Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

*IDC **01** 00:24:00.9±2.1, 0°.42N×125°.71E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.3/29, mbtmp3.2/3, Error ellipse: s-maj=203.9km s-min=27.0km az=64.0*

*DJA **01** 00:24:08.3±1.4, 0°S±6°×12°5E±°, h25^{km}±12^{km}, M3.5/7, MLv3.5/7*

ISC 01 00:24:09.1±1.0, 0°.24S±0°.09×124°.69E±0°.08, h50^{km}, n10, σ2^{s}.35/13, mb3.1/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.08**	**319**	P	**Pn**	**00 24 27.2**	**-0.7**
KMSI				S	**Sn**	**00 24 41.3**	**-0.5**
GTOI	**Gorontalo**	**1.90**	**297**	P	**Pn**	**00 24 41.4**	**+2.4**
GTOI				S	**Sn**	**00 25 05.3**	**+3.6**
SANI	**Sanana**	**2.21**	**144**	P	**Pn**	**00 24 43.4**	**0.0**
SANI				S	**Sn**	**00 25 07.9**	**-1.7**
LBMI	**Labuha**	**2.83**	**98**	S	**Sn**	**00 25 28.1**	**+3.2**
MRSI	**Marisa**	**2.84**	**285**	P	**Pn**	**00 24 48.2**	**-3.8**
APSI	**Ampana**	**3.12**	**258**	P	**Pn**	**00 24 58.0**	**+2.2**
MPSI	**Mapaga**	**4.83**	**277**	P	**Pn**	**00 25 18.3**	**-1.0**
WRA	**Warramunga Arr**	**21.74**	**155**	P	**P**	**00 28 56.3**	**-0.2**
	0.2nm,0.4s,baz=336,slow=10,SNR=5.5						
ASAR	**Alice Springs**	**24.94**	**160**	P	**P**	**00 29 28.7**	**+0.7**
	0.3nm,0.5s,baz=338,slow=7.0,SNR=2.4						
MKAR	**Makanchi Array**	**59.72**	**328**	P	**P**	**00 34 07.3**	**-1.4**
	0.3nm,0.6s,baz=126,slow=8.0,SNR=5.8						

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*IDC **01** 00:51:31.2±2.5, 31°.66S×71°.70W, h0^{km}, mb1 3.6/1, mb1mx3.4/22, mbtmp3.3/1, ML3.5/1, Error ellipse: s-maj=122.3km s-min=46.4km az=95.0*

*GUC **01** 00:51:33.4±0.7, 31°.70S×71°.96W, h42^{km}±4^{km}, ML3.6*

ISC 01 00:51:31.5±3.1, 31°.70S±0°.03×72°.12W±0°.10, h14^{km}±21^{km}, n28, σ0^{s}.91/36, 5C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	**Catapilco**	**1.10**	**141**	⇓*i*P	**Pb**	**00 51 52.1**	**-0.2**
VA06				*i* S	**Sb**	**00 52 05.7**	**-0.9**
VA06				IAML		00 52 08.4	
	comp=N,4μm,0.3s						
CO06	**Fray Jorge**	**1.11**	**22**	⇑*i*P	**Pb**	**00 51 52.0**	**-0.5**
CO06				IAML		00 52 12.1	
	comp=E,2μm,0.2s						
VA01	**Torpederas**	**1.37**	**163**	*e*P	**Pn**	**00 51 56.7**	**+0.4**
VA01				*i* S	**Sn**	**00 52 12.9**	**-1.4**
VA01				IAML		00 52 15.0	
	comp=E,747nm,0.1s						
ROCH	**El Roble**	**1.57**	**144**	⇑*i*P	**Pn**	**00 51 59.6**	**+0.4**
ROCH				⇑*i*P	**Pn**	**00 51 59.5**	**+0.2**
ROCH				*i* S	**Sn**	**00 52 19.1**	**-0.4**
ROCH				*i* S	**Sn**	**00 52 19.4**	**-0.1**
ROCH				IAML		00 52 27.2	
	comp=N,2μm,0.3s						
ROCH				IAML		00 52 27.4	
	comp=N,1μm,0.5s						
VA03	**San Esteban**	**1.70**	**129**	*e*P	**Pn**	**00 52 01.2**	**+0.3**
VA03				*i* S	**Sn**	**00 52 21.4**	**-1.0**
VA03				IAML		00 52 27.1	
	comp=E,2μm,0.2s						
MT02	**Curacav**	**1.76**	**152**	⇑*i*P	**Pn**	**00 52 02.0**	**+0.4**
MT02				*i* S	**Sn**	**00 52 22.5**	**-1.3**
PEL	**Peldehue**	**1.88**	**140**	*e*P	**Pn**	**00 52 03.8**	**+0.5**
PEL				*i* S	**Sn**	**00 52 26.0**	**-0.8**
PEL				IAML		00 52 33.0	
	comp=E,888nm,0.3s						
GO04	**Tololo Observa**	**1.90**	**37**	*e*P	**Pn**	**00 52 03.6**	**-0.1**
GO04				*i* S	**Sn**	**00 52 26.9**	**-0.7**
CO05	**La Serena**	**1.93**	**23**	*e*P	**Pb**	**00 52 06.2**	**-0.4**
CO05				*i* S	**Sn**	**00 52 28.4**	**+0.4**
CO05				IAML		00 52 35.9	
	comp=N,931nm,0.5s						
VA05	**Santo Domingo**	**1.99**	**168**	*e*P	**Pn**	**00 52 05.4**	**+0.6**
VA05				IAML		00 52 42.4	
	comp=E,1μm,0.2s						
MT05	**Renca**	**2.05**	**146**	*e*P	**Pn**	**00 52 06.3**	**+0.7**
MT05				*e*S	**Sn**	**00 52 30.7**	**-0.3**
MT05				IAML		00 52 39.6	
	comp=E,1μm,0.2s						
MT01	**Popeta**	**2.27**	**162**	*e*P	**Pn**	**00 52 09.4**	**+0.7**
MT01				IAML		00 52 50.3	
	comp=E,343nm,0.5s						
MT09	**Talagante**	**2.27**	**156**	*e*P	**Pn**	**00 52 10.3**	**+1.4**
MT09				IAML		00 52 54.2	
	comp=N,530nm,0.8s						
BO04	**La Punta**	**2.61**	**151**	⇑*i*P	**Pn**	**00 52 14.6**	**+1.3**
BO04				*i* S	**Sn**	**00 52 44.9**	**+0.1**
BO04				IAML		00 52 59.8	
	comp=N,383nm,0.3s						
LMEL	**Las Melosas**	**2.68**	**144**	*e*P	**Pn**	**00 52 15.8**	**+1.4**
LMEL				*e*S	**Sn**	**00 52 47.0**	**+0.3**
BO01	**Tunca**	**2.82**	**162**	*e*P	**Pn**	**00 52 17.1**	**+0.9**
BO01				IAML		00 53 07.3	
	comp=E,148nm,0.4s						
LCO	**Las Campanas**	**2.95**	**25**	*e*P	**Pn**	**00 52 17.5**	**-0.7**
GO05	**Huala**	**3.30**	**177**	*e*P	**Pn**	**00 52 23.1**	**+0.3**
GO05				*i* S	**Sn**	**00 52 59.4**	**-2.5**
H03N1	**Juan Fernandez**	**5.99**	**251**	T	T	00 59 43.0	
	baz=80,slow=72						
H03N3	**Juan Fernandez**	**6.01**	**251**	T	T	00 59 43.1	
	baz=80,slow=72						
H03N2	**Juan Fernandez**	**6.01**	**251**	T	T	00 59 40.1	
	baz=80,slow=72						
H03S3	**Juan Fernandez**	**6.10**	**248**	T	T	00 59 51.6	
	baz=69						
H03S1	**Juan Fernandez**	**6.10**	**248**	T	T	00 59 53.3	
	baz=69						
H03S2	**Juan Fernandez**	**6.12**	**248**	T	T	00 59 53.2	
	baz=69						
PLCA	**Paso Flores**	**9.10**	**172**	Pn	**Pn**	**00 53 44.0**	**+1.5**
	comp=E,0.1nm,0.3s,baz=344,slow=14,SNR=1.8						
TORD	**Torodi Ar. Bea**	**83.50**	**70**	P	**P**	**01 03 59.2**	**0.0**
	comp=E,148nm,0.9s,baz=254,slow=4.9,SNR=5.5						
BVAR	**Borovoye Array**	**145.62**	**41**	PKPbc	**PKPab**	**01 11 10.6**	**+1.0**
	comp=E,0.9nm,0.6s,baz=251,slow=8.8,SNR=7.0						
ZALV	**Zalesovo Beam**	**152.30**	**30**	PKPbc	**PKiKP**	**01 11 27.3**	**+0.6**
	comp=E,1.0nm,0.5s,baz=318,slow=3.7,SNR=6.8						

IDC 01 00:58:56.0±1.3, 60°.44N×29°.16W, h0^{km}, mb3.4/3, mb1 3.8/4, mb1mx3.4/55, mbtmp3.5/4, ML3.2/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/29, Error ellipse: s-maj=44.9km s-min=25.3km az=46.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**5.64**	**37**	Pn	Pn	01 00 20.3	-0.6
	0.8nm,0.3s,baz=197,slow=11,SNR=2.4						
BORG				Sn	Sn	01 01 22.2	-4.0
	baz=263,slow=23,SNR=0.8						
ESDC	**Sonseca Array**	**26.04**	**132**	P	P	01 04 32.2	+1.5
	0.6nm,0.8s,baz=333,slow=9.7,SNR=3.3						
BRTR	**Keskin Array B**	**43.31**	**89**	LR	LR	01 26 32.4	
	comp=Z,61nm,18.7s,baz=306,slow=38						
ILAR	**Eielson Array**	**46.71**	**329**	P	P	01 07 26.0	+0.1
	0.6nm,0.9s,baz=38,slow=8.0,SNR=4.9						
PDAR	**Pinedale Array**	**49.58**	**287**	P	P	01 07 48.6	0.0
	0.5nm,0.8s,baz=64,slow=8.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**52.34**	**141**	P	P	01 08 07.8	-1.6
	0.4nm,0.8s,baz=336,slow=6.2,SNR=0.6						

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*IDC **01** 00:59:19.6±1.1, 60°.62N×28°.81W, h0^{km}, mb3.6/7, mb1 3.9/8, mb1mx3.6/56, mbtmp3.7/8, ML4.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/31, Error ellipse: s-maj=25.4km s-min=21.5km az=39.0*

*NEIC **01** 00:59:20.9±1.4, 60°.8N±0°.1×29°.0W±0°.2, h10^{km}±1^{km}, mb4.3/9, Error ellipse: s-maj=26.0km s-min=14.7km az=157.0*

ISC 01 00:59:20.5±0.7, 60°.6N±0°.1×28°.94W±0°.08, h10^{km}, n22, σ1^{s}.13/22, mb3.8/9, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**5.43**	**37**	Pn	**Pn**	**01 00 41.7**	**+0.3**
	7.2nm,0.3s,baz=240,slow=5.9,SNR=23						
BORG				Sn	**Sn**	**01 01 45.4**	**+1.5**
	1.4nm,0.3s,baz=328,slow=22,SNR=12						
BORG	**Borgarnes**	**5.43**	**37**		**Pn**	**01 00 39.7**	**-1.7**
ESK	**Eskdalemuir**	**14.59**	**100**	Pn	**Pn**	**01 02 47.9**	**+1.1**
NBO00	**NORSAR Array S**	**19.17**	**71**	P	**Pn**	**01 03 44.4**	**-0.4**
NC303	**NORSAR Array S**	**19.39**	**71**		**Pn**	**01 03 46.9**	**-0.4**
NC303				IAmb	IAmb	01 04 03.3	
	comp=Z,32nm,1.4s						
NB201	**NORSAR Array S**	**19.41**	**71**	P	**P**	**01 03 45.8**	**-0.7**
NB201				IAmb	IAmb	01 03 47.9	
	comp=Z,22nm,1.1s						
DRLN	**Deer Lake**	**19.78**	**248**	P	**P**	**01 03 51.4**	**+0.8**
DRLN				IAmb	IAmb	01 04 00.8	
	comp=Z,68nm,1.4s						
ARCES	**ARCESS Array B**	**23.77**	**45**	LR	LR	01 11 53.1	
	comp=Z,67nm,18.8s,baz=260,slow=32						
PAB	**San Pablo**	**26.05**	**133**	P	**P**	**01 04 53.3**	**-0.5**
ESDC	**Sonseca Array**	**26.07**	**132**	P	**P**	**01 04 55.9**	**+1.9**
	comp=Z,1.8nm,0.8s,baz=332,slow=10,SNR=11						
ESDC	**Sonseca Array**	**26.07**	**132**	P	**P**	**01 04 55.6**	**+1.6**
AKASG	**Malin Array Be**	**33.20**	**81**	P	**P**	**01 05 56.5**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=305,slow=8.5,SNR=2.1						
ILAR	**Eielson Array**	**46.62**	**329**	P	**P**	**01 07 50.1**	**+1.9**
	comp=Z,1.1nm,0.8s,baz=31,slow=6.7,SNR=11						
PDAR	**Pinedale Array**	**49.63**	**288**	P	**P**	**01 08 12.1**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=66,slow=9.0,SNR=5.3						
PDAR	**Pinedale Array**	**49.63**	**288**	P	**P**	**01 08 11.8**	**-0.3**
BVAR	**Borovoye Array**	**49.84**	**51**	P	**P**	**01 08 13.4**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=322,slow=13,SNR=2.7						
BBB	**Bella Bella**	**50.43**	**308**	P	**P**	**01 08 16.3**	**-1.4**
TORD	**Torodi Ar. Bea**	**52.41**	**141**	P	**P**	**01 08 31.8**	**-1.0**
	comp=Z,123nm,0.8s,baz=341,slow=8.4,SNR=3.8						
KURBB	**Kurchatov Arra**	**54.81**	**48**	P	**P**	**01 08 48.5**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=329,slow=7.6,SNR=4.7						
MK31	**Makanchi Array**	**59.38**	**48**	P	**P**	**01 09 22.8**	**+0.2**
MK31				IAmb	IAmb	01 09 30.3	
	comp=Z,1.8nm,1.1s						
MKAR	**Makanchi Array**	**59.38**	**48**	P	**P**	**01 09 23.1**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=334,slow=3.7,SNR=7.4						
MKAR	**Makanchi Array**	**59.38**	**48**	P	**P**	**01 09 22.2**	**-0.4**

IDC 01 01:10:20.4±1.5, 60°.52N×28°.78W, h0^{km}, mb3.7/2, mb1 4.0/3, mb1mx3.4/49, mbtmp3.8/3, ML3.5/1, Error ellipse: s-maj=43.2km s-min=28.3km az=38.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**5.46**	**36**	Pn	Pn	01 11 42.6	-0.3
	1.5nm,0.3s,baz=225,slow=10.0,SNR=7.8						
BORG				Sn	Sn	01 12 39.1	-7.1
	baz=265,slow=19,SNR=1.2						
ESDC	**Sonseca Array**	**25.95**	**132**	P	P	01 15 55.6	+1.3
	2.0nm,1.1s,baz=330,slow=11,SNR=8.1						
PDAR	**Pinedale Array**	**49.73**	**288**	P	P	01 19 14.3	+0.1
	0.6nm,0.8s,baz=58,slow=7.7,SNR=5.0						
TORD	**Torodi Ar. Bea**	**52.29**	**141**	P	P	01 19 32.0	-1.4
	98nm,0.7s,baz=331,slow=5.6,SNR=5.3						

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*NDI **01** 01:10:28.3±2.6, 34°.94N×69°.72E, h80^{km}, ML3.8, mb4.0(NEIC)*

*IDC **01** 01:10:30.9±8.7, 36°.50N×70°.94E, h89^{km}±61^{km}, mb3.9/1, mb1 3.4/7, mb1mx3.1/48, mbtmp3.7/7, ML3.4/6, Error ellipse: s-maj=78.4km s-min=50.0km az=160.0*

*NEIC **01** 01:10:30.7±1.0, 36°.45N±0°.06×70°.82E±0°.07, h102^{km}±9^{km}, mb4.0/5, Error ellipse: s-maj=9.1km s-min=7.4km az=129.0*

*NNC **01** 01:10:34.9±3.3, 37°.07N×70°.94E, h0^{km}, mb4.3, mpv3.9, Error ellipse: s-maj=25.8km s-min=20.6km az=170.0*

ISC 01 01:10:29.6±0.8, 36°.42N±0°.06×70°.97E±0°.07, h100^{km}, n36, σ1^{s}.47/41, mb4.2/3, 1C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.44**	**221**	Pn	**Pn**	**01 11 08.5**	**+0.4**
KBL				Sn	**Sn**	**01 11 37.1**	**-0.6**
GAR	**Garm**	**2.63**	**349**	Pn	**Pn**	**01 11 11.5**	**+1.0**
CHGR	**Chuyangaron**	**2.66**	**328**		**Pn**	**01 11 10.9**	**0.0**
DRK	**Karamyk**	**3.13**	**12**		**Pn**	**01 11 18.9**	**+1.5**
NIL	**Nilore**	**3.34**	**145**		**Pn**	**01 11 21.2**	**+1.3**
BTK	**Batken**	**3.64**	**358**	Pn	**Pn**	**01 11 26.0**	**+2.0**
DHRM	**DHARAMSHALA**	**6.06**	**132**	*e*P	**Pn**	**01 11 55.9**	**-1.0**
DHRM				*e*S	**Sn**	**01 13 01.9**	**-3.1**
DHRM				IAML		01 13 04.4	
	comp=N,70nm,0.3s						
DHRM				IAML		01 13 04.5	
	comp=E,93nm,0.6s						
AML	**Almayashu**	**6.09**	**19**	P	**Pn**	**01 11 58.4**	**+1.0**
	SNR=36						
UCH	**Uchtor**	**6.42**	**24**	P	**Pn**	**01 12 02.9**	**+1.0**
	SNR=12						
EKS2	**Erkin-Say**	**6.61**	**18**	P	**Pn**	**01 12 05.4**	**+1.3**
	SNR=11						
KK07	**Karatay Array**	**6.67**	**357**	⇓P	**Pn**	**01 12 05.4**	**+0.4**
	comp=E,3.2nm,0.4s,baz=173,slow=12						
KK07				⇓S	**Sn**	**01 13 15.6**	**-3.9**
	comp=E,1.5nm,0.5s,baz=177,slow=27						
KKAR	**Karatay Array**	**6.69**	**357**	Pn	**Pn**	**01 12 05.7**	**+0.5**
AAK	**Ala-Archa**	**6.79**	**23**	P	**Pn**	**01 12 08.1**	**+1.5**
	comp=E,5.7nm,0.3s,baz=196,slow=17,SNR=57						
AAK				S	**Sn**	**01 13 23.2**	**+0.8**
	comp=E,0.8nm,0.3s,baz=157,slow=23,SNR=5.6						
AAK	**Ala-Archa**	**6.79**	**23**	P	**Pn**	**01 12 08.0**	**+1.4**
	SNR=23						
AAK	**Ala-Archa**	**6.79**	**23**	P	**Pn**	**01 12 07.8**	**+1.2**
	comp=E,6.4nm,0.3s						
AAK				⇑S	**Sn**	**01 13 20.4**	**-2.1**
	comp=E,4.3nm,0.6s						
AAK	**Ala-Archa**	**6.79**	**23**	Pn	**Pn**	**01 12 07.9**	**+1.2**
KBK	**Karagaybulak**	**6.95**	**25**	P	**Pn**	**01 12 11.1**	**+2.3**
	SNR=5.5						
BOOM	**Boomskoye usch**	**7.18**	**31**	Pn	**Pn**	**01 12 12.9**	**+0.8**
CHMS	**Chumysh**	**7.19**	**23**	P	**Pn**	**01 12 13.5**	**+1.5**
	SNR=11						
USP	**Ospenovka**	**7.36**	**21**	P	**Pn**	**01 12 15.3**	**+0.9**
	SNR=10						
SMLA	**Simla**	**7.38**	**134**	*e*P	**Pn**	**01 12 15.0**	**+0.5**
SMLA				*e*S	Sn	01 13 31.1	-5.6
SMLA				IAML		01 13 35.8	
	comp=Z,83nm,0.2s						
SMLA				IAML		01 13 39.2	
	comp=N,158nm,0.3s						
TKM2	**Tokmak 2**	**7.41**	**27**	P	**Pn**	**01 12 16.4**	**+1.2**
	SNR=8.8						
TKM2	**Tokmak 2**	**7.41**	**27**	⇓P	**Pn**	**01 12 16.4**	**+1.2**
	comp=N,4.5nm,0.5s						
TKM2				⇓S	**Sn**	**01 13 37.6**	**-0.1**
	comp=N,3.0nm,0.8s						
KUDL	**Kundal**	**9.48**	**149**	*e*P	Pn	01 12 39.8	-3.4
KUDL				*e*S	Sn	01 14 05.2	-23
MKAR	**Makanchi Array**	**13.38**	**36**	P	**Pn**	**01 13 35.8**	**+0.5**
	comp=N,0.0nm,0.3s,baz=211,slow=12,SNR=2.2						
KURBB	**Kurchatov Arra**	**15.21**	**19**	P	**Pn**	**01 14 00.3**	**+1.5**
	comp=N,0.1nm,0.3s,baz=207,slow=10,SNR=3.9						
BVAR	**Borovoye Array**	**16.61**	**359**	P	**Pn**	**01 14 15.2**	**-1.0**
	comp=N,0.2nm,0.3s,baz=195,slow=17,SNR=6.0						
BRVK	**Borovoye**	**16.65**	**359**	Pn	**Pn**	**01 14 14.1**	**-2.6**
AKTO	**Aktyubinsk**	**16.84**	**330**	P	**Pn**	**01 14 18.9**	**-0.2**
	comp=N,0.3nm,0.3s,baz=144,slow=14,SNR=4.2						
ZAA0	**Zalesovo Array**	**20.00**	**24**	P	**P**	**01 14 54.7**	**+0.7**
ZAA0				IAmb	IAmb	01 14 58.3	
	comp=Z,2.8nm,0.9s						
ZALV	**Zalesovo Beam**	**20.00**	**24**	P	**P**	**01 14 54.3**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=213,slow=10,SNR=9.6						
ZALV	**Zalesovo Beam**	**20.00**	**24**	P	**P**	**01 14 54.6**	**+0.6**
KIV	**Kislovodsk**	**22.80**	**298**	P	**P**	**01 15 23.4**	**-0.6**
KIV				IAmb	IAmb	01 15 24.7	
	comp=Z,11nm,1.5s						
BR231	**Keskin MP Arra**	**30.09**	**288**	P	**P**	**01 16 28.5**	**-1.0**
BR231				IAmb	IAmb	01 16 28.7	
	comp=Z,4.6nm,0.6s						
TIR	**Tirane**	**39.62**	**293**	P	**P**	**01 17 51.4**	**+0.1**
ARCES	**ARCESS Array B**	**41.21**	**338**	P	**P**	**01 18 06.6**	**+2.6**
	comp=Z,4.8nm,1.1s,baz=119,slow=9.4,SNR=4.0						

IDC 01 01:11:37.0±577.0, 24°.58N×129°.86E, h0^{km}, Error ellipse: s-maj=258.3km s-min=191.7km az=57.0, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I30JP	**ISUMI INFRASON**	**14.00**	**38**	*i*		02 40 30.0	
	baz=225,slow=319,SNR=1.3						
I39PW	**PALAU INFRASON**	**17.54**	**164**	*i*		03 00 00.0	
	baz=347,slow=308,SNR=0.5						
I45RU	**USSURIYSK INFR**	**19.64**	**5**	*i*		03 15 30.0	
	baz=185,slow=334,SNR=2.1						

INET 01 01:24:47.7, 11°.24N×87°.01W, h15^{km}, MW4.0, Near coast of Nicaragua

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*MEX **01** 01:29:14.8±0.8, 19°.98N×109°.38W, h10^{km}, MD4.3*

*NEIC **01** 01:29:18.3±1.9, 20°.0N±0°.1×109°.4W±0°.1, h10^{km}±2^{km}, mb4.2/78, Error ellipse: s-maj=21.2km s-min=13.1km az=226.0*

*IDC **01** 01:29:18.1±1.2, 20°.09N×109°.07W, h0^{km}, mb3.9/6, mb1 4.1/9, mb1mx3.9/31, mbtmp3.9/9, ML3.4/3, MS3.6/18, Ms1 3.6/18, ms1mx3.4/37, Error ellipse: s-maj=48.3km s-min=19.1km az=60.0*

ISC 01 01:29:19.6±0.6, 19°.80N±0°.07×109°.45W±0°.05, h35^{km}, n136, σ1^{s}.58/118, mb4.2/20, MS3.6/16, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H06E		**1.72**	**234**	*e*P	**Pn**	**01 29 44.0**	**-3.0**
H06E				*e*S	**Sn**	**01 30 05.8**	**-2.0**
H06E1	**SOCORRO T-PHAS**	**1.73**	**234**	T	T	01 31 56.3	
	SNR=21						
H06N1	**SOCORRO T-PHAS**	**1.73**	**238**	T	T	01 31 41.5	
	SNR=24						
H06N	**Isla Socorro**	**1.73**	**238**	*e*P	**Pn**	**01 29 43.9**	**-3.3**
H06N				*e*S	**Sn**	**01 30 06.4**	**-1.6**
H06S1	**SOCORRO T**	**1.78**	**234**	T	T	01 31 51.7	
	SNR=14						
H06S		**1.78**	**234**	*e*P	**Pn**	**01 29 44.9**	**-3.0**
H06S				*i* S	**Sn**	**01 30 07.2**	**-2.2**
SLBS	**Sierra La Lagu**	**3.90**	**353**	Pn	**Pn**	**01 30 16.0**	**-1.0**
CJM	**Chamela**	**4.16**	**93**	*e*P	Pn	01 30 14.1	-6.5
CJM				*i* S	**Sn**	**01 31 01.7**	**-6.3**
JUBC	**Volcan de Coli**	**5.54**	**92**	*i* P	Pn	01 30 35.2	-4.7
ZAIG	**Zacatecas**	**7.06**	**64**	Pn	**Pn**	**01 31 01.1**	**+0.4**
HPIG		**7.91**	**25**	Pn	**Pn**	**01 31 11.6**	**-0.7**
TLIG	**Tlapa**	**10.55**	**100**	Pn	**Pn**	**01 31 50.1**	**+1.6**
TX31	**Lajitas Ar. Si**	**10.85**	**28**	Pn	**Pn**	**01 31 51.2**	**-1.2**
TX32	**Lajitas Array**	**10.85**	**28**		**Pn**	**01 31 51.9**	**-0.5**
TXAR	**Lajitas Array**	**10.85**	**28**	Pn	**Pn**	**01 31 55.5**	**+3.1**
	baz=198,slow=14,SNR=13						
319A	**Douglas**	**11.53**	**1**		**Pn**	**01 32 02.2**	**+0.5**
SFX	**San Felipe**	**12.21**	**338**	Pn	**Pn**	**01 32 11.8**	**+0.9**
MNTX	**Cornudas Mount**	**12.40**	**16**	Pn	**Pn**	**01 32 11.7**	**-1.9**
TUC	**Tucson**	**12.52**	**355**	Pn	**Pn**	**01 32 13.4**	**-1.9**
121A	**Cookes Peak, D**	**12.77**	**6**	Pn	**Pn**	**01 32 17.6**	**-1.2**
113A	**Mohawk Valley,**	**13.48**	**344**	Pn	**Pn**	**01 32 27.6**	**-0.7**
JCT	**Junction City**	**13.75**	**37**	Pn	**Pn**	**01 32 29.1**	**-3.0**
GLA	**Glamis**	**14.05**	**341**		**Pn**	**01 32 36.7**	**+0.6**
RMX	**La Rumorosa**	**14.06**	**336**		**Pn**	**01 32 36.6**	**+0.1**
CMIG	**Matias Romero**	**14.08**	**99**	Pn	**Pn**	**01 32 36.9**	**+0.3**
	0.2nm,0.3s,baz=291,slow=12,SNR=6.9						
CMIG				LR	LR	01 37 35.2	
	comp=Z,277nm,21.4s,baz=280,slow=36						
Y14A	**Wickenburg**	**14.43**	**348**		**Pn**	**01 32 40.9**	**-0.5**
BNM	**Barren Site**	**14.51**	**9**	Pn	**Pn**	**01 32 41.7**	**-1.0**
X16A	**Lo Mia Camp, P**	**14.67**	**353**	Pn	**Pn**	**01 32 42.6**	**-2.1**
X18A	**Snowflake**	**14.68**	**358**		**Pn**	**01 32 44.3**	**-0.6**
PFO	**Pinyon Flats O**	**15.11**	**337**	Pn	**P**	**01 32 52.8**	**-2.5**
	0.1nm,0.3s,baz=131,slow=11,SNR=1.6						
PFO				LR	LR	01 37 40.6	
	comp=Z,451nm,20.8s,baz=152,slow=34						
MSTX	**Muleshoe**	**15.31**	**21**	Pn	**Pn**	**01 32 50.7**	**-2.5**
MSTX				IAmb	IAmb	01 33 04.2	
	comp=Z,17nm,1.2s						
ANMO	**Albuquerque**	**15.32**	**9**	Pn	**Pn**	**01 32 52.8**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=189,slow=13,SNR=2.6						
ANMO				LR	LR	01 39 06.6	
	comp=Z,73nm,19.4s,baz=192,slow=39						
ANMO	**Albuquerque**	**15.32**	**9**	Pn	**Pn**	**01 32 51.4**	**-1.9**
ANMO				IAmb	IAmb	01 33 02.7	
	comp=Z,9.4nm,1.4s						
ABTX	**Abilene, Hawle**	**15.49**	**33**	Pn	**Pn**	**01 32 55.4**	**-0.1**
ABTX				IAmb	IAmb	01 33 10.4	
	comp=Z,12nm,1.1s						
W13A	**Hualapai Mount**	**15.74**	**346**	Pn	**Pn**	**01 32 60.0**	**+1.2**
WUAZ	**Wupatki**	**15.75**	**354**	Pn	**Pn**	**01 32 59.6**	**+0.7**
WUAZ				IAmb	IAmb	01 33 06.8	
	comp=Z,19nm,1.0s						
HKT	**Hockley**	**15.94**	**48**	Pn	**Pn**	**01 33 00.8**	**-0.5**
HKT				IAmb	IAmb	01 33 18.4	
	comp=Z,18nm,1.5s						
GSC	**Goldstone, Bar**	**16.75**	**339**	Pn	**Pn**	**01 33 11.5**	**-0.1**
U15A	**North Rim**	**16.75**	**352**		**Pn**	**01 33 11.9**	**+0.1**
MVCO	**Mesa Verde**	**17.37**	**3**	P	**Pn**	**01 33 19.7**	**+0.3**
MVCO				IAmb	IAmb	01 33 34.8	
	comp=Z,15nm,1.1s						
QSM	**Queen of Sheba**	**17.38**	**339**	Pn	**Pn**	**01 33 18.3**	**-1.0**
QSM				IAmb	IAmb	01 33 31.8	
	comp=Z,18nm,1.2s						
KNB	**Kanab**	**17.41**	**351**		**P**	**01 33 20.1**	**-0.8**
KNB				IAmb	IAmb	01 33 24.9	
	comp=Z,25nm,1.3s						
LCMT	**Little Creek M**	**17.47**	**350**		**P**	**01 33 20.9**	**-0.6**
LCMT				IAmb	IAmb	01 33 25.7	
	comp=Z,14nm,1.2s						
GWY	**Greenwater Val**	**17.52**	**340**		**P**	**01 33 21.8**	**-0.3**
ISA	**Isabella, Lake**	**17.69**	**335**		**P**	**01 33 23.8**	**-0.2**
PKCU	**Pink Cliffs**	**17.76**	**353**		**Pn**	**01 33 24.1**	**-0.3**
PKCU				IAmb	IAmb	01 33 29.4	
	comp=Z,18nm,1.1s						
CCUT	**Cedar City**	**18.01**	**350**		**Pn**	**01 33 27.0**	**-0.4**
SZCU	**Shurtz Canyon**	**18.01**	**351**		**Pn**	**01 33 25.9**	**-1.5**
SDCO	**Great Sand Dun**	**18.21**	**10**		**P**	**01 33 27.9**	**-1.9**
PRN	**Pahroc Range**	**18.21**	**346**		**P**	**01 33 28.1**	**-1.7**
MTPU	**Mount Pierson**	**18.33**	**353**		**P**	**01 33 29.6**	**-1.7**
APG	**El Apazote**	**18.73**	**102**	LR	LR	01 39 35.2	
	comp=Z,128nm,20.8s,baz=318,slow=34						
LCH	**Last Change Ra**	**18.79**	**339**	P	**Pn**	**01 33 36.0**	**-0.8**
MVU	**Marysvale**	**18.79**	**353**		**Pn**	**01 33 36.3**	**-0.6**
MSU	**Marysvale**	**18.80**	**353**	P	**Pn**	**01 33 37.3**	**+0.4**
R11A	**Troy Canyon, C**	**19.24**	**345**	P	**Pn**	**01 33 41.9**	**-0.3**
SRU	**San Rafael Swe**	**19.27**	**357**	P	**Pn**	**01 33 41.9**	**-0.6**
TPH	**Tonopah**	**19.43**	**341**	P	**Pn**	**01 33 43.8**	**-0.6**
SMCO	**Snowmass**	**19.43**	**6**	P	**P**	**01 33 42.9**	**-0.4**
SMCO				IAmb	IAmb	01 33 51.8	
	comp=Z,16nm,1.1s						
TMUT	**Trail Mountain**	**19.49**	**356**	P	**P**	**01 33 43.9**	**-0.1**
TMUT				IAmb	IAmb	01 33 56.4	
	comp=Z,11nm,1.2s						
SPR3	**Spring Creek 3**	**19.59**	**349**	P	**P**	**01 33 44.3**	**-0.8**
SPR3				IAmb	IAmb	01 33 50.1	
	comp=Z,16nm,1.3s						
P17A	**Butcher Ranch,**	**19.64**	**357**	P	**P**	**01 33 45.8**	**+0.4**
P17A				IAmb	IAmb	01 33 51.0	
	comp=Z,18nm,1.1s						
MDPB	**Devils Postpil**	**19.65**	**337**	P	**Pn**	**01 33 46.7**	**-0.5**
MDPB				IAmb	IAmb	01 33 52.3	
	comp=Z,21nm,1.3s						
P18A	**Preston Nutter**	**19.77**	**358**	P	**P**	**01 33 46.6**	**-0.4**
P18A				IAmb	IAmb	01 33 53.8	
	comp=Z,18nm,1.2s						
MTO3	**Montecristo**	**19.93**	**102**	P	**Pn**	**01 33 49.9**	**-0.7**
MTO3				IAmb	IAmb	01 33 52.6	
	comp=Z,18nm,1.2s						
LHV	**Little Huntoon**	**20.00**	**339**	P	**Pn**	**01 33 50.9**	**0.0**
ISCO	**Idaho Springs**	**20.20**	**9**	P	**P**	**01 33 49.5**	**-2.2**
MPU	**Maple Canyon**	**20.24**	**355**	P	**P**	**01 33 51.6**	**-0.3**
MPU				IAmb	IAmb	01 33 58.9	
	comp=Z,14nm,1.1s						
RYN	**Ryan**	**20.34**	**339**	P	**P**	**01 33 53.5**	**+0.4**
RYN				IAmb	IAmb	01 34 00.3	
	comp=Z,16nm,1.3s						
CMB	**Columbia Colle**	**20.51**	**335**	P	**P**	**01 33 54.4**	**-0.3**
DUG	**Dugway, Tooele**	**20.53**	**353**	P	**P**	**01 33 54.0**	**-1.1**
DUG				IAmb	IAmb	01 34 02.7	
	comp=Z,24nm,1.2s						
KVN	**Kaiserville**	**20.59**	**341**	P	**P**	**01 33 55.8**	**0.0**
KVN				IAmb	IAmb	01 33 60.0	
	comp=Z,12nm,1.1s						
143A	**Socs Landing,**	**20.62**	**48**	P	**P**	**01 33 54.6**	**-1.3**
W39A	**Magazine**	**20.65**	**39**	P	**P**	**01 33 56.2**	**0.0**
W39A				IAmb	IAmb	01 34 00.7	
	comp=Z,12nm,1.1s						
RDMU	**Red Mountain**	**20.70**	**360**	P	**P**	**01 33 56.8**	**-0.2**
JLU	**Jordanelle**	**20.80**	**356**	P	**P**	**01 33 57.9**	**-0.2**
JLU				IAmb	IAmb	01 34 08.9	
	comp=Z,14nm,1.3s						
YERR	**Yerington**	**20.91**	**338**	P	**P**	**01 33 59.8**	**+0.6**
CTU	**Camp Tracy**	**20.92**	**355**	P	**P**	**01 33 58.3**	**-0.9**
CTU				IAmb	IAmb	01 34 07.3	
	comp=Z,12nm,1.1s						

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PNTR  Pine Nut          21.13 338  P      P      01 34 01.4 -0.2
U38A  Gravette          21.20  35  P      P      01 34 01.8 -0.3
BGU   Big Grassy Mou    21.28 352  P      P      01 34 02.8 -0.3
BGU                                IAmb   IAmb   01 34 06.4
      comp=Z,7.0nm,1.0s
VCNR  Virginia City     21.33 338  P      P      01 34 04.1 +0.4
ELK   Elko              21.46 348  P      P      01 34 07.3 +2.2
      comp=Z,2.3nm,0.9s,baz=187,slow=11,SNR=5.8
ELK                                LR     LR     01 42 41.2
      comp=Z,71nm,19.8s,baz=135,slow=38
ELK   Elko              21.46 348  P      P      01 34 04.6 -0.5
SPUT  South Promonto    21.59 354  P      P      01 34 06.2 -0.2
SPUT                               IAmb   IAmb   01 34 09.9
      comp=Z,10.0nm,1.1s
BMN   Battle Mountai    21.62 344  P      P      01 34 07.0 +0.3
HWUT  Hardware Ranch    21.81 356  P      P      01 34 06.9 -1.9
HWUT                               IAmb   IAmb   01 34 17.9
      comp=Z,15nm,1.1s
BEKR  Beckworth         22.09 337  P      P      01 34 11.7 -0.2
BEKR                               IAmb   IAmb   01 34 22.3
      comp=Z,11nm,1.2s
HVU   Hansel Valley     22.09 353  P      P      01 34 11.0 -0.9
HVU                                IAmb   IAmb   01 34 20.6
      comp=Z,8.9nm,1.2s
ORV   Oroville          22.26 335  P      P      01 34 12.5 -1.0
ORV                                IAmb   IAmb   01 34 23.9
      comp=Z,15nm,1.4s
PDAR  Pinedale Array    22.90 360  P      P      01 34 21.5 +1.0
      comp=Z,0.9nm,0.9s,baz=161,slow=9.4,SNR=6.9
PDAR                               LR     LR     01 42 33.1
      comp=Z,99nm,20.2s,baz=191,slow=35
PDAR  Pinedale Array    22.90 360  P      P      01 34 19.3 -1.2
K22A  Casper            22.91   6  P      P      01 34 18.3 -2.2
Z47A  Carrollton        23.27  51  P      P      01 34 22.6 -1.4
REDW  Red Top Meadow    23.52 357  P      P      01 34 24.9 -1.8
REDW                               IAmb   IAmb   01 34 36.6
      comp=Z,14nm,1.4s
W45A  Hickory Valley    23.53  45  P      P      01 34 26.2 -0.4
LOHW  Long Hollow       23.76 358  P      P      01 34 27.7 -1.3
LOHW                               IAmb   IAmb   01 34 37.9
      comp=Z,8.3nm,1.4s
WVOR  Wild Horse Val    23.87 343  P      P      01 34 28.4 -1.5
WVOR                               IAmb   IAmb   01 34 34.4
      comp=Z,14nm,1.3s
MOD   Modoc Plateau     23.88 340  P      P      01 34 30.0 -0.1
HLID  Hailey            24.06 351  P      P      01 34 31.4 -0.2
MFID  Camas Ranch       24.15 349  P      P      01 34 32.3 -0.1
MFID                               IAmb   IAmb   01 34 36.1
      comp=Z,11nm,1.5s
YBH   Yreka Blue Hor    24.59 336  LR     LR     01 42 44.0
      comp=Z,162nm,19.6s,baz=165,slow=33
J08A  Circle Bar Ran    24.68 344  P      P      01 34 36.3 -1.0
J08A                               IAmb   IAmb   01 34 48.1
      comp=Z,13nm,1.4s
YHH   Holmes Hill       24.95 358  P      P      01 34 39.0 -0.9
YHH                                IAmb   IAmb   01 34 44.6
      comp=Z,6.3nm,1.0s
YHL   Hebgen Lake       25.02 357  P      P      01 34 38.9 -1.7
FPAL  Fort Paine        25.70  50  P      P      01 34 45.6 -1.0
PLID  Pearl Lake        25.80 349  P      P      01 34 46.9 -0.7
PLID                               IAmb   IAmb   01 34 49.5
      comp=Z,3.5nm,1.1s
W50A  Signal Mountai    26.24  49  P      P      01 34 51.2 -0.2
HRY   Holter Researc    26.91 356  P      P      01 34 58.1 +0.6
CPCT  Cooper Cave       26.92  49  P      P      01 34 58.1 +0.5
CPCT                               IAmb   IAmb   01 35 01.8
      comp=Z,7.8nm,1.0s
TKL   Tuckaleechee C    27.56  50  LR     LR     01 46 40.4
      comp=Z,72nm,18.6s,baz=245,slow=38
NEW   Newport           29.07 349  LR     LR     01 47 33.7
      comp=Z,131nm,21.9s,baz=182,slow=38
ULM   Lac du Bonnet     32.24  16  LR     LR     01 49 19.9
      comp=Z,81nm,20.2s,baz=185,slow=38
OTAV  Otavalo           36.05 119  P      P      01 36 18.3 -0.2
SDV   Santo Domingo     39.04 100  P      P      01 36 43.3 -0.2
TAOE  Nuku Hiva Isla    41.53 230 eT      T      02 20 58.5
      comp=Z,74nm,0.2s
YKA   Yellowknife Ar    42.81 356  LR     LR     01 55 43.3
      comp=Z,108nm,18.4s,baz=0.0,slow=37
NNA   Nana              45.04 132  LR     LR     01 52 02.7
      comp=Z,66nm,21.6s,baz=328,slow=30
INK   Inuvik            50.79 349  P      P      01 38 17.4 +1.4
      comp=Z,6.2nm,0.9s,baz=138,slow=8.0,SNR=18
INK   Inuvik            50.79 349  P      P      01 38 15.4 -0.6
ILAR  Eielson Array     51.34 341  P      P      01 38 21.3 +1.1
      comp=Z,0.8nm,0.7s,baz=142,slow=6.5,SNR=8.0
ILAR                               LR     LR     02 00 02.5
      comp=Z,67nm,21.4s,baz=146,slow=36
ILAR  Eielson Array     51.34 341  P      P      01 38 21.1 +0.9
PPT   Papeete           54.14 229  LR     LR     01 55 57.0
      comp=Z,57nm,19.6s,baz=62,slow=29
PPT2  Papeete2          54.16 229 eLR     LR     01 54 17.1
      comp=Z,158nm,28.2s
LPAZ  La Paz            54.17 129  P      P      01 38 44.9 +2.4
      comp=Z,1.4nm,0.7s,baz=315,slow=5.9,SNR=5.7
LPAZ                               LR     LR     01 58 32.3
      comp=Z,67nm,21.1s,baz=301,slow=32
H03N2 Juan Fernandez    60.42 151  T      T      02 45 07.5
      baz=329,slow=78,SNR=46
H03N1 Juan Fernandez    60.43 151  T      T      02 45 09.7
      baz=329,slow=78,SNR=50
H03N3 Juan Fernandez    60.44 151  T      T      02 45 01.8
      baz=329,slow=78,SNR=48
RAR   Rarotonga         63.91 233  LR     LR     01 59 39.9
      comp=Z,75nm,21.0s,baz=44,slow=28
BDFB  Brasilia          69.90 116  P      P      01 40 29.9 +2.3
      comp=Z,0.8nm,0.3s,baz=356,slow=7.5,SNR=3.5
BDFB  Brasilia          69.90 116  P      P      01 40 29.2 +1.6
BDFB                               IAmb   IAmb   01 40 34.0
      comp=Z,2.9nm,0.9s
PLCA  Paso Flores       70.24 150  LR     LR     02 04 29.9
      comp=Z,78nm,18.3s,baz=337,slow=30
ESDC  Sonseca Array     88.85  48  LR     LR     02 21 20.4
      comp=Z,19nm,19.6s,baz=0.0,slow=35
DZM   Mont Dzumac       92.07 247 eLR     LR     02 11 56.9
      comp=Z,180nm,27.6s
WRA   Warramunga Arr   120.36 258  PKP    PKiKP  01 48 14.0 +5.9
      comp=Z,0.6nm,1.0s,baz=82,slow=2.3,SNR=2.4
ASAR  Alice Springs    121.44 254  PKP    PKiKP  01 48 15.9 +5.8
      comp=Z,0.2nm,0.5s,baz=93,slow=1.9,SNR=1.8
```

NNC 01 01:29:56.9±16.0**, 36.°79N**×**70.°48E, h0^{km}, mb3.7, mpv3.4, 4C-2D, Error ellipse: s-maj=128.2km s-min=110.3km az=164.0, Hindu Kush region**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC       h  m  s     ISC
KK07  Karatay Array     6.29    0 ⇑P     Pn      01 31 32.0 +1.0
      1.0nm,0.5s,baz=172,slow=12
KK07                              ⇓S     Sn      01 32 43.1 -0.5
      0.2nm,0.3s,baz=178,slow=22
AAK   Ala-Archa         6.61   27 ⇑P     Pn      01 31 35.1 -0.3
      1.2nm,0.3s
AAK                               ⇑S     Sn      01 32 48.8 -2.7
      1.3nm,0.6s
TKM2  Tokmak 2          7.28   31 ⇓P     Pn      01 31 42.9 -1.8
      1.7nm,0.7s
TKM2                              ⇑S     Sn      01 33 17.0 +8.9
      0.2nm,0.4s
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*KRNET **01** 01:33:10.0±0.1, 40.°78N×77.°78E, h18^{km}, mb3.4*
*SOME **01** 01:33:11.2, 40.°88N×77.°73E, h10^{km}*
*NNC **01** 01:33:12.1±0.9, 40.°87N×77.°76E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=6.1km s-min=4.4km az=172.0*
ISC 01 01:33:12.2±1.6**, 40.°88N**±0.°07×**77.°73E**±0.°04**, h10^{km}, n69, σ1.°78**/103**, 28C-17D, Kyrgyzstan-Xinjiang border region**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC       h  m  s     ISC
TARG  Taragay, Kyrgy    0.85    4⇓iP     Pg      01 33 28.4 -0.4
      baz=1.0
TARG                             ⇓iS     Sb      01 33 41.8 +0.7
      baz=1.0
KDJ   Kajisay           1.32  342⇑eP     Pb      01 33 36.8 -0.4
      baz=42
KDJ                              ⇑iS     Sg      01 33 56.4 +1.7
      baz=42
PRZ   Przheval'sk       1.68   17⇓iP     Pb      01 33 43.1 -0.3
      baz=15
PRZ                              ⇓iS     Sg      01 34 07.1 +0.7
      baz=15
ULHL  Ulahol            1.77  321  P     Pb      01 33 44.7 -0.2
      SNR=52
ULHL  Ulahol            1.77  321⇑iP     Pb      01 33 44.7 -0.2
      baz=22
ULHL                             ⇑iS     Sg      01 34 10.1 +1.0
      baz=22
ANVS  Anan'yevo         1.91  359⇓eP     Pb      01 33 47.4 +0.2
      baz=58
ANVS                             ⇓iS     Sg      01 34 14.4 +0.9
      baz=58
BOOM  Boomskoye usch    2.10  321⇑iP     Pb      01 33 49.8 -0.7
      baz=22
BOOM                             ⇑iS     Sg      01 34 18.8 -0.9
      baz=22
TNSS  Tian-Shan         2.24  345 eP     Pb      01 33 53.5 +0.5
      44nm,0.4s
TNSS                              eS     Sg      01 34 24.2  0.0
      47nm,0.9s
TNSS  Tian-Shan         2.24  345  Pg    Pb      01 33 53.5 +0.5
      44nm,0.4s
TNSS                               Lg    Lg      01 34 24.2
      47nm,0.9s
SATY  Saty              2.24   13 eP     Pg      01 33 54.0 -1.1
      7.8nm,0.3s
SATY                              eS     Sg      01 34 25.0 +0.8
      90nm,1.0s
SATY  Saty              2.24   13  Pg    Pg      01 33 54.0 -1.1
      7.8nm,0.3s
SATY                               Lg    Lg      01 34 25.0
      90nm,1.0s
MDOK  Medeo             2.34  348 eP     Pb      01 33 55.1 +0.4
      24nm,0.5s
MDOK                              eS     Sg      01 34 26.6 -0.8
      84nm,0.7s
MDOK  Medeo             2.34  348 ⇑Pg    Pb      01 33 54.3 -0.4
      18nm,0.5s
MDOK                              ⇑Lg    Lg      01 34 27.3
      108nm,0.8s
MDOK  Medeo             2.34  348  Pg    Pb      01 33 55.1 +0.4
      24nm,0.5s
MDOK                               Lg    Lg      01 34 26.6
      84nm,0.7s
KOTS  Kotyrbulak        2.40  349 eP     Pg      01 33 57.4 -0.9
      20nm,0.3s
KOTS                              eS     Sg      01 34 30.5 +1.1
      68nm,0.3s
KOTS  Kotyrbulak        2.40  349  Pg    Pg      01 33 57.4 -0.9
      20nm,0.3s
KOTS                               Lg    Lg      01 34 30.5
      68nm,0.3s
KNDC  Almaty            2.41  347 ⇓Pg    Pb      01 33 56.6 +0.9
      37nm,0.5s
KNDC                              ⇑Lg    Lg      01 34 30.9
      201nm,0.6s
AAA   Alma-Ata          2.41  346 eP     Pg      01 33 57.3 -1.1
      71nm,0.5s
AAA                               eS     Sg      01 34 31.1 +1.5
      202nm,0.7s
AAA   Alma-Ata          2.41  346  Pg    Pg      01 33 57.3 -1.1
      71nm,0.5s
AAA                                Lg    Lg      01 34 31.1
      202nm,0.7s
MTBS  Maitube           2.45  337 eP     Pb      01 33 57.4 +0.9
      20nm,0.4s
MTBS                              eS     Sg      01 34 31.6 +0.5
      63nm,0.4s
MTBS  Maitube           2.45  337  Pg    Pb      01 33 57.4 +0.9
      20nm,0.4s
MTBS                               Lg    Lg      01 34 31.6
      63nm,0.4s
UZB   Uzynbulak         2.46   23 eP     Pb      01 33 56.5 -0.3
      6.8nm,0.3s
UZB                               eS     Sg      01 34 29.1 -2.3
      40nm,0.6s
UZB   Uzynbulak         2.46   23  Pg    Pb      01 33 56.5 -0.3
      6.8nm,0.3s
UZB                                Lg    Lg      01 34 29.1
      40nm,0.6s
KST   Kastek            2.54  329 eP     Pb      01 33 58.7 +0.8
      27nm,0.3s
KST                               eS     Sg      01 34 32.8 -0.9
      35nm,0.5s
KST   Kastek            2.54  329  Pg    Pb      01 33 58.7 +0.8
      27nm,0.3s
KST                                Lg    Lg      01 34 32.8
      35nm,0.5s
TKM2  Tokmak 2          2.59  323  P     Pb      01 33 59.7 +0.8
      SNR=25
TKM2  Tokmak 2          2.59  323 ⇑Pg    Pb      01 33 59.1 +0.2
      11nm,0.5s
TKM2                              ⇑Lg    Lg      01 34 35.5
      18nm,0.6s
TKM2  Tokmak 2          2.59  323⇓iP     Pb      01 33 56.7 -2.2
      baz=23
TKM2                             ⇓iS     Sb      01 34 30.9  0.0
      baz=23
KURS  Kuram             2.63    7 eP     Pg      01 34 00.6 -2.0
      7.3nm,0.6s
KURS                              eS     Sg      01 34 36.1 -0.6
      39nm,0.8s
KURS  Kuram             2.63    7  Pg    Pg      01 34 00.6 -2.0
      7.3nm,0.6s
KURS                               Lg    Lg      01 34 36.1
      39nm,0.8s
KBK   Karagaybulak      2.74  311  P     Pb      01 34 02.7 +1.3
      SNR=19
KBK   Karagaybulak      2.74  311⇑iP     Pb      01 33 58.6 -2.8
      baz=12
KBK                              ⇑iS     Sb      01 34 34.0 -1.1
      baz=12
UCH   Uchtor            2.77  300  P     Pb      01 34 02.3 +0.3
      SNR=19
UCH   Uchtor            2.77  300⇓eP     Pn      01 33 59.0 +1.9
      baz=2.0
UCH                              ⇓iS     Sb      01 34 34.8 -1.4
      baz=2.0
DGS   Degeres           2.78  329 eP     Pb      01 34 03.0 +1.0
      35nm,0.5s
DGS                               eS     Sg      01 34 40.0 -1.5
      55nm,0.4s
DGS   Degeres           2.78  329  Pg    Pb      01 34 03.0 +1.0
      35nm,0.5s
DGS                                Lg    Lg      01 34 40.0
      55nm,0.4s
PDGK  Podgornoye        2.78   28  Pg    Pb      01 34 01.5 -0.6
      6.9nm,0.4s
PDGK                               Lg    Lg      01 34 37.7
      56nm,0.7s
PDGK  Podgornoye        2.78   28 ⇑Pn    Pb      01 33 58.9 -3.2
      6.5nm,0.4s
PDGK                              ⇓Lg    Lg      01 34 40.0
      60nm,0.6s
KTBS  Karatobe          2.94  345 eP     Pb      01 34 05.4 +0.7
      11nm,0.3s
KTBS                              eS     Sg      01 34 44.3 -2.4
      102nm,0.6s
KTBS  Karatobe          2.94  345  Pg    Pb      01 34 05.4 +0.7
      11nm,0.3s
KTBS                               Lg    Lg      01 34 44.3
      102nm,0.6s
AAK   Ala-Archa         2.99  307  P     Pb      01 34 06.5 +0.8
      SNR=32
AAK   Ala-Archa         2.99  307 ⇑Pg    Pb      01 34 06.4 +0.6
      24nm,0.7s
AAK                               ⇓Lg    Lg      01 34 46.2
      30nm,0.7s
AAK   Ala-Archa         2.99  307⇑iP     Pn      01 34 02.1 +2.2
      baz=8.0
AAK                              ⇑iS     Sb      01 34 40.1 -2.3
      baz=8.0
CHMS  Chumysh           3.07  315  P     Pb      01 34 08.6 +1.6
      SNR=15
CHMS  Chumysh           3.07  315⇑iP     Pn      01 34 03.1 +2.2
      baz=15
CHMS                             ⇑iS     Sb      01 34 41.9 -2.7
      baz=15
KUU   Kurty             3.19  342 eP     Pb      01 34 10.2 +1.2
      4.3nm,0.2s
KUU                               eS     Sg      01 34 52.5 -2.0
      16nm,0.5s
KUU   Kurty             3.19  342  Pg    Pb      01 34 10.2 +1.2
      4.3nm,0.2s
KUU                                Lg    Lg      01 34 52.5
      16nm,0.5s
KRBS  Karabastau        3.21  332 eP     Pb      01 34 10.2 +0.9
      21nm,0.4s
KRBS                              eS     Sg      01 34 52.4 -2.7
      16nm,0.5s
KRBS  Karabastau        3.21  332  Pg    Pb      01 34 10.2 +0.9
      21nm,0.4s
KRBS                               Lg    Lg      01 34 52.4
      16nm,0.5s
BLB   Baldybastay       3.27    9  Pg    Pb      01 34 11.7 +1.4
      11nm,0.4s
BLB                                Lg    Lg      01 34 54.9
      34nm,0.3s
AML   Almayashu         3.28  294  P     Pg      01 34 13.0 -2.1
      SNR=14
AML   Almayashu         3.28  294⇓eP     Pn      01 34 06.0 +1.9
      baz=95
AML                              ⇓iS     Sn      01 34 46.8 +3.4
      baz=95
ARXS  Arharly           3.34    1 eP     Pb      01 34 13.2 +1.6
      6.2nm,0.5s
ARXS                              eS     Sg      01 34 57.3 -2.0
      86nm,0.5s
ARXS  Arharly           3.34    1  Pg    Pb      01 34 13.2 +1.6
      6.2nm,0.5s
ARXS                               Lg    Lg      01 34 57.3
      86nm,0.5s
USP   Ospenovka         3.39  316  P     Pb      01 34 13.7 +1.2
      SNR=26
USP   Ospenovka         3.39  316⇑eP     Pn      01 34 07.6 +2.4
      baz=17
USP                              ⇑iS     Sb      01 34 49.7 -4.0
      baz=17
EKS2  Erkin-Say         3.45  302  P     Pb      01 34 15.7 +2.1
      SNR=32
EKS2  Erkin-Say         3.45  302⇑iP     Pn      01 34 08.4 +2.2
      baz=3.0
EKS2                             ⇑iS     Sn      01 34 50.8 +3.6
      baz=3.0
DJR   Jarkent           3.77   23 eP     Pb      01 34 20.7 +1.7
      1.9nm,0.2s
DJR                               eS     Sg      01 35 10.4 -3.0
      14nm,0.5s
DJR   Jarkent           3.77   23  Pg    Pb      01 34 20.7 +1.7
      1.9nm,0.2s
DJR                                Lg    Lg      01 35 10.4
      14nm,0.5s
MRKS  Merke             3.85  300 eP     Pb      01 34 21.9 +1.6
      5.4nm,0.4s
MRKS                              eS     Sg      01 35 12.7 -3.2
      11nm,0.4s
MRKS  Merke             3.85  300  Pg    Pb      01 34 21.9 +1.6
      5.4nm,0.4s
MRKS                               Lg    Lg      01 35 12.7
      11nm,0.4s
MNAS  Manas             4.23  294⇑iP     Pn      01 34 18.9 +2.0
      baz=95
MNAS                             ⇑iS     Sn      01 35 09.4 +2.9
      baz=95
KAPS  Kapalarasan       4.56   15 eP     Pb      01 34 35.2 +2.8
      3.3nm,0.5s
KAPS                              eS     Sg      01 35 35.3 -3.4
      5.7nm,0.4s
KAPS  Kapalarasan       4.56   15  Pg    Pb      01 34 35.2 +2.8
      3.3nm,0.5s
KAPS                               Lg    Lg      01 35 35.3
      5.7nm,0.4s
BTLS  Baital            4.96  328 eP     Pg      01 34 43.5 -3.8
      3.0nm,0.4s
BTLS                              eS     Sg      01 35 49.3 -2.2
      6.3nm,0.6s
BTLS  Baital            4.96  328  Pg    Pg      01 34 43.5 -3.8
      3.0nm,0.4s
BTLS                               Lg    Lg      01 35 49.3
      6.3nm,0.6s
KK07  Karatay Array     5.83  295 ⇓Pg    Pg      01 35 00.5 -3.3
      0.8nm,0.5s
KK07                              ⇓Lg    Lg      01 36 14.7
      2.4nm,0.6s
MK31  Makanchi Array    6.77   28 ⇑Pn    Pn      01 34 51.7  0.0
      0.3nm,0.3s,baz=208,slow=14,SNR=13
MK31                              ⇑Sn    Sn      01 36 09.7 +0.9
      0.9nm,0.6s,baz=204,slow=24,SNR=3.8
MK31                              ⇑Lg    Lg      01 36 43.8
      2.1nm,0.8s,baz=172,slow=39,SNR=4.7
```

IDC 01 01:44:41.4±31.0**, 23.°26S**×**175.°01W, h0^{km}, mb4.1**/4**, mb1 4.3**/4**, mb1mx3.9**/25**, mbtmp4.1**/4**, Error ellipse: s-maj=571.5km s-min=159.0km az=80.0, Tonga Islands region**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC       h  m  s     ISC
CTA   Charters Tower   36.06  267  P     P       01 51 46.0 +1.0
      2.4nm,0.4s,baz=91,slow=5.2,SNR=1.5
STKA  Stephens Creek   39.20  248  P     P       01 52 10.6 -0.8
      1.0nm,0.4s,baz=98,slow=9.7,SNR=3.8
ASAR  Alice Springs    46.65  259  P     P       01 53 11.7 -0.4
      0.7nm,0.5s,baz=99,slow=6.4,SNR=8.2
WRA   Warramunga Arr   47.02  264  P     P       01 53 14.8 -0.1
      1.8nm,0.5s,baz=100,slow=7.9,SNR=32
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*IDC **01** 01:50:42.7±1.9, 22.°51S×67.°70W, h61^{km}±20^{km}, mb2.8/1, mb1 3.2/4, mb1mx3.1/19, mbtmp3.1/4, Error ellipse: s-maj=39.0km s-min=15.3km az=155.0*
*GUC **01** 01:50:46.6±0.8, 22.°46S×68.°49W, h114^{km}±4^{km}, ML3.4*
ISC 01 01:50:43.8±1.1**, 22.°45S**±0.°05×**68.°45W**±0.°08**, h132^{km}**±9^{km}**, n21, σ1.°26**/35**, 10C-1D, Northern Chile**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC       h  m  s     ISC
LVC   Limon Verde       0.46  249  P     Pn      01 51 04.0 +0.7
      64nm,0.3s,baz=80,slow=10,SNR=360
LVC                                S     Sn      01 51 17.5 -0.5
      294nm,0.3s,baz=257,slow=21,SNR=34
LVC   Limon Verde       0.46  249 eP     Pn      01 51 03.1 -0.2
LVC                               i S    Sn      01 51 17.0 -1.0
PB09  IPOC Station P    0.98  311⇑iP     Pn      01 51 08.2 +1.3
PB09                              i S    Sn      01 51 24.5  0.0
PB09                               IAML          01 51 26.3
      comp=E,533nm,0.4s
PB06  IPOC Station P    1.07  256⇑iP     Pn      01 51 08.4 +0.6
PB06                              i S    Sn      01 51 25.3 -0.6
PB06                               IAML          01 51 30.3
      comp=E,672nm,0.1s
PB15  IPOC Station P    1.21  231 eP     Pn      01 51 10.2 +1.0
PB15                              i S    Sn      01 51 28.8 +0.3
PB03  IPOC Station P    1.28  288⇑iP     Pn      01 51 10.5 +0.7
PB03                              i S    Sn      01 51 28.8 -0.7
PB03                               IAML          01 51 29.9
      comp=N,858nm,0.2s
PB07  IPOC Station P    1.52  298⇑iP     Pn      01 51 13.3 +0.8
PB07                              i S    Sn      01 51 33.3 -0.9
PB07                               IAML          01 51 33.8
      comp=N,815nm,0.2s
PB04  IPOC Station P    1.58  274⇑iP     Pn      01 51 13.8 +0.6
PB04                              i S    Sn      01 51 35.2 -0.3
PB04                               IAML          01 51 38.8
      comp=N,502nm,0.2s
PB05  IPOC Station P    1.67  256⇑iP     Pn      01 51 14.7 +0.6
PB05                              i S    Sn      01 51 36.2 -1.1
PB05                               IAML          01 51 37.6
      comp=E,223nm,0.3s
PB01  IPOC Station P    1.70  325⇑iP     Pn      01 51 15.4 +0.9
PB01                              i S    Sn      01 51 37.5 -0.3
PB01                               IAML          01 51 39.0
      comp=E,534nm,0.1s
PB02  IPOC Station P    1.75  310⇑iP     Pn      01 51 15.8 +0.7
PB02                              i S    Sn      01 51 38.0 -0.9
PB02                               IAML          01 51 39.7
      comp=N,582nm,0.2s
PB10  IPOC Station P    2.21  241⇓iP     Pn      01 51 21.0 +0.4
PB10                              i S    Sn      01 51 46.8 -1.9
PB10                               IAML          01 51 48.8
      comp=N,217nm,0.3s
PATCX Punta Patache     2.27  315⇑iP     Pn      01 51 21.4 +0.1
PATCX                             i S    Sn      01 51 48.9 -1.2
PATCX                              IAML          01 51 58.1
      comp=N,217nm,0.4s
PB08  IPOC Station P    2.39  344 eP     Pn      01 51 25.1 +2.0
PB08                              i S    Sn      01 51 54.5 +1.3
PB08                               IAML          01 51 58.5
      comp=N,123nm,0.2s
TA01  Diego Aracena     2.48  319 eP     Pn      01 51 23.8  0.0
TA01                              i S    Sn      01 51 53.0 -1.5
TA01                               IAML          01 51 56.8
      comp=E,158nm,0.2s
PB11  IPOC Station P    2.90  337⇑iP     Pn      01 51 29.8 +0.3
PB11                              i S    Sn      01 52 03.8 -0.8
PB11                               IAML          01 52 07.5
      comp=N,159nm,0.3s
LPAZ  La Paz            6.14    3  P     Pn      01 52 11.4 -1.4
      comp=N,0.1nm,0.3s,baz=152,slow=15,SNR=2.0
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIV	San Ignacio	9.47	49	P	Pn	01 52 51.3	-5.9
	comp=N,0.1nm,0.3s,baz=235,slow=12,SNR=1.8						
SIV				S	Sn	01 54 30.7	-11
	comp=N,0.2nm,0.3s,baz=343,slow=12,SNR=2.1						
BDFB	Brasilia	20.45	74	P	P	01 55 07.6	-3.6
	comp=N,0.2nm,0.3s,baz=225,slow=13,SNR=2.5						
TXAR	Lajitas Array	61.65	325	P	P	02 00 58.3	+10
	comp=N,0.1nm,0.5s,baz=138,slow=9.6,SNR=1.9						
TORD	Torodi Ar. Bea	77.27	70	P	P	02 02 27.0	+2.9
	comp=N,0.3nm,0.4s,baz=251,slow=5.3,SNR=9.0						

KRSC 01 01:52:08.4±2.1, 48°.14N×155°.10E, h170km±31km, ML4.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.63	14	eP	Pn	01 52 52.9	+0.9
SKR				eS	Sn	01 53 27.0	+1.0
PAU	Pauzhetka	3.51	18	eP	Pn	01 53 04.3	+1.4
PAU				eS	Sn	01 53 46.2	+0.8
KDTR	Khodutka, Kamc	4.14	26	eP	Pn	01 53 12.4	+1.5
KDTR				eS	Sn	01 54 00.5	+0.6
MIPR	Malaya Ipel'ka	4.28	14	eP	Pn	01 53 12.6	-0.1
ASAK	Asacha	4.61	22	eP	Pn	01 53 19.4	+2.3
ASAK				eS	Sn	01 54 12.3	+1.4
MTVR	Mutnovka	4.78	23	eP	Pn	01 53 22.0	+2.7
MTVR				eS	Sn	01 54 16.6	+1.8
RUS	Russkaya	4.82	26	eP	Pn	01 53 21.1	+1.4
RUS				eS	Sn	01 54 15.0	-0.6
KOK	Koryaka	5.63	22	eP	Pn	01 53 32.9	+2.6
AVH	Avacha	5.63	23	eP	Pn	01 53 32.8	+2.5
SMAR	Somma	5.64	23	eP	Pn	01 53 33.4	+2.7
SDLR	Sedlovina	5.68	24	eP	Pn	01 53 32.9	+1.9
NLC	Nalytchevo	5.71	27	eS	Sn	01 54 35.4	-1.2
GNL	Ganaly	5.84	17	P	Pn	01 53 33.9	+0.7
SPN	Mys Shipunski	5.87	30	eP	Pn	01 53 35.5	+2.1
SPN				eS	Sn	01 54 39.6	-0.6
MKZ	Mys Kozlova	7.65	30	eP	Pn	01 53 58.4	+1.6
MKZ				eS	Sn	01 55 20.1	-2.4
TUMD	Tumrok D	7.80	23	eP	Pn	01 54 01.8	+2.9
TUMR	Tumrok	7.81	22	eP	Pn	01 54 02.6	+3.5
KBTR	Krutoberegovo	9.36	27	eP	Pn	01 54 19.7	+0.2
BKI	Bering	9.77	40	S	Sn	01 56 11.2	-2.1

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*IDC **01** 02:57:36.7±1.3, 8°.16S×125°.56E, h0km, mb4.1/3, mb1 4.2/7, mb1mx3.7/41, mbtmp4.1/7, ML3.8/4, MS3.1/5, Ms1 3.1/5, ms1mx2.7/32, Error ellipse: s-maj=47.9km s-min=22.0km az=80.0*

*DJA **01** 02:57:42.1±0.5, 8°S±3°×12°5E±°, h10km, M4.2/9, mb4.5/6, mB4.6/1, MLv4.1/9, Mw(mB)3.8/1*

ISC 01 02:57:40.5±1.1, **8°.39S**±0°.08×**125°.49E**±0°.09, **h35km, n16, σ2s.20**/18, **mb4.1**/3, **Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOEI	Soe	1.82	222	P	Pn	02 58 11.3	+1.9
BATI	Baumata	2.55	225	Pn	Pn	02 58 22.5	+3.0
	20nm,0.3s,baz=205,slow=2.5,SNR=13						
BATI				Sn	Sn	02 58 46.5	-2.8
	25nm,0.3s,baz=346,slow=12,SNR=6.0						
BATI				LR	LR	02 59 46.4	
	comp=Z,454nm,20.2s,baz=34,slow=47						
BATI	Baumata	2.55	225	P	Pn	02 58 21.4	+1.9
MMRI	Maumere	3.23	265	P	Pn	02 58 28.8	0.0
EDFI	Ende, Flores	3.78	264	P	Pn	02 58 35.2	-1.2
BSSI	Bau Bau, Buton	5.44	294	P	Pn	02 58 58.8	-0.4
	0.1nm590nm24nm,0.7s						
BNSI	Bone	6.66	306	P	Pn	02 59 14.2	-1.7
	0.1nm28nm,0.7s						
PLAI	Plampang	7.64	266	P	Pn	02 59 30.1	+0.6
	0.1nm22nm,0.8s						
FITZ	Fitzroy Crossi	9.65	179	Pn	Pn	02 59 59.4	+2.4
	0.8nm,0.3s,baz=360,slow=11,SNR=5.3						
FITZ				Sn	Sn	03 01 41.8	-2.5
	baz=288,slow=20						
WRA	Warramunga Arr	14.32	144	Pn	Pn	03 01 02.1	+1.2
	0.4nm,0.3s,baz=319,slow=12,SNR=40						
WRA				Sn	Sn	03 03 35.7	-3.0
	0.3nm,0.3s,baz=318,slow=24,SNR=5.5						
WRA				LR	LR	03 07 45.0	
	comp=Z,34nm,18.9s,baz=195,slow=42						
ASAR	Alice Springs	17.20	153	P	P	03 01 41.8	+2.3
	0.3nm,0.3s,baz=324,slow=12,SNR=16						
ASAR				S	Sn	03 04 44.7	-3.8
	0.1nm,0.3s,baz=316,slow=22,SNR=2.3						
ASAR				LR	LR	03 09 51.7	
	comp=Z,52nm,20.0s,baz=3.5,slow=42						
LEM	Lembang	17.79	274	LR	LR	03 10 02.4	
	comp=Z,98nm,18.6s,baz=6.5,slow=42						
PMG	Port Moresby	21.43	94	LR	LR	03 12 18.7	
	comp=Z,53nm,19.1s,baz=169,slow=41						
MKAR	Makanchi Array	67.03	329	P	P	03 08 31.1	+1.0
	1.5nm,0.8s,baz=135,slow=6.3,SNR=8.2						
ZALV	Zalesovo Beam	70.94	336	P	P	03 08 54.5	+0.4
	1.4nm,0.7s,baz=134,slow=4.3,SNR=5.0						
KURBB	Kurchatov Arra	71.44	331	P	P	03 08 57.5	+0.3
	1.7nm,1.0s,baz=134,slow=5.4,SNR=8.1						

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*IDC **01** 02:58:11.8±1.0, 7°.21N×91°.79E, h0km, mb3.8/8, mb1 4.0/10, mb1mx3.6/50, mbtmp3.9/10, ML4.8/2, MS3.1/6, Ms1 3.1/6, ms1mx2.8/38, Error ellipse: s-maj=33.2km s-min=19.6km az=68.0*

ISC 01 02:58:13.1±0.9, **7°.2N**±0°.1×**91°.7E**±0°.1, **h10km, n15, σ0s.75**/10, **mb3.8**/8, **MS3.2**/4, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PALK	Pallekele	10.95	271	Pn	Pn	03 00 49.4	-0.7
	4.0nm,0.3s,baz=190,slow=15,SNR=18						
PALK				Sn	Sn	03 02 37.1	-16
	15nm,0.3s,baz=128,slow=12,SNR=16						
PALK				LR	LR	03 04 35.0	
	comp=Z,84nm,19.6s,baz=184,slow=35						
CMAR	Chiang Mai Arr	13.18	31	Pn	Pn	03 01 20.1	-0.4
	2.0nm,0.3s,baz=230,slow=14,SNR=2.3						
CMAR				LR	LR	03 06 20.6	
	comp=Z,27nm,18.9s,baz=208,slow=37						
H08S3	Diego Garcia H	24.22	233	T	T	03 30 09.8	
	baz=52,slow=75,SNR=60						
H08S2	Diego Garcia H	24.22	233	T	T	03 30 14.9	
	baz=52,slow=75,SNR=5.6						
H08S1	Diego Carcia H	24.24	233	T	T	03 30 28.5	
	baz=52,slow=75,SNR=13						
MKAR	Makanchi Array	40.25	350	P	P	03 05 50.8	+0.6
	1.3nm,0.7s,baz=171,slow=9.0,SNR=4.9						
SONM	Songino Array	42.34	15	P	P	03 06 07.8	+0.3
	0.4nm,0.4s,baz=196,slow=8.6,SNR=4.0						
SONM				LR	LR	03 23 47.6	
	comp=Z,41nm,18.4s,baz=346,slow=36						
KSRS	Korea Array	44.52	42	LR	LR	03 26 01.3	
	comp=Z,9.6nm,20.1s,baz=340,slow=38						
KURBB	Kurchatov Arra	44.63	348	P	P	03 06 25.9	+0.2
	0.9nm,0.8s,baz=173,slow=7.5,SNR=6.0						
ZALV	Zalesovo Beam	46.92	354	P	P	03 06 43.7	0.0
	0.9nm,0.6s,baz=169,slow=8.6,SNR=5.2						
BVAR	Borovoye Array	48.87	343	P	P	03 06 59.7	+0.8
	0.2nm,0.6s,baz=197,slow=4.5,SNR=1.5						
WRA	Warramunga Arr	49.86	124	P	P	03 07 05.8	-1.1
	1.2nm,0.7s,baz=308,slow=8.4,SNR=4.7						
ASAR	Alice Springs	51.36	128	P	P	03 07 18.4	+0.1
	1.2nm,0.8s,baz=300,slow=7.4,SNR=5.2						
ASAR				LR	LR	03 30 21.6	
	comp=Z,16nm,18.9s,baz=10,slow=38						
MAW	Mawson	77.44	191	P	P	03 10 09.1	+0.9
	1.7nm,0.7s,baz=37,slow=5.1,SNR=2.1						
ESDC	Sonseca Array	89.81	310	LR	LR	03 56 11.9	
	comp=Z,33nm,18.3s,baz=5.0,slow=39						

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*NEIC **01** 02:58:24.4±1.5, 19°.56S±0°.04×69°.32W±0°.06, h100km±5km, mb4.3/6, ML3.9(GUC), Error ellipse: s-maj=7.5km s-min=6.5km az=82.0*

*GUC **01** 02:58:25.1±0.8, 19°.56S×69°.37W, h105km±2km, ML4.0*

*IDC **01** 02:58:25.9±1.8, 19°.59S×69°.08W, h115km±14km, mb3.8/4, mb1 3.7/7, mb1mx3.5/27, mbtmp4.1/7, Error ellipse: s-maj=35.8km s-min=12.5km az=103.0*

*VAO **01** 02:58:27.8±0.5, 19°.47S×69°.24W, h136km, mb4.2*

ISC 01 02:58:24.1±0.6, **19°.56S**±0°.03×**69°.36W**±0°.06, **h107**km±6km, **n82, σ1s.19**/102, **mb4.3**/5, **9C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.34	234	⇑eP	Pn	02 58 40.1	+0.1
PB11				i S	Sn	02 58 51.7	-0.1
PB11				IAML		02 58 52.3	
	comp=E,14μm,0.3s						
PB11	IPOC Station P	0.34	234		Pn	02 58 39.4	-0.6
PB11				Sn	Sn	02 58 51.5	-0.3
PB08	IPOC Station P	0.61	161	⇑iP	Pn	02 58 42.6	+0.7
PB08				i S	Sn	02 58 55.6	+0.4
PB08				IAML		02 58 56.7	
	comp=E,6μm,0.4s						
PB08	IPOC Station P	0.61	161		Pn	02 58 41.1	-0.8
PB08				Sn	Sn	02 58 55.4	+0.1
HMBC	Humberstone	0.87	215	⇑iP	Pn	02 58 44.1	+0.2
HMBC				i S	Sn	02 58 58.7	-0.1
HMBC				IAML		02 59 01.1	
	comp=N,3μm,0.4s						
TA02	Huaiquique	1.01	226	⇑iP	Pn	02 58 45.4	+0.2
TA02				i S	Sn	02 59 00.8	-0.3
TA02				IAML		02 59 03.6	
	comp=N,5μm,0.1s						
TA02	Huaiquique	1.01	226		Pn	02 58 45.4	+0.2
PB16	IPOC Station P	1.23	353		Pn	02 58 48.6	+0.4
TA01	Diego Aracena	1.26	218	⇑iP	Pn	02 58 47.9	-0.1
TA01				i S	Sn	02 59 05.4	-0.6
TA01	Diego Aracena	1.26	218	Pn	Pn	02 58 48.0	-0.1
PB12	IPOC Station P	1.31	316	⇓iP	Pn	02 58 48.7	0.0
PB12				i S	Sn	02 59 06.4	-0.8
PB12				IAML		02 59 08.0	
	comp=E,3μm,0.7s						
PB12	IPOC Station P	1.31	316	Pn	Pn	02 58 48.7	0.0
PATCX	Punta Patache	1.46	211	⇑iP	Pn	02 58 50.1	-0.3
PATCX				i S	Sn	02 59 10.1	-0.2
PATCX				IAML		02 59 11.6	
	comp=E,2μm,0.5s						
PATCX	Punta Patache	1.46	211		Pn	02 58 50.4	0.0
PB01	IPOC Station P	1.48	185	⇑iP	Pn	02 58 51.2	+0.5
PB01				i S	Sn	02 59 11.2	+0.4
PB01				IAML		02 59 13.2	
	comp=N,3μm,0.2s						
PB01	IPOC Station P	1.48	185		Pn	02 58 51.0	+0.3
AP01	Chacalluta	1.50	322	⇑iP	Pn	02 58 51.4	+0.6
AP01				i S	Sn	02 59 11.8	+0.7
AP01				IAML		02 59 15.4	
	comp=N,4μm,0.5s						
AP01	Chacalluta	1.50	322		Pn	02 58 51.4	+0.6
PB02	IPOC Station P	1.82	196	⇑iP	Pn	02 58 55.2	+0.4
PB02				i S	Sn	02 59 18.2	0.0
PB02				IAML		02 59 23.4	
	comp=E,2μm,0.3s						
PB07	IPOC Station P	2.21	193	eP	Pn	02 59 00.2	+0.3
PB07				i S	Sn	02 59 26.4	-0.8
PB07				IAML		02 59 33.8	
	comp=E,738nm,0.1s						
PB07	IPOC Station P	2.21	193		Pn	02 59 00.2	+0.3
PB09	IPOC Station P	2.23	177	eP	Pn	02 59 01.1	+1.0
PB09				eS	Sn	02 59 28.8	+1.2
PB09				IAML		02 59 33.8	
	comp=N,654nm,0.8s						
PB09	IPOC Station P	2.23	177		Pn	02 58 59.8	-0.3
PB03	IPOC Station P	2.50	188	eP	Pn	02 59 03.9	+0.2
PB03				i S	Sn	02 59 32.6	-1.4
PB04	IPOC Station P	2.86	195	eP	Pn	02 59 08.7	+0.4
PB04				i S	Sn	02 59 39.4	-2.9
PB04				IAML		02 59 57.9	
	comp=E,434nm,0.7s						
PB04	IPOC Station P	2.86	195	Pn	Pn	02 59 09.1	+0.8
LVC	Limon Verde	3.06	172	P	Pn	02 59 12.7	+1.4
	comp=E,9.4nm,0.3s,baz=2.3,slow=12,SNR=60						
LVC				S	Sn	02 59 48.7	+1.2
	comp=E,61nm,0.3s,baz=316,slow=12,SNR=35						
LVC	Limon Verde	3.06	172	Pn	Pn	02 59 12.1	+0.8
PB06	IPOC Station P	3.14	184	eP	Pn	02 59 12.2	+0.2
PB06				i S	Sn	02 59 46.9	-2.1
PB06				IAML		02 59 47.8	
	comp=N,345nm,0.6s						
PB06	IPOC Station P	3.14	184		Pn	02 59 12.5	+0.5
PB05	IPOC Station P	3.37	193	eP	Pn	02 59 14.7	-0.4
PB05				i S	Sn	02 59 49.3	-5.1
PB05				IAML		03 00 13.4	
	comp=E,210nm,0.4s						
LPAZ	La Paz	3.46	20	P	Pn	02 59 19.4	+2.7
	comp=E,2.3nm,0.3s,baz=204,slow=7.7,SNR=36						
LPAZ				S	Sn	02 59 54.1	-3.2
	comp=E,1.7nm,0.3s,baz=159,slow=6.8,SNR=4.7						
LPAZ	La Paz	3.46	20	eP	Pn	02 59 18.7	+1.9
LPAZ	La Paz	3.46	20	Pn	Pn	02 59 19.3	+2.5
PB15	IPOC Station P	3.63	182	eP	Pn	02 59 19.4	+0.7
PB15				i S	Sn	02 59 59.7	-1.2
PB15	IPOC Station P	3.63	182		Pn	02 59 18.9	+0.1
PB10	IPOC Station P	4.09	196	Pn	Pn	02 59 24.8	+0.1
AC02	Maricunga	7.25	178	Pn	Pn	03 00 07.2	-0.6
SIV	San Ignacio	8.65	67	P	Pn	03 00 24.5	-2.1
	comp=E,2.5nm,0.3s,baz=260,slow=9.5,SNR=76						
ETMB	Extrema	10.15	18	eP	Pn	03 00 49.1	+2.1
PTLB	Pontes e Lacer	10.57	69	Pn	Pn	03 00 50.8	-1.9
VILB	Vilhena	10.97	55	Pn	Pn	03 00 55.8	-2.3
PDRB	Porto dos Gac	14.50	59	eP	Pn	03 01 46.1	+1.7
CLDB	Colider	15.67	59	eP	P	03 02 00.5	-0.4
PTGB	Pitanga	16.82	111	eP	P	03 02 15.2	+1.5
ARAG	Araguaiana, MT	17.16	80	eP	P	03 02 19.0	+1.6
MACA	Manacapuru-AM	18.37	29	eP	P	03 02 29.9	-0.7
MACA	Manacapuru-AM	18.37	29		P	03 02 30.1	-0.6
NPGB	Novo Progresso	18.43	49	eP	P	03 02 30.6	-0.8
SNDB	Serra Nova Dou	18.94	69	eP	P	03 02 36.5	-0.4
CNLB	Canela	19.42	124	eP	P	03 02 42.1	0.0
BB19B	Bebedouro	19.60	98	eP	P	03 02 44.6	+0.5
IPMB	Ipameri, GO	20.09	89	eP	P	03 02 49.8	+0.3
ITTB	Itaituba	20.11	43	eP	P	03 02 48.7	-1.0
TER01	Tubaro-SC	20.50	120	eP	P	03 02 53.6	-0.1
BDFB	Brasilia	20.71	83	P	P	03 02 55.5	-0.8
	comp=E,4.2nm,0.5s,baz=246,slow=9.4,SNR=12						
BDFB	Brasilia	20.71	83	P	P	03 02 55.4	-0.9
BDFB				IAmb	IAmb	03 02 59.5	
	comp=Z,14nm,1.4s						
PTGA	Pitinga	20.85	27	P	P	03 02 56.0	-1.6
	comp=Z,4.4nm,0.3s,baz=325,slow=23,SNR=20						
PLCA	Paso Flores	21.13	183	P	P	03 03 01.6	+1.1
	comp=Z,5.0nm,0.8s,baz=352,slow=9.9,SNR=10						
PLCA	Paso Flores	21.13	183	eP	P	03 03 03.6	+3.2
PLCA	Paso Flores	21.13	183	P	P	03 03 00.3	-0.1
VAO	Valinhos	21.14	103	eP	P	03 02 59.9	-0.9
PEXB	Peixe	21.56	73	eP	P	03 03 03.9	-1.3
MALB	Monte Alegre	22.97	42	eP	P	03 03 19.2	-0.5
BSCB	Bom Sucesso	23.10	98	eP	P	03 03 21.4	+0.4
BOAV	Boa Vista	23.48	23	eP	P	03 03 24.4	0.0
BOAV	Boa Vista	23.48	23	P	P	03 03 24.3	-0.1
BOAV				IAmb	IAmb	03 03 25.1	
	comp=Z,8.3nm,0.6s						
SMTB	Santa Maria do	23.60	66	eP	P	03 03 26.4	+0.8
JANB	Januaria	24.32	83	eP	P	03 03 32.1	0.0
DIAM	Diamantina, MG	24.33	91	eP	P	03 03 32.8	+0.6
SDBA	SAO DESIDERIO	24.54	77	eP	P	03 03 34.2	+0.1
MCPB	Macapa, AP	25.53	44	eP	P	03 03 42.5	-0.5
SJMB	Sao Joao De Ma	26.62	93	eP	P	03 03 53.2	+0.4
SDV	Santo Domingo	28.30	357	eP	P	03 04 07.9	-0.1
GDU01	Guandu, BA	29.10	83	eP	P	03 04 14.1	-0.8
SNAA	Sanae	64.24	161	P	P	03 08 48.9	+1.4
SNAA				IAmb	IAmb	03 08 58.7	
	comp=Z,5.4nm,1.5s						
DBIC	Dimbokro	68.60	74	P	P	03 09 16.1	0.0
	comp=Z,2.7nm,0.9s,baz=234,slow=8.7,SNR=7.8						
DBIC	Dimbokro	68.60	74	P	P	03 09 15.8	-0.3
DBIC				IAmb	IAmb	03 09 20.2	
	comp=Z,8.9nm,1.2s						
TORD	Torodi Ar. Bea	77.11	71	P	P	03 10 05.6	-0.8
	comp=Z,48nm,0.5s,baz=253,slow=5.3,SNR=23						
MKAR	Makanchi Array	144.29	34	PKP	PKPab	03 17 46.6	+0.7
	comp=Z,0.3nm,0.6s,baz=323,slow=2.1,SNR=1.4						
MKAR	Makanchi Array	144.29	34		PKPbc	03 17 47.3	+1.1
SONM	Songino Array	151.59	6	PKPbc	PKPbc	03 18 07.2	+1.2
	comp=Z,1.0nm,0.8s,baz=333,slow=1.6,SNR=4.0						

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*IDC **01** 03:03:58.7±0.8, 30°.51S×71°.73W, h0km, mb4.2/7, mb1 4.2/12, mb1mx4.1/24, mbtmp4.1/12, ML4.0/5, MS3.4/7, Ms1 3.4/7, ms1mx3.2/22, Error ellipse: s-maj=27.9km s-min=18.5km az=103.0*

*SJA **01** 03:03:58.4±0.8, 30°.40S×72°.02W, h12km±4km, ML4.5, MW4.2*

*NEIC **01** 03:04:03.8±1.7, 30°.47S±0°.04×71°.69W±0°.08, h31km±4km, mb4.5/20, Mwr4.1/39, ML4.6(GUC), Error ellipse: s-maj=9.6km s-min=6.2km az=105.0*

*VAO **01** 03:04:04.2±0.5, 30°.49S×71°.58W, h31km, mb4.3*

*GUC **01** 03:04:04.6±0.8, 30°.41S×71°.63W, h18km±4km, ML4.6*

*NEIC **01** 03:04:04.3, 30°.47S×71°.63W, h33km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.61; $M_{\theta\theta}$-0.46; $M_{\phi\phi}$-1.15; $M_{r\theta}$0.08; $M_{\theta\phi}$1.11; $M_{\phi r}$-0.98; Fault plane solution: $M_0$2.06000×10^{15} NP1:ϕ_s160.06000°, δ59.84000°, λ109.01000°. NP2:ϕ_s305.62000°, δ35.16000°, λ60.72000°. Principal axes: T 1.9568, Plg69.0000°, Azm110.0000°; N 0.2009, Plg16.0000°, Azm330.0000°; P -2.1578, Plg13.0000°, Azm236.0000°;*

ISC 01 03:03:59.8±1.6, **30°.43S**±0°.02×**71°.78W**±0°.04, **h6**km±10km, **n162, σ1s.71**/191, **mb4.5**/13, **7C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.27	153	⇑iP	Pn	03 04 10.2	-0.1
CO06				i S	Sb	03 04 14.7	+2.7
CO06				IAML		03 04 15.1	
	comp=N,72μm,0.3s						
CO06	Fray Jorge	0.27	153	Pg	Pn	03 04 10.1	-0.2
CO06				Sg	Sb	03 04 14.6	+2.7
CO05	La Serena	0.69	43	⇓iP	Pn	03 04 16.6	+0.5
CO05				i S	Sb	03 04 24.5	+0.5
CO05				IAML		03 04 26.7	
	comp=N,34μm,0.3s						
CO05	La Serena	0.69	43		Pn	03 04 16.5	+0.5
CO05				Sn	Sn	03 04 25.6	-1.5
GO04	Tololo Observa	0.88	73	⇓iP	Pn	03 04 19.1	+0.1
GO04				i S	Sb	03 04 29.6	-0.2
GO04	Tololo Observa	0.88	73		Pn	03 04 19.0	+0.1
GO04				Sn	Sb	03 04 29.8	+0.1
GO04	Tololo Observa	0.88	73	eP	Pn	03 04 19.0	+0.1
GO04				eS	Sn	03 04 30.5	-1.7
LCO	Las Campanas	1.70	34	⇑iP	Pb	03 04 32.2	+0.7
LCO				i S	Sg	03 04 53.8	-0.5
LCO	Las Campanas	1.70	34	Pn	Pb	03 04 31.9	+0.4
LCO				Sn	Sb	03 04 53.1	-0.1
LCO	Las Campanas	1.70	34	eP	Pb	03 04 32.0	+0.5
AROD	Rodeo	2.01	83	eP	Pb	03 04 37.9	+1.0
AROD				eS	Sg	03 05 03.3	-1.0
VA06	Catapilco	2.16	169	eP	Pn	03 04 37.5	+1.2
VA06				i S	Sn	03 05 04.0	+0.6
VA06				IAML		03 05 13.1	
	comp=E,6μm,0.6s						
AC04	Llanos de Chal	2.30	16	⇑iP	Pn	03 04 39.9	+1.7
AC04				IAML		03 05 22.6	
	comp=N,3μm,0.7s						
AC04	Llanos de Chal	2.30	16	Pn	Pn	03 04 40.0	+1.7
AC04	Llanos de Chal	2.30	16	eP	Pn	03 04 40.0	+1.7
AC04				eS	Sb	03 05 08.8	-1.5
AC04				IAML		03 05 22.8	
	comp=Z,2μm,0.7s						
ACDV	Cuesta del Vie	2.31	84	eP	Pb	03 04 42.1	+0.1
ACDV				eS	Sg	03 05 13.8	-0.3
ACDV				IAML		03 05 22.7	
	comp=Z,1μm,0.8s						
ACCO	Cerro Coronel	2.34	95	eP	Pb	03 04 43.4	+0.8
RTLS	Leoncito	2.53	123	eP	Pb	03 04 45.7	0.0
RTLS				IAML		03 05 28.1	
	comp=Z,900nm,0.8s						
VA03	San Esteban	2.55	156	⇑iP	Pn	03 04 44.5	+2.8
VA03				IAML		03 05 27.9	
	comp=E,4μm,0.7s						
VA03	San Esteban	2.55	156		Pn	03 04 43.5	+1.7
VA03	San Esteban	2.55	156	eP	Pn	03 04 43.7	+1.9
VA03				eP	Pb	03 04 44.3	-1.7
VA03				eS	Sg	03 05 21.8	+0.1
VA03				IAML		03 05 24.6	
	comp=Z,3μm,0.6s						
VA01	Torpederas	2.59	178	Pn	Pn	03 04 42.8	+0.7
ROCH	El Roble	2.62	166	⇑iP	Pb	03 04 44.2	-2.9
ROCH				eP	Pn	03 04 44.1	+1.3
ROCH				i S	Sb	03 05 21.1	+1.4
ROCH				IAML		03 05 24.4	
	comp=N,6μm,0.5s						
ROC1	El Roble	2.62	166	eP	Pn	03 04 44.3	+1.5
ROC1				eS	Sb	03 05 21.6	+1.8
AUSP	Uspallata	2.72	132	eP	Pn	03 04 42.8	-1.4
AUSP				eP	Pb	03 04 48.0	-0.9
AUSP				eS	Sg	03 05 25.5	-1.6
PEL	Peldehue	2.86	161	⇑iP	Pn	03 04 47.8	+1.9
PEL				IAML		03 05 33.1	
	comp=E,2μm,0.4s						
PEL	Peldehue	2.86	161		Pn	03 04 47.5	+1.6
PEL	Peldehue	2.86	161	eP	Pn	03 04 42.8	-3.2
PEL				eP	Pn	03 04 47.9	+1.9
PEL				eS	Sn	03 05 22.3	+1.6
MT02	Curacav	2.87	169	eP	Pn	03 04 47.3	+1.2
MT02				IAML		03 05 36.2	
	comp=E,2μm,0.7s						
MT02	Curacav	2.87	169		Pn	03 04 47.2	+1.2
MT02	Curacav	2.87	169	eP	Pn	03 04 42.8	-3.3
MT02				eP	Pb	03 04 47.7	-3.7
MT02				eS	Sn	03 05 24.9	+3.9
MT02				IAML		03 05 35.6	
	comp=Z,2μm,0.6s						
ZON	Zonda	2.88	113	eP	Pb	03 04 50.0	-1.6
ZON				eS	Sb	03 05 29.4	+2.2
ZON				IAML		03 05 40.6	
	comp=Z,697nm,0.4s						
MT05	Renca	3.08	164	Pn	Pn	03 04 51.0	+1.9
MT05	Renca	3.08	164	eP	Pn	03 04 50.7	+1.7
MT05				IAML		03 05 45.2	
	comp=Z,2μm,0.7s						
RTCV	Cerro Valdivia	3.12	118	eP	Pb	03 04 53.4	-2.3
GO03	Copiap	3.13	26	eP	Pn	03 04 51.7	+2.0
GO03				IAML		03 05 47.4	
	comp=E,2μm,0.4s						
GO03	Copiap	3.13	26	Pn	Pn	03 04 51.6	+1.9
GO03	Copiap	3.13	26	eP	Pn	03 04 51.6	+1.9
GO03				eS	Sg	03 05 42.0	+1.6
VA05	Santo Domingo	3.22	178	eP	Pn	03 04 52.0	+1.1
VA05				IAML		03 05 44.6	
	comp=N,2μm,0.4s						
VA05	Santo Domingo	3.22	178		Pn	03 04 52.4	+1.6
ASAL	Salagasta	3.31	131	eP	Pb	03 04 56.9	-2.0
ASAL				eS	Sb	03 05 37.3	-2.2
MT09	Talagante	3.40	169	⇑iP	Pn	03 04 55.2	+1.7
MT09				IAML		03 05 49.9	
	comp=N,2μm,0.3s						
MT09	Talagante	3.40	169	Pn	Pn	03 04 55.1	+1.7
ARCO	CERRO ARCO	3.42	135	eP	Pn	03 04 55.5	+1.8
ARCO				eS	Sg	03 05 52.0	+2.5
ARCO				IAML		03 05 53.2	
	comp=Z,961nm,0.5s						
MT01	Popeta	3.45	173	eP	Pn	03 04 55.2	+1.2
MT01				IAML		03 05 50.1	
	comp=E,1μm,0.2s						
MT01	Popeta	3.45	173		Pn	03 04 55.1	+1.0
MT01	Popeta	3.45	173	eP	Pn	03 04 55.5	+1.4
MT01				eS	Sn	03 05 38.8	+3.5
MT01				IAML		03 05 53.7	
	comp=Z,889nm,0.7s						
VCA	Vinchina	3.54	62	eP	Pb	03 05 00.9	-1.9
VCA				eS	Sg	03 05 56.8	+3.3
VCA				IAML		03 05 59.5	
	comp=Z,1μm,0.4s						
AAGR	Agrelo	3.65	137	eP	Pb	03 05 01.8	-2.9
AAGR				eS	Sg	03 05 53.9	-3.1
LMEL	Las Melosas	3.66	159	eP	Pn	03 05 00.7	+3.7
BO01	Tunca	3.99	172	Pn	Pn	03 05 03.5	+2.1
BO01	Tunca	3.99	172	eP	Pn	03 04 58.3	-3.2
BO01				eP	Pb	03 05 03.0	-7.5
BO01				eS	Sb	03 05 55.8	-3.3
BO01				IAML		03 06 10.1	
	comp=Z,405nm,0.6s						
AC02	Maricunga	4.27	34	Pn	Pn	03 05 08.1	+2.3
AC02	Maricunga	4.27	34	eP	Pn	03 05 08.5	+2.8
AC02				eS	Sn	03 05 58.3	+2.1
AC02				IAML		03 06 16.6	
	comp=Z,737nm,1.1s						
ACLC	CERRO LA CRUZ	4.31	78	eP	Pn	03 05 09.6	+3.6
ACLC				eS	Sb	03 06 01.8	-6.5
ACLC				IAML		03 06 10.6	
	comp=Z,2μm,0.5s						
BO02	Sierra Bellavi	4.43	169	Pn	Pn	03 05 09.2	+1.6
BO02	Sierra Bellavi	4.43	169	eP	Pn	03 05 09.4	+1.8

BO02				eS	Sn	03 06 02.9	+3.4
BO02				IAML		03 06 21.6	
	comp=Z,721nm,0.9s						
APLL	PUNTA DE LOS L	4.53	91	eP	Pn	03 05 12.4	+3.4
APLL				eS	Sb	03 06 17.6	+2.9
GO05	Huala	4.57	182	Pn	Pn	03 05 09.3	-0.1
GO05	Huala	4.57	182	eP	Pn	03 05 09.7	+0.3
RFA	San Rafael	5.15	148	eP	Pn	03 05 20.8	+3.3
RFA				IAML		03 06 52.1	
	comp=Z,239nm,1.5s						
ML02	Panimavida	5.33	177	Pn	Pn	03 05 21.0	+1.2
CYA	Choya	5.58	71	eP	Pn	03 05 26.1	+2.8
CYA				eS	Sn	03 06 30.3	+2.6
CYA				IAML		03 06 39.0	
	comp=Z,202nm,0.7s						
PB14	IPOC Station P	5.91	12	Pn	Pn	03 05 27.3	-0.8
FSA	Cafayete	6.68	51	eP	Pn	03 05 43.0	+4.4
AHML	Horco Molle	6.73	59	eP	Pn	03 05 42.8	+3.7
AHML				eS	Sn	03 06 58.3	+2.2
AHML				IAML		03 07 28.6	
	comp=Z,73nm,0.8s						
H03N1	Juan Fernandez	6.77	242	T	T	03 12 39.5	
	baz=70,slow=72						
H03N2	Juan Fernandez	6.78	242	T	T	03 12 35.2	
	baz=70,slow=72						
H03N3	Juan Fernandez	6.78	242	T	T	03 12 41.2	
	baz=70,slow=72						
VA04	Juan Fernndez	6.79	240	Pn	Pn	03 05 40.0	+0.1
PB15	IPOC Station P	7.48	17		Pn	03 05 50.6	+1.0
PB06	IPOC Station P	7.94	15	Pn	Pn	03 05 56.8	+0.9
LVC	Limon Verde	8.20	19	Pn	Pn	03 06 00.9	+1.3
	comp=Z,1.5nm,0.3s,baz=196,slow=10,SNR=11						
LVC				Sn	Sn	03 07 28.9	-3.9
	comp=Z,3.4nm,0.3s,baz=202,slow=8.3,SNR=3.9						
LVC				LR	LR	03 09 23.6	
	comp=Z,202nm,21.3s,baz=211,slow=39						
LVC	Limon Verde	8.20	19	eP	Pn	03 06 00.6	+0.9
LVC	Limon Verde	8.20	19	Pn	Pn	03 05 59.7	+0.1
LC01	Cunco	8.45	181	Pn	Pn	03 06 02.8	+0.2
PB01	IPOC Station P	9.57	13	Pn	Pn	03 06 18.5	+0.3
PLCA	Paso Flores	10.33	175	Pn	Pn	03 06 28.3	-0.2
	comp=Z,0.1nm,0.3s,baz=340,slow=15,SNR=5.4						
PLCA				LR	LR	03 10 33.2	
	comp=Z,195nm,19.7s,baz=352,slow=38						
PLCA	Paso Flores	10.33	175	eP	Pn	03 06 29.1	+0.6
PLCA	Paso Flores	10.33	175	Pn	Pn	03 06 28.8	+0.3
LL04	Puerto Octay	10.47	183	Pn	Pn	03 06 30.1	-0.2
PB12	IPOC Station P	11.84	7	Pn	Pn	03 06 50.1	+0.9
ITQB	Itaqui	13.15	91	eP	Pn	03 07 05.9	-1.2
ITQB	Itaqui	13.15	91	Pn	Pn	03 07 06.8	-0.2
CPUP	Villa Florida	13.36	76	Pn	Pn	03 07 11.2	+1.3
	comp=Z,0.6nm,0.3s,baz=247,slow=14,SNR=6.0						
CPUP				Sn	Sn	03 09 34.8	-3.9
	comp=Z,0.3nm,0.3s,baz=190,slow=16,SNR=1.5						
CPUP				LR	LR	03 12 38.6	
	comp=Z,154nm,21.2s,baz=254,slow=39						
CPUP	Villa Florida	13.36	76	eP	Pn	03 07 08.7	-1.2
CPUP	Villa Florida	13.36	76	Pn	Pn	03 07 10.2	+0.3
LPAZ	La Paz	14.47	14	Pn	Pn	03 07 28.4	+2.8
	comp=Z,0.3nm,0.3s,baz=207,slow=11,SNR=8.5						
PLTB	Pedras Altas	15.63	100	eP	Pn	03 07 39.4	-1.2
PLTB	Pedras Altas	15.63	100	Pn	Pn	03 07 39.0	-1.6
PLTB				IAmb	IAmb	03 07 53.2	
	comp=Z,10nm,0.6s						
CPSB	Cacapava Do Su	15.82	95	eP	Pn	03 07 42.6	-0.5
SIV	San Ignacio	17.40	37	P	P	03 08 04.7	+0.1
	comp=Z,0.7nm,0.3s,baz=215,slow=9.2,SNR=20						
SIV				LR	LR	03 16 03.2	
	comp=Z,202nm,21.6s,baz=238,slow=42						
ITAB	Concordia	17.50	84	eP	Pn	03 08 03.9	-0.6
ITAB	Concordia	17.50	84	P	P	03 08 05.8	+0.1
AQDB	Aquidauana	17.56	59	eP	Pn	03 08 05.5	+0.2
CNLB	Canela	18.18	92	eP	Pn	03 08 12.4	-0.5
PTGB	Pitanga	18.37	77	eP	Pn	03 08 15.0	-0.2
PTLB	Pontes e Lacer	18.89	41	eP	P	03 08 21.6	+0.6
PTLB	Pontes e Lacer	18.89	41		P	03 08 20.5	-0.5
NNA	Nana	18.94	345	LR	LR	03 14 31.2	
	comp=Z,53nm,18.3s,baz=158,slow=33						
TER01	Tubaro-SC	19.80	90	eP	P	03 08 31.2	+0.3
PP1B	Ponte de Pedra	20.00	54	eP	P	03 08 33.6	+0.4
PCMB	Pacaembu	20.40	69	eP	P	03 08 37.5	0.0
VILB	Vilhena	20.42	34	eP	P	03 08 38.4	+0.6
VILB	Vilhena	20.42	34	P	P	03 08 38.0	+0.3
VILB				IAmb	IAmb	03 08 54.8	
	comp=Z,12nm,0.8s						
SALV	Santo Antonio	20.64	49	eP	P	03 08 40.2	0.0
ETMB	Extrema	21.16	15	eP	P	03 08 47.3	+1.6
ETMB	Extrema	21.16	15	P	P	03 08 45.9	+0.2
ETMB				IAmb	IAmb	03 09 04.0	
	comp=Z,9.1nm,0.8s						
ITRB	Iturama	22.11	66	eP	P	03 08 55.7	-0.3
CZSB	Cruzeiro do Su	22.60	358	eP	P	03 09 01.6	+0.4
SAML	Samuel	22.83	22	P	P	03 09 05.0	+1.4
RCLB	Rio Claro- Sao	23.10	76	eP	P	03 09 05.5	-1.0
VAO	Valinhos	23.33	77	eP	P	03 09 09.5	+0.7
PDRB	Porto dos Gac	23.36	40	eP	P	03 09 09.4	+0.3
ARAG	Araguaiana, MT	23.44	56	eP	P	03 09 11.4	+1.5
CLDB	Colider	24.48	41	eP	P	03 09 19.8	0.0
USHA	Ushuaia	24.51	175	P	P	03 09 19.7	+0.1
	comp=Z,17nm,0.9s,baz=351,slow=7.0,SNR=3.4						
IPMB	Ipameri, GO	24.75	65	eP	P	03 09 21.5	-0.7
TBTG	Tabatinga, AM	26.16	4	eP	P	03 09 37.6	+2.6
BDFB	Brasilia	26.28	61	P	P	03 09 35.7	-0.5
	comp=Z,8.1nm,0.8s,baz=234,slow=7.9,SNR=11						
BDFB	Brasilia	26.28	61	P	P	03 09 35.5	-0.7
BDFB				IAmb	IAmb	03 09 36.0	
	comp=Z,8.3nm,0.8s						
SNDB	Serra Nova Dou	26.41	50	eP	P	03 09 38.4	+1.1
NPGB	Novo Progresso	27.90	37	eP	P	03 09 50.7	0.0
PEXB	Peixe	28.38	55	eP	P	03 09 55.0	+0.1
MC01	Montes Claros	28.84	68	eP	P	03 09 58.2	-0.9
JANB	Januaria	29.48	65	eP	P	03 10 04.3	-0.5
SJMB	Sao Joao De Ma	30.08	74	eP	P	03 10 09.1	-0.9
SMTB	Santa Maria do	31.16	51	eP	P	03 10 18.9	-0.7
BOAV	Boa Vista	34.36	20	P	P	03 10 47.0	-0.6
BOAV				IAmb	IAmb	03 11 01.6	
	comp=Z,6.6nm,0.8s						
PMSA	Palmer Station	34.70	174	LR	LR	03 24 09.7	
	comp=Z,102nm,18.6s,baz=344,slow=35						
ZARC	Zaragoza, Cauc	37.82	355	P	P	03 11 18.4	+1.2
URIC	Uribia, Colomb	41.89	360	P	P	03 11 50.5	-0.4
URIC				IAmb	IAmb	03 12 03.0	
	comp=Z,16nm,1.2s						
OBIP	Obispado Ponce	48.45	7	P	P	03 12 43.2	+0.2
CELP	Cerrillos	48.48	7	P	P	03 12 43.9	+0.6
VNA2	Neumayer--Watz	53.22	158	P	P	03 13 18.5	0.0
SNAA	Sanae	54.81	159	P	P	03 13 30.3	+0.1
SNAA	Sanae	54.81	159	P	P	03 13 30.0	-0.1
SNAA				IAmb	IAmb	03 13 31.4	
	comp=Z,4.9nm,1.0s						
CNNC	Cliffs of the	65.57	355	P	P	03 14 44.5	+0.3
TXAR	Lajitas Array	66.75	330	P	P	03 14 52.5	+0.5
	comp=Z,0.3nm,0.7s,baz=156,slow=6.9,SNR=2.4						
SDMD	Soldier's Deli	69.64	356	P	P	03 15 09.3	-0.4
SDMD				IAmb	IAmb	03 15 17.7	
	comp=Z,9.4nm,1.4s						
KAN13	South Haven SW	71.28	338	P	P	03 15 20.2	+0.3
DBIC	Dimbokro	73.85	72	P	P	03 15 35.3	-0.4
	comp=Z,5.4nm,0.8s,baz=232,slow=6.7,SNR=8.1						
DBIC	Dimbokro	73.85	72	P	P	03 15 35.2	-0.4
DBIC				IAmb	IAmb	03 15 35.4	
	comp=Z,11nm,1.4s						
MAW	Mawson	76.53	164	P	P	03 15 50.6	+0.3
	comp=Z,5.2nm,0.8s,baz=209,slow=6.0,SNR=8.4						
MAW				LR	LR	03 52 12.0	
	comp=Z,43nm,18.4s,baz=239,slow=38						
MAW	Mawson	76.53	164	P	P	03 15 50.4	+0.1
ISA	Isabella, Lake	79.05	323	P	P	03 16 04.6	-0.2
PDAR	Pinedale Array	80.69	333	P	P	03 16 14.9	+1.2
	comp=Z,0.1nm,0.5s,baz=120,slow=5.3,SNR=1.7						
BOSA	Boshof	81.54	118	P	P	03 16 17.0	-1.7
	comp=Z,3.4nm,1.0s,baz=243,slow=4.5,SNR=2.6						
BOSA	Boshof	81.54	118	P	P	03 16 16.9	-1.7
BOSA				IAmb	IAmb	03 16 34.2	
	comp=Z,9.2nm,1.3s						
TORD	Torodi Ar. Bea	82.79	70	P	P	03 16 24.9	-0.2
	comp=Z,2.4nm,0.7s,baz=263,slow=4.4,SNR=18						
AKASG	Malin Array Be	119.59	46	PKP	PKPdf	03 22 48.1	-1.9
	comp=Z,0.5nm,0.5s,baz=274,slow=2.6,SNR=4.8						
ASAR	Alice Springs	120.83	208	PKP	PKPdf	03 22 52.3	-1.2
	comp=Z,0.2nm,0.5s,baz=132,slow=1.4,SNR=1.6						
WRA	Warramunga Arr	123.97	210	PKP	PKPdf	03 22 58.9	-0.7
	comp=Z,0.7nm,0.6s,baz=161,slow=1.7,SNR=9.4						
H11S2	WAKE ISLAND Hy	125.97	272	T	T	05 41 44.4	
	baz=114,slow=75,SNR=217						
H11S1	WAKE ISLAND Hy	125.98	272	T	T	05 41 45.4	
	baz=114,slow=75,SNR=202						
H11S3	WAKE ISLAND Hy	125.99	272	T	T	05 41 45.9	
	baz=114,slow=75,SNR=220						
H11N3	WAKE ISLAND Hy	126.29	273	T	T	05 42 15.0	
	baz=155,slow=74						
H11N1	WAKE ISLAND Hy	126.31	273	T	T	05 42 15.3	
H11N2	WAKE ISLAND Hy	126.31	273	T	T	05 42 18.4	
	baz=119,slow=74						
ZALV	Zalesovo Beam	151.05	29	PKPbc	PKPbc	03 23 53.3	+0.1
	comp=Z,18nm,0.7s,baz=296,slow=3.3,SNR=7.4						
ZALV	Zalesovo Beam	151.05	29		PKPbc	03 23 53.5	+0.3
MKAR	Makanchi Array	154.14	44	PKPbc	PKPbc	03 23 59.9	-0.4
	comp=Z,1.1nm,0.7s,baz=300,slow=2.8,SNR=5.9						
MKAR				PKPab	PKPab	03 24 14.9	+0.8
	comp=Z,1.3nm,0.8s,baz=283,slow=7.4,SNR=4.4						

KMA 01 03:14:27.7±0.3**,37°.53N×128°.96E,h0^{km},Error ellipse: s-maj=2.4km s-min=1.8km az=155.0,South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKEB	Okgye-meyeon	0.09	12	P	Pg	03 14 29.3	-0.1
	SNR=8.0						
OKEB	Okgye-meyeon	0.09	12	P	Pg	03 14 29.3	-0.1
	SNR=8.0						
KSDGY	Daegwallycong	0.27	305	P	Pg	03 14 33.2	+0.2
	SNR=8.9						
KSDGY	Daegwallycong	0.27	305	P	Pg	03 14 33.2	+0.2
	SNR=8.9						
KSJMJ	Jumunjin	0.38	335	P	Pg	03 14 35.2	+0.1
	SNR=14						
KSJMJ	Jumunjin	0.38	335	P	Pg	03 14 35.2	+0.1
	SNR=14						
KSWJU	Wonju	0.73	260	P	Pg	03 14 41.8	0.0
	SNR=6.6						
KSWJU	Wonju	0.73	260	P	Pg	03 14 41.8	0.0
	SNR=6.6						
KSWJU				S	Sg	03 14 51.9	+0.7
KSULJ	Uljin	0.91	156	P	Pg	03 14 45.1	+0.1
	SNR=7.4						
KSULJ	Uljin	0.91	156	P	Pg	03 14 45.1	+0.1
	SNR=7.4						
KSCHC	Chuncheon	0.94	285	P	Pg	03 14 46.0	+0.2
	SNR=7.4						
KSCHC	Chuncheon	0.94	285	P	Pg	03 14 46.0	+0.2
	SNR=7.4						

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*EAF **01** 03:16:11.4±0.8, 18°.44S×29°.53E, h10^{km}, MD3.2*

BUL 01 03:16:05.9±0.5**,18°.94S×30°.62E,h10^{km},MD3.2, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLWY	Bulawayo	2.23	237	iP	Pn	03 16 42.6	-0.6
BLWY				iS	Sn	03 17 09.4	-1.5
BLWY	Bulawayo	2.23	237	iP	Pn	03 16 44.4	+1.3
BLWY				iS	Sn	03 17 07.1	-3.8
KRI	Karoi	2.31	335	iP	Pn	03 16 34.7	-9.5
KRI				iS	Sn	03 16 55.7	-17
KRI	Karoi	2.31	335	iP	Pn	03 16 31.6	-13
MATP	Matopo	2.48	233	iP	Pn	03 16 46.2	-0.2
MATP				iS	Sn	03 17 15.9	-1.0
MATP	Matopo	2.48	233	iP	Pn	03 16 47.5	+1.0

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*UCR **01** 03:33:42.9±0.9, 13°.94N×90°.95W, h85^{km}±11^{km}, ML3.6, mb4.1(NEIC)*

*SNET **01** 03:33:43.2±0.8, 13°.93N×90°.93W, h86^{km}±10^{km}, ML3.7*

*NEIC **01** 03:33:43.6±1.2, 14°.0N±0°.1×90°.88W±0°.06, h94^{km}±7^{km}, mb4.1/10, Error ellipse: s-maj=16.0km s-min=5.5km az=204.0*

*IDC **01** 03:33:44.4±1.6, 14°.14N×90°.67W, h109^{km}±7^{km}, mb3.6/6, mb1 3.7/9, mb1mx3.4/35, mbtmp3.8/9, MS3.0/5, Ms1 3.0/5, ms1mx2.8/23, Error ellipse: s-maj=30.7km s-min=15.0km az=49.0*

*INET **01** 03:33:45.6, 14°.11N×90°.77W, h15^{km}, ML3.2, MW3.3*

*GCG **01** 03:33:46.2±0.6, 14°.19N×90°.89W, h80^{km}±9^{km}, MD3.8*

ISC 01 03:33:42.9±0.8**,13°.96N**±0°.07×**90°.92W**±0°.05**,h103**^{km}±6^{km}**, n65,**σ**0^s.77**/85**,mb4.0**/10**,1D,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.49	8	eP	Pn	03 33 59.0	-0.2
PCG	Pacaya	0.52	35	⇓iP	Pn	03 33 59.6	+0.1
NBG	Las Nubes	0.83	42	eP	Pn	03 34 02.7	+0.6
NBG				eS	Sn	03 34 18.5	+1.9
RTAL	Retalhuleu	0.94	307		Pn	03 34 02.8	-0.1
RTAL				Sn	Sn	03 34 17.4	-0.7
STG3	Santiaguito 3,	0.98	320	eP	Pn	03 34 03.9	+0.3
STG3				eS	Sn	03 34 18.3	-0.8
SLOZ	Alcaldia de Sa	1.10	87	eP	Pn	03 34 04.3	-0.3
SLOZ				eS	Sn	03 34 20.9	-0.2
SLOZ				IAML		03 34 25.1	
	comp=Z,1µm,0.7s						
APG	El Apazote	1.12	23	P	Pn	03 34 04.9	-0.3
	comp=Z,187nm,0.3s,baz=244,slow=6.5,SNR=3121						
APG				S	Sn	03 34 20.4	-1.5
	comp=Z,40nm,0.3s,baz=66,slow=15,SNR=12						
CEVE	Cerro Verde	1.26	96	eP	Pn	03 34 06.6	-0.2
CEVE				eS	Sn	03 34 25.3	+0.6
CEVE				IAML		03 34 27.8	
	comp=Z,7µm,0.2s						
CEVE	Cerro Verde	1.26	96	eP	Pn	03 34 06.6	-0.2
CEVE				eS	Sn	03 34 25.3	+0.6
CEVE				IAML		03 34 27.8	
	comp=Z,7µm,0.2s						
JAYA	Jayaque - finc	1.46	102	eP	Pn	03 34 08.6	-0.4
JAYA				eS	Sn	03 34 28.6	-0.1
JAYA				IAML		03 34 30.2	
	comp=Z,3µm,0.2s						
JAYA	Jayaque - finc	1.46	102	eP	Pn	03 34 08.6	-0.4
JAYA				eS	Sn	03 34 28.6	-0.1
JAYA				IAML		03 34 30.2	
	comp=Z,3µm,0.2s						
HUEH	Huehuetenango	1.46	337	Pn	Pn	03 34 09.8	+0.7
CEDA	San Andres	1.48	96	eP	Pn	03 34 09.1	-0.1
CEDA				eS	Sn	03 34 29.4	+0.3
CEDA	San Andres	1.48	96	eP	Pn	03 34 09.1	-0.1
CEDA				eS	Sn	03 34 29.4	+0.3
TACO	Tacachico	1.52	90	eP	Pn	03 34 09.0	-0.5
TACO				eS	Sn	03 34 29.7	-0.1
TACO				IAML		03 34 37.2	
	comp=Z,168nm,0.5s						
TACO	Tacachico	1.52	90	eP	Pn	03 34 09.0	-0.5
TACO				eS	Sn	03 34 29.7	-0.1
TACO				IAML		03 34 37.2	
	comp=Z,168nm,0.5s						
MTO3	Montecristo	1.57	74	Pn	Pn	03 34 09.7	-0.6
LALI	Alcalda de L	1.62	107	eP	Pn	03 34 11.0	+0.3
LALI				eS	Sn	03 34 31.7	-0.3
LALI				IAML		03 34 35.8	
	comp=Z,506nm,0.2s						
LALI	Alcalda de L	1.62	107	eP	Pn	03 34 11.0	+0.3
LALI				eS	Sn	03 34 31.7	-0.3
LALI				IAML		03 34 35.8	
	comp=Z,506nm,0.2s						
MRL	Marmol	1.63	47	iP	Pn	03 34 12.3	+1.1
MRL				eS	Sn	03 34 32.0	-0.6
ESQI	Esquipulas	1.64	69	Pn	Pn	03 34 11.0	-0.2
SNET	Serv Nac Est T	1.66	99	Pn	Pn	03 34 12.4	+1.0
OPAM	Oficina de Pla	1.69	98	IAML		03 34 38.1	
	comp=Z,943nm,0.3s						
OPAM	Oficina de Pla	1.69	98	IAML		03 34 38.1	
	comp=Z,943nm,0.3s						
SJTE	Alcalda de S	1.89	100	eP	Pn	03 34 14.1	-0.1
SJTE				eS	Sn	03 34 38.8	+0.7
SJTE				IAML		03 34 42.4	
	comp=Z,242nm,0.2s						
SJTE	Alcalda de S	1.89	100	eP	Pn	03 34 14.1	-0.1
SJTE				eS	Sn	03 34 38.8	+0.7
SJTE				IAML		03 34 42.4	
	comp=Z,242nm,0.2s						
PAVA	Las Pavas	1.94	97	eP	Pn	03 34 15.1	+0.2
PAVA	Las Pavas	1.94	97	eP	Pn	03 34 15.1	+0.2
COEG	Centro de Oper	2.01	100	eP	Pn	03 34 16.1	+0.3
COEG	Centro de Oper	2.01	100	eP	Pn	03 34 16.1	+0.3
COEB	Comit de Eme	2.36	101	eP	Pn	03 34 20.9	+0.4
COEB				IAML		03 34 54.2	
	comp=Z,228nm,0.5s						
COEB	Comit de Eme	2.36	101	eP	Pn	03 34 20.9	+0.4
COEB				IAML		03 34 54.2	
	comp=Z,228nm,0.5s						
ALJI	Alcalda de J	2.37	105	eP	Pn	03 34 19.6	-0.7
ALJI				eS	Sn	03 34 49.9	+0.8
ALJI				IAML		03 34 51.2	
	comp=Z,192nm,0.3s						
ALJI	Alcalda de J	2.37	105	eP	Pn	03 34 19.6	-0.7
ALJI				eS	Sn	03 34 49.9	+0.8
ALJI				IAML		03 34 51.2	
	comp=Z,192nm,0.3s						
CCIG	Comitan	2.59	333		Pn	03 34 25.0	+1.5
PETF	Flores	3.10	19	Pn	Pn	03 34 31.0	+0.8
TGUH	Tegucigalpa,Un	3.54	88		Pn	03 34 35.8	-0.2
CMIG	Matias Romero	4.93	310	P	Pn	03 34 55.9	+1.2
	comp=Z,1.9nm,0.3s,baz=158,slow=9.5,SNR=3.1						
CMIG				S	Sn	03 35 49.6	-1.0
	comp=Z,1.7nm,0.3s,baz=114,slow=15,SNR=1.4						
CMIG				LR	LR	03 36 26.6	
	comp=Z,52nm,21.8s,baz=87,slow=32						
MATN	Matagalpa	4.96	101		Pn	03 34 54.9	-0.3
JTS	Las Juntas de	6.88	121	P	Pn	03 35 23.1	+1.9
	comp=Z,3.0nm,0.3s,baz=0.3,slow=21,SNR=12						
JTS				S	Sn	03 36 36.6	-1.4
	comp=Z,1.1nm,0.3s,baz=12,slow=19,SNR=1.4						
JTS	Las Juntas de	6.88	121		Pn	03 35 21.4	+0.2
RIMA	Rio Macho	8.06	120		Pn	03 35 38.1	+0.6
SRBA	San Rafael, Bu	8.77	122		Pn	03 35 47.1	+0.1
TX31	Lajitas Ar. Si	19.32	324	P	Pn	03 38 02.6	+0.3
TX31				IAmb	IAmb	03 38 10.0	
	comp=Z,12nm,1.4s						
TX32	Lajitas Array	19.32	324	P	P	03 38 01.3	+1.2
TXAR	Lajitas Array	19.32	324	P	Pn	03 38 02.9	+0.6
	comp=Z,0.3nm,0.3s,baz=144,slow=12,SNR=26						
TXAR				PcP	PcP	03 42 19.7	+1.2
	comp=Z,0.0nm,0.3s,baz=142,slow=4.6,SNR=2.7						
TXAR	Lajitas Array	19.32	324	P	P	03 38 01.1	+0.9
TXAR					PcP	03 42 19.4	+0.9
Z51A	Franklin	19.96	14	P	P	03 38 06.5	-0.4
MNTX	Cornudas Mount	22.08	325	P	P	03 38 30.5	+0.9
TKL	Tuckaleechee C	22.54	15	P	P	03 38 34.2	-0.2
	comp=Z,3.5nm,0.4s,baz=173,slow=6.2,SNR=12						
TKL				LR	LR	03 46 55.0	
	comp=Z,35nm,21.0s,baz=210,slow=35						
TKL	Tuckaleechee C	22.54	15	P	P	03 38 35.4	+1.1
TKL				IAmb	IAmb	03 38 36.1	
	comp=Z,5.3nm,0.7s						
T47A	Sharon Grove	23.18	8	P	P	03 38 40.8	+0.2
T47A				IAmb	IAmb	03 38 41.4	
	comp=Z,7.7nm,0.6s						
S39A	Bolivar	23.73	355	P	P	03 38 45.9	+0.3
S39A				IAmb	IAmb	03 38 47.1	
	comp=Z,4.9nm,0.7s						
121A	Cookes Peak, D	24.06	323	P	P	03 38 49.5	+0.6
121A				IAmb	IAmb	03 38 54.4	
	comp=Z,8.8nm,1.1s						
ATAH	Atahualpa	24.37	149	LR	LR	03 46 55.8	
	comp=Z,30nm,19.1s,baz=152,slow=32						
MTPU	Mount Pierson	30.52	326	P	P	03 39 47.9	+1.0
MTPU				IAmb	IAmb	03 40 01.7	
	comp=Z,3.2nm,1.3s						
PDAR	Pinedale Array	32.90	334	LR	LR	03 56 10.3	
	comp=Z,35nm,19.9s,baz=238,slow=41						
ULM	Lac du Bonnet	36.41	355	P	P	03 40 36.4	-0.9
	comp=Z,2.3nm,0.5s,baz=165,slow=7.8,SNR=3.1						
SCHQ	Schefferville	44.90	20	P	P	03 41 46.3	-0.8
	comp=Z,6.6nm,0.6s,baz=226,slow=7.2,SNR=20						
SCHQ	Schefferville	44.90	20	P	P	03 41 46.2	-0.8
YKA	Yellowknife Ar	51.31	346	P	P	03 42 35.9	-0.4
	comp=Z,0.3nm,0.3s,baz=153,slow=7.8,SNR=4.3						
ILAR	Eielson Array	63.29	337	P	P	03 43 59.7	-0.7
	comp=Z,0.1nm,0.4s,baz=132,slow=4.9,SNR=6.4						
ILAR				LR	LR	04 13 44.1	
	comp=Z,23nm,19.0s,baz=190,slow=38						
ILAR	Eielson Array	63.29	337	P	P	03 44 00.6	+0.2
ESDC	Sonseca Array	78.91	52	P	P	03 45 32.9	-2.4
	comp=Z,0.2nm,0.6s,baz=294,slow=4.5,SNR=2.0						
WRA	Warramunga Arr	136.41	256	PKP	PKPdf	03 52 55.0	+1.6
	comp=Z,0.4nm,0.7s,baz=89,slow=2.6,SNR=6.5						

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*CNRM **01** 04:03:45.4, 36°.19N×3°.19W, h6^{km}, ml2.1*

*MDD **01** 04:03:46.6±0.3, 36°.15N×3°.46W, h0^{km}, mbLg2.4/22, Error ellipse: s-maj=4.0km s-min=2.4km az=43.0, PRXIMO*

*SFS **01** 04:03:46.0, 36°.15N×3°.46W, ML2.3, ALBORAN N.*

*IGIL **01** 04:03:47.9, 36°.15N×3°.47W, h1^{km}*

*INMG **01** 04:03:47.6±1.8, 36°.11N×3°.43W, h12^{km}±6^{km}, ML2.1, Error ellipse: s-maj=3.8km s-min=2.6km az=50.0*

ISC 01 04:03:45.8±1.0**,36°.16N**±0°.02×**3°.38W**±0°.02**,h13**^{km}±9^{km}**, n83,**σ**1^s.42**/144**,2D,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EALB	Alboran	0.35	127	⇓P	Pb	04 03 54.3	+0.3
	192nm,0.1s,SNR=18						
EALB				S	Sb	04 03 59.5	0.0
	1µm,0.2s						
ELGU	Los Guajares,	0.74	345	P	Pg	04 03 59.7	-0.5
	17nm,0.2s,SNR=7.9						
ELGU				S	Sg	04 04 10.1	+0.3
	138nm,0.1s,SNR=7.9						
EBER	Berja	0.84	28	P	Pg	04 04 02.0	-0.1
	8.4nm,0.3s,SNR=68						
EBER				S	Sg	04 04 12.7	-0.4
	306nm,0.4s						
EMEL	Melilla	0.92	158	⇓P	Pg	04 04 03.5	-0.1
	116nm,0.1s,SNR=18						
EMEL				S	Sg	04 04 15.4	-0.3
	134nm,0.1s,SNR=7.9						
GOG	Mont Gurugu	0.98	161	P	Pb	04 04 04.4	-0.4
GOG	Mont Gurugu	0.98	161	P	Pb	04 04 04.4	-0.4
GOG				S	Sb	04 04 18.4	+0.7
EMAL	Malaga-Limoner	1.04	306	P	Pb	04 04 05.5	-0.2
EMAL				S	Sg	04 04 19.6	+0.2
EMAL	Malaga-Limoner	1.04	306	P	Pb	04 04 05.5	-0.2
EMAL				S	Sg	04 04 19.6	+0.2
PALE	Palemas	1.04	206	P	Pn	04 04 07.0	+0.8
PALE	Palemas	1.04	206	P	Pn	04 04 07.0	+0.8
PALE				S	Sg	04 04 20.0	+0.5
EGOR	Sierra Gorda,	1.12	329	P	Pb	04 04 05.6	-1.6
	0.9nm,0.3s,SNR=7.9						
EGOR				S	Sb	04 04 21.8	+0.2
	26nm,0.3s,SNR=7.9						
EMIJ	Mijas	1.19	290	P	Pn	04 04 06.5	-1.8
	2.7nm,0.2s,SNR=31						
EMIJ				S	Sb	04 04 22.3	-1.4
	41nm,0.2s,SNR=9.4						
CHAS	Isla Isabel II	1.24	141	P	Pn	04 04 07.6	-1.3
CHAS				S	Sb	04 04 22.4	-2.6
ENIJ	Nijar	1.25	49	P	Pn	04 04 07.7	-1.3
	7.3nm,0.3s,SNR=7.9						
ENIJ				S	Sb	04 04 24.4	-0.8
	62nm,0.3s,SNR=7.9						
GORA	Gorafe	1.35	12	P	Pb	04 04 11.5	+0.5
	5.8nm,0.2s,SNR=7.9						
GORA				S	Sg	04 04 30.0	+0.7
	40nm,0.3s,SNR=7.9						
TAF	Taforalt	1.56	149	P	Pn	04 04 13.0	-0.2
TAF	Taforalt	1.56	149	P	Pn	04 04 13.1	-0.2
TAF				S	Sn	04 04 32.3	-1.1
ECEU	Ceuta	1.64	262	P	Pn	04 04 13.2	-1.1
	1.2nm,0.1s,SNR=7.9						
ECEU				S	Sn	04 04 33.3	-2.0
	5.0nm,0.1s,SNR=7.9						
EQES	Quesada	1.66	9	P	Pb	04 04 16.6	+0.2
	9.8nm,0.1s,SNR=138						
EQES				S	Sg	04 04 38.8	-0.6
	65nm,0.3s						
AKLM	AKL	1.69	194	P	Pn	04 04 16.0	+0.9
AKLM	AKL	1.69	194	P	Pn	04 04 16.0	+0.9
AKLM				S	Sn	04 04 37.1	+0.4
SMIR	Smir Dam	1.69	254	P	Pn	04 04 15.5	+0.4
SMIR				S	Sn	04 04 35.5	-1.1
EJIF	Jimena Fronter	1.71	281	P	Pn	04 04 15.5	+0.1
	SNR=7.9						
EJIF				S	Sn	04 04 35.7	-1.4
	SNR=7.9						
CHEFC	Chefchaouen	1.91	237	P	Pb	04 04 20.6	0.0
CHEFC				S	Sn	04 04 43.2	+1.1
JBK	JBK	1.94	160	P	Pn	04 04 18.5	-0.2
JBK	JBK	1.94	160	P	Pn	04 04 18.5	-0.2
JBK				S	Sn	04 04 41.6	-1.4
SESP	Santiago Espad	2.07	19	P	Pb	04 04 22.5	-0.9
	8.1nm,0.4s,SNR=7.9						

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SESP                                   S      Sb      04 04 48.2  -0.9
      18nm,0.3s,SNR=7.9
ESPR  Espera              2.12 290  P      Pn      04 04 22.0  +1.0
      0.7nm,0.1s,SNR=4.0
ESPR                                S      Sn      04 04 47.4  +0.3
      9.7nm,0.4s,SNR=7.9
EADA  Adamuz              2.22 335  P      Pn      04 04 23.2  +0.7
      0.8nm,0.1s,SNR=7.9
EADA                                S      Sn      04 04 50.2  +0.4
      9.3nm,0.3s,SNR=7.9
CART  Cartagena           2.38  53  P      Pn      04 04 24.6  -0.1
CART                                S      Sn      04 04 53.3  -0.4
EMUR  La Murta            2.40  45  P      Pn      04 04 25.2  +0.3
      1.3nm,0.5s,SNR=7.9
EMUR                                S      Sn      04 04 54.1  -0.2
      11nm,0.5s,SNR=7.9
ECAB  El Cabril           2.51 320  P      Pn      04 04 26.9  +0.4
      0.1nm,0.1s,SNR=7.9
ECAB                                S      Sn      04 04 57.1  +0.1
      5.2nm,0.4s,SNR=7.9
LCRM  LCR                 2.75 207  P      Pn      04 04 31.2  +1.4
LCRM                                S      Sn      04 05 04.8  +1.9
ETOB  Tobarra             2.88  30  P      Pn      04 04 33.6  +2.1
      3.0nm,0.2s,SNR=40
ETOB                                S      Sn      04 05 07.4  +1.3
      4.0nm,0.3s
IFR   Ifrane              3.00 209  P      Pn      04 04 34.1  +0.8
IFR                                 S      Sn      04 05 08.7  -0.5
EMIN  Mina Concepcio      3.09 302  P      Pn      04 04 34.8  +0.5
      0.6nm,0.2s,SNR=7.9
EMIN                                S      Sn      04 05 10.1  -1.0
      1.8nm,0.3s,SNR=7.9
TDRA  Tendrara            3.30 160  P      Pn      04 04 38.7  +1.2
TDRA                                S      Sn      04 05 17.3  +0.6
PAB   San Pablo           3.47 348  P      Pn      04 04 41.2  +1.6
      0.7nm,0.3s,SNR=7.9
PAB                                 S      Sn      04 05 21.1  +0.5
      0.4nm,0.2s,SNR=7.9
MD31  MD31                3.47 199  P      Pn      04 04 39.7  +0.1
MD31                                S      Sn      04 05 21.5  +0.8
MDT   Midelt              3.48 197  P      Pn      04 04 40.0  +0.1
MDT                                 S      Sn      04 05 21.3  +0.3
ESDC  Sonseca Array       3.54 353  P      Pn      04 04 41.5  +0.9
      0.8nm,0.3s,baz=173,slow=12,SNR=5.7
ESDC                                S      Sn      04 05 21.4  -1.0
      0.9nm,0.3s,baz=168,slow=15,SNR=7.9
EGRO  El Granado          3.56 294  P      Pn      04 04 41.9  +1.1
      0.6nm,0.1s,SNR=7.9
EGRO                                S      Sn      04 05 21.2  -1.6
      2.0nm,0.3s,SNR=7.9
PVAQ  Vaqueiros           3.70 291  ePn    Pn      04 04 43.8  +1.1
PVAQ                                eSn    Sn      04 05 25.1  -1.0
PVAQ                                A      A       04 05 30.6
      3.4nm,0.6s
PVAQ  Vaqueiros           3.70 291  P      Pn      04 04 43.8  +1.1
PVAQ                                S      Sn      04 05 25.1  -1.0
      3.4nm,0.6s
PVAQ  Vaqueiros           3.70 291  P      Pn      04 04 44.5  +1.9
PVAQ                                S      Sn      04 05 25.3  -0.8
ZHG   ZHG                 3.81 226  P      Pn      04 04 44.5  +0.2
ZHG                                 S      Sn      04 05 29.5  +0.6
PBDV  Barranco-do-Ve      3.81 288  ePn    Pn      04 04 45.3  +1.0
PBDV                                eSn    Sn      04 05 26.3  -2.7
PBDV  Barranco-do-Ve      3.81 288  P      Pn      04 04 45.3  +1.0
PBDV                                S      Sn      04 05 26.3  -2.7
EBAD  Badajoz             3.88 313  P      Pn      04 04 45.5  +0.3
      0.2nm,0.1s,SNR=7.9
EBAD                                S      Sn      04 05 29.0  -1.7
      1.4nm,0.2s,SNR=7.9
ECHE  Chera               3.92  28  P      Pn      04 04 49.3  +3.5
      1.4nm,0.6s,SNR=7.9
ECHE                                S      Sn      04 05 31.7  -0.1
      1.7nm,0.5s,SNR=4.0
PCVE  Castro Verde        4.01 293  ePn    Pn      04 04 51.0  +4.0
PCVE                                eSn    Sn      04 05 33.6  -0.3
PCVE                                A      A       04 05 52.8
      2.2nm,0.5s
PCVE  Castro Verde        4.01 293  P      Pn      04 04 51.0  +4.0
PCVE                                S      Sn      04 05 33.6  -0.3
      2.2nm,0.5s
UCM   Universidad Co      4.15   1  P      Pn      04 04 53.6  +4.8
UCM                                 S      Sn      04 05 36.3  -0.9
UCM   Universidad Co      4.15   1  P      Pn      04 04 53.6  +4.8
UCM                                 S      Sn      04 05 36.3  -0.9
MESJ  Messejana           4.22 295  eP     Pn      04 04 50.7  +0.8
MESJ  Messejana           4.22 295  ePn    Pn      04 04 51.3  +1.4
MESJ                                eSn    Sn      04 05 37.1  -1.9
MESJ                                A      A       04 05 40.9
      2.0nm,0.3s
MESJ  Messejana           4.22 295  P      Pn      04 04 50.7  +0.8
MESJ                                S      Sn      04 05 37.1  -1.9
      2.0nm,0.3s
PESTR Estremoz            4.30 310  P      Pn      04 04 52.0  +1.0
PESTR                               S      Sn      04 05 42.1  +1.0
FIGM  Figuig              4.38 156  P      Pn      04 04 53.6  +1.4
FIGM                                S      Sn      04 05 44.2  +1.0
MORF  Marmelete           4.38 287  eSn    Sn      04 05 43.0  -0.2
MORF  Marmelete           4.38 287  S      Sn      04 05 43.0  -0.2
EVO   Evora               4.39 304  ePn    Pn      04 04 53.8  +1.7
EVO                                 eSn    Sn      04 05 42.4  -0.7
EVO                                 A      A       04 05 47.5
      2.9nm,0.3s
EVO   Evora               4.39 304  P      Pn      04 04 53.8  +1.7
EVO                                 S      Sn      04 05 42.2  -0.9
EPLA  Plasencia           4.44 332  P      Pn      04 04 53.8  +0.8
      0.8nm,0.3s,SNR=7.9
EPLA                                S      Sn      04 05 44.1  -0.5
      0.9nm,0.3s,SNR=7.9
PTEO  Sao Teotonio        4.50 290  ePn    Pn      04 04 56.9  +3.2
PTEO  Sao Teotonio        4.50 290  P      Pn      04 04 56.9  +3.2
GUD   Guadarrama          4.52 353  P      Pn      04 04 55.5  +1.3
      0.3nm,0.3s,SNR=7.9
GUD                                 S      Sn      04 05 46.1  -0.6
      0.4nm,0.3s,SNR=7.9
PNCL  Nicolau / Gran      4.55 297  ePn    Pn      04 04 55.4  +1.0
PNCL                                eSn    Sn      04 05 49.2  +2.0
PNCL                                A      A       04 05 54.3
      2.2nm,0.7s
PNCL  Nicolau / Gran      4.55 297  P      Pn      04 04 55.4  +1.0
PNCL                                S      Sn      04 05 49.2  +2.0
      2.2nm,0.7s
PMRV  Marv??o             4.55 317  ePn    Pn      04 04 55.4  +0.9
PMRV  Marv??o             4.55 317  P      Pn      04 04 55.4  +0.9
EIBI  Ibiza               4.72  51  P      Pn      04 04 59.4  +2.6
      0.3nm,0.2s,SNR=7.9
EIBI                                S      Sn      04 05 48.0  -3.4
      0.6nm,0.2s,SNR=7.9
ETOR  Torete              4.77  12  P      Pn      04 04 59.6  +2.1
      0.7nm,0.2s,SNR=7.9
ETOR                                S      Sn      04 05 51.3  -1.4
      2.3nm,0.3s,SNR=7.9
PMTG  Montargil           4.82 309  ePn    Pn      04 04 59.4  +1.3
PMTG  Montargil           4.82 309  P      Pn      04 04 59.4  +1.3
PCBR  Castelo Branco      4.90 320  ePn    Pn      04 04 59.9  +0.7
PCBR  Castelo Branco      4.90 320  P      Pn      04 04 59.9  +0.7
MTE   Manteigas           5.35 324  ePn    Pn      04 05 06.9  +1.4
MTE   Manteigas           5.35 324  P      Pn      04 05 06.9  +1.4
PSBE  So Bento            5.44 310  ePn    Pn      04 05 07.5  +0.9
MVO   Moncorvo            5.76 331  ePn    Pn      04 05 12.0  +1.0
POLO  Lamas de Olo        6.25 328  ePn    Pn      04 05 18.9  +1.1
POLO  Lamas de Olo        6.25 328  P      Pn      04 05 18.9  +1.1
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*IDC **01** 04:10:57.5±3.0, 20.°34S×175.°90W, h118^{km}±26^{km}, mb4.1/10, mb1 4.3/12, mb1mx4.0/36, mbtmp4.5/12, Error ellipse: s-maj=25.5km s-min=15.4km az=132.0*

*NEIC **01** 04:11:00.9±1.6, 20.°4S±0.°1×175.°65W±0.°09, h152^{km}±6^{km}, mb4.8/47, Error ellipse: s-maj=17.9km s-min=11.8km az=169.0*

*NOU **01** 04:11:04.2, 20.°30S×175.°41W, h206^{km}, mb4.7/35, Tonga Islands*

ISC 01 04:11:00.5±0.4**, 20.°45S**±0.°08×**175.°62W**±0.°06**, h150**^{km}**, n172,** σ1.^{s}**42**/167**, mb4.7**/34**, 5C-1D, Tonga Islands**

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Code  Station Name         Δ°  AZ°    Phase ID            Time       Res
                                    Op     ISC          h  m  s     ISC
NIUE  Niue                5.53  77  Pn     Pn      04 12 22.7  +1.7
NIUE                                Sn     Sn      04 13 22.2  -1.6
NIUE  Niue                5.53  77  P      Pn      04 12 23.8  +2.8
      1μm,0.6s
DGTI  Dogotuki            6.04 312  P      Pn      04 12 31.4  +3.6
      136nm,0.9s
MSVF  Nonsavu             6.57 293  P      Pn      04 12 39.8  +5.0
      3.7nm,0.3s,baz=132,slow=12,SNR=18
MSVF  Nonsavu             6.57 293         Pn      04 12 37.0  +2.1
MSVF  Nonsavu             6.57 293  P      Pn      04 12 40.2  +5.3
      91nm,1.1s
AFI   Afiamalu            7.47  30  P      Pn      04 12 44.3  -2.7
      13nm,0.3s,baz=252,slow=19,SNR=6.3
AFI                                 S      Sn      04 13 59.0   -12
      16nm,0.3s,baz=243,slow=24,SNR=4.8
MARNC Mare, Loyalty      15.31 263  Pn     Pn      04 14 28.2  -0.6
DVP   Devils Point       15.54 277  P      P       04 14 37.0  +4.2
PINNC Pines Island,      15.90 259         Pn      04 14 35.7  -0.4
LIFNC LIFOU              16.05 266  P      P       04 14 39.6  +1.3
YATNC Mamie plateau,     16.38 261  P      P       04 14 43.8  +1.8
      46nm,1.4s
OUENC Ouen Island, N     16.45 260  P      P       04 14 43.3  +0.6
OUENC                               IAmb   IAmb    04 14 50.1
      comp=Z,29nm,0.8s
OUENC Ouen Island, N     16.45 260  P      P       04 14 45.8  +3.1
DZM   Mont Dzumac        16.80 261  eP     Pn      04 14 50.5  +3.4
      comp=Z,175nm,1.1s
DZM   Mont Dzumac        16.80 261  P      Pn      04 14 49.9  +2.8
      comp=Z,4.8nm,0.3s,baz=79,slow=17,SNR=45
DZM   Mont Dzumac        16.80 261  P      P       04 14 46.0  -0.8
DZM   Mont Dzumac        16.80 261  P      Pn      04 14 50.7  +3.6
ONTNC Ouen Toro          16.80 260  P      P       04 14 46.7  +0.1
ONTNC                               IAmb   IAmb    04 14 53.5
      comp=Z,59nm,1.0s
NOUC  Port Laguerre      16.93 261  P      Pn      04 14 50.7  +2.1
      comp=Z,60nm,1.1s
SANVU Saraoutou          17.08 284  P      P       04 14 48.6  -1.1
SANVU                               IAmb   IAmb    04 14 54.8
      comp=Z,61nm,0.9s
OUZ   Omahuta            17.51 211  P      Pn      04 14 55.3  -0.1
MXZ   Matakaoa Point     17.85 196  P      P       04 14 58.8  +0.8
MXZ                                 IAmb   IAmb    04 15 01.9
      comp=Z,81nm,1.1s
URZ   Urewera            18.83 198  P      P       04 15 08.1  -0.6
      comp=Z,8.7nm,0.3s,baz=293,slow=13,SNR=41
URZ                                 S      S       04 18 24.2   -11
      comp=Z,0.6nm,0.3s,baz=302,slow=24,SNR=1.6
URZ   Urewera            18.83 198  P      P       04 15 08.0  -0.7
URZ                                 IAmb   IAmb    04 15 11.0
      comp=Z,32nm,0.4s
URZ   Urewera            18.83 198  P      P       04 15 09.3  +0.6
      comp=Z,43nm,0.5s
NMHZ  Naumai             19.69 198  P      P       04 15 18.9  +0.7
HIZ   Hauiti             19.79 203  P      Pn      04 15 21.2  -1.0
HIZ   Hauiti             19.79 203  P      P       04 15 20.7  +1.6
HIZ   Hauiti             19.79 203  P      Pn      04 15 21.4  -0.8
      comp=Z,97nm,0.8s
RATZ  Rangitukua         19.80 200  P      P       04 15 15.6  -3.6
BKZ   Black Stump Fm     19.85 198  P      P       04 15 19.6  -0.2
BKZ   Black Stump Fm     19.85 198  P      P       04 15 19.3  -0.5
BKZ                                 IAmb   IAmb    04 15 24.4
      comp=Z,11nm,0.6s
BKZ   Black Stump Fm     19.85 198  P      P       04 15 20.5  +0.7
      comp=Z,17nm,0.6s
NTVZ  North Tongarir     20.04 200  P      P       04 15 21.4  -0.5
TMVZ  Te Maari           20.05 200  P      P       04 15 22.0   0.0
MCHZ  McNeill Hill       20.05 198  P      P       04 15 22.2  +0.3
ETVZ  East Tongariro     20.06 200  P      P       04 15 21.2  -1.0
OTVZ  Oturere            20.10 200  P      P       04 15 21.8  -0.8
KWHZ  Kaweka Forest      20.11 198  P      P       04 15 21.5  -1.1
SNVZ  South Ngauruho     20.13 200  P      P       04 15 22.2  -0.7
WNVZ  Wahianoa           20.27 200  P      P       04 15 23.2  -1.2
BHHZ  Black Hill Sta     20.27 199  P      P       04 15 22.1  -2.2
KAHZ  Kahuranaki         20.32 197  P      P       04 15 26.6  +1.7
KRHZ  Kereru             20.33 198  P      P       04 15 25.7  +0.9
PNHZ  Pukenui            20.62 198  P      P       04 15 27.0  -1.0
NEZ   North Egmont       20.74 203  P      P       04 15 31.5  +2.2
TSZ   Takapari Road      20.83 198  P      P       04 15 28.5  -1.7
PRHZ  Porangahau         20.83 197  P      P       04 15 31.9  +1.7
BFZ   Birch Farm         21.32 197  P      P       04 15 36.2  +0.6
BFZ   Birch Farm         21.32 197  P      P       04 15 35.7  +0.2
BFZ                                 IAmb   IAmb    04 15 54.3
      comp=Z,89nm,1.5s
BFZ   Birch Farm         21.32 197  P      P       04 15 37.9  +2.4
      comp=Z,27nm,1.1s
MRZ   Mangatainoka R     21.50 199  P      P       04 15 36.1  -1.3
TIWZ  Tintock            21.51 198  P      P       04 15 38.7  +1.1
HOWZ  Holdsworth Sta     21.73 198  P      P       04 15 38.4  -1.5
CAW   Cannon Point       22.06 199  P      P       04 15 44.6  +1.4
TRWZ  Traveller          22.15 198  P      P       04 15 43.4  -0.7
DUWZ  D'Urville Isla     22.16 201  P      P       04 15 41.9  -2.3
MSWZ  Moikau Station     22.29 198  P      P       04 15 43.9  -1.5
SNZO  South Karori       22.36 199  P      P       04 15 46.7  +0.6
      comp=Z,55nm,0.8s
BHW   Baring Head        22.39 199  P      P       04 15 47.1  +0.6
BHW   Baring Head        22.39 199  P      P       04 15 45.8  -0.6
TCW   Tory Channel       22.40 200  P      P       04 15 44.3  -2.2
PLWZ  Palliser           22.43 198  P      P       04 15 45.2  -1.6
QRZ   Quartz Range       22.68 204  P      P       04 15 49.6  +0.5
QRZ   Quartz Range       22.68 204  P      P       04 15 49.6  +0.5
QRZ   Quartz Range       22.68 204  P      P       04 15 49.9  +0.7
      comp=Z,67nm,0.5s
TUWZ  Tuamarina          22.71 201  P      P       04 15 47.9  -1.6
TUWZ  Tuamarina          22.71 201  P      P       04 15 47.9  -1.6
NNZ   Nelson             22.71 202  P      P       04 15 50.2  +0.8
BSWZ  Blackbirch Sta     22.99 200  P      P       04 15 52.3  +0.3
THZ   Tophouse           23.36 202  P      P       04 15 54.7  -0.8
THZ   Tophouse           23.36 202  P      P       04 15 55.0  -0.5
KHZ   Kahutara           23.73 200  P      P       04 15 58.1  -0.6
KHZ                                 IAmb   IAmb    04 16 03.0
      comp=Z,20nm,0.6s
KHZ   Kahutara           23.73 200  P      P       04 15 58.9  +0.2
      comp=Z,39nm,0.7s
LTZ   Lake Taylor        24.48 202  P      P       04 16 06.2  +0.6
LTZ                                 IAmb   IAmb    04 16 10.3
      comp=Z,35nm,0.8s
OXZ   Oxford             25.04 202  P      P       04 16 10.7   0.0
MQZ   McQueen's Vall     25.17 200  P      P       04 16 12.5  +0.7
RPZ   Rata Peaks         25.73 203  P      P       04 16 17.3  +0.4
RPZ                                 IAmb   IAmb    04 16 21.6
      comp=Z,26nm,0.6s
RPZ   Rata Peaks         25.73 203  P      P       04 16 18.0  +1.1
      comp=Z,46nm,0.6s
FOZ   Fox Glacier        26.04 205  P      P       04 16 20.4  +0.8
LBZ   Lake Benmore       26.62 203  P      P       04 16 24.8  -0.2
LBZ                                 IAmb   IAmb    04 16 33.4
      comp=Z,24nm,1.2s
ODZ   Otahua Downs       27.03 202  P      P       04 16 30.4  +1.9
      comp=Z,28nm,2.0s
WKZ   Wanaka             27.44 204  P      P       04 16 32.1  -0.2
WKZ                                 IAmb   IAmb    04 16 37.3
      comp=Z,30nm,1.1s
EIDS  Eidsvold           31.01 255  P      P       04 17 03.3  -0.7
EIDS                                IAmb   IAmb    04 17 04.1
      comp=Z,9.1nm,1.1s
ARMA  Armidale           31.10 245  P      P       04 17 04.6  -0.3
CNB   Canberra Magne     34.11 237  P      P       04 17 32.4  +1.4
CAN   Canberra           34.40 237  P      P       04 17 32.4  -1.0
CAN                                 IAmb   IAmb    04 17 33.3
      comp=Z,7.9nm,0.6s
CTA   Charters Tower     35.71 264  P      P       04 17 45.0  +0.1
CTAO  Charters Tower     35.71 264  P      P       04 17 44.1  -0.8
CTAO                                IAmb   IAmb    04 17 45.0
      comp=Z,24nm,0.8s
CTAO  Charters Tower     35.71 264  P      P       04 17 44.8  -0.1
      comp=Z,35nm,0.9s
CMSA  Cobar Meteorol     36.31 244  P      P       04 17 49.6  -0.2
PMG   Port Moresby       37.51 281  P      P       04 17 59.3  -0.9
      comp=Z,4.2nm,0.3s,baz=102,slow=5.2,SNR=5.2
PMG   Port Moresby       37.51 281  P      P       04 17 58.7  -1.4
PMG                                 IAmb   IAmb    04 18 00.1
      comp=Z,19nm,0.6s
TOO   Toolangi           37.73 235  P      P       04 18 00.8  -1.0
TOO                                 IAmb   IAmb    04 18 02.3
      comp=Z,14nm,1.1s
TOO   Toolangi           37.73 235  P      P       04 18 01.0  -0.8
COEN  Coen               39.81 273  P      P       04 18 18.6  -0.6
COEN                                IAmb   IAmb    04 18 19.4
      comp=Z,20nm,0.8s
STKA  Stephens Creek     39.82 244  P      P       04 18 17.9  -1.3
      comp=Z,3.1nm,0.4s,baz=96,slow=9.8,SNR=11
STKA                                PcP    PcP     04 20 22.8  +0.4
      comp=Z,1.0nm,0.5s,baz=6.7,slow=3.2,SNR=4.0
STKA  Stephens Creek     39.82 244  P      P       04 18 18.0  -1.2
LCRK  Leigh Creek        42.61 247  P      P       04 18 41.6  -0.4
BBOO  Buckleboo          44.57 244  P      P       04 18 56.0  -1.6
BBOO                                IAmb   IAmb    04 18 57.5
      comp=Z,36nm,1.3s
BBOO  Buckleboo          44.57 244  P      P       04 18 56.8  -0.8
OOD   Oodnadatta         44.80 251  P      P       04 19 01.4  +1.8
MULG  Mulgathing         46.20 247  P      P       04 19 09.0  -1.5
WR0   Warramunga Arr     46.62 261  P      P       04 19 12.3  -1.7
AS31  Alice Springs      46.70 256  P      P       04 19 13.7  -0.9
ASAR  Alice Springs      46.70 256  P      P       04 19 12.7  -1.9
      comp=Z,9.4nm,0.7s,baz=87,slow=8.3,SNR=62
ASAR                                PcP    PcP     04 20 45.0  -0.8
      comp=Z,2.5nm,0.5s,baz=105,slow=3.7,SNR=12
ASAR  Alice Springs      46.70 256  P      P       04 19 12.8  -1.7
WB0   Warramunga Arr     46.79 262  P      P       04 19 13.0  -2.3
WB0                                 IAmb   IAmb    04 19 14.5
      comp=Z,16nm,0.4s
WB2   Warramunga Arr     46.80 261  P      P       04 19 12.9  -2.5
WB2                                 IAmb   IAmb    04 19 14.6
      comp=Z,15nm,1.1s
WRAB  Tennant Creek      46.81 261  P      P       04 19 13.2  -2.2
WRAB                                IAmb   IAmb    04 19 14.6
      comp=Z,12nm,1.0s
WRAB  Tennant Creek      46.81 261  P      P       04 19 13.8  -1.6
      comp=Z,15nm,1.2s
WRA   Warramunga Arr     46.81 261  P      P       04 19 12.8  -2.7
      comp=Z,4.3nm,0.3s,baz=95,slow=7.6,SNR=168
WRA                                 PcP    PcP     04 20 45.5  -0.7
      comp=Z,0.7nm,0.8s,baz=96,slow=3.2,SNR=5.2
WRA   Warramunga Arr     46.81 261  P      P       04 19 12.6  -2.9
FORT  Forrest            51.36 246  P      P       04 19 48.0  -1.9
FORT                                IAmb   IAmb    04 20 05.5
      comp=Z,21nm,0.9s
MTN   Manton Dam         51.39 270  P      P       04 19 48.7  -1.6
MTN                                 IAmb   IAmb    04 19 49.6
      comp=Z,19nm,0.7s
MTN   Manton Dam         51.39 270  P      P       04 19 48.9  -1.4
WRKA  Warakurna          51.62 254  P      P       04 19 50.1  -1.9
KNRA  Kununurra          52.89 265  P      P       04 20 00.2  -1.1
KNRA  Kununurra          52.89 265  P      P       04 20 01.3   0.0
VNDA  Vanda              58.16 186  P      P       04 20 39.3  +1.2
SOEI  Soe                58.73 271  P      P       04 20 41.9  -1.3
PSA00 Pilbara Seismi     59.85 256  P      P       04 20 48.7  -1.9
PSA00                               IAmb   IAmb    04 20 55.0
      comp=Z,13nm,1.1s
QSPA  South Pole Qui     69.62 180  P      P       04 21 53.1  -0.2
PETK  Petropavlovsk-     76.82 344  P      P       04 22 36.1  +0.7
      comp=Z,4.0nm,1.0s,baz=176,slow=8.7,SNR=2.1
PETK  Petropavlovsk-     76.82 344  P      P       04 22 35.9  +0.5
NJ2   Nanjing            81.58 309  eP     P       04 22 59.6  -2.1
NJ2                                 pmax   pmax
      comp=Z,7.0nm,0.6s
MAW   Mawson             82.35 199  P      P       04 23 05.5  +0.4
      comp=Z,1.0nm,0.5s,baz=139,slow=7.8,SNR=8.1
MAW   Mawson             82.35 199  P      P       04 23 06.0  +0.9
H03S2 Juan Fernandez     84.17 124  T      T       05 56 05.4
      baz=248,slow=75,SNR=32
H03S1 Juan Fernandez     84.19 124  T      T       05 56 06.3
      baz=248,slow=75,SNR=43
H03S3 Juan Fernandez     84.19 124  T      T       05 56 05.1
      baz=248,slow=75,SNR=38
H03N2 Juan Fernandez     84.31 123  T      T       05 56 07.0
      baz=258,slow=72,SNR=13
H03N3 Juan Fernandez     84.31 123  T      T       05 56 08.0
      baz=258,slow=72,SNR=9.6
H03N1 Juan Fernandez     84.32 123  T      T       05 56 08.5
      baz=258,slow=72,SNR=9.2
TXAR  Lajitas Array      85.16  56  P      P       04 23 22.9  +2.7
      comp=Z,0.3nm,0.9s,baz=210,slow=7.1,SNR=3.8
SEY   Seymchan           86.85 346  P      P       04 23 27.4  -0.1
      comp=Z,0.6nm,0.3s,baz=71,slow=12,SNR=4.1
SYO   Syowa Base         87.25 192⇑ eP     P       04 23 27.8  -1.8
SYO   Syowa Base         87.25 192⇓ ePcP   P       04 23 29.4  -0.2
I23K  Minto, Yukon-K     87.68  11  P      P       04 23 32.0  +0.6
ILAR  Eielson Array      87.79  12  P      P       04 23 32.1   0.0
      comp=Z,0.4nm,0.6s,baz=217,slow=5.6,SNR=8.2
ILAR  Eielson Array      87.79  12  P      P       04 23 31.9  -0.1
SNAA  Sanae              87.98 178  P      P       04 23 33.8  +0.6
SNAA  Sanae              87.98 178  P      P       04 23 33.5  +0.3
HRY   Holter Researc     88.11  38  P      P       04 23 34.2   0.0
VNA2  Neumayer--Watz     88.50 176  P      P       04 23 36.4  +0.8
      baz=189,slow=3.7
XAN   Xi'an              89.89 307  P      P       04 23 42.8  +0.1
XAN                                 pmax   pmax
      comp=Z,5.0nm,0.9s
HHC   Hu-ho-hao-te       90.93 314  eP     P       04 23 45.8  -1.7
HHC                                 pmax   pmax
      comp=Z,8.0nm,0.8s
HHC                                 pmax   pmax
      comp=Z,95nm,9.1s
CMAR  Chiang Mai Arr     92.21 289  P      P       04 23 54.2  +0.5
      comp=Z,1.3nm,0.3s,baz=108,slow=3.9,SNR=5.3
CMAR  Chiang Mai Arr     92.21 289  P      P       04 23 52.9  -0.9
MKAR  Makanchi Array    112.79 313  PKiKP  PKiKP   04 29 18.1  -1.3
      comp=Z,0.4nm,0.4s,baz=138,slow=0.7,SNR=9.6
BVAR  Borovoye Array    120.47 320  PKP    PKPdf   04 29 33.1  -0.8
      comp=Z,0.5nm,0.5s,baz=20,slow=4.6,SNR=2.8
ARCES ARCESS Array B    129.26 351  PKP    PKPdf   04 29 50.6  +0.3
      comp=Z,3.3nm,0.9s,baz=29,slow=2.1,SNR=3.7
ARCES ARCESS Array B    129.26 351         PKPdf   04 29 50.8  +0.5
FINES FINESS Array B    136.33 345  PKP    PKPdf   04 30 03.8   0.0
      comp=Z,6.7nm,1.2s,baz=77,slow=2.3,SNR=4.2
HFS   Hagfors           139.81 353  PKhKP  PKPpre  04 30 01.6
      comp=Z,2.3nm,0.8s,baz=90,slow=2.9,SNR=1.6
NACGM Naroch            141.66 339  i PKP  PKPdf   04 30 10.8  -2.8
AKASG Malin Array Be    144.02 333  PKhKP  PKPpre  04 30 15.3
      comp=Z,4.1nm,0.5s,baz=40,slow=4.2,SNR=24
EKA   Eskdalemuir Ar    144.71   7  PKP    PKPab   04 30 17.9  -0.3
      comp=Z,0.8nm,0.5s,baz=340,slow=3.0,SNR=6.5
MBAR  Mbarara           146.78 234  PKPbc  PKPab   04 30 27.8  +0.3
      comp=Z,3.1nm,0.2s,baz=162,slow=2.4,SNR=7.6
BRTR  Keskin Array B    148.44 314  PKPbc  PKPbc   04 30 29.1  -0.6
      comp=Z,6.4nm,0.7s,baz=141,slow=2.5,SNR=21
DPC   Dobruska-Polom    148.70 345⇑ ePKP   PKPbc   04 30 30.3  +0.4
ASF   Jabal al Asfar    148.72 299  PKPbc  PKPbc   04 30 30.8  +0.1
      comp=Z,5.4nm,0.8s,baz=96,slow=3.2,SNR=6.8
PRU   Pruhonice         149.44 347⇑ ePKP   PKPbc   04 30 31.6  -0.1
MMAI  Mount Meron Ar    149.72 301  PKPbc  PKPbc   04 30 33.4  +0.3
      comp=Z,9.2nm,0.6s,baz=74,slow=6.2,SNR=12
KHC   Kasperske Hory    150.45 348⇑ ePKP   PKPbc   04 30 34.5  +0.2
CKRC  Cesky Krumlov     150.60 347⇑ ePKP   PKiKP   04 30 36.1  +0.9
GERES GERESS Array B    150.70 347  PKPbc  PKPbc   04 30 35.0   0.0
      comp=Z,0.3nm,0.3s,baz=0.0,slow=2.9,SNR=3.7
GERES                               PKPab  PKPab   04 30 41.5  -0.8
      comp=Z,0.4nm,0.3s,baz=0.0,slow=3.9,SNR=1.7
GERES GERESS Array B    150.70 347  PKPdf  PKPdf   04 30 28.8  -0.5
EIL   Elat              150.90 294  PKPbc  PKPbc   04 30 35.1  -0.8
      comp=Z,2.1nm,0.5s,baz=103,slow=2.5,SNR=3.6
DAVOX Davos/Dischmat    153.36 352  PKPbc  PKPbc   04 30 40.4  -0.7
      comp=Z,1.2nm,0.4s,baz=320,slow=7.9,SNR=2.8
TORD  Torodi Ar. Bea    172.29 160  PKPab  PKPab   04 32 19.4  +2.5
      comp=Z,0.3nm,0.7s,baz=177,slow=4.3,SNR=1.8
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*IDC **01** 04:21:16.8±1.8, 34.°31N×22.°56E, h0^{km}, mb3.9/9, mb1 3.9/15, mb1mx3.7/59, mbtmp3.9/15, ML3.7/6, MS3.0/2, Ms1 3.0/2, ms1mx2.5/49, Error ellipse: s-maj=37.0km s-min=16.2km az=0.0*

*NEIC **01** 04:21:21.1±1.6, 34.°23N±0.°09×22.°47E±0.°06, h34^{km}±9^{km}, mb4.1/4, Error ellipse: s-maj=13.3km s-min=5.7km az=199.0*

*THE **01** 04:21:25.7, 34.°53N×22.°79E, h16^{km}±5^{km}, ML2.8/2, Error ellipse: s-maj=6.4km s-min=1.4km az=181.0*

ISC 01 04:21:21.9±1.6**, 34.°42N**±0.°10×**22.°71E**±0.°06**, h10**^{km}**, n54,** σ1.^{s}**81**/43**, mb4.1**/11**, Central Mediterranean Sea**

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Code  Station Name         Δ°  AZ°    Phase ID            Time       Res
                                    Op     ISC          h  m  s     ISC
KNDR  Palaiochora Ch      1.14  44  P      Pg      04 21 43.6  -0.1
KNDR                                S      Sg      04 21 57.6  -0.9
      320nm,0.9s
KNDR  Palaiochora Ch      1.14  44         Pg      04 21 43.6  -0.1
KNDR                                       Sg      04 21 57.6  -0.9
RODP  Rodopos             1.42  37  P      Pn      04 21 48.7  +0.9
RODP  Rodopos             1.42  37         Pn      04 21 48.7  +0.9
IMMV  Iera Moni Meta      1.47  45  P      Pn      04 21 48.9  +0.5
IMMV  Iera Moni Meta      1.47  45         Pn      04 21 48.9  +0.5
ANKY  Antikythira Is      1.52  18  P      Pn      04 21 49.5  +0.4
ANKY  Antikythira Is      1.52  18         Pn      04 21 49.5  +0.4
VAM   Vamos               1.57  51  P      Pn      04 21 50.0  +0.2
VAM   Vamos               1.57  51         Pn      04 21 50.0  +0.2
KTHR  Kythira             1.85   7  P      Pn      04 21 54.1  +0.5
KTHR  Kythira             1.85   7         Pn      04 21 54.1  +0.5
KTHA  Kythira Island      1.85   9  P      Pn      04 21 54.5  +0.8
KTHA  Kythira Island      1.85   9         Pn      04 21 54.5  +0.8
IDI   Anoyia              1.99  64  Pn     Pn      04 21 56.1  +0.5
      4.4nm,0.3s,baz=251,slow=9.9,SNR=15
IDI                                 Sn     Sb      04 22 23.7  +0.7
      5.3nm,0.3s,baz=8.7,slow=19,SNR=6.9
VLI   Veliai              2.30   5  P      Pn      04 22 00.6  +0.8
VLI   Veliai              2.30   5         Pn      04 22 00.6  +0.8
ITM   Ithomi              2.82 347  Pn     Pn      04 22 06.5  -0.5
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ITM				Sn	Sn	04 22 42.5	+1.3
KRND	KRANIDI	2.97	7	P	Pn	04 22 09.1	0.0
KRND				S	Sn	04 22 44.7	-0.1
	145nm,1.4s						
KRND	KRANIDI	2.97	7		Pn	04 22 09.1	0.0
KRND					Sn	04 22 44.7	-0.1
AGG	Agios Georgios	4.60	356	Pn	Pn	04 22 31.5	0.0
ELL	Elmali	6.30	66	Pn	Pn	04 22 55.5	+0.5
KBN	Korca	6.37	347		Pn	04 22 54.7	-1.2
FNA	Florina	6.44	351		Pn	04 22 55.9	-0.9
FNA					Sn	04 24 09.2	-1.0
SCTE	Santa Cesarea	6.58	330	Pn	Pn	04 22 55.6	-3.0
TIP	Timpagrande	6.73	317		Pn	04 22 56.8	-4.0
RAFF	Raffo Rosso	7.33	295		Pn	04 23 04.8	-4.2
VAE	Valguarnera	7.39	297	Pn	Pn	04 23 03.8	-6.0
	1.7nm,0.3s,baz=63,slow=18,SNR=4.1						
VAE				Sn	Sn	04 24 26.9	-6.9
	1.6nm,0.3s,baz=358,slow=19,SNR=1.5						
MMAI	Mount Meron Ar	10.66	94	Pn	Pn	04 23 51.6	-3.1
	1.5nm,0.3s,baz=269,slow=11,SNR=2.4						
VRAC	Vranov	15.55	345	Pn	Pn	04 24 58.6	-2.5
	0.2nm,0.3s,baz=141,slow=12,SNR=2.0						
CKRC	Cesky Krumlov	15.68	339	eP	P	04 25 11.2	+4.3
DAVOX	Davos/Dischmat	15.70	326	Pn	Pn	04 25 00.6	-2.6
	0.1nm,0.3s,baz=142,slow=19,SNR=3.8						
OKC	Ostrava-Krasne	15.77	349	eP	Pn	04 25 07.8	+3.9
KHC	Kasperske Hory	16.18	338	eP	P	04 25 19.5	+7.1
KHC				ex	x	04 25 29.6	
DPC	Dobruska-Polom	16.59	346	eP	Pn	04 25 16.1	+1.6
OSTC	Ostas	16.81	346	eP	Pn	04 25 18.4	+1.2
CHVC	Chvalec	16.87	345	eP	Pn	04 25 09.6	-8.4
AKASG	Malin Array Be	16.95	14	Pn	Pn	04 25 17.3	-1.7
	0.6nm,0.3s,baz=206,slow=10,SNR=5.7						
AKASG	Malin Array Be	16.95	14	P	Pn	04 25 19.1	+0.2
ESDC	Sonseca Array	21.89	292	P	P	04 26 11.3	-3.7
	0.6nm,0.8s,baz=87,slow=11,SNR=4.3						
ESDC				LR	LR	04 34 25.1	
	comp=Z,22nm,20.7s,baz=285,slow=36						
MDT	Midelt	22.79	274	P	P	04 26 20.6	-4.1
	1.2nm,0.8s,baz=104,slow=4.2,SNR=4.9						
MDT				LR	LR	04 36 30.6	
	comp=Z,60nm,18.3s,baz=100,slow=40						
HFS	Hagfors	26.39	350	P	P	04 26 56.1	-2.0
	4.6nm,1.0s,baz=162,slow=10.0,SNR=1.7						
FINES	FINESS Array B	27.12	4	P	P	04 27 02.1	-2.7
	4.1nm,1.0s,baz=188,slow=9.6,SNR=3.3						
ARCES	ARCESS Array B	35.20	2	P	P	04 28 13.3	-2.4
	3.8nm,1.0s,baz=193,slow=7.4,SNR=4.9						
KKAR	Karatay Array	37.83	62	P	P	04 28 36.9	-1.7
KURBB	Kurchatov Arra	43.15	50	P	P	04 29 19.5	-2.9
	1.0nm,0.5s,baz=279,slow=8.8,SNR=12						
KURK	Kurchatov	43.20	50	P	P	04 29 20.3	-2.5
KURK				IAmb	IAmb	04 29 21.2	
	comp=Z,2.8nm,1.0s						
MK31	Makanchi Array	45.85	56	P	P	04 29 41.5	-2.7
MKAR	Makanchi Array	45.85	56	P	P	04 29 41.8	-2.4
	comp=Z,1.4nm,0.4s,baz=267,slow=7.6,SNR=29						
MKAR	Makanchi Array	45.85	56	P	P	04 29 41.5	-2.7
ZAA0	Zalesovo Array	46.96	46	P	P	04 29 49.2	-3.5
ZAA0				IAmb	IAmb	04 29 59.1	
	comp=Z,1.8nm,0.7s						
ZALV	Zalesovo Beam	46.96	46	P	P	04 29 49.2	-3.5
	comp=Z,1.1nm,0.3s,baz=271,slow=8.3,SNR=7.4						
ZALV	Zalesovo Beam	46.96	46	P	P	04 29 49.9	-2.7
SONM	Songino Array	61.50	50	P	P	04 31 37.0	-1.9
	comp=Z,1.2nm,0.8s,baz=275,slow=7.3,SNR=5.6						

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*PRE **01** 04:22:35.7±1.0, 28°.08S×26°.83E, h2^{km}, ML2.5*
*EAF **01** 04:22:41.3±1.7, 28°.16S×26°.94E, h10^{km}, MD3.8*
*BUL **01** 04:22:42.2±1.5, 28°.10S×26°.84E, h10^{km}, MD4.0*
ISC 01 04:22:39.2±1.8, **28°.06S**±0°.05×**26°.87E**±0°.05, **h27**^{km}±16^{km}, **n21**, σ1^{s}**82**/34, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	Parys	1.21	21	eP	Pn	04 23 00.1	-0.5
PRYS				eS	Sn	04 23 16.5	+0.3
PRYS				IAML		04 23 21.1	
	comp=Z,239nm,0.3s						
BOSA	Boshof	1.52	248	eP	Pn	04 23 04.7	0.0
BOSA				eS	Sn	04 23 24.5	+0.8
BOSA				IAML		04 23 30.9	
	comp=Z,33nm,0.5s						
BOSA	Boshof	1.52	248	i P	Pb	04 23 07.5	+0.7
BOSA	Boshof	1.52	248	i P	Pb	04 23 07.5	+0.7
SWZ	Schweizer	1.62	302	eP	Pn	04 23 06.4	+0.3
SWZ				eS	Sn	04 23 27.3	+1.1
SWZ				IAML		04 23 32.7	
	comp=Z,50nm,0.1s						
KSR	Koster	2.20	1	eP	Pn	04 23 14.7	+0.6
KSR				eS	Sn	04 23 41.8	+1.2
KSR				IAML		04 23 48.2	
	comp=Z,242nm,0.7s						
HRAO	HartRAO	2.28	19	eP	Pn	04 23 15.7	+0.4
HRAO				eS	Sn	04 23 44.2	+1.6
HRAO				IAML		04 23 51.7	
	comp=Z,29nm,0.5s						
LBTB	Lobatse	3.24	339	eP	Pn	04 23 29.1	+0.7
LBTB				eS	Sn	04 24 06.9	+0.8
LBTB				IAML		04 24 24.5	
	comp=Z,38nm,0.7s						
LBTB	Lobatse	3.24	339	i P	Pb	04 23 34.5	-1.6
LBTB	Lobatse	3.24	339	i P	Pb	04 23 34.5	-1.6
POGA	Pongola	4.35	82	eP	Pn	04 23 44.2	+0.7
POGA				eS	Sn	04 24 33.7	+0.2
POGA				IAML		04 24 44.6	
	comp=Z,8.7nm,1.1s						
GRAN	Grantham	5.86	223	eP	Pn	04 24 04.1	-0.3
GRAN				eS	Sn	04 25 08.2	-2.6
GRAN				IAML		04 25 18.5	
	comp=Z,3.3nm,1.7s						
MOPA	Mopani	6.09	43	i P	Pn	04 24 11.7	+4.2
MOPA				i S	Sn	04 25 15.4	-1.0
MOPA	Mopani	6.09	43	i P	Pn	04 24 11.7	+4.2
MOPA				i S	Sn	04 25 15.4	-1.0
ARMS	Ukamas	6.30	269	eP	Pn	04 24 10.7	+0.3
ARMS				eS	Sn	04 25 19.1	-2.5
ARMS				IAML		04 26 02.5	
	comp=Z,12nm,0.8s						
MSNA	Messina	6.37	27	i P	Pn	04 24 16.6	+5.2
MSNA				i S	Sn	04 25 23.0	-0.3
MSNA	Messina	6.37	27	i P	Pn	04 24 16.6	+5.2
MSNA				i S	Sn	04 25 23.0	-0.3
MATP	Matopo	7.75	11	i P	Pn	04 24 35.5	+5.1
MATP				i S	Sn	04 25 55.8	-1.5
MATP	Matopo	7.75	11	i P	Pn	04 24 35.5	+5.1
MATP				i S	Sn	04 25 55.8	-1.5
BLWY	Bulawayo	8.04	12	i P	Pn	04 24 37.6	+3.1
BLWY				i S	Sn	04 26 02.4	-2.3
BLWY	Bulawayo	8.04	12	i P	Pn	04 24 37.6	+3.1
BLWY				i S	Sn	04 26 02.4	-2.3

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*IDC **01** 05:03:18.6±1.1, 19°.71N×109°.58W, h0^{km}, mb3.9/6, mb1 4.2/10, mb1mx3.9/49, mbtmp3.9/10, ML3.4/4, MS3.4/8, Ms1 3.4/8, ms1mx3.1/28, Error ellipse: s-maj=27.5km s-min=12.1km az=131.0*
*NEIC **01** 05:03:20.6±3.0, 19°.64N±0°.07×109°.53W±0°.07, h10^{km}±1^{km}, mb4.1/51, Md4.2/8(MEX), Error ellipse: s-maj=14.4km s-min=9.0km az=139.0*
*MEX **01** 05:03:23.3±1.1, 19°.64N×109°.53W, h10^{km}, MD4.2*
ISC 01 05:03:21.6±1.5, **19°.59N**±0°.08×**109°.59W**±0°.07, **h29**^{km}±13^{km}, **n76**, σ1^{s}**03**/71, **mb4.1**/14, **MS3.3**/5, **Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H06E		1.50	238		Pb	05 03 48.5	-0.1
H06E					Sn	05 04 03.3	-1.7
H06E		1.50	238	eP	Pb	05 03 48.5	-0.1
H06E				eS	Sn	05 04 05.4	+0.4
H06E1	SOCORRO T-PHAS	1.50	238	Pn	Pb	05 03 48.7	0.0
H06E1				Sn	Sb	05 04 08.4	+1.0
	SNR=776						
H06E1				T	T	05 05 45.6	
H06N1	SOCORRO T-PHAS	1.51	241	Pn	Pb	05 03 48.5	-0.4
H06N1				Sn	Sb	05 04 08.2	+0.6
	SNR=37						
H06N1				T	T	05 05 45.2	
	SNR=7.5						
H06N	Isla Socorro	1.51	241		Pb	05 03 48.3	-0.6
H06N					Sn	05 04 04.0	-1.4
H06N	Isla Socorro	1.51	241	eP	Pb	05 03 48.3	-0.6
H06S1	SOCORRO T	1.55	237	Pn	Pb	05 03 49.2	-0.4
H06S1				Sn	Sb	05 04 09.3	+0.5
	SNR=536						
H06S1				T	T	05 05 41.0	
	SNR=4.7						
H06S		1.55	237		Pb	05 03 49.0	-0.6
H06S					Sn	05 04 04.7	-1.8
H06S		1.55	237	eP	Pb	05 03 49.0	-0.6
H06S				i S	Sn	05 04 07.3	+0.8
SLBS	Sierra La Lagu	4.09	355	Pn	Pn	05 04 19.9	-2.4
JUBC	Volcan de Coli	5.68	90	i P	Pn	05 04 43.5	-0.8
ZAIG	Zacatecas	7.28	63	Pn	Pn	05 05 04.6	-1.7
TLIG	Tlapa	10.65	99	Pn	Pn	05 05 52.7	+0.4
TXAR	Lajitas Array	11.09	28	Pn	Pn	05 05 58.5	+0.1
	0.1nm,0.3s,baz=199,slow=15,SNR=16						
TXAR				LR	LR	05 09 40.9	
	comp=Z,126nm,19.2s,baz=0.0,slow=35						
MNTX	Cornudas Mount	12.64	17	Pn	Pn	05 06 20.3	+0.9
TUC	Tucson	12.71	355	Pn	Pn	05 06 21.4	+0.9
121A	Cookes Peak, D	12.99	7	Pn	Pn	05 06 25.5	+1.1
CMIG	Matias Romero	14.18	98	Pn	Pn	05 06 40.5	-0.1
	0.1nm,0.3s,baz=301,slow=13,SNR=4.4						
CMIG				LR	LR	05 11 46.7	
	comp=Z,222nm,19.0s,baz=272,slow=36						
X16A	Lo Mia Camp, P	14.86	354	Pn	Pn	05 06 50.5	+0.6
X18A	Snowflake	14.88	359		Pn	05 06 51.7	+1.5
PFO	Pinyon Flats O	15.25	338	Pn	P	05 07 00.9	+1.3
	0.0nm,0.3s,baz=144,slow=9.2,SNR=5.2						
PFO	Pinyon Flats O	15.25	338	P	P	05 07 02.2	+2.5
PFO				IAmb	IAmb	05 07 02.8	
	comp=Z,6.1nm,1.0s						
W18A	Petrified Fore	15.47	360		Pn	05 06 58.8	+0.8
W18A				IAmb	IAmb	05 07 04.1	
	comp=Z,11nm,1.1s						
ANMO	Albuquerque	15.54	10	Pn	Pn	05 06 59.7	+0.8
	comp=Z,0.1nm,0.3s,baz=174,slow=9.4,SNR=3.0						
ANMO				LR	LR	05 12 24.1	
	comp=Z,107nm,20.1s,baz=188,slow=35						
ANMO	Albuquerque	15.54	10	IAmb	IAmb	05 07 05.0	
	comp=Z,8.0nm,1.4s						
ABTX	Abilene, Hawle	15.74	32	P	Pn	05 07 02.9	+1.5
ABTX				IAmb	IAmb	05 07 04.9	
	comp=Z,15nm,1.2s						
WUAZ	Wupatki	15.94	355	Pn	Pn	05 07 04.2	+0.1
WUAZ				IAmb	IAmb	05 07 09.9	
	comp=Z,11nm,0.9s						
U15A	North Rim	16.94	353	Pn	Pn	05 07 15.9	-1.0
QSM	Queen of Sheba	17.53	340	Pn	Pn	05 07 23.9	+0.1
MVCO	Mesa Verde	17.58	3	Pn	Pn	05 07 23.9	-0.9
MVCO				IAmb	IAmb	05 07 26.3	
	comp=Z,18nm,1.3s						
KNB	Kanab	17.59	351		P	05 07 25.6	-0.1
KNB				IAmb	IAmb	05 07 28.1	
	comp=Z,18nm,1.3s						
LCMT	Little Creek M	17.65	350		Pn	05 07 25.8	+0.3
PKCU	Pink Cliffs	17.95	353	P	P	05 07 31.6	+1.9
T25A	Trinidad	18.06	13	P	Pn	05 07 30.9	+0.2
T25A				IAmb	IAmb	05 07 33.1	
	comp=Z,14nm,1.2s						
CCUT	Cedar City	18.20	350	P	Pn	05 07 31.5	-0.8
SDCO	Great Sand Dun	18.44	10	P	P	05 07 33.6	-1.5
SDCO				IAmb	IAmb	05 07 38.6	
	comp=Z,14nm,1.3s						
APG	El Apazote	18.82	101	P	Pn	05 07 40.9	+0.9
	comp=Z,0.5nm,0.3s,baz=348,slow=0.5,SNR=4.2						
MVU	Marysvale	18.98	354	P	Pn	05 07 42.8	+0.9
MVU				IAmb	IAmb	05 07 44.5	
	comp=Z,18nm,1.1s						
MSU	Marysvale	18.99	354	P	Pn	05 07 42.4	+0.5
Q16A	Castle Valley	19.31	356	P	Pn	05 07 47.2	+1.5
Q16A				IAmb	IAmb	05 07 48.3	
	comp=Z,9.4nm,1.2s						
SRU	San Rafael Swe	19.47	358	P	P	05 07 46.8	+0.4
TPH	Tonopah	19.58	342	P	Pn	05 07 49.4	+0.4
SMCO	Snowmass	19.65	6		Pn	05 07 49.8	-0.2
SMCO				IAmb	IAmb	05 07 54.8	
	comp=Z,16nm,1.1s						
SPR3	Spring Creek 3	19.77	349	P	Pn	05 07 51.2	-0.2
SPR3				IAmb	IAmb	05 07 53.2	
	comp=Z,10nm,1.2s						
P18A	Preston Nutter	19.98	359	P	P	05 07 53.0	+1.0
P18A				IAmb	IAmb	05 07 56.9	
	comp=Z,16nm,1.2s						
LHV	Little Huntoon	20.14	339	P	P	05 07 53.4	0.0
LHV				IAmb	IAmb	05 08 00.9	
	comp=Z,12nm,1.2s						
NLU	North Lily Min	20.41	355	P	P	05 07 57.0	+0.5
RYN	Ryan	20.49	340	P	Pn	05 07 59.3	-0.4
RYN				IAmb	IAmb	05 08 03.5	
	comp=Z,13nm,1.4s						
O20A	White River Ci	20.51	3	P	P	05 07 57.4	-0.2
O20A				IAmb	IAmb	05 08 02.9	
	comp=Z,8.0nm,1.0s						
DUG	Dugway, Tooele	20.72	353	P	P	05 08 00.3	+0.5
DUG				IAmb	IAmb	05 08 02.8	
	comp=Z,13nm,1.1s						
KVN	Kaiserville	20.74	341	P	Pn	05 08 01.8	-0.9
KVN				IAmb	IAmb	05 08 03.1	
	comp=Z,7.6nm,1.1s						
RDMU	Red Mountain	20.91	0	P	P	05 08 02.2	+0.2
R32A	Long Quarter,	21.01	24	P	P	05 08 00.8	-2.1
YERR	Yerington	21.05	339	P	P	05 08 02.8	-0.8
CTU	Camp Tracy	21.11	355	P	P	05 08 03.1	-1.0
CTU				IAmb	IAmb	05 08 10.5	
	comp=Z,17nm,1.5s						
PNTR	Pine Nut	21.27	338	P	P	05 08 07.9	+2.0
PNTR				IAmb	IAmb	05 08 09.1	
	comp=Z,9.7nm,1.0s						
VCNR	Virginia City	21.47	338	P	P	05 08 09.9	+1.9
VCNR				IAmb	IAmb	05 08 15.2	
	comp=Z,12nm,1.1s						
ELK	Elko	21.63	348	P	P	05 08 10.3	+0.5
	comp=Z,1.8nm,0.9s,baz=184,slow=10,SNR=4.8						
ELK				LR	LR	05 16 33.7	
	comp=Z,67nm,19.7s,baz=164,slow=37						
SPUT	South Promonto	21.79	354	IAmb	IAmb	05 08 13.0	
	comp=Z,5.8nm,1.0s						
HWUT	Hardware Ranch	22.01	356	IAmb	IAmb	05 08 20.4	
	comp=Z,9.2nm,1.1s						
HVU	Hansel Valley	22.28	354	IAmb	IAmb	05 08 23.8	
	comp=Z,6.6nm,1.3s						
PDAR	Pinedale Array	23.11	0	P	P	05 08 24.7	-0.7
	comp=Z,1.3nm,0.9s,baz=168,slow=9.2,SNR=6.7						
PDAR				LR	LR	05 17 27.4	
	comp=Z,95nm,18.4s,baz=120,slow=37						
K22A	Casper	23.13	6	P	P	05 08 25.6	-0.1
TPAW	Teton Pass	23.86	358	IAmb	IAmb	05 08 33.6	
	comp=Z,11nm,1.5s						
WVOR	Wild Horse Val	24.02	343	IAmb	IAmb	05 08 37.4	
	comp=Z,7.7nm,1.1s						
YBH	Yreka Blue Hor	24.73	336	LR	LR	05 16 46.9	
	comp=Z,87nm,18.3s,baz=163,slow=33						
NEW	Newport	29.25	350	LR	LR	05 21 28.0	
	comp=Z,85nm,18.4s,baz=172,slow=37						
YKA	Yellowknife Ar	43.01	357	P	P	05 11 17.5	-0.6
	comp=Z,1.9nm,0.8s,baz=162,slow=8.4,SNR=5.4						
INK	Inuvik	50.96	349	P	P	05 12 20.7	+0.5
	comp=Z,5.8nm,0.9s,baz=133,slow=8.7,SNR=17						
INK	Inuvik	50.96	349	P	P	05 12 20.1	-0.1
ILAR	Eielson Array	51.49	341	P	P	05 12 25.4	+1.1
	comp=Z,1.5nm,1.0s,baz=149,slow=7.7,SNR=5.7						
H03N2	Juan Fernandez	60.31	151	T	T	06 19 03.3	
	baz=329,slow=77,SNR=17						
H03N1	Juan Fernandez	60.32	151	T	T	06 19 03.8	
	baz=329,slow=77,SNR=20						
H03N3	Juan Fernandez	60.32	151	T	T	06 19 02.6	
	baz=329,slow=77,SNR=14						
ARCES	ARCESS Array B	85.57	14	P	P	05 15 56.8	-0.1
	comp=Z,2.5nm,0.8s,baz=320,slow=5.2,SNR=8.8						
ARCES				LR	LR	05 53 54.9	
	comp=Z,40nm,18.0s,baz=300,slow=36						
WRA	Warramunga Arr	120.19	258	PKP	PKiKP	05 22 12.3	+1.6
	comp=Z,0.3nm,0.8s,baz=73,slow=3.5,SNR=1.6						

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*AEIC **01** 05:52:21.9±2.0, 51°.5N±0°.1×167°.0W±0°.1, h2^{km}±9^{km}, ML3.5/23, Error ellipse: s-maj=16.6km s-min=10.0km az=149.0*
*NEIC **01** 05:52:22.6±2.0, 51°.81N±0°.04×167°.2W±0°.1, h20^{km}±16^{km}, Error ellipse: s-maj=11.2km s-min=4.8km az=103.0*
*IDC **01** 05:52:22.6±2.1, 51°.89N×166°.01W, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.4/49, mbtmp3.5/4, ML3.0/1, Error ellipse: s-maj=42.9km s-min=34.4km az=4.0*
ISC 01 05:52:21.7±1.4, **51°.6N**±0°.1×**167°.08W**±0°.08, **h35**^{km}, **n32**, σ0^{s}**95**/29, **mb3.5**/3, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKTU	Okmok Mt. Tuli	1.91	342		Pn	05 52 52.2	+0.5
OKFG	Magazine Ridge	1.91	345		Pn	05 52 51.9	+0.3
OKFG					Sn	05 53 15.3	+0.9
OKCE	Okmok Cone E	1.97	341		Pn	05 52 52.8	+0.2
UNV	Unalaska Valle	2.30	8		Pn	05 52 56.9	-0.1
MNAT	Makushin Natee	2.33	6		Pn	05 52 57.3	-0.1
MNAT					Sn	05 53 25.8	+1.1
MSW	Makushin Switc	2.35	4		Pn	05 52 57.9	+0.1
MSW					Sn	05 53 25.9	+0.5
AKMO	Akutan Morgan	2.60	14		Pn	05 53 00.6	-0.6
AKMO					Sn	05 53 32.5	+0.9
WESP	Westdahl Peak	3.25	25		Pn	05 53 10.6	+0.4
WECS	Westdahl Cape	3.27	24		Pn	05 53 11.0	+0.6
SSBA	Shishaldin	3.66	28		Pn	05 53 16.4	+0.6
FALS	False Pass	3.96	32		Pn	05 53 20.0	+0.3
KOFP	Korovin Flat P	4.40	282		Pn	05 53 25.6	-0.3
ATKA	Atka Island	4.46	281		Pn	05 53 26.4	-0.2
DT1	Dutton Round H	4.56	37		Pn	05 53 28.4	+0.4
SDPT	Sand Point	5.46	44		Pn	05 53 40.7	+0.3
ADK	Adak	5.98	277	Pn	Pn	05 53 46.7	-0.9
KIWB	Kanaga Island	6.27	276		Pn	05 53 52.9	+1.3
KIMD	Kanaga Island	6.33	276		Pn	05 53 52.8	+0.5
VNHG	Veniaminof 1	6.59	42		Pn	05 53 56.8	+0.7
CHGN	Chignik	6.97	44	Pn	Pn	05 54 01.2	+0.2
ILAR	Eielson Array	16.86	31	Pn	Pn	05 56 11.0	-3.7
	0.1nm,0.3s,baz=225,slow=11,SNR=2.1						
TABL	Table Mountain	16.90	48	Pn	P	05 56 16.9	-0.2
M26K	Nabesna, AK	16.90	41		Pn	05 56 14.6	-0.7
INK	Inuvik	23.26	31	P	P	05 57 25.2	-0.3
	4.2nm,0.8s,baz=239,slow=7.7,SNR=12						
H11N2	WAKE ISLAND Hy	37.77	222	T	T	06 39 34.4	
	baz=26,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	37.78	222	T	T	06 39 33.9	
	baz=26,slow=76,SNR=17						
H11N1	WAKE ISLAND Hy	37.79	222	T	T	06 39 35.0	
	baz=26,slow=76,SNR=9.9						
H11S1	WAKE ISLAND Hy	38.94	222	T	T	06 41 02.7	
	baz=26,slow=76,SNR=4.9						
H11S2	WAKE ISLAND Hy	38.96	222	T	T	06 41 03.4	
	baz=26,slow=76,SNR=5.9						
H11S3	WAKE ISLAND Hy	38.96	222	T	T	06 41 04.1	
	baz=26,slow=76,SNR=5.4						
TXAR	Lajitas Array	51.34	90	P	P	06 01 23.6	+1.1
	0.3nm,0.5s,baz=300,slow=5.9,SNR=12						
SONM	Songino Array	52.92	303	P	P	06 01 43.1	+9.0
	0.3nm,0.6s,baz=58,slow=7.4,SNR=2.2						

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*THE **01** 05:57:32.8, 38°.44N×20°.46E, h10^{km}, ML3.4/9, Error ellipse: s-maj=1.1km s-min=0.4km az=288.0*
*ATH **01** 05:57:33.3, 38°.43N×20°.48E, h11^{km}±1^{km}, ML3.1/13, Error ellipse: s-maj=1.7km s-min=0.6km az=277.0*
*IDC **01** 05:57:43.2±13.0, 39°.54N×21°.80E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.4/33, mbtmp3.7/4, Error ellipse: s-maj=252.9km s-min=45.5km az=38.0*
ISC 01 05:57:32.7±0.8, **38°.44N**±0°.02×**20°.45E**±0°.03, **h12**^{km}±5^{km}, **n80**, σ1^{s}**12**/102, **mb3.8**/4, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.09	78	P	Pg	05 57 35.0	-0.5
FSK				S	Sg	05 57 36.6	-1.0
	35μm,0.3s						
FSK	Fiskardo	0.09	78	P	Pg	05 57 35.1	-0.5
FSK				S	Sg	05 57 36.8	-0.8
FSK				AML	AML	05 57 36.8	
	comp=N,52594μm,0.5s						
FSK				AML	AML	05 57 36.9	
	comp=E,88764μm,0.2s						
KEF4	Livadi, Kephal	0.18	185	P	Pg	05 57 36.7	0.0
KEF4				S	Sg	05 57 39.9	+0.3
	comp=E,98μm,0.4s						
KEF4	Livadi, Kephal	0.18	185	P	Pg	05 57 36.7	0.0
KEF4				S	Sg	05 57 40.2	+0.6
DMLN	Damoulianata-K	0.21	196	P	Pg	05 57 37.2	0.0
DMLN				S	Sg	05 57 41.1	+0.8
	comp=E,14μm,0.5s						
DMLN	Damoulianata-K	0.21	196	P	Pg	05 57 37.3	0.0
DMLN				S	Sg	05 57 41.4	+1.1
LXRA	Lixouri, Kepha	0.24	182	P	Pg	05 57 37.3	-0.4
LXRA				S	Sg	05 57 42.4	+1.3
EVGI	Lefkada island	0.24	42	P	Pg	05 57 37.7	-0.2
EVGI				S	Sg	05 57 41.9	+0.5
	comp=E,12μm,0.3s						
EVGI	Lefkada island	0.24	42	P	Pg	05 57 37.9	0.0
EVGI				S	Sg	05 57 41.9	+0.5
KEF3	Kipouria, Keph	0.25	198	P	Pg	05 57 37.4	-0.5
KEF3				S	Sg	05 57 41.6	+0.2
	comp=E,20μm,0.2s						
KEF3	Kipouria, Keph	0.25	198	P	Pg	05 57 37.5	-0.4
KEF3				S	Sg	05 57 41.5	+0.1
ARGA	Argostoli. Kep	0.26	174	P	Pg	05 57 39.1	+0.9
ARGA				S	Sg	05 57 42.8	+0.9
DRAG	Dragano-Lefkad	0.26	23	P	Pg	05 57 37.9	-0.3
DRAG				S	Sg	05 57 42.0	0.0
	comp=E,25μm,0.3s						
DRAG	Dragano-Lefkad	0.26	23	P	Pg	05 57 38.2	0.0
DRAG				S	Sg	05 57 43.0	+1.0
VLS	Valsamata	0.28	157	P	Pg	05 57 38.3	-0.3
VLS				S	Sg	05 57 42.8	+0.3
	comp=E,7μm,0.2s						
VLS	Valsamata	0.28	157	P	Pg	05 57 38.4	-0.2
VLS				S	Sg	05 57 43.0	+0.5
VLS				AML	AML	05 57 44.0	
	comp=E,14956μm,0.1s						
VLS				AML	AML	05 57 45.0	
	comp=N,14722μm,0.3s						
NYDR	Nydri-Lefkada	0.34	36	P	Pg	05 57 39.2	-0.3
NYDR				S	Sg	05 57 44.8	+0.7
	comp=N,4μm,0.3s						
NYDR	Nydri-Lefkada	0.34	36	P	Pg	05 57 39.5	-0.1
NYDR				S	Sg	05 57 44.7	+0.7
PSDA	Pessada-Kefalo	0.34	161	P	Pg	05 57 39.4	-0.2
PSDA				S	Sg	05 57 44.9	+0.7
	comp=N,1μm,0.2s						
PSDA	Pessada-Kefalo	0.34	161	P	Pg	05 57 39.5	-0.1
PSDA				S	Sg	05 57 44.8	+0.5
LKD2	Lefkada island	0.39	25	P	Pg	05 57 40.1	-0.4
LKD2	Lefkada island	0.39	25	P	Pg	05 57 40.4	0.0
LKD2				S	Sb	05 57 47.0	-0.4
LKD2				AML	AML	05 57 47.6	
	comp=N,5992μm,0.5s						
LKD2				AML	AML	05 57 49.1	
	comp=E,3370μm,0.5s						
TSLK	Tsoukalades, L	0.42	23	P	Pg	05 57 41.3	+0.3
TSLK				S	Sb	05 57 48.1	-0.2
TSLK				AML	AML	05 57 48.7	
	comp=E,7852μm,0.3s						
TSLK				AML	AML	05 57 51.9	
	comp=N,8444μm,0.4s						
VTN	Vitineika	0.78	132	P	Pg	05 57 47.8	-0.1
LTHK	Lithakia	0.79	157	P	Pg	05 57 47.4	-0.6
LTHK	Lithakia	0.79	157	P	Pg	05 57 47.4	-0.6
LTHK				AML	AML	05 58 05.5	
	comp=N,3707μm,0.4s						
LTHK				AML	AML	05 58 07.4	
	comp=E,4486μm,0.4s						
RLS	Riolos of Patr	0.89	115	P	Pg	05 57 49.4	-0.5
RLS	Riolos of Patr	0.89	115	P	Pg	05 57 49.9	0.0
RLS				AML	AML	05 58 10.7	
	comp=E,613μm,0.4s						
RLS				AML	AML	05 58 12.5	
	comp=N,1152μm,0.4s						
IGT	Igoumenitsa	1.09	355	P	Pg	05 57 54.0	+0.2
DRO	Drossia	1.11	116	P	Pg	05 57 53.5	-0.5
DRO	Drossia	1.11	116	P	Pg	05 57 53.6	-0.5
DRO				AML	AML	05 58 19.5	
	comp=N,3277μm,0.4s						
DRO				AML	AML	05 58 19.7	
	comp=E,3508μm,0.3s						
EFP	Efpalio	1.15	90	P	Pb	05 57 53.4	-1.0
EFP	Efpalio	1.15	90	P	Pb	05 57 53.7	-0.7
EFP				AML	AML	05 58 17.5	
	comp=E,3976μm,0.5s						
EFP				AML	AML	05 58 19.5	
	comp=N,2890μm,0.4s						
ANX	Ano Chora	1.17	82	P	Pb	05 57 54.8	0.0

ANX	**Ano Chora**	**1.17**	**82**	P	**Pb**	**05 57 54.8**	**0.0**
ANX				AML	AML	05 58 18.5	
	comp=E,2183µm,0.6s						
ANX				AML	AML	05 58 18.9	
	comp=N,2842µm,0.5s						
EVR	**Evrytania**	**1.17**	**66**	P	**Pb**	**05 57 54.0**	**-0.9**
EVR				AML	AML	05 58 18.1	
	comp=N,1018µm,1.0s						
EVR				AML	AML	05 58 19.4	
	comp=E,800µm,0.6s						
LAKA	**Lakka**	**1.22**	**99**	P	**Pb**	**05 57 55.8**	**+0.1**
JAN	**Janina**	**1.26**	**14**	P	**Pn**	**05 57 56.3**	**+0.2**
JAN				AML	AML	05 58 17.9	
	comp=E,2110µm,0.6s						
JAN				AML	AML	05 58 18.4	
	comp=N,1254µm,0.4s						
SERG	**Sergoula**	**1.27**	**91**	P	**Pn**	**05 57 55.4**	**-0.8**
SERG	**Sergoula**	**1.27**	**91**	P	**Pn**	**05 57 55.6**	**-0.6**
SERG				AML	AML	05 58 21.9	
	comp=N,1824µm,0.5s						
SERG				AML	AML	05 58 22.6	
	comp=E,1364µm,0.8s						
KASA	**Kassiopi**	**1.36**	**343**	P	**Pb**	**05 57 58.9**	**+0.8**
KEK	**Kerkira**	**1.37**	**339**	P	**Pb**	**05 57 59.2**	**+1.0**
KLV	**Kalavryta, Ach**	**1.40**	**106**	P	**Pn**	**05 57 58.0**	**-0.1**
KLV	**Kalavryta, Ach**	**1.40**	**106**	P	**Pn**	**05 57 58.3**	**+0.2**
KLV				AML	AML	05 58 25.4	
	comp=E,710µm,0.4s						
KLV				AML	AML	05 58 27.5	
	comp=N,493µm,0.5s						
GUR	**Goura**	**1.58**	**108**	P	**Pn**	**05 58 01.0**	**+0.4**
AGG	**Agios Georgios**	**1.58**	**68**	P	**Pn**	**05 58 01.7**	**+1.1**
OHR	**Ohrid**	**2.68**	**6**	*i* Pn	**Pb**	**05 58 20.5**	**-0.1**
STIP	**Stip**	**3.51**	**22**	*i* Pn	**Pn**	**05 58 31.1**	**+4.0**
DRME	**Dracevica, Mon**	**3.87**	**346**	*e*Pn	**Pn**	**05 58 32.3**	**+0.4**
PDG	**Podgorica**	**4.09**	**348**	*e*Pn	**Pn**	**05 58 34.0**	**-0.9**
PRVS	**Prvonek**	**4.25**	**16**	*e*Pn	**Pn**	**05 58 39.5**	**+2.3**
HCY	**Herceg Novi**	**4.27**	**340**	*e*Pn	**Pn**	**05 58 37.1**	**-0.4**
BARS	**Barje**	**4.50**	**13**	*e*Pn	**Pn**	**05 58 41.4**	**+0.8**
TREB	**Trebinje**	**4.56**	**340**	*e*Pn	**Pn**	**05 58 40.4**	**-1.1**
BRY	**Bratogost**	**4.69**	**343**	*e*Pn	**Pn**	**05 58 43.1**	**-0.2**
SELS	**Selova**	**4.80**	**6**	*e*Pn	**Pn**	**05 58 42.8**	**-2.0**
SJES	**Sjenica**	**4.83**	**356**	*e*Pn	**Pn**	**05 58 47.5**	**+2.2**
STON	**Ston**	**4.89**	**336**	*e*Pn	**Pn**	**05 58 45.0**	**-1.0**
STON	**Ston**	**4.89**	**336**	*e*Pn	**Pn**	**05 58 45.6**	**-0.4**
STON				Sn	**Sn**	**05 59 40.9**	**-1.6**
LSTV	**Lastovo**	**5.10**	**329**	*e*Pn	**Pn**	**05 58 48.1**	**-0.7**
RUDO	**Rudo**	**5.24**	**351**	*e*Pn	**Pn**	**05 58 51.7**	**+0.9**
BBLS	**Lazići**	**5.48**	**352**	*e*Pn	**Pn**	**05 58 57.1**	**+3.0**
BBLS	**Lazići**	**5.48**	**352**	*e*Pn	**Pn**	**05 58 56.5**	**+2.4**
MAKA	**Makarska**	**5.50**	**333**	*e*Pn	**Pn**	**05 58 54.5**	**+0.3**
RICI	**Ricice**	**5.64**	**335**	*e*Pn	**Pn**	**05 58 56.1**	**-0.1**
DIVS	**Divibare**	**5.66**	**357**	*e*Pn	**Pn**	**05 58 57.6**	**+0.9**
DIVS	**Divibare**	**5.66**	**357**	*e*Pn	**Pn**	**05 58 58.4**	**+1.7**
HAPS	**Han Pijesak,Bl**	**5.75**	**349**	*e*Pn	**Pn**	**05 58 58.5**	**+0.6**
ZIRJ	**Zirje**	**6.35**	**327**	*e*Pn	**Pn**	**05 59 05.5**	**-0.4**
MGRS	**Mrkonjic Grad**	**6.48**	**338**	*e*Pn	Pn	05 58 58.8	-9.1
MORI	**Morici**	**6.49**	**328**	*e*Pn	**Pn**	**05 59 08.6**	**+0.6**
FRGS	**Fruska Gora**	**6.73**	**356**	*e*Pn	Pn	05 59 19.8	+8.5
DUGI	**Dugi Otok**	**6.87**	**326**	*e*Pn	**Pn**	**05 59 13.0**	**-0.2**
DUGI				Sn	**Sn**	**06 00 26.1**	**-5.2**
SMRN	**Sveta Marina**	**8.09**	**327**	*e*Pn	**Pn**	**05 59 28.7**	**-1.2**
CRES	**Cresnjev**	**8.26**	**335**	*e*Pn	**Pn**	**05 59 31.3**	**-0.9**
CEY	**Cerknica**	**8.55**	**330**	*e*Pn	**Pn**	**05 59 35.4**	**-0.9**
FINES	**FINESS Array B**	**23.30**	**7**	P	**P**	**06 02 39.6**	**-0.4**
	comp=N,2.8nm,0.9s,baz=179,slow=12,SNR=4.3						
NOA	**NORSAR Array B**	**23.35**	**349**	P	**P**	**06 02 44.3**	**+3.7**
	comp=N,1.1nm,0.9s,baz=163,slow=14,SNR=2.5						
MKAR	**Makanchi Array**	**45.22**	**59**	P	**P**	**06 05 50.6**	**+1.1**
	comp=N,0.7nm,0.7s,baz=280,slow=7.4,SNR=2.8						
ZALV	**Zalesovo Beam**	**45.56**	**48**	P	**P**	**06 05 51.6**	**-0.5**
	comp=N,0.7nm,0.3s,baz=284,slow=8.4,SNR=4.1						

*NEIC **01** 06:05:06.5±1.0,17°.23S±0°.08×174°.1W±0°.1,h85^{km}±7^{km}, mb4.5/16,Error ellipse: s-maj=16.0km s-min=12.1km az=101.0*

*IDC **01** 06:05:06.3±3.0,17°.31S×174°.08W,h89^{km}±28^{km},mb4.0/8, mb1 4.3/10,mb1mx3.9/35,mbtmp4.4/10,MS2.9/1, Ms1 2.9/1,ms1mx2.5/29,Error ellipse: s-maj=39.4km s-min=15.0km az=138.0*

ISC 01 06:05:07.1±0.6**,17°.19S**±0°.09×**174°.06W**±0°.10**,h100**^{km}**, n31,**σ**1^{s}16**/26**,mb4.4**/15**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.94**	**34**	P	**Pn**	**06 06 05.9**	**+0.4**
	76nm,0.3s,baz=200,slow=3.5,SNR=78						
AFI				S	**Sn**	**06 06 48.0**	**-2.8**
	201nm,0.3s,baz=58,slow=23,SNR=13						
NIUE	**Niue**	**4.36**	**116**	Pn	**Pn**	**06 06 10.2**	**-1.0**
MSVF	**Nonsavu**	**7.55**	**265**	P	Pn	06 07 03.8	+9.2
	1.2nm,0.3s,baz=116,slow=16,SNR=14						
DZM	**Mont Dzumac**	**18.99**	**252**	P	**Pn**	**06 09 20.7**	**-2.1**
	0.2nm,0.3s,baz=99,slow=23,SNR=3.4						
OUZ	**Omahuta**	**21.06**	**209**	P	**P**	**06 09 43.5**	**+0.3**
OUZ				IAmb	IAmb	06 10 01.2	
	comp=Z,34nm,1.3s						
URZ	**Urewera**	**22.37**	**199**	P	**P**	**06 09 56.0**	**-1.1**
	comp=Z,16nm,0.3s,baz=302,slow=23,SNR=26						
URZ	**Urewera**	**22.37**	**199**	P	**P**	**06 09 57.2**	**+0.1**
HIZ	**Hauiti**	**23.36**	**202**	P	**P**	**06 10 08.5**	**+1.7**
HIZ				IAmb	IAmb	06 10 08.8	
	comp=Z,23nm,0.9s						
PPT	**Papeete**	**23.37**	**95**	LR	LR	06 16 58.6	
	comp=Z,29nm,19.0s,baz=266,slow=30						
BKZ	**Black Stump Fm**	**23.40**	**199**	P	**P**	**06 10 08.1**	**+0.9**
QRZ	**Quartz Range**	**26.25**	**203**	P	**P**	**06 10 34.1**	**+1.3**
CTAO	**Charters Tower**	**37.65**	**259**	P	**P**	**06 12 13.1**	**+0.2**
CTAO				IAmb	IAmb	06 12 27.1	
	comp=Z,9.8nm,1.3s						
STKA	**Stephens Creek**	**42.61**	**241**	P	**P**	**06 12 53.4**	**-0.2**
	comp=Z,3.7nm,0.7s,baz=98,slow=10,SNR=5.0						
BBOO	**Buckleboo**	**47.38**	**241**	P	**P**	**06 13 31.1**	**-0.4**
WB0	**Warramunga Arr**	**48.80**	**259**	P	**P**	**06 13 41.8**	**-0.8**
WB0				IAmb	IAmb	06 13 58.1	
	comp=Z,8.8nm,1.4s						
WB2	**Warramunga Arr**	**48.83**	**258**	P	**P**	**06 13 42.2**	**-0.5**
WB2				IAmb	IAmb	06 13 42.9	
	comp=Z,3.8nm,0.6s						
WRAB	**Tennant Creek**	**48.83**	**258**	P	**P**	**06 13 41.4**	**-1.4**
WRA	**Warramunga Arr**	**48.84**	**258**	P	**P**	**06 13 42.5**	**-0.4**
	comp=Z,2.1nm,0.5s,baz=96,slow=6.8,SNR=8.9						
AS31	**Alice Springs**	**48.97**	**253**	P	**P**	**06 13 43.4**	**-0.4**
AS31				IAmb	IAmb	06 13 44.3	
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**48.97**	**253**	P	**P**	**06 13 43.7**	**-0.1**
	comp=Z,10nm,0.5s,baz=89,slow=8.6,SNR=167						
QSPA	**South Pole Qui**	**72.86**	**180**	P	**P**	**06 16 26.1**	**+1.1**
QSPA				IAmb	IAmb	06 16 33.0	
	comp=Z,9.9nm,1.5s						
K05A	**Summer Lake**	**77.08**	**37**	P	**P**	**06 16 50.3**	**+0.6**
TXAR	**Lajitas Array**	**82.13**	**56**	P	**P**	**06 17 18.1**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=202,slow=6.2,SNR=5.1						
PDAR	**Pinedale Array**	**84.02**	**42**	P	**P**	**06 17 27.5**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=201,slow=3.1,SNR=13						
ILAR	**Eielson Array**	**84.31**	**11**	P	**P**	**06 17 28.6**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=235,slow=6.3,SNR=30						
H03S2	**Juan Fernandez**	**84.75**	**124**	T	T	07 50 45.8	
	baz=250,slow=75,SNR=6.2						
H03S1	**Juan Fernandez**	**84.76**	**124**	T	T	07 50 49.8	
	baz=250,slow=75,SNR=5.9						
H03S3	**Juan Fernandez**	**84.76**	**124**	T	T	07 50 46.4	
	baz=250,slow=75,SNR=5.1						
INK	**Inuvik**	**90.15**	**14**	P	**P**	**06 17 56.7**	**+1.2**
	comp=Z,1.7nm,1.0s,baz=232,slow=4.6,SNR=4.1						
INK	**Inuvik**	**90.15**	**14**	IAmb	IAmb	06 18 03.2	
	comp=Z,3.2nm,1.2s						
CLL	**Collm**	**145.50**	**352**	*e*PKPbc	**PKiKP**	**06 24 36.0**	**-1.4**

*IDC **01** 06:13:36.4±0.4,41°.19N×73°.24E,h0^{km},mb4.8/37, mb1 4.9/44,mb1mx4.9/57,mbtmp4.8/44,ML4.2/7,MS3.9/41, Ms1 3.9/41,ms1mx3.9/48,Error ellipse: s-maj=8.7km s-min=6.9km az=142.0*

*BJI **01** 06:13:40.3±0.0,41°.57N×72°.98E,h43^{km},mB4.8/35, mb4.7/50,ML4.8/7,Ms4.4/33,Ms7 4.2/34*

*KRNET **01** 06:13:42.0±0.1,41°.36N×73°.24E,h28^{km},mb5.6*

*NNC **01** 06:13:41.4±0.9,41°.43N×73°.26E,h0^{km},mb5.7,mpv5.4, Error ellipse: s-maj=8.6km s-min=3.7km az=177.0*

*ISU **01** 06:13:42,41°.27N×73°.29E,h25^{km}*

*SOME **01** 06:13:42.4,41°.55N×73°.25E,h10^{km},MS4.4*

*MOS **01** 06:13:43.0±1.1,41°.35N×73°.21E,h57^{km},mb5.3/57, MS4.1/10,Error ellipse: s-maj=4.4km s-min=3.8km az=88.6*

MOS Felt (V) at Kyzyl-Unkur, Dzhaz-Kechuu, Ortok, Ak-Bulak, Saty, Kara-Alma, Kok-Alma; (IV-V) at Ak-Took, Arslanbob; (IV) at Kok-Zhangak, Kara-Kul'; (III-IV) at Dzhalal-Abad, Toktogul; (III) at Osh, Taraz, Mayluu-Suu.

*NEIC **01** 06:13:43.4±2.3,41°.38N±0°.05×73°.26E±0°.07,h41^{km}±2^{km}, mb5.1/168,Error ellipse: s-maj=8.0km s-min=6.8km az=136.0*

*BGR **01** 06:13:44.0±0.0,40°.95N×72°.94E,h33^{km},mb5.1,Ms4.1*

*KNET **01** 06:13:44.5±0.7,41°.49N×73°.37E,h34^{km}±3^{km},ml5.1,Error ellipse: s-maj=5.9km s-min=5.0km az=108.0*

ISC 01 06:13:41.5±0.5**,41°.31N**±0°.02×**73°.29E**±0°.02**,h32**^{km}±3^{km}**, h32**^{km}**:pP-P,n903,**σ**1^{s}66**/964**,mb5.1**/238**,MS4.0**/53**, 99C-47D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALK	**Salom-Alik**	**0.59**	**137**	*e*P	**Pn**	**06 13 54.4**	**+0.6**
SALK				*e*S	**Sn**	**06 14 03.2**	**+0.8**
AML	**Almayashu**	**0.87**	**20**	⇓P	**Pb**	**06 13 58.2**	**-0.3**
	51µm,0.5s						
AML				⇑S	**Sb**	**06 14 09.7**	**-0.3**
	46µm,0.4s						
AML	**Almayashu**	**0.87**	**20**	*i* P	**Pb**	**06 13 58.2**	**-0.3**
AML				*i* S	**Sb**	**06 14 09.7**	**-0.3**
AML	**Almayashu**	**0.87**	**20**	P	**Pb**	**06 13 58.2**	**-0.3**
AML	**Almayashu**	**0.87**	**20**	⇑*i*P	**Pb**	**06 13 58.2**	**-0.3**
	baz=23						
AML				⇑*i*S	**Sb**	**06 14 09.7**	**-0.3**
	baz=23						
OHH	**Osh**	**0.88**	**206**	*i* P	**Pb**	**06 13 58.9**	**+0.6**
OHH	**Osh**	**0.88**	**206**	*e*S	**Sb**	**06 14 11.0**	**+1.2**
OHH	**Osh**	**0.88**	**206**	⇑*i*P	**Pb**	**06 13 58.9**	**+0.6**
	baz=3.0						
OHH				⇑*i*S	**Sb**	**06 14 11.3**	**+1.5**
	baz=3.0						
ANR	**Andizhan**	**0.90**	**232**	*i* P	**Pb**	**06 14 00.0**	**+1.4**
ANR				*i* S	**Sb**	**06 14 14.0**	**+3.7**
UCH	**Uchtor**	**1.29**	**45**	P	**Pb**	**06 14 05.6**	**0.0**
	3µm,0.3s,SNR=1432						
UCH				⇓S	**Sb**	**06 14 22.7**	**+0.6**
	35µm,0.5s						
UCH	**Uchtor**	**1.29**	**45**	*i* P	**Pb**	**06 14 05.6**	**0.0**
UCH				*i* S	**Sb**	**06 14 23.0**	**+1.0**
UCH	**Uchtor**	**1.29**	**45**	⇑*i*P	**Pb**	**06 14 05.6**	**0.0**
	baz=47						
UCH				⇑*i*S	**Sb**	**06 14 23.0**	**+1.0**
	baz=47						
SFK	**Sufi-Kurgan**	**1.31**	**173**	*e*P	**Pb**	**06 14 06.2**	**+0.5**
SFK				*i* S	**Sb**	**06 14 25.1**	**+2.9**
SFK	**Sufi-Kurgan**	**1.31**	**173**	*e*P	**Pb**	**06 14 06.0**	**+0.3**
SFK				*e*S	**Sb**	**06 14 26.0**	**+3.8**
SFK	**Sufi-Kurgan**	**1.31**	**173**	⇓*e*P	**Pb**	**06 14 06.8**	**+1.1**
	baz=72						
SFK				⇓*e*S	**Sb**	**06 14 24.7**	**+2.5**
	baz=72						
MNAS	**Manas**	**1.31**	**334**	*i* P	**Pb**	**06 14 05.0**	**-0.7**
MNAS				*i* S	**Sb**	**06 14 21.9**	**-0.3**
MNAS	**Manas**	**1.31**	**334**	⇑*i*P	**Pb**	**06 14 05.0**	**-0.7**
	baz=34						
MNAS				⇑*i*S	**Sb**	**06 14 21.9**	**-0.3**
	baz=34						
EKS2	**Erkin-Say**	**1.40**	**15**	P	**Pb**	**06 14 06.9**	**-0.2**
	3µm,0.4s,SNR=2237						
EKS2				⇑S	**Sb**	**06 14 24.0**	**-0.6**
	6µm,0.4s						
EKS2	**Erkin-Say**	**1.40**	**15**	*i* P	**Pb**	**06 14 06.8**	**-0.3**
EKS2				*i* S	**Sb**	**06 14 25.1**	**+0.5**
EKS2	**Erkin-Say**	**1.40**	**15**	⇑*i*P	**Pb**	**06 14 06.8**	**-0.3**
	baz=17						
EKS2				⇑*i*S	**Sb**	**06 14 25.1**	**+0.5**
	baz=17						
MRKS	**Merke**	**1.43**	**358**	*e*P	**Pb**	**06 14 07.5**	**-0.2**
	16µm,0.5s						
MRKS				*e*S	**Sb**	**06 14 25.9**	**+0.3**
	57µm,0.4s						
MRKS	**Merke**	**1.43**	**358**	P	**Pb**	**06 14 07.5**	**-0.2**
	16µm,0.5s						
MRKS				S	**Sb**	**06 14 26.3**	**+0.7**
	57µm,0.4s						
FRG	**Fergana**	**1.48**	**231**	*e*P	**Pb**	**06 14 09.0**	**+0.6**
FRG				*e*S	**Sb**	**06 14 28.0**	**+1.2**
AAK	**Ala-Archa**	**1.60**	**34**	Pg	**Pb**	**06 14 10.6**	**0.0**
	3µm,0.3s,baz=209,slow=8.5,SNR=7483						
AAK				Lg	Lg	06 14 31.6	
	4µm,0.3s,baz=139,slow=19,SNR=42						
AAK				LR	LR	06 14 40.0	
	comp=Z,1µm,20.0s,baz=188,slow=37						
AAK	**Ala-Archa**	**1.60**	**34**	*e*P	**Pb**	**06 14 10.6**	**0.0**
	SNR=361						
AAK	**Ala-Archa**	**1.60**	**34**	P	**Pb**	**06 14 11.0**	**+0.4**
AAK				S	**Sb**	**06 14 31.8**	**+1.3**
AAK	**Ala-Archa**	**1.60**	**34**	Pn	**Pb**	**06 14 10.9**	**+0.3**
TRKS	**Terek-Say**	**1.63**	**278**	⇓*e*P	**Pb**	**06 14 10.1**	**-1.0**
	baz=75						
TRKS				⇓*i*S	**Sb**	**06 14 31.1**	**-0.3**
	baz=75						
FRU1	**Bishkek**	**1.80**	**33**	PN	**Pb**	**06 14 14.5**	**+0.6**
FRU1	**Bishkek**	**1.80**	**33**		**Pb**	**06 14 14.5**	**+0.6**
FRU1	**Bishkek**	**1.80**	**33**	⇓*i*P	**Pb**	**06 14 13.7**	**-0.2**
	baz=34						
FRU1				⇓*i*S	**Sb**	**06 14 36.8**	**+0.7**
	baz=34						
KBK	**Karagaybulak**	**1.82**	**42**	⇓P	**Pb**	**06 14 14.6**	**+0.2**
	1µm,0.2s,SNR=1389						
KBK				⇓S	**Sb**	**06 14 36.8**	**-0.2**
	32µm,0.4s						
KBK	**Karagaybulak**	**1.82**	**42**	*i* PN	**Pb**	**06 14 14.3**	**-0.1**
KBK				*i* S	**Sb**	**06 14 37.5**	**+0.6**
KBK	**Karagaybulak**	**1.82**	**42**	⇑*i*P	**Pb**	**06 14 14.3**	**-0.1**
	baz=44						
KBK				⇑*i*S	**Sb**	**06 14 37.5**	**+0.6**
	baz=44						
CHMS	**Chumysh**	**2.00**	**32**	⇓P	**Pb**	**06 14 16.5**	**-0.9**
	3µm,0.4s,SNR=305						
CHMS	**Chumysh**	**2.00**	**32**	*i* PN	**Pb**	**06 14 16.4**	**-0.9**
CHMS				*i* S	**Sb**	**06 14 41.2**	**-0.7**
CHMS	**Chumysh**	**2.00**	**32**	⇑*i*P	**Pb**	**06 14 16.4**	**-0.9**
	baz=34						
CHMS				⇑*i*S	**Sb**	**06 14 41.2**	**-0.7**
	baz=34						
DZA	**Taraz**	**2.15**	**318**	*e*P	**Pb**	**06 14 20.2**	**+0.4**
	13µm,0.4s						
DZA				*e*S	**Sb**	**06 14 47.5**	**+1.4**
	78µm,0.4s						
DZA	**Taraz**	**2.15**	**318**	*e*Pg	**Pb**	**06 14 19.9**	**+0.1**
	baz=318						
DZA	**Taraz**	**2.15**	**318**	*e*PN	**Pb**	**06 14 19.9**	**+0.1**
DZA	**Taraz**	**2.15**	**318**	Pg	**Pb**	**06 14 20.2**	**+0.4**
	13µm,0.4s						
DZA				Lg	Lg	06 14 47.5	
	78µm,0.4s						
DRK	**Karamyk**	**2.15**	**212**		**Pb**	**06 14 18.8**	**-1.3**
DRK	**Karamyk**	**2.15**	**212**	⇑*i*P	**Pb**	**06 14 19.0**	**-1.1**
	baz=11						
DRK				⇑*i*S	**Sb**	**06 14 46.4**	**-0.1**
	baz=11						
BTK	**Batken**	**2.26**	**237**	PN	**Pn**	**06 14 19.3**	**+2.6**
BTK	**Batken**	**2.26**	**237**	*e*P	Pb	06 14 28.0	+6.3
BTK				*e*S	**Sb**	**06 14 56.0**	**+6.7**
BTK	**Batken**	**2.26**	**237**		**Pn**	**06 14 19.3**	**+2.6**
BTK	**Batken**	**2.26**	**237**	⇑*e*P	**Pb**	**06 14 20.5**	**-1.2**
	baz=36						
BTK				⇑*i*S	**Sb**	**06 14 48.5**	**-0.8**
	baz=36						
BOOM	**Boomskoye usch**	**2.30**	**58**	PN	**Pb**	**06 14 21.3**	**-1.2**
BOOM	**Boomskoye usch**	**2.30**	**58**		**Pb**	**06 14 21.3**	**-1.2**
BOOM	**Boomskoye usch**	**2.30**	**58**	⇑*i*P	**Pb**	**06 14 20.9**	**-1.6**
	baz=60						
BOOM				⇑*i*S	**Sb**	**06 14 49.2**	**-1.4**
	baz=60						
TKM2	**Tokmak 2**	**2.35**	**46**	⇑P	**Pb**	**06 14 21.8**	**-1.5**
	2µm,0.4s,SNR=1120						
TKM2	**Tokmak 2**	**2.35**	**46**	*e*PN	**Pb**	**06 14 21.6**	**-1.7**
TKM2				*i* S	**Sb**	**06 14 50.0**	**-2.0**
TKM2	**Tokmak 2**	**2.35**	**46**	⇑Pn	**Pb**	**06 14 22.0**	**-1.3**
	2µm,0.6s						
TKM2				⇓Lg	Lg	06 14 52.0	
TKM2	**Tokmak 2**	**2.35**	**46**	⇓*e*P	**Pb**	**06 14 21.6**	**-1.7**
	baz=47						
TKM2				⇓*i*S	**Sb**	**06 14 50.0**	**-2.0**
	baz=47						
SGDS	**Sogindy**	**2.36**	**24**	*e*Pg	**Pb**	**06 14 24.5**	**+1.1**
	baz=26						
ULHL	**Ulahol**	**2.40**	**66**	⇑P	**Pb**	**06 14 21.9**	**-2.2**
	712nm,0.5s,SNR=531						
ULHL	**Ulahol**	**2.40**	**66**	*e*PN	**Pb**	**06 14 22.3**	**-1.8**
ULHL				*i* S	**Sb**	**06 14 51.5**	**-1.8**
ULHL	**Ulahol**	**2.40**	**66**	⇓*e*P	**Pb**	**06 14 22.3**	**-1.8**
	baz=67						
ULHL				⇓*i*S	**Sb**	**06 14 51.8**	**-1.5**
	baz=67						
CHMG	**Chimgan**	**2.48**	**277**	*e*P	**Pb**	**06 14 29.0**	**+3.6**
CHMG				*e*S	**Sb**	**06 14 59.0**	**+3.4**
CHRV	**Charvak**	**2.53**	**279**	*e*P	**Pb**	**06 14 25.0**	**-1.3**
CHRV				*e*S	**Sb**	**06 14 56.0**	**-1.0**
IUG	**Iuzhnay**	**2.58**	**290**	*e*P	**Pb**	**06 14 27.6**	**+0.5**
	45µm,0.3s						
IUG				*e*S	**Sb**	**06 15 00.7**	**+2.2**
	14µm,0.5s						
IUG	**Iuzhnay**	**2.58**	**290**	*e*Pg	**Pb**	**06 14 27.7**	**+0.5**
	baz=290						
IUG	**Iuzhnay**	**2.58**	**290**	*e*PN	**Pb**	**06 14 27.6**	**+0.5**
IUG	**Iuzhnay**	**2.58**	**290**	Pg	**Pb**	**06 14 27.6**	**+0.5**
	45µm,0.3s						
IUG				Lg	Lg	06 15 00.6	
	14µm,0.5s						
KST	**Kastek**	**2.63**	**48**	*e*P	**Pb**	**06 14 28.2**	**+0.1**
	1µm,0.4s						
KST				*e*S	**Sb**	**06 15 01.1**	**+1.0**
	4µm,0.7s						
KST	**Kastek**	**2.63**	**48**	Pg	**Pb**	**06 14 28.2**	**+0.1**
	1µm,0.4s						
KST				Lg	Lg	06 15 01.1	
	4µm,0.7s						
DGS	**Degeres**	**2.67**	**43**	*e*P	**Pb**	**06 14 29.7**	**+1.1**
	2µm,0.8s						
DGS				*e*S	**Sb**	**06 15 03.8**	**+2.9**
	7µm,0.8s						
DGS	**Degeres**	**2.67**	**43**	Pg	**Pb**	**06 14 29.7**	**+1.1**
	2µm,0.8s						
DGS				Lg	Lg	06 15 03.8	
	7µm,0.8s						
KSH	**Kashi**	**2.72**	**130**	P	**Pb**	**06 14 27.1**	**-2.5**
KSH				S	**Sb**	**06 15 02.9**	**+0.3**
KSH				pmax	pmax		
	comp=Z,860nm,0.4s						
KSH				smax	smax		
	comp=N,9µm,0.7s						
KSH				smax	smax		
	comp=E,5µm,0.7s						
KK02	**Karatay Array**	**2.73**	**312**	⇓Pn	**Pn**	**06 14 25.0**	**+1.8**
	170nm,0.9s						
KK02				⇑Pg	Pb	06 14 29.9	+0.2
	2µm,0.7s						
KK02				⇓Lg	Lg	06 15 04.6	
	4µm,0.5s						
KKAR	**Karatay Array**	**2.73**	**312**	PN	**Pn**	**06 14 25.0**	**+1.8**
KKAR	**Karatay Array**	**2.73**	**312**	Pn	**Pn**	**06 14 25.0**	**+1.8**
YBZ	**Yangibazar**	**2.79**	**271**	*e*P	**Pb**	**06 14 28.0**	**-2.7**
CHM	**Chimkent**	**2.93**	**291**	*e*P	**Pb**	**06 14 36.0**	**+2.9**
	11nm,0.2s						
CHM				*e*S	**Sb**	**06 15 14.7**	**+6.2**
	22µm,0.4s						
MTBS	**Maitube**	**2.96**	**51**	*e*P	**Pb**	**06 14 34.1**	**+0.6**
	573nm,0.4s						
MTBS				*e*S	**Sb**	**06 15 11.1**	**+1.9**
	3µm,0.5s						
MTBS	**Maitube**	**2.96**	**51**	Pg	**Pb**	**06 14 34.1**	**+0.6**
	573nm,0.4s						
MTBS				Lg	Lg	06 15 11.1	
	3µm,0.5s						
KRBS	**Karabastau**	**2.96**	**36**	*e*P	**Pb**	**06 14 34.3**	**+0.6**
	865nm,0.4s						
KRBS				*e*S	**Sb**	**06 15 11.6**	**+2.2**
	4µm,0.8s						
KRBS	**Karabastau**	**2.96**	**36**	Pg	**Pb**	**06 14 34.3**	**+0.6**
	865nm,0.4s						
KRBS				Lg	Lg	06 15 11.6	
	4µm,0.8s						
TAS	**Tashkent**	**3.01**	**272**	PN	**Pn**	**06 14 27.9**	**+1.0**
TAS	**Tashkent**	**3.01**	**272**		**Pn**	**06 14 27.9**	**+1.0**
TAS	**Tashkent**	**3.01**	**272**	⇓*i*P	**Pn**	**06 14 29.7**	**+2.7**
	baz=71						
TAS				⇓*i*S	**Sn**	**06 15 05.3**	**+3.4**
	baz=71						
IZV	**Izvestkoviy**	**3.01**	**54**	*e*P	**Pb**	**06 14 35.3**	**+0.7**
	713nm,0.7s						
IZV				*e*S	**Sb**	**06 15 13.4**	**+2.5**
	2µm,0.4s						
IZV	**Izvestkoviy**	**3.01**	**54**	Pg	**Pb**	**06 14 35.3**	**+0.7**
	713nm,0.7s						
IZV				Lg	Lg	06 15 13.4	
	2µm,0.4s						
KDJ	**Kajisay**	**3.02**	**73**	PN	**Pn**	**06 14 30.7**	**+3.3**
KDJ	**Kajisay**	**3.02**	**73**	Pn	**Pn**	**06 14 30.6**	**+3.3**
KDJ	**Kajisay**	**3.02**	**73**	⇑*e*P	**Pb**	**06 14 31.4**	**-3.4**
	baz=74						
KDJ				⇑*i*S	**Sb**	**06 15 07.3**	**-4.0**
	baz=74						
BRLS	**Borolday**	**3.09**	**305**	*e*P	**Pb**	**06 14 36.4**	**+0.7**
	2µm,0.5s						
BRLS				*e*S	**Sb**	**06 15 15.6**	**+2.6**
	9µm,0.5s						
BRLS	**Borolday**	**3.09**	**305**	*e*Pg	**Pb**	**06 14 36.6**	**+0.8**
	baz=300						
BRLS	**Borolday**	**3.09**	**305**	*e*PN	**Pb**	**06 14 36.5**	**+0.7**
BRLS	**Borolday**	**3.09**	**305**	Pg	**Pb**	**06 14 36.4**	**+0.7**
	2µm,0.5s						
BRLS				Lg	Lg	06 15 15.6	
	9µm,0.5s						
TNSS	**Tian-Shan**	**3.22**	**56**	*e*P	**Pb**	**06 14 38.5**	**+0.3**
	854nm,0.5s						
TNSS				*e*S	**Sb**	**06 15 18.6**	**+1.5**
	2µm,0.6s						
TNSS	**Tian-Shan**	**3.22**	**56**	*e*Pg	**Pb**	**06 14 41.1**	**+2.8**
	baz=58						
TNSS	**Tian-Shan**	**3.22**	**56**	Pg	**Pb**	**06 14 38.5**	**+0.3**
	854nm,0.5s						
TNSS				Lg	Lg	06 15 18.6	
	2µm,0.6s						
GAR	**Garm**	**3.24**	**226**		**Pn**	**06 14 34.3**	**+4.0**
AAA	**Alma-Ata**	**3.29**	**54**	*e*P	**Pb**	**06 14 40.3**	**+1.1**
	1µm,0.5s						
AAA				*e*S	**Sb**	**06 15 22.2**	**+3.3**
	4µm,0.7s						
AAA	**Alma-Ata**	**3.29**	**54**	*e*Pg	**Pb**	**06 14 42.4**	**+3.1**
	baz=55						
AAA	**Alma-Ata**	**3.29**	**54**	*e*PN	**Pb**	**06 14 35.4**	**-3.8**
AAA	**Alma-Ata**	**3.29**	**54**	Pg	**Pb**	**06 14 40.3**	**+1.1**
	1µm,0.5s						
AAA				Lg	Lg	06 15 22.2	
	4µm,0.7s						
KNDC	**Almaty**	**3.33**	**54**	PN	**Pb**	**06 14 35.6**	**-4.2**
KNDC	**Almaty**	**3.33**	**54**	⇓Pn	**Pb**	**06 14 35.6**	**-4.2**
	2µm,0.7s						
KNDC				⇑Lg	Lg	06 15 24.5	
	12µm,0.9s						
MDOK	**Medeo**	**3.35**	**55**	*e*P	**Pb**	**06 14 41.2**	**+1.0**
	691nm,0.5s						
MDOK				*e*S	**Sb**	**06 15 23.3**	**+2.7**
	2µm,0.8s						
MDOK	**Medeo**	**3.35**	**55**	*e*Pg	**Pb**	**06 14 43.0**	**+2.7**
	baz=56						
MDOK	**Medeo**	**3.35**	**55**	*e*PN	**Pb**	**06 14 43.0**	**+2.7**
MDOK	**Medeo**	**3.35**	**55**	⇓Pn	**Pn**	**06 14 35.7**	**+3.9**
	635nm,0.9s						
MDOK				⇑Lg	Lg	06 15 25.9	
	3µm,0.8s						
MDOK	**Medeo**	**3.35**	**55**	Pg	**Pb**	**06 14 41.2**	**+1.0**
	691nm,0.5s						
MDOK				Lg	Lg	06 15 23.3	
	2µm,0.8s						
TARG	**Taragay, Kyrgy**	**3.42**	**82**		**Pn**	**06 14 35.5**	**+2.6**
KUU	**Kurty**	**3.42**	**40**	*e*P	**Pb**	**06 14 43.4**	**+1.9**
	525nm,0.7s						
KUU				*e*S	**Sb**	**06 15 27.0**	**+4.4**
	3µm,0.5s						
KUU	**Kurty**	**3.42**	**40**	*e*Pg	**Pb**	**06 14 43.5**	**+2.0**
	baz=41						
KUU	**Kurty**	**3.42**	**40**	*e*PN	**Pb**	**06 14 43.4**	**+2.0**
KUU	**Kurty**	**3.42**	**40**	Pg	**Pb**	**06 14 43.4**	**+2.0**
	525nm,0.7s						
KUU				Lg	Lg	06 15 27.0	
	3µm,0.5s						
KOTS	**Kotyrbulak**	**3.42**	**55**	*e*P	**Pb**	**06 14 44.0**	**+2.4**
	750nm,0.7s						
KOTS				*e*S	**Sb**	**06 15 28.3**	**+5.5**
	6µm,0.8s						

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KOTS  Kotyrbulak          3.42  55  Pg    Pb     06 14 44.0 +2.4
      750nm,0.7s
KOTS                                Lg    Lg     06 15 28.3
      6µm,0.8s
KTBS  Karatobe            3.47  45 eP     Pb     06 14 44.1 +1.9
      653nm,0.5s
KTBS                               eS     Sb     06 15 28.3 +4.4
      4µm,0.6s
KTBS  Karatobe            3.47  45  Pg    Pb     06 14 44.1 +1.9
      653nm,0.5s
KTBS                                Lg    Lg     06 15 28.3
      4µm,0.6s
ANVS  Anan'yevo           3.58  64 ePN    Pn     06 14 38.7 +3.8
ANVS                               eS     Sn     06 15 20.1 +4.0
ANVS  Anan'yevo           3.58  64⇑eP     Pn     06 14 38.7 +3.8
      baz=65
ANVS                              ⇑eS     Sn     06 15 20.1 +4.0
      baz=65
BTLS  Baital              3.77   8 eP     Pb     06 14 48.0 +0.7
      882nm,0.6s
BTLS                               eS     Sb     06 15 36.7 +4.2
      325nm,0.8s
BTLS  Baital              3.77   8 ePg    Pb     06 14 49.7 +2.3
      baz=9.1
BTLS  Baital              3.77   8 ePN    Pb     06 14 49.6 +2.3
BTLS  Baital              3.77   8  Pg    Pb     06 14 48.0 +0.7
      882nm,0.6s
BTLS                                Lg    Lg     06 15 36.7
      325nm,0.8s
PRZ   Przheval'sk         3.99  71  PN    Pb     06 14 47.7  -3.5
PRZ   Przheval'sk         3.99  71  Pn    Pb     06 14 47.7  -3.5
PRZ   Przheval'sk         3.99  71⇑eP     Pn     06 14 44.8 +4.2
      baz=72
PRZ                               ⇑eS     Sn     06 15 30.0 +3.6
      baz=72
CHGR  Chuyangaron         4.14 231        Pn     06 14 46.0 +3.4
SATY  Saty                4.18  64 eP     Pb     06 14 59.3 +4.8
      750nm,0.8s
SATY                               eS     Sb     06 15 54.3  +10
      1µm,0.6s
SATY  Saty                4.18  64 ePg    Pb     06 14 58.9 +4.5
      baz=64
SATY  Saty                4.18  64 ePN    Pb     06 14 58.9 +4.5
SATY  Saty                4.18  64  Pg    Pb     06 14 59.3 +4.8
      750nm,0.8s
SATY                                Lg    Lg     06 15 54.3
      1µm,0.6s
KURS  Kuram               4.22  57 eP     Pb     06 14 57.7 +2.7
      509nm,0.8s
KURS                               eS     Sb     06 15 51.6 +6.2
      1µm,0.9s
KURS  Kuram               4.22  57  Pg    Pb     06 14 57.7 +2.7
      509nm,0.8s
KURS                                Lg    Lg     06 15 51.6
      1µm,0.9s
ARXS  Arharly             4.42  48 eP     Pb     06 15 01.6 +3.1
      376nm,0.5s
ARXS                               eS     Sb     06 15 58.7 +7.3
      3µm,0.6s
ARXS  Arharly             4.42  48 ePN    Pn     06 14 48.9 +2.5
ARXS  Arharly             4.42  48  Pg    Pb     06 15 01.6 +3.1
      376nm,0.5s
ARXS                                Lg    Lg     06 15 58.7
      3µm,0.6s
KPKS  Kokpek              4.54  60 eP     Pb     06 15 05.5 +5.1
      760nm,0.5s
KPKS                               eS     Sb     06 16 05.3  +11
      2µm,0.7s
KPKS  Kokpek              4.54  60 ePg    Pb     06 15 04.3 +3.8
      baz=61
KPKS  Kokpek              4.54  60 ePN    Pb     06 15 04.3 +3.8
UZB   Uzynbulak           4.63  65 eP     Pb     06 15 05.4 +3.3
      473nm,0.6s
UZB                                eS     Sb     06 16 04.8 +7.3
      958nm,0.7s
UZB   Uzynbulak           4.63  65 ePg    Pb     06 15 06.6 +4.5
      baz=66
UZB   Uzynbulak           4.63  65 ePN    Pb     06 15 06.6 +4.5
UZB   Uzynbulak           4.63  65  Pg    Pb     06 15 05.4 +3.3
      473nm,0.6s
UZB                                 Lg    Lg     06 16 04.8
      958nm,0.7s
BLB   Baldybastay         4.73  52  Pg    Pb     06 15 07.0 +3.3
      1µm,0.5s
BLB                                 Lg    Lg     06 16 07.9
      2µm,0.8s
PDGK  Podgornoye          5.02  64  PN    Pn     06 14 56.8 +2.1
PDGK  Podgornoye          5.02  64  Pg    Pb     06 15 13.1 +4.5
      65nm,0.6s
PDGK                                Lg    Lg     06 16 18.0
      525nm,0.7s
PDGK  Podgornoye          5.02  64 ⇓Pn    Pn     06 14 56.8 +2.1
      17nm,0.6s
PDGK                               ⇑Pg    Pb     06 15 09.4 +0.7
      352nm,0.7s
PDGK                               ⇓Lg    Lg     06 16 17.2
      1µm,0.7s
SAM   Samarkand           5.07 253 eP     Sn     06 15 58.0 +5.1
SAM                                eS     Pn     06 14 56.0 +0.6
AGL   Agalyk              5.21 252 eP     Pn     06 14 59.0 +1.7
AGL                                eS     Sn     06 15 58.0 +1.7
KTAB  Kitab               5.36 248 eP     Pn     06 15 03.0 +3.7
KTAB                               eS     Sn     06 16 03.0 +3.0
KTMS  Ketmen              5.65  65 eP     Pb     06 15 24.6 +5.2
      139nm,0.7s
KTMS                               eS     Sb     06 16 37.8  +11
      706nm,0.8s
KTMS  Ketmen              5.65  65  Pg    Pb     06 15 24.6 +5.2
      139nm,0.7s
KTMS                                Lg    Lg     06 16 37.8
      706nm,0.8s
DJR   Jarkent             5.65  56 eP     Pb     06 15 23.5 +4.1
      162nm,0.5s
DJR                                eS     Sb     06 16 36.0 +9.3
      612nm,1.0s
DJR   Jarkent             5.65  56  Pg    Pb     06 15 23.5 +4.1
      162nm,0.5s
DJR                                 Lg    Lg     06 16 36.0
      612nm,1.0s
KAPS  Kapalarasan         5.95  46 eP     Pb     06 15 28.4 +4.0
      187nm,0.7s
KAPS                               eS     Sb     06 16 44.4 +9.3
      564nm,0.6s
KAPS  Kapalarasan         5.95  46  Pg    Pb     06 15 28.4 +4.0
      187nm,0.7s
KAPS                                Lg    Lg     06 16 44.4
      564nm,0.6s
PKMR  Pachkamar           5.98 245 eP     Pn     06 15 10.0 +2.2
PKMR                               eS     Sn     06 16 17.0 +1.8
OTUK  Ortayu              6.96 355  PN    Pn     06 15 22.8 +1.6
OTUK  Ortayu              6.96 355 ⇑Pn    Pn     06 15 22.9 +1.6
      303nm,1.0s
OTUK                               ⇑Lg    Lg     06 17 17.4
      4µm,1.0s
BUXR  Bukhara             6.99 260 eP     Pn     06 15 22.0 +0.3
BUXR                               eS     Sn     06 16 38.0  -2.0
KBL   Kabul               7.55 208  P     Pn     06 15 32.6 +3.1
KBL   Kabul               7.55 208  P     Pn     06 15 32.4 +2.9
      SNR=116
KBL                                 S     Sn     06 16 58.1 +4.1
KBL   Kabul               7.55 208  Pn    Pn     06 15 32.6 +3.1
CEP   Cherat              7.56 189  P     Pn     06 15 32.9 +3.3
CEP                                 S     Sn     06 16 56.0 +1.8
GZLY  Gazly               7.57 264 eS     Sn     06 16 51.0  -3.2
CHCP  Chirah Chowk        7.64 180  P     Pn     06 15 34.2 +3.6
NIL   Nilore              7.65 180  P     Pn     06 15 34.0 +3.3
NIL   Nilore              7.65 180  P     Pn     06 15 33.9 +3.3
NIL   Nilore              7.65 180  Pn    Pn     06 15 34.0 +3.3
MAKZ  Makanchi            8.32  46  P     Pn     06 15 41.9 +2.0
MAKZ  Makanchi            8.32  46  Pn    Pn     06 15 41.9 +2.0
MK31  Makanchi Array      8.48  47 i P    Pn     06 15 42.4 +0.3
MK31  Makanchi Array      8.48  47 ⇓Pn    Pn     06 15 44.0 +1.9
      51nm,0.6s
MK31                               ⇑Pg           06 16 20.9
      187nm,0.6s,baz=230,slow=13,SNR=11
MK31                               ⇑Lg    Lg     06 18 04.5
      339nm,1.0s,baz=226,slow=25,SNR=3.6
MK31  Makanchi Array      8.48  47        Pn     06 15 44.4 +2.3
MKAR  Makanchi Array      8.48  47  Pn    Pn     06 15 44.5 +2.4
      8.6nm,0.3s,baz=226,slow=14,SNR=407
MKAR                                Lg    Lg     06 18 03.6
      8.9nm,0.3s,baz=264,slow=25,SNR=3.7
MKAR                                LR    LR     06 19 12.5
      comp=Z,1µm,19.1s,baz=236,slow=39
MKAR  Makanchi Array      8.48  47 i P    Pn     06 15 44.5 +2.4
MKAR                                pmax  pmax
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      comp=Z,43nm,0.6s
THW   Thamme Wali         8.59 189  P     Pn     06 15 45.8 +2.1
JMU   Jammu               8.68 171 eS     Sn     06 17 14.5  -7.0
BRZS  Berezniki           8.68 357 eP     Pg     06 16 18.5
      comp=Z,75nm,0.5s
BRZS                               eS     Sg     06 18 10.5
      comp=Z,231nm,0.5s
BRZS  Berezniki           8.68 357 eP     Pn     06 15 45.8 +1.0
BRZS  Berezniki           8.68 357  Pg    Pg     06 16 18.5
      comp=Z,75nm,0.5s
DHRM  DHARAMSHALA         9.36 164 eP     Pn     06 15 54.9 +0.5
DHRM                               eS     Sn     06 17 34.1  -4.6
DHRM                                IAML         06 17 44.9
      comp=N,607nm,0.6s
DHRM                                IAML         06 17 45.1
      comp=E,886nm,0.4s
SARP  Sargodha            9.39 183  P     Pn     06 15 56.2 +1.7
KURBB Kurchatov Arra     10.00  20  Pn    Pn     06 16 02.6  -0.2
      comp=E,1.6nm,0.3s,baz=211,slow=11,SNR=69
KURBB                               Lg    Lg     06 18 50.6
      comp=E,3.8nm,0.3s,baz=55,slow=35,SNR=3.7
KURBB Kurchatov Arra     10.00  20 ⇑Pn    Pn     06 16 02.1  -0.7
      comp=E,78nm,0.5s
KURK  Kurchatov          10.11  20  P     Pn     06 16 02.6  -1.7
KURK  Kurchatov          10.11  20        Pn     06 16 04.0  -0.2
BHK   Bhakra             10.19 165 eP     Pn     06 16 08.2 +2.7
SEM   Semipalatinsk      10.30  26 eP     Pn     06 16 06.7  -0.6
      baz=26
SEM   Semipalatinsk      10.30  26 eP     Pn     06 16 06.6  -0.6
ZSN   Zaisan             10.30  50 eP     Pn     06 16 48.6  +42
      comp=E,25nm,0.7s
ZSN                                eS            06 19 02.5
      comp=E,154nm,1.7s
ZSN   Zaisan             10.30  50 eP     Pn     06 16 07.8 +0.7
      baz=50
ZSN   Zaisan             10.30  50 eP     Pn     06 16 07.7 +0.7
SMLA  Simla              10.63 162 eP     Pn     06 16 10.5  -1.1
SMLA                               eS     Sn     06 18 01.3  -8.2
SMLA                                IAML         06 18 14.7
      comp=E,360nm,0.5s
SMLA                                IAML         06 18 16.3
      comp=N,392nm,0.4s
WMQ   Urumqi             10.92  72 eP     Pn     06 16 20.7 +5.2
WMQ                                 S     Sn     06 18 25.0 +8.5
WMQ                                 pmax  pmax
      comp=N,29nm,0.9s
WMQ                                 pmax  pmax
      comp=N,280nm,4.5s
WMQ                                 LR    LR
      comp=N,810nm,9.1s
WMQ                                 LR    LR
      comp=N,2µm,13.5s
WMQ                                 LR    LR
      comp=N,1µm,15.1s
HRA   Herat              11.13 235  Pn    Pn     06 16 17.3  -1.3
BVAR  Borovoye Array     11.88 351  Pn    Pn     06 16 27.3  -1.2
      comp=N,3.7nm,0.3s,baz=184,slow=19,SNR=36
BVAR                                Sn    Sn     06 18 35.5  -4.4
      comp=N,6.8nm,0.3s,baz=185,slow=24,SNR=3.1
BRVK  Borovoye           11.93 351ceP     Pn     06 16 27.7  -1.5
BRVK                                pmax  pmax
      comp=Z,15nm,0.8s
BRVK  Borovoye           11.93 351  P     Pn     06 16 27.9  -1.3
BRVK                                S     Sn     06 18 36.2  -4.8
BRVK  Borovoye           11.93 351 ⇑Pn    Pn     06 16 27.7  -1.5
      comp=Z,64nm,0.6s
BRVK  Borovoye           11.93 351  Pn    Pn     06 16 28.0  -1.1
GEYT  Alibeck            12.18 259  Pn    Pn     06 16 29.2  -3.5
      comp=Z,8.8nm,0.3s,baz=75,slow=12,SNR=82
GEYT                                Sn    Sn     06 18 37.8   -10
      comp=Z,5.6nm,0.3s,baz=75,slow=1.7,SNR=1.3
GEYT                                LR    LR     06 22 28.4
      comp=Z,694nm,19.0s,baz=70,slow=44
GEYT  Alibeck            12.18 259        Pn     06 16 29.6  -3.2
GYA0B ALIBECK ARRAY      12.18 259  Pn    Pn     06 16 29.5  -3.2
DGZ   Jazzator, Alta     12.97  45 i P    Pn     06 16 43.3  -0.3
NDI   New Delhi          13.00 164 eP     Pn     06 16 43.4  -0.6
NDI                                eP     Pn     06 16 43.5  -0.6
NDI                                eS     Sn     06 18 55.9   -12
NDI                                eS     Sn     06 18 59.0  -8.5
KUDL  Kundal             13.40 168 eP     Pn     06 16 47.5  -1.9
KUDL                               eS     Sn     06 19 05.5   -12
SONA  Sohna              13.40 165 eP     Pn     06 16 46.5  -2.9
SONA                               eS     Sn     06 19 06.2   -11
AKTO  Aktyubinsk         13.99 316  Pn    Pn     06 16 55.9  -1.4
      comp=Z,2.5nm,0.3s,baz=129,slow=15,SNR=72
AKTO                                Sn    Sn     06 19 22.8  -8.6
      comp=Z,0.6nm,0.3s,baz=29,slow=22,SNR=1.4
AKTO                                LR    LR     06 22 43.6
      comp=Z,1µm,19.9s,baz=132,slow=39
ZAA0  Zalesovo Array     14.81  28  Pn    Pn     06 17 08.0  -0.5
ZALV  Zalesovo Beam      14.81  28  Pn    Pn     06 17 08.0  -0.5
      comp=Z,4.8nm,0.3s,baz=227,slow=13,SNR=68
ZALV                                Sn    Sn     06 19 45.2  -6.1
      comp=Z,1.0nm,0.3s,baz=228,slow=13,SNR=2.5
ZALV                                Lg    Lg     06 21 24.2
      comp=Z,1.0nm,0.3s,baz=217,slow=24,SNR=2.0
ZALV                                LR    LR     06 23 10.8
      comp=Z,1µm,19.9s,baz=214,slow=38
ZALV  Zalesovo Beam      14.81  28  Pn    Pn     06 17 07.7  -0.8
AJM   Ajmer              14.84 175 eP     Pn     06 17 06.4  -2.6
PYUN  Piuthan            15.39 146 eP     Pn     06 17 13.6  -2.9
DANN  Dangsing           15.51 143 eP     Pn     06 17 15.0  -3.2
      comp=Z,88nm,0.5s
KOLN  Koldanda           15.94 145 eP     Pn     06 17 20.2  -3.4
      comp=Z,37nm,0.4s
GKN   Gorkha             16.21 141 eP     Pn     06 17 24.3  -2.7
      comp=Z,68nm,0.4s
KKN   Kakani             16.70 140 eP     Pn     06 17 30.3  -2.9
      comp=Z,79nm,0.6s
DMN   Daman              16.76 141 eP     Pn     06 17 31.0  -3.1
      comp=Z,62nm,0.7s
GUN   Gumba              16.89 138 eP     Pn     06 17 33.7  -2.1
      comp=Z,70nm,0.6s
PKIN  Phulchoki          16.93 140 eP     Pn     06 17 33.1  -3.1
      comp=Z,28nm,0.4s
PKI   Pulchoki           16.94 140 eP     Pn     06 17 33.9  -2.5
      comp=Z,19nm,0.3s
JIRN  Jiri               17.25 138 eP     Pn     06 17 37.8  -2.5
      comp=Z,28nm,0.4s
SVE   Sverdlovsk         17.55 336 eP     Pn     06 17 42.6  -0.9
SVE                                 pmax  pmax
      comp=Z,103nm,1.5s
ARU   Arti               17.90 333  P     Pn     06 17 46.8  -1.0
      comp=Z,0.0nm,0.3s,baz=141,slow=8.6,SNR=56
ARU                                 S     Sn     06 20 57.8  -8.4
      comp=Z,0.0nm,0.3s,baz=144,slow=24,SNR=1.7
ARU                                 LR    LR     06 25 04.7
      comp=Z,803nm,19.3s,baz=128,slow=38
ARU   Arti               17.90 333c iP    Pn     06 17 46.8  -1.0
ARU                                 S     Sn     06 21 05.9  -0.3
ARU                                 pmax  pmax
      comp=Z,78nm,0.9s
ARU                                 MLR   MLR
      comp=Z,782nm,18.0s
ARU   Arti               17.90 333        Pn     06 17 47.2  -0.6
ARU                                 IAmb  IAmb   06 18 04.7
      comp=Z,147nm,1.3s
RAMN  Ramite             18.04 138 eP     Pn     06 17 48.1  -1.9
      comp=Z,65nm,0.5s
BHUJ  Bhuj               18.26 191 eP     P      06 17 49.2  -3.2
BHUJ                                IAmb  IAmb   06 17 57.0
      comp=Z,96nm,0.8s
TAPN  Taplejung          18.29 135 eP     P      06 17 51.9  -1.1
BHPL  Bhopal             18.35 168 eP     P      06 17 52.7  -0.7
BHPL                                IAmb  IAmb   06 17 59.6
      comp=Z,24nm,0.5s
BHPL                               eS     Sn     06 20 58.5   -19
BHPL                                IAML         06 21 10.6
      comp=N,24nm,0.5s
BHPL                                IAML         06 21 11.0
      comp=E,30nm,0.8s
BHPL                                IAML         06 21 35.7
      comp=N,30nm,0.9s
ODAN  Odare              18.52 137 eP     P      06 17 54.5  -0.9
      comp=N,54nm,0.6s
LSA   Lhasa              18.55 123  P     Pn     06 17 58.7 +2.3
LSA                                 pmax  pmax
      comp=N,13nm,0.3s
MAK   Makhachkala        19.17 284 eP     P      06 18 01.3  -0.9
MAK                                eS     Sn     06 21 35.6  -1.5
MAK                                 pmax  pmax
      comp=Z,208nm,1.6s
MAK                                 MLR   MLR
      comp=Z,633nm,18.0s
GTA   Gaotai             20.28  87 ⇑P     Pn     06 18 16.7 +0.1
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GTA                                 pP    sP     06 18 26.1  -1.9
GTA                                 sP    pP     06 18 30.4 +6.7
GTA                                 sS    sS     06 22 13.0  -2.1
GTA                                 pmax  pmax
      comp=Z,69nm,0.9s
GTA                                 pmax  pmax
      comp=Z,180nm,5.5s
GTA                                 LR    LR
      comp=Z,160nm,16.7s
GTA                                 LR    LR
      comp=Z,420nm,15.3s
GTA                                 LR    LR
      comp=Z,430nm,16.4s
BOK   Bokaro             20.40 145  IAmb  IAmb   06 18 30.7
      comp=Z,61nm,0.9s
GROC  Groznyy            20.41 284 eP     P      06 18 16.0 +0.3
GROC                               e             06 18 34.8
GROC                                pmax  pmax
      comp=Z,264nm,1.0s
BELG  Belogornoye        20.64 311  P     P      06 18 17.1  -1.1
      comp=Z,59nm,0.6s,baz=336,slow=1.5,SNR=36
BELG                                S     S      06 22 07.0 +0.1
      comp=Z,31nm,1.0s,baz=116,slow=23,SNR=1.8
BELG                                LR    LR     06 27 19.7
      comp=Z,271nm,21.7s,baz=133,slow=40
SHME  Shamm              20.81 228 i P    P      06 18 20.9 +0.7
      SNR=10
SHME  Shamm              20.81 228  P     P      06 18 20.8 +0.7
BANOM Banah              20.82 228 i P    P      06 18 20.7 +0.4
      SNR=13
BANOM Banah              20.82 228  P     P      06 18 21.1 +0.8
      SNR=6.3
MDH   Madha              21.31 227  P     P      06 18 24.9  -0.7
MDH   Madha              21.31 227  P     P      06 18 27.0 +1.4
MSFE  Esma-Masafi        21.34 227  P     P      06 18 26.6 +0.7
MOY   Mondy              21.58  52 eP     P      06 18 30.5 +2.1
MOY                                 pmax  pmax
      comp=Z,57nm,1.6s
GNI   Garni              21.63 276  P     P      06 18 29.9 +0.8
      comp=Z,65nm,0.8s,baz=165,slow=0.9,SNR=17
GNI                                 LR    LR     06 28 29.0
      comp=Z,194nm,20.8s,baz=72,slow=41
GNI   Garni              21.63 276ceP     P      06 18 31.1 +2.0
GNI                                 pmax  pmax
      comp=Z,121nm,1.0s
GNI   Garni              21.63 276  P     P      06 18 30.9 +1.8
GNI                                 IAmb  IAmb   06 18 32.5
      comp=Z,94nm,0.9s
UOSS  Minazif            21.64 226  P     P      06 18 28.5  -0.6
UOSS  Minazif            21.64 226  P     P      06 18 27.9  -1.2
HATD  Hatta, Dubai       21.78 226  P     P      06 18 31.2 +0.6
HATD  Hatta, Dubai       21.78 226  P     P      06 18 31.9 +1.3
WSAR  Wadi Sarin         21.82 219  P     P      06 18 31.1 +0.1
      comp=Z,13nm,0.8s,baz=47,slow=8.9,SNR=10
WSAR                                LR    LR     06 28 51.2
      comp=Z,198nm,20.3s,baz=58,slow=42
ZEI   Tsey               21.83 284 eP     P      06 18 28.5  -2.7
ZEI                                 pmax  pmax
      comp=Z,10.0nm,0.7s
NAZ   Nazwa, Dubai       21.91 227  P     P      06 18 31.8  -0.2
ASHO  Ashiyiah           21.93 226 i P    P      06 18 33.3 +1.0
      SNR=26
ASHO  Ashiyiah           21.93 226  P     P      06 18 33.5 +1.2
      SNR=9.6
ASHO                                P     P      06 18 33.5 +1.2
      SNR=9.6
NCK   Nalchik            21.98 286 i P    P      06 18 32.8 +0.1
NCK                                 pmax  pmax
      comp=Z,96nm,0.7s
SOHO  SOHO               22.12 224  P     P      06 18 33.3  -1.0
SOHO  SOHO               22.12 224  P     P      06 18 36.2 +2.0
FAQ   Al Faqa, Dubai     22.14 227  P     P      06 18 34.9 +0.5
FAQ   Al Faqa, Dubai     22.14 227  P     P      06 18 35.3 +0.8
HOQ   Hoqain             22.17 222  P     P      06 18 36.2 +1.3
HOQ                                 P     P      06 18 36.2 +1.3
ONI   Oni                22.18 283  P     P      06 18 35.9 +1.1
ONI                                 pmax  pmax
      comp=Z,49nm,0.7s
ONI   Oni                22.18 283  P     P      06 18 35.9 +1.1
ONI                                 IAmb  IAmb   06 18 38.7
      comp=Z,49nm,0.7s
WBK   Wadi Bani Khal     22.20 217  P     P      06 18 37.1 +2.0
WBK                                 P     P      06 18 37.1 +2.0
SMDO  Samad              22.25 220  P     P      06 18 36.8 +1.0
      SNR=7.5
SMDO                                P     P      06 18 36.8 +1.0
      SNR=7.5
GOF   Gofitskoye         22.30 290⇑iP     P      06 18 37.3 +1.2
GOF                                 pmax  pmax
      comp=Z,178nm,1.4s
ASUD  Al Ashush, Dub     22.38 227 i P    P      06 18 38.2 +1.2
      SNR=10
JLN   Jalan Bani Buh     22.40 216  P     P      06 18 40.9 +3.6
JLN                                 P     P      06 18 40.9 +3.6
KBZ   Khabaz             22.47 286  P     P      06 18 37.4  -0.5
      comp=Z,18nm,0.7s,baz=105,slow=9.5,SNR=27
KBZ                                 S     S      06 22 48.2 +5.8
      comp=Z,5.8nm,0.9s,baz=93,slow=6.1,SNR=1.3
KBZ                                 LR    LR     06 28 23.6
      comp=Z,288nm,21.6s,baz=84,slow=40
ALNE  Al Ain             22.60 226  P     P      06 18 41.2 +1.7
      SNR=9.3
KVAR  Kislovodsk Arr     22.60 287  P     P      06 18 39.8 +0.4
      comp=Z,21nm,0.6s,baz=99,slow=23,SNR=9.4
KVAR                                LR    LR     06 29 00.9
      comp=Z,191nm,20.9s,baz=258,slow=41
KIV   Kislovodsk         22.61 287 i P    P      06 18 39.4  -0.1
      SNR=14
KIV   Kislovodsk         22.61 287 eP     P      06 18 39.2  -0.3
KIV                                eS     S      06 22 42.4  -2.7
KIV                                 pmax  pmax
      comp=Z,89nm,1.0s
KIV                                 MLR   MLR
      comp=Z,124nm,14.0s
KIV   Kislovodsk         22.61 287  P     P      06 18 35.8  -3.7
KIV   Kislovodsk         22.61 287  P     P      06 18 39.4  -0.1
KIV                                 IAmb  IAmb   06 19 13.7
      comp=Z,68nm,0.8s
NEY   Neytrino           22.64 285 i P    P      06 18 40.8 +0.9
NEY                                 pmax  pmax
      comp=Z,8.0nm,0.6s
ZAK   Zakamensk          22.64  56 eP     P      06 18 40.9 +1.1
ZAK                                 pmax  pmax
      comp=Z,33nm,1.2s
SHA1  Shidzhatmaz        22.64 286 i P    P      06 18 39.9  -0.1
KARS  Kars               22.77 278  P     P      06 18 40.4  -0.9
KARS                                pmax  pmax
      comp=Z,227nm,1.1s
KARS  Kars               22.77 278  P     P      06 18 40.4  -0.9
ARQ   Araqi              22.78 223  P     P      06 18 42.2 +0.9
ARQ                                 P     P      06 18 42.2 +0.9
JMDO  Jabal Madar        22.81 219  P     P      06 18 42.8 +1.2
JMDO                                P     P      06 18 42.8 +1.2
KIRV  Kirov              22.92 327  P     P      06 18 41.9  -0.5
      comp=Z,69nm,0.9s,baz=128,slow=4.6,SNR=17
KIRV                                LR    LR     06 28 14.2
      comp=Z,1µm,18.2s,baz=127,slow=38
KIRV  Kirov              22.92 327ceP     P      06 18 42.7 +0.3
BSY   Bisya              22.93 221  P     P      06 18 45.8 +2.9
BSY                                 P     P      06 18 45.8 +2.9
TLY   Talaya             23.17  53  P     P      06 18 45.0  -0.1
      comp=Z,5.3nm,0.8s,baz=260,slow=8.2,SNR=4.2
TLY                                 LR    LR     06 28 05.4
      comp=Z,411nm,20.9s,baz=260,slow=37
TLY   Talaya             23.17  53 eP     P      06 18 47.3 +2.2
TLY                                eSS    Sn     06 23 30.8  +18
TLY                                 pmax  pmax
      comp=Z,40nm,1.3s
TLY                                 MLR   MLR
      comp=Z,976nm,18.0s
VRH   Novokhopyorsk      23.79 305 eP     P      06 18 50.5  -0.6
VRH                                 pmax  pmax
      comp=Z,80nm,0.6s
UMZA  Um Al Zommool      24.00 225  P     P      06 18 53.8 +0.5
UMZA                                P     P      06 18 53.8 +0.5
SIRT  Sirnak             24.07 271  P     P      06 18 55.6 +1.6
HYB   Hyderabad          24.24 168 i P    P      06 18 56.5 +0.9
HYB                                eS     S      06 23 30.0  +18
SONM  Songino Array      24.34  63  P     P      06 18 57.4 +1.0
      comp=Z,4.6nm,0.9s,baz=270,slow=8.5,SNR=16
SONM                                LR    LR     06 29 35.0
      comp=Z,421nm,18.3s,baz=276,slow=39
SONM  Songino Array      24.34  63  P     P      06 18 57.2 +0.8
LZH   Lanzhou            24.34  92 eP     P      06 18 58.8 +2.3
LZH                                 pP    pP     06 19 07.5 +0.9
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LZH                               sP     sP     06 19 12.1 +1.5
LZH                              eS      S      06 23 15.1 +1.3
LZH                               sS     sS     06 23 31.1 +0.9
LZH                               pmax   pmax
      comp=Z,31nm,1.0s
LZH                               pmax   pmax
      comp=Z,94nm,4.1s
LZH                               LR     LR
      comp=Z,330nm,14.1s
LZH                               LR     LR
      comp=Z,470nm,13.6s
LZH                               LR     LR
      comp=Z,1µm,16.8s
MZR   Muzera            24.69 228 i P    P      06 18 59.9 +0.3
      SNR=9.1
MZR   Muzera            24.69 228   P    P      06 19 00.4 +0.7
      SNR=5.8
TRNA  Turayna           24.71 235   P    P      06 19 01.0 +1.2
ULN   Ulaanbaatar       24.78  63ceP     P      06 19 01.8 +1.3
ULN                               pmax   pmax
      comp=Z,10.0nm,0.8s
SOC   Sochi             24.78 287 eP     P      06 19 00.3  0.0
SOC                               e             06 19 32.8
SOC                               eS     S      06 23 21.8 +1.3
SOC                               eSS    SnSn   06 24 08.7 +0.1
SOC                               pmax   pmax
      comp=Z,42nm,0.7s
SOC                               MLR    MLR
      comp=Z,82nm,14.0s
VORD  Divnogorie        25.25 304 eP     P      06 19 03.6 -0.9
VORD                              pmax   pmax
      comp=Z,60nm,0.6s
VSR   Storozhevoye      25.38 305 eP     P      06 19 04.3 -1.3
VSR                               pmax   pmax
      comp=Z,100nm,1.2s
VORR  Voronezh          25.43 306   P    P      06 19 05.0 -1.0
VORR                              pmax   pmax
      comp=Z,250nm,1.0s
LPSR  Galich'ya Gora    25.78 308 eP     P      06 19 08.3 -0.9
LPSR                              pmax   pmax
      comp=Z,80nm,0.8s
PRGR  Permogore         26.30 330 eP     P      06 19 13.3 -0.6
PRGR                              e*PP   pP     06 19 23.7 -0.2
PRGR                              pmax   pmax
      comp=Z,19nm,0.5s
CD2   Chengdu           26.59 103   P    P      06 19 18.6 +1.7
CD2                                 S    S      06 23 50.5 +1.0
CD2                               pmax   pmax
      comp=Z,10.0nm,0.5s
CD2                               LR     LR
      comp=Z,320nm,14.7s
CD2                               LR     LR
      comp=Z,330nm,13.2s
MOS   Moscow            27.31 314 eP     P      06 19 22.2 -0.8
MOS                               e             06 19 36.2
MOS                               e             06 20 08.6
MOS                               ePPP   PPP    06 20 17.9
MOS                               eS     S      06 24 03.9 +3.6
MOS                               pmax   pmax
      comp=Z,68nm,0.6s
BTO   Baotou            27.62  79 eP     P      06 19 26.2 +0.1
BTO                                 S    S      06 24 03.6 -2.1
BTO                               LR     LR
      comp=Z,790nm,15.4s
BTO                               LR     LR
      comp=Z,680nm,11.7s
OBN   Obninsk           27.72 312   P    P      06 19 25.9 -0.7
      comp=Z,6.0nm,0.5s,baz=99,slow=14,SNR=4.3
OBN                               LR     LR     06 31 09.4
      comp=Z,125nm,20.1s,baz=107,slow=38
OBN   Obninsk           27.72 312⇑eP     P      06 19 26.4 -0.3
OBN                               e             06 20 12.4
OBN                               pmax   pmax
      comp=Z,16nm,0.8s
OBN                               MLR    MLR
      comp=Z,475nm,19.0s
OBN   Obninsk           27.72 312   IAmb IAmb   06 20 11.2
      comp=Z,35nm,0.5s
DOK   Doka              27.93 222   P    P      06 19 30.3 +1.5
DOK                                 P    P      06 19 30.3 +1.5
DMTO  DMTO              28.30 219   P    P      06 19 35.4 +3.2
DMTO                                P    P      06 19 35.4 +3.2
KLMR  Klimovskoe        28.36 325 eP     P      06 19 31.3 -1.0
KLMR                              pmax   pmax
      comp=Z,20nm,1.3s
KLMR  Klimovskoe        28.36 325 eP     P      06 19 31.4 -0.9
KLMR                              AMP           06 19 46.7
      comp=Z,20nm,1.3s
KLMR                              eScP   ScP    06 26 24.7 +2.0
HHC   Hu-ho-hao-te      28.70  78 eP     P      06 19 38.1 +2.4
HHC                               pmax   pmax
      comp=Z,6.0nm,0.7s
HHC                               pmax   pmax
      comp=Z,130nm,9.3s
WHFO  Wadi Hawf         28.70 221   P    P      06 19 36.0 +0.2
WHFO                                P    P      06 19 36.0 +0.2
XAN   Xi'an             28.97  93   P    P      06 19 48.4  +10
XAN                                 S    S      06 24 45.3  +18
XAN                               pmax   pmax
      comp=Z,19nm,1.0s
XAN                               pmax   pmax
      comp=Z,130nm,4.8s
XAN                               LR     LR
      comp=N,290nm,14.1s
XAN                               LR     LR
      comp=E,370nm,16.0s
XAN                               LR     LR
      comp=Z,630nm,18.0s
NRIK  Noril'sk          29.08  10   P    P      06 19 39.1 +0.5
      comp=Z,12nm,0.8s,baz=201,slow=8.1,SNR=18
NRIK                              LR     LR     06 33 02.6
      comp=Z,519nm,19.7s,baz=190,slow=40
NRIK  Noril'sk          29.08  10ceP     P      06 19 39.4 +0.8
NRIK                              pmax   pmax
      comp=Z,31nm,1.3s
NRIK  Noril'sk          29.08  10   P    P      06 19 39.5 +0.9
RAYN  Ar Rayn           29.22 241 i P    P      06 19 41.2 +0.8
      SNR=14
RAYN  Ar Rayn           29.22 241   P    P      06 19 41.2 +0.8
RAYN                              pmax   pmax
      comp=Z,22nm,1.1s
RAYN  Ar Rayn           29.22 241   P    P      06 19 41.0 +0.6
RAYN  Ar Rayn           29.22 241   P    P      06 19 41.2 +0.8
ABTO  Aybut             29.42 222   P    P      06 19 42.7 +0.5
ABTO                                P    P      06 19 42.7 +0.5
BR131 Keskin Array S    30.01 280   P    P      06 19 48.2 +0.8
BR131                             pmax   pmax
      comp=Z,18nm,0.8s
BR131 Keskin Array S    30.01 280   P    P      06 19 48.2 +0.8
BRTR  Keskin Array B    30.01 280   P    P      06 19 48.4 +1.0
      comp=Z,7.2nm,0.7s,baz=94,slow=8.3,SNR=18
BRTR                              LR     LR     06 33 15.1
      comp=Z,116nm,20.7s,baz=78,slow=39
BRTR  Keskin Array B    30.01 280   P    P      06 19 47.8 +0.4
BRTR  Keskin Array B    30.01 280   P    P      06 19 47.8 +0.4
BOD   Bodaibo           30.56  43 eP     P      06 19 51.9 +0.1
BOD                               pmax   pmax
      comp=Z,27nm,1.0s
GYA   Guiyang           31.20 108 ⇑P     P      06 19 59.9 +2.0
GYA                               sP     sP     06 20 18.9 +6.8
GYA                               pmax   pmax
      comp=Z,13nm,0.8s
GYA                               LR     LR
      comp=Z,200nm,10.8s
GYA                               LR     LR
      comp=Z,170nm,10.0s
GYA                               LR     LR
      comp=Z,340nm,14.4s
AKASG Malin Array Be    31.59 302   P    P      06 20 00.8 -0.2
      comp=Z,14nm,0.6s,baz=76,slow=7.8,SNR=46
AKASG                             LR     LR     06 34 18.0
      comp=Z,244nm,18.5s,baz=85,slow=39
AKASG Malin Array Be    31.59 302   IAmb IAmb   06 20 01.8
      comp=Z,25nm,0.9s
AKBB  Malin Array Si    31.59 302   IAmb IAmb   06 20 01.7
      comp=Z,26nm,0.7s
CMAR  Chiang Mai Arr    31.62 128   PcP  PcP    06 22 52.3 -1.0
      comp=Z,1.1nm,0.3s,baz=320,slow=4.0,SNR=5.6
CMAR                              LR     LR     06 35 50.7
      comp=Z,133nm,21.9s,baz=1.0,slow=42
MILM  Milestii Mici     32.08 295 ⇑P     P      06 20 05.9 +0.5
MILM  Milestii Mici     32.08 295c iP    P      06 20 05.0 -0.3
MILM                              pmax   pmax
      comp=Z,40nm,0.6s
MILM                              MLR    MLR
      comp=Z,300nm,19.0s
LEF   Lefka             32.12 272 ⇑P     P      06 20 07.2 +1.3
SORM  Soroca            32.27 298 ⇑P     P      06 20 06.9 -0.1
MNK   Minsk             32.58 310 i P    P      06 20 09.0 -0.6
MNK                               i             06 21 16.9
MNK                               i             06 22 55.0
MNK                               i S    S      06 25 22.6 -0.2
MNK                               i SS   SnSn   06 27 19.0 +0.8
MNK                               pmax   pmax
      comp=Z,48nm,0.9s
MNK                               pmax   pmax
      comp=E,7.0nm,0.9s
MNK                               pmax   pmax
      comp=N,18nm,0.9s
MNK                               MLR    MLR
      comp=E,65nm,15.0s
MNK                               MLR    MLR
      comp=N,135nm,15.0s
MNK                               MLR    MLR
      comp=Z,399nm,14.0s
MNK   Minsk             32.58 310 i P    P      06 20 09.1 -0.5
      comp=E,7.0nm,0.9s
MNK                               i P    P      06 20 09.1 -0.5
      comp=N,18nm,0.9s
MNK                               i P    P      06 20 09.1 -0.5
      comp=Z,48nm,0.9s,baz=95
MNK                               i PP   PnPn   06 21 16.9 -0.6
MNK                               i PcP  PcP    06 22 55.1 -0.2
MNK                               i S    S      06 25 22.7 -0.2
MNK                               i SS   SnSn   06 27 19.1 +0.9
MNK                               i LQ   LQ     06 30 54.3
MNK                               i LR   LR     06 32 48.9
MNK                               i LRM  MLR    06 34 00.5
      comp=E,65nm,15.0s
MNK                               i LRM  MLR    06 34 00.9
      comp=N,135nm,14.8s
MNK                               i LRM  MLR    06 34 03.7
      comp=Z,399nm,13.8s
TPGR  Topolog           32.65 292 ⇑P     P      06 20 11.7 +1.3
MANR  Mangalia          32.72 290 ⇑P     P      06 20 11.9 +1.0
CFR   Carcaliu          32.79 292 ⇑P     P      06 20 12.2 +0.6
NACGM Naroch            33.24 310 i P    P      06 20 12.9 -2.5
TESR  Tescani           33.61 295 ⇑P     P      06 20 19.4 +0.7
VRI   Vrincioaia        33.65 294 ⇑P     P      06 20 20.7 +1.5
ISAL  Salakas           33.67 311 eP     P      06 20 19.9 +0.7
PLOR  Plostina          33.71 294 ⇑P     P      06 20 21.3 +1.6
VSU   Vasula            33.72 317 eP     P      06 20 19.8 +0.3
ISR   Istrita           33.91 292 ⇓P     P      06 20 23.4 +2.0
APA   Apatity           33.99 334⇑iP     P      06 20 26.9 +5.1
APA                               i             06 21 42.0
APA                               i             06 23 05.0
APA                               i S    S      06 25 48.0 +3.5
APA                               pmax   pmax
      comp=Z,5.0nm,0.7s
APA                               MLR    MLR
      comp=Z,1µm,10.0s
COVR  Voineasa-Covas    34.02 294 ⇓P     P      06 20 23.8 +1.5
MLR   Muntele Rosu      34.26 293   P    P      06 20 25.6 +1.1
MLR                               pmax   pmax
      comp=Z,48nm,0.9s
MLR   Muntele Rosu      34.26 293   P    P      06 20 25.6 +1.1
BURAR Bucovina Array    34.43 297 ⇓P     P      06 20 26.8 +0.9
BURAR Bucovina Array    34.43 297   P    P      06 20 25.7 -0.2
BURAR                             IAmb   IAmb   06 20 27.8
      comp=Z,16nm,0.9s
BUR08 Bucovina Ar. S    34.43 297   P    P      06 20 26.2 +0.1
PALK  Pallekele         34.53 167   P    P      06 20 27.0  0.0
      comp=Z,5.0nm,0.6s,baz=354,slow=10.0,SNR=2.1
PALK  Pallekele         34.53 167   P    P      06 20 27.0  0.0
PALK                              pmax   pmax
      comp=Z,42nm,1.4s
PALK  Pallekele         34.53 167   IAmb IAmb   06 21 29.1
      comp=Z,42nm,1.4s
DOPR  Dopca             34.56 294 ⇑P     P      06 20 28.5 +1.5
FIA1  FINESS Array S    34.65 322   P    P      06 20 27.4 -0.1
FINES FINESS Array B    34.65 322   P    P      06 20 27.6  0.0
      comp=Z,13nm,0.5s,baz=110,slow=9.5,SNR=126
FINES                             LR     LR     06 35 10.2
      comp=Z,573nm,19.6s,baz=103,slow=37
WHN   Wuhan             34.66  95 ⇑P     P      06 20 39.3  +11
VOIR                    34.89 293 ⇑P     P      06 20 30.8 +0.9
PABE  Paberze           34.89 311 eP     P      06 20 30.3 +0.6
PABE  Paberze           34.89 311   P    P      06 20 29.8 +0.1
LVV   L'vov             34.96 301 eP     P      06 20 30.2 -0.2
LVV                               e             06 20 40.8
LVV                               e             06 21 54.4
LVV                               eS     S      06 25 59.0 -0.9
LVV                               MLR    MLR
      comp=Z,500nm,15.0s
COPA  Copaceanca        35.03 291 ⇑P     P      06 20 33.1 +2.0
STFAR Stefanesti-Arg    35.06 292 ⇑P     P      06 20 33.2 +1.8
ARCR  ARCALIA           35.08 296 ⇑P     P      06 20 33.4 +1.9
ARR   Arges             35.19 293 ⇓P     P      06 20 33.4 +0.9
MTSE  Matsula           35.27 317 eP     P      06 20 33.6 +0.7
BMR   Baia Mare         35.57 297 ⇑P     P      06 20 37.3 +1.6
CJR   Cluj-Napoca       35.66 296 ⇓P     P      06 20 38.3 +1.8
CBBR  Cluj-Babes-Bol    35.68 296 ⇓P     P      06 20 38.2 +1.6
KWP   Kalwaria Pacla    35.84 301 eP     P      06 20 39.2 +1.3
TRPA  Tarpa             36.14 298 ⇑P     P      06 20 41.7 +1.2
TRPA  Tarpa             36.14 298 eP     P      06 20 40.6 +0.1
TRPA                              ePP    PP     06 22 04.5 +1.7
KOLS  Kolonicke sedl    36.20 300 eP     P      06 20 41.4 +0.3
KOLS                              pmax   pmax
      comp=Z,23nm,1.1s
KOLS  Kolonicke sedl    36.20 300 eP     P      06 20 41.4 +0.3
UZH   Uzhgorod          36.23 299 eP     P      06 20 40.0 -1.3
UZH                               i             06 20 51.7
UZH                               e             06 21 00.0
DRGR                    36.24 296 ⇑P     P      06 20 42.5 +1.0
GZR   Gura Zlata        36.47 294 ⇓P     P      06 20 44.5 +1.0
CRVS  Cervenica-Dubn    36.74 300 eP     P      06 20 47.9 +2.2
CRVS  Cervenica-Dubn    36.74 300 eP     P      06 20 47.9 +2.2
VTS   Vitosha           36.80 289 ⇓P     P      06 20 48.3 +1.9
VTS   Vitosha           36.80 289   P    P      06 20 47.1 +0.7
VTS                               pmax   pmax
      comp=Z,18nm,1.0s
VTS   Vitosha           36.80 289   P    P      06 20 47.1 +0.7
HERR  Herculane         36.83 293 ⇓P     P      06 20 46.4  0.0
BEL   Belsk             36.84 305 eP     P      06 20 47.2 +0.8
APE   Apeiranthos       36.89 279 ⇑P     P      06 20 48.0 +0.9
ZAPS  Zavoj             37.06 290 eP     P      06 20 50.0 +1.5
ZAGS  Zajecar           37.20 291 eP     P      06 20 50.6 +1.0
BZS   Buzias            37.22 294 ⇓P     P      06 20 50.4 +0.6
NJ2   Nanjing           37.33  89 eP     P      06 20 52.5 +1.7
NJ2                               pmax   pmax
      comp=Z,15nm,0.5s
MDVR  Moldovita         37.34 293 ⇑P     P      06 20 51.9 +1.0
NIE   Niedzica          37.42 301 eP     P      06 20 53.6 +2.1
KECS  Kecovo            37.44 299 eP     P      06 20 52.7 +1.1
KECS                              pmax   pmax
      comp=Z,14nm,0.8s
KECS  Kecovo            37.44 299 eP     P      06 20 52.7 +1.1
ARA0  ARCESS Array S    37.47 335 eP     P      06 20 51.9 +0.3
ARCES ARCESS Array B    37.47 335   P    P      06 20 51.7 +0.1
      comp=Z,9.6nm,0.5s,baz=109,slow=8.8,SNR=133
ARCES                             LR     LR     06 36 52.6
      comp=Z,418nm,18.4s,baz=130,slow=37
ARCES ARCESS Array B    37.47 335   P    P      06 20 52.0 +0.4
ARCES                             pmax   pmax
      comp=Z,60nm,1.7s
ARCES ARCESS Array B    37.47 335   P    P      06 20 52.0 +0.4
ARCES                             IAmb   IAmb   06 21 28.2
      comp=Z,60nm,1.7s
ZEA   Zeya              37.60  52 eP     P      06 20 54.8 +2.0
ZEA                               pmax   pmax
      comp=Z,10.0nm,1.2s
ZEA                               MLR    MLR
      comp=E,200nm,17.0s
ZEA                               MLR    MLR
      comp=Z,200nm,19.0s
OJC   Ojcow             37.63 302 eP     P      06 20 53.6 +0.4
OJC   Ojcow             37.63 302   P    P      06 20 53.4 +0.2
OJC                               pmax   pmax
      comp=Z,69nm,0.9s
OJC   Ojcow             37.63 302   P    P      06 20 53.4 +0.2
VAY   Valandovo         37.64 287 i P    P      06 20 54.3 +0.9
PRVS  Prvonek           37.66 289 eP     P      06 20 53.7 +0.1
BARS  Barje             37.76 290 eP     P      06 20 55.3 +0.9
STIP  Stip              37.81 288 i P    P      06 20 54.3 -0.5
PSZ   Piszkesteto       37.93 299 ⇓P     P      06 20 55.8  0.0
PSZ   Piszkesteto       37.93 299 eP     P      06 20 56.3 +0.5
PSZ   Piszkesteto       37.93 299   IAmb IAmb   06 20 57.7
      comp=Z,25nm,1.1s
IZAB  Izabela           37.93 300 eP     P      06 20 56.8 +1.0
LANS  Liptovska Anna    38.00 301 eP     P      06 20 57.7 +1.3
LANS                              pmax   pmax
      comp=Z,15nm,1.3s
LANS  Liptovska Anna    38.00 301 eP     P      06 20 57.7 +1.3
KTK1  Kautokeino        38.02 333 eP     P      06 20 56.0 -0.3
SELS  Selova            38.14 291 eP     P      06 20 57.7 +0.1
GRUS  Gruza             38.25 292 eP     P      06 20 59.7 +1.2
TRUS  Trudelj           38.38 293 eP     P      06 21 00.0 +0.4
HAMF  Hammerfest        38.48 336 eP     P      06 21 00.3 +0.3
VYHS  Vyhne             38.52 300 eP     P      06 21 01.7 +1.0
VYHS                              pmax   pmax
      comp=Z,26nm,1.2s
VYHS  Vyhne             38.52 300 eP     P      06 21 01.7 +1.0
FRGS  Fruska Gora       38.56 294 ⇑P     P      06 21 02.1 +1.0
FNA   Florina           38.67 287   P    P      06 21 01.8 -0.3
FNA                               pmax   pmax
      comp=Z,11nm,0.8s
FNA   Florina           38.67 287   P    P      06 21 01.8 -0.3
DIVS  Divibare          38.70 292⇑iP     P      06 21 03.1 +0.7
DIVS  Divibare          38.70 292   P    P      06 21 03.3 +0.9
DIVS                              IAmb   IAmb   06 21 04.3
      comp=Z,26nm,0.9s
DIVS  Divibare          38.70 292 eP     P      06 21 03.0 +0.7
OKC   Ostrava-Krasne    38.74 302 eP     P      06 21 03.4 +0.9
OKC   Ostrava-Krasne    38.74 302 eP     P      06 21 03.4 +0.9
KOLL  Kolacno           38.79 300 eP     P      06 21 04.0 +1.0
GKP   Gorka Klasztor    38.88 307 eP     P      06 21 04.4 +0.8
SJES  Sjenica           38.93 291 eP     P      06 21 05.3 +0.9
OHR   Ohrid             38.98 288 i P    P      06 20 53.6  -11
SRO   Srobarova         38.99 299 eP     P      06 21 05.6 +1.0
SRO   Srobarova         38.99 299 eP     P      06 21 05.6 +1.0
YAK   Yakutsk           39.05  39c iP    P      06 21 05.0  0.0
YAK                               e*PP   sP     06 21 19.2 -0.2
YAK                               e             06 22 34.8
YAK                               e             06 23 13.7
YAK                               eS     S      06 27 00.2 -1.6
YAK                               e*SS   sS     06 27 27.2 +8.3
YAK                               eSSS   SSS    06 30 16.1
YAK                               e             06 31 12.1
YAK                               pmax   pmax
      comp=Z,213nm,1.0s
YAK                               pmax   pmax
      comp=N,9.0nm,0.9s
YAK                               pmax   pmax
      comp=E,15nm,0.9s
YAK                               pmax   pmax
      comp=Z,196nm,5.1s
YAK                               pmax   pmax
      comp=N,141nm,4.4s
YAK                               pmax   pmax
      comp=E,113nm,3.8s
YAK                               smax   smax
      comp=E,130nm,4.2s
YAK                               smax   smax
      comp=N,71nm,3.2s
YAK   Yakutsk           39.05  39   P    P      06 21 05.2 +0.3
MORH  Mrgy, Hungar      39.11 296 eP     P      06 21 05.9 +0.3
MORH  Mrgy, Hungar      39.11 296⇑iP     P      06 21 06.0 +0.3
MORC  Moravsky Berou    39.14 302 ⇓P     P      06 21 06.6 +0.7
MORC  Moravsky Berou    39.14 302 eP     P      06 21 06.5 +0.6
MORC  Moravsky Berou    39.14 302   P    P      06 21 06.2 +0.3
MORC                              pmax   pmax
      comp=Z,34nm,0.8s
MORC  Moravsky Berou    39.14 302   P    P      06 21 06.2 +0.3
MORC                              IAmb   IAmb   06 21 07.5
      comp=Z,34nm,0.8s
JETT  Jettan, Norway    39.15 334 eP     P      06 21 06.9 +1.1
BBLS  Lazi&#263;i       39.17 292⇑iP     P      06 21 06.8 +0.5
BBLS  Lazi&#263;i       39.17 292 eP     P      06 21 07.0 +0.7
JAVC  Velka Javorina    39.22 300 eP     P      06 21 08.4 +1.8
RUDO  Rudo              39.26 292⇑iP     P      06 21 06.5 -0.5
HAPS  Han Pijesak,BI    39.42 293⇑iP     P      06 21 09.1 +0.6
SMOL  Smolenice         39.44 300 eP     P      06 21 09.4 +1.0
SMOL                              pmax   pmax
      comp=Z,12nm,0.9s
SMOL  Smolenice         39.44 300 eP     P      06 21 09.4 +1.0
KOVH  Kovagotottos      39.51 296 eP     P      06 21 09.2 +0.2
ITM   Ithomi            39.52 281   P    P      06 21 07.3 -1.9
MODS  Modra-Piesok      39.56 300 eP     P      06 21 09.3 -0.2
MODS                              pmax   pmax
      comp=Z,21nm,1.0s
MODS  Modra-Piesok      39.56 300 eP     P      06 21 09.3 -0.2
KRLC  Kraliky           39.57 302 eP     P      06 21 09.7 +0.1
KRLC  Kraliky           39.57 302 eP     P      06 21 09.7 +0.1
MPLH  Magyarpolny       39.64 298 eP     P      06 21 10.0 -0.1
TRO   Tromso            39.67 334 eP     P      06 21 10.2 +0.2
PDG   Podgorica         39.68 290⇑iP     P      06 21 10.8 +0.4
PDG   Podgorica         39.68 290   P    P      06 21 11.0 +0.5
PDG                               IAmb   IAmb   06 21 12.0
      comp=Z,33nm,0.7s
UPM   Unac-Piva         39.70 291⇑iP     P      06 21 11.8 +0.9
KSP   Ksiaz             39.76 304 eP     P      06 21 11.7 +0.6
DRME  Dracevica, Mon    39.80 290⇑iP     P      06 21 10.9 -0.6
DPC   Dobruska-Polom    39.82 303 eP     P      06 21 12.3 +0.7
DPC   Dobruska-Polom    39.82 303 eP     P      06 21 12.3 +0.7
VRAC  Vranov            39.83 301 eP     P      06 21 12.4 +0.7
OSTC  Ostas             39.85 303 eP     P      06 21 12.5 +0.7
OSTC                              ex     x      06 21 20.6
UPC   Upice             39.99 303 eP     P      06 21 13.4 +0.4
UPC   Upice             39.99 303 eP     P      06 21 13.4 +0.4
KRUC  Moravsky          40.00 301 eP     P      06 21 14.1 +1.0
BRY   Bratogost         40.04 291⇑iP     P      06 21 14.2 +0.5
BSD   Bornholm Skovb    40.07 311 i P    P      06 21 13.1 -0.4
HCY   Herceg Novi       40.21 290⇑iP     P      06 21 15.1 +0.2
TREB  Trebinje          40.23 291⇑iP     P      06 21 15.1  0.0
FAUS  Fauske            40.46 330 eP     P      06 21 16.6 +0.1
BLY   Banja Luka        40.47 294⇑iP     P      06 21 17.6 +0.6
DEL   Delary            40.55 313 i P    P      06 21 17.4 -0.1
STEI  Steigen           40.58 330 eP     P      06 21 17.4 -0.2
CONA  Conrad Observa    40.58 299 i P    P      06 21 18.9 +0.8
      comp=Z,33nm,0.7s,SNR=14
MOR8  Moi Rana          40.60 328 eP     P      06 21 17.1 -0.7
MDJ   Mudanjiang        40.64  66   P    P      06 21 18.0 -0.4
MDJ                                 S    S      06 27 25.7 -0.3
MDJ                               pmax   pmax
      comp=Z,6.0nm,1.0s
MDJ                               pmax   pmax
      comp=Z,200nm,5.0s
MDJ                               LR     LR
      comp=Z,180nm,14.4s
MDJ                               LR     LR
      comp=Z,300nm,10.7s
MDJ                               LR     LR
      comp=Z,360nm,17.7s
STON  Ston              40.64 291⇑iP     P      06 21 18.3 -0.1
TIXI  Tiksi             40.65  24   P    P      06 21 18.5 +0.4
      comp=Z,36nm,0.8s,baz=271,slow=5.2,SNR=44
TIXI                              PcP    PcP    06 23 17.8 -1.5
      comp=Z,9.3nm,0.7s,baz=315,slow=3.8,SNR=3.0
TIXI  Tiksi             40.65  24ceP     P      06 21 18.0 -0.1
TIXI                              pmax   pmax
      comp=Z,25nm,0.6s
TIXI  Tiksi             40.65  24   P    P      06 21 18.5 +0.4
TIXI                              IAmb   IAmb   06 21 19.4
      comp=Z,29nm,0.7s
PVCC  Panska Ves        40.89 304 eP     P      06 21 20.9 +0.5
PVCC  Panska Ves        40.89 304 eP     P      06 21 20.9 +0.5
ARSA  Arzberg           40.96 298 i P    P      06 21 21.4 +0.3
      comp=Z,17nm,1.0s
KLR   Kul'dur           40.98  58   P    P      06 21 22.1 +1.0
      comp=Z,7.5nm,0.5s,baz=281,slow=8.1,SNR=24
KLR   Kul'dur           40.98  58ceP     P      06 21 21.2 +0.1
KLR                               pmax   pmax
      comp=Z,8.0nm,0.6s
PRU   Pruhonice         41.01 303 eP     P      06 21 21.8 +0.4
PRU                               epP    pP     06 21 31.6 +0.2
PRU   Pruhonice         41.01 303 eP     P      06 21 21.8 +0.4
PRA   Prague            41.06 303 eP     P      06 21 22.7 +0.9
PRA   Prague            41.06 303 eP     P      06 21 22.7 +0.9
BORU  Boraas            41.08 315 i P    P      06 21 21.6 -0.2
FABU  Falkenberg        41.15 314 i P    P      06 21 22.1 -0.3
KONS  Konsvik           41.17 328 eP     P      06 21 22.7 +0.3
STOK  Stokkvaagen       41.19 328 eP     P      06 21 22.6  0.0
BRG   Berggiesshubel    41.22 304 eP     P      06 21 23.7 +0.5
      comp=Z,27nm,0.7s,baz=77,slow=8.1
BRG   Berggiesshubel    41.22 304 i P    P      06 21 23.6 +0.5
BRG                               Amp           06 21 24.7
      comp=Z,23nm,0.7s
BRG   Berggiesshubel    41.22 304   P    P      06 21 34.0  +11
BRG                               Amp           06 21 34.3
      comp=Z,11nm,0.7s
LOF   Lofoten           41.24 331 eP     P      06 21 22.6 -0.3
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CRES  Cresnjev          41.36 296⇑iP     P      06 21 24.2 -0.1
PERS  Pernice           41.38 298 i P    P      06 21 24.9 +0.4
CKRC  Cesky Krumlov     41.40 301 eP     P      06 21 26.7 +2.1
SOKA  Soboth            41.42 298 i P    P      06 21 25.3 +0.4
      comp=Z,18nm,0.6s,SNR=17
NSS   Namsos            41.47 325 eP     P      06 21 24.8 -0.1
NC405 NORSAR Array S    41.49 320  P     P      06 21 24.2 -1.1
FBE   Freiberg          41.58 304 eP     P      06 21 27.0 +1.0
      comp=Z,46nm,0.7s,baz=77,slow=8.1
NC602 NORSAR Array S    41.58 319 eP     P      06 21 25.9  0.0
MOA   Molln             41.65 300 i P    P      06 21 27.0 +0.3
      comp=Z,18nm,0.8s,SNR=5.9
NC303 NORSAR Array S    41.66 320  IAmb  IAmb   06 21 27.4
      comp=Z,39nm,0.7s
CLL   Collm             41.73 305⇑iP     P      06 21 27.3 +0.1
CLL                               i             06 21 37.3
CLL                                pmax  pmax
      comp=Z,30nm,0.6s
CLL   Collm             41.73 305⇑iP     P      06 21 27.3 +0.1
      comp=Z,30nm,0.6s
CLL                               i pP   pP     06 21 37.3 +0.1
CLL                               ePcP   PcP    06 23 25.0 +1.8
CLL   Collm             41.73 305 eP     P      06 21 27.4 +0.2
      comp=Z,53nm,1.4s,baz=77,slow=8.1
CLL                               eL     L      06 39 47.9
      comp=Z,222nm,20.4s
CLL   Collm             41.73 305  IAmb  IAmb   06 21 28.2
      comp=Z,31nm,0.6s
NB2   NORSAR Subarra    41.74 320  P     P      06 21 26.5 -0.7
      comp=Z,12nm,0.7s,baz=89,slow=8.6
NB2   NORSAR Subarra    41.74 320  P     P      06 21 26.5 -0.7
      baz=89,slow=8.6
NOA   NORSAR Array B    41.74 320  P     P      06 21 26.8 -0.5
      comp=Z,13nm,0.7s,baz=90,slow=8.2,SNR=43
NOA                                LR    LR     06 39 20.1
      comp=Z,383nm,20.7s,baz=85,slow=37
GEC2  GERESS Array S    41.78 301 eP     P      06 21 28.9 +1.0
      comp=Z,63nm,0.9s,baz=77,slow=8.1
GEC2                              eL     L      06 40 27.4
      comp=Z,299nm,18.4s
GERES GERESS Array B    41.78 301  P     P      06 21 28.8 +0.9
      comp=Z,47nm,0.6s,baz=68,slow=8.4,SNR=95
GERES                              LR    LR     06 40 36.6
      comp=Z,309nm,18.2s,baz=94,slow=39
OBKA  Obir              41.79 298 i P    P      06 21 28.5 +0.6
      comp=Z,25nm,0.6s,SNR=12
KHC   Kasperske Hory    41.80 302 eP     P      06 21 28.3 +0.4
KHC                               epP    pP     06 21 36.1 -1.9
KHC   Kasperske Hory    41.80 302 eP     P      06 21 28.3 +0.4
KHC   Kasperske Hory    41.80 302  P     P      06 21 28.5 +0.5
KSRS  Korea Array       41.82  77  P     P      06 21 28.2  0.0
      comp=Z,3.1nm,0.7s,baz=285,slow=7.3,SNR=16
KSRS                               PcP   PcP    06 23 23.5 -0.3
      comp=Z,0.7nm,0.3s,baz=252,slow=3.1,SNR=2.5
KSRS                               LR    LR     06 40 50.1
      comp=Z,174nm,18.5s,baz=284,slow=39
STRU  Stroemstad        41.83 317 i P    P      06 21 27.7 -0.2
LJU   Ljubljana         41.93 297 i P    P      06 21 29.6 +0.7
LJU   Ljubljana         41.93 297⇑iP     P      06 21 29.6 +0.7
NC204 NORSAR Array S    41.95 320  IAmb  IAmb   06 21 29.4
      comp=Z,81nm,1.2s
OSL   Oslo              42.02 318 eP     P      06 21 29.6 +0.1
CEY   Cerknica          42.08 297⇑iP     P      06 21 30.7 +0.5
RIY   Rijeka            42.15 296⇑iP     P      06 21 30.9 +0.1
TANN  Tannenbergstha    42.24 304 eP     P      06 21 32.0 +0.5
      comp=Z,21nm,1.0s,baz=77,slow=8.1
WET   Wettzell          42.25 302 eP     P      06 21 32.4 +0.8
      comp=Z,35nm,1.0s,baz=77,slow=8.1
WET                               eL     L      06 40 41.2
      comp=Z,249nm,19.3s
JAVS  Javornik          42.28 297 i P    P      06 21 31.9  0.0
NKC   Novy Kostel       42.28 304 eP     P      06 21 32.3 +0.5
NKC   Novy Kostel       42.28 304 eP     P      06 21 32.3 +0.5
WERN  Wernitzgruen      42.32 304 eP     P      06 21 32.9 +0.7
      comp=Z,16nm,1.3s,baz=77,slow=8.1
WERD  Werda             42.33 304 eP     P      06 21 32.8 +0.6
      comp=Z,22nm,0.8s,baz=77,slow=8.1
GUNZ  Gunzen            42.33 304 eP     P      06 21 32.9 +0.7
      comp=Z,26nm,0.9s,baz=77,slow=8.1
MYKA  Terra Mystica     42.36 298 i P    P      06 21 32.7 +0.1
      comp=Z,8.9nm,0.7s
SGRT  San Giovanni R    42.37 290  P     P      06 21 32.5 -0.2
USRK  Ussuriysk Ar.     42.40  66  P     P      06 21 32.1 -0.7
      comp=Z,2.2nm,0.7s,baz=291,slow=8.0,SNR=3.4
USRK                               LR    LR     06 40 28.0
      comp=Z,226nm,21.3s,baz=268,slow=38
PLN   Plauen            42.41 304 eP     P      06 21 33.4 +0.6
      comp=Z,29nm,1.3s,baz=77,slow=8.1
KBA   Koelnbreinsper    42.44 299 i P    P      06 21 33.5 +0.2
      comp=Z,13nm,0.5s
NEUB  Neuenburg         42.50 305 eP     P      06 21 34.2 +0.7
      comp=Z,49nm,0.9s,baz=77,slow=8.1
MANZ  Manzenberg        42.55 303 eP     P      06 21 34.7 +0.7
      comp=Z,3.2nm,0.8s,baz=77,slow=8.1
TIP   Timpagrande       42.55 287 ⇓P     P      06 21 34.4 +0.2
TIP   Timpagrande       42.55 287  P     P      06 21 34.0 -0.2
KONO  Kongsberg         42.60 318 eP     P      06 21 34.1 -0.1
FLTG  Flechtingen       42.61 307 eP     P      06 21 34.4  0.0
      comp=Z,45nm,1.1s,baz=77,slow=8.1
MOX   Moxa              42.72 304 eP     P      06 21 35.8 +0.5
      comp=Z,18nm,0.9s,baz=77,slow=8.1
MOX                               eL     L      06 40 51.2
      comp=Z,401nm,18.1s
DOMB  Dombas            42.74 321 eP     P      06 21 35.3 -0.1
ZOU   Zoufplan          42.83 298  P     P      06 21 36.1 -0.4
BSEG  Bad Segeberg      42.88 309 eP     P      06 21 37.5 +0.9
      comp=Z,40nm,0.9s,baz=77,slow=8.1
BSEG                              eL     L      06 40 19.9
      comp=Z,239nm,20.5s
ABTA  Abfaltersbach     43.08 299 eP     P      06 21 37.8 -0.7
      comp=Z,9.8nm,0.6s,SNR=5.3
STAL  STALIGIAL         43.08 298  P     P      06 21 37.7 -0.7
GRF   Grafenberg Arr    43.17 303 eP     P      06 21 40.5 +1.4
      comp=Z,80nm,0.8s,baz=77,slow=8.1
GRF                               eL     L      06 40 58.9
      comp=Z,339nm,19.1s
SKAR  Skarslia          43.17 319 eP     P      06 21 39.7 +0.8
GRFO  Grafenberg        43.18 303  P     P      06 21 40.2 +1.1
GRFO                               pmax  pmax
      comp=Z,69nm,0.8s
GRFO  Grafenberg        43.18 303  P     P      06 21 40.2 +1.1
SPB2  Spitsbergen Ar    43.25 345  P     P      06 21 39.5 +0.2
SPB2                               IAmb  IAmb   06 21 41.2
      comp=Z,67nm,1.1s
SPA0  Spitsbergen Ar    43.25 345 eP     P      06 21 40.2 +0.9
SPITS Spitsbergen Ar    43.25 345  P     P      06 21 39.9 +0.6
SPITS                              pmax  pmax
      comp=Z,83nm,1.2s
NRDL  Niedersach Rie    43.26 307 eP     P      06 21 40.5 +0.9
      comp=Z,47nm,1.0s,baz=77,slow=8.1
MOL   Molde             43.43 322 eP     P      06 21 41.4 +0.5
FUR   Furstenfeldbru    43.51 301 eP     P      06 21 43.0 +1.2
      comp=Z,101nm,0.7s,baz=77,slow=8.1
WTTA  Wattenberg        43.52 299 i P    P      06 21 41.9 -0.1
      comp=Z,33nm,0.5s,SNR=12
CEL   Celeste           43.52 286  P     P      06 21 41.0 -1.0
CEL                                IAmb  IAmb   06 21 43.5
      comp=Z,64nm,1.1s
WATA  Walderalm         43.54 300 eP     P      06 21 41.9 -0.3
      comp=Z,23nm,0.6s,SNR=9.4
GTTG  Gottingen         43.54 306 eP     P      06 21 42.9 +0.9
      comp=Z,68nm,1.0s,baz=77,slow=8.1
GRNR  Gornyy            43.59  55⇑iP     P      06 21 44.4 +2.0
GRNR                               pmax  pmax
      comp=Z,9.0nm,0.9s
GRNR                               MLR   MLR
      comp=E,310nm,13.0s
GRNR                               MLR   MLR
      comp=N,290nm,15.0s
GRNR                               MLR   MLR
      comp=Z,300nm,14.0s
SQTA  Sankt Quirin      43.81 300 i P    P      06 21 44.0 -0.4
      comp=Z,23nm,0.6s,SNR=8.6
AQU   L'Aquila          43.81 292  P     P      06 21 44.6 +0.2
AQU                                pmax  pmax
      comp=Z,32nm,0.7s
AQU   L'Aquila          43.81 292  P     P      06 21 44.6 +0.2
AQU                                IAmb  IAmb   06 21 50.1
      comp=Z,32nm,0.7s
MOTA  Moosalm           43.84 300 i P    P      06 21 44.3 -0.4
      comp=Z,17nm,0.6s,SNR=7.3
CTI   Castel Tesino     43.85 298  P     P      06 21 43.3 -1.4
CTI                                pmax  pmax
      comp=Z,20nm,0.8s
CTI   Castel Tesino     43.85 298  P     P      06 21 43.3 -1.4
CTI                                IAmb  IAmb   06 21 45.0
      comp=Z,20nm,0.8s
NRCA  Norcia            43.85 293  IAmb  IAmb   06 21 47.4
      comp=Z,29nm,0.8s
RETA  Reutte            44.03 300 i P    P      06 21 46.3 +0.3
      comp=Z,22nm,0.5s,SNR=9.3
TEOL  Teolo             44.04 297  P     P      06 21 45.9 -0.1
MURB  Monte Urbino      44.12 294  P     P      06 21 48.0 +1.2
MURB                               IAmb  IAmb   06 21 49.4
      comp=Z,52nm,1.0s
FETA  Feichten          44.18 299 eP     P      06 21 46.8 -0.6
      comp=Z,12nm,0.7s
KBS   Kingsbay          44.35 346ceP     P      06 21 50.4 +2.3
KBS                                pmax  pmax
      comp=Z,136nm,2.5s
UBR   Ueberruh          44.40 300 eP     P      06 21 49.5 +0.5
      comp=Z,79nm,0.8s,baz=77,slow=8.1
DAVA  Damuels           44.66 300 i P    P      06 21 51.3 +0.1
      comp=Z,72nm,0.6s,SNR=23
PSI   Prapat            44.74 142  P     P      06 21 51.4 -0.7
      comp=Z,2.7nm,0.5s,baz=290,slow=6.4,SNR=4.3
TNS   Taunus Mts        44.78 304 eL     L      06 42 13.2
      comp=Z,249nm,19.2s
ZCCA  Zocca             44.82 296  P     P      06 21 54.0 +1.6
ZCCA                               IAmb  IAmb   06 22 09.6
      comp=Z,54nm,1.3s
VLC   Villacollemand    45.29 296  P     P      06 21 56.5 +0.4
BFO   Black Forest      45.37 302 eP     P      06 21 57.0 +0.3
      comp=Z,24nm,1.0s,baz=77,slow=8.1
BFO                               eL     L      06 42 37.7
      comp=Z,194nm,21.4s
BFO   Black Forest      45.37 302  P     P      06 21 56.3 -0.4
BFO                                      P      06 21 56.5 -0.1
BFO                                IAmb  IAmb   06 21 57.8
      comp=Z,20nm,0.8s
BTNL  Ternell           46.12 305 dP     P      06 22 03.1 +0.5
      comp=Z,10nm,1.0s
ECH   Echery            46.15 302  IAmb  IAmb   06 22 03.8
      comp=Z,25nm,1.3s
MEM   Membach           46.19 305 dP     P      06 22 03.4 +0.3
      comp=Z,12nm,0.9s
BHOU  Houvegnez         46.26 305 dP     P      06 22 04.5 +0.8
WLF   Walferdange       46.36 304 dP     P      06 22 04.8 +0.4
      comp=Z,20nm,1.0s
WLF   Walferdange       46.36 304 eP     P      06 22 05.3 +0.9
      comp=Z,43nm,1.1s,baz=77,slow=8.1
SENIN Lac Senin/Sane    46.63 300        P      06 22 06.8 -0.1
SENIN                              IAmb  IAmb   06 22 09.2
      comp=Z,16nm,0.8s
JHS   Saijyo            46.66  77  P     P      06 22 06.4 -0.6
BCLA  Clavier           46.68 305 dP     P      06 22 07.3 +0.4
      comp=Z,8.4nm,0.9s
RCHB  Rochefort         46.80 305 dP     P      06 22 08.0 +0.2
      comp=Z,9.8nm,0.9s
MNSI  Mandailing Nat    46.81 143  P     P      06 22 08.7 +0.4
      comp=Z,10µmcomp=Z,26nm,0.4s
BGES  Gesves            46.82 305 dP     P      06 22 08.2 +0.2
      comp=Z,8.2nm,1.0s
BMRD  Maredsous         47.04 305 dP     P      06 22 09.9 +0.2
      comp=Z,9.9nm,1.0s
DOU   Dourbes           47.20 305 dP     P      06 22 11.3 +0.4
      comp=Z,8.6nm,0.8s
VSL   Villasalto        47.70 290  P     P      06 22 14.7 -0.4
PPI   Padang Panjang    48.29 142  P     P      06 22 21.1 +1.3
MSEY  Mahe Island       48.58 204  P     P      06 22 22.4 +0.4
MSEY                               pmax  pmax
      comp=Z,18nm,0.9s
MSEY  Mahe Island       48.58 204  P     P      06 22 22.4 +0.4
MSEY                               IAmb  IAmb   06 22 23.1
      comp=Z,18nm,0.8s
YSS   Yuzh-Sakhalins    48.69  59 eP     P      06 22 24.5 +2.0
PDSI  Padang            48.72 143  P     P      06 22 23.2 +0.1
ELMS  Elmsett, Ipswi    48.78 309 eP     P      06 22 23.1  0.0
ELMS                               IAmb  IAmb   06 22 24.3
      comp=Z,54nm,0.7s
SSB   Saint Sauveur     48.81 299  P     P      06 22 23.7 +0.1
SSB                                pmax  pmax
      comp=Z,36nm,1.2s
SSB   Saint Sauveur     48.81 299  P     P      06 22 23.7 +0.1
SSB                                IAmb  IAmb   06 22 24.6
      comp=Z,36nm,1.2s
KEST  Kesra             49.34 286  P     P      06 22 28.4 +0.7
      comp=Z,7.1nm,0.9s,baz=293,slow=5.0,SNR=4.1
KEST                               LR    LR     06 47 08.4
      comp=Z,42nm,19.5s,baz=283,slow=41
KEST  Kesra             49.34 286  IAmb  IAmb   06 22 29.3
      comp=Z,23nm,1.2s
NOR   Nord              49.41 349 i P    P      06 22 26.5 -1.1
NOR                                IAmb  IAmb   06 22 28.4
      comp=Z,8.4nm,0.6s
ASAJ  Asahikawa         49.61  62  P     P      06 22 29.9 +0.3
      comp=Z,10nm,0.5s,baz=310,slow=8.9,SNR=5.4
EDMD  Edmundbyers       49.66 313 eP     P      06 22 29.3 -0.5
EDMD                               IAmb  IAmb   06 22 30.2
      comp=Z,16nm,0.7s
BIGH  Upper Bighouse    49.66 318 eP     P      06 22 29.6 -0.2
BIGH                               IAmb  IAmb   06 22 30.5
      comp=Z,41nm,0.6s
MAJO  Matsushiro        49.68  73  P     P      06 22 29.9 -0.4
MAJO                               pmax  pmax
      comp=Z,24nm,0.9s
MAJO  Matsushiro        49.68  73  P     P      06 22 29.9 -0.4
MAJO                               IAmb  IAmb   06 22 30.9
      comp=Z,24nm,0.9s
MAT   Matsushiro        49.68  73  P     P      06 22 29.9 -0.4
MAT                               eS     S      06 29 29.4 -7.5
MJAR  Matsushiro Arr    49.68  73  P     P      06 22 30.3  0.0
      comp=Z,17nm,0.9s,baz=292,slow=8.8,SNR=28
MJAR                               LR    LR     06 44 52.5
      comp=Z,73nm,18.3s,baz=330,slow=38
MJAR  Matsushiro Arr    49.68  73  P     P      06 22 30.9 +0.6
MJAR                               pmax  pmax
      comp=Z,11nm,1.0s
MJAR  Matsushiro Arr    49.68  73  P     P      06 22 30.9 +0.6
HPK   Haverah Park      49.73 312 eP     P      06 22 30.1 -0.2
HPK                                IAmb  IAmb   06 22 30.9
      comp=Z,26nm,0.6s
EBL   Broad Law         49.97 314 eP     P      06 22 31.3 -0.9
EDI   Edinburgh         50.00 314 eP     P      06 22 31.5 -0.9
EDI                                IAmb  IAmb   06 22 32.7
      comp=Z,14nm,0.7s
ESK   Eskdalemuir       50.19 314 eP     P      06 22 33.2 -0.7
ESK                                IAmb  IAmb   06 22 34.5
      comp=Z,15nm,0.8s
KESW  Keswick, Cumbr    50.36 313 eP     P      06 22 34.9 -0.3
KESW                               IAmb  IAmb   06 22 36.5
      comp=Z,17nm,0.8s
DAG   Danmarks Havn     50.65 343 i P    P      06 22 36.5 -0.5
DAG                                IAmb  IAmb   06 22 37.5
      comp=Z,30nm,0.6s
KAC   Achnashellach     50.65 317 eP     P      06 22 36.7 -0.6
PGBU  Glenifferbraes    50.73 315 eP     P      06 22 37.4 -0.5
PGBU                               IAmb  IAmb   06 22 38.7
      comp=Z,22nm,0.8s
NEWG  New Galloway      50.81 314 eP     P      06 22 38.2 -0.3
NEWG                               IAmb  IAmb   06 22 39.6
      comp=Z,9.5nm,0.8s
KPL   Plockton          50.88 317 eP     P      06 22 38.2 -0.7
KPL                                IAmb  IAmb   06 22 39.7
      comp=Z,24nm,0.7s
MCH1  Michaelchurch     51.15 310 eP     P      06 22 40.5 -0.6
MCH1                               IAmb  IAmb   06 22 41.8
      comp=Z,24nm,0.8s
GAL1  Galloway          51.16 313 eP     P      06 22 40.8 -0.3
GAL1                               IAmb  IAmb   06 22 41.7
      comp=Z,13nm,0.7s
LEWI  Lewis, Hebride    51.26 318 eP     P      06 22 41.4 -0.4
LEWI                               IAmb  IAmb   06 22 42.7
      comp=Z,17nm,0.6s
JSA   Saint Aubin       51.65 306 eP     P      06 22 45.1 +0.1
JSA                                IAmb  IAmb   06 22 46.0
      comp=Z,28nm,0.9s
KSM   Kuching           51.83 130  P     P      06 22 49.0 +2.4
SPMM  Sapulut           53.05 121  P     P      06 22 57.0 +1.3
KMBO  Kilima Mbogo      53.40 227  P     P      06 22 58.2 -0.4
      comp=Z,5.1nm,0.8s,baz=32,slow=11,SNR=9.3
KMBO  Kilima Mbogo      53.40 227  P     P      06 22 59.2 +0.6
BILL  Bilibino          53.51  28⇑iP     P      06 22 58.8 +0.4
BILL                              e             06 25 00.3
BILL                               pmax  pmax
      comp=Z,16nm,1.1s
BILL                               MLR   MLR
      comp=Z,334nm,17.0s
PETK  Petropavlovsk-    55.32  47  PcP   PcP    06 24 10.0 -2.1
      comp=Z,5.5nm,0.9s,baz=242,slow=3.1,SNR=3.8
PETK                               LR    LR     06 48 05.9
      comp=Z,169nm,18.1s,baz=294,slow=37
BORG  Borgarnes         55.38 329  P     P      06 23 13.6 +1.6
BORG                               pmax  pmax
      comp=Z,408nm,2.0s
BORG  Borgarnes         55.38 329  P     P      06 23 13.6 +1.6
CART  Cartagena         55.84 292  P     P      06 23 15.6 -0.1
NEEM  North Greenlan    56.72 348 i P    P      06 23 20.8 -1.1
NEEM                               IAmb  IAmb   06 23 22.5
      comp=Z,33nm,0.7s
ESBB  Sonseca Array     56.87 296  P     P      06 23 22.9 -0.2
ESBB                               IAmb  IAmb   06 23 23.8
      comp=Z,13nm,0.8s
ESDC  Sonseca Array     56.87 296  P     P      06 23 22.8 -0.4
      comp=Z,10nm,0.7s,baz=55,slow=7.2,SNR=79
ESDC                               LR    LR     06 51 27.4
      comp=Z,96nm,19.4s,baz=0.0,slow=40
SUMG  Summit            57.11 341  P     P      06 23 25.9 +1.1
SUMG                               pmax  pmax
      comp=Z,36nm,0.8s
SUMG  Summit            57.11 341 i P    P      06 23 24.0 -0.7
SUMG                               IAmb  IAmb   06 23 25.9
      comp=Z,26nm,0.7s
SUMG  Summit            57.11 341  P     P      06 23 25.9 +1.1
PAB   San Pablo         57.20 296  P     P      06 23 25.2 -0.3
PAB                                pmax  pmax
      comp=Z,8.0nm,0.8s
PAB   San Pablo         57.20 296  P     P      06 23 25.2 -0.3
PAB   San Pablo         57.20 296  P     P      06 23 25.5  0.0
LEM   Lembang           57.31 138  LR    LR     06 51 08.6
      comp=Z,52nm,20.7s,baz=202,slow=39
PBRG  Braganca          57.71 299 eP     P      06 23 29.1 +0.1
      comp=Z,22nm,1.6s
MVO   Moncorvo          58.20 299 eP     P      06 23 32.8 +0.3
      comp=Z,24nm,1.4s
MVO                               epP    pP     06 23 43.4 +0.5
TAF   Taforalt          58.21 290  P     P      06 23 33.0 +0.4
BBKI  Banjar Baru       58.45 129  P     P      06 23 36.3 +1.9
JBK   JBK               58.56 290  P     P      06 23 36.0 +0.7
PVRL  Vila Real         58.60 299 eP     P      06 23 35.4 +0.1
      comp=Z,20nm,1.6s
PVRL                              epP    pP     06 23 45.1 -0.5
POLO  Lamas de Olo      58.60 299 eP     P      06 23 35.3 -0.1
      comp=Z,16nm,1.6s
POLO                              epP    pP     06 23 45.9 +0.2
PGAV  Gavieira, Arco    58.63 300 eP     P      06 23 35.9 +0.4
      comp=Z,72nm,1.6s
PGAV                              epP    pP     06 23 46.6 +0.7
FIGM  Figuig            58.78 287  P     P      06 23 36.4 -0.3
TDRA  Tendrara          58.85 288  P     P      06 23 38.0 +0.7
MTE   Manteigas         58.92 298 eP     P      06 23 38.0 +0.5
      comp=Z,28nm,1.8s
MTE                               epP    pP     06 23 45.2 -2.7
PVIS  Viseu             58.99 299 eP     P      06 23 38.4 +0.4
      comp=Z,28nm,1.1s
PVIS                              epP    pP     06 23 47.4 -1.0
PALE  Palemas           59.08 291  P     P      06 23 39.0 +0.3
KBKI  Kotabaru          59.10 128  P     P      06 23 40.6 +1.7
      comp=Z,26nm,0.8s
PCBR  Castelo Branco    59.15 298 eP     P      06 23 39.5 +0.4
      comp=Z,11nm,2.3s
PMRV  Marv??o           59.30 297 eP     P      06 23 40.6 +0.5
      comp=Z,20nm,1.0s
PMRV                              epP    pP     06 23 49.5 -1.0
ICESG Greenland Ices    59.44 337 i P    P      06 23 40.3 -0.7
ICESG                              IAmb  IAmb   06 23 42.0
      comp=Z,40nm,0.8s
PESTR Estremoz          59.72 297 eP     P      06 23 42.5 -0.5
      comp=Z,22nm,1.6s
TULEG Thule             59.99 350  IAmb  IAmb   06 23 45.7
      comp=Z,25nm,1.1s
PMTG  Montargil         60.04 297 eP     P      06 23 45.1 -0.1
      comp=Z,22nm,1.8s
PMTG                              epP    pP     06 23 54.4 -1.2
PBEJ  Beja              60.34 296 eP     P      06 23 47.5 +0.3
      comp=Z,14nm,1.2s
PVAQ  Vaqueiros         60.56 295 eP     P      06 23 49.0 +0.3
      comp=Z,38nm,1.4s
PVAQ                              epP    pP     06 23 59.7 +0.6
PBDV  Barranco-do-Ve    60.78 295 eP     P      06 23 50.9 +0.6
      comp=Z,57nm,1.6s
PBDV                              epP    pP     06 24 01.4 +0.6
MDT   Midelt            60.81 289  P     P      06 23 51.0 +0.3
ZHG   ZHG               61.91 291  P     P      06 23 59.0 +1.0
A21K  Barrow            62.21  16  P     P      06 23 59.4 +0.1
      baz=320
ILULI Ilulissat         62.46 341  P     P      06 24 01.1 +0.1
ILULI                              pmax  pmax
      comp=Z,27nm,0.7s
ILULI Ilulissat         62.46 341  P     P      06 24 01.1 +0.1
ZGR   Zagora            63.01 287  P     P      06 24 06.0 +0.5
DY2G  Dye2              63.05 337 i P    P      06 24 04.4 -0.9
DY2G                               IAmb  IAmb   06 24 06.0
      comp=Z,34nm,0.5s
GAMB  Gambell           63.40  27  P     P      06 24 07.6 +0.2
      baz=310
OUK   Oukaimeden        64.00 290  P     P      06 24 13.0 +0.7
RES   Resolute Bay      64.02 357  P     P      06 24 09.3 -2.0
RES                                pmax  pmax
      comp=Z,6.0nm,0.9s
RES   Resolute Bay      64.02 357  P     P      06 24 09.3 -2.0
ANM   Nome              64.91  24  P     P      06 24 18.2 +0.9
      baz=315
TOLK  Toolik Lake Re    65.82  16  P     P      06 24 23.6 +0.4
      baz=326
A36M  Sachs Harbour     66.25   6  P     P      06 24 26.0 +0.3
      baz=345
COLD  Coldfoot          66.86  17  P     P      06 24 30.2 +0.4
COLD  Coldfoot          66.86  17  P     P      06 24 30.1 +0.4
      baz=326
GCSA  Galena City Sc    67.23  21  P     P      06 24 32.5 +0.3
      baz=321,SNR=6.7
H21K  Melozitna Rive    67.54  19  P     P      06 24 34.2  0.0
      baz=324
TORD  Torodi Ar. Bea    67.64 268  P     P      06 24 35.0 -0.6
      comp=Z,55nm,0.4s,baz=41,slow=5.2,SNR=4.8
TORD                               LR    LR     06 58 04.6
      comp=Z,25nm,19.0s,baz=5.0,slow=40
I21K  Tanana            68.13  19  IAmb  IAmb   06 24 39.1
      comp=Z,24nm,1.2s
I21K  Tanana            68.13  19  P     P      06 24 37.8 -0.1
      baz=325,SNR=5.8
SPIA  Saint Paul Isl    68.36  32  P     P      06 24 39.9 +0.5
      baz=314
J20K  Nowinta River     68.40  20  P     P      06 24 39.5 -0.1
      baz=324,SNR=9.8
H24K  Noodor Dome       68.53  17  P     P      06 24 40.6 +0.1
      baz=328,SNR=8.1
MLY   Manley            68.56  18  P     P      06 24 40.5 -0.1
      baz=326,SNR=6.0
I23K  Minto, Yukon-K    68.78  18  IAmb  IAmb   06 24 43.5
      comp=Z,13nm,0.8s
I23K  Minto, Yukon-K    68.78  18  P     P      06 24 42.4 +0.5
      baz=327,SNR=9.2
INK   Inuvik            68.86  10  P     P      06 24 42.7 +0.3
      baz=339
TTA   Tatalina          68.90  22  P     P      06 24 43.6 +0.8
TTA                                pmax  pmax
      comp=Z,36nm,1.7s
TTA   Tatalina          68.90  22  P     P      06 24 43.6 +0.8
TTA                                IAmb  IAmb   06 24 44.3
      comp=Z,36nm,1.7s
TTA   Tatalina          68.90  22  P     P      06 24 43.2 +0.4
      baz=322
BATI  Baumata           69.08 126  LR    LR     06 59 19.9
      comp=Z,154nm,18.0s,baz=318,slow=40
K20K  Telida            69.08  21  IAmb  IAmb   06 24 45.5
      comp=Z,43nm,1.6s
K20K  Telida            69.08  21  P     P      06 24 44.0 +0.1
      baz=324
NEA2  Nenana            69.32  18  IAmb  IAmb   06 24 46.2
      comp=Z,16nm,0.9s
NEA2  Nenana            69.32  18  P     P      06 24 45.2 -0.1
      baz=327,SNR=5.9
TCOL  CIGO, UAF Yank    69.36  17  P     P      06 24 45.6 +0.1
      baz=328
COLA  College           69.36  17  P     P      06 24 45.9 +0.4
COLA                               pmax  pmax
      comp=Z,26nm,0.8s
COLA  College           69.36  17  P     P      06 24 45.9 +0.4
COLA                               IAmb  IAmb   06 24 46.7
      comp=Z,26nm,0.8s
COLA  College           69.36  17  P     P      06 24 45.2 -0.2
      baz=328
CAST  Castle Rocks      69.56  20  IAmb  IAmb   06 24 48.0
      comp=Z,14nm,0.8s
CAST  Castle Rocks      69.56  20  P     P      06 24 46.8  0.0
      baz=325
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CCB   Clear Creek Bu     69.56  18  IAmb    IAmb     06 24 47.5
      comp=Z,24nm,1.4s
IL31                     69.66  17  IAmb    IAmb     06 24 47.9
      comp=Z,13nm,0.8s
ILAR  Eielson Array      69.66  17  P       P        06 24 46.9 -0.5
      comp=Z,11nm,0.8s,baz=322,slow=4.9,SNR=114
ILAR                                LR      LR       06 58 23.2
      comp=Z,61nm,18.4s,baz=311,slow=38
KTH   Kantishna Hill     69.74  19  IAmb    IAmb     06 24 48.9
      comp=Z,17nm,0.9s
L19K  White Mountain     69.82  22  IAmb    IAmb     06 24 50.6
      comp=Z,34nm,1.4s
L19K  White Mountain     69.82  22  P       P        06 24 48.9 +0.4
      baz=323,SNR=5.3
L20K  Farewell, AK       69.85  21  P       P        06 24 48.8 +0.2
      baz=324
PPLA  Purkeypile         69.96  20  P       P        06 24 48.9 -0.5
      baz=325
HDA   Harding Lake       69.96  17  P       P        06 24 48.4 -0.9
      baz=329,SNR=5.2
TRF   Thorofare Moun     69.98  19  P       P        06 24 49.0 -0.6
      baz=327
MCK   McKinley           70.08  19  P       P        06 24 49.6 -0.4
      baz=328
J25K  Salcha River,      70.13  17  P       P        06 24 49.7 -0.7
      baz=330,SNR=7.6
EPYK  Eagle Plains       70.19  12  P       P        06 24 50.0 -0.7
      baz=336
RND   Reindeer           70.37  19  IAmb    IAmb     06 24 53.8
      comp=Z,29nm,1.5s
J26L  Joseph Creek       70.61  16  P       P        06 24 53.3 -0.1
      baz=332,SNR=10
I29M  Ogilvie Camp,      70.85  13  P       P        06 24 54.2 -0.4
      baz=335,SNR=14
EGAK  Eagle              70.85  15  P       P        06 24 54.1 -0.5
      baz=333
WAT1  Susitna Watana     70.94  19  P       P        06 24 54.0 -1.3
      baz=328
SCRK  Sand Creek         70.99  16  IAmb    IAmb     06 24 56.6
      comp=Z,20nm,1.0s
SCRK  Sand Creek         70.99  16  P       P        06 24 55.1 -0.6
      baz=331,SNR=14
DHY   Denali Highway     71.01  18  IAmb    IAmb     06 24 56.1
      comp=Z,11nm,0.7s
DHY   Denali Highway     71.01  18  P       P        06 24 55.0 -0.9
      baz=329
RIDG  Independent Ri     71.01  17  IAmb    IAmb     06 24 56.0
      comp=Z,19nm,0.8s
RIDG  Independent Ri     71.01  17  P       P        06 24 55.0 -0.7
      baz=331
N19K  Bonanza Creek      71.03  23  P       P        06 24 55.4 -0.6
      baz=324
KOWA  Kowa               71.10 273  P       P        06 24 56.5 -0.3
KOWA  Kowa               71.10 273  P       P        06 24 56.6 -0.3
WAT6  Susitna Watana     71.34  19  P       P        06 24 56.9 -1.0
      baz=329
SPCR  Spurr Chakacha     71.35  21  P       P        06 24 57.2 -0.6
      baz=326
M22K  Willow             71.45  20  P       P        06 24 58.0 -0.3
      baz=327
PAX   Paxson             71.54  18  IAmb    IAmb     06 24 59.5
      comp=Z,29nm,1.2s
PAX   Paxson             71.54  18  P       P        06 24 58.6 -0.4
      baz=330,SNR=12
O19K  Port Alsworth      71.58  23  P       P        06 24 59.1  0.0
      baz=324
J29M  Klondike Camp      71.69  14  P       P        06 24 59.7 -0.1
      baz=336
GHO   Glory Hole Cre     71.74  20  IAmb    IAmb     06 25 00.6
      comp=Z,26nm,0.9s
DAWY  Dawson             71.83  14  IAmb    IAmb     06 25 01.5
      comp=Z,15nm,0.9s
DAWY  Dawson             71.83  14  P       P        06 25 00.4 -0.3
      baz=335,SNR=12
PMR   Palmer             71.84  20  IAmb    IAmb     06 25 01.2
      comp=Z,18nm,0.8s
PMR   Palmer             71.84  20  P       P        06 25 00.0 -0.6
      baz=328
SML   Sawmill            71.86  19  P       P        06 25 00.5 -0.3
      baz=328,SNR=6.4
P18K  Big Mountain,      71.96  24  P       P        06 25 01.7 +0.2
      baz=324
L26K  Log Cabin Wild     71.96  17  P       P        06 25 01.4 -0.1
      baz=332
SCM   Sheep Creek Mo     72.09  19  P       P        06 25 01.9 -0.4
      baz=329,SNR=5.1
HARP  HAARP              72.11  18  P       P        06 25 02.9 +0.6
      baz=331,SNR=8.8
M24K  Tolsona, Glenn     72.13  18  P       P        06 25 02.5  0.0
      baz=330,SNR=5.5
KNK   Knik Glacier       72.17  20  P       P        06 25 02.5 -0.2
      baz=328
L27K  Beaver Creek,      72.25  16  P       P        06 25 03.4 +0.2
      baz=333
M26K  Nabesna, AK        72.59  17  IAmb    IAmb     06 26 53.6
      comp=Z,38nm,1.9s
M26K  Nabesna, AK        72.59  17  P       P        06 25 05.1 -0.1
      baz=332
O22K  Cooper Landing     72.63  21  P       P        06 25 05.5 +0.2
      baz=328
KLU   Klutina            72.72  19  IAmb    IAmb     06 25 07.8
      comp=Z,30nm,1.2s
KLU   Klutina            72.72  19  P       P        06 25 05.9 -0.2
      baz=330,SNR=8.6
HOM   Homer              72.79  22  P       P        06 25 06.2 -0.1
      baz=326
M27K  Edge Creek, AK     72.87  16  P       P        06 25 07.3 +0.3
      baz=333,SNR=6.3
N25K  Chitina, Valde     72.93  18  P       P        06 25 07.3 -0.1
      baz=331
GLI   Glacier Island     72.97  19  P       P        06 25 06.9 -0.5
      baz=329
BRSE  Bradley Lake S     72.97  22  P       P        06 25 07.1 -0.4
      baz=327
BVCY  Beaver Creek       73.03  16  P       P        06 25 08.3 +0.4
      baz=334,SNR=5.9
DIV   Divide             73.07  19  IAmb    IAmb     06 25 09.1
      comp=Z,15nm,0.7s
SDPT  Sand Point         73.41  29  P       P        06 25 10.5 +0.4
      baz=321
MCARA McCarthy VSAT      73.49  17  P       P        06 25 10.3 -0.2
      baz=332
BMRM  Bremner River      73.49  18  IAmb    IAmb     06 25 11.9
      comp=Z,26nm,1.1s
BMRM  Bremner River      73.49  18  P       P        06 25 10.7 +0.2
      baz=331
M30M  Minto, Yukon       73.67  14  P       P        06 25 11.6  0.0
      baz=337,SNR=6.5
YUK3  Moose Creek        73.69  16  P       P        06 25 11.6 -0.4
      baz=334,SNR=12
CRQE  Cirque             74.03  18  P       P        06 25 14.0 +0.2
      baz=332
BERG  Berg Lake          74.21  18  IAmb    IAmb     06 25 17.5
      comp=Z,40nm,1.1s
CTG   Chitna Glacier     74.23  17  P       P        06 25 14.9 -0.1
      baz=334
OHAK  Old Harbor         74.32  24  P       P        06 25 15.7 +0.3
      baz=326
M31M  Drury Creek, Y     74.44  13  P       P        06 25 16.2 +0.1
      baz=339,SNR=10
YUK4  Talbot Arm         74.45  15  P       P        06 25 16.1 -0.3
      baz=336,SNR=7.1
MMPY  Sheldon Lake,      74.55  11  P       P        06 25 17.1 +0.4
      baz=341
FARO  Faro, Yukon        74.59  13  P       P        06 25 17.1 +0.2
      baz=340,SNR=6.1
N31M  Braeburn, Yuko     74.87  14  P       P        06 25 18.5  0.0
      baz=338,SNR=5.9
YUK6  Outpost Mounta     74.87  15  P       P        06 25 19.1 +0.3
      baz=336
WRGLY Wrigley            74.95   8  P       P        06 25 19.5 +0.6
      baz=347,SNR=13
HYT   Haines Junctio     75.15  15  IAmb    IAmb     06 25 22.0
      comp=Z,24nm,0.8s
HYT   Haines Junctio     75.15  15  P       P        06 25 20.3  0.0
      baz=337,SNR=14
PNL   Peninsula          75.83  16  P       P        06 25 24.1  0.0
      baz=335
PSA00 Pilbara Seismi     76.01 136  P       P        06 25 25.5  0.0
PSA00                               IAmb    IAmb     06 25 26.1
      comp=Z,20nm,0.9s
PSA00 Pilbara Seismi     76.01 136  IAmb    IAmb     06 25 26.2
      comp=Z,9.3nm,0.8s
TGTN  Hyland Airport     76.03  10  P       P        06 25 25.7 +0.5
      baz=344,SNR=7.2
YKA   Yellowknife Ar     76.35   4  P       P        06 25 26.9  0.0
      comp=Z,17nm,0.6s,baz=5.6,slow=5.8,SNR=67
YKA                                 LR      LR       07 01 48.2
      comp=Z,134nm,20.1s,baz=0.0,slow=38
KNRA  Kununurra          76.43 125  P       P        06 25 27.4 -0.5
KNRA                                IAmb    IAmb     06 25 28.9
      comp=Z,22nm,0.9s
FITZ  Fitzroy Crossi     76.43 129  P       P        06 25 27.6 -0.4
      comp=Z,8.0nm,0.8s,baz=327,slow=5.1,SNR=10
P33M  Teslin, Yukon      76.58  13  P       P        06 25 28.1 -0.4
      baz=340,SNR=5.9
DBIC  Dimbokro           76.73 267  P       P        06 25 29.2 -0.6
      comp=Z,21nm,0.7s,baz=45,slow=6.2,SNR=26
DBIC  Dimbokro           76.73 267  P       P        06 25 28.4 -1.4
DBIC                                pmax    pmax
      comp=Z,28nm,0.9s
DBIC  Dimbokro           76.73 267  P       P        06 25 28.4 -1.4
DBIC                                IAmb    IAmb     06 25 30.4
      comp=Z,28nm,0.9s
SKAG  Skagway            76.83  15  P       P        06 25 29.9 +0.2
      baz=338
KIC   Kosan Boka         76.84 267  ePKP2   P        06 25 30.1 -0.4
      comp=Z,58nm,0.8s
TIC   Toumodi            76.87 267  ePKP2   P        06 25 30.2 -0.5
LIC   Lamto              77.14 267  ePKP2   P        06 25 31.3 -0.9
      comp=Z,98nm,0.9s
SCHQ  Schefferville      78.35 338  P       P        06 25 37.8 -0.5
      comp=Z,11nm,0.9s,baz=33,slow=6.0,SNR=9.7
SCHQ                                LR      LR       06 59 47.1
      comp=Z,96nm,22.0s,baz=100,slow=35
SCHQ  Schefferville      78.35 338  IAmb    IAmb     06 28 20.9
      comp=Z,49nm,1.5s
DLBC  Dease Lake         78.73  12  IAmb    IAmb     06 28 35.9
      comp=Z,38nm,1.7s
TSUM  Tsumeb             79.27 233  P       P        06 25 43.6 -0.4
LBTB  Lobatse            79.43 223  P       P        06 25 45.2 +0.6
LBTB                                pmax    pmax
      comp=Z,13nm,0.8s
LBTB  Lobatse            79.43 223  P       P        06 25 45.2 +0.6
LBTB                                IAmb    IAmb     06 25 46.0
      comp=Z,13nm,0.8s
BOSA  Boshof             82.56 221  P       P        06 26 00.9 -0.4
      comp=Z,6.2nm,0.9s,baz=22,slow=3.0,SNR=8.2
BOSA                                LR      LR       07 02 35.1
      comp=Z,66nm,21.5s,baz=358,slow=36
BOSA  Boshof             82.56 221  IAmb    IAmb     06 26 12.5
      comp=Z,24nm,1.4s
WRA   Warramunga Arr     83.11 124  P       P        06 26 03.9 -0.3
      comp=Z,6.6nm,0.7s,baz=323,slow=5.0,SNR=28
WRA                                 PP      PP       06 29 13.3 -2.5
      comp=Z,0.4nm,0.7s,baz=312,slow=7.1,SNR=1.2
WRA                                 LR      LR       07 10 04.8
      comp=Z,14nm,19.9s,baz=195,slow=41
WRAB  Tennant Creek      83.11 124  P       P        06 26 04.0 -0.2
WRAB                                pmax    pmax
      comp=Z,11nm,0.9s
WRAB  Tennant Creek      83.11 124  P       P        06 26 04.0 -0.2
WRAB                                IAmb    IAmb     06 26 04.6
      comp=Z,11nm,0.8s
WB2   Warramunga Arr     83.11 124  IAmb    IAmb     06 26 04.6
      comp=Z,11nm,0.8s
FFC   Flin Flon          84.25 357  P       P        06 26 09.7 +0.1
FFC                                 pmax    pmax
      comp=Z,24nm,0.9s
FFC   Flin Flon          84.25 357  P       P        06 26 09.7 +0.1
FFC                                 IAmb    IAmb     06 26 10.4
      comp=Z,24nm,0.9s
PMG   Port Moresby       84.28 108  P       P        06 26 10.4 +0.1
      comp=Z,4.5nm,0.3s,baz=19,slow=8.6,SNR=3.6
PMG                                 LR      LR       07 08 28.5
      comp=Z,19nm,19.0s,baz=66,slow=39
PMG   Port Moresby       84.28 108  P       P        06 26 10.4 +0.1
PMG                                 pmax    pmax
      comp=Z,13nm,0.4s
COEN  Coen               84.61 114  P       P        06 26 11.9 -0.1
COEN                                IAmb    IAmb     06 26 12.6
      comp=Z,11nm,0.8s
ASAR  Alice Springs      85.62 127  P       P        06 26 16.2 -0.6
      comp=Z,7.4nm,0.7s,baz=317,slow=4.6,SNR=105
ASAR                                LR      LR       07 09 02.2
      comp=Z,17nm,18.7s,baz=348,slow=39
PKME  Peaks-Kenny Pk     87.53 335  P       P        06 26 25.6 -0.4
      baz=27
ULM   Lac du Bonnet      88.32 353  P       P        06 26 28.6 -1.1
      comp=Z,4.9nm,0.7s,baz=356,slow=4.0,SNR=6.2
ULM                                 LR      LR       07 08 12.5
      comp=Z,89nm,20.9s,baz=336,slow=37
ULM   Lac du Bonnet      88.32 353  IAmb    IAmb     06 29 24.1
      comp=Z,24nm,1.6s
LONY  Lake Ozonia        89.73 338  P       P        06 26 35.9 -0.6
      baz=24
B05A  Bryant             89.77  10  P       P        06 26 36.2 -0.3
      baz=349
WALA  Waterton Lakes     89.79   5  IAmb    IAmb     06 26 37.5
      comp=Z,13nm,0.9s
B08A  Colville Reser     90.02   8  IAmb    IAmb     06 26 38.4
      comp=Z,7.9nm,0.8s
EYMN  Ely                90.11 350  P       P        06 26 37.5 -0.6
      baz=11
AGMN  Agassiz Nation     90.26 353  P       P        06 26 38.2 -0.6
      baz=8.2
C06D  Leavenworth        90.26   9  P       P        06 26 38.8  0.0
      baz=350
NEW   Newport            90.33   7  IAmb    IAmb     06 26 40.3
      comp=Z,9.9nm,1.0s
NEW   Newport            90.33   7  P       P        06 26 39.2  0.0
      baz=352
D03D  Eldon              90.35  11  P       P        06 26 39.4 +0.2
      baz=348
DGMT  Dagmar             90.57 358  P       P        06 26 40.0 -0.3
      baz=2.0
C09A  Chrisman Ranch     90.68   8  IAmb    IAmb     06 26 42.0
      comp=Z,13nm,0.8s
EGMT  Eagleton           91.00   2  P       P        06 26 42.4  0.0
      baz=358
L61B  Northampton        91.13 336  P       P        06 26 42.9  0.0
      baz=25
D08A  Wollman Farm,      91.34   8  IAmb    IAmb     06 26 44.7
      comp=Z,7.9nm,1.0s
MSO   Missoula           92.00   5  P       P        06 26 46.9 -0.2
      baz=355
LAO   LASA Array         92.38 360  P       P        06 26 48.8 +0.1
      baz=0.4
BOZ   Bozeman (W)        93.36   3  IAmb    IAmb     06 26 54.2
      comp=Z,4.5nm,0.8s
BOZ   Bozeman (W)        93.36   3  P       P        06 26 53.6 +0.1
      baz=356
PLID  Pearl Lake         93.58   7  IAmb    IAmb     06 26 55.2
      comp=Z,5.0nm,0.8s
RLMT  Red Lodge          93.92   2  IAmb    IAmb     06 26 57.5
      comp=Z,7.8nm,1.1s
RLMT  Red Lodge          93.92   2  P       P        06 26 56.0 -0.1
      baz=358
SSPA  Standing Stone     94.34 338  P       P        06 26 56.9 -0.8
      baz=21
SUSD  Miller             94.34 354  P       P        06 26 57.3 -0.5
      baz=5.9
H17A  Grant Village      94.60   3  IAmb    IAmb     06 27 02.8
      comp=Z,6.3nm,0.9s
H17A  Grant Village      94.60   3  P       P        06 26 59.5 +0.2
      baz=357
J05D  Fort Rock, OR      94.77  11  P       P        06 27 00.3 +0.3
      baz=349
JFWS  Jewell Farm        94.85 348  P       P        06 26 59.7 -0.4
      baz=12
ECSD  EROS Data Cent     94.85 353  IAmb    IAmb     06 27 00.9
      comp=Z,7.1nm,1.0s
ECSD  EROS Data Cent     94.85 353  P       P        06 26 60.0 -0.1
      baz=7.7
FLWY  Flagg Ranch        94.91   3  IAmb    IAmb     06 27 02.5
      comp=Z,5.1nm,0.9s
RSSD  Black Hills        94.92 358  P       P        06 27 00.7  0.0
RSSD                                pmax    pmax
      comp=Z,4.0nm,0.7s
RSSD  Black Hills        94.92 358  P       P        06 27 00.7  0.0
RSSD  Black Hills        94.92 358  P       P        06 27 00.4 -0.3
      baz=2.1
J08A  Circle Bar Ran     95.05   9  IAmb    IAmb     06 27 02.7
      comp=Z,12nm,1.4s
HLID  Hailey             95.22   6  P       P        06 27 02.5 +0.4
      baz=354
STKA  Stephens Creek     96.24 127  LR      LR       07 14 34.1
      comp=Z,38nm,21.3s,baz=311,slow=38
BW06  Boulder Array      96.26   2  P       P        06 27 06.2 -0.7
      baz=358
PDAR  Pinedale Array     96.26   2  P       P        06 27 06.8 -0.1
      comp=Z,1.4nm,0.7s,baz=46,slow=3.4,SNR=18
PDAR                                LR      LR       07 15 28.6
      comp=Z,84nm,18.9s,baz=22,slow=38
HWUT  Hardware Ranch     97.34   4  IAmb    IAmb     06 27 13.5
      comp=Z,6.6nm,0.8s
DUG   Dugway, Tooele     98.68   5  P       P        06 27 17.6 -0.1
      baz=355
KSU1  Kansas State U     99.44 352  P       Pdif     06 27 20.4 -0.5
      baz=7.7
SDCO  Great Sand Dun    101.31 359  P       Pdif     06 27 28.4 -1.3
      baz=1.0
TXAR  Lajitas Array     109.65 357  PP      PP       06 32 39.4 +0.1
      comp=Z,1.7nm,1.2s,baz=1.4,slow=5.0,SNR=5.2
RAO   Raoul Island      122.13 102  PKIKP   PKPdf    06 32 31.6 -1.2
RAO   Raoul Island      122.13 102          PKPdf    06 32 31.6 -1.2
SNAA  Sanae             124.52 202  PKPdf   PKPdf    06 32 36.3  0.0
VNA2  Neumayer--Watz    125.52 203  PKPdf   PKPdf    06 32 38.0  0.0
VNA3  Neumayer Olymp    126.33 203  PKPdf   PKPdf    06 32 39.3 -0.3
QSPA  South Pole Qui    131.10 180          PKPdf    06 32 48.5 -0.4
CPUP  Villa Florida     136.91 274  PKP     PKPdf    06 32 59.8 -1.2
      comp=Z,3.7nm,0.9s,baz=68,slow=5.2,SNR=4.6
LPAZ  La Paz            138.49 295  PKhKP   PKPpre   06 32 57.9
      comp=Z,0.5nm,0.6s,baz=23,slow=8.5,SNR=1.9
TRQA  Tornquist         145.71 260  PKP2    PKPdf    06 33 16.4  0.0
TRQA  Tornquist         145.71 260          PKPdf    06 33 16.4  0.0
GO03  Copiap            147.21 283          PKPbc    06 33 21.9 +0.2
PLCA  Paso Flores       152.83 259  PKPbc   PKPbc    06 33 34.4 -0.6
      comp=Z,2.8nm,0.7s,baz=327,slow=1.8,SNR=7.3
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*JMA **01** 06:21:18.3±0.2, 26°.32N×127°.35E, h46^{km}±2^{km}, M3.7*
JMA Felt II J1.
*IDC **01** 06:21:18.4±2.4, 26°.40N×127°.43E, h57^{km}±33^{km}, mb3.7/9, mb1 3.8/9, mb1mx3.5/41, mbtmp4.0/9, MS2.7/3, Ms1 2.7/3, ms1mx2.4/34, Error ellipse: s-maj=62.6km s-min=31.4km az=140.0*
ISC 01 06:21:17.9±0.9, **26°.36N**±0°.08×**127°.35E**±0°.04, **h52**^{km}±7^{km}, **n21**, σ**0^s.38**/27, **mb3.9**/9, **Ryukyu Islands**

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Code  Station Name       Δ°    AZ°   Phase ID        Time       Res
                                    Op      ISC      h  m  s    ISC
JAGN  Aguni-jima          0.25 337  P       Pn       06 21 27.1 +0.3
JAGN                                S       Sn       06 21 33.3 +0.1
JJT3  Tamagusuku3         0.44 119  P       Pn       06 21 28.8 +0.2
JJT3                                S       Sn       06 21 36.1 -0.2
JKE   Kume jima 2         0.51 267  P       Pn       06 21 29.4  0.0
JKE                                 S       Sn       06 21 37.5 -0.2
JNTH  Nagotoyohara        0.62  75  P       Pn       06 21 30.8 +0.1
JNTH                                S       Sn       06 21 39.6 -0.4
JIH   Iheya               0.87  39  P       Pn       06 21 34.4 +0.4
JIH                                 S       Sn       06 21 44.8 -0.9
JOW   Kunigami            0.95  60  P       Pn       06 21 35.6 +0.5
      412nm,0.3s,baz=135,slow=18,SNR=519
JOW                                 LR      LR       06 21 46.0
      comp=Z,43nm,21.0s,baz=86,slow=32
JOW                                 S       Sn       06 21 47.4 -0.3
      535nm,0.3s,baz=132,slow=23,SNR=14
JOW   Kunigami            0.95  60  P       Pn       06 21 35.5 +0.5
JOW                                 S       Sn       06 21 47.7  0.0
JYRO  Yoronjima           1.19  56  P       Pn       06 21 38.6 +0.4
JYRO                                S       Sn       06 21 53.0 -0.3
JOKE  Okinoerabujima      1.48  47  P       Pn       06 21 42.7 +0.5
JOKE                                S       Sn       06 21 59.6 -0.8
KSRS  Korea Array        11.08   2  LR      LR       06 28 09.9
      comp=Z,16nm,18.5s,baz=330,slow=37
MJAR  Matsushiro Arr     13.73  40  LR      LR       06 30 29.3
      comp=Z,28nm,18.9s,baz=320,slow=40
DAV   Davao City (W)     19.25 185  LR      LR       06 32 17.2
      comp=Z,40nm,20.2s,baz=24,slow=34
SONM  Songino Array      27.03 328  P       P        06 26 55.4 +0.1
      1.9nm,0.7s,baz=140,slow=9.3,SNR=7.4
CMAR  Chiang Mai Arr     27.37 259  P       P        06 26 58.9 +0.3
      0.8nm,0.3s,baz=68,slow=7.9,SNR=4.6
MKAR  Makanchi Array     40.87 312  P       P        06 28 54.6 -0.2
      1.0nm,0.4s,baz=96,slow=10,SNR=16
ZALV  Zalesovo Beam      41.67 323  P       P        06 29 01.3  0.0
      1.5nm,0.4s,baz=112,slow=9.3,SNR=6.4
KURBB Kurchatov Arra     44.22 317  P       P        06 29 22.1 +0.2
      0.8nm,0.3s,baz=108,slow=9.0,SNR=2.9
ARCES ARCESS Array B     69.60 338  P       P        06 32 21.2 -0.1
      2.7nm,1.0s,baz=64,slow=10,SNR=1.7
FINES FINESS Array B     72.37 330  P       P        06 32 38.3 +0.1
      20nm,1.3s,baz=64,slow=6.3,SNR=8.9
AKASG Malin Array Be     74.92 319  P       P        06 32 53.2 -0.2
      0.3nm,0.4s,baz=62,slow=5.8,SNR=2.3
NOA   NORSAR Array B     78.85 334  P       P        06 33 15.3 -0.1
      0.4nm,0.6s,baz=51,slow=5.6,SNR=1.4
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*FUNV **01** 06:25:36.2, 8°.44N×71°.40W, h5^{km}, MW3.8*
ISC 01 06:25:34.3±1.2, **8°.55N**±0°.03×**71°.38W**±0°.02, **h1**^{km}±10^{km}, **n29**, σ**1^s.56**/58, **Venezuela**

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Code  Station Name       Δ°    AZ°   Phase ID        Time       Res
                                    Op      ISC      h  m  s    ISC
SOCV  Socops              0.58 117  eP      Pg       06 25 46.1 +0.7
SOCV                                eS      Sg       06 25 53.2 +0.3
SOCV  Socops              0.58 117  eP      Pg       06 25 46.2 +0.8
SOCV                                eS      Sg       06 25 54.0 +1.1
SDV   Santo Domingo       0.81  65  eP      Pb       06 25 51.6 +0.2
SDV                                 eS      Sb       06 26 02.8 -0.1
SDV                                 i                06 26 05.7
      comp=Z,144nm,0.5s
CAPV  Capacho             1.15 234  eP      Pg       06 25 55.2 -1.1
CAPV                                eS      Sg       06 26 11.1 -0.1
PAMC  Pamplona, Colo      1.77 228  eP      Pn       06 26 07.6 +1.0
PAMC                                eS      Sb       06 26 31.0 +0.2
PAMC                                i                06 26 33.9
      comp=Z,175nm,0.4s
MCQV  Machiques           1.88 323  eP      Pb       06 26 08.6 -0.9
MCQV                                eS      Sg       06 26 34.3 -0.5
OCAC  Ocana               1.94 261  eP      Pn       06 26 08.8 +0.2
OCAC                                eS      Sn       06 26 34.5 +0.7
OCAC                                i                06 26 36.5
      comp=Z,2μm,0.3s
SANV  Sanarito            2.05  62  eP      Pb       06 26 12.3 -0.2
SANV                                eS      Sn       06 26 37.9 +1.4
TAMC  Tame, Arauca        2.13 191  eP      Pn       06 26 12.3 +1.2
TAMC                                eS      Sb       06 26 42.0 +1.1
TAMC                                i                06 26 46.7
      comp=Z,178nm,0.7s
LL6C  La Loma 6 Bece      2.21 302  eP      Pn       06 26 12.8 +0.7
LL6C                                eS      Sn       06 26 40.1 -0.1
ELOV  Elorza              2.42 129  eP      Pn       06 26 17.0 +1.9
ELOV                                eS      Sn       06 26 48.3 +2.9
ELOV  Elorza              2.42 129  eP      Pn       06 26 15.8 +0.7
ELOV                                eS      Sn       06 26 44.4 -1.0
SIQV  Siquisique          2.60  36  eP      Pn       06 26 19.1 +1.6
SIQV                                eS      Sn       06 26 51.9 +2.1
BARC  Barichara           2.64 223  eP      Pn       06 26 19.6 +1.4
BARC                                eS      Sb       06 26 56.9 +1.3
BARC                                i                06 27 01.8
      comp=Z,74nm,0.4s
SMLC  San Martn de        2.67 276  eP      Pn       06 26 18.5  0.0
SMLC                                eS      Sb       06 26 55.3 -1.1
SMLC                                i                06 26 56.9
      comp=Z,180nm,0.3s
BRRC  Barranca, Sant      2.72 238  eP      Pn       06 26 20.0 +0.8
BRRC                                eS      Sb       06 26 59.0 +1.4
BRRC                                i                06 27 08.2
      comp=Z,33nm,0.3s
RUSC  La Rusia            3.13 213  eP      Pn       06 26 26.1 +0.8
RUSC                                eS      Sb       06 27 12.5 +2.5
RUSC                                i                06 27 20.8
      comp=Z,41nm,0.8s
MAPV  Macapo              3.15  66  eP      Pn       06 26 26.9 +1.7
MAPV                                eS      Sn       06 27 03.8 +0.3
URIC  Uribia, Colomb      3.19 349  eP      Pb       06 26 33.3 +1.4
URIC                                eS      Sn       06 27 03.6 -0.9
URIC                                i                06 27 04.8
      comp=Z,21nm,0.2s
BAUV  El Baul             3.32  83  eP      Pn       06 26 28.7 +1.3
BAUV                                eS      Sn       06 27 06.7 -0.9
ZARC  Zaragoza, Cauc      3.60 253  eP      Pn       06 26 31.4 +0.1
ZARC                                eS      Sb       06 27 20.2 -2.9
ZARC                                i                06 27 29.3
      comp=Z,33nm,0.3s
PTBC  PUERTO BERRIO,      3.65 237  eP      Pn       06 26 30.4 -1.5
PTBC                                eS      Sb       06 27 24.6 +0.2
PTBC                                i                06 27 36.7
      comp=Z,23nm,0.8s
MONV  Montecano           3.66  22  eP      Pn       06 26 33.7 +1.5
MONV                                eS      Sn       06 27 16.8 +0.9
BENV  Beln                3.99  69  eP      Pn       06 26 37.8 +1.1
BENV                                eS      Sn       06 27 23.4 -0.7
UREC  San Jos de Ur       4.19 259  eP      Pn       06 26 41.0 +1.6
UREC                                eS      Sn       06 27 30.4 +1.3
UREC                                i                06 27 32.1
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	comp=Z,12nm,0.4s						
CACV	CAICARA DEL OR	4.89	101	eP	Pb	06 26 56.9	-3.9
CACV				eS	Sb	06 27 55.2	-4.9
VILC	Villavicencio,	4.97	208	eP	Pn	06 26 50.6	+0.4
VILC				eS	Sn	06 27 48.0	-0.5
MERV	Las Mercedes	5.07	82	eP	Pn	06 26 52.1	+0.6
MERV				eS	Sn	06 27 48.1	-2.6
BIRV	Birongo	5.39	69	eP	Pn	06 26 56.9	+0.9
BIRV				eS	Sn	06 27 55.7	-3.0

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*FUNV **01** 07:04:18.9, 8°.44N×71°.39W, h5^{km}, MW3.2*

ISC 01 07:04:18.6±1.1, **8°.45N**±0°.04×**71°.36W**±0°.03, **h13**^{km}±9^{km}, **n18,** σ1^{s}.**39**/35, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.52	109	eP	Pg	07 04 29.1	+0.2
SOCV				eS	Sg	07 04 37.3	+1.4
SOCV	Socops	0.52	109	eP	Pg	07 04 29.2	+0.4
SOCV				eS	Sg	07 04 37.0	+1.1
SDV	Santo Domingo	0.83	59	eP	Pg	07 04 34.6	-0.2
SDV				eS	Sg	07 04 46.2	+0.4
CAPV	Capacho	1.11	238	eP	Pg	07 04 38.2	-1.9
CAPV				eS	Sb	07 04 54.6	+0.2
PAMC	Pamplona, Colo	1.73	230	eP	Pb	07 04 50.9	+0.4
PAMC				eS	Sg	07 05 14.2	-0.2
PAMC				i		07 05 17.3	
	comp=Z,45nm,0.2s						
OCAC	Ocana	1.95	264	eP	Pn	07 04 52.1	+0.5
OCAC				eS	Sn	07 05 17.5	+1.3
OCAC				i		07 05 19.3	
	comp=Z,244nm,0.4s						
MCQV	Machiques	1.97	324	eP	Pn	07 04 52.4	+0.7
MCQV				eS	Sn	07 05 17.3	+1.0
SANV	Sanarito	2.08	60	eP	Pn	07 04 54.7	+1.3
SANV				eS	Sn	07 05 21.3	+2.1
ELOV	Elorza	2.35	128	eP	Pn	07 04 58.0	+1.1
ELOV				eS	Sn	07 05 26.9	+1.1
BARC	Barichara	2.59	225	eP	Pb	07 05 04.8	-0.3
BARC				eS	Sg	07 05 39.2	-2.7
BARC				i		07 05 43.2	
	comp=Z,16nm,0.4s						
SIQV	Siquisique	2.66	35	eP	Pn	07 05 02.4	+1.0
SIQV				eS	Sn	07 05 35.0	+1.5
BRRC	Barranca, Sant	2.69	240	eP	Pn	07 05 03.5	+1.9
BRRC				eS	Sb	07 05 41.3	+1.7
BRRC				i		07 05 47.5	
	comp=Z,6.8nm,0.3s						
MAPV	Macapo	3.17	64	eP	Pn	07 05 08.8	+0.5
MAPV				eS	Sn	07 05 46.1	0.0
BAUV	El Baul	3.31	81	eP	Pn	07 05 09.8	-0.4
BAUV				eS	Sn	07 05 48.9	-0.6
MONV	Montecano	3.74	21	eP	Pn	07 05 15.6	-0.5
MONV				eS	Sn	07 05 59.6	-0.5
BENV	Beln	4.00	68	eP	Pn	07 05 20.0	+0.2
BENV				eS	Sn	07 06 05.9	-0.7
CACV	CAICARA DEL OR	4.85	100	eP	Pb	07 05 39.2	-4.3
CACV				eS	Sb	07 06 38.7	-3.2
BIRV	Birongo	5.41	68	eP	Pn	07 05 38.3	-0.7
BIRV				eS	Sn	07 06 37.9	-3.3

IDC 01 07:07:17.9±2.4, **5°.74S**×**126°.85E, h0**^{km}, **mb3.6**/1, **mb1 3.6**/3, **mb1mx3.2**/34, **mbtmp3.4**/3, **ML3.4**/2, **Error ellipse: s-maj=327.5km s-min=29.6km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.88	153	Pn	Pn	07 11 04.8	+1.9
	0.2nm,0.3s,baz=332,slow=13,SNR=11						
ASAR	Alice Springs	19.07	160	P	P	07 11 41.2	-0.8
	0.1nm,0.3s,baz=343,slow=11,SNR=8.3						
MKAR	Makanchi Array	65.48	328	P	P	07 18 03.0	0.0
	0.6nm,0.9s,baz=114,slow=7.4,SNR=5.7						

UPA 01 07:14:34.1±1.6, **8°.83N**×**78°.32W, h0**^{km}±10^{km}, **MW4.5, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPD2	Meteti	0.41	132	eP	Pg	07 14 42.9	+0.8
UPD2				eS	Sb	07 14 51.1	0.0
CHPO	Chepo, Panama	0.85	294	eP	Pg	07 14 50.9	+0.5
CHPO				eS	Sn	07 15 05.3	-1.3
GAMB1	Gamboa	1.40	282	eP	Pn	07 15 00.4	-0.5
GAMB1				eS	Sn	07 15 21.6	+1.5
CHOR3	La Chorrera	1.43	273	eP	Pn	07 15 00.3	-1.0
CHOR3				eS	Sn	07 15 20.7	0.0
ZANG	Zanguenga, Cho	1.53	275	eP	Pn	07 15 01.8	-0.9
ZANG				eS	Sn	07 15 24.1	+0.7
AZU	Azuero	2.19	242	eP	Pn	07 15 10.9	-0.9
AZU				eS	Sn	07 15 40.2	+0.6
CHIT3	Chitre	2.25	247	eP	Pn	07 15 12.0	-0.6
CHIT3				eS	Sn	07 15 40.6	-0.4

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*NEIC **01** 07:20:36.5±1.9, 24°.24S±0°.05×67°.07W±0°.10, h164^{km}±6^{km}, mb4.5/32, ML4.9(GUC), Error ellipse: s-maj=12.8km s-min=7.6km az=84.0*

*IDC **01** 07:20:36.6±0.9, 24°.13S×66°.97W, h169^{km}±8^{km}, mb3.9/14, mb1 4.0/20, mb1mx3.9/34, mbtmp4.4/20, Error ellipse: s-maj=12.7km s-min=11.0km az=39.0*

*VAO **01** 07:20:36.0±0.3, 24°.18S×67°.15W, h172^{km}, mb4.5*

*GUC **01** 07:20:38.2±0.7, 24°.19S×67°.47W, h212^{km}±9^{km}, ML4.9*

*SJA **01** 07:20:38.1±0.9, 24°.24S×67°.25W, h150^{km}, ML4.3, MW4.3*

ISC 01 07:20:36.6±0.6, **24°.20S**±0°.04×**67°.18W**±0°.03, **h174**^{km}±6^{km}, **n204,** σ1^{s}.**26**/230, **mb4.3**/25, **15C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.61	109	iP	Pn	07 21 10.9	+1.5
SLA				iS	Sn	07 21 36.5	+1.8
SLA				IAML		07 21 37.2	
	comp=Z,987nm,1.6s						
HJA	Humahuaca	1.90	59	iP	Pn	07 21 14.2	+1.6
HJA				iS	Sn	07 21 42.2	+1.7
AZAP	Zapla	1.93	91	iP	Pn	07 21 13.7	+0.9
AZAP				iS	Sn	07 21 41.2	+0.5
AZAP				IAML		07 21 45.3	
	comp=Z,876nm,1.5s						
FSA	Cafayete	2.19	150	iP	Pn	07 21 16.4	+0.7
LVC	Limon Verde	2.24	315	P	Pn	07 21 18.4	+2.0
	comp=Z,74nm,0.3s,baz=151,slow=6.9,SNR=989						
LVC				S	Sn	07 21 48.6	+1.4
	comp=Z,225nm,0.3s,baz=20,slow=23,SNR=72						
LVC	Limon Verde	2.24	315	⇑iP	Pn	07 21 18.4	+2.0
LVC				iS	Sn	07 21 48.4	+1.2
LVC	Limon Verde	2.24	315	iP	Pn	07 21 18.6	+2.1
LVC				IAML		07 21 53.0	
	comp=Z,954nm,0.9s						
PB15	IPOC Station P	2.32	295	⇑iP	Pn	07 21 19.0	+1.9
PB15				iS	Sn	07 21 49.7	+1.3
PB15	IPOC Station P	2.32	295		Pn	07 21 19.0	+1.9
PB15	IPOC Station P	2.32	295	iP	Pn	07 21 19.0	+1.9
ASTB	Santa Barbara	2.51	85	iP	Pn	07 21 20.0	+0.8
ASTB				iS	Sn	07 21 53.1	+0.8
YJA	Yavi	2.53	38	iP	Pn	07 21 21.5	+1.6
PB06	IPOC Station P	2.65	304	⇑iP	Pn	07 21 22.7	+1.7
PB06				iS	Sn	07 21 56.0	+0.6
PB06				IAML		07 21 58.7	
	comp=N,7µm,0.3s						
PB06	IPOC Station P	2.65	304		Pn	07 21 22.8	+1.7
PB06	IPOC Station P	2.65	304	iP	Pn	07 21 22.7	+1.7
PB06				iS	Sn	07 21 56.2	+0.8
ALOL	LOMAS DE OLMED	2.95	83	iP	Pn	07 21 25.0	+0.6
ALOL				iS	Sn	07 22 01.1	-0.5
PB14	IPOC Station P	2.97	261	⇑iP	Pn	07 21 25.7	+0.8
PB14				iS	Sn	07 22 01.5	-1.0
PB14				IAML		07 22 04.9	
	comp=E,676nm,0.1s						
PB14	IPOC Station P	2.97	261	iP	Pn	07 21 25.7	+0.8
PB14				IAML		07 22 07.8	
	comp=Z,662nm,0.2s						
PB09	IPOC Station P	3.05	321	⇑iP	Pn	07 21 27.6	+1.7
PB09				iS	Sn	07 22 05.4	+1.2
PB09				IAML		07 22 06.9	
	comp=N,3µm,0.4s						
PB09	IPOC Station P	3.05	321	iP	Pn	07 21 27.6	+1.7
PB09				iS	Sn	07 22 05.2	+1.1
AHML	Horco Molle	3.07	147	iP	Pn	07 21 26.3	+0.4
PB05	IPOC Station P	3.08	295	⇑iP	Pn	07 21 27.1	+1.0
PB05				iS	Sn	07 22 03.5	-1.1
PB05				IAML		07 22 06.2	
	comp=E,2µm,0.4s						
PB05	IPOC Station P	3.08	295	iP	Pn	07 21 27.0	+0.9
PB05				IAML		07 22 16.7	
	comp=Z,1µm,0.3s						
AC02	Maricunga	3.16	213	⇑iP	Pn	07 21 28.6	+1.2
AC02				eS	Sn	07 22 08.2	+1.1
AC02				IAML		07 22 23.7	
	comp=E,563nm,0.1s						
AC02	Maricunga	3.16	213	Pn	Pn	07 21 28.6	+1.2
AC02	Maricunga	3.16	213	iP	Pn	07 21 28.6	+1.2
PB10	IPOC Station P	3.16	282	⇑iP	Pn	07 21 28.0	+1.0
PB10				iS	Sn	07 22 05.1	-1.1
PB10				IAML		07 22 11.8	
	comp=E,2µm,0.3s						
PB10	IPOC Station P	3.16	282	iP	Pn	07 21 28.3	+1.2
PB10				IAML		07 22 11.3	
	comp=Z,813nm,0.3s						
PB03	IPOC Station P	3.19	312	⇑iP	Pn	07 21 28.8	+1.2
PB03				iS	Sn	07 22 06.8	-0.4
PB03				IAML		07 22 09.2	
	comp=E,3µm,0.4s						
PB03	IPOC Station P	3.19	312	iP	Pn	07 21 29.0	+1.4
PB04	IPOC Station P	3.30	304	⇑iP	Pn	07 21 29.9	+0.9
PB04				iS	Sn	07 22 08.6	-1.0
PB04	IPOC Station P	3.30	304	iP	Pn	07 21 30.0	+1.1
PB07	IPOC Station P	3.50	314	⇑iP	Pn	07 21 32.5	+1.0
PB07				iS	Sn	07 22 13.0	-1.1
PB07	IPOC Station P	3.50	314	iP	Pn	07 21 32.0	+0.5
PB01	IPOC Station P	3.80	325	⇑iP	Pn	07 21 36.0	+0.9
PB01				iS	Sn	07 22 19.7	-1.0
PB01	IPOC Station P	3.80	325	iP	Pn	07 21 35.8	+0.7
PB02	IPOC Station P	3.81	318	eP	Pn	07 21 36.1	+0.8
PB02				iS	Sn	07 22 18.5	-2.4
PB02	IPOC Station P	3.81	318	iP	Pn	07 21 35.8	+0.6
PATCX	Punta Patache	4.34	320	⇑iP	Pn	07 21 42.4	+0.3
PATCX				iS	Sn	07 22 31.7	-1.5
PATCX	Punta Patache	4.34	320		Pn	07 21 42.8	+0.7
PATCX	Punta Patache	4.34	320	iP	Pn	07 21 42.0	-0.1
GO03	Copiap	4.36	218	⇑iP	Pn	07 21 41.3	-0.9
GO03				iS	Sn	07 22 31.2	-2.3
GO03	Copiap	4.36	218	Pn	Pn	07 21 41.3	-0.9
CYA	Choya	4.40	164	iP	Pn	07 21 43.2	+0.5
PB08	IPOC Station P	4.43	335	iP	Pn	07 21 45.0	+1.5
PB08				IAML		07 22 43.9	
	comp=Z,254nm,0.6s						
TA01	Diego Aracena	4.56	322	Pn	Pn	07 21 44.6	-0.2
TA01	Diego Aracena	4.56	322	iP	Pn	07 21 45.0	+0.2
VCA	Vinchina	4.61	191	iP	Pn	07 21 46.2	+0.7
HMBC	Humberstone	4.64	327	⇑iP	Pn	07 21 45.1	-0.9
HMBC				eS	Sn	07 22 36.9	-3.3
ACLC	CERRO LA CRUZ	5.21	178	iP	Pn	07 21 53.2	-0.1
AC04	Llanos de Chal	5.30	220	iP	Pn	07 21 52.8	-1.6
LCO	Las Campanas	5.73	213	Pn	Pn	07 21 59.2	-1.0
ACDV	Cuesta del Vie	6.19	196	iP	Pn	07 22 06.3	+0.1
ACDV				IAML		07 23 16.8	
	comp=Z,52nm,0.7s						
APLL	PUNTA DE LOS L	6.20	175	iP	Pn	07 22 05.0	-1.2
APLL				IAML		07 23 15.6	
	comp=Z,56nm,0.5s						
PB12	IPOC Station P	6.28	332	iP	Pn	07 22 05.0	-2.4
PB12				IAML		07 23 20.7	
	comp=Z,111nm,0.6s						
AROD	Rodeo	6.28	198	iP	Pn	07 22 08.0	+0.4
AVFE	Valle Fertil	6.44	182	iP	Pn	07 22 08.0	-1.4
ACCO	Cerro Coronel	6.58	194	iP	Pn	07 22 11.0	-0.5
ACCO				IAML		07 23 30.5	
	comp=Z,73nm,0.5s						
CO05	La Serena	6.75	212		Pn	07 22 11.5	-1.8
GO04	Tololo Observa	6.76	208	iP	Pn	07 22 12.0	-1.8
ACHE	Chepes	6.95	176	iP	Pn	07 22 15.0	-1.2
ZON	Zonda	7.44	190		Pn	07 22 23.1	+0.5
RTCV	Cerro Valdivia	7.73	189	iP	Pn	07 22 26.5	+0.2
RTCV				IAML		07 23 54.0	
	comp=Z,15nm,0.5s						
RTLS	Leoncito	7.80	193	iP	Pn	07 22 27.0	-0.5
RTLS				IAML		07 23 54.0	
	comp=Z,32nm,1.1s						
LPAZ	La Paz	7.92	353	P	Pn	07 22 30.5	+0.9
	comp=Z,5.9nm,0.3s,baz=150,slow=5.0,SNR=149						
LPAZ				S	Sn	07 23 57.0	-1.7
	comp=Z,0.9nm,0.3s,baz=333,slow=19,SNR=4.0						
LPAZ	La Paz	7.92	353		Pn	07 22 30.3	+0.7
ASAL	Salagasta	8.49	190	iP	Pn	07 22 35.9	-0.5
ASAL				IAML		07 24 10.9	
	comp=Z,16nm,0.9s						
ARCO	CERRO ARCO	8.75	190	iP	Pn	07 22 39.4	-0.5
ARCO				IAML		07 24 40.9	
	comp=Z,18nm,0.5s						
AAGR	Agrelo	8.97	189	iP	Pn	07 22 42.0	-0.8
AAGR				IAML		07 24 25.4	
	comp=Z,20nm,0.4s						
VA03	San Esteban	9.03	198	Pn	Pn	07 22 41.0	-2.6
CPUP	Villa Florida	9.17	105	P	Pn	07 22 42.6	-2.7
	comp=Z,0.3nm,0.3s,baz=292,slow=11,SNR=4.8						
CPUP	Villa Florida	9.17	105	eP	Pn	07 22 45.3	0.0
CPUP	Villa Florida	9.17	105		Pn	07 22 42.2	-3.1
MT02	Curacav	9.67	200	Pn	Pn	07 22 48.1	-3.8
SIV	San Ignacio	9.98	36	P	Pn	07 22 53.9	-2.2
	comp=Z,2.5nm,0.3s,baz=216,slow=11,SNR=63						
SIV				S	Sn	07 24 33.2	-14
	comp=Z,0.5nm,0.3s,baz=220,slow=16,SNR=7.7						
ITQB	Itaqui	10.88	122	eP	Pn	07 23 06.8	-0.9
BO02	Sierra Bellavi	11.01	196	Pn	Pn	07 23 08.9	-0.5
AQDB	Aquidauana	11.25	73	eP	Pn	07 23 12.6	-0.1
AQDB	Aquidauana	11.25	73		Pn	07 23 11.2	-1.4
PTLB	Pontes e Lacer	11.53	42	eP	Pn	07 23 14.6	-1.6
PTLB	Pontes e Lacer	11.53	42		Pn	07 23 14.1	-2.2
ML02	Panimavida	12.09	197		Pn	07 23 23.3	0.0
VILB	Vilhena	12.99	32	eP	Pn	07 23 35.1	+0.1
VILB	Vilhena	12.99	32	Pn	Pn	07 23 35.6	+0.6
TRCB	Terra Rica	13.42	87	eP	Pn	07 23 40.2	-0.2
SALV	Santo Antonio	13.58	55	eP	Pn	07 23 40.4	-2.0
CPSB	Cacapava Do Su	13.69	120	eP	Pn	07 23 42.3	-1.3
PTGB	Pitanga	13.78	95	eP	Pn	07 23 44.8	-0.1
ITAB	Concordia	13.90	106	eP	P	07 23 48.2	-0.8
ITAB	Concordia	13.90	106		Pn	07 23 44.9	-1.4
PLTB	Pedras Altas	14.16	125	eP	Pn	07 23 47.8	-1.8
PLTB	Pedras Altas	14.16	125	Pn	Pn	07 23 47.3	-2.2
ETMB	Extrema	14.33	4	eP	Pn	07 23 51.9	+0.1
ETMB	Extrema	14.33	4	Pn	Pn	07 23 50.7	-1.1
TRQA	Tornquist	14.51	163		Pn	07 23 52.6	-1.2
PCMB	Pacaembu	14.90	83	eP	P	07 23 59.8	-0.3
LC01	Cunco	15.19	194	P	Pn	07 24 02.5	+0.4
CNLB	Canela	15.45	113	eP	Pn	07 24 04.1	-1.4
SAML	Samuel	15.64	15	P	Pn	07 24 07.3	-0.6
PDRB	Porto dos Gac	15.98	40	eP	Pn	07 24 10.4	-1.6
ITRB	Iturama	16.23	77	eP	P	07 24 14.5	-0.4
TIJ01	Guaruva-PR	16.55	98	eP	P	07 24 18.4	-0.1
ARAG	Araguaiana, MT	16.73	62	eP	Pn	07 24 21.9	+0.9
PLCA	Paso Flores	16.73	189	P	P	07 24 20.7	+0.5
	comp=Z,0.4nm,0.3s,baz=28,slow=13,SNR=13						
PLCA	Paso Flores	16.73	189	eP	P	07 24 19.7	-0.5
PLCA	Paso Flores	16.73	189	P	P	07 24 20.8	+0.5
PLCA				IAmb	IAmb	07 24 29.0	
	comp=Z,12nm,0.7s						
TER01	Tubaro-SC	16.74	109	eP	P	07 24 19.7	-0.7
CLDB	Colider	17.12	41	eP	P	07 24 23.5	-1.1
CZSB	Cruzeiro do Su	17.21	341	eP	P	07 24 26.5	+0.8
CZSB	Cruzeiro do Su	17.21	341	P	P	07 24 25.7	+0.1
CZSB				IAmb	IAmb	07 24 36.1	
	comp=Z,17nm,0.9s						
LL04	Puerto Octay	17.23	193	P	P	07 24 25.9	+0.2
LL04				IAmb	IAmb	07 24 26.4	
	comp=Z,20nm,0.8s						
BB19B	Bebedouro	17.50	83	eP	P	07 24 29.1	+0.3
LL05	Los Muermos	17.95	196	P	P	07 24 33.8	+0.3
RCLB	Rio Claro- Sao	18.14	88	eP	P	07 24 34.3	-1.5
PET01	Itanhaem-SP	18.16	94	eP	P	07 24 35.5	-0.5
VAO	Valinhos	18.57	90	eP	P	07 24 39.6	-0.9
IPMB	Ipameri, GO	18.74	74	eP	P	07 24 41.3	-1.1
SNDB	Serra Nova Dou	19.36	54	eP	P	07 24 47.5	-1.6
PARB	Paraibuna	19.75	92	eP	P	07 24 53.7	+0.4
BDFB	Brasilia	19.91	68	P	P	07 24 54.0	-1.1
	comp=Z,6.2nm,0.3s,baz=241,slow=9.8,SNR=102						
BDFB	Brasilia	19.91	68	P	P	07 24 54.5	-0.6
TBTG	Tabatinga, AM	20.07	352	eP	P	07 24 58.0	+1.3
NPGB	Novo Progresso	20.48	36	eP	P	07 24 58.6	-2.5
BSCB	Bom Sucesso	20.93	86	eP	P	07 25 04.0	-1.9
MAN01	Angra dos Reis	21.33	91	eP	P	07 25 08.3	-1.8
PEXB	Peixe	21.57	59	eP	P	07 25 10.7	-2.0
COYC	Coyhaique	21.69	189	P	P	07 25 13.6	0.0
MACA	Manacapuru-AM	21.84	18	eP	P	07 25 13.4	-1.9
MACA	Manacapuru-AM	21.84	18	P	P	07 25 13.6	-1.8
VAS01	Vassouras-RJ	21.89	90	eP	P	07 25 15.7	-0.3
ITTB	Itaituba	22.59	31	eP	P	07 25 20.2	-2.4
DIAM	Diamantina, MG	22.67	80	eP	P	07 25 22.6	-0.9
DUB01	Friburgo-RJ	22.90	90	eP	P	07 25 24.5	-1.0
MC01	Montes Claros	22.99	75	eP	P	07 25 24.5	-1.9
JANB	Januaria	23.35	71	eP	P	07 25 28.3	-1.3
CAM01	Campos-RJ	23.60	89	eP	P	07 25 30.7	-1.1
SDBA	SAO DESIDERIO	24.14	65	eP	P	07 25 35.3	-1.5
SMTB	Santa Maria do	24.14	54	eP	P	07 25 36.0	-0.8
PTGA	Pitinga	24.36	18	P	P	07 25 37.9	-0.7
	comp=Z,2.9nm,0.5s,baz=317,slow=23,SNR=21						
PRPB	Parauapebas	24.48	46	eP	P	07 25 38.0	-1.8
ALF01	Guarapari-ES	24.70	87	eP	P	07 25 40.7	-1.1
SJMB	Sao Joao De Ma	24.79	82	eP	P	07 25 40.9	-1.7
BSFB	Barra de Sao F	25.06	83	eP	P	07 25 43.5	-1.5
RIB01	Linhares ES	25.33	84	eP	P	07 25 46.0	-1.5
MALB	Monte Alegre	25.49	31	eP	P	07 25 47.1	-1.8
NAN01	Guarapari, ES	26.01	81	eP	P	07 25 51.9	-1.7
GUA01	Guaratinga, BA	26.72	79	eP	P	07 25 58.7	-1.3
BOAV	Boa Vista	27.22	15	eP	P	07 26 04.5	+0.1
BOAV	Boa Vista	27.22	15	P	P	07 26 04.7	+0.3
CMC01	Camacan, BA	27.43	76	eP	P	07 26 04.8	-1.6
MCPB	Macapa, AP	27.87	34	eP	P	07 26 09.4	-0.8
GDU01	Guandu, BA	28.06	73	eP	P	07 26 10.0	-1.9
TMAB	Tom-Au,PA,Br	28.48	43	eP	P	07 26 15.3	-0.3
ROSB	Rosrio	30.73	50	eP	P	07 26 36.0	+0.5
MDP	Montagnes des	32.39	28	P	P	07 26 48.5	-1.5
	comp=Z,5.9nm,0.4s,baz=193,slow=11,SNR=18						
PMSA	Palmer Station	40.62	178	eP	P	07 27 57.8	-1.3
VNA3	Neumayer Olymp	57.02	161	P	P	07 30 04.4	+0.6
VNA1	Neumayer--Stat	57.22	160	P	P	07 30 05.8	+0.7
VNA2	Neumayer--Watz	57.59	160	P	P	07 30 08.3	+0.6
	baz=291,slow=6.9						
SNAA	Sanae	59.22	161	P	P	07 30 19.5	+0.5
SNAA	Sanae	59.22	161	P	P	07 30 19.6	+0.5
	comp=Z,2.4nm,0.5s,baz=272,slow=10						
SNAA	Sanae	59.22	161	P	P	07 30 19.6	+0.5
SNAA				IAmb	IAmb	07 30 20.1	
	comp=Z,3.8nm,0.7s						
V55A	Taylorsville	61.18	347	P	P	07 30 33.6	+0.9
V55A				IAmb	IAmb	07 30 35.9	
	comp=Z,17nm,1.4s						
WLAR	White Oak Lake	62.63	336	P	P	07 30 43.4	+1.0
JCT	Junction City	62.73	328	P	P	07 30 43.7	+0.4
JCT				IAmb	IAmb	07 30 45.3	
	comp=Z,7.0nm,0.8s						
WVT	Waverly	63.10	341	P	P	07 30 45.6	+0.1
WVT				IAmb	IAmb	07 30 45.9	
	comp=Z,7.0nm,0.9s						
TX31	Lajitas Ar. Si	63.74	325	P	P	07 30 51.2	+1.2
TX31				IAmb	IAmb	07 31 06.1	
	comp=Z,9.7nm,1.2s						
TX32	Lajitas Array	63.74	325	P	P	07 30 51.5	+1.5
TXAR	Lajitas Array	63.74	325	P	P	07 30 51.0	+1.0
	comp=Z,0.5nm,0.5s,baz=153,slow=7.7,SNR=15						
TXAR	Lajitas Array	63.74	325	P	P	07 30 51.0	+1.0
P52A	Corning	65.02	347	P	P	07 30 57.6	-0.3
QSPA	South Pole Qui	66.00	180	P	P	07 31 05.2	+1.0
QSPA				IAmb	IAmb	07 31 05.8	
	comp=Z,6.3nm,0.6s						
S39A	Bolivar	66.29	338	P	P	07 31 07.0	+0.9
S39A				IAmb	IAmb	07 31 07.9	
	comp=Z,12nm,1.1s						
MNTX	Cornudas Mount	66.51	325	P	P	07 31 08.1	+0.4
MNTX				IAmb	IAmb	07 31 09.4	
	comp=Z,4.8nm,1.1s						
MSTX	Muleshoe	67.02	328	P	P	07 31 11.4	+0.4
MSTX				IAmb	IAmb	07 31 13.5	
	comp=Z,14nm,1.1s						
DBIC	Dimbokro	68.02	72	P	P	07 31 16.2	-1.3
	comp=Z,1.1nm,0.3s,baz=238,slow=5.5,SNR=5.6						
DBIC	Dimbokro	68.02	72	P	P	07 31 17.4	-0.2
DBIC				IAmb	IAmb	07 31 33.8	
	comp=Z,9.8nm,1.3s						
ANMO	Albuquerque	69.62	326	P	P	07 31 28.5	+1.3
ANMO				IAmb	IAmb	07 31 30.5	
	comp=Z,6.9nm,1.1s						
SDCO	Great Sand Dun	71.37	329	P	P	07 31 39.9	+2.0
KOWA	Kowa	72.67	65	P	P	07 31 44.5	-1.2
	comp=Z,1.7nm,0.3s,baz=255,slow=6.2,SNR=7.3						
KOWA	Kowa	72.67	65	P	P	07 31 45.6	-0.1
ECSD	EROS Data Cent	72.80	338	P	P	07 31 46.2	+0.3
VNDA	Vanda	74.48	190	P	P	07 31 57.3	+2.0
	comp=Z,1.9nm,0.9s,baz=109,slow=6.6,SNR=2.7						
TORD	Torodi Ar. Bea	76.80	69	P	P	07 32 08.7	-0.8
	comp=Z,132nm,0.6s,baz=263,slow=5.7,SNR=21						
PDAR	Pinedale Array	77.23	329	P	P	07 32 12.7	+1.1
	comp=Z,0.5nm,0.5s,baz=136,slow=8.5,SNR=8.4						
PDAR	Pinedale Array	77.23	329	P	P	07 32 13.3	+1.7
AHID	Auburn Hatcher	77.96	329	P	P	07 32 17.0	+1.4
AHID				IAmb	IAmb	07 32 18.4	
	comp=Z,8.5nm,1.1s						
ULM	Lac du Bonnet	78.36	342	P	P	07 32 17.8	+0.5
	comp=Z,4.1nm,0.7s,baz=140,slow=4.7,SNR=4.4						
TPAW	Teton Pass	78.44	329	P	P	07 32 19.9	+1.5
SCHQ	Schefferville	78.71	0	P	P	07 32 19.6	+0.4
	comp=Z,2.9nm,0.9s,baz=0.0,slow=3.0,SNR=1.3						
DGMT	Dagmar	79.57	336	P	P	07 32 24.0	0.0
BOSA	Boshof	80.79	117	P	P	07 32 30.9	-0.4
	comp=Z,1.9nm,0.4s,baz=241,slow=3.1,SNR=6.1						
BOSA	Boshof	80.79	117	P	P	07 32 31.7	+0.4
BOSA				IAmb	IAmb	07 32 32.4	
	comp=Z,16nm,1.4s						
MAW	Mawson	81.30	163	P	P	07 32 33.8	+0.8
	comp=Z,4.0nm,1.0s,baz=208,slow=7.1,SNR=6.7						
MAW	Mawson	81.30	163	P	P	07 32 33.6	+0.6
ESDC	Sonseca Array	86.66	44	P	P	07 33 01.7	+1.1
	comp=Z,1.6nm,1.1s,baz=252,slow=5.2,SNR=5.1						
YKA	Yellowknife Ar	94.25	340	P	P	07 33 36.1	+0.8
	comp=Z,0.5nm,0.5s,baz=121,slow=5.8,SNR=10						
ASAR	Alice Springs	128.21	205	PKP	PKPdf	07 39 23.1	+0.3
	comp=Z,1.9nm,0.7s,baz=131,slow=1.9,SNR=22						
WRA	Warramunga Arr	131.37	207	PKP	PKPdf	07 39 29.5	+0.6
	comp=Z,1.4nm,0.4s,baz=161,slow=1.8,SNR=33						
WRA				SKPbc	SKPbc	07 42 37.7	-0.1
	comp=Z,0.5nm,0.6s,baz=152,slow=3.3,SNR=11						
WRA	Warramunga Arr	131.37	207		PKPdf	07 39 29.3	+0.4
ZALV	Zalesovo Beam	143.65	28	PKP	PKPbc	07 39 48.9	+0.6
	comp=Z,1.6nm,0.7s,baz=291,slow=3.0,SNR=6.4						
ZALV				SKPbc	SKPbc	07 43 13.9	+1.3
	comp=Z,0.7nm,0.6s,baz=3.8,slow=4.5,SNR=4.1						
MKAR	Makanchi Array	146.78	40	PKPbc	PKPdf	07 39 57.2	+1.1
	comp=Z,2.2nm,0.7s,baz=297,slow=1.9,SNR=6.6						
MKAR	Makanchi Array	146.78	40		PKPbc	07 39 58.8	+0.7
MJAR	Matsushiro Arr	154.96	305	PKPab	PKPab	07 40 33.0	-0.9
	comp=Z,0.9nm,0.4s,baz=79,slow=0.8,SNR=5.2						

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*SJA **01** 07:26:09.6±0.8, 31°.59S×71°.69W, h14^{km}±3^{km}, ML4.8, MW4.5*

*GUC **01** 07:26:13.7±0.8, 31°.59S×71°.36W, h41^{km}±3^{km}, ML4.7*

*IDC **01** 07:26:13.9±0.5, 31°.59S×71°.39W, h43^{km}±3^{km}, mb4.6/13, mb1 4.6/18, mb1mx4.4/32, mbtmp4.7/18, ML4.4/5, MS3.8/14, Ms1 3.7/14, ms1mx3.6/21, Error ellipse: s-maj=17.9km s-min=11.5km az=89.0*

*NEIC **01** 07:26:14.1±1.6, 31°.60S±0°.04×71°.48W±0°.09, h40^{km}±5^{km}, mb5.0/59, Mwr4.7/36, ML4.7(GUC), Error ellipse: s-maj=10.8km s-min=6.2km az=87.0*

*VAO **01** 07:26:14.1±0.3, 31°.59S×71°.32W, h43^{km}, mb4.8*

*NEIC **01** 07:26:14.1, 31°.60S×71°.48W, h51^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.95; $M_{\theta\theta}$0.01; $M_{\phi\phi}$-0.96; $M_{r\theta}$0.17; $M_{\theta\phi}$0.07; $M_{\phi r}$-0.73; Fault plane solution: $M_0$1.22000×10^{16} NP1:ϕ_s170.54000°, δ63.96000°, λ84.98000°. NP2:ϕ_s1.85000°, δ26.49000°, λ100.15000°. Principal axes: T 1.2138, Plg71.0000°, Azm70.0000°; N 0.0032, Plg5.0000°, Azm173.0000°; P -1.2171, Plg19.0000°, Azm264.0000°;*

ISC 01 07:26:12.5±0.4, **31°.58S**±0°.02×**71°.38W**±0°.03, **h32**^{km}±2^{km}, **h32**^{km}**:pP-P, n306,** σ1^{s}.**49**/337, **mb5.0**/43, **MS3.9**/11, **8C-7D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.93	346	⇑iP	Pb	07 26 31.1	+0.9
CO06				iS	Sn	07 26 40.4	-1.1

CO06				IAML		07 26 49.2	
	comp=E,51µm,0.6s						
CO06	Fray Jorge	0.93	346		Pb	07 26 31.0	+0.9
VA06	Catapilco	0.98	176	⇑iP	Pb	07 26 31.4	+0.4
VA06				iS	Sb	07 26 44.1	+0.5
VA06				IAML		07 26 47.0	
	comp=E,46µm,0.2s						
VA03	San Esteban	1.37	150	⇓iP	Pb	07 26 37.7	+0.1
VA03				iS	Sb	07 26 54.9	+0.1
VA03				IAML		07 26 59.2	
	comp=E,22µm,0.5s						
VA03	San Esteban	1.37	150		Pb	07 26 37.9	+0.3
VA03	San Esteban	1.37	150	eP	Pb	07 26 38.0	+0.4
VA03				IAML		07 27 08.7	
	comp=Z,10µm,1.4s						
ROCH	El Roble	1.42	168	⇑iP	Pb	07 26 38.3	-0.2
ROCH				eP	Pb	07 26 38.1	-0.4
ROCH				iS	Sb	07 26 57.0	+0.6
ROCH				iS	Sn	07 26 57.1	+3.1
ROCH				IAML		07 27 00.1	
	comp=N,17µm,0.5s						
ROCH				IAML		07 27 00.3	
	comp=N,22µm,0.2s						
ROC1	El Roble	1.42	168	eP	Pb	07 26 38.0	-0.6
ROC1				eS	Sb	07 26 57.4	+0.8
GO04	Tololo Observa	1.49	20	⇑iP	Pb	07 26 40.2	+0.5
GO04				iS	Sb	07 26 59.4	+1.1
GO04	Tololo Observa	1.49	20		Pb	07 26 40.2	+0.5
GO04	Tololo Observa	1.49	20	eP	Pb	07 26 40.0	+0.3
GO04				eS	Sb	07 27 00.9	+2.6
CO05	La Serena	1.66	4	⇓iP	Pb	07 26 41.9	-0.6
CO05				iS	Sb	07 27 03.0	+0.1
CO05				IAML		07 27 08.2	
	comp=E,24µm,0.5s						
PEL	Peldehue	1.66	160	⇓iP	Pb	07 26 41.9	-0.7
PEL				iS	Sb	07 27 03.6	+0.4
PEL	Peldehue	1.66	160		Pb	07 26 41.9	-0.7
PEL	Peldehue	1.66	160	eP	Pb	07 26 42.0	-0.5
MT02	Curacav	1.69	173	⇑iP	Pb	07 26 41.5	-1.3
MT02				iS	Sb	07 27 03.7	0.0
MT02				IAML		07 27 06.3	
	comp=E,7µm,0.2s						
MT02	Curacav	1.69	173		Pb	07 26 42.9	0.0
MT02	Curacav	1.69	173	eP	Pb	07 26 41.7	-1.2
MT02				eP	Pb	07 26 42.0	-0.9
MT02				eS	Sb	07 27 05.2	+1.4
MT02				IAML		07 27 17.9	
	comp=Z,6µm,0.5s						
RTLS	Leoncito	1.79	98	eP	Pb	07 26 46.3	+1.6
RTLS				eS	Sb	07 27 09.7	+2.8
RTLS				IAML		07 27 14.9	
	comp=Z,4µm,0.6s						
AUSP	Uspallata	1.81	111	eP	Pb	07 26 46.5	+1.3
MT05	Renca	1.89	164	⇓iP	Pb	07 26 44.9	-1.3
MT05				iS	Sb	07 27 08.8	-0.7
MT05				IAML		07 27 12.0	
	comp=E,15µm,0.5s						
MT05	Renca	1.89	164	eP	Pb	07 26 45.0	-1.3
MT05				eS	Sb	07 27 11.2	+1.7
MT05				IAML		07 27 18.2	
	comp=Z,6µm,0.8s						
FCH	Farellones	1.97	153	⇓iP	Pb	07 26 46.4	-1.4
FCH				iS	Sb	07 27 11.6	-0.5
FCH				IAML		07 27 21.2	
	comp=E,5µm,0.6s						
VA05	Santo Domingo	2.08	185	eP	Pn	07 26 46.4	+1.3
VA05				iS	Sb	07 27 13.2	-1.8
VA05				IAML		07 27 20.8	
	comp=E,11µm,0.6s						
VA05	Santo Domingo	2.08	185		Pn	07 26 46.8	+1.7
AROD	Rodeo	2.16	50	eP	Pb	07 26 52.0	+0.9
MT09	Talagante	2.21	172	⇑iP	Pn	07 26 49.6	+2.5
MT09				iS	Sn	07 27 16.1	+2.7
MT09				IAML		07 27 25.1	
	comp=N,5µm,0.2s						
ACCO	Cerro Coronel	2.22	64	eP	Pb	07 26 53.0	+0.9
MT01	Popeta	2.28	177	eP	Pn	07 26 49.8	+2.0
MT01				iS	Sb	07 27 18.6	-2.1
MT01				IAML		07 27 25.9	
	comp=E,7µm,0.1s						
MT01	Popeta	2.28	177	eP	Pn	07 26 49.9	+2.0
MT01				eS	Sb	07 27 21.9	+1.2
MT01				IAML		07 27 26.7	
	comp=Z,3µm,0.2s						
ZON	Zonda	2.30	90	eP	Pb	07 26 54.0	+0.6
ZON				eS	Sb	07 27 27.5	+6.0
ZON				IAML		07 27 41.4	
	comp=Z,3µm,0.7s						
ASAL	Salagasta	2.38	116	eP	Pb	07 26 55.0	+0.3
ASAL				eS	Sn	07 27 10.1	-7.4
ACDV	Cuesta del Vie	2.40	55	eP	Pn	07 26 49.7	0.0
ACDV				eP	Pb	07 26 55.0	0.0
ACDV				eS	Sb	07 27 30.9	+6.7
ACDV				IAML		07 27 33.7	
	comp=Z,2µm,0.3s						
ARCO	CERRO ARCO	2.42	122	eP	Pb	07 26 56.0	+0.5
ARCO				eS	Sb	07 27 37.3	+12
ARCO				IAML		07 27 43.7	
	comp=Z,3µm,0.7s						
RTCV	Cerro Valdivia	2.43	97	eP	Pn	07 26 49.7	-0.4
RTCV				eP	Pb	07 26 55.0	-0.6
LMEL	Las Melosas	2.47	157	eP	Pb	07 26 54.0	-2.3
LMEL				iS	Sb	07 27 23.9	-2.4
LMEL				IAML		07 27 31.9	
	comp=N,4µm,0.2s						
BO04	La Punta	2.49	165	⇓iP	Pn	07 26 53.3	+2.5
AAGR	Agrelo	2.63	125	eP	Pb	07 26 58.0	-0.9
AAGR				eS	Sn	07 27 13.7	-10
LCO	Las Campanas	2.63	13		Pb	07 26 56.1	-3.0
LCO	Las Campanas	2.63	13	eP	Pb	07 26 56.0	-3.0
BO01	Tunca	2.81	175	eP	Pn	07 26 57.3	+2.0
BO01	Tunca	2.81	175		Pn	07 26 58.3	+3.0
BO01	Tunca	2.81	175	eP	Pn	07 26 57.0	+1.8
BO01				eP	Pb	07 26 57.3	-4.7
BO01				IAML		07 27 45.0	
	comp=Z,2µm,1.1s						
BO02	Sierra Bellavi	3.24	171	eP	Pn	07 27 03.6	+2.5
BO02	Sierra Bellavi	3.24	171	eP	Pn	07 27 03.8	+2.6
BO02				eS	Sn	07 27 43.2	+4.5
BO02				IAML		07 28 06.9	
	comp=Z,3µm,0.8s						
AC04	Llanos de Chal	3.38	5	eP	Pn	07 27 05.0	+2.1
AC04				⇑iP	Pn	07 27 05.0	+2.1
AC04	Llanos de Chal	3.38	5	eP	Pn	07 27 05.1	+2.1
AC04				eS	Sb	07 27 49.7	-2.5
AC04				IAML		07 28 01.0	
	comp=Z,3µm,0.4s						
GO05	Huala	3.45	188	⇓iP	Pn	07 27 04.4	+0.4
GO05	Huala	3.45	188	eP	Pn	07 27 04.7	+0.6
AVFE	Valle Fertil	3.48	76	eP	Pb	07 27 09.1	-4.4
AVFE				IAML		07 28 15.9	
	comp=Z,2µm,0.6s						
VCA	Vinchina	3.95	45	eP	Pn	07 27 03.2	-7.7
VCA				eP	Pb	07 27 11.2	-10
VCA				eS	Sb	07 28 07.7	-1.1
VCA				IAML		07 28 13.0	
	comp=Z,5µm,0.5s						
RFA	San Rafael	4.01	143	eP	Pn	07 27 11.2	-0.6
RFA				eP	Pb	07 27 15.7	-6.8
RFA				eS	Sb	07 28 23.6	+13
RFA				IAML		07 28 27.2	
	comp=Z,518nm,0.6s						
ACHE	Chepes	4.05	85	eP	Pn	07 27 17.1	+4.7
GO03	Copiap	4.10	14	⇑iP	Pn	07 27 15.2	+2.3
GO03	Copiap	4.10	14	eP	Pn	07 27 15.7	+2.7
GO03				eP	Pb	07 27 16.0	-7.9
GO03				eS	Sn	07 28 05.7	+5.9
ML02	Panimavida	4.17	180	Pn	Pn	07 27 16.0	+2.1
APLL	PUNTA DE LOS L	4.33	75	eP	Pn	07 27 20.0	+3.9
ACLC	CERRO LA CRUZ	4.38	62	eP	Pn	07 27 15.7	-1.3
ACLC				eP	Pb	07 27 21.5	-7.3
ACLC				eS	Sb	07 28 14.2	-7.1
ACLC				IAML		07 28 22.9	
	comp=Z,3µm,0.5s						
TINO	Tinogasta	4.82	44	eP	Pn	07 27 28.0	+5.1
AC02	Maricunga	5.12	23	eP	Pn	07 27 30.0	+2.6
AC02				eS	Sb	07 28 37.2	-5.7
AC02				IAML		07 29 06.3	
	comp=Z,1µm,0.9s						
CYA	Choya	5.76	59	eP	Pn	07 27 38.7	+3.0
CYA				IAML		07 29 27.9	
	comp=Z,391nm,1.2s						
VA04	Juan Fernndez	6.62	250	Pn	Pn	07 27 47.8	+0.4
H03N1	Juan Fernandez	6.63	252	T	T	07 34 31.2	
	baz=79,slow=72,SNR=896						
H03N3	Juan Fernandez	6.64	252	T	T	07 34 28.5	
	baz=79,slow=72,SNR=1052						
H03N2	Juan Fernandez	6.65	252	T	T	07 34 31.5	
	baz=79,slow=72,SNR=1342						
H03S3	Juan Fernandez	6.73	249	T	T	07 34 40.6	
	baz=84,slow=75,SNR=38						
H03S1	Juan Fernandez	6.74	248	T	T	07 34 40.1	
	baz=84,slow=75,SNR=43						
H03S2	Juan Fernandez	6.75	249	T	T	07 34 41.5	
	baz=84,slow=75,SNR=41						
LC01	Cunco	7.31	183	Pn	Pn	07 27 57.5	+0.4
LC01	Cunco	7.31	183	eP	Pn	07 27 57.0	0.0
LR03	Panguipulli	8.07	185		Pn	07 28 07.8	+0.4
PLCA	Paso Flores	9.16	176	P	Pn	07 28 23.8	+1.4
	comp=Z,0.6nm,0.3s,baz=341,slow=10,SNR=12						
PLCA				LR	LR	07 31 57.7	
	comp=Z,294nm,19.8s,baz=353,slow=38						
PLCA	Paso Flores	9.16	176	eP	Pn	07 28 24.2	+1.9
LVC	Limon Verde	9.20	14	P	Pn	07 28 24.3	+0.9
	comp=Z,1.1nm,0.3s,baz=175,slow=10,SNR=6.3						
LVC	Limon Verde	9.20	14	eP	Pn	07 28 24.5	+1.2
LVC	Limon Verde	9.20	14	Pn	Pn	07 28 24.7	+1.4
TRQA	Tornquist	10.06	132		Pn	07 28 36.2	+1.4
ALOL	LOMAS DE OLMEDI	10.13	42	eP	Pn	07 28 42.0	+6.2
ITQB	Itaqui	12.85	85	eP	Pn	07 29 12.8	0.0
ITQB	Itaqui	12.85	85	Pn	Pn	07 29 12.9	+0.1
CPUP	Villa Florida	13.36	70	P	Pn	07 29 20.4	+0.5
	comp=Z,0.5nm,0.3s,baz=245,slow=12,SNR=8.6						
CPUP				LR	LR	07 34 59.5	
	comp=Z,510nm,20.2s,baz=247,slow=39						
CPUP	Villa Florida	13.36	70	eP	Pn	07 29 20.5	+0.6
CPUP	Villa Florida	13.36	70		Pn	07 29 19.7	-0.2
PLTB	Pedras Altas	15.14	95	eP	Pn	07 29 43.2	-0.8
PLTB	Pedras Altas	15.14	95		Pn	07 29 43.0	-1.0
CPSB	Cacapava Do Su	15.43	90	eP	Pn	07 29 47.6	-0.2
LPAZ	La Paz	15.51	12	P	Pn	07 29 51.0	+1.6
	comp=Z,1.3nm,0.3s,baz=185,slow=8.0,SNR=29						
LPAZ	La Paz	15.51	12	eP	P	07 29 51.7	-1.9
LPAZ	La Paz	15.51	12		P	07 29 51.3	-2.3
ITAB	Concordia	17.32	80	P	P	07 30 14.1	+1.1
ITAB				IAmb	IAmb	07 30 31.3	
	comp=Z,70nm,1.0s						
CNLB	Canela	17.84	88	eP	Pn	07 30 18.1	-0.2
AQDB	Aquidauana	17.89	56	eP	P	07 30 19.4	+0.1
SIV	San Ignacio	18.14	34	P	P	07 30 22.2	+0.1
	comp=Z,1.8nm,0.3s,baz=204,slow=8.8,SNR=50						
SIV				sP	sP	07 30 38.1	+3.0
	comp=Z,4.2nm,0.3s,baz=210,slow=9.0,SNR=18						
SIV				LR	LR	07 38 12.6	
	comp=Z,113nm,21.0s,baz=187,slow=40						
PTGB	Pitanga	18.34	73	eP	Pn	07 30 25.9	+1.4
TRCB	Terra Rica	18.81	67	eP	Pn	07 30 31.0	+0.8
TER01	Tubaro-SC	19.49	87	eP	Pn	07 30 38.3	+0.1
PTLB	Pontes e Lacer	19.56	38	eP	P	07 30 36.8	-0.9
PTLB	Pontes e Lacer	19.56	38	P	Pn	07 30 38.6	-0.6
NNA	Nana	20.14	344	LR	LR	07 37 19.1	
	comp=Z,86nm,21.3s,baz=178,slow=33						
PCMB	Pacaembu	20.52	66	eP	P	07 30 48.8	+0.7
TIJ01	Guaruva-PR	20.62	78	eP	P	07 30 47.5	-1.7
SALV	Santo Antonio	21.16	46	eP	P	07 30 55.6	+0.5
VILB	Vilhena	21.20	32	eP	P	07 30 55.7	+0.2
VILB	Vilhena	21.20	32	P	P	07 30 55.6	+0.1
VILB				IAmb	IAmb	07 31 15.8	
	comp=Z,49nm,0.9s						
ETMB	Extrema	22.18	14	eP	P	07 31 07.0	+1.0
ETMB	Extrema	22.18	14	P	P	07 31 07.2	+1.2
ETMB				IAmb	IAmb	07 31 27.3	
	comp=Z,47nm,0.9s						
ITRB	Iturama	22.29	63	eP	P	07 31 07.3	+0.1
BB19B	Bebedouro	22.96	68	eP	P	07 31 15.0	+0.7
RCLB	Rio Claro- Sao	23.08	73	eP	P	07 31 16.4	+0.8
VAO	Valinhos	23.28	74	eP	P	07 31 18.5	+1.0
USHA	Ushuaia	23.34	176	P	P	07 31 17.7	0.0
	comp=Z,168nm,1.5s,baz=36,slow=3.4,SNR=3.9						
USHA				LR	LR	07 39 58.4	
	comp=Z,256nm,19.6s,baz=10.0,slow=35						
CZSB	Cruzeiro do Su	23.76	357	eP	P	07 31 23.5	+1.3
CZSB	Cruzeiro do Su	23.76	357	P	P	07 31 23.5	+1.3
CZSB				IAmb	IAmb	07 31 43.2	
	comp=Z,43nm,0.9s						
SAML	Samuel	23.77	20	P	P	07 31 22.2	0.0
ARAG	Araguaiana, MT	23.83	53	eP	P	07 31 23.3	+0.5
PDRB	Porto dos Gac	24.04	37	eP	P	07 31 24.6	-0.1
IPMB	Ipameri, GO	24.94	63	eP	P	07 31 32.6	-0.4
CLDB	Colider	25.15	38	eP	P	07 31 36.0	+1.1
ATAH	Atahualpa	25.19	343	LR	LR	07 40 33.0	
	comp=Z,119nm,21.8s,baz=158,slow=34						
BSCB	Bom Sucesso	26.01	73	eP	P	07 31 42.6	-0.2
VAS01	Vassouras-RJ	26.51	76	eP	P	07 31 48.2	+1.1
BDFB	Brasilia	26.56	59	P	P	07 31 47.6	-0.2
	comp=Z,34nm,1.0s,baz=236,slow=7.6,SNR=28						
BDFB				LR	LR	07 43 31.6	
	comp=Z,730nm,20.4s,baz=230,slow=39						
BDFB	Brasilia	26.56	59	P	P	07 31 48.0	+0.2
BDFB				IAmb	IAmb	07 31 49.1	
	comp=Z,53nm,1.1s						
SNDB	Serra Nova Dou	26.90	48	eP	P	07 31 50.5	-0.2
TBTG	Tabatinga, AM	27.29	3	eP	P	07 31 44.1	-10
TBTG	Tabatinga, AM	27.29	3	eP	P	07 31 55.0	+0.9
DIAM	Diamantina, MG	28.30	69	eP	P	07 32 03.6	+0.2
NPGB	Novo Progresso	28.63	35	eP	P	07 32 05.0	-1.2
PEXB	Peixe	28.77	53	eP	P	07 32 07.8	+0.3
MC01	Montes Claros	28.98	66	eP	P	07 32 09.2	-0.2
JANB	Januaria	29.68	63	eP	P	07 32 15.1	-0.5
MACA	Manacapuru-AM	30.01	22	eP	P	07 32 18.3	-0.1
MACA	Manacapuru-AM	30.01	22	P	P	07 32 18.6	+0.2
SJMB	Sao Joao De Ma	30.08	72	eP	P	07 32 19.0	0.0
BSFB	Barra de Sao F	30.29	73	eP	P	07 32 20.6	-0.2
RIB01	Linhares ES	30.42	74	eP	P	07 32 22.5	+0.5
ITTB	Itaituba	30.80	32	eP	P	07 32 25.2	-0.2
SDBA	SAO DESIDERIO	30.95	58	eP	P	07 32 26.7	-0.1
NAN01	Guarapari, ES	31.38	72	eP	P	07 32 30.2	-0.3
SMTB	Santa Maria do	31.62	49	eP	P	07 32 33.1	+0.4
GUA01	Guaratinga, BA	32.32	70	eP	P	07 32 38.0	-0.7
PRPB	Parauapebas	32.34	43	eP	P	07 32 38.7	-0.3
OTAV	Otavalo	32.35	347	eP	P	07 32 47.6	+8.1
OTAV	Otavalo	32.35	347	eP	P	07 32 39.0	-0.5
PTGA	Pitinga	32.53	22	P	P	07 32 40.7	+0.1
	baz=202,slow=11						
CMC01	Camacan, BA	33.23	68	eP	P	07 32 46.5	-0.2
MALB	Monte Alegre	33.70	32	eP	P	07 32 50.4	-0.3
GDU01	Guandu, BA	34.13	66	eP	P	07 32 54.3	-0.3
PRAC	Prado	35.26	354	eP	P	07 33 04.4	0.0
BOAV	Boa Vista	35.33	19	eP	P	07 33 04.9	0.0
BOAV	Boa Vista	35.33	19	P	P	07 33 05.4	+0.5
BOAV				IAmb	IAmb	07 33 05.8	
	comp=Z,17nm,0.7s						
ORTC	Ortega, Tolima	35.48	353	eP	P	07 33 06.3	+0.1
VILC	Villavicencio,	35.56	356	eP	P	07 32 54.3	-13
MCPB	Macapa, AP	36.04	34	eP	P	07 33 10.9	-0.1
PLMC	San Jos del P	36.58	352	eP	P	07 33 17.8	+2.0
NORC	Norcasia	37.09	354	eP	P	07 33 19.8	-0.2
ROSB	Rosrio	38.38	47	eP	P	07 33 31.0	+0.1
ZARC	Zaragoza, Cauc	38.99	355	eP	P	07 33 34.5	-1.5
ZARC	Zaragoza, Cauc	38.99	355	P	P	07 33 36.7	+0.7
OCAC	Ocana	39.64	357	P	P	07 33 40.4	-1.1
BAUV	El Baul	40.42	5	P	P	07 33 47.9	+0.1
BAUV				IAmb	IAmb	07 33 48.7	
	comp=Z,28nm,0.9s						
MDP	Montagnes des	40.62	29	P	P	07 33 49.3	-0.2
	comp=Z,23nm,0.8s,baz=210,slow=9.5,SNR=8.0						
SJCC	San Jacinto, C	41.40	354	P	P	07 33 56.5	+0.5
PCRV	Puerto La Cruz	42.02	10	P	P	07 34 01.2	+0.2
	comp=Z,8.5nm,0.8s,baz=153,slow=11,SNR=2.5						
BIRV	Birongo	42.10	8	P	P	07 34 01.9	+0.3
BIRV				IAmb	IAmb	07 34 20.2	
	comp=Z,19nm,1.1s						
URIC	Uribia, Colomb	43.04	359	P	P	07 34 07.2	-2.0
URIC				IAmb	IAmb	07 34 33.2	
	comp=Z,21nm,1.1s						
TOSP	Speyside	43.88	15	P	P	07 34 16.3	+0.3
MLPR	Magueyes Islan	49.44	5	P	P	07 34 58.6	-1.0
CRPR	Cabo Rojo, PR	49.47	5	P	P	07 34 58.6	-1.2
VNA3	Neumayer Olymp	51.39	159	P	P	07 35 14.5	+0.7
VNA3	Neumayer Olymp	51.39	159	pP	pP	07 35 27.0	+3.4
VNA2	Neumayer--Watz	52.03	158	P	P	07 35 19.3	+0.8
	baz=288,slow=8.5						
VNA2	Neumayer--Watz	52.03	158	pP	pP	07 35 31.8	+3.4
SNAA	Sanae	53.62	159	P	P	07 35 30.9	+0.6
SNAA	Sanae	53.62	159	pP	pP	07 35 43.4	+3.2
SNAA	Sanae	53.62	159	P	P	07 35 30.8	+0.6
	comp=Z,14nm,0.9s,baz=279,slow=7.3,SNR=57						
SNAA				pP	sP	07 35 43.0	-0.9
	comp=Z,26nm,0.8s,baz=282,slow=7.5,SNR=27						
SNAA	Sanae	53.62	159	P	P	07 35 30.9	+0.6
QSPA	South Pole Qui	58.65	180	P	P	07 36 07.4	+1.0
QSPA				IAmb	IAmb	07 36 08.3	
	comp=Z,14nm,0.8s						
553A	Crawfordville	62.67	347	P	P	07 36 34.4	+0.5
H06E1	SOCORRO T-PHAS	62.83	317	T	T	08 44 37.5	
352A	Blakely	64.02	347	P	P	07 36 42.4	-0.4
352A				IAmb	IAmb	07 36 43.2	
	comp=Z,17nm,0.9s						
833A	Chaparral WMA,	65.28	333	P	P	07 36 52.0	+0.9
	baz=154						
VBMS	Vicksburg	65.99	342	P	P	07 36 55.7	+0.1
Y52A	Lilburn	66.19	348	P	P	07 36 56.7	-0.2
Y52A				IAmb	IAmb	07 36 57.8	
	comp=Z,19nm,1.0s						
Z47A	Carrollton	66.33	345	P	P	07 36 57.4	-0.4
Z47A				IAmb	IAmb	07 36 58.9	
	comp=Z,14nm,0.8s						
143A	Socs Landing,	66.68	342	P	P	07 37 00.8	+0.8
X51A	Calhoun	67.01	348	P	P	07 37 02.7	+0.6
KMSC	Kings Mountain	67.03	351	P	P	07 37 02.4	+0.2
	baz=171						
JCT	Junction City	67.36	334	P	P	07 37 04.9	+0.4
JCT				IAmb	IAmb	07 37 06.4	
	comp=Z,12nm,1.0s						
CPCT	Cooper Cave	67.81	348	P	P	07 37 07.2	0.0
CPCT				IAmb	IAmb	07 37 08.2	
	comp=Z,12nm,0.8s						
SWET	Sewanee	67.84	347	P	P	07 37 07.4	0.0
SWET				IAmb	IAmb	07 37 08.4	
	comp=Z,23nm,0.9s						
TKL	Tuckaleechee C	67.89	349	P	P	07 37 07.4	-0.2
TKL				IAmb	IAmb	07 37 08.3	
	comp=Z,10nm,0.9s						
TX32	Lajitas Array	67.92	330	P	P	07 37 09.2	+1.1
TXAR	Lajitas Array	67.92	330	P	P	07 37 08.9	+0.8
	comp=Z,2.8nm,0.7s,baz=149,slow=7.6,SNR=37						
TXAR				pP	sP	07 37 20.9	-1.1
	comp=Z,2.3nm,0.7s,baz=156,slow=8.6,SNR=11						
TXAR				LR	LR	08 03 00.5	
	comp=Z,84nm,18.0s,baz=0.0,slow=32						
TXAR	Lajitas Array	67.92	330	P	P	07 37 09.4	+1.3
TX31	Lajitas Ar. Si	67.92	330	P	P	07 37 08.8	+0.7
TX31				IAmb	IAmb	07 37 09.9	
	comp=Z,10nm,0.8s						
X40A	Basin Creek Fa	68.75	341	P	P	07 37 13.9	+0.8
	baz=160						
CLTN	Cedars of Leba	68.76	347	P	P	07 37 12.7	-0.4
CLTN				IAmb	IAmb	07 37 14.2	
	comp=Z,12nm,0.6s						
MIAR	Mount Ida	69.02	340	P	P	07 37 15.9	+1.1
MIAR				IAmb	IAmb	07 37 16.1	
	comp=Z,14nm,1.4s						
WVT	Waverly	69.10	346	P	P	07 37 15.2	0.0
ABTX	Abilene, Hawle	69.22	335	P	P	07 37 16.7	+0.6
	baz=154						
W41B	Gary Mavity, V	69.24	342	P	P	07 37 16.6	+0.6
	baz=161						
S57A	Dark Hollow, R	69.35	354	P	P	07 37 17.0	+0.3
S57A				IAmb	IAmb	07 37 17.7	
	comp=Z,8.4nm,0.8s						
WHAR	Wooly Hollow	69.36	342	P	P	07 37 17.3	+0.4
WHAR				IAmb	IAmb	07 37 18.1	
	comp=Z,10nm,1.1s						
W39A	Magazine	69.69	341	P	P	07 37 19.7	+0.9
	baz=160						
LCAR	Lake Charles	69.81	343	P	P	07 37 19.6	0.0
PARMO	Parma	70.04	344	P	P	07 37 21.2	+0.2
U40A	Yellville	70.52	342	P	P	07 37 23.9	0.0
U40A				IAmb	IAmb	07 37 25.0	
	comp=Z,14nm,0.8s						
U40A	Yellville	70.52	342	P	P	07 37 24.5	+0.5
	baz=161						
MNTX	Cornudas Mount	70.70	330	P	P	07 37 25.2	+0.1
WCI	Wyandotte Cave	70.83	348	P	P	07 37 24.6	-1.2
WCI				IAmb	IAmb	07 37 26.5	
	comp=Z,10nm,0.8s						
TUL1	Leonard	70.94	339	P	P	07 37 26.9	+0.4
	baz=158						
P52A	Corning	71.56	351	P	P	07 37 30.0	-0.2
	baz=170						
MSTX	Muleshoe	71.60	333	P	P	07 37 31.5	+0.8
	baz=152						
P49A	Miami Univ. Ec	71.83	349	P	P	07 37 31.3	-0.5
	baz=168						
SSPA	Standing Stone	72.11	355	P	P	07 37 33.8	+0.4
SSPA				IAmb	IAmb	07 37 52.2	
	comp=Z,15nm,1.3s						
N59A	State Game Lan	72.25	357	P	P	07 37 35.5	+1.2
	baz=176						
121A	Cookes Peak, D	72.47	328	P	P	07 37 38.0	+2.0
	baz=148						
N54A	Moraine State	72.62	353	P	P	07 37 36.8	+0.3
	baz=172						
LIC	Lamto	73.48	72	eP	P	07 37 42.1	-0.2
	comp=Z,55nm,0.8s						
TIC	Toumodi	73.73	71	eP	P	07 37 43.4	-0.3
KIC	Kosan Boka	73.80	72	eP	P	07 37 44.2	+0.1
	comp=Z,53nm,0.7s						
DBIC	Dimbokro	73.88	72	P	P	07 37 44.8	+0.2
	comp=Z,25nm,0.7s,baz=234,slow=5.5,SNR=38						
DBIC				LR	LR	08 06 45.4	
	comp=Z,95nm,21.9s,baz=224,slow=33						
DBIC	Dimbokro	73.88	72	P	P	07 37 44.9	+0.3
ANMO	Albuquerque	73.94	331	P	P	07 37 45.1	+0.4
T25A	Trinidad	75.02	333	P	P	07 37 52.6	+1.7
	baz=151						
MAW	Mawson	75.33	164	P	P	07 37 52.2	+0.1
	comp=Z,9.0nm,0.9s,baz=209,slow=6.1,SNR=11						
MAW				LR	LR	08 13 58.5	
	comp=Z,61nm,18.2s,baz=239,slow=38						
MAW	Mawson	75.33	164	P	P	07 37 52.4	+0.2
SUR	Sutherland	75.51	119	P	P	07 37 55.3	+1.1
SUR				IAmb	IAmb	07 38 22.8	
	comp=Z,16nm,1.1s						
SDCO	Great Sand Dun	75.97	333	P	P	07 37 57.0	+0.5
S22A	4UR Ranch, Cre	76.50	332	P	P	07 38 00.5	+1.0
	baz=150						
Q24A	Divide	76.90	334	P	P	07 38 02.8	+1.1
	baz=151						
BC3	Big Chuckawall	77.06	323	P	P	07 38 03.9	+1.4
	baz=143						
GMRC	Granite Mounta	78.06	324	P	P	07 38 09.2	+1.1
	baz=143						
ECSD	EROS Data Cent	78.43	342	P	P	07 38 10.2	+0.4
ECSD				IAmb	IAmb	07 38 11.0	
	comp=Z,19nm,0.9s						
HEC	Hector,Ludlow	78.43	324	P	P	07 38 12.1	+2.0
	baz=142						
BFSC	Mount Baldy Ra	78.65	322	P	P	07 38 13.2	+1.8
	baz=141						
SPMN	Marine on St.	78.89	345	P	P	07 38 11.8	-0.5
	baz=162						
GSC	Goldstone, Bar	79.04	324	P	P	07 38 14.9	+1.5
	baz=142						
O20A	White River Ci	79.11	332	P	P	07 38 14.9	+1.0
	baz=149						
KOWA	Kowa	79.13	66	P	P	07 38 14.6	+0.4
	comp=Z,16nm,0.6s,baz=233,slow=5.0,SNR=57						
KOWA				pP	sP	07 38 27.4	-1.0
	comp=Z,6.1nm,0.6s,baz=228,slow=5.6,SNR=6.5						
KOWA				sP	pP	07 38 32.6	+8.0
	comp=Z,9.7nm,0.7s,baz=222,slow=18,SNR=6.1						
KOWA	Kowa	79.13	66	P	P	07 38 14.7	+0.5
KOWA				IAmb	IAmb	07 38 15.6	
	comp=Z,19nm,0.8s						
EDW2	Edwards Air Fo	79.32	323	P	P	07 38 15.9	+1.0
	baz=141						
LRMC	Laurel Mtn Rad	79.63	323	P	P	07 38 18.1	+1.4
	baz=141						
MPMC	Manual Prospec	79.98	324	P	P	07 38 19.5	+0.8
	baz=142						
FURC	Furnace Creek,	79.98	324	P	P	07 38 19.3	+0.9
	baz=142						
ISA	Isabella, Lake	80.18	323	P	P	07 38 20.8	+1.2
	baz=141						
PKM	Mcpherson Peak	80.29	321	P	P	07 38 21.6	+1.3
	baz=140						
CWC	Cottonwood Cre	80.58	323	P	P	07 38 23.1	+1.2
	baz=141						
K22A	Casper	80.62	335	P	P	07 38 23.1	+1.2
	baz=150						

VES	Vestal, Richgr	80.63	322	P	P	07 38 23.3	+1.4
	baz=140						
BOSA	Boshof	80.70	118	P	P	07 38 22.6	-0.3
	comp=Z,7.9nm,0.8s,baz=260,slow=3.8,SNR=15						
BOSA				LR	LR	08 12 15.4	
	comp=Z,35nm,18.2s,baz=234,slow=34						
BOSA	Boshof	80.70	118	P	P	07 38 23.3	+0.5
BOSA				IAmb	IAmb	07 38 24.2	
	comp=Z,8.5nm,0.8s						
R11A	Troy Canyon, C	80.85	326	P	P	07 38 24.4	+1.1
	baz=143						
HWUT	Hardware Ranch	81.71	331	P	P	07 38 25.9	-1.9
PDAR	Pinedale Array	81.87	333	P	P	07 38 28.9	+0.2
	comp=Z,1.3nm,0.9s,baz=134,slow=4.3,SNR=7.6						
PDAR				LR	LR	08 11 21.5	
	comp=Z,45nm,19.1s,baz=154,slow=33						
PDAR	Pinedale Array	81.87	333	P	P	07 38 29.1	+0.5
B35A	Bob, Littlefor	82.06	345	P	P	07 38 28.7	-0.5
B35A				IAmb	IAmb	07 38 42.3	
	comp=Z,12nm,0.8s						
LBTB	Lobatse	82.81	115	P	P	07 38 34.2	+0.2
LBTB				IAmb	IAmb	07 38 34.7	
	comp=Z,14nm,0.7s						
TORD	Torodi Ar. Bea	82.86	70	P	P	07 38 34.2	+0.1
	comp=Z,16nm,0.8s,baz=266,slow=5.2,SNR=91						
TORD				LR	LR	08 12 10.9	
	comp=Z,86nm,21.5s,baz=340,slow=33						
MDND	Maddock	83.03	341	P	P	07 38 35.1	+0.8
	baz=156						
ULM	Lac du Bonnet	84.32	344	P	P	07 38 40.1	-0.6
	comp=Z,5.8nm,0.8s,baz=167,slow=5.5,SNR=6.1						
ULM				pP	pP	07 38 52.2	+1.0
	comp=Z,5.8nm,0.7s,baz=134,slow=3.7,SNR=5.0						
MCMT	McKenzie Canyo	84.90	332	P	P	07 38 45.4	+1.1
PLID	Pearl Lake	86.42	330	P	P	07 38 52.2	+0.5
M04C	Macdoel	86.54	325	P	P	07 38 52.6	+0.3
	baz=139						
M02C	Callahan	86.75	324	P	P	07 38 53.6	+0.4
	baz=138						
J05D	Fort Rock, OR	87.38	326	P	P	07 38 57.2	+0.8
	baz=139						
I05D	Terrebonne, OR	88.22	327	P	P	07 39 01.8	+1.6
	baz=139						
ESDC	Sonseca Array	94.50	46	P	P	07 39 29.4	-0.1
	comp=Z,1.1nm,0.9s,baz=228,slow=5.0,SNR=5.5						
ESDC				LR	LR	08 21 00.7	
	comp=Z,29nm,18.9s,baz=275,slow=35						
ASAR	Alice Springs	119.97	207	PKP	PKPdf	07 44 59.0	-1.3
	comp=Z,0.9nm,0.5s,baz=137,slow=1.7,SNR=13						
ASAR				pPKP	pPKPdf	07 45 12.1	+1.1
	comp=Z,0.8nm,0.5s,baz=128,slow=1.6,SNR=6.1						
ASAR				PKKPbc	PKKPbc	07 55 08.6	0.0
	comp=Z,0.5nm,0.6s,baz=344,slow=1.8,SNR=5.9						
ASAR	Alice Springs	119.97	207		PKPdf	07 44 58.4	-1.9
AKASG	Malin Array Be	120.14	46	PKP	PKPdf	07 44 58.1	-1.4
	comp=Z,0.4nm,0.3s,baz=253,slow=2.9,SNR=4.7						
BRTR	Keskin Array B	120.15	59	PKP	PKPdf	07 44 59.3	-0.9
	comp=Z,1.3nm,0.8s,baz=224,slow=2.1,SNR=4.9						
BRTR	Keskin Array B	120.15	59		PKPdf	07 44 58.5	-1.7
WRA	Warramunga Arr	123.14	209	PKP	PKPdf	07 45 05.5	-1.0
	comp=Z,3.1nm,0.5s,baz=164,slow=1.5,SNR=16						
WRA				pPKP	sPKPdf	07 45 19.0	-1.8
	comp=Z,1.9nm,0.5s,baz=161,slow=1.8,SNR=7.7						
H11S2	WAKE ISLAND Hy	126.34	271	T	T	10 04 05.3	
	baz=117,slow=75,SNR=252						
H11S1	WAKE ISLAND Hy	126.35	271	T	T	10 04 04.6	
	baz=117,slow=75,SNR=234						
H11S3	WAKE ISLAND Hy	126.35	271	T	T	10 04 06.6	
	baz=117,slow=75,SNR=218						
H11N3	WAKE ISLAND Hy	126.69	272	T	T	10 04 28.1	
	baz=116,slow=75,SNR=135						
H11N1	WAKE ISLAND Hy	126.70	272	T	T	10 04 29.2	
	baz=116,slow=75,SNR=38						
H11N2	WAKE ISLAND Hy	126.70	272	T	T	10 04 29.4	
	baz=116,slow=75,SNR=217						
KLMR	Klimovskoe	127.12	35	*e*PKPdf	PKPdf	07 45 11.4	-1.2
KLMR				AMP		07 45 27.3	
	comp=Z,18nm,1.5s						
ARU	Arti	137.54	39	PKP	PKPdf	07 45 32.5	+0.1
	comp=Z,1.7nm,0.2s,baz=157,slow=22,SNR=3.4						
ARU	Arti	137.54	39		PKPdf	07 45 31.5	-0.9
BVAR	Borovoye Array	145.11	41	PKPbc	PKPdf	07 45 46.6	+0.4
	comp=Z,20nm,0.5s,baz=238,slow=10,SNR=50						
BVAR				pPKPbc	sPKPdf	07 46 00.0	-0.6
	comp=Z,8.3nm,0.5s,baz=248,slow=7.8,SNR=9.2						
YAK	Yakutsk	146.63	342	PKPbc	PKPbc	07 45 49.4	-0.6
	comp=Z,27nm,0.5s,baz=298,slow=0.6,SNR=17						
HYB	Hyderabad	149.34	110	*i* PKP	PKPbc	07 45 58.5	-0.2
EKS2	Erkin-Say	150.29	58	P	PKiKP	07 46 01.2	0.0
	SNR=13						
AML	Almayashu	150.32	59	P	PKiKP	07 46 01.3	-0.3
	SNR=8.3						
USP	Ospenovka	150.69	57	P	PKPbc	07 46 01.5	+0.2
	SNR=9.1						
UCH	Uchtor	150.90	59	P	PKiKP	07 46 03.0	+0.1
	SNR=19						
TKM2	Tokmak 2	151.55	57	P	PKiKP	07 46 03.8	-0.1
	SNR=10						
ZALV	Zalesovo Beam	151.88	30	PKP	PKPdf	07 45 56.8	-0.3
	comp=Z,1.5nm,0.7s,baz=323,slow=2.2,SNR=6.8						
ZALV				PKPbc	PKPbc	07 46 03.6	+0.1
	comp=Z,31nm,0.5s,baz=311,slow=3.1,SNR=90						
ZALV				pPKPbc	sPKPbc	07 46 16.8	-1.2
	comp=Z,13nm,0.6s,baz=297,slow=3.3,SNR=8.7						
ZALV	Zalesovo Beam	151.88	30	PKPdf	PKPdf	07 45 57.5	+0.5
ZALV					PKPbc	07 46 03.3	-0.2
ULHL	Ulahol	152.16	58	P	PKiKP	07 46 05.7	+0.6
	SNR=5.6						
KSH	Kashi	152.39	64	PKPbc	PKPbc	07 46 05.1	-0.3
KSH				pPKP	PKPab	07 46 15.0	-0.6
MKAR	Makanchi Array	154.72	46	PKPbc	PKPbc	07 46 09.8	-0.3
	comp=Z,3.1nm,0.8s,baz=296,slow=2.1,SNR=12						
MKAR				PKPab	PKPab	07 46 25.5	+0.5
	comp=Z,6.4nm,0.7s,baz=294,slow=4.2,SNR=17						
MKAR				pPKPab	sPKPab	07 46 38.4	-0.9
	comp=Z,2.2nm,0.6s,baz=292,slow=4.1,SNR=3.8						
MKAR	Makanchi Array	154.72	46	PKPdf	PKPdf	07 45 59.1	-2.4
MKAR					PKPbc	07 46 09.6	-0.5
MKAR				PKPab	PKPab	07 46 25.6	+0.5
SONM	Songino Array	163.68	5	PKPab	PKPab	07 47 04.4	+0.5
	comp=Z,0.7nm,0.6s,baz=331,slow=5.2,SNR=4.4						
SONM	Songino Array	163.68	5	PKPdf	PKPdf	07 46 10.1	-1.9
SONM					PKPab	07 47 01.9	-2.0
CMAR	Chiang Mai Arr	164.27	144	PKP	PKPdf	07 46 13.6	+0.3
	comp=Z,1.1nm,0.3s,baz=253,slow=2.9,SNR=6.7						
CMAR				PKPab	PKPab	07 47 06.7	-0.5
	comp=Z,1.2nm,0.3s,baz=243,slow=6.3,SNR=8.1						
CMAR	Chiang Mai Arr	164.27	144		PKPdf	07 46 12.6	-0.7
CMAR				PKPab	PKPab	07 47 05.5	-1.7
GTA	Gaotai	169.39	40	*e*PKPbc	PKPdf	07 46 17.5	+0.8
GTA				pPKP	sPKPdf	07 46 30.8	-0.4
GTA				sPKP		07 46 38.9	
GTA				PKPab	PKPab	07 47 30.4	+0.9
HHC	Hu-ho-hao-te	170.45	346	*e*P	PKPdf	07 46 18.0	+0.8
NJ2	Nanjing	171.28	276	*e*P	PKPdf	07 46 18.0	+0.3
LZH	Lanzhou	174.00	40	*e*PKP	PKPdf	07 46 13.7	-5.3

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*MDD **01** 07:29:10.6±0.3, 36°.21N×3°.40W, h0^{km}, mbLg2.6/12, Error ellipse: s-maj=4.0km s-min=2.3km az=48.0, PRXIMO*
*INMG **01** 07:29:10.4±1.4, 36°.17N×3°.45W, h0^{km}, ML2.1, Error ellipse: s-maj=3.1km s-min=2.1km az=57.0*
*CNRM **01** 07:29:12.6, 36°.06N×3°.40W, h58^{km}, ml2.1*
ISC 01 07:29:09.6±1.4, **36°.15N**±0°.02×**3°.38W**±0°.03, **h14**^{km}±11^{km}, **n61**, σ1^s**22**/95, **1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EALB	Alboran	0.35	126	⇓Pg	Pb	07 29 18.1	+0.6
	98nm,0.1s,SNR=18						
EALB				Lg	Lg	07 29 23.3	
	1μm,0.2s,SNR=33						
ELGU	Los Guajares,	0.75	345	Pg	Pg	07 29 23.3	-0.8
	4.9nm,0.2s,SNR=7.9						
ELGU				Lg	Lg	07 29 32.7	
	156nm,0.1s,SNR=7.9						
EBER	Berja	0.85	28	Pg	Pg	07 29 25.7	-0.4
	6.5nm,0.1s,SNR=7.9						
EBER				Lg	Lg	07 29 36.5	
	131nm,0.3s,SNR=7.9						
EMEL	Melilla	0.91	158	Pg	Pb	07 29 27.4	+0.2
	48nm,0.2s,SNR=7.9						
EMEL				Lg	Lg	07 29 40.4	
	74nm,0.2s,SNR=7.9						
GOG	Mont Gurugu	0.97	161	P	Pg	07 29 28.4	0.0
GOG				S	Sb	07 29 41.8	+0.8
PALE	Palemas	1.03	206	P	Pn	07 29 29.9	+0.2
PALE				S	Sn	07 29 43.9	0.0
EMAL	Malaga-Limoner	1.05	306	P	Pb	07 29 29.6	+0.1
EMAL				S	Sb	07 29 43.5	+0.4
EMAL	Malaga-Limoner	1.05	306	Pg	Pb	07 29 29.6	+0.1
EMAL				Lg	Lg	07 29 43.5	
EGOR	Sierra Gorda,	1.13	329	Pg	Pb	07 29 29.2	-1.8
	0.3nm,0.1s,SNR=7.9						
EGOR				Lg	Lg	07 29 44.3	
	28nm,0.3s,SNR=7.9						
EMIJ	Mijas	1.20	291	Pg	Pn	07 29 30.4	-1.6
	0.6nm,0.2s,SNR=14						
EMIJ				Lg	Lg	07 29 46.2	
	42nm,0.2s,SNR=15						
CHAS	Isla Isabel II	1.23	141	P	Pn	07 29 31.4	-1.0
CHAS				S	Sb	07 29 46.3	-2.1
ENIJ	Nijar	1.25	48	Pg	Pn	07 29 31.4	-1.3
	3.1nm,0.1s,SNR=7.9						
ENIJ				Lg	Lg	07 29 47.9	
	58nm,0.2s,SNR=7.9						
TAF	Taforalt	1.54	149	P	Pn	07 29 37.0	+0.2
TAF				S	Sn	07 29 55.4	-1.2
CEU	Ceuta	1.64	262	S	Sn	07 29 54.8	-3.9
EQES	Quesada	1.67	8	Pg	Pb	07 29 40.4	+0.2
	3.9nm,0.2s,SNR=22						
EQES				Lg	Lg	07 30 02.3	
	62nm,0.2s,SNR=14						
SMIR	Smir Dam	1.69	255	P	Pb	07 29 41.0	+0.5
SMIR				S	Sn	07 29 59.6	-0.4
CHEFC	Chefchaouen	1.91	238	P	Pn	07 29 43.3	+1.6
CHEFC				S	Sn	07 30 04.7	-0.9
JBK	JBK	1.93	160	P	Pn	07 29 42.6	+0.6
JBK				S	Sn	07 30 05.7	-0.5
SESP	Santiago Espad	2.08	18	Pg	Pb	07 29 46.7	-0.6
	0.0nm,0.3s,SNR=7.9						
SESP				Sn	Sn	07 30 11.6	+1.6
	4.5nm,0.1s,SNR=7.9						
EADA	Adamuz	2.23	335	Pn	Pn	07 29 47.1	+0.9
	1.0nm,0.1s,SNR=7.9						
EADA				Pg	Pb	07 29 50.4	+0.7
	2.2nm,0.1s,SNR=7.9						
EADA				Sn	Sn	07 30 13.5	-0.1
	1.9nm,0.1s,SNR=7.9						
EADA				Lg	Lg	07 30 18.6	
	7.1nm,0.2s,SNR=7.9						
EMUR	La Murta	2.41	45	Pn	Pn	07 29 50.0	+1.4
	0.7nm,0.2s,SNR=7.9						
EMUR				Sn	Sn	07 30 17.1	-0.8
	1.2nm,0.3s,SNR=7.9						
ECAB	El Cabril	2.52	320	Pn	Pn	07 29 50.6	+0.4
	0.4nm,0.2s,SNR=7.9						
ECAB				Pg	Pb	07 29 56.3	+1.6
	3.3nm,0.5s,SNR=7.9						
ECAB				Sn	Sn	07 30 20.4	-0.3
	0.2nm,0.1s,SNR=7.9						
ECAB				Lg	Lg	07 30 28.6	
	5.8nm,0.3s,SNR=7.9						
ETOB	Tobarra	2.89	30	Pn	Pn	07 29 57.4	+2.2
	2.0nm,0.2s,SNR=13						
ETOB				Sn	Sn	07 30 30.7	+0.9
	1.1nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	3.10	303	Pn	Pn	07 29 59.0	+1.0
	0.4nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	07 30 33.9	-0.9
	0.6nm,0.1s,SNR=7.9						
MD31	MD31	3.46	200	P	Pn	07 30 02.8	-0.4
MD31				S	Sn	07 30 43.3	-0.7
PAB	San Pablo	3.48	348	Pn	Pn	07 30 03.9	+0.5
	0.1nm,0.2s,SNR=7.9						
PAB				Lg	Lg	07 30 58.4	
	1.7nm,0.4s,SNR=7.9						
ESDC	Sonseca Array	3.55	353	Lg	Lg	07 31 01.2	
	baz=166,slow=27,SNR=7.9						
EGRO	El Granado	3.57	294	Pn	Pn	07 30 04.8	+0.2
	0.1nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	07 30 45.6	-1.0
	0.8nm,0.1s,SNR=7.9						
PVAQ	Vaqueiros	3.70	291	*e*Pn	Pn	07 30 08.0	+1.7
PVAQ				*e*Sn	Sn	07 30 48.5	-1.3
PVAQ				A	A	07 30 53.8	
	3.6nm,0.4s						
PVAQ	Vaqueiros	3.70	291	Pn	Pn	07 30 08.0	+1.7
PVAQ				Sn	Sn	07 30 48.5	-1.3
	3.6nm,0.4s						
PVAQ	Vaqueiros	3.70	291	P	Pn	07 30 08.2	+1.9
PVAQ				S	Sn	07 30 49.5	-0.2
ZHG	ZHG	3.80	226	P	Pn	07 30 09.5	+1.7
ZHG				S	Sn	07 30 53.5	+1.2
PBDV	Barranco-do-Ve	3.82	288	*e*Pn	Pn	07 30 09.1	+1.1
PBDV				*e*Sn	Sn	07 30 52.0	-0.7
PBDV				A	A	07 31 00.0	
	3.8nm,1.0s						
PBDV	Barranco-do-Ve	3.82	288	Pn	Pn	07 30 09.1	+1.1
PBDV				Sn	Sn	07 30 52.0	-0.7
	3.8nm,1.0s						
EBAD	Badajoz	3.89	313	Pn	Pn	07 30 09.2	+0.3
	0.2nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	07 30 53.6	-0.9
	0.9nm,0.2s,SNR=7.9						
PCVE	Castro Verde	4.02	293	*e*Pn	Pn	07 30 11.8	+1.1
PCVE				*e*Sn	Sn	07 30 57.1	-0.5
PCVE				A	A	07 30 58.7	
	2.6nm,0.9s						
PCVE	Castro Verde	4.02	293	Pn	Pn	07 30 11.8	+1.1
PCVE				Sn	Sn	07 30 57.1	-0.5
	2.6nm,0.9s						
MESJ	Messejana	4.23	295	*e*Pn	Pn	07 30 15.0	+1.4
MESJ				*e*Sn	Sn	07 31 00.8	-1.9
MESJ				A	A	07 31 08.8	
	2.3nm,0.3s						
MESJ	Messejana	4.23	295	Pn	Pn	07 30 15.0	+1.4
MESJ				Sn	Sn	07 31 00.8	-1.9
	2.3nm,0.3s						
PESTR	Estremoz	4.31	310	*e*Pn	Pn	07 30 17.6	+2.9
MORF	Marmelete	4.39	287	*e*Sn	Sn	07 31 06.8	0.0
MORF	Marmelete	4.39	287	Sn	Sn	07 31 06.8	0.0
EVO	Evora	4.39	304	S	Sn	07 31 05.6	-1.2
EVO	Evora	4.39	304	*e*Pn	Pn	07 30 16.8	+0.9
EVO				*e*Sn	Sn	07 31 05.7	-1.1
EVO				A	A	07 31 09.8	
	2.5nm,0.3s						
EVO	Evora	4.39	304	Pn	Pn	07 30 16.8	+0.9
EVO				Sn	Sn	07 31 05.7	-1.1
	2.5nm,0.3s						
PFVI	Vila Bisbo	4.49	284	*e*Pn	Pn	07 30 17.4	+0.2
PNCL	Nicolau / Gran	4.56	297	*e*Pn	Pn	07 30 19.3	+1.2
PNCL				*e*Sn	Sn	07 31 10.1	-0.8
PNCL	Nicolau / Gran	4.56	297	Pn	Pn	07 30 19.3	+1.2
PNCL				Sn	Sn	07 31 10.1	-0.8
PMRV	Marv??o	4.56	317	*e*Pn	Pn	07 30 19.9	+1.7
PMRV	Marv??o	4.56	317	Pn	Pn	07 30 19.9	+1.7
PMTG	Montargil	4.83	309	*e*Pn	Pn	07 30 23.9	+2.1
PMTG				*e*Sn	Sn	07 31 15.8	-1.7
PMTG	Montargil	4.83	309	Pn	Pn	07 30 23.9	+2.1
PMTG				Sn	Sn	07 31 15.8	-1.7
PCBR	Castelo Branco	4.91	320	*e*Pn	Pn	07 30 23.9	+1.0
PCBR	Castelo Branco	4.91	320	Pn	Pn	07 30 23.9	+1.0
MTE	Manteigas	5.36	324	*e*Pn	Pn	07 30 29.9	+0.7
MTE	Manteigas	5.36	324	Pn	Pn	07 30 29.9	+0.7
PSBE	So Bento	5.45	310	*e*Pn	Pn	07 30 31.3	+0.9
MVO	Moncorvo	5.77	331	*e*Pn	Pn	07 30 35.7	+0.9
MVO	Moncorvo	5.77	331	Pn	Pn	07 30 35.8	+1.0
	0.9nm,0.1s,SNR=7.9						
PBRG	Braganca	6.23	336	*e*Pn	Pn	07 30 42.2	+1.1
PBRG	Braganca	6.23	336	Pn	Pn	07 30 42.2	+1.1

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*IDC **01** 07:45:10.9±1.5, 39°.44N×143°.46E, h0^{km}, mb3.7/7, mb1 3.8/9, mb1mx3.6/37, mbtmp3.7/9, ML3.2/2, MS3.0/4, Ms1 3.0/4, ms1mx2.6/38, Error ellipse: s-maj=33.8km s-min=24.1km az=114.0*
*NIED **01** 07:45:11.6, 39°.47N×143°.62E, h22^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.38; $M_{\theta\theta}$0.95; $M_{\phi\phi}$-3.33; $M_{r\theta}$2.90; $M_{\theta\phi}$-1.29; $M_{\phi r}$2.26; Fault plane solution: $M_0$4.90000×10^{14} NP1:ϕ_s44.00000°, δ73.00000°, λ116.00000°. NP2:ϕ_s165.00000°, δ31.00000°, λ34.00000°.*
*JMA **01** 07:45:11.6±0.2, 39°.47N×143°.62E, h22^{km}±4^{km}, M3.9*
ISC 01 07:45:10.2±0.9, **39°.47N**±0°.04×**143°.49E**±0°.06, **h11**^{km}, **n33**, σ**2**^{s}**24**/30, **mb3.8**/7, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	1.30	275	P	Pg	07 45 36.0	+0.9
MIYJ				*e*S	Sg	07 45 53.6	+1.6
JTH	Tanohata	1.34	291	P	Pg	07 45 36.8	+0.8
OFUJ	Ofunato	1.47	255	P	Pg	07 45 38.5	+0.1
JOM	Ohasama	1.70	271	P	Pg	07 45 42.3	-0.6
JOM				*e*S	Sg	07 46 04.1	-0.8
JANG	Nango	1.77	301	P	Pg	07 45 42.5	-1.6
JANG				*e*S	Sg	07 46 05.6	-1.5
JMK	Ichinoseki	1.84	254	P	Pg	07 45 44.2	-1.3
JMK				*e*S	Sg	07 46 06.7	-2.6
JIO	Ouri	1.95	239	P	Pg	07 45 45.2	-2.5
JRG	Rokugo	2.21	269	P	Pg	07 45 49.8	-2.9
JRG				*e*S	Sb	07 46 17.8	+0.1
JTM	Tenmabayashi	2.28	306	P	Pb	07 45 50.3	-1.0
JYK	Kaneyama	2.50	258	P	Pb	07 45 53.7	-1.3
JOT	Ohata	2.67	317	*e*S	Sb	07 46 28.1	-2.7
JNBK	Urakawa-nobuka	2.87	349	P	Pb	07 45 58.7	-2.6
JNBK				*e*S	Sb	07 46 32.7	-3.7
JCH	Churui	3.15	358	P	Pb	07 46 01.8	-4.3
JCH				S	Sn	07 46 37.6	+0.4
JFT	Otama	3.15	233	P	Pb	07 46 02.5	-3.7
ASAJ	Asahikawa	4.69	352	Pn	Pn	07 46 23.5	+2.6
	1.3nm,0.3s,baz=209,slow=17,SNR=8.6						
ASAJ				Sn	Sn	07 47 14.9	-0.5
	0.9nm,0.3s,baz=96,slow=17,SNR=2.1						
MJAR	Matsushiro Arr	5.09	237	Pn	Pn	07 46 28.8	+2.3
	0.3nm,0.3s,baz=40,slow=12,SNR=17						
MJAR				LR	LR	07 48 19.8	
	comp=Z,29nm,18.6s,baz=5.0,slow=38						
MAT	Matsushiro	5.09	237	P	Pn	07 46 30.4	+3.9
KSRS	Korea Array	12.37	266	LR	LR	07 52 15.9	
	comp=Z,34nm,18.5s,baz=76,slow=34						
JCJ	Chichijima	12.39	185	Pn	Pn	07 48 04.4	-2.1
	1.1nm,0.3s,baz=228,slow=16,SNR=1.6						
SEY	Seymchan	24.10	10	P	P	07 50 28.4	+2.9
	1.1nm,0.2s,baz=163,slow=10,SNR=3.7						
SONM	Songino Array	27.89	300	P	P	07 51 02.2	+2.0
	0.8nm,0.7s,baz=99,slow=9.5,SNR=4.6						
SONM				LR	LR	08 02 02.3	
	comp=Z,28nm,18.1s,baz=105,slow=36						
H11N2	WAKE ISLAND Hy	28.16	128	T	T	08 20 41.8	
	baz=319,slow=74						
H11N1	WAKE ISLAND Hy	28.17	128	T	T	08 20 36.1	
	baz=319,slow=74						
H11N3	WAKE ISLAND Hy	28.18	128	T	T	08 20 31.8	
	baz=319,slow=74						
H11S1	WAKE ISLAND Hy	28.97	129	T	T	08 21 40.1	
	baz=321,slow=76,SNR=5.4						
H11S3	WAKE ISLAND Hy	28.98	130	T	T	08 21 40.5	
	baz=321,slow=76,SNR=4.1						
H11S2	WAKE ISLAND Hy	28.99	129	T	T	08 21 38.1	
	baz=321,slow=76,SNR=4.0						
ZALV	Zalesovo Beam	41.53	310	P	P	07 52 58.9	+1.6
	1.1nm,0.5s,baz=97,slow=7.8,SNR=4.0						
MKAR	Makanchi Array	44.26	300	P	P	07 53 21.7	+2.1
	1.3nm,0.9s,baz=94,slow=6.7,SNR=4.1						
ILAR	Eielson Array	46.57	34	P	P	07 53 40.3	+2.7
	0.3nm,0.9s,baz=243,slow=6.0,SNR=1.8						
BVAR	Borovoye Array	50.17	311	P	P	07 54 08.3	+2.7
	0.9nm,0.5s,baz=76,slow=6.1,SNR=3.0						
WRA	Warramunga Arr	59.72	190	P	P	07 55 16.7	+1.8
	0.2nm,0.5s,baz=10,slow=4.3,SNR=0.9						
BRTR	Keskin Array B	78.45	312	LR	LR	08 37 37.3	
	comp=Z,61nm,18.5s,baz=259,slow=40						

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*FUNV **01** 07:46:03.7, 8°.47N×71°.38W, h5^{km}, MW3.3*
ISC 01 07:46:03.9±1.2, **8°.48N**±0°.04×**71°.37W**±0°.03, **h10**^{km}±10^{km}, **n17**, σ**1**^{s}**00**/31, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.55	111	*e*P	Pg	07 46 14.5	-0.1
SOCV				*e*S	Sg	07 46 22.5	+0.7
SOCV	Socops	0.55	111	*e*P	Pg	07 46 14.4	-0.1
SOCV				*e*S	Sg	07 46 22.8	+1.0
SDV	Santo Domingo	0.83	61	*e*P	Pg	07 46 19.9	-0.1
SDV				*e*S	Sg	07 46 31.4	+0.5
CAPV	Capacho	1.11	237	*e*P	Pg	07 46 23.5	-1.8
CAPV				*e*S	Sg	07 46 39.7	-0.2
PAMC	Pamplona, Colo	1.74	229	*e*P	Pb	07 46 36.2	0.0
PAMC				*e*S	Sg	07 47 00.5	+0.7
MCQV	Machiques	1.94	324	*e*P	Pn	07 46 37.6	+0.7
MCQV				*e*S	Sn	07 47 02.3	+0.9
OCAC	Ocana	1.94	263	*e*P	Pn	07 46 37.3	+0.2
OCAC				*e*S	Sn	07 47 02.8	+1.1
SANV	Sanarito	2.08	61	*e*P	Pn	07 46 39.7	+0.7
SANV				*e*S	Sn	07 47 05.8	+0.8
ELOV	Elorza	2.38	128	*e*P	Pn	07 46 42.9	-0.1
ELOV				*e*S	Sn	07 47 12.0	-0.2
SIQV	Siquisique	2.65	35	*e*P	Pn	07 46 46.9	+0.1
SIQV				*e*S	Sn	07 47 18.9	-0.2
MAPV	Macapo	3.17	65	*e*P	Pn	07 46 53.8	-0.2
MAPV				*e*S	Sn	07 47 31.8	-0.2
BAUV	El Baul	3.32	82	*e*P	Pn	07 46 56.6	+0.6
BAUV				*e*S	Sn	07 47 34.5	-1.1
PTBC	PUERTO BERRIO,	3.62	238	*e*P	Pn	07 46 59.2	-0.8
PTBC				*e*S	Sn	07 47 45.7	+2.9
MONV	Montecano	3.72	22	*e*P	Pn	07 47 01.4	0.0
MONV				*e*S	Sn	07 47 43.7	-1.6
BENV	Beln	4.00	68	*e*P	Pn	07 47 05.8	+0.4
BENV				*e*S	Sn	07 47 50.7	-1.8
CACV	CAICARA DEL OR	4.87	100	*e*P	Pb	07 47 24.5	-4.9
BIRV	Birongo	5.41	68	*e*P	Pn	07 47 23.9	-0.8

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*RSPR **01** 08:22:12.1, 18°.26N×68°.97W, h157^{km}±6^{km}, MD3.8/8*
*NEIC **01** 08:22:13.4±1.9, 18°.4N±0°.3×68°.92W±0°.09, h153^{km}±16^{km}, Error ellipse: s-maj=48.0km s-min=4.5km az=193.0*
*OSPL **01** 08:22:14.7±0.8, 17°.60N×68°.96W, h7^{km}±25^{km}, ML2.6*
ISC 01 08:22:14.2±1.3, **18°.4N**±0°.2×**68°.93W**±0°.04, **h134**^{km}, **n49**, σ**1**^{s}**49**/48, **10C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DR12	Loma Pena Alta	0.61	315	Pn	Pn	08 22 32.3	-2.2
SDD	Santo Domingo	0.94	276	*i* P	Pn	08 22 36.9	0.0
SDD				*e*S	Sn	08 22 52.9	-1.2
IDE	Isla Desecheo	1.38	88	⇑*e*P	Pn	08 22 40.8	-0.5
IDE	Isla Desecheo	1.38	88	*e*S	Sn	08 23 04.7	+2.8
PRSN	Puerto Rico Se	1.70	94	Pn	Pn	08 22 44.4	-0.4
PRSN				IAML		08 23 19.3	
	comp=E,180nm,0.3s						
AGPR	Aguadilla, PR	1.73	86	⇑*e*P	Pn	08 22 45.0	-0.2
AGPR	Aguadilla, PR	1.73	86	*e*S	Sn	08 23 10.7	+1.8
AGPR	Aguadilla, PR	1.73	86	Pn	Pn	08 22 45.8	+0.6
AGPR				IAML		08 23 11.8	
	comp=N,137nm,0.5s						
AGPR				IAML		08 23 13.6	
	comp=E,128nm,0.3s						
AGPR	Aguadilla, PR	1.73	86		Sn	08 23 10.7	+1.8
AGPR	Aguadilla, PR	1.73	86	*i* P	Pn	08 22 46.0	+0.8
AGPR				IAML		08 23 11.5	
	comp=Z,67nm,0.6s						
LSP	Las Mesas	1.76	95	⇑*e*P	Pn	08 22 45.9	+0.3
CRPR	Cabo Rojo, PR	1.76	101	⇑*e*P	Pn	08 22 44.7	-0.9
CRPR	Cabo Rojo, PR	1.76	101	*e*S	Sn	08 23 11.3	+1.8
CRPR	Cabo Rojo, PR	1.76	101	Pn	Pn	08 22 43.5	-2.1
CRPR	Cabo Rojo, PR	1.76	101		Sn	08 23 11.3	+1.8
CRPR	Cabo Rojo, PR	1.76	101	IAML		08 23 16.7	
	comp=E,64nm,2.6s						
CRPR				IAML		08 23 40.2	
	comp=N,50nm,2.5s						
CRPR	Cabo Rojo, PR	1.76	101	*i* P	Pn	08 22 44.9	-0.7
CRPR				IAML		08 23 20.6	
	comp=Z,54nm,2.0s						
MLPR	Magueyes Islan	1.83	102	⇑*e*P	Pn	08 22 45.3	-1.1
MLPR	Magueyes Islan	1.83	102	*e*S	Sn	08 23 13.1	+2.1
MLPR	Magueyes Islan	1.83	102	Pn	Pn	08 22 45.5	-0.8
MLPR	Magueyes Islan	1.83	102		Sn	08 23 13.1	+2.1
SC01	Santiago de lo	2.01	302	Pn	Pn	08 22 49.3	+0.8
SC01				IAML		08 23 21.2	
	comp=N,86nm,1.3s						
SC01				IAML		08 23 21.4	
	comp=E,84nm,0.6s						
AOPR	Arecibo Observ	2.07	90	⇑*e*P	Pn	08 22 49.1	-0.1
AOPR	Arecibo Observ	2.07	90	*e*S	Sn	08 23 17.1	+1.0
AOPR	Arecibo Observ	2.07	90	Pn	Pn	08 22 49.3	+0.1
LOBA2	Hotel Casa Bon	2.08	263	*i* P	Pn	08 22 48.0	-1.3
LOBA2				IAML		08 23 15.6	
	comp=Z,36nm,1.2s						
OBIP	Obispado Ponce	2.23	98	⇑*e*P	Pn	08 22 50.6	-0.6
OBIP	Obispado Ponce	2.23	98	*e*S	Sn	08 23 20.7	+1.1

OBIP	Obispado Ponce	2.23	98	Pn	Pn	08 22 50.8	-0.4
OBIP	Obispado Ponce	2.23	98		Sn	08 23 20.7	+1.1
CELP	Cerrillos	2.25	97	⇑*e*P	Pn	08 22 51.0	-0.5
CELP	Cerrillos	2.25	97	*e*S	Sn	08 23 21.4	+1.3
CELP	Cerrillos	2.25	97	Pn	Pn	08 22 51.5	+0.1
CELP				IAML		08 23 23.7	
	comp=N,42nm,0.4s						
CELP	Cerrillos	2.25	97		Sn	08 23 21.4	+1.3
EMPR	Esperanza - Ma	2.28	87	⇑*e*P	Pn	08 22 52.7	+0.9
EMPR	Esperanza - Ma	2.28	87		Pn	08 22 52.7	+0.9
EMPR	Esperanza - Ma	2.28	87	IAML		08 24 01.6	
	comp=E,120nm,1.9s						
SDDR	Presa de Saban	2.32	286	Pn	Pn	08 22 52.6	+0.2
SDDR				IAML		08 23 29.6	
	comp=E,43nm,0.8s						
SDDR				IAML		08 24 13.1	
	comp=E,38nm,3.1s						
LONE2	Loma La Sidra	2.42	275	*i* P	Pn	08 22 55.1	+1.4
SJG	San Juan	2.65	95	Pn	Pn	08 22 56.9	+0.4
SJG				IAML		08 23 30.8	
	comp=E,37nm,0.4s						
SJG				IAML		08 23 30.9	
	comp=E,42nm,1.0s						
GCPR	Guaynabo City	2.70	90	Pn	Pn	08 22 56.1	-1.1
GCPR				IAML		08 23 53.8	
	comp=N,26nm,2.4s						
IGPR	InterUniversit	2.71	98	⇓*e*P	Pn	08 22 57.4	+0.2
PDPR	Patillas Dam,	2.78	96	Pn	Pn	08 22 58.9	+0.7
PDPR				IAML		08 23 33.2	
	comp=E,71nm,2.3s						
CBYP	Canovanas	2.92	91	Pn	Pn	08 22 59.6	-0.4
CUPR	Culebra, Puert	3.46	90	⇑*e*P	Pn	08 23 05.0	-2.0
CUPR	Culebra, Puert	3.46	90		Pn	08 23 05.0	-2.0
STVI	Saint Thomas	3.77	89	*e*S	Sn	08 23 51.3	-3.8
STVI	Saint Thomas	3.77	89		Sn	08 23 51.3	-3.8
STVI	Saint Thomas	3.77	89	Pn	Pn	08 23 09.4	-1.7
STVI				IAML		08 25 09.0	
	comp=N,26nm,3.2s						

*IDC **01** 08:46:32.2±1.9, 0°.83N×125°.44E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/45, mbtmp3.7/5, ML3.3/1, Error ellipse: s-maj=129.8km s-min=26.1km az=66.0*

*DJA **01** 08:46:42.9±1.6, 0°N±3°×12°5E±°, h23km±16km, M4.2/13, mb4.6/1, mB5.0/1, MLv4.1/13, Mw(mB)4.3/1*

ISC 01 08:46:43.4±1.1**, 0°.46N**±0°.09×**125°.21E**±0°.05**, h87km, n14, σ1s.46**/14**, mb3.7**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.23	275	P	Pn	08 47 03.3	-2.4
TNTI	Ternate	2.18	82	P	Pn	08 47 19.0	+1.0
LBMI	Labuha	2.54	115	P	Pn	08 47 22.0	-0.7
SANI	Sanana	2.61	163	P	Pn	08 47 20.8	-2.9
LUWI	Luwuk	2.85	239	P	Pn	08 47 27.2	+0.2
MRSI	Marisa	3.27	270	P	Pn	08 47 31.7	-0.8
APSI	Ampana	3.81	249	P	Pn	08 47 41.1	+1.2
TTSI	Tana Toraja	6.41	237	P	Pn	08 48 16.0	+0.7
SPSI	Sidrap Palu	6.99	231	P	Pn	08 48 24.3	+1.1
FITZ	Fitzroy Crossi	18.45	179	P	Pn	08 50 53.6	+0.3
	0.1nm,0.3s,baz=11,slow=10,SNR=1.6						
WRA	Warramunga Arr	22.16	157	P	P	08 51 32.0	-0.4
	2.2nm,0.7s,baz=335,slow=9.5,SNR=19						
ASAR	Alice Springs	25.43	161	P	P	08 52 04.2	+1.0
	0.8nm,0.6s,baz=341,slow=7.4,SNR=17						
STKA	Stephens Creek	35.71	156	P	P	08 53 34.8	+1.1
	2.5nm,1.0s,baz=304,slow=11,SNR=1.1						
MKAR	Makanchi Array	59.41	327	P	P	08 56 35.8	-1.2
	0.2nm,0.3s,baz=121,slow=8.5,SNR=1.9						

*NNC **01** 08:50:33.7±9.6, 53°.07N×88°.16E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=82.0km s-min=39.9km az=73.0, Suspected Mining explosion.*

*IDC **01** 08:50:38.5±3.3, 53°.58N×87°.93E, h0km, mb1 3.2/2, mb1mx3.0/45, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=34.6km s-min=19.4km az=82.0*

ISC 01 08:50:38.0±3.4**, 53°.6N**±0°.1×**87°.9E**±0°.2**, h0km, n7, σ0s.93**/9**, 4C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.86	281	*i*		09 04 00.0	
	baz=99,slow=300,SNR=2.8						
ZAA0	Zalesovo Array	1.86	281	⇑Pn	Pn	08 51 11.6	+0.5
	0.3nm,0.2s						
ZAA0				⇓Sn	Sg	08 51 38.6	+0.8
	1.7nm,0.3s						
ZALV	Zalesovo Beam	1.86	281	Pn	Pb	08 51 11.7	-1.1
	3.2nm,0.3s,baz=97,slow=14,SNR=28						
ZALV				Sn	Sn	08 51 35.3	0.0
	4.4nm,0.3s,baz=105,slow=26,SNR=14						
KURBB	Kurchatov Arra	6.52	246	Pn	Pn	08 52 16.1	+1.1
	0.2nm,0.3s,baz=62,slow=14,SNR=8.1						
KURBB				Lg	Lg	08 54 03.7	
	0.1nm,0.3s,baz=65,slow=33,SNR=4.5						
KURBB	Kurchatov Arra	6.52	246	⇑Pn	Pn	08 52 15.7	+0.6
	1.1nm,0.3s						
KURBB				⇑Sn	Sn	08 53 29.2	-0.9
	2.8nm,0.6s						
KURBB				⇓Lg	Lg	08 54 03.3	
	2.6nm,0.7s						
MK31	Makanchi Array	7.74	210	⇓Pn	Pn	08 52 20.5	-11
	1.8nm,0.8s,baz=36,slow=17						
MK31				⇑Sn	Sn	08 53 41.5	-19
	1.9nm,0.8s						
MK31				⇓Lg	Lg	08 54 27.7	
	0.1nm,0.4s,baz=27,slow=27						
MKAR	Makanchi Array	7.74	210	Pn	Pn	08 52 32.5	+0.7
	0.2nm,0.3s,baz=30,slow=14,SNR=6.4						
MKAR				Sn	Sn	08 53 59.8	-0.5
	0.1nm,0.3s,baz=24,slow=29,SNR=1.8						

GUC 01 09:04:12.1±0.7**, 30°.75S**×**71°.45W, h52km**±3km**, ML3.8, 2C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.18	296	⇑*i*P	Pn	09 04 20.3	-0.3
CO06				*i* S	Sn	09 04 25.7	-0.8
CO06				IAML		09 04 26.6	
	comp=N,16µm,0.2s						
GO04	Tololo Observa	0.80	44	⇓*i*P	Pn	09 04 27.9	+0.4
GO04				*e*S	Sn	09 04 39.1	+0.4
GO04				IAML		09 04 42.4	
	comp=E,6µm,0.6s						
CO05	La Serena	0.85	12	⇓*i*P	Pn	09 04 28.4	+0.5
CO05				*i* S	Sn	09 04 40.4	+0.9
CO05				IAML		09 04 45.1	
	comp=E,2µm,0.5s						
VA06	Catapilco	1.81	176	⇓*i*P	Pn	09 04 41.4	+0.6
VA06				*i* S	Sn	09 05 03.9	+1.3
VA06				IAML		09 05 18.7	
	comp=E,949nm,0.5s						
LCO	Las Campanas	1.85	21	*e*P	Pn	09 04 42.7	+1.0
LCO				*i* S	Sn	09 05 05.6	+1.5
VA03	San Esteban	2.14	159	*e*P	Pn	09 04 46.7	+1.1
VA03				*i* S	Sn	09 05 13.0	+2.0
VA03				IAML		09 05 21.6	
	comp=E,930nm,0.4s						
ROCH	El Roble	2.24	171	⇓*i*P		09 04 47.9	
ROCH				*i* P	Pn	09 04 47.8	+0.8
ROCH				*e*S	Sn	09 05 15.3	+1.7
ROCH				*e*S		09 05 15.8	
ROCH				IAML		09 05 22.8	
	comp=N,910nm,0.7s						
ROCH				IAML		09 05 33.4	
	comp=E,493nm,0.5s						
PEL	Peldehue	2.47	165	*e*P	Pn	09 04 52.4	+2.4
PEL				*i* S	Sn	09 05 20.4	+1.5
PEL				IAML		09 05 35.9	
	comp=N,422nm,0.6s						
MT02	Curacav	2.51	174	⇓*i*P	Pn	09 04 51.1	+0.6
MT02				*i* S	Sn	09 05 21.2	+1.2
MT02				IAML		09 05 27.0	
	comp=E,252nm,0.2s						
AC04	Llanos de Chal	2.56	7	*e*P	Pn	09 04 52.1	+0.9
AC04				IAML		09 05 36.1	
	comp=N,226nm,0.7s						
MT05	Renca	2.70	167	*e*P	Pn	09 04 54.4	+1.3
MT05				*i* S	Sn	09 05 25.5	+0.9
VA05	Santo Domingo	2.90	183	*e*P	Pn	09 04 55.0	-0.8
VA05				IAML		09 05 43.3	
	comp=E,478nm,0.7s						
MT09	Talagante	3.04	173	⇑*i*P	Pn	09 04 59.1	+1.3
MT09				*i* S	Sn	09 05 34.3	+1.3
MT09				IAML		09 05 48.3	
	comp=N,336nm,0.2s						
MT01	Popeta	3.11	177	*e*P	Pn	09 04 58.9	+0.3
MT01				IAML		09 05 46.8	
	comp=N,157nm,0.3s						
LMEL	Las Melosas	3.26	162	*e*P	Pn	09 05 02.6	+1.8
LMEL				IAML		09 05 50.5	
	comp=N,275nm,0.3s						
BO04	La Punta	3.30	168	*e*P	Pn	09 05 02.5	+1.1
BO04				*i* S	Sn	09 05 40.6	+1.2
BO04				IAML		09 05 55.3	
	comp=E,211nm,0.2s						
GO03	Copiap	3.32	19	*e*P	Pn	09 05 03.8	+2.1
GO03				*i* S	Sn	09 05 40.6	+0.7
GO03				IAML		09 05 56.4	
	comp=N,188nm,0.2s						
BO01	Tunca	3.64	175	*e*P	Pn	09 05 06.3	+0.3
BO01				*e*S	Sn	09 05 48.9	+1.2
BO02	Sierra Bellavi	4.07	172	*e*P	Pn	09 05 13.1	+1.2
BO02				*i* S	Sn	09 05 59.0	+0.8
GO05	Huala	4.26	185	*e*P	Pn	09 05 13.4	-1.1
AC02	Maricunga	4.40	28	*e*P	Pn	09 05 19.3	+2.5

IDC 01 09:11:30.5±1.9**, 17°.07S**×**178°.02W, h0km, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.8**/28**, mbtmp3.9**/4**, Error ellipse: s-maj=172.1km s-min=33.0km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.36	240	P	P	09 19 02.9	+0.9
	2.6nm,0.9s,baz=72,slow=6.4,SNR=2.9						
WRA	Warramunga Arr	45.16	259	P	P	09 19 48.8	-0.5
	0.2nm,0.3s,baz=97,slow=6.9,SNR=13						
ASAR	Alice Springs	45.38	253	P	P	09 19 50.7	-0.4
	3.1nm,0.6s,baz=88,slow=8.5,SNR=62						
TXAR	Lajitas Array	85.23	58	P	P	09 24 09.6	+0.1
	0.2nm,0.9s,baz=198,slow=5.4,SNR=3.4						

*SOF **01** 09:28:20.5, 41°.65N×25°.00E, h14km, MD2.5*

*ISK **01** 09:28:20.6, 41°.68N×25°.07E, h5km, ML2.5/8*

*ATH **01** 09:28:20.9, 41°.63N×24°.98E, h10km±3km, ML2.1/2, Error ellipse: s-maj=7.0km s-min=1.4km az=197.0*

*THE **01** 09:28:21.8, 41°.59N×24°.95E, h10km±1km, ML2.2/4, Error ellipse: s-maj=2.6km s-min=1.2km az=202.0*

ISC 01 09:28:20.9±1.0**, 41°.63N**±0°.03×**24°.98E**±0°.02**, h10km**±9km**, n34, σ0s.57**/47**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RZN	Rozhen	0.20	286	*i* Pg	Pg	09 28 25.3	0.0
KDZ	Kurdzhali	0.33	87	*i* Pg	Pg	09 28 26.2	-1.3
PLD	Plovdiv	0.51	336	PG	Pg	09 28 31.3	+0.3
PLD				SG	Sg	09 28 38.1	+0.4
PLD	Plovdiv	0.51	336	*i* Pg	Pg	09 28 31.2	+0.3
DIM	Dimitrovgrad	0.59	45	*i* Pg	Pg	09 28 32.3	0.0
RDO	Rodhopi	0.64	139	P	Pg	09 28 33.2	-0.1
RDO	Rodhopi	0.64	139	P	Pg	09 28 33.3	0.0
RDO				S	Sg	09 28 41.6	-0.2
RDO	Rodhopi	0.64	139	PG	Pg	09 28 33.4	0.0
RDO				SG	Sg	09 28 42.2	+0.4
KAVA	Kavala	0.73	209	P	Pg	09 28 35.0	+0.1
KAVA	Kavala	0.73	209	P	Pg	09 28 35.0	+0.1
KVLA	Kavala	0.83	213	P	Pg	09 28 36.4	-0.4
NVR	Nevrokopi	0.89	252	P	Pg	09 28 38.0	0.0
NVR				S	Sg	09 28 49.9	+0.4
	150nm,0.2s						
NVR	Nevrokopi	0.89	252	P	Pg	09 28 36.9	-1.1
NVR				S	Sg	09 28 49.9	+0.4
NVR				AML	AML	09 28 55.3	
	comp=E,332µm,0.2s						
NVR				AML	AML	09 28 55.6	
	comp=N,275µm,0.2s						
MMB	Musomiste	0.94	268	*i* P	Pg	09 28 38.8	-0.2
THAS	Thassos island	1.04	191	P	Pb	09 28 40.8	-0.2
THAS				S	Sb	09 28 55.3	+0.6
	comp=N,142nm,0.3s						
ALN	Alexandroupoli	1.09	132	P	Pb	09 28 41.6	-0.2
ALN				S	Sg	09 28 55.6	-0.4
ALN				AML	AML	09 29 00.4	
	comp=E,185µm,0.3s						
ALN				AML	AML	09 29 02.4	
	comp=N,92µm,0.4s						
ALN	Alexandroupoli	1.09	132	PG	Pg	09 28 41.8	0.0
ALN				SG	Sn	09 28 57.0	-0.3
SRS	Serrai	1.16	244	P	Pb	09 28 42.2	-0.9
SRS				S	Sg	09 28 59.3	+0.9
	comp=N,230nm,0.4s						
SMTH	Samothraki Isl	1.23	160	P	Pg	09 28 44.8	+0.2
SMTH				S	Sb	09 29 00.2	0.0
	comp=N,40nm,0.4s						
SMTH	Samothraki Isl	1.23	160	P	Pn	09 28 44.2	0.0
ENEZ	Enez	1.26	135	PN	Pg	09 28 45.1	0.0
ENEZ				SN	Sg	09 29 02.7	+1.2
EDRB	Edirne	1.34	80	PN	Pn	09 28 45.1	-0.5
EDRB				SN	Sn	09 29 03.1	-0.3
UKOP	Uzunkopru-Edir	1.34	112	PN	Pg	09 28 46.3	-0.4
KKB	Krupnik	1.44	280	*i* P	Pn	09 28 47.4	+0.4
OUR	Ouranopolis	1.50	211	P	Pn	09 28 46.9	-0.9
ERIK	Erikli-Kesan	1.51	129	PN	Pb	09 28 48.7	-0.2
VTS	Vitosha	1.63	308	*i* P	Pb	09 28 51.4	+0.3
KNT	Kendrikon	1.64	254	P	Pn	09 28 49.7	0.0
MPEP	Malo Peshtene	1.95	332	*i* P	Pg	09 28 57.5	-0.8
MAR6	Marsite Statio	1.96	118	PN	Pn	09 28 54.7	+0.5
MAR3	Marsite Statio	1.96	116	PN	Pn	09 28 55.2	+1.0
STIP	Stip	2.09	273	*i* Pn	Pn	09 28 54.9	-1.1
STIP				*i* Sn	Sn	09 29 22.6	+0.5
MRMT	Marmara Adasi	2.23	117	PN	Pn	09 28 58.3	+0.4
MAR9	Marsite Statio	2.29	115	PN	Pn	09 28 59.6	+0.9

IDC 01 09:30:32.8±1.8**, 2°.54S**×**139°.03E, h0km, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.6**/35**, mbtmp3.7**/4**, ML3.9**/1**, Error ellipse: s-maj=106.8km s-min=28.0km az=112.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.90	195	P	P	09 34 44.5	+0.3
	0.4nm,0.3s,baz=19,slow=12,SNR=11						
FITZ	Fitzroy Crossi	20.29	219	P	P	09 35 09.8	-0.5
	3.5nm,1.1s,baz=24,slow=12						
ASAR	Alice Springs	21.58	193	P	P	09 35 23.8	-0.6
	0.7nm,0.5s,baz=4.4,slow=11,SNR=4.9						
ILAR	Eielson Array	85.54	24	P	P	09 43 12.9	+0.3
	0.3nm,0.6s,baz=279,slow=4.5,SNR=4.7						

*NEIC **01** 09:45:40.0±2.8, 7°.68S±0°.09×117°.17E±0°.06, h299km±7km, mb4.4/30, Error ellipse: s-maj=12.7km s-min=8.2km az=169.0*

*IDC **01** 09:45:40.3±1.5, 7°.63S×117°.16E, h307km±15km, mb3.9/15, mb1 3.9/19, mb1mx3.6/42, mbtmp4.6/19, Error ellipse: s-maj=17.5km s-min=9.1km az=55.0*

*DJA **01** 09:45:40.4±0.2, 8°S±3°×11°7E±°, h293km±2km, M4.3/19, mB4.8/8, mb4.6/19, MLv4.4/19, Mw(mB)4.0/8*

ISC 01 09:45:39.9±0.4**, 7°.76S**±0°.05×**117°.20E**±0°.05**, h300km, n134, σ1s.58**/137**, mb4.3**/37**, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWSI	Taliwang, Sumb	1.02	198	P	Pn	09 46 20.1	-0.3
TWSI				S	S	09 46 50.5	-2.1
PLAI	Plampang	1.21	152	P	Pn	09 46 20.8	-0.5
PLAI	Plampang	1.21	152	P	Pn	09 46 20.9	-0.4
SRBI	Singaraja	2.00	260	P	Pn	09 46 26.4	-0.2
DNP	Denpasar	2.17	245	P	Pn	09 46 28.6	+0.6
IGBI	Denpasar	2.29	242	P	Pn	09 46 28.8	-0.2
WBSI	Waikabubak, Su	2.86	131	P	Pn	09 46 32.5	-1.8
ABJI	Asem Bagus	2.94	269	P	Pn	09 46 36.3	+1.3
JAGI	Jajag, Banyuwa	3.10	257	P	Pn	09 46 36.1	-0.5
JAGI	Jajag, Banyuwa	3.10	257	Pn	Pn	09 46 36.2	-0.5
JAGI	Jajag, Banyuwa	3.10	257	P	Pn	09 46 36.6	0.0
KMMI	Kalianget	3.28	282	P	Pn	09 46 39.9	+1.4
BLJI	Banyuglugur	3.57	270	P	Pn	09 46 42.4	+0.9
BSSI	Bau Bau, Buton	3.64	64	P	Pn	09 46 42.6	+0.4
KAPI	Kappang	3.72	43	P	Pn	09 46 43.5	+0.4
	3.8nm,0.3s,baz=233,slow=10.0,SNR=5.3						
KAPI	Kappang	3.72	43	Pn	Pn	09 46 42.4	-0.7
GMJI	Gumukmas	3.75	262	P	Pn	09 46 43.4	0.0
BKSI	Bulukumba	3.78	50	P	Pn	09 46 44.4	+0.7
BNSI	Bone	4.41	41	P	Pn	09 46 53.0	+2.3
EDFI	Ende, Flores	4.55	103	P	Pn	09 46 50.9	-1.5
BBKI	Banjar Baru	4.87	331	P	Pn	09 46 58.7	+2.8
MMRI	Maumere	5.06	100	P	Pn	09 46 57.4	-0.8
	1.2nm7µm258nm,0.8s						
MMRI	Maumere	5.06	100	Pn	Pn	09 46 56.6	-1.6
MMRI	Maumere	5.06	100	P	Pn	09 46 57.7	-0.5
NGJI	Ngawi	5.70	274	P	Pn	09 47 18.0	+12
UGM	Wanagama	6.62	268	Pn	Pn	09 47 16.8	+0.1
UGM	Wanagama	6.62	268	P	Pn	09 47 16.9	+0.2
	144nm,0.6s						
SMRI	Semarang	6.74	276	Pn	Pn	09 47 20.4	+2.3
BATI	Baumata	6.83	111	P	Pn	09 47 18.9	-0.5
	31nm,0.3s,baz=324,slow=1.4,SNR=13						
BATI				S	S	09 48 33.0	-6.6
	30nm,0.3s,baz=316,slow=2.5,SNR=4.3						
BATI	Baumata	6.83	111	P	Pn	09 47 18.8	-0.5
	0.5nm1µm74nm,0.5s						
SOEI	Soe	7.26	106	P	Pn	09 47 24.0	-0.6
	1.4nm2µm122nm,0.7s						
SOEI	Soe	7.26	106	Pn	Pn	09 47 23.8	-0.8
SOEI	Soe	7.26	106	P	Pn	09 47 24.1	-0.6
	124nm,0.8s						
GTOI	Gorontalo	10.15	35	P	P	09 48 02.2	-1.1
	256nm8.4nm,0.7s						
SANI	Sanana	10.43	58	P	P	09 48 05.9	-0.5
	1µm132nm,0.8s						
SANI	Sanana	10.43	58	P	P	09 48 05.2	-1.2
	133nm,0.8s						
DBJI	Dramaga	10.44	276	P	P	09 48 09.1	+2.6
KSM	Kuching	11.46	323	P	P	09 48 17.6	-0.3
KSM	Kuching	11.46	323	P	P	09 48 19.8	+1.9
	49nm,0.8s						
AAI	Ambon	11.66	70	P	P	09 48 20.8	+0.7
	94nm,0.8s						
XMIS	Christmas Isla	11.72	256	P	P	09 48 20.6	-0.2
XMIS	Christmas Isla	11.72	256	P	P	09 48 21.6	+0.8
	104nm,0.9s						
LBMI	Labuha	12.47	56	P	P	09 48 30.9	+1.8
	36nm,1.3s						
KLSI		12.76	283	P	P	09 48 33.2	+0.8
	26nm,0.9s						
FITZ	Fitzroy Crossi	13.16	142	P	P	09 48 38.4	+1.7
	1.8nm,0.3s,baz=317,slow=10,SNR=32						
FITZ				S	S	09 51 06.3	+4.2
	0.3nm,0.3s,baz=162,slow=20,SNR=1.8						
MDSI	Maura Dua	13.35	283	P	P	09 48 40.2	+1.4
	12nm,0.9s						
MBWA	Marble Bar	13.55	170	P	Pn	09 48 41.7	+0.6
	19nm,2.8s						
KKM	Kota Kinabalu	13.74	356	P	Pn	09 48 43.9	+0.3
KKM	Kota Kinabalu	13.74	356	P	Pn	09 48 46.3	+2.7
KNRA	Kununurra	13.78	126	P	Pn	09 48 44.5	+0.5
KNRA	Kununurra	13.78	126	P	Pn	09 48 44.4	+0.5
	32nm,0.7s						
PSA00	Pilbara Seismi	13.97	170	P	Pn	09 48 47.8	+1.7
	28nm,2.4s						
DRS	Darwin Rock St	14.26	110	P	Pn	09 48 50.4	+0.7
	30nm,0.7s						
MNAI	Manna	14.56	283	P	P	09 48 51.0	-1.2
MNAI	Manna	14.56	283	P	Pn	09 48 55.8	+2.6
	190nm,1.1s						
MTN	Manton Dam	14.61	111	P	Pn	09 48 53.8	+0.1
MTN	Manton Dam	14.61	111	P	Pn	09 48 54.4	+0.6
	77nm,0.5s						
SWI	Sorong	15.60	65	P	P	09 49 03.9	+0.3
	181nm,0.9s						
SIJI	Sorong	15.60	65	P	P	09 49 04.1	+0.5
	7.0nm,0.3s,baz=260,slow=7.2,SNR=13						
FAKI	Fak Fak	15.73	73	P	P	09 49 05.7	+0.6
	776nm79nm,0.8s						
FAKI	Fak Fak	15.73	73	P	P	09 49 04.2	-0.9
FAKI	Fak Fak	15.73	73	P	P	09 49 05.7	+0.6
	76nm,0.8s						
KDU	Kakadu	15.81	109	P	P	09 49 06.7	+0.8
	26nm,0.7s						
MEEK	Meekatharra	18.83	176	P	P	09 49 39.6	+1.2
	16nm,1.9s						
WRKA	Warakurna	20.19	150	P	P	09 49 54.0	+1.2
	24nm,0.6s						
WB0	Warramunga Arr	20.50	127	P	P	09 49 56.3	+0.3
WB0				IAmb	IAmb	09 49 57.7	
	comp=Z,13nm,1.0s						
WRA	Warramunga Arr	20.56	128	P	P	09 49 56.6	0.0
	comp=Z,6.7nm,0.6s,baz=293,slow=12,SNR=68						
WRA				S	S	09 53 39.6	+12
	comp=Z,1.3nm,0.8s,baz=298,slow=15,SNR=4.8						
WRA	Warramunga Arr	20.56	128	P	P	09 49 56.6	0.0
WRAB	Tennant Creek	20.56	128	P	P	09 49 55.3	-1.3
WRAB				IAmb	IAmb	09 49 58.8	
	comp=Z,12nm,0.6s						
WRAB	Tennant Creek	20.56	128	P	P	09 49 58.0	+1.4
	comp=Z,21nm,0.7s						
WB2	Warramunga Arr	20.57	128	P	P	09 49 56.9	+0.3
WB2				IAmb	IAmb	09 49 58.7	
	comp=Z,13nm,0.6s						
WR0	Warramunga Arr	20.72	128	P	P	09 49 58.6	+0.4
WR0				IAmb	IAmb	09 50 00.6	
	comp=Z,37nm,1.1s						
KULM	Kulim	20.99	308	P	P	09 49 59.6	-1.2
PSI	Prapat	21.03	299	P	P	09 50 00.0	-1.4
	comp=Z,6.7nm,0.4s,baz=163,slow=3.7,SNR=7.6						
GSI	Gunungsitoli	21.54	294	P	P	09 50 06.2	+0.2
GSI				IAmb	IAmb	09 50 24.9	
	comp=Z,15nm,1.0s						
AS31	Alice Springs	22.52	137	P	P	09 50 16.0	+1.3
AS31				IAmb	IAmb	09 50 17.5	
	comp=Z,10nm,0.3s						
ASAR	Alice Springs	22.52	137	P	P	09 50 16.1	+1.4
	comp=Z,11nm,0.4s,baz=312,slow=8.3,SNR=286						
ASAR				ScP	ScP	09 57 05.5	-1.5
	comp=Z,1.2nm,0.6s,baz=322,slow=1.7,SNR=6.9						
QIS	Mount Isa	25.13	123	P	P	09 50 39.6	+1.2
	comp=Z,7.9nm,1.6s						
COEN	Coen	26.23	106	P	P	09 50 48.4	+0.1
COEN	Coen	26.23	106	P	P	09 50 48.6	+0.4
	comp=Z,44nm,0.9s						
OOD	Oodnadatta	26.52	141	P	P	09 50 52.3	+1.7
	comp=Z,21nm,0.6s						
MULG	Mulgathing	27.42	147	P	P	09 51 00.5	+1.9
	comp=Z,13nm,2.6s						
INKA	Innaminka	29.86	135	P	P	09 51 22.1	+2.0
	comp=Z,32nm,0.7s						
LCRK	Leigh Creek	29.95	142	P	P	09 51 22.6	+1.7
	comp=Z,25nm,1.7s						
BBOO	Buckleboo	30.45	148	P	P	09 51 26.0	+0.7
BBOO				IAmb	IAmb	09 51 36.8	
	comp=Z,14nm,1.1s						
BBOO	Buckleboo	30.45	148	P	P	09 51 27.2	+1.8
	comp=Z,16nm,2.1s						
CTAO	Charters Tower	30.68	117	P	P	09 51 28.9	+1.3
CTAO				IAmb	IAmb	09 51 29.9	
	comp=Z,6.7nm,0.7s						
CMAR	Chiang Mai Arr	31.67	326	P	P	09 51 37.2	+1.1
	comp=Z,3.5nm,0.4s,baz=150,slow=6.0,SNR=7.4						
CMAR	Chiang Mai Arr	31.67	326	P	P	09 51 36.7	+0.6
HTT	Hallett	32.50	145	P	P	09 51 45.4	+2.2
	comp=Z,30nm,2.5s						
STKA	Stephens Creek	33.04	140	P	P	09 51 49.5	+1.7
	comp=Z,6.6nm,0.4s,baz=312,slow=9.0,SNR=24						
STKA	Stephens Creek	33.04	140	P	P	09 51 49.5	+1.7
GUMO	Guam	34.70	52	P	P	09 52 01.4	-0.9
CMSA	Cobar Meteorol	35.56	136	P	P	09 52 11.7	+2.3
	comp=Z,12nm,1.6s						
YNG	Young	39.02	137	P	P	09 52 40.9	+2.7
TOO	Toolangi	39.22	143	P	P	09 52 42.6	+2.8
TOO	Toolangi	39.22	143	P	P	09 52 42.6	+2.8
	comp=Z,19nm,1.9s						
ARMA	Armidale	39.32	130		P	09 52 42.6	+1.7
CAN	Canberra	40.01	138	P	P	09 52 48.3	+1.9
CAN				IAmb	IAmb	09 52 56.0	
	comp=Z,11nm,1.1s						
CAN	Canberra	40.01	138	P	P	09 52 48.3	+1.9
	comp=Z,50nm,2.6s						
MGCD	Mangrove Creek	40.31	134	P	P	09 52 52.0	+3.2
	comp=Z,21nm,1.1s						
JCJ	Chichijima	42.27	34	P	P	09 53 03.0	-1.6
	comp=Z,29nm,0.4s,baz=264,slow=19,SNR=8.8						
JCJ	Chichijima	42.27	34	P	P	09 53 02.4	-2.2
JCJ	Chichijima	42.27	34	P	P	09 53 07.5	+2.9
	comp=Z,78nm,1.7s						
DZM	Mont Dzumac	49.44	112	P	P	09 54 02.0	+1.3

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              comp=Z,8.0nm,1.0s,baz=119,slow=19,SNR=2.1
GTA    Gaotai              49.62 342 eP     P       09 54 02.4 +0.8
GTA                                  pmax   pmax
              comp=Z,5.0nm,0.7s
USRK   Ussuriysk Ar.       53.42  13 P      P       09 54 29.1  -0.1
              comp=Z,1.2nm,0.5s,baz=189,slow=6.9,SNR=4.5
USRK   Ussuriysk Ar.       53.42  13 P      P       09 54 30.2 +0.9
SONM   Songino Array       56.17 351 P      P       09 54 48.8  -0.3
              comp=Z,10nm,0.7s,baz=169,slow=8.4,SNR=60
SONM   Songino Array       56.17 351 P      P       09 54 48.4  -0.7
SONM                                 IAmb   IAmb    09 54 49.5
              comp=Z,9.4nm,0.6s
BKZ    Black Stump Fm      61.46 130 P      P       09 55 26.3 +0.9
BKZ                                  IAmb   IAmb    09 55 39.5
              comp=Z,7.1nm,1.1s
URZ    Urewera             61.72 129 P      P       09 55 27.4 +0.4
URZ                                  IAmb   IAmb    09 55 42.5
              comp=Z,22nm,1.2s
MK31   Makanchi Array      62.55 334 P      P       09 55 30.8  -1.6
MKAR   Makanchi Array      62.55 334 P      P       09 55 31.5  -0.9
              comp=Z,2.8nm,0.3s,baz=151,slow=5.9,SNR=68
MKAR   Makanchi Array      62.55 334 P      P       09 55 30.8  -1.6
AAK    Ala-Archa           63.46 326 P      P       09 55 37.3  -1.2
              comp=Z,0.6nm,0.3s,baz=26,slow=12,SNR=3.6
GAR    Garm                63.66 321 P      P       09 55 37.7  -2.2
CHGR   Chuyangaron         64.19 320 P      P       09 55 41.1  -2.2
SOCY   Socotra             65.89 287 P      P       09 55 52.6  -2.0
SOCY                                 IAmb   IAmb    09 56 07.0
              comp=Z,13nm,1.1s
KKAR   Karatay Array       66.01 324 P      P       09 55 53.0  -1.7
KURBB  Kurchatov Arra      67.08 334 P      P       09 55 59.9  -1.3
              comp=Z,1.0nm,0.5s,baz=146,slow=5.3,SNR=8.9
KURK   Kurchatov           67.11 335 P      P       09 56 00.0  -1.4
KURK                                 IAmb   IAmb    09 56 01.2
              comp=Z,4.1nm,1.1s
ZAA0   Zalesovo Array      67.26 340 P      P       09 56 00.3  -2.0
ZAA0                                 IAmb   IAmb    09 56 01.3
              comp=Z,4.0nm,0.6s
ZALV   Zalesovo Beam       67.26 340 P      P       09 56 00.6  -1.7
              comp=Z,4.6nm,0.5s,baz=148,slow=5.3,SNR=20
ZALV   Zalesovo Beam       67.26 340 P      P       09 56 00.7  -1.6
OPO    Ambohidratompo      68.67 253 P      P       09 56 11.8  -0.2
              comp=Z,2.5nm,0.5s,baz=102,slow=5.6,SNR=7.0
VOI    Vohitsoka           69.00 250 P      P       09 56 14.5 +0.6
VOI                                  IAmb   IAmb    09 56 15.2
              comp=Z,14nm,1.0s
PETK   Petropavlovsk-      69.68  25 P      P       09 56 14.7  -2.6
              comp=Z,4.1nm,1.1s,baz=237,slow=6.4,SNR=1.6
BVAR   Borovoye Array      72.37 332 P      P       09 56 32.5  -0.8
              comp=Z,1.9nm,0.6s,baz=190,slow=14,SNR=6.5
RAYN   Ar Rayn             76.56 296 P      P       09 56 55.0  -3.0
TORD   Torodi Ar. Bea     116.48 281 PKP    PKPdf   10 03 48.0  -1.2
              comp=Z,0.4nm,0.6s,baz=60,slow=1.7,SNR=4.6
DBIC   Dimbokro           122.54 273 PKP    PKPdf   10 03 58.3  -2.5
              comp=Z,1.2nm,0.4s,baz=240,slow=2.4,SNR=5.2
DBIC   Dimbokro           122.54 273        PKPdf   10 03 58.2  -2.6
TXAR   Lajitas Array      136.03  55 SKPbc  SKPbc   10 07 27.8  -1.6
              comp=Z,0.3nm,0.8s,baz=264,slow=0.9,SNR=4.3
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*IDC **01** 10:08:34.5±3.3, 31°.54N×141°.36E, h0^{km}, mb3.7/4, mb1 3.7/7, mb1mx3.5/36, mbtmp3.7/7, ML3.3/3, MS2.2/1, Ms1 2.2/1, ms1mx1.9/34, Error ellipse: s-maj=123.8km s-min=16.3km az=68.0*

*JMA **01** 10:08:34.7±0.2, 31°.78N×142°.01E, h38^{km}, M3.7*

ISC 01 10:08:37.3±1.2**, 31°.72N**±0°.07×**141°.8E**±0°.1**, h35**^{km}**, n14, σ0^{s}.93**/16**, mb3.7**/4**, Southeast of Honshu**

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Code   Station Name           Δ°  AZ°   Phase ID          Time     Res
                                     Op     ISC       h  m  s    ISC
JAOM   Aogashimamukai       1.91 293 P      Pn      10 09 07.5 +0.1
JHJ2   Mitsune              2.20 310 P      Pn      10 09 11.0  -0.3
JHJ    Hachijo jima 2       2.23 309 Pn     Pn      10 09 11.0  -0.7
              22nm,0.3s,baz=87,slow=22,SNR=5.5
JHJ                                  Sn     Sn      10 09 36.6  -1.4
              20nm,0.3s,baz=257,slow=19,SNR=2.0
BSO1   Boso 1               3.01 346 P      Pn      10 09 21.5  -0.5
CBIJ   Chichi jima          4.62 176 P      Pn      10 09 44.8 +0.2
CBIJ                                 eS     Sn      10 10 36.6  -0.5
JCJ    Chichijima           4.62 176 Pn     Pn      10 09 45.4 +0.8
              6.7nm,0.3s,baz=356,slow=23,SNR=17
JCJ                                  Sn     Sn      10 10 34.9  -2.2
              6.8nm,0.3s,baz=90,slow=20,SNR=2.2
JRY    Ryogami san          4.93 331 eS     Sn      10 10 44.3  -0.4
JAG    Ashikaga             5.09 338 P      Pn      10 09 50.9  -0.2
MJAR   Matsushiro Arr       5.67 329 Pn     Pn      10 09 59.8 +0.7
              0.2nm,0.3s,baz=150,slow=10,SNR=6.2
KSRS   Korea Array         12.81 300 LR     LR      10 15 48.4
              comp=Z,11nm,21.6s,baz=110,slow=34
MKAR   Makanchi Array      47.40 306 P      P       10 17 09.2 +1.1
              0.2nm,0.4s,baz=80,slow=9.2,SNR=4.6
KURBB  Kurchatov Arra      49.67 312 P      P       10 17 25.4   0.0
              1.0nm,0.3s,baz=84,slow=6.9,SNR=5.8
WRA    Warramunga Arr      51.87 189 P      P       10 17 42.8 +0.4
              0.5nm,0.4s,baz=5.7,slow=7.6,SNR=7.5
ASAR   Alice Springs       55.60 189 P      P       10 18 10.2 +0.6
              0.4nm,0.8s,baz=20,slow=13,SNR=5.1
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*VAO **01** 10:26:49.6±1.3, 31°.81S×69°.44W, h93^{km}, mb4.4*

*IDC **01** 10:26:51.7±2.4, 31°.47S×69°.21W, h98^{km}±20^{km}, mb3.9/10, mb1 3.9/15, mb1mx3.9/29, mbtmp4.2/15, MS2.8/1, Ms1 2.8/1, ms1mx2.5/16, Error ellipse: s-maj=24.2km s-min=14.9km az=95.0*

*SJA **01** 10:26:52.3±0.7, 31°.47S×69°.34W, h116^{km}±3^{km}, ML4.2, MW4.1*

*NEIC **01** 10:26:53.0±1.6, 31°.48S±0°.05×69°.43W±0°.07, h111^{km}±5^{km}, mb4.3/17, Md4.4(SJA), Error ellipse: s-maj=9.4km s-min=7.4km az=107.0*

ISC 01 10:26:52.6±0.6**, 31°.44S**±0°.03×**69°.34W**±0°.04**, h110**^{km}±5^{km}**, n146, σ1^{s}.59**/164**, mb4.2**/15**, San Juan Province**

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Code   Station Name           Δ°  AZ°   Phase ID          Time     Res
                                     Op     ISC       h  m  s    ISC
RTLS   Leoncito             0.36 175 eP     Pn      10 27 10.3 +1.3
RTLS                                 eS     Sn      10 27 23.3 +1.9
RTLS                                  IAML          10 27 24.5
              comp=Z,9µm,0.5s
ZON    Zonda                0.57 101        Pn      10 27 11.5 +1.4
ZON                                   Sn    Sn      10 27 24.3 +1.2
ZON    Zonda                0.57 101 eP     Pn      10 27 11.6 +1.6
ZON                                  eS     Sn      10 27 24.0 +0.9
ZON                                   IAML          10 27 26.1
              comp=Z,5µm,0.3s
RTLL   Cerro Villicun       0.74  82 eP     Pn      10 27 12.7 +1.3
AUSP   Uspallata            0.78 183 eP     Pn      10 27 13.3 +1.2
AUSP                                 eS     Sn      10 27 27.7 +1.1
RTCV   Cerro Valdivia       0.80 122 eP     Pn      10 27 13.4 +1.5
RTCV                                 eS     Sn      10 27 26.4   0.0
ACCO   Cerro Coronel        0.88  15 eP     Pn      10 27 14.7 +1.6
ASAL   Salagasta            1.22 160 eP     Pn      10 27 12.0  -4.3
AROD   Rodeo                1.28 355 eP     Pn      10 27 19.3 +2.1
AROD                                 eS     Sn      10 27 38.7 +3.0
ACDV   Cuesta del Vie       1.28   8 eP     Pn      10 27 13.5  -3.6
ACDV                                  IAML          10 27 38.9
              comp=Z,3µm,0.8s
ARCO   CERRO ARCO           1.44 166 eP     Pn      10 27 14.5  -4.4
ARCO                                 eP     Pn      10 27 20.2 +1.3
ARCO                                 eS     Sn      10 27 41.1 +2.4
ARCO                                  IAML          10 27 41.9
              comp=Z,5µm,0.3s
VA03   San Esteban          1.67 218  Pn    Pn      10 27 22.6 +1.0
VA03   San Esteban          1.67 218 eP     Pn      10 27 22.6 +1.0
VA03                                  IAML          10 27 51.1
              comp=Z,1µm,0.3s
AAGR   Agrelo               1.69 165 eP     Pn      10 27 23.2 +1.3
AAGR                                 eS     Sn      10 27 47.0 +2.8
GO04   Tololo Observa       1.79 315        Pn      10 27 24.0 +0.8
GO04   Tololo Observa       1.79 315 eP     Pn      10 27 24.1 +0.9
GO04                                 eS     Sn      10 27 48.3 +1.9
AVFE   Valle Fertil         1.79  65 eP     Pn      10 27 24.3 +1.2
AVFE                                 eS     Sn      10 27 43.0  -3.3
AVFE                                  IAML          10 27 51.3
              comp=Z,1µm,0.2s
ACAN   Cantantal            2.01 115 eP     Pn      10 27 13.8   -12
PEL    Peldehue             2.05 214  Pn    Pn      10 27 26.7 +0.4
PEL    Peldehue             2.05 214 eP     Pn      10 27 26.8 +0.6
PEL                                  eS     Sn      10 27 53.9 +2.0
ROC1   El Roble             2.09 223 eP     Pn      10 27 26.9  -0.1
ROC1                                 eS     Sn      10 27 54.0 +0.8
CO06   Fray Jorge           2.12 291  Pn    Pn      10 27 26.5  -0.6
AVIZ   Vizcacheras          2.14 161 eP     Pn      10 27 28.5 +1.0
AVIZ                                 eS     Sn      10 27 50.0  -4.2
CO05   La Serena            2.23 312        Pn      10 27 28.9 +0.3
MT05   Renca                2.28 211  Pn    Pn      10 27 29.6 +0.4
MT05   Renca                2.28 211 eP     Pn      10 27 30.0 +0.8
MT05                                  IAML          10 28 00.7
              comp=Z,1µm,0.5s
ACHE   Chepes               2.31  84 eP     Pn      10 27 30.7 +1.1
MT02   Curacav              2.37 220        Pn      10 27 29.8  -0.5
MT02   Curacav              2.37 220 eP     Pn      10 27 30.0  -0.3
MT02                                 eS     Sn      10 27 54.0  -5.3
MT02                                  IAML          10 28 03.5
              comp=Z,762nm,0.9s
VA01   Torpederas           2.51 231        Pn      10 27 30.9  -1.3
APLL   PUNTA DE LOS L       2.63  67 eP     Pn      10 27 34.8 +1.0
LCO    Las Campanas         2.69 334  Pn    Pn      10 27 35.3 +0.4
LCO    Las Campanas         2.69 334 eP     Pn      10 27 35.5 +0.6
MT09   Talagante            2.71 210  Pn    Pn      10 27 34.4  -0.6
VCA    Vinchina             2.87  20 eP     Pn      10 27 38.9 +1.8
VCA                                   IAML          10 28 19.2
              comp=Z,915nm,0.6s
ACLC   CERRO LA CRUZ        2.88  46 eP     Pn      10 27 38.4 +1.2
ACLC                                  IAML          10 28 15.6
              comp=Z,776nm,0.2s
MT01   Popeta               2.91 213        Pn      10 27 36.3  -1.0
MT01   Popeta               2.91 213 eP     Pn      10 27 36.4  -1.0
MT01                                 eS     Sn      10 28 11.7  -0.1
MT01                                  IAML          10 28 17.2
              comp=Z,388nm,0.3s
VA05   Santo Domingo        2.93 220  Pn    Pn      10 27 36.7  -1.0
BO01   Tunca                3.29 206  Pn    Pn      10 27 41.1  -1.3
BO01   Tunca                3.29 206 eP     Pn      10 27 41.4  -1.1
BO01                                  IAML          10 28 22.2
              comp=Z,293nm,0.3s
RFA    San Rafael           3.40 168 eP     Pn      10 27 43.8  -0.2
RFA                                  eS     Sn      10 28 12.0   -12
RFA                                   IAML          10 28 23.2
              comp=Z,411nm,0.4s
BO02   Sierra Bellavi       3.56 200  Pn    Pn      10 27 45.7  -0.3
BO02   Sierra Bellavi       3.56 200 eP     Pn      10 27 45.8  -0.2
BO02                                 eS     Sn      10 28 15.0   -12
BO02                                  IAML          10 28 34.9
              comp=Z,325nm,0.2s
AC04   Llanos de Chal       3.56 334  Pn    Pn      10 27 45.9  -0.3
AC04   Llanos de Chal       3.56 334 eP     Pn      10 27 46.4 +0.2
AC04                                 eS     Sn      10 28 13.5   -14
AC04                                 eS     Sn      10 28 14.5   -13
AC04                                  IAML          10 28 37.4
              comp=Z,470nm,0.7s
GO03   Copiap               3.91 348  Pn    Pn      10 27 51.2 +0.3
GO03   Copiap               3.91 348 eP     Pn      10 27 51.2 +0.3
GO03                                 eS     Sn      10 28 30.0  -6.0
GO03                                 eS     Sn      10 28 35.7  -0.3
GO05   Huala                4.17 211  Pn    Pn      10 27 51.6  -2.7
CYA    Choya                4.28  47 eP     Pn      10 27 50.0  -5.8
CYA                                  eP     Pn      10 27 55.8   0.0
CYA                                  eS     Sn      10 28 43.4  -1.5
CYA                                   IAML          10 28 44.2
              comp=Z,394nm,0.5s
EDS3   Malargue             4.32 181 eP     Pn      10 27 57.0 +0.6
EDS3                                 eS     Sn      10 28 32.0   -14
AC02   Maricunga            4.59   2  Pn    Pn      10 28 01.5 +1.1
AC02   Maricunga            4.59   2 eP     Pn      10 28 01.6 +1.1
AC02                                  IAML          10 28 59.4
              comp=Z,129nm,0.3s
ML02   Panimavida           4.65 201  Pn    Pn      10 27 58.7  -1.9
PB14   IPOC Station P       6.86 352  Pn    Pn      10 28 28.3  -2.6
LC01   Cunco                7.72 195  Pn    Pn      10 28 38.8  -3.5
PB15   IPOC Station P       8.20 359  Pn    Pn      10 28 47.2  -1.9
PB06   IPOC Station P       8.70 359  Pn    Pn      10 28 55.2  -0.6
LVC    Limon Verde          8.80   3  P     Pn      10 28 55.5  -1.9
              comp=Z,1.3nm,0.3s,baz=172,slow=12,SNR=9.2
LVC    Limon Verde          8.80   3  Pn    Pn      10 28 54.8  -2.6
TRQA   Tornquist            8.95 139        Pn      10 28 58.2  -0.7
PLCA   Paso Flores          9.32 186  P     Pn      10 29 02.3  -1.7
              comp=Z,0.4nm,0.3s,baz=346,slow=11,SNR=14
PLCA   Paso Flores          9.32 186        Pn      10 29 02.5  -1.6
LL04   Puerto Octay         9.77 194  Pn    Pn      10 29 06.2  -3.8
PB01   IPOC Station P      10.36 359  Pn    Pn      10 29 13.3  -4.9
ITQB   Itaqui              11.10  84 eP     Pn      10 29 25.7  -2.4
ITQB   Itaqui              11.10  84  Pn    Pn      10 29 27.3  -0.8
CPUP   Villa Florida       11.69  67  P     Pn      10 29 32.8  -3.2
              comp=Z,0.4nm,0.3s,baz=234,slow=11,SNR=3.3
CPUP                                  LR    LR      10 34 07.0
              comp=Z,49nm,19.1s,baz=214,slow=38
CPUP   Villa Florida       11.69  67 eP     Pn      10 29 34.8  -1.2
PB12   IPOC Station P      12.80 356  Pn    Pn      10 29 48.4  -2.4
PB16   IPOC Station P      13.05 359  P     Pn      10 29 56.9 +2.4
PLTB   Pedras Altas        13.42  95 eP     Pn      10 29 55.7  -2.9
PLTB   Pedras Altas        13.42  95  Pn    Pn      10 29 56.4  -2.2
CPSB   Cacapava Do Su      13.69  90 eP     Pn      10 30 00.5  -1.6
COYC   Coyhaique           14.27 188  P     P       10 30 12.4  -1.0
LPAZ   La Paz              15.13   4  P     P       10 30 22.7  -1.0
              comp=Z,0.6nm,0.3s,baz=186,slow=7.5,SNR=23
LPAZ   La Paz              15.13   4 eP     P       10 30 22.9  -0.8
LPAZ   La Paz              15.13   4  P     P       10 30 23.4  -0.3
ITAB   Concordia           15.58  79 eP     Pn      10 30 25.7  -0.4
CNLB   Canela              16.09  87 eP     Pn      10 30 31.5  -1.1
AQDB   Aquidauana          16.40  52 eP     P       10 30 38.3 +1.1
PTGB   Pitanga             16.64  71 eP     P       10 30 40.0 +0.1
SIV    San Ignacio         17.13  28  P     Pn      10 30 46.1 +0.7
              comp=Z,1.3nm,0.3s,baz=205,slow=11,SNR=31
TER01  Tubaro-SC           17.74  86 eP     Pn      10 30 52.7 +0.1
PTLB   Pontes e Lacer      18.45  33 eP     Pn      10 31 01.7 +0.6
PCMB   Pacaembu            18.89  63 eP     Pn      10 31 05.8  -0.5
TIJ01  Guaruva-PR          18.89  76 eP     P       10 31 03.9  -0.7
FRTB   Fartura             19.30  70 eP     Pn      10 31 10.5  -0.7
SALV   Santo Antonio       19.85  42 eP     P       10 31 16.0 +0.9
VILB   Vilhena             20.23  27 eP     P       10 31 20.4 +1.2
ITRB   Iturama             20.69  60 eP     P       10 31 25.3 +1.3
PET01  Itanhaem-SP         20.74  75 eP     P       10 31 24.2  -0.3
RCLB   Rio Claro- Sao      21.39  70 eP     P       10 31 33.2 +1.6
VAO    Valinhos            21.57  73 eP     P       10 31 34.4 +0.9
ETMB   Extrema             21.71   8 eP     P       10 31 36.3 +1.4
ETMB   Extrema             21.71   8  P     P       10 31 34.9   0.0
ETMB                                  IAmb  IAmb    10 32 01.8
              comp=Z,12nm,1.0s
EFI    East Falkland       21.86 161  P     P       10 31 37.4 +1.3
ARAG   Araguaiana, MT      22.38  50 eP     P       10 31 42.4 +0.4
PARB   Paraibuna           22.52  75 eP     P       10 31 41.8  -1.6
PDRB   Porto dos Gac       22.91  33 eP     P       10 31 48.4 +1.1
CZSB   Cruzeiro do Su      23.80 352 eP     P       10 31 57.5 +2.1
CLDB   Colider             24.00  34 eP     P       10 31 58.6 +1.4
VAS01  Vassouras-RJ        24.79  75 eP     P       10 32 05.6 +1.2
BDFB   Brasilia            25.02  56  P     P       10 32 06.6 +0.1
              comp=Z,7.1nm,0.8s,baz=226,slow=11,SNR=7.4
BDFB   Brasilia            25.02  56  P     P       10 32 06.9 +0.3
BDFB                                  IAmb  IAmb    10 32 07.9
              comp=Z,15nm,1.1s
SNDB   Serra Nova Dou      25.55  45 eP     P       10 32 11.8 +0.5
TBTG   Tabatinga, AM       27.12 359 eP     P       10 32 27.8 +2.4
ITTB   Itaituba            29.82  28 eP     P       10 32 51.1 +1.8
SMTB   Santa Maria do      30.23  47 eP     P       10 32 53.5 +0.4
PRPB   Parauapebas         31.08  40 eP     P       10 33 01.0 +0.5
MCPB   Macapa, AP          34.98  31 eP     P       10 33 36.1 +1.7
VNA3   Neumayer Olymp      50.89 159  P     P       10 35 42.2 +0.3
VNA2   Neumayer--Watz      51.51 158  P     P       10 35 46.7 +0.1
              baz=289,slow=8.8
SNAA   Sanae               53.11 159  P     P       10 35 58.4   0.0
SNAA   Sanae               53.11 159  P     P       10 35 59.1 +0.6
              comp=Z,4.7nm,0.8s,baz=279,slow=6.2,SNR=14
SNAA   Sanae               53.11 159  P     P       10 35 58.2  -0.3
QSPA   South Pole Qui      58.79 180  P     P       10 36 39.5 +0.4
VNDA   Vanda               67.04 191  P     P       10 37 34.6 +1.4
              comp=Z,1.7nm,0.9s,baz=108,slow=6.4,SNR=2.7
VNDA   Vanda               67.04 191  P     P       10 37 34.7 +1.4
VNDA                                  IAmb  IAmb    10 37 39.8
              comp=Z,2.9nm,1.1s
TXAR   Lajitas Array       68.70 328  P     P       10 37 45.6 +1.2
              comp=Z,0.5nm,0.9s,baz=160,slow=8.4,SNR=3.5
V48A   Smith Brothers      68.82 345  P     P       10 37 45.4 +0.5
WVT    Waverly             69.42 344  P     P       10 37 48.5  -0.1
WVT                                   IAmb  IAmb    10 37 49.5
              comp=Z,3.9nm,0.7s
LCAR   Lake Charles        70.21 341  P     P       10 37 54.0 +0.6
LCAR                                  IAmb  IAmb    10 38 23.4
              comp=Z,2.8nm,0.7s
DBIC   Dimbokro            72.19  70  P     P       10 38 04.6  -1.3
              comp=Z,1.7nm,0.5s,baz=218,slow=5.8,SNR=4.2
DBIC   Dimbokro            72.19  70  P     P       10 38 06.1 +0.2
DBIC                                  IAmb  IAmb    10 38 18.7
              comp=Z,5.5nm,1.1s
R40A   Maddies Statio      72.60 341  P     P       10 38 08.2 +0.5
R40A                                  IAmb  IAmb    10 38 08.7
              comp=Z,4.1nm,0.6s
MAW    Mawson              74.96 163  P     P       10 38 21.6 +0.4
              comp=Z,2.6nm,0.8s,baz=128,slow=12,SNR=2.8
MAW    Mawson              74.96 163  P     P       10 38 21.8 +0.5
KOWA   Kowa                77.49  64  P     P       10 38 36.8 +0.3
KOWA                                  IAmb  IAmb    10 38 37.5
              comp=Z,4.0nm,0.7s
ECSD   EROS Data Cent      78.87 340  P     P       10 38 43.7 +0.3
BOSA   Boshof              79.21 117  P     P       10 38 45.6  -0.4
              comp=Z,3.1nm,0.8s,baz=234,slow=3.1,SNR=3.1
TORD   Torodi Ar. Bea      81.18  69  P     P       10 38 56.6 +0.1
              comp=Z,4.1nm,0.9s,baz=270,slow=5.2,SNR=20
TORD   Torodi Ar. Bea      81.18  69  P     P       10 38 56.5 +0.1
TORD                                  IAmb  IAmb    10 38 57.4
              comp=Z,3.2nm,0.8s
PDAR   Pinedale Array      82.56 331  P     P       10 39 05.0 +1.6
              comp=Z,0.3nm,0.5s,baz=134,slow=4.3,SNR=3.8
PDAR   Pinedale Array      82.56 331  P     P       10 39 04.4 +1.0
SCHQ   Schefferville       85.95   1  P     P       10 39 20.1 +0.2
              comp=Z,2.3nm,0.8s,baz=234,slow=8.7,SNR=5.6
SCHQ   Schefferville       85.95   1  P     P       10 39 19.0  -0.8
ASAR   Alice Springs      120.86 205  PKP   PKPdf   10 45 31.2  -1.2
              comp=Z,0.3nm,0.5s,baz=132,slow=1.9,SNR=5.5
ASAR   Alice Springs      120.86 205        PKPdf   10 45 30.4  -2.1
WRA    Warramunga Arr     124.08 207  PKP   PKPdf   10 45 37.9  -0.9
              comp=Z,0.9nm,0.5s,baz=168,slow=1.6,SNR=18
WRA    Warramunga Arr     124.08 207  PKPdf PKPdf   10 45 37.6  -1.2
ZALV   Zalesovo Beam      150.85  32  PKPbc PKiKP   10 46 32.3   0.0
              comp=Z,8.6nm,0.7s,baz=301,slow=3.0,SNR=35
ZALV   Zalesovo Beam      150.85  32        PKPbc   10 46 31.8 +0.1
MKAR   Makanchi Array     153.36  47  PKPbc PKPbc   10 46 37.2  -0.4
              comp=Z,1.8nm,0.8s,baz=298,slow=2.6,SNR=7.7
MKAR                                  PKPab PKPab   10 46 50.2   0.0
              comp=Z,1.3nm,0.8s,baz=291,slow=3.8,SNR=4.8
MKAR   Makanchi Array     153.36  47        PKPbc   10 46 37.5  -0.2
SONM   Songino Array      163.31  10  PKPab PKPab   10 47 33.6 +0.4
              comp=Z,1.1nm,0.9s,baz=312,slow=5.4,SNR=5.2
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*CNRM **01** 10:52:10.3, 36°.62N×7°.43W, h53^{km}, ml2.4*

*MDD **01** 10:52:12.0±0.6, 36°.76N×7°.17W, h22^{km}±1^{km}, mbLg2.5/10, Error ellipse: s-maj=6.9km s-min=3.5km az=16.0, PRXIMO*

*SFS **01** 10:52:12.0, 36°.75N×7°.19W, h28^{km}, ML2.4, GOLFO DE CADIZ*

*INMG **01** 10:52:12.7±1.6, 36°.75N×7°.23W, h19^{km}±4^{km}, ML2.2, Error ellipse: s-maj=4.7km s-min=3.0km az=22.0*

*IGIL **01** 10:52:13.4, 36°.77N×7°.24W, h22^{km}, ML2.1*

ISC 01 10:52:11.4±0.9**, 36°.72N**±0°.03×**7°.16W**±0°.02**, h30**^{km}**, n77, σ1^{s}.67**/137**, 1C-7D, Strait of Gibraltar**

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Code   Station Name           Δ°  AZ°   Phase ID          Time     Res
                                     Op     ISC       h  m  s    ISC
ARNO   Arenosillo           0.51  42  P     Pb      10 52 23.4 +1.4
ARNO                                  S     Sb      10 52 30.7 +1.5
PTAV   Tavira               0.56 316 ePg    Pb      10 52 23.3 +0.5
PTAV                                 eSg    Sb      10 52 30.8 +0.1
PBDV   Barranco-do-Ve       0.81 310⇓iP     Pb      10 52 26.7  -0.2
PBDV                                 eS     Sb      10 52 36.5  -1.0
PBDV                                  A     A       10 52 42.1
              34nm,0.4s
PBDV   Barranco-do-Ve       0.81 310  Pg    Pb      10 52 26.7  -0.2
PBDV                                  Lg    Lg      10 52 36.5
              34nm,0.4s
PVAQ   Vaqueiros            0.81 327⇓iP     Pn      10 52 26.8   0.0
PVAQ                                 eS     Sb      10 52 36.8  -0.8
PVAQ                                  A     A       10 52 37.1
              153nm,0.4s
PVAQ   Vaqueiros            0.81 327  Pg    Pn      10 52 26.8   0.0
PVAQ                                  Lg    Lg      10 52 36.8
              153nm,0.4s
PVAQ   Vaqueiros            0.81 327  P     Pn      10 52 26.6  -0.2
PVAQ                                  S     Sb      10 52 36.7  -1.0
EGRO   El Granado           0.85 343 ⇓Pg    Pn      10 52 27.4 +0.1
              11nm,0.3s,SNR=18
EGRO                                  Lg    Lg      10 52 37.9
              76nm,0.1s,SNR=9.9
ESPR   Espera               1.06  82  Pg    Pn      10 52 31.4 +1.2
              4.0nm,0.2s,SNR=16
ESPR                                  Lg    Lg      10 52 44.6
              201nm,0.3s,SNR=20
EMIN   Mina Concepcio       1.11  20  Pn    Pn      10 52 30.9  -0.1
              0.3nm,0.0s,SNR=59
EMIN                                  Pg    Pb      10 52 31.7  -0.3
              5.3nm,0.1s,SNR=7.9
EMIN                                  Sn    Sn      10 52 43.6  -1.7
              13nm,0.1s,SNR=17
EMIN                                  Lg    Lg      10 52 45.2
              24nm,0.1s,SNR=7.9
PCVE   Castro Verde         1.15 323⇓iP     Pn      10 52 31.4   0.0
PCVE                                 eS     Sn      10 52 45.4  -0.7
PCVE                                  A     A       10 52 50.0
              12nm,0.2s
PCVE   Castro Verde         1.15 323  Pg    Pn      10 52 31.4   0.0
PCVE                                  Lg    Lg      10 52 45.4
              12nm,0.2s
MORF   Marmelete            1.33 297 eP     Pn      10 52 33.9 +0.1
MORF                                 eS     Sn      10 52 49.2  -1.4
MORF                                  IAML          10 52 50.1
              comp=N,64nm,0.2s
MORF   Marmelete            1.33 297 eP     Pn      10 52 34.0 +0.1
MORF                                 eS     Sn      10 52 49.3  -1.3
MORF                                  A     A       10 52 49.8
              comp=N,48nm,0.1s
MORF   Marmelete            1.33 297  Pg    Pn      10 52 34.0 +0.1
MORF                                  Lg    Lg      10 52 49.3
              comp=N,48nm,0.1s
PFVI   Vila Bisbo           1.40 288 eP     Pn      10 52 35.1 +0.3
PFVI                                 eS     Sn      10 52 50.5  -1.7
PFVI                                  A     A       10 52 51.4
              comp=N,16nm,0.1s
PFVI   Vila Bisbo           1.40 288  Pn    Pn      10 52 34.7  -0.1
              comp=N,22nm,1.0s,SNR=7.3
PFVI                                  Sn    Sn      10 52 50.6  -1.6
              comp=N,34nm,0.1s,SNR=11
MESJ   Messejana            1.40 323 eP     Pn      10 52 35.0 +0.1
MESJ                                 eS     Sn      10 52 50.8  -1.5
MESJ                                  IAML          10 52 51.8
              comp=E,12nm,0.1s
MESJ   Messejana            1.40 323⇓iP     Pn      10 52 35.0 +0.1
MESJ                                 eS     Sn      10 52 51.2  -1.1
MESJ                                  A     A       10 52 56.0
              comp=E,19nm,0.2s
MESJ   Messejana            1.40 323  Pg    Pn      10 52 35.0 +0.1
MESJ                                  Lg    Lg      10 52 51.2
              comp=E,19nm,0.2s
PBEJ   Beja                 1.42 337 eP     Pn      10 52 35.1   0.0
PBEJ                                 eS     Sn      10 52 52.0  -0.8
PBEJ                                  A     A       10 52 59.6
              comp=E,11nm,0.3s
PBEJ   Beja                 1.42 337  Pg    Pn      10 52 35.1   0.0
PBEJ                                  Lg    Lg      10 52 52.0
              comp=E,5.6nm,0.3s
PBAR   Barrancos            1.45   4 ePn    Pn      10 52 35.8 +0.2
PBAR                                 eSn    Sn      10 52 55.4 +1.7
PBAR                                  A     A       10 53 00.0
              comp=E,23nm,0.3s
PBAR   Barrancos            1.45   4  Pn    Pn      10 52 35.8 +0.2
PBAR                                  Sn    Sn      10 52 55.4 +1.7
              comp=E,23nm,0.3s
PTEO   Sao Teotonio         1.49 304⇑eP     Pn      10 52 36.7 +0.5
PTEO                                 eS     Sn      10 52 53.6  -1.0
PTEO                                  A     A       10 53 06.0
              comp=E,11nm,0.4s
PTEO   Sao Teotonio         1.49 304  Pn    Pn      10 52 36.7 +0.5
PTEO                                  Lg    Lg      10 52 53.6
              comp=E,5.4nm,0.4s
PNCL   Nicolau / Gran       1.76 322 ePn    Pn      10 52 40.0 +0.1
PNCL                                 eSn    Sn      10 53 00.1  -1.2
PNCL                                  A     A       10 53 11.0
              comp=E,10nm,0.4s
PNCL   Nicolau / Gran       1.76 322  Pn    Pn      10 52 40.0 +0.1
PNCL                                  Sn    Sn      10 53 00.1  -1.2
              comp=E,10nm,0.4s
EMIJ   Mijas                1.93  94  Sn    Sn      10 53 05.3  -0.2
              comp=E,1.3nm,0.2s,SNR=7.9
EVO    Evora                1.93 340  P     Pn      10 52 42.2 +0.1
EVO                                   S     Sn      10 53 06.1 +0.7
EVO    Evora                1.93 340 ePn    Pn      10 52 42.4 +0.2
EVO                                  eSn    Sn      10 53 04.3  -1.1
EVO                                   A     A       10 53 07.7
              comp=E,48nm,0.1s
EVO    Evora                1.93 340  Pn    Pn      10 52 42.4 +0.2
EVO                                   Sn    Sn      10 53 04.3  -1.1
              comp=E,48nm,0.1s
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ECAB	El Cabril	1.94	45	Pn	Pn	10 52 42.5	+0.2
	comp=E,1.6nm,0.8s,SNR=12						
ECAB				Sn	Sn	10 53 03.1	-2.5
	comp=E,3.6nm,0.1s,SNR=6.7						
ECAB				Lg	Lg	10 53 10.0	
	comp=E,9.0nm,0.1s,SNR=7.9						
EBAD	Badajoz	2.03	3	Pn	Pn	10 52 43.5	-0.1
	comp=E,1.2nm,0.3s,SNR=18						
EBAD				Sn	Sn	10 53 05.5	-2.4
	comp=E,5.4nm,0.1s,SNR=8.4						
EBAD				Lg	Lg	10 53 13.3	
	comp=E,14nm,0.1s,SNR=7.9						
PESTR	Estremoz	2.17	351	⇓*e*Pn	Pn	10 52 45.4	-0.1
PESTR				*e*Sn	Sn	10 53 11.9	+0.6
PESTR				A	A	10 53 21.5	
	comp=E,5.7nm,0.6s						
PESTR	Estremoz	2.17	351	P	Pn	10 52 45.1	-0.4
PESTR				S	Sn	10 53 11.2	-0.1
EGOR	Sierra Gorda,	2.48	80	Sn	Sn	10 53 18.4	-0.8
	SNR=7.9						
PMTG	Montargil	2.49	341	*e*Pn	Pn	10 52 49.9	0.0
PMTG				*e*Sn	Sn	10 53 18.5	-0.7
PMTG				A	A	10 53 30.7	
	comp=E,6.3nm,0.3s						
PMTG	Montargil	2.49	341	Pn	Pn	10 52 49.9	0.0
PMTG				Sn	Sn	10 53 18.5	-0.7
	comp=E,6.3nm,0.3s						
EADA	Adamuz	2.51	54	Pn	Pn	10 52 51.5	+1.3
	comp=E,0.4nm,0.1s,SNR=7.9						
EADA				Pg	Pb	10 52 56.9	+1.0
	comp=E,1.4nm,0.2s,SNR=7.9						
EADA				Sn	Sn	10 53 17.5	-2.4
	comp=E,5.7nm,0.1s,SNR=7.9						
EADA				Lg	Lg	10 53 27.9	
	comp=E,5.7nm,0.1s,SNR=7.9						
PMRV	Marv??o	2.71	356	⇓*i*Pn	Pn	10 52 52.9	0.0
PMRV				*e*Sn	Sn	10 53 23.8	-0.8
PMRV				*e*Sg	Sb	10 53 36.9	+5.0
PMRV				A	A	10 53 40.8	
	comp=E,7.7nm,0.4s						
PMRV	Marv??o	2.71	356	Pn	Pn	10 52 52.9	0.0
PMRV				Sn	Sn	10 53 23.8	-0.8
PMRV				Lg	Lg	10 53 36.9	
	comp=E,7.7nm,0.4s						
PMAFR	Mafra	2.79	324	*e*Pn	Pn	10 52 54.7	+0.7
PMAFR				*e*Sn	Sn	10 53 26.1	-0.6
PMAFR				A	A	10 53 26.7	
	comp=E,21nm,0.1s						
PMAFR	Mafra	2.79	324	Pn	Pn	10 52 54.5	+0.5
	comp=E,26nm,0.7s,SNR=6.9						
PMAFR				Sn	Sn	10 53 24.9	-1.8
	comp=E,18nm,0.1s,SNR=8.6						
ELGU	Los Guajares,	2.84	86	Pn	Pn	10 52 54.0	-0.8
	comp=E,0.8nm,0.2s,SNR=7.9						
ELGU				Sn	Sn	10 53 24.6	-3.5
	comp=E,2.9nm,0.3s,SNR=7.9						
PSBE	So Bento	3.07	336	*e*Pn	Pn	10 52 58.5	+0.6
PSBE				*e*Sn	Sn	10 53 32.6	-1.0
PCBR	Castelo Branco	3.12	356	*e*Pn	Pn	10 52 58.7	+0.1
PCBR				*e*Sn	Sn	10 53 33.0	-1.8
PCBR				A	A	10 53 33.7	
	comp=E,4.5nm,0.1s						
PCBR	Castelo Branco	3.12	356	Pn	Pn	10 52 58.7	+0.1
PCBR				Sn	Sn	10 53 33.0	-1.8
	comp=E,2.2nm,0.1s						
ZHG	ZHG	3.30	172	P	Pn	10 53 02.8	+1.8
ZHG				S	Sn	10 53 39.8	+0.6
EQES	Quesada	3.44	70	Sn	Sn	10 53 40.5	-2.3
	comp=E,1.9nm,0.1s,SNR=7.9						
EPLA	Plasencia	3.44	14	Pn	Pn	10 53 03.5	+0.5
	comp=E,1.2nm,0.4s,SNR=7.0						
EPLA				Sn	Sn	10 53 40.1	-2.7
	comp=E,1.2nm,0.1s,SNR=5.0						
EPLA				Lg	Lg	10 53 56.7	
	comp=E,1.5nm,0.2s,SNR=7.9						
PCAS	Casmilo, Conde	3.49	343	*e*Pn	Pn	10 53 04.1	+0.5
PCAS	Casmilo, Conde	3.49	343	Pn	Pn	10 53 04.1	+0.5
PAB	San Pablo	3.59	37	Pn	Pn	10 53 05.6	+0.6
	comp=E,0.2nm,0.1s,SNR=7.9						
PAB				Pg	Pb	10 53 13.8	-0.4
	comp=E,0.6nm,0.1s,SNR=7.9						
PAB				Sn	Sn	10 53 42.1	-4.4
	comp=E,1.6nm,0.1s,SNR=7.9						
PAB				Lg	Lg	10 54 00.3	
	comp=E,1.0nm,0.2s,SNR=7.9						
MTE	Manteigas	3.68	355	*e*Pn	Pn	10 53 06.2	-0.2
MTE				*e*Sn	Sn	10 53 45.6	-3.2
MTE				*e*Sg	Sb	10 54 07.7	+7.7
MTE	Manteigas	3.68	355	Pn	Pn	10 53 06.2	-0.2
MTE				Sn	Sn	10 53 45.6	-3.2
MTE				Lg	Lg	10 54 07.7	
SESP	Santiago Espad	3.93	68	Pn	Pn	10 53 10.8	+1.0
	comp=E,0.1nm,0.1s,SNR=7.9						
SESP				Pg	Pb	10 53 19.3	-0.7
	comp=E,0.6nm,0.2s,SNR=7.9						
SESP				Sn	Sn	10 53 52.9	-2.1
	comp=E,3.3nm,0.1s,SNR=7.9						
PVIS	Viseu	4.03	352	*e*Pn	Pn	10 53 11.0	-0.1
PVIS				*e*Sn	Sn	10 53 55.4	-1.9
PVIS	Viseu	4.03	352	Pn	Pn	10 53 11.0	-0.1
PVIS				Sn	Sn	10 53 55.4	-1.9
MD31	MD31	4.33	152	P	Pn	10 53 16.1	+0.9
MD31				S	Sn	10 54 01.1	-3.6
MVO	Moncorvo	4.44	1	*e*Pn	Pn	10 53 16.9	+0.2
MVO				*e*Sn	Sn	10 54 04.4	-3.0
MVO	Moncorvo	4.44	1	Pn	Pn	10 53 16.8	+0.1
	comp=E,1.1nm,0.3s,SNR=6.2						
MVO				Sn	Sn	10 54 03.7	-3.6
	comp=E,1.8nm,0.2s,SNR=7.9						
GUD	Guadarrama	4.57	30	Pn	Pn	10 53 19.3	+0.7
	comp=E,1.4nm,0.9s,SNR=5.7						
GUD				Sn	Sn	10 54 07.6	-3.1
	comp=E,4.1nm,0.8s,SNR=5.0						
GUD				Lg	Lg	10 54 30.6	
	comp=E,1.2nm,0.3s,SNR=7.9						
POLO	Lamas de Olo	4.67	354	*e*Pn	Pn	10 53 19.8	-0.1
POLO				*e*Sn	Sn	10 54 10.9	-2.3
POLO				A	A	10 54 14.8	
	comp=E,1.4nm,0.9s						
POLO	Lamas de Olo	4.67	354	Pn	Pn	10 53 19.8	-0.1
POLO				Sn	Sn	10 54 10.9	-2.3
	comp=E,1.4nm,0.9s						
ETOB	Tobarra	4.85	65	Pn	Pn	10 53 20.6	-1.7
	comp=E,0.6nm,0.2s,SNR=7.9						
ETOB				Sn	Sn	10 54 14.7	-2.8
	comp=E,1.8nm,0.1s,SNR=7.9						
PCAB	Cabril	5.03	353	*e*Sn	Sn	10 54 18.9	-2.9
PCAB	Cabril	5.03	353	Sn	Sn	10 54 18.9	-2.9
PBRG	Braganca	5.09	4	*e*Pn	Pn	10 53 25.8	+0.2
PBRG	Braganca	5.09	4	Pn	Pn	10 53 25.8	+0.2
ELOB	Lobios	5.18	353	Pn	Pn	10 53 26.8	-0.2
	comp=E,0.5nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	10 54 22.4	-3.5
	comp=E,1.6nm,0.7s,SNR=7.9						
ECAL	Calabor	5.22	3	Pn	Pn	10 53 27.6	+0.1
	comp=E,5.3nm,0.8s,SNR=5.7						
ECAL				Sn	Sn	10 54 23.1	-3.6
	comp=E,3.8nm,0.2s,SNR=7.9						
ECAL				Lg	Lg	10 54 50.4	
	comp=E,1.7nm,0.3s,SNR=7.9						
PGAV	Gavieira, Arco	5.31	351	*e*Pn	Pn	10 53 28.5	-0.2
PGAV	Gavieira, Arco	5.31	351	Pn	Pn	10 53 28.5	-0.2
OUK	Oukaimeden	5.53	186	P	Pn	10 53 31.4	-0.6
OUK				S	Sn	10 54 29.9	-4.8
ETOR	Torete	5.71	43	Pn	Pn	10 53 34.2	0.0
	comp=E,3.0nm,0.1s,SNR=7.9						
TTIG	Tnine Tigouga,	6.25	190	P	Pn	10 53 38.2	-3.5
TTIG				S	Sn	10 54 45.5	-6.7

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*IDC **01** 10:55:21.9±1.1, 26°.02N×90°.67E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.6/55, mbtmp3.8/7, ML4.2/1, MS2.4/1, Ms1 2.6/1, ms1mx2.2/36, Error ellipse: s-maj=50.3km s-min=16.6km az=65.0*

ISC 01 10:55:25.8±1.0, **26°.1N**±0°.1×**90°.7E**±0°.2, **h24**^{km}, **n8**, σ**0^{s}.69**/9, **mb3.8**/6, **Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	Bariadhala	3.49	166	Pn	Pn	10 56 18.1	-0.4
	0.2nm,0.3s,baz=72,slow=20,SNR=1.4						
BRDH				Sn	Sn	10 57 00.1	+1.1
	0.2nm,0.3s,baz=249,slow=24,SNR=5.9						
CMAR	Chiang Mai Arr	10.75	133	Pn	Pn	10 57 58.4	0.0
	0.5nm,0.3s,baz=304,slow=15,SNR=4.7						
CMAR				LR	LR	11 03 42.5	
	comp=Z,19nm,19.1s,baz=150,slow=47						
MKAR	Makanchi Array	21.73	344	P	P	11 00 16.1	+0.8
	4.0nm,0.6s,baz=154,slow=11,SNR=25						
SONM	Songino Array	24.99	26	P	P	11 00 47.8	+0.1
	0.6nm,0.6s,baz=205,slow=10,SNR=4.2						
KURBB	Kurchatov Arra	26.24	342	P	P	11 00 59.3	+0.5
	0.8nm,0.5s,baz=155,slow=10,SNR=9.1						
FINES	FINESS Array B	55.35	328	P	P	11 04 57.4	0.0
	1.4nm,0.5s,baz=92,slow=4.6,SNR=7.3						
NOA	NORSAR Array B	62.50	327	P	P	11 05 46.7	-0.4
	1.6nm,1.0s,baz=82,slow=6.3,SNR=2.6						
ASAR	Alice Springs	64.75	136	P	P	11 06 01.6	-0.8
	0.2nm,0.5s,baz=313,slow=6.9,SNR=3.4						

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*IDC **01** 10:57:49.4±1.2, 2°.91N×124°.97E, h0^{km}, mb3.9/7, mb1 4.0/7, mb1mx3.7/41, mbtmp3.9/7, Error ellipse: s-maj=112.0km s-min=16.9km az=67.0*

ISC 01 10:57:54.3±1.4, **3°.0N**±0°.3×**125°.1E**±0°.7, **h35**^{km}, **n7**, σ**0^{s}.56**/7, **mb3.9**/6, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.92	179	P	P	11 02 34.4	+0.3
	1.9nm,0.6s,baz=348,slow=5.2,SNR=9.8						
WRA	Warramunga Arr	24.48	159	P	P	11 03 11.0	+0.6
	2.4nm,0.5s,baz=335,slow=10,SNR=45						
ASAR	Alice Springs	27.80	163	P	P	11 03 40.2	-0.1
	0.4nm,0.3s,baz=338,slow=7.5,SNR=20						
STKA	Stephens Creek	38.01	157	P	P	11 05 08.9	-0.3
	2.8nm,0.7s,baz=347,slow=6.0,SNR=3.7						
MKAR	Makanchi Array	57.30	326	P	P	11 07 39.1	+0.4
	0.3nm,0.3s,baz=124,slow=8.1,SNR=8.0						
ZALV	Zalesovo Beam	60.57	334	P	P	11 08 01.4	+0.2
	0.4nm,0.4s,baz=132,slow=8.8,SNR=2.5						
KURBB	Kurchatov Arra	61.54	328	P	P	11 08 07.2	-0.7
	0.2nm,0.3s,baz=132,slow=6.8,SNR=5.6						

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*MDD **01** 11:10:01.8±1.0, 36°.98N×11°.94W, h30^{km}, mb4.6/18, Error ellipse: s-maj=9.5km s-min=8.7km az=29.0, PRXIMO*
*INMG **01** 11:10:03.8±1.1, 36°.99N×11°.87W, h31^{km}, ML2.8, Error ellipse: s-maj=4.3km s-min=3.1km az=74.0*
*IGIL **01** 11:10:03.4, 36°.98N×11°.86W, h32^{km}, ML2.7*
*CNRM **01** 11:10:05.5, 36°.51N×11°.14W, h0^{km}, ml3.2*

ISC 01 11:10:01.2±3.2, **37°.09N**±0°.09×**11°.7W**±0°.1, **h10**^{km}, **n91**, σ**1^{s}.09**/122, **8C**, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.28	88	⇑*i*Pn	Pn	11 10 39.6	+0.8
PFVI				*e*Sn	Sn	11 11 05.7	-1.3
PFVI				A	A	11 11 07.6	
	60nm,0.1s						
PFVI	Vila Bisbo	2.28	88	⇑P	Pn	11 10 39.6	+0.8
	33nm,0.1s,SNR=18						
PFVI				S	Sn	11 11 05.7	-1.3
	188nm,0.1s,SNR=17						
PFVI	Vila Bisbo	2.28	88	P	Pn	11 10 39.6	+0.8
PFVI				S	Sn	11 11 03.9	-3.1
PLAGO	Lagos	2.39	89	*e*Sn	Sn	11 11 08.9	-0.8
PTEO	Sao Teotonio	2.40	78	⇑*i*Pn	Pn	11 10 41.6	+1.1
PTEO				*e*Sn	Sn	11 11 09.7	-0.2
PTEO				A	A	11 11 16.1	
	29nm,0.3s						
PTEO	Sao Teotonio	2.40	78	P	Pn	11 10 41.6	+1.1
PTEO				S	Sn	11 11 09.7	-0.2
	15nm,0.3s						
MORF	Marmelete	2.42	84	*e*P	Pn	11 10 41.8	+0.9
MORF				*e*S	Sn	11 11 09.9	-0.8
MORF				IAML		11 11 11.9	
	comp=E,57nm,0.2s						
MORF	Marmelete	2.42	84	⇑*i*Pn	Pn	11 10 41.8	+0.9
MORF				*e*Sn	Sn	11 11 10.0	-0.8
MORF				A	A	11 11 13.8	
	comp=E,46nm,0.2s						
MORF	Marmelete	2.42	84	P	Pn	11 10 41.8	+0.9
MORF				S	Sn	11 11 09.9	-0.8
PMST	Lisbon--Monsan	2.56	49	*e*Pn	Pn	11 10 44.0	+1.2
PMST				*e*Sn	Sn	11 11 15.4	+1.3
PMST				A	A	11 11 19.2	
	comp=E,24nm,0.5s						
PMAFR	Mafra	2.65	45	⇑*i*Pn	Pn	11 10 45.1	+1.1
PMAFR				*e*Sn	Sn	11 11 16.3	+0.1
PMAFR				A	A	11 11 20.7	
	comp=E,57nm,0.1s						
PMAFR	Mafra	2.65	45	⇑P	Pn	11 10 45.2	+1.1
	comp=E,12nm,0.1s,SNR=18						
PMAFR				S	Sn	11 11 16.4	+0.1
	comp=E,5.3nm,0.1s,SNR=11						
PNCL	Nicolau / Gran	2.70	67	⇑*e*Pn	Pn	11 10 45.7	+1.1
PNCL				*e*Sn	Sn	11 11 17.7	+0.3
PNCL				A	A	11 11 25.7	
	comp=E,20nm,0.2s						
PNCL	Nicolau / Gran	2.70	67	P	Pn	11 10 45.7	+1.1
PNCL				S	Sn	11 11 17.7	+0.3
	comp=E,20nm,0.2s						
MESJ	Messejana	2.85	74	*e*P	Pn	11 10 47.8	+1.1
MESJ				*e*S	Sn	11 11 20.5	-0.6
MESJ				IAML		11 11 25.6	
	comp=E,17nm,0.1s						
MESJ	Messejana	2.85	74	*e*Pn	Pn	11 10 47.8	+1.1
MESJ				*e*Sn	Sn	11 11 21.1	0.0
MESJ				A	A	11 11 30.0	
	comp=E,12nm,0.2s						
MESJ	Messejana	2.85	74	P	Pn	11 10 47.8	+1.1
MESJ				S	Sn	11 11 20.5	-0.6
PCVE	Castro Verde	2.95	78	*e*Pn	Pn	11 10 49.1	+1.0
PCVE				*e*Sn	Sn	11 11 22.5	-1.0
PCVE				A	A	11 11 27.3	
	comp=E,12nm,0.3s						
PCVE	Castro Verde	2.95	78	P	Pn	11 10 49.1	+1.0
PCVE				S	Sn	11 11 22.5	-1.0
	comp=E,12nm,0.3s						
PBDV	Barranco-do-Ve	3.00	86	*e*Pn	Pn	11 10 50.0	+1.2
PBDV				*e*Sn	Sn	11 11 23.9	-0.8
PBDV				A	A	11 11 30.9	
	comp=E,22nm,0.3s						
PBDV	Barranco-do-Ve	3.00	86	S	Sn	11 11 23.9	-0.8
	comp=E,22nm,0.3s						
PBEJ	Beja	3.17	72	*e*Pn	Pn	11 10 52.8	+1.7
PBEJ				*e*Sn	Sn	11 11 28.4	-0.6
PBEJ				A	A	11 11 33.8	
	comp=E,16nm,0.3s						
PBEJ	Beja	3.17	72	P	Pn	11 10 52.8	+1.7
PBEJ				S	Sn	11 11 28.4	-0.6
	comp=E,7.8nm,0.3s						
PVAQ	Vaqueiros	3.17	83	*e*Pn	Pn	11 10 52.5	+1.3
PVAQ				*e*Sn	Sn	11 11 28.6	-0.5
PVAQ				A	A	11 11 31.1	
	comp=E,34nm,0.1s						
PVAQ	Vaqueiros	3.17	83	P	Pn	11 10 52.5	+1.3
PVAQ				S	Sn	11 11 28.6	-0.5
	comp=E,34nm,0.1s						
PVAQ	Vaqueiros	3.17	83	P	Pn	11 10 52.4	+1.3
PVAQ				S	Sn	11 11 28.8	-0.3
PTAV	Tavira	3.21	88	*e*Sn	Sn	11 11 29.4	-0.7
EVO	Evora	3.24	63	P	Pn	11 10 52.0	-0.1
EVO				S	Sn	11 11 29.9	-0.7
EVO	Evora	3.24	63	*e*Pn	Pn	11 10 53.2	+1.1
EVO				*e*Sn	Sn	11 11 30.7	0.0
EVO				A	A	11 11 36.9	
	comp=E,24nm,0.3s						
EVO	Evora	3.24	63	P	Pn	11 10 53.2	+1.1
PSBE	So Bento	3.31	42	*e*Pn	Pn	11 10 54.6	+1.5
PSBE				*e*Sn	Sn	11 11 34.0	+1.4
PSBE				A	A	11 11 38.0	
	comp=E,28nm,0.5s						
PMTG	Montargil	3.36	53	⇑*e*Pn	Pn	11 10 54.5	+0.7
PMTG				*e*Sn	Sn	11 11 33.6	-0.1
PMTG				A	A	11 11 37.9	
	comp=E,9.8nm,0.2s						
PMTG	Montargil	3.36	53	P	Pn	11 10 54.5	+0.7
EGRO	El Granado	3.37	81	P	Pn	11 10 54.9	+1.0
	comp=E,7.4nm,0.1s,SNR=32						
EGRO				S	Sn	11 11 32.0	-2.0
	comp=E,9.4nm,0.1s,SNR=7.9						
PESTR	Estremoz	3.68	60	*e*Pn	Pn	11 10 58.8	+0.6
PESTR				*e*Sn	Sn	11 11 40.9	-0.8
PESTR				A	A	11 11 46.4	
	comp=E,5.5nm,0.2s						
PBAR	Barrancos	3.84	72	*e*Pn	Pn	11 11 02.2	+1.9
PBAR				*e*Sn	Sn	11 11 44.2	-1.2
PBAR				A	A	11 11 52.4	
	comp=E,21nm,0.6s						
PBAR	Barrancos	3.84	72	P	Pn	11 11 02.2	+1.9
PBAR				S	Sn	11 11 44.2	-1.2
	comp=E,21nm,0.6s						
PCAS	Casmilo, Conde	3.86	39	*e*Pn	Pn	11 11 01.6	+0.9
PCAS				*e*Sn	Sn	11 11 45.6	-0.5
PCAS				A	A	11 11 48.1	
	comp=E,10nm,0.3s						
PCAS	Casmilo, Conde	3.86	39	P	Pn	11 11 01.6	+0.9
PCAS				S	Sn	11 11 45.6	-0.5
	comp=E,10nm,0.3s						
EMIN	Mina Concepcio	4.04	79	P	Pn	11 11 04.0	+1.0
	comp=E,4.3nm,0.1s,SNR=30						
EMIN				S	Sn	11 11 48.6	-1.8
	comp=E,12nm,0.1s,SNR=7.9						
EBAD	Badajoz	4.04	64	P	Pn	11 11 04.2	+1.0
	comp=E,4.5nm,0.1s,SNR=26						
EBAD				S	Sn	11 11 49.5	-1.1
	comp=E,5.9nm,0.2s,SNR=7.9						
PMRV	Marv??o	4.10	54	*e*Pn	Pn	11 11 04.7	+0.8
PMRV				*e*Sn	Sn	11 11 51.3	-0.7
PMRV				A	A	11 11 52.8	
	comp=E,7.2nm,0.2s						
PMRV	Marv??o	4.10	54	P	Pn	11 11 04.7	+0.8
PMRV				S	Sn	11 11 51.3	-0.7
	comp=E,7.2nm,0.2s						
PCBR	Castelo Branco	4.29	49	*e*Pn	Pn	11 11 07.8	+1.3
PCBR				*e*Sn	Sn	11 11 55.3	-1.2
PCBR				A	A	11 11 58.4	
	comp=E,4.6nm,0.4s						
PCBR	Castelo Branco	4.29	49	P	Pn	11 11 07.8	+1.3
PCBR				S	Sn	11 11 55.3	-1.2
	comp=E,2.3nm,0.4s						
MTE	Manteigas	4.62	43	*e*Pn	Pn	11 11 12.3	+1.2
MTE				*e*Sn	Sn	11 12 03.4	-1.4
MTE				A	A	11 12 08.8	
	comp=E,8.9nm,0.4s						
MTE	Manteigas	4.62	43	P	Pn	11 11 12.3	+1.2
MTE				S	Sn	11 12 03.4	-1.4
	comp=E,4.4nm,0.4s						
ESPR	Espera	4.67	91	S	Sn	11 12 04.5	-1.4
	comp=E,17nm,0.2s,SNR=7.9						
PVIS	Viseu	4.67	38	*e*Pn	Pn	11 11 12.5	+0.7
PVIS				*e*Sn	Sn	11 12 03.4	-2.6
PVIS	Viseu	4.67	38	P	Pn	11 11 12.5	+0.7
PVIS				S	Sn	11 12 03.4	-2.6
ECAB	El Cabril	5.07	77	P	Pn	11 11 18.3	+1.1
	comp=E,4.0nm,0.2s,SNR=28						
ECAB				S	Sn	11 12 14.1	-1.8
	comp=E,3.4nm,0.2s,SNR=7.9						
PVRL	Vila Real	5.19	35	*e*Pn	Pn	11 11 19.6	+0.7
PVRL				*e*Sn	Sn	11 12 16.6	-2.2
PVRL				A	A	11 12 17.7	
	comp=E,12nm,0.2s						
PVRL	Vila Real	5.19	35	P	Pn	11 11 19.6	+0.7
PVRL				S	Sn	11 12 16.6	-2.2
	comp=E,5.8nm,0.2s						
POLO	Lamas de Olo	5.23	34	*e*Pn	Pn	11 11 19.9	+0.4
POLO				*e*Sn	Sn	11 12 17.5	-2.4
POLO				A	A	11 12 19.2	
	comp=E,5.1nm,0.2s						
POLO	Lamas de Olo	5.23	34	P	Pn	11 11 19.9	+0.4
POLO				S	Sn	11 12 17.5	-2.4
	comp=E,5.1nm,0.2s						
EPLA	Plasencia	5.29	54	P	Pn	11 11 21.7	+1.3
	comp=E,3.6nm,0.1s,SNR=14						
EPLA				S	Sn	11 12 20.2	-1.3
	comp=E,3.2nm,0.3s,SNR=7.9						
PCAB	Cabril	5.41	30	*e*Pn	Pn	11 11 22.2	+0.3
PCAB				*e*Sn	Sn	11 12 22.0	-2.2
PCAB				A	A	11 12 24.6	
	comp=E,13nm,0.1s						
PCAB	Cabril	5.41	30	P	Pn	11 11 22.2	+0.3
PCAB				S	Sn	11 12 22.0	-2.2
	comp=E,6.7nm,0.1s						
MVO	Moncorvo	5.44	40	*e*Pn	Pn	11 11 23.0	+0.6
MVO				*e*Sn	Sn	11 12 22.9	-2.1
MVO				A	A	11 12 25.1	
	comp=E,11nm,0.4s						
MVO	Moncorvo	5.44	40	P	Pn	11 11 23.0	+0.6
	comp=E,6.6nm,0.1s,SNR=11						
MVO				S	Sn	11 12 22.2	-2.8
	comp=E,4.8nm,0.1s,SNR=7.9						
ZHG	ZHG	5.50	130	P	Pn	11 11 20.5	-2.7
ZHG				S	Sn	11 12 18.6	-7.9
ELOB	Lobios	5.53	29	P	Pn	11 11 23.9	+0.3
	comp=E,0.7nm,0.1s,SNR=8.7						
ELOB				S	Sn	11 12 23.7	-3.5
	comp=E,3.9nm,0.1s,SNR=7.9						
PGAV	Gavieira, Arco	5.53	27	*e*Pn	Pn	11 11 24.3	+0.6
PGAV				*e*Sn	Sn	11 12 24.0	-3.4
PGAV				A	A	11 12 27.4	
	comp=E,9.1nm,0.1s						
PGAV	Gavieira, Arco	5.53	27	P	Pn	11 11 24.3	+0.6
PGAV				S	Sn	11 12 24.0	-3.4
	comp=E,9.1nm,0.1s						
PMPST	Porto Santo, M	5.53	225	*e*Pn	Pn	11 11 15.7	-7.9
PMPST				*e*Sn	Sn	11 12 09.6	-18
EZAM	Zamans	5.55	24	P	Pn	11 11 24.0	+0.1
	comp=E,1.4nm,0.1s,SNR=7.9						
EZAM				S	Sn	11 12 22.7	-5.0
	comp=E,0.7nm,0.2s,SNR=7.9						
PMPS	Porto Santo	5.55	225	*e*Pn	Pn	11 11 16.7	-7.1
PMPS				*e*Sn	Sn	11 12 09.5	-18
PMPS				A	A	11 12 10.6	
	comp=E,13nm,0.9s						
PMPS	Porto Santo	5.55	225	P	Pn	11 11 16.7	-7.1
PMPS				S	Sn	11 12 09.6	-18
SRHM	Skhour des Reh	5.56	145	P	Pn	11 11 21.1	-3.0
SRHM				S	Sn	11 12 18.9	-9.2
EMIJ	Mijas	5.56	93	S	Sn	11 12 26.1	-2.0
	comp=E,0.4nm,0.1s,SNR=7.9						
EADA	Adamuz	5.74	77	P	Pn	11 11 26.9	+0.5
	comp=E,6.1nm,0.3s,SNR=7.9						
EADA				S	Sn	11 12 29.8	-2.5
	comp=E,3.0nm,0.3s,SNR=7.9						
EGOR	Sierra Gorda,	6.05	88	P	Pn	11 11 32.0	+1.1
	comp=E,1.0nm,0.2s,SNR=7.9						
EGOR				S	Sn	11 12 37.2	-3.0
	comp=E,5.2nm,0.4s,SNR=7.9						
PBRG	Braganca	6.06	38	*e*Pn	Pn	11 11 31.5	+0.6
PBRG				*e*Sn	Sn	11 12 37.2	-3.1
PBRG				A	A	11 12 43.9	
	comp=E,3.7nm,0.1s						
PBRG	Braganca	6.06	38	P	Pn	11 11 31.5	+0.6
PBRG				S	Sn	11 12 37.2	-3.1
	comp=E,1.9nm,0.1s						
ECAL	Calabor	6.17	37	P	Pn	11 11 32.8	+0.5
	comp=E,4.3nm,0.2s,SNR=7.9						
ECAL				S	Sn	11 12 39.4	-3.6
	comp=E,1.4nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	6.20	19	P	Pn	11 11 33.1	+0.2
	comp=E,1.7nm,0.2s,SNR=7.9						
EMAZ				S	Sn	11 12 37.4	-6.4
	comp=E,21nm,0.2s,SNR=7.9						
PAB	San Pablo	6.26	65	P	Pn	11 11 33.7	+0.1
	comp=E,0.9nm,0.1s,SNR=7.9						
PAB				S	Sn	11 12 42.7	-2.6
	comp=E,1.0nm,0.5s,SNR=7.9						
ELGU	Los Guajares,	6.45	90	P	Pn	11 11 39.1	+2.9
	comp=E,0.9nm,0.2s,SNR=7.9						
ELGU				S	Sn	11 12 47.4	-2.6
	comp=E,0.8nm,0.3s,SNR=7.9						
LCRM	LCR	6.52	119	P	Pn	11 11 33.6	-3.8
LCRM				S	Sn	11 12 43.8	-8.2
ESDC	Sonseca Array	6.58	65	P	Pn	11 11 38.9	+0.8
	comp=E,3.3nm,0.2s,baz=253,slow=13,SNR=7.9						
ESDC				S	Sn	11 12 49.3	-4.0
	baz=35,slow=42,SNR=7.9						
OUK	Oukaimeden	6.67	151	P	Pn	11 11 36.4	-3.1
OUK				S	Sn	11 12 44.4	-11
GUD	Guadarrama	6.86	57	P	Pn	11 11 42.7	+0.7
	comp=E,0.8nm,0.2s,SNR=7.9						
EQES	Quesada	6.88	82	P	Pn	11 11 42.8	+0.5
	comp=E,1.5nm,0.1s,SNR=7.9						
EQES				S	Sn	11 12 59.2	-1.5
	comp=E,3.8nm,0.4s,SNR=7.9						
TTIG	Tnine Tigouga,	7.06	157	P	Pn	11 11 39.6	-5.2
TTIG				S	Sn	11 12 53.5	-12
MD31	MD31	7.07	125	P	Pn	11 11 42.8	-2.0
MD31				S	Sn	11 12 56.8	-8.5
EPON	Pontenova	7.12	28	P	Pn	11 11 45.1	-0.4
	comp=E,1.4nm,0.2s,SNR=7.9						
EPON				S	Sn	11 13 00.9	-5.5

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	ISC
	comp=E,0.0nm,0.2s,SNR=7.9						
SESP	Santiago Espad	7.32	79	P	Pn	11 11 47.7	-0.7
	comp=E,0.8nm,0.2s,SNR=7.9						
SESP				S	Sn	11 13 08.0	-3.6
	comp=E,1.4nm,0.1s,SNR=7.9						
OUZM	OUZ	7.40	145	P	Pn	11 11 47.1	-2.2
OUZM				S	Sn	11 13 05.1	-8.3
EARI	Arriondas	7.93	37	S	Sn	11 13 21.7	-4.7
	comp=E,0.2nm,0.2s,SNR=7.9						
ETOB	Tobarra	8.16	76	P	Pn	11 11 59.9	+0.1
	comp=E,0.9nm,0.2s,SNR=7.9						
ETOB				S	Sn	11 13 29.4	-2.7
	comp=E,0.3nm,0.1s,SNR=7.9						
ETOR	Torete	8.37	61	P	Pn	11 12 03.6	+1.0
	comp=E,25nm,0.2s,SNR=33						
ETOR				S	Sn	11 13 32.4	-4.8
	comp=E,1.1nm,0.1s,SNR=7.9						

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*IDC **01** 11:42:38.0±2.2, 62°.83N×29°.22E, h0^{km}, mb1 3.1/4, mb1mx3.0/48, mbtmp3.1/4, ML2.2/4, Error ellipse: s-maj=30.5km s-min=7.5km az=117.0*
*HEL **01** 11:42:41.9±0.2, 63°.15N×27°.75E, h0^{km}, ML2.1, Explosion*
*NAO **01** 11:42:43.2±1.4, 63°.02N×28°.19E, ML2.2*
*BER **01** 11:42:45.3±2.4, 63°.05N×27°.91E, h0^{km}, ML1.8, ML2.2(NAO), Suspected explosion*
*LVSN **01** 11:42:47.9±1.1, 57°.75N×20°.56E, h0^{km}±9^{km}, ML1.9*
ISC 01 11:42:43.2±0.8**, 63°.09N**±0°.02×**27°.57E**±0°.04**, h0**^{km}**, n49, σ1^{s}.60**/77**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUF	Sumiainen	0.75	241	PG	Pg	11 42 56.6	-1.0
	baz=55						
SUF				SB	Sb	11 43 10.3	+0.4
KAF	Kangasniemi	1.14	211	PG	Pg	11 43 03.5	-1.6
KAF				SN	Sb	11 43 22.1	+0.9
KEF	Keuruu	1.56	235	PG	Pn	11 43 11.3	-0.8
KEF				MSG		11 43 31.4	
	comp=Z,21nm,0.2s						
KEF				SN	Sg	11 43 35.5	+2.4
JOF	Joensuu	1.71	94	PG	Pn	11 43 11.1	-3.2
JOF				SN	Sn	11 43 35.0	-2.0
FIA0	FINESS Array S	1.80	204	Pn	Pg	11 43 17.9	+0.3
	baz=26,slow=18						
FIA0				Lg	Lg	11 43 42.0	
	baz=32,slow=37						
FIA0	FINESS Array S	1.80	204	Pn	Pg	11 43 17.9	+0.3
	baz=26,slow=18						
FIA0				Sg	Sg	11 43 42.0	+1.2
	baz=32,slow=37						
FIA0	FINESS Array S	1.80	204	PG	Pb	11 43 16.5	-0.5
	baz=23						
FIA0				SG	Sg	11 43 42.0	+1.2
FINES	FINESS Array B	1.80	204	Pn	Pn	11 43 14.8	-0.6
	comp=Z,1.2nm,0.3s,baz=29,slow=18,SNR=71						
FINES				Lg	Lg	11 43 42.5	
	comp=Z,5.3nm,0.3s,baz=37,slow=27,SNR=43						
OUF	Merijarvi	1.80	317	PG	Pn	11 43 14.7	-0.8
OBF0	Syolatti, Pyha	2.04	315	PG	Pb	11 43 21.5	+0.3
OBF0				SG	Sb	11 43 46.7	-0.4
OUL	Oulu	2.13	341	PG	Pn	11 43 19.8	-0.3
	baz=159						
OUL				SG	Sb	11 43 49.6	-0.1
VJF	Virojoki	2.56	180	PG	Pb	11 43 29.8	-0.2
VJF				MSG		11 43 59.1	
	comp=Z,10.0nm,0.2s						
VJF				SG	Sb	11 44 02.4	+0.4
PVF	Pernaja	2.68	198	PG	Pb	11 43 31.7	-0.3
PVF				MSG		11 44 03.3	
	comp=Z,11nm,0.2s						
PVF				SG	Sb	11 44 07.4	+2.0
MSF	Maaselka	2.90	12	PB	Pn	11 43 29.7	-0.9
	baz=192						
MSF				SB	Sn	11 44 07.3	+1.1
NUR	Nurmijrvi	2.94	209	SG	Sb	11 44 14.7	+1.9
KU6	Riekki	3.11	18	PG	Pn	11 43 35.0	+1.5
	baz=202						
KU6				MSG		11 44 11.0	
	comp=Z,3.3nm,0.2s						
KU6				SG	Sn	11 44 14.0	+2.7
BURU	Burvik	3.13	301	PB	Pn	11 43 35.8	+2.1
UMAU	Umeaa	3.19	287	PN	Pn	11 43 33.3	-1.2
MEF	Metsahovi	3.26	209	*e*P	Pb	11 43 42.0	+0.1
MEF				*e*S	Sb	11 44 21.0	-1.0
MEF				AML	AML	11 44 32.5	
	comp=N,5.3nm,0.2s						
MEF				AML	AML	11 44 36.2	
	comp=Z,6.9nm,0.5s						
MEF				AML	AML	11 44 39.6	
	comp=E,9.5nm,0.3s						
TOF	Tornio	3.31	336	PB	Pn	11 43 38.3	+2.0
TOF				SB	Sn	11 44 17.5	+1.3
KALU	Kalix	3.32	329	PB	Pn	11 43 38.9	+2.5
RAF	Rauma	3.43	235	*e*P	Pb	11 43 44.0	-0.8
RAF				*e*S	Sb	11 44 25.6	-1.4
RAF				AML	AML	11 44 35.2	
	comp=E,7.5nm,0.1s						
RAF				AML	AML	11 44 37.1	
	comp=Z,9.1nm,0.9s						
RAF				AML	AML	11 44 42.0	
	comp=N,7.6nm,0.1s						
RAF	Rauma	3.43	235	PG	Pb	11 43 44.0	-0.8
RNF	Rovaniemi	3.59	350	PB	Pn	11 43 41.8	+1.7
RNF				SG	Sb	11 44 30.4	-1.2
ERTU	Ertsjaerv	4.17	329	PB	Pn	11 43 50.9	+2.9
PAJU	Pajala	4.38	336	PN	Pn	11 43 51.7	+0.8
KLF	Kolari	4.43	342	PN	Pn	11 43 51.3	-0.3
VSU	Vasula	4.66	185	*e*S	Sn	11 44 25.7	-24
APA0	Apatity Array	5.07	24	Pn	Pn	11 44 01.6	+1.2
	baz=206,slow=14						
APA0				Sn	Sn	11 44 59.0	-0.5
	baz=202,slow=28						
APA0	Apatity Array	5.07	24	Pn	Pn	11 44 01.6	+1.2
	baz=206,slow=14						
APA0				Sn	Sn	11 44 59.0	-0.5
	baz=202,slow=28						
HEF	Hetta	5.58	345	*e*P	Pn	11 44 08.8	+1.4
HEF				*e*S	Sn	11 45 08.4	-3.6
KTK1	Kautokeino	6.20	345	*e*P	Pn	11 44 15.2	-0.7
KTK1				*e*S	Sn	11 45 24.4	-3.0
KTK1				IAML		11 45 31.1	
	comp=Z,1.2nm,0.5s						
ARA0	ARCESS Array S	6.53	354	Pn	Pn	11 44 20.9	+0.6
	baz=168,slow=16						
ARA0				Sn	Sn	11 45 32.8	-2.6
	baz=169,slow=28						
ARA0	ARCESS Array S	6.53	354	Pn	Pn	11 44 20.9	+0.6
	baz=168,slow=16						
ARA0				Sn	Sn	11 45 32.8	-2.6
	baz=169,slow=28						
ARA0				IAML		11 45 43.8	
	comp=Z,1.7nm,0.8s						
ARCES	ARCESS Array B	6.53	354	Pn	Pn	11 44 19.0	-1.3
	baz=166,slow=15,SNR=12						
ARCES				Sn	Sn	11 45 33.1	-2.3
	baz=168,slow=22,SNR=7.2						
KIF	Kilpisjarvi	6.54	338	*e*P	Pn	11 44 21.5	+0.9
KIF				*e*S	Sn	11 45 33.3	-2.4
KEV	Kevo	6.70	358	*e*P	Pn	11 44 22.6	-0.1
FAUS	Fauske	6.71	315	*e*P	Pn	11 44 23.7	+0.8
FAUS				*e*S	Sn	11 45 38.2	-1.7
FAUS				IAML		11 45 56.4	
	comp=Z,2.6nm,0.6s						
KONS	Konsvik	7.05	305	*e*P	Pn	11 44 27.9	+0.4
STEI	Steigen	7.05	319	*e*P	Pn	11 44 28.4	+0.9
STEI				*e*S	Sn	11 45 46.9	-1.3
JETT	Jettan, Norway	7.10	339	*e*P	Pn	11 44 29.3	+1.1
HFS	Hagfors	7.25	252	Pn	Pn	11 44 32.2	+1.9
	comp=Z,0.2nm,0.3s,baz=65,slow=16,SNR=12						
HFS				Sn	Sn	11 45 56.4	+3.2
	comp=Z,0.2nm,0.3s,baz=67,slow=27,SNR=2.2						
HFS	Hagfors	7.25	252	Pn	Pn	11 44 32.5	+2.2
	baz=78,slow=14						
HFS	Hagfors	7.25	252	Pn	Pn	11 44 32.5	+2.2
	baz=78,slow=14						
NRA0	NORESS Array S	7.92	260	Pn	Pn	11 44 41.5	+2.0
	baz=58,slow=12						
NRA0				Sn	Sn	11 46 08.8	-1.0
	baz=70,slow=28						
NRA0	NORESS Array S	7.92	260	Pn	Pn	11 44 41.5	+2.0
	baz=58,slow=12						
NRA0				Sn	Sn	11 46 08.8	-1.0
	baz=70,slow=28						
NB2	NORSAR Subarra	7.95	262	Pn	Pn	11 44 41.4	+1.5
	baz=67,slow=11						
NB2	NORSAR Subarra	7.95	262	Pn	Pn	11 44 41.4	+1.5
	baz=67,slow=11						
NOA	NORSAR Array B	7.95	262	Pn	Pn	11 44 41.8	+1.8
	comp=Z,0.0nm,0.3s,baz=69,slow=16,SNR=3.8						

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*IDC **01** 11:45:15.7±1.5, 15°.28S×176°.40W, h0^{km}, mb3.9/6, mb1 4.2/7, mb1mx4.0/34, mbtmp3.9/7, ML3.8/1, Error ellipse: s-maj=82.5km s-min=21.9km az=155.0*
*NEIC **01** 11:45:18.8±2.9, 15°.0S±0°.2×176°.35W±0°.07, h10^{km}±1^{km}, mb4.7/18, Error ellipse: s-maj=29.2km s-min=6.1km az=339.0*
ISC 01 11:45:19.2±0.6**, 15°.1S**±0°.1×**176°.39W**±0°.09**, h17**^{km}**, n35, σ1^{s}.41**/35**, mb4.5**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.62	76	Pn	Pn	11 46 25.9	-2.4
	3.9nm,0.3s,baz=253,slow=19,SNR=3.8						
AFI				Sn	Sn	11 47 19.8	-1.8
	5.2nm,0.3s,baz=108,slow=20,SNR=2.6						
MSVF	Nonsavu	5.95	243	Pn	Pn	11 46 45.6	-1.1
OUENC	Ouen Island, N	17.47	243		P	11 49 23.8	+0.5
OUENC				IAmb	IAmb	11 49 36.5	
	comp=Z,58nm,1.2s						
DZM	Mont Dzumac	17.69	244	Pn	Pn	11 49 23.5	-1.4
MLZ	Mavora Lakes	32.91	200	P	P	11 51 53.6	+1.1
WHZ	Wether Hill Ro	33.43	200	P	P	11 51 56.7	-0.4
WB0	Warramunga Arr	47.06	257	P	P	11 53 48.3	-2.1
WB0				IAmb	IAmb	11 53 54.8	
	comp=Z,5.4nm,1.0s						
WB2	Warramunga Arr	47.09	257	P	P	11 53 49.1	-1.5
WB2				IAmb	IAmb	11 54 11.9	
	comp=Z,5.5nm,1.1s						
WRA	Warramunga Arr	47.11	257	P	P	11 53 48.8	-1.9
	comp=Z,1.6nm,0.8s,baz=89,slow=7.9,SNR=11						
WRA	Warramunga Arr	47.11	257	P	P	11 53 49.1	-1.6
AS31	Alice Springs	47.47	252	P	P	11 53 52.3	-1.2
ASAR	Alice Springs	47.47	252	P	P	11 53 52.2	-1.3
	comp=Z,3.4nm,0.7s,baz=82,slow=8.2,SNR=35						
ASAR	Alice Springs	47.47	252	P	P	11 53 51.5	-2.1
PSA00	Pilbara Seismi	60.53	254	P	P	11 55 28.3	-0.7
PSA00				IAmb	IAmb	11 55 50.1	
	comp=Z,9.8nm,1.2s						
VNDA	Vanda	63.43	185	P	P	11 55 49.1	+1.6
QSPA	South Pole Qui	74.97	180	P	P	11 57 01.0	+1.6
QSPA				IAmb	IAmb	11 57 14.9	
	comp=Z,20nm,1.5s						
TRF	Thorofare Moun	80.85	12	P	P	11 57 31.5	-0.5
TRF				IAmb	IAmb	11 57 51.8	
	comp=Z,9.4nm,1.3s						
HLID	Hailey	81.23	40	P	P	11 57 36.3	+1.8
HLID				IAmb	IAmb	11 57 48.2	
	comp=Z,6.0nm,1.2s						
M27K	Edge Creek, AK	81.80	15	P	P	11 57 38.2	+1.2
HDA	Harding Lake	82.38	12	P	P	11 57 41.4	+1.6
HDA				IAmb	IAmb	11 57 53.9	
	comp=Z,7.6nm,1.1s						
BCAR	Beaver Creek A	82.41	15	P	P	11 57 41.3	+1.1
CCB	Clear Creek Bu	82.41	12	P	P	11 57 41.1	+1.1
CCB				IAmb	IAmb	11 57 49.1	
	comp=Z,6.4nm,1.0s						
IMAR	Indian Mountai	82.58	9	P	P	11 57 41.9	+1.1
ILAR	Eielson Array	82.71	12	P	P	11 57 41.2	-0.3
	comp=Z,1.5nm,0.9s,baz=218,slow=6.9,SNR=9.1						
ILAR	Eielson Array	82.71	12	P	P	11 57 42.8	+1.3
TXAR	Lajitas Array	82.85	57	P	P	11 57 44.6	+1.4
	comp=Z,0.3nm,1.0s,baz=230,slow=9.3,SNR=2.0						
DAWY	Dawson	83.85	15	P	P	11 57 48.6	+1.1
DAWY				IAmb	IAmb	11 57 55.0	
	comp=Z,8.0nm,1.2s						
PDAR	Pinedale Array	83.97	43	P	P	11 57 49.5	+0.6
	comp=Z,0.6nm,0.8s,baz=204,slow=3.3,SNR=4.2						
PDAR	Pinedale Array	83.97	43	P	P	11 57 49.3	+0.4
COLD	Coldfoot	84.29	10		P	11 57 50.3	+0.7
BMAR	Burnt Mountain	85.49	12	P	P	11 57 57.3	+1.5
SONM	Songino Array	92.69	319	P	P	11 58 31.2	+0.7
	comp=Z,0.4nm,0.7s,baz=134,slow=4.2,SNR=2.9						
CLL	Collm	143.07	350	*e*PKPdf	PKPdf	12 04 53.0	+0.9
BRTR	Keskin Array B	144.04	319	PKP	PKPdf	12 04 52.9	-1.5
	comp=Z,2.1nm,0.9s,baz=127,slow=2.2,SNR=6.4						
BRTR	Keskin Array B	144.04	319		PKPbc	12 04 51.7	-0.6

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*IDC **01** 11:46:32.7±1.4, 15°.13S×176°.72W, h0^{km}, mb4.2/6, mb1 4.5/7, mb1mx4.2/34, mbtmp4.2/7, ML4.2/1, MS4.5/6, Ms1 4.5/6, ms1mx4.0/26, Error ellipse: s-maj=75.4km s-min=21.9km az=157.0*
*NEIC **01** 11:46:36.9±3.0, 14°.9S±0°.2×176°.6W±0°.1, h10^{km}±1^{km}, mb4.8/32, Error ellipse: s-maj=32.1km s-min=12.5km az=150.0*
*GCMT **01** 11:46:37.8±0.2, 14°.91S±0°.01×176°.48W±0°.01, h12^{km}, MW5.2/120, Moment Tensor Solution. s45,c55; s120,c187; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.67±.14; $M_{\theta\theta}$6.93±.13; $M_{\phi\phi}$-5.26±.12; $M_{r\theta}$-0.62±.35; $M_{\theta\phi}$0.38±.12; $M_{\phi r}$-2.15±.35; Best double couple: $M_0$6.63200×10^{16} NP1:ϕ_s311.00000°, δ69.00000°, λ-15.00000°. NP2:ϕ_s46.00000°, δ76.00000°, λ-158.00000°. Principal axes: T 6.9990, Plg5.0000°, Azm177.0000°; N -0.7320, Plg64.0000°, Azm77.0000°; P -6.2660, Plg25.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 11:46:36.7±0.5**, 14°.8S**±0°.1×**176°.7W**±0°.1**, h17**^{km}**, n67, σ1^{s}.49**/61**, mb4.7**/21**, MS4.5**/3**, 1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.89	80	Pn	Pn	11 47 46.8	-2.8
	8.5nm,0.3s,baz=72,slow=19,SNR=5.4						
AFI				LR	LR	11 49 13.4	
	comp=Z,4μm,21.2s,baz=242,slow=32						
MSVF	Nonsavu	5.78	239	Pn	Pn	11 48 02.0	+0.1
	1.4nm,0.3s,baz=71,slow=18,SNR=5.8						
MSVF	Nonsavu	5.78	239	Pn	Pn	11 48 02.2	+0.3
RAO	Raoul Island	14.41	184	LR	LR	11 54 27.9	
	comp=Z,6μm,19.1s,baz=17,slow=34						
OUENC	Ouen Island, N	17.29	242		P	11 50 39.8	+1.0
RAR	Rarotonga	17.34	114	LR	LR	11 56 04.3	
	comp=Z,630nm,18.0s,baz=351,slow=33						
PPT	Papeete	26.22	100	LR	LR	11 59 37.3	
	comp=Z,829nm,20.0s,baz=252,slow=30						
WHZ	Wether Hill Ro	33.56	199		P	11 53 17.0	+1.3
WB0	Warramunga Arr	46.79	257	P	P	11 55 03.5	-2.3
WB0				IAmb	IAmb	11 55 11.9	
	comp=Z,20nm,1.2s						
WB2	Warramunga Arr	46.83	256	P	P	11 55 04.5	-1.6
WB2				IAmb	IAmb	11 55 12.3	
	comp=Z,12nm,1.2s						
WRA	Warramunga Arr	46.84	256	P	P	11 55 04.4	-1.8
	comp=Z,2.4nm,1.0s,baz=92,slow=6.7,SNR=6.8						
WRA	Warramunga Arr	46.84	256	P	P	11 55 04.3	-1.9
AS31	Alice Springs	47.23	251	P	P	11 55 07.5	-1.7
ASAR	Alice Springs	47.23	251	P	P	11 55 07.2	-2.0
	comp=Z,4.3nm,0.7s,baz=85,slow=8.6,SNR=13						
PSA00	Pilbara Seismi	60.28	253	P	P	11 56 43.8	-1.0
DAV	Davao City (W)	61.17	287	LR	LR	12 20 24.8	
	comp=Z,808nm,20.9s,baz=142,slow=33						
CMB	Columbia Colle	74.50	43	P	P	11 58 16.3	+1.8
CMB				IAmb	IAmb	11 58 29.2	
	comp=Z,8.7nm,1.4s						
ISA	Isabella, Lake	74.53	46	P	P	11 58 17.0	+2.2
ISA				IAmb	IAmb	11 58 29.2	
	comp=Z,11nm,1.2s						
QSPA	South Pole Qui	75.23	180	LR	LR	12 23 51.1	
	comp=Z,257nm,21.3s,baz=64,slow=30						
QSPA	South Pole Qui	75.23	180	P	P	11 58 18.9	+0.5
YERR	Yerington	75.77	43	P	P	11 58 22.2	+0.2
YERR				IAmb	IAmb	11 58 33.3	
	comp=Z,8.2nm,1.1s						
LHV	Little Huntoon	75.86	44	P	P	11 58 23.2	+0.9
LHV				IAmb	IAmb	11 58 41.2	
	comp=Z,22nm,1.5s						
PAHR	Pah Rah Range	76.07	42	P	P	11 58 25.3	+1.6
PAHR				IAmb	IAmb	11 58 35.0	
	comp=Z,7.0nm,1.1s						
KVN	Kaiserville	76.56	43	P	P	11 58 28.7	+2.2
KVN				IAmb	IAmb	11 58 44.8	
	comp=Z,14nm,1.5s						
BMN	Battle Mountai	77.86	42	P	P	11 58 35.6	+1.9
BMN				IAmb	IAmb	11 58 45.0	
	comp=Z,8.8nm,1.1s						
WVOR	Wild Horse Val	78.02	40	P	P	11 58 36.1	+1.5
WVOR				IAmb	IAmb	11 58 42.3	
	comp=Z,8.4nm,1.2s						
TTA	Tatalina	79.17	9	P	P	11 58 41.4	+1.1
ELK	Elko	79.31	43	P	P	11 58 42.0	+0.2
HAWA	Hanford	79.68	36	P	P	11 58 44.1	+0.7
MSU	Marysvale	80.31	46	P	P	11 58 49.9	+2.6
DUG	Dugway, Tooele	80.66	44	P	P	11 58 50.7	+1.6
HLID	Hailey	81.25	41	P	P	11 58 52.2	0.0
HVU	Hansel Valley	81.44	43	P	P	11 58 54.7	+1.5
CCB	Clear Creek Bu	82.23	12	P	P	11 58 55.6	-1.0
IMAR	Indian Mountai	82.38	9	P	P	11 58 57.4	+0.1
ILAR	Eielson Array	82.53	12	P	P	11 58 58.8	+0.6
	comp=Z,1.0nm,0.7s,baz=230,slow=5.1,SNR=5.8						
MCMT	McKenzie Canyo	82.86	40	P	P	11 59 00.7	+0.1
ANMO	Albuquerque	82.92	51	P	P	11 59 03.3	+2.1
ANMO				IAmb	IAmb	11 59 15.9	
	comp=Z,7.6nm,1.2s						
TX31	Lajitas Ar. Si	82.99	57	P	P	11 59 04.2	+2.7
TX32	Lajitas Array	82.99	57	P	P	11 59 04.0	+2.5
TX32				IAmb	IAmb	11 59 07.6	
	comp=Z,10.0nm,1.4s						
TXAR	Lajitas Array	82.99	57	P	P	11 59 02.2	+0.7
	comp=Z,3.1nm,1.1s,baz=238,slow=4.3,SNR=8.5						
TXAR	Lajitas Array	82.99	57	P	P	11 59 01.6	+0.1
REDW	Red Top Meadow	83.43	42	P	P	11 59 05.6	+2.0
REDW				IAmb	IAmb	11 59 08.0	
	comp=Z,13nm,1.4s						
FXWY	Fox Creek	83.45	42	P	P	11 59 06.2	+2.5
FXWY				IAmb	IAmb	11 59 23.2	
	comp=Z,4.3nm,1.1s						
DAWY	Dawson	83.69	16	P	P	11 59 04.2	-0.1
DAWY				IAmb	IAmb	11 59 25.1	
	comp=Z,12nm,1.3s						
PD31	Pinedale Array	84.01	43	P	P	11 59 08.8	+2.2
PD31				IAmb	IAmb	11 59 16.7	
	comp=Z,5.2nm,1.2s						
PDAR	Pinedale Array	84.01	43	P	P	11 59 06.4	-0.2
	comp=Z,1.9nm,1.0s,baz=219,slow=3.8,SNR=5.7						
YHH	Holmes Hill	84.09	41	P	P	11 59 07.7	+0.6
COLD	Coldfoot	84.10	10	P	P	11 59 09.6	+3.4
BMAR	Burnt Mountain	85.31	12	P	P	11 59 12.3	-0.1
SONM	Songino Array	92.27	319	P	P	11 59 45.7	-0.4
	comp=Z,0.6nm,0.8s,baz=108,slow=4.7,SNR=2.7						
SYO	Syowa Base	92.51	192⇑	*e*P	P	11 59 46.4	-0.2
BRTR	Keskin Array B	143.63	319	PKP	PKPbc	12 06 07.8	-0.9
	comp=Z,5.6nm,1.0s,baz=86,slow=1.9,SNR=11						
BRTR	Keskin Array B	143.63	319	PKPdf	PKPdf	12 06 11.2	0.0
GERES	GERESS Array B	144.99	348	PKPbc	PKPbc	12 06 11.4	-1.1
	comp=Z,0.4nm,0.3s,baz=355,slow=4.1,SNR=1.8						
CONA	Conrad Observa	145.37	345	*e*P	PKiKP	12 06 18.0	+0.1
	comp=Z,14nm,1.4s						
MOA	Molln	145.81	347	*e*P	PKiKP	12 06 18.8	+0.1
	comp=Z,5.4nm,0.8s						
SOKA	Soboth	146.74	345	*e*P	PKPbc	12 06 17.4	-0.6
	comp=Z,7.9nm,1.1s						
RETA	Reutte	146.83	351	*e*P	PKiKP	12 06 21.1	+0.2
	comp=Z,5.9nm,1.0s						
WATA	Walderalm	146.84	350	*e*P	PKiKP	12 06 22.7	+1.7
	comp=Z,9.1nm,1.0s						
WTTA	Wattenberg	146.90	350	*e*P	PKiKP	12 06 20.4	-0.7
	comp=Z,3.9nm,0.8s						
MOTA	Moosalm	146.91	350	*e*P	PKiKP	12 06 20.5	-0.6
	comp=Z,11nm,1.2s						
OBKA	Obir	147.01	346	*e*P	PKiKP	12 06 20.7	-0.6
	comp=Z,5.7nm,1.3s						
MYKA	Terra Mystica	147.11	347	*e*P	PKiKP	12 06 20.4	-1.0
	comp=Z,11nm,1.1s						
DAVA	Damuels	147.15	352	*e*P	PKiKP	12 06 23.7	+2.0
	comp=Z,16nm,1.6s						
ABTA	Abfaltersbach	147.23	348	*e*P	PKPbc	12 06 19.5	+0.1
	comp=Z,10nm,1.4s						
FETA	Feichten	147.29	351	*e*P	PKPab	12 06 20.2	-1.1
	comp=Z,7.0nm,1.0s						

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*IDC **01** 12:06:22.1±1.5, 15°.47S×176°.39W, h0^{km}, mb4.1/7, mb1 4.4/8, mb1mx4.0/49, mbtmp4.1/8, ML3.8/1, MS4.2/16, Ms1 4.2/16, ms1mx4.0/39, Error ellipse: s-maj=82.1km s-min=21.0km az=155.0*
*NEIC **01** 12:06:26.0±2.6, 15°.1S±0°.2×176°.3W±0°.1, h10^{km}±1^{km}, mb4.9/10, Error ellipse: s-maj=33.3km s-min=13.8km az=153.0*
*GCMT **01** 12:06:31.0±0.3, 14°.89S±0°.01×176°.41W±0°.02, h12^{km}, MW5.0/92, Moment Tensor Solution. s21,c23; s92,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.17±.10; $M_{\theta\theta}$3.71±.09; $M_{\phi\phi}$-2.54±.08; $M_{r\theta}$-0.40±.27; $M_{\theta\phi}$0.26±.09; $M_{\phi r}$-1.54±.27; Best double couple: $M_0$3.65400×10^{16} NP1:ϕ_s308.00000°, δ63.00000°, λ-21.00000°. NP2: ϕ_s48.00000°, δ72.00000°, λ-151.00000°. Principal axes: T 3.7670, Plg6.0000°, Azm176.0000°; N -0.2260, Plg56.0000°, Azm78.0000°; P -3.5400, Plg33.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 12:06:25.2±0.7**, 15°.2S**±0°.2×**176°.2W**±0°.1**, h10**^{km}**, n50, σ1^{s}.76**/27**, mb4.5**/12**, MS4.3**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.51	74	Pn	Pn	12 07 32.9	-0.7
	4.4nm,0.3s,baz=52,slow=11,SNR=8.4						
AFI				Sn	Sn	12 08 24.6	-1.6
	2.2nm,0.3s,baz=296,slow=23,SNR=1.3						
AFI				LR	LR	12 09 03.1	
	comp=Z,2μm,20.4s,baz=246,slow=34						
MSVF	Nonsavu	6.03	244	LR	LR	12 09 18.8	
	comp=Z,440nm,18.7s,baz=60,slow=30						
MSVF	Nonsavu	6.03	244	Pn	Pn	12 07 53.5	-1.1
RAO	Raoul Island	14.08	186	LR	LR	12 14 20.2	
	comp=Z,3μm,21.2s,baz=62,slow=35						
DZM	Mont Dzumac	17.77	245	*e*Pn	P	12 10 37.9	+4.1
	68nm,1.6s						
DZM				*e*LR	LR	12 14 41.0	
	comp=Z,713nm,27.1s						
DZM	Mont Dzumac	17.77	245	LR	LR	12 15 40.8	
	comp=Z,407nm,20.2s,baz=62,slow=32						
URZ	Urewera	23.72	193	LR	LR	12 19 28.8	
	comp=Z,2μm,21.9s,baz=31,slow=34						
HNR	Honiara	23.95	281	LR	LR	12 19 21.3	
	comp=Z,1μm,21.0s,baz=112,slow=33						
PPT	Papeete	25.68	99	LR	LR	12 19 27.1	
	comp=Z,369nm,20.8s,baz=266,slow=30						
PPT2	Papeete2	25.68	99	*e*LR	LR	12 18 23.0	
	comp=Z,1μm,25.8s						
TAOE	Nuku Hiva Isla	35.82	84	*e*LR	LR	12 22 56.4	
	comp=Z,904nm,28.2s						
H11S2	WAKE ISLAND Hy	37.45	333	T	T	12 52 56.4	
	baz=159						
H11S3	WAKE ISLAND Hy	37.46	333	T	T	12 52 57.7	
	baz=159						
H11S1	WAKE ISLAND Hy	37.47	333	T	T	12 53 00.7	
	baz=159						
H11N3	WAKE ISLAND Hy	38.45	334	T	T	12 54 18.9	
	baz=152,slow=76,SNR=4.3						
H11N1	WAKE ISLAND Hy	38.45	334	T	T	12 54 09.3	
	baz=152,slow=76,SNR=9.4						
H11N2	WAKE ISLAND Hy	38.46	334	T	T	12 54 20.6	
	baz=152,slow=76,SNR=7.5						
WB0	Warramunga Arr	47.18	257	P	P	12 14 55.7	-2.8
WB0				IAmb	IAmb	12 15 04.5	
	comp=Z,7.6nm,1.0s						
WRA	Warramunga Arr	47.22	257	P	P	12 14 54.8	-4.0
	comp=Z,1.2nm,0.8s,baz=90,slow=7.2,SNR=9.4						
WRA	Warramunga Arr	47.22	257	P	P	12 14 56.1	-2.7
AS31	Alice Springs	47.57	252	P	P	12 14 58.5	-3.0
ASAR	Alice Springs	47.57	252	P	P	12 14 58.2	-3.3
	comp=Z,2.5nm,0.6s,baz=85,slow=8.7,SNR=57						
ASAR				LR	LR	12 33 27.4	
	comp=Z,301nm,19.9s,baz=72,slow=34						
ASAR	Alice Springs	47.57	252	P	P	12 14 58.7	-2.8
RPN	Rapa Nui	62.90	113	LR	LR	12 36 30.3	
	comp=Z,197nm,21.6s,baz=320,slow=29						
VNDA	Vanda	63.32	185	LR	LR	12 40 14.2	
	comp=Z,108nm,20.5s,baz=7.5,slow=32						
KAPI	Kappang	63.63	272	LR	LR	12 42 11.0	
	comp=Z,91nm,21.5s,baz=124,slow=34						
PETK	Petropavlovsk-	71.63	344	LR	LR	12 42 15.0	
	comp=Z,221nm,21.7s,baz=167,slow=30						
CMB	Columbia Colle	74.44	43	P	P	12 18 04.1	+0.2
CMB				IAmb	IAmb	12 18 09.8	
	comp=Z,6.1nm,1.1s						

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QSPA  South Pole Qui    74.85 180  P      P      12 18 07.1 +1.2
QSPA                               IAmb   IAmb   12 18 37.1
      comp=Z,21nm,0.8s
USRK  Ussuriysk Ar.     75.59 324  LR     LR     12 45 06.0
      comp=Z,184nm,21.8s,baz=130,slow=31
TPH   Tonopah           76.57  44  P      P      12 18 17.4 +1.1
TXAR  Lajitas Array     82.79  57  P      P      12 18 50.9 +0.7
      comp=Z,0.7nm,0.9s,baz=2.5,slow=31,SNR=4.6
IL31                    82.80  12  P      P      12 18 49.8 +0.6
IL31                               IAmb   IAmb   12 19 06.3
      comp=Z,14nm,1.5s
ILAR  Eielson Array     82.80  12  P      P      12 18 48.4 -0.8
      comp=Z,4.4nm,1.2s,baz=210,slow=5.9,SNR=11
ILAR                               LR     LR     12 49 44.8
      comp=Z,133nm,21.1s,baz=232,slow=31
ILAR  Eielson Array     82.80  12  P      P      12 18 49.3 +0.1
MCMT  McKenzie Canyo    82.83  40  P      P      12 18 51.1 +0.9
YHL   Hebgen Lake       83.88  40  P      P      12 18 56.6 +0.9
YHL                                IAmb   IAmb   12 19 02.3
      comp=Z,11nm,0.9s
PD31  Pinedale Array    83.96  43  P      P      12 18 57.0 +1.0
PD31                               IAmb   IAmb   12 19 01.4
      comp=Z,5.1nm,0.9s
PDAR  Pinedale Array    83.96  43  P      P      12 18 56.5 +0.5
      comp=Z,3.4nm,0.8s,baz=216,slow=3.4,SNR=12
PDAR  Pinedale Array    83.96  43  P      P      12 18 57.2 +1.2
COLD  Coldfoot          84.38  10  P      P      12 18 58.0 +0.6
BMAR  Burnt Mountain    85.58  12  P      P      12 19 03.7 +0.3
MAW   Mawson            87.10 199  LR     LR     12 56 16.1
      comp=Z,306nm,18.9s,baz=78,slow=34
H03S2 Juan Fernandez    87.59 124  T      T      13 56 33.8
      baz=251,slow=75,SNR=4.9
H03S1 Juan Fernandez    87.61 124  T      T      13 56 31.5
      baz=251,slow=75,SNR=4.6
H03S3 Juan Fernandez    87.61 124  T      T      13 56 31.2
      baz=251,slow=75,SNR=4.3
YKA   Yellowknife Ar    91.01  24  P      P      12 19 29.8 +0.5
      comp=Z,0.4nm,0.8s,baz=224,slow=3.5,SNR=2.1
YKA                                LR     LR     12 54 15.1
      comp=Z,296nm,20.0s,baz=0.0,slow=32
SONM  Songino Array     92.87 319  P      P      12 19 38.2 -0.3
      comp=Z,0.2nm,0.4s,baz=319,slow=35,SNR=3.7
BRTR  Keskin Array B   144.23 319  PKP    PKPab  12 26 00.3 +0.5
      comp=Z,6.3nm,1.0s,baz=50,slow=1.9,SNR=12
BRTR  Keskin Array B   144.23 319         PKPab  12 26 00.2 +0.4
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IDC ***01*** *12:08:27.6±0.5, 30°.30S×71°.46W, h0^{km}, mb4.7/19, mb1 4.8/24, mb1mx4.7/36, mbtmp4.7/24, ML4.6/5, MS3.7/9, Ms1 3.7/9, ms1mx3.6/26, Error ellipse: s-maj=20.7km s-min=11.8km az=93.0*

SJA ***01*** *12:08:30.5±0.7, 30°.23S×71°.72W, h29^{km}±3^{km}, ML5.0, MW4.9*

MOS ***01*** *12:08:32.6±1.4, 30°.27S×71°.32W, h38^{km}, mb5.2/23, Error ellipse: s-maj=14.2km s-min=7.4km az=97.5*

NEIC ***01*** *12:08:33.5±2.2, 30°.30S±0°.04×71°.57W±0°.07, h35^{km}±5^{km}, mb5.0/90, Mwr4.7/36, ML5.1(GUC), Error ellipse: s-maj=8.9km s-min=6.0km az=87.0*

GUC ***01*** *12:08:33.5±0.7, 30°.29S×71°.51W, h51^{km}±2^{km}, ML5.1*

NEIC ***01*** *12:08:33.5, 30°.30S×71°.57W, h47^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.06; $M_{\theta\theta}$0.05; $M_{\phi\phi}$-1.12; $M_{r\theta}$0.27; $M_{\theta\phi}$0.07; $M_{\phi r}$-0.40; Fault plane solution: $M_0$1.19000×10^{16} NP1:ϕ_s164.68000°, δ56.51000°, λ76.13000°. NP2:ϕ_s8.79000°, δ35.94000°, λ109.91000°. Principal axes: T 1.1900, Plg74.0000°, Azm36.0000°; N 0.0080, Plg12.0000°, Azm172.0000°; P -1.1980, Plg11.0000°, Azm265.0000°;*

VAO ***01*** *12:08:34.2±0.4, 30°.29S×71°.36W, h43^{km}, mb5.0*

ISC 01 12:08:33.3±0.3**, 30°.25S**±0°.03×**71°.61W**±0°.04**, h38**^{km}±1^{km}**, n395,** $\sigma 1^{s}59$/428**, mb5.0**/69**, 9C-15D, Near coast of central Chile**

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Code  Station Name       Δ°   AZ°     Phase ID        Time     Res
                                    Op     ISC       h  m  s   ISC
CO06  Fray Jorge         0.43 183⇑ iP     Pn     12 08 43.1 +0.2
CO06                               i S    Sn     12 08 50.7 +0.9
CO06  Fray Jorge         0.43 183         Pn     12 08 43.2 +0.2
CO06                                 Sn   Sn     12 08 50.3 +0.5
CO05  La Serena          0.46  45⇓ iP     Pn     12 08 44.3 +1.0
CO05                               i S    Sn     12 08 52.1 +1.6
CO05                                 IAML        12 08 53.2
      comp=E,233µm,0.5s
CO05  La Serena          0.46  45         Pn     12 08 44.3 +1.0
CO05                                 Sn   Sn     12 08 51.9 +1.4
GO04  Tololo Observa     0.71  84⇓ iP     Pn     12 08 46.5 -0.6
GO04                               i S    Sn     12 08 55.9 -1.0
GO04                                 IAML        12 09 01.1
      comp=N,188µm,0.5s
GO04  Tololo Observa     0.71  84         Pn     12 08 46.3 -0.8
GO04                                 Sn   Sn     12 08 55.5 -1.4
GO04  Tololo Observa     0.71  84  eP     Pn     12 08 46.5 -0.6
LCO   Las Campanas       1.46  33⇓ iP     Pn     12 08 58.5 +0.9
LCO                                i S    Sn     12 09 17.2 +1.7
LCO   Las Campanas       1.46  33    Pn   Pn     12 08 58.4 +0.9
LCO                                  Sn   Sn     12 09 17.1 +1.6
LCO   Las Campanas       1.46  33  eP     Pn     12 08 58.0 +0.5
LCO                                eS     Sn     12 09 18.2 +2.7
AROD  Rodeo              1.85  88  eP     Pn     12 09 04.7 +1.9
AC04  Llanos de Chal     2.09  13⇑ iP     Pn     12 09 07.4 +1.6
AC04                               eS     Sn     12 09 32.8 +2.3
AC04                                 IAML        12 09 42.8
      comp=N,10µm,0.2s
AC04  Llanos de Chal     2.09  13    Pn   Pn     12 09 07.5 +1.7
AC04                                 Sn   Sn     12 09 32.4 +1.9
AC04  Llanos de Chal     2.09  13  eP     Pn     12 09 01.7 -4.1
AC04                               eP     Pn     12 09 02.7 -3.1
AC04                               eP     Pn     12 09 07.0 +1.2
AC04                                 IAML        12 09 40.0
      comp=Z,10µm,0.5s
ACDV  Cuesta del Vie     2.16  89  eP     Pn     12 09 09.0 +2.1
ACDV                               eS     Sn     12 09 36.7 +4.2
ACDV                                 IAML        12 09 38.5
      comp=Z,6µm,0.6s
ACCO  Cerro Coronel      2.23  99  eP     Pn     12 09 10.2 +2.2
VA06  Catapilco          2.32 173  eP     Pn     12 09 09.2 +0.2
VA06                                 IAML        12 09 55.5
      comp=N,13µm,0.2s
RTLS  Leoncito           2.52 129  eP     Pn     12 09 14.0 +2.0
RTLS                               eS     Sn     12 09 42.2 +0.6
RTLS                                 IAML        12 09 56.2
      comp=Z,5µm,0.7s
VA03  San Esteban        2.67 160  eP     Pn     12 09 14.3 +0.4
VA03                               eS     Sn     12 09 45.3 +0.3
VA03                                 IAML        12 09 58.4
      comp=N,8µm,0.6s
VA03  San Esteban        2.67 160         Pn     12 09 14.7 +0.8
VA03  San Esteban        2.67 160  eP     Pn     12 09 14.9 +1.0
VA03                               eS     Sn     12 09 43.7 -1.3
VA03                                 IAML        12 10 00.3
      comp=Z,5µm,0.6s
AUSP  Uspallata          2.74 137  eP     Pn     12 09 17.0 +1.9
AUSP                               eS     Sn     12 09 53.1 +6.0
ROCH  El Roble           2.77 169⇑ eP     Pn     12 09 15.8 +0.5
ROCH                               eP     Pn     12 09 15.6 +0.3
ROCH                               eS     Sn     12 09 47.9 +0.3
ROCH                               eS     Sn     12 09 48.4 +0.8
ROCH                                 IAML        12 10 03.0
      comp=N,5µm,0.6s
ROCH                                 IAML        12 10 09.7
      comp=N,6µm,0.4s
ROC1  El Roble           2.77 170  eP     Pn     12 09 16.4 +1.0
ROC1                               eS     Sn     12 09 49.2 +1.5
VA01  Torpederas         2.77 181    Pn   Pn     12 09 14.4 -0.7
ZON   Zonda              2.83 118  eP     Pn     12 09 17.7 +1.6
ZON                                eS     Sn     12 10 01.7  +13
ZON                                  IAML        12 10 07.8
      comp=Z,3µm,0.7s
GO03  Copiap             2.91  25  eP     Pn     12 09 18.1 +1.0
GO03                               eS     Sn     12 09 53.0 +2.2
GO03                                 IAML        12 10 03.1
      comp=N,15µm,0.3s
GO03  Copiap             2.91  25    Pn   Pn     12 09 18.9 +1.8
GO03  Copiap             2.91  25  eP     Pn     12 09 18.3 +1.2
GO03                               eS     Sn     12 09 52.2 +1.4
GO03                               eS            12 10 00.7
PEL   Peldehue           3.00 165    P    Pn     12 09 19.5 +1.2
PEL   Peldehue           3.00 165  eP     Pn     12 09 18.7 +0.3
PEL                                eS     Sn     12 09 53.5 +0.5
PEL                                  IAML        12 10 05.5
      comp=N,4µm,0.4s
PEL   Peldehue           3.00 165    Pn   Pn     12 09 19.5 +1.2
PEL   Peldehue           3.00 165  eP     Pn     12 09 19.5 +1.2
PEL                                eS     Sn     12 10 06.7  +14
MT02  Curacav            3.03 172⇓ eP     Pn     12 09 19.1 +0.3
MT02                               eS     Sn     12 09 54.0 +0.1
MT02  Curacav            3.03 172    Pn   Pn     12 09 19.3 +0.5
MT02  Curacav            3.03 172  eP     Pn     12 09 19.2 +0.5
MT02                               eS     Sn     12 09 54.2 +0.4
MT02                                 IAML        12 10 09.8
      comp=Z,2µm,0.9s
RTCV  Cerro Valdivia     3.09 122  eP     Pn     12 09 21.5 +1.9
RTCV                               eS     Sn     12 10 01.7 +6.4
MT05  Renca              3.22 167  eP     Pn     12 09 22.4 +0.9
MT05                               eS     Sn     12 09 58.4 -0.3
MT05                                 IAML        12 10 07.6
      comp=E,5µm,0.4s
MT05  Renca              3.22 167    Pn   Pn     12 09 22.9 +1.4
MT05  Renca              3.22 167  eP     Pn     12 09 19.2 -2.3
MT05                               eP            12 09 22.7
MT05                                 IAML        12 10 15.8
      comp=Z,3µm,2.7s
VCA   Vinchina           3.33  64  eP     Pn     12 09 21.2 -1.8
VCA                                eP            12 09 26.9
VCA                                eP            12 09 27.0
VCA                                eS     Sn     12 10 01.7 +0.3
VCA                                eS            12 10 02.7
VCA                                  IAML        12 10 17.6
      comp=Z,9µm,0.4s
ASAL  Salagasta          3.33 135  eP     Pn     12 09 25.0 +2.0
ASAL                               eS     Sn     12 10 05.2 +3.9
VA05  Santo Domingo      3.40 180  eP     Pn     12 09 23.6 -0.3
VA05                               eS     Sn     12 10 03.0 +0.1
VA05                                 IAML        12 10 22.2
      comp=N,4µm,0.2s
ARCO  CERRO ARCO         3.45 139  eP     Pn     12 09 27.0 +2.3
ARCO                               eS     Sn     12 10 11.2 +6.7
ARCO                                 IAML        12 10 16.0
      comp=Z,3µm,0.9s
ARCO                               eS            12 10 18.0
MT09  Talagante          3.56 172⇓ eP     Pn     12 09 26.9 +0.7
MT09                               eS     Sn     12 10 07.0 -0.1
MT09                                 IAML        12 10 24.0
      comp=N,3µm,0.6s
MT09  Talagante          3.56 172    Pn   Pn     12 09 27.4 +1.2
AVFE  Valle Fertil       3.61  98  eP     Pn     12 09 28.2 +1.3
AVFE                               eS     Sn     12 10 11.2 +3.0
AVFE                                 IAML        12 10 18.3
      comp=Z,3µm,0.8s
MT01  Popeta             3.62 175  eP     Pn     12 09 27.2 +0.4
MT01                               eS     Sn     12 10 11.3 +2.9
MT01                                 IAML        12 10 21.5
      comp=Z,2µm,0.7s
AAGR  Agrelo             3.69 141  eP     Pn     12 09 31.0 +3.0
AAGR                               eS     Sn     12 10 24.5  +14
AC02  Maricunga          4.04  33  eP     Pn     12 09 34.9 +1.8
AC02                               eS     Sn     12 10 20.7 +1.3
AC02                                 IAML        12 10 38.6
      comp=Z,4µm,0.8s
ACLC  CERRO LA CRUZ      4.13  80  eP     Pn     12 09 35.6 +1.6
ACLC                               eS     Sn     12 10 23.1 +1.9
ACLC                                 IAML        12 10 32.9
      comp=Z,5µm,0.8s
BO01  Tunca              4.16 174    Pn   Pn     12 09 35.1 +0.8
BO01  Tunca              4.16 174  eP     Pn     12 09 34.7 +0.5
BO01                               eS     Sn     12 10 28.2 +6.6
BO01                                 IAML        12 10 57.4
      comp=Z,1µm,1.3s
ACHE  Chepes             4.36 103  eP     Pn     12 09 38.0 +0.9
BO02  Sierra Bellavi     4.59 171  eP     Pn     12 09 41.7 +1.5
BO02                                 IAML        12 10 59.5
      comp=Z,1µm,0.8s
CYA   Choya              5.38  72  eP     Pn     12 09 46.7 -4.4
CYA                                  IAML        12 11 27.2
      comp=Z,485nm,0.9s
PB14  IPOC Station P     5.70  11    Pn   Pn     12 09 54.5 -1.2
PB14  IPOC Station P     5.70  11  eP     Pn     12 09 49.2 -6.5
PB14                               eP            12 09 54.1
H03N1 Juan Fernandez     6.98 241    T    T      12 17 17.9
      baz=70,slow=72,SNR=2767
H03N2 Juan Fernandez     7.00 241    T    T      12 17 17.0
      baz=70,slow=72,SNR=3267
H03N3 Juan Fernandez     7.00 241    T    T      12 17 18.9
      baz=70,slow=72,SNR=2186
VA04  Juan Fernndez      7.01 239    Pn   Pn     12 10 12.8 -0.6
LVC   Limon Verde        7.98  18    Pn   Pn     12 10 25.4 -1.7
      comp=Z,4.0nm,0.3s,baz=168,slow=8.1,SNR=20
LVC                                  Sn   Sn     12 11 54.5 -1.8
      comp=Z,7.8nm,0.3s,baz=166,slow=11,SNR=3.4
LVC                                  LR   LR     12 13 27.2
      comp=Z,834nm,20.8s,baz=213,slow=38
LVC   Limon Verde        7.98  18  eP     Pn     12 10 29.6 +2.5
LVC   Limon Verde        7.98  18    Pn   Pn     12 10 25.6 -1.5
PB07  IPOC Station P     8.62  11    Pn   Pn     12 10 35.1 -0.6
LC01  Cunco              8.63 181         Pn     12 10 34.6 -1.1
PLCA  Paso Flores       10.50 176    Pn   Pn     12 10 59.8 -1.5
      comp=Z,0.4nm,0.3s,baz=347,slow=14,SNR=8.8
PLCA                                 Sn   Sn     12 13 03.1 +5.5
      comp=Z,0.2nm,0.3s,baz=291,slow=18,SNR=2.2
PLCA                                 LR   LR     12 15 29.3
      comp=Z,635nm,19.1s,baz=345,slow=40
PLCA  Paso Flores       10.50 176    P    Pn     12 11 00.3 -1.0
PLCA  Paso Flores       10.50 176  eP     Pn     12 11 01.2 -0.1
PLCA  Paso Flores       10.50 176         Pn     12 11 00.3 -1.0
LL04  Puerto Octay      10.66 183    Pn   Pn     12 11 02.2 -1.3
TRQA  Tornquist         11.15 137    P    Pn     12 11 09.5 -0.6
TRQA  Tornquist         11.15 137         Pn     12 11 09.5 -0.6
PB16  IPOC Station P    12.01  10    Pn   Pn     12 11 21.6 -0.9
ITQB  Itaqui            13.01  91  eP     Pn     12 11 33.0 -2.6
ITQB  Itaqui            13.01  91    Pn   Pn     12 11 32.8 -2.7
CPUP  Villa Florida     13.17  76    Pn   Pn     12 11 34.6 -3.3
      comp=Z,1.1nm,0.3s,baz=245,slow=12,SNR=8.0
CPUP                                 Sn   Sn     12 13 43.8  -19
      comp=Z,1.0nm,0.3s,baz=268,slow=11,SNR=2.8
CPUP                                 LR   LR     12 17 30.9
      comp=Z,226nm,18.4s,baz=254,slow=42
CPUP  Villa Florida     13.17  76    P    Pn     12 11 35.0 -2.8
CPUP  Villa Florida     13.17  76  eP     Pn     12 11 34.8 -3.1
CPUP  Villa Florida     13.17  76    Pn   Pn     12 11 35.0 -2.8
LPAZ  La Paz            14.26  14    Pn   Pn     12 11 53.5 +0.2
      comp=Z,4.6nm,0.3s,baz=194,slow=7.2,SNR=72
LPAZ                                 LR   LR     12 17 57.8
      comp=Z,372nm,18.2s,baz=192,slow=40
LPAZ  La Paz            14.26  14  eP     Pn     12 11 53.9 +0.7
LPAZ  La Paz            14.26  14    Pn   Pn     12 11 50.9 -2.3
COYC  Coyhaique         15.31 181    Pn   Pn     12 12 04.3 -2.2
PLTB  Pedras Altas      15.52 100  eP     Pn     12 12 07.2 -2.1
PLTB  Pedras Altas      15.52 100         Pn     12 12 06.7 -2.7
CPSB  Cacapava Do Su    15.70  95  eP     Pn     12 12 09.5 -2.2
SIV   San Ignacio       17.17  37    P    Pn     12 12 30.3 -0.1
      comp=Z,2.6nm,0.3s,baz=218,slow=11,SNR=81
AQDB  Aquidauana        17.34  60  eP     Pn     12 12 29.7 -2.8
AQDB  Aquidauana        17.34  60    P    Pn     12 12 29.2 -3.3
ITAB  Concordia         17.34  85  eP     Pn     12 12 31.1 -1.4
ITAB  Concordia         17.34  85    P    Pn     12 12 30.7 -1.8
CNLB  Canela            18.05  92  eP     Pn     12 12 39.6 -1.6
PTGB  Pitanga           18.19  77  eP     P      12 12 42.2 -0.8
TRCB  Terra Rica        18.52  71  eP     P      12 12 45.6 -1.0
PTLB  Pontes e Lacer    18.66  41  eP     P      12 12 47.8 -0.3
PTLB  Pontes e Lacer    18.66  41    P    P      12 12 47.0 -1.1
PTLB                                 IAmb IAmb   12 13 05.3
      comp=Z,67nm,0.9s
NNA   Nana              18.81 344    LR   LR     12 18 31.3
      comp=Z,148nm,20.7s,baz=165,slow=32
TER01 Tubaro-SC         19.66  91  eP     P      12 12 58.6 -0.4
VILB  Vilhena           20.19  34  eP     P      12 13 04.9  0.0
VILB  Vilhena           20.19  34    P    P      12 13 04.2 -0.7
VILB                                 IAmb IAmb   12 13 09.7
      comp=Z,113nm,1.2s
PCMB  Pacaembu          20.20  70  eP     P      12 13 04.0 -0.9
SALV  Santo Antonio     20.42  49  eP     P      12 13 06.6 -0.6
TIJ01 Guaruva-PR        20.58  82  eP     P      12 13 05.5 -3.6
FRTB  Fartura           20.83  76  eP     P      12 13 09.9 -1.8
ETMB  Extrema           20.94  15  eP     P      12 13 13.9 +1.0
ETMB  Extrema           20.94  15    P    P      12 13 13.3 +0.4
ETMB                                 IAmb IAmb   12 13 18.8
      comp=Z,72nm,1.0s
ITRB  Iturama           21.90  66  eP     P      12 13 21.6 -1.7
PET01 Itanhaem-SP       22.41  81  eP     P      12 13 26.9 -1.8
CZSB  Cruzeiro do Su    22.42 357  eP     P      12 13 30.5 +1.7
CZSB  Cruzeiro do Su    22.42 357    P    P      12 13 29.5 +0.6
SAML  Samuel            22.61  22    P    P      12 13 30.1 -0.7
SAML                                 pmax pmax
      comp=Z,22nm,0.8s
SAML  Samuel            22.61  22    P    P      12 13 30.1 -0.7
BB19B Bebedouro         22.69  72  eP     P      12 13 29.4 -2.4
RCLB  Rio Claro- Sao    22.91  76  eP     P      12 13 33.0 -1.0
PDRB  Porto dos Gac     23.12  40  eP     P      12 13 35.7 -0.5
VAO   Valinhos          23.15  78  eP     P      12 13 34.4 -2.1
ARAG  Araguaiana, MT    23.22  56  eP     P      12 13 34.7 -2.4
EFI   East Falkland     23.65 159⇓ eP     P      12 13 44.4 +3.4
EFI                                  pmax pmax
      comp=Z,285nm,2.6s
ATAH  Atahualpa         23.86 343    LR   LR     12 22 05.0
      comp=Z,86nm,18.1s,baz=167,slow=34
PARB  Paraibuna         24.16  80  eP     P      12 13 43.9 -2.3
CLDB  Colider           24.25  41  eP     P      12 13 45.2 -1.6
IPMB  Ipameri, GO       24.54  66  eP     P      12 13 48.2 -1.4
USHA  Ushuaia           24.68 176    P    P      12 13 50.7 +0.3
      comp=Z,14nm,0.8s,baz=324,slow=10,SNR=2.8
USHA                                 LR   LR     12 23 27.4
      comp=Z,378nm,20.5s,baz=341,slow=36
MAN01 Angra dos Reis    25.76  80  eP     P      12 13 58.6 -1.9
BSCB  Bom Sucesso       25.84  75  eP     P      12 14 00.2 -1.2
TBTG  Tabatinga, AM     25.97   4  eP     P      12 14 01.7 -0.7
TBTG  Tabatinga, AM     25.97   4    P    P      12 14 03.4 +1.0
BDFB  Brasilia          26.07  61    P    P      12 14 02.4 -1.1
      comp=Z,51nm,0.7s,baz=233,slow=8.4,SNR=61
BDFB                                 LR   LR     12 26 17.3
      comp=Z,58nm,21.4s,baz=202,slow=41
BDFB  Brasilia          26.07  61    P    P      12 14 02.3 -1.2
BDFB                                 IAmb IAmb   12 14 03.3
      comp=Z,53nm,0.7s
SNDB  Serra Nova Dou    26.18  50  eP     P      12 14 03.6 -0.9
VAS01 Vassouras-RJ      26.43  79  eP     P      12 14 06.1 -0.5
DUB01 Friburgo-RJ       27.41  80  eP     P      12 14 14.5 -1.0
NPGB  Novo Progresso    27.67  37  eP     P      12 14 16.4 -1.3
DIAM  Diamantina, MG    28.03  71  eP     P      12 14 20.5 -0.7
CAM01 Campos-RJ         28.13  80  eP     P      12 14 20.7 -1.1
PEXB  Peixe             28.15  55  eP     P      12 14 21.3 -0.8
MC01  Montes Claros     28.64  68  eP     P      12 14 24.9 -1.7
MACA  Manacapuru-AM     28.86  23  eP     P      12 14 28.5 +0.2
MACA  Manacapuru-AM     28.86  23    P    P      12 14 27.3 -1.0
MACA                                 IAmb IAmb   12 14 29.0
      comp=Z,29nm,0.7s
JANB  Januaria          29.27  65  eP     P      12 14 30.8 -1.4
ALF01 Guarapari-ES      29.41  78  eP     P      12 14 31.9 -1.3
ITTB  Itaituba          29.79  33  eP     P      12 14 35.5 -1.1
SJMB  Sao Joao De Ma    29.89  74  eP     P      12 14 36.1 -1.4
BSFB  Barra de Sao F    30.11  75  eP     P      12 14 38.0 -1.4
RIB01 Linhares ES       30.27  76  eP     P      12 14 39.4 -1.5
SDBA  SAO DESIDERIO     30.44  60  eP     P      12 14 41.6 -0.8
SMTB  Santa Maria do    30.93  52  eP     P      12 14 46.3 -0.5
PTGA  Pitinga           31.37  23    P    P      12 14 50.0 -0.6
      comp=Z,16nm,0.9s,baz=211,slow=10,SNR=24
PRPB  Parauapebas       31.52  45  eP     P      12 14 50.8 -1.2
GUA01 Guaratinga, BA    32.07  72  eP     P      12 14 55.5 -1.3
MALB  Monte Alegre      32.68  33  eP     P      12 15 01.0 -1.1
CMC01 Camacan, BA       32.95  70  eP     P      12 15 03.2 -1.2
NBIT  Itapeh - BA       33.24  70  eP     P      12 15 06.3 -0.8
GDU01 Guandu, BA        33.80  68  eP     P      12 15 10.2 -1.7
PRAC  Prado             33.91 354  eP     P      12 15 15.1 +2.3
ORTC  Ortega, Tolima    34.14 354  eP     P      12 15 17.0 +2.2
BOAV  Boa Vista         34.14  20  eP     P      12 15 15.0 +0.2
BOAV  Boa Vista         34.14  20    P    P      12 15 14.7 -0.1
VILC  Villavicencio,    34.22 356  eP     P      12 15 17.0 +1.4
PMSA  Palmer Station    34.87 174    P    P      12 15 19.5 -1.1
      comp=Z,21nm,1.1s,baz=196,slow=3.3,SNR=2.2
PMSA  Palmer Station    34.87 174  eP     P      12 15 19.3 -1.2
NBPN  Ponto Novo - B    34.99  63  eP     P      12 15 21.0 -1.3
MCPB  Macapa, AP        35.06  36  eP     P      12 15 22.6 -0.1
GUY2C Guyana, Caldas    35.45 354  eP     P      12 15 27.5 +0.9
TMAB  Tom-Au,PA,Br      35.57  43  eP     P      12 15 27.0 -0.1
NORC  Norcasia          35.74 354  eP     P      12 15 30.4 +1.7
RUSC  La Rusia          35.96 358  eP     P      12 15 32.3 +1.3
CBOC  Ciudad Bolivar    36.15 353  eP     P      12 15 34.9 +2.7
NBLA  Lagarto - SE      36.79  66  eP     P      12 15 36.0 -1.7
DBBC  Dabeiba           37.31 352  eP     P      12 15 42.7 +0.7
ROSB  Rosrio            37.64  49  eP     P      12 15 44.1 -0.7
ZARC  Zaragoza, Cauc    37.65 355  eP     P      12 15 45.6 +0.8
ZARC  Zaragoza, Cauc    37.65 355    P    P      12 15 45.4 +0.6
ZARC                                 IAmb IAmb   12 16 05.1
      comp=Z,18nm,0.9s
NBMA  Muriti-CE         38.29  60  eP     P      12 15 49.9 -0.4
SOCV  Socops            38.31   1  eP     P      12 15 48.4 -2.0
NBPS  Pedro II - PI     38.36  54  eP     P      12 15 50.0 -0.9
NBAN  Anadia - AL       38.77  66  eP     P      12 15 53.0 -1.4
NBPB  Pedra_Branca-C    38.89  57  eP     P      12 15 54.7 -0.7
SMLC  San Martn de      38.89 356  eP     P      12 15 55.1 -0.2
SDV   Santo Domingo     38.92   2  eP     P      12 15 56.2 +0.5
BAUV  El Baul           39.11   6    P    P      12 15 56.9 -0.3
NBLV  Livramento - P    39.69  62  eP     P      12 16 00.9 -1.2
SJCC  San Jacinto, C    40.06 355  eP     P      12 16 04.6 -0.4
SJCC  San Jacinto, C    40.06 355    P    P      12 16 05.3 +0.3
SJCC                                 IAmb IAmb   12 16 27.3
      comp=Z,32nm,1.0s
NBMO  Morrinhos-CE      40.11  54  eP     P      12 16 03.9 -1.6
NBRF  Rio Formoso -     40.27  65  eP     P      12 16 06.2 -0.7
NBPA  Parau_RN          40.58  60  eP     P      12 16 08.5 -0.9
NBCL  Cascavel-CE       40.73  57  eP     P      12 16 10.2 -0.4
NBPV  Pedro Velho       41.53  63  eP     P      12 16 17.1 -0.2
JTS   Las Juntas de     42.30 340    P    P      12 16 24.5 +1.1
      comp=Z,1.7nm,0.3s,baz=185,slow=14,SNR=4.1
JTS   Las Juntas de     42.30 340⇓ eP     P      12 16 26.6 +3.2
JTS                                  pmax pmax
      comp=Z,24nm,2.3s
MLPR  Magueyes Islan    48.14   6    P    P      12 17 09.6 -0.1
CRPR  Cabo Rojo, PR     48.17   6    P    P      12 17 09.9  0.0
OBIP  Obispado Ponce    48.25   6    P    P      12 17 10.5  0.0
CELP  Cerrillos         48.28   6    P    P      12 17 11.1 +0.3
PDPR  Patillas Dam,     48.28   7    P    P      12 17 10.5 -0.2
PDPR                                 IAmb IAmb   12 17 11.1
      comp=Z,20nm,0.8s
SJG   San Juan          48.36   7    P    P      12 17 11.0 -0.4
      comp=Z,10nm,0.4s,baz=177,slow=5.0,SNR=4.7
SJG   San Juan          48.36   7    P    P      12 17 11.0 -0.4
SJG   San Juan          48.36   7    P    P      12 17 10.7 -0.7
CBYP  Canovanas         48.55   7    P    P      12 17 11.8 -1.1
GCPR  Guaynabo City     48.57   7    P    P      12 17 12.4 -0.5
VNA3  Neumayer Olymp    52.71 159    P    P      12 17 43.2 -0.4
VNA2  Neumayer--Watz    53.34 158    P    P      12 17 47.9 -0.4
      baz=289,slow=8.2
VNA2  Neumayer--Watz    53.34 158    sP   sP     12 18 05.0 +0.8
SNAA  Sanae             54.93 159    P    P      12 17 59.4 -0.6
SNAA  Sanae             54.93 159    sP   sP     12 18 16.5 +0.7
SNAA  Sanae             54.93 159    P    P      12 17 59.4 -0.6
      comp=Z,17nm,0.8s,baz=279,slow=8.3,SNR=74
SNAA  Sanae             54.93 159    P    P      12 17 59.3 -0.7
SNAA                                 pmax pmax
      comp=Z,29nm,1.1s
SNAA  Sanae             54.93 159    P    P      12 17 59.2 -0.7
NVL   N'lazarevskaya    59.63 158  eP     P      12 18 36.4 +3.4
NVL                                  pmax pmax
      comp=Z,23nm,1.0s
QSPA  South Pole Qui    59.98 180    P    P      12 18 36.0 +0.2
      comp=Z,19nm,0.8s,baz=148,slow=2.5,SNR=39
QSPA  South Pole Qui    59.98 180    P    P      12 18 35.9 +0.2
553A  Crawfordville     61.33 347    P    P      12 18 46.3 +1.3
352A  Blakely           62.68 347    P    P      12 18 54.3 +0.3
152A  Waverly Hall      63.79 348    P    P      12 19 01.7 +0.3
152A                                 IAmb IAmb   12 19 02.5
      comp=Z,13nm,1.0s
HKT   Hockley           64.15 337⇓ eP     P      12 19 06.0 +2.2
HKT                                  pmax pmax
      comp=Z,17nm,2.3s
Z47A  Carrollton        65.00 345    P    P      12 19 09.7 +0.4
Z47A                                 IAmb IAmb   12 19 10.9
      comp=Z,16nm,0.7s
HPIG                    65.53 327    P    P      12 19 14.9 +1.7
HPIG                                 IAmb IAmb   12 19 28.7
      comp=Z,15nm,1.0s
X48A  Hartselle         65.98 346    P    P      12 19 16.0 +0.4
X48A                                 IAmb IAmb   12 19 17.3
      comp=Z,19nm,0.8s
JCT   Junction City     66.08 334    P    P      12 19 17.4 +1.0
JCT                                  pmax pmax
      comp=Z,11nm,0.7s
JCT   Junction City     66.08 334    P    P      12 19 17.4 +1.0
JCT                                  IAmb IAmb   12 19 33.4
      comp=Z,11nm,0.7s
CPCT  Cooper Cave       66.47 349    P    P      12 19 19.1 +0.3
CPCT                                 IAmb IAmb   12 19 39.4
      comp=Z,10nm,0.9s
SWET  Sewanee           66.50 347    P    P      12 19 19.0  0.0
SWET                                 IAmb IAmb   12 19 20.5
      comp=Z,16nm,0.8s
TXAR  Lajitas Array     66.66 330    P    P      12 19 21.7 +1.4
      comp=Z,3.2nm,0.8s,baz=153,slow=8.8,SNR=20
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V48A   Smith Brothers     67.18 347   P        P        12 19 23.6 +0.4
V48A                                  IAmb     IAmb     12 19 37.6
       comp=Z,16nm,1.1s
CLTN   Cedars of Leba     67.42 347   P        P        12 19 25.4 +0.6
CLTN                                  IAmb     IAmb     12 19 26.4
       comp=Z,9.9nm,0.6s
U49A   Red Boiling Sp     67.73 348   P        P        12 19 26.7  0.0
U49A                                  IAmb     IAmb     12 19 27.6
       comp=Z,7.3nm,0.7s
Z35A   Perchaven, San     67.73 337   P        P        12 19 28.3 +1.5
WVT    Waverly            67.76 346   P        P        12 19 26.6 -0.3
WVT                                   pmax     pmax
       comp=Z,14nm,1.0s
WVT    Waverly            67.76 346   P        P        12 19 26.6 -0.3
WVT                                   IAmb     IAmb     12 19 28.5
       comp=Z,14nm,1.0s
VNDA   Vanda              67.84 191   P        P        12 19 27.3 +0.3
       comp=Z,1.0nm,0.9s,baz=198,slow=9.6,SNR=2.3
ABTX   Abilene, Hawle     67.94 335   P        P        12 19 28.8 +0.6
ABTX                                  IAmb     IAmb     12 19 42.8
       comp=Z,22nm,1.1s
LCAR   Lake Charles       68.47 343   P        P        12 19 31.6 +0.2
LCAR                                  IAmb     IAmb     12 19 52.2
       comp=Z,11nm,0.6s
PBMO   Poplar Bluff       68.97 344   P        P        12 19 34.8 +0.3
PBMO                                  IAmb     IAmb     12 19 55.3
       comp=Z,11nm,0.7s
SYO    Syowa Base         69.22 159⇑ eP       P        12 19 34.9 -0.8
MNTX   Cornudas Mount     69.45 330   P        P        12 19 37.5 -0.1
TUL1   Leonard            69.62 339   P        P        12 19 39.1 +0.5
TUL1                                  IAmb     IAmb     12 19 58.3
       comp=Z,14nm,0.8s
ACSO   Alum Creek Sta     70.91 351   P        P        12 19 45.6 -0.7
ACSO                                  IAmb     IAmb     12 19 59.8
       comp=Z,19nm,1.1s
121A   Cookes Peak, D     71.23 328   P        P        12 19 50.2 +1.5
121A                                  IAmb     IAmb     12 20 04.3
       comp=Z,10nm,0.9s
ANMO   Albuquerque        72.69 331⇓ eP       P        12 19 59.9 +2.5
ANMO                                  pmax     pmax
       comp=Z,14nm,4.0s
LIC    Lamto              73.27  72  eP       P        12 20 00.0 -1.1
       comp=Z,36nm,1.1s
TIC    Toumodi            73.51  72  eP       P        12 20 01.5 -1.0
KIC    Kosan Boka         73.58  72  eP       P        12 20 02.0 -0.9
       comp=Z,27nm,1.1s
DBIC   Dimbokro           73.66  72   P        P        12 20 02.0 -1.2
       comp=Z,7.1nm,0.7s,baz=216,slow=8.2,SNR=8.7
DBIC   Dimbokro           73.66  72   P        P        12 20 02.1 -1.2
DBIC                                  pmax     pmax
       comp=Z,13nm,0.9s
DBIC   Dimbokro           73.66  72   P        P        12 20 02.1 -1.2
DBIC                                  IAmb     IAmb     12 20 03.7
       comp=Z,13nm,0.9s
N35A   Tabor              74.17 341   P        P        12 20 05.0 -0.8
W18A   Petrified Fore     74.27 328   P        P        12 20 08.1 +1.4
W18A                                  IAmb     IAmb     12 20 22.8
       comp=Z,28nm,1.4s
X16A   Lo Mia Camp, P     74.49 327   P        P        12 20 09.8 +1.8
X16A                                  IAmb     IAmb     12 20 24.1
       comp=Z,10nm,1.0s
SDCO   Great Sand Dun     74.70 333   P        P        12 20 10.7 +1.5
SDCO                                  IAmb     IAmb     12 20 26.3
       comp=Z,17nm,1.6s
G62A   West of Eustis     75.11   1   P        P        12 20 12.3 +1.3
G62A                                  IAmb     IAmb     12 20 13.8
       comp=Z,14nm,0.8s
WUAZ   Wupatki            75.36 327   P        P        12 20 13.6 +0.6
WUAZ                                  IAmb     IAmb     12 20 28.6
       comp=Z,15nm,1.1s
MVCO   Mesa Verde         75.48 330   P        P        12 20 14.9 +1.2
TRQ    Mont Tremblant     76.16 358   P        P        12 20 16.9 -0.2
TRQ                                   IAmb     IAmb     12 20 30.9
       comp=Z,15nm,1.0s
W13A   Hualapai Mount     76.22 325   P        P        12 20 19.2 +1.2
SMCO   Snowmass           76.52 332   P        P        12 20 21.8 +2.0
SMCO                                  IAmb     IAmb     12 20 35.4
       comp=Z,11nm,0.8s
E62A   Clayton Lake       76.53   1   P        P        12 20 20.0 +0.9
E62A                                  IAmb     IAmb     12 20 34.5
       comp=Z,38nm,1.4s
U15A   North Rim          76.53 327   P        P        12 20 22.0 +2.3
MAW    Mawson             76.67 164   P        P        12 20 19.8  0.0
       comp=Z,6.9nm,0.5s,baz=224,slow=7.2,SNR=27
MAW    Mawson             76.67 164   P        P        12 20 19.1 -0.7
MAW                                   pmax     pmax
       comp=Z,4.0nm,1.0s
MAW    Mawson             76.67 164   P        P        12 20 19.1 -0.7
K31A   O'Neill            76.69 340   P        P        12 20 21.1 +0.9
D62A   Allapoint, All     77.00   2   P        P        12 20 22.7 +0.9
D62A                                  IAmb     IAmb     12 20 24.2
       comp=Z,20nm,0.9s
ECSD   EROS Data Cent     77.10 342   P        P        12 20 22.8 +0.4
ECSD                                  IAmb     IAmb     12 20 36.6
       comp=Z,10nm,0.8s
KNB    Kanab              77.25 327   P        P        12 20 26.3 +2.6
KNB                                   pmax     pmax
       comp=Z,16nm,1.1s
KNB    Kanab              77.25 327   P        P        12 20 26.3 +2.6
KNB                                   IAmb     IAmb     12 20 39.5
       comp=Z,16nm,1.1s
LCMT   Little Creek M     77.45 327   P        P        12 20 26.1 +1.4
GSC    Goldstone, Bar     77.85 324   P        P        12 20 28.8 +1.8
GSC                                   pmax     pmax
       comp=Z,21nm,1.5s
GSC    Goldstone, Bar     77.85 324   P        P        12 20 28.8 +1.8
GSC                                   IAmb     IAmb     12 20 51.8
       comp=Z,21nm,1.5s
WIN    Windhoek           77.92 109   P        P        12 20 26.6 -1.3
WIN                                   pmax     pmax
       comp=Z,54nm,1.6s
WIN    Windhoek           77.92 109   P        P        12 20 26.6 -1.3
SRU    San Rafael Swe     77.94 330   P        P        12 20 28.4 +0.9
SRU                                   pmax     pmax
       comp=Z,5.0nm,0.8s
SRU    San Rafael Swe     77.94 330   P        P        12 20 28.4 +0.9
CCUT   Cedar City         77.94 327   P        P        12 20 29.7 +2.1
CCUT                                  IAmb     IAmb     12 20 43.6
       comp=Z,12nm,1.1s
SHPR   Sheep Range        77.97 325   P        P        12 20 29.2 +1.6
MSU    Marysvale          78.18 329   P        P        12 20 30.8 +1.9
MSU    Marysvale          78.18 329   P        P        12 20 30.8 +1.9
P17A   Butcher Ranch,     78.33 330   P        P        12 20 31.1 +1.5
P17A                                  IAmb     IAmb     12 20 44.6
       comp=Z,11nm,1.1s
KOWA   Kowa               78.77  66   P        P        12 20 31.9 -0.4
       comp=Z,7.6nm,0.5s,baz=232,slow=4.6,SNR=6.5
KOWA   Kowa               78.77  66            P        12 20 31.1 -1.3
KOWA                                  IAmb     IAmb     12 20 32.9
       comp=Z,27nm,1.3s
ISA    Isabella, Lake     78.99 323   P        P        12 20 35.2 +2.0
ISA                                   pmax     pmax
       comp=Z,9.0nm,1.0s
ISA    Isabella, Lake     78.99 323   P        P        12 20 35.2 +2.0
MPU    Maple Canyon       79.17 330   P        P        12 20 36.1 +1.9
JLU    Jordanelle         79.57 330   P        P        12 20 36.7 +0.2
R11A   Troy Canyon, C     79.63 326   P        P        12 20 38.3 +1.5
DUG    Dugway, Tooele     79.83 329   P        P        12 20 38.0 +0.2
DUG                                   pmax     pmax
       comp=Z,7.0nm,1.1s
DUG    Dugway, Tooele     79.83 329   P        P        12 20 38.0 +0.2
TSUM   Tsumeb             79.90 106   LR       LR       12 51 58.8
       comp=Z,76nm,19.6s,baz=300,slow=33
TSUM   Tsumeb             79.90 106   P        P        12 20 38.2 -0.5
TSUM                                  IAmb     IAmb     12 20 56.8
       comp=Z,23nm,0.9s
TPH    Tonopah            80.22 325   P        P        12 20 41.3 +1.3
TPH                                   pmax     pmax
       comp=Z,42nm,1.1s
TPH    Tonopah            80.22 325   P        P        12 20 41.3 +1.3
HWUT   Hardware Ranch     80.45 331   P        P        12 20 42.1 +1.0
PDAR   Pinedale Array     80.59 333   P        P        12 20 42.9 +0.9
       comp=Z,0.6nm,0.7s,baz=131,slow=4.1,SNR=4.1
PDAR   Pinedale Array     80.59 333   P        P        12 20 42.0 +0.1
ELK    Elko               81.37 328   P        P        12 20 46.7 +0.6
ELK                                   pmax     pmax
       comp=Z,5.0nm,0.8s
ELK    Elko               81.37 328   P        P        12 20 46.7 +0.6
BOSA   Boshof             81.50 118   P        P        12 20 47.2 +0.1
       comp=Z,6.7nm,0.8s,baz=243,slow=4.9,SNR=11
BOSA   Boshof             81.50 118   P        P        12 20 46.5 -0.7
BOSA                                  pmax     pmax
       comp=Z,21nm,0.9s
BOSA   Boshof             81.50 118   P        P        12 20 46.5 -0.7
BOSA                                  IAmb     IAmb     12 21 04.6
       comp=Z,21nm,0.8s
PAHR   Pah Rah Range      82.55 325   P        P        12 20 53.4 +1.1
PAHR                                  IAmb     IAmb     12 21 07.6
       comp=Z,10nm,1.0s
TORD   Torodi Ar. Bea     82.59  70   P        P        12 20 52.2 -0.6
       comp=Z,12nm,0.8s,baz=266,slow=5.1,SNR=64
TORD   Torodi Ar. Bea     82.59  70   P        P        12 20 52.2 -0.6
TORD                                  IAmb     IAmb     12 20 53.3
       comp=Z,18nm,1.1s
ULM    Lac du Bonnet      82.98 345   P        P        12 20 53.8 -0.2
       comp=Z,3.6nm,0.7s,baz=236,slow=4.0,SNR=3.0
HLID   Hailey             83.26 330   P        P        12 20 57.7 +1.8
LBTB   Lobatse            83.56 115   P        P        12 20 57.0 -0.9
LBTB                                  pmax     pmax
       comp=Z,38nm,0.8s
LBTB   Lobatse            83.56 115   P        P        12 20 57.0 -0.9
MOD    Modoc Plateau      84.67 326   P        P        12 21 03.6 +0.6
MOD                                   IAmb     IAmb     12 21 32.5
       comp=Z,16nm,1.4s
PLID   Pearl Lake         85.16 330   P        P        12 21 05.4 -0.2
MDT    Midelt             89.18  51   P        P        12 21 25.6 +0.4
       comp=Z,1.2nm,0.6s,baz=272,slow=7.2,SNR=5.3
ESDC   Sonseca Array      93.71  46   P        P        12 21 45.7 -0.2
       comp=Z,1.5nm,0.9s,baz=244,slow=4.0,SNR=7.9
IZAB   Izabela           112.83  46  eP       Pdif     12 23 18.6 +7.4
AKASG  Malin Array Be    119.36  46   PKP      PKPdf    12 27 16.3 -1.8
       comp=Z,1.6nm,0.7s,baz=263,slow=2.6,SNR=7.0
AKASG  Malin Array Be    119.36  46   PKIKP    PKPdf    12 27 16.5 -1.6
AKASG  Malin Array Be    119.36  46            PKPdf    12 27 16.5 -1.6
AKBB   Malin Array Si    119.36  46⇓ iPKIKP   PKPdf    12 27 17.0 -1.1
ASAR   Alice Springs     121.06 207   PKP      PKPdf    12 27 20.4 -2.0
       comp=Z,0.9nm,0.7s,baz=125,slow=1.6,SNR=13
ASAR                                  PKKPbc   PKKPbc   12 37 24.9 +0.1
       comp=Z,1.1nm,0.8s,baz=334,slow=3.1,SNR=5.8
WRA    Warramunga Arr    124.20 210   PKP      PKPdf    12 27 27.4 -1.1
       comp=Z,1.2nm,0.5s,baz=157,slow=1.6,SNR=27
WRA                                   PKKPbc   PKKPbc   12 37 12.7 +0.2
       comp=Z,1.5nm,0.8s,baz=337,slow=4.1,SNR=7.2
OBN    Obninsk           124.42  41⇓ iPKIKP   PKiKP    12 27 29.3 +1.3
OBN                                   pmax     pmax
       comp=Z,9.0nm,1.0s
OBN                                   MLR      MLR
       comp=Z,284nm,21.0s
H11S2  WAKE ISLAND Hy126.11 272   T        T        14 46 26.3
       baz=115,slow=75,SNR=107
H11S1  WAKE ISLAND Hy126.12 272   T        T        14 46 20.4
       baz=115,slow=75,SNR=98
H11S3  WAKE ISLAND Hy126.13 272   T        T        14 46 23.2
       baz=115,slow=75,SNR=90
KLMR   Klimovskoe        126.14  34  ePKIKP   PKiKP    12 27 36.9 +5.7
KLMR                                  pmax     pmax
       comp=Z,13nm,1.1s
KLMR   Klimovskoe        126.14  34  ePKPdf   PKiKP    12 27 37.0 +5.7
KLMR                                  AMP               12 27 44.4
       comp=Z,13nm,1.1s
PRGR   Permogore         129.01  33  ePKIKP   PKPdf    12 27 36.3  0.0
PRGR                                  pmax     pmax
       comp=Z,5.0nm,0.5s
BILL   Bilibino          129.60 336⇓ ePKIKP   PKiKP    12 27 38.7 +0.7
BILL                                 i                  12 27 51.3
BILL                                  pmax     pmax
       comp=Z,3.0nm,1.0s
BELG   Belogornoye       130.92  45⇓ iPKIKP   PKiKP    12 27 41.0 -0.1
ARU    Arti              136.62  38   PKP      PKPdf    12 27 50.7 -0.1
       comp=Z,2.1nm,0.2s,baz=226,slow=4.3,SNR=3.7
ARU    Arti              136.62  38  i PKIKP  PKPdf    12 27 50.8  0.0
ARU                                                     12 30 29.5
ARU    Arti              136.62  38            PKPdf    12 27 50.5 -0.3
TIXI   Tiksi             137.07 351   PKP      PKPdf    12 27 51.4 +0.2
       comp=Z,2.6nm,0.8s,baz=17,slow=3.6,SNR=6.3
TIXI   Tiksi             137.07 351⇑ iPKIKP   PKPdf    12 27 51.9 +0.7
PEA0B  Petropavlovsk-    137.73 317⇓ ePKIKP   PKiKP    12 27 54.7 -0.2
NRIK   Noril'sk          139.08  11⇓ ePKIKP   PKPdf    12 27 55.1 +0.2
BVAR   Borovoye Array    144.22  40   PKP      PKPbc    12 28 03.8 +0.8
       comp=Z,6.8nm,0.6s,baz=243,slow=10,SNR=22
YAK    Yakutsk           145.30 343   PKPbc    PKPdf    12 28 06.4 +0.2
       comp=Z,41nm,0.8s,baz=182,slow=0.8,SNR=27
YAK    Yakutsk           145.30 343c iPKIKP   PKPdf    12 28 06.3 +0.2
YAK                                  e                  12 31 27.1
YAK                                   pmax     pmax
       comp=Z,91nm,1.1s
YAK                                   pmax     pmax
       comp=N,22nm,1.8s
YAK                                   pmax     pmax
       comp=E,11nm,1.7s
YAK                                   pmax     pmax
       comp=Z,90nm,3.0s
YAK                                   pmax     pmax
       comp=N,101nm,2.8s
YAK                                   pmax     pmax
       comp=E,74nm,3.6s
YAK    Yakutsk           145.30 343            PKPbc    12 28 05.7 -0.3
POO    Poona             146.58 102  eP       PKPdf    12 28 09.0 -0.8
BRZS   Berezniki         146.76  43  ePKPab   PKPbc    12 28 11.3 +0.4
       baz=44
BRZS   Berezniki         146.76  43  ePKP2    PKPbc    12 28 11.3 +0.4
BRLS   Borolday          146.82  57  ePKPab   PKPbc    12 28 11.7 +0.4
       baz=57
BRLS   Borolday          146.82  57  ePKP2    PKPbc    12 28 11.7 +0.4
IUG    Iuzhnay           147.11  58  ePKPbc   PKPdf    12 28 10.8 +0.8
       baz=58
IUG    Iuzhnay           147.11  58  ePKP2    PKPdf    12 28 10.8 +0.8
DZA    Taraz             147.93  57  ePKPbc   PKPbc    12 28 14.0 -0.5
       baz=56
DZA    Taraz             147.93  57  ePKP2    PKPbc    12 28 13.9 -0.5
BTLS   Baital            149.32  52  ePKPbc   PKPbc    12 28 17.9 +0.1
       baz=52
BTLS   Baital            149.32  52  ePKP2    PKPbc    12 28 17.9 +0.1
EKS2   Erkin-Say         149.74  56   P        PKiKP    12 28 20.0 -0.1
       SNR=20
AML    Almayashu         149.79  57   P        PKiKP    12 28 20.2 -0.3
       SNR=13
KURBB  Kurchatov Arra    149.81  39   PKPbc    PKPbc    12 28 18.9 +0.1
       comp=E,9.3nm,0.5s,baz=305,slow=3.2,SNR=36
KURK   Kurchatov         149.81  39   PKP2     PKPbc    12 28 18.9 +0.1
KURK   Kurchatov         149.81  39            PKPbc    12 28 18.8  0.0
HYB    Hyderabad         149.97 108  i PKP    PKPbc    12 28 20.5 +0.2
USP    Ospenovka         150.11  55   P        PKiKP    12 28 20.5 -0.2
       SNR=20
SGDS   Sogindy           150.16  54  ePKPbc   PKPbc    12 28 20.0  0.0
       baz=54
AAK    Ala-Archa         150.26  56   PKPbc    PKiKP    12 28 21.3 +0.1
       comp=E,25nm,0.7s,baz=217,slow=2.8,SNR=52
AAK    Ala-Archa         150.26  56c iPKIKP   PKiKP    12 28 21.1 -0.1
AAK    Ala-Archa         150.26  56            PKiKP    12 28 20.9 -0.4
CHMS   Chumysh           150.36  55   P        PKiKP    12 28 21.1 -0.1
       SNR=7.3
UCH    Uchtor            150.37  57   P        PKiKP    12 28 22.1 +0.2
       SNR=28
KBK    Karagaybulak      150.58  56   P        PKiKP    12 28 21.8 -0.1
       SNR=8.3
ZALV   Zalesovo Beam     150.82  29   PKP      PKPdf    12 28 15.4  0.0
       comp=E,2.3nm,0.6s,baz=279,slow=2.8,SNR=7.2
ZALV                                  PKPbc    PKPbc    12 28 21.4 +0.3
       comp=E,36nm,0.5s,baz=299,slow=3.2,SNR=84
SEM    Semipalatinsk     150.86  38  ePKPbc   PKPbc    12 28 21.2 -0.5
       baz=38
SEM    Semipalatinsk     150.86  38  ePKIKP   PKPbc    12 28 21.1 -0.5
TKM2   Tokmak 2          150.98  55   P        PKiKP    12 28 22.5 -0.2
       SNR=15
KUU    Kurty             151.22  53  ePKPbc   PKPbc    12 28 22.0 -0.5
       baz=53
KUU    Kurty             151.22  53  ePKIKP   PKPbc    12 28 21.9 -0.5
ULHL   Ulahol            151.61  56   P        PKiKP    12 28 24.6 +0.5
       SNR=18
MDOK   Medeo             151.93  54  ePKPbc   PKPbc    12 28 24.2 -0.1
       baz=54
MDOK   Medeo             151.93  54  ePKIKP   PKPbc    12 28 24.2 -0.1
KSH    Kashi             151.97  62   PKPbc    PKPbc    12 28 24.2 -0.3
KSH                                   pPKP     PKPab    12 28 33.0 -0.9
BOD    Bodaibo           152.16 354  ePKIKP   PKPbc    12 28 23.3 -0.8
BOD                                   pmax     pmax
       comp=Z,18nm,1.9s
ZEA    Zeya              152.83 335  ePKIKP   PKPdf    12 28 20.6 +2.1
ZEA                                   pmax     pmax
       comp=Z,10.0nm,1.3s
SATY   Saty              152.91  54  ePKPbc   PKPbc    12 28 25.8 -0.7
       baz=54
SATY   Saty              152.91  54  ePKIKP   PKPbc    12 28 25.7 -0.7
KPKS   Kokpek            152.97  53  ePKPbc   PKPbc    12 28 26.3 -0.3
       baz=53
KPKS   Kokpek            152.97  53  ePKIKP   PKPbc    12 28 26.2 -0.3
UZB    Uzynbulak         153.31  53  ePKPbc   PKPbc    12 28 27.0 -0.4
       baz=53
UZB    Uzynbulak         153.31  53  ePKIKP   PKPbc    12 28 27.0 -0.4
MK31   Makanchi Array    153.91  43c iPKIKP   PKPbc    12 28 28.0 -0.4
MKAR   Makanchi Array    153.91  43   PKPbc    PKPbc    12 28 28.1 -0.3
       comp=Z,3.9nm,0.8s,baz=329,slow=2.0,SNR=8.9
KLR    Kul'dur           154.06 324⇑ ePKIKP   PKPdf    12 28 20.9 +0.4
ZSN    Zaisan            155.04  40  ePKPab   PKPab    12 28 45.8 -0.7
       baz=40
ZSN    Zaisan            155.04  40  ePKP2    PKPab    12 28 45.7 -0.7
TLY    Talaya            158.30   8  ePKP2    PKPab    12 29 02.2 +1.9
TLY                                   pmax     pmax
       comp=Z,23nm,1.3s
WMQ    Urumqi            158.71  45  eP       PKPdf    12 28 26.5 -0.3
WMQ                                   pmax     pmax
       comp=Z,120nm,4.7s
ZAK    Zakamensk         159.52   9  ePKP2    PKPab    12 29 05.4 -0.3
ZAK                                   pmax     pmax
       comp=Z,6.0nm,1.4s
SONM   Songino Array     162.37   4   PKP      PKPdf    12 28 31.1 +0.4
       comp=Z,1.1nm,0.8s,baz=351,slow=1.3,SNR=5.8
SONM                                  PKPab    PKPab    12 29 19.7 +1.5
       comp=Z,1.8nm,0.8s,baz=304,slow=4.7,SNR=6.5
CMAR   Chiang Mai Arr    165.46 142   PKP      PKPdf    12 28 32.6 -1.7
       comp=Z,0.7nm,0.4s,baz=164,slow=26,SNR=2.0
CMAR                                  PKPab    PKPab    12 29 31.5 -0.9
       comp=Z,0.8nm,0.3s,baz=150,slow=29,SNR=1.7
HHC    Hu-ho-hao-te      169.11 347  eP       PKPdf    12 28 37.3 +0.9
NJ2    Nanjing           170.85 284  eP       PKPdf    12 28 38.2 +0.7
NJ2                                   pmax     pmax
       comp=Z,8.0nm,0.5s
LZH    Lanzhou           173.04  32  eP       PKPdf    12 28 33.8 -4.9
LZH                                   pP       pPKPdf   12 28 41.6 -9.4
LZH                                   sP       sPKPdf   12 28 45.0  -10
LZH                                   pmax     pmax
       comp=Z,12nm,1.1s
```

IDC 01 12:13:00.1±2.4**, 0°.78N**×**126°.84E, h0^{km}, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.2**/64**, mbtmp3.5**/3**, Error ellipse: s-maj=194.7km s-min=28.6km az=66.0, Northern Molucca Sea**

```
Code   Station Name          Δ°  AZ°    Phase ID             Time     Res
                                      Op       ISC       h  m  s    ISC
WRA    Warramunga Arr     21.86 161   P        P        12 17 54.9 +0.2
       0.6nm,0.7s,baz=340,slow=11,SNR=4.7
ASAR   Alice Springs      25.25 165   P        P        12 18 28.1 -0.1
       1.3nm,0.9s,baz=344,slow=8.5,SNR=9.4
MKAR   Makanchi Array     60.04 326   P        P        12 23 08.9  0.0
       0.4nm,0.6s,baz=144,slow=8.7,SNR=2.2
```

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*BJI **01** 12:14:17.4±0.0, 0°.36N×127°.76E, h30^{km}, mB5.3/45, mb4.7/59, Ms4.5/36, Ms7 4.3/36*

*IDC **01** 12:14:18.8±0.5, 1°.07N×127°.55E, h0^{km}, mb4.5/23, mb1 4.5/26, mb1mx4.3/67, mbtmp4.5/26, ML4.0/3, MS4.1/6, Ms1 4.1/6, ms1mx3.8/34, Error ellipse: s-maj=18.8km s-min=9.9km az=73.0*

*NEIC **01** 12:14:21.8±1.6, 1°.01N±0°.08×127°.50E±0°.08, h10^{km}±1^{km}, mb5.1/67, Error ellipse: s-maj=14.7km s-min=11.5km az=41.0*

*MOS **01** 12:14:21.3±0.9, 1°.06N×127°.47E, h27^{km}, mb5.1/41, Error ellipse: s-maj=10.9km s-min=5.5km az=113.8*

*DJA **01** 12:14:22.3±0.2, 1°N±2°×12°7E±°, h10^{km}, M4.8/50, mB5.3/35, mb4.9/50, MLv4.7/16, Mw(mB)4.7/35, MwMwp4.9/8, Mwp5.2/8*

*GCMT **01** 12:14:23.9±0.2, 1°.09N±0°.02×127°.45E±0°.01, h12^{km}, MW5.1/107, Moment Tensor Solution. s39,c42; s107,c168; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.51±.11; $M_{\theta\theta}$-0.42±.10; $M_{\phi\phi}$4.94±.10; $M_{r\theta}$0.71±.42; $M_{\theta\phi}$0.06±.09; $M_{\phi r}$-0.56±.32; Best double couple: $M_0$4.81800×10^{16} NP1:ϕ_s190.00000°, δ42.00000°, λ-76.00000°. NP2:ϕ_s351.00000°, δ49.00000°, λ-103.00000°. Principal axes: T 4.9740, Plg3.0000°, Azm90.0000°; N -0.3060, Plg9.0000°, Azm360.0000°; P -4.6620, Plg80.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*KLM **01** 12:14:25, 1°.17N×127°.41E, h10^{km}, mb4.9*

ISC 01 12:14:21.1±0.3**, 1°.02N**±0°.03×**127°.50E**±0°.05**, h10^{km}, n270, σ1^{s}63**/283**, mb5.0**/91**, MS4.3**/17**, 14C-16D, Halmahera**

```
Code   Station Name          Δ°  AZ°    Phase ID             Time     Res
                                      Op       ISC       h  m  s    ISC
TNTI   Ternate             0.28 209   P        Pg       12 14 26.5 -0.2
TNTI                                  S        Sg       12 14 30.2 -0.3
TNTI   Ternate             0.28 209            Pg       12 14 26.8 +0.1
LBMI   Labuha              1.64 180   P        Pn       12 14 50.3 +0.2
SANI   Sanana              3.40 206   P        Pn       12 15 13.5 -0.8
KMSI   Cibinong            3.55 263   P        Pn       12 15 17.8 +1.5
SWI    Sorong              4.20 116   P        Pn       12 15 25.9 +0.7
SIJI   Sorong              4.20 116   Pn       Pn       12 15 25.6 +0.3
       7.3nm,0.3s,baz=299,slow=23,SNR=21
SIJI                                  Sn       Sn       12 16 15.0 +0.5
       4.4nm,0.3s,baz=210,slow=22,SNR=3.7
GTOI   Gorontalo           4.51 265   P        Pn       12 15 32.2 +2.7
AAI    Ambon               4.72 172   P        Pn       12 15 34.3 +1.9
DDMP   Don Marcelino,      5.36 341⇓ eP       Pn       12 15 40.2 -1.0
MRSI   Marisa              5.59 265   P        Pn       12 15 44.0 -0.3
       0.6nm4μm2μm135nm,1.1s
MATI   Mati                6.02 348⇑ eP       Pn       12 15 52.5 +2.2
FAKI   Fak Fak             6.15 130   P        Pn       12 15 52.5 +0.5
       0.3nm1μm31nm,0.6s
FAKI   Fak Fak             6.15 130            Pn       12 15 52.9 +0.9
APSI   Ampana              6.16 252   P        Pn       12 15 53.1 +0.9
       0.8nm3μm2μm160nm,0.9s
DMPH   Davao City--Mi      6.35 342⇑ eP       Pn       12 15 53.4 -1.4
DMPH                                 eS       Sb       12 17 27.2 -0.5
KCP    Kidapawan           6.42 338⇑ iP       Pn       12 15 57.1 +1.3
TOLI2  Tolitoli            6.72 271   Pn       Pn       12 16 01.0 +1.1
BUKP   Musuan              7.24 340⇓ eP       Pn       12 16 08.4 +1.4
MPSI   Mapaga              7.63 265   P        Pn       12 16 14.1 +1.6
TTSI   Tana Toraja         8.68 242   P        Pn       12 16 27.5 +0.7
BNSI   Bone                9.14 234   P        Pn       12 16 33.1 -0.1
SPSI   Sidrap Palu         9.18 237   P        Pn       12 16 32.9 -0.7
TBP    Tagbilaran          9.35 337⇑ eP       Pn       12 16 34.4 -1.6
MSLP   Maasin              9.43 344⇑ eP       Pn       12 16 39.2 +2.1
BKSI   Bulukumba           9.69 229   P        Pn       12 16 41.3 +0.6
KAPI   Kappang             9.79 232   Pn       Pn       12 16 43.0 +0.9
       3.2nm,0.3s,baz=64,slow=8.6,SNR=8.5
KAPI                                  LR       LR       12 21 32.4
       comp=Z,360nm,20.9s,baz=88,slow=44
KAPI   Kappang             9.79 232   P        Pn       12 16 43.4 +1.4
KAPI   Kappang             9.79 232   Pn       Pn       12 16 43.4 +1.4
MYLDM  Lahad Datu          9.89 295   Pn       Pn       12 16 43.7 +0.2
BSSI   Bau Bau, Buton      9.98 224   P        Pn       12 16 44.2 -0.5
CNOP   Candoni, Negro     10.00 331⇓ eP       Pn       12 16 46.5 +1.5
MMRI   Maumere            10.93 209   P        Pn       12 17 01.4 +3.7
SOEI   Soe                11.18 197   Pn       Pn       12 17 00.2 -1.0
EDFI   Ende, Flores       11.30 211   P        Pn       12 17 05.0 +2.2
SPMM   Sapulut            11.62 289   P        Pn       12 17 13.0 +5.9
KKM    Kota Kinabalu      12.32 294   Pn       Pn       12 17 18.4 +1.6
BATP   Bataraza           12.37 309⇓ iP       Pn       12 17 21.3 +3.9
WBSI   Waikabubak, Su     13.32 217   P        Pn       12 17 31.0 +0.6
BBKI   Banjar Baru        13.41 251   P        Pn       12 17 31.5 -0.2
PLAI   Plampang           13.77 225   P        Pn       12 17 39.2 +2.7
MTN    Manton Dam         14.23 165            Pn       12 17 42.7 -0.1
TWSI   Taliwang, Sumb     14.35 227   P        Pn       12 17 44.9 +0.4
LUBP   Lubang             14.54 331⇑ eP       Pn       12 17 47.0 -0.1
SBUM   Sibu               15.34 276   Pn       Pn       12 17 57.8 -0.1
DNP    Denpasar           15.58 232   P        Pn       12 18 00.7 -0.3
KMMI   Kalianget          15.71 239   P        Pn       12 18 04.2 +1.6
STKI   Sintang            16.05 267   P        Pn       12 18 07.9 +0.8
PBKI   Pangkalan Bun      16.25 257   P        Pn       12 18 09.5 -0.2
JAGI   Jajag, Banyuwa     16.31 234   P        Pn       12 18 11.9 +1.5
JAGI   Jajag, Banyuwa     16.31 234            Pn       12 18 10.2 -0.2
JAGI                                  IAmb     IAmb     12 18 20.8
       comp=Z,132nm,1.1s
BLJI   Banyuglugur        16.38 238   P        P        12 18 13.7 -0.4
KNRA   Kununurra          16.63 176   Pn       Pn       12 18 14.1 -0.5
KSM    Kuching            17.20 272   Pn       Pn       12 18 21.6  0.0
APYP   Conner             17.84 340⇓ iP       Pn       12 18 29.7 +0.2
NGJI   Ngawi              18.04 242   P        P        12 18 34.0 +1.4
UWJI   Ujung Watu         18.10 246   P        Pn       12 18 32.5 -0.4
WOJI   Wonogiri, Jawa     18.73 242   P        P        12 18 39.3 -0.8
SMRI   Semarang           18.82 245   P        Pn       12 18 42.4 +0.8
FITZ   Fitzroy Crossi     19.08 185   P        P        12 18 42.6 -1.3
       comp=Z,0.2nm,0.3s,baz=7.4,slow=14,SNR=3.1
FITZ                                  LR       LR       12 27 20.7
       comp=Z,232nm,18.6s,baz=18,slow=41
KPJI   Karang Pucung      20.30 246   P        P        12 18 58.5 +1.2
CMJI   Cimerak            20.92 245   P        P        12 19 04.4 +0.4
LEM    Lembang            21.32 248   P        P        12 19 08.8 +0.3
```

	comp=Z,16nm,0.4s,baz=357,slow=23,SNR=2.3						
LEM				LR	LR	12 29 27.7	
	comp=Z,575nm,19.6s,baz=54,slow=42						
COEN	**Coen**	**21.50**	**134**	P	**P**	**12 19 12.0**	**+1.6**
PPBI	**Pangkal Pinang**	**21.59**	**262**	P	**P**	**12 19 11.9**	**+0.5**
WB0	**Warramunga Arr**	**21.73**	**162**	P	**P**	**12 19 13.0**	**+0.2**
WB0				IAmb	IAmb	12 19 20.6	
	comp=Z,101nm,1.1s						
WRAB	**Tennant Creek**	**21.88**	**162**	*ce*P	**P**	**12 19 13.6**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,123nm,1.4s						
WRAB	**Tennant Creek**	**21.88**	**162**	P	**P**	**12 19 15.1**	**+0.8**
WRAB				IAmb	IAmb	12 19 18.5	
	comp=Z,158nm,1.4s						
WRA	**Warramunga Arr**	**21.88**	**163**	P	**P**	**12 19 14.2**	**-0.2**
	comp=Z,32nm,0.9s,baz=341,slow=11,SNR=59						
WRA				S	**S**	**12 23 18.0**	**+1.7**
	comp=Z,0.7nm,0.6s,baz=346,slow=14,SNR=2.5						
WRA	**Warramunga Arr**	**21.88**	**163**	P	**P**	**12 19 14.4**	**0.0**
WRA				pmax	pmax		
	comp=Z,7.0nm,1.6s						
WRA	**Warramunga Arr**	**21.88**	**163**	P	**P**	**12 19 14.4**	**0.0**
WB2	**Warramunga Arr**	**21.89**	**162**	P	**P**	**12 19 14.3**	**-0.1**
WB2				IAmb	IAmb	12 19 18.5	
	comp=Z,150nm,1.4s						
CBJI	**Citeko**	**21.90**	**250**	P	**P**	**12 19 13.8**	**-0.8**
CNJI	**Cibinong**	**21.94**	**248**	P	**P**	**12 19 15.6**	**+0.5**
WR0	**Warramunga Arr**	**21.96**	**162**	P	**P**	**12 19 14.6**	**-0.6**
WR0				IAmb	IAmb	12 19 19.4	
	comp=Z,118nm,1.4s						
PMG	**Port Moresby**	**22.15**	**118**	LR	LR	12 30 22.9	
	comp=Z,2µm,18.0s,baz=334,slow=44						
PMG	**Port Moresby**	**22.15**	**118**	P	**P**	**12 19 17.8**	**+0.5**
PMG				pmax	pmax		
	comp=Z,58nm,1.8s						
PMG	**Port Moresby**	**22.15**	**118**	P	**P**	**12 19 17.8**	**+0.5**
CGJI	**Cibinong**	**23.05**	**251**	P	**P**	**12 19 27.0**	**+0.1**
TPUB	**Ta-pu**	**23.14**	**344**	P	**P**	**12 19 28.6**	**+1.0**
TPUB				IAmb	IAmb	12 20 04.8	
	comp=Z,72nm,0.6s						
MYKOM	**Kota Tinggi**	**23.66**	**272**	P	**P**	**12 19 34.0**	**+1.0**
PSA00	**Pilbara Seismi**	**23.66**	**198**	P	**P**	**12 19 32.0**	**-1.0**
PSA00				IAmb	IAmb	12 19 37.3	
	comp=Z,112nm,1.8s						
PSA00	**Pilbara Seismi**	**23.66**	**198**	P	**P**	**12 19 31.4**	**-1.5**
PSA00				IAmb	IAmb	12 19 47.2	
	comp=Z,18nm,1.1s						
KASI	**Kota Agung**	**23.88**	**254**	P	**P**	**12 19 35.8**	**+0.7**
MDSI	**Maura Dua**	**23.94**	**257**	P	**P**	**12 19 35.2**	**-0.5**
XMIS	**Christmas Isla**	**24.56**	**242**	P	**P**	**12 19 40.6**	**-0.8**
QIZ	**Qiongzhong**	**24.91**	**317**	P	**P**	**12 19 46.2**	**+1.7**
QIZ				S	**S**	**12 24 10.5**	**+2.6**
QIZ				LR	LR		
	comp=Z,620nm,18.6s						
QIZ				LR	LR		
	comp=Z,500nm,17.7s						
QIZ				LR	LR		
	comp=Z,400nm,16.5s						
JRMM	**Jerantut**	**25.16**	**277**	P	**P**	**12 19 48.0**	**+1.1**
RABL	**Rabaul**	**25.18**	**102**	P	**P**	**12 19 48.8**	**+1.7**
RABL				IAmb	IAmb	12 19 54.1	
	comp=Z,39nm,0.8s						
QZH	**Quanzhou**	**25.30**	**341**	P	**P**	**12 19 44.5**	**-3.4**
QZH				pmax	pmax		
	comp=Z,560nm,5.7s						
QZH				LR	LR		
	comp=Z,420nm,16.1s						
AS31	**Alice Springs**	**25.31**	**166**	P	**P**	**12 19 47.3**	**-0.8**
ASAR	**Alice Springs**	**25.31**	**166**	P	**P**	**12 19 47.6**	**-0.6**
	comp=Z,27nm,0.8s,baz=344,slow=11,SNR=54						
ASAR	**Alice Springs**	**25.31**	**166**	P	**P**	**12 19 47.7**	**-0.4**
ASAR	**Alice Springs**	**25.31**	**166**	P	**P**	**12 19 47.7**	**-0.4**
BKNI	**Bangkinang**	**26.47**	**269**	P	**P**	**12 19 59.1**	**+0.4**
IPM	**Ipoh**	**26.67**	**278**	P	**P**	**12 19 59.9**	**-0.6**
IPM				IAmb	IAmb	12 20 02.9	
	comp=Z,25nm,1.2s						
GIRL	**Giralia**	**26.84**	**208**	P	**P**	**12 20 02.3**	**+0.4**
PDSI	**Padang**	**27.11**	**266**	P	**P**	**12 20 08.1**	**+3.6**
PPI	**Padang Panjang**	**27.14**	**267**	P	**P**	**12 20 05.2**	**+0.4**
MNSI	**Mandailing Nat**	**27.92**	**270**	P	**P**	**12 20 11.3**	**-0.5**
SSE	**Sheshan**	**30.51**	**349**	P	**P**	**12 20 37.6**	**+3.1**
SSE				S	**S**	**12 25 42.9**	**+6.9**
SSE				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SSE				pmax	pmax		
	comp=Z,190nm,3.6s						
SSE				LR	LR		
	comp=Z,100nm,16.5s						
SSE				LR	LR		
	comp=Z,140nm,17.8s						
FORT	**Forrest**	**31.62**	**179**	P	**P**	**12 20 43.1**	**-1.3**
FORT				IAmb	IAmb	12 21 33.0	
	comp=Z,24nm,0.9s						
MORW	**Morawa**	**31.86**	**199**	P	**P**	**12 20 46.1**	**-0.4**
MORW				IAmb	IAmb	12 21 09.5	
	comp=Z,26nm,1.3s						
NJ2	**Nanjing**	**31.93**	**346**	*e*P	**P**	**12 20 50.2**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**32.95**	**303**	P	**P**	**12 20 54.6**	**-1.6**
	comp=Z,2.8nm,1.0s,baz=121,slow=7.1,SNR=12						
CMAR	**Chiang Mai Arr**	**32.95**	**303**	P	**P**	**12 20 55.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**32.95**	**303**	P	**P**	**12 20 55.4**	**-0.9**
CHTO	**Chiang Mai**	**33.12**	**304**	P	**P**	**12 20 56.5**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHTO	**Chiang Mai**	**33.12**	**304**	P	**P**	**12 20 56.5**	**-1.3**
ENH	**Enshi**	**33.76**	**331**	P	**P**	**12 21 04.9**	**+1.8**
ENH				IAmb	IAmb	12 21 13.8	
	comp=Z,32nm,1.6s						
KMI	**Kunming**	**33.86**	**317**	⇑P	**P**	**12 21 07.8**	**+3.5**
KMI				pmax	pmax		
	comp=Z,13nm,0.6s						
BBOO	**Buckleboo**	**34.60**	**167**	P	**P**	**12 21 09.8**	**-0.6**
INU	**Inuyama**	**35.29**	**14**	P	**P**	**12 21 16.5**	**+0.3**
INU				IAmb	IAmb	12 21 20.4	
	comp=Z,32nm,1.0s						
STKA	**Stephens Creek**	**35.34**	**159**	P	**P**	**12 21 15.9**	**-0.8**
	comp=Z,6.6nm,0.8s,baz=353,slow=6.1,SNR=8.9						
STKA	**Stephens Creek**	**35.34**	**159**	P	**P**	**12 21 18.6**	**+1.9**
STKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
STKA	**Stephens Creek**	**35.34**	**159**	P	**P**	**12 21 18.6**	**+1.9**
KSAR	**Wonju Array Be**	**36.25**	**1**	P	**P**	**12 21 24.0**	**-0.5**
KSAR	**Wonju Array Be**	**36.25**	**1**	P	**P**	**12 21 24.0**	**-0.5**
KSRS	**Korea Array**	**36.26**	**1**	P	**P**	**12 21 22.9**	**-1.6**
	comp=Z,2.8nm,0.7s,baz=176,slow=9.5,SNR=11						
KS19	**Wonju Array Si**	**36.31**	**0**	P	**P**	**12 21 25.8**	**+0.8**
KS19				IAmb	IAmb	12 21 47.4	
	comp=Z,25nm,1.4s						
MAJO	**Matsushiro**	**36.71**	**14**	P	**P**	**12 21 28.0**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,22nm,0.9s						
MAJO	**Matsushiro**	**36.71**	**14**	P	**P**	**12 21 28.0**	**-0.5**
MAJO				IAmb	IAmb	12 21 31.9	
	comp=Z,22nm,0.9s						
MAT	**Matsushiro**	**36.71**	**14**	P	**P**	**12 21 26.4**	**-2.1**
MJAR	**Matsushiro Arr**	**36.71**	**14**	P	**P**	**12 21 26.5**	**-2.0**
	comp=Z,11nm,0.8s,baz=182,slow=10,SNR=12						
MJAR	**Matsushiro Arr**	**36.71**	**14**	P	**P**	**12 21 28.6**	**+0.1**
MJAR				pmax	pmax		
	comp=Z,11nm,1.3s						
MJAR	**Matsushiro Arr**	**36.71**	**14**	P	**P**	**12 21 28.6**	**+0.1**
XAN	**Xi'an**	**37.17**	**334**	P	**P**	**12 21 30.1**	**-2.4**
XAN				S	**S**	**12 27 13.7**	**-5.6**
XAN				ScS	**ScS**	**12 31 40.7**	**-7.0**
XAN				pmax	pmax		
	comp=Z,11nm,1.2s						
XAN				pmax	pmax		
	comp=Z,200nm,4.1s						
XAN				LR	LR		
	comp=Z,230nm,14.4s						
XAN				LR	LR		
	comp=Z,210nm,16.7s						
XAN				LR	LR		
	comp=Z,430nm,18.7s						
CD2	**Chengdu**	**37.29**	**325**	P	**P**	**12 21 35.1**	**+1.6**
CD2				S	**S**	**12 27 22.8**	**+1.7**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,270nm,14.7s						
CD2				LR	LR		
	comp=Z,320nm,16.2s						
CD2				LR	LR		
	comp=Z,380nm,16.7s						
JMM	**Marumori**	**38.66**	**17**	P	**P**	**12 21 45.9**	**+1.0**
JMM				IAmb	IAmb	12 21 55.9	
	comp=Z,70nm,1.3s						
ARMA	**Armidale**	**38.80**	**146**	P	**P**	**12 21 47.2**	**+0.9**
ARMA				IAmb	IAmb	12 21 51.7	
	comp=Z,61nm,1.8s						
TIY	**Taiyuan**	**39.07**	**341**	⇓P	**P**	**12 21 51.9**	**+3.4**
TIY				S	**S**	**12 27 46.8**	**-1.1**
TIY				pmax	pmax		
	comp=Z,37nm,1.0s						
TIY				pmax	pmax		
	comp=Z,250nm,4.7s						
TIY				LR	LR		
	comp=Z,130nm,8.0s						
TIY				LR	LR		
	comp=Z,110nm,6.3s						
TIY				LR	LR		
	comp=Z,280nm,15.6s						
BJT	**Baijiatuau**	**40.17**	**346**	P	**P**	**12 21 58.0**	**+0.5**
BJT				pmax	pmax		
	comp=Z,19nm,1.1s						
BJT	**Baijiatuau**	**40.17**	**346**	P	**P**	**12 21 58.0**	**+0.5**
BJI	**Beijing**	**40.19**	**346**	P	**P**	**12 22 01.3**	**+3.7**
BJI				pmax	pmax		
	comp=Z,21nm,1.0s						
VLA	**Vladivostok**	**42.10**	**5**	⇓*e*P	**P**	**12 22 12.6**	**-0.7**
VLA				pmax	pmax		
	comp=Z,28nm,1.4s						
SHL	**Shillong**	**42.13**	**308**	P	**P**	**12 22 14.1**	**0.0**
SHL				pmax	pmax		
	comp=Z,25nm,1.3s						
SHL	**Shillong**	**42.13**	**308**	P	**P**	**12 22 14.1**	**0.0**
SHL				IAmb	IAmb	12 22 17.3	
	comp=Z,25nm,1.3s						
HHC	**Hu-ho-hao-te**	**42.20**	**342**	*e*P	**P**	**12 22 18.1**	**+3.7**
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,270nm,7.7s						
BTO	**Baotou**	**42.48**	**340**	*e*P	**P**	**12 22 19.6**	**+3.0**
BTO				S	**S**	**12 28 44.6**	**+5.8**
BTO				LR	LR		
	comp=Z,690nm,14.7s						
BTO				LR	LR		
	comp=Z,520nm,14.3s						
USA0B	**Ussuriysk Arra**	**43.18**	**5**	P	**P**	**12 22 22.6**	**+0.5**
USA0B				pmax	pmax		
	comp=Z,17nm,1.2s						
USA0B	**Ussuriysk Arra**	**43.18**	**5**	P	**P**	**12 22 22.6**	**+0.5**
USRK	**Ussuriysk Ar.**	**43.18**	**5**	P	**P**	**12 22 21.6**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=264,slow=38,SNR=7.6						
USRK	**Ussuriysk Ar.**	**43.18**	**5**	P	**P**	**12 22 22.2**	**+0.1**
USRK	**Ussuriysk Ar.**	**43.18**	**5**	P	**P**	**12 22 22.1**	**+0.1**
MDJ	**Mudanjiang**	**43.45**	**2**	P	**P**	**12 22 27.0**	**+2.7**
MDJ				pP	sP	12 22 34.7	+5.8
MDJ				sP	pP	12 22 37.9	+10
MDJ				S	**S**	**12 28 53.2**	**+0.5**
MDJ				sS	sS	12 29 06.5	+8.4
MDJ				pmax	pmax		
	comp=Z,26nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,87nm,4.0s						
MDJ				LR	LR		
	comp=Z,320nm,10.7s						
MDJ				LR	LR		
	comp=Z,200nm,12.4s						
MDJ				LR	LR		
	comp=Z,480nm,18.5s						
MDJ	**Mudanjiang**	**43.45**	**2**	P	**P**	**12 22 24.9**	**+0.6**
MDJ				IAmb	IAmb	12 22 30.0	
	comp=Z,26nm,1.1s						
TEY	**Ternei**	**44.57**	**9**	*e*P	**P**	**12 22 31.5**	**-1.7**
LSA	**Lhasa**	**44.82**	**313**	P	**P**	**12 22 35.4**	**-0.7**
LSA				pmax	pmax		
	comp=Z,40nm,2.0s						
LSA	**Lhasa**	**44.82**	**313**	P	**P**	**12 22 35.4**	**-0.7**
LSA				IAmb	IAmb	12 23 43.0	
	comp=Z,40nm,2.0s						
GTA	**Gaotai**	**45.81**	**330**	⇑P	**P**	**12 22 43.2**	**-0.2**
GTA				pP	sP	12 22 49.4	+1.6
GTA				sP	pP	12 22 52.9	+6.3
GTA				PP	**PP**	**12 24 33.4**	**+2.6**
GTA				S	**S**	**12 29 22.0**	**-5.5**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.9s						
GTA				pmax	pmax		
	comp=Z,230nm,5.1s						
GTA				LR	LR		
	comp=Z,180nm,21.4s						
GTA				LR	LR		
	comp=Z,110nm,17.8s						
GTA				LR	LR		
	comp=Z,200nm,18.2s						
KLR	**Kul'dur**	**48.17**	**4**	P	**P**	**12 23 00.6**	**-0.9**
	comp=Z,5.2nm,0.9s,baz=211,slow=6.5,SNR=6.1						
KLR	**Kul'dur**	**48.17**	**4**	⇓*i*P	**P**	**12 23 00.2**	**-1.3**
KLR				pmax	pmax		
	comp=Z,12nm,1.3s						
ULN	**Ulaanbaatar**	**49.92**	**342**	⇑*e*P	**P**	**12 23 14.8**	**-0.4**
ULN				pmax	pmax		
	comp=Z,16nm,1.1s						
ULN	**Ulaanbaatar**	**49.92**	**342**	P	**P**	**12 23 14.7**	**-0.4**
ULN				IAmb	IAmb	12 23 25.2	
	comp=Z,14nm,1.0s						
SONM	**Songino Array**	**50.10**	**342**	P	**P**	**12 23 15.7**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=159,slow=7.3,SNR=20						
SONM	**Songino Array**	**50.10**	**342**	P	**P**	**12 23 16.1**	**-0.4**
SONM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SONM	**Songino Array**	**50.10**	**342**	P	**P**	**12 23 16.1**	**-0.4**
HYB	**Hyderabad**	**50.79**	**292**	*i* P	**P**	**12 23 23.5**	**+1.4**
ZEA	**Zeya**	**52.55**	**360**	*e*P	**P**	**12 23 33.5**	**-1.1**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZAK	**Zakamensk**	**53.32**	**341**	*e*P	**P**	**12 23 42.5**	**+2.0**
ZAK				*e*		12 24 41.3	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
TLY	**Talaya**	**54.33**	**342**	⇓*e*P	**P**	**12 23 49.3**	**+1.5**
TLY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MOY	**Mondy**	**55.18**	**340**	*e*P	**P**	**12 23 58.1**	**+4.1**
MOY				pmax	pmax		
	comp=Z,44nm,2.1s						
WMQ	**Urumqi**	**55.38**	**326**	*e*P	**P**	**12 23 57.9**	**+2.3**
WMQ				pP	sP	12 24 02.3	+2.3
WMQ				sP	pP	12 24 07.9	+9.1
WMQ				pmax	pmax		
	comp=Z,70nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,540nm,4.3s						
WMQ				LR	LR		
	comp=Z,280nm,21.9s						
PEA0B	**Petropavlovsk-**	**57.65**	**21**	P	**P**	**12 24 11.8**	**+0.3**
PEA0B				pmax	pmax		
	comp=Z,229nm,2.0s						
PEA0B	**Petropavlovsk-**	**57.65**	**21**	P	**P**	**12 24 11.8**	**+0.3**
PETK	**Petropavlovsk-**	**57.65**	**21**	P	**P**	**12 24 10.9**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=87,slow=26,SNR=8.1						
PETK	**Petropavlovsk-**	**57.65**	**21**	P	**P**	**12 24 11.1**	**-0.4**
PETK	**Petropavlovsk-**	**57.65**	**21**	P	**P**	**12 24 11.1**	**-0.4**
ZSN	**Zaisan**	**59.19**	**328**	*e*P	**P**	**12 24 21.5**	**-1.0**
	baz=328						
ZSN	**Zaisan**	**59.19**	**328**	*e*P	**P**	**12 24 21.4**	**-1.0**
DGZ	**Jazzator, Alta**	**59.32**	**331**	⇑*e*P	**P**	**12 24 22.6**	**-0.8**
DGZ				pmax	pmax		
	comp=Z,22nm,1.3s						
URZ	**Urewera**	**60.05**	**136**	LR	LR	12 53 11.3	
	comp=Z,220nm,18.0s,baz=30,slow=39						
UZB	**Uzynbulak**	**60.19**	**321**	*e*P	**P**	**12 24 28.1**	**-1.5**
	comp=Z,26nm,1.4s,baz=321						
UZB	**Uzynbulak**	**60.19**	**321**	*e*P	**P**	**12 24 28.9**	**-0.7**
UZB				pmax	pmax		
	comp=Z,26nm,1.4s						
NIL	**Nilore**	**60.20**	**309**	P	**P**	**12 24 28.8**	**-0.8**
NIL				pmax	pmax		
	comp=Z,15nm,0.9s						
NIL	**Nilore**	**60.20**	**309**	P	**P**	**12 24 28.8**	**-0.8**
NIL				IAmb	IAmb	12 24 52.7	
	comp=Z,15nm,0.9s						
MK31	**Makanchi Array**	**60.22**	**326**	P	**P**	**12 24 29.6**	**+0.1**
MK31				pmax	pmax		
	comp=Z,19nm,1.0s						
MK31	**Makanchi Array**	**60.22**	**326**	P	**P**	**12 24 29.6**	**+0.1**
MK31				IAmb	IAmb	12 24 34.6	
	comp=Z,19nm,0.9s						
MKAR	**Makanchi Array**	**60.22**	**326**	P	**P**	**12 24 28.7**	**-0.8**
	comp=Z,2.7nm,0.5s,baz=122,slow=8.3,SNR=27						
PRZ	**Przheval'sk**	**60.26**	**320**	P	**P**	**12 24 31.2**	**+1.1**
PRZ				pmax	pmax		
	comp=Z,56nm,1.2s						
PRZ	**Przheval'sk**	**60.26**	**320**	P	**P**	**12 24 31.2**	**+1.1**
TARG	**Taragay, Kyrgy**	**60.28**	**319**	P	**P**	**12 24 31.4**	**+0.9**
TARG				IAmb	IAmb	12 24 45.5	
	comp=Z,44nm,1.4s						
MAKZ	**Makanchi**	**60.40**	**326**	P	**P**	**12 24 28.9**	**-1.8**
MAKZ				pmax	pmax		
	comp=Z,35nm,1.1s						
MAKZ	**Makanchi**	**60.40**	**326**	P	**P**	**12 24 28.9**	**-1.8**
KSH	**Kashi**	**60.51**	**316**	P	**P**	**12 24 34.3**	**+2.6**
KSH				pP	sP	12 24 40.9	+4.7
KSH				S	**S**	**12 32 51.3**	**+3.7**
KSH				pmax	pmax		
	comp=Z,24nm,1.2s						
KSH				pmax	pmax		
	comp=Z,250nm,5.0s						
KSH				LR	LR		
	comp=Z,240nm,6.9s						
KSH				LR	LR		
	comp=Z,170nm,5.7s						
KSH				LR	LR		
	comp=Z,240nm,11.9s						
SATY	**Saty**	**60.54**	**320**	*e*P	**P**	**12 24 31.2**	**-0.7**
	comp=Z,31nm,1.2s,baz=320						
SATY	**Saty**	**60.54**	**320**	*e*P	**P**	**12 24 31.2**	**-0.7**
SATY				pmax	pmax		
	comp=Z,31nm,1.2s						
KPKS	**Kokpek**	**60.57**	**321**	*e*P	**P**	**12 24 31.2**	**-0.8**
	comp=Z,24nm,1.5s,baz=321						
KPKS	**Kokpek**	**60.57**	**321**	*e*P	**P**	**12 24 31.2**	**-0.8**
KPKS				pmax	pmax		
	comp=Z,24nm,1.5s						
KDJ	**Kajisay**	**60.88**	**319**	P	**P**	**12 24 35.9**	**+1.6**
KDJ				pmax	pmax		
	comp=Z,32nm,1.1s						
KDJ	**Kajisay**	**60.88**	**319**	P	**P**	**12 24 35.9**	**+1.6**
KDJ				IAmb	IAmb	12 24 39.6	
	comp=Z,32nm,1.1s						
YAK	**Yakutsk**	**60.88**	**1**	P	**P**	**12 24 32.3**	**-1.4**
	comp=Z,9.1nm,0.7s,baz=137,slow=0.3,SNR=6.6						
YAK	**Yakutsk**	**60.88**	**1**	*e*P	**P**	**12 24 31.7**	**-2.0**
YAK				*e**PP	**sP**	**12 24 41.6**	**+3.3**
YAK				*e*		12 25 15.3	
YAK				*e*S	**S**	**12 32 48.2**	**-3.1**
YAK				*e**SS	sS	12 33 05.6	+8.8
YAK				*e*		12 34 12.3	
YAK				*e*SS	**SS**	**12 36 47.9**	**-2.7**
YAK				pmax	pmax		
	comp=Z,17nm,1.2s						
YAK				pmax	pmax		
	comp=N,12nm,1.5s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,151nm,3.5s						
YAK				pmax	pmax		
	comp=N,126nm,3.3s						
YAK				pmax	pmax		
	comp=E,138nm,3.8s						
YAK				smax	smax		
	comp=E,149nm,3.2s						
YAK				smax	smax		
	comp=N,52nm,2.7s						
YAK	**Yakutsk**	**60.88**	**1**	P	**P**	**12 24 32.7**	**-0.9**
YAK				IAmb	IAmb	12 24 42.8	
	comp=Z,23nm,0.8s						
MA2	**Magadan**	**61.14**	**13**	⇓*e*P	**P**	**12 24 34.6**	**-0.9**
MA2				pmax	pmax		
	comp=Z,28nm,1.3s						
MDOK	**Medeo**	**61.46**	**320**	*e*P	**P**	**12 24 37.4**	**-0.8**
	baz=320						
MDOK	**Medeo**	**61.46**	**320**	*e*P	**P**	**12 24 37.4**	**-0.8**
TDK	**Taldyqorghan**	**61.52**	**322**	*e*P	**P**	**12 24 38.2**	**-0.2**
	comp=Z,30nm,1.2s,baz=322						
TDK	**Taldyqorghan**	**61.52**	**322**	*e*P	**P**	**12 24 38.1**	**-0.2**
TDK				pmax	pmax		
	comp=Z,30nm,1.2s						
ULHL	**Ulahol**	**61.55**	**319**	P	**P**	**12 24 41.9**	**+3.0**
	SNR=14						
AAA	**Alma-Ata**	**61.57**	**320**	*e*P	**P**	**12 24 38.0**	**-0.8**
	comp=Z,34nm,1.3s,baz=320						
AAA	**Alma-Ata**	**61.57**	**320**	*e*P	**P**	**12 24 38.0**	**-0.8**
AAA				pmax	pmax		
	comp=Z,34nm,1.3s						
BOOM	**Boomskoye usch**	**61.86**	**319**	P	**P**	**12 24 40.8**	**-0.2**
BOOM				pmax	pmax		
	comp=Z,25nm,1.3s						
BOOM	**Boomskoye usch**	**61.86**	**319**	P	**P**	**12 24 40.8**	**-0.2**
BOOM				IAmb	IAmb	12 24 45.4	
	comp=Z,25nm,1.2s						
KUU	**Kurty**	**62.26**	**320**	*e*P	**P**	**12 24 42.3**	**-1.1**
	comp=Z,57nm,1.5s,baz=320						
KUU	**Kurty**	**62.26**	**320**	*e*P	**P**	**12 24 42.3**	**-1.1**
KUU				pmax	pmax		
	comp=Z,57nm,1.5s						
TKM2	**Tokmak 2**	**62.28**	**319**	P	**P**	**12 24 44.4**	**+0.6**
	SNR=13						
KBK	**Karagaybulak**	**62.59**	**319**	P	P	12 24 52.4	+6.6
	SNR=9.1						
UCH	**Uchtor**	**62.69**	**318**	P	**P**	**12 24 49.9**	**+3.0**
	SNR=29						
AAK	**Ala-Archa**	**62.88**	**319**	P	**P**	**12 24 47.5**	**-0.2**
	comp=Z,2.5nm,0.5s,baz=116,slow=7.6,SNR=6.1						
AAK	**Ala-Archa**	**62.88**	**319**	⇑*e*P	**P**	**12 24 48.6**	**+0.8**
AAK				pmax	pmax		
	comp=Z,68nm,1.7s						
AAK	**Ala-Archa**	**62.88**	**319**	P	**P**	**12 24 48.3**	**+0.5**
AAK				IAmb	IAmb	12 24 54.6	
	comp=Z,22nm,1.2s						
SGDS	**Sogindy**	**63.16**	**319**	*e*P	**P**	**12 24 48.0**	**-1.5**
	baz=319						
USP	**Ospenovka**	**63.16**	**319**	P	**P**	**12 24 49.5**	**0.0**
	SNR=13						
AML	**Almayashu**	**63.20**	**318**	P	**P**	**12 24 53.3**	**+3.2**
	SNR=39						
ZAA0	**Zalesovo Array**	**63.34**	**333**	P	**P**	**12 24 51.1**	**+0.7**
ZAA0				IAmb	IAmb	12 24 54.2	
	comp=Z,22nm,1.4s						
ZALV	**Zalesovo Beam**	**63.34**	**333**	P	**P**	**12 24 48.0**	**-2.4**
	comp=Z,1.5nm,0.6s,baz=45,slow=21,SNR=3.0						
ZALV	**Zalesovo Beam**	**63.34**	**333**	P	**P**	**12 24 51.3**	**+1.0**
ZALV	**Zalesovo Beam**	**63.34**	**333**	P	**P**	**12 24 51.3**	**+1.0**
EKS2	**Erkin-Say**	**63.37**	**318**	P	**P**	**12 24 53.8**	**+2.9**
	SNR=12						
SEM	**Semipalatinsk**	**63.40**	**328**	*e*P	**P**	**12 24 50.4**	**-0.7**
	baz=328						
SEM	**Semipalatinsk**	**63.40**	**328**	*e*P	**P**	**12 24 50.4**	**-0.7**
BTLS	**Baital**	**64.25**	**321**	*e*P	**P**	**12 24 56.1**	**-0.5**
	baz=321						
BTLS	**Baital**	**64.25**	**321**	*e*P	**P**	**12 24 56.0**	**-0.5**
GAR	**Garm**	**64.33**	**313**	P	**P**	**12 24 57.4**	**+0.1**
BTK	**Batken**	**64.36**	**315**	P	**P**	**12 24 57.9**	**+0.5**
BTK				pmax	pmax		
	comp=Z,54nm,1.5s						
BTK	**Batken**	**64.36**	**315**	P	**P**	**12 24 57.9**	**+0.5**
KURBB	**Kurchatov Arra**	**64.43**	**328**	P	**P**	**12 24 56.5**	**-1.0**
	comp=Z,16nm,0.9s,baz=128,slow=5.9,SNR=48						
KURK	**Kurchatov**	**64.43**	**328**	P	**P**	**12 24 56.7**	**-0.9**
KURK				pmax	pmax		
	comp=Z,56nm,1.2s						
KURK	**Kurchatov**	**64.43**	**328**	P	**P**	**12 24 56.7**	**-0.9**
CHGR	**Chuyangaron**	**65.05**	**313**	P	**P**	**12 25 02.6**	**+0.6**
DZA	**Taraz**	**65.10**	**318**	*e*P	**P**	**12 25 01.9**	**-0.3**
	baz=318						
DZA	**Taraz**	**65.10**	**318**	*e*P	**P**	**12 25 01.9**	**-0.3**
IUG	**Iuzhnay**	**65.69**	**317**	*e*P	**P**	**12 25 05.1**	**-1.0**
	baz=316						
IUG	**Iuzhnay**	**65.69**	**317**	*e*P	**P**	**12 25 05.1**	**-1.0**
KKAR	**Karatay Array**	**65.74**	**318**	P	**P**	**12 25 05.2**	**-1.1**
KKAR	**Karatay Array**	**65.74**	**318**	P	**P**	**12 25 05.2**	**-1.1**
BRLS	**Borolday**	**66.17**	**317**	*e*P	**P**	**12 25 08.3**	**-0.7**
	baz=317						
BRLS	**Borolday**	**66.17**	**317**	*e*P	**P**	**12 25 08.3**	**-0.7**
BRZS	**Berezniki**	**67.34**	**325**	*e*P	**P**	**12 25 15.5**	**-0.9**
	comp=Z,14nm,1.6s,baz=325						
BRZS	**Berezniki**	**67.34**	**325**	*e*P	**P**	**12 25 15.5**	**-0.9**

BRZS				pmax	pmax		
	comp=Z,14nm,1.6s						
HRA	**Herat**	**69.15**	**307**	P	**P**	**12 25 28.7**	**+0.4**
HRA				IAmb	IAmb	12 25 41.5	
	comp=Z,19nm,1.4s						
BVAR	**Borovoye Array**	**70.00**	**327**	P	**P**	**12 25 31.9**	**-1.0**
	comp=Z,4.3nm,0.8s,baz=173,slow=13,SNR=10						
BRVK	**Borovoye**	**70.08**	**327**	⇑*e*P	**P**	**12 25 32.9**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,14nm,1.3s						
BRVK	**Borovoye**	**70.08**	**327**	P	**P**	**12 25 33.0**	**-0.4**
BRVK				IAmb	IAmb	12 28 04.2	
	comp=Z,8.7nm,0.7s						
WSAR	**Wadi Sarin**	**70.22**	**294**	P	**P**	**12 25 34.4**	**-0.5**
	comp=Z,4.2nm,0.9s,baz=104,slow=12,SNR=4.3						
TIXI	**Tiksi**	**70.53**	**0**	⇓*e*P	**P**	**12 25 34.5**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.5s						
TIXI	**Tiksi**	**70.53**	**0**	P	**P**	**12 25 35.8**	**+0.1**
GEYT	**Alibeck**	**73.19**	**309**	P	**P**	**12 25 53.5**	**+0.9**
	comp=Z,5.3nm,0.7s,baz=92,slow=7.4,SNR=5.8						
GEYT	**Alibeck**	**73.19**	**309**	P	**P**	**12 25 52.6**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**73.19**	**309**	P	**P**	**12 25 52.0**	**-0.6**
GYA0B				IAmb	IAmb	12 25 57.1	
	comp=Z,9.6nm,0.8s						
NRIK	**Noril'sk**	**73.23**	**346**	P	**P**	**12 25 52.0**	**-0.1**
	comp=Z,3.9nm,0.7s,baz=132,slow=6.5,SNR=4.0						
NRIK	**Noril'sk**	**73.23**	**346**	⇓*e*P	**P**	**12 25 52.7**	**+0.7**
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
NRIK	**Noril'sk**	**73.23**	**346**	P	**P**	**12 25 53.1**	**+1.0**
NRIK				IAmb	IAmb	12 25 54.9	
	comp=Z,14nm,1.4s						
SOCY	**Socotra**	**73.67**	**282**	P	**P**	**12 25 55.2**	**-0.7**
AKTO	**Aktyubinsk**	**76.25**	**322**	P	**P**	**12 26 09.2**	**-0.8**
	comp=Z,2.3nm,0.6s,baz=86,slow=7.1,SNR=4.2						
ARU	**Arti**	**77.63**	**328**	P	**P**	**12 26 16.8**	**-0.8**
	comp=Z,1.9nm,0.2s,baz=82,slow=7.1,SNR=1.2						
ARU	**Arti**	**77.63**	**328**	*c i*P	**P**	**12 26 16.8**	**-0.8**
ARU				S	**S**	**12 36 07.0**	**-2.3**
ARU				SS	**SS**	**12 41 05.3**	**-3.5**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.8s						
ARU	**Arti**	**77.63**	**328**	IAmb	IAmb	12 26 26.1	
	comp=Z,17nm,1.3s						
RAYN	**Ar Rayn**	**82.26**	**293**	P	**P**	**12 26 42.9**	**-0.5**
RAYN				pmax	pmax		
	comp=Z,15nm,1.2s						
RAYN	**Ar Rayn**	**82.26**	**293**	P	**P**	**12 26 42.9**	**-0.5**
RAYN				IAmb	IAmb	12 26 49.1	
	comp=Z,15nm,1.2s						
BELG	**Belogornoye**	**83.02**	**323**	⇓*e*P	**P**	**12 26 44.6**	**-2.0**
BELG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PPT	**Papeete**	**83.55**	**108**	LR	LR	13 00 03.2	
	comp=Z,145nm,21.2s,baz=254,slow=33						
KIV	**Kislovodsk**	**85.56**	**314**	*e*P	**P**	**12 26 57.1**	**-2.8**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,187nm,20.0s						
ILAR	**Eielson Array**	**87.21**	**25**	P	**P**	**12 27 05.8**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=186,slow=4.4,SNR=4.9						
KLMR	**Klimovskoe**	**88.13**	**331**	*e*P	**P**	**12 27 09.6**	**-2.3**
KLMR				pmax	pmax		
	comp=Z,14nm,1.3s						
KLMR	**Klimovskoe**	**88.13**	**331**	*e*P	**P**	**12 27 09.7**	**-2.2**
KLMR				AMP		12 27 27.7	
	comp=Z,14nm,1.3s						
OBN	**Obninsk**	**89.71**	**325**	⇓*e*P	**P**	**12 27 16.9**	**-2.6**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
APA	**Apatity**	**90.64**	**337**	⇓*i*P	P	12 27 30.1	+6.5
APA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,1μm,20.0s						
VSU	**Vasula**	**94.77**	**329**	⇓*e*P	**P**	**12 27 41.5**	**-1.3**
VSU				pmax	pmax		
	comp=Z,293nm,3.8s						

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*IDC **01** 12:18:38.6±0.9, 34.°88N×24.°93E, h0km, mb3.9/10, mb1 3.9/13, mb1mx3.7/61, mbtmp3.8/13, ML3.3/3, Error ellipse: s-maj=19.4km s-min=8.4km az=83.0*

*ISK **01** 12:18:41.4, 35.°08N×24.°81E, h9km, ML3.2/6*

*THE **01** 12:18:41.1, 35.°02N×24.°84E, h12km, ML3.4/9, Error ellipse: s-maj=0.9km s-min=0.4km az=349.0*

*ATH **01** 12:18:41.0, 34.°99N×24.°85E, h12km±2km, ML3.5/5, Error ellipse: s-maj=2.8km s-min=1.3km az=152.0*

*NEIC **01** 12:18:42.0±1.4, 35.°08N±0.°05×25.°01E±0.°07, h10km±1km, mb4.0/3, ML3.4(THE), ML3.5(ATH), Error ellipse: s-maj=11.8km s-min=5.0km az=55.0*

ISC 01 12:18:41.3±0.7**, 35.°01N**±0.°03×**24.°84E**±0.°02**, h12**km±4km**, n62, σ0.s87**/79**, mb4.0**/11**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.03**	**300**	P	**Pg**	**12 18 43.2**	**-0.3**
SIVA				S	**Sg**	**12 18 44.7**	**-0.3**
	241μm,0.5s						
SIVA	**Sivas**	**0.03**	**300**	P	**Pg**	**12 18 43.3**	**-0.2**
SIVA				S	**Sg**	**12 18 44.9**	**-0.1**
SIVA				AML	AML	12 18 45.4	
SIVA				AML	AML	12 18 45.7	
TMBK	**Timbaki Herakl**	**0.09**	**319**	P	**Pg**	**12 18 44.3**	**+0.3**
TMBK				S	**Sg**	**12 18 46.0**	**0.0**
	78μm,0.3s						
IDI	**Anoyia**	**0.29**	**9**	Pg	**Pg**	**12 18 46.9**	**-0.3**
	374nm,0.3s,baz=184,slow=16,SNR=2148						
IDI				Lg	Lg	12 18 52.2	
	2μm,0.3s,baz=267,slow=11,SNR=84						
IDI	**Anoyia**	**0.29**	**9**	P	**Pg**	**12 18 46.9**	**-0.3**
IDI				S	**Sg**	**12 18 51.5**	**+0.3**
	9μm,0.2s						
IDI	**Anoyia**	**0.29**	**9**	P	**Pg**	**12 18 46.9**	**-0.3**
IDI				S	**Sg**	**12 18 51.8**	**+0.6**
IDI				AML	AML	12 18 53.0	
	comp=N,20164μm,0.3s						
IDI				AML	AML	12 18 53.0	
	comp=E,14526μm,0.2s						
KSTL	**Kastelli Herak**	**0.35**	**33**	P	**Pb**	**12 18 49.8**	**+0.3**
KSTL				S	**Sb**	**12 18 57.0**	**+2.0**
	comp=E,3μm,0.4s						
IACM	**Heraklion**	**0.36**	**32**	P	**Pg**	**12 18 48.1**	**-0.3**
IACM				S	**Sg**	**12 18 53.6**	**+0.4**
	comp=E,20μm,0.4s						
IACM	**Heraklion**	**0.36**	**32**	P	**Pg**	**12 18 48.2**	**-0.3**
HRKL	**Herakleio**	**0.38**	**35**	P	**Pg**	**12 18 48.5**	**-0.3**
HRKL	**Herakleio**	**0.38**	**35**	PG	**Pg**	**12 18 48.7**	**-0.1**
HRKL				SG	**Sg**	**12 18 53.8**	**0.0**
PRNS	**Prines Rethymn**	**0.45**	**323**	P	**Pg**	**12 18 50.3**	**+0.1**
GVD	**Gavdhos**	**0.64**	**255**	P	**Pg**	**12 18 53.9**	**+0.2**
GVD				S	**Sg**	**12 19 02.8**	**+0.7**
	comp=E,9μm,0.3s						
GVD	**Gavdhos**	**0.64**	**255**	P	**Pg**	**12 18 53.8**	**+0.2**
GVD				S	**Sg**	**12 19 02.0**	**-0.1**
GVD				AML	AML	12 19 07.5	
	comp=E,19616μm,0.3s						
GVD				AML	AML	12 19 07.9	
	comp=N,17446μm,0.3s						
GVD	**Gavdhos**	**0.64**	**255**	PG	**Pb**	**12 18 54.2**	**-0.1**
GVD				SG	**Sb**	**12 19 03.4**	**+0.2**
VAM	**Vamos**	**0.66**	**308**	P	**Pg**	**12 18 53.2**	**-0.9**
VAM				S	**Sg**	**12 19 02.9**	**+0.1**
	comp=N,4μm,0.3s						
VAM	**Vamos**	**0.66**	**308**	P	**Pg**	**12 18 53.4**	**-0.7**
NPS	**Neapolis**	**0.69**	**68**	P	**Pg**	**12 18 53.8**	**-0.8**
NPS				S	**Sb**	**12 19 04.2**	**-0.4**
	comp=N,2μm,0.5s						
NPS	**Neapolis**	**0.69**	**68**	P	**Pg**	**12 18 53.8**	**-0.8**
NPS				S	**Sg**	**12 19 03.0**	**-0.6**
NPS				AML	AML	12 19 04.2	
	comp=N,3616μm,0.4s						
NPS				AML	AML	12 19 05.7	
	comp=E,5218μm,0.6s						
IMMV	**Iera Moni Meta**	**0.84**	**303**	P	**Pg**	**12 18 56.4**	**-1.0**
IMMV				S	**Sb**	**12 19 09.3**	**+0.4**
	comp=E,3μm,0.5s						
IMMV	**Iera Moni Meta**	**0.84**	**303**	P	**Pg**	**12 18 56.4**	**-1.0**
IMMV				AML	AML	12 19 11.5	
	comp=N,5342μm,0.4s						
IMMV				AML	AML	12 19 16.0	
	comp=E,4056μm,0.7s						
IMMV	**Iera Moni Meta**	**0.84**	**303**	PG	**Pg**	**12 18 56.6**	**-0.8**
IMMV				SG	**Sg**	**12 19 08.0**	**-0.4**
KNDR	**Palaiochora Ch**	**0.97**	**284**	PG	**Pb**	**12 18 59.6**	**-0.4**
KNDR				SG	**Sn**	**12 19 14.6**	**+0.2**
RODP	**Rodopos**	**1.04**	**302**	P	**Pb**	**12 19 00.0**	**-1.2**
RODP	**Rodopos**	**1.04**	**302**	PG	**Pb**	**12 19 00.9**	**-0.3**
STIA	**Sitia Lasithi**	**1.05**	**79**	P	**Pb**	**12 19 00.9**	**-0.4**
ZKR	**Zakros**	**1.14**	**84**	P	**Pb**	**12 19 01.9**	**-0.9**
ZKR	**Zakros**	**1.14**	**84**	PN	**Pg**	**12 19 03.9**	**+0.8**
SANT	**Santorini**	**1.45**	**20**	PN	**Pn**	**12 19 07.6**	**+0.2**
SANT	**Santorini**	**1.45**	**20**		**Pn**	**12 19 06.8**	**-0.6**
ANKY	**Antikythira Is**	**1.52**	**305**	P	**Pb**	**12 19 09.3**	**-0.1**
APE	**Apeiranthos**	**2.13**	**15**	PN	**Pn**	**12 19 17.4**	**+0.7**
KOSK	**Kos Island**	**2.46**	**44**	PN	**Pn**	**12 19 22.8**	**+1.6**
DAT	**Datca**	**2.81**	**51**	PN	**Pn**	**12 19 27.4**	**+1.3**
BODT	**Bodrum**	**2.87**	**44**	PN	**Pn**	**12 19 27.8**	**+1.0**
ARG	**Arkhangelos**	**2.94**	**65**	PN	**Pn**	**12 19 29.2**	**+1.5**
ITM	**Ithomi**	**3.21**	**313**	Pn	**Pn**	**12 19 34.6**	**+3.2**
AGG	**Agios Georgios**	**4.48**	**334**	Pn	**Pn**	**12 19 48.4**	**-0.6**
TIP	**Timpagrande**	**7.68**	**305**	Pn	**Pn**	**12 20 34.3**	**+1.4**
BRTR	**Keskin Array B**	**8.44**	**53**	Pn	**Pn**	**12 20 42.8**	**-0.7**
	comp=E,0.1nm,0.3s,baz=315,slow=19,SNR=1.6						
MMAI	**Mount Meron Ar**	**8.99**	**100**	Pn	**Pn**	**12 20 49.7**	**-1.3**
	comp=E,1.4nm,0.3s,baz=295,slow=14,SNR=1.6						
SGRT	**San Giovanni R**	**9.81**	**316**	Pn	**Pn**	**12 21 04.0**	**+1.8**
EIL	**Elat**	**10.07**	**119**	Pn	**Pn**	**12 21 04.8**	**-0.9**
	comp=E,0.2nm,0.3s,baz=19,slow=23,SNR=1.2						
EIL				Sn	Sn	12 22 43.7	-15
	comp=E,0.1nm,0.3s,baz=116,slow=16,SNR=1.5						
AKASG	**Malin Array Be**	**16.01**	**10**	Pn	**P**	**12 22 28.8**	**-0.8**
	comp=E,0.8nm,0.3s,baz=201,slow=11,SNR=4.4						
AKASG	**Malin Array Be**	**16.01**	**10**	P	**P**	**12 22 29.9**	**+0.4**
AKBB	**Malin Array Si**	**16.01**	**10**	P	**P**	**12 22 28.7**	**-0.8**
AKBB				IAmb	IAmb	12 22 33.5	
	comp=Z,2.4nm,0.7s						
GERES	**GERESS Array B**	**16.10**	**333**	Pn	**P**	**12 22 31.3**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=150,slow=8.0,SNR=2.2						
KBZ	**Khabaz**	**16.43**	**53**	Pn	**P**	**12 22 36.0**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=247,slow=12,SNR=4.4						
ESDC	**Sonseca Array**	**23.32**	**290**	P	**P**	**12 23 50.1**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=86,slow=39,SNR=3.1						
HFS	**Hagfors**	**26.17**	**347**	P	**P**	**12 24 14.0**	**-1.2**
	comp=Z,4.5nm,1.0s,baz=165,slow=6.0,SNR=1.7						
FINES	**FINESS Array B**	**26.47**	**1**	P	**P**	**12 24 16.4**	**-1.5**
	comp=Z,2.6nm,0.8s,baz=232,slow=9.4,SNR=3.6						
TORD	**Torodi Ar. Bea**	**30.19**	**230**	P	**P**	**12 24 51.4**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=33,slow=8.9,SNR=3.7						
ARCES	**ARCESS Array B**	**34.59**	**0**	P	**P**	**12 25 27.9**	**-1.7**
	comp=Z,1.7nm,0.9s,baz=174,slow=9.8,SNR=1.4						
MK31	**Makanchi Array**	**44.08**	**56**	P	**P**	**12 26 49.4**	**+0.3**
MK31				IAmb	IAmb	12 26 49.4	
	comp=Z,4.3nm,1.2s						
MKAR	**Makanchi Array**	**44.08**	**56**	P	**P**	**12 26 48.7**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=271,slow=8.7,SNR=4.3						
ZALV	**Zalesovo Beam**	**45.30**	**46**	P	**P**	**12 26 58.2**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=272,slow=7.9,SNR=4.6						
SONM	**Songino Array**	**59.79**	**50**	P	**P**	**12 28 45.9**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=300,slow=5.8,SNR=3.9						
SONM	**Songino Array**	**59.79**	**50**	P	**P**	**12 28 45.8**	**-0.5**
SONM				IAmb	IAmb	12 28 56.5	
	comp=Z,2.2nm,1.2s						
SCHQ	**Schefferville**	**63.13**	**320**	P	**P**	**12 29 09.0**	**+0.4**
	comp=Z,3.0nm,0.8s,baz=13,slow=4.2,SNR=5.3						
YKA	**Yellowknife Ar**	**77.51**	**342**	P	**P**	**12 30 36.2**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=43,slow=6.0,SNR=7.6						
DAWY	**Dawson**	**80.47**	**353**	P	**P**	**12 30 53.3**	**+0.6**
BCAR	**Beaver Creek A**	**81.68**	**354**	P	**P**	**12 30 59.9**	**+0.8**

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*NOU **01** 12:18:53.5, 41.°02S×175.°54E, h48km, MLv3.3/8, North Island, New Zealand*

*WEL **01** 12:18:54.0, 41˚S±2˚×17˚5E±˚, h25km±4km, M3.0/23, ML3.3/23, MLv3.0/23, Error ellipse: s-maj=0.0km s-min=0.0km az=101.9*

ISC 01 12:18:54.1±1.1**, 40.°85S**±0.°02×**175.°32E**±0.°02**, h33**km±2km**, n90, σ1.s05**/106**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOWZ	**Holdsworth Sta**	**0.16**	**107**	P	**Pb**	**12 18 59.9**	**-0.5**
HOWZ				S	**Sb**	**12 19 04.3**	**-0.4**
MRZ	**Mangatainoka R**	**0.28**	**46**	P	**Pb**	**12 19 00.9**	**-0.7**
MRZ				S	**Sb**	**12 19 06.0**	**-0.7**
KIW	**Kapiti Island**	**0.31**	**268**	P	**Pn**	**12 19 01.9**	**-0.4**
KIW				S	**Sn**	**12 19 07.2**	**0.0**
CAW	**Cannon Point**	**0.32**	**217**	P	**Pb**	**12 19 02.1**	**-0.1**
CAW				S	**Sn**	**12 19 07.8**	**+0.3**
MTW	**Mount Morrison**	**0.34**	**155**	P	**Pb**	**12 19 02.5**	**+0.1**
MTW				S	**Sn**	**12 19 08.9**	**+0.9**
TIWZ	**Tintock**	**0.44**	**80**	P	**Pb**	**12 19 03.7**	**-0.1**
TIWZ				S	**Sb**	**12 19 10.9**	**+0.4**
TMWZ	**Te Maipa**	**0.50**	**120**	P	**Pb**	**12 19 05.1**	**+0.3**
TMWZ				S	**Sn**	**12 19 13.8**	**+1.3**
PAWZ	**Paruwai Farm**	**0.54**	**171**	P	**Pb**	**12 19 05.6**	**+0.2**
PAWZ				S	**Sn**	**12 19 14.1**	**+0.8**
MSWZ	**Moikau Station**	**0.56**	**185**	P	**Pb**	**12 19 06.0**	**+0.2**
MSWZ				S	**Sn**	**12 19 15.1**	**+1.0**
POWZ	**Post Office Ro**	**0.57**	**37**	P	**Pb**	**12 19 05.5**	**-0.4**
PRWZ	**Pori Road**	**0.58**	**59**	P	**Pb**	**12 19 06.0**	**0.0**
WEL	**Wellington**	**0.60**	**224**	P	**Pn**	**12 19 06.4**	**+0.2**
TRWZ	**Traveller**	**0.61**	**153**	P	**Pb**	**12 19 06.6**	**0.0**
TRWZ				S	**Sn**	**12 19 16.7**	**+1.5**
OHWZ	**Ohakea**	**0.65**	**360**	P	**Pn**	**12 19 07.2**	**+0.3**
OHWZ				S	**Sn**	**12 19 16.7**	**+0.8**
BHW	**Baring Head**	**0.65**	**211**	P	**Pb**	**12 19 07.0**	**-0.1**
BHW				S	**Sn**	**12 19 16.8**	**+0.8**
SNZO	**South Karori**	**0.65**	**225**	P	**Pn**	**12 19 07.3**	**+0.4**
CPWZ	**Castlepoint**	**0.67**	**95**	P	**Pn**	**12 19 07.9**	**+0.7**
CPWZ				S	**Sn**	**12 19 18.4**	**+1.8**
PLWZ	**Palliser**	**0.72**	**184**	P	**Pb**	**12 19 08.2**	**-0.1**
PLWZ				S	**Sn**	**12 19 18.8**	**+0.9**
BFZ	**Birch Farm**	**0.73**	**77**	P	**Pb**	**12 19 08.0**	**-0.4**
BFZ	**Birch Farm**	**0.73**	**77**	P	**Pb**	**12 19 08.0**	**-0.4**
DVHZ	**Dannevirke**	**0.85**	**50**	P	**Pb**	**12 19 09.7**	**-0.8**
TCW	**Tory Channel**	**0.86**	**245**	P	**Pn**	**12 19 10.6**	**+0.7**
TCW				S	**Sn**	**12 19 21.9**	**+0.5**
TSZ	**Takapari Road**	**0.93**	**32**	P	**Pn**	**12 19 11.1**	**+0.2**
ANWZ	**Angora Road**	**0.96**	**66**	P	**Pn**	**12 19 11.0**	**-0.3**
DUWZ	**D'Urville Isla**	**1.06**	**272**	P	**Pb**	**12 19 13.8**	**-0.2**
DUWZ				S	**Sn**	**12 19 28.3**	**+2.0**
WAZ	**Wanganui**	**1.13**	**347**	P	**Pb**	**12 19 15.2**	**+0.2**
PNHZ	**Pukenui**	**1.16**	**36**	P	**Pn**	**12 19 14.1**	**+0.1**
PRHZ	**Porangahau**	**1.16**	**60**	P	**Pn**	**12 19 13.6**	**-0.5**
WPHZ	**Waipukurau**	**1.16**	**48**	P	**Pn**	**12 19 14.0**	**-0.1**
TUWZ	**Tuamarina**	**1.19**	**241**	P	**Pn**	**12 19 14.7**	**+0.3**
CMWZ	**Cape Campbell**	**1.22**	**223**	P	**Pb**	**12 19 16.0**	**-0.7**
BSWZ	**Blackbirch Sta**	**1.39**	**231**	P	**Pn**	**12 19 17.5**	**+0.3**
PXZ	**Pawanui**	**1.44**	**56**	P	**Pn**	**12 19 17.5**	**-0.3**
KRHZ	**Kereru**	**1.45**	**34**	P	**Pn**	**12 19 18.0**	**-0.1**
MTVZ	**Mangateitei**	**1.47**	**5**	P	**Pb**	**12 19 20.1**	**-0.9**
BHHZ	**Black Hill Sta**	**1.48**	**23**	P	**Pn**	**12 19 18.9**	**+0.5**
MOVZ	**Moawhango**	**1.48**	**13**	P	**Pn**	**12 19 19.3**	**+0.7**
NNZ	**Nelson**	**1.51**	**255**	P	**Pn**	**12 19 19.8**	**+1.0**
WNVZ	**Wahianoa**	**1.54**	**8**	P	**Pn**	**12 19 20.7**	**+1.3**
LREZ	**Lake Rotokare**	**1.56**	**333**	P	**Pb**	**12 19 21.7**	**-0.7**
PKVZ	**Pokaka**	**1.56**	**1**	P	**Pb**	**12 19 21.4**	**-1.1**
TRVZ	**Turoa**	**1.56**	**7**	P	**Pb**	**12 19 21.2**	**-1.4**
WHVZ	**Whangaehu Hut**	**1.58**	**8**	P	**Pn**	**12 19 21.5**	**+1.5**
DRZ	**Dome Shelter**	**1.59**	**7**	P	**Pb**	**12 19 22.7**	**-0.3**
KAHZ	**Kahuranaki**	**1.59**	**49**	P	**Pn**	**12 19 19.5**	**-0.5**
TUVZ	**Tukino**	**1.60**	**9**	P	**Pn**	**12 19 21.8**	**+1.5**
FWVZ	**Far West T-bar**	**1.61**	**7**	P	**Pb**	**12 19 21.9**	**-1.4**
KWHZ	**Kaweka Forest**	**1.66**	**31**	P	**Pn**	**12 19 20.7**	**-0.2**
SNVZ	**South Ngauruho**	**1.68**	**9**	P	**Pn**	**12 19 22.7**	**+1.4**
NGZ	**Ngauruhoe**	**1.69**	**8**	P	**Pn**	**12 19 23.0**	**+1.6**
OTVZ	**Oturere**	**1.71**	**9**	P	**Pn**	**12 19 23.0**	**+1.3**
NNVZ	**North Ngauruho**	**1.73**	**8**	P	**Pn**	**12 19 23.5**	**+1.5**
ETVZ	**East Tongariro**	**1.74**	**10**	P	**Pn**	**12 19 23.5**	**+1.3**
WTVZ	**West Tongariro**	**1.75**	**7**	P	**Pn**	**12 19 23.8**	**+1.6**
PREZ	**Palmer Road**	**1.75**	**329**	P	**Pb**	**12 19 24.8**	**-0.8**
MCHZ	**McNeill Hill**	**1.76**	**37**	P	**Pn**	**12 19 22.0**	**-0.2**
TMVZ	**Te Maari**	**1.76**	**10**	P	**Pn**	**12 19 23.5**	**+1.1**
KRVZ	**Karewarewa**	**1.77**	**8**	P	**Pb**	**12 19 24.9**	**-1.2**
NTVZ	**North Tongarir**	**1.77**	**9**	P	**Pn**	**12 19 23.7**	**+1.2**
VRZ	**Vera Road**	**1.78**	**346**	P	**Pb**	**12 19 24.7**	**-1.4**
TWVZ	**Taurewa**	**1.78**	**3**	P	**Pn**	**12 19 24.0**	**+1.3**
NMEZ	**Namu Road**	**1.81**	**322**	P	**Pb**	**12 19 25.5**	**-1.2**
NEZ	**North Egmont**	**1.84**	**329**	P	**Pb**	**12 19 25.8**	**-1.3**
KHEZ	**Kahui Hut**	**1.85**	**327**	P	**Pb**	**12 19 26.3**	**-1.0**
DREZ	**Durham Road**	**1.87**	**332**	P	**Pb**	**12 19 26.4**	**-1.2**
KATZ	**Kakaramea**	**1.90**	**9**	P	**Pb**	**12 19 26.5**	**-1.7**
BKZ	**Black Stump Fm**	**1.91**	**29**	P	**Pn**	**12 19 23.9**	**-0.4**
BKZ	**Black Stump Fm**	**1.91**	**29**	P	**Pn**	**12 19 24.0**	**-0.4**
MHEZ	**Mangahewa**	**1.93**	**336**	P	**Pb**	**12 19 27.6**	**-1.1**
NBEZ	**Newall Road No**	**1.94**	**324**	P	**Pb**	**12 19 27.9**	**-0.8**
PKE	**Pukeiti**	**1.95**	**328**	P	**Pb**	**12 19 27.9**	**-1.0**
RATZ	**Rangitukua**	**2.01**	**10**	P	**Pb**	**12 19 29.1**	**-1.0**
THZ	**Tophouse**	**2.03**	**243**	P	**Pn**	**12 19 26.0**	**-0.1**
KHZ	**Kahutara**	**2.05**	**220**	P	**Pn**	**12 19 25.7**	**-0.6**
KHZ	**Kahutara**	**2.05**	**220**	P	**Pn**	**12 19 25.7**	**-0.6**
QRZ	**Quartz Range**	**2.12**	**270**	P	**Pn**	**12 19 28.9**	**+1.7**
QRZ	**Quartz Range**	**2.12**	**270**	P	**Pn**	**12 19 29.4**	**+2.3**
MRHZ	**Matea Rd**	**2.19**	**23**	P	**Pn**	**12 19 29.3**	**+1.2**
MTHZ	**Maungataniwha**	**2.32**	**31**	P	**Pn**	**12 19 29.4**	**-0.5**
HIZ	**Hauiti**	**2.36**	**351**	P	**Pn**	**12 19 32.7**	**+2.1**
HIZ	**Hauiti**	**2.36**	**351**	P	**Pn**	**12 19 32.6**	**+2.1**
TLZ	**Tolley Road**	**2.53**	**4**	P	**Pn**	**12 19 35.8**	**+2.9**
RTZ	**Ruatahuna**	**2.58**	**30**	P	**Pn**	**12 19 32.5**	**-1.1**
LTZ	**Lake Taylor**	**2.98**	**229**	P	**Pn**	**12 19 38.2**	**-0.9**
TOZ	**Tahuroa Road**	**3.12**	**3**	P	**Pb**	**12 19 46.6**	**-2.3**
OKCZ	**Okains Bay**	**3.32**	**210**	P	**Pn**	**12 19 42.1**	**-1.7**
RPZ	**Rata Peaks**	**4.26**	**226**	P	**Pn**	**12 19 56.1**	**-0.6**
TMZ	**Timaru**	**4.75**	**221**	P	**Pn**	**12 20 02.4**	**-1.0**
ODZ	**Otahua Downs**	**5.41**	**218**	P	**Pn**	**12 20 11.1**	**-1.3**
ODZ	**Otahua Downs**	**5.41**	**218**	P	**Pn**	**12 20 11.2**	**-1.3**

PRU 01 12:22:48.9±0.0**, 50.°12N×19.°05E, h0**km**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.49**	**78**	*e*Pg	Pg	12 22 57.4	-0.9
OJC				*e*Sg	Sg	12 23 04.2	-0.5
OKC	**Ostrava-Krasne**	**0.65**	**244**	*e*SG	Sg	12 23 09.7	0.0
	comp=Z,19nm,0.5s						
LANS	**Liptovska Anna**	**1.01**	**164**	*e*PG	Pg	12 23 07.6	-0.6
LANS				*e*SG	Sg	12 23 21.0	-0.2
LANS				*e*LG	Lg	12 23 21.5	
MORC	**Moravsky Berou**	**1.03**	**251**	*e*PG	Pg	12 23 08.8	+0.1
MORC				*e*SG	Sg	12 23 22.8	+0.8
KRLC	**Kraliky**	**1.46**	**269**	*e*SG	Sg	12 23 35.2	-0.6
	comp=Z,15nm,0.3s						
VYHS	**Vyhne**	**1.63**	**185**	*e*PN	Pn	12 23 17.8	-1.1
VYHS				*e*SN	Sn	12 23 38.5	-2.1
VYHS				*e*LG	Lg	12 23 41.2	
DPC	**Dobruska-Polom**	**1.77**	**279**	*e*PG	Pn	12 23 21.3	+0.5
DPC				*e*SG	Sg	12 23 45.6	0.0
	comp=Z,11nm,0.6s						
VRAC	**Vranov**	**1.79**	**244**	*e*PN	Pb	12 23 22.3	-0.3
VRAC				*e*SG	Sn	12 23 44.6	+0.1
OSTC	**Ostas**	**1.87**	**285**	*e*SG	Sg	12 23 49.5	+0.6
UPC	**Upice**	**1.99**	**282**	*e*SG	Sg	12 23 53.1	+0.4
KHC	**Kasperske Hory**	**3.69**	**257**	*e*SG	Sg	12 24 45.6	-1.9

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*IDC **01** 12:25:00.8±0.5, 15.°20S×173.°48W, h0km, mb4.5/13, mb1 4.8/14, mb1mx4.5/36, mbtmp4.5/14, ML4.8/1, MS3.8/11, Ms1 3.9/11, ms1mx3.6/37, Error ellipse: s-maj=27.2km s-min=14.6km az=132.0*

*NEIC **01** 12:25:06.9±2.4, 15.°23S±0.°07×173.°39W±0.°07, h35km±1km, mb4.8/66, Error ellipse: s-maj=11.7km s-min=10.7km az=149.0*

*NOU **01** 12:25:10.4, 14.°53S×172.°72W, h157km, mb4.8/26, Samoa Islands*

ISC 01 12:25:04.9±0.3**, 15.°17S**±0.°06×**173.°37W**±0.°07**, h30**km**, n236, σ1.s23**/206**, mb4.8**/47**, MS3.9**/11**, 12C-8D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.99**	**51**	Pn	**Pn**	**12 25 35.7**	**-0.9**
	313nm,0.3s,baz=196,slow=3.1,SNR=197						
AFI				Sn	**Sn**	**12 25 54.7**	**-5.9**
	3μm,0.3s,baz=322,slow=23,SNR=29						
NIUE	**Niue**	**5.09**	**140**	P	**Pn**	**12 26 18.2**	**-1.0**
	baz=4.6,SNR=18						
NIUE	**Niue**	**5.09**	**140**	Pn	**Pn**	**12 26 18.1**	**-1.0**
MSVF	**Nonsavu**	**8.62**	**252**	LR	LR	12 30 11.4	
	comp=Z,2μm,20.4s,baz=71,slow=36						
MSVF	**Nonsavu**	**8.62**	**252**		**Pn**	**12 27 06.8**	**-0.9**
FUNA	**Funafuti**	**9.82**	**311**	Pn	**Pn**	**12 27 23.5**	**-0.7**
KNTN	**Kanton**	**12.43**	**8**	Pn	**Pn**	**12 27 60.0**	**+0.1**
RAR	**Rarotonga**	**14.24**	**117**	LR	LR	12 33 05.2	
	comp=Z,74nm,18.1s,baz=250,slow=34						
MARNC	**Mare, Loyalty**	**18.73**	**248**	P	**P**	**12 29 18.9**	**-2.5**
MARNC	**Mare, Loyalty**	**18.73**	**248**	P	**Pn**	**12 29 26.2**	**+4.3**
	3.3nm,0.9s						
OUENC	**Ouen Island, N**	**20.06**	**246**	P	**P**	**12 29 35.1**	**-0.8**
OUENC	**Ouen Island, N**	**20.06**	**246**	P	Pn	12 29 41.1	+3.3
DZM	**Mont Dzumac**	**20.31**	**247**	*e*P	Pn	12 29 42.8	+1.9
	137nm,1.4s						
DZM				*e*LR	LR	12 34 26.9	
	comp=Z,1μm,27.4s						
DZM	**Mont Dzumac**	**20.31**	**247**	LR	LR	12 37 08.9	
	comp=Z,306nm,18.1s,baz=34,slow=36						
DZM	**Mont Dzumac**	**20.31**	**247**	P	**P**	**12 29 37.5**	**-1.2**
DZM				IAmb	IAmb	12 29 46.5	
	comp=Z,53nm,1.1s						
DZM	**Mont Dzumac**	**20.31**	**247**	P	Pn	12 29 43.5	+2.6
PAE	**Paea**	**22.95**	**99**	*e*T	T	12 53 31.5	
	comp=Z,1.6nm,0.2s						
PPT	**Papeete**	**22.95**	**99**	LR	LR	12 36 34.1	
	comp=Z,70nm,19.7s,baz=244,slow=30						
PPT2	**Papeete2**	**22.95**	**99**	*e*LR	LR	12 35 28.6	
	comp=Z,443nm,27.0s						
PPT2	**Papeete2**	**22.95**	**99**	*e*T	T	12 53 28.8	
	comp=Z,3.2nm,0.3s						
OUZ	**Omahuta**	**23.14**	**208**	P	**P**	**12 30 10.1**	**+1.4**
KUZ	**Kuaotunu**	**23.58**	**202**	P	P	12 30 04.9	-8.1
HAZ	**Te Kaha**	**23.82**	**198**	P	**P**	**12 30 16.8**	**+1.5**
WIAZ	**Waiheke Island**	**23.84**	**203**	P	**P**	**12 30 16.5**	**+0.9**
PUZ	**Puketiti**	**23.98**	**196**	P	**P**	**12 30 19.4**	**+2.5**
RUGZ	**Raukumara Rang**	**24.05**	**198**	P	**P**	**12 30 18.9**	**+1.3**
MWZ	**Matawai**	**24.43**	**198**	P	**P**	**12 30 23.0**	**+2.0**
KMRZ	**Kaimai**	**24.49**	**201**	P	P	12 30 12.2	-9.3
URZ	**Urewera**	**24.49**	**198**	P	**P**	**12 30 21.0**	**-0.5**
	comp=Z,11nm,0.5s,baz=122,slow=23,SNR=12						
URZ	**Urewera**	**24.49**	**198**	P	**P**	**12 30 21.7**	**+0.2**
URZ	**Urewera**	**24.49**	**198**	IAmb	IAmb	12 30 23.4	
	comp=Z,16nm,0.8s						
URZ	**Urewera**	**24.49**	**198**	P	**P**	**12 30 21.8**	**+0.3**
TOZ	**Tahuroa Road**	**24.54**	**202**	P	**P**	**12 30 23.5**	**+1.5**
RAGZ	**Rawiri**	**24.61**	**198**	P	**P**	**12 30 24.7**	**+1.9**
RIGZ	**Rimuhau**	**24.71**	**197**	P	**P**	**12 30 24.9**	**+1.4**
RTZ	**Ruatahuna**	**24.85**	**198**	P	**P**	**12 30 25.6**	**+0.6**
HIZ	**Hauiti**	**25.46**	**202**	P	**P**	**12 30 31.7**	**+1.3**
BKZ	**Black Stump Fm**	**25.51**	**199**	P	**P**	**12 30 30.5**	**-0.3**
BKZ	**Black Stump Fm**	**25.51**	**199**	P	**P**	**12 30 31.5**	**+0.7**
ETVZ	**East Tongariro**	**25.73**	**200**	P	**P**	**12 30 33.6**	**+0.7**
KWHZ	**Kaweka Forest**	**25.77**	**198**	P	**P**	**12 30 33.8**	**+0.6**
OTVZ	**Oturere**	**25.77**	**200**	P	**P**	**12 30 32.5**	**-0.8**
BFZ	**Birch Farm**	**26.98**	**198**	P	**P**	**12 30 45.0**	**+1.0**
QRZ	**Quartz Range**	**28.35**	**203**	P	**P**	**12 30 56.9**	**+0.6**
TUWZ	**Tuamarina**	**28.38**	**200**	P	**P**	**12 30 56.8**	**+0.3**
THZ	**Tophouse**	**29.03**	**201**	P	**P**	**12 31 01.5**	**-0.9**
THZ				IAmb	IAmb	12 31 03.1	
	comp=Z,33nm,1.2s						
KHZ	**Kahutara**	**29.40**	**200**	P	**P**	**12 31 06.6**	**+1.1**
TAOE	**Nuku Hiva Isla**	**33.07**	**83**	*e*LR	LR	12 40 05.0	
	comp=Z,710nm,27.7s						
TAOE	**Nuku Hiva Isla**	**33.07**	**83**	*e*T	T	13 06 06.9	
	comp=Z,30nm,0.2s						
DCZ	**Deep Cove**	**34.37**	**205**	P	**P**	**12 31 48.7**	**-0.4**
WHZ	**Wether Hill Ro**	**34.41**	**203**	P	**P**	**12 31 48.7**	**-0.9**
ARMA	**Armidale**	**35.48**	**239**	P	**P**	**12 31 58.6**	**-0.6**
	baz=36,SNR=5.4						
ARMA	**Armidale**	**35.48**	**239**	P	**P**	**12 31 58.5**	**-0.7**
ARMA				IAmb	IAmb	12 31 58.6	
	comp=Z,12nm,0.7s						
CTAO	**Charters Tower**	**38.72**	**257**	P	**P**	**12 32 25.4**	**-1.2**
H11S2	**WAKE ISLAND Hy**	**38.78**	**329**	T	T	13 13 13.9	
	baz=146,slow=76,SNR=5.7						
H11S3	**WAKE ISLAND Hy**	**38.80**	**329**	T	T	13 13 08.6	
	baz=146,slow=76,SNR=7.2						
H11S1	**WAKE ISLAND Hy**	**38.80**	**329**	T	T	13 13 08.4	
	baz=146,slow=76,SNR=6.9						
CNB	**Canberra Magne**	**38.91**	**232**	P	**P**	**12 32 27.2**	**-1.0**
	baz=39,SNR=5.0						
CNB	**Canberra Magne**	**38.91**	**232**	P	**P**	**12 32 27.4**	**-0.8**
CAN	**Canberra**	**39.19**	**232**	P	**P**	**12 32 29.9**	**-0.6**
CAN				IAmb	IAmb	12 32 39.6	
	comp=Z,15nm,1.0s						
CAN	**Canberra**	**39.19**	**232**	P	**P**	**12 32 29.5**	**-1.0**

H11N3	WAKE ISLAND Hy	39.73	330	T	T	13 14 22.7	
	SNR=3.9						
H11N1	WAKE ISLAND Hy	39.73	330	T	T	13 15 01.5	
	baz=230,slow=74,SNR=16						
H11N2	WAKE ISLAND Hy	39.75	330	T	T	13 15 01.5	
	baz=164,slow=74,SNR=7.0						
MTSU	Mount Surprise	40.58	260	P	P	12 32 42.0	-0.2
	baz=41,SNR=15						
CMSA	Cobar Meteorol	40.69	239	P	P	12 32 41.7	-1.2
	baz=41,SNR=8.0						
CMSA	Cobar Meteorol	40.69	239	P	P	12 32 42.0	-1.0
COEN	Coen	42.02	266	P	P	12 32 53.9	-0.2
COEN				IAmb	IAmb	12 32 56.0	
	comp=Z,15nm,0.8s						
TOO	Toolangi	42.63	231	P	P	12 32 57.8	-0.9
	baz=43,SNR=5.8						
TOO	Toolangi	42.63	231	P	P	12 32 58.0	-0.8
TOO	Toolangi	42.63	231	P	P	12 32 58.1	-0.7
STKA	Stephens Creek	44.17	240	P	P	12 33 10.4	-0.9
	comp=Z,16nm,0.8s,baz=87,slow=10,SNR=20						
STKA	Stephens Creek	44.17	240	P	P	12 33 10.8	-0.5
INKA	Innaminka	44.26	246	P	P	12 33 10.6	-1.4
HTT	Hallett	46.69	238	P	P	12 33 30.2	-1.0
	baz=47,SNR=7.0						
HTT	Hallett	46.69	238	P	P	12 33 30.3	-1.0
LCRK	Leigh Creek	46.79	242	P	P	12 33 30.7	-1.3
OOD	Oodnadatta	48.73	246	P	P	12 33 46.3	-0.8
BBOO	Buckleboo	48.95	240	P	P	12 33 47.3	-1.4
BBOO	Buckleboo	48.95	240	P	P	12 33 47.4	-1.4
WR0	Warramunga Arr	49.73	257	P	P	12 33 52.6	-2.3
WR0				IAmb	IAmb	12 33 55.3	
	comp=Z,12nm,1.4s						
WB0	Warramunga Arr	49.88	257	P	P	12 33 55.0	-1.1
WB0				IAmb	IAmb	12 33 55.3	
	comp=Z,12nm,0.9s						
WB2	Warramunga Arr	49.91	257	P	P	12 33 54.9	-1.4
WRAB	Tennant Creek	49.91	257	P	P	12 33 54.6	-1.7
WRAB	Tennant Creek	49.91	257	P	P	12 33 54.1	-2.2
WRA	Warramunga Arr	49.92	257	P	P	12 33 54.8	-1.6
	comp=Z,7.8nm,0.7s,baz=91,slow=7.0,SNR=87						
WRA				PcP	PcP	12 35 16.3	-0.2
	comp=Z,1.2nm,0.7s,baz=88,slow=3.9,SNR=4.8						
WRA				LR	LR	12 52 10.1	
	comp=Z,142nm,21.8s,baz=40,slow=33						
WRA	Warramunga Arr	49.92	257	P	P	12 33 55.3	-1.1
AS31	Alice Springs	50.21	252	P	P	12 33 57.3	-1.2
AS31				IAmb	IAmb	12 33 58.3	
	comp=Z,10nm,1.1s						
ASAR	Alice Springs	50.21	252	P	P	12 33 57.2	-1.3
	comp=Z,26nm,0.8s,baz=87,slow=7.9,SNR=232						
ASAR				LR	LR	12 53 39.7	
	comp=Z,224nm,22.0s,baz=85,slow=34						
MULG	Mulgathing	50.34	243	P	P	12 33 57.8	-1.6
KDU	Kakadu	52.51	266	P	P	12 34 15.3	-0.5
	baz=53,SNR=4.5						
MTN	Manton Dam	53.78	265	P	P	12 34 24.4	-0.8
	baz=54,SNR=4.2						
MTN	Manton Dam	53.78	265	P	P	12 34 24.6	-0.6
MTN				IAmb	IAmb	12 34 31.6	
	comp=Z,6.5nm,0.8s						
WRKA	Warakurna	55.30	250	P	P	12 34 34.9	-1.2
	baz=56,SNR=38						
FORT	Forrest	55.54	243	P	P	12 34 36.3	-1.4
	baz=56,SNR=13						
FORT	Forrest	55.54	243	P	P	12 34 36.4	-1.4
FORT	Forrest	55.54	243	P	P	12 34 36.3	-1.4
KNRA	Kununurra	55.63	261	P	P	12 34 38.8	+0.2
KNRA				IAmb	IAmb	12 34 58.1	
	comp=Z,14nm,1.1s						
FITZ	Fitzroy Crossi	58.28	258	LR	LR	12 58 35.0	
	comp=Z,68nm,18.9s,baz=106,slow=35						
PSA00	Pilbara Seismi	63.30	253	P	P	12 35 30.5	-1.0
PSA00	Pilbara Seismi	63.30	253	P	P	12 35 30.6	-0.9
PSA00				IAmb	IAmb	12 35 46.9	
	comp=Z,11nm,1.0s						
VNDA	Vanda	63.60	186	P	P	12 35 34.1	+1.6
	comp=Z,7.6nm,1.0s,baz=17,slow=6.9,SNR=14						
VNDA	Vanda	63.60	186	P	P	12 35 32.8	+0.3
VNDA				IAmb	IAmb	12 35 35.0	
	comp=Z,13nm,1.1s						
VNDA				PcP	PcP	12 36 09.3	+0.6
MJAR	Matsushiro Arr	68.78	320	LR	LR	13 00 56.3	
	comp=Z,34nm,22.0s,baz=150,slow=31						
KMRM	Mail Ridge	71.86	38	P	P	12 36 27.2	+2.0
CMB	Columbia Colle	72.58	41	P	P	12 36 30.7	+1.2
MPK	Martis Peak	73.54	40	P	P	12 36 36.5	+1.0
MPK				IAmb	IAmb	12 36 37.7	
	comp=Z,11nm,1.0s						
GLA	Glamis	73.62	48	P	P	12 36 37.4	+1.6
GLA				IAmb	IAmb	12 36 38.1	
	comp=Z,9.1nm,1.0s						
PNTR	Pine Nut	73.69	41	P	P	12 36 37.4	+1.1
PNTR				IAmb	IAmb	12 36 39.1	
	comp=Z,11nm,1.0s						
QSM	Queen of Sheba	73.73	45	P	P	12 36 36.6	+0.3
QSM				IAmb	IAmb	12 36 38.2	
	comp=Z,9.7nm,1.2s						
VCNR	Virginia City	73.78	41	P	P	12 36 37.6	+0.9
VCNR				IAmb	IAmb	12 36 39.0	
	comp=Z,8.6nm,1.0s						
YERR	Yerington	73.86	41	P	P	12 36 38.7	+1.4
LHV	Little Huntoon	73.91	42	P	P	12 36 39.1	+1.9
LHV				IAmb	IAmb	12 36 39.9	
	comp=Z,7.9nm,1.1s						
GWY	Greenwater Val	73.98	45	P	P	12 36 38.4	+0.5
RYN	Ryan	74.11	42	P	P	12 36 39.9	+1.2
PAHR	Pah Rah Range	74.19	40	P	P	12 36 40.0	+1.0
PAHR				IAmb	IAmb	12 36 41.9	
	comp=Z,7.6nm,1.0s						
113A	Mohawk Valley,	74.25	49	P	P	12 36 40.4	+1.0
113A				IAmb	IAmb	12 36 41.3	
	comp=Z,6.0nm,0.8s						
214A	Organ Pipe Nat	74.55	50	P	P	12 36 42.6	+1.4
214A				IAmb	IAmb	12 36 43.9	
	comp=Z,12nm,1.2s						
KVN	Kaiserville	74.63	42	P	P	12 36 43.1	+1.4
KVN				IAmb	IAmb	12 36 43.7	
	comp=Z,7.2nm,1.0s						
TPH	Tonopah	74.65	43	P	P	12 36 43.0	+1.1
QSPA	South Pole Qui	74.87	180	P	P	12 36 43.2	+0.5
W13A	Hualapai Mount	75.34	47	P	P	12 36 47.0	+1.0
PINE	Pine Mountain	75.70	36	P	P	12 36 49.7	+1.9
KSRS	Korea Array	76.02	316	P	P	12 36 51.6	+2.2
	comp=Z,1.4nm,0.9s,baz=116,slow=8.5,SNR=4.6						
TUC	Tucson	76.23	51	P	P	12 36 52.4	+1.4
TUC				IAmb	IAmb	12 36 53.3	
	comp=Z,9.7nm,0.9s						
319A	Douglas	76.93	52	P	P	12 36 56.7	+1.7
CCUT	Cedar City	76.95	45	P	P	12 36 56.8	+1.7
CCUT				IAmb	IAmb	12 36 57.7	
	comp=Z,8.7nm,1.2s						
KNB	Kanab	77.05	46	P	P	12 36 56.5	+0.9
KNB				IAmb	IAmb	12 37 05.7	
	comp=Z,11nm,1.3s						
U15A	North Rim	77.13	46	P	P	12 36 58.1	+1.9
U15A				IAmb	IAmb	12 36 58.8	
	comp=Z,7.5nm,1.0s						
MSU	Marysvale	78.25	45	P	P	12 37 04.3	+2.0
121A	Cookes Peak, D	78.58	52	P	P	12 37 06.0	+1.7
121A				IAmb	IAmb	12 37 07.2	
	comp=Z,9.8nm,0.8s						
PLID	Pearl Lake	79.33	37	P	P	12 37 09.0	+0.9
HLID	Hailey	79.44	39	P	P	12 37 09.7	+1.1
HLID				IAmb	IAmb	12 37 11.5	
	comp=Z,10nm,0.9s						
HVU	Hansel Valley	79.52	42	P	P	12 37 09.9	+0.8
HVU				IAmb	IAmb	12 37 11.1	
	comp=Z,6.4nm,0.8s						
NJ2	Nanjing	80.05	307	*e*P	P	12 37 09.8	-2.2
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
MNTX	Cornudas Mount	80.07	53	P	P	12 37 13.6	+1.4
BNM	Barren Site	80.16	51	P	P	12 37 14.3	+1.4
TX31	Lajitas Ar. Si	80.46	56	P	P	12 37 16.2	+1.8
TXAR	Lajitas Array	80.46	56	P	P	12 37 15.8	+1.4
	comp=Z,1.8nm,0.9s,baz=226,slow=6.4,SNR=15						
TXAR	Lajitas Array	80.46	56	P	P	12 37 15.5	+1.1
J20K	Nowinta River	80.47	8	P	P	12 37 15.7	+2.1
ANMO	Albuquerque	80.64	50	P	P	12 37 17.0	+1.6
MCK	McKinley	80.90	11	P	P	12 37 17.1	+1.3
CN2	Changchun	80.93	320	*e*P	P	12 37 17.8	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PD31	Pinedale Array	82.08	42	P	P	12 37 23.8	+0.9
PDAR	Pinedale Array	82.08	42	P	P	12 37 23.8	+0.9
	comp=Z,2.7nm,0.9s,baz=221,slow=3.3,SNR=18						
SCRK	Sand Creek	82.08	13	P	P	12 37 24.2	+2.0
SCRK				IAmb	IAmb	12 37 25.2	
	comp=Z,6.9nm,1.0s						
ILAR	Eielson Array	82.22	11	P	P	12 37 24.0	+1.2
	comp=Z,1.4nm,0.7s,baz=233,slow=6.4,SNR=24						
ILAR				LR	LR	13 06 47.4	
	comp=Z,94nm,19.6s,baz=256,slow=30						
YHH	Holmes Hill	82.26	40	P	P	12 37 23.6	-0.3
MSTX	Muleshoe	83.00	52	P	P	12 37 28.3	+0.6
MSTX				IAmb	IAmb	12 37 29.9	
	comp=Z,6.8nm,0.8s						
COLD	Coldfoot	83.92	9	P	P	12 37 34.0	+2.5
COLD				IAmb	IAmb	12 37 35.2	
	comp=Z,7.5nm,1.1s						
MAW	Mawson	88.02	199	P	P	12 37 52.3	+0.3
	comp=Z,14nm,0.9s,baz=128,slow=6.7,SNR=19						
MAW	Mawson	88.02	199	P	P	12 37 49.0	-2.9
	baz=88,SNR=15						
INK	Inuvik	88.04	14	P	P	12 37 53.1	+1.3
	comp=Z,1.3nm,0.8s,baz=192,slow=6.7,SNR=5.0						
HHC	Hu-ho-hao-te	88.89	313	*e*P	P	12 37 55.6	-1.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,210nm,7.4s						
YKA	Yellowknife Ar	89.88	23	P	P	12 38 01.9	+1.3
	comp=Z,1.7nm,0.9s,baz=230,slow=3.7,SNR=5.8						
YKA				LR	LR	13 11 25.8	
	comp=Z,121nm,21.1s,baz=0.0,slow=31						
CMAR	Chiang Mai Arr	92.57	288	P	P	12 38 15.2	+1.1
	comp=Z,0.5nm,0.4s,baz=94,slow=3.0,SNR=5.7						
CMAR	Chiang Mai Arr	92.57	288	P	P	12 38 12.7	-1.5
A36M	Sachs Harbour	92.67	13	P	P	12 38 14.9	+1.5
SYO	Syowa Base	92.83	191	⇑*e*pP	pP	12 38 25.0	+1.9
VNA3	Neumayer Olymp	93.08	175	P	P	12 38 15.6	0.0
LZH	Lanzhou	93.11	306	*e*P	P	12 38 18.1	+1.6
LZH				pP	pP	12 38 26.8	+1.4
LZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SNAA	Sanae	93.13	177	P	P	12 38 15.4	-0.4
VNA2	Neumayer--Watz	93.58	175	P	P	12 38 18.2	+0.4
ULM	Lac du Bonnet	93.74	39	LR	LR	13 14 38.0	
	comp=Z,151nm,19.7s,baz=308,slow=32						
VNA1	Neumayer--Stat	93.77	175	P	P	12 38 19.8	+1.1
BVAR	Borovoye Array	117.72	322	PKP	PKPdf	12 43 47.5	-0.6
	comp=Z,1.8nm,0.7s,baz=211,slow=10.0,SNR=6.4						
ARCES	ARCESS Array B	124.39	352	PKP	PKPdf	12 44 00.6	+0.1
	comp=Z,2.7nm,0.9s,baz=330,slow=7.0,SNR=4.8						
KLMR	Klimovskoe	128.59	340	*e*PKPdf	PKPdf	12 44 07.5	-1.2
KLMR				AMP		12 44 10.8	
	comp=Z,17nm,1.5s						
AKASG	Malin Array Be	140.14	338	PKP	PKPdf	12 44 30.6	0.0
	comp=Z,1.9nm,0.8s,baz=36,slow=2.4,SNR=4.7						
CLL	Collm	143.59	353	*e*PKPdf	PKPbc	12 44 34.0	-0.1
DPC	Dobruska-Polom	144.04	349	*e*PKP	PKPdf	12 44 37.0	-0.7
DPC				*e*x	x	12 44 52.3	
BURAR	Bucovina Array	144.17	338	⇑P	PKPdf	12 44 37.5	-0.5
BURAR	Bucovina Array	144.17	338	PKPdf	PKPbc	12 44 36.3	+0.1
TSUM	Tsumeb	144.18	198	PKP	PKPbc	12 44 36.8	-0.2
	comp=Z,8.6nm,0.9s,baz=181,slow=6.3,SNR=19						
TSUM	Tsumeb	144.18	198	PKPdf	PKPbc	12 44 37.1	+0.1
CRVS	Cervenica-Dubn	144.23	343	*e*PKP	PKPdf	12 44 38.7	+0.7
MORC	Moravsky Berou	144.36	348	*e*PKP	PKPbc	12 44 37.1	+0.5
MORC	Moravsky Berou	144.36	348		PKPbc	12 44 36.8	+0.2
KIBK	Kibwezi	144.37	243	PKPdf	PKPbc	12 44 37.7	-0.1
MOX	Moxa	144.39	355	*e*L	L	13 48 25.8	
	comp=Z,93nm,20.6s						
TRPA	Tarpa	144.61	342	⇑P	PKPdf	12 44 38.5	-0.1
PRU	Pruhonice	144.68	351	*e*PKP	PKPdf	12 44 38.6	-0.1
ARCR	ARCALIA	144.93	339	⇑P	PKPdf	12 44 40.2	+1.0
VRAC	Vranov	144.99	349	⇓P	PKPdf	12 44 40.1	+0.8
VRAC	Vranov	144.99	349	*e*PKP	PKPdf	12 44 39.5	+0.2
CFR	Carcaliu	145.01	333	⇑P	PKPdf	12 44 40.4	+1.0
VRI	Vrincioaia	145.05	335	⇑P	PKPbc	12 44 38.7	-0.2
BNN	Bunyan	145.14	318	PKPbc	PKPab	12 44 39.6	0.0
TPGR	Topolog	145.14	332	⇓P	PKPdf	12 44 40.3	+0.6
JAVC	Velka Javorina	145.20	347	*e*PKP	PKPdf	12 44 41.2	+1.5
KRUC	Moravsky	145.27	349	*e*PKP	PKPdf	12 44 40.3	+0.5
COVR	Voineasa-Covas	145.28	336	⇓P	PKPdf	12 44 40.5	+0.6
VYHS	Vyhne	145.28	346	*e*PKP	PKPdf	12 44 41.0	+1.2
GRF	Grafenberg Arr	145.37	355	*e*PKPdf	PKPab	12 44 40.4	+0.4
	baz=7.3,slow=3.0						
GRF				*e*L	L	13 52 45.8	
	comp=Z,207nm,18.2s						
TIRR	Tirgusor	145.45	332	⇓P	PKPdf	12 44 40.2	0.0
TIRR	Tirgusor	145.45	332	PKPdf	PKPab	12 44 40.3	-0.1
DOPR	Dopca	145.50	337	⇑P	PKPab	12 44 41.9	+1.4
TLBR	Topalu	145.55	333	⇓P	PKPab	12 44 42.1	+1.3
KMBO	Kilima Mbogo	145.66	245	PKPbc	PKPdf	12 44 41.9	+0.1
	comp=Z,2.7nm,0.4s,baz=64,slow=2.2,SNR=15						
KMBO	Kilima Mbogo	145.66	245	PKPbc	PKPbc	12 44 42.2	+0.1
KHC	Kasperske Hory	145.66	352	*e*PKP	PKPab	12 44 41.0	-0.1
KHC				*e*x	x	12 44 56.3	
MLR	Muntele Rosu	145.67	336	⇓P	PKPab	12 44 42.2	+0.8
MLR	Muntele Rosu	145.67	336	PKPbc	PKPab	12 44 41.7	+0.3
CVDA	Cernavoda	145.72	332	⇑P	PKiKP	12 44 43.1	-1.6
DRGR		145.74	340	⇑P	PKPab	12 44 41.5	0.0
MODS	Modra-Piesok	145.75	347	*e*PKP	PKPbc	12 44 41.2	+0.2
CKRC	Cesky Krumlov	145.86	351	*e*PKP	PKPab	12 44 42.8	+1.0
GERES	GERESS Array B	145.92	352	PKPbc	PKPdf	12 44 41.0	0.0
	comp=Z,3.5nm,0.9s,baz=90,slow=1.3,SNR=8.3						
GERES	GERESS Array B	145.92	352	PKPbc	PKPab	12 44 41.9	-0.2
BR131	Keskin Array S	146.00	321	PKPbc	PKPbc	12 44 42.5	+0.2
BRTR	Keskin Array B	146.00	321	PKPbc	PKPab	12 44 43.2	+0.4
	comp=Z,16nm,0.9s,baz=106,slow=2.7,SNR=39						
BRTR	Keskin Array B	146.00	321	PKPbc	PKPab	12 44 42.6	-0.2
VOIR		146.07	337	⇓P	PKPab	12 44 43.8	+1.0
ANTO	Ankara	146.41	322	⇓P	PKiKP	12 44 45.4	-1.0
CONA	Conrad Observa	146.46	349	*e*P	PKPab	12 44 44.4	+0.1
	comp=Z,9.6nm,1.0s						
MOA	Molln	146.81	351	*e*P	PKPab	12 44 45.0	-0.5
	comp=Z,11nm,1.4s						
BFO	Black Forest	146.91	358		PKPab	12 44 45.4	-0.5
ARSA	Arzberg	147.17	349	*e*P	PKPbc	12 44 45.8	+0.6
	comp=Z,13nm,1.2s						
MORH	Mrgy, Hungar	147.45	344	⇑P	PKPab	12 44 47.1	-0.9
WATA	Walderalm	147.67	354	*e*P	PKPbc	12 44 47.2	+0.4
	comp=Z,3.3nm,0.5s						
MOTA	Moosalm	147.71	354	*e*P	PKPbc	12 44 47.9	+1.0
	comp=Z,9.5nm,1.2s						
WTTA	Wattenberg	147.73	354	*e*P	PKPbc	12 44 47.6	+0.5
	comp=Z,7.8nm,0.9s						
SOKA	Soboth	147.81	349	*e*P	PKPbc	12 44 47.1	0.0
	comp=Z,15nm,1.2s						
DAVA	Damuels	147.87	356	*e*P	PKPbc	12 44 48.0	+0.6
	comp=Z,13nm,1.0s						
FETA	Feichten	148.06	355	*e*P	PKiKP	12 44 49.1	-0.7
	comp=Z,9.6nm,1.4s						
OBKA	Obir	148.06	350	*e*P	PKPbc	12 44 48.7	+0.9
	comp=Z,4.3nm,0.8s						
MYKA	Terra Mystica	148.09	351	*e*P	PKPbc	12 44 47.9	0.0
	comp=Z,9.0nm,0.9s						
ABTA	Abfaltersbach	148.14	352	*e*P	PKPbc	12 44 47.9	-0.1
	comp=Z,9.1nm,0.7s						
CRNS	Crni Vrh	148.53	350	*i* PKPbc	PKPbc	12 44 48.9	-0.1
BOJS	Bojanci	148.90	348	*i* PKPbc	PKPbc	12 44 50.5	+0.6
VTS	Vitosha	149.15	336	⇑P	PKiKP	12 44 52.0	-0.1
VTS	Vitosha	149.15	336	PKPbc	PKiKP	12 44 51.9	-0.1
PDG	Podgorica	150.74	341	⇑P	PKiKP	12 44 55.4	+0.2
FNA	Florina	151.44	336	PKPbc	PKiKP	12 44 56.6	-0.1
DBIC	Dimbokro	165.92	126	PKP	PKPdf	12 45 07.2	-0.8
	comp=Z,5.4nm,0.9s,baz=110,slow=1.7,SNR=3.6						

IPEC ***01*** *12:25:20.3±0.2, 50°.19N×19°.14E, h1^{km}, ML2.7/3, Error ellipse: s-maj=2.4km s-min=1.1km az=167.0*

PRU ***01*** *12:25:21.0±0.0, 50°.16N×19°.10E, h0^{km}*

ISC 01 12:25:20.6±0.9**, 50°.10N**±0°.04×**19°.11E**±0°.02**, h0^{km}, n22, σ0^{s}.94**/38**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.46	75	*e*Pg	Pg	12 25 28.4	-1.0
OJC				*e*Sg	Sg	12 25 34.3	-1.0
OKC	Ostrava-Krasne	0.68	247	*e*PG	Pg	12 25 34.3	+0.7
OKC				*e*SG	Sb	12 25 43.9	-1.3
	comp=Z,52nm,0.7s						
LANS	Liptovska Anna	0.98	166	*e*PG	Pg	12 25 39.7	+0.3
LANS				*e*SG	Sb	12 25 53.5	-0.5
LANS				*e*LG	Lg	12 25 54.1	
MORC	Moravsky Berou	1.06	253	*e*PG	Pb	12 25 41.8	-0.2
MORC				*e*SG	Sg	12 25 55.0	+0.1
MORC	Moravsky Berou	1.06	253	*e*Pg	Pb	12 25 41.7	-0.2
	baz=67						
MORC				*e*Sg	Sg	12 25 54.9	+0.1
	109nm,0.6s,baz=67						
KRLC	Kraliky	1.50	270	*e*PG	Pn	12 25 47.6	-1.2
KRLC				*e*SG	Sg	12 26 08.8	0.0
	comp=Z,67nm,0.8s						
JAVC	Velka Javorina	1.56	218	*e*Pg	Pb	12 25 50.0	-0.4
	baz=35						
VYHS	Vyhne	1.62	186	*e*PN	Pn	12 25 49.8	-0.7
VYHS				*e*SN	Sn	12 26 11.2	-0.8
VYHS				*e*LG	Lg	12 26 13.8	
DPC	Dobruska-Polom	1.81	279	*e*PG	Pn	12 25 52.9	-0.2
DPC				*e*SG	Sg	12 26 19.2	+0.5
	comp=Z,57nm,0.6s						
VRAC	Vranov	1.82	245	*e*Pn	Pn	12 25 53.5	+0.3
	baz=61						
VRAC				*e*Sg	Sg	12 26 19.1	+0.1
	50nm,1.2s,baz=61						
KECS	Kecovo	1.85	150	*e*SN	Sb	12 26 18.3	-0.8
OSTC	Ostas	1.91	285	*e*PG	Pb	12 25 56.3	0.0
OSTC				*e*SG	Sb	12 26 20.9	+0.2
	comp=Z,46nm,0.8s						
KSP	Ksiaz	1.95	293	*e*Pg	Pb	12 25 57.2	+0.3
KSP				*e*Sg	Sb	12 26 21.2	-0.6
CRVS	Cervenica-Dubn	1.95	127	*e*PN	Pb	12 25 57.0	0.0
CRVS				*e*SG	Sg	12 26 26.4	+3.3
CHVC	Chvalec	2.02	285	*e*PG	Pb	12 25 58.0	-0.2
CHVC				*e*SG	Sg	12 26 25.5	+0.1
	comp=Z,24nm,0.6s						
UPC	Upice	2.03	283	*e*PG	Pb	12 25 58.4	+0.1
UPC				*e*SG	Sg	12 26 26.0	+0.3
	comp=Z,24nm,0.8s						
KRUC	Moravsky	2.05	240	*e*Pn	Pn	12 25 56.9	+0.5
	baz=57						
KRUC				*e*Sg	Sg	12 26 26.5	0.0
	53nm,1.2s,baz=57						
MODS	Modra-Piesok	2.11	215	*e*PG	Pg	12 26 01.2	+0.2
KOLS	Kolonicke sedl	2.37	118	*e*PG	Pg	12 26 06.8	+0.8
CKRC	Cesky Krumlov	3.39	250	*e*SG	Sg	12 27 09.0	-0.3
BRG	Berggiesshubel	3.39	285	Pg	Pn	12 26 17.8	+3.1
BRG				Sg	Sg	12 27 09.4	0.0
BRG				Amp		12 27 15.1	
	comp=Z,12nm,0.6s						
KHC	Kasperske Hory	3.73	257	*e*SG	Sg	12 27 19.4	-0.9
	comp=Z,11nm,0.6s						

UPP 01 12:36:31.4±0.2**, 60°.98N**×**15°.24E, h0^{km}, ML1.6, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROTU	Roteberg	0.52	32	P	Pg	12 36 41.2	-0.1
ROTU				S	Sg	12 36 48.8	+0.7
FALU	Falun	0.57	149	P	Pg	12 36 42.1	-0.1
FALU				S	Sg	12 36 49.5	-0.1
HUDU	Hudiksvall	1.18	49	P	Pg	12 36 53.2	-0.7
UDD	Uddeholm	1.21	223	P	Pg	12 36 53.8	-0.7
ARNU	Arnoeviken	1.25	54	P	Pg	12 36 54.5	-0.9
NRAU	Nora	1.42	184	P	Pn	12 36 57.5	-0.9
NRAU				S	Sg	12 37 16.1	-0.8
BACU	Backbrunna	1.46	140	P	Pn	12 36 58.6	-0.4
BACU				S	Sg	12 37 17.8	-0.5
FIBU	Brunna	1.51	135	P	Pn	12 36 59.4	-0.2
GRAU	Graesoe	1.75	110	P	Pn	12 37 03.4	+0.4

BER 01 12:37:15.3±1.3**, 60°.77N**×**11°.84E, h0^{km}, ML1.0, Suspected explosion, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NC602	NORSAR Array S	0.15	257	*e*P	Pg	12 37 17.4	-0.7
NC602				*e*S	Sg	12 37 19.6	-0.5
NC602				IAML		12 37 21.3	
	comp=Z,80nm,0.3s						
NAO01	NORSAR Array S	0.47	280	*e*P	Pg	12 37 23.9	-0.4
NAO01				*e*S	Sg	12 37 30.5	0.0
NAO01				IAML		12 37 37.0	
	comp=Z,16nm,0.8s						
NBO00	NORSAR Array S	0.58	297	*e*P	Pg	12 37 25.1	-1.3
NBO00				*e*S	Sg	12 37 33.4	-0.6
NBO00				IAML		12 37 41.1	
	comp=Z,5.7nm,0.9s						
NC204	NORSAR Array S	0.73	315	*e*P	Pg	12 37 29.2	-0.1
NC204				*e*S	Sg	12 37 37.6	-1.1
NC204				IAML		12 37 46.4	
	comp=Z,2.7nm,0.3s						
SKAR	Skarslia	1.74	269	*e*S	Sn	12 38 07.6	-2.1
SKAR				IAML		12 38 11.8	
	comp=Z,3.2nm,0.4s						

IDC ***01*** *12:42:12.6±1.3, 0°.80N×126°.99E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.7/38, mbtmp3.9/5, MS3.1/1, Ms1 3.1/1, ms1mx2.6/35, Error ellipse: s-maj=137.6km s-min=20.1km az=69.0*

DJA ***01*** *12:42:12.7±0.5, 1°N±3°×12°8E±°, h10^{km}, M3.4/6, MLv3.4/6*

ISC 01 12:42:13.8±1.1**, 1°.01N**±0°.06×**127°.5E**±0°.1**, h10^{km}, n11, σ0^{s}.87**/13**, mb4.0**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.29	215	P	Pg	12 42 19.9	+0.1
TNTI				S	Sg	12 42 24.0	+0.3
LBMI	Labuha	1.64	181	P	Pn	12 42 43.2	+0.4
LBMI				S	Sb	12 43 05.7	+0.7
SANI	Sanana	3.41	207	P	Pn	12 43 06.2	-1.0
SANI				S	Sb	12 43 55.8	-0.2
KMSI	Cibinong	3.58	263	P	Pn	12 43 08.6	-0.9
GTOI	Gorontalo	4.54	265	P	Pn	12 43 24.0	+1.3
WRA	Warramunga Arr	21.87	163	P	P	12 47 06.9	-0.1
	3.4nm,0.6s,baz=340,slow=11,SNR=27						
ASAR	Alice Springs	25.30	166	P	P	12 47 40.2	-0.6
	4.8nm,0.9s,baz=339,slow=8.8,SNR=21						
KSRS	Korea Array	36.26	1	LR	LR	13 06 22.4	
	comp=Z,29nm,20.0s,baz=66,slow=40						
SONM	Songino Array	50.11	342	P	P	12 51 09.0	-0.4
	0.6nm,0.8s,baz=149,slow=6.4,SNR=3.8						
MKAR	Makanchi Array	60.23	326	P	P	12 52 21.4	-1.0
	1.3nm,0.9s,baz=121,slow=8.6,SNR=5.3						
ZALV	Zalesovo Beam	63.36	333	P	P	12 52 44.6	+1.4
	0.4nm,0.4s,baz=148,slow=8.5,SNR=2.2						

IDC ***01*** *12:47:23.0±1.2, 0°.78N×127°.17E, h0^{km}, mb3.8/4, mb1 4.0/6, mb1mx3.7/43, mbtmp3.8/6, ML3.0/2, Error ellipse: s-maj=52.9km s-min=19.6km az=67.0*

NEIC ***01*** *12:47:23.4±1.6, 1°.0N±0°.1×127°.32E±0°.06, h10^{km}±2^{km}, mb4.1/8, Error ellipse: s-maj=22.6km s-min=9.4km az=7.0*

ISC 01 12:47:25.4±1.3**, 0°.8N**±0°.1×**127°.32E**±0°.09**, h18^{km}**±6^{km}**, n19, σ1^{s}.30**/20**, mb4.0**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.05	105		Pg	12 47 28.6	-0.1
SIJI	Sorong	4.28	113	Pn	Pn	12 48 30.2	+0.6
	1.0nm,0.3s,baz=314,slow=23,SNR=2.4						
SIJI				Sn	Sn	12 49 19.1	-0.1
	0.5nm,0.3s,baz=155,slow=22,SNR=1.5						
TOLI2	Tolitoli	6.54	273	Pn	Pn	12 49 02.1	+1.4
SOEI	Soe	10.90	196	Pn	Pn	12 49 59.7	-1.0
KNRA	Kununurra	16.42	175	P	Pn	12 51 14.9	-0.1
KNRA				IAmb	IAmb	12 51 19.0	
	comp=Z,23nm,1.2s						
FITZ	Fitzroy Crossi	18.84	185	P	Pn	12 51 44.4	-0.6
	comp=Z,0.0nm,0.3s,baz=138,slow=14,SNR=2.0						
WB0	Warramunga Arr	21.57	162	P	P	12 52 15.0	+0.8
WB0				IAmb	IAmb	12 52 19.0	
	comp=Z,5.8nm,0.9s						
WRA	Warramunga Arr	21.72	162	P	P	12 52 16.7	+0.9
	comp=Z,4.3nm,0.7s,baz=340,slow=11,SNR=23						
WRA	Warramunga Arr	21.72	162	P	P	12 52 15.8	0.0
WB2	Warramunga Arr	21.72	162	P	P	12 52 16.6	+0.8
WB2				IAmb	IAmb	12 52 20.6	
	comp=Z,7.4nm,0.8s						
WR0	Warramunga Arr	21.80	161	P	P	12 52 16.5	-0.1
WR0				IAmb	IAmb	12 52 21.6	
	comp=Z,5.5nm,0.9s						
AS31	Alice Springs	25.13	166	P	P	12 52 49.1	-0.4
ASAR	Alice Springs	25.14	166	P	P	12 52 50.3	+0.7
	comp=Z,2.1nm,0.6s,baz=344,slow=8.5,SNR=33						
ASAR	Alice Springs	25.14	166	P	P	12 52 49.7	+0.1
SONM	Songino Array	50.26	342	P	P	12 56 22.4	+1.7

	comp=Z,0.4nm,0.6s,baz=147,slow=8.2,SNR=2.2						
MK31	Makanchi Array	60.30	326	P	P	12 57 30.8	-2.2
MKAR	Makanchi Array	60.30	326	P	P	12 57 32.1	-0.9
	comp=Z,0.8nm,0.7s,baz=116,slow=8.6,SNR=9.2						
MKAR	Makanchi Array	60.30	326	P	P	12 57 30.8	-2.2
KURK	Kurchatov	64.53	328	P	P	12 57 58.5	-2.6

IDC 01 12:52:41.7±1.5, 0°.70N×126°.79E, h0^{km}, mb3.7/4, mb1 4.0/4, mb1mx3.6/41, mbtmp3.8/4, Error ellipse: s-maj=151.8km s-min=21.7km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.80	161	P	P	12 57 35.7	+0.1
	3.8nm,0.7s,baz=340,slow=11,SNR=10						
ASAR	Alice Springs	25.18	165	P	P	12 58 09.1	-0.1
	2.2nm,0.8s,baz=344,slow=9.2,SNR=19						
SONM	Songino Array	50.18	342	P	P	13 01 39.6	+0.3
	0.2nm,0.3s,baz=154,slow=10,SNR=2.4						
MKAR	Makanchi Array	60.08	326	P	P	13 02 50.5	-0.3
	0.6nm,0.7s,baz=123,slow=8.2,SNR=6.5						

IDC 01 12:53:57.3±2.3, 0°.67N×126°.86E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.5/41, mbtmp3.8/3, MS3.0/2, Ms1 3.1/2, ms1mx2.6/33, Error ellipse: s-maj=193.0km s-min=28.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.76	161	P	P	12 58 50.4	-0.4
	1.3nm,0.5s,baz=339,slow=11,SNR=6.6						
ASAR	Alice Springs	25.14	165	P	P	12 59 24.6	+0.3
	2.0nm,0.6s,baz=345,slow=8.5,SNR=11						
CMAR	Chiang Mai Arr	32.61	304	LR	LR	13 15 07.3	
	comp=Z,20nm,19.6s,baz=145,slow=39						
USRK	Ussuriysk Ar.	43.58	5	LR	LR	13 19 55.6	
	comp=Z,23nm,21.6s,baz=358,slow=36						
MKAR	Makanchi Array	60.14	326	P	P	13 04 06.7	-0.1
	0.4nm,0.7s,baz=128,slow=7.4,SNR=1.5						

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*IDC **01** 13:05:48.0±1.7, 15°.52S×176°.69W, h0^{km}, mb3.7/4, mb1 4.1/5, mb1mx3.8/22, mbtmp3.8/5, ML3.8/1, MS3.6/11, Ms1 3.6/11, ms1mx3.4/35, Error ellipse: s-maj=102.8km s-min=27.0km az=156.0*

ISC 01 13:05:52.6±1.5, 15°.8S±0°.6×176°.5W±0°.2, h35^{km}, n25, σ1^{s}42/7, mb3.7/4, MS3.8/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	4.93	69	Pn	Pn	13 07 03.2	-1.1
	3.3nm,0.3s,baz=299,slow=22,SNR=2.8						
AFI				Sn	Sn	13 07 50.7	-9.5
	0.6nm,0.3s,baz=87,slow=19,SNR=0.9						
AFI				LR	LR	13 08 31.8	
	comp=Z,788nm,19.7s,baz=252,slow=33						
AFI				T	T	13 11 41.4	
	7.0nm,0.3s,baz=150,slow=13,SNR=4.8						
MSVF	Nonsavu	5.57	248	LR	LR	13 08 57.6	
	comp=Z,282nm,21.6s,baz=61,slow=34						
DZM	Mont Dzumac	17.30	246	*e*LR	LR	13 13 36.0	
	comp=Z,198nm,30.9s						
DZM	Mont Dzumac	17.30	246	LR	LR	13 14 56.2	
	comp=Z,85nm,21.6s,baz=238,slow=32						
PPT	Papeete	25.86	98	LR	LR	13 18 55.2	
	comp=Z,120nm,20.4s,baz=230,slow=30						
PPT2	Papeete2	25.86	98	*e*LR	LR	13 17 55.4	
	comp=Z,291nm,23.5s						
TAOE	Nuku Hiva Isla	36.14	83	*e*LR	LR	13 22 29.6	
	comp=Z,235nm,24.8s						
H11S2	WAKE ISLAND Hy	37.82	333	T	T	13 52 22.7	
H11S3	WAKE ISLAND Hy	37.84	333	T	T	13 52 24.9	
	SNR=4.7						
H11S1	WAKE ISLAND Hy	37.84	333	T	T	13 52 22.7	
H11N3	WAKE ISLAND Hy	38.83	335	T	T	13 53 36.4	
	baz=153,slow=76,SNR=4.6						
H11N1	WAKE ISLAND Hy	38.83	335	T	T	13 53 35.8	
	baz=153,slow=76,SNR=15						
H11N2	WAKE ISLAND Hy	38.85	335	T	T	13 53 36.9	
	baz=153,slow=76,SNR=8.3						
WRA	Warramunga Arr	46.85	257	LR	LR	13 32 50.4	
	comp=Z,137nm,18.3s,baz=90,slow=35						
ASAR	Alice Springs	47.15	252	P	P	13 14 21.6	-0.5
	1.1nm,0.7s,baz=84,slow=8.7,SNR=14						
ASAR				LR	LR	13 32 19.9	
	comp=Z,154nm,21.0s,baz=92,slow=34						
BATI	Baumata	58.41	268	LR	LR	13 40 41.3	
	comp=Z,56nm,18.3s,baz=135,slow=36						
VNDA	Vanda	62.74	185	LR	LR	13 40 38.1	
	comp=Z,24nm,19.1s,baz=5.5,slow=33						
PETK	Petropavlovsk-	72.09	344	LR	LR	13 50 11.6	
	comp=Z,58nm,18.5s,baz=96,slow=37						
TXAR	Lajitas Array	83.31	57	P	P	13 18 18.8	+2.5
	0.5nm,0.9s,baz=267,slow=3.2,SNR=3.4						
ILAR	Eielson Array	83.39	12	P	P	13 18 15.6	-0.3
	0.6nm,0.8s,baz=236,slow=4.8,SNR=4.4						
PDAR	Pinedale Array	84.54	43	P	P	13 18 22.5	0.0
	0.3nm,0.6s,baz=232,slow=4.4,SNR=2.2						
MAW	Mawson	86.49	199	LR	LR	13 55 21.1	
	comp=Z,41nm,20.5s,baz=86,slow=34						
PLCA	Paso Flores	91.48	133	LR	LR	13 52 06.9	
	comp=Z,64nm,21.6s,baz=221,slow=30						
BRTR	Keskin Array B	144.47	318	PKP	PKPdf	13 25 25.1	-0.7
	1.6nm,0.9s,baz=337,slow=2.8,SNR=4.9						
GERES	GERESS Array B	145.95	348	PKPbc	PKPbc	13 25 28.5	-0.2
	0.9nm,0.5s,baz=113,slow=3.0,SNR=4.1						

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*IDC **01** 13:32:18.8±2.1, 0°.32N×126°.04E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.5/40, mbtmp3.7/3, Error ellipse: s-maj=199.6km s-min=26.7km az=65.0*

*DJA **01** 13:32:18.0±0.5, 1°N±3°×12°8E±°, h10^{km}, M3.7/7, mb4.2/1, MLv3.4/7*

ISC 01 13:32:19.7±3.3, 0°.9N±0°.1×127°.5E±0°.1, h17^{km}±21^{km}, n8, σ1^{s}14/9, mb3.7/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.22	232	P	Pb	13 32 24.4	-0.8
TNTI				S	Sb	13 32 29.1	+0.1
LBMI	Labuha	1.53	181	Pg	Pg	13 32 49.4	+0.2
KMSI	Cibinong	3.57	265	P	Pn	13 33 14.0	-0.4
GTOI	Gorontalo	4.54	267	P	Pn	13 33 29.8	+2.1
TTSI	Tana Toraja	8.66	243	P	Pn	13 34 24.5	+0.2
WRA	Warramunga Arr	21.77	163	P	P	13 37 10.9	+0.1
	1.3nm,0.5s,baz=337,slow=11,SNR=4.0						
ASAR	Alice Springs	25.20	166	P	P	13 37 45.4	+0.7
	3.0nm,0.9s,baz=342,slow=9.3,SNR=22						
MKAR	Makanchi Array	60.33	326	P	P	13 42 27.1	-0.7
	0.4nm,0.6s,baz=120,slow=8.5,SNR=4.7						

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*IDC **01** 13:36:04.9±1.1, 0°.84N×127°.16E, h0^{km}, mb4.0/5, mb1 4.1/7, mb1mx3.8/42, mbtmp3.9/7, ML3.5/2, MS3.3/4, Ms1 3.3/4, ms1mx2.8/56, Error ellipse: s-maj=51.5km s-min=18.9km az=66.0*

*DJA **01** 13:36:06.1±0.3, 1°N±3°×12°8E±°, h10^{km}, M4.0/13, mb4.2/8, MLv3.9/13*

*NEIC **01** 13:36:07.2±0.8, 0°.97N±0°.06×127°.45E±0°.08, h12^{km}±6^{km}, mb4.2/10, Error ellipse: s-maj=11.3km s-min=9.2km az=103.0*

ISC 01 13:36:06.4±0.8, 0°.97N±0°.07×127°.52E±0°.06, h10^{km}, n37, σ1^{s}04/34, mb4.2/9, MS3.2/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.25	218	P	Pg	13 36 11.3	-0.3
TNTI				S	Sg	13 36 15.6	+0.6
TNTI	Ternate	0.25	218		Pg	13 36 11.3	-0.3
TNTI					Sg	13 36 15.3	+0.2
LBMI	Labuha	1.60	181	P	Pn	13 36 34.6	-0.2
SANI	Sanana	3.37	207	P	Pn	13 36 58.6	-0.6
KMSI	Cibinong	3.56	264	P	Pn	13 37 02.7	+0.9
SWI	Sorong	4.16	116	P	Pn	13 37 08.3	-1.7
SIJI	Sorong	4.17	116	Pn	Pn	13 37 12.3	+2.2
	2.3nm,0.3s,baz=109,slow=13,SNR=11						
SIJI				Sn	Sn	13 38 01.1	+2.2
	0.3nm,0.3s,baz=15,slow=23,SNR=1.2						
GTOI	Gorontalo	4.52	266	P	Pn	13 37 17.5	+2.4
MRSI	Marisa	5.60	265	P	Pn	13 37 30.6	+0.7
	0.2nm31nm,0.8s						
TOLI2	Tolitoli	6.74	271	Pn	Pn	13 37 45.8	+0.2
MPSI	Mapaga	7.65	265	P	Pn	13 37 58.7	+0.7
	0.1nm12nm,0.6s						
TTSI	Tana Toraja	8.67	243	P	Pn	13 38 11.5	-0.6
	12nm,0.7s						
BNSI	Bone	9.13	234	P	Pn	13 38 18.8	+0.4
	19nm,0.8s						
SPSI	Sidrap Palu	9.17	238	P	Pn	13 38 19.4	+0.5
	33nm,0.7s						
BKSI	Bulukumba	9.68	230	P	Pn	13 38 34.6	+8.7
KAPI	Kappang	9.78	232	Pn	Pn	13 38 29.0	+1.8
EDFI	Ende, Flores	11.27	211	P	Pn	13 38 47.7	-0.1
	5.3nm,1.1s						
KNRA	Kununurra	16.59	176		Pn	13 40 01.0	+1.8
KNRA				IAmb	IAmb	13 40 18.7	
	comp=Z,16nm,1.2s						
FITZ	Fitzroy Crossi	19.04	185	P	P	13 40 27.4	-1.4
	comp=Z,0.1nm,0.3s,baz=353,slow=8.1,SNR=1.4						
GUMO	Guam	21.26	53	LR	LR	13 48 04.4	
	comp=Z,35nm,22.0s,baz=258,slow=33						
WB0	Warramunga Arr	21.68	162	P	P	13 40 57.3	-0.3
WB0				IAmb	IAmb	13 41 02.0	
	comp=Z,18nm,1.3s						
WRA	Warramunga Arr	21.83	163	P	P	13 40 59.1	-0.1
	comp=Z,5.9nm,0.7s,baz=336,slow=11,SNR=8.4						
WRA	Warramunga Arr	21.83	163	IAmb	IAmb	13 41 02.0	
	comp=Z,0.4nm,1.0s						
WB2	Warramunga Arr	21.84	162	P	P	13 40 59.4	+0.2
WB2				IAmb	IAmb	13 41 03.6	
	comp=Z,8.2nm,0.8s						
PMG	Port Moresby	22.11	118	LR	LR	13 52 45.8	
	comp=Z,78nm,18.5s,baz=326,slow=45						
AS31	Alice Springs	25.26	166	P	P	13 41 32.6	-0.4
AS31				IAmb	IAmb	13 41 39.2	
	comp=Z,2.7nm,0.8s						
ASAR	Alice Springs	25.26	166	P	P	13 41 32.7	-0.3
	comp=Z,4.3nm,0.8s,baz=344,slow=9.1,SNR=25						
ASAR	Alice Springs	25.26	166	P	P	13 41 32.5	-0.6
PSI	Prapat	28.64	274	LR	LR	13 53 44.5	
	comp=Z,70nm,18.4s,baz=96,slow=38						
BBOO	Buckleboo	34.55	167	P	P	13 42 54.8	-0.6
STKA	Stephens Creek	35.29	159	P	P	13 43 01.8	+0.1
	comp=Z,3.8nm,0.9s,baz=324,slow=12,SNR=3.3						
STKA				LR	LR	13 59 53.5	
	comp=Z,60nm,18.0s,baz=23,slow=40						
STKA	Stephens Creek	35.29	159	IAmb	IAmb	13 43 17.7	
	comp=Z,3.0nm,1.5s						
SONM	Songino Array	50.15	342	P	P	13 45 02.1	-0.1
	comp=Z,0.7nm,0.7s,baz=162,slow=10.0,SNR=3.0						
MK31	Makanchi Array	60.26	326	P	P	13 46 14.1	-1.1
MK31				IAmb	IAmb	13 46 24.7	
	comp=Z,8.2nm,1.4s						
MKAR	Makanchi Array	60.26	326	P	P	13 46 14.7	-0.5
	comp=Z,0.7nm,0.6s,baz=117,slow=7.1,SNR=8.3						
GAR	Garm	64.37	313	P	P	13 46 42.3	-0.7
KKAR	Karatay Array	65.78	318	P	P	13 46 51.7	-0.3

IDC 01 13:38:08.4±3.2, 31°.77S×177°.97W, h0^{km}, mb3.6/2, mb1 3.9/3, mb1mx3.7/31, mbtmp3.7/3, ML3.2/1, Error ellipse: s-maj=77.9km s-min=48.3km az=122.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.63	211	Pn	Pn	13 40 00.6	-0.2
	0.3nm,0.3s,baz=302,slow=23,SNR=1.6						
URZ				Sn	Sn	13 41 23.0	-4.9
	0.7nm,0.3s,baz=121,slow=23,SNR=2.8						
ASAR	Alice Springs	43.08	268	P	P	13 46 10.2	-0.2
	0.3nm,0.6s,baz=105,slow=7.6,SNR=5.9						
WRA	Warramunga Arr	44.19	274	P	P	13 46 19.3	-0.1
	0.7nm,0.5s,baz=114,slow=7.4,SNR=4.6						
FINES	FINESS Array B	146.43	339	PKPbc	PKPdf	13 57 49.9	+0.5
	2.8nm,0.9s,baz=48,slow=2.8,SNR=4.8						

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*BJI **01** 13:39:53.6±0.0, 16°.40S×71°.00W, h106^{km}, mB5.3/14*

*MOS **01** 13:39:53.3±1.3, 16°.33S×71°.29W, h113^{km}, mb5.2/46, Error ellipse: s-maj=13.3km s-min=5.3km az=114.2*

*VAO **01** 13:39:54.0±0.3, 16°.37S×70°.95W, h99^{km}, mb5.2*

*ARE **01** 13:39:55±2.3, 16°.51S±0°.07×71°.31W±0°.10, h128^{km}±4^{km}, Error ellipse: s-maj=13.5km s-min=9.5km az=79.0*

*NEIC **01** 13:39:55.1±1.6, 16°.38S±0°.07×71°.11W±0°.10, h117^{km}±4^{km}, mb5.3/372, Mww5.0, ML5.0(ARE), Mwr5.3(GUC), Error ellipse: s-maj=13.6km s-min=9.7km az=82.0*

*GUC **01** 13:39:56.5±0.5, 16°.58S×71°.30W, h128^{km}±3^{km}, MW5.3*

*IDC **01** 13:39:57.5±0.4, 16°.32S×71°.00W, h137^{km}±3^{km}, mb4.7/17, mb1 4.8/19, mb1mx4.7/31, mbtmp5.1/19, MS4.0/7, Ms1 3.9/7, ms1mx3.5/29, Error ellipse: s-maj=11.6km s-min=8.8km az=25.0*

*GCMT **01** 13:39:58.1±0.3, 16°.46S±0°.02×71°.29W±0°.02, h134^{km}±2^{km}, MW5.1/95, Moment Tensor Solution. s43,c48; s95,c125; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.31±.12; $M_{\theta\theta}$1.19±.15; $M_{\phi\phi}$3.13±.19; $M_{r\theta}$0.02±.12; $M_{\theta\phi}$-3.14±.15; $M_{\phi r}$-1.49±.15; Best double couple: $M_0$5.13200×10^{16} NP1:ϕ_s129.00000°,δ40.00000°,λ-111.00000°. NP2: ϕ_s336.00000°,δ53.00000°,λ-73.00000°. Principal axes: T 5.5960, Plg7.0000°, Azm54.0000°; N -0.9190, Plg13.0000°, Azm146.0000°; P -4.6670, Plg75.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 13:40:01, 16°.58S×71°.28W, h100^{km}, Moment Tensor Solution. Duration: 16^{s}4 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.98; $M_{\theta\theta}$1.76; $M_{\phi\phi}$2.22; $M_{r\theta}$0.23; $M_{\theta\phi}$-2.35; $M_{\phi r}$-1.08; Fault plane solution: $M_0$4.32000×10^{16} NP1: ϕ_s129.00000°,δ39.00000°,λ-103.00000°. NP2: ϕ_s326.00000°,δ52.00000°,λ-79.00000°. Principal axes: T 4.4595, Plg6.0000°, Azm49.0000°; N -0.2927, Plg8.0000°, Azm139.0000°; P -4.1668, Plg80.0000°, Azm280.0000°;*

ISC 01 13:39:55.4±0.4, 16°.51S±0°.03×71°.12W±0°.05, h126^{km}±3^{km}, h127^{km}:pP-P, n908, σ1^{s}24/913, mb5.2/222, 15C-15D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	Chacalluta	2.00	158	⇑*i*P	Pn	13 40 30.1	+1.0
AP01				*i* S	Sn	13 40 55.3	+0.4
AP01	Chacalluta	2.00	158		Pn	13 40 30.0	+1.0
PB12	IPOC Station P	2.23	160	⇑*i*P	Pn	13 40 32.5	+0.4
PB12				*i* S	Sn	13 41 00.3	+0.1
PB12	IPOC Station P	2.23	160		Pn	13 40 32.5	+0.4
PB16	IPOC Station P	2.38	140		Pn	13 40 35.9	+1.4
I08BO	LAS PENAS INFR	2.57	84	P	Pn	13 40 40.0	+3.1
	baz=266,slow=13,SNR=5.0						
LPAZ	La Paz	2.87	86	P	Pn	13 40 43.4	+2.5
	303nm,0.3s,baz=270,slow=8.6,SNR=9076						
LPAZ				S	Sn	13 41 17.8	+2.1
	70nm,0.3s,baz=184,slow=24,SNR=8.1						
LPAZ	La Paz	2.87	86	⇑*i*P	Pn	13 40 43.5	+2.6
LPAZ				*i* S	Sn	13 41 17.9	+2.1
LPAZ	La Paz	2.87	86	*e*P	Pn	13 40 41.4	+0.5
PB11	IPOC Station P	3.52	157	⇑*i*P	Pn	13 40 48.4	-0.5
PB11				*e*S	Sn	13 41 28.4	-1.9
PB11	IPOC Station P	3.52	157	Pn	Pn	13 40 48.5	-0.5
TA02	Huaiquique	3.86	166	⇑*e*P	Pn	13 40 52.8	-0.4
TA02				*i* S	Sn	13 41 35.2	-2.8
TA02	Huaiquique	3.86	166		Pn	13 40 52.8	-0.4
HMBC	Humberstone	3.93	163	⇑*i*P	Pn	13 40 53.5	-0.8
HMBC				*i* S	Sn	13 41 37.3	-2.5
PB08	IPOC Station P	4.07	153	*e*P	Pn	13 40 57.2	+0.8
PB08				*e*S	Sn	13 41 42.2	-1.3
PB08	IPOC Station P	4.07	153	Pn	Pn	13 40 56.9	+0.6
TA01	Diego Aracena	4.13	168	⇑*e*P	Pn	13 40 56.5	-0.3
TA01				*i* S	Sn	13 41 41.1	-3.5
TA01	Diego Aracena	4.13	168	Pn	Pn	13 40 56.4	-0.5
PATCX	Punta Patache	4.39	168	*e*P	Pn	13 40 59.7	-0.6
PATCX				*i* S	Sn	13 41 46.9	-3.9
PATCX	Punta Patache	4.39	168		Pn	13 40 59.6	-0.7
PB01	IPOC Station P	4.77	161	Pn	Pn	13 41 04.5	-0.9
PB07	IPOC Station P	5.32	168	Pn	Pn	13 41 12.1	-0.9
PB09	IPOC Station P	5.55	162	Pn	Pn	13 41 15.7	-0.3
PB04	IPOC Station P	5.87	171	Pn	Pn	13 41 18.8	-1.5
PB06	IPOC Station P	6.34	167	Pn	Pn	13 41 25.1	-1.5
LVC	Limon Verde	6.42	161	P	Pn	13 41 27.9	+0.1
	117nm,0.3s,baz=326,slow=8.7,SNR=515						
LVC				S	Sn	13 42 36.0	-4.0
	383nm,0.3s,baz=186,slow=21,SNR=25						
LVC	Limon Verde	6.42	161	*e*P	Pn	13 41 28.0	+0.1
LVC	Limon Verde	6.42	161	Pn	Pn	13 41 27.8	-0.1
PB15	IPOC Station P	6.84	167	Pn	Pn	13 41 31.7	-1.8
PB10	IPOC Station P	6.99	176	Pn	Pn	13 41 33.2	-2.1
NNA	Nana	7.14	308	P	Pn	13 41 35.9	-1.5
	14nm,0.3s,baz=138,slow=12,SNR=16						
NNA				S	Sn	13 42 53.3	-3.9
	24nm,0.3s,baz=211,slow=23,SNR=8.6						
NNA				LR	LR	13 44 52.4	
	comp=Z,503nm,18.9s,baz=138,slow=41						
NNA	Nana	7.14	308	P	Pn	13 41 33.4	-4.0
NNA						13 42 53.3	
NNA	Nana	7.14	308	Pn	Pn	13 41 33.4	-4.0
PB14	IPOC Station P	8.11	175	Pn	Pn	13 41 48.0	-2.6
ETMB	Extrema	8.19	36	Pn	Pn	13 41 49.6	-1.9
CZSB	Cruzeiro do Su	8.86	350	*e*P	Pn	13 41 57.4	-3.1
CZSB	Cruzeiro do Su	8.86	350	Pn	Pn	13 41 55.5	-5.1
SIV	San Ignacio	9.66	88	P	Pn	13 42 08.6	-2.7
	17nm,0.3s,baz=270,slow=10,SNR=149						
AC02	Maricunga	10.44	170		Pn	13 42 20.6	-1.6
GO03	Copiap	11.06	176		Pn	13 42 28.2	-1.9
VILB	Vilhena	11.13	73	*e*P	Pn	13 42 28.1	-3.0
VILB	Vilhena	11.13	73	Pn	Pn	13 42 27.7	-3.4
PTLB	Pontes e Lacer	11.57	86	*e*P	Pn	13 42 33.4	-3.4
PTLB	Pontes e Lacer	11.57	86	Pn	Pn	13 42 32.9	-3.9
AC04	Llanos de Chal	11.64	180	Pn	Pn	13 42 34.1	-3.6
ATAH	Atahualpa	11.72	322	P	Pn	13 42 37.7	-1.5
	0.3nm,0.3s,baz=154,slow=5.0,SNR=2.3						
TBTG	Tabatinga, AM	12.30	6	*e*P	Pn	13 42 44.6	-1.8
TBTG	Tabatinga, AM	12.30	6	Pn	Pn	13 42 41.5	-5.0
LCO	Las Campanas	12.45	178	P	Pn	13 42 46.4	-2.2
LCO	Las Campanas	12.45	178		Pn	13 42 46.4	-2.2
GO04	Tololo Observa	13.61	179	Pn	Pn	13 43 02.2	-1.3
PDRB	Porto dos Gac	14.78	73	*e*P	Pn	13 43 15.1	-3.2
SALV	Santo Antonio	14.83	90	*e*P	Pn	13 43 16.6	-2.2
ZON	Zonda	15.13	172	P	Pn	13 43 22.3	-0.4
ZON				pmax	pmax		
	comp=Z,38nm,1.0s						
ZON	Zonda	15.13	172	Pn	Pn	13 43 22.3	-0.4
AQDB	Aquidauana	15.14	107	*e*P	Pn	13 43 21.7	-1.1
AQDB	Aquidauana	15.14	107		Pn	13 43 20.2	-2.7
CLDB	Colider	15.90	71	*e*P	Pn	13 43 29.7	-2.5
CPUP	Villa Florida	16.12	130	P	Pn	13 43 33.2	-1.7
	comp=Z,1.3nm,0.3s,baz=308,slow=11,SNR=13						
CPUP	Villa Florida	16.12	130	P	Pn	13 43 32.1	-2.8
CPUP				pmax	pmax		
	comp=Z,36nm,1.5s						
CPUP	Villa Florida	16.12	130		Pn	13 43 32.1	-2.8
MT02	Curacav	16.68	180		Pn	13 43 39.3	-2.4
MACA	Manacapuru-AM	16.77	39	*e*P	P	13 43 40.9	-2.0
MACA	Manacapuru-AM	16.77	39		P	13 43 39.9	-3.1
PTLC	Puerto Leguiza	16.97	347	*e*P	P	13 43 40.6	-4.5
MT09	Talagante	17.20	180	P	P	13 43 46.7	-1.0
MT01	Popeta	17.28	180	P	P	13 43 46.8	-1.7
BO01	Tunca	17.81	180	P	P	13 43 53.5	-0.8
NPGB	Novo Progresso	18.05	60	*e*P	P	13 43 55.9	-1.2
OTAV	Otavalo	18.14	336	P	P	13 43 54.6	-4.0
OTAV				pmax	pmax		
	comp=Z,58nm,1.2s						
OTAV	Otavalo	18.14	336	*e*P	Pn	13 44 00.8	+0.9
OTAV	Otavalo	18.14	336	*e*P	P	13 43 58.9	+0.3
OTAV	Otavalo	18.14	336	P	P	13 43 54.6	-4.0
PAC1	Pacto, Paraso	18.31	335	*e*P	P	13 43 59.8	-0.3
TRCB	Terra Rica	18.49	113	*e*P	P	13 44 02.2	+0.4
TRCB	Terra Rica	18.49	113	P	P	13 44 01.3	-0.5
TRCB				IAmb	IAmb	13 44 10.7	
	comp=Z,90nm,0.6s						
ARAG	Araguaiana, MT	18.57	90	*e*P	P	13 44 00.8	-2.0
GCUF	Volcan Galeras	18.66	340	*e*P	Pn	13 44 07.6	+1.5
ITQB	Itaqui	18.67	137	*e*P	P	13 44 04.3	+0.7
ITQB	Itaqui	18.67	137	P	P	13 44 03.2	-0.5
ITQB				IAmb	IAmb	13 44 11.8	
	comp=Z,119nm,0.9s						
GARC	Garzon, Huila	19.07	347	*e*P	P	13 44 07.8	-0.7
PTGA	Pitinga	19.14	36	P	P	13 44 06.8	-2.2
	comp=Z,6.7nm,0.3s,baz=207,slow=11,SNR=53						
PTGA				S	S	13 47 32.9	-6.5
	comp=Z,0.3nm,0.3s,baz=316,slow=23,SNR=3.0						
SOTA	Rioblanco	19.30	343	*e*P	P	13 44 13.4	+2.2
ITTB	Itaituba	19.33	53	*e*P	P	13 44 10.2	-0.8
PCON	Cinco Dias	19.43	344	*e*P	P	13 44 13.4	+0.7
PTGB	Pitanga	19.60	118	*e*P	P	13 44 14.5	+0.5
SNDB	Serra Nova Dou	19.73	79	*e*P	P	13 44 14.3	-1.1
MARP	Paez Belalcaza	19.81	346	*e*P	P	13 44 16.7	+0.1
ITRB	Iturama	19.98	102	*e*P	P	13 44 18.4	+0.3
PRAC	Prado	20.43	349	*e*P	P	13 44 22.6	-0.4
ITAB	Concordia	20.57	124	*e*P	P	13 44 24.6	+0.3
ITAB	Concordia	20.57	124	P	P	13 44 24.1	-0.3
ITAB				IAmb	IAmb	13 44 28.4	
	comp=Z,89nm,0.8s						
HORQ	Saladito	20.59	344	*e*P	P	13 44 24.8	-0.2
ORTC	Ortega, Tolima	20.69	348	*e*P	P	13 44 25.1	-0.7
YOTC	Yotoco, Valle	21.01	345	*e*P	P	13 44 28.6	-0.6
ANIL	Santa Ana	21.29	348	*e*P	P	13 44 29.6	-2.8
FRTB	Fartura	21.36	112	*e*P	P	13 44 33.1	+0.2
BOAV	Boa Vista	21.50	30	*e*P	P	13 44 33.5	-0.9
BOAV	Boa Vista	21.50	30	P	P	13 44 32.7	-1.6
PLMC	San Jos del P	21.88	346	*e*P	P	13 44 38.2	-0.2
IPMB	Ipameri, GO	21.92	97	*e*P	P	13 44 37.4	-1.5
GUY2C	Guyana, Caldas	22.00	349	*e*P	P	13 44 39.1	-1.0
PLTB	Pedras Altas	22.00	137	*e*P	P	13 44 39.3	-0.2
PLTB	Pedras Altas	22.00	137	P	P	13 44 38.5	-1.0
PLTB				IAmb	IAmb	13 44 42.5	
	comp=Z,91nm,1.2s						
MALB	Monte Alegre	22.07	50	*e*P	P	13 44 38.5	-1.8
SPBC	San Pablo de B	22.21	352	*e*P	P	13 44 42.0	+0.1
PIZC	Pizarro, Choco	22.21	343	*e*P	P	13 44 41.5	-0.2
BDFB	Brasilia	22.21	91	P	P	13 44 40.6	-1.4
	comp=Z,51nm,0.7s,baz=254,slow=15,SNR=68						
BDFB	Brasilia	22.21	91	P	P	13 44 39.9	-2.1
NORC	Norcasia	22.24	350	*e*P	P	13 44 38.2	-3.9
RUSC	La Rusia	22.34	355	*e*P	P	13 44 41.5	-2.1
PEXB	Peixe	22.53	82	*e*P	P	13 44 43.7	-1.3
CBOC	Ciudad Bolivar	22.75	347	*e*P	P	13 44 45.8	-1.5
HELC	Santa Helena	22.97	349	*e*P	P	13 44 44.8	-4.8
RCLB	Rio Claro- Sao	22.99	109	*e*P	P	13 44 49.5	+0.1
BARC	Barichara	23.04	355	*e*P	P	13 44 46.7	-3.4
PTBC	PUERTO BERRIO,	23.14	352	*e*P	P	13 44 45.7	-5.1
PRPB	Parauapebas	23.25	66	*e*P	P	13 44 50.1	-1.7
ELOV	Elorza	23.41	4	*e*P	P	13 44 50.2	-3.1
TER01	Tubaro-SC	23.53	124	*e*P	P	13 44 53.9	-0.4
VAO	Valinhos	23.61	110	*e*P	P	13 44 55.3	+0.1
DBBC	Dabeiba	23.91	347	*e*P	P	13 44 58.0	+0.1
ZARC	Zaragoza, Cauc	24.13	351	*e*P	P	13 44 56.2	-3.6
ZARC	Zaragoza, Cauc	24.13	351	P	P	13 44 57.1	-2.7
PLCA	Paso Flores	24.14	179	P	P	13 45 01.6	+1.8
	comp=Z,96nm,1.2s,baz=349,slow=10,SNR=52						
PLCA				PcP	PcP	13 48 39.6	+2.1
	comp=Z,9.3nm,0.9s,baz=346,slow=5.8,SNR=5.0						
PLCA	Paso Flores	24.14	179	P	P	13 45 00.6	+0.8
PLCA						13 48 39.2	
PLCA				pmax	pmax		
	comp=Z,43nm,0.8s						
PLCA	Paso Flores	24.14	179	*e*P	P	13 45 01.9	+2.1
PLCA	Paso Flores	24.14	179	P	P	13 45 00.6	+0.8
PLCA					PcP	13 48 39.1	+1.7
SMTB	Santa Maria do	24.16	75	*e*P	P	13 44 59.5	-0.6
PTAC	Punta Ardita,	24.42	344	*e*P	P	13 45 01.3	-1.1
SOCV	Socops	24.63	1	*e*P	P	13 45 01.9	-2.4
OCAC	Ocana	24.68	355	P	P	13 45 02.2	-2.7
MCPB	Macapa, AP	24.71	51	*e*P	P	13 45 04.7	-0.4
PARB	Paraibuna	24.89	110	*e*P	P	13 45 07.2	+0.5
SDV	Santo Domingo	25.23	1	*e*P	P	13 45 09.1	-0.9
SDV	Santo Domingo	25.23	1	P	P	13 45 07.1	-2.9
SMLC	San Martn de	25.32	353	*e*P	P	13 45 07.6	-2.9
MOTC	Monteria, Cord	25.52	350	*e*P	P	13 45 09.5	-2.9
MOTC	Monteria, Cord	25.52	350	P	P	13 45 10.4	-2.0
SDBA	SAO DESIDERIO	25.70	84	*e*P	P	13 45 13.0	-1.1
JANB	Januaria	25.83	91	*e*P	P	13 45 14.4	-0.9
MC01	Montes Claros	26.04	94	*e*P	P	13 45 17.3	+0.1
DIAM	Diamantina, MG	26.24	98	*e*P	P	13 45 19.0	-0.1
SJCC	San Jacinto, C	26.54	351	*e*P	P	13 45 18.6	-3.1
SJCC	San Jacinto, C	26.54	351	P	P	13 45 19.3	-2.4
TMAB	Tom-Au,PA,Br	26.65	61	*e*P	P	13 45 22.6	0.0
COYC	Coyhaique	28.99	181	P	P	13 45 41.2	-1.9
CVTR	Volcan Turrial	29.18	334	P	P	13 45 41.6	-3.9
CVTR				IAmb	IAmb	13 45 49.1	
	comp=Z,51nm,1.2s						
ROSB	Rosrio	29.78	66	*e*P	P	13 45 49.5	-0.9
JTS	Las Juntas de	29.94	332	⇓*e*P	P	13 45 52.6	+0.8
JTS				pmax	pmax		

	comp=Z,21nm,1.2s						
GUA01	Guaratinga, BA	30.00	95	*e*P	P	13 45 52.8	+0.5
NBIT	Itapeh - BA	30.52	92	*e*P	P	13 45 57.5	+0.5
NBPN	Ponto Novo - B	30.54	83	*e*P	P	13 45 56.0	-1.2
GDU01	Guandu, BA	30.56	89	*e*P	P	13 45 56.7	-0.6
NBPS	Pedro II - PI	31.50	71	*e*P	P	13 46 04.2	-1.5
MPOM	Morne Pois Mar	32.38	19	P	P	13 46 08.2	-5.0
MPOM				IAmb	IAmb	13 46 13.4	
	comp=Z,81nm,1.0s						
NBPB	Pedra_Branca-C	32.76	74	*e*P	P	13 46 16.2	-0.5
NBLA	Lagarto - SE	32.80	85	*e*P	P	13 46 15.2	-1.8
NBMA	Muriti-CE	32.88	78	*e*P	P	13 46 16.9	-0.9
NBMO	Morrinhos-CE	33.23	70	*e*P	P	13 46 19.6	-1.1
NBCL	Cascavel-CE	34.45	73	*e*P	P	13 46 31.3	0.0
CRPR	Cabo Rojo, PR	34.52	7	P	P	13 46 28.8	-2.9
CRPR				IAmb	IAmb	13 46 42.7	
	comp=Z,50nm,1.1s						
NBAN	Anadia - AL	34.57	83	*e*P	P	13 46 31.0	-1.4
NBLV	Livramento - P	34.62	79	*e*P	P	13 46 32.2	-0.6
CBYP	Canovanas	34.95	9	P	P	13 46 32.2	-3.2
CBYP				IAmb	IAmb	13 46 34.0	
	comp=Z,32nm,0.9s						
GCPR	Guaynabo City	34.95	8	P	P	13 46 32.1	-3.3
GCPR				IAmb	IAmb	13 46 33.7	
	comp=Z,27nm,0.8s						
CUPR	Culebra, Puert	35.07	10	P	P	13 46 33.5	-2.9
NBRF	Rio Formoso -	35.93	82	*e*P	P	13 46 42.9	-1.1
NBPV	Pedro Velho	36.45	78	*e*P	P	13 46 48.0	-0.4
RPN	Rapa Nui	36.89	247	LR	LR	13 58 27.3	
	comp=Z,134nm,18.5s,baz=358,slow=30						
USHA	Ushuaia	38.30	177	P	P	13 47 05.4	+1.9
	comp=Z,30nm,0.6s,baz=15,slow=7.3,SNR=15						
SOR	Soroa	40.75	343	P	P	13 47 24.5	+0.4
SOR				pmax	pmax		
	comp=Z,70nm,1.0s						
SOR	Soroa	40.75	343	P	P	13 47 24.5	+0.4
SOR				IAmb	IAmb	13 47 27.8	
	comp=Z,70nm,1.0s						
061Z	Ochoppi	43.18	347	P	P	13 47 44.3	+0.5
DWPF	Disney Wildern	45.47	347	P	P	13 48 02.0	+0.1
	baz=166						
HOPE	Hope Point	46.24	153	P	P	13 48 08.9	+1.1
HOPE				pmax	pmax		
	comp=Z,54nm,0.9s						
HOPE	Hope Point	46.24	153	P	P	13 48 08.8	+1.1
HOPE				IAmb	IAmb	13 48 11.2	
	comp=Z,54nm,0.9s						
456A	Hilliard	48.12	347	P	P	13 48 22.4	-0.1
PMSA	Palmer Station	48.46	176	P	P	13 48 26.4	+1.6
	comp=Z,21nm,0.9s,baz=26,slow=9.8,SNR=4.2						
257A	Skidaway Islan	49.13	349	P	P	13 48 29.3	-1.0
TIGA	Tifton	49.15	346	P	P	13 48 29.5	-0.9
TIGA				IAmb	IAmb	13 48 33.1	
	comp=Z,81nm,1.1s						
TIGA	Tifton	49.15	346	P	P	13 48 30.3	-0.2
	baz=164						
255A	Hazlehurst	49.37	347	P	P	13 48 31.0	-1.1
352A	Blakely	49.52	344	P	P	13 48 32.3	-1.0
BRAL	Brewton	49.81	342	P	P	13 48 34.7	-0.8
BRAL	Brewton	49.81	342	P	P	13 48 35.4	-0.1
	baz=160						
NHSC	New Hope	50.09	350	P	P	13 48 37.6	+0.1
NHSC	New Hope	50.09	350	P	P	13 48 37.5	-0.1
	baz=169						
154A	Montrose	50.17	347	P	P	13 48 37.8	-0.4
250A	Grady	50.35	343	P	P	13 48 39.0	-0.5
152A	Waverly Hall	50.60	345	P	P	13 48 40.3	-1.1
152A				IAmb	IAmb	13 48 42.0	
	comp=Z,78nm,1.2s						
346A	Big Creek Wild	50.78	340	P	P	13 48 42.1	-0.6
Y57A	Sumter	51.01	350	P	P	13 48 44.1	-0.4
GOGA	Godfrey	51.02	347	P	P	13 48 43.2	-1.3
GOGA				pmax	pmax		
	comp=Z,38nm,1.2s						
GOGA	Godfrey	51.02	347	P	P	13 48 43.2	-1.3
GOGA				IAmb	IAmb	13 48 45.1	
	comp=Z,38nm,1.1s						
GOGA	Godfrey	51.02	347	P	P	13 48 44.0	-0.5
	baz=165,SNR=9.7						
344A	Westbrook Farm	51.27	338	P	P	13 48 45.6	-0.8
344A				IAmb	IAmb	13 48 47.6	
	comp=Z,49nm,0.8s						
Z51A	Franklin	51.33	345	P	P	13 48 45.5	-1.4
Z51A				IAmb	IAmb	13 48 49.2	
	comp=Z,36nm,1.4s						
HODGE	Hodges	51.56	348	P	P	13 48 48.3	-0.2
HODGE				IAmb	IAmb	13 48 49.3	
	comp=Z,38nm,1.0s						
Y52A	Lilburn	51.59	346	P	P	13 48 47.4	-1.4
Y52A				IAmb	IAmb	13 48 49.3	
	comp=Z,30nm,1.1s						
BIRD	Birdtown, Kers	51.64	350	P	P	13 48 48.2	-0.9
BIRD				IAmb	IAmb	13 48 50.6	
	comp=Z,57nm,0.9s						
342A	Flagon Creek P	51.78	337	P	P	13 48 50.4	+0.1
146A	Union	51.80	341	P	P	13 48 49.8	-0.5
VBMS	Vicksburg	51.89	339	P	P	13 48 50.7	-0.3
	baz=156						
HKT	Hockley	51.97	333	*d i*P	P	13 48 52.0	+0.4
HKT				pmax	pmax		
	comp=Z,22nm,1.1s						
HKT	Hockley	51.97	333	P	P	13 48 50.4	-1.2
Z47A	Carrollton	52.01	342	P	P	13 48 50.5	-1.4
Z47A				IAmb	IAmb	13 48 52.1	
	comp=Z,42nm,0.8s						
W57A	Gilead	52.06	351	P	P	13 48 51.1	-1.2
W57A				IAmb	IAmb	13 48 53.4	
	comp=Z,30nm,0.9s						
KMSC	Kings Mountain	52.27	349	P	P	13 48 52.2	-1.6
KMSC				IAmb	IAmb	13 48 54.7	
	comp=Z,54nm,0.9s						
KMSC	Kings Mountain	52.27	349	P	P	13 48 53.3	-0.5
	baz=168,SNR=16						
833A	Chaparral WMA,	52.30	328	P	P	13 48 54.7	+0.5
	baz=145,SNR=12						
BG3	Lake Jocassee	52.43	348	P	P	13 48 54.1	-0.9
BG3				IAmb	IAmb	13 48 56.0	
	comp=Z,34nm,1.0s						
X51A	Calhoun	52.45	346	P	P	13 48 53.9	-1.2
X51A				IAmb	IAmb	13 48 57.1	
	comp=Z,66nm,1.4s						
FPAL	Fort Paine	52.60	345	P	P	13 48 55.1	-1.2
W52A	Murphy	52.74	347	P	P	13 48 56.4	-0.9
W52A				IAmb	IAmb	13 48 58.0	
	comp=Z,33nm,1.1s						
X48A	Hartselle	52.90	343	P	P	13 48 56.8	-1.6
X48A				IAmb	IAmb	13 48 58.6	
	comp=Z,25nm,0.9s						
V55A	Taylorsville	52.94	350	P	P	13 48 57.8	-1.0
NATX	Nacogdoches	53.04	335	P	P	13 49 00.3	+0.8
	baz=152						
V53A	Saluda	53.06	348	P	P	13 48 58.9	-0.8
V53A				IAmb	IAmb	13 49 00.3	
	comp=Z,27nm,0.8s						
Y45A	Yeager Farm, C	53.08	341	P	P	13 48 58.8	-1.0
Y45A				IAmb	IAmb	13 49 00.5	
	comp=Z,32nm,1.0s						
W50A	Signal Mountai	53.16	345	P	P	13 48 59.1	-1.3
CPCT	Cooper Cave	53.21	346	P	P	13 48 59.6	-1.1
CPCT				IAmb	IAmb	13 49 01.3	
	comp=Z,40nm,1.3s						
TKL	Tuckaleechee C	53.25	347	P	P	13 49 00.0	-1.0
TKL				pmax	pmax		
	comp=Z,46nm,1.0s						
TKL	Tuckaleechee C	53.25	347	P	P	13 49 00.0	-1.0
TKL				IAmb	IAmb	13 49 01.3	
	comp=Z,46nm,1.0s						
U56A	King	53.29	351	P	P	13 49 00.1	-1.2
SWET	Sewanee	53.33	345	P	P	13 48 59.9	-1.8
SWET				IAmb	IAmb	13 49 01.1	
	comp=Z,16nm,0.7s						
V52A	Sevierville	53.39	347	P	P	13 49 00.9	-1.1
435B	Jarrell	53.47	331	P	P	13 49 01.6	-1.1
435B				IAmb	IAmb	13 49 04.2	
	comp=Z,38nm,1.1s						
435B	Jarrell	53.47	331	P	P	13 49 03.0	+0.3
	baz=148						
V51A	Loudon	53.51	347	P	P	13 49 01.7	-1.3
V51A				IAmb	IAmb	13 49 03.3	
	comp=Z,35nm,1.1s						
T59A	Double "B" Far	53.54	354	P	P	13 49 01.9	-1.1
Z41A	Richland Creek	53.65	337	P	P	13 49 03.9	0.0
	baz=154						
PLAL	Pickwick Lake	53.68	343	P	P	13 49 02.1	-2.1
U54A	Nelsons Funny	53.70	349	P	P	13 49 02.9	-1.5
V48A	Smith Brothers	54.05	344	P	P	13 49 05.4	-1.4
V48A				IAmb	IAmb	13 49 06.5	
	comp=Z,18nm,0.8s						
TZTN	Tazewell	54.06	348	P	P	13 49 06.2	-0.7
TZTN				IAmb	IAmb	13 49 07.2	
	comp=Z,44nm,1.1s						
TZTN	Tazewell	54.06	348	P	P	13 49 05.6	-1.2
	baz=165,SNR=8.1						
BLA	Blacksburg	54.14	351	P	P	13 49 06.9	-0.7
BLA				pmax	pmax		
	comp=Z,65nm,1.3s						
BLA	Blacksburg	54.14	351	P	P	13 49 06.9	-0.7
BLA				IAmb	IAmb	13 49 09.6	
	comp=Z,65nm,1.2s						
BLA	Blacksburg	54.14	351	P	P	13 49 07.6	0.0
	baz=169,SNR=6.2						
WLAR	White Oak Lake	54.15	337	P	P	13 49 07.4	-0.1
W45A	Hickory Valley	54.17	342	P	P	13 49 05.8	-1.9
CLTN	Cedars of Leba	54.26	345	P	P	13 49 06.8	-1.5
JCT	Junction City	54.27	329	P	P	13 49 08.1	-0.5
JCT				pmax	pmax		
	comp=Z,22nm,0.8s						
JCT	Junction City	54.27	329	P	P	13 49 08.1	-0.5
JCT				IAmb	IAmb	13 49 10.4	
	comp=Z,22nm,0.8s						
JCT	Junction City	54.27	329	P	P	13 49 08.6	0.0
	baz=146,SNR=8.3						
WHTX	Lake Whitney,	54.44	332	P	P	13 49 08.9	-0.8
WHTX	Lake Whitney,	54.44	332	P	P	13 49 10.1	+0.4
	baz=149,SNR=7.4						
S57A	Dark Hollow, R	54.48	352	P	P	13 49 09.2	-0.7
S57A				IAmb	IAmb	13 49 11.7	
	comp=Z,26nm,1.2s						
Z38A	Mt. Pleasant	54.49	335	P	P	13 49 10.0	-0.1
U49A	Red Boiling Sp	54.52	345	P	P	13 49 08.3	-1.9
U49A				IAmb	IAmb	13 49 09.7	
	comp=Z,13nm,0.7s						
WVT	Waverly	54.69	343	P	P	13 49 08.9	-2.5
WVT				pmax	pmax		
	comp=Z,18nm,0.9s						
WVT	Waverly	54.69	343	P	P	13 49 08.9	-2.5
WVT				IAmb	IAmb	13 49 10.9	
	comp=Z,18nm,0.9s						
WVT	Waverly	54.69	343	P	P	13 49 09.7	-1.7
	baz=160						
X40A	Basin Creek Fa	54.76	338	P	P	13 49 11.3	-0.7
X40A	Basin Creek Fa	54.76	338	P	P	13 49 11.1	-0.9
	baz=154						
T50A	Nancy	54.79	347	P	P	13 49 09.7	-2.5
T50A				IAmb	IAmb	13 49 11.8	
	comp=Z,17nm,0.8s						
S54A	Dingess, Beckl	54.86	350	P	P	13 49 11.2	-1.5
LPAR	Lepanto	54.92	341	P	P	13 49 12.1	-1.0
MIAR	Mount Ida	55.08	337	P	P	13 49 13.4	-0.9
MIAR				pmax	pmax		
	comp=Z,42nm,0.8s						
MIAR	Mount Ida	55.08	337	P	P	13 49 13.4	-0.9
MIAR				IAmb	IAmb	13 49 15.2	
	comp=Z,42nm,0.8s						
MIAR	Mount Ida	55.08	337	P	P	13 49 14.0	-0.3
	baz=154,SNR=25						
S51A	Beattyville	55.12	348	P	P	13 49 13.0	-1.5
S51A				IAmb	IAmb	13 49 14.7	
	comp=Z,19nm,0.9s						
W41B	Gary Mavity, V	55.17	339	P	P	13 49 14.4	-0.6
	baz=155,SNR=11						
GLAT	Glass	55.23	342	P	P	13 49 14.3	-1.0
WHAR	Wooly Hollow	55.29	339	P	P	13 49 14.8	-1.0
WHAR				IAmb	IAmb	13 49 16.2	
	comp=Z,26nm,0.9s						
T47A	Sharon Grove	55.30	344	P	P	13 49 14.4	-1.5
T47A				IAmb	IAmb	13 49 15.3	
	comp=Z,24nm,0.9s						
TX31	Lajitas Ar. Si	55.36	325	P	P	13 49 16.2	-0.3
TX31				IAmb	IAmb	13 49 17.5	
	comp=Z,30nm,0.8s						
TX32	Lajitas Array	55.36	325	P	P	13 49 16.2	-0.3
TXAR	Lajitas Array	55.36	325	P	P	13 49 16.8	+0.2
	comp=Z,7.7nm,0.7s,baz=150,slow=8.5,SNR=87						
TXAR				pP	pP	13 49 49.7	+1.9
	comp=Z,1.6nm,0.7s,baz=146,slow=9.1,SNR=2.7						
TXAR				PcP	PcP	13 50 16.7	+1.1
	comp=Z,2.3nm,0.8s,baz=142,slow=6.3,SNR=4.7						
TXAR	Lajitas Array	55.36	325	P	P	13 49 16.2	-0.4
R53A	Hurricane	55.49	350	P	P	13 49 16.3	-0.8
R53A				IAmb	IAmb	13 49 17.7	
	comp=Z,44nm,0.8s						
Z35A	Perchaven, San	55.49	333	P	P	13 49 17.4	+0.1
LCAR	Lake Charles	55.62	340	P	P	13 49 16.8	-1.3
LCAR				IAmb	IAmb	13 49 18.2	
	comp=Z,26nm,0.9s						
PARMO	Parma	55.74	342	P	P	13 49 17.4	-1.6
W39A	Magazine	55.74	338	P	P	13 49 17.9	-1.1
W39A				IAmb	IAmb	13 49 20.4	
	comp=Z,41nm,0.8s						
W39A	Magazine	55.74	338	P	P	13 49 19.3	+0.3
	baz=154,SNR=21						
T45A	Paducah	55.75	343	P	P	13 49 17.4	-1.7
X37A	Clayton	55.81	336		P	13 49 19.0	-0.5
R50A	Paris	55.89	347	P	P	13 49 18.2	-1.8
R50A				IAmb	IAmb	13 49 20.3	
	comp=Z,33nm,0.9s						
Q54A	Coxs Mills	55.94	351	P	P	13 49 19.5	-0.9
ABTX	Abilene, Hawle	55.96	331	P	P	13 49 20.3	-0.4
ABTX	Abilene, Hawle	55.96	331	P	P	13 49 21.1	+0.3
	baz=147,SNR=27						
LOOK	Love County	56.02	334		P	13 49 20.0	-1.1
PBMO	Poplar Bluff	56.05	341	P	P	13 49 19.8	-1.3
PBMO				IAmb	IAmb	13 49 21.2	
	comp=Z,41nm,0.8s						
R49A	Shelbyville	56.08	347	P	P	13 49 20.0	-1.4
R49A				IAmb	IAmb	13 49 21.4	
	comp=Z,38nm,1.2s						
Q52A	Bidwell	56.16	350	P	P	13 49 20.2	-1.6
Q52A				IAmb	IAmb	13 49 22.3	
	comp=Z,41nm,0.8s						
P60A	Greenville	56.18	356	P	P	13 49 21.8	-0.2
	baz=175						
WCI	Wyandotte Cave	56.28	346	P	P	13 49 21.0	-1.8
WCI				pmax	pmax		
	comp=Z,73nm,1.3s						
WCI	Wyandotte Cave	56.28	346	P	P	13 49 20.9	-1.8
WCI				IAmb	IAmb	13 49 22.6	
	comp=Z,72nm,1.3s						
WCI	Wyandotte Cave	56.28	346	P	P	13 49 21.4	-1.4
	baz=162						
Q51A	Peebles	56.41	349	P	P	13 49 22.3	-1.4
Q51A				IAmb	IAmb	13 49 23.9	
	comp=Z,38nm,1.0s						
U40A	Yellville	56.45	339	P	P	13 49 22.6	-1.4
U40A				IAmb	IAmb	13 49 24.4	
	comp=Z,30nm,0.8s						
U40A	Yellville	56.45	339	P	P	13 49 23.3	-0.7
	baz=155,SNR=21						
MCWV	Mont Chateau	56.46	352	P	P	13 49 23.6	-0.5
	baz=170,SNR=5.7						
P53A	Whipple	56.52	350	P	P	13 49 22.5	-2.0
S44A	Carbondale	56.55	343	P	P	13 49 23.0	-1.7
SIUC	Southern Illin	56.56	343	P	P	13 49 23.1	-1.7
P52A	Corning	56.79	350	P	P	13 49 24.8	-1.6
P52A	Corning	56.79	350	P	P	13 49 25.5	-0.9
	baz=167,SNR=12						
P51A	Williamsport	56.80	349	P	P	13 49 25.0	-1.4
P51A				IAmb	IAmb	13 49 26.4	
	comp=Z,39nm,0.9s						
X34A	Smith Ranch, M	56.82	334		P	13 49 26.1	-0.7
W35A	Tecumseh	56.90	335		P	13 49 25.8	-1.4
W35A				IAmb	IAmb	13 49 27.8	
	comp=Z,53nm,1.0s						
O56A	Blue Knob Stat	56.91	353	P	P	13 49 26.6	-0.6
O56A				IAmb	IAmb	13 49 46.2	
	comp=Z,24nm,1.3s						
O56A	Blue Knob Stat	56.91	353	P	P	13 49 26.9	-0.4
	baz=172						
MGMO	Mountain Grove	56.98	340	P	P	13 49 26.4	-1.4
MGMO				IAmb	IAmb	13 49 28.1	
	comp=Z,40nm,0.9s						
O54A	Avella	57.05	352	P	P	13 49 27.4	-0.9
O54A				IAmb	IAmb	13 49 29.8	
	comp=Z,26nm,0.8s						
U38A	Gravette	57.07	338	P	P	13 49 26.8	-1.6
TUL1	Leonard	57.13	336	P	P	13 49 27.7	-1.2
TUL1				IAmb	IAmb	13 49 29.9	
	comp=Z,56nm,1.1s						
TUL1	Leonard	57.13	336	P	P	13 49 28.6	-0.2
	baz=152,SNR=6.7						
FVM	French Village	57.16	342	P	P	13 49 27.8	-1.2
FVM				pmax	pmax		
	comp=Z,60nm,0.8s						
FVM	French Village	57.16	342	P	P	13 49 27.8	-1.2
P49A	Miami Univ. Ec	57.18	348	P	P	13 49 27.0	-2.1
P49A				IAmb	IAmb	13 49 28.8	
	comp=Z,55nm,1.1s						
P49A	Miami Univ. Ec	57.18	348	P	P	13 49 27.4	-1.7
	baz=164,SNR=7.6						
SSPA	Standing Stone	57.20	354	P	P	13 49 28.0	-1.2
	baz=172						
FNO	Franklin	57.20	334		P	13 49 27.6	-1.8
O52A	Adamsville	57.21	350	P	P	13 49 28.3	-1.0
BLO	Bloomington	57.23	346	P	P	13 49 28.1	-1.4
BLO				pmax	pmax		
	comp=Z,30nm,0.6s						
BLO	Bloomington	57.23	346	P	P	13 49 28.1	-1.4
BLO				IAmb	IAmb	13 49 28.8	
	comp=Z,30nm,0.6s						
O53A	New Philadelph	57.24	351	P	P	13 49 28.7	-0.8
O53A	New Philadelph	57.24	351	P	P	13 49 29.0	-0.6
	baz=169,SNR=9.2						
PAL	Palisades	57.28	357	P	P	13 49 28.4	-1.3
	baz=177						
OKCFA	Oklahoma City	57.36	335	P	P	13 49 29.9	-0.6
OK025	Westminster Rd	57.46	335		P	13 49 30.4	-0.8
CCM	Cathedral Cave	57.47	341	P	P	13 49 29.5	-1.7
CCM				pmax	pmax		
	comp=Z,37nm,1.2s						
CCM	Cathedral Cave	57.47	341	P	P	13 49 29.5	-1.7
CCM				IAmb	IAmb	13 49 31.3	
	comp=Z,37nm,1.1s						
CCM	Cathedral Cave	57.47	341	P	P	13 49 29.4	-1.9
	baz=157						
ACSO	Alum Creek Sta	57.52	349	P	P	13 49 30.1	-1.4
ACSO	Alum Creek Sta	57.52	349	P	P	13 49 30.4	-1.1
	baz=167,SNR=15						
OK031	S. Brethren Rd	57.58	335		P	13 49 31.0	-1.0
Q44A	Meyer Farm, Va	57.61	344	P	P	13 49 30.7	-1.5
Q44A				IAmb	IAmb	13 49 31.8	
	comp=Z,44nm,0.8s						
BCOK	Bluff Creek, N	57.63	335		P	13 49 31.6	-0.8
QUOK	Quay	57.72	336	P	P	13 49 32.6	-0.4
N53A	Lisbon	57.73	351	P	P	13 49 32.1	-0.9
O49A	Covington	57.73	348	P	P	13 49 31.1	-1.9
O49A				IAmb	IAmb	13 49 32.8	
	comp=Z,46nm,1.0s						
N54A	Moraine State	57.77	352	P	P	13 49 32.8	-0.4
N54A	Moraine State	57.77	352	P	P	13 49 33.2	-0.1
	baz=170,SNR=12						
S39A	Bolivar	57.82	339	P	P	13 49 32.4	-1.3
S39A				IAmb	IAmb	13 49 33.9	
	comp=Z,34nm,0.8s						
M57A	Sunshine Farm,	57.82	355	P	P	13 49 32.8	-0.8
P46A	Rosedale	57.82	345	P	P	13 49 31.4	-2.2
P46A				IAmb	IAmb	13 49 33.1	
	comp=Z,24nm,0.9s						
R40A	Maddies Statio	58.01	340	P	P	13 49 33.3	-1.6
R40A				IAmb	IAmb	13 49 34.9	
	comp=Z,22nm,0.8s						
N51A	Ashland	58.08	350	P	P	13 49 34.2	-1.2
N51A				IAmb	IAmb	13 49 35.4	
	comp=Z,45nm,0.8s						
M55A	Ridgway	58.11	353	P	P	13 49 34.9	-0.8
M55A				IAmb	IAmb	13 49 37.1	
	comp=Z,23nm,1.1s						
MNTX	Cornudas Mount	58.12	326	P	P	13 49 35.0	-1.0
MNTX				IAmb	IAmb	13 49 36.8	
	comp=Z,27nm,1.1s						
MNTX	Cornudas Mount	58.12	326	P	P	13 49 34.9	-1.0
	baz=141,SNR=28						
M54A	Oil Creek Stat	58.26	352	P	P	13 49 35.9	-0.8
M54A				IAmb	IAmb	13 49 37.5	
	comp=Z,55nm,1.0s						
M54A	Oil Creek Stat	58.26	352	P	P	13 49 36.1	-0.6
	baz=170,SNR=8.1						
T35A	Sooner Cattle	58.29	336	P	P	13 49 35.9	-1.0
T35A				IAmb	IAmb	13 49 38.2	
	comp=Z,73nm,1.4s						
M53A	WI Miller and	58.33	352	P	P	13 49 36.0	-1.1
M53A	WI Miller and	58.33	352	P	P	13 49 36.5	-0.7
	baz=169,SNR=8.5						
N49A	Columbus Grove	58.41	348	P	P	13 49 35.9	-1.7
BLOK	Blackwell	58.43	336	P	P	13 49 37.3	-0.6
P43A	Skaggs, Pawnee	58.44	343	P	P	13 49 36.1	-1.8
ALLY	Alegheny Colle	58.46	352	P	P	13 49 37.0	-1.1
SFIN	Lafayette	58.52	346	P	P	13 49 36.3	-2.1
SFIN				IAmb	IAmb	13 49 37.6	
	comp=Z,60nm,1.4s						
SFIN	Lafayette	58.52	346	P	P	13 49 36.2	-2.3
	baz=162						
CROK	Carrier	58.52	335		P	13 49 37.9	-0.7
M52A	Chesterland	58.53	351	P	P	13 49 37.8	-0.7
MSTX	Muleshoe	58.56	329	P	P	13 49 38.0	-1.0
MSTX	Muleshoe	58.56	329	P	P	13 49 38.7	-0.4
	baz=144,SNR=24						
BINY	Binghamton	58.58	356	P	P	13 49 38.2	-0.7
BINY				IAmb	IAmb	13 49 39.3	
	comp=Z,13nm,0.8s						
BINY	Binghamton	58.58	356	P	P	13 49 37.2	-1.7
	baz=175						
L56A	Greenwood	58.65	354	P	P	13 49 38.6	-0.8
L56A				IAmb	IAmb	13 49 41.7	
	comp=Z,24nm,1.3s						
M50A	Fremont	58.67	350	P	P	13 49 38.3	-1.1
N47A	Urbana	58.68	347	P	P	13 49 37.9	-1.7
HRV	Adam Dziewonsk	58.72	360	P	P	13 49 38.8	-1.0
HRV				pmax	pmax		
	comp=Z,38nm,1.3s						
HRV	Adam Dziewonsk	58.72	360	P	P	13 49 38.8	-1.0
HRV				IAmb	IAmb	13 49 41.5	
	comp=Z,38nm,1.2s						
HRV	Adam Dziewonsk	58.72	360	P	P	13 49 37.8	-2.0
	baz=180						
KAN13	South Haven SW	58.75	335	P	P	13 49 39.7	-0.5
KAN14	Manchester OK	58.90	335	P	P	13 49 40.4	-0.8
KAN14				IAmb	IAmb	13 49 41.6	
	comp=Z,24nm,0.8s						
ERPA	Erie	58.90	352	P	P	13 49 40.6	-0.4
ERPA	Erie	58.90	352	P	P	13 49 40.7	-0.4
	baz=170,SNR=11						
KAN09	Caldwell North	58.91	335	P	P	13 49 40.7	-0.6
KAN01	Argonia South	58.99	335	P	P	13 49 41.4	-0.4
KAN05	Bluff City Nor	58.99	335	P	P	13 49 41.5	-0.3
P40A	Paris	59.07	341	P	P	13 49 40.5	-1.8
P40A				IAmb	IAmb	13 49 42.4	
	comp=Z,26nm,0.9s						
KAN10	Anthony SW Sta	59.10	335	P	P	13 49 42.0	-0.6
KAN10				IAmb	IAmb	13 49 43.7	
	comp=Z,41nm,1.2s						
KAN06	Argonia West S	59.11	335	P	P	13 49 42.1	-0.5
KAN08	Anthony NE Sta	59.13	335	P	P	13 49 42.5	-0.3
K57A	Scipio Center	59.15	355	P	P	13 49 41.8	-1.0
K57A				IAmb	IAmb	13 49 43.7	
	comp=Z,29nm,1.2s						
KAN16	Harper SW Stat	59.17	335	P	P	13 49 42.8	-0.3
KAN12	Harper NE Stat	59.21	335	P	P	13 49 43.0	-0.3
HDIL	Hopedale	59.23	344	P	P	13 49 41.5	-1.9
HDIL				IAmb	IAmb	13 49 42.7	
	comp=Z,27nm,0.8s						
HDIL	Hopedale	59.23	344	P	P	13 49 41.5	-1.9
	baz=160						
MMNY	Mt. Morris Dam	59.27	354	P	P	13 49 42.7	-0.9
MMNY				IAmb	IAmb	13 49 43.3	
	comp=Z,15nm,0.6s						
L48A	N Adams	59.44	348	P	P	13 49 42.8	-2.0
P38A	Dawn	59.63	340	P	P	13 49 44.2	-2.0
J59A	Piesco	59.76	357	P	P	13 49 45.8	-1.2
J57A	Williamstown	59.79	356	P	P	13 49 45.9	-1.3
J57A				IAmb	IAmb	13 49 48.0	
	comp=Z,20nm,1.1s						
N41A	Harden Midland	59.80	343	P	P	13 49 45.7	-1.6
K50A	Casco	59.93	350	P	P	13 49 46.2	-1.9
121A	Cookes Peak, D	60.08	324	P	P	13 49 49.1	-0.5
121A				IAmb	IAmb	13 49 52.0	
	comp=Z,23nm,1.0s						
121A	Cookes Peak, D	60.08	324	P	P	13 49 49.3	-0.3
	baz=139,SNR=16						
319A	Douglas	60.08	322	P	P	13 49 49.1	-0.4
319A				IAmb	IAmb	13 49 51.7	
	comp=Z,33nm,1.0s						
KSU1	Kansas State U	60.24	337	P	P	13 49 49.8	-0.6

KSU1				IAmb	IAmb	13 49 50.9	
	comp=Z,41nm,0.8s						
KSU1	Kansas State U	60.24	337	P	P	13 49 49.1	-1.3
	baz=152						
LBNH	Lisbon	60.45	359	P	P	13 49 51.6	0.0
	baz=179						
R32A	Long Quarter,	60.46	335	P	P	13 49 51.7	-0.2
N38A	Joes South For	60.60	341	P	P	13 49 51.0	-1.7
N38A				IAmb	IAmb	13 49 52.7	
	comp=Z,28nm,1.1s						
BNM	Barren Site	60.67	326	P	P	13 49 53.0	-0.7
J47A	Sunmer	60.77	349	P	P	13 49 52.5	-1.3
K43A	Burlington	61.01	346	P	P	13 49 54.2	-1.3
K43A				IAmb	IAmb	13 49 54.8	
	comp=Z,28nm,0.7s						
DELO	Deloro Mine	61.02	355	P	P	13 49 54.4	-1.0
DELO				IAmb	IAmb	13 49 56.3	
	comp=Z,34nm,1.4s						
FRNY	Flat Rock	61.09	358	P	P	13 49 55.1	-0.8
L40A	Anamosa	61.16	343	P	P	13 49 55.4	-1.2
L40A				IAmb	IAmb	13 49 56.9	
	comp=Z,26nm,0.9s						
ANMO	Albuquerque	61.20	327	*d i*P	P	13 49 57.5	+0.3
ANMO				pmax	pmax		
	comp=Z,14nm,1.0s						
ANMO	Albuquerque	61.20	327	P	P	13 49 57.0	-0.2
ANMO	Albuquerque	61.20	327	P	P	13 49 57.3	+0.2
	baz=141						
CBKS	Cedar Bluff	61.21	335	P	P	13 49 56.0	-1.0
CBKS				pmax	pmax		
	comp=Z,69nm,1.0s						
CBKS	Cedar Bluff	61.21	335	P	P	13 49 56.0	-1.0
CBKS	Cedar Bluff	61.21	335	P	P	13 49 57.2	+0.3
	baz=148,SNR=9.4						
SADO	Sadowa	61.42	353	P	P	13 49 56.9	-1.2
SADO				IAmb	IAmb	13 49 58.9	
	comp=Z,29nm,1.1s						
G62A	West of Eustis	61.43	0	P	P	13 49 57.7	-0.6
G62A				IAmb	IAmb	13 49 59.6	
	comp=Z,53nm,1.3s						
N35A	Tabor	61.45	339	P	P	13 49 57.5	-1.0
PLVO	Plevna	61.49	355	P	P	13 49 57.7	-0.9
G65A	Princeton	61.50	3	P	P	13 49 58.0	-0.7
G65A				IAmb	IAmb	13 49 58.8	
	comp=Z,19nm,0.8s						
PKME	Peaks-Kenny Pk	61.50	1	P	P	13 49 57.1	-1.5
PKME	Peaks-Kenny Pk	61.50	1	P	P	13 49 58.8	+0.2
	baz=182						
MOQ	Mont Orford	61.53	359	P	P	13 49 58.3	-0.7
SCIA	State Center	61.60	341	P	P	13 49 58.6	-0.9
	baz=156						
TUC	Tucson	61.64	322	P	P	13 49 59.5	-0.5
TUC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TUC	Tucson	61.64	322	P	P	13 49 59.5	-0.5
TUC	Tucson	61.64	322	P	P	13 50 00.6	+0.6
	baz=136						
JFWS	Jewell Farm	61.69	344	P	P	13 49 58.5	-1.6
JFWS				pmax	pmax		
	comp=Z,28nm,0.9s						
JFWS	Jewell Farm	61.69	344	P	P	13 49 58.5	-1.6
JFWS				IAmb	IAmb	13 50 00.1	
	comp=Z,28nm,0.9s						
JFWS	Jewell Farm	61.69	344	P	P	13 49 58.9	-1.1
	baz=159						
MNTQ	Montreal, Queb	61.75	358	P	P	13 49 58.7	-1.6
MNTQ				IAmb	IAmb	13 50 00.7	
	comp=Z,24nm,0.7s						
T25A	Trinidad	61.90	330	P	P	13 50 02.0	+0.1
T25A				IAmb	IAmb	13 50 03.8	
	comp=Z,34nm,1.1s						
T25A	Trinidad	61.90	330	P	P	13 50 02.7	+0.8
	baz=143,SNR=12						
N33A	J Bar K, Exete	61.98	338	P	P	13 50 01.9	-0.2
F64A	Sherman	62.12	2	P	P	13 50 02.1	-0.8
F64A				IAmb	IAmb	13 50 03.7	
	comp=Z,37nm,1.4s						
I42A	Draeger Farm,	62.27	346	P	P	13 50 02.8	-1.1
I42A				IAmb	IAmb	13 50 06.3	
	comp=Z,36nm,1.2s						
LMN	Caledonia Moun	62.33	5	P	P	13 50 02.6	-1.6
LMN				IAmb	IAmb	13 50 04.9	
	comp=Z,21nm,1.1s						
TRQ	Mont Tremblant	62.51	357	P	P	13 50 04.3	-1.2
214A	Organ Pipe Nat	62.60	320	P	P	13 50 06.2	-0.2
214A				IAmb	IAmb	13 50 09.1	
	comp=Z,41nm,1.1s						
214A	Organ Pipe Nat	62.60	320	P	P	13 50 07.9	+1.5
	baz=134,SNR=12						
KSCO	Kaye Shedlock’	62.60	333	P	P	13 50 06.3	-0.1
KSCO	Kaye Shedlock’	62.60	333	P	P	13 50 06.8	+0.4
	baz=146,SNR=10						
G45A	Suttons Bay	62.66	348	P	P	13 50 04.8	-1.7
G45A				IAmb	IAmb	13 50 08.9	
	comp=Z,42nm,0.8s						
L34A	Svendsen Farm,	62.69	339	P	P	13 50 05.0	-1.7
I40A	Norwalk	62.70	344	P	P	13 50 04.7	-2.0
I40A				IAmb	IAmb	13 50 06.4	
	comp=Z,17nm,0.7s						
X18A	Snowflake	62.77	324	P	P	13 50 07.1	-0.6
X18A				IAmb	IAmb	13 50 10.1	
	comp=Z,27nm,1.2s						
BGNE	Belgrade	62.83	337	P	P	13 50 06.8	-0.9
BGNE	Belgrade	62.83	337	P	P	13 50 07.7	0.0
	baz=151,SNR=11						
E62A	Clayton Lake	62.85	1	P	P	13 50 07.1	-0.6
E62A				IAmb	IAmb	13 50 08.2	
	comp=Z,18nm,0.8s						
SDCO	Great Sand Dun	62.91	330	P	P	13 50 09.1	+0.4
SDCO				IAmb	IAmb	13 50 10.5	
	comp=Z,34nm,0.8s						
SDCO	Great Sand Dun	62.91	330	P	P	13 50 09.5	+0.9
	baz=143,SNR=49						
W18A	Petrified Fore	63.08	325	P	P	13 50 10.1	+0.4
W18A				IAmb	IAmb	13 50 12.0	
	comp=Z,26nm,1.1s						
W18A	Petrified Fore	63.08	325	P	P	13 50 10.6	+0.9
	baz=138						
D62A	Allapoint, All	63.32	2	P	P	13 50 10.2	-0.6
D62A				IAmb	IAmb	13 50 11.2	
	comp=Z,21nm,0.8s						
X16A	Lo Mia Camp, P	63.53	323	P	P	13 50 12.5	-0.2
X16A				IAmb	IAmb	13 50 15.3	
	comp=Z,29nm,1.1s						
S22A	4UR Ranch, Cre	63.56	329	P	P	13 50 13.7	+0.8
	baz=141,SNR=18						
I37A	Lemond, Waseca	63.58	342	P	P	13 50 11.2	-1.3
I37A				IAmb	IAmb	13 50 12.5	
	comp=Z,26nm,0.7s						
BATG	Bathurst New B	63.65	4	P	P	13 50 11.7	-1.2
E46A	Sault Ste Mari	63.70	350	P	P	13 50 11.6	-1.7
E46A				IAmb	IAmb	13 50 13.2	
	comp=Z,40nm,0.9s						
Q24A	Divide	63.71	331	P	P	13 50 14.0	+0.1
	baz=143,SNR=16						
MVCO	Mesa Verde	63.99	327	P	P	13 50 15.3	-0.4
MVCO				IAmb	IAmb	13 50 17.7	
	comp=Z,50nm,1.4s						
MVCO	Mesa Verde	63.99	327	P	P	13 50 16.4	+0.7
	baz=140,SNR=15						
Y14A	Wickenburg	64.10	322	P	P	13 50 16.3	0.0
K31A	O'Neill	64.11	338	P	P	13 50 16.1	0.0
E43A	Lone Tree Farm	64.21	348	P	P	13 50 15.4	-1.3
E43A				IAmb	IAmb	13 50 16.6	
	comp=Z,46nm,1.2s						
WUAZ	Wupatki	64.28	324	P	P	13 50 17.7	+0.1
WUAZ				IAmb	IAmb	13 50 20.3	
	comp=Z,35nm,1.1s						
WUAZ	Wupatki	64.28	324	P	P	13 50 18.9	+1.3
	baz=137,SNR=24						
ECSD	EROS Data Cent	64.33	340	P	P	13 50 16.9	-0.7
ECSD	EROS Data Cent	64.33	340	P	P	13 50 17.1	-0.4
	baz=153,SNR=30						
SPMN	Marine on St.	64.52	343	P	P	13 50 17.8	-0.9
SPMN				IAmb	IAmb	13 50 19.0	
	comp=Z,71nm,1.1s						
SPMN	Marine on St.	64.52	343	P	P	13 50 17.9	-0.8
	baz=157						
VLDQ	Val d'Or	64.57	355	P	P	13 50 17.7	-1.3
GLA	Glamis	64.59	320	P	P	13 50 20.3	+0.8
	baz=133						
ISCO	Idaho Springs	64.59	331	P	P	13 50 18.7	-1.0
ISCO				pmax	pmax		
	comp=Z,21nm,1.0s						
ISCO	Idaho Springs	64.59	331	P	P	13 50 18.7	-1.0
ISCO				IAmb	IAmb	13 50 21.5	
	comp=Z,21nm,0.9s						
ISCO	Idaho Springs	64.59	331	P	P	13 50 20.5	+0.8
	baz=143,SNR=10						
SMCO	Snowmass	64.75	330	P	P	13 50 20.9	+0.1
SMCO				IAmb	IAmb	13 50 22.9	
	comp=Z,25nm,0.8s						
PDMCI	Parker Dam,Lak	65.03	321	P	P	13 50 22.9	+0.7
	baz=134						
RMX	La Rumorosa	65.07	319	P	P	13 50 22.6	-0.2
RMX				IAmb	IAmb	13 50 25.2	
	comp=Z,32nm,1.1s						
IKP	In-Ko-Pah, Jac	65.12	319	P	P	13 50 23.9	+0.9
	baz=132,SNR=6.9						
SWSC	Sam W. Stewart	65.12	319	P	P	13 50 24.0	+1.2
	baz=132						
CBX	Cerro Bola	65.25	318	P	P	13 50 25.0	+1.1
F36A	Milaca	65.31	343	P	P	13 50 22.8	-1.0
F36A				IAmb	IAmb	13 50 24.3	
	comp=Z,54nm,1.0s						
BC3	Big Chuckawall	65.39	320	P	P	13 50 26.2	+1.5
	baz=133,SNR=5.6						
VNA3	Neumayer Olymp	65.45	162	P	P	13 50 26.0	+1.5
MONP2	Monument Peak	65.48	319	P	P	13 50 26.9	+1.4
	baz=132,SNR=8.6						
BAR	Barrett	65.50	319	P	P	13 50 26.0	+0.7
BAR				IAmb	IAmb	13 50 28.1	
	comp=Z,34nm,0.9s						
IRM	Iron Mountain	65.54	321	P	P	13 50 27.1	+1.5
	baz=133,SNR=17						
N23A	Red Feather La	65.62	332	P	P	13 50 26.6	+0.3
	baz=143,SNR=10						
NEE2	Needles Airpor	65.64	322	P	P	13 50 27.2	+1.0
	baz=134						
VNA1	Neumayer--Stat	65.66	161	P	P	13 50 27.7	+2.0
SUSD	Miller	65.76	338	P	P	13 50 26.1	-0.7
SUSD	Miller	65.76	338	P	P	13 50 26.5	-0.2
	baz=151,SNR=6.4						
109C	Camp Elliot, M	65.91	318	P	P	13 50 29.2	+1.3
	baz=131						
BELC	Belle Mtn. Jos	65.95	320	P	P	13 50 29.8	+1.5
	baz=132						
TPFO	Pinon Flats	65.97	319	P	P	13 50 30.2	+1.7
	baz=132,SNR=5.5						
PFO	Pinyon Flats O	65.98	319	P	P	13 50 30.2	+1.7
	baz=132,SNR=6.5						
VNA2	Neumayer--Watz	66.03	161	P	P	13 50 29.8	+1.7
	baz=278,slow=6.7						
O20A	White River Ci	66.10	330	P	P	13 50 29.0	-0.3
O20A				IAmb	IAmb	13 50 31.3	
	comp=Z,27nm,0.8s						
O20A	White River Ci	66.10	330	P	P	13 50 30.3	+1.0
	baz=141,SNR=17						
F33A	5 Mile Ranch,	66.11	341	P	P	13 50 28.2	-0.7
KNB	Kanab	66.17	324	P	P	13 50 30.5	+0.7
KNB				pmax	pmax		
	comp=Z,63nm,1.1s						
KNB	Kanab	66.17	324	P	P	13 50 30.5	+0.7
KNB				IAmb	IAmb	13 50 32.9	
	comp=Z,63nm,1.1s						
GMRC	Granite Mounta	66.27	321	P	P	13 50 31.9	+1.5
	baz=133,SNR=18						
MURC	Murrieta	66.43	319	P	P	13 50 32.8	+1.5
	baz=131						
SRU	San Rafael Swe	66.47	327	P	P	13 50 31.4	-0.2
SRU				pmax	pmax		
	comp=Z,22nm,0.9s						
SRU	San Rafael Swe	66.47	327	P	P	13 50 31.4	-0.2
SRU				IAmb	IAmb	13 50 33.5	
	comp=Z,22nm,0.9s						
MTPU	Mount Pierson	66.56	326	P	P	13 50 32.2	-0.2
DRLN	Deer Lake	66.58	10	P	P	13 50 29.6	-2.2
DRLN				IAmb	IAmb	13 50 47.9	
	comp=Z,95nm,1.4s						
Q16A	Castle Valley	66.66	327	P	P	13 50 33.1	+0.3
BBRC	Big Bear Solar	66.70	320	P	P	13 50 35.1	+1.9
	baz=132,SNR=5.1						
EYMN	Ely	66.70	345	P	P	13 50 31.8	-0.9
EYMN				IAmb	IAmb	13 50 32.9	
	comp=Z,28nm,0.8s						
EYMN	Ely	66.70	345	P	P	13 50 32.5	-0.1
	baz=159,SNR=5.6						
HEC	Hector,Ludlow	66.71	321	P	P	13 50 34.9	+1.8
	baz=132,SNR=11						
P18A	Preston Nutter	66.71	328	P	P	13 50 34.2	+0.9
P18A				IAmb	IAmb	13 50 35.6	
	comp=Z,25nm,1.0s						
SZCU	Shurtz Canyon	66.74	325	P	P	13 50 34.0	+0.6
P17A	Butcher Ranch,	66.85	328	P	P	13 50 34.2	+0.2
P17A				IAmb	IAmb	13 50 36.1	
	comp=Z,37nm,1.0s						
CCUT	Cedar City	66.86	324	P	P	13 50 35.5	+1.3
CCUT				IAmb	IAmb	13 50 37.5	
	comp=Z,31nm,1.0s						
TUQ	Turquoise Moun	66.87	321	P	P	13 50 35.6	+1.4
	baz=133,SNR=7.0						
MSU	Marysvale	66.90	326	P	P	13 50 35.6	+1.2
MSU	Marysvale	66.90	326	P	P	13 50 35.6	+1.2
MVU	Marysvale	66.91	326	P	P	13 50 35.4	+0.9
TMUT	Trail Mountain	66.96	327	P	P	13 50 35.2	+0.3
CIS	Catalina Islan	67.08	318	P	P	13 50 35.9	+0.5
	baz=130						
BFSC	Mount Baldy Ra	67.14	319	P	P	13 50 36.5	+0.6
	baz=131,SNR=7.4						
RRX	Edison Barstow	67.15	320	P	P	13 50 36.8	+1.0
	baz=132						
SHPR	Sheep Range	67.15	323	P	P	13 50 36.0	0.0
SHPR				IAmb	IAmb	13 50 38.8	
	comp=Z,22nm,0.9s						
FMP	Fort Macarthur	67.20	318	P	P	13 50 37.1	+1.0
	baz=130						
K22A	Casper	67.28	332	P	P	13 50 36.7	+0.1
K22A				IAmb	IAmb	13 50 38.4	
	comp=Z,29nm,0.9s						
K22A	Casper	67.28	332	P	P	13 50 37.3	+0.6
	baz=143,SNR=8.8						
GSC	Goldstone, Bar	67.32	321	P	P	13 50 38.3	+1.4
	baz=132,SNR=15						
SHOC	Shoshone, Teco	67.40	321	P	P	13 50 38.4	+1.0
	baz=133,SNR=6.0						
RSSD	Black Hills	67.42	335	P	P	13 50 36.9	-0.6
RSSD				pmax	pmax		
	comp=Z,18nm,0.9s						
RSSD	Black Hills	67.42	335	P	P	13 50 36.9	-0.6
RSSD	Black Hills	67.42	335	P	P	13 50 38.2	+0.6
	baz=146						
DECC	Green Verdugo	67.57	319	P	P	13 50 39.4	+0.9
	baz=130						
SNAA	Sanae	67.65	161	P	P	13 50 40.0	+1.5
SNAA	Sanae	67.65	161	P	P	13 50 39.6	+1.1
SNAA				pmax	pmax		
	comp=Z,45nm,0.7s						
SNAA	Sanae	67.65	161	P	P	13 50 39.6	+1.1
SNAA				IAmb	IAmb	13 50 41.3	
	comp=Z,45nm,0.7s						
B35A	Bob, Littlefor	67.65	344	P	P	13 50 37.3	-1.4
B35A				IAmb	IAmb	13 50 39.0	
	comp=Z,38nm,1.1s						
MPU	Maple Canyon	67.72	327	P	P	13 50 39.6	+0.1
MPU				IAmb	IAmb	13 50 41.8	
	comp=Z,29nm,1.2s						
EDW2	Edwards Air Fo	67.77	320	P	P	13 50 41.1	+1.3
	baz=131,SNR=11						
QSM	Queen of Sheba	67.80	321	P	P	13 50 40.5	+0.6
QSM				IAmb	IAmb	13 50 42.4	
	comp=Z,27nm,1.0s						
GWY	Greenwater Val	67.83	321	P	P	13 50 40.7	+0.4
GWY				IAmb	IAmb	13 50 42.7	
	comp=Z,25nm,0.9s						
PSUT	Pine Spring	67.83	325	P	P	13 50 41.1	+0.9
PSUT				IAmb	IAmb	13 50 43.0	
	comp=Z,25nm,1.0s						
NLU	North Lily Min	67.90	327	P	P	13 50 41.2	+0.5
LRMC	Laurel Mtn Rad	67.97	320	P	P	13 50 42.7	+1.6
	baz=131,SNR=19						
OSI	Osito Audit: C	68.05	319	P	P	13 50 42.7	+1.1
	baz=130						
JLU	Jordanelle	68.06	328	P	P	13 50 41.5	-0.2
JLU				IAmb	IAmb	13 50 44.0	
	comp=Z,26nm,1.0s						
FURC	Furnace Creek,	68.13	322	P	P	13 50 43.8	+1.9
	baz=132,SNR=28						
AGMN	Agassiz Nation	68.19	342	P	P	13 50 40.5	-1.5
AGMN				IAmb	IAmb	13 50 42.6	
	comp=Z,46nm,0.8s						
AGMN	Agassiz Nation	68.19	342	P	P	13 50 41.7	-0.3
	baz=154,SNR=22						
MPMC	Manual Prospec	68.23	321	P	P	13 50 44.0	+1.2
	baz=132,SNR=22						
SCZ2	Santa Cruz Isl	68.24	318	P	P	13 50 43.7	+1.0
	baz=129						
CTU	Camp Tracy	68.28	328	P	P	13 50 42.9	0.0
SPR3	Spring Creek 3	68.42	325	P	P	13 50 44.2	+0.1
ARVC	Arvin	68.45	319	P	P	13 50 45.1	+1.2
	baz=130						
DUG	Dugway, Tooele	68.46	327	P	P	13 50 44.7	+0.6
DUG				pmax	pmax		
	comp=Z,36nm,1.2s						
DUG	Dugway, Tooele	68.46	327	P	P	13 50 44.7	+0.6
DUG				IAmb	IAmb	13 50 46.6	
	comp=Z,36nm,1.1s						
DUG	Dugway, Tooele	68.46	327	P	P	13 50 45.5	+1.4
	baz=137,SNR=17						
ISA	Isabella, Lake	68.58	320	P	P	13 50 45.2	+0.4
ISA				pmax	pmax		
	comp=Z,30nm,1.0s						
ISA	Isabella, Lake	68.58	320	P	P	13 50 45.2	+0.4
ISA				IAmb	IAmb	13 50 47.8	
	comp=Z,30nm,1.0s						
ISA	Isabella, Lake	68.58	320	P	P	13 50 46.6	+1.8
	baz=131,SNR=24						
R11A	Troy Canyon, C	68.67	324	P	P	13 50 46.0	+0.6
R11A	Troy Canyon, C	68.67	324	P	P	13 50 47.3	+1.9
	baz=134,SNR=32						
BW06	Boulder Array	68.76	331	P	P	13 50 45.5	-0.6
BW06	Boulder Array	68.76	331	P	P	13 50 46.2	+0.2
	baz=140,SNR=21						
PD31	Pinedale Array	68.76	331	P	P	13 50 45.3	-0.7
PDAR	Pinedale Array	68.76	331	P	P	13 50 46.0	0.0
	comp=Z,5.8nm,0.8s,baz=148,slow=7.0,SNR=32						
PDAR				PcP	PcP	13 51 10.0	+0.2
	comp=Z,2.4nm,0.7s,baz=162,slow=6.2,SNR=4.7						
PDAR				pP	pP	13 51 19.4	+0.9
	comp=Z,3.2nm,0.8s,baz=116,slow=3.4,SNR=3.4						
PDAR	Pinedale Array	68.76	331	P	P	13 50 45.6	-0.4
CWC	Cottonwood Cre	68.84	321	P	P	13 50 48.3	+1.7
	baz=131						
PKM	Mcpherson Peak	68.92	319	P	P	13 50 48.6	+1.5
	baz=130,SNR=11						
MDND	Maddock	68.95	340	P	P	13 50 46.4	-0.3
MDND	Maddock	68.95	340	P	P	13 50 47.4	+0.6
	baz=151,SNR=12						
VES	Vestal, Richgr	69.07	320	P	P	13 50 49.4	+1.7
	baz=130,SNR=11						
BGU	Big Grassy Mou	69.11	327	P	P	13 50 47.9	-0.1
LIC	Lamto	69.14	77	*e*P	P	13 50 47.7	-0.9
	comp=Z,50nm,0.9s						
TIC	Toumodi	69.29	76	*e*P	P	13 50 48.7	-0.9
SMMC	Simmler	69.30	319	P	P	13 50 51.3	+2.1
	baz=130,SNR=7.8						
TIN	Tinemaha, Big	69.34	321	P	P	13 50 51.5	+1.9
	baz=131						
DBIC	Dimbokro	69.45	76	P	P	13 50 49.6	-1.0
	comp=Z,20nm,0.7s,baz=259,slow=5.3,SNR=26						
DBIC	Dimbokro	69.45	76	P	P	13 50 49.2	-1.4
DBIC				pmax	pmax		
	comp=Z,18nm,0.7s						
DBIC	Dimbokro	69.45	76	P	P	13 50 49.2	-1.4
DBIC				IAmb	IAmb	13 50 52.2	
	comp=Z,18nm,0.7s						
KIC	Kosan Boka	69.45	77	*e*P	P	13 50 49.7	-0.9
	comp=Z,46nm,0.7s						
AHID	Auburn Hatcher	69.50	330	P	P	13 50 50.1	-0.4
HVU	Hansel Valley	69.60	328	P	P	13 50 50.5	-0.6
HVU				pmax	pmax		
	comp=Z,19nm,0.8s						
HVU	Hansel Valley	69.60	328	P	P	13 50 50.5	-0.6
ECR	Eagle Creek	69.85	330	P	P	13 50 52.8	+0.2
LOHW	Long Hollow	69.90	331	P	P	13 50 52.9	-0.1
ULM	Lac du Bonnet	69.96	343	P	P	13 50 52.2	-0.6
	comp=Z,35nm,0.8s,baz=153,slow=5.8,SNR=40						
ULM				pP	pP	13 51 25.7	+0.3
	comp=Z,23nm,1.0s,baz=145,slow=6.5,SNR=4.9						
ULM				LR	LR	14 23 31.9	
	comp=Z,101nm,18.6s,baz=88,slow=37						
ULM	Lac du Bonnet	69.96	343	P	P	13 50 51.8	-1.1
ULM				pmax	pmax		
	comp=Z,47nm,0.9s						
ULM	Lac du Bonnet	69.96	343	P	P	13 50 51.8	-1.1
ULM				IAmb	IAmb	13 50 53.2	
	comp=Z,47nm,0.9s						
TPAW	Teton Pass	69.97	330	P	P	13 50 53.4	-0.1
MOOW	Moose Ponds	70.07	331	P	P	13 50 53.6	-0.5
MLAC	Mammoth, Mammo	70.08	321	P	P	13 50 55.9	+1.7
	baz=131						
FXWY	Fox Creek	70.12	330	P	P	13 50 54.1	-0.2
ELK	Elko	70.15	326	P	P	13 50 54.1	-0.5
ELK				pmax	pmax		
	comp=Z,12nm,1.0s						
ELK	Elko	70.15	326	P	P	13 50 54.0	-0.5
MDPB	Devils Postpil	70.23	321	P	P	13 50 55.5	+0.4
FLWY	Flagg Ranch	70.30	331	P	P	13 50 55.5	+0.1
FLWY				IAmb	IAmb	13 50 57.9	
	comp=Z,49nm,0.9s						
PMPB	Monarch Peak	70.38	319	P	P	13 50 57.3	+1.5
PMPB				IAmb	IAmb	13 50 59.5	
	comp=Z,29nm,0.9s						
LAO	LASA Array	70.40	335	P	P	13 50 56.0	+0.2
LAO				IAmb	IAmb	13 50 57.6	
	comp=Z,52nm,1.2s						
LAO	LASA Array	70.40	335	P	P	13 50 56.4	+0.6
	baz=144,SNR=9.9						
RLMT	Red Lodge	70.45	332	P	P	13 50 56.1	-0.1
RLMT				IAmb	IAmb	13 50 58.3	
	comp=Z,39nm,1.2s						
RLMT	Red Lodge	70.45	332	P	P	13 50 57.2	+0.9
	baz=141,SNR=18						
H17A	Grant Village	70.48	331	P	P	13 50 56.6	0.0
H17A	Grant Village	70.48	331	P	P	13 50 57.6	+1.0
	baz=140,SNR=7.0						
LKWY	Lake	70.53	331	P	P	13 50 56.6	-0.2
LKWY				pmax	pmax		
	comp=Z,36nm,0.9s						
LKWY	Lake	70.53	331	P	P	13 50 56.6	-0.2
LKWY				IAmb	IAmb	13 50 60.0	
	comp=Z,36nm,0.9s						
RYN	Ryan	70.55	322	P	P	13 50 56.8	-0.2
KVN	Kaiserville	70.59	323	P	P	13 50 57.9	+0.7
KVN				pmax	pmax		
	comp=Z,24nm,1.1s						
KVN	Kaiserville	70.59	323	P	P	13 50 57.9	+0.7
YHH	Holmes Hill	70.91	331	P	P	13 50 58.7	-0.5
YHH				IAmb	IAmb	13 51 02.0	
	comp=Z,43nm,1.3s						
BMN	Battle Mountai	71.02	324	P	P	13 50 59.5	-0.3
BMN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BMN	Battle Mountai	71.02	324	P	P	13 50 59.5	-0.3
DGMT	Dagmar	71.08	337	P	P	13 51 00.1	+0.3
DGMT				IAmb	IAmb	13 51 01.9	
	comp=Z,67nm,1.1s						
DGMT	Dagmar	71.08	337	P	P	13 51 00.8	+1.0
	baz=146,SNR=12						
SAO	San Andreas Ge	71.13	319	P	P	13 50 58.6	-1.7
SAO				pmax	pmax		
	comp=Z,16nm,1.0s						
SAO	San Andreas Ge	71.13	319	P	P	13 50 58.6	-1.7
SCHQ	Schefferville	71.15	3	P	P	13 50 59.5	-0.5
	comp=Z,6.8nm,0.9s,baz=250,slow=8.4,SNR=5.6						
SCHQ	Schefferville	71.15	3	IAmb	IAmb	13 51 01.1	
	comp=Z,20nm,1.2s						
YERR	Yerington	71.21	322	P	P	13 51 01.9	+0.9
YERR				IAmb	IAmb	13 51 04.0	
	comp=Z,44nm,1.2s						
QLMT	Earthquake Lak	71.21	331	P	P	13 51 01.7	+0.8
CMB	Columbia Colle	71.28	321	P	P	13 51 01.7	+0.5
CMB	Columbia Colle	71.28	321	P	P	13 51 01.7	+0.5
PNTR	Pine Nut	71.49	322	P	P	13 51 03.4	+0.7
PNTR				IAmb	IAmb	13 51 05.9	
	comp=Z,31nm,0.9s						
VCNR	Virginia City	71.65	322	P	P	13 51 04.4	+0.7
VCNR				IAmb	IAmb	13 51 06.8	
	comp=Z,33nm,1.1s						
EMB	Emerald Bay	71.71	322	P	P	13 51 04.9	+0.8
HLID	Hailey	71.72	328	P	P	13 51 04.5	+0.5
HLID	Hailey	71.72	328	P	P	13 51 05.3	+1.4
	baz=136,SNR=28						
PAHR	Pah Rah Range	71.77	323	P	P	13 51 05.1	+0.9
PAHR				IAmb	IAmb	13 51 07.4	
	comp=Z,55nm,1.0s						
BCYI	Bear Canyon	71.77	329	P	P	13 51 04.0	-0.2

MCMT	McKenzie Canyo	71.88	330	P	P	13 51 06.0	+1.0
BOZ	Bozeman (W)	71.88	331	P	P	13 51 04.9	+0.1
BOZ				pmax	pmax		
	comp=Z,20nm,1.1s						
BOZ	Bozeman (W)	71.88	331	P	P	13 51 04.9	+0.1
BOZ	Bozeman (W)	71.88	331	P	P	13 51 05.8	+0.9
	baz=139,SNR=17						
NVL	N'lazarevskaya	72.22	160	*e*P	P	13 51 13.4	+7.1
NVL				pmax	pmax		
	comp=Z,53nm,1.0s						
MFID	Camas Ranch	72.34	327	P	P	13 51 08.2	+0.6
MFID				IAmb	IAmb	13 51 10.3	
	comp=Z,50nm,1.0s						
LRM	Limekiln Ridge	72.43	331	P	P	13 51 08.4	+0.2
HRY	Holter Researc	72.82	332	P	P	13 51 10.9	+0.6
MCCM	Marconi Confer	72.88	320	P	P	13 51 11.1	+0.4
MCCM				IAmb	IAmb	13 51 13.0	
	comp=Z,46nm,0.8s						
EGMT	Eagleton	72.92	334	P	P	13 51 11.0	+0.1
EGMT				IAmb	IAmb	13 51 12.5	
	comp=Z,31nm,0.8s						
EGMT	Eagleton	72.92	334	P	P	13 51 11.5	+0.7
	baz=141,SNR=15						
KOWA	Kowa	73.06	69	P	P	13 51 10.7	-1.6
O03E	Paynes Creek	73.56	322	P	P	13 51 15.1	+0.3
	baz=129,SNR=6.1						
PLID	Pearl Lake	73.61	329	P	P	13 51 15.1	0.0
QSPA	South Pole Qui	73.66	180	P	P	13 51 16.6	+1.5
QSPA				IAmb	IAmb	13 51 18.4	
	comp=Z,41nm,1.2s						
J08A	Circle Bar Ran	73.69	326	P	P	13 51 15.6	0.0
MSO	Missoula	73.87	331	P	P	13 51 16.6	+0.2
MSO	Missoula	73.87	331	P	P	13 51 17.6	+1.1
	baz=137,SNR=12						
O02D	Mt. Diablo Mer	74.08	321	P	P	13 51 18.4	+0.7
	baz=129						
BMO	Blue Mountains	74.11	328	P	P	13 51 18.0	+0.1
BMO				pmax	pmax		
	comp=Z,15nm,1.0s						
BMO	Blue Mountains	74.11	328	P	P	13 51 18.0	+0.1
WDC	Whiskeytown Da	74.18	322	P	P	13 51 17.4	-0.9
WDC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WDC	Whiskeytown Da	74.18	322	P	P	13 51 17.4	-0.9
N02D	Trinity Center	74.52	322	P	P	13 51 20.7	+0.4
	baz=129,SNR=6.1						
M04C	Macdoel	74.53	323	P	P	13 51 21.2	+0.8
	baz=130,SNR=12						
JTMT	Jette	74.70	331	P	P	13 51 21.8	+0.5
I07A	Izee	74.73	326	P	P	13 51 21.5	-0.1
F10A	Beach Ranch, E	74.85	329	P	P	13 51 22.5	+0.4
M02C	Callahan	74.87	322	P	P	13 51 23.1	+0.7
	baz=129						
YBH	Yreka Blue Hor	75.00	323	P	P	13 51 23.1	0.0
YBH				pmax	pmax		
	comp=Z,13nm,1.0s						
YBH	Yreka Blue Hor	75.00	323	P	P	13 51 23.1	0.0
K04D	Chiloquin, OR	75.02	324	P	P	13 51 24.7	+1.4
	baz=130,SNR=5.1						
L04D	Klamath Falls	75.07	323	P	P	13 51 24.2	+0.7
	baz=129						
J05D	Fort Rock, OR	75.15	325	P	P	13 51 25.3	+1.3
	baz=130,SNR=11						
G08A	Pilot Rock	75.26	327	P	P	13 51 24.9	+0.3
PINE	Pine Mountain	75.32	325	P	P	13 51 25.1	+0.1
PINE				IAmb	IAmb	13 51 28.2	
	comp=Z,41nm,1.1s						
KRMB	Red Mountain	75.58	322	P	P	13 51 27.5	+1.0
KRMB				IAmb	IAmb	13 51 29.5	
	comp=Z,86nm,1.4s						
J04D	Umpqua Nationa	75.61	324	P	P	13 51 28.0	+1.3
	baz=130,SNR=5.5						
FFC	Flin Flon	75.66	342	P	P	13 51 26.1	-0.4
FFC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FFC	Flin Flon	75.66	342	P	P	13 51 26.1	-0.4
HUMO	Hull Mountain	75.69	323	P	P	13 51 26.8	-0.1
L02E	Cave Junction	75.79	323	P	P	13 51 29.1	+1.6
	baz=128,SNR=5.2						
I05D	Terrebonne, OR	75.89	325	P	P	13 51 30.0	+1.9
	baz=131,SNR=11						
I04A	Tendick Farm,	76.14	324	P	P	13 51 30.2	+0.7
	baz=130						
K02D	Willamette Mer	76.16	323	P	P	13 51 30.5	+0.8
	baz=128						
DBO	Dodson Butte	76.18	323	P	P	13 51 30.9	+1.1
HAWA	Hanford	76.30	328	P	P	13 51 31.6	+1.3
HAWA				IAmb	IAmb	13 51 33.0	
	comp=Z,28nm,0.9s						
NEW	Newport	76.40	330	P	P	13 51 32.0	+1.2
	baz=135						
D08A	Wollman Farm,	76.44	329	P	P	13 51 31.9	+0.9
G05D	Wamic, OR	76.47	326	P	P	13 51 32.8	+1.5
	baz=131						
J01E	Myrtle Point	76.60	323	P	P	13 51 33.0	+1.0
	baz=128						
I03D	Drain, OR	76.60	324	P	P	13 51 32.9	+0.9
	baz=129						
H04D	Lebanon	76.78	325	P	P	13 51 33.8	+0.8
	baz=130						
F05D	White Salmon	76.97	326	P	P	13 51 35.8	+1.7
	baz=131						
FCC	Fort Churchill	77.33	348	P	P	13 51 35.5	-0.3
FCC				pmax	pmax		
	comp=Z,43nm,1.3s						
FCC	Fort Churchill	77.33	348	P	P	13 51 35.5	-0.3
FCC				IAmb	IAmb	13 51 55.5	
	comp=Z,43nm,1.2s						
LTY	Liberty	77.46	328	P	P	13 51 37.5	+0.6
LTY				IAmb	IAmb	13 51 39.5	
	comp=Z,38nm,1.2s						
F04A	Amboy	77.51	326	P	P	13 51 37.4	+0.4
F04A				IAmb	IAmb	13 51 39.5	
	comp=Z,47nm,0.9s						
TORD	Torodi Ar. Bea	77.74	72	P	P	13 51 38.0	-1.0
	comp=Z,35nm,0.7s,baz=257,slow=5.2,SNR=110						
TORD				pP	pP	13 52 14.0	+1.8
	comp=Z,16nm,0.8s,baz=258,slow=4.9,SNR=4.6						
TORD	Torodi Ar. Bea	77.74	72	P	P	13 51 38.0	-1.0
TORD				IAmb	IAmb	13 51 41.5	
	comp=Z,35nm,0.7s						
F04D	Rainier, OR	77.92	326	P	P	13 51 40.5	+1.2
	baz=130						
E04D	Cinebar	77.99	327	P	P	13 51 41.2	+1.6
	baz=130						
D05A	Enumclaw	78.09	327	P	P	13 51 41.0	+0.8
D05A				IAmb	IAmb	13 51 42.6	
	comp=Z,52nm,0.8s						
EDM	Edmonton	78.38	336	P	P	13 51 41.1	-0.7
EDM				pmax	pmax		
	comp=Z,92nm,1.0s						
EDM	Edmonton	78.38	336	P	P	13 51 41.1	-0.7
EDM				IAmb	IAmb	13 51 42.7	
	comp=Z,92nm,1.0s						
D04E	Lakebay	78.49	327	P	P	13 51 43.6	+1.1
	baz=130						
E03A	Lebam	78.51	326	P	P	13 51 44.2	+1.7
E03A				IAmb	IAmb	13 51 45.5	
	comp=Z,66nm,1.1s						
RADR	Rader Ridge	78.56	326	P	P	13 51 44.3	+1.4
B06A	Marblemount	78.70	329	P	P	13 51 44.4	+0.9
B06A				IAmb	IAmb	13 51 45.3	
	comp=Z,34nm,0.8s						
B05A	Bryant	78.84	328	P	P	13 51 45.2	+0.8
	baz=131						
D03D	Eldon	78.89	327	P	P	13 51 45.3	+0.7
	baz=130						
NLWA	Neilton Lookou	79.20	327	P	P	13 51 47.5	+1.0
NLWA				IAmb	IAmb	13 51 49.5	
	comp=Z,46nm,1.1s						
MORF	Marmelete	79.44	46	*e*P	P	13 51 48.5	+0.5
MORF				IAmb	IAmb	13 51 53.3	
	comp=Z,106nm,2.0s						
MORF	Marmelete	79.44	46	*e*P	P	13 51 49.3	+1.3
	comp=Z,36nm,1.6s						
MORF	Marmelete	79.44	46	*e*P	P	13 51 48.5	+0.5
PGC	Sidney	79.78	328	P	P	13 51 50.8	+1.4
PGC				IAmb	IAmb	13 51 52.3	
	comp=Z,50nm,1.2s						
PNCL	Nicolau / Gran	79.93	45	*e*P	P	13 51 51.0	+0.5
	comp=Z,27nm,1.9s						
MESJ	Messejana	80.01	46	*e*P	P	13 51 51.5	+0.6
MESJ				IAmb	IAmb	13 51 52.2	
	comp=Z,9.4nm,0.9s						
MESJ	Messejana	80.01	46	*e*P	P	13 51 51.7	+0.8
	comp=Z,18nm,1.7s						
PCVE	Castro Verde	80.03	46	*e*P	P	13 51 51.8	+0.8
	comp=Z,35nm,1.9s						
PVAQ	Vaqueiros	80.14	46	*e*P	P	13 51 52.2	+0.6
	comp=Z,21nm,1.4s						
LLLB	Lillooet	80.27	330	P	P	13 51 52.9	+0.8
PBEJ	Beja	80.34	46	*e*P	P	13 51 51.4	-1.3
	comp=Z,22nm,1.8s						
PMTG	Montargil	80.62	45	*e*P	P	13 51 54.8	+0.6
	comp=Z,19nm,1.5s						
PESTR	Estremoz	80.95	45	*e*P	P	13 51 56.4	+0.5
	comp=Z,22nm,1.3s						
PMRV	Marv??o	81.36	45	*e*P	P	13 51 58.7	+0.6
	comp=Z,21nm,1.7s						
VNDA	Vanda	81.38	190	P	P	13 52 00.5	+2.8
	comp=Z,6.1nm,0.8s,baz=120,slow=5.3,SNR=23						
VNDA	Vanda	81.38	190	P	P	13 51 59.7	+2.1
VNDA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VNDA	Vanda	81.38	190	P	P	13 51 59.7	+2.1
PCBR	Castelo Branco	81.50	44	*e*P	P	13 51 58.4	-0.4
	comp=Z,24nm,1.9s						
CBB	Campbell River	81.63	328	P	P	13 51 59.8	+0.5
CBB				IAmb	IAmb	13 52 02.1	
	comp=Z,53nm,0.9s						
MTE	Manteigas	81.73	44	*e*P	P	13 52 00.5	+0.4
	comp=Z,37nm,1.5s						
SYO	Syowa Base	81.88	160⇓	*e*P	P	13 52 01.6	+1.2
SYO	Syowa Base	81.88	160⇑	*e*PcP	PcP	13 52 05.8	+0.1
SUR	Sutherland	82.92	122	P	P	13 52 08.2	+1.4
SUR				IAmb	IAmb	13 52 09.7	
	comp=Z,42nm,1.1s						
PBRG	Braganca	82.95	43	*e*P	P	13 52 06.4	0.0
	comp=Z,30nm,1.6s						
PAB	San Pablo	83.48	46	P	P	13 52 09.5	+0.3
PAB				pmax	pmax		
	comp=Z,21nm,1.0s						
PAB	San Pablo	83.48	46	P	P	13 52 09.5	+0.3
TSUM	Tsumeb	83.52	108	P	P	13 52 10.6	+0.6
TSUM				IAmb	IAmb	13 52 11.8	
	comp=Z,26nm,0.8s						
ESDC	Sonseca Array	83.81	46	P	P	13 52 11.1	+0.2
	comp=Z,12nm,0.8s,baz=255,slow=5.1,SNR=80						
ESDC				pP	pP	13 52 44.4	0.0
	comp=Z,3.1nm,0.8s,baz=252,slow=5.6,SNR=3.3						
ESDC				LR	LR	14 26 33.9	
	comp=Z,44nm,21.9s,baz=350,slow=34						
ESDC	Sonseca Array	83.81	46	P	P	13 52 10.3	-0.5
ESBB	Sonseca Array	83.81	46	P	P	13 52 10.8	-0.1
YKA	Yellowknife Ar	85.81	341	P	P	13 52 20.4	+0.2
	comp=Z,20nm,0.8s,baz=128,slow=6.1,SNR=68						
YKA				pP	pP	13 52 55.8	+1.9
	comp=Z,8.0nm,0.8s,baz=127,slow=6.3,SNR=4.7						
YKA				LR	LR	14 34 03.4	
	comp=Z,54nm,18.4s,baz=0.0,slow=38						
YKA	Yellowknife Ar	85.81	341	P	P	13 52 19.9	-0.3
BOSA	Boshof	87.65	119	P	P	13 52 30.8	+0.5
	comp=Z,5.5nm,0.9s,baz=160,slow=7.6,SNR=6.2						
BOSA				LR	LR	14 28 24.9	
	comp=Z,52nm,18.1s,baz=329,slow=33						
BOSA	Boshof	87.65	119	P	P	13 52 30.8	+0.5
BOSA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BOSA	Boshof	87.65	119	IAmb	IAmb	13 52 31.6	
	comp=Z,8.4nm,1.0s						
CRAG	Craig	88.61	330	P	P	13 52 34.7	+0.9
	baz=122						
WRAK	Wrangell Islan	88.75	331	P	P	13 52 35.1	+0.7
	baz=123						
DLBC	Dease Lake	88.83	333	P	P	13 52 35.6	+0.6
WRGLY	Wrigley	89.22	339	P	P	13 52 37.4	+0.9
	baz=131						
BORG	Borgarnes	89.39	19	LR	LR	14 30 51.9	
	comp=Z,557nm,20.5s,baz=228,slow=34						
MAW	Mawson	89.68	164	P	P	13 52 40.6	+1.8
	comp=Z,23nm,1.0s,baz=222,slow=5.4,SNR=19						
MAW	Mawson	89.68	164	P	P	13 52 40.1	+1.3
MAW				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MAW	Mawson	89.68	164	P	P	13 52 40.1	+1.3
TGTN	Hyland Airport	89.92	336	P	P	13 52 41.3	+1.3
	baz=126						
P33M	Teslin, Yukon	91.01	334	P	P	13 52 46.2	+1.1
	baz=122						
CLF	Chambon-Foret	91.44	40	P	P	13 52 46.4	-0.8
CLF				IAmb	IAmb	13 52 47.6	
	comp=Z,26nm,0.9s						
SUMG	Summit	91.49	9	P	P	13 52 47.9	+0.5
SUMG				pmax	pmax		
	comp=Z,55nm,1.1s						
SUMG	Summit	91.49	9	P	P	13 52 47.9	+0.5
MMPY	Sheldon Lake,	91.70	336	P	P	13 52 49.1	+0.9
	baz=124						
FARO	Faro, Yukon	92.30	335	P	P	13 52 51.7	+0.7
	baz=122						
M31M	Drury Creek, Y	92.70	335	P	P	13 52 53.5	+0.7
	baz=121						
TULEG	Thule	92.86	1	P	P	13 52 53.1	-0.1
TULEG				IAmb	IAmb	13 53 03.3	
	comp=Z,23nm,1.5s						
N31M	Braeburn, Yuko	92.91	334	P	P	13 52 53.8	0.0
	baz=120						
HYT	Haines Junctio	93.32	333	P	P	13 52 57.0	+1.2
	baz=118						
PNL	Peninsula	93.62	332	P	P	13 52 58.4	+1.3
	baz=117						
M30M	Minto, Yukon	93.86	335	P	P	13 52 58.7	+0.5
	baz=119						
YUK4	Talbot Arm	94.05	333	P	P	13 53 00.4	+1.1
	baz=117						
MESA	MESA	95.00	332	P	P	13 53 04.2	+0.5
	baz=115						
YUK3	Moose Creek	95.02	333	P	P	13 53 04.3	+0.6
	baz=116						
A36M	Sachs Harbour	95.36	345	P	P	13 53 04.5	-0.2
A36M				IAmb	IAmb	13 53 05.7	
	comp=Z,16nm,0.9s						
A36M	Sachs Harbour	95.36	345	P	P	13 53 05.3	+0.5
	baz=129						
BVCY	Beaver Creek	95.47	334	P	P	13 53 06.0	+0.4
	baz=115						
INK	Inuvik	95.56	341	P	P	13 53 05.6	-0.1
INK				pmax	pmax		
	comp=Z,13nm,1.0s						
INK	Inuvik	95.56	341	P	P	13 53 05.6	-0.1
INK				IAmb	IAmb	13 53 07.0	
	comp=Z,13nm,1.0s						
INK	Inuvik	95.56	341	P	P	13 53 06.3	+0.6
	baz=121						
DAWY	Dawson	95.59	336	P	P	13 53 06.3	+0.2
	baz=116						
M27K	Edge Creek, AK	95.88	334	P	P	13 53 07.6	+0.1
	baz=114						
MCARA	McCarthy VSAT	95.97	333	P	P	13 53 08.1	+0.3
	baz=114						
L27K	Beaver Creek,	96.15	334	P	P	13 53 08.4	-0.2
L27K				IAmb	IAmb	13 53 09.8	
	comp=Z,7.4nm,0.9s						
L27K	Beaver Creek,	96.15	334	P	P	13 53 09.2	+0.6
	baz=114						
EGAK	Eagle	96.59	336	P	P	13 53 10.5	0.0
EGAK				IAmb	IAmb	13 53 11.2	
	comp=Z,7.7nm,1.1s						
EGAK	Eagle	96.59	336	P	P	13 53 11.0	+0.5
	baz=115						
KLU	Klutina	97.31	332	P	P	13 53 13.8	-0.1
KLU	Klutina	97.31	332	P	P	13 53 14.2	+0.2
	baz=111						
SCRK	Sand Creek	97.40	335	P	P	13 53 14.4	0.0
	baz=112						
J26L	Joseph Creek	97.43	335	P	P	13 53 14.5	+0.1
	baz=113						
M24K	Tolsona, Glenn	97.64	333	P	P	13 53 15.3	-0.1
	baz=111						
PAX	Paxson	97.64	334	P	P	13 53 15.1	-0.3
	baz=111						
SCM	Sheep Creek Mo	98.05	332	P	P	13 53 17.8	+0.6
	baz=110						
J25K	Salcha River,	98.20	335	P	P	13 53 18.0	+0.2
	baz=111						
WAT6	Susitna Watana	98.49	333	P	P	13 53 19.3	0.0
	baz=109						
SML	Sawmill	98.49	332	P	P	13 53 19.3	+0.1
	baz=109						
HDA	Harding Lake	98.77	335	P	P	13 53 20.2	-0.1
	baz=110						
ILAR	Eielson Array	98.86	335	P	P	13 53 20.4	-0.4
	comp=Z,1.3nm,0.8s,baz=151,slow=3.6,SNR=15						
ILAR				pP	pP	13 53 55.5	+0.8
	comp=Z,0.7nm,0.8s,baz=154,slow=3.1,SNR=3.5						
KHC	Kasperske Hory	98.90	41⇑	*e*P	Pdif	13 53 21.0	-0.3
KHC				pmax	pmax		
	comp=Z,33nm,3.2s						
GERES	GERESS Array B	98.90	42	P	Pdif	13 53 20.6	-0.8
	comp=Z,1.5nm,0.8s,baz=282,slow=8.1,SNR=3.9						
RC01	Rabbit Creek A	98.91	331	P	P	13 53 20.7	-0.3
	baz=108						
WAT1	Susitna Watana	98.92	333	P	P	13 53 20.9	-0.2
	baz=109						
CLL	Collm	99.10	39	*e*P	Pdif	13 53 22.0	-0.1
CLL	Collm	99.10	39	*e*Pdif	Pdif	13 53 22.0	-0.1
COLA	College	99.29	335⇓	*e*P	Pdif	13 53 22.5	-0.1
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
COLA	College	99.29	335	P	Pdif	13 53 23.0	+0.4
	baz=109						
TCOL	CIGO, UAF Yank	99.29	335	P	Pdif	13 53 23.1	+0.5
	baz=109						
MCK	McKinley	99.37	334	P	Pdif	13 53 23.0	-0.1
	baz=108						
MDM	Murphy Dome	99.47	335		Pdif	13 53 23.4	-0.1
MDM				IAmb	IAmb	13 53 24.3	
	comp=Z,10nm,0.9s						
CAPN	Captain Cook N	99.47	331	P	Pdif	13 53 23.6	+0.2
	baz=107						
H24K	Noodor Dome	99.61	336	P	Pdif	13 53 24.5	+0.4
	baz=109						
NEA2	Nenana	99.69	335	P	Pdif	13 53 24.6	+0.2
	baz=108						
TRF	Thorofare Moun	99.86	333	P	Pdif	13 53 25.1	-0.3
	baz=107						
I23K	Minto, Yukon-K	99.98	335	P	Pdif	13 53 25.4	-0.2
	baz=108						
MLY	Manley	100.51	335	P	Pdif	13 53 28.1	0.0
	baz=106						
PPLA	Purkeypile	100.54	333	P	Pdif	13 53 28.4	0.0
	baz=106						
CHUM	Lake Minchumin	100.85	334	P	Pdif	13 53 29.6	+0.1
	baz=105						
ANM	Nome	106.59	333	P	PKiKP	13 58 04.6	-0.4
	baz=94						
ARCES	ARCESS Array B	107.65	22	PKKPbc	PKKPbc	14 09 22.9	-1.3
	comp=Z,2.9nm,0.8s,baz=84,slow=3.8,SNR=9.9						
TNA	Tin City	107.70	334	P	PKiKP	13 58 07.1	0.0
	baz=91						
FINES	FINESS Array B	107.78	30	PKKPbc	PKKPbc	14 09 23.2	-0.4
	comp=Z,2.1nm,0.8s,baz=212,slow=4.9,SNR=3.8						
SPIA	Saint Paul Isl	108.65	325	P	PKiKP	13 58 09.9	+0.9
	baz=92						
GAMB	Gambell	109.35	332	P	PKiKP	13 58 10.9	+0.8
	baz=88						
BRTR	Keskin Array B	111.60	53	PKiKP	PKiKP	13 58 15.1	-0.3
	comp=Z,1.6nm,1.0s,baz=220,slow=4.8,SNR=4.6						
KLMR	Klimovskoe	114.31	30	*e*PKIKP	PKPdf	13 58 19.4	-0.3
KLMR				pmax	pmax		
	comp=Z,18nm,1.5s						
KLMR	Klimovskoe	114.31	30	*e*PKPdf	PKPdf	13 58 19.5	-0.2
KLMR				AMP		13 58 25.8	
	comp=Z,18nm,1.5s						
PRGR	Permogore	117.02	29	*e*PKIKP	PKPdf	13 58 25.7	+0.8
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BILL	Bilibino	117.14	339⇓	*i*PKIKP	PKPdf	13 58 22.8	-2.2
BILL				*e*		13 59 38.0	
BILL				pmax	pmax		
	comp=Z,14nm,1.8s						
KIV	Kislovodsk	118.35	49	*e*PKIKP	PKPdf	13 58 28.0	-0.2
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBZ	Khabaz	118.52	49	PKP	PKPdf	13 58 29.4	+1.0
	comp=Z,7.5nm,0.9s,baz=232,slow=3.0,SNR=11						
KBZ	Khabaz	118.52	49*c*	*i*PKIKP	PKPdf	13 58 29.6	+1.3
KIRV	Kirov	119.72	31⇓	*i*PKIKP	PKPdf	13 58 30.8	+0.6
GNI	Garni	120.14	53⇓	*i*PKIKP	PKPdf	13 58 33.0	+1.2
BELG	Belogornoye	120.39	39⇑	*i*PKIKP	PKPdf	13 58 32.1	+0.5
STKA	Stephens Creek	122.57	213	PKP	PKPdf	13 58 37.2	+0.6
	comp=Z,5.8nm,0.7s,baz=148,slow=1.8,SNR=11						
TIXI	Tiksi	123.60	353	PKP	PKPdf	13 58 37.2	-0.1
	comp=Z,1.8nm,0.3s,baz=7.8,slow=0.8,SNR=16						
TIXI	Tiksi	123.60	353⇑	*i*PKIKP	PKPdf	13 58 37.6	+0.3
TIXI	Tiksi	123.60	353	PKPdf	PKPdf	13 58 36.9	-0.4
SEY	Seymchan	124.71	337	PKP	PKiKP	13 58 41.0	+1.1
	comp=Z,11nm,0.7s,baz=84,slow=1.9,SNR=21						
ARU	Arti	125.10	32	*i* PKIKP	PKPdf	13 58 41.5	+0.9
ARU						14 00 34.4	
ARU						14 05 41.4	
ARU				SS	SS	14 17 11.2	-6.4
ARU	Arti	125.10	32	PKPdf	PKPdf	13 58 40.8	+0.1
NRIK	Noril'sk	125.53	9	PKP	PKPdf	13 58 41.9	+0.9
	comp=Z,2.4nm,0.6s,baz=62,slow=3.4,SNR=5.0						
NRIK	Noril'sk	125.53	9⇓	*i*PKIKP	PKPdf	13 58 42.0	+0.9
PETK	Petropavlovsk-	127.31	325	PKP	PKiKP	13 58 46.1	+0.6
	comp=Z,8.4nm,0.9s,baz=182,slow=4.1,SNR=6.2						
GEYT	Alibeck	130.74	54	PKP	PKPdf	13 58 52.9	+0.9
	comp=Z,3.7nm,0.8s,baz=57,slow=9.0,SNR=5.0						
YAK	Yakutsk	132.21	347	PKP	PKPdf	13 58 54.8	+0.8
	comp=Z,2.0nm,0.4s,baz=202,slow=5.1,SNR=6.6						
YAK	Yakutsk	132.21	347	*e*PKIKP	PKPdf	13 58 54.0	+0.1
YAK				*e*		14 01 16.7	
YAK				*e*		14 05 54.9	
YAK				pmax	pmax		
	comp=Z,18nm,1.3s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.6s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,108nm,4.1s						
YAK				pmax	pmax		
	comp=N,106nm,3.0s						
YAK				pmax	pmax		
	comp=E,55nm,3.6s						
BRVK	Borovoye	132.66	31⇓	*i*PKIKP	PKPdf	13 58 56.8	+1.7
AS31	Alice Springs	133.18	212	PKPdf	PKPdf	13 58 57.5	+0.4
ASAR	Alice Springs	133.18	212	PKP	PKPdf	13 58 58.0	+0.8
	comp=E,4.5nm,0.7s,baz=136,slow=2.0,SNR=46						
ASAR	Alice Springs	133.18	212	PKIKP	PKPdf	13 58 56.8	-0.3
ASAR	Alice Springs	133.18	212	PKPdf	PKPdf	13 58 56.8	-0.3
PMG	Port Moresby	134.21	239	PKP	PKiKP	13 59 00.6	+0.1
	comp=E,3.8nm,0.4s,baz=124,slow=9.4,SNR=3.6						
HRA	Herat	134.70	58	PKPdf	PKPdf	13 59 00.5	+0.6
WR0	Warramunga Arr	135.86	216		PKPdf	13 59 02.4	+0.2
WB2	Warramunga Arr	135.97	216	PKPdf	PKPdf	13 59 03.0	+0.6
WRA	Warramunga Arr	135.98	216	PKP	PKPdf	13 59 03.5	+1.1
	comp=E,16nm,0.9s,baz=150,slow=1.9,SNR=37						
WRA	Warramunga Arr	135.98	216	PKIKP	PKPdf	13 59 02.3	-0.1
WRA	Warramunga Arr	135.98	216	PKPdf	PKPdf	13 59 02.3	-0.1
WRAB	Tennant Creek	135.98	216*d*	*i*PKIKP	PKPdf	13 59 02.2	-0.2
ZAA0	Zalesovo Array	138.21	21	PKPdf	PKPdf	13 59 04.8	-0.6
ZALV	Zalesovo Beam	138.21	21	PKP	PKPdf	13 59 05.3	-0.1
	comp=E,38nm,0.7s,baz=352,slow=2.6,SNR=10						
ZALV				pPKP	pPKPdf	13 59 41.5	+0.6
	comp=E,28nm,1.0s,baz=300,slow=2.9,SNR=7.5						
ZALV	Zalesovo Beam	138.21	21	PKPdf	PKPdf	13 59 04.6	-0.8
KLR	Kul'dur	142.44	335	PKhKP	PKPpre	13 59 09.2	
	comp=E,5.7nm,0.9s,baz=15,slow=3.1,SNR=4.8						
KLR	Kul'dur	142.44	335⇑	*e*PKIKP	PKPdf	13 59 10.4	-2.8
DGZ	Jazzator, Alta	142.61	23⇓	*i*PKIKP	PKPdf	13 59 11.3	-2.4
MK31	Makanchi Array	142.61	30⇑	*e*PKIKP	PKPdf	13 59 12.8	-0.9
MKAR	Makanchi Array	142.61	30	PKhKP	PKPpre	13 59 09.8	
	comp=E,3.4nm,0.8s,baz=321,slow=3.1,SNR=14						
MTN	Manton Dam	143.47	218	PKPdf	PKPbc	13 59 14.4	+0.8
NIL	Nilore	143.72	55	PKIKP	PKPbc	13 59 15.1	+1.2
NIL	Nilore	143.72	55		PKPbc	13 59 15.1	+1.1
MOY	Mondy	144.36	8	*e*PKIKP	PKPbc	13 59 17.0	+1.6
MOY				pmax	pmax		
	comp=Z,82nm,1.4s						
TLY	Talaya	144.66	6	*e*PKIKP	PKPdf	13 59 17.8	+0.7
TLY				pmax	pmax		
	comp=Z,153nm,0.8s						
TLY	Talaya	144.66	6	PKPdf	PKPab	13 59 16.9	+0.9
JYA	Atsumi	145.18	315	P	PKPbc	13 59 18.7	+0.5
ZAK	Zakamensk	145.91	6	*e*PKP2	PKPbc	13 59 21.4	+1.2
ZAK				pmax	pmax		
	comp=Z,60nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,46nm,1.1s						
JYT	Yasato	145.98	311	P	PKPdf	13 59 20.5	+0.7
USRK	Ussuriysk Ar.	146.18	330	PKPbc	PKPbc	13 59 21.6	+0.5
	comp=Z,39nm,0.8s,baz=34,slow=2.2,SNR=46						
USRK				pPKPbc	pPKPbc	13 59 56.9	+0.7
	comp=Z,9.6nm,0.9s,baz=48,slow=2.8,SNR=2.7						
JSD	Sado	146.44	316	P	PKPbc	13 59 22.1	0.0

POO	Poona	146.56	81	*e*P	PKPdf	13 59 21.0	-0.3
MDJ	Mudanjiang	146.98	332	PKPbc	PKPdf	13 59 22.6	+1.4
MDJ				PP	PP	14 02 47.3	-0.9
MDJ				AMB	AMB		
	comp=Z,150nm,6.7s						
MDJ	Mudanjiang	146.98	332		PKPbc	13 59 23.6	+0.2
JRY	Ryogami san	147.01	312	P	PKPbc	13 59 23.5	-0.3
JOD2	Odawara 2	147.22	311	P	PKPdf	13 59 23.4	+1.5
MJAR	Matsushiro Arr	147.24	313	PKPbc	PKPbc	13 59 24.6	+0.2
	comp=Z,86nm,0.8s,baz=103,slow=2.8,SNR=138						
MJAR				pPKP	pPKPbc	14 00 00.4	+0.9
	comp=Z,18nm,0.8s,baz=107,slow=3.7,SNR=3.6						
MAJO	Matsushiro	147.24	313	⇓*e*PKIKP	PKPdf	13 59 20.9	-1.0
MAJO	Matsushiro	147.24	313		PKPbc	13 59 24.5	+0.1
MAT	Matsushiro	147.24	313	PKP	PKPdf	13 59 21.3	-0.6
MAT	Matsushiro	147.24	313	P	PKPdf	13 59 23.8	+1.9
WMQ	Urumqi	147.38	29	*e*PKPbc	PKPdf	13 59 23.3	+1.3
WMQ				pPKP	pPKPdf	13 59 47.8	-10
WMQ				sPKP		13 59 59.2	
JGN	Niukaw	148.03	313	P	PKPbc	13 59 27.4	+0.8
JGF	Kuroka	148.31	312	P	PKPbc	13 59 27.6	+0.3
JGF	Kuroka	148.31	312	PKPbc	PKPbc	13 59 27.1	-0.2
SONM	Songino Array	148.69	3	PKPbc	PKPbc	13 59 28.8	+0.8
	comp=Z,30nm,0.8s,baz=325,slow=1.7,SNR=62						
SONM				pPKPbc	pPKPbc	14 00 03.6	+0.3
	comp=Z,16nm,0.9s,baz=336,slow=1.6,SNR=5.8						
SONM	Songino Array	148.69	3		PKPdf	13 59 25.7	+1.5
ULN	Ulaanbaatar	148.69	2	⇓*e*PKIKP	PKPdf	13 59 25.5	+1.3
ULN	Ulaanbaatar	148.69	2	PKPbc	PKPdf	13 59 25.8	+1.7
JIE	Ise	149.36	311	P	PKiKP	13 59 31.2	+0.2
CN2	Changchun	149.38	336	*e*PKPbc	PKPdf	13 59 26.9	+1.7
BATI	Baumata	149.70	210	PKP	PKPdf	13 59 26.9	+0.3
SOEI	Soe	149.79	211	PKP	PKPdf	13 59 27.0	+0.1
SOEI	Soe	149.79	211		PKPdf	13 59 29.0	+2.2
JWT	Wachi	149.84	313	P	PKPbc	13 59 31.1	0.0
FAKI	Fak Fak	149.91	232	PKP	PKPdf	13 59 27.3	+0.4
FAKI	Fak Fak	149.91	232	PKPdf	PKPdf	13 59 25.8	-1.1
HYB	Hyderabad	150.99	84	*i* PKP	PKPdf	13 59 29.5	+1.0
HYB				*e*		13 59 35.0	
HYB				*e*pPKP	pPKPbc	14 00 10.5	+0.8
MMRI	Maumere	151.74	209	PKP	PKPdf	13 59 30.0	+0.3
EDFI	Ende, Flores	151.89	208	PKP	PKPdf	13 59 30.2	+0.1
KSRS	Korea Array	153.21	325	PKP	PKPdf	13 59 32.9	+1.7
	comp=Z,4.6nm,0.9s,baz=36,slow=1.0,SNR=14						
KSRS				PKPbc	PKiKP	13 59 40.2	+1.4
	comp=Z,20nm,0.9s,baz=34,slow=1.5,SNR=38						
KSRS				PKPab	PKPab	13 59 51.6	+0.8
	comp=Z,5.4nm,0.9s,baz=53,slow=3.5,SNR=4.9						
KSRS				pPKPbc	pPKPbc	14 00 14.3	+0.2
	comp=Z,6.2nm,0.9s,baz=31,slow=2.3,SNR=3.0						
KSAR	Wonju Array Be	153.24	325	PKIKP	PKPbc	13 59 39.3	+0.5
KSAR	Wonju Array Be	153.24	325	PKPdf	PKPdf	13 59 31.2	0.0
KSAR				PKPbc	PKPbc	13 59 39.3	+0.5
TWSI	Taliwang, Sumb	153.70	198	PKP	PKPdf	13 59 32.8	+0.2
HHC	Hu-ho-hao-te	155.63	355	*e*PKP	PKPdf	13 59 34.6	0.0
GTA	Gaotai	155.84	17	⇓PKP	PKPdf	13 59 36.1	+1.1
GTA				PKPab	PKPab	14 00 02.1	-0.1
GTA				AMB	AMB		
	comp=Z,69nm,6.2s						
BTO	Baotou	155.97	358	*e*PKP	PKPdf	13 59 36.3	+1.2
BTO				SS	SS	14 23 20.6	+4.2
LZH	Lanzhou	159.99	12	*e*PKP	PKPdf	13 59 41.6	+1.4
LZH				pPKP	pPKPdf	14 00 08.3	-7.7
LZH				sPKP		14 00 20.5	
NJ2	Nanjing	162.07	331	*e*PKP	PKPdf	13 59 43.2	+0.9
XAN	Xi'an	162.54	360	PKP	PKPdf	13 59 43.9	+1.1
CD2	Chengdu	164.92	17	PKP	PKPdf	13 59 44.6	-0.5
KMI	Kunming	169.68	33	⇑PKP	PKPdf	13 59 48.5	-0.4
KMI				sPKP		14 00 24.8	
CMAR	Chiang Mai Arr	170.32	77	PKPab	PKPab	14 01 06.0	-0.3
	comp=Z,1.9nm,0.8s,baz=283,slow=6.6,SNR=7.9						
CMAR	Chiang Mai Arr	170.32	77	PKP2	PKPab	14 01 06.0	-0.3

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*IDC **01** 13:42:54.6±2.5, 1°.09N×127°.53E, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.4/36, mbtmp3.6/3, Error ellipse: s-maj=188.6km s-min=28.5km az=67.0*

*DJA **01** 13:42:55.7±0.7, 1°N±4°×12°7E±1°3, h10^{km}, M2.9/5, MLv2.9/5*

ISC 01 13:42:56.2±1.6, **1°.04N**±0°.09×**127°.4E**±0°.3, **h10**^{km}, **n6, σ0^{s}.45**/8, **mb3.6**/3, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.26	179	P	Pg	13 43 01.7	+0.2
TNTI				S	Sg	13 43 05.7	+0.6
LBMI	Labuha	1.67	175	P	Pn	13 43 25.1	-0.4
LBMI				S	Sb	13 43 48.1	-0.1
SANI	Sanana	3.36	204	P	Pn	13 43 48.3	-0.5
WRA	Warramunga Arr	21.94	162	P	P	13 47 49.7	-0.4
	1.3nm,0.6s,baz=341,slow=11,SNR=4.7						
ASAR	Alice Springs	25.37	166	P	P	13 48 23.9	+0.1
	1.0nm,0.7s,baz=346,slow=10.0,SNR=11						
MKAR	Makanchi Array	60.12	326	P	P	13 53 04.2	+0.3
	0.4nm,0.8s,baz=114,slow=9.6,SNR=1.9						

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*KRNET **01** 13:57:48.0±0.1, 40°.32N×73°.16E, h17^{km}, mb3.1*

*KNET **01** 13:57:49.5±0.3, 40°.47N×73°.32E, h4^{km}±2^{km}, ml2.7, Error ellipse: s-maj=4.2km s-min=2.4km az=100.0*

*SOME **01** 13:57:49.8, 40°.60N×73°.13E, h0^{km}*

*NNC **01** 13:57:50.8±0.9, 40°.52N×73°.18E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=7.3km s-min=3.2km az=176.0*

ISC 01 13:57:47.4±1.1, **40°.39N**±0°.03×**73°.29E**±0°.02, **h6**^{km}±10^{km}, **n52, σ1^{s}.56**/86, **39C-14D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.41	156	⇓*e*P	Pg	13 57 55.8	+0.4
	baz=39						
SFK				⇓*e*S	Sg	13 58 02.1	+1.4
	baz=39						
OHH	Osh	0.41	290	⇑*i*P	Pg	13 57 54.8	-0.6
	baz=5.0						
OHH				⇑*i*S	Sg	13 58 00.0	-0.7
	baz=5.0						
DRK	Karamyk	1.46	232	⇑*i*P	Pn	13 58 12.8	-1.9
	baz=32						
DRK				⇑*i*S	Sn	13 58 31.2	-3.1
	baz=32						
AML	Almayashu	1.77	10	⇓P	Pb	13 58 21.4	+0.8
	74nm,0.2s,SNR=190						
AML				⇓S	Sg	13 58 46.4	+2.0
	150nm,0.3s						
AML	Almayashu	1.77	10	⇑*i*P	Pg	13 58 21.8	+0.4
	baz=12						
AML				⇑*i*S	Sg	13 58 46.9	+2.5
	baz=12						
BTK	Batken	1.92	261	⇑*i*P	Pn	13 58 21.0	+0.2
	baz=62						
BTK				⇑*i*S	Sn	13 58 45.4	+0.1
	baz=62						
TRKS	Terek-Say	1.99	306	⇑*i*P	Pn	13 58 22.4	+0.6
	baz=8.0						
TRKS				⇑*i*S	Sn	13 58 47.7	+0.5
	baz=8.0						
UCH	Uchtor	2.06	26	⇑P	Pb	13 58 26.4	+0.9
	8.5nm,0.2s,SNR=32						
UCH				⇓S	Sg	13 58 55.3	+1.6
	47nm,0.5s						
UCH	Uchtor	2.06	26	⇑*i*P	Pb	13 58 26.2	+0.6
	baz=28						
UCH				⇑*i*S	Sg	13 58 54.4	+0.8
	baz=28						
MNAS	Manas	2.18	345	⇑*i*P	Pb	13 58 27.0	-0.4
	baz=47						
MNAS				⇑*i*S	Sb	13 58 55.6	+0.8
	baz=47						
EKS2	Erkin-Say	2.30	9	⇑P	Pb	13 58 29.9	+0.4
	3.6nm,0.1s,SNR=7.8						
EKS2				⇑S	Sg	13 59 01.4	-0.1
	11nm,0.2s						
EKS2	Erkin-Say	2.30	9	⇑*i*P	Pb	13 58 29.1	-0.4
	baz=11						
EKS2				⇑*i*S	Sg	13 58 59.3	-2.2
	baz=11						
MRKS	Merke	2.36	359	*e*P	Pg	13 58 32.2	-0.5
	34nm,0.3s						
MRKS				*e*S	Sg	13 59 02.8	-0.4
	72nm,0.4s						
MRKS	Merke	2.36	359	Pg	Pg	13 58 32.2	-0.5
	34nm,0.3s						
MRKS				Lg	Lg	13 59 02.8	
	72nm,0.4s						
AAK	Ala-Archa	2.42	22	⇑P	Pb	13 58 32.2	+0.6
	22nm,0.4s						
AAK				⇓S	Sg	13 59 04.4	-1.0
	24nm,0.3s						
AAK	Ala-Archa	2.42	22	⇑*i*P	Pb	13 58 31.1	-0.5
	baz=23						
AAK				⇑*i*S	Sb	13 59 02.6	+0.7
	baz=23						
KBK	Karagaybulak	2.59	28	⇑*i*P	Pb	13 58 33.4	-1.0
	baz=29						
KBK				⇑*i*S	Sb	13 59 06.7	+0.1
	baz=29						
FRU1	Bishkek	2.62	22	⇑*i*P	Pb	13 58 33.9	-1.0
	baz=23						
FRU1				⇑*i*S	Sb	13 59 07.6	+0.1
	baz=23						
GAR	Garm	2.68	240	⇓*i*P	Pn	13 58 31.6	+0.3
	baz=40						
GAR				⇓*i*S	Sn	13 59 03.6	-0.5
	baz=40						
CHMS	Chumysh	2.83	22	⇑P	Pb	13 58 37.1	-1.4
	8.6nm,0.2s,SNR=6.5						
CHMS	Chumysh	2.83	22	⇑*i*P	Pn	13 58 36.6	+3.3
	baz=24						
CHMS				⇑*i*S	Sb	13 59 12.3	-1.1
	baz=24						
ULHL	Ulahol	2.90	49	⇑P	Pb	13 58 38.3	-1.4
	6.0nm,0.2s,SNR=6.4						
ULHL	Ulahol	2.90	49	⇑*i*P	Pn	13 58 37.9	+3.5
	baz=49						
ULHL				⇑*i*S	Sb	13 59 14.4	-1.1
	baz=49						
USP	Ospenovka	3.02	17	⇑*e*P	Pn	13 58 39.1	+3.2
	baz=18						
USP				⇑*i*S	Sb	13 59 16.7	-2.1
	baz=18						
IUG	Iuzhnay	3.02	307	*e*P	Pb	13 58 43.2	+1.5
	153nm,0.2s						
IUG				*e*S	Sb	13 59 21.1	+2.2
	44nm,0.5s						
IUG	Iuzhnay	3.02	307	Pg	Pb	13 58 43.2	+1.5
	153nm,0.2s						
IUG				Lg	Lg	13 59 21.1	
	44nm,0.5s						
TKM2	Tokmak 2	3.07	34	⇓P	Pb	13 58 40.8	-1.8
	6.3nm,0.3s,SNR=8.1						
TKM2	Tokmak 2	3.07	34	⇓Pg	Pb	13 58 44.9	+2.3
	1.9nm,0.3s						
TKM2				⇑Lg	Lg	13 59 26.0	
	9.2nm,0.5s						
TKM2	Tokmak 2	3.07	34	⇓*i*P	Pn	13 58 40.1	+3.4
	baz=34						
TKM2				⇓*i*S	Sb	13 59 18.3	-2.1
	baz=34						
KST	Kastek	3.33	36	*e*P	Pg	13 58 50.7	-0.5
	6.2nm,0.4s						
KST				*e*S	Sg	13 59 34.5	+0.3
	14nm,0.4s						
KST	Kastek	3.33	36	Pg	Pg	13 58 50.7	-0.5
	6.2nm,0.4s						
KST				Lg	Lg	13 59 34.5	
	14nm,0.4s						
KDJ	Kajisay	3.41	58	⇑*i*P	Pn	13 58 45.0	+3.6
	baz=58						
KDJ				⇑*i*S	Sb	13 59 26.9	-3.4
	baz=58						
KK08	Karatay Array	3.43	323	⇓Pg	Pb	13 58 50.3	+1.7
	1.0nm,0.4s						
KK08				⇓Lg	Lg	13 59 33.0	
	4.3nm,0.5s						
MTBS	Maitube	3.61	40	*e*P	Pg	13 58 56.2	-0.5
	4.5nm,0.7s						
MTBS				*e*S	Sg	13 59 43.9	+0.5
	7.9nm,0.5s						
MTBS	Maitube	3.61	40	Pg	Pg	13 58 56.2	-0.5
	4.5nm,0.7s						
MTBS				Lg	Lg	13 59 43.9	
	7.9nm,0.5s						
CHGR	Chuyangaron	3.63	243	⇑*i*P	Pn	13 58 44.8	+0.5
	baz=43						
CHGR				⇑*i*S	Sn	13 59 26.3	-1.3
	baz=43						
KRBS	Karabastau	3.75	27	*e*P	Pg	13 58 57.8	-1.6
	3.9nm,0.4s						
KRBS				*e*S	Sg	13 59 46.6	-1.4
	7.4nm,0.6s						
KRBS	Karabastau	3.75	27	Pg	Pg	13 58 57.8	-1.6
	3.9nm,0.4s						
KRBS				Lg	Lg	13 59 46.6	
	7.4nm,0.6s						
TNSS	Tian-Shan	3.81	45	*e*P	Pg	13 59 00.0	-0.5
	5.1nm,0.5s						
TNSS				*e*S	Sg	13 59 50.6	+0.7
	3.9nm,0.3s						
TNSS	Tian-Shan	3.81	45	Pg	Pg	13 59 00.0	-0.5
	5.1nm,0.5s						
TNSS				Lg	Lg	13 59 50.6	
	3.9nm,0.3s						
MDOK	Medeo	3.95	44	*e*P	Pg	13 59 02.0	-1.1
	5.2nm,0.4s						
MDOK				*e*S	Sg	13 59 54.7	+0.4
	7.6nm,0.6s						
MDOK	Medeo	3.95	44	Pg	Pg	13 59 02.0	-1.1
	5.2nm,0.4s						
MDOK				Lg	Lg	13 59 54.7	
	7.6nm,0.6s						
KOTS	Kotyrbulak	4.03	44	*e*P	Pg	13 59 04.2	-0.5
	5.2nm,0.3s						
KOTS				*e*S	Sg	13 59 57.8	+0.9
	22nm,0.5s						
KOTS	Kotyrbulak	4.03	44	Pg	Pg	13 59 04.2	-0.5
	5.2nm,0.3s						
KOTS				Lg	Lg	13 59 57.8	
	22nm,0.5s						
KTBS	Karatobe	4.17	36	*e*P	Pg	13 59 05.8	-1.6
	6.5nm,0.7s						
KTBS				*e*S	Sg	14 00 00.4	-1.1
	11nm,0.7s						
KTBS	Karatobe	4.17	36	Pg	Pg	13 59 05.8	-1.6
	6.5nm,0.7s						
KTBS				Lg	Lg	14 00 00.4	
	11nm,0.7s						
KUU	Kurty	4.17	32	*e*P	Pg	13 59 06.0	-1.5
	4.1nm,0.6s						
KUU				*e*S	Sg	14 00 00.7	-0.8
	9.1nm,0.5s						
KUU	Kurty	4.17	32	Pg	Pg	13 59 06.0	-1.5
	4.1nm,0.6s						
KUU				Lg	Lg	14 00 00.7	
	9.1nm,0.5s						
SATY	Saty	4.67	53	*e*P	Pg	13 59 15.1	-1.8
	5.1nm,0.7s						
SATY				*e*S	Sg	14 00 16.4	-1.0
	12nm,1.4s						
SATY	Saty	4.67	53	Pg	Pg	13 59 15.1	-1.8
	5.1nm,0.7s						
SATY				Lg	Lg	14 00 16.4	
	12nm,1.4s						
BTLS	Baital	4.69	7	*e*P	Pg	13 59 14.1	-3.1
	1.3nm,0.7s						
BTLS				*e*S	Sg	14 00 14.3	-3.6
	2.3nm,0.8s						
UZB	Uzynbulak	5.10	55	Pg	Pb	13 59 16.8	-0.4
	12nm,0.8s						
UZB				Lg	Lg	14 00 21.0	
	6.2nm,0.7s						

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*EAF **01** 14:02:07.6±2.1, 21°.12S×33°.18E, h10^{km}, MD3.6*

BUL 01 14:02:07.8±4.1, **21°.34S×33°.18E, h10**^{km}, **MD3.7, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	2.72	217	*i* P	Pn	14 02 53.5	+1.9
MOPA	Mopani	2.72	217	*i* P	Pn	14 02 53.5	+1.9
MSNA	Messina	3.10	251	*i* P	Pn	14 02 56.2	-0.6
MSNA	Messina	3.10	251	*i* P	Pn	14 02 56.2	-0.6
BLWY	Bulawayo	4.45	285	*i* P	Pn	14 03 16.2	+0.7
BLWY	Bulawayo	4.45	285	*i* P	Pn	14 03 16.2	+0.7
MATP	Matopo	4.47	281	*i* P	Pn	14 03 14.9	-0.9
MATP				*i* S	Sn	14 04 02.3	-5.8
MATP	Matopo	4.47	281	*i* P	Pn	14 03 14.9	-0.9
MATP				*i* S	Sn	14 04 02.3	-5.8
TETE	Tete	5.18	4	*i* P	Pn	14 03 20.9	-4.6
TETE	Tete	5.18	4	*i* P	Pn	14 03 20.9	-4.6
KRI	Karoi	5.62	322	*i* P	Pn	14 03 26.1	-5.4
KRI	Karoi	5.62	322	*i* P	Pn	14 03 26.1	-5.4

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*DJA **01** 14:02:24.1±0.3, 1°N±2°×12°7E±°, h10^{km}, M3.5/6, MLv3.5/6*

*IDC **01** 14:02:27.5±1.5, 0°.70N×126°.76E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.4/52, mbtmp3.6/4, MS2.2/1, Ms1 2.2/1, ms1mx2.0/34, Error ellipse: s-maj=161.7km s-min=21.8km az=69.0*

ISC 01 14:02:24.5±2.2, **1°.1N**±0°.2×**127°.0E**±0°.1, **h10**^{km}, **n10, σ1^{s}.01**/9, **mb3.7**/4, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.49	133	P	Pg	14 02 33.0	-1.1
TNTI				S	Sg	14 02 40.4	-0.2
LBMI	Labuha	1.80	164	P	Pn	14 02 56.1	+0.5
LBMI				S	Sb	14 03 19.9	-0.4
KMSI	Cibinong	3.07	260	P	Pn	14 03 12.7	-0.3
SANI	Sanana	3.30	198	P	Pn	14 03 16.3	+0.1
SIJI	Sorong	4.69	115	LR	LR	14 05 06.8	
	comp=Z,24nm,19.1s,baz=16,slow=33						
TTSI	Tana Toraja	8.28	240	P	Pn	14 04 24.5	-0.2
WRA	Warramunga Arr	22.12	161	P	P	14 07 21.3	+1.0
	2.1nm,0.8s,baz=338,slow=10,SNR=7.2						
ASAR	Alice Springs	25.52	165	P	P	14 07 55.3	+1.8
	2.3nm,0.9s,baz=348,slow=10,SNR=14						
SONM	Songino Array	49.86	342	P	P	14 11 24.0	+6.0
	0.3nm,0.5s,baz=153,slow=9.7,SNR=2.2						
MKAR	Makanchi Array	59.86	326	P	P	14 12 36.9	+6.5
	0.3nm,0.5s,baz=118,slow=8.1,SNR=7.3						

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*IDC **01** 14:11:30.7±1.0, 51°.95N×173°.59E, h0^{km}, mb3.7/10, mb1 4.0/11, mb1mx3.7/45, mbtmp3.8/11, ML2.7/1, Error ellipse: s-maj=30.6km s-min=18.0km az=171.0*

*AEIC **01** 14:11:33.1±1.1, 51°.89N±0°.07×173°.6E±0°.1, h20^{km}±5^{km}, ML3.5/8, mb4.4/47(NEIC), Error ellipse: s-maj=10.8km s-min=9.1km az=204.0*

*NEIC **01** 14:11:34.4±1.1, 51°.94N±0°.04×173°.5E±0°.1, h27^{km}±5^{km}, Error ellipse: s-maj=9.6km s-min=5.8km az=85.0*

ISC 01 14:11:33.9±0.6, **51°.97N**±0°.09×**173°.46E**±0°.05, **h24**^{km}, **n78, σ1^{s}.05**/75, **mb4.3**/31, **Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	0.86	27		Pn	14 11 49.9	-0.6
SMY					Sn	14 12 03.3	+1.1
LSSA	Little Sitkin	3.12	88		Pn	14 12 21.5	-0.1
LSNW	Little Sitkin	3.12	88		Pn	14 12 20.7	-0.9
LSNW					Sn	14 12 58.7	+0.6
AMKA	Amchitka	3.68	97		Pn	14 12 28.8	-0.5
AMKA					Sn	14 13 10.9	-0.9
CESW	Semis' Southwe	3.78	89		Pn	14 12 29.9	-0.6
PET	Petropavlovsk	9.10	283	Pn	Pn	14 13 43.7	+0.1
PEA0B	Petropavlovsk-	9.68	283	Pn	Pn	14 13 52.7	+1.2
PETK	Petropavlovsk-	9.68	283	Pn	Pn	14 13 53.1	+1.7
	0.4nm,0.3s,baz=102,slow=20,SNR=3.0						
PETK				Sn	Sn	14 15 32.7	-6.6
	0.2nm,0.3s,baz=92,slow=21,SNR=1.8						
ANM	Nome	16.71	33	P	P	14 15 27.7	-0.5
ANM				IAmb	IAmb	14 15 30.7	
	comp=Z,19nm,1.2s						
L19K	White Mountain	19.81	47	P	P	14 16 02.5	+0.1
L19K				IAmb	IAmb	14 16 20.1	
	comp=Z,13nm,1.4s						
OHAK	Old Harbor	19.83	62	P	P	14 16 01.8	-0.8
OHAK				IAmb	IAmb	14 16 05.3	
	comp=Z,47nm,1.3s						
M19K	Big River Lodg	19.95	48	P	P	14 16 03.5	-0.3
KDAK	Kodiak Island	20.23	60	P	P	14 16 05.5	-1.4
J20K	Nowinta River	20.76	41	P	P	14 16 12.8	+0.2
J20K				IAmb	IAmb	14 16 25.8	
	comp=Z,9.1nm,0.7s						
CNPM	China Poot	21.05	55	P	P	14 16 15.8	0.0
BRLK	Bradley Lake	21.25	54	P	P	14 16 17.6	-0.3
BRLK				IAmb	IAmb	14 16 42.6	
	comp=Z,41nm,1.4s						
IMAR	Indian Mountai	21.61	37	P	P	14 16 22.0	+0.2
H21K	Melozitna Rive	21.84	38	P	P	14 16 25.1	+0.9
KTH	Kantishna Hill	21.92	44	P	P	14 16 23.9	-1.3
KTH				IAmb	IAmb	14 16 32.1	
	comp=Z,18nm,1.2s						
TRF	Thorofare Moun	22.17	45	P	P	14 16 27.6	-0.4
SML	Sawmill	22.74	49	P	P	14 16 34.0	+0.1
SML				IAmb	IAmb	14 16 38.5	
	comp=Z,12nm,0.8s						
I23K	Minto, Yukon-K	23.02	41	P	P	14 16 36.1	-0.6
SCM	Sheep Creek Mo	23.22	50	P	P	14 16 38.8	-0.1
SCM				IAmb	IAmb	14 17 07.2	
	comp=Z,32nm,1.4s						
WRH	Wood River Hil	23.36	43	P	P	14 16 40.2	+0.1
WRH				IAmb	IAmb	14 16 46.1	
	comp=Z,6.4nm,0.8s						
DHY	Denali Highway	23.38	46	P	P	14 16 39.3	-1.3
DHY				IAmb	IAmb	14 17 08.3	
	comp=Z,15nm,1.4s						
MDM	Murphy Dome	23.43	42	P	P	14 16 41.3	+0.4
MDM				IAmb	IAmb	14 16 54.5	
	comp=Z,12nm,1.4s						
CCB	Clear Creek Bu	23.53	42	P	P	14 16 41.4	-0.3
CCB				IAmb	IAmb	14 16 47.0	
	comp=Z,7.2nm,0.8s						
M24K	Tolsona, Glenn	23.79	49	P	P	14 16 43.5	-0.9
H24K	Noodor Dome	23.82	40	P	P	14 16 45.1	+0.5
HDA	Harding Lake	23.83	43	P	P	14 16 44.5	-0.2
KLU	Klutina	23.85	51	P	P	14 16 44.4	-0.6
KLU				IAmb	IAmb	14 17 06.8	
	comp=Z,6.1nm,1.0s						
IL31		23.94	42	P	P	14 16 45.3	-0.4
ILAR	Eielson Array	23.94	42	P	P	14 16 45.2	-0.5
	comp=Z,1.5nm,0.7s,baz=256,slow=8.4,SNR=26						
ILAR	Eielson Array	23.94	42	P	P	14 16 45.8	+0.1
TOLK	Toolik Lake Re	24.20	33	P	P	14 16 47.9	-0.3
TOLK				IAmb	IAmb	14 16 54.5	
	comp=Z,6.3nm,0.7s						
PAX	Paxson	24.22	47	P	P	14 16 48.2	-0.3
PAX				IAmb	IAmb	14 16 57.0	
	comp=Z,5.3nm,0.9s						
N25K	Chitina, Valde	24.49	50	P	P	14 16 50.4	-0.5
N25K				IAmb	IAmb	14 16 52.2	
	comp=Z,17nm,1.4s						
DOT	Dot Lake	24.95	46	P	P	14 16 54.8	-0.2
DOT				IAmb	IAmb	14 17 00.3	
	comp=Z,4.3nm,0.7s						
SCRK	Sand Creek	25.03	45	P	P	14 16 55.6	-0.1
CRQM	Cirque	25.16	53	P	P	14 16 56.6	-0.5
CRQM				IAmb	IAmb	14 17 17.4	
	comp=Z,29nm,1.3s						
L27K	Beaver Creek,	25.88	47	P	P	14 17 04.3	+0.8
BCAR	Beaver Creek A	25.90	47	P	P	14 17 03.7	0.0
EGAK	Eagle	26.35	43	P	P	14 17 07.9	+0.2
EGAK				IAmb	IAmb	14 17 14.2	
	comp=Z,3.7nm,0.8s						
DAWY	Dawson	27.05	45	P	P	14 17 14.5	+0.5
TIXI	Tiksi	27.78	332	P	P	14 17 21.5	+1.1
	comp=Z,0.4nm,0.3s,baz=318,slow=13,SNR=3.3						
WRAK	Wrangell Islan	31.32	60	P	P	14 17 49.7	-2.1
H11N2	WAKE ISLAND Hy	32.58	192	T	T	14 52 57.2	
	baz=7.7,slow=76,SNR=7.4						
H11N3	WAKE ISLAND Hy	32.59	192	T	T	14 53 07.1	
	baz=7.7,slow=76,SNR=6.1						
H11N1	WAKE ISLAND Hy	32.60	192	T	T	14 52 54.6	
	baz=7.7,slow=76,SNR=6.6						
H11S1	WAKE ISLAND Hy	33.81	192	T	T	14 54 26.1	
	baz=78,slow=74,SNR=4.1						
H11S3	WAKE ISLAND Hy	33.82	192	T	T	14 54 26.7	
	baz=8.1,slow=74,SNR=4.9						
H11S2	WAKE ISLAND Hy	33.83	192	T	T	14 54 27.9	
YKA	Yellowknife Ar	38.29	45	P	P	14 18 52.0	+0.2
	comp=Z,0.7nm,0.7s,baz=292,slow=6.3,SNR=6.0						
C03A	Quillayute Air	39.01	71	P	P	14 18 57.1	-0.9
SONM	Songino Array	42.02	292	P	P	14 19 24.9	+1.8
	comp=Z,0.2nm,0.4s,baz=51,slow=9.4,SNR=1.8						
BCYI	Bear Canyon	47.48	69	P	P	14 20 06.4	-0.5
SPB2	Spitsbergen Ar	49.37	354	P	P	14 20 21.1	+0.4
R11A	Troy Canyon, C	49.89	76	P	P	14 20 24.8	-0.6
PDAR	Pinedale Array	50.64	68	P	P	14 20 31.2	+0.2
	comp=Z,0.3nm,0.4s,baz=325,slow=1.8,SNR=3.6						
KURK	Kurchatov	55.02	309	P	P	14 21 03.6	+0.6
KURK				IAmb	IAmb	14 21 04.6	
	comp=Z,2.9nm,1.1s						
MK31	Makanchi Array	55.80	304	P	P	14 21 09.0	+0.3
MK31				IAmb	IAmb	14 21 18.5	
	comp=Z,4.6nm,1.2s						
MKAR	Makanchi Array	55.80	304	P	P	14 21 09.1	+0.4

	comp=Z,0.4nm,0.5s,baz=44,slow=5.8,SNR=2.9						
MKAR	Makanchi Array	55.80	304	P	P	14 21 08.9	+0.2
MNTX	Cornudas Mount	60.53	75	P	P	14 21 42.7	+0.7
MNTX				IAmb	IAmb	14 21 44.0	
	comp=Z,3.1nm,0.8s						
P40A	Paris	62.57	60	P	P	14 21 55.5	-0.1
TX31	Lajitas Ar. Si	63.26	76	P	P	14 22 00.8	+0.4
TX32	Lajitas Array	63.26	76	P	P	14 22 00.8	+0.3
TX32				IAmb	IAmb	14 22 02.6	
	comp=Z,4.6nm,1.1s						
TXAR	Lajitas Array	63.26	76	P	P	14 22 01.1	+0.6
	comp=Z,1.7nm,0.6s,baz=303,slow=4.1,SNR=25						
TXAR	Lajitas Array	63.26	76	P	P	14 22 00.8	+0.4
FIA1	FINESS Array S	63.99	343	P	P	14 22 04.4	-0.2
FINES	FINESS Array B	63.99	343	P	P	14 22 04.6	0.0
	comp=Z,2.6nm,0.8s,baz=336,slow=9.8,SNR=2.2						
FINES	FINESS Array B	63.99	343	P	P	14 22 04.4	-0.2
FCAR	Ozark Folk Cen	65.17	63	P	P	14 22 12.0	-0.8
CMAR	Chiang Mai Arr	66.17	270	P	P	14 22 21.0	+1.6
	comp=Z,0.3nm,0.4s,baz=10,slow=5.6,SNR=1.6						
GEYT	Alibeck	74.25	312	P	P	14 23 08.8	0.0
GEYT				IAmb	IAmb	14 23 20.8	
	comp=Z,2.0nm,0.6s						
GYA0B	ALIBECK ARRAY	74.25	312	P	P	14 23 08.5	-0.3
GYA0B				IAmb	IAmb	14 23 20.7	
	comp=Z,4.1nm,0.6s						
ASAR	Alice Springs	82.89	216	P	P	14 23 57.0	+0.8
	comp=Z,0.3nm,0.7s,baz=23,slow=5.5,SNR=7.6						
MAW	Mawson	144.00	218	PKP	PKPbc	14 31 03.6	0.0
	comp=Z,3.6nm,0.8s,baz=114,slow=6.6,SNR=4.1						

BUL ***01*** *14:12:28.2±1.5, 25°.84S×29°.59E, h0^{km}±23^{km}, MD3.8*

ISC 01 14:12:27.1±1.2**, 25°.33S**±0°.07×**28°.90E**±0°.04**, h10**^{km}**, n16, σ2^{s}48**/24**, 6D, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	2.90	52	⇓eP	Pb	14 13 17.4	-1.6
MOPA				eS	Sg	14 14 02.4	+2.0
MOPA	Mopani	2.90	52	i P	Pn	14 13 12.2	-1.2
MOPA				i S	Sn	14 13 45.8	-2.6
MOPA	Mopani	2.90	52	⇓eP	Pb	14 13 17.4	-1.6
MOPA				eS	Sg	14 14 02.4	+2.0
LBTB	Lobatse	3.01	275	eP	Pn	14 13 16.0	+1.0
LBTB				eS	Sg	14 14 05.2	+1.3
LBTB	Lobatse	3.01	275	i P	Pg	14 13 25.4	+0.6
LBTB	Lobatse	3.01	275	eP	Pn	14 13 16.0	+1.0
LBTB				eS	Sg	14 14 05.2	+1.3
CNG	Changalane	3.11	109	i P	Pn	14 13 08.2	-8.1
MSNA	Messina	3.14	19	eP	Pn	14 13 20.1	+3.4
MSNA				eS	Sg	14 14 12.0	+3.9
MSNA	Messina	3.14	19	i S	Sb	14 14 02.6	+1.1
MSNA	Messina	3.14	19	eP	Pn	14 13 20.1	+3.4
MSNA				eS	Sg	14 14 12.0	+3.9
BOSA	Boshof	4.61	224	⇓eP	Pn	14 13 37.8	+0.8
BOSA				⇓eS	Sn	14 14 17.5	-13
BOSA	Boshof	4.61	224	i P	Pn	14 13 41.0	+4.0
BOSA	Boshof	4.61	224	⇓eP	Pn	14 13 37.8	+0.8
BOSA				⇓eS	Sn	14 14 17.5	-13
MATP	Matopo	4.89	356	i P	Pb	14 13 51.0	-2.0
MATP				i S	Sb	14 14 50.9	-1.1
BLWY	Bulawayo	5.17	357	i P	Pb	14 13 53.7	-4.1
BLWY				i S	Sb	14 14 57.5	-2.6
KRI	Karoi	8.48	5	i P	Pn	14 14 29.2	-1.0

NEIC ***01*** *14:17:23.1±2.0, 24°.47S±0°.09×179°.8W±0°.2, h473^{km}±11^{km}, mb4.3/21, Error ellipse: s-maj=22.9km s-min=11.5km az=72.0*

IDC ***01*** *14:17:25.9±2.1, 24°.46S×179°.94W, h503^{km}±22^{km}, mb3.2/8, mb1 3.4/10, mb1mx3.3/23, mbtmp4.1/10, Error ellipse: s-maj=24.9km s-min=18.8km az=114.0*

ISC 01 14:17:25.5±0.7**, 24°.49S**±0°.07×**179°.9W**±0°.1**, h505**^{km}**, n61, σ1^{s}52**/61**, mb4.1**/18**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.05	160	P	P	14 18 49.6	-3.5
MSVF	Nonsavu	7.00	343	P	P	14 19 12.2	+0.2
	10nm,0.3s,baz=235,slow=22,SNR=48						
MSVF	Nonsavu	7.00	343	P	P	14 19 11.9	-0.1
URZ	Urewera	13.97	190	P	P	14 20 23.7	-0.9
	1.6nm,0.3s,baz=121,slow=23,SNR=10.0						
URZ				S	S	14 22 53.6	+1.2
	0.4nm,0.3s,baz=301,slow=23,SNR=1.7						
URZ	Urewera	13.97	190	P	P	14 20 21.7	-2.9
HSRZ	Hossack Road	14.18	193	P	P	14 20 28.1	+1.4
RIGZ	Rimuhau	14.32	188	P	P	14 20 30.3	+2.0
RTZ	Ruatahuna	14.34	190	P	P	14 20 29.9	+1.3
TLZ	Tolley Road	14.35	195	P	P	14 20 31.3	+2.7
BKZ	Black Stump Fm	14.96	191	P	P	14 20 32.9	-2.2
BKZ	Black Stump Fm	14.96	191	P	P	14 20 32.3	-2.7
TMVZ	Te Maari	15.06	193	P	P	14 20 37.6	+1.4
ETVZ	East Tongariro	15.08	193	P	P	14 20 38.3	+1.9
OTVZ	Oturere	15.12	193	P	P	14 20 35.3	-1.5
SNVZ	South Ngauruho	15.14	194	P	P	14 20 37.8	+0.7
KWHZ	Kaweka Forest	15.22	191	P	P	14 20 38.0	+0.2
VRZ	Vera Road	15.29	196	P	P	14 20 42.0	+3.6
BHHZ	Black Hill Sta	15.35	192	P	P	14 20 38.8	-0.4
KAHZ	Kahuranaki	15.51	189	P	P	14 20 41.9	+1.1
NEZ	North Egmont	15.60	198	P	P	14 20 45.1	+3.3
PXZ	Pawanui	15.74	189	P	P	14 20 42.8	-0.3
WAZ	Wanganui	15.83	195	P	P	14 20 44.7	+0.6
TSZ	Takapari Road	15.92	192	P	P	14 20 42.8	-2.2
ANWZ	Angora Road	16.22	190	P	P	14 20 47.5	-0.6
BFZ	Birch Farm	16.48	190	P	P	14 20 49.0	-1.7
BFZ	Birch Farm	16.48	190	P	P	14 20 48.5	-2.3
HOWZ	Holdsworth Sta	16.82	192	P	P	14 20 52.6	-1.7
QRZ	Quartz Range	17.50	200	P	P	14 20 59.4	-1.4
THZ	Tophouse	18.25	198	P	P	14 21 06.2	-1.5
THZ				IAmb	IAmb	14 21 07.2	
	comp=Z,18nm,1.1s						
OXZ	Oxford	19.94	198	P	P	14 21 21.1	-1.9
EIDS	Eidsvold	26.35	262	P	P	14 22 21.0	+0.4
EIDS				IAmb	IAmb	14 22 27.2	
	comp=Z,7.2nm,1.4s						
CTAO	Charters Tower	31.61	271	P	P	14 23 07.3	+0.7
CTAO				IAmb	IAmb	14 23 08.1	
	comp=Z,5.7nm,0.7s						
TAU	Tasmania Unive	32.63	228	P	P	14 23 15.5	+0.6
TAU				IAmb	IAmb	14 23 42.4	
	comp=Z,41nm,1.2s						
STKA	Stephens Creek	34.63	249	P	P	14 23 32.1	+0.1
	comp=Z,1.5nm,0.4s,baz=148,slow=22,SNR=3.0						
PMG	Port Moresby	34.81	290	P	P	14 23 31.2	-2.5
PMG				IAmb	IAmb	14 23 35.9	
	comp=Z,7.6nm,0.8s						
BBOO	Buckleboo	39.34	248	P	P	14 24 10.0	-0.8
AS31	Alice Springs	42.07	261	P	P	14 24 31.7	-1.1
ASAR	Alice Springs	42.07	261	P	P	14 24 32.6	-0.1
	comp=Z,1.1nm,0.5s,baz=92,slow=6.3,SNR=34						
ASAR	Alice Springs	42.07	261	P	P	14 24 31.8	-0.9
WR0	Warramunga Arr	42.31	267	P	P	14 24 33.9	-0.7
WB2	Warramunga Arr	42.49	267	P	P	14 24 35.3	-0.7
WB2				IAmb	IAmb	14 24 35.9	
	comp=Z,4.0nm,0.6s						
WB0	Warramunga Arr	42.49	267	P	P	14 24 35.3	-0.8
WB0				IAmb	IAmb	14 24 36.3	
	comp=Z,5.2nm,0.7s						
WRA	Warramunga Arr	42.50	267	P	P	14 24 35.6	-0.5
	comp=Z,4.0nm,0.6s,baz=104,slow=8.0,SNR=25						
WRA	Warramunga Arr	42.50	267	P	P	14 24 35.4	-0.7
FORT	Forrest	46.23	250	P	P	14 25 04.2	-0.6
FORT				IAmb	IAmb	14 25 13.6	
	comp=Z,27nm,1.1s						
KNRA	Kununurra	48.82	270	P	P	14 25 24.4	-0.1
KNRA				IAmb	IAmb	14 25 25.2	
	comp=Z,12nm,0.8s						
VNDA	Vanda	53.81	185	P	P	14 26 01.1	+1.4
	comp=Z,0.4nm,0.7s,baz=15,slow=12,SNR=1.7						
VNDA	Vanda	53.81	185	P	P	14 26 01.2	+1.4
QSPA	South Pole Qui	65.60	180	P	P	14 27 19.6	+0.8
QSPA				IAmb	IAmb	14 27 21.0	
	comp=Z,11nm,1.4s						
KSM	Kuching	72.33	280	P	P	14 28 00.1	-0.1
KSM				IAmb	IAmb	14 28 21.2	
	comp=Z,15nm,1.1s						
KSRS	Korea Array	78.78	320	P	P	14 28 36.0	+0.6
	comp=Z,1.1nm,0.7s,baz=127,slow=4.5,SNR=5.1						
KSAR	Wonju Array Be	78.79	320	P	P	14 28 34.4	-1.1
PETK	Petropavlovsk-	79.70	346	P	P	14 28 40.2	+0.3
	comp=Z,3.4nm,0.9s,baz=96,slow=9.1,SNR=1.4						
CMAR	Chiang Mai Arr	89.85	290	P	P	14 29 32.5	+1.9
	comp=Z,0.9nm,0.8s,baz=136,slow=3.2,SNR=5.6						
CMAR	Chiang Mai Arr	89.85	290	P	P	14 29 31.5	+1.0
TXAR	Lajitas Array	90.63	58	P	P	14 29 35.0	+1.0
	comp=Z,0.2nm,0.6s,baz=220,slow=7.5,SNR=4.5						
TXAR	Lajitas Array	90.63	58	P	P	14 29 34.8	+0.8
BPAW	Bear Paw Mtn.	91.14	12	P	P	14 29 36.3	+0.9
HFS	Hagfors	143.14	349	PKhKP	PKPpre	14 35 58.2	
	comp=Z,2.4nm,0.4s,baz=72,slow=4.8,SNR=17						
AKASG	Malin Array Be	145.53	327	PKPbc	PKPdf	14 36 05.2	-0.3
	comp=Z,0.4nm,0.3s,baz=44,slow=4.2,SNR=5.9						
BRTR	Keskin Array B	148.03	306	PKPbc	PKPbc	14 36 13.8	-0.4
	comp=Z,0.4nm,0.5s,baz=31,slow=39,SNR=2.4						

TUL ***01*** *14:20:53.2±0.5, 36°.77N±0°.01×97°.86W±0°.02, h5^{km}±7^{km}, ML2.5, mb_Lg2.4/10(NEIC), Error ellipse: s-maj=2.1km s-min=1.8km az=208.0*

NEIC 01 14:20:53.1±0.3**, 36°.74N**±0°.02×**97°.86W**±0°.02**, h5**^{km}±7^{km}**, Error ellipse: s-maj=2.3km s-min=1.8km az=205.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.11	358	Pg	Pg	14 20 55.5	0.0
KAN14	Manchester OK	0.23	338		Pg	14 20 57.7	-0.1
KAN14				Sg	Sg	14 21 00.7	-0.1
CROK	Carrier	0.26	204	Pg	Pg	14 20 58.9	+0.7
OK032	Salt Plains WL	0.29	283		Pg	14 20 58.8	0.0
OK032				Sg	Sg	14 21 02.8	+0.1
KAN17	Caldwell West	0.31	13	Pg	Pg	14 20 59.2	0.0
KAN17				Sg	Sg	14 21 03.4	0.0
KAN05	Bluff City Nor	0.37	358		Pg	14 21 00.2	-0.1
KAN13	South Haven SW	0.41	48	Pg	Pg	14 21 01.2	+0.2
KAN13				Sg	Sg	14 21 06.3	0.0
KAN01	Argonia South	0.42	11	Pg	Pg	14 21 01.2	0.0
KAN10	Anthony SW Sta	0.43	333	Pg	Pg	14 21 01.2	-0.2
KAN10				Sg	Sg	14 21 06.6	-0.5
KAN09	Caldwell North	0.44	26	Pg	Pg	14 21 01.6	0.0
KAN09				Sg	Sg	14 21 07.4	0.0
KAN08	Anthony NE Sta	0.49	349		Pg	14 21 02.5	-0.2
KAN06	Argonia West S	0.51	360		Pg	14 21 02.8	-0.1
KAN16	Harper SW Stat	0.51	341	Pg	Pg	14 21 02.8	-0.2
KAN16				Sg	Sg	14 21 09.6	-0.2
BLOK	Blackwell	0.52	87	Pg	Pg	14 21 03.4	+0.4
BLOK				Sg	Sg	14 21 10.3	+0.6
KAN12	Harper NE Stat	0.57	348	Pg	Pg	14 21 03.9	-0.2
KAN12				Sg	Sg	14 21 11.3	-0.2
QUOK	Quay	1.08	121		Pg	14 21 13.7	-0.2
T35A	Sooner Cattle	1.09	80	Pg	Pg	14 21 13.9	-0.2
T35A				Sg	Sg	14 21 28.1	-0.2
BCOK	Bluff Creek, N	1.10	169	Pg	Pg	14 21 13.9	-0.3
OK031	S. Brethren Rd	1.14	133		Pg	14 21 14.8	-0.1
OK025	Westminster Rd	1.23	160		Pg	14 21 16.7	0.0
OKCFA	Oklahoma City	1.36	166	Pn	Pn	14 21 18.8	0.0
OKCSW	OKLAHOMA CITY	1.37	166	Pn	Pn	14 21 18.9	-0.1
FNO	Franklin	1.52	166		Pn	14 21 21.1	+0.1
FNO				IAmb_Lg		14 21 46.3	
	comp=Z,27nm,0.8s						
R32A	Long Quarter,	1.81	338	Pn	Pn	14 21 24.9	-0.1
CBKS	Cedar Bluff	2.55	325	IAmb_Lg		14 22 19.6	
	comp=Z,16nm,0.7s						
KSU1	Kansas State U	2.56	22	IAmb_Lg		14 22 18.6	
	comp=Z,17nm,1.0s						
U38A	Gravette	2.81	95	IAmb_Lg		14 22 21.6	
	comp=Z,11nm,1.2s						
KSCO	Kaye Shedlock’	4.40	302	IAmb_Lg		14 23 11.9	
	comp=Z,8.4nm,0.8s						
MGMO	Mountain Grove	4.49	83	IAmb_Lg		14 23 15.9	
	comp=Z,6.2nm,0.8s						

SJA ***01*** *14:29:17.7±0.8, 30°.55S×71°.93W, h14^{km}±6^{km}, ML4.0, MW4.1*

IDC ***01*** *14:29:17.2±2.0, 30°.63S×71°.51W, h0^{km}, mb4.0/2, mb1 3.9/7, mb1mx3.7/37, mbtmp3.8/7, ML3.6/5, MS2.9/4, Ms1 3.0/4, ms1mx2.8/24, Error ellipse: s-maj=58.0km s-min=30.3km az=105.0*

GUC ***01*** *14:29:22.0±1.1, 30°.65S×71°.54W, h44^{km}±4^{km}, ML4.0*

NEIC ***01*** *14:29:22.5±1.6, 30°.59S±0°.04×71°.70W±0°.07, h32^{km}±2^{km}, mb4.2/4, ML4.0(GUC), Error ellipse: s-maj=8.9km s-min=5.7km az=95.0*

ISC 01 14:29:20.2±0.9**, 30°.53S**±0°.02×**71°.83W**±0°.05**, h26**^{km}±6^{km}**, n99, σ1^{s}92**/124**, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.22	130	⇑iP	Pn	14 29 27.9	0.0
CO06				i S	Sn	14 29 31.6	+1.2
CO06	Fray Jorge	0.22	130	Pg	Pn	14 29 27.9	0.0
CO06				Sg	Sb	14 29 30.9	+0.4
CO05	La Serena	0.80	40	⇓eP	Pb	14 29 36.6	+1.1
CO05				i S	Sn	14 29 47.8	+1.0
CO05				IAML		14 29 51.7	
	comp=N,12μm,0.5s						
CO05	La Serena	0.80	40		Pb	14 29 36.5	+1.1
CO05				Sn	Sn	14 29 47.6	+0.8
GO04	Tololo Observa	0.96	69	⇓iP	Pn	14 29 38.2	-0.1
GO04				i S	Sn	14 29 48.8	-2.4
GO04	Tololo Observa	0.96	69		Pn	14 29 38.2	-0.1
GO04				Sn	Sn	14 29 50.2	-1.0
GO04	Tololo Observa	0.96	69	eP	Pn	14 29 38.0	-0.3
GO04				eP	Pb	14 29 45.3	+6.9
GO04				eS	Sb	14 29 51.0	+0.2
LCO	Las Campanas	1.80	33	⇓iP	Pb	14 29 51.9	-0.8
LCO				i S	Sb	14 30 14.8	-0.3
LCO	Las Campanas	1.80	33	Pn	Pn	14 29 51.8	+1.9
LCO	Las Campanas	1.80	33	eP	Pb	14 29 52.0	-0.8
AROD	Rodeo	2.07	81	eP	Pb	14 29 56.4	-0.9
AROD				eS	Sb	14 30 23.4	+0.6
VA06	Catapilco	2.08	167	eP	Pn	14 29 54.0	+0.6
VA06				i S	Sn	14 30 16.4	-2.0
VA06				IAML		14 30 26.7	
	comp=N,1μm,0.2s						
ACDV	Cuesta del Vie	2.37	82	eP	Pb	14 30 01.0	-1.3
ACDV				IAML		14 30 39.6	
	comp=Z,502nm,0.9s						
ACCO	Cerro Coronel	2.39	92	eP	Pb	14 30 01.0	-1.7
ACCO				eS	Sb	14 30 34.2	+2.3
AC04	Llanos de Chal	2.41	16	⇑eP	Pn	14 30 00.1	+2.0
AC04				eS	Sn	14 30 25.9	-0.7
AC04				IAML		14 30 47.1	
	comp=E,495nm,0.4s						
AC04	Llanos de Chal	2.41	16	Pn	Pn	14 29 60.0	+2.0
AC04	Llanos de Chal	2.41	16	eP	Pn	14 30 00.0	+2.0
AC04				IAML		14 30 41.6	
	comp=Z,614nm,0.8s						
VA03	San Esteban	2.48	154	eP	Pn	14 30 01.4	+2.3
VA03				i S	Sn	14 30 26.6	-2.0
VA03				IAML		14 30 41.2	
	comp=E,970nm,0.5s						
VA03	San Esteban	2.48	154		Pn	14 30 00.2	+1.1
VA03	San Esteban	2.48	154	eP	Pn	14 30 01.0	+1.9
VA03				IAML		14 30 43.8	
	comp=Z,650nm,0.8s						
VA01	Torpederas	2.49	176		Pn	14 29 59.0	-0.1
RTLS	Leoncito	2.51	121	eP	Pb	14 30 02.0	-2.9
RTLS				IAML		14 30 46.2	
	comp=Z,698nm,0.6s						
ROCH	El Roble	2.53	164	eP	Pn	14 30 00.2	+0.3
ROCH				eS	Sn	14 30 29.1	-1.0
ROCH				IAML		14 30 39.2	
	comp=N,755nm,0.6s						
ROCH				IAML		14 30 43.9	
	comp=N,1μm,0.2s						
ROC1	El Roble	2.54	164	eP	Pn	14 30 01.0	+1.1
ROC1				eS	Sn	14 30 31.1	+0.9
AUSP	Uspallata	2.69	130	eP	Pb	14 30 05.0	-2.8
AUSP				eS	Sb	14 30 41.0	+0.5
PEL	Peldehue	2.78	160	i P	Pn	14 30 04.4	+1.2
PEL				i S	Sn	14 30 34.4	-1.6
PEL				IAML		14 30 54.6	
	comp=E,516nm,0.7s						
PEL	Peldehue	2.78	160	Pn	Pn	14 30 04.4	+1.2
PEL	Peldehue	2.78	160	eP	Pn	14 30 04.5	+1.4
PEL				eS	Sb	14 30 42.9	-0.1
MT02	Curacav	2.79	168	eP	Pn	14 30 03.5	+0.4
MT02				eS	Sn	14 30 35.0	-0.9
MT02	Curacav	2.79	168		Pn	14 30 04.1	+0.9
MT02	Curacav	2.79	168	eP	Pn	14 30 04.0	+0.9
MT02				eS	Sb	14 30 43.3	+0.3
MT02				IAML		14 30 52.7	
	comp=Z,295nm,0.7s						
ZON	Zonda	2.89	111	Pn	Pn	14 30 04.4	-0.2
ZON	Zonda	2.89	111	eP	Pn	14 30 05.0	+0.4
ZON				IAML		14 30 57.0	
	comp=Z,261nm,0.9s						
MT05	Renca	3.00	162	eS	Sn	14 30 39.1	-2.2
MT05				IAML		14 31 00.2	
	comp=E,1μm,0.3s						
MT05	Renca	3.00	162		Pn	14 30 07.8	+1.6
RTCV	Cerro Valdivia	3.12	116	eP	Pn	14 30 11.0	+3.2
VA05	Santo Domingo	3.12	177	IAML		14 31 06.9	
	comp=E,422nm,0.5s						
VA05	Santo Domingo	3.12	177	Pn	Pn	14 30 08.3	+0.5
GO03	Copiap	3.24	26	eP	Pn	14 30 11.9	+2.4
GO03				eS	Sn	14 30 49.4	+2.1
GO03				IAML		14 31 04.8	
	comp=N,617nm,0.5s						
GO03	Copiap	3.24	26	Pn	Pn	14 30 11.3	+1.8
GO03	Copiap	3.24	26	eP	Pn	14 30 11.9	+2.4
GO03				eP	Pb	14 30 12.0	-5.1
GO03				eS	Sb	14 30 54.3	-1.9
ASAL	Salagasta	3.28	130	eP	Pn	14 30 13.0	+3.0
ASAL				eS	Sb	14 30 59.8	+2.4
MT09	Talagante	3.31	168	⇑eP	Pn	14 30 11.9	+1.3
MT09				eS	Sn	14 30 47.5	-1.7
MT09				IAML		14 31 06.3	
	comp=E,343nm,0.3s						
MT09	Talagante	3.31	168	Pn	Pn	14 30 11.8	+1.2
MT01	Popeta	3.36	172	eP	Pn	14 30 11.4	+0.3
MT01				eS	Sn	14 30 48.8	-1.3
MT01				IAML		14 31 09.7	
	comp=E,220nm,0.5s						
MT01	Popeta	3.36	172		Pn	14 30 11.6	+0.5
MT01	Popeta	3.36	172	eP	Pn	14 30 12.0	+0.9
MT01				IAML		14 31 07.0	
	comp=Z,199nm,0.5s						
ARCO	CERRO ARCO	3.38	134	eP	Pb	14 30 16.0	-3.5
ARCO				eS	Sb	14 31 04.7	+4.4
ARCO				IAML		14 31 18.6	
	comp=Z,293nm,0.6s						
LMEL	Las Melosas	3.58	158	IAML		14 31 11.6	
	comp=N,334nm,0.3s						
BO04	La Punta	3.60	164	eP	Pn	14 30 15.8	+1.4
AAGR	Agrelo	3.61	136	eP	Pn	14 30 18.0	+3.4
AAGR				eS	Sb	14 31 12.3	+5.5
VCA	Vinchina	3.63	61	eP	Pb	14 30 20.0	-3.8
VCA				eS	Sb	14 31 07.8	+0.4
VCA				IAML		14 31 15.9	
	comp=Z,668nm,0.4s						
AVFE	Valle Fertil	3.77	93	eP	Pn	14 30 19.0	+2.2
AVFE				eS	Sb	14 31 07.3	-4.3
AVFE				IAML		14 31 20.3	
	comp=Z,233nm,0.9s						
BO01	Tunca	3.90	171	Pn	Pn	14 30 19.6	+1.1
BO01	Tunca	3.90	171	eP	Pn	14 30 20.0	+1.5
BO01				IAML		14 31 25.8	
	comp=Z,126nm,0.6s						
BO02	Sierra Bellavi	4.34	169	Pn	Pn	14 30 25.8	+1.2
BO02	Sierra Bellavi	4.34	169	eP	Pn	14 30 27.6	+2.9
BO02				eP	Pb	14 30 28.0	-7.9
BO02				eS	Sn	14 31 15.7	+1.2
BO02				IAML		14 31 36.7	
	comp=Z,163nm,0.9s						
ACLC	CERRO LA CRUZ	4.37	77	eP	Pn	14 30 28.0	+2.8
ACLC				eS	Sn	14 31 20.8	+5.4
ACLC				IAML		14 31 26.3	
	comp=Z,302nm,0.4s						
AC02	Maricunga	4.38	33	Pn	Pn	14 30 27.5	+1.9
AC02	Maricunga	4.38	33	eP	Pn	14 30 28.0	+2.5
AC02				IAML		14 31 41.0	
	comp=Z,230nm,0.9s						
GO05	Huala	4.47	181	Pn	Pn	14 30 25.8	-0.5
GO05	Huala	4.47	181	eP	Pn	14 30 26.6	+0.2
GO05				eS	Sb	14 31 37.8	+6.4
APLL	PUNTA DE LOS L	4.58	90	eP	Pn	14 30 30.3	+2.4
RFA	San Rafael	5.09	147	eP	Pn	14 30 37.5	+2.6
RFA				eS	Sb	14 31 50.8	+1.4
RFA				IAML		14 32 40.8	
	comp=Z,45nm,0.8s						
ML02	Panimavida	5.23	176	Pn	Pn	14 30 37.9	+1.1
CYA	Choya	5.65	70	eP	Pn	14 30 45.3	+2.7
CYA				eS	Sn	14 31 50.3	+3.6
CYA				IAML		14 32 25.3	
	comp=Z,121nm,1.0s						
H03N1	Juan Fernandez	6.68	242	T	T	14 37 53.8	
	baz=72,slow=72,SNR=3105						
H03N2	Juan Fernandez	6.69	242	T	T	14 37 57.1	
	baz=72,slow=72,SNR=2585						
H03N3	Juan Fernandez	6.69	242	T	T	14 37 47.9	
	baz=72,slow=72,SNR=2205						
VA04	Juan Fernndez	6.70	241	Pn	Pn	14 30 58.0	+1.1
PB15	IPOC Station P	7.59	17	Pn	Pn	14 31 10.3	+0.9
PB15	IPOC Station P	7.59	17	eP	Pn	14 31 11.0	+1.6
PB05	IPOC Station P	7.78	11	eP	Pb	14 31 24.3	-10
LVC	Limon Verde	8.31	19	Pn	Pn	14 31 18.4	-0.9
	comp=Z,0.3nm,0.3s,baz=186,slow=13,SNR=1.5						
LVC				Sn	Sn	14 32 50.3	-2.3
	comp=Z,1.4nm,0.3s,baz=248,slow=22,SNR=1.9						
LVC				LR	LR	14 34 59.6	
	comp=Z,45nm,20.1s,baz=208,slow=41						
LVC	Limon Verde	8.31	19	Pn	Pn	14 31 21.1	+1.7
PB07	IPOC Station P	8.94	12	Pn	Pn	14 31 29.4	+1.5
PB01	IPOC Station P	9.68	13	Pn	Pn	14 31 38.9	+1.0
PLCA	Paso Flores	10.23	175	Pn	Pn	14 31 44.6	-0.8
	comp=Z,0.1nm,0.3s,baz=217,slow=19,SNR=2.1						
PLCA				LR	LR	14 36 20.6	
	comp=Z,79nm,18.3s,baz=338,slow=42						
PLCA	Paso Flores	10.23	175	Pn	Pn	14 31 46.0	+0.5
LL02	Futaleuf	12.64	180		Pn	14 32 19.3	+1.1
CPUP	Villa Florida	13.43	75	Pn	Pn	14 32 25.6	-3.5
	comp=Z,0.3nm,0.3s,baz=280,slow=4.9,SNR=2.8						
CPUP				LR	LR	14 37 58.0	
	comp=Z,95nm,21.1s,baz=233,slow=40						
LPAZ	La Paz	14.57	14	Pn	Pn	14 32 46.1	+0.7
	comp=Z,0.1nm,0.3s,baz=202,slow=5.4,SNR=2.9						
LPAZ	La Paz	14.57	14	Pn	Pn	14 32 45.2	-0.2
SIV	San Ignacio	17.51	37	P	P	14 33 23.8	+0.2
	comp=Z,0.2nm,0.3s,baz=222,slow=12,SNR=10						
SIV				LR	LR	14 39 32.4	
	comp=Z,46nm,18.8s,baz=284,slow=35						
PTLB	Pontes e Lacer	19.00	41	P	Pn	14 33 41.3	+0.5
BDFB	Brasilia	26.37	61	P	P	14 34 54.2	-0.5
	comp=Z,2.2nm,0.5s,baz=248,slow=9.7,SNR=3.9						
BDFB	Brasilia	26.37	61	P	P	14 34 54.6	0.0
BDFB				IAmb	IAmb	14 35 16.0	
	comp=Z,6.6nm,1.2s						
VNA3	Neumayer Olymp	52.51	159	P	P	14 38 30.6	-0.1
VNA1	Neumayer--Stat	52.80	158	P	P	14 38 33.8	+1.0
VNA2	Neumayer--Watz	53.15	158	P	P	14 38 35.8	+0.4
	baz=284,slow=9.3						
SNAA	Sanae	54.74	159	P	P	14 38 47.4	+0.3
DBIC	Dimbokro	73.92	72	P	P	14 40 53.7	+0.3
TORD	Torodi Ar. Bea	82.87	70	P	P	14 41 41.6	-1.2
	comp=Z,0.4nm,0.5s,baz=258,slow=5.0,SNR=3.9						
TORD	Torodi Ar. Bea	82.87	70	IAmb	IAmb	14 41 57.5	
	comp=Z,1.8nm,0.8s						
H11S2	WAKE ISLAND Hy	125.93	272	T	T	17 07 02.9	
	baz=115,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	125.94	272	T	T	17 07 03.1	
	baz=115,slow=75,SNR=37						
H11S3	WAKE ISLAND Hy	125.94	272	T	T	17 07 03.5	
	baz=115,slow=75,SNR=29						
ZALV	Zalesovo Beam	151.16	29	PKPbc	PKiKP	14 49 11.8	+0.7
	comp=Z,2.1nm,0.8s,baz=298,slow=3.2,SNR=10						
ZALV	Zalesovo Beam	151.16	29		PKiKP	14 49 11.2	+0.1

NEIC ***01*** *14:29:25.9±0.6, 37°.25N±0°.02×97°.85W±0°.01, h9^{km}±2^{km}, Error ellipse: s-maj=2.7km s-min=1.3km az=193.0*

NEIC 01 14:29:26.3±0.9**, 37°.22N**±0°.02×**97°.87W**±0°.02**, h4**^{km}±4^{km}**, mb_Lg2.7**/36**, ML2.7**/22**, Error ellipse: s-maj=2.4km s-min=1.7km az=219.0, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN06	Argonia West S	0.03	24		Pg	14 29 27.3	0.0
KAN06				Sg	Sg	14 29 27.9	0.0
KAN08	Anthony NE Sta	0.08	272		Pg	14 29 28.2	+0.2
KAN08				Sg	Sg	14 29 29.6	+0.4
KAN01	Argonia South	0.12	128	Pg	Pg	14 29 28.9	+0.3
KAN05	Bluff City Nor	0.12	180		Pg	14 29 28.9	+0.3
KAN05				Sg	Sg	14 29 31.0	+0.8
KAN12	Harper NE Stat	0.12	306	Pg	Pg	14 29 29.1	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
KAN12				Sg	Sg	14 29 30.9	+0.4
KAN16	Harper SW Stat	0.15	271	Pg	Pg	14 29 29.6	+0.3
KAN16				Sg	Sg	14 29 31.8	+0.4
KAN17	Caldwell West	0.20	154	Pg	Pg	14 29 30.4	+0.2
KAN10	Anthony SW Sta	0.20	241	Pg	Pg	14 29 30.5	+0.2
KAN09	Caldwell North	0.22	113	Pg	Pg	14 29 30.8	+0.2
KAN14	Manchester OK	0.28	195		Pg	14 29 31.9	+0.2
KAN14				Sg	Sg	14 29 35.9	+0.6
GC02	Grant County #	0.37	178	Pg	Pg	14 29 33.6	+0.1
KAN13	South Haven SW	0.38	124	Pg	Pg	14 29 33.7	+0.1
KAN13				Sg	Sg	14 29 38.1	-0.5
OK032	Salt Plains WL	0.50	213		Pg	14 29 36.0	+0.1
OK032					Sg	14 29 43.0	+0.6
BLOK	Blackwell	0.70	131	Pg	Pg	14 29 39.4	-0.4
BLOK				Sg	Sg	14 29 48.8	0.0
CROK	Carrier	0.72	187	Pg	Pg	14 29 40.0	-0.2
T35A	Sooner Cattle	1.13	105	Pg	Pg	14 29 47.4	-0.6
T35A				Sg	Sg	14 30 01.6	-1.0
R32A	Long Quarter,	1.37	331		Pn	14 29 51.0	-1.2
QUOK	Quay	1.41	138		Pn	14 29 51.8	-0.9
OK031	S. Brethren Rd	1.52	146		Pn	14 29 53.6	-0.6
BCOK	Bluff Creek, N	1.58	172	Pn	Pn	14 29 54.5	-0.5
OKCFA	Oklahoma City	1.84	169	Pn	Pn	14 29 58.4	-0.2
OKCFA				IAmb_Lg		14 30 26.5	
	comp=Z,32nm,0.7s						
OKCSW	OKLAHOMA CITY	1.85	169		Pn	14 29 58.3	-0.5
W35A	Tecumseh	2.22	158	Pn	Pn	14 30 03.1	-0.8
U38A	Gravette	2.90	105	IAmb_Lg		14 31 06.3	
	comp=Z,18nm,0.7s						
LOOK	Love County	3.27	170	IAmb_Lg		14 31 16.6	
	comp=Z,16nm,0.9s						
X37A	Clayton	3.32	142	Pn	Pn	14 30 18.6	-0.4
X37A				IAmb_Lg		14 31 20.2	
	comp=Z,22nm,0.7s						
U40A	Yellville	4.12	101	IAmb_Lg		14 31 40.8	
	comp=Z,13nm,0.7s						
BGNE	Belgrade	4.18	357	IAmb_Lg		14 31 40.1	
	comp=Z,18nm,0.8s						
MIAR	Mount Ida	4.39	126	IAmb_Lg		14 31 47.7	
	comp=Z,18nm,0.8s						
MGMO	Mountain Grove	4.47	89	IAmb_Lg		14 31 46.5	
	comp=Z,14nm,0.7s						
FCAR	Ozark Folk Cen	4.81	104	IAmb_Lg		14 32 01.7	
	comp=Z,12nm,0.9s						
WHAR	Wooly Hollow	4.91	111	IAmb_Lg		14 32 10.0	
	comp=Z,21nm,1.0s						
X40A	Basin Creek Fa	4.92	122	IAmb_Lg		14 32 12.8	
	comp=Z,11nm,0.9s						
N38A	Joes South For	5.07	44	IAmb_Lg		14 32 07.8	
	comp=Z,15nm,0.8s						
P40A	Paris	5.12	62	IAmb_Lg		14 32 14.9	
	comp=Z,14nm,1.0s						
T25A	Trinidad	5.22	271	IAmb_Lg		14 32 14.2	
	comp=Z,12nm,0.8s						
FVM	French Village	5.96	80	IAmb_Lg		14 32 37.0	
	comp=Z,8.0nm,1.0s						
PBMO	Poplar Bluff	5.97	92	IAmb_Lg		14 32 39.3	
	comp=Z,15nm,0.8s						
S44A	Carbondale	6.87	83	IAmb_Lg		14 33 04.2	
	comp=Z,11nm,0.8s						
JCT	Junction City	6.92	194	IAmb_Lg		14 33 21.1	
	comp=Z,7.9nm,0.8s						

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*NEIC **01** 14:35:25.2±0.3, 37°.22N±0°.01×97°.87W±0°.02, h4km±3km, mb_Lg2.4/19, ML2.6/22, Error ellipse: s-maj=2.5km s-min=0.8km az=223.0*

*ANF **01** 14:35:25.6±0.5, 37°.26N×97°.83W, h4km, ML3.2/6, Error ellipse: s-maj=8.9km s-min=3.7km az=47.0*

*NEIC **01** 14:35:25.1±0.5, 37°.24N±0°.02×97°.86W±0°.01, h6km±2km, Error ellipse: s-maj=2.3km s-min=1.6km az=203.0*

ISC 01 14:35:25.4±0.9**, 37°.24N**±0°.03×**97°.86W**±0°.02**, h5**km±5km**, n41, σ0s.52**/46**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN06	Argonia West S	0.01	13		Pg	14 35 26.3	-0.1
KAN06				Sg	Sg	14 35 27.0	-0.2
KAN08	Anthony NE Sta	0.09	263		Pg	14 35 27.1	-0.2
KAN08				Sg	Sg	14 35 28.4	-0.3
KAN01	Argonia South	0.12	135	Pg	Pg	14 35 27.9	0.0
KAN01				Sg	Sg	14 35 29.7	+0.2
KAN12	Harper NE Stat	0.12	299	Pg	Pg	14 35 28.0	0.0
KAN12				Sg	Sg	14 35 29.8	+0.1
KAN05	Bluff City Nor	0.13	184		Pg	14 35 27.9	-0.2
KAN05				Sg	Sg	14 35 29.6	-0.1
KAN16	Harper SW Stat	0.16	266	Pg	Pg	14 35 28.6	-0.1
KAN16				Sg	Sg	14 35 30.7	-0.1
KAN17	Caldwell West	0.21	158	Pg	Pg	14 35 29.4	-0.1
KAN10	Anthony SW Sta	0.22	239	Pg	Pg	14 35 29.4	-0.3
KAN09	Caldwell North	0.22	117	Pg	Pg	14 35 29.8	+0.1
KAN09				Sg	Sg	14 35 32.8	+0.2
KAN14	Manchester OK	0.29	196		Pg	14 35 30.8	-0.3
KAN14				Sg	Sg	14 35 34.8	-0.1
KAN13	South Haven SW	0.38	126	Pg	Pg	14 35 32.7	0.0
KAN13				Sg	Sg	14 35 37.9	+0.2
GC02	Grant County #	0.39	180	Pg	Pg	14 35 32.6	-0.2
OK032	Salt Plains WL	0.52	213		Pg	14 35 34.9	-0.4
OK032					Sg	14 35 42.0	0.0
BLOK	Blackwell	0.70	132	Pg	Pg	14 35 37.6	-1.2
BLOK				Sg	Sg	14 35 47.2	-0.8
CROK	Carrier	0.74	188	Pg	Pg	14 35 38.8	-0.7
T35A	Sooner Cattle	1.13	106		Pg	14 35 46.3	-0.7
T35B	Sooner Cattle	1.13	106	P	Pg	14 35 46.4	-0.5
	baz=286						
T35B				S	Sg	14 36 01.3	-0.3
	baz=286						
R32A	Long Quarter,	1.36	331		Pn	14 35 50.5	-0.6
R32A	Long Quarter,	1.36	331	P	Pn	14 35 50.6	-0.4
	baz=151						
R32A				S	Sg	14 36 08.4	-0.7
	baz=151						
QUOK	Quay	1.41	139		Pn	14 35 51.0	-0.7
OK031	S. Brethren Rd	1.52	147	Pn	Pn	14 35 52.5	-0.7
OK030	Cody Creek RV	1.57	146		Pn	14 35 53.5	-0.3
BCOK	Bluff Creek, N	1.59	173	Pn	Pn	14 35 53.5	-0.6
OK025	Westminster Rd	1.71	166	Pn	Pn	14 35 55.0	-0.8
OKCFA	Oklahoma City	1.85	170	P	Pn	14 35 58.4	+0.7
	baz=350						
FNO	Franklin	2.01	169	IAmb_Lg		14 36 30.6	
	comp=Z,17nm,0.7s						
KSU1	Kansas State U	2.11	28	IAmb_Lg		14 36 36.4	
	comp=Z,24nm,0.8s						
KSU1	Kansas State U	2.11	28	S	Sb	14 36 30.4	0.0
	baz=208						
TUL1	Leonard	2.13	128	P	Pn	14 36 02.6	+1.0
	baz=309						
TUL1				S	Sb	14 36 31.5	+0.4
	baz=309						
CBKS	Cedar Bluff	2.16	317	P	Pn	14 36 02.6	+0.6
	baz=137						
CBKS				S	Sb	14 36 32.5	+0.4
	baz=137						
W35A	Tecumseh	2.23	159	Pn	Pn	14 36 02.8	-0.1
U38A	Gravette	2.90	105	IAmb_Lg		14 36 59.4	
	comp=Z,10.0nm,0.8s						
X37A	Clayton	3.33	142	IAmb_Lg		14 37 19.4	
	comp=Z,19nm,0.7s						
X37A	Clayton	3.33	142	P	Pn	14 36 18.6	+0.6
	baz=323						
X37A				S	Sn	14 36 59.0	+1.2
	baz=323						
S39A	Bolivar	3.64	81	IAmb_Lg		14 37 29.5	
	comp=Z,6.6nm,0.8s						
W39A	Magazine	3.88	120	IAmb_Lg		14 37 32.9	
	comp=Z,17nm,0.8s						
P38A	Dawn	4.15	54	IAmb_Lg		14 37 43.4	
	comp=Z,6.5nm,0.8s						
MIAR	Mount Ida	4.39	126	IAmb_Lg		14 37 43.8	
	comp=Z,7.5nm,0.8s						
X40A	Basin Creek Fa	4.92	122	IAmb_Lg		14 38 10.7	
	comp=Z,7.2nm,0.9s						
T25A	Trinidad	5.23	271	IAmb_Lg		14 38 09.9	
	comp=Z,6.9nm,1.1s						
CCM	Cathedral Cave	5.32	79	IAmb_Lg		14 38 22.0	
	comp=Z,7.2nm,0.8s						

IDC 01 14:39:22.8±19.0**, 22°.96S**×**174°.41W, h0**km**, mb4.2**/5**, mb1 4.3**/5**, mb1mx3.8**/31**, mbtmp4.2**/5**, Error ellipse: s-maj=357.5km s-min=150.0km az=84.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	36.63	267	P	P	14 46 31.6	+0.3
	3.8nm,0.3s,baz=120,slow=1.4,SNR=2.4						
STKA	Stephens Creek	39.82	247	P	P	14 46 58.1	+0.1
	0.8nm,0.5s,baz=87,slow=9.4,SNR=4.1						
ASAR	Alice Springs	47.25	258	P	P	14 47 57.5	-0.6
	1.0nm,0.5s,baz=96,slow=7.0,SNR=15						
WRA	Warramunga Arr	47.60	263	P	P	14 48 00.2	-0.7
	2.6nm,0.6s,baz=103,slow=8.1,SNR=29						
FITZ	Fitzroy Crossi	56.03	263	P	P	14 49 04.4	+0.6
	1.3nm,0.6s,baz=105,slow=3.9,SNR=5.6						

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*IDC **01** 14:45:33.5±0.8, 15°.30S×173°.44W, h0km, mb4.3/8, mb1 4.5/9, mb1mx4.1/35, mbtmp4.3/9, ML4.6/1, MS3.5/11, Ms1 3.5/11, ms1mx3.2/39, Error ellipse: s-maj=42.8km s-min=16.8km az=139.0*

*NEIC **01** 14:45:40.2±1.4, 15°.4S±0°.1×173°.5W±0°.1, h35km±1km, mb4.7/29, Error ellipse: s-maj=20.5km s-min=19.4km az=156.0*

ISC 01 14:45:39.9±0.5**, 15°.4S**±0°.1×**173°.44W**±0°.10**, h42**km**, n69, σ1s.05**/52**, mb4.6**/22**, MS3.4**/10**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.18	48	Pn	Pn	14 46 10.0	-3.8
	207nm,0.3s,baz=352,slow=0.1,SNR=124						
AFI				Sn	Sn	14 46 29.9	-10
	2μm,0.3s,baz=325,slow=22,SNR=27						
AFI				LR	LR	14 46 52.8	
	comp=Z,924nm,19.1s,baz=206,slow=37						
NIUE	Niue	4.97	138	Pn	Pn	14 46 52.0	-0.1
MSVF	Nonsavu	8.49	253	LR	LR	14 50 45.9	
	comp=Z,567nm,20.6s,baz=145,slow=37						
DZM	Mont Dzumac	20.17	248	*e*LR	LR	14 55 15.0	
	comp=Z,370nm,26.8s						
DZM	Mont Dzumac	20.17	248	LR	LR	14 56 59.4	
	comp=Z,131nm,20.9s,baz=56,slow=34						
PAE	Paea	22.98	99	*e*T	T	15 13 52.6	
	2.7nm,0.3s						
PPT	Papeete	22.98	99	LR	LR	14 58 54.6	
	comp=Z,51nm,18.5s,baz=239,slow=35						
PPT2	Papeete2	22.98	99	*e*LR	LR	14 56 00.9	
	comp=Z,229nm,28.2s						
PPT2	Papeete2	22.98	99	*e*T	T	15 13 53.6	
	4.0nm,0.4s						
PPTF	Pamatai, Papee	23.00	99	P	P	14 50 40.0	-1.4
MXZ	Matakaoa Point	23.27	197	P	P	14 50 42.4	-1.4
URZ	Urewera	24.26	198	P	P	14 50 53.7	+0.6
	9.0nm,0.6s,baz=121,slow=20,SNR=3.4						
URZ				LR	LR	14 59 16.1	
	comp=Z,94nm,21.2s,baz=31,slow=34						
URZ	Urewera	24.26	198	IAmb	IAmb	14 51 12.4	
	comp=Z,34nm,1.4s						
HNR	Honiara	26.64	280	LR	LR	15 00 23.3	
	comp=Z,44nm,20.7s,baz=36,slow=33						
BFZ	Birch Farm	26.75	198	P	P	14 51 15.5	-0.2
QRZ	Quartz Range	28.13	203	P	P	14 51 29.2	+1.2
LTZ	Lake Taylor	29.93	201	P	P	14 51 43.0	-1.1
LTZ				IAmb	IAmb	14 52 08.0	
	comp=Z,12nm,1.0s						
TAOE	Nuku Hiva Isla	33.16	83	*e*T	T	15 26 38.3	
	comp=Z,34nm,0.2s						
ARMA	Armidale	35.31	239	P	P	14 52 30.8	-0.6
ARMA				IAmb	IAmb	14 52 32.9	
	comp=Z,7.1nm,0.8s						
PMG	Port Moresby	38.89	274	LR	LR	15 06 58.4	
	comp=Z,49nm,18.1s,baz=70,slow=33						
H11S2	WAKE ISLAND Hy	38.93	329	T	T	15 33 46.6	
	baz=146,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	38.94	329	T	T	15 33 53.6	
	baz=146,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	38.95	329	T	T	15 33 48.3	
	baz=146,slow=76,SNR=12						
CAN	Canberra	39.01	232	P	P	14 53 03.1	+0.6
CAN				IAmb	IAmb	14 53 31.4	
	comp=Z,31nm,1.5s						
H11N3	WAKE ISLAND Hy	39.88	330	T	T	15 35 55.9	
	baz=150,slow=76,SNR=3.9						
H11N1	WAKE ISLAND Hy	39.88	330	T	T	15 35 58.2	
	baz=150,slow=76,SNR=4.1						
H11N2	WAKE ISLAND Hy	39.90	330	T	T	15 35 55.7	
	baz=150,slow=76,SNR=3.9						
COEN	Coen	41.94	266	P	P	14 53 27.1	+0.1
TOO	Toolangi	42.44	231	P	P	14 53 31.3	+0.4
TOO				IAmb	IAmb	14 53 57.7	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	44.01	240	P	P	14 53 43.8	+0.2
	comp=Z,6.5nm,0.7s,baz=87,slow=9.6,SNR=17						
STKA				LR	LR	15 10 41.1	
	comp=Z,23nm,21.7s,baz=24,slow=34						
STKA	Stephens Creek	44.01	240	P	P	14 53 44.0	+0.5
WB2	Warramunga Arr	49.80	257	P	P	14 54 28.6	-0.4
WB2				IAmb	IAmb	14 54 29.6	
	comp=Z,5.6nm,0.7s						
WRA	Warramunga Arr	49.81	257	P	P	14 54 27.4	-1.7
	comp=Z,2.8nm,0.5s,baz=92,slow=7.2,SNR=46						
WRA				LR	LR	15 13 30.0	
	comp=Z,60nm,20.6s,baz=285,slow=34						
WRA	Warramunga Arr	49.81	257	P	P	14 54 28.5	-0.6
AS31	Alice Springs	50.08	252	P	P	14 54 30.9	-0.2
AS31				IAmb	IAmb	14 54 31.5	
	comp=Z,3.0nm,0.7s						
ASAR	Alice Springs	50.08	252	P	P	14 54 30.0	-1.1
	comp=Z,14nm,0.8s,baz=89,slow=7.6,SNR=144						
ASAR				LR	LR	15 14 03.2	
	comp=Z,122nm,20.9s,baz=104,slow=34						
ASAR	Alice Springs	50.08	252	P	P	14 54 30.2	-0.9
FORT	Forrest	55.39	243	P	P	14 55 09.8	-0.4
PSA00	Pilbara Seismi	63.17	253	P	P	14 56 03.5	-0.6
VNDA	Vanda	63.38	186	P	P	14 56 01.6	-3.0
VNDA				IAmb	IAmb	14 56 08.6	
	comp=Z,6.5nm,1.1s						
VNDA				PcP	PcP	14 56 42.7	+1.4
YBH	Yreka Blue Hor	73.61	37	P	P	14 57 10.1	+1.0
YBH				IAmb	IAmb	14 57 10.6	
	comp=Z,4.4nm,0.9s						
QSM	Queen of Sheba	73.92	45	P	P	14 57 11.0	+0.1
QSPA	South Pole Qui	74.66	180	P	P	14 57 16.8	+1.9
QSPA				IAmb	IAmb	14 57 18.1	
	comp=Z,13nm,1.0s						
214A	Organ Pipe Nat	74.74	50	P	P	14 57 16.4	+0.6
214A				IAmb	IAmb	14 57 17.2	
	comp=Z,5.2nm,1.0s						
TPH	Tonopah	74.85	43	P	P	14 57 17.0	+0.5
K05A	Summer Lake	75.29	37	P	P	14 57 19.6	+0.7
K05A				IAmb	IAmb	14 57 20.8	
	comp=Z,11nm,1.1s						
PINE	Pine Mountain	75.91	36	P	P	14 57 23.2	+0.7
PINE				IAmb	IAmb	14 57 37.7	
	comp=Z,10.0nm,1.1s						
BMN	Battle Mountai	76.17	41	P	P	14 57 24.1	+0.1
TUC	Tucson	76.41	51	P	P	14 57 25.8	+0.3
TUC				IAmb	IAmb	14 57 27.2	
	comp=Z,5.6nm,1.1s						
U15A	North Rim	77.32	46	P	P	14 57 31.3	+0.5
HLID	Hailey	79.64	39	P	P	14 57 44.1	+0.8
SCM	Sheep Creek Mo	79.69	12	P	P	14 57 43.2	+0.2
SCM				IAmb	IAmb	14 58 01.9	
	comp=Z,24nm,1.3s						
TXAR	Lajitas Array	80.64	56	P	P	14 57 46.8	-2.0
	comp=Z,0.7nm,0.8s,baz=210,slow=7.2,SNR=7.5						
PDAR	Pinedale Array	82.28	42	P	P	14 57 57.8	+0.4
	comp=Z,0.4nm,0.5s,baz=204,slow=3.3,SNR=4.6						
PDAR				LR	LR	15 31 57.0	
	comp=Z,53nm,18.1s,baz=56,slow=34						
PDAR	Pinedale Array	82.28	42	P	P	14 57 57.5	0.0
ILAR	Eielson Array	82.44	11	P	P	14 57 57.0	-0.4
	comp=Z,0.4nm,0.6s,baz=234,slow=5.8,SNR=11						
MAW	Mawson	87.79	199	P	P	14 58 24.7	+0.4
	comp=Z,5.1nm,0.7s,baz=149,slow=6.3,SNR=10						
VNA3	Neumayer Olymp	92.87	175	P	P	14 58 49.8	+1.8
SNAA	Sanae	92.92	177	P	P	14 58 49.9	+1.5
VNA2	Neumayer--Watz	93.37	175	P	P	14 58 52.5	+2.2
	baz=182,slow=4.5						
VNA1	Neumayer--Stat	93.57	175	P	P	14 58 53.5	+2.3
ARCES	ARCESS Array B	124.59	352	PKP	PKPdf	15 04 33.9	-0.4
	comp=Z,3.2nm,0.9s,baz=332,slow=1.8,SNR=5.0						
AKASG	Malin Array Be	140.31	337	PKP	PKPdf	15 05 04.0	-0.2
	comp=Z,0.2nm,0.3s,baz=25,slow=3.1,SNR=1.6						
CLL	Collm	143.80	353	*e*PKPdf	PKPdf	15 05 11.0	+0.5
KHC	Kasperske Hory	145.86	352	*e*PKP	PKPab	15 05 15.6	+0.3
CKRC	Cesky Krumlov	146.06	351	*e*PKP	PKPab	15 05 16.8	+0.8
BRTR	Keskin Array B	146.12	321	PKPbc	PKPab	15 05 16.6	-0.2
	comp=Z,5.4nm,0.9s,baz=137,slow=2.1,SNR=10						
BRTR	Keskin Array B	146.12	321	PKPbc	PKPbc	15 05 15.9	-0.2
GERES	GERESS Array B	146.12	352	PKPbc	PKPbc	15 05 15.8	+0.1
	comp=Z,0.9nm,0.7s,baz=61,slow=3.3,SNR=3.7						

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*DJA **01** 14:46:39.9±0.2, 3°N±2°×9°8E±°, h10km, M4.2/13, mb4.1/7, mB4.8/1, MLv4.3/13, Mw(mB)4.1/1*

*NEIC **01** 14:46:42.7±0.8, 3°.10N±0°.07×98°.01E±0°.08, h81km±4km, mb4.5/8, Error ellipse: s-maj=11.5km s-min=9.4km az=70.0*

*IDC **01** 14:46:42.5±2.4, 2°.69N×98°.14E, h75km±42km, mb3.6/7, mb1 3.7/8, mb1mx3.4/42, mbtmp3.9/8, ML4.0/1, MS3.4/11, Ms1 3.4/11, ms1mx3.1/44, Error ellipse: s-maj=74.5km s-min=47.4km az=132.0*

ISC 01 14:46:40.8±0.6**, 3°.25N**±0°.05×**97°.97E**±0°.04**, h35**km**, n52, σ1s.96**/42**, mb4.3**/15**, MS3.4**/9**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCSI	Kotacane, Aceh	0.34	324	P	Pn	14 46 47.3	-2.0
TSI	Tuntungan	0.65	67	P	Pn	14 46 52.8	-0.7
TSI				S	Sn	14 47 02.0	-0.5
TPTI		0.79	271	P	Pn	14 46 55.5	+0.1
TPTI				S	Sn	14 47 05.6	-0.4
PSI	Prapat	1.05	115	P	Pn	14 46 59.3	+0.1
	55nm,0.3s,baz=305,slow=13,SNR=59						
PSI				S	Sn	14 47 12.1	-0.6
	70nm,0.3s,baz=304,slow=23,SNR=16						
RPSI	Rantau Prapat	1.10	120		Sn	14 47 12.1	-1.6
SNSI	Sinabang, Aceh	1.84	243	P	Pn	14 47 12.5	+2.6
GSI	Gunungsitoli	1.97	192	P	Pn	14 47 12.7	+1.0
GSI	Gunungsitoli	1.97	192	Pn	Pn	14 47 12.3	+0.6
LHMI	Lhok Sumawe	2.22	333	P	Pn	14 47 17.4	+2.3
LHMI	Lhok Sumawe	2.22	333		Pn	14 47 19.4	+4.2
MNSI	Mandailing Nat	2.92	146	P	Pn	14 47 25.4	+0.6
IPM	Ipoh	3.29	68	Pn	Pn	14 47 32.1	+2.2
KULM	Kulim	3.36	53	Pn	Pn	14 47 33.4	+2.5
BKNI	Bangkinang	4.22	133	P	Pn	14 47 59.0	+16
BKNI	Bangkinang	4.22	133	Pn	Pn	14 47 43.0	+0.3
PDSI	Padang	4.82	149	P	Pn	14 47 52.5	+1.5
MYKOM	Kota Tinggi	6.05	104	Pn	Pn	14 48 09.4	+1.5
DSRI	Dabo	7.57	119	P	Pn	14 48 29.2	+0.4
	0.1nm6.2nm,0.8s						
LEM	Lembang	13.89	136	LR	LR	14 56 00.3	
	comp=Z,128nm,18.8s,baz=198,slow=42						
CMAR	Chiang Mai Arr	15.15	4	P	P	14 50 20.1	+3.1
	0.2nm,0.3s,baz=198,slow=11,SNR=20						
CMAR				LR	LR	14 56 35.5	
	comp=Z,135nm,18.8s,baz=195,slow=38						
CHTO	Chiang Mai	15.50	3	P	P	14 50 20.5	-0.5
PALK	Pallekele	17.65	284	LR	LR	14 57 12.3	
	comp=Z,118nm,20.0s,baz=216,slow=35						
KMI	Kunming	22.23	11	⇑P	P	14 51 35.4	+0.6
KMI				pP	sP	14 51 52.0	+3.1
KMI				sP	pP	14 52 05.7	+21
KMI				pmax	pmax		
	comp=Z,21nm,0.5s						
KMI				LR	LR		
	comp=N,300nm,13.2s						
KMI				LR	LR		
	comp=E,180nm,12.0s						
KMI				LR	LR		
	comp=Z,290nm,12.0s						
TOLI2	Tolitoli	22.89	95	P	P	14 51 39.2	-2.6
KAPI	Kappang	23.26	111	LR	LR	15 01 33.7	
	comp=Z,58nm,20.1s,baz=305,slow=39						
HYB	Hyderabad	23.69	308	*i* P	P	14 51 52.0	+2.4
BKSI	Bulukumba	23.71	111	P	P	14 51 52.3	+2.5
	comp=Z,348nmcomp=Z,17nm,1.6s						
DAV	Davao City (W)	27.75	81	LR	LR	15 04 31.0	
	comp=Z,66nm,18.6s,baz=300,slow=39						
BATI	Baumata	28.87	118	LR	LR	15 06 03.0	
	comp=Z,119nm,18.2s,baz=308,slow=41						
SIJI	Sorong	33.53	96	LR	LR	15 09 19.0	
	comp=Z,15nm,19.2s,baz=292,slow=41						
NJ2	Nanjing	34.73	32	*e*P	P	14 53 28.0	+0.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC	Hu-ho-hao-te	39.39	16	*e*P	P	14 54 07.6	+0.2
HHC				pmax	pmax		
	comp=Z,190nm,0.9s						
HHC				AMB	AMB		
	comp=Z,290nm,8.1s						
WMQ	Urumqi	41.42	349	*e*P	P	14 54 24.6	+0.6
WB0	Warramunga Arr	42.46	124	P	P	14 54 28.4	-4.4
WB0				IAmb	IAmb	14 54 29.3	
	comp=Z,4.8nm,0.7s						
WR0	Warramunga Arr	42.68	124	P	P	14 54 27.9	-6.7
WR0				IAmb	IAmb	14 54 38.5	
	comp=Z,5.5nm,0.9s						
KSRS	Korea Array	43.74	35	LR	LR	15 14 35.1	
	comp=Z,39nm,18.0s,baz=15,slow=38						
SONM	Songino Array	45.01	8	P	P	14 54 55.8	+2.7
	comp=Z,0.2nm,0.5s,baz=185,slow=12,SNR=2.1						
MKAR	Makanchi Array	45.47	345	P	P	14 54 58.4	+1.8
	comp=Z,0.5nm,0.6s,baz=162,slow=9.5,SNR=6.8						
KKAR	Karatay Array	46.59	332	P	P	14 55 02.5	-3.0
MJAR	Matsushiro Arr	49.68	43	LR	LR	15 17 35.3	
	comp=Z,33nm,19.1s,baz=50,slow=37						
GEYT	Alibeck	50.17	319	P	P	14 55 35.6	+2.4
	comp=Z,4.5nm,0.7s,baz=167,slow=7.3,SNR=5.9						
GYA0B	ALIBECK ARRAY	50.17	319	P	P	14 55 30.6	-2.6
GYA0B				IAmb	IAmb	14 55 37.1	
	comp=Z,6.8nm,0.8s						
USRK	Ussuriysk Ar.	50.63	31	LR	LR	15 20 13.0	
	comp=Z,65nm,18.2s,baz=187,slow=39						
ZAA0	Zalesovo Array	51.68	350	P	P	14 55 42.4	-1.8
ZAA0				IAmb	IAmb	14 55 52.9	
	comp=Z,6.1nm,1.4s						
ZALV	Zalesovo Beam	51.68	350	P	P	14 55 44.5	+0.3
	comp=Z,1.3nm,0.6s,baz=182,slow=6.8,SNR=8.2						
ZALV	Zalesovo Beam	51.68	350	P	P	14 55 42.8	-1.4
BRTR	Keskin Array B	68.32	312	P	P	14 57 39.3	+0.4
	comp=Z,0.8nm,0.4s,baz=85,slow=2.6,SNR=5.1						
BRTR	Keskin Array B	68.32	312	P	P	14 57 35.3	-3.6
AKASG	Malin Array Be	74.12	322	P	P	14 58 13.2	-0.4
	comp=Z,0.2nm,0.3s,baz=91,slow=5.1,SNR=4.8						
BOSA	Boshof	76.46	240	LR	LR	15 27 19.4	
	comp=Z,25nm,19.2s,baz=352,slow=32						
ARCES	ARCESS Array B	80.88	340	P	P	14 58 52.8	+1.7
	comp=Z,2.9nm,0.8s,baz=89,slow=6.7,SNR=2.5						
CLL	Collm	84.33	321	*e*P	P	14 59 06.0	-3.3

IDC 01 14:58:27.4±15.0**, 0°.55S**×**126°.15E, h266**km±161km**, mb2.9**/3**, mb1 3.2**/4**, mb1mx2.6**/50**, mbtmp3.7**/4**, Error ellipse: s-maj=113.2km s-min=83.0km az=55.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	17.44	182	P	P	15 02 14.2	+1.1
	0.5nm,0.3s,baz=8.1,slow=11,SNR=8.0						
WRA	Warramunga Arr	20.87	158	P	P	15 02 50.2	+0.5
	0.5nm,0.3s,baz=333,slow=11,SNR=13						
ASAR	Alice Springs	24.18	162	P	P	15 03 19.5	-0.6
	0.2nm,0.3s,baz=337,slow=8.9,SNR=12						
STKA	Stephens Creek	34.41	156	P	P	15 04 49.3	-0.7
	0.9nm,0.5s,baz=336,slow=6.5,SNR=1.7						

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*TUL **01** 15:03:27±1.0, 36°.68N±0°.02×98°.73W±0°.04, h3km±7km, ML2.6, mb_Lg2.4/14(NEIC), Error ellipse: s-maj=5.0km s-min=2.6km az=81.0*

NEIC 01 15:03:27.4±1.6**, 36°.69N**±0°.03×**98°.70W**±0°.05**, h11**km±7km**, Error ellipse: s-maj=5.4km s-min=3.5km az=77.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.41	74		Pg	15 03 35.8	+0.2
CROK	Carrier	0.61	108	Pg	Pg	15 03 39.2	-0.1
CROK				Sg	Sg	15 03 46.9	-0.4
KAN10	Anthony SW Sta	0.65	48	Pg	Pg	15 03 40.0	-0.1
KAN14	Manchester OK	0.65	66	Pg	Pg	15 03 40.1	+0.1
GC02	Grant County #	0.69	77	Pg	Pg	15 03 40.9	0.0
KAN16	Harper SW Stat	0.74	44	Pg	Pg	15 03 40.7	-1.0
KAN05	Bluff City Nor	0.78	58	Pg	Pg	15 03 41.5	-1.1
KAN05				Sg	Sg	15 03 52.8	-0.1
KAN08	Anthony NE Sta	0.79	48	Pg	Pg	15 03 42.6	-0.1
KAN06	Argonia West S	0.87	50	Pg	Pg	15 03 44.0	-0.3
KAN01	Argonia South	0.89	58	Pg	Pg	15 03 43.3	-1.2
KAN09	Caldwell North	0.97	63	Pg	Pg	15 03 43.9	-2.3

KAN09				Sg	Sb	15 03 59.1	-0.1
KAN13	South Haven SW	1.03	72	Pg	Pg	15 03 46.7	-0.6
KAN13				Sg	Sb	15 04 01.0	+0.1
BLOK	Blackwell	1.20	86	Pg	Pb	15 03 49.8	-0.4
BCOK	Bluff Creek, N	1.36	139		Pn	15 03 52.0	-0.4
OK031	S. Brethren Rd	1.68	116	Pn	Pb	15 03 57.6	-0.8
QUOK	Quay	1.69	107	Pn	Pb	15 03 58.0	-0.6
R32A	Long Quarter,	1.73	360	Pn	Pn	15 03 58.3	+0.9
R32A				IAmb_Lg		15 04 23.7	
	comp=Z,19nm,0.7s						
OK030	Cody Creek RV	1.73	116		Pn	15 03 57.9	+0.4
T35A	Sooner Cattle	1.77	82		Pb	15 03 59.0	-0.9
FNO	Franklin	1.78	143	Pn	Pn	15 03 59.0	+0.9
W35A	Tecumseh	2.14	135	Pn	Pn	15 04 03.6	+0.5
X34A	Smith Ranch, M	2.21	161		Pn	15 04 04.9	+0.9
X34A				IAmb_Lg		15 04 39.4	
	comp=Z,19nm,0.7s						
CBKS	Cedar Bluff	2.27	339	IAmb_Lg		15 04 40.7	
	comp=Z,16nm,0.8s						
U38A	Gravette	3.48	93	IAmb_Lg		15 05 23.7	
	comp=Z,5.9nm,0.8s						
HHAR	Hobbs	3.86	95	IAmb_Lg		15 05 29.7	
	comp=Z,6.5nm,0.7s						
W39A	Magazine	4.26	109	IAmb_Lg		15 05 50.6	
	comp=Z,9.3nm,1.0s						
MIAR	Mount Ida	4.69	116	IAmb_Lg		15 06 02.5	
	comp=Z,5.3nm,0.7s						
P40A	Paris	5.96	60	IAmb_Lg		15 06 43.1	
	comp=Z,5.8nm,0.9s						

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*NOU **01** 15:04:34.8, 40°.30S×177°.14E, h22km, MLv3.7/7, Off E. Coast of N. Island, N.Z.*

*WEL **01** 15:04:34.5±0.6, 40°S±3°×17°7E±°, h38km±5km, M3.3/25, ML3.6/26, MLv3.3/25, Error ellipse: s-maj=0.0km s-min=0.0km az=119.2*

ISC 01 15:04:31.7±2.1**, 40°.47S**±0°.03×**177°.44E**±0°.04**, h28**km±21km**, n130, σ1ˢ.10**/153**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PXZ	Pawanui	0.62	315	P	Pn	15 04 45.8	+1.1
PXZ				S	Sn	15 04 54.0	+0.3
PRHZ	Porangahau	0.65	288	P	Pn	15 04 46.2	+1.2
PRHZ				S	Sn	15 04 55.3	+0.9
ANWZ	Angora Road	0.73	270	P	Pn	15 04 47.5	+1.2
ANWZ				S	Sn	15 04 57.5	+0.9
KAHZ	Kahuranaki	0.80	327	P	Pn	15 04 48.3	+1.1
KAHZ				S	Sn	15 04 59.8	+1.6
CKHZ	Cape Kidnapper	0.86	341	P	Pn	15 04 49.0	+1.1
CKHZ				S	Sn	15 04 59.9	+0.3
WPHZ	Waipukurau	0.86	298	P	Pn	15 04 48.8	+0.8
WPHZ				S	Sn	15 04 58.9	-0.8
BFZ	Birch Farm	0.93	256	P	Pn	15 04 50.0	+1.0
BFZ				S	Sn	15 05 01.8	+0.3
BFZ	Birch Farm	0.93	256	P	Pn	15 04 49.9	+0.9
DVHZ	Dannevirke	0.99	280	P	Pn	15 04 50.4	+0.7
DVHZ				S	Sn	15 05 02.1	-0.7
CPWZ	Castlepoint	1.04	245	P	Pn	15 04 51.9	+1.5
PNHZ	Pukenui	1.10	300	P	Pn	15 04 51.8	+0.5
PNHZ				S	Sn	15 05 04.4	-1.2
PRWZ	Pori Road	1.12	265	P	Pn	15 04 52.7	+1.1
PRWZ				S	Sn	15 05 06.0	-0.1
KRHZ	Kereru	1.16	315	P	Pn	15 04 52.6	+0.4
KRHZ				S	Sn	15 05 05.9	-1.3
MCHZ	McNeill Hill	1.17	331	P	Pn	15 04 53.2	+1.0
MCHZ				S	Sn	15 05 06.3	-1.0
TSZ	Takapari Road	1.20	289	P	Pn	15 04 53.2	+0.4
TSZ				S	Sn	15 05 06.2	-1.9
TIWZ	Tintock	1.22	255	P	Pn	15 04 53.9	+0.9
TIWZ				S	Sn	15 05 08.5	-0.1
ARHZ	Aropaoanui	1.25	344	P	Pn	15 04 54.6	+1.2
POWZ	Post Office Ro	1.28	273	P	Pn	15 04 54.5	+0.8
POWZ				S	Sn	15 05 09.2	-0.8
KWHZ	Kaweka Forest	1.30	323	P	Pn	15 04 54.7	+0.5
KWHZ				S	Sn	15 05 09.1	-1.6
TMWZ	Te Maipa	1.34	241	P	Pn	15 04 55.1	+0.5
TMWZ				S	Sn	15 05 11.8	+0.3
MHGZ	Mahia Peninsul	1.36	15	P	Pn	15 04 56.0	+1.1
WHHZ	Waihua	1.40	353	P	Pn	15 04 56.6	+1.2
WHHZ				S	Sn	15 05 13.3	+0.4
MRZ	Mangatainoka R	1.43	262	P	Pn	15 04 56.4	+0.5
MRZ				S	Sn	15 05 11.9	-1.8
BHHZ	Black Hill Sta	1.44	312	P	Pn	15 04 56.5	+0.5
BHHZ				S	Sn	15 05 11.9	-2.2
NMHZ	Naumai	1.45	340	P	Pn	15 04 57.2	+1.0
NMHZ				S	Sn	15 05 13.4	-1.0
KNZ	Kokohu	1.46	7	P	Pn	15 04 56.9	+0.8
BKZ	Black Stump Fm	1.49	330	P	Pn	15 04 57.3	+0.5
BKZ				S	Sn	15 05 13.5	-1.8
BKZ	Black Stump Fm	1.49	330	P	Pn	15 04 57.3	+0.5
HOWZ	Holdsworth Sta	1.52	253	P	Pn	15 04 57.5	+0.4
RAHZ	Arahi	1.57	350	P	Pn	15 04 58.8	+0.9
PRGZ	Paritu Road	1.58	13	P	Pn	15 04 58.9	+1.0
TRWZ	Traveller	1.62	234	P	Pn	15 04 58.6	+0.2
MTW	Mount Morrison	1.62	244	P	Pn	15 04 58.7	+0.2
OHWZ	Ohakea	1.64	279	P	Pn	15 05 00.4	+1.6
MOVZ	Moawhango	1.68	309	P	Pn	15 05 00.1	+0.9
MTHZ	Maungataniwha	1.68	344	P	Pn	15 04 59.9	+0.6
SNGZ	Shannon Statio	1.69	357	P	Pn	15 05 00.3	+0.9
PAWZ	Paruwai Farm	1.78	238	P	Pn	15 05 00.8	+0.2
RIGZ	Rimuhau	1.78	8	P	Pn	15 05 01.4	+0.7
MRHZ	Matea Rd	1.81	334	P	Pn	15 05 02.0	+0.9
WNVZ	Wahianoa	1.82	308	P	Pn	15 05 02.6	+1.2
TUVZ	Tukino	1.82	311	P	Pn	15 05 02.7	+1.3
WHVZ	Whangaehu Hut	1.85	309	P	Pn	15 05 03.0	+1.2
MTVZ	Mangateitei	1.86	305	P	Pn	15 05 03.1	+1.3
TRVZ	Turoa	1.87	308	P	Pn	15 05 03.2	+1.1
DRZ	Dome Shelter	1.87	309	P	Pn	15 05 03.6	+1.4
ETVZ	East Tongariro	1.88	314	P	Pn	15 05 03.2	+1.0
RTZ	Ruatahuna	1.89	349	P	Pn	15 05 02.7	+0.6
SNVZ	South Ngauruho	1.89	312	P	Pn	15 05 03.3	+1.0
HATZ	Hinemaiaia	1.89	326	P	Pn	15 05 02.9	+0.7
OTVZ	Oturere	1.89	313	P	Pn	15 05 03.3	+1.0
FWVZ	Far West T-bar	1.89	309	P	Pn	15 05 03.4	+1.0
TMVZ	Te Maari	1.90	315	P	Pn	15 05 03.4	+1.0
MSWZ	Moikau Station	1.91	240	P	Pn	15 05 02.4	-0.1
CAW	Cannon Point	1.91	250	P	Pn	15 05 02.7	+0.3
NGZ	Ngauruhoe	1.92	312	P	Pn	15 05 03.7	+1.0
RITZ	Rihia Road	1.93	320	P	Pn	15 05 03.9	+1.2
NTVZ	North Tongarir	1.93	315	P	Pn	15 05 03.7	+0.9
NNVZ	North Ngauruho	1.94	313	P	Pn	15 05 04.0	+1.0
KRVZ	Karewarewa	1.95	314	P	Pn	15 05 04.1	+1.0
KIW	Kapiti Island	1.96	258	P	Pn	15 05 03.6	+0.5
WTVZ	West Tongariro	1.96	313	P	Pn	15 05 04.3	+1.0
RAGZ	Rawiri	1.97	359	P	Pn	15 05 03.9	+0.6
PLWZ	Palliser	1.98	236	P	Pn	15 05 03.1	-0.4
PKVZ	Pokaka	2.00	306	P	Pn	15 05 04.7	+1.0
KATZ	Kakaramea	2.01	317	P	Pn	15 05 04.9	+0.9
WAZ	Wanganui	2.01	290	P	Pn	15 05 05.5	+1.7
TKGZ	Te Karaka	2.05	9	P	Pn	15 05 05.0	+0.6
RATZ	Rangitukua	2.05	321	P	Pn	15 05 05.2	+0.8
MUGZ	Murupara	2.06	345	P	Pn	15 05 03.8	-0.6
TWVZ	Taurewa	2.08	312	P	Pn	15 05 05.5	+0.6
ALRZ	Allen Road	2.08	336	P	Pn	15 05 05.5	+0.7
PRRZ	Plateau Road	2.13	337	P	Pn	15 05 06.0	+0.6
MWZ	Matawai	2.13	2	P	Pn	15 05 05.8	+0.2
WHTZ	Whakaora	2.13	327	P	Pn	15 05 06.6	+1.0
BHW	Baring Head	2.16	243	P	Pn	15 05 05.7	-0.1
WEL	Wellington	2.18	247	P	Pn	15 05 06.3	+0.1
WPRZ	Whakapapatarin	2.18	333	P	Pn	15 05 06.6	+0.4
URZ	Urewera	2.22	353	P	Pn	15 05 07.0	+0.4
URZ	Urewera	2.22	353	P	Pn	15 05 07.1	+0.4
RRRZ	Republican Roa	2.24	341	P	Pn	15 05 07.6	+0.5
HRRZ	Handcock Road	2.26	336	P	Pn	15 05 08.2	+0.9
TWGZ	Tauwhareparae	2.33	11	P	Pn	15 05 09.0	+0.8
KUTZ	Kaahu Road	2.34	327	P	Pn	15 05 08.9	+0.5
HSRZ	Hossack Road	2.34	336	P	Pn	15 05 09.1	+0.6
TARZ	Mount Tarawera	2.34	342	P	Pn	15 05 09.3	+0.8
HLRZ	Highlands Stat	2.37	339	P	Pn	15 05 09.8	+1.0
VRZ	Vera Road	2.46	302	P	Pn	15 05 10.7	+0.7
PUZ	Puketiti	2.48	15	P	Pn	15 05 10.5	+0.3
OMRZ	Omania	2.50	340	P	Pn	15 05 10.6	0.0
RUGZ	Raukumara Rang	2.51	4	P	Pn	15 05 11.2	+0.4
TCW	Tory Channel	2.51	252	P	Pn	15 05 10.6	-0.1
LREZ	Lake Rotokare	2.54	292	P	Pn	15 05 12.9	+1.8
MARZ	Manawahe	2.55	346	P	Pn	15 05 11.7	+0.5
TLZ	Tolley Road	2.59	325	P	Pn	15 05 12.0	+0.1
PKGZ	Pakihiroa	2.62	11	P	Pn	15 05 13.0	+0.6
DUWZ	D'Urville Isla	2.70	262	P	Pn	15 05 13.5	+0.2
OPRZ	Ohinepanea	2.71	345	P	Pn	15 05 13.6	+0.2
HAZ	Te Kaha	2.72	6	P	Pn	15 05 14.1	+0.5
WMGZ	Waiomatatini S	2.75	16	P	Pn	15 05 14.4	+0.3
PREZ	Palmer Road	2.76	293	P	Pn	15 05 16.6	+2.4
HIZ	Hauiti	2.79	314	P	Pn	15 05 15.0	+0.4
HIZ	Hauiti	2.79	314	P	Pn	15 05 15.1	+0.5
DREZ	Durham Road	2.80	296	P	Pn	15 05 16.5	+1.8
TUWZ	Tuamarina	2.82	249	P	Pn	15 05 14.2	-0.7
NEZ	North Egmont	2.84	294	P	Pn	15 05 17.0	+1.8
KMRZ	Kaimai	2.87	336	P	Pb	15 05 21.8	-0.4
KHEZ	Kahui Hut	2.88	293	P	Pn	15 05 18.5	+2.6
NMEZ	Namu Road	2.93	290	P	Pn	15 05 18.6	+2.1
PKE	Pukeiti	2.95	294	P	Pn	15 05 18.6	+1.8
BSWZ	Blackbirch Sta	2.97	244	P	Pn	15 05 16.5	-0.4
NBEZ	Newall Road No	3.00	292	P	Pn	15 05 19.5	+2.1
TOZ	Tahuroa Road	3.12	331	P	Pn	15 05 19.3	+0.2
NNZ	Nelson	3.17	255	P	Pn	15 05 19.9	+0.2
KHZ	Kahutara	3.52	235	P	Pn	15 05 23.7	-0.8
KHZ	Kahutara	3.52	235	P	Pn	15 05 26.7	+2.2
THZ	Tophouse	3.66	248	P	Pn	15 05 25.6	-1.0
QRZ	Quartz Range	3.75	263	P	Pn	15 05 27.4	-0.4
QRZ	Quartz Range	3.75	263	P	Pn	15 05 27.5	-0.3
ETAZ	East Tamaki Re	4.02	330	P	Pn	15 05 31.9	+0.5
AWAZ	Awhitu Peninsu	4.04	326	P	Pn	15 05 32.7	+1.0
WIAZ	Waiheke Island	4.09	333	P	Pn	15 05 32.9	+0.5
GVZ	Greta Valley S	4.13	231	P	Pn	15 05 35.0	+2.0
MBAZ	Motutapu North	4.20	331	P	Pn	15 05 34.6	+0.8
LTZ	Lake Taylor	4.51	237	P	Pn	15 05 38.6	+0.4
AKCZ	Akaroa Harbour	4.78	223	P	Pn	15 05 42.9	+1.0
MQZ	McQueen's Vall	4.81	226	P	Pn	15 05 41.6	-0.6
CTZ	Chatham Island	5.50	128	P	Pn	15 05 55.8	+4.1
CTZ				S	Sn	15 06 53.2	-0.7
TMZ	Timaru	6.16	228	P	Pn	15 06 00.6	-0.2
ODZ	Otahua Downs	6.77	225	P	Pn	15 06 13.3	+4.1

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*NEIC **01** 15:31:33.2±1.8, 30°.40S±0°.04×71°.74W±0°.10, h23km±4km, ML4.1(GUC), Error ellipse: s-maj=12.6km s-min=4.9km az=106.0*

*GUC **01** 15:31:33.6±0.7, 30°.45S×71°.70W, h38km±2km, ML4.1*

ISC 01 15:31:33.1±1.5**, 30°.39S**±0°.04×**71°.8W**±0°.1**, h24**km±10km**, n39, σ0ˢ.93**/46**, 3C-7D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.32	154	⇑ *i*P	Pb	15 31 40.6	+0.3
CO06				*i* S	Sb	15 31 45.1	-0.1
CO06				IAML		15 31 45.4	
	comp=E,61µm,0.2s						
CO06	Fray Jorge	0.32	154	Pg	Pb	15 31 40.6	+0.3
CO06				Sg	Sb	15 31 44.5	-0.7
CO05	La Serena	0.67	46	⇓ *i*P	Pn	15 31 46.6	-0.4
CO05				*i* S	Sb	15 31 55.6	+0.6
CO05	La Serena	0.67	46		Pn	15 31 46.4	-0.7
CO05				Sg	Sb	15 31 54.1	-1.0
GO04	Tololo Observa	0.89	76	⇓ *i*P	Pn	15 31 49.4	-0.9
GO04				*i* S	Sn	15 32 00.6	-2.0
GO04	Tololo Observa	0.89	76		Pn	15 31 49.4	-0.9
GO04				Sg	Sn	15 32 00.0	-2.5
LCO	Las Campanas	1.67	35	⇑ *i*P	Pn	15 32 02.2	+1.2
LCO				*i* S	Sn	15 32 23.8	+1.9
LCO	Las Campanas	1.67	35	Pn	Pn	15 32 01.9	+0.9
VA06	Catapilco	2.21	169	⇓ *i*P	Pn	15 32 07.8	-0.4
VA06				IAML		15 32 44.6	
	comp=E,1µm,0.4s						
AC04	Llanos de Chal	2.27	16	Pn	Pn	15 32 09.6	+0.6
VA03	San Esteban	2.60	156	*e*P	Pn	15 32 14.3	+0.6
VA03				*i* S	Sn	15 32 44.6	+0.1
VA03				IAML		15 32 57.0	
	comp=E,1µm,0.3s						
VA03	San Esteban	2.60	156		Pn	15 32 14.3	+0.6
VA01	Torpederas	2.63	177		Pn	15 32 12.5	-1.5
ROCH	El Roble	2.66	166	⇓ *i*P	Pn	15 32 14.8	+0.1
ROCH				⇓ *i*P	Pn	15 32 14.6	-0.1
ROCH				*i* S	Sn	15 32 46.5	+0.2
ROCH				IAML		15 32 55.0	
	comp=N,938nm,0.5s						
ROCH				IAML		15 32 55.4	
	comp=N,728nm,0.5s						
PEL	Peldehue	2.91	161	⇓ *i*P	Pn	15 32 18.4	+0.5
PEL				*i* S	Sn	15 32 52.0	-0.1
PEL				IAML		15 33 09.3	
	comp=N,367nm,0.5s						
PEL	Peldehue	2.91	161		Pn	15 32 18.2	+0.3
ZON	Zonda	2.92	114	Pn	Pn	15 32 18.3	+0.3
MT02	Curacav	2.92	169		Pn	15 32 17.6	-0.4
GO03	Copiap	3.10	27	IAML		15 33 14.4	
	comp=N,185nm,0.4s						
GO03	Copiap	3.10	27	Pn	Pn	15 32 21.5	+0.9
MT05	Renca	3.13	164	IAML		15 33 15.9	
	comp=E,881nm,0.3s						
MT05	Renca	3.13	164	Pn	Pn	15 32 20.7	-0.2
VA05	Santo Domingo	3.26	177		Pn	15 32 21.9	-0.9
MT09	Talagante	3.45	169	⇑ *i*P	Pn	15 32 25.8	+0.4
MT09				IAML		15 33 23.7	
	comp=E,332nm,0.5s						
MT09	Talagante	3.45	169	Pn	Pn	15 32 25.6	+0.2
MT01	Popeta	3.50	173	⇓ *i*P	Pn	15 32 25.5	-0.4
MT01				*i* S	Sn	15 33 05.8	-0.8
MT01	Popeta	3.50	173		Pn	15 32 25.4	-0.5
LMEL	Las Melosas	3.71	159	*e*P	Pn	15 32 30.8	+1.8
LMEL				*i* S	Sn	15 33 13.1	+1.1
BO01	Tunca	4.04	172	*e*P	Pn	15 32 33.1	-0.3
BO01	Tunca	4.04	172	Pn	Pn	15 32 32.7	-0.7
AC02	Maricunga	4.25	34	Pn	Pn	15 32 37.9	+1.2
BO02	Sierra Bellavi	4.47	169	Pn	Pn	15 32 38.9	-0.5
GO05	Huala	4.61	181	Pn	Pn	15 32 39.5	-1.8
PB14	IPOC Station P	5.87	12	Pn	Pn	15 32 59.7	+0.8
LVC	Limon Verde	8.16	19	Pn	Pn	15 33 30.9	+0.5
LC01	Cunco	8.49	180	Pn	Pn	15 33 32.4	-2.1
PB07	IPOC Station P	8.79	12	Pn	Pn	15 33 37.8	-1.1
PB09	IPOC Station P	8.86	16	Pn	Pn	15 33 38.4	-1.4
PB08	IPOC Station P	10.48	14	Pn	Pn	15 34 02.2	0.0

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*IDC **01** 15:38:36.2±2.1, 0°.89N×127°.24E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.2/30, mbtmp3.5/4, MS2.5/1, Ms1 2.7/1, ms1mx2.1/31, Error ellipse: s-maj=196.5km s-min=24.1km az=65.0*

*DJA **01** 15:38:36.9±0.8, 1°N±3°×12°7E±°, h23km±11km, M2.6/3, MLv2.6/3*

ISC 01 15:38:37.4±1.4**, 0°.98N**±0°.10×**127°.4E**±0°.3**, h10**km**, n7, σ0ˢ.92**/7**, mb3.5**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.22	199	S	Sg	15 38 44.7	-0.3
LBMI	Labuha	1.61	178	P	Pn	15 39 05.0	-0.9
LBMI				Pg	Pg	15 39 09.4	+1.1
WRA	Warramunga Arr	21.87	162	P	P	15 43 29.9	-0.6
	0.3nm,0.5s,baz=340,slow=11,SNR=4.9						
ASAR	Alice Springs	25.29	166	P	P	15 44 05.2	+0.9
	0.5nm,0.7s,baz=354,slow=10,SNR=5.7						
CMAR	Chiang Mai Arr	32.92	304	LR	LR	15 58 25.6	
	comp=Z,7.5nm,18.9s,baz=320,slow=36						
STKA	Stephens Creek	35.33	159	P	P	15 45 32.7	-0.3
	1.3nm,0.4s,baz=326,slow=7.3,SNR=3.1						
MKAR	Makanchi Array	60.21	326	P	P	15 48 45.9	+0.2
	0.3nm,0.7s,baz=117,slow=7.9,SNR=2.7						

DJA 01 15:38:56.0±0.5**, 11°S**±4°×**11°8E**±°**, h10**km**, M3.8**/9**, mb4.2**/3**, MLv3.6**/9**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	2.28	40	P	Pn	15 39 34.3	+0.5
WBSI				S	Sn	15 40 01.2	-0.8
PLAI	Plampang	2.57	357	P	Pn	15 39 37.6	-0.1
TWSI	Taliwang, Sumb	2.84	339	P	Pn	15 39 40.5	-1.0
IGBI	Denpasar	3.75	313	P	Pn	15 39 54.2	+0.3
EDFI	Ende, Flores	4.57	55	P	Pn	15 40 05.9	+0.6
JAGI	Jajag, Banyuwa	4.72	308	P	Pn	15 40 07.9	+0.6
BSSI	Bau Bau, Buton	5.82	26	P	Pn	15 40 22.6	+0.1
	0.1nm15nm,1.3s						
BKSI	Bulukumba	6.43	20	P	Pn	15 40 31.3	+0.4
	0.0nm11nm,0.6s						

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*ISK **01** 15:38:57.3, 38°.82N×37°.83E, h1km, ML3.6/36*

*DDA **01** 15:38:57.9, 38°.83N×37°.84E, h16km, MW3.7*

ISC 01 15:38:58.4±0.8**, 38°.84N**±0°.02×**37°.84E**±0°.02**, h14**km±6km**, n81, σ1ˢ.43**/104**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEKM	Malatya_Hekimh	0.10	68	*i* P	Pg	15 39 01.3	-0.5
HEKM				*i* S	Sg	15 39 04.0	-0.1
DARE	Darende-Malaty	0.39	226	PG	Pg	15 39 05.7	-0.5
DARE				SG	Sb	15 39 11.6	-1.3
CUGUR	Gurin_SVAS	0.46	255	*i* P	Pg	15 39 07.2	-0.3
CUGUR				*i* S	Sb	15 39 14.3	-0.7
ARPR	Arapgir-MALATY	0.46	57	PG	Pg	15 39 07.6	0.0
ARPR				SG	Sb	15 39 15.3	+0.1
AKCD	Akcadag	0.55	173	*i* P	Pg	15 39 08.8	-0.4
AKCD				*i* S	Sb	15 39 18.0	+0.4
CUKAN	kangal_SIVAS	0.56	329	*i* P	Pg	15 39 08.8	-0.5
CUKAN				*i* S	Sb	15 39 17.2	-0.6
KEMA	Kemaliye	0.67	50	*i* P	Pg	15 39 10.9	-0.5
KEMA				*i* S	Sb	15 39 20.7	-0.2
MALT	Malatya	0.70	138	PG	Pg	15 39 11.5	-0.6
MALT				SG	Sb	15 39 21.8	-0.2
ELBS	KAHRAMANMARAS	0.76	227	*i* P	Pg	15 39 12.6	-0.5
ELBS				*i* S	Sn	15 39 24.4	-1.6
ILIC	ilic-Erzincan	0.83	43	PG	Pg	15 39 14.4	-0.2
CUAYA	Sivas-Altinyay	0.95	297	*i* P	Pb	15 39 15.7	-1.0
CUAYA				*i* S	Sn	15 39 29.8	-1.0
ELZG	Elazig	0.96	111	*i* P	Pb	15 39 15.9	-1.0
ELZG				*i* S	Sn	15 39 30.2	-0.9
CUZAR	Zara_SIVAS	1.05	357	*i* P	Pg	15 39 18.4	-0.2
CUZAR				*i* S	Sn	15 39 34.3	+1.1
SCER	sogukcermik	1.16	332	*i* P	Pg	15 39 20.4	-0.3
SCER				*i* S	Sg	15 39 37.1	+1.3
SARI	SarD1z-Kayseri	1.19	249	PN	Pg	15 39 20.7	-0.7
SVRC	Sivrice-ELAZID	1.24	111	PN	Pg	15 39 21.5	-0.8
SVSK	Karacayir	1.26	329	PN	Pg	15 39 22.6	+0.1
REFA	Refahiye_ERZN	1.28	34	*i* P	Pb	15 39 22.1	-0.3
REFA				*i* S	Sg	15 39 41.5	+1.6
TNCL	Tunceli-Merkez	1.36	78	*i* P	Pb	15 39 23.1	-0.5
TNCL				*i* S	Sg	15 39 42.4	+0.2
CUSAR	Sarkisla-SIVAS	1.37	295	*i* P	Pb	15 39 23.0	-0.7
SUSE	Susehri	1.40	12	*i* P	Pg	15 39 25.6	+0.3
SUSE				*i* S	Sg	15 39 47.6	+4.2
ATAB	Bozova	1.42	165	*i* P	Pb	15 39 24.3	-0.2
ATAB				*i* S	Sg	15 39 46.2	+2.2
KAHM	Kahramanmaras,	1.48	207	*i* P	Pg	15 39 26.3	-0.5
KAHM				*i* S	Sg	15 39 47.2	+1.1
GZT	Gaziantep	1.50	188	*i* P	Pg	15 39 27.2	0.0
GZT				*i* S	Sg	15 39 49.9	+3.2
KMRS	Kahramanmaras	1.52	209	PN	Pb	15 39 26.2	-0.2
KHMN	Narli-Kahraman	1.54	201	PN	Pb	15 39 26.4	-0.3
KOVA	Elazig, Kovanc	1.55	94	*i* P	Pb	15 39 26.8	-0.1
BNN	Bunyan	1.55	271	PN	Pb	15 39 26.9	-0.1
RSDY	Resadiye-TOKAT	1.60	346	PN	Pg	15 39 28.2	-1.0
SAIM	ADANA	1.63	238	*i* P	Pb	15 39 28.3	+0.1
SAIM				*i* S	Sg	15 39 51.2	+0.5
ERZN	Erzincan	1.64	62	PN	Pg	15 39 28.8	-1.1
ALUC	Giresun/Alucra	1.67	25	*i* P	Pg	15 39 29.7	-0.7
ALUC				*i* S	Sg	15 39 54.1	+2.1
EUZM	Uzumlu	1.68	58	*i* P	Pg	15 39 29.7	-1.0
EUZM				*i* S	Sg	15 39 53.4	+0.8
KELT	Kelkit	1.71	40	*i* P	Pb	15 39 29.9	+0.2
KELT				*i* S	Sg	15 39 53.2	-0.1
ANDN	Andirin	1.72	223	*i* P	Pb	15 39 29.6	-0.2
GUNE	Kayseri	1.73	273	*i* P	Pg	15 39 30.4	-1.2
GAZ	Gaziantep	1.74	197	PN	Pb	15 39 29.1	-1.0
TOKT	Tokat	1.78	326	PN	Pb	15 39 30.4	-0.4
HACI	Hacifakili, Ak	1.85	298	*i* P	Pb	15 39 31.6	-0.3
SANL	SANLIURFA_Merk	1.90	151	*i* P	Pg	15 39 33.7	-1.1
DIYA	Diyarbakir	2.02	116	*i* P	Pb	15 39 34.6	-0.2
DYBB	Diyarbakir	2.02	115	PN	Pb	15 39 33.3	-1.5
ERBA	Erbaa	2.02	336	*i* P	Pb	15 39 33.7	-1.2
SURC	SANLIURFA_SURC	2.05	162	*i* P	Pb	15 39 34.1	-1.4
GUMT	Gumushane	2.06	38	PN	Pb	15 39 34.4	-1.1
YAHY	KAYSERI_Yahyal	2.08	250	*i* P	Pb	15 39 34.1	-1.8
KOZT	Kozan	2.09	230	PN	Pb	15 39 34.7	-1.3
YOZ	Yozgat	2.11	293	PN	Pb	15 39 35.2	-1.3
ORDU	Ordu-Boztepe	2.15	0	*i* P	Pb	15 39 35.2	-1.8
KUZU	Kuzuini	2.15	197	*i* P	Pb	15 39 35.5	-1.6
SIRC	Yozgat	2.15	284	*i* P	Pn	15 39 34.5	+0.6
CKRK	Yozgat, Cekere	2.19	305	*i* P	Pb	15 39 36.6	-1.2
YEDI	Yedisu-Bingol	2.19	73	PN	Pb	15 39 35.9	-1.9
BNGB	Bingl	2.22	85	PN	Pb	15 39 36.7	-1.7
AKO	Adana	2.33	235	*i* P	Pg	15 39 42.1	-1.0
AVNS	Nevsehir-Avano	2.33	270	*i* P	Pb	15 39 38.9	-1.4
KOZK	Kozakli-Nevseh	2.34	280	PN	Pb	15 39 38.0	-2.4
BAYB	BAYBURT	2.35	52	*i* P	Pb	15 39 38.1	-2.5
BAYT	Aydıntepe-Bayb	2.36	48	PN	Pb	15 39 38.7	-2.1
CEYT	Ceyhan	2.46	223	PN	Pn	15 39 39.1	+1.0
MAZI	Mazidag	2.48	123	PN	Pb	15 39 40.2	-2.5
HKOY	Hamitkoy-Ladik	2.49	326	PN	Pb	15 39 40.4	-2.6
CMRD	Camardi-Nigde	2.53	243	PN	Pb	15 39 40.7	-2.9
NIDE	Nigde/Merkez-G	2.55	252	*i* P	Pn	15 39 41.0	+1.6
ECAT	Cat-ERZURUM	2.55	72	*i* P	Pb	15 39 44.4	+0.3
MACK	Trabzon	2.57	35	*i* P	Pb	15 39 42.7	-1.6
KTUT	Trabzon	2.61	34	PN	Pb	15 39 42.7	-2.1
COAL	Corum-Alaca	2.62	304	*i* P	Pb	15 39 42.4	-2.7
KVT	Kavak	2.63	329	PN	Pb	15 39 42.6	-2.6
KARA	Karaisali	2.70	235	PN	Pn	15 39 43.1	+1.7
SVAN	Silvan-Diyarba	2.73	104	PN	Pb	15 39 43.8	-3.1
TAHT	Tahtakopru-Hat	2.79	209	PN	Pn	15 39 44.0	+1.5
VRTB	Varto-Mus	2.84	82	PN	Pn	15 39 44.9	+1.5
GULA	Gulagac	2.86	261	PN	Pn	15 39 45.7	+2.0
KRTS	Karatas	2.99	222	PN	Pn	15 39 46.8	+1.5
YAYL	Yayladag	3.12	207	PN	Pn	15 39 48.7	+1.5
KAMT	Kaman	3.25	281	PN	Pn	15 39 50.9	+1.9
MERS	Mersin	3.28	234	PN	Pn	15 39 51.3	+1.9
SERE	Sereflikochisa	3.33	273	PN	Pn	15 39 51.9	+1.7
YESY	Yesilyurt	3.39	253	PN	Pn	15 39 52.8	+1.9
SULT	Sultanhani-AKS	3.45	261	PN	Pn	15 39 53.9	+2.2

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*AEIC **01** 15:44:09.8±3.4, 52°.3N±0°.1×163°.0W±0°.1, h12km±9km, Error ellipse: s-maj=17.8km s-min=9.5km az=155.0*

NEIC 01 15:44:10.3±1.1**, 52°.5N**±0°.1×**163°.13W**±0°.08**, h36**km±27km**, ML3.6**/6**, ML2.9**/12(AEIC)**, Error ellipse: s-maj=15.5km s-min=4.1km az=158.0, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISLZ	Isanotski Laza	2.28	351		Pn	15 44 44.5	-0.9
ISLZ					Sn	15 45 13.3	+1.0
WECS	Westdahl Cape	2.28	335		Pn	15 44 45.6	+0.2
AKUT	Akutan	2.30	317	Pn	Pn	15 44 46.4	+0.8
AKUT				IAML		15 45 28.0	
	comp=E,252nm,2.9s						
AKMO	Akutan Morgan	2.37	314		Pn	15 44 46.6	0.0
AKMO					Sn	15 45 15.1	+0.7
FALS	False Pass	2.39	356		Pn	15 44 46.3	-0.5
FALS					Sn	15 45 15.2	+0.3
UNV	Unalaska Valle	2.45	305		Pn	15 44 46.2	-1.5
UNV					Sn	15 45 16.2	-0.2
MSW	Makushin Switc	2.63	305		Pn	15 44 50.0	-0.2
MSW					Sn	15 45 21.1	+0.3
DT1	Dutton Round H	2.68	10		Pn	15 44 50.0	-0.9
SDPT	Sand Point	3.28	27	Pn	Pn	15 44 58.8	-0.3
SDPT				IAML		15 46 10.2	
	comp=N,169nm,4.1s						
CHGN	Chignik	4.72	34	Pn	Pn	15 45 18.7	-0.1
CHGN				IAML		15 46 06.7	
	comp=N,54nm,3.9s						
CHGN				IAML		15 47 16.9	
	comp=E,73nm,3.8s						
ADK	Adak	8.36	271	Pn	Pn	15 46 09.0	+0.3

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*IDC **01** 15:52:12.0±2.0, 14°.77S×176°.78W, h0km, mb3.8/5, mb1 4.2/5, mb1mx3.8/30, mbtmp3.8/5, MS3.6/12, Ms1 3.6/12, ms1mx3.5/24, Error ellipse: s-maj=128.3km s-min=25.4km az=150.0*

*NEIC **01** 15:52:14.1±0.2, 14°.72S±0°.09×176°.7W±0°.1, h10km±1km, mb4.0/3, Error ellipse: s-maj=24.6km s-min=5.7km az=236.0*

ISC 01 15:52:13.1±0.8**, 14°.8S**±0°.1×**176°.8W**±0°.1**, h10**km**, n32, σ1ˢ.03**/12**, mb4.0**/7**, MS3.7**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	7.82	124	Pn	Pn	15 54 07.7	+0.8
KNTN	Kanton	12.96	23	Pn	Pn	15 55 15.8	-1.6
RAO	Raoul Island	14.42	184	Pn	Pn	15 55 35.7	-1.6

PPT	Papeete	26.27	100	LR	LR	16 05 11.8	
	comp=Z,50nm,21.6s,baz=244,slow=30						
H11S2	WAKE ISLAND Hy	36.87	333	T	T	16 38 43.7	
	baz=155						
H11S3	WAKE ISLAND Hy	36.88	333	T	T	16 38 42.7	
	baz=155,SNR=4.4						
H11S1	WAKE ISLAND Hy	36.89	333	T	T	16 38 46.9	
	baz=155						
H11N3	WAKE ISLAND Hy	37.87	334	T	T	16 39 57.2	
	baz=153,slow=76,SNR=4.1						
H11N1	WAKE ISLAND Hy	37.88	334	T	T	16 39 54.0	
	baz=153,slow=76,SNR=9.4						
H11N2	WAKE ISLAND Hy	37.89	334	T	T	16 39 58.1	
	baz=153,slow=76,SNR=7.1						
WB0	Warramunga Arr	46.76	257	P	P	16 00 43.8	+0.8
WB0				IAmb	IAmb	16 00 51.9	
	comp=Z,9.8nm,1.3s						
WRA	Warramunga Arr	46.80	256	P	P	16 00 43.8	+0.5
	comp=Z,2.0nm,1.1s,baz=91,slow=7.1,SNR=6.3						
WRA	Warramunga Arr	46.80	256	IAmb	IAmb	16 00 52.2	
	comp=Z,0.6nm,1.4s						
AS31	Alice Springs	47.19	251	P	P	16 00 47.0	+0.6
AS31				IAmb	IAmb	16 00 47.4	
	comp=Z,1.5nm,1.1s						
ASAR	Alice Springs	47.19	251	P	P	16 00 46.9	+0.5
	comp=Z,1.8nm,0.6s,baz=83,slow=8.6,SNR=25						
GUMO	Guam	47.29	305	LR	LR	16 17 44.2	
	comp=Z,44nm,20.0s,baz=102,slow=32						
VNDA	Vanda	63.65	185	LR	LR	16 28 58.9	
	comp=Z,21nm,18.1s,baz=34,slow=35						
MJAR	Matsushiro Arr	66.41	322	LR	LR	16 26 57.0	
	comp=Z,22nm,21.9s,baz=40,slow=31						
PETK	Petropavlovsk-	71.11	344	LR	LR	16 29 00.2	
	comp=Z,67nm,21.5s,baz=117,slow=31						
KSRS	Korea Array	73.47	317	LR	LR	16 32 56.0	
	comp=Z,34nm,18.4s,baz=80,slow=33						
USRK	Ussuriysk Ar.	74.97	325	LR	LR	16 30 41.5	
	comp=Z,68nm,20.2s,baz=124,slow=31						
ILAR	Eielson Array	82.53	12	P	P	16 04 36.0	+0.3
	comp=Z,1.4nm,1.0s,baz=216,slow=4.3,SNR=7.5						
TXAR	Lajitas Array	83.02	57	P	P	16 04 39.1	-0.1
	comp=Z,0.2nm,0.8s,baz=218,slow=6.7,SNR=2.7						
PDAR	Pinedale Array	84.03	43	P	P	16 04 45.6	+1.4
	comp=Z,0.7nm,0.8s,baz=188,slow=5.5,SNR=4.6						
PMSA	Palmer Station	86.03	157	LR	LR	16 35 46.2	
	comp=Z,46nm,21.1s,baz=304,slow=30						
USHA	Ushuaia	88.23	147	LR	LR	16 33 55.8	
	comp=Z,63nm,21.1s,baz=286,slow=28						
CMAR	Chiang Mai Arr	89.33	289	LR	LR	16 40 13.4	
	comp=Z,27nm,20.5s,baz=113,slow=32						
YKA	Yellowknife Ar	90.88	24	LR	LR	16 42 08.9	
	comp=Z,57nm,19.5s,baz=0.0,slow=33						
PLCA	Paso Flores	92.32	133	LR	LR	16 38 37.0	
	comp=Z,33nm,18.5s,baz=342,slow=30						
BRTR	Keskin Array B	143.60	319	PKP	PKPdf	16 11 48.4	-0.3
	comp=Z,2.6nm,1.0s,baz=48,slow=2.1,SNR=4.8						
BRTR	Keskin Array B	143.60	319		PKPbc	16 11 47.4	+1.4
GERES	GERESS Array B	144.97	348	PKP	PKPdf	16 11 51.0	+0.3
	comp=Z,0.7nm,0.7s,baz=51,slow=7.8,SNR=2.2						

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*DJA **01** 15:56:44.6±1.1, 9°S±3°×10°6E±°, h29^{km}±11^{km}, M3.9/8, mb4.4/1, MLv3.7/8*

*IDC **01** 15:56:47.2±3.7, 7°.75S×107°.27E, h0^{km}, mb3.5/3, mb1 3.6/3, mb1mx3.3/33, mbtmp3.5/3, Error ellipse: s-maj=181.8km s-min=29.5km az=49.0*

ISC 01 15:56:46.5±1.5, **8°.6S**±0°.1×**106°.14E**±0°.09, **h22**^{km}**, n11,** σ**1^{s}43**/11, **mb3.5**/3, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	Cibinong	1.60	38	P	Pb	15 57 15.2	-0.3
CGJI	Cibinong	2.01	347	P	Pb	15 57 20.8	-1.6
LEM	Lembang	2.28	40	P	Pb	15 57 25.1	-2.0
CMJI	Cimerak	2.42	71	P	Pn	15 57 25.7	+0.9
KPJI	Karang Pucung	3.03	66	P	Pn	15 57 35.0	+1.8
KASI	Kota Agung	3.45	332	P	Pn	15 57 39.7	+0.7
KLSI		4.11	340	P	Pn	15 57 49.3	+1.2
UGM	Wanagama	4.39	82	P	Pn	15 57 52.7	+0.7
WRA	Warramunga Arr	29.52	116	P	P	16 02 48.6	-1.0
	0.6nm,0.7s,baz=290,slow=10,SNR=6.4						
ASAR	Alice Springs	30.51	123	P	P	16 02 57.6	-0.8
	0.2nm,0.8s,baz=301,slow=8.8,SNR=5.6						
MKAR	Makanchi Array	59.09	341	P	P	16 06 46.5	+1.3
	0.3nm,0.6s,baz=139,slow=7.2,SNR=4.2						

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*TEH **01** 16:04:57.9, 26°.93N×54°.10E, h16^{km}, ML3.4*

*DSN **01** 16:04:58.0±1.2, 26°.92N×54°.05E, h10^{km}, ML3.1/10, Error ellipse: s-maj=12.9km s-min=9.5km az=159.0*

*OMAN **01** 16:04:59.8±0.1, 27°.00N×54°.06E, h25^{km}, mb4.7/1, ml3.1/19, Mwp4.9/3, Error ellipse: s-maj=1.4km s-min=0.8km az=2.0*

ISC 01 16:04:57.9±1.8, **26°.93N**±0°.05×**54°.13E**±0°.04, **h4**^{km}±16^{km}, **n78,** σ**1^{s}08**/101, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	LAR	0.76	16	*e*Pg	Pg	16 05 13.1	+0.6
LAR1				*e*		16 05 39.9	
	comp=Z,21μm,0.6s						
LMD1	Lamerd	0.95	295	*e*Pg	Pg	16 05 15.4	-0.7
LMD1				*e*		16 05 42.4	
	comp=Z,11μm,0.3s						
JHRM	Jahrom	1.64	343	*e*Pg	Pb	16 05 28.4	-0.3
JHRM				*e*Sg	Sg	16 05 51.5	+0.9
QIR1	Qir	1.81	328	*e*Pn	Pn	16 05 30.2	+0.3
GENO	Geno	1.88	75	*e*Pn	Pn	16 05 31.3	+0.4
GENO				*e*		16 06 07.2	
	comp=Z,1μm,0.3s						
SHME	Shamm	2.00	116	P	Pn	16 05 32.0	-0.5
SHME	Shamm	2.00	116	P	Pn	16 05 32.7	+0.3
SHME				S	Sb	16 06 01.0	+0.8
BANOM	Banah	2.19	117	P	Pn	16 05 35.1	0.0
BANOM	Banah	2.19	117	*e*Pn	Pn	16 05 35.0	0.0
BANOM	Banah	2.19	117	P	Pn	16 05 35.3	+0.2
IBND	Bandar-abas	2.21	76	*e*Pn	Pn	16 05 35.8	+0.6
IBND				*e*		16 06 31.9	
	comp=Z,3μm,0.6s						
JRN	Qarnain Island	2.29	210	*e*Pn	Pn	16 05 36.1	-0.3
NAZ	Nazwa, Dubai	2.38	144	*e*Pn	Pn	16 05 39.1	+1.5
NAZ	Nazwa, Dubai	2.38	144	P	Pn	16 05 39.5	+1.9
	SNR=7.1						
NAZ				S	Sb	16 06 10.8	-0.1
MASF	Masafi	2.40	130	P	Pn	16 05 38.4	+0.5
MASF				P	Pn	16 05 38.4	+0.5
MASF				S	Sb	16 06 11.2	-0.3
MASF				S	Sb	16 06 11.2	-0.3
MSFE	Esma-Masafi	2.40	130	P	Pn	16 05 37.5	-0.5
MSFE	Esma-Masafi	2.40	130	*e*Pn	Pn	16 05 39.2	+1.2
ASUD	Al Ashush, Dub	2.54	155	P	Pn	16 05 39.6	-0.2
ASUD	Al Ashush, Dub	2.54	155	*e*Pn	Pn	16 05 41.5	+1.7
ASUD	Al Ashush, Dub	2.54	155	P	Pn	16 05 42.1	+2.2
	SNR=12						
MDH	Madha	2.54	129	P	Pn	16 05 40.4	+0.6
MDH	Madha	2.54	129	*e*Pn	Pn	16 05 41.0	+1.2
MDH	Madha	2.54	129	P	Pn	16 05 40.8	+1.0
MDH				P	Pn	16 05 40.8	+1.0
FAQ	Al Faqa, Dubai	2.55	149	*e*Pn	Pn	16 05 41.6	+1.7
FAQ	Al Faqa, Dubai	2.55	149	P	Pn	16 05 42.0	+2.1
FAQ				S	Sb	16 06 14.3	-1.5
UOSS	Minazif	2.72	136	P	Pn	16 05 42.5	+0.2
UOSS	Minazif	2.72	136	*e*Pn	Pn	16 05 43.0	+0.7
UOSS	Minazif	2.72	136	P	Pn	16 05 43.2	+0.9
HATD	Hatta, Dubai	2.77	139	P	Pn	16 05 44.4	+1.4
HATD	Hatta, Dubai	2.77	139	*e*Pn	Pn	16 05 44.0	+1.0
HATD	Hatta, Dubai	2.77	139	P	Pn	16 05 44.5	+1.6
HATD				S	Sn	16 06 16.4	-0.4
ASHO	Ashiyiah	2.83	142	P	Pn	16 05 44.9	+1.0
ASHO				S	Sn	16 06 19.1	+0.6
ASHO	Ashiyiah	2.83	142	*e*Pn	Pn	16 05 44.9	+1.0
ASHO	Ashiyiah	2.83	142	P	Pn	16 05 45.1	+1.1
	SNR=9.2						
ASHO				S	Sn	16 06 20.0	+1.5
SHMA	Al-Shehemyia	3.04	250	P	Pn	16 05 44.5	-2.2
SHMA				S	Sn	16 06 24.3	+0.8
GHWR	Ruwais	3.17	201	P	Pn	16 05 47.3	-1.2
GHWR				S	Sn	16 06 28.2	+1.5
MZWR	Madinat Zayed	3.17	184	*e*Pn	Pn	16 05 48.9	+0.4
MZWR	Madinat Zayed	3.17	184	P	Pn	16 05 49.2	+0.7
ALNE	Al Ain	3.22	153	*e*Pn	Pn	16 05 50.4	+1.2
ALNE	Al Ain	3.22	153	P	Pn	16 05 50.8	+1.6
KHNJ	Kahnooj	3.33	72	*e*Pn	Pn	16 05 50.9	+0.1
SOHO	SOHO	3.53	142	P	Pn	16 05 53.5	0.0
SOHO	SOHO	3.53	142	*e*Pn	Pn	16 05 54.5	+1.0
SOHO	SOHO	3.53	142	P	Pn	16 05 54.5	+1.0
SOHO				S	Sn	16 06 37.1	+1.4
NGRK	Negar Kerman	3.54	40	*e*Pn	Pn	16 05 54.2	+0.2
NGRK				*e*		16 05 58.7	
	comp=Z,334nm,0.2s						
MZR	Muzera	3.96	189	P	Pn	16 05 57.8	-1.6
MZR	Muzera	3.96	189	*e*Pn	Pn	16 05 59.3	-0.1
MZR	Muzera	3.96	189	P	Pn	16 05 59.4	+0.1
MZR				S	Sn	16 06 49.4	+3.2
KHGB	Koh Gabri	4.00	30	*e*Pn	Pn	16 06 01.4	+1.3
CHMN	Cheshme madani	4.18	45	*e*		16 06 06.7	
	comp=Z,1μm,0.2s						
CHMN				*e*Pn	Pn	16 06 05.0	+2.2
ARQ	Araqi	4.19	148	P	Pn	16 06 04.1	+1.6
	SNR=8.9						
ARQ				S	Sn	16 06 53.2	+1.4
UMZA	Um Al Zommool	4.30	167	*e*Pn	Pn	16 06 04.6	+0.5
UMZA	Um Al Zommool	4.30	167	P	Pn	16 06 04.5	+0.4
UMZA				S	Sn	16 06 54.5	-0.2
KBAM	BAM	4.40	59	*e*		16 06 08.4	
	comp=Z,680nm,0.8s						
KBAM				*e*Pn	Pn	16 06 06.8	+1.2
HOQ	Hoqain	4.41	139	P	Pn	16 06 07.1	+1.5
	SNR=8.3						
HOQ				S	Sn	16 06 56.2	-1.1
IMEH	Mehriz	4.46	5	*e*Pn	Pn	16 06 06.9	+0.4
KLNJ	Kolanjah	4.63	332	*e*Pn	Pn	16 06 08.5	-0.4
BSY	Bisya	5.02	146	P	Pn	16 06 15.2	+1.2
BSY				S	Sn	16 07 10.8	-1.6
IRAM	Ramesheh	5.09	343	*e*Pn	Pn	16 06 15.1	0.0
SMDO	Samad	5.25	137	P	Pn	16 06 18.2	+1.1
SMDO				P	Pn	16 06 18.2	+1.1
SMDO				S	Sn	16 07 17.6	-0.5
SMDO				S	Sn	16 07 17.6	-0.5
ICHK	Chekchek	5.30	3	*e*Pn	Pn	16 06 18.0	0.0
WSAR	Wadi Sarin	5.49	131	P	Pn	16 06 20.5	0.0
	SNR=11						
JMDO	Jabal Madar	5.80	141	P	Pn	16 06 25.9	+1.2
IZEF	Zefreh	6.14	346	*e*Pn	Pn	16 06 28.1	-1.5
WBK	Wadi Bani Khal	6.15	133	P	Pn	16 06 29.2	-0.4
WBK				S	Sn	16 07 38.5	-1.9
TPRV	Parvadeh(Tabas	6.46	19	*e*Pn	Pn	16 06 34.0	+0.1
IKLH	Kolahrood	6.74	341	*e*Pn	Pn	16 06 36.7	-1.1
JLN	Jalan Bani Buh	6.76	134	P	Pn	16 06 38.5	+0.6
NHDN	Nehbandan	6.82	48	*e*Pn	Pn	16 06 39.0	+0.2
IKOO	Kooshah	6.92	37	*e*Pn	Pn	16 06 41.3	+1.0
TKDS	Koohdasht(Taba	7.14	20	*e*Pn	Pn	16 06 43.8	+0.6
KRSH	Karshahi	7.22	347	*e*Pn	Pn	16 06 43.2	-1.1
TNSJ	Nastanj	7.33	16	*e*Pn	Pn	16 06 45.3	-0.4
SRVN	Saravan	7.38	84	*e*Pn	Pn	16 06 47.1	+0.6
DOK	Doka	8.28	180	P	Pn	16 06 59.6	+0.9
RAYN	Ar Rayn	8.52	248	P	Pn	16 07 01.2	-0.8
WHFO	Wadi Hawf	8.98	182	P	Pn	16 07 08.9	+0.5
	SNR=6.1						
ABTO	Aybut	9.57	185	P	Pn	16 07 16.5	+0.1

NNC 01 16:05:48.9±19.0, **37°.62N**×**70°.10E, h0**^{km}**, mb3.9, mpv3.6, 3C-2D, Error ellipse: s-maj=158.6km s-min=109.0km az=2.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK05	Karatay Array	5.50	3	⇓P	Pn	16 07 11.3	-0.9
	3.0nm,0.7s,baz=180,slow=12						
KK05				⇑S	Sn	16 08 20.2	+4.0
	9.4nm,0.5s,baz=189,slow=32						
TKM2	Tokmak 2	6.76	37	⇑P	Pn	16 07 32.8	+3.1
	3.0nm,0.5s						
TKM2				⇓S	Sn	16 08 43.3	-4.2
	2.5nm,0.6s						
AB31	Akbulak array	13.76	331	⇑P	Pn	16 09 02.7	-2.5
	0.8nm,0.6s,baz=149,slow=12,SNR=4.1						

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*JMA **01** 16:07:15.8±0.1, 36°.14N×140°.08E, h50^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: φ$_s$238.00000°, δ15.00000°, λ97.00000°. NP2: φ$_s$52.00000°, δ75.00000°, λ88.00000°. Principal axes: T Plg60.0000°, Azm319.0000°; N Plg2.0000°, Azm52.0000°; P Plg30.0000°, Azm143.0000°;*

JMA Felt II J1.

*IDC **01** 16:07:15.1±2.0, 36°.09N×140°.16E, h52^{km}±19^{km}, mb3.3/7, mb1 3.5/9, mb1mx3.3/34, mbtmp3.6/9, ML3.5/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/30 Error ellipse: s-maj=26.2km s-min=11.8km az=78.0*

*NIED **01** 16:07:15.8, 36°.14N×140°.08E, h50^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.83; M$_{\theta\theta}$-1.01; M$_{\phi\phi}$0.18; M$_{r\theta}$2.86; M$_{\theta\phi}$-0.63; M$_{\phi r}$1.29; Fault plane solution: M$_0$3.31000×10^{14} NP1: φ$_s$66.00000°, δ81.00000°, λ89.00000°. NP2: φ$_s$249.00000°, δ9.00000°, λ93.00000°.*

ISC 01 16:07:15.8±0.8, **36°.14N**±0°.06×**140°.12E**±0°.05, **h55**^{km}±7^{km}, **n25,** σ**1^{s}42**/26, **mb3.5**/7, **5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	Yasato	0.11	33	⇓P	Pn	16 07 23.9	-0.3
JYT				S	Sn	16 07 29.3	-1.0
JHO	Hitachi	0.59	37	⇓P	Pn	16 07 28.0	-0.5
JHO				S	Sn	16 07 36.6	-1.1
JAG	Ashikaga	0.61	298	⇓P	Pn	16 07 28.1	-0.6
JAG				S	Sn	16 07 36.6	-1.5
JKT	Katashina	0.94	312	⇓P	Pn	16 07 32.4	-0.6
JKT				S	Sn	16 07 44.7	-1.0
JRY	Ryogami san	1.00	263	⇓P	Pn	16 07 33.2	-0.4
JRY				S	Sn	16 07 45.5	-1.3
JOD2	Odawara 2	1.21	224	P	Pn	16 07 36.6	+0.1
MJAR	Matsushiro Arr	1.60	285	P	Pn	16 07 41.0	-0.7
	4.2nm,0.3s,baz=84,slow=8.2,SNR=216						
MJAR				LR	LR	16 08 35.5	
	comp=Z,53nm,20.1s,baz=20,slow=50						
MAT	Matsushiro	1.60	285	P	Pn	16 07 40.8	-0.9
MAT				S	Sn	16 07 58.8	-2.5
JHJ	Hachijo jima 2	3.02	185	P	Pn	16 08 01.0	-0.2
	19nm,0.3s,baz=144,slow=24,SNR=12						
JHJ				S	Sn	16 08 34.5	-1.7
	19nm,0.3s,baz=121,slow=19,SNR=1.6						
ASAJ	Asahikawa	8.19	13	P	Pn	16 09 11.1	-0.8
	0.6nm,0.3s,baz=211,slow=11,SNR=8.0						
KSRS	Korea Array	9.87	281	P	Pn	16 09 37.8	+2.9
	0.1nm,0.3s,baz=94,slow=14,SNR=2.0						
KSRS				LR	LR	16 12 56.6	
	comp=Z,56nm,18.1s,baz=20,slow=34						
USRK	Ussuriysk Ar.	10.17	325	P	Pn	16 09 42.8	+3.8
	baz=161,slow=18,SNR=2.4						
SONM	Songino Array	27.44	306	P	P	16 12 57.2	+0.7
	0.7nm,0.7s,baz=109,slow=9.2,SNR=6.5						
H11N2	WAKE ISLAND Hy	28.62	118	T	T	16 43 15.5	
	baz=311,SNR=2.6						
H11N1	WAKE ISLAND Hy	28.63	118	T	T	16 43 17.1	
	baz=311						
H11N3	WAKE ISLAND Hy	28.64	118	T	T	16 43 11.5	
	baz=311						
H11S1	WAKE ISLAND Hy	29.28	120	T	T	16 44 04.3	
	baz=314,slow=74,SNR=4.4						
H11S3	WAKE ISLAND Hy	29.28	120	T	T	16 44 04.8	
	baz=314,slow=74,SNR=3.5						
H11S2	WAKE ISLAND Hy	29.30	120	T	T	16 44 01.3	
	baz=314						
ZALV	Zalesovo Beam	41.76	313	P	P	16 14 59.7	+0.4
	0.4nm,0.4s,baz=111,slow=6.3,SNR=3.0						
MKAR	Makanchi Array	43.72	303	P	P	16 15 14.5	-0.9
	0.5nm,0.8s,baz=79,slow=9.0,SNR=3.6						
ILAR	Eielson Array	50.80	32	P	P	16 16 10.0	-0.2
	0.4nm,0.9s,baz=265,slow=6.1,SNR=3.6						
WRA	Warramunga Arr	56.04	187	P	P	16 16 48.5	-0.6
	0.6nm,0.5s,baz=1.3,slow=7.7,SNR=26						
ASAR	Alice Springs	59.77	187	P	P	16 17 14.7	-0.4
	0.3nm,0.8s,baz=15,slow=11,SNR=7.5						
AKASG	Malin Array Be	74.36	322	P	P	16 18 46.7	-0.8
	0.3nm,0.4s,baz=47,slow=6.8,SNR=5.0						

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*TUL **01** 16:11:30.7±0.8, 36°.852N±0°.008×97°.75W±0°.02, h7^{km}±5^{km}, ML2.7, mb_Lg2.3/10(NEIC), Error ellipse: s-maj=1.9km s-min=1.0km az=112.0*

NEIC 01 16:11:30.8±0.5, **36°.84N**±0°.01×**97°.75W**±0°.02, **h8**^{km}±4^{km}**, Error ellipse: s-maj=2.0km s-min=1.5km az=109.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.09	279	Pg	Pg	16 11 33.0	-0.1
GC02				Sg	Sg	16 11 34.5	-0.2
KAN14	Manchester OK	0.21	305		Pg	16 11 35.1	+0.1
KAN14				Sg	Sg	16 11 37.6	-0.3
KAN17	Caldwell West	0.21	357	Pg	Pg	16 11 35.1	0.0
KAN17				Sg	Sg	16 11 38.0	+0.1
KAN13	South Haven SW	0.28	51	Pg	Pg	16 11 36.5	+0.1
KAN05	Bluff City Nor	0.29	340		Pg	16 11 36.6	0.0
KAN05				Sg	Sg	16 11 40.2	-0.3
KAN01	Argonia South	0.32	359	Pg	Pg	16 11 37.1	0.0
KAN09	Caldwell North	0.32	20	Pg	Pg	16 11 37.0	-0.1
KAN09				Sg	Sg	16 11 41.4	0.0
OK032	Salt Plains WL	0.37	265		Pg	16 11 38.2	+0.1
OK032				Sg	Sg	16 11 43.2	+0.2
CROK	Carrier	0.38	209	Pg	Pg	16 11 38.6	+0.3
CROK				Sg	Sg	16 11 43.7	+0.4
KAN10	Anthony SW Sta	0.40	316	Pg	Pg	16 11 38.6	0.0
KAN06	Argonia West S	0.42	348		Pg	16 11 39.0	0.0
KAN06				Sg	Sg	16 11 44.6	0.0
KAN08	Anthony NE Sta	0.43	336	Pg	Pg	16 11 39.1	-0.1
BLOK	Blackwell	0.44	100	Pg	Pg	16 11 39.4	0.0
KAN16	Harper SW Stat	0.46	327	Pg	Pg	16 11 39.3	-0.5
KAN12	Harper NE Stat	0.50	337	Pg	Pg	16 11 40.3	-0.2
KAN12				Sg	Sg	16 11 46.5	-0.7
T35A	Sooner Cattle	1.00	85		Pg	16 11 49.4	-0.6
OK029	Liberty Lake	1.07	167	Pg	Pg	16 11 51.0	-0.3
OK029				Sg	Sg	16 12 05.2	+0.1
QUOK	Quay	1.07	128		Pg	16 11 51.0	-0.4
QUOK				Sg	Sg	16 12 05.0	-0.4
U32A	Winter Ranch,	1.10	246	Pg	Pg	16 11 51.3	-0.7
OK031	S. Brethren Rd	1.15	140	Pg	Pg	16 11 52.3	-0.6
OK031				Sg	Sg	16 12 07.6	-0.2
OK034	N. Norfolk Rd.	1.18	134	Pg	Pb	16 11 52.9	-0.5
BCOK	Bluff Creek, N	1.18	174	Pg	Pb	16 11 52.9	-0.6
OK030	Cody Creek RV	1.20	139	Pg	Pb	16 11 53.3	-0.5
OK025	Westminster Rd	1.30	165		Pn	16 11 55.1	-0.1
FNO	Franklin	1.60	170	Pn	Pn	16 11 59.5	+0.1
TUL1	Leonard	1.83	120	IAmb_Lg		16 12 32.1	
	comp=Z,21nm,1.0s						
KSU1	Kansas State U	2.43	21	IAmb_Lg		16 12 47.7	
	comp=Z,7.2nm,0.8s						
CBKS	Cedar Bluff	2.52	322	IAmb_Lg		16 12 50.9	
	comp=Z,12nm,0.7s						
U38A	Gravette	2.74	97	Pn	Pn	16 12 15.3	+0.3
X37A	Clayton	2.96	138	Pn	Pn	16 12 18.1	0.0
HHAR	Hobbs	3.12	99	Pn	Pn	16 12 20.3	0.0
S39A	Bolivar	3.63	75	IAmb_Lg		16 13 30.1	
	comp=Z,6.0nm,0.8s						
FCAR	Ozark Folk Cen	4.64	100	IAmb_Lg		16 13 58.0	
	comp=Z,4.8nm,0.7s						
P40A	Paris	5.24	57	IAmb_Lg		16 14 19.4	
	comp=Z,7.3nm,0.9s						

IDC 01 16:25:35.6±2.3, **0°.59N**×**126°.73E, h0**^{km}**, mb3.1**/3, **mb1 3.3**/3, **mb1mx3.0**/32, **mbtmp3.2**/3, **Error ellipse: s-maj=213.1km s-min=26.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.73	160	P	P	16 30 29.5	+0.8
	0.3nm,0.5s,baz=339,slow=11,SNR=2.4						
ASAR	Alice Springs	25.10	164	P	P	16 31 01.6	-0.7
	0.3nm,0.7s,baz=348,slow=8.5,SNR=2.5						
MKAR	Makanchi Array	60.13	326	P	P	16 35 45.0	0.0
	0.2nm,0.6s,baz=117,slow=8.4,SNR=3.0						

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*IDC **01** 16:26:40.1±1.3, 0°.94N×127°.43E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.5/34, mbtmp3.8/5, MS2.6/1, Ms1 2.6/1, ms1mx2.3/33, Error ellipse: s-maj=137.1km s-min=19.8km az=70.0*

*DJA **01** 16:26:41.4±0.4, 1°N±3°×12°8E±°, h10^{km}, M3.9/8, mb4.3/5, mB4.9/1, MLv3.7/8, Mw(mB)4.2/1*

*NEIC **01** 16:26:41.5±1.6, 0°.99N±0°.08×127°.55E±0°.09, h10^{km}±1^{km}, mb4.5/8, Error ellipse: s-maj=19.3km s-min=5.2km az=130.0*

ISC 01 16:26:40.8±0.8, **1°.01N**±0°.06×**127°.52E**±0°.08, **h10**^{km}**, n28,** σ**1^{s}30**/28, **mb4.0**/9, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.28	213	P	Pg	16 26 47.1	+0.6
TNTI				S	Sg	16 26 51.2	+0.8
TNTI	Ternate	0.28	213	Pg	Pg	16 26 47.0	+0.4
TNTI				Sg	Sg	16 26 51.4	+1.0
LBMI	Labuha	1.64	181	P	Pn	16 27 10.6	+0.9
SANI	Sanana	3.41	207	P	Pn	16 27 34.1	+0.1
KMSI	Cibinong	3.57	263	P	Pn	16 27 37.1	+0.9
GTOI	Gorontalo	4.53	265	P	Pn	16 27 52.1	+2.7
MRSI	Marisa	5.60	265	P	Pb	16 28 15.4	-3.4
APSI	Ampana	6.17	252	P	Pn	16 28 17.9	+5.8
TOLI2	Tolitoli	6.74	271	Pn	Pn	16 28 19.0	-0.8
TTSI	Tana Toraja	8.69	242	P	Pn	16 28 46.9	+0.2
	557nm10nm,0.7s						
BNSI	Bone	9.15	234	P	Pn	16 28 53.9	+0.9
	18nm,1.1s						
SPSI	Sidrap Palu	9.19	237	P	Pn	16 28 54.4	+0.9
	19nm,0.5s						
BKSI	Bulukumba	9.71	230	P	Pn	16 29 01.5	+0.9
KAPI	Kappang	9.80	232	LR	LR	16 32 37.7	
	comp=Z,34nm,19.0s,baz=88,slow=37						
WB0	Warramunga Arr	21.72	162	P	P	16 31 31.7	-0.6
WRA	Warramunga Arr	21.87	163	P	P	16 31 34.6	+0.6
	2.0nm,0.7s,baz=340,slow=11,SNR=15						
WRA	Warramunga Arr	21.87	163	P	P	16 31 33.9	-0.1
WB2	Warramunga Arr	21.88	163	P	P	16 31 33.4	-0.6
WB2				IAmb	IAmb	16 31 38.4	
	comp=Z,8.1nm,1.3s						
TPUB	Ta-pu	23.14	344	P	P	16 31 49.8	+2.4
TPUB				IAmb	IAmb	16 31 55.6	
	comp=Z,37nm,1.1s						
ASAR	Alice Springs	25.30	166	P	P	16 32 07.9	+0.1
	comp=Z,2.1nm,0.7s,baz=344,slow=9.0,SNR=14						
SONM	Songino Array	50.11	342	P	P	16 35 36.1	-0.2
	comp=Z,0.8nm,0.9s,baz=157,slow=7.8,SNR=4.3						
MSVF	Nonsavu	53.10	113	P	P	16 35 57.3	-1.8
MK31	Makanchi Array	60.23	326	P	P	16 36 50.1	+0.8
MK31				IAmb	IAmb	16 37 18.7	
	comp=Z,3.4nm,1.1s						
MKAR	Makanchi Array	60.23	326	P	P	16 36 50.6	+1.3
	comp=Z,0.8nm,0.6s,baz=123,slow=7.8,SNR=8.0						
ZALV	Zalesovo Beam	63.35	333	P	P	16 37 11.8	+1.7
	comp=Z,0.3nm,0.3s,baz=141,slow=4.8,SNR=3.8						
ZALV	Zalesovo Beam	63.35	333	P	P	16 37 09.3	-0.8
GAR	Garm	64.34	313		P	16 37 17.5	+0.4
KURK	Kurchatov	64.44	328	P	P	16 37 16.6	-0.7
KURK				IAmb	IAmb	16 37 19.5	
	comp=Z,4.1nm,0.9s						

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*NEIC **01** 16:32:07.8±1.1, 7°.61S±0°.07×122°.72E±0°.08, h295^{km}±6^{km}, mb4.4/21, Error ellipse: s-maj=12.1km s-min=9.5km az=52.0*

*DJA **01** 16:32:07.0±0.2, 8°S±2°×12°3E±°, h295^{km}±3^{km}, M4.0/18, mb4.1/14, mB4.6/5, MLv4.1/18, Mw(mB)3.8/5*

*IDC **01** 16:32:07.4±0.8, 7°.64S×122°.81E, h291^{km}±7^{km}, mb3.6/4, mb1 4.0/10, mb1mx3.4/42, mbtmp4.5/10, Error ellipse: s-maj=27.6km s-min=9.0km az=67.0*

ISC 01 16:32:07.4±0.4, **7°.68S**±0°.05×**122°.70E**±0°.06, **h300**^{km}**, n94,** σ**1^{s}16**/101, **mb4.2**/11, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	Maumere	1.06	206	P	Pn	16 32 47.8	-0.3
MMRI				S	S	16 33 19.4	-1.0
MMRI	Maumere	1.06	206		Pn	16 32 47.9	-0.2
MMRI	Maumere	1.06	206	P	Pn	16 32 48.5	+0.4
EDFI	Ende, Flores	1.46	223	P	Pn	16 32 50.0	-0.5
EDFI				S	S	16 33 23.4	-1.3
SOEI	Soe	2.58	143	P	Pn	16 32 58.6	-0.7
SOEI	Soe	2.58	143	Pn	Pn	16 32 59.4	0.0
SOEI	Soe	2.58	143	P	Pn	16 32 59.6	+0.3
BSSI	Bau Bau, Buton	2.67	305	P	Pn	16 33 00.5	+0.5
BATI	Baumata	2.69	159	P	Pn	16 33 00.3	+0.1
	202nm,0.3s,baz=350,slow=3.0,SNR=139						

BATI				S	**S**	**16 33 40.0**	**-2.4**
	125nm,0.3s,baz=237,slow=2.8,SNR=9.7						
BATI	**Baumata**	**2.69**	**159**	P	**Pn**	**16 32 59.4**	**-0.8**
BATI				S	**S**	**16 33 40.6**	**-1.8**
BKSI	**Bulukumba**	**3.47**	**312**	P	**Pn**	**16 33 08.2**	**+0.2**
WBSI	**Waikabubak, Su**	**3.81**	**239**	P	**Pn**	**16 33 09.9**	**-1.7**
KAPI	**Kappang**	**3.95**	**312**	P	**Pn**	**16 33 14.9**	**+1.8**
	3.0nm,0.3s,baz=151,slow=8.6,SNR=14						
KAPI	**Kappang**	**3.95**	**312**	Pn	**Pn**	**16 33 14.2**	**+1.1**
BNSI	**Bone**	**4.15**	**321**	P	**Pn**	**16 33 16.2**	**+0.9**
SPSI	**Sidrap Palu**	**4.70**	**321**	P	**Pn**	**16 33 22.4**	**+0.9**
PLAI	**Plampang**	**5.01**	**256**	P	**Pn**	**16 33 24.4**	**-0.6**
PLAI	**Plampang**	**5.01**	**256**	P	**Pn**	**16 33 24.8**	**-0.2**
TTSI	**Tana Toraja**	**5.42**	**328**	P	**Pn**	**16 33 30.8**	**+0.9**
	0.1nm18nm,1.1s						
TWSI	**Taliwang, Sumb**	**5.86**	**259**	P	**Pn**	**16 33 33.6**	**-1.4**
	0.4nm474nm20nm,1.0s						
GTOI	**Gorontalo**	**8.26**	**2**	P	**Pn**	**16 34 06.9**	**+2.6**
	158nm5.0nm,0.9s						
LBMI	**Labuha**	**8.47**	**35**	P	**Pn**	**16 34 07.9**	**+1.0**
	28nm,0.8s						
JAGI	**Jajag, Banyuwa**	**8.50**	**264**	P	**Pn**	**16 34 06.5**	**-0.7**
	23nm,1.4s						
JAGI	**Jajag, Banyuwa**	**8.50**	**264**	Pn	**Pn**	**16 34 05.3**	**-1.9**
JAGI	**Jajag, Banyuwa**	**8.50**	**264**	P	**Pn**	**16 34 07.2**	**0.0**
TOLI2	**Tolitoli**	**8.94**	**348**	P	**Pn**	**16 34 12.2**	**-0.4**
DRS	**Darwin Rock St**	**9.35**	**121**	P	**Pn**	**16 34 18.5**	**+0.9**
MTN	**Manton Dam**	**9.76**	**122**		**Pn**	**16 34 22.2**	**-0.4**
MTN	**Manton Dam**	**9.76**	**122**	P	**Pn**	**16 34 22.9**	**+0.3**
KNRA	**Kununurra**	**9.92**	**144**	Pn	**Pn**	**16 34 24.5**	**-0.1**
FAKI	**Fak Fak**	**10.61**	**64**	P	**Pn**	**16 34 31.8**	**-1.4**
	32nm,0.6s						
FAKI	**Fak Fak**	**10.61**	**64**	Pn	**Pn**	**16 34 31.7**	**-1.5**
FAKI	**Fak Fak**	**10.61**	**64**	P	**Pn**	**16 34 32.4**	**-0.8**
FITZ	**Fitzroy Crossi**	**10.75**	**165**	P	**P**	**16 34 35.5**	**-1.9**
	4.6nm,0.3s,baz=5.8,slow=8.2,SNR=64						
FITZ				S	**S**	**16 36 37.3**	**+2.0**
	1.8nm,0.3s,baz=162,slow=7.3,SNR=6.9						
KDU	**Kakadu**	**10.83**	**118**	P	**Pn**	**16 34 35.4**	**-0.4**
SWI	**Sorong**	**10.89**	**52**	P	**Pn**	**16 34 35.7**	**-0.8**
	47nm,0.8s						
SIJI	**Sorong**	**10.89**	**52**	P	**Pn**	**16 34 36.1**	**-0.5**
	3.2nm,0.3s,baz=238,slow=5.6,SNR=14						
UGM	**Wanagama**	**12.07**	**268**	Pn	**Pn**	**16 34 50.7**	**-0.2**
UGM	**Wanagama**	**12.07**	**268**	P	**P**	**16 34 51.8**	**-0.4**
MYLDM	**Lahad Datu**	**13.44**	**342**		**P**	**16 35 05.5**	**-1.9**
MBWA	**Marble Bar**	**13.71**	**192**	P	**Pn**	**16 35 11.8**	**+1.2**
PSA00	**Pilbara Seismi**	**14.09**	**191**	P	**Pn**	**16 35 16.1**	**+1.1**
PSA00	**Pilbara Seismi**	**14.09**	**191**	P	**Pn**	**16 35 15.5**	**+0.4**
PSA00	**Pilbara Seismi**	**14.09**	**191**	P	**Pn**	**16 35 16.2**	**+1.1**
KKM	**Kota Kinabalu**	**15.09**	**334**	Pn	**Pn**	**16 35 27.6**	**+0.6**
KKM				IAmb	IAmb	16 35 36.3	
	comp=Z,43nm,1.2s						
WB0	**Warramunga Arr**	**16.52**	**138**	P	**Pn**	**16 35 41.7**	**-2.0**
WB0				IAmb	IAmb	16 35 44.8	
	comp=Z,9.9nm,0.7s						
WRA	**Warramunga Arr**	**16.61**	**138**	P	**Pn**	**16 35 42.8**	**-1.9**
	comp=Z,3.7nm,0.3s,baz=306,slow=10.0,SNR=179						
WRA				S	**S**	**16 38 38.1**	**-2.4**
	baz=312,slow=20,SNR=4.2						
WRA	**Warramunga Arr**	**16.61**	**138**	P	**P**	**16 35 41.9**	**-0.3**
WRAB	**Tennant Creek**	**16.61**	**138**	P	**Pn**	**16 35 42.8**	**-2.0**
WRAB				IAmb	IAmb	16 35 44.2	
	comp=Z,16nm,0.6s						
WRAB	**Tennant Creek**	**16.61**	**138**	P	**Pn**	**16 35 43.1**	**-1.7**
WB2	**Warramunga Arr**	**16.62**	**138**	P	**Pn**	**16 35 42.8**	**-2.0**
WB2				IAmb	IAmb	16 35 44.3	
	comp=Z,16nm,0.6s						
WR0	**Warramunga Arr**	**16.76**	**138**	P	**Pn**	**16 35 44.3**	**-2.1**
WR0				IAmb	IAmb	16 35 47.2	
	comp=Z,13nm,0.7s						
GIRL	**Giralia**	**16.97**	**208**	P	**Pn**	**16 35 48.5**	**-0.4**
GIRL	**Giralia**	**16.97**	**208**	P	**Pn**	**16 35 48.1**	**-0.7**
WRKA	**Warakurna**	**18.07**	**163**	P	**Pn**	**16 35 59.4**	**+1.4**
AS31	**Alice Springs**	**19.19**	**147**	P	**P**	**16 36 10.9**	**+1.0**
ASAR	**Alice Springs**	**19.19**	**147**	P	**P**	**16 36 11.2**	**+1.3**
	comp=Z,2.5nm,0.3s,baz=336,slow=13,SNR=220						
ASAR				S	**S**	**16 39 31.5**	**+0.4**
	baz=323,slow=20,SNR=7.6						
ASAR				ScP	**ScP**	**16 43 24.9**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=342,slow=2.3,SNR=4.7						
MEEK	**Meekatharra**	**19.25**	**191**	P	**P**	**16 36 11.8**	**+1.3**
QIS	**Mount Isa**	**20.77**	**130**	P	**P**	**16 36 26.8**	**+0.6**
COEN	**Coen**	**21.05**	**109**	P	**P**	**16 36 28.3**	**-0.6**
COEN				IAmb	IAmb	16 36 31.4	
	comp=Z,10nm,1.1s						
COEN	**Coen**	**21.05**	**109**	P	**P**	**16 36 28.6**	**-0.3**
MORW	**Morawa**	**22.19**	**196**	P	**P**	**16 36 39.3**	**+0.2**
MORW				IAmb	IAmb	16 36 41.8	
	comp=Z,16nm,0.9s						
MORW	**Morawa**	**22.19**	**196**	P	**P**	**16 36 40.2**	**+1.1**
MTSU	**Mount Surprise**	**23.47**	**118**	P	**P**	**16 36 51.5**	**+0.6**
OOD	**Oodnadatta**	**23.48**	**150**	P	**P**	**16 36 52.1**	**+1.2**
BLDU	**Ballidu**	**23.50**	**193**	P	**P**	**16 36 52.0**	**+0.9**
FORT	**Forrest**	**23.53**	**168**	P	**P**	**16 36 52.2**	**+1.0**
FORT	**Forrest**	**23.53**	**168**	P	**P**	**16 36 52.5**	**+1.2**
KLBR	**Kellerberrin**	**24.24**	**190**	P	**P**	**16 36 58.8**	**+1.1**
MULG	**Mulgathing**	**24.89**	**156**	P	**P**	**16 37 04.7**	**+1.1**
MUN	**Mundaring**	**24.93**	**193**	P	**P**	**16 37 05.4**	**+1.5**
NWAO	**Narrogin (SRO)**	**25.63**	**191**	P	**P**	**16 37 11.1**	**+0.9**
LCRK	**Leigh Creek**	**26.92**	**149**	P	**P**	**16 37 23.1**	**+1.4**
BBOO	**Buckleboo**	**27.91**	**155**	P	**P**	**16 37 31.2**	**+0.7**
BBOO	**Buckleboo**	**27.91**	**155**	P	**P**	**16 37 31.5**	**+1.0**
HTT	**Hallett**	**29.70**	**152**	P	**P**	**16 37 48.1**	**+1.8**
STKA	**Stephens Creek**	**29.83**	**146**	P	**P**	**16 37 48.8**	**+1.4**
	comp=Z,6.2nm,0.3s,baz=326,slow=9.2,SNR=31						
STKA	**Stephens Creek**	**29.83**	**146**	IAmb	IAmb	16 37 57.4	
	comp=Z,5.0nm,1.5s						
TPUB	**Ta-pu**	**30.85**	**356**	P	**P**	**16 37 56.3**	**-0.2**
YOJ	**Yonaguni jima**	**31.94**	**1**	P	**P**	**16 38 06.3**	**+0.4**
CMSA	**Cobar Meteorol**	**31.99**	**141**	P	**P**	**16 38 08.2**	**+1.9**
YHNB	**Yeheng**	**32.17**	**358**	P	**P**	**16 38 07.4**	**-0.6**
ARPS	**Mount Arapiles**	**33.80**	**152**	P	**P**	**16 38 23.7**	**+1.9**
TOO	**Toolangi**	**36.23**	**149**	P	**P**	**16 38 43.5**	**+0.9**
TOO				IAmb	IAmb	16 39 05.8	
	comp=Z,17nm,1.2s						
JWT	**Wachi**	**44.38**	**15**	P	**P**	**16 39 48.8**	**0.0**
JWT				IAmb	IAmb	16 40 14.2	
	comp=Z,48nm,1.5s						
DZM	**Mont Dzumac**	**44.46**	**114**	P	**P**	**16 39 49.8**	**0.0**
DZM				IAmb	IAmb	16 40 05.2	
	comp=Z,23nm,1.3s						
USA0B	**Ussuriysk Arra**	**52.31**	**8**	P	**P**	**16 40 48.6**	**-0.2**
USA0B				IAmb	IAmb	16 41 08.9	
	comp=Z,11nm,1.2s						
USRK	**Ussuriysk Ar.**	**52.31**	**8**	P	**P**	**16 40 48.9**	**+0.1**
	comp=Z,2.2nm,0.5s,baz=196,slow=6.7,SNR=8.8						
USRK	**Ussuriysk Ar.**	**52.31**	**8**	P	**P**	**16 40 48.7**	**-0.2**
SONM	**Songino Array**	**57.12**	**347**	P	**P**	**16 41 23.9**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=166,slow=8.6,SNR=2.2						
MKAR	**Makanchi Array**	**65.03**	**331**	P	**P**	**16 42 16.2**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=130,slow=5.8,SNR=7.4						
PETK	**Petropavlovsk-**	**67.44**	**22**	P	**P**	**16 42 32.0**	**+1.0**
VNDA	**Vanda**	**72.74**	**172**	P	**P**	**16 43 04.2**	**+1.5**
	comp=Z,0.9nm,0.6s,baz=324,slow=7.3,SNR=10						
TIXI	**Tiksi**	**79.26**	**2**	P	**P**	**16 43 39.0**	**-0.2**

IDC 01 17:07:07.3±1.7**, 14°.70S**×**176°.62W, h0**^{km}**, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.7**/26**, mbtmp3.8**/4**, ML3.8**/1**, Error ellipse: s-maj=89.1km s-min=29.2km az=157.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.76**	**81**	Pn	Pn	17 08 20.3	-0.2
	3.9nm,0.3s,baz=286,slow=20,SNR=2.1						
H11S2	**WAKE ISLAND Hy**	**36.85**	**333**	T	T	17 53 43.4	
	baz=153						
H11S3	**WAKE ISLAND Hy**	**36.86**	**333**	T	T	17 53 45.2	
	baz=153						
H11S1	**WAKE ISLAND Hy**	**36.86**	**333**	T	T	17 53 44.9	
	baz=153						
H11N3	**WAKE ISLAND Hy**	**37.84**	**334**	T	T	17 54 56.7	
	baz=153						
H11N1	**WAKE ISLAND Hy**	**37.85**	**334**	T	T	17 54 53.3	
	baz=153						
H11N2	**WAKE ISLAND Hy**	**37.86**	**334**	T	T	17 55 02.9	
	baz=153						
WRA	**Warramunga Arr**	**46.98**	**256**	P	P	17 15 40.1	-0.5
	0.9nm,1.0s,baz=92,slow=7.4,SNR=3.2						
ASAR	**Alice Springs**	**47.37**	**251**	P	P	17 15 43.6	0.0
	0.9nm,0.9s,baz=86,slow=8.2,SNR=4.5						
ILAR	**Eielson Array**	**82.40**	**12**	P	P	17 19 30.8	-0.2
	0.9nm,0.9s,baz=224,slow=6.3,SNR=4.0						
BRTR	**Keskin Array B**	**143.62**	**319**	PKP	PKPdf	17 26 45.7	+1.0
	1.1nm,0.7s,baz=79,slow=3.1,SNR=3.8						

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*IDC **01** 17:08:23.5±0.6, 15°.14S×176°.59W, h0^{km}, mb4.6/17, mb1 4.7/19, mb1mx4.7/26, mbtmp4.5/19, ML5.2/1, MS5.3/27, Ms1 5.3/27, ms1mx5.2/29, Error ellipse: s-maj=24.8km s-min=15.1km az=139.0*

*BJI **01** 17:08:25.2±0.0, 14°.78S×176°.35W, h9^{km}, mB5.6/45, mb4.9/52, Ms5.6/66, Ms7 5.3/62*

*NEIC **01** 17:08:25.5, 14°.93S×176°.61W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.01; $M_{\theta\theta}$4.05; $M_{\phi\phi}$-3.04; $M_{r\theta}$-1.08; $M_{\theta\phi}$0.55; $M_{\phi r}$-0.05; Fault plane solution: $M_0$3.85000×10^{17} NP1:ϕ_s219.94000°, δ81.19000°, λ172.57000°. NP2:ϕ_s311.08000°, δ82.66000°, λ8.88000°. Principal axes: T 4.3132, Plg11.0000°, Azm176.0000°; N -1.2274, Plg78.0000°, Azm350.0000°; P -3.0858, Plg1.0000°, Azm85.0000°;*

*MOS **01** 17:08:25.3±1.8, 14°.96S×176°.71W, h12^{km}, mb5.3/23, MS5.6/27 Error ellipse: s-maj=8.8km s-min=8.5km az=72.3*

*NEIC **01** 17:08:25.1±3.0, 14°.88S±0°.07×176°.56W±0°.07, h10^{km}±1^{km}, mb5.6/195, Ms_20 5.6/279, Mwb5.7/54, Mww5.8, Error ellipse: s-maj=12.7km s-min=10.2km az=157.0*

*NEIC **01** 17:08:27, 14°.92S×176°.19W, h14^{km}, Moment Tensor Solution. Duration: 3^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.37; $M_{\theta\theta}$4.39; $M_{\phi\phi}$-4.76; $M_{r\theta}$3.54; $M_{\theta\phi}$-0.18; $M_{\phi r}$0.18; Fault plane solution: $M_0$5.80000×10^{17} NP1: ϕ_s141.00000°, δ66.00000°, λ20.00000°. NP2:ϕ_s43.00000°, δ72.00000°, λ155.00000°. Principal axes: T 6.4488, Plg30.0000°, Azm0.0000°; N -1.6709, Plg60.0000°, Azm189.0000°; P -4.7779, Plg4.0000°, Azm93.0000°;*

*GCMT **01** 17:08:32.1±0.1, 14°.92S×176°.44W, h12^{km}, MW5.8/156, Moment Tensor Solution. s139,c257; s156,c435; Duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.18±.04; $M_{\theta\theta}$5.71±.04; $M_{\phi\phi}$-4.54±.04; $M_{r\theta}$-0.42±.11; $M_{\theta\phi}$1.17±.04; $M_{\phi r}$-0.81±.11; Best double couple: $M_0$5.35500×10^{17} NP1:ϕ_s308.00000°, δ79.00000°, λ-5.00000°. NP2:ϕ_s39.00000°, δ85.00000°, λ-169.00000°. Principal axes: T 5.8790, Plg4.0000°, Azm173.0000°; N -1.0580, Plg77.0000°, Azm64.0000°; P -4.8310, Plg12.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 01 17:08:23.9±0.7**, 15°.04S**±0°.05×**176°.43W**±0°.04**, h5**^{km}±3^{km}**, n843, σ1^{s}99**/713**, mb5.5**/170**, MS5.5**/205**, 36C-48D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.64**	**77**	Pn	**Pn**	**17 09 34.0**	**-0.9**
	32nm,0.3s,baz=72,slow=1.4,SNR=18						
AFI				Sn	**Sn**	**17 10 22.1**	**-7.1**
	15nm,0.3s,baz=285,slow=23,SNR=1.1						
AFI				LR	LR	17 11 15.9	
	comp=Z,42µm,20.5s,baz=241,slow=36						
AFI	**Afiamalu**	**4.64**	**77**	P	**Pn**	**17 09 34.0**	**-0.9**
MSVF	**Nonsavu**	**5.94**	**242**	Pn	**Pn**	**17 09 50.9**	**-1.7**
	2.4nm,0.3s,baz=68,slow=17,SNR=7.3						
MSVF				LR	LR	17 12 07.1	
	comp=Z,43µm,19.0s,baz=59,slow=39						
MSVF	**Nonsavu**	**5.94**	**242**	⇓*i*P	**Pn**	**17 09 52.6**	**-0.1**
MSVF	**Nonsavu**	**5.94**	**242**		**Pn**	**17 09 51.2**	**-1.4**
NIUE	**Niue**	**7.40**	**124**	Pn	**Pn**	**17 10 15.6**	**+2.9**
FUNA	**Funafuti**	**7.76**	**326**		**Sn**	**17 11 40.8**	**-5.1**
KNTN	**Kanton**	**13.04**	**21**		**Pn**	**17 11 26.8**	**-3.2**
SANVU	**Saraoutou**	**15.80**	**266**	P	**Pn**	**17 12 07.8**	**+0.5**
LIFNC	**LIFOU**	**16.55**	**247**	P	**Pn**	**17 12 17.7**	**+0.8**
RAR	**Rarotonga**	**16.98**	**114**	LR	LR	17 16 49.2	
	comp=Z,8µm,19.0s,baz=288,slow=30						
RAR	**Rarotonga**	**16.98**	**114**	P	**P**	**17 12 26.2**	**+1.9**
RAR				pmax	pmax		
	comp=Z,466nm,1.9s						
RAR	**Rarotonga**	**16.98**	**114**	P	**P**	**17 12 26.2**	**+1.9**
PINNC	**Pines Island,**	**17.01**	**241**	P	**Pn**	**17 12 21.1**	**-1.6**
PINNC				IAmb	IAmb	17 13 04.8	
	comp=Z,562nm,1.6s						
OUENC	**Ouen Island, N**	**17.45**	**243**	P	**Pn**	**17 12 27.9**	**-0.4**
DZM	**Mont Dzumac**	**17.67**	**244**	*e*Pn	**P**	**17 12 34.3**	**+2.2**
	comp=Z,330nm,1.7s						
DZM				*e*LQ	LQ	17 15 54.2	
	comp=Z,35µm,34.4s						
DZM				*e*LR	LR	17 16 41.8	
	comp=Z,15µm,30.4s						
DZM	**Mont Dzumac**	**17.67**	**244**	P	**Pn**	**17 12 29.2**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=330,slow=23,SNR=1.4						
DZM				LR	LR	17 18 12.5	
	comp=Z,5µm,18.6s,baz=72,slow=34						
DZM	**Mont Dzumac**	**17.67**	**244**	P	**Pn**	**17 12 29.4**	**-1.7**
ONTNC	**Ouen Toro**	**17.75**	**243**	P	**Pn**	**17 12 30.6**	**-1.3**
TARA	**Tarawa**	**19.40**	**326**	P	**P**	**17 12 45.9**	**-5.1**
TARA				IAmb	IAmb	17 13 10.9	
	comp=Z,517nm,1.6s						
OUZ	**Omahuta**	**22.01**	**202**	P	**P**	**17 13 18.2**	**-0.9**
HNR	**Honiara**	**23.74**	**281**	LR	LR	17 21 22.4	
	comp=Z,20µm,21.2s,baz=112,slow=33						
HNR	**Honiara**	**23.74**	**281**	P	**P**	**17 13 36.0**	**-1.3**
HNR				pmax	pmax		
	comp=Z,228nm,1.4s						
HNR				MLR	MLR		
	comp=Z,19µm,20.0s						
HNR	**Honiara**	**23.74**	**281**	P	**P**	**17 13 36.0**	**-1.3**
HNR				IAmb	IAmb	17 13 46.3	
	comp=Z,228nm,1.4s						
HNR	**Honiara**	**23.74**	**281**	IAMs_20	IAMs_20	17 21 11.0	
	comp=Z,19µm,20.0s						
URZ	**Urewera**	**23.83**	**193**	P	**P**	**17 13 33.8**	**-4.1**
	comp=Z,6.9nm,0.9s,baz=122,slow=24,SNR=2.0						
URZ				LR	LR	17 22 25.6	
	comp=Z,19µm,19.3s,baz=31,slow=36						
URZ	**Urewera**	**23.83**	**193**	P	**P**	**17 13 36.7**	**-1.2**
URZ				IAMs_20	IAMs_20	17 22 04.9	
	comp=Z,18µm,20.0s						
HIZ	**Hauiti**	**24.62**	**197**	P	**P**	**17 13 45.0**	**-0.2**
HIZ				IAmb	IAmb	17 14 12.1	
	comp=Z,176nm,1.5s						
HIZ				IAMs_20	IAMs_20	17 21 53.5	
	comp=Z,22µm,22.0s						
BKZ	**Black Stump Fm**	**24.83**	**193**	P	**P**	**17 13 48.4**	**+1.2**
BKZ				IAMs_20	IAMs_20	17 22 51.4	
	comp=Z,22µm,21.0s						
XMAS	**Kiritimati**	**25.32**	**49**	P	**P**	**17 13 51.1**	**-0.7**
PPT	**Papeete**	**25.89**	**99**	LR	LR	17 21 29.2	
	comp=Z,6µm,20.6s,baz=262,slow=30						
PPT2	**Papeete2**	**25.89**	**99**	*e*S	**S**	**17 18 22.0**	**-5.8**
	comp=Z,1µm,23.5s						
PPT2				*e*LQ	LQ	17 19 13.2	
	comp=Z,11µm,25.8s						
PPT2				*e*LR	LR	17 20 17.0	
	comp=Z,23µm,26.0s,baz=265						
QRZ	**Quartz Range**	**27.43**	**198**	P	**P**	**17 14 11.7**	**+1.0**
QRZ				IAMs_20	IAMs_20	17 23 32.9	
	comp=Z,18µm,21.0s						
NNZ	**Nelson**	**27.55**	**197**	P	**P**	**17 14 13.3**	**+1.6**
TUWZ	**Tuamarina**	**27.59**	**196**	P	**P**	**17 14 13.4**	**+1.3**
KWAJ	**Kwajalein Atol**	**28.48**	**325**	P	**P**	**17 14 16.6**	**-3.7**
KWAJ				pmax	pmax		
	comp=Z,164nm,0.9s						
KWAJ				MLR	MLR		
	comp=Z,15µm,19.0s						
KWAJ	**Kwajalein Atol**	**28.48**	**325**	P	**P**	**17 14 16.6**	**-3.7**
KWAJ	**Kwajalein Atol**	**28.48**	**325**	IAMs_20	IAMs_20	17 22 50.7	
	comp=Z,15µm,19.0s						
KHZ	**Kahutara**	**28.62**	**196**	P	**P**	**17 14 19.9**	**-1.4**
KHZ				IAmb	IAmb	17 14 38.1	
	comp=Z,207nm,2.0s						
KHZ				IAMs_20	IAMs_20	17 24 42.6	
	comp=Z,18µm,21.0s						
LTZ	**Lake Taylor**	**29.31**	**197**	P	**P**	**17 14 26.6**	**-0.8**
MQZ	**McQueen's Vall**	**30.06**	**196**	IAMs_20	IAMs_20	17 26 12.5	
	comp=Z,12µm,18.0s						
RPZ	**Rata Peaks**	**30.52**	**198**	IAMs_20	IAMs_20	17 26 06.5	
	comp=Z,19µm,21.0s						
FOZ	**Fox Glacier**	**30.74**	**200**	P	**P**	**17 14 41.2**	**+1.2**
FOZ				IAmb	IAmb	17 15 17.2	
	comp=Z,189nm,1.7s						
FOZ				IAMs_20	IAMs_20	17 26 59.3	
	comp=Z,14µm,21.0s						
LBZ	**Lake Benmore**	**31.39**	**199**	IAMs_20	IAMs_20	17 27 50.8	
	comp=Z,17µm,20.0s						
ODZ	**Otahua Downs**	**31.85**	**197**	IAMs_20	IAMs_20	17 26 31.1	
	comp=Z,17µm,20.0s						
EIDS	**Eidsvold**	**32.10**	**246**	P	**P**	**17 14 50.1**	**-2.1**
WKZ	**Wanaka**	**32.15**	**200**	IAMs_20	IAMs_20	17 28 16.7	
	comp=Z,12µm,21.0s						
JOHN	**Johnston Islan**	**32.29**	**12**	IAMs_20	IAMs_20	17 24 39.3	
	comp=Z,11µm,21.0s						
RABL	**Rabaul**	**32.73**	**286**	P	**P**	**17 14 54.8**	**-3.2**
MLZ	**Mavora Lakes**	**32.93**	**200**	P	**P**	**17 14 58.9**	**-0.4**
MLZ				IAmb	IAmb	17 15 13.8	
	comp=Z,123nm,1.6s						
MLZ				IAMs_20	IAMs_20	17 28 03.4	
	comp=Z,11µm,22.0s						
ARMA	**Armidale**	**33.06**	**237**	P	**P**	**17 14 59.1**	**-1.6**
PATS	**Pohnpei**	**33.15**	**309**	P	P	17 15 06.9	+5.3
	baz=34,SNR=3.9						
PATS	**Pohnpei**	**33.15**	**309**	P	**P**	**17 14 58.8**	**-2.8**
PATS				IAMs_20	IAMs_20	17 24 49.3	
	comp=Z,9µm,19.0s						
DCZ	**Deep Cove**	**33.34**	**201**	P	**P**	**17 15 02.3**	**-0.6**
DCZ				IAMs_20	IAMs_20	17 30 52.1	
	comp=Z,10µm,19.0s						
WHZ	**Wether Hill Ro**	**33.45**	**200**	P	**P**	**17 15 03.2**	**-0.6**
WHZ				IAmb	IAmb	17 15 05.7	
	comp=Z,197nm,1.8s						
WHZ				IAMs_20	IAMs_20	17 29 07.2	
	comp=Z,9µm,21.0s						
RMQ	**Roma**	**34.38**	**245**	P	**P**	**17 15 14.1**	**+1.9**
	baz=34,SNR=6.2						
CTAO	**Charters Tower**	**35.88**	**256**	P	**P**	**17 15 21.5**	**-3.7**
CTAO				pmax	pmax		
	comp=Z,54nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,5µm,21.0s						
CTAO	**Charters Tower**	**35.88**	**256**	P	**P**	**17 15 21.5**	**-3.7**
TAOE	**Nuku Hiva Isla**	**35.99**	**84**	*e*S	**S**	**17 21 00.9**	**-4.9**
	comp=Z,834nm,24.0s						
TAOE				*e*LR	LR	17 24 57.8	
	comp=Z,18µm,28.2s,baz=266						
TAOE	**Nuku Hiva Isla**	**35.99**	**84**	P	**P**	**17 15 26.8**	**+0.5**
PMG	**Port Moresby**	**35.99**	**275**	P	**P**	**17 15 25.1**	**-1.1**
	comp=Z,14nm,1.0s,baz=144,slow=18,SNR=3.0						
PMG	**Port Moresby**	**35.99**	**275**	P	**P**	**17 15 22.9**	**-3.3**
CAN	**Canberra**	**36.97**	**230**	P	**P**	**17 15 35.5**	**+1.1**
CAN				pmax	pmax		
	comp=Z,51nm,1.4s						
CAN				MLR	MLR		
	comp=Z,4µm,20.0s						
CAN	**Canberra**	**36.97**	**230**	P	**P**	**17 15 35.5**	**+1.1**
H11S2	**WAKE ISLAND Hy**	**37.23**	**333**	T	T	17 54 57.2	
	baz=153,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**37.24**	**333**	T	T	17 54 57.8	
	baz=153,slow=76,SNR=37						
H11S1	**WAKE ISLAND Hy**	**37.25**	**333**	T	T	17 54 57.7	
	baz=153,slow=76,SNR=28						
MTSU	**Mount Surprise**	**37.70**	**260**	P	**P**	**17 15 42.4**	**+1.6**
	baz=38,SNR=7.1						
WAKE	**Wake Island**	**37.95**	**333**	IAMs_20	IAMs_20	17 27 36.1	
	comp=Z,8µm,20.0s						
MANU	**Manus Island**	**37.97**	**286**	P	**P**	**17 15 42.9**	**-0.2**
H11N3	**WAKE ISLAND Hy**	**38.23**	**334**	T	T	17 56 21.2	
	baz=153,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**38.23**	**334**	T	T	17 56 11.6	
	baz=153,slow=76,SNR=19						
H11N2	**WAKE ISLAND Hy**	**38.24**	**334**	T	T	17 56 22.2	
	baz=153,slow=76,SNR=38						
QLP	**Quilpie**	**38.38**	**246**	P	**P**	**17 15 48.6**	**+2.2**
	baz=38,SNR=6.5						
COEN	**Coen**	**39.09**	**266**	P	**P**	**17 15 51.0**	**-1.5**
KHLU	**Kahalu\`u**	**39.90**	**31**	P	**P**	**17 15 58.4**	**-0.8**
KHLU				IAmb	IAmb	17 16 07.3	
	comp=Z,359nm,1.7s						
TOO	**Toolangi**	**40.46**	**229**	P	**P**	**17 16 04.7**	**+1.1**
	baz=40,SNR=3.9						
TOO	**Toolangi**	**40.46**	**229**	P	**P**	**17 16 02.8**	**-0.9**
TOO				pmax	pmax		
	comp=Z,67nm,1.2s						
TOO	**Toolangi**	**40.46**	**229**	P	**P**	**17 16 02.8**	**-0.9**
TAU	**Tasmania Unive**	**41.64**	**221**	P	**P**	**17 16 13.0**	**-0.2**
TAU				pmax	pmax		
	comp=Z,135nm,1.6s						
TAU				MLR	MLR		
	comp=Z,6µm,19.0s						
TAU	**Tasmania Unive**	**41.64**	**221**	P	**P**	**17 16 13.0**	**-0.2**
TAU	**Tasmania Unive**	**41.64**	**221**	IAMs_20	IAMs_20	17 30 02.0	
	comp=Z,6µm,19.0s						
STKA	**Stephens Creek**	**41.70**	**239**	P	**P**	**17 16 12.5**	**-1.4**
	comp=Z,7.9nm,1.1s,baz=111,slow=6.0,SNR=5.4						
STKA				LR	LR	17 32 59.1	
	comp=Z,2µm,18.1s,baz=73,slow=36						
STKA	**Stephens Creek**	**41.70**	**239**	P	**P**	**17 16 13.1**	**-0.8**
STKA				pmax	pmax		
	comp=Z,13nm,1.6s						
STKA	**Stephens Creek**	**41.70**	**239**	P	**P**	**17 16 13.1**	**-0.8**
QIS	**Mount Isa**	**42.12**	**256**	P	**P**	**17 16 19.1**	**+1.5**
	baz=42,SNR=6.8						
MIDW	**Midway**	**43.01**	**359**	IAMs_20	IAMs_20	17 29 41.1	
	comp=Z,10µm,20.0s						
BBOO	**Buckleboo**	**46.48**	**239**	P	**P**	**17 16 52.9**	**+0.6**
BBOO				IAmb	IAmb	17 17 05.2	
	comp=Z,117nm,1.9s						
WR0	**Warramunga Arr**	**46.89**	**257**	P	**P**	**17 16 54.2**	**-1.5**
WB0	**Warramunga Arr**	**47.04**	**257**	P	**P**	**17 16 54.4**	**-2.5**
WB0				IAmb	IAmb	17 16 58.9	
	comp=Z,54nm,1.2s						
WB2	**Warramunga Arr**	**47.07**	**257**	P	**P**	**17 16 54.9**	**-2.2**
WB2				IAmb	IAmb	17 16 59.2	
	comp=Z,54nm,1.2s						
WRAB	**Tennant Creek**	**47.07**	**257**	⇓*e*P	**P**	**17 16 54.4**	**-2.7**
WRAB				pmax	pmax		
	comp=Z,50nm,1.3s						
WRAB				MLR	MLR		
	comp=Z,2µm,15.0s						
WRAB	**Tennant Creek**	**47.07**	**257**	P	**P**	**17 16 55.0**	**-2.1**
WRAB				IAmb	IAmb	17 16 59.2	
	comp=Z,52nm,1.2s						
WRAB	**Tennant Creek**	**47.07**	**257**	IAMs_20	IAMs_20	17 34 22.6	
	comp=Z,7µm,21.0s						
WRA	**Warramunga Arr**	**47.08**	**257**	P	**P**	**17 16 54.6**	**-2.6**
	comp=Z,22nm,1.1s,baz=90,slow=7.6,SNR=22						
WRA				PcP	**PcP**	**17 18 29.3**	**0.0**
	comp=Z,5.4nm,1.1s,baz=92,slow=3.5,SNR=2.9						
WRA				LR	LR	17 34 34.8	
	comp=Z,7µm,21.4s,baz=85,slow=34						
WRA	**Warramunga Arr**	**47.08**	**257**	P	**P**	**17 16 54.8**	**-2.4**
WRA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
WRA	**Warramunga Arr**	**47.08**	**257**	P	**P**	**17 16 54.8**	**-2.4**
AS31	**Alice Springs**	**47.44**	**252**	P	**P**	**17 16 57.7**	**-2.3**
AS31				PcP	**PcP**	**17 18 30.7**	**+0.2**
ASAR	**Alice Springs**	**47.45**	**252**	P	**P**	**17 16 58.1**	**-1.9**
	comp=Z,10nm,0.6s,baz=84,slow=8.4,SNR=41						
ASAR				PcP	**PcP**	**17 18 32.0**	**+1.5**
	comp=Z,4.1nm,0.9s,baz=102,slow=3.7,SNR=1.4						
ASAR				LR	LR	17 35 05.9	
	comp=Z,8µm,19.8s,baz=96,slow=34						
ASAR	**Alice Springs**	**47.45**	**252**	P	**P**	**17 16 57.4**	**-2.6**
ASAR	**Alice Springs**	**47.45**	**252**	P	**P**	**17 16 57.4**	**-2.6**
GUMO	**Guam**	**47.70**	**305**	P	**P**	**17 17 01.1**	**-0.8**
GUMO				pmax	pmax		
	comp=Z,247nm,1.3s						
GUMO	**Guam**	**47.70**	**305**	P	**P**	**17 17 01.1**	**-0.8**
KDU	**Kakadu**	**49.58**	**266**	P	**P**	**17 17 18.7**	**+2.3**
	baz=50,SNR=3.9						
MTN	**Manton Dam**	**50.84**	**266**	P	**P**	**17 17 28.1**	**+2.0**
	baz=51,SNR=6.7						
MTN	**Manton Dam**	**50.84**	**266**	P	**P**	**17 17 23.4**	**-2.7**
SAUI	**Saumlaki**	**51.60**	**272**	P	**P**	**17 17 31.3**	**-0.5**
SAUI				IAmb	IAmb	17 18 09.0	
	comp=Z,156nm,1.4s						
FAKI	**Fak Fak**	**51.97**	**278**	P	**P**	**17 17 33.8**	**-0.8**
WRKA	**Warakurna**	**52.57**	**250**	P	**P**	**17 17 37.9**	**-1.0**
	baz=53,SNR=21						
KNRA	**Kununurra**	**52.73**	**262**	P	**P**	**17 17 42.2**	**+2.0**
	baz=53,SNR=4.9						
KNRA	**Kununurra**	**52.73**	**262**	P	**P**	**17 17 37.8**	**-2.4**
KNRA				IAmb	IAmb	17 17 43.1	
	comp=Z,104nm,1.4s						
FORT	**Forrest**	**52.98**	**243**	P	**P**	**17 17 42.2**	**+0.4**
SWI	**Sorong**	**53.52**	**280**	P	**P**	**17 17 45.7**	**-0.3**
	comp=Z,49nm,1.1s						
LBMI	**Labuha**	**57.17**	**279**	P	**P**	**17 18 12.4**	**0.0**
	comp=Z,999nmcomp=Z,44nm,1.1s						
TNTI	**Ternate**	**57.73**	**281**	P	**P**	**17 18 15.0**	**-1.3**
TNTI				IAmb	IAmb	17 18 51.7	

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                comp=Z,69nm,1.6s
SOEI   Soe              58.02 268  P         P          17 18 17.1  -1.4
                comp=Z,2µmcomp=Z,124nm,1.0s
SOEI   Soe              58.02 268  P         P          17 18 15.4  -3.1
JCJ    Chichijima       58.03 316  P         P          17 18 16.7  -1.5
SANI   Sanana           58.21 277  P         P          17 18 18.5  -1.2
                comp=Z,1µmcomp=Z,29nm,1.0s
BATI   Baumata          58.52 267  P         P          17 18 21.2  -0.7
                comp=Z,1µmcomp=Z,36nm,2.0s
MMRI   Maumere          60.21 269  P         P          17 18 32.9  -0.7
MMRI                               IAmb      IAmb       17 18 54.6
                comp=Z,118nm,1.5s
PSA00  Pilbara Seismi   60.50 254  P         P          17 18 32.7  -2.7
PSA00                              IAmb      IAmb       17 18 39.1
                comp=Z,65nm,1.1s
PSA00  Pilbara Seismi   60.50 254  P         P          17 18 32.3  -3.1
PSA00                              IAmb      IAmb       17 18 38.5
                comp=Z,60nm,1.2s
MBWA   Marble Bar       60.65 254  IAMs_20   IAMs_20    17 42 11.8
                comp=Z,4µm,22.0s
EDFI   Ende, Flores     60.72 268  P         P          17 18 36.5  -0.7
                comp=Z,403nmcomp=Z,24nm,0.8s
KMSI   Cibinong         60.89 279  P         P          17 18 38.2   0.0
                comp=Z,3µmcomp=Z,49nm,1.0s
MEEK   Meekatharra      61.25 248  P         P          17 18 40.5   0.0
                baz=61,SNR=5.3
KLBR   Kellerberrin     61.82 242  P         P          17 18 42.8  -1.5
                baz=62,SNR=5.5
NWAO   Narrogin (SRO)   62.25 241  IAMs_20   IAMs_20    17 46 30.3
                comp=Z,4µm,18.0s
APSI   Ampana           62.69 277  P         P          17 18 51.3  +1.0
                comp=Z,1µmcomp=Z,38nm,1.1s
WBSI   Waikabubak, Su   62.75 267  P         P          17 18 50.3  -0.5
                comp=Z,64nm,1.1s
MRSI   Marisa           62.81 278  P         P          17 18 51.8  +0.7
                comp=Z,1µmcomp=Z,12nm,1.1s
RPN    Rapa Nui         63.12 113  LR        LR         17 38 56.3
                comp=Z,2µm,21.4s,baz=282,slow=29
BNSI   Bone             63.25 273  P         P          17 18 53.7  -0.4
                comp=Z,639nmcomp=Z,23nm,1.3s
MORW   Morawa           63.39 245  P         P          17 18 52.7  -2.1
MORW                               IAmb      IAmb       17 18 57.5
                comp=Z,45nm,1.3s
KAPI   Kappang          63.44 272  P         P          17 18 55.1  -0.3
KAPI                               pmax      pmax
                comp=Z,67nm,1.7s
KAPI                               MLR       MLR
                comp=Z,1µm,21.0s
KAPI   Kappang          63.44 272  P         P          17 18 55.1  -0.3
KAPI                               IAmb      IAmb       17 18 58.9
                comp=Z,67nm,1.7s
VNDA   Vanda            63.45 185  P         P          17 18 54.2  -0.2
                comp=Z,5.9nm,1.1s,baz=6.6,slow=5.6,SNR=9.2
VNDA                               LR        LR         17 42 15.8
                comp=Z,2µm,21.4s,baz=22,slow=32
VNDA   Vanda            63.45 185  P         P          17 18 55.6  +1.2
VNDA                               pmax      pmax
                comp=Z,29nm,1.4s
VNDA   Vanda            63.45 185  P         P          17 18 55.6  +1.2
TTSI   Tana Toraja      63.88 274  P         P          17 18 58.5  +0.3
                comp=Z,459nmcomp=Z,14nm,1.1s
TOLI2  Tolitoli         64.10 279  P         P          17 18 57.4  -2.3
PLAI   Plampang         64.48 267  P         P          17 19 02.7  +0.5
                comp=Z,1µmcomp=Z,87nm,1.1s
TWSI   Taliwang, Sumb   65.36 267  P         P          17 19 06.0  -1.9
                comp=Z,583nmcomp=Z,50nm,1.2s
GIRL   Giralia          65.56 252  P         P          17 19 09.7  +0.6
INU    Inuyama          66.75 320  P         P          17 19 15.9  -0.5
INU                                IAmb      IAmb       17 20 28.0
                comp=Z,67nm,1.8s
MJAR   Matsushiro Arr   66.80 321  P         P          17 19 16.8  +0.1
                comp=Z,0.6nm,0.5s,baz=257,slow=27,SNR=3.3
MJAR                               LR        LR         17 46 41.2
                comp=Z,392nm,18.8s,baz=170,slow=34
MJAR   Matsushiro Arr   66.80 321  P         P          17 19 16.6  -0.1
MJAR                               pmax      pmax
                comp=Z,14nm,1.4s
MJAR   Matsushiro Arr   66.80 321  P         P          17 19 16.6  -0.1
MAJO   Matsushiro       66.81 321  P         P          17 19 16.2  -0.6
MAJO                               pmax      pmax
                comp=Z,16nm,1.2s
MAJO                               MLR       MLR
                comp=Z,1µm,20.0s
MAJO   Matsushiro       66.81 321  P         P          17 19 16.2  -0.6
MAT    Matsushiro       66.81 321  P         P          17 19 16.4  -0.3
MAT                                S         S          17 28 02.4  -7.4
MJB9   Matsu-Tunnel     66.81 321  P         P          17 19 17.8  +1.0
IGBI   Denpasar         67.02 267  P         P          17 19 18.5  -0.1
                comp=Z,76nm,1.1s
SRBI   Singaraja        67.12 267  P         P          17 19 19.8  +0.6
                comp=Z,62nm,1.2s
KBKI   Kotabaru         67.33 273  P         P          17 19 20.7  +0.1
                comp=Z,20nm,1.1s
MYLDM  Lahad Datu       67.51 282  P         P          17 19 23.4  +1.7
MYLDM                              IAmb      IAmb       17 19 44.0
                comp=Z,38nm,1.3s
JWT    Wachi            67.73 319  P         P          17 19 23.4  +0.8
JWT                                IAmb      IAmb       17 19 33.5
                comp=Z,55nm,1.5s
JMN    Monobe           67.76 317  P         P          17 19 22.2  -0.7
JSD    Sado             67.77 323  P         P          17 19 21.0  -1.7
JSD                                IAmb      IAmb       17 19 46.9
                comp=Z,45nm,1.1s
SMY    Shemya           67.98 354  P         P          17 19 23.7   0.0
SMY                                pmax      pmax
                comp=Z,440nm,1.5s
SMY    Shemya           67.98 354  P         P          17 19 23.7   0.0
JAGI   Jajag, Banyuwa   68.05 267  P         P          17 19 21.6  -3.5
JAGI                               IAmb      IAmb       17 19 33.5
                comp=Z,82nm,1.2s
JTM    Tenmabayashi     68.09 326  P         P          17 19 25.7  +1.0
JTM                                IAmb      IAmb       17 21 40.1
                comp=Z,106nm,1.4s
YUK    Yuzh-Kuril'sk    68.11 332 eP         P          17 19 24.5  -0.3
YUK                               e                     17 19 50.7
YUK                               e                     17 21 53.8
YUK                               ePPP      PPP         17 23 31.4
YUK                               eS        S           17 28 23.4  -1.8
YUK                               e                     17 29 23.1
YUK                               eSS       SS          17 32 46.1  -2.0
YUK                                pmax      pmax
                comp=Z,1101µm,16.8s
YUK                                pmax      pmax
                comp=N,367nm,1.6s
YUK                                pmax      pmax
                comp=E,356nm,1.4s
YUK                                pmax      pmax
                comp=Z,487nm,1.4s
BBKI   Banjar Baru      68.57 272  P         P          17 19 28.8  +0.4
                comp=Z,39nm,1.9s
JSU    Suzuyama         68.82 313  P         P          17 19 29.0  -0.6
JSU                                IAmb      IAmb       17 19 45.4
                comp=Z,46nm,1.3s
UNV    Unalaska Valle   69.13   6  P         P          17 19 30.1  -0.8
CASY   Casey            69.52 204  P         P          17 19 32.7  -0.6
SKR    Severo-Kuril's   69.72 342 eP         P          17 19 35.9  +1.2
SKR                                pmax      pmax
                comp=Z,79nm,1.4s
SKR                                MLR       MLR
                comp=Z,2µm,16.0s
SKR                                MLR       MLR
                comp=Z,2µm,16.0s
PET    Petropavlovsk    71.10 344 eP         P          17 19 48.2  +5.1
PET                               eS        S           17 29 02.1  +2.1
PET                               ePS       PnS         17 29 31.8  +4.2
PET                               ePPS      PPS         17 29 45.1
PET                                pmax      pmax
                comp=Z,300nm,7.1s
PET                                pmax      pmax
                comp=Z,48nm,1.5s
PET                                MLR       MLR
                comp=Z,2µm,17.0s
PET                                MLR       MLR
                comp=Z,3µm,16.0s
PET    Petropavlovsk    71.10 344  IAMs_20   IAMs_20    17 43 55.8
                comp=Z,5µm,22.0s
SDPT   Sand Point       71.40  10  P         P          17 19 44.5  -0.3
PEA0B  Petropavlovsk-   71.43 344  P         P          17 19 44.9  -0.2
PEA0B                              pmax      pmax
                comp=Z,271nm,1.8s
PEA0B  Petropavlovsk-   71.43 344  P         P          17 19 44.9  -0.2
PETK   Petropavlovsk-   71.43 344  P         P          17 19 46.0  +0.9
                comp=Z,14nm,1.0s,baz=151,slow=6.4,SNR=6.8
PETK                               LR        LR         17 44 40.2
                comp=Z,4µm,21.9s,baz=144,slow=30
PETK   Petropavlovsk-   71.43 344  P         P          17 19 46.0  +0.9
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PETK   Petropavlovsk-   71.43 344  P         P          17 19 44.5  -0.6
YSS    Yuzh-Sakhalins   71.75 332 eP         P          17 19 47.0  -0.1
YSS                               eS        S           17 29 05.0  -2.8
YSS                               e                     17 29 38.1
YSS                               eSS       SS          17 33 46.2  +2.1
YSS                                pmax      pmax
                comp=Z,20nm,1.6s
YSS                                MLR       MLR
                comp=Z,2µm,16.0s
YSS                                MLR       MLR
                comp=N,1µm,14.0s
YSS    Yuzh-Sakhalins   71.75 332  IAMs_20   IAMs_20    17 44 50.0
                comp=Z,3µm,22.0s
YULB   Yu-li            71.87 301  P         P          17 19 47.8  -0.6
YULB                               IAmb      IAmb       17 20 10.1
                comp=Z,67nm,1.7s
SMRI   Semarang         71.96 267  P         P          17 19 48.5  -0.7
SMRI                               IAmb      IAmb       17 20 51.3
                comp=Z,91nm,1.2s
NACB   Ninganchiao      71.96 302  P         P          17 19 47.8  -1.1
NACB                               IAmb      IAmb       17 20 00.6
                comp=Z,162nm,1.8s
TPUB   Ta-pu            72.38 301  P         P          17 19 51.1  -0.3
TPUB                               IAmb      IAmb       17 20 05.2
                comp=Z,63nm,1.3s
CHGN   Chignik          72.66  10  P         P          17 19 53.5  +1.2
SBUM   Sibu             72.68 277  P         P          17 19 52.3  -1.1
CHIR   Chirikof Islan   72.73  12  P         P          17 19 53.0  +0.2
STKI   Sintang          72.73 275  P         P          17 19 54.5  +0.7
MCCM   Marconi Confer   72.90  42  P         P          17 19 53.3  -0.9
SAO    San Andreas Ge   73.05  43  P         P          17 19 54.0  -1.1
SAO                                pmax      pmax
                comp=Z,63nm,1.2s
SAO    San Andreas Ge   73.05  43  P         P          17 19 54.0  -1.1
SAO                                IAmb      IAmb       17 20 04.7
                comp=Z,63nm,1.1s
PKM    Mcpherson Peak   73.13  46  P         P          17 19 58.7  +2.8
                baz=238
PMPB   Monarch Peak     73.17  44  P         P          17 19 55.1  -0.9
SMMC   Simmler          73.23  45  P         P          17 19 59.3  +3.0
                baz=237
HOPS   Hopland Field    73.27  41  P         P          17 19 53.6  -2.8
HOPS                               IAmb      IAmb       17 20 06.0
                comp=Z,115nm,1.3s
PAGB   Antelope Grade   73.28  45  P         P          17 19 57.2  +0.6
PAGB                               IAmb      IAmb       17 20 07.5
                comp=Z,141nm,1.7s
GDXM   Geysers          73.34  41  P         P          17 19 56.1  -0.8
KCPM   Cahto Peak       73.36  40  P         P          17 19 55.6  -1.5
KCPM                               IAmb      IAmb       17 20 06.8
                comp=Z,138nm,1.6s
TEY    Ternei           73.40 327⇓eP         P          17 20 04.9  +7.9
TEY                               e                     17 29 32.9
TEY                                pmax      pmax
                comp=Z,10.0nm,1.7s
TEY                                pmax      pmax
                comp=E,10.0nm,1.2s
KMRM   Mail Ridge       73.60  39  P         P          17 19 59.9  +1.5
SII    Sitkinak Islan   73.71  13  P         P          17 19 54.9  -3.7
OSI    Osito Audit: C   73.74  47  P         P          17 19 59.1  -0.2
OSI                                IAmb      IAmb       17 20 09.1
                comp=Z,108nm,1.6s
KSRS   Korea Array      73.87 317  P         P          17 20 00.4  +0.5
                comp=Z,3.2nm,1.2s,baz=131,slow=5.1,SNR=3.1
KSRS                               LR        LR         17 49 28.2
                comp=Z,1µm,19.1s,baz=119,slow=33
PASC   Pasadena Art C   73.89  47  P         P          17 20 00.0  -0.2
PASC                               IAmb      IAmb       17 20 09.3
                comp=Z,137nm,1.9s
KSAR   Wonju Array Be   73.89 317  P         P          17 19 58.6  -1.5
KSAR   Wonju Array Be   73.89 317  P         P          17 19 58.6  -1.5
VES    Vestal, Richgr   74.14  45  P         P          17 20 04.6  +3.0
                baz=238
O02D   Mt. Diablo Mer   74.14  40  P         P          17 20 04.4  +2.8
                baz=234,SNR=8.9
BFSC   Mount Baldy Ra   74.30  47  P         P          17 20 05.2  +2.4
                baz=239,SNR=5.6
EDW2   Edwards Air Fo   74.39  47  P         P          17 20 05.0  +1.8
                baz=239,SNR=17
ISA    Isabella, Lake   74.47  46  P         P          17 20 03.8  +0.2
ISA                                pmax      pmax
                comp=Z,66nm,1.3s
ISA    Isabella, Lake   74.47  46  P         P          17 20 03.8  +0.2
ISA                                IAmb      IAmb       17 20 13.2
                comp=Z,66nm,1.2s
ISA    Isabella, Lake   74.47  46  P         P          17 20 05.7  +2.1
                baz=238
MONP2  Monument Peak    74.51  49  P         P          17 20 06.1  +2.0
                baz=240,SNR=7.1
ORV    Oroville         74.59  41  P         P          17 20 04.9  +0.7
ORV                                pmax      pmax
                comp=Z,49nm,1.3s
ORV    Oroville         74.59  41  P         P          17 20 04.9  +0.7
IKP    In-Ko-Pah, Jac   74.62  49  P         P          17 20 06.4  +1.8
                baz=241,SNR=6.0
N02D   Trinity Center   74.67  39  P         P          17 20 06.1  +1.5
                baz=234,SNR=7.2
TYV    Tymovskoe        74.73 335 eP         PcP        17 20 16.6  -2.2
TYV                               e                     17 30 02.2
TYV                                pmax      pmax
                comp=Z,28nm,1.9s
TYV                                pmax      pmax
                comp=Z,800nm,5.1s
TYV                                MLR       MLR
                comp=Z,3µm,17.0s
QZH    Quanzhou         74.76 302  P         P          17 20 04.7  -0.7
QZH                                S         S          17 29 44.8  +2.0
QZH                                LR        LR
                comp=Z,550nm,15.2s
QZH                                LR        LR
                comp=Z,810nm,22.3s
QZH                                LR        LR
                comp=Z,930nm,21.3s
M02C   Callahan         74.82  39  P         P          17 20 07.6  +2.1
                baz=234,SNR=6.5
O03E   Paynes Creek     74.83  40  P         P          17 20 07.8  +2.2
                baz=235
L02E   Cave Junction    74.83  38  P         P          17 20 07.2  +1.7
                baz=233
BBRC   Big Bear Solar   74.84  48  P         P          17 20 07.8  +1.8
                baz=240
PFO    Pinyon Flats O   74.84  48  P         P          17 20 05.6  -0.3
                comp=Z,1.4nm,0.7s,baz=7.3,slow=5.5,SNR=1.8
PFO    Pinyon Flats O   74.84  48  P         P          17 20 07.2  +1.3
                baz=240,SNR=5.3
TPFO   Pinon Flats      74.84  48  P         P          17 20 07.0  +1.1
                baz=240,SNR=5.5
LRMC   Laurel Mtn Rad   74.92  46  P         P          17 20 08.2  +1.9
                baz=239,SNR=7.7
SWSC   Sam W. Stewart   74.99  49  P         P          17 20 08.5  +1.9
                baz=241
QSPA   South Pole Qui   75.00 180  P         P          17 20 05.3  -1.1
QSPA                               IAmb      IAmb       17 20 36.0
                comp=Z,59nm,1.1s
MDPB   Devils Postpil   75.10  44  IAmb      IAmb       17 20 16.7
                comp=Z,51nm,1.1s
K02D   Willamette Mer   75.12  37  P         P          17 20 08.4  +1.2
                baz=233,SNR=8.5
CWC    Cottonwood Cre   75.14  45  P         P          17 20 09.3  +1.7
                baz=238
MLAC   Mammoth, Mammo75.26  44  P         P          17 20 10.2  +1.8
                baz=238
MPMC   Manual Prospec   75.35  46  P         P          17 20 10.7  +1.8
                baz=239,SNR=27
USRK   Ussuriysk Ar.    75.36 324  P         P          17 20 09.3  +0.9
                comp=Z,1.8nm,0.8s,baz=106,slow=4.7,SNR=1.8
USRK                               LR        LR         17 47 07.6
                comp=Z,4µm,21.8s,baz=121,slow=31
TIN    Tinemaha, Big    75.37  45  P         P          17 20 10.9  +2.1
                baz=238
BELC   Belle Mtn. Jos   75.37  48  P         P          17 20 10.6  +1.6
                baz=240,SNR=5.8
MPK    Martis Peak      75.39  42  P         P          17 20 08.7  -0.4
SSE    Sheshan          75.42 308  P         P          17 20 07.5  -1.6
SSE                                S         S          17 29 51.6  +1.7
SSE                                pmax      pmax
                comp=Z,15nm,0.6s
SSE                                pmax      pmax
                comp=Z,140nm,4.3s
SSE                                LR        LR
                comp=Z,400nm,20.6s
SSE                                LR        LR
                comp=Z,360nm,21.5s
GSC    Goldstone, Bar   75.44  47  P         P          17 20 11.0  +1.7
                baz=240,SNR=17
HEC    Hector,Ludlow    75.54  47  P         P          17 20 11.8  +2.0
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                baz=240,SNR=10
PNTR   Pine Nut         75.55  42  P         P          17 20 10.4  +0.4
PNTR                               IAmb      IAmb       17 20 19.4
                comp=Z,101nm,1.0s
CBJI   Citeko           75.57 267  P         P          17 20 09.2  -1.1
BC3    Big Chuckawall   75.59  49  P         P          17 20 12.3  +2.1
                baz=241,SNR=6.3
DBJI   Dramaga          75.63 267  P         P          17 20 11.1  +0.3
                comp=Z,2µmcomp=Z,76nm,2.1s
L04D   Klamath Falls    75.64  38  P         P          17 20 12.3  +2.0
                baz=234,SNR=5.3
M04C   Macdoel          75.67  39  P         P          17 20 11.9  +1.4
                baz=234,SNR=7.5
QSM    Queen of Sheba   75.74  46  P         P          17 20 11.5  +0.7
QSM                                IAmb      IAmb       17 20 20.1
                comp=Z,58nm,1.2s
GLA    Glamis           75.76  50  P         P          17 20 13.4  +2.3
                baz=241,SNR=6.7
LCH    Last Change Ra   75.86  45  IAmb      IAmb       17 20 20.9
                comp=Z,44nm,1.2s
I03D   Drain, OR        75.91  37  P         P          17 20 14.5  +2.9
                baz=233
GWY    Greenwater Val   75.99  46  P         P          17 20 12.6  +0.1
FURC   Furnace Creek,   76.00  46  P         P          17 20 15.2  +3.0
                baz=239,SNR=10
GMRC   Granite Mounta   76.00  48  P         P          17 20 14.9  +2.4
                baz=240,SNR=10.0
RYN    Ryan             76.01  43  IAmb      IAmb       17 20 21.8
                comp=Z,58nm,1.1s
PAHR   Pah Rah Range    76.03  42  IAmb      IAmb       17 20 22.0
                comp=Z,69nm,1.2s
IRM    Iron Mountain    76.06  49  P         P          17 20 15.0  +2.2
                baz=241,SNR=17
SHOC   Shoshone, Teco   76.12  47  P         P          17 20 16.2  +3.2
                baz=240,SNR=12
TUQ    Turquoise Moun   76.14  47  P         P          17 20 14.8  +1.5
                baz=240,SNR=9.8
P18K   Big Mountain,    76.15  11  P         P          17 20 13.5  +0.8
P18K                               IAmb      IAmb       17 20 20.3
                comp=Z,108nm,1.3s
P18K                               IAMs_20   IAMs_20    17 48 59.0
                comp=Z,3µm,20.0s
P18K   Big Mountain,    76.15  11  P         P          17 20 14.8  +2.1
                baz=201
K04D   Chiloquin, OR    76.21  38  P         P          17 20 14.6  +1.1
                baz=234
J04D   Umpqua Nationa   76.36  38  P         P          17 20 17.0  +2.6
                baz=234,SNR=6.1
I04A   Tendick Farm,    76.51  37  P         P          17 20 17.5  +2.4
                baz=234,SNR=7.2
KVN    Kaiserville      76.51  43  P         P          17 20 16.0  +0.6
KVN                                pmax      pmax
                comp=Z,70nm,1.1s
KVN    Kaiserville      76.51  43  P         P          17 20 16.0  +0.6
KVN                                IAmb      IAmb       17 20 24.6
                comp=Z,70nm,1.1s
O18K   Koktuh Hills     76.58  11  IAMs_20   IAMs_20    17 49 12.5
                comp=Z,3µm,20.0s
CGJI   Cibinong         76.64 267  P         P          17 20 13.5  -2.9
MOD    Modoc Plateau    76.67  40  IAmb      IAmb       17 20 25.4
                comp=Z,92nm,1.2s
214A   Organ Pipe Nat   76.75  51  P         P          17 20 19.2  +2.5
                baz=243
H04D   Lebanon          76.76  36  P         P          17 20 18.6  +2.2
                baz=233
P19K   Oil Pt           76.77  12  P         P          17 20 19.0  +2.8
                baz=203
PDMCI  Parker Dam,Lak   76.86  49  P         P          17 20 20.2  +2.9
                baz=242,SNR=5.9
G03D   McMinnville, O   76.87  36  P         P          17 20 19.8  +2.8
                baz=233
J05D   Fort Rock, OR    76.90  38  P         P          17 20 19.5  +2.0
                baz=235,SNR=17
MDJ    Mudanjiang       76.98 324  IAMs_20   IAMs_20    17 47 03.0
                comp=Z,3µm,22.0s
O19K   Port Alsworth    77.06  11  IAMs_20   IAMs_20    17 46 22.3
                comp=Z,3µm,21.0s
O19K   Port Alsworth    77.06  11  P         P          17 20 19.8  +2.1
                baz=202
HOM    Homer            77.10  13  IAMs_20   IAMs_20    17 48 47.3
                comp=Z,4µm,20.0s
SHPR   Sheep Range      77.20  46  P         P          17 20 19.9  +0.5
SHPR                               IAmb      IAmb       17 20 28.9
                comp=Z,58nm,1.3s
O20K   Slope Mountain   77.29  12  P         P          17 20 20.9  +1.8
                baz=204
BRLK   Bradley Lake     77.36  13  IAMs_20   IAMs_20    17 48 21.8
                comp=Z,4µm,20.0s
BRSE   Bradley Lake S   77.37  13  P         P          17 20 21.9  +2.3
                baz=206
GRNR   Gornyy           77.40 332⇓iP         P          17 20 23.2  +3.3
GRNR                              eS        S           17 30 18.0  +7.0
GRNR                               pmax      pmax
                comp=Z,10.0nm,1.2s
GRNR                               smax      smax
                comp=N,2.0nm,1.0s
I05D   Terrebonne, OR   77.45  37  P         P          17 20 22.6  +2.2
                baz=234,SNR=8.1
N19K   Bonanza Creek    77.61  11  IAmb      IAmb       17 20 31.6
                comp=Z,69nm,1.4s
N19K                               IAMs_20   IAMs_20    17 50 32.7
                comp=Z,3µm,20.0s
NJ2    Nanjing          77.63 308 eP         P          17 20 24.1  +2.5
NJ2                                PP        PP         17 23 17.3  +0.4
NJ2                                S         S          17 30 21.7  +7.6
NJ2                                pmax      pmax
                comp=Z,13nm,0.6s
NJ2                                pmax      pmax
                comp=Z,380nm,4.1s
NJ2                                LR        LR
                comp=Z,1µm,17.1s
NJ2                                LR        LR
                comp=Z,1µm,17.6s
NJ2                                LR        LR
                comp=Z,1µm,22.4s
SVW2   Sparrevohn       77.68  10  P         P          17 20 21.4  +0.2
SVW2                               IAmb      IAmb       17 20 31.9
                comp=Z,90nm,1.7s
BMN    Battle Mountai   77.82  42  IAmb      IAmb       17 20 31.9
                comp=Z,86nm,1.2s
R11A   Troy Canyon, C   77.83  45  IAmb      IAmb       17 20 32.0
                comp=Z,55nm,1.3s
R11A   Troy Canyon, C   77.83  45  P         P          17 20 24.5  +1.6
                baz=240,SNR=16
SEW    Seward           77.98  13  P         P          17 20 25.3  +2.4
                baz=207
G05D   Wamic, OR        78.00  36  P         P          17 20 25.6  +2.2
                baz=234
WVOR   Wild Horse Val   78.00  40  IAmb      IAmb       17 20 35.7
                comp=Z,68nm,1.1s
E04D   Cinebar          78.08  35  P         P          17 20 26.3  +2.5
                baz=233,SNR=6.6
O22K   Cooper Landing   78.26  13  IAMs_20   IAMs_20    17 48 49.1
                comp=Z,2µm,20.0s
F05D   White Salmon     78.29  36  P         P          17 20 27.2  +2.2
                baz=234
D04E   Lakebay          78.34  34  P         P          17 20 27.4  +2.2
                baz=233
D03D   Eldon            78.39  34  P         P          17 20 27.6  +2.2
                baz=232
I07A   Izee             78.39  38  IAmb      IAmb       17 20 35.0
                comp=Z,86nm,1.4s
SPU    Mount Spurr      78.41  12  P         P          17 20 25.1  -0.3
TUC    Tucson           78.45  52  P         P          17 20 28.1  +1.8
                baz=244
J08A   Circle Bar Ran   78.61  39  IAmb      IAmb       17 20 41.8
                comp=Z,110nm,1.3s
MDSI   Maura Dua        78.62 268  P         P          17 20 26.3  -1.2
                comp=Z,355nmcomp=Z,7.0nm,1.9s
M19K   Big River Lodg   78.64  10  IAmb      IAmb       17 20 34.6
                comp=Z,156nm,2.0s
M19K                               IAMs_20   IAMs_20    17 50 46.7
                comp=Z,3µm,19.0s
KLR    Kul'dur          78.65 328⇓eP         P          17 20 26.2  -0.7
KLR                                MLR       MLR
                comp=Z,860µm,18.0s
RC01   Rabbit Creek A   78.81  13  IAMs_20   IAMs_20    17 50 45.4
                comp=Z,3µm,19.0s
RC01   Rabbit Creek A   78.81  13  P         P          17 20 29.8  +2.3
                baz=206
L19K   White Mountain   78.82  10  P         P          17 20 28.0  +0.4
L19K                               IAMs_20   IAMs_20    17 51 29.7
                comp=Z,3µm,19.0s
L19K   White Mountain   78.82  10  P         P          17 20 29.5  +1.9
                baz=201
DL2    Dalian           78.85 315 eP         P          17 20 23.6  -4.6
DL2                                S         S          17 30 17.1   -10
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DL2                                  pmax     pmax
      comp=Z,63nm,2.0s
DL2                                  pmax     pmax
      comp=Z,220nm,4.1s
DL2                                  LR       LR
      comp=N,2µm,16.0s
DL2                                  LR       LR
      comp=E,1µm,19.6s
DL2                                  LR       LR
      comp=Z,2µm,22.0s
PWL   Port Wells         78.91  14   IAmb     IAmb      17 20 41.5
      comp=Z,67nm,1.2s
PWL                                  IAMs_20  IAMs_20   17 50 33.3
      comp=Z,2µm,19.0s
PWL   Port Wells         78.91  14   P        P         17 20 29.6 +1.5
      baz=208
HIN   Hinchinbrook I     78.93  15   IAMs_20  IAMs_20   17 48 19.0
      comp=Z,4µm,21.0s
CN2   Changchun          78.95 321  eP        P         17 20 31.5 +2.8
CN2                                  pmax     pmax
      comp=Z,10.0nm,1.4s
CN2                                  pmax     pmax
      comp=Z,100nm,3.0s
CN2                                  LR       LR
      comp=Z,800nm,18.0s
CN2                                  LR       LR
      comp=Z,2µm,18.0s
CN2                                  LR       LR
      comp=Z,2µm,20.0s
MA2   Magadan            78.97 344   IAMs_20  IAMs_20   17 50 15.7
      comp=Z,3µm,20.0s
SPR3  Spring Creek 3     79.00  45   IAmb     IAmb      17 20 38.3
      comp=Z,71nm,1.3s
GLI   Glacier Island     79.21  14   IAMs_20  IAMs_20   17 49 21.4
      comp=Z,3µm,20.0s
GLI   Glacier Island     79.21  14   P        P         17 20 31.4 +1.7
      baz=209
FID   Port Fidalgo       79.25  14   IAMs_20  IAMs_20   17 48 07.0
      comp=Z,3µm,20.0s
L20K  Farewell, AK       79.27  10   P        P         17 20 32.0 +2.0
      baz=202,SNR=7.7
ELK   Elko               79.27  43   P        P         17 20 31.4 +0.6
ELK                                  pmax     pmax
      comp=Z,45nm,1.2s
ELK   Elko               79.27  43   P        P         17 20 31.4 +0.6
A04D  Lummi Island       79.31  33   P        P         17 20 32.0 +1.5
      baz=233
M22K  Willow             79.32  12   P        P         17 20 31.9 +1.7
      baz=206
TTA   Tatalina           79.34   9   P        P         17 20 32.1 +1.6
      baz=200,SNR=15
B05A  Bryant             79.36  34   P        P         17 20 33.0 +2.2
      baz=233,SNR=5.2
KNK   Knik Glacier       79.37  13   IAMs_20  IAMs_20   17 47 34.5
      comp=Z,2µm,20.0s
KNK   Knik Glacier       79.37  13   P        P         17 20 32.5 +1.9
      baz=208
PMR   Palmer             79.39  13   IAmb     IAmb      17 20 38.6
      comp=Z,126nm,1.5s
PMR   Palmer             79.39  13   P        P         17 20 32.6 +2.0
      baz=207
G08A  Pilot Rock         79.39  37   IAmb     IAmb      17 20 40.3
      comp=Z,94nm,1.2s
WUAZ  Wupatki            79.44  49   P        P         17 20 33.6 +1.9
      baz=243
SIT   Sitka              79.52  21   P        P         17 20 32.6 +1.2
      baz=220
GHO   Glory Hole Cre     79.59  13   IAmb     IAmb      17 20 46.0
      comp=Z,101nm,1.4s
GHO                                  IAMs_20  IAMs_20   17 55 51.2
      comp=Z,2µm,20.0s
DIV   Divide             79.75  15   IAmb     IAmb      17 20 46.9
      comp=Z,130nm,1.4s
SML   Sawmill            79.75  13   IAMs_20  IAMs_20   17 51 13.5
      comp=Z,2µm,19.0s
SML   Sawmill            79.75  13   P        P         17 20 34.4 +1.6
      baz=208
C06D  Leavenworth        79.81  34   P        P         17 20 34.8 +1.5
      baz=234
CUT   Chulitna           79.88  12   P        P         17 20 34.2 +1.0
CUT   Chulitna           79.88  12   P        P         17 20 35.0 +1.8
      baz=206,SNR=7.3
BMRM  Bremner River      79.90  15   IAmb     IAmb      17 20 41.8
      comp=Z,158nm,1.4s
BMRM                                 IAMs_20  IAMs_20   17 50 30.6
      comp=Z,3µm,20.0s
BMRM  Bremner River      79.90  15   P        P         17 20 35.6 +2.1
      baz=211
MESA  MESA               79.93  17   IAMs_20  IAMs_20   17 47 52.7
      comp=Z,4µm,22.0s
PPLA  Purkeypile         79.96  11   P        P         17 20 35.8 +1.9
      baz=204
SCM   Sheep Creek Mo     80.00  14   IAmb     IAmb      17 20 47.1
      comp=Z,67nm,1.1s
SCM                                  IAMs_20  IAMs_20   17 48 16.1
      comp=Z,2µm,21.0s
SCM   Sheep Creek Mo     80.00  14   P        P         17 20 35.3 +1.3
      baz=209
E08A  Dider Farm, El     80.00  36   IAmb     IAmb      17 20 43.4
      comp=Z,122nm,1.4s
KLU   Klutina            80.03  14   IAMs_20  IAMs_20   17 47 27.9
      comp=Z,3µm,22.0s
KLU   Klutina            80.03  14   P        P         17 20 36.0 +1.7
      baz=210
K20K  Telida             80.05  10   IAMs_20  IAMs_20   17 48 26.2
      comp=Z,2µm,21.0s
K20K  Telida             80.05  10   P        P         17 20 35.9 +1.7
      baz=202,SNR=11
QIZ   Qiongzhong         80.06 293   P        P         17 20 34.8 -0.5
QIZ                                  S        S         17 30 38.4 -2.3
QIZ                                  pmax     pmax
      comp=Z,290nm,3.7s
QIZ                                  LR       LR
      comp=Z,1µm,26.9s
QIZ                                  LR       LR
      comp=Z,920nm,18.6s
QIZ                                  LR       LR
      comp=Z,1µm,20.6s
BMO   Blue Mountains     80.13  38   P        P         17 20 35.7 +0.5
BMO                                  pmax     pmax
      comp=Z,69nm,1.4s
BMO   Blue Mountains     80.13  38   P        P         17 20 35.7 +0.5
BMO                                  IAmb     IAmb      17 20 44.0
      comp=Z,69nm,1.4s
YAH   Yahtse             80.14  17   IAMs_20  IAMs_20   17 50 23.1
      comp=Z,4µm,20.0s
TGL   Tana Glacier       80.18  16   IAMs_20  IAMs_20   17 48 32.0
      comp=Z,4µm,20.0s
TABL  Table Mountain     80.38  17   IAMs_20  IAMs_20   17 48 30.4
      comp=Z,3µm,21.0s
D08A  Wollman Farm,      80.40  36   P        P         17 20 37.1 +0.6
D08A                                 IAmb     IAmb      17 20 45.6
      comp=Z,115nm,1.4s
VRDI  Verde Repeater     80.41  15   IAMs_20  IAMs_20   17 49 55.2
      comp=Z,3µm,19.0s
N25K  Chitina, Valde     80.45  15   IAmb     IAmb      17 20 50.4
      comp=Z,66nm,1.2s
N25K                                 IAMs_20  IAMs_20   17 48 13.1
      comp=Z,3µm,20.0s
N25K  Chitina, Valde     80.45  15   P        P         17 20 38.0 +1.5
      baz=211
CAST  Castle Rocks       80.46  11   IAMs_20  IAMs_20   17 52 14.0
      comp=Z,3µm,19.0s
WHN   Wuhan              80.48 305 ⇑P        PcP       17 20 48.3 +4.1
WHN   Wuhan              80.48 305   S        SKSac     17 30 55.0 -1.3
WHN                                  LR       LR
      comp=N,4µm,17.3s
WHN                                  LR       LR
      comp=E,3µm,23.6s
WHN                                  LR       LR
      comp=Z,4µm,18.2s
M24K  Tolsona, Glenn     80.50  14   P        P         17 20 37.1 +0.3
M24K  Tolsona, Glenn     80.50  14   P        P         17 20 39.0 +2.2
      baz=210
GLB   Gilahina Butte     80.50  15   IAmb     IAmb      17 20 45.1
      comp=Z,102nm,1.5s
GLB                                  IAMs_20  IAMs_20   17 50 28.6
      comp=Z,2µm,20.0s
WAT6  Susitna Watana     80.57  13   P        P         17 20 39.0 +1.7
      baz=208
DUG   Dugway, Tooele     80.61  44   IAmb     IAmb      17 20 47.0
      comp=Z,58nm,1.1s
DUG   Dugway, Tooele     80.61  44   P        P         17 20 39.4 +1.4
      baz=241,SNR=15
WAT1  Susitna Watana     80.62  13   P        P         17 20 39.5 +2.2
      baz=207
MCARA McCarthy VSAT      80.66  16   IAMs_20  IAMs_20   17 48 38.7
      comp=Z,2µm,21.0s
MCARA McCarthy VSAT      80.66  16   P        P         17 20 39.3 +1.8
      baz=213
LOGN  Logan Glacier      80.73  17   IAMs_20  IAMs_20   17 47 56.8
      comp=Z,3µm,20.0s
BARN  Barnard Glacie     80.75  16   IAmb     IAmb      17 20 52.9
      comp=Z,127nm,1.2s
BARN                                 IAMs_20  IAMs_20   17 48 29.1
      comp=Z,3µm,20.0s
CTG   Chitna Glacier     80.76  17   P        P         17 20 39.6 +1.4
      baz=214
CTGM  Chitina Glacie     80.76  17   P        P         17 20 38.1 -0.2
CTGM                                 IAmb     IAmb      17 20 57.3
      comp=Z,51nm,1.0s
CTGM                                 IAMs_20  IAMs_20   17 47 47.4
      comp=Z,3µm,21.0s
F10A  Beach Ranch, E     80.78  37   IAmb     IAmb      17 20 52.8
      comp=Z,62nm,1.1s
KTH   Kantishna Hill     80.80  11   P        P         17 20 36.2 -2.1
KTH                                  IAmb     IAmb      17 20 46.6
      comp=Z,171nm,1.6s
KTH                                  IAMs_20  IAMs_20   17 48 41.9
      comp=Z,4µm,22.0s
J20K  Nowinta River      80.81  10   IAMs_20  IAMs_20   17 50 05.0
      comp=Z,2µm,21.0s
J20K  Nowinta River      80.81  10   P        P         17 20 40.5 +2.3
      baz=202,SNR=17
TRF   Thorofare Moun     80.82  12   P        P         17 20 40.0 +1.4
      baz=206
121A  Cookes Peak, D     80.84  53   P        P         17 20 42.9 +3.5
      baz=246
CHUM  Lake Minchumin     80.84  11   P        P         17 20 39.6 +1.2
      baz=204,SNR=19
GCSA  Galena City Sc     80.93   8   P        P         17 20 41.0 +2.2
      baz=199
HARP  HAARP              81.00  14   P        P         17 20 41.6 +2.2
      baz=211
PLID  Pearl Lake         81.04  39   IAMs_20  IAMs_20   17 56 34.4
      comp=Z,2µm,20.0s
RND   Reindeer           81.07  12   P        P         17 20 38.9 -0.9
RND                                  pmax     pmax
      comp=Z,264nm,1.6s
RND                                  MLR      MLR
      comp=Z,5µm,21.0s
RND   Reindeer           81.07  12   P        P         17 20 38.9 -0.9
DHY   Denali Highway     81.08  13   IAmb     IAmb      17 20 49.0
      comp=Z,78nm,1.6s
DHY                                  IAMs_20  IAMs_20   17 54 17.7
      comp=Z,2µm,19.0s
HLID  Hailey             81.23  41   IAmb     IAmb      17 20 50.6
      comp=Z,64nm,1.1s
HLID  Hailey             81.23  41   P        P         17 20 42.7 +1.5
      baz=240,SNR=29
BPAW  Bear Paw Mtn.      81.28  11   IAMs_20  IAMs_20   17 52 09.8
      comp=Z,2µm,20.0s
MCK   McKinley           81.34  12   P        P         17 20 41.1 -0.1
MCK                                  pmax     pmax
      comp=Z,110nm,1.3s
MCK                                  MLR      MLR
      comp=Z,5µm,20.0s
MCK   McKinley           81.34  12   P        P         17 20 41.1 -0.1
MCK                                  IAmb     IAmb      17 20 49.2
      comp=Z,110nm,1.3s
MCK   McKinley           81.34  12   P        P         17 20 42.5 +1.3
      baz=207,SNR=21
SKAG  Skagway            81.36  20   P        P         17 20 43.5 +2.2
      baz=220,SNR=5.8
HVU   Hansel Valley      81.40  43   IAmb     IAmb      17 20 51.4
      comp=Z,66nm,1.2s
PAX   Paxson             81.42  14   IAmb     IAmb      17 20 49.6
      comp=Z,106nm,1.9s
PAX   Paxson             81.42  14   P        P         17 20 43.0 +1.3
      baz=210
M26K  Nabesna, AK        81.53  15   IAmb     IAmb      17 20 50.7
      comp=Z,107nm,1.2s
M26K                                 IAMs_20  IAMs_20   17 49 32.6
      comp=Z,3µm,22.0s
M26K  Nabesna, AK        81.53  15   P        P         17 20 43.6 +1.4
      baz=213,SNR=23
YUK6  Outpost Mounta     81.58  18   P        P         17 20 44.3 +1.5
      baz=217,SNR=6.2
YUK3  Moose Creek        81.67  16   P        P         17 20 44.6 +1.4
      baz=215,SNR=18
HYT   Haines Junctio     81.75  18   P        P         17 20 45.0 +1.5
      baz=218,SNR=6.6
M27K  Edge Creek, AK     81.77  16   P        P         17 20 42.7 -1.0
M27K                                 IAMs_20  IAMs_20   17 50 48.2
      comp=Z,2µm,19.0s
M27K  Edge Creek, AK     81.77  16   P        P         17 20 45.4 +1.8
      baz=214,SNR=17
YUK4  Talbot Arm         81.83  17   P        P         17 20 46.0 +2.0
      baz=217
L26K  Log Cabin Wild     81.97  15   IAMs_20  IAMs_20   17 50 58.2
      comp=Z,3µm,20.0s
L26K  Log Cabin Wild     81.97  15   P        P         17 20 46.7 +2.2
      baz=212,SNR=6.2
NEW   Newport            82.08  35   P        P         17 20 49.0 +3.6
      baz=237
BVCY  Beaver Creek       82.08  16   P        P         17 20 47.1 +1.9
      baz=215,SNR=14
NEA2  Nenana             82.09  12   P        P         17 20 47.3 +2.2
      baz=207
I21K  Tanana             82.09  10   IAmb     IAmb      17 20 55.5
      comp=Z,109nm,1.4s
I21K                                 IAMs_20  IAMs_20   17 51 38.1
      comp=Z,2µm,21.0s
I21K  Tanana             82.09  10   P        P         17 20 46.9 +1.9
      baz=204,SNR=12
MLY   Manley             82.17  11   P        P         17 20 44.3 -1.3
MLY                                  IAmb     IAmb      17 20 53.3
      comp=Z,56nm,1.3s
MLY                                  IAMs_20  IAMs_20   17 54 49.3
      comp=Z,2µm,20.0s
RIDG  Independent Ri     82.23  14   IAMs_20  IAMs_20   17 50 38.0
      comp=Z,3µm,20.0s
RIDG  Independent Ri     82.23  14   P        P         17 20 47.2 +1.4
      baz=211
MVCO  Mesa Verde         82.27  48   P        P         17 20 49.1 +2.2
      baz=245
DOT   Dot Lake           82.33  14   IAmb     IAmb      17 21 00.2
      comp=Z,60nm,1.1s
HDA   Harding Lake       82.35  12   P        P         17 20 45.2 -1.2
HDA   Harding Lake       82.35  12   P        P         17 20 48.3 +1.9
      baz=209
L27K  Beaver Creek,      82.37  15   IAmb     IAmb      17 20 55.3
      comp=Z,77nm,1.5s
L27K                                 IAMs_20  IAMs_20   17 51 01.0
      comp=Z,3µm,20.0s
L27K  Beaver Creek,      82.37  15   P        P         17 20 48.1 +1.5
      baz=214
MNTX  Cornudas Mount     82.38  54   P        P         17 20 48.7 +1.4
MNTX                                 IAmb     IAmb      17 20 57.2
      comp=Z,59nm,1.3s
MNTX  Cornudas Mount     82.38  54   P        P         17 20 49.7 +2.3
      baz=247
CCB   Clear Creek Bu     82.39  12   IAmb     IAmb      17 20 54.5
      comp=Z,92nm,1.2s
WHY   Whitehorse         82.43  19   P        P         17 20 49.5 +2.4
      baz=220
I23K  Minto, Yukon-K     82.53  11   IAMs_20  IAMs_20   17 49 55.9
      comp=Z,3µm,21.0s
I23K  Minto, Yukon-K     82.53  11   P        P         17 20 48.9 +1.6
      baz=206,SNR=16
TCOL  CIGO, UAF Yank     82.58  12   P        P         17 20 49.1 +1.6
      baz=208
COLA  College            82.58  12d iP        P         17 20 48.7 +1.1
COLA                                 pmax     pmax
      comp=Z,89nm,1.9s
COLA  College            82.58  12   P        P         17 20 47.4 -0.2
COLA  College            82.58  12   P        P         17 20 49.0 +1.5
      baz=208
SCRK  Sand Creek         82.63  14   IAmb     IAmb      17 20 56.6
      comp=Z,96nm,1.6s
SCRK                                 IAMs_20  IAMs_20   17 49 58.6
      comp=Z,3µm,22.0s
SCRK  Sand Creek         82.63  14   P        P         17 20 49.4 +1.4
      baz=212,SNR=12
IL31                     82.69  12   IAmb     IAmb      17 20 56.2
      comp=Z,113nm,1.4s
ILAR  Eielson Array      82.69  12   P        P         17 20 48.4 +0.2
      comp=Z,4.1nm,0.7s,baz=230,slow=6.0,SNR=31
ILAR                                 LR       LR        17 51 46.3
      comp=Z,2µm,20.9s,baz=223,slow=31
P33M  Teslin, Yukon      82.77  20   P        P         17 20 50.4 +1.6
      baz=222,SNR=5.1
N31M  Braeburn, Yuko     82.79  18   P        P         17 20 49.7 +0.9
      baz=220,SNR=7.3
ANMO  Albuquerque        82.83  51⇑eP        P         17 20 53.1 +3.2
ANMO                                 pmax     pmax
      comp=Z,21nm,1.1s
ANMO  Albuquerque        82.83  51   P        P         17 20 49.1 -0.8
ANMO                                 IAmb     IAmb      17 20 59.5
      comp=Z,72nm,1.3s
ANMO  Albuquerque        82.83  51   P        P         17 20 51.5 +1.6
      baz=246
TXAR  Lajitas Array      82.86  57   P        P         17 20 51.5 +1.5
      comp=Z,2.2nm,1.1s,baz=242,slow=1.9,SNR=9.3
TXAR                                 LR       LR        17 49 30.1
      comp=Z,1µm,21.7s,baz=0.0,slow=30
J25K  Salcha River,      82.87  13   P        P         17 20 50.2 +1.0
      baz=210,SNR=25
BJI   Beijing            83.11 314   P        P         17 20 53.9 +3.0
BJI                                  S        S         17 31 15.1 +3.7
BJI                                  SS       SS        17 36 36.6 +0.8
BJI                                  pmax     pmax
      comp=Z,24nm,1.2s
BJI                                  pmax     pmax
      comp=Z,390nm,8.0s
BJI                                  LR       LR
      comp=Z,1µm,16.6s
BJI                                  LR       LR
      comp=Z,890nm,20.7s
BJI                                  LR       LR
      comp=Z,2µm,22.8s
MSO   Missoula           83.17  38   IAMs_20  IAMs_20   17 50 15.6
      comp=Z,2µm,20.0s
MSO   Missoula           83.17  38   P        P         17 20 52.8 +1.6
      baz=240,SNR=14
J26L  Joseph Creek       83.17  14   P        P         17 20 53.0 +2.1
      baz=212,SNR=28
UNM   Universidad Na     83.31  68   IAMs_20  IAMs_20   17 48 47.1
      comp=Z,3µm,21.0s
M30M  Minto, Yukon       83.34  17   P        P         17 20 52.5 +0.9
      baz=218,SNR=22
REDW  Red Top Meadow     83.40  42   P        P         17 20 52.3 -0.4
H24K  Noodor Dome        83.43  11   IAmb     IAmb      17 21 01.3
      comp=Z,77nm,1.9s
RDOG  Red Dog Mine       83.44   5   P        P         17 21 00.2 +8.2
      baz=193
ZEA   Zeya               83.63 330  eP        P         17 20 57.4 +4.1
ZEA                                 eS        S         17 31 23.4 +7.3
ZEA                                 eSS       SS        17 36 45.0 +2.0
ZEA                                  smax     smax
      comp=N,300nm,8.7s
ZEA                                  smax     smax
      comp=E,300nm,13.5s
MOOW  Moose Ponds        83.65  42   IAmb     IAmb      17 21 05.2
      comp=Z,43nm,1.2s
S22A  4UR Ranch, Cre     83.69  48   P        P         17 20 56.5 +2.0
      baz=246
O20A  White River Ci     83.70  46   P        P         17 20 55.8 +1.5
      baz=245,SNR=6.5
M31M  Drury Creek, Y     83.76  18   P        P         17 20 55.6 +1.8
      baz=221,SNR=5.7
BILL  Bilibino           83.79 354c iP        P         17 20 55.0 +1.2
BILL                                e                   17 24 13.1
BILL                                eS        S         17 31 14.6 -2.6
BILL                                 pmax     pmax
      comp=Z,42nm,2.1s
BILL  Bilibino           83.79 354   P        P         17 20 51.7 -2.1
BILL                                 IAMs_20  IAMs_20   17 52 19.1
      comp=Z,3µm,21.0s
COCO  West Island        83.81 259   IAMs_20  IAMs_20   18 01 21.1
      comp=Z,2µm,19.0s
DAWY  Dawson             83.82  15   P        P         17 20 55.9 +1.8
      baz=216,SNR=25
BOZ   Bozeman (W)        83.96  40   P        P         17 20 57.2 +1.8
      baz=242,SNR=29
EGAK  Eagle              83.97  14   IAMs_20  IAMs_20   17 50 27.1
      comp=Z,3µm,21.0s
EGAK  Eagle              83.97  14   P        P         17 20 56.5 +1.7
      baz=214,SNR=19
BW06  Boulder Array      83.97  43   P        P         17 20 56.7 +1.1
      baz=243,SNR=7.8
PDAR  Pinedale Array     83.97  43   P        P         17 20 57.5 +1.9
      comp=Z,11nm,0.8s,baz=224,slow=4.1,SNR=19
PDAR                                 LR       LR        17 55 24.7
      comp=Z,495nm,18.6s,baz=249,slow=34
H17A  Grant Village      84.05  41   P        P         17 20 57.5 +1.4
      baz=243,SNR=7.7
YHH   Holmes Hill        84.06  41   P        P         17 20 56.4 +0.2
FARO  Faro, Yukon        84.10  19   P        P         17 20 57.7 +2.1
      baz=222
COLD  Coldfoot           84.27  10   P        P         17 20 58.7 +2.5
      baz=206
SDCO  Great Sand Dun     84.66  49   P        P         17 21 00.5 +1.2
      baz=247
TIY   Taiyuan            84.80 311 ⇑P        P         17 21 04.0 +4.3
TIY                                  S        S         17 31 33.2 +4.6
TIY                                  pmax     pmax
      comp=Z,210nm,6.0s
TIY                                  LR       LR
      comp=Z,480nm,12.5s
TIY                                  LR       LR
      comp=Z,900nm,16.3s
TIY                                  LR       LR
      comp=Z,1µm,18.8s
MMPY  Sheldon Lake,      85.05  19   P        P         17 21 02.5 +2.1
      baz=224,SNR=17
I29M  Ogilvie Camp,      85.15  15   P        P         17 21 02.9 +2.2
      baz=217,SNR=22
HIA   Hailar             85.16 324   IAMs_20  IAMs_20   17 54 24.6
      comp=Z,3µm,20.0s
RLMT  Red Lodge          85.22  41   P        P         17 21 02.8 +1.0
      baz=243,SNR=11
T25A  Trinidad           85.22  50   P        P         17 21 03.1 +1.1
      baz=247
TGTN  Hyland Airport     85.26  21   P        P         17 21 03.3 +1.8
      baz=226,SNR=14
GYA   Guiyang            85.30 299 ⇑P        P         17 21 06.5 +4.0
GYA                                  sP       pwP       17 21 12.0 +6.2
GYA                                  S        S         17 31 42.1 +7.9
GYA                                  pmax     pmax
      comp=Z,7.0nm,0.9s
GYA                                  pmax     pmax
      comp=Z,200nm,6.1s
GYA                                  LR       LR
      comp=Z,900nm,15.8s
GYA                                  LR       LR
      comp=Z,710nm,14.7s
GYA                                  LR       LR
      comp=Z,1µm,25.4s
Q24A  Divide             85.39  48   P        P         17 21 03.7 +0.7
      baz=247
ISCO  Idaho Springs      85.40  47   P        P         17 21 03.8 +0.8
      baz=246
TOLK  Toolik Lake Re     85.65  10   IAMs_20  IAMs_20   17 59 36.0
      comp=Z,3µm,18.0s
TOLK  Toolik Lake Re     85.65  10   P        P         17 21 04.9 +1.7
      baz=206
XAN   Xi'an              86.06 307   P        P         17 21 09.3 +3.2
XAN                                  pP       pwP       17 21 13.2 +3.9
XAN                                  sP       sP        17 21 16.4 +8.7
XAN                                  SKS      S         17 31 33.9 -7.3
XAN                                  S        ScS       17 31 48.0 -2.2
XAN                                  SS       SS        17 37 17.6 -2.1
XAN                                  pmax     pmax
      comp=Z,12nm,1.3s
XAN                                  pmax     pmax
      comp=Z,200nm,4.6s
XAN                                  LR       LR
      comp=Z,630nm,17.2s
XAN                                  LR       LR
      comp=Z,1µm,17.9s
XAN                                  LR       LR
      comp=Z,2µm,20.1s
EGMT  Eagleton           86.23  38   P        P         17 21 08.5 +1.9
      baz=243,SNR=7.3
JCT   Junction City      86.40  57   P        P         17 21 08.7 +0.9
      baz=250
GSI   Gunungsitoli       86.47 272   IAMs_20  IAMs_20   17 59 06.2
      comp=Z,2µm,22.0s
HHC   Hu-ho-hao-te       86.65 314  eP        P         17 21 09.0 +0.1
HHC                                  PP       PP        17 24 33.1 +1.9
HHC                                  S        S         17 31 43.7 -3.1
HHC                                  pmax     pmax
      comp=Z,15nm,0.8s
HHC                                  pmax     pmax
      comp=Z,400nm,7.1s
HHC                                  LR       LR
      comp=Z,820nm,17.6s
HHC                                  LR       LR
      comp=Z,780nm,15.7s
HHC                                  LR       LR
      comp=Z,2µm,16.5s
MAW   Mawson             87.19 199   P        P         17 21 10.8 -0.1
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	comp=Z,6.2nm,1.0s,baz=169,slow=7.1,SNR=5.2						
MAW				LR	LR	17 58 08.6	
	comp=Z,2μm,20.4s,baz=112,slow=34						
ABTX	**Abilene, Hawle**	**87.25**	**55**	P	**P**	**17 21 12.3**	**+0.4**
	baz=250						
BTO	**Baotou**	**87.64**	**313**	*e*P	**P**	**17 21 16.0**	**+2.3**
BTO				S	**S**	**17 32 01.8**	**+5.4**
BTO				LR	LR		
	comp=Z,3μm,7.8s						
BTO				LR	LR		
	comp=Z,2μm,14.7s						
YAK	**Yakutsk**	**87.64**	**338**	LR	LR	17 54 54.8	
	comp=Z,868nm,21.7s,baz=105,slow=32						
YAK	**Yakutsk**	**87.64**	**338**	⇓*e*P	**P**	**17 21 14.7**	**+1.7**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YAK	**Yakutsk**	**87.64**	**338**	IAMs_20	IAMs_20	17 53 57.8	
	comp=Z,2μm,22.0s						
LAO	**LASA Array**	**87.81**	**40**	P	**P**	**17 21 14.7**	**+0.4**
	baz=246						
H03S2	**Juan Fernandez**	**87.83**	**124**	T	T	18 58 44.6	
	baz=251,slow=75,SNR=41						
H03S1	**Juan Fernandez**	**87.84**	**124**	T	T	18 58 31.0	
	baz=251,slow=75,SNR=32						
H03S3	**Juan Fernandez**	**87.85**	**124**	T	T	18 58 29.7	
	baz=251,slow=75,SNR=35						
H03N2	**Juan Fernandez**	**87.94**	**124**	T	T	18 58 35.8	
	baz=257,slow=73,SNR=9.8						
H03N3	**Juan Fernandez**	**87.94**	**124**	T	T	18 58 40.9	
	baz=257,slow=73,SNR=8.4						
H03N1	**Juan Fernandez**	**87.95**	**124**	T	T	18 58 40.6	
	baz=257,slow=73,SNR=9.5						
KMI	**Kunming**	**88.24**	**296**	⇑P	**P**	**17 21 16.4**	**-0.7**
KMI				sP	pwP	17 21 29.1	+8.8
KMI				PP	**PP**	**17 24 47.5**	**+3.0**
KMI				SKS	**SKSac**	**17 31 43.2**	**-3.9**
KMI				S	**S**	**17 32 04.6**	**+1.6**
KMI				pmax	pmax		
	comp=Z,14nm,1.4s						
KMI				pmax	pmax		
	comp=Z,120nm,4.1s						
KMI				LR	LR		
	comp=Z,520nm,20.2s						
KMI				LR	LR		
	comp=Z,920nm,19.8s						
KMI				LR	LR		
	comp=Z,1μm,19.8s						
INK	**Inuvik**	**88.64**	**15**	P	**P**	**17 21 16.9**	**-0.7**
INK				pmax	pmax		
	comp=Z,42nm,1.5s						
INK	**Inuvik**	**88.64**	**15**	P	**P**	**17 21 16.9**	**-0.7**
INK				IAmb	IAmb	17 21 28.6	
	comp=Z,42nm,1.5s						
INK	**Inuvik**	**88.64**	**15**	P	**P**	**17 21 17.6**	**0.0**
	baz=221						
COYC	**Coyhaique**	**89.12**	**137**	IAMs_20	IAMs_20	17 52 29.3	
	comp=Z,2μm,19.0s						
CD2	**Chengdu**	**89.13**	**302**	P	**P**	**17 21 21.1**	**+0.2**
CD2				SKS	**SKSac**	**17 31 51.6**	**-0.3**
CD2				S	**ScS**	**17 32 17.4**	**+1.5**
CD2				SS	**SS**	**17 38 04.9**	**+0.1**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,280nm,5.5s						
CD2				LR	LR		
	comp=Z,1μm,22.1s						
CD2				LR	LR		
	comp=Z,1μm,20.1s						
CD2				LR	LR		
	comp=Z,2μm,17.8s						
CMAR	**Chiang Mai Arr**	**89.73**	**289**	P	**P**	**17 21 25.5**	**+1.6**
	comp=Z,3.9nm,1.0s,baz=98,slow=3.1,SNR=16						
CMAR				PKKPbc	**PKKPbc**	**17 39 00.8**	**+3.7**
	comp=Z,0.6nm,1.0s,baz=277,slow=3.5,SNR=2.8						
CMAR				LR	LR	18 00 10.6	
	comp=Z,296nm,18.6s,baz=146,slow=35						
CMAR	**Chiang Mai Arr**	**89.73**	**289**	*i* P	**P**	**17 21 25.7**	**+1.8**
CMAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**89.73**	**289**	P	**P**	**17 21 21.6**	**-2.3**
DGMT	**Dagmar**	**89.78**	**39**	P	**P**	**17 21 23.9**	**+0.3**
	baz=247						
CHTO	**Chiang Mai**	**89.82**	**289**	P	**P**	**17 21 21.1**	**-3.3**
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,600nm,21.0s						
CHTO	**Chiang Mai**	**89.82**	**289**	P	**P**	**17 21 21.1**	**-3.3**
LZH	**Lanzhou**	**90.67**	**307**	*e*P	**P**	**17 21 29.7**	**+1.6**
LZH				pP	pwP	17 21 33.0	+1.6
LZH				sP	sP	17 21 36.0	+6.3
LZH				SKS	**SKSac**	**17 32 02.1**	**+1.3**
LZH				*e*S	**S**	**17 32 24.4**	**-0.7**
LZH				sS	sS	17 32 33.3	+6.3
LZH				SS	**SS**	**17 38 29.0**	**+1.9**
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,160nm,4.3s						
LZH				LR	LR		
	comp=Z,820nm,11.9s						
LZH				LR	LR		
	comp=Z,2μm,16.3s						
LZH				LR	LR		
	comp=Z,1μm,16.5s						
YKA	**Yellowknife Ar**	**90.95**	**24**	P	**P**	**17 21 30.7**	**+2.2**
	comp=Z,16nm,1.1s,baz=228,slow=3.0,SNR=11						
YKA				LR	LR	17 54 56.1	
	comp=Z,4μm,21.6s,baz=0.0,slow=31						
PLCA	**Paso Flores**	**91.91**	**133**	LR	LR	17 54 47.2	
	comp=Z,780nm,19.8s,baz=245,slow=30						
BOD	**Bodaibo**	**92.14**	**330**	*e*P	P	17 21 39.5	+5.3
BOD				pmax	pmax		
	comp=Z,22nm,1.8s						
ULN	**Ulaanbaatar**	**92.23**	**319**	*c i*P	**P**	**17 21 38.2**	**+3.1**
ULN				pmax	pmax		
	comp=Z,18nm,1.3s						
ULN	**Ulaanbaatar**	**92.23**	**319**	P	**P**	**17 21 32.6**	**-2.5**
ULN				IAmb	IAmb	17 21 46.6	
	comp=Z,28nm,1.4s						
SYO	**Syowa Base**	**92.36**	**192**	⇓*e*X	**P**	**17 21 31.6**	**-3.5**
SYO	**Syowa Base**	**92.36**	**192**	⇓*e*PcP	**PcP**	**17 21 35.8**	**-0.1**
SYO	**Syowa Base**	**92.36**	**192**	⇑*e*pP	pP	17 21 37.8	+1.5
SONM	**Songino Array**	**92.64**	**319**	P	**P**	**17 21 36.8**	**-0.2**
	comp=Z,3.1nm,0.9s,baz=133,slow=5.2,SNR=18						
SONM				LR	LR	17 58 34.9	
	comp=Z,968nm,21.9s,baz=98,slow=32						
MIAR	**Mount Ida**	**92.65**	**55**	P	**P**	**17 21 36.8**	**-0.4**
	baz=254						
W39A	**Magazine**	**92.67**	**54**	IAMs_20	IAMs_20	18 00 31.5	
	comp=Z,1μm,18.0s						
W39A	**Magazine**	**92.67**	**54**	P	**P**	**17 21 37.3**	**0.0**
	baz=254						
ECSD	**EROS Data Cent**	**93.08**	**46**	P	**P**	**17 21 37.4**	**-1.6**
ECSD				IAmb	IAmb	17 21 46.9	
	comp=Z,37nm,1.4s						
ECSD	**EROS Data Cent**	**93.08**	**46**	P	**P**	**17 21 39.5**	**+0.5**
	baz=252						
A36M	**Sachs Harbour**	**93.24**	**14**	IAMs_20	IAMs_20	17 55 54.2	
	comp=Z,1μm,21.0s						
A36M	**Sachs Harbour**	**93.24**	**14**	P	**P**	**17 21 41.0**	**+2.0**
	baz=229						
SNAA	**Sanae**	**93.39**	**178**	⇓*e*P	**P**	**17 21 40.6**	**+0.6**
SNAA				pmax	pmax		
	comp=Z,13nm,1.3s						
SNAA	**Sanae**	**93.39**	**178**	P	**P**	**17 21 38.5**	**-1.5**
SNAA				IAMs_20	IAMs_20	18 01 04.3	
	comp=Z,2μm,20.0s						
FFC	**Flin Flon**	**93.43**	**34**	P	**P**	**17 21 39.5**	**-0.8**
FFC				pmax	pmax		
	comp=Z,42nm,1.4s						
FFC	**Flin Flon**	**93.43**	**34**	P	**P**	**17 21 39.5**	**-0.8**
FFC				IAmb	IAmb	17 21 48.2	
	comp=Z,42nm,1.4s						
VNA3	**Neumayer Olymp**	**93.46**	**176**	P	**P**	**17 21 40.5**	**+0.2**
U40A	**Yellville**	**93.72**	**54**	P	**P**	**17 21 44.1**	**+2.0**
	baz=254						
W41B	**Gary Mavity, V**	**93.88**	**55**	P	**P**	**17 21 43.9**	**+1.2**
	baz=255						
TIXI	**Tiksi**	**93.88**	**345**	⇑*e*P	**P**	**17 21 43.6**	**+1.7**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TIXI	**Tiksi**	**93.88**	**345**	P	**P**	**17 21 41.7**	**-0.2**
TIXI				IAmb	IAmb	17 21 50.5	
	comp=Z,71nm,2.0s						
BOAB	**BOACO BROADBAN**	**93.89**	**78**	IAMs_20	IAMs_20	17 53 53.4	
	comp=Z,2μm,20.0s						
VNA2	**Neumayer--Watz**	**93.92**	**176**	P	**P**	**17 21 42.3**	**-0.1**
	baz=195,slow=4.3						
JTS	**Las Juntas de**	**94.03**	**80**	IAMs_20	IAMs_20	17 54 08.3	
	comp=Z,1μm,19.0s						
VNA1	**Neumayer--Stat**	**94.14**	**176**	P	**P**	**17 21 42.8**	**-0.5**
MGMO	**Mountain Grove**	**94.39**	**53**	IAmb	IAmb	17 21 53.6	
	comp=Z,37nm,1.1s						
GTA	**Gaotai**	**94.68**	**309**	P	**P**	**17 21 49.4**	**+2.8**
GTA				pP	pwP	17 21 55.1	+5.3
GTA				sP	sP	17 21 58.4	+10
GTA				S	**S**	**17 33 05.7**	**+5.0**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,81nm,5.1s						
GTA				LR	LR		
	comp=Z,570nm,18.9s						
GTA				LR	LR		
	comp=Z,1μm,20.4s						
GTA				LR	LR		
	comp=Z,2μm,22.9s						
HDC	**Heredia**	**94.76**	**81**	IAMs_20	IAMs_20	17 54 33.7	
	comp=Z,2μm,20.0s						
AGMN	**Agassiz Nation**	**94.94**	**41**	P	**P**	**17 21 46.8**	**-0.6**
	baz=253						
ZAK	**Zakamensk**	**95.38**	**321**	*e*P	**P**	**17 21 48.5**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.8s						
CCM	**Cathedral Cave**	**95.41**	**52**	IAMs_20	IAMs_20	17 58 19.6	
	comp=Z,1μm,18.0s						
CCM	**Cathedral Cave**	**95.41**	**52**	P	**P**	**17 21 49.7**	**0.0**
	baz=255						
ULM	**Lac du Bonnet**	**95.50**	**40**	LR	LR	18 00 04.9	
	comp=Z,828nm,19.6s,baz=266,slow=32						
TLY	**Talaya**	**95.54**	**322**	LR	LR	18 01 45.6	
	comp=Z,2μm,20.1s,baz=100,slow=34						
TLY	**Talaya**	**95.54**	**322**	IAMs_20	IAMs_20	18 01 52.1	
	comp=Z,2μm,20.0s						
TRQA	**Tornquist**	**99.06**	**133**	IAMs_20	IAMs_20	18 02 41.6	
	comp=Z,1μm,18.0s						
PSGCX	**Pisagua**	**99.78**	**113**	IAMs_20	IAMs_20	17 57 11.9	
	comp=Z,2μm,21.0s						
PB12	**IPOC Station P**	**99.92**	**112**	IAMs_20	IAMs_20	17 56 21.9	
	comp=Z,2μm,22.0s						
PB11	**IPOC Station P**	**100.14**	**114**	IAMs_20	IAMs_20	17 57 42.4	
	comp=Z,2μm,21.0s						
P49A	**Miami Univ. Ec**	**100.71**	**52**	IAMs_20	IAMs_20	18 01 11.8	
	comp=Z,1μm,20.0s						
PB16	**IPOC Station P**	**100.75**	**112**	IAMs_20	IAMs_20	17 56 59.8	
	comp=Z,1μm,22.0s						
TZTN	**Tazewell**	**101.07**	**55**	IAMs_20	IAMs_20	18 05 54.8	
	comp=Z,1μm,19.0s						
ACSO	**Alum Creek Sta**	**102.14**	**51**	IAMs_20	IAMs_20	18 02 17.7	
	comp=Z,1μm,20.0s						
HOPE	**Hope Point**	**102.99**	**157**	IAMs_20	IAMs_20	18 02 29.8	
	comp=Z,2μm,20.0s						
BLA	**Blacksburg**	**103.65**	**55**	IAMs_20	IAMs_20	18 07 33.2	
	comp=Z,1μm,18.0s						
M53A	**WI Miller and**	**104.05**	**50**	IAMs_20	IAMs_20	18 18 00.1	
	comp=Z,1μm,18.0s						
PALK	**Pallekele**	**104.23**	**274**	IAMs_20	IAMs_20	18 12 30.1	
	comp=Z,1μm,20.0s						
N54A	**Moraine State**	**104.50**	**51**	IAMs_20	IAMs_20	18 03 51.2	
	comp=Z,2μm,20.0s						
M54A	**Oil Creek Stat**	**104.81**	**50**	IAMs_20	IAMs_20	18 07 59.3	
	comp=Z,972nm,18.0s						
ZALV	**Zalesovo Beam**	**107.15**	**322**	PKiKP	**PKiKP**	**17 26 51.0**	**0.0**
	comp=Z,0.2nm,0.3s,baz=107,slow=4.8,SNR=1.9						
BINY	**Binghamton**	**107.62**	**50**	IAMs_20	IAMs_20	18 10 51.4	
	comp=Z,1μm,18.0s						
MKAR	**Makanchi Array**	**108.49**	**315**	PKiKP	**PKiKP**	**17 26 54.2**	**+0.4**
	comp=Z,1.1nm,0.9s,baz=101,slow=2.9,SNR=2.9						
LONY	**Lake Ozonia**	**108.79**	**48**	IAMs_20	IAMs_20	18 14 57.1	
	comp=Z,1μm,18.0s						
SDDR	**Presa de Saban**	**108.80**	**75**	IAMs_20	IAMs_20	18 02 18.0	
	comp=Z,1μm,21.0s						
PAL	**Palisades**	**109.09**	**51**	IAMs_20	IAMs_20	18 06 32.6	
	comp=Z,1μm,21.0s						
WSPT	**Westport, CT**	**109.53**	**51**	IAMs_20	IAMs_20	18 06 55.4	
	comp=Z,1μm,20.0s						
VT1	**Waterbury**	**110.09**	**48**	IAMs_20	IAMs_20	18 07 30.5	
	comp=Z,1μm,20.0s						
QUA2	**Belchertown**	**110.32**	**50**	IAMs_20	IAMs_20	18 12 13.9	
	comp=Z,1μm,18.0s						
FFD	**Franklin Falls**	**110.86**	**49**	IAMs_20	IAMs_20	18 07 13.1	
	comp=Z,1μm,20.0s						
BRYW	**Bryant College**	**110.91**	**51**	IAMs_20	IAMs_20	18 10 52.6	
	comp=Z,1μm,19.0s						
KURK	**Kurchatov**	**110.94**	**319**	*i* PKIKP	**PKiKP**	**17 26 58.6**	**+0.3**
KURK	**Kurchatov**	**110.94**	**319**	IAMs_20	IAMs_20	18 11 55.0	
	comp=Z,1μm,19.0s						
KURBB	**Kurchatov Arra**	**111.00**	**319**	PKiKP	**PKiKP**	**17 26 58.6**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=110,slow=2.2,SNR=4.5						
WES	**Weston**	**111.08**	**50**	IAMs_20	IAMs_20	18 13 53.1	
	comp=Z,2μm,18.0s						
PKME	**Peaks-Kenny Pk**	**112.56**	**47**	IAMs_20	IAMs_20	18 23 17.6	
	comp=Z,1μm,19.0s						
PQI	**Presque Isle**	**113.40**	**45**	IAMs_20	IAMs_20	18 23 44.5	
	comp=Z,1μm,18.0s						
EMMW	**East Machias**	**113.88**	**48**	IAMs_20	IAMs_20	18 17 23.6	
	comp=Z,1μm,18.0s						
AAK	**Ala-Archa**	**114.02**	**310**	IAMs_20	IAMs_20	18 09 48.4	
	comp=Z,1μm,22.0s						
BRVK	**Borovoye**	**115.86**	**322**	⇓*i*PKIKP	**PKPdf**	**17 27 08.9**	**+1.3**
BRVK	**Borovoye**	**115.86**	**322**	IAMs_20	IAMs_20	18 13 15.4	
	comp=Z,2μm,21.0s						
SVE	**Sverdlovsk**	**120.27**	**328**	*i* PKIKP	**PKiKP**	**17 27 23.3**	**+7.2**
SVE				MLR	MLR		
	comp=Z,3μm,20.0s						
ARU	**Arti**	**121.49**	**328**	PKP	**PKiKP**	**17 27 18.7**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=289,slow=22,SNR=1.9						
ARU	**Arti**	**121.49**	**328**	*i* PKIKP	**PKiKP**	**17 27 19.2**	**+0.8**
ARU						17 28 49.5	
ARU						17 34 31.1	
ARU				SS	SS	17 45 16.6	-8.6
ARU				MLR	MLR		
	comp=Z,3μm,20.0s						
ARCES	**ARCESS Array B**	**123.82**	**351**	PKP	**PKiKP**	**17 27 22.7**	**0.0**
	comp=Z,2.8nm,0.8s,baz=11,slow=1.2,SNR=6.8						
VOI	**Vohitsoka**	**123.93**	**230**	IAMs_20	IAMs_20	18 15 04.7	
	comp=Z,1μm,22.0s						
APA	**Apatity**	**124.04**	**347**	⇓*i*PKIKP	PKPdf	17 27 12.3	-11
APA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,4μm,20.0s						
PRGR	**Permogore**	**124.69**	**337**	*e*PKIKP	**PKiKP**	**17 27 24.6**	**0.0**
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KIRV	**Kirov**	**124.90**	**333**	⇑*i*PKIKP	**PKiKP**	**17 27 28.5**	**+3.4**
MSEY	**Mahe Island**	**124.98**	**253**	IAMs_20	IAMs_20	18 14 25.3	
	comp=Z,1μm,22.0s						
GEYT	**Alibeck**	**126.94**	**306**		**PKPdf**	**17 27 25.3**	**-4.1**
GYA0B	**ALIBECK ARRAY**	**126.94**	**306**	PKPdf	**PKPdf**	**17 27 25.6**	**-3.9**
KLMR	**Klimovskoe**	**127.42**	**339**	*e*PKIKP	**PKiKP**	**17 27 30.3**	**+0.2**
KLMR				*e*SSS	SSS	17 51 26.5	
KLMR				pmax	pmax		
	comp=Z,36nm,1.4s						
KLMR	**Klimovskoe**	**127.42**	**339**	*e*PKPdf	**PKiKP**	**17 27 30.3**	**+0.2**
KLMR				AMP		17 27 38.4	
	comp=Z,36nm,1.4s						
KLMR				*e*SS	**SS**	**17 46 47.9**	**+8.5**
KLMR				*e*SS	**SS**	**17 46 47.9**	**+8.5**
KLMR				*e*SSS	SSS	17 51 26.6	
KLMR				*e*SSS	SSS	17 51 26.6	
KLMR				LQ	LQ	18 11 39.3	
KLMR				LQ	LQ	18 11 39.3	
KLMR				LR	LR	18 17 07.3	
BELG	**Belogornoye**	**129.00**	**327**	*d i*PKIKP	**PKiKP**	**17 27 35.6**	**+2.1**
SUR	**Sutherland**	**130.04**	**199**	IAMs_20	IAMs_20	18 24 52.4	
	comp=Z,1μm,19.0s						
FINES	**FINESS Array B**	**130.92**	**346**	PKP	**PKPdf**	**17 27 36.5**	**+0.3**
	comp=Z,3.2nm,0.9s,baz=108,slow=3.1,SNR=2.0						
SOCY	**Socotra**	**131.00**	**273**	IAMs_20	IAMs_20	18 26 25.0	
	comp=Z,1μm,20.0s						
MOS	**Moscow**	**131.71**	**335**	*i* PKIKP	**PKiKP**	**17 27 41.7**	**+2.9**
MOS				*e*		17 30 01.7	
OBN	**Obninsk**	**132.58**	**335**	⇓*i*PKIKP	**PKiKP**	**17 27 41.0**	**+0.4**
OBN				*e*SS	SS	17 47 41.8	-1.1
OBN				pmax	pmax		
	comp=Z,13nm,1.4s						
OBN				MLR	MLR		
	comp=Z,2μm,20.0s						
MAK	**Makhachkala**	**133.30**	**316**	*i* P	**Pdif**	**17 24 33.9**	**-4.5**
MAK				*i*		17 27 38.1	
MAK				*e*		17 34 52.0	
MAK				*e*SS	SS	17 47 46.0	-7.0
MAK				*e*SSS	SSS	17 52 51.9	
MAK				pmax	pmax		
	comp=Z,414nm,2.0s						
NB2	**NORSAR Subarra**	**133.73**	**355**	PKPdf	PKiKP	17 27 52.1	+9.2
	comp=Z,0.8nm,0.7s,baz=11,slow=1.9						
KIV	**Kislovodsk**	**136.03**	**319**	*i* PKIKP	**PKiKP**	**17 27 48.6**	**+0.5**
KIV				*e*PS	**PS**	**17 40 47.8**	**-2.4**
KIV				*e*SS	SS	17 48 24.2	-1.7
KIV				*e*SSS	SSS	17 53 26.3	
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV	**Kislovodsk**	**136.03**	**319**	IAMs_20	IAMs_20	18 31 37.1	
	comp=Z,1μm,20.0s						
MNK	**Minsk**	**136.30**	**340**	*i* PKIKP	**PKPdf**	**17 27 45.7**	**-0.8**
MNK				*i*		17 30 25.9	
MNK				*i* PPP	PPP	17 33 22.7	
MNK				*i*		17 34 56.8	
MNK				*i* PS	**PS**	**17 40 50.9**	**-0.7**
MNK				*i* SS	SS	17 48 26.5	-1.1
MNK				*i* SSS	SSS	17 53 32.1	
MNK				pmax	pmax		
	comp=E,3.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,16nm,1.2s						
MNK				pmax	pmax		
	comp=N,15nm,1.1s						
MNK				MLR	MLR		
	comp=N,1μm,27.0s						
MNK				MLR	MLR		
	comp=E,171nm,20.0s						
MNK				MLR	MLR		
	comp=Z,1μm,18.0s						
MNK	**Minsk**	**136.30**	**340**	*i* PKP	**PKPdf**	**17 27 45.7**	**-0.8**
	comp=E,3.0nm,0.8s						
MNK				*i* PKP	**PKPdf**	**17 27 45.7**	**-0.8**
	comp=N,15nm,1.1s						
MNK				*i* PKP	**PKPdf**	**17 27 45.7**	**-0.8**
	comp=Z,16nm,1.2s,baz=36						
MNK				*i* PP	**PP**	**17 30 25.9**	**-0.5**
MNK				*i* SKP		17 31 19.6	
MNK				*i* PKS	**PKSdf**	**17 31 22.0**	**-0.6**
MNK				*i* PPP	PPP	17 33 22.7	
MNK				*i* SKS	**SKSdf**	**17 34 56.8**	**-1.2**
MNK				*i* PS	**PS**	**17 40 51.0**	**-0.7**
MNK				*i* SKKS	**SKKSdf**	**17 44 39.5**	**-1.2**
MNK				*i* SS	**SS**	**17 48 26.5**	**-1.0**
MNK				*i* SSS	SSS	17 53 32.1	
MNK				*i* LR	LR	18 23 57.6	
MNK				*i* LRM	MLR	18 26 58.4	
	comp=N,1μm,27.4s						
MNK				*i* LRM	MLR	18 28 45.4	
	comp=E,171nm,19.7s						
MNK				*i* LRM	MLR	18 28 56.8	
	comp=Z,1μm,17.8s						
GNI	**Garni**	**136.31**	**313**	IAMs_20	IAMs_20	18 35 51.1	
	comp=Z,995nm,20.0s						
NACGM	**Naroch**	**136.33**	**341**	*i* PKP	**PKPdf**	**17 27 43.3**	**-3.3**
SOC	**Sochi**	**138.08**	**320**	*i* PKIKP	**PKPdf**	**17 27 50.6**	**+0.4**
SOC				*e*		17 30 35.3	
SOC				*e*PPP	PPP	17 33 38.8	
SOC				*e*SS	SS	17 48 44.1	-5.8
SOC				*e*SSS	SSS	17 54 02.4	
SUW	**Suwalki**	**138.18**	**343**	*e*PKP	PKiKP	17 28 01.2	+9.2
ANN	**Anapa**	**138.78**	**323**	*i* PKIKP	**PKPdf**	**17 27 52.4**	**+1.0**
ANN				*e*		17 27 57.0	
ANN				*e*		17 30 42.3	
ANN				pmax	pmax		
	comp=Z,60nm,0.9s						
AKBB	**Malin Array Si**	**138.84**	**335**	⇓*i*PKIKP	**PKiKP**	**17 27 54.3**	**+0.8**
RAYN	**Ar Rayn**	**139.65**	**289**	IAMs_20	IAMs_20	18 38 55.8	
	comp=Z,794nm,20.0s						
BSEG	**Bad Segeberg**	**140.83**	**354**	*e*L	L	18 29 05.8	
	comp=Z,2μm,21.9s						
LVV	**L'vov**	**141.51**	**339**	*e*PKHKP	PKPpre	17 27 43.0	
LVV				MLR	MLR		
	comp=Z,2μm,24.0s						
KIBK	**Kibwezi**	**141.76**	**246**		**PKPdf**	**17 27 53.6**	**-4.3**
KIBK				IAMs_20	IAMs_20	18 25 46.0	
	comp=Z,913nm,20.0s						
OJC	**Ojcow**	**142.51**	**343**	*e*PKP	**PKiKP**	**17 28 04.4**	**+3.3**
KOLS	**Kolonicke sedl**	**142.87**	**339**	*e*PKIKP	**PKiKP**	**17 28 03.1**	**+1.2**
KOLS	**Kolonicke sedl**	**142.87**	**339**	*e*PKP	**PKiKP**	**17 28 03.0**	**+1.2**
BURAR	**Bucovina Array**	**142.89**	**336**	⇑P	**PKPdf**	**17 27 59.7**	**+0.8**
BURAR	**Bucovina Array**	**142.89**	**336**	⇑PKIKP	**PKPdf**	**17 27 59.7**	**+0.8**
KMBO	**Kilima Mbogo**	**143.02**	**247**	PKP	**PKPdf**	**17 27 58.7**	**-1.6**
	comp=Z,0.8nm,0.3s,baz=150,slow=1.8,SNR=6.7						
KMBO	**Kilima Mbogo**	**143.02**	**247**	PKIKP	**PKiKP**	**17 28 02.7**	**-0.8**
KMBO				MLR	MLR		
	comp=Z,1μm,21.0s						
KMBO	**Kilima Mbogo**	**143.02**	**247**		**PKiKP**	**17 28 02.7**	**-0.8**
KMBO	**Kilima Mbogo**	**143.02**	**247**	IAMs_20	IAMs_20	18 25 06.1	
	comp=Z,952nm,21.0s						
CLL	**Collm**	**143.03**	**350**	*e*PKIKP	**PKPdf**	**17 28 00.0**	**+1.1**
CLL				*i*		17 28 03.8	
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CLL				MLR	MLR		
	comp=Z,2μm,21.1s						
CLL	**Collm**	**143.03**	**350**	*e*PKPdf	**PKPdf**	**17 28 00.0**	**+1.1**
	comp=Z,7.0nm,0.8s						
CLL				*i*		17 28 03.8	
CLL				*e*PPS	PPS	17 43 36.0	
CLL				*e*SS	SS	17 49 42.0	-4.2
CLL				*e*		17 52 36.0	
CLL				*e*SSS	SSS	17 55 06.0	
CLL				*e*SSSS		17 59 00.0	
CLL				Lm	MLR	18 29 00.0	
	comp=Z,2μm,21.1s						
CLL	**Collm**	**143.03**	**350**	*e*L	L	18 30 18.3	
	comp=Z,2μm,21.9s						
NIE	**Niedzica**	**143.08**	**342**	*e*PKP	**PKiKP**	**17 28 06.2**	**+3.9**
OSTC	**Ostas**	**143.12**	**347**	*e*PKP	**PKiKP**	**17 28 04.6**	**+2.3**
OSTC				AMS	AMS	18 29 30.0	
	comp=Z,2μm,22.5s						
UZH	**Uzhgorod**	**143.13**	**339**	⇑*i*PKIKP	**PKiKP**	**17 28 02.2**	**-0.1**
UZH				*i*		17 28 07.4	
CRVS	**Cervenica-Dubn**	**143.17**	**340**	*e*PKIKP	**PKiKP**	**17 28 03.1**	**+0.6**
CRVS	**Cervenica-Dubn**	**143.17**	**340**	*e*PKP	**PKiKP**	**17 28 03.1**	**+0.6**
UPC	**Upice**	**143.21**	**347**	*e*PKP	**PKiKP**	**17 28 02.4**	**-0.1**
UPC				AMS	AMS	18 29 00.0	
	comp=Z,3μm,22.0s						
UPC	**Upice**	**143.21**	**347**	*e*PKIKP	**PKiKP**	**17 28 02.4**	**-0.1**
UPC				MLR	MLR		
	comp=Z,3μm,22.0s						
BRG	**Berggiesshubel**	**143.28**	**349**	*e*PKP	**PKiKP**	**17 28 01.4**	**-1.2**
BRG				Amp		17 28 02.3	
	comp=Z,4.1nm,1.1s						
BRG	**Berggiesshubel**	**143.28**	**349**	P	**PKiKP**	**17 28 07.8**	**+5.1**
BRG				Amp		17 28 09.2	
	comp=Z,9.5nm,1.1s						
TSUM	**Tsumeb**	**143.29**	**203**	IAMs_20	IAMs_20	18 33 43.2	
	comp=Z,1μm,19.0s						
DPC	**Dobruska-Polom**	**143.29**	**346**	*e*PKP	**PKPdf**	**17 28 00.6**	**+1.2**
DPC				AMS	AMS	18 29 40.0	
	comp=Z,2μm,20.2s						
DPC	**Dobruska-Polom**	**143.29**	**346**	*e*PKIKP	**PKPdf**	**17 28 00.6**	**+1.2**
DPC				MLR	MLR		
	comp=Z,2μm,20.2s						
KRLC	**Kraliky**	**143.44**	**346**	*e*PKP	**PKPdf**	**17 28 00.8**	**+1.1**
KRLC				AMS	AMS	18 26 40.0	
	comp=Z,2μm,26.1s						
KRLC	**Kraliky**	**143.44**	**346**	*e*PKIKP	**PKPdf**	**17 28 00.8**	**+1.1**
KRLC				MLR	MLR		
	comp=Z,2μm,26.1s						
TRPA	**Tarpa**	**143.47**	**339**	*e*PKPDF	**PKPdf**	**17 27 58.8**	**-0.9**
TRPA	**Tarpa**	**143.47**	**339**	*e*P	**PKiKP**	**17 28 03.7**	**+0.6**
PVCC	**Panska Ves**	**143.50**	**348**	*e*PKP	**PKPdf**	**17 28 00.6**	**+0.9**
PVCC				AMS	AMS	18 27 50.0	
	comp=Z,2μm,29.5s						
PVCC	**Panska Ves**	**143.50**	**348**	*e*PKIKP	**PKPdf**	**17 28 00.6**	**+0.9**
PVCC				MLR	MLR		
	comp=Z,2μm,29.5s						
MORC	**Moravsky Berou**	**143.53**	**345**	*e*PKP	**PKPdf**	**17 27 59.9**	**0.0**
TPGR	**Topolog**	**143.59**	**330**	⇑P	**PKPdf**	**17 28 00.6**	**+0.5**
VRI	**Vrincioaia**	**143.62**	**332**	⇑P	**PKiKP**	**17 28 05.8**	**+2.3**
VRI	**Vrincioaia**	**143.62**	**332**	⇑PKIKP	**PKiKP**	**17 28 05.8**	**+2.3**
ARCR	**ARCALIA**	**143.66**	**336**	⇓P	**PKiKP**	**17 28 05.9**	**+2.4**
OZUR		**143.86**	**334**	⇑P	**PKPdf**	**17 28 01.2**	**+0.6**
BISRR	**Bisoca**	**143.88**	**332**	⇓P	**PKiKP**	**17 28 09.8**	**+5.7**
MOX	**Moxa**	**143.89**	**351**	*e*L	L	18 32 45.0	
	comp=Z,2μm,20.8s						

BRTR	Keskin Array B	144.00	319	PKP	PKPdf	17 28 01.0	-0.1
	comp=Z,23nm,0.9s,baz=101,slow=2.5,SNR=36						
BRTR	Keskin Array B	144.00	319	PKPdf	PKPab	17 27 58.7	+0.2
PRU	Pruhonice	144.01	348	ePKP	PKPdf	17 28 01.6	+1.0
PRU				AMS	AMS	18 28 30.0	
	comp=Z,2µm,21.6s						
PRU	Pruhonice	144.01	348	ePKIKP	PKPdf	17 28 01.6	+1.0
PRU				MLR	MLR		
	comp=Z,2µm,21.6s						
VRAC	Vranov	144.20	345	⇑P	PKPdf	17 28 00.2	-0.8
VRAC	Vranov	144.20	345	ePKP	PKPdf	17 28 01.7	+0.7
VRAC	Vranov	144.20	345	⇑PKIKP	PKPdf	17 28 00.2	-0.8
MANR	Mangalia	144.26	328	⇑P	PKPdf	17 28 02.9	+1.7
MLR	Muntele Rosu	144.26	333	⇓P	PKiKP	17 28 03.7	-1.3
MLR	Muntele Rosu	144.26	333	⇓PKIKP	PKiKP	17 28 03.7	-1.3
JAVC	Velka Javorina	144.34	344	ePKP	PKPdf	17 28 02.2	+0.9
VYHS	Vyhne	144.34	343	ePKIKP	PKPdf	17 28 02.5	+1.2
VYHS	Vyhne	144.34	343	ePKP	PKPdf	17 28 02.5	+1.2
ANTO	Ankara	144.45	320	IAMs_20	IAMs_20	18 34 42.8	
	comp=Z,881nm,22.0s						
MEM	Membach	144.47	357	dPKPdf	PKPdf	17 28 00.9	-0.5
MEM				dPKP	PKiKP	17 28 05.9	+0.9
KRUC	Moravsky	144.47	345	ePKP	PKPdf	17 28 01.8	+0.3
BTNL	Ternell	144.48	357	dPKPdf	PKPab	17 27 59.7	0.0
BTNL				dPKP	PKiKP	17 28 06.8	+1.6
DRGR		144.54	337	⇓P	PKPdf	17 28 01.9	+0.1
DRGR		144.54	337	⇓PKIKP	PKPdf	17 28 01.9	+0.1
PSZ	Piszkesteto	144.54	341	⇓P	PKPdf	17 28 02.8	+1.1
PSZ	Piszkesteto	144.54	341	ePKPDF	PKPdf	17 28 02.5	+0.8
PSZ	Piszkesteto	144.54	341	eP	PKiKP	17 28 03.6	-1.8
PSZ	Piszkesteto	144.54	341	⇓PKIKP	PKPdf	17 28 02.8	+1.1
SNF	Seneffe	144.62	359	dPKPdf	PKPdf	17 28 01.3	-0.3
SNF				dPKP	PKiKP	17 28 07.6	+2.3
ROTZ	Rotzenmuhle	144.65	350	ePKPdf	PKiKP	17 28 03.7	-1.7
	baz=13,slow=2.9						
BCLA	Clavier	144.68	358	dPKPdf	PKPdf	17 28 02.7	+0.9
TNS	Taunus Mts	144.68	355	ePKPdf	PKPdf	17 28 03.6	+1.7
	baz=13,slow=2.9						
TNS				eL	L	18 29 55.5	
	comp=Z,1µm,21.7s						
VOIR		144.70	334	⇑P	PKPdf	17 28 03.6	+1.5
VOIR		144.70	334	⇑PKIKP	PKPdf	17 28 03.6	+1.5
SMOL	Smolenice	144.72	344	ePKIKP	PKPdf	17 28 03.7	+1.8
SMOL	Smolenice	144.72	344	ePKP	PKPdf	17 28 03.7	+1.8
BHOU	Houvegnez	144.72	357	dPKPdf	PKPdf	17 28 03.0	+1.1
BHOU				dPKP	PKiKP	17 28 08.6	+3.0
BGES	Gesves	144.72	358	dPKiKP	PKiKP	17 28 05.2	-0.4
BMRD	Maredsous	144.81	359	dPKPdf	PKPdf	17 28 02.8	+0.8
BMRD				dPKP	PKiKP	17 28 07.6	+1.8
GRF	Grafenberg Arr	144.88	351	ePKPdf	PKiKP	17 28 04.1	-1.8
	baz=13,slow=2.9						
GRF				eL	L	18 32 42.9	
	comp=Z,2µm,21.1s						
MODS	Modra-Piesok	144.89	344	ePKIKP	PKPdf	17 28 03.8	+1.6
MODS	Modra-Piesok	144.89	344	ePKP	PKPdf	17 28 03.8	+1.6
ARR	Arges	144.93	334	⇓P	PKiKP	17 28 04.4	-1.9
RCHB	Rochefort	144.95	358	dPKPdf	PKPdf	17 28 03.0	+0.7
RCHB				dPKP	PKiKP	17 28 08.1	+2.0
KHC	Kasperske Hory	145.02	349	ePKP	PKPdf	17 28 03.5	+1.0
KHC				ex	x	17 28 09.0	
KHC				AMS	AMS	18 22 00.0	
	comp=Z,2µm,27.4s						
KHC	Kasperske Hory	145.02	349	cePKIKP	PKPdf	17 28 04.1	+1.6
DOU	Dourbes	145.02	359	dPKPdf	PKPdf	17 28 04.1	+1.7
ZST	Bratislava	145.09	344	ePKIKP	PKiKP	17 28 04.9	-1.5
ZST	Bratislava	145.09	344	ePKP	PKiKP	17 28 04.9	-1.5
WET	Wettzell	145.14	349	ePKPdf	PKiKP	17 28 04.6	-1.9
	baz=13,slow=2.9						
WET				eL	L	18 30 42.5	
	comp=Z,1µm,21.4s						
FURI	Furi	145.15	264	IAMs_20	IAMs_20	18 32 20.7	
	comp=Z,777nm,20.0s						
CKRC	Cesky Krumlov	145.17	348	ePKP	PKiKP	17 28 05.2	-1.4
CKRC				ex	x	17 28 13.0	
BUD	Budapest	145.19	342	ePKPDF	PKPdf	17 28 03.0	+0.3
DEV	Deva	145.22	336	⇑P	PKPdf	17 28 03.5	+0.6
DEV	Deva	145.22	336	⇑PKIKP	PKPdf	17 28 03.5	+0.6
SGRR	Singureni	145.23	331	⇑P	PKPdf	17 28 03.0	+0.1
GEC2	GERESS Array S	145.27	348	ePKPdf	PKPdf	17 28 04.5	+1.5
	baz=13,slow=2.9						
GEC2				eL	L	18 31 58.8	
	comp=Z,2µm,21.2s						
GERES	GERESS Array B	145.27	348	PKPbc	PKPbc	17 28 02.7	0.0
	comp=Z,5.3nm,0.8s,baz=44,slow=4.1,SNR=13						
WLF	Walferdange	145.40	357	dPKPdf	PKPab	17 28 03.1	0.0
WLF				dPKP	PKiKP	17 28 10.8	+3.8
WLF	Walferdange	145.40	357	ePKPdf	PKiKP	17 28 05.9	-1.1
	baz=13,slow=2.9						
AMBH	Ambrzfalva	145.63	339	⇑P	PKiKP	17 28 06.7	-0.8
AMBH	Ambrzfalva	145.63	339	ePKPDF	PKPab	17 28 05.7	+1.7
CONA	Conrad Observa	145.66	345	eP	PKiKP	17 28 06.3	-1.4
	comp=Z,112nm,1.5s,SNR=25						
GZR	Gura Zlata	145.67	336	⇑P	PKPab	17 28 05.9	+1.6
GZR	Gura Zlata	145.67	336	⇑PKP2	PKPab	17 28 05.9	+1.6
SOP	Sopron	145.71	344	ePKPDF	PKPab	17 28 05.4	+1.1
SOP	Sopron	145.71	344	eP	PKiKP	17 28 12.5	+4.8
EGYH	Egyhazaskeszo	145.75	343	ePKPDF	PKPab	17 28 05.2	+0.8
EGYH	Egyhazaskeszo	145.75	343	eP	PKiKP	17 28 08.7	+1.0
MPLH	Magyarpolny	145.91	343	ePKPDF	PKPab	17 28 05.1	0.0
MPLH	Magyarpolny	145.91	343	eP	PKiKP	17 28 08.4	+0.3
BZS	Buzias	145.94	337	⇓P	PKPab	17 28 06.4	+1.2
BZS	Buzias	145.94	337	⇓PKP2	PKPab	17 28 06.4	+1.2
STU	Stuttgart	146.04	353	ePKPdf	PKiKP	17 28 08.1	-0.3
	baz=13,slow=2.9						
MOA	Molln	146.10	347	eP	PKiKP	17 28 07.7	-0.9
	comp=Z,86nm,1.9s,SNR=18						
HERR	Herculane	146.24	336	⇓P	PKPab	17 28 06.4	0.0
BANR	Banloc	146.31	337	⇓P	PKiKP	17 28 09.2	+0.2
FUR	Furstenfeldbru	146.36	351	ePKPdf	PKiKP	17 28 08.9	-0.1
	baz=13,slow=2.9						
FUR				eL	L	18 34 07.6	
	comp=Z,2µm,20.4s						
ARSA	Arzberg	146.38	345	eP	PKPab	17 28 07.6	+0.7
	comp=Z,14nm,0.9s,SNR=10						
MORH	Mrgy, Hungar	146.44	341	⇑P	PKPab	17 28 07.4	+0.3
MORH	Mrgy, Hungar	146.44	341	ePKPDF	PKPab	17 28 07.3	+0.3
MORH	Mrgy, Hungar	146.44	341	eP	PKiKP	17 28 08.6	-0.6
MORH	Mrgy, Hungar	146.44	341	eP	PKPab	17 28 07.0	-0.1
RJOB	Jochberg	146.51	349	ePKPdf	PKiKP	17 28 08.7	-0.8
	baz=13,slow=2.9						
BFO	Black Forest	146.57	354	ePKPdf	PKiKP	17 28 09.4	-0.1
	baz=13,slow=2.9						
BFO				eL	L	18 35 54.5	
	comp=Z,930nm,20.6s						
GHAJ	Ghor Haditha	146.58	305	IAMs_20	IAMs_20	18 38 10.7	
	comp=Z,862nm,20.0s						
MDVR	Moldovita	146.60	336	⇑P	PKPab	17 28 08.7	+0.9
LODK	Lodwar	146.62	253	IAMs_20	IAMs_20	18 29 02.8	
	comp=Z,856nm,21.0s						
CSS	Mathiatis	146.72	312	IAMs_20	IAMs_20	18 39 14.6	
	comp=Z,914nm,22.0s						
KOVH	Kovagotottos	146.73	341	ePKPDF	PKPab	17 28 08.1	-0.1
KOVH	Kovagotottos	146.73	341	eP	PKiKP	17 28 09.4	-0.4
KUBS	Kucevo	146.93	336	eP	PKPab	17 28 08.5	-0.6
KOGS	Kog	146.93	344	i PKPbc	PKPab	17 28 09.4	+0.5
FRGS	Fruska Gora	146.99	339	⇓P	PKPab	17 28 09.7	+0.4
FRGS	Fruska Gora	146.99	339	eP	PKiKP	17 28 10.0	-0.4
FRGS	Fruska Gora	146.99	339	eP	PKiKP	17 28 10.4	0.0
UBR	Ueberruh	147.00	352	ePKPdf	PKiKP	17 28 13.0	+2.5
	baz=13,slow=2.9						
SOKA	Soboth	147.03	345	eP	PKPab	17 28 09.7	+0.2
	comp=Z,51nm,1.5s,SNR=24						
ISP	Isparta	147.08	319	IAMs_20	IAMs_20	18 32 19.6	
	comp=Z,940nm,22.0s						
RETA	Reutte	147.10	351	eP	PKiKP	17 28 10.8	+0.1
	comp=Z,46nm,1.4s,SNR=7.1						
WATA	Walderalm	147.11	350	eP	PKiKP	17 28 10.5	-0.4
	comp=Z,55nm,1.6s						
WTTA	Wattenberg	147.17	350	eP	PKPab	17 28 10.5	+0.3
	comp=Z,79nm,1.5s,SNR=18						
MOTA	Moosalm	147.18	351	eP	PKPab	17 28 10.5	+0.4
	comp=Z,38nm,1.1s,SNR=8.7						
ZAGS	Zajecar	147.20	335	eP	PKPab	17 28 09.9	-0.2
SQTA	Sankt Quirin	147.29	350	eP	PKPab	17 28 09.7	-0.8
	comp=Z,24nm,1.0s						
OBKA	Obir	147.30	346	eP	PKiKP	17 28 11.0	-0.2
	comp=Z,20nm,1.1s,SNR=15						
MYKA	Terra Mystica	147.39	347	eP	PKPab	17 28 10.3	-0.6
	comp=Z,37nm,0.8s,SNR=14						
DAVA	Damuels	147.42	352	eP	PKiKP	17 28 11.4	-0.1
	comp=Z,29nm,0.9s						
ZAPS	Zavoj	147.47	334	eP	PKiKP	17 28 11.7	+0.2
ABTA	Abfaltersbach	147.51	349	eP	PKPab	17 28 10.8	-0.6
	comp=Z,29nm,1.1s,SNR=19						
FETA	Feichten	147.56	351	eP	PKPbc	17 28 10.0	+0.4
	comp=Z,14nm,1.1s						
BOVS	Bovan	147.56	335	⇑P	PKPab	17 28 11.0	-0.6
TRUS	Trudelj	147.57	337	eP	PKiKP	17 28 12.1	+0.4
CRES	Cresnjev	147.72	344	eP	PKiKP	17 28 11.8	-0.1
VTS	Vitosha	147.73	332	⇑P	PKPab	17 28 12.4	-0.1
VTS	Vitosha	147.73	332	⇑PKP2	PKPab	17 28 12.4	-0.1
GRUS	Gruza	147.74	336	eP	PKiKP	17 28 11.8	-0.2
LJU	Ljubljana	147.75	346	ePKPbc	PKiKP	17 28 11.6	-0.4
LJU	Ljubljana	147.75	346	eP	PKiKP	17 28 11.7	-0.3
DIVS	Divibare	147.83	338	eP	PKiKP	17 28 12.1	-0.3
DIVS	Divibare	147.83	338	eP	PKiKP	17 28 12.0	-0.3
CEY	Cerknica	148.06	346	eP	PKPbc	17 28 11.0	+0.2
SELS	Selova	148.14	335	eP	PKiKP	17 28 12.9	0.0
BOSS	Bosilegrad	148.16	333	eP	PKPab	17 28 13.9	-0.1
BARS	Barje	148.19	334	eP	PKPbc	17 28 12.1	+0.9
BARS	Barje	148.19	334	eP	PKiKP	17 28 12.4	-0.6
BLY	Banja Luka	148.21	341	eP	PKiKP	17 28 13.4	+0.5
HAPS	Han Pijesak,BI	148.22	339	eP	PKiKP	17 28 13.4	+0.3
BBLS	Lazići	148.25	338	eP	PKPbc	17 28 11.4	0.0
BBLS	Lazići	148.25	338	eP	PKiKP	17 28 13.4	+0.2
PRVS	Prvonek	148.33	333	eP	PKiKP	17 28 13.4	+0.1
CTI	Castel Tesino	148.35	349	PKP2	PKPbc	17 28 12.5	+0.8
CTI	Castel Tesino	148.35	349		PKPbc	17 28 12.5	+0.8
RIY	Rijeka	148.43	345	eP	PKPab	17 28 14.8	-0.1
RUDO	Rudo	148.48	338	eP	PKiKP	17 28 13.6	0.0
SJES	Sjenica	148.56	337	eP	PKPab	17 28 15.1	-0.6
STIP	Stip	148.94	332	i P	PKiKP	17 28 14.8	+0.3
MBAR	Mbarara	148.97	242	PKIKP	PKPbc	17 28 13.4	-0.9
MBAR				MLR	MLR		
	comp=Z,1µm,21.0s						
MBAR	Mbarara	148.97	242		PKPbc	17 28 13.4	-0.9
MBAR	Mbarara	148.97	242	IAMs_20	IAMs_20	18 29 12.7	
	comp=Z,1µm,21.0s						
UPM	Unac-Piva	149.00	338	eP	PKPbc	17 28 13.7	+0.1
BRY	Bratogost	149.40	338	eP	PKiKP	17 28 15.7	0.0
PDG	Podgorica	149.54	337	⇓P	PKiKP	17 28 17.0	+1.2
PDG	Podgorica	149.54	337	eP	PKiKP	17 28 16.1	+0.4
STON	Ston	149.72	339	eP	PKPdf	17 28 11.7	+1.3
DRME	Dracevica, Mon	149.78	337	eP	PKiKP	17 28 17.8	+1.5
SSB	Saint Sauveur	149.84	359	PKIKP	PKPdf	17 28 09.2	-1.4
SSB						17 28 17.6	
SSB				MLR	MLR		
	comp=Z,2µm,20.0s						
SSB	Saint Sauveur	149.84	359	PKPdf	PKPdf	17 28 09.2	-1.4
SSB					pPKPbc	17 28 17.6	+1.0
OHR	Ohrid	150.02	333	i P	PKiKP	17 28 18.9	+2.1
OSSC	Osservatorio P	150.86	348	PKPdf	PKPdf	17 28 10.1	-2.2
OSSC					sPKPbc	17 28 22.1	+2.6
SANT	Santorini	151.14	321	⇓P	PKPbc	17 28 17.7	-1.1
SANT	Santorini	151.14	321	IAMs_20	IAMs_20	18 44 50.9	
	comp=Z,766nm,20.0s						
PGAV	Gavieira, Arco	151.28	19	eLR	LR	18 19 22.5	
	comp=Z,2µm,22.0s						
PCAB	Cabril	151.59	18	ePKP	PKiKP	17 28 22.2	+2.1
PBRG	Braganca	151.87	16	ePKP	PKPab	17 28 30.3	+1.1
PBRG				i LQ	LQ	17 28 37.0	
POLO	Lamas de Olo	151.97	18	ePKP	PKPab	17 28 31.1	+1.4
POLO				i LQ	LQ	17 28 37.5	
MATE	Matera	152.03	338	⇑P	PKiKP	17 28 24.2	+3.2
MVO	Moncorvo	152.39	17	ePKP	PKiKP	17 28 22.9	+1.1
MVO				i LQ	LQ	17 28 40.2	
MVO	Moncorvo	152.39	17	eLR	LR	18 20 10.3	
	comp=Z,2µm,20.0s						
PAOL	Paolisi	152.39	342	PKPdf	PKPdf	17 28 14.0	-0.7
PAOL					sPKPbc	17 28 26.3	+3.1
PVIS	Viseu	152.53	19	ePKP	PKPab	17 28 35.5	+3.4
PVIS				i LQ	LQ	17 28 39.8	
MTE	Manteigas	152.93	19	ePKP	PKiKP	17 28 25.5	+2.6
MTE	Manteigas	152.93	19	eLR	LR	18 21 57.3	
	comp=Z,2µm,22.0s						
PCAS	Casmilo, Conde	152.93	21	ePKP	PKiKP	17 28 24.2	+1.3
PCAS				i LQ	LQ	17 28 41.4	
TIP	Timpagrande	153.30	337	⇑P	PKiKP	17 28 26.2	+2.5
PCBR	Castelo Branco	153.46	19	ePKP	PKPab	17 28 31.0	-4.9
PCBR				i LQ	LQ	17 28 43.5	
PMST	Lisbon--Monsan	153.85	23	ePKP	PKPdf	17 28 13.5	-3.3
PMRV	Marv??o	153.86	20	i LQ	LQ	17 28 32.3	
PMRV	Marv??o	153.86	20	eLR	LR	18 20 45.3	
	comp=Z,2µm,20.0s						
PMTG	Montargil	153.91	21	ePKP	PKPab	17 28 31.9	-5.9
PMTG				i LQ	LQ	17 28 45.4	
PESTR	Estremoz	154.31	20	i LQ	LQ	17 28 47.4	
EVO	Evora	154.46	21	ePKP	PKPab	17 28 43.3	+3.1
EVO				i LQ	LQ	17 28 47.8	
ESDC	Sonseca Array	154.58	14	PKPbc	PKPbc	17 28 25.5	-0.8
	comp=Z,0.4nm,0.4s,baz=342,slow=3.6,SNR=3.5						
PNCL	Nicolau / Gran	154.65	23	i LQ	LQ	17 28 49.0	
PBEJ	Beja	154.96	22	i LQ	LQ	17 28 50.2	
MESJ	Messejana	155.00	23	i LQ	LQ	17 28 50.2	
PCVE	Castro Verde	155.25	22	i LQ	LQ	17 28 51.1	
PVAQ	Vaqueiros	155.57	22	i LQ	LQ	17 28 53.1	
PVAQ	Vaqueiros	155.57	22	eLR	LR	18 21 14.1	
	comp=Z,2µm,22.0s						
PBDV	Barranco-do-Ve	155.63	23	i LQ	LQ	17 28 54.0	
KEST	Kesra	158.75	347	PKPab	PKPab	17 28 59.8	+1.0
	comp=Z,8.4nm,0.9s,baz=44,slow=0.3,SNR=4.1						
TORD	Torodi Ar. Bea	177.39	136	PKP	PKPdf	17 28 36.3	-0.3
	comp=Z,2.6nm,1.1s,baz=312,slow=3.4,SNR=8.2						
TORD				PKPab	PKPab	17 30 21.4	-0.1
	comp=Z,1.4nm,1.0s,baz=247,slow=3.0,SNR=3.1						
TORD				PP	PP	17 34 19.4	+5.4
	comp=Z,1.5nm,1.1s,baz=234,slow=3.0,SNR=4.2						
TORD	Torodi Ar. Bea	177.39	136		PKPdf	17 28 37.7	+1.2

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*TUL **01** 17:34:35.3±1.8, 36°.51N±0°.02×98°.71W±0°.03, h1^{km}±7^{km}, ML3.1, mb_Lg2.8/44(NEIC), Error ellipse: s-maj=3.5km s-min=2.5km az=104.0*

*NEIC **01** 17:34:36.8±1.4, 36°.51N±0°.01×98°.66W±0°.05, h18^{km}±4^{km}, Error ellipse: s-maj=5.4km s-min=1.8km az=79.0*

ISC 01 17:34:35.6±1.0, **36°.49N**±0°.03×**98°.69W**±0°.03, **h12**^{km}±9^{km}, **n76, σ0^{s}.97**/91, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.28	246	Pg	Pg	17 34 40.8	-0.6
U32A	Winter Ranch,	0.28	246	P	Pg	17 34 40.9	-0.5
	baz=65						
U32A				S	Sg	17 34 45.2	0.0
	baz=65						
OK032	Salt Plains WL	0.49	51		Pg	17 34 45.4	+0.1
OK032				Sg	Sg	17 34 52.7	+0.9
CROK	Carrier	0.57	89	Pg	Pg	17 34 47.1	+0.5
CROK				Sg	Sb	17 34 55.5	0.0
KAN14	Manchester OK	0.74	51		Pb	17 34 50.1	-0.4
KAN14				Sg	Sg	17 35 00.4	+0.7
GC02	Grant County #	0.75	61	Pg	Pb	17 34 50.4	-0.3
GC02				Sg	Sg	17 35 00.9	+0.8
KAN10	Anthony SW Sta	0.79	37		Pb	17 34 50.8	-0.5
KAN10				Sg	Sb	17 35 01.1	-0.9
KAN16	Harper SW Stat	0.88	34	Pg	Pb	17 34 52.7	-0.2
KAN16				Sg	Sb	17 35 04.0	-0.8
KAN05	Bluff City Nor	0.90	46	Pg	Pb	17 34 53.2	0.0
KAN05				Sg	Sb	17 35 04.2	-0.9
KAN17	Caldwell West	0.92	53	Pg	Pb	17 34 53.0	-0.5
KAN17				Sg	Sg	17 35 05.9	+0.5
KAN08	Anthony NE Sta	0.93	38	Pg	Pb	17 34 53.6	-0.1
KAN08				Sg	Sg	17 35 06.4	+0.7
KAN12	Harper NE Stat	0.97	34		Pb	17 34 53.9	-0.5
KAN12				Sg	Sg	17 35 07.9	+0.8
KAN01	Argonia South	0.99	48	Pg	Pb	17 34 54.6	-0.2
KAN01				Sg	Sb	17 35 07.6	-0.3
KAN06	Argonia West S	1.00	41		Pb	17 34 54.6	-0.3
KAN06				Sg	Sg	17 35 08.5	+0.4
KAN09	Caldwell North	1.07	53	Pg	Pb	17 34 55.6	-0.5
KAN09				Sg	Sg	17 35 10.7	+0.6
KAN13	South Haven SW	1.10	62	Pg	Pb	17 34 56.5	-0.1
BCOK	Bluff Creek, N	1.21	133	Pg	Pn	17 34 58.4	+0.1
BCOK				Sg	Sn	17 35 14.8	+0.2
BLOK	Blackwell	1.21	77		Pn	17 34 58.5	0.0
OK029	Liberty Lake	1.22	125		Pn	17 34 58.3	-0.1
OK029				Sg	Sb	17 35 13.1	-1.1
OK025	Westminster Rd	1.42	129		Pn	17 35 02.1	+0.8
OKCFA	Oklahoma City	1.47	137	Pn	Pn	17 35 02.6	+0.6
OKCFA	Oklahoma City	1.47	137	P	Pn	17 35 02.9	+1.0
	baz=318						
OKCFA				Sb	Sg	17 35 23.2	+0.2
	baz=318						
OK033	Mehan	1.48	107		Pn	17 35 02.5	+0.3
OK031	S. Brethren Rd	1.59	109		Pn	17 35 03.7	+0.1
FNO	Franklin	1.62	139	Pn	Pn	17 35 05.0	+1.1
QUOK	Quay	1.63	101		Pb	17 35 05.5	-0.1
OK030	Cody Creek RV	1.64	110		Pb	17 35 05.7	-0.1
OK034	N. Norfolk Rd.	1.67	106	Pn	Pn	17 35 04.7	+0.1
T35A	Sooner Cattle	1.80	76	Pn	Pn	17 35 06.9	+0.4
T35B	Sooner Cattle	1.80	76	P	Pb	17 35 08.6	+0.1
	baz=257						
T35B				S	Sg	17 35 32.9	-0.5
	baz=257						
R32A	Long Quarter,	1.93	359		Pn	17 35 08.9	+0.6
R32A	Long Quarter,	1.93	359	P	Pb	17 35 09.9	-0.8
	baz=179						
R32A				Sb	Sb	17 35 36.3	+1.5
	baz=179						
W35A	Tecumseh	1.99	132	Pn	Pn	17 35 09.4	+0.3
X34A	Smith Ranch, M	2.01	160	Pn	Pn	17 35 11.2	+1.7
X34A				IAmb_Lg		17 35 44.7	
	comp=Z,54nm,0.8s						
TUL1	Leonard	2.41	103	IAmb_Lg		17 35 58.2	
	comp=Z,28nm,0.8s						
TUL1	Leonard	2.41	103	P	Pn	17 35 16.5	+1.6
	baz=285						
CBKS	Cedar Bluff	2.46	340		Pn	17 35 16.3	+0.6
CBKS	Cedar Bluff	2.46	340	P	Pb	17 35 18.7	-1.2
	baz=159						
CBKS				S	Sb	17 35 50.8	+0.6
	baz=159						
LOOK	Love County	2.78	153		Pn	17 35 20.8	+0.8
KSU1	Kansas State U	3.08	32	Pn	Pn	17 35 25.4	+1.3
X37A	Clayton	3.30	124		Pn	17 35 28.1	+0.9
X37A				IAmb_Lg		17 36 28.8	
	comp=Z,34nm,0.9s						
X37A	Clayton	3.30	124	P	Pn	17 35 28.5	+1.3
	baz=307						
Z35A	Perchaven, San	3.37	159	Pn	Pn	17 35 29.4	+1.3
U38A	Gravette	3.47	90		Pn	17 35 30.0	+0.6
HHAR	Hobbs	3.83	92		Pn	17 35 34.3	-0.2
ABTX	Abilene, Hawle	3.94	192	Pn	Pn	17 35 36.8	+0.9
ABTX				IAmb_Lg		17 36 47.3	
	comp=Z,20nm,1.1s						
KSCO	Kaye Shedlock'	4.01	310	Pn	Pn	17 35 38.4	+1.4
MSTX	Muleshoe	4.19	234	Pn	Pn	17 35 41.0	+1.6
MSTX				IAmb_Lg		17 36 53.4	
	comp=Z,24nm,0.9s						
W39A	Magazine	4.19	107		Pn	17 35 41.1	+1.8
N33A	J Bar K, Exete	4.35	12	Pn	Pn	17 35 43.8	+2.3
Z38A	Mt. Pleasant	4.43	136	Pn	Pn	17 35 43.7	+1.0
Z38A				IAmb_Lg		17 37 02.4	
	comp=Z,23nm,0.7s						
S39A	Bolivar	4.45	73		Pn	17 35 43.0	0.0
S39A				IAmb_Lg		17 36 57.1	
	comp=Z,16nm,0.8s						
MIAR	Mount Ida	4.60	114	Pn	Pn	17 35 44.1	-0.9
MIAR				IAmb_Lg		17 37 13.8	
	comp=Z,14nm,0.8s						
WHTX	Lake Whitney,	4.61	167	Pn	Pn	17 35 45.1	0.0
T25A	Trinidad	4.64	280	Pn	Pn	17 35 46.2	+0.5
U40A	Yellville	4.71	90	Pn	Pn	17 35 46.6	+0.2
U40A				IAmb_Lg		17 37 09.3	
	comp=Z,15nm,0.8s						
BGNE	Belgrade	4.93	5	Pn	Pn	17 35 50.0	+0.4
BGNE				IAmb_Lg		17 37 23.2	
	comp=Z,19nm,0.8s						
N35A	Tabor	4.97	28	Pn	Pn	17 35 50.3	+0.3
P38A	Dawn	5.13	51	Pn	Pn	17 35 52.5	+0.2
P38A				IAmb_Lg		17 37 22.8	
	comp=Z,17nm,1.1s						
X40A	Basin Creek Fa	5.18	111	Pn	Pn	17 35 51.8	-1.2
X40A				IAmb_Lg		17 37 27.1	
	comp=Z,26nm,0.8s						
MGMO	Mountain Grove	5.19	81	Pn	Pn	17 35 53.1	-0.1
WHAR	Wooly Hollow	5.33	101		Pn	17 35 54.0	-1.1
WHAR				IAmb_Lg		17 37 32.6	
	comp=Z,15nm,0.8s						
FCAR	Ozark Folk Cen	5.34	95	Pn	Pn	17 35 54.6	-0.6
FCAR				IAmb_Lg		17 37 27.1	
	comp=Z,12nm,0.7s						
R40A	Maddies Statio	5.42	69	Pn	Pn	17 35 56.1	-0.1
R40A				IAmb_Lg		17 37 31.4	
	comp=Z,14nm,0.8s						
SDCO	Great Sand Dun	5.59	285		Pn	17 35 58.8	-0.1
L34A	Svendsen Farm,	5.75	17	Pn	Pn	17 36 00.2	-0.6
P40A	Paris	6.05	58	Pn	Pn	17 36 02.1	-2.9
JCT	Junction City	6.07	189		Pn	17 36 05.3	0.0
JCT				IAmb_Lg		17 38 03.0	
	comp=Z,12nm,0.9s						
LCAR	Lake Charles	6.10	92	Pn	Pn	17 36 03.0	-2.6
CCM	Cathedral Cave	6.13	73	Pn	Pn	17 36 03.2	-2.9
CCM				IAmb_Lg		17 37 50.5	
	comp=Z,18nm,1.1s						
ISCO	Idaho Springs	6.38	303	Pn	Pn	17 36 07.8	-1.9
ISCO				IAmb_Lg		17 38 00.3	
	comp=Z,14nm,0.9s						
ANMO	Albuquerque	6.51	259	Pn	Pn	17 36 09.2	-2.2
PBMO	Poplar Bluff	6.64	85	IAmb_Lg		17 38 15.6	
	comp=Z,12nm,0.8s						
FVM	French Village	6.75	75	IAmb_Lg		17 38 12.1	
	comp=Z,12nm,0.8s						
ECSD	EROS Data Cent	7.40	12	IAmb_Lg		17 38 29.1	
	comp=Z,7.6nm,0.9s						
K22A	Casper	8.62	318	IAmb_Lg		17 39 22.0	
	comp=Z,9.1nm,0.8s						

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*TUL **01** 17:36:39.1±2.1, 36°.74N±0°.03×98°.75W±0°.05, h3^{km}±8^{km}, ML3.0, mb_Lg2.8/19(NEIC), Error ellipse: s-maj=5.8km s-min=4.5km az=85.0*

NEIC 01 17:36:41.0±1.8, **36°.78N**±0°.04×**98°.60W**±0°.05, **h13**^{km}±7^{km}, **Error ellipse: s-maj=6.2km s-min=5.6km az=165.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.31	86		Pb	17 36 47.9	-0.5
KAN10	Anthony SW Sta	0.53	50	Pg	Pb	17 36 51.9	-0.3
KAN14	Manchester OK	0.54	71	Pg	Pb	17 36 52.1	-0.2
CROK	Carrier	0.57	119	Pg	Pg	17 36 52.0	-0.1
GC02	Grant County #	0.60	83	Pg	Pb	17 36 53.1	-0.2
KAN16	Harper SW Stat	0.62	44	Pg	Pg	17 36 52.3	-0.7
KAN05	Bluff City Nor	0.67	61	Pg	Pb	17 36 54.4	-0.1
KAN08	Anthony NE Sta	0.67	49	Pg	Pg	17 36 53.9	-0.2
KAN12	Harper NE Stat	0.70	43		Pg	17 36 54.9	+0.2
KAN17	Caldwell West	0.72	68		Pg	17 36 54.1	-0.8
KAN06	Argonia West S	0.75	52	Pg	Pg	17 36 55.2	-0.4
KAN01	Argonia South	0.77	61	Pg	Pg	17 36 55.6	-0.3
KAN09	Caldwell North	0.86	66	Pg	Pg	17 36 56.1	-1.6
KAN13	South Haven SW	0.93	75	Pg	Pg	17 36 57.7	-1.2
BLOK	Blackwell	1.11	91	Pg	Pb	17 37 01.4	-0.6
OK029	Liberty Lake	1.35	136		Pn	17 37 05.3	-0.2
BCOK	Bluff Creek, N	1.38	144		Pn	17 37 04.9	-1.0
OK033	Mehan	1.53	118		Pn	17 37 08.5	+0.5
OK025	Westminster Rd	1.58	139	Pn	Pn	17 37 08.8	+0.2
R32A	Long Quarter,	1.64	357		Pn	17 37 10.0	+0.5
QUOK	Quay	1.64	111	Pn	Pb	17 37 10.7	-0.5
OK031	S. Brethren Rd	1.65	120	Pn	Pb	17 37 10.6	-0.6
OKCFA	Oklahoma City	1.65	145	Pn	Pn	17 37 09.6	-0.1
T35A	Sooner Cattle	1.68	85	Pn	Pb	17 37 11.9	+0.1
OK030	Cody Creek RV	1.70	120		Pb	17 37 11.4	-0.6
OK034	N. Norfolk Rd.	1.71	116		Pn	17 37 11.2	+0.8
FNO	Franklin	1.81	147	Pn	Pn	17 37 12.5	+0.7
W35A	Tecumseh	2.15	139	Pn	Pn	17 37 16.8	+0.3
CBKS	Cedar Bluff	2.22	336	Pn	Pn	17 37 18.8	+1.2
CBKS				IAmb_Lg		17 37 55.0	
	comp=Z,50nm,0.8s						
X34A	Smith Ranch, M	2.27	164	Pn	Pn	17 37 18.9	+0.8
X34A				IAmb_Lg		17 37 56.4	
	comp=Z,52nm,1.0s						
TUL1	Leonard	2.43	110	IAmb_Lg		17 37 59.3	
	comp=Z,25nm,0.8s						
KSU1	Kansas State U	2.80	34	Pn	Pn	17 37 25.1	-0.3
KSU1				IAmb_Lg		17 38 18.9	
	comp=Z,29nm,0.9s						
LOOK	Love County	3.02	157	Pn	Pn	17 37 28.0	-0.4
U38A	Gravette	3.41	95	Pn	Pn	17 37 32.8	-1.0
U38A				IAmb_Lg		17 38 37.1	
	comp=Z,22nm,0.8s						
X37A	Clayton	3.42	129	Pn	Pn	17 37 33.4	-0.5
X37A				IAmb_Lg		17 38 38.7	
	comp=Z,30nm,0.9s						
Z35A	Perchaven, San	3.62	162	Pn	Pn	17 37 33.6	-3.1
HHAR	Hobbs	3.79	96	Pn	Pn	17 37 37.6	-1.5
HHAR				IAmb_Lg		17 38 52.0	
	comp=Z,8.7nm,0.8s						

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSCO	Kaye Shedlock'	3.88	306	Pn	Pn	17 37 38.6	-1.9
ABTX	Abilene, Hawle	4.24	192	Pn	Pn	17 37 41.7	-3.6
S39A	Bolivar	4.31	76	Pn	Pn	17 37 45.8	-0.4
S39A				IAmb_Lg		17 39 06.5	
	comp=Z,13nm,0.9s						
Z38A	Mt. Pleasant	4.60	139	Pn	Pn	17 37 49.0	-1.2
U40A	Yellville	4.65	94	Pn	Pn	17 37 50.0	-0.8
T25A	Trinidad	4.67	276	Pn	Pn	17 37 50.5	-0.8
T25A				IAmb_Lg		17 39 04.9	
	comp=Z,37nm,1.1s						
S44A	Carbondale	7.51	80	IAmb_Lg		17 40 47.3	
	comp=Z,18nm,0.7s						
Q44A	Meyer Farm, Va	7.87	72	IAmb_Lg		17 41 01.8	
	comp=Z,20nm,0.9s						

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*IDC **01** 17:44:23.6±4.5, 35°.81N×70°.69E, h65^{km}±43^{km}, mb3.5/5, mb1 3.6/10, mb1mx3.2/52, mbtmp3.7/10, ML3.4/5, Error ellipse: s-maj=31.0km s-min=25.7km az=3.0*

ISC 01 17:44:27.8±1.4, **36°.0N**±0°.2×**70°.56E**±0°.09, **h110**^{km}**, n10,** σ**1^{s}67**/11, **mb3.6**/4, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEYT	Alibeck	10.14	285	P	Pn	17 46 50.3	+0.1
	0.8nm,0.3s,baz=99,slow=18,SNR=7.1						
GEYT				S	Sn	17 48 39.4	-2.6
	0.4nm,0.3s,baz=156,slow=15,SNR=1.7						
MKAR	Makanchi Array	13.89	36	P	Pn	17 47 38.0	-1.9
	0.1nm,0.3s,baz=224,slow=15,SNR=2.1						
KURBB	Kurchatov Arra	15.70	19	P	P	17 48 03.9	-0.4
	0.0nm,0.3s,baz=206,slow=10,SNR=5.3						
BVAR	Borovoye Array	17.01	360	P	P	17 48 19.1	+0.2
	0.1nm,0.3s,baz=189,slow=14,SNR=2.1						
AKTO	Aktyubinsk	17.03	332	P	Pn	17 48 19.7	+0.6
	0.6nm,0.3s,baz=127,slow=10,SNR=9.8						
ZALV	Zalesovo Beam	20.50	25	P	P	17 48 56.9	0.0
	0.7nm,0.3s,baz=214,slow=10.0,SNR=5.4						
FINES	FINESS Array B	37.69	327	P	P	17 51 34.8	+2.7
	8.3nm,1.1s,baz=116,slow=8.7,SNR=5.5						
ARCES	ARCESS Array B	41.46	338	P	P	17 52 05.3	+2.0
	1.8nm,0.9s,baz=110,slow=8.0,SNR=1.3						
WRA	Warramunga Arr	82.04	122	P	P	17 56 35.6	-0.4
	0.4nm,0.7s,baz=321,slow=4.5,SNR=1.9						
ASAR	Alice Springs	84.27	125	P	P	17 56 47.4	-0.1
	0.3nm,0.7s,baz=320,slow=6.3,SNR=5.6						

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*ISU **01** 17:44:57, 41°.30N×72°.30E, h5^{km}*

*KRNET **01** 17:45:01.5±0.1, 41°.19N×72°.34E, h15^{km}, mb2.9*

*KNET **01** 17:45:02.5±0.4, 41°.22N×72°.49E, h0^{km}, ml2.6, Error ellipse: s-maj=7.1km s-min=2.9km az=129.0*

*SOME **01** 17:45:03.7, 41°.20N×72°.37E, h15^{km}*

*NNC **01** 17:45:06.1±3.5, 41°.39N×72°.39E, h0^{km}, mb3.3, mpv2.8, Error ellipse: s-maj=33.9km s-min=12.8km az=175.0*

ISC 01 17:45:02.5±1.1, **41°.13N**±0°.02×**72°.24E**±0°.02, **h9**^{km}±10^{km}, **n37,** σ**1^{s}29**/68, **27C-20D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANR	Andizhan	0.39	166	*e*P	Pg	17 45 10.0	-0.1
ANR				*e*S	Sb	17 45 17.0	-0.6
OHH	Osh	0.73	145	⇑*i*P	Pg	17 45 15.8	-0.9
	baz=53						
OHH				⇑*i*S	Sg	17 45 26.0	-0.2
	baz=53						
FRG	Fergana	0.83	205	*e*P	Pb	17 45 19.0	-0.1
FRG				*e*S	Sn	17 45 35.0	+2.2
TRKS	Terek-Say	0.92	296	⇓*i*P	Pg	17 45 18.9	-1.3
	baz=88						
TRKS				⇓*i*S	Sg	17 45 31.5	-0.7
	baz=88						
MNAS	Manas	1.37	8	⇓*e*P	Pn	17 45 25.9	-2.1
	baz=5.0						
MNAS				⇓*i*S	Sb	17 45 43.7	-2.5
	baz=5.0						
SFK	Sufi-Kurgan	1.47	139	⇑*e*P	Pn	17 45 28.8	-0.7
	baz=43						
SFK				⇑*e*S	Sb	17 45 48.5	-0.7
	baz=43						
AML	Almayashu	1.48	47	⇓P	Pn	17 45 27.1	-2.6
	18nm,0.2s,SNR=28						
AML				⇓S	Sn	17 45 46.3	-3.2
	89nm,0.2s						
AML	Almayashu	1.48	47	⇑*i*P	Pn	17 45 27.6	-2.2
	baz=47						
AML				⇑*i*S	Sn	17 45 46.6	-2.9
	baz=47						
BTK	Batken	1.52	226	*e*S	Pn	17 45 29.0	-1.0
BTK				*e*P	Sg	17 45 53.0	+1.6
BTK	Batken	1.52	226	⇓*i*P	Pg	17 45 31.1	-0.6
	baz=26						
BTK				⇓*i*S	Sg	17 45 54.2	+2.8
	baz=26						
MRKS	Merke	1.77	24	*e*P	Pb	17 45 34.5	-0.8
	7.2nm,0.2s						
MRKS				*e*S	Sn	17 45 56.8	+0.5
	39nm,0.3s						
CHRV	Charvak	1.79	287	*e*P	Pn	17 45 32.0	-1.7
CHRV				*e*S	Sb	17 45 58.0	-0.3
DZA	Taraz	1.89	339	*e*P	Pb	17 45 37.6	+0.4
	48nm,0.1s						
DZA				*e*S	Sb	17 46 02.5	+1.6
	210nm,0.2s						
EKS2	Erkin-Say	1.92	36	⇑P	Pn	17 45 35.0	-0.5
	5.6nm,0.2s,SNR=19						
EKS2				⇑S	Sb	17 46 01.3	-0.5
	27nm,0.3s						
EKS2	Erkin-Say	1.92	36	⇓*e*P	Pn	17 45 35.2	-0.3
	baz=36						
EKS2				⇓*i*S	Sn	17 45 59.6	-0.2
	baz=36						
UCH	Uchtor	2.03	56	⇓P	Pn	17 45 37.3	0.0
	6.0nm,0.1s,SNR=28						
UCH				⇓S	Sn	17 46 03.9	+0.9
	37nm,0.2s						
UCH	Uchtor	2.03	56	⇓*i*P	Pn	17 45 37.1	-0.2
	baz=57						
UCH				⇓*i*S	Sn	17 46 02.6	-0.4
	baz=57						
AAK	Ala-Archa	2.26	47	⇓P	Pn	17 45 41.5	+1.3
	8.6nm,0.3s						
AAK	Ala-Archa	2.26	47	⇑Pg	Pb	17 45 42.6	-1.0
	2.6nm,0.3s						
AAK				⇑Lg	Lg	17 46 11.7	
	16nm,0.6s						
KK07	Karatay Array	2.35	327	⇑Pn	Pn	17 45 42.7	+1.4
	1.4nm,0.3s						
KK07				⇓Pg	Pg	17 45 47.9	+0.4
	8.2nm,0.6s,baz=143,slow=16						
KK07				⇓Lg	Lg	17 46 15.0	
	24nm,0.5s,baz=137,slow=27						
FRU1	Bishkek	2.45	46	⇑*i*P	Pn	17 45 42.8	0.0
	baz=45						
FRU1				⇑*i*S	Sn	17 46 13.4	+0.5
	baz=45						
KBK	Karagaybulak	2.53	52	⇑P	Pn	17 45 45.5	+1.4
	5.6nm,0.1s,SNR=12						
KBK	Karagaybulak	2.53	52	⇑*e*P	Pn	17 45 44.1	+0.1
	baz=52						
KBK				⇑*i*S	Sn	17 46 15.0	-0.1
	baz=52						
BRLS	Borolday	2.61	318	*e*P	Pb	17 45 48.6	-0.8
	5.5nm,0.1s						
BRLS				*e*S	Sb	17 46 21.6	0.0
	40nm,0.3s						
CHMS	Chumysh	2.64	44	⇑*i*P	Pn	17 45 45.4	0.0
	baz=44						
CHMS				⇑*i*S	Sn	17 46 17.3	-0.3
	baz=44						
USP	Ospenovka	2.72	37	⇑P	Pn	17 45 47.3	+0.8
	4.6nm,0.2s,SNR=7.2						
USP	Ospenovka	2.72	37	⇑*i*P	Pn	17 45 46.4	0.0
	baz=37						
USP				⇑*i*S	Sn	17 46 19.3	-0.2
	baz=37						
TKM2	Tokmak 2	3.08	53	⇓P	Pn	17 45 52.5	+1.0
	2.3nm,0.1s,SNR=6.7						
TKM2	Tokmak 2	3.08	53	⇑Pg	Pb	17 45 57.1	-0.5
	1.9nm,0.3s						
TKM2				⇑Lg	Lg	17 46 36.2	
	7.2nm,0.4s						
TKM2	Tokmak 2	3.08	53	⇑*e*P	Pn	17 45 51.7	+0.2
	baz=53						
TKM2				⇑*i*S	Sn	17 46 28.0	-0.6
	baz=53						
BOOM	Boomskoye usch	3.08	63	⇓*i*P	Pn	17 45 51.8	+0.2
	baz=63						
BOOM				⇓*i*S	Sn	17 46 28.3	-0.4
	baz=63						
ULHL	Ulahol	3.20	68	⇑*i*P	Pn	17 45 53.4	+0.2
	baz=69						
ULHL				⇑*i*S	Sn	17 46 31.3	-0.3
	baz=69						
KST	Kastek	3.37	54	*e*P	Pb	17 46 02.2	-0.3
	5.6nm,0.5s						
KST				*e*S	Sb	17 46 45.1	+1.5
	10.0nm,0.4s						
DGS	Degeres	3.37	50	*e*P	Pb	17 46 01.6	-0.9
	3.4nm,0.5s						
DGS				*e*S	Sb	17 46 44.5	+0.8
	13nm,0.6s						
KRBS	Karabastau	3.61	44	*e*P	Pb	17 46 06.7	+0.1
	1.3nm,0.4s						
KRBS				*e*S	Sb	17 46 52.3	+1.7
	6.0nm,0.4s						
KUU	Kurty	4.10	46	*e*P	Pb	17 46 15.8	+1.0
	1.0nm,0.3s						
KUU				*e*S	Sb	17 47 07.6	+3.0
	6.5nm,0.5s						
BTLS	Baital	4.13	18	*e*P	Pb	17 46 16.4	+1.0
	4.8nm,0.5s						
BTLS				*e*S	Sb	17 47 08.4	+3.1
	2.9nm,0.4s						

JMA 01 18:07:04.7, 24°.32N×123°.52E, h19^{km}±2^{km}**, M1.6, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	0.19	86	P	Pg	18 07 09.5	-0.1
IRIF				S	Sg	18 07 13.3	+0.3
HATJ	Hateruma jima	0.37	135	P	Pg	18 07 12.3	-0.2
HATJ				S	Sg	18 07 17.8	0.0
JKRS	Kuro-shima	0.45	100	P	Pg	18 07 13.9	-0.1
JKRS				S	Sb	18 07 20.9	+0.4
YOJ	Yonaguni jima	0.48	287	P	Pg	18 07 14.4	-0.2
YOJ				S	Sg	18 07 21.0	-0.2
JIJ	Ishigaki jima	0.57	86	P	Pb	18 07 15.5	-0.5
JIJ				S	Sg	18 07 23.8	0.0
JISG	Ishigakijimahi	0.77	70	P	Pb	18 07 19.2	-0.3
JISG				*e*S	Sn	18 07 31.2	-0.4

IDC 01 18:07:13.7±2.2**, 31°.33N×140°.57E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/5**, mb1mx3.3**/33**, mbtmp3.5**/5**, ML2.9**/2**, Error ellipse: s-maj=103.3km s-min=17.8km az=74.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	1.90	340	Pn	Pn	18 07 47.6	+0.2
	8.1nm,0.3s,baz=66,slow=20,SNR=1.9						
JHJ				Sn	Sn	18 08 11.2	-0.9
	6.1nm,0.3s,baz=70,slow=18,SNR=1.2						
JCJ	Chichijima	4.45	161	Pn	Pn	18 08 22.1	-0.4
	3.5nm,0.3s,baz=0.0,slow=20,SNR=0.9						
JCJ				Sn	Sn	18 09 10.7	-4.3
	3.0nm,0.3s,baz=102,slow=20,SNR=1.2						
MJAR	Matsushiro Arr	5.55	340	Pn	Pn	18 08 37.2	-0.4
	0.1nm,0.3s,baz=163,slow=13,SNR=4.5						
MKAR	Makanchi Array	46.75	307	P	P	18 15 44.9	+0.2
	0.5nm,0.9s,baz=83,slow=9.6,SNR=1.6						
WRA	Warramunga Arr	51.33	188	P	P	18 16 19.6	-0.4
	0.7nm,0.9s,baz=5.3,slow=7.4,SNR=10						
ASAR	Alice Springs	55.06	187	P	P	18 16 47.5	+0.1
	0.3nm,0.9s,baz=3.3,slow=5.6,SNR=5.5						

TAP 01 18:07:20.6, 24°.61N×121°.64E, h44^{km}**, ML1.4, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENTT	Nioudou	0.07	296	*e*P	Pn	18 07 27.9	+0.3
	baz=296						
ENTT				*e*S	Sn	18 07 33.4	+0.9
	baz=296						
NDS	Dongshan	0.08	71	*e*P	Pn	18 07 27.9	+0.2
	baz=71						
NDS				*e*S	Sn	18 07 33.0	+0.5
	baz=71						
NDT	Datong Townshi	0.11	267	*e*P	Pn	18 07 28.1	+0.3
	baz=266						
NDT				*e*S	Sn	18 07 33.3	+0.6
	baz=266						
TWE	Neicheng	0.12	14	*e*P	Pn	18 07 28.2	+0.4
	baz=21						
TWE				*e*S	Sn	18 07 33.5	+0.8
	baz=21						
NWLT	Wulai	0.21	324	*e*P	Pn	18 07 28.9	+0.4
	baz=324						
NWLT				*e*S	Sn	18 07 34.4	+0.6
	baz=324						
YHNB	Yeheng	0.24	284	*e*P	Pn	18 07 28.9	+0.2
	baz=284						
YHNB				*e*S	Sn	18 07 35.0	+0.6
	baz=284						
NSK	Sanguang	0.26	285	*e*P	Pn	18 07 29.1	+0.2
	baz=284						
NSK				*e*S	Sn	18 07 35.1	+0.4
	baz=284						
NNSB	Datong	0.29	232	*e*P	Pn	18 07 29.7	+0.4
	baz=232						
NNSB				*e*S	Sn	18 07 35.6	+0.3
	baz=232						
NNS	Nan Shan	0.29	235	*e*P	Pn	18 07 29.4	+0.2
	baz=233						
NNS				*e*S	Sn	18 07 35.9	+0.6
	baz=233						
TIPB	Shuangxi	0.40	25	*e*P	Pn	18 07 30.7	+0.3
	baz=25						
TIPB				*e*S	Sn	18 07 38.0	+0.8
	baz=25						
ETLH	Xiulin Townshi	0.42	199	*e*P	Pn	18 07 31.0	+0.3
	baz=199						
ETLH				*e*S	Sn	18 07 37.4	-0.4
	baz=199						
NACB	Ninganchiao	0.43	185	*e*P	Pn	18 07 31.2	+0.5
	baz=185						
NACB				*e*S	Sn	18 07 37.8	0.0
	baz=185						
NWF	Wu-fen Shan	0.48	16	*e*P	Pn	18 07 31.6	+0.3
	baz=15						
NWF				*e*S	Sn	18 07 39.8	+0.9
	baz=15						
FUSS	Fushou	0.51	225	*e*P	Pn	18 07 32.1	+0.2
	baz=224						
FUSS				*e*S	Sn	18 07 40.8	+0.9
	baz=224						

JMA 01 18:12:09.5±0.1**, 24°.55N×123°.55E, h7**^{km}**, M0.8, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	0.27	143	P	Pg	18 12 15.0	+0.2
IRIF				S	Sg	18 12 18.4	0.0
YOJ	Yonaguni jima	0.50	260	P	Pg	18 12 19.3	+0.2
YOJ				S	Sg	18 12 26.1	+0.4
JKRS	Kuro-shima	0.52	127	P	Pg	18 12 19.9	+0.3
JKRS				*e*S	Sg	18 12 27.2	+0.8
HATJ	Hateruma jima	0.54	155	S	Sg	18 12 27.6	+0.5
JYNG	Yonagunijimaku	0.56	260	P	Pg	18 12 20.3	0.0
JYNG				S	Sg	18 12 27.8	+0.2
JIJ	Ishigaki jima	0.57	109	P	Pg	18 12 20.2	-0.3
JIJ				S	Sg	18 12 28.3	+0.3
JISG	Ishigakijimahi	0.69	87	P	Pb	18 12 23.4	-0.5
JISG				S	Sb	18 12 33.1	-0.6
JTJ	Tarama	1.05	85	*e*S	Sb	18 12 44.6	+0.6

TAP 01 18:12:16.0, 24°.92N×122°.32E, h20^{km}**, ML1.9, D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.32	286	*e*P	Pb	18 12 23.0	0.0
	baz=285						
TWB1				*e*S	Sb	18 12 28.8	+1.1
	baz=285						
TIPB	Shuangxi	0.46	276	*e*P	Pb	18 12 26.0	+0.6
	baz=276						
TIPB				*e*S	Sb	18 12 33.3	+1.5
	baz=276						
NWF	Wu-fen Shan	0.52	287	P	Pb	18 12 27.0	+0.6
	baz=286						
NWF				*e*S	Sb	18 12 34.7	+1.2
	baz=286						
TWC	Suao	0.53	234	*e*P	Pb	18 12 27.1	+0.4
	baz=233						
TWC				*e*S	Sb	18 12 35.0	+1.1
	baz=233						
NDS	Dongshan	0.62	243	*e*P	Pb	18 12 28.8	+0.6
	baz=242						
NDS				*e*S	Sn	18 12 37.9	-1.2
	baz=242						
TWE	Neicheng	0.63	252	P	Pb	18 12 28.6	+0.3
	baz=250						
TWE				*e*S	Sn	18 12 38.1	-1.2
	baz=250						
EWUT	Wuta	0.69	226	*e*P	Pb	18 12 29.7	+0.4
	baz=226						
EWUT				*e*S	Sn	18 12 40.0	-0.7
	baz=226						
YM01	YM01	0.72	288	*e*P	Pb	18 12 30.2	+0.3
	baz=288						
YM01				*e*S	Sn	18 12 41.1	-0.5
	baz=288						
ENA	Nanau	0.72	227	*e*P	Pn	18 12 30.5	-0.6
	baz=226						
ENA				*e*S	Sn	18 12 40.9	-0.7
	baz=226						
ENTT	Nioudou	0.74	248	*e*P	Pn	18 12 30.9	-0.5
	baz=247						
ENTT				*e*S	Sn	18 12 41.7	-0.5
	baz=247						
NWLT	Wulai	0.76	259	*e*P	Pn	18 12 31.2	-0.5
	baz=259						
NWLT				*e*S	Sn	18 12 42.3	-0.2
	baz=259						
NDT	Datong Townshi	0.80	247	*e*P	Pn	18 12 31.8	-0.4
	baz=246						
NDT				*e*S	Sn	18 12 43.5	-0.1
	baz=246						
YHNB	Yeheng	0.90	254	*e*P	Pn	18 12 33.3	-0.3
	baz=253						
YHNB				*e*S	Sn	18 12 45.9	-0.1
	baz=253						
NSK	Sanguang	0.91	255	*e*P	Pb	18 12 33.5	+0.3
	baz=254						
NSK				*e*S	Sn	18 12 46.4	0.0
	baz=254						
NNSB	Datong	0.99	240	*e*P	Pn	18 12 34.9	0.0
	baz=240						
NNSB				*e*S	Sn	18 12 48.3	0.0
	baz=240						
NNS	Nan Shan	0.99	241	*e*P	Pb	18 12 34.6	+0.1
	baz=240						
NNS				*e*S	Sn	18 12 48.6	+0.2
	baz=240						
NACB	Ninganchiao	1.00	222	*e*P	Pn	18 12 34.9	0.0
	baz=221						
NACB				*e*S	Sn	18 12 49.0	+0.6
	baz=221						
ETLH	Xiulin Townshi	1.05	227	*e*P	Pn	18 12 36.5	+0.9
	baz=227						
ETLH				*e*S	Sn	18 12 50.4	+0.7
	baz=227						
FUSS	Fushou	1.19	236	*e*P	Pn	18 12 37.9	+0.1
	baz=235						
FUSS				*e*S	Sn	18 12 53.5	0.0
	baz=235						
CHGB	Renai	1.35	231	*e*P	Pn	18 12 40.3	+0.3
	baz=230						
CHGB				*e*S	Sn	18 12 57.3	-0.2
	baz=230						
WHP	Taichung City	1.41	243	*e*P	Pn	18 12 41.0	+0.3
	baz=242						
WHP				*e*S	Sb	18 12 59.6	+0.4
	baz=242						

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*IDC **01** 18:27:32.3±2.1, 0°.83N×127°.15E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.2/41, mbtmp3.5/3, Error ellipse: s-maj=174.1km s-min=25.4km az=66.0*

*DJA **01** 18:27:32.9±0.4, 1°N±3°×12°7E±°, h10^{km}, M3.1/7, MLv3.1/7*

ISC 01 18:27:33.7±1.3**, 0°.74N**±0°.08×**127°.09E**±0°.09**, h10**^{km}**, n6,** σ**1^{s}42**/8**, mb3.5**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.28	84	P	Pg	18 27 39.9	+0.5
TNTI				S	Sg	18 27 43.3	0.0
LBMI	Labuha	1.43	163	P	Pg	18 28 02.7	+1.5
LBMI				S	Sn	18 28 16.2	-2.4
SANI	Sanana	2.98	202	P	Pb	18 28 26.2	-0.7
WRA	Warramunga Arr	21.75	161	P	P	18 32 26.0	+0.4
	0.6nm,0.6s,baz=340,slow=11,SNR=8.5						
ASAR	Alice Springs	25.15	165	P	P	18 33 00.3	+1.0
	0.9nm,0.8s,baz=341,slow=8.1,SNR=8.4						
MKAR	Makanchi Array	60.21	326	P	P	18 37 41.9	-0.1
	0.8nm,0.6s,baz=128,slow=8.1,SNR=6.9						

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*IDC **01** 18:32:42.2±1.9, 31°.22N×140°.39E, h0^{km}, mb3.4/3, mb1 3.5/5, mb1mx3.4/36, mbtmp3.4/5, ML2.9/2, Error ellipse: s-maj=87.3km s-min=17.9km az=76.0*

ISC 01 18:32:42.1±1.8**, 31°.3N**±0°.2×**140°.8E**±0°.6**, h10**^{km}**, n6,** σ**1^{s}67**/8**, mb3.5**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	2.00	334	Pn	Pn	18 33 16.7	+0.8
	20nm,0.3s,baz=139,slow=19,SNR=6.7						
JHJ				Sn	Sb	18 33 42.4	-1.1
	6.1nm,0.3s,baz=262,slow=19,SNR=1.9						
JCJ	Chichijima	4.37	164	Pn	Pn	18 33 50.2	+1.6
	2.9nm,0.3s,baz=302,slow=21,SNR=1.5						
JCJ				Sn	Sn	18 34 36.6	-3.0
	0.9nm,0.3s,baz=230,slow=16,SNR=1.7						
MJAR	Matsushiro Arr	5.64	338	Pn	Pn	18 34 05.9	-0.1
	0.1nm,0.3s,baz=162,slow=12,SNR=5.2						
MKAR	Makanchi Array	46.93	307	P	P	18 41 13.1	+0.2
	0.5nm,0.8s,baz=82,slow=10,SNR=2.1						
WRA	Warramunga Arr	51.34	188	P	P	18 41 47.5	+0.7
	0.3nm,0.5s,baz=5.4,slow=7.4,SNR=7.8						
ASAR	Alice Springs	55.07	188	P	P	18 42 14.3	+0.1
	0.4nm,1.1s,baz=0.7,slow=5.6,SNR=2.0						

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*IDC **01** 18:41:41.4±0.5, 13°.58N×144°.74E, h143^{km}±6^{km}, mb3.3/10, mb1 3.5/10, mb1mx3.4/40, mbtmp3.7/10, MS3.6/1, Ms1 3.6/1, ms1mx2.8/20, Error ellipse: s-maj=29.0km s-min=13.8km az=91.0*

*NEIC **01** 18:41:42.7±2.1, 13°.48N±0°.08×144°.6E±0°.1, h142^{km}±5^{km}, mb4.0/7, Error ellipse: s-maj=22.0km s-min=4.1km az=118.0*

ISC 01 18:41:42.0±0.6**, 13°.52N**±0°.09×**144°.7E**±0°.1**, h150**^{km}**, n29,** σ**0^{s}84**/23**, mb3.7**/13**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.20	71	P	Pn	18 42 02.3	0.0
	150nm,0.3s,baz=264,slow=4.4,SNR=393						
GUMO				S	Sn	18 42 16.2	-1.5
	1µm,0.3s,baz=127,slow=22,SNR=35						
GUMO	Guam	0.20	71		Pn	18 42 02.2	0.0
GUMO				Sn	Sn	18 42 16.6	-1.0
ANA2	Anatahan	2.98	20	Pn	Pn	18 42 30.3	+1.2
PATS	Pohnpei	14.97	115		P	18 45 08.2	+0.2
H11S3	WAKE ISLAND Hy	21.72	74	T	T	19 09 25.8	
	baz=263						
H11S1	WAKE ISLAND Hy	21.73	74	T	T	19 09 20.8	
	baz=263						
H11S2	WAKE ISLAND Hy	21.74	74	T	T	19 09 25.5	
	baz=263						
H11N1	WAKE ISLAND Hy	22.15	71	T	T	19 09 54.0	
	baz=257,slow=75,SNR=6.9						
H11N2	WAKE ISLAND Hy	22.16	71	T	T	19 09 42.0	
	baz=257,slow=75,SNR=4.0						
H11N3	WAKE ISLAND Hy	22.16	71	T	T	19 09 41.7	
	baz=257,slow=75,SNR=6.4						
MJAR	Matsushiro Arr	23.64	347	P	P	18 46 39.7	0.0
	1.7nm,0.7s,baz=163,slow=7.9,SNR=3.6						
KSRS	Korea Array	28.13	331	P	P	18 47 19.3	-0.6
	1.0nm,0.5s,baz=140,slow=9.9,SNR=5.0						
USRK	Ussuriysk Ar.	32.44	343	LR	LR	18 59 22.6	
	comp=Z,106nm,21.3s,baz=297,slow=33						

WB0	Warramunga Arr	34.59	197	P	P	18 48 17.5	+0.7
WR0	Warramunga Arr	34.73	197	P	P	18 48 18.6	+0.6
WR0				IAmb	IAmb	18 48 37.9	
	comp=Z,8.5nm,1.3s						
WB2	Warramunga Arr	34.77	197	P	P	18 48 19.1	+0.8
WB2				IAmb	IAmb	18 48 19.7	
	comp=Z,6.0nm,0.9s						
WRA	Warramunga Arr	34.78	197	P	P	18 48 18.7	+0.4
	comp=Z,2.1nm,0.7s,baz=24,slow=9.5,SNR=19						
WRA	Warramunga Arr	34.78	197	P	P	18 48 17.5	-0.8
AS31	Alice Springs	38.43	196	P	P	18 48 50.1	+0.8
AS31				IAmb	IAmb	18 49 04.8	
	comp=Z,2.2nm,1.4s						
ASAR	Alice Springs	38.43	196	P	P	18 48 49.7	+0.4
	comp=Z,0.6nm,0.6s,baz=20,slow=11,SNR=26						
ASAR	Alice Springs	38.43	196	P	P	18 48 49.3	0.0
CMAR	Chiang Mai Arr	44.15	283	P	P	18 49 37.8	+1.7
	comp=Z,0.5nm,0.4s,baz=88,slow=5.9,SNR=5.2						
STKA	Stephens Creek	45.24	184	P	P	18 49 44.4	0.0
	comp=Z,1.5nm,0.5s,baz=355,slow=9.0,SNR=2.9						
STKA	Stephens Creek	45.24	184	IAmb	IAmb	18 50 10.7	
	comp=Z,2.0nm,1.2s						
SONM	Songino Array	46.68	325	P	P	18 49 55.3	-0.4
	comp=Z,0.2nm,0.5s,baz=139,slow=7.5,SNR=1.7						
BBOO	Buckleboo	46.80	190	P	P	18 49 56.9	+0.3
MKAR	Makanchi Array	61.41	316	P	P	18 51 40.8	-1.6
	comp=Z,0.2nm,0.4s,baz=90,slow=8.3,SNR=5.1						
ILAR	Eielson Array	68.71	25	P	P	18 52 29.1	0.0
	comp=Z,0.4nm,0.6s,baz=251,slow=5.6,SNR=7.7						
YKA	Yellowknife Ar	83.00	27	P	P	18 53 50.3	+0.1
	comp=Z,0.5nm,0.6s,baz=282,slow=7.8,SNR=2.9						

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*MEX **01** 18:49:40.8±0.5, 14°.68N×91°.59W, h158km±5km, MD4.3*
*GCG **01** 18:49:42.7±0.3, 14°.86N×91°.38W, h123km±301km, MD3.4*
ISC 01 18:49:37.6±2.2, **14°.6N**±0°.1×**91°.59W**±0°.07, **h163**km±12km, **n11**, σ**1s.58**/18, **1C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.11	12	*e*P	Pn	18 50 00.5	+0.8
THIG		0.72	295	*i* P	Pn	18 50 02.9	+1.3
THIG				*e*S	Sn	18 50 20.1	0.0
FUG	Fuego 3	0.74	102	*e*P	Pn	18 50 02.7	+0.6
PATR	El Naranjo	0.80	310	*i* P	Pn	18 50 03.1	+0.6
PATR				*e*S	Sn	18 50 20.9	-0.7
PAVE	Pavencul	0.81	316	*i* P	Pn	18 50 03.4	+0.8
PAVE				*e*S	Sn	18 50 21.1	-0.6
NBG	Las Nubes	1.21	91	*e*P	Pn	18 50 06.4	+0.7
CCIG	Comitan	1.75	343	*i* P	Pn	18 50 11.9	+0.9
CCIG				*i* S	Sn	18 50 35.9	-1.0
MRL	Marmol	1.91	75	⇑*i*P	Pn	18 50 13.1	+0.4
TGIG		2.62	326	*i* P	Pn	18 50 21.8	+0.9
TGIG				*i* S	Sn	18 50 53.4	-1.1
CMIG	Matias Romero	4.02	308	*e*P	Pn	18 50 40.3	+1.8
CMIG				*e*S	Sn	18 51 25.1	-0.8
HUIG	Huatulco	4.51	285	*i* P	Pn	18 50 46.6	+1.7
HUIG				*e*S	Sn	18 51 33.0	-4.4

IDC 01 19:18:39.8±2.3, **9°.60S**×**117°.54E, h0**km, **mb3.2**/2, **mb1 3.5**/4, **mb1mx3.1**/29, **mbtmp3.4**/4, **ML3.5**/2, **Error ellipse: s-maj=93.3km s-min=28.0km az=44.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.06	96	Pn	Pn	19 20 11.2	+0.4
	2.8nm,0.3s,baz=307,slow=11,SNR=2.0						
BATI				Sn	Sn	19 21 14.7	-6.3
	2.3nm,0.3s,baz=352,slow=20,SNR=2.1						
WRA	Warramunga Arr	19.20	124	P	P	19 23 04.8	-0.7
	0.1nm,0.3s,baz=299,slow=12,SNR=7.2						
ASAR	Alice Springs	20.98	134	P	P	19 23 25.2	+0.4
	0.4nm,0.5s,baz=310,slow=9.7,SNR=14						
MKAR	Makanchi Array	64.35	334	P	P	19 29 17.4	0.0
	0.2nm,0.6s,baz=147,slow=6.3,SNR=1.5						

IDC 01 19:21:25.7±15.0, **26°.09S**×**68°.92E, h0**km, **mb3.6**/4, **mb1 3.7**/4, **mb1mx3.3**/34, **mbtmp3.6**/4, **MS3.6**/1, **Ms1 3.5**/1, **ms1mx2.9**/28, **Error ellipse: s-maj=509.3km s-min=42.7km az=50.0, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	18.65	11	T	T	19 44 48.9	
	baz=190,slow=76,SNR=5.3						
H08S2	Diego Garcia H	18.65	11	T	T	19 44 53.7	
	baz=190,slow=76,SNR=6.1						
H08S3	Diego Garcia H	18.67	11	T	T	19 44 50.6	
	baz=190,slow=76,SNR=5.5						
BOSA	Boshof	38.71	256	LR	LR	19 42 50.4	
	comp=Z,90nm,19.4s,baz=354,slow=33						
H01W2	Cape Leeuwin H	39.66	114	T	T	20 11 15.7	
	baz=270						
H01W3	Cape Leeuwin H	39.66	114	T	T	20 11 11.2	
	baz=270						
H01W1	Cape Leeuwin H	39.68	114	T	T	20 11 17.1	
	baz=270						
ASAR	Alice Springs	58.45	103	P	P	19 31 23.3	-0.5
	0.4nm,0.7s,baz=249,slow=6.1,SNR=5.2						
WRA	Warramunga Arr	59.98	99	P	P	19 31 34.9	+0.4
	0.3nm,0.7s,baz=256,slow=7.0,SNR=1.4						
ZALV	Zalesovo Beam	80.88	9	P	P	19 33 41.2	-0.1
	0.6nm,0.5s,baz=197,slow=4.5,SNR=4.1						
SONM	Songino Array	80.93	25	P	P	19 33 42.1	+0.2
	0.5nm,0.8s,baz=203,slow=6.3,SNR=2.7						

IDC 01 19:55:01.9±8.0, **28°.43S**×**68°.99W, h103**km±64km, **mb3.5**/1, **mb1 3.4**/2, **mb1mx3.2**/22, **mbtmp3.8**/2, **ML3.6**/1, **Error ellipse: s-maj=81.7km s-min=58.2km az=105.0, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	5.79	1	P	Pn	19 56 26.6	+0.8
	1.8nm,0.3s,baz=188,slow=9.8,SNR=27						
LVC				S	Sn	19 57 30.7	-0.4
	2.6nm,0.3s,baz=232,slow=23,SNR=13						
TORD	Torodi Ar. Bea	79.82	69	P	P	20 06 58.9	-0.4
	0.7nm,0.7s,baz=249,slow=5.2,SNR=3.6						
TORD				pP	pP	20 07 27.2	-0.1
	0.4nm,0.6s,baz=244,slow=5.1,SNR=2.4						
WRA	Warramunga Arr	126.89	208	PKP	PKPdf	20 13 53.0	-1.3
	0.3nm,0.7s,baz=163,slow=1.1,SNR=1.9						
ZALV	Zalesovo Beam	148.12	30	PKPbc	PKPbc	20 14 35.5	+0.4
	1.2nm,0.4s,baz=290,slow=4.5,SNR=6.6						
MKAR	Makanchi Array	151.02	43	PKPbc	PKPbc	20 14 42.4	-0.2
	1.0nm,0.7s,baz=280,slow=2.3,SNR=7.8						

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*IDC **01** 20:00:37.5±1.0, 32°.20N×141°.75E, h0km, mb3.6/6, mb1 3.7/9, mb1mx3.6/33, mbtmp3.6/9, ML3.3/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/45, Error ellipse: s-maj=30.4km s-min=17.8km az=71.0*
*JMA **01** 20:00:39.4±0.1, 32°.45N×141°.81E, h17km, M3.4*
ISC 01 20:00:38.6±0.8, **32°.23N**±0°.07×**141°.76E**±0°.09, **h10**km, **n18**, σ**1s.21**/23, **mb3.6**/6, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	1.85	297	P	Pn	20 01 10.3	-0.2
JHCJ				*e*S	Sn	20 01 33.0	-1.0
JHJ2	Mitsune	1.86	299	P	Pn	20 01 10.5	0.0
JHJ2				*e*S	Sn	20 01 33.1	-0.9
JHJ	Hachijo jima 2	1.89	299	Pn	Pn	20 01 10.6	-0.3
	51nm,0.3s,baz=72,slow=18,SNR=26						
JHJ				LR	LR	20 01 28.2	
	comp=Z,72nm,19.6s,baz=76,slow=27						
JHJ				Sn	Sn	20 01 32.9	-1.9
	34nm,0.3s,baz=254,slow=22,SNR=2.6						
BSO1	Boso 1	2.50	345	P	Pn	20 01 17.8	-1.1
BSO3	Boso 3	2.77	338	P	Pn	20 01 22.1	-0.7
JOD2	Odawara 2	3.75	324	P	Pn	20 01 36.3	-0.3
JRY	Ryogami san	4.46	329	P	Pn	20 01 45.9	-0.4
JRY				*e*S	Sn	20 02 35.0	-3.2
JAG	Ashikaga	4.60	336	P	Pn	20 01 47.4	-0.8
JCJ	Chichijima	5.13	176	Pn	Pn	20 01 55.9	+0.3
	6.6nm,0.3s,baz=6.1,slow=19,SNR=7.0						
JCJ				Sn	Sn	20 02 52.3	-2.6
	4.2nm,0.3s,baz=330,slow=20,SNR=2.4						
MJAR	Matsushiro Arr	5.20	327	Pn	Pn	20 01 56.5	-0.1
	0.2nm,0.3s,baz=146,slow=10,SNR=6.1						
MJAR				Sn	Sn	20 02 56.4	-0.2
	0.1nm,0.3s,baz=147,slow=26,SNR=2.0						
KSRS	Korea Array	12.50	298	LR	LR	20 08 45.0	
	comp=Z,61nm,18.2s,baz=5.5,slow=39						
KLR	Kul'dur	18.57	339	P	P	20 04 55.5	0.0
	0.1nm,0.3s,baz=149,slow=7.9,SNR=1.9						
SONM	Songino Array	30.92	311	P	P	20 06 57.2	+1.6
	0.5nm,0.5s,baz=105,slow=10,SNR=4.2						
MKAR	Makanchi Array	47.04	306	P	P	20 09 10.6	+0.3
	0.3nm,0.6s,baz=89,slow=9.6,SNR=5.5						
WRA	Warramunga Arr	52.36	189	P	P	20 09 50.8	-0.2
	0.8nm,0.5s,baz=5.5,slow=7.6,SNR=13						
ASAR	Alice Springs	56.09	189	P	P	20 10 18.3	+0.2
	0.2nm,0.5s,baz=0.4,slow=7.0,SNR=4.6						
INK	Inuvik	58.55	26	P	P	20 10 35.4	+0.5
	0.3nm,0.3s,baz=277,slow=8.1,SNR=1.4						
NVAR	Mina Array Bea	77.66	52	P	P	20 12 36.8	+1.1
	0.1nm,0.3s,baz=292,slow=5.5,SNR=1.9						

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*IDC **01** 20:03:05.0±1.4, 27°.49N×107°.41E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.6/35, mbtmp3.7/8, ML3.2/1, Error ellipse: s-maj=51.6km s-min=24.7km az=77.0*
ISC 01 20:03:10.1±1.2, **27°.5N**±0°.1×**107°.4E**±0°.2, **h35**km, **n8**, σ**0s.89**/8, **mb3.8**/6, **Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.87	223	Pn	Pn	20 05 57.3	+0.3
	0.0nm,0.3s,baz=36,slow=12,SNR=1.6						
CMAR				Lg	Lg	20 09 19.9	
	0.0nm,0.3s,baz=49,slow=28,SNR=2.4						
SONM	Songino Array	20.32	358	P	P	20 07 44.4	+1.2
	1.0nm,0.7s,baz=175,slow=11,SNR=5.7						
MKAR	Makanchi Array	27.57	321	P	P	20 08 54.5	+0.7
	0.3nm,0.5s,baz=114,slow=10,SNR=4.2						
ZALV	Zalesovo Beam	31.20	334	P	P	20 09 26.1	+0.2
	2.4nm,0.6s,baz=132,slow=8.5,SNR=11						
NRIK	Noril'sk	43.45	350	P	P	20 11 09.5	+0.1
	2.0nm,0.6s,baz=146,slow=10,SNR=4.3						
ASAR	Alice Springs	56.95	151	P	P	20 12 52.2	+0.1
	0.3nm,0.6s,baz=332,slow=6.9,SNR=3.0						
ARCES	ARCESS Array B	61.70	337	P	P	20 13 24.0	-0.4
	1.5nm,0.8s,baz=74,slow=6.7,SNR=1.0						
NOA	NORSAR Array B	69.22	329	P	P	20 14 11.8	-1.4
	0.3nm,0.6s,baz=60,slow=4.2,SNR=1.7						

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*MOS **01** 20:20:07.4±1.0, 6°.78S×155°.51E, h20km, mb4.9/22, Error ellipse: s-maj=10.0km s-min=8.1km az=114.0*
*IDC **01** 20:20:11.7±2.3, 6°.93S×155°.57E, h42km±19km, mb4.3/21, mb1 4.5/22, mb1mx4.4/34, mbtmp4.6/22, ML3.1/1, MS3.8/17, Ms1 3.8/17, ms1mx3.6/36, Error ellipse: s-maj=16.8km s-min=12.4km az=94.0*
*NEIC **01** 20:20:12.7±1.4, 6°.98S±0°.08×155°.56E±0°.07, h52km±6km, mb5.0/83, Error ellipse: s-maj=12.3km s-min=9.6km az=220.0*
*BJI **01** 20:20:13.2±0.0, 6°.53S×155°.46E, h53km, mB5.0/21, mb4.8/47, Ms4.7/6, Ms7 4.4/6*
*DJA **01** 20:20:15.4±0.6, 7°S±5°×15°5E±°, h70km±6km, M4.9/14, mB4.7/3, mb4.8/14, MLv5.1/2, Mw(mB)3.9/3*
ISC 01 20:20:13.0±0.7, **6°.99S**±0°.05×**155°.53E**±0°.06, **h58**km±5km, **n247**, σ**1s.20**/248, **mb4.8**/91, **MS3.7**/15, **11C-10D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	4.35	310		Pn	20 21 16.4	-0.3
HNR	Honiara	5.00	119	P	Pn	20 21 28.0	+2.4
	69nm,0.3s,baz=293,slow=3.5,SNR=11						
HNR	Honiara	5.00	119	P	Pn	20 21 24.8	-0.8
HNR	Honiara	5.00	119		Pn	20 21 24.8	-0.8
PMG	Port Moresby	8.62	253	P	Pn	20 22 16.2	+1.1
	12nm,0.3s,baz=58,slow=10,SNR=37						
PMG				S	Sn	20 23 54.7	+3.7
	baz=357,slow=15,SNR=8.7						
PMG				LR	LR	20 25 25.4	
	comp=Z,615nm,21.5s,baz=55,slow=36						
PMG	Port Moresby	8.62	253	P	Pn	20 22 15.3	+0.1
PMG	Port Moresby	8.62	253	Pn	Pn	20 22 15.3	+0.1
COEN	Coen	13.97	239		Pn	20 23 28.0	-0.2
PATS	Pohnpei	14.01	11	Pn	Pn	20 23 28.0	-0.7
CTAO	Charters Tower	15.83	214	P	Pn	20 23 53.5	+1.2
CTAO				pmax	pmax		
	comp=Z,19nm,1.1s						
CTAO	Charters Tower	15.83	214	P	Pn	20 23 53.5	+1.2
DZM	Mont Dzumac	18.33	146	*e*P	P	20 24 13.3	-10
	comp=Z,51nm,1.1s						
DZM				*e*LR	LR	20 28 33.6	
	comp=Z,499nm,26.6s						
DZM	Mont Dzumac	18.33	146	LR	LR	20 31 00.1	
	comp=Z,271nm,19.0s,baz=261,slow=35						
EIDS	Eidsvold	18.76	193	P	P	20 24 26.6	-0.8
GUMO	Guam	23.02	333	LR	LR	20 32 26.8	
	comp=Z,143nm,21.8s,baz=156,slow=32						
FAKI	Fak Fak	23.54	279	P	P	20 25 16.1	-2.3
ARMA	Armidale	23.59	188	P	P	20 25 13.9	-4.9
ARMA				IAmb	IAmb	20 25 57.7	
	comp=Z,79nm,2.0s						
SAUI	Saumlaki	24.04	266	P	P	20 25 20.6	-2.4
WR0	Warramunga Arr	24.10	236	P	P	20 25 24.2	+0.7
WR0				IAmb	IAmb	20 25 33.8	
	comp=Z,30nm,1.1s						
WB0	Warramunga Arr	24.12	236	P	P	20 25 24.2	+0.5
WRAB	Tennant Creek	24.24	236	*c i*P	P	20 25 25.7	+0.9
WRAB				pmax	pmax		
	comp=Z,13nm,0.7s						
WRAB	Tennant Creek	24.24	236	P	P	20 25 25.0	+0.3
WB2	Warramunga Arr	24.25	236	P	P	20 25 25.0	+0.2
WRA	Warramunga Arr	24.25	236	P	P	20 25 25.7	+0.9
	comp=Z,14nm,0.6s,baz=58,slow=9.3,SNR=204						
WRA				PcP	PcP	20 29 05.2	+1.1
	comp=Z,1.1nm,0.4s,baz=67,slow=2.7,SNR=7.4						
WRA				ScP	ScP	20 32 40.2	+2.2
	comp=Z,0.6nm,0.7s,baz=69,slow=3.0,SNR=3.0						
WRA				LR	LR	20 34 50.2	
	comp=Z,178nm,19.1s,baz=55,slow=36						
WRA	Warramunga Arr	24.25	236	*e*P	P	20 25 25.8	+0.9
WRA				pmax	pmax		
	comp=Z,15nm,0.6s						
WRA	Warramunga Arr	24.25	236	P	P	20 25 24.4	-0.5
MSVF	Nonsavu	24.42	118	P	P	20 25 27.1	+0.5
	comp=Z,20nm,0.6s,baz=272,slow=11,SNR=15						
MSVF	Nonsavu	24.42	118	⇓*i*P	P	20 25 28.4	+1.9
MSVF				pmax	pmax		
	comp=Z,41nm,0.8s						
MSVF	Nonsavu	24.42	118	P	P	20 25 25.4	-1.2
MSVF				IAmb	IAmb	20 25 29.2	
	comp=Z,39nm,0.8s						
MTN	Manton Dam	24.71	254	P	P	20 25 28.8	-0.3
MTN				IAmb	IAmb	20 25 41.8	
	comp=Z,34nm,1.0s						
SIJI	Sorong	24.94	283	P	P	20 25 31.3	+0.1
	comp=Z,10nm,0.7s,baz=96,slow=11,SNR=6.8						
SWI	Sorong	24.95	283	P	P	20 25 30.8	-0.5
	comp=Z,43nm,1.2s						
AS31	Alice Springs	26.57	229	P	P	20 25 45.3	-0.6
ASAR	Alice Springs	26.57	229	P	P	20 25 45.9	-0.1
	comp=Z,3.1nm,0.5s,baz=62,slow=9.1,SNR=65						
ASAR				PcP	PcP	20 29 10.3	+1.0
	comp=Z,1.7nm,0.8s,baz=59,slow=2.9,SNR=6.2						
ASAR				ScP	ScP	20 32 47.1	+2.5
	comp=Z,0.6nm,0.6s,baz=70,slow=3.0,SNR=5.4						
ASAR				LR	LR	20 36 07.6	
	comp=Z,220nm,18.7s,baz=98,slow=36						
ASAR	Alice Springs	26.57	229	P	P	20 25 45.1	-0.9
KNRA	Kununurra	27.60	249	P	P	20 25 55.1	0.0
KNRA				IAmb	IAmb	20 26 07.5	
	comp=Z,41nm,1.1s						
H11S3	WAKE ISLAND Hy	27.61	23	T	T	20 54 21.2	
	baz=203,slow=75,SNR=526						
H11S2	WAKE ISLAND Hy	27.62	23	T	T	20 54 09.1	
	baz=203,slow=75,SNR=199						
H11S1	WAKE ISLAND Hy	27.63	23	T	T	20 54 20.0	
	baz=203,slow=75,SNR=196						
STKA	Stephens Creek	27.97	206	P	P	20 25 58.9	+0.6
	comp=Z,2.7nm,0.5s,baz=14,slow=12,SNR=9.6						
STKA	Stephens Creek	27.97	206	*e*P	P	20 26 00.0	+1.7
STKA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
STKA	Stephens Creek	27.97	206	P	P	20 25 58.1	-0.2
LBMI	Labuha	28.65	282	P	P	20 26 05.6	+1.0
	comp=Z,30nm,0.8s						
SOEI	Soe	31.04	263	P	P	20 26 25.3	-0.5
SOEI				IAmb	IAmb	20 27 03.0	
	comp=Z,19nm,0.9s						
BBOO	Buckleboo	31.42	213	P	P	20 26 28.4	-0.5
BBOO				IAmb	IAmb	20 26 38.0	
	comp=Z,70nm,1.6s						
MMRI	Maumere	33.01	265	P	P	20 26 42.6	-0.5
GTOI	Gorontalo	33.31	282	P	P	20 26 48.1	+2.4
	comp=Z,8.6nm,0.8s						
FORT	Forrest	34.96	224	P	P	20 26 57.8	-1.9
BKSI	Bulukumba	35.23	271	P	P	20 27 03.4	+1.1
	comp=Z,16nm,0.9s						
TOLI2	Tolitoli	35.59	282	P	P	20 27 04.4	-1.0
KAPI	Kappang	35.63	271	P	P	20 27 05.3	-0.4
KAPI				pmax	pmax		
	comp=Z,19nm,0.9s						
KAPI	Kappang	35.63	271	P	P	20 27 05.3	-0.4
KAPI				IAmb	IAmb	20 27 18.0	
	comp=Z,19nm,0.8s						
TAU	Tasmania Unive	36.50	190	P	P	20 27 11.2	-1.5
TAU				pmax	pmax		
	comp=Z,81nm,1.5s						
TAU	Tasmania Unive	36.50	190	P	P	20 27 11.2	-1.5
URZ	Urewera	36.76	151	P	P	20 27 14.4	-0.6
URZ				IAmb	IAmb	20 27 43.5	
	comp=Z,24nm,1.2s						
BKZ	Black Stump Fm	37.19	153	P	P	20 27 19.1	+0.3
BKZ				IAmb	IAmb	20 27 25.3	
	comp=Z,52nm,1.7s						
PSA00	Pilbara Seismi	37.37	243	P	P	20 27 19.3	-1.2
PSA00	Pilbara Seismi	37.37	243	P	P	20 27 18.9	-1.6
PSA00				IAmb	IAmb	20 27 31.8	
	comp=Z,32nm,1.2s						
THZ	Tophouse	37.91	159	P	P	20 27 24.5	-0.3
THZ				IAmb	IAmb	20 27 38.4	
	comp=Z,25nm,1.2s						
LTZ	Lake Taylor	38.59	160	P	P	20 27 31.7	+1.2
KHZ	Kahutara	38.71	159	P	P	20 27 30.5	-0.9
KHZ				IAmb	IAmb	20 27 58.6	
	comp=Z,28nm,1.1s						
MYLDM	Lahad Datu	38.88	287	P	P	20 27 31.9	-1.4
MYLDM				IAmb	IAmb	20 27 45.5	
	comp=Z,26nm,1.1s						
JAGI	Jajag, Banyuwa	41.01	265	P	P	20 27 49.1	-1.9
JAGI				IAmb	IAmb	20 27 58.6	
	comp=Z,17nm,0.9s						
KKM	Kota Kinabalu	41.31	287	P	P	20 27 53.2	-0.3
MORW	Morawa	43.19	234	P	P	20 28 08.8	+0.3
MORW				IAmb	IAmb	20 28 20.1	
	comp=Z,76nm,1.9s						
JSG	Sagara	44.56	340	P	P	20 28 18.5	-0.9
UGM	Wanagama	44.62	266	P	P	20 28 19.2	-1.1
SMRI	Semarang	44.73	267	P	P	20 28 19.8	-1.3
SMRI				IAmb	IAmb	20 28 49.2	
	comp=Z,41nm,1.1s						
YULB	Yu-li	45.06	313	P	P	20 28 22.6	-0.9
YULB				IAmb	IAmb	20 28 36.2	
	comp=Z,35nm,1.4s						
JMN	Monobe	45.40	334	P	P	20 28 24.1	-2.0
JMN				IAmb	IAmb	20 29 06.2	
	comp=Z,26nm,1.2s						
TPUB	Ta-pu	45.49	312	P	P	20 28 25.8	-1.1
SSLB	Suanglung	45.55	313	P	P	20 28 26.8	-0.7
SSLB				IAmb	IAmb	20 28 41.4	
	comp=Z,50nm,1.7s						
YHNB	Yeheng	45.80	315	P	P	20 28 27.6	-1.9
KSM	Kuching	45.90	279	P	P	20 28 29.2	-1.1
KSM				IAmb	IAmb	20 28 59.6	
	comp=Z,25nm,1.4s						
JWT	Wachi	46.13	337	P	P	20 28 31.4	-0.3
JWT				IAmb	IAmb	20 29 18.1	
	comp=Z,34nm,1.3s						
MJA0	Matsu Arr-Jizo	46.24	341	*e*P	P	20 28 34.9	+2.2
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MJAR	Matsushiro Arr	46.25	341	P	P	20 28 32.7	0.0
	comp=Z,2.2nm,0.6s,baz=167,slow=7.6,SNR=7.8						
MJAR				PcP	PcP	20 30 08.2	+0.7
	comp=Z,4.6nm,0.7s,baz=171,slow=3.8,SNR=8.4						
MJAR				LR	LR	20 46 16.7	
	comp=Z,39nm,21.8s,baz=125,slow=34						
MJAR	Matsushiro Arr	46.25	341	P	P	20 28 30.9	-1.8
MJAR						20 30 08.3	
MJAR				pmax	pmax		
	comp=Z,9.0nm,1.7s						
MJAR	Matsushiro Arr	46.25	341	P	P	20 28 30.9	-1.8
MJAR				PcP	PcP	20 30 08.3	+0.8
MAJO	Matsushiro	46.25	341	⇓*e*P	P	20 28 33.4	+0.7
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MAJO	Matsushiro	46.25	341	P	P	20 28 31.8	-0.9
MAJO				IAmb	IAmb	20 29 04.8	
	comp=Z,53nm,1.9s						
MAT	Matsushiro	46.25	341	P	P	20 28 31.4	-1.3
JHS	Saijyo	46.81	335	P	P	20 28 35.5	-1.7
JHS				PcP	PcP	20 30 10.5	+1.0
JSD	Sado	47.60	341	P	P	20 28 42.7	-0.4
JTM	Tenmabayashi	49.37	346	P	P	20 28 57.8	+1.1
DLV	T Lat	50.42	292	P	P	20 29 04.7	-0.7
DLV				IAmb	IAmb	20 29 15.9	
	comp=Z,28nm,1.1s						
KSRS	Korea Array	51.18	332	P	P	20 29 10.5	0.0
	comp=Z,1.6nm,0.4s,baz=153,slow=9.4,SNR=7.4						
KSRS				PcP	PcP	20 30 26.1	+0.8
	comp=Z,1.7nm,0.7s,baz=143,slow=4.3,SNR=4.5						
KSRS				LR	LR	20 51 34.9	
	comp=Z,24nm,18.3s,baz=114,slow=37						
JEW	Eniwo	51.22	347	P	P	20 29 09.0	-1.7
JKA	Kamikawa-asahi	52.19	348	P	P	20 29 17.1	-0.8
ASAJ	Asahikawa	52.19	348	P	P	20 29 17.1	-0.8
ASAJ				pmax	pmax		
	comp=Z,113nm,1.9s						
NJ2	Nanjing	52.25	320	*e*P	P	20 29 20.5	+1.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
UBPT	Khong Chiam	54.31	294	P	P	20 29 33.9	-0.1
UBPT				IAmb	IAmb	20 29 36.2	
	comp=Z,9.3nm,0.9s						
USA0B	Ussuriysk Arra	55.21	340	P	P	20 29 39.8	-0.2
USA0B				pmax	pmax		
	comp=Z,45nm,1.9s						
USA0B	Ussuriysk Arra	55.21	340	P	P	20 29 39.8	-0.2
USA0B				IAmb	IAmb	20 30 05.8	
	comp=Z,45nm,1.9s						
USRK	Ussuriysk Ar.	55.21	340	P	P	20 29 40.9	+0.9
	comp=Z,3.7nm,0.8s,baz=128,slow=7.2,SNR=10						
USRK	Ussuriysk Ar.	55.21	340	P	P	20 29 38.9	-1.1
USRK	Ussuriysk Ar.	55.21	340	P	P	20 29 38.9	-1.1
IPM	Ipoh	55.58	280	P	P	20 29 42.8	-0.4
IPM				IAmb	IAmb	20 29 44.2	
	comp=Z,11nm,0.7s						
KULM	Kulim	56.11	281	P	P	20 29 45.6	-1.4
KULM				IAmb	IAmb	20 30 07.1	
	comp=Z,8.1nm,0.9s						
SLVN	Son La	57.94	300	P	P	20 30 01.0	+1.1
SLVN				IAmb	IAmb	20 30 11.3	
	comp=Z,7.7nm,0.9s						
GSI	Gunungsitoli	58.41	276	P	P	20 30 00.5	-2.8
KLR	Kul'dur	59.72	342	⇓*e*P	P	20 30 11.9	+0.2
KLR				pmax	pmax		
	comp=Z,13nm,1.8s						
PETK	Petropavlovsk-	59.90	2	P	P	20 30 13.1	+0.3
	comp=Z,5.1nm,0.8s,baz=148,slow=7.5,SNR=12						
PETK	Petropavlovsk-	59.90	2	P	P	20 30 12.5	-0.3
PETK	Petropavlovsk-	59.90	2	P	P	20 30 12.5	-0.3
XAN	Xi'an	60.07	316	P	P	20 30 14.2	-0.2
XAN				pP	pP	20 30 27.1	-2.9
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,72nm,3.8s						
KMI	Kunming	60.45	304	⇑P	P	20 30 17.9	+0.5
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CM31	Chiang Mai Arr	61.26	295	P	P	20 30 23.6	+0.8
CMAR	Chiang Mai Arr	61.26	295	P	P	20 30 24.1	+1.3
	comp=Z,15nm,0.7s,baz=123,slow=5.3,SNR=116						
CMAR				LR	LR	20 57 21.5	
	comp=Z,15nm,18.9s,baz=100,slow=36						
CMAR	Chiang Mai Arr	61.26	295	P	P	20 30 22.5	-0.3
CHTO	Chiang Mai	61.37	296	P	P	20 30 24.0	+0.5
CHTO						20 31 06.6	
CHTO				pmax	pmax		
	comp=Z,23nm,1.1s						
CHTO	Chiang Mai	61.37	296	P	P	20 30 24.0	+0.5
CHTO				IAmb	IAmb	20 30 35.2	

	comp=Z,23nm,1.1s						
CHTO				PcP	PcP	20 31 06.6	+1.2
CD2	Chengdu	62.21	310	P	P	20 30 29.7	+0.7
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
HHC	Hu-ho-hao-te	62.40	324	eP	P	20 30 32.2	+2.0
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,90nm,8.0s						
BTO	Baotou	63.17	323	eP	P	20 30 39.3	+4.0
LZH	Lanzhou	64.68	315	eP	P	20 30 46.9	+1.5
LZH				pP	pP	20 30 56.3	-4.8
LZH				PcP	PcP	20 31 15.9	-2.9
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA	Zeya	65.03	342	eP	P	20 30 48.2	+1.1
ZEA				pmax	pmax		
	comp=N,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GTA	Gaotai	69.10	317	eP	P	20 31 14.4	+1.0
GTA				pP	pP	20 31 24.8	-4.4
GTA				sP	sP	20 31 29.1	-6.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ULN	Ulaanbaatar	69.28	327	⇓eP	P	20 31 15.6	+1.2
ULN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ULN	Ulaanbaatar	69.28	327	P	P	20 31 14.7	+0.3
SONM	Songino Array	69.62	327	P	P	20 31 17.1	+0.7
	comp=Z,3.1nm,0.5s,baz=141,slow=5.8,SNR=22						
SONM	Songino Array	69.62	327	P	P	20 31 17.1	+0.7
SONM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SONM	Songino Array	69.62	327	P	P	20 31 17.1	+0.7
SHL	Shillong	69.75	300	P	P	20 31 17.6	-0.1
SHL				pmax	pmax		
	comp=Z,24nm,0.9s						
SHL	Shillong	69.75	300	P	P	20 31 17.6	-0.1
SHL				IAmb	IAmb	20 31 28.8	
	comp=Z,24nm,0.9s						
SEY	Seymchan	69.76	358	P	P	20 31 17.1	+0.4
	comp=Z,3.0nm,0.8s,baz=182,slow=9.7						
SEY				LR	LR	20 57 48.0	
	comp=Z,38nm,21.9s,baz=120,slow=32						
VNDA	Vanda	70.57	179	P	P	20 31 22.8	+1.2
	comp=Z,1.6nm,0.7s,baz=332,slow=6.2,SNR=11						
VNDA	Vanda	70.57	179	P	P	20 31 22.0	+0.4
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
VNDA	Vanda	70.57	179	P	P	20 31 22.0	+0.4
YAK	Yakutsk	71.67	347	eP	P	20 31 28.4	+0.1
YAK				e*PP	pP	20 31 43.8	-0.4
YAK				e		20 34 08.2	
YAK				ePPP	PPP	20 35 51.0	
YAK				eS	S	20 40 44.3	+0.9
YAK				e*SS	sS	20 41 11.8	+1.5
YAK				e		20 41 29.9	
YAK				eSS	SS	20 45 22.7	+2.5
YAK				pmax	pmax		
	comp=Z,17nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,162nm,4.3s						
YAK				pmax	pmax		
	comp=N,108nm,4.3s						
YAK				pmax	pmax		
	comp=E,115nm,3.8s						
YAK				smax	smax		
	comp=E,63nm,2.5s						
YAK				smax	smax		
	comp=N,89nm,2.6s						
YAK	Yakutsk	71.67	347	P	P	20 31 28.4	+0.1
YAK				IAmb	IAmb	20 31 30.0	
	comp=Z,15nm,0.8s						
LSA	Lhasa	71.70	304	P	P	20 31 31.1	+1.2
LSA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LSA	Lhasa	71.70	304	P	P	20 31 29.2	-0.7
LSA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LSA	Lhasa	71.70	304	P	P	20 31 29.2	-0.7
ZAK	Zakamensk	72.77	328	eP	P	20 31 34.4	-0.9
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TAPN	Taplejung	73.85	301	eP	P	20 31 43.3	+0.8
ODAN	Odare	73.98	300	eP	P	20 31 43.6	+0.4
	comp=Z,36nm,0.6s						
RAMN	Ramite	74.69	300	eP	P	20 31 47.4	+0.1
	comp=Z,8.5nm,0.4s						
JIRN	Jiri	75.23	301	eP	P	20 31 51.4	+0.8
	comp=Z,14nm,0.7s						
BILL	Bilibino	75.24	4	⇑eP	P	20 31 50.4	+1.2
BILL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BILL	Bilibino	75.24	4	P	P	20 31 50.0	+0.7
BILL				IAmb	IAmb	20 32 04.9	
	comp=Z,25nm,1.6s						
GUN	Gumba	75.57	301	eP	P	20 31 53.4	+0.9
	comp=Z,22nm,0.6s						
PKI	Pulchoki	75.88	301	eP	P	20 31 54.8	+0.6
PKIN	Phulchoki	75.89	301	eP	P	20 31 54.7	+0.5
KKN	Kakani	76.04	301	eP	P	20 31 55.8	+0.8
DMN	Daman	76.14	301	eP	P	20 31 56.3	+0.7
GKN	Gorkha	76.65	301	eP	P	20 31 58.8	+0.4
ANM	Nome	77.08	16	P	P	20 32 00.6	+0.8
ANM				pmax	pmax		
	comp=Z,50nm,1.6s						
ANM	Nome	77.08	16	P	P	20 32 00.6	+0.8
TNA	Tin City	77.18	15	P	P	20 32 00.6	+0.3
KOLN	Koldanda	77.47	300	eP	P	20 32 03.3	+0.2
	comp=Z,3.5nm,0.3s						
M19K	Big River Lodg	78.75	22	P	P	20 32 10.6	+1.5
M19K				IAmb	IAmb	20 32 36.4	
	comp=Z,9.6nm,0.7s						
WMQ	Urumqi	79.18	317	eP	P	20 32 13.7	+1.7
HYB	Hyderabad	79.77	289	i P	P	20 32 15.5	-0.1
HYB				e		20 32 24.5	
TIXI	Tiksi	80.42	352	⇑iP	P	20 32 17.5	-0.5
TIXI				pmax	pmax		
	comp=Z,10.0nm,2.0s						
PWL	Port Wells	80.48	24	P	P	20 32 18.2	-0.3
DGZ	Jazzator, Alta	81.46	322	⇓eP	P	20 32 23.7	-0.5
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MCK	McKinley	81.86	22	P	P	20 32 25.5	-0.3
MCK				pmax	pmax		
	comp=Z,11nm,0.8s						
MCK	McKinley	81.86	22	P	P	20 32 25.5	-0.3
MCK				IAmb	IAmb	20 32 26.4	
	comp=Z,10nm,0.8s						
COLA	College	82.89	21	⇓iP	P	20 32 30.9	-0.2
COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
QSPA	South Pole Qui	82.99	180	P	P	20 32 32.2	+0.4
QSPA				IAmb	IAmb	20 32 33.8	
	comp=Z,13nm,1.1s						
IL31		83.18	21	P	P	20 32 31.8	-0.7
ILAR	Eielson Array	83.18	21	P	P	20 32 31.6	-1.0
	comp=Z,1.8nm,0.8s,baz=246,slow=5.7,SNR=21						
ILAR				LR	LR	21 05 49.7	
	comp=Z,85nm,19.7s,baz=234,slow=33						
DOT	Dot Lake	83.65	23	P	P	20 32 35.3	+0.2
DOT				IAmb	IAmb	20 32 51.0	
	comp=Z,35nm,1.8s						
MK31	Makanchi Array	83.75	319	ceP	P	20 32 35.9	-0.1
MK31	Makanchi Array	83.75	319	P	P	20 32 35.5	-0.5
MKAR	Makanchi Array	83.75	319	P	P	20 32 35.8	-0.3
	comp=Z,3.3nm,0.7s,baz=105,slow=5.9,SNR=19						
MKAR	Makanchi Array	83.75	319	eP	P	20 32 36.2	+0.2
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	83.75	319	P	P	20 32 35.9	-0.1
SCRK	Sand Creek	83.84	23	P	P	20 32 36.2	-0.1
M27K	Edge Creek, AK	83.91	25	P	P	20 32 37.2	+0.6
M27K				IAmb	IAmb	20 32 54.5	
	comp=Z,16nm,1.1s						
TOLK	Toolik Lake Re	84.46	18	P	P	20 32 39.8	+0.7
TOLK				IAmb	IAmb	20 32 41.0	
	comp=Z,11nm,1.2s						
ZALV	Zalesovo Beam	84.47	326	P	P	20 32 38.5	-0.9
	comp=Z,2.8nm,0.7s,baz=110,slow=6.3,SNR=11						
MAW	Mawson	84.60	203	P	P	20 32 41.0	+1.1
	comp=Z,5.7nm,0.9s,baz=115,slow=8.5,SNR=8.7						
MAW	Mawson	84.60	203	P	P	20 32 41.0	+1.1
MAW				pmax	pmax		
	comp=Z,9.0nm,1.8s						
KSH	Kashi	86.41	310	P	P	20 32 52.1	+2.5
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BBB	Bella Bella	87.20	37	LR	LR	21 06 05.4	
	comp=Z,105nm,19.6s,baz=276,slow=32						
NIL	Nilore	87.44	304	P	P	20 32 54.0	-0.7
NIL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NIL	Nilore	87.44	304	P	P	20 32 54.0	-0.7
NIL				IAmb	IAmb	20 32 55.8	
	comp=Z,5.8nm,0.7s						
AAK	Ala-Archa	88.13	313	⇓eP	P	20 32 58.1	+0.2
AAK				pmax	pmax		
	comp=Z,15nm,1.8s						
YBH	Yreka Blue Hor	88.49	48	LR	LR	21 04 50.6	
	comp=Z,127nm,21.3s,baz=290,slow=30						
NRIK	Noril'sk	88.90	341	P	P	20 33 00.1	-0.6
	comp=Z,4.4nm,0.7s,baz=112,slow=4.2,SNR=9.1						
NRIK				LR	LR	21 12 35.9	
	comp=Z,32nm,19.8s,baz=79,slow=35						
NRIK	Noril'sk	88.90	341	P	P	20 33 00.1	-0.6
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NRIK	Noril'sk	88.90	341	P	P	20 33 00.1	-0.6
NRIK				IAmb	IAmb	20 33 01.1	
	comp=Z,5.0nm,0.8s						
INK	Inuvik	89.53	21	P	P	20 33 03.9	+0.3
	comp=Z,2.2nm,0.5s,baz=272,slow=3.7,SNR=11						
INK				LR	LR	21 08 33.8	
	comp=Z,113nm,20.4s,baz=216,slow=32						
INK	Inuvik	89.53	21	P	P	20 33 03.5	-0.1
INK				pmax	pmax		
	comp=Z,15nm,1.5s						
INK	Inuvik	89.53	21	P	P	20 33 03.5	-0.1
INK				IAmb	IAmb	20 33 05.2	
	comp=Z,15nm,1.4s						
SYO	Syowa Base	92.50	199	⇑eP	P	20 33 18.0	+0.5
SYO	Syowa Base	92.50	199	⇑ePcP	PcP	20 33 21.4	+3.2
SYO	Syowa Base	92.50	199	⇑epP	pP	20 33 31.6	-1.9
BRVK	Borovoye	92.68	323	⇓eP	P	20 33 17.5	-1.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.7s						
A36M	Sachs Harbour	93.28	18	P	P	20 33 21.0	0.0
A36M				IAmb	IAmb	20 33 35.4	
	comp=Z,9.7nm,1.1s						
NEW	Newport	93.40	42	LR	LR	21 07 33.2	
	comp=Z,100nm,21.8s,baz=274,slow=30						
ELK	Elko	93.93	50	LR	LR	21 08 45.7	
	comp=Z,76nm,19.5s,baz=275,slow=31						
YKA	Yellowknife Ar	96.08	28	P	P	20 33 34.2	+0.1
	comp=Z,1.2nm,0.5s,baz=268,slow=4.6,SNR=9.5						
PDAR	Pinedale Array	98.30	48	P	P	20 33 44.4	-0.5
	comp=Z,0.7nm,0.8s,baz=0.0,slow=0.1,SNR=5.0						
PDAR				LR	LR	21 14 48.9	
	comp=Z,73nm,18.0s,baz=311,slow=33						
ANMO	Albuquerque	100.53	56	⇓eP	Pdif	20 33 53.0	-1.9
ANMO				pmax	pmax		
	comp=Z,16nm,3.7s						
VNA2	Neumayer--Watz	101.41	186	Pdiff	Pdif	20 33 58.0	+0.1
ARCES	ARCESS Array B	109.73	343	PKiKP	PKiKP	20 38 37.2	+0.1
	comp=Z,1.0nm,0.4s,baz=84,slow=2.8,SNR=17						
GNI	Garni	110.34	310	d iPKIKP	PKiKP	20 38 36.0	-3.3
NCK	Nalchik	110.65	314	⇑iPKIKP	PKiKP	20 38 38.0	-1.6
OBN	Obninsk	112.03	327	i PKIKP	PKiKP	20 38 45.4	+3.7
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	114.15	336	PKP	PKPdf	20 38 45.5	-0.1
	comp=Z,2.7nm,0.8s,baz=64,slow=3.2,SNR=7.5						
FINES				PKKPbc	PKKPbc	20 49 27.2	-1.6
	comp=Z,2.0nm,0.8s,baz=225,slow=3.3,SNR=5.6						
FINES	FINESS Array B	114.15	336	c iPKIKP	PKiKP	20 38 46.0	+0.4
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PLCA	Paso Flores	116.41	142	PKP	PKPdf	20 38 51.1	+0.4
	comp=Z,1.7nm,0.4s,baz=209,slow=3.4,SNR=8.9						
PLCA	Paso Flores	116.41	142	ePKIKP	PKiKP	20 38 51.4	+0.6
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	Malin Array Be	117.84	325	PKP	PKPdf	20 38 53.1	+0.1
	comp=Z,1.0nm,0.6s,baz=62,slow=2.4,SNR=4.6						
AKBB	Malin Array Si	117.84	325	⇑iPKIKP	PKPdf	20 38 53.2	+0.2
NB2	NORSAR Subarra	119.87	341	PKPdf	PKPdf	20 38 56.0	-0.7
	comp=Z,0.2nm,0.3s,baz=42,slow=1.8						
NOA	NORSAR Array B	119.87	341	PKP	PKPdf	20 38 56.3	-0.4
	comp=Z,0.4nm,0.6s,baz=50,slow=1.5,SNR=3.8						
BOSA	Boshof	120.44	231	PKP	PKiKP	20 38 59.5	+0.5
	comp=Z,1.4nm,0.7s,baz=43,slow=0.7,SNR=1.6						
VRAC	Vranov	125.54	328	ePKP	PKPdf	20 39 08.3	+0.4
KRUC	Moravsky	125.79	328	ePKP	PKiKP	20 39 09.1	+0.3
CLL	Collm	126.06	332	ePKIKP	PKPdf	20 39 07.0	-1.8
CLL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CLL	Collm	126.06	332	ePKPdf	PKPdf	20 39 07.0	-1.8
	comp=Z,8.0nm,1.1s						
CLL				e		20 39 20.0	
CKRC	Cesky Krumlov	127.02	329	ePKPDF	PKiKP	20 39 12.2	+0.9
CKRC				ex	x	20 39 23.0	
NKC	Novy Kostel	127.03	331	ePKPDF	PKiKP	20 39 12.1	+0.8
NKC	Novy Kostel	127.03	331	ePKIKP	PKiKP	20 39 12.1	+0.8
KHC	Kasperske Hory	127.20	329	ePKPDF	PKiKP	20 39 11.9	+0.2
KHC				ex	x	20 39 22.6	
KHC	Kasperske Hory	127.20	329	ePKIKP	PKiKP	20 39 11.9	+0.2
KHC				e		20 39 22.6	
GERES	GERESS Array B	127.32	329	PKP	PKiKP	20 39 12.6	+0.6
	comp=Z,1.6nm,0.7s,baz=80,slow=3.1,SNR=6.6						
LPAZ	La Paz	131.00	119	PKP	PKPdf	20 39 20.5	+0.5
	comp=Z,1.6nm,0.5s,baz=315,slow=1.4,SNR=7.3						
CPUP	Villa Florida	134.03	137	PKP	PKPdf	20 39 25.7	+1.0
	comp=Z,1.8nm,0.5s,baz=303,slow=3.7,SNR=4.0						
MVO	Moncorvo	142.59	338	ePKP	PKPdf	20 39 36.8	-3.3
ESDC	Sonseca Array	142.60	334	PKhKP	PKPpre	20 39 36.0	
	comp=Z,0.8nm,0.7s,baz=12,slow=3.3,SNR=8.2						
POLO	Lamas de Olo	142.68	339	ePKP	PKPdf	20 39 37.1	-3.2
PVIS	Viseu	143.29	339	ePKP	PKPbc	20 39 39.1	+0.7
MTE	Manteigas	143.44	338	ePKP	PKPbc	20 39 39.6	+0.7
PCBR	Castelo Branco	143.91	338	ePKP	PKPbc	20 39 40.7	+0.6
PMRV	Marv??o	144.23	337	ePKP	PKPbc	20 39 42.2	+1.0
PMRV				i LQ	LQ	20 39 52.1	
PSBE	So Bento	144.68	339	ePKP	PKPdf	20 39 44.3	+0.6
PESTR	Estremoz	144.79	337	ePKP	PKPdf	20 39 43.8	-0.1
PMTG	Montargil	144.86	338	ePKP	PKPdf	20 39 44.0	0.0
PMTG				i LQ	LQ	20 39 54.1	
EVO	Evora	145.25	337	ePKP	PKPdf	20 39 45.4	+0.7
EVO				i LQ	LQ	20 39 55.7	
PMAFR	Mafra	145.35	339	ePKP	PKPdf	20 39 45.9	+1.0
PBEJ	Beja	145.63	336	ePKP	PKPab	20 39 46.9	+0.9
PBEJ				i LQ	LQ	20 39 57.1	
PNCL	Nicolau / Gran	145.81	337	ePKP	PKPab	20 39 47.5	+0.9
PNCL				i LQ	LQ	20 39 57.6	
MESJ	Messejana	145.93	337	ePKP	PKPab	20 39 48.0	+0.9
MESJ				i LQ	LQ	20 39 58.2	
PCVE	Castro Verde	146.04	336	ePKP	PKPab	20 39 47.9	+0.4
PVAQ	Vaqueiros	146.10	336	ePKP	PKPab	20 39 48.5	+0.7
PVAQ				i LQ	LQ	20 39 58.7	
PBDV	Barranco-do-Ve	146.33	336	ePKP	PKPbc	20 39 48.0	+0.2
PTEO	Sao Teotonio	146.38	337	ePKP	PKPab	20 39 49.5	+0.7
PTEO				i LQ	LQ	20 39 59.7	
MORF	Marmelete	146.56	337	ePKP	PKPdf	20 39 46.0	-1.1
MORF	Marmelete	146.56	337	ePKP	PKPab	20 39 49.4	-0.2
BDFB	Brasilia	147.61	134	PKPbc	PKPbc	20 39 52.3	+0.1
	comp=Z,12nm,0.6s,baz=276,slow=1.6,SNR=16						
TORD	Torodi Ar. Bea	153.53	285	PKP	PKPdf	20 39 58.4	-0.1
	comp=Z,0.5nm,0.6s,baz=103,slow=1.4,SNR=4.1						
TORD				PKPbc	PKPbc	20 40 05.8	-0.4
	comp=Z,1.3nm,0.5s,baz=94,slow=2.2,SNR=16						
TORD				PKPab	PKPab	20 40 19.0	+0.2
	comp=Z,1.5nm,0.3s,baz=86,slow=4.8,SNR=17						
DBIC	Dimbokro	160.52	270	PKPab	PKPab	20 40 49.5	+0.6
	comp=Z,4.7nm,0.8s,baz=109,slow=6.1,SNR=5.2						

IPEC ***01*** *20:28:56.8±0.1, 50°.14N×19°.07E, h0^{km}±1^{km}, ML2.5/3,*
Error ellipse: s-maj=2.7km s-min=0.8km az=165.0
PRU ***01*** *20:28:57.8±0.0, 50°.09N×19°.02E, h0^{km}*
ISC 01 20:28:56.1±0.8**, 50°.05N**±0°.04×**19°.05E**±0°.02**, h0^{km}, n24,**
σ0.^{s}57/38**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.51	70	ePg	Pg	20 29 05.8	-0.1
OJC				eSg	Sg	20 29 12.4	-0.1
OKC	Ostrava-Krasne	0.62	250	ePG	Pb	20 29 09.6	-0.2
OKC				eSG	Sb	20 29 18.5	-0.5
	comp=Z,35nm,0.9s						
LANS	Liptovska Anna	0.94	163	ePG	Pn	20 29 16.0	-0.6
LANS				eSG	Sb	20 29 29.1	+0.8
LANS				eLG	Lg	20 29 29.9	
MORC	Moravsky Berou	1.01	255	ePG	Pn	20 29 17.4	-0.2
MORC				eSG	Sb	20 29 29.9	-0.4
MORC	Moravsky Berou	1.01	255	ePg	Pn	20 29 17.3	-0.3
	baz=69						
MORC				eSg	Sb	20 29 29.8	-0.5
	55nm,0.7s,baz=69						
NIE	Niedzica	1.03	127	ePg	Pn	20 29 17.5	-0.3
NIE				eSg	Sn	20 29 33.4	+0.4
KRLC	Kraliky	1.46	272	ePG	Pn	20 29 23.4	-0.3
KRLC				eSG	Sn	20 29 43.7	+0.1
	comp=Z,27nm,0.4s						
STHS	Stebnicka Huta	1.56	113	eSN	Sg	20 29 47.6	+1.4
VYHS	Vyhne	1.56	185	ePN	Pb	20 29 25.9	0.0
VYHS				eSN	Sg	20 29 46.8	+0.5
VYHS				eLG	Lg	20 29 49.2	
VRAC	Vranov	1.76	246	ePn	Pb	20 29 29.3	+0.1
	baz=62						
VRAC				eSg	Sg	20 29 53.3	+0.8
	33nm,1.0s,baz=62						
DPC	Dobruska-Polom	1.78	281	ePG	Pb	20 29 29.5	0.0
DPC				eSG	Sg	20 29 53.8	+0.7
	comp=Z,18nm,0.7s						
KECS	Kecovo	1.83	148	eSN	Sg	20 29 54.3	-0.5
OSTC	Ostas	1.89	287	ePG	Pn	20 29 30.4	+0.8
OSTC				eSG	Sg	20 29 57.5	+0.9
	comp=Z,17nm,0.9s						
CRVS	Cervenica-Dubn	1.95	125	ePN	Pg	20 29 33.4	0.0
KRUC	Moravsky	1.99	241	ePn	Pb	20 29 32.6	-0.5
	baz=57						
KRUC				eSg	Sg	20 30 00.6	+0.6
	26nm,0.9s,baz=57						
CHVC	Chvalec	1.99	287	ePG	Pb	20 29 32.4	-0.8
CHVC				eSG	Sg	20 30 00.8	+0.7
	comp=Z,50nm,1.5s						
UPC	Upice	2.00	284	eSG	Sg	20 30 01.1	+0.8
	comp=Z,38nm,1.8s						
MODS	Modra-Piesok	2.04	215	eSG	Sg	20 30 01.8	+0.2
PRU	Pruhonice	2.91	270	eSG	Sg	20 30 29.2	-0.2
	comp=Z,7.5nm,0.6s						
PVCC	Panska Ves	2.91	281	eSG	Sg	20 30 30.7	+1.1
	comp=Z,12nm,0.5s						
CKRC	Cesky Krumlov	3.33	250	eSG	Sg	20 30 43.0	0.0
BRG	Berggiesshubel	3.36	286	Sg	Sg	20 30 43.7	-0.4
BRG				Amp		20 30 50.5	
	comp=Z,3.5nm,0.4s						
KHC	Kasperske Hory	3.68	258	ePG	Pg	20 30 06.5	0.0
KHC				eSG	Sg	20 30 54.4	+0.3
	comp=Z,5.0nm,0.5s						
CLL	Collm	4.04	290	eSg	Sg	20 31 06.0	0.0

TAP ***01*** *20:49:43.6, 24°.79N×122°.26E, h10^{km}, ML2.9, C*
JMA ***01*** *20:49:44.6, 24°.70N×122°.26E, h38^{km}±4^{km}, M2.1*
ISC 01 20:49:42.1±1.0**, 24°.83N**±0°.02×**122°.35E**±0°.02**, h12^{km}**±8^{km}**,**
n86, σ0.^{s}75/153**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.37	299	P	Pb	20 49 50.6	0.0
	baz=312						
TWB1				S	Sg	20 49 54.7	+0.2
	baz=312						
EGS		0.38	272	i P	Pb	20 49 50.4	-0.3
	baz=281						
EGS				S	Sg	20 49 55.5	+0.8
	baz=281						
NTC	Toucheng	0.47	273	i P	Pg	20 49 51.6	+0.2
	baz=280						
NTC				S	Sb	20 49 58.8	-0.3
	baz=280						
TIPB	Shuangxi	0.49	287	i P	Pb	20 49 52.5	-0.2
	baz=294						
TIPB				S	Sb	20 49 59.3	-0.6
	baz=294						
TWC	Suao	0.50	244	i P	Pg	20 49 51.7	-0.3
	baz=252						
TWC				i S	Sg	20 49 57.3	-1.3
	baz=252						
ILA	Ilan	0.55	263	P	Pb	20 49 54.0	+0.4
	baz=259						
ILA				S	Sb	20 50 01.2	-0.2
	baz=259						
NWF	Wu-fen Shan	0.57	295	i P	Pn	20 49 55.3	-0.8
	baz=302						
NWF				i S	Sb	20 50 02.2	+0.1
	baz=302						
NDS	Dongshan	0.60	251	P	Pg	20 49 53.7	-0.2
	baz=246						
NDS				S	Sg	20 50 01.2	-0.7
	baz=246						
TWE	Neicheng	0.63	260	i P	Pg	20 49 54.2	-0.1
	baz=256						
TWE				S	Sg	20 50 02.4	-0.2
	baz=256						
EWUT	Wuta	0.64	234	P	Pg	20 49 54.5	-0.1
	baz=234						
EWUT				S	Sg	20 50 01.9	-1.2
	baz=234						
JYNG	Yonagunijimaku	0.66	124	P	Pn	20 49 57.5	+0.2
ENA	Nanau	0.68	234	P	Pg	20 49 54.9	-0.4
	baz=233						
ENA				S	Sg	20 50 03.3	-0.9
	baz=233						
TWA	Mucha	0.71	282	i P	Pn	20 49 57.6	-0.3
	baz=276						
TWA				i S	Sn	20 50 07.2	-1.6
	baz=276						
YOJ	Yonaguni jima	0.71	121	P	Pn	20 49 58.5	+0.6
	baz=115						
YOJ				S	Sn	20 50 09.4	+0.7
	baz=115						
YOJ	Yonaguni jima	0.71	121	P	Pn	20 49 58.3	+0.4
YOJ				S	Sn	20 50 07.9	-0.8
ENTT	Nioudou	0.73	255	P	Pg	20 49 56.4	+0.1
	baz=257						
ENTT				S	Sg	20 50 05.9	-0.1
	baz=257						
NHDH	Xindian Distri	0.76	280	i P	Pn	20 49 58.6	0.0
	baz=274						
NHDH				i S	Sb	20 50 08.0	+0.6
	baz=274						
NWLT	Wulai	0.77	266	i P	Pb	20 49 57.3	-0.1
	baz=270						
NWLT				i S	Sg	20 50 07.1	0.0
	baz=270						
YM01	YM01	0.77	294	P	Pn	20 49 58.8	-0.1
	baz=299						
YM01				S	Sn	20 50 09.0	-1.4
	baz=299						
NDT	Datong Townshi	0.79	254	i P	Pg	20 49 57.5	+0.1
	baz=256						
NDT				S	Sg	20 50 07.7	-0.1
	baz=256						
TAP	Taipei	0.79	285	P	Pn	20 49 59.4	+0.4
	baz=290						
TAP				S	Sn	20 50 09.7	-1.1
	baz=290						
TWY	Chenhua	0.81	303	i P	Pn	20 49 59.6	+0.3
	baz=308						
TWY				S	Sn	20 50 10.2	-1.0
	baz=308						
ANP	Anpu	0.83	296	P	Pn	20 50 00.1	+0.5
	baz=300						
PCYT	Pengchaiyu	0.83	343	i P	Pn	20 49 59.8	+0.1
	baz=345						
PCYT				S	Sn	20 50 14.1	+2.2
	baz=345						
NTST	Danshui	0.88	292	i P	Pn	20 50 00.8	+0.5
	baz=308						
NTST				i S	Sn	20 50 12.2	-0.8
	baz=308						
TWS1	Kuangyinshan	0.88	288	P	Pn	20 50 00.4	+0.1
	baz=292						
TWS1				S	Sn	20 50 12.9	-0.2
	baz=292						
YHNB	Yeheng	0.90	260	P	Pg	20 49 59.4	0.0
	baz=257						
YHNB				S	Sg	20 50 11.3	+0.2
	baz=257						

NSK	Sanguang	0.91	261	P	Pg	20 49 59.6	-0.1
	baz=257						
NSK				S	Sg	20 50 10.9	-0.7
	baz=257						
ETL	Fush Village	0.94	225	P	Pb	20 50 00.1	-0.2
	baz=234						
ETL				S	Sb	20 50 11.4	-1.3
	baz=234						
NACB	Ninganchiao	0.94	226	P	Pb	20 50 00.1	-0.3
	baz=227						
NACB				S	Sb	20 50 11.3	-1.6
	baz=227						
NNSB	Datong	0.96	246	P	Pb	20 50 00.3	-0.5
	baz=237						
NNSB				S	Sb	20 50 13.1	-0.4
	baz=237						
NNS	Nan Shan	0.97	247	iP	Pg	20 50 00.9	+0.1
	baz=238						
NNS				iS	Sb	20 50 12.9	-0.7
	baz=238						
ETLH	Xiulin Townshi	1.00	232	P	Pb	20 50 00.8	-0.6
	baz=233						
ETLH				S	Sb	20 50 13.4	-1.2
	baz=233						
TWD	Chiawan	1.01	223	iP	Pb	20 50 01.4	-0.1
	baz=231						
TWD				iS	Sb	20 50 14.1	-0.7
	baz=231						
HWA	Hwalien	1.08	219	P	Pg	20 50 04.8	+1.8
	baz=228						
HWA				eS	Sn	20 50 18.9	+0.8
	baz=228						
FUSS	Fushou	1.16	240	iP	Pb	20 50 04.2	0.0
	baz=242						
FUSS				iS	Sb	20 50 19.0	-0.2
	baz=242						
WHF	Hehuan Shan	1.20	236	iP	Pn	20 50 04.9	-0.1
	baz=237						
WHF				iS	Sb	20 50 19.5	-1.1
	baz=237						
TWT	Tachien	1.21	242	P	Pg	20 50 05.9	+0.4
	baz=237						
TWT				S	Sb	20 50 20.8	+0.1
	baz=237						
LIOB	Emei	1.22	262	iP	Pg	20 50 06.0	+0.3
	baz=264						
LIOB				iS	Sg	20 50 23.1	+1.5
	baz=264						
TDCB	Techi	1.22	242	P	Pg	20 50 05.6	-0.1
	baz=237						
TDCB				S	Sb	20 50 20.9	-0.2
	baz=237						
NSTT	Nanjuang	1.24	261	iP	Pg	20 50 06.0	+0.1
	baz=264						
NSTT				iS	Sg	20 50 22.2	+0.2
	baz=264						
ESL	Shilin	1.31	220	iP	Pg	20 50 07.4	+0.1
	baz=243						
ESL				iS	Sg	20 50 25.0	+0.7
	baz=243						
CHGB	Renai	1.31	235	P	Pb	20 50 07.0	+0.2
	baz=237						
CHGB				S	Sb	20 50 23.1	-0.7
	baz=237						
IRIF	Iriomote-Funau	1.35	111	P	Pg	20 50 08.1	0.0
OWD	Renai	1.38	231	iP	Pg	20 50 08.4	-0.2
	baz=233						
OWD				iS	Sn	20 50 24.2	-1.3
	baz=233						
WHP	Taichung City	1.39	247	iP	Pg	20 50 09.0	+0.2
	baz=249						
WHP				iS	Sn	20 50 25.5	-0.2
	baz=249						
EGFH	Guangfu	1.43	216	iP	Pg	20 50 09.8	+0.3
	baz=193						
EGFH				S	Sg	20 50 28.6	+0.5
	baz=193						
TWQ1	Liyutan	1.51	252	iP	Pg	20 50 11.4	+0.3
	baz=269						
TWQ1				eS	Sg	20 50 30.8	0.0
	baz=269						
WCS	Beigang Elemen	1.52	240	P	Pg	20 50 11.2	0.0
	baz=249						
WCS				S	Sg	20 50 31.0	+0.1
	baz=249						
HATJ	Hateruma jima	1.54	120	eS	Sb	20 50 29.4	-0.5
HGSD	Ruisui	1.57	212	P	Pb	20 50 10.8	-0.4
	baz=192						
HGSD				eS	Sb	20 50 32.2	+1.2
	baz=192						
EHY	Hungye	1.62	216	P	Pb	20 50 11.6	-0.3
	baz=192						
EHY				eS	Sb	20 50 32.2	0.0
	baz=192						
SMLT	Sun Moon Lake	1.62	235	iP	Pg	20 50 13.6	+0.4
	baz=237						
SMLT				S	Sb	20 50 32.9	+0.4
	baz=237						
JKRS	Kuro-shima	1.63	111	P	Pg	20 50 12.5	-0.8
JKRS				eS	Sb	20 50 32.6	+0.1
SSLB	Suanglung	1.64	231	P	Pb	20 50 12.8	+0.5
	baz=233						
SSLB				S	Sb	20 50 33.3	+0.3
	baz=233						
TYC	Yuchr	1.64	236	P	Pg	20 50 13.1	-0.5
	baz=239						
TYC				eS	Sb	20 50 32.9	0.0
	baz=239						
TCU	Taichung	1.67	246	eP	Pb	20 50 13.3	+0.6
	baz=251						
TCU				eS	Sg	20 50 35.2	-0.5
	baz=251						
JIJ	Ishigaki jima	1.70	105	P	Pb	20 50 13.4	+0.1
YULB	Yu-li	1.72	214	P	Pn	20 50 12.4	+0.5
	baz=220						
EYUL	Yuli	1.75	213	P	Pb	20 50 14.2	+0.1
	baz=195						
WJS	Zhushan	1.78	236	iP	Pg	20 50 16.3	-0.1
	baz=242						
WJS				iS	Sg	20 50 41.5	+1.9
	baz=242						
WNT	Mingjian	1.79	238	P	Pg	20 50 16.6	+0.2
	baz=245						
WNT				iS	Sg	20 50 40.1	+0.4
	baz=245						
JISG	Ishigakijimahi	1.80	97	P	Pb	20 50 14.8	-0.3
YUS	Yu-Shan	1.84	224	P	Pb	20 50 16.7	+0.7
	baz=229						
FULB	Fuli	1.89	211	iP	Pn	20 50 14.3	+0.2
	baz=191						
ALS	Alishan	1.93	227	iP	Pb	20 50 18.2	+0.9
	baz=217						
ALS				iS	Sg	20 50 44.0	-0.1
	baz=217						
CHKT	Chengkung	1.94	208	eS	Sn	20 50 38.8	-0.4
	baz=187						
CHN5	Tsauling	1.96	231	P	Pb	20 50 18.4	+0.7
	baz=238						
CHN5				S	Sg	20 50 44.2	-0.9
	baz=238						
WDLH	Douliu	2.00	236	S	Sg	20 50 46.2	-0.3
	baz=242						
WRL	Guolierlin Hig	2.02	243	eP	Pb	20 50 18.1	-0.6
	baz=247						
ELDTW	Lidau	2.04	217	iP	Pn	20 50 17.6	+1.3
	baz=210						
EDH	Donghe	2.08	207	iP	Pn	20 50 17.0	+0.2
	baz=188						
EDH				iS	Sn	20 50 41.3	-1.4
	baz=188						
WTK	Tuku	2.12	238	P	Pb	20 50 21.1	+0.7
	baz=245						
WTK				S	Sb	20 50 47.9	+1.3
	baz=245						
CHN4	Tsaushan	2.17	228	P	Pb	20 50 20.1	-1.3
	baz=235						
CHN4				S	Sb	20 50 50.0	+1.7
	baz=235						
TPUB	Ta-pu	2.19	226	P	Pb	20 50 21.6	0.0
	baz=218						
TPUB				S	Sg	20 50 51.0	-1.4
	baz=218						
STYH	Taoyuan	2.19	221	P	Pb	20 50 20.4	-1.3
	baz=215						
STYH				S	Sb	20 50 48.9	+0.2
	baz=215						
LONT	Longtian	2.21	210	eP	Pb	20 50 20.9	-1.2
	baz=218						
WTP	Ta-pu	2.23	225	iP	Pb	20 50 22.8	+0.4
	baz=217						
WTP				iS	Sb	20 50 52.0	+2.0
	baz=217						
TWK	Hsinying	2.30	228	P	Pb	20 50 23.7	0.0
	baz=235						
TWK				eS	Sb	20 50 53.2	+1.1
	baz=235						
CHN1	Nanshi	2.33	226	iP	Pb	20 50 23.7	-0.5
	baz=234						
CHN1				iS	Sb	20 50 53.8	+0.9
	baz=234						
SGST	Jiashian	2.37	223	eS	Sb	20 50 55.1	+1.1
	baz=216						
SLGT	Liugui	2.40	221	iP	Pb	20 50 25.1	-0.1
	baz=229						
SLGT				iS	Sb	20 50 56.1	+1.3
	baz=229						
SSD	Sandimen	2.60	217	eP	Pb	20 50 28.1	-0.6
	baz=211						
MASBT	Mashibuluo	2.71	216	P	Pb	20 50 29.2	-1.3
	baz=211						
EAST	Anshuo	2.80	210	P	Pn	20 50 27.7	+1.0
	baz=193						
PHUB	P'eng-hu	2.85	243	eP	Pn	20 50 28.5	+1.1
	baz=250						
PHUB				S	Sn	20 51 02.4	+0.7
	baz=250						

IDC 01 20:52:23.2±3.2**, 33°.06S**×**178°.44W, h0**^{km}**, mb3.6**/2**, mb1 3.8**/3**, mb1mx3.6**/36**, mbtmp3.6**/3**, ML3.5**/1**, Error ellipse: s-maj=73.7km s-min=46.5km az=122.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.33	214	Pn	Pn	20 53 57.3	-0.4
	1.0nm,0.3s,baz=128,slow=20,SNR=9.9						
URZ				Sn	Sn	20 55 07.6	-3.1
	0.5nm,0.3s,baz=302,slow=23,SNR=1.8						
ASAR	Alice Springs	42.67	270	P	P	21 00 21.8	0.0
	0.4nm,0.4s,baz=110,slow=7.7,SNR=9.1						
WRA	Warramunga Arr	43.90	275	P	P	21 00 31.6	-0.2
	0.3nm,0.4s,baz=115,slow=7.4,SNR=13						
FINES	FINESS Array B	147.49	338	PKPbc	PKPbc	21 12 07.7	-0.7
	4.4nm,1.0s,baz=49,slow=4.4,SNR=4.8						

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*IDC **01** 21:02:37.1±12.0, 21°.37S×177°.64W, h376^{km}±78^{km}, mb3.3/3, mb1 3.5/4, mb1mx3.1/34, mbtmp4.0/4, Error ellipse: s-maj=191.2km s-min=41.9km az=140.0*

ISC 01 21:02:37.5±2.1**, 21°.3S**±0°.3×**177°.6W**±0°.3**, h381**^{km}**, n7, σ0^{s}.86**/6**, mb3.5**/3**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.40	310	P	Pn	21 04 02.9	-0.1
	2.8nm,0.3s,baz=132,slow=16,SNR=16						
ASAR	Alice Springs	44.67	257	P	P	21 10 14.6	0.0
	1.8nm,0.7s,baz=93,slow=8.1,SNR=16						
WRA	Warramunga Arr	44.83	263	P	P	21 10 15.1	-0.7
	0.4nm,0.3s,baz=96,slow=7.5,SNR=19						
CMAR	Chiang Mai Arr	90.70	289	P	P	21 14 59.7	+1.1
	0.6nm,0.6s,baz=128,slow=3.1,SNR=5.0						
MKAR	Makanchi Array	111.99	313	PKiKP	PKiKP	21 20 27.4	-0.6
	0.2nm,0.4s,baz=242,slow=1.8,SNR=5.1						
ARCES	ARCESS Array B	129.76	350	PKP	PKPdf	21 21 01.0	-0.3
	2.1nm,1.0s,baz=28,slow=2.9,SNR=4.1						
AKASG	Malin Array Be	143.87	331	PKhKP	PKPpre	21 21 24.0	
	0.8nm,0.4s,baz=43,slow=4.5,SNR=6.0						

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*NNC **01** 21:04:59.7±3.3, 41°.77N×79°.50E, h0^{km}, mb2.8, mpv2.6, Error ellipse: s-maj=21.8km s-min=16.4km az=146.0*

*KRNET **01** 21:05:00.6±0.1, 41°.79N×79°.43E, h17^{km}, mb2.2*

*SOME **01** 21:05:00.0, 41°.90N×79°.52E, h0^{km}*

ISC 01 21:05:00.8±2.1**, 41°.79N**±0°.07×**79°.40E**±0°.06**, h17**^{km}±11^{km}**, n25, σ1^{s}.16**/44**, 8C-9D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	1.02	313	⇓iP	Pg	21 05 20.6	0.0
	baz=13						
PRZ				⇓iS	Sn	21 05 35.2	+0.7
	baz=13						
TARG	Taragay, Kyrgy	1.20	268	⇑iP	Pg	21 05 24.0	0.0
	baz=68						
TARG				⇑iS	Sg	21 05 41.0	+1.2
	baz=68						
SATY	Saty	1.47	330	eP	Pb	21 05 27.4	-0.3
	0.4nm,0.2s						
SATY				eS	Sb	21 05 47.1	+1.0
	6.4nm,0.1s						
SATY	Saty	1.47	330	P	Pn	21 05 26.6	-0.1
	0.6nm,0.1s						
SATY				S	Sb	21 05 47.2	+1.0
	6.4nm,0.1s						
PDGK	Podgornoye	1.54	2	P	Pn	21 05 27.6	-0.1
	0.7nm,0.3s						
PDGK				S	Sb	21 05 48.4	+0.1
	3.4nm,0.5s						
PDGK	Podgornoye	1.54	2	⇓P	Pn	21 05 26.0	-1.7
	0.1nm,0.1s						
PDGK				⇑S	Sg	21 05 54.2	+3.6
	2.2nm,0.2s						
ANVS	Anan'yevo	1.63	308	⇑iP	Pg	21 05 31.4	-0.8
	baz=8.0						
ANVS				⇑iS	Sg	21 05 53.9	+0.6
	baz=8.0						
KDJ	Kajisay	1.69	282	⇑iP	Pb	21 05 32.4	+0.8
	baz=82						
KDJ				⇑iS	Sg	21 05 55.5	+0.1
	baz=82						
KPKS	Kokpek	1.76	343	eP	Pn	21 05 30.9	+0.3
	1.0nm,0.1s						
KPKS				eS	Sb	21 05 53.7	-0.8
	4.6nm,0.2s						
KURS	Kuram	1.93	332	eP	Pb	21 05 35.5	0.0
	0.9nm,0.1s						
KURS				eS	Sg	21 06 01.4	-1.4
	1.3nm,0.2s						
KURS	Kuram	1.93	332	Pg	Pb	21 05 35.5	0.0
	0.9nm,0.1s						
KURS				Lg	Lg	21 06 01.9	
	1.3nm,0.2s						
TNSS	Tian-Shan	2.21	305	eP	Pb	21 05 41.4	+0.9
	1.6nm,0.1s						
TNSS				eS	Sg	21 06 11.1	-0.8
	3.3nm,0.3s						
TNSS	Tian-Shan	2.21	305	Pg	Pb	21 05 41.4	+0.9
	1.6nm,0.1s						
TNSS				Lg	Lg	21 06 11.1	
	3.3nm,0.3s						
MDOK	Medeo	2.22	309	eP	Pb	21 05 41.5	+0.9
	1.1nm,0.2s						
MDOK				eS	Sg	21 06 11.4	-0.8
	7.4nm,0.3s						
MDOK	Medeo	2.22	309	⇑P	Pb	21 05 41.4	+0.9
	0.4nm,0.2s						
MDOK				S	Sg	21 06 11.7	-0.5
	2.3nm,0.3s						
MDOK	Medeo	2.22	309	Pg	Pb	21 05 41.5	+0.9
	1.1nm,0.2s						
MDOK				Lg	Lg	21 06 11.4	
	7.4nm,0.3s						
KOTS	Kotyrbulak	2.23	311	eP	Pb	21 05 41.9	+1.2
	1.6nm,0.2s						
KOTS				eS	Sg	21 06 12.4	0.0
	8.3nm,0.3s						
KOTS	Kotyrbulak	2.23	311	Pg	Pb	21 05 41.9	+1.2
	1.6nm,0.2s						
KOTS				Lg	Lg	21 06 12.4	
	8.3nm,0.3s						
ULHL	Ulahol	2.40	282	⇓iP	Pb	21 05 43.5	-0.2
	baz=82						
ULHL				⇓iS	Sb	21 06 15.0	+1.9
	baz=82						
BLB	Baldybastay	2.40	344	Pg	Pb	21 05 43.1	-0.7
	1.7nm,0.2s						
BLB				Lg	Lg	21 06 15.5	
	5.0nm,0.2s						
DJR	Jarkent	2.56	6	eP	Pb	21 05 45.5	-0.8
	0.3nm,0.1s						
DJR				eS	Sb	21 06 18.1	+0.6
	2.4nm,0.5s						
BOOM	Boomskoye usch	2.67	286	⇓iP	Pb	21 05 47.1	-1.2
	baz=86						
BOOM				⇓iS	Sb	21 06 21.0	+0.2
	baz=86						
KTBS	Karatobe	2.78	315	eP	Pb	21 05 51.3	+1.3
	0.6nm,0.3s						
KTBS				eS	Sg	21 06 28.1	-1.9
	3.8nm,0.3s						
KTBS	Karatobe	2.78	315	Pg	Pb	21 05 51.6	+1.6
	0.6nm,0.3s						
KTBS				Lg	Lg	21 06 28.1	
	3.8nm,0.3s						
TKM2	Tokmak 2	3.04	293	⇓eP	Pb	21 05 52.3	-2.3
	baz=93						
TKM2				⇓iS	Sb	21 06 30.2	-1.3
	baz=93						

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*ECX **01** 21:46:50.8±0.6, 32°.32N×115°.35W, h4^{km}±3^{km}, MD2.3, ML2.5*

*MEX **01** 21:46:51.2±0.7, 32°.39N×115°.20W, h12^{km}±12^{km}, MD3.6*

ISC 01 21:46:48.9±0.9**, 32°.35N**±0°.04×**115°.28W**±0°.03**, h18**^{km}±4^{km}**, n19, σ0^{s}.68**/33**, 6C-1D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	Cerro Prieto	0.08	347	⇓eP	Pg	21 46 52.5	+0.1
CPBX				eS	Sg	21 46 54.9	+0.2
CPBX				IAML		21 46 57.5	
	comp=N,5μm,0.3s						
CPBX				⇑e		21 46 57.5	
CPBX				⇑e		21 47 10.2	
CPBX				IAML		21 47 10.2	
	comp=E,6μm,0.4s						
MBIG	Mexicali	0.10	49	eP	Pg	21 46 52.5	0.0
MBIG				eS	Sg	21 46 55.0	0.0
SGL	Mount Signal	0.48	309	eP	Pb	21 46 59.0	+0.1
SGL				iS	Sb	21 47 05.7	0.0
COA	Coachella	0.54	15	eP	Pn	21 47 01.4	-0.3
YUH2	Yuha Desert	0.62	299	⇑eP	Pg	21 47 01.1	-0.1
YUH2				eS	Sg	21 47 09.0	-0.5
COK2	Cook Ranch 2	0.63	323	eP	Pb	21 47 02.1	+0.7
YMD	Yuma Desert	0.66	71	eP	Pn	21 47 03.0	-0.4
RMX	La Rumorosa	0.72	291	eP	Pg	21 47 01.9	-1.2
RMX				eS	Sg	21 47 10.3	-2.5
IKP	In-Ko-Pah, Jac	0.76	294	⇑eP	Pg	21 47 03.7	-0.2
IKP				eS	Sg	21 47 13.7	-0.3
CRR	Carrizo Plain	0.79	313	eP	Pb	21 47 04.5	+0.3
ECBX	El Chinero	0.89	167	eP	Pg	21 47 06.1	-0.2
ECBX				eS	Sb	21 47 18.6	+1.1
MONP2	Monument Peak	1.10	300	⇑eP	Pb	21 47 10.0	+0.3
MONP2				eS	Sb	21 47 24.1	+0.2
CBX	Cerro Bola	1.17	269	eP	Pb	21 47 11.0	+0.3
CBX				eS	Sb	21 47 26.1	+0.5
CBX	Cerro Bola	1.17	269	eP	Pb	21 47 11.0	+0.3
CBX				eS	Sb	21 47 25.4	-0.2
TJIG	Tijuana	1.18	275	eP	Pn	21 47 10.9	+0.3
TJIG				iS	Sb	21 47 25.6	-0.3
BAR	Barrett	1.22	286	⇑eP	Pn	21 47 11.6	+0.5
BAR				eS	Sb	21 47 26.9	0.0
SPIG	San Pedro Mart	1.30	187	eP	Pn	21 47 12.4	-0.2
SPIG				eS	Sb	21 47 29.4	-0.3
SDRC	San Diego Road	1.45	286	eP	Pn	21 47 15.5	+1.1
SDRC				eS	Sn	21 47 33.9	+0.9
214A	Organ Pipe Nat	2.13	100	eP	Pb	21 47 26.9	-0.2

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*NEIC **01** 22:05:11.7±1.9, 17°.8S±0°.2×178°.6W±0°.1, h573^{km}±9^{km}, mb4.3/29, Error ellipse: s-maj=24.3km s-min=17.3km az=157.0*

*IDC **01** 22:05:13.1±1.7, 17°.50S×178°.86W, h578^{km}±18^{km}, mb3.5/8, mb1 3.8/10, mb1mx3.4/35, mbtmp4.4/10, Error ellipse: s-maj=55.8km s-min=15.0km az=151.0*

ISC 01 22:05:09.9±0.6**, 17°.9S**±0°.2×**178°.5W**±0°.1**, h550**^{km}**, n54, σ1^{s}.26**/54**, mb4.3**/22**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.26	272	P	P	22 06 30.5	+3.8
	9.7nm,0.3s,baz=103,slow=3.5,SNR=58						
MSVF	Nonsavu	3.26	272	P	P	22 06 30.4	+3.7
AFI	Afiamalu	7.60	60	P	P	22 07 04.4	+0.5
	4.4nm,0.3s,baz=69,slow=21,SNR=1.7						
PINNC	Pines Island,	13.98	248	P	P	22 08 12.1	+3.2
DZM	Mont Dzumac	14.73	251	P	P	22 08 16.2	-0.6
	0.5nm,0.3s,baz=245,slow=22,SNR=2.1						
DZM	Mont Dzumac	14.73	251	P	P	22 08 19.3	+2.6
FOZ	Fox Glacier	27.41	199	P	P	22 10 11.4	-0.2
EIDS	Eidsvold	29.17	250	P	P	22 10 26.5	-0.8
EIDS				IAmb	IAmb	22 10 27.5	
	comp=Z,7.4nm,0.9s						
ARMA	Armidale	29.86	240	P	P	22 10 33.7	+0.3
ARMA				IAmb	IAmb	22 10 55.2	
	comp=Z,21nm,1.4s						
CTAO	Charters Tower	33.34	260	P	P	22 11 02.5	-0.6
CTAO				IAmb	IAmb	22 11 02.9	
	comp=Z,4.4nm,0.7s						
COEN	Coen	36.99	270	P	P	22 11 32.9	-0.6
COEN				IAmb	IAmb	22 11 34.2	
	comp=Z,6.4nm,0.8s						
TOO	Toolangi	37.10	231	P	P	22 11 34.6	+0.5
TOO				IAmb	IAmb	22 11 35.4	
	comp=Z,9.9nm,0.8s						
STKA	Stephens Creek	38.55	241	P	P	22 11 46.5	+0.6
	comp=Z,6.5nm,0.5s,baz=96,slow=11,SNR=20						
STKA	Stephens Creek	38.55	241	P	P	22 11 46.3	+0.4
BBOO	Buckleboo	43.32	241	P	P	22 12 23.6	-0.2
WB2	Warramunga Arr	44.52	260	P	P	22 12 31.8	-1.4
WRA	Warramunga Arr	44.53	260	P	P	22 12 32.2	-1.1
	comp=Z,2.4nm,0.5s,baz=91,slow=6.8,SNR=18						
WRA	Warramunga Arr	44.53	260	P	P	22 12 32.0	-1.3
AS31	Alice Springs	44.69	254	P	P	22 12 33.7	-0.9
AS31				IAmb	IAmb	22 12 34.5	
	comp=Z,8.1nm,0.7s						
ASAR	Alice Springs	44.69	254	P	P	22 12 34.0	-0.6
	comp=Z,27nm,0.6s,baz=88,slow=8.3,SNR=239						
ASAR	Alice Springs	44.69	254	P	P	22 12 33.9	-0.7
FORT	Forrest	49.92	245	P	P	22 13 12.8	-0.9
KNRA	Kununurra	50.38	264	P	P	22 13 16.5	-0.7
SIJI	Sorong	52.12	283	P	P	22 13 29.0	-0.9
	comp=Z,6.7nm,0.5s,baz=60,slow=8.6,SNR=3.6						
PSA00	Pilbara Seismi	57.81	255	P	P	22 14 07.9	-1.5
PSA00	Pilbara Seismi	57.81	255	P	P	22 14 08.4	-1.1
PSA00				IAmb	IAmb	22 14 11.4	
	comp=Z,25nm,1.3s						
UGM	Wanagama	69.53	268	P	P	22 15 23.6	-0.8
BEKR	Beckworth	78.94	42	P	P	22 16 17.5	+0.4
P18K	Big Mountain,	79.31	12	P	P	22 16 17.5	-0.9
P18K				IAmb	IAmb	22 16 27.9	
	comp=Z,29nm,1.5s						
NVAR	Mina Array Bea	79.48	44	P	P	22 16 20.7	+0.7
	comp=Z,1.2nm,0.7s,baz=225,slow=8.9,SNR=9.6						
NVAR	Mina Array Bea	79.48	44	P	P	22 16 20.9	+0.8
O18K	Koktuh Hills	79.74	12	P	P	22 16 19.9	-0.8
O18K				IAmb	IAmb	22 16 21.0	
	comp=Z,23nm,1.1s						
GHO	Glory Hole Cre	82.80	14	P	P	22 16 35.8	-0.6
GHO				IAmb	IAmb	22 16 36.9	
	comp=Z,15nm,1.1s						
SCM	Sheep Creek Mo	83.22	14	P	P	22 16 37.6	-0.8
M24K	Tolsona, Glenn	83.73	15	P	P	22 16 41.0	0.0
GLB	Gilahina Butte	83.76	16	P	P	22 16 40.3	-0.8
GLB				IAmb	IAmb	22 16 59.9	
	comp=Z,14nm,1.4s						
J20K	Nowinta River	83.94	10	P	P	22 16 40.9	-1.0
CCB	Clear Creek Bu	85.58	13	P	P	22 16 48.2	-1.6
CCB				IAmb	IAmb	22 16 48.8	
	comp=Z,6.3nm,1.2s						
BCAR	Beaver Creek A	85.64	16	P	P	22 16 50.2	0.0
IMAR	Indian Mountai	85.67	10	P	P	22 16 49.4	-0.8
IL31		85.88	13	P	P	22 16 49.9	-1.3
ILAR	Eielson Array	85.88	13	P	P	22 16 49.5	-1.7
	comp=Z,0.5nm,0.4s,baz=222,slow=5.2,SNR=10						
ILAR	Eielson Array	85.88	13	P	P	22 16 49.8	-1.4
TX31	Lajitas Ar. Si	86.07	58	P	P	22 16 53.9	+0.7
TX31				IAmb	IAmb	22 16 54.7	
	comp=Z,8.7nm,1.2s						
TXAR	Lajitas Array	86.07	58	P	P	22 16 54.4	+1.2
	comp=Z,1.2nm,0.7s,baz=221,slow=5.5,SNR=13						
TXAR	Lajitas Array	86.07	58	P	P	22 16 54.0	+0.9
MCMT	McKenzie Canyo	86.29	41	P	P	22 16 54.4	+0.4
PD31	Pinedale Array	87.40	43	P	P	22 16 58.7	-0.6
PD31				IAmb	IAmb	22 17 00.4	

	comp=Z,4.5nm,1.4s						
PDAR	Pinedale Array	87.40	43	P	P	22 16 59.4	0.0
	comp=Z,0.7nm,0.5s,baz=210,slow=3.8,SNR=6.3						
PDAR	Pinedale Array	87.40	43	P	P	22 16 59.2	-0.1
BMAR	Burnt Mountain	88.65	12	P	P	22 17 04.1	-0.2
SNAA	Sanae	90.63	179	P	P	22 17 12.6	-1.0
SNAA				IAmb	IAmb	22 17 38.6	
	comp=Z,3.1nm,1.3s						
CLL	Collm	145.41	347	*i* PKPbc	PKPbc	22 23 46.2	-0.4
GERES	GERESS Array B	147.55	345	PKPbc	PKPbc	22 23 51.7	-1.0
	comp=Z,0.2nm,0.3s,baz=359,slow=3.9,SNR=4.1						

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*IDC **01** 22:05:21.6±5.1, 5°.48N×124°.38E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.6/37, mbtmp3.7/4, Error ellipse: s-maj=109.2km s-min=43.8km az=166.0*

*MAN **01** 22:05:27.0, 6°.43N×124°.09E, h1^{km}, mb4.8, ML3.7, MS3.6*

ISC 01 22:05:30.1±1.0**, 6°.33N**±0°.08×**124°.00E**±0°.04**, h22**^{km}±7^{km}**, n14, σ2^{s}.21**/21**, mb3.8**/4**, 6C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	0.98	104	⇓*e*P	Pb	22 05 48.7	+0.2
GSPH				*i* S	Sn	22 06 04.4	+2.5
KCP	Kidapawan	1.27	58	⇑*e*P	Pn	22 05 49.5	-3.2
KCP				*i* S	Sb	22 06 12.8	+3.2
PAGZ	Pagadian	1.62	338	⇑*e*P	Pn	22 05 54.2	-3.2
PAGZ				*i* S	Sn	22 06 17.7	0.0
DMPH	Davao City--Mi	1.67	64	⇑*e*P	Pn	22 05 55.7	-2.4
DMPH				*e*S	Sb	22 06 20.8	-0.1
DDMP	Don Marcelino,	1.72	98	⇓*e*P	Pn	22 05 56.6	-2.1
DDMP				*e*S	Sn	22 06 20.3	+0.2
DAV	Davao City (W)	1.73	65	Pn	Pn	22 05 56.0	-2.9
	48nm,0.3s,baz=0.6,slow=2.3,SNR=3.9						
DAV				Sn	Sn	22 06 17.5	-2.9
	64nm,0.3s,baz=106,slow=22,SNR=11						
ZCP	Zamboanga City	2.00	287	⇓*i*P	Pb	22 06 05.1	-0.7
ZCP				*i* S	Sb	22 06 30.0	-0.3
DCPH	Dipolog City	2.32	344	⇑*e*P	Pn	22 06 06.4	-0.7
SNPH	Sibulan	3.08	346	⇑*e*P	Pn	22 06 17.3	-0.2
TBP	Tagbilaran	3.34	358	⇑*e*P	Pn	22 06 20.2	-0.9
SONM	Songino Array	44.00	343	P	P	22 13 39.0	+2.9
	0.9nm,0.5s,baz=142,slow=7.3,SNR=3.7						
MKAR	Makanchi Array	53.88	326	P	P	22 14 52.3	+0.5
	0.7nm,0.7s,baz=119,slow=7.2,SNR=6.6						
ZALV	Zalesovo Beam	57.05	334	P	P	22 15 16.4	+2.0
	0.5nm,0.6s,baz=128,slow=9.5,SNR=2.5						
ILAR	Eielson Array	83.94	26	P	P	22 17 56.6	-1.7
	0.6nm,1.0s,baz=248,slow=5.8,SNR=4.2						

WEL 01 22:26:14.7±0.8**, 32°S**±8°×**18°0E**±1°2**, h442**^{km}±16^{km}**, M4.0**/16**, mB4.5**/13**, MLv4.9**/16**, Mw(mB)3.6**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=96.1, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.49	191	P	P	22 27 44.3	+0.9
MXZ				S	S	22 28 54.2	-1.6
HAZ	Te Kaha	5.77	194	P	P	22 27 46.9	+0.7
HAZ				S	S	22 29 00.6	-0.5
OUZ	Omahuta	5.85	237	P	P	22 27 47.5	+0.4
OUZ				S	S	22 29 03.0	+0.4
RUGZ	Raukumara Rang	6.00	195	P	P	22 27 48.3	-0.4
RUGZ				S	S	22 29 05.0	-0.6
TWGZ	Tauwhareparae	6.14	192	P	P	22 27 51.8	+1.7
TWGZ				S	S	22 29 10.1	+1.9
MWZ	Matawai	6.38	195	P	P	22 27 53.1	+0.5
MWZ				S	S	22 29 13.3	+0.5
URZ	Urewera	6.41	198	P	P	22 27 52.5	-0.3
URZ				S	S	22 29 13.3	+0.1
TKGZ	Te Karaka	6.42	192	P	P	22 27 52.5	-0.4
TKGZ				S	S	22 29 12.8	-0.6
RAGZ	Rawiri	6.56	195	P	P	22 27 55.3	+0.7
RAGZ				S	S	22 29 17.3	+1.0
RIGZ	Rimuhau	6.70	192	P	P	22 27 56.8	+0.8
RIGZ				S	S	22 29 18.2	-0.6
SNGZ	Shannon Statio	6.85	195	P	P	22 27 58.8	+1.2
RAHZ	Arahi	7.04	196	P	P	22 28 01.0	+1.4
RAHZ				S	S	22 29 26.8	+1.3
MTHZ	Maungataniwha	7.04	198	P	P	22 28 00.3	+0.7
MHGZ	Mahia Peninsul	7.11	191	P	P	22 28 02.2	+1.9
WHHZ	Waihua	7.16	195	P	P	22 28 02.3	+1.4
BKZ	Black Stump Fm	7.43	199	P	P	22 28 03.4	-0.4
MCHZ	McNeill Hill	7.64	197	P	P	22 28 06.4	+0.4
MCHZ				S	S	22 29 38.4	+1.2
KWHZ	Kaweka Forest	7.69	199	P	P	22 28 06.8	+0.2
KWHZ				S	S	22 29 40.5	+2.2
CKHZ	Cape Kidnapper	7.75	195	P	P	22 28 07.7	+0.4
CKHZ				S	S	22 29 41.4	+1.9
WNVZ	Wahianoa	7.85	203	P	P	22 28 09.0	+0.5
WNVZ				S	S	22 29 45.3	+3.6
BHHZ	Black Hill Sta	7.85	200	P	P	22 28 07.3	-1.1
BHHZ				S	S	22 29 39.3	-2.3
MOVZ	Moawhango	7.87	202	P	P	22 28 07.9	-0.8
MOVZ				S	S	22 29 42.4	+0.3
KRHZ	Kereru	7.91	198	P	P	22 28 08.0	-0.9
KAHZ	Kahuranaki	7.93	195	P	P	22 28 07.6	-1.6
PXZ	Pawanui	8.15	195	P	P	22 28 12.4	+0.8
PNHZ	Pukenui	8.21	199	P	P	22 28 09.5	-2.6
TSZ	Takapari Road	8.41	199	P	P	22 28 13.6	-0.7
PRHZ	Porangahau	8.43	196	P	P	22 28 13.3	-1.2
MRZ	Mangatainoka R	9.07	200	P	P	22 28 20.7	-0.8

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*IDC **01** 22:32:18.5±5.3, 64°.44S×174°.93E, h0^{km}, mb4.3/3, mb1 4.4/4, mb1mx3.9/22, mbtmp4.3/4, ML4.2/1, MS3.7/5, Ms1 3.7/5, ms1mx3.3/25, Error ellipse: s-maj=188.8km s-min=25.5km az=70.0*

*NEIC **01** 22:32:20.8±1.0, 64°.55S±0°.07×174°.5E±0°.7, h10^{km}±2^{km}, mb4.3/6, Error ellipse: s-maj=54.0km s-min=10.9km az=82.0*

ISC 01 22:32:21.0±1.6**, 64°.6S**±0°.1×**174°.3E**±0°.4**, h10**^{km}**, n31, σ0^{s}.45**/12**, mb4.4**/7**, MS3.7**/5**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	Scott Base	13.55	187		Pn	22 35 32.5	-0.4
VNDA	Vanda	13.56	191	Pn	Pn	22 35 33.9	+0.8
	1.1nm,0.3s,baz=32,slow=17,SNR=70						
VNDA				LR	LR	22 39 41.5	
	comp=Z,287nm,18.2s,baz=24,slow=32						
VNDA	Vanda	13.56	191		Pn	22 35 32.7	-0.4
LTZ	Lake Taylor	21.86	356	P	P	22 37 13.8	+0.2
LTZ				IAmb	IAmb	22 37 32.2	
	comp=Z,21nm,1.3s						
QSPA	South Pole Qui	25.52	180	P	P	22 37 49.7	+0.3
	comp=Z,21nm,0.9s,baz=29,slow=6.3						
QSPA				LR	LR	22 46 45.3	
	comp=Z,182nm,18.3s,baz=38,slow=34						
QSPA	South Pole Qui	25.52	180	P	P	22 37 49.9	+0.5
MAW	Mawson	39.40	214	LR	LR	22 56 00.9	
	comp=Z,107nm,20.1s,baz=144,slow=36						
SNAA	Sanae	44.01	181	P	P	22 40 27.8	-0.3
SNAA				IAmb	IAmb	22 40 32.4	
	comp=Z,3.5nm,1.2s						
H01W1	Cape Leeuwin H	46.33	280	T	T	23 31 35.2	
	baz=148,slow=76,SNR=15						
H01W2	Cape Leeuwin H	46.33	280	T	T	23 31 25.3	
	baz=148,slow=76,SNR=15						
H01W3	Cape Leeuwin H	46.34	280	T	T	23 31 32.4	
	baz=148,slow=76,SNR=13						
ASAR	Alice Springs	48.57	308	P	P	22 41 04.5	+0.2
	comp=Z,1.5nm,0.8s,baz=153,slow=8.0,SNR=11						
WB2	Warramunga Arr	51.87	310	P	P	22 41 29.3	-0.1
WB2				IAmb	IAmb	22 41 35.6	
	comp=Z,5.1nm,1.1s						
WRA	Warramunga Arr	51.88	310	P	P	22 41 29.2	-0.2
	comp=Z,1.0nm,0.7s,baz=162,slow=6.3,SNR=11						
WRA	Warramunga Arr	51.88	310	P	P	22 41 29.2	-0.2
WB0	Warramunga Arr	52.02	310	P	P	22 41 29.9	-0.6
WB0				IAmb	IAmb	22 41 30.9	
	comp=Z,5.0nm,0.9s						
PPT2	Papeete2	52.88	45	*e*LR	LR	22 56 21.4	
	comp=Z,68nm,22.5s						
MEH	Mehetia	53.08	47	*e*T	T	23 37 47.5	
	comp=Z,21nm,0.3s						
VAH	Vaihoa	55.70	46	*e*T	T	23 41 04.7	
	comp=Z,149nm,0.3s						
BATI	Baumata	64.62	303	LR	LR	23 07 52.5	
	comp=Z,51nm,19.5s,baz=270,slow=33						
H03S2	Juan Fernandez	66.67	120	T	T	23 55 56.6	
	baz=205,slow=74,SNR=10						
H03S1	Juan Fernandez	66.67	120	T	T	23 55 53.3	
	baz=205,slow=74,SNR=11						
H03S3	Juan Fernandez	66.69	120	T	T	23 55 55.4	
	baz=205,slow=74,SNR=11						
H03N3	Juan Fernandez	67.01	120	T	T	23 56 10.1	
	baz=213,slow=72,SNR=6.9						
H03N2	Juan Fernandez	67.03	120	T	T	23 56 05.4	
	baz=213,slow=72,SNR=23						
H03N1	Juan Fernandez	67.03	120	T	T	23 55 59.4	
	baz=213,slow=72,SNR=4.4						
BOSA	Boshof	84.02	207	LR	LR	23 19 07.1	
	comp=Z,57nm,21.1s,baz=188,slow=33						
H08S2	Diego Garcia H	88.17	256	T	T	00 24 05.4	
	baz=150						
H08S1	Diego Carcia H	88.18	256	T	T	00 24 02.8	
	baz=150						
H08S3	Diego Garcia H	88.19	256	T	T	00 24 07.3	
	baz=150						
H02S1	DAWSON INLET T	124.41	36	T	T	01 07 27.3	
	SNR=6.9						

IDC 01 22:38:23.9±3.4**, 5°.42S**×**134°.11E, h0**^{km}**, mb3.6**/1**, mb1 3.8**/4**, mb1mx3.3**/35**, mbtmp3.6**/4**, ML3.5**/3**, Error ellipse: s-maj=127.5km s-min=32.3km az=83.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.44	179	Pn	Pn	22 41 48.9	-0.9
	0.1nm,0.3s,baz=356,slow=13,SNR=1.9						
WRA				Sn	Sn	22 44 23.0	-7.7
	0.2nm,0.3s,baz=352,slow=24,SNR=3.2						
WRA				Lg	Lg	22 46 06.8	
	0.1nm,0.3s,baz=1.3,slow=29,SNR=4.9						
FITZ	Fitzroy Crossi	15.08	213	Pn	Pn	22 41 58.5	+0.2
	0.3nm,0.3s,baz=34,slow=10,SNR=22						
FITZ				Sn	Sn	22 44 34.0	-12
	0.7nm,0.3s,baz=203,slow=18,SNR=6.6						
ASAR	Alice Springs	18.15	181	P	P	22 42 37.8	-0.1
	0.2nm,0.3s,baz=6.6,slow=12,SNR=8.2						
ASAR				S	Sn	22 45 50.4	-10
	0.0nm,0.3s,baz=3.8,slow=30,SNR=2.2						
MKAR	Makanchi Array	69.22	325	P	P	22 49 32.7	0.0
	0.4nm,0.6s,baz=127,slow=7.7,SNR=2.3						

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*BJI **01** 22:48:04.5±0.0, 38°.63N×142°.50E, h48^{km}, mB4.9/32, mb4.7/60, Ms4.2/34, Ms7 4.0/33*

*MOS **01** 22:48:05.6±0.9, 38°.73N×142°.23E, h39^{km}, mb4.9/27, MS4.2/5, Error ellipse: s-maj=6.9km s-min=4.5km az=113.9*

*BGR **01** 22:48:05.7±0.0, 38°.25N×142°.30E, h33^{km}, mb5.1, Ms4.2*

*NEIC **01** 22:48:06.6±1.6, 38°.67N±0°.06×142°.31E±0°.09, h33^{km}±5^{km}, mb4.7/85, Error ellipse: s-maj=11.2km s-min=7.5km az=112.0*

*JMA **01** 22:48:06.3±0.1, 38°.68N×142°.27E, h39^{km}±1^{km}, M4.6*

JMA Felt III J1.

*NIED **01** 22:48:06.3, 38°.68N×142°.27E, h39^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}4.63; $M_{\theta\theta}$-0.46; $M_{\phi\phi}$-4.17; $M_{r\theta}$5.96; $M_{\theta\phi}$-2.47; $M_{\phi r}$4.41; Fault plane solution: $M_0$8.98000×10^{15} NP1:ϕ_s48.00000°, δ74.00000°, λ104.00000°. NP2:ϕ_s185.00000°, δ21.00000°, λ49.00000°.*

*IDC **01** 22:48:07.3±0.5, 38°.65N×142°.15E, h40^{km}±4^{km}, mb4.2/30, mb1 4.3/34, mb1mx4.2/56, mbtmp4.4/34, ML4.0/4, MS3.7/27, Ms1 3.8/27, ms1mx3.6/55 Error ellipse: s-maj=12.7km s-min=10.6km az=96.0*

ISC 01 22:48:06.5±0.4**, 38°.67N**±0°.04×**142°.35E**±0°.04**, h39**^{km}±2^{km}**, h39**^{km}**:pP-P, n380, σ1^{s}.33**/395**, mb4.7**/124**, MS4.0**/35**, 19C-26D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.67	308	⇓P	Pn	22 48 18.6	-0.9
OFUJ				S	Sn	22 48 27.4	-1.5
JKMT	Kesennumamotoy	0.70	282	⇓P	Pn	22 48 18.8	-1.1
JKMT				*e*S	Sn	22 48 27.5	-2.0
JIKH	Ishinomakikobu	0.78	243	⇓P	Pn	22 48 20.1	-0.8
JIKH				*i* S	Sn	22 48 29.7	-1.7
JIO	Ouri	0.81	255	⇓P	Pn	22 48 20.4	-1.0
JIO				*e*S	Sn	22 48 29.9	-2.3
JMK	Ichinoseki	0.93	288	⇓P	Pn	22 48 22.1	-0.9
JMK				*e*S	Sn	22 48 33.5	-1.6
JOM	Ohasama	1.15	315	⇓P	Pn	22 48 25.7	-0.4
JOM				*e*S	Sn	22 48 39.8	-0.8
JTH	Tanohata	1.33	344	P	Pn	22 48 28.2	-0.3
JOU	Okura	1.35	258	⇓P	Pn	22 48 28.6	-0.3
JOU				S	Sn	22 48 45.1	-0.5
JMM	Marumori	1.46	237	⇑P	Pn	22 48 29.9	-0.4
JMM				S	Sn	22 48 46.8	-1.4
JMM	Marumori	1.46	237		Pn	22 48 29.9	-0.4
JRG	Rokugo	1.52	299	⇓P	Pn	22 48 31.0	-0.1
JYK	Kaneyama	1.58	280	⇓P	Pn	22 48 31.7	-0.2
JTM	Tenmabayashi	2.34	335	Pn	Pn	22 48 43.6	+1.3
JYT	Yasato	2.98	216		Pn	22 48 50.5	-0.6
JSD	Sado	3.27	260	Pn	Pn	22 48 55.4	+0.1
ERM	Erimo	3.40	10	*ce*P	Pn	22 48 57.7	+0.7
ERM	Erimo	3.40	10	Pn	Pn	22 48 57.2	+0.3
MAJO	Matsushiro	3.91	238	*c i*P	Pn	22 49 06.7	+2.7
MAJO	Matsushiro	3.91	238	Pn	Pn	22 49 06.2	+2.2
MAT	Matsushiro	3.91	238	P	Pn	22 49 05.9	+1.9
MAT				S	Sn	22 49 54.4	+5.7
MJAR	Matsushiro Arr	3.91	238	Pn	Pn	22 49 05.1	+1.1
	3.1nm,0.3s,baz=38,slow=11,SNR=135						
MJAR				Sn	Sn	22 49 51.9	+3.2
	2.2nm,0.3s,baz=36,slow=17,SNR=6.0						
MJAR				LR	LR	22 50 53.3	
	comp=Z,996nm,18.6s,baz=35,slow=44						
MJAR	Matsushiro Arr	3.91	238	P	Pn	22 49 04.8	+0.8
MJAR	Matsushiro Arr	3.91	238	Pn	Pn	22 49 04.8	+0.8
MJB9	Matsu-Tunnel	3.91	239		Pn	22 49 06.2	+2.2
JEW	Eniwo	4.23	351		Pn	22 49 10.5	+2.2
JGF	Kuroka	5.03	234	Pn	Pn	22 49 21.7	+2.3
NMR	Nemuro--Hokkai	5.35	27	⇑*i*P	Pn	22 49 22.8	-0.9
NMR				*e*S	Sn	22 50 20.0	-4.0
INU	Inuyama	5.40	234		Pn	22 49 26.6	+2.2
ASAJ	Asahikawa	5.45	2	Pn	Pn	22 49 26.0	+0.9
	7.6nm,0.3s,baz=217,slow=8.7,SNR=29						
ASAJ				Sn	Sn	22 50 26.8	+0.3
	4.8nm,0.3s,baz=192,slow=30,SNR=3.7						
ASAJ	Asahikawa	5.45	2	P	Pn	22 49 26.1	+1.0
JKA	Kamikawa-asahi	5.45	2	Pn	Pn	22 49 26.1	+1.0
RUSJ	Misakicho	5.86	21	*e*P	Pn	22 49 30.9	+0.3
RUSJ				*e*S	Sn	22 50 35.1	-1.3
JHJ2	Mitsune	5.91	201	Pn	Pn	22 49 32.5	+1.1
JHJ	Hachijo jima 2	5.91	201	Pn	Pn	22 49 31.6	+0.2
	44nm,0.3s,baz=143,slow=22,SNR=11						
JHJ				Sn	Sn	22 50 35.6	-2.4
	81nm,0.3s,baz=73,slow=22,SNR=5.7						
GRPR	Tuman	5.91	25	⇓*i*P	Pn	22 49 31.6	+0.2
GRPR				*e*S	Sn	22 50 34.2	-3.7
GRPR				pmax	pmax		
	comp=N,62nm,0.2s						
GRPR				pmax	pmax		
	comp=E,71nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,96nm,0.2s						
GRPR				smax	smax		
	comp=N,718nm,0.3s						
GRPR				smax	smax		
	comp=E,583nm,0.3s						
YUK	Yuzh-Kuril'sk	5.98	25	*e*P	Pn	22 49 32.6	+0.3
YUK				*e*S	Sn	22 50 38.0	-1.5
YUK				pmax	pmax		
	comp=Z,133nm,0.4s						
YUK				pmax	pmax		
	comp=E,78nm,0.2s						
YUK				pmax	pmax		
	comp=N,61nm,0.3s						
YUK				smax	smax		
	comp=E,498nm,0.4s						
YUK				smax	smax		
	comp=N,550nm,0.5s						
JWT	Wachi	6.50	241	Pn	Pn	22 49 42.7	+3.1
TEY	Ternei	7.67	328	⇑*e*P	Pn	22 50 01.0	+5.4
TEY				pmax	pmax		
	comp=N,40nm,0.6s						
TEY				pmax	pmax		
	comp=E,30nm,0.6s						
TEY				pmax	pmax		
	comp=Z,30nm,0.6s						
JHS	Saijyo	8.26	247	Pn	Pn	22 50 06.4	+2.8
YSS	Yuzh-Sakhalins	8.29	2	*e*P	Pn	22 50 05.9	+1.9
YSS				*e*S	Sn	22 51 35.2	-1.1
YSS				pmax	pmax		
	comp=Z,40nm,0.6s						
YSS				MLR	MLR		
	comp=Z,1µm,15.0s						
YSS	Yuzh-Sakhalins	8.29	2	Pn	Pn	22 50 05.1	+1.1
JMN	Monobe	8.43	237		Pn	22 50 07.2	+1.1
USA0B	Ussuriysk Arra	9.54	309	P	Pn	22 50 22.7	+1.5
USA0B	Ussuriysk Arra	9.54	309	Pn	Pn	22 50 22.7	+1.5
USRK	Ussuriysk Ar.	9.54	309	Pn	Pn	22 50 22.1	+0.9
	baz=118,slow=14,SNR=66						
USRK				LR	LR	22 53 50.7	
	comp=Z,725nm,19.0s,baz=129,slow=36						
USRK	Ussuriysk Ar.	9.54	309	P	Pn	22 50 22.5	+1.3
USRK	Ussuriysk Ar.	9.54	309	Pn	Pn	22 50 22.5	+1.3
JNU	Nakatsue	10.82	243	Pn	Pn	22 50 40.4	+1.6
	comp=Z,1.0nm,0.3s,baz=228,slow=1.6,SNR=3.9						
MDJ	Mudanjiang	11.24	306	P	Pn	22 50 47.7	+3.3
MDJ				pP		22 50 54.7	
MDJ				sP		22 50 59.1	
MDJ				S	Sn	22 52 47.4	-1.3
MDJ				pmax	pmax		
	comp=Z,34nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,120nm,3.5s						
MDJ				LR	LR		
	comp=Z,290nm,7.3s						
MDJ				LR	LR		
	comp=Z,610nm,12.1s						
MDJ				LR	LR		
	comp=Z,860nm,18.7s						
KSRS	Korea Array	11.44	268	Pn	Pn	22 50 51.4	+4.2
	comp=Z,0.8nm,0.3s,baz=82,slow=14,SNR=26						
KSRS				LR	LR	22 54 57.0	
	comp=Z,362nm,19.0s,baz=79,slow=36						
KSAR	Wonju Array Be	11.47	268	P	Pn	22 50 48.8	+1.1
KSAR	Wonju Array Be	11.47	268		Pn	22 50 48.8	+1.1
KS19	Wonju Array Si	11.47	269		Pn	22 50 50.5	+2.8
JCJ	Chichijima	11.54	181	Pn	Pn	22 50 46.4	-2.2
	comp=Z,8.0nm,0.3s,baz=93,slow=21,SNR=6.1						
JCJ				Sn	Sn	22 52 45.9	-10
	comp=Z,4.8nm,0.3s,baz=252,slow=17,SNR=2.9						
JCJ				LR	LR	22 56 02.1	
	comp=Z,55nm,20.2s,baz=310,slow=41						
JCJ	Chichijima	11.54	181		Pn	22 50 46.9	-1.7
TJN	Taejon	12.12	264	⇑*e*P	Pn	22 50 58.7	+2.2
KLR	Kul'dur	13.02	328	Pn	Pn	22 51 08.7	0.0
	comp=Z,0.2nm,0.3s,baz=132,slow=11,SNR=7.2						
KLR				LR	LR	22 56 03.9	
	comp=Z,659nm,19.5s,baz=140,slow=37						
KLR	Kul'dur	13.02	328	⇓*e*P	Pn	22 51 08.9	+0.2
KLR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CN2	Changchun	13.71	297	*e*P	P	22 51 22.5	-3.6
CN2				*e*S	Sn	22 53 53.4	+4.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,12.0s						
CN2				LR	LR		
	comp=Z,400nm,13.0s						
PETK	Petropavlovsk-	17.91	31	LR	LR	22 59 28.8	
	comp=Z,88nm,19.6s,baz=219,slow=38						
ZEA	Zeya	18.28	330	*e*P	P	22 52 15.7	-1.0
ZEA				pmax	pmax		
	comp=E,20nm,0.7s						
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.1s						
ZEA				MLR	MLR		
	comp=E,300nm,14.0s						
ZEA				MLR	MLR		
	comp=N,300nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,19.0s						
NJ2	Nanjing	20.24	258	⇓P	Pn	22 52 40.1	-0.3
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
BJI	Beijing	20.27	282	P	P	22 52 37.0	-1.5
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJI				LR	LR		
	comp=Z,190nm,8.7s						
BJI				LR	LR		
	comp=Z,350nm,14.4s						
BJI				LR	LR		
	comp=Z,370nm,14.0s						
BJT	Baijiatuau	20.27	282	P	P	22 52 36.9	-1.7
BJT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BJT	Baijiatuau	20.27	282	P	P	22 52 36.9	-1.7
YULB	Yu-li	23.52	236	P	P	22 53 11.8	-1.3
YULB				IAmb	IAmb	22 53 32.2	
	comp=Z,25nm,1.3s						
TPUB	Ta-pu	24.02	237	P	P	22 53 16.0	-1.8
TPUB				IAmb	IAmb	22 53 27.6	
	comp=Z,41nm,1.1s						
WHN	Wuhan	24.36	259	⇓P	P	22 53 21.7	+0.9
YAK	Yakutsk	24.66	346	P	P	22 53 22.4	-0.8
	comp=Z,8.4nm,0.5s,baz=356,slow=1.9,SNR=4.1						
YAK				LR	LR	23 05 10.2	
	comp=Z,46nm,18.8s,baz=247,slow=42						
YAK	Yakutsk	24.66	346	*e*P	P	22 53 23.2	+0.1
YAK				*e**PP	sP	22 53 36.9	-1.5
YAK				*e*		22 53 56.8	
YAK				*e*		22 56 59.1	
YAK				*e*S	S	22 57 42.2	+0.4
YAK				*e*SS	SnSn	22 58 33.2	+3.5
YAK				*e*		23 04 18.9	
YAK				pmax	pmax		
	comp=Z,23nm,1.3s						
YAK				pmax	pmax		
	comp=N,17nm,1.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,303nm,4.3s						
YAK				pmax	pmax		
	comp=N,159nm,4.1s						
YAK				pmax	pmax		
	comp=E,127nm,2.7s						
YAK				smax	smax		
	comp=E,137nm,2.8s						
YAK				smax	smax		
	comp=N,74nm,3.0s						
YAK	Yakutsk	24.66	346	P	P	22 53 21.9	-1.2
YAK				IAmb	IAmb	22 53 39.5	
	comp=Z,24nm,0.6s						
BTO	Baotou	24.90	285	*e*P	P	22 53 23.9	-1.8
BTO				S	S	22 57 44.2	-2.2
BTO				LR	LR		
	comp=Z,820nm,11.4s						
BTO				LR	LR		
	comp=Z,2µm,15.1s						
SEY	Seymchan	25.05	11	P	P	22 53 29.1	+2.4
	comp=Z,16nm,0.8s,baz=197,slow=6.3,SNR=25						
SEY				LR	LR	23 03 52.0	
	comp=Z,93nm,18.9s,baz=204,slow=38						
BOD	Bodaibo	26.58	325	*e*P	P	22 53 40.0	-0.6
BOD				pmax	pmax		
	comp=Z,14nm,1.4s						
ULN	Ulaanbaatar	27.10	301	⇓*i*P	P	22 53 46.0	+0.4
ULN				pmax	pmax		
	comp=Z,12nm,1.7s						
ULN	Ulaanbaatar	27.10	301	P	P	22 53 45.1	-0.5
XAN	Xi'an	27.23	271	P	P	22 53 45.7	-1.0
XAN				pP	sP	22 54 00.6	-1.5
XAN				sP	pP	22 54 07.4	+10
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,130nm,4.6s						
XAN				LR	LR		
	comp=Z,240nm,17.2s						
XAN				LR	LR		
	comp=Z,210nm,16.7s						
XAN				LR	LR		

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       comp=Z,230nm,17.5s
SONM  Songino Array     27.53 301   P      P      22 53 50.0 +0.5
       comp=Z,2.0nm,0.5s,baz=94,slow=9.0,SNR=13
SONM                                LR     LR     23 04 59.9
       comp=Z,206nm,18.9s,baz=40,slow=37
SONM  Songino Array     27.53 301   P      P      22 53 49.2 -0.3
SONM                                pmax   pmax
       comp=Z,5.0nm,1.2s
SONM  Songino Array     27.53 301   P      P      22 53 49.2 -0.3
ENH   Enshi             28.24 263   P      P      22 53 54.8 -1.1
H11N2 WAKE ISLAND Hy    28.40 125   T      T      23 24 22.0
       baz=316,slow=75,SNR=2361
H11N1 WAKE ISLAND Hy    28.41 125   T      T      23 24 21.3
       baz=316,slow=75,SNR=3741
H11N3 WAKE ISLAND Hy    28.42 125   T      T      23 24 22.6
       baz=316,slow=75,SNR=2612
H11S1 WAKE ISLAND Hy    29.18 127   T      T      23 25 17.2
       baz=318,slow=75,SNR=690
H11S3 WAKE ISLAND Hy    29.18 127   T      T      23 25 17.2
       baz=318,slow=75,SNR=1237
H11S2 WAKE ISLAND Hy    29.20 127   T      T      23 25 18.4
       baz=318,slow=75,SNR=560
TLY   Talaya            29.86 309   P      P      22 54 09.2 -0.8
       comp=Z,3.1nm,0.7s,baz=115,slow=11,SNR=5.9
TLY                                 LR     LR     23 06 46.3
       comp=Z,308nm,18.5s,baz=122,slow=38
TLY   Talaya            29.86 309  eP      P      22 54 10.0  0.0
TLY                                 pmax   pmax
       comp=Z,28nm,1.4s
TLY                                 MLR    MLR
       comp=Z,569nm,13.0s
TLY   Talaya            29.86 309   P      P      22 54 09.9 -0.1
TLY                                 IAmb   IAmb   22 54 11.3
       comp=Z,6.3nm,0.8s
ZAK   Zakamensk         29.88 306  eP      P      22 54 07.2 -3.0
ZAK                                 pmax   pmax
       comp=Z,15nm,1.2s
LZH   Lanzhou           30.56 277  eP      P      22 54 13.4 -3.1
LZH                                 pmax   pmax
       comp=Z,11nm,1.0s
LZH                                 LR     LR
       comp=Z,190nm,12.5s
LZH                                 LR     LR
       comp=Z,260nm,11.9s
LZH                                 LR     LR
       comp=Z,250nm,14.6s
GYA   Guiyang           32.25 259 ⇑P      P      22 54 33.5 +2.1
GYA                                 pP     pP     22 54 44.0 +1.9
GYA                                 pmax   pmax
       comp=Z,16nm,0.5s
BILL  Bilibino          32.26  17⇓iP      P      22 54 32.7 +1.9
BILL                               i                22 55 39.3
BILL                                pmax   pmax
       comp=Z,40nm,3.2s
BILL                                MLR    MLR
       comp=Z,57nm,15.0s
BILL  Bilibino          32.26  17   P      P      22 54 31.4 +0.5
CD2   Chengdu           32.44 268  eP      P      22 54 33.0 +0.1
CD2                                 pmax   pmax
       comp=Z,10.0nm,0.5s
GTA   Gaotai            32.83 285 ⇑P      P      22 54 36.5 +0.2
GTA                                 pP     pP     22 54 46.2 -0.9
GTA                                 sP     sP     22 54 50.1 -1.7
GTA                                 PcP    PcP    22 57 21.8 +1.2
GTA                                 pmax   pmax
       comp=Z,6.0nm,1.2s
GTA                                 pmax   pmax
       comp=Z,40nm,4.2s
GTA                                 LR     LR
       comp=Z,180nm,15.6s
GTA                                 LR     LR
       comp=Z,300nm,17.4s
GTA                                 LR     LR
       comp=Z,380nm,17.5s
TIXI  Tiksi             33.77 352   P      P      22 54 43.2 -0.7
       comp=Z,1.3nm,0.6s,baz=138,slow=9.0,SNR=8.6
TIXI  Tiksi             33.77 352⇑eP      P      22 54 43.5 -0.5
TIXI                                pmax   pmax
       comp=Z,3.0nm,0.8s
TIXI  Tiksi             33.77 352   P      P      22 54 43.6 -0.3
KMI   Kunming           35.96 260 ⇑P      P      22 55 02.8 -0.9
KMI                                 pP     pP     22 55 15.0 +0.5
KMI                                 sP     sP     22 55 18.8 -0.4
KMI                                 pmax   pmax
       comp=Z,8.0nm,0.9s
KMI                                 LR     LR
       comp=Z,140nm,22.2s
KMI                                 LR     LR
       comp=Z,140nm,18.1s
KMI                                 LR     LR
       comp=Z,210nm,19.7s
DGZ   Jazzator, Alta    40.06 304c iP      P      22 55 39.1 +1.2
DGZ                                 pmax   pmax
       comp=Z,29nm,0.9s
SIJI  Sorong            40.64 197   LR     LR     23 10 15.3
       comp=Z,51nm,21.2s,baz=79,slow=33
WMQ   Urumqi            40.79 295  eP      P      22 55 44.9 +1.0
WMQ                                 pP     pP     22 55 52.8 -2.0
WMQ                                 sP     sP     22 55 57.0 -2.6
WMQ                                 pmax   pmax
       comp=Z,27nm,1.5s
WMQ                                 pmax   pmax
       comp=Z,110nm,3.7s
ZAA0  Zalesovo Array    41.38 311   P      P      22 55 48.4 -0.1
ZAA0                                IAmb   IAmb   22 55 50.1
       comp=Z,11nm,0.6s
ZALV  Zalesovo Beam     41.38 311   P      P      22 55 48.5  0.0
       comp=Z,11nm,0.4s,baz=89,slow=8.4,SNR=60
ZALV                                PcP    PcP    22 57 46.5 +0.4
       comp=Z,1.3nm,0.4s,baz=86,slow=3.1,SNR=4.6
ZALV                                LR     LR     23 13 41.5
       comp=Z,211nm,19.2s,baz=88,slow=37
ZSN   Zaisan            42.05 301  eP      P      22 55 54.0 -0.2
       baz=301
ZSN   Zaisan            42.05 301  eP      P      22 55 53.9 -0.2
NRIK  Noril'sk          42.11 334   P      P      22 55 54.1 -0.2
       comp=Z,2.4nm,0.5s,baz=180,slow=23,SNR=4.9
NRIK                                LR     LR     23 14 18.8
       comp=Z,312nm,19.4s,baz=117,slow=37
NRIK  Noril'sk          42.11 334⇑eP      P      22 55 53.7 -0.6
NRIK                                pmax   pmax
       comp=Z,11nm,1.5s
NRIK  Noril'sk          42.11 334   P      P      22 55 54.1 -0.2
CHTO  Chiang Mai        42.42 255   P      P      22 55 57.1 -0.4
CHTO                                pmax   pmax
       comp=Z,3.0nm,0.7s
CHTO  Chiang Mai        42.42 255   P      P      22 55 57.1 -0.4
CMAR  Chiang Mai Arr    42.64 254   P      P      22 55 57.9 -1.4
       comp=Z,0.7nm,0.3s,baz=46,slow=7.0,SNR=6.9
CMAR                                LR     LR     23 15 16.6
       comp=Z,32nm,19.3s,baz=82,slow=38
CMAR  Chiang Mai Arr    42.64 254 i P      P      22 55 59.4 +0.2
CMAR                                pmax   pmax
       comp=Z,1.0nm,0.3s
CMAR  Chiang Mai Arr    42.64 254   P      P      22 55 59.1 -0.1
LSA   Lhasa             42.82 274   P      P      22 56 01.1  0.0
LSA                                 pmax   pmax
       comp=Z,18nm,1.5s
LSA   Lhasa             42.82 274   P      P      22 56 01.1  0.0
LSA                                 IAmb   IAmb   22 56 04.3
       comp=Z,18nm,1.5s
SVW2  Sparrevohn        43.78  38   P      P      22 56 09.3 +1.4
MK31  Makanchi Array    43.90 301   P      P      22 56 08.9 -0.2
MK31                                pmax   pmax
       comp=Z,14nm,1.1s
MK31  Makanchi Array    43.90 301   P      P      22 56 08.9 -0.2
MK31                                IAmb   IAmb   22 56 12.0
       comp=Z,14nm,1.1s
MKAR  Makanchi Array    43.90 301   P      P      22 56 09.3 +0.2
       comp=Z,5.2nm,0.5s,baz=79,slow=10,SNR=55
MKAR                                LR     LR     23 14 58.2
       comp=Z,79nm,19.4s,baz=48,slow=37
MKAR  Makanchi Array    43.90 301   P      P      22 56 09.2 +0.1
MKAR  Makanchi Array    43.90 301   P      P      22 56 09.2 +0.1
MAKZ  Makanchi          44.11 301   P      P      22 56 10.8  0.0
MAKZ                                pmax   pmax
       comp=Z,12nm,1.0s
MAKZ  Makanchi          44.11 301   P      P      22 56 10.8  0.0
MAKZ                                IAmb   IAmb   22 56 15.0
       comp=Z,12nm,1.0s
L19K  White Mountain    44.16  37   P      P      22 56 12.8 +1.8
SHL   Shillong          44.18 268   P      P      22 56 12.0 +0.2
SHL                                 pmax   pmax
       comp=Z,10.0nm,0.5s
SHL   Shillong          44.18 268   P      P      22 56 12.0 +0.2
SHL                                 IAmb   IAmb   22 56 34.8
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       comp=Z,10nm,0.5s
SEM   Semipalatinsk     44.56 306  eP      P      22 56 13.1 -1.5
       baz=306
SEM   Semipalatinsk     44.56 306  eP      P      22 56 13.0 -1.5
K20K  Telida            44.57  35   P      P      22 56 15.0 +0.8
J20K  Nowinta River     44.58  34   P      P      22 56 14.4 +0.1
J20K                                IAmb   IAmb   22 56 17.9
       comp=Z,10nm,1.1s
IMAR  Indian Mountai    44.87  31   P      P      22 56 16.9 +0.3
H21K  Melozitna Rive    45.24  32   P      P      22 56 21.5 +2.0
H21K                                IAmb   IAmb   22 56 37.9
       comp=Z,15nm,1.4s
KURK  Kurchatov         45.53 307   P      P      22 56 21.6 -0.4
KURK                                pmax   pmax
       comp=Z,30nm,0.8s
KURK  Kurchatov         45.53 307   P      P      22 56 21.6 -0.4
KURBB Kurchatov Arra    45.60 307   P      P      22 56 22.5 -0.1
       comp=Z,24nm,0.6s,baz=82,slow=8.3,SNR=183
MLY   Manley            46.08  33   P      P      22 56 26.2  0.0
MLY                                 IAmb   IAmb   22 56 44.6
       comp=Z,7.5nm,1.1s
TAPN  Taplejung         46.58 273  eP      P      22 56 30.8 -0.2
TDK   Taldyqorghan      46.96 299  eP      P      22 56 33.0 -0.4
       comp=Z,5.1nm,0.6s,baz=299
TDK   Taldyqorghan      46.96 299  eP      P      22 56 33.0 -0.4
TDK                                 pmax   pmax
       comp=Z,5.0nm,0.6s
UZB   Uzynbulak         47.06 297  eP      P      22 56 33.8 -0.6
       baz=297
UZB   Uzynbulak         47.06 297  eP      P      22 56 33.7 -0.6
ODAN  Odare             47.07 273  eP      P      22 56 35.2 +0.5
KPKS  Kokpek            47.21 297  eP      P      22 56 34.8 -0.6
       baz=297
KPKS  Kokpek            47.21 297  eP      P      22 56 34.8 -0.6
WRH   Wood River Hil    47.22  34   P      P      22 56 36.7 +1.7
SATY  Saty              47.52 297  eP      P      22 56 37.2 -0.7
       baz=297
SATY  Saty              47.52 297  eP      P      22 56 37.2 -0.7
RAMN  Ramite            47.64 273  eP      P      22 56 39.6 +0.4
       comp=Z,12nm,0.5s
IL31                    47.72  33   P      P      22 56 39.7 +0.8
IL31                                IAmb   IAmb   22 56 59.1
       comp=Z,16nm,1.5s
ILAR  Eielson Array     47.72  33   P      P      22 56 40.6 +1.7
       comp=Z,2.4nm,0.7s,baz=265,slow=6.4,SNR=25
ILAR  Eielson Array     47.72  33   P      P      22 56 40.3 +1.3
ILAR  Eielson Array     47.72  33   P      P      22 56 40.3 +1.3
GUN   Gumba             47.75 275  eP      P      22 56 40.6 +0.5
       comp=Z,23nm,0.5s
KKN   Kakani            48.27 275  eP      P      22 56 44.5 +0.5
PKI   Pulchoki          48.27 275  eP      P      22 56 44.3 +0.1
PKIN  Phulchoki         48.28 275  eP      P      22 56 44.3 +0.2
TARG  Taragay, Kyrgy    48.36 295   P      P      22 56 45.0 +0.2
TARG                                IAmb   IAmb   22 56 49.3
       comp=Z,5.3nm,0.6s
MDOK  Medeo             48.44 297  eP      P      22 56 44.8 -0.2
       baz=297
MDOK  Medeo             48.44 297  eP      P      22 56 44.8 -0.2
DMN   Daman             48.49 275  eP      P      22 56 46.1 +0.4
       comp=Z,24nm,0.7s
AAA   Alma-Ata          48.51 297  eP      P      22 56 44.5 -1.1
       baz=297
AAA   Alma-Ata          48.51 297  eP      P      22 56 44.4 -1.1
TNSS  Tian-Shan         48.55 297  eP      P      22 56 45.6 -0.5
       baz=297
BMAR  Burnt Mountain    48.55  30   P      P      22 56 47.2 +1.8
SRIT  Nakonsritamara    48.63 243   P      P      22 56 47.6 +1.1
GKN   Gorkha            48.67 275  eP      P      22 56 47.3 +0.3
       comp=Z,13nm,0.4s
KUU   Kurty             48.70 298  eP      P      22 56 45.9 -1.0
       comp=Z,7.7nm,0.8s,baz=298
KUU   Kurty             48.70 298  eP      P      22 56 45.9 -1.0
KUU                                 pmax   pmax
       comp=Z,8.0nm,0.8s
SCRK  Sand Creek        49.04  34   P      P      22 56 50.8 +1.5
SCRK                                IAmb   IAmb   22 57 06.7
       comp=Z,8.5nm,1.1s
DANN  Dangsing          49.19 276  eP      P      22 56 51.9 +0.7
       comp=Z,52nm,0.5s
BRZS  Berezniki         49.40 307  eP      P      22 56 51.0 -1.1
       comp=Z,6.8nm,1.0s,baz=307
BRZS  Berezniki         49.40 307  eP      P      22 56 51.0 -1.1
BRZS                                pmax   pmax
       comp=Z,7.0nm,1.0s
BOOM  Boomskoye usch    49.42 297   P      P      22 56 53.1 +0.5
BOOM                                pmax   pmax
       comp=Z,11nm,1.2s
BOOM  Boomskoye usch    49.42 297   P      P      22 56 53.0 +0.5
BOOM                                IAmb   IAmb   22 56 57.8
       comp=Z,11nm,1.2s
KOLN  Koldanda          49.59 276  eP      P      22 56 54.7 +0.6
       comp=Z,5.3nm,0.4s
PYUN  Piuthan           49.91 277  eP      P      22 56 57.1 +0.6
BTLS  Baital            49.91 301  eP      P      22 56 55.0 -1.0
       baz=301
BTLS  Baital            49.91 301  eP      P      22 56 55.0 -1.0
SGDS  Sogindy           50.02 298  eP      P      22 56 56.5 -0.5
       baz=298
BVAR  Borovoye Array    50.04 311   P      P      22 56 57.1 +0.2
       comp=Z,4.8nm,0.5s,baz=161,slow=4.3,SNR=31
BVAR                                PcP    PcP    22 58 16.8 +0.5
       comp=Z,3.6nm,0.6s,baz=209,slow=7.7,SNR=4.3
BRVK  Borovoye          50.09 312⇓iP      P      22 56 57.8 +0.5
BRVK                                pmax   pmax
       comp=Z,4.0nm,0.6s
BRVK  Borovoye          50.09 312   P      P      22 56 57.4 +0.1
BRVK                                IAmb   IAmb   22 56 58.4
       comp=Z,8.3nm,1.1s
AAK   Ala-Archa         50.38 297   P      P      22 56 59.9  0.0
       comp=Z,1.4nm,0.4s,baz=130,slow=4.2,SNR=8.2
AAK   Ala-Archa         50.38 297   P      P      22 56 59.7 -0.2
AAK                                 pmax   pmax
       comp=Z,3.0nm,1.0s
AAK   Ala-Archa         50.38 297   P      P      22 56 59.6 -0.2
KSH   Kashi             50.43 293   P      P      22 57 03.3 +3.1
KSH                                 pP     sP     22 57 20.6 +4.6
KSH                                 pmax   pmax
       comp=Z,6.0nm,0.8s
IPM   Ipoh              50.62 238   P      P      22 57 01.7 -0.1
DZA   Taraz             52.48 299  eP      P      22 57 15.0 -0.4
       baz=299
DZA   Taraz             52.48 299  eP      P      22 57 15.0 -0.4
KKAR  Karatay Array     52.96 299   P      P      22 57 18.8 -0.1
KKAR  Karatay Array     52.96 299   P      P      22 57 18.8 -0.1
DRK   Karamyk           53.43 295   P      P      22 57 22.6 -0.2
DRK                                 IAmb   IAmb   22 57 27.3
       comp=Z,8.5nm,1.1s
BRLS  Borolday          53.45 299  eP      P      22 57 23.6 +1.1
       baz=299
BRLS  Borolday          53.45 299  eP      P      22 57 23.6 +1.1
IUG   Iuzhnay           53.64 298  eP      P      22 57 23.7 -0.4
       baz=298
IUG   Iuzhnay           53.64 298  eP      P      22 57 23.6 -0.4
BTK   Batken            53.90 296   P      P      22 57 25.8 -0.2
BTK                                 pmax   pmax
       comp=Z,9.0nm,1.3s
BTK   Batken            53.90 296   P      P      22 57 25.8 -0.2
BTK                                 IAmb   IAmb   22 57 31.6
       comp=Z,8.5nm,1.3s
SVE   Sverdlovsk        54.42 318⇑eP      P      22 57 30.4 +1.0
SVE                                 pmax   pmax
       comp=Z,21nm,0.9s
A36M  Sachs Harbour     54.47  22   P      P      22 57 30.4 +0.9
A36M                                IAmb   IAmb   22 57 33.2
       comp=Z,8.0nm,0.9s
GAR   Garm              54.68 295   P      P      22 57 31.1 -0.5
GAR                                 IAmb   IAmb   22 57 46.1
       comp=Z,15nm,1.3s
NIL   Nilore            54.82 288   P      P      22 57 33.6 +0.9
NIL                                 pmax   pmax
       comp=Z,17nm,0.8s
NIL   Nilore            54.82 288   P      P      22 57 33.6 +0.9
KNRA  Kununurra         55.53 196   P      P      22 57 38.0 +0.3
ARU   Arti              55.64 318   P      P      22 57 38.3 +0.2
       comp=Z,2.5nm,0.4s,baz=70,slow=2.6,SNR=16
ARU   Arti              55.64 318c iP      P      22 57 38.3 +0.2
ARU                                               22 58 34.0
ARU                                               22 59 43.9
ARU                                 S      S      23 05 23.6 +2.4
ARU                                 SS     SS     23 08 59.3 -6.8
ARU                                 pmax   pmax
       comp=Z,18nm,1.1s
ARU                                 MLR    MLR
       comp=Z,323nm,20.0s
ARU   Arti              55.64 318   P      P      22 57 38.0 -0.2
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CHGR  Chuyangaron       55.65 295   P      P      22 57 38.7 +0.1
ABKAR Akbulak array     57.46 310   P      P      22 57 51.0 -0.2
ABKAR Akbulak array     57.46 310   P      P      22 57 51.0 -0.2
ABKAR                               IAmb   IAmb   22 57 51.9
       comp=Z,7.5nm,0.7s
KBL   Kabul             57.53 290   P      P      22 57 51.6 -0.6
KBL                                 pmax   pmax
       comp=Z,8.0nm,1.1s
KBL   Kabul             57.53 290   P      P      22 57 51.6 -0.6
KBL                                 IAmb   IAmb   22 57 52.7
       comp=Z,7.9nm,1.1s
EUNU  Eureka            58.47   9   P      P      22 57 58.4 +0.5
EUNU                                IAmb   IAmb   22 57 59.3
       comp=Z,3.4nm,0.8s
FITZ  Fitzroy Crossi    58.60 199   P      P      22 57 59.2 -0.2
       comp=Z,2.1nm,0.8s,baz=0.0,slow=11,SNR=2.0
WB0   Warramunga Arr    58.60 189   P      P      22 57 59.7 +0.3
WRAB  Tennant Creek     58.77 189⇓eP      P      22 58 00.8 +0.2
WRAB                                pmax   pmax
       comp=Z,8.0nm,1.0s
WB2   Warramunga Arr    58.78 189   P      P      22 58 00.4 -0.2
WRA   Warramunga Arr    58.78 189   P      P      22 58 00.9 +0.3
       comp=Z,5.3nm,0.9s,baz=5.7,slow=7.4,SNR=25
WRA                                 pP     pP     22 58 12.8 +0.9
       comp=Z,7.5nm,0.7s,baz=6.3,slow=6.9,SNR=14
WRA   Warramunga Arr    58.78 189   P      P      22 58 00.6  0.0
WRA                                 pmax   pmax
       comp=Z,1.0nm,0.8s
WRA   Warramunga Arr    58.78 189   P      P      22 58 00.6  0.0
KIRV  Kirov             59.40 323⇓eP      P      22 58 05.1 +0.6
PRGR  Permogore         59.81 327  eP      P      22 58 02.7 -4.6
YKA   Yellowknife Ar    62.03  31   P      P      22 58 23.5 +1.1
       comp=Z,1.5nm,0.8s,baz=302,slow=6.7,SNR=5.3
YKA                                 pP     sP     22 58 35.9 -2.1
       comp=Z,1.0nm,0.7s,baz=301,slow=6.8,SNR=5.1
ASAR  Alice Springs     62.51 189   P      P      22 58 26.7 +0.7
       comp=Z,2.1nm,0.8s,baz=12,slow=5.9,SNR=17
ASAR                                pP     pP     22 58 38.0 +0.7
       comp=Z,3.5nm,0.7s,baz=12,slow=7.0,SNR=11
ASAR  Alice Springs     62.51 189   P      P      22 58 26.8 +0.8
HRA   Herat             62.55 293   P      P      22 58 27.1 +0.5
HRA                                 IAmb   IAmb   22 58 28.1
       comp=Z,5.3nm,0.9s
ARCES ARCESS Array B    62.73 339   P      P      22 58 26.2 -0.8
       comp=Z,1.0nm,0.5s,baz=48,slow=8.5,SNR=12
ARCES                               LR     LR     23 28 00.2
       comp=Z,80nm,21.7s,baz=355,slow=38
ARCES ARCESS Array B    62.73 339   P      P      22 58 26.8 -0.2
ARCES                               pmax   pmax
       comp=Z,3.0nm,1.0s
ARCES ARCESS Array B    62.73 339   P      P      22 58 26.8 -0.2
KLMR  Klimovskoe        62.78 328  eP      P      22 58 26.3 -1.1
KLMR                                pmax   pmax
       comp=Z,12nm,1.2s
KLMR  Klimovskoe        62.78 328  eP      P      22 58 26.3 -1.1
KLMR                                AMP           22 58 29.3
       comp=Z,12nm,1.2s
BELG  Belogornoye       63.12 317⇑eP      P      22 58 29.5 -0.3
BELG                                pmax   pmax
       comp=Z,2.0nm,0.8s
GEYT  Alibeck           63.70 299   P      P      22 58 32.9 -1.1
       comp=Z,5.1nm,0.8s,baz=226,slow=8.0,SNR=8.0
GEYT                                LR     LR     23 27 57.7
       comp=Z,103nm,18.8s,baz=240,slow=38
GEYT  Alibeck           63.70 299   P      P      22 58 33.4 -0.6
GEYT                                IAmb   IAmb   22 58 35.1
       comp=Z,5.2nm,0.8s
DZM   Mont Dzumac       64.50 155  eLR     LR     23 18 04.4
       comp=Z,273nm,23.7s
OBN   Obninsk           67.24 323⇓eP      P      22 58 56.7 +0.3
OBN                                 pmax   pmax
       comp=Z,10.0nm,0.7s
OBN                                 MLR    MLR
       comp=Z,89nm,13.0s
FIA1  FINESS Array S    67.72 332   P      P      22 58 59.5 +0.2
FINES FINESS Array B    67.72 332   P      P      22 58 59.5 +0.1
       comp=Z,6.7nm,0.7s,baz=104,slow=8.0,SNR=12
FINES                               LR     LR     23 29 36.8
       comp=Z,158nm,19.5s,baz=60,slow=37
FINES FINESS Array B    67.72 332   P      P      22 58 59.6 +0.2
FINES FINESS Array B    67.72 332   P      P      22 58 59.6 +0.2
NEW   Newport           68.45  45   LR     LR     23 37 35.8
       comp=Z,39nm,18.1s,baz=305,slow=43
SUMG  Summit            69.06   0   P      P      22 59 09.2 +1.1
SUMG                                pmax   pmax
       comp=Z,3.0nm,0.9s
SUMG  Summit            69.06   0 i P      P      22 59 09.5 +1.4
SUMG  Summit            69.06   0   P      P      22 59 09.2 +1.1
GOF   Gofitskoye        69.56 312⇑eP      P      22 59 11.9 +0.7
KIV   Kislovodsk        70.40 311  eP      P      22 59 17.7 +1.2
KIV                                 pmax   pmax
       comp=Z,22nm,1.1s
KIV                                 MLR    MLR
       comp=Z,61nm,17.0s
KIV   Kislovodsk        70.40 311   P      P      22 59 17.0 +0.5
KBZ   Khabaz            70.40 311   P      P      22 59 17.5 +1.1
       comp=Z,7.2nm,0.8s,baz=86,slow=3.3,SNR=17
KBZ                                 LR     LR     23 32 02.5
       comp=Z,72nm,19.1s,baz=48,slow=38
GNI   Garni             71.33 307⇓eP      P      22 59 24.6 +2.3
GNI                                 pmax   pmax
       comp=Z,20nm,1.5s
MNK   Minsk             71.56 326 i P      P      22 59 21.7 -1.5
MNK                               i                 23 01 59.3
MNK                               i PPP    PPP    23 03 44.8
MNK                               i S      S      23 08 39.1 -0.1
MNK                               i                 23 09 23.3
MNK                               i SS     SS     23 13 16.0 +2.2
MNK                                 pmax   pmax
       comp=E,3.0nm,1.1s
MNK                                 pmax   pmax
       comp=Z,11nm,1.1s
MNK                                 pmax   pmax
       comp=N,9.0nm,1.1s
MNK                                 MLR    MLR
       comp=N,281nm,20.0s
MNK                                 MLR    MLR
       comp=Z,172nm,15.0s
MNK                                 MLR    MLR
       comp=E,27nm,15.0s
MNK   Minsk             71.56 326 i P      P      22 59 21.8 -1.4
       comp=E,3.0nm,1.1s
MNK                               i P      P      22 59 21.8 -1.4
       comp=N,9.0nm,1.1s
MNK                               i P      P      22 59 21.8 -1.4
       comp=Z,11nm,1.1s,baz=49
MNK                               i PP     PP     23 01 59.4 -2.4
MNK                               i PPP    PPP    23 03 44.9
MNK                               i S      S      23 08 39.1 -0.1
MNK                               i SS     SS     23 13 16.0 +2.2
MNK                               i SSS    SSS    23 16 36.0
MNK                               i LQ     LQ     23 25 46.7
MNK                               i LR     LR     23 30 10.3
MNK                               i LRM    MLR    23 32 56.6
       comp=N,281nm,20.2s
MNK                               i LRM    MLR    23 33 20.0
       comp=Z,172nm,15.4s
MNK                               i LRM    MLR    23 33 21.6
       comp=E,27nm,14.9s
NACGM Naroch            71.77 327 i P      P      22 59 22.9 -1.6
UOSS  Minazif           72.02 288   P      P      22 59 26.4 -0.1
UOSS                                IAmb   IAmb   22 59 27.3
       comp=Z,9.4nm,1.0s
LRM   Limekiln Ridge    72.47  45   P      P      22 59 30.8 +1.7
NC405 NORSAR Array S    72.76 337   P      P      22 59 29.7 -0.6
ANN   Anapa             72.93 314  eP      P      22 59 28.4 -3.2
ANN                                e*PP    pP     22 59 39.1 -4.1
ANN                                eS      S      23 08 51.7 -3.5
ANN                                 pmax   pmax
       comp=Z,300nm,1.1s
NB2   NORSAR Subarra    72.97 337   P      P      22 59 31.4 -0.2
       comp=Z,2.2nm,0.7s,baz=37,slow=5.9
NOA   NORSAR Array B    72.97 337   P      P      22 59 32.1 +0.6
       comp=Z,3.0nm,0.7s,baz=38,slow=6.1,SNR=13
NOA                                 LR     LR     23 34 10.1
       comp=Z,100nm,21.8s,baz=305,slow=38
NVAR  Mina Array Bea    73.42  54   P      P      22 59 37.0 +2.1
       comp=Z,1.7nm,0.9s,baz=282,slow=5.9,SNR=9.3
NVAR                                pP     pP     22 59 48.1 +1.7
       comp=Z,1.4nm,0.8s,baz=287,slow=4.9,SNR=3.2
NVAR  Mina Array Bea    73.42  54   P      P      22 59 36.1 +1.2
AKASG Malin Array Be    73.46 322   P      P      22 59 34.6 +0.1
       comp=Z,6.2nm,0.6s,baz=48,slow=5.9,SNR=35
AKASG                               pP     pP     22 59 47.0 +0.9
       comp=Z,1.0nm,0.4s,baz=46,slow=6.4,SNR=4.7
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AKASG				LR	LR	23 34 36.1	
	comp=Z,84nm,21.1s,baz=45,slow=38						
AKASG	Malin Array Be	73.46	322	P	P	22 59 34.7	+0.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	73.46	322	P	P	22 59 34.7	+0.1
AKBB	Malin Array Si	73.46	322	⇑*e*P	P	22 59 34.5	-0.1
AKBB				pmax	pmax		
	comp=Z,11nm,0.9s						
AKBB	Malin Array Si	73.46	322	P	P	22 59 34.4	-0.1
AKBB				IAmb	IAmb	22 59 35.4	
	comp=Z,9.4nm,0.8s						
GURO	Guroymak-BITLI	73.96	307	P	P	22 59 39.1	+1.1
GURO				IAmb	IAmb	22 59 39.9	
	comp=Z,5.4nm,0.7s						
QSM	Queen of Sheba	75.82	55	P	P	22 59 50.1	+1.5
QSM				IAmb	IAmb	22 59 51.5	
	comp=Z,6.2nm,1.1s						
PD31	Pinedale Array	76.00	46	P	P	22 59 50.9	+1.2
PDAR	Pinedale Array	76.00	46	P	P	22 59 51.5	+1.7
	comp=Z,1.9nm,0.6s,baz=258,slow=1.7,SNR=24						
PDAR				pP	sP	23 00 03.8	-1.7
	comp=Z,0.9nm,0.6s,baz=286,slow=2.7,SNR=4.9						
PDAR	Pinedale Array	76.00	46	P	P	22 59 51.2	+1.4
P17A	Butcher Ranch,	77.43	49	P	P	22 59 58.7	+0.9
P17A				IAmb	IAmb	23 00 01.0	
	comp=Z,4.0nm,0.8s						
LCMT	Little Creek M	77.47	53	P	P	22 59 59.3	+1.3
LCMT				IAmb	IAmb	23 00 01.4	
	comp=Z,4.5nm,1.0s						
BUR08	Bucovina Ar. S	77.48	322	P	P	22 59 57.8	-0.1
BUR08				IAmb	IAmb	23 00 09.9	
	comp=Z,5.7nm,1.1s						
BNN	Bunyan	77.58	310	P	P	22 59 59.2	+0.6
SRU	San Rafael Swe	77.79	50	P	P	23 00 01.6	+1.8
SRU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SRU	San Rafael Swe	77.79	50	P	P	23 00 01.6	+1.8
SRU				IAmb	IAmb	23 00 16.9	
	comp=Z,4.8nm,0.7s						
TIRR	Tirgusor	78.06	318	P	P	23 00 01.5	+0.5
TIRR				pmax	pmax		
	comp=Z,156nm,1.5s						
TIRR	Tirgusor	78.06	318	P	P	23 00 01.5	+0.5
OJC	Ojcow	78.10	326	P	P	23 00 01.6	+0.5
OJC				pmax	pmax		
	comp=Z,16nm,1.1s						
OJC	Ojcow	78.10	326	P	P	23 00 01.6	+0.5
BRTR	Keskin Array B	78.32	312	P	P	23 00 03.1	+0.4
	comp=Z,1.3nm,0.4s,baz=111,slow=2.4,SNR=7.8						
BRTR				LR	LR	23 39 10.3	
	comp=Z,42nm,18.0s,baz=32,slow=39						
BRTR	Keskin Array B	78.32	312	P	P	23 00 02.9	+0.1
U15A	North Rim	78.43	53	P	P	23 00 05.1	+1.6
BSEG	Bad Segeberg	78.94	333	*e*L	L	23 36 38.1	
	comp=Z,132nm,20.7s						
LANS	Liptovska Anna	79.03	326	*e*P	P	23 00 07.8	+1.5
LANS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LANS	Liptovska Anna	79.03	326	*e*P	P	23 00 07.8	+1.5
MORC	Moravsky Berou	79.39	327	*e*P	P	23 00 09.1	+0.8
MORC	Moravsky Berou	79.39	327	P	P	23 00 08.9	+0.6
MORC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MORC	Moravsky Berou	79.39	327	P	P	23 00 08.9	+0.6
MORC				IAmb	IAmb	23 00 09.8	
	comp=Z,6.9nm,1.0s						
CHVC	Chvalec	79.40	328	*e*P	P	23 00 09.2	+0.9
DPC	Dobruska-Polom	79.47	328	*e*P	P	23 00 09.7	+1.0
DPC	Dobruska-Polom	79.47	328	*e*P	P	23 00 09.7	+1.0
KRLC	Kraliky	79.49	328	*e*P	P	23 00 09.5	+0.7
KRLC	Kraliky	79.49	328	*e*P	P	23 00 09.5	+0.7
PSZ	Piszkesteto	79.76	325	P	P	23 00 10.8	+0.5
PSZ				pmax	pmax		
	comp=Z,13nm,1.2s						
PSZ	Piszkesteto	79.76	325	P	P	23 00 10.8	+0.5
PSZ				IAmb	IAmb	23 00 12.4	
	comp=Z,13nm,1.2s						
VYHS	Vyhne	79.80	326	*e*P	P	23 00 11.8	+1.3
VYHS	Vyhne	79.80	326	*e*P	P	23 00 11.8	+1.3
BRG	Berggiesshubel	80.02	330	*e*P	P	23 00 12.6	+0.9
BRG				Amp		23 00 15.0	
	comp=Z,5.4nm,0.9s						
JAVC	Velka Javorina	80.03	327	*e*P	P	23 00 13.9	+2.1
PVCC	Panska Ves	80.04	329	*e*P	P	23 00 13.1	+1.4
PVCC	Panska Ves	80.04	329	*e*P	P	23 00 13.1	+1.4
CLL	Collm	80.05	330	*i* P	P	23 00 12.1	+0.4
CLL				*e*		23 00 33.0	
CLL				pmax	pmax		
	comp=Z,11nm,0.9s						
CLL	Collm	80.05	330	*i* P	P	23 00 12.1	+0.4
	comp=Z,11nm,0.9s						
CLL				*e*sPcP		23 00 33.0	
CLL	Collm	80.05	330	*e*L	L	23 40 02.1	
	comp=Z,77nm,18.9s						
CLL	Collm	80.05	330	P	P	23 00 12.1	+0.4
CLL				IAmb	IAmb	23 00 13.0	
	comp=Z,9.5nm,0.8s						
VRAC	Vranov	80.15	327	*e*P	P	23 00 13.1	+0.7
SMOL	Smolenice	80.40	326	*e*P	P	23 00 15.0	+1.3
SMOL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SMOL	Smolenice	80.40	326	*e*P	P	23 00 15.0	+1.3
KRUC	Moravsky	80.42	327	*e*P	P	23 00 14.7	+0.9
PRU	Pruhonice	80.48	329	*e*P	P	23 00 15.4	+1.3
PRU	Pruhonice	80.48	329	*e*P	P	23 00 15.4	+1.3
SRO	Srobarova	80.54	326	*e*P	P	23 00 16.2	+1.7
SRO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SRO	Srobarova	80.54	326	*e*P	P	23 00 16.2	+1.7
MODS	Modra-Piesok	80.57	326	*e*P	P	23 00 15.7	+1.0
MODS	Modra-Piesok	80.57	326	*e*P	P	23 00 15.7	+1.0
RAYN	Ar Rayn	80.72	293	P	P	23 00 15.3	-0.6
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
RAYN	Ar Rayn	80.72	293	P	P	23 00 15.3	-0.6
MOX	Moxa	81.11	331	*e*L	L	23 39 20.6	
	comp=Z,88nm,19.0s						
CKRC	Cesky Krumlov	81.48	328	*e*P	P	23 00 21.3	+1.8
CONA	Conrad Observa	81.52	327	*e*P	P	23 00 21.1	+1.3
	comp=Z,3.9nm,0.8s						
KHC	Kasperske Hory	81.54	329	*e*P	P	23 00 20.5	+0.7
KHC	Kasperske Hory	81.54	329	*ce*P	P	23 00 20.7	+0.9
KHC				pmax	pmax		
	comp=Z,13nm,0.8s						
KHC	Kasperske Hory	81.54	329	P	P	23 00 20.5	+0.7
KHC				IAmb	IAmb	23 00 21.7	
	comp=Z,5.5nm,0.8s						
GEC2	GERESS Array S	81.71	329	*e*L	L	23 38 55.2	
	comp=Z,141nm,20.1s						
GERES	GERESS Array B	81.71	329	P	P	23 00 21.1	+0.3
	comp=Z,1.8nm,0.8s,baz=31,slow=8.3,SNR=7.9						
GERES				LR	LR	23 39 15.2	
	comp=Z,144nm,18.9s,baz=70,slow=38						
GERES	GERESS Array B	81.71	329	P	P	23 00 21.3	+0.5
GERES	GERESS Array B	81.71	329	P	P	23 00 21.3	+0.5
WET	Wettzell	81.81	329	*e*L	L	23 39 28.4	
	comp=Z,190nm,19.1s						
GRF	Grafenberg Arr	82.03	330	*e*P	P	23 00 23.0	+0.7
	comp=Z,15nm,0.9s,baz=36,slow=4.3						
GRF				*e*L	L	23 38 46.1	
	comp=Z,108nm,18.5s						
VTS	Vitosha	82.03	319	P	P	23 00 23.7	+1.0
VTS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VTS	Vitosha	82.03	319	P	P	23 00 23.7	+1.0
VTS				IAmb	IAmb	23 00 24.7	
	comp=Z,9.8nm,0.9s						
ARSA	Arzberg	82.19	327	*e*P	P	23 00 22.9	-0.3
	comp=Z,1.6nm,0.6s						
ELL	Elmali	82.49	312	P	P	23 00 25.1	0.0
ELL				pmax	pmax		
	comp=Z,50nm,1.4s						
ELL	Elmali	82.49	312	P	P	23 00 25.1	0.0
DIVS	Divibare	82.55	322	P	P	23 00 25.0	-0.3
TNS	Taunus Mts	82.64	332	*e*L	L	23 37 20.6	
	comp=Z,87nm,18.0s						
SOKA	Soboth	82.85	327	*e*P	P	23 00 27.4	+0.6
	comp=Z,7.4nm,0.9s						
ANMO	Albuquerque	82.97	51	⇑*e*P	P	23 00 31.0	+3.2
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.8s						
BTNL	Ternell	83.16	334	*d*P	P	23 00 29.0	+0.8
OBKA	Obir	83.19	327	*e*P	P	23 00 29.0	+0.5
	comp=Z,2.5nm,0.8s						
FUR	Furstenfeldbru	83.23	329	*e*L	L	23 40 29.8	
	comp=Z,130nm,19.7s						
BHOU	Houvegnez	83.40	334	*d*P	P	23 00 29.8	+0.3
MYKA	Terra Mystica	83.48	327	*e*P	P	23 00 29.9	-0.1
	comp=Z,4.0nm,0.6s						
BCLA	Clavier	83.59	334	*d*P	P	23 00 30.8	+0.4
	comp=Z,4.9nm,0.9s						
WTTA	Wattenberg	83.81	329	*e*P	P	23 00 32.5	+0.6
	comp=Z,4.9nm,1.0s						
ABTA	Abfaltersbach	83.86	328	*e*P	P	23 00 30.9	-1.1
	comp=Z,2.5nm,1.2s						
BMRD	Maredsous	83.87	334	*d*P	P	23 00 32.3	+0.4
	comp=Z,4.6nm,1.0s						
MOTA	Moosalm	83.96	329	*e*P	P	23 00 32.3	-0.3
	comp=Z,12nm,1.3s						
RETA	Reutte	83.98	329	*e*P	P	23 00 33.5	+0.9
	comp=Z,9.8nm,1.0s,SNR=6.9						
DOU	Dourbes	84.10	334	*d*P	P	23 00 32.4	-0.6
DOU				*d*PcP	PcP	23 00 37.3	+0.4
PDG	Podgorica	84.16	321	P	P	23 00 33.1	-0.3
PMOR	Pomariorio Ree	84.16	114	*e*T	T	00 33 15.7	
	comp=Z,33nm,0.2s						
STAL	STALIGIAL	84.17	328	P	P	23 00 32.6	-0.9
STAL				IAmb	IAmb	23 00 33.4	
	comp=Z,6.7nm,0.7s						
FETA	Feichten	84.37	329	*i* P	P	23 00 35.0	+0.4
	comp=Z,3.5nm,0.8s,SNR=5.3						
DAVA	Damuels	84.50	330	*e*P	P	23 00 36.2	+0.9
	comp=Z,4.9nm,0.7s						
PPT	Papeete	84.71	117	LR	LR	23 31 32.7	
	comp=Z,44nm,21.1s,baz=356,slow=31						
PPT2	Papeete2	84.72	117	*e*LR	LR	23 27 24.5	
	comp=Z,127nm,24.2s						
KBN	Korca	84.74	319	P	P	23 00 36.6	0.0
KBN				pmax	pmax		
	comp=Z,27nm,1.4s						
KBN	Korca	84.74	319	P	P	23 00 36.6	0.0
MEH	Mehetia	85.97	117	*e*T	T	00 35 31.7	
	comp=Z,31nm,0.3s						
NRCA	Norcia	86.72	325	P	P	23 00 47.0	+0.7
NRCA				IAmb	IAmb	23 00 55.1	
	comp=Z,7.0nm,1.1s						
TX32	Lajitas Array	88.54	53	P	P	23 00 55.3	0.0
TXAR	Lajitas Array	88.54	53	P	P	23 00 57.0	+1.7
	comp=Z,1.0nm,0.7s,baz=298,slow=3.2,SNR=16						
TXAR				pP	pP	23 01 08.5	+1.5
	comp=Z,0.7nm,0.6s,baz=300,slow=3.0,SNR=6.6						
TXAR	Lajitas Array	88.54	53	P	P	23 00 55.9	+0.5
CCM	Cathedral Cave	89.13	39	P	P	23 00 58.8	+1.0
CCM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CCM	Cathedral Cave	89.13	39	P	P	23 00 58.8	+1.0
CCM				IAmb	IAmb	23 00 59.9	
	comp=Z,4.5nm,0.8s						
TKL	Tuckaleechee C	94.63	36	LR	LR	23 46 46.7	
	comp=Z,20nm,18.2s,baz=340,slow=37						
ESDC	Sonseca Array	96.15	334	P	P	23 01 30.4	+0.1
	comp=Z,0.3nm,0.8s,baz=9.6,slow=5.6,SNR=4.1						
ESDC				LR	LR	23 49 57.1	
	comp=Z,71nm,18.6s,baz=340,slow=39						
TORD	Torodi Ar. Bea	116.69	316	PKP	PKPdf	23 06 46.1	-0.8
	comp=Z,0.4nm,0.8s,baz=29,slow=3.3,SNR=1.9						
SNAA	Sanae	142.52	197	PKPdf	PKPdf	23 07 31.3	-2.7
VNA2	Neumayer--Watz	144.09	196	PKPdf	PKPbc	23 07 35.1	+0.3
VNA3	Neumayer Olymp	144.33	195	PKPdf	PKPbc	23 07 35.4	-0.1
LPAZ	La Paz	145.22	59	PKPbc	PKPbc	23 07 40.3	-0.4
	comp=Z,1.5nm,0.7s,baz=357,slow=6.1,SNR=6.1						
H03N2	Juan Fernandez	146.43	94	T	T	01 52 24.2	
	baz=286,SNR=8.8						
H03N3	Juan Fernandez	146.44	94	T	T	01 52 36.7	
	baz=286,SNR=7.8						
H03N1	Juan Fernandez	146.44	94	T	T	01 52 19.0	
	baz=286,SNR=11						

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*IDC **01** 22:59:35.5±0.8, 32°.68S×178°.33W, h0^{km}, mb4.5/7, mb1 4.7/8, mb1mx4.3/34, mbtmp4.5/8, ML4.6/1, MS3.8/12, Ms1 3.8/12, ms1mx3.6/28, Error ellipse: s-maj=34.2km s-min=22.7km az=168.0*

*NEIC **01** 22:59:37.9±1.9, 32°.94S±0°.08×178°.3W±0°.2, h10^{km}±1^{km}, mb4.7/22, Error ellipse: s-maj=22.6km s-min=12.1km az=102.0*

*WEL **01** 22:59:38.5±0.8, 33°S±9°×17°8W±2°4, h33^{km}, M4.8/18, mB5.2/13, ML5.2/18, MLv5.1/18, Mw(mB)4.6/13, Error ellipse: s-maj=0.0km s-min=0.0km az=110.1*

ISC 01 22:59:40.4±0.6**, 32°.82S**±0°.06×**178°.32W**±0°.09**, h32**^{km}**, n91,** σ1^{s}.25/98**, mb4.7**/16**, MS3.8**/12**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.56	6	P	Pn	23 00 28.5	-4.9
GLKZ				S	Sn	23 01 09.3	-5.0
RAO	Raoul Island	3.57	6	Pn	Pn	23 00 35.4	+1.9
MXZ	Matakaoa Point	5.48	209	P	Pn	23 00 58.3	-1.5
MXZ				S	Sn	23 02 01.6	-0.1
WMGZ	Waiomatatini S	5.66	207	P	Pn	23 01 00.4	-1.8
WMGZ				S	Sn	23 02 06.6	+0.5
PKGZ	Pakihiroa	5.86	209	P	Pn	23 01 03.8	-1.2
PKGZ				S	Sn	23 02 10.4	-0.6
PUZ	Puketiti	5.94	207	P	Pn	23 01 04.4	-1.8
PUZ				S	Sn	23 02 13.1	0.0
RUGZ	Raukumara Rang	6.09	211	P	Pn	23 01 07.1	-1.1
RUGZ				S	Sn	23 02 19.2	+2.3
TWGZ	Tauwhareparae	6.14	208	P	Pn	23 01 08.4	-0.5
TWGZ				S	Sn	23 02 19.0	+0.9
CNGZ	Carnagh Statio	6.32	206	P	Pn	23 01 09.3	-2.0
CNGZ				S	Sn	23 02 23.7	+1.2
TKGZ	Te Karaka	6.42	208	P	Pn	23 01 12.4	-0.3
TKGZ				S	Sn	23 02 24.0	-0.8
MWZ	Matawai	6.46	210	P	Pn	23 01 12.1	-1.2
MWZ				S	Sn	23 02 25.0	-0.9
OPRZ	Ohinepanea	6.54	218	P	Pn	23 01 15.0	+0.7
URZ	Urewera	6.58	213	Pn	Pn	23 01 13.8	-1.1
	11nm,0.3s,baz=300,slow=22,SNR=32						
URZ				Sn	Sn	23 02 28.9	-0.1
	17nm,0.3s,baz=177,slow=15,SNR=3.2						
URZ	Urewera	6.58	213	P	Pn	23 01 13.4	-1.6
URZ				S	Sn	23 02 28.8	-0.1
RAGZ	Rawiri	6.65	210	P	Pn	23 01 14.8	-1.1
RAGZ				S	Sn	23 02 30.0	-0.5
RIGZ	Rimuhau	6.68	207	P	Pn	23 01 16.2	-0.2
RIGZ				S	Sn	23 02 31.0	-0.5
PRGZ	Paritu Road	6.83	206	P	Pn	23 01 16.6	-1.7
PRGZ				S	Sn	23 02 32.6	-2.3
SNGZ	Shannon Statio	6.92	209	P	Pn	23 01 19.1	-0.4
SNGZ				S	Sn	23 02 36.4	-0.8
KNZ	Kokohu	6.99	207	P	Pn	23 01 19.0	-1.5
KNZ				S	Sn	23 02 37.3	-1.6
MHGZ	Mahia Peninsul	7.02	205	P	Pn	23 01 19.6	-1.4
MHGZ				S	Sn	23 02 40.2	+0.5
RAHZ	Arahi	7.14	210	P	Pn	23 01 23.0	+0.5
RAHZ				S	Sn	23 02 42.0	-0.6
MTHZ	Maungataniwha	7.19	212	P	Pn	23 01 23.1	-0.2
MTHZ				S	Sn	23 02 42.3	-1.6
WHHZ	Waihua	7.21	209	P	Pn	23 01 23.5	0.0
WHHZ				S	Sn	23 02 43.8	-0.6
MRHZ	Matea Rd	7.37	214	P	Pn	23 01 25.6	-0.2
NMHZ	Naumai	7.41	211	P	Pn	23 01 26.1	-0.2
ARHZ	Aropaoanui	7.47	209	P	Pn	23 01 26.3	-0.7
BKZ	Black Stump Fm	7.60	212	Pn	Pn	23 01 27.6	-1.4
MSVF	Nonsavu	15.37	347	LR	LR	23 08 17.1	
	comp=Z,425nm,18.7s,baz=151,slow=34						
PINNC	Pines Island,	16.17	305	P	P	23 03 30.9	+2.7
PINNC				IAmb	IAmb	23 03 32.6	
	comp=Z,81nm,1.0s						
OUENC	Ouen Island, N	16.72	305	P	P	23 03 37.8	+3.6
OUENC				IAmb	IAmb	23 03 39.6	
	comp=Z,39nm,0.9s						
DCZ	Deep Cove	16.89	217	P	P	23 03 36.2	+0.2
DCZ				IAmb	IAmb	23 03 55.3	
	comp=Z,46nm,1.5s						
DZM	Mont Dzumac	17.23	305	*e*Pn	P	23 03 41.3	+1.3
	comp=Z,22nm,0.8s						
DZM				*e*LR	LR	23 07 40.5	
	comp=Z,699nm,22.4s						
DZM	Mont Dzumac	17.23	305	P	P	23 03 41.2	+1.3
	comp=Z,0.5nm,0.3s,baz=129,slow=18,SNR=5.6						
DZM				LR	LR	23 09 12.8	
	comp=Z,984nm,18.7s,baz=112,slow=34						
DZM	Mont Dzumac	17.23	305	P	P	23 03 40.8	+0.8
ARMA	Armidale	25.66	267	P	P	23 05 09.7	+2.2
ARMA				IAmb	IAmb	23 05 31.8	
	comp=Z,29nm,1.4s						
EIDS	Eidsvold	27.68	278	P	P	23 05 26.4	+0.8
EIDS				IAmb	IAmb	23 05 40.2	
	comp=Z,10nm,0.9s						
PPT2	Papeete2	29.98	67	*e*LR	LR	23 13 32.3	
	comp=Z,160nm,25.0s						
PPT	Papeete	29.99	67	LR	LR	23 18 16.5	
	comp=Z,58nm,18.5s,baz=212,slow=38						
STKA	Stephens Creek	33.74	261	P	P	23 06 18.9	-0.1
	comp=Z,1.7nm,0.7s,baz=325,slow=2.9,SNR=3.8						
STKA				LR	LR	23 19 39.7	
	comp=Z,372nm,18.1s,baz=42,slow=36						
STKA	Stephens Creek	33.74	261	P	P	23 06 18.6	-0.4
CTA	Charters Tower	33.99	283	P	P	23 06 22.7	+1.4
	comp=Z,10.0nm,0.5s,baz=121,slow=12,SNR=13						
CTAO	Charters Tower	33.99	283	P	P	23 06 22.6	+1.3
BBOO	Buckleboo	38.11	257	P	P	23 06 55.7	-0.7
PMG	Port Moresby	39.45	298	LR	LR	23 21 10.5	
	comp=Z,148nm,18.2s,baz=119,slow=33						
COEN	Coen	39.73	289	P	P	23 07 10.6	+0.5
COEN				IAmb	IAmb	23 07 25.6	
	comp=Z,8.8nm,0.6s						
TAOE	Nuku Hiva Isla	42.55	65	*e*LR	LR	23 19 17.4	
	comp=Z,185nm,24.3s						
AS31	Alice Springs	42.76	270	P	P	23 07 34.7	-0.4
ASAR	Alice Springs	42.76	270	P	P	23 07 34.8	-0.3
	comp=Z,9.3nm,0.8s,baz=111,slow=7.6,SNR=67						
ASAR				S	S	23 13 56.1	-1.0
	comp=Z,0.7nm,0.8s,baz=113,slow=16,SNR=4.3						
ASAR	Alice Springs	42.76	270	P	P	23 07 34.5	-0.5
WR0	Warramunga Arr	43.79	275	P	P	23 07 42.7	-0.7
WR0				IAmb	IAmb	23 07 57.7	
	comp=Z,20nm,1.1s						
WRA	Warramunga Arr	43.97	275	P	P	23 07 44.2	-0.6
	comp=Z,8.8nm,0.5s,baz=115,slow=7.3,SNR=142						
WRA				ScP	ScP	23 13 21.1	+1.4
	comp=Z,0.8nm,0.8s,baz=112,slow=3.9,SNR=4.3						
WRA				S	S	23 14 12.9	-1.8
	comp=Z,0.6nm,0.9s,baz=113,slow=15,SNR=2.6						
WRA				LR	LR	23 24 35.4	
	comp=Z,125nm,20.8s,baz=135,slow=34						
WRA	Warramunga Arr	43.97	275	P	P	23 07 43.8	-1.0
FORT	Forrest	45.21	258	P	P	23 07 53.6	-0.9
VNDA	Vanda	45.67	186	LR	LR	23 23 48.1	
	comp=Z,93nm,20.4s,baz=22,slow=32						
VNDA	Vanda	45.67	186	P	P	23 07 57.3	-0.3
MTN	Manton Dam	50.13	281	P	P	23 08 32.2	-0.7
KNRA	Kununurra	50.66	276	P	P	23 08 36.8	-0.1
FITZ	Fitzroy Crossi	52.12	272	P	P	23 08 47.4	-0.5
	comp=Z,6.1nm,0.7s,baz=157,slow=8.4,SNR=10.0						
CASY	Casey	52.89	209	P	P	23 08 51.9	-0.9
CASY				IAmb	IAmb	23 09 02.4	
	comp=Z,28nm,1.2s						
SIJI	Sorong	57.00	293	P	P	23 09 22.6	-0.6
	comp=Z,2.0nm,0.3s,baz=73,slow=4.1,SNR=4.1						
QSPA	South Pole Qui	57.30	180	P	P	23 09 26.3	+1.4
QSPA				IAmb	IAmb	23 09 37.9	
	comp=Z,9.8nm,0.7s						
TOLI2	Tolitoli	66.48	288	P	P	23 10 27.0	-0.2
TOLI2				IAmb	IAmb	23 10 36.7	
	comp=Z,4.8nm,0.7s						
MAW	Mawson	69.96	201	P	P	23 10 49.2	+1.1
MAW				IAmb	IAmb	23 10 50.8	
	comp=Z,3.9nm,1.4s						
SNAA	Sanae	75.76	179	P	P	23 11 32.8	+10
SNAA	Sanae	75.76	179	P	P	23 11 22.6	+0.1
SNAA				IAmb	IAmb	23 11 34.0	
	comp=Z,8.2nm,1.2s						
VNA3	Neumayer Olymp	75.92	176	P	P	23 11 34.2	+11
VNA2	Neumayer--Watz	76.35	177	P	P	23 11 36.7	+11
	baz=174,slow=5.0						
VNA1	Neumayer--Stat	76.58	177	P	P	23 11 37.6	+10
PLCA	Paso Flores	81.07	133	LR	LR	23 44 53.3	
	comp=Z,38nm,18.1s,baz=220,slow=34						
KSRS	Korea Array	86.01	320	LR	LR	23 47 40.0	
	comp=Z,17nm,18.4s,baz=120,slow=34						
NVAR	Mina Array Bea	90.19	43	P	P	23 12 39.0	+1.3
	comp=Z,0.2nm,0.6s,baz=233,slow=8.9,SNR=2.9						
NVAR	Mina Array Bea	90.19	43	P	P	23 12 38.1	+0.4
TXAR	Lajitas Array	93.92	58	LR	LR	23 50 41.3	
	comp=Z,66nm,18.0s,baz=0.0,slow=33						
CMAR	Chiang Mai Arr	93.94	289	LR	LR	23 59 27.7	
	comp=Z,11nm,18.2s,baz=300,slow=38						
CPUP	Villa Florida	98.69	129	LR	LR	23 52 39.5	
	comp=Z,34nm,18.4s,baz=264,slow=32						
MKAR	Makanchi Array	119.10	309	PKP	PKPdf	23 18 24.5	-1.2
	comp=Z,0.6nm,0.6s,baz=176,slow=0.8,SNR=5.5						
ZALV	Zalesovo Beam	119.64	318	PKP	PKPdf	23 18 25.4	-1.0
	comp=Z,0.6nm,0.5s,baz=120,slow=5.2,SNR=2.6						
ZALV	Zalesovo Beam	119.64	318		PKPdf	23 18 25.9	-0.5
NRIK	Noril'sk	121.72	335	PKP	PKPdf	23 18 29.2	-0.7
	comp=Z,0.9nm,0.4s,baz=68,slow=0.9,SNR=3.8						
ARCES	ARCESS Array B	140.88	347	PKhKP	PKPpre	23 19 01.4	
	comp=Z,3.7nm,1.0s,baz=0.0,slow=1.8,SNR=4.0						
KBZ	Khabaz	146.17	301	PKPbc	PKPbc	23 19 17.3	+0.2
	comp=Z,2.0nm,0.8s,baz=136,slow=4.6,SNR=3.6						
FINES	FINESS Array B	147.30	338	PKPbc	PKPbc	23 19 19.3	-0.5
	comp=Z,10nm,0.7s,baz=39,slow=4.0,SNR=42						
NB2	NORSAR Subarra	151.09	350	PKP	PKPbc	23 19 29.1	-0.3
	comp=Z,1.1nm,0.6s,baz=14,slow=2.5						
NOA	NORSAR Array B	151.09	350	PKPbc	PKPbc	23 19 29.1	-0.3
	comp=Z,1.0nm,0.7s,baz=14,slow=4.1,SNR=7.1						
AKASG	Malin Array Be	153.00	320	PKPbc	PKiKP	23 19 34.3	+0.1
	comp=Z,1.1nm,0.5s,baz=72,slow=2.7,SNR=11						
AKASG	Malin Array Be	153.00	320		PKPbc	23 19 33.6	-0.4
DBIC	Dimbokro	153.28	165	PKPbc	PKiKP	23 19 36.0	+0.1
	comp=Z,2.7nm,0.8s,baz=154,slow=2.2,SNR=4.5						
BRTR	Keskin Array B	153.42	294	PKPbc	PKiKP	23 19 35.8	+0.1
	comp=Z,1.9nm,0.6s,baz=130,slow=4.7,SNR=6.2						
TORD	Torodi Ar. Bea	160.42	180	PKPab	PKPab	23 20 20.3	+2.2
	comp=Z,0.3nm,0.3s,baz=172,slow=2.1,SNR=6.6						
TORD	Torodi Ar. Bea	160.42	180		PKPdf	23 19 37.7	+0.4
GERES	GERESS Array B	161.62	334	PKPab	PKPab	23 20 20.5	-2.3
	comp=Z,0.5nm,0.6s,baz=77,slow=4.2,SNR=2.6						

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*IDC **01** 23:08:44.7±2.3, 0°.83N×127°.26E, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.6/34, mbtmp3.9/3, MS2.8/1, Ms1 2.8/1, ms1mx2.2/39, Error ellipse: s-maj=171.9km s-min=27.9km az=66.0*

*NEIC **01** 23:08:45.3±1.5, 1°.0N±0°.1×127°.5E±0°.2, h7^{km}±7^{km}, mb4.3/8, Error ellipse: s-maj=26.2km s-min=5.6km az=124.0*

ISC 01 23:08:46.9±2.3**, 0°.9N**±0°.1×**127°.5E**±0°.3**, h18**^{km}±12^{km}**, n16,** σ0^{s}.**71**/16**, mb4.0**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.15	219	Pg	Pg	23 08 50.7	-0.5
TNTI				Sg	Sg	23 08 54.7	+0.7
SOEI	Soe	11.04	197		Pn	23 11 23.9	-0.4
FITZ	Fitzroy Crossi	18.95	185	LR	LR	23 20 37.8	
	comp=Z,27nm,18.7s,baz=38,slow=38						
WB0	Warramunga Arr	21.63	162	P	P	23 13 36.1	-0.2
WB0				IAmb	IAmb	23 13 40.6	
	comp=Z,9.0nm,1.4s						
WRA	Warramunga Arr	21.77	162	P	P	23 13 38.6	+0.7
	comp=Z,2.8nm,0.6s,baz=341,slow=11,SNR=26						
WRA	Warramunga Arr	21.77	162	P	P	23 13 36.9	-1.0
WB2	Warramunga Arr	21.78	162	P	P	23 13 38.5	+0.5
WB2				IAmb	IAmb	23 13 39.8	
	comp=Z,3.9nm,0.7s						
WR0	Warramunga Arr	21.85	162	P	P	23 13 39.9	+1.1
WR0				IAmb	IAmb	23 13 41.6	
	comp=Z,7.4nm,1.1s						
AS31	Alice Springs	25.20	166	P	P	23 14 11.4	-0.3
ASAR	Alice Springs	25.20	166	P	P	23 14 12.1	+0.3
	comp=Z,2.3nm,0.7s,baz=347,slow=10,SNR=18						
ASAR	Alice Springs	25.20	166	P	P	23 14 13.1	+1.3
BBOO	Buckleboo	34.49	167	P	P	23 15 34.0	0.0
BBOO				IAmb	IAmb	23 15 58.7	
	comp=Z,36nm,1.4s						
LTZ	Lake Taylor	59.22	143	P	P	23 18 47.1	-0.1
MKAR	Makanchi Array	60.30	326	P	P	23 18 54.8	+0.2
	comp=Z,0.7nm,0.7s,baz=119,slow=6.6,SNR=2.3						
MKAR	Makanchi Array	60.30	326	P	P	23 18 54.6	0.0
PPLA	Purkeypile	84.81	27	P	P	23 21 20.2	-0.1

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*IDC **01** 23:27:02.2±1.4, 21°.89N×94°.06E, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.5/46, mbtmp3.8/5, ML3.7/1, Error ellipse: s-maj=67.6km s-min=18.1km az=52.0*

*NEIC **01** 23:27:08.6±1.8, 22°.1N±0°.2×94°.5E±0°.3, h35^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=64.7km s-min=3.1km*

az=231.0

ISC 01 23:27:08.1±0.9, 22°.2N±0°.1×94°.7E±0°.2, h35^{km}, n19, σ0ˢ84/20, mb4.0/9, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOHI	KOHIMA	3.50	352	*e*P	Pn	23 27 58.6	-1.6
KOHI				*e*S	Sn	23 28 40.5	-0.1
KOHI				IAML		23 28 48.1	
	comp=N,31nm,0.6s						
KOHI				IAML		23 28 48.6	
	comp=E,35nm,0.6s						
SHL	Shillong	4.17	323	Pn	Pn	23 28 10.8	+1.2
CHTO	Chiang Mai	5.27	130	Pn	Pn	23 28 24.9	+0.5
CMAR	Chiang Mai Arr	5.50	132	Pn	Pn	23 28 27.9	+0.2
	comp=E,0.6nm,0.3s,baz=313,slow=12,SNR=1.8						
CMAR				Pg		23 28 52.4	
	comp=E,0.9nm,0.3s,baz=308,slow=18,SNR=9.3						
CMAR				Lg	Lg	23 30 01.2	
	comp=E,0.4nm,0.3s,baz=303,slow=30,SNR=2.0						
CMAR	Chiang Mai Arr	5.50	132		Pn	23 28 28.8	+1.1
LSA	Lhasa	8.07	338		Pn	23 29 04.2	+0.9
TARG	Taragay, Kyrgy	24.04	328	P	P	23 32 20.2	-0.2
TARG				IAmb	IAmb	23 32 32.9	
	comp=Z,2.1nm,0.9s						
MK31	Makanchi Array	26.46	341	P	P	23 32 41.7	-0.2
MK31				IAmb	IAmb	23 33 09.4	
	comp=Z,5.4nm,1.4s						
MKAR	Makanchi Array	26.46	341	P	P	23 32 41.9	0.0
	comp=Z,1.1nm,0.6s,baz=146,slow=10,SNR=13						
MKAR	Makanchi Array	26.46	341	P	P	23 32 41.7	-0.2
ABKAR	Akbulak array	38.44	323	P	P	23 34 26.9	+0.5
ARU	Arti	43.22	331	P	P	23 35 04.8	-0.8
ARU				IAmb	IAmb	23 35 05.8	
	comp=Z,2.3nm,0.6s						
PSA00	Pilbara Seismi	50.00	149	P	P	23 35 58.0	-1.1
WB0	Warramunga Arr	57.01	134	P	P	23 36 51.2	+0.5
WB0				IAmb	IAmb	23 37 01.9	
	comp=Z,7.7nm,1.3s						
WRA	Warramunga Arr	57.10	134	P	P	23 36 51.5	+0.2
	comp=Z,0.6nm,0.6s,baz=321,slow=7.7,SNR=9.1						
WRA	Warramunga Arr	57.10	134	P	P	23 36 51.3	0.0
WB2	Warramunga Arr	57.10	134	P	P	23 36 52.3	+1.0
WB2				IAmb	IAmb	23 37 10.9	
	comp=Z,5.7nm,1.2s						
ASAR	Alice Springs	59.49	138	P	P	23 37 09.4	+1.4
	comp=Z,0.5nm,0.7s,baz=316,slow=6.5,SNR=7.5						
ARCES	ARCESS Array B	62.08	338	P	P	23 37 25.0	0.0
	comp=Z,2.2nm,0.9s,baz=107,slow=6.0,SNR=1.2						

IDC 01 23:36:23.4±437.0, 39°.47N×116°.96W, h0^{km}, Error ellipse: s-maj=166.2km s-min=108.1km az=177.0, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I57US	PINON FLAT INF	5.86	176	*i*		00 15 00.0	
	baz=351,slow=319,SNR=2.5						
I56US	NEWPORT INFRAS	8.79	359	*i*		00 30 20.0	
	baz=174,slow=328,SNR=1.3						
I10CA	LAC DU BONNET	18.25	47	*i*		01 28 10.0	
	baz=237,slow=335,SNR=2.7						

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*MEX **01** 23:47:24.2±0.8, 13°.94N×92°.49W, h96^{km}±32^{km}, MD3.9*
*GCG **01** 23:47:28.1±0.4, 15°.73N×92°.09W, h50^{km}, MD3.5*
*IDC **01** 23:47:28.4±5.7, 14°.96N×92°.26W, h0^{km}, mb3.5/2, mb1 3.6/4, mb1mx3.4/27, mbtmp3.2/4, ML3.3/2, Error ellipse: s-maj=165.1km s-min=32.1km az=30.0*

ISC 01 23:47:24.3±3.4, 14°.13N±0°.09×92°.63W±0°.05, h5^{km}±24^{km}, n15, σ1ˢ03/25, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.85	24	*e*P	Pb	23 47 42.2	+0.6
THIG				*e*S	Sn	23 47 57.4	+1.5
PATR	El Naranjo	1.05	21	*e*P	Pn	23 47 45.2	-0.8
PATR				*e*S	Sn	23 48 01.4	+0.2
PAVE	Pavencul	1.14	22	*e*P	Pn	23 47 46.9	-0.4
PAVE				*e*S	Sn	23 48 03.7	+0.2
STG3	Santiaguito 3,	1.18	60	*e*P	Pb	23 47 48.4	+1.1
PCIG		1.67	340	*e*P	Pn	23 47 53.8	-0.5
PCIG				*e*S	Sb	23 48 17.9	+0.9
FUG	Fuego 3	1.76	79	*e*P	Pn	23 47 56.5	+0.8
FUG				*e*S	Sb	23 48 19.0	-0.6
CCIG	Comitan	2.19	12	*i* P	Pn	23 48 00.8	-0.8
CCIG				*i* S	Sn	23 48 27.3	-2.0
NBG	Las Nubes	2.25	78	*e*P	Pb	23 48 04.8	-0.9
TGIG		2.68	350	*e*P	Pn	23 48 07.4	-0.8
TGIG				*e*S	Sn	23 48 41.2	+0.1
UXUV	UXUV	3.49	335	*e*P	Pn	23 48 20.6	+1.3
UXUV				*e*S	Sn	23 49 01.1	0.0
CMIG	Matias Romero	3.66	324	Pn	Pn	23 48 20.5	-1.2
	1.8nm,0.3s,baz=139,slow=12,SNR=11						
CMIG				Sn	Sn	23 49 05.0	-0.4
	2.9nm,0.3s,baz=119,slow=11,SNR=3.6						
CMIG				Lg	Lg	23 49 13.6	
	3.7nm,0.3s,baz=78,slow=20,SNR=4.1						
CMIG	Matias Romero	3.66	324	*e*P	Pn	23 48 21.5	-0.2
CMIG				*e*S	Sn	23 49 05.5	+0.2
TXAR	Lajitas Array	18.26	328	P	Pn	23 51 37.4	-1.4
	0.0nm,0.3s,baz=147,slow=12,SNR=2.1						
NVAR	Mina Array Bea	33.19	322	P	P	23 54 04.2	+1.8
	0.2nm,0.6s,baz=138,slow=8.3,SNR=2.7						
YKA	Yellowknife Ar	50.76	347	P	P	23 56 24.4	-0.8
	0.5nm,0.6s,baz=153,slow=8.1,SNR=6.0						

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*IDC **02** 00:11:59.5±1.6, 16°.11S×178°.74E, h0^{km}, mb4.0/5, mb1 4.3/5, mb1mx3.9/24, mbtmp4.0/5, MS3.6/10, Ms1 3.6/10, ms1mx3.3/36, Error ellipse: s-maj=54.6km s-min=21.3km az=116.0*

ISC 02 00:12:01.0±1.6, 16°.1S±0°.1×178°.7E±0°.3, h10^{km}, n17, σ0ˢ71/8, mb3.9/5, MS3.6/9, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.78	202	Pn	Pn	00 12 31.4	-0.4
	23nm,0.3s,baz=26,slow=12,SNR=40						
MSVF				Sn	Sn	00 12 55.1	+0.5
	110nm,0.3s,baz=136,slow=21,SNR=5.8						
MSVF				LR	LR	00 13 18.3	
	comp=Z,407nm,19.1s,baz=293,slow=45						
AFI	Afiamalu	9.41	78	LR	LR	00 17 14.8	
	comp=Z,339nm,21.1s,baz=230,slow=34						
DZM	Mont Dzumac	13.06	241	*e*LR	LR	00 18 26.4	
	comp=Z,395nm,26.7s						
DZM	Mont Dzumac	13.06	241	LR	LR	00 19 12.3	
	comp=Z,256nm,21.9s,baz=233,slow=33						
HNR	Honiara	19.47	288	LR	LR	00 23 17.5	
	comp=Z,143nm,18.1s,baz=87,slow=35						
RAR	Rarotonga	20.98	107	LR	LR	00 22 50.5	
	comp=Z,287nm,21.4s,baz=265,slow=31						
PPT2	Papeete2	30.35	97	*e*LR	LR	00 26 14.6	
	comp=Z,191nm,31.5s						
STKA	Stephens Creek	37.19	238	P	P	00 19 12.8	+0.2
	1.3nm,0.5s,baz=65,slow=9.8,SNR=1.5						
STKA				LR	LR	00 32 45.7	
	comp=Z,78nm,19.2s,baz=32,slow=34						
TAOE	Nuku Hiva Isla	40.72	85	*e*LR	LR	00 30 56.0	
	comp=Z,209nm,28.3s						
WRA	Warramunga Arr	42.31	258	P	P	00 19 54.4	-1.0
	1.3nm,1.1s,baz=90,slow=8.1,SNR=3.2						
WRA				LR	LR	00 35 38.4	
	comp=Z,48nm,21.9s,baz=60,slow=34						
ASAR	Alice Springs	42.70	252	P	P	00 19 58.2	-0.3
	0.9nm,0.5s,baz=85,slow=8.4,SNR=13						
ASAR				LR	LR	00 36 09.4	
	comp=Z,79nm,20.9s,baz=106,slow=34						
FITZ	Fitzroy Crossi	50.65	260	LR	LR	00 40 31.5	
	comp=Z,91nm,21.3s,baz=114,slow=34						
BATI	Baumata	53.83	269	LR	LR	00 44 48.9	
	comp=Z,60nm,18.7s,baz=150,slow=37						
ILAR	Eielson Array	84.75	14	P	P	00 24 34.6	-0.3
	2.0nm,1.0s,baz=238,slow=6.1,SNR=12						
CMAR	Chiang Mai Arr	85.69	290	P	P	00 24 41.6	+0.9
	0.7nm,0.3s,baz=100,slow=4.8,SNR=5.4						
TXAR	Lajitas Array	87.35	59	LR	LR	00 55 23.6	
	comp=Z,42nm,21.3s,baz=0.0,slow=30						
GERES	GERESS Array B	145.10	343	PKPbc	PKPbc	00 31 38.6	+0.3
	0.5nm,0.4s,baz=85,slow=2.1,SNR=6.1						

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*IDC **02** 00:32:06.4±4.2, 36°.29N×70°.52E, h200^{km}±36^{km}, mb3.2/10, mb1 3.3/15, mb1mx3.0/61, mbtmp3.8/15, MS4.0/1, Ms1 4.0/1, ms1mx2.4/33, Error ellipse: s-maj=30.1km s-min=19.6km az=26.0*
*NNC **02** 00:32:09.8±3.3, 36°.81N×70°.08E, h155^{km}±80^{km}, mb3.5, mpv4.6, Error ellipse: s-maj=36.4km s-min=20.0km az=76.0*
*SOME **02** 00:32:12.7, 38°.08N×71°.72E, h0^{km}*

ISC 02 00:32:07.5±0.7, 36°.55N±0°.05×70°.42E±0°.09, h200^{km}, n36, σ1ˢ48/46, mb3.3/9, 4C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.98	155	P	Pn	00 32 58.1	+1.0
CEP				S	Sn	00 33 35.0	-0.8
CHCP	Chirah Chowk	3.71	140	P	Pn	00 33 07.1	+1.3
THW	Thamme Wali	3.90	163	P	Pn	00 33 08.6	+0.4
IUG	Iuzhnay	5.60	357	*e*P	Pn	00 33 31.3	+1.6
	2μm,0.4s						
IUG				*e*S	Sn	00 34 32.9	-1.7
	271nm,0.7s						
AML	Almayashu	6.13	23	P	Pn	00 33 37.7	+1.0
	SNR=416						
DZA	Taraz	6.38	6	*e*P	Pn	00 33 41.2	+1.6
	129nm,0.2s						
DZA				*e*S	Sn	00 34 52.2	-0.4
	184nm,0.4s						
BRLS	Borolday	6.49	356	*e*P	Pn	00 33 44.1	+3.1
	7.9nm,0.1s						
BRLS				*e*S	Sn	00 34 56.7	+1.4
	11nm,0.1s						
UCH	Uchtor	6.50	28	P	Pn	00 33 42.7	+1.1
	SNR=115						
MRKS	Merke	6.56	18	*e*P	Pn	00 33 43.8	+1.7
	21nm,0.1s						
MRKS				*e*S	Sn	00 34 55.3	-1.6
	54nm,0.5s						
EKS2	Erkin-Say	6.63	22	P	Pn	00 33 44.4	+1.4
	SNR=26						
AAK	Ala-Archa	6.85	26	P	Pn	00 33 47.1	+1.3
	4.8nm,0.3s,baz=196,slow=7.0,SNR=80						
AAK				S	Sn	00 35 02.5	-1.4
	2.3nm,0.3s,baz=16,slow=20,SNR=12						
AAK	Ala-Archa	6.85	26	P	Pn	00 33 47.1	+1.3
	SNR=24						
AAK	Ala-Archa	6.85	26	⇓P	Pn	00 33 46.7	+0.9
	15nm,0.6s						
AAK				⇓S	Sn	00 35 03.4	-0.5
	20nm,0.6s						
KBK	Karagaybulak	7.03	28	P	Pn	00 33 49.8	+1.6
	SNR=20						
CHMS	Chumysh	7.25	26	P	Pn	00 33 52.5	+1.5
	SNR=12						
ULHL	Ulahol	7.26	37	P	Pn	00 33 51.9	+0.7
	SNR=5.9						
USP	Ospenovka	7.41	24	P	Pn	00 33 53.8	+0.8
	SNR=32						
TKM2	Tokmak 2	7.51	30	P	Pn	00 33 55.5	+1.0
	SNR=77						
TKM2	Tokmak 2	7.51	30	⇑P	Pn	00 33 55.3	+0.8
	31nm,0.5s						
TKM2				⇓S	Sn	00 35 18.8	-0.7
	7.5nm,0.7s						
MKAR	Makanchi Array	13.53	37	P	Pn	00 35 11.9	+0.4
	0.2nm,0.3s,baz=221,slow=11,SNR=9.5						
AB31	Akbulak array	14.82	332	⇑P	Pn	00 35 26.8	-0.5
	0.8nm,0.3s,baz=147,slow=11,SNR=62						
AB31				⇑S	S	00 38 07.7	-4.1
	0.9nm,0.6s,baz=150,slow=23,SNR=2.6						
KURBB	Kurchatov Arra	15.23	20	P	Pn	00 35 32.4	+0.1
	0.1nm,0.3s,baz=208,slow=10,SNR=8.9						
BVAR	Borovoye Array	16.48	360	P	Pn	00 35 48.0	+0.7
	0.9nm,0.3s,baz=190,slow=16,SNR=13						
AKTO	Aktyubinsk	16.51	331	P	Pn	00 35 48.8	+1.0
	0.6nm,0.3s,baz=146,slow=14,SNR=10						
AKTO				S	S	00 38 47.4	-1.8
	0.1nm,0.3s,baz=112,slow=2.8,SNR=1.4						
AKTO	Aktyubinsk	16.51	331	⇓P	Pn	00 35 48.6	+0.8
	4.3nm,0.8s						
AKTO				⇑S	S	00 38 47.9	-1.3
	2.7nm,0.9s						
ZALV	Zalesovo Beam	20.07	25	P	P	00 36 27.0	+1.6
	1.5nm,0.3s,baz=215,slow=11,SNR=9.8						
ARU	Arti	21.44	342	P	P	00 36 42.0	+2.2
	0.3nm,0.3s,baz=336,slow=20,SNR=3.3						
SONM	Songino Array	28.69	56	P	P	00 37 45.8	-0.1
	0.5nm,0.7s,baz=254,slow=8.9,SNR=2.9						
FINES	FINESS Array B	37.18	326	P	P	00 39 00.2	+1.2
	1.8nm,0.9s,baz=134,slow=9.8,SNR=1.1						
ARCES	ARCESS Array B	40.92	338	P	P	00 39 31.8	+1.9
	2.4nm,0.9s,baz=110,slow=6.8,SNR=3.8						
MJAR	Matsushiro Arr	53.37	68	LR	LR	01 04 53.9	
	comp=Z,149nm,19.4s,baz=160,slow=37						
TORD	Torodi Ar. Bea	65.25	268	P	P	00 42 27.0	-1.1
	0.2nm,0.4s,baz=43,slow=6.1,SNR=4.4						
INK	Inuvik	73.93	9	P	P	00 43 20.0	-0.2
	1.0nm,1.0s,baz=304,slow=16,SNR=1.8						
YKA	Yellowknife Ar	81.22	2	P	P	00 43 59.7	-0.9
	0.2nm,0.4s,baz=350,slow=5.4,SNR=2.4						
WRA	Warramunga Arr	82.41	122	P	P	00 44 05.3	-2.2
	0.3nm,0.5s,baz=303,slow=7.7,SNR=1.6						
ASAR	Alice Springs	84.67	125	P	P	00 44 17.2	-1.7
	0.4nm,0.5s,baz=309,slow=5.0,SNR=6.1						

IDC 02 00:33:22.9±2.1, 1°.14N×127°.66E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.2/52, mbtmp3.5/4, MS4.1/1, Ms1 4.1/1, ms1mx2.5/24, Error ellipse: s-maj=191.6km s-min=22.7km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.95	163	P	P	00 38 17.8	-0.6
	0.8nm,0.7s,baz=342,slow=11,SNR=5.8						
ASAR	Alice Springs	25.39	167	P	P	00 38 52.6	+0.4
	0.7nm,0.7s,baz=353,slow=15,SNR=7.3						
DZM	Mont Dzumac	44.31	124	LR	LR	01 01 32.5	
	comp=Z,193nm,18.2s,baz=104,slow=38						
MKAR	Makanchi Array	60.20	326	P	P	00 43 33.2	+0.4
	0.4nm,0.7s,baz=123,slow=5.3,SNR=2.2						
KURBB	Kurchatov Arra	64.41	328	P	P	00 44 00.6	-0.3
	0.9nm,0.9s,baz=126,slow=5.9,SNR=6.5						

IDC 02 00:34:45.0±1.8, 1°.76N×125°.56E, h0^{km}, mb3.6/3, mb1 3.9/4, mb1mx3.3/56, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=116.2km s-min=24.0km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.73	180	P	P	00 39 16.4	0.0
	0.2nm,0.3s,baz=14,slow=7.9,SNR=7.8						
WRA	Warramunga Arr	23.22	159	P	P	00 39 53.9	0.0
	1.3nm,0.6s,baz=338,slow=10,SNR=13						
ASAR	Alice Springs	26.54	163	P	P	00 40 24.6	-0.1
	1.0nm,0.6s,baz=340,slow=7.4,SNR=12						
MKAR	Makanchi Array	58.52	326	P	P	00 44 43.4	+0.1
	0.2nm,0.3s,baz=118,slow=7.1,SNR=5.7						

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*IDC **02** 00:51:44.1±2.1, 32°.89S×178°.28W, h0^{km}, mb4.2/2, mb1 4.4/3, mb1mx4.0/32, mbtmp4.2/3, ML4.2/1, Error ellipse: s-maj=59.8km s-min=31.7km az=129.0*
*WEL **02** 00:51:46.1±0.8, 33°S±6°×17°8W±1°6, h33^{km}, M4.4/11, mB4.8/6, ML4.8/13, MLv4.7/11, Mw(mB)4.1/6, Error ellipse: s-maj=0.0km s-min=0.0km az=109.5*

ISC 02 00:51:44.9±1.4, 32°.88S±0°.08×177°.7W±0°.2, h35^{km}, n27, σ1ˢ78/44, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.61	357	P	Pn	00 52 37.6	-0.8
GLKZ				S	Sn	00 53 14.5	-5.2
MXZ	Matakaoa Point	5.71	214	S	Sn	00 54 12.0	+0.5
WMGZ	Waiomatatini S	5.87	212	P	Pn	00 53 09.2	-0.2
PUZ	Puketiti	6.15	211	P	Pn	00 53 11.9	-1.4
PUZ				S	Sn	00 54 21.4	-1.0
RUGZ	Raukumara Rang	6.33	215	P	Pn	00 53 16.3	+0.4
RUGZ				S	Sn	00 54 26.6	-0.5
TWGZ	Tauwhareparae	6.36	213	P	Pn	00 53 17.6	+1.4
TWGZ				S	Sn	00 54 27.8	+0.2
CNGZ	Carnagh Statio	6.52	210	P	Pn	00 53 18.5	+0.2
CNGZ				S	Sn	00 54 32.2	+0.8
MWZ	Matawai	6.70	214	P	Pn	00 53 22.0	+1.2
MWZ				S	Sn	00 54 33.5	-2.4
URZ	Urewera	6.84	217	Pn	Pn	00 53 21.6	-1.1
	4.7nm,0.3s,baz=122,slow=23,SNR=20						
URZ				Sn	Sn	00 54 37.4	-1.9
	5.7nm,0.3s,baz=114,slow=23,SNR=5.8						
URZ	Urewera	6.84	217	P	Pn	00 53 23.0	+0.3
URZ				S	Sn	00 54 37.3	-2.1
RAGZ	Rawiri	6.88	214	P	Pn	00 53 23.2	-0.2
RAGZ				S	Sn	00 54 39.1	-1.4
RIGZ	Rimuhau	6.89	211	P	Pn	00 53 24.9	+1.4
RIGZ				S	Sn	00 54 39.5	-1.2
PRGZ	Paritu Road	7.02	210	P	Pn	00 53 24.0	-1.3
PRGZ				S	Sn	00 54 43.9	0.0
SNGZ	Shannon Statio	7.14	213	P	Pn	00 53 28.4	+1.5
SNGZ				S	Sn	00 54 45.9	-1.0
RTZ	Ruatahuna	7.18	216	P	Pn	00 53 27.2	-0.3
RTZ				S	Sn	00 54 45.8	-2.1
RAHZ	Arahi	7.37	214	P	Pn	00 53 32.3	+2.3
RAHZ				S	Sn	00 54 50.3	-2.1
TOZ	Tahuroa Road	7.38	227	P	Pn	00 53 33.2	+3.1
MTHZ	Maungataniwha	7.43	215	P	Pn	00 53 31.3	+0.3
MTHZ				S	Sn	00 54 52.7	-1.3
OUZ	Omahuta	7.60	250	P	Pn	00 53 35.4	+2.2
TLZ	Tolley Road	7.75	223	S	Sn	00 54 58.5	-3.3
BKZ	Black Stump Fm	7.85	215	P	Pn	00 53 36.5	-0.1
BKZ				S	Sn	00 55 01.3	-2.9
MCHZ	McNeill Hill	7.97	213	P	Pn	00 53 39.2	+0.9
MCHZ				S	Sn	00 55 05.8	-1.4
ASAR	Alice Springs	43.30	269	P	P	00 59 44.0	+0.5
	1.8nm,0.7s,baz=117,slow=7.6,SNR=21						
ASAR	Alice Springs	43.30	269	P	P	00 59 44.2	+0.6
WRA	Warramunga Arr	44.51	274	P	P	00 59 53.0	-0.2
	2.3nm,0.5s,baz=115,slow=7.5,SNR=16						
FINES	FINESS Array B	147.55	339	PKPbc	PKiKP	01 11 28.5	+1.8
	2.2nm,0.4s,baz=42,slow=4.6,SNR=32						
NOA	NORSAR Array B	151.23	351	PKPbc	PKiKP	01 11 38.0	+3.6
	0.7nm,0.7s,baz=17,slow=4.2,SNR=3.8						

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*IDC **02** 00:51:45.8±0.6, 17°.24N×147°.51E, h0^{km}, mb4.5/24, mb1 4.6/25, mb1mx4.5/43, mbtmp4.5/25, ML4.3/1, MS3.8/24, Ms1 3.8/24, ms1mx3.7/36, Error ellipse: s-maj=19.0km s-min=13.5km az=100.0*
*BJI **02** 00:51:46.5±0.0, 17°.05N×147°.93E, h37^{km}, mB5.1/31, mb4.7/47, Ms4.6/19, Ms7 4.3/19*
*NEIC **02** 00:51:47.8±1.8, 17°.12N±0°.09×147°.65E±0°.09, h15^{km}±4^{km}, mb4.9/71, Error ellipse: s-maj=14.6km s-min=10.5km az=131.0*

ISC 02 00:51:51.5±0.5, 17°.18N±0°.06×147°.54E±0°.08, h41^{km}, n152, σ1ˢ14/154, mb4.7/62, MS3.9/27, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	1.94	245	Pn	Pn	00 52 22.4	+0.4
GUMO	Guam	4.40	216	Pn	Pn	00 52 56.2	+0.3
	17nm,0.3s,baz=54,slow=14,SNR=3.4						
GUMO				Sn	Sn	00 53 46.2	+0.3
	37nm,0.3s,baz=351,slow=23,SNR=5.2						
GUMO				LR	LR	00 54 35.0	
	comp=Z,696nm,19.7s,baz=6.0,slow=38						
GUMO	Guam	4.40	216	Pn	Pn	00 52 54.9	-1.0
PATS	Pohnpei	14.71	133	Pn	Pn	00 55 11.0	-6.0
H11S3	WAKE ISLAND Hy	18.28	83	T	T	01 14 40.2	
	baz=269,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	18.29	83	T	T	01 14 45.0	
	baz=269,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	18.30	83	T	T	01 14 41.3	
	baz=269,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	18.53	79	T	T	01 15 02.8	
	baz=265,slow=74,SNR=25						
H11N2	WAKE ISLAND Hy	18.54	79	T	T	01 15 02.7	
	baz=265,slow=74,SNR=23						
H11N3	WAKE ISLAND Hy	18.55	79	T	T	01 15 00.9	
	baz=265,slow=74,SNR=19						
JOW	Kunigami	20.25	302	LR	LR	01 02 56.6	
	comp=Z,493nm,20.9s,baz=150,slow=33						
INU	Inuyama	20.38	335	P	P	00 56 25.1	+0.3
INU				IAmb	IAmb	00 56 31.6	
	comp=Z,66nm,1.1s						
JGF	Kuroka	20.46	336	P	P	00 56 24.6	-1.2
JGF				IAmb	IAmb	00 56 33.0	
	comp=Z,33nm,0.9s						
MJAR	Matsushiro Arr	20.98	339	P	P	00 56 30.4	-0.9
	comp=Z,18nm,1.0s,baz=175,slow=12,SNR=18						
MJAR	Matsushiro Arr	20.98	339	P	P	00 56 29.9	-1.4
MAJO	Matsushiro	20.98	339	P	P	00 56 30.8	-0.5
MAJO				IAmb	IAmb	00 56 40.8	
	comp=Z,26nm,0.8s						
MAT	Matsushiro	20.98	339	P	P	00 56 30.8	-0.5
MAT				S	S	01 00 22.8	-0.1
JWT	Wachi	21.03	331	P	P	00 56 31.9	+0.1
JSU	Suzuyama	21.07	316	P	P	00 56 30.9	-1.4
JSU				IAmb	IAmb	00 56 33.6	
	comp=Z,39nm,0.4s						
JNU	Nakatsue	21.84	320	P	P	00 56 40.3	-0.3
	comp=Z,12nm,0.5s,baz=147,slow=1.2,SNR=4.2						
JNU	Nakatsue	21.84	320	P	P	00 56 40.1	-0.5
JNU				IAmb	IAmb	00 56 43.5	
	comp=Z,48nm,1.2s						
JSD	Sado	22.32	340	P	P	00 56 45.1	-0.5
DAV	Davao City (W)	23.68	248	LR	LR	01 04 10.2	
	comp=Z,232nm,20.5s,baz=319,slow=31						
SIJI	Sorong	24.06	223	P	P	00 57 02.6	-0.5
	comp=Z,28nm,1.0s,baz=29,slow=10,SNR=15						
SIJI				LR	LR	01 05 06.2	
	comp=Z,316nm,19.5s,baz=31,slow=33						
SWI	Sorong	24.06	223	P	P	00 57 02.0	-1.1
	comp=Z,47nm,1.3s						
SSLB	Suanglung	25.73	289	P	P	00 57 18.2	-0.1
SSLB				IAmb	IAmb	00 57 19.6	
	comp=Z,72nm,1.4s						
PMG	Port Moresby	26.42	181	P	P	00 57 25.1	+0.6
	comp=Z,6.1nm,0.3s,baz=356,slow=14,SNR=3.4						
KSRS	Korea Array	26.57	323	P	P	00 57 24.1	-1.6
	comp=Z,2.5nm,0.7s,baz=141,slow=10,SNR=6.9						
KSRS				LR	LR	01 07 08.9	
	comp=Z,286nm,18.2s,baz=126,slow=35						
USRK	Ussuriysk Ar.	29.96	337	P	P	00 57 56.8	+0.9
	comp=Z,6.2nm,0.9s,baz=131,slow=8.2,SNR=6.2						
QIZ	Qiongzhong	35.83	279	P	P	00 58 47.1	-0.4
QIZ				S	S	01 04 26.4	+3.8
QIZ				LR	LR		
	comp=Z,92nm,13.5s						
QIZ				LR	LR		
	comp=Z,170nm,15.1s						
QIZ				LR	LR		
	comp=Z,220nm,17.7s						
PETK	Petropavlovsk-	36.73	10	LR	LR	01 17 17.8	
	comp=Z,118nm,18.1s,baz=190,slow=42						
SBUM	Sibu	37.65	251	P	P	00 59 02.5	-0.5
HHC	Hu-ho-hao-te	38.91	315	*e*P	P	00 59 14.6	+1.2
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,77nm,7.8s						
WB0	Warramunga Arr	38.92	200	P	P	00 59 12.6	-1.0
WR0	Warramunga Arr	39.05	200	P	P	00 59 14.3	-0.3
WB2	Warramunga Arr	39.10	200	P	P	00 59 13.9	-1.1
WRA	Warramunga Arr	39.10	200	P	P	00 59 14.5	-0.6
	comp=Z,5.8nm,0.8s,baz=22,slow=9.2,SNR=29						
WRA				PcP	PcP	01 01 26.0	+1.6
	comp=Z,1.7nm,1.0s,baz=23,slow=3.3,SNR=2.2						
WRA	Warramunga Arr	39.10	200	P	P	00 59 14.2	-0.8
HIA	Hailar	39.13	331	P	P	00 59 14.7	-0.4
HIA				IAmb	IAmb	00 59 15.9	
	comp=Z,16nm,1.0s						
KSM	Kuching	39.79	251	P	P	00 59 19.7	-1.2
KSM				IAmb	IAmb	00 59 21.0	
	comp=Z,20nm,1.1s						
AS31	Alice Springs	42.72	199	P	P	00 59 43.8	-1.1
ASAR	Alice Springs	42.73	199	PcP	PcP	01 01 37.9	+1.8
	comp=Z,1.7nm,1.0s,baz=26,slow=5.1,SNR=3.1						
ASAR				LR	LR	01 19 40.5	
	comp=Z,74nm,18.4s,baz=24,slow=39						
LZH	Lanzhou	42.94	305	*e*P	P	00 59 51.1	+4.3
LZH				pP	pP	00 59 55.1	-2.0
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				LR	LR		
	comp=Z,270nm,14.6s						
LZH				LR	LR		
	comp=Z,290nm,14.9s						
LZH				LR	LR		
	comp=Z,250nm,15.2s						
ULN	Ulaanbaatar	45.04	322	P	P	01 00 02.5	-1.0

SONM	**Songino Array**	**45.41**	**322**	P	**P**	**01 00 06.3**	**-0.1**
	comp=Z,5.9nm,1.1s,baz=132,slow=8.6,SNR=22						
SONM				PcP	**PcP**	**01 01 46.1**	**+1.0**
	comp=Z,3.2nm,0.9s,baz=128,slow=4.0,SNR=5.6						
SONM				LR	LR	01 19 03.5	
	comp=Z,196nm,18.7s,baz=118,slow=36						
SONM	**Songino Array**	**45.41**	**322**	P	**P**	**01 00 05.7**	**-0.7**
SONM				IAmb	IAmb	01 00 07.7	
	comp=Z,9.8nm,1.2s						
CHTO	**Chiang Mai**	**46.13**	**280**	P	**P**	**01 00 11.7**	**-0.6**
CHTO				IAmb	IAmb	01 00 21.4	
	comp=Z,14nm,1.5s						
CM31	**Chiang Mai Arr**	**46.17**	**279**	P	**P**	**01 00 12.5**	**-0.1**
CM31				IAmb	IAmb	01 00 14.2	
	comp=Z,15nm,1.1s						
CMAR	**Chiang Mai Arr**	**46.17**	**279**	P	**P**	**01 00 13.4**	**+0.8**
	comp=Z,3.0nm,0.3s,baz=73,slow=6.5,SNR=31						
CMAR				LR	LR	01 21 14.7	
	comp=Z,35nm,18.1s,baz=144,slow=38						
CMAR	**Chiang Mai Arr**	**46.17**	**279**	P	**P**	**01 00 12.5**	**-0.1**
YAK	**Yakutsk**	**46.54**	**349**	P	**P**	**01 00 14.3**	**-0.5**
GTA	**Gaotai**	**46.86**	**308**	*e*P	**P**	**01 00 18.5**	**+0.6**
GTA				pP	pP	01 00 23.6	-4.6
GTA				PcP	**PcP**	**01 01 52.5**	**+2.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,53nm,4.4s						
GTA				LR	LR		
	comp=Z,140nm,17.5s						
GTA				LR	LR		
	comp=Z,230nm,17.4s						
GTA				LR	LR		
	comp=Z,230nm,17.4s						
TLY	**Talaya**	**48.80**	**325**	P	**P**	**01 00 32.2**	**-0.4**
STKA	**Stephens Creek**	**49.11**	**187**	LR	LR	01 21 22.1	
	comp=Z,85nm,20.2s,baz=24,slow=36						
GSI	**Gunungsitoli**	**51.58**	**258**	P	**P**	**01 00 53.2**	**-1.0**
BILL	**Bilibino**	**52.23**	**9**	P	**P**	**01 00 58.5**	**+0.3**
BILL				IAmb	IAmb	01 01 01.3	
	comp=Z,20nm,1.2s						
LSA	**Lhasa**	**52.76**	**294**	P	**P**	**01 01 04.5**	**+1.2**
LSA				IAmb	IAmb	01 01 11.6	
	comp=Z,5.8nm,0.5s						
TIXI	**Tiksi**	**55.58**	**353**	P	**P**	**01 01 22.0**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=136,slow=6.9,SNR=6.3						
TIXI	**Tiksi**	**55.58**	**353**	P	**P**	**01 01 22.4**	**-0.1**
TIXI				IAmb	IAmb	01 01 28.4	
	comp=Z,9.7nm,1.1s						
WMQ	**Urumqi**	**56.62**	**311**	*e*P	**P**	**01 01 31.7**	**+1.1**
WMQ				pP	pP	01 01 38.8	-2.3
WMQ				pmax	pmax		
	comp=Z,34nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.9s						
SII	**Sitkinak Islan**	**58.48**	**34**	P	**P**	**01 01 43.2**	**-0.2**
ZSN	**Zaisan**	**59.10**	**315**	*e*P	**P**	**01 01 46.9**	**-1.0**
	baz=315						
ZAA0	**Zalesovo Array**	**60.28**	**323**	P	**P**	**01 01 55.0**	**-0.8**
ZAA0				IAmb	IAmb	01 01 57.3	
	comp=Z,9.0nm,0.9s						
ZALV	**Zalesovo Beam**	**60.28**	**323**	P	**P**	**01 01 55.0**	**-0.8**
	comp=Z,8.3nm,0.8s,baz=100,slow=6.5,SNR=33						
ZALV				LR	LR	01 28 19.3	
	comp=Z,96nm,18.7s,baz=86,slow=36						
ZALV	**Zalesovo Beam**	**60.28**	**323**	P	**P**	**01 01 54.2**	**-1.6**
MK31	**Makanchi Array**	**60.77**	**314**	P	**P**	**01 01 59.0**	**-0.4**
MK31				IAmb	IAmb	01 02 01.1	
	comp=Z,8.6nm,1.1s						
MKAR	**Makanchi Array**	**60.77**	**314**	P	**P**	**01 01 59.3**	**-0.1**
	comp=Z,4.4nm,0.8s,baz=89,slow=8.1,SNR=19						
MKAR				LR	LR	01 29 09.8	
	comp=Z,81nm,19.1s,baz=74,slow=37						
MKAR	**Makanchi Array**	**60.77**	**314**	P	**P**	**01 01 59.4**	**+0.1**
MAKZ	**Makanchi**	**60.99**	**314**	P	**P**	**01 02 00.8**	**0.0**
MAKZ				IAmb	IAmb	01 02 02.6	
	comp=Z,7.7nm,0.9s						
J20K	**Nowinta River**	**61.06**	**25**	P	**P**	**01 02 01.7**	**+0.8**
IMAR	**Indian Mountai**	**61.90**	**23**	P	**P**	**01 02 07.8**	**+1.2**
H21K	**Melozitna Rive**	**62.14**	**24**	P	**P**	**01 02 09.7**	**+1.5**
H21K				IAmb	IAmb	01 02 20.6	
	comp=Z,18nm,1.4s						
SEM	**Semipalatinsk**	**62.50**	**318**	*e*P	**P**	**01 02 09.5**	**-1.6**
	baz=318						
UZB	**Uzynbulak**	**62.85**	**310**	*e*P	**P**	**01 02 12.1**	**-1.4**
	comp=Z,12nm,1.5s,baz=310						
KPKS	**Kokpek**	**63.11**	**310**	*e*P	**P**	**01 02 13.8**	**-1.4**
	comp=Z,12nm,1.5s,baz=310						
PRZ	**Przheval'sk**	**63.30**	**309**	P	**P**	**01 02 17.1**	**+0.5**
SATY	**Saty**	**63.30**	**310**	*e*P	**P**	**01 02 15.2**	**-1.3**
	comp=Z,19nm,1.8s,baz=310						
I23K	**Minto, Yukon-K**	**63.33**	**25**	P	**P**	**01 02 16.8**	**+0.6**
KURK	**Kurchatov**	**63.56**	**319**	P	**P**	**01 02 16.6**	**-1.3**
NRIK	**Noril'sk**	**63.63**	**340**	P	**P**	**01 02 17.9**	**-0.1**
	comp=Z,13nm,0.9s,baz=106,slow=8.9,SNR=26						
NRIK				LR	LR	01 31 11.8	
	comp=Z,80nm,20.0s,baz=153,slow=37						
NRIK	**Noril'sk**	**63.63**	**340**	P	**P**	**01 02 18.5**	**+0.5**
TARG	**Taragay, Kyrgy**	**63.73**	**308**	P	**P**	**01 02 18.6**	**-1.1**
TARG				IAmb	IAmb	01 02 21.4	
	comp=Z,19nm,1.4s						
KDJ	**Kajisay**	**64.20**	**309**	P	**P**	**01 02 22.4**	**-0.1**
KDJ				IAmb	IAmb	01 02 24.1	
	comp=Z,20nm,1.3s						
IL31		**64.24**	**26**	P	**P**	**01 02 21.2**	**-0.8**
IL31				IAmb	IAmb	01 02 36.5	
	comp=Z,14nm,1.4s						
ILAR	**Eielson Array**	**64.24**	**26**	P	**P**	**01 02 21.8**	**-0.4**
	comp=Z,2.5nm,1.0s,baz=255,slow=5.4,SNR=14						
ILAR				LR	LR	01 27 31.8	
	comp=Z,41nm,22.0s,baz=242,slow=33						
ILAR	**Eielson Array**	**64.24**	**26**	P	**P**	**01 02 21.4**	**-0.7**
MDOK	**Medeo**	**64.30**	**310**	*e*P	**P**	**01 02 21.9**	**-1.2**
	baz=310						
KUU	**Kurty**	**64.81**	**311**	*e*P	**P**	**01 02 24.8**	**-1.5**
	comp=Z,39nm,1.7s,baz=311						
BOOM	**Boomskoye usch**	**65.12**	**309**	P	**P**	**01 02 26.9**	**-1.6**
BOOM				IAmb	IAmb	01 02 29.8	
	comp=Z,15nm,1.4s						
BMAR	**Burnt Mountain**	**65.81**	**23**	P	**P**	**01 02 33.0**	**+0.6**
SGDS	**Sogindy**	**66.06**	**310**	*e*P	**P**	**01 02 32.8**	**-1.6**
	baz=310						
BCAR	**Beaver Creek A**	**66.08**	**28**	P	**P**	**01 02 34.2**	**0.0**
AAK	**Ala-Archa**	**66.18**	**310**	P	**P**	**01 02 34.5**	**-0.8**
AAK				IAmb	IAmb	01 02 36.4	
	comp=Z,6.3nm,1.3s						
BTLS	**Baital**	**66.44**	**312**	*e*P	**P**	**01 02 35.3**	**-1.5**
	baz=312						
BRZS	**Berezniki**	**67.33**	**318**	*e*P	**P**	**01 02 41.1**	**-1.2**
	baz=318						
NIL	**Nilore**	**67.80**	**300**	P	**P**	**01 02 45.5**	**-0.2**
DRK	**Karamyk**	**68.40**	**306**	P	**P**	**01 02 48.5**	**-1.1**
BRVK	**Borovoye**	**68.82**	**321**	P	**P**	**01 02 51.0**	**-0.6**
KKAR	**Karatay Array**	**69.08**	**310**	P	**P**	**01 02 52.4**	**-1.0**
IUG	**Iuzhnay**	**69.51**	**309**	*e*P	**P**	**01 02 54.6**	**-1.6**
	baz=309						
BRLS	**Borolday**	**69.58**	**310**	*e*P	**P**	**01 02 56.2**	**-0.4**
	baz=310						
GAR	**Garm**	**69.59**	**306**	P	**P**	**01 02 56.5**	**-0.3**
INK	**Inuvik**	**70.08**	**23**	P	**P**	**01 02 59.4**	**+0.4**
	comp=Z,4.5nm,1.1s,baz=246,slow=4.2,SNR=6.1						
INK	**Inuvik**	**70.08**	**23**	P	**P**	**01 02 59.5**	**+0.4**
INK				IAmb	IAmb	01 03 00.6	
	comp=Z,8.3nm,1.2s						
CHGR	**Chuyangaron**	**70.53**	**306**	P	**P**	**01 03 01.7**	**-0.8**
KBL	**Kabul**	**71.15**	**301**	P	**P**	**01 03 05.8**	**-0.8**
ARU	**Arti**	**75.31**	**325**	P	**P**	**01 03 29.8**	**-0.6**
ARU				IAmb	IAmb	01 03 33.7	
	comp=Z,16nm,1.0s						
ABKAR	**Akbulak array**	**75.64**	**317**	P	**P**	**01 03 31.0**	**-1.4**
HRA	**Herat**	**76.71**	**302**	P	**P**	**01 03 38.7**	**-0.4**
HRA				IAmb	IAmb	01 03 40.3	
	comp=Z,8.4nm,1.1s						
YKA	**Yellowknife Ar**	**78.50**	**28**	P	**P**	**01 03 48.0**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=286,slow=5.5,SNR=7.2						
YKA				LR	LR	01 39 27.4	
	comp=Z,100nm,19.1s,baz=0.0,slow=36						
GEYT	**Alibeck**	**79.20**	**306**	P	**P**	**01 03 51.9**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=102,slow=6.1,SNR=2.5						
GEYT				LR	LR	01 43 01.4	
	comp=Z,78nm,18.7s,baz=265,slow=39						
RES	**Resolute Bay**	**80.48**	**14**	P	**P**	**01 03 59.5**	**+0.8**
RES				IAmb	IAmb	01 04 11.6	
	comp=Z,14nm,1.5s						
BEKR	**Beckworth**	**80.77**	**51**	P	**P**	**01 04 01.5**	**+0.2**
MPK	**Martis Peak**	**81.16**	**52**	P	**P**	**01 04 04.0**	**+0.6**
MPK				IAmb	IAmb	01 04 22.5	
	comp=Z,8.8nm,1.2s						
CMB	**Columbia Colle**	**81.21**	**53**	P	**P**	**01 04 04.4**	**+0.9**
PNTR	**Pine Nut**	**81.54**	**52**	P	**P**	**01 04 04.7**	**-0.7**
PNTR				IAmb	IAmb	01 04 07.7	
	comp=Z,7.0nm,0.9s						
KVN	**Kaiserville**	**82.67**	**52**	P	**P**	**01 04 12.1**	**+0.7**
NVAR	**Mina Array Bea**	**82.69**	**52**	P	**P**	**01 04 12.5**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=264,slow=4.9,SNR=13						
NVAR	**Mina Array Bea**	**82.69**	**52**	P	**P**	**01 04 12.1**	**+0.6**
MFID	**Camas Ranch**	**83.08**	**47**	P	**P**	**01 04 13.0**	**-0.3**
MFID				IAmb	IAmb	01 04 15.4	
	comp=Z,5.7nm,1.1s						
KLMR	**Klimovskoe**	**83.61**	**332**	*e*P	**P**	**01 04 14.4**	**-1.0**
KLMR				AMP		01 04 17.2	
	comp=Z,57nm,1.4s						
KLMR				*e*S	**S**	**01 14 31.4**	**-3.1**
KLMR				*e*S	**S**	**01 14 31.4**	**-3.1**
TULEG	**Thule**	**83.97**	**8**	P	**P**	**01 04 16.9**	**-0.1**
TULEG				IAmb	IAmb	01 04 19.2	
	comp=Z,10nm,0.9s						
HLID	**Hailey**	**84.01**	**46**	P	**P**	**01 04 18.5**	**+0.4**
UOSS	**Minazif**	**84.09**	**294**	P	**P**	**01 04 18.0**	**-0.6**
UOSS				IAmb	IAmb	01 04 19.9	
	comp=Z,15nm,1.2s						
ELK	**Elko**	**84.29**	**49**	P	**P**	**01 04 20.6**	**+1.0**
ARCES	**ARCESS Array B**	**84.46**	**343**	P	**P**	**01 04 19.9**	**+0.3**
	comp=Z,5.6nm,0.8s,baz=47,slow=10,SNR=6.7						
ARCES				LR	LR	01 49 09.0	
	comp=Z,56nm,19.4s,baz=105,slow=41						
BCYI	**Bear Canyon**	**84.47**	**45**	P	**P**	**01 04 19.8**	**-0.7**
HRY	**Holter Researc**	**84.74**	**43**	P	**P**	**01 04 21.9**	**+0.2**
FXWY	**Fox Creek**	**86.32**	**45**	P	**P**	**01 04 31.4**	**+1.7**
FXWY				IAmb	IAmb	01 04 33.4	
	comp=Z,5.5nm,1.2s						
CCUT	**Cedar City**	**86.68**	**52**	P	**P**	**01 04 32.1**	**+0.5**
PDAR	**Pinedale Array**	**87.63**	**46**	P	**P**	**01 04 35.2**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=242,slow=4.8,SNR=2.0						
PDAR				LR	LR	01 36 13.6	
	comp=Z,34nm,20.1s,baz=318,slow=30						
U15A	**North Rim**	**87.86**	**53**	P	**P**	**01 04 37.7**	**+0.3**
U15A				IAmb	IAmb	01 04 56.4	
	comp=Z,5.3nm,1.1s						
RDMU	**Red Mountain**	**88.41**	**48**	P	**P**	**01 04 40.3**	**+0.4**
RDMU				IAmb	IAmb	01 04 43.3	
	comp=Z,5.6nm,0.9s						
KBZ	**Khabaz**	**88.45**	**315**	P	**P**	**01 04 38.5**	**-1.1**
	comp=Z,4.9nm,1.0s,baz=45,slow=4.3,SNR=4.6						
FINES	**FINESS Array B**	**88.98**	**336**	P	**P**	**01 04 41.0**	**-0.7**
	comp=Z,3.4nm,0.8s,baz=43,slow=2.7,SNR=8.0						
FINES				LR	LR	01 49 40.4	
	comp=Z,82nm,18.1s,baz=60,slow=39						
MNK	**Minsk**	**92.14**	**330**	*i* P	**P**	**01 04 57.5**	**+0.9**
	comp=E,1.0nm,0.7s						
MNK				*i* P	**P**	**01 04 57.5**	**+0.9**
	comp=N,9.0nm,0.7s						
MNK				*i* P	**P**	**01 04 57.5**	**+0.9**
	comp=Z,5.0nm,0.6s,baz=57						
MNK				*i* pP	**sP**	**01 05 12.2**	**+0.1**
MNK				*i* PP	**PP**	**01 08 36.9**	**+0.5**
MNK				*i* PPP	PPP	01 10 36.6	
MNK				*i* S	**SKSac**	**01 15 25.8**	**-0.8**
MNK				*i* sS	**S**	**01 15 51.9**	**-4.2**
MNK				*i* PS	PnS	01 17 13.1	+1.0
MNK				*i* SS	**SS**	**01 22 07.0**	**+1.9**
MNK				*i* SSS	SSS	01 25 46.0	
MNK				*i* LQ	LQ	01 40 39.1	
MNK				*i* LR	LR	01 45 00.2	
MNK				*i* LRM	MLR	01 46 56.0	
	comp=Z,160nm,23.9s						
MNK				*i* LRM	MLR	01 47 09.1	
	comp=E,57nm,22.4s						
MNK				*i* LRM	MLR	01 47 09.8	
	comp=N,568nm,23.2s						
NACGM	**Naroch**	**92.44**	**330**	*i* P	**P**	**01 04 56.9**	**-1.1**
ULM	**Lac du Bonnet**	**92.84**	**35**	LR	LR	01 47 31.5	
	comp=N,55nm,18.8s,baz=237,slow=36						
AKASG	**Malin Array Be**	**93.54**	**326**	P	**P**	**01 05 01.7**	**-1.5**
	comp=N,0.3nm,0.4s,baz=42,slow=3.8,SNR=5.4						
AKASG				LR	LR	01 48 55.0	
	comp=N,67nm,20.6s,baz=60,slow=37						
RAYN	**Ar Rayn**	**93.81**	**296**	P	**P**	**01 05 03.4**	**-1.6**
RAYN				IAmb	IAmb	01 05 06.5	
	comp=Z,9.1nm,1.3s						
NOA	**NORSAR Array B**	**94.59**	**340**	LR	LR	01 51 56.2	
	comp=Z,38nm,20.6s,baz=340,slow=38						
VNDA	**Vanda**	**94.88**	**177**	LR	LR	01 43 51.4	
	comp=Z,17nm,20.1s,baz=320,slow=33						
BRTR	**Keskin Array B**	**96.42**	**315**	P	**P**	**01 05 16.5**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=235,slow=5.1,SNR=2.1						
TXAR	**Lajitas Array**	**97.23**	**56**	LR	LR	01 47 28.7	
	comp=Z,46nm,18.0s,baz=0.0,slow=34						
CLL	**Collm**	**101.09**	**333**	*e*Pdif	**Pdif**	**01 05 38.0**	**+0.8**
CLL				*e*PP	**PP**	**01 09 46.0**	**+0.7**
CLL				*e*SS	SS	01 24 12.0	+0.7
SNAA	**Sanae**	**122.78**	**191**	PKPdf	**PKiKP**	**01 10 43.6**	**+0.9**
VNA2	**Neumayer--Watz**	**124.19**	**190**	PKPdf	**PKiKP**	**01 10 46.4**	**+1.0**
	baz=148,slow=0.3						
VNA3	**Neumayer Olymp**	**124.25**	**189**	PKPdf	**PKiKP**	**01 10 46.8**	**+1.3**
VNA1	**Neumayer--Stat**	**124.57**	**190**	PKPdf	**PKiKP**	**01 10 46.3**	**+0.2**
TORD	**Torodi Ar. Bea**	**134.77**	**310**	PKP	**PKPdf**	**01 11 07.0**	**+0.2**
	comp=Z,1.4nm,1.1s,baz=27,slow=3.5,SNR=4.6						
TORD				PP	**PP**	**01 13 42.7**	**+2.7**
	comp=Z,1.1nm,1.0s,baz=46,slow=6.6,SNR=4.1						
LPAZ	**La Paz**	**145.86**	**94**	PKPbc	**PKPab**	**01 11 29.7**	**+1.1**
	comp=Z,3.1nm,0.8s,baz=324,slow=3.7,SNR=8.6						
LPAZ	**La Paz**	**145.86**	**94**		**PKPdf**	**01 11 27.6**	**0.0**

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*IDC **02** 01:44:19.8±0.8, 38°.76N×20°.73E, h0^{km}, mb3.8/9, mb1 3.8/18, mb1mx3.7/48, mbtmp3.7/18, ML3.4/8, MS2.8/2, Ms1 2.9/2, ms1mx2.5/43, Error ellipse: s-maj=16.4km s-min=14.4km az=33.0*

*PDG **02** 01:44:21.0±0.3, 38°.72N×20°.55E, h13^{km}, ML3.6/12, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

*THE **02** 01:44:21.9, 38°.70N×20°.62E, h8^{km}, ML3.8/12, Error ellipse: s-maj=0.8km s-min=0.4km az=277.0*

*ATH **02** 01:44:21.8, 38°.71N×20°.61E, h9^{km}±1^{km}, ML3.7/23, Error ellipse: s-maj=1.5km s-min=0.7km az=285.0*

*NEIC **02** 01:44:24.5±1.5, 38°.70N±0°.05×20°.57E±0°.06, h28^{km}±2^{km}, mb4.4/8, ML3.7(ATH), ML3.8(THE), Error ellipse: s-maj=7.7km s-min=6.0km az=46.0*

ISC 02 01:44:21.6±0.6**, 38°.72N**±0°.02×**20°.60E**±0°.02**, h11**^{km}±3^{km}**, n189, σ1.^{s}24**/236**, mb4.0**/12**, 15C-13D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRAG	**Dragano-Lefkad**	**0.04**	**208**	P	**Pg**	**01 44 23.3**	**-0.3**
DRAG				S	**Sg**	**01 44 24.5**	**-0.5**
	830µm,0.4s						
DRAG	**Dragano-Lefkad**	**0.04**	**208**	P	**Pg**	**01 44 23.1**	**-0.5**
DRAG				S	**Sg**	**01 44 24.5**	**-0.5**
NYDR	**Nydri-Lefkada**	**0.08**	**93**	P	**Pg**	**01 44 23.7**	**-0.2**
NYDR				S	**Sg**	**01 44 25.1**	**-0.6**
NYDR	**Nydri-Lefkada**	**0.08**	**93**	P	**Pg**	**01 44 23.8**	**-0.1**
NYDR				S	**Sg**	**01 44 25.6**	**-0.1**
LKD2	**Lefkada island**	**0.09**	**34**	P	**Pg**	**01 44 23.9**	**-0.2**
LKD2				S	**Sg**	**01 44 25.9**	**0.0**
	149µm,0.2s						
LKD2	**Lefkada island**	**0.09**	**34**	P	**Pg**	**01 44 23.9**	**-0.2**
LKD2				S	**Sg**	**01 44 26.1**	**+0.1**
LKD2				AML	AML	01 44 26.2	
LKD2				AML	AML	01 44 26.3	
EVGI	**Lefkada island**	**0.11**	**155**	P	**Pg**	**01 44 24.4**	**+0.1**
EVGI				S	**Sg**	**01 44 25.9**	**-0.4**
	236µm,0.4s						
EVGI	**Lefkada island**	**0.11**	**155**	P	**Pg**	**01 44 24.5**	**+0.2**
EVGI				S	**Sg**	**01 44 26.5**	**+0.2**
TSLK	**Tsoukalades, L**	**0.12**	**23**	P	**Pg**	**01 44 24.6**	**+0.1**
TSLK				S	**Sg**	**01 44 26.7**	**+0.1**
	102µm,0.7s						
TSLK	**Tsoukalades, L**	**0.12**	**23**	P	**Pg**	**01 44 24.6**	**+0.1**
TSLK				S	**Sg**	**01 44 27.2**	**+0.7**
TSLK				AML	AML	01 44 28.1	
TSLK				AML	AML	01 44 29.9	
FSK	**Fiskardo**	**0.26**	**186**	P	**Pg**	**01 44 27.1**	**+0.2**
FSK				S	**Sg**	**01 44 31.1**	**+0.7**
	40µm,0.5s						
FSK	**Fiskardo**	**0.26**	**186**	P	**Pg**	**01 44 26.6**	**-0.2**
FSK				S	**Sg**	**01 44 30.8**	**+0.4**
FSK				AML	AML	01 44 32.4	
FSK				AML	AML	01 44 32.6	
	comp=N,50723µm,0.4s						
DMLN	**Damoulianata-K**	**0.51**	**200**	P	**Pg**	**01 44 31.2**	**-0.3**
DMLN				S	**Sb**	**01 44 39.3**	**-0.7**
	comp=N,22µm,0.5s						
DMLN	**Damoulianata-K**	**0.51**	**200**	P	**Pg**	**01 44 30.9**	**-0.6**
DMLN				S	**Sg**	**01 44 39.0**	**+0.7**
LXRA	**Lixouri, Kepha**	**0.53**	**194**	P	**Pg**	**01 44 31.6**	**-0.4**
VLS	**Valsamata**	**0.54**	**181**	P	**Pg**	**01 44 31.5**	**-0.6**
VLS				S	**Sg**	**01 44 39.9**	**+0.7**
	comp=N,9µm,0.5s						
VLS	**Valsamata**	**0.54**	**181**	P	**Pg**	**01 44 31.3**	**-0.8**
VLS				S	**Sg**	**01 44 39.9**	**+0.7**
VLS				AML	AML	01 44 44.3	
	comp=N,22466µm,0.5s						
VLS				AML	AML	01 44 45.4	
	comp=E,13519µm,0.4s						
ARGA	**Argostoli. Kep**	**0.55**	**190**	P	**Pg**	**01 44 32.4**	**+0.1**
ARGA				S	**Sb**	**01 44 40.3**	**-0.8**
KEF3	**Kipouria, Keph**	**0.55**	**201**	P	**Pg**	**01 44 31.4**	**-0.8**
KEF3				S	**Sg**	**01 44 39.9**	**+0.4**
	comp=E,34µm,0.5s						
KEF3	**Kipouria, Keph**	**0.55**	**201**	P	**Pg**	**01 44 31.5**	**-0.8**
KEF3				S	**Sg**	**01 44 38.9**	**-0.6**
PSDA	**Pessada-Kefalo**	**0.60**	**181**	P	**Pg**	**01 44 32.7**	**-0.6**
PSDA				S	**Sb**	**01 44 42.0**	**-0.7**
	comp=E,2µm,0.3s						
PSDA	**Pessada-Kefalo**	**0.60**	**181**	P	**Pg**	**01 44 32.7**	**-0.6**
PSDA				S	**Sg**	**01 44 41.6**	**+0.4**
IGT	**Igoumenitsa**	**0.84**	**346**	P	**Pg**	**01 44 37.4**	**-0.4**
IGT				S	**Sb**	**01 44 50.6**	**+1.1**
	comp=E,3µm,0.4s						
IGT	**Igoumenitsa**	**0.84**	**346**	P	**Pg**	**01 44 37.4**	**-0.4**
IGT				AML	AML	01 44 55.5	
	comp=E,4556µm,0.5s						
IGT				AML	AML	01 44 55.7	
	comp=N,7061µm,0.4s						
VTN	**Vitineika**	**0.92**	**150**	P	**Pg**	**01 44 39.5**	**+0.1**
VTN	**Vitineika**	**0.92**	**150**	P	**Pg**	**01 44 39.3**	**-0.1**
RLS	**Riolos of Patr**	**0.95**	**134**	P	**Pg**	**01 44 39.2**	**-0.6**
RLS	**Riolos of Patr**	**0.95**	**134**	P	**Pg**	**01 44 39.3**	**-0.5**
RLS				S	**Sg**	**01 44 52.3**	**+0.1**
RLS				AML	AML	01 45 02.6	
	comp=N,11974µm,0.5s						
RLS				AML	AML	01 45 05.9	
	comp=E,6907µm,0.5s						
JAN	**Janina**	**0.96**	**12**	P	**Pb**	**01 44 40.6**	**+0.4**
JAN				S	**Sn**	**01 44 55.0**	**+0.3**
	comp=E,3µm,0.6s						
JAN	**Janina**	**0.96**	**12**	P	**Pb**	**01 44 40.6**	**+0.4**
JAN				AML	AML	01 45 03.0	
	comp=N,3956µm,0.5s						
JAN				AML	AML	01 45 04.5	
	comp=E,4880µm,0.7s						
ZAK2	**Zakynthos**	**0.96**	**166**	P	**Pg**	**01 44 39.8**	**-0.2**
EVR	**Evrytania**	**0.97**	**78**	P	**Pg**	**01 44 39.9**	**-0.3**
EVR	**Evrytania**	**0.97**	**78**	P	**Pg**	**01 44 39.8**	**-0.3**
EVR				AML	AML	01 45 08.0	
	comp=N,4005µm,0.7s						
EVR				AML	AML	01 45 09.2	
	comp=E,3599µm,0.7s						
LTHK	**Lithakia**	**1.02**	**169**	P	**Pg**	**01 44 39.9**	**-1.4**
LTHK	**Lithakia**	**1.02**	**169**	P	**Pg**	**01 44 40.0**	**-1.2**
LTHK				S	**Sb**	**01 44 54.9**	**+0.1**
ANX	**Ano Chora**	**1.04**	**96**	P	**Pg**	**01 44 41.0**	**-0.7**
ANX	**Ano Chora**	**1.04**	**96**	P	**Pg**	**01 44 40.7**	**-1.0**
ANX				AML	AML	01 45 05.2	
	comp=N,29185µm,0.5s						
ANX				AML	AML	01 45 05.5	
	comp=E,27269µm,1.0s						
EFP	**Efpalio**	**1.07**	**105**	P	**Pg**	**01 44 41.3**	**-0.8**
EFP	**Efpalio**	**1.07**	**105**	P	**Pg**	**01 44 41.1**	**-0.9**
EFP				AML	AML	01 45 04.1	
	comp=N,12758µm,0.4s						
EFP				AML	AML	01 45 05.5	
	comp=E,10302µm,0.4s						
DRO	**Drossia**	**1.16**	**131**	P	**Pb**	**01 44 42.8**	**-0.9**
DRO	**Drossia**	**1.16**	**131**	P	**Pb**	**01 44 42.8**	**-0.9**
DRO				AML	AML	01 45 10.5	
	comp=N,9274µm,0.6s						
DRO				AML	AML	01 45 15.5	
	comp=E,17258µm,0.6s						
KEK	**Kerkira**	**1.17**	**328**	P	**Pb**	**01 44 44.4**	**+0.5**
KEK				S	**Sn**	**01 45 01.0**	**+1.0**
	comp=E,1µm,0.5s						
KEK	**Kerkira**	**1.17**	**328**	P	**Pb**	**01 44 44.4**	**+0.5**
KEK				AML	AML	01 45 09.7	
	comp=E,2034µm,0.6s						
KEK				AML	AML	01 45 17.3	
	comp=N,2383µm,0.5s						
LAKA	**Lakka**	**1.18**	**113**	P	**Pb**	**01 44 43.2**	**-0.9**
LAKA	**Lakka**	**1.18**	**113**	P	**Pb**	**01 44 43.0**	**-1.0**
LAKA				AML	AML	01 45 08.5	
	comp=E,7272µm,0.7s						
LAKA				AML	AML	01 45 11.1	
	comp=N,4919µm,0.8s						
SERG	**Sergoula**	**1.18**	**104**	P	**Pb**	**01 44 43.4**	**-0.7**
SERG	**Sergoula**	**1.18**	**104**	P	**Pb**	**01 44 43.5**	**-0.5**
SERG				AML	AML	01 45 09.3	
	comp=N,11743µm,0.6s						
SERG				AML	AML	01 45 10.1	
	comp=E,9038µm,0.6s						
TRIZ	**Trizonia**	**1.21**	**106**	P	**Pb**	**01 44 43.7**	**-0.8**
TRIZ	**Trizonia**	**1.21**	**106**	P	**Pb**	**01 44 43.8**	**-0.7**
MAKR	**Makrakomi, Fth**	**1.23**	**76**	P	**Pn**	**01 44 44.8**	**0.0**
MAKR	**Makrakomi, Fth**	**1.23**	**76**	P	**Pn**	**01 44 45.0**	**+0.2**
MAKR				AML	AML	01 45 12.4	
	comp=N,6190µm,0.4s						
MAKR				AML	AML	01 45 14.5	
	comp=E,6333µm,0.3s						
ALIK	**Aliki, Aigiali**	**1.27**	**111**	P	**Pn**	**01 44 44.7**	**-0.6**
AGG	**Agios Georgios**	**1.39**	**77**	P	**Pn**	**01 44 47.5**	**+0.5**
AGG	**Agios Georgios**	**1.39**	**77**	P	**Pb**	**01 44 47.8**	**+0.3**
AGG				AML	AML	01 45 14.4	
	comp=E,5577µm,1.0s						
AGG				AML	AML	01 45 16.3	
	comp=N,4435µm,0.9s						
AGG	**Agios Georgios**	**1.39**	**77**	Pn	**Pn**	**01 44 47.4**	**+0.5**
THL	**Klokotos Trika**	**1.39**	**52**	P	**Pn**	**01 44 47.6**	**+0.7**
THL	**Klokotos Trika**	**1.39**	**52**	P	**Pn**	**01 44 47.1**	**+0.2**
THL				AML	AML	01 45 13.2	
	comp=N,3122µm,0.7s						
THL				AML	AML	01 45 13.5	
	comp=E,3454µm,0.6s						
KLV	**Kalavryta, Ach**	**1.39**	**118**	P	**Pn**	**01 44 46.4**	**-0.7**
KLV	**Kalavryta, Ach**	**1.39**	**118**	P	**Pn**	**01 44 46.7**	**-0.4**
KLV				AML	AML	01 45 14.7	
	comp=E,3792µm,0.7s						
KLV				AML	AML	01 45 20.7	
	comp=N,4973µm,0.9s						
GUR	**Goura**	**1.58**	**119**	P	**Pn**	**01 44 49.9**	**+0.3**
GUR				AML	AML	01 45 21.4	
	comp=N,11311µm,0.5s						
GUR				AML	AML	01 45 22.9	
	comp=E,7550µm,0.6s						
THAL	**Thalero**	**1.76**	**112**	P	**Pb**	**01 44 54.0**	**+0.1**
THAL				AML	AML	01 45 32.5	
	comp=E,10270µm,0.7s						
THAL				AML	AML	01 45 36.9	
	comp=N,5228µm,0.6s						
ITM	**Ithomi**	**1.86**	**145**	P	**Pb**	**01 44 56.0**	**+0.4**
ITM				AML	AML	01 45 28.4	
	comp=E,2619µm,0.6s						
ITM				AML	AML	01 45 41.7	
	comp=N,1620µm,0.6s						
ITM	**Ithomi**	**1.86**	**145**	Pn	**Pb**	**01 44 54.9**	**-0.7**
LKR	**Lokris**	**1.88**	**91**	P	**Pb**	**01 44 56.0**	**0.0**
LKR				AML	AML	01 45 32.2	
	comp=N,1264µm,0.5s						
LKR				AML	AML	01 45 34.6	
	comp=E,1319µm,0.8s						
ATAL	**Atalanti**	**1.90**	**90**	P	**Pb**	**01 44 56.6**	**+0.3**
KBN	**Korca**	**1.91**	**4**	Pn	**Pb**	**01 44 56.9**	**+0.5**
VLO	**Vlora**	**1.94**	**334**	Pn	**Pn**	**01 44 55.7**	**+1.1**
SCTE	**Santa Cesarea**	**2.13**	**310**	Pn	**Pn**	**01 44 57.3**	**+0.1**
VIL2	**Platees**	**2.16**	**103**	P	**Pb**	**01 44 60.0**	**-0.7**
VIL2				AML	AML	01 45 40.6	
	comp=N,1744µm,0.9s						
VIL2				AML	AML	01 45 46.2	
	comp=E,3053µm,0.8s						
OHR	**Ohrid**	**2.40**	**4**	*i* Pn	**Pb**	**01 45 03.8**	**-1.0**
TIR	**Tirane**	**2.69**	**348**	⇓P	**Pn**	**01 45 06.7**	**+1.9**
TIR	**Tirane**	**2.69**	**348**	Pn	**Pn**	**01 45 06.2**	**+1.5**
TIP	**Timpagrande**	**3.03**	**280**	⇑P	**Pn**	**01 45 09.7**	**+0.2**
TIP	**Timpagrande**	**3.03**	**280**	Pn	**Pn**	**01 45 09.8**	**+0.2**
STIP	**Stip**	**3.21**	**22**	*i* Pn	**Pb**	**01 45 15.9**	**-2.7**

ULC	Ulcinj	3.40	343	⇓iPn	Pn	01 45 14.7	0.0
ULC				iSn	Sn	01 45 55.7	+0.7
MATE	Matera	3.57	304	⇓P	Pn	01 45 18.4	+1.5
MATE				⇑S	Sg	01 46 17.4	+1.2
DRME	Dracevica, Mon	3.63	343	ePn	Pn	01 45 18.5	+0.8
DRME	Dracevica, Mon	3.63	343	⇑iPn	Pn	01 45 18.1	+0.4
DRME				iSn	Sn	01 46 01.1	+0.5
CEL	Celeste	3.72	264	Pn	Pn	01 45 20.1	+1.1
BUM	Brajici-Budva	3.81	341	⇑iPn	Pn	01 45 20.2	-0.1
BUM				iSn	Sn	01 46 05.5	+0.4
PDG	Podgorica	3.85	345	⇓P	Pn	01 45 22.7	+2.0
PDG				⇓S	Sn	01 46 06.5	+0.6
PDG	Podgorica	3.85	345	ePn	Pn	01 45 21.8	+1.1
PDG	Podgorica	3.85	345	Pn	Pn	01 45 21.8	+1.1
TTG	Podgorica	3.85	345	⇑iPn	Pn	01 45 21.0	+0.3
TTG				iSn	Sn	01 46 06.2	+0.3
PVY	Plav	3.90	353	⇑iPn	Pn	01 45 22.3	+0.7
PVY				iSn	Sn	01 46 08.3	+0.8
PRVS	Prvonek	3.95	16	ePn	Pn	01 45 24.1	+1.9
CEME	Cevo	4.03	342	⇓iPn	Pn	01 45 23.4	+0.1
CEME				iSn	Sn	01 46 10.8	+0.2
BOSS	Bosilegrad	4.04	20	ePn	Pn	01 45 25.6	+2.2
HCY	Herceg Novi	4.05	337	ePn	Pn	01 45 22.9	-0.6
HCY	Herceg Novi	4.05	337	⇓iPn	Pn	01 45 23.0	-0.6
HCY				iSn	Sn	01 46 11.2	+0.1
IVA	Berane	4.18	353	⇑iPn	Pn	01 45 25.5	+0.1
IVA				iSn	Sn	01 46 14.8	+0.4
BARS	Barje	4.20	12	ePn	Pn	01 45 27.0	+1.4
KOME	Kolasin	4.21	349	⇓iPn	Pn	01 45 26.0	+0.2
KOME				iSn	Sn	01 46 15.8	+0.8
NKME	Niksic	4.23	343	⇑iPn	Pn	01 45 26.2	+0.1
NKME				iSn	Sn	01 46 15.8	+0.3
APE	Apeiranthos	4.24	111	⇑P	Pn	01 45 29.3	+3.2
APE				⇑S	Sn	01 46 20.3	+4.7
NKY	Niksic	4.27	344	⇑iPn	Pn	01 45 26.2	-0.4
TREB	Trebinje	4.34	338	ePn	Pn	01 45 26.8	-0.8
VTS	Vitosha	4.38	26	⇓P	Pn	01 45 30.0	+1.8
VTS				⇓S	Sb	01 46 27.1	-4.5
VTS	Vitosha	4.38	26	Pn	Pn	01 45 30.3	+2.1
BRY	Bratogost	4.46	340	ePn	Pn	01 45 29.3	0.0
BRY	Bratogost	4.46	340	⇑iPn	Pn	01 45 29.5	+0.2
BRY				iSn	Sn	01 46 21.5	+0.2
SELS	Selova	4.51	5	ePn	Pn	01 45 29.7	-0.2
SANT	Santorini	4.52	120	Pn	Pn	01 45 30.4	+0.4
SJES	Sjenica	4.56	354	ePn	Pn	01 45 32.9	+2.2
UPM	Unac-Piva	4.66	345	ePn	Pn	01 45 34.0	+1.9
UPM	Unac-Piva	4.66	345	⇓iPn	Pn	01 45 32.5	+0.4
UPM				iSn	Sn	01 46 26.4	+0.1
STON	Ston	4.70	333	ePn	Pn	01 45 31.0	-1.4
ALN	Alexandroupoli	4.73	61	Pn	Pn	01 45 34.9	+2.1
SGRT	San Giovanni R	4.79	311	Pn	Pn	01 45 34.0	+0.2
ZAPS	Zavoj	4.80	18	ePn	Pn	01 45 37.7	+3.8
IDI	Anoyia	4.85	134	Pn	Pn	01 45 34.7	+0.2
	comp=E,0.7nm,0.3s,baz=325,slow=15,SNR=1.0						
IDI				Sn	Sn	01 46 30.3	-0.5
	comp=E,1.5nm,0.3s,baz=340,slow=8.2,SNR=3.3						
RUDO	Rudo	4.98	350	ePn	Pn	01 45 35.9	-0.4
VAE	Valguarnera	5.03	258	Pn	Pn	01 45 40.1	+3.0
	comp=E,0.4nm,0.3s,baz=40,slow=18,SNR=2.6						
VAE				Sn	Sn	01 46 34.8	-0.5
	comp=E,1.3nm,0.3s,baz=239,slow=18,SNR=2.3						
RAFF	Raffo Rosso	5.15	255	Pn	Pn	01 45 37.9	-0.8
GRUS	Gruza	5.17	1	ePn	Pn	01 45 40.0	+1.1
PAOL	Paolisi	5.18	298	Pn	Pn	01 45 40.9	+1.8
BBLS	Lazići	5.22	350	ePn	Pn	01 45 40.3	+0.6
BBLS	Lazići	5.22	350	ePn	Pn	01 45 40.5	+0.8
ZAGS	Zajecar	5.24	13	ePn	Pn	01 45 41.9	+2.1
DIVS	Divibare	5.39	355	ePn	Pn	01 45 42.2	+0.2
DIVS	Divibare	5.39	355	Pn	Pn	01 45 42.3	+0.2
DIVS	Divibare	5.39	355	ePn	Pn	01 45 42.4	+0.3
TRUS	Trudelj	5.50	359	ePn	Pn	01 45 44.8	+1.3
HAPS	Han Pijesak,Bl	5.50	348	ePn	Pn	01 45 43.0	-0.6
MGRS	Mrkonjic Grad	6.27	336	ePn	Pn	01 45 54.8	+0.7
HERR	Herculane	6.31	12	⇑P	Pn	01 45 56.8	+2.3
HERR				⇑S	Sn	01 47 04.1	-2.4
FRGS	Fruska Gora	6.46	355	⇑P	Pn	01 45 54.8	-1.8
FRGS				⇓S	Sn	01 47 06.4	-4.0
FRGS	Fruska Gora	6.46	355	ePn	Pn	01 45 56.5	-0.2
FRGS	Fruska Gora	6.46	355	ePn	Pn	01 45 56.4	-0.2
BLY	Banja Luka	6.54	338	ePn	Pn	01 45 57.1	-0.7
AQU	L'Aquila	6.57	306	ePn	Pn	01 45 57.6	-0.6
AQU	L'Aquila	6.57	306	Pn	Pn	01 45 59.3	+1.0
GZR	Gura Zlata	6.86	13	⇓P	Pn	01 46 05.8	+3.5
NRCA	Norcia	7.01	308	Pn	Pn	01 46 05.0	+0.8
KOVH	Kovagotottos	7.59	347	ePN	Pn	01 46 11.1	-1.1
KOVH				eSN	Sn	01 47 30.6	-7.7
MURB	Monte Urbino	7.61	309	Pn	Pn	01 46 12.2	-0.2
MORH	Mrgy, Hungar	7.63	350	ePN	Pn	01 46 11.9	-0.8
MORH				eSN	Sn	01 47 29.0	-10
MORH	Mrgy, Hungar	7.63	350	ePn	Pn	01 46 11.0	-1.6
MLR	Muntele Rosu	7.85	29	Pn	Pn	01 46 24.6	+8.8
	comp=E,0.5nm,0.3s,baz=185,slow=18,SNR=6.5						
RIY	Rijeka	8.02	327	ePn	Pn	01 46 17.2	-0.8
GBRS	Gornja Briga	8.05	330	iPn	Pn	01 46 19.1	+0.6
CRES	Cresnjev	8.06	333	ePn	Pn	01 46 18.1	-0.5
CRES	Cresnjev	8.06	333	ePn	Pn	01 46 17.6	-1.0
CEY	Cerknica	8.37	329	ePn	Pn	01 46 22.3	-0.6
LJU	Ljubljana	8.59	330	ePn	Pn	01 46 26.7	+0.9
MPLH	Magyarpolny	8.74	346	ePN	Pn	01 46 29.0	+1.2
OBKA	Obir	8.97	332	ePn	Pn	01 46 33.2	+2.1
	comp=E,2.6nm,0.6s						
KEST	Kesra	9.46	255	Pn	Pn	01 46 38.9	+1.1
	comp=E,0.1nm,0.3s,baz=90,slow=16,SNR=1.7						
KEST				Sn	Sn	01 48 20.9	-3.3
	comp=E,0.0nm,0.3s,baz=347,slow=24,SNR=0.9						
KEST				LR	LR	01 51 16.6	
	comp=E,44nm,18.6s,baz=296,slow=44						
STAL	STALIGIAL	9.52	325	Pn	Pn	01 46 39.2	+0.5
ZOU	Zoufplan	9.63	327	Pn	Pn	01 46 41.2	+0.9
CTI	Castel Tesino	9.87	321	Pn	Pn	01 46 43.4	-0.1
MOTA	Moosalm	11.06	324	ePn	Pn	01 47 00.1	+0.3
	comp=E,1.4nm,0.5s						
DAVOX	Davos/Dischmat	11.26	319	Pn	Pn	01 47 03.4	+0.8
	comp=E,0.1nm,0.3s,baz=126,slow=17,SNR=1.6						
DAVOX				Sn	Sn	01 49 08.2	-0.3
	comp=E,0.2nm,0.3s,baz=291,slow=15,SNR=2.2						
GERES	GERESS Array B	11.28	336	Pn	Pn	01 47 02.1	-0.6
	comp=E,0.3nm,0.3s,baz=133,slow=17,SNR=4.6						
GERES	GERESS Array B	11.28	336	Pn	Pn	01 47 03.7	+1.0
SENIN	Lac Senin/Sane	12.42	312	Pn	Pn	01 47 18.5	+0.1
MMAI	Mount Meron Ar	13.28	111	Pn	Pn	01 47 30.2	0.0
	comp=E,0.3nm,0.3s,baz=304,slow=11,SNR=2.3						
GHAJ	Ghor Haditha	14.31	117	Pn	Pn	01 47 47.1	+2.9
ASF	Jabal al Asfar	14.79	111	Pn	P	01 47 57.1	+0.3
	comp=E,0.1nm,0.3s,baz=339,slow=8.6,SNR=2.2						
EIL	Elat	14.90	123	Pn	Pn	01 47 50.5	-1.8
	comp=E,0.3nm,0.3s,baz=248,slow=5.4,SNR=1.9						
EIL				Sn	Sn	01 50 25.8	-12
	comp=E,0.2nm,0.3s,baz=245,slow=21,SNR=2.1						
NACGM	Naroch	16.72	12	iP	Pn	01 48 03.9	-12
SIRT	Sirnak	17.23	87	P	P	01 48 24.9	+1.0
SIRT				IAmb	IAmb	01 48 35.2	
	comp=Z,34nm,0.9s						
KVAR	Kislovodsk Arr	17.38	65	P	Pn	01 48 23.2	-1.0
	baz=266,slow=16,SNR=2.0						
KBZ	Khabaz	17.49	66	P	P	01 48 26.4	-0.1
	comp=Z,0.0nm,0.3s,baz=272,slow=12,SNR=1.9						
ESDC	Sonseca Array	19.05	281	P	Pn	01 48 45.1	+0.6
	comp=Z,0.0nm,0.3s,baz=76,slow=10,SNR=6.3						
MDT	Midelt	21.25	262	P	P	01 49 10.4	+2.5
	comp=Z,0.6nm,0.7s,baz=62,slow=5.8,SNR=4.1						
HFS	Hagfors	21.88	351	P	P	01 49 14.5	+0.3
	comp=Z,3.9nm,0.9s,baz=168,slow=14,SNR=2.1						
FINES	FINESS Array B	23.00	7	P	P	01 49 24.9	-1.3
	comp=Z,4.7nm,0.9s,baz=178,slow=9.2,SNR=7.6						
FINES	FINESS Array B	23.00	7	P	P	01 49 27.2	+1.1
EKA	Eskdalemuir Ar	23.02	324	P	P	01 49 27.6	+1.1
	comp=Z,0.9nm,0.3s,baz=124,slow=11,SNR=4.6						
NC405	NORSAR Array S	23.09	349	P	P	01 49 27.8	+0.7
NOA	NORSAR Array B	23.10	348	P	P	01 49 26.9	-0.4
	comp=Z,1.0nm,0.9s,baz=159,slow=9.6,SNR=3.8						
NOA				LR	LR	02 00 44.0	
	comp=Z,31nm,18.1s,baz=20,slow=43						
TORD	Torodi Ar. Bea	30.49	218	P	P	01 50 34.0	-0.7
	comp=Z,0.6nm,0.5s,baz=32,slow=8.7,SNR=7.0						
TORD	Torodi Ar. Bea	30.49	218	P	P	01 50 34.5	-0.2
ARCES	ARCESS Array B	30.99	3	P	P	01 50 38.8	+0.2
	comp=Z,1.9nm,0.8s,baz=194,slow=11,SNR=3.7						
ARCES	ARCESS Array B	30.99	3	P	P	01 50 39.1	+0.4
UOSS	Minazif	33.00	104	P	P	01 50 57.2	+0.5
UOSS				IAmb	IAmb	01 51 00.9	
	comp=Z,5.4nm,1.1s						
KKAR	Karatay Array	37.53	67	P	P	01 51 35.7	+0.1
GAR	Garm	38.32	73	P	P	01 51 42.8	+0.4
GAR				IAmb	IAmb	01 51 48.1	
	comp=Z,6.0nm,0.7s						
MK31	Makanchi Array	44.97	59	P	P	01 52 36.4	-0.3
MKAR	Makanchi Array	44.97	59	P	P	01 52 35.2	-1.5
	comp=Z,1.0nm,0.5s,baz=270,slow=8.3,SNR=9.9						
MKAR	Makanchi Array	44.97	59	P	P	01 52 38.0	+1.3
ZAA0	Zalesovo Array	45.29	49	P	P	01 52 39.8	+0.7
ZAA0				IAmb	IAmb	01 52 44.7	
	comp=Z,2.4nm,0.9s						
ZALV	Zalesovo Beam	45.29	49	P	P	01 52 38.4	-0.7
	comp=Z,1.6nm,0.4s,baz=276,slow=9.0,SNR=7.3						
ZALV	Zalesovo Beam	45.29	49	P	P	01 52 38.2	-0.9
WRA	Warramunga Arr	120.50	92	PKP	PKPdf	02 03 12.7	-0.9
	comp=Z,0.3nm,0.6s,baz=325,slow=2.1,SNR=5.0						
WRA	Warramunga Arr	120.50	92		PKPdf	02 03 11.9	-1.7
ASAR	Alice Springs	122.17	96	PKP	PKPdf	02 03 15.7	-1.0
	comp=Z,0.4nm,0.5s,baz=310,slow=1.7,SNR=7.4						

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*NEIC **02** 01:58:28.6±1.7, 25°.3S±0°.1×179°.8E±0°.2, h497km±7km, mb4.6/21, Error ellipse: s-maj=23.4km s-min=16.7km az=80.0*

*IDC **02** 01:58:28.5±1.7, 25°.15S×179°.77E, h501km±16km, mb3.8/9, mb1 3.8/12, mb1mx3.6/39, mbtmp4.6/12, Error ellipse: s-maj=28.9km s-min=13.3km az=158.0*

ISC 02 01:58:27.4±0.7**, 25°.26S**±0°.09×**179°.86E**±0°.10**, h493km, n49, σ0ˢ.90**/52**, mb4.5**/20**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.68	347	P	P	02 00 20.6	+0.1
	3.7nm,0.3s,baz=196,slow=7.5,SNR=14						
MSVF	Nonsavu	7.68	347	P	P	02 00 20.8	+0.2
DZM	Mont Dzumac	12.70	282	P	P	02 01 14.9	+1.3
	0.3nm,0.3s,baz=103,slow=18,SNR=2.3						
URZ	Urewera	13.17	190	P	P	02 01 20.5	+2.3
	0.8nm,0.3s,baz=302,slow=23,SNR=2.3						
URZ				S	S	02 03 37.5	-1.6
	0.6nm,0.3s,baz=121,slow=23,SNR=1.9						
BHW	Baring Head	16.63	193	P	P	02 01 54.8	+0.2
QRZ	Quartz Range	16.68	200	P	P	02 01 56.2	+1.0
ARMA	Armidale	25.45	252	P	P	02 03 16.6	+1.1
EIDS	Eidsvold	26.00	264	P	P	02 03 20.8	+0.6
EIDS				IAmb	IAmb	02 03 22.1	
	comp=Z,10nm,1.0s						
CTAO	Charters Tower	31.38	273	P	P	02 04 08.1	+0.8
CTAO				IAmb	IAmb	02 04 08.9	
	comp=Z,16nm,0.8s						
STKA	Stephens Creek	34.12	250	P	P	02 04 31.0	+0.6
	comp=Z,2.3nm,0.4s,baz=98,slow=9.8,SNR=5.5						
STKA	Stephens Creek	34.12	250	P	P	02 04 31.1	+0.7
COEN	Coen	36.23	281	P	P	02 04 49.1	+0.9
COEN				IAmb	IAmb	02 05 38.6	
	comp=Z,25nm,1.5s						
BBOO	Buckleboo	38.81	248	P	P	02 05 08.4	-0.8
AS31	Alice Springs	41.70	262	P	P	02 05 32.6	0.0
ASAR	Alice Springs	41.70	262	P	P	02 05 32.5	-0.2
	comp=Z,3.1nm,0.3s,baz=91,slow=7.2,SNR=53						
ASAR				S	S	02 11 14.3	+0.8
	comp=Z,0.6nm,0.8s,baz=102,slow=14,SNR=4.6						
ASAR	Alice Springs	41.70	262	P	P	02 05 32.0	-0.6
WR0	Warramunga Arr	42.02	268	P	P	02 05 34.4	-0.8
WR0				IAmb	IAmb	02 05 34.9	
	comp=Z,15nm,1.3s						
WB2	Warramunga Arr	42.20	268	P	P	02 05 36.0	-0.5
WB2				IAmb	IAmb	02 05 36.3	
	comp=Z,12nm,0.5s						
WRAB	Tennant Creek	42.20	268	P	P	02 05 35.9	-0.6
WRAB				IAmb	IAmb	02 06 15.7	
	comp=Z,24nm,0.8s						
WB0	Warramunga Arr	42.20	268	P	P	02 05 35.8	-0.8
WB0				IAmb	IAmb	02 05 36.7	
	comp=Z,12nm,0.6s						
WRA	Warramunga Arr	42.21	268	P	P	02 05 36.0	-0.6
	comp=Z,7.3nm,0.4s,baz=103,slow=7.6,SNR=115						
WRA				ScP	ScP	02 10 23.9	+0.9
	comp=Z,0.1nm,0.4s,baz=109,slow=4.1,SNR=4.6						
WRA				S	S	02 11 18.8	-2.0
	comp=Z,1.8nm,0.9s,baz=100,slow=12,SNR=8.3						
WRA	Warramunga Arr	42.21	268	P	P	02 05 36.0	-0.6
FORT	Forrest	45.73	251	P	P	02 06 02.9	-1.0
FORT				IAmb	IAmb	02 07 28.2	
	comp=Z,34nm,1.1s						
MTN	Manton Dam	47.45	276	P	P	02 06 15.8	-1.2
KNRA	Kununurra	48.57	271	P	P	02 06 25.4	0.0
FITZ	Fitzroy Crossi	50.61	267	P	P	02 06 40.4	-0.1
	comp=Z,8.6nm,0.7s,baz=112,slow=6.4						
FAKI	Fak Fak	50.87	288	P	P	02 06 41.7	-0.8
FAKI				IAmb	IAmb	02 06 58.3	
	comp=Z,22nm,1.1s						
SIJI	Sorong	52.76	290	P	P	02 06 55.4	-0.8
	comp=Z,16nm,0.4s,baz=104,slow=7.4,SNR=11						
PSA00	Pilbara Seismi	54.80	261	P	P	02 07 08.8	-1.8
MORW	Morawa	56.30	251	P	P	02 07 20.3	-0.6
MORW				IAmb	IAmb	02 08 04.9	
	comp=Z,61nm,1.6s						
TOLI2	Tolitoli	62.80	285	P	P	02 08 05.8	+1.2
TOLI2				IAmb	IAmb	02 09 16.8	
	comp=Z,14nm,1.0s						
KSRS	Korea Array	79.20	320	P	P	02 09 41.4	+0.7
	comp=Z,2.0nm,0.8s,baz=130,slow=6.7,SNR=4.8						
USRK	Ussuriysk Ar.	81.83	327	P	P	02 09 54.2	0.0
	comp=Z,2.6nm,0.8s,baz=138,slow=3.4,SNR=4.9						
SNAA	Sanae	83.31	179	P	P	02 10 01.5	0.0
NVAR	Mina Array Bea	85.81	44	P	P	02 10 14.3	-0.1
	comp=Z,0.7nm,0.7s,baz=220,slow=8.3,SNR=6.0						
NVAR	Mina Array Bea	85.81	44	P	P	02 10 14.0	-0.5
TXAR	Lajitas Array	91.25	58	P	P	02 10 40.4	+0.5
	comp=Z,1.0nm,0.9s,baz=215,slow=5.5,SNR=9.6						
ARCES	ARCESS Array B	133.19	348	SKPbc	SKPbc	02 19 27.1	-0.3
	comp=Z,3.2nm,0.9s,baz=25,slow=3.4,SNR=9.6						
FINES	FINESS Array B	139.69	341	SKPbc	SKPbc	02 19 46.8	-0.1
	comp=Z,2.5nm,0.8s,baz=48,slow=2.1,SNR=3.5						
NOA	NORSAR Array B	143.40	351	PKP	PKPab	02 17 01.9	-1.0
	comp=Z,1.0nm,0.9s,baz=12,slow=2.3,SNR=4.5						
KONO	Kongsberg	144.96	351	PKPdf	PKPdf	02 17 07.6	+0.2
PABE	Paberze	145.01	336	PKPdf	PKPdf	02 17 07.7	+0.1
AKASG	Malin Array Be	146.03	326	PKPbc	PKPdf	02 17 10.3	+0.8
	comp=Z,1.8nm,0.4s,baz=43,slow=4.5,SNR=12						
AKBB	Malin Array Si	146.03	326	PKPbc	PKPab	02 17 12.3	-0.9
BRTR	Keskin Array B	148.28	305	PKPbc	PKPbc	02 17 17.9	0.0
	comp=Z,0.8nm,0.6s,baz=150,slow=1.9,SNR=1.7						
BRTR	Keskin Array B	148.28	305	PKPbc	PKPbc	02 17 16.8	-1.1
CSS	Mathiatis	149.59	296	PKPbc	PKPbc	02 17 19.5	-1.6
BUR08	Bucovina Ar. S	150.00	325	PKPbc	PKPbc	02 17 20.5	-1.3
ELL	Elmali	151.93	301	PKPbc	PKPbc	02 17 26.2	-0.3

IDC 02 02:06:16.6±7.3**, 45°.80N**×**146°.92E, h0km, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.4**/39**, mbtmp3.6**/4**, ML2.2**/1**, Error ellipse: s-maj=352.0km s-min=79.6km az=114.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	10.13	40	Pn	Pn	02 08 43.2	+0.1
	0.1nm,0.3s,baz=205,slow=3.0,SNR=2.5						
H11N2	WAKE ISLAND Hy	30.78	141	T	T	02 43 59.2	
	baz=336,slow=75,SNR=7.3						
H11N1	WAKE ISLAND Hy	30.79	141	T	T	02 44 04.8	
	baz=336,slow=75,SNR=8.9						
H11N3	WAKE ISLAND Hy	30.79	141	T	T	02 44 02.6	
	baz=336,slow=75,SNR=6.2						
H11S1	WAKE ISLAND Hy	31.77	142	T	T	02 45 19.0	
	baz=337,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	31.78	142	T	T	02 45 17.9	
	baz=337,slow=76,SNR=8.5						
H11S2	WAKE ISLAND Hy	31.79	142	T	T	02 45 23.0	
	baz=337,slow=76,SNR=7.2						
ILAR	Eielson Array	39.95	38	P	P	02 13 51.8	-0.4
	0.3nm,0.6s,baz=266,slow=6.7,SNR=5.6						
PDAR	Pinedale Array	68.71	50	P	P	02 17 22.5	+0.4
	0.4nm,0.6s,baz=287,slow=1.8,SNR=4.7						
TXAR	Lajitas Array	81.65	56	P	P	02 18 36.6	-0.1
	0.2nm,0.5s,baz=299,slow=3.9,SNR=8.0						

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*IDC **02** 02:07:16.7±1.4, 6°.57N×126°.58E, h83km±11km, mb3.8/13, mb1 4.0/15, mb1mx3.6/45, mbtmp4.2/15, Error ellipse: s-maj=26.1km s-min=10.7km az=66.0*

*DJA **02** 02:07:16.3±0.7, 6°N±5°×12°6E±°, h10km, M4.5/8, mb4.6/8, mB4.9/4, MLv4.5/5, Mw(mB)4.2/4, MwMwp5.8/1, Mwp5.8/1*

*NEIC **02** 02:07:17.4±1.6, 6°.5N±0°.1×126°.5E±0°.1, h82km±7km, mb4.5/13, Error ellipse: s-maj=24.2km s-min=10.8km az=50.0*

*MAN **02** 02:07:20.6, 6°.67N×126°.02E, h18km, mb4.3, ML3.1, MS2.8*

ISC 02 02:07:15.5±0.5**, 6°.54N**±0°.06×**126°.57E**±0°.09**, h68km, n49, σ1ˢ.31**/55**, mb4.2**/19**, 4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.51	323	⇓eP	Pn	02 07 29.1	+0.8
MATI				eS	Sn	02 07 39.3	+1.6
DDMP	Don Marcelino,	0.95	243	⇓eP	Pn	02 07 33.0	-0.4
DAV	Davao City (W)	1.12	298	P	Pn	02 07 36.0	+0.6
	329nm,0.3s,baz=95,slow=2.7,SNR=25						
DAV				S	Sn	02 07 53.1	+2.9
	162nm,0.3s,baz=77,slow=23,SNR=25						
DAV	Davao City (W)	1.12	298		Pn	02 07 36.8	+1.4
GLSP	General Luna,	3.26	352	⇓eP	Pn	02 08 08.7	+4.4
GLSP				iS	Sn	02 08 46.4	+4.6
PAGZ	Pagadian	3.42	293	⇓eP	Pn	02 08 07.0	+0.5
GTOI	Gorontalo	6.85	211	P	Pn	02 08 54.1	+0.7
	0.3nm922nm82nm,0.8s						
MRSI	Marisa	7.58	218	P	Pn	02 09 05.0	+1.5
	0.4nm30nm,0.6s						
TOLI2	Tolitoli	7.90	227	Pn	Pn	02 09 05.6	-2.1
SANI	Sanana	8.55	184	P	Pn	02 09 16.2	-0.5
	706nm34nm,0.9s						
SIJI	Sorong	8.72	147	P	Pn	02 09 21.5	+2.4
	2.7nm,0.3s,baz=338,slow=18,SNR=4.4						
APSI	Ampana	8.88	214	P	Pn	02 09 22.0	+0.8
	895nm36nm,0.6s						
FAKI	Fak Fak	10.97	149	Pn	Pn	02 09 53.1	+3.3
TTSI	Tana Toraja	11.66	215	P	Pn	02 10 00.9	+1.7
	28µm35nm,1.1s						
KAPI	Kappang	13.34	211	P	Pn	02 10 22.7	+0.7
	0.2nm,0.3s,baz=51,slow=15,SNR=4.6						
SBUM	Sibu	14.87	255	P	P	02 10 47.8	+1.5
EDFI	Ende, Flores	15.94	198	P	P	02 10 58.6	+0.3
MTN	Manton Dam	19.78	167	P	Pn	02 11 41.1	-1.3
MTN				IAmb	IAmb	02 11 45.2	
	comp=Z,23nm,1.1s						
KNRA	Kununurra	22.18	174	P	P	02 12 06.8	+0.6
KNRA				IAmb	IAmb	02 12 13.2	
	comp=Z,46nm,1.4s						
FITZ	Fitzroy Crossi	24.50	182	P	P	02 12 28.6	0.0
	comp=Z,4.2nm,0.5s,baz=5.4,slow=9.7,SNR=32						
WB0	Warramunga Arr	27.25	164	P	P	02 12 52.9	-0.7
WB0				IAmb	IAmb	02 13 02.1	
	comp=Z,14nm,1.4s						
WRAB	Tennant Creek	27.40	164	P	P	02 12 53.6	-1.2
WRA	Warramunga Arr	27.40	164	P	P	02 12 54.5	-0.4
	comp=Z,0.8nm,0.6s,baz=343,slow=10,SNR=8.0						
WRA				PcP	PcP	02 16 11.4	-1.1
	comp=Z,0.7nm,1.1s,baz=339,slow=2.0,SNR=2.3						
WRA	Warramunga Arr	27.40	164	P	P	02 12 53.3	-1.6
WB2	Warramunga Arr	27.41	164	P	P	02 12 54.8	-0.1
PSI	Prapat	27.80	264	P	P	02 12 58.8	+0.1
	comp=Z,1.7nm,0.3s,baz=54,slow=19						
RPSI	Rantau Prapat	27.81	263	P	P	02 12 58.8	+0.1
PSA00	Pilbara Seismi	28.70	193	P	P	02 13 05.5	-0.9
PSA00				IAmb	IAmb	02 13 06.6	
	comp=Z,7.0nm,0.7s						
CMAR	Chiang Mai Arr	29.40	296	P	P	02 13 11.7	-1.1
	comp=Z,1.5nm,0.3s,baz=100,slow=9.2,SNR=2.6						
ASAR	Alice Springs	30.86	167	P	P	02 13 25.8	+0.2
	comp=Z,1.0nm,0.4s,baz=348,slow=7.3,SNR=16						
ASAR				PcP	PcP	02 16 21.8	+0.6
	comp=Z,0.4nm,0.5s,baz=356,slow=3.1,SNR=2.8						
MJAR	Matsushiro Arr	31.71	18	P	P	02 13 32.1	-0.8
	comp=Z,0.8nm,0.4s,baz=200,slow=5.3,SNR=1.9						
FORT	Forrest	37.13	178	P	P	02 14 20.0	+0.3
BBOO	Buckleboo	40.16	168	P	P	02 14 44.9	-0.2
BBOO				IAmb	IAmb	02 15 03.2	
	comp=Z,14nm,1.1s						
STKA	Stephens Creek	40.80	160	P	P	02 14 49.9	-0.5
	comp=Z,3.4nm,0.7s,baz=347,slow=8.1,SNR=5.6						
STKA	Stephens Creek	40.80	160	P	P	02 14 51.5	+1.1
SONM	Songino Array	44.61	341	P	P	02 15 20.4	-0.8
	comp=Z,0.3nm,0.4s,baz=188,slow=10,SNR=3.5						
MK31	Makanchi Array	55.19	324	P	P	02 16 40.7	-0.7
MK31				IAmb	IAmb	02 16 58.3	
	comp=Z,2.7nm,1.1s						
MKAR	Makanchi Array	55.19	324	P	P	02 16 40.7	-0.6
	comp=Z,1.3nm,0.4s,baz=115,slow=7.2,SNR=31						
MKAR				PcP	PcP	02 17 41.5	-0.2
	comp=Z,0.9nm,0.8s,baz=111,slow=6.6,SNR=3.6						
MKAR	Makanchi Array	55.19	324	P	P	02 16 40.5	-0.9
ZALV	Zalesovo Beam	58.04	332	P	P	02 17 00.2	-1.2
	comp=Z,0.4nm,0.3s,baz=123,slow=5.3,SNR=3.7						
ZALV				PcP	PcP	02 17 51.7	-0.9
	comp=Z,0.2nm,0.3s,baz=109,slow=8.3,SNR=2.1						
NRIK	Noril'sk	67.68	346	P	P	02 18 04.8	-0.4
	comp=Z,1.8nm,0.6s,baz=90,slow=6.6,SNR=3.7						
ABKAR	Akbulak array	69.90	320	P	P	02 18 18.0	-1.4
ARU	Arti	72.50	327	P	P	02 18 34.7	-0.2
ARU				IAmb	IAmb	02 18 35.6	
	comp=Z,10nm,1.4s						
ARCES	ARCESS Array B	87.78	340	P	P	02 19 56.1	-0.7
	comp=Z,1.0nm,0.6s,baz=60,slow=2.9,SNR=7.3						
ARCES	ARCESS Array B	87.78	340	P	P	02 19 56.4	-0.4
FINES	FINESS Array B	89.30	332	P	P	02 20 03.0	-1.1
	comp=Z,3.6nm,1.0s,baz=42,slow=4.5,SNR=6.3						
FINES	FINESS Array B	89.30	332	P	P	02 20 03.2	-0.9
TORD	Torodi Ar. Bea	121.86	290	PKP	PKiKP	02 26 02.2	-1.0
	comp=Z,1.0nm,0.6s,baz=30,slow=2.4,SNR=7.9						
TORD	Torodi Ar. Bea	121.86	290		PKiKP	02 26 02.7	-0.5

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*IDC **02** 02:07:18.3±3.8, 36°.21N×30°.23E, h0km, mb3.9/2, mb1 3.7/4, mb1mx3.4/39, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=53.3km s-min=33.6km az=12.0*

*DDA **02** 02:07:22.3, 36°.01N×30°.65E, h21km±1km, ML2.9*

*ISK **02** 02:07:22.0, 36°.02N×30°.61E, h18km, ML2.8/18*

*NIC **02** 02:07:23.4±0.0, 36°.13N×30°.69E, h35km±36km, Ml3.0/4*

ISC 02 02:07:22.2±1.1**, 35°.99N**±0°.03×**30°.65E**±0°.02**, h20km**±4km**, n67, σ1ˢ.00**/79**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.41	324	iP	Pg	02 07 30.7	-0.1
AKUM				iS	Sb	02 07 37.2	+0.5
KEMT	Kemer-ANTALYA	0.61	353	PG	Pb	02 07 34.1	-0.2
KEMT				SG	Sg	02 07 42.9	+0.1
DEMR	Demre-Antalya	0.65	292	PG	Pb	02 07 34.4	-0.4
KSL	Kastellorizon	0.87	281	P	Pn	02 07 39.7	+0.2
KSL				S	Sn	02 07 51.3	-0.2
KSL				AML	AML	02 07 58.6	
	0.7nm,0.5s						
KSL				AML	AML	02 07 58.6	
	0.7nm,0.5s						
KSL				AML	AML	02 07 59.4	
	0.5nm,0.5s						
KSL				AML	AML	02 07 59.4	
	0.5nm,0.5s						
AKAS	Kas	0.88	286	iP	Pg	02 07 39.3	0.0
AKAS				IAML		02 07 59.0	
	comp=N,535nm,0.6s						
AKAS				IAML		02 07 59.0	
	comp=E,348nm,0.4s						
AKAS	Kas	0.88	286	PG	Pg	02 07 39.2	-0.2
AKAS				SG	Sg	02 07 50.9	-0.1
ANTB	Antalya	0.91	0	PG	Pb	02 07 39.5	+0.2
ANTB				SG	Sn	02 07 52.4	0.0
ELL	Elmali	0.96	322	PG	Pb	02 07 40.3	0.0
ELL				SG	Sg	02 07 53.7	0.0
ELL	Elmali	0.96	322	P	Pb	02 07 40.0	-0.3
ELL				S	Sb	02 07 51.8	-0.8
KORT	Korkueli	1.03	347	iP	Pn	02 07 42.1	+0.4
KORT				iS	Sg	02 07 56.5	+0.5
KORT	Korkueli	1.03	347	PG	Pn	02 07 41.8	0.0
KORT				SG	Sg	02 07 56.2	+0.2
KEPZ	Antalya-Kepez	1.19	40	iP	Pn	02 07 43.0	-0.9
BUCA	Burdur, Bucak-	1.33	357	iP	Pb	02 07 46.9	+0.2
GAZI	Gazipasa	1.37	79	iP	Pn	02 07 45.5	-0.8
GAZI				IAML		02 08 05.0	
	comp=E,256nm,0.6s						
GAZI				IAML		02 08 06.0	
	comp=N,156nm,0.7s						
GAZI	Gazipasa	1.37	79	PN	Pn	02 07 45.8	-0.5
FETY	Fethiye	1.42	297	iP	Pb	02 07 47.6	-0.4
FETY	Fethiye	1.42	297	PN	Pn	02 07 47.2	+0.3
FETY				SN	Sb	02 08 05.4	-0.2
CAME	Cameli-Denizli	1.44	312	PN	Pn	02 07 47.5	+0.1
BCK	Bucak	1.47	358	PN	Pn	02 07 48.1	+0.4

GOLH	Golhisar	1.52	325	*i* P	Pb	02 07 49.6	-0.2
CAEL	Denizli, Camel	1.55	317	*i* P	Pn	02 07 49.3	+0.4
CAEL				IAML		02 08 26.0	
	comp=N,150nm,0.9s						
AKMS	Akamas	1.69	125	P	Pb	02 07 52.0	-0.6
AKMS				AML	AML	02 08 26.3	
	comp=N,0.6nm,0.5s						
AKMS				AML	AML	02 08 36.7	
	comp=N,0.5nm,0.5s						
SEYD	Seydisehir-KON	1.71	34	PN	Pn	02 07 51.6	+0.6
SEDI	Konya, Seydise	1.71	31	*i* P	Pn	02 07 51.5	+0.5
BRDR	BURDUR-Merkez	1.76	345	*i* P	Pb	02 07 53.1	-0.8
HDMB	Hadim	1.77	56	PN	Pn	02 07 52.9	+0.9
ALFC	Alefka	1.80	117	P	Pn	02 07 52.9	+0.7
ALFC				S	Sn	02 08 14.9	+0.4
ALFC				AML	AML	02 08 28.8	
	comp=N,0.4nm,0.5s						
ALFC				AML	AML	02 08 28.8	
	comp=N,0.4nm,0.5s						
ALFC				AML	AML	02 08 30.5	
	comp=N,0.5nm,0.6s						
ALFC				AML	AML	02 08 30.5	
	comp=N,0.5nm,0.6s						
DALY	Dalyan (Mula)	1.81	298	*i* P	Pn	02 07 52.8	+0.6
DALY	Dalyan (Mula)	1.81	298	PN	Pn	02 07 52.8	+0.6
ERMK	Ermenek	1.94	70	*i* P	Pb	02 07 56.0	-1.1
ERMK				*i* S	Sb	02 08 21.6	+0.6
ERMK				IAML		02 08 32.0	
	comp=N,92nm,0.4s						
ERMK				IAML		02 08 34.0	
	comp=E,106nm,0.7s						
NATA	Nata	1.98	127	P	Pb	02 07 56.5	-1.2
BAGO	Egridir - ISPA	2.00	3	*i* P	Pn	02 07 55.5	+0.5
TEKE	Tekeli-Mersin	2.01	85	PN	Pn	02 07 56.4	+1.4
TAVA	DENIZLI_Tavas	2.02	317	*i* P	Pn	02 07 55.4	0.0
ARG	Arkhangelos	2.05	277	PN	Pn	02 07 55.9	+0.3
TURN	Turunc	2.09	293	*i* P	Pn	02 07 56.9	+0.7
TURN	Turunc	2.09	293	PN	Pn	02 07 56.7	+0.6
BERE	Bereket-Mersin	2.12	80	PN	Pn	02 07 57.9	+1.2
KKBE	Karaman, Kazim	2.22	56	*i* P	Pb	02 07 60.0	-1.7
KMER	Konya-Meram	2.25	37	*i* P	Pn	02 07 59.8	+1.3
MULA	Mugla, Merkez-	2.25	305	*i* P	Pn	02 07 59.5	+1.0
DOGA	KONYA_Doganhis	2.26	21	*i* P	Pn	02 07 60.0	+1.3
KZIL	AFYON_Kizioren	2.30	350	*i* P	Pn	02 07 59.1	0.0
YVAC	Isparta, Yalva	2.32	12	*i* P	Pn	02 08 00.3	+0.8
GULN	MERSIN_Gulnar	2.36	85	*i* P	Pn	02 08 01.4	+1.6
KONT	Konya--Tatoy	2.38	35	*i* P	Pn	02 08 02.0	+1.7
KONT	Konya--Tatoy	2.38	35	PN	Pn	02 08 01.5	+1.2
KRMN	Karaman	2.42	60	PN	Pn	02 08 02.1	+1.4
CSS	Mathiatis	2.42	114	P	Pn	02 08 00.8	0.0
ASGA	Asgata	2.44	119	P	Pn	02 08 01.2	+0.2
PASA	Karahalli, USA	2.53	339	*i* P	Pn	02 08 02.8	+0.6
OSC1	CSNet OBS 1	2.54	168	S	Sb	02 08 36.8	-1.1
SHUT	Suhut-Afyon	2.56	358	PN	Pn	02 08 03.6	+0.9
DAT	Datca	2.58	287	*i* P	Pn	02 08 03.1	+0.1
LADK	Ladik-KONYA	2.60	31	PN	Pn	02 08 04.3	+1.1
MVOU	Mavrovouni	2.62	111	P	Pn	02 08 03.0	-0.5
MVOU				AML	AML	02 08 47.9	
	comp=E,0.1nm,0.6s						
AYDN	Tasoluk	2.77	308	*i* P	Pn	02 08 06.0	+0.4
KDHN	Kadinhani	2.78	25	*i* P	Pn	02 08 05.2	-0.6
BDRM	Kayabasi	2.79	293	*i* P	Pn	02 08 06.3	+0.5
USAK	Uak-Merkez	3.01	335	*i* P	Pn	02 08 08.9	+0.1
USAK				IAML		02 08 43.0	
	comp=E,69nm,1.0s						
KERG	Konya-Eregli	3.14	62	*i* P	Pn	02 08 12.6	+1.9
OSC2	CSNet OBS 4	3.20	155	S	Sn	02 08 52.5	+3.4
ZKR	Zakros	3.71	258	P	Pn	02 08 19.6	+1.1
BRTR	Keskin Array B	4.42	32	Pn	Pn	02 08 28.6	+0.3
	comp=E,0.4nm,0.3s,baz=214,slow=47,SNR=9.6						
BRTR				Sn	Sn	02 09 18.8	-0.4
	comp=E,0.2nm,0.3s,baz=220,slow=13,SNR=2.5						
GERES	GERESS Array B	17.88	321	P	Pn	02 11 22.0	-7.7
	comp=E,0.3nm,0.3s,baz=131,slow=12,SNR=4.1						
FINES	FINESS Array B	25.64	355	P	P	02 12 46.2	-4.0
	comp=E,5.5nm,1.0s,baz=173,slow=11,SNR=2.3						
MKAR	Makanchi Array	39.57	58	P	P	02 14 54.1	+2.2
	comp=E,0.6nm,0.8s,baz=258,slow=5.7,SNR=2.2						

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*ROM **02** 02:46:18.4±0.2, 43°.559N±0°.006×13°.742E±0°.010, h7^{km}, ML2.8/54, Error ellipse: s-maj=0.9km s-min=0.4km az=238.0*

*PRU **02** 02:46:20.1±0.0, 43°.61N×13°.90E, h0^{km}*

*LDG **02** 02:46:21.0±0.3, 43°.43N×13°.63E, h10^{km}, Ml2.5/16, Error ellipse: s-maj=7.8km s-min=4.0km az=62.0*

ISC 02 02:46:19.8±0.8**, 43°.54N**±0°.02×**13°.68E**±0°.02**, h12**^{km}±4^{km}**,**
n207, σ1^{s}59/263**, 29C-28D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOI	Ancona	0.06	283	⇑P	Pg	02 46 21.2	-0.9
AOI				S	Sg	02 46 22.9	-1.0
AOI				AML	AML		
	comp=N,14300μm,0.6s						
AOI				AML	AML		
	comp=E,21050μm,0.8s						
AOI	Ancona	0.06	283	P	Pg	02 46 21.1	-1.0
AOI				AML	AML		
	comp=E,21050μm,0.8s						
AOI				AML	AML		
	comp=N,14300μm,0.6s						
AOI				AML	AML		
	comp=E,21050μm,0.8s						
AOI				AML	AML		
	comp=N,14300μm,0.6s						
PCRO	Pietralacroce	0.13	303	P	Pg	02 46 22.6	-0.4
PCRO				S	Sg	02 46 25.2	-0.1
PCRO				AML	AML		
	comp=E,8525μm,0.5s						
PCRO				AML	AML		
	comp=N,7690μm,0.6s						
PCRO				AML	AML		
	comp=N,7695μm,0.6s						
PCRO				AML	AML		
	comp=E,8530μm,0.5s						
PCRO	Pietralacroce	0.13	303	⇑P	Pg	02 46 22.6	-0.3
PCRO				AML	AML		
	comp=E,8525μm,0.5s						
PCRO				AML	AML		
	comp=N,7695μm,0.6s						
PCRO				AML	AML		
	comp=E,8525μm,0.5s						
PCRO				AML	AML		
	comp=N,7690μm,0.6s						
PCRO				AML	AML		
	comp=E,8530μm,0.5s						
PCRO				AML	AML		
	comp=N,7695μm,0.6s						
PP3	Marolino	0.17	198	⇓P	Pg	02 46 23.1	-0.4
PP3				S	Sg	02 46 26.9	+0.8
PP3				AML	AML		
	comp=N,12150μm,0.2s						
PP3				AML	AML		
	comp=N,12000μm,0.1s						
PP3				AML	AML		
	comp=E,11650μm,0.2s						
PP3				AML	AML		
	comp=N,12200μm,0.2s						
PP3				AML	AML		
	comp=E,11050μm,0.2s						
PP3	Marolino	0.17	198	AML	AML		
	comp=N,12000μm,0.1s						
PP3				AML	AML		
	comp=E,11050μm,0.2s						
PP3				AML	AML		
	comp=N,12150μm,0.2s						
PP3				AML	AML		
	comp=E,11650μm,0.2s						
PP3				AML	AML		
	comp=E,11050μm,0.3s						
PP3				AML	AML		
	comp=N,12200μm,0.2s						
PP3				AML	AML		
	comp=E,11650μm,0.2s						
PP3				AML	AML		
	comp=N,12000μm,0.1s						
PP3				AML	AML		
	comp=E,11050μm,0.2s						
PP3				AML	AML		
	comp=N,12200μm,0.2s						
PP3				AML	AML		
	comp=E,11650μm,0.2s						
PP3				AML	AML		
	comp=N,12000μm,0.1s						
CIMA	Civitanova Mar	0.23	182	⇓P	Pg	02 46 24.7	+0.1
CIMA				S	Sg	02 46 30.0	+2.1
CIMA				AML	AML		
	comp=E,23350μm,0.1s						
CIMA				AML	AML		
	comp=N,8670μm,0.3s						
CIMA				AML	AML		
	comp=N,8670μm,0.3s						
CIMA				AML	AML		
	comp=E,23350μm,0.1s						
CIMA	Civitanova Mar	0.23	182	AML	AML		
	comp=E,23350μm,0.1s						
CIMA				AML	AML		
	comp=E,23350μm,0.1s						
CIMA				AML	AML		
	comp=N,8670μm,0.3s						
CIMA				AML	AML		
	comp=E,23350μm,0.1s						
CIMA				AML	AML		
	comp=N,8670μm,0.3s						
CIMA				AML	AML		
	comp=N,8670μm,0.3s						
CADA	Capodarco di F	0.35	170	P	Pg	02 46 26.5	-0.2
CADA				S	Sg	02 46 33.3	+1.9
CADA				AML	AML		
	comp=E,3200μm,0.3s						
CADA				AML	AML		
	comp=N,2745μm,1.4s						
CADA				AML	AML		
	comp=E,3205μm,0.2s						
CADA				AML	AML		
	comp=E,3200μm,0.2s						
CADA				AML	AML		
	comp=N,2745μm,1.4s						
CADA	Capodarco di F	0.35	170	⇑P	Pg	02 46 26.6	-0.1
CADA				AML	AML		
	comp=E,3200μm,0.3s						
CADA				AML	AML		
	comp=N,2745μm,1.4s						
CADA				AML	AML		
	comp=E,3205μm,0.3s						
CADA				AML	AML		
	comp=N,2745μm,1.4s						
CADA				AML	AML		
	comp=E,3200μm,0.2s						
CADA				AML	AML		
	comp=N,2745μm,1.4s						
TRE1	Treia	0.35	230	P	Pg	02 46 26.4	-0.4
TRE1				S	Sg	02 46 33.1	+1.6
CING	Cingoli	0.39	246	⇓P	Pg	02 46 27.1	-0.4
CING				S	Sg	02 46 34.0	+1.3
CING	Cingoli	0.39	246	⇓P	Pg	02 46 27.1	-0.3
MNTP	Montappone	0.43	201	P	Pg	02 46 28.0	-0.2
EL6	Elcito	0.47	244	⇓P	Pg	02 46 28.6	-0.4
EL6				S	Sg	02 46 36.8	+1.5
EL6	Elcito	0.47	244	⇓P	Pg	02 46 28.6	-0.4
SSM1	San Severino M	0.48	230	P	Pg	02 46 28.8	-0.3
MMUR	Monte Murano	0.51	259	P	Pg	02 46 29.7	0.0
GUMA	Gualdo di Mace	0.51	159	⇓P	Pg	02 46 29.9	+0.2
GUMA				S	Sb	02 46 39.4	+1.3
GUMA				AML	AML		
	comp=E,2350μm,0.3s						
GUMA				AML	AML		
	comp=N,1715μm,0.4s						
GUMA				AML	AML		
	comp=E,3315μm,0.2s						
GUMA				AML	AML		
	comp=N,1685μm,1.1s						
GUMA	Gualdo di Mace	0.51	159	⇓P	Pg	02 46 29.9	+0.2
GUMA				AML	AML		
	comp=E,2350μm,0.3s						
GUMA				AML	AML		
	comp=N,1715μm,0.4s						
GUMA				AML	AML		
	comp=E,3315μm,0.2s						
GUMA				AML	AML		
	comp=N,1685μm,1.1s						
GUMA				AML	AML		
	comp=E,2350μm,0.3s						
GUMA				AML	AML		
	comp=N,1715μm,0.4s						
GUMA				AML	AML		
	comp=E,3315μm,0.2s						
GUMA				AML	AML		
	comp=N,1685μm,1.1s						
MDAR	Monte D'Aria	0.52	229	P	Pg	02 46 29.4	-0.6
GAG1	Gagliole	0.54	236	P	Pg	02 46 29.7	-0.6
ARVD	Arcevia	0.54	266	P	Pg	02 46 29.8	-0.5
ARVD				S	Sg	02 46 39.9	+2.5
ARVD				AML	AML		
	comp=E,242μm,1.1s						
ARVD				AML	AML		
	comp=N,246μm,0.5s						
ARVD	Arcevia	0.54	266	⇓P	Pg	02 46 29.8	-0.5
ARVD				AML	AML		
	comp=E,242μm,1.1s						
ARVD				AML	AML		
	comp=N,246μm,0.5s						
ARVD				AML	AML		
	comp=E,242μm,1.1s						
ARVD				AML	AML		
	comp=N,246μm,0.5s						
ARVD				AML	AML		
	comp=E,242μm,1.1s						
ARVD				AML	AML		
	comp=N,246μm,0.5s						
CRM1	Catelraimondo	0.56	235	P	Pg	02 46 30.3	-0.3
CRM1				S	Sg	02 46 39.7	+1.6
MTL1	Matelica	0.56	240	P	Pg	02 46 30.2	-0.5
CSP1	Cessapalombo	0.56	218	P	Pg	02 46 30.1	-0.7
CSP1				S	Sg	02 46 40.8	+2.5
CSP1				AML	AML		
	comp=E,772μm,0.4s						
CSP1				AML	AML		
	comp=N,744μm,1.3s						
CSP1				AML	AML		
	comp=E,771μm,0.4s						
CSP1				AML	AML		
	comp=N,747μm,1.3s						
CSP1	Cessapalombo	0.56	218	⇓P	Pg	02 46 30.1	-0.7
CSP1				AML	AML		
	comp=E,772μm,0.4s						
CSP1				AML	AML		
	comp=N,744μm,1.3s						
CSP1				AML	AML		
	comp=E,776μm,0.4s						
CSP1				AML	AML		
	comp=N,748μm,1.3s						
OFFI	Offida	0.60	180	P	Pg	02 46 32.0	+0.6
OFFI				AML	AML		
	comp=E,1680μm,0.6s						
OFFI				AML	AML		
	comp=N,1825μm,0.6s						
OFFI	Offida	0.60	180	⇑P	Pg	02 46 32.2	+0.8
OFFI				AML	AML		
	comp=E,1680μm,0.6s						
OFFI				AML	AML		
	comp=N,1825μm,0.6s						
OFFI				AML	AML		
	comp=E,1680μm,0.6s						
OFFI				AML	AML		
	comp=N,1825μm,0.6s						
SNTG	Esanatoglia	0.61	243	⇓P	Pg	02 46 30.9	-0.7
SNTG				S	Sg	02 46 41.1	+1.5
SNTG				AML	AML		
	comp=E,233μm,1.2s						
SNTG				AML	AML		
	comp=N,499μm,0.2s						
SNTG	Esanatoglia	0.61	243	⇓P	Pg	02 46 30.9	-0.7
SNTG				AML	AML		
	comp=E,233μm,1.2s						
SNTG				AML	AML		
	comp=N,499μm,0.2s						
SNTG				AML	AML		
	comp=E,233μm,1.2s						
SNTG				AML	AML		
	comp=N,499μm,0.2s						
FDMO	Fiordimonte	0.66	221	P	Pg	02 46 31.7	-0.9
FDMO				S	Sb	02 46 44.0	+1.5
SSFR	Montelago di S	0.66	262	P	Pg	02 46 31.7	-0.9
SSFR				AML	AML		
	comp=N,836μm,0.2s						
SSFR				AML	AML		
	comp=N,766μm,0.2s						
SSFR				AML	AML		
	comp=E,584μm,0.3s						
SSFR				AML	AML		
	comp=E,592μm,0.2s						
SSFR	Montelago di S	0.66	262	⇑P	Pg	02 46 32.0	-0.6
SSFR				AML	AML		
	comp=E,592μm,0.2s						
SSFR				AML	AML		
	comp=N,836μm,0.2s						
SSFR				AML	AML		
	comp=E,584μm,0.3s						
SSFR				AML	AML		
	comp=N,766μm,0.2s						
FSSB	Fossombrone	0.67	284	P	Pg	02 46 32.5	-0.4
FSSB				AML	AML		
	comp=E,659μm,1.2s						
FSSB				AML	AML		
	comp=N,790μm,0.3s						
FSSB	Fossombrone	0.67	284	⇑P	Pg	02 46 32.6	-0.2
FSSB				AML	AML		
	comp=E,659μm,1.2s						
FSSB				AML	AML		
	comp=N,790μm,0.3s						
FSSB				AML	AML		
	comp=E,659μm,1.2s						
FSSB				AML	AML		
	comp=N,790μm,0.3s						
FRON	Frontone	0.69	269	⇑P	Pg	02 46 32.7	-0.6
FRON				S	Sg	02 46 44.0	+1.6
FRON				AML	AML		
	comp=E,314μm,1.3s						
FRON				AML	AML		
	comp=N,413μm,0.8s						
FRON				AML	AML		
	comp=E,314μm,1.3s						
FRON	Frontone	0.69	269	⇑P	Pg	02 46 32.7	-0.5
FRON				AML	AML		
	comp=E,314μm,1.3s						
FRON				AML	AML		
	comp=N,413μm,0.8s						
FRON				AML	AML		
	comp=E,314μm,1.3s						
FRON				AML	AML		
	comp=N,413μm,0.8s						
FOSV	Fossato di Vic	0.71	250	P	Pg	02 46 32.7	-0.8
FOSV				S	Sg	02 46 44.5	+1.6
FOSV				AML	AML		
	comp=E,434μm,0.2s						
FOSV				AML	AML		
	comp=N,381μm,0.2s						
FOSV				AML	AML		
	comp=E,434μm,0.2s						
FOSV	Fossato di Vic	0.71	250	⇑P	Pg	02 46 33.6	0.0
FOSV				AML	AML		
	comp=E,434μm,0.2s						
FOSV				AML	AML		
	comp=N,381μm,0.2s						
FOSV				AML	AML		
	comp=E,434μm,0.2s						
FOSV				AML	AML		
	comp=N,381μm,0.2s						
PESA	Pesaro	0.73	304	P	Pg	02 46 33.6	-0.3
PESA				AML	AML		
	comp=E,242μm,0.9s						
PESA				AML	AML		
	comp=N,274μm,0.2s						
PESA				AML	AML		
	comp=E,708μm,0.2s						
PESA				AML	AML		
	comp=N,868μm,0.2s						
PESA	Pesaro	0.73	304	⇑P	Pg	02 46 34.2	+0.3
PESA				AML	AML		
	comp=E,708μm,0.2s						
PESA				AML	AML		
	comp=N,868μm,0.2s						
PESA				AML	AML		
	comp=E,708μm,0.2s						
PESA				AML	AML		
	comp=N,868μm,0.2s						
TRTR	Tortoreto Alta	0.75	167	P	Pg	02 46 35.0	+0.8
CESI	CESI - Serrava	0.78	227	P	Pg	02 46 33.8	-1.0
CESI				S	Sb	02 46 47.9	+2.1
CESI				AML	AML		
	comp=E,428μm,0.2s						
CESI				AML	AML		
	comp=N,330μm,1.5s						
CESI	CESI - Serrava	0.78	227	⇓P	Pg	02 46 33.9	-0.9
CESI				S	Sb	02 46 48.0	+2.2
CESI				AML	AML		
	comp=E,428μm,0.2s						
CESI				AML	AML		
	comp=N,330μm,1.5s						
CESI				AML	AML		
	comp=E,428μm,0.2s						
CESI				AML	AML		
	comp=N,330μm,1.5s						
NARO	Abbazia di Nar	0.80	276	P	Pg	02 46 34.5	-0.7
NARO				AML	AML		
	comp=E,168μm,1.0s						
NARO				AML	AML		
	comp=N,164μm,0.3s						
NARO	Abbazia di Nar	0.80	276	⇓P	Pg	02 46 35.4	+0.1
NARO				AML	AML		
	comp=E,168μm,1.0s						
NARO				AML	AML		
	comp=N,164μm,0.3s						
NARO				AML	AML		
	comp=E,168μm,1.0s						
NARO				AML	AML		
	comp=N,164μm,0.3s						
NRCA	Norcia	0.82	211	P	Pg	02 46 34.3	-1.3
NRCA				S	Sg	02 46 48.3	+2.1
NRCA				AML	AML		
	comp=N,836μm,0.8s						
NRCA				AML	AML		
	comp=N,855μm,0.8s						
NRCA				AML	AML		
	comp=N,836μm,0.8s						
NRCA				AML	AML		
	comp=E,1335μm,0.2s						
NRCA				AML	AML		
	comp=E,1395μm,0.2s						
NRCA	Norcia	0.82	211	⇑P	Pg	02 46 34.5	-1.0
NRCA				AML	AML		
	comp=E,1335μm,0.2s						
NRCA				AML	AML		
	comp=N,836μm,0.8s						
NRCA				AML	AML		
	comp=E,1395μm,0.2s						
NRCA				AML	AML		
	comp=N,855μm,0.8s						
NRCA				AML	AML		
	comp=E,1335μm,0.2s						
NRCA				AML	AML		
	comp=N,836μm,0.8s						
NRCA				AML	AML		
	comp=E,1395μm,0.2s						
NRCA				AML	AML		
	comp=N,855μm,0.8s						
ATFO	Monte Foce - G	0.83	258	P	Pg	02 46 35.0	-0.7
ATFO				AML	AML		
	comp=N,392μm,0.4s						
ATFO				AML	AML		
	comp=E,343μm,1.6s						
ATFO				AML	AML		
	comp=N,392μm,0.4s						
ATFO	Monte Foce - G	0.83	258	⇓P	Pg	02 46 35.9	+0.2
ATFO				AML	AML		
	comp=E,343μm,1.6s						
ATFO				AML	AML		
	comp=N,392μm,0.4s						
ATFO				AML	AML		
	comp=E,343μm,1.6s						
ATFO				AML	AML		
	comp=N,392μm,0.4s						
PIEI	Pieia	0.83	270	P	Pg	02 46 34.9	-0.9
PIEI				S	Sg	02 46 48.4	+1.6
PIEI				AML	AML		
	comp=N,183μm,0.3s						
PIEI				AML	AML		
	comp=E,332μm,1.4s						
PIEI	Pieia	0.83	270	⇓P	Pg	02 46 35.1	-0.8
PIEI				AML	AML		
	comp=E,332μm,1.4s						
PIEI				AML	AML		
	comp=N,183μm,0.3s						
PIEI				AML	AML		
	comp=E,332μm,1.4s						

PIEI				AML	AML		
	comp=N,183µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.84**	**246**	P	**Pg**	**02 46 34.9**	**-1.0**
ATCC				S	**Sb**	**02 46 49.5**	**+2.0**
ATCC				AML	AML		
	comp=E,795µm,0.6s						
ATCC				AML	AML		
	comp=N,781µm,0.4s						
ATCC				AML	AML		
	comp=E,796µm,0.6s						
ATCC				AML	AML		
	comp=N,782µm,0.4s						
ATCC	**AVT- Casa Cast**	**0.84**	**246**	P	**Pg**	**02 46 35.1**	**-0.8**
ATCC				AML	AML		
	comp=E,795µm,0.6s						
ATCC				AML	AML		
	comp=N,781µm,0.4s						
ATCC				AML	AML		
	comp=E,796µm,0.6s						
ATCC				AML	AML		
	comp=N,782µm,0.4s						
PE3	**Peglio**	**0.88**	**281**	P	**Pg**	**02 46 36.7**	**0.0**
PE3				AML	AML		
	comp=E,906µm,0.4s						
PE3				AML	AML		
	comp=N,1495µm,0.4s						
PE3				AML	AML		
	comp=E,906µm,0.4s						
PE3	**Peglio**	**0.88**	**281**	⇓P	**Pg**	**02 46 37.3**	**+0.6**
PE3				AML	AML		
	comp=E,906µm,0.4s						
PE3				AML	AML		
	comp=N,1495µm,0.4s						
PE3				AML	AML		
	comp=E,906µm,0.4s						
PE3				AML	AML		
	comp=N,1495µm,0.4s						
ASSB	**Assisi San Ben**	**0.90**	**237**	P	**Pg**	**02 46 35.9**	**-1.1**
ASSB				AML	AML		
	comp=E,803µm,0.4s						
ASSB				AML	AML		
	comp=N,625µm,0.3s						
ASSB	**Assisi San Ben**	**0.90**	**237**	⇑P	**Pg**	**02 46 36.5**	**-0.6**
ASSB				AML	AML		
	comp=E,803µm,0.4s						
ASSB				AML	AML		
	comp=N,625µm,0.3s						
APEC	**Apecchio**	**0.92**	**272**	P	**Pg**	**02 46 36.7**	**-0.7**
APEC				AML	AML		
	comp=E,418µm,0.3s						
APEC				AML	AML		
	comp=N,394µm,0.9s						
APEC				AML	AML		
	comp=N,395µm,0.9s						
APEC	**Apecchio**	**0.92**	**272**	P	**Pg**	**02 46 37.5**	**+0.1**
APEC				AML	AML		
	comp=E,418µm,0.3s						
APEC				AML	AML		
	comp=N,394µm,0.9s						
APEC				AML	AML		
	comp=E,418µm,0.3s						
APEC				AML	AML		
	comp=N,395µm,0.9s						
ATPI	**Pietralunga -**	**0.94**	**265**	P	**Pg**	**02 46 37.0**	**-0.8**
ATPI				AML	AML		
	comp=E,206µm,1.1s						
ATPI				AML	AML		
	comp=N,335µm,0.4s						
ATPI	**Pietralunga -**	**0.94**	**265**	P	**Pg**	**02 46 36.3**	**-1.5**
ATPI				AML	AML		
	comp=E,206µm,1.1s						
ATPI				AML	AML		
	comp=N,335µm,0.4s						
ATPI				AML	AML		
	comp=E,206µm,1.1s						
ATPI				AML	AML		
	comp=N,335µm,0.4s						
ATVO	**AVT- Monte Val**	**0.94**	**261**	P	**Pg**	**02 46 36.9**	**-1.0**
ATVO				AML	AML		
	comp=E,211µm,0.5s						
ATVO				AML	AML		
	comp=N,214µm,0.5s						
ATVO	**AVT- Monte Val**	**0.94**	**261**	⇓P	**Pg**	**02 46 37.7**	**-0.2**
ATVO				AML	AML		
	comp=E,211µm,0.5s						
ATVO				AML	AML		
	comp=N,214µm,0.5s						
ATVO				AML	AML		
	comp=E,211µm,0.5s						
ATVO				AML	AML		
	comp=N,214µm,0.5s						
ATTE	**AVT- Monte Tez**	**1.03**	**251**	P	**Pg**	**02 46 38.9**	**-0.6**
ATTE	**AVT- Monte Tez**	**1.03**	**251**	⇓P	**Pn**	**02 46 42.2**	**+2.1**
BADI	**Badiali**	**1.04**	**269**	P	**Pg**	**02 46 39.5**	**-0.4**
BADI				AML	AML		
	comp=N,401µm,0.4s						
BADI				AML	AML		
	comp=E,242µm,0.4s						
BADI	**Badiali**	**1.04**	**269**	⇓P	**Pn**	**02 46 42.1**	**+1.8**
BADI				AML	AML		
	comp=E,242µm,0.4s						
BADI				AML	AML		
	comp=N,401µm,0.4s						
LNSS	**Leonessa**	**1.04**	**207**	⇓P	**Pg**	**02 46 38.2**	**-1.6**
LNSS				AML	AML		
	comp=N,586µm,1.1s						
LNSS				AML	AML		
	comp=N,586µm,1.1s						
LNSS				AML	AML		
	comp=E,552µm,0.4s						
LNSS	**Leonessa**	**1.04**	**207**	P	**Pg**	**02 46 38.3**	**-1.6**
LNSS				AML	AML		
	comp=E,552µm,0.4s						
LNSS				AML	AML		
	comp=N,586µm,1.1s						
LNSS				AML	AML		
	comp=E,552µm,0.4s						
LNSS				AML	AML		
	comp=N,586µm,1.1s						
PARC	**Parchiule**	**1.05**	**277**	P	**Pg**	**02 46 39.3**	**-0.8**
PARC				AML	AML		
	comp=N,232µm,0.7s						
PARC				AML	AML		
	comp=E,194µm,1.4s						
PARC	**Parchiule**	**1.05**	**277**	⇓P	**Pb**	**02 46 41.6**	**+1.6**
PARC				AML	AML		
	comp=E,194µm,1.4s						
PARC				AML	AML		
	comp=N,232µm,0.7s						
RM33	**Pellescritta (**	**1.08**	**199**	P	**Pg**	**02 46 38.8**	**-1.8**
RM33				AML	AML		
	comp=N,508µm,1.3s						
RM33				AML	AML		
	comp=N,508µm,0.7s						
RM33				AML	AML		
	comp=E,583µm,0.4s						
RM33				AML	AML		
	comp=N,508µm,0.7s						
RM33				AML	AML		
	comp=E,571µm,0.3s						
RM33	**Pellescritta (**	**1.08**	**199**	P	**Pg**	**02 46 39.1**	**-1.5**
RM33				AML	AML		
	comp=E,583µm,0.4s						
RM33				AML	AML		
	comp=N,508µm,1.3s						
RM33				AML	AML		
	comp=E,571µm,0.3s						
RM33				AML	AML		
	comp=N,508µm,0.7s						
RM33				AML	AML		
	comp=E,583µm,0.4s						
RM33				AML	AML		
	comp=N,508µm,1.3s						
RM33				AML	AML		
	comp=E,571µm,0.3s						
RM33				AML	AML		
	comp=N,508µm,0.7s						
GIGS	**Gran Sasso**	**1.09**	**184**	P	**Pg**	**02 46 38.7**	**-2.1**
GIGS				AML	AML		
	comp=N,120µm,0.8s						
GIGS				AML	AML		
	comp=N,120µm,0.8s						
GIGS				AML	AML		
	comp=E,114µm,0.4s						
GIGS	**Gran Sasso**	**1.09**	**184**	P	**Pg**	**02 46 39.4**	**-1.3**
GIGS				AML	AML		
	comp=E,114µm,0.4s						
GIGS				AML	AML		
	comp=N,120µm,0.8s						
GIGS				AML	AML		
	comp=E,114µm,0.4s						
GIGS				AML	AML		
	comp=N,120µm,0.8s						
MOMA	**Monte Martano**	**1.09**	**228**	P	**Pg**	**02 46 39.6**	**-1.3**
MOMA				AML	AML		
	comp=E,403µm,0.6s						
MOMA				AML	AML		
	comp=N,422µm,0.5s						
MOMA	**Monte Martano**	**1.09**	**228**	⇑P	**Pg**	**02 46 39.6**	**-1.2**
MOMA				AML	AML		
	comp=E,403µm,0.6s						
MOMA				AML	AML		
	comp=N,422µm,0.5s						
DUGI	**Dugi Otok**	**1.10**	**65**	*e*Pg	**Pg**	**02 46 40.0**	**-0.8**
DUGI				Sg	**Sn**	**02 46 55.9**	**-0.2**
ARRO	**Arrone**	**1.17**	**215**	P	**Pb**	**02 46 41.2**	**-0.7**
ARRO				AML	AML		
	comp=E,182µm,0.2s						
ARRO				AML	AML		
	comp=N,220µm,0.2s						
ARRO	**Arrone**	**1.17**	**215**	⇑P	**Pb**	**02 46 41.4**	**-0.5**
ARRO				AML	AML		
	comp=E,182µm,0.2s						
ARRO				AML	AML		
	comp=N,220µm,0.2s						
AQU	**L'Aquila**	**1.20**	**190**	*e*Pn	**Pb**	**02 46 42.7**	**+0.2**
AQU	**L'Aquila**	**1.20**	**190**	P	**Pb**	**02 46 41.1**	**-1.4**
AQU				AML	AML		
	comp=N,276µm,0.9s						
AQU				AML	AML		
	comp=E,300µm,1.0s						
AQU	**L'Aquila**	**1.20**	**190**	⇑P	**Pn**	**02 46 43.8**	**+1.3**
AQU				AML	AML		
	comp=E,300µm,1.0s						
AQU				AML	AML		
	comp=N,276µm,0.9s						
CESX	**Cesi**	**1.23**	**221**	P	**Pn**	**02 46 41.5**	**-1.3**
CESX				AML	AML		
	comp=E,454µm,1.6s						
CESX				AML	AML		
	comp=N,256µm,0.3s						
CESX	**Cesi**	**1.23**	**221**	⇑P	**Pn**	**02 46 44.2**	**+1.4**
CESX				AML	AML		
	comp=E,454µm,1.6s						
CESX				AML	AML		
	comp=N,256µm,0.3s						
CRE	**Caprese Michel**	**1.26**	**274**	P	**Pn**	**02 46 44.3**	**+1.0**
CRE	**Caprese Michel**	**1.26**	**274**	⇑P	**Pg**	**02 46 46.1**	**+2.1**
FAGN	**Fagnano**	**1.27**	**183**	P	**Pn**	**02 46 42.6**	**-0.8**
FAGN				AML	AML		
	comp=E,683µm,0.3s						
FAGN				AML	AML		
	comp=N,362µm,1.4s						
FAGN	**Fagnano**	**1.27**	**183**	⇑P	**Pn**	**02 46 42.7**	**-0.7**
FAGN				AML	AML		
	comp=E,683µm,0.3s						
FAGN				AML	AML		
	comp=N,362µm,1.4s						
MGAB	**Montegabbione**	**1.31**	**242**	P	**Pn**	**02 46 44.1**	**+0.3**
MGAB				AML	AML		
	comp=N,300µm,1.2s						
MGAB				AML	AML		
	comp=E,368µm,1.3s						
MGAB				AML	AML		
	comp=N,268µm,1.3s						
MGAB				AML	AML		
	comp=E,310µm,1.3s						
MGAB	**Montegabbione**	**1.31**	**242**	⇑P	**Pn**	**02 46 45.1**	**+1.3**
MGAB				AML	AML		
	comp=E,310µm,1.3s						
MGAB				AML	AML		
	comp=N,300µm,1.2s						
MGAB				AML	AML		
	comp=E,368µm,1.3s						
MGAB				AML	AML		
	comp=N,268µm,1.3s						
T0110	**Collepietro**	**1.31**	**177**	P	**Pn**	**02 46 43.2**	**-0.8**
T0110				AML	AML		
	comp=E,343µm,0.4s						
T0110				AML	AML		
	comp=N,352µm,0.3s						
T0110	**Collepietro**	**1.31**	**177**	P	**Pn**	**02 46 44.3**	**+0.3**
T0110				AML	AML		
	comp=E,343µm,0.4s						
T0110				AML	AML		
	comp=N,352µm,0.3s						
FIAM	**Fiamignano**	**1.33**	**198**	P	**Pn**	**02 46 43.1**	**-1.3**
FIAM				AML	AML		
	comp=E,202µm,1.2s						
FIAM				AML	AML		
	comp=N,240µm,1.5s						
FIAM	**Fiamignano**	**1.33**	**198**	⇑P	**Pn**	**02 46 43.2**	**-1.2**
FIAM				AML	AML		
	comp=E,202µm,1.2s						
FIAM				AML	AML		
	comp=N,240µm,1.5s						
CAFR	**Castel Frentan**	**1.40**	**159**	P	**Pn**	**02 46 45.5**	**+0.4**
ZIRJ	**Zirje**	**1.43**	**85**	*e*Pn	**Pn**	**02 46 44.9**	**-0.7**
ZIRJ				Sn	**Sn**	**02 47 04.3**	**0.0**
SACS	**San Casciano d**	**1.47**	**243**	P	**Pn**	**02 46 47.1**	**+0.9**
SACS				AML	AML		
	comp=N,137µm,0.6s						
SACS				AML	AML		
	comp=E,82µm,0.6s						
SACS	**San Casciano d**	**1.47**	**243**	P	**Pn**	**02 46 48.1**	**+2.0**
SACS				AML	AML		
	comp=E,82µm,0.6s						
SACS				AML	AML		
	comp=N,137µm,0.6s						
MORI	**Morici**	**1.51**	**77**	*e*Pn	**Pn**	**02 46 46.2**	**-0.4**
MORI				Sn	**Sg**	**02 47 07.2**	**-1.0**
SMRN	**Sveta Marina**	**1.54**	**13**	*i* Pn	**Pn**	**02 46 46.9**	**-0.2**
SMRN				Sn	**Sn**	**02 47 07.3**	**+0.4**
CERT	**Cerreto**	**1.67**	**198**	P	**Pn**	**02 46 49.1**	**+0.2**
CERT				AML	AML		
	comp=E,99µm,1.4s						
CERT				AML	AML		
	comp=N,92µm,0.4s						
CERT	**Cerreto**	**1.67**	**198**	⇓P	**Pn**	**02 46 49.8**	**+0.9**
CERT				AML	AML		
	comp=E,99µm,1.4s						
CERT				AML	AML		
	comp=N,92µm,0.4s						
FRES	**Fresagrandinar**	**1.72**	**155**	P	**Pn**	**02 46 49.0**	**-0.6**
UDBI	**Udbina**	**1.80**	**56**	*e*Pn	**Pn**	**02 46 51.4**	**+0.7**
UDBI				Sn	**Sb**	**02 47 14.8**	**-0.5**
RIY	**Rijeka**	**1.88**	**18**	*e*Pn	**Pn**	**02 46 51.9**	**+0.2**
RIY	**Rijeka**	**1.88**	**18**	*e*Pn	**Pn**	**02 46 52.1**	**+0.4**
RIY				Sn	**Sb**	**02 47 17.2**	**-0.2**
PLIT	**Plitvice**	**1.94**	**45**	*e*Pn	**Pn**	**02 46 53.2**	**+0.6**
PLIT				Sn	**Sb**	**02 47 18.3**	**-0.8**
SKDS	**Skadanscina**	**2.02**	**7**	*i* Pn	**Pn**	**02 46 53.5**	**-0.2**
SKDS				*i* Sn	**Sn**	**02 47 19.3**	**+0.3**
SKDS				IAML		02 47 22.4	
	comp=Z,14nm,0.2s						
KNDS	**Knezji Dol**	**2.05**	**14**	*i* Pn	**Pn**	**02 46 54.2**	**0.0**
KNDS				*e*Sn	**Sb**	**02 47 22.0**	**-0.6**
KNDS				IAML		02 47 26.7	
	comp=Z,24nm,0.3s						
BOJS	**Bojanci**	**2.27**	**29**	P	**Pn**	**02 46 57.3**	**+0.3**
BOJS				AML	AML		
	comp=N,123µm,0.5s						
BOJS				AML	AML		
	comp=E,139µm,0.5s						
BOJS	**Bojanci**	**2.27**	**29**	P	**Pn**	**02 46 58.2**	**+1.1**
BOJS				AML	AML		
	comp=E,139µm,0.5s						
BOJS				AML	AML		
	comp=N,123µm,0.5s						
CEY	**Cerknica**	**2.27**	**13**	*e*Pn	**Pn**	**02 46 56.1**	**-1.0**
PII	**Pisa**	**2.30**	**276**	P	**Pn**	**02 46 58.7**	**+1.2**
PII	**Pisa**	**2.30**	**276**	⇑P	**Pn**	**02 46 59.0**	**+1.5**
SGRT	**San Giovanni R**	**2.34**	**139**	P	**Pn**	**02 46 57.0**	**-1.2**
SGRT				AML	AML		
	comp=E,83µm,0.4s						
SGRT				AML	AML		
	comp=N,68µm,0.5s						
SGRT	**San Giovanni R**	**2.34**	**139**	⇓P	**Pn**	**02 46 57.5**	**-0.7**
SGRT				AML	AML		
	comp=E,83µm,0.4s						
SGRT				AML	AML		
	comp=N,68µm,0.5s						
OZLJ	**Ozalj**	**2.44**	**31**	*e*Pn	**Pn**	**02 47 00.2**	**+0.8**
MAKA	**Makarska**	**2.45**	**95**	*e*Pn	**Pn**	**02 46 59.7**	**+0.2**
MAKA				Sn	**Sn**	**02 47 29.4**	**+0.1**
MSAG	**Monte S. Angel**	**2.46**	**137**	P	**Pn**	**02 46 58.4**	**-1.3**
MSAG				AML	AML		
	comp=N,199µm,0.7s						
MSAG				AML	AML		
	comp=E,95µm,0.6s						
MSAG	**Monte S. Angel**	**2.46**	**137**	⇑P	**Pn**	**02 46 58.7**	**-1.0**
MSAG				AML	AML		
	comp=E,95µm,0.6s						
MSAG				AML	AML		
	comp=N,199µm,0.7s						
LSTV	**Lastovo**	**2.47**	**107**	*e*Pn	**Pn**	**02 46 58.9**	**-1.0**
LSTV				Sn	**Sn**	**02 47 30.2**	**+0.3**
RICI	**Ricice**	**2.51**	**90**	*e*Pn	**Pn**	**02 47 00.8**	**+0.4**
RICI				Sn	**Sn**	**02 47 31.6**	**+0.6**
CRNS	**Crni Vrh**	**2.58**	**9**	*i* Pn	**Pn**	**02 47 01.7**	**+0.3**
CRNS				*i* Sn	**Sn**	**02 47 34.1**	**+1.5**
LJU	**Ljubljana**	**2.58**	**13**	*i* Pn	**Pn**	**02 47 02.2**	**+0.8**
LJU	**Ljubljana**	**2.58**	**13**	*e*Pn	**Pn**	**02 47 02.0**	**+0.6**
LJU	**Ljubljana**	**2.58**	**13**	P	**Pn**	**02 47 02.0**	**+0.6**
LJU				AML	AML		
	comp=N,438µm,1.1s						
LJU				AML	AML		
	comp=E,340µm,0.5s						
LJU	**Ljubljana**	**2.58**	**13**	P	**Pn**	**02 47 01.3**	**-0.1**
LJU				AML	AML		
	comp=E,340µm,0.5s						
LJU				AML	AML		
	comp=N,438µm,1.1s						
MGRS	**Mrkonjic Grad**	**2.61**	**69**	*e*Pn	**Pn**	**02 47 01.5**	**-0.3**
CRES	**Cresnjev**	**2.62**	**28**	*e*Pn	**Pn**	**02 46 58.9**	**-3.0**
CADS	**Cadrg**	**2.69**	**1**	*i* Pn	**Pn**	**02 47 02.9**	**-0.1**
MPRI	**Monte Prat**	**2.75**	**350**	P	**Pn**	**02 47 04.3**	**+0.5**
MPRI				AML	AML		
	comp=E,59µm,1.6s						
MPRI				AML	AML		
	comp=N,66µm,0.5s						
MPRI	**Monte Prat**	**2.75**	**350**	⇑P	**Pn**	**02 47 04.4**	**+0.7**
MPRI				AML	AML		
	comp=E,59µm,1.6s						
MPRI				AML	AML		
	comp=N,66µm,0.5s						
BLY	**Banja Luka**	**2.80**	**63**	*e*Pn	**Pb**	**02 47 10.1**	**+0.4**
STAL	**STALIGIAL**	**2.81**	**346**	P	**Pn**	**02 47 04.8**	**+0.2**
STAL				AML	AML		
	comp=E,74µm,0.5s						
STAL				AML	AML		
	comp=N,68µm,1.3s						
STAL	**STALIGIAL**	**2.81**	**346**	⇑P	**Pn**	**02 47 05.0**	**+0.4**
STAL				AML	AML		
	comp=E,74µm,0.5s						
STAL				AML	AML		
	comp=N,68µm,1.3s						
ROVR	**Rover Verones**	**2.81**	**319**	P	**Pn**	**02 47 04.8**	**+0.1**
ROVR	**Rover Verones**	**2.81**	**319**	P	**Pn**	**02 47 05.4**	**+0.7**
CIMO	**Cimolais**	**2.91**	**343**	P	**Pn**	**02 47 06.0**	**0.0**
CIMO	**Cimolais**	**2.91**	**343**	P	**Pn**	**02 47 06.3**	**+0.4**
DOSS	**Dosso del Somm**	**2.94**	**324**	P	**Pn**	**02 47 07.0**	**+0.5**
DOSS				AML	AML		
	comp=E,55µm,0.7s						
DOSS				AML	AML		
	comp=N,61µm,0.8s						
DOSS	**Dosso del Somm**	**2.94**	**324**	P	**Pn**	**02 47 07.0**	**+0.5**
DOSS				AML	AML		
	comp=E,55µm,0.7s						
DOSS				AML	AML		
	comp=N,61µm,0.8s						
STON	**Ston**	**3.01**	**101**	*e*Pn	**Pn**	**02 47 06.0**	**-1.3**
STON	**Ston**	**3.01**	**101**	*e*Pn	**Pn**	**02 47 07.0**	**-0.3**
STON				Sn	**Sn**	**02 47 42.8**	**-0.5**
STON	**Ston**	**3.01**	**101**	P	**Pn**	**02 47 06.2**	**-1.1**
STON				AML	AML		
	comp=N,28µm,1.0s						
STON				AML	AML		
	comp=E,25µm,0.8s						
STON	**Ston**	**3.01**	**101**	⇓P	**Pn**	**02 47 07.1**	**-0.1**
STON				S	**Sn**	**02 47 45.0**	**+1.7**
STON				AML	AML		
	comp=E,25µm,0.8s						
STON				AML	AML		
	comp=N,28µm,1.0s						
ACOM	**Acomizza, Ital**	**3.01**	**358**	P	**Pn**	**02 47 07.6**	**+0.1**
ACOM				AML	AML		
	comp=E,55µm,0.7s						
ACOM				AML	AML		
	comp=N,63µm,1.5s						
ACOM	**Acomizza, Ital**	**3.01**	**358**	⇑P	**Pn**	**02 47 08.7**	**+1.1**
ACOM				AML	AML		
	comp=E,55µm,0.7s						
ACOM				AML	AML		
	comp=N,63µm,1.5s						
OBKA	**Obir**	**3.04**	**11**	*e*Pn	**Pn**	**02 47 08.3**	**+0.6**
	comp=N,1.3nm,0.2s,SNR=13						
OBKA				Sg	**Sg**	**02 47 57.7**	**+0.5**
	comp=N,25nm,0.7s						
ZOU	**Zoufplan**	**3.06**	**351**	P	**Pn**	**02 47 08.3**	**+0.1**
ZOU	**Zoufplan**	**3.06**	**351**	P	**Pn**	**02 47 08.7**	**+0.5**
SALO	**Salr**	**3.07**	**314**	P	**Pn**	**02 47 09.0**	**+0.9**
SALO	**Salr**	**3.07**	**314**	P	**Pn**	**02 47 09.8**	**+1.6**
MYKA	**Terra Mystica**	**3.09**	**359**	*e*Pn	**Pn**	**02 47 09.2**	**+0.7**
	comp=N,0.9nm,0.2s						
MAGA	**Magasa**	**3.12**	**317**	P	**Pn**	**02 47 08.9**	**0.0**
MAGA				AML	AML		
	comp=E,95µm,1.5s						
MAGA				AML	AML		
	comp=N,77µm,1.6s						
MAGA	**Magasa**	**3.12**	**317**	⇑P	**Pn**	**02 47 09.3**	**+0.4**
MAGA				AML	AML		
	comp=E,95µm,1.5s						
MAGA				AML	AML		
	comp=N,77µm,1.6s						
ABTA	**Abfaltersbach**	**3.31**	**346**	*i* Pn	**Pn**	**02 47 12.3**	**+0.7**
	comp=N,0.8nm,0.1s,SNR=9.7						
ABTA				*e*Sn	**Sn**	**02 47 51.0**	**0.0**
	comp=N,2.2nm,0.2s						
MABI	**Malga Bissina**	**3.38**	**319**	P	**Pn**	**02 47 13.2**	**+0.6**
MABI				AML	AML		
	comp=N,22µm,1.5s						
MABI				AML	AML		
	comp=E,23µm,1.4s						
MABI	**Malga Bissina**	**3.38**	**319**	⇓P	**Pn**	**02 47 13.3**	**+0.8**
MABI				AML	AML		
	comp=E,23µm,1.4s						
MABI				AML	AML		
	comp=N,22µm,1.5s						
APPI	**Appiano**	**3.42**	**330**	P	**Pn**	**02 47 13.7**	**+0.7**
APPI	**Appiano**	**3.42**	**330**	⇓P	**Pn**	**02 47 14.2**	**+1.2**
PGF	**Pioggiola**	**3.57**	**256**	*e*Pn	**Pn**	**02 47 13.7**	**-1.4**
PGF	**Pioggiola**	**3.57**	**256**	*e*P	**Pn**	**02 47 17.3**	**+2.2**
PGF				*e*Sn	**Sn**	**02 47 53.6**	**-3.7**
	comp=N,1.1nm,0.4s						
RISI	**Rein**	**3.59**	**342**	P	**Pn**	**02 47 16.7**	**+1.2**
RISI				AML	AML		
	comp=E,60µm,0.5s						
RISI				AML	AML		
	comp=N,97µm,0.3s						
RISI	**Rein**	**3.59**	**342**	P	**Pn**	**02 47 16.9**	**+1.5**
RISI				AML	AML		
	comp=E,60µm,0.5s						
RISI				AML	AML		
	comp=N,97µm,0.3s						
ABSI	**Aberstueckl**	**3.60**	**333**	P	**Pn**	**02 47 16.5**	**+0.9**
ABSI				AML	AML		
	comp=E,77µm,0.3s						
ABSI				AML	AML		
	comp=N,114µm,1.0s						
ABSI	**Aberstueckl**	**3.60**	**333**	⇑P	**Pn**	**02 47 16.6**	**+1.0**
ABSI				AML	AML		
	comp=E,77µm,0.3s						
ABSI				AML	AML		
	comp=N,114µm,1.0s						
MDI	**Monti di Nese**	**3.61**	**310**	P	**Pn**	**02 47 15.8**	**+0.2**
MDI				AML	AML		
	comp=E,29µm,1.4s						
MDI				AML	AML		
	comp=N,43µm,1.6s						
MDI	**Monti di Nese**	**3.61**	**310**	⇑P	**Pn**	**02 47 16.4**	**+0.8**
MDI				AML	AML		
	comp=E,29µm,1.4s						
MDI				AML	AML		
	comp=N,43µm,1.6s						
HCY	**Herceg Novi**	**3.69**	**105**	*e*Pn	**Pn**	**02 47 15.0**	**-1.7**
HAPS	**Han Pijesak,Bl**	**3.85**	**80**	*e*Pn	**Pn**	**02 47 14.9**	**-4.1**

ARSA	Arzberg	3.93	19	*e*Pn	Pn	02 47 19.7	-0.3
	comp=N,1.1nm,0.3s						
ARSA				*e*Sn	Sn	02 48 05.2	-0.9
	comp=N,2.0nm,0.4s						
WTTA	Wattenberg	4.00	340	*e*Pn	Pn	02 47 22.6	+1.6
	comp=N,1.8nm,0.3s						
WTTA				*e*Sn	Sn	02 48 08.8	+1.0
	comp=N,3.9nm,0.3s						
ORI	Oriolo Calabro	4.04	148	⇑P	Pn	02 47 19.1	-2.4
FETA	Feichten	4.06	330	*i* Pn	Pn	02 47 23.7	+1.8
	comp=N,0.5nm,0.2s						
MOTA	Moosalm	4.22	335	*e*Pn	Pn	02 47 26.5	+2.5
	comp=N,0.5nm,0.1s						
MOTA				*e*Sn	Sn	02 48 15.1	+1.8
	comp=N,1.5nm,0.3s						
DRME	Dracevica, Mon	4.26	107	*e*Pn	Pn	02 47 22.8	-1.7
MOA	Molln	4.33	5	*e*Pn	Pn	02 47 26.5	+1.0
	comp=N,1.0nm,0.2s						
MOA				*e*Sn	Sn	02 48 16.5	+0.5
	comp=N,5.8nm,0.7s						
RETA	Reutte	4.45	334	*e*Pn	Pn	02 47 28.8	+1.6
	comp=N,0.7nm,0.2s						
SBF	Sospel	4.54	276	*e*P	Pn	02 47 30.9	+2.5
SBF				*e*Sn	Sn	02 48 16.7	-4.4
	comp=N,1.0nm,0.2s						
DAVA	Damuels	4.61	326	*e*Pn	Pn	02 47 31.5	+2.2
	comp=N,0.5nm,0.2s						
DAVA				*e*Sn	Sn	02 48 24.6	+1.7
	comp=N,2.1nm,0.4s						
CONA	Conrad Observa	4.65	18	*i* Pn	Pn	02 47 30.2	+0.3
	comp=N,0.6nm,0.2s						
CONA				*e*Sn	Sn	02 48 24.2	+0.3
	comp=N,1.6nm,0.5s						
FRF	La Foret Royal	5.11	273	*e*P	Pn	02 47 38.2	+2.0
FRF				*e*Sn	Sn	02 48 30.1	-5.0
	comp=N,0.4nm,0.2s						
MBDF	Montbardon	5.11	286	*e*Pn	Pn	02 47 35.1	-1.2
MBDF	Montbardon	5.11	286	*e*P	Pn	02 47 39.0	+2.7
MBDF				*e*Sn	Sn	02 48 31.3	-4.1
	comp=N,0.4nm,0.2s						
LMR	La Mourre	5.23	270	*e*P	Pn	02 47 40.4	+2.7
LMR				*e*Sn	Sn	02 48 33.1	-4.8
	comp=N,0.4nm,0.2s						
LPG	La Plagne	5.33	294	*e*Pn	Pn	02 47 38.9	-0.5
LPG	La Plagne	5.33	294	*e*P	Pn	02 47 42.4	+3.0
LPG				*e*Sn	Sn	02 48 36.4	-4.5
	comp=N,0.7nm,0.3s						
LPL	La Plagne	5.35	294	*e*P	Pn	02 47 43.0	+3.4
LPL				*e*Sn	Sn	02 48 36.8	-4.4
	comp=N,1.3nm,0.3s						
KHC	Kasperske Hory	5.60	359	*e*PN	Pn	02 47 42.5	-0.3
KHC				*e*SN	Sn	02 48 45.5	-1.6
MFNL	Monte Finestre	5.77	186	⇓P	Pb	02 48 02.1	+1.8
ORIF	Oris-en-Rattie	5.77	287	*e*Pn	Pn	02 47 44.2	-1.1
ORIF	Oris-en-Rattie	5.77	287	*e*P	Pn	02 47 48.1	+2.8
ORIF				*e*Sn	Sn	02 48 47.8	-3.7
	comp=N,0.7nm,0.3s						
SMRF	Simiane la Rot	5.89	277	*e*P	Pn	02 47 49.7	+2.8
HINF	Hinteralfeld	6.42	314	*e*Pn	Pn	02 47 53.5	-0.6
HINF				*e*Sn	Sn	02 49 02.6	-4.7
	comp=N,2.3nm,0.4s						
CDF	Champ du Feu	6.61	320	*e*Pn	Pn	02 47 56.3	-0.5
CDF				*e*Sn	Sn	02 49 08.0	-4.1
	comp=N,0.7nm,0.3s						
VIVF	Saint-Julien-l	6.61	285	*e*Pn	Pn	02 47 56.2	-0.6
VIVF	Saint-Julien-l	6.61	285	*e*P	Pn	02 48 01.7	+4.9
VIVF				*e*Sn	Sn	02 49 07.1	-4.9
	comp=N,0.4nm,0.3s						
HAU	Haudompre	6.80	314	*e*Pn	Pn	02 47 58.6	-0.8
HAU				*e*Sn	Sn	02 49 11.4	-5.3
	comp=N,1.9nm,0.3s						
SMF	Signal de Mont	7.62	297	*e*Pn	Pn	02 48 09.8	-0.9
LOR	Lormes	7.85	302	*e*Pn	Pn	02 48 14.0	+0.2
	baz=109						
LOR				*e*Sn	Sn	02 49 37.1	-5.5
	comp=N,1.3nm,0.3s						
AVF	Avril sur Loir	7.99	298	*e*Pn	Pn	02 48 14.8	-0.9
SSF	Saint Saulge	7.99	300	*e*Pn	Pn	02 48 14.8	-0.9
SSF				*e*Sn	Sn	02 49 39.8	-6.2
BGF	Bois d'Agland	8.24	295	*e*Pn	Pn	02 48 18.1	-1.1

ROM 02 02:47:26.6±0.3**,38°.49N**±0°.03×**15°.57E**±0°.03**,h135**^{km}±2^{km}**,**
Md2.0/5**,2D,Error ellipse: s-maj=3.3km s-min=2.2km**
az=159.0,Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOPP	Joppolo	0.28	65	⇓P	Pn	02 47 45.8	+0.4
JOPP				S	Sn	02 47 59.2	-0.3
JOPP				END			
GMB	Gambarie	0.38	147	P	Pn	02 47 46.2	+0.2
GMB				S	Sn	02 48 00.2	-0.2
GMB				END			
MCSR	Castroreale	0.49	210	⇓P	Pn	02 47 46.2	-0.2
MCSR				S	Sn	02 48 01.3	0.0
MCSR				END			
SOI	Samo	0.57	137	P	Pn	02 47 47.0	+0.3
SOI				S	Sn	02 48 01.1	-0.7
SOI				END			
NOV	Novara	0.57	216	P	Pn	02 47 47.1	+0.3
NOV				S	Sn	02 48 02.1	0.0
NOV				END			
IFIL	Filicudi I Eol	0.79	276	P	Pn	02 47 48.2	0.0

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*IDC **02** 02:54:34.2±0.8,27°.36N×140°.26E,h405^{km}±11^{km},mb3.0/7,*
mb1 3.2/7,mb1mx2.8/43,mbtmp3.8/7,Error ellipse:
s-maj=30.0km s-min=20.0km az=98.0

ISC 02 02:54:34.1±1.0**,27°.4N**±0°.2×**140°.1E**±0°.2**,h400**^{km}**,n8,**
σ**0**^{s}**.74**/9**,mb3.4**/7**,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	1.85	99	P	Pn	02 55 30.4	+1.2
	6.3nm,0.3s,baz=270,slow=23,SNR=28						
JCJ				S	S	02 56 13.3	-0.4
	22nm,0.3s,baz=282,slow=23,SNR=16						
WRA	Warramunga Arr	47.40	187	P	P	03 02 29.8	-0.5
	0.3nm,0.4s,baz=3.9,slow=7.6,SNR=4.7						
ZALV	Zalesovo Beam	48.06	319	P	P	03 02 35.3	+0.4
	0.7nm,0.5s,baz=111,slow=6.3,SNR=2.5						
BVAR	Borovoye Array	56.58	317	P	P	03 03 37.3	+0.6
	1.2nm,0.5s,baz=88,slow=7.5,SNR=7.1						
ILAR	Eielson Array	58.32	29	P	P	03 03 47.7	-0.8
	0.2nm,0.6s,baz=260,slow=5.2,SNR=1.7						
INK	Inuvik	63.51	24	P	P	03 04 22.5	-0.3
	0.5nm,0.3s,baz=260,slow=6.1,SNR=1.4						
YKA	Yellowknife Ar	72.73	28	P	P	03 05 19.4	-0.2
	0.4nm,0.4s,baz=297,slow=6.2,SNR=5.0						
FINES	FINESS Array B	76.86	333	P	P	03 05 42.6	-0.3
	1.2nm,0.5s,baz=67,slow=4.7,SNR=11						

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*IDC **02** 03:04:28.9±4.6,32°.80N×76°.00E,h0^{km},mb3.8/4,*
mb1 3.8/6,mb1mx3.5/44,mbtmp3.7/6,ML3.1/2,Error
ellipse: s-maj=82.2km s-min=44.5km az=123.0

ISC 02 03:04:33.6±2.7**,32°.9N**±0°.2×**76°.2E**±0°.3**,h28**^{km}**,n6,**σ**1**^{s}**.48**/8**,**
mb3.9/3**,Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	9.83	353	Pn	Pn	03 06 54.4	+1.2
	0.2nm,0.3s,baz=150,slow=12,SNR=4.2						
AAK				Sn	Sn	03 08 42.7	+0.1
	0.2nm,0.3s,baz=149,slow=22,SNR=1.9						
MKAR	Makanchi Array	14.65	17	Pn	Pn	03 08 00.6	+1.7
	0.1nm,0.3s,baz=199,slow=14,SNR=4.1						
MKAR				Sn	Sn	03 10 38.0	-2.3
	0.1nm,0.3s,baz=194,slow=23,SNR=2.0						
BVAR	Borovoye Array	20.56	350	P	P	03 09 09.7	-0.2
	1.2nm,0.5s,baz=152,slow=12,SNR=10						
ZALV	Zalesovo Beam	21.93	14	P	P	03 09 24.9	+0.3
	0.8nm,0.4s,baz=202,slow=11,SNR=5.9						
FINES	FINESS Array B	42.85	327	P	P	03 12 27.9	-1.1
	9.0nm,1.1s,baz=119,slow=10,SNR=3.7						
ARCES	ARCESS Array B	46.10	338	P	P	03 12 54.5	-0.4
	1.4nm,0.9s,baz=102,slow=8.5,SNR=1.0						

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*IDC **02** 03:15:27.2±1.8,0°.08S×123°.10E,h131^{km}±17^{km},mb3.6/14,*
mb1 3.8/17,mb1mx3.6/51,mbtmp4.1/17,Error ellipse:
s-maj=18.2km s-min=11.2km az=76.0

*DJA **02** 03:15:29.0±0.4,0°S±4°×12°3E±°,h101^{km}±7^{km},M4.4/13,*
mB4.7/3,mb4.5/6,MLv4.4/13,Mw(mB)3.9/3

ISC 02 03:15:28.9±0.5**,0°.00N**±0°.05×**123°.10E**±0°.06**,h150**^{km}**,n33,**
σ**2**^{s}**.16**/40**,mb3.9**/16**,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	Gorontalo	0.64	352	P	Pn	03 15 48.6	-2.4
GTOI				S	Sn	03 16 04.6	-3.3
KMSI	Cibinong	1.05	57	P	Pn	03 15 50.9	-3.2
KMSI				S	Sn	03 16 08.1	-5.2
MRSI	Marisa	1.25	292	P	Pn	03 15 52.7	-3.2
MRSI				S	Sn	03 16 11.3	-5.2
APSI	Ampana	1.71	238	P	Pn	03 15 57.5	-3.2
MPSI	Mapaga	3.21	276	P	Pn	03 16 18.6	-0.4
SANI	Sanana	3.54	125	P	Pn	03 16 17.7	-5.5
LBMI	Labuha	4.45	98	P	Pn	03 16 34.0	-1.1
TTSI	Tana Toraja	4.46	227	P	Pn	03 16 33.7	-1.5
SPSI	Sidrap Palu	5.15	220	P	Pn	03 16 42.5	-1.9
	0.4nm2µm37nm,0.7s						
BNSI	Bone	5.29	214	P	Pn	03 16 45.9	-0.4
	0.2nm789nm59nm,0.6s						
KAPI	Kappang	6.00	214	P	Pn	03 16 54.3	-1.3
	7.5nm,0.3s,baz=34,slow=3.8,SNR=18						
KAPI				S	Sn	03 17 58.4	-5.1
	4.5nm,0.3s,baz=54,slow=23,SNR=8.4						
BKSI	Bulukumba	6.06	209	P	Pn	03 16 56.7	+0.2
	0.1nm24nm,0.8s						
BSSI	Bau Bau, Buton	6.63	203	P	Pn	03 17 03.6	-0.5
	0.2nm37nm,0.8s						
SIJI	Sorong	8.22	96	P	Pn	03 17 23.7	-1.5
	baz=199,slow=22,SNR=1.0						
FITZ	Fitzroy Crossi	18.16	172	P	P	03 19 29.6	-0.4
	0.4nm,0.3s,baz=18,slow=7.2,SNR=4.9						
WRA	Warramunga Arr	22.68	152	P	P	03 20 16.3	-1.5
	1.8nm,0.6s,baz=332,slow=10,SNR=27						
ASAR	Alice Springs	25.76	157	P	P	03 20 46.4	+0.5
	0.6nm,0.6s,baz=342,slow=14,SNR=6.3						
ASAR				PcP	PcP	03 24 12.2	+0.3
	0.3nm,0.3s,baz=354,slow=2.7,SNR=4.1						
ASAR				ScP	ScP	03 27 41.5	+3.8
	0.1nm,0.3s,baz=336,slow=3.1,SNR=1.8						
CMAR	Chiang Mai Arr	29.99	309	P	P	03 21 26.1	+2.5
	1.4nm,0.3s,baz=138,slow=7.0,SNR=9.7						
STKA	Stephens Creek	36.22	153	P	P	03 22 18.0	+0.6
	1.8nm,0.6s,baz=350,slow=12,SNR=3.2						
KSRS	Korea Array	37.53	6	P	P	03 22 29.8	+1.4
	0.7nm,0.5s,baz=276,slow=8.9,SNR=2.3						
MJAR	Matsushiro Arr	38.97	20	P	P	03 22 40.8	+0.3
	1.6nm,0.5s,baz=182,slow=9.2,SNR=4.6						
USRK	Ussuriysk Ar.	44.72	9	P	P	03 23 27.8	+0.8
	1.2nm,0.4s,baz=197,slow=7.0,SNR=6.2						
SONM	Songino Array	49.81	345	P	P	03 24 08.4	+1.8
	1.6nm,0.6s,baz=162,slow=9.5,SNR=10.0						
SONM				PcP	PcP	03 25 24.9	-0.2
	0.4nm,0.4s,baz=158,slow=4.3,SNR=3.1						
MKAR	Makanchi Array	58.66	328	P	P	03 25 11.3	+0.8
	0.8nm,0.3s,baz=123,slow=8.8,SNR=20						
MKAR				PcP	PcP	03 25 58.7	-0.2
	0.7nm,0.5s,baz=139,slow=4.6,SNR=6.3						
ZALV	Zalesovo Beam	62.35	336	P	P	03 25 35.3	0.0
	0.5nm,0.3s,baz=116,slow=6.6,SNR=3.3						
KURBB	Kurchatov Arra	63.01	330	P	P	03 25 40.4	+0.6
	0.7nm,0.2s,baz=135,slow=6.0,SNR=5.2						
AKTO	Aktyubinsk	74.37	323	P	P	03 26 50.5	+0.4
	0.8nm,0.4s,baz=123,slow=5.6,SNR=4.1						
VNDA	Vanda	80.23	172	P	P	03 27 21.8	-0.5
	0.7nm,0.9s,baz=303,slow=6.3,SNR=1.6						
ILAR	Eielson Array	90.01	25	P	P	03 28 10.5	-0.6
	0.2nm,0.6s,baz=264,slow=6.3,SNR=1.2						
ARCES	ARCESS Array B	92.66	340	P	P	03 28 23.9	+0.5
	1.8nm,0.9s,baz=101,slow=1.2,SNR=3.9						
SPITS	Spitsbergen Ar	93.40	349	P	P	03 28 26.7	0.0
	18nm,1.1s,baz=52,slow=9.3,SNR=2.5						
TORD	Torodi Ar. Bea	120.50	285	PKP	PKPdf	03 34 04.2	+0.5
	0.4nm,0.7s,baz=130,slow=2.9,SNR=3.9						
TXAR	Lajitas Array	126.74	53	PKP	PKPdf	03 34 16.3	+0.8
	0.4nm,1.0s,baz=286,slow=3.4,SNR=2.5						

KMA 02 03:38:51.2±0.2**,38°.90N**×**126°.10E,h0**^{km}±1^{km}**,Error**
ellipse: s-maj=3.7km s-min=0.9km az=348.0,North
Korea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YNCB	YEONCHEON	1.08	143	P	Pg	03 39 11.9	+0.1
KSGAH	Ganghwa	1.22	167	P	Pg	03 39 14.5	-0.1
	SNR=18						
KSGAH	Ganghwa	1.22	167	P	Pg	03 39 14.5	-0.1
	SNR=18						
KSGAH				S	Sg	03 39 30.6	+0.1
KSDDC	Dongducheon	1.25	143	P	Pg	03 39 15.4	+0.2
YPDB	Yeonpyeongdo	1.33	194	P	Pg	03 39 16.7	0.0
	SNR=8.0						
YPDB	Yeonpyeongdo	1.33	194	P	Pg	03 39 16.7	0.0
	SNR=8.0						
KSCWO	Cheorwon	1.38	126	P	Pg	03 39 17.5	-0.2
	SNR=19						
KSCWO	Cheorwon	1.38	126	P	Pg	03 39 17.5	-0.2
	SNR=19						
HWCB	Hwacheon	1.41	118	P	Pn	03 39 18.0	0.0
	SNR=26						
HWCB	Hwacheon	1.41	118	P	Pn	03 39 18.0	0.0
	SNR=26						
KSBAR	Backryungdo	1.43	230	P	Pn	03 39 18.1	-0.3
	SNR=16						
KSBAR	Backryungdo	1.43	230	P	Pn	03 39 18.1	-0.3
	SNR=16						
DACB	Daecheong-do R	1.53	226	P	Pb	03 39 20.2	-0.3
	SNR=24						
DACB	Daecheong-do R	1.53	226	P	Pb	03 39 20.2	-0.3
	SNR=24						
SHHB	Siheung-si	1.62	163	P	Pb	03 39 22.0	0.0
KSDEI	Deokjeokdo	1.65	180	P	Pb	03 39 21.9	-0.4
	SNR=10.0						
KSDEI	Deokjeokdo	1.65	180	P	Pb	03 39 21.9	-0.4
	SNR=10.0						
KSCHC	Chuncheon	1.75	129	P	Pb	03 39 24.5	+0.3
	SNR=31						
KSCHC	Chuncheon	1.75	129	P	Pb	03 39 24.5	+0.3
	SNR=31						
SEHB	SEOHWA	1.80	110	P	Pg	03 39 25.5	-0.2
	SNR=29						
SEHB	SEOHWA	1.80	110	P	Pg	03 39 25.5	-0.2
	SNR=29						
HAWB	Hwaseong-si	1.89	164	P	Pb	03 39 26.3	-0.2
	SNR=20						
KSMGY	Mungyeong	2.73	145	P	Pn	03 39 36.3	0.0
	SNR=9.3						

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*VAO **02** 03:45:18.6±0.5,2°.83S×76°.62W,h65^{km},mb4.3*

*IDC **02** 03:45:19.8±2.0,3°.09S×76°.62W,h97^{km}±20^{km},mb3.5/12,*
mb1 3.8/19,mb1mx3.7/31,mbtmp4.0/19,Error ellipse:
s-maj=16.1km s-min=13.1km az=54.0

*NEIC **02** 03:45:22.2±1.8,3°.18S±0°.08×76°.67W±0°.09,h113^{km}±9^{km},*
mb4.3/12,Error ellipse: s-maj=15.2km s-min=9.7km
az=55.0

*IGQ **02** 03:45:23±0.5,3°S±3°×7°7W±°,h76^{km}*

ISC 02 03:45:19.9±0.8**,3°.18S**±0°.04×**76°.77W**±0°.04**,h96**^{km}±8^{km}**,**
n139,σ**1**^{s}**.67**/146**,mb3.9**/15**,Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSC	San Juan Bosco	1.72	271	P	Pn	03 45 48.0	-0.9
BOSC				S	Sn	03 46 08.0	-2.9
LOJ1	Universidad t	1.78	243	P	Pn	03 46 00.0	+10
SANGA	Volcan Sangay	1.95	305	P	Pn	03 45 53.0	+0.9
PUYO	Puyo, Santa Ro	2.09	323	P	Pn	03 45 54.0	+0.4
ACUE	Ecuador-Cuenca	2.20	277	P	Pn	03 45 56.0	+0.8
BPAT	Tungurahua Vol	2.35	315	P	Pn	03 45 58.0	+0.6
BPAT				S	Sn	03 46 26.0	0.0
ARRY	Arrayan	2.36	315	P	Pn	03 45 58.0	+0.5
BMAS	Trigal station	2.38	314	P	Pn	03 45 58.0	+0.3
BMAS				S	Sn	03 46 26.0	-0.6
BRUN	Tungurahua Vol	2.39	317	P	Pn	03 45 58.0	+0.2
BRUN				S	Sn	03 46 27.0	+0.2
RETU	Refugio	2.39	316	P	Pn	03 45 59.0	+1.0
POND	Pondoa	2.42	316	P	Pn	03 45 59.0	+0.8
POND				S	Sn	03 46 27.0	-0.5
BBIL	Ulba Tungurahu	2.42	315	P	Pn	03 45 59.0	+0.8
JUI6	Juive	2.43	316	P	Pn	03 45 59.0	+0.7
BIL2	Estacion Bilba	2.43	315	P	Pn	03 46 00.0	+1.7
COHC	Cochancay	2.58	286	P	Pn	03 46 01.0	+1.1
TAMH	Tambohuasha Ch	2.58	309	P	Pn	03 46 02.0	+1.6
PORT	Chimborazo Vol	2.62	310	P	Pn	03 46 03.0	+1.9
PIAT	Ana Tenorio	2.63	325	P	Pn	03 46 01.0	0.0
CHSH	Refugio Sur-Vo	2.68	309	P	Pn	03 46 03.0	+1.1
GONZ	Gonzanam	2.82	248	P	Pn	03 46 03.0	-0.6
VCES	Cotopaxi	2.86	326	P	Pn	03 46 06.0	+1.7
MILO	Milagro-Astudi	2.92	288	P	Pn	03 46 05.0	+0.5
MILO				S	Sn	03 46 38.0	-0.8
BRRN	Barrancas-Volc	2.92	324	P	Pn	03 46 06.0	+1.0
TAMB	Tambo	2.94	327	P	Pn	03 46 06.0	+0.7
BMOR	Cotopaxi Volca	2.96	325	P	Pn	03 46 07.0	+1.4
BTAM	Cotopaxi Volca	2.97	327	P	Pn	03 46 07.0	+1.3
SLOR	San Lorenzo -	2.98	325	P	Pn	03 46 07.0	+1.2
BVC2	Cotopaxi Volca	2.99	327	P	Pn	03 46 07.0	+1.0
BREF	Cotopaxi Volca	3.00	326	P	Pn	03 46 08.0	+1.9
VC1	Cotopaxi 1	3.00	327	P	Pn	03 46 07.0	+0.9
AMIL	Milagro (Trans	3.00	290	P	Pn	03 46 05.0	-0.6
SRAM	San Ramn-Vol	3.00	323	P	Pn	03 46 08.0	+2.0
ANTS	Antisana-Sarah	3.00	332	P	Pn	03 46 08.0	+1.8
BNAS	Cotopaxi Volca	3.02	326	P	Pn	03 46 08.0	+1.7
CAMI	Rancho Maria	3.03	325	P	Pn	03 46 09.0	+2.6
ANTI	Antisana	3.04	333	P	Pn	03 46 08.0	+1.3
SUCR	Mariscal Sucre	3.05	326	P	Pn	03 46 09.0	+2.3
ARNL	Arenillas	3.31	264	P	Pn	03 46 07.0	-2.7
CASC	Dorado de Casc	3.34	350	P	Pn	03 46 12.0	+1.7
MCRA	Macar, Loja	3.39	249	P	Pn	03 46 09.0	-1.9
ISPG	Isla Puna-Puer	3.40	273	P	Pn	03 46 10.0	-1.0
CAYR	Refugio Cayamb	3.40	339	P	Pn	03 46 14.0	+2.4
HPAL	Hacienda Las P	3.49	327	P	Pn	03 46 15.0	+2.5
YAHU	Yahuarcocha	3.75	340	P	Pn	03 46 19.0	+2.9
OTAV	Otavalo	3.78	334	*e*P	Pn	03 46 18.5	+1.9
OTAV	Otavalo	3.78	334		Pn	03 46 19.4	+2.8
PTLC	Puerto Leguiza	3.87	31	*i* P	Pn	03 46 14.9	-2.5
PTLC	Puerto Leguiza	3.87	31	P	Pn	03 46 14.0	-3.3
PAC1	Pacto, Paraso	3.97	329	*e*P	Pn	03 46 24.7	+5.9
FLF1	Flavio Alfaro-	4.15	312	P	Pn	03 46 23.0	+1.8
ATAH	Atahualpa	4.25	202	P	Pn	03 46 24.1	+1.2
	15nm,0.3s,baz=20,slow=9.1,SNR=98						
ATAH				S	Sn	03 47 12.3	+0.7
	12nm,0.3s,baz=35,slow=18,SNR=7.4						
GCUF	Volcan Galeras	4.41	353	*e*P	Pn	03 46 26.6	+1.5
GARC	Garzon, Huila	5.48	14	*e*P	Pn	03 46 40.2	+0.8
PCON	Cinco Dias	5.48	4	*e*P	Pn	03 46 41.7	+2.0
MARP	Paez Belalcaza	6.04	8	*e*P	Pn	03 46 49.0	+2.0
MACC	Macarena, Meta	6.04	29	*e*P	Pn	03 46 47.5	+0.6
CZSB	Cruzeiro do Su	6.07	138	*e*P	Pn	03 46 49.0	+1.8
CZSB	Cruzeiro do Su	6.07	138	Pn	Pn	03 46 48.2	+0.9
CZSB				Sn	Sn	03 47 55.8	+0.4
TBTG	Tabatinga, AM	6.92	99	*e*P	Pn	03 46 59.5	+0.6
TBTG	Tabatinga, AM	6.92	99	Pn	Pn	03 46 59.1	+0.2
GUVC	San Jose del G	7.03	36	*e*P	Pn	03 47 01.0	+0.6
PRAC	Prado	7.10	15	*e*P	Pn	03 47 02.6	+1.3
YOTC	Yotoco, Valle	7.12	3	*e*P	Pn	03 47 04.5	+2.8
ORTC	Ortega, Tolima	7.20	12	*e*P	Pn	03 47 04.0	+1.3
VILC	Villavicencio,	7.87	23	*e*P	Pn	03 47 13.3	+1.5
ROSC	El Rosal	8.33	17	P	Pn	03 47 17.3	-1.1
	3.0nm,0.3s,baz=261,slow=19,SNR=2.2						
ROSC	El Rosal	8.33	17	Pn	Pn	03 47 21.3	+2.9
NNA	Nana	8.75	180	P	Pn	03 47 23.6	-0.2
	15nm,0.3s,baz=334,slow=8.8,SNR=13						
NNA				S	Sn	03 48 53.2	-7.6
	7.1nm,0.3s,baz=308,slow=19,SNR=5.9						
CBOC	Ciudad Bolivar	9.01	5	*e*P	Pn	03 47 30.9	+3.5
ZARC	Zaragoza, Cauc	10.77	10	Pn	Pn	03 47 54.4	+3.2
ETMB	Extrema	12.39	123	Pn	Pn	03 48 11.0	-2.0
SJCC	San Jacinto, C	13.08	7	Pn	Pn	03 48 23.2	+1.0
SDV	Santo Domingo	13.46	27	Pn	Pn	03 48 28.0	+0.7
PAYG	Puerto Ayora	13.73	280	Pn	Pn	03 48 32.6	+2.0
SAML	Samuel	14.68	114	Pn	Pn	03 48 42.1	-0.8
BAUV	El Baul	14.86	36	Pn	Pn	03 48 45.3	+0.1
URIC	Uribia, Colomb	15.53	18	Pn	Pn	03 48 53.8	+0.1
URIC				IAmb	IAmb	03 48 55.0	
	comp=Z,20nm,0.9s						
LPAZ	La Paz	15.56	147	P	Pn	03 48 53.9	-0.7
	comp=Z,0.1nm,0.3s,baz=236,slow=14,SNR=1.5						
LPAZ	La Paz	15.56	147	*e*P	P	03 48 56.8	-0.1
MACA	Manacapuru-AM	16.07	90	*e*P	Pn	03 48 58.4	-2.0
MACA	Manacapuru-AM	16.07	90	Pn	Pn	03 48 58.7	-1.7
PB16	IPOC Station P	16.66	155		P	03 49 09.6	+0.5
PTGA	Pitinga	16.97	82	P	Pn	03 49 09.5	-2.1
	comp=Z,1.6nm,0.3s,baz=303,slow=5.2,SNR=19						
PTGA				S	Sn	03 52 07.1	-13
	comp=Z,0.3nm,0.3s,baz=320,slow=22,SNR=1.3						
BIRV	Birongo	17.13	38	Pn	Pn	03 49 15.4	+1.9
BIRV				IAmb	IAmb	03 49 17.9	
	comp=Z,20nm,0.7s						
BOAV	Boa Vista	17.16	71	*e*P	P	03 49 12.3	-1.8
PCRV	Puerto La Cruz	17.95	42	P	P	03 49 20.2	-2.6
	comp=Z,0.3nm,0.3s,baz=244,slow=6.7,SNR=2.4						
PB09	IPOC Station P	19.90	159	P	Pn	03 49 45.4	-1.3
PB09				IAmb	IAmb	03 49 58.8	
	comp=Z,12nm,1.2s						
SIV	San Ignacio	20.02	131	P	P	03 49 46.1	+0.7
	comp=Z,0.3nm,0.3s,baz=319,slow=13,SNR=6.3						
LVC	Limon Verde	20.77	159	P	P	03 49 54.5	+0.7
	comp=Z,2.9nm,0.7s,baz=264,slow=6.3,SNR=1.9						
ITTB	Itaituba	21.03	94	*e*P	P	03 49 56.0	-0.2
PTLB	Pontes e Lacer	21.22	126	*e*P	P	03 49 59.0	+0.8
PDRB	Porto dos Gac	21.56	114	*e*P	P	03 50 01.6	-0.3
NPGB	Novo Progresso	21.67	101	*e*P	P	03 50 02.8	-0.3
CLDB	Colider	22.16	111	*e*P	P	03 50 08.9	+0.5
MALB	Monte Alegre	22.52	87	*e*P	P	03 50 12.3	+0.2
APG	El Apazote	22.59	323	P	P	03 50 14.1	+1.2
	comp=Z,3.2nm,1.0s,baz=204,slow=20,SNR=3.1						
SALV	Santo Antonio	24.29	123	*e*P	P	03 50 31.7	+3.0
MCPB	Macapa, AP	24.86	84	*e*P	P	03 50 33.9	0.0
MDP	Montagnes des	25.47	71	P	P	03 50 37.8	-1.6
	comp=Z,22nm,0.7s,baz=265,slow=7.8,SNR=14						
SNDB	Serra Nova Dou	26.70	110	*e*P	P	03 50 51.1	+0.6
CMIG	Matias Romero	26.93	319	P	P	03 50 52.2	-0.3
	comp=Z,1.7nm,0.7s,baz=64,slow=9.6,SNR=2.2						
ARAG	Araguaiana, MT	27.55	118	*e*P	P	03 51 00.0	+2.0
IPMB	Ipameri, GO	31.62	120	*e*P	P	03 51 36.9	+2.7
ITQB	Itaqui	32.55	146	*e*P	P	03 51 45.5	+3.4
ROSB	Rosrio	32.60	90	*e*P	P	03 51 43.9	+1.1
SDBA	SAO DESIDERIO	32.84	108	*e*P	P	03 51 44.5	-0.4
JANB	Januaria	34.09	112	*e*P	P	03 51 55.5	-0.2
CPSB	Cacapava Do Su	34.94	143	*e*P	P	03 52 06.4	+3.6
MC01	Montes Claros	34.94	115	*e*P	P	03 52 03.8	+0.7
VAO	Valinhos	34.95	127	*e*P	P	03 52 06.2	+3.1
NBPS	Pedro II - PI	35.27	93	*e*P	P	03 52 07.4	+1.4
CNLB	Canela	35.80	139	*e*P	P	03 52 13.2	+2.9
BSCB	Bom Sucesso	35.82	122	*e*P	P	03 52 14.2	+3.5
NBPB	Pedra_Branca-C	37.15	95	*e*P	P	03 52 23.2	+1.2
PLCA	Paso Flores	37.81	172	P	P	03 52 27.1	-0.1
	comp=Z,2.0nm,0.8s,baz=330,slow=5.9,SNR=4.6						
PLCA	Paso Flores	37.81	172	P	P	03 52 27.6	+0.4
PLCA				IAmb	IAmb	03 52 32.2	
	comp=Z,9.2nm,1.3s						
NBMA	Muriti-CE	38.06	98	*e*P	P	03 52 29.8	+0.1
RPN	Rapa Nui	39.20	229	P	P	03 52 39.9	+1.0
	comp=Z,24nm,0.3s,baz=122,slow=13,SNR=1.6						
NBLA	Lagarto - SE	39.42	103	*e*P	P	03 52 41.6	+0.6
NBAN	Anadia - AL	40.73	101	*e*P	P	03 52 51.8	0.0
TXAR	Lajitas Array	41.35	323	P	P	03 52 56.6	-0.1
	comp=Z,0.5nm,0.8s,baz=149,slow=8.3,SNR=5.8						
TXAR				PcP	PcP	03 54 54.0	+0.6
	comp=Z,0.4nm,0.7s,baz=154,slow=5.9,SNR=5.8						
TXAR	Lajitas Array	41.35	323	P	P	03 52 57.6	+0.9
ANMO	Albuquerque	47.06	326	P	P	03 53 43.3	+0.9
SDCO	Great Sand Dun	48.66	330	P	P	03 53 56.0	+1.2
SDCO				IAmb	IAmb	03 53 56.1	
	comp=Z,1.8nm,0.7s						
W18A	Petrified Fore	49.06	324	P	P	03 53 57.6	-0.2
W18A				IAmb	IAmb	03 53 59.8	
	comp=Z,4.8nm,1.0s						
X16A	Lo Mia Camp, P	49.61	322	P	P	03 54 03.4	+1.4
PDAR	Pinedale Array	54.48	331	P	P	03 54 37.9	-0.2
	comp=Z,0.3nm,0.4s,baz=133,slow=8.3,SNR=4.7						
NVAR	Mina Array Bea	56.43	321	P	P	03 54 52.8	+0.7
	comp=Z,1.1nm,0.7s,baz=122,slow=7.6						
MFID	Camas Ranch	58.18	327	P	P	03 55 04.4	+0.3
YKA	Yellowknife Ar	71.49	343	P	P	03 56 29.1	-0.9
	comp=Z,1.2nm,0.7s,baz=141,slow=6.2,SNR=6.7						
YKA	Yellowknife Ar	71.49	343	P	P	03 56 29.9	-0.2
DBIC	Dimbokro	72.45	82	P	P	03 56 35.7	-1.1
	comp=Z,2.7nm,0.4s,baz=265,slow=2.8,SNR=7.7						
DBIC	Dimbokro	72.45	82	P	P	03 56 34.8	-1.9
ESDC	Sonseca Array	78.89	49	P	P	03 57 10.8	-2.2
	comp=Z,0.1nm,0.4s,baz=308,slow=6.3,SNR=1.7						
TORD	Torodi Ar. Bea	79.51	76	P	P	03 57 15.5	-1.4
	comp=Z,0.5nm,0.3s,baz=278,slow=5.8,SNR=4.0						
ILAR	Eielson Array	84.50	336	P	P	03 57 39.8	-2.2
	comp=Z,0.5nm,0.8s,baz=136,slow=4.0,SNR=5.5						

MKAR	Makanchi Array	132.90	20	PKP	PKPdf	04 04 24.0	-0.3
	comp=Z,0.6nm,0.8s,baz=344,slow=2.7,SNR=2.4						
ASAR	Alice Springs	139.94	227	PKhKP	PKPpre	04 04 29.3	
	comp=Z,0.2nm,0.5s,baz=219,slow=38,SNR=1.7						
ASAR				PKP	PKPdf	04 04 36.7	-1.3
	comp=Z,0.2nm,0.3s,baz=141,slow=1.9,SNR=2.4						
WRA	Warramunga Arr	141.77	232	PKhKP	PKPpre	04 04 35.3	
	comp=Z,0.4nm,0.7s,baz=121,slow=2.6,SNR=2.4						
WRA				PKP	PKiKP	04 04 43.0	-1.4
	comp=Z,0.5nm,0.4s,baz=120,slow=2.0,SNR=6.6						

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*DDA **02** 03:52:37.9, 36°.04N×30°.72E, h20^{km}±1^{km}, ML2.7*
*ISK **02** 03:52:37.9, 36°.03N×30°.64E, h15^{km}, ML2.6/12*
*NIC **02** 03:52:38.0±0.0, 36°.03N×30°.62E, h0^{km}±1^{km}, Ml2.9/2*
ISC 02 03:52:38.3±1.4**, 36°.07N**±0°.04×**30°.62E**±0°.02**, h9**^{km}±11^{km}**, n54, σ0^{s}70**/68**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.33	318	*i* P	Pb	03 52 46.7	+0.2
AKUM				*i* S	Sb	03 52 53.2	+1.3
AKUM				IAML		03 52 56.0	
	comp=N,458nm,0.3s						
AKUM				IAML		03 52 57.0	
	comp=E,537nm,0.3s						
KEMT	Kemer-ANTALYA	0.53	355	PG	Pb	03 52 49.4	-0.4
KEMT				SG	Sb	03 52 58.3	+0.7
DEMR	Demre-Antalya	0.60	286	PG	Pb	03 52 50.8	-0.2
DEMR				SG	Sb	03 53 00.1	+0.5
ANTB	Antalya	0.82	2	PG	Pb	03 52 55.1	+0.3
ANTB				SG	Sn	03 53 07.8	-0.7
AKAS	Kas	0.83	281	*i* P	Pn	03 52 55.5	-0.9
AKAS				*i* S	Sn	03 53 09.0	+0.1
AKAS				IAML		03 53 15.0	
	comp=N,486nm,0.7s						
AKAS				IAML		03 53 19.0	
	comp=E,280nm,0.5s						
AKAS	Kas	0.83	281	PG	Pb	03 52 55.2	+0.1
KSL	Kastellorizon	0.84	276	P	Pn	03 52 55.8	-0.6
KSL				S	Sn	03 53 08.2	-0.7
ELL	Elmali	0.88	320	PG	Pn	03 52 56.4	-0.7
ELL	Elmali	0.88	320	P	Pn	03 52 56.4	-0.7
ELL				S	Sn	03 53 11.0	+0.8
KORT	Korkueli	0.95	347	*i* P	Pn	03 52 58.1	+0.1
KORT				*i* S	Sn	03 53 11.5	-0.3
KORT				IAML		03 53 21.0	
	comp=E,148nm,0.7s						
KORT	Korkueli	0.95	347	PG	Pn	03 52 57.6	-0.4
KEPZ	Antalya-Kepez	1.15	44	*i* P	Pb	03 52 59.2	-1.2
BUCA	Burdur, Bucak-	1.25	358	*i* P	Pg	03 53 02.4	+0.1
BUCA				*i* S	Sn	03 53 19.5	+0.3
FETY	Fethiye	1.36	295	*i* P	Pb	03 53 03.6	-0.4
FETY	Fethiye	1.36	295	PN	Pb	03 53 03.6	-0.4
FETY				SN	Sg	03 53 22.2	+0.2
CAME	Cameli-Denizli	1.37	310	PN	Pb	03 53 03.8	-0.4
GAZI	Gazipasa	1.38	83	*i* P	Pn	03 53 01.6	-2.3
GAZI				IAML		03 53 21.0	
	comp=N,162nm,0.5s						
GAZI				IAML		03 53 21.0	
	comp=E,198nm,0.7s						
GAZI	Gazipasa	1.38	83	PN	Pn	03 53 03.3	-0.6
GAZI				SN	Sn	03 53 21.2	-1.1
GOLH	Golhisar	1.44	324	*i* P	Pg	03 53 06.0	+0.1
CAEL	Denizli, Camel	1.48	315	*i* P	Pg	03 53 07.5	+0.8
CAEL				IAML		03 53 39.0	
	comp=E,109nm,0.7s						
CAEL				IAML		03 53 42.0	
	comp=N,109nm,0.8s						
SEDI	Konya, Seydise	1.65	33	*i* P	Pn	03 53 07.4	-0.3
SEYD	Seydisehir-KON	1.65	36	PN	Pn	03 53 07.6	0.0
SEYD				SN	Sn	03 53 29.2	+0.1
BRDR	BURDUR-Merkez	1.68	345	*i* P	Pg	03 53 09.8	-0.8
HDMB	Hadim	1.75	59	PN	Pn	03 53 08.5	-0.6
HDMB				SN	Sn	03 53 30.9	-0.7
DALY	Dalyan (Mula)	1.75	296	*i* P	Pn	03 53 08.5	-0.3
DALY	Dalyan (Mula)	1.75	296	PN	Pn	03 53 08.9	+0.1
AKMS	Akamas	1.75	126	P	Pn	03 53 09.3	+0.4
AKMS				AML	AML	03 53 31.3	
	comp=N,0.4nm,0.9s						
AKMS				AML	AML	03 53 31.3	
	comp=N,0.4nm,0.9s						
AKMS				S	Sb	03 53 34.1	+1.3
AKMS				AML	AML	03 53 38.0	
	comp=N,0.4nm,0.5s						
AKMS				AML	AML	03 53 38.0	
	comp=N,0.4nm,0.5s						
ALFC	Alefka	1.85	119	P	Pn	03 53 10.6	+0.2
ALFC				AML	AML	03 53 44.9	
	comp=N,0.4nm,0.5s						
ALFC				AML	AML	03 53 45.2	
	comp=N,0.3nm,0.5s						
BASM	Basmaki-Afyon	1.90	346	PN	Pn	03 53 11.6	+0.6
BAGO	Egridir - ISPA	1.92	4	*i* P	Pn	03 53 11.5	+0.2
TAVA	DENIZLI_Tavas	1.95	316	*i* P	Pn	03 53 11.8	+0.1
ARG	Arkhangelos	2.02	275	PN	Pn	03 53 12.0	-0.6
TEKE	Tekeli-Mersin	2.02	87	PN	Pn	03 53 12.4	-0.2
TURN	Turunc	2.04	291	*i* P	Pn	03 53 12.4	-0.4
TURN	Turunc	2.04	291	PN	Pn	03 53 12.9	+0.1
NATA	Nata	2.05	128	P	Pn	03 53 14.4	+1.4
BERE	Bereket-Mersin	2.12	82	PN	Pn	03 53 13.4	-0.8
KKBE	Karaman, Kazim	2.19	58	*i* P	Pn	03 53 15.9	+0.9
MULA	Mugla, Merkez-	2.19	303	*i* P	Pb	03 53 16.3	-1.9
DOGA	KONYA_Doganhis	2.20	22	*i* P	Pn	03 53 15.8	+0.7
KMER	Konya-Meram	2.20	39	*i* P	Pn	03 53 16.2	+1.0
KZIL	AFYON_Kizioren	2.21	350	*i* P	Pn	03 53 15.4	0.0
YVAC	Isparta, Yalva	2.25	13	*i* P	Pn	03 53 16.6	+0.8
KONT	Konya--Tatoy	2.33	36	PN	Pn	03 53 17.5	+0.6
GULN	MERSIN_Gulnar	2.37	86	*i* P	Pn	03 53 17.7	+0.3
KRMN	Karaman	2.40	62	PN	Pn	03 53 18.1	+0.3
PASA	Karahalli, USA	2.44	339	*i* P	Pn	03 53 19.0	+0.5
SHUT	Suhut-Afyon	2.48	359	PN	Pn	03 53 19.3	+0.3
ASGA	Asgata	2.50	120	P	Pn	03 53 19.6	+0.4
DAT	Datca	2.54	286	*i* P	Pn	03 53 19.6	-0.2
LADK	Ladik-KONYA	2.54	33	PN	Pn	03 53 20.1	+0.2
KDHN	Kadinhani	2.72	26	*i* P	Pn	03 53 21.8	-0.6
BDRM	Kayabasi	2.74	292	*i* P	Pn	03 53 22.0	-0.5
BDRM				IAML		03 53 56.0	
	comp=N,26nm,0.3s						
USAK	Uak-Merkez	2.93	335	*i* P	Pn	03 53 24.9	-0.2
USAK				IAML		03 53 59.0	
	comp=E,26nm,1.2s						

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*BJI **02** 04:41:16.7±0.0, 38°.41N×141°.92E, h65^{km}, mB4.9/33, mb4.9/58, Ms4.1/11, Ms7 3.8/11*
*JMA **02** 04:41:19.7, 38°.34N×141°.85E, h63^{km}±1^{km}, M4.6 Broadband fault plane solution: P waves. NP1: ϕ_s71.00000°, δ45.00000°, λ148.00000°. NP2: ϕ_s185.00000°, δ68.00000°, λ50.00000°. Principal axes: T Plg50.0000°, Azm50.0000°; N Plg37.0000°, Azm202.0000°; P Plg14.0000°, Azm303.0000°;*
JMA Felt III J1.
*NEIC **02** 04:41:19.4±1.4, 38°.39N±0°.05×141°.86E±0°.08, h57^{km}±5^{km}, mb4.6/95 Error ellipse: s-maj=9.3km s-min=6.7km az=120.0*
*IDC **02** 04:41:19.7±0.5, 38°.33N×141°.83E, h67^{km}±5^{km}, mb4.3/25, mb1 4.4/33, mb1mx4.3/52, mbtmp4.6/33, MS3.3/14, Ms1 3.3/14, ms1mx3.1/38, Error ellipse: s-maj=12.0km s-min=10.4km az=102.0*
*NIED **02** 04:41:19.7, 38°.34N×141°.85E, h63^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.71; $M_{\theta\theta}$-1.39; $M_{\phi\phi}$-2.31; $M_{r\theta}$0.30; $M_{\theta\phi}$-2.82; $M_{\phi r}$-2.18; Fault plane solution: $M_0$4.82000×10^{15} NP1: ϕ_s198.00000°, δ59.00000°, λ63.00000°. NP2: ϕ_s63.00000°, δ40.00000°, λ127.00000°.*
ISC 02 04:41:19.3±0.5**, 38°.33N**±0°.04×**141°.90E**±0°.05**, h65**^{km}±4^{km}**, n206, σ1^{s}13**/220**, mb4.6**/80**, 6C-8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.34	267	⇑P	Pn	04 41 30.2	0.0
JIKH				*i* S	Sn	04 41 37.7	-0.4
JIO	Ouri	0.45	286	⇑P	Pn	04 41 31.2	+0.1
JIO				S	Sn	04 41 39.2	-0.6
JKMT	Kesennumamotoy	0.58	325	⇓P	Pn	04 41 32.6	+0.1
JKMT				S	Sn	04 41 41.9	-0.3
OFUJ	Ofunato	0.77	346	⇓P	Pn	04 41 34.7	+0.1
OFUJ				S	Sn	04 41 45.7	-0.2
JMK	Ichinoseki	0.82	319	⇓P	Pn	04 41 35.5	+0.3
JMK				S	Sn	04 41 46.8	-0.2
JOU	Okura	0.97	272	⇑P	Pn	04 41 37.2	0.0
JOU				S	Sn	04 41 50.3	-0.2
JMM	Marumori	0.99	242	⇑P	Pn	04 41 37.1	-0.3
JMM				S	Sn	04 41 50.0	-0.8
JMM	Marumori	0.99	242		Pn	04 41 37.1	-0.3
JMM				Sn	Sn	04 41 49.8	-1.0
JOM	Ohasama	1.23	338	⇓P	Pn	04 41 40.8	+0.2
JOM				S	Sn	04 41 56.6	+0.1
JFK	Kawauchi	1.26	220	⇑P	Pn	04 41 40.9	0.0
JFK				S	Sn	04 41 56.7	-0.4
JYK	Kaneyama	1.34	296	⇓P	Pn	04 41 42.1	+0.1
JYK				S	Sn	04 41 59.2	+0.2
JYS	Shirataka	1.45	266	⇓P	Pn	04 41 43.7	+0.3
JYS				S	Sn	04 42 01.9	+0.4
JRG	Rokugo	1.45	317	P	Pn	04 41 43.6	+0.2
JFT	Otama	1.48	237	P	Pn	04 41 44.3	+0.5
JFT				S	Sn	04 42 02.4	+0.1
JYA	Atsumi	1.74	279	⇓P	Pn	04 41 47.5	+0.3
JYA				S	Sn	04 42 09.2	+0.8
JYT	Yasato	2.50	213		Pn	04 41 57.2	-0.4
JTM	Tenmabayashi	2.54	346	Pn	Pn	04 41 58.4	+0.3
JTM				Sn	Sn	04 42 26.8	-1.0
JSD	Sado	2.88	265	Pn	Pn	04 42 02.5	-0.3
MAJO	Matsushiro	3.44	240	Pn	Pn	04 42 11.9	+1.5
MAT	Matsushiro	3.44	240	P	Pn	04 42 12.3	+1.9
MAT				*e*S	Sn	04 42 50.4	+0.4
MJAR	Matsushiro Arr	3.44	240	P	Pn	04 42 11.3	+0.8
	2.9nm,0.3s,baz=61,slow=14,SNR=69						
MJAR				S	Sn	04 42 58.3	+8.3
	3.8nm,0.3s,baz=84,slow=15,SNR=4.6						
MJAR				LR	LR	04 43 47.4	
	comp=Z,405nm,21.6s,baz=50,slow=44						
MJB9	Matsu-Tunnel	3.44	240		Pn	04 42 11.4	+0.9
ERM	Erimo	3.80	14	Pn	Pn	04 42 15.0	-0.4
JEW	Eniwo	4.52	356		Pn	04 42 24.9	-0.3
JGF	Kuroka	4.55	235	Pn	Pn	04 42 27.4	+1.8
INU	Inuyama	4.92	234		Pn	04 42 31.9	+1.2
JHJ	Hachijo jima 2	5.48	199	P	Pn	04 42 37.3	-1.0
	26nm,0.3s,baz=154,slow=22,SNR=6.9						
JHJ				S	Sn	04 43 34.1	-5.8
	131nm,0.3s,baz=82,slow=23,SNR=12						
JHJ				LR	LR	04 44 20.1	
	comp=Z,87nm,19.4s,baz=83,slow=33						
JKA	Kamikawa-asahi	5.80	5	Pn	Pn	04 42 41.1	-1.6
ASAJ	Asahikawa	5.80	5	P	Pn	04 42 42.0	-0.7
	14nm,0.3s,baz=214,slow=11,SNR=41						
ASAJ				S	Sn	04 43 44.6	-3.2
	26nm,0.3s,baz=72,slow=24,SNR=6.1						
JWT	Wachi	6.04	242	Pn	Pn	04 42 46.6	+0.7
JHS	Saijyo	7.80	247	Pn	Pn	04 43 13.0	+2.9
YSS	Yuzh-Sakhalins	8.64	4	Pn	Pn	04 43 20.5	-1.0
USA0B	Ussuriysk Arra	9.49	311	Pn	Pn	04 43 33.1	+0.1
USRK	Ussuriysk Ar.	9.49	311	P	Pn	04 43 33.2	+0.2
	baz=121,slow=14,SNR=122						
USRK				LR	LR	04 46 57.1	
	comp=Z,185nm,20.2s,baz=106,slow=36						
USRK	Ussuriysk Ar.	9.49	311	Pn	Pn	04 43 31.8	-1.2
JNU	Nakatsue	10.36	243	P	Pn	04 43 45.4	+0.3
	1.8nm,0.3s,baz=70,slow=3.5,SNR=4.8						
KSRS	Korea Array	11.08	270	P	Pn	04 43 55.9	+1.0
	0.9nm,0.3s,baz=84,slow=14,SNR=6.5						
KSRS				LR	LR	04 48 07.3	
	comp=Z,50nm,19.0s,baz=73,slow=37						
MDJ	Mudanjiang	11.16	308	P	Pn	04 43 56.5	+0.6
MDJ				pmax	pmax		
	comp=Z,12nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,290nm,4.8s						
MDJ	Mudanjiang	11.16	308	Pn	Pn	04 43 58.6	+2.6
JCJ	Chichijima	11.21	179	P	Pn	04 43 53.7	-2.9
	12nm,0.3s,baz=289,slow=15,SNR=10						
JCJ				S	Sn	04 45 51.0	-9.2
	28nm,0.3s,baz=107,slow=22,SNR=6.6						
KLR	Kul'dur	13.12	329	P	Pn	04 44 21.1	-1.4
	1.0nm,0.3s,baz=145,slow=12,SNR=23						
KLR				LR	LR	04 49 16.2	
	comp=Z,135nm,20.6s,baz=136,slow=36						
CN2	Changchun	13.56	299	*e*P	P	04 44 32.0	-3.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
DL2	Dalian	15.86	278	P	Pn	04 44 58.3	-0.1
DL2				pmax	pmax		
	comp=Z,63nm,1.1s						
PETK	Petropavlovsk-	18.38	31	P	P	04 45 28.1	-0.6
	0.3nm,0.3s,baz=229,slow=11,SNR=2.5						
HIA	Hailar	19.30	312	P	P	04 45 37.9	-1.0
NJ2	Nanjing	19.83	259	*e*P	P	04 45 45.8	+1.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJI	Beijing	20.00	283	P	P	04 45 44.0	-2.4
BJI				pmax	pmax		
	comp=Z,12nm,0.7s						
BJI				pmax	pmax		
	comp=Z,58nm,5.0s						
BJT	Baijiatuau	20.00	283	P	P	04 45 44.1	-2.5
BJT				IAmb	IAmb	04 45 55.8	
	comp=Z,16nm,0.6s						
HHC	Hu-ho-hao-te	23.46	286	*e*P	P	04 46 23.1	0.0
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,58nm,6.3s						
SEY	Seymchan	25.45	11	P	P	04 46 40.5	-0.2
	comp=Z,4.5nm,0.4s,baz=178,slow=8.6,SNR=8.3						
XAN	Xi'an	26.88	271	P	P	04 46 53.0	-1.0
XAN				pP	pP	04 47 04.3	-5.3
XAN				pmax	pmax		
	comp=Z,18nm,0.6s						
XAN				pmax	pmax		
	comp=Z,120nm,3.6s						
ULN	Ulaanbaatar	26.97	302	P	P	04 46 54.3	-0.6
ULN				IAmb	IAmb	04 46 56.4	
	comp=Z,22nm,1.2s						
SONM	Songino Array	27.41	302	P	P	04 46 58.4	-0.4
	comp=Z,7.6nm,0.5s,baz=116,slow=8.9,SNR=42						
SONM				LR	LR	04 58 20.2	
	comp=Z,58nm,18.3s,baz=221,slow=37						
SONM	Songino Array	27.41	302	P	P	04 46 58.4	-0.4
SONM				IAmb	IAmb	04 47 01.1	
	comp=Z,7.9nm,0.6s						
ENH	Enshi	27.85	263	P	P	04 47 02.9	+0.1
H11N2	WAKE ISLAND Hy	28.51	123	T	T	05 17 26.7	
	baz=316,slow=75,SNR=1279						
H11N1	WAKE ISLAND Hy	28.52	124	T	T	05 17 25.8	
	baz=316,slow=75,SNR=2448						
H11N3	WAKE ISLAND Hy	28.53	123	T	T	05 17 28.1	
	baz=316,slow=75,SNR=1974						
H11S1	WAKE ISLAND Hy	29.27	125	T	T	05 18 20.6	
	baz=318,slow=76,SNR=812						
H11S3	WAKE ISLAND Hy	29.27	126	T	T	05 18 24.0	
	baz=318,slow=76,SNR=1295						
H11S2	WAKE ISLAND Hy	29.28	126	T	T	05 18 26.8	
	baz=318,slow=76,SNR=755						
TLY	Talaya	29.79	309	P	P	04 47 19.7	-0.1
	comp=Z,9.6nm,0.6s,baz=97,slow=6.8,SNR=7.2						
TLY				LR	LR	04 59 51.5	
	comp=Z,65nm,19.4s,baz=168,slow=37						
TLY	Talaya	29.79	309	P	P	04 47 20.2	+0.5
TLY				IAmb	IAmb	04 47 21.3	
	comp=Z,14nm,0.8s						
LZH	Lanzhou	30.25	278	*e*P	P	04 47 24.0	-0.2
LZH				pP	pP	04 47 39.1	-0.8
LZH				sP	sP	04 47 45.3	-2.2
LZH				pmax	pmax		
	comp=Z,30nm,1.1s						
GTA	Gaotai	32.57	285	*e*P	P	04 47 44.7	+0.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,130nm,4.9s						
GTA				LR	LR		
	comp=Z,81nm,16.0s						
GTA				LR	LR		
	comp=Z,110nm,15.6s						
GTA				LR	LR		
	comp=Z,140nm,16.0s						
KMI	Kunming	35.55	260	⇑P	P	04 48 10.9	+0.3
KMI				pP	pP	04 48 25.0	-1.5
KMI				pmax	pmax		
	comp=Z,15nm,0.8s						
WMQ	Urumqi	40.61	296	*e*P	P	04 48 53.9	+1.1
WMQ				pmax	pmax		
	comp=Z,65nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.5s						
ZAA0	Zalesovo Array	41.34	311	P	P	04 48 58.1	-0.3
ZALV	Zalesovo Beam	41.34	311	P	P	04 48 58.5	0.0
	comp=Z,23nm,0.5s,baz=84,slow=8.2,SNR=89						
ZALV				LR	LR	05 06 56.8	
	comp=Z,47nm,18.6s,baz=40,slow=37						
ZALV	Zalesovo Beam	41.34	311	P	P	04 48 57.9	-0.6
CHTO	Chiang Mai	41.99	255	P	P	04 49 05.0	+0.7
CMAR	Chiang Mai Arr	42.21	254	LR	LR	05 07 43.4	
	comp=Z,26nm,18.3s,baz=65,slow=38						
NRIK	Noril'sk	42.26	335	P	P	04 49 05.7	0.0
	comp=Z,3.4nm,0.3s,baz=135,slow=13,SNR=4.7						
NRIK				LR	LR	05 07 22.7	
	comp=Z,57nm,19.2s,baz=55,slow=37						
NRIK	Noril'sk	42.26	335	P	P	04 49 05.5	-0.2
MK31	Makanchi Array	43.77	301	P	P	04 49 18.5	+0.1
MK31				IAmb	IAmb	04 49 19.7	
	comp=Z,12nm,0.7s						
MKAR	Makanchi Array	43.77	301	P	P	04 49 18.1	-0.2
	comp=Z,15nm,0.7s,baz=85,slow=9.8,SNR=70						
SHL	Shillong	43.82	268	P	P	04 49 19.7	+0.5
SHL				IAmb	IAmb	04 49 22.7	
	comp=Z,9.6nm,0.8s						
MAKZ	Makanchi	43.98	301	P	P	04 49 20.1	+0.1
MAKZ				IAmb	IAmb	04 49 21.5	
	comp=Z,15nm,0.7s						
J20K	Nowinta River	45.05	34	P	P	04 49 29.2	+0.9
J20K				IAmb	IAmb	04 49 30.8	
	comp=Z,9.6nm,1.1s						
KURK	Kurchatov	45.45	307	P	P	04 49 31.2	-0.4
KURBB	Kurchatov Arra	45.52	307	P	P	04 49 31.9	-0.3
	comp=Z,18nm,0.3s,baz=79,slow=7.9,SNR=78						
TAPN	Taplejung	46.25	273	*e*P	P	04 49 38.6	0.0
MLY	Manley	46.55	33	P	P	04 49 41.7	+1.6
ODAN	Odare	46.73	273	*e*P	P	04 49 42.5	+0.2
TOLK	Toolik Lake Re	47.14	28	P	P	04 49 46.2	+1.5
TOLK				IAmb	IAmb	04 49 47.1	
	comp=Z,5.2nm,0.9s						
RAMN	Ramite	47.31	273	*e*P	P	04 49 46.9	+0.1
	comp=Z,26nm,0.5s						
GUN	Gumba	47.42	275	*e*P	P	04 49 48.1	+0.3
MDM	Murphy Dome	47.62	33	P	P	04 49 49.5	+1.1
MDM				IAmb	IAmb	04 49 50.8	
	comp=Z,13nm,1.2s						
KKN	Kakani	47.95	275	*e*P	P	04 49 52.0	+0.3
	comp=Z,44nm,0.5s						
PKI	Pulchoki	47.95	275	*e*P	P	04 49 51.4	-0.5
PKIN	Phulchoki	47.96	275	*e*P	P	04 49 51.4	-0.4
	comp=Z,12nm,0.4s						
DMN	Daman	48.17	275	*e*P	P	04 49 53.5	0.0
	comp=Z,11nm,0.4s						
TARG	Taragay, Kyrgy	48.18	295	P	P	04 49 52.5	-1.1
IL31		48.20	33	P	P	04 49 53.9	+1.1
IL31				IAmb	IAmb	04 49 54.2	
	comp=Z,5.4nm,0.8s						
ILAR	Eielson Array	48.20	33	P	P	04 49 53.5	+0.7
	comp=Z,3.6nm,0.7s,baz=267,slow=6.4,SNR=32						
ILAR				pP	pP	04 50 10.8	+1.7
	comp=Z,2.8nm,0.6s,baz=258,slow=5.6,SNR=7.8						
ILAR	Eielson Array	48.20	33	P	P	04 49 53.4	+0.5
GKN	Gorkha	48.35	276	*e*P	P	04 49 54.7	-0.1
DANN	Dangsing	48.88	276	*e*P	P	04 49 59.1	+0.1
BOOM	Boomskoye usch	49.26	297	P	P	04 50 02.0	+0.4
KOLN	Koldanda	49.27	276	*e*P	P	04 50 01.7	-0.2
	comp=Z,14nm,0.3s						
SCRK	Sand Creek	49.51	34	P	P	04 50 04.1	+1.0
SCRK				IAmb	IAmb	04 50 04.7	
	comp=Z,7.9nm,1.0s						
BVAR	Borovoye Array	49.99	312	P	P	04 50 06.7	0.0
	comp=Z,4.1nm,0.5s,baz=155,slow=4.2,SNR=27						
BRVK	Borovoye	50.05	312	P	P	04 50 07.6	+0.5
BRVK				IAmb	IAmb	04 50 10.7	
	comp=Z,4.8nm,0.5s						
AAK	Ala-Archa	50.22	298	P	P	04 50 08.6	-0.2
KSH	Kashi	50.24	293	P	P	04 50 14.5	+5.5
KSH				pmax	pmax		
	comp=Z,11nm,0.8s						
KKAR	Karatay Array	52.82	299	P	P	04 50 27.6	-0.4
GAR	Garm	54.50	295	P	P	04 50 40.0	-0.5
NIL	Nilore	54.59	288	P	P	04 50 41.2	+0.2
A36M	Sachs Harbour	54.91	22	P	P	04 50 44.5	+1.8
A36M				IAmb	IAmb	04 50 45.2	
	comp=Z,8.9nm,0.8s						
CHGR	Chuyangaron	55.47	295	P	P	04 50 46.8	-0.7
ARU	Arti	55.65	318	P	P	04 50 47.3	-1.1
	comp=Z,2.0nm,0.3s,baz=56,slow=3.6,SNR=8.1						
ABKAR	Akbulak array	57.41	310	P	P	04 51 00.3	-0.6
ABKAR	Akbulak array	57.41	310	P	P	04 51 00.3	-0.6
ABKAR				IAmb	IAmb	04 51 17.0	
	comp=Z,5.8nm,0.7s						
AKTO	Aktyubinsk	58.10	311	P	P	04 51 06.0	+0.2
	comp=Z,3.5nm,0.5s,baz=68,slow=11,SNR=10						
WB0	Warramunga Arr	58.22	188	P	P	04 51 06.9	+0.1
WR0	Warramunga Arr	58.39	188	P	P	04 51 07.7	-0.3
WB2	Warramunga Arr	58.40	188	P	P	04 51 07.6	-0.5
WRA	Warramunga Arr	58.40	188	P	P	04 51 07.8	-0.3
	comp=Z,6.8nm,0.6s,baz=5.6,slow=7.1,SNR=85						
WRA				pP	pP	04 51 24.9	-0.1
	comp=Z,7.4nm,0.8s,baz=4.8,slow=7.2,SNR=13						
WRA	Warramunga Arr	58.40	188	P	P	04 51 07.9	-0.3
RES	Resolute Bay	61.25	15	P	P	04 51 27.5	+0.4
RES				IAmb	IAmb	04 51 27.5	
	comp=Z,5.2nm,0.6s						
ASAR	Alice Springs	62.12	188	P	P	04 51 33.8	+0.2
	comp=Z,3.2nm,0.7s,baz=6.9,slow=4.7,SNR=40						
ASAR				pP	pP	04 51 51.1	+0.6
	comp=Z,2.7nm,0.8s,baz=8.7,slow=6.3,SNR=6.1						
YKA	Yellowknife Ar	62.49	31	P	P	04 51 35.9	+0.3
	comp=Z,2.9nm,0.7s,baz=304,slow=6.7,SNR=10						
YKA				PcP	PcP	04 52 15.2	+0.9
	comp=Z,0.8nm,0.6s,baz=303,slow=3.5,SNR=4.7						
YKA	Yellowknife Ar	62.49	31	P	P	04 51 35.5	-0.1
ARCES	ARCESS Array B	62.92	339	P	P	04 51 38.3	0.0
	comp=Z,0.7nm,0.5s,baz=54,slow=6.9,SNR=9.5						
ARCES				LR	LR	05 23 32.1	
	comp=Z,27nm,19.1s,baz=310,slow=40						
BELG	Belogornoye	63.12	317	P	P	04 51 39.9	0.0
	comp=Z,7.3nm,0.4s,baz=336,slow=5.6,SNR=7.8						
FINES	FINESS Array B	67.85	332	P	P	04 52 09.9	-0.4
	comp=Z,2.6nm,0.6s,baz=35,slow=7.0,SNR=8.8						
FINES	FINESS Array B	67.85	332	P	P	04 52 10.3	+0.1
EDM	Edmonton	68.09	39	P	P	04 52 13.2	+1.2
STKA	Stephens Creek	69.85	180	P	P	04 52 22.8	-0.1
	comp=Z,1.1nm,0.5s,baz=352,slow=8.2,SNR=4.1						
STKA	Stephens Creek	69.85	180	P	P	04 52 23.4	+0.6
KBZ	Khabaz	70.35	311	P	P	04 52 26.8	+0.8
	comp=Z,1.2nm,0.4s,baz=228,slow=1.2,SNR=5.1						
MPK	Martis Peak	72.31	54	P	P	04 52 38.6	+0.3
MPK				IAmb	IAmb	04 52 40.2	
	comp=Z,6.6nm,0.9s						
FFC	Flin Flon	72.41	33	P	P	04 52 39.2	+0.9
FFC				IAmb	IAmb	04 52 39.5	
	comp=Z,7.0nm,0.9s						
PAHR	Pah Rah Range	72.48	53	P	P	04 52 39.5	+0.3
HRY	Holter Researc	72.75	44	P	P	04 52 41.8	+1.2
YERR	Yerington	72.99	54	P	P	04 52 43.3	+1.1
YERR				IAmb	IAmb	04 52 44.5	
	comp=Z,7.8nm,1.1s						
EGMT	Eagleton	73.05	42	P	P	04 52 43.4	+1.1
EGMT				IAmb	IAmb	04 52 44.1	
	comp=Z,11nm,0.8s						
NB2	NORSAR Subarra	73.14	337	P	P	04 52 42.5	-0.1
	comp=Z,0.8nm,0.6s,baz=39,slow=6.2						
NOA	NORSAR Array B	73.14	337	P	P	04 52 42.8	+0.2
	comp=Z,0.3nm,0.4s,baz=52,slow=7.0,SNR=5.8						
NOA				LR	LR	05 27 22.6	
	comp=Z,38nm,21.5s,baz=280,slow=38						
DLMT	Dillon	73.15	45	P	P	04 52 44.1	+1.1
HLID	Hailey	73.21	48	P	P	04 52 44.7	+1.3
BMN	Battle Mountai	73.40	51	P	P	04 52 46.0	+1.4
BMN				IAmb	IAmb	04 52 47.1	
	comp=Z,9.8nm,1.4s						
AKASG	Malin Array Be	73.51	322	P	P	04 52 44.5	-0.3
	comp=Z,1.1nm,0.3s,baz=38,slow=8.5,SNR=8.5						
AKASG				LR	LR	05 25 25.6	
	comp=Z,26nm,18.9s,baz=215,slow=36						
BOZ	Bozeman (W)	73.54	45	P	P	04 52 46.7	+1.3
BOZ				IAmb	IAmb	04 52 47.0	
	comp=Z,4.8nm,0.7s						
KVN	Kaiserville	73.67	53	P	P	04 52 47.4	+1.2
KVN				IAmb	IAmb	04 52 49.1	
	comp=Z,11nm,1.4s						
LHV	Little Huntoon	73.88	54	P	P	04 52 48.3	+1.1
LHV				IAmb	IAmb	04 52 50.3	

	comp=Z,8.6nm,1.1s						
YHH	Holmes Hill	74.48	45	P	P	04 52 51.9	+0.8
TPH	Tonopah	74.80	53	P	P	04 52 53.6	+0.7
H17A	Grant Village	74.88	45	P	P	04 52 55.2	+1.9
H17A				IAmb	IAmb	04 52 57.2	
	comp=Z,6.7nm,0.8s						
FXWY	Fox Creek	75.10	46	P	P	04 52 54.2	-0.3
RLMT	Red Lodge	75.14	44	P	P	04 52 55.7	+1.0
MOOW	Moose Ponds	75.19	46	P	P	04 52 56.4	+1.3
TPAW	Teton Pass	75.24	46	P	P	04 52 56.3	+0.9
TPAW				IAmb	IAmb	04 52 58.1	
	comp=Z,4.1nm,0.7s						
HVU	Hansel Valley	75.25	48	P	P	04 52 56.4	+1.0
HVU				IAmb	IAmb	04 52 57.4	
	comp=Z,4.2nm,0.6s						
AHID	Auburn Hatcher	75.61	47	P	P	04 52 58.0	+0.6
AHID				IAmb	IAmb	04 52 59.4	
	comp=Z,4.0nm,0.7s						
R11A	Troy Canyon, C	75.66	52	P	P	04 52 58.0	+0.2
LAO	LASA Array	75.74	41	P	P	04 52 58.2	+0.2
LAO				IAmb	IAmb	04 52 59.7	
	comp=Z,8.3nm,0.8s						
SPR3	Spring Creek 3	76.04	51	P	P	04 53 01.0	+0.9
HWUT	Hardware Ranch	76.07	48	P	P	04 53 00.9	+0.8
HWUT				IAmb	IAmb	04 53 02.5	
	comp=Z,10.0nm,1.2s						
DUG	Dugway, Tooele	76.22	50	P	P	04 53 01.2	+0.3
DUG				IAmb	IAmb	04 53 03.3	
	comp=Z,9.7nm,1.3s						
GWY	Greenwater Val	76.29	55	P	P	04 53 01.7	+0.4
GWY				IAmb	IAmb	04 53 02.9	
	comp=Z,5.3nm,0.7s						
QSM	Queen of Sheba	76.30	55	P	P	04 53 02.4	+1.1
QSM				IAmb	IAmb	04 53 03.3	
	comp=Z,7.3nm,0.8s						
BW06	Boulder Array	76.48	46	P	P	04 53 03.0	+0.5
BW06				IAmb	IAmb	04 53 03.6	
	comp=Z,4.9nm,0.6s						
PD31	Pinedale Array	76.48	46	P	P	04 53 03.0	+0.5
PD31				IAmb	IAmb	04 53 03.6	
	comp=Z,4.2nm,0.6s						
PDAR	Pinedale Array	76.48	46	P	P	04 53 03.2	+0.8
	comp=Z,4.0nm,0.6s,baz=271,slow=1.5,SNR=48						
PDAR				pP	pP	04 53 21.3	+1.4
	comp=Z,1.9nm,0.6s,baz=266,slow=3.4,SNR=6.9						
PDAR	Pinedale Array	76.48	46	P	P	04 53 02.7	+0.2
PRN	Pahroc Range	76.57	53	P	P	04 53 03.5	+0.5
PRN				IAmb	IAmb	04 53 23.3	
	comp=Z,6.9nm,1.2s						
NLU	North Lily Min	76.81	49	P	P	04 53 05.2	+0.9
MPU	Maple Canyon	77.03	49	P	P	04 53 05.9	+0.3
MPU				IAmb	IAmb	04 53 07.5	
	comp=Z,4.1nm,0.6s						
CCUT	Cedar City	77.53	52	P	P	04 53 09.2	+0.7
MVU	Marysvale	77.64	51	P	P	04 53 09.4	+0.3
TMUT	Trail Mountain	77.74	49	P	P	04 53 09.5	-0.2
RDMU	Red Mountain	77.89	48	P	P	04 53 10.3	0.0
RDMU				IAmb	IAmb	04 53 12.7	
	comp=Z,9.1nm,0.8s						
P17A	Butcher Ranch,	77.91	49	P	P	04 53 11.1	+0.7
P17A				IAmb	IAmb	04 53 12.8	
	comp=Z,8.3nm,0.8s						
LCMT	Little Creek M	77.95	52	P	P	04 53 10.5	-0.2
LCMT				IAmb	IAmb	04 53 12.8	
	comp=Z,4.6nm,1.0s						
MTPU	Mount Pierson	77.95	51	P	P	04 53 11.0	+0.1
MTPU				IAmb	IAmb	04 53 13.3	
	comp=Z,3.8nm,0.8s						
P18A	Preston Nutter	78.10	49	P	P	04 53 11.5	-0.2
P18A				IAmb	IAmb	04 53 14.3	
	comp=Z,11nm,1.5s						
KNB	Kanab	78.21	52	P	P	04 53 12.3	+0.2
ULM	Lac du Bonnet	78.21	34	P	P	04 53 11.3	-0.3
	comp=Z,3.0nm,0.7s,baz=307,slow=7.4,SNR=4.2						
SRU	San Rafael Swe	78.27	49	P	P	04 53 12.4	0.0
SRU				IAmb	IAmb	04 53 14.5	
	comp=Z,7.6nm,0.7s						
W13A	Hualapai Mount	78.74	54	P	P	04 53 15.6	+0.4
U15A	North Rim	78.91	52	P	P	04 53 16.6	+0.5
Y14A	Wickenburg	80.04	55	P	P	04 53 22.1	+0.1
WUAZ	Wupatki	80.06	52	P	P	04 53 22.6	+0.3
X16A	Lo Mia Camp, P	80.73	53	P	P	04 53 26.7	+0.9
X16A				IAmb	IAmb	04 53 28.5	
	comp=Z,5.0nm,0.9s						
ECSD	EROS Data Cent	82.66	39	P	P	04 53 35.6	0.0
ECSD				IAmb	IAmb	04 53 36.7	
	comp=Z,4.4nm,0.7s						
I37A	Lemond, Waseca	83.99	37	P	P	04 53 42.8	+0.3
BMRD	Maredsous	84.01	334	*d*PcP	PcP	04 53 44.9	-1.4
STAL	STALIGIAL	84.26	327	P	P	04 53 43.2	-0.6
STAL				IAmb	IAmb	04 54 02.5	
	comp=Z,3.4nm,0.6s						
DAVOX	Davos/Dischmat	85.02	329	P	P	04 53 48.5	+0.7
	comp=Z,1.2nm,0.5s,baz=320,slow=16,SNR=2.3						
P40A	Paris	88.08	39	P	P	04 54 03.4	+0.7
TX31	Lajitas Ar. Si	89.03	53	P	P	04 54 07.9	+0.5
TX32	Lajitas Array	89.03	53	P	P	04 54 07.9	+0.5
TX32				IAmb	IAmb	04 54 09.1	
	comp=Z,3.9nm,0.7s						
TXAR	Lajitas Array	89.03	53	P	P	04 54 08.2	+0.7
	comp=Z,3.1nm,0.6s,baz=294,slow=2.9,SNR=58						
TXAR				pP	pP	04 54 26.6	+1.4
	comp=Z,0.6nm,0.6s,baz=315,slow=3.6,SNR=3.4						
CCM	Cathedral Cave	89.61	39	P	P	04 54 10.4	+0.5
U40A	Yellville	90.10	41	P	P	04 54 12.2	-0.1
MIAR	Mount Ida	91.10	43	P	P	04 54 17.3	+0.4
ESDC	Sonseca Array	96.30	334	LR	LR	05 43 00.4	
	comp=Z,27nm,18.1s,baz=320,slow=38						
TORD	Torodi Ar. Bea	116.68	316	PKP	PKPdf	04 59 55.5	-1.1
	comp=Z,0.4nm,0.6s,baz=278,slow=5.4,SNR=3.6						
TORD	Torodi Ar. Bea	116.68	316		PKPdf	04 59 55.9	-0.8
SNAA	Sanae	142.10	197	PKPdf	PKPdf	05 00 39.9	-3.0
VNA2	Neumayer--Watz	143.67	196	PKPdf	PKPab	05 00 43.3	+0.8
	baz=105,slow=1.8						
VNA3	Neumayer Olymp	143.92	195	PKPdf	PKPab	05 00 43.5	+0.1
VNA1	Neumayer--Stat	144.07	196	PKPdf	PKPab	05 00 43.6	-0.4
LPAZ	La Paz	145.69	59	PKPbc	PKPbc	05 00 52.1	+0.2
	comp=Z,6.5nm,0.6s,baz=354,slow=4.1,SNR=30						
LPAZ	La Paz	145.69	59	PKPdf	PKPdf	05 00 51.1	-0.4

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*VIE **02** 04:52:10.6±0.5, 51°.47N×16°.06E, h0^{km}, mb2.4/2, ml2.6/2, Error ellipse: s-maj=5.9km s-min=2.8km az=60.0 78 km WNW of Wroclaw Suspected Mining induced.*

ISC 02 04:52:10.7±1.2**, 51°.48N**±0°.05×**16°.11E**±0°.03**, h0^{km}, n23, σ0^{s}75**/48**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.65	170	*e*Pg	Pg	04 52 23.4	+0.4
KSP				*e*Sg	Sg	04 52 31.9	+0.5
CHVC	Chvalec	0.89	182	*e*PG	Pg	04 52 28.2	+0.5
CHVC				*e*SG	Sg	04 52 40.1	+0.8
OSTC	Ostas	0.93	176	*e*PG	Pg	04 52 28.7	+0.3
OSTC				*e*SG	Sg	04 52 40.9	+0.6
	comp=Z,20nm,0.3s						
UPC	Upice	0.97	184	*e*PG	Pg	04 52 29.7	+0.4
UPC				*e*SG	Sg	04 52 42.3	+0.4
DPC	Dobruska-Polom	1.14	173	*e*PG	Pg	04 52 32.3	-0.1
DPC				*e*SG	Sg	04 52 47.3	+0.2
	comp=Z,13nm,0.3s						
PVCC	Panska Ves	1.36	226	*e*PG	Pg	04 52 36.7	0.0
PVCC				*e*SG	Sn	04 52 56.0	+0.3
	comp=Z,59nm,0.4s						
KRLC	Kraliky	1.47	163	*e*PG	Pn	04 52 38.1	-0.3
KRLC				*e*SG	Sg	04 52 56.0	-1.7
	comp=Z,19nm,0.6s						
BRG	Berggiesshubel	1.50	247	Pg	Pg	04 52 39.3	0.0
BRG				Sg	Sn	04 52 59.3	+0.4
BRG				Amp		04 53 00.6	
	comp=Z,20nm,0.3s						
PRU	Pruhonice	1.79	214	*e*PN	Pn	04 52 41.9	-1.0
PRU				*e*PG	Pb	04 52 44.4	0.0
PRU				*e*SG	Sg	04 53 08.8	+0.5
	comp=Z,12nm,0.7s						
MORC	Moravsky Berou	1.93	151	*e*PN	Pn	04 52 44.3	-0.5
MORC				*e*SG	Sb	04 53 10.7	-0.7
CLL	Collm	1.96	266	*e*Pn	Pn	04 52 44.0	-1.1
CLL				*e*Pg	Pb	04 52 47.0	-0.1
CLL				*e*Sg	Sg	04 53 14.0	+0.5
	comp=Z,8.0nm,0.4s						
OKC	Ostrava-Krasne	2.09	141	*e*SG	Sb	04 53 15.7	-0.2
	comp=Z,26nm,0.9s						
VRAC	Vranov	2.19	172	*e*PN	Pn	04 52 49.0	+0.6
VRAC				*e*SG	Sb	04 53 19.9	+1.0
KRUC	Moravsky	2.43	176	*e*PN	Pn	04 52 52.4	+0.9
KRUC				*e*SG	Sg	04 53 27.8	-0.7
NKC	Novy Kostel	2.64	243	*e*PN	Pn	04 52 54.5	0.0
NKC				*e*PG	Pg	04 53 00.7	-0.5
NKC				*e*SG	Sg	04 53 36.6	+1.3
	comp=Z,12nm,0.3s						
OJC	Ojcow	2.65	117	*e*Pg	Pg	04 53 01.9	+0.5
OJC				*e*Sg	Sg	04 53 37.3	+1.4
JAVC	Velka Javorina	2.81	159	*e*PN	Pn	04 52 57.9	+1.1
KHC	Kasperske Hory	2.86	216	*e*PN	Pn	04 52 57.5	0.0
KHC				*e*PG	Pb	04 53 03.3	+0.8
KHC				*e*SN	Sn	04 53 31.1	-1.5
KHC				*e*SG	Sg	04 53 43.2	+0.8
CKRC	Cesky Krumlov	2.90	204	*e*PN	Pn	04 52 57.5	-0.6
CKRC				*e*PG	Pb	04 53 03.1	-0.2
CKRC				*e*SG	Sg	04 53 43.8	-0.1
LANS	Liptovska Anna	3.17	136	*e*PG	Pg	04 53 11.4	0.0
LANS				*e*SG	Sg	04 53 51.0	-1.4
MODS	Modra-Piesok	3.20	166	*e*PG	Pg	04 53 11.1	-0.8
MODS				*e*SG	Sg	04 53 52.0	-1.3
CONA	Conrad Observa	3.56	183	*e*Pn	Pn	04 53 07.5	+0.3
	comp=Z,0.3nm,0.2s						
MOA	Molln	3.83	199	*e*Pn	Pn	04 53 10.8	0.0
	comp=Z,0.4nm,0.1s						

IDC 02 04:57:48.6±3.3**, 48°.16N×33°.65E, h0^{km}, mb3.5**/2**, mb1 3.7**/2**, mb1mx3.2**/32**, mbtmp3.6**/2**, ML2.9**/1**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.2**/49**, Error ellipse: s-maj=54.8km s-min=19.4km az=19.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKASG	Malin Array Be	3.85	313	Pn	Pn	04 58 47.4	-1.7
	0.8nm,0.3s,baz=127,slow=18,SNR=4.5						
AKASG				Pg	Pb	04 58 58.2	+0.8
	1.3nm,0.3s,baz=127,slow=17,SNR=10						
AKASG				Lg	Lg	04 59 48.3	
	6.1nm,0.3s,baz=129,slow=30,SNR=25						
ARCES	ARCESS Array B	21.81	352	P	P	05 02 42.5	+0.5
	1.7nm,0.9s,baz=173,slow=9.8,SNR=9.0						
ZALV	Zalesovo Beam	32.08	60	P	P	05 04 17.0	0.0
	0.4nm,0.3s,baz=290,slow=9.3,SNR=2.0						
YAK	Yakutsk	51.54	37	LR	LR	05 33 16.0	
	comp=Z,27nm,18.2s,baz=228,slow=41						

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*KRSC **02** 05:00:24.8±0.7, 52°.56N×159°.87E, h41^{km}±9^{km}, ML4.1*

*IDC **02** 05:00:27.6±1.1, 52°.46N×159°.50E, h63^{km}±7^{km}, mb3.6/9, mb1 3.7/9, mb1mx3.4/45, mbtmp3.9/9, MS4.0/2, Ms1 4.0/2, ms1mx2.9/38, Error ellipse: s-maj=20.3km s-min=13.1km az=26.0*

ISC 02 05:00:26.3±1.2**, 52°.57N**±0°.05×**159°.76E**±0°.05**, h45^{km}**±10^{km}**, n37, σ1^{s}59**/53**, mb3.8**/9**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.55	16	*i* P	Pn	05 00 37.0	-0.9
SPN				*e*S	Sn	05 00 46.0	-0.2
NLC	Nalytchevo	0.65	337	*e*P	Pn	05 00 39.2	0.0
NLC				*e*S	Sn	05 00 49.4	+0.9
DALK	Dalny	0.77	307	*i* P	Pn	05 00 40.7	0.0
DALK				*e*S	Sn	05 00 51.6	+0.4
RUS	Russkaya	0.78	260	*e*P	Pn	05 00 40.6	-0.3
RUS				*e*S	Sn	05 00 52.0	+0.6
PET	Petropavlovsk	0.81	304	*i* P	Pn	05 00 41.3	-0.1
PET				*e*S	Sn	05 00 52.9	+0.6
UGLR	Uglovaya	0.86	319	*i* P	Pn	05 00 42.6	+0.5
SDLR	Sedlovina	0.89	323	*i* P	Pn	05 00 42.6	+0.1
SMAR	Somma	0.91	320	*e*P	Pn	05 00 43.0	+0.2
AVH	Avacha	0.93	319	*i* P	Pn	05 00 43.7	+0.6
AVH				*e*S	Sn	05 00 56.9	+1.5
KRER	Koryakskii	0.96	321	*e*P	Pn	05 00 44.3	+0.8
MTVR	Mutnovka	0.97	265	*e*P	Pn	05 00 43.6	0.0
MTVR				*e*S	Sn	05 00 56.4	+0.1
KOK	Koryaka	0.99	317	*e*P	Pn	05 00 44.4	+0.5
KRMR	Karymshinskiy	1.03	285	*i* P	Pn	05 00 44.6	+0.3
KRMR				*e*S	Sn	05 00 58.9	+1.4
ASAK	Asacha	1.16	261	*i* P	Pn	05 00 46.9	+0.8
ASAK				*e*S	Sn	05 01 03.1	+2.3
KDTR	Khodutka, Kamc	1.29	234	*e*P	Pn	05 00 48.1	+0.3
KDTR				*e*S	Sn	05 01 05.3	+1.5
PETK	Petropavlovsk-	1.36	294	P	Pn	05 00 49.0	+0.1
	28nm,0.3s,baz=110,slow=20,SNR=134						
PETK				S	Sn	05 01 07.0	+1.3
	43nm,0.3s,baz=243,slow=26,SNR=6.5						
GNL	Ganaly	1.57	316	*e*P	Pn	05 00 53.3	+1.5
GNL				*e*S	Sn	05 01 14.5	+3.4
APC	Apacha	1.62	284	*e*P	Pn	05 00 54.2	+1.8
APC				*e*S	Sn	05 01 15.9	+3.8
PAU	Pauzhetka	2.13	240	*e*P	Pn	05 01 01.8	+2.4
PAU				*e*S	Sn	05 01 28.1	+3.5
MKZ	Mys Kozlova	2.31	30	*e*P	Pn	05 01 02.1	+0.3
MKZ				*e*S	Sn	05 01 29.2	+0.3
TUMD	Tumrok D	2.67	8	*e*P	Pn	05 01 08.2	+1.5
TUMD				*e*S	Sn	05 01 39.3	+1.5
TUMR	Tumrok	2.73	5	*e*P	Pn	05 01 09.8	+2.1
TUMR				*e*S	Sn	05 01 41.6	+2.2
KMNR	Kamenistaya	3.20	5	*e*P	Pn	05 01 15.8	+1.6
KBTR	Krutoberegovo	4.06	25	*e*P	Pn	05 01 28.3	+2.5
KBTR				*e*S	Sn	05 02 14.2	+2.2
SRKR	Sorokina	4.17	11	*e*P	Pn	05 01 30.5	+3.1
SONM	Songino Array	33.83	284	P	P	05 07 01.2	-2.9
	0.7nm,0.5s,baz=76,slow=12,SNR=2.6						
KURBB	Kurchatov Arra	47.94	302	P	P	05 08 57.8	-2.1
	0.7nm,0.2s,baz=58,slow=7.3,SNR=4.6						
MKAR	Makanchi Array	48.20	296	P	P	05 09 00.8	-1.2
	0.5nm,0.6s,baz=56,slow=7.3,SNR=4.9						
ARCES	ARCESS Array B	53.72	342	P	P	05 09 43.0	-0.2
	1.6nm,0.8s,baz=41,slow=8.8,SNR=1.3						
AAK	Ala-Archa	55.13	296	LR	LR	05 33 53.0	
	comp=Z,32nm,18.9s,baz=24,slow=36						
NVAR	Mina Array Bea	56.11	70	LR	LR	05 33 25.0	
	comp=Z,428nm,18.8s,baz=161,slow=35						
FINES	FINESS Array B	60.52	336	P	P	05 10 30.8	-0.5
	4.4nm,1.1s,baz=55,slow=5.3,SNR=3.4						
NB2	NORSAR Subarra	63.99	344	P	P	05 10 54.3	-0.2
	comp=Z,0.5nm,0.5s,baz=22,slow=6.9						
NOA	NORSAR Array B	63.99	344	P	P	05 10 53.4	-1.1
	comp=Z,0.5nm,0.5s,baz=31,slow=6.5,SNR=5.4						
HFS	Hagfors	64.39	342	P	P	05 10 56.7	-0.3
	comp=Z,1.1nm,0.4s,baz=48,slow=4.4,SNR=8.2						
TXAR	Lajitas Array	71.03	67	P	P	05 11 41.1	+1.6
	comp=Z,0.2nm,0.6s,baz=305,slow=5.1,SNR=5.4						
WRA	Warramunga Arr	75.52	205	P	P	05 12 05.7	0.0
	comp=Z,0.3nm,0.7s,baz=14,slow=5.3,SNR=1.9						

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*BJI **02** 05:21:56.4±0.0, 24°.23N×121°.93E, h9^{km}, mB4.7/29, mb4.5/56, ML4.6/12, Ms4.3/51, Ms7 4.1/50*

*JMA **02** 05:21:57.0±0.1, 24°.12N×121°.92E, h22^{km}±3^{km}, M4.4*

*NIED **02** 05:21:57.0, 24°.12N×121°.92E, h22^{km}, MW4.5, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}1.38; $M_{\theta\theta}$-0.17; $M_{\phi\phi}$-1.21; $M_{r\theta}$2.77; $M_{\theta\phi}$-0.45; $M_{\phi r}$4.42; Fault plane solution: $M_0$5.40000×10^{15} NP1:ϕ_s32.00000°, δ83.00000°, λ93.00000°. NP2:ϕ_s190.00000°, δ8.00000°, λ69.00000°.*

*TAP **02** 05:21:57.5, 24°.19N×121°.91E, h24^{km}, ML4.8, C*

*NEIC **02** 05:21:57.5±2.5, 24°.15N±0°.04×121°.94E±0°.03, h22^{km}±5^{km}, Error ellipse: s-maj=5.9km s-min=3.4km az=178.0*

*ASIES **02** 05:21:57.4, 24°.19N×121°.92E, h26^{km}, MW4.4*

*IDC **02** 05:21:59.3±3.1, 24°.14N×122°.09E, h43^{km}±30^{km}, mb4.0/21, mb1 4.1/23, mb1mx3.9/56, mbtmp4.2/23, ML3.8/2, MS3.8/22, Ms1 3.8/22, ms1mx3.6/42, Error ellipse: s-maj=18.6km s-min=14.6km az=65.0*

ISC 02 05:21:57.6±0.8**, 24°.14N**±0°.02×**121°.95E**±0°.02**, h25^{km}**±5^{km}**, n227, σ1^{s}24**/305**, mb4.4**/35**, MS4.0**/22**, 17C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.25	312	P	Pb	05 22 03.4	-0.6
	baz=308						
EHP				S	Sb	05 22 08.1	-0.2
	baz=308						
ETL	Fush Village	0.30	273	⇓*i*P	Pb	05 22 04.3	-0.3
	baz=263						
ETL				S	Sb	05 22 09.7	+0.3
	baz=263						
NACB	Ninganchiao	0.32	276	⇓*i*P	Pb	05 22 04.5	-0.5
	baz=261						
NACB				*i* S	Sb	05 22 09.8	-0.1
	baz=261						
NACB	Ninganchiao	0.32	276		Pb	05 22 04.4	-0.5
TWD	Chiawan	0.33	259	⇓*i*P	Pb	05 22 04.8	-0.2
	baz=248						
TWD				S	Sb	05 22 10.7	+0.6
	baz=248						
EWUT	Wuta	0.34	333	⇓P	Pb	05 22 04.7	-0.5
	baz=340						
EWUT				*i* S	Sb	05 22 10.1	-0.3
	baz=340						
ENA	Nanau	0.34	327	*i* P	Pb	05 22 04.5	-0.7
	baz=328						
ENA				*i* S	Sb	05 22 09.0	-1.4
	baz=328						
HWA	Hwalien	0.35	242	⇓P	Pb	05 22 06.1	+0.7
	baz=230						
HWA				*e*S	Sn	05 22 12.6	-0.8
	baz=230						
TEYL	Yanliau Villag	0.42	230	⇓*i*P	Pb	05 22 07.0	+0.5
	baz=223						
TEYL				*i* S	Sn	05 22 14.7	-0.4
	baz=223						
ETLH	Xiulin Townshi	0.43	279	⇓*i*P	Pb	05 22 06.2	-0.5
	baz=272						
ETLH				S	Sb	05 22 12.6	-0.3
	baz=272						
NDS	Dongshan	0.53	337	⇑P	Pb	05 22 07.9	-0.5
	baz=342						
NDS				*e*S	Sb	05 22 15.3	-0.4
	baz=342						
ESL	Shilin	0.57	235	⇓P	Pb	05 22 08.9	-0.1
	baz=228						
ESL				*e*S	Sb	05 22 17.3	+0.5
	baz=228						
NNSB	Datong	0.59	299	⇓P	Pb	05 22 08.7	-0.7
	baz=296						
NNSB				*e*S	Sb	05 22 16.5	-0.9
	baz=296						
NNS	Nan Shan	0.60	300	⇓P	Pb	05 22 09.1	-0.5
	baz=289						
NNS				*e*S	Sb	05 22 17.3	-0.5
	baz=289						
ENTT	Nioudou	0.60	325	⇓P	Pb	05 22 09.1	-0.5
	baz=320						
ENTT				S	Sb	05 22 18.0	+0.2
	baz=320						
NDT	Datong Townshi	0.61	319	*e*P	Pb	05 22 09.1	-0.6
	baz=313						
NDT				*e*S	Sb	05 22 18.1	+0.3
	baz=313						
WHF	Hehuan Shan	0.62	270	⇓*i*P	Pb	05 22 09.6	-0.5
	baz=265						
WHF				*e*S	Sb	05 22 18.4	-0.3
	baz=265						
TWE	Neicheng	0.63	336	⇑P	Pb	05 22 09.5	-0.5
	baz=339						
TWE				*e*S	Sn	05 22 19.1	-1.3
	baz=339						
ILA	Ilan	0.65	344	*e*P	Pb	05 22 10.3	0.0
	baz=346						
ILA				*e*S	Sb	05 22 19.4	+0.5
	baz=346						
FUSS	Fushou	0.65	280	⇓*i*P	Pb	05 22 10.3	-0.2
	baz=275						
FUSS				S	Sb	05 22 19.4	+0.1
	baz=275						
EGFH	Guangfu	0.67	225	*e*P	Pb	05 22 10.9	+0.2
	baz=231						
EGFH				*e*S	Sn	05 22 21.7	+0.4
	baz=231						
EGS		0.70	359	*e*P	Pn	05 22 11.5	-0.5
	baz=1.0						
EGS				*e*S	Sb	05 22 20.0	-0.5
	baz=1.0						
CHGB	Renai	0.71	264	P	Pb	05 22 11.2	-0.3
	baz=250						
CHGB				S	Sb	05 22 20.9	-0.1
	baz=250						
TWT	Tachien	0.71	279	⇓P	Pb	05 22 11.6	+0.1
	baz=274						
TWT				S	Sn	05 22 21.5	-1.1
	baz=274						
NTC	Toucheng	0.72	352	*e*P	Pb	05 22 11.5	0.0
	baz=354						
NTC				*e*S	Sn	05 22 21.7	-0.8
	baz=354						
OWD	Renai	0.73	255	P	Pb	05 22 11.6	-0.2
	baz=249						
OWD				*e*S	Sb	05 22 21.2	-0.1
	baz=249						
TDCB	Techi	0.73	279	P	Pb	05 22 11.4	-0.3
	baz=275						
TDCB				*e*S	Sb	05 22 20.8	-0.6
	baz=275						
YHNB	Yeheng	0.74	315	⇑*i*P	Pb	05 22 11.1	-0.8
	baz=304						
YHNB				S	Sb	05 22 20.7	-1.0
	baz=304						
YHNB	Yeheng	0.74	315		Pb	05 22 11.3	-0.6
YHNB	Yeheng	0.74	315	P	Pb	05 22 11.5	-0.4
NWLT	Wulai	0.75	328	⇑*e*P	Pb	05 22 11.6	-0.5
	baz=325						
NWLT				*e*S	Sb	05 22 21.2	-0.7
	baz=325						
NSK	Sanguang	0.76	315	*e*P	Pb	05 22 11.4	-0.8
	baz=306						
NSK				*e*S	Sb	05 22 21.5	-0.6
	baz=306						
HGSD	Ruisui	0.80	217	⇓P	Pb	05 22 12.6	-0.3
	baz=200						
TIPB	Shuangxi	0.83	352	⇑P	Pb	05 22 13.3	-0.2
	baz=3.0						
TIPB				S	Sb	05 22 22.9	-1.4
	baz=3.0						
EHY	Hungye	0.85	222	*e*P	Pb	05 22 13.1	-0.7
	baz=216						
TWB1	Santiao Chiao	0.86	3	⇑P	Pn	05 22 14.1	-0.2
	baz=6.0						
TWB1				*e*S	Sn	05 22 26.2	+0.2
	baz=6.0						
TWA	Mucha	0.90	339	⇑P	Pb	05 22 14.2	-0.4
	baz=333						
TWA				*e*S	Sb	05 22 26.0	-0.1
	baz=333						
NHDH	Xindian Distri	0.90	335	⇑P	Pn	05 22 14.5	-0.2
	baz=320						
NHDH				*e*S	Sb	05 22 26.0	-0.3
	baz=320						
WHP	Taichung City	0.92	279	*e*P	Pn	05 22 14.9	-0.2
	baz=275						
WHP				S	Sn	05 22 27.1	-0.6
	baz=275						
TATO	Taipei	0.93	333		Pn	05 22 14.9	-0.3
NWF	Wu-fen Shan	0.94	351	⇑*i*P	Pn	05 22 15.4	0.0
	baz=353						
NWF				S	Sn	05 22 29.0	+1.0
	baz=353						
WCS	Beigang Elemen	0.95	265	*e*P	Pn	05 22 15.2	-0.2
	baz=261						
YULB	Yu-li	0.95	219	⇓*i*P	Pn	05 22 14.4	-1.0
	baz=225						
YULB				*e*S	Sb	05 22 26.9	-0.8
	baz=225						
YULB	Yu-li	0.95	219		Pn	05 22 14.5	-1.0
JYNG	Yonagunijimaku	0.96	71	P	Pb	05 22 15.6	0.0
JYNG				*e*S	Sn	05 22 29.4	+0.9
SSLB	Suanglung	0.97	249	⇑P	Pn	05 22 15.2	-0.5
	baz=243						
SSLB				S	Sb	05 22 27.7	-0.6
	baz=243						
SSLB	Suanglung	0.97	249		Pn	05 22 15.4	-0.4
SSLB	Suanglung	0.97	249	P	Pb	05 22 15.8	-0.1
EYUL	Yuli	0.98	216	*e*P	Pb	05 22 16.7	+0.8
	baz=225						
TAP	Taipei	0.98	336	P	Pb	05 22 16.2	+0.2
	baz=322						
TAP				*e*S	Sn	05 22 28.9	0.0
	baz=322						
LIOB	Emei	0.99	301	P	Pb	05 22 16.0	-0.1
	baz=291						
LIOB				*e*S	Sn	05 22 29.3	+0.2
	baz=291						
NSTT	Nanjuang	0.99	300	P	Pb	05 22 16.0	-0.1
	baz=290						
NSTT				S	Sn	05 22 29.1	-0.1

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       baz=290
SMLT   Sun Moon Lake    0.99 255⇓iP   Pb       05 22 16.1 -0.1
       baz=242
SMLT                            eS    Sb       05 22 28.8 -0.1
       baz=242
TYC    Yuchr            1.02 257  P   Pn       05 22 16.3 -0.1
       baz=252
YOJ    Yonaguni jima    1.02  72 ⇓P   Pn       05 22 16.4  0.0
       baz=76
YOJ                             eS    Sn       05 22 30.8 +0.8
       baz=76
YOJ    Yonaguni jima    1.02  72  P   Pn       05 22 16.4  0.0
YOJ                               S   Sn       05 22 31.2 +1.2
YOJ    Yonaguni jima    1.02  72      Pn       05 22 16.5  0.0
YOJ    Yonaguni jima    1.02  72  P   Pb       05 22 16.8 +0.1
YM01   YM01             1.06 341 ⇑P   Pn       05 22 16.6 -0.4
       baz=328
YM01                              S   Sn       05 22 31.7 +0.8
       baz=328
TWS1   Kuangyinshan     1.07 333 eP   Pb       05 22 17.7 +0.2
       baz=334
TWS1                              S   Sn       05 22 33.0 +1.8
       baz=334
NCU    National Centr   1.08 320 eP   Pb       05 22 17.2 -0.4
       baz=320
NCU                               S   Sn       05 22 33.1 +1.8
       baz=320
NCUH   Zhongli          1.08 320 eP   Pb       05 22 17.1 -0.5
       baz=319
NCUH                             eS   Sn       05 22 33.5 +2.1
       baz=319
SBCB   Hsinchu          1.09 307  P   Pb       05 22 18.0 +0.2
       baz=305
SBCB                             eS   Sn       05 22 33.1 +1.5
       baz=305
TWQ1   Liyutan          1.09 281 i P  Pb       05 22 18.3 +0.5
       baz=278
TWQ1                              S   Sn       05 22 32.3 +0.6
       baz=278
YM08   YM08             1.09 343  P   Pb       05 22 18.0 +0.1
       baz=328
HSN    Hsinchu          1.11 307  P   Pb       05 22 18.0 -0.1
       baz=308
HSN                              eS   Sb       05 22 33.5 +1.4
       baz=308
ANP    Anpu             1.11 340 eP   Pb       05 22 17.8 -0.5
       baz=326
FULB   Fuli             1.11 213 eP   Pn       05 22 17.2 -0.5
       baz=195
NTST   Danshui          1.11 336 eP   Pb       05 22 17.8 -0.4
       baz=337
NTST                             eS   Sb       05 22 35.0 +2.7
       baz=337
NSY    Sanyi            1.11 284 eP   Pb       05 22 18.6 +0.4
       baz=282
NSY                              eS   Sb       05 22 34.0 +1.6
       baz=282
NMLH   Miaoli           1.12 291 eP   Pb       05 22 19.3 +0.9
       baz=288
NMLH                             eS   Sb       05 22 33.9 +1.3
       baz=288
WJS    Zhushan          1.16 254 eP   Pb       05 22 19.4 +0.5
       baz=246
WJS                               S   Sb       05 22 35.4 +1.8
       baz=246
TCU    Taichung         1.16 271  P   Pb       05 22 19.5 +0.5
       baz=266
TCU                               S   Sb       05 22 36.5 +2.8
       baz=266
CHKT   Chengkung        1.17 207  P   Pn       05 22 17.0 -1.4
       baz=191
TWY    Chenhua          1.17 344  P   Pb       05 22 18.8 -0.5
       baz=346
TWY                              eS   Sb       05 22 36.4 +2.4
       baz=346
WNT1   Nantou City      1.18 259  P   Pb       05 22 20.3 +0.9
       baz=253
WNT1                             eS   Sb       05 22 36.3 +2.0
       baz=253
WNT    Mingjian         1.18 257  P   Pb       05 22 19.9 +0.5
       baz=236
WNT                               S   Sb       05 22 35.4 +1.1
       baz=236
WDJ    Dajia District   1.21 280  P   Pb       05 22 19.8 -0.1
       baz=277
WDJ                               S   Sb       05 22 36.8 +1.7
       baz=277
ALS    Alishan          1.22 239  P   Pb       05 22 20.2  0.0
       baz=220
ALS                               S   Sb       05 22 36.3 +0.7
       baz=220
WCHH   Zhanghua         1.27 268 eP   Pb       05 22 21.0 +0.2
       baz=262
WCHH                             eS   Sb       05 22 38.5 +1.7
       baz=262
ELDTW  Lidau            1.27 222  P   Pn       05 22 19.2 -0.8
       baz=206
CHN5   Tsauling         1.28 245 i P  Pb       05 22 21.2 +0.1
       baz=239
CHN5                             eS   Sb       05 22 38.7 +1.5
       baz=239
EDH    Donghe           1.30 207 eP   Pn       05 22 19.0 -1.3
       baz=192
EDH                              eS   Sn       05 22 34.8 -2.1
       baz=192
WDLH   Douliu           1.36 251 eP   Pb       05 22 23.0 +0.5
       baz=245
WDLH                             eS   Sb       05 22 41.7 +2.2
       baz=245
LONT   Longtian         1.44 212 eP   Pn       05 22 21.4 -0.7
       baz=207
STYH   Taoyuan          1.44 228 eP   Pn       05 22 22.7 +0.5
       baz=214
STYH                             eS   Sb       05 22 42.7 +0.9
       baz=214
WRL    Guolierlin Hig   1.45 261 ⇑P   Pb       05 22 23.5 -0.5
       baz=256
WRL                              eS   Sb       05 22 42.4 +0.3
       baz=256
TPUB   Ta-pu            1.47 236⇑iP   Pb       05 22 24.1 -0.2
       baz=219
TPUB                             eS   Sb       05 22 43.9 +1.4
       baz=219
TPUB   Ta-pu            1.47 236      Pb       05 22 24.1 -0.2
TPUB   Ta-pu            1.47 236  P   Pb       05 22 24.7 +0.4
PCYT   Pengchaiyu       1.49   4 eP   Pn       05 22 23.0 +0.2
       baz=7.0
PCYT                             eS   Sb       05 22 42.2 -0.8
       baz=7.0
WTP    Ta-pu            1.51 234  P   Pb       05 22 24.7 -0.3
       baz=218
LDUT   Ludao            1.52 197 eP   Pn       05 22 22.5 -0.9
       baz=193
LDUT                             eS   Sn       05 22 39.8 -2.6
       baz=193
CHY    Chiayi           1.53 246 eP   Pb       05 22 25.0 -0.4
       baz=239
CHY                              eS   Sb       05 22 45.6 +1.3
       baz=239
TWGBT  Beinan           1.54 211 eP   Pn       05 22 22.3 -1.3
       baz=206
TWGBT                            eS   Sn       05 22 41.8 -1.0
       baz=206
TWG    Pinlang          1.54 212 eP   Pn       05 22 22.4 -1.1
       baz=207
TWG    Pinlang          1.54 212      Pn       05 22 22.7 -0.9
WTCT   Ta-ch'eng        1.55 260 eP   Pb       05 22 24.6 -1.0
       baz=254
WTCT                             eS   Sb       05 22 46.0 +1.3
       baz=254
TTN    Taitung          1.56 208 eP   Pn       05 22 23.9 +0.1
       baz=204
TWK    Hsinying         1.59 237 eP   Pb       05 22 26.0 -0.5
       baz=231
TWK                              eS   Sb       05 22 47.6 +1.4
       baz=231
CHN1   Nanshi           1.61 234 eP   Pb       05 22 26.4 -0.3
       baz=228
CHN1                             eS   Sb       05 22 48.1 +1.5
       baz=228
SNST   Tainan City      1.61 236 eP   Pb       05 22 26.6 -0.1
       baz=231
SGST   Jiashian         1.64 230  P   Pn       05 22 25.6 +0.7
       baz=224
SGST                             eS   Sb       05 22 47.3 -0.1
       baz=224
IRIF   Iriomote-Funau   1.64  83  P   Pn       05 22 24.6 -0.3
IRIF                              S   Sb       05 22 46.3 -1.1
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SLGT   Liugui           1.65 226 eP   Pb       05 22 27.1 -0.3
       baz=220
SLGT                             eS   Sb       05 22 49.8 +2.0
       baz=220
WSF    Szhu             1.66 253 eP   Pb       05 22 26.8 -0.7
       baz=247
WSF                              eS   Sb       05 22 49.1 +1.3
       baz=247
HATJ   Hateruma jima    1.70  92  P   Pn       05 22 26.5 +0.8
ECL    Taimali          1.79 211 eP   Pn       05 22 25.3 -1.6
       baz=206
CHN3   Shinhua          1.80 234 eP   Pb       05 22 30.2 +0.3
       baz=229
SCST   Cishan           1.83 227 eP   Pb       05 22 30.2 -0.2
       baz=222
SSD    Sandimen         1.84 221 eP   Pb       05 22 29.4 -1.2
       baz=215
TSMG   Majia            1.86 220 eP   Pb       05 22 29.9 -1.1
       baz=206
SCLT   Jiali            1.87 239 eP   Pb       05 22 29.7 -1.4
       baz=234
JKRS   Kuro-shima       1.89  87  P   Pn       05 22 29.2 +0.9
JKRS                             eS   Sb       05 22 53.1 -1.4
TWM1   Shoushan         1.92 227 eP   Pb       05 22 32.0 +0.1
       baz=223
MASBT  Mashibuluo       1.94 219 eP   Pb       05 22 31.0 -1.3
       baz=199
MASBT                            eS   Sb       05 22 55.4 -0.8
       baz=199
SGLT   Jiouru           1.94 224 eP   Pb       05 22 31.9 -0.5
       baz=204
JIJ    Ishigaki jima    2.02  83  P   Pn       05 22 30.3 +0.2
JIJ                              eS   Sn       05 22 56.0 +1.4
EAST   Anshuo           2.02 210 eP   Pn       05 22 30.0 -0.2
       baz=196
TAW    Tawu             2.02 209 eP   Pn       05 22 30.3 +0.1
       baz=204
SSPT   Xinbi            2.08 218 eP   Pb       05 22 33.8 -0.9
       baz=200
SCZT   Fangliau         2.14 215 eP   Pb       05 22 34.4 -1.3
       baz=199
SLIU   Shizi            2.19 209 eP   Pn       05 22 33.4 +0.9
       baz=196
JISG   Ishigakijimahi   2.20  78  P   Pn       05 22 33.0 +0.4
JISG                             eS   Sn       05 22 59.6 +0.5
PHUB   P'eng-hu         2.26 254 eP   Pn       05 22 34.0 +0.5
       baz=250
PNG    Penghu           2.26 256 eP   Pn       05 22 34.0 +0.5
       baz=251
WLCH   Liuqiu           2.29 219 eP   Pb       05 22 38.6 +0.3
       baz=213
TWK1   Hengchun         2.43 206 eP   Pn       05 22 36.3 +0.5
       baz=192
TWKBT  Hengchun         2.43 206 eP   Pn       05 22 36.1 +0.3
       baz=192
TSEB   Hengchuen, Pin   2.43 204 eP   Pn       05 22 37.8 +2.0
       baz=191
VCHM   Qimei            2.49 249 eP   Pn       05 22 37.5 +0.9
       baz=230
JTJ    Tarama           2.56  78  P   Pn       05 22 37.9 +0.3
MATB   Ma-tsu           2.70 318 eP   Pn       05 22 38.4 -1.1
       baz=316
PTMZ   Houxiangcun      2.72 290 eP   Pn       05 22 39.6 -0.2
       baz=288
JIKM   Ikemajima        3.11  75  P   Pn       05 22 46.2 +1.1
LYJJ   Jianjiangzhen    3.11 321 eP   Pn       05 22 43.9 -1.2
       baz=320
JMJ2   Miyako jima3     3.14  78  P   Pn       05 22 47.3 +1.8
QZH    Quanzhou         3.16 285⇑iPn  Pn       05 22 45.1 -0.7
QZH                               Sn  Sn       05 23 18.3 -4.4
QZH                               smax smax
       comp=N,430nm,0.7s
QZH                               smax smax
       comp=E,600nm,0.5s
XPSS   Dashiqiu         3.20 331 eP   Pn       05 22 44.9 -1.5
       baz=329
KNM    Kinmen           3.22 276 eP   Pn       05 22 48.2 +1.6
       baz=271
KNMB   Chin-men Tao     3.26 276 eP   Pn       05 22 46.1 -1.1
       baz=272
KNMB   Chin-men Tao     3.26 276  Pn  Pn       05 22 46.6 -0.6
MHZQ   Yeshan           3.29 307 eP   Pn       05 22 46.5 -1.0
       baz=305
AXDP   Jialang          3.70 283 eP   Pn       05 22 52.8 -0.5
       baz=278
ZPLA   Ao Xicun         3.84 268 eP   Pn       05 22 55.1 -0.1
       baz=263
JOW    Kunigami         6.32  64  P   Pn       05 23 27.9 -1.4
       5.3nm,0.3s,baz=187,slow=13,SNR=6.3
JOW    Kunigami         6.32  64  Pn  Pn       05 23 29.0 -0.2
JOW    Kunigami         6.32  64  P   Pn       05 23 29.2  0.0
GZH    Guangzhou        7.96 264  Pn  Pn       05 23 47.5 -4.3
GZH                               Sn  Sn       05 25 13.3 -7.8
GZH                               smax smax
       comp=N,280nm,0.8s
GZH                               smax smax
       comp=E,190nm,1.0s
NJ2    Nanjing          8.34 342 eP   Pn       05 23 55.2 -1.8
NJ2                               S   Sn       05 25 29.5 -0.9
NJ2                               pmax pmax
       comp=Z,50nm,0.7s
NJ2                               smax smax
       comp=N,170nm,1.1s
NJ2                               smax smax
       comp=E,230nm,1.0s
WHN    Wuhan            9.29 315 ⇓P   Pn       05 24 09.2 -0.8
WHN                               S   Sn       05 25 57.5 +3.9
WHN                               LR  LR
       comp=N,3µm,4.2s
WHN                               LR  LR
       comp=E,2µm,3.0s
WHN                               LR  LR
       comp=Z,3µm,16.9s
QIZ    Qiongzhong      12.35 248  P   Pn       05 24 52.6 +0.6
QIZ                               S   Sn       05 27 11.2 +2.2
QIZ                               LR  LR
       comp=N,330nm,15.3s
QIZ                               LR  LR
       comp=E,250nm,17.8s
QIZ                               LR  LR
       comp=Z,280nm,18.0s
GYA    Guiyang         14.02 283 ⇑P   Pn       05 25 18.4 +3.6
GYA                               pP  P        05 25 22.6 +0.1
GYA                               S   Sn       05 27 54.5 +4.8
GYA                               pmax pmax
       comp=Z,11nm,1.1s
GYA                               LR  LR
       comp=N,520nm,12.0s
GYA                               LR  LR
       comp=E,780nm,12.0s
GYA                               LR  LR
       comp=Z,1µm,16.8s
KSRS   Korea Array     14.22  20  P   Pn       05 25 16.9 -0.5
       0.3nm,0.3s,baz=202,slow=13,SNR=2.0
BJI    Beijing         16.58 344  P   Pn       05 25 48.2 -0.2
BJI                               pmax pmax
       comp=Z,8.0nm,1.4s
BJI                               pmax pmax
       comp=Z,170nm,4.3s
BJI                               LR  LR
       comp=N,450nm,15.1s
BJI                               LR  LR
       comp=E,190nm,14.7s
BJI                               LR  LR
       comp=Z,670nm,16.1s
DAV    Davao City (W)  17.33 168  LR  LR       05 32 39.6
       comp=Z,164nm,19.0s,baz=338,slow=37
CD2    Chengdu         17.47 297  P   P        05 26 00.2 -0.6
CD2                               S   Sn       05 29 15.0 +1.3
CD2                               pmax pmax
       comp=Z,10.0nm,0.4s
CD2                               LR  LR
       comp=N,630nm,11.2s
CD2                               LR  LR
       comp=E,630nm,10.2s
CD2                               LR  LR
       comp=Z,1µm,11.2s
KMI    Kunming         17.49 277 ⇑P   P        05 26 03.7 +2.5
KMI                               sP  sP       05 26 15.2 +4.8
KMI                               S   Sn       05 29 13.9 -0.5
KMI                               pmax pmax
       comp=Z,10.0nm,0.7s
KMI                               LR  LR
       comp=N,260nm,17.2s
KMI                               LR  LR
       comp=E,900nm,15.3s
KMI                               LR  LR
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       comp=Z,980nm,13.0s
JHJ    Hachijo jima 2  18.01  56  LR  LR       05 33 09.7
       comp=Z,97nm,20.1s,baz=329,slow=37
JCJ    Chichijima      18.49  77  LR  LR       05 32 40.7
       comp=Z,230nm,20.7s,baz=136,slow=35
MJAR   Matsushiro Arr  18.67  45  LR  LR       05 34 20.2
       comp=Z,88nm,20.2s,baz=210,slow=40
HHC    Hu-ho-hao-te    18.80 335 eP   Pn       05 26 17.6 +1.7
HHC                               pmax pmax
       comp=Z,15nm,0.9s
HHC                               pmax pmax
       comp=Z,140nm,7.7s
HHC                               LR  LR
       comp=N,710nm,16.4s
HHC                               LR  LR
       comp=E,370nm,15.9s
HHC                               LR  LR
       comp=Z,860nm,17.2s
LZH    Lanzhou         19.63 311 eP   Pn       05 26 26.6 +0.5
LZH                               pP  sP       05 26 32.7 -1.4
LZH                               sP  pP       05 26 36.3 +5.0
LZH                               pmax pmax
       comp=Z,23nm,1.1s
LZH                               LR  LR
       comp=N,510nm,12.2s
LZH                               LR  LR
       comp=E,690nm,13.0s
LZH                               LR  LR
       comp=Z,710nm,16.0s
CN2    Changchun       19.82   7 eP   P        05 26 26.6 +0.2
CN2                              ePP  PnPn     05 26 44.9 +2.6
CN2                              eS   S        05 30 03.3 -5.1
CN2                               LR  LR
       comp=N,520nm,15.0s
CN2                               LR  LR
       comp=E,170nm,15.0s
CN2                               LR  LR
       comp=Z,430nm,16.0s
USRK   Ussuriysk Ar.   21.63  20  P   P        05 26 45.4 -0.5
       2.5nm,0.7s,baz=198,slow=10,SNR=2.8
USRK                              LR  LR       05 35 44.9
       comp=Z,132nm,19.2s,baz=175,slow=38
CHTO   Chiang Mai      22.04 261  P   P        05 26 51.9 +1.3
CHTO                              IAmb IAmb    05 26 54.8
       comp=Z,15nm,0.8s
CMAR   Chiang Mai Arr  22.15 260  P   P        05 26 53.0 +1.2
       comp=Z,6.7nm,0.8s,baz=61,slow=8.4,SNR=29
CMAR   Chiang Mai Arr  22.15 260  P   P        05 26 53.3 +1.5
GUMO   Guam            24.06 112  LR  LR       05 36 35.8
       comp=Z,112nm,18.8s,baz=280,slow=37
GTA    Gaotai          24.11 314 ⇑P   P        05 27 11.7 +0.1
GTA                               pP  pP       05 27 18.6 +0.4
GTA                               sP  pwP      05 27 21.8 +0.6
GTA                               sS  sS       05 31 34.3 -5.8
GTA                               pmax pmax
       comp=Z,13nm,1.5s
GTA                               pmax pmax
       comp=Z,120nm,5.8s
GTA                               LR  LR
       comp=Z,160nm,15.6s
GTA                               LR  LR
       comp=Z,450nm,14.2s
GTA                               LR  LR
       comp=Z,540nm,15.3s
STKI   Sintang         26.00 204  P   P        05 27 24.7 -4.0
KLR    Kul'dur         26.20  15  P   P        05 27 30.2  0.0
       comp=Z,2.1nm,0.7s,baz=188,slow=5.8,SNR=6.5
KLR                               LR  LR       05 39 06.1
       comp=Z,163nm,20.6s,baz=199,slow=39
ULN    Ulaanbaatar     26.47 337  P   P        05 27 32.6 -0.3
SONM   Songino Array   26.68 336  P   P        05 27 34.4 -0.4
       comp=Z,4.5nm,0.8s,baz=150,slow=9.4,SNR=12
SONM                              LR  LR       05 39 29.2
       comp=Z,612nm,18.0s,baz=146,slow=39
SONM   Songino Array   26.68 336  P   P        05 27 35.6 +0.8
SONM                              IAmb IAmb    05 27 45.8
       comp=Z,12nm,1.3s
SHL    Shillong        27.29 279  P   P        05 27 41.7 +1.1
SHL                               IAmb IAmb    05 27 44.3
       comp=Z,19nm,1.1s
LSA    Lhasa           27.96 288  P   P        05 27 47.7 +0.8
LSA                               IAmb IAmb    05 27 49.2
       comp=Z,9.8nm,0.9s
KAPI   Kappang         29.06 185  LR  LR       05 39 58.7
       comp=Z,63nm,21.7s,baz=14,slow=37
PSI    Prapat          30.73 230  LR  LR       05 40 21.3
       comp=Z,94nm,18.8s,baz=56,slow=36
TLY    Talaya          30.88 338  P   P        05 28 10.7 -1.3
       comp=Z,3.5nm,0.6s,baz=180,slow=2.0,SNR=4.4
TLY    Talaya          30.88 338  P   P        05 28 12.6 +0.6
TLY                               IAmb IAmb    05 28 14.6
       comp=Z,5.0nm,0.8s
WMQ    Urumqi          34.19 314 eP   P        05 28 42.7 +1.6
WMQ                               pP  pP       05 28 48.1 +0.3
WMQ                               pmax pmax
       comp=Z,15nm,0.7s
WMQ                               pmax pmax
       comp=Z,190nm,4.5s
WMQ                               LR  LR
       comp=Z,110nm,14.5s
MK31   Makanchi Array  38.85 316  P   P        05 29 21.3 +0.4
MKAR   Makanchi Array  38.85 316  P   P        05 29 21.0 +0.1
       comp=Z,6.7nm,0.5s,baz=101,slow=10,SNR=40
MKAR                              LR  LR       05 46 45.4
       comp=Z,227nm,19.2s,baz=94,slow=38
MKAR   Makanchi Array  38.85 316  P   P        05 29 19.8 -1.1
MAKZ   Makanchi        39.06 316  P   P        05 29 22.0 -0.6
MAKZ                              IAmb IAmb    05 29 24.3
       comp=Z,19nm,1.1s
ZAA0   Zalesovo Array  40.66 327  P   P        05 29 34.9 -0.8
ZALV   Zalesovo Beam   40.66 327  P   P        05 29 35.6 -0.1
       comp=Z,7.7nm,0.8s,baz=112,slow=7.7,SNR=28
ZALV                              LR  LR       05 47 35.6
       comp=Z,254nm,18.9s,baz=122,slow=38
ZALV   Zalesovo Beam   40.66 327  P   P        05 29 34.0 -1.7
KSH    Kashi           41.51 303  P   P        05 29 46.8 +3.7
KSH                               pP  pwP      05 29 54.4 +1.3
KSH                               pmax pmax
       comp=Z,14nm,0.9s
KSH                               pmax pmax
       comp=Z,310nm,4.8s
KSH                               LR  LR
       comp=Z,170nm,7.7s
KSH                               LR  LR
       comp=Z,200nm,5.2s
KSH                               LR  LR
       comp=Z,400nm,11.2s
H11S3  WAKE ISLAND Hy  41.92  89  T   T        06 15 05.1
       baz=284,slow=74,SNR=17
H11S1  WAKE ISLAND Hy  41.93  89  T   T        06 14 56.5
       baz=284,slow=74,SNR=7.4
H11S2  WAKE ISLAND Hy  41.94  89  T   T        06 14 56.4
       baz=284,slow=74,SNR=12
KURK   Kurchatov       42.57 320  P   P        05 29 52.3 +0.9
KURK                              IAmb IAmb    05 29 52.8
       comp=Z,10nm,1.1s
KURBB  Kurchatov Arra  42.59 320  P   P        05 29 51.5 -0.1
       comp=Z,4.5nm,1.0s,baz=113,slow=7.1,SNR=21
AAK    Ala-Archa       43.09 307  P   P        05 29 56.4 +0.4
       comp=Z,3.8nm,0.8s,baz=111,slow=5.5,SNR=9.3
AAK    Ala-Archa       43.09 307  P   P        05 29 57.3 +1.4
COEN   Coen            43.17 149  P   P        05 29 56.7  0.0
COEN                              IAmb IAmb    05 29 58.1
       comp=Z,28nm,1.2s
WRA    Warramunga Arr  45.45 164  P   P        05 30 13.4 -1.4
       comp=Z,2.4nm,0.7s,baz=345,slow=9.0,SNR=34
BTK    Batken          45.51 303  IAmb IAmb    05 30 20.7
       comp=Z,12nm,1.4s
KKAR   Karatay Array   46.05 307  P   P        05 30 20.3 +0.8
KBL    Kabul           46.81 295  P   P        05 30 26.2 +0.4
BVAR   Borovoye Array  48.15 321  P   P        05 30 35.5 -0.1
       comp=Z,3.0nm,0.6s,baz=161,slow=6.3,SNR=13
BRVK   Borovoye        48.22 321  P   P        05 30 37.2 +1.0
BRVK                              IAmb IAmb    05 30 40.6
       comp=Z,4.0nm,0.7s
ASAR   Alice Springs   48.92 165  P   P        05 30 41.2 -0.7
       comp=Z,0.9nm,0.6s,baz=355,slow=14,SNR=12
NRIK   Noril'sk        49.62 345  LR  LR       05 53 25.1
       comp=Z,143nm,18.5s,baz=149,slow=38
CTAO   Charters Tower  49.93 150  P   P        05 30 50.4 +0.8
CTAO                              IAmb IAmb    05 30 51.2
       comp=Z,16nm,1.1s
ABKAR  Akbulak array   53.97 314  P   P        05 31 18.6 -0.8
ABKAR                             IAmb IAmb    05 31 21.1
       comp=Z,7.4nm,0.8s
GEYT   Alibeck         55.42 300  P   P        05 31 31.6 +1.4
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	comp=Z,4.8nm,0.8s,baz=212,slow=8.2,SNR=5.2						
GEYT				LR	LR	05 58 42.2	
	comp=Z,106nm,18.9s,baz=20,slow=40						
GEYT	Alibeck	55.42	300	P	P	05 31 30.4	+0.3
GEYT				IAmb	IAmb	05 31 38.8	
	comp=Z,6.5nm,0.9s						
ARU	Arti	55.56	323	P	P	05 31 29.5	-1.3
KLMR	Klimovskoe	65.57	328	eP	P	05 32 36.9	-2.1
KLMR				AMP		05 32 48.6	
	comp=Z,15nm,1.4s						
KBZ	Khabaz	66.05	309	P	P	05 32 42.6	+0.2
	comp=Z,3.7nm,0.9s,baz=152,slow=3.9,SNR=5.2						
KBZ				LR	LR	06 05 11.7	
	comp=Z,68nm,20.0s,baz=72,slow=39						
MSVF	Nonsavu	68.75	122	LR	LR	06 00 53.3	
	comp=Z,60nm,18.1s,baz=198,slow=34						
ILAR	Eielson Array	68.93	27	P	P	05 32 59.0	-1.2
	comp=Z,0.2nm,0.5s,baz=260,slow=5.2,SNR=2.0						
ARCES	ARCESS Array B	69.84	338	LR	LR	06 07 28.7	
	comp=Z,59nm,19.1s,baz=240,slow=39						
FINES	FINESS Array B	71.83	330	P	P	05 33 17.9	-0.1
	comp=Z,1.9nm,0.7s,baz=38,slow=7.0,SNR=6.5						
FINES				LR	LR	06 08 10.6	
	comp=Z,246nm,18.7s,baz=84,slow=38						
MNK	Minsk	72.99	323	i P	P	05 33 26.5	+1.5
	comp=E,2.0nm,0.7s						
MNK				i P	P	05 33 26.5	+1.5
	comp=N,20nm,0.9s						
MNK				i P	P	05 33 26.5	+1.5
	comp=Z,10.0nm,0.6s,baz=251						
MNK				i S	S	05 42 50.1	-0.3
MNK				i SSS	SSS	05 50 40.0	
MNK				i LR	LR	06 04 07.0	
MNK				i LRM	MLR	06 07 58.9	
	comp=N,120nm,19.6s						
MNK				i LRM	MLR	06 08 17.0	
	comp=Z,75nm,18.1s						
INK	Inuvik	73.00	22	P	P	05 33 24.8	-0.1
	comp=Z,0.9nm,0.5s,baz=333,slow=11,SNR=5.4						
INK	Inuvik	73.00	22	IAmb	IAmb	05 33 26.0	
	comp=Z,2.9nm,1.0s						
AKASG	Malin Array Be	73.36	318	P	P	05 33 26.9	-0.4
	comp=Z,0.3nm,0.4s,baz=64,slow=5.6,SNR=3.2						
BRTR	Keskin Array B	73.76	307	P	P	05 33 29.3	-0.8
	comp=Z,4.8nm,1.1s,baz=54,slow=6.4,SNR=4.9						
NOA	NORSAR Array B	78.59	332	LR	LR	06 12 12.1	
	comp=Z,249nm,18.0s,baz=65,slow=38						
YKA	Yellowknife Ar	82.74	23	P	P	05 34 17.6	-1.5
	comp=Z,1.1nm,0.7s,baz=312,slow=5.3,SNR=6.0						
GERES	GERESS Array B	83.32	321	P	P	05 34 21.0	-1.6
	comp=Z,0.8nm,0.8s,baz=10,slow=8.1,SNR=4.1						
GERES				LR	LR	06 16 42.9	
	comp=Z,69nm,18.2s,baz=74,slow=39						
PPT	Papeete	95.67	107	LR	LR	06 09 08.5	
	comp=Z,64nm,19.9s,baz=104,slow=30						
ESDC	Sonseca Array	98.91	321	LR	LR	06 25 25.7	
	comp=Z,46nm,19.4s,baz=320,slow=38						

IDC 02 05:26:57.4±2.6**, 1°.62N×127°.70E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.0**/47**, mbtmp3.4**/3**, Error ellipse: s-maj=214.6km s-min=27.4km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.39	163	P	P	05 31 58.5	+0.8
	0.7nm,0.6s,baz=344,slow=11,SNR=9.7						
ASAR	Alice Springs	25.85	167	P	P	05 32 29.9	-1.0
	0.2nm,0.5s,baz=343,slow=12,SNR=1.6						
MKAR	Makanchi Array	59.83	326	P	P	05 37 04.9	+0.1
	0.3nm,0.5s,baz=116,slow=8.9,SNR=4.4						

IDC 02 05:43:22.6±3.1**, 46°.55S×99°.07E, h0^{km}, mb3.7**/5**, mb1 3.8**/5**, mb1mx3.7**/33**, mbtmp3.7**/5**, MS3.6**/5**, Ms1 3.6**/5**, ms1mx3.1**/26**, Error ellipse: s-maj=102.7km s-min=24.1km az=124.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	Cape Leeuwin H	16.27	50	T	T	06 03 32.5	
	baz=215,slow=74,SNR=71						
H01W3	Cape Leeuwin H	16.29	50	T	T	06 03 36.7	
	baz=215,slow=74,SNR=84						
H01W1	Cape Leeuwin H	16.29	50	T	T	06 03 34.8	
	baz=215,slow=74,SNR=88						
MAW	Mawson	28.13	209	LR	LR	05 58 17.8	
	comp=Z,97nm,18.9s,baz=58,slow=32						
ASAR	Alice Springs	36.07	63	P	P	05 50 25.4	-0.5
	0.3nm,0.6s,baz=213,slow=6.4,SNR=4.4						
ASAR				LR	LR	06 03 53.7	
	comp=Z,53nm,18.3s,baz=209,slow=34						
WRA	Warramunga Arr	39.15	59	P	P	05 50 52.2	+0.2
	0.6nm,0.9s,baz=222,slow=8.5,SNR=5.3						
WRA				LR	LR	06 04 55.7	
	comp=Z,85nm,21.2s,baz=220,slow=33						
VNDA	Vanda	39.19	162	P	P	05 50 53.0	+1.3
	0.9nm,0.9s,baz=298,slow=8.1,SNR=4.2						
QSPA	South Pole Qui	43.59	180	P	P	05 51 26.2	-1.9
	1.4nm,0.7s,baz=323,slow=2.0,SNR=6.4						
SNAA	Sanae	50.10	204	P	P	05 52 19.7	+0.8
	1.2nm,0.9s,baz=153,slow=6.8,SNR=3.0						
AAK	Ala-Archa	91.45	342	LR	LR	06 39 13.1	
	comp=Z,38nm,18.1s,baz=121,slow=37						
GEYT	Alibeck	91.77	329	LR	LR	06 30 09.7	
	comp=Z,35nm,21.7s,baz=225,slow=31						

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*NNC **02** 05:43:27.1±4.7, 40°.36N×73°.44E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=37.5km s-min=15.9km az=170.0*

*SOME **02** 05:43:27.9, 40°.45N×73°.35E, h0^{km}*

*KRNET **02** 05:43:28.5±0.1, 40°.37N×73°.22E, h12^{km}, mb2.9*

ISC 02 05:43:25.0±1.3**, 40°.34N**±0°.03×**73°.42E**±0°.03**, h3**^{km}±13^{km}**, n29, σ1^{s}.33**/50**, 21C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.33	169	⇑eP	Pn	05 43 36.2	-0.8
	baz=48						
SFK				⇑eS	Sb	05 43 42.5	+3.0
	baz=48						
OHH	Osh	0.52	291	⇑iP	Pg	05 43 35.4	+0.4
	baz=95						
OHH				⇑iS	Sg	05 43 40.7	-1.0
	baz=95						
SALK	Salom-Alik	0.62	29	⇓eP	Pn	05 43 41.8	+0.8
	baz=42						
SALK				⇓eS	Sn	05 43 51.2	-0.4
	baz=42						
DRK	Karamyk	1.51	236	⇓iP	Pb	05 43 54.9	+1.0
	baz=31						
DRK				⇓iS	Sb	05 44 14.3	+0.8
	baz=31						
AML	Almayashu	1.81	7	⇑iP	Pg	05 44 01.9	+2.2
	baz=11						
AML				⇑iS	Sg	05 44 26.3	+3.2
	baz=11						
BTK	Batken	2.01	263	⇓iP	Pb	05 44 02.8	+0.5
	baz=61						
BTK				⇓iS	Sb	05 44 28.2	+0.4
	baz=61						
TRKS	Terek-Say	2.10	305	⇑iP	Pb	05 44 03.7	-0.1
	baz=6.0						
TRKS				⇑iS	Sb	05 44 29.2	-1.2
	baz=6.0						
MNAS	Manas	2.26	343	⇑eP	Pg	05 44 08.0	-0.3
	baz=46						
MNAS				⇑iS	Sg	05 44 36.5	-1.0
	baz=46						
EKS2	Erkin-Say	2.34	6	⇑eP	Pg	05 44 10.0	+0.1
	baz=10.0						
EKS2				⇑iS	Sg	05 44 39.9	-0.3
	baz=10.0						
MRKS	Merke	2.41	357	eP	Pg	05 44 11.5	+0.2
	4.0nm,0.4s						
MRKS				eS	Sg	05 44 43.4	+0.9
	24nm,0.2s						
MRKS	Merke	2.41	357	Pg	Pg	05 44 11.5	+0.2
	4.0nm,0.4s						
MRKS				Lg	Lg	05 44 43.4	
	24nm,0.2s						
KBK	Karagaybulak	2.59	26	⇑iP	Pg	05 44 14.2	-0.4
	baz=29						
KBK				⇑iS	Sg	05 44 47.2	-1.0
	baz=29						
GAR	Garm	2.74	242	⇑iP	Pb	05 44 14.0	-0.8
	baz=39						
GAR				⇑iS	Sb	05 44 47.1	-1.7
	baz=39						
ULHL	Ulahol	2.86	47	⇑iP	Pg	05 44 18.7	-1.1
	baz=50						
ULHL				⇑iS	Sg	05 44 55.0	-1.8
	baz=50						
USP	Ospenovka	3.04	15	⇑iP	Pb	05 44 20.1	+0.3
	baz=18						
USP				⇑iS	Sb	05 44 57.1	-0.2
	baz=18						
TKM2	Tokmak 2	3.06	32	⇓Pg	Pb	05 44 17.0	-3.2
	2.6nm,1.1s						
TKM2				⇑Lg	Lg	05 45 01.8	
	3.1nm,0.7s						
IUG	Iuzhnay	3.13	306	eP	Pg	05 44 24.7	-0.3
	335nm,0.3s						
IUG				eS	Sg	05 45 05.4	-0.2
	22nm,0.4s						
IUG	Iuzhnay	3.13	306	Pg	Pg	05 44 24.7	-0.3
	335nm,0.3s						
IUG				Lg	Lg	05 45 05.4	
	22nm,0.4s						
KST	Kastek	3.31	34	eP	Pg	05 44 27.8	-0.7
	2.6nm,0.4s						
KST				eS	Sg	05 45 10.6	-0.7
	2.2nm,0.6s						
KST	Kastek	3.31	34	Pg	Pg	05 44 27.8	-0.7
	2.6nm,0.4s						
KST				Lg	Lg	05 45 10.6	
	2.2nm,0.6s						
DGS	Degeres	3.40	30	eP	Pg	05 44 30.3	+0.2
	1.9nm,0.5s						
DGS				eS	Sg	05 45 15.3	+1.2
	3.9nm,0.9s						
DGS	Degeres	3.40	30	Pg	Pg	05 44 30.3	+0.2
	1.9nm,0.5s						
DGS				Lg	Lg	05 45 15.3	
	3.9nm,0.9s						
TARG	Taragay, Kyrgy	3.60	66	⇓eP	Pb	05 44 29.5	0.0
	baz=67						
TARG				⇓iS	Sb	05 45 13.8	+0.1
	baz=67						
TNSS	Tian-Shan	3.78	43	eP	Pg	05 44 37.3	-0.1
	2.0nm,0.3s						
TNSS				eS	Sg	05 45 27.5	+1.1
	3.0nm,0.5s						
TNSS	Tian-Shan	3.78	43	Pg	Pg	05 44 37.3	-0.1
	2.0nm,0.3s						
TNSS				Lg	Lg	05 45 27.5	
	3.0nm,0.5s						
BRLS	Borolday	3.80	316	eP	Pb	05 44 35.0	+2.3
	5.9nm,0.2s						
BRLS				eS	Sg	05 45 23.6	-3.5
	5.6nm,0.4s						
BRLS	Borolday	3.80	316	Pg	Pb	05 44 35.0	+2.3
	5.9nm,0.2s						
BRLS				Lg	Lg	05 45 23.5	
	5.6nm,0.4s						
KUU	Kurty	4.17	30	eP	Pg	05 44 45.0	+0.1
	1.1nm,0.1s						
KUU				eS	Sg	05 45 40.1	+1.3
	2.3nm,0.2s						
KUU	Kurty	4.17	30	Pg	Pg	05 44 45.0	+0.1
	1.1nm,0.1s						
KUU				Lg	Lg	05 45 40.1	
	2.3nm,0.2s						

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*BJI **02** 05:53:00.9±0.0, 24°.23N×121°.90E, h18^{km}, mB4.6/19, mb4.4/32, ML4.2/10, Ms4.2/27, Ms7 3.8/27*

*NEIC **02** 05:53:00.6±1.8, 24°.18N±0°.04×121°.91E±0°.04, h26^{km}±6^{km}, Error ellipse: s-maj=6.1km s-min=5.4km az=149.0*

*NIED **02** 05:53:00.0, 24°.11N×121°.90E, h21^{km}, MW4.2, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.37; M$_{\theta\theta}$-0.02; M$_{\phi\phi}$-1.35; M$_{r\theta}$0.71; M$_{\theta\phi}$0.48; M$_{\phi r}$1.98; Fault plane solution: M$_0$2.54000×10^{15} NP1:ϕ_s11.00000°, δ74.00000°, λ107.00000°. NP2:ϕ_s142.00000°, δ23.00000°, λ44.00000°.*

*JMA **02** 05:53:00.0±0.1, 24°.11N×121°.90E, h21^{km}±2^{km}, M4.2*

*ASIES **02** 05:53:00.7, 24°.17N×121°.90E, h29^{km}, MW4.2*

*TAP **02** 05:53:00.7, 24°.18N×121°.89E, h24^{km}, ML4.6, B*

*IDC **02** 05:53:02.5±3.0, 24°.10N×121°.97E, h47^{km}±30^{km}, mb3.8/15, mb1 3.9/17, mb1mx3.8/45, mbtmp4.1/17, ML3.8/2, MS3.6/19, Ms1 3.6/19, ms1mx3.4/40, Error ellipse: s-maj=19.7km s-min=17.8km az=69.0*

ISC 02 05:53:00.7±0.7**, 24°.14N**±0°.02×**121°.92E**±0°.02**, h27**^{km}±5^{km}**, n208, σ1^{s}.14**/283**, mb4.3**/24**, MS3.7**/17**, 10C-28D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village	0.23	315	P	Pb	05 53 06.4	-0.5
	baz=313						
EHP				S	Sb	05 53 10.4	-0.8
	baz=313						
ETL	Fush Village	0.27	273	⇓iP	Pb	05 53 07.3	-0.2
	baz=263						
ETL				i S	Sb	05 53 12.5	+0.4
	baz=263						
NACB	Ninganchiao	0.30	276	⇓iP	Pb	05 53 07.5	-0.3
	baz=262						
NACB				S	Sb	05 53 12.6	-0.1
	baz=262						
NACB	Ninganchiao	0.30	276		Pb	05 53 07.4	-0.5
TWD	Chiawan	0.30	258	⇓iP	Pb	05 53 07.8	-0.1
	baz=248						
TWD				eS	Sb	05 53 13.5	+0.7
	baz=248						
ENA	Nanau	0.33	330	⇓iP	Pb	05 53 07.7	-0.5
	baz=332						
ENA				S	Sb	05 53 13.2	-0.2
	baz=332						
EWUT	Wuta	0.33	337	⇓iP	Pb	05 53 07.8	-0.4
	baz=343						
EWUT				S	Sb	05 53 12.6	-0.8
	baz=343						
HWA	Hwalien	0.33	240	⇓iP	Pb	05 53 09.0	+0.7
	baz=229						
HWA				eS	Sn	05 53 16.0	+0.4
	baz=229						
TEYL	Yanliau Villag	0.40	227	⇓P	Pb	05 53 09.8	+0.4
	baz=221						
TEYL				eS	Sn	05 53 17.0	-0.4
	baz=221						
ETLH	Xiulin Townshi	0.40	279	⇓iP	Pb	05 53 09.2	-0.3
	baz=271						
ETLH				S	Sb	05 53 15.6	+0.1
	baz=271						
ETM	Tongmen	0.43	246	⇓P	Pb	05 53 09.7	-0.1
	baz=238						
NDS	Dongshan	0.52	339	⇓iP	Pb	05 53 11.0	-0.3
	baz=341						
NDS				S	Sb	05 53 18.3	-0.2
	baz=341						
TEGC	Jichi Village	0.56	219	eP	Pb	05 53 12.4	+0.5
	baz=213						
NNSB	Datong	0.56	300	⇓iP	Pb	05 53 11.8	-0.4
	baz=290						
NNSB				i S	Sb	05 53 19.7	-0.3
	baz=290						
NNS	Nan Shan	0.58	301	⇓iP	Pb	05 53 11.9	-0.5
	baz=290						
NNS				S	Sb	05 53 19.9	-0.4
	baz=290						
NDT	Datong Townshi	0.59	321	P	Pb	05 53 12.1	-0.4
	baz=315						
NDT				S	Sb	05 53 20.6	+0.2
	baz=315						
ENTT	Nioudou	0.59	327	i P	Pb	05 53 12.0	-0.5
	baz=322						
ENTT				eS	Sb	05 53 20.2	-0.3
	baz=322						
WHF	Hehuan Shan	0.60	270	⇓iP	Pb	05 53 12.6	-0.3
	baz=264						
WHF				i S	Sb	05 53 21.4	+0.2
	baz=264						
TWE	Neicheng	0.62	338	⇑iP	Pb	05 53 12.8	-0.2
	baz=341						
TWE				eS	Sb	05 53 21.0	-0.3
	baz=341						
FUSS	Fushou	0.62	280	⇓iP	Pb	05 53 13.1	-0.1
	baz=275						
FUSS				S	Sb	05 53 22.2	+0.5
	baz=275						
ILA	Ilan	0.64	346	P	Pb	05 53 13.4	+0.2
	baz=348						
ILA				S	Sn	05 53 23.1	-0.1
	baz=348						
EGFH	Guangfu	0.65	224	⇓P	Pb	05 53 13.8	+0.2
	baz=229						
EGFH				eS	Sb	05 53 22.9	+0.6
	baz=229						
CHGB	Renai	0.69	263	⇓iP	Pb	05 53 14.1	-0.1
	baz=249						
CHGB				S	Sb	05 53 22.8	-0.7
	baz=249						
TWT	Tachien	0.69	279	⇓iP	Pb	05 53 14.3	+0.1
	baz=273						
TWT				S	Sn	05 53 24.2	-0.5
	baz=273						
EGS		0.70	1	P	Pn	05 53 14.6	-0.2
	baz=2.0						
EGS				eS	Sn	05 53 25.2	+0.5
	baz=2.0						
TDCB	Techi	0.70	279	⇓iP	Pb	05 53 14.3	-0.1
	baz=274						
TDCB				S	Sb	05 53 23.8	-0.1
	baz=274						
OWD	Renai	0.70	255	⇓iP	Pb	05 53 14.4	-0.1
	baz=249						
OWD				eS	Sb	05 53 24.1	+0.3
	baz=249						
NTC	Toucheng	0.71	353	⇑P	Pb	05 53 14.6	+0.1
	baz=356						
NTC				S	Sn	05 53 24.8	-0.2
	baz=356						
YHNB	Yeheng	0.72	317	⇓iP	Pb	05 53 14.3	-0.4
	baz=307						
YHNB				S	Sb	05 53 22.5	-1.8
	baz=307						
YHNB	Yeheng	0.72	317		Pb	05 53 14.4	-0.4
YHNB	Yeheng	0.72	317	P	Pb	05 53 14.6	-0.1
NSK	Sanguang	0.74	316	⇓iP	Pb	05 53 14.5	-0.5
	baz=307						
NSK				S	Sb	05 53 24.3	-0.4
	baz=307						
NWLT	Wulai	0.74	329	P	Pb	05 53 14.7	-0.3
	baz=327						
NWLT				eS	Sb	05 53 24.4	-0.3
	baz=327						
HGSD	Ruisui	0.79	215	eP	Pn	05 53 16.2	+0.1
	baz=210						
HGSD				eS	Sn	05 53 27.7	+0.7
	baz=210						
TIPB	Shuangxi	0.83	354	⇑iP	Pn	05 53 16.6	0.0
	baz=4.0						
TIPB				S	Sb	05 53 27.4	0.0
	baz=4.0						
EHY	Hungye	0.84	221	P	Pb	05 53 15.8	-0.8
	baz=216						
TWB1	Santiao Chiao	0.86	4	⇑iP	Pb	05 53 17.2	+0.1
TWB1				S	Sn	05 53 29.7	+0.9
TWA	Mucha	0.89	340	P	Pn	05 53 17.3	-0.1
	baz=334						
TWA				eS	Sn	05 53 29.2	-0.2
	baz=334						
NHDH	Xindian Distri	0.89	336	⇑eP	Pn	05 53 17.3	-0.1
	baz=322						
NHDH				eS	Sn	05 53 29.7	+0.3
	baz=322						
WHP	Taichung City	0.90	279	P	Pb	05 53 17.8	+0.1
	baz=274						
WHP				eS	Sn	05 53 29.9	+0.1
	baz=274						
TATO	Taipei	0.92	335		Pn	05 53 17.5	-0.3
WCS	Beigang Elemen	0.93	265	⇓eP	Pn	05 53 17.9	0.0
	baz=253						
WCS				eS	Sn	05 53 30.4	+0.1
	baz=253						
NWF	Wu-fen Shan	0.93	352	⇑iP	Pb	05 53 18.6	+0.4
	baz=347						
NWF				S	Sn	05 53 31.4	+0.8
	baz=347						
YULB	Yu-li	0.94	217	eP	Pn	05 53 17.7	-0.4
	baz=225						
YULB				eS	Sb	05 53 30.8	+0.3
	baz=225						
YULB	Yu-li	0.94	217		Pn	05 53 17.9	-0.3
SSLB	Suanglung	0.95	248	⇓iP	Pn	05 53 18.2	-0.2
	baz=242						
SSLB				eS	Sb	05 53 30.5	-0.3
	baz=242						
SSLB	Suanglung	0.95	248		Pn	05 53 18.1	-0.2
SSLB	Suanglung	0.95	248	P	Pn	05 53 18.4	+0.1
LIOB	Emei	0.96	301	P	Pb	05 53 18.9	+0.1
	baz=292						
LIOB				eS	Sn	05 53 31.5	+0.2
	baz=292						
EYUL	Yuli	0.96	215	eP	Pn	05 53 18.1	-0.4
	baz=224						
NSTT	Nanjuang	0.97	300	eP	Pb	05 53 18.9	+0.1
	baz=290						
NSTT				eS	Sb	05 53 30.9	-0.3
	baz=290						
TAP	Taipei	0.97	337	eP	Pb	05 53 19.1	+0.3
	baz=324						
TAP				eS	Sn	05 53 31.4	+0.1
	baz=324						
SMLT	Sun Moon Lake	0.97	255	⇓iP	Pn	05 53 18.6	0.0
	baz=241						
SMLT				eS	Sb	05 53 31.4	+0.1
	baz=241						
JYNG	Yonagunijimaku	0.98	72	P	Pn	05 53 18.8	+0.1
JYNG				eS	Sb	05 53 32.1	+0.4
TYC	Yuchr	1.00	256	⇓iP	Pn	05 53 18.9	0.0
	baz=244						
TYC				eS	Sn	05 53 31.7	-0.4
	baz=244						
HSN1	Hsinchu	1.04	308	eP	Pb	05 53 20.8	+0.8
	baz=306						
HSN1				eS	Sb	05 53 34.1	+0.9
	baz=306						
YOJ	Yonaguni jima	1.04	72	⇓iP	Pn	05 53 19.6	+0.1
	baz=75						
YOJ	Yonaguni jima	1.04	72	P	Pn	05 53 19.6	+0.1
YOJ				eS	Sb	05 53 34.6	+1.2
YOJ	Yonaguni jima	1.04	72		Pn	05 53 19.6	+0.1
YOJ	Yonaguni jima	1.04	72	P	Pb	05 53 19.9	-0.2
YM01	YM01	1.05	342	⇑P	Pn	05 53 19.7	0.0
	baz=329						
YM01				eS	Sn	05 53 33.2	-0.2
	baz=329						
TWS1	Kuangyinshan	1.06	334	eP	Pb	05 53 20.1	-0.2
	baz=335						
TWS1				eS	Sb	05 53 35.6	+1.8
	baz=335						
NCU	National Centr	1.06	321	eP	Pb	05 53 20.1	-0.3
	baz=321						
NCU				eS	Sb	05 53 36.2	+2.4
	baz=321						
NCUH	Zhongli	1.06	321	eP	Pb	05 53 20.3	-0.1
	baz=320						
NCUH				eS	Sb	05 53 35.4	+1.5
	baz=320						
TWQ1	Liyutan	1.07	281	P	Pb	05 53 21.2	+0.8
	baz=285						
TWQ1				eS	Sb	05 53 36.1	+2.1
	baz=285						
SBCB	Hsinchu	1.07	307	⇑iP	Pb	05 53 20.7	+0.2
	baz=306						
SBCB				eS	Sb	05 53 35.6	+1.5
	baz=306						
HSN	Hsinchu	1.08	307	eP	Pb	05 53 20.9	+0.1
	baz=308						
HSN				eS	Sb	05 53 36.9	+2.4
	baz=308						
NSY	Sanyi	1.09	285	eP	Pb	05 53 22.0	+1.1
	baz=280						
NSY				eS	Sb	05 53 36.1	+1.3
	baz=280						
ANP	Anpu	1.10	341	eP	Pb	05 53 20.8	-0.3
	baz=342						
YUS	Yu-Shan	1.10	234	eP	Pn	05 53 21.1	+0.3
	baz=227						
YUS				eS	Sb	05 53 37.2	+1.7
	baz=227						
NMLH	Miaoli	1.10	291	eP	Pb	05 53 22.4	+1.4
	baz=289						
FULB	Fuli	1.10	211	eP	Pn	05 53 20.5	+0.2
	baz=194						
NTST	Danshui	1.10	337	eP	Pb	05 53 20.8	-0.3
	baz=338						
NTST				eS	Sb	05 53 38.0	+3.0
	baz=338						
TCU	Taichung	1.14	270	eP	Pb	05 53 22.5	+0.9

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        baz=264
TCU                               eS    Sb      05 53 38.0 +1.9
        baz=264
WJS   Zhushan          1.14 254  eP    Pb      05 53 22.0 +0.3
        baz=246
WJS                               eS    Sb      05 53 37.3 +1.2
        baz=246
CHKT  Chengkung        1.16 206  eP    Pn      05 53 20.4 -0.7
        baz=190
WNT1  Nantou City      1.16 258  eP    Pb      05 53 22.4 +0.4
        baz=252
WNT1                              eS    Sb      05 53 37.9 +1.3
        baz=252
WNT   Mingjian         1.16 257   P    Pb      05 53 22.7 +0.6
        baz=236
WNT                               eS    Sb      05 53 38.9 +2.1
        baz=236
TWY   Chenhua          1.16 346  eP    Pb      05 53 22.4 +0.3
        baz=330
WDJ   Dajia District   1.19 280  eP    Pb      05 53 23.0 +0.6
        baz=274
WDJ                               eS    Sb      05 53 39.9 +2.5
        baz=274
ALS   Alishan          1.20 238   P    Pb      05 53 22.8 -0.2
        baz=220
ALS                               eS    Sb      05 53 39.2 +1.1
        baz=220
WCHH  Zhanghua         1.25 267  eP    Pb      05 53 24.0 +0.5
        baz=261
WCHH                              eS    Sb      05 53 40.5 +1.4
        baz=261
CHN5  Tsauling         1.26 245   P    Pb      05 53 24.1 +0.3
        baz=238
CHN5                              eS    Sb      05 53 41.4 +1.7
        baz=238
ELDTW Lidau            1.26 221  eP    Pn      05 53 22.4 -0.2
        baz=205
ELDTW                             eS    Sn      05 53 39.0 +0.3
        baz=205
EDH   Donghe           1.30 206  eP    Pn      05 53 22.6 -0.4
        baz=191
EDH                               eS    Sn      05 53 38.4 -1.1
        baz=191
WDLH  Douliu           1.34 251  eP    Pb      05 53 25.5 +0.3
        baz=244
WDLH                              eS    Sb      05 53 44.7 +2.7
        baz=244
STYH  Taoyuan          1.43 227  eP    Pn      05 53 25.8 +1.0
        baz=222
STYH                              eS    Sb      05 53 44.8 +0.4
        baz=222
LONT  Longtian         1.43 211  eP    Pn      05 53 25.8 +0.9
        baz=206
LONT                              eS    Sb      05 53 44.0 -0.5
        baz=206
WRL   Guolierlin Hig   1.43 261   P    Pb      05 53 26.6  0.0
        baz=255
WRL                               eS    Sb      05 53 45.4 +0.9
        baz=255
STYT  Tauyuan          1.45 228   P    Pb      05 53 26.6 -0.4
        baz=222
STYT                              eS    Sb      05 53 45.5 +0.5
        baz=222
TPUB  Ta-pu            1.45 235  eP    Pb      05 53 26.9 -0.1
        baz=219
TPUB                              eS    Sb      05 53 46.8 +1.8
        baz=219
TPUB  Ta-pu            1.45 235        Pb      05 53 26.7 -0.3
TPUB  Ta-pu            1.45 235   P    Pb      05 53 27.4 +0.4
CHN2  Minshiung        1.46 246  eP    Pb      05 53 27.8 +0.7
        baz=241
WTK   Tuku             1.47 252  eP    Pb      05 53 26.7 -0.7
        baz=247
PCYT  Pengchaiyu       1.48   5  eP    Pn      05 53 26.3 +0.7
        baz=8.0
WTP   Ta-pu            1.49 233  eP    Pb      05 53 27.5 -0.3
        baz=217
WTP                               eS    Sb      05 53 47.7 +1.4
        baz=217
CHY   Chiayi           1.51 245  eP    Pb      05 53 28.4 +0.3
        baz=240
LDUT  Ludao            1.52 196  eP    Pn      05 53 24.3 -1.8
        baz=184
LDUT                              eS    Sn      05 53 43.3 -1.7
        baz=184
TWGBT Beinan           1.53 210  eP    Pn      05 53 25.4 -0.8
        baz=195
TWG   Pinlang          1.53 211  eP    Pn      05 53 25.6 -0.6
        baz=195
TWG   Pinlang          1.53 211        Pn      05 53 25.9 -0.4
TWK   Hsinying         1.58 237  eP    Pb      05 53 29.3 +0.1
        baz=231
CHN1  Nanshi           1.59 233  eP    Pb      05 53 29.5  0.0
        baz=228
SNST  Tainan City      1.60 235  eP    Pb      05 53 30.1 +0.6
        baz=230
SGST  Jiashian         1.62 229  eP    Pn      05 53 28.5 +1.0
        baz=215
WSF   Szhu             1.63 252  eP    Pn      05 53 28.9 +1.3
        baz=248
SLGT  Liugui           1.64 226  eP    Pb      05 53 29.6 -0.6
        baz=212
IRIF  Iriomote-Funau   1.66  83   P    Pn      05 53 28.1 +0.1
IRIF                               S    Sn      05 53 48.6 +0.1
ICHU  Yijhu            1.69 243  eP    Pb      05 53 30.5 -0.6
        baz=237
ICHU                              eS    Sb      05 53 54.1 +2.1
        baz=237
HATJ  Hateruma jima    1.73  93   P    Pn      05 53 29.6 +0.7
HATJ                              eS    Sn      05 53 50.3 +0.3
ECL   Taimali          1.78 210  eP    Pn      05 53 30.3 +0.7
        baz=196
CHN3  Shinhua          1.78 234  eP    Pb      05 53 33.4 +0.8
        baz=229
SSD   Sandimen         1.83 221  eP    Pb      05 53 32.8 -0.6
        baz=215
TSMG  Majia            1.85 220  eP    Pb      05 53 33.3 -0.6
        baz=215
TWM1  Shoushan         1.90 227  eP    Pb      05 53 35.5 +0.8
        baz=222
JKRS  Kuro-shima       1.91  87   P    Pn      05 53 32.4 +1.0
MASBT Mashibuluo       1.93 218  eP    Pn      05 53 32.6 +0.8
        baz=213
EAST  Anshuo           2.01 210  eP    Pn      05 53 33.1 +0.2
        baz=196
TAW   Tawu             2.01 208  eP    Pn      05 53 33.3 +0.4
        baz=204
JIJ   Ishigaki jima    2.04  83   P    Pn      05 53 33.3 +0.1
JIJ                               eS    Sn      05 53 57.7 -0.1
SSPT  Xinbi            2.07 217  eP    Pb      05 53 36.4 -1.1
        baz=199
SCZT  Fangliau         2.13 214  eP    Pb      05 53 37.4 -1.2
        baz=198
SLIU  Shizi            2.18 208  eP    Pn      05 53 36.3 +1.2
        baz=195
JISG  Ishigakijimahi   2.23  78   P    Pn      05 53 35.8  0.0
JISG                              eS    Sn      05 54 02.1 -0.3
PHUB  P'eng-hu         2.24 254  eP    Pn      05 53 36.7 +0.8
        baz=249
PNG   Penghu           2.24 256  eP    Pn      05 53 36.7 +0.8
        baz=250
WLCH  Liuqiu           2.28 219  eP    Pb      05 53 42.0 +0.9
        baz=213
VCHM  Qimei            2.46 248  eP    Pn      05 53 40.2 +1.1
        baz=230
JTJ   Tarama           2.58  78   P    Pn      05 53 41.5 +0.8
JTJ                               eS    Sn      05 54 11.2 -0.1
MATB  Ma-tsu           2.68 319  eP    Pn      05 53 40.9 -1.2
        baz=317
PTMZ  Houxiangcun      2.70 290  eP    Pn      05 53 42.2 -0.1
        baz=287
LYJJ  Jianjiangzhen    3.09 321  eP    Pn      05 53 47.0 -0.7
        baz=320
JIKM  Ikemajima        3.13  75   P    Pn      05 53 49.0 +0.8
QZH   Quanzhou         3.13 285⇑iPn    Pn      05 53 48.1 -0.1
QZH                               Sn    Sn      05 54 20.6 -4.2
QZH                               smax  smax
        comp=N,320nm,0.6s
QZH                               smax  smax
        comp=E,190nm,0.5s
QZH                               LR    LR
        comp=Z,1µm,7.1s
JMJ2  Miyako jima3     3.16  78   P    Pn      05 53 49.6 +0.9
XPSS  Dashiqiu         3.18 331  eP    Pn      05 53 48.1 -0.8
        baz=329
KNMB  Chin-men Tao     3.24 276  eP    Pn      05 53 49.4 -0.2
        baz=271
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KNMB  Chin-men Tao     3.24 276   Pn    Pn      05 53 49.8 +0.1
MHZQ  Yeshan           3.26 307  eP    Pn      05 53 49.4 -0.6
        baz=306
AXDP  Jialang          3.67 283  eP    Pn      05 53 56.0 +0.3
        baz=277
ZPLA  Ao Xicun         3.82 268  eP    Pn      05 53 57.7  0.0
        baz=262
JOW   Kunigami         6.33  64   P    Pn      05 54 31.9 -0.4
        6.9nm,0.3s,baz=189,slow=15,SNR=9.7
JOW   Kunigami         6.33  64   P    Pn      05 54 31.6 -0.7
GZH   Guangzhou        7.93 264   Pn    Pn      05 54 51.1 -3.2
GZH                               Sn    Sn      05 56 17.5 -5.7
GZH                               smax  smax
        comp=N,130nm,1.2s
GZH                               smax  smax
        comp=E,140nm,1.1s
WHN   Wuhan            9.27 315 ⇓P     Pn      05 55 18.2 +5.7
WHN                               S     Sn      05 56 59.1 +3.2
WHN                               LR    LR
        comp=N,2µm,4.4s
WHN                               LR    LR
        comp=E,1µm,3.5s
WHN                               LR    LR
        comp=Z,1µm,18.3s
QIZ   Qiongzhong      12.33 248   P     Pn      05 55 54.7 +0.2
QIZ                               S     Sn      05 58 13.3 +2.2
QIZ                               LR    LR
        comp=N,140nm,12.7s
QIZ                               LR    LR
        comp=E,150nm,18.4s
QIZ                               LR    LR
        comp=Z,190nm,15.6s
GYA   Guiyang         13.99 283 ⇑P     Pn      05 56 18.3 +1.0
GYA                               sP    P       05 56 25.6 +0.6
GYA                               S     Sn      05 58 53.0 +1.2
GYA                               pmax  pmax
        comp=Z,12nm,1.2s
GYA                               LR    LR
        comp=N,220nm,10.8s
GYA                               LR    LR
        comp=E,480nm,11.5s
GYA                               LR    LR
        comp=Z,640nm,13.4s
KSRS  Korea Array     14.23  20   P     Pn      05 56 22.1 +1.8
        0.2nm,0.3s,baz=197,slow=11,SNR=1.8
KSRS                              LR    LR      06 02 56.1
        comp=Z,113nm,18.2s,baz=202,slow=42
XAN   Xi'an           15.03 314   P     P       05 56 38.2 +1.8
XAN                               S     S       05 59 31.4 -2.6
XAN                               pmax  pmax
        comp=Z,15nm,0.8s
XAN                               LR    LR
        comp=N,510nm,6.2s
XAN                               LR    LR
        comp=E,230nm,5.5s
XAN                               LR    LR
        comp=Z,260nm,8.4s
JHJ   Hachijo jima 2  18.03  56   LR    LR      06 04 05.1
        comp=Z,56nm,18.7s,baz=272,slow=37
JCJ   Chichijima      18.51  77   LR    LR      06 03 54.9
        comp=Z,133nm,18.6s,baz=108,slow=35
MJAR  Matsushiro Arr  18.68  45   LR    LR      06 05 32.6
        comp=Z,74nm,19.4s,baz=230,slow=40
BTO   Baotou          19.21 332  eP    Pn      05 57 26.5 +2.8
BTO                               LR    LR
        comp=Z,1µm,14.9s
BTO                               LR    LR
        comp=Z,830nm,14.7s
LZH   Lanzhou         19.61 312  eP    Pn      05 57 29.7 +1.1
LZH                               pP    sP      05 57 35.7 -1.2
LZH                               pmax  pmax
        comp=Z,26nm,1.5s
LZH                               LR    LR
        comp=Z,410nm,11.3s
LZH                               LR    LR
        comp=Z,600nm,10.7s
LZH                               LR    LR
        comp=Z,450nm,12.3s
CN2   Changchun       19.82   8  eP    P       05 57 27.9 -1.3
CN2                              ePP   PnPn    05 57 46.7 +1.6
CN2                              eS    S       06 01 04.3 -6.7
CN2                               LR    LR
        comp=Z,140nm,15.0s
CN2                               LR    LR
        comp=Z,240nm,15.0s
CN2                               LR    LR
        comp=Z,250nm,16.0s
CMAR  Chiang Mai Arr  22.13 260   P     P       05 57 55.5 +1.1
        comp=Z,4.8nm,0.9s,baz=58,slow=8.1,SNR=17
CMAR                              LR    LR      06 07 31.8
        comp=Z,141nm,18.3s,baz=115,slow=39
GUMO  Guam            24.08 112   LR    LR      06 06 13.0
        comp=Z,73nm,20.3s,baz=122,slow=33
GTA   Gaotai          24.09 314 ⇓P     P       05 58 15.0 +0.9
GTA                               pP    pP      05 58 19.8 -1.9
GTA                               sP    sP      05 58 23.6 -0.7
GTA                               pmax  pmax
        comp=Z,10.0nm,1.1s
GTA                               pmax  pmax
        comp=Z,81nm,6.2s
GTA                               LR    LR
        comp=Z,120nm,15.6s
GTA                               LR    LR
        comp=Z,220nm,16.4s
GTA                               LR    LR
        comp=Z,250nm,14.5s
KLR   Kul'dur         26.20  15   P     P       05 58 33.7 +0.7
        comp=Z,1.4nm,0.5s,baz=241,slow=5.1,SNR=7.1
KLR                               LR    LR      06 10 17.2
        comp=Z,114nm,18.4s,baz=202,slow=39
SONM  Songino Array   26.67 336   P     P       05 58 37.3 -0.1
        comp=Z,3.6nm,0.7s,baz=156,slow=11,SNR=9.4
SONM                              LR    LR      06 10 40.6
        comp=Z,305nm,18.2s,baz=75,slow=40
SHL   Shillong        27.27 279   P     P       05 58 42.9 -0.2
SHL                               IAmb  IAmb    05 58 47.2
        comp=Z,7.7nm,0.9s
WMQ   Urumqi          34.17 314  eP    P       05 59 46.5 +2.8
MK31  Makanchi Array  38.83 316   P     P       06 00 23.2 -0.2
MK31                              IAmb  IAmb    06 00 25.5
        comp=Z,7.6nm,1.1s
MKAR  Makanchi Array  38.83 316   P     P       06 00 23.9 +0.5
        comp=Z,4.9nm,0.5s,baz=101,slow=10,SNR=43
MKAR                              LR    LR      06 18 07.4
        comp=Z,80nm,20.8s,baz=102,slow=39
MKAR  Makanchi Array  38.83 316   P     P       06 00 23.3 -0.1
PETK  Petropavlovsk-  39.53  34   LR    LR      06 17 07.9
        comp=Z,60nm,20.6s,baz=160,slow=37
ZAA0  Zalesovo Array  40.64 327   P     P       06 00 37.5 -0.8
ZAA0                              IAmb  IAmb    06 00 39.5
        comp=Z,4.0nm,0.6s
ZALV  Zalesovo Beam   40.64 327   P     P       06 00 37.4 -0.9
        comp=Z,3.3nm,0.5s,baz=112,slow=8.2,SNR=20
ZALV                              LR    LR      06 18 48.1
        comp=Z,116nm,19.2s,baz=115,slow=38
ZALV  Zalesovo Beam   40.64 327   P     P       06 00 37.6 -0.6
KSH   Kashi           41.48 303   P     P       06 00 49.8 +4.2
KSH                               pmax  pmax
        comp=Z,10.0nm,1.1s
H11S3 WAKE ISLAND Hy  41.95  89   T     T       06 46 15.1
        baz=284,slow=74,SNR=9.1
H11S1 WAKE ISLAND Hy  41.96  89   T     T       06 46 15.8
        baz=284,slow=74,SNR=4.2
H11S2 WAKE ISLAND Hy  41.97  89   T     T       06 46 20.1
        baz=284,slow=74,SNR=4.5
KURK  Kurchatov       42.55 320   P     P       06 00 54.3 +0.3
AAK   Ala-Archa       43.06 307   LR    LR      06 21 44.7
        comp=Z,108nm,18.6s,baz=96,slow=40
WB0   Warramunga Arr  45.31 163   P     P       06 01 15.5 -0.9
WB0                               IAmb  IAmb    06 01 26.3
        comp=Z,8.1nm,1.4s
WRA   Warramunga Arr  45.46 164   P     P       06 01 16.5 -1.1
        comp=Z,0.8nm,0.6s,baz=343,slow=8.5,SNR=6.3
WRA   Warramunga Arr  45.46 164   IAmb  IAmb    06 01 21.5
        comp=Z,0.4nm,1.4s
WB2   Warramunga Arr  45.46 163   P     P       06 01 16.7 -0.9
KKAR  Karatay Array   46.03 307   P     P       06 01 23.7 +1.7
ASAR  Alice Springs   48.93 165   P     P       06 01 43.5 -1.2
        comp=Z,0.2nm,0.4s,baz=336,slow=5.8,SNR=3.0
NRIK  Noril'sk        49.62 345   LR    LR      06 25 10.2
        comp=Z,60nm,18.7s,baz=59,slow=39
ABKAR Akbulak array   53.95 314   P     P       06 02 21.9  0.0
ABKAR Akbulak array   53.95 314   P     P       06 02 22.1 +0.1
ABKAR                             IAmb  IAmb    06 02 24.0
        comp=Z,5.0nm,0.8s
AKTO  Aktyubinsk      55.27 316   LR    LR      06 27 48.9
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        comp=Z,65nm,18.5s,baz=79,slow=38
GEYT  Alibeck         55.40 300   P     P       06 02 32.2 -0.5
        comp=Z,1.5nm,0.4s,baz=338,slow=3.4,SNR=2.5
GEYT  Alibeck         55.40 300   IAmb  IAmb    06 02 35.5
        comp=Z,6.0nm,1.2s
ARU   Arti            55.54 323   LR    LR      06 26 49.7
        comp=Z,64nm,20.1s,baz=88,slow=36
KIRV  Kirov           60.64 325   LR    LR      06 31 28.1
        comp=Z,89nm,18.7s,baz=88,slow=38
KBZ   Khabaz          66.03 309   P     P       06 03 44.6 -0.4
        comp=Z,3.4nm,0.8s,baz=144,slow=11,SNR=3.8
H21K  Melozitna Rive  66.34  27   P     P       06 03 46.5  0.0
H21K                              IAmb  IAmb    06 03 48.0
        comp=Z,5.8nm,1.3s
PPLA  Purkeypile      66.95  30   P     P       06 03 49.8 -1.0
ILAR  Eielson Array   68.94  27   P     P       06 04 03.9 +0.8
        comp=Z,0.2nm,0.5s,baz=280,slow=5.9,SNR=5.0
BMAR  Burnt Mountain  69.29  24   P     P       06 04 05.7 +0.5
ARCES ARCESS Array B  69.83 338   LR    LR      06 42 30.1
        comp=Z,42nm,18.2s,baz=285,slow=42
L27K  Beaver Creek,   71.53  29   P     P       06 04 17.9 -1.1
L27K                              IAmb  IAmb    06 04 25.1
        comp=Z,5.6nm,1.3s
BCAR  Beaver Creek A  71.55  29   P     P       06 04 19.9 +0.8
FINES FINESS Array B  71.82 330   P     P       06 04 20.6  0.0
        comp=Z,5.7nm,1.1s,baz=107,slow=6.6,SNR=4.9
FINES                             LR    LR      06 41 08.8
        comp=Z,58nm,18.4s,baz=50,slow=40
MNK   Minsk           72.97 323  i P    P       06 04 25.7 -1.9
        comp=E,2.0nm,1.1s
MNK                              i P    P       06 04 25.7 -1.9
        comp=N,16nm,0.9s
MNK                              i P    P       06 04 25.7 -1.9
        comp=Z,7.0nm,0.9s,baz=72
MNK                              i PcP  PcP     06 04 42.7 -1.7
MNK                              i PP   PP      06 07 07.3 -2.5
MNK                              i PPP  PPP     06 08 52.9
MNK                              i S    S       06 13 51.5 -1.1
MNK                              i SS   SS      06 18 32.8  0.0
MNK                              i SSS  SSS     06 22 05.3
MNK                              i LQ   LQ      06 30 43.1
MNK                              i LR   LR      06 35 16.3
MNK                              i LRM  MLR     06 38 55.5
        comp=E,11nm,18.8s
MNK                              i LRM  MLR     06 39 03.5
        comp=N,207nm,25.3s
MNK                              i LRM  MLR     06 39 15.8
        comp=Z,132nm,22.4s
INK   Inuvik          73.01  22   P     P       06 04 27.1 -0.5
        comp=Z,0.8nm,0.9s,baz=314,slow=8.7,SNR=4.1
INK   Inuvik          73.01  22   IAmb  IAmb    06 04 54.4
        comp=Z,4.8nm,1.1s
PCA   Pinnacle        73.16  31   P     P       06 04 26.6 -2.1
AKASG Malin Array Be  73.34 318   P     P       06 04 28.4 -1.5
        comp=Z,0.2nm,0.3s,baz=57,slow=5.9,SNR=4.1
BRTR  Keskin Array B  73.74 307   P     P       06 04 33.1 +0.5
        comp=Z,1.8nm,0.7s,baz=64,slow=2.9,SNR=3.9
NOA   NORSAR Array B  78.57 332   LR    LR      06 43 04.6
        comp=Z,99nm,19.2s,baz=65,slow=38
CRVS  Cervenica-Dubn  78.68 319  eP    P       06 05 02.7 +2.3
YKA   Yellowknife Ar  82.74  23   P     P       06 05 20.6 -1.2
        comp=Z,1.2nm,0.7s,baz=310,slow=4.9,SNR=9.9
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*GUC **02** 06:08:50.9±0.6, 19.°67S×69.°34W, h98^{km}±2^{km}, ML3.7*
*IDC **02** 06:08:51.6±1.8, 19.°76S×69.°08W, h119^{km}±17^{km}, mb3.5/3, mb1 3.4/6, mb1mx3.2/27, mbtmp3.7/6, Error ellipse: s-maj=35.1km s-min=15.0km az=101.0*
ISC 02 06:08:49.6±0.9**, 19.°71S**±0.°03×**69.°40W**±0.°07**, h106**^{km}±7^{km}**, n26, σ1^{s}38**/47**, 11C-2D, Northern Chile**

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Code  Station Name     Δ°   AZ°   Phase ID          Time      Res
                                  Op    ISC       h  m  s    ISC
PB11  IPOC Station P   0.25 258⇑iP    Pn      06 09 05.0 +0.1
PB11                            eS    Sn      06 09 16.3  0.0
PB11                             IAML         06 09 17.2
        comp=E,7µm,0.2s
PB08  IPOC Station P   0.49 152⇓iP    Pn      06 09 06.8 +0.3
PB08                            i S   Sn      06 09 18.9 -0.1
PB08                             IAML         06 09 22.2
        comp=E,4µm,0.3s
PSGC  Pisagua          0.69 279⇑iP    Pn      06 09 08.0 +0.4
PSGC                            eS    Sn      06 09 21.5 +0.3
PSGC                             IAML         06 09 22.6
        comp=N,2µm,0.2s
HMBC  Humberstone      0.73 219⇑iP    Pn      06 09 08.6 +0.6
HMBC                            eS    Sn      06 09 22.3 +0.5
HMBC                             IAML         06 09 23.3
        comp=N,6µm,0.7s
TA02  Huaiquique       0.89 231⇑iP    Pn      06 09 10.0 +0.7
TA02                            eS    Sn      06 09 24.9 +0.7
TA02                             IAML         06 09 26.9
        comp=E,8µm,0.1s
TA01  Diego Aracena    1.12 221⇑iP    Pn      06 09 12.2 +0.4
TA01                            eS    Sn      06 09 29.2 +0.6
PATCX Punta Patache    1.31 212 eP    Pn      06 09 14.7 +0.6
PATCX                           eS    Sn      06 09 33.4 +0.8
PB01  IPOC Station P   1.33 184⇑eP    Pn      06 09 15.1 +0.8
PB01                            i S   Sn      06 09 34.2 +1.2
PB01                             IAML         06 09 35.4
        comp=E,2µm,0.4s
PB16  IPOC Station P   1.37 356⇑iP    Pn      06 09 16.1 +0.8
PB16                            eS    Sn      06 09 35.3 +0.7
PB12  IPOC Station P   1.40 321⇑iP    Pn      06 09 15.3 +0.2
PB12                            eS    Sn      06 09 34.0 -0.4
PB12                             IAML         06 09 37.5
        comp=N,679nm,0.3s
AP01  Chacalluta       1.60 326⇑eP    Pn      06 09 18.0 +0.5
AP01                            eS    Sn      06 09 38.7 +0.1
AP01                             IAML         06 09 43.0
        comp=N,1µm,0.2s
PB02  IPOC Station P   1.67 196⇑eP    Pn      06 09 19.4 +1.0
PB02                            eS    Sn      06 09 40.8 +0.6
PB02                             IAML         06 09 49.1
        comp=E,1µm,0.2s
PB07  IPOC Station P   2.06 193⇓eP    Pn      06 09 24.7 +1.3
PB07                            eS    Sn      06 09 50.2 +1.0
PB07                             IAML         06 09 59.7
        comp=E,439nm,0.3s
PB09  IPOC Station P   2.08 176⇑eP    Pn      06 09 24.9 +1.2
PB09                            eS    Sn      06 09 51.0 +1.3
PB09                             IAML         06 09 59.5
        comp=N,365nm,0.4s
PB03  IPOC Station P   2.35 188 eP    Pn      06 09 28.7 +1.5
PB03                            eS    Sn      06 09 54.9 -1.0
PB03                             IAML         06 10 01.7
        comp=E,277nm,0.4s
PB04  IPOC Station P   2.70 195 eP    Pn      06 09 33.4 +1.6
PB04                            eS    Sn      06 09 59.4 -4.8
LVC   Limon Verde      2.92 171  P    Pn      06 09 36.3 +1.4
        comp=E,6.7nm,0.3s,baz=342,slow=8.7,SNR=54
LVC                              S    Sn      06 10 10.9 +1.3
        comp=E,18nm,0.3s,baz=222,slow=22,SNR=28
LVC   Limon Verde      2.92 171 eP    Pn      06 09 36.2 +1.4
LVC                             eS    Sn      06 10 10.2 +0.5
PB06  IPOC Station P   2.99 183 eP    Pn      06 09 37.0 +1.5
PB06                            eS    Sn      06 10 08.8 -2.0
PB05  IPOC Station P   3.22 193 eP    Pn      06 09 39.6 +1.0
PB05                            eS    Sn      06 10 14.2 -2.1
PB15  IPOC Station P   3.48 181 eP    Pn      06 09 43.6 +1.4
PB15                            i S   Sn      06 10 22.0 -0.7
LPAZ  La Paz           3.61  20  P    Pn      06 09 46.5 +2.2
        comp=E,0.7nm,0.3s,baz=176,slow=3.9,SNR=20
SIV   San Ignacio      8.75  66  P    Pn      06 10 50.2 -3.1
        comp=E,0.4nm,0.3s,baz=239,slow=9.9,SNR=9.2
BDFB  Brasilia        20.77  82  P    P       06 13 21.5 -0.9
        comp=E,1.3nm,0.4s,baz=243,slow=4.5,SNR=3.6
TORD  Torodi Ar. Bea  77.20  71  P    P       06 20 31.4 -1.1
        comp=E,0.5nm,0.4s,baz=257,slow=5.2,SNR=8.9
YKA   Yellowknife Ar  89.35 341  P    P       06 21 34.8 +1.1
        comp=E,0.8nm,0.7s,baz=124,slow=4.7,SNR=5.4
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*TUL **02** 06:19:59.7±1.5, 36.°76N±0.°04×98.°07W±0.°06, h7^{km}±3^{km}, ML3.1, mb_Lg2.8/50(NEIC), Error ellipse: s-maj=6.6km s-min=5.4km az=84.0*
*NEIC **02** 06:19:60.0±1.5, 36.°73N±0.°04×98.°04W±0.°07, h8^{km}±7^{km}, Error ellipse: s-maj=8.1km s-min=5.4km az=87.0*
*ANF **02** 06:20:00.3±0.2, 36.°73N×98.°05W, h10^{km}, ML3.4/10, Error ellipse: s-maj=2.7km s-min=2.3km az=17.0*
ISC 02 06:19:59.8±1.1**, 36.°74N**±0.°02×**98.°07W**±0.°03**, h8**^{km}±10^{km}**, n74, σ0^{s}84**/62**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.13	298		Pg	06 20 02.8	+0.1
GC02	Grant County #	0.20	57		Pg	06 20 04.0	+0.2
KAN14	Manchester OK	0.23	21		Pg	06 20 04.5	+0.1
CROK	Carrier	0.25	164	Pg	Pg	06 20 05.1	+0.4
KAN10	Anthony SW Sta	0.38	356		Pg	06 20 07.3	0.0
KAN17	Caldwell West	0.39	39		Pg	06 20 07.3	0.0
KAN05	Bluff City Nor	0.40	23		Pg	06 20 07.7	+0.1
KAN01	Argonia South	0.48	31		Pg	06 20 09.0	-0.1
KAN16	Harper SW Stat	0.48	0		Pg	06 20 09.1	-0.1
KAN08	Anthony NE Sta	0.49	9		Pg	06 20 09.3	0.0
KAN06	Argonia West S	0.53	18		Pg	06 20 10.0	-0.1
KAN09	Caldwell North	0.53	42		Pg	06 20 10.0	-0.1
KAN13	South Haven SW	0.54	60		Pg	06 20 10.2	-0.2
KAN12	Harper NE Stat	0.56	6		Pg	06 20 10.5	-0.1
BLOK	Blackwell	0.68	88	Pg	Pg	06 20 12.8	-0.1
U32A	Winter Ranch,	0.84	245		Pg	06 20 15.6	-0.3
U32A	Winter Ranch, baz=65	0.84	245	P	Pg	06 20 15.6	-0.3
U32A	baz=65			S	Sb	06 20 28.0	0.0
OK029	Liberty Lake	1.06	152		Pg	06 20 19.9	-0.4
BCOK	Bluff Creek, N	1.15	161		Pg	06 20 21.1	-0.7
QUOK	Quay	1.23	117		Pb	06 20 22.9	-0.5
T35A	Sooner Cattle	1.26	82		Pn	06 20 23.0	-0.7
T35B	Sooner Cattle baz=262	1.26	82	P	Pn	06 20 23.1	-0.7
T35B	baz=262			S	Sg	06 20 40.2	-0.1
OK031	S. Brethren Rd	1.27	128		Pn	06 20 23.3	-0.6
OK025	Westminster Rd	1.30	153		Pn	06 20 24.1	-0.3
OK034	N. Norfolk Rd.	1.31	123		Pn	06 20 24.1	-0.5
OK030	Cody Creek RV	1.32	128		Pn	06 20 24.1	-0.5
OKCFA	Oklahoma City	1.42	159		Pn	06 20 25.1	-0.8
OKCFA	Oklahoma City baz=340	1.42	159	P	Pn	06 20 25.7	-0.2
OKCFA	baz=340			S	Sg	06 20 45.5	+0.2
OKCSW	OKLAHOMA CITY	1.43	159		Pn	06 20 25.7	-0.4
FNO	Franklin	1.58	160		Pb	06 20 28.6	-0.7
R32A	Long Quarter,	1.75	343		Pn	06 20 31.6	+0.9
R32A	Long Quarter, baz=162	1.75	343	P	Pn	06 20 31.5	+0.9
R32A	baz=162			S	Sb	06 20 54.8	+0.3
W35A	Tecumseh	1.86	148		Pn	06 20 32.6	+0.6
TUL1	Leonard	2.02	114	Pn	Pb	06 20 35.7	-1.0
TUL1	comp=Z,47nm,0.7s			IAmb_Lg		06 21 04.8	
TUL1	Leonard baz=295	2.02	114	P	Pn	06 20 34.8	+0.7
TUL1	baz=295			Sb	Sb	06 21 02.7	+0.7
X34A	Smith Ranch, M	2.15	175	Pn	Pn	06 20 37.3	+1.3
CBKS	Cedar Bluff	2.46	328	Pn	Pn	06 20 41.8	+1.5
CBKS	Cedar Bluff baz=147	2.46	328	P	Pn	06 20 40.9	+0.6
CBKS	baz=147			S	Sn	06 21 11.9	+1.4
KSU1	Kansas State U	2.62	26	Pn	Pn	06 20 43.3	+0.8
KSU1	comp=Z,48nm,1.0s			IAmb_Lg		06 21 25.9	
KSU1	Kansas State U baz=206	2.62	26	P	Pn	06 20 43.2	+0.7
LOOK	Love County	2.84	165	Pn	Pn	06 20 46.6	+1.1
U38A	Gravette	2.98	95	Pn	Pn	06 20 48.2	+0.8
U38A	Gravette baz=277	2.98	95	P	Pn	06 20 48.2	+0.8
X37A	Clayton	3.07	134	Pn	Pn	06 20 49.5	+0.8
X37A	Clayton baz=315	3.07	134	P	Pn	06 20 48.7	+0.1
HHAR	Hobbs	3.35	97	Pn	Pn	06 20 53.2	+0.6
HHAR	comp=Z,20nm,0.7s			IAmb_Lg		06 21 52.6	
Z35A	Perchaven, San	3.47	169	Pn	Pn	06 20 55.4	+1.2
Z35A	Perchaven, San baz=350	3.47	169	P	Pn	06 20 55.3	+1.2
W39A	Magazine	3.80	113	Pn	Pn	06 21 00.3	+1.6
S39A	Bolivar	3.90	75	Pn	Pn	06 21 00.3	+0.1
S39A	Bolivar baz=257	3.90	75	P	Pn	06 21 00.2	+0.1
N33A	J Bar K, Exete	4.02	7	Pn	Pn	06 21 02.5	+0.7
N33A	comp=Z,17nm,0.9s			IAmb_Lg		06 22 05.1	
U40A	Yellville	4.21	94		Pn	06 21 04.3	-0.1
U40A	comp=Z,26nm,0.8s			IAmb_Lg		06 22 13.0	
KSCO	Kaye Shedlock’ comp=Z,14nm,0.7s	4.26	303	IAmb_Lg		06 22 26.2	
MIAR	Mount Ida	4.26	120	Pn	Pn	06 21 06.4	+1.4
MIAR	comp=Z,18nm,0.8s			IAmb_Lg		06 22 25.0	
Z38A	Mt. Pleasant	4.30	143	Pn	Pn	06 21 06.8	+1.2
Z38A	comp=Z,15nm,0.7s			IAmb_Lg		06 22 28.6	
ABTX	Abilene, Hawle comp=Z,17nm,0.7s	4.31	198	IAmb_Lg		06 22 15.4	
P38A	Dawn comp=Z,20nm,0.8s	4.59	50	IAmb_Lg		06 22 33.2	
BGNE	Belgrade comp=Z,27nm,0.8s	4.66	359	IAmb_Lg		06 22 33.3	
MGMO	Mountain Grove comp=Z,14nm,0.7s	4.66	83	IAmb_Lg		06 22 34.0	
FCAR	Ozark Folk Cen comp=Z,11nm,0.9s	4.87	98	IAmb_Lg		06 22 42.2	
WHAR	Wooly Hollow comp=Z,18nm,1.0s	4.90	105	IAmb_Lg		06 22 40.5	
T25A	Trinidad comp=Z,22nm,0.8s	5.10	276	IAmb_Lg		06 22 44.2	
OGNE	Ogallala	5.21	325		Pg	06 21 36.3	-3.4
OGNE	comp=Z,19nm,0.9s			IAmb_Lg		06 22 47.3	
P40A	Paris comp=Z,14nm,0.8s	5.50	58	IAmb_Lg		06 22 58.4	
CCM	Cathedral Cave comp=Z,15nm,0.9s	5.59	74	IAmb_Lg		06 23 02.0	
LCAR	Lake Charles comp=Z,11nm,0.8s	5.61	95	IAmb_Lg		06 22 58.5	
K31A	O'Neill comp=Z,21nm,0.8s	5.90	355	IAmb_Lg		06 23 17.6	
435B	Jarrell comp=Z,13nm,0.8s	5.96	176	IAmb_Lg		06 23 14.7	
PBMO	Poplar Bluff comp=Z,18nm,1.0s	6.13	87	IAmb_Lg		06 23 14.2	
FVM	French Village comp=Z,14nm,0.9s	6.21	76	IAmb_Lg		06 23 15.4	
SCIA	State Center comp=Z,14nm,0.7s	6.38	35	IAmb_Lg		06 23 23.9	
S44A	Carbondale comp=Z,18nm,0.7s	7.09	80	IAmb_Lg		06 23 46.5	
OLIL	Olney comp=Z,9.4nm,1.0s	8.14	73	IAmb_Lg		06 24 32.0	

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*JMA **02** 06:32:20.6±0.1, 24.°13N×121.°91E, h24^{km}±2^{km}, M2.9*
*TAP **02** 06:32:21.4, 24.°18N×121.°89E, h23^{km}, ML3.8, B*
ISC 02 06:32:21.3±0.9**, 24.°17N**±0.°02×**121.°92E**±0.°02**, h23**^{km}±6^{km}**,**
n100, σ0.^{s}75/170**, 2C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village baz=314	0.22	311	P	Pb	06 32 27.1	0.0
EHP	baz=314			S	Sb	06 32 31.6	+0.6
ETL	Fush Village baz=263	0.27	269	P	Pb	06 32 27.3	-0.5
ETL	baz=263			eS	Sb	06 32 31.7	-0.7
NACB	Ninganchiao baz=262	0.30	272	⇓iP	Pb	06 32 28.0	-0.2
NACB	baz=262			S	Sb	06 32 32.9	0.0
EWUT	Wuta baz=344	0.31	335	i P	Pb	06 32 28.3	0.0
EWUT	baz=344			S	Sb	06 32 33.6	+0.4
ENA	Nanau baz=332	0.31	328	P	Pb	06 32 28.1	-0.3
ENA	baz=332			S	Sb	06 32 33.4	+0.2
TWD	Chiawan baz=248	0.31	254	P	Pb	06 32 28.2	-0.1
TWD	baz=248			eS	Sb	06 32 32.8	-0.4
HWA	Hwalien baz=240	0.35	237	P	Pb	06 32 29.4	+0.5
ETLH	Xiulin Townshi baz=271	0.41	276	⇓iP	Pb	06 32 29.7	-0.3
ETLH	baz=271			S	Sb	06 32 36.4	+0.5
TEYL	Yanliau Villag baz=221	0.42	225	P	Pb	06 32 30.2	0.0
TEYL	baz=221			S	Sb	06 32 36.7	+0.6
ETM	Tongmen baz=231	0.44	243	eP	Pb	06 32 30.2	-0.3
ETM	baz=231			eS	Sb	06 32 37.4	+0.6
TWC	Suao	0.45	351	P	Pb	06 32 30.6	0.0
TWC				eS	Sb	06 32 37.5	+0.6
NDS	Dongshan baz=341	0.50	338	P	Pb	06 32 31.5	0.0
NDS	baz=341			S	Sn	06 32 39.2	-1.8
NNSB	Datong baz=297	0.56	298	i P	Pb	06 32 32.3	-0.3
NNSB	baz=297			S	Sb	06 32 40.1	-0.1
ESL	Shilin baz=226	0.57	232	P	Pb	06 32 32.6	-0.1
ESL	baz=226			S	Sb	06 32 40.8	+0.4
ENTT	Nioudou baz=322	0.57	325	⇓iP	Pb	06 32 32.7	-0.1
ENTT	baz=322			S	Sn	06 32 41.0	-1.8
NDT	Datong Townshi baz=315	0.57	319	P	Pb	06 32 32.7	-0.1
NDT	baz=315			S	Sn	06 32 41.0	-1.8
TEGC	Jichi Village baz=212	0.57	218	eP	Pn	06 32 33.4	-0.7
TEGC	baz=212			eS	Sn	06 32 41.9	-0.9
TWE	Neicheng baz=341	0.60	337	P	Pb	06 32 33.2	0.0
TWE	baz=341			eS	Sn	06 32 41.8	-1.7
WHF	Hehuan Shan baz=264	0.60	268	⇓iP	Pb	06 32 33.1	-0.4
WHF	baz=264			S	Sb	06 32 41.7	0.0
ILA	Ilan baz=349	0.62	345	eP	Pb	06 32 33.6	+0.1
ILA	baz=349			eS	Sn	06 32 43.5	-0.4
FUSS	Fushou baz=274	0.62	278	i P	Pb	06 32 33.6	-0.2
FUSS	baz=274			i S	Sn	06 32 42.5	-1.9
EGFH	Guangfu baz=229	0.67	223	P	Pb	06 32 34.4	0.0
EGFH	baz=229			eS	Sn	06 32 44.6	-0.6
EGS	baz=3.0	0.68	1	eP	Pn	06 32 35.5	0.0
EGS	baz=3.0			eS	Sn	06 32 45.1	-0.2
TWT	Tachien baz=274	0.69	277	P	Pn	06 32 35.0	-0.9
TWT	baz=274			S	Sn	06 32 44.8	-1.1
NTC	Toucheng baz=356	0.69	353	⇑P	Pn	06 32 35.0	-0.7
NTC	baz=356			S	Sn	06 32 44.9	-0.8
CHGB	Renai baz=249	0.69	261	i P	Pb	06 32 34.6	-0.3
CHGB	baz=249			S	Sb	06 32 44.3	+0.2
TDCB	Techi baz=274	0.70	277	i P	Pb	06 32 35.0	0.0
TDCB	baz=274			S	Sn	06 32 44.6	-1.7
YHNB	Yeheng baz=307	0.71	315	i P	Pb	06 32 34.8	-0.3
YHNB	baz=307			S	Sn	06 32 44.5	-1.7
OWD	Renai baz=249	0.71	253	eP	Pb	06 32 34.9	-0.3
OWD	baz=249			eS	Sn	06 32 45.2	-1.3
NWLT	Wulai baz=327	0.72	328	i P	Pn	06 32 35.5	-0.6
NWLT	baz=327			S	Sn	06 32 44.8	-1.7
NSK	Sanguang baz=307	0.72	315	P	Pb	06 32 34.9	-0.4
NSK	baz=307			eS	Sn	06 32 45.4	-1.2
TIPB	Shuangxi baz=357	0.81	354	i P	Pn	06 32 37.0	-0.3
TIPB	baz=357			S	Sn	06 32 48.7	0.0
HGSD	Ruisui baz=210	0.81	214	P	Pn	06 32 38.5	+1.1
HGSD	baz=210			eS	Sn	06 32 49.5	+0.8
TWB1	Santiao Chiao	0.84	4	P	Pn	06 32 37.9	+0.1
TWB1				S	Sn	06 32 50.0	+0.5
TWA	Mucha baz=334	0.87	339	P	Pn	06 32 38.5	+0.3
TWA	baz=334			eS	Sn	06 32 50.2	+0.1
NHDH	Xindian Distri baz=322	0.87	336	eP	Pn	06 32 38.2	0.0
NHDH	baz=322			eS	Sn	06 32 50.2	0.0
WPL	Puli Township baz=248	0.90	260	eP	Pn	06 32 38.1	-0.4
WPL	baz=248			eS	Sn	06 32 51.3	+0.6
TATO	Taipei baz=335	0.90	334	P	Pn	06 32 38.6	+0.1
WHP	Taichung City baz=274	0.90	277	eP	Pn	06 32 38.7	0.0
WHP	baz=274			eS	Sn	06 32 50.5	-0.5
NWF	Wu-fen Shan baz=348	0.91	352	⇑iP	Pn	06 32 39.1	+0.2
NWF	baz=348			i S	Sn	06 32 52.4	+1.1
WFSB	Wu-fen Shan baz=354	0.91	352	P	Pn	06 32 39.1	+0.4
WCS	Beigang Elemen baz=253	0.93	264	eP	Pn	06 32 39.2	+0.2
WCS	baz=253			eS	Sn	06 32 51.0	-0.7
ECBN	Changbin baz=191	0.95	207	eP	Pn	06 32 40.1	+0.8
ECBN	baz=191			eS	Sn	06 32 53.7	+1.6
LIOB	Emei baz=292	0.95	300	P	Pn	06 32 39.7	+0.3
LIOB	baz=292			eS	Sn	06 32 51.9	-0.4
NSTT	Nanjuang baz=290	0.96	299	P	Pn	06 32 39.9	+0.5
NSTT	baz=290			eS	Sn	06 32 52.6	+0.2
YULB	Yu-li baz=224	0.96	217	eP	Pb	06 32 38.1	-1.2
SSLB	Suanglung baz=243	0.96	247	P	Pn	06 32 39.1	-0.3
SSLB	baz=243			eS	Sb	06 32 50.8	-0.9
JYNG	Yonagunijimaku	0.97	73	P	Pn	06 32 39.2	-0.4
JYNG				S	Sb	06 32 52.5	+0.5
SMLT	Sun Moon Lake baz=241	0.98	253	P	Pn	06 32 39.6	-0.2
SMLT	baz=241			eS	Sn	06 32 52.8	-0.1
EYUL	Yuli baz=224	0.98	214	eP	Pb	06 32 39.8	0.0
TNOU	National Taiwa baz=355	0.99	352	eP	Pn	06 32 41.2	+1.4
TNOU	baz=355			eS	Sb	06 32 51.7	-0.8
TYC	Yuchr baz=245	1.01	255	eP	Pn	06 32 39.7	-0.4
TYC	baz=245			eS	Sn	06 32 54.3	+0.7
HSN1	Hsinchu baz=306	1.02	307	P	Pb	06 32 41.2	+0.7
HSN1	baz=306			eS	Sn	06 32 54.8	+0.8
YM01	YM01 baz=328	1.03	342	eP	Pb	06 32 40.6	+0.1
YOJ	Yonaguni jima baz=75	1.03	73	eP	Pn	06 32 39.8	-0.6
YOJ	Yonaguni jima	1.03	73	P	Pn	06 32 40.0	-0.4
YOJ				eS	Sn	06 32 54.8	+0.6
TWS1	Kuangyinshan baz=335	1.04	334	P	Pb	06 32 41.2	+0.6
TWS1	baz=335			eS	Sn	06 32 56.3	+2.0
NCU	National Centr baz=321	1.04	320	eP	Pb	06 32 40.9	+0.2
NCUH	Zhongli baz=320	1.04	320	P	Pb	06 32 41.0	+0.3
NCUH	baz=320			eS	Sn	06 32 55.4	+1.0
SBCB	Hsinchu baz=306	1.06	306	eP	Pb	06 32 41.1	+0.2
SBCB	baz=306			eS	Sn	06 32 55.7	+0.9
TWQ1	Liyutan baz=276	1.06	280	P	Pb	06 32 42.3	+1.2
TWQ1	baz=276			eS	Sn	06 32 56.0	+1.0
HSN	Hsinchu baz=309	1.07	306	eP	Pb	06 32 41.6	+0.4
ANP	Anpu baz=342	1.08	340	eP	Pb	06 32 41.4	-0.1
NSY	Sanyi baz=280	1.09	283	eP	Pb	06 32 41.7	+0.2
NSY	baz=280			eS	Sn	06 32 56.5	+0.9
FULB	Fuli baz=221	1.12	211	eP	Pn	06 32 41.3	-0.4
WWF	Wufeng baz=259	1.13	264	eP	Pb	06 32 42.6	+0.4
WWF	baz=259			eS	Sn	06 32 58.0	+1.5
TCU	Taichung baz=266	1.14	269	P	Pb	06 32 43.3	+1.0
TWY	Chenhua baz=347	1.14	345	eP	Pb	06 32 43.5	+1.1
TWY	baz=347			eS	Sn	06 32 58.6	+1.7
WJS	Zhushan baz=237	1.15	253	eP	Pb	06 32 42.6	+0.1
CHKT	Chengkung baz=189	1.18	206	eP	Pn	06 32 42.1	-0.3
WDJ	Dajia District baz=276	1.19	279	eP	Pb	06 32 43.5	+0.3
ALS	Alishan baz=219	1.21	238	P	Pb	06 32 44.0	+0.1
ALS	baz=219			eS	Sb	06 33 00.8	+1.6
CHN5	Tsauling baz=240	1.27	244	P	Pb	06 32 44.8	+0.1
EDH	Donghe baz=192	1.32	206	eP	Pn	06 32 43.4	-0.9
WRL	Guolierlin Hig baz=255	1.44	260	P	Pb	06 32 47.5	0.0
WRL	baz=255			eS	Sb	06 33 06.1	+0.8
STYH	Taoyuan baz=221	1.45	227	P	Pb	06 32 47.5	-0.1
STYH	baz=221			eS	Sb	06 33 06.8	+1.3
PCYT	Pengchaiyu baz=8.0	1.46	5	eP	Pb	06 32 47.0	-0.9
TPUB	Ta-pu baz=219	1.47	234	eP	Pb	06 32 47.7	-0.2
TPUB	baz=219			eS	Sb	06 33 06.5	+0.4
WTK	Tuku baz=247	1.48	252	P	Pb	06 32 48.6	+0.4
WTK	baz=247			eS	Sb	06 33 07.3	+0.7
WTP	Ta-pu baz=217	1.51	233	eP	Pb	06 32 48.3	-0.4
CHY	Chiayi baz=240	1.52	244	eP	Pb	06 32 48.9	-0.1
TWGBT	Beinan baz=195	1.55	210	eP	Pn	06 32 46.9	-0.7
TWG	Pinlang baz=195	1.55	210	eP	Pn	06 32 47.2	-0.3
TWK	Hsinying baz=218	1.59	236	eP	Pb	06 32 49.1	-1.0
TWK	baz=218			eS	Sb	06 33 09.6	-0.2
CHN1	Nanshi baz=228	1.61	233	eP	Pb	06 32 49.5	-0.9
SGST	Jiashian baz=214	1.64	229	eP	Pn	06 32 49.5	+0.8
IRIF	Iriomote-Funau	1.66	84	P	Pn	06 32 48.4	-0.6
IRIF				eS	Sn	06 33 09.7	+0.1
ICHU	Yijhu baz=237	1.71	242	P	Pb	06 32 51.6	-0.5
ICHU	baz=237			eS	Sb	06 33 13.0	0.0
HATJ	Hateruma jima	1.72	93	P	Pn	06 32 50.0	+0.1
HATJ				eS	Sn	06 33 11.6	+0.4
SSD	Sandimen baz=215	1.84	220	eP	Pb	06 32 53.7	-0.7
TSMG	Majia baz=215	1.87	219	eP	Pb	06 32 54.0	-0.8
JKRS	Kuro-shima	1.91	87	P	Pn	06 32 52.7	+0.3
JKRS				eS	Sn	06 33 17.0	+1.3
MASBT	Mashibuluo baz=198	1.95	218	eP	Pn	06 32 53.6	+0.6
MASBT	baz=198			eS	Sb	06 33 18.6	-1.4
EAST	Anshuo baz=196	2.03	209	eP	Pn	06 32 55.0	+0.8
JIJ	Ishigaki jima	2.04	84	P	Pn	06 32 53.9	-0.3
JIJ				eS	Sn	06 33 18.8	-0.1
JISG	Ishigakijimahi	2.22	79	P	Pn	06 32 56.3	-0.4
JISG				eS	Sn	06 33 21.8	-1.6
PNG	Penghu baz=251	2.25	255	eP	Pn	06 32 57.6	+0.5
PHUB	P'eng-hu baz=248	2.25	254	eP	Pn	06 32 57.1	0.0
PHUB	baz=248			eS	Sn	06 33 24.9	+0.7
PTMZ	Houxiangcun baz=285	2.70	289	eP	Pn	06 33 02.8	-0.5
ZPLA	Ao Xicun baz=264	3.82	267	eP	Pn	06 33 18.5	-0.2

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*KOLA **02** 06:41:22.9, 66.°95N×26.°21E, h0^{km}, ML1.9, Finland, Lapland*
HEL 02 06:41:20.2±0.2**, 67.°84N×20.°06E, h0**^{km}**, ML1.7, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	Lannavaara	0.76	73	PG	Pg	06 41 33.6	-1.0
LANU				SB	Sg	06 41 45.6	+1.2
KIF	Kilpisjarvi	1.20	13	eP	Pn	06 41 44.8	+0.6
KIF	Kilpisjarvi	1.20	13	PN	Pn	06 41 44.5	+0.3
KIF	comp=Z,2.7nm,0.2s			MSG		06 41 57.8	
KIF				SN	Sn	06 42 04.5	+3.4
PAJU	Pajala	1.44	123	PG	Pn	06 41 45.5	-1.9
PAJU				SG	Sg	06 42 04.2	-2.0
HEF	Hetta	1.46	65	eP	Pn	06 41 45.5	-2.4
HEF	Hetta baz=249	1.46	65	PG	Pn	06 41 46.5	-1.4
HEF	comp=Z,5.5nm,0.2s			MSG		06 42 04.3	
HEF				SN	Sn	06 42 10.2	+2.5
ERTU	Ertsjaerv	1.54	146	PN	Pn	06 41 49.0	+0.2
ERTU				SN	Sn	06 42 09.4	-0.1
KLF	Kolari	1.62	110	PG	Pn	06 41 49.0	-0.9
KLF				SN	Sn	06 42 11.7	+0.2
KALU	Kalix baz=324	2.38	145	PG	Pb	06 42 03.2	-0.6
KALU				SG	Sb	06 42 34.4	+0.8
TOF	Tornio	2.44	135	PG	Pb	06 42 03.7	-1.1
TOF	comp=Z,6.6nm,0.2s			MSG		06 42 32.2	
TOF				SG	Sb	06 42 34.7	-0.7
SGF	Sodankyl	2.50	96	PG	Pb	06 42 05.2	-0.8
SGF				SG	Sb	06 42 37.8	+0.5

ARA0	ARCESS Array S	2.62	47	PN	Pn	06 42 02.8	-0.9
ARA0				SN	Sn	06 42 31.8	-4.3
ARCES	ARCESS Array B	2.62	47	P	Pn	06 42 05.7	+2.0
ARCES				S	Sn	06 42 38.0	+1.9
RNF	Rovaniemi	2.63	115	PB	Pn	06 42 05.6	+1.8
RNF				SG	Sb	06 42 39.4	-1.4
KEV	Kevo	3.17	50	PG	Pb	06 42 16.7	-0.7
	baz=231						
KEV				MSG		06 42 53.2	
	comp=Z,2.5nm,0.2s						
BURU	Burvik	3.32	170	SB	Sb	06 42 58.1	-2.6
VRF	Varrio	3.63	87	SG	Sg	06 43 14.8	-1.7
KU6	Riekki	4.28	111	SG	Sg	06 43 33.0	-4.3

IDC 02 06:42:54.1±0.5**, 54°.36N×87°.08E, h0^{km}, mb1 2.7**/2**, mb1mx2.7**/43**, mbtmp2.7**/2**, ML2.3**/2**, Error ellipse: s-maj=16.0km s-min=0.6km az=164.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.39	254	*i*		06 51 10.0	
	baz=70,slow=339,SNR=2.2						
ZALV	Zalesovo Beam	1.39	254	Pg	Pg	06 43 19.0	-1.7
	0.8nm,0.3s,baz=71,slow=16,SNR=11						
ZALV				Lg	Lg	06 43 41.2	
	0.9nm,0.3s,baz=72,slow=32,SNR=7.2						
KURBB	Kurchatov Arra	6.42	238	Pn	Pn	06 44 30.2	+0.4
	0.1nm,0.3s,baz=57,slow=14,SNR=4.3						
MKAR	Makanchi Array	8.16	204	Pn	Pn	06 44 53.1	-0.6
	0.1nm,0.3s,baz=26,slow=13,SNR=1.3						

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*IDC **02** 06:48:02.3±0.6, 38°.85N×144°.78E, h0^{km}, mb4.2/22, mb1 4.4/29, mb1mx4.3/45, mbtmp4.3/29, ML3.7/6, MS3.5/20, Ms1 3.6/20, ms1mx3.3/42, Error ellipse: s-maj=16.2km s-min=12.7km az=104.0*

*BJI **02** 06:48:04.6±0.0, 39°.10N×144°.70E, h20^{km}, mB5.0/25, mb4.6/41, Ms4.2/21, Ms7 4.0/21*

*NEIC **02** 06:48:06.5±1.7, 38°.89N±0°.06×144°.7E±0°.1, h22^{km}±5^{km}, mb4.8/48, Error ellipse: s-maj=13.1km s-min=8.4km az=104.0*

*NIED **02** 06:48:07.7, 39°.16N×144°.53E, h51^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-4.66; $M_{\theta\theta}$0.82; $M_{\phi\phi}$3.84; $M_{r\theta}$1.07; $M_{\theta\phi}$1.31; $M_{\phi r}$3.19; Fault plane solution: $M_0$5.61000×10^{15} NP1: ϕ_s199.00000°, δ63.00000°, λ-91.00000°. NP2: ϕ_s22.00000°, δ27.00000°, λ-88.00000°.*

*JMA **02** 06:48:07.6±0.2, 39°.16N×144°.53E, h51^{km}, M4.4*

ISC 02 06:48:03.9±0.4**, 38°.98N**±0°.04×**144°.77E**±0°.06**, h10^{km}, n143, σ2^{s}.19**/146**, mb4.6**/53**, MS3.8**/23**, 1C-2D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	2.37	286	P	Pn	06 48 42.0	-0.8
MIYJ				S	Sn	06 49 07.1	-4.7
OFUJ	Ofunato	2.42	273	P	Pn	06 48 42.9	-0.5
OFUJ				S	Sn	06 49 08.9	-4.2
JTH	Tanohata	2.45	294	P	Pn	06 48 42.6	-1.2
JOM	Ohasama	2.75	281	P	Pn	06 48 47.7	-0.3
JOM				S	Sn	06 49 17.3	-3.9
JMK	Ichinoseki	2.77	271	P	Pn	06 48 48.1	-0.1
JMK				S	Sn	06 49 17.9	-3.8
JANG	Nango	2.87	300	P	Pn	06 48 48.2	-1.5
ERM	Erimo	3.27	338	Pn	Pn	06 48 54.0	-1.2
JMM	Marumori	3.31	252		Pn	06 48 55.2	-0.6
JTM	Tenmabayashi	3.37	304	Pn	Pn	06 48 55.8	-0.8
JYK	Kaneyama	3.44	270	P	Pn	06 48 57.7	+0.2
JYK				*e*S	Sn	06 49 34.5	-3.8
JNBK	Urakawa-nobuka	3.64	336	P	Pn	06 48 59.0	-1.2
JNBK				*e*S	Sn	06 49 38.0	-5.2
JOT	Ohata	3.73	311	P	Pn	06 49 00.8	-0.6
JOT				*e*S	Sn	06 49 40.8	-4.6
JCH	Churui	3.79	344	P	Pn	06 49 00.6	-1.7
JCH				*e*S	Sn	06 49 41.5	-5.3
JKB	Kayabe	4.07	317	P	Pn	06 49 05.0	-1.2
JKB				S	Sn	06 49 48.8	-5.1
NEM2	Nemuro 2	4.44	9	P	Pn	06 49 08.8	-2.5
NEM2				S	Sn	06 49 56.1	-6.9
JYT	Yasato	4.55	234		Pn	06 49 12.4	-0.4
JEW	Eniwo	4.61	328	Pn	Pn	06 49 13.2	-0.3
JTKR	Abashiri--Toko	5.03	353	P	Pn	06 49 18.3	-1.0
JTKR				*e*S	Sn	06 50 12.5	-5.0
JOSM	Okushiri--Mats	5.09	309	P	Pn	06 49 20.5	+0.4
JSD	Sado	5.19	262	Pn	Pn	06 49 21.8	+0.2
BSO1	Boso 1	5.28	216	P	Pn	06 49 22.1	-0.2
BSO1				S	Sn	06 50 20.6	-2.3
JHR	Hokuryu	5.28	335	P	Pn	06 49 23.5	+0.7
JHR				S	Sn	06 50 20.7	-3.0
JKA	Kamikawa-asahi	5.38	343	Pn	Pn	06 49 23.7	-0.6
JKA	Kamikawa-asahi	5.38	343		Sn	06 50 29.6	+3.4
ASAJ	Asahikawa	5.39	343	Pn	Pn	06 49 23.7	-0.6
	6.5nm,0.3s,baz=204,slow=12,SNR=17						
ASAJ				Sn	Sn	06 50 29.6	+3.3
	14nm,0.3s,baz=68,slow=25,SNR=6.9						
JRY	Ryogami san	5.52	239	P	Pn	06 49 26.2	0.0
JRY				*e*S	Sn	06 50 24.2	-5.5
MJAR	Matsushiro Arr	5.74	247	Pn	Pn	06 49 27.0	-2.2
	1.0nm,0.3s,baz=71,slow=12,SNR=24						
MJAR				Sn	Sn	06 50 35.0	-0.1
	0.8nm,0.3s,baz=61,slow=13,SNR=5.2						
MJAR	Matsushiro Arr	5.74	247	Pn	Pn	06 49 29.8	+0.7
MAJO	Matsushiro	5.74	247	Pn	Pn	06 49 29.9	+0.7
MAT	Matsushiro	5.74	247	P	Pn	06 49 30.3	+1.2
MAT				*e*S	Sn	06 50 34.8	-0.3
MJB9	Matsu-Tunnel	5.74	247		Pn	06 49 30.7	+1.5
JGF	Kuroka	6.80	243	Pn	Pn	06 49 45.0	+1.3
JHJ	Hachijo jima 2	7.10	216	Pn	Pn	06 49 44.2	-3.6
	18nm,0.3s,baz=252,slow=22,SNR=2.1						
JHJ				Sn	Sn	06 51 00.8	-7.9
	103nm,0.3s,baz=122,slow=21,SNR=8.4						
INU	Inuyama	7.17	242		Pn	06 49 50.3	+1.5
JWT	Wachi	8.34	247	Pn	Pn	06 50 06.0	+1.1
JHS	Saijyo	10.13	251	Pn	Pn	06 50 30.8	+1.4
USA0B	Ussuriysk Arra	10.90	303	Pn	Pn	06 50 41.4	+1.5
USRK	Ussuriysk Ar.	10.90	303	Pn	Pn	06 50 40.4	+0.6
	baz=106,slow=14,SNR=51						
USRK				LR	LR	06 55 05.7	
	comp=Z,128nm,21.1s,baz=109,slow=39						
USRK	Ussuriysk Ar.	10.90	303	Pn	Pn	06 50 40.8	+1.0
JCJ	Chichijima	12.05	191	Pn	Pn	06 50 51.4	-4.2
	7.5nm,0.3s,baz=9.5,slow=21,SNR=8.6						
JCJ				Sn	Sn	06 52 59.5	-10
	8.0nm,0.3s,baz=288,slow=23,SNR=1.9						
MDJ	Mudanjiang	12.64	301	P	Pn	06 51 04.9	+1.2
MDJ				pmax	pmax		
	comp=Z,76nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,300nm,7.1s						
MDJ	Mudanjiang	12.64	301	Pn	Pn	06 51 02.9	-0.8
KSRS	Korea Array	13.34	269	Pn	Pn	06 51 13.9	+0.7
	0.3nm,0.3s,baz=82,slow=14,SNR=5.7						
KSRS				LR	LR	06 56 04.3	
	comp=Z,87nm,20.1s,baz=80,slow=36						
KLR	Kul'dur	13.86	322	Pn	Pn	06 51 18.0	-2.2
	0.2nm,0.3s,baz=126,slow=12,SNR=11						
KLR				LR	LR	06 56 51.6	
	comp=Z,180nm,19.9s,baz=142,slow=38						
PETK	Petropavlovsk-	16.70	28	Pn	Pn	06 51 57.6	-0.3
	0.3nm,0.3s,baz=200,slow=7.7,SNR=1.3						
HIA	Hailar	20.61	308	P	P	06 52 42.5	-0.7
NJ2	Nanjing	22.15	260	*e*P	P	06 53 02.2	+2.4
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
YAK	Yakutsk	24.87	343	P	P	06 53 26.9	+0.6
	8.2nm,0.4s,baz=12,slow=2.3,SNR=4.4						
YAK				LR	LR	07 04 14.5	
	comp=Z,118nm,18.6s,baz=65,slow=39						
HHC	Hu-ho-hao-te	25.46	285	*e*P	P	06 53 33.8	+1.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,8.1s						
HHC				LR	LR		
	comp=N,180nm,13.1s						
HHC				LR	LR		
	comp=E,310nm,13.4s						
HHC				LR	LR		
	comp=Z,370nm,15.5s						
WHN	Wuhan	26.28	261	⇓P	P	06 53 49.0	+10
BTO	Baotou	26.65	285	*e*P	P	06 53 45.4	+2.5
BTO				S	S	06 58 17.2	-0.8
BTO				LR	LR		
	comp=N,770nm,13.0s						
BTO				LR	LR		
	comp=E,760nm,19.4s						
ULN	Ulaanbaatar	28.56	300	P	P	06 54 00.3	+0.4
SONM	Songino Array	29.00	300	P	P	06 54 04.3	+0.4
	0.6nm,0.3s,baz=111,slow=14,SNR=4.5						
SONM				LR	LR	07 06 40.7	
	comp=Z,106nm,19.2s,baz=172,slow=38						
LZH	Lanzhou	32.39	278	*e*P	P	06 54 48.9	+15
LZH				pP	pwP	06 54 55.1	+12
LZH				sP	sP	06 54 58.1	+22
LZH				pmax	pmax		
	comp=Z,28nm,1.3s						
LZH				LR	LR		
	comp=N,290nm,14.0s						
LZH				LR	LR		
	comp=E,410nm,13.8s						
LZH				LR	LR		
	comp=Z,310nm,14.6s						
CD2	Chengdu	34.34	269	*e*P	P	06 54 51.0	+0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GTA	Gaotai	34.57	285	⇓P	P	06 54 54.8	+2.0
GTA				pP	pwP	06 55 04.9	+3.0
GTA				sP	sP	06 55 09.7	+15
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,89nm,6.2s						
GTA				LR	LR		
	comp=Z,140nm,17.1s						
GTA				LR	LR		
	comp=Z,160nm,17.5s						
GTA				LR	LR		
	comp=Z,210nm,18.2s						
KMI	Kunming	37.88	261	⇑P	P	06 55 29.3	+8.0
KMI				pP	pwP	06 55 33.6	+3.1
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMI				LR	LR		
	comp=N,190nm,13.4s						
KMI				LR	LR		
	comp=E,160nm,15.5s						
KMI				LR	LR		
	comp=Z,200nm,15.5s						
WMQ	Urumqi	42.36	296	*e*P	P	06 56 01.4	+3.2
ZAA0	Zalesovo Array	42.61	311	P	P	06 56 00.4	+0.4
ZALV	Zalesovo Beam	42.61	311	P	P	06 56 01.0	+1.1
	comp=Z,1.5nm,0.5s,baz=87,slow=7.7,SNR=8.2						
ZALV				PcP	PcP	06 57 54.1	+2.1
	comp=Z,0.7nm,0.5s,baz=94,slow=3.4,SNR=2.4						
ZALV				LR	LR	07 13 42.5	
	comp=Z,67nm,19.0s,baz=88,slow=36						
ZALV	Zalesovo Beam	42.61	311	P	P	06 56 00.4	+0.5
NRIK	Noril'sk	42.65	334	LR	LR	07 15 32.3	
	comp=Z,150nm,19.1s,baz=95,slow=39						
K20K	Telida	43.22	35	P	P	06 56 06.7	+1.8
J20K	Nowinta River	43.26	34	P	P	06 56 07.1	+2.0
IMAR	Indian Mountai	43.62	31	P	P	06 56 09.6	+1.6
H21K	Melozitna Rive	43.97	32	P	P	06 56 12.5	+1.7
H21K				IAmb	IAmb	06 56 13.6	
	comp=Z,9.7nm,0.9s						
CMAR	Chiang Mai Arr	44.55	256	P	P	06 56 14.9	-1.1
	comp=Z,1.0nm,0.3s,baz=33,slow=5.4,SNR=1.3						
CMAR				LR	LR	07 17 20.9	
	comp=Z,41nm,18.4s,baz=39,slow=40						
KTH	Kantishna Hill	44.65	35	P	P	06 56 18.5	+2.1
KTH				IAmb	IAmb	06 56 21.1	
	comp=Z,21nm,1.3s						
MLY	Manley	44.79	33	P	P	06 56 18.8	+1.3
MLY				IAmb	IAmb	06 56 22.8	
	comp=Z,19nm,1.3s						
COLD	Coldfoot	45.16	30	P	P	06 56 21.7	+1.4
MK31	Makanchi Array	45.36	301	P	P	06 56 23.0	+0.8
MKAR	Makanchi Array	45.36	301	P	P	06 56 23.3	+1.1
	comp=Z,1.3nm,0.7s,baz=87,slow=9.9,SNR=9.4						
MKAR				LR	LR	07 16 45.9	
	comp=Z,101nm,18.1s,baz=66,slow=38						
MKAR	Makanchi Array	45.36	301	P	P	06 56 22.9	+0.7
PMR	Palmer	45.48	38	P	P	06 56 23.8	+1.0
PMR				IAmb	IAmb	06 56 26.4	
	comp=Z,9.7nm,1.1s						
TOLK	Toolik Lake Re	45.52	28	IAmb	IAmb	06 56 36.0	
	comp=Z,7.8nm,1.0s						
GHO	Glory Hole Cre	45.57	38	P	P	06 56 24.8	+1.1
RND	Reindeer	45.57	35	IAmb	IAmb	06 56 35.5	
	comp=Z,9.5nm,1.0s						
SML	Sawmill	45.85	38	P	P	06 56 26.5	+0.6
SML				IAmb	IAmb	06 56 27.4	
	comp=Z,13nm,1.0s						
MDM	Murphy Dome	45.85	33	P	P	06 56 27.8	+1.9
MDM				IAmb	IAmb	06 56 28.4	
	comp=Z,13nm,0.9s						
WRH	Wood River Hil	45.91	34	IAmb	IAmb	06 56 28.2	
	comp=Z,5.8nm,0.8s						
H24K	Noodor Dome	46.02	32	P	P	06 56 29.3	+2.2
H24K				IAmb	IAmb	06 56 41.7	
	comp=Z,6.4nm,0.8s						
HDA	Harding Lake	46.40	34	P	P	06 56 30.9	+0.7
HDA				IAmb	IAmb	06 56 42.2	
	comp=Z,9.2nm,0.7s						
IL31		46.43	33	P	P	06 56 31.4	+1.2
IL31				IAmb	IAmb	06 56 42.5	
	comp=Z,7.9nm,0.7s						
ILAR	Eielson Array	46.43	33	P	P	06 56 31.0	+0.7
	comp=Z,5.2nm,0.7s,baz=262,slow=6.8,SNR=53						
KURK	Kurchatov	46.85	307	P	P	06 56 34.7	+0.9
BMAR	Burnt Mountain	47.34	30	P	P	06 56 39.3	+1.8
DOT	Dot Lake	47.71	35	IAmb	IAmb	06 56 44.6	
	comp=Z,17nm,1.4s						
SCRK	Sand Creek	47.72	34	IAmb	IAmb	06 56 42.3	
	comp=Z,9.8nm,1.1s						
PMG	Port Moresby	48.19	177	LR	LR	07 18 52.5	
	comp=Z,18nm,18.9s,baz=349,slow=38						
VRDI	Verde Repeater	48.23	38	P	P	06 56 46.8	+2.2
VRDI				IAmb	IAmb	06 56 57.5	
	comp=Z,8.5nm,0.9s						
CRQM	Cirque	48.44	39	P	P	06 56 48.5	+2.2
BCAR	Beaver Creek A	48.79	35	P	P	06 56 51.0	+2.2
DAWY	Dawson	49.72	34	P	P	06 56 56.8	+0.9
HYT	Haines Junctio	51.15	38	P	P	06 57 09.3	+2.5
BVAR	Borovoye Array	51.24	312	P	P	06 57 08.6	+1.2
	comp=Z,1.2nm,0.5s,baz=145,slow=5.4,SNR=4.1						
INK	Inuvik	51.44	28	P	P	06 57 10.1	+1.5
	comp=Z,4.8nm,0.7s,baz=295,slow=6.1,SNR=32						
INK	Inuvik	51.44	28	P	P	06 57 09.8	+1.2
INK				IAmb	IAmb	06 57 21.2	
	comp=Z,7.0nm,0.7s						
KSH	Kashi	52.04	294	P	P	06 57 18.6	+4.8
KSH				sP	pwP	06 57 28.3	+5.3
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KSH				LR	LR		
	comp=Z,310nm,5.7s						
KSH				LR	LR		
	comp=Z,210nm,6.4s						
KSH				LR	LR		
	comp=Z,150nm,4.9s						
KKAR	Karatay Array	54.45	300	P	P	06 57 32.0	+0.7
GAR	Garm	56.26	295	P	P	06 57 45.0	+0.4
GAR				IAmb	IAmb	06 57 57.2	
	comp=Z,20nm,1.4s						
NIL	Nilore	56.52	288	P	P	06 57 46.5	+0.1
NIL				IAmb	IAmb	06 57 59.3	
	comp=Z,14nm,0.9s						
ARU	Arti	56.66	318	P	P	06 57 47.8	+0.7
ABKAR	Akbulak array	58.71	310	P	P	06 58 02.3	+0.7
WB0	Warramunga Arr	59.24	191	P	P	06 58 04.7	-0.7
WB0				IAmb	IAmb	06 58 17.0	
	comp=Z,6.9nm,0.9s						
WRA	Warramunga Arr	59.42	191	P	P	06 58 05.6	-1.0
	comp=Z,3.7nm,0.9s,baz=12,slow=7.0,SNR=17						
WRA				PcP	PcP	06 58 55.2	+0.8
	comp=Z,0.4nm,0.6s,baz=354,slow=3.7,SNR=4.9						
WRA	Warramunga Arr	59.42	191	P	P	06 58 05.3	-1.4
RES	Resolute Bay	60.04	15	P	P	06 58 11.2	+0.9
YKA	Yellowknife Ar	60.78	32	P	P	06 58 14.9	-0.6
	comp=Z,1.8nm,0.8s,baz=304,slow=6.4,SNR=6.7						
HYB	Hyderabad	60.89	269	*i* P	P	06 58 28.5	+11
ARCES	ARCESS Array B	63.10	340	P	P	06 58 32.3	+1.2
	comp=Z,1.9nm,0.9s,baz=34,slow=9.8,SNR=1.4						
ARCES				LR	LR	07 31 24.9	
	comp=Z,61nm,18.6s,baz=305,slow=41						
ASAR	Alice Springs	63.14	191	P	P	06 58 30.9	-0.9
	comp=Z,1.7nm,0.7s,baz=11,slow=6.4,SNR=17						
KLMR	Klimovskoe	63.52	328	*e*P	P	06 58 26.1	-7.8
KLMR				AMP		06 58 42.2	
	comp=Z,15nm,1.4s						
KLMR				*e*PcP	PcP	06 59 05.9	-4.6
DZM	Mont Dzumac	64.03	158	LR	LR	07 28 38.9	
	comp=Z,25nm,18.1s,baz=46,slow=38						
GEYT	Alibeck	65.20	300	P	P	06 58 45.8	+0.4
	comp=Z,1.9nm,0.6s,baz=236,slow=9.4,SNR=2.2						
GEYT				LR	LR	07 29 09.1	
	comp=Z,21nm,18.5s,baz=55,slow=38						
FINES	FINESS Array B	68.31	333	P	P	06 59 05.3	+0.6
	comp=Z,4.1nm,0.7s,baz=52,slow=10,SNR=11						
FINES				LR	LR	07 30 55.2	
	comp=Z,92nm,20.9s,baz=64,slow=38						
STKA	Stephens Creek	70.56	183	P	P	06 59 18.3	-0.6
	comp=Z,0.8nm,0.5s,baz=328,slow=18,SNR=2.9						
FFC	Flin Flon	70.62	34	P	P	06 59 19.5	+0.3
FFC				IAmb	IAmb	06 59 21.0	
	comp=Z,10.0nm,1.1s						
KBZ	Khabaz	71.62	312	P	P	06 59 26.9	+1.5
	comp=Z,3.7nm,0.9s,baz=105,slow=5.4,SNR=4.8						
KBZ				LR	LR	07 33 57.9	
	comp=Z,34nm,18.2s,baz=40,slow=38						
MNK	Minsk	72.34	327	*i* P	P	06 59 19.8	-10
	comp=E,2.0nm,0.7s						
MNK				*i* P	P	06 59 19.8	-10
	comp=N,16nm,0.9s						
MNK				*i* P	P	06 59 19.8	-10
	comp=Z,15nm,0.8s,baz=227						
MNK				*i* PcP	PcP	06 59 43.8	-3.8
MNK				*i* PP	PP	07 01 59.9	-10
MNK				*i* PPP	PPP	07 03 43.7	
MNK				*i* S	S	07 08 40.1	-13
MNK				*i* SS	SS	07 13 24.1	-5.7
MNK				*i* SSS	SSS	07 16 50.0	
MNK				*i* LQ	LQ	07 24 36.4	
MNK				*i* LR	LR	07 28 46.4	
MNK				*i* LRM	MLR	07 32 58.2	
	comp=Z,140nm,19.6s						
MNK				*i* LRM	MLR	07 33 12.7	
	comp=N,758nm,22.4s						
MNK				*i* LRM	MLR	07 33 24.3	
	comp=E,59nm,24.6s						
NB2	NORSAR Subarra	73.39	338	P	P	06 59 36.1	+0.4
	comp=Z,4.1nm,0.9s,baz=38,slow=6.2						
NOA	NORSAR Array B	73.39	338	P	P	06 59 35.5	-0.2
	comp=Z,1.2nm,0.8s,baz=38,slow=5.9,SNR=3.7						
NOA				LR	LR	07 37 25.7	
	comp=Z,35nm,18.5s,baz=270,slow=40						
AKASG	Malin Array Be	74.35	323	P	P	06 59 41.8	+0.3
	comp=Z,2.4nm,0.6s,baz=46,slow=6.1,SNR=12						
PDAR	Pinedale Array	74.41	47	P	P	06 59 43.3	+1.0
	comp=Z,1.0nm,0.8s,baz=270,slow=1.6,SNR=6.6						
P17A	Butcher Ranch,	75.78	51	P	P	06 59 50.3	+0.1
P17A				IAmb	IAmb	06 59 52.8	
	comp=Z,10nm,1.3s						
RDMU	Red Mountain	75.78	49	P	P	06 59 51.3	+1.1
RDMU				IAmb	IAmb	06 59 52.8	
	comp=Z,9.7nm,1.1s						
SRU	San Rafael Swe	76.14	51	P	P	06 59 52.0	-0.2
SRU				IAmb	IAmb	06 59 54.4	
	comp=Z,4.9nm,0.9s						
BUR08	Bucovina Ar. S	78.38	323	P	P	07 00 04.2	-0.4
BRTR	Keskin Array B	79.51	313	P	P	07 00 12.8	+1.8
	comp=Z,2.9nm,1.0s,baz=32,slow=12,SNR=4.1						
BRTR				LR	LR	07 42 46.8	
	comp=Z,22nm,19.1s,baz=360,slow=41						
DPC	Dobruska-Polom	80.18	329	*e*P	P	07 00 26.0	+12
CLL	Collm	80.69	332	*e*sP	sP	07 00 28.0	+9.2
I37A	Lemond, Waseca	82.11	38	P	P	07 00 25.5	+0.9
KHC	Kasperske Hory	82.23	330	*e*P	P	07 00 36.3	+11
GERES	GERESS Array B	82.41	330	P	P	07 00 26.5	+0.3
	comp=Z,0.6nm,0.6s,baz=45,slow=12,SNR=3.6						
GERES				LR	LR	07 40 53.0	
	comp=Z,46nm,20.1s,baz=268,slow=38						
TX31	Lajitas Ar. Si	86.83	54	P	P	07 00 49.7	+0.8
TX32	Lajitas Array	86.83	54	IAmb	IAmb	07 00 51.0	
	comp=Z,8.8nm,1.5s						
TXAR	Lajitas Array	86.84	54	P	P	07 00 49.7	+0.7
	comp=Z,1.3nm,0.7s,baz=305,slow=2.9,SNR=17						
KEST	Kesra	95.02	325	LR	LR	07 49 28.5	
	comp=Z,44nm,20.2s,baz=265,slow=39						
ESDC	Sonseca Array	96.65	336	LR	LR	07 52 47.4	
	comp=Z,24nm,19.6s,baz=295,slow=40						
SNAA	Sanae	143.37	197	PKPdf	PKPbc	07 07 34.5	0.0
LPAZ	La Paz	143.43	61	PKP	PKPdf	07 07 39.2	-0.6
	comp=Z,1.0nm,0.8s,baz=358,slow=7.0,SNR=3.8						
VNA2	Neumayer--Watz	144.91	195	PKPdf	PKPab	07 07 39.4	+0.2
	baz=98,slow=1.8						
VNA3	Neumayer Olymp	145.11	194	PKPdf	PKPbc	07 07 39.8	-0.1
VNA1	Neumayer--Stat	145.31	195	PKPdf	PKPbc	07 07 39.1	-1.4

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*JMA **02** 06:55:10.9±0.2, 24°.50N×122°.64E, h104^{km}±2^{km}*

*TAP **02** 06:55:11.5, 24°.58N×122°.64E, h95^{km}±1^{km}, ML3.3, B*

ISC 02 06:55:11.5±1.9**, 24°.58N**±0°.07×**122°.65E**±0°.03**, h98^{km}**±13^{km}**, n29, σ0^{s}.58**/50**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.35	110	*e*P	Pn	06 55 26.1	+0.1
	baz=108						
YOJ				*e*S	Sn	06 55 36.7	-0.2
	baz=108						
YOJ	Yonaguni jima	0.35	110	P	Pn	06 55 26.1	+0.1
YOJ				S	Sn	06 55 38.2	+1.3
TWC	Suao	0.73	272	P	Pn	06 55 28.8	-0.1
	baz=272						
TWC				S	Sn	06 55 41.9	-0.1
	baz=272						
NTC	Toucheng	0.79	290	*e*S	Sn	06 55 43.0	0.0
	baz=290						
EWUT	Wuta	0.81	260	*e*P	Pn	06 55 29.1	-0.6
	baz=260						
EWUT				*e*S	Sn	06 55 43.2	-0.1
	baz=260						
ENA	Nanau	0.84	260	*i* P	Pn	06 55 30.6	+0.6
	baz=259						
ENA				S	Sn	06 55 44.7	+0.7
	baz=259						
TIPB	Shuangxi	0.84	297	P	Pn	06 55 30.5	+0.4
	baz=297						
TIPB				S	Sn	06 55 43.4	-0.6
	baz=297						
NDS	Dongshan	0.85	274	*e*S	Sn	06 55 43.1	-1.0
	baz=273						
EHP	Heping Village	0.87	252	*e*P	Pn	06 55 30.4	0.0
	baz=251						
TWE	Neicheng	0.90	279	*e*P	Pn	06 55 29.1	-1.6
	baz=278						
TWE				S	Sn	06 55 45.0	-0.1
	baz=278						
ENTT	Nioudou	0.99	273	*i* P	Pn	06 55 31.2	-0.4
	baz=273						
ENTT				*e*S	Sn	06 55 47.7	+0.9
	baz=273						
IRIF	Iriomote-Funau	1.02	104	P	Pn	06 55 31.8	-0.1
IRIF				S	Sn	06 55 47.5	+0.3
ETL	Fush Village	1.03	246	S	Sn	06 55 47.2	-0.4
	baz=245						
NDT	Datong Townshi	1.03	271	*e*S	Sn	06 55 48.8	+1.2
	baz=271						
NACB	Ninganchiao	1.04	247	P	Pn	06 55 31.7	-0.5
	baz=246						
NACB				S	Sn	06 55 47.0	-0.8
	baz=246						
NWLT	Wulai	1.06	281	P	Pn	06 55 31.7	-0.7
	baz=280						
NWLT				S	Sn	06 55 47.7	-0.5
	baz=280						
TWD	Chiawan	1.08	243	P	Pn	06 55 32.1	-0.6
	baz=242						
TWD				S	Sn	06 55 48.3	-0.3
	baz=242						
ETLH	Xiulin Townshi	1.13	251	*e*P	Pn	06 55 33.1	-0.1
	baz=250						
ETLH				*e*S	Sn	06 55 49.7	+0.1
	baz=250						
YHNB	Yeheng	1.16	274	P	Pn	06 55 34.4	+0.8
	baz=274						
YHNB				S	Sn	06 55 50.4	+0.1
	baz=274						
PCYT	Pengchaiyu	1.17	333	*e*S	Sn	06 55 50.5	+0.3
	baz=334						
NSK	Sanguang	1.18	275	*e*P	Pn	06 55 34.1	+0.3

	baz=274						
NSK				eS	Sn	06 55 50.6	-0.1
	baz=274						
JKRS	Kuro-shima	1.29	105	P	Pn	06 55 35.4	+0.4
JKRS				S	Sn	06 55 53.1	+0.3
FUSS	Fushou	1.32	256	i P	Pn	06 55 36.2	+0.5
	baz=255						
FUSS				S	Sn	06 55 53.9	-0.1
	baz=255						
WHF	Hehuan Shan	1.33	251	i P	Pn	06 55 36.5	+0.4
	baz=250						
WHF				S	Sn	06 55 54.7	+0.1
	baz=250						
JIJ	Ishigaki jima	1.38	99	P	Pn	06 55 36.0	-0.1
JIJ				S	Sn	06 55 54.1	-0.7
TWT	Tachien	1.38	257	P	Pn	06 55 36.6	+0.2
	baz=256						
TWT				S	Sn	06 55 55.5	+0.4
	baz=256						
NCUH	Zhongli	1.38	286	eP	Pn	06 55 36.6	+0.4
	baz=286						
CHGB	Renai	1.44	249	P	Pn	06 55 37.6	+0.5
	baz=248						
CHGB				S	Sn	06 55 56.1	-0.5
	baz=248						
JISG	Ishigakijimahi	1.51	90	S	Sn	06 55 56.8	-0.9

PRE 02 07:14:53.8±1.1, 33°.05S×19°.17E, h5km, ML3.5, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATJ	Matjiesfontein	1.20	100	eP	Pn	07 15 17.7	+0.3
MATJ				eS	Sb	07 15 33.0	+0.1
CVNA	Calvinia	1.64	18	eP	Pb	07 15 24.6	0.0
CVNA				eS	Sb	07 15 45.7	-0.1
GRAN	Grantham	2.64	74	eP	Pn	07 15 38.1	+0.9
GRAN				eS	Sn	07 16 10.1	+0.5
GRAN				IAML		07 16 22.9	
	comp=Z,524nm,0.5s						
KOMG	Komaggas	3.55	336	eP	Pn	07 15 49.7	0.0
KOMG				eS	Sn	07 16 32.5	+0.5
KOMG				IAML		07 16 57.5	
	comp=Z,68nm,0.3s						
AUGR	Augrabies	4.56	13	eP	Pn	07 16 04.7	+1.2
AUGR				eS	Sn	07 16 55.8	-1.1
AUGR				IAML		07 17 30.1	
	comp=Z,320nm,0.6s						
PKA	Prieska	4.56	43	eP	Pn	07 16 04.1	+0.6
PKA				eS	Sn	07 16 56.3	-0.6
PKA				IAML		07 17 21.6	
	comp=Z,88nm,0.5s						
KEIM	Keimoes	4.60	20	eP	Pn	07 16 04.9	+0.8
KEIM				eS	Sn	07 16 57.6	-0.4
KEIM				IAML		07 17 22.4	
	comp=Z,225nm,0.5s						
ROSN	Rosenhof	4.60	105	eP	Pn	07 16 04.1	+0.1
ROSN				eS	Sn	07 16 56.4	-1.4
ROSN				IAML		07 17 28.7	
	comp=Z,870nm,0.5s						
KROM	Kromhout	4.68	105	eP	Pn	07 16 05.5	+0.5
KROM				eS	Sn	07 16 58.8	-0.9
UPI	Upington	5.01	22	eP	Pn	07 16 10.4	+0.7
UPI				eS	Sn	07 17 06.2	-1.9
UPI				IAML		07 17 40.4	
	comp=Z,124nm,0.4s						
ARMS	Ukamas	5.02	6	eP	Pn	07 16 10.4	+0.5
ARMS				eS	Sn	07 17 06.7	-1.6
ARMS				IAML		07 17 40.1	
	comp=Z,301nm,0.3s						
SOE	Somerset East	5.39	88	eP	Pn	07 16 16.8	+1.9
SOE				eS	Sn	07 17 15.9	-1.4
SOE				IAML		07 17 55.1	
	comp=Z,269nm,0.5s						
AUSN	Aus	6.84	338	eP	Pn	07 16 35.3	+0.3
AUSN				eS	Sn	07 17 50.1	-3.4
AUSN				IAML		07 18 36.0	
	comp=Z,3.7nm,0.2s						
BOSA	Boshof	6.85	51	eP	Pn	07 16 36.8	+1.7
BOSA				eS	Sn	07 17 50.7	-2.8
BOSA				IAML		07 18 14.5	
	comp=Z,17nm,0.4s						

MAN 02 07:27:29.4, 7°.85N×127°.19E, h13km, mb4.6, ML3.5, MS3.3, 4C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	0.89	292⇑	iP	Pn	07 27 47.4	-0.2
DMPH	Davao City--Mi	1.84	246⇑	eP	Pn	07 27 58.2	-2.5
DMPH				eS	Sn	07 28 06.7	-17
GLSP	General Luna,	2.19	331⇑	eP	Pn	07 28 05.9	+0.4
GLSP				i S	Sg	07 28 52.0	+12
KCP	Kidapawan	2.25	248⇓	eP	Pn	07 28 07.3	+0.9
DDMP	Don Marcelino,	2.28	220⇑	eP	Pn	07 28 06.8	+0.1

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*JMA **02** 07:43:24.6±0.1, 24°.51N×122°.48E, h32km, M2.0*

*TAP **02** 07:43:24.3, 24°.55N×122°.44E, h15km±1km, ML2.8, D*

ISC 02 07:43:23.0±1.1, 24°.55N±0°.04×122°.51E±0°.02, h17km±9km, n31, σ0ˢ.57/60, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.41	104	P	Pn	07 43 33.5	-0.6
JYNG				eS	Sn	07 43 40.8	-0.6
YOJ	Yonaguni jima	0.46	101	P	Pn	07 43 34.8	-0.1
	baz=99						
YOJ				i S	Sn	07 43 43.2	+0.5
	baz=99						
YOJ	Yonaguni jima	0.46	101	P	Pn	07 43 34.5	-0.4
YOJ				S	Sn	07 43 42.8	+0.1
TWC	Suao	0.61	275	i P	Pb	07 43 35.1	-0.1
	baz=275						
TWC				eS	Sg	07 43 42.6	-0.6
	baz=275						
TWB1	Santiao Chiao	0.66	314	i P	Pn	07 43 37.2	-0.4
	baz=318						
TWB1				eS	Sg	07 43 43.3	-1.5
	baz=318						
EWUT	Wuta	0.68	261	P	Pb	07 43 36.9	+0.5
	baz=259						
EWUT				eS	Sb	07 43 45.5	0.0
	baz=259						
NTC	Toucheng	0.69	296	i P	Pb	07 43 36.8	+0.1
	baz=298						
NTC				i S	Sb	07 43 46.2	+0.3
	baz=298						
ENA	Nanau	0.71	260	P	Pb	07 43 37.5	+0.5
	baz=258						
ENA				eS	Sb	07 43 46.5	0.0
	baz=258						
NDS	Dongshan	0.73	276	P	Pg	07 43 37.1	-0.2
	baz=276						
NDS				eS	Sb	07 43 47.0	0.0
	baz=276						
TIPB	Shuangxi	0.75	304	P	Pb	07 43 37.9	+0.2
	baz=306						
TIPB				eS	Sb	07 43 48.6	+0.9
	baz=306						
TWE	Neicheng	0.79	282	P	Pg	07 43 38.2	-0.2
	baz=283						
TWE				i S	Sg	07 43 48.5	-0.3
	baz=283						
NWF	Wu-fen Shan	0.84	308	i P	Pn	07 43 40.1	-0.1
	baz=310						
NWF				i S	Sg	07 43 50.9	+0.3
	baz=310						
ENTT	Nioudou	0.87	276	eP	Pn	07 43 40.0	-0.4
	baz=276						
ENTT				S	Sg	07 43 51.5	+0.1
	baz=276						
NDT	Datong Townshi	0.91	273	i P	Pb	07 43 40.2	-0.2
	baz=273						
NDT				S	Sb	07 43 52.1	-0.2
	baz=273						
NACB	Ninganchiao	0.92	246	P	Pn	07 43 41.2	0.0
	baz=243						
NACB				S	Sg	07 43 52.7	-0.3
	baz=243						
NWLT	Wulai	0.95	284	P	Pn	07 43 42.1	+0.5
	baz=284						
NWLT				eS	Sg	07 43 53.9	+0.1
	baz=284						
ETLH	Xiulin Townshi	1.00	250	P	Pn	07 43 42.6	+0.2
	baz=248						
ETLH				S	Sg	07 43 55.2	-0.5
	baz=248						
NNSB	Datong	1.04	263	P	Pb	07 43 42.0	-0.6
	baz=262						
NNSB				eS	Sb	07 43 55.4	-0.6
	baz=262						
YHNB	Yeheng	1.04	277	P	Pg	07 43 43.3	0.0
	baz=276						
YHNB				eS	Sb	07 43 55.4	-0.7
	baz=276						
NNS	Nan Shan	1.04	264	eP	Pg	07 43 43.8	+0.5
	baz=263						
NNS				eS	Sn	07 43 57.3	0.0
	baz=263						
NSK	Sanguang	1.06	277	P	Pg	07 43 43.6	+0.1
	baz=276						
NSK				eS	Sg	07 43 57.1	-0.3
	baz=276						
FUSS	Fushou	1.20	255	eP	Pg	07 43 48.3	+2.1
	baz=254						
FUSS				S	Sg	07 44 01.6	-0.3
	baz=254						
WHF	Hehuan Shan	1.21	251	eP	Pg	07 43 47.1	+0.6
	baz=249						
WHF				eS	Sg	07 44 02.2	-0.1
	baz=249						
TWT	Tachien	1.25	256	eP	Pg	07 43 48.4	+1.1
	baz=255						
TWT				eS	Sg	07 44 04.4	+0.7
	baz=255						
TDCB	Techi	1.27	257	eP	Pg	07 43 48.9	+1.2
	baz=255						
TDCB				S	Sg	07 44 03.8	-0.4
	baz=255						
JKRS	Kuro-shima	1.40	103	P	Pb	07 43 49.4	+0.7
JKRS				eS	Sg	07 44 07.5	-0.8
HGSD	Ruisui	1.45	224	P	Pb	07 43 49.1	-0.5
	baz=221						
HGSD				eS	Sn	07 44 07.0	-0.2
	baz=221						
JIJ	Ishigaki jima	1.50	97	eS	Sn	07 44 08.8	+0.5
YULB	Yu-li	1.60	224	P	Pb	07 43 51.6	-0.6
	baz=222						
YULB				eS	Sn	07 44 10.5	-0.5
	baz=222						
SSLB	Suanglung	1.61	242	eP	Pg	07 43 54.3	+0.2
	baz=240						
SSLB				S	Sb	07 44 12.6	0.0
	baz=240						
JISG	Ishigakijimahi	1.64	88	P	Pb	07 43 52.9	+0.1

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*IDC **02** 07:50:09.9±1.6, 0°.84N×127°.14E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.8/39, mbtmp3.9/5, ML3.5/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/46, Error ellipse: s-maj=61.2km s-min=26.4km az=60.0*

*DJA **02** 07:50:11.5±0.4, 1°N±2°×12°8E±°, h10km, M3.6/6, mb3.8/1, MLv3.5/6*

ISC 02 07:50:13.4±1.4, 0°.88N±0°.10×127°.40E±0°.09, h17km±6km, n10, σ1ˢ.56/11, mb3.9/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.11	197	P	Pg	07 50 16.7	-0.3
TNTI				S	Sg	07 50 19.7	+0.3
LBMI	Labuha	1.51	176	P	Pn	07 50 40.1	+0.5
LBMI				S	Sn	07 51 00.9	+2.0
SANI	Sanana	3.23	206	P	Pn	07 51 03.2	-0.1
SIJI	Sorong	4.24	114	Pn	Pn	07 51 19.1	+1.9
	2.6nm,0.3s,baz=159,slow=19,SNR=5.0						
GTOI	Gorontalo	4.39	267	P	Pn	07 51 21.7	+2.4
WRA	Warramunga Arr	21.78	162	P	P	07 55 04.1	-0.5
	3.1nm,0.7s,baz=341,slow=11,SNR=25						
ASAR	Alice Springs	25.20	166	P	P	07 55 37.9	-0.5
	3.6nm,0.7s,baz=344,slow=10,SNR=36						
STKA	Stephens Creek	35.24	159	P	P	07 57 06.3	-0.8
	1.3nm,0.9s,baz=337,slow=15,SNR=3.0						
MSVF	Nonsavu	53.16	113	LR	LR	08 20 03.1	
	comp=Z,29nm,20.0s,baz=213,slow=34						
MKAR	Makanchi Array	60.27	326	P	P	08 00 19.5	-1.5
	0.3nm,0.4s,baz=118,slow=8.0,SNR=2.4						

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*IDC **02** 08:01:53.6±1.2, 17°.93S×178°.49W, h577km±13km, mb3.7/20, mb1 3.9/23, mb1mx3.7/42, mbtmp4.6/23, Error ellipse: s-maj=16.6km s-min=10.7km az=145.0*

*NOU **02** 08:01:53.8, 17°.86S×178°.38W, h591km, mb4.8/52, Fiji Islands Region*

*NEIC **02** 08:01:54.6±2.0, 17°.9S±0°.1×178°.5W±0°.1, h588km±7km, mb4.3/57, Error ellipse: s-maj=19.7km s-min=12.5km az=152.0*

ISC 02 08:01:53.4±0.4, 17°.88S±0°.08×178°.48W±0°.08, h579km, n186, σ0ˢ.91/181, mb4.2/55, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAVE	Taveuni	1.79	310	P	P	08 03 06.9	+1.9
DGTI	Dogotuki	2.31	312	P	P	08 03 08.7	+1.4
MSVF	Nonsavu	3.31	272	P	P	08 03 14.0	+1.2
	14nm,0.3s,baz=133,slow=3.1,SNR=77						
MSVF	Nonsavu	3.31	272	P	P	08 03 14.9	+2.1
MSVF	Nonsavu	3.31	272	P	P	08 03 15.1	+2.3
AFI	Afiamalu	7.56	60	P	P	08 03 46.7	-1.3
	12nm,0.3s,baz=125,slow=13,SNR=8.3						
DVP	Devils Point	12.70	269	P	P	08 04 40.5	+1.2
MARNC	Mare, Loyalty	13.20	252	P	P	08 04 44.1	-0.3
MARNC	Mare, Loyalty	13.20	252	P	P	08 04 45.0	+0.6
LIFNC	LIFOU	13.78	256	P	P	08 04 52.6	+2.2
SANVU	Saraoutou	13.93	278	P	P	08 04 52.5	+0.5
SANVU	Saraoutou	13.93	278	P	P	08 04 53.8	+1.9
	57nm,0.8s						
PINNC	Pines Island,	14.02	248	P	P	08 04 53.5	+0.8
YATNC	Mamie plateau,	14.36	251	P	P	08 04 56.6	+0.4
OUENC	Ouen Island, N	14.50	249	P	P	08 04 57.5	+0.1
OUENC	Ouen Island, N	14.50	249	P	P	08 04 57.8	+0.3
DZM	Mont Dzumac	14.77	251	eP	P	08 05 01.2	+1.0
	52nm,0.8s						
DZM	Mont Dzumac	14.77	251	P	P	08 04 59.6	-0.6
	2.5nm,0.3s,baz=86,slow=17,SNR=26						
DZM	Mont Dzumac	14.77	251	P	P	08 04 59.7	-0.4
DZM	Mont Dzumac	14.77	251	P	P	08 04 59.8	-0.4
ONTNC	Ouen Toro	14.82	250	P	P	08 05 00.7	+0.2
ONTNC	Ouen Toro	14.82	250	P	P	08 05 00.7	+0.2
NOUC	Port Laguerre	14.90	251	P	P	08 05 01.9	+0.6
KNTN	Kanton	16.41	25	P	P	08 05 15.0	-0.7
KOUNC	Koumac, New Ca	16.49	258	P	P	08 05 16.9	+0.6
OUZ	Omahuta	18.66	201	P	P	08 05 38.7	+2.9
OUZ				IAmb	IAmb	08 05 39.7	
	comp=Z,41nm,1.2s						
URZ	Urewera	20.67	190	P	P	08 05 52.1	-1.9
	comp=Z,9.1nm,0.8s,baz=122,slow=23,SNR=3.7						
URZ	Urewera	20.67	190	P	P	08 05 54.1	+0.1
EIDS	Eidsvold	29.21	250	P	P	08 07 09.3	-0.3
	baz=29,SNR=11						
EIDS	Eidsvold	29.21	250	P	P	08 07 09.2	-0.3
EIDS				IAmb	IAmb	08 07 10.2	
	comp=Z,22nm,0.7s						
ARMA	Armidale	29.89	240	P	P	08 07 16.1	+0.6
	baz=30,SNR=27						
ARMA	Armidale	29.89	240	P	P	08 07 16.4	+0.9
ARMA	Armidale	29.89	240	P	P	08 07 16.5	+0.9
MGCD	Mangrove Creek	31.25	235	P	P	08 07 27.8	+0.8
	baz=31,SNR=7.6						
MGCD	Mangrove Creek	31.25	235	P	P	08 07 28.0	+1.0
RMQ	Roma	31.45	248	P	P	08 07 29.3	+0.5
	baz=31,SNR=17						
CTA	Charters Tower	33.38	260	P	P	08 07 44.4	-0.8
	comp=Z,9.3nm,0.4s,baz=93,slow=12,SNR=11						
CTAO	Charters Tower	33.38	260	P	P	08 07 44.8	-0.4
CTAO				IAmb	IAmb	08 07 46.0	
	comp=Z,22nm,0.7s						
CTAO	Charters Tower	33.38	260	P	P	08 07 45.1	-0.1
CNB	Canberra Magne	33.39	232	P	P	08 07 46.0	+0.9
	baz=33,SNR=72						
CAN	Canberra	33.67	232	P	P	08 07 47.6	+0.2
CAN	Canberra	33.67	232	P	P	08 07 48.0	+0.6
MILA	Mila	34.25	230	P	P	08 07 51.8	-0.5
	baz=34,SNR=3.5						
PMG	Port Moresby	34.38	280	P	P	08 07 54.8	+1.2
	comp=Z,66nm,0.8s,baz=91,slow=6.8,SNR=20						
CMSA	Cobar Meteorol	35.10	240	P	P	08 07 59.8	+0.4
	baz=35,SNR=104						
MTSU	Mount Surprise	35.34	264	P	P	08 08 01.5	-0.1
	baz=35,SNR=10.0						
QLP	Quilpie	35.48	249	P	P	08 08 02.6	0.0
	baz=35,SNR=18						
GLAD	Gladstone	36.82	224	P	P	08 08 13.9	+0.5
COEN	Coen	37.03	270	P	P	08 08 15.9	+0.4
COEN	Coen	37.03	270	P	P	08 08 16.1	+0.6
TOO	Toolangi	37.13	231	P	P	08 08 16.9	+0.8
	baz=37,SNR=8.2						
TOO	Toolangi	37.13	231	P	P	08 08 16.9	+0.8
STKA	Stephens Creek	38.58	241	P	P	08 08 28.7	+0.8
	comp=Z,36nm,0.5s,baz=90,slow=10,SNR=186						
STKA	Stephens Creek	38.58	241	P	P	08 08 28.7	+0.8
	baz=38,SNR=139						
STKA	Stephens Creek	38.58	241	P	P	08 08 28.8	+0.8
STKA				IAmb	IAmb	08 08 29.5	
	comp=Z,12nm,1.1s						
QIS	Mount Isa	39.59	259	P	P	08 08 35.5	-0.7
	baz=40,SNR=9.0						
QIS	Mount Isa	39.59	259	P	P	08 08 35.6	-0.6
ARPS	Mount Arapiles	39.61	234	P	P	08 08 36.2	+0.1
	baz=40,SNR=5.9						
ARPS	Mount Arapiles	39.61	234	P	P	08 08 36.6	+0.5
HTT	Hallett	41.10	239	P	P	08 08 48.6	+0.6
	baz=41,SNR=24						
NAPP	Napperby	41.69	240	P	P	08 08 53.7	+1.1
TWOA	Tennyson Woods	41.71	237	P	P	08 08 53.1	+0.3
WHYH	Whyalla	42.14	240	P	P	08 08 56.7	+0.6
JAY	Jayapura	42.83	286	P	P	08 09 00.4	-1.4
	comp=Z,39nm,1.0s						
OOD	Oodnadatta	43.16	248	P	P	08 09 05.0	+0.8
BBOO	Buckleboo	43.36	241	P	P	08 09 05.9	+0.2
	baz=43,SNR=86						
BBOO	Buckleboo	43.36	241	P	P	08 09 06.0	+0.3
BBOO	Buckleboo	43.36	241	P	P	08 09 06.0	+0.3
WR0	Warramunga Arr	44.38	260	P	P	08 09 12.6	-1.1
WR0				IAmb	IAmb	08 09 15.7	
	comp=Z,9.8nm,0.8s						
WB0	Warramunga Arr	44.53	260	P	P	08 09 14.2	-0.7
WB2	Warramunga Arr	44.56	260	P	P	08 09 14.5	-0.6
WRAB	Tennant Creek	44.56	260	P	P	08 09 14.4	-0.7
WRAB	Tennant Creek	44.56	260	P	P	08 09 14.8	-0.3
WRA	Warramunga Arr	44.57	260	P	P	08 09 14.3	-0.8
	comp=Z,12nm,0.3s,baz=75,slow=7.8,SNR=532						
WRA				PcP	PcP	08 10 45.5	0.0
	comp=Z,2.3nm,0.4s,baz=96,slow=3.1,SNR=5.5						
WRA	Warramunga Arr	44.57	260	P	P	08 09 13.5	-1.7
AS31	Alice Springs	44.73	254	P	P	08 09 16.4	0.0
ASAR	Alice Springs	44.73	254	P	P	08 09 16.4	0.0
	comp=Z,163nm,0.6s,baz=88,slow=8.4,SNR=2329						
ASAR				PcP	PcP	08 10 46.1	+0.1
	comp=Z,4.9nm,0.6s,baz=106,slow=4.0,SNR=5.4						
ASAR				S	S	08 15 09.5	-2.5
	comp=Z,0.5nm,0.8s,baz=85,slow=14,SNR=5.3						
ASAR	Alice Springs	44.73	254	P	P	08 09 16.6	+0.2
MULG	Mulgathing	44.76	245	P	P	08 09 16.5	0.0
KDU	Kakadu	47.49	269	P	P	08 09 37.0	-0.3
	baz=47,SNR=23						
KDU	Kakadu	47.49	269	P	P	08 09 37.2	-0.1
DRS	Darwin Rock St	49.04	269	P	P	08 09 48.5	-0.3
WRKA	Warakurna	49.79	252	P	P	08 09 54.2	-0.1
	baz=50,SNR=415						
WRKA	Warakurna	49.79	252	P	P	08 09 54.2	-0.1
FORT	Forrest	49.96	245	P	P	08 09 54.6	-0.8
	baz=50,SNR=48						
FORT	Forrest	49.96	245	P	P	08 09 54.4	-0.9
FORT	Forrest	49.96	245	P	P	08 09 54.8	-0.6
KNRA	Kununurra	50.42	264	P	P	08 09 58.6	-0.3
	baz=50,SNR=22						
KNRA	Kununurra	50.42	264	P	P	08 09 58.2	-0.7
KNRA	Kununurra	50.42	264	P	P	08 09 58.7	-0.3
FAKI	Fak Fak	50.50	281	P	P	08 09 58.7	-0.9
	comp=Z,15nm,1.3s						
FAKI	Fak Fak	50.50	281	P	P	08 09 58.3	-1.2
FAKI				IAmb	IAmb	08 10 00.5	
	comp=Z,23nm,1.3s						
FAKI	Fak Fak	50.50	281	P	P	08 09 59.6	0.0
SWI	Sorong	52.17	283	P	P	08 10 11.4	-0.2
	comp=Z,103nm,0.7s						
FITZ	Fitzroy Crossi	52.96	261	P	P	08 10 17.2	0.0
	comp=Z,4.1nm,0.3s,baz=120,slow=4.3,SNR=10						
SOEI	Soe	56.00	270	P	P	08 10 36.9	-1.7
	comp=Z,81nm,0.8s						
SANI	Sanana	56.67	280	P	P	08 10 42.2	-0.9
	comp=Z,42nm,1.1s						
PSA00	Pilbara Seismi	57.85	255	P	P	08 10 49.5	-1.6
PSA00				IAmb	IAmb	08 10 51.4	
	comp=Z,12nm,0.8s						
PSA00	Pilbara Seismi	57.85	255	P	P	08 10 50.7	-0.3
MBWA	Marble Bar	58.01	256	P	P	08 10 51.8	-0.3
MEEK	Meekatharra	58.38	249	P	P	08 10 53.9	-0.7
	baz=58,SNR=17						
MEEK	Meekatharra	58.38	249	P	P	08 10 54.1	-0.5
KLBR	Kellerberrin	58.78	244	P	P	08 10 56.5	-0.6
	baz=59,SNR=20						
KLBR	Kellerberrin	58.78	244	P	P	08 10 56.8	-0.3
NWAO	Narrogin (SRO)	59.16	242	P	P	08 10 59.7	0.0
BLDU	Ballidu	59.73	245	P	P	08 11 02.9	-0.6
	baz=60,SNR=28						
BLDU	Ballidu	59.73	245	P	P	08 11 03.0	-0.5
MUN	Mundaring	60.07	243	P	P	08 11 05.8	0.0
	baz=60,SNR=6.0						
MUN	Mundaring	60.07	243	P	P	08 11 05.9	+0.2
GTOI	Gorontalo	60.39	281	P	P	08 11 08.9	+0.8
	comp=Z,9.2nm,0.9s						
MORW	Morawa	60.43	246	P	P	08 11 07.3	-0.8
	baz=60,SNR=12						
MORW	Morawa	60.43	246	P	P	08 11 07.8	-0.3
VNDA	Vanda	60.47	185	P	P	08 11 07.8	+0.3
	comp=Z,0.4nm,0.4s,baz=350,slow=7.4,SNR=5.7						
PLAI	Plampang	62.42	269	P	P	08 11 21.8	+0.5
TOLI2	Tolitoli	62.64	281	P	P	08 11 23.2	+0.5
GIRL	Giralia	62.84	253	P	P	08 11 24.8	+1.0
	baz=63,SNR=9.3						
GIRL	Giralia	62.84	253	P	P	08 11 24.9	+1.0
MPSI	Mapaga	63.20	280	P	P	08 11 25.8	-0.5
	comp=Z,860nmcomp=Z,24nm,0.7s						
JAGI	Jajag, Banyuwa	65.97	269	P	P	08 11 42.4	-1.4
JAGI				IAmb	IAmb	08 11 43.3	
	comp=Z,41nm,0.9s						
CASY	Casey	66.14	205	P	P	08 11 43.4	-0.4
CASY				IAmb	IAmb	08 11 45.1	
	comp=Z,10nm,1.1s						
MJAR	Matsushiro Arr	67.84	323	P	P	08 11 54.0	-0.7
	comp=Z,2.8nm,0.5s,baz=109,slow=10.0,SNR=5.4						
MJAR	Matsushiro Arr	67.84	323	IAmb	IAmb	08 11 55.2	
	comp=Z,5.1nm,1.3s						
UGM	Wanagama	69.58	268	P	P	08 12 05.9	+0.1
SSLB	Suanglung	72.16	303	P	P	08 12 20.3	-0.4
QSPA	South Pole Qui	72.18	180	P	P	08 12 20.6	+0.4
QSPA				IAmb	IAmb	08 12 21.8	
	comp=Z,10.0nm,0.9s						
TPUB	Ta-pu	72.18	302	P	P	08 12 19.7	-1.1
TPUB				IAmb	IAmb	08 12 20.7	
	comp=Z,23nm,0.6s						
PETK	Petropavlovsk-	73.63	345	P	P	08 12 28.6	+0.2
	comp=Z,1.4nm,0.7s,baz=123,slow=10,SNR=0.9						
CGJI	Cibinong	74.54	268	P	P	08 12 33.2	-1.2
	comp=Z,2µmcomp=Z,83nm,0.5s						
KASI	Kota Agung	75.99	269	P	P	08 12 41.3	-1.2
	comp=Z,57nm,0.8s						
USRK	Ussuriysk Ar.	76.55	326	P	P	08 12 46.3	+1.5
	comp=Z,1.1nm,0.6s,baz=120,slow=4.1,SNR=5.3						
MDSI	Maura Dua	76.60	270	P	P	08 12 43.4	-2.4
	comp=Z,5.1nm,0.7s						
CMB	Columbia Colle	77.86	43	P	P	08 12 52.9	+0.7
MDPB	Devils Postpil	78.50	44	P	P	08 12 57.3	+1.4
MDPB				IAmb	IAmb	08 12 58.2	
	comp=Z,5.2nm,0.8s						
YBH	Yreka Blue Hor	78.55	39	P	P	08 12 57.1	+1.3
YBH				IAmb	IAmb	08 12 58.0	
	comp=Z,3.9nm,0.7s						
BEKR	Beckworth	78.92	42	P	P	08 12 59.1	+1.1
BEKR				IAmb	IAmb	08 13 00.1	
	comp=Z,12nm,1.5s						
HUMO	Hull Mountain	78.92	38	P	P	08 12 59.5	+1.8
PNTR	Pine Nut	78.97	43	P	P	08 12 59.3	+1.0
PNTR				IAmb	IAmb	08 13 00.7	
	comp=Z,8.6nm,0.8s						
YERR	Yerington	79.14	43	IAmb	IAmb	08 13 01.0	
	comp=Z,5.9nm,0.6s						
PAHR	Pah Rah Range	79.45	42	P	P	08 13 02.0	+1.3
NVAR	Mina Array Bea	79.45	44	P	P	08 13 02.2	+1.3
	comp=Z,2.7nm,0.7s,baz=222,slow=7.9,SNR=20						
KVN	Kaiserville	79.92	43		P	08 13 04.2	+1.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CN2	Changchun	79.95	322	*e*P	P	08 13 01.6	-1.4
CN2				*e*pP	pwP	08 15 08.9	+1.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.8s						
MOD	Modoc Plateau	80.11	40	P	P	08 13 05.1	+1.0
MOD				IAmb	IAmb	08 13 06.0	
	comp=Z,5.6nm,0.8s						
PRN	Pahroc Range	81.11	46	P	P	08 13 09.1	-0.3
PRN				IAmb	IAmb	08 13 12.1	
	comp=Z,4.7nm,0.9s						
WVOR	Wild Horse Val	81.43	40	P	P	08 13 11.6	+0.7
WVOR				IAmb	IAmb	08 13 13.3	
	comp=Z,6.6nm,1.0s						
J08A	Circle Bar Ran	82.04	40	IAmb	IAmb	08 13 15.9	
	comp=Z,3.6nm,0.7s						
CCUT	Cedar City	82.34	47	P	P	08 13 17.6	+1.8
U15A	North Rim	82.55	48	P	P	08 13 17.5	+0.6
U15A				IAmb	IAmb	08 13 19.7	
	comp=Z,5.5nm,0.8s						
GHO	Glory Hole Cre	82.79	14	P	P	08 13 17.4	+0.2
GHO				IAmb	IAmb	08 13 18.6	
	comp=Z,11nm,1.0s						
G08A	Pilot Rock	82.83	38	P	P	08 13 18.9	+1.0
TCRU	Three Creeks R	83.49	46	IAmb	IAmb	08 13 31.5	
	comp=Z,4.9nm,0.5s						
SEY	Seymchan	83.73	347	P	P	08 13 21.6	-0.2
	comp=Z,1.9nm,0.5s,baz=189,slow=13,SNR=2.6						
MAW	Mawson	83.87	200	P	P	08 13 22.5	-0.1
	comp=Z,3.7nm,0.5s,baz=164,slow=3.1,SNR=10						
MAW	Mawson	83.87	200	P	P	08 13 22.1	-0.4
TRF	Thorofare Moun	83.99	12	P	P	08 13 23.0	-0.3
TRF				IAmb	IAmb	08 13 24.4	
	comp=Z,14nm,1.0s						
WRH	Wood River Hil	85.35	13	IAmb	IAmb	08 13 34.9	
	comp=Z,6.9nm,1.3s						
IL31		85.87	13	P	P	08 13 30.9	-1.2
IL31				IAmb	IAmb	08 13 49.3	
	comp=Z,7.4nm,1.5s						
ILAR	Eielson Array	85.87	13	P	P	08 13 31.6	-0.5
	comp=Z,0.9nm,0.4s,baz=222,slow=5.1,SNR=30						
TX31	Lajitas Ar. Si	86.04	58	P	P	08 13 34.4	+0.5
TX31				IAmb	IAmb	08 13 37.2	
	comp=Z,16nm,1.1s						
TX32	Lajitas Array	86.04	58	IAmb	IAmb	08 13 37.2	
	comp=Z,5.4nm,1.1s						
TXAR	Lajitas Array	86.04	58	P	P	08 13 36.2	+2.3
	comp=Z,2.1nm,0.7s,baz=219,slow=6.2,SNR=24						
MCMT	McKenzie Canyo	86.26	41	P	P	08 13 35.5	+0.7
BW06	Boulder Array	87.38	43	P	P	08 13 40.5	+0.5
PDAR	Pinedale Array	87.38	43	P	P	08 13 40.9	+0.8
	comp=Z,1.3nm,0.6s,baz=219,slow=2.5,SNR=9.8						
TOLK	Toolik Lake Re	88.77	10	P	P	08 13 45.2	-0.5
CMAR	Chiang Mai Arr	88.81	290	P	P	08 13 48.0	+1.0
	comp=Z,2.2nm,0.3s,baz=108,slow=3.0,SNR=13						
SNAA	Sanae	90.63	179	P	P	08 13 53.9	-0.6
VNA3	Neumayer Olymp	90.78	176	P	P	08 13 55.2	+0.1
VNA2	Neumayer--Watz	91.21	177	P	P	08 13 56.9	-0.2
	baz=192,slow=3.8						
VNA1	Neumayer--Stat	91.44	177	P	P	08 13 58.1	0.0
INK	Inuvik	91.87	15	P	P	08 13 59.7	-0.3
	comp=Z,1.3nm,0.9s,baz=220,slow=5.9,SNR=3.9						
INK	Inuvik	91.87	15	IAmb	IAmb	08 14 04.9	
	comp=Z,2.3nm,1.1s						
SONM	Songino Array	93.48	319	P	P	08 14 08.4	+0.4
	comp=Z,1.5nm,0.7s,baz=148,slow=8.5,SNR=2.3						
YKA	Yellowknife Ar	94.33	25	P	P	08 14 10.2	-1.1
	comp=Z,0.3nm,0.5s,baz=239,slow=4.5,SNR=2.5						
MKAR	Makanchi Array	109.06	314	PKiKP	PKiKP	08 19 16.9	-1.1
	comp=Z,0.9nm,0.6s,baz=173,slow=0.7,SNR=9.7						
KURBB	Kurchatov Arra	111.81	318	PKiKP	PKiKP	08 19 22.2	-0.7
	comp=Z,0.8nm,0.6s,baz=89,slow=1.8,SNR=8.8						
BVAR	Borovoye Array	116.78	321	PKP	PKPdf	08 19 32.0	-0.5
	comp=Z,1.7nm,0.4s,baz=217,slow=5.1,SNR=7.1						
ARU	Arti	122.78	326	PKP	PKPdf	08 19 43.3	-0.6
	comp=Z,1.1nm,0.4s,baz=257,slow=4.4,SNR=3.8						
AKTO	Aktyubinsk	124.80	320	PKP	PKPdf	08 19 47.9	-0.1
	comp=Z,1.3nm,0.8s,baz=68,slow=6.6,SNR=3.8						
ARCES	ARCESS Array B	126.27	350	PKP	PKPdf	08 19 49.5	-0.7
	comp=Z,2.4nm,0.8s,baz=59,slow=1.7,SNR=6.7						
BRTR	Keskin Array B	144.71	315	PKP	PKPbc	08 20 25.9	+0.1
	comp=Z,4.1nm,0.7s,baz=116,slow=4.4,SNR=9.1						
CRVS	Cervenica-Dubn	145.08	337	*e*PKP	PKPab	08 20 28.2	+0.7
CLL	Collm	145.42	347	*i* PKPbc	PKPbc	08 20 27.8	+0.5
	comp=Z,7.0nm,0.9s						
LANS	Liptovska Anna	145.58	339	*e*PKP	PKPab	08 20 29.5	0.0
VYHS	Vyhne	146.36	339	*e*PKP	PKPbc	08 20 31.1	+1.0
GERES	GERESS Array B	147.56	345	PKPbc	PKPbc	08 20 33.8	+0.5
	comp=Z,3.1nm,0.6s,baz=33,slow=3.3,SNR=14						

MAN 02 08:05:29.0, 13°.67N×120°.19E, h31km, mb4.4, ML3.2, MS3.0, 2C-3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.09	36	⇑*e*P	Pb	08 05 34.9	+0.5
LUBP				*i* S	Sb	08 05 39.8	+1.7
PGP	Puerto Galera	0.76	102	⇑*e*P	Pn	08 05 37.9	-5.7
PGP				*e*S	Sb	08 05 45.2	-8.6
MACP	Maragondon, Ca	0.78	41	⇓*i*P	Pn	08 05 44.0	+0.1
MACP				*e*S	Sn	08 05 56.2	+1.6
LQP	Lukban	1.38	71	⇓*e*P	Pb	08 05 59.0	+4.7
SJMP	San Jose	1.50	143	⇓*i*P	Pn	08 05 54.0	+0.2

ATH 02 08:06:16.0, 38°.38N×20°.45E, h14km±3km, ML1.7/2, Error ellipse: s-maj=3.4km s-min=0.8km az=200.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.12	49	P	Pg	08 06 18.9	-0.6
FSK				S	Sg	08 06 21.2	-0.5
FSK				AML	AML	08 06 21.4	
	comp=E,2113µm,0.2s						
FSK				AML	AML	08 06 21.5	
	comp=N,904µm,0.2s						
KEF4	Livadi, Kephal	0.12	188	P	Pb	08 06 20.0	0.0
KEF4				S	Sg	08 06 21.6	0.0
DMLN	Damoulianata-K	0.15	202	P	Pg	08 06 19.4	-0.4
DMLN				S	Sg	08 06 22.7	+0.3
KEF3	Kipouria, Keph	0.19	204	P	Pg	08 06 19.7	-0.7
KEF3				S	Sg	08 06 23.0	-0.4
VLS	Valsamata	0.23	150	P	Pg	08 06 20.6	-0.4
VLS				S	Sg	08 06 24.6	+0.2
VLS				AML	AML	08 06 24.7	
	comp=N,292µm,0.1s						
VLS				AML	AML	08 06 26.3	
	comp=E,410µm,0.1s						
PSDA	Pessada-Kefalo	0.29	157	P	Pg	08 06 21.6	-0.3
PSDA				S	Sb	08 06 26.9	-0.5
EVGI	Lefkada island	0.29	34	P	Pg	08 06 21.8	-0.4
EVGI				S	Sg	08 06 26.6	+0.3
DRAG	Dragano-Lefkad	0.32	18	P	Pg	08 06 22.5	-0.1
DRAG				S	Sg	08 06 27.5	+0.4
NYDR	Nydri-Lefkada	0.39	31	P	Pg	08 06 23.3	-0.5
NYDR				S	Sg	08 06 29.5	+0.4
LKD2	Lefkada island	0.44	22	P	Pg	08 06 24.9	+0.1
LKD2				S	Sb	08 06 31.4	-0.6

THE 02 08:07:07.0, 38°.41N×20°.44E, h18km±1km, ML2.2/5, Error ellipse: s-maj=1.6km s-min=0.3km az=236.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.15	186	P	Pg	08 07 11.1	-0.1
KEF4				S	Sg	08 07 14.5	+0.5
	12µm,0.3s						
DMLN	Damoulianata-K	0.17	198	P	Pg	08 07 11.7	+0.1
DMLN				S	Sg	08 07 15.0	+0.3
KEF3	Kipouria, Keph	0.21	200	P	Pg	08 07 11.8	-0.3
KEF3				S	Sb	08 07 15.7	0.0
	2µm,0.2s						
VLS	Valsamata	0.26	153	P	Pg	08 07 12.8	0.0
VLS				S	Sb	08 07 17.0	0.0
	542nm,0.1s						
EVGI	Lefkada island	0.27	38	P	Pg	08 07 12.9	-0.2
EVGI				S	Sb	08 07 17.7	+0.1
DRAG	Dragano-Lefkad	0.30	20	P	Pg	08 07 13.3	-0.2
DRAG				S	Sb	08 07 18.3	-0.1
PSDA	Pessada-Kefalo	0.31	159	P	Pg	08 07 13.8	+0.1
NYDR	Nydri-Lefkada	0.37	33	P	Pg	08 07 14.4	-0.3
NYDR				S	Sg	08 07 19.9	0.0
	118nm,0.2s						
LKD2	Lefkada island	0.42	24	P	Pg	08 07 15.4	-0.2
LKD2				S	Sb	08 07 22.4	+0.4
	108nm,0.6s						
IGT	Igoumenitsa	1.13	356	P	Pg	08 07 36.1	+7.2

IDC ***02*** *08:15:20.8±0.8, 22°.17S×63°.92W, h530km±12km, mb3.4/4, mb1 3.3/9, mb1mx3.0/36, mbtmp4.0/9, Error ellipse: s-maj=19.5km s-min=12.2km az=108.0*

VAO ***02*** *08:15:22.3±0.3, 22°.17S×63°.64W, h508km, mb3.6*

ISC 02 08:15:20.5±0.6, 22°.25S±0°.08×63°.79W±0°.08, h500km, n37, σ1s.93/39, mb3.9/4, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	4.75	265	P	P	08 16 48.1	+2.4
	8.4nm,0.3s,baz=88,slow=6.0,SNR=54						
LVC				S	S	08 17 56.7	+1.5
	3.5nm,0.3s,baz=264,slow=22,SNR=15						
LVC	Limon Verde	4.75	265	*e*P	P	08 16 48.5	+2.8
SIV	San Ignacio	6.73	23	P	P	08 17 05.6	+1.4
	2.5nm,0.3s,baz=175,slow=9.0,SNR=38						
SIV				S	S	08 18 32.7	+3.8
	0.3nm,0.3s,baz=89,slow=2.6,SNR=4.7						
CPUP	Villa Florida	7.15	126	P	P	08 17 10.7	+2.5
	0.5nm,0.3s,baz=318,slow=8.4,SNR=5.4						
CPUP	Villa Florida	7.15	126	*e*P	P	08 17 09.2	+1.1
LPAZ	La Paz	7.21	325	P	P	08 17 10.1	+0.4
	0.8nm,0.3s,baz=130,slow=3.8,SNR=28						
LPAZ				S	S	08 18 36.4	-2.4
	0.3nm,0.3s,baz=59,slow=22,SNR=11						
LPAZ	La Paz	7.21	325	*e*P	P	08 17 11.2	+1.5
PTLB	Pontes e Lacer	8.07	34	*e*P	P	08 17 19.2	+1.5
ITQB	Itaqui	9.80	140	*e*P	P	08 17 37.2	+1.5
VILB	Vilhena	9.86	21	*e*P	P	08 17 37.1	+0.6
SALV	Santo Antonio	9.92	52	*e*P	P	08 17 37.5	+0.4
TRCB	Terra Rica	10.32	95	*e*P	P	08 17 42.8	+1.5
PTGB	Pitanga	11.03	105	*e*P	P	08 17 51.2	+2.3
ITAB	Concordia	11.69	117	*e*P	P	08 17 57.4	+1.6
CPSB	Cacapava Do Su	12.32	133	*e*P	P	08 18 04.6	+2.2
PDRB	Porto dos Gac	12.54	34	*e*P	P	08 18 05.3	+0.3
ETMB	Extrema	12.58	349	*e*P	P	08 18 05.9	+0.6
ARAG	Araguaiana, MT	13.06	62	*e*P	P	08 18 10.6	+0.2
CLDB	Colider	13.66	35	*e*P	P	08 18 16.6	-0.1
VAO	Valinhos	15.55	96	*e*P	P	08 18 36.2	-0.3
MACA	Manacapuru-AM	19.21	9	*e*P	P	08 19 13.8	+1.7
PLCA	Paso Flores	19.30	196	P	P	08 19 12.5	-0.1
	0.1nm,0.3s,baz=27,slow=12,SNR=5.9						
PLCA	Paso Flores	19.30	196	*e*P	P	08 19 14.8	+2.1
JANB	Januaria	19.78	72	*e*P	P	08 19 16.9	-0.4
SMTB	Santa Maria do	20.48	52	*e*P	P	08 19 24.0	+0.3
PTGA	Pitinga	21.71	10	P	P	08 19 31.9	-2.9
	0.6nm,0.3s,baz=21,slow=24,SNR=8.3						
NAN01	Guarapari, ES	22.65	83	*e*P	P	08 19 42.3	-0.9
GUA01	Guaratinga, BA	23.30	80	*e*P	P	08 19 48.3	-0.7
GDU01	Guandu, BA	24.51	74	*e*P	P	08 19 58.6	-1.3
OTAV	Otavalo	26.53	325	*e*P	P	08 20 20.0	+1.8
NBMA	Muriti-CE	28.29	62	*e*P	P	08 20 32.0	-1.2
PMSA	Palmer Station	42.51	180	P	P	08 22 28.6	-2.2
	23nm,0.7s,baz=81,slow=22,SNR=12						
TORD	Torodi Ar. Bea	73.18	68	P	P	08 25 58.7	-1.7
	2.6nm,0.5s,baz=254,slow=5.6,SNR=24						
PDAR	Pinedale Array	77.22	327	P	P	08 26 21.2	-1.6
	0.1nm,0.4s,baz=111,slow=6.8,SNR=2.4						
ASAR	Alice Springs	131.22	202	SKPbc	SKPbc	08 36 10.2	-3.9
	0.2nm,0.6s,baz=152,slow=4.1,SNR=4.2						
WRA	Warramunga Arr	134.48	204	SKPbc	SKPbc	08 36 20.9	-4.2
	0.2nm,0.5s,baz=153,slow=1.8,SNR=5.1						
MKAR	Makanchi Array	143.29	40	PKP	PKPab	08 33 54.0	-1.3
	0.4nm,0.4s,baz=327,slow=3.7,SNR=6.0						

NEIC ***02*** *08:34:59.8±1.6, 7°.40S±0°.09×126°.6E±0°.1, h313km±5km, mb4.2/10, Error ellipse: s-maj=14.7km s-min=13.5km az=81.0*

IDC ***02*** *08:34:59.2±1.4, 7°.45S×126°.51E, h310km±14km, mb3.5/4, mb1 3.7/9, mb1mx3.3/39, mbtmp4.3/9, Error ellipse: s-maj=23.0km s-min=12.8km az=67.0*

ISC 02 08:34:58.7±0.7, 7°.47S±0°.07×126°.56E±0°.08, h300km, n44, σ1s.23/46, mb4.2/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	3.21	225	Pn	Pn	08 35 58.7	+2.0
SOEI	Soe	3.21	225	P	Pn	08 35 58.7	+2.0
BATI	Baumata	3.95	226	P	Pn	08 36 06.8	+2.4
	170nm,0.3s,baz=110,slow=1.6,SNR=82						
BATI				S	S	08 36 57.1	+0.1
	78nm,0.3s,baz=327,slow=17,SNR=14						
MMRI	Maumere	4.44	255	Pn	Pn	08 36 11.4	+1.6
DRS	Darwin Rock St	6.52	139	P	Pn	08 36 36.9	+2.6
MTN	Manton Dam	6.98	140	Pn	Pn	08 36 40.8	+0.9
KAPI	Kappang	7.20	289	P	Pn	08 36 44.4	+1.9
	0.9nm,0.3s,baz=293,slow=2.2,SNR=4.7						
KAPI	Kappang	7.20	289	Pn	Pn	08 36 43.4	+0.9
FAKI	Fak Fak	7.25	52		Pn	08 36 42.8	-0.4
FAKI	Fak Fak	7.25	52	P	Pn	08 36 42.9	-0.3
SIJI	Sorong	8.06	36	P	Pn	08 36 53.1	0.0
	5.8nm,0.3s,baz=92,slow=23,SNR=6.6						
KNRA	Kununurra	8.44	165	Pn	Pn	08 36 59.7	+2.0
KNRA	Kununurra	8.44	165	P	Pn	08 37 00.5	+2.8
PLAI	Plampang	8.80	261	P	Pn	08 37 00.4	-1.8
FITZ	Fitzroy Crossi	10.60	185	P	Pn	08 37 24.9	+0.6
	0.8nm,0.3s,baz=6.4,slow=7.9,SNR=4.1						
WB0	Warramunga Arr	14.39	149		P	08 38 09.4	+0.2
WRA	Warramunga Arr	14.51	149	P	P	08 38 10.4	0.0
	0.9nm,0.3s,baz=331,slow=16,SNR=38						
WRA				S	S	08 40 47.1	-2.7
	0.3nm,0.3s,baz=330,slow=23,SNR=6.4						
WRA	Warramunga Arr	14.51	149	P	P	08 38 10.1	-0.4
WB2	Warramunga Arr	14.52	149	P	P	08 38 10.8	+0.3
WR0	Warramunga Arr	14.63	149	P	P	08 38 11.9	+0.1
COEN	Coen	17.54	113	P	P	08 38 44.0	+0.4
COEN				IAmb	IAmb	08 38 44.9	
	comp=Z,4.4nm,0.7s						
COEN	Coen	17.54	113	P	P	08 38 44.4	+0.8
WRKA	Warakurna	17.55	175	P	P	08 38 44.5	+0.9
AS31	Alice Springs	17.58	157	P	P	08 38 44.9	+1.0
ASAR	Alice Springs	17.58	157	P	P	08 38 44.7	+0.8
	comp=Z,3.6nm,0.3s,baz=331,slow=10,SNR=211						
ASAR				S	S	08 41 49.5	-1.4
	comp=Z,0.0nm,0.3s,baz=336,slow=17,SNR=5.1						
ASAR	Alice Springs	17.58	157	P	P	08 38 44.5	+0.6
QIS	Mount Isa	18.13	137	P	P	08 38 51.0	+1.1
OOD	Oodnadatta	21.98	158	P	P	08 39 28.5	-0.1
CTAO	Charters Tower	22.83	125	P	P	08 39 36.9	+0.4
CTAO				IAmb	IAmb	08 39 57.9	
	comp=Z,13nm,1.4s						
FORT	Forrest	23.23	177	P	P	08 39 38.7	-1.2
FORT	Forrest	23.23	177	P	P	08 39 39.7	-0.2
	comp=Z,38nm,0.8s						
MULG	Mulgathing	23.76	164	P	P	08 39 45.0	+0.3
BBOO	Buckleboo	26.71	162	P	P	08 40 10.4	-0.7
BBOO				IAmb	IAmb	08 40 11.6	
	comp=Z,7.0nm,0.8s						
STKA	Stephens Creek	28.04	152	P	P	08 40 23.3	+0.4
	comp=Z,2.1nm,0.3s,baz=329,slow=9.3,SNR=15						
STKA	Stephens Creek	28.04	152	IAmb	IAmb	08 40 31.8	
	comp=Z,0.6nm,1.1s						
TOO	Toolangi	34.54	153	P	P	08 41 20.0	+0.5
TOO				IAmb	IAmb	08 41 48.1	
	comp=Z,28nm,1.4s						
MK31	Makanchi Array	66.80	329	P	P	08 45 18.1	-0.5
MK31				IAmb	IAmb	08 45 30.4	
	comp=Z,3.8nm,1.2s						
MKAR	Makanchi Array	66.80	329	P	P	08 45 18.1	-0.4
	comp=Z,0.9nm,0.5s,baz=122,slow=7.5,SNR=13						
ZALV	Zalesovo Beam	70.54	335	P	P	08 45 39.7	-1.5
	comp=Z,2.1nm,0.4s,baz=136,slow=4.6,SNR=9.8						
KURK	Kurchatov	71.18	330	P	P	08 45 44.6	-0.6
KURK				IAmb	IAmb	08 45 45.6	
	comp=Z,2.9nm,0.5s						
VNDA	Vanda	72.41	172	P	P	08 45 51.4	-0.7
	comp=Z,0.6nm,0.6s,baz=304,slow=9.5,SNR=2.4						
VNDA	Vanda	72.41	172	P	P	08 45 51.3	-0.8
CPUP	Villa Florida	146.19	174	PKPbc	PKPdf	08 54 03.4	+0.2
	comp=Z,1.1nm,0.5s,baz=260,slow=0.9,SNR=3.8						
LPAZ	La Paz	152.27	148	PKPbc	PKPbc	08 54 20.2	-0.7
	comp=Z,0.3nm,0.3s,baz=90,slow=1.0,SNR=1.9						

SJA ***02*** *08:41:59.2±0.7, 32°.05S×71°.92W, h59km±9km, ML3.8, MW4.0*

GUC ***02*** *08:42:00.4±0.8, 32°.00S×71°.63W, h45km±7km, ML3.8*

ISC 02 08:42:01.5±1.1, 32°.06S±0°.03×71°.90W±0°.06, h50km, n41, σ1s.98/64, 2C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.71	135	⇓*i*P	Pn	08 42 13.0	-2.4
VA06				*e*S	Sn	08 42 19.4	-6.1
VA01	Torpederas	0.98	168	*e*P	Pn	08 42 18.7	-0.3
VA01				*i* S	Sn	08 42 32.5	+0.7
VA01	Torpederas	0.98	168	*e*P	Pn	08 42 19.0	0.0
ROC1	El Roble	1.18	141	*e*P	Pn	08 42 20.6	-1.3
ROCH	El Roble	1.18	141	⇑*e*P	Pn	08 42 20.4	-1.5
ROCH				*e*S	Sn	08 42 35.0	-1.9
ROCH				IAML		08 42 39.1	
	comp=E,2µm,0.6s						
VA03	San Esteban	1.34	122	⇓*e*P	Pn	08 42 21.9	-2.0
VA03				*e*S	Sn	08 42 37.6	-3.0
VA03				IAML		08 42 41.3	
	comp=E,4µm,0.2s						
MT02	Curacav	1.36	152	⇓*i*P	Pn	08 42 23.5	-0.6
MT02				*e*S	Sn	08 42 40.2	-0.7
MT02	Curacav	1.36	152	*e*P	Pn	08 42 20.6	-3.5
MT02				*e*P	Pn	08 42 23.4	-0.7
CO06	Fray Jorge	1.40	9	⇓*e*P	Pn	08 42 23.3	-1.4
CO06				*e*S	Sn	08 42 40.4	-1.6
PEL	Peldehue	1.49	137	⇓*i*P	Pn	08 42 24.9	-1.0
PEL				*e*S	Sn	08 42 42.9	-1.4
PEL				IAML		08 42 45.8	
	comp=E,3µm,0.4s						
PEL	Peldehue	1.49	137	*e*P	Pn	08 42 20.6	-5.3
PEL				*e*P	Pn	08 42 25.0	-0.9
PEL				*e*S	Sn	08 42 43.8	-0.4
VA05	Santo Domingo	1.61	172	*e*P	Pn	08 42 27.6	+0.1
VA05				*i* S	Sn	08 42 49.0	+1.9
VA05				IAML		08 42 55.3	
	comp=E,3µm,0.3s						
MT05	Renca	1.65	144	⇑*i*P	Pn	08 42 28.0	-0.1
MT05				*e*S	Sn	08 42 47.7	-0.5
MT05				IAML		08 42 51.9	
	comp=E,3µm,0.4s						
MT05	Renca	1.65	144	*e*P	Pn	08 42 28.0	-0.1
MT05				*e*S	Sn	08 42 47.4	-0.8
MT05				IAML		08 42 59.0	
	comp=Z,954nm,0.4s						
FCH	Farellones	1.85	133	⇓*e*P	Pn	08 42 30.5	-0.7
FCH				*e*S	Sn	08 42 52.4	-1.2
FCH				IAML		08 42 54.9	
	comp=N,1µm,0.3s						
MT01	Popeta	1.88	163	⇓*i*P	Pn	08 42 31.5	+0.3
MT01				*e*S	Sn	08 42 55.1	+1.3
MT01				IAML		08 43 03.3	
	comp=N,964nm,0.3s						
MT01	Popeta	1.88	163	*e*P	Pn	08 42 31.0	-0.2
MT01				*e*S	Sn	08 42 58.1	+4.4
MT01				IAML		08 43 02.8	
	comp=Z,456nm,0.5s						
GO04	Tololo Observa	2.11	27	*e*P	Pn	08 42 33.3	-1.2
GO04				*e*S	Sn	08 42 57.3	-2.4
GO04	Tololo Observa	2.11	27	*e*P	Pn	08 42 34.0	-0.5
GO04				*e*S	Sn	08 42 59.4	-0.3
AUSP	Uspallata	2.14	95	*e*P	Pn	08 42 35.5	+0.5
AUSP				*e*S	Sn	08 43 02.0	+1.5
BO04	La Punta	2.21	151	⇓*e*P	Pn	08 42 36.1	+0.4
BO04				*e*S	Sn	08 43 01.7	-0.2
BO04				IAML		08 43 10.2	
	comp=E,832nm,0.2s						
RTLS	Leoncito	2.23	84	*e*P	Pn	08 42 36.8	+0.5
RTLS				*e*S	Sn	08 42 58.1	-4.6
RTLS				*e*S	Sn	08 43 04.4	+1.7
RTLS				IAML		08 43 05.2	
	comp=Z,930nm,0.7s						
LMEL	Las Melosas	2.28	142	*e*P	Pn	08 42 37.2	+0.4
LMEL				*e*S	Sn	08 43 03.0	-0.9
BO01	Tunca	2.42	164	*e*P	Pn	08 42 38.9	+0.2
BO01				*e*S	Sn	08 43 11.6	+4.5
BO01				IAML		08 43 24.8	
	comp=Z,228nm,0.6s						
ARCO	CERRO ARCO	2.63	108	*e*P	Pn	08 42 45.0	+3.4
ARCO				*e*P	Pn	08 42 45.0	+3.4
ARCO				*e*S	Sn	08 43 12.6	+0.3
ARCO				IAML		08 43 19.5	
	comp=Z,412nm,1.3s						
ASAL	Salagasta	2.65	102	*e*P	Pn	08 42 44.0	+2.2
ASAL				*e*S	Sn	08 43 15.1	+2.4
AAGR	Agrelo	2.79	112	*e*P	Pn	08 42 46.0	+2.3
AAGR				*e*S	Sn	08 43 19.1	+2.9
ZON	Zonda	2.79	80	*e*P	Pn	08 42 45.0	+1.3
ZON				*e*S	Sn	08 43 20.3	+4.1
ZON				IAML		08 43 28.5	
	comp=Z,232nm,0.7s						
AROD	Rodeo	2.81	48	*e*P	Pn	08 42 45.0	+0.7
AROD				*e*S	Sn	08 43 21.8	+4.7
ACCO	Cerro Coronel	2.83	60	*e*P	Pn	08 42 46.0	+1.4
ACCO				*e*S	Sn	08 43 24.4	+6.7
RTCV	Cerro Valdivia	2.86	87	*e*P	Pn	08 42 46.0	+1.3
BO02	Sierra Bellavi	2.88	161	*e*P	Pn	08 42 45.0	0.0
BO02				*e*S	Sn	08 43 29.6	+11
BO02				IAML		08 43 33.5	
	comp=Z,480nm,0.7s						
GO05	Huala	2.94	180	*e*P	Pn	08 42 45.0	-0.8
GO05				*e*S	Sn	08 43 08.1	-12
LCO	Las Campanas	3.21	19	*e*P	Pn	08 42 49.0	-0.7
AC04	Llanos de Chal	3.91	11	*e*P	Pn	08 42 58.0	-1.1
AC04				*e*S	Sn	08 43 50.1	+6.4
AC04				IAML		08 44 01.1	
	comp=Z,132nm,0.7s						
RFA	San Rafael	3.94	134	*e*P	Pn	08 43 01.4	+1.8
RFA				IAML		08 44 05.6	
	comp=Z,60nm,1.5s						
AVFE	Valle Fertil	4.05	71	*e*P	Pn	08 43 01.4	+0.3
AVFE				*e*P	Pn	08 43 01.6	+0.6
AVFE				IAML		08 44 03.0	
	comp=Z,118nm,1.0s						
ACHE	Chepes	4.56	80	*e*P	Pn	08 43 08.0	-0.1
VCA	Vinchina	4.60	45	*e*P	Pn	08 43 10.0	+1.3
VCA				*e*S	Sn	08 44 08.1	+7.2
VCA				*e*S	Sn	08 44 13.1	+12
VCA				IAML		08 44 26.3	
	comp=Z,179nm,1.3s						
GO03	Copiap	4.68	18	*e*P	Pn	08 43 08.1	-1.6
GO03				*e*P	Pn	08 43 09.0	-0.7
GO03				*e*S	Sn	08 44 05.6	+2.8
ACLC	CERRO LA CRUZ	5.00	60	*e*P	Pn	08 43 14.5	+0.3
ACLC				IAML		08 44 20.0	
	comp=Z,152nm,0.8s						

IDC ***02*** *08:51:48.2±5.0, 11°.44S×118°.39E, h66km±44km, mb3.8/3, mb1 3.9/9, mb1mx3.5/40, mbtmp4.1/9, ML4.0/5, MS2.6/2, Ms1 2.6/2, ms1mx2.3/46, Error ellipse: s-maj=60.5km s-min=22.2km az=66.0*

ISC 02 08:51:43.3±0.7, 11°.55S±0°.06×118°.31E±0°.08, h26km, n21, σ2s.87/24, mb4.2/3, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	2.76	349	P	Pn	08 52 27.4	+1.5
JAGI	Jajag, Banyuwa	5.12	306	P	Pn	08 52 56.6	-1.7
BATI	Baumata	5.42	76	P	Pn	08 53 06.4	+3.8
	33nm,0.3s,baz=268,slow=1.8,SNR=9.9						
SOEI	Soe	6.12	74	P	Pn	08 53 17.0	+4.7
KAPI	Kappang	6.65	12	P	Pn	08 53 22.0	+2.5
	0.9nm,0.3s,baz=220,slow=11,SNR=4.1						
KAPI				S	Sn	08 54 32.6	-1.9
	3.8nm,0.3s,baz=116,slow=22,SNR=12						
KAPI				LR	LR	08 56 10.2	
	comp=Z,30nm,18.6s,baz=141,slow=40						
KAPI	Kappang	6.65	12	P	Pn	08 53 20.4	+0.9
UGM	Wanagama	8.49	295	P	Pn	08 53 43.3	-1.4
FITZ	Fitzroy Crossi	9.62	133	P	Pn	08 54 02.7	+2.6
	baz=90,slow=0.1						
FITZ				S	Sn	08 55 44.5	-2.9
	1.8nm,0.3s,baz=172,slow=18,SNR=5.1						
MBWA	Marble Bar	9.65	172	P	Pn	08 54 01.9	+1.3
PSA00	Pilbara Seismi	10.07	172	P	Pn	08 54 08.2	+1.8
	10nm,2.2s						
KNRA	Kununurra	10.95	113	P	Pn	08 54 21.4	+2.9
GIRL	Giralia	11.69	199	P	Pn	08 54 30.2	+1.6
DRS	Darwin Rock St	12.35	95	P	Pn	08 54 40.5	+3.0
MTN	Manton Dam	12.60	97	P	Pn	08 54 44.1	+3.1
FAKI	Fak Fak	16.26	59	P	Pn	08 55 30.3	+0.2
SIJI	Sorong	16.68	51	P	Pn	08 55 35.3	-0.1
	1.1nm,0.3s,baz=233,slow=20,SNR=1.8						

WRA	Warramunga Arr	17.52	120	P	P	08 55 47.0	0.0
	0.4nm,0.3s,baz=302,slow=15,SNR=19						
WRA				S	Sn	08 58 53.0	-7.6
	0.3nm,0.3s,baz=288,slow=27,SNR=6.1						
WRA				LR	LR	09 02 23.4	
	comp=Z,24nm,18.0s,baz=5.0,slow=36						
ASAR	Alice Springs	19.11	131	P	Pn	08 56 07.5	+2.2
	0.2nm,0.3s,baz=304,slow=10,SNR=14						
ASAR				S	Sn	08 59 33.7	-5.1
	0.3nm,0.3s,baz=305,slow=23,SNR=10						
USRK	Ussuriysk Ar.	56.87	12	P	P	09 01 24.9	-0.8
	1.1nm,0.7s,baz=198,slow=9.1,SNR=1.6						
SONM	Songino Array	60.07	351	P	P	09 01 47.4	-0.8
	1.5nm,0.6s,baz=170,slow=11,SNR=3.2						
MKAR	Makanchi Array	66.42	334	P	P	09 02 30.1	-0.1
	1.4nm,0.7s,baz=150,slow=7.2,SNR=12						

*MAN **02** 08:53:01.0, 11°.77N×124°.16E, h1^{km}, mb4.5, ML3.4, MS3.2*
*IDC **02** 08:53:18.0±3.1, 9°.75N×123°.88E, h0^{km}, mb3.9/4, mb1 4.0/4, mb1mx3.5/40, mbtmp3.9/4, MS3.2/7, Ms1 3.2/7, ms1mx2.8/55, Error ellipse: s-maj=334.0km s-min=27.3km az=63.0*
ISC 02 08:53:01.8±0.9**, 11°.74N**±0°.04×**124°.15E**±0°.05**, h10^{km}, n23, σ1^{s}90**/25**, mb3.8**/4**, MS3.1**/7**, 9C-5D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	Masbate	0.80	320	⇓iP	Pg	08 53 16.0	-1.2
MMPH				i S	Sb	08 53 27.3	-1.3
OCLP	Ormoc	0.82	147	⇑eP	Pb	08 53 18.2	0.0
OCLP				eS	Sn	08 53 32.3	+0.7
RCP	Roxas	1.39	263	⇑eP	Pb	08 53 27.5	-0.3
RCP				i S	Sg	08 53 47.3	+0.9
LLP	Lapu-Lapu	1.43	187	⇑iP	Pg	08 53 28.6	-0.6
LLP				i S	Sg	08 53 49.1	+1.4
MSLP	Maasin	1.74	156	⇓eP	Pb	08 53 33.5	-0.4
MSLP				i S	Sb	08 53 56.4	+0.6
TBP	Tagbilaran	2.06	188	⇑eP	Pn	08 53 33.2	-3.2
TBP				i S	Sb	08 54 05.2	+0.3
AUQP	San Andres	2.13	318	⇑eP	Pb	08 53 38.6	-1.9
AUQP				i S	Sg	08 54 11.8	+1.4
JAP	San Jose, Anti	2.37	246	⇑eP	Pg	08 53 47.0	-0.4
CNOP	Candoni, Negro	2.41	218	⇑eP	Pb	08 53 43.1	-2.2
SNPH	Sibulan	2.54	201	⇓iP	Pb	08 53 45.2	-2.4
SNPH				i S	Sn	08 54 09.8	-4.5
GLSP	General Luna,	2.75	135	⇓iP	Pb	08 53 48.5	-2.5
SJMP	San Jose	3.05	284	⇓eP	Pn	08 53 51.5	+1.4
CUYO	Cuyo Island	3.19	254	⇑eP	Pn	08 53 54.1	+2.0
DCPH	Dipolog City	3.23	194	⇑eP	Pn	08 53 53.5	+0.8
DCPH				i S	Sn	08 54 33.3	+2.1
JAY	Jayapura	21.71	130	LR	LR	09 06 59.8	
	comp=Z,57nm,18.6s,baz=250,slow=40						
LEM	Lembang	24.71	223	LR	LR	09 09 32.3	
	comp=Z,45nm,18.7s,baz=208,slow=42						
CMAR	Chiang Mai Arr	25.22	288	LR	LR	09 09 18.6	
	comp=Z,18nm,18.3s,baz=95,slow=37						
WRA	Warramunga Arr	33.04	162	P	P	08 59 40.0	+2.3
	1.0nm,0.8s,baz=340,slow=10,SNR=2.5						
ASAR	Alice Springs	36.46	165	P	P	09 00 08.7	+1.5
	1.1nm,0.6s,baz=340,slow=7.0,SNR=7.4						
ASAR				LR	LR	09 14 55.3	
	comp=Z,30nm,19.5s,baz=26,slow=38						
STKA	Stephens Creek	46.48	159	P	P	09 01 33.5	+4.2
	2.2nm,0.7s,baz=351,slow=10,SNR=3.9						
MKAR	Makanchi Array	49.60	323	P	P	09 02 21.9	+29
	0.8nm,0.8s,baz=112,slow=9.8,SNR=4.2						
MKAR				LR	LR	09 24 21.6	
	comp=Z,46nm,18.4s,baz=40,slow=36						
YAK	Yakutsk	50.37	3	LR	LR	09 26 35.1	
	comp=Z,38nm,18.2s,baz=257,slow=38						
AAK	Ala-Archa	52.82	315	LR	LR	09 26 36.8	
	comp=Z,27nm,21.0s,baz=96,slow=37						

PGC 02 08:57:48.9±0.0**, 48°.47N×128°.74W, h10^{km}, MLSn2.9**/16**, Mw3.5**/16**, 220km Wsw of Tofino, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMF	NEPTUNE Canada	0.57	205	P	Pg	08 57 59.6	-0.3
KEMF				S	Sg	08 58 06.1	-1.2
NC27	ODP1027	0.96	137	P	Pg	08 58 05.6	-1.8
NC27				S	Sg	08 58 17.0	-2.9
EDB	Eliza Dome	1.77	36	Pn	Pn	08 58 16.9	-2.6
EDB				Sn	Sn	08 58 36.7	-5.3
BPBC	Brooks Peninsu	1.81	20	Pn	Pn	08 58 17.6	-2.6
TOFB	Tofino	2.00	69	Pn	Pn	08 58 21.1	-1.6
TOFB				Sn	Sn	08 58 43.9	-3.7
PACB	Port Alice, BC	2.13	22	Pn	Pn	08 58 23.4	-1.1
PACB				Sn	Sn	08 58 47.0	-4.0
MAYB	Maynard	2.19	27	Pn	Pn	08 58 24.0	-1.5
MAYB				Sn	Sn	08 58 49.0	-3.8
OZB	Mount Ozzard	2.21	76	Pn	Pn	08 58 23.9	-1.7
OZB				Sn	Sn	08 58 49.4	-3.6
HOLB	Holberg	2.21	10	Pn	Pn	08 58 25.1	-0.6
WOSB	Woss	2.21	39	Pn	Pn	08 58 24.1	-1.6
WOSB				Sn	Sn	08 58 49.0	-4.1
BTB	Buttle Lake	2.35	64	Pn	Pn	08 58 26.8	-0.9
BTB				Sn	Sn	08 58 53.3	-3.3
PHC	Port Hardy	2.40	20	Pn	Pn	08 58 27.2	-1.0
PHC				Sn	Sn	08 58 53.4	-4.2
B928	Bamfield	2.42	80	Pn	Pn	08 58 27.1	-1.3
TLCB	Telegraph Cove	2.42	30	Pn	Pn	08 58 27.6	-0.9
TLCB				Sn	Sn	08 58 55.0	-3.3
SPLB	Strathcona Par	2.48	54	Pn	Pn	08 58 28.2	-1.2
SPLB				Sn	Sn	08 58 56.5	-3.1
NCRB	Newcastle Ridg	2.61	41	Pn	Pn	08 58 30.1	-1.2
NCRB				Sn	Sn	08 59 00.3	-2.8
CBB	Campbell River	2.71	53	Pn	Pn	08 58 31.8	-0.7
MGB	Mount Grey	2.73	77	Pn	Pn	08 58 31.4	-1.5
MGB				Sn	Sn	08 59 02.7	-3.4
PFB	Port Renfrew	2.86	86	Pn	Pn	08 58 33.2	-1.4
PFB				Sn	Sn	08 59 05.6	-3.5
B926	Mesachie Lake	3.08	82	Pn	Pn	08 58 36.6	-1.0
TXB	Texada	3.09	65	Pn	Pn	08 58 37.0	-0.7
NLLB	Nanaimo Lost L	3.23	75	Pn	Pn	08 58 39.0	-0.6
SHB	Sechelt	3.40	69	Pn	Pn	08 58 41.3	-0.7
BBB	Bella Bella	3.74	6	Pn	Pn	08 58 46.1	-0.5
BBB				Sn	Sn	08 59 27.2	-3.6
WPB	Watts Point	3.83	70	Pn	Pn	08 58 47.9	0.0

IDC 02 09:08:00.2±2.9**, 54°.51N×83°.58E, h0^{km}, mb1 2.8**/1**, mb1mx2.8**/41**, mbtmp2.8**/1**, ML3.0**/1**, Error ellipse: s-maj=21.4km s-min=12.8km az=149.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.92	127	i		09 13 30.0	
	baz=307,slow=336,SNR=18						
ZALV	Zalesovo Beam	0.92	127	Pg	Pg	09 08 17.7	-0.1
	3.9nm,0.3s,baz=310,slow=14,SNR=23						
ZALV				Lg	Lg	09 08 30.9	
	3.0nm,0.3s,baz=308,slow=28,SNR=9.7						
MKAR	Makanchi Array	7.77	187	Pn	Pn	09 09 54.9	+0.4
	0.2nm,0.3s,baz=9.1,slow=15,SNR=6.4						

*IDC **02** 09:13:54.3±3.2, 18°.16S×178°.20W, h539^{km}±24^{km}, mb2.9/4, mb1 3.3/5, mb1mx3.0/31, mbtmp3.8/5, Error ellipse: s-maj=124.5km s-min=21.8km az=154.0*
ISC 02 09:13:55.5±2.5**, 18°S**±1°×**178°.4W**±0°.5**, h550^{km}, n6, σ0^{s}55**/6**, mb3.4**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.39	272	P	P	09 15 12.6	-0.5
	3.7nm,0.3s,baz=92,slow=23,SNR=19						
WRA	Warramunga Arr	44.65	259	P	P	09 21 20.2	+0.4
	0.7nm,0.3s,baz=98,slow=6.1,SNR=42						
ASAR	Alice Springs	44.82	254	P	P	09 21 21.2	+0.1
	3.3nm,0.6s,baz=89,slow=8.8,SNR=70						
NVAR	Mina Array Bea	79.38	44	P	P	09 25 05.3	+0.3
	0.2nm,0.5s,baz=226,slow=7.3,SNR=2.5						
TXAR	Lajitas Array	85.96	58	P	P	09 25 37.8	-0.4
	0.3nm,0.8s,baz=223,slow=5.1,SNR=3.4						
ARCES	ARCESS Array B	126.27	350	PKP	PKPdf	09 31 55.7	+0.5
	1.8nm,1.0s,baz=40,slow=2.1,SNR=4.0						

NNC 02 09:22:14.1±2.1**, 53°.65N×88°.22E, h0^{km}, mb3.8, mpv3.4, 7C-7D, Error ellipse: s-maj=16.5km s-min=9.0km az=59.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	2.04	280	⇑Pn	Pn	09 22 48.8	-0.8
	2.9nm,0.6s						
ZAA0				⇑Sn	Sb	09 23 16.9	-0.8
	14nm,0.8s						
KURK	Kurchatov	6.59	247	⇑Pn	Pn	09 23 53.0	+0.8
	3.8nm,1.0s						
KURK				⇓Sn	Sn	09 25 10.6	+2.7
	2.2nm,1.0s						
KURK				⇑Lg	Lg	09 25 42.7	
	4.8nm,0.6s						
KURBB	Kurchatov Arra	6.69	247	⇓Pn	Pn	09 23 54.0	+0.5
	5.8nm,0.7s						
KURBB				⇓Sn	Sn	09 25 09.3	-1.0
	8.3nm,0.7s						
KURBB				⇓Lg	Lg	09 25 47.0	
	9.4nm,0.6s						
MK31	Makanchi Array	7.84	211	⇑Pn	Pn	09 24 11.6	+2.3
	3.1nm,1.0s,baz=28,slow=13,SNR=9.8						
MK31				⇓Sn	Sn	09 25 38.5	-0.4
	5.4nm,1.1s						
MK31				⇓Lg	Lg	09 26 23.9	
	6.7nm,1.2s,baz=24,slow=39,SNR=5.9						
MAKZ	Makanchi	7.93	213	⇑Pn	Pn	09 24 11.1	+0.5
	2.3nm,0.9s						
MAKZ				⇓Sn	Sn	09 25 42.2	+1.3
	3.4nm,0.9s						
MAKZ				⇑Lg	Lg	09 26 25.2	
	8.1nm,1.4s						

*IDC **02** 09:37:51.3±1.2, 77°.22N×21°.04E, h0^{km}, mb3.3/3, mb1 3.7/6, mb1mx3.2/65, mbtmp3.6/6, ML3.1/3, Error ellipse: s-maj=38.6km s-min=8.6km az=64.0*
*NAO **02** 09:37:52.6±1.0, 76°.94N×18°.67E, h16^{km}±9^{km}, ML4.0*
*BER **02** 09:37:54.9±1.7, 76°.96N×18°.66E, h15^{km}±8^{km}, ML3.2, MW3.6, ML4.0(NAO), Confirmed Earthquake*
*IEPN **02** 09:37:55.0, 77°.02N×18°.87E, h10^{km}*
*KOLA **02** 09:37:58.3, 76°.61N×19°.78E, h0^{km}, ML3.1, Error ellipse: s-maj=52.7km s-min=30.6km az=60.0, Storfjorden zone*
ISC 02 09:37:52.8±1.2**, 76°.94N**±0°.03×**18°.70E**±0°.04**, h14^{km}**±8^{km}**, n51, σ2^{s}03**/74**, mb3.4**/3**, 3C-1D, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	0.72	276	Pg	Pg	09 38 07.0	+0.2
HSPB				Lg	Lg	09 38 16.1	
HSPB	Hornsund (broa	0.72	276	eP	Pg	09 38 07.0	+0.2
HSPB				eS	Sg	09 38 16.2	-0.1
HSPB				IAML		09 38 20.3	
	comp=Z,1µm,0.5s						
HSPB	Hornsund (broa	0.72	276	⇑iP	Pg	09 38 07.0	+0.2
HSPB				eS	Sg	09 38 16.1	-0.1
SPA0	Spitsbergen Ar	1.34	339	Pn	Pn	09 38 16.4	-0.6
	baz=154,slow=18						
SPA0				Pg	Pb	09 38 17.5	-0.2
SPA0				Lg	Lg	09 38 34.4	
SPA0	Spitsbergen Ar	1.34	339	Pn	Pn	09 38 16.4	-0.6
	baz=154,slow=18						
SPA0				Pg	Pb	09 38 17.5	-0.2
SPA0				Sg	Sb	09 38 34.4	-0.3
SPA0	Spitsbergen Ar	1.34	339	⇑iP	Pn	09 38 16.4	-0.6
SPA0				eS	Sb	09 38 34.0	-0.6
SPITS	Spitsbergen Ar	1.34	339	Pn	Pn	09 38 17.2	+0.1
	baz=153,slow=19,SNR=4506						
SPITS				Sn	Sb	09 38 34.0	-0.6
	baz=131,slow=19,SNR=7.0						
BRBA	Barentsburg A	1.49	321	Pn	Pn	09 38 18.7	-0.3
BRBA				Lg	Lg	09 38 39.0	
BRBA	Barentsburg A	1.49	321	⇑iP	Pn	09 38 18.9	-0.2
BRBA				ePg	Pb	09 38 20.2	+0.1
BRBA				eSg	Sn	09 38 38.8	+0.6
BRBA				IAML		09 38 44.1	
	comp=Z,1µm,0.4s						
HOPEN	Hopen	1.52	103	Pn	Pn	09 38 19.7	+0.2
HOPEN				Sn	Sn	09 38 38.3	-0.8
HOPEN				Lg	Lg	09 38 41.4	
HOPEN	Hopen	1.52	103	eP	Pn	09 38 19.4	0.0
HOPEN				ePg	Pb	09 38 22.1	+1.4
HOPEN				eS	Sn	09 38 38.2	-0.8
HOPEN				eSg	Sb	09 38 41.1	+1.3
HOPEN				IAML		09 38 44.6	
	comp=Z,1µm,0.4s						
HOPEN	Hopen	1.52	103	⇓iP	Pn	09 38 19.5	0.0
HOPEN				i S	Sn	09 38 38.2	-0.8
KBS	Kingsbay	2.45	328	Pn	Pn	09 38 31.3	-0.9
KBS				Pg	Pb	09 38 37.2	+0.7
KBS				Lg	Lg	09 39 08.4	
KBS	Kingsbay	2.45	328	eP	Pn	09 38 31.2	-0.9
KBS				ePg	Pb	09 38 37.2	+0.7
KBS				eSg	Sg	09 39 08.8	-2.5
KBS	Kingsbay	2.45	328	eP	Pn	09 38 31.1	-1.1
KBS				eS	Sn	09 39 00.0	-1.8
BJO1	Bjornoya	2.46	178	Pn	Pn	09 38 31.6	-0.7
BJO1				Pg	Pb	09 38 38.4	+1.7
BJO1				Lg	Lg	09 39 10.1	
BJO1	Bjornoya	2.46	178	eP	Pn	09 38 32.8	+0.5
BJO1				ePg	Pb	09 38 38.3	+1.7
BJO1				eSg	Sg	09 39 09.1	-2.4
BJO1				IAML		09 39 20.2	
	comp=Z,336nm,0.4s						
BJO1	Bjornoya	2.46	178	eP	Pg	09 38 38.2	-1.6
BJO1				eS	Sg	09 39 09.5	-2.0
HAMF	Hammerfest	6.48	165	Pn	Pn	09 39 26.7	-0.8
HAMF				Sn	Sn	09 40 34.1	-7.1
HAMF	Hammerfest	6.48	165	eP	Pn	09 39 27.4	-0.2
HAMF				eS	Sn	09 40 34.4	-6.7
HAMF				IAML		09 40 37.6	
	comp=Z,36nm,0.5s						
ZFI	Zemlya Franca-	6.72	42	eP	Pn	09 39 29.8	-1.1
ZFI				eS	Sn	09 40 38.4	-8.6
	comp=Z,50nm,0.5s						
TRO	Tromso	7.35	179	eP	Pn	09 39 39.7	+0.2
TRO				eS	Sn	09 40 55.5	-6.9
TRO				IAML		09 41 33.9	
	comp=Z,6.4nm,0.5s						
JETT	Jettan, Norway	7.44	175	Pn	Pn	09 39 40.6	-0.1
JETT				Sn	Sn	09 40 59.4	-5.4
KEV	Kevo	7.60	158	eP	Pn	09 39 42.5	-0.3
KEV				eS	Sn	09 40 59.7	-8.8
ARA0	ARCESS Array S	7.69	162	Pn	Pn	09 39 43.8	-0.4
	baz=353,slow=14						
ARA0				Sn	Sn	09 41 03.5	-7.4
	slow=22						
ARA0	ARCESS Array S	7.69	162	Pn	Pn	09 39 43.8	-0.4
	baz=353,slow=14						
ARA0				Sn	Sn	09 41 03.5	-7.4
	slow=22						
ARA0				IAML		09 41 25.8	
	comp=Z,31nm,0.9s						
ARCES	ARCESS Array B	7.69	162	Pn	Pn	09 39 43.8	-0.4
	baz=348,slow=12,SNR=47						
ARCES				Sn	Sn	09 41 03.6	-7.3
	baz=0.0,slow=19,SNR=7.4						
ARCES	ARCESS Array B	7.69	162	P	Pn	09 39 44.9	+0.7
ARCES				S	Sn	09 41 02.6	-8.4
KIF	Kilpisjarvi	8.00	175	Pn	Pn	09 39 48.4	0.0
KIF				Sn	Sn	09 41 12.6	-5.9
KIF	Kilpisjarvi	8.00	175	Pn	Pn	09 39 48.4	0.0
KIF				Sn	Sn	09 41 12.6	-5.9
KTK1	Kautokeino	8.08	168	eP	Pn	09 39 49.4	0.0
KTK1				eS	Sn	09 41 10.5	-10
KTK1				IAML		09 41 24.6	
	comp=Z,13nm,0.4s						
HEF	Hetta	8.70	168	eP	Pn	09 39 58.1	+0.1
TERR	Teriberka	9.08	140	P	Pn	09 40 00.9	-2.2
TERR				S	Sn	09 41 34.5	-10
STEI	Steigen	9.12	188	eP	Pn	09 40 05.2	+1.5
FAUS	Fauske	9.66	188	eP	Pn	09 40 12.9	+1.8
DBG	Daneborg	9.87	274	eP	Pn	09 40 15.5	+1.6
APA0	Apatity Array	10.29	148	Pn	Pn	09 40 17.4	-2.3
	baz=331,slow=12						
APA0				Sn	Sn	09 42 04.9	-10
	baz=343,slow=28						
APA0	Apatity Array	10.29	148	Pn	Pn	09 40 17.4	-2.3
	baz=331,slow=12						
APA0				Sn	Sn	09 42 04.9	-10
	baz=343,slow=28						
APA0	Apatity Array	10.29	148	P	Pn	09 40 18.3	-1.4
APA0				S	Sn	09 42 04.0	-11
APA	Apatity	10.38	147	S	Sn	09 42 07.2	-9.5
AMDE	Amderma	13.87	98	P	Pn	09 41 04.2	-4.4
	comp=Z,6.8nm,1.2s						
AMDE				eS	Sn	09 43 29.1	-13
LSH	Leshukonskoye	14.74	130	P	Pn	09 41 22.2	+1.7
	comp=Z,37nm,2.2s						
LSH				S	Sn	09 43 52.9	-10
FIA0	FINESS Array S	15.77	167	P	Pn	09 41 31.6	-2.4
	baz=1.7,slow=14						
FIA0	FINESS Array S	15.77	167	P	Pn	09 41 31.6	-2.4
	baz=1.7,slow=14						
FINES	FINESS Array B	15.77	167	Pn	Pn	09 41 31.6	-2.4
	comp=Z,0.2nm,0.3s,baz=178,slow=30,SNR=7.2						
FINES				Sn	Sn	09 44 20.4	-7.7
	comp=Z,0.5nm,0.3s,baz=3.9,slow=22,SNR=5.4						
HFS	Hagfors	16.98	189	Pn	Pn	09 41 51.6	+2.2
	comp=Z,0.1nm,0.3s,baz=10,slow=10,SNR=2.9						
PRGR	Permogore	17.75	135	P	Pn	09 41 52.6	-6.4
ILAR	Eielson Array	38.24	350	P	P	09 45 10.7	-0.9
	comp=Z,0.2nm,0.6s,baz=0.7,slow=7.2,SNR=2.8						
TORD	Torodi Ar. Bea	64.41	198	P	P	09 48 32.7	+4.7
	comp=Z,0.3nm,0.6s,baz=7.1,slow=7.8,SNR=3.6						
TXAR	Lajitas Array	68.39	308	P	P	09 48 56.9	+3.4
	comp=Z,0.1nm,0.4s,baz=36,slow=4.0,SNR=3.9						
ASAR	Alice Springs	118.52	71	PKP	PKPdf	09 56 38.4	-0.9
	comp=Z,0.2nm,0.4s,baz=2.5,slow=2.0,SNR=4.1						

*IDC **02** 09:38:26.9±0.5, 30°.49S×71°.79W, h0^{km}, mb4.4/13, mb1 4.6/17, mb1mx4.4/35, mbtmp4.5/17, ML4.5/4, MS4.2/10, Ms1 4.2/10, ms1mx3.9/20, Error ellipse: s-maj=21.3km s-min=15.6km az=81.0*
*GUC **02** 09:38:27.0±0.6, 30°.45S×72°.21W, h38^{km}±3^{km}, ML4.8*
*NEIC **02** 09:38:27.6, 30°.42S×72°.14W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.40; M$_{\theta\theta}$0.17; M$_{\phi\phi}$-1.57; M$_{r\theta}$0.40; M$_{\theta\phi}$-0.03; M$_{\phi r}$-1.14; Fault plane solution: M$_0$1.92000×10^{16} NP1:φ$_s$167.97000°, δ64.94000°, λ77.61000°. NP2:φ$_s$15.39000°, δ27.77000°, λ114.65000°. Principal axes: T 1.8814, Plg68.0000°, Azm54.0000°; N 0.0823, Plg11.0000°, Azm173.0000°; P -1.9638, Plg19.0000°, Azm267.0000°;*
*NEIC **02** 09:38:28.0±1.4, 30°.39S±0°.04×72°.11W±0°.06, h10^{km}±1^{km}, mb5.1/71, Mwr4.8/46, ML4.8(GUC) Error ellipse: s-maj=8.6km s-min=6.4km az=280.0*
*VAO **02** 09:38:28.7±0.4, 30°.42S×71°.89W, h10^{km}, mb4.8*
*GCMT **02** 09:38:30.0±0.4, 30°.52S±0°.03×72°.31W±0°.03, h19^{km}±1^{km}, MW4.9/65, Moment Tensor Solution. s22,c22; s65,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.25±.16; M$_{\theta\theta}$-0.17±.09; M$_{\phi\phi}$-2.08±.12; M$_{r\theta}$0.41±.18; M$_{\theta\phi}$0.13±.06; M$_{\phi r}$-1.83±.21; Best double couple: M$_0$2.86700×10^{16} NP1:φ$_s$1.00000°, δ25.00000°, λ99.00000°. NP2: φ$_s$171.00000°, δ65.00000°, λ86.00000°. Principal axes: T 2.9570, Plg69.0000°, Azm72.0000°; N -0.1810, Plg4.0000°, Azm172.0000°; P -2.7770, Plg20.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 09:38:30.1±0.8**, 30°.44S**±0°.04×**72°.01W**±0°.06**, h26^{km}**±5^{km}**, n235, σ1^{s}11**/232**, mb5.0**/48**, MS4.3**/7**, 2C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.40	127	eP	Pb	09 38 37.7	-1.1
CO06				i S	Sb	09 38 45.7	+1.0
CO06				IAML		09 38 48.3	
	comp=N,47µm,0.3s						
CO06	Fray Jorge	0.40	127	Pg	Pb	09 38 37.7	-1.1
CO05	La Serena	0.84	52	eP	Pn	09 38 45.0	-1.2
CO05				i S	Sn	09 38 58.4	+0.7
CO05				IAML		09 39 01.5	
	comp=E,34µm,0.5s						
CO05	La Serena	0.84	52		Pn	09 38 45.2	-1.1
GO04	Tololo Observa	1.07	76	eP	Pn	09 38 49.1	-0.6
GO04				i S	Sn	09 39 06.0	+2.1
GO04				IAML		09 39 13.8	
	comp=N,62µm,0.3s						
GO04	Tololo Observa	1.07	76		Pn	09 38 49.2	-0.6
LCO	Las Campanas	1.82	39	Pn	Pn	09 38 59.8	-0.1
VA06	Catapilco	2.20	164	eP	Pn	09 39 03.8	-1.3
VA06				i S	Sn	09 39 30.8	-0.7
VA06				IAML		09 39 47.1	
	comp=N,5µm,0.5s						
AC04	Llanos de Chal	2.37	20	eP	Pn	09 39 05.8	-1.6
AC04				i S	Sn	09 39 35.7	+0.2
AC04	Llanos de Chal	2.37	20	Pn	Pn	09 39 05.5	-1.8
VA01	Torpederas	2.60	173	Pn	Pn	09 39 08.8	-1.6
VA03	San Esteban	2.63	152	i S	Sn	09 39 42.8	+0.6
VA03				IAML		09 39 55.8	
	comp=E,5µm,0.5s						
VA03	San Esteban	2.63	152		Pn	09 39 11.9	+0.8
ROCH	El Roble	2.67	162	eP	Pn	09 39 10.8	-0.8
ROCH				eP	Pn	09 39 10.3	-1.3
ROCH				i S	Sn	09 39 43.0	-0.3
ROCH				i S	Sn	09 39 43.1	-0.1
ROCH				IAML		09 40 03.3	
	comp=N,4µm,0.4s						
ROCH				IAML		09 40 03.5	
	comp=N,6µm,0.5s						
MT02	Curacav	2.91	166		Pn	09 39 14.8	0.0
PEL	Peldehue	2.92	158	eP	Pn	09 39 13.7	-1.4
PEL				i S	Sn	09 39 49.3	0.0
PEL				IAML		09 40 06.2	
	comp=E,3µm,0.5s						
PEL	Peldehue	2.92	158	Pn	Pn	09 39 15.5	+0.5
ZON	Zonda	3.06	112	Pn	Pn	09 39 17.9	+1.0
MT05	Renca	3.14	160	Pn	Pn	09 39 18.2	+0.2
GO03	Copiap	3.23	29	eP	Pn	09 39 18.1	-1.1
GO03				i S	Sn	09 39 57.4	+0.5
GO03				IAML		09 40 15.3	
	comp=E,2µm,0.6s						
GO03	Copiap	3.23	29	Pn	Pn	09 39 18.6	-0.6
VA05	Santo Domingo	3.23	174		Pn	09 39 17.4	-1.7
FCH	Farellones	3.23	154	eP	Pn	09 39 19.0	-0.5
FCH				i S	Sn	09 39 58.4	+1.1
MT09	Talagante	3.44	166	Pn	Pn	09 39 22.3	+0.1
MT01	Popeta	3.48	170	IAML		09 40 28.9	
	comp=E,1µm,0.5s						
MT01	Popeta	3.48	170		Pn	09 39 21.6	-1.0
LMEL	Las Melosas	3.73	156	i S	Sn	09 40 08.8	-0.6
BO01	Tunca	4.02	169	Pn	Pn	09 39 29.1	-0.9
AC02	Maricunga	4.39	36	Pn	Pn	09 39 36.1	+0.6
BO02	Sierra Bellavi	4.47	167	eP	Pn	09 39 34.5	-1.7
BO02				i S	Sn	09 40 25.3	-2.1
BO02	Sierra Bellavi	4.47	167	Pn	Pn	09 39 35.7	-0.5
GO05	Huala	4.56	179		Pn	09 39 35.0	-2.5
H03N1	Juan Fernandez	6.59	241	T	T	09 47 07.4	
	baz=71,slow=72,SNR=826						
H03N2	Juan Fernandez	6.61	241	T	T	09 47 07.8	
	baz=71,slow=72,SNR=1013						
H03N3	Juan Fernandez	6.61	241	T	T	09 47 06.5	
	baz=71,slow=72,SNR=537						
VA04	Juan Fernndez	6.62	239		Pn	09 40 00.9	-4.8
PB15	IPOC Station P	7.54	18		Pn	09 40 15.7	-3.0
PB06	IPOC Station P	8.00	16	Pn	Pn	09 40 20.7	-4.1
LVC	Limon Verde	8.27	20	Pn	Pn	09 40 26.1	-2.7
	comp=E,1.4nm,0.3s,baz=214,slow=11,SNR=9.8						
LVC				Sn	Sn	09 42 00.8	-0.8
	comp=E,2.5nm,0.3s,baz=4.6,slow=17,SNR=3.7						
LVC	Limon Verde	8.27	20	eP	Pn	09 40 27.1	-1.7
LVC	Limon Verde	8.27	20	Pn	Pn	09 40 26.4	-2.4
LC01	Cunco	8.44	179	Pn	Pn	09 40 28.8	-2.0
PB07	IPOC Station P	8.88	13	Pn	Pn	09 40 32.3	-4.7
LR03	Panguipulli	9.18	182		Pn	09 40 39.2	-1.7
PLCA	Paso Flores	10.34	174	Pn	Pn	09 40 55.7	-1.2
	comp=E,1.2nm,0.3s,baz=339,slow=12,SNR=36						
PLCA				LR	LR	09 44 21.7	
	comp=E,225nm,18.1s,baz=351,slow=34						
PLCA	Paso Flores	10.34	174	eP	Pn	09 40 56.2	-0.7
PLCA	Paso Flores	10.34	174	Pn	Pn	09 40 55.9	-0.9
LL04	Puerto Octay	10.46	182	Pn	Pn	09 40 55.7	-2.7
PSGCX	Pisagua	10.93	9	Pn	Pn	09 40 59.3	-5.7
TRQA	Tornquist	11.25	135		Pn	09 41 08.5	-0.7
PB16	IPOC Station P	12.26	11		Pn	09 41 22.7	-0.9
ITQB	Itaqui	13.35	91	eP	Pn	09 41 36.6	-1.3
ITQB	Itaqui	13.35	91		Pn	09 41 36.3	-1.6
CPUP	Villa Florida	13.55	76	Pn	Pn	09 41 41.0	+0.3

	comp=E,0.1nm,0.3s,baz=241,slow=10.0,SNR=3.5						
CPUP				LR	LR	09 47 16.3	
	comp=E,2µm,18.4s,baz=255,slow=40						
CPUP	Villa Florida	13.55	76	*e*P	Pn	09 41 40.4	-0.3
CPUP	Villa Florida	13.55	76		Pn	09 41 40.8	+0.1
LPAZ	La Paz	14.52	15	Pn	Pn	09 41 55.6	+1.0
	comp=E,0.8nm,0.3s,baz=182,slow=5.1,SNR=37						
LPAZ	La Paz	14.52	15	*e*P	Pn	09 41 54.6	0.0
LPAZ	La Paz	14.52	15		Pn	09 41 54.2	-0.3
COYC	Coyhaique	15.11	180		Pn	09 42 01.4	-0.4
PLTB	Pedras Altas	15.82	100	*e*P	Pn	09 42 09.8	-1.4
PLTB	Pedras Altas	15.82	100		Pn	09 42 07.8	-3.4
CPSB	Cacapava Do Su	16.02	95	*e*P	Pn	09 42 12.3	-1.3
SIV	San Ignacio	17.52	37	Pn	Pn	09 42 32.1	-0.6
	comp=E,3.2nm,0.3s,baz=218,slow=11,SNR=102						
SIV				LR	LR	09 50 24.1	
	comp=E,894nm,18.5s,baz=223,slow=41						
ITAB	Concordia	17.70	85	*e*P	Pn	09 42 35.2	+0.3
ITAB	Concordia	17.70	85	P	Pn	09 42 35.3	+0.5
AQDB	Aquidauana	17.73	60	*e*P	Pn	09 42 34.9	-0.3
AQDB	Aquidauana	17.73	60	P	Pn	09 42 35.1	-0.1
CNLB	Canela	18.38	92	*e*P	P	09 42 43.0	-0.1
PTGB	Pitanga	18.56	77	*e*P	P	09 42 45.0	-0.2
PTLB	Pontes e Lacer	19.02	41	*e*P	P	09 42 49.9	-0.3
PTLB	Pontes e Lacer	19.02	41	P	P	09 42 50.2	0.0
TER01	Tubaro-SC	20.00	90	*e*P	P	09 43 00.9	0.0
VILB	Vilhena	20.54	35	*e*P	P	09 43 06.8	+0.1
VILB	Vilhena	20.54	35	P	P	09 43 06.4	-0.4
VILB				IAmb	IAmb	09 43 11.7	
	comp=Z,77nm,1.0s						
PCMB	Pacaembu	20.59	70	*e*P	P	09 43 07.3	+0.1
SALV	Santo Antonio	20.80	50	*e*P	P	09 43 09.1	-0.4
TIJ01	Guaruva-PR	20.95	82	*e*P	P	09 43 11.5	+0.3
FRTB	Fartura	21.20	76	*e*P	P	09 43 14.3	+0.3
ETMB	Extrema	21.21	16	*e*P	P	09 43 14.9	+0.9
ETMB	Extrema	21.21	16	P	P	09 43 14.5	+0.5
ETMB				IAmb	IAmb	09 43 18.7	
	comp=Z,59nm,1.0s						
ITRB	Iturama	22.29	66	*e*P	P	09 43 24.5	-1.1
CZSB	Cruzeiro do Su	22.60	358	*e*P	P	09 43 29.8	+0.9
CZSB	Cruzeiro do Su	22.60	358	P	P	09 43 29.5	+0.6
CZSB				IAmb	IAmb	09 43 45.6	
	comp=Z,77nm,1.0s						
PET01	Itanhaem-SP	22.78	80	*e*P	P	09 43 31.5	+0.7
SAML	Samuel	22.91	23	P	P	09 43 31.7	-0.4
BB19B	Bebedouro	23.07	72	*e*P	P	09 43 32.8	-1.1
RCLB	Rio Claro- Sao	23.29	76	*e*P	P	09 43 35.9	-0.2
PDRB	Porto dos Gac	23.49	40	*e*P	P	09 43 37.1	-0.9
VAO	Valinhos	23.53	78	*e*P	P	09 43 37.7	-0.7
ARAG	Araguaiana, MT	23.61	56	*e*P	P	09 43 37.5	-1.6
ATAH	Atahualpa	23.94	344	P	P	09 43 44.7	+1.9
	comp=Z,4.1nm,0.7s,baz=99,slow=6.4,SNR=3.6						
USHA	Ushuaia	24.52	175	P	P	09 43 48.0	+0.8
	comp=Z,15nm,0.7s,baz=24,slow=10,SNR=6.4						
USHA				LR	LR	09 54 27.7	
	comp=Z,410nm,19.3s,baz=358,slow=39						
PARB	Paraibuna	24.53	80	*e*P	P	09 43 47.7	-0.1
CLDB	Colider	24.62	41	*e*P	P	09 43 48.4	-0.1
IPMB	Ipameri, GO	24.93	66	*e*P	P	09 43 51.0	-0.4
MAN01	Angra dos Reis	26.12	80	*e*P	P	09 44 02.6	+0.4
TBTG	Tabatinga, AM	26.18	5	*e*P	P	09 44 03.4	+0.7
TBTG	Tabatinga, AM	26.18	5	P	P	09 44 03.1	+0.4
BSCB	Bom Sucesso	26.22	75	*e*P	P	09 44 03.0	-0.1
BDFB	Brasilia	26.46	62	P	P	09 44 05.1	-0.2
	comp=Z,30nm,0.7s,baz=236,slow=8.1,SNR=39						
BDFB				LR	LR	09 55 17.2	
	comp=Z,318nm,20.4s,baz=283,slow=38						
BDFB	Brasilia	26.46	62	P	P	09 44 05.0	-0.3
BDFB				IAmb	IAmb	09 44 06.0	
	comp=Z,33nm,0.8s						
SNDB	Serra Nova Dou	26.57	51	*e*P	P	09 44 06.0	-0.1
VAS01	Vassouras-RJ	26.80	79	*e*P	P	09 44 08.4	+0.2
DUB01	Friburgo-RJ	27.78	80	*e*P	P	09 44 17.4	+0.3
NPGB	Novo Progresso	28.03	37	*e*P	P	09 44 18.4	-0.9
DIAM	Diamantina, MG	28.41	71	*e*P	P	09 44 23.4	+0.5
PEXB	Peixe	28.54	55	*e*P	P	09 44 24.2	+0.4
MC01	Montes Claros	29.03	68	*e*P	P	09 44 27.9	-0.4
MACA	Manacapuru-AM	29.16	24	*e*P	P	09 44 29.7	+0.3
MACA	Manacapuru-AM	29.16	24	P	P	09 44 29.1	-0.3
MACA				IAmb	IAmb	09 44 38.4	
	comp=Z,22nm,0.7s						
JANB	Januaria	29.66	65	*e*P	P	09 44 33.5	-0.4
ALF01	Guarapari-ES	29.79	78	*e*P	P	09 44 34.6	-0.3
ITTB	Itaituba	30.14	34	*e*P	P	09 44 37.1	-0.9
SJMB	Sao Joao De Ma	30.27	74	*e*P	P	09 44 39.4	+0.2
BSFB	Barra de Sao F	30.49	75	*e*P	P	09 44 41.0	-0.1
RIB01	Linhares ES	30.64	76	*e*P	P	09 44 42.4	-0.1
SDBA	SAO DESIDERIO	30.82	60	*e*P	P	09 44 44.2	0.0
OTAV	Otavalo	31.11	347	*e*P	P	09 44 49.5	+2.4
SMTB	Santa Maria do	31.32	52	*e*P	P	09 44 48.2	-0.2
NAN01	Guarapari, ES	31.56	74	*e*P	P	09 44 50.1	-0.5
PRPB	Parauapebas	31.90	45	*e*P	P	09 44 53.8	+0.2
GUA01	Guaratinga, BA	32.46	72	*e*P	P	09 44 57.9	-0.5
MALB	Monte Alegre	33.03	34	*e*P	P	09 45 03.2	-0.3
CMC01	Camacan, BA	33.33	71	*e*P	P	09 45 06.0	-0.1
NBIT	Itapeh - BA	33.63	70	*e*P	P	09 45 09.1	+0.4
GDU01	Guandu, BA	34.18	68	*e*P	P	09 45 13.0	-0.6
BOAV	Boa Vista	34.44	21	*e*P	P	09 45 15.6	-0.1
BOAV	Boa Vista	34.44	21	IAmb	IAmb	09 45 25.4	
	comp=Z,21nm,0.8s						
NBPN	Ponto Novo - B	35.38	63	*e*P	P	09 45 23.6	-0.3
MCPB	Macapa, AP	35.41	36	*e*P	P	09 45 24.2	+0.1
TMAB	Tom-Au,PA,Br	35.94	44	*e*P	P	09 45 29.4	+0.7
NBLA	Lagarto - SE	37.18	66	*e*P	P	09 45 38.8	-0.5
ZARC	Zaragoza, Cauc	37.81	355	P	P	09 45 43.6	-0.9
NBMA	Muriti-CE	38.68	60	*e*P	P	09 45 52.0	0.0
NBPS	Pedro II - PI	38.75	54	*e*P	P	09 45 52.3	-0.3
SDV	Santo Domingo	39.12	2	*e*P	P	09 45 56.0	+0.2
SDV	Santo Domingo	39.12	2	P	P	09 45 55.6	-0.1
NBAN	Anadia - AL	39.16	66	*e*P	P	09 45 55.3	-0.7
NBPB	Pedra_Branca-C	39.28	57	*e*P	P	09 45 57.2	+0.3
BAUV	El Baul	39.34	6	P	P	09 45 57.0	-0.3
BAUV				IAmb	IAmb	09 46 07.9	
	comp=Z,44nm,1.0s						
MDP	Montagnes des	39.90	31	P	P	09 46 02.0	-0.1
	comp=Z,9.3nm,0.8s,baz=207,slow=11,SNR=1.9						
NBLV	Livramento - P	40.08	62	*e*P	P	09 46 03.7	0.0
SJCC	San Jacinto, C	40.22	355	P	P	09 46 02.9	-1.8
NBPA	Parau_RN	40.97	60	*e*P	P	09 46 11.3	+0.3
BIRV	Birongo	41.05	9	P	P	09 46 10.8	-0.7
BIRV				IAmb	IAmb	09 46 27.0	
	comp=Z,24nm,0.9s						
NBCL	Cascavel-CE	41.12	57	*e*P	P	09 46 12.8	+0.7
NBPV	Pedro Velho	41.92	63	*e*P	P	09 46 19.3	+0.5
COVE	Coope Vega, Sa	42.62	342	P	P	09 46 23.0	-1.3
COVE				IAmb	IAmb	09 46 35.7	
	comp=Z,24nm,0.9s						
BOAB	BOACO BROADBAN	44.62	341	P	P	09 46 39.4	-1.0
BOAB				IAmb	IAmb	09 46 56.8	
	comp=Z,46nm,1.4s						
MATN	Matagalpa	45.15	341	P	P	09 46 44.3	-0.5
MLPR	Magueyes Islan	48.36	6	P	P	09 47 08.3	-1.4
CELP	Cerrillos	48.51	7	P	P	09 47 10.7	-0.2
PDPR	Patillas Dam,	48.52	8	P	P	09 47 10.6	-0.3
PDPR				IAmb	IAmb	09 47 20.7	
	comp=Z,28nm,1.0s						
APG	El Apazote	48.55	336	P	P	09 47 13.2	+1.6
	comp=Z,4.4nm,0.9s,baz=159,slow=8.6,SNR=7.5						
CBYP	Canovanas	48.78	8	P	P	09 47 12.4	-0.7
VNA3	Neumayer Olymp	52.65	159	P	P	09 47 42.0	+0.3
VNA1	Neumayer--Stat	52.95	158	P	P	09 47 43.3	-0.4
VNA2	Neumayer--Watz	53.29	158	P	P	09 47 46.8	+0.5
	baz=293,slow=8.3						
SNAA	Sanae	54.88	159	P	P	09 47 58.3	+0.3
SNAA	Sanae	54.88	159	P	P	09 47 58.5	+0.5
SNAA				IAmb	IAmb	09 47 59.4	
	comp=Z,26nm,1.1s						
QSPA	South Pole Qui	59.79	180	P	P	09 48 33.4	+0.5
QSPA				IAmb	IAmb	09 48 44.6	
	comp=Z,11nm,0.7s						
656A	Willston	60.31	349	P	P	09 48 36.4	-0.2
152A	Waverly Hall	63.91	348	IAmb	IAmb	09 49 09.9	
	comp=Z,15nm,0.9s						
HPIG		65.50	327		P	09 49 13.8	+2.3
W50A	Signal Mountai	66.48	348	IAmb	IAmb	09 49 27.1	
	comp=Z,15nm,0.7s						
V53A	Saluda	66.54	350	IAmb	IAmb	09 49 26.9	
	comp=Z,9.6nm,0.8s						
CPCT	Cooper Cave	66.59	349	IAmb	IAmb	09 49 27.8	
	comp=Z,13nm,0.9s						
TX32	Lajitas Array	66.66	330	IAmb	IAmb	09 49 29.2	
	comp=Z,7.5nm,0.8s						
TXAR	Lajitas Array	66.66	330	P	P	09 49 19.9	+1.3
	comp=Z,1.5nm,0.9s,baz=150,slow=7.0,SNR=12						
TKL	Tuckaleechee C	66.67	350	IAmb	IAmb	09 49 27.9	
	comp=Z,9.4nm,0.7s						
V52A	Sevierville	66.82	350	IAmb	IAmb	09 49 29.8	
	comp=Z,11nm,0.8s						
V51A	Loudon	66.90	349	IAmb	IAmb	09 49 29.5	
	comp=Z,12nm,0.8s						
CLTN	Cedars of Leba	67.53	347	IAmb	IAmb	09 49 33.8	
	comp=Z,13nm,0.8s						
WVT	Waverly	67.86	346	P	P	09 49 25.5	-0.5
WVT				IAmb	IAmb	09 49 37.3	
	comp=Z,12nm,0.8s						
ABTX	Abilene, Hawle	67.96	335	P	P	09 49 26.1	-0.7
ABTX				IAmb	IAmb	09 49 37.2	
	comp=Z,20nm,0.9s						
X37A	Clayton	68.33	339	P	P	09 49 28.3	-0.7
W39A	Magazine	68.43	341	P	P	09 49 28.8	-0.8
T47A	Sharon Grove	68.55	347	P	P	09 49 30.4	+0.1
T47A				IAmb	IAmb	09 49 40.1	
	comp=Z,22nm,1.0s						
LCAR	Lake Charles	68.56	343	P	P	09 49 30.3	-0.1
LCAR				IAmb	IAmb	09 49 40.0	
	comp=Z,17nm,0.7s						
PBMO	Poplar Bluff	69.06	344	P	P	09 49 33.5	+0.1
PBMO				IAmb	IAmb	09 49 43.2	
	comp=Z,12nm,0.8s						
X34A	Smith Ranch, M	69.12	337	P	P	09 49 33.5	-0.5
X34A				IAmb	IAmb	09 49 44.2	
	comp=Z,17nm,0.8s						
SYO	Syowa Base	69.17	159	⇑*e*P	P	09 49 31.4	-2.4
SYO	Syowa Base	69.17	159	⇑*e*sP	P	09 49 36.0	+2.2
U40A	Yellville	69.26	342	P	P	09 49 34.5	-0.3
U40A				IAmb	IAmb	09 49 44.7	
	comp=Z,13nm,0.9s						
MNTX	Cornudas Mount	69.44	330	P	P	09 49 35.3	-0.7
MNTX				IAmb	IAmb	09 49 45.4	
	comp=Z,9.8nm,0.8s						
CCM	Cathedral Cave	70.47	344	P	P	09 49 41.9	-0.3
CCM				IAmb	IAmb	09 49 52.1	
	comp=Z,19nm,0.8s						
S39A	Bolivar	70.65	342	IAmb	IAmb	09 49 53.8	
	comp=Z,23nm,1.2s						
N49A	Columbus Grove	71.89	350	IAmb	IAmb	09 50 00.3	
	comp=Z,15nm,0.8s						
T25A	Trinidad	73.76	334		P	09 50 04.5	+2.3
DBIC	Dimbokro	74.04	72	P	P	09 50 03.9	-0.2
	comp=Z,5.8nm,0.6s,baz=256,slow=2.9,SNR=8.5						
DBIC				LR	LR	10 20 16.1	
	comp=Z,304nm,19.5s,baz=218,slow=34						
DBIC	Dimbokro	74.04	72	P	P	09 50 03.8	-0.2
SMCO	Snowmass	76.53	333		P	09 50 20.8	+2.5
MAW	Mawson	76.58	164	P	P	09 50 17.9	+0.1
	comp=Z,6.7nm,0.9s,baz=274,slow=6.9,SNR=3.2						
MAW				LR	LR	10 23 10.7	
	comp=Z,174nm,21.1s,baz=234,slow=35						
ECSD	EROS Data Cent	77.17	342	IAmb	IAmb	09 50 32.2	
	comp=Z,19nm,1.1s						
KOWA	Kowa	79.16	66	P	P	09 50 33.4	+0.4
KOWA				IAmb	IAmb	09 50 34.9	
	comp=Z,18nm,1.0s						
SPR3	Spring Creek 3	79.53	328	P	P	09 50 34.1	-0.8
TSUM	Tsumeb	80.17	106	P	P	09 50 38.8	+0.1
PDAR	Pinedale Array	80.61	333	P	P	09 50 41.8	+1.3
	comp=Z,0.3nm,0.4s,baz=114,slow=3.7,SNR=6.7						
NVAR	Mina Array Bea	80.99	325	P	P	09 50 44.8	+2.1
	comp=Z,0.6nm,0.7s,baz=157,slow=5.5,SNR=4.8						
BOSA	Boshof	81.71	118	P	P	09 50 46.6	-0.2
	comp=Z,3.2nm,0.9s,baz=224,slow=7.0,SNR=3.6						
BOSA				LR	LR	10 22 34.0	
	comp=Z,103nm,20.2s,baz=208,slow=32						
TORD	Torodi Ar. Bea	82.98	70	P	P	09 50 53.7	+0.3
	comp=Z,14nm,0.8s,baz=262,slow=4.8,SNR=64						
TORD				LR	LR	10 26 09.7	
	comp=Z,289nm,18.9s,baz=270,slow=35						
TORD	Torodi Ar. Bea	82.98	70		P	09 50 53.5	+0.1
TORD				IAmb	IAmb	09 50 54.9	
	comp=Z,13nm,0.9s						
ULM	Lac du Bonnet	83.07	345	P	P	09 50 56.6	+3.6
	comp=Z,2.0nm,0.6s,baz=157,slow=7.7,SNR=2.0						
CASY	Casey	83.58	181	P	P	09 50 56.2	+0.6
CASY				IAmb	IAmb	09 51 06.8	
	comp=Z,9.3nm,0.8s						
YBH	Yreka Blue Hor	85.69	324	P	P	09 51 09.8	+3.2
	comp=Z,2.1nm,1.1s,baz=139,slow=11,SNR=1.6						
ESDC	Sonseca Array	94.09	46	LR	LR	10 33 58.1	
	comp=Z,106nm,18.1s,baz=225,slow=35						
AKASG	Malin Array Be	119.73	46	PKP	PKiKP	09 57 16.8	-0.7
	comp=Z,1.9nm,0.7s,baz=264,slow=2.8,SNR=8.1						
BRTR	Keskin Array B	120.03	59	PKP	PKiKP	09 57 19.1	+0.5
	comp=Z,1.1nm,0.8s,baz=204,slow=5.3,SNR=3.9						
ASAR	Alice Springs	120.74	208	PKP	PKiKP	09 57 19.9	-0.6
	comp=Z,0.3nm,0.7s,baz=126,slow=1.3,SNR=1.8						
WRA	Warramunga Arr	123.86	210	PKP	PKiKP	09 57 26.1	-0.7
	comp=Z,0.5nm,0.8s,baz=172,slow=1.7,SNR=4.6						
ARU	Arti	136.98	38	PKP	PKiKP	09 57 51.0	-0.9
	comp=Z,1.9nm,0.2s,baz=199,slow=5.2,SNR=4.9						
AKTO	Aktyubinsk	137.96	47	PKP	PKiKP	09 57 52.9	-1.2
	comp=Z,1.6nm,0.7s,baz=187,slow=3.5,SNR=6.5						
BVAR	Borovoye Array	144.59	40	PKP	PKPdf	09 58 04.4	+0.5
	comp=Z,2.7nm,0.6s,baz=254,slow=8.9,SNR=6.6						
EKS2	Erkin-Say	150.13	56	P	PKiKP	09 58 20.1	+0.6
	SNR=16						
KURBB	Kurchatov Arra	150.17	39	PKP	PKPdf	09 58 14.4	+1.2
	comp=Z,6.8nm,0.7s,baz=303,slow=3.7,SNR=4.9						
KURBB				PKPbc	PKiKP	09 58 19.2	+0.1
	comp=Z,7.4nm,0.6s,baz=297,slow=3.1,SNR=16						
AML	Almayashu	150.18	57	P	PKiKP	09 58 20.0	0.0
	SNR=9.5						
USP	Ospenovka	150.50	55	P	PKiKP	09 58 20.4	+0.3
	SNR=14						
AAK	Ala-Archa	150.65	56	PKPbc	PKiKP	09 58 21.5	+1.0
	comp=Z,23nm,0.8s,baz=214,slow=1.6,SNR=46						
AAK	Ala-Archa	150.65	56	P	PKiKP	09 58 21.6	+1.0
	SNR=11						
AAK	Ala-Archa	150.65	56		PKiKP	09 58 21.7	+1.1
UCH	Uchtor	150.75	57	P	PKiKP	09 58 22.3	+1.0
	SNR=30						
ZALV	Zalesovo Beam	151.15	29	PKP	PKPdf	09 58 14.3	-0.3
	comp=Z,0.9nm,0.3s,baz=298,slow=3.2,SNR=3.9						
ZALV				PKPbc	PKiKP	09 58 21.1	0.0
	comp=Z,22nm,0.5s,baz=299,slow=3.3,SNR=57						
ZALV	Zalesovo Beam	151.15	29		PKPdf	09 58 14.7	+0.1
ZALV				PKPbc	PKiKP	09 58 21.6	+0.5
ZALV				PKPab	pPKPbc	09 58 30.4	+2.3
TKM2	Tokmak 2	151.37	55	P	PKiKP	09 58 22.8	+0.6
	SNR=13						
ULHL	Ulahol	152.00	56	P	PKiKP	09 58 24.7	+1.2
	SNR=12						
KSH	Kashi	152.36	62	PKPbc	PKPdf	09 58 18.2	+1.1
MJAR	Matsushiro Arr	154.14	292	PKPab	PKPab	09 58 43.5	+2.0
	comp=Z,1.3nm,0.7s,baz=108,slow=2.7,SNR=4.1						
MKAR	Makanchi Array	154.28	43	PKP	PKPdf	09 58 19.9	+0.4
	comp=Z,1.2nm,0.7s,baz=318,slow=4.1,SNR=3.4						
MKAR				PKPbc	pPKPdf	09 58 28.1	+0.7
	comp=Z,3.3nm,0.8s,baz=318,slow=3.3,SNR=6.3						
MKAR	Makanchi Array	154.28	43	PKPdf	PKPdf	09 58 19.1	-0.4
MKAR					pPKPdf	09 58 28.2	+0.9
WMQ	Urumqi	159.08	45	*e*P	PKPdf	09 58 25.3	-0.5
WMQ				pmax	pmax		
	comp=Z,79nm,4.1s						
SONM	Songino Array	162.58	4	PKPab	PKPab	09 59 19.5	+1.8
	comp=Z,0.6nm,0.5s,baz=347,slow=5.9,SNR=3.6						
GTA	Gaotai	168.81	35	*e*PKPbc	PKPdf	09 58 36.8	+1.9
GTA				pPKP	pPKPdf	09 58 45.4	+2.8
GTA				sPKP		09 58 49.6	
HHC	Hu-ho-hao-te	169.21	345	*e*P	PKPdf	09 58 30.3	-4.8
NJ2	Nanjing	170.56	283	*e*P	PKPdf	09 58 34.6	-1.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						

IDC 02 09:40:11.0±2.1**, 28°.60N**×**140°.78E, h0^{km}, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.2**/60**, mbtmp3.6**/4**, MS2.3**/1**, Ms1 2.3**/1**, ms1mx2.0**/63**, Error ellipse: s-maj=81.4km s-min=22.9km az=59.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.95	140	Pn	Pn	09 40 45.2	-0.1
	6.4nm,0.3s,baz=295,slow=18,SNR=2.0						
JCJ				Sn	Sn	09 41 05.4	-5.1
	18nm,0.3s,baz=259,slow=22,SNR=6.3						
JHJ	Hachijo jima 2	4.59	350	LR	LR	09 43 14.7	
	comp=Z,40nm,21.1s,baz=316,slow=40						
MKAR	Makanchi Array	48.56	309	P	P	09 48 55.3	-0.7
	0.7nm,0.9s,baz=104,slow=6.9,SNR=2.1						
WRA	Warramunga Arr	48.65	188	P	P	09 48 57.0	0.0
	1.1nm,0.7s,baz=9.0,slow=8.3,SNR=7.2						
KURBB	Kurchatov Arra	51.10	314	P	P	09 49 15.6	+0.3
	1.0nm,0.4s,baz=90,slow=7.5,SNR=6.7						
ASAR	Alice Springs	52.38	188	P	P	09 49 24.9	-0.2
	0.2nm,0.6s,baz=1.7,slow=5.0,SNR=4.6						

NNC ***02*** *09:53:08.6±1.2, 50°.84N×84°.43E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=16.1km s-min=7.8km az=109.0*

SOME ***02*** *09:53:09.7, 50°.70N×84°.20E, h0^{km}*

ISC 02 09:53:05.7±1.0**, 50°.80N**±0°.03×**84°.24E**±0°.03**, h11^{km}**±13^{km}**, n21, σ2^{s}08**/34**, 6C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UKR	Ust'-Kan	0.37	68	Pg	Pg	09 53 14.2	+1.2
UKR				Sg	Sg	09 53 17.3	-0.6
CHBI	Chibit, Altay	2.14	102	Pg	Pb	09 53 46.4	+1.9
CHBI				Sg	Sb	09 54 11.5	+0.5
ARTR	Artybash	2.16	61	Pg	Pg	09 53 46.4	-0.6
ARTR				Sg	Sb	09 54 10.0	-1.4
AKAR	Aktash	2.21	101	Pg	Pb	09 53 46.4	+0.7
AKAR				Sg	Sb	09 54 13.6	+0.6
DGZ	Jazzator, Alta	2.33	117	Pg	Pg	09 53 50.0	-0.2
DGZ				Sg	Sb	09 54 18.4	+2.0
ULGR	Ulagan, Altay	2.37	93	Pg	Pb	09 53 50.0	+1.6
ULGR				Sg	Sb	09 54 18.7	+0.9
SEM	Semipalatinsk	2.57	263	*e*P	Pg	09 53 58.6	+3.7
	6.7nm,0.2s						
SEM				*e*S	Sg	09 54 33.2	+5.0
	129nm,0.2s						
SEM	Semipalatinsk	2.57	263	Pg	Pg	09 53 55.2	+0.3
	6.7nm,0.2s						
SEM				Lg	Lg	09 54 33.2	
	129nm,0.2s						
ELT	Eltsovka	2.76	26	Pg	Pg	09 53 58.1	-0.3
ELT				Sg	Sg	09 54 33.1	-1.0
TASR	Tashtagol	3.00	48	Pg	Pb	09 54 01.0	+2.1
TASR				Sg	Sb	09 54 38.0	+2.5
ZAA0	Zalesovo Array	3.17	6	⇓Pn	Pb	09 53 59.4	-2.6
	0.3nm,0.4s						
ZAA0				⇓Pg	Pg	09 54 06.4	0.0
	1.1nm,0.4s						
ZAA0				⇑Sn	Sb	09 54 36.9	-3.7
	1.3nm,0.3s						
ZAA0				⇓Lg	Lg	09 54 48.3	
	11nm,0.8s						
ZSN	Zaisan	3.38	173	*e*P	Pg	09 54 09.6	-0.7
	11nm,0.5s						
ZSN				*e*S	Sg	09 54 52.8	-1.3
	50nm,0.7s						
ZSN	Zaisan	3.38	173	Pg	Pb	09 54 06.4	+0.9
	11nm,0.5s						
ZSN				Lg	Lg	09 54 52.8	
	50nm,0.7s						
KURK	Kurchatov	3.57	271	⇑Pn	Pb	09 54 08.3	-0.4
	1.6nm,0.6s						
KURK				⇓Lg	Lg	09 55 04.9	
	27nm,0.4s						
KURBB	Kurchatov Arra	3.63	269	⇑Pn	Pb	09 54 09.9	+0.1
	4.5nm,0.4s						
KURBB				⇑Lg	Lg	09 55 06.0	
	106nm,0.7s						
MK31	Makanchi Array	4.21	199	⇑Pn	Pb	09 54 17.1	-2.5
	0.3nm,0.2s,baz=26,slow=14,SNR=158						
MK31				⇑Lg	Lg	09 55 24.7	
	8.3nm,0.4s,baz=32,slow=28,SNR=8.9						
MAKZ	Makanchi	4.27	201	⇓Pn	Pb	09 54 18.1	-2.5
	3.1nm,0.3s						
MAKZ				⇓Lg	Lg	09 55 27.0	
	50nm,1.1s						
KAPS	Kapalarasan	6.41	213	*e*P	Pg	09 55 08.2	-0.3
	2.1nm,0.5s						
KAPS				*e*S	Sg	09 56 33.3	+1.9
	7.0nm,0.8s						
KAPS	Kapalarasan	6.41	213	Pg	Pg	09 55 05.5	-2.9
	2.1nm,0.5s						
KAPS				Lg	Lg	09 56 33.3	
	7.0nm,0.8s						
BRZS	Berezniki	7.44	268	*e*P	Pg	09 55 26.7	-1.2
	2.4nm,0.7s						
BRZS				*e*S	Sg	09 57 06.0	+1.9
	4.3nm,0.9s						
BRZS	Berezniki	7.44	268	Pg	Pg	09 55 24.4	-3.5
	2.4nm,0.7s						
BRZS				Lg	Lg	09 57 06.0	
	4.3nm,0.9s						

DJA ***02*** *10:00:49.1±0.9, 5°S±6°×15°3E±1°0, h58^{km}±6^{km}, M4.8/15, mB5.1/6, mb4.8/15, MLv5.0/3, Mw(mB)4.4/6*

IDC ***02*** *10:00:50.3±1.6, 5°.00S×152°.42E, h52^{km}±13^{km}, mb4.1/17, mb1 4.3/19, mb1mx4.0/57, mbtmp4.4/19, ML3.1/2, MS3.7/1, Ms1 3.7/1, ms1mx2.9/39, Error ellipse: s-maj=18.6km s-min=10.8km az=110.0*

NEIC ***02*** *10:00:50.2±1.9, 4°.91S±0°.06×152°.55E±0°.09, h45^{km}±2^{km}, mb4.7/34, Error ellipse: s-maj=13.0km s-min=9.4km az=89.0*

ISC 02 10:00:50.8±0.5**, 4°.94S**±0°.05×**152°.51E**±0°.07**, h55^{km}, n96, σ1^{s}13**/97**, mb4.6**/44**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.82	335		Pn	10 01 05.1	-1.3
RABL	Rabaul	0.82	335	P	Pn	10 01 05.2	-1.1
MANU	Manus Island	5.88	299		Pn	10 02 15.1	-0.4
PMG	Port Moresby	6.92	230	P	Pn	10 02 29.0	-0.6
	5.3nm,0.3s,baz=35,slow=7.1,SNR=13						
PMG				S	Sn	10 03 46.5	-0.5
	10nm,0.3s,baz=176,slow=17,SNR=14						
PMG	Port Moresby	6.92	230	Pn	Pn	10 02 30.3	+0.7
PMG				Sn	Sn	10 03 47.6	+0.6
PMG	Port Moresby	6.92	230	P	Pn	10 02 30.1	+0.5
PMG	Port Moresby	6.92	230	P	Pn	10 02 30.1	+0.5
JAY	Jayapura	12.02	281	P	Pn	10 03 39.6	+0.1
	0.8nm,0.3s,baz=59,slow=12,SNR=2.1						
COEN	Coen	12.84	225	Pn	Pn	10 03 49.2	-1.4
SMPI	Sarmi	14.08	282	P	Pn	10 04 09.7	+2.2
	51nm,1.1s						
MTSU	Mount Surprise	15.36	211	P	Pn	10 04 23.9	-0.4
CTAO	Charters Tower	16.24	201		P	10 04 37.0	-0.6
QIS	Mount Isa	19.96	218	P	P	10 05 18.7	+0.1
FAKI	Fak Fak	20.31	275	P	P	10 05 22.6	+0.2
	736nm89nm,1.0s						
FAKI	Fak Fak	20.31	275	P	P	10 05 22.7	+0.3
FAKI	Fak Fak	20.31	275	P	P	10 05 22.8	+0.4
EIDS	Eidsvold	20.36	184	P	P	10 05 23.4	+0.5
EIDS				IAmb	IAmb	10 05 27.1	
	comp=Z,21nm,0.8s						
EIDS	Eidsvold	20.36	184	P	P	10 05 23.3	+0.5
SIJI	Sorong	21.59	280	P	P	10 05 36.0	-0.3
	comp=Z,55nm,0.6s,baz=97,slow=7.2,SNR=35						
SWI	Sorong	21.60	280	P	P	10 05 37.1	+0.8
	comp=Z,1µmcomp=Z,100nm,0.6s						
RMQ	Roma	21.72	189	P	P	10 05 37.9	+0.4
DZM	Mont Dzumac	21.73	143	P	P	10 05 39.0	+1.3
	comp=Z,19nm,0.7s,baz=299,slow=5.8,SNR=18						
DZM	Mont Dzumac	21.73	143	P	P	10 05 39.2	+1.5
DZM				IAmb	IAmb	10 05 40.1	
	comp=Z,39nm,1.0s						
DZM	Mont Dzumac	21.73	143	P	P	10 05 38.6	+0.9
OUENC	Ouen Island, N	22.23	143	P	P	10 05 43.7	+0.7
OUENC				IAmb	IAmb	10 05 45.6	
	comp=Z,52nm,1.3s						
MTN	Manton Dam	22.51	248	P	P	10 05 46.4	+0.3
MTN				IAmb	IAmb	10 06 14.3	
	comp=Z,17nm,0.8s						
DRS	Darwin Rock St	22.61	249	P	P	10 05 48.0	+0.9
QLP	Quilpie	22.93	199	P	P	10 05 50.1	-0.2
WB0	Warramunga Arr	22.99	229	P	P	10 05 49.1	-1.9
WB0				IAmb	IAmb	10 05 54.5	
	comp=Z,25nm,1.1s						
WR0	Warramunga Arr	22.99	228	P	P	10 05 49.4	-1.7
WR0				IAmb	IAmb	10 05 54.6	
	comp=Z,23nm,1.2s						
WB2	Warramunga Arr	23.12	228	P	P	10 05 50.8	-1.6
WB2				IAmb	IAmb	10 05 57.6	
	comp=Z,20nm,0.6s						
WRA	Warramunga Arr	23.13	228	P	P	10 05 50.6	-1.8
	comp=Z,10.0nm,0.6s,baz=52,slow=9.7,SNR=43						
WRA				S	S	10 09 58.6	-1.3
	comp=Z,4.4nm,1.1s,baz=55,slow=17,SNR=7.1						
WRA	Warramunga Arr	23.13	228	P	P	10 05 49.3	-3.2

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INKA  Innaminka          25.29 205 P       P       10 06 12.8 +0.6
      comp=Z,60nm,1.0s
LBMI  Labuha             25.33 279 P       P       10 06 12.4 -0.4
      comp=Z,92nm,0.9s
ARMA  Armidale           25.36 182 P       P       10 06 14.3 +1.3
ARMA                               IAmb    IAmb    10 06 15.7
      comp=Z,26nm,1.1s
KNRA  Kununurra          25.65 244 P       P       10 06 15.8 +0.2
KNRA                               IAmb    IAmb    10 06 19.9
      comp=Z,28nm,0.7s
KNRA  Kununurra          25.65 244 P       P       10 06 16.4 +0.8
AS31  Alice Springs      25.85 222 P       P       10 06 17.7 +0.3
ASAR  Alice Springs      25.85 222 P       P       10 06 15.9 -1.5
      comp=Z,4.3nm,0.7s,baz=56,slow=9.2,SNR=25
ASAR  Alice Springs      25.85 222 P       P       10 06 18.7 +1.3
SANI  Sanana             26.62 275 P       P       10 06 23.9 -0.6
      comp=Z,16nm,0.8s
SANI  Sanana             26.62 275 P       P       10 06 26.2 +1.7
OOD   Oodnadatta         27.80 213 P       P       10 06 34.4 -0.4
STKA  Stephens Creek     28.68 200 P       P       10 06 40.7 -2.0
      comp=Z,3.0nm,0.7s,baz=20,slow=14,SNR=5.8
FITZ  Fitzroy Crossi     29.34 241 P       P       10 06 46.4 -2.2
      comp=Z,8.8nm,0.7s,baz=58,slow=5.7,SNR=18
DAV   Davao City (W)     29.40 294 LR      LR      10 18 14.5
      comp=Z,140nm,18.1s,baz=84,slow=36
GTOI  Gorontalo          29.98 280 P       P       10 06 55.6 +1.2
      comp=Z,6.8nm,0.8s
APSI  Ampana             31.07 276 P       P       10 07 03.7 -0.3
MYLDM Lahad Datu         35.42 286 P       P       10 07 42.0 +0.1
PSA00 Pilbara Seismi     35.71 239 P       P       10 07 42.1 -2.2
OUZ   Omahuta            35.88 150 P       P       10 07 45.7 +0.1
TPUB  Ta-pu              41.91 313 P       P       10 08 36.4 +0.2
TPUB                               IAmb    IAmb    10 08 37.3
      comp=Z,11nm,0.8s
MORW  Morawa             42.03 231 P       P       10 08 36.3 -0.9
MORW                               IAmb    IAmb    10 08 44.5
      comp=Z,37nm,1.5s
KSRS  Korea Array        47.99 334 P       P       10 09 25.4 +1.1
      comp=Z,1.7nm,0.8s,baz=155,slow=7.1,SNR=6.5
KS19  Wonju Array Si     48.06 334 P       P       10 09 27.7 +2.9
NJ2   Nanjing            48.77 321 eP      P       10 09 32.8 +2.4
NJ2                                pmax    pmax
      comp=Z,15nm,0.5s
USRK  Ussuriysk Ar.      52.29 341 P       P       10 09 57.5 +0.8
      comp=Z,1.0nm,0.7s,baz=186,slow=4.5,SNR=4.5
USRK  Ussuriysk Ar.      52.29 341 P       P       10 09 58.3 +1.6
KLR   Kul'dur            56.90 344 P       P       10 10 30.9 +0.9
      comp=Z,1.5nm,0.6s,baz=196,slow=6.3,SNR=5.6
CM31  Chiang Mai Arr     57.67 295 P       P       10 10 36.1  0.0
CMAR  Chiang Mai Arr     57.67 295 P       P       10 10 35.8 -0.4
      comp=Z,2.5nm,0.8s,baz=115,slow=5.3,SNR=10
CMAR  Chiang Mai Arr     57.67 295 P       P       10 10 35.4 -0.7
HHC   Hu-ho-hao-te       58.99 325 eP      P       10 10 49.9 +4.9
HHC                                pmax    pmax
      comp=Z,9.0nm,0.9s
HHC                                pmax    pmax
      comp=Z,100nm,7.3s
LZH   Lanzhou            61.13 316 eP      P       10 11 01.2 +1.4
LZH                                sP      sP      10 11 21.6 +1.2
LZH                                pmax    pmax
      comp=Z,15nm,1.1s
GTA   Gaotai             65.56 317 eP      P       10 11 30.2 +1.1
GTA                                pP      pP      10 11 46.0 +2.2
GTA                                sP      sP      10 11 51.7 +1.8
GTA                                pmax    pmax
      comp=Z,4.0nm,1.2s
SONM  Songino Array      66.29 328 P       P       10 11 33.0 -0.6
      comp=Z,1.2nm,0.7s,baz=128,slow=9.3,SNR=3.9
SONM  Songino Array      66.29 328 P       P       10 11 32.5 -1.1
TAOE  Nuku Hiva Isla     66.90  97 P       P       10 11 37.3 -0.7
VNDA  Vanda              72.70 178 P       P       10 12 12.8 +0.4
      comp=Z,1.4nm,0.9s,baz=293,slow=7.4,SNR=5.0
VNDA  Vanda              72.70 178 P       P       10 12 13.3 +0.9
WMQ   Urumqi             75.65 317 eP      P       10 12 30.5 +0.2
WMQ                                pP      pP      10 12 45.8 +0.2
WMQ                                sP      sP      10 12 55.0 +3.4
WMQ                                pmax    pmax
      comp=Z,15nm,0.9s
WMQ                                pmax    pmax
      comp=Z,170nm,5.1s
MK31  Makanchi Array     80.24 319 P       P       10 12 54.8 -0.9
MKAR  Makanchi Array     80.24 319 P       P       10 12 56.9 +1.2
      comp=Z,3.8nm,0.9s,baz=100,slow=6.6,SNR=13
MKAR  Makanchi Array     80.24 319 P       P       10 12 55.9 +0.2
ZAA0  Zalesovo Array     81.11 326 P       P       10 12 59.5 -0.5
ZALV  Zalesovo Beam      81.11 326 P       P       10 12 60.0 -0.1
      comp=Z,2.1nm,0.6s,baz=118,slow=5.7,SNR=9.5
ZALV  Zalesovo Beam      81.11 326 P       P       10 12 59.3 -0.8
ILAR  Eielson Array      82.40  22 P       P       10 13 05.6 -1.1
      comp=Z,3.3nm,0.8s,baz=255,slow=5.3,SNR=5.5
ILAR  Eielson Array      82.40  22 P       P       10 13 05.4 -1.3
KDJ   Kajisay            82.50 313 P       P       10 13 07.3 -0.6
KDJ                                IAmb    IAmb    10 13 12.0
      comp=Z,9.5nm,1.0s
KSH   Kashi              82.81 311 P       P       10 13 11.9 +2.4
KSH                                pP      pwP     10 13 28.6 +3.5
KSH                                pmax    pmax
      comp=Z,9.0nm,0.8s
BCPM  Bancas Point       83.39  28 P       P       10 13 11.8 -0.1
BOOM  Boomskoye usch     83.48 314 P       P       10 13 13.0  0.0
BOOM                               IAmb    IAmb    10 13 14.7
      comp=Z,4.3nm,0.8s
KURK  Kurchatov          83.70 322 P       P       10 13 13.2 -0.5
KURK                               IAmb    IAmb    10 13 15.1
      comp=Z,7.4nm,1.0s
KURBB Kurchatov Arra     83.73 322 P       P       10 13 12.7 -1.1
      comp=Z,3.0nm,0.8s,baz=110,slow=4.4,SNR=8.9
NIL   Nilore             83.81 304 P       P       10 13 14.2 -0.6
NIL                                IAmb    IAmb    10 13 15.7
      comp=Z,11nm,1.0s
QSPA  South Pole Qui     85.02 180 P       P       10 13 20.1 -0.2
QSPA                               IAmb    IAmb    10 13 20.7
      comp=Z,5.6nm,1.1s
MAW   Mawson             85.33 203 P       P       10 13 21.8 +0.2
MAW                                IAmb    IAmb    10 13 22.5
      comp=Z,6.2nm,1.5s
EPYK  Eagle Plains       86.91  22 P       P       10 13 29.7 +0.2
KKAR  Karatay Array      87.52 313 P       P       10 13 30.8 -2.1
CHGR  Chuyangaron        87.87 309 P       P       10 13 34.3 -0.5
CHGR                               IAmb    IAmb    10 13 41.4
      comp=Z,6.4nm,0.9s
BVAR  Borovoye Array     89.18 323 P       P       10 13 40.1 -0.4
      comp=Z,2.8nm,0.7s,baz=180,slow=8.9,SNR=9.9
GERES GERESS Array B    124.02 328 PKP     PKPdf   10 19 42.5 -0.7
      comp=Z,0.7nm,0.6s,baz=29,slow=3.0,SNR=3.6
GERES GERESS Array B    124.02 328         PKPdf   10 19 42.4 -0.8
TORD  Torodi Ar. Bea    150.07 288 PKPbc   PKPbc   10 20 34.9 -1.6
      comp=Z,9.0nm,0.8s,baz=68,slow=2.6,SNR=26
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*IDC **02** 10:02:06.9±2.0, 35°.66N×69°.50E, h0^{km}, mb4.3/11, mb1 4.3/17, mb1mx3.9/71, mbtmp4.3/17, ML4.1/6, MS3.3/8, Ms1 3.3/8, ms1mx3.0/58, Error ellipse: s-maj=39.8km s-min=17.8km az=151.0*

*NNC **02** 10:02:11.3±4.1, 35°.61N×69°.22E, h67^{km}±34^{km}, mb4.4, mpv4.7, Error ellipse: s-maj=48.0km s-min=13.3km az=160.0*

*MOS **02** 10:02:14.4±1.0, 36°.08N×69°.44E, h50^{km}, mb4.5/12, Error ellipse: s-maj=9.0km s-min=4.1km az=73.7*

*BJI **02** 10:02:14.0±0.0, 36°.00N×69°.30E, h40^{km}, mB4.7/14, mb4.6/18, ML4.5/3, Ms4.2/7, Ms7 3.8/9*

*NEIC **02** 10:02:15.3±1.7, 35°.95N±0°.05×69°.28E±0°.08, h45^{km}±10^{km}, mb4.4/12, Error ellipse: s-maj=9.1km s-min=7.6km az=105.0*

ISC 02 10:02:15.0±0.5**, 35°.87N**±0°.05×**69°.27E**±0°.04**, h50**^{km}**, n161,** σ**2^{s}34**/185**, mb4.3**/25**, MS3.5**/10**, 8C-10D, Hindu Kush region**

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Code  Station Name          Δ°   AZ°    Phase ID            Time     Res
                                   Op      ISC       h  m  s     ISC
KBL   Kabul               1.34 188 PN      Pn      10 02 39.4 +1.9
KBL   Kabul               1.34 188         Pn      10 02 39.4 +1.9
CHGR  Chuyangaron         2.79 358         Pn      10 02 56.4 -0.8
CEP   Cherat              2.98 132 P       Pn      10 03 04.6 +4.7
CEP                                S       Sn      10 03 49.0  +14
GAR   Garm                3.24  15 Pn      Pn      10 03 03.2 -0.2
NIL   Nilore              3.96 123 PN      Pn      10 03 14.7 +1.5
NIL   Nilore              3.96 123         Pn      10 03 14.7 +1.5
CHCP  Chirah Chowk        3.96 123 P       Pn      10 03 17.3 +4.0
DRK   Karamyk             4.13  28         Pn      10 03 14.9 -0.9
BTK   Batken              4.36  16 PN      Pn      10 03 19.8 +1.0
BTK   Batken              4.36  16         Pn      10 03 19.8 +1.0
IUG   Iuzhnay             6.30   5 eP      Pn      10 03 43.9 -1.5
      baz=4.3
IUG   Iuzhnay             6.30   5 ePN     Pn      10 03 43.8 -1.5
KSH   Kashi               6.45  54 P       Pn      10 03 43.5 -3.9
KSH                                S       Sn      10 04 52.3 -7.4
KSH                                smax    smax
      comp=N,380nm,0.5s
KSH                                smax    smax
      comp=E,330nm,0.5s
KSH                                LR      LR
      comp=Z,820nm,9.3s
DHRM  DHARAMSHALA         6.86 120 eP      Pn      10 03 56.4 +3.2
DHRM                               eS      Sn      10 05 14.0 +3.9
DHRM                               IAML            10 05 16.4
      comp=E,302nm,0.6s
DHRM                               IAML            10 05 16.7
      comp=N,405nm,0.7s
AML   Almayashu           7.14  28 P       Pn      10 03 56.6 -0.6
      SNR=82
BRLS  Borolday            7.17   3 eP      Pn      10 03 52.1 -5.0
      baz=1.7
DZA   Taraz               7.20  12 eP      Pn      10 03 56.4 -1.3
      baz=12
DZA   Taraz               7.20  12 ePN     Pn      10 03 56.3 -1.3
KKAR  Karatay Array       7.29   7 PN      Pn      10 03 57.8 -1.1
KKAR  Karatay Array       7.29   7 Pn      Pn      10 03 57.8 -1.1
UCH   Uchtor              7.55  31 P       Pn      10 04 02.3 -0.5
      SNR=69
EKS2  Erkin-Say           7.63  26 P       Pn      10 04 02.9 -0.7
      SNR=22
AAK   Ala-Archa           7.88  29 Pn      Pn      10 04 06.9 -0.3
      comp=N,13nm,0.3s,baz=174,slow=4.9,SNR=59
AAK                                Sn      Sn      10 05 31.6 -3.4
      comp=N,3.0nm,0.3s,baz=330,slow=20,SNR=1.6
AAK                                LR      LR      10 07 28.2
      comp=N,149nm,20.1s,baz=216,slow=40
AAK   Ala-Archa           7.88 29c iP      Pn      10 04 06.2 -0.9
AAK   Ala-Archa           7.88  29 Pn      Pn      10 04 06.5 -0.6
FRU1  Bishkek             8.08  29 P       Pn      10 04 09.3 -0.5
FRU1  Bishkek             8.08  29 Pn      Pn      10 04 09.3 -0.5
KBK   Karagaybulak        8.09  31 P       Pn      10 04 10.1 +0.2
      SNR=22
SMLA  Simla               8.12 123 eP      Pn      10 04 12.3 +2.1
SMLA                               eS      Sn      10 05 41.3 +0.8
SMLA                               IAML            10 05 45.8
      comp=N,215nm,0.4s
SMLA                               IAML            10 05 51.1
      comp=E,192nm,0.4s
CHMS  Chumysh             8.29  29 P       Pn      10 04 12.8 +0.2
      SNR=10
ULHL  Ulahol              8.37  38 P       Pn      10 04 13.3 -0.5
      SNR=24
BOOM  Boomskoye usch      8.40  36 P       Pn      10 04 13.2 -1.0
BOOM  Boomskoye usch      8.40  36         Pn      10 04 13.2 -1.0
USP   Ospenovka           8.42  27 P       Pn      10 04 13.6 -0.8
      SNR=21
TKM2  Tokmak 2            8.58  33 P       Pn      10 04 16.3 -0.4
      SNR=24
TKM2  Tokmak 2            8.58  33 ⇑P      Pn      10 04 15.4 -1.3
      comp=E,13nm,0.5s
TKM2                               ⇓S      Sn      10 05 55.1 +2.9
      comp=E,15nm,0.8s
SGDS  Sogindy             8.63  27 eP      Pn      10 04 15.1 -2.2
      comp=E,3.9nm,0.5s,baz=27
KDJ   Kajisay             8.78  42 P       Pn      10 04 18.6 -0.8
KDJ   Kajisay             8.78  42         Pn      10 04 18.6 -0.8
TARG  Taragay, Kyrgy      8.87  46         Pn      10 04 20.0 -0.8
GEYT  Alibeck             9.16 286 Pn      Pn      10 04 23.6 -1.0
      comp=E,2.2nm,0.3s,baz=125,slow=13,SNR=11
GEYT                               Sn      Sn      10 06 03.1 -3.2
      comp=E,4.1nm,0.3s,baz=104,slow=24,SNR=2.4
GEYT                               LR      LR      10 09 04.4
      comp=E,65nm,20.9s,baz=90,slow=44
GYA0B ALIBECK ARRAY       9.16 286 ⇑P      Pn      10 04 24.1 -0.5
GYA0B                              ⇑S      Sn      10 06 02.4 -3.9
GYA0B ALIBECK ARRAY       9.16 286 Pn      Pn      10 04 22.1 -2.5
TNSS  Tian-Shan           9.30  37 eP      Pn      10 04 24.7 -2.0
      baz=37
AAA   Alma-Ata            9.41  37 eP      Pn      10 04 26.1 -1.9
      baz=36
AAA   Alma-Ata            9.41  37 eP      Pn      10 04 26.1 -1.9
KNDC  Almaty              9.44  37 P       Pn      10 04 28.2 -0.2
KNDC                               S       Sn      10 06 15.8 +2.7
KNDC  Almaty              9.44  37 ⇑P      Pn      10 04 28.2 -0.2
      comp=E,69nm,0.3s
KNDC                               ⇑S      Sn      10 06 15.8 +2.7
      comp=E,42nm,0.5s
MDOK  Medeo               9.44  37 eP      Pn      10 04 26.9 -1.6
      baz=37
MDOK  Medeo               9.44  37 eP      Pn      10 04 26.9 -1.6
MDOK  Medeo               9.44  37 P       Pn      10 04 27.6 -0.8
      comp=E,36nm,0.5s
MDOK                               S       Sn      10 06 17.6 +4.4
      comp=E,14nm,0.7s
KUU   Kurty               9.68  32 eP      Pn      10 04 29.4 -2.2
      comp=E,3.6nm,0.6s,baz=32
KUU   Kurty               9.68  32 eP      Pn      10 04 29.4 -2.2
KUU                                pmax    pmax
      comp=Z,4.0nm,0.6s
PRZ   Przheval'sk         9.69  44 P       Pn      10 04 30.7 -1.2
PRZ   Przheval'sk         9.69  44         Pn      10 04 30.7 -1.2
NDI   New Delhi           9.82 135 eP      Pn      10 04 35.1 +1.5
NDI                                eP      Pn      10 04 35.5 +1.9
NDI                                eS      Sn      10 06 19.7 -2.8
NDI                                eS      Sn      10 06 21.5 -1.0
KUDL  Kundal              9.84 139 eP      Pn      10 04 34.1 +0.3
KUDL                               eS      Sn      10 06 20.4 -2.4
KUDL                               IAML            10 06 26.1
      comp=N,66nm,0.2s
BTLS  Baital              9.86  20 eP      Pn      10 04 32.6 -1.4
      baz=20
BTLS  Baital              9.86  20 eP      Pn      10 04 32.6 -1.4
SATY  Saty               10.07  42 eP      Pn      10 04 34.7 -2.4
      baz=42
SATY  Saty               10.07  42 eP      Pn      10 04 34.6 -2.4
SONA  Sohna              10.08 137 eS      Sn      10 06 28.2 -0.5
UZB   Uzynbulak          10.47  43 eP      Pn      10 04 39.1 -3.4
      comp=N,2.7nm,0.5s,baz=43
UZB   Uzynbulak          10.47  43 eP      Pn      10 04 39.0 -3.4
UZB                                pmax    pmax
      comp=Z,3.0nm,0.5s
KPKS  Kokpek             10.50  41 eP      Pn      10 04 40.2 -2.6
      comp=Z,4.3nm,0.7s,baz=41
KPKS  Kokpek             10.50  41 eP      Pn      10 04 40.2 -2.6
KPKS                               pmax    pmax
      comp=Z,4.0nm,0.7s
ARXS  Arharly            10.60  36 eP      Pn      10 04 41.8 -2.5
OTUK  Ortayu             12.58   9 P       Pn      10 05 07.7 -3.4
OTUK  Ortayu             12.58   9 ⇓P      Pn      10 05 07.7 -3.4
      comp=Z,5.9nm,0.9s
BRZS  Berezniki          14.32   9 eP      Pn      10 05 33.8 -1.0
      baz=8.6
BRZS  Berezniki          14.32   9 eP      Pn      10 05 33.8 -1.0
DANN  Dangsing           14.38 117 eP      Pn      10 05 33.6 -2.4
      comp=Z,15nm,0.3s
BHPL  Bhopal             14.44 148 eP      Pn      10 05 36.3 -0.3
BHPL                               eS      Sn      10 08 08.9 -6.4
BHPL                               IAML            10 08 27.3
      comp=E,33nm,0.2s
MAKZ  Makanchi           14.49  37 P       Pn      10 05 33.9 -3.2
MAKZ  Makanchi           14.49  37 ⇑P      Pn      10 05 33.4 -3.7
      comp=E,13nm,1.3s
MAKZ  Makanchi           14.49  37 Pn      Pn      10 05 33.9 -3.2
KOLN  Koldanda           14.61 120 eP      Pn      10 05 36.6 -2.3
      comp=E,14nm,0.3s
MK31  Makanchi Array     14.64  38 P       Pn      10 05 35.6 -3.4
MK31  Makanchi Array     14.64  38 ⇓P      Pn      10 05 34.3 -4.7
      comp=E,8.7nm,0.8s,baz=220,slow=13,SNR=18
MK31  Makanchi Array     14.64  38         Pn      10 05 35.6 -3.4
MKAR  Makanchi Array     14.64  38 Pn      Pn      10 05 35.6 -3.4
      comp=E,0.5nm,0.3s,baz=220,slow=14,SNR=21
MKAR                               LR      LR      10 12 09.2
      comp=E,67nm,21.5s,baz=233,slow=41
MKAR  Makanchi Array     14.64  38 P       Pn      10 05 35.4 -3.6
MKAR  Makanchi Array     14.64  38 Pn      Pn      10 05 35.4 -3.6
AB31  Akbulak array      15.02 336 ⇓P      Pn      10 05 39.9 -4.0
      comp=E,4.3nm,0.5s,baz=155,slow=13,SNR=96
ABKAR Akbulak array      15.02 336 Pn      Pn      10 05 40.1 -3.9
ABKAR Akbulak array      15.02 336 Pn      Pn      10 05 40.1 -3.9
GKN   Gorkha             15.21 117 eP      Pn      10 05 43.9 -2.8
      comp=E,42nm,0.4s
DMN   Daman              15.78 117 eP      Pn      10 05 51.9 -2.2
      comp=E,29nm,0.4s
KKN   Kakani             15.80 116 eP      Pn      10 05 51.6 -2.8
      comp=E,52nm,0.6s
PKIN  Phulchoki          16.01 117 eP      Pn      10 05 54.8 -2.3
      comp=E,33nm,0.5s
PKI   Pulchoki           16.02 117 eP      Pn      10 05 55.0 -2.3
      comp=E,40nm,0.5s
GUN   Gumba              16.17 115 eP      Pn      10 05 57.4 -1.8
      comp=E,43nm,0.5s
KURBB Kurchatov Arra     16.20  22 Pn      Pn      10 05 53.7 -5.4
      comp=E,0.1nm,0.3s,baz=213,slow=11,SNR=1.8
KURBB Kurchatov Arra     16.20  22 ⇓P      P       10 05 59.8 -1.7
      comp=E,13nm,0.7s
WMQ   Urumqi             16.21  55 eP      P       10 06 02.1 +0.4
WMQ                                sP      pP      10 06 13.6 -0.3
WMQ                                pmax    pmax
      comp=E,30nm,0.9s
WMQ                                pmax    pmax
      comp=E,210nm,4.7s
KURK  Kurchatov          16.31  22 P       Pn      10 05 57.0 -3.4
KURK                               pmax    pmax
      comp=Z,8.0nm,0.8s
KURK  Kurchatov          16.31  22 ⇑P      Pn      10 06 00.9 +0.5
      comp=Z,7.7nm,0.7s
KURK  Kurchatov          16.31  22 Pn      Pn      10 05 57.0 -3.4
AKTO  Aktyubinsk         16.68 334 Pn      Pn      10 06 03.9 -1.2
      comp=Z,0.6nm,0.3s,baz=152,slow=10,SNR=13
AKTO                               LR      LR      10 13 10.8
      comp=Z,92nm,20.3s,baz=144,slow=39
AKTO  Aktyubinsk         16.68 334 ⇓P      P       10 06 06.0 -0.9
      comp=Z,13nm,1.1s
BVAR  Borovoye Array     17.17   2 P       Pn      10 06 09.0 -2.2
      comp=Z,1.3nm,0.3s,baz=191,slow=15,SNR=15
BVAR  Borovoye Array     17.17   2 P       Pn      10 06 09.0 -2.2
BRVK  Borovoye           17.20   2 P       Pn      10 06 08.2 -3.4
BRVK                               pmax    pmax
      comp=Z,26nm,1.5s
BRVK  Borovoye           17.20   2 ⇓P      Pn      10 06 10.1 -1.4
      comp=Z,11nm,1.1s
BRVK  Borovoye           17.20   2 P       Pn      10 06 08.2 -3.4
RAMN  Ramite             17.24 116 eP      Pn      10 06 11.9 -0.6
      comp=Z,44nm,0.5s
TAPN  Taplejung          17.84 113 eP      Pn      10 06 19.0 -0.9
ODAN  Odare              17.87 115 eP      Pn      10 06 19.9 -0.4
      comp=Z,52nm,0.7s
DGZ   Jazzator, Alta     19.14  38 eP      P       10 06 30.9 -3.1
DGZ                                pmax    pmax
      comp=Z,7.0nm,0.5s
LSA   Lhasa              19.38 102 P       P       10 06 37.9 +0.7
LSA                                pmax    pmax
      comp=Z,14nm,0.8s
LSA   Lhasa              19.38 102 P       P       10 06 37.9 +0.7
LSA                                IAmb    IAmb    10 06 53.5
      comp=Z,14nm,0.8s
ZAA0  Zalesovo Array     21.09  26 ⇓P      P       10 06 52.6 -2.3
      comp=Z,1.7nm,0.6s
ZAA0  Zalesovo Array     21.09  26 P       P       10 06 53.6 -1.3
ZAA0                               IAmb    IAmb    10 06 58.8
      comp=Z,12nm,0.7s
ZALV  Zalesovo Beam      21.09  26 P       P       10 06 53.6 -1.3
      comp=Z,17nm,0.7s,baz=219,slow=10,SNR=55
ZALV  Zalesovo Beam      21.09  26 i P     P       10 06 54.0 -0.9
ZALV                               pmax    pmax
      comp=Z,17nm,0.7s
ZALV  Zalesovo Beam      21.09  26 P       P       10 06 54.0 -0.9
KBZ   Khabaz             21.66 299 P       P       10 07 05.6 +4.4
      comp=Z,2.6nm,0.7s,baz=97,slow=5.0,SNR=3.8
ARU   Arti               21.81 344 P       P       10 07 05.4 +2.8
      comp=Z,2.5nm,0.2s,baz=149,slow=8.0,SNR=5.9
ARU                                LR      LR      10 16 14.3
      comp=Z,76nm,19.2s,baz=148,slow=38
ARU   Arti               21.81 344d iP     P       10 07 05.5 +2.8
ARU                                                10 07 26.0
ARU                                S       Sn      10 11 05.7 -7.0
ARU                                SS      SnSn    10 11 28.1 -0.5
ARU                                pmax    pmax
      comp=Z,6.0nm,0.9s
KIV   Kislovodsk         21.86 300 eP      P       10 07 04.0 +0.5
KIV                                eS      S       10 11 04.9 +2.6
KIV                                pmax    pmax
      comp=Z,10.0nm,1.0s
KIV                                MLR     MLR
      comp=Z,47nm,14.0s
KIV   Kislovodsk         21.86 300 P       P       10 07 03.6 +0.1
KIV                                IAmb    IAmb    10 07 13.6
      comp=Z,31nm,1.5s
SHL   Shillong           21.94 112 P       P       10 07 05.4 +0.8
SHL                                pmax    pmax
      comp=Z,48nm,0.7s
SHL   Shillong           21.94 112 P       P       10 07 05.4 +0.8
BELG  Belogornoye        22.54 324 P       P       10 07 11.0 +0.5
      comp=Z,17nm,0.7s,baz=320,slow=5.4,SNR=4.1
GTA   Gaotai             24.39  72 eP      P       10 07 31.4 +2.7
GTA                                pP      pP      10 07 43.0 +0.8
GTA                                sP      sP      10 07 49.8 +1.3
GTA                                pmax    pmax
      comp=Z,4.0nm,0.9s
GTA                                pmax    pmax
      comp=Z,44nm,4.5s
GTA                                LR      LR
      comp=Z,79nm,13.4s
GTA                                LR      LR
      comp=Z,100nm,15.6s
GTA                                LR      LR
      comp=Z,120nm,14.2s
TLY   Talaya             29.09  46 LR      LR      10 20 22.0
      comp=Z,127nm,19.3s,baz=250,slow=38
OBN   Obninsk            29.52 321 ⇓eP     P       10 08 15.1 +0.7
OBN                                *PP     pP      10 08 27.0 -0.7
OBN                                *SP     sP      10 08 32.0 -1.8
OBN                                S       S       10 13 01.0 -4.4
OBN                                *SS     sS      10 13 27.0 -1.5
OBN                                pmax    pmax
      comp=Z,7.0nm,0.9s
OBN                                MLR     MLR
      comp=Z,65nm,14.0s
CMAR  Chiang Mai Arr     31.42 116 i P     P       10 08 33.7 +2.2
CMAR                               pmax    pmax
      comp=Z,1.0nm,0.3s
AKASG Malin Array Be     32.26 310 P       P       10 08 39.8 +1.2
      comp=Z,2.1nm,0.5s,baz=87,slow=7.1,SNR=16
AKASG                              LR      LR      10 25 14.5
      comp=Z,38nm,20.0s,baz=290,slow=43
AKASG Malin Array Be     32.26 310 i P     P       10 08 39.9 +1.3
AKASG                              pmax    pmax
      comp=Z,3.0nm,0.5s
AKASG Malin Array Be     32.26 310 P       P       10 08 38.9 +0.3
AKBB  Malin Array Si     32.26 310 i P     P       10 08 38.4 -0.2
HHC   Hu-ho-hao-te       33.30  68 eP      P       10 08 49.6 +1.6
HHC                                pmax    pmax
      comp=Z,9.0nm,0.6s
HHC                                pmax    pmax
      comp=Z,120nm,7.9s
MNK   Minsk              33.97 316 i P     P       10 08 54.6 +1.1
MNK                                i               10 10 09.1
MNK                                i PPP   PPP     10 10 21.3
MNK                                i               10 11 38.0
MNK                                i S     S       10 14 17.9 +3.1
MNK                                i SS    SnSn    10 16 28.9 +4.1
MNK                                i SSS   SSS     10 16 45.2
MNK                                i               10 19 09.4
MNK                                pmax    pmax
      comp=Z,8.0nm,0.7s
MNK                                pmax    pmax
      comp=N,19nm,0.8s
MNK                                pmax    pmax
      comp=E,2.0nm,0.9s
MNK                                MLR     MLR
      comp=E,56nm,22.0s
MNK                                MLR     MLR
      comp=Z,33nm,14.0s
MNK                                MLR     MLR
      comp=N,144nm,17.0s
MNK   Minsk              33.97 316 i P     P       10 08 54.7 +1.2
      comp=E,2.0nm,0.8s
MNK                                i P     P       10 08 54.7 +1.2
      comp=N,19nm,0.8s
MNK                                i P     P       10 08 54.7 +1.2
      comp=Z,8.0nm,0.7s,baz=284
MNK                                i PP    PP      10 10 09.1 -1.9
MNK                                i PPP   PPP     10 10 21.3
MNK                                i PcP   PcP     10 11 38.0 +7.5
MNK                                i S     S       10 14 17.9 +3.1
MNK                                i SS    SnSn    10 16 28.9 +4.2
MNK                                i SSS   SSS     10 16 45.2
MNK                                i LR    LR      10 22 20.1
MNK                                i LRM   MLR     10 24 09.3
      comp=E,56nm,21.7s
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MNK				i LRM	MLR	10 24 22.4	
	comp=Z,33nm,13.8s						
MNK				i LRM	MLR	10 24 34.0	
	comp=N,144nm,17.4s						
BURAR	Bucovina Array	34.46	304	P	P	10 08 57.5	-0.4
BUR08	Bucovina Ar. S	34.47	304	P	P	10 08 57.0	-1.1
NRIK	Noril'sk	35.01	11	P	P	10 09 00.5	-1.8
	comp=N,3.6nm,0.6s,baz=209,slow=5.1,SNR=2.7						
NRIK	Noril'sk	35.01	11	i P	P	10 09 00.7	-1.6
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NRIK	Noril'sk	35.01	11	P	P	10 09 02.1	-0.1
NRIK				IAmb	IAmb	10 10 00.4	
	comp=Z,4.8nm,0.8s						
FINES	FINESS Array B	37.24	327	P	P	10 09 22.6	+1.2
	comp=Z,5.2nm,1.0s,baz=98,slow=9.8,SNR=4.2						
FINES	FINESS Array B	37.24	327	i P	P	10 09 21.7	+0.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	37.24	327	P	P	10 09 21.9	+0.5
NJ2	Nanjing	40.96	81	eP	P	10 09 53.4	+0.6
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
ARCES	ARCESS Array B	41.20	338	P	P	10 09 55.1	+0.8
	comp=Z,2.5nm,0.8s,baz=108,slow=6.5,SNR=5.1						
CLL	Collm	42.50	309	eP	P	10 10 08.0	+2.8
CLL	Collm	42.50	309	eP	P	10 10 08.0	+2.8
CLL				Lm	MLR	11 24 00.0	
	comp=Z,200nm,18.6s						
HFS	Hagfors	42.70	323	P	P	10 10 07.7	+1.0
	comp=Z,3.4nm,0.6s,baz=108,slow=9.3,SNR=7.7						
ZEA	Zeya	43.53	47	eP	P	10 10 21.4	+7.9
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NB2	NORSAR Subarra	44.05	324	P	P	10 10 17.6	0.0
	comp=Z,1.0nm,0.5s,baz=100,slow=7.9						
NOA	NORSAR Array B	44.05	324	P	P	10 10 17.9	+0.3
	comp=Z,1.7nm,0.7s,baz=99,slow=8.0,SNR=5.1						
YAK	Yakutsk	45.29	35	i P	P	10 10 27.7	+0.3
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
KLR	Kul'dur	46.65	53	i P	P	10 10 37.4	-0.9
KLR				pmax	pmax		
	comp=Z,13nm,1.8s						
TIXI	Tiksi	46.88	22	P	P	10 10 39.7	-0.1
	comp=Z,1.2nm,0.3s,baz=281,slow=2.8,SNR=13						
TIXI	Tiksi	46.88	22	i P	P	10 10 38.7	-1.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIXI	Tiksi	46.88	22	P	P	10 10 40.0	+0.2
TIXI				IAmb	IAmb	10 10 46.6	
	comp=Z,4.1nm,0.8s						
TORD	Torodi Ar. Bea	64.30	268	P	P	10 12 45.6	0.0
	comp=Z,1.9nm,0.7s,baz=43,slow=5.9,SNR=13						
TORD	Torodi Ar. Bea	64.30	268	IAmb	IAmb	10 14 16.8	
	comp=Z,5.1nm,1.6s						
GUMO	Guam	70.58	87	LR	LR	10 46 56.2	
	comp=Z,66nm,21.0s,baz=340,slow=38						
ILAR	Eielson Array	75.76	15	P	P	10 13 55.4	+0.4
	comp=Z,0.6nm,0.6s,baz=291,slow=4.6,SNR=1.2						

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*IDC **02** 10:05:24.4±1.9, 61°.74N×147°.42W, $h38^{km}\pm16^{km}$, mb3.9/24, mb1 4.1/28, mb1mx3.9/66, mbtmp4.2/28, ML4.0/5, MS3.6/4, Ms1 3.6/4, ms1mx3.1/51, Error ellipse: s-maj=19.9km s-min=9.5km az=48.0*

*NEIC **02** 10:05:25.3±1.3, 61°.71N±0°.02×147°.29W±0°.04, $h42^{km}\pm5^{km}$, Error ellipse: s-maj=3.6km s-min=2.5km az=160.0*

*NEIC **02** 10:05:25, 61°.69N×147°.26W, $h48^{km}$, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.31; $M_{\theta\theta}$-5.16; $M_{\phi\phi}$6.47; $M_{r\theta}$1.19; $M_{\theta\phi}$5.51; $M_{\phi r}$0.91; Fault plane solution: $M_0$8.22000×10^{15} NP1:ϕ_s336.61000°, δ79.70000°, λ-180.00000°. NP2:ϕ_s246.61000°, δ90.00000°, λ-10.30000°. Principal axes: T 8.8239, Plg7.0000°, Azm292.0000°; N -1.3718, Plg80.0000°, Azm67.0000°; P -7.4521, Plg7.0000°, Azm201.0000°;*

*AEIC **02** 10:05:25.9±1.2, 61°.70N±0°.02×147°.27W±0°.05, $h36^{km}\pm6^{km}$, ML4.6/193, mb4.4/3(NEIC), ML4.8/164(NEIC), Mwr4.5/193(NEIC) Error ellipse: s-maj=3.5km s-min=3.1km az=172.0*

ISC 02 10:05:24.6±0.5, **61°.72N**±0°.02×**147°.26W**±0°.02, **$h39^{km}$**$\pm4^{km}$, **n326**, σ**1^s05**/344, **mb4.3**/30, **MS4.1**/3, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCM	Sheep Creek Mo	0.12	344		Pn	10 05 31.8	-2.2
SCM					Sn	10 05 37.5	-4.6
SCM	Sheep Creek Mo	0.12	344	P	Pn	10 05 31.7	-2.2
	baz=167,SNR=1000						
SCM				S	Sn	10 05 37.5	-4.6
	baz=167						
SML	Sawmill	0.52	280		Pn	10 05 35.4	-0.3
SML					Sn	10 05 43.6	+0.3
SML				IAML		10 05 44.5	
	comp=N,58µm,0.8s						
SML				IAML		10 05 44.5	
	comp=E,56µm,0.6s						
SML	Sawmill	0.52	280	P	Pn	10 05 35.3	-0.3
	baz=102,SNR=1000						
SML				S	Sn	10 05 43.7	+0.3
	baz=102						
M24K	Tolsona, Glenn	0.64	53		Pn	10 05 37.7	+0.4
M24K					Sn	10 05 48.0	+1.7
M24K	Tolsona, Glenn	0.64	53	P	Pn	10 05 37.6	+0.3
	baz=232,SNR=1000						
M24K				S	Sn	10 05 48.0	+1.7
	baz=232						
KNK	Knik Glacier	0.65	242		Pn	10 05 37.5	+0.1
KNK					Sn	10 05 47.5	+1.0
KNK				IAML		10 05 48.2	
	comp=N,53µm,0.7s						
KNK				IAML		10 05 50.1	
	comp=E,46µm,0.8s						
KNK	Knik Glacier	0.65	242	P	Pn	10 05 37.5	+0.1
	baz=63,SNR=444						
KNK				S	Sn	10 05 47.2	+0.7
	baz=63						
KLU	Klutina	0.68	109		Pn	10 05 37.5	-0.3
KLU				IAML		10 05 47.7	
	comp=N,37µm,0.5s						
KLU	Klutina	0.68	109		Sn	10 05 47.2	-0.1
KLU	Klutina	0.68	109	P	Pn	10 05 37.5	-0.3
	baz=288,SNR=1000						
KLU				S	Sn	10 05 47.2	-0.1
	baz=288						
JPK	Jack Peak	0.74	154		Pn	10 05 38.2	-0.4
VMT	TAPS Tl Valdez	0.77	146		Pn	10 05 38.4	-0.5
GHO	Glory Hole Cre	0.79	274		Pn	10 05 39.3	0.0
GHO				IAML		10 05 51.7	
	comp=E,28µm,1.1s						
GHO				IAML		10 05 51.8	
	comp=N,27µm,0.8s						
GHO	Glory Hole Cre	0.79	274		Sn	10 05 50.7	+0.7
GLI	Glacier Island	0.85	175		Pn	10 05 40.2	+0.1
GLI				IAML		10 05 53.1	
	comp=E,36µm,0.7s						
GLI	Glacier Island	0.85	175		Sn	10 05 52.3	+1.0
GLI	Glacier Island	0.85	175	P	Pn	10 05 40.2	+0.1
	baz=354						
GLI				S	Sn	10 05 52.2	+0.9
	baz=354						
WAT6	Susitna Watana	0.89	346		Pn	10 05 40.2	-0.6
WAT6					Sn	10 05 52.5	-0.1
WAT6	Susitna Watana	0.89	346	P	Pn	10 05 40.4	-0.4
	baz=166,SNR=1000						
WAT6				S	Sn	10 05 52.4	-0.1
	baz=166						
PMR	Palmer	0.90	263		Pn	10 05 40.8	+0.1
PMR				IAML		10 05 53.9	
	comp=E,23µm,0.6s						
PMR	Palmer	0.90	263		Sn	10 05 53.3	+0.8
PMR	Palmer	0.90	263	P	Pn	10 05 40.9	+0.1
	baz=82,SNR=1000						
PMR				S	Sn	10 05 53.0	+0.4
	baz=82						
PS11	TAPS Pump St11	0.92	66		Pn	10 05 41.7	+0.7
PS11					Sn	10 05 55.7	+2.7
DIV	Divide	0.93	129		Pn	10 05 40.6	-0.6
PWL	Port Wells	1.01	211		Pn	10 05 42.7	+0.5
PWL				IAML		10 05 57.7	
	comp=E,29µm,0.3s						
PWL				IAML		10 05 58.9	
	comp=N,24µm,0.5s						
PWL	Port Wells	1.01	211	P	Pn	10 05 42.7	+0.5
	baz=31						
PWL				S	Sn	10 05 56.6	+1.4
	baz=31						
PS12	TAPS Pump St12	1.04	103		Pn	10 05 42.5	-0.2
PS12					Sn	10 05 56.5	+0.5
FID	Port Fidalgo	1.05	158		Pn	10 05 43.1	+0.3
HARP	HAARP	1.20	55		Pn	10 05 45.5	+0.6
HARP	HAARP	1.20	55	P	Pn	10 05 45.5	+0.6
	baz=236,SNR=1000						
HARP				S	Sn	10 06 02.3	+2.4
	baz=236						
N25K	Chitina, Valde	1.27	94		Pn	10 05 46.1	+0.1
N25K				IAML		10 06 05.8	
	comp=E,28µm,0.5s						
N25K	Chitina, Valde	1.27	94	P	Pn	10 05 45.9	-0.1
	baz=275,SNR=1000						
N25K				S	Sn	10 06 01.8	0.0
	baz=275						
WAT7	Susitna Watana	1.34	327		Pn	10 05 47.1	+0.2
RC01	Rabbit Creek A	1.35	243		Pn	10 05 48.1	+1.2
RC01	Rabbit Creek A	1.35	243		Sn	10 06 05.5	+2.0
RC01	Rabbit Creek A	1.35	243	P	Pn	10 05 48.1	+1.2
	baz=62,SNR=1000						
RC01				S	Sn	10 06 05.6	+2.0
	baz=62						
DHY	Denali Highway	1.36	358		Pn	10 05 47.6	+0.4
DHY				IAML		10 06 06.0	
	comp=N,14µm,0.9s						
DHY				IAML		10 06 06.1	
	comp=E,17µm,0.9s						
DHY	Denali Highway	1.36	358		Sn	10 06 05.2	+1.1
DHY	Denali Highway	1.36	358	P	Pn	10 05 47.6	+0.4
	baz=178						
DHY				S	Sn	10 06 04.6	+0.6
	baz=178						
M22K	Willow	1.36	273		Pn	10 05 47.9	+0.9
M22K	Willow	1.36	273	P	Pn	10 05 48.0	+0.9
	baz=91,SNR=1000						
M22K				S	Sn	10 06 05.7	+1.9
	baz=91						
BMRM	Bremner River	1.49	119		Pn	10 05 48.9	0.0
BMRM				IAML		10 06 12.8	
	comp=N,12µm,0.8s						
BMRM				IAML		10 06 13.8	
	comp=E,10µm,0.6s						
BMRM	Bremner River	1.49	119	P	Pn	10 05 49.0	+0.2
	baz=301,SNR=1000						
BMRM				S	Sn	10 06 08.3	+1.3
	baz=301						
PAX	Paxson	1.51	33		Pn	10 05 49.8	+0.6
PAX	Paxson	1.51	33		Sn	10 06 09.2	+1.7
PAX	Paxson	1.51	33	P	Pn	10 05 49.7	+0.6
	baz=214,SNR=1000						
PAX				S	Sn	10 06 08.6	+1.1
	baz=214						
FIS	Fire Island	1.54	249		Pn	10 05 49.9	+0.5
CUT	Chulitna	1.57	297		Pn	10 05 51.2	+1.3
CUT	Chulitna	1.57	297	P	Pn	10 05 51.2	+1.3
	baz=115,SNR=211						
CUT				S	Sn	10 06 11.5	+2.4
	baz=115						
GLB	Gilahina Butte	1.67	98	Pn	Pn	10 05 52.0	+0.6
GLB				IAML		10 06 17.6	
	comp=N,8µm,0.7s						
GOAT	Goat Mountain	1.68	132		Pn	10 05 52.3	+0.9
GOAT					Sn	10 06 13.2	+1.4
O22K	Cooper Landing	1.73	225		Pn	10 05 53.4	+1.4
O22K	Cooper Landing	1.73	225	P	Pn	10 05 52.7	+0.6
	baz=43,SNR=124						
O22K				S	Sn	10 06 15.5	+2.8
	baz=43						
RAGM	Ragged Mountai	1.84	136		Pn	10 05 54.4	+0.8
PS10	TAPS Pump St10	1.84	21		Pn	10 05 55.6	+1.9
RND	Reindeer	1.84	337		Pn	10 05 55.0	+1.2
RND				IAML		10 06 20.9	
	comp=N,13µm,0.7s						
RND				IAML		10 06 24.0	
	comp=E,10µm,1.0s						
SLKM	Skilak Lake	1.88	231		Pn	10 05 55.4	+1.2
SLKM					Sn	10 06 19.3	+2.6
VRDI	Verde Repeater	1.89	103		Pn	10 05 55.3	+0.8
SEW	Seward	1.94	214		Pn	10 05 56.3	+1.3
SEW					Sn	10 06 19.3	+1.1
SEW	Seward	1.94	214	P	Pn	10 05 55.4	+0.3
	baz=33,SNR=169						
SEW				S	Sn	10 06 20.3	+2.2
	baz=33						
HMT	Hamilton	2.02	132		Pn	10 05 57.2	+1.1
MENT	Mentasta	2.06	52		Pn	10 05 57.4	+0.8
MENT				IAML		10 06 27.6	
	comp=E,10µm,0.6s						
MENT				IAML		10 06 41.5	
	comp=N,8µm,0.7s						
MENT	Mentasta	2.06	52		Sn	10 06 23.9	+2.9
MCARA	McCarthy VSAT	2.06	98		Pn	10 05 57.8	+1.2
MCARA	McCarthy VSAT	2.06	98	IAML		10 06 31.2	
	comp=N,10µm,0.7s						
MCARA	McCarthy VSAT	2.06	98	P	Pn	10 05 57.6	+1.0
	baz=281,SNR=1000						
MCARA				S	Sn	10 06 21.2	+0.2
	baz=281						
CAPN	Captain Cook N	2.11	245	P	Pn	10 05 59.8	+2.5
	baz=62,SNR=7.0						
M26K	Nabesna, AK	2.12	69		Pn	10 05 58.5	+0.9
M26K	Nabesna, AK	2.12	69	P	Pn	10 05 58.4	+0.9
	baz=252,SNR=185						
MCK	McKinley	2.16	340		Pn	10 06 00.1	+2.0
MCK				IAML		10 06 28.3	
	comp=N,9µm,0.9s						
MCK				IAML		10 06 29.8	
	comp=E,8µm,0.6s						
MCK	McKinley	2.16	340		Sn	10 06 26.4	+2.8
MCK	McKinley	2.16	340	P	Pn	10 06 00.1	+2.0
	baz=159,SNR=1000						
BERG	Berg Lake	2.19	126		Pn	10 05 58.7	+0.3
NICHA	Nichawak Mount	2.19	131		Pn	10 05 59.5	+1.1
STLK	Strandline Lak	2.20	266		Pn	10 06 00.1	+1.5
CRQM	Cirque	2.21	114		Pn	10 06 00.1	+1.2
CRQM	Cirque	2.21	114	IAML		10 06 34.5	
	comp=E,8µm,0.7s						
CRQM				IAML		10 06 43.2	
	comp=N,9µm,0.8s						
TRF	Thorofare Moun	2.23	322		Pn	10 06 00.5	+1.4
TRF				IAML		10 06 29.6	
	comp=E,8µm,0.4s						
TRF				IAML		10 06 40.1	
	comp=N,6µm,0.9s						
TRF	Thorofare Moun	2.23	322	P	Pn	10 06 00.6	+1.5
	baz=140						
L26K	Log Cabin Wild	2.24	53		Pn	10 06 00.4	+1.2
L26K	Log Cabin Wild	2.24	53	P	Pn	10 06 00.4	+1.2
	baz=236,SNR=598						
KAIM	Kayak Island	2.28	141	Pn	Pn	10 06 00.2	+0.6
KAIM	Kayak Island	2.28	141	P	Pn	10 06 00.1	+0.5
	baz=323						
RIDG	Independent Ri	2.31	28		Pn	10 06 01.7	+1.6
RIDG				IAML		10 06 42.7	
	comp=E,5µm,0.8s						
RIDG	Independent Ri	2.31	28	P	Pn	10 06 01.7	+1.6
	baz=210,SNR=1000						
SPCG	Spurr Capps Gl	2.32	261		Pn	10 06 02.1	+1.8
SPCG					Sn	10 06 27.1	-0.6
KHIT	Khitrov Hills	2.33	122		Pn	10 06 01.7	+1.2
Q23K	Middleton Isla	2.34	169		Pn	10 06 01.4	+0.9
Q23K				IAML		10 06 47.2	
	comp=N,5µm,0.8s						
Q23K	Middleton Isla	2.34	169	P	Pn	10 06 01.9	+1.4
	baz=349,SNR=8.6						
MID	Middleton Isla	2.35	168		Pn	10 06 01.7	+1.1
MID				IAML		10 06 47.2	
	comp=N,6µm,1.4s						
TGL	Tana Glacier	2.35	112		Pn	10 06 01.1	+0.3
TGL				IAML		10 06 38.8	
	comp=E,8µm,0.6s						
PTPK	Patty Peak	2.36	101		Pn	10 06 01.9	+0.8
SPU	Mount Spurr	2.37	259		Pn	10 06 01.8	+1.0
SUCK	Suckling Hills	2.37	133		Pn	10 06 01.6	+0.7
SUCK				IAML		10 06 42.1	
	comp=N,5µm,0.5s						
SUCK				IAML		10 06 47.6	
	comp=E,5µm,1.4s						
GRIN	Grindle Hills	2.40	125		Pn	10 06 02.5	+1.1
SPCN	Chakachatna No	2.42	260		Pn	10 06 03.0	+1.4
DOT	Dot Lake	2.43	36		Pn	10 06 02.8	+1.0
SPCR	Spurr Chakacha	2.43	260	P	Pn	10 06 02.7	+0.8
	baz=76						
BALM	Baldy	2.46	104		Pn	10 06 02.7	+0.4
WAX	Waxell Ridge	2.49	119		Pn	10 06 03.1	+0.5
KIAG	Kiagna River	2.50	107		Pn	10 06 03.3	+0.5
KTH	Kantishna Hill	2.50	319		Pn	10 06 04.3	+1.6
KTH				IAML		10 06 36.9	
	comp=E,6µm,0.9s						
KTH				IAML		10 06 38.1	
	comp=N,5µm,0.6s						
BGLC	Bering Glacier	2.52	128	P	Pn	10 06 04.7	+1.8
	baz=311,SNR=8.0						
PPLA	Purkeypile	2.59	299		Pn	10 06 05.0	+1.0
PPLA	Purkeypile	2.59	299	P	Pn	10 06 05.1	+1.0
	baz=115,SNR=403						
M27K	Edge Creek, AK	2.62	74		Pn	10 06 06.2	+1.8
M27K	Edge Creek, AK	2.62	74	P	Pn	10 06 06.1	+1.8
	baz=258,SNR=149						
BRSE	Bradley Lake S	2.62	222		Pn	10 06 05.5	+1.1
BRSE	Bradley Lake S	2.62	222	P	Pn	10 06 04.8	+0.4
	baz=40,SNR=117						
ISLE	Juniper Island	2.64	113		Pn	10 06 04.7	0.0
ISLE				IAML		10 06 54.1	
	comp=E,5µm,0.8s						
ISLE				IAML		10 06 55.4	
	comp=N,6µm,0.9s						
BRLK	Bradley Lake	2.65	224		Pn	10 06 05.2	+0.4
BWN	Browne	2.66	339		Pn	10 06 06.0	+1.2
HDA	Harding Lake	2.70	3		Pn	10 06 06.9	+1.5
HDA	Harding Lake	2.70	3	IAML		10 06 44.3	
	comp=N,4µm,0.6s						
HDA	Harding Lake	2.70	3	P	Pn	10 06 06.3	+0.8
	baz=183,SNR=749						
SCRK	Sand Creek	2.72	32	Pn	Pn	10 06 06.2	+0.5
SCRK	Sand Creek	2.72	32	P	Pn	10 06 06.4	+0.7
	baz=215,SNR=422						
BARN	Barnard Glacie	2.77	101		Pn	10 06 07.3	+0.7
BARN				IAML		10 06 52.7	
	comp=N,6µm,0.8s						
WRH	Wood River Hil	2.79	353		Pn	10 06 07.5	+0.9
WRH				IAML		10 06 53.2	
	comp=E,4µm,1.2s						
WRH				IAML		10 06 53.2	
	comp=N,4µm,1.1s						
BAGL	Bagley Icefiel	2.80	114		Pn	10 06 07.1	+0.3
CAST	Castle Rocks	2.81	309		Pn	10 06 07.9	+1.0
CAST				IAML		10 06 54.6	
	comp=N,3µm,1.0s						
CAST				IAML		10 06 54.7	
	comp=E,4µm,0.8s						
CAST	Castle Rocks	2.81	309	P	Pn	10 06 08.0	+1.0
	baz=126,SNR=120						
PS08	TAPS Pump Stn8	2.84	4		Pn	10 06 08.2	+0.9
CYK	Cape Yakataga	2.85	123		Pn	10 06 08.1	+0.6
DFR	Drift River	2.86	249		Pn	10 06 08.3	+0.5
L27K	Beaver Creek,	2.87	60		Pn	10 06 08.7	+0.9
L27K	Beaver Creek,	2.87	60	P	Pn	10 06 08.7	+0.9
	baz=244,SNR=56						
BC03		2.88	60		Pn	10 06 08.9	+1.0
BCAR	Beaver Creek A	2.88	60	Pn	Pn	10 06 09.0	+1.0
REF	Redoubt East F	2.92	247		Pn	10 06 09.4	+0.8
BPAW	Bear Paw Mtn.	2.93	326		Pn	10 06 09.8	+1.1
BPAW				IAML		10 07 00.7	
	comp=N,3µm,0.6s						
BPAW				IAML		10 07 01.9	
	comp=E,2µm,1.1s						
BPAW	Bear Paw Mtn.	2.93	326	P	Pn	10 06 09.7	+1.1
	baz=143,SNR=347						
RDN	Redoubt North	2.93	248		Pn	10 06 09.3	+0.5
CCB	Clear Creek Bu	2.95	355		Pn	10 06 10.5	+1.7
CCB				IAML		10 07 01.4	
	comp=E,3µm,1.4s						
CNPM	China Poot	2.95	223		Pn	10 06 09.9	+1.0
CTG	Chitna Glacier	2.95	102	P	Pn	10 06 09.8	+0.8
	baz=287,SNR=376						
RSO	Redoubt South	2.95	247		Pn	10 06 10.0	+1.0
CTGM	Chitina Glacie	2.96	102		Pn	10 06 09.9	+0.8
CTGM				IAML		10 06 55.6	
	comp=E,2µm,1.0s						
CTGM				IAML		10 06 55.7	
	comp=N,4µm,1.5s						
RDWB	Redoubt West	2.98	248		Pn	10 06 10.0	+0.6
RED	Redoubt Volcan	2.98	246		Pn	10 06 09.9	+0.6
NCT	North Crescent	2.99	250		Pn	10 06 10.1	+0.7
HOM	Homer	2.99	228	Pn	Pn	10 06 11.0	+1.6
HOM	Homer	2.99	228	P	Pn	10 06 10.3	+0.9
	baz=45,SNR=17						
NEA2	Nenana	3.00	345		Pn	10 06 10.5	+1.0
NEA2				IAML		10 06 57.6	
	comp=E,3µm,0.8s						
NEA2				IAML		10 06 59.0	
	comp=N,3µm,1.2s						
NEA2	Nenana	3.00	345	P	Pn	10 06 10.2	+0.7
	baz=164,SNR=111						
YAH	Yahtse	3.01	114		Pn	10 06 10.3	+0.4
YAH				IAML		10 06 58.3	
	comp=N,3µm,0.8s						
YAH				IAML		10 07 08.4	
	comp=E,3µm,0.9s						
MESA	MESA	3.02	119		Pn	10 06 10.6	+0.6
MESA	MESA	3.02	119	P	Pn	10 06 10.6	+0.6
	baz=303,SNR=102						
J25K	Salcha River,	3.03	16		Pn	10 06 10.3	+0.3
J25K	Salcha River,	3.03	16	P	Pn	10 06 10.3	+0.3
	baz=197,SNR=194						
YUK2	White River	3.05	86		Pn	10 06 11.3	+0.9
IL31		3.07	3		Pn	10 06 12.0	+1.6
ILAR	Eielson Array	3.07	3	Pn	Pn	10 06 09.7	-0.8
	comp=E,74nm,0.3s,baz=187,slow=13,SNR=1042						
ILAR				Sn	Sn	10 06 48.7	+2.8
	comp=E,150nm,0.3s,baz=197,slow=18,SNR=8.6						
ILAR	Eielson Array	3.07	3	Pn	Pn	10 06 11.0	+0.5
BVCY	Beaver Creek	3.09	74		Pn	10 06 12.5	+1.6
BVCY	Beaver Creek	3.09	74	P	Pn	10 06 12.3	+1.5
	baz=259,SNR=68						
O20K	Slope Mountain	3.09	240		Pn	10 06 11.8	+0.9
O20K	Slope Mountain	3.09	240	P	Pn	10 06 11.9	+1.0
	baz=56,SNR=44						
LOGN	Logan Glacier	3.15	104		Pn	10 06 12.5	+0.7
LOGN				IAML		10 07 03.9	
	comp=E,3µm,0.8s						
LOGN				IAML		10 07 06.0	
	comp=N,3µm,0.8s						
COLA	College	3.18	355		Pn	10 06 12.8	+0.9
COLA	College	3.18	355	P	Pn	10 06 12.6	+0.7
	baz=175						
TCOL	CIGO, UAF Yank	3.18	355		Pn	10 06 13.3	+1.4
TCOL	CIGO, UAF Yank	3.18	355	P	Pn	10 06 12.7	+0.8
	baz=175,SNR=186						
CHUM	Lake Minchumin	3.18	315		Pn	10 06 13.1	+1.1
CHUM	Lake Minchumin	3.18	315	P	Pn	10 06 13.1	+1.1
	baz=131,SNR=702						
L20K	Farewell, AK	3.20	287		Pn	10 06 12.7	+0.4
L20K	Farewell, AK	3.20	287	P	Pn	10 06 12.8	+0.4
	baz=101,SNR=546						
RKAV	Rock Avalanche	3.21	114		Pn	10 06 13.3	+0.6
YUK3	Moose Creek	3.23	86		Pn	10 06 13.8	+0.8
YUK3	Moose Creek	3.23	86	P	Pn	10 06 13.8	+0.8
	baz=272,SNR=147						
TABL	Table Mountain	3.24	111		Pn	10 06 13.3	+0.2
TABL				IAML		10 07 07.5	
	comp=E,3µm,0.8s						
TABL				IAML		10 07 10.7	
	comp=N,2µm,0.9s						
J26L	Joseph Creek	3.26	29	P	Pn	10 06 14.2	+1.0
	baz=212,SNR=604						
MDM	Murphy Dome	3.28	353		Pn	10 06 14.1	+0.7
MDM				IAML		10 07 09.5	
	comp=E,2µm,1.2s						
MDM				IAML		10 07 09.8	
	comp=N,2µm,0.6s						
IVE	Iliamna Volcan	3.29	241		Pn	10 06 14.1	+0.4
ILS	Iliamna Low So	3.35	241		Pn	10 06 14.9	+0.5
ILSW	Iliamna Southw	3.37	241		Pn	10 06 15.1	+0.5
M19K	Big River Lodg	3.39	276		Pn	10 06 15.3	+0.4
M19K				IAML		10 07 10.3	
	comp=N,2µm,0.6s						
M19K				IAML		10 07 10.9	
	comp=E,2µm,0.7s						
M19K	Big River Lodg	3.39	276	P	Pn	10 06 15.4	+0.5
	baz=90						
CHX	Chaix Hills	3.43	116		Pn	10 06 17.0	+1.4
SAMH	Samovar Hills	3.54	114		Pn	10 06 18.4	+1.3
K20K	Telida	3.56	300	Pn	Pn	10 06 17.7	+0.5
K20K				IAML		10 07 18.1	

	comp=N,1µm,0.7s						
K20K				IAML		10 07 19.1	
	comp=E,3µm,0.8s						
K20K	Telida	3.56	300	P	Pn	10 06 17.7	+0.5
	baz=115,SNR=225						
I23K	Minto, Yukon-K	3.57	346		Pn	10 06 18.2	+0.8
I23K				IAML		10 07 15.3	
	comp=N,3µm,0.8s						
I23K	Minto, Yukon-K	3.57	346	P	Pn	10 06 18.1	+0.8
	baz=164,SNR=139						
OPT	Oil Point	3.60	237		Pn	10 06 18.7	+1.0
P19K	Oil Pt	3.60	237	P	Pn	10 06 18.4	+0.6
	baz=52,SNR=29						
N19K	Bonanza Creek	3.60	259		Pn	10 06 18.4	+0.5
N19K	Bonanza Creek	3.60	259	P	Pn	10 06 18.4	+0.5
	baz=72,SNR=41						
L19K	White Mountain	3.62	281	Pn	Pn	10 06 18.7	+0.6
L19K				IAML		10 07 25.4	
	comp=N,1µm,1.3s						
L19K	White Mountain	3.62	281	P	Pn	10 06 18.7	+0.6
	baz=94,SNR=327						
PS07	TAPS Pump Stn7	3.63	353		Pn	10 06 19.5	+1.3
MLY	Manley	3.67	336		Pn	10 06 19.8	+1.0
MLY				IAML		10 07 02.8	
	comp=E,1µm,0.5s						
MLY				IAML		10 07 03.0	
	comp=N,1µm,0.6s						
MLY	Manley	3.67	336	P	Pn	10 06 19.8	+1.0
	baz=153,SNR=877						
O19K	Port Alsworth	3.77	249		Pn	10 06 20.0	0.0
O19K				IAML		10 07 28.6	
	comp=E,2µm,0.7s						
O19K				IAML		10 07 30.0	
	comp=N,2µm,0.6s						
O19K	Port Alsworth	3.77	249	P	Pn	10 06 20.1	0.0
	baz=63,SNR=18						
PCA	Pinnacle	3.79	112		Pn	10 06 20.8	+0.4
PINM	Pinnacle	3.79	112	P	Pn	10 06 20.6	+0.1
	baz=298,SNR=66						
AU22	Augustine Moun	3.83	235		Pn	10 06 22.3	+1.4
AUL	Augustine Lava	3.85	235		Pn	10 06 22.7	+1.5
AUQ	Augustine Qik'	3.86	235		Pn	10 06 22.8	+1.5
AGU	Augustine-Summ	3.86	235		Pn	10 06 22.6	+1.1
AUW	Augustine West	3.87	235		Pn	10 06 22.8	+1.3
J20K	Nowinta River	4.00	311	Pn	Pn	10 06 23.9	+0.7
J20K				IAML		10 07 34.8	
	comp=N,1µm,0.9s						
J20K				IAML		10 07 44.9	
	comp=E,1µm,0.9s						
J20K	Nowinta River	4.00	311	P	Pn	10 06 24.0	+0.8
	baz=125,SNR=356						
SVW2	Sparrevohn	4.05	265		Pn	10 06 24.1	+0.2
I21K	Tanana	4.07	331		Pn	10 06 25.1	+0.9
I21K				IAML		10 07 41.0	
	comp=N,952nm,0.8s						
I21K	Tanana	4.07	331	P	Pn	10 06 25.2	+1.1
	baz=147,SNR=345						
EGAK	Eagle	4.12	39		Pn	10 06 26.0	+1.0
EGAK				IAML		10 07 46.3	
	comp=N,1µm,0.8s						
EGAK	Eagle	4.12	39	P	Pn	10 06 26.0	+1.0
	baz=224						
BCPM	Bancas Point	4.13	112		Pn	10 06 25.1	0.0
BCPM				IAML		10 07 31.2	
	comp=N,1µm,0.7s						
BCPM				IAML		10 07 43.9	
	comp=E,1µm,1.0s						
H24K	Noodor Dome	4.14	356	Pn	Pn	10 06 26.0	+0.7
H24K				IAML		10 07 38.8	
	comp=N,833nm,1.4s						
H24K				IAML		10 07 39.3	
	comp=E,836nm,1.6s						
H24K	Noodor Dome	4.14	356	P	Pn	10 06 25.5	+0.3
	baz=176						
YUK4	Talbot Arm	4.14	91	P	Pn	10 06 25.5	+0.1
	baz=278						
Q19K	Cape Douglas,	4.23	231	Pn	Pn	10 06 26.8	+0.2
Q19K	Cape Douglas,	4.23	231	P	Pn	10 06 26.9	+0.4
	baz=46,SNR=19						
TT01	Tatalina	4.26	290		Pn	10 06 26.8	0.0
TTA	Tatalina	4.26	290	Pn	Pn	10 06 26.8	-0.1
TTA	Tatalina	4.26	290	P	Pn	10 06 26.8	-0.1
	baz=103,SNR=124						
PS06	TAPS Pump Stn6	4.29	346		Pn	10 06 28.8	+1.5
DAWY	Dawson	4.30	53	Pn	Pn	10 06 28.4	+1.0
DAWY				IAML		10 07 44.4	
	comp=E,884nm,1.1s						
DAWY				IAML		10 07 47.0	
	comp=N,1µm,0.9s						
DAWY	Dawson	4.30	53	P	Pn	10 06 28.6	+1.1
	baz=240,SNR=31						
O18K	Koktuh Hills	4.32	248		Pn	10 06 27.7	0.0
YUK6	Outpost Mounta	4.36	96		Pn	10 06 28.7	+0.3
YUK6	Outpost Mounta	4.36	96	P	Pn	10 06 28.7	+0.3
	baz=284,SNR=33						
PNL	Peninsula	4.38	115		Pn	10 06 29.0	+0.5
PNL	Peninsula	4.38	115	P	Pn	10 06 29.5	+1.0
	baz=301,SNR=28						
YUK5	Granite Creek	4.55	93		Pn	10 06 31.8	+0.7
P18K	Big Mountain,	4.57	243	Pn	Pn	10 06 31.0	-0.2
P18K	Big Mountain,	4.57	243	P	Pn	10 06 31.3	+0.1
	baz=56,SNR=8.8						
YUK7	Dusty Glacier	4.58	101		Pn	10 06 32.5	+1.1
H21K	Melozitna Rive	4.66	330		Pn	10 06 33.0	+0.8
H21K				IAML		10 07 55.6	
	comp=E,925nm,1.2s						
H21K				IAML		10 07 57.7	
	comp=N,626nm,1.2s						
H21K	Melozitna Rive	4.66	330	P	Pn	10 06 33.1	+0.8
	baz=146						
KDAK	Kodiak Island	4.78	217		Pn	10 06 34.0	0.0
KDAK				IAML		10 08 03.6	
	comp=N,571nm,0.9s						
HYT	Haines Junctio	4.79	97	Pn	Pn	10 06 34.6	+0.3
HYT	Haines Junctio	4.79	97	P	Pn	10 06 34.4	+0.2
	baz=285,SNR=40						
J29M	Klondike Camp	4.94	52		Pn	10 06 37.5	+1.4
J29M	Klondike Camp	4.94	52	P	Pn	10 06 37.6	+1.4
	baz=240,SNR=14						
M30M	Minto, Yukon	4.98	76		Pn	10 06 37.8	+1.0
M30M	Minto, Yukon	4.98	76	P	Pn	10 06 37.6	+0.7
	baz=264,SNR=17						
IM03		5.15	329		Pn	10 06 39.9	+0.9
IMAR	Indian Mountai	5.15	329	Pn	Pn	10 06 39.6	+0.6
GCSA	Galena City Sc	5.30	309		Pn	10 06 41.6	+0.6
GCSA	Galena City Sc	5.30	309	P	Pn	10 06 41.6	+0.6
	baz=121,SNR=124						
PS05	TAPS Pump Stn5	5.32	345		Pn	10 06 42.4	+1.0
I29M	Ogilvie Camp,	5.42	44		Pn	10 06 44.0	+1.2
I29M	Ogilvie Camp,	5.42	44	P	Pn	10 06 43.5	+0.8
	baz=232,SNR=122						
OHAK	Old Harbor	5.46	217		Pn	10 06 42.8	-0.5
OHAK	Old Harbor	5.46	217	P	Pn	10 06 42.8	-0.5
	baz=32						
N31M	Braeburn, Yuko	5.49	87	P	Pn	10 06 43.6	-0.1
	baz=277,SNR=6.1						
COLD	Coldfoot	5.67	348		Pn	10 06 47.4	+1.2
COLD	Coldfoot	5.67	348	P	Pn	10 06 46.9	+0.7
	baz=166,SNR=87						
BM03	Burnt Mountain	5.83	10		Pn	10 06 48.6	+0.1
BMAR	Burnt Mountain	5.85	10	Pn	Pn	10 06 50.7	+2.1
BM01	Burnt Mountain	5.87	10		Pn	10 06 49.0	+0.1
WHY	Whitehorse	6.08	95	Pn	Pn	10 06 51.6	-0.3
WHY	Whitehorse	6.08	95	P	Pn	10 06 51.4	-0.5
	baz=285,SNR=25						
M31M	Drury Creek, Y	6.09	80		Pn	10 06 52.9	+1.0
M31M	Drury Creek, Y	6.09	80	P	Pn	10 06 52.6	+0.6
	baz=271,SNR=23						
SII	Sitkinak Islan	6.28	218	Pn	Pn	10 06 54.5	-0.1
SII	Sitkinak Islan	6.28	218	P	Pn	10 06 54.6	0.0
	baz=32						
SKAG	Skagway	6.30	106		Pn	10 06 56.0	+1.2
SKAG	Skagway	6.30	106	P	Pn	10 06 55.6	+0.8
	baz=296,SNR=69						
EPYK	Eagle Plains	6.56	40	P	Pn	10 06 58.5	0.0
	baz=230						
FARO	Faro, Yukon	6.58	79	P	Pn	10 06 59.2	+0.5
	baz=272,SNR=38						
TOLK	Toolik Lake Re	7.02	353	P	Pn	10 07 07.0	+2.3
	baz=171,SNR=45						
P33M	Teslin, Yukon	7.19	96		Pn	10 07 07.5	+0.4
P33M	Teslin, Yukon	7.19	96	P	Pn	10 07 07.8	+0.7
	baz=288,SNR=9.5						
MMPY	Sheldon Lake,	7.54	76	P	Pn	10 07 12.7	+0.8
	baz=270,SNR=9.1						
SIT	Sitka	7.67	122		Pn	10 07 13.7	+0.1
SIT	Sitka	7.67	122	P	Pn	10 07 13.7	+0.1
	baz=312,SNR=5.2						
CHGN	Chignik	7.91	232	P	Pn	10 07 17.4	+0.6
	baz=42						
VNHG	Veniaminof 1	8.25	233		Pn	10 07 22.6	+1.0
ANM	Nome	8.67	297	P	Pn	10 07 27.4	+0.1
	baz=101,SNR=12						
INK	Inuvik	8.78	35	Pn	Pn	10 07 29.4	+0.7
	comp=N,1.8nm,0.3s,baz=224,slow=14,SNR=42						
INK				Lg	Lg	10 09 58.4	
	baz=322,slow=28,SNR=5.0						
INK				LR	LR	10 11 06.4	
	comp=N,119nm,21.0s,baz=306,slow=39						
INK	Inuvik	8.78	35	Pn	Pn	10 07 29.8	+1.0
INK	Inuvik	8.78	35	P	Pn	10 07 28.9	+0.2
	baz=228,SNR=23						
TGTN	Hyland Airport	9.04	83	P	Pn	10 07 32.6	+0.2
	baz=279						
RDOG	Red Dog Mine	9.17	321	P	Pn	10 07 38.7	+4.6
	baz=126						
DLBC	Dease Lake	9.21	103	Pn	Pn	10 07 35.5	+0.7
	comp=N,1.2nm,0.3s,baz=327,slow=10,SNR=39						
DLBC				Lg	Lg	10 10 07.4	
	comp=N,0.9nm,0.3s,baz=142,slow=17,SNR=3.4						
DLBC				LR	LR	10 11 22.8	
	comp=N,524nm,18.6s,baz=330,slow=39						
TNA	Tin City	9.94	302	P	Pn	10 07 44.9	+0.3
	baz=103,SNR=12						
A21K	Barrow	10.32	343	P	Pn	10 07 49.6	-0.1
	baz=154						
A36M	Sachs Harbour	13.33	30	P	Pn	10 08 28.8	-2.1
	baz=231,SNR=48						
BBB	Bella Bella	14.10	124	Pn	Pn	10 08 41.8	+0.4
	comp=N,0.3nm,0.3s,baz=36,slow=8.7,SNR=4.7						
YKA	Yellowknife Ar	15.21	73	Pn	Pn	10 08 55.8	-0.4
	comp=N,0.3nm,0.3s,baz=281,slow=9.7,SNR=13						
YKA				LR	LR	10 15 07.2	
	comp=N,178nm,21.5s,baz=0.0,slow=38						
BILL	Bilibino	20.26	308	P	P	10 09 55.6	-0.6
BILL				IAmb	IAmb	10 09 56.5	
	comp=Z,22nm,1.0s						
B08A	Colville Reser	20.64	118	P	P	10 10 01.8	+1.3
B08A				IAmb	IAmb	10 10 03.4	
	comp=Z,7.7nm,0.9s						
NEW	Newport	21.66	115	P	P	10 10 13.5	+2.0
	comp=Z,10nm,1.0s,baz=323,slow=9.6,SNR=14						
NEW	Newport	21.66	115	P	P	10 10 12.3	+0.8
	baz=320,SNR=7.3						
RES	Resolute Bay	22.33	34	P	P	10 10 18.3	-0.1
	comp=Z,2.7nm,0.7s,baz=225,slow=7.9,SNR=7.3						
YBH	Yreka Blue Hor	24.86	132	P	P	10 10 45.5	+2.3
	comp=Z,4.7nm,1.0s,baz=354,slow=9.8,SNR=4.7						
YBH	Yreka Blue Hor	24.86	132	IAmb	IAmb	10 11 08.4	
	comp=Z,26nm,1.6s						
EGMT	Eagleton	25.13	106	P	P	10 10 45.6	0.0
	baz=317						
SEY	Seymchan	27.17	299	P	P	10 11 03.5	-0.3
	comp=Z,8.4nm,0.8s,baz=91,slow=6.5,SNR=12						
RLMT	Red Lodge	27.54	109	P	P	10 11 07.9	+0.3
	baz=321						
ELK	Elko	28.54	123	P	P	10 11 17.4	+0.9
	comp=Z,0.3nm,0.4s,baz=344,slow=15,SNR=2.2						
BW06	Boulder Array	29.26	113	P	P	10 11 23.1	+0.1
	baz=324						
PDAR	Pinedale Array	29.26	113	P	P	10 11 24.6	+1.7
	comp=Z,0.7nm,0.7s,baz=318,slow=5.2,SNR=6.4						
NEEM	North Greenlan	32.14	24	*i* P	P	10 11 47.3	-0.7
NEEM				IAmb	IAmb	10 11 48.5	
	comp=Z,4.9nm,0.5s						
NOR	Nord	34.49	11	*e*P	P	10 12 20.2	+12
DAG	Danmarks Havn	38.07	17	*i* P	P	10 12 50.1	+11
DAG				IAmb	IAmb	10 12 50.9	
	comp=Z,4.3nm,0.6s						
TXAR	Lajitas Array	43.13	118	P	P	10 13 22.6	+1.5
	comp=Z,1.0nm,0.7s,baz=333,slow=6.6,SNR=12						
TXAR				LR	LR	10 32 44.5	
	comp=Z,131nm,18.2s,baz=0.0,slow=38						
NRIK	Noril'sk	43.56	335	P	P	10 13 23.5	-0.4
	comp=Z,3.0nm,0.6s,baz=88,slow=6.9,SNR=5.4						
KLR	Kul'dur	44.53	293	P	P	10 13 30.6	-1.3
	comp=Z,1.7nm,0.8s,baz=16,slow=9.3,SNR=3.9						
USRK	Ussuriysk Ar.	48.24	288	P	P	10 13 59.1	-2.0
	comp=Z,1.1nm,0.7s,baz=35,slow=9.6,SNR=4.6						
ARCES	ARCESS Array B	48.93	3	P	P	10 14 05.0	-1.1
	comp=Z,2.8nm,0.7s,baz=359,slow=6.8,SNR=10						
CN2	Changchun	51.48	292	*e*P	P	10 14 31.6	+5.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SONM	Songino Array	55.98	309	P	P	10 14 59.4	+0.7
	comp=Z,1.3nm,0.7s,baz=21,slow=8.4,SNR=2.9						
NOA	NORSAR Array B	56.46	12	P	P	10 15 02.2	+0.4
	comp=Z,0.8nm,0.8s,baz=331,slow=10,SNR=1.9						
FINES	FINESS Array B	57.05	4	P	P	10 15 05.0	-1.0
	comp=Z,3.8nm,0.9s,baz=359,slow=9.9,SNR=6.9						
FINES	FINESS Array B	57.05	4	P	P	10 15 05.3	-0.6
ZALV	Zalesovo Beam	57.57	326	P	P	10 15 07.2	-2.5
	comp=Z,1.1nm,0.5s,baz=46,slow=6.4,SNR=4.7						
ZALV	Zalesovo Beam	57.57	326	P	P	10 15 08.2	-1.5
HHC	Hu-ho-hao-te	59.81	301	*e*P	P	10 15 26.6	+1.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,7.1s						
BVAR	Borovoye Array	61.77	335	P	P	10 15 38.0	-0.7
	comp=Z,1.5nm,0.6s,baz=132,slow=2.2,SNR=5.6						
MKAR	Makanchi Array	64.75	325	P	P	10 15 56.8	-1.6
	comp=Z,1.1nm,0.7s,baz=33,slow=6.3,SNR=9.5						
GTA	Gaotai	65.65	308	*e*P	P	10 16 17.3	+13
GTA				sP	sP	10 16 26.2	+4.9
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,82nm,5.5s						
GTA				LR	LR		
	comp=N,130nm,17.4s						
GTA				LR	LR		
	comp=E,170nm,17.8s						
GTA				LR	LR		
	comp=Z,190nm,17.8s						
WMQ	Urumqi	65.87	320	*e*P	P	10 16 09.3	+3.5
WMQ				LR	LR		
	comp=Z,170nm,25.5s						
AKTO	Aktyubinsk	66.38	343	P	P	10 16 09.1	+0.2
	comp=Z,0.6nm,0.3s,baz=305,slow=2.7,SNR=3.7						
LZH	Lanzhou	67.00	304	*e*P	P	10 16 22.1	+8.8
LZH				pP	sP	10 16 31.5	+1.6
LZH				sP	PcP	10 16 36.3	-5.2
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
AKASG	Malin Array Be	67.89	2	P	P	10 16 17.5	-1.0
	comp=Z,2.8nm,0.6s,baz=2.1,slow=6.3,SNR=15						
KVAR	Kislovodsk Arr	74.37	353	P	P	10 16 56.3	-1.7
	comp=Z,8.3nm,0.6s,baz=24,slow=10.0,SNR=2.5						
KBZ	Khabaz	74.58	352	P	P	10 16 59.1	+0.2
	comp=Z,2.5nm,0.7s,baz=29,slow=1.4,SNR=3.7						
ESDC	Sonseca Array	74.67	29	P	P	10 16 59.8	+0.2
	comp=Z,1.9nm,1.0s,baz=341,slow=5.2,SNR=12						
BRTR	Keskin Array B	78.90	359	P	P	10 17 22.5	-1.1
	comp=Z,2.4nm,1.0s,baz=17,slow=1.5,SNR=3.6						
CMAR	Chiang Mai Arr	84.59	299	P	P	10 17 55.0	+1.4
	comp=Z,0.9nm,0.3s,baz=6.1,slow=5.4,SNR=5.0						

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*MOS **02** 10:08:24.4±0.9, 6°.12S×154°.61E, h35^{km}, mb5.4/38, Error ellipse: s-maj=8.6km s-min=6.6km az=102.0*

*BJI **02** 10:08:25.1±0.0, 6°.13S×155°.04E, h56^{km}, mB5.2/40, mb5.1/65, Ms4.9/35, Ms7 4.5/39*

*GCMT **02** 10:08:27.0±0.2, 6°.43S±0°.01×154°.50E±0°.01, h39^{km}, MW5.2/110, Moment Tensor Solution. s110, c144; s90, c133; Duration: 1^{s}.0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.74±.02; $M_{\theta\theta}$-0.16±.01; $M_{\phi\phi}$-0.58±.01; $M_{r\theta}$0.09±.01; $M_{\theta\phi}$0.34±.01; $M_{\phi r}$-0.06±.01; Best double couple: $M_0$0.76400×10^{17} NP1:ϕ_s335.00000°, δ42.00000°, λ96.00000°. NP2:ϕ_s147.00000°, δ49.00000°, λ85.00000°. Principal axes: T 0.7520, Plg85.0000°, Azm13.0000°; N 0.0240, Plg4.0000°, Azm151.0000°; P -0.7760, Plg4.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **02** 10:08:27.4±1.4, 6°.17S×154°.66E, h48^{km}±13^{km}, mb4.7/24, mb1 4.9/28, mb1mx4.7/41, mbtmp5.0/28, ML4.5/5, MS4.3/30, Ms1 4.3/30, ms1mx4.2/36 Error ellipse: s-maj=11.2km s-min=9.8km az=107.0*

*NEIC **02** 10:08:29.0±1.4, 6°.24S±0°.07×154°.68E±0°.07, h56^{km}±3^{km}, mb5.3/127, Error ellipse: s-maj=11.0km s-min=9.1km az=212.0*

*DJA **02** 10:08:29.2±0.4, 6°S±3°×15°5E±°, h58^{km}±4^{km}, M5.3/79, mb5.4/79, mB5.7/40, MLv5.5/2, Mw(mB)5.3/40, MwMwp4.9/1, Mwp5.2/1*

ISC 02 10:08:28.7±0.4, **6°.25S**±0°.04×**154°.72E**±0°.04, **h62**^{km}±3^{km}, **h62**^{km}**:pP-P, n681**, σ1^{s}.44/683, **mb5.3**/166, **14C-4D,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	3.26	309		Pn	10 09 17.5	0.0
HNR	Honiara	6.07	122	P	Pn	10 09 57.1	+1.3
	92nm,0.3s,baz=196,slow=4.2,SNR=39						
HNR				S	Sn	10 11 08.2	+4.2
	baz=66,slow=20,SNR=1.5						
HNR				LR	LR	10 12 25.1	
	comp=Z,6µm,18.1s,baz=290,slow=39						
HNR	Honiara	6.07	122	P	Pn	10 09 59.4	+3.5
PMG	Port Moresby	8.12	247	P	Pn	10 10 23.2	-0.8
	37nm,0.3s,baz=57,slow=9.9,SNR=82						
PMG				S	Sn	10 11 54.1	-0.3
	12nm,0.3s,baz=64,slow=22,SNR=8.6						
PMG				LR	LR	10 13 24.5	
	comp=Z,6µm,20.3s,baz=355,slow=37						
PMG	Port Moresby	8.12	247	Pn	Pn	10 10 23.0	-1.0
PMG	Port Moresby	8.12	247	P	Pn	10 10 23.6	-0.4
PMG	Port Moresby	8.12	247	P	Pn	10 10 23.6	-0.4
MANU	Manus Island	8.44	299		Pn	10 10 27.7	-0.6
PATS	Pohnpei	13.48	15	P	Pn	10 11 37.4	+0.2
	baz=14,SNR=5.2						
PATS	Pohnpei	13.48	15	Pn	Pn	10 11 36.2	-1.0
PATS	Pohnpei	13.48	15	P	P	10 11 41.8	-2.6
COEN	Coen	13.70	235	P	Pn	10 11 38.1	-2.0
	baz=14						
COEN	Coen	13.70	235	Pn	Pn	10 11 38.5	-1.7
COEN	Coen	13.70	235	P	Pn	10 11 38.2	-2.0
JAY	Jayapura	14.46	284	P	Pn	10 11 49.5	-0.7
	0.8nm,0.3s,baz=88,slow=2.8,SNR=5.6						
JAY				LR	LR	10 17 11.5	
	comp=Z,2µm,20.7s,baz=92,slow=36						
JAY	Jayapura	14.46	284	P	Pn	10 11 50.7	+0.5
	39nm,1.2s						
SANVU	Saraoutou	15.28	128	P	P	10 12 04.0	-0.4
MTSU	Mount Surprise	15.58	220	P	Pn	10 12 05.0	+0.4
	baz=16,SNR=33						
MTSU	Mount Surprise	15.58	220	P	Pn	10 12 04.1	-0.5
CTA	Charters Tower	16.03	210	P	Pn	10 12 09.7	-0.7
	2.9nm,0.3s,baz=29,slow=13,SNR=17						
CTA	Charters Tower	16.03	210	P	Pn	10 12 09.5	-0.9
CTAO	Charters Tower	16.03	210	P	Pn	10 12 09.4	-0.9
CTAO				pmax	pmax		
	comp=Z,52nm,0.8s						
CTAO	Charters Tower	16.03	210	Pn	Pn	10 12 09.4	-0.9
CTAO	Charters Tower	16.03	210	P	Pn	10 12 09.4	-0.9
SMPI	Sarmi	16.52	284	P	P	10 12 18.0	-0.1
	comp=Z,2µmcomp=Z,135nm,1.4s						
KOUNC	Koumac, New Ca	16.98	148	P	P	10 12 24.4	+1.2
RK1H	Rockhampton Ha	17.52	193	P	P	10 12 29.5	+0.3
NOUC	Port Laguerre	19.33	146	P	Pn	10 12 50.5	-0.2
EIDS	Eidsvold	19.33	190	P	P	10 12 49.7	+0.7
	baz=19,SNR=23						
EIDS	Eidsvold	19.33	190		P	10 12 49.3	+0.3
EIDS	Eidsvold	19.33	190	P	P	10 12 49.9	+0.8
DZM	Mont Dzumac	19.39	145	*e*P	P	10 12 50.4	+0.7
	comp=Z,242nm,1.1s						
DZM				*e*LR	LR	10 17 22.7	
	comp=Z,3µm,25.9s						
DZM	Mont Dzumac	19.39	145	P	P	10 12 50.5	+0.7
	comp=Z,4.1nm,0.3s,baz=353,slow=9.4,SNR=24						
DZM				LR	LR	10 19 13.4	
	comp=Z,1µm,21.8s,baz=346,slow=33						
DZM	Mont Dzumac	19.39	145		P	10 12 49.9	+0.1
DZM	Mont Dzumac	19.39	145	P	Pn	10 12 51.7	+0.3
ONTNC	Ouen Toro	19.58	146		P	10 12 52.0	+0.2
ONTNC				IAmb	IAmb	10 13 17.4	
	comp=Z,123nm,1.0s						
ONTNC	Ouen Toro	19.58	146	P	Pn	10 12 53.2	-0.4
	comp=Z,145nm,1.0s						
YATNC	Mamie plateau,	19.63	144	P	Pn	10 12 55.8	+1.5
TARA	Tarawa	19.68	68	P	Pn	10 12 54.2	-0.7
TARA				IAmb	IAmb	10 13 07.4	
	comp=Z,292nm,1.1s						
TARA	Tarawa	19.68	68	P	Pn	10 12 57.3	+2.4
MARNC	Mare, Loyalty	19.88	141	P	P	10 12 55.2	+0.1
MARNC	Mare, Loyalty	19.88	141	P	Pn	10 12 57.1	-0.1
OUENC	Ouen Island, N	19.89	145	P	P	10 12 55.7	+0.6
OUENC	Ouen Island, N	19.89	145	P	Pn	10 12 56.5	-0.7
QIS	Mount Isa	20.43	224	P	P	10 13 01.2	+0.1
	baz=20,SNR=69						
QIS	Mount Isa	20.43	224	P	P	10 13 01.6	+0.5
RMQ	Roma	20.91	195	P	P	10 13 06.9	+0.7
	baz=21,SNR=53						
RMQ	Roma	20.91	195	P	P	10 13 07.3	+1.1
GUMO	Guam	22.00	334	P	P	10 13 15.8	-2.1
	comp=Z,59nm,0.8s,baz=188,slow=16,SNR=2.1						
GUMO				LR	LR	10 23 04.9	
	comp=Z,340nm,18.3s,baz=150,slow=40						
QLP	Quilpie	22.56	205	P	P	10 13 23.2	-0.7
	baz=23,SNR=25						
QLP	Quilpie	22.56	205	P	P	10 13 23.8	-0.1
FAKI	Fak Fak	22.64	277	P	P	10 13 26.6	+1.7
	comp=Z,2µmcomp=Z,164nm,0.9s						
FAKI	Fak Fak	22.64	277	P	P	10 13 25.2	+0.3
FAKI				IAmb	IAmb	10 13 26.9	
	comp=Z,138nm,0.9s						
FAKI	Fak Fak	22.64	277	P	P	10 13 25.3	+0.4
KDU	Kakadu	22.85	252	P	P	10 13 25.5	-1.5
	baz=23,SNR=48						
KDU	Kakadu	22.85	252	P	P	10 13 26.4	-0.6
SAUI	Saumlaki	23.30	264	P	P	10 13 33.3	+1.8
	comp=Z,11µmcomp=Z,436nm,1.0s						
SAUI	Saumlaki	23.30	264	P	P	10 13 31.9	+0.4
SAUI	Saumlaki	23.30	264	P	P	10 13 31.6	+0.1
WR0	Warramunga Arr	23.88	233	P	P	10 13 36.8	+0.1
WR0				IAmb	IAmb	10 13 49.3	
	comp=Z,119nm,0.7s						
WB0	Warramunga Arr	23.89	234	P	P	10 13 36.9	0.0
WB0				IAmb	IAmb	10 13 49.4	
	comp=Z,77nm,0.8s						
SIJI	Sorong	24.00	282	P	P	10 13 37.6	-0.3
	comp=Z,31nm,0.7s,baz=79,slow=6.7,SNR=29						
SIJI				LR	LR	10 24 31.0	
	comp=Z,714nm,21.7s,baz=156,slow=40						
SWI	Sorong	24.01	282	P	P	10 13 38.7	+0.7
	comp=Z,74nm,0.8s						
WRAB	Tennant Creek	24.01	234	*ce*P	P	10 13 37.6	-0.4
WRAB				pmax	pmax		
	comp=Z,128nm,1.3s						
WRAB	Tennant Creek	24.01	234	P	P	10 13 38.1	+0.2
WRAB				IAmb	IAmb	10 14 02.9	
	comp=Z,89nm,0.8s						
WRAB	Tennant Creek	24.01	234	P	P	10 13 39.0	+1.0
WB2	Warramunga Arr	24.02	234	P	P	10 13 38.0	0.0
	baz=24						
WB2	Warramunga Arr	24.02	234	P	P	10 13 38.0	0.0
WB2				IAmb	IAmb	10 14 03.6	
	comp=Z,106nm,0.9s						
WRA	Warramunga Arr	24.03	234	P	P	10 13 38.1	-0.1
	comp=Z,55nm,0.9s,baz=57,slow=9.6,SNR=139						
WRA				PcP	PcP	10 17 19.3	+0.6
	comp=Z,11nm,0.7s,baz=55,slow=2.0,SNR=6.1						
WRA				S	S	10 17 54.5	+3.4
	comp=Z,19nm,1.2s,baz=54,slow=16,SNR=11						
WRA				LR	LR	10 22 59.6	
	comp=Z,1µm,19.5s,baz=65,slow=36						
WRA	Warramunga Arr	24.03	234	*i* P	P	10 13 38.0	-0.1
WRA				pmax	pmax		
	comp=Z,56nm,0.9s						
WRA	Warramunga Arr	24.03	234	P	P	10 13 37.0	-1.1
MTN	Manton Dam	24.15	253	P	P	10 13 38.2	-1.1
	baz=24,SNR=9.3						
MTN	Manton Dam	24.15	253	P	P	10 13 38.7	-0.6
MTN				IAmb	IAmb	10 13 55.9	
	comp=Z,73nm,0.8s						
MTN	Manton Dam	24.15	253	P	P	10 13 40.7	+1.4
ARMA	Armidale	24.22	187	P	P	10 13 40.0	+0.2
	baz=24,SNR=15						
ARMA	Armidale	24.22	187	P	P	10 13 40.2	+0.4
ARMA				IAmb	IAmb	10 13 41.5	
	comp=Z,88nm,1.0s						
ARMA	Armidale	24.22	187	P	P	10 13 40.7	+0.9
DRS	Darwin Rock St	24.28	254	P	P	10 13 40.0	-0.4
INKA	Innaminka	25.16	210	P	P	10 13 48.6	+0.3

LHI	Lord Howe Isla	25.47	171	P	P	10 13 51.3	+0.2
	baz=26						
MSVF	Nonsavu	25.48	119	LR	LR	10 23 09.3	
	comp=Z,2µm,19.2s,baz=308,slow=34						
MSVF	Nonsavu	25.48	119	*i* P	P	10 13 45.8	-5.6
MSVF				pmax	pmax		
	comp=Z,40nm,1.2s						
MSVF	Nonsavu	25.48	119	P	P	10 13 51.9	+0.5
MSVF				IAmb	IAmb	10 14 23.4	
	comp=Z,153nm,1.8s						
MSVF	Nonsavu	25.48	119	P	P	10 13 54.6	+3.2
MSAI	Masohi	25.86	275	P	P	10 13 55.7	+0.9
	comp=Z,794nmcomp=Z,11nm,0.7s						
AS31	Alice Springs	26.47	227	P	P	10 13 59.9	-0.4
ASAR	Alice Springs	26.47	227	P	P	10 13 59.1	-1.1
	comp=Z,11nm,0.7s,baz=60,slow=8.8,SNR=89						
ASAR				PcP	PcP	10 17 25.2	+1.1
	comp=Z,14nm,0.9s,baz=53,slow=2.8,SNR=9.2						
ASAR				ScP	ScP	10 21 01.5	+2.5
	comp=Z,1.1nm,0.6s,baz=71,slow=3.4,SNR=4.0						
ASAR	Alice Springs	26.47	227	P	P	10 13 59.4	-0.9
ASPA	Alice Springs	26.47	227	P	P	10 13 59.9	-0.4
	baz=26						
CMSA	Cobar Meteorol	26.54	197	P	P	10 14 00.4	-0.3
	baz=27,SNR=19						
CMSA	Cobar Meteorol	26.54	197	P	P	10 14 01.8	+1.0
AAI	Ambon	26.55	274	P	P	10 14 02.4	+1.4
	comp=Z,129nm,0.8s						
KNRA	Kununurra	27.12	248	P	P	10 14 06.0	-0.1
	baz=27,SNR=14						
KNRA	Kununurra	27.12	248	P	P	10 14 05.7	-0.4
KNRA				IAmb	IAmb	10 14 26.9	
	comp=Z,88nm,0.8s						
KNRA	Kununurra	27.12	248	P	P	10 14 06.4	+0.3
H11S3	WAKE ISLAND Hy	27.27	25	T	T	10 42 49.2	
	baz=207,slow=74,SNR=321						
H11S2	WAKE ISLAND Hy	27.27	25	T	T	10 42 48.5	
	baz=207,SNR=257						
H11S1	WAKE ISLAND Hy	27.29	25	T	T	10 42 46.6	
	baz=207,slow=74,SNR=86						
LBMI	Labuha	27.73	281	P	P	10 14 13.7	+2.1
	comp=Z,2µmcomp=Z,190nm,1.2s						
OOD	Oodnadatta	28.03	218	P	P	10 14 14.7	+0.6
STKA	Stephens Creek	28.30	204	P	P	10 14 15.4	-1.1
	comp=Z,13nm,0.9s,baz=344,slow=7.9,SNR=15						
STKA				PcP	PcP	10 17 28.9	+0.5
	comp=Z,18nm,1.0s,baz=345,slow=1.5,SNR=6.1						
STKA				LR	LR	10 25 31.4	
	comp=Z,1µm,19.5s,baz=18,slow=36						
STKA	Stephens Creek	28.30	204	P	P	10 14 15.2	-1.3
	baz=28,SNR=13						
STKA	Stephens Creek	28.30	204	P	P	10 14 15.8	-0.7
STKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
STKA	Stephens Creek	28.30	204	P	P	10 14 15.8	-0.7
STKA	Stephens Creek	28.30	204	P	P	10 14 16.5	0.0
H11N1	WAKE ISLAND Hy	28.44	25	T	T	10 44 23.0	
	baz=204,slow=76,SNR=3.7						
H11N3	WAKE ISLAND Hy	28.45	25	T	T	10 44 13.4	
	baz=204,SNR=7.2						
H11N2	WAKE ISLAND Hy	28.46	25	T	T	10 44 20.7	
	baz=204,slow=76,SNR=4.2						
LCRK	Leigh Creek	28.64	211	P	P	10 14 19.5	0.0
SANI	Sanana	28.95	277	P	P	10 14 22.3	-0.2
	comp=Z,1µmcomp=Z,145nm,1.0s						
SANI	Sanana	28.95	277	P	P	10 14 22.8	+0.3
CAN	Canberra	29.41	190	P	P	10 14 26.1	-0.3
CAN				pmax	pmax		
	comp=Z,43nm,1.2s						
CAN	Canberra	29.41	190	P	P	10 14 26.1	-0.3
SOEI	Soe	30.35	261	P	P	10 14 39.2	+4.2
	comp=Z,1µmcomp=Z,86nm,1.3s						
SOEI	Soe	30.35	261	P	P	10 14 35.1	+0.1
SOEI	Soe	30.35	261	P	P	10 14 36.0	+1.0
FITZ	Fitzroy Crossi	30.71	245	P	P	10 14 36.9	-1.1
	comp=Z,29nm,0.8s,baz=90,slow=8.0						
FITZ				PcP	PcP	10 17 36.0	+1.2
	comp=Z,15nm,0.8s,baz=319,slow=6.1,SNR=4.2						
FITZ	Fitzroy Crossi	30.71	245	P	P	10 14 37.3	-0.8
	baz=31,SNR=6.1						
HTT	Hallett	30.77	206	P	P	10 14 37.8	-0.6
	baz=31,SNR=6.8						
HTT	Hallett	30.77	206	P	P	10 14 38.5	+0.1
MULG	Mulgathing	30.81	217	P	P	10 14 38.9	+0.1
NAPP	Napperby	30.91	208	P	P	10 14 39.1	-0.5
BATI	Baumata	30.98	261	P	P	10 14 40.8	+0.4
	comp=Z,22nm,0.6s,baz=156,slow=6.9,SNR=4.8						
BATI	Baumata	30.98	261	P	P	10 14 50.8	+10
WHYH	Whyalla	31.06	209	P	P	10 14 41.4	+0.5
KMSI	Cibinong	31.42	281	P	P	10 14 45.3	+0.9
	comp=Z,4µmcomp=Z,383nm,0.7s						
WRKA	Warakurna	31.45	231	P	P	10 14 43.6	-1.0
	baz=31,SNR=30						
WRKA	Warakurna	31.45	231	P	P	10 14 44.1	-0.5
BBOO	Buckleboo	31.63	211	P	P	10 14 45.2	-0.8
	baz=32,SNR=5.9						
BBOO	Buckleboo	31.63	211	P	P	10 14 45.6	-0.3
MMRI	Maumere	32.29	264	P	P	10 14 52.1	+0.1
	comp=Z,11µmcomp=Z,202nm,0.9s						
MMRI	Maumere	32.29	264	P	P	10 14 50.7	-1.3
MMRI	Maumere	32.29	264	P	P	10 14 52.1	+0.1
	comp=Z,206nm,0.9s						
TOO	Toolangi	32.29	194	P	P	10 14 52.4	+0.6
	baz=32,SNR=4.3						
TOO	Toolangi	32.29	194	P	P	10 14 52.4	+0.6
TOO				pmax	pmax		
	comp=Z,44nm,1.5s						
TOO	Toolangi	32.29	194	P	P	10 14 52.4	+0.6
ARPS	Mount Arapiles	32.59	199	P	P	10 14 54.5	+0.2
	baz=33,SNR=17						
ARPS	Mount Arapiles	32.59	199	P	P	10 14 54.5	+0.2
BRAT	Ballarat	32.67	196	P	P	10 14 56.1	+1.1
	comp=Z,21nm,0.9s						
EDFI	Ende, Flores	32.84	264	P	P	10 14 55.5	-1.4
	comp=Z,907nmcomp=Z,140nm,0.9s						
MRSI	Marisa	33.39	280	P	P	10 15 00.9	-0.7
	comp=Z,1µmcomp=Z,103nm,1.3s						
APSI	Ampana	33.42	278	P	P	10 15 02.5	+0.7
	comp=Z,2µmcomp=Z,229nm,1.1s						
BSSI	Bau Bau, Buton	34.03	268	P	P	10 15 08.3	+1.2
	comp=Z,715nmcomp=Z,68nm,0.8s						
BNSI	Bone	34.51	271	P	P	10 15 12.9	+1.6
	comp=Z,42nm,0.9s						
TOLI2	Tolitoli	34.66	281	P	P	10 15 11.5	-1.1
TOLI2	Tolitoli	34.66	281	P	P	10 15 12.4	-0.2
SPSI	Sidrap Palu	34.88	272	P	P	10 15 24.7	+10
TTSI	Tana Toraja	34.92	274	P	P	10 15 16.4	+1.5
	comp=Z,27nm,0.8s						
FORT	Forrest	34.95	222	P	P	10 15 14.3	-0.5
FORT	Forrest	34.95	222	P	P	10 15 15.5	+0.6
WBSI	Waikabubak, Su	35.14	262	P	P	10 15 17.2	+0.4
	comp=Z,2µmcomp=Z,162nm,0.9s						
MPSI	Mapaga	35.37	279	P	P	10 15 18.5	-0.2
	comp=Z,2µmcomp=Z,268nm,0.9s						
PLAI	Plampang	36.70	264	P	P	10 15 28.9	-1.2
	comp=Z,1µmcomp=Z,166nm,0.8s						
PLAI	Plampang	36.70	264	P	P	10 15 29.5	-0.6
HIZ	Hauiti	36.94	153	P	P	10 15 32.2	+0.4
HIZ				IAmb	IAmb	10 16 02.0	
	comp=Z,55nm,1.0s						
MBWA	Marble Bar	36.97	243	P	P	10 15 31.1	-1.2
PSA00	Pilbara Seismi	37.00	242	P	P	10 15 31.7	-0.9
PSA00				IAmb	IAmb	10 15 32.7	
	comp=Z,31nm,0.9s						
PSA00	Pilbara Seismi	37.00	242	P	P	10 15 32.3	-0.2
TWSI	Taliwang, Sumb	37.59	264	P	P	10 15 37.2	-0.4
	comp=Z,38nm,1.1s						
URZ	Urewera	37.79	151	P	P	10 15 39.0	0.0
URZ				IAmb	IAmb	10 15 57.2	
	comp=Z,42nm,0.9s						
URZ	Urewera	37.79	151	P	P	10 15 40.5	+1.5
SMKI	Samarinda	37.87	277	P	P	10 15 42.9	+2.9
	comp=Z,6µmcomp=Z,123nm,1.1s						
MYLDM	Lahad Datu	37.90	287	P	P	10 15 40.9	+0.7
QRZ	Quartz Range	37.94	158	P	P	10 15 41.7	+1.5
QRZ	Quartz Range	37.94	158	P	P	10 15 41.0	+0.7
QRZ				IAmb	IAmb	10 15 42.3	
	comp=Z,64nm,1.1s						
QRZ	Quartz Range	37.94	158	P	P	10 15 41.7	+1.5
WAZ	Wanganui	38.02	154	P	P	10 15 43.1	+2.2
BKZ	Black Stump Fm	38.22	152	P	P	10 15 45.0	+2.4
NNZ	Nelson	38.60	157	P	P	10 15 48.0	+2.2
THZ	Tophouse	38.89	158	P	P	10 15 48.3	0.0
THZ	Tophouse	38.89	158	P	P	10 15 47.8	-0.5
THZ				IAmb	IAmb	10 15 51.5	
	comp=Z,57nm,0.9s						
KIW	Kapiti Island	38.91	155	P	P	10 15 52.1	+3.7
TCW	Tory Channel	38.95	156	P	P	10 15 50.2	+1.5
TUWZ	Tuamarina	39.00	157	P	P	10 15 49.1	0.0
MRZ	Mangatainoka R	39.02	155	P	P	10 15 49.2	-0.1
PRWZ	Pori Road	39.11	154	P	P	10 15 53.0	+3.0
CAW	Cannon Point	39.18	155	P	P	10 15 51.1	+0.5
HOWZ	Holdsworth Sta	39.19	155	P	P	10 15 50.8	+0.1
BSWZ	Blackbirch Sta	39.22	157	P	P	10 15 51.7	+0.7
IGBI	Denpasar	39.30	264	P	P	10 15 51.6	-0.4
	comp=Z,113nm,0.9s						
MTW	Mount Morrison	39.40	155	P	P	10 15 52.2	-0.3
TMWZ	Te Maipa	39.53	155	P	P	10 15 53.6	+0.1
LTZ	Lake Taylor	39.56	160	P	P	10 15 54.3	+0.5
TRWZ	Traveller	39.68	155	P	P	10 15 55.5	+0.7
KHZ	Kahutara	39.69	158	P	P	10 15 54.6	-0.2
SPMM	Sapulut	39.71	285	P	P	10 15 56.0	+0.5
BBKI	Banjar Baru	39.82	272	P	P	10 15 58.2	+1.8
	comp=Z,37nm,0.8s						
MEEK	Meekatharra	39.91	235	P	P	10 15 56.5	-0.5
	baz=40,SNR=17						
MEEK	Meekatharra	39.91	235	P	P	10 15 57.2	+0.3
MTKI	Muara Teweh, K	40.08	276	P	P	10 16 12.1	+14
JAGI	Jajag, Banyuwa	40.28	264	P	P	10 15 59.9	-0.3
	comp=Z,2µmcomp=Z,201nm,0.9s						
JAGI	Jajag, Banyuwa	40.28	264	P	P	10 15 58.3	-1.9
JAGI	Jajag, Banyuwa	40.28	264	P	P	10 15 59.3	-0.9
KKM	Kota Kinabalu	40.33	287	P	P	10 16 00.2	-0.4
KKM				IAmb	IAmb	10 16 02.5	
	comp=Z,73nm,1.1s						
KKM	Kota Kinabalu	40.33	287	P	P	10 16 01.1	+0.5
MLZ	Mavora Lakes	40.68	165	P	P	10 16 02.6	-0.4
JOW	Kunigami	41.68	323	LR	LR	10 31 05.7	
	comp=Z,286nm,21.9s,baz=273,slow=33						
KLBR	Kellerberrin	42.76	229	P	P	10 16 19.2	-1.0
	baz=43,SNR=26						
KLBR	Kellerberrin	42.76	229	P	P	10 16 19.7	-0.6
NGJI	Ngawi	42.96	266	P	P	10 16 24.4	+2.3
	comp=Z,657nmcomp=Z,26nm,0.6s						
MORW	Morawa	42.98	233	P	P	10 16 21.5	-0.5
	baz=43,SNR=7.6						
MORW	Morawa	42.98	233	P	P	10 16 21.6	-0.5
MORW				IAmb	IAmb	10 16 22.4	
	comp=Z,46nm,1.0s						
MORW	Morawa	42.98	233	P	P	10 16 22.6	+0.6
PBKI	Pangkalan Bun	43.05	273	P	P	10 16 27.6	+4.8
BLDU	Ballidu	43.11	231	P	P	10 16 22.2	-0.9
	baz=43,SNR=7.5						
BLDU	Ballidu	43.11	231	P	P	10 16 22.7	-0.4
SBUM	Sibu	43.31	280	P	P	10 16 26.0	+1.1
SBUM	Sibu	43.31	280	P	P	10 16 25.4	+0.6
NWAO	Narrogin (SRO)	43.79	228	P	P	10 16 29.6	+1.1
UGM	Wanagama	43.88	265	P	P	10 16 32.7	+3.2
	comp=Z,184nm,1.3s						
UGM	Wanagama	43.88	265	P	P	10 16 29.5	0.0
YULB	Yu-li	43.97	313	P	P	10 16 30.2	+0.1
YULB				IAmb	IAmb	10 16 44.2	
	comp=Z,65nm,0.7s						
SMRI	Semarang	43.98	266	P	P	10 16 30.2	-0.1
YOGI	Yogyakarta	44.10	265	P	P	10 16 31.7	+0.4
	comp=Z,139nm,0.8s						
MUN	Mundaring	44.11	229	P	P	10 16 30.7	-0.4
	baz=44,SNR=4.9						
MUN	Mundaring	44.11	229	P	P	10 16 31.4	+0.3
NACB	Ninganchiao	44.24	314	P	P	10 16 32.6	+0.4
NACB				IAmb	IAmb	10 16 47.3	
	comp=Z,56nm,0.8s						
TPUB	Ta-pu	44.40	313	P	P	10 16 32.9	-0.6
TPUB	Ta-pu	44.40	313	P	P	10 16 34.1	+0.6
SSLB	Suanglung	44.46	313	P	P	10 16 34.1	+0.1
SSLB	Suanglung	44.46	313	P	P	10 16 35.4	+1.4
	comp=Z,77nm,0.8s						
YHNB	Yeheng	44.71	315	P	P	10 16 36.4	+0.4
YHNB				IAmb	IAmb	10 16 47.3	
	comp=Z,80nm,1.1s						
KSM	Kuching	45.00	278	P	P	10 16 39.0	+0.6
KSM	Kuching	45.00	278	P	P	10 16 38.2	-0.2
KSM				IAmb	IAmb	10 16 52.1	
	comp=Z,32nm,0.8s						
KSM	Kuching	45.00	278	P	P	10 16 39.0	+0.6
	comp=Z,44nm,1.3s						
JNU	Nakatsue	45.23	331	P	P	10 16 40.0	+0.1
JNU				IAmb	IAmb	10 16 56.0	
	comp=Z,32nm,0.7s						
JNU	Nakatsue	45.23	331	P	P	10 16 42.3	+2.3
MJAR	Matsushiro Arr	45.29	341	P	P	10 16 38.7	-1.7
	comp=Z,4.1nm,1.0s,baz=176,slow=8.6,SNR=4.8						
MJAR				PcP	PcP	10 18 18.9	-0.4
	comp=Z,6.1nm,0.9s,baz=171,slow=3.7,SNR=6.0						
MJAR				LR	LR	10 37 00.4	
	comp=Z,158nm,18.0s,baz=190,slow=38						
MAJO	Matsushiro	45.29	341	*i* P	P	10 16 38.7	-1.7
MAJO				pmax	pmax		
	comp=Z,11nm,1.0s						
MAT	Matsushiro	45.29	341	P	P	10 16 38.5	-1.9
CMJI	Cimerak	45.93	265	P	P	10 16 45.8	0.0
	comp=Z,1µmcomp=Z,112nm,0.8s						
KNMB	Chin-men Tao	46.74	312	P	P	10 16 51.5	-0.5
LEM	Lembang	46.79	267	P	P	10 16 54.1	+1.4
	comp=Z,34nm,0.8s						
CNJI	Cibinong	47.25	266	P	P	10 16 58.5	+2.3
	comp=Z,3µmcomp=Z,337nm,1.1s						
CBJI	Citeko	47.56	267	P	P	10 17 06.4	+7.8
MCQ	Macquarie Isla	48.23	177	P	P	10 17 04.2	+1.2
	baz=48						
XMIS	Christmas Isla	48.69	262	P	P	10 17 07.0	-0.3
CGJI	Cibinong	48.70	267	P	P	10 17 06.6	-0.8
	comp=Z,89nm,0.8s						
TJN	Taejon	49.55	331	*ce*P	P	10 17 12.6	-0.8
TJN	Taejon	49.55	331	P	P	10 17 15.3	+1.9
KLSI		49.77	269	P	P	10 17 16.4	+0.8
	comp=Z,6.7nm,1.4s						
KASI	Kota Agung	49.95	268	P	P	10 17 16.4	-0.5
KSRS	Korea Array	50.15	332	P	P	10 17 17.9	-0.1
	comp=Z,13nm,0.8s,baz=149,slow=9.4,SNR=17						
KSAR	Wonju Array Be	50.16	332	P	P	10 17 17.0	-1.0
KSAR	Wonju Array Be	50.16	332	P	P	10 17 17.0	-1.0
KS19	Wonju Array Si	50.22	332	P	P	10 17 18.0	-0.5
MDSI	Maura Dua	50.34	269	P	P	10 17 18.5	-1.3
	comp=Z,930nmcomp=Z,12nm,1.3s						
DSRI	Dabo	50.36	275	P	P	10 17 21.2	+1.2
	comp=Z,28nm,1.3s						
INCN	Inchon	50.79	331	P	P	10 17 22.9	+0.1
INCN				pmax	pmax		
	comp=Z,62nm,0.8s						
INCN	Inchon	50.79	331	P	P	10 17 22.9	+0.1
INCN	Inchon	50.79	331	P	P	10 17 24.3	+1.5
QIZ	Qiongzhong	50.85	301	P	P	10 17 23.6	0.0
QIZ				pP	pP	10 17 39.2	+0.2
QIZ				S	S	10 24 37.3	+1.8
QIZ				sS	sS	10 25 05.1	+2.4
QIZ				pmax	pmax		
	comp=Z,19nm,1.5s						
QIZ				pmax	pmax		
	comp=Z,270nm,3.4s						
QIZ				LR	LR		
	comp=Z,150nm,15.5s						
QIZ				LR	LR		
	comp=Z,220nm,17.1s						
QIZ				LR	LR		
	comp=Z,290nm,21.0s						
NJ2	Nanjing	51.17	320	*e*P	P	10 17 27.1	+1.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MYKOM	Kota Tinggi	51.41	277	P	P	10 17 27.8	-0.1
JRMM	Jerantut	53.13	280	P	P	10 17 41.0	+0.4
WHN	Wuhan	53.22	316	⇓P	P	10 17 42.1	+1.1
WHN				S	S	10 25 08.8	+1.2
WHN				LR	LR		
	comp=Z,620nm,25.3s						
BKNI	Bangkinang	53.97	275	P	P	10 17 46.6	-0.2
USRK	Ussuriysk Ar.	54.24	340	P	P	10 17 48.4	+0.2
	comp=Z,5.4nm,0.8s,baz=145,slow=7.3,SNR=15						
USRK				LR	LR	10 41 48.3	
	comp=Z,83nm,18.3s,baz=138,slow=37						
USRK	Ussuriysk Ar.	54.24	340	P	P	10 17 47.9	-0.3
USRK	Ussuriysk Ar.	54.24	340	P	P	10 17 47.9	-0.3
PDSI	Padang	54.38	273	P	P	10 17 49.3	-0.6
	comp=Z,3µmcomp=Z,26nm,0.9s						
IPM	Ipoh	54.66	280	P	P	10 17 51.0	-0.8
IPM	Ipoh	54.66	280	P	P	10 17 51.1	-0.8
IPM				IAmb	IAmb	10 17 52.5	
	comp=Z,37nm,0.9s						
IPM	Ipoh	54.66	280	P	P	10 17 51.7	-0.1
	comp=Z,52nm,1.1s						
TIA	Tai'an	55.01	323	*e*P	P	10 17 48.3	-5.7
TIA				pmax	pmax		
	comp=Z,18nm,0.9s						
KULM	Kulim	55.18	281	P	P	10 17 55.0	-0.6
KULM	Kulim	55.18	281	P	P	10 17 54.9	-0.6
KULM				IAmb	IAmb	10 17 56.0	
	comp=Z,26nm,0.7s						
PPT	Papeete	55.47	107	LR	LR	10 37 03.5	
	comp=Z,144nm,21.9s,baz=264,slow=31						
PPT2	Papeete2	55.47	107	*e*S	S	10 25 33.2	-5.4
	comp=Z,125nm,25.2s						
PPT2				*e*LR	LR	10 33 56.1	
	comp=Z,294nm,23.0s						
MNSI	Mandailing Nat	55.48	275	P	P	10 17 56.4	-1.4
	comp=Z,7µmcomp=Z,82nm,0.9s						
CN2	Changchun	56.40	335	*e*P	P	10 18 02.4	-1.4
CN2				*e*pP	pP	10 18 15.0	-5.1
CN2				*e*PP	PP	10 20 10.0	0.0
CN2				*e*S	S	10 25 49.2	-0.7
CN2				*e*sS	pS	10 26 10.6	+3.3
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				LR	LR		
	comp=Z,360nm,18.0s						
CN2				LR	LR		
	comp=Z,190nm,18.0s						
CN2				LR	LR		
	comp=Z,330nm,20.0s						
ENH	Enshi	56.53	313	P	P	10 18 05.0	-0.1
ENH				IAmb	IAmb	10 18 28.1	
	comp=Z,32nm,0.9s						
GYA	Guiyang	56.79	307	⇑P	P	10 18 07.8	+0.8
GYA				pP	pP	10 18 19.4	-3.6
GYA				pmax	pmax		
	comp=Z,24nm,0.8s						
GYA				LR	LR		
	comp=Z,490nm,17.7s						
SLVN	Son La	56.87	300	P	P	10 18 07.8	+0.1
SLVN				IAmb	IAmb	10 18 09.9	
	comp=Z,29nm,1.0s						
GSI	Gunungsitoli	57.54	276	P	P	10 18 11.2	-1.2
	comp=Z,4µmcomp=Z,83nm,0.9s						
GSI	Gunungsitoli	57.54	276	P	P	10 18 10.7	-1.7
GSI	Gunungsitoli	57.54	276	P	P	10 18 12.8	+0.4
KCSI	Kotacane, Aceh	57.68	278	P	P	10 18 12.5	-0.9
	comp=Z,37nm,1.0s						
BJI	Beijing	58.15	326	P	P	10 18 18.6	+2.4
BJI				pmax	pmax		
	comp=Z,18nm,0.7s						
KLR	Kul'dur	58.77	343	P	P	10 18 20.5	+0.1
	baz=140,slow=7.9						
KLR				LR	LR	10 42 00.7	
	comp=Z,111nm,20.9s,baz=158,slow=34						
KLR	Kul'dur	58.77	343	*ce*P	P	10 18 19.2	-1.1
KLR				pmax	pmax		
	comp=Z,24nm,1.0s						
XAN	Xi'an	58.98	316	P	P	10 18 21.6	-0.6
XAN				pP	pP	10 18 33.8	-4.8
XAN				sP	sP	10 18 39.6	-5.9
XAN				pmax	pmax		
	comp=Z,27nm,0.7s						
XAN				pmax	pmax		
	comp=Z,120nm,4.3s						
PETK	Petropavlovsk-	59.18	2	P	P	10 18 24.0	+0.9
	comp=Z,15nm,0.8s,baz=176,slow=6.5,SNR=8.8						
PETK	Petropavlovsk-	59.18	2	P	P	10 18 23.2	+0.1
KMI	Kunming	59.37	304	⇑P	P	10 18 26.6	+1.3
KMI				pP	pP	10 18 37.0	-3.9
KMI				S	S	10 26 36.5	+6.6
KMI				pmax	pmax		
	comp=Z,98nm,1.1s						
KMI				pmax	pmax		
	comp=Z,140nm,3.5s						
KMI				LR	LR		
	comp=Z,160nm,23.8s						
KMI				LR	LR		
	comp=Z,220nm,27.3s						
KMI				LR	LR		
	comp=Z,340nm,22.9s						
CM31	Chiang Mai Arr	60.22	295	P	P	10 18 31.5	+0.6
CMAR	Chiang Mai Arr	60.22	295	P	P	10 18 31.9	+1.1
	comp=Z,18nm,0.9s,baz=112,slow=5.1,SNR=90						
CMAR				LR	LR	10 43 10.6	
	comp=Z,130nm,21.6s,baz=154,slow=35						
CMAR				PKP2bc		10 48 01.9	
	comp=Z,0.7nm,0.4s,baz=341,slow=5.2,SNR=5.6						
CMAR	Chiang Mai Arr	60.22	295	*i* P	P	10 18 31.8	+0.9
CMAR				pmax	pmax		
	comp=Z,21nm,0.9s						
CMAR	Chiang Mai Arr	60.22	295	P	P	10 18 31.2	+0.3
CHTO	Chiang Mai	60.33	296	P	P	10 18 32.1	+0.4
CHTO				pmax	pmax		
	comp=Z,62nm,1.3s						
CHTO	Chiang Mai	60.33	296	P	P	10 18 32.1	+0.4
CHTO	Chiang Mai	60.33	296	P	P	10 18 32.4	+0.7
	comp=Z,24nm,1.3s						
CD2	Chengdu	61.12	310	P	P	10 18 37.1	+0.2
CD2				S	S	10 26 52.7	+0.9
CD2				pmax	pmax		
	comp=Z,70nm,0.6s						
CD2				pmax	pmax		
	comp=Z,190nm,5.3s						
CD2				LR	LR		
	comp=Z,350nm,17.7s						
CD2				LR	LR		
	comp=Z,400nm,20.1s						
CD2				LR	LR		
	comp=Z,470nm,22.1s						
HHC	Hu-ho-hao-te	61.33	324	*e*P	P	10 18 41.2	+3.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,7.1s						
HHC				LR	LR		
	comp=Z,820nm,19.2s						
HHC				LR	LR		
	comp=Z,360nm,16.7s						
HHC				LR	LR		
	comp=Z,290nm,19.8s						
BTO	Baotou	62.10	323	*e*P	P	10 18 47.5	+4.2
HIA	Hailar	63.13	335	*c i*P	P	10 18 49.5	-0.5
HIA				pmax	pmax		
	comp=Z,28nm,1.0s						
HIA	Hailar	63.13	335	P	P	10 18 50.3	+0.4
HIA				IAmb	IAmb	10 18 54.6	
	comp=Z,22nm,0.8s						
LZH	Lanzhou	63.59	315	*e*P	P	10 18 54.2	+0.8
LZH				sP	sP	10 19 18.9	+1.9
LZH				sS	sS	10 27 53.5	+2.8
LZH				pmax	pmax		
	comp=Z,33nm,1.1s						
LZH				pmax	pmax		
	comp=Z,250nm,5.2s						
LZH				LR	LR		
	comp=Z,350nm,14.4s						
LZH				LR	LR		
	comp=Z,320nm,16.0s						
LZH				LR	LR		
	comp=Z,1µm,16.0s						
ZEA	Zeya	64.08	342	*e*P	P	10 18 56.2	+0.1
ZEA				*e*		10 19 09.5	
ZEA				*e*		10 28 35.8	
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
MA2	Magadan	65.69	358	*e*P	P	10 19 05.5	-0.9
MA2				pmax	pmax		
	comp=Z,59nm,2.1s						
CASY	Casey	67.22	198	P	P	10 19 15.5	-0.6
CASY				IAmb	IAmb	10 19 16.9	
	comp=Z,21nm,0.9s						
GTA	Gaotai	68.01	317	⇑P	P	10 19 22.6	+0.8
GTA				pP	pP	10 19 35.5	-3.0
GTA				sP	sP	10 19 42.6	-2.8
GTA				S	S	10 28 18.8	+2.2
GTA				pmax	pmax		
	comp=Z,12nm,1.1s						
GTA				pmax	pmax		
	comp=Z,130nm,5.5s						
GTA				LR	LR		
	comp=Z,130nm,17.4s						
GTA				LR	LR		
	comp=Z,170nm,18.2s						
GTA				LR	LR		
	comp=Z,230nm,20.7s						

ULN	Ulaanbaatar	68.23	328	P	P	10 19 23.2	+0.2
ULN				pmax	pmax		
	comp=Z,13nm,1.1s						
ULN	Ulaanbaatar	68.23	328	P	P	10 19 23.1	+0.2
SONM	Songino Array	68.56	327	P	P	10 19 25.4	+0.4
	comp=Z,8.3nm,0.9s,baz=129,slow=6.2,SNR=14						
SONM				LR	LR	10 51 31.1	
	comp=Z,150nm,18.3s,baz=137,slow=38						
SONM	Songino Array	68.56	327	P	P	10 19 25.2	+0.2
SONM				pmax	pmax		
	comp=Z,20nm,1.4s						
SONM	Songino Array	68.56	327	P	P	10 19 25.2	+0.2
SHL	Shillong	68.68	300	P	P	10 19 26.1	-0.2
SHL				pmax	pmax		
	comp=Z,163nm,0.9s						
SHL	Shillong	68.68	300	P	P	10 19 26.1	-0.2
SEY	Seymchan	69.00	359	LR	LR	10 50 37.1	
	comp=Z,105nm,19.2s,baz=162,slow=37						
LSA	Lhasa	70.63	304	P	P	10 19 38.8	+0.2
LSA				pmax	pmax		
	comp=Z,97nm,1.2s						
YAK	Yakutsk	70.77	348	LR	LR	10 48 48.3	
	comp=Z,140nm,21.9s,baz=92,slow=34						
YAK	Yakutsk	70.77	348	*e*P	P	10 19 38.0	-0.1
YAK				*e**PP	pP	10 19 51.5	-3.5
YAK				*e*		10 19 56.8	
YAK				*e*		10 22 12.1	
YAK				*e*S	S	10 28 51.3	+3.4
YAK				*e**SS	sS	10 29 20.1	+3.9
YAK				*e*		10 29 40.0	
YAK				*e*SS	SS	10 33 27.8	+6.4
YAK				pmax	pmax		
	comp=Z,30nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,78nm,2.6s						
YAK				pmax	pmax		
	comp=N,44nm,2.0s						
YAK				pmax	pmax		
	comp=E,62nm,2.5s						
YAK				smax	smax		
	comp=E,93nm,3.1s						
YAK				smax	smax		
	comp=N,73nm,2.3s						
YAK	Yakutsk	70.77	348	P	P	10 19 38.2	+0.1
YAK				IAmb	IAmb	10 19 39.1	
	comp=Z,30nm,1.0s						
VNDA	Vanda	71.33	178	P	P	10 19 41.6	+0.3
	comp=Z,9.2nm,1.0s,baz=330,slow=5.4,SNR=18						
VNDA				LR	LR	10 44 27.1	
	comp=Z,155nm,18.9s,baz=351,slow=30						
VNDA	Vanda	71.33	178	P	P	10 19 42.0	+0.6
VNDA				pmax	pmax		
	comp=Z,18nm,1.2s						
VNDA	Vanda	71.33	178	P	P	10 19 42.0	+0.6
ZAK	Zakamensk	71.72	328	*e*P	P	10 19 43.8	-0.5
ZAK				pmax	pmax		
	comp=Z,18nm,1.1s						
TLY	Talaya	72.28	329	*e*P	P	10 19 47.5	0.0
TLY				pmax	pmax		
	comp=Z,20nm,0.9s						
TLY				MLR	MLR		
	comp=Z,415nm,18.0s						
TLY	Talaya	72.28	329	P	P	10 19 47.6	0.0
TAPN	Taplejung	72.78	301	*e*P	P	10 19 51.4	0.0
	comp=Z,201nm,1.0s						
ODAN	Odare	72.92	300	*e*P	P	10 19 52.4	+0.3
	comp=Z,192nm,0.8s						
RAMN	Ramite	73.62	300	*e*P	P	10 19 56.6	+0.4
	comp=Z,25nm,0.5s						
GUN	Gumba	74.50	301	*e*P	P	10 20 01.5	0.0
	comp=Z,115nm,0.8s						
BILL	Bilibino	74.56	4	⇓*e*P	P	10 19 59.3	-1.2
BILL						10 20 13.0	
BILL				*e**PP	PcP	10 20 14.7	+0.1
BILL				*e*PPP	PPP	10 24 31.9	
BILL				*e*		10 30 32.0	
BILL				*e*SSS	SSS	10 37 31.3	
BILL				pmax	pmax		
	comp=Z,25nm,0.8s						
BILL				MLR	MLR		
	comp=Z,97nm,18.0s						
BILL	Bilibino	74.56	4	P	P	10 20 00.9	+0.4
BILL				IAmb	IAmb	10 20 05.3	
	comp=Z,23nm,0.8s						
PKI	Pulchoki	74.81	301	*e*P	P	10 20 02.9	-0.4
PKIN	Phulchoki	74.82	301	*e*P	P	10 20 02.9	-0.4
KKN	Kakani	74.98	301	*e*P	P	10 20 04.0	-0.1
PALK	Pallekele	75.05	279	LR	LR	10 56 41.4	
	comp=Z,175nm,19.6s,baz=224,slow=39						
DMN	Daman	75.08	301	*e*P	P	10 20 04.9	+0.2
SII	Sitkinak Islan	75.19	26	P	P	10 20 04.2	-0.2
	baz=233						
GKN	Gorkha	75.58	301	*e*P	P	10 20 07.3	-0.2
OHAK	Old Harbor	75.98	26	P	P	10 20 09.2	+0.4
	baz=234						
KOLN	Koldanda	76.41	300	*e*P	P	10 20 11.9	-0.4
	comp=Z,52nm,0.7s						
DANN	Dangsing	76.42	301	*e*P	P	10 20 11.8	-0.6
	comp=Z,82nm,0.8s						
P18K	Big Mountain,	76.48	24	P	P	10 20 11.7	0.0
	baz=232						
ANM	Nome	76.59	17	P	P	10 20 12.5	+0.3
	baz=221						
TNA	Tin City	76.67	15	P	P	10 20 13.2	+0.6
	baz=218						
Q19K	Cape Douglas,	76.84	25	P	P	10 20 13.2	-0.6
	baz=233						
O19K	Port Alsworth	77.34	23	P	P	10 20 16.9	+0.4
	baz=232						
SVW2	Sparrevohn	77.41	22	P	P	10 20 17.9	+1.0
SVW2				IAmb	IAmb	10 20 32.1	
	comp=Z,103nm,2.0s						
P19K	Oil Pt	77.45	24	P	P	10 20 17.3	+0.2
P19K	Oil Pt	77.45	24	P	P	10 20 17.5	+0.3
	baz=233						
N19K	Bonanza Creek	77.66	23	P	P	10 20 18.5	+0.1
	baz=232						
O20K	Slope Mountain	77.95	24	P	P	10 20 19.4	-0.6
	baz=234						
WMQ	Urumqi	78.09	317	*e*P	P	10 20 23.7	+2.5
WMQ				LR	LR		
	comp=Z,180nm,22.9s						
M19K	Big River Lodg	78.36	22	P	P	10 20 22.5	+0.3
	baz=232						
L19K	White Mountain	78.37	22	P	P	10 20 23.0	+0.8
	baz=232,SNR=14						
TTA	Tatalina	78.42	21	P	P	10 20 23.4	+0.8
TTA				pmax	pmax		
	comp=Z,17nm,0.9s						
TTA	Tatalina	78.42	21	P	P	10 20 23.4	+0.8
TTA	Tatalina	78.42	21	P	P	10 20 23.2	+0.7
	baz=230,SNR=12						
BRSE	Bradley Lake S	78.53	25	P	P	10 20 24.3	+1.2
	baz=236						
HYB	Hyderabad	78.77	289	*i* P	P	10 20 25.0	-0.4
	comp=Z,140nm,1.0s						
HYB				*e*PcP	PcP	10 20 34.0	0.0
HYB				*e*pP	pwP	10 20 44.5	+0.4
L20K	Farewell, AK	78.91	22	P	P	10 20 25.7	+0.5
	baz=232,SNR=7.7						
CAPN	Captain Cook N	78.94	24	P	P	10 20 25.2	-0.1
	baz=235						
SEW	Seward	79.27	25	P	P	10 20 27.0	-0.1
	baz=237						
GCSA	Galena City Sc	79.31	19	P	P	10 20 27.8	+0.6
	baz=229,SNR=8.8						
O22K	Cooper Landing	79.36	25	P	P	10 20 27.9	+0.2
O22K				IAmb	IAmb	10 20 50.5	
	comp=Z,48nm,0.8s						
O22K	Cooper Landing	79.36	25	P	P	10 20 28.3	+0.6
	baz=236						
K20K	Telida	79.38	21	P	P	10 20 28.6	+1.0
K20K	Telida	79.38	21	P	P	10 20 28.7	+1.0
	baz=232,SNR=9.0						
TIXI	Tiksi	79.58	352	LR	LR	10 52 30.0	
	comp=Z,101nm,22.0s,baz=214,slow=33						
TIXI	Tiksi	79.58	352	*ce*P	P	10 20 27.2	-1.4
TIXI				pmax	pmax		
	comp=Z,12nm,1.8s						
TIXI	Tiksi	79.58	352	P	P	10 20 29.6	+1.0
RC01	Rabbit Creek A	79.70	24	P	P	10 20 29.7	+0.2
RC01				IAmb	IAmb	10 20 30.9	
	comp=Z,37nm,1.2s						
RC01	Rabbit Creek A	79.70	24	P	P	10 20 29.5	0.0
	baz=236						
PPLA	Purkeypile	79.78	22	P	P	10 20 30.0	-0.1
	baz=234						
J20K	Nowinta River	79.86	20	P	P	10 20 31.5	+1.2
J20K				IAmb	IAmb	10 20 32.6	
	comp=Z,22nm,0.8s						
J20K	Nowinta River	79.86	20	P	P	10 20 31.1	+0.8
	baz=232,SNR=14						
M22K	Willow	79.91	23	P	P	10 20 30.3	-0.2
	baz=236						
CAST	Castle Rocks	80.13	21	P	P	10 20 31.7	-0.1
	baz=234						
PWL	Port Wells	80.14	25	IAmb	IAmb	10 20 33.5	
	comp=Z,46nm,0.8s						
PWL	Port Wells	80.14	25	P	P	10 20 32.0	+0.1
	baz=238						
PMR	Palmer	80.22	24	P	P	10 20 32.7	+0.4
PMR				pmax	pmax		
	comp=Z,38nm,1.3s						
PMR	Palmer	80.22	24	P	P	10 20 32.6	+0.4
PMR				IAmb	IAmb	10 20 47.8	
	comp=Z,38nm,1.3s						
PMR	Palmer	80.22	24	P	P	10 20 32.5	+0.3
	baz=237,SNR=5.7						
CUT	Chulitna	80.22	23	P	P	10 20 31.8	-0.5
	baz=236						
CHUM	Lake Minchumin	80.32	21	P	P	10 20 33.3	+0.6
	baz=234,SNR=15						
DGZ	Jazzator, Alta	80.39	323	*c i*P	P	10 20 32.9	-0.7
DGZ				pmax	pmax		
	comp=Z,14nm,1.2s						
KNK	Knik Glacier	80.39	24	P	P	10 20 33.7	+0.4
	baz=238						
SML	Sawmill	80.66	24	P	P	10 20 35.8	+1.1
SML				IAmb	IAmb	10 21 13.1	
	comp=Z,43nm,1.0s						
SML	Sawmill	80.66	24	P	P	10 20 34.5	-0.2
	baz=238,SNR=7.1						
GLI	Glacier Island	80.67	25	P	P	10 20 34.6	-0.1
	baz=239						
TRF	Thorofare Moun	80.81	22	P	P	10 20 35.5	-0.1
TRF	Thorofare Moun	80.81	22	P	P	10 20 35.6	-0.1
	baz=236						
SCM	Sheep Creek Mo	81.07	24	P	P	10 20 37.9	+0.9
	baz=238,SNR=5.2						
IMAR	Indian Mountai	81.11	19	P	P	10 20 37.7	+0.7
I21K	Tanana	81.21	20	P	P	10 20 38.1	+0.7
	baz=234,SNR=7.0						
H21K	Melozitna Rive	81.22	19	P	P	10 20 38.2	+0.6
	baz=233						
WAT6	Susitna Watana	81.30	23	P	P	10 20 38.1	-0.2
	baz=238,SNR=6.9						
MCK	McKinley	81.47	22	P	P	10 20 39.2	+0.2
MCK				pmax	pmax		
	comp=Z,43nm,1.0s						
MCK	McKinley	81.47	22	P	P	10 20 39.2	+0.2
MCK				IAmb	IAmb	10 20 40.1	
	comp=Z,43nm,1.0s						
MCK	McKinley	81.47	22	P	P	10 20 38.4	-0.6
	baz=237,SNR=13						
KLU	Klutina	81.47	25	P	P	10 20 39.5	+0.4
	baz=240,SNR=6.7						
MLY	Manley	81.55	20	P	P	10 20 39.4	0.0
	baz=235,SNR=14						
M24K	Tolsona, Glenn	81.68	24	P	P	10 20 41.5	+1.4
M24K	Tolsona, Glenn	81.68	24	P	P	10 20 40.9	+0.8
	baz=240						
DHY	Denali Highway	81.71	23	P	P	10 20 40.5	+0.1
	baz=238						
BMRM	Bremner River	81.77	25	P	P	10 20 40.6	0.0
	baz=241						
NEA2	Nenana	81.89	21	P	P	10 20 40.0	-1.1
	baz=237,SNR=6.1						
N25K	Chitina, Valde	82.08	25	P	P	10 20 43.4	+1.1
N25K				IAmb	IAmb	10 20 58.7	
	comp=Z,64nm,1.6s						
N25K	Chitina, Valde	82.08	25	P	P	10 20 43.0	+0.7
	baz=241						
I23K	Minto, Yukon-K	82.10	21	P	P	10 20 42.5	+0.4
	baz=236						
WRH	Wood River Hil	82.18	22	P	P	10 20 43.0	+0.4
WRH				IAmb	IAmb	10 21 08.8	
	comp=Z,50nm,1.8s						
HARP	HAARP	82.24	24	P	P	10 20 43.7	+0.7
	baz=240						
MDM	Murphy Dome	82.40	21	P	P	10 20 43.6	-0.2
PAX	Paxson	82.40	23	P	P	10 20 44.4	+0.5
	baz=240						
TCOL	CIGO, UAF Yank	82.48	21	P	P	10 20 43.8	-0.4
	baz=238,SNR=6.7						
COLA	College	82.49	21	*i* P	P	10 20 43.0	-1.2
COLA				pmax	pmax		
	comp=Z,23nm,1.0s						
COLA	College	82.49	21	P	P	10 20 43.8	-0.3
	baz=238						
HDA	Harding Lake	82.57	22	P	P	10 20 44.9	+0.3
HDA	Harding Lake	82.57	22	P	P	10 20 44.5	-0.2
	baz=239,SNR=6.7						
MCARA	McCarthy VSAT	82.64	25	P	P	10 20 46.1	+1.0
MCARA				IAmb	IAmb	10 21 02.0	
	comp=Z,54nm,1.3s						
MCARA	McCarthy VSAT	82.64	25	P	P	10 20 46.1	+1.0
	baz=242						
MK31	Makanchi Array	82.67	319	*c i*P	P	10 20 45.2	-0.4
MK31	Makanchi Array	82.67	319	P	P	10 20 45.7	+0.1
MKAR	Makanchi Array	82.67	319	P	P	10 20 45.3	-0.3
	comp=Z,5.9nm,0.7s,baz=101,slow=6.3,SNR=20						
MKAR				LR	LR	10 58 15.5	
	comp=Z,119nm,19.9s,baz=100,slow=36						
MKAR	Makanchi Array	82.67	319	*i* P	P	10 20 45.5	-0.1
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ILAR	Eielson Array	82.78	22	P	P	10 20 44.4	-1.4
	comp=Z,9.0nm,0.8s,baz=252,slow=4.8,SNR=55						
ILAR				PKKPbc	PKKPbc	10 39 08.1	-4.6
	comp=Z,0.2nm,0.6s,baz=23,slow=2.9,SNR=4.3						
ILAR				LR	LR	10 53 01.7	
	comp=Z,514nm,21.6s,baz=250,slow=32						
ILAR	Eielson Array	82.78	22	P	P	10 20 45.6	-0.2
ILAR	Eielson Array	82.78	22	P	P	10 20 45.6	-0.2
MAKZ	Makanchi	82.88	319	P	P	10 20 46.3	-0.4
MAKZ				pmax	pmax		
	comp=Z,14nm,0.9s						
MAKZ	Makanchi	82.88	319	P	P	10 20 46.2	-0.4
COLD	Coldfoot	82.99	19	P	P	10 20 47.3	+0.5
	baz=235						
H24K	Noodor Dome	83.00	20	P	P	10 20 47.2	+0.3
	baz=238						
RIDG	Independent Ri	83.03	23	P	P	10 20 47.2	+0.1
	baz=241,SNR=8.4						
M26K	Nabesna, AK	83.13	25	P	P	10 20 48.8	+1.2
	baz=242						
CTG	Chitna Glacier	83.18	26	P	P	10 20 49.4	+1.3
	baz=244						
J25K	Salcha River,	83.26	22	P	P	10 20 48.2	-0.2
	baz=240,SNR=16						
L26K	Log Cabin Wild	83.27	24	P	P	10 20 48.8	+0.4
	baz=242,SNR=5.9						
DOT	Dot Lake	83.29	23	P	P	10 20 49.0	+0.6
DOT				IAmb	IAmb	10 20 49.9	
	comp=Z,28nm,1.0s						
PINM	Pinnacle	83.29	27	P	P	10 20 49.4	+0.8
	baz=245						
ZALV	Zalesovo Beam	83.41	326	P	P	10 20 48.3	-0.9
	comp=Z,6.1nm,0.7s,baz=107,slow=5.1,SNR=27						
ZALV				LR	LR	10 57 50.0	
	comp=Z,87nm,21.2s,baz=107,slow=36						
SCRK	Sand Creek	83.47	23	P	P	10 20 49.5	0.0
	baz=241,SNR=11						
M27K	Edge Creek, AK	83.57	25	P	P	10 20 50.8	+0.7
M27K				IAmb	IAmb	10 21 10.9	
	comp=Z,34nm,1.1s						
M27K	Edge Creek, AK	83.57	25	P	P	10 20 51.1	+1.0
	baz=243,SNR=11						
A21K	Barrow	83.73	14	P	P	10 20 51.4	+0.9
	baz=229						
J26L	Joseph Creek	83.89	23	P	P	10 20 51.8	+0.2
	baz=242,SNR=9.9						
L27K	Beaver Creek,	83.91	24	P	P	10 20 52.3	+0.7
	baz=243,SNR=9.1						
YUK3	Moose Creek	83.92	26	P	P	10 20 52.5	+0.6
	baz=245						
BCAR	Beaver Creek A	83.93	24	P	P	10 20 52.5	+0.7
TOLK	Toolik Lake Re	84.00	18	P	P	10 20 53.0	+1.0
TOLK				IAmb	IAmb	10 20 53.7	
	comp=Z,16nm,0.8s						
TOLK	Toolik Lake Re	84.00	18	P	P	10 20 52.6	+0.6
	baz=236						
BVCY	Beaver Creek	84.02	25	P	P	10 20 53.0	+0.8
	baz=244						
TARG	Taragay, Kyrgy	84.45	313	P	P	10 20 55.1	-0.2
YUK4	Talbot Arm	84.53	26	P	P	10 20 56.4	+1.4
	baz=246						
HYT	Haines Junctio	84.83	27	IAmb	IAmb	10 21 12.5	
	comp=Z,63nm,1.6s						
HYT	Haines Junctio	84.83	27	P	P	10 20 57.5	+1.0
	baz=248,SNR=7.7						
EGAK	Eagle	84.94	23	P	P	10 20 57.6	+0.9
	baz=244						
BMAR	Burnt Mountain	84.94	20		P	10 20 58.3	+1.5
MAW	Mawson	84.98	203	P	P	10 20 57.2	+0.3
	comp=Z,24nm,0.7s,baz=104,slow=5.3,SNR=34						
MAW				LR	LR	10 54 58.2	
	comp=Z,171nm,22.0s,baz=60,slow=33						
MAW	Mawson	84.98	203	P	P	10 20 57.5	+0.5
	baz=85,SNR=25						
MAW	Mawson	84.98	203	P	P	10 20 57.1	+0.2
KDJ	Kajisay	84.99	313	IAmb	IAmb	10 21 02.0	
	comp=Z,24nm,0.8s						
KSH	Kashi	85.32	310	P	P	10 21 01.1	+1.7
KSH				pP	pP	10 21 16.7	+0.3
KSH				pmax	pmax		
	comp=Z,19nm,1.0s						
DAWY	Dawson	85.33	24	P	P	10 20 59.6	+0.8
	baz=246,SNR=5.4						
SKAG	Skagway	85.35	29	P	P	10 21 00.6	+1.7
	baz=250						
M30M	Minto, Yukon	85.81	26	P	P	10 21 02.1	+0.9
	baz=248,SNR=10						
WRAK	Wrangell Islan	85.86	32	P	P	10 21 02.4	+0.9
	baz=252						
N31M	Braeburn, Yuko	85.86	27	P	P	10 21 02.6	+1.1
	baz=249,SNR=7.3						
J29M	Klondike Camp	85.95	24	P	P	10 21 02.9	+1.0
	baz=247						
WHY	Whitehorse	85.98	28	P	P	10 21 02.7	+0.6
	baz=250						
KURK	Kurchatov	86.08	322	P	P	10 21 02.3	-0.4
KURK	Kurchatov	86.08	322	P	P	10 21 01.5	-1.2
KURBB	Kurchatov Arra	86.11	322	P	P	10 21 02.2	-0.6
	comp=Z,2.9nm,0.7s,baz=104,slow=3.5,SNR=17						
I29M	Ogilvie Camp,	86.28	23	P	P	10 21 03.8	+0.3
	baz=246,SNR=16						
NIL	Nilore	86.36	304	P	P	10 21 04.7	+0.1
NIL				pmax	pmax		
	comp=Z,17nm,0.5s						
NIL	Nilore	86.36	304	P	P	10 21 04.7	+0.1
NIL				IAmb	IAmb	10 21 21.1	
	comp=Z,17nm,0.5s						
M31M	Drury Creek, Y	86.73	26	P	P	10 21 05.9	+0.2
	baz=250,SNR=6.7						
P33M	Teslin, Yukon	86.79	28	P	P	10 21 06.8	+0.7
	baz=252						
AAK	Ala-Archa	87.04	313	P	P	10 21 07.5	-0.3
	comp=Z,5.2nm,0.7s,baz=87,slow=2.8,SNR=7.2						
AAK	Ala-Archa	87.04	313	*ce*P	P	10 21 07.6	-0.3
AAK				pmax	pmax		
	comp=Z,20nm,0.8s						
AAK	Ala-Archa	87.04	313	P	P	10 21 07.6	-0.3
FARO	Faro, Yukon	87.20	26	P	P	10 21 08.4	+0.4
	baz=251,SNR=8.1						
EPYK	Eagle Plains	87.27	22	P	P	10 21 09.0	+0.7
EPYK	Eagle Plains	87.27	22	P	P	10 21 08.7	+0.4
	baz=248						
NRIK	Noril'sk	87.94	341	P	P	10 21 10.2	-1.2
	comp=Z,28nm,1.0s,baz=117,slow=4.4,SNR=29						
NRIK				LR	LR	11 00 12.1	
	comp=Z,134nm,21.7s,baz=97,slow=35						
NRIK	Noril'sk	87.94	341	*ce*P	P	10 21 09.0	-2.4
NRIK				pmax	pmax		
	comp=Z,27nm,0.9s						
NRIK	Noril'sk	87.94	341	P	P	10 21 09.9	-1.4
NRIK				IAmb	IAmb	10 21 11.3	
	comp=Z,22nm,0.8s						
K02D	Willamette Mer	88.06	47	P	P	10 21 13.9	+1.3
	baz=260						
MMPY	Sheldon Lake,	88.24	26	P	P	10 21 13.8	+0.8
	baz=253						
O02D	Mt. Diablo Mer	88.28	49	P	P	10 21 15.0	+1.3
	baz=260						
M02C	Callahan	88.43	48	P	P	10 21 15.7	+1.2
	baz=260						
I03D	Drain, OR	88.46	46	P	P	10 21 15.9	+1.6
	baz=260						
N02D	Trinity Center	88.47	49	P	P	10 21 15.2	+0.6
	baz=260						
H04D	Lebanon	89.04	45	P	P	10 21 18.7	+1.7
	baz=260						
O03E	Paynes Creek	89.04	49	P	P	10 21 18.5	+1.2
	baz=261						
INK	Inuvik	89.12	21	PKKP		10 38 53.8	
	comp=Z,2.1nm,0.9s,baz=81,slow=3.6,SNR=7.1						
INK	Inuvik	89.12	21	P	P	10 21 16.7	-0.2
	baz=251						
ORV	Oroville	89.16	50	P	P	10 21 18.6	+0.8
ORV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ORV	Oroville	89.16	50	P	P	10 21 18.6	+0.8
TGTN	Hyland Airport	89.30	28	P	P	10 21 19.0	+1.0
	baz=256						
D03D	Eldon	89.31	42	P	P	10 21 18.9	+0.6
	baz=260						
BTK	Batken	89.33	310	P	P	10 21 18.1	-0.6
BTK				pmax	pmax		
	comp=Z,12nm,1.0s						
BTK	Batken	89.33	310	P	P	10 21 18.1	-0.6
BTK				IAmb	IAmb	10 21 47.7	
	comp=Z,12nm,0.9s						
F04A	Amboy	89.49	44	P	P	10 21 18.3	-0.9
E04D	Cinebar	89.50	43	P	P	10 21 20.7	+1.5
	baz=260						
GAR	Garm	89.55	309	P	P	10 21 18.9	-0.9
GAR				IAmb	IAmb	10 21 28.0	
	comp=Z,34nm,1.5s						
SMMC	Simmler	89.73	55	P	P	10 21 21.3	+0.6
	baz=262						
PKM	Mcpherson Peak	89.83	55	P	P	10 21 23.1	+1.8
	baz=262,SNR=6.6						
SBC	Santa Barbara	89.85	55	P	P	10 21 22.6	+1.5
	baz=262						
J05D	Fort Rock, OR	89.92	47	P	P	10 21 22.6	+1.2
	baz=261						
HOOD	Mount Hood Mea	89.93	45	P	P	10 21 21.9	+0.4
HOOD				IAmb	IAmb	10 21 36.0	
	comp=Z,22nm,0.9s						
KBL	Kabul	89.95	305	P	P	10 21 21.8	-0.1
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBL	Kabul	89.95	305	P	P	10 21 21.8	-0.1
I05D	Terrebonne, OR	90.00	46	P	P	10 21 22.6	+1.0
	baz=261						
KKAR	Karatay Array	90.01	313	P	P	10 21 20.3	-1.4
KKAR	Karatay Array	90.01	313	P	P	10 21 20.3	-1.4
B05A	Bryant	90.09	42	P	P	10 21 22.6	+0.7
	baz=261						
RUBR	Rubicon Trail	90.12	51	P	P	10 21 24.1	+1.5
F05D	White Salmon	90.15	44	P	P	10 21 23.1	+0.8
	baz=261						
G05D	Wamic, OR	90.15	45	P	P	10 21 22.9	+0.6
	baz=261						
VCNR	Virginia City	90.54	51	P	P	10 21 25.3	+0.8
VCNR				IAmb	IAmb	10 21 27.6	
	comp=Z,19nm,1.0s						
VES	Vestal, Richgr	90.54	54	P	P	10 21 25.3	+1.0
	baz=263						
PNTR	Pine Nut	90.55	51	P	P	10 21 25.8	+1.2
ARVC	Arvin	90.66	55	P	P	10 21 26.2	+1.3
	baz=263,SNR=5.9						
MDPB	Devils Postpil	90.77	52	P	P	10 21 26.4	+0.7
MDPB				IAmb	IAmb	10 21 55.9	
	comp=Z,14nm,0.9s						
CIS	Catalina Islan	90.79	57	P	P	10 21 25.9	+0.4
	baz=263						
PAHR	Pah Rah Range	90.80	50	P	P	10 21 26.5	+0.9
PAHR				IAmb	IAmb	10 21 28.5	
	comp=Z,20nm,1.0s						
DECC	Green Verdugo	90.96	56	P	P	10 21 27.7	+1.4
	baz=263						
ISA	Isabella, Lake	91.01	54	P	P	10 21 27.1	+0.5
ISA				pmax	pmax		
	comp=Z,24nm,1.5s						
ISA	Isabella, Lake	91.01	54	P	P	10 21 27.1	+0.5

ISA				IAmb	IAmb	10 21 42.0	
	comp=Z,24nm,1.4s						
ISA	Isabella, Lake	91.01	54	P	P	10 21 27.7	+1.1
	baz=263,SNR=6.4						
LHV	Little Huntoon	91.30	52	P	P	10 21 29.3	+1.5
EDW2	Edwards Air Fo	91.31	55	P	P	10 21 29.5	+1.5
	baz=263,SNR=18						
CWC	Cottonwood Cre	91.42	54	P	P	10 21 29.6	+1.0
	baz=263						
NVAR	Mina Array Bea	91.47	52	PKKPbc	PKKPbc	10 38 50.6	0.0
	comp=Z,0.6nm,0.7s,baz=73,slow=3.0,SNR=4.3						
BFSC	Mount Baldy Ra	91.51	56	P	P	10 21 30.1	+1.1
	baz=264,SNR=10						
BVAR	Borovoye Array	91.54	323	P	P	10 21 27.0	-1.5
	comp=Z,11nm,1.0s,baz=188,slow=10,SNR=24						
BRVK	Borovoye	91.61	323	ceP	P	10 21 26.9	-1.9
BRVK				pmax	pmax		
	comp=Z,11nm,1.0s						
LRMC	Laurel Mtn Rad	91.63	55	P	P	10 21 31.2	+1.6
	baz=264,SNR=28						
109C	Camp Elliot, M	91.82	57	P	P	10 21 31.8	+1.5
	baz=264						
MURC	Murrieta	91.82	57	P	P	10 21 31.7	+1.3
	baz=264						
MPMC	Manual Prospec	91.85	54	P	P	10 21 31.7	+1.1
	baz=264,SNR=23						
WRGLY	Wrigley	91.85	27	P	P	10 21 30.1	+0.4
	baz=260						
PNT	Penticton	91.86	41	P	P	10 21 25.8	-4.4
PNT				pmax	pmax		
	comp=Z,24nm,1.0s						
E08A	Dider Farm, El	91.88	44	P	P	10 21 30.6	+0.3
E08A				IAmb	IAmb	10 21 32.0	
	comp=Z,13nm,0.8s						
J08A	Circle Bar Ran	91.92	47	P	P	10 21 31.1	+0.4
J08A				IAmb	IAmb	10 21 32.5	
	comp=Z,8.0nm,0.8s						
D08A	Wollman Farm,	92.05	43	P	P	10 21 31.2	+0.2
D08A				IAmb	IAmb	10 21 45.0	
	comp=Z,18nm,1.2s						
BBRC	Big Bear Solar	92.12	56	P	P	10 21 33.0	+1.0
	baz=264,SNR=6.9						
GSC	Goldstone, Bar	92.32	55	P	P	10 21 33.9	+1.2
	baz=264,SNR=8.6						
MONP2	Monument Peak	92.39	57	P	P	10 21 34.7	+1.5
	baz=264,SNR=7.4						
FURC	Furnace Creek,	92.40	54	P	P	10 21 34.4	+1.6
	baz=264						
PFO	Pinyon Flats O	92.43	57	P	P	10 21 34.2	+0.9
	baz=264,SNR=8.1						
TPFO	Pinon Flats	92.44	57	P	P	10 21 34.4	+1.0
	baz=264,SNR=8.0						
C09A	Chrisman Ranch	92.57	42	P	P	10 21 33.5	0.0
C09A				IAmb	IAmb	10 21 35.3	
	comp=Z,31nm,1.5s						
IKP	In-Ko-Pah, Jac	92.63	58	P	P	10 21 34.9	+0.7
	baz=264						
HEC	Hector,Ludlow	92.66	55	P	P	10 21 35.4	+1.1
	baz=264,SNR=9.8						
SHOC	Shoshone, Teco	92.81	54	P	P	10 21 36.1	+1.2
	baz=264,SNR=18						
A36M	Sachs Harbour	92.82	18	P	P	10 21 33.8	-0.2
A36M				IAmb	IAmb	10 21 35.2	
	comp=Z,15nm,0.8s						
A36M	Sachs Harbour	92.82	18	P	P	10 21 33.5	-0.5
	baz=259						
BELC	Belle Mtn. Jos	92.86	56	P	P	10 21 36.6	+1.4
	baz=264,SNR=24						
SWSC	Sam W. Stewart	92.92	57	P	P	10 21 36.2	+0.8
	baz=264						
BMO	Blue Mountains	92.92	45	P	P	10 21 35.4	+0.1
BMO				pmax	pmax		
	comp=Z,15nm,1.2s						
BMO	Blue Mountains	92.92	45	P	P	10 21 35.4	+0.1
BMO				IAmb	IAmb	10 21 37.4	
	comp=Z,15nm,1.2s						
SYO	Syowa Base	92.94	199	⇑eP	P	10 21 34.1	-0.6
SYO	Syowa Base	92.94	199	⇓epP	pP	10 21 50.6	-0.8
TUQ	Turquoise Moun	93.05	55	P	P	10 21 37.4	+1.2
	baz=264,SNR=10						
GMRC	Granite Mounta	93.21	56	P	P	10 21 38.0	+1.2
	baz=265,SNR=16						
BC3	Big Chuckawall	93.27	57	P	P	10 21 37.8	+0.6
	baz=265,SNR=9.7						
NEW	Newport	93.39	42	P	P	10 21 37.3	0.0
	baz=264,SNR=9.3						
IRM	Iron Mountain	93.57	56	P	P	10 21 39.9	+1.4
	baz=265,SNR=25						
R11A	Troy Canyon, C	93.59	52	P	P	10 21 39.9	+1.2
	baz=265,SNR=27						
GLA	Glamis	93.74	57	P	P	10 21 40.4	+1.1
	baz=265						
NEE2	Needles Airpor	94.06	56	P	P	10 21 40.9	+0.3
	baz=265						
ELK	Elko	94.06	50	P	P	10 21 41.5	+0.7
ELK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ELK	Elko	94.06	50	P	P	10 21 41.5	+0.7
ELK				IAmb	IAmb	10 21 43.5	
	comp=Z,8.6nm,1.0s						
PDMCI	Parker Dam,Lak	94.42	56	P	P	10 21 43.3	+1.1
	baz=266,SNR=5.7						
W13A	Hualapai Mount	94.69	55	P	P	10 21 45.2	+1.4
W13A				IAmb	IAmb	10 21 47.1	
	comp=Z,12nm,0.9s						
HLID	Hailey	94.88	47	P	P	10 21 45.4	+1.0
HLID	Hailey	94.88	47	P	P	10 21 45.2	+0.8
	baz=266,SNR=6.0						
MSO	Missoula	95.42	44	P	P	10 21 46.7	0.0
	baz=267						
YKA	Yellowknife Ar	95.81	28	P	P	10 21 48.5	+0.6
	comp=Z,5.7nm,0.9s,baz=266,slow=4.6,SNR=14						
YKA				PKKP	PKKPbc	10 38 35.7	-4.2
	comp=Z,1.2nm,0.5s,baz=86,slow=2.6,SNR=14						
YKA				LR	LR	11 00 02.5	
	comp=Z,184nm,21.9s,baz=0.0,slow=32						
DUG	Dugway, Tooele	95.87	50	P	P	10 21 49.0	+0.1
	baz=267						
WUAZ	Wupatki	96.76	55	P	P	10 21 53.9	+0.7
	baz=267,SNR=6.5						
BOZ	Bozeman (W)	96.97	45	P	P	10 21 54.3	+0.5
	baz=268,SNR=5.3						
TUC	Tucson	97.09	58	P	Pdif	10 21 55.0	+0.3
	baz=267						
H17A	Grant Village	97.69	46	P	Pdif	10 21 58.2	+0.9
	baz=269						
W18A	Petrified Fore	98.08	56	P	Pdif	10 21 60.0	+0.8
	baz=268						
EGMT	Eagleton	98.30	42	Pdiff	Pdif	10 22 00.1	+0.4
	baz=270						
BW06	Boulder Array	98.40	48	Pdiff	Pdif	10 22 00.6	+0.1
	baz=269						
PDAR	Pinedale Array	98.40	48	P	Pdif	10 22 00.7	+0.2
	comp=Z,2.9nm,0.7s,baz=246,slow=2.4,SNR=24						
PDAR				LR	LR	11 03 17.6	
	comp=Z,283nm,18.8s,baz=290,slow=33						
ARU	Arti	98.58	326	d *i*P	P	10 21 57.7	-2.9
ARU				*PP	pP	10 22 13.1	-5.0
ARU						10 25 58.1	
ARU				S	SKSac	10 32 30.0	-3.1
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
RLMT	Red Lodge	98.63	45	Pdiff	P	10 22 01.3	-0.1
	baz=270						
GEYT	Alibeck	99.01	307	LR	LR	11 09 19.2	
	comp=Z,93nm,19.7s,baz=25,slow=37						
AKTO	Aktyubinsk	99.05	320	LR	LR	11 04 02.8	
	comp=Z,73nm,21.1s,baz=78,slow=34						
MVCO	Mesa Verde	99.14	53	Pdiff	Pdif	10 22 03.9	0.0
	baz=269						
O20A	White River Ci	99.37	50	Pdiff	Pdif	10 22 05.3	+0.5
	baz=270						
S22A	4UR Ranch, Cre	100.47	53	Pdiff	Pdif	10 22 10.6	+0.8
	baz=270						
K22A	Casper	100.64	48	Pdiff	Pdif	10 22 10.2	-0.1
	baz=271						
LAO	LASA Array	100.73	44	Pdiff	Pdif	10 22 11.0	+0.5
	baz=272						
ANMO	Albuquerque	100.77	56	Pdiff	Pdif	10 22 11.1	-0.1
	baz=270						
SNAA	Sanae	100.85	187	P	Pdif	10 22 10.6	0.0
N23A	Red Feather La	101.11	50	Pdiff	Pdif	10 22 12.9	+0.3
	baz=271						
ISCO	Idaho Springs	101.39	51	Pdiff	Pdif	10 22 13.9	0.0
	baz=271						
Q24A	Divide	101.77	52	Pdiff	Pdif	10 22 15.8	+0.2
	baz=272						
VNA3	Neumayer Olymp	101.97	185	P	Pdif	10 22 16.5	+1.0
DGMT	Dagmar	102.00	42	Pdiff	Pdif	10 22 16.2	+0.2
	baz=274						
VNA2	Neumayer--Watz	102.06	186	P	Pdif	10 22 16.1	+0.2
	baz=165,slow=4.0						
RSSD	Black Hills	102.39	46	Pdiff	Pdif	10 22 17.8	-0.4
	baz=273						
T25A	Trinidad	102.40	53	Pdiff	Pdif	10 22 17.4	-1.0
	baz=272						
TXAR	Lajitas Array	103.14	61	Pdiff	Pdif	10 22 25.4	+3.6
	comp=Z,0.2nm,0.6s,baz=251,slow=2.8,SNR=3.4						
TXAR				PKKPbc	PKKPbc	10 38 18.7	+0.7
	comp=Z,1.1nm,0.8s,baz=96,slow=4.1,SNR=12						
U40A	Yellville	111.71	53	PKiKP	PKiKP	10 26 56.5	-0.4
	baz=278						
FINES	FINESS Array B	113.15	336	PKKPbc	PKKPbc	10 37 57.1	+10
	comp=Z,1.3nm,0.5s,baz=180,slow=3.8,SNR=4.3						
MNK	Minsk	115.81	329	*i* P	Pdif	10 23 26.1	+8.8
MNK				*i*		10 27 03.4	
MNK				*i*		10 28 07.3	
MNK				*i* PPP	PPP	10 30 34.2	
MNK				*i*		10 34 10.1	
MNK				*i* SS	SS	10 44 04.7	+0.8
MNK				pmax	pmax		
	comp=N,29nm,0.9s						
MNK				pmax	pmax		
	comp=Z,12nm,0.7s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,145nm,15.0s						
MNK				MLR	MLR		
	comp=E,23nm,17.0s						
MNK				MLR	MLR		
	comp=Z,78nm,17.0s						
MNK	Minsk	115.81	329	*i* P	Pdif	10 23 26.1	+8.8
	comp=E,4.0nm,0.9s						
MNK				*i* P	Pdif	10 23 26.1	+8.8
	comp=N,29nm,0.9s						
MNK				*i* P	Pdif	10 23 26.1	+8.8
	comp=Z,12nm,0.7s,baz=61						
MNK				*i* PKiKP	PKiKP	10 27 03.4	-0.7
MNK				*i* PP	PP	10 28 07.3	-0.6
MNK				*i* PPP	PPP	10 30 34.2	
MNK				*i* SKS	SKSdf	10 34 10.1	-0.8
MNK				*i* PS	PS	10 37 55.6	+5.7
MNK				*i* SS	SS	10 44 04.8	+0.9
MNK				*i* SSS	SSS	10 48 23.1	
MNK				*i* LR	LR	11 14 22.2	
MNK				*i* LRM	MLR	11 16 06.4	
	comp=N,145nm,15.2s						
MNK				*i* LRM	MLR	11 16 11.5	
	comp=E,23nm,17.4s						
MNK				*i* LRM	MLR	11 16 25.9	
	comp=Z,78nm,16.6s						
ACSO	Alum Creek Sta	118.44	47	PKiKP	PKPdf	10 27 09.3	-0.4
	baz=287						
HFS	Hagfors	118.71	339	PKP	PKiKP	10 27 10.0	+0.4
	comp=Z,3.8nm,1.1s,baz=41,slow=4.6,SNR=1.4						
HFS	Hagfors	118.71	339	PKIKP	PKiKP	10 27 10.0	+0.4
O53A	New Philadelph	119.72	47	PKiKP	PKPdf	10 27 11.3	-0.9
	baz=289						
GOGA	Godfrey	119.84	55	PKiKP	PKPdf	10 27 12.6	0.0
	baz=283						
BOSA	Boshof	120.27	232	PKP	PKiKP	10 27 14.0	+0.2
	comp=Z,3.8nm,0.6s,baz=175,slow=1.7,SNR=5.1						
BOSA	Boshof	120.27	232	PKIKP	PKiKP	10 27 14.0	+0.2
N54A	Moraine State	120.37	46	PKiKP	PKiKP	10 27 13.5	+0.1
	baz=290						
M54A	Oil Creek Stat	120.41	45	PKiKP	PKPdf	10 27 13.0	-0.4
	baz=290						
KMSC	Kings Mountain	121.12	53	PKiKP	PKPdf	10 27 14.8	-0.2
	baz=286						
BLA	Blacksburg	121.25	50	PKiKP	PKPdf	10 27 14.8	-0.5
	baz=288						
O56A	Blue Knob Stat	121.62	46	PKiKP	PKPdf	10 27 15.2	-0.6
	baz=291						
SSPA	Standing Stone	121.97	45	PKiKP	PKPdf	10 27 16.1	-0.3
	baz=292						
LSZ	Lusaka	122.88	247	PKIKP	PKPdf	10 27 17.7	-1.3
LSZ	Lusaka	122.88	247	PKPdf	PKPdf	10 27 17.7	-1.3
VYHS	Vyhne	123.74	326	*e*P	Pdif	10 23 48.0	-4.8
FNA	Florina	126.05	317	PKIKP	PKPdf	10 27 23.0	-1.3
FNA	Florina	126.05	317	PKPdf	PKPdf	10 27 23.0	-1.3
GERES	GERESS Array B	126.28	329	PKP	PKPdf	10 27 24.1	-0.4
	comp=Z,1.1nm,0.6s,baz=54,slow=2.3,SNR=9.7						
YOTC	Yotoco, Valle	129.10	90	*e*P	PKPdf	10 27 31.2	+0.2
PLMC	San Jos del P	129.24	89	*e*P	PKPdf	10 27 31.2	0.0
DAVOX	Davos/Dischmat	129.57	329	PKP	PKPdf	10 27 31.1	0.0
	comp=Z,2.8nm,0.8s,baz=59,slow=5.9,SNR=2.8						
GARC	Garzon, Huila	129.78	92	*e*P	PKiKP	10 27 38.9	+5.6
HELC	Santa Helena	130.06	87	*e*P	PKPdf	10 27 32.2	-0.9
GUY2C	Guyana, Caldas	130.17	88	*e*P	PKPdf	10 27 33.1	-0.3
PTLC	Puerto Leguiza	130.22	95	*e*P	PKPdf	10 27 32.2	-0.8
SJCC	San Jacinto, C	130.50	82	PKPdf	PKPdf	10 27 33.8	+0.3
PRAC	Prado	130.53	90	*e*P	PKPdf	10 27 33.1	-0.5
NORC	Norcasia	130.68	88	*e*P	PKiKP	10 27 35.1	+0.3
ZARC	Zaragoza, Cauc	130.78	86	*e*P	PKiKP	10 27 35.1	+0.1
ZARC	Zaragoza, Cauc	130.78	86	PKPdf	PKPdf	10 27 33.4	-0.6
TSUM	Tsumeb	130.79	238	PKPdf	PKPdf	10 27 33.8	-0.3
PTBC	PUERTO BERRIO,	131.14	87	*e*P	PKPdf	10 27 33.1	-1.6
ROSC	El Rosal	131.18	89	PKP	PKiKP	10 27 35.9	-0.4
	comp=Z,8.4nm,0.4s,baz=115,slow=6.5,SNR=4.7						
SPBC	San Pablo de B	131.48	88	*e*P	PKPdf	10 27 33.1	-2.3
LPAZ	La Paz	132.05	118	PKP	PKiKP	10 27 38.1	-0.1
	comp=Z,2.8nm,0.7s,baz=286,slow=3.5,SNR=9.7						
LPAZ	La Paz	132.05	118	*e*P	PKPdf	10 27 37.0	-0.1
LPAZ	La Paz	132.05	118	PKPdf	PKPdf	10 27 37.0	-0.1
RUSC	La Rusia	132.48	88	*e*P	PKiKP	10 27 38.9	-0.1
SOCV	Socops	134.76	85	*e*P	PKiKP	10 27 49.4	+6.4
SDV	Santo Domingo	134.99	84	*e*P	PKPdf	10 27 42.7	+0.5
SDV	Santo Domingo	134.99	84	PKPdf	PKPdf	10 27 42.3	+0.1
CPUP	Villa Florida	135.11	138	PKP	PKiKP	10 27 42.9	-0.5
	comp=Z,5.2nm,1.1s,baz=315,slow=1.4,SNR=3.7						
PTLB	Pontes e Lacer	140.13	123	PKPdf	PKPdf	10 27 50.8	-0.6
ESDC	Sonseca Array	141.58	333	PKP	PKPdf	10 27 53.7	+0.3
	comp=Z,0.5nm,0.9s,baz=351,slow=2.1,SNR=3.7						
ESDC				PP	PP	10 30 53.7	-2.8
	comp=Z,0.6nm,0.8s,baz=359,slow=5.1,SNR=1.9						
PCBR	Castelo Branco	142.92	337	*e*PKPdf	PKPdf	10 27 51.5	-4.2
PMRV	Marv??o	143.24	337	*e*PKPdf	PKPbc	10 27 53.3	-0.1
PMTG	Montargil	143.87	337	*e*PKPdf	PKPbc	10 27 55.0	-0.2
EVO	Evora	144.25	337	*e*PKPdf	PKPab	10 27 55.0	-1.0
PBEJ	Beja	144.63	336	*e*PKPdf	PKPbc	10 27 57.7	+0.1
BOAV	Boa Vista	144.66	95	PKPdf	PKPab	10 27 58.0	-0.3
TOSP	Speyside	144.82	79	PKPdf	PKPab	10 27 57.9	-0.9
PNCL	Nicolau / Gran	144.82	337	*e*PKPdf	PKPbc	10 27 58.3	+0.1
PNCL				*i* LQ	LQ	10 28 10.9	
MESJ	Messejana	144.93	336	*e*PKP	PKPbc	10 27 58.8	+0.2
MESJ	Messejana	144.93	336	*e*PKPdf	PKPbc	10 27 58.8	+0.2
MESJ				*i* LQ	LQ	10 28 11.5	
PCVE	Castro Verde	145.04	336	*e*PKPdf	PKPab	10 27 59.1	+0.2
PVAQ	Vaqueiros	145.10	335	*e*PKPdf	PKPab	10 27 59.3	+0.1
PVAQ				*i* LQ	LQ	10 28 12.6	
PVAQ	Vaqueiros	145.10	335		PKPbc	10 27 57.9	-1.2
PBDV	Barranco-do-Ve	145.33	335	*e*PKPdf	PKPab	10 28 00.5	+0.4
PTEO	Sao Teotonio	145.39	337	*e*PKPab	PKPab	10 28 00.5	+0.3
PTEO				*i* LQ	LQ	10 28 13.4	
MORF	Marmelete	145.56	336	*e*PKP	PKPdf	10 28 00.2	-0.3
MORF	Marmelete	145.56	336	*e*PKPab	PKPab	10 28 01.2	+0.2
MORF				*i* LQ	LQ	10 28 13.8	
PFVI	Vila Bisbo	145.79	336	*e*PKPdf	PKPbc	10 28 01.3	0.0
BDFB	Brasilia	148.69	134	PKP	PKPdf	10 28 07.1	+0.8
	comp=Z,9.9nm,0.9s,baz=86,slow=3.4,SNR=7.0						
BDFB				PKPbc	PKPbc	10 28 10.4	+0.2
	comp=Z,11nm,1.0s,baz=127,slow=2.3,SNR=5.5						
SHEL	Horse Pasture	150.66	221	PKIKP	PKiKP	10 28 16.2	+0.7
SHEL	Horse Pasture	150.66	221	PKPbc	PKiKP	10 28 16.2	+0.7
TORD	Torodi Ar. Bea	152.56	286	PKP	PKPdf	10 28 11.6	-0.6
	comp=Z,1.0nm,0.8s,baz=19,slow=2.2,SNR=5.8						
TORD				PKPbc	PKPbc	10 28 18.8	-0.4
	comp=Z,13nm,0.7s,baz=55,slow=1.4,SNR=51						
TORD				PP	PP	10 32 00.0	-2.8
	comp=Z,2.6nm,1.0s,baz=58,slow=4.4,SNR=3.7						
KOWA	Kowa	157.55	293	PKPab	PKPab	10 28 51.1	0.0
KIC	Kosan Boka	159.59	271	*e*PKP2	PKPab	10 28 59.9	-0.2
	comp=Z,86nm,0.9s						
DBIC	Dimbokro	159.70	272	PKPab	PKPab	10 29 01.0	+0.4
	comp=Z,31nm,0.9s,baz=95,slow=4.5,SNR=19						
DBIC	Dimbokro	159.70	272	PKP2	PKPab	10 29 01.0	+0.4
DBIC	Dimbokro	159.70	272	PKPab	PKPab	10 29 00.8	+0.2
TIC	Toumodi	159.86	272	*e*PKP2	PKPab	10 29 00.9	-0.4
LIC	Lamto	159.87	271	*e*PKP2	PKPab	10 29 01.0	-0.3
	comp=Z,129nm,1.1s						

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*IDC **02** 10:54:47.6±0.8, 38°.90N×144°.84E, h0^{km}, mb3.8/10, mb1 4.0/15, mb1mx3.7/63, mbtmp3.9/15, ML3.4/5, MS3.1/4, Ms1 3.1/4, ms1mx2.7/50, Error ellipse: s-maj=21.5km s-min=16.4km az=118.0*

*NIED **02** 10:54:52.8, 39°.13N×144°.49E, h50^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.93; M$_{\theta\theta}$-0.06; M$_{\phi\phi}$0.98; M$_{r\theta}$0.63; M$_{\theta\phi}$0.32; M$_{\phi r}$0.87; Fault plane solution: M$_0$1.47000×10^{15} NP1: ϕ_s211.00000°, δ69.00000°, λ-77.00000°. NP2: ϕ_s359.00000°, δ24.00000°, λ-120.00000°.*

*JMA **02** 10:54:52.8±0.2, 39°.13N×144°.49E, h50^{km}, M3.9*

ISC 02 10:54:54.5±0.8**, 39°.11N**±0°.06×**144°.56E**±0°.07**, h50^{km}, n35, σ2^{s}37**/44**, mb3.8**/11**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	2.17	283	P	Pn	10 55 26.8	-1.4
JTH	Tanohata	2.24	293	P	Pn	10 55 27.6	-1.5
OFUJ	Ofunato	2.25	270	P	Pn	10 55 27.7	-1.5
OFUJ				S	Sn	10 55 53.5	-2.2
JOM	Ohasama	2.56	279	P	Pn	10 55 32.5	-1.0
JMK	Ichinoseki	2.60	268	P	Pn	10 55 32.8	-1.2
JMK				S	Sn	10 56 02.5	-1.9
JANG	Nango	2.66	299	P	Pn	10 55 33.1	-1.8
JYK	Kaneyama	3.27	268	P	Pn	10 55 42.5	-0.8
JYK				*e*S	Sn	10 56 20.1	-0.9
JNBK	Urakawa-nobuka	3.45	337	P	Pn	10 55 44.4	-1.3
JNBK				S	Sn	10 56 23.0	-2.3
JCH	Churui	3.62	346	P	Pn	10 55 45.6	-2.3
JCH				S	Sn	10 56 26.8	-2.5
JKB	Kayabe	3.86	317	P	Pn	10 55 50.5	-0.8
NEM2	Nemuro 2	4.34	12	P	Pn	10 55 53.8	-4.1
NEM2				S	Sn	10 56 41.2	-6.0
JOSM	Okushiri--Mats	4.88	309	P	Pn	10 56 05.1	-0.1
JTKR	Abashiri--Toko	4.88	354	P	Pn	10 56 03.3	-2.0
JTKR				*e*S	Sn	10 56 56.5	-3.9
JHR	Hokuryu	5.09	336	P	Pn	10 56 08.7	+0.5
JHR				*e*S	Sn	10 57 05.8	+0.1
ASAJ	Asahikawa	5.21	344	Pn	Pn	10 56 08.6	-1.3
	1.3nm,0.3s,baz=169,slow=13,SNR=20						
ASAJ				Sn	Sn	10 57 06.8	-1.9
	1.2nm,0.3s,baz=289,slow=6.4,SNR=4.0						
JRY	Ryogami san	5.45	237	P	Pn	10 56 10.8	-2.4
JRY				S	Sn	10 57 10.0	-4.6
MJAR	Matsushiro Arr	5.64	245	Pn	Pn	10 56 14.6	-1.1
	1.0nm,0.3s,baz=61,slow=10,SNR=33						
MAT	Matsushiro	5.64	245	P	Pn	10 56 15.1	-0.7
MAT				S	Sn	10 57 19.1	-0.2
JOD2	Odawara 2	5.81	230	P	Pn	10 56 15.2	-2.9
JOD2				S	Sn	10 57 16.9	-6.6
JHJ	Hachijo jima 2	7.12	214	Pn	Pn	10 56 30.7	-5.3
	13nm,0.3s,baz=146,slow=22,SNR=6.1						
JHJ				Sn	Sn	10 57 45.0	-11
	63nm,0.3s,baz=154,slow=23,SNR=7.9						
USRK	Ussuriysk Ar.	10.69	302	Pn	Pn	10 57 26.4	+1.6
	baz=100,slow=11,SNR=24						
KSRS	Korea Array	13.18	268	Pn	Pn	10 58 00.1	+1.3
	0.2nm,0.3s,baz=70,slow=14,SNR=4.5						
KSRS				LR	LR	11 02 27.8	
	comp=Z,52nm,21.8s,baz=94,slow=34						
KLR	Kul'dur	13.65	322	Pn	Pn	10 58 03.3	-1.9
	0.1nm,0.3s,baz=120,slow=12,SNR=4.5						
KLR				LR	LR	11 03 02.1	
	comp=Z,99nm,19.2s,baz=114,slow=35						
GUMO	Guam	25.42	179	LR	LR	11 08 54.3	
	comp=Z,21nm,19.9s,baz=68,slow=34						
SONM	Songino Array	28.79	300	P	P	11 00 56.5	+8.8
	0.7nm,0.6s,baz=77,slow=7.8,SNR=3.5						
SONM				LR	LR	11 14 30.6	
	comp=Z,97nm,18.4s,baz=208,slow=41						
ZALV	Zalesovo Beam	42.40	311	P	P	11 02 46.0	+2.3
	0.9nm,0.6s,baz=64,slow=3.4,SNR=4.0						
CMAR	Chiang Mai Arr	44.42	256	P	P	11 03 02.6	+2.1
	0.6nm,0.3s,baz=46,slow=7.7,SNR=1.9						
MKAR	Makanchi Array	45.15	301	P	P	11 03 08.1	+2.1
	0.9nm,0.8s,baz=82,slow=8.7,SNR=4.1						
ILAR	Eielson Array	46.41	33	P	P	11 03 15.8	+0.2
	1.0nm,0.8s,baz=259,slow=6.7,SNR=9.4						
INK	Inuvik	51.40	28	P	P	11 03 54.9	+1.1
	0.9nm,0.8s,baz=301,slow=7.2,SNR=3.8						
WRA	Warramunga Arr	59.52	191	P	P	11 04 51.1	-1.5
	1.3nm,0.9s,baz=8.3,slow=7.4,SNR=13						
ASAR	Alice Springs	63.24	191	P	P	11 05 16.8	-0.9
	0.8nm,0.7s,baz=13,slow=6.1,SNR=15						
FINES	FINESS Array B	68.12	333	P	P	11 05 50.2	+1.5
	1.4nm,0.8s,baz=76,slow=14,SNR=1.5						
NVAR	Mina Array Bea	71.76	55	P	P	11 06 13.0	+1.1
	0.1nm,0.4s,baz=305,slow=6.5,SNR=1.3						
TXAR	Lajitas Array	86.89	54	P	P	11 07 33.4	-0.8
	0.3nm,0.7s,baz=316,slow=3.1,SNR=3.9						

IDC 02 11:06:52.7±7.5**, 32°.02S**×**179°.46W, h0^{km}, mb3.3**/2**, mb1 3.6**/2**, mb1mx3.5**/17**, mbtmp3.3**/2**, Error ellipse: s-maj=326.3km s-min=59.3km az=159.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPT2	Papeete2	30.57	69	*e*LR	LR	11 13 00.5	
	comp=Z,392nm,25.8s						
ASAR	Alice Springs	41.81	269	P	P	11 14 44.0	-0.3
	0.2nm,0.5s,baz=112,slow=7.6,SNR=3.5						
WRA	Warramunga Arr	42.95	275	P	P	11 14 53.7	0.0
	0.2nm,0.3s,baz=115,slow=7.5,SNR=6.8						
FINES	FINESS Array B	146.21	338	PKPbc	PKPdf	11 26 33.5	+0.3
	1.5nm,0.8s,baz=44,slow=4.2,SNR=5.4						

PGC 02 11:18:18.1±0.0**, 48°.49N**×**128°.78W, h10^{km}, MLSn2.9**/22**, Mw3.5**/22**, 222km Wsw of Tofino, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEMF	NEPTUNE Canada	0.58	202	P	Pg	11 18 28.8	-0.5
KEMF				S	Sg	11 18 35.5	-1.4
EDB	Eliza Dome	1.76	38	Pn	Pn	11 18 46.1	-2.5
EDB				Sn	Sn	11 19 06.2	-4.8
BPBC	Brooks Peninsu	1.79	21	Pn	Pn	11 18 47.1	-2.0
TOFB	Tofino	2.01	70	Pn	Pn	11 18 50.8	-1.2
TOFB				Sn	Sn	11 19 13.3	-3.9
PACB	Port Alice, BC	2.12	23	Pn	Pn	11 18 52.2	-1.3
PACB				Sn	Sn	11 19 15.3	-4.5
MAYB	Maynard	2.18	28	Pn	Pn	11 18 53.0	-1.4
MAYB				Sn	Sn	11 19 18.0	-3.6
HOLB	Holberg	2.19	11	Pn	Pn	11 18 53.4	-1.2
WOSB	Woss	2.21	40	Pn	Pn	11 18 53.2	-1.6
WOSB				Sn	Sn	11 19 17.9	-4.3
GDR	Gold River	2.22	53	Pn	Pn	11 18 53.4	-1.5
GDR				Sn	Sn	11 19 18.0	-4.3
OZB	Mount Ozzard	2.23	77	Pn	Pn	11 18 53.0	-2.1
OZB				Sn	Sn	11 19 19.1	-3.4
BTB	Buttle Lake	2.36	64	Pn	Pn	11 18 55.7	-1.3
BTB				Sn	Sn	11 19 22.7	-3.4
PHC	Port Hardy	2.38	21	Pn	Pn	11 18 56.0	-1.1
PHC				Sn	Sn	11 19 21.9	-4.4
TLCB	Telegraph Cove	2.42	31	Pn	Pn	11 18 56.6	-1.0
TLCB				Sn	Sn	11 19 24.1	-3.0
BFSB	Bamfield	2.44	81	Pn	Pn	11 18 56.3	-1.6
BFSB				Sn	Sn	11 19 23.6	-4.1
B928	Bamfield	2.44	81	Pn	Pn	11 18 56.4	-1.5
B928				Sn	Sn	11 19 23.6	-4.2
SPLB	Strathcona Par	2.48	54	Pn	Pn	11 18 57.8	-0.7
SPLB				Sn	Sn	11 19 25.1	-3.8
NCRB	Newcastle Ridg	2.61	42	Pn	Pn	11 18 59.5	-0.9
NCRB				Sn	Sn	11 19 28.4	-3.8
CBB	Campbell River	2.72	54	Pn	Pn	11 19 00.1	-1.6
CBB				Sn	Sn	11 19 30.6	-4.0
B927	Port Alberni	2.72	73	Pn	Pn	11 19 00.2	-1.5
MGB	Mount Grey	2.75	78	Pn	Pn	11 19 00.4	-1.9
MGB				Sn	Sn	11 19 31.8	-3.9
OCP	Olym-Cheeka Pk	2.77	92	Pn	Pn	11 19 01.7	-0.8
PFB	Port Renfrew	2.88	87	Pn	Pn	11 19 02.1	-2.0
PFB				Sn	Sn	11 19 35.0	-3.8
TXB	Texada	3.10	65	Pn	Pn	11 19 05.8	-1.2
B926	Mesachie Lake	3.10	82	Pn	Pn	11 19 05.4	-1.6
B926				Sn	Sn	11 19 40.1	-4.0
CLRS	Cowichan Lake	3.10	82	Pn	Pn	11 19 05.4	-1.6
CLRS				Sn	Sn	11 19 40.0	-4.0
NLLB	Nanaimo Lost L	3.25	75	Pn	Pn	11 19 08.4	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NLLB				Sn	Sn	11 19 45.4	-2.4
SHB	Sechelt	3.41	69	Pn	Pn	11 19 10.5	-0.8
SHB				Sn	Sn	11 19 49.6	-2.3
BBB	Bella Bella	3.72	6	Pn	Pn	11 19 15.3	-0.2
BBB				Sn	Sn	11 19 55.8	-3.5
BIB	Bowen Island	3.72	74	Pn	Pn	11 19 14.7	-0.8
WPB	Watts Point	3.84	70	Pn	Pn	11 19 16.9	-0.3
WSLR	Whistler	4.17	65	Pn	Pn	11 19 21.5	-0.2
VDB	Vedder Mountai	4.45	81	Pn	Pn	11 19 25.1	-0.4
MBW	Mount Baker	4.57	84	Pn	Pn	11 19 27.1	-0.3
BUTB	Butedale	4.58	2	Pn	Pn	11 19 27.8	+0.3
LLLB	Lillooet	4.96	62	Pn	Pn	11 19 32.5	-0.1

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*IDC **02** 11:25:21.8±16.0, 32°.96S×70°.04W, h94^{km}±133^{km}, mb3.2/2, mb1 3.5/3, mb1mx3.3/30, mbtmp3.6/3, ML4.0/1, Error ellipse: s-maj=95.6km s-min=48.8km az=14.0*

*GUC **02** 11:25:24.1±0.8, 32°.61S×70°.12W, h119^{km}±4^{km}, ML4.0*

ISC 02 11:25:25.1±0.9, **32°.60S**±0°.04×**70°.1W**±0°.1, **h108**^{km}±8^{km}, **n20,** σ1^{s}.**20**/34, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA03	San Esteban	0.38	244	*e*P	Pn	11 25 40.5	-0.6
VA03				*i* S	Sn	11 25 53.5	+0.3
VA03				IAML		11 25 54.9	
	comp=E,16µm,0.1s						
PEL	Peldehue	0.71	220	*e*P	Pn	11 25 42.7	-0.7
PEL				*i* S	Sn	11 25 57.1	-0.1
PEL				IAML		11 25 58.7	
	comp=N,2µm,0.5s						
ROCH	El Roble	0.82	243	*e*P	Pn	11 25 44.1	-0.4
ROCH				*e*P	Pn	11 25 44.0	-0.6
ROCH				*i* S	Sn	11 25 59.4	+0.2
ROCH				*i* S	Sn	11 25 59.6	+0.3
ROCH				IAML		11 26 02.0	
	comp=N,4µm,0.5s						
ROCH				IAML		11 26 03.4	
	comp=N,5µm,0.3s						
MT05	Renca	0.94	212	*e*P	Pn	11 25 45.1	-0.5
MT05				*i* S	Sn	11 26 01.4	+0.5
MT05				IAML		11 26 03.2	
	comp=E,13µm,0.3s						
VA06	Catapilco	0.98	272	*e*P	Pn	11 25 45.4	-0.4
VA06				*i* S	Sn	11 26 01.7	+0.2
VA06				IAML		11 26 02.7	
	comp=N,5µm,0.4s						
MT02	Curacav	1.07	232	*e*P	Pn	11 25 46.1	-0.7
MT02				*i* S	Sn	11 26 03.4	+0.1
LMEL	Las Melosas	1.25	182	*e*P	Pn	11 25 48.0	-1.0
LMEL				*i* S	Sn	11 26 07.0	0.0
LMEL				IAML		11 26 14.5	
	comp=N,2µm,0.1s						
MT09	Talagante	1.37	211	*e*P	Pn	11 25 49.5	-0.9
MT09				*i* S	Sn	11 26 09.5	-0.1
MT09				IAML		11 26 10.7	
	comp=E,2µm,0.3s						
BO04	La Punta	1.44	196	*e*P	Pn	11 25 50.5	-0.7
BO04				*i* S	Sn	11 26 10.9	0.0
BO04				IAML		11 26 12.3	
	comp=E,1µm,0.2s						
BO01	Tunca	1.96	204	*e*P	Pn	11 25 56.1	-1.3
BO01				*i* S	Sn	11 26 21.3	-0.8
CO06	Fray Jorge	2.30	326	*e*P	Pn	11 26 01.6	-0.3
CO06				*i* S	Sn	11 26 29.4	-0.6
CO06				IAML		11 26 36.7	
	comp=N,446nm,0.5s						
GO04	Tololo Observa	2.48	347	*e*P	Pn	11 26 03.8	-0.6
GO04				*i* S	Sn	11 26 34.2	-0.3
LPAZ	La Paz	16.34	7	P	P	11 29 11.1	+1.3
	comp=N,0.3nm,0.3s,baz=180,slow=16,SNR=5.1						
VNA3	Neumayer Olymp	50.06	158	P	P	11 34 11.5	+3.1
VNA2	Neumayer--Watz	50.70	158	P	P	11 34 14.3	+1.1
SNAA	Sanae	52.29	158	P	P	11 34 28.7	+3.7
TXAR	Lajitas Array	69.32	329	P	P	11 36 21.1	+0.2
	comp=N,0.3nm,0.7s,baz=150,slow=7.3,SNR=3.9						
TORD	Torodi Ar. Bea	82.23	69	P	P	11 37 32.9	-1.8
	comp=N,0.4nm,0.6s,baz=222,slow=7.8,SNR=3.0						
WRA	Warramunga Arr	122.75	208	PKP	PKPdf	11 44 06.5	-2.3
	comp=N,0.5nm,1.0s,baz=152,slow=1.7,SNR=5.0						
ZALV	Zalesovo Beam	152.19	32	PKPbc	PKPbc	11 45 06.8	-0.7
	comp=N,3.7nm,0.4s,baz=321,slow=2.9,SNR=20						

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*IDC **02** 11:31:06.7±1.3, 34°.20S×109°.15W, h0^{km}, mb3.9/4, mb1 4.2/4, mb1mx3.9/30, mbtmp3.9/4, MS3.9/7, Ms1 3.9/7, ms1mx3.6/24, Error ellipse: s-maj=49.5km s-min=28.9km az=32.0*

*NEIC **02** 11:31:08.4±1.4, 34°.4S±0°.1×109°.18W±0°.05, h10^{km}±1^{km}, mb4.8/50, Error ellipse: s-maj=18.6km s-min=4.1km az=201.0*

ISC 02 11:31:07.7±0.5, **34°.4S**±0°.1×**109°.15W**±0°.08, **h10**^{km}, **n83,** σ**0**^{s}.**84**/68, **mb4.8**/30, **MS4.0**/10, **Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	25.00	97	T	T	12 02 46.8	
	baz=259,slow=75,SNR=16						
H03S1	Juan Fernandez	25.01	97	T	T	12 02 44.8	
	baz=259,slow=75,SNR=21						
H03S3	Juan Fernandez	25.01	97	T	T	12 02 47.4	
	baz=259,slow=75,SNR=22						
H03N2	Juan Fernandez	25.06	96	T	T	12 02 44.4	
	baz=266,slow=73,SNR=3.9						
H03N3	Juan Fernandez	25.07	97	T	T	12 02 45.0	
	baz=266,slow=73,SNR=7.3						
H03N1	Juan Fernandez	25.08	97	T	T	12 02 45.9	
	baz=266,slow=73,SNR=8.1						
VA05	Santo Domingo	31.01	99	P	P	11 37 25.7	+0.2
PLCA	Paso Flores	31.08	113	P	P	11 37 27.9	+1.7
	1.6nm,0.9s,baz=247,slow=7.7,SNR=3.0						
PLCA				LR	LR	11 47 30.5	
	comp=Z,91nm,18.4s,baz=269,slow=32						
BO01	Tunca	31.30	101	P	P	11 37 28.7	+0.7
MT09	Talagante	31.50	100	P	P	11 37 29.8	-0.1
MT09				IAmb	IAmb	11 37 54.8	
	comp=Z,26nm,1.4s						
USHA	Ushuaia	34.82	139	LR	LR	11 48 06.8	
	comp=Z,274nm,21.3s,baz=288,slow=29						
PB14	IPOC Station P	34.92	84	P	P	11 38 00.7	+0.6
PB14				IAmb	IAmb	11 38 02.1	
	comp=Z,11nm,0.7s						
AC02	Maricunga	35.08	89	P	P	11 38 01.5	-0.2
AC02				IAmb	IAmb	11 38 05.6	
	comp=Z,17nm,1.4s						
PB04	IPOC Station P	36.15	81	P	P	11 38 10.7	+0.2
PB04				IAmb	IAmb	11 38 14.2	
	comp=Z,36nm,1.4s						
LVC	Limon Verde	37.03	82	P	P	11 38 18.0	-0.3
PSGCX	Pisagua	37.52	77	P	P	11 38 22.8	+0.7
PSGCX				IAmb	IAmb	11 38 30.9	
	comp=Z,34nm,1.5s						
PB11	IPOC Station P	37.81	78	P	P	11 38 25.3	+0.7
PB11				IAmb	IAmb	11 38 41.9	
	comp=Z,17nm,1.3s						
PB12	IPOC Station P	37.87	76		S	11 44 15.9	-0.6
TRQA	Tornquist	37.93	110	P	P	11 38 26.1	+0.8
TAOE	Nuku Hiva Isla	38.12	304	*e*LR	LR	11 48 55.0	
	comp=Z,210nm,26.1s,baz=144						
MEH	Mehetia	38.33	285	*e*T	T	12 18 55.2	
	comp=Z,18nm,0.2s						
PPTF	Pamatai, Papee	39.69	284	P	P	11 38 40.9	+0.6
PPT2	Papeete2	39.69	284	*e*LR	LR	11 49 21.0	
	comp=Z,544nm,25.5s,baz=103						
PPT	Papeete	39.71	284	LR	LR	11 50 53.4	
	comp=Z,250nm,20.7s,baz=84,slow=30						
PMSA	Palmer Station	40.73	152	P	P	11 38 48.9	+0.6
LPAZ	La Paz	40.89	74	LR	LR	11 51 39.4	
	comp=Z,190nm,20.9s,baz=282,slow=30						
LPAZ	La Paz	40.89	74	P	P	11 38 51.5	+0.7
ITQB	Itaqui	44.38	99	P	P	11 39 18.6	+0.1
CPUP	Villa Florida	45.03	94	LR	LR	11 55 02.9	
	comp=Z,163nm,19.0s,baz=290,slow=32						
PLTB	Pedras Altas	46.14	103	P	P	11 39 32.5	+0.1
PLTB				IAmb	IAmb	11 39 33.5	
	comp=Z,16nm,1.1s						
ETMB	Extrema	46.21	68	P	P	11 39 32.5	-0.5
SIV	San Ignacio	46.73	79	P	P	11 39 37.4	+0.1
	comp=Z,1.3nm,0.4s,baz=209,slow=7.8,SNR=7.7						
PTLB	Pontes e Lacer	48.60	80	P	P	11 39 51.6	0.0
PTLB				IAmb	IAmb	11 39 53.3	
	comp=Z,13nm,1.5s						
AQDB	Aquidauana	48.91	88	P	P	11 39 54.4	+0.3
AQDB				IAmb	IAmb	11 40 00.2	
	comp=Z,6.3nm,0.9s						
SJCC	San Jacinto, C	54.54	43	P	P	11 40 36.3	+0.2
MACA	Manacapuru-AM	54.66	66	P	P	11 40 36.2	-0.8
SBA	Scott Base	55.46	195	P	P	11 40 42.1	+0.2
SBA				IAmb	IAmb	11 41 09.7	
	comp=Z,22nm,1.5s						
VNDA	Vanda	56.54	195	LR	LR	11 59 49.4	
	comp=Z,60nm,21.3s,baz=95,slow=30						
VNDA	Vanda	56.54	195	P	P	11 40 50.8	+1.1
BDFB	Brasilia	57.64	87	LR	LR	12 02 59.1	
	comp=Z,172nm,20.4s,baz=320,slow=33						
THZ	Tophouse	59.87	238	P	P	11 41 13.2	-0.4
VNA3	Neumayer Olymp	60.83	159	P	P	11 41 20.2	+0.5
VNA1	Neumayer--Stat	61.48	158	P	P	11 41 18.6	-5.4
VNA2	Neumayer--Watz	61.64	159	P	P	11 41 21.7	-3.5
SNAA	Sanae	62.66	160	P	P	11 41 32.1	+0.1
SNAA	Sanae	62.66	160	P	P	11 41 32.0	0.0
SNAA				IAmb	IAmb	11 41 44.1	
	comp=Z,10.0nm,1.4s						
113A	Mohawk Valley,	66.91	356	P	P	11 42 01.1	+1.1
113A				IAmb	IAmb	11 42 13.9	
	comp=Z,12nm,1.6s						
RMX	La Rumorosa	66.92	354	P	P	11 41 58.4	-1.9
237A	Washetta, Mont	67.19	12	P	P	11 42 02.5	+0.7
237A				IAmb	IAmb	11 42 04.7	
	comp=Z,9.4nm,0.8s						
DLPL	La Plaine	67.20	51	P	P	11 42 01.4	-0.8
Y14A	Wickenburg	68.03	357	P	P	11 42 07.9	+0.8
UWB	Uwekahuna B	69.18	313	P	P	11 42 15.3	+0.6
GSC	Goldstone, Bar	69.66	353	P	P	11 42 18.0	+0.6
GSC				IAmb	IAmb	11 42 18.7	
	comp=Z,11nm,1.5s						
MIAR	Mount Ida	70.08	14	P	P	11 42 19.8	0.0
ISA	Isabella, Lake	70.20	352	P	P	11 42 21.2	+0.6
ISA				IAmb	IAmb	11 42 32.0	
	comp=Z,7.2nm,1.3s						
257A	Skidaway Islan	71.09	25	P	P	11 42 26.2	+0.1
GOGA	Godfrey	71.59	22	P	P	11 42 29.1	0.0
GOGA				IAmb	IAmb	11 42 50.2	
	comp=Z,22nm,1.6s						
FCAR	Ozark Folk Cen	71.67	15	P	P	11 42 29.4	-0.1
MGMO	Mountain Grove	72.86	14	P	P	11 42 37.6	+1.0
MGMO				IAmb	IAmb	11 42 38.4	
	comp=Z,15nm,1.4s						
NVAR	Mina Array Bea	72.91	352	P	P	11 42 38.0	+0.9
	comp=Z,1.0nm,0.7s,baz=193,slow=7.4						
NVAR	Mina Array Bea	72.91	352	P	P	11 42 37.8	+0.6
Q16A	Castle Valley	72.93	358	P	P	11 42 37.6	+0.4
T42A	Van Buren	72.98	15	P	P	11 42 37.0	-0.3
T42A				IAmb	IAmb	11 42 37.9	
	comp=Z,11nm,1.4s						
JSC	Jenkinsville	73.11	24	P	P	11 42 37.7	-0.4
JSC				IAmb	IAmb	11 42 45.9	
	comp=Z,10nm,1.2s						
CPCT	Cooper Cave	73.16	21	P	P	11 42 37.6	-0.8
CPCT				IAmb	IAmb	11 42 37.8	
	comp=Z,16nm,1.5s						
DZM	Mont Dzumac	73.46	254	*e*LR	LR	12 04 58.9	
	comp=Z,517nm,25.6s						
KVN	Kaiserville	73.50	353	P	P	11 42 41.1	+0.5
BMN	Battle Mountai	74.79	354	P	P	11 42 48.9	+0.9
BMN				IAmb	IAmb	11 42 58.9	
	comp=Z,17nm,1.6s						
TAU	Tasmania Unive	76.18	227	P	P	11 42 54.9	-1.1
MOD	Modoc Plateau	76.57	351	P	P	11 42 58.3	+0.1
MOD				IAmb	IAmb	11 43 05.1	
	comp=Z,13nm,1.6s						
K22A	Casper	76.67	2	P	P	11 42 58.5	-0.2
K22A				IAmb	IAmb	11 43 02.0	
	comp=Z,16nm,1.6s						
BW06	Boulder Array	76.75	360	P	P	11 42 59.6	+0.4
BW06				IAmb	IAmb	11 43 09.2	
	comp=Z,8.7nm,1.5s						
PD31	Pinedale Array	76.75	360	P	P	11 42 58.6	-0.7
PDAR	Pinedale Array	76.75	360	P	P	11 42 59.1	-0.2
	comp=Z,0.6nm,0.9s,baz=270,slow=0.3,SNR=4.6						
PDAR	Pinedale Array	76.75	360	P	P	11 42 58.9	-0.4
HLID	Hailey	77.69	356	P	P	11 43 05.0	+0.6
HLID				IAmb	IAmb	11 43 16.0	
	comp=Z,6.9nm,1.1s						
TOO	Toolangi	80.39	231	P	P	11 43 19.1	-0.5
TOO				IAmb	IAmb	11 43 26.4	
	comp=Z,20nm,1.2s						
AKASG	Malin Array Be	145.77	49	PKPbc	PKPdf	11 50 43.9	-2.1
	comp=Z,0.2nm,0.3s,baz=274,slow=3.6,SNR=4.5						
AKASG	Malin Array Be	145.77	49		PKPdf	11 50 45.1	-0.9
SONM	Songino Array	150.30	308	PKPbc	PKPbc	11 50 57.8	-1.1
	comp=Z,0.9nm,0.7s,baz=17,slow=1.5,SNR=4.5						
SONM	Songino Array	150.30	308		PKPbc	11 50 58.1	-0.8
SONM				PKPab	pPKPab	11 51 08.0	+0.4
CMAR	Chiang Mai Arr	150.40	245	PKPbc	PKiKP	11 51 01.1	+0.5
	comp=Z,0.6nm,0.4s,baz=193,slow=3.7,SNR=6.6						
CMAR	Chiang Mai Arr	150.40	245		PKiKP	11 51 00.4	-0.3
CMAR				PKPab	sPKPab	11 51 10.7	+1.2

IDC 02 11:33:36.8±1.8, **8°.96S**×**128°.67E**, **h0**^{km}, **mb3.4**/1, **mb1 3.4**/4, **mb1mx3.1**/41, **mbtmp3.3**/4, **ML2.8**/2, **Error ellipse: s-maj=62.6km s-min=23.6km az=76.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.55	198	Pn	Pn	11 35 56.1	+0.4
	0.0nm,0.3s,baz=28,slow=12,SNR=2.9						
FITZ				Sn	Sn	11 37 45.3	+1.5
	1.4nm,0.3s,baz=40,slow=0.4,SNR=21						
WRA	Warramunga Arr	12.22	154	Pn	Pn	11 36 32.1	-0.2
	0.1nm,0.3s,baz=332,slow=17,SNR=6.0						
WRA				Sn	Sn	11 38 51.3	+2.0
	0.1nm,0.3s,baz=332,slow=23,SNR=2.9						
ASAR	Alice Springs	15.46	162	Pn	Pn	11 37 15.6	-0.8
	baz=338,slow=11,SNR=5.9						
MKAR	Makanchi Array	69.16	328	P	P	11 44 45.2	0.0
	0.2nm,0.5s,baz=131,slow=4.4,SNR=3.0						

IDC 02 11:34:55.2±2.0, **33°.68S**×**109°.51W**, **h0**^{km}, **mb3.7**/1, **mb1 4.1**/1, **mb1mx3.6**/24, **mbtmp3.7**/1, **Error ellipse: s-maj=131.9km s-min=68.2km az=118.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAOE	Nuku Hiva Isla	37.50	304	*e*LR	LR	11 52 39.8	
	comp=Z,92nm,26.6s						
MEH	Mehetia	37.88	285	*e*T	T	12 22 35.2	
	14nm,0.2s						
PPT2	Papeete2	39.25	284	*e*LR	LR	11 53 09.5	
	comp=Z,181nm,25.2s						
PDAR	Pinedale Array	76.08	360	P	P	11 46 44.0	-0.6
	0.7nm,0.9s,baz=190,slow=4.6,SNR=2.2						
AKASG	Malin Array Be	145.54	48	PKPbc	PKPdf	11 54 34.5	-0.3
	0.4nm,0.5s,baz=275,slow=3.6,SNR=1.2						
SONM	Songino Array	149.65	309	PKPbc	PKiKP	11 54 47.4	-0.3
	1.4nm,0.8s,baz=90,slow=2.9,SNR=5.5						
CMAR	Chiang Mai Arr	150.41	246	PKPbc	PKPbc	11 54 48.0	-1.2
	0.5nm,0.4s,baz=201,slow=2.3,SNR=5.4						

NNC 02 11:49:37.5±18.0, **36°.71N**×**70°.29E**, **h0**^{km}, **mb3.7**, **mpv3.6**, **4C-2D**, **Error ellipse: s-maj=167.6km s-min=82.0km az=173.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKM2	Tokmak 2	7.42	32	⇑P	Pn	11 51 26.9	-0.4
	1.6nm,0.5s						
TKM2				⇓S	Sn	11 52 52.4	+0.1
	2.1nm,0.7s						
AB31	Akbulak array	14.62	332	⇑P	Pn	11 53 08.1	+2.5
	0.5nm,0.5s,baz=153,slow=12,SNR=16						
AB31				⇑S	Sn	11 55 47.7	-0.6
	0.5nm,0.6s,baz=155,slow=22,SNR=4.3						
AKTO	Aktyubinsk	16.31	331	⇓P	P	11 53 29.7	-1.3
	1.2nm,0.8s						
AKTO				⇑S	Sn	11 56 31.4	+1.9
	1.0nm,0.8s						

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*JMA **02** 11:59:58.8±0.1, 24°.12N×121°.93E, h23^{km}±2^{km}, M3.1*

*TAP **02** 11:59:59.4, 24°.19N×121°.90E, h26^{km}, ML3.9, C*

ISC 02 11:59:59.2±1.0, **24°.14N**±0°.02×**121°.95E**±0°.02, **h23**^{km}±7^{km}, **n118,** σ**0**^{s}.**91**/204, **5C-24D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.26	312	*e*P	Pb	12 00 05.4	-0.1
	baz=311						
EHP				*e*S	Sb	12 00 10.3	+0.6
	baz=311						
ETL	Fush Village	0.30	274	⇓*i*P	Pb	12 00 06.1	0.0
	baz=263						
ETL				S	Sb	12 00 11.4	+0.6
	baz=263						
NACB	Ninganchiao	0.33	277	⇓*i*P	Pb	12 00 06.3	-0.2
	baz=258						
NACB				*i* S	Sb	12 00 11.6	+0.1
	baz=258						
TWD	Chiawan	0.33	260	⇓*i*P	Pb	12 00 06.6	+0.1
	baz=248						
TWD				S	Sn	12 00 12.5	-2.0
	baz=248						
EWUT	Wuta	0.34	333	P	Pb	12 00 06.7	-0.2
	baz=342						
EWUT				S	Sb	12 00 12.0	+0.1
	baz=342						
ENA	Nanau	0.35	327	⇓*i*P	Pb	12 00 06.5	-0.3
	baz=330						
ENA				*i* S	Sb	12 00 11.9	-0.1
	baz=330						
HWA	Hwalien	0.35	243	P	Pn	12 00 07.8	-1.1
	baz=229						
HWA				S	Sn	12 00 15.0	-0.1
	baz=229						
TEYL	Yanliau Villag	0.42	230	P	Pb	12 00 08.0	0.0
	baz=222						
TEYL				S	Sn	12 00 16.1	-0.6
	baz=222						
ETLH	Xiulin Townshi	0.43	279	⇓*i*P	Pb	12 00 08.0	-0.3
	baz=272						
ETLH				S	Sb	12 00 14.4	-0.1
	baz=272						
ETM	Tongmen	0.45	248	⇓*i*P	Pb	12 00 08.6	0.0
	baz=231						
ETM				S	Sn	12 00 15.6	-2.0
	baz=231						
TWC	Suao	0.48	349	⇓*i*P	Pb	12 00 08.9	-0.1
	baz=359						
TWC				S	Sb	12 00 16.2	+0.5
	baz=359						
NDS	Dongshan	0.54	337	⇑*i*P	Pb	12 00 10.0	0.0
	baz=340						
NDS				*i* S	Sn	12 00 17.8	-2.0
	baz=340						
TEGC	Jichi Village	0.57	221	*e*P	Pn	12 00 11.6	-0.2
	baz=213						
TEGC				*e*S	Sn	12 00 20.8	+0.3
	baz=213						
ESL	Shilin	0.57	236	⇓*i*P	Pb	12 00 10.5	-0.1
	baz=227						
ESL				S	Sn	12 00 19.0	-1.6
	baz=227						
NNSB	Datong	0.59	299	⇓*i*P	Pb	12 00 10.6	-0.5
	baz=289						
NNSB				S	Sb	12 00 18.5	-0.6
	baz=289						
NNS	Nan Shan	0.60	300	⇓*i*P	Pb	12 00 10.7	-0.5
	baz=290						
NNS				*i* S	Sb	12 00 19.2	-0.3
	baz=290						
ENTT	Nioudou	0.61	325	⇓*i*P	Pb	12 00 10.8	-0.5
	baz=319						
ENTT				*i* S	Sb	12 00 19.4	-0.1
	baz=319						
NDT	Datong Townshi	0.61	319	P	Pb	12 00 10.9	-0.3
	baz=314						
NDT				S	Sb	12 00 19.2	-0.3
	baz=314						
WHF	Hehuan Shan	0.62	271	⇓*i*P	Pb	12 00 11.4	-0.4
	baz=265						
WHF				*i* S	Sb	12 00 20.1	-0.2
	baz=265						
TWE	Neicheng	0.64	336	⇓*i*P	Pb	12 00 11.4	-0.2
	baz=340						
TWE				*i* S	Sb	12 00 20.1	0.0
	baz=340						
FUSS	Fushou	0.65	280	⇓*i*P	Pb	12 00 11.9	-0.2
	baz=275						
FUSS				*i* S	Sb	12 00 20.7	-0.2
	baz=275						
ILA	Ilan	0.65	344	*e*P	Pb	12 00 11.8	-0.1
	baz=342						
ILA				*e*S	Sn	12 00 21.7	-0.9
	baz=342						
EGFH	Guangfu	0.67	226	P	Pb	12 00 12.2	0.0
	baz=230						
EGFH				S	Sn	12 00 22.2	-0.7
	baz=230						
EGS		0.70	359	*e*P	Pn	12 00 13.4	-0.3
	baz=4.0						
CHGB	Renai	0.71	264	⇓*i*P	Pb	12 00 12.9	-0.2
	baz=248						
CHGB				*i* S	Sb	12 00 22.5	-0.1
	baz=248						
TWT	Tachien	0.71	279	P	Pn	12 00 13.3	-0.8
	baz=275						
TWT				S	Sn	12 00 22.9	-1.4
	baz=275						
NTC	Toucheng	0.72	351	P	Pb	12 00 13.0	-0.2
	baz=355						
NTC				S	Sn	12 00 23.4	-0.9
	baz=355						
OWD	Renai	0.73	256	⇓*i*P	Pb	12 00 13.2	-0.1
	baz=249						
OWD				S	Sb	12 00 22.7	-0.3
	baz=249						
TDCB	Techi	0.73	279	⇓*i*P	Pb	12 00 13.1	-0.3
	baz=275						
TDCB				*i* S	Sb	12 00 22.7	-0.3
	baz=275						
YHNB	Yeheng	0.74	316	⇓*i*P	Pb	12 00 13.1	-0.5
	baz=307						
YHNB				*i* S	Sb	12 00 22.4	-1.0
	baz=307						
NWLT	Wulai	0.76	328	*e*P	Pb	12 00 13.4	-0.3
	baz=320						
NWLT				*e*S	Sb	12 00 22.9	-0.8
	baz=320						
NSK	Sanguang	0.76	315	⇓*i*P	Pb	12 00 13.2	-0.6
	baz=306						
NSK				*i* S	Sb	12 00 22.9	-0.9
	baz=306						
HGSD	Ruisui	0.80	217	*e*P	Pn	12 00 15.2	+0.1
	baz=201						
HGSD				S	Sn	12 00 28.5	+2.2
	baz=201						
TIPB	Shuangxi	0.84	352	P	Pn	12 00 15.3	-0.3
	baz=3.0						
TIPB				S	Sn	12 00 26.2	-1.1
	baz=3.0						
EHY	Hungye	0.85	223	*e*P	Pb	12 00 14.8	-0.5
	baz=216						
TWB1	Santiao Chiao	0.87	2	*e*P	Pn	12 00 16.0	0.0
	baz=6.0						
TWB1				*e*S	Sn	12 00 27.8	-0.1
	baz=6.0						
TWA	Mucha	0.90	339	*e*P	Pn	12 00 16.9	+0.4
	baz=332						
TWA				*e*S	Sn	12 00 28.2	-0.6
	baz=332						
NHDH	Xindian Distri	0.91	335	*e*P	Pb	12 00 15.6	-0.7
	baz=321						
NHDH				*e*S	Sn	12 00 28.1	-0.8
	baz=321						
WHP	Taichung City	0.93	279	P	Pn	12 00 16.4	-0.5
	baz=275						
WHP				S	Sb	12 00 27.9	-0.6
	baz=275						
NWF	Wu-fen Shan	0.94	351	⇑*i*P	Pn	12 00 17.4	+0.3
	baz=353						
NWF				*i* S	Sn	12 00 30.3	+0.4
	baz=353						
WCS	Beigang Elemen	0.95	265	P	Pn	12 00 16.7	-0.4
	baz=254						
WCS				S	Sn	12 00 30.6	+0.7
	baz=254						
YULB	Yu-li	0.95	219	P	Pb	12 00 16.2	-0.9
	baz=226						
YULB				S	Sn	12 00 29.5	-0.5
	baz=226						
JYNG	Yonagunijimaku	0.96	71	P	Pn	12 00 17.3	0.0

SSLB	Suanglung	0.97	249	⇓iP	Pn	12 00 16.9	-0.5
	baz=244						
SSLB				S	Sb	12 00 29.2	-0.6
	baz=244						
EYUL	Yuli	0.97	216	eP	Pb	12 00 18.0	+0.5
	baz=225						
TAP	Taipei	0.98	336	eP	Pb	12 00 18.2	+0.6
	baz=324						
LIOB	Emei	0.99	301	P	Pb	12 00 18.1	+0.4
	baz=291						
LIOB				S	Sn	12 00 30.3	-0.7
	baz=291						
SMLT	Sun Moon Lake	0.99	255	⇑iP	Pb	12 00 17.6	-0.2
	baz=242						
SMLT				iS	Sn	12 00 31.5	+0.4
	baz=242						
NSTT	Nanjuang	0.99	300	⇑iP	Pb	12 00 17.7	0.0
	baz=290						
NSTT				S	Sn	12 00 30.2	-0.8
	baz=290						
YOJ	Yonaguni jima	1.02	71	P	Pn	12 00 18.2	+0.1
	baz=75						
YOJ	Yonaguni jima	1.02	71	P	Pn	12 00 18.2	+0.1
TYC	Yuchr	1.02	257	⇓iP	Pb	12 00 17.7	-0.6
	baz=252						
YM01	YM01	1.06	341	eP	Pb	12 00 18.6	-0.4
	baz=328						
YM01				eS	Sn	12 00 33.3	+0.5
	baz=328						
TWS1	Kuangyinshan	1.07	333	eP	Pb	12 00 19.2	+0.1
	baz=334						
TWS1				eS	Sn	12 00 34.3	+1.3
	baz=334						
NCUH	Zhongli	1.08	320	eP	Pb	12 00 18.8	-0.4
	baz=319						
NCUH				eS	Sn	12 00 34.6	+1.4
	baz=319						
NCU	National Centr	1.08	320	eP	Pb	12 00 19.4	+0.2
	baz=320						
NCU				eS	Sn	12 00 34.6	+1.4
	baz=320						
SBCB	Hsinchu	1.09	307	eP	Pb	12 00 20.1	+0.6
	baz=305						
SBCB				S	Sn	12 00 34.7	+1.2
	baz=305						
TWQ1	Liyutan	1.09	281	P	Pb	12 00 20.3	+0.8
	baz=278						
TWQ1				S	Sn	12 00 34.3	+0.8
	baz=278						
FULB	Fuli	1.11	213	P	Pb	12 00 19.7	0.0
	baz=195						
HSN	Hsinchu	1.11	307	P	Pb	12 00 19.8	+0.1
	baz=308						
HSN				S	Sn	12 00 34.1	+0.3
	baz=308						
ANP	Anpu	1.11	340	eP	Pb	12 00 20.0	+0.1
	baz=327						
NSY	Sanyi	1.12	285	P	Pb	12 00 20.6	+0.8
	baz=281						
NSY				S	Sn	12 00 35.9	+1.8
	baz=281						
NTST	Danshui	1.12	336	eP	Pb	12 00 20.5	+0.6
	baz=337						
NTST				eS	Sn	12 00 35.2	+1.1
	baz=337						
WJS	Zhushan	1.16	255	P	Pb	12 00 21.2	+0.6
	baz=250						
WJS				S	Sb	12 00 37.0	+1.8
	baz=250						
TCU	Taichung	1.16	271	P	Pb	12 00 21.5	+0.9
	baz=267						
TCU				S	Sb	12 00 37.2	+1.9
	baz=267						
CHKT	Chengkung	1.16	207	eP	Pn	12 00 19.2	-0.9
	baz=191						
WNT	Mingjian	1.18	258	P	Pb	12 00 21.4	+0.4
	baz=238						
WNT				S	Sb	12 00 37.9	+2.0
	baz=238						
WDJ	Dajia District	1.21	280	eP	Pb	12 00 21.9	+0.4
	baz=277						
WDJ				S	Sb	12 00 38.0	+1.3
	baz=277						
ALS	Alishan	1.22	239	⇓iP	Pb	12 00 21.5	-0.2
	baz=222						
ALS				S	Sb	12 00 39.5	+2.3
	baz=222						
WCHH	Zhanghua	1.27	268	P	Pb	12 00 22.7	+0.2
	baz=263						
WCHH				S	Sb	12 00 40.0	+1.6
	baz=263						
ELDTW	Lidau	1.27	222	P	Pn	12 00 21.1	-0.6
	baz=207						
CHN5	Tsauling	1.28	245	⇑iP	Pb	12 00 23.0	+0.3
	baz=240						
CHN5				iS	Sb	12 00 41.0	+2.2
	baz=240						
EDH	Donghe	1.30	207	P	Pn	12 00 21.4	-0.5
	baz=192						
EDH				S	Sn	12 00 36.9	-1.7
	baz=192						
WDLH	Douliu	1.36	251	P	Pb	12 00 24.5	+0.4
	baz=246						
WDLH				S	Sb	12 00 43.2	+2.1
	baz=246						
LONT	Longtian	1.44	212	eP	Pn	12 00 23.2	-0.6
	baz=207						
STYH	Taoyuan	1.44	228	P	Pb	12 00 25.0	-0.4
	baz=223						
STYH				S	Sb	12 00 44.5	+1.1
	baz=223						
WRL	Guolierlin Hig	1.46	261	eP	Pb	12 00 25.1	-0.6
	baz=257						
WRL				eS	Sb	12 00 44.2	+0.5
	baz=257						
TPUB	Ta-pu	1.47	236	P	Pb	12 00 25.6	-0.2
	baz=220						
TPUB				S	Sb	12 00 45.8	+1.7
	baz=220						
CHN2	Minshiung	1.48	246	P	Pb	12 00 27.2	+1.2
	baz=241						
WTK	Tuku	1.50	253	P	Pb	12 00 26.4	+0.1
	baz=236						
WTK				S	Sb	12 00 46.6	+1.7
	baz=236						
WTP	Ta-pu	1.51	234	P	Pb	12 00 26.4	-0.2
	baz=229						
WTP				S	Sb	12 00 46.8	+1.5
	baz=229						
LDUT	Ludao	1.52	197	eP	Pn	12 00 23.2	-1.8
	baz=185						
LDUT				eS	Sn	12 00 41.3	-2.8
	baz=185						
CHY	Chiayi	1.53	246	P	Pb	12 00 27.4	+0.5
	baz=241						
CHY				S	Sb	12 00 48.2	+2.2
	baz=241						
TWGBT	Beinan	1.54	211	eP	Pn	12 00 24.2	-1.0
	baz=196						
TWG	Pinlang	1.54	212	eP	Pn	12 00 24.3	-0.9
	baz=207						
TWG				eS	Sn	12 00 43.0	-1.5
	baz=207						
TWK	Hsinying	1.59	237	⇓iP	Pb	12 00 27.7	-0.3
	baz=232						
TWK				S	Sb	12 00 48.8	+1.0
	baz=232						
CHN1	Nanshi	1.61	234	P	Pb	12 00 27.9	-0.4
	baz=229						
CHN1				S	Sb	12 00 49.3	+1.1
	baz=229						
SNST	Tainan City	1.61	236	P	Pb	12 00 28.1	-0.2
	baz=231						
SNST				S	Sb	12 00 49.8	+1.6
	baz=231						
SGST	Jiashian	1.63	230	P	Pb	12 00 27.5	-1.2
	baz=225						
SGST				S	Sb	12 00 49.5	+0.6
	baz=225						
IRIF	Iriomote-Funau	1.64	83	P	Pn	12 00 26.8	+0.2
IRIF				eS	Sn	12 00 47.5	+0.6
WSF	Szhu	1.66	253	⇓iP	Pb	12 00 28.7	-0.3
	baz=248						
WSF				S	Sb	12 00 51.2	+1.7
	baz=248						
HATJ	Hateruma jima	1.70	92	P	Pn	12 00 28.2	+0.8
ICHU	Yijhu	1.71	244	eP	Pb	12 00 29.4	-0.7
	baz=239						
ICHU				eS	Sb	12 00 51.7	+0.5
	baz=239						
CHN8	Yiju	1.78	244	P	Pb	12 00 30.3	-0.8
	baz=240						
CHN8				S	Sb	12 00 54.1	+1.1
	baz=240						
CHN3	Shinhua	1.80	234	eP	Pb	12 00 30.4	-1.1
	baz=230						
CHN3				eS	Sb	12 00 55.8	+2.3
	baz=230						
SSD	Sandimen	1.84	221	eP	Pb	12 00 31.3	-0.8
	baz=201						
SSD				eS	Sb	12 00 54.6	-0.1
	baz=201						
TSMG	Majia	1.86	220	P	Pb	12 00 31.6	-0.9
	baz=200						
TSMG				S	Sb	12 00 54.8	-0.6
	baz=200						
JKRS	Kuro-shima	1.89	87	P	Pn	12 00 31.0	+1.0
TWM1	Shoushan	1.92	227	eP	Pb	12 00 33.6	+0.1
	baz=223						
MASBT	Mashibuluo	1.94	219	eP	Pn	12 00 31.6	+0.8
	baz=200						
MASBT				eS	Sb	12 00 57.0	-0.6
	baz=200						
JIJ	Ishigaki jima	2.02	83	P	Pn	12 00 32.1	+0.3
JIJ				eS	Sn	12 00 56.2	-0.1
EAST	Anshuo	2.02	210	P	Pn	12 00 33.2	+1.3
	baz=197						
LAY	Lan-yu	2.12	190	eP	Pn	12 00 32.5	-0.8
	baz=187						
SCZT	Fangliau	2.14	215	eP	Pb	12 00 35.6	-1.7
	baz=199						
SLIU	Shizi	2.19	209	eP	Pn	12 00 35.7	+1.6
	baz=196						
JISG	Ishigakijimahi	2.20	78	P	Pn	12 00 34.2	-0.1
PHUB	P'eng-hu	2.26	255	eP	Pn	12 00 35.3	+0.1
	baz=251						
PHUB				eS	Sn	12 01 01.9	-0.4
	baz=251						
PNG	Penghu	2.26	256	P	Pn	12 00 35.0	-0.2
	baz=252						
PNG				S	Sn	12 01 03.0	+0.7
	baz=252						
TWK1	Hengchun	2.42	206	eP	Pn	12 00 37.2	-0.2
	baz=193						
VCHM	Qimei	2.49	249	eP	Pn	12 00 39.1	+0.8
	baz=232						
VCHM				eS	Sn	12 01 08.9	+1.0
	baz=232						
MATB	Ma-tsu	2.71	318	eP	Pn	12 00 40.9	-0.3
	baz=316						
PTMZ	Houxiangcun	2.73	290	eP	Pn	12 00 41.4	-0.2
	baz=287						
LYJJ	Jianjiangzhen	3.11	321	eP	Pn	12 00 45.4	-1.4
	baz=319						
XPSS	Dashiqiu	3.20	331	eP	Pn	12 00 47.0	-1.1
	baz=328						
KNM	Kinmen	3.22	276	eP	Pn	12 00 49.9	+1.6
	baz=270						
KNMB	Chin-men Tao	3.26	276	eP	Pn	12 00 48.2	-0.7
	baz=271						
AXDP	Jialang	3.70	283	eP	Pn	12 00 54.4	-0.5
	baz=278						
ZPLA	Ao Xicun	3.84	268	eP	Pn	12 00 56.2	-0.7
	baz=262						

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*IDC **02** 12:00:18.6±1.1, 16°.73S×175°.06E, h0^{km}, mb3.9/6, mb1 4.2/7, mb1mx3.7/34, mbtmp3.9/7, ML4.4/1, MS3.6/3, Ms1 3.6/3, ms1mx3.0/32, Error ellipse: s-maj=47.3km s-min=23.0km az=166.0*

ISC 02 12:00:23.8±0.9**, 16°.8S**±0°.3×**175°.1E**±0°.1**, h35^{km}, n10, σ1^{s}.95**/7**, mb3.9**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	2.92	108	Pn	Pn	12 01 07.3	-0.5
	1.9nm,0.3s,baz=272,slow=12,SNR=6.7						
DZM	Mont Dzumac	9.71	236	LR	LR	12 05 45.4	
	comp=Z,358nm,21.0s,baz=27,slow=34						
HNR	Honiara	16.52	295	LR	LR	12 10 17.0	
	comp=Z,100nm,18.6s,baz=182,slow=36						
STKA	Stephens Creek	33.87	238	P	P	12 07 04.4	+1.2
	2.0nm,0.8s,baz=107,slow=11,SNR=3.1						
WRA	Warramunga Arr	38.78	259	P	P	12 07 43.5	-1.9
	1.1nm,0.8s,baz=92,slow=7.9,SNR=7.5						
ASAR	Alice Springs	39.18	253	P	P	12 07 47.1	-1.6
	2.9nm,0.8s,baz=82,slow=8.8,SNR=27						
JOW	Kunigami	62.88	313	LR	LR	12 36 55.7	
	comp=Z,82nm,19.0s,baz=2.0,slow=35						
CMAR	Chiang Mai Arr	82.75	292	P	P	12 12 46.3	+1.6
	0.6nm,0.3s,baz=114,slow=3.5,SNR=6.7						
ILAR	Eielson Array	86.36	15	P	P	12 13 00.3	-1.6
	0.4nm,0.8s,baz=232,slow=5.9,SNR=5.5						
TXAR	Lajitas Array	90.70	60	P	P	12 13 25.0	+1.5
	0.2nm,0.8s,baz=263,slow=7.8,SNR=2.2						

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*IDC **02** 12:04:10.1±0.8, 56°.13S×26°.73W, h0^{km}, mb4.2/5, mb1 4.3/5, mb1mx4.0/19, mbtmp4.2/5, Error ellipse: s-maj=35.3km s-min=25.0km az=74.0*

*NEIC **02** 12:04:18.1±1.3, 56°.16S±0°.07×26°.7W±0°.2, h56^{km}±8^{km}, mb4.5/20, Error ellipse: s-maj=17.3km s-min=5.2km az=56.0*

ISC 02 12:04:15.7±0.5**, 56°.08S**±0°.10×**26°.6W**±0°.1**, h35^{km}, n41, σ0^{s}.87**/36**, mb4.5**/13**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.96	283	Pn	Pn	12 05 42.5	+1.1
VNA1	Neumayer--Stat	16.64	159	P	P	12 08 10.2	+2.4
VNA3	Neumayer Olymp	16.84	161	P	P	12 08 11.9	+1.7
VNA2	Neumayer--Watz	17.03	158	P	P	12 08 14.0	+1.7
	baz=322,slow=13						
SNAA	Sanae	18.57	156	P	P	12 08 29.2	-0.1
SNAA	Sanae	18.57	156	P	P	12 08 29.1	-0.1
GO09	Cerro Castillo	27.14	261	P	P	12 09 55.0	-0.1
GO09				IAmb	IAmb	12 10 24.3	
	comp=Z,21nm,1.4s						
TRQA	Tornquist	29.66	292	P	P	12 10 18.3	+0.6
TRQA				IAmb	IAmb	12 10 43.7	
	comp=Z,19nm,1.5s						
PLTB	Pedras Altas	30.78	311	P	P	12 10 28.6	+0.9
PLTB				IAmb	IAmb	12 10 57.0	
	comp=Z,12nm,1.4s						
QSPA	South Pole Qui	34.17	180	P	P	12 10 57.0	-0.2
LC01	Cunco	34.36	281	P	P	12 10 58.9	-0.1
LC01				IAmb	IAmb	12 11 16.0	
	comp=Z,5.5nm,0.8s						
MAW	Mawson	39.91	143	P	P	12 11 45.2	-0.5
	comp=Z,2.1nm,0.7s,baz=221,slow=11,SNR=2.0						
BDFB	Brasilia	43.57	329	P	P	12 12 15.6	-0.6
BDFB				IAmb	IAmb	12 12 29.5	
	comp=Z,9.2nm,1.5s						
PB10	IPOC Station P	45.67	297	P	P	12 12 32.3	-0.6
PB09	IPOC Station P	46.47	300	P	P	12 12 39.1	-0.2
VNDA	Vanda	46.56	183	P	P	12 12 38.8	-0.4
	comp=Z,1.0nm,0.7s,baz=182,slow=9.0,SNR=5.3						
VNDA	Vanda	46.56	183	P	P	12 12 38.4	-0.7
PB01	IPOC Station P	47.23	300	P	P	12 12 44.9	-0.3
PTLB	Pontes e Lacer	47.56	315	P	P	12 12 47.3	-0.4
PTLB				IAmb	IAmb	12 12 48.2	
	comp=Z,5.6nm,1.3s						
H10S2	ASCENSION HYDR	47.93	16	T	T	13 05 10.7	
	baz=31,slow=74,SNR=6.0						
H10S3	ASCENSION HYDR	47.94	16	T	T	13 05 11.3	
	baz=189,slow=74,SNR=36						
PSGCX	Pisagua	48.77	300	P	P	12 12 56.2	-0.9
H10N1	ASCENSION HYDR	49.05	16	T	T	13 06 34.8	
	baz=189,slow=75,SNR=6.9						
H10N3	ASCENSION HYDR	49.05	16	T	T	13 06 32.5	
	baz=189,slow=75,SNR=52						
H10N2	ASCENSION HYDR	49.07	16	T	T	13 06 35.9	
	baz=189,slow=75,SNR=38						
TSUM	Tsumeb	49.39	60	P	P	12 13 01.5	-0.4
PB16	IPOC Station P	49.56	302	P	P	12 13 03.6	-0.1
PB16				IAmb	IAmb	12 13 05.3	
	comp=Z,5.9nm,1.3s						
LPAZ	La Paz	50.68	305	P	P	12 13 11.8	-0.4
	comp=Z,1.6nm,0.3s,baz=146,slow=3.6,SNR=14						
LPAZ	La Paz	50.68	305	P	P	12 13 12.3	+0.1
LPAZ				IAmb	IAmb	12 13 12.9	
	comp=Z,3.4nm,0.9s						
BOAV	Boa Vista	64.52	322	P	P	12 14 48.4	-0.5
BOAV				IAmb	IAmb	12 15 08.3	
	comp=Z,4.9nm,1.1s						
DBIC	Dimbokro	65.05	24	P	P	12 14 53.1	+0.8
	comp=Z,2.9nm,0.6s,baz=185,slow=7.1,SNR=3.1						
DBIC	Dimbokro	65.05	24	P	P	12 14 53.2	+1.0
DBIC				IAmb	IAmb	12 15 17.1	
	comp=Z,9.1nm,1.3s						
TORD	Torodi Ar. Bea	72.91	29	P	P	12 15 41.5	+0.5
	comp=Z,2.5nm,0.5s,baz=200,slow=6.3,SNR=18						
TORD	Torodi Ar. Bea	72.91	29	P	P	12 15 42.6	+1.6
BOAB	BOACO BROADBAN	84.04	303	P	P	12 16 41.2	-1.2
FINES	FINESS Array B	124.25	28	PKP	PKPdf	12 23 08.8	-0.3
	comp=Z,2.0nm,1.0s,baz=132,slow=3.9,SNR=4.2						
YKA	Yellowknife Ar	136.43	318	PKP	PKPdf	12 23 31.1	-1.0
	comp=Z,0.3nm,0.5s,baz=140,slow=1.8,SNR=2.0						
INK	Inuvik	146.05	320	PKPbc	PKPdf	12 23 48.8	-0.3
	comp=Z,2.2nm,0.7s,baz=56,slow=1.5,SNR=14						
INK	Inuvik	146.05	320		PKPdf	12 23 49.3	+0.2
SONM	Songino Array	150.38	86	PKPbc	PKPbc	12 24 02.3	-0.1
	comp=Z,1.0nm,0.6s,baz=199,slow=2.2,SNR=5.0						
ILAR	Eielson Array	150.40	312	PKPbc	PKPbc	12 24 00.9	-0.8
	comp=Z,2.0nm,0.9s,baz=135,slow=3.3,SNR=19						

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*IDC **02** 12:06:15.7±2.3, 40°.70N×142°.35E, h58^{km}±21^{km}, mb3.6/9, mb1 3.7/12, mb1mx3.5/44, mbtmp3.8/12, ML4.1/1, MS2.6/2, Ms1 2.6/2, ms1mx2.2/45, Error ellipse: s-maj=26.4km s-min=12.8km az=106.0*

*JMA **02** 12:06:15.0±0.1, 40°.71N×142°.42E, h48^{km}±2^{km}, M3.8*

JMA Felt II J1.

ISC 02 12:06:15.4±1.1**, 40°.73N**±0°.03×**142°.36E**±0°.06**, h51^{km}**±11^{km}**, n34, σ1^{s}.11**/41**, mb3.8**/9**, 5C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKEN	Kujiedanarisaw	0.72	224	⇑P	Pn	12 06 29.2	-0.2
JKEN				S	Sn	12 06 39.4	-0.2
JANG	Nango	0.73	242	⇑P	Pn	12 06 29.8	+0.2
JANG				S	Sn	12 06 40.0	0.0
JARK	Aomorirokkasho	0.80	291	⇓P	Pn	12 06 30.7	+0.2
JARK				S	Sn	12 06 42.0	+0.4
JTH	Tanohata	0.87	206	⇑P	Pn	12 06 31.0	-0.5
JTH				eS	Sn	12 06 42.7	-0.5
JTM	Tenmabayashi	0.98	274	⇓P	Pn	12 06 33.0	+0.1
JTM				S	Sn	12 06 45.9	+0.1
JOT	Ohata	1.19	304	⇓P	Pn	12 06 35.6	-0.1
JOT				S	Sn	12 06 51.0	+0.3
JAH	Hinai	1.42	248	⇓P	Pn	12 06 39.2	+0.4
JAH				S	Sn	12 06 57.0	+0.6
JEM	Erimo	1.42	25	P	Pn	12 06 39.4	+0.5
JOM	Ohasama	1.49	213	⇑P	Pn	12 06 40.1	+0.2
JOM				S	Sn	12 06 58.3	+0.1
JKB	Kayabe	1.53	320	P	Pn	12 06 40.5	+0.2
JKB				S	Sn	12 06 59.0	-0.1
JNBK	Urakawa-nobuka	1.58	11	⇑P	Pn	12 06 42.0	+1.0
JSR	Shiriuchi	1.67	299	⇓P	Pn	12 06 42.5	+0.3
JSR				eS	Sn	12 07 03.5	+1.0
JIW	Iwasaki	1.79	267	P	Pn	12 06 44.4	+0.5
JIW				eS	Sn	12 07 06.6	+1.1
JRG	Rokugo	1.87	225	P	Pn	12 06 45.9	+0.9
JRG				S	Sn	12 07 09.0	+1.5
ASAJ	Asahikawa	3.39	3	P	Pn	12 07 06.9	+1.0
	13nm,0.3s,baz=221,slow=8.9,SNR=128						
ASAJ				S	Sn	12 07 45.5	+0.6
	3.4nm,0.3s,baz=147,slow=32,SNR=5.7						
ASAJ				LR	LR	12 08 13.4	
	comp=Z,18nm,21.0s,baz=210,slow=34						
MAT	Matsushiro	5.29	219	P	Pn	12 07 33.1	+1.2
MAT				eS	Sn	12 08 36.7	+5.1
MJAR	Matsushiro Arr	5.29	219	P	Pn	12 07 33.1	+1.2
	0.2nm,0.3s,baz=35,slow=13,SNR=18						
USRK	Ussuriysk Ar.	8.41	298	P	Pn	12 08 15.3	+0.7
	baz=98,slow=14,SNR=4.3						
SEY	Seymchan	23.03	12	P	P	12 11 15.8	0.0
	3.2nm,0.8s,baz=205,slow=17,SNR=6.3						
H11N2	WAKE ISLAND Hy	29.61	128	T	T	12 43 55.4	
	baz=321,slow=76,SNR=20						
H11N1	WAKE ISLAND Hy	29.62	128	T	T	12 43 54.5	
	baz=321,SNR=21						
H11N3	WAKE ISLAND Hy	29.63	128	T	T	12 43 56.0	
	baz=321,slow=76,SNR=18						
H11S1	WAKE ISLAND Hy	30.44	129	T	T	12 44 55.8	
	baz=322,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	30.45	130	T	T	12 44 55.5	
	baz=322,slow=76,SNR=10						
H11S2	WAKE ISLAND Hy	30.46	129	T	T	12 44 56.0	
	baz=322,slow=76,SNR=8.9						
ZALV	Zalesovo Beam	40.06	309	P	P	12 13 45.2	-0.2
	0.7nm,0.3s,baz=102,slow=8.4,SNR=4.0						
MKAR	Makanchi Array	42.88	299	P	P	12 14 08.2	-0.4
	1.6nm,0.8s,baz=89,slow=10,SNR=8.9						
ILAR	Eielson Array	46.01	34	P	P	12 14 33.7	+0.4
	1.6nm,1.2s,baz=261,slow=6.0,SNR=5.8						
INK	Inuvik	50.78	29	P	P	12 15 10.3	+0.4
	0.9nm,0.4s,baz=278,slow=5.9,SNR=11						
FITZ	Fitzroy Crossi	60.55	198	P	P	12 16 20.6	+0.1
	4.9nm,1.1s,baz=168,slow=11,SNR=3.6						
ARCES	ARCESS Array B	60.81	339	LR	LR	12 44 30.0	
	comp=Z,19nm,18.2s,baz=245,slow=38						
WRA	Warramunga Arr	60.81	189	P	P	12 16 20.6	-1.6
	0.3nm,0.6s,baz=9.4,slow=5.2,SNR=4.5						
ASAR	Alice Springs	64.54	189	P	P	12 16 45.4	-1.7
	0.1nm,0.3s,baz=2.9,slow=6.7,SNR=7.1						
FINES	FINESS Array B	65.90	332	P	P	12 16 54.8	-0.7
	2.7nm,0.9s,baz=38,slow=7.2,SNR=8.1						

TAP 02 12:06:54.3, 24°.18N×121°.93E, h26^{km}, ML1.8, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village	0.22	307	eP	Pb	12 07 00.6	+0.3
	baz=307						
ETL	Fush Village	0.28	266	eS	Sb	12 07 06.7	+0.8
	baz=256						
EWUT	Wuta	0.30	332	eP	Pb	12 07 01.5	+0.1
	baz=337						
EWUT				eS	Sn	12 07 07.5	-1.2
	baz=337						
ENA	Nanau	0.30	325	P	Pb	12 07 01.9	+0.4
	baz=325						
ENA				S	Sb	12 07 07.4	+1.1
	baz=325						
NACB	Ninganchiao	0.31	269	P	Pb	12 07 01.6	+0.1
	baz=260						
NACB				S	Sb	12 07 07.3	+0.9
	baz=260						
TWD	Chiawan	0.32	252	P	Pb	12 07 01.9	+0.2
	baz=240						
TWD				eS	Sb	12 07 07.9	+1.1
	baz=240						
ETLH	Xiulin Townshi	0.41	274	eP	Pb	12 07 03.2	0.0
	baz=273						
ETLH				eS	Sn	12 07 10.7	-0.9
	baz=273						
TWC	Suao	0.43	350	eS	Sn	12 07 11.3	-0.7
	baz=355						
NDS	Dongshan	0.49	336	eP	Pn	12 07 05.4	-0.4
	baz=339						
NDS				eS	Sn	12 07 13.2	-0.4
	baz=339						
NNSB	Datong	0.56	296	eP	Pb	12 07 05.9	+0.3
	baz=288						
NNSB				eS	Sn	12 07 14.5	-0.9
	baz=288						
ENTT	Nioudou	0.57	324	eP	Pn	12 07 06.7	-0.1
	baz=316						
ENTT				eS	Sn	12 07 14.9	-0.4
	baz=316						
NDT	Datong Townshi	0.57	318	eS	Sn	12 07 15.1	-0.4
	baz=312						
NNS	Nan Shan	0.57	297	P	Pb	12 07 06.2	+0.3
	baz=289						
NNS				eS	Sn	12 07 15.0	-0.6
	baz=289						
ESL	Shilin	0.58	232	eP	Pb	12 07 06.1	+0.1
	baz=238						
WHF	Hehuan Shan	0.61	267	eP	Pb	12 07 06.8	+0.1
	baz=266						
WHF				eS	Sb	12 07 15.8	+0.6
	baz=266						
FUSS	Fushou	0.63	276	eP	Pb	12 07 07.2	+0.3
	baz=275						
FUSS				eS	Sb	12 07 16.2	+0.6
	baz=275						
CHGB	Renai	0.70	260	eP	Pb	12 07 08.2	+0.1

	baz=247						
CHGB				*e*S	Sn	12 07 18.8	-0.2
	baz=247						
YHNB	**Yeheng**	**0.70**	**314**	*e*P	Pn	12 07 08.5	-0.3
	baz=314						
NWLT	**Wulai**	**0.71**	**327**	*e*S	Sn	12 07 18.7	-0.3
	baz=318						
OWD	**Renai**	**0.73**	**252**	*e*P	Pb	12 07 08.6	+0.1
	baz=251						
OWD				*e*S	Sn	12 07 18.9	-0.5
	baz=251						
TIPB	**Shuangxi**	**0.80**	**353**	*e*P	Pn	12 07 10.5	+0.6
	baz=1.0						
TIPB				*e*S	Sn	12 07 22.8	+1.8
	baz=1.0						
WHP	**Taichung City**	**0.91**	**276**	*e*P	Pn	12 07 12.2	+0.7
	baz=275						
WHP				*e*S	Sn	12 07 24.0	+0.1
	baz=275						

JMA 02 12:06:58.5±0.1, 24°.26N×123°.65E, h16^{km}±1^{km}, M1.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.10**	**44**	P	Pg	12 07 01.8	-0.2
IRIF				S	Sb	12 07 04.6	0.0
HATJ	**Hateruma jima**	**0.25**	**145**	P	Pg	12 07 03.9	-0.1
JKRS	**Kuro-shima**	**0.33**	**94**	P	Pg	12 07 05.2	-0.2
JKRS				S	Sb	12 07 10.7	-0.3
JIJ	**Ishigaki jima**	**0.46**	**77**	P	Pg	12 07 07.5	-0.3
JIJ				S	Sg	12 07 13.9	-0.1
JYNG	**Yonagunijimaku**	**0.67**	**287**	P	Pg	12 07 11.4	-0.3
JYNG				*e*S	Sb	12 07 21.5	+0.6
JISG	**Ishigakijimahi**	**0.69**	**61**	P	Pb	12 07 12.0	-0.1
JISG				*e*S	Sb	12 07 21.5	+0.2
JTJ	**Tarama**	**1.03**	**68**	P	Pb	12 07 17.9	-0.1
JTJ				S	Sn	12 07 32.6	+0.2

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*IDC **02** 12:09:32.1±1.3, 34°.65S×108°.15W, h0^{km}, mb3.6/3, mb1 4.0/3, mb1mx3.8/29, mbtmp3.6/3, MS3.9/8, Ms1 3.9/8, ms1mx3.7/16, Error ellipse: s-maj=55.9km s-min=35.5km az=58.0*

*NEIC **02** 12:09:33.8±1.6, 34°.8S±0°.1×108°.0W±0°.2, h10^{km}±1^{km}, mb4.8/53, Error ellipse: s-maj=24.1km s-min=17.7km az=262.0*

*GCMT **02** 12:09:34.8±0.4, 34°.99S±0°.03×108°.76W±0°.04, h31^{km}±1^{km}, MW5.0/65, Moment Tensor Solution. s20,c23; s65,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.78±.21; $M_{\theta\theta}$-1.91±.17; $M_{\phi\phi}$2.70±.17; $M_{r\theta}$-1.29±.26; $M_{\theta\phi}$-2.63±.16; $M_{\phi r}$-1.51±.19; Best double couple: $M_0$4.07900×10^{16} NP1:ϕ_s114.00000°, δ62.00000°, λ-166.00000°. NP2: ϕ_s17.00000°, δ78.00000°, λ-29.00000°. Principal axes: T 4.0540, Plg11.0000°, Azm68.0000°; N 0.0560, Plg59.0000°, Azm177.0000°; P -4.1030, Plg29.0000°, Azm332.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 12:09:32.7±0.7, 34°.9S±0°.1×108°.1W±0°.1, h10^{km}, n77, σ0^{s}.89/66, mb4.8/27, MS4.0/8, 1C-1D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA02	**Isla de Pascua**	**7.79**	**351**	Pn	**Pn**	**12 11 25.1**	**-1.1**
LL07	**Hotel Espejo d**	**27.93**	**117**	P	**P**	**12 15 23.9**	**+0.8**
LL02	**Futaleuf**	**29.15**	**117**	P	**P**	**12 15 33.1**	**-0.9**
PLCA	**Paso Flores**	**30.05**	**112**	P	**P**	**12 15 44.2**	**+2.1**
	1.0nm,0.6s,baz=247,slow=7.7,SNR=2.3						
PLCA				LR	LR	12 25 34.3	
	comp=Z,92nm,20.4s,baz=288,slow=32						
VA05	**Santo Domingo**	**30.05**	**98**	P	**P**	**12 15 42.8**	**+0.8**
MT01	**Popeta**	**30.30**	**99**	P	**P**	**12 15 45.4**	**+1.2**
MT01				IAmb	IAmb	12 16 11.0	
	comp=Z,27nm,1.5s						
MT02	**Curacav**	**30.53**	**98**	P	**P**	**12 15 46.5**	**+0.2**
MT02				IAmb	IAmb	12 15 47.9	
	comp=Z,22nm,1.3s						
PB06	**IPOC Station P**	**35.65**	**81**	P	**P**	**12 16 31.2**	**-0.1**
PB06				IAmb	IAmb	12 16 53.8	
	comp=Z,11nm,0.9s						
LVC	**Limon Verde**	**36.23**	**81**	P	**P**	**12 16 34.9**	**-1.5**
LVC				IAmb	IAmb	12 16 53.8	
	comp=Z,11nm,1.2s						
TA02	**Huaiquique**	**36.41**	**77**	P	**P**	**12 16 37.7**	**+0.1**
PB01	**IPOC Station P**	**36.53**	**78**	P	**P**	**12 16 37.7**	**-1.0**
PB01				IAmb	IAmb	12 16 51.7	
	comp=Z,20nm,1.5s						
PB16	**IPOC Station P**	**37.95**	**74**	P	**P**	**12 16 50.9**	**-0.4**
LPAZ	**La Paz**	**40.18**	**73**	LR	LR	12 29 16.0	
	comp=Z,72nm,21.4s,baz=220,slow=30						
CPUP	**Villa Florida**	**44.11**	**93**	LR	LR	12 33 10.2	
	comp=Z,196nm,21.5s,baz=260,slow=32						
ITAB	**Concordia**	**48.00**	**97**	P	**P**	**12 18 12.7**	**+0.7**
HZTE	**Horizontes, Gu**	**50.10**	**29**	P	**P**	**12 18 28.6**	**+0.5**
BATAN	**Batan**	**50.48**	**32**	P	**P**	**12 18 30.0**	**-1.0**
ROSC	**El Rosal**	**50.70**	**46**	LR	LR	12 36 19.4	
	comp=Z,92nm,18.9s,baz=210,slow=32						
MACA	**Manacapuru-AM**	**54.06**	**65**	P	**P**	**12 18 57.8**	**0.0**
SBA	**Scott Base**	**55.17**	**195**	P	**P**	**12 19 06.1**	**+1.2**
SBA				IAmb	IAmb	12 19 20.3	
	comp=Z,18nm,1.3s						
BDFB	**Brasilia**	**56.78**	**86**	LR	LR	12 42 13.0	
	comp=Z,143nm,18.6s,baz=246,slow=34						
ZAIG	**Zacatecas**	**57.58**	**6**	P	**P**	**12 19 22.6**	**-0.5**
ZAIG				IAmb	IAmb	12 19 35.6	
	comp=Z,10nm,1.4s						
VNA3	**Neumayer Olymp**	**60.01**	**158**	P	P	12 19 47.0	+7.9
VNA1	**Neumayer--Stat**	**60.65**	**158**	P	P	12 19 49.6	+6.1
VNA2	**Neumayer--Watz**	**60.81**	**158**	P	P	12 19 53.3	+8.6
	baz=255,slow=4.2						
SNAA	**Sanae**	**61.85**	**160**	P	P	12 19 59.7	+8.1
TXAR	**Lajitas Array**	**64.01**	**4**	P	**P**	**12 20 07.4**	**+0.9**
	comp=Z,0.2nm,0.8s,baz=180,slow=11,SNR=2.1						
TXAR	**Lajitas Array**	**64.01**	**4**	P	**P**	**12 20 07.1**	**+0.6**
CRPR	**Cabo Rojo, PR**	**65.43**	**43**	P	**P**	**12 20 14.7**	**-1.1**
MNTX	**Cornudas Mount**	**66.28**	**3**	P	**P**	**12 20 22.0**	**+0.9**
MNTX				IAmb	IAmb	12 20 30.2	
	comp=Z,6.7nm,1.5s						
BBGH	**Gun Hill**	**66.31**	**53**	P	**P**	**12 20 21.1**	**-0.5**
FDF	**Fort de France**	**66.46**	**50**	P	**P**	**12 20 22.1**	**-0.5**
MSVF	**Nonsavu**	**67.05**	**264**	LR	LR	12 43 02.7	
	comp=Z,89nm,21.0s,baz=140,slow=30						
237A	**Washetta, Mont**	**67.53**	**11**	P	**P**	**12 20 30.1**	**+1.1**
ABTX	**Abilene, Hawle**	**67.62**	**8**	P	**P**	**12 20 30.4**	**+0.8**
ABTX				IAmb	IAmb	12 20 38.4	
	comp=Z,7.9nm,1.3s						
X18A	**Snowflake**	**69.08**	**358**	P	**P**	**12 20 39.3**	**+0.4**
X18A				IAmb	IAmb	12 20 50.5	
	comp=Z,10nm,1.5s						
WLAR	**White Oak Lake**	**69.64**	**13**	P	**P**	**12 20 42.1**	**-0.1**
WLAR				IAmb	IAmb	12 20 53.2	
	comp=Z,15nm,1.1s						
GSC	**Goldstone, Bar**	**70.30**	**352**	P	**P**	**12 20 47.1**	**+0.8**
GSC				IAmb	IAmb	12 20 56.7	
	comp=Z,10nm,1.3s						
W35A	**Tecumseh**	**70.46**	**10**	P	**P**	**12 20 48.0**	**+0.9**
W35A				IAmb	IAmb	12 21 13.4	
	comp=Z,9.4nm,1.1s						
POHA	**Pohakuloa**	**70.60**	**313**	P	**P**	**12 20 49.0**	**+0.4**
ISA	**Isabella, Lake**	**70.86**	**351**	P	**P**	**12 20 49.9**	**+0.2**
ISA				IAmb	IAmb	12 20 58.8	
	comp=Z,7.1nm,1.2s						
QSM	**Queen of Sheba**	**70.97**	**352**	P	**P**	**12 20 50.5**	**+0.3**
QSM				IAmb	IAmb	12 21 11.1	
	comp=Z,12nm,1.7s						
U40A	**Yellville**	**72.28**	**13**	P	**P**	**12 20 59.2**	**+1.0**
U40A				IAmb	IAmb	12 21 10.1	
	comp=Z,13nm,1.6s						
SDCO	**Great Sand Dun**	**72.31**	**2**	P	**P**	**12 20 59.2**	**+0.6**
SDCO				IAmb	IAmb	12 21 27.3	
	comp=Z,2.9nm,0.2s						
LCAR	**Lake Charles**	**72.34**	**14**	P	**P**	**12 20 58.8**	**+0.4**
W50A	**Signal Mountai**	**72.90**	**19**	P	**P**	**12 21 01.5**	**-0.4**
V48A	**Smith Brothers**	**73.01**	**18**	P	**P**	**12 21 03.5**	**+1.0**
V48A				IAmb	IAmb	12 21 12.8	
	comp=Z,12nm,1.4s						
TPH	**Tonopah**	**73.09**	**352**	P	**P**	**12 21 03.4**	**+0.2**
NVAR	**Mina Array Bea**	**73.56**	**352**	P	**P**	**12 21 05.4**	**-0.6**
	baz=181,slow=7.2						
SYO	**Syowa Base**	**73.69**	**168**	⇓*e*P	**P**	**12 21 03.4**	**-2.8**
SYO	**Syowa Base**	**73.69**	**168**	⇑*e*PcP	**PcP**	**12 21 20.6**	**-1.3**
KVN	**Kaiserville**	**74.15**	**352**	P	**P**	**12 21 09.2**	**-0.2**
DZM	**Mont Dzumac**	**74.17**	**254**	LR	LR	12 46 22.4	
	comp=Z,73nm,19.2s,baz=188,slow=30						
TZTN	**Tazewell**	**74.65**	**20**	P	**P**	**12 21 12.5**	**+0.3**
TZTN				IAmb	IAmb	12 21 21.2	
	comp=Z,14nm,1.3s						
O20A	**White River Ci**	**74.65**	**360**	P	**P**	**12 21 12.7**	**+0.4**
BMN	**Battle Mountai**	**75.42**	**353**	P	**P**	**12 21 17.0**	**+0.3**
BMN				IAmb	IAmb	12 21 27.0	
	comp=Z,12nm,1.4s						
OLIL	**Olney**	**75.55**	**16**	P	**P**	**12 21 18.2**	**+1.0**
BW06	**Boulder Array**	**77.29**	**359**	P	**P**	**12 21 26.8**	**-0.6**
BW06				IAmb	IAmb	12 21 28.6	
	comp=Z,17nm,1.6s						
PD31	**Pinedale Array**	**77.29**	**359**	P	**P**	**12 21 26.8**	**-0.6**
PD31				IAmb	IAmb	12 21 37.3	
	comp=Z,10nm,1.5s						
PDAR	**Pinedale Array**	**77.29**	**359**	P	**P**	**12 21 26.1**	**-1.2**
	comp=Z,1.0nm,0.9s,baz=200,slow=7.6,SNR=6.4						
PDAR	**Pinedale Array**	**77.29**	**359**	P	**P**	**12 21 26.5**	**-0.8**
SCIA	**State Center**	**77.63**	**11**	P	**P**	**12 21 30.6**	**+1.6**
HLID	**Hailey**	**78.29**	**355**	P	**P**	**12 21 32.8**	**0.0**
HLID				IAmb	IAmb	12 21 43.5	
	comp=Z,7.9nm,1.3s						
MOOW	**Moose Ponds**	**78.30**	**358**	P	**P**	**12 21 33.4**	**+0.5**
RSSD	**Black Hills**	**78.72**	**3**	P	**P**	**12 21 36.0**	**+0.7**
BCYI	**Bear Canyon**	**78.97**	**356**	P	**P**	**12 21 36.5**	**-0.1**
YMR	**Madison River**	**79.23**	**358**	P	**P**	**12 21 38.6**	**+0.6**
YHH	**Holmes Hill**	**79.34**	**358**	P	**P**	**12 21 40.1**	**+1.3**
MCMT	**McKenzie Canyo**	**79.46**	**357**	P	**P**	**12 21 39.6**	**+0.3**
PLID	**Pearl Lake**	**79.93**	**354**	P	**P**	**12 21 41.4**	**-0.5**
BOZ	**Bozeman (W)**	**80.18**	**357**	P	**P**	**12 21 43.8**	**+0.7**
F10A	**Beach Ranch, E**	**80.91**	**354**	P	**P**	**12 21 46.4**	**-0.5**
F10A				IAmb	IAmb	12 21 46.5	
	comp=Z,23nm,1.5s						
C09A	**Chrisman Ranch**	**82.82**	**353**	P	**P**	**12 21 58.2**	**+1.4**
C09A				IAmb	IAmb	12 22 06.9	
	comp=Z,19nm,1.6s						
GGN	**Saint George**	**87.96**	**28**	P	**P**	**12 22 22.1**	**-0.4**
WRA	**Warramunga Arr**	**99.50**	**238**	LR	LR	13 04 51.8	
	comp=Z,95nm,18.2s,baz=100,slow=33						
CMAR	**Chiang Mai Arr**	**150.97**	**243**	PKPbc	**PKiKP**	**12 29 27.7**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=193,slow=1.8,SNR=5.7						
SONM	**Songino Array**	**151.33**	**307**	PKPbc	**PKPbc**	**12 29 26.3**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=53,slow=0.7,SNR=4.1						

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*IDC **02** 12:12:28.6±0.7, 16°.58S×175°.37E, h0^{km}, mb4.4/15, mb1 4.6/17, mb1mx4.4/40, mbtmp4.5/17, ML5.0/2, MS4.2/20, Ms1 4.2/20, ms1mx4.2/26, Error ellipse: s-maj=24.3km s-min=15.8km az=163.0*

*GCMT **02** 12:12:33.8±0.2, 16°.63S±0°.01×175°.41E±0°.01, h15^{km}±1^{km}, MW5.1/111, Moment Tensor Solution. s53,c68; s111,c184; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.50±.11; $M_{\theta\theta}$-2.17±.12; $M_{\phi\phi}$2.67±.11; $M_{r\theta}$1.11±.23; $M_{\theta\phi}$4.12±.10; $M_{\phi r}$1.11±.21; Best double couple: $M_0$4.99500×10^{16} NP1:ϕ_s344.00000°, δ75.00000°, λ174.00000°. NP2:ϕ_s75.00000°, δ84.00000°, λ15.00000°. Principal axes: T 5.4170, Plg14.0000°, Azm300.0000°; N -0.8410, Plg74.0000°, Azm96.0000°; P -4.5720, Plg6.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **02** 12:12:36.8±2.1, 16°.9S±0°.1×175°.31E±0°.07, h43^{km}±6^{km}, mb4.7/52 Error ellipse: s-maj=14.8km s-min=10.3km az=178.0*

ISC 02 12:12:34.6±0.4, 16°.71S±0°.08×175°.33E±0°.07, h35^{km}, n126, σ1^{s}.67/108, mb4.7/42, MS4.3/19, 1C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.79**	**112**	Pn	Pn	12 13 13.0	-3.7
	7.7nm,0.3s,baz=279,slow=11,SNR=23						
MSVF				LR	LR	12 14 06.5	
	comp=Z,9μm,18.6s,baz=295,slow=35						
MSVF	**Nonsavu**	**2.79**	**112**	Pn	Pn	12 13 12.8	-4.0
SANVU	**Saraoutou**	**7.92**	**278**	Pn	**Pn**	**12 14 27.5**	**+0.3**
MARNC	**Mare, Loyalty**	**8.38**	**234**	Pn	**Pn**	**12 14 33.2**	**-0.3**
LIFNC	**LIFOU**	**8.67**	**241**	Pn	**Pn**	**12 14 37.4**	**-0.1**
PINNC	**Pines Island,**	**9.47**	**230**		**Pn**	**12 14 48.3**	**-0.1**
OUENC	**Ouen Island, N**	**9.81**	**233**	Pn	**Pn**	**12 14 53.7**	**+0.5**
DZM	**Mont Dzumac**	**9.94**	**236**	*e*Pn	**Pn**	**12 14 59.2**	**+4.2**
	216nm,1.4s						
DZM				*e*LR	LR	12 17 25.0	
	comp=Z,3μm,24.1s						
DZM	**Mont Dzumac**	**9.94**	**236**	Pn	**Pn**	**12 14 58.0**	**+3.0**
	0.5nm,0.3s,baz=66,slow=14,SNR=9.9						
DZM				LR	LR	12 18 05.2	
	comp=Z,2μm,21.1s,baz=61,slow=34						
DZM	**Mont Dzumac**	**9.94**	**236**	Pn	**Pn**	**12 14 55.8**	**+0.7**
ONTNC	**Ouen Toro**	**10.05**	**235**	Pn	**Pn**	**12 14 57.5**	**+1.0**
AFI	**Afiamalu**	**12.74**	**79**	LR	LR	12 19 01.2	
	comp=Z,724nm,19.0s,baz=239,slow=31						
RAO	**Raoul Island**	**13.94**	**155**	LR	LR	12 19 06.9	
	comp=Z,902nm,21.1s,baz=102,slow=28						
HNR	**Honiara**	**16.64**	**294**	Pn	**Pn**	**12 16 22.4**	**-2.8**
	7.9nm,0.3s,baz=221,slow=11,SNR=2.2						
HNR				LR	LR	12 22 19.6	
	comp=Z,725nm,18.1s,baz=130,slow=36						
OUZ	**Omahuta**	**18.50**	**184**	P	**P**	**12 16 48.3**	**+0.6**
OUZ				IAmb	IAmb	12 16 53.2	
	comp=Z,73nm,1.3s						
URZ	**Urewera**	**21.52**	**176**	LR	LR	12 23 34.3	
	comp=Z,878nm,21.6s,baz=31,slow=31						
HIZ	**Hauiti**	**21.72**	**181**	P	**P**	**12 17 21.9**	**-0.9**
HIZ				IAmb	IAmb	12 17 47.4	
	comp=Z,43nm,1.1s						
EIDS	**Eidsvold**	**24.19**	**245**	P	**P**	**12 17 49.3**	**+1.4**
TUWZ	**Tuamarina**	**24.66**	**183**	P	**P**	**12 17 52.0**	**0.0**
ARMA	**Armidale**	**25.59**	**234**	P	**P**	**12 18 02.3**	**+1.7**
ARMA				IAmb	IAmb	12 18 07.3	
	comp=Z,29nm,0.9s						
CTAO	**Charters Tower**	**27.78**	**259**	P	**P**	**12 18 21.4**	**+1.0**
CTAO				IAmb	IAmb	12 18 43.3	
	comp=Z,20nm,1.4s						
PMG	**Port Moresby**	**28.36**	**281**	P	**P**	**12 18 25.5**	**-0.1**
	comp=Z,9.6nm,0.8s,baz=99,slow=3.2,SNR=8.4						
PMG	**Port Moresby**	**28.36**	**281**	P	**P**	**12 18 25.5**	**-0.1**
PMG				IAmb	IAmb	12 18 30.0	
	comp=Z,26nm,1.2s						
TOO	**Toolangi**	**33.49**	**226**	P	**P**	**12 19 12.0**	**+1.3**
TOO				IAmb	IAmb	12 19 16.1	
	comp=Z,16nm,1.1s						
PPT2	**Papeete2**	**33.51**	**97**	*e*S	**S**	**12 24 30.9**	**-0.2**
	comp=Z,211nm,26.5s						
PPT2				*e*LQ	LQ	12 26 52.0	
	comp=Z,2μm,25.2s						
PPT2				*e*LR	LR	12 28 20.5	
	comp=Z,2μm,29.0s,baz=264						
STKA	**Stephens Creek**	**34.09**	**237**	P	**P**	**12 19 16.9**	**+0.9**
	comp=Z,6.2nm,0.9s,baz=78,slow=8.6,SNR=9.6						
STKA				LR	LR	12 31 51.2	
	comp=Z,578nm,20.3s,baz=64,slow=34						
STKA	**Stephens Creek**	**34.09**	**237**	P	**P**	**12 19 17.4**	**+1.5**
H11S2	**WAKE ISLAND Hy**	**36.00**	**346**	T	T	12 57 35.1	
	baz=166,slow=76,SNR=535						
H11S3	**WAKE ISLAND Hy**	**36.01**	**346**	T	T	12 57 35.8	
	baz=166,slow=76,SNR=363						
H11S1	**WAKE ISLAND Hy**	**36.02**	**346**	T	T	12 57 36.5	
	baz=166,slow=76,SNR=472						
H11N1	**WAKE ISLAND Hy**	**37.14**	**347**	T	T	12 59 01.9	
	baz=164,slow=76,SNR=257						
H11N3	**WAKE ISLAND Hy**	**37.14**	**347**	T	T	12 59 00.8	
	baz=164,slow=76,SNR=310						
H11N2	**WAKE ISLAND Hy**	**37.15**	**347**	T	T	12 59 03.7	
	baz=164,slow=76,SNR=127						
WR0	**Warramunga Arr**	**38.79**	**259**	P	**P**	**12 19 55.6**	**-0.6**
WB0	**Warramunga Arr**	**38.94**	**259**	P	**P**	**12 19 57.2**	**-0.2**
WB2	**Warramunga Arr**	**38.97**	**259**	P	**P**	**12 19 56.4**	**-1.3**
WRAB	**Tennant Creek**	**38.97**	**259**	P	**P**	**12 19 56.6**	**-1.1**
WRA	**Warramunga Arr**	**38.98**	**259**	P	**P**	**12 19 56.1**	**-1.6**
	comp=Z,2.3nm,0.8s,baz=91,slow=8.8,SNR=16						
WRA				LR	LR	12 35 07.1	
	comp=Z,437nm,18.0s,baz=110,slow=35						
WRA	**Warramunga Arr**	**38.98**	**259**	P	**P**	**12 19 56.2**	**-1.6**
AS31	**Alice Springs**	**39.39**	**253**	P	**P**	**12 20 00.7**	**-0.6**
ASAR	**Alice Springs**	**39.39**	**253**	P	**P**	**12 19 60.0**	**-1.3**
	comp=Z,8.5nm,0.8s,baz=82,slow=8.9,SNR=74						
ASAR				LR	LR	12 35 41.6	
	comp=Z,634nm,18.7s,baz=96,slow=35						
ASAR	**Alice Springs**	**39.39**	**253**	P	**P**	**12 20 01.1**	**-0.2**
MTN	**Manton Dam**	**42.85**	**269**	P	**P**	**12 20 29.9**	**+0.2**
MTN				IAmb	IAmb	12 20 41.9	
	comp=Z,32nm,1.5s						
TAOE	**Nuku Hiva Isla**	**44.03**	**85**	*e*S	**S**	**12 27 06.3**	**-3.4**
	comp=Z,377nm,26.9s						
TAOE				*e*LQ	LQ	12 30 53.4	
	comp=Z,1μm,26.5s						
TAOE				*e*LR	LR	12 33 04.9	
	comp=Z,344nm,29.5s						
FAKI	**Fak Fak**	**44.48**	**283**	P	**P**	**12 20 42.5**	**-0.4**
KNRA	**Kununurra**	**44.66**	**264**	P	**P**	**12 20 44.0**	**-0.3**
KNRA				IAmb	IAmb	12 20 44.5	
	comp=Z,13nm,0.8s						
FITZ	**Fitzroy Crossi**	**47.32**	**261**	P	**P**	**12 21 05.3**	**0.0**
	comp=Z,15nm,1.0s,baz=107,slow=6.8,SNR=14						
KAPI	**Kappang**	**55.64**	**275**	P	**P**	**12 22 08.2**	**+0.6**
TOLI2	**Tolitoli**	**56.62**	**283**	P	**P**	**12 22 14.2**	**-0.4**
TOLI2				IAmb	IAmb	12 22 15.2	
	comp=Z,8.5nm,1.0s						
VNDA	**Vanda**	**61.21**	**183**	P	**P**	**12 22 46.9**	**+1.5**
	comp=Z,1.3nm,0.8s,baz=14,slow=10,SNR=4.9						
VNDA				LR	LR	12 46 33.7	
	comp=Z,230nm,18.4s,baz=27,slow=33						
VNDA	**Vanda**	**61.21**	**183**	P	**P**	**12 22 47.2**	**+1.8**
VNDA				IAmb	IAmb	12 22 56.7	
	comp=Z,6.4nm,1.3s						
MJAR	**Matsushiro Arr**	**63.52**	**327**	P	**P**	**12 22 59.8**	**-1.7**
	comp=Z,3.4nm,0.9s,baz=162,slow=6.4,SNR=4.6						
MJAR				LR	LR	12 46 05.8	
	comp=Z,92nm,21.9s,baz=140,slow=32						
MJAR	**Matsushiro Arr**	**63.52**	**327**	IAmb	IAmb	12 23 01.7	
	comp=Z,5.9nm,1.1s						
CASY	**Casey**	**64.76**	**204**	P	**P**	**12 23 08.6**	**-0.5**
CASY				IAmb	IAmb	12 23 12.7	
	comp=Z,15nm,1.3s						
SBUM	**Sibu**	**65.11**	**281**	P	**P**	**12 23 12.4**	**0.0**
KSM	**Kuching**	**66.60**	**279**	P	**P**	**12 23 20.6**	**-1.3**
KSM				IAmb	IAmb	12 23 22.7	
	comp=Z,9.3nm,1.1s						
KSRS	**Korea Array**	**69.94**	**321**	LR	LR	12 52 19.5	
	comp=Z,60nm,19.2s,baz=130,slow=34						
PETK	**Petropavlovsk-**	**71.18**	**349**	LR	LR	12 48 47.6	
	comp=Z,90nm,21.4s,baz=164,slow=31						
USRK	**Ussuriysk Ar.**	**72.38**	**329**	LR	LR	12 51 26.5	
	comp=Z,92nm,19.4s,baz=117,slow=32						
NJ2	**Nanjing**	**72.64**	**312**	*e*P	**P**	**12 24 01.7**	**+3.0**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
QSPA	**South Pole Qui**	**73.33**	**180**	P	**P**	**12 24 01.9**	**-0.6**
WHN	**Wuhan**	**75.14**	**309**	⇓P	P	12 24 24.1	+11
IPM	**Ipoh**	**76.34**	**279**	P	**P**	**12 24 19.9**	**-0.8**
IPM				IAmb	IAmb	12 24 21.1	
	comp=Z,12nm,1.1s						
RPSI	**Rantau Prapat**	**77.78**	**277**	P	**P**	**12 24 28.4**	**-0.5**
PSI	**Prapat**	**77.82**	**277**	P	**P**	**12 24 28.4**	**-0.8**
	comp=Z,1.7nm,0.4s,baz=162,slow=3.2,SNR=3.6						
XAN	**Xi'an**	**80.84**	**310**	P	**P**	**12 24 45.3**	**+0.2**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BRLK	**Bradley Lake**	**80.99**	**17**	P	**P**	**12 24 47.1**	**+1.8**
RSO	**Redoubt South**	**81.09**	**15**	P	**P**	**12 24 48.0**	**+1.9**
ORV	**Oroville**	**81.19**	**44**	P	**P**	**12 24 48.4**	**+1.6**
ORV				IAmb	IAmb	12 24 49.9	
	comp=Z,12nm,1.4s						
CMB	**Columbia Colle**	**81.20**	**46**	P	**P**	**12 24 49.3**	**+2.3**
CMB				IAmb	IAmb	12 24 50.1	
	comp=Z,10nm,1.2s						
ISA	**Isabella, Lake**	**81.42**	**49**	P	**P**	**12 24 50.8**	**+2.6**
ISA				IAmb	IAmb	12 25 17.2	
	comp=Z,14nm,1.5s						
MDPB	**Devils Postpil**	**81.91**	**47**	P	**P**	**12 24 53.4**	**+2.3**
KMI	**Kunming**	**82.00**	**299**	⇑P	**P**	**12 24 53.9**	**+2.2**
KMI				pP	pwP	12 25 08.3	+2.3
KMI	**Kunming**	**82.00**	**299**	S	**S**	**12 34 59.5**	**-4.5**
KMI	**Kunming**	**82.00**	**299**	SS	SS	12 40 20.8	-3.0
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KMI				LR	LR		
	comp=N,150nm,18.9s						
KMI				LR	LR		
	comp=E,170nm,21.9s						
KMI				LR	LR		
	comp=Z,160nm,18.9s						
L19K	**White Mountain**	**82.09**	**14**	P	**P**	**12 24 53.7**	**+2.7**
HHC	**Hu-ho-hao-te**	**82.24**	**317**	*e*P	**P**	**12 24 56.0**	**+3.6**
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,8.0s						
PNTR	**Pine Nut**	**82.25**	**45**	P	**P**	**12 24 55.1**	**+2.4**
PNTR				IAmb	IAmb	12 24 56.1	
	comp=Z,12nm,1.1s						
YERR	**Yerington**	**82.44**	**46**	P	**P**	**12 24 56.0**	**+2.3**
YERR				IAmb	IAmb	12 24 57.0	
	comp=Z,8.6nm,1.0s						
TTA	**Tatalina**	**82.50**	**13**	P	**P**	**12 24 55.8**	**+2.6**
LHV	**Little Huntoon**	**82.61**	**47**	P	**P**	**12 24 56.7**	**+2.5**
QSM	**Queen of Sheba**	**82.72**	**49**	P	**P**	**12 24 56.8**	**+1.8**
LCH	**Last Change Ra**	**82.74**	**48**	P	**P**	**12 24 57.0**	**+1.8**
RYN	**Ryan**	**82.77**	**46**	P	**P**	**12 24 57.5**	**+2.2**
RYN				IAmb	IAmb	12 24 58.7	
	comp=Z,7.6nm,1.1s						
CMAR	**Chiang Mai Arr**	**82.87**	**292**	P	**P**	**12 24 56.4**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=121,slow=3.6,SNR=13						
CMAR				LR	LR	12 58 18.8	
	comp=Z,87nm,21.9s,baz=168,slow=33						
CMAR	**Chiang Mai Arr**	**82.87**	**292**	P	**P**	**12 24 56.2**	**+0.1**
MAW	**Mawson**	**82.90**	**201**	LR	LR	12 58 44.8	
	comp=Z,160nm,18.2s,baz=70,slow=33						
KVN	**Kaiserville**	**83.26**	**46**	P	**P**	**12 24 59.6**	**+1.7**
KVN				IAmb	IAmb	12 25 01.1	
	comp=Z,9.2nm,1.1s						
TPH	**Tonopah**	**83.42**	**47**	P	**P**	**12 25 00.8**	**+2.0**
CAST	**Castle Rocks**	**83.80**	**14**	P	**P**	**12 25 01.3**	**+1.5**
BMN	**Battle Mountai**	**84.49**	**45**	P	**P**	**12 25 06.5**	**+2.3**
J08A	**Circle Bar Ran**	**85.03**	**42**	P	**P**	**12 25 08.4**	**+1.7**
J08A				IAmb	IAmb	12 25 09.9	
	comp=Z,6.7nm,1.0s						
M26K	**Nabesna, AK**	**85.38**	**18**	P	**P**	**12 25 09.5**	**+1.5**
LZH	**Lanzhou**	**85.48**	**310**	*e*P	**P**	**12 25 10.2**	**+1.0**
LZH				pP	PcP	12 25 14.8	+2.7
LZH				sP	pP	12 25 18.6	-0.6
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
ELK	**Elko**	**85.98**	**45**	P	**P**	**12 25 10.8**	**-0.9**
	comp=Z,2.7nm,1.0s,baz=216,slow=3.5,SNR=5.3						
ELK	**Elko**	**85.98**	**45**	P	**P**	**12 25 13.6**	**+1.9**
ELK				IAmb	IAmb	12 25 14.4	
	comp=Z,5.0nm,1.2s						
X16A	**Lo Mia Camp, P**	**86.11**	**52**	P	**P**	**12 25 14.2**	**+1.8**
X16A				IAmb	IAmb	12 25 16.2	
	comp=Z,6.7nm,1.1s						
ILAR	**Eielson Array**	**86.19**	**15**	P	**P**	**12 25 10.0**	**-1.9**
	comp=Z,3.2nm,0.8s,baz=235,slow=5.7,SNR=20						
ILAR				LR	LR	12 57 07.0	
	comp=Z,243nm,20.2s,baz=224,slow=31						
ILAR	**Eielson Array**	**86.19**	**15**	P	**P**	**12 25 10.7**	**-1.1**
BCAR	**Beaver Creek A**	**86.25**	**18**	P	**P**	**12 25 13.0**	**+0.8**
U15A	**North Rim**	**86.27**	**50**	P	**P**	**12 25 15.7**	**+2.4**
SCRK	**Sand Creek**	**86.33**	**17**	P	**P**	**12 25 15.0**	**+2.3**
MFID	**Camas Ranch**	**86.77**	**43**	P	**P**	**12 25 16.9**	**+1.6**
MFID				IAmb	IAmb	12 25 18.1	
	comp=Z,7.3nm,1.2s						
BCYI	**Bear Canyon**	**88.74**	**43**	P	**P**	**12 25 25.8**	**+0.9**
SONM	**Songino Array**	**88.81**	**321**	P	**P**	**12 25 25.1**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=110,slow=3.5,SNR=4.2						
SONM				LR	LR	13 01 08.0	
	comp=Z,87nm,21.0s,baz=124,slow=33						
MCMT	**McKenzie Canyo**	**89.31**	**43**	P	**P**	**12 25 27.9**	**+0.3**
BNM	**Barren Site**	**89.71**	**54**	P	**P**	**12 25 31.7**	**+2.0**
GTA	**Gaotai**	**89.72**	**311**	⇓P	**P**	**12 25 30.5**	**+1.0**
GTA				pP	sP	12 25 43.2	+0.1
GTA				sP	pwP	12 25 50.4	+6.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,130nm,6.5s						
GTA				LR	LR		
	comp=N,91nm,19.3s						
GTA				LR	LR		
	comp=E,150nm,20.0s						
GTA				LR	LR		
	comp=Z,220nm,18.5s						
RDMU	**Red Mountain**	**89.85**	**47**	P	**P**	**12 25 31.6**	**+1.4**
RDMU				IAmb	IAmb	12 25 48.7	

	comp=Z,3.5nm,1.1s						
TXAR	Lajitas Array	90.48	60	P	P	12 25 32.5	-0.8
	comp=Z,4.0nm,1.1s,baz=225,slow=5.1,SNR=13						
TXAR				LR	LR	12 59 36.7	
	comp=Z,236nm,18.7s,baz=0.0,slow=31						
PDAR	Pinedale Array	90.69	45	P	P	12 25 34.3	+0.2
	comp=Z,2.0nm,1.1s,baz=242,slow=3.2,SNR=6.6						
PDAR				LR	LR	13 01 25.9	
	comp=Z,110nm,18.8s,baz=274,slow=32						
PDAR	Pinedale Array	90.69	45	P	P	12 25 34.6	+0.6
SNAA	Sanae	91.83	181	P	P	12 25 36.6	-2.1
VNA3	Neumayer Olymp	92.20	178	P	P	12 25 37.7	-2.7
VNA2	Neumayer--Watz	92.57	179	P	P	12 25 40.3	-1.7
VNA1	Neumayer--Stat	92.83	179	P	P	12 25 41.1	-2.1
YKA	Yellowknife Ar	95.82	26	P	P	12 25 55.7	-1.2
	comp=Z,1.4nm,0.9s,baz=236,slow=4.4,SNR=3.7						
WMQ	Urumqi	99.71	313	*e*P	Pdif	12 26 17.3	+2.3
MOX	Moxa	143.71	342	*e*L	L	13 39 46.6	
	comp=Z,80nm,20.1s						
KHC	Kasperske Hory	144.42	339	*e*PKP	PKPdf	12 32 07.0	-0.2
GERES	GERESS Array B	144.62	339	PKP	PKPab	12 32 05.8	-0.4
	comp=Z,1.5nm,0.9s,baz=46,slow=3.9,SNR=7.2						
GERES	GERESS Array B	144.62	339		PKPab	12 32 06.2	0.0
GRF	Grafenberg Arr	144.68	342	*e*PKPdf	PKPab	12 32 06.4	+0.1
	baz=27,slow=3.0						
GRF				*e*L	L	13 36 22.2	
	comp=Z,93nm,20.5s						
DAVOX	Davos/Dischmat	147.68	341	PKPbc	PKPdf	12 32 14.2	+1.2
	comp=Z,3.6nm,0.7s,baz=311,slow=9.3,SNR=2.5						
TORD	Torodi Ar. Bea	172.90	241	PKP	PKPdf	12 32 39.2	-1.8
	comp=Z,1.1nm,0.9s,baz=344,slow=2.0,SNR=4.2						
TORD				PKPab	PKPab	12 34 05.8	-1.8
	comp=Z,0.6nm,0.8s,baz=134,slow=6.4,SNR=4.8						
TORD	Torodi Ar. Bea	172.90	241		PKPdf	12 32 39.6	-1.4

IDC 02 12:40:16.3±2.2,7°.06S×155°.77E,h0^{km},mb3.5/4, mb1 3.9/5,mb1mx3.6/29,mbtmp3.6/5,ML1.9/1,Error ellipse: s-maj=67.3km s-min=30.1km az=130.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.84	254	Pn	Pn	12 42 26.9	+1.5
	0.7nm,0.3s,baz=169,slow=16,SNR=2.9						
WRA	Warramunga Arr	24.42	236	P	P	12 45 37.0	+0.2
	0.4nm,0.6s,baz=58,slow=9.1,SNR=7.6						
ASAR	Alice Springs	26.71	229	P	P	12 45 56.8	-0.9
	0.2nm,0.6s,baz=66,slow=9.0,SNR=7.1						
CMAR	Chiang Mai Arr	61.51	295	P	P	12 50 35.6	+0.1
	0.6nm,0.4s,baz=128,slow=6.2,SNR=5.5						
ILAR	Eielson Array	83.15	21	P	P	12 52 44.0	+0.1
	1.0nm,1.1s,baz=200,slow=10,SNR=3.6						

IDC 02 12:41:38.1±10.0,33°.65S×109°.93W,h0^{km},mb3.5/1, mb1 4.0/1,mb1mx3.6/25,mbtmp3.5/1,MS3.8/5,Ms1 3.8/5, ms1mx3.5/19,Error ellipse: s-maj=737.6km s-min=70.7km az=110.0

NEIC 02 12:41:40.7±1.8,33°.8S±0°.1×109°.3W±0°.2,h10^{km}±1^{km}, mb4.8/34,Error ellipse: s-maj=21.5km s-min=16.9km az=94.0

ISC 02 12:41:39.8±0.6,33°.83S±0°.09×109°.3W±0°.1,h10^{km},n50, σ0^{s}.99/43,mb4.8/17,MS3.9/8,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA02	Isla de Pascua	6.65	359	Pn	Pn	12 43 16.8	-0.8
RPN	Rapa Nui	6.68	360	Pn	Pn	12 43 17.1	-0.9
COYC	Coyhaique	30.68	124	P	P	12 47 54.5	-0.1
COYC				IAmb	IAmb	12 47 59.6	
	comp=Z,24nm,1.4s						
GO05	Huala	30.74	103	P	P	12 47 55.5	+0.3
GO05				IAmb	IAmb	12 48 20.7	
	comp=Z,15nm,1.3s						
VA05	Santo Domingo	31.23	100	P	P	12 47 59.6	+0.1
VA01	Torpederas	31.33	99	P	P	12 48 00.8	+0.4
BO01	Tunca	31.53	102	P	P	12 48 02.1	-0.1
BO01				IAmb	IAmb	12 48 30.5	
	comp=Z,17nm,1.4s						
MT02	Curacav	31.70	100	P	P	12 48 03.6	0.0
MT02				IAmb	IAmb	12 48 13.1	
	comp=Z,23nm,1.4s						
CO06	Fray Jorge	31.90	95	P	P	12 48 05.9	+0.4
GO09	Cerro Castillo	31.90	134	P	P	12 48 06.3	+1.0
NNA	Nana	36.72	61	P	P	12 48 46.3	-1.1
LVC	Limon Verde	37.09	83	P	P	12 48 50.5	-0.4
TA02	Huaiquique	37.19	79	P	P	12 48 51.3	+0.1
TA02				IAmb	IAmb	12 48 53.2	
	comp=Z,22nm,0.9s						
PSGCX	Pisagua	37.52	78	P	P	12 48 54.2	-0.1
PSGCX				IAmb	IAmb	12 49 14.2	
	comp=Z,26nm,1.5s						
TAOE	Nuku Hiva Isla	37.72	304	*e*LR	LR	12 59 21.6	
	comp=Z,224nm,26.2s						
MEH	Mehetia	38.07	285	*e*T	T	13 29 20.5	
	comp=Z,11nm,0.2s						
ATAH	Atahualpa	39.00	54	LR	LR	13 02 24.6	
	comp=Z,163nm,19.2s,baz=246,slow=32						
PPT2	Papeete2	39.44	284	*e*LR	LR	12 59 50.5	
	comp=Z,409nm,26.0s						
PPT	Papeete	39.45	284	LR	LR	13 01 31.2	
	comp=Z,186nm,19.6s,baz=80,slow=31						
CPUP	Villa Florida	45.20	95	LR	LR	13 05 59.5	
	comp=Z,92nm,18.2s,baz=246,slow=32						
CPUP	Villa Florida	45.20	95	P	P	12 49 56.9	-0.2
ROSC	El Rosal	50.72	48	LR	LR	13 08 20.6	
	comp=Z,91nm,20.2s,baz=240,slow=31						
ROSC	El Rosal	50.72	48	P	P	12 50 39.6	-0.8
ROSC				IAmb	IAmb	12 50 47.9	
	comp=Z,13nm,0.8s						
VNDA	Vanda	57.01	195	P	P	12 51 24.3	-0.9
AFI	Afiamalu	59.60	273	LR	LR	13 09 04.1	
	comp=Z,62nm,19.9s,baz=122,slow=28						
OUZ	Omahuta	61.95	245	P	P	12 51 58.8	-1.1
SNAA	Sanae	63.19	160	P	P	12 52 07.3	-0.4
SNAA				IAmb	IAmb	12 52 15.5	
	comp=Z,9.5nm,1.5s						
121A	Cookes Peak, D	66.02	1	P	P	12 52 27.1	+0.4
121A				IAmb	IAmb	12 52 27.9	
	comp=Z,11nm,1.6s						
RMX	La Rumorosa	66.39	354	P	P	12 52 27.1	-1.9
RMX				IAmb	IAmb	12 52 31.7	
	comp=Z,7.0nm,1.1s						
109C	Camp Elliot, M	66.77	353	P	P	12 52 31.8	+0.6
OSI	Osito Audit: C	68.66	352	P	P	12 52 44.7	+1.4
POHA	Pohakuloa	69.13	313	P	P	12 52 46.1	-0.6
MVCO	Mesa Verde	70.68	1	P	P	12 52 55.4	-0.5
BLOK	Blackwell	71.13	10	P	P	12 53 00.1	+1.7
SPR3	Spring Creek 3	72.61	356	P	P	12 53 08.3	+0.7
TMUT	Trail Mountain	72.78	358	P	P	12 53 08.5	0.0
DZM	Mont Dzumac	73.48	254	*e*LR	LR	13 15 30.8	
	comp=Z,110nm,24.1s						
FVM	French Village	73.57	15	P	P	12 53 13.9	+1.0
FVM				IAmb	IAmb	12 53 20.8	
	comp=Z,10nm,1.4s						
P43A	Skaggs, Pawnee	75.36	16	P	P	12 53 23.9	+0.6
P43A				IAmb	IAmb	12 53 24.9	
	comp=Z,12nm,1.1s						
MOD	Modoc Plateau	76.04	352	P	P	12 53 28.0	+0.7
K22A	Casper	76.15	2	P	P	12 53 29.4	+1.5
K22A				IAmb	IAmb	12 53 43.1	
	comp=Z,13nm,1.6s						
PDAR	Pinedale Array	76.22	360	P	P	12 53 27.4	-1.0
	comp=Z,0.3nm,0.6s,baz=161,slow=5.7,SNR=2.0						
PDAR	Pinedale Array	76.22	360	P	P	12 53 28.1	-0.3
HOOD	Mount Hood Mea	79.57	351	P	P	12 53 47.7	+0.8
HOOD				IAmb	IAmb	12 54 00.6	
	comp=Z,10nm,1.1s						
F10A	Beach Ranch, E	79.75	354	P	P	12 53 48.9	+1.1
F10A				IAmb	IAmb	12 53 54.8	
	comp=Z,17nm,1.6s						
EGMT	Eagleton	81.48	360	P	P	12 53 56.8	-0.2
EGMT				IAmb	IAmb	12 54 02.0	
	comp=Z,19nm,1.6s						
E62A	Clayton Lake	87.74	26	P	P	12 54 29.9	+1.4
SONM	Songino Array	149.87	308	PKPbc	PKPdf	13 01 28.1	+2.8
	comp=Z,0.5nm,0.5s,baz=48,slow=2.1,SNR=3.2						
CMAR	Chiang Mai Arr	150.51	246	PKPbc	PKPbc	13 01 31.0	-1.3
	comp=Z,0.3nm,0.3s,baz=184,slow=2.4,SNR=5.2						
CMAR	Chiang Mai Arr	150.51	246	PKPdf	PKPdf	13 01 26.6	-0.4
CMAR				PKPbc	sPKPdf	13 01 31.5	+1.3
CMAR				PKPab	PKPab	13 01 40.0	+1.1

IDC 02 12:49:35.1±28.0,22°.85S×175°.09W,h0^{km},mb4.2/4, mb1 4.3/4,mb1mx3.8/36,mbtmp4.2/4,MS3.1/1,Ms1 3.1/1, ms1mx2.5/36,Error ellipse: s-maj=511.0km s-min=146.8km az=78.0

NEIC 02 12:49:55.8±1.1,23°.8S±0°.3×176°.5W±0°.3,h69^{km}±23^{km}, mb4.6/16,Error ellipse: s-maj=53.0km s-min=26.9km az=51.0

ISC 02 12:49:53.1±3.4,23°.7S±0°.3×176°.5W±0°.4,h50^{km},n24, σ0^{s}.75/22,mb4.5/11,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.83	272	LR	LR	12 58 03.5	
	comp=Z,58nm,19.0s,baz=32,slow=30						
BHW	Baring Head	19.12	200	P	P	12 54 11.1	-0.7
BSWZ	Blackbirch Sta	19.72	202	P	P	12 54 18.1	-0.3
CAN	Canberra	32.06	241	P	P	12 56 16.1	+0.9
CTA	Charters Tower	34.71	269	P	P	12 56 39.1	+0.6
	3.5nm,0.3s,baz=95,slow=10,SNR=7.5						
CTAO	Charters Tower	34.71	269	P	P	12 56 40.4	+1.9
CTAO				IAmb	IAmb	12 56 48.5	
	comp=Z,22nm,1.4s						
PMG	Port Moresby	37.50	286	P	P	12 57 02.1	-0.3
PMG				IAmb	IAmb	12 57 07.9	
	comp=Z,7.3nm,0.9s						
STKA	Stephens Creek	37.80	248	P	P	12 57 04.8	0.0
	comp=Z,0.6nm,0.3s,baz=99,slow=15,SNR=4.7						
STKA	Stephens Creek	37.80	248	P	P	12 57 05.0	+0.2
COEN	Coen	39.28	277	P	P	12 57 16.9	-0.4
COEN				IAmb	IAmb	12 57 25.8	
	comp=Z,7.8nm,1.1s						
BBOO	Buckleboo	42.50	247	P	P	12 57 42.9	-0.8
BBOO				IAmb	IAmb	12 57 53.7	
	comp=Z,26nm,1.4s						
AS31	Alice Springs	45.26	260	P	P	12 58 05.7	-0.2
ASAR	Alice Springs	45.26	260	P	P	12 58 05.6	-0.3
	comp=Z,0.6nm,0.4s,baz=85,slow=8.6,SNR=12						
ASAR	Alice Springs	45.26	260	P	P	12 58 06.9	+0.9
WR0	Warramunga Arr	45.46	265	P	P	12 58 07.0	-0.5
WR0				IAmb	IAmb	12 58 25.3	
	comp=Z,12nm,1.5s						
WB2	Warramunga Arr	45.63	265	P	P	12 58 08.5	-0.4
WB2				IAmb	IAmb	12 58 08.7	
	comp=Z,2.6nm,0.5s						
WRAB	Tennant Creek	45.64	265	P	P	12 58 08.3	-0.6
WB0	Warramunga Arr	45.64	265	P	P	12 58 08.6	-0.3
WB0				IAmb	IAmb	12 58 24.2	
	comp=Z,9.4nm,1.4s						
WRA	Warramunga Arr	45.65	265	P	P	12 58 08.4	-0.6
	comp=Z,2.7nm,0.6s,baz=101,slow=7.9,SNR=56						
WRA	Warramunga Arr	45.65	265	P	P	12 58 08.6	-0.4
FORT	Forrest	49.41	249	P	P	12 58 36.9	-1.2
MTN	Manton Dam	50.66	273	P	P	12 58 45.0	-2.8
KNRA	Kununurra	51.92	268	P	P	12 58 57.6	+0.4
QSPA	South Pole Qui	66.42	180	P	P	13 00 37.3	+0.4
QSPA				IAmb	IAmb	13 00 40.0	
	comp=Z,7.2nm,1.3s						

ISC 02 12:50:14.6±1.3,50°.24N±0°.07×18°.75E±0°.04,h9^{km}±15^{km}, n5,σ0^{s}.46/10,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.68	91	*e*Pg	Pg	12 50 27.1	-0.5
OJC				*e*Sg	Sg	12 50 37.0	+0.6
MORC	Moravsky Berou	0.90	240	*e*PG	Pg	12 50 31.8	-0.1
MORC				*e*SG	Sb	12 50 44.5	0.0
LANS	Liptovska Anna	1.18	156	*e*PG	Pg	12 50 37.4	+0.2
LANS				*e*SG	Sn	12 50 53.4	-0.1
LANS				*e*LG	Lg	12 50 55.3	
VRAC	Vranov	1.68	237	*e*PN	Pb	12 50 45.6	+0.1
VRAC				*e*SG	Sg	12 51 07.9	-0.5
KSP	Ksiaz	1.68	292	*e*Pg	Pg	12 50 46.6	-0.2
KSP				*e*Sg	Sg	12 51 09.1	+0.6

IDC 02 12:50:57.9±1.4,34°.17S×109°.23W,h0^{km},mb4.1/4, mb1 4.4/4,mb1mx4.0/32,mbtmp4.1/4,MS3.7/3,Ms1 3.7/3, ms1mx3.4/18,Error ellipse: s-maj=52.4km s-min=34.5km az=164.0

NEIC 02 12:51:00.5±1.2,34°.21S±0°.05×108°.9W±0°.1,h10^{km}±1^{km}, mb4.8/66,Error ellipse: s-maj=19.1km s-min=8.3km az=254.0

ISC 02 12:50:59.8±0.6,34°.24S±0°.09×108°.96W±0°.10,h10^{km},n88, σ0^{s}.90/79,mb4.8/37,MS3.8/6,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA02	Isla de Pascua	7.07	357	Pn	Pn	12 52 43.3	0.0
VA04	Juan Fernndez	24.96	97	P	P	12 56 23.1	-0.4
VA05	Santo Domingo	30.88	100	P	P	12 57 17.5	+1.2
VA05				IAmb	IAmb	12 57 17.7	
	comp=Z,40nm,1.3s						
MT01	Popeta	31.13	100	P	P	12 57 18.8	+0.2
MT01				IAmb	IAmb	12 57 32.7	
	comp=Z,13nm,1.2s						
BO01	Tunca	31.16	101	P	P	12 57 19.3	+0.4
BO01				IAmb	IAmb	12 57 33.9	
	comp=Z,22nm,1.6s						
BO02	Sierra Bellavi	31.34	102	P	P	12 57 19.6	-1.0
BO02				IAmb	IAmb	12 57 23.1	
	comp=Z,24nm,1.6s						
GO03	Copiap	33.73	89	P	P	12 57 39.9	-1.6
GO03				IAmb	IAmb	12 57 48.7	
	comp=Z,26nm,1.4s						
ZON	Zonda	33.78	97	P	P	12 57 42.5	+0.6
ZON				IAmb	IAmb	12 57 49.2	
	comp=Z,18nm,1.5s						
PATCX	Punta Patache	36.70	79	P	P	12 58 07.5	+0.4
PATCX				IAmb	IAmb	12 58 18.6	
	comp=Z,31nm,1.2s						
LVC	Limon Verde	36.86	82	P	P	12 58 09.1	+0.2
LVC				IAmb	IAmb	12 58 14.4	
	comp=Z,12nm,1.2s						
PB01	IPOC Station P	37.13	80	P	P	12 58 12.3	+1.5
PB08	IPOC Station P	37.84	79	P	P	12 58 17.4	+0.1
PB08				IAmb	IAmb	12 58 22.1	
	comp=Z,9.4nm,1.0s						
TAOE	Nuku Hiva Isla	38.18	304	*e*LR	LR	13 08 44.8	
	comp=Z,166nm,26.5s						
MEH	Mehetia	38.46	285	*e*T	T	13 38 44.8	
	comp=Z,17nm,0.3s						
ATAH	Atahualpa	39.02	53	P	P	12 58 26.1	-1.0
	comp=Z,4.9nm,0.9s,baz=346,slow=12,SNR=2.3						
PPT2	Papeete2	39.82	284	*e*LR	LR	13 09 11.8	
	comp=Z,307nm,27.0s						
PPT	Papeete	39.83	284	LR	LR	13 10 07.4	
	comp=Z,155nm,21.5s,baz=83,slow=29						
LPAZ	La Paz	40.70	74	P	P	12 58 44.0	+2.5
	comp=Z,1.4nm,0.8s,baz=262,slow=3.1,SNR=4.4						
LPAZ	La Paz	40.70	74	P	P	12 58 43.6	+2.1
PMSA	Palmer Station	40.76	152	P	P	12 58 41.7	+1.1
OTAV	Otavalo	44.65	46	P	P	12 59 12.8	-0.5
OTAV				IAmb	IAmb	12 59 18.3	
	comp=Z,16nm,1.6s						
CPUP	Villa Florida	44.88	94	LR	LR	13 14 44.5	
	comp=Z,96nm,20.2s,baz=236,slow=32						
CPUP	Villa Florida	44.88	94	P	P	12 59 14.0	-0.5
CPUP				IAmb	IAmb	12 59 43.1	
	comp=Z,20nm,1.6s						
PLTB	Pedras Altas	46.01	103	P	P	12 59 23.2	-0.3
PLTB				IAmb	IAmb	12 59 29.9	
	comp=Z,13nm,1.2s						
ITAB	Concordia	48.81	98	P	P	12 59 45.7	+0.3
SRBA	San Rafael, Bu	49.59	34	P	P	12 59 50.9	-0.5
BOAB	BOACO BROADBA	N1.44	30	P	P	13 00 04.3	-0.9
BOAB				IAmb	IAmb	13 00 24.3	
	comp=Z,32nm,1.1s						
ZARC	Zaragoza, Cauc	52.58	44	P	P	13 00 14.4	+0.6
MACA	Manacapuru-AM	54.46	66	P	P	13 00 28.1	+0.4
MACA				IAmb	IAmb	13 00 29.1	
	comp=Z,17nm,1.0s						
NIUE	Niue	55.79	269	P	P	13 00 37.1	-0.2
VNDA	Vanda	56.69	195	LR	LR	13 19 16.9	
	comp=Z,43nm,20.8s,baz=66,slow=30						
BDFB	Brasilia	57.48	87	P	P	13 00 48.9	-0.6
BDFB				IAmb	IAmb	13 00 56.0	
	comp=Z,6.9nm,1.2s						
BAUV	El Baul	57.86	50	P	P	13 00 51.9	-0.1
VNA3	Neumayer Olymp	60.88	159	P	P	13 01 11.2	-1.0
VNA1	Neumayer--Stat	61.52	158	P	P	13 01 08.4	-8.1
VNA2	Neumayer--Watz	61.69	159	P	P	13 01 09.9	-7.7
DCZ	Deep Cove	62.61	232	P	P	13 01 25.5	+1.4
SNAA	Sanae	62.71	160	P	P	13 01 22.5	-2.0
SNAA	Sanae	62.71	160	P	P	13 01 23.7	-0.8
SNAA				IAmb	IAmb	13 01 30.0	
	comp=Z,6.5nm,1.1s						
GTBY	Guantanamo Bay	62.77	36	P	P	13 01 25.4	0.0
TX31	Lajitas Ar. Si	63.43	5	P	P	13 01 30.0	+0.3
TX31				IAmb	IAmb	13 01 44.6	
	comp=Z,29nm,1.6s						
TX32	Lajitas Array	63.43	5	P	P	13 01 30.3	+0.6
TX32				IAmb	IAmb	13 01 44.6	
	comp=Z,8.9nm,1.6s						
OBIP	Obispado Ponce	65.79	45	P	P	13 01 45.7	+0.4
PUH	Pauahi	69.14	313	P	P	13 02 07.0	+0.4
352A	Blakely	69.18	22	P	P	13 02 06.4	0.0
ISA	Isabella, Lake	70.11	352	P	P	13 02 12.8	+0.7
ISA				IAmb	IAmb	13 02 13.5	
	comp=Z,5.5nm,1.3s						
SHPR	Sheep Range	70.62	355	P	P	13 02 16.0	+0.6
CCUT	Cedar City	71.54	356	P	P	13 02 21.3	+0.3
SZCU	Shurtz Canyon	71.57	357	P	P	13 02 21.8	+0.6
TPH	Tonopah	72.36	353	P	P	13 02 26.1	+0.2
TPH				IAmb	IAmb	13 02 29.4	
	comp=Z,17nm,1.0s						
SWET	Sewanee	72.38	20	P	P	13 02 25.7	-0.1
SWET				IAmb	IAmb	13 02 26.1	
	comp=Z,7.6nm,1.0s						
PBMO	Poplar Bluff	72.74	15	P	P	13 02 27.7	-0.2
PBMO				IAmb	IAmb	13 02 34.4	
	comp=Z,6.2nm,1.1s						
NV11	Mina Array Sit	72.81	352	P	P	13 02 29.2	+0.6
NV11				IAmb	IAmb	13 02 30.4	
	comp=Z,4.2nm,0.9s						
NVAR	Mina Array Bea	72.82	352	P	P	13 02 29.8	+1.1
	comp=Z,3.0nm,0.8s,baz=186,slow=8.1,SNR=21						
NVAR	Mina Array Bea	72.82	352	P	P	13 02 28.7	0.0
BG3	Lake Jocassee	73.06	22	P	P	13 02 31.1	+1.2
BG3				IAmb	IAmb	13 02 39.9	
	comp=Z,18nm,1.6s						
MCCM	Marconi Confer	73.17	349	P	P	13 02 29.8	-0.6
KVN	Kaiserville	73.41	353	P	P	13 02 32.5	+0.3
DZM	Mont Dzumac	73.64	254	*e*LR	LR	13 24 47.6	
	comp=Z,117nm,27.1s						
O20A	White River Ci	74.01	1	P	P	13 02 34.7	-0.9
HOPS	Hopland Field	74.03	349	P	P	13 02 36.0	+0.4
BMN	Battle Mountai	74.69	353	P	P	13 02 40.2	+0.7
BMN				IAmb	IAmb	13 02 41.7	
	comp=Z,6.0nm,1.1s						
WDC	Whiskeytown Da	75.50	349	P	P	13 02 44.6	+0.6
WDC				IAmb	IAmb	13 02 52.5	
	comp=Z,11nm,1.4s						
KHMM	Horse Mountain	75.97	349	P	P	13 02 46.6	-0.3
N38A	Joes South For	76.06	12	P	P	13 02 47.5	+0.4
K22A	Casper	76.55	2	P	P	13 02 50.8	+0.6
K22A				IAmb	IAmb	13 02 56.2	
	comp=Z,12nm,1.4s						
BW06	Boulder Array	76.64	360	P	P	13 02 49.0	-1.7
PD31	Pinedale Array	76.64	360	P	P	13 02 50.3	-0.5
PDAR	Pinedale Array	76.64	360	P	P	13 02 48.9	-1.9
	comp=Z,0.9nm,0.9s,baz=198,slow=2.7,SNR=6.8						
PDAR	Pinedale Array	76.64	360	P	P	13 02 49.0	-1.7
T59A	Double "B" Far	76.65	25	P	P	13 02 50.2	-0.4
T59A				IAmb	IAmb	13 02 50.8	
	comp=Z,27nm,1.5s						
HLID	Hailey	77.59	356	P	P	13 02 56.7	+0.7
I07A	Izee	78.54	352	P	P	13 03 01.8	+0.6
I07A				IAmb	IAmb	13 03 08.8	
	comp=Z,5.3nm,1.0s						
YMR	Madison River	78.56	359	P	P	13 03 00.5	-0.9
P57A	Homestead Farm	78.75	24	P	P	13 03 01.5	-0.7
P57A				IAmb	IAmb	13 03 16.2	
	comp=Z,9.3nm,1.1s						
MCMT	McKenzie Canyo	78.78	357	P	P	13 03 03.6	+1.0
N53A	Lisbon	79.05	21	P	P	13 03 05.1	+1.2
N53A				IAmb	IAmb	13 03 11.3	
	comp=Z,40nm,1.6s						
BUCK	Buck Mountain	79.10	350	P	P	13 03 04.0	-0.2
PLID	Pearl Lake	79.21	355	P	P	13 03 04.9	-0.1
BOZ	Bozeman (W)	79.50	358	P	P	13 03 06.6	+0.1
E08A	Dider Farm, El	80.88	353	P	P	13 03 14.3	+0.7
E08A				IAmb	IAmb	13 03 17.6	
	comp=Z,16nm,1.7s						
WALA	Waterton Lakes	83.05	357	P	P	13 03 25.4	+0.3
B06A	Marblemount	83.14	352	P	P	13 03 25.7	+0.2
SADO	Sadowa	83.17	21	P	P	13 03 26.0	+0.2
SADO				IAmb	IAmb	13 03 26.8	
	comp=Z,11nm,0.9s						
ULN	Ulaanbaatar	149.92	308		PKPbc	13 10 48.9	-1.2
SONM	Songino Array	150.35	308	PKPbc	PKPbc	13 10 49.4	-1.8
	comp=Z,2.6nm,1.0s,baz=101,slow=1.8,SNR=8.4						
SONM	Songino Array	150.35	308		PKPbc	13 10 49.8	-1.4
CMAR	Chiang Mai Arr	150.60	245	PKPbc	PKPbc	13 10 51.6	-0.8
	comp=Z,1.2nm,0.7s,baz=181,slow=0.9,SNR=15						

IDC 02 13:16:59.0±6.1,39°.40N×110°.56E,h0^{km},mb3.1/3, mb1 3.4/4,mb1mx3.2/44,mbtmp3.2/4,ML3.1/1,MS3.5/1, Ms1 3.5/1,ms1mx2.6/20,Error ellipse: s-maj=130.6km s-min=30.4km az=85.0,Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	8.96	342	Pn	Pn	13 19 09.7	0.0
	0.2nm,0.3s,baz=158,slow=14,SNR=6.4						
MKAR	Makanchi Array	21.85	299	P	P	13 21 52.6	-0.3
	0.5nm,0.7s,baz=95,slow=12,SNR=2.9						
CMAR	Chiang Mai Arr	23.17	209	P	P	13 22 07.1	0.0
	0.7nm,0.6s,baz=14,slow=9.5,SNR=6.2						
KURBB	Kurchatov Arra	25.08	307	P	P	13 22 25.3	+0.3
	0.3nm,0.5s,baz=104,slow=9.6,SNR=2.9						
JCJ	Chichijima	29.00	105	LR	LR	13 35 08.3	
	comp=Z,104nm,20.4s,baz=112,slow=38						

DJA 02 13:18:58.4±1.0,1°N±6°×12°3E±°,h13^{km}±5^{km},M3.5/6, MLv3.5/6,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.84	158	P	Pg	13 19 11.6	-3.1
GTOI				S	Sg	13 19 21.9	-3.8
MRSI	Marisa	1.21	219	P	Pn	13 19 20.6	-0.4
MRSI				S	Sb	13 19 36.4	-0.2
KMSI	Cibinong	1.53	123	P	Pn	13 19 25.7	+0.2
KMSI				S	Sb	13 19 45.8	-0.2
APSI	Ampana	2.54	204	P	Pn	13 19 39.8	+0.4
MPSI	Mapaga	3.00	249	P	Pn	13 19 46.8	+1.1
SANI	Sanana	4.76	136	P	Pn	13 20 09.5	-0.4

WEL 02 13:27:06.7±0.8,36°S±11°×17°9E±1°7,h241^{km}±9^{km},M3.1/7, mB4.2/2,ML4.0/11,MLv3.1/7,Mw(mB)3.3/2,Error ellipse: s-maj=0.0km s-min=0.0km az=119.7,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.99	187	P	Pn	13 27 49.0	+0.8
WMGZ				S	S	13 28 19.9	-1.0
HAZ	Te Kaha	2.05	201	P	Pn	13 27 47.8	-1.0
HAZ				S	S	13 28 20.4	-1.6
PKGZ	Pakihiroa	2.10	194	P	Pn	13 27 49.6	+0.2
PKGZ				S	S	13 28 22.7	-0.4
PUZ	Puketiti	2.25	190	P	Pn	13 27 51.0	+0.2
PUZ				S	S	13 28 25.7	+0.1
RUGZ	Raukumara Rang	2.28	201	P	Pn	13 27 50.5	-0.7
RUGZ				S	S	13 28 24.6	-1.6
TWGZ	Tauwhareparae	2.40	194	P	Pn	13 27 53.3	+1.0
TWGZ				S	S	13 28 29.8	+1.5
MWZ	Matawai	2.66	201	P	Pn	13 27 54.9	0.0
MWZ				S	S	13 28 33.7	+0.6
TKGZ	Te Karaka	2.68	195	P	Pn	13 27 55.5	+0.3
TKGZ				S	S	13 28 34.7	+1.3
URZ	Urewera	2.73	208	P	Pn	13 27 55.3	-0.3
URZ				S	S	13 28 34.8	+0.4
RIGZ	Rimuhau	2.96	195	P	Pn	13 27 58.3	+0.2
RIGZ				S	S	13 28 40.7	+2.0
SNGZ	Shannon Statio	3.13	200	P	Pn	13 28 00.6	+0.5
SNGZ				S	S	13 28 43.8	+1.5
BKZ	Black Stump Fm	3.76	208	P	Pn	13 28 07.8	+0.6
MCHZ	McNeill Hill	3.94	204	P	Pn	13 28 10.2	+0.9
MCHZ				S	S	13 29 01.6	+2.7

KWHZ	**Kaweka Forest**	4.01	206	P	Pn	13 28 10.3	+0.1
KWHZ				S	S	13 29 02.2	+1.5
HIZ	**Hauiti**	4.08	228	P	Pn	13 28 12.9	+1.9
OTVZ	**Oturere**	4.11	215	P	Pn	13 28 11.9	+0.4
SNVZ	**South Ngauruho**	4.14	215	P	Pn	13 28 12.3	+0.4
KAHZ	**Kahuranaki**	4.21	200	P	Pn	13 28 13.0	+0.5
KRHZ	**Kereru**	4.23	206	P	Pn	13 28 12.6	-0.1
KRHZ				S	S	13 29 05.3	+0.1
PXZ	**Pawanui**	4.43	199	P	Pn	13 28 15.5	+0.3
PXZ				S	S	13 29 10.0	+0.5
PRHZ	**Porangahau**	4.71	200	P	Pn	13 28 18.9	+0.3
PRHZ				S	S	13 29 15.9	+0.1
TSZ	**Takapari Road**	4.74	207	P	Pn	13 28 18.7	-0.2
TSZ				S	S	13 29 17.4	+1.0
MRZ	**Mangatainoka R**	5.41	206	P	Pn	13 28 26.2	-0.9
MRZ				S	S	13 29 29.1	-2.2
KIW	**Kapiti Island**	5.84	210	P	Pn	13 28 31.5	-1.0
MTW	**Mount Morrison**	5.88	205	P	Pn	13 28 31.8	-1.2
MTW				S	S	13 29 42.0	+0.1
CAW	**Cannon Point**	5.99	208	P	Pn	13 28 33.0	-1.4
TUWZ	**Tuamarina**	6.71	212	P	Pn	13 28 42.2	-1.3

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*IDC **02** 13:27:35.9±0.9, 34°.41S×109°.36W, h0^{km}, mb4.0/4, mb1 4.4/4, mb1mx4.0/25, mbtmp4.0/4, MS3.8/11, Ms1 3.7/11, ms1mx3.6/20, Error ellipse: s-maj=40.7km s-min=29.8km az=97.0*

*NEIC **02** 13:27:38.1±1.2, 34°.6S±0°.1×109°.4W±0°.2, h10^{km}±1^{km}, mb4.6/16, Error ellipse: s-maj=28.6km s-min=17.8km az=268.0*

ISC 02 13:27:37.8±0.8, **34°.6S**±0°.1×**109°.3W**±0°.2, **h10**^{km}, **n46**, σ**0^{s}.93**/27, **mb4.6**/11, **MS3.9**/13, **Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA02	**Isla de Pascua**	7.37	359	Pn	**Pn**	**13 29 26.8**	**+1.3**
LL07	**Hotel Espejo d**	28.98	117	P	**P**	**13 33 37.6**	**+0.1**
LC01	**Cunco**	30.16	109	P	**P**	**13 33 47.6**	**-0.4**
PLCA	**Paso Flores**	31.11	113	LR	LR	13 44 03.6	
	comp=Z,66nm,18.7s,baz=293,slow=32						
TRQA	**Tornquist**	37.97	109	P	**P**	**13 34 56.1**	**+0.3**
TRQA				IAmb	IAmb	13 35 09.7	
	comp=Z,17nm,1.5s						
TAOE	**Nuku Hiva Isla**	38.13	305	*e*LR	LR	13 45 25.0	
	comp=Z,148nm,25.6s						
MEH	**Mehetia**	38.27	286	*e*T	T	14 15 17.0	
	comp=Z,33nm,0.3s						
PPT2	**Papeete2**	39.63	285	*e*LR	LR	13 45 50.0	
	comp=Z,400nm,25.2s						
PPT	**Papeete**	39.64	285	LR	LR	13 47 19.8	
	comp=Z,218nm,18.1s,baz=92,slow=30						
LPAZ	**La Paz**	41.06	74	P	**P**	**13 35 22.1**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=180,slow=1.6,SNR=5.3						
LPAZ				LR	LR	13 48 20.7	
	comp=Z,73nm,18.3s,baz=243,slow=30						
LPAZ	**La Paz**	41.06	74	IAmb	IAmb	13 35 24.1	
	comp=Z,2.6nm,0.9s						
CPUP	**Villa Florida**	45.14	94	LR	LR	13 51 15.0	
	comp=Z,125nm,20.6s,baz=230,slow=31						
PLTB	**Pedras Altas**	46.21	103	P	**P**	**13 36 03.6**	**+0.5**
PTLB	**Pontes e Lacer**	48.75	80	P	**P**	**13 36 21.8**	**-1.2**
PTLB				IAmb	IAmb	13 36 29.3	
	comp=Z,8.0nm,1.4s						
ZARC	**Zaragoza, Cauc**	53.00	45	P	**P**	**13 36 55.2**	**+0.2**
QSPA	**South Pole Qui**	55.64	180	P	**P**	**13 37 14.3**	**+0.6**
	comp=Z,2.5nm,1.1s,baz=132,slow=5.7,SNR=4.8						
QSPA	**South Pole Qui**	55.64	180	IAmb	IAmb	13 37 26.3	
	comp=Z,9.5nm,1.5s						
VNDA	**Vanda**	56.31	195	LR	LR	13 56 35.6	
	comp=Z,46nm,19.8s,baz=86,slow=31						
BDFB	**Brasilia**	57.77	87	LR	LR	14 00 35.3	
	comp=Z,97nm,19.2s,baz=278,slow=34						
VNA3	**Neumayer Olymp**	60.69	159	P	**P**	**13 37 50.3**	**+1.5**
VNA1	**Neumayer--Stat**	61.34	158	P	**P**	**13 37 52.3**	**-0.9**
VNA2	**Neumayer--Watz**	61.49	159	P	**P**	**13 37 55.9**	**+1.6**
	baz=251,slow=5.5						
SNAA	**Sanae**	62.51	160	P	**P**	**13 38 02.4**	**+1.2**
SNAA	**Sanae**	62.51	160	P	**P**	**13 38 01.8**	**+0.6**
SNAA				IAmb	IAmb	13 38 08.8	
	comp=Z,5.1nm,1.0s						
MSVF	**Nonsavu**	66.08	264	LR	LR	14 01 23.0	
	comp=Z,46nm,21.5s,baz=148,slow=31						
CCUT	**Cedar City**	71.84	357	P	**P**	**13 39 00.9**	**+0.1**
CCUT				IAmb	IAmb	13 39 04.2	
	comp=Z,7.9nm,1.5s						
NV11	**Mina Array Sit**	73.08	353	P	**P**	**13 39 07.8**	**-0.3**
NVAR	**Mina Array Bea**	73.10	353	P	**P**	**13 39 07.8**	**-0.6**
	comp=Z,2.7nm,1.0s,baz=186,slow=7.3,SNR=12						
DZM	**Mont Dzumac**	73.29	255	*e*LR	LR	14 01 26.5	
	comp=Z,110nm,27.8s						
DZM	**Mont Dzumac**	73.29	255	LR	LR	14 05 01.8	
	comp=Z,57nm,19.2s,baz=188,slow=31						
JSC	**Jenkinsville**	73.34	24	P	**P**	**13 39 10.1**	**+0.5**
JSC				IAmb	IAmb	13 39 24.6	
	comp=Z,9.6nm,1.1s						
KVN	**Kaiserville**	73.69	353	P	**P**	**13 39 11.5**	**-0.3**
KVN				IAmb	IAmb	13 39 12.5	
	comp=Z,8.8nm,1.3s						
TZTN	**Tazewell**	74.70	21	P	**P**	**13 39 17.7**	**+0.2**
PDAR	**Pinedale Array**	76.95	360	P	**P**	**13 39 28.9**	**-1.6**
	comp=Z,1.1nm,0.9s,baz=159,slow=5.4,SNR=5.5						
HLID	**Hailey**	77.89	356	P	**P**	**13 39 34.9**	**-0.8**
HLID				IAmb	IAmb	13 39 38.7	
	comp=Z,7.7nm,1.4s						
STKA	**Stephens Creek**	86.16	234	LR	LR	14 12 40.2	
	comp=Z,55nm,18.8s,baz=26,slow=31						
H11S2	**WAKE ISLAND Hy**	95.51	289	T	T	15 27 15.5	
	baz=126						
H11S1	**WAKE ISLAND Hy**	95.53	289	T	T	15 27 11.8	
	baz=126						
H11S3	**WAKE ISLAND Hy**	95.53	289	T	T	15 27 26.1	
	baz=126						
ASAR	**Alice Springs**	96.65	235	LR	LR	14 24 05.7	
	comp=Z,38nm,18.5s,baz=143,slow=35						
WRA	**Warramunga Arr**	98.82	239	LR	LR	14 22 51.5	
	comp=Z,49nm,18.1s,baz=115,slow=34						
AKASG	**Malin Array Be**	145.99	49	PKPbc	**PKPdf**	**13 47 16.3**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=283,slow=3.3,SNR=4.3						
AKASG	**Malin Array Be**	145.99	49		**PKPdf**	**13 47 15.0**	**-1.5**
CMAR	**Chiang Mai Arr**	150.21	245	PKPbc	**PKPbc**	**13 47 29.6**	**0.0**
	comp=Z,1.0nm,0.8s,baz=147,slow=1.3,SNR=12						
CMAR	**Chiang Mai Arr**	150.21	245		**PKiKP**	**13 47 30.1**	**-0.3**
SONM	**Songino Array**	150.33	307	PKPbc	**PKPbc**	**13 47 27.6**	**-1.6**
	comp=Z,1.0nm,0.8s,baz=93,slow=2.9,SNR=6.5						

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*HEL **02** 13:28:20.6±0.1, 67°.19N×20°.69E, h1^{km}, ML2.5, ML2.9(UPP), Confirmed Induced event*

*NAO **02** 13:28:20.4±0.7, 67°.14N×20°.97E, ML2.9*

*IDC **02** 13:28:20.9±0.8, 67°.12N×21°.00E, h0^{km}, mb1 3.5/5, mb1mx3.2/41, mbtmp3.5/5, ML2.8/5, Error ellipse: s-maj=14.0km s-min=7.2km az=111.0*

*BER **02** 13:28:22.1±3.4, 67°.11N×20°.77E, h1^{km}, ML2.4, ML2.9(NAO), Confirmed Induced event*

ISC 02 13:28:18.6±0.7, **67°.14N**±0°.02×**20°.75E**±0°.03, **h0**^{km}, **n48**, σ**1^{s}.62**/71, **1D**, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERTU	**Ertsjaerv**	0.82	135	*e*P	**Pb**	**13 28 36.1**	**+0.5**
ERTU				*e*S	**Sb**	**13 28 47.7**	**+0.5**
RATU	**Laukkuluspa**	0.82	328	*i* P	**Pg**	**13 28 34.1**	**-0.1**
RATU				*i* S	**Sg**	**13 28 43.7**	**-1.1**
KUA	**Kurravaara**	0.83	349	*i* P	**Pg**	**13 28 34.3**	**-0.2**
KUA				*i* S	**Sg**	**13 28 45.1**	**-0.2**
SALU	**Saltoluokta**	0.90	287	*i* P	**Pg**	**13 28 36.1**	**+0.3**
SALU				*i* S	**Sg**	**13 28 47.6**	**+0.1**
PAJU	**Pajala**	0.93	96	*e*P	**Pb**	**13 28 38.0**	**+0.4**
HARU	**Harads**	0.98	175	*e*P	**Pg**	**13 28 38.9**	**+1.5**
NIKU	**Nikkaluokta**	0.98	319	*e*P	**Pg**	**13 28 37.2**	**-0.2**
LANU	**Lannavaara**	1.03	27	*e*P	**Pg**	**13 28 38.2**	**-0.1**
LANU				*e*S	**Sg**	**13 28 51.7**	**+0.1**
KOVU	**Salmi**	1.11	349	*e*P	**Pg**	**13 28 39.3**	**-0.6**
KLF	**Kolari**	1.26	84	*e*P	**Pn**	**13 28 43.6**	**+0.3**
SJUU	**Sjulsmark**	1.67	168	*e*P	**Pb**	**13 28 51.2**	**+1.0**
HEF	**Hetta**	1.69	40	Pn	**Pb**	**13 28 50.2**	**-0.4**
HEF				Sn	**Sb**	**13 29 11.9**	**-0.4**
HEF	**Hetta**	1.69	40	⇓*i*P	**Pb**	**13 28 50.1**	**-0.4**
HEF	**Hetta**	1.69	40	*e*P	**Pb**	**13 28 50.1**	**-0.4**
HEF				MSG		13 29 15.6	
	comp=Z,26nm,0.2s						
TOF	**Tornio**	1.78	125	MSG		13 29 19.5	
	comp=Z,53nm,0.3s						
KIF	**Kilpisjarvi**	1.88	1	Pn	**Pb**	**13 28 53.4**	**-0.2**
KIF				Sn	**Sg**	**13 29 19.4**	**+0.6**
KIF	**Kilpisjarvi**	1.88	1	*e*P	**Pb**	**13 28 53.5**	**-0.1**
KIF	**Kilpisjarvi**	1.88	1	*e*P	**Pb**	**13 28 53.2**	**-0.4**
KIF				MSG		13 29 20.6	
	comp=Z,32nm,0.2s						
KTK1	**Kautokeino**	2.10	25	Pn	**Pb**	**13 28 57.0**	**-0.5**
KTK1				Sn	**Sb**	**13 29 24.1**	**0.0**
KTK1	**Kautokeino**	2.10	25	*e*P	**Pb**	**13 28 57.1**	**-0.5**
KTK1				*e*S	**Sb**	**13 29 24.0**	**0.0**
KTK1				IAML		13 29 26.4	
	comp=Z,70nm,0.5s						
FAUS	**Fauske**	2.13	279	*e*P	**Pb**	**13 28 57.4**	**-0.7**
FAUS				IAML		13 29 27.8	
	comp=Z,54nm,0.5s						
RNF	**Rovaniemi**	2.15	102	MSG		13 29 31.8	
	comp=Z,28nm,0.3s						
STEI	**Steigen**	2.26	293	*e*PG	**Pb**	**13 29 01.0**	**+0.8**
STEI				*e*SG	**Sb**	**13 29 29.3**	**+0.7**
JETT	**Jettan, Norway**	2.43	357	Pn	**Pn**	**13 29 01.1**	**+1.5**
JETT	**Jettan, Norway**	2.43	357	*e*PG	**Pb**	**13 29 02.6**	**-0.5**
JETT				*e*SG	**Sb**	**13 29 34.1**	**+0.5**
BURU	**Burvik**	2.58	174	*e*P	**Pn**	**13 29 04.4**	**+2.9**
ARA0	**ARCESS Array S**	2.98	34	Pn	**Pn**	**13 29 08.4**	**+1.3**
	baz=210,slow=16						
ARA0				Sn	**Sn**	**13 29 45.1**	**+1.5**
	baz=215,slow=22						
ARA0	**ARCESS Array S**	2.98	34	Pn	**Pn**	**13 29 08.4**	**+1.3**
	baz=210,slow=16						
ARA0				Sn	**Sn**	**13 29 45.1**	**+1.5**
	baz=215,slow=22						
ARCES	**ARCESS Array B**	2.98	34	Pn	**Pn**	**13 29 08.8**	**+1.7**
	baz=216,slow=13,SNR=168						
ARCES				Sn	**Sb**	**13 29 46.2**	**-3.3**
	baz=212,slow=21,SNR=3.9						
KONS	**Konsvik**	3.08	262	*e*P	**Pn**	**13 29 09.9**	**+1.5**
KEV	**Kevo**	3.50	38	*e*P	**Pn**	**13 29 15.4**	**+1.3**
HAMF	**Hammerfest**	3.68	15	*e*P	**Pn**	**13 29 18.4**	**+1.8**
HAMF				IAML		13 30 24.7	
	comp=Z,11nm,0.6s						
APA0	**Apatity Array**	4.75	79	Pn	**Pn**	**13 29 32.4**	**+1.1**
	baz=259,slow=14						
APA0				Sn	**Sn**	**13 30 27.4**	**+0.3**
	baz=284,slow=37						
APA0				Lg	Lg	13 30 43.4	
	baz=287,slow=28						
APA0	**Apatity Array**	4.75	79	Pn	**Pn**	**13 29 32.4**	**+1.1**
	baz=259,slow=14						
APA0				Sn	**Sn**	**13 30 27.4**	**+0.3**
	baz=284,slow=37						
FIA0	**FINESS Array S**	6.17	155	Pn	**Pn**	**13 29 53.9**	**+3.1**
	baz=346,slow=16						
FIA0				Sn	**Sn**	**13 31 03.0**	**+1.1**
	baz=347,slow=28						
FIA0				Lg	Lg	13 31 31.1	
	baz=347,slow=28						
FIA0	**FINESS Array S**	6.17	155	Pn	**Pn**	**13 29 53.9**	**+3.1**
	baz=346,slow=16						
FIA0				Sg	**Sg**	**13 31 31.1**	**-5.4**
	baz=347,slow=28						
FINES	**FINESS Array B**	6.17	155	Pn	**Pn**	**13 29 53.6**	**+2.9**
	comp=Z,0.8nm,0.3s,baz=346,slow=12,SNR=30						
FINES				Sn	**Sn**	**13 31 02.3**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=348,slow=23,SNR=6.0						
FINES				Lg	Lg	13 31 31.3	
	comp=Z,0.7nm,0.3s,baz=348,slow=24,SNR=4.1						
NB2	**NORSAR Subarra**	7.40	219	Pn	**Pn**	**13 30 09.1**	**+1.3**
	baz=17,slow=14						
NB2				Lg	Lg	13 32 12.0	
	baz=30,slow=37						
NB2	**NORSAR Subarra**	7.40	219	Pn	**Pn**	**13 30 09.1**	**+1.3**
	baz=17,slow=14						
NB2				Sg	**Sg**	**13 32 12.0**	**-3.9**
	baz=30,slow=37						
NOA	**NORSAR Array B**	7.40	219	Pn	**Pn**	**13 30 09.9**	**+2.2**
	comp=Z,0.0nm,0.3s,baz=26,slow=11,SNR=5.6						
NOA				Sn	**Sn**	**13 31 32.3**	**0.0**
	comp=Z,0.0nm,0.3s,baz=37,slow=21,SNR=4.0						
NOA				Lg	Lg	13 32 12.4	
	comp=Z,0.1nm,0.3s,baz=95,slow=19,SNR=3.9						
NRA0	**NORESS Array S**	7.59	217	Pn	**Pn**	**13 30 12.3**	**+2.1**
	baz=24,slow=14						
NRA0				Sn	**Sn**	**13 31 35.4**	**-1.5**
	baz=20,slow=28						
NRA0				Lg	Lg	13 32 17.9	
	baz=26,slow=37						
NRA0	**NORESS Array S**	7.59	217	Pn	**Pn**	**13 30 12.3**	**+2.1**
	baz=24,slow=14						
NRA0				Sn	**Sn**	**13 31 35.4**	**-1.5**
	baz=20,slow=28						
NRA0				Sg	**Sg**	**13 32 17.9**	**-4.1**
	baz=26,slow=37						
HFS	**Hagfors**	7.69	207	Pn	**Pn**	**13 30 12.4**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=28,slow=13,SNR=15						
HFS				Sn	**Sn**	**13 31 35.7**	**-3.7**
	comp=Z,0.4nm,0.3s,baz=34,slow=27,SNR=1.9						
HFS				Lg	Lg	13 32 17.2	
	comp=Z,0.3nm,0.3s,baz=15,slow=28,SNR=1.7						
HFS	**Hagfors**	7.69	207	Pn	**Pn**	**13 30 12.4**	**+0.7**
	baz=29,slow=14						
HFS	**Hagfors**	7.69	207	Pn	**Pn**	**13 30 12.4**	**+0.7**
	baz=29,slow=14						
SPA0	**Spitsbergen Ar**	11.17	355	Pn	**Pn**	**13 30 59.3**	**+0.1**
	baz=158,slow=18						
SPA0	**Spitsbergen Ar**	11.17	355	Pn	**Pn**	**13 30 59.3**	**+0.1**
	baz=158,slow=18						
SPITS	**Spitsbergen Ar**	11.17	355	Pn	**Pn**	**13 30 59.1**	**-0.1**
	baz=166,slow=13,SNR=1.3						

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*ISK **02** 13:48:40.5, 39°.28N×39°.98E, h4^{km}, ML3.4/33*

*DDA **02** 13:48:41.4, 39°.28N×39°.95E, h12^{km}±2^{km}, MW3.7*

ISC 02 13:48:41.4±1.1, **39°.29N**±0°.02×**39°.99E**±0°.01, **h4**^{km}±10^{km}, **n65**, σ**1^{s}.05**/98, **8C-5D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERZN	**Erzincan**	0.36	325	PG	**Pg**	**13 48 48.5**	**0.0**
ERZN				SG	**Sg**	**13 48 54.3**	**+1.0**
TNCL	**Tunceli-Merkez**	0.39	244	⇑*i*P	**Pg**	**13 48 48.9**	**-0.1**
TNCL				*i* S	**Sg**	**13 48 54.8**	**+0.7**
TNCL				IAML		13 48 55.0	
	comp=E,8µm,0.3s						
TNCL				IAML		13 48 55.0	
	comp=N,8µm,0.3s						
YEDI	**Yedisu-Bingol**	0.45	70	PG	**Pg**	**13 48 50.5**	**+0.4**
YEDI				SG	**Sb**	**13 48 57.3**	**-1.9**
EUZM	**Uzumlu**	0.48	332	⇑*i*P	**Pg**	**13 48 50.5**	**-0.1**
EUZM				*i* S	**Sb**	**13 48 58.1**	**-1.8**
EUZM				IAML		13 48 59.0	
	comp=E,5µm,0.5s						
EUZM				IAML		13 48 59.0	
	comp=N,3µm,0.4s						
KOVA	**Elazig, Kovanc**	0.60	194	⇓*i*P	**Pg**	**13 48 53.2**	**+0.3**
KOVA				IAML		13 49 02.0	
	comp=E,1µm,0.4s						
KOVA				*i* S	**Sb**	**13 49 02.0**	**-1.2**
KOVA				IAML		13 49 08.0	
	comp=N,595nm,0.5s						
BNGB	**Bingl**	0.61	119	PG	**Pg**	**13 48 52.7**	**-0.4**
BNGB				SG	**Sb**	**13 49 02.2**	**-1.4**
KARO	**Karliova-Bingo**	0.82	88	PG	**Pg**	**13 48 56.9**	**-0.2**
KARO				SG	**Sb**	**13 49 09.3**	**-0.5**
SLHN	**Bingol, Solhan**	0.87	112	⇑*i*P	**Pg**	**13 48 57.6**	**-0.4**
SLHN				*i* S	**Sn**	**13 49 12.0**	**-1.6**
SLHN				IAML		13 49 16.0	
	comp=E,810nm,0.6s						
SLHN				IAML		13 49 18.0	
	comp=N,682nm,0.8s						
HANI	**Diyarbakir_Han**	0.93	160	*i* P	**Pb**	**13 48 59.3**	**-0.7**
HANI				*i* S	**Sn**	**13 49 13.7**	**-1.3**
BAYB	**BAYBURT**	0.99	12	⇓*i*P	**Pg**	**13 48 58.7**	**-1.7**
BAYB				*i* S	**Sb**	**13 49 15.1**	**+0.4**
BAYB				IAML		13 49 20.0	
	comp=N,259nm,0.6s						
BAYB				IAML		13 49 24.0	
	comp=E,234nm,0.8s						
KELT	**Kelkit**	1.03	327	⇑*i*P	**Pg**	**13 49 00.5**	**-0.7**
KELT				*i* S	**Sb**	**13 49 15.7**	**-0.2**
KELT				IAML		13 49 19.0	
	comp=E,349nm,0.5s						
KELT				IAML		13 49 19.0	
	comp=N,388nm,0.7s						
SVRC	**Sivrice-ELAZID**	1.05	211	PG	**Pg**	**13 49 00.9**	**-0.7**
EMRE	**Erzurum,Aziziy**	1.06	45	*i* P	**Pb**	**13 49 01.7**	**-0.7**
EMRE				*i* S	**Sn**	**13 49 21.1**	**+2.6**
BAYT	**Aydıntepe-Bayb**	1.11	6	PN	**Pb**	**13 49 02.6**	**-0.7**
ELZG	**Elazig**	1.11	225	⇑*i*P	**Pg**	**13 49 01.8**	**-0.9**
ELZG				*i* S	**Sb**	**13 49 18.4**	**+0.2**
ILIC	**ilic-Erzincan**	1.12	279	PN	**Pg**	**13 49 01.9**	**-0.9**
REFA	**Refahiye_ERZN**	1.13	303	⇓*i*P	**Pg**	**13 49 02.1**	**-1.0**
REFA				*i* S	**Sb**	**13 49 18.7**	**0.0**
REFA				IAML		13 49 23.0	
	comp=E,190nm,0.9s						
REFA				IAML		13 49 24.0	
	comp=N,193nm,0.8s						
VRTB	**Varto-Mus**	1.14	96	*i* P	**Pg**	**13 49 02.9**	**-0.4**
VRTB				*i* S	**Sn**	**13 49 24.0**	**+3.6**
VRTB				IAML		13 49 37.0	
	comp=E,693nm,0.7s						
VRTB				IAML		13 49 46.0	
	comp=N,584nm,0.9s						
VRTB	**Varto-Mus**	1.14	96	PN	**Pb**	**13 49 03.5**	**-0.3**
EJDE	**Erzurum, Palan**	1.15	61	*i* P	**Pg**	**13 49 02.8**	**-0.6**
EJDE				*i* S	**Sn**	**13 49 20.2**	**-0.8**
KEMA	**Kemaliye**	1.16	270	⇑*i*P	**Pg**	**13 49 02.4**	**-1.3**
KEMA				*i* S	**Sb**	**13 49 19.4**	**-0.2**
KEMA				IAML		13 49 24.0	
	comp=N,720nm,0.6s						
KEMA				IAML		13 49 24.0	
	comp=E,754nm,0.3s						
ERZM	**Erzurum**	1.23	59	*i* P	**Pb**	**13 49 05.0**	**-0.3**
ERZM				*i* S	**Sn**	**13 49 22.9**	**+0.2**
GUMT	**Gumushane**	1.24	342	PN	**Pb**	**13 49 04.8**	**-0.6**
KRIK	**Erzurum-spir**	1.27	34	*i* P	**Pn**	**13 49 05.7**	**-0.4**
ARPR	**Arapgir-MALATY**	1.30	262	PN	**Pb**	**13 49 06.3**	**-0.2**
DYBB	**Diyarbakir**	1.34	175	PN	**Pb**	**13 49 06.7**	**-0.3**
DIYA	**Diyarbakir**	1.36	176	⇓*i*P	**Pg**	**13 49 08.2**	**+0.6**
DIYA				*i* S	**Sn**	**13 49 28.5**	**+2.7**
ALUC	**Giresun/Alucra**	1.42	319	*i* P	**Pn**	**13 49 07.0**	**-1.0**
ALUC				*i* S	**Sn**	**13 49 28.1**	**+0.9**
ALUC				IAML		13 49 30.0	
	comp=N,408nm,0.5s						
ALUC				IAML		13 49 31.0	
	comp=E,512nm,0.6s						
SVAN	**Silvan-Diyarba**	1.48	140	⇑*i*P	**Pg**	**13 49 09.4**	**-0.3**
SVAN				IAML		13 49 30.0	
	comp=E,288nm,0.6s						
SVAN				*i* S	**Sg**	**13 49 30.3**	**+1.5**
SVAN				IAML		13 49 32.0	
	comp=N,473nm,0.7s						
SVAN	**Silvan-Diyarba**	1.48	140	PN	**Pn**	**13 49 08.5**	**-0.2**
MALT	**Malatya**	1.56	232	PN	**Pb**	**13 49 10.1**	**-0.8**
KOPR	**Koprukoy-ERZUR**	1.60	63	PN	**Pb**	**13 49 11.1**	**-0.5**
EKAR	**Karacoban**	1.61	90	*i* P	**Pb**	**13 49 11.4**	**-0.3**
HEKM	**Malatya_Hekimh**	1.63	256	⇓*i*P	**Pb**	**13 49 11.8**	**-0.4**
HEKM				IAML		13 49 34.0	
	comp=E,215nm,0.4s						
HEKM				*i* S	**Sg**	**13 49 34.2**	**+0.3**
HEKM				IAML		13 49 39.0	
	comp=N,758nm,0.7s						
SUSE	**Susehri**	1.66	304	*i* P	**Pg**	**13 49 13.2**	**0.0**
SUSE				*i* S	**Sg**	**13 49 36.2**	**+1.5**
MACK	**Trabzon**	1.66	354	*i* P	**Pb**	**13 49 12.2**	**-0.4**
MACK				*i* S	**Sg**	**13 49 36.9**	**+2.0**
KTUT	**Trabzon**	1.71	354	PN	**Pn**	**13 49 11.6**	**-0.3**
BTMN	**Batman**	1.72	144	*i* P	**Pg**	**13 49 13.8**	**-0.5**
BTMN				*i* S	**Sg**	**13 49 37.4**	**+0.8**
BTMN				IAML		13 49 38.0	
	comp=E,278nm,0.4s						
GURO	**Guroymak-BITLI**	1.75	114	PN	**Pn**	**13 49 12.9**	**+0.3**
CUZAR	**Zara_SIVAS**	1.82	290	*i* P	**Pb**	**13 49 14.3**	**-1.0**
CUZAR				*i* S	**Sg**	**13 49 40.5**	**+0.7**
MAZI	**Mazidag**	1.86	169	PN	**Pn**	**13 49 14.2**	**+0.1**
BLIS	**Bitlis-Merkez**	1.87	117	*i* P	**Pb**	**13 49 15.6**	**-0.6**
BLIS				*i* S	**Sg**	**13 49 42.0**	**+0.5**
BLIS				IAML		13 49 47.0	
	comp=E,136nm,0.6s						
BLIS				IAML		13 49 55.0	
	comp=N,86nm,0.6s						
AKCD	**Akcadag**	1.90	239	⇑*i*P	**Pb**	**13 49 15.3**	**-1.4**
AKCD				*i* S	**Sg**	**13 49 42.8**	**+0.5**
AKCD				IAML		13 49 45.0	
	comp=E,323nm,0.8s						
AKCD				IAML		13 49 47.0	
	comp=N,380nm,0.5s						
CHOM	**Cayeli-Rize**	1.90	18	PN	**Pb**	**13 49 15.4**	**-1.2**
CUKAN	**kangal_SIVAS**	1.96	272	*i* P	**Pb**	**13 49 16.5**	**-1.2**
CUKAN				*i* S	**Sg**	**13 49 44.3**	**-0.1**
CUKAN				IAML		13 49 47.0	
	comp=N,265nm,0.6s						
CUKAN				IAML		13 49 51.0	
	comp=E,246nm,0.6s						
URFA	**Urfa**	2.06	207	PN	**Pn**	**13 49 16.7**	**-0.1**
MARD	**Mardin**	2.06	162	*i* P	**Pb**	**13 49 18.7**	**-0.7**
MARD				*i* S	**Sg**	**13 49 46.8**	**-0.9**
DARE	**Darende-Malaty**	2.08	251	PN	**Pn**	**13 49 17.3**	**+0.1**
DBAD	**Bademkaya**	2.17	36	*i* P	**Pn**	**13 49 18.9**	**+0.6**
DBAD				*i* S	**Sg**	**13 49 50.9**	**-0.1**
DBAD				IAML		13 49 55.0	
	comp=E,70nm,0.8s						
SENK	**Senkaya-Erzuru**	2.21	54	PN	**Pn**	**13 49 19.1**	**0.0**
SCER	**sogukcermik**	2.29	285	*i* P	**Pb**	**13 49 21.4**	**-1.8**
SCER				*i* S	**Sg**	**13 49 58.7**	**+3.9**
SCER				IAML		13 50 02.0	
	comp=N,177nm,0.7s						
DAGI	**Agillar**	2.32	39	*i* P	**Pn**	**13 49 21.1**	**+0.7**
DAGI				IAML		13 50 02.0	
	comp=E,18nm,0.6s						
DAGI				IAML		13 50 05.0	
	comp=N,24nm,0.8s						
RSDY	**Resadiye-TOKAT**	2.33	299	PN	**Pn**	**13 49 20.7**	**+0.2**
AGRB	**Hanur-Agry**	2.34	82	PN	**Pn**	**13 49 20.9**	**+0.1**
SVSK	**Karacayir**	2.40	286	PN	**Pn**	**13 49 21.7**	**+0.4**
BCA	**Borcka**	2.49	29	PN	**Pn**	**13 49 23.3**	**+0.6**
AKDM	**Akdamar-Van**	2.52	111	PN	**Pn**	**13 49 23.9**	**+0.6**
SIRT	**Sirnak**	2.62	132	PN	**Pn**	**13 49 25.3**	**+0.7**
TOKT	**Tokat**	2.85	292	PN	**Pn**	**13 49 28.2**	**+0.6**
CUSAR	**Sarkisla-SIVAS**	2.91	274	*i* P	**Pn**	**13 49 30.3**	**+1.7**
CUSAR				*i* S	**Sg**	**13 50 14.9**	**+0.1**
CUSAR				IAML		13 50 21.0	
	comp=N,28nm,0.6s						
SARI	**SarD1z-Kayseri**	2.93	254	PN	**Pn**	**13 49 29.4**	**+0.6**
GAZ	**Gaziantep**	3.04	227	PN	**Pn**	**13 49 30.9**	**+0.6**
CLDR	**Caldiran**	3.05	91	PN	**Pn**	**13 49 31.2**	**+0.6**
BNN	**Bunyan**	3.26	264	PN	**Pn**	**13 49 33.8**	**+0.5**
YOZ	**Yozgat**	3.63	277	PN	**Pn**	**13 49 39.2**	**+0.7**

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*IDC **02** 14:03:04.5±1.7, 18°.24S×178°.09W, h638^{km}±19^{km}, mb2.9/8, mb1 3.2/9, mb1mx3.0/27, mbtmp3.9/9, Error ellipse: s-maj=33.8km s-min=19.1km az=146.0*

ISC 02 14:03:00.9±0.9, **18°.1S**±0°.2×**178°.1W**±0°.2, **h590**^{km}, **n9**, σ**1^{s}.17**/10, **mb3.6**/7, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	3.68	274	P	P	14 04 31.4	+7.9
	4.1nm,0.3s,baz=168,slow=3.6,SNR=23						
URZ	**Urewera**	20.56	191	P	**P**	**14 06 58.9**	**-1.0**
	2.1nm,0.4s,baz=122,slow=23,SNR=1.7						
STKA	**Stephens Creek**	38.82	241	P	**P**	**14 09 37.8**	**+1.2**
	0.8nm,0.4s,baz=78,slow=4.2,SNR=3.3						
WRA	**Warramunga Arr**	44.89	260	P	**P**	**14 10 23.9**	**-0.5**
	0.8nm,0.4s,baz=95,slow=6.8,SNR=53						
WRA				PcP	**PcP**	**14 11 52.1**	**-1.0**
	0.2nm,0.3s,baz=87,slow=3.4,SNR=4.8						
ASAR	**Alice Springs**	45.03	254	P	**P**	**14 10 25.9**	**+0.5**
	1.9nm,0.4s,baz=91,slow=8.2,SNR=124						
ASAR				PcP	**PcP**	**14 11 52.7**	**-0.9**
	0.5nm,0.5s,baz=104,slow=4.0,SNR=9.7						
NVAR	**Mina Array Bea**	79.33	44	P	**P**	**14 14 07.4**	**+0.7**
	0.8nm,1.0s,baz=234,slow=7.6,SNR=2.2						
TXAR	**Lajitas Array**	85.83	58	P	**P**	**14 14 40.5**	**+1.2**
	0.5nm,0.7s,baz=224,slow=6.3,SNR=4.6						
ILAR	**Eielson Array**	85.96	13	P	**P**	**14 14 37.4**	**-1.7**
	0.2nm,0.4s,baz=226,slow=4.2,SNR=6.0						
CMAR	**Chiang Mai Arr**	89.21	290	P	**P**	**14 14 55.6**	**+0.3**
	0.3nm,0.4s,baz=112,slow=2.4,SNR=2.0						

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*NEIC **02** 14:03:32.7±0.6, 36°.21N±0°.02×97°.55W±0°.03, h6^{km}±5^{km}, Error ellipse: s-maj=3.3km s-min=2.0km az=59.0*

*ANF **02** 14:03:32.5±0.3, 36°.23N×97°.57W, h8^{km}±3^{km}, ML3.0/4, Error ellipse: s-maj=3.5km s-min=2.1km az=4.0*

*TUL **02** 14:03:33±0.5, 36°.22N±0°.02×97°.55W±0°.02, h6^{km}±2^{km},* *ML2.7, mb_Lg2.4/10(NEIC), Error ellipse: s-maj=3.1km s-min=2.2km az=50.0*

ISC 02 14:03:32.9±0.9**, 36°.22N**±0°.03×**97°.56W**±0°.03**, h10^{km}, n35, σ0^{s}.42**/31**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	0.45	311	Pg	Pg	14 03 41.9	+0.3
BCOK	**Bluff Creek, N**	0.56	184	Pg	Pg	14 03 43.8	0.0
BLOK	**Blackwell**	0.61	27	Pg	Pg	14 03 44.8	-0.1
OK031	**S. Brethren Rd**	0.64	114	Pg	Pg	14 03 45.3	-0.1
OK025	**Westminster Rd**	0.66	164	Pg	Pg	14 03 45.6	-0.1
GC02	**Grant County #**	0.68	340	Pg	Pg	14 03 46.0	0.0
QUOK	**Quay**	0.69	93		Pg	14 03 46.1	-0.2
OK034	**N. Norfolk Rd.**	0.72	106	Pg	Pg	14 03 46.7	-0.2
OK032	**Salt Plains WL**	0.79	319		Pg	14 03 48.0	-0.1
KAN13	**South Haven SW**	0.80	5	Pg	Pg	14 03 48.3	0.0
OKCFA	**Oklahoma City**	0.80	173	P	Pg	14 03 48.2	-0.2
	baz=354						
KAN14	**Manchester OK**	0.81	337		Pg	14 03 48.4	-0.1
KAN17	**Caldwell West**	0.84	349	Pg	Pg	14 03 49.2	0.0
KAN09	**Caldwell North**	0.92	357		Pg	14 03 50.5	-0.1
KAN05	**Bluff City Nor**	0.93	345	Pg	Pg	14 03 50.7	-0.1
KAN01	**Argonia South**	0.95	351		Pg	14 03 51.0	-0.3
KAN10	**Anthony SW Sta**	1.00	335		Pg	14 03 51.9	-0.3
KAN06	**Argonia West S**	1.06	347		Pg	14 03 53.0	-0.3
KAN08	**Anthony NE Sta**	1.06	342		Pg	14 03 53.1	-0.2
KAN16	**Harper SW Stat**	1.08	338	Pg	Pb	14 03 53.6	-0.3
T35A	**Sooner Cattle**	1.10	50		Pb	14 03 53.8	-0.3
T35B	**Sooner Cattle**	1.10	50	P	Pb	14 03 53.6	-0.5
	baz=230						
U32A	**Winter Ranch,**	1.17	278	Pg	Pb	14 03 54.9	-0.5
U32A	**Winter Ranch,**	1.17	278	P	Pb	14 03 54.8	-0.5
	baz=98						
U32A				S	Sb	14 04 10.9	+0.3
	baz=98						
W35A	**Tecumseh**	1.20	152		Pb	14 03 55.0	-0.8
TUL1	**Leonard**	1.47	101	Pn	Pn	14 03 59.3	-0.2
TUL1	**Leonard**	1.47	101	P	Pn	14 03 59.3	-0.2
	baz=283						
TUL1				S	Sb	14 04 19.3	+0.2
	baz=283						
X34A	**Smith Ranch, M**	1.63	188		Pb	14 04 03.0	-0.1
KSU1	**Kansas State U**	2.98	14	IAmb_Lg		14 05 09.0	
	comp=Z,8.8nm,0.7s						
W39A	**Magazine**	3.24	107	IAmb_Lg		14 05 22.1	
	comp=Z,9.2nm,0.7s						
W39A	**Magazine**	3.24	107	S	Sn	14 05 04.1	+1.6
	baz=290						
MIAR	**Mount Ida**	3.66	116	IAmb_Lg		14 05 33.5	
	comp=Z,8.9nm,0.8s						
X40A	**Basin Creek Fa**	4.23	113	IAmb_Lg		14 05 51.8	
	comp=Z,10nm,0.8s						
MGMO	**Mountain Grove**	4.36	76	IAmb_Lg		14 05 52.2	
	comp=Z,13nm,1.1s						
P38A	**Dawn**	4.66	42	IAmb_Lg		14 06 03.0	
	comp=Z,8.4nm,0.8s						

*JMA **02** 14:22:18.3, 34°.88N×137°.39E, h317^{km}, M2.6*
*IDC **02** 14:22:19.4±3.3, 34°.74N×137°.13E, h270^{km}±151^{km}, mb2.7/2, mb1 2.9/3, mb1mx2.3/45, mbtmp3.2/3, Error ellipse: s-maj=244.3km s-min=33.8km az=27.0*

ISC 02 14:22:20.0±1.1**, 35°.0N**±0°.1×**137°.40E**±0°.09**, h300^{km}, n15, σ0^{s}.71**/17**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAO	**Obara**	0.32	338	P	Pn	14 22 58.6	+0.3
JNY	**Yasuok**	0.54	44	P	Pn	14 22 59.3	+0.5
JYTA	**Yamagatataniai**	0.83	319	P	Pn	14 22 59.9	+0.3
JKN2	**Miekihoku**	1.18	232	P	Pn	14 23 01.2	-0.1
JKG	**Kaga**	1.57	326	P	Pn	14 23 03.6	+0.1
JRY	**Ryogami san**	1.61	49	P	Pn	14 23 05.3	+1.4
JWT	**Wachi**	1.67	281	P	Pn	14 23 04.2	-0.1
MAT	**Matsushiro**	1.70	22	P	Pn	14 23 05.1	+0.6
MJAR	**Matsushiro Arr**	1.70	23	P	Pn	14 23 05.0	+0.5
	0.2nm,0.3s,baz=192,slow=8.6,SNR=10						
MJAR				S	S	14 23 38.3	-1.6
	0.0nm,0.3s,baz=208,slow=40,SNR=1.6						
JHU	**Hanno**	1.77	60	P	Pn	14 23 05.7	+0.7
JHU				S	S	14 23 40.4	-0.4
JAG	**Ashikaga**	2.21	48	P	Pn	14 23 08.6	+0.2
BSO1	**Boso 1**	2.96	95	P	Pn	14 23 14.3	-0.4
JHO	**Hitachi**	3.05	57	P	Pn	14 23 15.9	-0.3
WRA	**Warramunga Arr**	54.69	184	P	P	14 31 19.1	+0.3
	0.2nm,0.3s,baz=359,slow=7.5,SNR=15						
ASAR	**Alice Springs**	58.41	184	P	P	14 31 45.1	+0.4
	0.2nm,0.9s,baz=354,slow=5.1,SNR=5.6						

*DNK **02** 14:22:32.3±3.1, 58°.21N×6°.23E, h0^{km}, Mc2.9, ML2.1, Explosion*

BER 02 14:22:34.0±2.2**, 58°.19N×6°.24E, h0^{km}, Mc2.6, ML1.6, ML2.9**(DNK)**, 2C-2D, Explosion, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNART	**Snartemo**	0.53	73	e	Pg	14 22 43.3	-0.9
	baz=276,slow=16						
SNART				⇑iP	Pb	14 22 43.5	-2.7
SNART				iP	Pn	14 22 43.5	-5.3
SNART				eS	Sg	14 22 49.1	-2.0
SNART				iS	Sb	14 22 49.8	-4.7
SNART				IAML		14 22 52.7	
	comp=Z,57nm,0.7s						
SNART				IAML		14 22 52.9	
	comp=Z,10.0nm,0.4s						
SNART	**Snartemo**	0.53	73	⇑iP	Pg	14 22 43.5	-0.7
SNART				eS	Sg	14 22 49.1	-2.0
SNART				IAML		14 22 52.7	
	comp=Z,57nm,0.7s						
STAV	**Stavanger**	0.80	340	eP	Pg	14 22 48.3	-1.1
STAV				eS	Sg	14 22 58.2	-1.5
STAV				IAML		14 23 03.0	
	comp=Z,19nm,0.8s						
HOMB	**Homborsund**	1.20	85	e	Pg	14 22 55.3	-1.7
	baz=269,slow=16						
HOMB				eP	Pb	14 22 55.9	-1.7
HOMB				iP	Pb	14 22 55.9	-1.7
HOMB				eS	Sg	14 23 10.3	-2.2
HOMB				iS	Sb	14 23 10.4	-3.2
HOMB				IAML		14 23 13.4	
	comp=Z,14nm,0.3s						
HOMB				IAML		14 23 13.7	
	comp=Z,10nm,0.3s						
HOMB	**Homborsund**	1.20	85	eP	Pg	14 22 55.9	-1.1
HOMB				eS	Sg	14 23 10.3	-2.2
HOMB				IAML		14 23 13.4	
	comp=Z,14nm,0.3s						
ODD1	**Odda**	1.74	6	eP	Pn	14 23 03.9	-1.6
ODD1				eS	Sn	14 23 25.3	-3.1
ODD1				IAML		14 23 28.5	
	comp=Z,9.6nm,0.4s						
ODD1	**Odda**	1.74	6	eP	Pn	14 23 03.9	-1.6
ODD1				eS	Sn	14 23 25.3	-3.1
ODD1				IAML		14 23 28.5	
	comp=Z,9.6nm,0.4s						
MUD	**Monsted U'grnd**	2.35	136	iP	Pn	14 23 10.4	-3.4
MUD				iS	Sn	14 23 38.4	-5.0
MUD				IAML		14 23 43.0	
	comp=Z,4.6nm,0.1s						
MUD	**Monsted U'grnd**	2.35	136	iP	Pn	14 23 10.4	-3.4
MUD				iS	Sn	14 23 38.4	-5.0
MUD				IAML		14 23 43.0	
	comp=Z,4.6nm,0.1s						
ASK	**Askoy**	2.37	347	eP	Pn	14 23 12.8	-1.2
ASK				eS	Sn	14 23 40.8	-2.9
ASK				IAML		14 23 58.1	
	comp=Z,18nm,1.0s						
ASK	**Askoy**	2.37	347	eP	Pn	14 23 12.8	-1.2
ASK				eS	Sn	14 23 40.8	-2.9
ASK				IAML		14 23 58.1	
	comp=Z,18nm,1.0s						
SKAR	**Skarslia**	2.71	22	eP	Pn	14 23 17.6	-1.3
SKAR				eS	Sn	14 23 48.6	-3.9
SKAR				IAML		14 23 55.9	
	comp=Z,3.4nm,0.4s						
SKAR	**Skarslia**	2.71	22	eP	Pn	14 23 17.6	-1.3
SKAR				eS	Sn	14 23 48.6	-3.9
SKAR				IAML		14 23 55.9	
	comp=Z,3.4nm,0.4s						
STRU	**Stroemstad**	2.72	70	iP	Pn	14 23 16.5	-2.4
STRU				iS	Sn	14 23 50.2	-2.3
STRU	**Stroemstad**	2.72	70	iP	Pn	14 23 16.5	-2.4
STRU				iS	Sn	14 23 50.2	-2.3
TJOU	**Tjoern**	2.86	91	iP	Pn	14 23 18.9	-1.9
TJOU				iS	Sn	14 23 52.9	-3.0
TJOU	**Tjoern**	2.86	91	iP	Pn	14 23 18.9	-1.9
TJOU				iS	Sn	14 23 52.9	-3.0
HYA	**Hoyanger**	2.99	359	eP	Pn	14 23 20.0	-2.5
HYA				eS	Sn	14 23 54.6	-4.4
HYA				IAML		14 24 11.7	
	comp=Z,5.0nm,0.7s						
HYA	**Hoyanger**	2.99	359	eP	Pn	14 23 20.0	-2.5
HYA				eS	Sn	14 23 54.6	-4.4
HYA				IAML		14 24 11.7	
	comp=Z,5.0nm,0.7s						
ONAU	**Onsala**	3.14	102	iP	Pn	14 23 23.7	-1.0
ONAU				iS	Sn	14 24 00.6	-2.2
ONAU	**Onsala**	3.14	102	iP	Pn	14 23 23.7	-1.0
ONAU				iS	Sn	14 24 00.6	-2.2
BORU	**Boraas**	3.53	96	⇓iP	Pn	14 23 30.0	0.0
BORU				iS	Sn	14 24 08.0	-4.3
BORU	**Boraas**	3.53	96	⇓iP	Pn	14 23 30.0	0.0
BORU				iS	Sn	14 24 08.0	-4.3

DNK 02 14:23:18.8±0.6**, 58°.41N×6°.44E, h6^{km}**±4^{km}**, ML1.7, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNART	**Snartemo**	0.41	100	e	Pg	14 23 24.7	-2.1
	baz=278,slow=10						
SNART				iP	Pb	14 23 26.1	-2.4
SNART				iS	Sg	14 23 31.9	-0.2
SNART				IAML		14 23 39.9	
	comp=Z,14nm,0.3s						
HOMB	**Homborsund**	1.10	97	e	Pg	14 23 38.0	-1.9
	baz=280,slow=18						
HOMB				iP	Pb	14 23 39.0	-1.2
HOMB				iS	Sg	14 23 53.3	-0.8
HOMB				IAML		14 23 56.9	
	comp=Z,16nm,0.3s						

*JMA **02** 14:28:12.6±0.2, 22°.54N×121°.60E, h0^{km}, M3.4*
*TAP **02** 14:28:12.1, 22°.35N×121°.42E, h12^{km}, ML3.0, C*

ISC 02 14:28:11.8±0.9**, 22°.36N**±0°.03×**121°.50E**±0°.03**, h15^{km}**±7^{km}**, n72, σ1^{s}.16**/99**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	0.32	355	iP	Pg	14 28 19.8	+1.3
	baz=15						
LDUT				iS	Sg	14 28 25.1	+2.1
	baz=15						
LAY	**Lan-yu**	0.32	171	iP	Pg	14 28 18.8	+0.3
	baz=159						
LAY				S	Sg	14 28 22.8	-0.2
	baz=159						
TTN	**Taitung**	0.51	321	eP	Pb	14 28 23.2	+0.7
	baz=337						
TTN				eS	Sb	14 28 31.5	+1.8
	baz=337						
TAW	**Tawu**	0.56	270	P	Pg	14 28 21.9	-0.9
	baz=272						
TAW				eS	Sg	14 28 28.4	-1.8
	baz=272						
ECL	**Taimali**	0.56	296	P	Pg	14 28 22.3	-0.5
	baz=301						
ECL				eS	Sg	14 28 29.5	-0.8
	baz=301						
TWGBT	**Beinan**	0.60	320	eP	Pb	14 28 23.9	-0.2
	baz=310						
EAST	**Anshuo**	0.60	273	iP	Pg	14 28 22.7	-0.9
	baz=274						
EAST				S	Sg	14 28 30.1	-1.5
	baz=274						
TWG	**Pinlang**	0.61	320	P	Pb	14 28 24.0	-0.2
	baz=310						
TWG				eS	Sg	14 28 31.3	-0.6
	baz=310						
EDH	**Donghe**	0.64	344	eP	Pb	14 28 24.6	-0.1
	baz=1.0						
EDH				eS	Sb	14 28 34.2	+0.8
	baz=1.0						
LONT	**Longtian**	0.65	328	P	Pb	14 28 25.0	+0.2
	baz=316						
LONT				eS	Sb	14 28 33.7	+0.1
	baz=316						
SLIU	**Shizi**	0.66	258	P	Pg	14 28 23.3	-1.5
	baz=258						
SLIU				eS	Sg	14 28 31.4	-2.2
	baz=258						
TSEB	**Hengchuen, Pin**	0.71	231	eP	Pg	14 28 24.6	-1.1
	baz=243						
TSEB				eS	Sg	14 28 35.4	+0.1
	baz=243						
CHKT	**Chengkung**	0.75	351	eP	Pb	14 28 26.1	-0.4
	baz=6.0						
CHKT				eS	Sb	14 28 36.8	+0.2
	baz=6.0						
HEN	**Hengchun**	0.78	244	P	Pg	14 28 25.8	-1.3
	baz=242						
HEN				S	Sg	14 28 35.2	-2.2
	baz=242						
SCZT	**Fangliau**	0.81	271	P	Pg	14 28 26.1	-1.5
	baz=282						
MASBT	**Mashibuluo**	0.84	288	P	Pg	14 28 26.7	-1.4
	baz=290						
FULB	**Fuli**	0.86	347	P	Pb	14 28 28.1	-0.3
	baz=4.0						
TSMG	**Majia**	0.86	294	eP	Pg	14 28 27.1	-1.5
	baz=297						
SSPT	**Xinbi**	0.87	279	eP	Pg	14 28 27.6	-1.1
	baz=290						
SSD	**Sandimen**	0.89	296	P	Pg	14 28 27.6	-1.5
	baz=308						
ELDTW	**Lidau**	0.94	332	eP	Pg	14 28 28.9	-1.2
	baz=337						
EYUL	**Yuli**	1.00	351	eP	Pb	14 28 30.9	+0.1
	baz=5.0						
SLGT	**Liugui**	1.01	309	eP	Pb	14 28 31.4	+0.4
	baz=312						
WLCH	**Liuqiu**	1.03	270	eP	Pg	14 28 32.6	+0.8
	baz=271						
YULB	**Yu-li**	1.05	350	eP	Pg	14 28 30.2	-2.0
	baz=3.0						
STYH	**Taoyuan**	1.05	321	eP	Pg	14 28 31.0	-1.1
	baz=336						
TWM1	**Shoushan**	1.10	295	eP	Pn	14 28 33.9	+1.3
	baz=298						
SGST	**Jiashian**	1.11	311	eP	Pb	14 28 33.3	+0.6
	baz=314						
HGSD	**Ruisui**	1.13	357	eP	Pg	14 28 31.9	-1.8
	baz=10.0						
EHY	**Hungye**	1.16	352	eP	Pg	14 28 32.4	-1.8
	baz=4.0						
WTP	**Ta-pu**	1.20	318	eP	Pb	14 28 34.7	+0.3
	baz=331						
WTP				eS	Sn	14 28 51.1	+0.8
	baz=331						
CHN1	**Nanshi**	1.22	313	eP	Pn	14 28 35.4	+1.1
	baz=316						
CHN1				eS	Sn	14 28 52.5	+2.0
	baz=316						
TPUB	**Ta-pu**	1.23	320	eP	Pg	14 28 34.9	-0.8
	baz=333						
TPUB				eS	Sn	14 28 52.4	+1.4
	baz=333						
SNST	**Tainan City**	1.26	313	eP	Pn	14 28 36.4	+1.5
	baz=327						
CHN3	**Shinhua**	1.27	305	eP	Pn	14 28 36.5	+1.6
	baz=308						
TWK	**Hsinying**	1.30	314	eP	Pg	14 28 36.0	-0.9
	baz=330						
EGFH	**Guangfu**	1.31	357	eP	Pg	14 28 34.9	-2.1
	baz=9.0						
ALS	**Alishan**	1.31	331	eP	Pg	14 28 36.1	-1.1
	baz=335						
CHN5	**Tsauling**	1.45	329	eP	Pn	14 28 38.2	+0.7
	baz=332						
CHN5				eS	Sn	14 28 58.3	+2.0
	baz=332						
ESL	**Shilin**	1.45	358	eP	Pn	14 28 35.7	-1.8
	baz=12						
CHY	**Chiayi**	1.51	319	eP	Pn	14 28 39.4	+1.1
	baz=333						
CHY				eS	Sg	14 28 59.1	-1.3
	baz=333						
SSLB	**Suanglung**	1.51	341	eP	Pn	14 28 38.7	+0.3
	baz=335						
WDLH	**Douliu**	1.59	327	eP	Pb	14 28 41.1	+0.1
	baz=330						
OWD	**Renai**	1.62	350	eP	Pn	14 28 40.8	+0.8
	baz=2.0						
WJS	**Zhushan**	1.62	334	eP	Pb	14 28 41.7	+0.3
	baz=338						
TYC	**Yuchr**	1.65	339	eP	Pb	14 28 42.2	+0.2
	baz=354						
TYC				eS	Sg	14 29 04.6	-0.4
	baz=354						
WTK	**Tuku**	1.67	323	eP	Pn	14 28 41.4	+0.8
	baz=326						
WTK				eS	Sn	14 29 02.6	+0.8
	baz=326						
WNT	**Mingjian**	1.69	334	eP	Pg	14 28 43.1	-1.2
	baz=338						
CHGB	**Renai**	1.72	350	eP	Pn	14 28 42.4	+1.0
	baz=6.0						
WCS	**Beigang Elemen**	1.78	342	eP	Pb	14 28 43.5	-0.6
	baz=345						
WHF	**Hehuan Shan**	1.79	353	eP	Pn	14 28 43.0	+0.4
	baz=7.0						
NACB	**Ninganchiao**	1.81	3	eP	Pn	14 28 42.1	-0.4
	baz=16						
NACB				eS	Sn	14 29 04.5	-0.7
	baz=16						
ETLH	**Xiulin Townshi**	1.84	360	eP	Pn	14 28 42.7	-0.3
	baz=2.0						
FUSS	**Fushou**	1.90	353	eP	Pn	14 28 45.2	+1.3
	baz=6.0						
WHP	**Taichung City**	1.98	345	eP	Pb	14 28 47.1	-0.5
	baz=360						
NNSB	**Datong**	2.07	357	eP	Pn	14 28 47.3	+1.2
	baz=9.0						
NNS	**Nan Shan**	2.08	357	eP	Pb	14 28 48.5	-0.8
	baz=9.0						
TWQ1	**Liyutan**	2.09	342	eP	Pn	14 28 48.1	+1.8
	baz=329						
PHUB	**P'eng-hu**	2.12	303	eP	Pn	14 28 46.2	-0.5
	baz=306						
YHNB	**Yeheng**	2.31	357	eP	Pn	14 28 51.1	+1.7
	baz=12						
NSK	**Sanguang**	2.31	357	eP	Pn	14 28 51.1	+1.7
	baz=12						
LIOB	**Emei**	2.32	349	eP	Pn	14 28 51.4	+1.9
	baz=335						
NWLT	**Wulai**	2.41	0	eP	Pn	14 28 52.3	+1.5
	baz=14						
JYNG	**Yonagunijimaku**	2.48	32	P	Pn	14 28 53.6	+2.0
HATJ	**Hateruma jima**	2.72	51	P	Pn	14 28 55.7	+0.8
HATJ				eS	Sn	14 29 27.1	-0.4
IRIF	**Iriomote-Funau**	2.84	46	P	Pn	14 28 57.7	+1.0
IRIF				S	Sn	14 29 31.0	+0.3
JKRS	**Kuro-shima**	2.97	50	P	Pn	14 28 59.7	+1.3
JKRS				eS	Sn	14 29 33.6	-0.3
JIJ	**Ishigaki jima**	3.15	50	P	Pn	14 29 01.5	+0.7
JIJ				eS	Sn	14 29 37.1	-1.1
JISG	**Ishigakijimahi**	3.41	49	P	Pn	14 29 05.1	+0.7
JISG				S	Sn	14 29 44.1	-0.5
JTJ	**Tarama**	3.72	52	P	Pn	14 29 09.7	+1.0
JTJ				S	Sn	14 29 52.4	+0.2
JIRB	**Irabujima**	4.17	53	S	Sn	14 30 03.2	-0.3
JMJ2	**Miyako jima3**	4.24	55	eS	Sn	14 30 04.4	-0.8

TAP 02 14:30:51.0, 24°.19N×121°.90E, h25^{km}, ML1.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	0.25	263	eP	Pb	14 30 57.4	+0.1
	baz=262						
ETL				eS	Sb	14 31 02.8	+1.1
	baz=262						
ENA	**Nanau**	0.27	329	P	Pb	14 30 57.9	+0.2
	baz=330						
ENA				S	Sb	14 31 03.3	+1.2
	baz=330						
NACB	**Ninganchiao**	0.28	266	iP	Pb	14 30 57.7	+0.1
	baz=261						
NACB				S	Sb	14 31 02.9	+0.7
	baz=261						
TWD	**Chiawan**	0.30	248	eP	Pb	14 30 57.9	0.0
	baz=247						
TWD				eS	Sb	14 31 03.2	+0.6
	baz=247						
ETLH	**Xiulin Townshi**	0.38	272	P	Pb	14 30 59.2	-0.1
	baz=272						
ETLH				eS	Sb	14 31 05.6	+0.7
	baz=272						
NDS	**Dongshan**	0.47	340	eP	Pn	14 31 01.5	-0.6
	baz=340						
NDS				eS	Sb	14 31 08.4	+1.1
	baz=340						
NNSB	**Datong**	0.52	297	P	Pb	14 31 02.1	+0.4
	baz=289						
NNSB				eS	Sb	14 31 09.7	+0.7
	baz=289						
NNS	**Nan Shan**	0.54	297	P	Pb	14 31 02.2	+0.3
	baz=289						
NNS				S	Sn	14 31 10.8	-0.7
	baz=289						
ENTT	**Nioudou**	0.54	326	eP	Pn	14 31 02.7	-0.5
	baz=321						
ENTT				eS	Sn	14 31 10.7	-0.7
	baz=321						
NDT	**Datong Townshi**	0.54	320	eP	Pb	14 31 02.3	+0.5
	baz=314						
NDT				eS	Sn	14 31 11.3	-0.1
	baz=314						
ESL	**Shilin**	0.57	228	eP	Pb	14 31 01.1	-1.3
	baz=235						
TWE	**Neicheng**	0.57	338	P	Pb	14 31 02.8	+0.5
	baz=340						
TWE				eS	Sn	14 31 11.3	-0.8
	baz=340						
WHF	**Hehuan Shan**	0.58	265	P	Pb	14 31 02.8	0.0
	baz=264						
WHF				eS	Sb	14 31 11.8	+1.0
	baz=264						
FUSS	**Fushou**	0.60	275	P	Pb	14 31 03.3	+0.3
	baz=275						
FUSS				eS	Sn	14 31 12.4	-0.8
	baz=275						
YHNB	**Yeheng**	0.67	315	P	Pb	14 31 04.5	+0.3
	baz=307						
YHNB				eS	Sn	14 31 14.2	-0.6
	baz=307						
CHGB	**Renai**	0.67	259	P	Pb	14 31 04.2	-0.1
	baz=247						
CHGB				S	Sb	14 31 14.1	+0.8
	baz=247						
NWLT	**Wulai**	0.68	328	eP	Pb	14 31 04.6	+0.3
	baz=326						
NWLT				eS	Sn	14 31 14.6	-0.4
	baz=326						
NSK	**Sanguang**	0.69	315	eP	Pb	14 31 04.7	+0.3
	baz=306						
NSK				eS	Sn	14 31 14.5	-0.6
	baz=306						
OWD	**Renai**	0.70	250	P	Pb	14 31 04.5	-0.1
	baz=249						
OWD				eS	Sn	14 31 14.9	-0.6
	baz=249						
TIPB	**Shuangxi**	0.78	355	eP	Pn	14 31 06.3	-0.2
	baz=4.0						
TIPB				eS	Sn	14 31 18.1	+0.8
	baz=4.0						
WHP	**Taichung City**	0.87	276	eP	Pn	14 31 10.1	+2.3
	baz=276						
LIOB	**Emei**	0.92	300	eP	Pn	14 31 09.8	+1.5
	baz=299						
SSLB	**Suanglung**	0.95	245	eP	Pb	14 31 09.2	+0.3
	baz=243						

JMA 02 14:30:52.1±0.1**, 24°.35N×122°.99E, h48^{km}**±2^{km}**, M1.9, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	0.11	338	P	Pn	14 30 59.6	-0.1
JYNG				S	Sn	14 31 05.0	-0.1
YOJ	**Yonaguni jima**	0.11	10	P	Pn	14 30 59.7	-0.1
YOJ				S	Sn	14 31 05.2	+0.1
IRIF	**Iriomote-Funau**	0.68	91	P	Pn	14 31 05.3	-0.1

IRIF				S	Sn	14 31 15.3	+0.2
JKRS	Kuro-shima	0.94	97	P	Pn	14 31 09.4	+0.5
JKRS				*e*S	Sn	14 31 22.1	+0.8
JIJ	Ishigaki jima	1.05	89	P	Pn	14 31 10.4	-0.1
JIJ				S	Sn	14 31 23.7	-0.3
JISG	Ishigakijimahi	1.23	79	P	Pn	14 31 13.0	+0.2
JISG				S	Sn	14 31 28.8	+0.5

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*PRU **02** 14:35:07.0±0.0, 50°.23N×18°.98E, h0^{km}*

*IDC **02** 14:35:07.5±1.1, 50°.12N×19°.03E, h0^{km}, mb1 3.8/4, mb1mx3.3/42, mbtmp3.7/4, ML2.8/5, Error ellipse: s-maj=20.1km s-min=8.1km az=141.0*

ISC 02 14:35:05.6±0.7, **50°.23N**±0°.04×**19°.05E**±0°.02, **h0^{km}, n30, σ0^{s}.99**/48, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.48	91	*e*Pg	Pg	14 35 15.6	+0.7
OJC				*e*Sg	Sg	14 35 22.1	+1.0
OKC	Ostrava-Krasne	0.70	236	*e*PG	Pb	14 35 20.4	-0.2
OKC				*e*SG	Sg	14 35 26.8	-1.2
	comp=Z,67nm,0.9s						
MORC	Moravsky Berou	1.07	246	*e*PG	Pg	14 35 26.7	+0.6
MORC				*e*SG	Sb	14 35 42.3	+0.8
LANS	Liptovska Anna	1.11	166	*e*PG	Pg	14 35 27.5	+0.6
LANS				*e*SG	Sg	14 35 42.2	+0.9
LANS				*e*LG	Lg	14 35 43.9	
NIE	Niedzica	1.15	134	*e*Pg	Pn	14 35 29.3	+0.4
NIE				*e*Sg	Sb	14 35 44.3	+0.5
KRLC	Kraliky	1.46	265	*e*PG	Pn	14 35 33.3	0.0
KRLC				*e*SG	Sb	14 35 53.1	+0.2
	comp=Z,25nm,0.5s						
JAVC	Velka Javorina	1.64	214	*e*PN	Pn	14 35 35.9	+0.2
STHS	Stebnicka Huta	1.64	119	*e*PN	Pn	14 35 36.4	+0.7
VYHS	Vyhne	1.74	185	*e*PN	Pn	14 35 37.0	-0.1
VYHS				*e*SN	Sn	14 35 58.9	-1.0
VYHS				*e*LG	Lg	14 36 01.7	
DPC	Dobruska-Polom	1.75	275	*e*PG	Pb	14 35 38.3	-0.3
DPC				*e*SG	Sb	14 36 01.1	0.0
	comp=Z,43nm,0.7s						
VRAC	Vranov	1.84	241	Pn	Pn	14 35 38.9	+0.5
	6.5nm,0.3s,baz=55,slow=14,SNR=17						
VRAC				Lg	Lg	14 36 03.9	
	4.6nm,0.3s,baz=146,slow=17,SNR=9.1						
VRAC	Vranov	1.84	241	*e*PN	Pb	14 35 39.8	-0.2
VRAC				*e*SG	Sn	14 36 03.2	+0.9
OSTC	Ostas	1.84	281	*e*PG	Pb	14 35 39.6	-0.5
KSP	Ksiaz	1.86	290	*e*Pb	Pb	14 35 40.8	+0.3
KSP				*e*Pg	Pg	14 35 43.1	+1.8
KSP				*e*Sg	Sg	14 36 07.6	+2.3
CHVC	Chvalec	1.95	282	*e*PG	Pb	14 35 41.1	-0.8
UPC	Upice	1.96	279	*e*SG	Sg	14 36 09.6	+1.0
	comp=Z,13nm,0.6s						
CRVS	Cervenica-Dubn	2.06	129	*e*PN	Pb	14 35 44.2	+0.4
CRVS				*e*SN	Sg	14 36 11.7	+0.1
KRUC	Moravsky	2.08	237	*e*PN	Pn	14 35 42.1	+0.4
KRUC				*e*SG	Sg	14 36 12.6	+0.2
KOLS	Kolonicke sedl	2.47	120	*e*PG	Pg	14 35 52.5	-0.3
KOLS				*e*SN	Sb	14 36 23.2	+1.5
PRU	Pruhonice	2.91	267	*e*SG	Sg	14 36 38.3	-0.7
	comp=Z,9.2nm,0.5s						
BRG	Berggiesshubel	3.32	283	Pg	Pg	14 36 10.1	+1.0
BRG				Sg	Sg	14 36 54.0	+1.9
BRG				Amp		14 37 06.2	
	comp=Z,5.7nm,0.4s						
CKRC	Cesky Krumlov	3.39	247	*e*SG	Sg	14 36 54.8	+0.3
KHC	Kasperske Hory	3.72	255	*e*PG	Pb	14 36 11.9	-0.2
KHC				*e*SG	Sg	14 37 02.9	-2.0
GERES	GERESS Array B	3.75	250	Pn	Pn	14 36 05.0	+0.3
	comp=Z,0.3nm,0.3s,baz=70,slow=14,SNR=5.8						
GERES				Pg	Pb	14 36 14.4	+1.8
	comp=Z,0.9nm,0.3s,baz=68,slow=17,SNR=13						
GERES				Lg	Lg	14 37 05.3	
	comp=Z,1.3nm,0.3s,baz=72,slow=27,SNR=9.3						
CLL	Collm	3.98	288	*e*Pg	Pg	14 36 22.0	+0.1
CLL				*e*Sg	Sg	14 37 13.0	-0.5
NKC	Novy Kostel	4.24	273	*e*SG	Sg	14 37 21.6	0.0
AKASG	Malin Array Be	6.52	82	Pn	Pn	14 36 42.3	-0.3
	comp=Z,0.3nm,0.3s,baz=305,slow=13,SNR=1.6						
AKASG				Lg	Lg	14 38 26.9	
	comp=Z,0.4nm,0.3s,baz=277,slow=31,SNR=1.6						
HFS	Hagfors	10.38	345	Pn	Pn	14 37 34.0	-1.6
	comp=Z,0.2nm,0.3s,baz=191,slow=15,SNR=2.1						
FINES	FINESS Array B	11.91	17	Pn	Pn	14 37 53.9	-2.5
	comp=Z,0.2nm,0.3s,baz=199,slow=12,SNR=6.6						
FINES				Sn	Sn	14 40 00.7	-9.1
	comp=Z,0.1nm,0.3s,baz=202,slow=22,SNR=1.6						
ARCES	ARCESS Array B	19.62	7	Pn	P	14 39 35.2	0.0
	baz=196,slow=12,SNR=4.4						

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*DJA **02** 14:57:38.4±0.4, 7°S±3°×13°0E±°, h190^{km}±9^{km}, M4.3/12, mB4.8/6, mb4.5/7, MLv4.5/12, Mw(mB)4.0/6*

*IDC **02** 14:57:38.1±2.2, 7°.18S×129°.81E, h131^{km}±24^{km}, mb3.1/3, mb1 3.7/8, mb1mx3.3/40, mbtmp4.1/8, MS3.8/1, Ms1 3.8/1, ms1mx2.5/13, Error ellipse: s-maj=33.9km s-min=20.0km az=92.0*

ISC 02 14:57:38.7±0.8, **7°.31S**±0°.06×**129°.74E**±0°.06, **h150^{km}, n18, σ2^{s}.75**/22, **mb3.2**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.68	113	P	Pn	14 58 12.8	+2.6
SAUI				S	Sn	14 58 38.3	+3.9
AAI	Ambon	3.92	337	P	Pn	14 58 37.7	-0.3
MSAI	Masohi	4.02	348	P	Pn	14 58 39.6	+0.3
FAKI	Fak Fak	5.03	30	P	Pn	14 58 49.4	-3.2
SOEI	Soe	5.93	245	P	Pn	14 59 07.0	+2.3
	0.7nm1µm148nm,0.9s						
SANI	Sanana	6.43	324	P	Pn	14 59 11.5	+0.3
	0.1nm9.5nm,1.1s						
SIJI	Sorong	6.58	13	P	Pn	14 59 09.6	-3.6
	3.3nm,0.3s,baz=38,slow=7.2,SNR=45						
SIJI				S	Sn	15 00 08.8	-18
	9.3nm,0.3s,baz=218,slow=22,SNR=16						
SWI	Sorong	6.58	13	P	Pn	14 59 09.9	-3.4
BATI	Baumata	6.66	244	P	Pn	14 59 16.8	+2.5
	32nm,0.3s,baz=76,slow=2.9,SNR=32						
BATI				S	Sn	15 00 28.5	-0.7
	17nm,0.3s,baz=301,slow=23,SNR=14						
BATI	Baumata	6.66	244	P	Pn	14 59 16.8	+2.5
	0.3nm862nm72nm,0.8s						
LBMI	Labuha	7.00	341	P	Pn	14 59 18.9	+0.1
	0.1nm29nm,0.9s						
FITZ	Fitzroy Crossi	11.44	200	P	Pn	15 00 18.5	+0.7
	1.3nm,0.3s,baz=41,slow=12,SNR=34						
FITZ				S	Sn	15 02 20.0	-4.2
	2.3nm,0.3s,baz=76,slow=22,SNR=9.7						
WRA	Warramunga Arr	13.32	161	P	Pn	15 00 42.5	+0.3
	2.6nm,0.3s,baz=333,slow=12,SNR=55						
WRA				S	Sn	15 03 05.2	-4.5
	1.8nm,0.3s,baz=352,slow=22,SNR=6.9						
ASAR	Alice Springs	16.74	167	P	Pn	15 01 27.4	+2.7
	0.9nm,0.3s,baz=340,slow=8.9,SNR=62						
ASAR				S	S	15 04 26.5	-4.3
	0.3nm,0.3s,baz=346,slow=27,SNR=4.2						
CMAR	Chiang Mai Arr	39.74	311	P	P	15 04 58.4	+1.5
	0.2nm,0.5s,baz=132,slow=6.2,SNR=4.5						
MSVF	Nonsavu	48.16	107	LR	LR	15 23 36.7	
	comp=Z,89nm,19.1s,baz=93,slow=32						
MKAR	Makanchi Array	68.35	327	P	P	15 08 25.2	+1.3
	0.6nm,0.5s,baz=113,slow=7.8,SNR=14						
KURBB	Kurchatov Arra	72.64	329	P	P	15 08 50.0	+0.2
	0.2nm,0.4s,baz=128,slow=4.9,SNR=2.9						

IDC 02 15:11:41.8±2.1, **6°.75S**×**128°.86E, h0^{km}, mb3.6**/1, **mb1 3.4**/3, **mb1mx3.3**/27, **mbtmp3.3**/3, **ML3.2**/2, **Error ellipse: s-maj=102.8km s-min=32.1km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.71	195	Sn	Sn	15 16 41.9	+0.2
	0.1nm,0.3s,baz=302,slow=14,SNR=1.5						
WRA	Warramunga Arr	14.15	158	Pn	Pn	15 15 02.8	-0.9
	0.1nm,0.3s,baz=337,slow=12,SNR=8.0						
WRA				Sn	Sn	15 17 26.9	-15
	0.1nm,0.3s,baz=333,slow=20,SNR=1.3						
ASAR	Alice Springs	17.50	164	P	P	15 15 48.1	-0.6
	0.1nm,0.3s,baz=336,slow=9.4,SNR=11						
ASAR				S	Sn	15 18 47.0	-16
	0.0nm,0.3s,baz=350,slow=22,SNR=2.1						
MKAR	Makanchi Array	67.40	327	P	P	15 22 39.2	0.0
	0.6nm,0.9s,baz=112,slow=8.0,SNR=4.6						

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*SJA **02** 15:13:48.2±0.7, 19°.66S×69°.31W, h104^{km}±3^{km}, ML4.4, MW4.1*

*IDC **02** 15:13:49.4±0.7, 19°.57S×69°.08W, h106^{km}±5^{km}, mb3.9/12, mb1 4.1/15, mb1mx4.0/31, mbtmp4.3/15, MS3.0/2, Ms1 2.9/2, ms1mx2.6/25, Error ellipse: s-maj=17.1km s-min=15.4km az=69.0*

*GUC **02** 15:13:49.5±0.6, 19°.67S×69°.27W, h101^{km}±2^{km}, ML4.4*

*VAO **02** 15:13:49.8±0.4, 19°.63S×69°.07W, h101^{km}, mb4.6*

*NEIC **02** 15:13:49.3±1.5, 19°.67S±0°.04×69°.27W±0°.06, h100^{km}±2^{km}, mb4.3/11, ML4.4(GUC), Error ellipse: s-maj=8.0km s-min=4.9km az=73.0*

ISC 02 15:13:48.6±0.5, **19°.67S**±0°.03×**69°.29W**±0°.04, **h101^{km}**±4^{km}, **n183, σ1^{s}.24**/231, **mb4.3**/14, **10C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	IPOC Station P	0.36	255	⇑*i*P	Pn	15 14 04.1	+0.3
PB11				*i* S	Sn	15 14 15.6	+0.4
PB11				IAML		15 14 16.3	
	comp=E,22µm,0.2s						
PB11	IPOC Station P	0.36	255	Pn	Pn	15 14 04.1	+0.3
PB11				Sn	Sn	15 14 15.5	+0.3
PB08	IPOC Station P	0.49	165	⇑*i*P	Pn	15 14 05.8	+0.9
PB08				*i* S	Sn	15 14 17.9	+0.8
PB08				IAML		15 14 18.8	
	comp=E,23µm,0.3s						
PB08	IPOC Station P	0.49	165		Pn	15 14 05.8	+0.9
PB08				Sn	Sn	15 14 17.7	+0.6
PB08	IPOC Station P	0.49	165	*e*P	Pn	15 14 05.0	+0.1
PB08				*e*P	Pn	15 14 06.0	+1.1
PB08				*e*S	Sn	15 14 18.6	+1.6
PB08				*e*S	Sn	15 14 18.6	+1.6
PB08				IAML		15 14 18.9	
	comp=Z,14µm,0.3s						
PSGC	Pisagua	0.79	275	⇑*i*P	Pn	15 14 07.4	+0.3
PSGC				*i* S	Sn	15 14 21.2	+0.2
PSGCX	Pisagua	0.79	275		Pn	15 14 06.9	-0.2
PSGCX				Sn	Sn	15 14 21.3	+0.3
HMBC	Humberstone	0.83	223	⇑*i*P	Pn	15 14 07.9	+0.4
HMBC				*i* S	Sn	15 14 22.1	+0.4
HMBC				IAML		15 14 23.6	
	comp=E,13µm,0.3s						
TA02	Huaiquique	1.00	233	⇑*i*P	Pn	15 14 09.6	+0.5
TA02				*i* S	Sn	15 14 24.7	+0.2
TA02	Huaiquique	1.00	233	Pn	Pn	15 14 09.6	+0.5
TA02				Sn	Sn	15 14 25.0	+0.5
TA02	Huaiquique	1.00	233	*e*P	Pn	15 14 09.6	+0.5
TA02				*e*S	Sn	15 14 25.4	+0.9
TA02				IAML		15 14 26.6	
	comp=Z,9µm,0.1s						
TA01	Diego Aracena	1.23	223	⇑*i*P	Pn	15 14 12.0	+0.4
TA01				*i* S	Sn	15 14 29.3	+0.2
TA01				IAML		15 14 33.7	
	comp=E,4µm,0.2s						
TA01	Diego Aracena	1.23	223	Pn	Pn	15 14 12.1	+0.4
TA01				Sn	Sn	15 14 29.4	+0.3
TA01	Diego Aracena	1.23	223	*e*P	Pn	15 14 12.1	+0.4
TA01				*e*S	Sn	15 14 29.9	+0.7
PB16	IPOC Station P	1.34	351	Pn	Pn	15 14 15.2	+1.6
PB01	IPOC Station P	1.38	188	⇑*i*P	Pn	15 14 14.5	+0.9
PB01				*e*S	Sn	15 14 33.1	+0.6
PB01				IAML		15 14 34.9	
	comp=E,10µm,0.2s						
PB01	IPOC Station P	1.38	188		Pn	15 14 14.3	+0.7
PATCX	Punta Patache	1.41	215	⇑*i*P	Pn	15 14 14.2	+0.3
PATCX				*e*S	Sn	15 14 33.1	0.0
PATCX				IAML		15 14 39.2	
	comp=E,6µm,0.3s						
PATCX	Punta Patache	1.41	215	Pn	Pn	15 14 14.4	+0.5
PATCX	Punta Patache	1.41	215	*e*P	Pn	15 14 14.4	+0.5
PATCX				*e*P	Pn	15 14 14.4	+0.5
PATCX				*e*P	Pn	15 14 14.4	+0.5
PATCX				*e*S	Sn	15 14 33.9	+0.8
PATCX				IAML		15 14 36.9	
	comp=Z,3µm,0.6s						
PB12	IPOC Station P	1.44	317	⇑*i*P	Pn	15 14 14.5	+0.2
PB12				*i* S	Sn	15 14 34.0	+0.3
PB12				IAML		15 14 36.6	
	comp=E,3µm,0.4s						
PB12	IPOC Station P	1.44	317	Pn	Pn	15 14 14.7	+0.4
PB12	IPOC Station P	1.44	317	*e*P	Pn	15 14 14.4	+0.2
PB12				*e*P	Pn	15 14 14.6	+0.4
PB12				*e*S	Sn	15 14 34.5	+0.9
AP01	Chacalluta	1.63	322	*e*P	Pn	15 14 17.1	+0.6
AP01	Chacalluta	1.63	322		Pn	15 14 17.4	+0.9
AP01	Chacalluta	1.63	322	*e*P	Pn	15 14 17.0	+0.5
AP01				IAML		15 14 43.0	
	comp=Z,2µm,0.1s						
PB02	IPOC Station P	1.74	199	*e*P	Pn	15 14 18.5	+0.4
PB02				*e*S	Sn	15 14 40.8	+0.3
PB02				IAML		15 14 47.6	
	comp=E,7µm,0.5s						
PB02	IPOC Station P	1.74	199	*e*P	Pn	15 14 17.0	-1.1
PB02				*e*P	Pn	15 14 18.7	+0.6
PB02				*e*S	Sn	15 14 41.4	+0.9
PB02				IAML		15 14 49.8	
	comp=Z,6µm,0.4s						
PB09	IPOC Station P	2.12	179	*e*P	Pn	15 14 24.1	+1.1
PB09				*e*S	Sn	15 14 50.1	+1.0
PB09				IAML		15 14 57.9	
	comp=E,2µm,0.7s						
PB09	IPOC Station P	2.12	179	Pn	Pn	15 14 24.0	+1.0
PB09	IPOC Station P	2.12	179	*e*P	Pn	15 14 24.0	+1.0
PB09				*e*S	Sn	15 14 51.9	+2.7
PB09				IAML		15 14 55.5	
	comp=Z,2µm,0.8s						
PB07	IPOC Station P	2.13	195	*e*P	Pn	15 14 23.5	+0.5
PB07				*e*S	Sn	15 14 49.4	0.0
PB07				IAML		15 14 58.0	
	comp=E,4µm,0.6s						
PB07	IPOC Station P	2.13	195		Pn	15 14 23.5	+0.5
PB03	IPOC Station P	2.41	190	*e*P	Pn	15 14 26.9	+0.2
PB03				*e*S	Sn	15 14 54.5	-1.4
PB03				IAML		15 15 02.9	
	comp=E,2µm,0.2s						
PB03	IPOC Station P	2.41	190	*e*P	Pn	15 14 27.6	+0.8
PB03				*e*S	Sn	15 14 57.4	+1.4
PB03				*e*S	Sn	15 14 58.6	+2.7
PB03				IAML		15 15 05.5	
	comp=Z,2µm,0.2s						
PB04	IPOC Station P	2.77	197	*e*P	Pn	15 14 32.2	+0.7
PB04				IAML		15 15 26.9	
	comp=E,1µm,0.4s						
PB04	IPOC Station P	2.77	197	Pn	Pn	15 14 32.1	+0.5
PB04	IPOC Station P	2.77	197	*e*P	Pn	15 14 27.6	-3.9
PB04				*e*P	Pn	15 14 32.9	+1.3
PB04				*e*S	Sn	15 15 04.2	-0.4
PB04				IAML		15 15 15.9	
	comp=Z,1µm,0.2s						
LVC	Limon Verde	2.95	173	P	Pn	15 14 36.9	+2.8
	comp=Z,66nm,0.3s,baz=344,slow=8.9,SNR=169						
LVC				S	Sn	15 15 09.8	+0.8
	comp=Z,101nm,0.3s,baz=112,slow=18,SNR=13						
LVC	Limon Verde	2.95	173	*e*P	Pn	15 14 35.1	+1.1
LVC	Limon Verde	2.95	173	*e*P	Pn	15 14 36.0	+1.9
LVC	Limon Verde	2.95	173	Pn	Pn	15 14 35.8	+1.7
LVC	Limon Verde	2.95	173	*e*P	Pn	15 14 35.8	+1.7
LVC				*e*P	Pn	15 14 36.0	+1.9
LVC				*e*S	Sn	15 14 58.6	-10
PB06	IPOC Station P	3.04	185	⇑*e*P	Pn	15 14 35.1	+0.1
PB06				*e*S	Sn	15 15 06.1	-4.7
PB06				IAML		15 15 21.0	
	comp=N,1µm,0.3s						
PB06	IPOC Station P	3.04	185	Pn	Pn	15 14 35.2	+0.1
PB06	IPOC Station P	3.04	185	*e*P	Pn	15 14 36.0	+1.0
PB06				*e*S	Sn	15 14 58.6	-12
PB06				*e*S	Sn	15 15 11.7	+0.9
PB06				IAML		15 15 19.8	
	comp=Z,1µm,0.8s						
PB05	IPOC Station P	3.29	195	*e*P	Pn	15 14 38.3	0.0
PB05				IAML		15 15 36.3	
	comp=E,932nm,0.4s						
PB05	IPOC Station P	3.29	195	*e*P	Pn	15 14 38.9	+0.6
PB05				*e*S	Sn	15 15 17.1	+0.4
PB05				IAML		15 15 44.2	
	comp=Z,538nm,0.9s						
PB15	IPOC Station P	3.53	183	*e*P	Pn	15 14 42.7	+1.0
PB15	IPOC Station P	3.53	183	Pn	Pn	15 14 42.2	+0.6
PB15	IPOC Station P	3.53	183	*e*P	Pn	15 14 43.2	+1.5
PB15				*e*S	Sn	15 15 18.6	-4.0
PB15				*e*S	Sn	15 15 23.4	+0.7
PB15				IAML		15 15 34.4	
	comp=Z,2µm,0.2s						
LPAZ	La Paz	3.53	18	P	Pn	15 14 44.9	+2.7
	comp=Z,7.4nm,0.3s,baz=191,slow=7.9,SNR=148						
LPAZ	La Paz	3.53	18	Pn	Pn	15 14 45.1	+2.9
LPAZ	La Paz	3.53	18	*e*P	Pn	15 14 45.0	+2.9
PB10	IPOC Station P	4.01	197	Pn	Pn	15 14 47.3	-0.6
PB10	IPOC Station P	4.01	197	*e*P	Pn	15 14 48.0	+0.1
PB10				*e*S	Sn	15 15 32.4	-1.5
YJA	Yavi	4.32	126	*e*P	Pn	15 14 55.6	+3.0
HJA	Humahuaca	5.04	135	*e*P	Pn	15 15 05.0	+2.7
PB14	IPOC Station P	5.04	192	Pn	Pn	15 15 02.2	0.0
AZAP	Zapla	5.99	140	*e*P	Pn	15 15 16.6	+1.6
AZAP				*e*P	Pn	15 15 17.0	+2.0
SLA	San Lorenzo	6.13	146	*e*P	Pn	15 15 19.0	+2.2
ASTB	Santa Barbara	6.19	134	*e*P	Pn	15 15 18.6	+1.0
ASTB				*e*S	Sn	15 16 27.6	+0.6
ALOL	LOMAS DE OLMED	6.43	131	*e*P	Pn	15 15 21.4	+0.6
ALOL				*e*S	Sn	15 16 33.6	+0.8
FSA	Cafayete	7.10	155	*e*P	Pn	15 15 28.6	-1.4
AC02	Maricunga	7.14	179	Pn	Pn	15 15 30.7	-0.1
AC02	Maricunga	7.14	179	*e*P	Pn	15 15 30.8	-0.1
SIV	San Ignacio	8.63	66	P	Pn	15 15 48.7	-2.1
	comp=Z,7.3nm,0.3s,baz=253,slow=11,SNR=90						
ACLC	CERRO LA CRUZ	9.95	168	*e*P	Pn	15 16 10.0	+1.3
ETMB	Extrema	10.23	17	*e*P	Pn	15 16 12.5	0.0
ETMB	Extrema	10.23	17	Pn	Pn	15 16 11.9	-0.6
PTLB	Pontes e Lacer	10.55	68	*e*P	Pn	15 16 14.7	-2.1
PTLB	Pontes e Lacer	10.55	68	Pn	Pn	15 16 13.4	-3.4
VILB	Vilhena	10.98	54	*e*P	Pn	15 16 21.8	-0.8
VILB	Vilhena	10.98	54	Pn	Pn	15 16 21.7	-1.0
SAML	Samuel	12.18	30		Pn	15 16 35.7	-3.0
AQDB	Aquidauana	12.79	96	*e*P	Pn	15 16 45.4	-1.4
AQDB	Aquidauana	12.79	96	Pn	Pn	15 16 44.3	-2.5
CPUP	Villa Florida	12.85	123	P	Pn	15 16 46.2	-1.2
	comp=Z,1.2nm,0.3s,baz=301,slow=10,SNR=13						
CPUP				LR	LR	15 22 43.4	
	comp=Z,44nm,19.0s,baz=310,slow=42						
CPUP	Villa Florida	12.85	123	*e*P	Pn	15 16 46.0	-1.5
CPUP	Villa Florida	12.85	123	Pn	Pn	15 16 45.8	-1.7
SALV	Santo Antonio	13.47	76	*e*P	Pn	15 16 54.3	-1.4
MT02	Curacav	13.64	187	Pn	Pn	15 16 58.3	+0.5
MT01	Popeta	14.25	187	Pn	Pn	15 17 06.4	+0.8
BO01	Tunca	14.76	186	P	P	15 17 17.4	+1.9
BO02	Sierra Bellavi	15.13	185	P	P	15 17 21.8	+2.1
BO02				IAmb	IAmb	15 17 23.7	
	comp=Z,22nm,0.8s						
ITQB	Itaqui	15.21	133	*e*P	Pn	15 17 18.8	+0.9
TBTG	Tabatinga, AM	15.40	358	*e*P	Pn	15 17 21.3	+1.0
CLDB	Colider	15.67	58	*e*P	Pn	15 17 21.8	-1.9
TRCB	Terra Rica	15.83	104	*e*P	Pn	15 17 24.7	-1.2
PTGB	Pitanga	16.72	111	*e*P	Pn	15 17 36.2	-0.6
PCMB	Pacaembu	16.98	100	*e*P	P	15 17 40.5	+0.2
ARAG	Araguaiana, MT	17.11	79	*e*P	Pn	15 17 40.3	-1.2
ITAB	Concordia	17.44	119	*e*P	Pn	15 17 45.5	0.0
ITAB	Concordia	17.44	119	P	Pn	15 17 45.4	-0.1
ITRB	Iturama	17.82	93	*e*P	Pn	15 17 50.7	+0.5
CPSB	Cacapava Do Su	17.88	130	*e*P	P	15 17 50.0	-0.1
MACA	Manacapuru-AM	18.43	28	*e*P	P	15 17 56.1	-0.1
NPGB	Novo Progresso	18.45	49	*e*P	P	15 17 54.9	-1.5
PLTB	Pedras Altas	18.54	134	*e*P	P	15 17 56.4	-1.0
PLTB	Pedras Altas	18.54	134	P	P	15 17 57.2	-0.1
PLTB				IAmb	IAmb	15 18 20.6	
	comp=Z,8.1nm,1.0s						
SNDB	Serra Nova Dou	18.91	69	*e*P	P	15 18 00.7	-0.9
LC01	Cunco	19.30	186	P	P	15 18 05.7	+0.2
LC01				IAmb	IAmb	15 18 10.1	
	comp=Z,11nm,0.9s						
CNLB	Canela	19.31	123	*e*P	P	15 18 04.1	-1.7
BB19B	Bebedouro	19.51	98	*e*P	P	15 18 07.1	-1.0
TIJ01	Guaruva-PR	19.56	110	*e*P	P	15 18 07.8	-0.8
IPMB	Ipameri, GO	20.02	89	*e*P	P	15 18 12.4	-1.2
ITTB	Itaituba	20.14	43	*e*P	P	15 18 13.4	-1.4
TER01	Tubaro-SC	20.39	119	*e*P	P	15 18 16.5	-0.9
RCLB	Rio Claro- Sao	20.49	102	*e*P	P	15 18 17.5	-1.1
BDFB	Brasilia	20.66	82	P	P	15 18 19.2	-1.3
	comp=Z,12nm,0.5s,baz=254,slow=10,SNR=14						
BDFB				LR	LR	15 27 49.5	
	comp=Z,49nm,19.6s,baz=333,slow=41						
BDFB	Brasilia	20.66	82	P	P	15 18 19.3	-1.2
BDFB				IAmb	IAmb	15 18 23.0	
	comp=Z,12nm,0.5s						
PTGA	Pitinga	20.91	27	P	P	15 18 20.7	-2.5
	comp=Z,8.9nm,0.5s,baz=197,slow=13,SNR=55						
PET01	Itanhaem-SP	20.92	107	*e*P	P	15 18 20.6	-2.5
PLCA	Paso Flores	21.03	183	P	P	15 18 24.9	+0.7
	comp=Z,4.1nm,0.8s,baz=0.2,slow=12,SNR=8.9						
PLCA	Paso Flores	21.03	183	*e*P	P	15 18 25.5	+1.3
PLCA	Paso Flores	21.03	183	P	P	15 18 25.2	+1.0
VAO	Valinhos	21.05	103	*e*P	P	15 18 23.0	-1.7
PEXB	Peixe	21.52	73	*e*P	P	15 18 28.4	-1.3
PARB	Paraibuna	22.31	104	*e*P	P	15 18 36.8	-1.2
BSCB	Bom Sucesso	23.02	98	*e*P	P	15 18 43.1	-2.1
PRPB	Parauapebas	23.20	57	*e*P	P	15 18 45.3	-1.6
BOAV	Boa Vista	23.55	22	*e*P	P	15 18 49.8	-0.2
BOAV	Boa Vista	23.55	22	P	P	15 18 49.4	-0.6
BOAV				IAmb	IAmb	15 18 50.5	
	comp=Z,16nm,0.7s						
SMTB	Santa Maria do	23.58	66	*e*P	P	15 18 50.0	-0.3
MAN01	Angra dos Reis	23.80	102	*e*P	P	15 18 51.7	-0.6
MC01	Montes Claros	24.25	87	*e*P	P	15 18 55.4	-1.0
DIAM	Diamantina, MG	24.25	91	*e*P	P	15 18 55.3	-1.2
JANB	Januaria	24.26	83	*e*P	P	15 18 54.7	-1.8
VAS01	Vassouras-RJ	24.26	101	*e*P	P	15 18 56.5	+0.1
SDBA	SAO DESIDERIO	24.50	77	*e*P	P	15 18 57.0	-1.7
DUB01	Friburgo-RJ	25.25	100	*e*P	P	15 19 03.5	-1.9
MCPB	Macapa, AP	25.55	43	*e*P	P	15 19 08.8	+0.6
CAM01	Campos-RJ	25.91	100	*e*P	P	15 19 11.7	+0.3
SJMB	Sao Joao De Ma	26.55	93	*e*P	P	15 19 16.9	-0.2
ALF01	Guarapari-ES	26.82	97	*e*P	P	15 19 19.0	-0.5
BSFB	Barra de Sao F	26.85	93	*e*P	P	15 19 19.1	-0.8
RIB01	Linhares ES	27.23	94	*e*P	P	15 19 22.7	-0.6
GUA01	Guaratinga, BA	28.17	89	*e*P	P	15 19 31.3	-0.4
CMC01	Camacan, BA	28.69	86	*e*P	P	15 19 35.5	-0.8
NBIT	Itapeh - BA	28.86	85	*e*P	P	15 19 36.9	-1.0
GDU01	Guandu, BA	29.04	83	*e*P	P	15 19 38.3	-1.1
NBPN	Ponto Novo - B	29.36	77	*e*P	P	15 19 41.7	-0.6
ROSB	Rosrio	29.69	59	*e*P	P	15 19 45.0	-0.2
PLCV	Puerto La Cruz	30.00	9	P	P	15 19 47.9	+0.1
PCRV	Puerto La Cruz	30.00	9	P	P	15 19 47.9	0.0
	comp=Z,5.6nm,0.6s,baz=23,slow=6.9,SNR=3.4						
NBPS	Pedro II - PI	31.09	64	*e*P	P	15 19 57.4	-0.2
NBLA	Lagarto - SE	31.53	79	*e*P	P	15 20 00.3	-1.1
NBMA	Muriti-CE	32.03	72	*e*P	P	15 20 05.6	-0.2
NBPB	Pedra_Branca-C	32.12	68	*e*P	P	15 20 06.8	+0.1
NBMO	Morrinhos-CE	32.85	64	*e*P	P	15 20 13.2	+0.3
NBAN	Anadia - AL	33.38	77	*e*P	P	15 20 16.9	-0.7
NBLV	Livramento - P	33.69	73	*e*P	P	15 20 20.3	-0.1
NBCL	Cascavel-CE	33.89	67	*e*P	P	15 20 22.2	+0.2
NBPA	Parau_RN	34.21	70	*e*P	P	15 20 24.6	-0.2
NBRF	Rio Formoso -	34.80	77	*e*P	P	15 20 29.6	-0.3
NBPV	Pedro Velho	35.55	73	*e*P	P	15 20 36.6	+0.4
PMSA	Palmer Station	45.22	177	*e*P	P	15 21 56.3	+1.1
TXAR	Lajitas Array	58.93	325	P	P	15 23 37.5	0.0
	comp=Z,0.3nm,0.8s,baz=132,slow=5.4,SNR=2.0						
SDCO	Great Sand Dun	66.50	329	P	P	15 24 29.6	+1.7
LIC	Lamto	68.23	75	*e*P	P	15 24 37.6	-1.3
	comp=Z,15nm,0.7s						
TIC	Toumodi	68.41	74	*e*P	P	15 24 38.7	-1.3
KIC	Kosan Boka	68.54	75	*e*P	P	15 24 39.9	-1.0
	comp=Z,24nm,0.7s						
DBIC	Dimbokro	68.56	74	P	P	15 24 39.6	-1.3
	comp=Z,10nm,0.8s,baz=240,slow=5.7,SNR=15						
DBIC	Dimbokro	68.56	74	P	P	15 24 40.1	-0.9
QSPA	South Pole Qui	70.52	180	P	P	15 24 54.2	+1.9
QSPA				IAmb	IAmb	15 24 55.6	
	comp=Z,2.8nm,1.1s						
PDAR	Pinedale Array	72.35	330	P	P	15 25 04.1	+0.4
	comp=Z,0.3nm,0.7s,baz=116,slow=7.1,SNR=2.7						
NVAR	Mina Array Bea	73.84	322	P	P	15 25 12.9	+0.4
	comp=Z,0.8nm,0.7s,baz=144,slow=6.6,SNR=6.5						
NVAR	Mina Array Bea	73.84	322	P	P	15 25 13.5	+0.9
TORD	Torodi Ar. Bea	77.08	71	P	P	15 25 30.2	-1.1
	comp=Z,5.3nm,0.5s,baz=252,slow=5.5,SNR=50						
TORD				pP	pP	15 25 58.2	-0.5
	comp=Z,2.5nm,0.8s,baz=254,slow=5.6,SNR=3.0						
TORD	Torodi Ar. Bea	77.08	71	P	P	15 25 30.4	-0.9
TORD				IAmb	IAmb	15 25 31.0	

	comp=Z,4.1nm,0.7s						
BOSA	Boshof	84.62	118	P	P	15 26 10.6	-0.9
	comp=Z,1.7nm,0.7s,baz=270,slow=5.1,SNR=2.2						
ESDC	Sonseca Array	84.78	45	P	P	15 26 11.5	-0.3
	comp=Z,0.5nm,0.6s,baz=238,slow=7.2,SNR=3.8						
YKA	Yellowknife Ar	89.35	341	P	P	15 26 33.4	+0.2
	comp=Z,3.3nm,0.7s,baz=134,slow=4.8,SNR=19						
YKA				pP	pP	15 27 00.8	-0.1
	comp=Z,2.1nm,0.7s,baz=140,slow=4.7,SNR=5.9						
YKA	Yellowknife Ar	89.35	341	P	P	15 26 34.4	+1.2
ASAR	Alice Springs	131.35	209	PKP	PKPdf	15 32 49.6	-0.3
	comp=Z,0.3nm,0.5s,baz=141,slow=1.5,SNR=12						
ASAR	Alice Springs	131.35	209		PKPdf	15 32 48.9	-1.0
WRA	Warramunga Arr	134.33	212	PKP	PKPdf	15 32 55.9	+0.3
	comp=Z,0.6nm,0.6s,baz=170,slow=1.7,SNR=12						
WRA				pPKP	pPKPdf	15 33 24.0	0.0
	comp=Z,0.2nm,0.5s,baz=150,slow=1.1,SNR=1.4						
WRA	Warramunga Arr	134.33	212		PKPdf	15 32 55.6	+0.1
ZALV	Zalesovo Beam	140.44	24	pPKP	pPKPdf	15 33 35.4	+0.7
	comp=Z,0.9nm,0.6s,baz=275,slow=1.1,SNR=3.6						
MKAR	Makanchi Array	144.34	34	PKP	PKPbc	15 33 11.5	0.0
	comp=Z,0.3nm,0.7s,baz=336,slow=3.2,SNR=2.0						
MKAR				pPKP	pPKPdf	15 33 42.1	+0.2
	comp=Z,0.2nm,0.4s,baz=322,slow=3.1,SNR=1.9						
SIJI	Sorong	151.31	227	PKPbc	PKiKP	15 33 32.4	+0.5
	comp=Z,3.5nm,0.7s,baz=229,slow=22,SNR=4.4						
SONM	Songino Array	151.68	6	PKPbc	PKiKP	15 33 32.3	+0.5
	comp=Z,0.7nm,0.5s,baz=238,slow=1.0,SNR=5.4						
SONM				pPKPbc	pPKPbc	15 33 59.9	-0.1
	comp=Z,1.2nm,0.5s,baz=304,slow=1.6,SNR=4.8						
CMAR	Chiang Mai Arr	168.80	94	PKPab	PKPab	15 34 55.0	-0.6
	comp=Z,0.3nm,0.6s,baz=258,slow=7.5,SNR=6.4						

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*IDC **02** 15:15:08.4±7.2, 7°.05S×154°.58E, h108km±59km, mb3.3/4, mb1 3.4/5, mb1mx3.0/29, mbtmp3.6/5, MS2.9/1, Ms1 2.9/1, ms1mx2.3/18, Error ellipse: s-maj=61.6km s-min=33.3km az=116.0*

ISC 02 15:15:01.7±1.4**, 7°.2S**±0°.3×**155°.0E**±0°.2**, h50**km**, n6, σ1ˢ90**/7**, mb3.4**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.07	253	P	Pn	15 16 58.0	+1.6
	0.6nm,0.3s,baz=73,slow=20,SNR=2.3						
PMG				S	Sn	15 18 25.7	-0.7
	0.3nm,0.3s,baz=333,slow=23,SNR=1.3						
WRA	Warramunga Arr	23.73	236	P	P	15 20 07.7	-1.8
	0.8nm,0.9s,baz=61,slow=9.1,SNR=1.4						
WRA				LR	LR	15 29 20.2	
	comp=Z,25nm,18.3s,baz=55,slow=36						
ASAR	Alice Springs	26.07	229	P	P	15 20 28.6	-2.3
	0.4nm,0.8s,baz=58,slow=9.1,SNR=4.6						
STKA	Stephens Creek	27.60	205	P	P	15 20 46.0	+1.6
	2.0nm,0.7s,baz=39,slow=12,SNR=3.5						
ILAR	Eielson Array	83.52	21	P	P	15 27 24.1	+0.1
	0.5nm,0.8s,baz=244,slow=5.5,SNR=2.9						
TORD	Torodi Ar. Bea	153.07	285	PKPbc	PKiKP	15 34 54.6	-0.4
	0.2nm,0.4s,baz=70,slow=0.9,SNR=2.1						

IDC 02 15:19:01.9±11.0**, 32°.83S**×**115°.35W, h0**km**, mb3.6**/1**, mb1 4.1**/1**, mb1mx3.3**/30**, mbtmp3.6**/1**, Error ellipse: s-maj=638.5km s-min=64.6km az=112.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVAR	Mina Array Bea	70.95	358	P	P	15 30 21.3	+0.1
	0.4nm,0.6s,baz=173,slow=8.0,SNR=4.7						
SONM	Songino Array	145.29	308	PKPbc	PKPbc	15 38 40.2	-1.0
	0.9nm,0.8s,baz=92,slow=2.1,SNR=5.2						
CMAR	Chiang Mai Arr	146.11	254	PKPbc	PKPdf	15 38 43.7	+0.1
	0.9nm,1.0s,baz=151,slow=2.1,SNR=6.3						

IDC 02 15:23:08.2±3.1**, 31°.51S**×**179°.06W, h0**km**, mb3.2**/2**, mb1 3.6**/3**, mb1mx2.9**/32**, mbtmp3.4**/3**, ML3.4**/1**, MS3.2**/2**, Ms1 3.2**/2**, ms1mx2.9**/7**, Error ellipse: s-maj=68.6km s-min=45.9km az=108.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.44	204	Pn	Pn	15 24 57.4	-0.5
	0.6nm,0.3s,baz=300,slow=24,SNR=14						
URZ				Sn	Sn	15 26 14.9	-8.1
	0.5nm,0.3s,baz=303,slow=23,SNR=1.5						
STKA	Stephens Creek	33.36	259	LR	LR	15 41 57.1	
	comp=Z,35nm,18.8s,baz=25,slow=34						
ASAR	Alice Springs	42.16	269	P	P	15 31 02.5	-0.3
	0.3nm,0.8s,baz=105,slow=7.6,SNR=5.9						
WRA	Warramunga Arr	43.25	274	P	P	15 31 11.7	+0.1
	0.2nm,0.5s,baz=112,slow=7.7,SNR=7.9						
VNDA	Vanda	46.91	186	LR	LR	15 47 22.3	
	comp=Z,36nm,21.2s,baz=92,slow=31						
FINES	FINESS Array B	145.85	339	PKPbc	PKPdf	15 42 48.0	-0.2
	2.9nm,1.1s,baz=29,slow=3.2,SNR=4.6						

IDC 02 15:50:59.9±6.4**, 33°.71S**×**111°.39W, h0**km**, mb3.8**/2**, mb1 4.3**/2**, mb1mx3.7**/29**, mbtmp3.8**/2**, MS3.7**/10**, Ms1 3.7**/10**, ms1mx3.5**/24**, Error ellipse: s-maj=378.5km s-min=59.9km az=109.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	33.04	114	LR	LR	16 06 44.2	
	comp=Z,105nm,20.3s,baz=282,slow=29						
LPAZ	La Paz	42.52	77	LR	LR	16 11 56.4	
	comp=Z,47nm,18.8s,baz=245,slow=30						
SIV	San Ignacio	48.46	81	LR	LR	16 15 30.3	
	comp=Z,70nm,21.7s,baz=286,slow=30						
VNDA	Vanda	56.67	195	LR	LR	16 19 42.4	
	comp=Z,44nm,19.4s,baz=96,slow=30						
PTGA	Pitinga	58.21	67	LR	LR	16 21 46.6	
	comp=Z,77nm,20.9s,baz=250,slow=32						
MSVF	Nonsavu	64.43	265	LR	LR	16 24 00.8	
	comp=Z,54nm,21.0s,baz=79,slow=31						
MDP	Montagnes des	67.54	67	LR	LR	16 27 42.0	
	comp=Z,74nm,19.3s,baz=237,slow=33						
DZM	Mont Dzumac	71.83	255	LR	LR	16 25 38.4	
	comp=Z,67nm,20.1s,baz=195,slow=29						
NVAR	Mina Array Bea	72.06	354	P	P	16 02 26.3	+0.4
	1.0nm,0.8s,baz=181,slow=7.5,SNR=5.5						
PDAR	Pinedale Array	76.12	1	P	P	16 02 49.4	-0.2
	0.7nm,0.9s,baz=157,slow=8.0,SNR=3.9						
STKA	Stephens Creek	85.25	235	LR	LR	16 36 11.7	
	comp=Z,42nm,19.1s,baz=33,slow=32						
ASAR	Alice Springs	95.68	237	LR	LR	16 39 30.7	
	comp=Z,28nm,21.2s,baz=94,slow=30						
SONM	Songino Array	148.44	308	PKPbc	PKPbc	16 10 46.5	-1.7
	0.2nm,0.3s,baz=95,slow=1.6,SNR=1.6						
CMAR	Chiang Mai Arr	148.96	248	PKPbc	PKPbc	16 10 50.3	0.0
	0.2nm,0.4s,baz=178,slow=1.9,SNR=1.5						
ZALV	Zalesovo Beam	156.74	335	PKPab	PKPab	16 11 25.7	-0.2
	0.3nm,0.5s,baz=39,slow=5.5,SNR=1.5						

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*IDC **02** 15:52:41.5±1.9, 39°.24N×27°.94E, h0km, mb3.5/2, mb1 3.4/5, mb1mx3.3/46, mbtmp3.4/5, ML3.3/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/28, Error ellipse: s-maj=38.8km s-min=15.0km az=149.0*

*THE **02** 15:52:44.9, 39°.12N×28°.24E, h7km±41km, Error ellipse: s-maj=41.6km s-min=1.7km az=77.0*

*ISK **02** 15:52:44.4, 39°.15N×28°.15E, h16km, ML3.9/53*

*DDA **02** 15:52:44.5, 39°.15N×28°.15E, h11km±3km, MW4.0*

ISC 02 15:52:44.7±0.9**, 39°.14N**±0°.02×**28°.16E**±0°.02**, h17**km±7km**, n137, σ0ˢ91**/175**, 21C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.37	226	⇑*i*P	Pb	15 52 52.7	-0.2
AKHS				*i* S	Sb	15 52 58.6	+0.2
AKHS				IAML		15 52 59.0	
	comp=E,4μm,0.3s						
AKHS				IAML		15 53 00.0	
	comp=N,2.5nm,0.4s						
AKS	Akhisar	0.37	226	PG	Pg	15 52 52.5	0.0
AKS				SG	Sb	15 52 58.2	-0.2
STEP	BALIKESIR_Sava	0.41	305	⇑*i*P	Pg	15 52 52.9	-0.3
STEP				*i* S	Sb	15 52 59.3	-0.4
DEMI	Demirci	0.45	102	⇓*i*P	Pb	15 52 54.1	-0.1
DEMI				*i* S	Sg	15 52 59.5	-0.4
DEMI				IAML		15 53 02.0	
	comp=E,2μm,0.2s						
DEMI				IAML		15 53 04.0	
	comp=N,2μm,0.5s						
GOMA	Golmarmara-Man	0.47	204	PG	Pg	15 52 54.3	+0.1
DURS	Dursunbey	0.52	28	⇑*i*P	Pg	15 52 54.8	-0.4
DURS				*i* S	Sg	15 53 02.0	-0.3
BALB	Balikesir	0.54	337	PG	Pb	15 52 55.7	-0.1
BALB				SG	Sb	15 53 03.7	+0.4
DST	Dursunbey	0.59	38	PG	Pg	15 52 56.1	-0.3
SMAA	Simav-Kutahya	0.64	93	PG	Pb	15 52 57.8	+0.3
SIMA	Simav-Kutahya	0.65	95	PG	Pb	15 52 57.7	+0.1
BALY	Balya	0.73	325	⇑*i*P	Pg	15 52 58.7	-0.3
BALY				*i* S	Sb	15 53 08.5	-0.2
BALY				IAML		15 53 09.0	
	comp=N,3μm,0.3s						
BALY				IAML		15 53 10.0	
	comp=E,2μm,0.2s						
KULA	Kula-Manisa	0.74	148	PG	Pb	15 52 59.6	+0.5
USAK	Uak-Merkez	0.80	122	⇓*i*P	Pb	15 53 00.5	+0.4
USAK				*i* S	Sg	15 53 10.4	-0.4
SHAP	Saphane-Kutahy	0.84	98	PG	Pb	15 53 01.5	+0.7
ZEDA	zmir-Bergama	0.86	259	⇑*i*P	Pb	15 53 01.5	+0.3
ZEDA				*i* S	Sb	15 53 13.2	+0.9
ZEDA				IAML		15 53 15.0	
	comp=N,3μm,0.6s						
ZEDA				IAML		15 53 15.0	
	comp=E,3μm,0.7s						
BUHA	Balikesir, Bur	0.91	294	⇓*i*P	Pb	15 53 02.2	+0.1
BUHA				*i* S	Sn	15 53 16.4	+0.9
BUHA				IAML		15 53 23.0	
	comp=N,1μm,0.9s						
DKL	Dikili	0.98	266	PG	Pn	15 53 03.8	+0.2
GONE	Gonen-Balikesi	0.98	338	PG	Pb	15 53 03.3	+0.1
GEDZ	Gediz	0.98	95	PG	Pn	15 53 04.1	+0.4
GDZ	Gediz	1.03	92	⇑*i*P	Pb	15 53 04.8	+0.6
GDZ				*i* S	Sb	15 53 18.5	+1.0
TVSB	Tavsanli	1.06	73	PG	Pn	15 53 05.5	+0.6
CAND	Candarli	1.07	261	PG	Pn	15 53 05.3	+0.4
ORLT	Orhaneli	1.07	32	PG	Pb	15 53 04.9	+0.1
KCTX	Karacabey (Bur	1.14	8	PN	Pg	15 53 06.1	-0.6
AYVA	Ayvalik	1.15	279	*i* P	Pg	15 53 07.2	+0.2
AYVA				*i* S	Sn	15 53 22.0	+0.6
AYVA				IAML		15 53 23.0	
	comp=E,3μm,0.7s						
BLCB	Balcova	1.15	230	P	Pb	15 53 06.3	+0.2
BLCB	Balcova	1.15	230	PN	Pb	15 53 06.4	+0.3
FOCM	Foa	1.19	250	PN	Pb	15 53 07.0	+0.2
AYDB	Zeytinkoy-Aydi	1.21	190	PN	Pn	15 53 07.2	+0.3
EDC	Edincik	1.23	349	PN	Pn	15 53 07.5	+0.4
KNL	Balıkesir	1.23	337	*i* P	Pn	15 53 07.5	+0.3
KNL				*i* S	Sb	15 53 23.6	+0.5
ULDT	Uludag	1.25	37	*i* P	Pn	15 53 07.9	+0.2
ULDT				*i* S	Sg	15 53 24.9	-0.6
PASA	Karahalli, USA	1.31	127	*i* P	Pb	15 53 09.1	+0.3
PASA				*i* S	Sb	15 53 26.0	+0.7
KHL	Karahalli	1.34	127	PN	Pn	15 53 09.3	+0.6
MDNY	Mudanya-Bursa	1.35	24	PN	Pn	15 53 09.2	+0.4
IGD	Bursa	1.38	35	*i* P	Pn	15 53 09.0	-0.2
IGD				*i* S	Sg	15 53 29.4	0.0
ANDZ	Kutahya, Merke	1.40	74	*i* P	Pn	15 53 09.9	+0.3
ANDZ				*i* S	Sg	15 53 30.8	+0.8
KRBG	Karabiga-Canak	1.42	332	PN	Pn	15 53 10.2	+0.5
GMLD	Gumuldur	1.44	223	PN	Pn	15 53 10.8	+0.9
URLA	Izmir	1.45	238	⇑*i*P	Pn	15 53 10.3	+0.3
URLA				*i* S	Sg	15 53 31.2	-0.3
URLA				IAML		15 53 36.0	
	comp=E,734nm,0.9s						
URLA	Izmir	1.45	238	PN	Pn	15 53 10.4	+0.3
PRK	Paraskevi	1.47	275	P	Pg	15 53 12.4	-0.6
DGB	zmir	1.48	223	*i* P	Pn	15 53 10.3	-0.1
DGB				*i* S	Sg	15 53 31.8	-0.5
DGB				IAML		15 53 33.0	
	comp=N,484nm,0.5s						
DGB				IAML		15 53 36.0	
	comp=E,679nm,0.3s						
AYDN	Tasoluk	1.49	188	⇑*i*P	Pn	15 53 10.9	+0.2
AYDN				*i* S	Sb	15 53 31.9	+1.3
GEMT	Gemlik	1.52	31	PN	Pn	15 53 11.3	+0.2
MRMT	Marmara Adasi	1.52	344	PN	Pn	15 53 11.9	+0.7
IZI	Iznik	1.57	40	PN	Pn	15 53 12.4	+0.6
EZN	Ezine	1.57	296	P	Pn	15 53 12.4	+0.6
EZN	Ezine	1.57	296	PN	Pn	15 53 12.3	+0.5
ZEYE	Izmir, Urla-Ze	1.57	236	*i* P	Pn	15 53 11.3	-0.5
ZEYE				*i* S	Sg	15 53 34.8	-0.8
GPNR	Gulpinar-Canak	1.60	282	PN	Pn	15 53 12.9	+0.7
KOCA	Canakkale, Ayv	1.61	284	*i* P	Pn	15 53 13.0	+0.7
KOCA				*i* S	Sn	15 53 32.2	-0.4
GCAM	G?zelcaml?	1.61	207	*i* P	Pn	15 53 11.7	-0.6
GCAM				*i* S	Sg	15 53 35.8	-0.8
GCAM	G?zelcaml?	1.61	207	PN	Pn	15 53 11.9	-0.4
LPK	Lapseki	1.64	319	PN	Pn	15 53 13.4	+0.7
AUBOZ	BOZOYUK	1.64	61	*i* P	Pg	15 53 15.4	-0.9
AUBOZ	BOZOYUK	1.64	61	PN	Pn	15 53 13.2	+0.3
KURT	Yalova, Merkez	1.66	29	*i* P	Pg	15 53 15.7	-0.9
KURT				*i* P	Pg	15 53 15.7	-0.9
KURT				*i* S	Sg	15 53 36.9	-1.4
KURT				*i* S	Sb	15 53 37.7	+2.2
KURT				IAML		15 53 39.0	
	comp=N,3μm,0.4s						
KURT				IAML		15 53 39.0	
	comp=N,3μm,0.4s						
KURT				IAML		15 53 39.0	
	comp=E,3μm,0.4s						
CESE	eme	1.66	242	PN	Pn	15 53 13.8	+0.8
TRML	Termal-Yalova	1.66	28	PN	Pn	15 53 13.1	0.0
BILE	Bilecik/Merkez	1.67	52	*i* P	Pb	15 53 14.6	-0.5
BILE				*i* S	Sg	15 53 37.5	-1.2
CAVI	Cavuskoy	1.68	50	PN	Pn	15 53 13.8	+0.5
MAR2	Marsite Statio	1.71	338	PN	Pn	15 53 14.3	+0.7
YLV	Yalova	1.71	33	PN	Pn	15 53 13.6	-0.1
AFYO	Afyonkarahisar	1.71	101	*i* P	Pb	15 53 16.0	+0.4
MAR6	Marsite Statio	1.71	337	PN	Pn	15 53 14.5	+0.8
RKY	Sarkoy-Tekirda	1.72	334	PN	Pn	15 53 14.5	+0.6
SART	Tekirdag	1.72	334	*i* P	Pn	15 53 15.0	+1.1
MAR3	Marsite Statio	1.73	338	PN	Pn	15 53 14.7	+0.7
SMG	Samos	1.77	216	P	Pn	15 53 14.0	-0.5
BOZC	Bozcaada	1.77	294	*i* P	Pn	15 53 14.3	-0.3
BOZC				*i* P	Pn	15 53 15.2	+0.7
BOZC				*i* S	Sn	15 53 37.4	+0.6
BOZC				*i* S	Sb	15 53 37.9	-0.7
BOZC				IAML		15 53 43.0	
	comp=E,693nm,0.3s						
BOZC	Bozcaada	1.77	294	PN	Pn	15 53 15.2	+0.7
ADVT	Abdulvahap	1.78	43	PN	Pn	15 53 14.9	+0.3
SIGR	SIGRI	1.79	273	P	Pn	15 53 15.6	+0.8
SIGR	SIGRI	1.79	273	PN	Pn	15 53 15.5	+0.8
GELI	Tayfur-Gelibol	1.81	315	PN	Pn	15 53 15.9	+0.9
CHOS	Chios island	1.81	246	P	Pn	15 53 15.8	+0.7
CHOS	Chios island	1.81	246	PN	Pn	15 53 15.9	+0.8
DDIM	Aydin, Didim	1.83	203	*i* P	Pb	15 53 18.7	+1.1
DDIM				*i* S	Sg	15 53 44.9	+1.3
MLSB	Milas	1.86	189	PN	Pn	15 53 16.1	+0.2
MULA	Mugla, Merkez-	1.88	176	*i* P	Pn	15 53 16.9	+0.7
DIDI	Didim-Aydin	1.90	203	PN	Pn	15 53 17.0	+0.7
TKR	Tekirdag	1.91	346	PN	Pn	15 53 16.7	+0.3
BASM	Basmaki-Afyon	1.92	129	PN	Pn	15 53 17.7	+1.0
BORA	Eskisehir	1.93	67	*i* P	Pb	15 53 19.8	+0.4
BORA				*i* S	Sg	15 53 47.6	+0.9
BORA				IAML		15 53 51.0	
	comp=N,427nm,0.6s						
BORA				IAML		15 53 51.0	
	comp=E,408nm,0.4s						
SHUT	Suhut-Afyon	1.96	107	PN	Pn	15 53 18.1	+0.9
ERIK	Erikli-Kesan	1.98	321	PN	Pn	15 53 18.3	+0.8
KESN	Edirne-Kesan	2.03	327	*i* P	Pn	15 53 18.6	+0.1
KESN				*i* S	Sn	15 53 43.9	+0.3
GADA	Gvkgeada	2.04	302	PN	Pn	15 53 18.9	+0.7
SGAZ	Eskisehir, Sey	2.12	79	*i* P	Pn	15 53 20.4	+1.0
SGAZ				*i* S	Sg	15 53 53.2	+0.4
ENZZ	Sultanice-Enez	2.13	314	PN	Pn	15 53 20.4	+0.9
BODT	Bodrum	2.18	198	P	Pn	15 53 20.2	0.0
BODT	Bodrum	2.18	198	PN	Pn	15 53 20.4	+0.2
CAVK	Edirne/Enez-Ca	2.18	316	*i* P	Pn	15 53 21.1	+0.9
CAVK				*i* S	Sb	15 53 50.8	+0.5
ENEZ	Enez	2.22	317	P	Pn	15 53 22.0	+1.3
DALY	Dalyan (Mula)	2.35	170	PN	Pn	15 53 23.7	+1.2
TURN	Turunc	2.36	178	PN	Pn	15 53 23.3	+0.7
ALN	Alexandroupoli	2.39	318	P	Pn	15 53 23.9	+0.9
SMTH	Samothraki Isl	2.42	304	P	Pn	15 53 24.4	+0.9
DAT	Datca	2.45	191	PN	Pn	15 53 25.0	+1.0
KOSK	Kos Island	2.56	202	PN	Pn	15 53 26.8	+1.4
RDO	Rodhopi	2.84	316	P	Pn	15 53 30.4	+1.2
EDRB	Edirne	2.91	339	P	Pn	15 53 30.6	+0.4
ARG	Arkhangelos	2.92	180	P	Pn	15 53 31.1	+0.8
APE	Apeiranthos	2.93	226	⇑P	Pb	15 53 36.2	-0.2
BRTR	Keskin Array B	4.29	80	Pn	Pn	15 53 51.3	+2.1
	comp=E,1.0nm,0.3s,baz=263,slow=13,SNR=17						
BRTR				Pg	Pg	15 54 04.9	-1.9
	comp=E,2.4nm,0.3s,baz=272,slow=19,SNR=37						
BRTR				Sn	Sn	15 54 38.5	-0.4
	comp=E,0.8nm,0.3s,baz=265,slow=17,SNR=1.9						
BRTR				Lg	Lg	15 55 03.4	
	comp=E,0.7nm,0.3s,baz=261,slow=24,SNR=8.0						
IDI	Anoyia	4.64	215	Pn	Pn	15 53 54.1	0.0
	comp=E,0.6nm,0.3s,baz=261,slow=14,SNR=1.7						
IDI				Sn	Sn	15 54 44.5	-3.2
	comp=E,0.4nm,0.3s,baz=126,slow=21,SNR=1.4						
IDI				Lg	Lg	15 55 08.9	
	baz=76,slow=13,SNR=1.3						
IDI				LR	LR	15 56 02.5	
	comp=E,68nm,19.1s,baz=16,slow=43						
VTS	Vitosha	5.10	315	⇓P	Pn	15 54 01.7	+1.3
STIP	Stip	5.22	301	*i* Pn	Pn	15 54 01.7	-0.3
TIRR	Tirgusor	5.32	2	⇑P	Pn	15 54 04.2	+0.9
BOSS	Bosilegrad	5.46	310	*e*Pn	Pn	15 54 07.1	+1.9
HARR	Harsova	5.55	358	⇑P	Pn	15 54 07.1	+0.6
PRVS	Prvonek	5.71	308	*e*Pn	Pn	15 54 10.8	+2.1
TPGR	Topolog	5.72	2	⇑P	Pn	15 54 09.3	+0.5
ZAPS	Zavoj	5.87	317	*e*Pn	Pn	15 54 12.9	+2.1
CFR	Carcaliu	6.04	360	⇑P	Pn	15 54 14.3	+1.2
BARS	Barje	6.04	309	*e*Pn	Pn	15 54 15.0	+1.7
TLCR		6.06	4	⇑P	Pn	15 54 15.3	+1.8
ZAGS	Zajecar	6.45	318	*e*Pn	Pn	15 54 19.1	+0.3
MLR	Muntele Rosu	6.56	346	⇓P	Pn	15 54 21.8	+1.3
BOVS	Bovan	6.61	315	⇑P	Pn	15 54 22.6	+1.6
BOVS	Bovan	6.61	315	*e*Pn	Pn	15 54 22.7	+1.7
SELS	Selova	6.69	310	*e*Pn	Pn	15 54 23.5	+1.3
VOIR		6.70	341	⇑P	Pn	15 54 23.8	+1.4
PLOR	Plostina	6.80	351	⇑P	Pn	15 54 24.9	+1.3
VRI	Vrincioaia	6.81	352	⇑P	Pn	15 54 25.5	+1.7
COVR	Voineasa-Covas	6.86	348	⇓P	Pn	15 54 26.4	+2.0
DOPR	Dopca	7.12	344	⇑P	Pn	15 54 29.7	+1.6
OZUR		7.17	347	⇓P	Pn	15 54 30.5	+1.8
GRUS	Gruza	7.33	313	*e*Pn	Pn	15 54 32.2	+1.3
MDVR	Moldovita	7.40	322	⇑P	Pn	15 54 32.9	+0.9
TESR	Tescani	7.45	352	⇑P	Pn	15 54 34.3	+1.8
DIVS	Divibare	7.87	312	*e*Pn	Pn	15 54 39.5	+1.1
MMAI	Mount Meron Ar	8.47	134	Pn	Pn	15 54 46.4	-0.3
	comp=E,1.1nm,0.3s,baz=322,slow=12,SNR=5.8						
BURAR	Bucovina Array	8.74	347	⇓P	Pn	15 54 52.7	+2.4
TORD	Torodi Ar. Bea	34.89	229	P	P	15 59 34.4	-0.9
	comp=E,0.3nm,0.5s,baz=41,slow=8.4,SNR=2.6						
MKAR	Makanchi Array	39.66	61	P	P	16 00 15.3	-0.2
	comp=E,0.4nm,0.6s,baz=270,slow=7.9,SNR=4.1						

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*IDC **02** 16:10:59.0±1.4, 18°.55N×145°.39E, h343km±15km, mb3.6/21, mb1 3.7/24, mb1mx3.5/47, mbtmp4.3/24, Error ellipse: s-maj=15.8km s-min=9.5km az=86.0*

*NEIC **02** 16:11:00.6±1.6, 18°.63N±0°.08×145°.3E±0°.1, h342km±4km, mb4.3/81, Error ellipse: s-maj=18.5km s-min=11.8km az=94.0*

ISC 02 16:10:59.9±0.5**, 18°.55N**±0°.06×**145°.30E**±0°.09**, h350**km**, n129, σ1ˢ07**/134**, mb4.2**/57**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	2.23	170	Pn	Pn	16 11 53.8	+0.8
GUMO	Guam	4.95	185	P	Pn	16 12 18.4	-0.6
	3.5nm,0.3s,baz=164,slow=15,SNR=1.9						
GUMO				S	S	16 13 21.4	-1.6
	6.7nm,0.3s,baz=242,slow=12,SNR=1.6						
GUMO	Guam	4.95	185	Pn	Pn	16 12 19.6	+0.5
JCJ	Chichijima	8.98	342	Pn	P	16 13 07.3	-0.7
JHJ	Hachijo jima 2	15.33	342	P	P	16 14 17.8	-0.4
	9.2nm,0.3s,baz=75,slow=22,SNR=2.1						
JHJ				S	S	16 17 02.1	-0.4
	7.6nm,0.3s,baz=81,slow=22,SNR=1.3						
JWT	Wachi	18.84	334	P	P	16 14 55.9	+0.1
JWT				IAmb	IAmb	16 15 18.3	
	comp=Z,12nm,1.0s						
MJAR	Matsushiro Arr	18.99	342	P	P	16 14 55.1	-2.1
	comp=Z,0.1nm,0.3s,baz=166,slow=10,SNR=5.2						
MJAR	Matsushiro Arr	18.99	342	P	P	16 14 56.1	-1.2
MAJO	Matsushiro	18.99	342	P	P	16 14 56.6	-0.7
MAT	Matsushiro	18.99	342	P	P	16 14 56.2	-1.1
JMM	Marumori	19.65	349	P	P	16 15 04.7	+0.5
JMM				IAmb	IAmb	16 15 07.7	
	comp=Z,20nm,1.0s						
JSD	Sado	20.37	344	P	P	16 15 10.8	-0.5
JSD				IAmb	IAmb	16 15 12.5	
	comp=Z,18nm,0.9s						
YULB	Yu-li	22.92	286	P	P	16 15 34.3	-0.3
YULB				IAmb	IAmb	16 15 56.1	
	comp=Z,11nm,1.0s						
YHNB	Yeheng	23.05	290	P	P	16 15 34.9	-0.9
YHNB				IAmb	IAmb	16 15 60.0	
	comp=Z,22nm,1.1s						
SSLB	Suanglung	23.28	287	P	P	16 15 37.5	-0.4
SSLB				IAmb	IAmb	16 15 40.7	
	comp=Z,8.5nm,0.6s						
KSRS	Korea Array	24.22	325	P	P	16 15 46.0	-0.2
	comp=Z,2.4nm,0.6s,baz=143,slow=8.4,SNR=11						
JKA	Kamikawa-asahi	25.59	355	P	P	16 15 59.4	+1.0
ASAJ	Asahikawa	25.59	355	P	P	16 15 59.9	+1.5
	comp=Z,3.5nm,0.5s,baz=221,slow=6.5,SNR=10						
USRK	Ussuriysk Ar.	27.91	339	P	P	16 16 18.9	0.0
	comp=Z,2.7nm,0.8s,baz=162,slow=12,SNR=3.0						
KLR	Kul'dur	32.51	343	P	P	16 16 58.8	-0.2
	comp=Z,2.9nm,0.6s,baz=166,slow=8.1,SNR=20						
BJT	Baijiatuau	32.98	317	P	P	16 17 04.0	+0.8
BJT				IAmb	IAmb	16 17 05.0	
	comp=Z,7.1nm,0.4s						
ENH	Enshi	34.50	297	P	P	16 17 16.5	+0.1
HHC	Hu-ho-hao-te	36.44	315	*e*P	P	16 17 33.5	+0.8
KNRA	Kununurra	37.71	207	P	P	16 17 45.7	+2.4
WB0	Warramunga Arr	39.55	196	P	P	16 17 58.9	+0.4
WB2	Warramunga Arr	39.73	196	P	P	16 18 00.8	+0.8
WRA	Warramunga Arr	39.73	196	P	P	16 18 00.5	+0.5
	comp=Z,0.6nm,0.6s,baz=14,slow=12,SNR=7.1						
WRA				PcP	PcP	16 19 58.1	-0.5
	comp=Z,0.3nm,0.8s,baz=13,slow=3.1,SNR=4.6						
WRA	Warramunga Arr	39.73	196	P	P	16 18 00.6	+0.5
MA2	Magadan	41.17	4	P	P	16 18 12.3	+1.2
MA2				IAmb	IAmb	16 18 12.8	
	comp=Z,16nm,1.1s						
ULN	Ulaanbaatar	42.66	322	P	P	16 18 23.8	+0.4
SONM	Songino Array	43.03	322	P	P	16 18 26.5	+0.1
	comp=Z,3.9nm,0.6s,baz=139,slow=8.0,SNR=17						
SONM	Songino Array	43.03	322	P	P	16 18 26.8	+0.4
AS31	Alice Springs	43.41	195	P	P	16 18 29.9	+0.4
ASAR	Alice Springs	43.41	195	P	P	16 18 28.6	-0.9
	comp=Z,0.2nm,0.7s,baz=14,slow=14,SNR=9.7						
ASAR				PcP	PcP	16 20 11.3	+0.5
	comp=Z,0.2nm,0.6s,baz=28,slow=3.4,SNR=4.1						
ASAR	Alice Springs	43.41	195	P	P	16 18 30.1	+0.7
ASAR				PcP	PcP	16 20 11.7	+0.8
CM31	Chiang Mai Arr	43.87	278	P	P	16 18 34.3	+1.1
CMAR	Chiang Mai Arr	43.87	278	P	P	16 18 33.4	+0.2
	comp=Z,3.3nm,0.8s,baz=70,slow=6.8,SNR=29						
CMAR	Chiang Mai Arr	43.87	278	P	P	16 18 33.9	+0.7
GTA	Gaotai	44.34	308	*e*P	P	16 18 37.3	+0.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
SEY	Seymchan	44.62	5	P	P	16 18 37.9	-0.6
	comp=Z,3.2nm,0.9s,baz=192,slow=6.7,SNR=6.6						
YAK	Yakutsk	44.80	350	P	P	16 18 38.0	-1.8
	comp=Z,9.2nm,0.5s,baz=68,slow=1.7,SNR=11						
YAK	Yakutsk	44.80	350	P	P	16 18 39.4	-0.5
SHL	Shillong	49.73	288	P	P	16 19 17.7	-0.7
GSI	Gunungsitoli	49.82	256	P	P	16 19 18.8	-0.2
GSI				IAmb	IAmb	16 19 20.1	
	comp=Z,8.2nm,0.6s						
LSA	Lhasa	50.27	293	P	P	16 19 22.5	-0.1
LSA				IAmb	IAmb	16 19 25.3	
	comp=Z,6.3nm,0.5s						
BILL	Bilibino	51.23	10	P	P	16 19 27.6	-0.9
TIXI	Tiksi	53.98	354	P	P	16 19 47.8	-0.6
WMQ	Urumqi	54.12	311	*e*P	P	16 19 52.6	+2.5
ZAA0	Zalesovo Array	57.91	323	P	P	16 20 16.2	-0.1
ZAA0				IAmb	IAmb	16 20 17.8	
	comp=Z,6.2nm,0.6s						
ZALV	Zalesovo Beam	57.91	323	P	P	16 20 16.6	+0.3
	comp=Z,5.0nm,0.4s,baz=113,slow=8.2,SNR=26						
ZALV	Zalesovo Beam	57.91	323	P	P	16 20 15.9	-0.3
MK31	Makanchi Array	58.30	314	P	P	16 20 20.1	+0.9
MK31				IAmb	IAmb	16 20 21.3	

	comp=Z,4.9nm,0.7s						
MKAR	Makanchi Array	58.30	314	P	P	16 20 19.6	+0.5
	comp=Z,7.9nm,0.7s,baz=90,slow=8.1,SNR=72						
MKAR	Makanchi Array	58.30	314	P	P	16 20 19.9	+0.7
MAKZ	Makanchi	58.51	314	P	P	16 20 21.4	+0.7
O18K	Koktuh Hills	58.93	31	P	P	16 20 25.0	+1.7
SVW2	Sparrevohn	59.14	29	P	P	16 20 26.4	+1.7
TTA	Tatalina	59.55	27	P	P	16 20 28.9	+1.4
N19K	Bonanza Creek	59.56	30	P	P	16 20 29.1	+1.6
N19K				IAmb	IAmb	16 20 30.2	
	comp=Z,6.6nm,0.8s						
L19K	White Mountain	59.81	28	P	P	16 20 29.4	+0.2
P19K	Oil Pt	59.84	31	P	P	16 20 29.8	+0.4
K20K	Telida	60.53	27	P	P	16 20 35.8	+1.8
K20K				IAmb	IAmb	16 20 37.0	
	comp=Z,5.7nm,0.8s						
J20K	Nowinta River	60.76	26	P	P	16 20 37.4	+2.0
J20K				IAmb	IAmb	16 20 37.7	
	comp=Z,5.6nm,0.6s						
CNPM	China Poot	60.79	31	P	P	16 20 36.4	+0.7
PRZ	Przheval'sk	60.79	309	P	P	16 20 37.8	+1.5
KURK	Kurchatov	61.13	318	P	P	16 20 37.7	-0.5
PPLA	Purkeypile	61.21	28	P	P	16 20 40.0	+1.4
PPLA				IAmb	IAmb	16 20 49.3	
	comp=Z,9.8nm,1.2s						
CAST	Castle Rocks	61.40	27	P	P	16 20 41.1	+1.3
IMAR	Indian Mountai	61.51	24	P	P	16 20 41.9	+1.5
NRIK	Noril'sk	61.62	340	P	P	16 20 41.7	+0.6
	comp=Z,8.2nm,0.7s,baz=116,slow=9.2,SNR=25						
NRIK	Noril'sk	61.62	340	P	P	16 20 41.5	+0.4
NRIK				IAmb	IAmb	16 20 42.9	
	comp=Z,9.2nm,0.8s						
KDJ	Kajisay	61.69	308	P	P	16 20 42.9	+0.6
KDJ				IAmb	IAmb	16 20 45.0	
	comp=Z,6.1nm,0.9s						
H21K	Melozitna Rive	61.77	25	P	P	16 20 43.8	+1.6
H21K				IAmb	IAmb	16 20 44.2	
	comp=Z,3.2nm,0.6s						
RC01	Rabbit Creek A	61.87	30	P	P	16 20 43.7	+0.8
RC01				IAmb	IAmb	16 20 45.8	
	comp=Z,5.0nm,0.6s						
I21K	Tanana	61.95	25	P	P	16 20 45.1	+1.8
I21K				IAmb	IAmb	16 20 45.5	
	comp=Z,5.3nm,0.6s						
PMR	Palmer	62.27	29	P	P	16 20 45.9	+0.4
PMR				IAmb	IAmb	16 20 46.6	
	comp=Z,4.7nm,0.5s						
MLY	Manley	62.41	25	P	P	16 20 47.8	+1.3
MLY				IAmb	IAmb	16 20 48.4	
	comp=Z,5.2nm,0.6s						
PWL	Port Wells	62.49	30	P	P	16 20 47.7	+0.7
BOOM	Boomskoye usch	62.61	309	P	P	16 20 49.0	+0.7
BOOM				IAmb	IAmb	16 20 50.8	
	comp=Z,4.6nm,0.7s						
KSH	Kashi	62.65	305	P	P	16 20 52.5	+3.9
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SML	Sawmill	62.69	29	P	P	16 20 48.9	+0.6
SML				IAmb	IAmb	16 20 50.3	
	comp=Z,9.5nm,1.0s						
RND	Reindeer	62.80	27	P	P	16 20 49.1	+0.1
I23K	Minto, Yukon-K	63.01	26	P	P	16 20 51.3	+1.0
I23K				IAmb	IAmb	16 20 52.6	
	comp=Z,5.3nm,0.7s						
AAK	Ala-Archa	63.67	309	P	P	16 20 55.7	+0.5
H24K	Noodor Dome	63.78	25	P	P	16 20 56.1	+0.8
H24K				IAmb	IAmb	16 20 57.5	
	comp=Z,2.4nm,0.5s						
HDA	Harding Lake	63.84	27	P	P	16 20 55.8	0.0
HDA				IAmb	IAmb	16 20 56.3	
	comp=Z,3.4nm,0.6s						
TOLK	Toolik Lake Re	63.87	22	P	P	16 20 57.6	+1.7
TOLK				IAmb	IAmb	16 20 58.3	
	comp=Z,6.3nm,1.1s						
IL31		63.95	26	P	P	16 20 56.0	-0.3
ILAR	Eielson Array	63.95	26	P	P	16 20 56.0	-0.4
	comp=Z,3.2nm,0.7s,baz=248,slow=5.7,SNR=52						
PAX	Paxson	64.22	28	P	P	16 20 59.1	+0.9
PAX				IAmb	IAmb	16 20 59.9	
	comp=Z,5.9nm,0.6s						
BMRM	Bremner River	64.31	31	P	P	16 21 00.3	+1.5
N25K	Chitina, Valde	64.40	30	P	P	16 21 00.8	+1.3
N25K				IAmb	IAmb	16 21 29.3	
	comp=Z,6.3nm,1.1s						
RIDG	Independent Ri	64.63	28	P	P	16 21 01.8	+1.0
RIDG				IAmb	IAmb	16 21 02.4	
	comp=Z,4.8nm,0.6s						
VRDI	Verde Repeater	64.89	30	P	P	16 21 03.7	+0.9
VRDI				IAmb	IAmb	16 21 21.3	
	comp=Z,9.2nm,1.2s						
DOT	Dot Lake	64.96	28	P	P	16 21 03.9	+1.0
DOT				IAmb	IAmb	16 21 04.4	
	comp=Z,6.0nm,0.7s						
SCRK	Sand Creek	65.04	27	P	P	16 21 04.3	+0.7
TGL	Tana Glacier	65.14	31	P	P	16 21 05.3	+1.1
NIL	Nilore	65.28	299	P	P	16 21 06.4	+0.9
ISLE	Juniper Island	65.36	31	P	P	16 21 07.0	+1.3
BMAR	Burnt Mountain	65.40	24	P	P	16 21 07.8	+2.1
M27K	Edge Creek, AK	65.77	29	P	P	16 21 09.4	+1.1
L27K	Beaver Creek,	65.87	28	P	P	16 21 09.3	+0.5
L27K				IAmb	IAmb	16 21 10.7	
	comp=Z,2.7nm,0.7s						
BCAR	Beaver Creek A	65.89	28	P	P	16 21 09.9	+1.0
TABL	Table Mountain	65.94	31	P	P	16 21 11.0	+1.5
BRVK	Borovoye	66.42	320	P	P	16 21 12.4	+0.1
KKAR	Karatay Array	66.58	310	P	P	16 21 14.1	+0.6
GAR	Garm	67.07	305	P	P	16 21 17.4	+0.5
HYT	Haines Junctio	67.75	31	P	P	16 21 23.0	+2.3
HYT				IAmb	IAmb	16 21 23.9	
	comp=Z,5.8nm,0.9s						
CHGR	Chuyangaron	68.00	305	P	P	16 21 23.6	+1.0
KBL	Kabul	68.63	301	P	P	16 21 27.7	+1.0
KBL				IAmb	IAmb	16 21 28.5	
	comp=Z,5.8nm,0.7s						
INK	Inuvik	69.66	23	P	P	16 21 31.2	-0.8
	comp=Z,2.9nm,0.7s,baz=263,slow=6.5,SNR=7.5						
INK	Inuvik	69.66	23	P	P	16 21 32.5	+0.5
INK				IAmb	IAmb	16 21 33.2	
	comp=Z,3.4nm,0.8s						
A36M	Sachs Harbour	72.34	19	P	P	16 21 48.6	+0.7
A36M				IAmb	IAmb	16 21 49.4	
	comp=Z,4.6nm,0.8s						
ARU	Arti	72.97	325	P	P	16 21 52.3	+0.4
ABKAR	Akbulak array	73.19	317	P	P	16 21 53.4	0.0
YKA	Yellowknife Ar	78.30	28	P	P	16 22 22.0	+0.3
	comp=Z,0.8nm,0.4s,baz=287,slow=5.3,SNR=9.0						
KLMR	Klimovskoe	81.41	332	*e*P	P	16 22 37.0	-1.3
KLMR				AMP		16 22 38.7	
	comp=Z,12nm,1.1s						
ARCES	ARCESS Array B	82.52	342	P	P	16 22 43.0	-0.9
	comp=Z,3.4nm,0.7s,baz=72,slow=5.1,SNR=14						
ARCES	ARCESS Array B	82.52	342	P	P	16 22 43.6	-0.3
ARCES				IAmb	IAmb	16 23 04.6	
	comp=Z,4.7nm,1.1s						
NVAR	Mina Array Bea	83.53	52	P	P	16 22 48.6	-1.3
	comp=Z,1.1nm,0.7s,baz=267,slow=6.0,SNR=9.4						
NVAR	Mina Array Bea	83.53	52	P	P	16 22 50.3	+0.4
KBZ	Khabaz	85.98	315	P	P	16 23 00.4	-1.2
	comp=Z,1.9nm,0.8s,baz=85,slow=2.5,SNR=2.1						
FINES	FINESS Array B	86.86	335	P	P	16 23 03.6	-1.8
	comp=Z,1.5nm,0.4s,baz=52,slow=4.9,SNR=23						
FINES	FINESS Array B	86.86	335	P	P	16 23 03.9	-1.5
TXAR	Lajitas Array	98.23	55	P	P	16 23 57.4	-1.1
	comp=Z,0.4nm,0.8s,baz=266,slow=3.6,SNR=2.6						
PSGCX	Pisagua	146.54	98	PKPbc	PKPbc	16 30 01.9	+0.4
PB11	IPOC Station P	146.99	98	PKPbc	PKPbc	16 30 02.9	+0.1
PB08	IPOC Station P	147.48	99	PKPbc	PKPbc	16 30 05.1	+0.7
LPAZ	La Paz	148.04	91	PKPbc	PKPbc	16 30 05.5	-0.8
	comp=Z,0.6nm,0.6s,baz=288,slow=3.2,SNR=2.1						

DJA 02 16:26:09.8±0.9, 3°S±8°×12°8E±°, h22^{km}±14^{km}, M3.6/9, mb4.1/3, MLv3.3/9, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	Ambon	0.72	180	P	Pn	16 26 24.4	-0.3
MSAI	Masohi	0.82	118	P	Pn	16 26 26.4	+0.3
SANI	Sanana	2.39	292	P	Pn	16 26 46.6	-1.0
LBMI	Labuha	2.41	343	P	Pn	16 26 49.0	+1.0
LBMI				S	Sn	16 27 17.7	+0.9
SWI	Sorong	3.70	56	P	Pn	16 27 05.0	-0.7
APSI	Ampana	6.86	287	P	Pn	16 27 48.9	-0.2
	0.1nm37nm,0.9s						
MRSI	Marisa	7.13	299	P	Pn	16 27 56.9	+4.1

IDC 02 16:33:02.0±2.0, 34°.19S×108°.83W, h0^{km}, mb3.9/2, mb1 4.3/2, mb1mx3.8/20, mbtmp3.9/2, MS3.9/8, Ms1 3.9/8, ms1mx3.6/21, Error ellipse: s-maj=115.0km s-min=57.0km az=101.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	7.06	356	LR	LR	16 36 19.8	
	comp=Z,33nm,19.4s,baz=139,slow=28						
PLCA	Paso Flores	30.89	114	LR	LR	16 48 34.7	
	comp=Z,158nm,22.0s,baz=288,slow=30						
MEH	Mehetia	38.55	285	*e*T	T	17 20 41.3	
	14nm,0.2s						
PPT2	Papeete2	39.92	284	*e*LR	LR	16 51 17.3	
	comp=Z,345nm,25.0s						
PPT	Papeete	39.93	284	LR	LR	16 52 08.1	
	comp=Z,246nm,19.2s,baz=83,slow=29						
LPAZ	La Paz	40.58	74	LR	LR	16 53 37.0	
	comp=Z,126nm,20.7s,baz=226,slow=30						
CPUP	Villa Florida	44.77	94	LR	LR	16 56 59.9	
	comp=Z,118nm,18.1s,baz=234,slow=32						
ROSC	El Rosal	50.67	47	LR	LR	16 59 58.1	
	comp=Z,98nm,20.3s,baz=230,slow=32						
VNDA	Vanda	56.76	195	LR	LR	17 01 45.9	
	comp=Z,50nm,20.6s,baz=92,slow=30						
NVAR	Mina Array Bea	72.79	352	P	P	16 44 32.8	+0.4
	1.3nm,0.8s,baz=183,slow=7.0,SNR=7.9						
DZM	Mont Dzumac	73.76	254	*e*LR	LR	17 06 44.3	
	comp=Z,106nm,31.0s						
PDAR	Pinedale Array	76.59	359	P	P	16 44 53.7	-0.7
	0.3nm,0.5s,baz=144,slow=6.3,SNR=4.1						
STKA	Stephens Creek	86.69	233	LR	LR	17 18 53.8	
	comp=Z,72nm,18.2s,baz=33,slow=32						
PMG	Port Moresby	96.16	254	LR	LR	17 20 00.0	
	comp=Z,69nm,21.6s,baz=342,slow=29						
AKASG	Malin Array Be	145.46	49	PKPbc	PKPdf	16 52 41.0	-0.6
	0.2nm,0.3s,baz=270,slow=4.1,SNR=2.8						
CMAR	Chiang Mai Arr	150.72	245	PKPbc	PKPbc	16 52 56.3	-0.4
	0.5nm,0.4s,baz=155,slow=1.6,SNR=5.8						
ZALV	Zalesovo Beam	158.02	338	PKPab	PKPab	16 53 33.4	-0.1
	0.6nm,0.6s,baz=38,slow=2.6,SNR=2.4						

JMA 02 17:16:11.0±0.1, 23°.99N×121°.69E, h40^{km}±1^{km}, M2.5
TAP 02 17:16:11.7, 24°.02N×121°.69E, h38^{km}, ML3.4, B

ISC 02 17:16:11.7±0.9, 24°.01N±0°.02×121°.74E±0°.02, h30^{km}±6^{km}, n104, $\sigma 1^{s}.05$/189, 8D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien	0.12	254	P	Pn	17 16 18.6	+0.9
	baz=237						
HWA				S	Sn	17 16 23.4	+2.2
	baz=237						
TWD	Chiawan	0.15	298	P	Pn	17 16 18.2	+0.3
	baz=306						
TWD				S	Sn	17 16 22.9	+1.2
	baz=306						
ETL	Fush Village	0.18	325	P	Pb	17 16 18.7	+0.9
	baz=327						
ETL				*e*S	Sn	17 16 23.4	+0.8
	baz=327						
TEYL	Yanliau Villag	0.19	222	*e*P	Pb	17 16 18.6	+0.8
	baz=207						
NACB	Ninganchiao	0.21	322	P	Pb	17 16 18.7	+0.6
	baz=318						
NACB				S	Sn	17 16 23.8	+0.6
	baz=318						
ETM	Tongmen	0.23	259	*i* P	Pb	17 16 18.7	+0.4
	baz=263						
ETM				S	Sn	17 16 23.7	0.0
	baz=263						
ETLH	Xiulin Townshi	0.30	310	P	Pb	17 16 19.5	+0.1
	baz=305						
ETLH				*e*S	Sb	17 16 24.9	+0.4
	baz=305						
ESL	Shilin	0.34	235	P	Pb	17 16 19.6	-0.1
	baz=235						
ESL				*e*S	Sb	17 16 25.5	+0.3
	baz=235						
TEGC	Jichi Village	0.35	211	*e*P	Pb	17 16 20.9	+1.0
	baz=197						
TEGC				*e*S	Sn	17 16 29.1	+2.4
	baz=197						
ENA	Nanau	0.42	1	P	Pb	17 16 21.0	+0.1
	baz=14						
ENA				*e*S	Sb	17 16 28.3	+1.2
	baz=14						
EWUT	Wuta	0.43	5	P	Pb	17 16 21.3	+0.2
	baz=17						
EWUT				*e*S	Sb	17 16 28.9	+1.3
	baz=17						
EGFH	Guangfu	0.44	220	*e*P	Pb	17 16 21.1	-0.2
	baz=225						
EGFH				*e*S	Sb	17 16 27.8	0.0
	baz=225						
WHF	Hehuan Shan	0.45	287	⇓*i*P	Pb	17 16 21.4	-0.3
	baz=281						
WHF				*e*S	Sb	17 16 28.2	-0.4
	baz=281						
FUSS	Fushou	0.51	298	*i* P	Pb	17 16 22.4	-0.1
	baz=299						
FUSS				*e*S	Sb	17 16 29.9	+0.1
	baz=299						
OWD	Renai	0.52	264	⇓*i*P	Pb	17 16 22.2	-0.3
	baz=268						
OWD				*e*S	Sb	17 16 29.1	-0.9
	baz=268						
CHGB	Renai	0.52	276	⇓*i*P	Pb	17 16 22.4	-0.2
	baz=268						
CHGB				*e*S	Sb	17 16 29.5	-0.5
	baz=268						
NNSB	Datong	0.53	322	⇓*i*P	Pb	17 16 22.4	-0.3
	baz=325						
NNSB				*e*S	Sb	17 16 29.4	-0.8
	baz=325						
NNS	Nan Shan	0.54	322	⇓*i*P	Pb	17 16 22.6	-0.3
	baz=325						
NNS				*e*S	Sb	17 16 30.1	-0.5
	baz=325						
TWT	Tachien	0.57	295	*i* P	Pb	17 16 23.3	-0.1
	baz=292						
TWT				*e*S	Sb	17 16 31.2	-0.1
	baz=292						
TDCB	Techi	0.58	295	⇓*i*P	Pb	17 16 23.4	-0.2
	baz=292						
TDCB				*e*S	Sb	17 16 31.1	-0.6
	baz=292						
HGSD	Ruisui	0.59	209	P	Pb	17 16 23.6	0.0
	baz=218						
HGSD				*e*S	Sb	17 16 34.1	+2.4
	baz=218						
TWC	Suao	0.60	10	P	Pb	17 16 24.2	+0.3
	baz=20						
TWC				*e*S	Sb	17 16 33.5	+1.3
	baz=20						
NDS	Dongshan	0.62	358	P	Pn	17 16 23.9	-0.6
	baz=352						
NDS				*e*S	Sb	17 16 32.9	+0.2
	baz=352						
NDT	Datong Townshi	0.62	341	*e*P	Pn	17 16 24.0	-0.6
	baz=344						
NDT				*e*S	Sb	17 16 33.0	+0.2
	baz=344						
EHY	Hungye	0.63	217	*e*P	Pn	17 16 22.9	-1.7
	baz=213						
ENTT	Nioudou	0.65	346	P	Pn	17 16 24.4	-0.5
	baz=350						
ENTT				*e*S	Sb	17 16 33.5	+0.2
	baz=350						
TWE	Neicheng	0.71	355	*i* P	Pn	17 16 25.3	-0.4
	baz=350						
TWE				*e*S	Sb	17 16 34.9	-0.2
	baz=350						
YHNB	Yeheng	0.73	333	*i* P	Pn	17 16 25.6	-0.5
	baz=336						
YHNB				*e*S	Sn	17 16 35.0	-1.3
	baz=336						
YULB	Yu-li	0.73	213	*e*P	Pn	17 16 24.4	-1.7
	baz=211						
YULB				*e*S	Sn	17 16 34.5	-1.8
	baz=211						
NSK	Sanguang	0.75	333	⇓*i*P	Pn	17 16 25.7	-0.6
	baz=335						
NSK				S	Sn	17 16 35.5	-1.2
	baz=335						
SSLB	Suanglung	0.75	253	⇓*i*P	Pn	17 16 25.4	-0.9
	baz=255						
SSLB				*e*S	Sn	17 16 34.8	-1.9
	baz=255						
ILA	Ilan	0.75	1	*e*P	Pn	17 16 25.7	-0.6
	baz=356						
WCS	Beigang Elemen	0.76	274	P	Pn	17 16 25.9	-0.5
	baz=273						
WCS				*e*S	Sn	17 16 35.9	-0.8
	baz=273						
EYUL	Yuli	0.76	210	*e*P	Pn	17 16 25.0	-1.4
	baz=217						
WHP	Taichung City	0.77	290	P	Pn	17 16 26.2	-0.4
	baz=286						
WHP				*e*S	Sn	17 16 36.5	-0.7
	baz=286						
SMLT	Sun Moon Lake	0.78	261	P	Pn	17 16 26.0	-0.7
	baz=257						
SMLT				*e*S	Sn	17 16 36.8	-0.6
	baz=257						
NWLT	Wulai	0.79	344	P	Pn	17 16 26.0	-0.9
	baz=347						
NWLT				S	Sn	17 16 36.4	-1.4
	baz=347						
TYC	Yuchr	0.81	263	P	Pn	17 16 26.6	-0.5
	baz=256						
TYC				*e*S	Sn	17 16 36.9	-1.2
	baz=256						
NTC	Toucheng	0.84	6	P	Pn	17 16 27.8	+0.2
	baz=17						
NTC				*e*S	Sn	17 16 39.5	+0.6
	baz=17						
FULB	Fuli	0.90	207	P	Pn	17 16 28.7	+0.3
	baz=214						
FULB				*e*S	Sn	17 16 41.7	+1.2
	baz=214						
LIOB	Emei	0.91	314	*i* P	Pn	17 16 29.0	+0.5
	baz=315						
LIOB				S	Sn	17 16 40.5	-0.1
	baz=315						
NSTT	Nanjuang	0.91	313	*i* P	Pn	17 16 29.0	+0.4
	baz=314						
NSTT				*e*S	Sn	17 16 40.5	-0.2
	baz=314						
WJS	Zhushan	0.94	259	*e*P	Pn	17 16 29.6	+0.7
	baz=258						
WJS				*e*S	Sn	17 16 42.2	+0.8
	baz=258						
TIPB	Shuangxi	0.96	5	P	Pn	17 16 29.3	+0.1
	baz=359						
TIPB				S	Sn	17 16 43.9	+2.0
	baz=359						
NHDH	Xindian Distri	0.97	349	*e*P	Pn	17 16 29.3	0.0
	baz=343						
NHDH				*e*S	Sn	17 16 41.8	-0.2
	baz=343						
CHKT	Chengkung	0.97	201	*e*P	Pn	17 16 28.4	-0.9
	baz=186						
WNT	Mingjian	0.97	262	P	Pn	17 16 29.8	+0.5
	baz=261						
WNT				S	Sn	17 16 42.8	+0.7
	baz=261						
TWA	Mucha	0.97	352	*e*P	Pn	17 16 29.5	+0.1
	baz=347						
TWA				*e*S	Sn	17 16 42.2	0.0
	baz=347						
NSY	Sanyi	0.98	295	*e*P	Pn	17 16 30.0	+0.6
	baz=295						
NSY				*e*S	Sn	17 16 43.0	+0.7
	baz=295						
TCU	Taichung	0.98	278	*e*P	Pn	17 16 29.7	+0.3
	baz=278						
TCU				*e*S	Sn	17 16 43.7	+1.4
	baz=278						
ALS	Alishan	0.99	240	P	Pn	17 16 29.8	0.0
	baz=231						
ALS				*e*S	Sn	17 16 42.2	-0.7
	baz=231						
TWB1	Santiao Chiao	1.02	13	*e*P	Pn	17 16 30.8	+0.8
	baz=26						
TWB1				*e*S	Sn	17 16 44.5	+1.2
	baz=26						
SBCB	Hsinchu	1.04	319	*e*P	Pn	17 16 29.9	-0.3
	baz=327						
TAP	Taipei	1.05	348	*e*P	Pn	17 16 31.1	+0.7
	baz=351						
ELDTW	Lidau	1.05	219	*e*P	Pn	17 16 30.2	-0.3
	baz=209						
CHN5	Tsauling	1.05	247	*e*P	Pn	17 16 31.1	+0.6
	baz=236						
CHN5				*e*S	Sn	17 16 44.9	+0.7
	baz=236						
HSN	Hsinchu	1.05	319	*e*P	Pn	17 16 31.2	+0.7
	baz=322						
HSN				*e*S	Sn	17 16 45.6	+1.5
	baz=322						
WDJ	Dajia District	1.06	289	*e*P	Pn	17 16 30.7	+0.2
	baz=289						
WDJ				*e*S	Sn	17 16 45.3	+1.1
	baz=289						
NWF	Wu-fen Shan	1.06	2	*e*P	Pn	17 16 30.8	+0.2
	baz=353						
NWF				*e*S	Sn	17 16 45.6	+1.2
	baz=353						
NCUH	Zhongli	1.08	332	*e*P	Pn	17 16 31.4	+0.6
	baz=334						
NCUH				*e*S	Sn	17 16 46.6	+1.8
	baz=334						
NCU	National Centr	1.08	332	*e*P	Pn	17 16 31.1	+0.3
	baz=334						
NCU				*e*S	Sn	17 16 46.1	+1.3
	baz=334						
WCHH	Zhanghua	1.08	274	*e*P	Pn	17 16 30.8	0.0
	baz=273						
WCHH				*e*S	Sn	17 16 45.7	+0.9
	baz=273						
EDH	Donghe	1.11	201	*e*P	Pn	17 16 30.5	-0.7
	baz=190						
EDH				*e*S	Sn	17 16 44.0	-1.4
	baz=190						
TWS1	Kuangyinshan	1.12	345	*e*P	Pn	17 16 30.6	-0.8
	baz=347						
TWS1				*e*S	Sn	17 16 46.7	+0.8
	baz=347						
YM01	YM01	1.14	352	*e*P	Pn	17 16 31.3	-0.4
	baz=354						
YM01				*e*S	Sn	17 16 45.9	-0.5
	baz=354						
WDLH	Douliu	1.14	254	*e*P	Pn	17 16 32.1	+0.4
	baz=253						
WDLH				*e*S	Sn	17 16 47.3	+0.9
	baz=253						
NTST	Danshui	1.18	347	*e*P	Pn	17 16 31.8	-0.4
	baz=349						
NTST				*e*S	Sn	17 16 48.9	+1.7
	baz=349						
ANP	Anpu	1.19	351	*e*P	Pn	17 16 31.4	-1.0
	baz=353						
JYNG	Yonagunijimaku	1.19	68	P	Pn	17 16 32.6	+0.3
JYNG				*e*S	Sn	17 16 47.8	+0.4
STYH	Taoyuan	1.22	227	*e*P	Pn	17 16 33.0	+0.3
	baz=222						
STYH				*e*S	Sn	17 16 47.6	-0.5
	baz=222						
LONT	Longtian	1.23	207	P	Pn	17 16 31.3	-1.6
	baz=206						
LONT				*e*S	Sn	17 16 48.1	-0.4
	baz=206						
TPUB	Ta-pu	1.24	235	P	Pn	17 16 34.0	+1.0
	baz=227						
TPUB				*e*S	Sn	17 16 49.8	+1.2
	baz=227						
YOJ	Yonaguni jima	1.25	69	*e*P	Pn	17 16 32.9	-0.2
	baz=69						
YOJ	Yonaguni jima	1.25	69	P	Pn	17 16 33.3	+0.2
YOJ				S	Sn	17 16 49.3	+0.4
WRL	Guolierlin Hig	1.25	265	*e*P	Pn	17 16 33.9	+0.7
	baz=276						
WRL				*e*S	Sn	17 16 50.0	+1.1
	baz=276						
WTK	Tuku	1.27	256	P	Pn	17 16 34.5	+1.0
	baz=255						
WTK				*e*S	Sn	17 16 51.7	+2.2
	baz=255						
WTP	Ta-pu	1.28	234	*i* P	Pn	17 16 34.2	+0.6
	baz=233						
WTP				*e*S	Sn	17 16 51.5	+1.7

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
	baz=233						
CHY	Chiayi	1.31	247	eP	Pn	17 16 36.4	+2.5
	baz=245						
WTCT	Ta-ch'eng	1.34	264	eP	Pn	17 16 34.8	+0.5
	baz=274						
WTCT				eS	Sn	17 16 52.9	+1.8
	baz=274						
LDUT	Ludao	1.35	190	eP	Pn	17 16 32.5	-2.1
	baz=183						
LDUT				eS	Sn	17 16 49.1	-2.4
	baz=183						
TWK	Hsinying	1.36	237	eP	Pn	17 16 35.7	+1.0
	baz=227						
TWK				eS	Sn	17 16 53.0	+1.2
	baz=227						
CHN1	Nanshi	1.38	234	eP	Pn	17 16 35.7	+0.8
	baz=233						
CHN1				eS	Sn	17 16 53.4	+1.2
	baz=233						
SNST	Tainan City	1.38	236	eP	Pn	17 16 36.5	+1.6
	baz=235						
SNST				eS	Sn	17 16 54.2	+2.0
	baz=235						
SGST	Jiashian	1.41	229	eP	Pn	17 16 35.4	+0.1
	baz=218						
SGST				eS	Sn	17 16 53.4	+0.6
	baz=218						
SLGT	Liugui	1.42	225	eP	Pn	17 16 36.9	+1.4
	baz=224						
SLGT				eS	Sn	17 16 54.9	+1.6
	baz=224						
WSF	Szhu	1.44	255	eP	Pn	17 16 36.9	+1.2
	baz=255						
WSF				eS	Sn	17 16 55.8	+2.3
	baz=255						
ICHU	Yijhu	1.48	244	eP	Pn	17 16 37.4	+1.1
	baz=244						
ICHU				eS	Sn	17 16 56.2	+1.5
	baz=244						
CHN8	Yiju	1.55	245	eP	Pn	17 16 38.1	+0.9
	baz=244						
CHN8				eS	Sn	17 16 58.5	+2.2
	baz=244						
ECL	Taimali	1.58	207	eP	Pn	17 16 36.6	-1.1
	baz=197						
SSD	Sandimen	1.62	219	eP	Pn	17 16 39.2	+1.0
	baz=219						
SSD				eS	Sn	17 17 00.2	+2.1
	baz=219						
TSMG	Majia	1.64	218	eP	Pn	17 16 40.1	+1.6
	baz=219						
TSMG				eS	Sn	17 17 00.6	+1.9
	baz=219						
TWM1	Shoushan	1.69	226	eP	Pn	17 16 43.1	+3.9
	baz=235						
IRIF	Iriomote-Funau	1.85	80	P	Pn	17 16 41.8	+0.4
IRIF				eS	Sn	17 17 04.2	+0.4
HATJ	Hateruma jima	1.89	88	P	Pn	17 16 42.7	+0.7
HATJ				eS	Sn	17 17 05.5	+0.7
SCZT	Fangliau	1.93	212	eP	Pn	17 16 43.9	+1.4
	baz=226						
SCZT				eS	Sn	17 17 06.9	+1.2
	baz=226						
SLIU	Shizi	1.98	206	eP	Pn	17 16 44.7	+1.4
	baz=196						
PHUB	P'eng-hu	2.04	256	eP	Pn	17 16 43.1	-1.0
	baz=256						
PHUB				eS	Sn	17 17 07.1	-1.4
	baz=256						
PNG	Penghu	2.05	258	P	Pn	17 16 43.5	-0.6
	baz=256						
JKRS	Kuro-shima	2.09	83	P	Pn	17 16 46.2	+1.5
JKRS				S	Sn	17 17 11.0	+1.3
JIJ	Ishigaki jima	2.23	80	P	Pn	17 16 46.8	+0.2
JIJ				eS	Sn	17 17 12.4	-0.7
VCHM	Qimei	2.26	250	eP	Pn	17 16 47.0	-0.1
	baz=237						
JISG	Ishigakijimahi	2.42	76	P	Pn	17 16 49.6	+0.4
JISG				S	Sn	17 17 17.3	-0.5
MATB	Ma-tsu	2.68	323	eP	Pn	17 16 53.7	+0.9
	baz=322						
LYJJ	Jianjiangzhen	3.10	325	eP	Pn	17 16 58.4	-0.2
	baz=324						

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*IDC **02** 17:35:45.3±1.4, 27°.87N×87°.13E, h0^{km}, mb3.7/7, mb1 3.8/8, mb1mx3.5/41, mbtmp3.6/8, ML3.8/1, Error ellipse: s-maj=60.3km s-min=19.1km az=62.0*

*DMN **02** 17:35:51.0±0.0, 28°.05N×87°.41E, h60^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 02 17:35:50.2±1.6, **28°.10N**±0°.07×**87°.30E**±0°.05, **h27**^{km}±13^{km}, **n21**, σ**1^{s}.54**/33, **mb3.5**/7, **1D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAPN	Taplejung	0.83	154	ePg	Pn	17 36 07.5	+1.0
TAPN				eSg	Sn	17 36 18.7	+0.7
TAPN				eSg	Sb	17 36 19.1	+1.8
ODAN	Odare	1.24	176	ePg	Pb	17 36 13.0	-0.2
ODAN				eSg	Sb	17 36 28.7	-0.1
GUN	Gumba	1.27	262	ePg	Pb	17 36 15.0	+1.3
GUN				eSg	Sb	17 36 32.2	+2.5
GUN				eSg	Sn	17 36 33.0	+4.2
RAMN	Ramite	1.30	208	ePg	Pb	17 36 14.1	-0.1
PKI	Pulchoki	1.75	253	ePg	Pb	17 36 21.3	-0.6
PKI				eSg	Sb	17 36 42.8	-0.8
PKIN	Phulchoki	1.76	253	ePg	Pb	17 36 21.4	-0.6
PKIN				eSg	Sb	17 36 42.9	-0.9
KKN	Kakani	1.81	261	ePg	Pb	17 36 22.2	-0.6
KKN				eSg	Sb	17 36 45.1	-0.1
DMN	Daman	2.00	256	ePg	Pb	17 36 24.5	-1.6
DMN				eSg	Sb	17 36 49.4	-1.3
	683nm,0.3s						
GKN	Gorkha	2.35	268	ePg	Pn	17 36 28.9	+1.7
GKN				eSg	Sn	17 36 56.5	+1.2
	734nm,0.4s						
DANN	Dangsing	3.13	275	ePg	Pn	17 36 39.1	+1.1
DANN				eSg	Sn	17 37 15.4	+0.7
	848nm,0.4s						
BOK	Bokaro	4.47	197	⇓iP	Pn	17 36 58.0	+1.7
BOK				i S	Sn	17 37 47.0	-0.4
THW	Thamme Wali	14.21	293	P	Pn	17 39 06.0	-3.7
CMAR	Chiang Mai Arr	14.37	129	Pn	P	17 39 17.7	-0.9
	0.2nm,0.3s,baz=297,slow=13,SNR=1.7						
MKAR	Makanchi Array	19.07	349	P	Pn	17 40 11.1	-0.3
	0.3nm,0.3s,baz=172,slow=9.5,SNR=9.7						
KURBB	Kurchatov Arra	23.46	346	P	P	17 40 58.4	+1.1
	1.0nm,0.6s,baz=162,slow=9.7,SNR=5.1						
SONM	Songino Array	24.67	32	P	P	17 41 10.8	+1.9
	0.3nm,0.3s,baz=212,slow=7.8,SNR=2.8						
ZALV	Zalesovo Beam	25.89	357	P	P	17 41 19.9	+0.2
	0.5nm,0.4s,baz=160,slow=9.0,SNR=2.0						
FINES	FINESS Array B	52.02	328	P	P	17 44 57.2	+0.1
	2.6nm,1.0s,baz=103,slow=8.2,SNR=6.7						
ARCES	ARCESS Array B	54.16	338	P	P	17 45 13.3	+0.6
	1.6nm,0.9s,baz=102,slow=8.4,SNR=1.5						
WRA	Warramunga Arr	65.95	131	P	P	17 46 33.5	-0.7
	0.3nm,0.4s,baz=325,slow=6.7,SNR=9.5						
ASAR	Alice Springs	68.32	134	P	P	17 46 47.9	-1.3
	0.2nm,0.8s,baz=314,slow=5.9,SNR=5.8						

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*IDC **02** 18:10:02.0±2.2, 4°.95S×144°.83E, h0^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.6/41, mbtmp3.6/6, ML3.6/1, Error ellipse: s-maj=49.5km s-min=26.3km az=80.0*

ISC 02 18:10:08.6±1.6, **5°.1S**±0°.2×**144°.9E**±0°.2, **h54**^{km}, **n6**, σ**0^{s}.49**/7, **mb3.6**/4, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.80	152	Pn	Pn	18 11 19.0	+0.6
	2.6nm,0.3s,baz=11,slow=7.9,SNR=11						
PMG				Sn	Sn	18 12 12.1	-0.8
	1.5nm,0.3s,baz=321,slow=23,SNR=3.6						
WRA	Warramunga Arr	17.95	214	P	P	18 14 14.4	0.0
	0.2nm,0.3s,baz=41,slow=11,SNR=28						
ASAR	Alice Springs	21.25	209	P	P	18 14 50.6	+0.2
	3.7nm,0.8s,baz=35,slow=12,SNR=15						
FITZ	Fitzroy Crossi	22.80	234	P	P	18 15 07.1	0.0
	0.9nm,0.8s,baz=86,slow=8.0,SNR=1.4						
CMAR	Chiang Mai Arr	50.99	299	P	P	18 19 05.2	-0.2
	0.7nm,0.7s,baz=128,slow=5.8,SNR=6.5						
MKAR	Makanchi Array	75.50	321	P	P	18 21 47.3	0.0
	0.3nm,0.7s,baz=101,slow=7.5,SNR=2.0						

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*MOS **02** 18:19:25.1±0.0, 42°.55N×45°.68E, h16^{km}, MPVA3.5*

*NORS **02** 18:19:26.4±0.0, 42°.50N×45°.62E, h7^{km}, MPVA3.5*

*DRS **02** 18:19:26.9±0.0, 42°.54N×45°.67E, h14^{km}*

ISC 02 18:19:26.5±1.0, **42°.56N**±0°.02×**45°.66E**±0°.02, **h14**^{km}±9^{km}, **n34**, σ**1^{s}.10**/63, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	Botlikh	0.43	75	ePg	Pg	18 19 35.2	+0.1
	39nm,0.1s						
BTLR				eSg	Sb	18 19 41.7	-0.6
	37nm,0.4s						
DVE	Vedeno	0.53	40	ePg	Pg	18 19 36.7	-0.2
DVE				eSg	Sg	18 19 44.6	+0.6
GROC	Groznyy	0.66	9	ePg	Pb	18 19 40.0	+0.2
GROC				eSg	Sn	18 19 50.6	-1.0
XNZR	Khunzakh	0.77	91	ePg	Pb	18 19 41.8	-0.1
	37nm,0.4s						
XNZR				eSg	Sn	18 19 53.2	-1.5
	321nm,0.6s						
PNSH	Pansheti	0.78	276	P	Pg	18 19 31.9	-10
PNSH				S	Sg	18 19 40.4	-11
LGD	Lagodekhi	0.84	149	P	Pn	18 19 43.1	-0.9
LGD				S	Sb	18 19 53.8	-0.3
MTEO	Meteo	0.84	279	P	Pg	18 19 41.0	-1.9
MTEO				S	Sg	18 19 50.9	-3.2
UNCR	Uncukul	0.85	79	i Pg	Pb	18 19 43.1	0.0
	30nm,0.3s						
UNCR				eSg	Sn	18 19 55.3	-1.2
	218nm,0.2s						
DLMR	Dylym	0.88	54	ePg	Pn	18 19 44.2	-0.4
	29nm,0.4s						
DLMR				eSg	Sn	18 19 56.7	-0.4
	37nm,0.3s						
GUDG	Gudauri	0.88	264	P	Pg	18 19 43.2	-0.4
GUDG				S	Sg	18 19 53.8	-1.4
KRNR	Karanay	0.96	73	ePg	Pg	18 19 45.0	-0.1
	10.0nm,0.3s						
KRNR				eSg	Sn	18 19 58.8	-0.4
	26nm,0.5s						
DBC	Dubki	0.98	61	ePg	Pn	18 19 46.4	+0.4
	12nm,0.3s						
DBC				eSg	Sn	18 20 00.8	+1.1
	52nm,0.3s						
GNBR	Gunib	0.98	99	ePg	Pg	18 19 45.2	-0.3
GNBR				eSg	Sn	18 20 00.8	+1.1
ARKR	Arakani	0.99	87	ePg	Pn	18 19 45.6	-0.4
	14nm,0.2s						
ARKR				eSg	Sn	18 19 60.0	+0.1
	34nm,0.5s						
LACR	Lac	1.04	286	ePg	Pb	18 19 44.8	-1.6
LACR				eSg	Sg	18 20 00.5	+0.2
BTNK	Botanikuri	1.08	217	P	Pg	18 19 47.0	-0.4
BTNK				S	Sn	18 20 02.4	+0.2
BUJR	Buynaksk	1.10	75	ePg	Pb	18 19 47.0	-0.4
	12nm,0.2s						
BUJR				eSg	Sn	18 20 02.9	+0.2
	68nm,0.9s						
DGRG	David-gareji	1.12	191	P	Pg	18 19 49.4	+1.2
KMKR	Kumukh	1.15	111	i Pg	Pg	18 19 48.5	-0.2
	28nm,0.2s						
KMKR				eSg	Sn	18 20 04.4	+0.4
	29nm,1.0s						
DDFL	Dedoflistskaro	1.16	163	P	Pg	18 19 52.8	+3.9
DDFL				S	Sn	18 20 13.3	+9.2
ARNR	Ardon	1.19	302	ePg	Pg	18 19 51.0	+1.6
ARNR				eSg	Sg	18 20 06.7	+1.7
KORR	Kora	1.29	295	ePg	Pb	18 19 50.9	+0.4
KORR				eSg	Sg	18 20 09.9	+1.8
TRKR	Terskaya	1.35	330	ePg	Pg	18 19 52.7	+0.1
TRKR				eSg	Sg	18 20 11.8	+1.7
STDR	Stavd-Durt	1.43	305	ePg	Pb	18 19 53.0	+0.1
STDR				eSg	Sg	18 20 14.8	+2.2
SGKR	Sergokala	1.48	93	ePg	Pn	18 19 52.9	+0.1
	16nm,0.8s						
SGKR				eSg	Sg	18 20 13.1	-1.2
	115nm,0.5s						
KANR	Karaman	1.49	64	ePg	Pb	18 19 53.9	-0.1
KANR				eSg	Sg	18 20 14.1	-0.4
URKR	Urkarakh	1.51	104	ePg	Pg	18 19 54.8	-0.8
	32nm,0.2s						
URKR				eSg	Sg	18 20 16.0	+0.8
LSNR	Lesken	1.53	299	ePg	Pg	18 19 55.7	-0.2
LSNR				eSg	Sg	18 20 16.7	+0.9
TRLG	Trialeti	1.54	229	P	Pb	18 19 54.5	-0.5
TRLG				S	Sg	18 20 15.3	-0.9
DIGR	Digorskoe uzhe	1.57	283	ePg	Pn	18 19 54.5	+0.3
DIGR				eSg	Sb	18 20 15.7	+0.3
ONI	Oni	1.63	272	P	Pb	18 19 56.1	-0.3
DMNI	Dmanisi	1.65	222	P	Pb	18 19 55.9	-0.8
DMNI				S	Sb	18 20 17.9	+0.5
ABS	Abastumani	2.26	250	P	Pb	18 20 07.0	-0.3
ABS				S	Sb	18 20 36.4	+1.2
SHA1	Shidzhatmaz	2.50	299	ePn	Pb	18 20 10.2	-1.1
SHA1				eSn	Sb	18 20 42.7	+0.7

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*IDC **02** 18:35:32.0±13.0, 52°.63N×174°.86W, h144^{km}±124^{km}, mb3.4/9, mb1 3.6/10, mb1mx3.1/51, mbtmp3.7/10, ML3.8/1, Error ellipse: s-maj=46.4km s-min=19.7km az=4.0*

*NEIC **02** 18:35:39.3±1.5, 52°.6N±0°.1×174°.58W±0°.07, h214^{km}±5^{km}, mb4.3/50, ML3.4/17(AEIC), Error ellipse: s-maj=17.1km s-min=6.5km az=175.0*

*AEIC **02** 18:35:40.2±3.7, 52°.3N±0°.1×174°.5W±0°.1, h218^{km}±5^{km}, Error ellipse: s-maj=20.9km s-min=9.5km az=161.0*

ISC 02 18:35:38.3±0.7, **52°.7N**±0°.1×**174°.54W**±0°.07, **h200**^{km}, **n95**, σ**1^{s}.40**/98, **mb3.5**/10, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KONE	Korovin Northe	0.40	140		Pn	18 36 08.0	+2.9
KOFP	Korovin Flat P	0.50	147		Pn	18 36 08.4	+2.9
ATKA	Atka Island	0.54	157		Pn	18 36 07.8	+2.2
ATKA					Sn	18 36 30.0	+3.5
GSTR	Great Sitkin T	1.11	238		Pn	18 36 11.4	+2.5
GSMY	Great Sitkin M	1.14	235		Pn	18 36 11.1	+2.0
GSTD	Great Sitkin T	1.18	237		Pn	18 36 11.6	+2.1
GSTD					Sn	18 36 35.5	+2.0
ADK	Adak	1.55	239		Pn	18 36 14.3	+1.8
ADK					Sn	18 36 40.6	+1.7
KICM	Kanaga Island	1.81	245		Pn	18 36 17.2	+2.3
KIWB	Kanaga Island	1.82	243		Pn	18 36 16.7	+1.8
KIMD	Kanaga Island	1.91	242		Pn	18 36 17.6	+1.8
KIMD					Sn	18 36 46.2	+1.2
TAFP	Tanaga Falls P	2.26	251		Pn	18 36 21.4	+1.8
TASE	Tanaga Southea	2.32	249		Pn	18 36 22.1	+1.9
NIKH	Nikolski High	3.46	83		Pn	18 36 35.0	+1.6
AMKA	Amchitka	4.03	253	Pn	Pn	18 36 41.1	+0.7
SPIA	Saint Paul Isl	5.12	27	Pn	Pn	18 36 57.3	+3.2
CNBA	Chernabura Isl	9.11	71	Pn	Pn	18 37 45.1	-0.7
CHGN	Chignik	10.04	63	Pn	Pn	18 37 57.0	-0.9
CHIR	Chirikof Islan	11.49	67	Pn	Pn	18 38 14.6	-1.9
SII	Sitkinak Islan	12.40	64	Pn	Pn	18 38 26.4	-1.6
P18K	Big Mountain,	12.67	50	Pn	Pn	18 38 32.7	+1.2
O18K	Koktuh Hills	12.88	49	Pn	P	18 38 36.1	-1.3
OHAK	Old Harbor	13.00	61	Pn	Pn	18 38 33.0	-2.5
Q19K	Cape Douglas,	13.27	54	Pn	Pn	18 38 39.4	+0.5
SVW2	Sparrevohn	13.30	43	P	P	18 38 41.7	-0.3
KDAK	Kodiak Island	13.49	59	P	Pn	18 38 39.7	-1.9
N19K	Bonanza Creek	13.63	46	P	P	18 38 45.2	-0.6
P19K	Oil Pt	13.71	51	Pn	P	18 38 45.6	-1.1
TTA	Tatalina	14.17	36		P	18 38 52.5	+0.8
L19K	White Mountain	14.17	40	P	P	18 38 53.1	+1.4
M19K	Big River Lodg	14.20	42	P	P	18 38 53.7	+1.6
RSO	Redoubt South	14.24	48		P	18 38 54.0	+1.2
CNPM	China Poot	14.63	53	Pn	Pn	18 38 55.7	-0.1
BRLK	Bradley Lake	14.87	52	Pn	Pn	18 38 58.2	-0.5
K20K	Telida	15.13	37	P	P	18 39 03.4	+1.1
K20K				IAmb	IAmb	18 39 04.8	
	comp=Z,7.7nm,0.8s						
J20K	Nowinta River	15.60	35	P	P	18 39 09.1	+1.6
PPLA	Purkeypile	15.60	40	P	P	18 39 09.5	+1.9
PPLA				IAmb	IAmb	18 39 15.0	
	comp=Z,9.5nm,0.6s						
SEW	Seward	15.66	52	P	Pn	18 39 07.9	-0.4
CUT	Chulitna	16.14	43	P	Pn	18 39 14.3	+0.3
CUT				IAmb	IAmb	18 39 41.7	
	comp=Z,19nm,1.1s						
PWL	Port Wells	16.42	50	P	Pn	18 39 17.3	-0.1
PWL				IAmb	IAmb	18 39 21.7	
	comp=Z,23nm,1.3s						
KTH	Kantishna Hill	16.43	39	P	Pn	18 39 18.4	+0.9
TRF	Thorofare Moun	16.62	40	P	Pn	18 39 20.0	+0.1
TRF				IAmb	IAmb	18 39 26.5	
	comp=Z,13nm,1.1s						
SML	Sawmill	16.74	47	P	Pn	18 39 20.4	-0.9
IMAR	Indian Mountai	16.89	30	P	Pn	18 39 23.1	+0.2
I21K	Tanana	16.95	34	P	Pn	18 39 23.6	+0.1
I21K				IAmb	IAmb	18 39 40.8	
	comp=Z,5.2nm,0.6s						
H21K	Melozitna Rive	16.97	32	P	Pn	18 39 24.4	+0.5
H21K				IAmb	IAmb	18 39 27.4	
	comp=Z,8.1nm,0.9s						
GLI	Glacier Island	17.00	50	P	Pn	18 39 23.9	-0.4
RND	Reindeer	17.17	41	P	Pn	18 39 25.1	-1.2
SCM	Sheep Creek Mo	17.20	47	P	P	18 39 25.0	-0.1
SCM				IAmb	IAmb	18 39 52.4	
	comp=Z,16nm,1.2s						
FID	Port Fidalgo	17.26	51	P	Pn	18 39 26.4	-0.9
MCK	McKinley	17.29	40	P	Pn	18 39 27.4	-0.2
MCK				IAmb	IAmb	18 39 28.9	
	comp=Z,6.4nm,0.7s						
MLY	Manley	17.29	35	P	Pn	18 39 27.5	-0.1
MLY				IAmb	IAmb	18 39 28.6	
	comp=Z,10.0nm,0.6s						
BWN	Browne	17.30	39	P	Pn	18 39 27.2	-0.5
BWN				IAmb	IAmb	18 39 31.7	
	comp=Z,11nm,0.9s						
DHY	Denali Highway	17.64	43	P	P	18 39 30.3	+0.3
NEA2	Nenana	17.66	38	P	Pn	18 39 30.6	-1.3
KLU	Klutina	17.73	49	P	Pn	18 39 32.7	-0.1
KLU				IAmb	IAmb	18 39 56.3	
	comp=Z,18nm,1.4s						
M24K	Tolsona, Glenn	17.80	47	P	Pn	18 39 33.2	-0.6
WRH	Wood River Hil	17.97	39	P	P	18 39 33.0	-0.4
MDM	Murphy Dome	18.15	37	P	Pn	18 39 36.5	-1.2
MDM				IAmb	IAmb	18 39 37.4	
	comp=Z,4.0nm,0.5s						
CCB	Clear Creek Bu	18.16	38	P	P	18 39 35.0	-0.4
BMRM	Bremner River	18.20	51	P	Pn	18 39 38.1	-0.3
BMRM				IAmb	IAmb	18 39 38.5	
	comp=Z,21nm,1.4s						
N25K	Chitina, Valde	18.37	49	P	Pn	18 39 40.5	+0.1
IL31		18.57	39	P	Pn	18 39 40.5	-2.0
ILAR	Eielson Array	18.57	39	P	P	18 39 39.1	-0.8
	comp=Z,0.3nm,0.3s,baz=240,slow=9.4,SNR=14						
H24K	Noodor Dome	18.73	35	P	Pn	18 39 43.0	-1.6
H24K				IAmb	IAmb	18 39 44.9	
	comp=Z,12nm,1.4s						
VRDI	Verde Repeater	18.81	51	P	Pn	18 39 43.9	-1.7
VRDI				IAmb	IAmb	18 39 51.3	
	comp=Z,13nm,1.2s						
CRQM	Cirque	18.86	52	P	P	18 39 42.9	-0.4
CRQM				IAmb	IAmb	18 40 08.5	
	comp=Z,15nm,1.4s						
WAX	Waxell Ridge	18.94	53	P	P	18 39 44.9	+0.8
RIDG	Independent Ri	18.94	43	P	P	18 39 43.7	-0.4
RIDG				IAmb	IAmb	18 40 00.7	
	comp=Z,5.8nm,0.8s						
TGL	Tana Glacier	19.01	52	P	P	18 39 41.9	-2.9
TGL				IAmb	IAmb	18 39 54.8	
	comp=Z,14nm,1.2s						
MENT	Mentasta	19.15	46	P	P	18 39 46.6	+0.4
MENT				IAmb	IAmb	18 40 13.6	
	comp=Z,7.8nm,1.2s						
DOT	Dot Lake	19.24	43	P	P	18 39 47.0	-0.1
DOT				IAmb	IAmb	18 39 48.6	
	comp=Z,4.8nm,0.8s						
SCRK	Sand Creek	19.39	42	P	P	18 39 48.5	-0.3
BARN	Barnard Glacie	19.63	52	P	Pn	18 39 53.8	-1.6
BARN				IAmb	IAmb	18 40 14.1	
	comp=Z,9.8nm,1.3s						
CTGM	Chitina Glacie	19.77	52	P	Pn	18 39 55.5	-1.6
TABL	Table Mountain	19.78	54	P	Pn	18 39 55.7	-1.6
M27K	Edge Creek, AK	19.80	48	P	Pn	18 39 55.7	-1.8
M27K				IAmb	IAmb	18 39 57.6	
	comp=Z,6.5nm,1.2s						
TOLK	Toolik Lake Re	19.87	27	P	P	18 39 54.9	+0.9
LOGN	Logan Glacier	19.90	53	P	Pn	18 39 56.8	-1.9
LOGN				IAmb	IAmb	18 40 19.9	
	comp=Z,16nm,1.4s						
BCAR	Beaver Creek A	20.03	46	P	P	18 39 54.8	-0.9
EGAK	Eagle	20.82	42	P	P	18 40 03.9	0.0
YKA	Yellowknife Ar	32.40	49	P	P	18 41 48.6	-0.1
	comp=Z,0.3nm,0.5s,baz=275,slow=8.6,SNR=2.4						
KLR	Kul'dur	33.35	286	P	P	18 41 55.0	-2.2
	comp=Z,0.6nm,0.5s,baz=38,slow=19,SNR=1.6						
NEW	Newport	35.97	73	P	P	18 42 20.3	+0.6
	comp=Z,2.6nm,0.5s,baz=280,slow=4.2,SNR=4.9						
NEW	Newport	35.97	73	IAmb	IAmb	18 42 20.7	
	comp=Z,3.7nm,0.6s						
RES	Resolute Bay	37.43	25	P	P	18 42 32.3	+0.7
	comp=Z,0.4nm,0.3s,baz=259,slow=10,SNR=1.9						
BOZ	Bozeman (W)	40.57	74	P	P	18 42 58.2	0.0
NVAR	Mina Array Bea	40.81	87	P	P	18 43 01.9	+1.6
	comp=Z,0.3nm,0.5s,baz=321,slow=7.0,SNR=3.2						
YHH	Holmes Hill	41.48	75	P	P	18 43 05.5	-0.2
BW06	Boulder Array	43.42	76	P	P	18 43 21.1	-0.2
BW06				IAmb	IAmb	18 43 21.8	
	comp=Z,3.1nm,0.5s						
PD31	Pinedale Array	43.42	76	P	P	18 43 21.0	-0.3
PDAR	Pinedale Array	43.42	76	P	P	18 43 21.4	+0.1
	comp=Z,2.5nm,0.5s,baz=322,slow=3.1,SNR=20						
PDAR	Pinedale Array	43.42	76	P	P	18 43 21.3	0.0
MKAR	Makanchi Array	61.23	310	P	P	18 45 30.3	-1.5
	comp=Z,0.9nm,1.0s,baz=37,slow=7.4,SNR=2.7						
WRA	Warramunga Arr	84.82	227	P	P	18 47 48.3	-1.8
	comp=Z,0.2nm,0.6s,baz=19,slow=9.1,SNR=4.6						
ASAR	Alice Springs	88.27	226	P	P	18 48 06.4	-0.4
	comp=Z,0.7nm,0.7s,baz=28,slow=4.7,SNR=9.6						

IDC 02 18:51:14.2±8.9, **18°.51S**×**177°.41W**, **h0**^{km}, **mb3.4**/3, **mb1 3.7**/3, **mb1mx3.5**/33, **mbtmp3.4**/3, **Error ellipse: s-maj=387.1km s-min=42.1km az=143.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.46	260	P	P	18 59 34.9	-0.5
	0.2nm,0.4s,baz=96,slow=7.0,SNR=6.7						
ASAR	Alice Springs	45.54	255	P	P	18 59 36.4	+0.2
	0.3nm,0.5s,baz=90,slow=7.4,SNR=5.9						
ILAR	Eielson Array	86.27	13	P	P	19 03 57.4	+0.1
	0.2nm,0.6s,baz=200,slow=4.5,SNR=1.8						

IDC 02 18:52:21.7±8.4, **1°.97S**×**127°.48E**, **h0**^{km}, **mb3.4**/2, **mb1 3.5**/4, **mb1mx3.3**/35, **mbtmp3.3**/4, **ML3.1**/2, **Error ellipse: s-maj=136.2km s-min=32.2km az=132.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.94	74	Pn	Pn	18 53 23.8	+0.3
	1.2nm,0.3s,baz=213,slow=24,SNR=12						
SIJI				Sn	Sn	18 54 13.2	+2.6
	baz=242,slow=22,SNR=1.3						
WRA	Warramunga Arr	19.08	160	P	P	18 56 45.8	-0.2
	0.1nm,0.3s,baz=341,slow=11,SNR=5.7						
ASAR	Alice Springs	22.45	164	P	P	18 57 23.3	+0.8
	0.2nm,0.4s,baz=346,slow=12,SNR=4.0						
STKA	Stephens Creek	32.59	157	P	P	18 58 54.2	-0.9
	1.6nm,0.8s,baz=322,slow=15,SNR=1.7						

IDC 02 19:10:55.8±48.0, **23°.24S**×**176°.48W**, **h0**^{km}, **mb4.0**/3, **mb1 4.1**/3, **mb1mx3.8**/23, **mbtmp4.0**/3, **Error ellipse: s-maj=888.3km s-min=172.3km az=87.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	37.96	248	P	P	19 18 14.9	-0.5
	1.4nm,0.8s,baz=76,slow=4.2,SNR=1.6						
ASAR	Alice Springs	45.33	259	P	P	19 19 15.7	-0.3
	0.5nm,0.4s,baz=97,slow=7.4,SNR=17						
WRA	Warramunga Arr	45.68	264	P	P	19 19 19.1	+0.3
	2.1nm,0.5s,baz=102,slow=7.8,SNR=39						

TAP 02 19:20:53.7, 21°.91N×120°.53E, h33^{km}, ML2.5, C, Taiwan region

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

SNW	Nanwan	0.21	77	P	Pb	19 20 59.9	-0.5
	baz=76						
SNW				S	Sb	19 21 05.8	+0.9
	baz=76						
HEN	Hengchun	0.22	64	*i* P	Pn	19 21 00.9	+0.3
	baz=65						
HEN				*i* S	Sb	19 21 06.4	+1.4
	baz=65						
TSEB	Hengchuen, Pin	0.35	92	*i* P	Pb	19 21 01.4	-0.6
	baz=91						
TSEB				*i* S	Sb	19 21 07.5	-0.2
	baz=91						
SLIU	Shizi	0.40	40	P	Pn	19 21 03.1	0.0
	baz=39						
SLIU				*i* S	Sn	19 21 09.6	+0.1
	baz=39						
TWP	Hsiaoliuchiu	0.46	341	*i* P	Pn	19 21 04.0	0.0
	baz=341						
TWP				*i* S	Sb	19 21 10.7	+0.2
	baz=341						
WLCH	Liuqiu	0.46	343	P	Pn	19 21 04.1	+0.1
	baz=342						
WLCH				S	Sb	19 21 10.7	+0.3
	baz=342						
SCZT	Fangliau	0.47	11	P	Pn	19 21 04.8	+0.6
	baz=11						
SCZT				S	Sn	19 21 12.7	+1.5
	baz=11						
EAST	Anshuo	0.56	32	P	Pn	19 21 05.7	+0.3
	baz=33						
EAST				*e*S	Sn	19 21 13.7	+0.2
	baz=33						
TAW	Tawu	0.56	38	*i* P	Pn	19 21 05.6	+0.2
	baz=38						
TAW				*e*S	Sn	19 21 13.6	0.0
	baz=38						
SSPT	Xinbi	0.57	4	*i* P	Pn	19 21 06.5	+0.9
	baz=3.0						
SSPT				S	Sn	19 21 15.5	+1.6
	baz=3.0						
MASBT	Mashibuluo	0.70	8	*i* P	Pb	19 21 08.0	+0.4
	baz=7.0						
MASBT				S	Sn	19 21 18.5	+1.3
	baz=7.0						
TSPT	Pingtung City	0.76	358	*e*P	Pn	19 21 07.0	-1.2
	baz=357						
TSPT				*e*S	Sn	19 21 17.5	-1.1
	baz=357						
ECL	Taimali	0.79	30	*i* P	Pn	19 21 08.8	+0.2
	baz=30						
ECL				S	Sn	19 21 19.3	+0.1
	baz=30						
TSMG	Majia	0.80	8	P	Pb	19 21 09.2	0.0
	baz=7.0						
TSMG				S	Sb	19 21 20.4	+0.7
	baz=7.0						
SSD	Sandimen	0.84	7	S	Sb	19 21 20.9	+0.1
	baz=7.0						
TWM1	Shoushan	0.91	354	P	Pn	19 21 10.0	-0.3
	baz=354						
TWM1				*e*S	Sn	19 21 21.5	-0.8
	baz=354						
TWGBT	Beinan	1.04	29	P	Pb	19 21 13.1	-0.1
	baz=29						
TWGBT				S	Sb	19 21 26.2	-0.3
	baz=29						
PHUB	P'eng-hu	1.82	331	P	Pn	19 21 23.8	+1.0
	baz=331						
PHUB				*e*S	Sn	19 21 44.3	-0.4
	baz=331						
VDOS	Pratas Island	3.74	252	*e*P	Pn	19 21 48.1	-1.0
	baz=251						

IDC 02 19:22:28.0±1.4**, 56°.77S**×**31°.24W, h0**^{km}**, mb3.8**/2**, mb1 3.9**/2**, mb1mx3.7**/18**, mbtmp3.8**/2**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.8**/24**, Error ellipse: s-maj=106.4km s-min=38.2km az=105.0, South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPUP	Villa Florida	35.70	317	LR	LR	19 41 41.9	
	comp=Z,87nm,21.5s,baz=220,slow=32						
VNDA	Vanda	45.72	184	P	P	19 30 50.0	-0.1
	0.7nm,0.7s,baz=191,slow=5.2,SNR=2.1						
BOSA	Boshof	48.32	79	LR	LR	19 48 12.4	
	comp=Z,29nm,18.5s,baz=188,slow=32						
H10S2	ASCENSION HYDR	49.42	22	T	T	20 24 50.5	
H10S3	ASCENSION HYDR	49.43	22	T	T	20 24 50.7	
	SNR=5.8						
H10N1	ASCENSION HYDR	50.54	22	T	T	20 26 15.0	
	baz=191,slow=75,SNR=5.6						
H10N3	ASCENSION HYDR	50.54	22	T	T	20 26 12.9	
	baz=191,slow=75,SNR=11						
H10N2	ASCENSION HYDR	50.55	22	T	T	20 26 16.2	
	baz=191,slow=75,SNR=11						
TORD	Torodi Ar. Bea	74.84	33	P	P	19 34 10.2	0.0
	1.0nm,0.8s,baz=203,slow=5.8,SNR=6.0						
ILAR	Eielson Array	148.91	312	PKPbc	PKPbc	19 42 15.6	-0.6
	0.5nm,0.8s,baz=126,slow=2.3,SNR=4.9						

TUL ***02*** *19:24:08.5±2.1, 36°.74N±0°.02×98°.76W±0°.04, h12^{km}±7^{km}, ML2.7, mb_Lg2.4/14(NEIC), Error ellipse: s-maj=5.1km s-min=3.1km az=74.0*

NEIC 02 19:24:09.5±1.2**, 36°.77N**±0°.02×**98°.69W**±0°.04**, h5**^{km}±2^{km}**, Error ellipse: s-maj=6.1km s-min=3.3km az=80.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.38	85	Pg	Pg	19 24 17.3	+0.3
OK032				Sg	Sb	19 24 23.7	-1.4
U32A	Winter Ranch,	0.47	213	Pg	Pg	19 24 16.7	-1.9
KAN10	Anthony SW Sta	0.59	53	Sg	Sb	19 24 30.3	-0.7
KAN14	Manchester OK	0.61	72	Pg	Pg	19 24 21.4	+0.1
KAN14				Sg	Sb	19 24 30.9	-0.7
CROK	Carrier	0.63	115	Pg	Pg	19 24 21.4	-0.2
GC02	Grant County #	0.67	83	Pg	Pg	19 24 22.3	-0.1
GC02				Sg	Sb	19 24 32.2	-1.1
KAN16	Harper SW Stat	0.67	48		Pg	19 24 22.6	+0.1
KAN16				Sg	Sb	19 24 32.9	-0.5
KAN08	Anthony NE Sta	0.73	52	Pg	Pg	19 24 23.6	0.0
KAN12	Harper NE Stat	0.76	46	Pg	Pg	19 24 24.0	-0.1
KAN17	Caldwell West	0.79	70	Pg	Pg	19 24 24.2	-0.4
KAN06	Argonia West S	0.81	54	Pg	Pg	19 24 25.1	0.0
KAN09	Caldwell North	0.93	67		Pg	19 24 27.1	-0.2
KAN13	South Haven SW	1.00	76		Pg	19 24 28.3	-0.4
BLOK	Blackwell	1.18	90		Pg	19 24 31.5	-0.7
OK029	Liberty Lake	1.39	134	Pn	Pn	19 24 34.4	-1.2
BCOK	Bluff Creek, N	1.42	142	Pn	Pn	19 24 35.0	-0.9
OK033	Mehan	1.59	117		Pn	19 24 38.2	-0.1
OK025	Westminster Rd	1.61	137	Pn	Pn	19 24 37.6	-1.1
R32A	Long Quarter,	1.65	359		Pn	19 24 39.4	+0.3
OK031	S. Brethren Rd	1.70	118	Pn	Pn	19 24 39.3	-0.5
QUOK	Quay	1.70	110		Pn	19 24 39.4	-0.6
T35A	Sooner Cattle	1.75	85	Pn	Pn	19 24 41.2	+0.6
OK030	Cody Creek RV	1.75	118		Pn	19 24 40.2	-0.4
OK034	N. Norfolk Rd.	1.77	115		Pn	19 24 40.8	0.0
W35A	Tecumseh	2.19	137	Pn	Pn	19 24 46.1	-0.4
CBKS	Cedar Bluff	2.20	338	Pn	Pn	19 24 47.9	+1.1
X34A	Smith Ranch, M	2.28	162	Pn	Pn	19 24 48.7	+0.9
X34A				IAmb_Lg		19 25 19.4	
	comp=Z,12nm,0.9s						
TUL1	Leonard	2.49	109	Pn	Pn	19 24 51.0	+0.2
KSU1	Kansas State U	2.84	35	IAmb_Lg		19 25 44.0	
	comp=Z,13nm,0.7s						
AMTX	Amarillo	3.08	233		Pn	19 24 57.6	-1.3
AMTX				IAmb_Lg		19 25 49.9	
	comp=Z,14nm,0.9s						
X37A	Clayton	3.47	128	IAmb_Lg		19 26 08.3	
	comp=Z,25nm,0.8s						
KSCO	Kaye Shedlock'	3.83	307	IAmb_Lg		19 26 19.5	
	comp=Z,8.4nm,0.8s						
HHAR	Hobbs	3.85	96		Pn	19 25 09.8	+0.3
S39A	Bolivar	4.38	76	IAmb_Lg		19 26 32.4	
	comp=Z,6.9nm,0.7s						
U40A	Yellville	4.71	93	IAmb_Lg		19 26 46.5	
	comp=Z,9.6nm,0.9s						
R40A	Maddies Statio	5.32	72		Pn	19 25 30.7	+1.1
R40A				IAmb_Lg		19 27 08.6	
	comp=Z,4.9nm,0.7s						

IDC ***02*** *19:32:49.0±0.6, 0°.90S×121°.49E, h0^{km}, mb4.2/14, mb1 4.3/16, mb1mx4.2/39, mbtmp4.2/16, ML4.3/2, MS3.5/12, Ms1 3.5/12, ms1mx3.2/49, Error ellipse: s-maj=25.2km s-min=12.5km az=73.0*

DJA ***02*** *19:32:51.7±0.2, 1°S±2°×12°1E±°, h10^{km}, M4.6/19, mb5.0/9, mB5.0/7, MLv4.8/19, Mw(mB)4.3/7*

NEIC ***02*** *19:32:54.5±2.2, 0°.92S±0°.06×121°.38E±0°.07, h37^{km}±8^{km}, mb4.7/38, Error ellipse: s-maj=10.7km s-min=8.5km az=76.0*

KLM ***02*** *19:32:55, 0°.99S×121°.60E, h53^{km}, mb4.8*

ISC 02 19:32:54.8±0.4**, 0°.97S**±0°.04×**121°.38E**±0°.05**, h45**^{km}**, n115, σ1^{s}58**/119**, mb4.6**/45**, MS3.3**/8**, 1C, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APSI	Ampana	0.27	78	P	Pn	19 32 59.7	-3.6
APSI				S	Sn	19 33 05.7	-3.5
MRSI	Marisa	1.54	21	P	Pn	19 33 18.7	-1.1
MRSI				S	Sn	19 33 41.6	+3.0
MPSI	Mapaga	1.97	311	P	Pn	19 33 21.8	-3.9
MPSI				S	Sn	19 33 48.8	-0.4
TOLI2	Tolitoli	2.15	344	Pn	Pn	19 33 26.0	-2.2
GTOI	Gorontalo	2.28	46	P	Pn	19 33 30.6	+0.6
TTSI	Tana Toraja	2.59	217	P	Pn	19 33 32.8	-1.4
KMSI	Cibinong	3.02	60	P	Pn	19 33 42.4	+2.3
BNSI	Bone	3.64	200	P	Pn	19 33 48.3	-0.4
KAPI	Kappang	4.34	202	Pn	Pn	19 33 57.4	-0.9
	70nm,0.3s,baz=49,slow=3.3,SNR=140						
KAPI				Sn	Sn	19 34 47.3	-0.3
	6.4nm,0.3s,baz=46,slow=20,SNR=1.6						
KAPI				LR	LR	19 35 25.1	
	comp=Z,334nm,20.8s,baz=49,slow=35						
BKB	Balikpapan	4.49	266	Pn	Pn	19 33 59.4	-1.0
BKSI	Bulukumba	4.50	196	P	Pn	19 33 59.2	-1.4
SANI	Sanana	4.73	103	P	Pn	19 34 02.7	-1.0
BSSI	Bau Bau, Buton	5.22	190	P	Pn	19 34 08.9	-1.5
	0.6nm2µm123nm,0.7s						
KBKI	Kotabaru	5.70	246	P	Pn	19 34 14.5	-2.5
	0.6nm2µm148nm,1.0s						
LBMI	Labuha	6.13	87	P	Pn	19 34 22.5	-0.4
	0.9nm1µm103nm,0.9s						
TNTI	Ternate	6.23	74	Pn	Pn	19 34 24.2	-0.1
MYLDM	Lahad Datu	6.75	335		Pn	19 34 31.2	-0.2
AAI	Ambon	7.33	112	P	Pn	19 34 41.0	+1.7
	0.2nm757nm65nm,0.8s						
SPMM	Sapulut	7.47	319	P	Pn	19 34 43.0	+1.6
MMRI	Maumere	7.67	174	P	Pn	19 34 43.1	-0.9
	0.3nm1µm66nm,0.6s						
MMRI	Maumere	7.67	174	Pn	Pn	19 34 43.5	-0.5
EDFI	Ende, Flores	7.74	178	P	Pn	19 34 43.5	-1.6
	0.1nm714nm30nm,0.5s						
KKM	Kota Kinabalu	8.66	324	Pn	Pn	19 34 59.7	+1.9
WBSI	Waikabubak, Su	8.84	193	P	Pn	19 34 59.1	-1.1
SOEI	Soe	9.19	162	Pn	Pn	19 35 06.3	+1.3
BATI	Baumata	9.46	166	Pn	Pn	19 35 09.7	+1.1
	7.6nm,0.3s,baz=248,slow=1.7,SNR=16						
BATI				LR	LR	19 39 38.7	
	comp=Z,1µm,18.2s,baz=346,slow=43						
SBUM	Sibu	9.77	290	P	Pn	19 35 16.0	+3.2
SBUM	Sibu	9.77	290	Pn	Pn	19 35 11.9	-0.9
SIJI	Sorong	9.88	90	Pn	Pn	19 35 13.8	-0.6
	1.6nm,0.3s,baz=268,slow=6.9,SNR=13						
SIJI				Sn	Sn	19 37 07.0	+2.8
	0.2nm,0.3s,baz=151,slow=19,SNR=1.8						
JAGI	Jajag, Banyuwa	10.36	224		Pn	19 35 21.1	+0.1
FAKI	Fak Fak	11.03	100	Pn	Pn	19 35 28.9	-1.2
KSM	Kuching	11.33	282	P	Pn	19 35 37.0	+2.8
LEM	Lembang	14.91	247	LR	LR	19 42 59.6	
	comp=Z,214nm,18.2s,baz=90,slow=41						
FITZ	Fitzroy Crossi	17.53	166	P	Pn	19 36 55.9	-0.2
	0.2nm,0.3s,baz=0.9,slow=8.0,SNR=8.7						
FITZ				LR	LR	19 45 10.0	
	comp=Z,199nm,19.2s,baz=354,slow=42						
JAY	Jayapura	19.38	95	LR	LR	19 46 40.4	
	comp=Z,43nm,21.0s,baz=352,slow=43						
IPM	Ipoh	21.04	285	P	P	19 37 35.8	+0.6
UBPT	Khong Chiam	22.54	316	P	P	19 37 51.4	+0.2
UBPT				IAmb	IAmb	19 37 52.9	
	comp=Z,22nm,1.2s						
WB0	Warramunga Arr	22.61	147	P	P	19 37 51.3	-0.7
WRAB	Tennant Creek	22.73	147	P	P	19 37 52.1	-1.0
WRAB				IAmb	IAmb	19 38 10.8	
	comp=Z,37nm,1.5s						
WRA	Warramunga Arr	22.73	147	P	P	19 37 52.6	-0.6
	comp=Z,7.8nm,1.0s,baz=321,slow=12,SNR=62						
WRA				LR	LR	19 48 03.1	
	comp=Z,75nm,18.9s,baz=15,slow=40						
WRA	Warramunga Arr	22.73	147	P	P	19 37 52.2	-1.0
WB2	Warramunga Arr	22.73	147	P	P	19 37 52.8	-0.4
PSI	Prapat	22.76	280	P	P	19 37 53.7	0.0
	comp=Z,3.9nm,0.7s,baz=134,slow=5.7,SNR=6.3						
WR0	Warramunga Arr	22.85	147	P	P	19 37 53.8	-0.7
WR0				IAmb	IAmb	19 38 01.0	
	comp=Z,53nm,1.5s						
GSI	Gunungsitoli	23.91	275	P	P	19 38 06.6	+1.8
GSI				IAmb	IAmb	19 38 18.8	
	comp=Z,29nm,1.0s						
TPUB	Ta-pu	24.13	358	P	P	19 38 05.5	-1.2
TPUB				IAmb	IAmb	19 38 08.2	
	comp=Z,32nm,1.0s						
YULB	Yu-li	24.21	360	P	P	19 38 08.7	+1.3
YULB				IAmb	IAmb	19 38 17.7	
	comp=Z,14nm,0.7s						
SSLB	Suanglung	24.61	359	P	P	19 38 11.2	+0.1
AS31	Alice Springs	25.63	153	P	P	19 38 19.9	-0.4
ASAR	Alice Springs	25.63	153	P	P	19 38 20.5	+0.1
	comp=Z,3.6nm,0.7s,baz=323,slow=8.0,SNR=37						
ASAR				PcP	PcP	19 41 52.1	+1.6
	comp=Z,0.4nm,0.5s,baz=344,slow=2.1,SNR=4.1						
ASAR				LR	LR	19 49 23.5	
	comp=Z,147nm,19.3s,baz=322,slow=39						
ASAR	Alice Springs	25.63	153	P	P	19 38 21.0	+0.7
GUMO	Guam	27.41	57	LR	LR	19 49 18.1	
	comp=Z,37nm,18.3s,baz=160,slow=36						
CM31	Chiang Mai Arr	29.31	312	P	P	19 38 54.5	+1.1
CMAR	Chiang Mai Arr	29.31	312	P	P	19 38 54.5	+1.0
	comp=Z,4.5nm,0.8s,baz=139,slow=7.4,SNR=20						
CMAR				LR	LR	19 52 22.8	
	comp=Z,61nm,19.6s,baz=176,slow=40						
CMAR	Chiang Mai Arr	29.31	312	P	P	19 38 53.8	+0.4
CHTO	Chiang Mai	29.54	313	P	P	19 38 55.4	0.0
CHTO				IAmb	IAmb	19 39 04.7	
	comp=Z,8.5nm,0.9s						
GYA	Guiyang	30.74	334	⇑P	P	19 39 06.9	+0.8
GYA				pP	pP	19 39 13.6	-4.3
GYA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NJ2	Nanjing	32.92	356	*e*P	P	19 39 27.1	+2.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ENH	Enshi	33.07	341	P	P	19 39 25.9	-0.5
CD2	Chengdu	35.86	334	*e*P	P	19 39 51.5	+1.0
STKA	Stephens Creek	36.19	150	P	P	19 39 52.9	-0.4
	comp=Z,2.7nm,0.7s,baz=310,slow=8.9,SNR=6.7						
STKA				LR	LR	19 55 21.1	
	comp=Z,65nm,18.7s,baz=27,slow=37						
XAN	Xi'an	36.74	343	P	P	19 39 59.6	+1.6
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,180nm,4.8s						
KSRS	Korea Array	38.70	8	P	P	19 40 14.6	+0.2
	comp=Z,1.8nm,0.6s,baz=188,slow=9.0,SNR=8.5						
KSRS				LR	LR	19 57 53.6	
	comp=Z,28nm,18.1s,baz=219,slow=39						
SHL	Shillong	38.85	315	P	P	19 40 15.4	-0.7
MAT	Matsushiro	40.47	21	P	P	19 40 27.8	-1.4
MJAR	Matsushiro Arr	40.47	21	P	P	19 40 27.8	-1.4
	comp=Z,3.4nm,0.7s,baz=182,slow=8.6,SNR=7.8						
LSA	Lhasa	41.98	319	P	P	19 40 44.2	+1.9
LSA				pmax	pmax		
	comp=Z,22nm,0.5s						
LSA	Lhasa	41.98	319	P	P	19 40 43.2	+0.9
LSA				IAmb	IAmb	19 40 51.4	
	comp=Z,13nm,1.4s						
HHC	Hu-ho-hao-te	42.57	349	*e*P	P	19 40 50.3	+3.8
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,7.4s						
ODAN	Odare	42.86	313	*e*P	P	19 40 49.0	-0.2
RAMN	Ramite	43.49	312	*e*P	P	19 40 54.5	+0.2
	comp=Z,8.8nm,0.4s						
GUN	Gumba	44.56	313	*e*P	P	19 41 03.2	+0.2
	comp=Z,23nm,0.7s						
PKI	Pulchoki	44.71	312	*e*P	P	19 41 04.0	-0.2
PKIN	Phulchoki	44.73	312	*e*P	P	19 41 03.7	-0.6
GTA	Gaotai	44.78	336	*e*P	P	19 41 05.6	+1.2
GTA				pP	pP	19 41 09.3	-7.1
GTA				sP	sP	19 41 11.7	-10
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KKN	Kakani	44.93	312	*e*P	P	19 41 05.8	0.0
DMN	Daman	44.96	312	*e*P	P	19 41 06.1	0.0
GKN	Gorkha	45.52	312	*e*P	P	19 41 10.4	-0.1
	comp=Z,5.4nm,0.4s						
USRK	Ussuriysk Ar.	45.95	11	P	P	19 41 13.2	-0.2
	comp=Z,2.3nm,0.6s,baz=194,slow=5.8,SNR=8.3						
USRK	Ussuriysk Ar.	45.95	11	P	P	19 41 13.0	-0.3
KOLN	Koldanda	46.17	311	*e*P	P	19 41 15.2	-0.4
DANN	Dangsing	46.36	312	*e*P	P	19 41 17.1	-0.1
	comp=Z,31nm,0.9s						
PYUN	Piuthan	46.80	311	*e*P	P	19 41 20.9	+0.3
	comp=Z,25nm,0.8s						
HIA	Hailar	50.06	359	P	P	19 41 44.1	-1.0
HIA				IAmb	IAmb	19 41 46.1	
	comp=Z,5.7nm,0.8s						
ULN	Ulaanbaatar	50.21	347	P	P	19 41 46.2	-0.2
ULN				IAmb	IAmb	19 41 54.7	
	comp=Z,13nm,1.3s						
SONM	Songino Array	50.33	347	P	P	19 41 47.7	+0.4
	comp=Z,3.4nm,0.6s,baz=170,slow=8.2,SNR=26						
SONM	Songino Array	50.33	347	P	P	19 41 47.5	+0.2
SONM				IAmb	IAmb	19 41 57.0	
	comp=Z,4.1nm,0.8s						
WMQ	Urumqi	53.80	330	*e*P	P	19 42 13.4	+0.3
WMQ				sP	sP	19 42 31.3	+0.8
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.3s						
TLY	Talaya	54.56	347	P	P	19 42 18.8	+0.4
TLY				IAmb	IAmb	19 42 24.6	
	comp=Z,8.3nm,1.1s						
KSH	Kashi	57.83	319	P	P	19 42 43.1	+0.9
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MK31	Makanchi Array	58.60	329	P	P	19 42 47.6	+0.4
MK31				IAmb	IAmb	19 43 06.1	
	comp=Z,4.7nm,1.1s						
MKAR	Makanchi Array	58.60	329	P	P	19 42 47.8	+0.5
	comp=Z,3.7nm,0.9s,baz=124,slow=8.9,SNR=13						
MKAR	Makanchi Array	58.60	329	P	P	19 42 47.4	+0.2
KBL	Kabul	60.34	311	P	P	19 42 59.1	-0.6
AAK	Ala-Archa	60.47	322	P	P	19 43 01.0	+0.6
AAK				IAmb	IAmb	19 43 09.2	
	comp=Z,9.2nm,1.4s						
DRK	Karamyk	60.59	317	P	P	19 43 01.5	+0.1
DRK				IAmb	IAmb	19 43 04.9	
	comp=Z,5.2nm,0.8s						
GAR	Garm	61.37	316	P	P	19 43 04.9	-1.6
BTK	Batken	61.53	318	P	P	19 43 07.8	+0.2
BTK				IAmb	IAmb	19 43 11.6	
	comp=Z,8.5nm,1.3s						
CHGR	Chuyangaron	62.02	316	P	P	19 43 10.1	-0.8
ZAA0	Zalesovo Array	62.53	337	P	P	19 43 12.7	-1.1
ZAA0				IAmb	IAmb	19 43 14.7	
	comp=Z,9.1nm,1.2s						
ZALV	Zalesovo Beam	62.53	337	P	P	19 43 13.2	-0.7
	comp=Z,2.5nm,0.7s,baz=123,slow=5.5,SNR=16						
ZALV	Zalesovo Beam	62.53	337	P	P	19 43 12.6	-1.3
KURK	Kurchatov	63.02	331	P	P	19 43 16.8	-0.4
YAK	Yakutsk	63.15	4	P	P	19 43 16.6	-1.2
KKAR	Karatay Array	63.21	320	P	P	19 43 18.0	-0.6
BRVK	Borovoye	68.55	330	P	P	19 43 52.3	-0.5
BRVK				IAmb	IAmb	19 43 53.4	
	comp=Z,17nm,1.4s						
ABKAR	Akbulak array	72.51	323	P	P	19 44 16.3	-0.7
ABKAR	Akbulak array	72.51	323	P	P	19 44 16.0	-0.9
ABKAR				IAmb	IAmb	19 44 17.4	
	comp=Z,7.5nm,1.4s						
TIXI	Tiksi	72.66	2	LR	LR	20 20 20.5	
	comp=Z,63nm,18.1s,baz=192,slow=39						
TIXI	Tiksi	72.66	2	P	P	19 44 16.5	-0.8
CRZF	Crozet Islands	75.28	222	P	P	19 44 34.2	+1.0
VNDA	Vanda	79.53	172	P	P	19 44 58.0	+1.6
	comp=Z,0.7nm,0.8s,baz=77,slow=8.2,SNR=1.2						
QSPA	South Pole Qui	88.97	180	P	P	19 45 46.4	+1.7
	comp=Z,0.6nm,0.3s,baz=294,slow=2.1,SNR=3.7						
ILAR	Eielson Array	91.61	25	P	P	19 45 57.1	+0.3
	comp=Z,0.3nm,0.6s,baz=261,slow=5.4,SNR=4.3						
MNK	Minsk	92.82	324	*i* P	P	19 45 54.7	-7.9
MNK				*i* P	P	19 45 54.7	-7.9
	comp=N,12nm,0.8s						
MNK				*i* P	P	19 45 54.7	-7.9
	comp=Z,7.0nm,0.8s,baz=88						
MNK				*i* PP	PP	19 49 36.6	-8.5
MNK				*i* PPP	PPP	19 51 36.0	
MNK				*i* S	SKSac	19 56 28.1	-4.6
MNK				*i* PS	PS	19 58 14.4	-7.6
MNK				*i* SS	SS	20 03 14.0	-4.3
MNK				*i* SSS	SSS	20 06 50.0	
MNK				*i* LQ	LQ	20 21 48.8	
MNK				*i* LR	LR	20 25 30.6	
MNK				*i* LRM	MLR	20 28 22.9	
	comp=N,247nm,20.2s						
MNK				*i* LRM	MLR	20 28 31.9	
	comp=E,15nm,16.6s						
MNK				*i* LRM	MLR	20 28 38.8	
	comp=Z,84nm,18.1s						

GCMT 02 19:37:05.0±0.3**, 34°.49S**±0°.04×**109°.09W**±0°.03**, h22**^{km}±1^{km}**, MW4.9**/75**, 1D, Moment Tensor Solution. s23,c24; s75,c89; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** M_{rr}-3.06±.20; $M_{\theta\theta}$0.66±.12; $M_{\phi\phi}$2.40±.14; $M_{r\theta}$0.02±.27; $M_{\theta\phi}$-0.27±.09; $M_{\phi r}$-0.77±.22; **Best double couple:** $M_0$2.85600×10^{16} **NP1:**ϕ_s170.00000°**,**δ37.00000°, λ-92.00000°. **NP2:**ϕ_s353.00000°**,**δ53.00000°, λ-88.00000°. **Principal axes:** T 2.5450**,** Plg8.0000°, Azm82.0000°**;** N 0.6210**,** Plg1.0000°, Azm172.0000°**;** P -3.1670**,** Plg82.0000°, Azm272.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAOE	Nuku Hiva Isla	38.24	305	*e*LR	LR	19 54 49.5	
	comp=Z,277nm,27.4s						
MEH	Mehetia	38.42	285	*e*T	T	20 24 50.2	
	19nm,0.3s						
PPT2	Papeete2	39.78	285	*e*LR	LR	19 55 19.7	
	comp=Z,560nm,26.0s						
VNA3	Neumayer Olymp	60.68	159	P	P	19 47 20.2	+6.0
VNA2	Neumayer--Watz	61.49	159	P	P	19 47 25.9	+6.2
	baz=231,slow=6.0						
SNAA	Sanae	62.51	160	P	P	19 47 32.3	+5.8
SYO	Syowa Base	74.24	169	⇓*e*pP	P	19 48 40.2	+0.4

NEIC ***02*** *19:40:30.3±0.9, 36°.80N±0°.02×98°.25W±0°.04, h5^{km}±2^{km} Error ellipse: s-maj=6.0km s-min=3.0km az=303.0*

TUL ***02*** *19:40:30±1.0, 36°.83N±0°.05×98°.28W±0°.03, h5^{km}±6^{km}, ML3.4, mb_Lg3.4/86(NEIC), Error ellipse: s-maj=6.9km s-min=2.3km az=156.0*

ANF ***02*** *19:40:30.7±0.6, 36°.81N×98°.31W, h9^{km}±5^{km}, ML4.1/18, Error ellipse: s-maj=3.7km s-min=2.4km az=72.0*

IDC ***02*** *19:40:30.7±1.1, 36°.83N×98°.17W, h0^{km}, mb3.4/1, mb1 3.6/5, mb1mx3.4/46, mbtmp3.2/5, ML3.7/4, Error ellipse: s-maj=15.2km s-min=13.2km az=172.0*

ISC 02 19:40:30.2±1.1**, 36°.81N**±0°.02×**98°.28W**±0°.02**, h3**^{km}±8^{km}**, n117, σ0^{s}91**/116**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.05	99		Pg	19 40 31.9	+0.5
KAN14	Manchester OK	0.29	60		Pg	19 40 36.0	+0.2
KAN14				Sg	Sg	19 40 39.9	+0.2
GC02	Grant County #	0.34	83	Pg	Pg	19 40 37.0	+0.3
KAN10	Anthony SW Sta	0.34	25	Pg	Pg	19 40 36.9	0.0
CROK	Carrier	0.39	142	Pg	Pg	19 40 38.0	+0.4
KAN05	Bluff City Nor	0.44	47		Pg	19 40 38.7	+0.1
KAN05				Sg	Sg	19 40 43.9	-0.5
KAN16	Harper SW Stat	0.45	22	Pg	Pg	19 40 38.8	0.0
KAN16				Sg	Sg	19 40 44.7	+0.1

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KAN17 Caldwell West      0.47  60 Pg       Pg     19 40 39.3  0.0
KAN08 Anthony NE Sta     0.48  31 Pg       Pg     19 40 39.5  0.0
KAN08                             Sg       Sg     19 40 45.7  0.0
KAN12 Harper NE Stat     0.53  25 Pg       Pg     19 40 40.4 -0.1
KAN01 Argonia South      0.54  50 Pg       Pg     19 40 40.5  0.0
KAN06 Argonia West S     0.55  37          Pg     19 40 40.6 -0.1
KAN06                             Sg       Sg     19 40 47.9  0.0
KAN09 Caldwell North     0.62  58 Pg       Pg     19 40 42.0 -0.1
KAN09                             Sg       Sg     19 40 49.3 -0.9
KAN13 South Haven SW     0.67  72          Pg     19 40 43.0 -0.1
U32A  Winter Ranch,      0.73 234          Pg     19 40 44.0 -0.1
U32A                              Sg       Sg     19 40 53.8 +0.2
U32A  Winter Ranch,      0.73 234 P        Pg     19 40 44.0 -0.1
      baz=53,SNR=66
U32A                              S        Sg     19 40 54.1 +0.6
      baz=53
BLOK  Blackwell          0.85  93 Pg       Pg     19 40 46.3 -0.3
BLOK                              Sg       Sg     19 40 57.5 -0.1
OK029 Liberty Lake       1.21 147          Pg     19 40 52.7 -0.7
BCOK  Bluff Creek, N     1.27 155          Pn     19 40 53.5 -1.4
OK033 Mehan              1.32 125          Pn     19 40 54.8 -0.8
QUOK  Quay               1.42 116          Pn     19 40 56.1 -0.7
T35A  Sooner Cattle      1.42  85 Pn       Pn     19 40 56.3 -0.6
T35B  Sooner Cattle      1.42  85 P        Pn     19 40 56.5 -0.4
      baz=266,SNR=12
T35B                              S        Sb     19 41 15.2 -0.6
      baz=266
OK031 S. Brethren Rd     1.44 126          Pn     19 40 56.8 -0.5
OK025 Westminster Rd     1.44 148          Pn     19 40 56.5 -0.7
OK030 Cody Creek RV      1.49 126          Pn     19 40 57.4 -0.5
OK034 N. Norfolk Rd.     1.49 122          Pn     19 40 57.5 -0.5
OKCFA Oklahoma City      1.55 154          Pn     19 40 58.1 -0.6
OKCFA Oklahoma City      1.55 154 P        Pn     19 40 58.5 -0.1
      baz=335,SNR=8.3
OKCFA                             S        Sb     19 41 19.6 +0.2
      baz=335
OKCSW OKLAHOMA CITY      1.56 154          Pn     19 40 58.2 -0.6
R32A  Long Quarter,      1.64 348          Pn     19 40 60.0 -0.1
R32A  Long Quarter,      1.64 348 P        Pn     19 41 00.1 +0.1
      baz=168,SNR=75
R32A                              S        Sb     19 41 22.2 -0.1
      baz=168
W35A  Tecumseh           2.01 145          Pn     19 41 04.6 -0.4
W35A                              IAmb_Lg         19 41 37.7
      comp=Z,190nm,0.7s
TUL1  Leonard            2.20 113 Pn       Pn     19 41 07.3 -0.3
TUL1                              IAmb_Lg         19 41 39.7
      comp=Z,214nm,0.8s
TUL1  Leonard            2.20 113 P        Pn     19 41 08.0 +0.4
      baz=295,SNR=36
TUL1                              S        Sb     19 41 38.5 +0.2
      baz=295
X34A  Smith Ranch, M     2.24 171          Pn     19 41 08.1  0.0
CBKS  Cedar Bluff        2.31 330          Pn     19 41 09.5 +0.3
CBKS                              IAmb_Lg         19 41 42.3
      comp=Z,123nm,0.7s
CBKS  Cedar Bluff        2.31 330 P        Pn     19 41 09.4 +0.3
      baz=150
CBKS                              S        Sn     19 41 39.0 +0.8
      baz=150
KSU1  Kansas State U     2.64  29 IAmb_Lg         19 41 57.8
      comp=Z,109nm,0.8s
KSU1  Kansas State U     2.64  29 P        Pn     19 41 14.5 +0.8
      baz=210
KSU1                              S        Sn     19 41 47.0 +0.8
      baz=210
LOOK  Love County        2.95 162 Pn       Pn     19 41 17.5 -0.5
LOOK                              IAmb_Lg         19 42 09.2
      comp=Z,96nm,0.8s
U38A  Gravette           3.15  96 Pn       Pn     19 41 19.9 -0.9
U38A                              IAmb_Lg         19 42 15.4
      comp=Z,94nm,0.8s
U38A  Gravette           3.15  96 P        Pn     19 41 21.1 +0.3
      baz=278,SNR=16
X37A  Clayton            3.24 132 Pn       Pn     19 41 22.1 +0.2
X37A                              IAmb_Lg         19 42 16.7
      comp=Z,106nm,1.1s
X37A  Clayton            3.24 132 P        Pn     19 41 22.2 +0.2
      baz=314,SNR=27
X37A                              S        Sn     19 42 01.3 +0.2
      baz=314
AMTX  Amarillo           3.37 236          Pn     19 41 22.9 -0.9
AMTX                              IAmb_Lg         19 42 21.9
      comp=Z,93nm,0.7s
HHAR  Hobbs              3.53  97          Pn     19 41 26.1 +0.1
HHAR                              IAmb_Lg         19 42 27.6
      comp=Z,67nm,0.7s
Z35A  Perchaven, San     3.57 166          Pn     19 41 24.6 -2.0
Z35A                              IAmb_Lg         19 42 32.6
      comp=Z,93nm,1.1s
Z35A  Perchaven, San     3.57 166 S        Sn     19 42 10.1 +0.9
      baz=347
N33B  J Bar K, Exete     3.97   9 S        Sn     19 42 17.7 -1.4
      baz=190
N33A  J Bar K, Exete     3.97   9          Pn     19 41 31.3 -0.7
W39A  Magazine           3.98 113          Pn     19 41 31.7 -0.5
W39A                              IAmb_Lg         19 42 45.7
      comp=Z,79nm,0.7s
W39A  Magazine           3.98 113 P        Pn     19 41 32.4 +0.2
      baz=295,SNR=6.6
S39A  Bolivar            4.05  76 Pn       Pn     19 41 33.0 -0.1
S39A  Bolivar            4.05  76 P        Pn     19 41 32.9 -0.1
      baz=259,SNR=15
KSCO  Kaye Shedlock'     4.08 304          Pn     19 41 32.3 -1.4
ABTX  Abilene, Hawle     4.33 195          Pn     19 41 37.3 +0.4
ABTX                              IAmb_Lg         19 42 48.6
      comp=Z,48nm,0.8s
ABTX  Abilene, Hawle     4.33 195 P        Pn     19 41 36.6 -0.3
      baz=15
U40A  Yellville          4.39  94 Pn       Pn     19 41 37.4 -0.2
U40A                              IAmb_Lg         19 42 48.2
      comp=Z,60nm,0.8s
U40A  Yellville          4.39  94 P        Pn     19 41 37.5 -0.2
      baz=278
U40A                              P        Pn     19 41 37.5 -0.2
      baz=278
MIAR  Mount Ida          4.44 119 Pn       Pn     19 41 37.0 -1.5
MIAR                              IAmb_Lg         19 42 52.8
      comp=Z,67nm,0.9s
Z38A  Mt. Pleasant       4.46 142          Pn     19 41 38.1 -0.5
Z38A                              IAmb_Lg         19 42 53.1
      comp=Z,66nm,0.8s
N35A  Tabor              4.54  26          Pn     19 41 38.3 -1.4
BGNE  Belgrade           4.59   1 Pn       Pn     19 41 40.1 -0.4
BGNE  Belgrade           4.59   1 P        Pn     19 41 40.5  0.0
      baz=181,SNR=14
P38A  Dawn               4.67  52          Pn     19 41 41.4 -0.3
P38A                              IAmb_Lg         19 43 10.8
      comp=Z,49nm,0.8s
P38A  Dawn               4.67  52 P        Pn     19 41 41.8 +0.2
      baz=234,SNR=8.2
MGMO  Mountain Grove     4.82  84          Pn     19 41 43.7  0.0
MGMO                              IAmb_Lg         19 43 07.5
      comp=Z,43nm,0.8s
WHTX  Lake Whitney,      4.86 172 Pn       Pn     19 41 44.0 -0.1
WHTX  Lake Whitney,      4.86 172 P        Pn     19 41 44.0 -0.1
      baz=352,SNR=5.4
T25A  Trinidad           4.92 276 Pn       Pn     19 41 44.0 -1.3
T25A                              IAmb_Lg         19 43 08.5
      comp=Z,76nm,0.7s
R40A  Maddies Statio     5.00  71          Pn     19 41 44.7 -1.4
R40A                              IAmb_Lg         19 43 16.0
      comp=Z,43nm,0.8s
X40A  Basin Creek Fa     5.00 116          Pn     19 41 45.8 -0.4
X40A  Basin Creek Fa     5.00 116 P        Pn     19 41 46.9 +0.7
      baz=299,SNR=17
X40A                              P        Pn     19 41 46.9 +0.7
      baz=299,SNR=17
FCAR  Ozark Folk Cen     5.05  99 Pn       Pn     19 41 46.8  0.0
OGNE  Ogallala           5.06 326          Pn     19 41 46.4 -0.7
OGNE                              IAmb_Lg         19 43 11.7
      comp=Z,102nm,0.7s
WHAR  Wooly Hollow       5.08 106 Pn       Pn     19 41 47.2 -0.1
WHAR                              IAmb_Lg         19 43 18.9
      comp=Z,39nm,0.9s
W41B  Gary Mavity, V     5.15 107 P        Pn     19 41 47.9 -0.3
      baz=290
237A  Washetta, Mont     5.21 156 Pn       Pn     19 41 48.5 -0.5
237A  Washetta, Mont     5.21 156 P        Pn     19 41 48.2 -0.8
      baz=338,SNR=6.0
WLAR  White Oak Lake     5.25 125 IAmb_Lg         19 43 24.3
      comp=Z,48nm,0.7s
N38A  Joes South For     5.59  43 Pn       Pn     19 41 53.7 -0.6
N38A                              IAmb_Lg         19 43 38.8
      comp=Z,88nm,0.8s
P40A  Paris              5.61  59 Pn       Pn     19 41 53.4 -1.0
CCM   Cathedral Cave     5.73  75 Pn       Pn     19 41 54.6 -1.6
CCM                               IAmb_Lg         19 43 43.1
      comp=Z,37nm,0.7s
SDCO  Great Sand Dun     5.84 281 Pn       Pn     19 41 54.8 -3.1
435B  Jarrell            6.04 174 IAmb_Lg         19 43 50.5
      comp=Z,59nm,0.8s
HBAR  Harrisburg         6.29  99 IAmb_Lg         19 43 54.4
      comp=Z,61nm,0.7s
PBMO  Poplar Bluff       6.30  88 IAmb_Lg         19 44 00.0
      comp=Z,67nm,0.9s
FVM   French Village     6.36  77 IAmb_Lg         19 44 01.3
      comp=Z,58nm,1.1s
SCIA  State Center       6.42  36 IAmb_Lg         19 44 00.4
      comp=Z,75nm,0.8s
JCT   Junction City      6.44 192 Pn       Pn     19 42 04.4 -1.6
ISCO  Idaho Springs      6.49 300 Pn       Pn     19 42 07.0 +0.1
SLM   Saint Louis        6.63  72 IAmb_Lg         19 44 00.8
      comp=Z,51nm,0.9s
ANMO  Albuquerque        6.90 257 Pn       Pn     19 42 16.2 +3.9
      comp=Z,0.2nm,0.3s,baz=92,slow=21,SNR=3.8
ANMO                              Pg       Pg     19 42 41.1 -1.3
      comp=Z,0.6nm,0.3s,baz=65,slow=16,SNR=6.7
ANMO                              Lg       Lg     19 44 04.3
      comp=Z,1.1nm,0.3s,baz=353,slow=22,SNR=2.4
ECSD  EROS Data Cent     7.03  10 Pn       Pn     19 42 10.8 -3.2
S44A  Carbondale         7.25  80 IAmb_Lg         19 44 27.7
      comp=Z,55nm,0.9s
SIUC  Southern Illin     7.28  80 IAmb_Lg         19 44 24.9
      comp=Z,42nm,0.8s
W45A  Hickory Valley     7.55 100 IAmb_Lg         19 44 39.7
      comp=Z,45nm,0.8s
L40A  Anamosa            7.57  44 Pn       Pn     19 42 20.6 -0.8
Q44A  Meyer Farm, Va     7.62  71 IAmb_Lg         19 44 39.6
      comp=Z,60nm,0.8s
SUSD  Miller             7.64 356 IAmb_Lg         19 44 43.4
      comp=Z,39nm,0.8s
MNTX  Cornudas Mount     7.78 231 Pn       Pn     19 42 24.4  0.0
I37A  Lemond, Waseca     8.10  26 IAmb_Lg         19 45 02.0
      comp=Z,22nm,0.8s
L42A  Oliver, Polo       8.44  49 IAmb_Lg         19 45 04.9
      comp=Z,39nm,0.8s
RSSD  Black Hills        8.52 331 Pn       Pn     19 42 34.5 -0.1
RSSD                              IAmb_Lg         19 45 08.4
      comp=Z,24nm,0.8s
K22A  Casper             8.62 315 IAmb_Lg         19 45 20.2
      comp=Z,28nm,0.8s
TX31  Lajitas Ar. Si     8.72 213 Pn       Pn     19 42 35.7 -1.6
TX32  Lajitas Array      8.72 213 Pn       Pn     19 42 35.8 -1.6
TXAR  Lajitas Array      8.72 213 Pn       Pn     19 42 37.0 -0.3
      comp=Z,0.3nm,0.3s,baz=39,slow=11,SNR=16
TXAR                              Pg       Pg     19 43 08.0 -9.2
      comp=Z,0.6nm,0.3s,baz=44,slow=12,SNR=6.5
TXAR                              Lg       Lg     19 45 03.1
      comp=Z,1.7nm,0.3s,baz=30,slow=25,SNR=9.3
TXAR  Lajitas Array      8.72 213 Pn       Pn     19 42 36.1 -1.3
121A  Cookes Peak, D     8.92 244 IAmb_Lg         19 45 24.4
      comp=Z,23nm,1.2s
F33A  5 Mile Ranch,      9.14   9 IAmb_Lg         19 45 21.7
      comp=Z,19nm,0.9s
I40A  Norwalk            9.17  37 IAmb_Lg         19 45 32.3
      comp=Z,31nm,1.1s
E28A  Huff               9.92 350 IAmb_Lg         19 46 02.6
      comp=Z,31nm,1.0s
PDAR  Pinedale Array    10.52 308 Pn       Pn     19 43 04.2 +2.1
      comp=Z,0.1nm,0.3s,baz=122,slow=18,SNR=1.5
PDAR                              Lg       Lg     19 46 02.2
      comp=Z,0.7nm,0.3s,baz=140,slow=15,SNR=6.0
TKL   Tuckaleechee C    11.77  91 Pn       Pn     19 43 17.7 -1.3
      comp=Z,0.4nm,0.3s,baz=276,slow=18,SNR=5.2
TKL                               Lg       Lg     19 46 33.6
      comp=Z,0.5nm,0.3s,baz=204,slow=19,SNR=1.9
ILAR  Eielson Array     39.96 330 P        P      19 48 07.0 +1.5
      comp=Z,0.4nm,0.8s,baz=107,slow=6.8,SNR=4.6
```

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*TUL **02** 19:44:21.9±1.1, 36°.83N±0°.02×98°.27W±0°.03, h5^{km}±7^{km}, ML2.6, mb_Lg2.4/7(NEIC), Error ellipse: s-maj=2.9km s-min=2.2km az=91.0*

NEIC 02 19:44:21.8±0.7**, 36°.82N**±0°.01×**98°.27W**±0°.02**, h9**^{km}±7^{km}**, Error ellipse: s-maj=2.7km s-min=1.9km az=57.0, Oklahoma**

```
Code  Station Name       Δ°   AZ°   Phase ID         Time     Res
                                 Op       ISC     h  m  s   ISC
OK032 Salt Plains WL     0.05 107          Pg     19 44 23.7  0.0
KAN14 Manchester OK      0.28  61 Pg       Pg     19 44 27.4  0.0
GC02  Grant County #     0.33  84          Pg     19 44 28.2 -0.2
KAN10 Anthony SW Sta     0.34  25          Pg     19 44 28.5  0.0
CROK  Carrier            0.39 143          Pg     19 44 29.9 +0.4
KAN05 Bluff City Nor     0.43  48 Pg       Pg     19 44 30.1 -0.2
KAN16 Harper SW Stat     0.44  22          Pg     19 44 30.5 +0.1
KAN17 Caldwell West      0.46  61 Pg       Pg     19 44 30.9  0.0
KAN08 Anthony NE Sta     0.47  30 Pg       Pg     19 44 30.6 -0.5
KAN12 Harper NE Stat     0.53  24 Pg       Pg     19 44 31.7 -0.4
KAN01 Argonia South      0.53  51 Pg       Pg     19 44 32.3 +0.2
KAN06 Argonia West S     0.54  37          Pg     19 44 31.4 -1.0
KAN09 Caldwell North     0.61  59 Pg       Pg     19 44 33.5 -0.2
KAN13 South Haven SW     0.67  73 Pg       Pg     19 44 33.9 -0.7
U32A  Winter Ranch,      0.73 234 Pg       Pg     19 44 35.9 -0.1
BLOK  Blackwell          0.85  94 Pg       Pg     19 44 37.9 -0.3
OK029 Liberty Lake       1.22 147 Pg       Pb     19 44 44.6 -0.4
BCOK  Bluff Creek, N     1.28 155 Pn       Pn     19 44 45.8 -0.1
OK033 Mehan              1.32 125 Pn       Pn     19 44 46.5  0.0
T35A  Sooner Cattle      1.41  86 Pn       Pn     19 44 47.7 -0.1
QUOK  Quay               1.42 117 Pn       Pb     19 44 48.2 -0.2
QUOK                              IAmb_Lg         19 45 06.1
      comp=Z,17nm,1.2s
OK031 S. Brethren Rd     1.44 126 Pn       Pn     19 44 48.4 +0.2
OK025 Westminster Rd     1.45 148 Pn       Pn     19 44 47.0 -1.1
OK025                             IAmb_Lg         19 45 09.3
      comp=Z,14nm,0.8s
OK034 N. Norfolk Rd.     1.49 122 Pn       Pn     19 44 49.1 +0.3
OK030 Cody Creek RV      1.49 126 Pn       Pb     19 44 49.5 -0.3
R32A  Long Quarter,      1.64 348 Pn       Pn     19 44 50.6 -0.3
W35A  Tecumseh           2.01 145 Pn       Pn     19 44 56.3 +0.4
W35A                              IAmb_Lg         19 45 28.4
      comp=Z,16nm,0.8s
TUL1  Leonard            2.20 114 IAmb_Lg         19 45 33.2
      comp=Z,24nm,1.0s
X34A  Smith Ranch, M     2.24 171 IAmb_Lg         19 45 37.4
      comp=Z,25nm,0.9s
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*ISU **02** 19:51:58, 41°.00N×72°.00E, h5^{km}*

*KRNET **02** 19:51:59.6±0.1, 40°.96N×72°.32E, h12^{km}, mb3.1*

*SOME **02** 19:52:00.3, 41°.05N×72°.33E, h15^{km}*

*KNET **02** 19:52:01.9±0.7, 40°.99N×72°.48E, h22^{km}±3^{km}, ml2.5, Error ellipse: s-maj=12.6km s-min=3.9km az=116.0*

*NNC **02** 19:52:02.0±1.0, 41°.06N×72°.36E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=8.9km s-min=4.0km az=175.0*

ISC 02 19:52:01.6±1.1**, 40°.94N**±0°.03×**72°.28E**±0°.02**, h8**^{km}±9^{km}**, n58, σ1^{s}67**/96**, 28C-20D, Kyrgyzstan**

```
Code  Station Name       Δ°   AZ°   Phase ID         Time     Res
                                 Op       ISC     h  m  s   ISC
ANR   Andizhan           0.19 161  eP      Pg     19 52 05.0 -0.5
ANR                                eS      Sg     19 52 09.0 +0.9
OHH   Osh                0.56 137⇑iP      Pg     19 52 10.1 -2.4
      baz=41
OHH                               ⇑iS      Sg     19 52 17.9 -2.0
      baz=41
FRG   Fergana            0.67 214  eP      Pn     19 52 18.0 +0.5
FRG                                eS      Sg     19 52 27.0 +3.6
TRKS  Terek-Say          1.04 305⇓iP      Pb     19 52 18.5 -3.5
      baz=1.0
TRKS                              ⇓eS      Sb     19 52 32.4 -3.6
      baz=1.0
SALK  Salom-Alik         1.17  92⇓eP      Pn     19 52 21.3 -3.2
      baz=93
SALK                              ⇓eS      Sb     19 52 36.6 -3.0
      baz=93
SFK   Sufi-Kurgan        1.31 134⇓eP      Pn     19 52 23.9 -2.6
      baz=36
SFK                               ⇓eS      Sb     19 52 42.1 -1.6
      baz=36
BTK   Batken             1.42 232  eP      Sg     19 52 48.0 +0.9
BTK                                eS      Pg     19 52 31.0 +2.2
BTK   Batken             1.42 232⇑iP      Pn     19 52 26.6 -1.2
      baz=32
BTK                               ⇑iS      Sn     19 52 46.4 -0.2
      baz=32
DRK   Karamyk            1.50 194⇓eP      Pn     19 52 27.8 -1.3
      baz=95
DRK                               ⇓iS      Sn     19 52 48.6 -0.4
      baz=95
MNAS  Manas              1.56   6⇑eP      Pn     19 52 27.9 -1.9
      baz=5.0
MNAS                              ⇑iS      Sn     19 52 48.9 -1.4
      baz=5.0
AML   Almayashu          1.60  41 ⇑P      Pn     19 52 29.0 -1.6
      52nm,0.2s,SNR=74
AML                                ⇓S      Sn     19 52 50.0 -1.7
      40nm,0.2s
AML   Almayashu          1.60  41⇑eP      Pn     19 52 28.8 -1.8
      baz=41
AML                               ⇑iS      Sn     19 52 50.0 -1.7
      baz=41
CHRV  Charvak            1.89 293  eS      Sn     19 52 57.0 -1.3
MRKS  Merke              1.94  21  eP      Pn     19 52 35.6 +0.6
      33nm,0.5s
MRKS                               eS      Sb     19 53 00.3 -1.4
      64nm,0.3s
MRKS  Merke              1.94  21   P      Pn     19 52 35.6 +0.6
      33nm,0.5s
MRKS                                S      Sb     19 53 00.3 -1.4
      64nm,0.3s
EKS2  Erkin-Say          2.06  33 ⇑P      Pn     19 52 36.7 +0.1
      11nm,0.4s,SNR=14
EKS2                               ⇑S      Sb     19 53 03.4 -1.7
      10nm,0.3s
EKS2  Erkin-Say          2.06  33⇓iP      Pn     19 52 36.0 -0.6
      baz=32
EKS2                              ⇓iS      Sn     19 53 02.5  0.0
      baz=32
IUG   Iuzhnay            2.08 306  eP      Pb     19 52 39.2 -0.4
      167nm,0.1s
IUG                                eS      Sb     19 53 06.5 +0.9
      82nm,0.1s
IUG   Iuzhnay            2.08 306   Pg     Pb     19 52 39.2 -0.4
      167nm,0.3s
IUG                                 Lg     Lg     19 53 06.5
      75nm,0.3s
UCH   Uchtor             2.12  52 ⇑P      Pn     19 52 37.1 -0.6
      14nm,0.1s,SNR=62
UCH   Uchtor             2.12  52⇓eP      Pn     19 52 37.2 -0.6
      baz=52
UCH                               ⇓iS      Sn     19 53 04.4 -0.1
      baz=52
AAK   Ala-Archa          2.38  44 ⇓P      Pn     19 52 41.3 +0.2
      13nm,0.3s,SNR=23
AAK   Ala-Archa          2.38  44 ⇓Pn     Pn     19 52 40.6 -0.4
      6.0nm,0.4s
AAK                                ⇑Lg     Lg     19 53 12.2
      4.6nm,0.5s
AAK   Ala-Archa          2.38  44⇑iP      Pn     19 52 40.3 -0.7
      baz=43
AAK                               ⇑iS      Sn     19 53 10.4  0.0
      baz=43
GAR   Garm               2.45 219⇑iP      Pn     19 52 42.6 +0.6
      baz=19
GAR                               ⇑iS      Sn     19 53 14.1 +1.9
      baz=19
FRU1  Bishkek            2.57  42⇑iP      Pn     19 52 43.2 -0.4
      baz=42
FRU1                              ⇑eS      Sn     19 53 15.1  0.0
      baz=42
KBK   Karagaybulak       2.63  48 ⇑P      Pn     19 52 44.6  0.0
      10nm,0.2s,SNR=5.4
KBK   Karagaybulak       2.63  48⇑iP      Pn     19 52 44.2 -0.4
      baz=48
KBK                               ⇑iS      Sn     19 53 16.4 -0.5
      baz=48
CHMS  Chumysh            2.77  41⇓iP      Pn     19 52 45.9 -0.4
      baz=41
CHMS                              ⇓iS      Sn     19 53 19.5 -0.4
      baz=41
BRLS  Borolday           2.77 320  eP      Pb     19 52 49.7 -1.8
      3.4nm,0.3s
BRLS                               eS      Sb     19 53 24.2 -1.4
      15nm,0.3s
BRLS  Borolday           2.77 320   Pg     Pb     19 52 49.7 -1.8
      3.4nm,0.3s
BRLS                                Lg     Lg     19 53 24.2
      15nm,0.3s
USP   Ospenovka          2.86  35 ⇓P      Pn     19 52 47.0 -0.5
      3.3nm,0.2s,SNR=7.5
USP   Ospenovka          2.86  35⇑eP      Pn     19 52 47.0 -0.5
      baz=34
USP                               ⇑iS      Sn     19 53 21.8 -0.4
      baz=34
BOOM  Boomskoye usch     3.15  59⇓eP      Pn     19 52 51.4 -0.3
      baz=59
BOOM                              ⇓iS      Sn     19 53 29.2 -0.4
      baz=59
TKM2  Tokmak 2           3.17  50 ⇑Pn     Pn     19 52 52.1 +0.1
      2.0nm,0.3s
TKM2                               ⇑Lg     Lg     19 53 37.7
      3.4nm,0.3s
CHGR  Chuyangaron        3.31 228⇑iP      Pn     19 52 54.5 +0.7
      baz=28
CHGR                              ⇑iS      Sn     19 53 34.6 +1.2
      baz=28
KST   Kastek             3.46  51  eP      Pb     19 53 02.5 -0.7
      6.0nm,0.2s
KST                                eS      Sb     19 53 46.9 +1.4
      12nm,0.2s
KST   Kastek             3.46  51   Pg     Pb     19 53 02.5 -0.7
      6.0nm,0.2s
KST                                 Lg     Lg     19 53 46.9
      12nm,0.5s
DGS   Degeres            3.48  47  eP      Pb     19 53 03.4 -0.1
      6.5nm,0.1s
DGS                                eS      Sb     19 53 48.3 +2.4
      6.6nm,0.1s
DGS   Degeres            3.48  47   Pg     Pb     19 53 03.4 -0.1
      6.5nm,0.6s
DGS                                 Lg     Lg     19 53 48.3
      6.6nm,0.7s
KRBS  Karabastau         3.74  41  eP      Pb     19 53 07.1 -0.8
      2.3nm,0.6s
KRBS                               eS      Sb     19 53 54.4 +1.1
      5.9nm,0.0s
KRBS  Karabastau         3.74  41   Pg     Pb     19 53 07.1 -0.8
      2.3nm,0.6s
KRBS                                Lg     Lg     19 53 54.4
      5.2nm,0.4s
MTBS  Maitube            3.79  53  eP      Pb     19 53 08.9 +0.1
      3.0nm,0.2s
MTBS                               eS      Sb     19 53 57.4 +2.5
      6.8nm,0.3s
MTBS  Maitube            3.79  53   Pg     Pb     19 53 08.9 +0.1
      3.0nm,0.2s
MTBS                                Lg     Lg     19 53 57.4
      6.8nm,0.3s
TNSS  Tian-Shan          4.07  57  eP      Pb     19 53 14.2 +0.6
      1.2nm,0.3s
TNSS                               eS      Sb     19 54 06.7 +3.6
      2.0nm,0.6s
TNSS  Tian-Shan          4.07  57   Pg     Pb     19 53 14.3 +0.6
      1.2nm,0.3s
TNSS                                Lg     Lg     19 54 06.7
      2.0nm,0.6s
MDOK  Medeo              4.19  56  eP      Pb     19 53 15.5 -0.2
      5.0nm,0.5s
MDOK                               eS      Sb     19 54 09.1 +2.5
      3.0nm,0.8s
MDOK  Medeo              4.19  56   Pg     Pb     19 53 15.5 -0.2
      5.0nm,0.5s
MDOK                                Lg     Lg     19 54 09.0
      3.0nm,0.8s
KUU   Kurty              4.22  44  eP      Pb     19 53 16.1 +0.1
      1.6nm,0.5s
KUU                                eS      Sb     19 54 09.8 +2.7
      4.5nm,0.4s
KUU   Kurty              4.22  44   Pg     Pb     19 53 16.1 +0.1
      1.6nm,0.5s
KUU                                 Lg     Lg     19 54 09.8
      4.5nm,0.4s
KOTS  Kotyrbulak         4.27  56  eP      Pb     19 53 18.2 +1.2
      4.4nm,0.3s
KOTS                               eS      Sb     19 54 13.4 +4.7
      6.6nm,0.4s
KOTS  Kotyrbulak         4.27  56   Pg     Pb     19 53 18.2 +1.2
      4.4nm,0.3s
KOTS                                Lg     Lg     19 54 13.4
      6.6nm,0.4s
KTBS  Karatobe           4.29  48  eP      Pb     19 53 17.7 +0.5
      1.4nm,0.3s
KTBS                               eS      Sb     19 54 12.4 +3.3
      7.3nm,0.4s
KTBS  Karatobe           4.29  48   Pg     Pb     19 53 17.7 +0.5
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	1.4nm,0.3s						
KTBS				Lg	Lg	19 54 12.4	
	7.3nm,0.4s						
BTLS	**Baital**	**4.30**	**17**	*e*P	**Pb**	**19 53 17.6**	**+0.1**
	1.1nm,0.3s						
BTLS				*e*S	**Sb**	**19 54 12.1**	**+2.6**
	3.7nm,0.5s						
BTLS	**Baital**	**4.30**	**17**	Pg	**Pb**	**19 53 17.6**	**+0.1**
	1.1nm,0.3s						
BTLS				Lg	Lg	19 54 12.1	
	3.7nm,0.5s						
ARXS	**Arharly**	**5.25**	**50**	*e*P	**Pb**	**19 53 35.1**	**+1.5**
	1.3nm,0.2s						
ARXS				*e*S	**Sb**	**19 54 42.4**	**+5.7**
	3.5nm,0.5s						
ARXS	**Arharly**	**5.25**	**50**	Pg	**Pb**	**19 53 35.1**	**+1.5**
	1.3nm,0.2s						
ARXS				Lg	Lg	19 54 42.4	
	3.5nm,0.5s						

IDC ***02*** *20:00:55.3±0.5, 44.°15N×148.°71E, h0^{km}, mb4.5/36, mb1 4.6/40, mb1mx4.5/68, mbtmp4.5/40, ML3.6/4, MS3.6/16, Ms1 3.6/16, ms1mx3.3/57, Error ellipse: s-maj=13.9km s-min=11.3km az=120.0*

BJI ***02*** *20:00:55.6±0.0, 44.°11N×149.°38E, h40^{km}, mB5.1/24, mb4.7/53, Ms4.6/21, Ms7 4.3/19*

NIED ***02*** *20:00:57.8, 44.°27N×148.°93E, h30^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.30; $M_{\theta\theta}$1.03; $M_{\phi\phi}$-3.32; $M_{r\theta}$2.07; $M_{\theta\phi}$-1.18; $M_{\phi r}$1.32; Fault plane solution: $M_0$4.00000×10^{15} NP1:ϕ_s43.00000°, δ68.00000°, λ123.00000°. NP2:ϕ_s163.00000°, δ39.00000°, λ37.00000°.*

JMA ***02*** *20:00:57.8±0.7, 44.°27N×148.°93E, h30^{km}, M4.5*

SKHL ***02*** *20:00:57.2±0.5, 43.°90N×149.°10E, h36^{km}±2^{km}, mb5.3/13, mbv5.3/2, ms4.5/4, msh5.1/2*

MOS ***02*** *20:01:00.2±0.9, 44.°07N×148.°69E, h47^{km}, mb4.9/31, MS3.8/9, Error ellipse: s-maj=6.7km s-min=4.8km az=129.0*

BGR ***02*** *20:01:04.2±0.0, 44.°22N×147.°76E, h33^{km}, mb5.2, Ms3.8*

NEIC ***02*** *20:01:04.3±1.5, 44.°1N±0.°1×148.°7E±0.°1, h64^{km}±6^{km}, mb4.8/163, Error ellipse: s-maj=17.4km s-min=12.3km az=167.0*

ISC 02 20:01:00.1±0.4**, 43.°99N**±0.°04×**148.°77E**±0.°05**, h38**^{km}±1^{km}**, h39**^{km}**:pP-P, n646, σ1**^{s}**41**/668**, mb4.8**/184**, MS3.9**/20**, 28C-17D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.40**	**333**	c *i*PN	**Pn**	**20 01 21.6**	**-1.4**
KUR				*e*S	**Sn**	**20 01 39.3**	**-0.9**
KUR				pmax	pmax		
	comp=N,857nm,0.5s						
KUR				pmax	pmax		
	comp=Z,3μm,0.5s						
KUR				pmax	pmax		
	comp=E,742nm,0.3s						
KUR				smax	smax		
	comp=N,6μm,0.6s						
KUR				smax	smax		
	comp=E,3μm,0.5s						
KUR	**Kuril'sk**	**1.40**	**333**	*i* P	**Pn**	**20 01 21.7**	**-1.3**
KUR				AMB	AMB	20 01 24.0	
	comp=E,2μm,0.5s						
KUR				*e*S	**Sn**	**20 01 40.0**	**-0.2**
KUR				A	A	20 01 42.0	
	comp=E,6μm,0.6s						
KUR				A	A	20 01 42.0	
	comp=E,3μm,0.6s						
KUR				AMS	AMS	20 02 17.0	
	comp=E,8μm,11.0s						
KUR				AMS	AMS	20 02 17.0	
	comp=E,10μm,11.0s						
KUR				AMS	AMS	20 02 17.0	
	comp=E,12μm,11.0s						
YUK	**Yuzh-Kuril'sk**	**2.10**	**272**	⇓*i*PN	**Pn**	**20 01 33.0**	**+0.4**
YUK				*i* S	**Sn**	**20 01 59.9**	**+2.5**
YUK				pmax	pmax		
	comp=N,608nm,0.4s						
YUK				pmax	pmax		
	comp=E,791nm,0.4s						
YUK				pmax	pmax		
	comp=Z,1μm,0.4s						
YUK				smax	smax		
	comp=E,4μm,0.7s						
YUK				smax	smax		
	comp=N,2μm,0.7s						
YUK				smax	smax		
	comp=N,5μm,0.5s						
YUK				smax	smax		
	comp=E,4μm,0.4s						
YUK				MLR	MLR		
	comp=E,2μm,11.0s						
YUK				MLR	MLR		
	comp=Z,1μm,11.0s						
YUK				MLR	MLR		
	comp=N,609nm,10.0s						
YUK	**Yuzh-Kuril'sk**	**2.10**	**272**	*i* P	**Pn**	**20 01 33.0**	**+0.4**
YUK				AMB	AMB	20 01 36.0	
	comp=N,1μm,0.4s						
YUK				*i* S	**Sn**	**20 01 59.6**	**+2.2**
YUK				A	A	20 02 07.0	
	comp=N,5μm,0.5s						
YUK				A	A	20 02 07.0	
	comp=N,4μm,0.5s						
YUK				AMS	AMS	20 02 36.0	
	comp=N,7μm,12.0s						
YUK				AMS	AMS	20 02 36.0	
	comp=N,6μm,12.0s						
YUK				AMS	AMS	20 02 36.0	
	comp=N,7μm,12.0s						
GRPR	**Tuman**	**2.16**	**271**	⇑*i*PN	**Pn**	**20 01 33.6**	**+0.1**
GRPR				*e*S	**Sn**	**20 02 01.2**	**+2.2**
GRPR				pmax	pmax		
	comp=Z,836nm,0.4s						
GRPR				pmax	pmax		
	comp=N,530nm,0.3s						
GRPR				pmax	pmax		
	comp=E,627nm,0.5s						
GRPR				smax	smax		
	comp=N,5μm,0.4s						
GRPR				smax	smax		
	comp=E,3μm,0.5s						
GRPR				smax	smax		
	comp=N,5μm,0.4s						
GRPR				smax	smax		
	comp=E,4μm,0.4s						
GRPR	**Tuman**	**2.16**	**271**	*i* P	**Pn**	**20 01 33.6**	**+0.1**
GRPR				AMB	AMB	20 01 39.0	
	comp=E,840nm,0.4s						
GRPR				*e*S	**Sn**	**20 02 01.2**	**+2.2**
GRPR				A	A	20 02 06.0	
	comp=E,5μm,0.5s						
GRPR				A	A	20 02 06.0	
	comp=E,3μm,0.5s						
GRPR				A	A	20 02 07.0	
	comp=E,5μm,0.4s						
GRPR				A	A	20 02 07.0	
	comp=E,4μm,0.4s						
NEM2	**Nemuro 2**	**2.28**	**255**	P	**Pn**	**20 01 34.9**	**-0.2**
NEM2				*e*S	**Sn**	**20 02 02.7**	**+0.8**
NMR	**Nemuro--Hokkai**	**2.29**	**255**	⇓*i*PN	**Pn**	**20 01 35.2**	**0.0**
NMR				*e*S	**Sn**	**20 02 03.6**	**+1.4**
NMR	**Nemuro--Hokkai**	**2.29**	**255**	*i* P	**Pn**	**20 01 35.2**	**0.0**
NMR				*e*S	**Sn**	**20 02 03.6**	**+1.4**
GLVR	**Golovnino**	**2.36**	**265**	⇑*i*PN	**Pn**	**20 01 36.9**	**+0.7**
GLVR				*i* S	**Sn**	**20 02 06.5**	**+2.6**
GLVR				pmax	pmax		
	comp=Z,1μm,0.3s						
GLVR				pmax	pmax		
	comp=E,339nm,0.4s						
GLVR				pmax	pmax		
	comp=N,745nm,0.3s						
GLVR				smax	smax		
	comp=E,4μm,0.7s						
GLVR				smax	smax		
	comp=N,3μm,0.5s						
GLVR				smax	smax		
	comp=N,5μm,0.4s						
GLVR				smax	smax		
	comp=E,4μm,0.4s						
GLVR	**Golovnino**	**2.36**	**265**	*i* P	**Pn**	**20 01 36.9**	**+0.7**
GLVR				AMB	AMB	20 01 41.0	
	comp=E,1μm,0.3s						
GLVR				*i* S	**Sn**	**20 02 06.5**	**+2.6**
GLVR				A	A	20 02 07.0	
	comp=E,3μm,0.7s						
GLVR				A	A	20 02 07.0	
	comp=E,4μm,0.7s						
GLVR				A	A	20 02 12.0	
	comp=E,6μm,0.4s						
GLVR				A	A	20 02 12.0	
	comp=E,4μm,0.4s						
RUSJ	**Misakicho**	**2.54**	**274**	⇓*i*PN	**Pn**	**20 01 40.2**	**+1.5**
RUSJ				*e*S	**Sn**	**20 02 12.1**	**+3.8**
JRA	**Rausu**	**2.63**	**270**	P	**Pn**	**20 01 40.8**	**+0.9**
JNK	**Nakash**	**2.96**	**264**	P	**Pn**	**20 01 45.2**	**+0.8**
AKK	**Akkeshi**	**3.02**	**253**	*e*P	**Pn**	**20 01 45.6**	**+0.4**
AKK				*e*S	**Sn**	**20 02 22.7**	**+2.6**
JAK	**Akkeshi**	**3.12**	**253**	P	**Pn**	**20 01 47.0**	**+0.3**
JAK				*e*S	**Sn**	**20 02 23.7**	**+1.0**
JTKR	**Abashiri--Toko**	**3.51**	**271**	P	**Pn**	**20 01 53.5**	**+1.5**
JAR	**Ashorobuto**	**3.69**	**261**	P	**Pn**	**20 01 55.7**	**+1.2**
JOB	**Onbets**	**3.75**	**255**	P	**Pn**	**20 01 56.2**	**+0.9**
JMP	**Maruseppu**	**3.90**	**272**	P	**Pn**	**20 01 59.2**	**+1.8**
JCH	**Churui**	**4.18**	**253**	P	**Pn**	**20 02 02.2**	**+1.0**
JKK2	**Kamakawa 2**	**4.35**	**271**	P	Pn	20 02 05.7	+2.1
JKA	**Kamikawa-asahi**	**4.45**	**274**	*e*P	Pn	20 02 07.3	+2.4
JKA	**Kamikawa-asahi**	**4.45**	**274**	Pn	Pn	20 02 07.3	+2.4
ASAJ	**Asahikawa**	**4.45**	**274**	Pn	Pn	20 02 07.2	+2.3
	comp=E,3.8nm,0.3s,baz=69,slow=5.6,SNR=30						
ASAJ				LR	LR	20 03 57.2	
	comp=E,805nm,19.0s,baz=174,slow=41						
ASAJ	**Asahikawa**	**4.45**	**274**	P	Pn	20 02 07.3	+2.4
ASAJ	**Asahikawa**	**4.45**	**274**	PN	Pn	20 02 07.3	+2.4
JSE	**Soyaes**	**4.53**	**284**	P	Pn	20 02 07.8	+1.8
JFR	**Furan**	**4.56**	**262**	P	Pn	20 02 08.8	+2.3
JEM	**Erimo**	**4.56**	**246**	P	**Pn**	**20 02 08.3**	**+1.9**
JEM	**Erimo**	**4.56**	**246**		**Pn**	**20 02 08.4**	**+1.9**
ERM	**Erimo**	**4.56**	**246**	c*e*PN	**Pn**	**20 02 07.8**	**+1.3**
ERM				pmax	pmax		
	comp=Z,148nm,0.5s						
ERM	**Erimo**	**4.56**	**246**	Pn	**Pn**	**20 02 08.3**	**+1.8**
JNBK	**Urakawa-nobuka**	**4.72**	**251**	P	**Pn**	**20 02 09.1**	**+0.4**
JAB	**Ashibetsu**	**4.77**	**266**	P	Pn	20 02 14.4	+5.1
JBT2	**Biratori 2**	**4.82**	**258**	P	**Pn**	**20 02 10.9**	**+0.9**
YSS	**Yuzh-Sakhalins**	**5.16**	**307**	*e*PN	Pn	20 02 16.0	+1.3
YSS				*e*S	**Sn**	**20 03 16.7**	**+3.8**
YSS				pmax	pmax		
	comp=Z,200nm,2.3s						
YSS				pmax	pmax		
	comp=Z,60nm,0.5s						
YSS				smax	smax		
	comp=E,30nm,0.5s						
YSS				smax	smax		
	comp=N,80nm,0.6s						
YSS				MLR	MLR		
	comp=N,600nm,15.0s						
YSS				MLR	MLR		
	comp=Z,1μm,15.0s						
YSS				MLR	MLR		
	comp=E,700nm,16.0s						
YSS	**Yuzh-Sakhalins**	**5.16**	**307**	*e*P	Pn	20 02 16.0	+1.3
YSS				AMB	AMB	20 02 16.9	
	comp=E,180nm,0.5s						
YSS				AMB	AMB	20 02 17.8	
	comp=E,200nm,2.0s						
YSS				*e*S	**Sn**	**20 03 15.8**	**+2.9**
YSS				A	A	20 03 22.9	
	comp=E,80nm,0.6s						
YSS				A	A	20 03 22.9	
	comp=E,30nm,0.6s						
YSS	**Yuzh-Sakhalins**	**5.16**	**307**	Pn	**Pn**	**20 02 14.9**	**+0.2**
JEW	**Eniwo**	**5.45**	**260**	P	Pn	20 02 21.6	+2.9
JEW	**Eniwo**	**5.45**	**260**	Pn	Pn	20 02 21.6	+2.9
JNB	**Noboribetsu**	**5.85**	**258**	P	**Pn**	**20 02 25.4**	**+1.3**
JNB				*e*S	**Sn**	**20 03 31.5**	**+1.7**
JKB	**Kayabe**	**6.05**	**252**	P	**Pn**	**20 02 27.8**	**+0.9**
JKB				*e*S	**Sn**	**20 03 33.6**	**-1.3**
JYM2	**Yakumo 2**	**6.43**	**256**	P	**Pn**	**20 02 33.2**	**+1.1**
JANG	**Nango**	**6.49**	**239**	P	**Pn**	**20 02 31.9**	**-1.0**
JANG				*e*S	**Sn**	**20 03 42.0**	**-3.6**
JTM	**Tenmabayashi**	**6.54**	**243**	P	**Pn**	**20 02 33.8**	**+0.2**
JTM				*e*S	**Sn**	**20 03 45.6**	**-1.2**
JTM	**Tenmabayashi**	**6.54**	**243**	Pn	**Pn**	**20 02 33.0**	**-0.6**
JTH	**Tanohata**	**6.55**	**234**	P	**Pn**	**20 02 32.2**	**-1.5**
JTH				*e*S	**Sn**	**20 03 42.0**	**-5.1**
UGL	**Uglegorsk**	**6.87**	**320**	*e*PN	Pn	20 02 43.0	+4.9
UGL				S	Sn	20 04 00.6	+5.6
UGL				pmax	pmax		
	comp=Z,48nm,0.5s						
UGL				smax	smax		
	comp=E,400nm,2.0s						
UGL				smax	smax		
	comp=N,71nm,1.0s						
UGL				smax	smax		
	comp=E,96nm,0.6s						
UGL	**Uglegorsk**	**6.87**	**320**	*e*P	Pn	20 02 40.9	+2.8
UGL				AMB	AMB	20 02 46.0	
	comp=E,50nm,0.5s						
UGL				*e*S	**Sn**	**20 03 56.9**	**+1.9**
UGL				A	A	20 04 02.0	
	comp=E,500nm,2.0s						
UGL				A	A	20 04 02.0	
	comp=E,400nm,2.0s						
UGL				A	A	20 04 07.0	
	comp=E,70nm,0.8s						
UGL				A	A	20 04 07.0	
	comp=E,100nm,0.8s						
UGL				AMS	AMS	20 05 33.8	
	comp=E,2μm,14.0s						
UGL				AMS	AMS	20 05 33.8	
	comp=E,2μm,14.0s						
UGL				AMS	AMS	20 05 33.8	
	comp=E,2μm,14.0s						
JOSM	**Okushiri--Mats**	**7.07**	**258**	P	**Pn**	**20 02 42.5**	**+1.6**
OFUJ	**Ofunato**	**7.24**	**230**	P	**Pn**	**20 02 41.5**	**-1.7**
OFUJ				*e*S	**Sn**	**20 03 58.5**	**-5.6**
JRG	**Rokugo**	**7.62**	**236**	*e*S	**Sn**	**20 04 10.2**	**-3.3**
JIO	**Ouri**	**7.86**	**228**	P	**Pn**	**20 02 50.1**	**-1.7**
JIO				*e*S	**Sn**	**20 04 13.3**	**-6.1**
TYV	**Tymovskoe**	**8.02**	**331**	*e*PN	Pn	20 02 57.2	+3.3
TYV				*e*S	**Sn**	**20 04 26.6**	**+3.3**
TYV				pmax	pmax		
	comp=Z,19nm,0.7s						
TYV				pmax	pmax		
	comp=Z,300nm,3.4s						
TYV				smax	smax		
	comp=N,8.0nm,0.9s						
TYV				smax	smax		
	comp=E,12nm,0.9s						
TYV				smax	smax		
	comp=N,300nm,4.6s						
TYV				smax	smax		
	comp=E,600nm,4.6s						
TYV				MLR	MLR		
	comp=Z,1μm,17.0s						
TYV	**Tymovskoe**	**8.02**	**331**	*e*P	Pn	20 02 56.3	+2.4
TYV				AMB	AMB	20 02 57.3	
	comp=Z,20nm,0.7s						
TYV				AMB	AMB	20 02 57.8	
	comp=Z,300nm,3.0s						
TYV				*e*S	**Sn**	**20 04 24.5**	**+1.2**
TYV				A	A	20 04 26.9	
	comp=Z,10.0nm,0.9s						
TYV				A	A	20 04 26.9	
	comp=Z,11nm,0.9s						
TYV				A	A	20 04 27.5	
	comp=Z,300nm,5.0s						
TYV				A	A	20 04 27.5	
	comp=Z,600nm,5.0s						
TYV				AMS	AMS	20 06 33.0	
	comp=Z,2μm,14.0s						
TYV				AMS	AMS	20 06 33.0	
	comp=Z,3μm,14.0s						
TYV				AMS	AMS	20 06 33.0	
	comp=Z,1μm,14.0s						
SKR	**Severo-Kuril's**	**8.35**	**34**	*e*P	**Pn**	**20 02 57.8**	**-0.5**
SKR				AMB	AMB	20 02 59.7	
	comp=Z,30nm,0.6s						
JMM	**Marumori**	**8.59**	**227**		**Pn**	**20 02 59.3**	**-2.5**
JYA	**Atsumi**	**8.69**	**235**	P	**Pn**	**20 03 02.9**	**-0.2**
JYA				*e*S	**Sn**	**20 04 36.4**	**-3.3**
JFK	**Kawauchi**	**8.93**	**225**	*e*S	**Sn**	**20 04 38.6**	**-7.1**
PAU	**Pauzhetka**	**9.23**	**33**	*e*P	**Pn**	**20 03 10.2**	**-0.3**
PAU				AMB	AMB	20 03 11.1	
	comp=Z,40nm,0.6s						
JSD	**Sado**	**9.92**	**237**	Pn	**Pn**	**20 03 18.8**	**-1.2**
OKH	**Okha**	**10.31**	**340**	*e*P	Pn	20 03 28.6	+3.4
OKH				AMB	AMB	20 03 31.4	
	comp=Z,120nm,0.7s						
NKL	**Nikolayevsk**	**10.61**	**333**	*e*P	Pn	20 03 31.4	+2.1
GRNR	**Gornyy**	**10.76**	**313**	⇓*i*PN	Pn	20 03 37.4	+5.9
GRNR				*e*S	Sn	20 05 44.1	+14
GRNR				pmax	pmax		
	comp=E,7.0nm,0.6s						
GRNR				pmax	pmax		
	comp=N,4.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GRNR				smax	smax		
	comp=N,3.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,250nm,19.0s						
GRNR				MLR	MLR		
	comp=N,250nm,12.0s						
GRNR				MLR	MLR		
	comp=Z,440nm,18.0s						
GRNR	**Gornyy**	**10.76**	**313**	*e*rx	rx	20 03 37.4	
GRNR				AMB	AMB	20 03 39.0	
	comp=Z,1μm,0.6s						
GRNR				AMS	AMS	20 05 00.0	
	comp=Z,250nm,17.0s						
GRNR				AMS	AMS	20 05 00.0	
	comp=Z,250nm,17.0s						
GRNR				AMS	AMS	20 05 00.0	
	comp=Z,440nm,17.0s						
PETK	**Petropavlovsk-**	**10.87**	**30**	Pn	**Pn**	**20 03 31.6**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=207,slow=14,SNR=18						
MJAR	**Matsushiro Arr**	**10.97**	**231**	Pn	**Pn**	**20 03 33.8**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=30,slow=14,SNR=21						
MJAR				Sn	**Sn**	**20 05 40.3**	**+4.7**
	comp=Z,0.1nm,0.3s,baz=50,slow=24,SNR=1.5						
MJAR	**Matsushiro Arr**	**10.97**	**231**	Pn	**Pn**	**20 03 32.2**	**-2.2**
MAJO	**Matsushiro**	**10.97**	**231**	*i* PN	**Pn**	**20 03 33.1**	**-1.2**
MAJO	**Matsushiro**	**10.97**	**231**	Pn	**Pn**	**20 03 33.6**	**-0.8**
MAT	**Matsushiro**	**10.97**	**231**	P	**Pn**	**20 03 33.6**	**-0.7**
MAT				S	**Sn**	**20 05 28.5**	**-7.2**
PET	**Petropavlovsk**	**11.15**	**32**	*e*PN	Pn	20 03 38.4	+1.6
PET				pmax	pmax		
	comp=Z,100nm,11.8s						
PET				MLR	MLR		
	comp=Z,700nm,15.0s						
PET	**Petropavlovsk**	**11.15**	**32**	*e*P	**Pn**	**20 03 36.2**	**-0.6**
PET				AMB	AMB	20 03 40.3	
	comp=Z,250nm,0.4s						
PET				AMS	AMS	20 08 32.6	
	comp=Z,700nm,15.0s						
USRK	**Ussuriysk Ar.**	**12.07**	**277**	Pn	**Pn**	**20 03 50.6**	**+1.3**
	baz=79,slow=12,SNR=9.8						
USRK				LR	LR	20 08 38.8	
	comp=Z,294nm,18.6s,baz=107,slow=39						
JGF	**Kuroka**	**12.12**	**230**	Pn	**Pn**	**20 03 50.5**	**+0.3**
KLR	**Kul'dur**	**12.81**	**300**	Pn	**P**	**20 04 05.2**	**-4.6**
	comp=Z,0.4nm,0.3s,baz=114,slow=12,SNR=12						
KLR				LR	LR	20 09 09.3	
	comp=Z,355nm,18.0s,baz=130,slow=39						
KLR	**Kul'dur**	**12.81**	**300**	*i* PN	**Pn**	**20 03 57.5**	**-1.9**
KLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
JWT	**Wachi**	**13.47**	**234**	Pn	**Pn**	**20 04 09.1**	**+0.6**
KSRS	**Korea Array**	**17.08**	**255**	P	**P**	**20 04 57.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=61,slow=11,SNR=8.0						
ZEA	**Zeya**	**17.13**	**312**	*e*P	**P**	**20 04 58.5**	**+0.9**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=E,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZEA				MLR	MLR		
	comp=Z,400nm,12.0s						
ZEA	**Zeya**	**17.13**	**312**	*e*P	**P**	**20 04 56.1**	**-1.5**
ZEA				AMB	AMB	20 04 59.3	
	comp=Z,10.0nm,1.0s						
JNU	**Nakatsue**	**17.67**	**238**	P	**P**	**20 05 06.2**	**+2.4**
	comp=Z,3.4nm,0.3s,baz=58,slow=11,SNR=8.3						
JNU				LR	LR	20 12 19.3	
	comp=Z,288nm,19.7s,baz=304,slow=39						
JNU	**Nakatsue**	**17.67**	**238**	IAmb	IAmb	20 05 08.6	
	comp=Z,66nm,1.1s						
SEY	**Seymchan**	**19.09**	**5**	P	**Pn**	**20 05 16.7**	**-3.4**
	comp=Z,0.8nm,0.3s,baz=184,slow=8.7,SNR=31						
SEY				LR	LR	20 13 05.4	
	comp=Z,225nm,18.0s,baz=182,slow=38						
YAK	**Yakutsk**	**21.26**	**335**	P	**P**	**20 05 39.5**	**-3.1**
	comp=Z,16nm,0.6s,baz=148,slow=2.9,SNR=18						
YAK				LR	LR	20 14 59.8	
	comp=Z,221nm,18.6s,baz=95,slow=40						
YAK	**Yakutsk**	**21.26**	**335**	*e*P	**P**	**20 05 39.3**	**-3.3**
YAK				*e*		20 06 01.5	
YAK				*e*S	**S**	**20 09 35.0**	**-1.5**
YAK				*e*		20 09 45.7	
YAK				*e*SS	**SnSn**	**20 09 55.3**	**-4.7**
YAK				*e*		20 17 06.8	
YAK				pmax	pmax		
	comp=Z,37nm,1.0s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,108nm,2.4s						
YAK				pmax	pmax		
	comp=E,69nm,2.6s						
YAK				pmax	pmax		
	comp=N,75nm,2.7s						
YAK				smax	smax		
	comp=E,139nm,2.8s						
YAK				smax	smax		
	comp=N,39nm,2.5s						
YAK				MLR	MLR		
	comp=Z,285nm,15.0s						
YAK				MLR	MLR		
	comp=E,126nm,17.0s						
YAK				MLR	MLR		
	comp=N,262nm,17.0s						
YAK	**Yakutsk**	**21.26**	**335**	P	**P**	**20 05 40.2**	**-2.4**
YAK				IAmb	IAmb	20 05 42.0	
	comp=Z,31nm,0.7s						
BJI	**Beijing**	**24.44**	**272**	P	**P**	**20 06 15.8**	**+0.7**
BJI				pmax	pmax		
	comp=Z,21nm,1.9s						
BJT	**Baijiatuau**	**24.46**	**272**	P	**P**	**20 06 15.6**	**+0.4**
BJT				pmax	pmax		
	comp=Z,16nm,0.8s						
BJT	**Baijiatuau**	**24.46**	**272**	P	**P**	**20 06 15.6**	**+0.4**
TIA	**Tai'an**	**25.31**	**263**	⇓P	**P**	**20 06 24.0**	**+1.1**
TIA				pmax	pmax		
	comp=Z,37nm,0.9s						
BILL	**Bilibino**	**25.81**	**15**	⇑*e*P	**P**	**20 06 29.2**	**+2.0**
BILL				*e**SP	**sP**	**20 06 43.6**	**+1.2**
BILL						20 07 08.0	
BILL				pmax	pmax		
	comp=Z,16nm,1.8s						
BILL				MLR	MLR		
	comp=Z,241nm,14.0s						
BILL	**Bilibino**	**25.81**	**15**	*e*P	**P**	**20 06 29.2**	**+2.0**
NJ2	**Nanjing**	**26.26**	**253**	*e*P	**P**	**20 06 34.2**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.55**	**142**	T	T	20 37 35.1	
	baz=332,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.56**	**142**	T	T	20 37 45.9	
	baz=332,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.56**	**142**	T	T	20 37 47.8	
	baz=332,slow=75						
BTO	**Baotou**	**28.68**	**277**	*e*P	P	20 06 55.6	+2.3
BTO				S	**S**	**20 11 39.3**	**-0.4**
BTO				LR	LR		
	comp=Z,580nm,14.1s						
BTO				LR	LR		
	comp=Z,850nm,15.3s						
ULN	**Ulaanbaatar**	**29.01**	**293**	c*e*P	**P**	**20 06 56.1**	**-0.2**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ULN	**Ulaanbaatar**	**29.01**	**293**	*e*P	**P**	**20 06 56.1**	**-0.2**
ULN	**Ulaanbaatar**	**29.01**	**293**	P	**P**	**20 06 56.9**	**+0.5**
TIXI	**Tiksi**	**29.37**	**347**	P	**P**	**20 06 54.9**	**-4.1**
	comp=Z,1.1nm,0.4s,baz=142,slow=8.4,SNR=15						
TIXI				PcP	**PcP**	**20 10 04.9**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=69,slow=1.0,SNR=2.7						
TIXI	**Tiksi**	**29.37**	**347**	P	**P**	**20 06 55.3**	**-3.7**
TIXI				pmax	pmax		

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      comp=Z,6.0nm,1.4s
TIXI  Tiksi            29.37 347   P      P      20 06 55.3 -3.7
SONM  Songino Array    29.46 293   P      P      20 07 01.1 +0.9
      comp=Z,4.2nm,0.6s,baz=84,slow=8.2,SNR=29
SONM                               PcP    PcP    20 10 06.3 +1.3
      comp=Z,0.7nm,0.7s,baz=115,slow=2.2,SNR=2.9
SONM                               LR     LR     20 19 49.3
      comp=Z,220nm,18.0s,baz=52,slow=39
SONM  Songino Array    29.46 293   P      P      20 07 01.0 +0.8
H11S1 WAKE ISLAND Hy   29.54 144   T      T      20 39 01.6
      baz=333,slow=76
H11S3 WAKE ISLAND Hy   29.55 144   T      T      20 39 02.8
      baz=333,slow=76
H11S2 WAKE ISLAND Hy   29.56 144   T      T      20 39 01.4
      baz=333,slow=76
GUMO  Guam             30.48 187   LR     LR     20 20 43.2
      comp=Z,19nm,18.8s,baz=110,slow=39
TLY   Talaya           30.83 301 i P      P      20 07 13.0 +0.8
TLY                                pmax   pmax
      comp=Z,5.0nm,1.0s
TLY   Talaya           30.83 301 eP      P      20 07 13.0 +0.8
ZAK   Zakamensk        31.17 298 eP      P      20 07 15.0 -0.3
ZAK                                pmax   pmax
      comp=Z,5.0nm,1.2s
TNA   Tin City         32.02  33   P      P      20 07 23.4 +1.1
ANM   Nome             32.72  35   P      P      20 07 28.8 +0.2
      baz=254
LZH   Lanzhou          34.93 273 eP      P      20 07 50.0 +1.7
LZH                                pP     sP     20 08 00.9 -2.6
LZH                                sP     pwP    20 08 04.2 +2.1
LZH                                pmax   pmax
      comp=Z,48nm,1.2s
GCSA  Galena City Sc   36.33  36   P      P      20 07 59.7  0.0
      baz=262
GTA   Gaotai           36.41 280 ⇑P      P      20 08 02.1 +1.2
GTA                                pP     pP     20 08 08.8 -1.9
GTA                                sP     sP     20 08 13.1 -3.0
GTA                                pmax   pmax
      comp=Z,11nm,1.3s
GTA                                pmax   pmax
      comp=Z,140nm,4.9s
GTA                                LR     LR
      comp=Z,190nm,14.5s
GTA                                LR     LR
      comp=Z,140nm,13.8s
GTA                                LR     LR
      comp=Z,230nm,13.1s
TTA   Tatalina         36.51  39   P      P      20 08 02.4 +1.0
TTA                                pmax   pmax
      comp=Z,11nm,0.8s
TTA   Tatalina         36.51  39   P      P      20 08 02.4 +1.0
TTA                                IAmb   IAmb   20 08 03.2
      comp=Z,10nm,0.8s
TTA   Tatalina         36.51  39   P      P      20 08 02.0 +0.6
      baz=265,SNR=7.4
SVW2  Sparrevohn       36.60  42   P      P      20 08 03.2 +1.1
P18K  Big Mountain,    36.76  45   P      P      20 08 04.3 +0.8
      baz=271
L19K  White Mountain   36.99  40   P      P      20 08 06.4 +1.0
L19K                               IAmb   IAmb   20 08 10.1
      comp=Z,10nm,1.2s
N19K  Bonanza Creek    37.13  43   P      P      20 08 08.4 +1.6
N19K  Bonanza Creek    37.13  43   P      P      20 08 07.5 +0.7
      baz=270
M19K  Big River Lodg   37.20  41   P      P      20 08 08.2 +1.0
      baz=268
K20K  Telida           37.41  39   P      P      20 08 10.2 +1.1
K20K  Telida           37.41  39   P      P      20 08 09.5 +0.5
      baz=267
J20K  Nowinta River    37.44  37   P      P      20 08 10.2 +1.0
J20K                               IAmb   IAmb   20 08 11.3
      comp=Z,13nm,0.8s
J20K  Nowinta River    37.44  37   P      P      20 08 10.1 +1.0
      baz=266,SNR=9.1
L20K  Farewell, AK     37.46  40   P      P      20 08 10.4 +1.0
      baz=268
CD2   Chengdu          37.59 265   P      P      20 08 11.6 +0.7
CD2                                pmax   pmax
      comp=Z,40nm,0.7s
IMAR  Indian Mountai   37.79  34   P      P      20 08 12.8 +0.7
A21K  Barrow           37.83  25   P      P      20 08 12.3  0.0
A21K  Barrow           37.83  25   P      P      20 08 12.5 +0.1
      baz=254
OHAK  Old Harbor       37.89  49   P      P      20 08 12.9 -0.1
OHAK                               IAmb   IAmb   20 08 32.0
      comp=Z,23nm,1.1s
OHAK  Old Harbor       37.89  49   P      P      20 08 13.5 +0.4
      baz=275
O20K  Slope Mountain   38.06  44   P      P      20 08 15.4 +0.8
      baz=272
GYA   Guiyang          38.12 257 ⇑P      P      20 08 15.6 +0.1
GYA                                pP     sP     20 08 29.9 -0.3
GYA                                pmax   pmax
      comp=Z,9.0nm,1.3s
H21K  Melozitna Rive   38.14  35   P      P      20 08 15.9 +0.7
H21K                               IAmb   IAmb   20 08 17.1
      comp=Z,17nm,1.1s
H21K  Melozitna Rive   38.14  35   P      P      20 08 15.8 +0.7
      baz=265
CHUM  Lake Minchumin   38.23  38   P      P      20 08 16.9 +1.0
      baz=268,SNR=5.4
SPCR  Spurr Chakacha   38.24  42   P      P      20 08 17.1 +1.0
      baz=271
PPLA  Purkeypile       38.25  39   P      P      20 08 17.9 +1.6
PPLA  Purkeypile       38.25  39   P      P      20 08 17.3 +1.1
      baz=269
I21K  Tanana           38.44  36   P      P      20 08 19.4 +1.7
I21K                               IAmb   IAmb   20 08 19.9
      comp=Z,10nm,0.8s
I21K  Tanana           38.44  36   P      P      20 08 18.6 +1.0
      baz=266,SNR=6.4
CNPM  China Poot       38.79  45   P      P      20 08 22.1 +1.4
BPAW  Bear Paw Mtn.    38.82  37   P      P      20 08 21.8 +1.0
      baz=269
KTH   Kantishna Hill   38.84  38   P      P      20 08 22.5 +1.4
BRLK  Bradley Lake     38.95  44   P      P      20 08 22.7 +0.7
BRLK                               IAmb   IAmb   20 08 48.6
      comp=Z,25nm,1.2s
MLY   Manley           38.96  36   P      P      20 08 23.6 +1.6
MLY                                IAmb   IAmb   20 08 24.2
      comp=Z,8.3nm,0.7s
MLY   Manley           38.96  36   P      P      20 08 22.8 +0.7
      baz=268
BRSE  Bradley Lake S   39.03  44   P      P      20 08 23.0 +0.3
      baz=274
TRF   Thorofare Moun   39.12  39   P      P      20 08 24.0 +0.5
TRF   Thorofare Moun   39.12  39   P      P      20 08 24.3 +0.8
      baz=270
CUT   Chulitna         39.14  40   P      P      20 08 23.5 +0.1
      baz=271
COLD  Coldfoot         39.32  33   P      P      20 08 25.9 +1.0
COLD                               IAmb   IAmb   20 08 26.3
      comp=Z,9.9nm,0.6s
COLD  Coldfoot         39.32  33   P      P      20 08 25.3 +0.4
      baz=265,SNR=9.7
RC01  Rabbit Creek A   39.44  42   P      P      20 08 26.6 +0.6
      baz=273
BWN   Browne           39.49  37   P      P      20 08 28.4 +2.0
I23K  Minto, Yukon-K   39.55  36   P      P      20 08 28.3 +1.4
I23K                               IAmb   IAmb   20 08 28.9
      comp=Z,7.3nm,0.8s
I23K  Minto, Yukon-K   39.55  36   P      P      20 08 27.3 +0.5
      baz=269
NRIK  Noril'sk         39.61 331   PcP    PcP    20 10 34.5 +0.8
      comp=Z,2.7nm,0.6s,baz=129,slow=6.5,SNR=2.1
SEW   Seward           39.65  44   P      P      20 08 28.1 +0.4
SEW   Seward           39.65  44   P      P      20 08 28.8 +1.0
      baz=275
NEA2  Nenana           39.66  37   P      P      20 08 29.2 +1.3
NEA2                               IAmb   IAmb   20 08 29.7
      comp=Z,11nm,0.6s
NEA2  Nenana           39.66  37   P      P      20 08 28.3 +0.5
      baz=270,SNR=7.5
TOLK  Toolik Lake Re   39.69  30   P      P      20 08 29.2 +1.2
TOLK                               IAmb   IAmb   20 08 29.6
      comp=Z,14nm,0.7s
TOLK  Toolik Lake Re   39.69  30   P      P      20 08 28.4 +0.3
      baz=264,SNR=10
MCK   McKinley         39.72  38   P      P      20 08 29.5 +1.1
MCK                                pmax   pmax
      comp=Z,7.0nm,0.9s
MCK   McKinley         39.72  38   P      P      20 08 29.5 +1.1
MCK   McKinley         39.72  38   P      P      20 08 28.9 +0.5
      baz=271
RND   Reindeer         39.77  39   P      P      20 08 29.8 +1.0
RND                                pmax   pmax
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      comp=Z,8.0nm,1.0s
RND   Reindeer         39.77  39   P      P      20 08 29.8 +1.0
GHO   Glory Hole Cre   39.79  41   P      P      20 08 30.3 +1.3
GHO                                IAmb   IAmb   20 08 40.4
      comp=Z,8.4nm,0.9s
WAT1  Susitna Watana   39.92  39   P      P      20 08 29.8 -0.3
      baz=272
MDM   Murphy Dome      40.02  36   P      P      20 08 32.1 +1.2
MDM                                IAmb   IAmb   20 08 32.8
      comp=Z,11nm,0.7s
KNK   Knik Glacier     40.04  42   P      P      20 08 31.6 +0.6
KNK                                IAmb   IAmb   20 08 32.5
      comp=Z,28nm,1.4s
KNK   Knik Glacier     40.04  42   P      P      20 08 31.7 +0.6
      baz=274
SML   Sawmill          40.07  41   P      P      20 08 32.0 +0.7
SML   Sawmill          40.07  41   P      P      20 08 31.8 +0.5
      baz=274
WRH   Wood River Hil   40.09  37   P      P      20 08 32.0 +0.6
WRH                                IAmb   IAmb   20 08 34.2
      comp=Z,7.5nm,0.6s
PWL   Port Wells       40.14  43   P      P      20 08 32.0 +0.2
PWL                                IAmb   IAmb   20 08 44.2
      comp=Z,19nm,1.1s
PWL   Port Wells       40.14  43   P      P      20 08 32.3 +0.5
      baz=275
H24K  Noodor Dome      40.18  35   P      P      20 08 33.5 +1.3
H24K                               IAmb   IAmb   20 08 34.6
      comp=Z,9.6nm,0.9s
H24K  Noodor Dome      40.18  35   P      P      20 08 33.2 +1.0
      baz=269
TCOL  CIGO, UAF Yank   40.18  36   P      P      20 08 33.1 +1.0
      baz=270
COLA  College          40.19  36 i P      P      20 08 32.5 +0.4
COLA                               pmax   pmax
      comp=Z,12nm,0.9s
COLA  College          40.19  36   P      P      20 08 33.4 +1.2
      baz=270
CCB   Clear Creek Bu   40.21  37   P      P      20 08 33.0 +0.7
WAT6  Susitna Watana   40.30  40   P      P      20 08 33.5 +0.1
      baz=273
DHY   Denali Highway   40.45  39   P      P      20 08 35.0 +0.5
DHY                                IAmb   IAmb   20 08 55.6
      comp=Z,14nm,1.3s
DHY   Denali Highway   40.45  39   P      P      20 08 34.7 +0.2
      baz=273
SCM   Sheep Creek Mo   40.55  41   P      P      20 08 35.7 +0.4
SCM                                pmax   pmax
      comp=Z,30nm,1.4s
SCM   Sheep Creek Mo   40.55  41          P      20 08 35.7 +0.4
SCM                                IAmb   IAmb   20 08 41.1
      comp=Z,30nm,1.4s
HDA   Harding Lake     40.58  37   P      P      20 08 35.7 +0.2
HDA                                IAmb   IAmb   20 08 37.0
      comp=Z,8.7nm,0.6s
HDA   Harding Lake     40.58  37   P      P      20 08 36.4 +0.9
      baz=272,SNR=7.7
IL31                   40.60  36   P      P      20 08 35.8 +0.3
ILAR  Eielson Array    40.60  36   P      P      20 08 36.0 +0.4
      comp=Z,4.9nm,0.7s,baz=257,slow=8.1,SNR=37
ILAR                               PcP    PcP    20 10 36.6 -0.3
      comp=Z,0.7nm,0.8s,baz=298,slow=3.9,SNR=2.6
ILAR                               LR     LR     20 26 07.2
      comp=Z,107nm,18.0s,baz=223,slow=37
ILAR  Eielson Array    40.60  36   P      P      20 08 35.9 +0.2
GLI   Glacier Island   40.74  42   P      P      20 08 37.2 +0.4
      baz=276
M24K  Tolsona, Glenn   41.06  40   P      P      20 08 41.2 +1.6
M24K  Tolsona, Glenn   41.06  40   P      P      20 08 40.7 +1.1
      baz=275
KLU   Klutina          41.24  41   P      P      20 08 41.7 +0.6
KLU                                IAmb   IAmb   20 08 42.9
      comp=Z,13nm,1.0s
KLU   Klutina          41.24  41   P      P      20 08 41.4 +0.3
      baz=276
J25K  Salcha River,    41.26  37   P      P      20 08 40.6 -0.5
      baz=273,SNR=6.2
DGZ   Jazzator, Alta   41.31 300 i P      P      20 08 42.8 +1.0
DGZ                                pmax   pmax
      comp=Z,4.0nm,0.8s
PAX   Paxson           41.32  39   P      P      20 08 42.4 +0.7
      baz=275
BMAR  Burnt Mountain   41.50  32   P      P      20 08 44.7 +1.7
HARP  HAARP            41.51  40   P      P      20 08 43.9 +0.7
      baz=276
RIDG  Independent Ri   41.54  38   P      P      20 08 43.1 -0.3
RIDG  Independent Ri   41.54  38   P      P      20 08 43.7 +0.2
      baz=274
KMI   Kunming          41.71 259 ⇑P      P      20 08 46.8 +1.3
KMI                                pP     pwP    20 08 57.3 -2.5
KMI                                pmax   pmax
      comp=Z,9.0nm,1.1s
KMI                                LR     LR
      comp=Z,150nm,18.9s
KMI                                LR     LR
      comp=Z,170nm,16.0s
KMI                                LR     LR
      comp=Z,150nm,17.1s
ZALV  Zalesovo Beam    41.79 307   P      P      20 08 45.7 +0.3
      comp=Z,0.9nm,0.4s,baz=76,slow=6.9,SNR=6.8
ZALV                               PcP    PcP    20 10 41.7 +0.7
      comp=Z,4.4nm,0.6s,baz=77,slow=3.1,SNR=14
ZALV                               LR     LR     20 29 30.7
      comp=Z,59nm,18.1s,baz=76,slow=41
DOT   Dot Lake         41.90  38   P      P      20 08 46.3  0.0
SCRK  Sand Creek       41.90  38   P      P      20 08 46.5  0.0
SCRK  Sand Creek       41.90  38   P      P      20 08 46.2 -0.3
      baz=275,SNR=6.5
BMRM  Bremner River    41.94  42   P      P      20 08 47.9 +1.2
BMRM                               IAmb   IAmb   20 09 02.6
      comp=Z,14nm,1.0s
BMRM  Bremner River    41.94  42   P      P      20 08 47.4 +0.7
      baz=278
J26L  Joseph Creek     42.04  37   P      P      20 08 47.9 +0.4
      baz=275
KAIM  Kayak Island     42.18  44   P      P      20 08 49.1 +0.5
      baz=279
L26K  Log Cabin Wild   42.28  39   P      P      20 08 50.1 +0.7
      baz=276
VRDI  Verde Repeater   42.46  42   P      P      20 08 52.2 +1.1
M26K  Nabesna, AK      42.51  40   P      P      20 08 53.1 +1.7
M26K                               IAmb   IAmb   20 08 56.7
      comp=Z,12nm,0.8s
M26K  Nabesna, AK      42.51  40   P      P      20 08 53.0 +1.7
      baz=278,SNR=8.1
MCARA McCarthy VSAT    42.64  41   P      P      20 08 54.0 +1.7
MCARA                              IAmb   IAmb   20 09 18.3
      comp=Z,25nm,1.3s
CRQE  Cirque           42.70  42   P      P      20 08 54.1 +1.1
      baz=279
TGL   Tana Glacier     42.83  42   P      P      20 08 55.3 +1.3
TGL                                IAmb   IAmb   20 09 20.5
      comp=Z,35nm,1.3s
WAX   Waxell Ridge     42.87  43   P      P      20 08 56.2 +1.9
WAX                                IAmb   IAmb   20 08 56.7
      comp=Z,23nm,0.8s
L27K  Beaver Creek,    42.96  39   P      P      20 08 56.6 +1.6
L27K  Beaver Creek,    42.96  39   P      P      20 08 56.2 +1.3
      baz=278,SNR=9.8
BCAR  Beaver Creek A   42.98  39   P      P      20 08 56.7 +1.5
M27K  Edge Creek, AK   43.03  40   P      P      20 08 57.3 +1.6
M27K                               IAmb   IAmb   20 09 02.3
      comp=Z,19nm,1.4s
M27K  Edge Creek, AK   43.03  40   P      P      20 08 56.9 +1.2
      baz=278
WMQ   Urumqi           43.09 292 eP      P      20 08 57.9 +1.6
WMQ                                pP     sP     20 09 13.7 +2.0
WMQ                                pmax   pmax
      comp=Z,24nm,0.7s
WMQ                                pmax   pmax
      comp=Z,130nm,6.3s
WMQ                                LR     LR
      comp=Z,400nm,12.1s
WMQ                                LR     LR
      comp=Z,470nm,18.1s
WMQ                                LR     LR
      comp=Z,150nm,16.5s
BARN  Barnard Glacie   43.34  42   P      P      20 08 59.9 +1.6
BARN                               IAmb   IAmb   20 09 00.6
      comp=Z,22nm,1.0s
MESA  MESA             43.36  43   P      P      20 08 59.5 +1.2
      baz=281
YAH   Yahtse           43.42  43   P      P      20 09 00.7 +1.8
BVCY  Beaver Creek     43.49  40   P      P      20 09 00.4 +1.1
      baz=279
CTG   Chitna Glacier   43.51  42   P      P      20 09 00.9 +1.4
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      baz=280,SNR=5.1
CTGM  Chitina Glacie   43.52  42   P      P      20 09 01.2 +1.6
CTGM                               IAmb   IAmb   20 09 01.9
      comp=Z,19nm,1.0s
ZSN   Zaisan           43.63 298 eP      P      20 09 00.5 -0.1
      baz=298
ZSN                              i S      S      20 15 28.3 +0.9
      baz=298
ZSN   Zaisan           43.63 298 eP      P      20 09 00.4 -0.1
LOGN  Logan Glacier    43.70  42   P      P      20 09 02.3 +1.2
LOGN                               IAmb   IAmb   20 09 09.1
      comp=Z,17nm,1.0s
TABL  Table Mountain   43.70  42   P      P      20 09 02.4 +1.2
YUK3  Moose Creek      43.79  40   P      P      20 09 02.9 +1.0
      baz=280
DAWY  Dawson           43.90  37   P      P      20 09 03.8 +1.2
DAWY  Dawson           43.90  37   P      P      20 09 03.6 +1.1
      baz=279
PINM  Pinnacle         44.21  43   P      P      20 09 06.0 +1.0
      baz=282
EPYK  Eagle Plains     44.68  34   P      P      20 09 10.4 +1.7
EPYK  Eagle Plains     44.68  34   P      P      20 09 10.0 +1.3
      baz=279,SNR=20
YUK4  Talbot Arm       44.72  41   P      P      20 09 11.0 +1.7
      baz=282
M30M  Minto, Yukon     45.32  39   P      P      20 09 15.5 +1.6
      baz=282
HYT   Haines Junctio   45.38  41   P      P      20 09 16.2 +1.8
HYT   Haines Junctio   45.38  41   P      P      20 09 16.4 +1.9
      baz=283,SNR=10
SEM   Semipalatinsk    45.49 303 eP      P      20 09 14.7 -0.9
      baz=303
SEM   Semipalatinsk    45.49 303 eP      P      20 09 14.7 -0.9
MK31  Makanchi Array   45.51 298   P      P      20 09 16.0 +0.4
MK31                               pmax   pmax
      comp=Z,14nm,0.8s
MK31  Makanchi Array   45.51 298   P      P      20 09 16.0 +0.4
MK31                               IAmb   IAmb   20 09 16.9
      comp=Z,14nm,0.8s
MKAR  Makanchi Array   45.51 298   P      P      20 09 16.1 +0.5
      comp=Z,13nm,0.7s,baz=79,slow=8.8,SNR=79
MKAR                               PcP    PcP    20 10 54.6 +0.8
      comp=Z,1.6nm,0.6s,baz=63,slow=5.1,SNR=3.0
INK   Inuvik           45.60  31   P      P      20 09 17.1 +1.2
      comp=Z,18nm,0.8s,baz=295,slow=6.7,SNR=39
INK   Inuvik           45.60  31   P      P      20 09 17.1 +1.2
INK                                IAmb   IAmb   20 09 17.9
      comp=Z,18nm,0.9s
INK   Inuvik           45.60  31   P      P      20 09 17.0 +1.2
      baz=279,SNR=21
MAKZ  Makanchi         45.70 298   P      P      20 09 17.7 +0.6
MAKZ                               pmax   pmax
      comp=Z,14nm,0.7s
MAKZ  Makanchi         45.70 298   P      P      20 09 17.7 +0.6
MAKZ                               IAmb   IAmb   20 09 18.5
      comp=Z,14nm,0.7s
N31M  Braeburn, Yuko   46.03  40   P      P      20 09 21.3 +1.8
      baz=284
KURK  Kurchatov        46.36 304ceP      P      20 09 21.7 -0.5
KURK                               pmax   pmax
      comp=Z,22nm,2.5s
KURK  Kurchatov        46.36 304 eP      P      20 09 21.7 -0.5
KURK  Kurchatov        46.36 304   P      P      20 09 21.9 -0.3
KURK                               IAmb   IAmb   20 09 22.9
      comp=Z,6.5nm,0.6s
KURBB Kurchatov Arra   46.45 304   P      P      20 09 22.4 -0.5
      comp=Z,3.8nm,0.5s,baz=72,slow=8.7,SNR=18
KURBB                              PcP    PcP    20 10 57.6 +0.7
      comp=Z,2.1nm,0.6s,baz=76,slow=3.4,SNR=9.7
M31M  Drury Creek, Y   46.50  39   P      P      20 09 24.7 +1.6
      baz=284,SNR=5.8
WHY   Whitehorse       46.67  41   P      P      20 09 26.4 +1.8
      baz=286
SKAG  Skagway          46.78  43   P      P      20 09 26.6 +1.4
      baz=286
FARO  Faro, Yukon      46.96  39   P      P      20 09 27.7 +0.9
      baz=285
SWI   Sorong           47.32 204   P      P      20 09 31.9 +1.9
      comp=Z,13nm,0.7s
SIJI  Sorong           47.32 204   P      P      20 09 31.6 +1.6
      comp=Z,4.4nm,0.6s,baz=33,slow=18,SNR=4.4
A36M  Sachs Harbour    47.66  25   P      P      20 09 32.8 +0.8
A36M                               IAmb   IAmb   20 09 34.2
      comp=Z,12nm,0.7s
A36M  Sachs Harbour    47.66  25   P      P      20 09 32.5 +0.6
      baz=283,SNR=5.5
P33M  Teslin, Yukon    47.77  41   P      P      20 09 34.8 +1.6
      baz=288,SNR=7.0
MMPY  Sheldon Lake,    47.79  38   P      P      20 09 34.6 +1.4
      baz=286
CHTO  Chiang Mai       48.48 255   P      P      20 09 40.6 +1.6
CHTO                               pmax   pmax
      comp=Z,6.0nm,1.1s
CHTO  Chiang Mai       48.48 255   P      P      20 09 40.6 +1.6
TDK   Taldyqorghan     48.71 297 eP      P      20 09 40.6 +0.1
      comp=Z,12nm,0.7s,baz=297
TDK   Taldyqorghan     48.71 297 eP      P      20 09 40.6 +0.1
TDK                                pmax   pmax
      comp=Z,13nm,0.7s
CMAR  Chiang Mai Arr   48.72 255   P      P      20 09 42.6 +1.8
      comp=Z,0.8nm,0.5s,baz=41,slow=7.2,SNR=10
CMAR                               PcP    PcP    20 11 08.1 +2.5
      comp=Z,0.8nm,0.7s,baz=10,slow=3.2,SNR=5.2
UZB   Uzynbulak        49.12 295 eP      P      20 09 43.9  0.0
      baz=295
UZB   Uzynbulak        49.12 295 eP      P      20 09 43.8  0.0
SHL   Shillong         49.22 268   P      P      20 09 44.8  0.0
SHL                                pmax   pmax
      comp=Z,13nm,0.9s
SHL   Shillong         49.22 268   P      P      20 09 44.8  0.0
SHL                                IAmb   IAmb   20 09 56.7
      comp=Z,12nm,0.9s
ARXS  Arharly          49.42 297   P      P      20 09 46.5 +0.4
TGTN  Hyland Airport   49.47  39   P      P      20 09 47.4 +1.3
      baz=290
SATY  Saty             49.56 295 eP      P      20 09 47.3 +0.1
      comp=Z,3.5nm,0.6s,baz=295
SATY  Saty             49.56 295 eP      P      20 09 47.3 +0.1
SATY                               pmax   pmax
      comp=Z,4.0nm,0.6s
PRZ   Przheval'sk      49.83 294   P      P      20 09 50.8 +1.5
PRZ                                pmax   pmax
      comp=Z,19nm,1.0s
PRZ   Przheval'sk      49.83 294   P      P      20 09 50.8 +1.5
BRZS  Berezniki        50.16 305 eP      P      20 09 51.0 -0.6
      baz=305
BRZS  Berezniki        50.16 305 eP      P      20 09 50.9 -0.6
BVAR  Borovoye Array   50.25 310   P      P      20 09 52.7 +0.5
      comp=Z,1.5nm,0.6s,baz=56,slow=0.5,SNR=13
BVAR                               PcP    PcP    20 11 11.3 +0.7
      comp=Z,1.5nm,0.6s,baz=48,slow=2.1,SNR=3.9
BRVK  Borovoye         50.30 310ceP      P      20 09 52.2 -0.3
BRVK                               pmax   pmax
      comp=Z,4.0nm,0.8s
BRVK  Borovoye         50.30 310 eP      P      20 09 52.2 -0.3
BRVK  Borovoye         50.30 310   P      P      20 09 53.0 +0.6
BRVK                               IAmb   IAmb   20 09 53.8
      comp=Z,6.9nm,0.9s
MDOK  Medeo            50.40 296 eP      P      20 09 54.0 +0.4
      baz=296
MDOK  Medeo            50.40 296 eP      P      20 09 54.0 +0.4
AAA   Alma-Ata         50.47 296 eP      P      20 09 54.7 +0.7
      comp=Z,11nm,0.8s,baz=296
AAA   Alma-Ata         50.47 296 eP      P      20 09 54.6 +0.7
AAA                                pmax   pmax
      comp=Z,11nm,0.8s
TNSS  Tian-Shan        50.52 296 eP      P      20 09 55.5 +0.7
      baz=296
KUU   Kurty            50.53 297 eP      P      20 09 53.9 -0.5
      comp=Z,8.3nm,0.6s,baz=297
KUU   Kurty            50.53 297 eP      P      20 09 53.8 -0.5
KUU                                pmax   pmax
      comp=Z,8.0nm,0.6s
TARG  Taragay, Kyrgy   50.57 294   P      P      20 09 55.7 +0.5
TARG                               IAmb   IAmb   20 10 07.7
      comp=Z,12nm,1.1s
KDJ   Kajisay          50.79 294   P      P      20 09 57.5 +0.9
KDJ                                pmax   pmax
      comp=Z,13nm,0.8s
KDJ   Kajisay          50.79 294   P      P      20 09 57.5 +0.9
HLK   Haleakala        50.84  99   P      P      20 09 57.6 +0.3
WRGLY Wrigley          50.97  36   P      P      20 09 57.8 +0.4
      baz=292
TAPN  Taplejung        51.17 272 eP      P      20 10 01.0 +1.2
      comp=Z,3.8nm,0.4s
BOOM  Boomskoye usch   51.43 295   P      P      20 10 02.7 +1.3
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BOOM                             pmax   pmax
      comp=Z,19nm,0.9s
BOOM  Boomskoye usch  51.43 295   P      P      20 10 02.7 +1.3
TKM2  Tokmak 2        51.45 296   P      P      20 10 02.9 +1.3
      SNR=18
BTLS  Baital          51.47 299  eP      P      20 10 01.1  -0.3
      baz=299
BTLS  Baital          51.47 299  eP      P      20 10 01.1  -0.3
ODAN  Odare           51.69 272  eP      P      20 10 05.1 +1.5
      comp=Z,2.5nm,0.4s
SGDS  Sogindy         51.83 297  eP      P      20 10 04.3 +0.1
      baz=297
KHLU  Kahalu`u        51.85 100   P      P      20 10 05.8 +1.2
KBK   Karagaybulak    52.00 296   P      P      20 10 06.9 +1.3
      SNR=14
USP   Ospenovka       52.00 297   P      P      20 10 06.6 +1.1
      SNR=17
FRU   Bishkek         52.13 296  eP      P      20 10 07.7 +1.3
FRU1  Bishkek         52.13 296   P      P      20 10 07.7 +1.2
FRU1                             pmax   pmax
      comp=Z,9.0nm,0.7s
FRU1  Bishkek         52.13 296   P      P      20 10 07.7 +1.2
FRU1                             IAmb   IAmb    20 10 08.6
      comp=Z,9.0nm,0.7s
GUN   Gumba           52.16 274  eP      P      20 10 08.3 +1.1
      comp=Z,51nm,0.8s
RAMN  Ramite          52.21 273  eP      P      20 10 08.3 +0.9
      comp=Z,51nm,0.4s
AAK   Ala-Archa       52.30 296   P      P      20 10 08.6 +0.8
      SNR=8.9
AAK   Ala-Archa       52.30 296ceP      P      20 10 07.6  -0.3
AAK                              pmax   pmax
      comp=Z,34nm,1.3s
AAK   Ala-Archa       52.30 296  eP      P      20 10 07.6  -0.3
AAK   Ala-Archa       52.30 296   P      P      20 10 08.6 +0.8
AAK                              IAmb   IAmb    20 10 20.4
      comp=Z,13nm,1.2s
EUNU  Eureka          52.41  10   P      P      20 10 07.0  -1.0
EUNU                             IAmb   IAmb    20 10 13.1
      comp=Z,6.2nm,0.9s
KKN   Kakani          52.67 274  eP      P      20 10 11.9 +1.1
      comp=Z,26nm,0.8s
PKI   Pulchoki        52.70 274  eP      P      20 10 11.9 +0.7
PKIN  Phulchoki       52.71 274  eP      P      20 10 11.9 +0.7
EKS2  Erkin-Say       52.76 296   P      P      20 10 12.3 +1.1
      SNR=13
DMN   Daman           52.90 274  eP      P      20 10 13.8 +1.3
GKN   Gorkha          53.01 275  eP      P      20 10 14.2 +1.0
AML   Almayashu       53.07 296   P      P      20 10 15.3 +1.5
      SNR=7.2
DANN  Dangsing        53.44 276  eP      P      20 10 17.7 +1.2
      comp=Z,45nm,0.6s
SVE   Sverdlovsk      53.76 317  eP      P      20 10 18.7 +0.5
SVE                              pmax   pmax
      comp=Z,10.0nm,0.8s
KOLN  Koldanda        53.89 275  eP      P      20 10 21.0 +1.3
PYUN  Piuthan         54.13 276  eP      P      20 10 22.7 +1.2
DZA   Taraz           54.21 298  eP      P      20 10 22.2 +0.4
      comp=Z,5.7nm,0.9s,baz=298
DZA   Taraz           54.21 298  eP      P      20 10 22.1 +0.4
DZA                              pmax   pmax
      comp=Z,6.0nm,0.9s
RES   Resolute Bay    54.40  17   P      P      20 10 22.4  -0.1
      comp=Z,13nm,0.8s,baz=326,slow=7.5,SNR=45
RES   Resolute Bay    54.40  17   P      P      20 10 22.0  -0.5
RES                              pmax   pmax
      comp=Z,14nm,0.8s
RES   Resolute Bay    54.40  17   P      P      20 10 22.0  -0.5
KKAR  Karatay Array   54.63 298   P      P      20 10 25.0 +0.3
KKAR  Karatay Array   54.63 298   P      P      20 10 25.0 +0.3
YKA   Yellowknife Ar  54.95  34   P      P      20 10 27.4 +0.7
      comp=Z,4.2nm,0.7s,baz=298,slow=7.1,SNR=18
ARU   Arti            54.97 317   P      P      20 10 25.9  -1.0
      comp=Z,3.1nm,0.4s,baz=73,slow=2.6,SNR=24
ARU   Arti            54.97 317⇑iP      P      20 10 25.5  -1.4
ARU                              PCP    PcP     20 11 27.7  -0.6
ARU                              S      S       20 18 03.9  -1.9
ARU                              pmax   pmax
      comp=Z,11µm,0.7s
ARU   Arti            54.97 317   P      P      20 10 26.0  -1.0
ARU                              IAmb   IAmb    20 10 27.7
      comp=Z,12nm,0.8s
IUG   Iuzhnay         55.42 298  eP      P      20 10 30.4  -0.1
      baz=298
IUG   Iuzhnay         55.42 298  eP      P      20 10 30.4  -0.1
BTK   Batken          55.99 295   P      P      20 10 35.0 +0.3
BTK                              pmax   pmax
      comp=Z,15nm,1.0s
BTK   Batken          55.99 295   P      P      20 10 35.0 +0.3
BTK                              IAmb   IAmb    20 10 47.0
      comp=Z,16nm,1.0s
GAR   Garm            56.88 294   P      P      20 10 41.6 +0.5
TULEG Thule           57.39  10   P      P      20 10 42.6  -1.3
TULEG                            IAmb   IAmb    20 10 43.8
      comp=Z,9.3nm,0.8s
ABKAR Akbulak array   57.82 309   P      P      20 10 47.5 +0.1
ABKAR Akbulak array   57.82 309   P      P      20 10 47.3   0.0
ABKAR                            IAmb   IAmb    20 10 48.5
      comp=Z,8.5nm,0.6s
CHGR  Chuyangaron     57.83 295   P      P      20 10 48.1 +0.5
NIL   Nilore          57.84 287   P      P      20 10 49.1 +1.3
NIL                              pmax   pmax
      comp=Z,37nm,0.9s
NIL   Nilore          57.84 287   P      P      20 10 49.1 +1.3
NEEM  North Greenlan  58.21   5  iP      P      20 10 47.8  -2.2
NEEM                             IAmb   IAmb    20 10 49.7
      comp=Z,7.5nm,0.6s
AKTO  Aktyubinsk      58.26 311   P      P      20 10 49.2  -1.2
      comp=Z,1.6nm,0.4s,baz=76,slow=9.4,SNR=7.5
ARCES ARCESS Array B  59.42 340   P      P      20 10 56.8  -1.4
      comp=Z,2.4nm,0.8s,baz=47,slow=7.1,SNR=9.4
ARCES                            LR     LR      20 42 02.4
      comp=Z,50nm,18.3s,baz=305,slow=42
ARCES ARCESS Array B  59.42 340   P      P      20 10 56.8  -1.4
ARCES                            pmax   pmax
      comp=Z,21nm,1.4s
G03D  McMinnville, O  59.49  55   P      P      20 10 59.0   0.0
      baz=303
PSI   Prapat          60.10 242   LR     LR     20 37 59.6
      comp=Z,19nm,19.8s,baz=68,slow=37
KBL   Kabul           60.20 291   P      P      20 11 04.0  -0.4
KBL                              pmax   pmax
      comp=Z,19nm,0.9s
KBL   Kabul           60.20 291   P      P      20 11 04.0  -0.4
J05D  Fort Rock, OR   61.78  56   P      P      20 11 16.0 +1.1
      baz=305
M04C  Macdoel         62.28  58   P      P      20 11 18.7 +0.5
      baz=306
BELG  Belogornoye     62.52 317   P      P      20 11 19.0  -0.4
      comp=Z,11nm,0.9s,baz=52,slow=3.1,SNR=6.2
BELG  Belogornoye     62.52 317  eP      P      20 11 18.8  -0.6
BELG                             pmax   pmax
      comp=Z,5.0nm,1.8s
SUMG  Summit          63.62   2   P      P      20 11 26.2  -0.8
SUMG                             pmax   pmax
      comp=Z,14nm,1.0s
SUMG  Summit          63.62   2  iP      P      20 11 26.6  -0.4
SUMG                             IAmb   IAmb    20 11 27.6
      comp=Z,6.3nm,0.8s
SUMG  Summit          63.62   2   P      P      20 11 26.2  -0.8
SUMG                             IAmb   IAmb    20 11 28.5
      comp=Z,14nm,1.0s
HYB   Hyderabad       63.95 269  iP      P      20 11 28.5  -1.0
HYB                              e              20 11 40.0
FFC   Flin Flon       64.80  37   P      P      20 11 35.2 +0.7
FFC                              pmax   pmax
      comp=Z,17nm,0.9s
FFC   Flin Flon       64.80  37   P      P      20 11 35.2 +0.7
HRA   Herat           64.83 294   P      P      20 11 35.1  -0.1
HRA                              IAmb   IAmb    20 11 47.7
      comp=Z,5.2nm,0.8s
WRA   Warramunga Arr  64.98 195   P      P      20 11 36.7 +0.8
      comp=Z,0.6nm,0.3s,baz=16,slow=6.9,SNR=24
WRA   Warramunga Arr  64.98 195   IAmb   IAmb   20 11 42.1
      comp=Z,0.2nm,1.1s
FINES FINESS Array B  65.19 334   P      P      20 11 35.6  -1.2
      comp=Z,8.2nm,0.5s,baz=37,slow=7.5,SNR=64
LRM   Limekiln Ridge  65.31  50   P      P      20 11 38.3   0.0
FITZ  Fitzroy Crossi  65.31 204   P      P      20 11 39.6 +1.5
      comp=Z,1.7nm,0.8s,baz=12,slow=9.3,SNR=2.6
GEYT  Alibeck         65.34 300   P      P      20 11 38.4 +0.1
      comp=Z,2.6nm,0.5s,baz=64,slow=3.4,SNR=6.4
GEYT                             LR     LR      20 42 44.0
      comp=Z,76nm,18.4s,baz=60,slow=38
GEYT  Alibeck         65.34 300   P      P      20 11 38.0  -0.3
GEYT                             IAmb   IAmb    20 11 51.0
      comp=Z,7.1nm,0.9s
GYA0B ALIBECK ARRAY   65.34 300   P      P      20 11 38.4 +0.1
GYA0B                            IAmb   IAmb    20 11 59.4
      comp=Z,8.5nm,0.9s
CMB   Columbia Colle  65.40  60   P      P      20 11 39.3 +0.6
CMB                              pmax   pmax
      comp=Z,4.0nm,1.2s
CMB   Columbia Colle  65.40  60   P      P      20 11 39.3 +0.6
OBN   Obninsk         65.81 324⇓eP      P      20 11 41.4 +0.5
OBN                              *PP    pwP     20 11 51.0  -4.3
OBN                              e              20 12 13.7
OBN                              pmax   pmax
      comp=Z,11nm,1.5s
OBN                              MLR    MLR
      comp=Z,142nm,15.0s
OBN   Obninsk         65.81 324  eP      P      20 11 41.3 +0.4
BMN   Battle Mountai  65.88  57   P      P      20 11 42.1 +0.2
BMN                              pmax   pmax
      comp=Z,10.0nm,1.3s
BMN   Battle Mountai  65.88  57   P      P      20 11 42.1 +0.2
BMN                              IAmb   IAmb    20 11 55.4
      comp=Z,10nm,1.3s
BOZ   Bozeman (W)     65.90  49   P      P      20 11 42.8 +0.9
      baz=309
VRH   Novokhopyorsk   66.12 319  eP      P      20 11 42.0  -1.0
VRH                              pmax   pmax
      comp=Z,10.0nm,0.8s
KVN   Kaiserville     66.20  58   P      P      20 11 45.4 +1.4
KVN                              pmax   pmax
      comp=Z,6.0nm,1.0s
KVN   Kaiserville     66.20  58   P      P      20 11 45.4 +1.4
RYN   Ryan            66.20  59   P      P      20 11 45.5 +1.5
LHV   Little Huntoon  66.44  59   P      P      20 11 47.1 +1.8
LHV                              IAmb   IAmb    20 11 58.7
      comp=Z,13nm,1.1s
ICESG Greenland Ices  67.07   3  iP      P      20 11 49.4 +0.2
ICESG                            IAmb   IAmb    20 11 50.2
      comp=Z,18nm,0.7s
H17A  Grant Village   67.24  50   P      P      20 11 50.5  -0.1
VSR   Storozhevoye    67.31 320  eP      P      20 11 50.3  -0.3
VSR                              pmax   pmax
      comp=Z,10.0nm,0.5s
TPH   Tonopah         67.34  59   P      P      20 11 52.4 +1.1
TPH                              pmax   pmax
      comp=Z,28nm,1.0s
TPH   Tonopah         67.34  59   P      P      20 11 52.4 +1.1
TIN   Tinemaha, Big   67.35  60   P      P      20 11 51.9 +0.6
      baz=309
MOOW  Moose Ponds     67.56  50   P      P      20 11 53.6 +1.0
TPAW  Teton Pass      67.61  51   P      P      20 11 54.4 +1.4
TPAW                             IAmb   IAmb    20 12 06.3
      comp=Z,10nm,1.1s
CWC   Cottonwood Cre  67.83  60   P      P      20 11 54.4   0.0
      baz=309
MTSE  Matsula         68.00 333  eP      P      20 11 55.1 +0.3
R11A  Troy Canyon, C  68.17  57   P      P      20 11 56.8 +0.3
R11A  Troy Canyon, C  68.17  57   P      P      20 11 57.3 +0.7
      baz=310
MPMC  Manual Prospec  68.44  60   P      P      20 11 58.3   0.0
      baz=310
FURC  Furnace Creek,  68.58  60   P      P      20 11 59.7 +0.9
      baz=310
ASAR  Alice Springs   68.69 195   P      P      20 12 01.4 +1.9
      comp=Z,1.4nm,0.7s,baz=9.8,slow=5.6,SNR=19
ASAR  Alice Springs   68.69 195   P      P      20 12 00.8 +1.3
PDAR  Pinedale Array  68.86  51   P      P      20 12 01.5 +0.7
      comp=Z,1.5nm,0.7s,baz=276,slow=2.4,SNR=4.6
PDAR  Pinedale Array  68.86  51          P      20 12 01.2 +0.4
EDW2  Edwards Air Fo  68.87  62   P      P      20 12 01.8 +1.0
      baz=310
GWY   Greenwater Val  68.88  60   P      P      20 12 02.2 +1.2
QSM   Queen of Sheba  68.89  60   P      P      20 12 01.0 +0.2
SNCC  San Nicolas Is  68.92  64   P      P      20 12 01.8 +0.8
      baz=310
PRN   Pahroc Range    69.10  58   P      P      20 12 01.7  -0.5
DY2G  Dye2            69.26   6  iP      P      20 12 01.3  -1.6
DY2G                             IAmb   IAmb    20 12 03.2
      comp=Z,7.7nm,0.8s
GOF   Gofitskoye      69.54 313⇑eP      P      20 12 05.8 +1.2
GOF                              pmax   pmax
      comp=Z,33nm,0.6s
ISAL  Salakas         69.60 329  eP      P      20 12 05.8 +1.0
NC405 NORSAR Array S  69.60 339   P      P      20 12 03.7  -1.1
SHPR  Sheep Range     69.61  59   P      P      20 12 03.7  -1.8
NC204 NORSAR Array S  69.70 340   P      P      20 12 04.3  -1.2
MNK   Minsk           69.75 328  iP      P      20 12 06.8 +1.0
MNK                              i              20 12 29.2
MNK                              i              20 14 40.9
MNK                              iPPP   PPP     20 16 22.6
MNK                              iS     S       20 21 12.3 +0.6
MNK                              i              20 22 05.7
MNK                              iSS    SS      20 25 43.3 +3.8
MNK                              pmax   pmax
      comp=E,1.0nm,0.8s
MNK                              pmax   pmax
      comp=N,12nm,0.9s
MNK                              pmax   pmax
      comp=Z,16nm,0.9s
MNK                              MLR    MLR
      comp=Z,124nm,20.0s
MNK                              MLR    MLR
      comp=N,233nm,21.0s
MNK                              MLR    MLR
      comp=E,20nm,21.0s
MNK   Minsk           69.75 328  iP      P      20 12 06.8 +1.0
      comp=E,1.0nm,0.8s
MNK                              iP     P       20 12 06.8 +1.0
      comp=N,12nm,0.9s
MNK                              iP     P       20 12 06.8 +1.0
      comp=Z,16nm,0.8s,baz=40
MNK                              iPcP   PcP     20 12 29.2 +0.9
MNK                              iPP    PP      20 14 40.9 +1.3
MNK                              iPPP   PPP     20 16 22.6
MNK                              iS     S       20 21 12.3 +0.6
MNK                              iSS    SS      20 25 43.4 +3.9
MNK                              iSSS   SSS     20 29 01.5
MNK                              iLQ    LQ      20 37 03.4
MNK                              iLR    LR      20 43 13.1
MNK                              iLRM   MLR     20 45 18.0
      comp=Z,124nm,19.6s
MNK                              iLRM   MLR     20 45 28.1
      comp=N,233nm,21.0s
MNK                              iLRM   MLR     20 45 28.9
      comp=E,20nm,21.0s
NB201 NORSAR Array S  69.76 339   P      P      20 12 03.6  -2.2
NB2   NORSAR Subarra  69.79 340   P      P      20 12 05.1  -0.9
      comp=Z,11nm,0.6s,baz=32,slow=6.5
NB2   NORSAR Subarra  69.79 340   P      P      20 12 05.1  -0.9
      baz=32,slow=6.5
NOA   NORSAR Array B  69.79 340   P      P      20 12 05.4  -0.6
      comp=Z,9.1nm,0.5s,baz=32,slow=6.6,SNR=71
NOA                              LR     LR      20 47 46.5
      comp=Z,21nm,18.1s,baz=305,slow=40
TUQ   Turquoise Moun  69.82  60   P      P      20 12 07.8 +1.1
      baz=310
NACGM Naroch          69.86 329  iP      P      20 12 06.3  -0.2
HFS   Hagfors         69.91 338   P      P      20 12 05.9  -0.8
      comp=Z,9.2nm,0.5s,baz=61,slow=7.0,SNR=50
CCUT  Cedar City      70.03  57   P      P      20 12 09.3 +1.1
NAO01 NORSAR Array S  70.04 340   P      P      20 12 07.2  -0.3
P17A  Butcher Ranch,  70.34  54   P      P      20 12 10.0 +0.1
P17A                             IAmb   IAmb    20 12 23.1
      comp=Z,9.1nm,1.1s
MTPU  Mount Pierson   70.42  56   P      P      20 12 12.2 +1.5
PABE  Paberze         70.44 330  eP      P      20 12 10.4 +0.5
PABE  Paberze         70.44 330   P      P      20 12 09.8  -0.2
LCMT  Little Creek M  70.45  57   P      P      20 12 12.1 +1.5
LCMT                             IAmb   IAmb    20 12 23.6
      comp=Z,8.9nm,1.1s
KIV   Kislovodsk      70.47 313 ⇑P      P      20 12 12.4 +1.8
KIV   Kislovodsk      70.47 313  eP      P      20 12 11.9 +1.4
KIV                              pmax   pmax
      comp=Z,33nm,1.1s
KIV                              MLR    MLR
      comp=Z,141nm,18.0s
KIV   Kislovodsk      70.47 313  eP      P      20 12 11.9 +1.4
KIV   Kislovodsk      70.47 313   P      P      20 12 12.3 +1.8
KBZ   Khabaz          70.51 312   P      P      20 12 11.8 +1.2
      comp=Z,18nm,0.8s,baz=68,slow=2.6,SNR=33
KBZ                              LR     LR      20 48 03.8
      comp=Z,122nm,18.4s,baz=24,slow=40
KBZ   Khabaz          70.51 312ceP      P      20 12 11.4 +0.8
KBZ                              pmax   pmax
      comp=Z,16nm,0.9s
KBZ   Khabaz          70.51 312  eP      P      20 12 11.4 +0.8
ULM   Lac du Bonnet   70.60  38   P      P      20 12 14.9 +3.9
      comp=Z,2.3nm,0.4s,baz=328,slow=7.4,SNR=2.9
ZEI   Tsey            70.60 311  eP      P      20 12 09.4  -2.1
ZEI                              pmax   pmax
      comp=Z,4.0nm,0.6s
SHA1  Shidzhatmaz     70.63 312  iP      P      20 12 12.6 +0.9
KNB   Kanab           70.71  57   P      P      20 12 13.9 +1.7
KNB                              pmax   pmax
      comp=Z,10.0nm,1.1s
KNB   Kanab           70.71  57   P      P      20 12 13.9 +1.7
KNB                              IAmb   IAmb    20 12 25.4
      comp=Z,9.6nm,1.1s
RSSD  Black Hills     70.94  47   P      P      20 12 13.2  -0.4
      baz=313
ONI   Oni             70.98 311   P      P      20 12 15.8 +2.2
ONI                              pmax   pmax
      comp=Z,15nm,0.8s
ONI   Oni             70.98 311   P      P      20 12 15.8 +2.2
ONI                              IAmb   IAmb    20 12 16.4
      comp=Z,15nm,0.8s
U15A  North Rim       71.41  57   P      P      20 12 18.2 +1.6
GNI   Garni           71.91 309   P      P      20 12 20.7 +1.3
      comp=Z,7.7nm,0.9s,baz=124,slow=7.3,SNR=3.1
GNI   Garni           71.91 309  iP      P      20 12 20.3 +0.9
GNI                              pmax   pmax
      comp=Z,24nm,1.1s
GLA   Glamis          72.06  61   P      P      20 12 21.1 +0.9
      baz=311
AKASG Malin Array Be  72.07 324   P      P      20 12 19.9  -0.1
      comp=Z,6.9nm,0.6s,baz=38,slow=6.1,SNR=36
AKASG Malin Array Be  72.07 324   P      P      20 12 18.8  -1.1
AKASG Malin Array Be  72.07 324   P      P      20 12 18.8  -1.1
AKBB  Malin Array Si  72.07 324   P      P      20 12 19.7  -0.2
AKBB                             pmax   pmax
      comp=Z,18nm,1.0s
AKBB  Malin Array Si  72.07 324   P      P      20 12 19.6  -0.2
AKBB                             IAmb   IAmb    20 12 20.9
      comp=Z,18nm,0.9s
ISCO  Idaho Springs   73.05  51   P      P      20 12 26.7 +0.4
      baz=314
X16A  Lo Mia Camp, P  73.27  58   P      P      20 12 28.2 +0.6
Q24A  Divide          73.88  51   P      P      20 12 32.0 +0.7
      baz=314
OGNE  Ogallala        74.22  48   P      P      20 12 33.1 +0.2
      baz=315
EYMN  Ely             74.24  37   P      P      20 12 33.2 +0.4
      baz=320
SORM  Soroca          74.39 323 ⇓P      P      20 12 33.7 +0.1
GURO  Guroymak-BITLI  74.54 309   P      P      20 12 35.8 +0.9
GURO                             IAmb   IAmb    20 12 48.7
      comp=Z,10nm,0.9s
UOSS  Minazif         74.87 290   P      P      20 12 37.2 +0.4
UOSS                             IAmb   IAmb    20 12 49.2
      comp=Z,7.7nm,0.8s
LVV   L'vov           74.88 327  eP      P      20 12 36.7 +0.2
ECSD  EROS Data Cent  75.00  43   P      P      20 12 37.7 +0.4
      baz=317
ANMO  Albuquerque     75.91  55  iP      P      20 12 43.2 +0.3
ANMO                             pmax   pmax
      comp=Z,10.0nm,2.9s
ANMO  Albuquerque     75.91  55   P      P      20 12 43.2 +0.3
ANMO  Albuquerque     75.91  55   P      P      20 12 43.5 +0.6
      baz=314
BUR08 Bucovina Ar. S  76.11 325   P      P      20 12 44.2 +0.5
BUR08                            IAmb   IAmb    20 12 45.6
      comp=Z,12nm,1.2s
BURAR Bucovina Array  76.13 324 ⇓P      P      20 12 44.1 +0.2
BURAR Bucovina Array  76.13 324   P      P      20 12 44.0 +0.2
BURAR                            IAmb   IAmb    20 12 56.6
      comp=Z,7.2nm,0.8s
LENM  Lemitar         76.14  56   P      P      20 12 44.1  -0.1
OJC   Ojcow           76.18 329  eP      P      20 12 44.8 +0.9
OJC   Ojcow           76.18 329   P      P      20 12 44.5 +0.5
OJC                              pmax   pmax
      comp=Z,21nm,1.0s
OJC   Ojcow           76.18 329   P      P      20 12 44.5 +0.5
KOLS  Kolonicke sedl  76.28 327  eP      P      20 12 45.6 +1.1
KOLS  Kolonicke sedl  76.28 327  eP      P      20 12 45.6 +1.1
I37A  Lemond, Waseca  76.34  41   P      P      20 12 45.2 +0.3
TESR  Tescani         76.38 323 ⇓P      P      20 12 45.8 +0.7
TLCR                  76.44 321 ⇑P      P      20 12 46.6 +1.2
UZH   Uzhgorod        76.51 327  eP      P      20 12 50.0 +4.2
UZH                              e              20 13 03.3
UZH                              e              20 13 07.1
CRVS  Cervenica-Dubn  76.62 327  eP      P      20 12 47.8 +1.3
CRVS                             e              20 12 58.6
CRVS  Cervenica-Dubn  76.62 327  eP      P      20 12 47.8 +1.3
CRVS                             e              20 12 58.6
NIE   Niedzica        76.65 328  eP      P      20 12 46.5  -0.1
319A  Douglas         76.66  59   P      P      20 12 47.9 +0.8
319A                             IAmb   IAmb    20 13 00.5
      comp=Z,15nm,1.4s
CFR   Carcaliu        76.75 321 ⇑P      P      20 12 47.7 +0.5
TRPA  Tarpa           76.81 326 ⇓P      P      20 12 48.6 +1.0
VRI   Vrincioaia      76.84 323 ⇑P      P      20 12 48.9 +1.1
PLOR  Plostina        76.89 323 ⇑P      P      20 12 49.5 +1.4
KSP   Ksiaz           76.92 331  eP      P      20 12 48.6 +0.5
SCHQ  Schefferville   77.00  20   P      P      20 12 48.9 +0.4
      comp=Z,3.7nm,0.8s,baz=294,slow=16,SNR=2.2
SCHQ                             LR     LR      20 48 04.3
      comp=Z,35nm,21.8s,baz=114,slow=37
COVR  Voineasa-Covas  77.09 323 ⇑P      P      20 12 50.2 +1.0
LANS  Liptovska Anna  77.18 329  eP      P      20 12 52.0 +2.3
LANS                             e              20 13 02.5
LANS                             pmax   pmax
      comp=Z,7.0nm,0.9s
LANS  Liptovska Anna  77.18 329  eP      P      20 12 52.0 +2.3
LANS                             e              20 13 02.5
CHVC  Chvalec         77.22 331  eP      P      20 12 51.3 +1.5
DPC   Dobruska-Polom  77.33 331  eP      P      20 12 51.6 +1.1
DPC                              ePCP   sP      20 13 02.8  -3.6
DPC   Dobruska-Polom  77.33 331  eP      P      20 12 51.6 +1.1
DPC                              e*PP   sP      20 13 02.8  -3.6
DOPR  Dopca           77.35 323 ⇓P      P      20 12 52.4 +1.8
MORC  Moravsky Berou  77.37 330 ⇑P      P      20 12 51.2 +0.5
MORC  Moravsky Berou  77.37 330  eP      P      20 12 51.5 +0.8
MORC                             e              20 13 02.7
MORC  Moravsky Berou  77.37 330   P      P      20 12 51.5 +0.8
MORC                             pmax   pmax
      comp=Z,16nm,1.1s
MORC  Moravsky Berou  77.37 330   P      P      20 12 51.5 +0.8
MORC                             IAmb   IAmb    20 12 52.9
      comp=Z,16nm,1.1s
KRLC  Kraliky         77.39 331  eP      P      20 12 51.9 +1.1
KRLC                             ePCP   pwP     20 13 02.3  -4.3
KRLC  Kraliky         77.39 331  eP      P      20 12 51.9 +1.1
KRLC                             e*PP   pwP     20 13 02.3  -4.3
MLR   Muntele Rosu    77.48 323   P      P      20 12 52.1 +0.6
      comp=Z,1.7nm,0.4s,baz=158,slow=19,SNR=2.0
ISR   Istrita         77.51 322 ⇓P      P      20 12 52.3 +0.7
CLL   Collm           77.63 333  iP      P      20 12 52.2 +0.1
CLL                              i              20 13 03.0
CLL                              pmax   pmax
      comp=Z,16nm,0.7s
CLL   Collm           77.63 333  iP      P      20 12 52.2 +0.1
      comp=Z,16nm,0.7s
CLL                              iPcP   pwP     20 13 03.0  -4.4
CLL   Collm           77.63 333  eP      P      20 12 52.3 +0.3
      comp=Z,16nm,0.7s,baz=29,slow=4.8
CLL   Collm           77.63 333   P      P      20 12 51.8  -0.2
BRG   Berggiesshubel  77.69 333  eP      P      20 12 53.6 +1.2
BRG                              Amp            20 12 55.2
      comp=Z,8.3nm,1.1s
BRG                              pP     pwP     20 13 04.0  -3.8
BRG                              Amp            20 13 05.4
      comp=Z,7.0nm,1.0s
ICOR  Ion Corvin      77.72 321 ⇓P      P      20 12 53.9 +1.2
PVCC  Panska Ves      77.78 332  eP      P      20 12 54.7 +1.8
PVCC  Panska Ves      77.78 332  eP      P      20 12 54.7 +1.8
VOIR                  77.91 323 ⇓P      P      20 12 55.1 +1.2
VYHS  Vyhne           77.96 329  eP      P      20 12 56.0 +2.0
VYHS                             e              20 13 06.1
VYHS                             pmax   pmax
      comp=Z,23nm,1.7s
VYHS  Vyhne           77.96 329  eP      P      20 12 56.0 +2.0
VYHS                             e              20 13 06.1
PSZ   Piszkesteto     78.03 328 ⇑P      P      20 12 54.4  -0.1
PSZ   Piszkesteto     78.03 328   P      P      20 12 52.9  -1.5
PSZ                              pmax   pmax
      comp=Z,6.0nm,0.8s
PSZ   Piszkesteto     78.03 328   P      P      20 12 52.9  -1.5
PSZ                              IAmb   IAmb    20 13 11.8
      comp=Z,5.6nm,0.8s
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JAVC	Velka Javorina	78.09	329	eP	P	20 12 56.6	+1.9
JAVC				e		20 13 07.8	
VRAC	Vranov	78.10	330	⇑P	P	20 12 55.1	+0.4
VRAC	Vranov	78.10	330	P	P	20 12 55.8	+1.0
	comp=Z,4.5nm,0.7s,baz=14,slow=5.8,SNR=6.9						
VRAC	Vranov	78.10	330	eP	P	20 12 55.9	+1.1
VRAC				e		20 13 07.1	
BRTR	Keskin Array B	78.22	314	P	P	20 12 56.5	+0.8
	comp=Z,2.1nm,0.8s,baz=82,slow=2.3,SNR=5.8						
BRTR	Keskin Array B	78.22	314	i P	P	20 12 57.0	+1.3
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
EKA	Eskdalemuir Ar	78.22	344	P	P	20 12 55.4	+0.1
	comp=Z,2.2nm,0.5s,baz=24,slow=5.2,SNR=12						
PRU	Pruhonice	78.25	332	eP	P	20 12 56.5	+1.0
PRU				ePCP	pwP	20 13 06.9	-4.4
PRU	Pruhonice	78.25	332	eP	P	20 12 56.5	+1.0
PRU				e*PP	pwP	20 13 06.9	-4.4
KRUC	Moravsky	78.38	330	eP	P	20 12 57.1	+0.8
KRUC				e		20 13 08.4	
SMOL	Smolenice	78.47	329	eP	P	20 12 57.9	+1.1
SMOL				e		20 13 09.2	
SMOL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SMOL	Smolenice	78.47	329	eP	P	20 12 57.9	+1.1
SMOL				e		20 13 09.2	
MODS	Modra-Piesok	78.64	329	eP	P	20 12 58.7	+1.0
MODS	Modra-Piesok	78.64	329	eP	P	20 12 58.7	+1.0
MOX	Moxa	78.65	334	eL	L	20 52 31.4	
	comp=Z,59nm,18.8s						
AMTX	Amarillo	78.73	52	P	P	20 12 59.4	+0.8
	baz=316						
MNTX	Cornudas Mount	78.82	57	P	P	20 12 59.5	+0.5
	baz=315						
GZR	Gura Zlata	78.92	324	⇓P	P	20 13 00.1	+0.7
BZS	Buzias	79.22	325	⇑P	P	20 13 01.1	+0.2
KHC	Kasperske Hory	79.31	332	eP	P	20 13 02.3	+0.9
KHC				ePCP	pwP	20 13 12.7	-4.5
KHC	Kasperske Hory	79.31	332	P	P	20 13 01.9	+0.5
KHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KHC	Kasperske Hory	79.31	332	P	P	20 13 01.9	+0.5
KHC				IAmb	IAmb	20 13 03.8	
	comp=Z,9.3nm,0.6s						
CKRC	Cesky Krumlov	79.32	331	eP	P	20 13 03.3	+1.8
HERR	Herculane	79.48	324	⇓P	P	20 13 02.4	+0.1
GEC2	GERESS Array S	79.51	332	P	P	20 13 03.0	+0.4
GERES	GERESS Array B	79.51	332	P	P	20 13 03.2	+0.6
	comp=Z,2.3nm,0.4s,baz=39,slow=5.8,SNR=30						
GERES	GERESS Array B	79.51	332	P	P	20 13 02.7	+0.1
CONA	Conrad Observa	79.53	330	eP	P	20 13 04.3	+1.6
GRA1	Grafenberg Arr	79.60	334	P	P	20 13 03.5	+0.5
GRA1				IAmb	IAmb	20 13 15.9	
	comp=Z,20nm,1.0s						
GRF	Grafenberg Arr	79.60	334	P	P	20 13 03.5	+0.5
GRF				pmax	pmax		
	comp=Z,20nm,1.0s						
GRF	Grafenberg Arr	79.60	334	eP	P	20 13 03.8	+0.9
	comp=Z,20nm,1.0s,baz=29,slow=4.8						
GRF				eL	L	20 50 14.0	
	comp=Z,36nm,20.2s						
GRFO	Grafenberg	79.60	334	P	P	20 13 03.6	+0.7
GRFO				pmax	pmax		
	comp=Z,18nm,0.9s						
GRFO	Grafenberg	79.60	334	P	P	20 13 03.6	+0.7
GRFO				IAmb	IAmb	20 13 15.9	
	comp=Z,18nm,0.9s						
VLDQ	Val d'Or	79.69	29	P	P	20 13 02.5	-0.9
VLDQ				IAmb	IAmb	20 13 15.0	
	comp=Z,13nm,1.0s						
MDVR	Moldovita	79.85	325	⇑P	P	20 13 04.4	0.0
MORH	Mrgy, Hungar	79.92	327	⇑P	P	20 13 04.7	0.0
T35A	Sooner Cattle	80.09	48	P	P	20 13 05.7	-0.2
T35A				IAmb	IAmb	20 13 18.4	
	comp=Z,11nm,0.9s						
ARSA	Arzberg	80.22	330	eP	P	20 13 07.5	+1.1
	comp=Z,1.6nm,0.5s						
SOKA	Soboth	80.89	330	i P	P	20 13 11.0	+1.0
	comp=Z,8.8nm,0.8s,SNR=9.3						
PERS	Pernice	80.89	330	i P	P	20 13 10.6	+0.6
GROS	Grobnik	80.90	329	i P	P	20 13 10.4	+0.3
VTS	Vitosha	80.95	323	⇑P	P	20 13 11.8	+1.3
VTS	Vitosha	80.95	323	P	P	20 13 11.0	+0.5
VTS				pmax	pmax		
	comp=Z,11nm,1.0s						
VTS	Vitosha	80.95	323	P	P	20 13 11.0	+0.5
VTS				IAmb	IAmb	20 13 23.6	
	comp=Z,11nm,1.0s						
DIVS	Divibare	81.12	325	P	P	20 13 11.4	0.0
KBA	Koelnbreinsper	81.15	331	i P	P	20 13 12.9	+1.4
	comp=Z,10nm,0.7s,SNR=6.7						
S39A	Bolivar	81.18	45	P	P	20 13 11.2	-0.5
S39A				IAmb	IAmb	20 13 23.3	
	comp=Z,12nm,1.2s						
OBKA	Obir	81.21	330	eP	P	20 13 12.6	+0.8
	comp=Z,3.4nm,0.7s						
LEGS	Legarje	81.40	329	i P	P	20 13 12.9	+0.2
MYKA	Terra Mystica	81.43	331	eP	P	20 13 12.5	-0.4
	comp=Z,2.1nm,0.5s						
WATA	Walderalm	81.53	332	i P	P	20 13 14.7	+1.1
	comp=Z,9.0nm,0.5s,SNR=6.2						
TX31	Lajitas Ar. Si	81.54	57	P	P	20 13 14.5	+0.7
TX31				IAmb	IAmb	20 13 27.5	
	comp=Z,21nm,1.2s						
TX32	Lajitas Array	81.54	57	P	P	20 13 14.6	+0.7
TXAR	Lajitas Array	81.54	57	P	P	20 13 14.8	+1.0
	comp=Z,1.8nm,0.6s,baz=300,slow=3.9,SNR=21						
TXAR	Lajitas Array	81.54	57	P	P	20 13 14.3	+0.4
WTTA	Wattenberg	81.58	332	eP	P	20 13 14.8	+0.9
	comp=Z,9.3nm,0.4s						
RETA	Reutte	81.67	333	eP	P	20 13 15.7	+1.5
	comp=Z,12nm,1.2s						
MOTA	Moosalm	81.68	332	i P	P	20 13 15.4	+1.1
	comp=Z,12nm,0.7s,SNR=5.8						
VISS	Visnje	81.70	329	i P	P	20 13 14.2	-0.1
ABTA	Abfaltersbach	81.72	331	eP	P	20 13 12.1	-2.3
	comp=Z,4.2nm,1.3s						
SQTA	Sankt Quirin	81.76	332	eP	P	20 13 15.9	+1.2
	comp=Z,8.6nm,0.8s						
CCM	Cathedral Cave	81.95	44	P	P	20 13 15.6	-0.1
CCM				pmax	pmax		
	comp=Z,17nm,1.4s						
CCM	Cathedral Cave	81.95	44	P	P	20 13 15.6	-0.1
CCM				IAmb	IAmb	20 13 27.5	
	comp=Z,17nm,1.4s						
STAL	STALIGIAL	82.08	331	P	P	20 13 15.9	-0.4
STAL				IAmb	IAmb	20 13 17.1	
	comp=Z,7.5nm,0.6s						
FETA	Feichten	82.09	332	eP	P	20 13 16.4	-0.1
	comp=Z,4.9nm,1.0s						
SFIN	Lafayette	82.11	40	P	P	20 13 16.0	-0.5
	baz=323						
DAVA	Damuels	82.14	333	eP	P	20 13 17.6	+0.8
	comp=Z,7.2nm,0.8s						
ECH	Echery	82.17	335	P	P	20 13 16.7	0.0
ECH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ECH	Echery	82.17	335	P	P	20 13 16.7	0.0
ECH				IAmb	IAmb	20 13 17.9	
	comp=Z,7.2nm,0.9s						
U40A	Yellville	82.44	46	P	P	20 13 17.9	-0.4
U40A				IAmb	IAmb	20 13 30.5	
	comp=Z,9.9nm,0.8s						
U40A	Yellville	82.44	46	P	P	20 13 18.2	-0.1
	baz=320						
DAVOX	Davos/Dischmat	82.58	333	P	P	20 13 19.7	+0.5
	comp=Z,6.0nm,0.5s,baz=350,slow=4.3,SNR=16						
CTI	Castel Tesino	82.63	331	P	P	20 13 18.9	-0.4
CTI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CTI	Castel Tesino	82.63	331	P	P	20 13 18.9	-0.4
CTI				IAmb	IAmb	20 13 20.3	
	comp=Z,5.0nm,0.6s						
PDG	Podgorica	82.80	325	⇓P	P	20 13 20.0	0.0
JCT	Junction City	83.01	54	P	P	20 13 22.0	+0.5
JCT				pmax	pmax		
	comp=Z,7.0nm,1.0s						
JCT	Junction City	83.01	54	P	P	20 13 21.9	+0.5
JCT				IAmb	IAmb	20 13 34.8	
	comp=Z,6.8nm,0.9s						
JCT	Junction City	83.01	54	P	P	20 13 22.6	+1.1
	baz=318						
MIAR	Mount Ida	83.44	47	P	P	20 13 23.6	+0.1
	baz=320						
W41B	Gary Mavity, V	83.66	46	P	P	20 13 24.9	+0.3
	baz=321						
X40A	Basin Creek Fa	83.88	47	P	P	20 13 26.4	+0.7
	baz=321						
MOQ	Mont Orford	83.91	28	P	P	20 13 26.6	+0.8
M54A	Oil Creek Stat	84.42	34	P	P	20 13 28.7	+0.2
	baz=327						
MURB	Monte Urbino	84.73	330	P	P	20 13 30.4	+0.3
NRCA	Norcia	84.88	329	P	P	20 13 31.1	+0.3
NRCA				IAmb	IAmb	20 13 32.6	
	comp=Z,13nm,0.9s						
LBNH	Lisbon	84.96	28	P	P	20 13 31.0	-0.1
	baz=332						
BNI	Bardonecchia	85.15	334	P	P	20 13 33.7	+1.5
BNI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BNI	Bardonecchia	85.15	334	P	P	20 13 33.7	+1.5
BNI				IAmb	IAmb	20 13 37.7	
	comp=Z,6.6nm,1.0s						
SSPA	Standing Stone	85.87	34	P	P	20 13 34.7	-1.0
	baz=328						
O56A	Blue Knob Stat	85.91	34	P	P	20 13 35.1	-0.9
	baz=328						
ESDC	Sonseca Array	93.15	339	P	P	20 14 10.9	+0.7
	comp=Z,0.4nm,0.6s,baz=3.7,slow=4.0,SNR=2.6						
TORD	Torodi Ar. Bea	115.70	324	PKP	PKPdf	20 19 38.7	+0.1
	comp=Z,0.3nm,0.4s,baz=34,slow=1.3,SNR=4.8						
VNDA	Vanda	121.51	177	PKP	PKiKP	20 19 49.4	+1.4
	comp=Z,0.9nm,0.8s,baz=16,slow=2.0,SNR=2.0						
DBIC	Dimbokro	124.22	328	PKP	PKiKP	20 19 55.1	-0.2
	comp=Z,1.3nm,0.6s,baz=315,slow=2.9,SNR=3.7						
SIV	San Ignacio	142.34	52	PKP	PKiKP	20 20 32.0	+0.2
	comp=Z,1.7nm,0.4s,baz=325,slow=0.9,SNR=5.2						
BDFB	Brasilia	148.34	32	PKPbc	PKPab	20 20 43.6	-2.2
	comp=Z,2.0nm,0.5s,baz=325,slow=4.5,SNR=6.0						
SNAA	Sanae	149.03	197	PKPbc	PKPab	20 20 44.0	-3.0
VNA2	Neumayer--Watz	150.54	196	PKPab	PKiKP	20 20 48.1	+1.1
	baz=118,slow=1.6						
VNA2				x	x	20 20 55.7	
VNA3	Neumayer Olymp	150.70	194	PKPab	PKPab	20 20 56.3	+2.5
VNA3	Neumayer Olymp	150.70	194	PKPbc	PKiKP	20 20 48.6	+1.3
VNA3	Neumayer Olymp	150.70	194	PKPdf	PKPbc	20 20 44.5	-2.2
VNA1	Neumayer--Stat	150.93	196	PKPab	PKPab	20 20 57.3	+2.6
PLCA	Paso Flores	150.95	97	PKPbc	PKiKP	20 20 49.2	+0.3
	comp=Z,2.1nm,0.7s,baz=338,slow=5.4,SNR=5.2						

RSNC 02 20:03:57.8±1.1, 6°.82N×73°.12W, h154km±3km, ML3.4, Mw3.9

IDC 02 20:04:00.4±6.1, 6°.78N×73°.62W, h178km±34km, mb3.5/1, mb1 3.8/2, mb1mx3.1/38, mbtmp4.0/2, Error ellipse: s-maj=224.8km s-min=45.2km az=95.0

ISC 02 20:03:56.5±1.0, 6°.81N±0°.03×73°.10W±0°.03, h163km±6km, n39, σ1s.72/74, 2C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	201	⇓iP	Pn	20 04 18.6	-0.2
BARC				eS	Sn	20 04 34.2	-1.7
BARC				i		20 04 36.6	
	comp=Z,369nm,0.4s						
PAMC	Pamplona, Colo	0.66	37	⇑eP	Pn	20 04 21.5	+0.7
PAMC				eS	Sn	20 04 38.5	-0.9
PAMC				i		20 04 40.9	
	comp=Z,217nm,0.5s						
BRRC	Barranca, Sant	0.68	296	⇓eP	Pn	20 04 20.6	+0.3
BRRC				eS	Sn	20 04 37.3	-1.2
BRRC				i		20 04 45.0	
	comp=Z,115nm,0.2s						
RUSC	La Rusia	0.91	179	eP	Pn	20 04 22.6	+0.1
RUSC				eS	Sn	20 04 41.3	-1.1
RUSC				i		20 04 42.5	
	comp=Z,192nm,0.4s						
TAMC	Tame, Arauca	1.35	106	eP	Pn	20 04 26.9	+1.2
TAMC				i		20 04 47.7	
	comp=Z,216nm,0.4s						
TAMC				eS	Sn	20 04 47.8	-0.3
PTBC	PUERTO BERRIO,	1.37	259	eP	Pn	20 04 25.2	-0.7
PTBC				eS	Sn	20 04 46.7	-1.7
PTBC				i		20 04 54.1	
	comp=Z,374nm,0.4s						
OCAC	Ocana	1.44	351	eP	Pn	20 04 26.9	+0.2
OCAC				eS	Sn	20 04 49.0	-1.0
OCAC				i		20 04 55.2	
	comp=Z,428nm,0.3s						
SPBC	San Pablo de B	1.50	220	eP	Pn	20 04 27.6	+0.4
SPBC				eS	Sn	20 04 50.3	-0.6
SPBC				i		20 04 54.8	
	comp=Z,373nm,0.3s						
ZARC	Zaragoza, Cauc	1.87	291	eP	Pn	20 04 31.4	+0.3
ZARC				eS	Sn	20 04 56.6	-1.1
ZARC				i		20 05 03.3	
	comp=Z,247nm,0.4s						
NORC	Norcasia	2.15	235	eP	Pn	20 04 34.6	+0.4
NORC				eS	Sn	20 05 03.2	-0.2
NORC				i		20 05 06.5	
	comp=Z,200nm,0.6s						
SMLC	San Martn de	2.20	334	eP	Pn	20 04 34.9	+0.1
SMLC				eS	Sn	20 05 03.5	-0.9
SMLC				i		20 05 06.0	
	comp=Z,91nm,0.1s						
ROSC	El Rosal	2.30	212	P	Pn	20 04 38.3	+1.9
	comp=Z,68nm,0.3s,baz=108,slow=20,SNR=32						
ROSC				S	Sn	20 05 07.9	+0.7
	comp=Z,59nm,0.3s,baz=241,slow=23,SNR=8.5						
ROSC	El Rosal	2.30	212	eP	Pn	20 04 38.1	+1.7
ROSC				eS	Sn	20 05 09.6	+2.4
ROSC				i		20 05 16.6	
	comp=Z,380nm,0.4s						
HELC	Santa Helena	2.49	256	eP	Pn	20 04 39.9	+1.3
HELC				eS	Sn	20 05 11.6	+0.6
HELC				i		20 05 17.3	
	comp=Z,123nm,0.3s						
UREC	San Jos de Ur	2.59	291	eP	Pn	20 04 39.1	-0.3
UREC				eS	Sn	20 05 09.7	-2.9
UREC				i		20 05 17.1	
	comp=Z,76nm,0.4s						
SOCV	Socops	2.66	56	⇑iP	Pn	20 04 40.2	-0.1
SOCV				eS	Sn	20 05 12.3	-2.0
VILC	Villavicencio,	2.74	192	eP	Pn	20 04 41.8	+0.3
VILC				eS	Sn	20 05 17.2	+1.0
GUY2C	Guyana, Caldas	2.75	235	eP	Pn	20 04 43.6	+1.8
GUY2C				eS	Sn	20 05 19.2	+2.4
GUY2C				i		20 05 25.4	
	comp=Z,194nm,0.3s						
LL1C	La Loma 1 Cana	2.75	351	eP	Pn	20 04 44.3	+2.9
LL1C				eS	Sn	20 05 19.5	+3.3
LL1C				i		20 05 33.3	
	comp=Z,387nm,0.5s						
PTGC	Puerto Gaitan,	2.77	160	⇓eP	Pn	20 04 41.5	0.0
PTGC				eS	Sn	20 05 14.8	-1.7
PTGC				i		20 05 22.1	
	comp=Z,65nm,0.2s						
LL6C	La Loma 6 Bece	2.91	357	eP	Pn	20 04 43.5	+0.2
LL6C				eS	Sn	20 05 17.9	-1.9
CBOC	Ciudad Bolivar	3.04	252	eP	Pn	20 04 46.2	+1.0
CBOC				eS	Sn	20 05 22.4	-0.5
CBOC				i		20 05 43.9	
	comp=Z,51nm,0.6s						
DBBC	Dabeiba	3.10	274	eP	Pn	20 04 46.0	+0.3
DBBC				eS	Sn	20 05 23.1	-0.7
DBBC				i		20 05 25.2	
	comp=Z,446nm,0.5s						
SDV	Santo Domingo	3.20	50	eP	Pn	20 04 48.0	+0.9
SDV				eS	Sn	20 05 25.8	-0.6
ANIL	Santa Ana	3.25	225	eP	Pn	20 04 49.9	+2.1
ANIL				eS	Sn	20 05 29.6	+1.9
ANIL				i		20 05 32.8	
	comp=Z,399nm,0.4s						
PRAC	Prado	3.55	210	eP	Pn	20 04 51.7	+0.2
PRAC				eS	Sn	20 05 33.8	-0.5
PRAC				i		20 05 43.0	
	comp=Z,159nm,0.5s						
ORTC	Ortega, Tolima	3.59	217	eP	Pn	20 04 52.7	+0.8
ORTC				eS	Sn	20 05 35.7	+0.7
ORTC				i		20 05 42.5	
	comp=Z,105nm,0.4s						
PLMC	San Jos del P	3.69	239	eP	Pn	20 04 54.1	+0.8
PLMC				eS	Sn	20 05 34.3	-3.0
PLMC				i		20 05 40.7	
	comp=Z,121nm,0.1s						
SJCC	San Jacinto, C	3.69	326	eP	Pn	20 04 52.5	-0.7
SJCC				eS	Sn	20 05 33.7	-3.8
GUVC	San Jose del G	4.26	174	eP	Pn	20 05 00.6	0.0
GUVC				i		20 05 54.5	
	comp=Z,39nm,0.1s						
YOTC	Yotoco, Valle	4.28	229	eP	Pn	20 05 01.3	+0.4
YOTC				i		20 06 04.5	
	comp=Z,7.9nm,0.5s						
SMRC	Santa Marta, M	4.47	346	eP	Pn	20 05 03.6	+0.4
SMRC				eS	Sn	20 05 51.4	-4.0
MACC	Macarena, Meta	4.69	189	eP	Pn	20 05 05.5	-0.7
MACC				eS	Sn	20 05 56.9	-3.8
MACC				i		20 06 01.5	
	comp=Z,24nm,0.8s						
BETC	Betania	4.72	210	eP	Pn	20 05 06.7	+0.2
BETC				eS	Sn	20 05 55.3	-6.0
BETC				i		20 06 05.9	
	comp=Z,21nm,0.4s						
MARP	Paez Belalcaza	4.86	216	eP	Pn	20 05 08.7	0.0
MARP				eS	Sn	20 06 03.3	-1.6
MARP				i		20 06 12.1	
	comp=Z,6.8nm,0.6s						
GARC	Garzon, Huila	5.17	208	eP	Pn	20 05 12.7	-0.1
GARC				eS	Sn	20 06 09.5	-2.9
GARC				i		20 06 16.6	
	comp=Z,35nm,0.3s						
POPC	Popayan, Colom	5.54	220	eP	Pn	20 05 17.9	+0.4
POPC				eS	Sn	20 06 17.7	-3.3
POPC				i		20 06 27.4	
	comp=Z,4.4nm,0.4s						
YKA	Yellowknife Ar	63.28	340	P	P	20 14 08.8	+1.3
	comp=Z,0.9nm,0.6s,baz=130,slow=7.3,SNR=7.2						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	20 23 29.9	+0.4
	comp=Z,0.3nm,0.8s,baz=107,slow=2.3,SNR=1.4						

IDC 02 20:13:04.1±4.2, 4°.98S×154°.69E, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.5/38, mbtmp3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/36, Error ellipse: s-maj=185.1km s-min=56.5km az=122.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.77	231	P	P	20 18 28.7	+0.9
	2.7nm,0.4s,baz=56,slow=10.0,SNR=44						
ASAR	Alice Springs	27.32	225	P	P	20 18 50.0	-0.9
	0.2nm,0.4s,baz=57,slow=9.2,SNR=7.4						
LEM	Lembang	46.84	265	LR	LR	20 42 08.0	
	comp=Z,27nm,21.9s,baz=164,slow=37						
TORD	Torodi Ar. Bea	152.15	289	PKPbc	PKPbc	20 33 02.6	-0.2
	0.2nm,0.5s,baz=75,slow=2.1,SNR=2.1						

IDC 02 20:24:25.3±1.8, 22°.21N×94°.46E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.2/49, mbtmp3.3/4, ML3.2/1, Error ellipse: s-maj=68.6km s-min=19.1km az=53.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	5.62	131	Pn	Pn	20 25 50.5	+0.2
	0.2nm,0.3s,baz=311,slow=13,SNR=1.5						
CMAR				Lg	Lg	20 27 23.6	
	0.0nm,0.3s,baz=308,slow=31,SNR=5.7						
MKAR	Makanchi Array	26.44	341	P	P	20 30 03.9	0.0
	0.5nm,0.5s,baz=148,slow=10,SNR=8.2						
KURBB	Kurchatov Arra	30.99	340	P	P	20 30 44.2	-0.1
	0.4nm,0.6s,baz=148,slow=8.3,SNR=4.0						
WRA	Warramunga Arr	57.21	134	P	P	20 34 14.5	0.0
	0.3nm,0.8s,baz=324,slow=7.5,SNR=1.9						

PDG 02 20:35:18.7±0.4, 44°.09N×19°.35E, h16km, MD3.2/1, ML3.0/13, Error ellipse: s-maj=0.5km s-min=0.9km az=0.0

KRSZO 02 20:35:18.8±0.8, 44°.07N×19°.33E, h6km±5km, M3.7/11, Error ellipse: s-maj=2.6km s-min=2.0km az=98.0

BEO 02 20:35:19.7±0.2, 44°.08N×19°.37E, h1km±1km, ML3.0/18

RHSSO 02 20:35:19.4±0.2, 44°.07N×19°.33E, h2km±1km, ML3.1/14

PRU 02 20:35:19.4±0.0, 44°.04N×19°.35E, h0km

LDG 02 20:35:19.4±0.2, 44°.07N×19°.42E, h2km, Ml2.7/6, Error ellipse: s-maj=3.7km s-min=3.1km az=54.0

ISC 02 20:35:19.0±0.9, 44°.08N±0°.01×19°.33E±0°.01, h11km±7km, n161, σ1s.48/250, 30C-24D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBLS	Lazići	0.22	165	⇑iPg	Pg	20 35 23.5	0.0
BBLS				eSg	Sg	20 35 26.8	+0.2
BBLS	Lazići	0.22	165	x	Pg	20 35 23.0	-0.5
BBLS	Lazići	0.22	165	ePg	Pg	20 35 23.6	0.0
BBLS				eSg	Sg	20 35 26.8	+0.2
HAPS	Han Pijesak,Bl	0.27	272	⇑iPg	Pg	20 35 24.9	+0.3
HAPS				eSg	Sg	20 35 29.0	+0.7
RUDO	Rudo	0.46	176	⇑iPg	Pg	20 35 26.9	-1.0
DIVS	Divibare	0.48	87	⇑iPg	Pg	20 35 28.0	-0.3
DIVS				eSg	Sg	20 35 34.4	-0.3
DIVS	Divibare	0.48	87	Pg	Pg	20 35 27.5	-0.8
DIVS	Divibare	0.48	87	ePg	Pg	20 35 28.1	-0.3
DIVS				eSg	Sg	20 35 34.4	-0.3
TEKS	Tekeris	0.49	17	ePg	Pg	20 35 28.0	-0.7
TEKS				eSg	Sg	20 35 34.8	-0.4
TEKS	Tekeris	0.49	17	ePg	Pg	20 35 28.3	-0.4
TEKS				eSg	Sg	20 35 35.0	-0.2
BLJ	Bijeljina	0.71	356	⇓iPg	Pg	20 35 32.0	-0.7
BLJ				eSg	Sg	20 35 41.7	-0.3
PLE	Pljevlja	0.75	177	⇓iPg	Pg	20 35 33.0	-0.4
PLE				i Sg	Sg	20 35 42.8	-0.4
TRUS	Trudelj	0.79	79	ePg	Pg	20 35 34.1	-0.1
TRUS				eSg	Sg	20 35 44.3	-0.2
UPM	Unac-Piva	0.93	200	⇓iPg	Pg	20 35 36.4	-0.4
UPM				eSg	Sg	20 35 48.9	0.0
UPM	Unac-Piva	0.93	200	⇑iPg	Pg	20 35 36.5	-0.4
UPM				i Sg	Sg	20 35 49.2	+0.3
SJES	Sjenica	0.94	150	ePg	Pg	20 35 36.3	-0.8
SJES				eSg	Sg	20 35 49.6	+0.3
GRUS	Gruza	1.02	100	ePg	Pg	20 35 37.8	-0.8
GRUS				eSg	Sg	20 35 51.6	-0.2
BEO	Beograd	1.10	48	Pg	Pb	20 35 38.9	-1.1
DOB	Doboj	1.10	307	ePg	Pb	20 35 39.0	-1.0
DOB				eSg	Sg	20 35 53.8	-0.6
FRGS	Fruska Gora	1.14	17	⇓P	Pb	20 35 40.5	-0.3
FRGS				⇑S	Sn	20 35 57.2	+0.6
FRGS	Fruska Gora	1.14	17	⇓iPg	Pb	20 35 40.3	-0.4
FRGS				eSg	Sg	20 35 55.9	+0.3
FRGS	Fruska Gora	1.14	17	ePg	Pb	20 35 40.4	-0.3
FRGS				eSg	Sb	20 35 55.5	0.0
KOME	Kolasin	1.23	174	⇑iPg	Pn	20 35 41.7	-0.6
KOME				i Sg	Sn	20 35 59.2	+0.2
IVA	Berane	1.27	161	⇑iPg	Pn	20 35 42.2	-0.6
IVA				i Sg	Sg	20 36 00.0	+0.1
NKY	Niksic	1.28	191	⇑iPg	Pn	20 35 43.0	0.0
NKY				i Sg	Sn	20 36 00.8	+0.5
BRY	Bratogost	1.31	206	⇓iPg	Pn	20 35 43.0	-0.3
BRY				eSg	Sb	20 36 00.0	-0.5
BRY	Bratogost	1.31	206	⇓iPg	Pn	20 35 43.0	-0.3
BRY				i Sg	Sg	20 36 01.6	+0.6
NKME	Niksic	1.34	192	⇓iPg	Pn	20 35 43.6	-0.1
NKME				i Sg	Sg	20 36 02.7	+0.7
SVIS	Svilajnac	1.37	81	ePg	Pn	20 35 44.5	+0.4
SVIS				eSg	Sb	20 36 02.0	-0.2
TREB	Trebinje	1.53	208	ePn	Pn	20 35 47.1	+0.8
TREB				eSn	Sg	20 36 08.6	+0.3
TREB	Trebinje	1.53	208	ePn	Pb	20 35 47.4	0.0
TREB				eSn	Sg	20 36 10.2	+1.9
PVY	Plav	1.55	163	⇑iPg	Pn	20 35 47.2	+0.5
PVY				i Sg	Sb	20 36 07.5	0.0
SELS	Selova	1.56	123	ePg	Pn	20 35 46.5	-0.2
SELS				eSg	Sb	20 36 08.1	+0.5
CEME	Cevo	1.56	191	⇓iPg	Pn	20 35 47.1	+0.4
CEME				i Sg	Sb	20 36 08.1	+0.5
PDG	Podgorica	1.65	182	⇑P	Pn	20 35 47.9	+0.1
PDG				⇓S	Sb	20 36 10.2	+0.2
PDG	Podgorica	1.65	182	ePn	Pn	20 35 48.6	+0.8
PDG				eSn	Sb	20 36 10.3	+0.2
PDG	Podgorica	1.65	182	ePn	Pn	20 35 48.8	+0.9
PDG				eSn	Sg	20 36 12.5	+0.6
TTG	Podgorica	1.65	182	⇓iPn	Pn	20 35 48.6	+0.8
TTG				i Sn	Sb	20 36 09.9	-0.2
MGRS	Mrkonjic Grad	1.65	283	ePn	Pn	20 35 48.9	+0.9
MGRS				eSn	Sg	20 36 11.6	-0.4
BLY	Banja Luka	1.68	294	⇑iPn	Pn	20 35 49.1	+0.8
BLY				eSn	Sb	20 36 12.2	+1.1
BLY	Banja Luka	1.68	294	Pn	Pb	20 35 50.6	+0.7
BLY	Banja Luka	1.68	294	ePn	Pg	20 35 51.0	-0.2

BLY				eSn	Sg	20 36 13.5	+0.6
STON	Ston	1.69	225	ePn	Pb	20 35 50.0	0.0
STON				eSn	Sb	20 36 11.6	+0.3
STON	Ston	1.69	225	ePn	Pb	20 35 50.2	+0.1
STON				Sn	Sg	20 36 14.8	+1.5
STON	Ston	1.69	225	ePn	Pb	20 35 50.1	0.0
STON				eSn	Sg	20 36 13.5	+0.2
RICI	Ricice	1.69	251	i Pn	Pb	20 35 50.4	+0.2
RICI				Sn	Sg	20 36 12.9	-0.5
KUBS	Kucevo	1.72	78	ePn	Pb	20 35 51.1	+0.5
KUBS				eSn	Sb	20 36 13.5	+1.2
HCY	Herceg Novi	1.74	201	⇑iPn	Pb	20 35 50.8	-0.1
HCY				eSn	Sb	20 36 13.2	+0.4
HCY	Herceg Novi	1.74	201	⇓iPn	Pn	20 35 50.0	+0.8
BOVS	Bovan	1.77	104	⇓P	Pn	20 35 49.4	-0.2
BOVS				⇓S	Sb	20 36 13.7	-0.1
BOVS	Bovan	1.77	104	ePg	Pn	20 35 50.4	+0.8
BOVS				eSg	Sb	20 36 14.7	+0.9
BUM	Brajici-Budva	1.80	190	⇓iPn	Pn	20 35 50.8	+0.7
BUM				i Sn	Sb	20 36 14.2	-0.5
BANR	Banloc	1.83	44	⇓P	Pn	20 35 50.8	+0.3
BANR				⇑S	Sb	20 36 16.9	+1.3
BANR	Banloc	1.83	44	Pg	Pg	20 35 57.9	+3.7
MDVR	Moldovita	1.85	67	⇑P	Pn	20 35 50.8	0.0
MDVR				⇓S	Sg	20 36 17.5	-0.9
MAKA	Makarska	1.85	246	i Pn	Pb	20 35 53.1	+0.2
MAKA				Sn	Sg	20 36 18.1	-0.3
DRME	Dracevica, Mon	1.89	183	ePn	Pb	20 35 52.9	-0.6
DRME				eSn	Sb	20 36 17.0	-0.2
DRME	Dracevica, Mon	1.89	183	⇑iPn	Pb	20 35 52.7	-0.8
DRME				i Sn	Sn	20 36 16.4	+1.3
PRIJ	Prijedor	2.08	297	ePn	Pn	20 35 54.8	+1.0
PRIJ				eSn	Sn	20 36 21.3	+1.7
ULC	Ulcinj	2.11	182	⇓iPn	Pn	20 35 55.8	+1.5
ULC				i Sn	Sn	20 36 21.4	+0.8
ZAGS	Zajecar	2.11	96	ePn	Pn	20 35 54.9	+0.6
ZAGS				eSn	Sb	20 36 22.4	-1.2
KOVH	Kovagotottos	2.19	337	ePN	Pn	20 35 55.7	+0.3
KOVH	Kovagotottos	2.19	337	eP	Pn	20 35 56.7	+1.3
KOVH	Kovagotottos	2.19	337	eSN	Sg	20 36 28.7	-0.8
KOVH	Kovagotottos	2.19	337	Pn	Pn	20 35 55.7	+0.3
KOVH				Pg	Pn	20 35 56.7	+1.3
KOVH				Lg	Lg	20 36 28.7	
MORH	Mrgy, Hungar	2.19	347	⇑P	Pn	20 35 55.6	+0.2
MORH	Mrgy, Hungar	2.19	347	ePN	Pn	20 35 55.4	0.0
MORH	Mrgy, Hungar	2.19	347	eP	Pb	20 35 57.5	-1.1
MORH	Mrgy, Hungar	2.19	347	eSN	Sg	20 36 29.0	-0.5
MORH	Mrgy, Hungar	2.19	347	ePn	Pn	20 35 56.7	+1.3
MORH				eSn	Sb	20 36 25.0	-0.9
MORH	Mrgy, Hungar	2.19	347	Pb	Pn	20 35 55.4	0.0
MORH				x	Pb	20 35 57.5	-1.1
MORH				Lg	Lg	20 36 29.0	
LSTV	Lastovo	2.20	235	ePn	Pn	20 35 57.0	+1.5
LSTV				Sn	Sb	20 36 26.3	+0.1
BARS	Barje	2.21	124	ePn	Pn	20 35 52.2	-3.4
BARS				eSn	Sn	20 36 17.5	-5.4
BZS	Buzias	2.24	46	⇑P	Pn	20 35 55.9	-0.2
BZS	Buzias	2.24	46	Pb	Pn	20 35 55.6	-0.5
BZS	Buzias	2.24	46	ePn	Pn	20 35 56.4	+0.3
BZS				eSn	Sn	20 36 25.5	+1.7
HERR	Herculane	2.35	69	⇑P	Pn	20 35 58.0	+0.4
DJES	Djerdap	2.36	74	⇑P	Pn	20 35 58.3	+0.5
MOSL	Moslavina	2.39	311	ePn	Pn	20 35 59.0	+0.8
AMBH	Ambrzfalva	2.48	23	⇑P	Pn	20 36 00.3	+0.9
AMBH				⇑S	Sb	20 36 32.4	-1.7
AMBH	Ambrzfalva	2.48	23	ePN	Pn	20 36 01.3	+2.0
AMBH				eSN	Sg	20 36 38.2	-0.4
AMBH	Ambrzfalva	2.48	23	Pg	Pn	20 36 01.3	+2.0
AMBH				Pb	Pg	20 36 07.0	+0.5
AMBH				Lg	Lg	20 36 38.2	
ZAPS	Zavoj	2.53	107	ePn	Pn	20 36 00.2	+0.2
ZAPS				eSn	Sn	20 36 32.7	+1.8
PRVS	Prvonek	2.54	127	ePn	Pn	20 36 02.7	+2.4
PRVS				eSn	Sn	20 36 33.5	+2.2
UDBI	Udbina	2.60	281	ePn	Pn	20 36 02.5	+1.4
MORI	Morici	2.62	267	ePn	Pb	20 36 04.0	-2.0
ZIRJ	Zirje	2.70	262	ePn	Pb	20 36 05.3	-2.0
SIRR	Siria	2.74	36	⇓P	Pn	20 36 02.4	-0.5
SIRR	Siria	2.74	36	Pn	Pn	20 36 03.2	+0.2
PLIT	Plitvice	2.77	288	ePn	Pn	20 36 04.9	+1.5
GZR	Gura Zlata	2.79	61	⇑P	Pn	20 36 03.6	-0.1
GZR	Gura Zlata	2.79	61	Pg	Pn	20 36 03.7	+0.1
GZR				Pb	Pb	20 36 04.3	-4.5
BOSS	Bosilegrad	2.79	123	ePn	Pn	20 36 03.8	+0.2
BOSS				eSn	Sn	20 36 38.9	+1.6
KALN	Kalnik	2.89	316	ePn	Pn	20 36 05.8	+0.8
PTJ	Puntijarka	3.01	309	ePn	Pn	20 36 07.8	+1.1
PTJ	Puntijarka	3.01	309	Pg	Pg	20 36 16.8	+0.2
DUGI	Dugi Otok	3.08	270	ePn	Pn	20 36 10.7	+3.0
OZLJ	Ozalj	3.15	301	ePn	Pn	20 36 10.2	+1.7
VTS	Vitosha	3.20	116	⇑P	Pn	20 36 08.9	-0.5
VTS	Vitosha	3.20	116	Pg	Pg	20 36 18.9	-1.4
VTS	Vitosha	3.20	116	ePn	Pn	20 36 10.0	+0.6
KOGS	Kog	3.22	319	i Pn	Pn	20 36 10.2	+0.7
KOGS	Kog	3.22	319	Pg	Pb	20 36 14.1	-2.0
CRES	Cresnjev	3.26	304	ePn	Pn	20 36 10.9	+0.8
CRES				eSn	Sn	20 36 49.9	+1.0
CRES	Cresnjev	3.26	304	Pg	Pg	20 36 21.9	+0.5
BSZH	Besenyszg	3.29	11	⇑P	Pn	20 36 11.3	+0.8
BSZH				⇓S	Sn	20 36 53.2	+3.6
BSZH	Besenyszg	3.29	11	eSN	Sg	20 37 04.7	0.0
BSZH	Besenyszg	3.29	11	Pg	Pg	20 36 23.7	+1.7
BSZH				Lg	Lg	20 37 04.7	
MPLH	Magyarpolny	3.34	339	ePN	Pn	20 36 12.1	+1.0
MPLH	Magyarpolny	3.34	339	eP	Pn	20 36 13.1	+1.9
MPLH	Magyarpolny	3.34	339	Pn	Pn	20 36 12.1	+1.0
MPLH				Pg	Pb	20 36 13.1	-5.1
MPLH				Sn	Sn	20 36 51.5	+0.6
CSKK	Cskako	3.37	348	ePN	Pn	20 36 12.0	+0.4
CSKK	Cskako	3.37	348	eP	Pn	20 36 15.1	+3.4
CSKK	Cskako	3.37	348	eSN	Sg	20 37 05.6	-1.6
CSKK	Cskako	3.37	348	Pn	Pn	20 36 12.0	+0.4
CSKK				Pg	Pn	20 36 15.1	+3.4
CSKK				Lg	Lg	20 37 05.6	
LOT	Lotru	3.45	65	⇓P	Pn	20 36 13.3	+0.5
GROS	Grobnik	3.60	313	⇑iPn	Pn	20 36 15.4	+0.5
DRGR		3.61	40	⇑P	Pn	20 36 14.7	-0.2
RIY	Rijeka	3.67	292	ePn	Pn	20 36 17.7	+1.9
SMRN	Sveta Marina	3.82	286	ePn	Pn	20 36 18.6	+0.9
CEY	Cerknica	3.86	297	ePn	Pn	20 36 19.8	+1.5
CEY				eSn	Sn	20 37 04.3	+0.6
PSZ	Piszkesteto	3.86	6	⇓P	Pn	20 36 18.3	-0.1
PERS	Pernice	3.92	312	⇑iPn	Pn	20 36 19.9	+0.7
PERS				eSn	Sn	20 37 02.7	-2.6
PERS				IAML		20 37 07.0	
	comp=Z,22nm,0.5s						
LJU	Ljubljana	3.93	302	ePn	Pn	20 36 20.8	+1.5
SOKA	Soboth	3.99	312	Pn	Pn	20 36 20.9	+0.6
	comp=Z,2.4nm,0.3s,SNR=15						
SOKA				eSn	Sn	20 37 07.4	+0.4
	comp=Z,4.7nm,0.4s						
ARSA	Arzberg	4.15	321	Pn	Pn	20 36 23.3	+1.0
	comp=Z,16nm,0.3s,SNR=41						
ARSA				eSn	Sn	20 37 09.1	-1.7
	comp=Z,11nm,0.4s						
OBKA	Obir	4.16	307	Pn	Pn	20 36 23.7	+1.2
	comp=Z,2.2nm,0.2s,SNR=12						
OBKA				eSn	Sn	20 37 12.8	+1.6
	comp=Z,5.0nm,0.3s						
VOIR		4.30	70	⇑P	Pn	20 36 25.3	+0.9
ZST	Bratislava	4.40	340	ePN	Pn	20 36 27.9	+2.1
ZST				eSN	Sn	20 37 14.9	-2.1
VYHS	Vyhne	4.43	356	ePN	Pn	20 36 27.4	+1.2
VYHS				eSN	Sn	20 37 16.0	-1.8
CADS	Cadrg	4.50	301	i Pn	Pn	20 36 28.5	+1.3
MODS	Modra-Piesok	4.53	342	ePN	Pn	20 36 28.8	+1.3
MODS				eSN	Sn	20 37 18.5	-1.7
CONA	Conrad Observa	4.55	329	Pn	Pn	20 36 28.6	+0.7
	comp=Z,1.4nm,0.3s,SNR=5.9						
CONA				eSn	Sn	20 37 23.2	+2.4
	comp=Z,5.9nm,0.4s						
TRPA	Tarpa	4.63	28	⇓P	Pn	20 36 28.5	-0.4
SMOL	Smolenice	4.63	344	eSN	Sn	20 37 22.2	-0.5
MYKA	Terra Mystica	4.75	304	ePn	Pn	20 36 33.0	+2.4
	comp=Z,2.1nm,0.3s						
MLR	Muntele Rosu	4.92	71	⇑P	Pn	20 36 32.9	-0.1
CRVS	Cervenica-Dubn	5.05	16	ePN	Pn	20 36 35.4	+0.8
KBA	Koelnbreinsper	5.16	308	ePn	Pn	20 36 37.9	+1.5
	comp=Z,1.5nm,0.3s						
KBA				eSn	Sn	20 37 38.4	+2.3
	comp=Z,0.9nm,0.2s						
MOA	Molln	5.17	319	ePn	Pn	20 36 38.5	+2.2
	comp=Z,3.8nm,0.5s						
MOA				eSn	Sn	20 37 35.1	-0.8
	comp=Z,3.3nm,0.3s						
BURAR	Bucovina Array	5.43	47	⇓P	Pn	20 36 40.1	+0.2
ABTA	Abfaltersbach	5.49	301	ePn	Pn	20 36 43.4	+2.5
	comp=Z,1.6nm,0.3s						
OKC	Ostrava-Krasne	5.82	352	eSN	Sn	20 37 52.1	+0.1
WTTA	Wattenberg	6.26	303	i Pn	Pn	20 36 54.1	+2.6
	comp=Z,2.7nm,0.2s,SNR=11						
WTTA				eSn	Sn	20 38 07.3	+4.2
WATA	Walderalm	6.33	304	ePn	Pn	20 36 55.2	+2.8
	comp=Z,3.3nm,0.2s						
KHC	Kasperske Hory	6.42	324	ePN	Pn	20 36 56.0	+2.5
KHC				eSN	Sn	20 38 06.9	0.0
SQTA	Sankt Quirin	6.50	302	ePn	Pn	20 36 57.8	+3.1
	comp=Z,2.7nm,0.3s						
FETA	Feichten	6.72	299	ePn	Pn	20 37 00.1	+2.4
	comp=Z,2.5nm,0.4s						
DAVA	Damuels	7.36	299	ePn	Pn	20 37 09.0	+2.6
	comp=Z,1.2nm,0.3s						
PGF	Pioggiola	7.69	262	ePn	Pn	20 37 11.0	0.0
PGF				eSn	Sn	20 38 33.7	-4.4
	comp=Z,0.3nm,0.3s						
SBF	Sospel	8.58	273	ePn	Pn	20 37 25.0	+1.8
SBF				eSn	Sn	20 38 55.3	-4.8
	comp=Z,0.8nm,0.2s						
MBDF	Montbardon	9.02	279	ePn	Pn	20 37 29.0	-0.2
MBDF				eSn	Sn	20 39 05.7	-5.1
	comp=Z,0.4nm,0.3s						
LPG	La Plagne	9.06	283	ePn	Pn	20 37 30.1	+0.2
LPL	La Plagne	9.07	284	ePn	Pn	20 37 30.9	+0.8
FRF	La Foret Royal	9.19	271	ePn	Pn	20 37 31.2	-0.2
FRF				eSn	Sn	20 39 09.4	-5.4
	comp=Z,0.3nm,0.3s						
LMR	La Mourre	9.32	270	ePn	Pn	20 37 35.0	+1.8
LMR				eSn	Sn	20 39 12.5	-5.5
	comp=Z,0.2nm,0.3s						
CDF	Champ du Feu	9.41	302	ePn	Pn	20 37 34.3	-0.2
HINF	Hinteralfeld	9.46	298	ePn	Pn	20 37 35.0	-0.2
ORIF	Oris-en-Rattie	9.65	280	ePn	Pn	20 37 38.4	+0.5
ORIF				eSn	Sn	20 39 20.4	-5.9
	comp=Z,0.7nm,0.4s						
HAU	Haudompre	9.84	298	ePn	Pn	20 37 41.3	+0.9
LASF	Ste Croix	11.13	275	ePn	Pn	20 37 59.1	+1.0

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*GCMT **02** 20:41:41.0±0.3, 34°.44S±0°.04×109°.06W±0°.02, h19^{km}±1^{km}, MW4.9/90, Moment Tensor Solution. s28,c34; s90,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.50±.16; $M_{\theta\theta}$0.36±.10; $M_{\phi\phi}$2.14±.10; $M_{r\theta}$0.92±.26; $M_{\theta\phi}$-0.13±.07; $M_{\phi r}$-0.84±.20; Best double couple: $M_0$2.61100×10^{16} NP1:ϕ_s188.00000°, δ36.00000°, λ-66.00000°. NP2: ϕ_s339.00000°, δ58.00000°, λ-106.00000°. Principal axes: T 2.3310, Plg11.0000°, Azm81.0000°; N 0.5560, Plg13.0000°, Azm348.0000°; P -2.8900, Plg72.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

*IDC **02** 20:41:44.5±9.1, 33°.69S×110°.81W, h0^{km}, mb3.7/1, mb1 4.2/1, mb1mx3.6/21, mbtmp3.7/1, MS4.0/12, Ms1 4.0/12, ms1mx3.8/23 Error ellipse: s-maj=608.4km s-min=64.1km az=111.0*

ISC 02 20:41:41.8±1.2**, 34°.5S**±0°.3×**110°.5W**±0°.6**, h10^{km}, n22, σ0^{s}.77**/7**, MS4.1**/14**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	32.04	113	LR	LR	20 57 24.7	
	comp=Z,254nm,21.3s,baz=288,slow=29						
TAOE	Nuku Hiva Isla	37.30	306	eLR	LR	20 59 24.0	
	comp=Z,206nm,24.3s						
PPT2	Papeete2	38.66	286	eLR	LR	21 00 01.5	
	comp=Z,489nm,24.0s						
PPT	Papeete	38.67	286	LR	LR	21 01 09.6	
	comp=Z,330nm,18.5s,baz=168,slow=30						
LPAZ	La Paz	42.01	75	LR	LR	21 02 17.1	
	comp=Z,237nm,21.7s,baz=248,slow=29						
RAR	Rarotonga	45.11	274	LR	LR	21 04 07.5	
	comp=Z,140nm,20.6s,baz=116,slow=30						
CPUP	Villa Florida	46.14	95	LR	LR	21 05 29.8	
	comp=Z,236nm,20.2s,baz=226,slow=31						
ROSC	El Rosal	51.92	48	LR	LR	21 08 57.4	
	comp=Z,98nm,19.7s,baz=260,slow=32						
URZ	Urewera	57.00	243	LR	LR	21 10 49.3	
	comp=Z,211nm,19.0s,baz=31,slow=30						
VNA3	Neumayer Olymp	61.08	159	P	P	20 51 56.4	+0.8
VNA1	Neumayer--Stat	61.74	158	P	P	20 51 59.6	-0.3
VNA2	Neumayer--Watz	61.89	159	P	P	20 52 00.9	-0.1
	baz=258,slow=6.9						
SNAA	Sanae	62.88	160	P	P	20 52 07.1	-0.6
MSVF	Nonsavu	65.08	265	LR	LR	21 14 59.8	
	comp=Z,73nm,18.7s,baz=179,slow=31						
DZM	Mont Dzumac	72.33	255	eLR	LR	21 15 38.3	
	comp=Z,146nm,25.3s						
DZM	Mont Dzumac	72.33	255	LR	LR	21 17 23.0	
	comp=Z,92nm,20.6s,baz=221,slow=30						
PDAR	Pinedale Array	76.92	1	P	P	20 53 34.1	-0.3
	0.7nm,0.9s,baz=170,slow=5.5,SNR=4.0						
STKA	Stephens Creek	85.37	234	LR	LR	21 26 46.8	
	comp=Z,71nm,18.4s,baz=203,slow=32						
ASAR	Alice Springs	95.84	236	LR	LR	21 33 16.1	
	comp=Z,45nm,19.5s,baz=172,slow=32						
WRA	Warramunga Arr	97.98	239	LR	LR	21 36 59.4	
	comp=Z,96nm,18.0s,baz=145,slow=34						
CMAR	Chiang Mai Arr	149.31	246	PKPbc	PKPab	21 01 35.5	-0.4
	2.0nm,0.8s,baz=186,slow=1.6,SNR=14						
SONM	Songino Array	149.51	307	PKPbc	PKiKP	21 01 33.2	+1.0
	2.2nm,0.9s,baz=95,slow=3.0,SNR=8.9						

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*IDC **02** 20:42:53.6±1.2, 42°.25N×85°.01E, h0^{km}, mb3.7/8, mb1 3.7/13, mb1mx3.4/61, mbtmp3.6/13, ML3.1/5, Error ellipse: s-maj=26.8km s-min=18.3km az=53.0*

*SOME **02** 20:43:01.5, 42°.73N×84°.63E, h0^{km}*

*NNC **02** 20:43:04.0±1.4, 42°.70N×84°.63E, h19^{km}±7^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=10.1km s-min=5.7km az=139.0*

ISC 02 20:43:02.8±1.2**, 42°.74N**±0°.06×**84°.63E**±0°.04**, h10^{km}, n61, σ2^{s}.25**/55**, mb3.7**/7**, 7C-14D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	3.21	284	eP	Pb	20 44 01.7	+1.6
	19nm,0.2s						
KTMS				eS	Sg	20 44 45.0	-1.1
	122nm,0.2s						
KTMS	Ketmen	3.21	284	Pg	Pb	20 44 01.7	+1.6
	19nm,0.2s						
KTMS				Lg	Lg	20 44 45.0	
	123nm,0.4s						
PDGK	Podgornoye	3.82	281	Pg	Pb	20 44 13.6	+3.2
	4.3nm,0.4s						
PDGK				Lg	Lg	20 45 05.5	
	45nm,0.3s						
PDGK	Podgornoye	3.82	281	⇑Pg	Pg	20 44 16.0	0.0
	22nm,0.6s						
PDGK				⇑Lg	Lg	20 45 07.4	
	45nm,0.4s						
DJR	Jarkent	3.87	296	eP	Pb	20 44 14.0	+2.8
	8.8nm,0.4s						
DJR				eS	Sg	20 45 06.2	-0.7
	51nm,0.4s						
DJR	Jarkent	3.87	296	Pg	Pb	20 44 14.0	+2.8
	8.8nm,0.4s						
DJR				Lg	Lg	20 45 06.3	
	51nm,0.4s						
UZB	Uzynbulak	4.14	278	eP	Pb	20 44 18.9	+3.1
	8.8nm,0.1s						
UZB				eS	Sg	20 45 14.6	-1.1
	61nm,0.1s						
UZB	Uzynbulak	4.14	278	Pg	Pb	20 44 18.9	+3.1
	8.5nm,0.3s						
UZB				Lg	Lg	20 45 14.6	
	60nm,0.4s						
MK31	Makanchi Array	4.39	338	⇓Pn	Pn	20 44 10.8	+1.3
	0.5nm,0.3s,baz=149,slow=14,SNR=54						
MK31				⇓Pg	Pg	20 44 25.2	-1.6
	1.5nm,0.3s,baz=143,slow=16,SNR=13						
MK31				⇓Lg	Lg	20 45 25.6	
	17nm,0.4s,baz=146,slow=29,SNR=7.2						
MKAR	Makanchi Array	4.39	338	Pn	Pn	20 44 10.6	+1.0
	0.6nm,0.3s,baz=154,slow=14,SNR=26						
MKAR				Pg	Pb	20 44 21.6	+1.6
	1.0nm,0.3s,baz=156,slow=15,SNR=8.1						
MKAR				Lg	Lg	20 45 25.0	
	15nm,0.3s,baz=146,slow=29,SNR=12						
MAKZ	Makanchi	4.49	336	⇓Pn	Pn	20 44 11.2	+0.3
	0.7nm,0.3s						
MAKZ				⇓Pg	Pg	20 44 27.0	-1.8
	3.5nm,0.3s						
MAKZ				⇑Lg	Lg	20 45 29.0	
	40nm,0.8s						
KAPS	Kapalarasan	4.58	306	eP	Pb	20 44 28.3	+5.1
	5.7nm,0.6s						
KAPS				eS	Sg	20 45 30.5	+0.7
	55nm,0.5s						
KAPS	Kapalarasan	4.58	306	Pg	Pb	20 44 28.3	+5.1
	5.7nm,0.6s						
KAPS				Lg	Lg	20 45 30.5	
	55nm,0.5s						
SATY	Saty	4.58	276	eP	Pb	20 44 27.5	+4.1
	6.6nm,0.2s						
SATY				eS	Sg	20 45 29.6	-0.4
	62nm,0.4s						
SATY	Saty	4.58	276	Pg	Pb	20 44 27.5	+4.1
	6.6nm,0.2s						
SATY				Lg	Lg	20 45 29.7	
	62nm,0.4s						
BLB	Baldybastay	4.68	289	Pg	Pb	20 44 29.9	+4.8
	14nm,0.2s						
BLB				Lg	Lg	20 45 33.6	
	47nm,0.6s						
ZSN	Zaisan	4.72	2	eP	Pb	20 44 29.5	+3.9
	4.8nm,0.3s						
ZSN				eS	Sg	20 45 32.8	-1.4
	28nm,0.5s						
ZSN	Zaisan	4.72	2	Pg	Pb	20 44 29.5	+3.9
	4.8nm,0.3s						
ZSN				Lg	Lg	20 45 32.8	
	28nm,0.5s						
KURS	Kuram	4.79	281	eP	Pb	20 44 31.2	+4.3
	8.7nm,0.8s						
KURS				eS	Sg	20 45 35.1	-1.5
	21nm,0.5s						
KURS	Kuram	4.79	281	Pg	Pb	20 44 31.2	+4.3
	8.7nm,0.8s						
KURS				Lg	Lg	20 45 35.1	
	21nm,0.5s						
TDK	Taldyqorghan	5.04	299	eP	Pg	20 44 37.0	-2.3
	24nm,0.5s						
TDK				eS	Sg	20 45 45.7	+1.2
	142nm,0.7s						
TDK	Taldyqorghan	5.04	299	Pg	Pg	20 44 37.0	-2.3
	24nm,0.5s						
TDK				Lg	Lg	20 45 45.7	
	142nm,0.7s						
ARXS	Arharly	5.17	289	eP	Pb	20 44 38.3	+5.0
	4.0nm,0.2s						
ARXS				eS	Sg	20 45 48.0	-0.7
	28nm,0.1s						
ARXS	Arharly	5.17	289	Pg	Pb	20 44 38.3	+5.0
	4.0nm,0.2s						
ARXS				Lg	Lg	20 45 48.0	
	28nm,0.5s						
KOTS	Kotyrbulak	5.54	278	eP	Pg	20 44 46.0	-2.9
	7.8nm,0.6s						
KOTS				eS	Sg	20 46 00.6	0.0
	46nm,0.5s						
KOTS	Kotyrbulak	5.54	278	Pg	Pg	20 44 46.0	-2.9
	7.8nm,0.6s						
KOTS				Lg	Lg	20 46 00.6	
	46nm,0.5s						
MDOK	Medeo	5.58	277	eP	Pg	20 44 46.4	-3.3
	5.0nm,0.5s						
MDOK				eS	Sg	20 46 01.7	-0.3
	23nm,0.7s						
MDOK	Medeo	5.58	277	⇓Pg	Pg	20 44 47.8	-1.9
	5.2nm,0.6s						
MDOK				⇓Lg	Lg	20 46 04.4	
	25nm,0.7s						
MDOK	Medeo	5.58	277	Pg	Pg	20 44 46.4	-3.3
	5.0nm,0.5s						
MDOK				Lg	Lg	20 46 01.7	
	23nm,0.7s						
KNDC	Almaty	5.64	277	⇓Lg	Lg	20 46 05.5	
	34nm,0.5s						
TNSS	Tian-Shan	5.65	276	eP	Pb	20 44 47.3	+5.5
	4.2nm,0.4s						
TNSS				eS	Sg	20 46 02.8	-1.6
	10nm,0.7s						
TNSS	Tian-Shan	5.65	276	Pg	Pb	20 44 47.3	+5.5
	4.2nm,0.4s						
TNSS				Lg	Lg	20 46 02.8	
	10nm,0.7s						
KTBS	Karatobe	5.89	282	eP	Pb	20 44 50.7	+5.1
	2.5nm,0.3s						
KTBS				eS	Sg	20 46 08.5	-3.4
	20nm,0.8s						
KTBS	Karatobe	5.89	282	Pg	Pb	20 44 50.7	+5.1
	2.5nm,0.3s						
KTBS				Lg	Lg	20 46 08.5	
	20nm,0.8s						
MTBS	Maitube	6.03	277	eP	Pg	20 44 54.9	-3.5
	3.8nm,0.5s						
MTBS				eS	Sg	20 46 16.0	-0.5
	12nm,0.5s						
MTBS	Maitube	6.03	277	Pg	Pg	20 44 54.9	-3.5
	3.8nm,0.5s						
MTBS				Lg	Lg	20 46 16.0	
	12nm,0.5s						
KUU	Kurty	6.16	284	eP	Pb	20 44 56.3	+6.2
	1.4nm,0.3s						
KUU				eS	Sg	20 46 18.7	-1.8
	30nm,0.6s						
KUU	Kurty	6.16	284	Pg	Pb	20 44 56.3	+6.2
	1.4nm,0.3s						
KUU				Lg	Lg	20 46 18.7	
	30nm,0.6s						
KST	Kastek	6.38	276	eP	Pb	20 45 00.5	+6.6
	5.5nm,0.3s						
KST				eS	Sg	20 46 25.8	-1.6
	15nm,0.7s						
KST	Kastek	6.38	276	Pg	Pb	20 45 00.5	+6.6
	5.5nm,0.3s						
KST				Lg	Lg	20 46 25.8	
	15nm,0.7s						
DGS	Degeres	6.52	277	eP	Pb	20 45 03.1	+6.8
	2.1nm,0.3s						
DGS				eS	Sg	20 46 30.3	-1.7
	14nm,0.7s						
DGS	Degeres	6.52	277	Pg	Pb	20 45 03.1	+6.8
	2.1nm,0.3s						
DGS				Lg	Lg	20 46 30.3	
	14nm,0.7s						
KRBS	Karabastau	6.61	281	eP	Pg	20 45 05.3	-4.2
	2.1nm,0.3s						
KRBS				eS	Sg	20 46 33.9	-1.2
	13nm,0.6s						
KRBS	Karabastau	6.61	281	Pg	Pg	20 45 05.3	-4.2
	2.1nm,0.3s						
KRBS				Lg	Lg	20 46 33.9	
	13nm,0.6s						
TKM2	Tokmak 2	6.65	275	⇑Pn	Pn	20 44 40.2	-0.5
	1.1nm,0.4s						
TKM2				⇑Pg	Pb	20 45 04.7	+6.1
	1.6nm,0.3s						
TKM2				⇓Lg	Lg	20 46 37.8	
	12nm,0.6s						
AAK	Ala-Archa	7.47	273	Pn	Pn	20 44 50.1	-1.9
	0.4nm,0.3s,baz=123,slow=12,SNR=4.2						
AAK				Lg	Lg	20 47 00.9	
	0.6nm,0.3s,baz=189,slow=23,SNR=1.7						
AAK	Ala-Archa	7.47	273	⇓Pg	Pg	20 45 21.3	-4.5
	1.9nm,0.5s						
AAK				⇓Lg	Lg	20 47 01.9	
	7.1nm,0.7s						
KURBB	Kurchatov Arra	8.93	334	Pn	Pn	20 45 11.6	-0.2
	0.1nm,0.3s,baz=157,slow=13,SNR=5.9						
KURBB				Lg	Lg	20 47 48.9	
	0.2nm,0.3s,baz=147,slow=30,SNR=7.6						
KURBB	Kurchatov Arra	8.93	334	⇑Pn	Pn	20 45 13.2	+1.4
	2.0nm,0.8s						
KURBB				⇓Lg	Lg	20 47 53.2	
	39nm,0.7s						
KURK	Kurchatov	8.98	335	⇓Pn	Pn	20 45 11.1	-1.4
	2.8nm,1.0s						
KURK				⇑Lg	Lg	20 47 53.2	
	29nm,1.0s						
OTUK	Ortayu	10.23	307	⇓Lg	Lg	20 48 31.2	
	7.2nm,0.8s						

ZALV	**Zalesovo Beam**	**11.22**	**1**	Pn	**Pn**	**20 45 40.8**	**-2.3**
	0.4nm,0.3s,baz=182,slow=13,SNR=6.5						
ZALV				Sn	**Sn**	**20 47 45.4**	**-3.1**
	0.4nm,0.3s,baz=185,slow=29,SNR=11						
BVAR	**Borovoye Array**	**14.02**	**322**	Pn	**Pn**	**20 46 20.8**	**-0.6**
	0.4nm,0.3s,baz=165,slow=18,SNR=6.3						
AKTO	**Aktyubinsk**	**19.77**	**302**	P	**P**	**20 47 31.7**	**-1.2**
	0.7nm,0.4s,baz=92,slow=14,SNR=2.5						
ARU	**Arti**	**21.59**	**318**	P	**P**	**20 47 51.9**	**-0.5**
	1.6nm,0.4s,baz=108,slow=10,SNR=13						
FINES	**FINESS Array B**	**38.95**	**319**	P	P	20 50 25.1	-3.6
	1.3nm,0.8s,baz=90,slow=5.9,SNR=5.3						
ARCES	**ARCESS Array B**	**40.01**	**332**	P	P	20 50 33.8	-3.6
	4.1nm,1.0s,baz=84,slow=9.2,SNR=16						
NOA	**NORSAR Array B**	**46.13**	**320**	P	P	20 51 23.1	-3.9
	0.5nm,0.7s,baz=82,slow=6.5,SNR=4.4						
TORD	**Torodi Ar. Bea**	**76.05**	**275**	P	P	20 54 44.4	-6.3
	0.4nm,0.4s,baz=40,slow=5.1,SNR=8.5						
WRA	**Warramunga Arr**	**77.35**	**133**	P	P	20 54 48.1	-10
	0.4nm,1.0s,baz=311,slow=6.8,SNR=4.7						
PDAR	**Pinedale Array**	**93.93**	**10**	P	P	20 56 14.3	-6.6
	0.1nm,0.5s,baz=12,slow=4.6,SNR=1.9						

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*IDC **02** 20:52:10.8±0.8, 5°.55S×154°.33E, h151^{km}±6^{km}, mb3.7/12, mb1 3.9/12, mb1mx3.5/41, mbtmp4.2/12, Error ellipse: s-maj=22.5km s-min=13.5km az=87.0*

*NEIC **02** 20:52:11.0±2.8, 5°.5S±0°.1×154°.5E±0°.1, h147^{km}±7^{km}, mb4.4/19, Error ellipse: s-maj=20.6km s-min=17.5km az=55.0*

ISC 02 20:52:10.7±0.6**, 5°.52S**±0°.08×**154°.41E**±0°.09**, h150^{km}, n40, σ1^{s}.78**/41**, mb4.2**/18**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.16**	**241**	P	**Pn**	**20 54 10.4**	**+4.1**
	2.5nm,0.3s,baz=78,slow=14,SNR=17						
PMG				S	**Sn**	**20 55 40.5**	**+3.3**
	baz=77,slow=14,SNR=1.6						
PMG	**Port Moresby**	**8.16**	**241**	Pn	**Pn**	**20 54 05.9**	**-0.4**
CTA	**Charters Tower**	**16.51**	**208**	P	**Pn**	**20 55 56.1**	**+2.3**
	0.8nm,0.3s,baz=26,slow=15,SNR=14						
CTAO	**Charters Tower**	**16.51**	**208**	P	**P**	**20 55 53.6**	**-0.1**
CTAO				IAmb	IAmb	20 55 56.9	
	comp=Z,15nm,0.7s						
DZM	**Mont Dzumac**	**20.15**	**146**	*e*P	**P**	**20 56 34.3**	**+0.8**
	comp=Z,78nm,1.1s						
DZM	**Mont Dzumac**	**20.15**	**146**	P	**P**	**20 56 35.1**	**+1.6**
	comp=Z,31nm,0.9s,baz=329,slow=10,SNR=19						
DZM	**Mont Dzumac**	**20.15**	**146**	P	**P**	**20 56 33.4**	**-0.2**
ONTNC	**Ouen Toro**	**20.35**	**146**	P	**P**	**20 56 36.0**	**+0.5**
ONTNC				IAmb	IAmb	20 56 37.6	
	comp=Z,28nm,0.9s						
OUENC	**Ouen Island, N**	**20.65**	**146**	P	**P**	**20 56 40.2**	**+1.5**
OUENC				IAmb	IAmb	20 56 40.6	
	comp=Z,16nm,0.8s						
WR0	**Warramunga Arr**	**24.07**	**232**	P	**P**	**20 57 11.0**	**-1.4**
WR0				IAmb	IAmb	20 57 13.9	
	comp=Z,5.0nm,0.7s						
WB0	**Warramunga Arr**	**24.08**	**232**	P	**P**	**20 57 10.1**	**-2.4**
WB0				IAmb	IAmb	20 57 13.9	
	comp=Z,5.3nm,0.8s						
WB2	**Warramunga Arr**	**24.21**	**232**	P	**P**	**20 57 13.1**	**-0.6**
WB2				IAmb	IAmb	20 57 14.7	
	comp=Z,6.1nm,0.8s						
WRA	**Warramunga Arr**	**24.22**	**232**	P	**P**	**20 57 13.5**	**-0.3**
	comp=Z,4.7nm,0.6s,baz=52,slow=10.0,SNR=43						
WRA				S	**S**	**21 01 16.6**	**-4.9**
	comp=Z,1.2nm,1.0s,baz=54,slow=14,SNR=4.4						
WRA	**Warramunga Arr**	**24.22**	**232**	IAmb	IAmb	20 57 19.0	
	comp=Z,0.2nm,1.0s						
AS31	**Alice Springs**	**26.74**	**226**	P	**P**	**20 57 35.1**	**-1.5**
ASAR	**Alice Springs**	**26.75**	**226**	P	**P**	**20 57 35.6**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=55,slow=9.2,SNR=18						
ASAR				S	**S**	**21 01 56.0**	**-5.4**
	comp=Z,0.6nm,0.9s,baz=53,slow=16,SNR=3.6						
H11S3	**WAKE ISLAND Hy**	**26.76**	**27**	T	T	21 26 08.5	
	baz=208,slow=76,SNR=4.9						
H11S2	**WAKE ISLAND Hy**	**26.77**	**27**	T	T	21 26 07.2	
	baz=208,slow=76,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**26.78**	**27**	T	T	21 26 09.1	
	baz=208,slow=76,SNR=4.4						
STKA	**Stephens Creek**	**28.83**	**203**	P	**P**	**20 57 53.7**	**-1.3**
	comp=Z,2.2nm,0.6s,baz=31,slow=12,SNR=4.8						
STKA	**Stephens Creek**	**28.83**	**203**	IAmb	IAmb	20 57 56.5	
	comp=Z,0.7nm,0.9s						
BKZ	**Black Stump Fm**	**38.99**	**152**	P	**P**	**20 59 23.0**	**+0.5**
BKZ				IAmb	IAmb	20 59 24.1	
	comp=Z,16nm,1.2s						
THZ	**Tophouse**	**39.67**	**158**	P	**P**	**20 59 28.4**	**+0.2**
TUWZ	**Tuamarina**	**39.78**	**157**	P	**P**	**20 59 30.0**	**+1.0**
LTZ	**Lake Taylor**	**40.34**	**160**	P	**P**	**20 59 34.7**	**+1.1**
MQZ	**McQueen's Vall**	**41.28**	**160**	P	**P**	**20 59 41.7**	**+0.5**
KSM	**Kuching**	**44.59**	**278**	P	**P**	**21 00 08.1**	**-0.2**
KSM				IAmb	IAmb	21 00 08.9	
	comp=Z,6.0nm,0.7s						
KLR	**Kul'dur**	**58.00**	**343**	P	**P**	**21 01 48.1**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=139,slow=2.2,SNR=4.2						
CMAR	**Chiang Mai Arr**	**59.63**	**295**	P	**P**	**21 02 00.1**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=114,slow=3.7,SNR=8.1						
SONM	**Songino Array**	**67.79**	**327**	P	**P**	**21 02 53.3**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=143,slow=4.6,SNR=6.5						
SONM	**Songino Array**	**67.79**	**327**	IAmb	IAmb	21 02 53.6	
	comp=Z,1.6nm,0.9s						
SHL	**Shillong**	**68.06**	**300**	P	**P**	**21 02 54.0**	**-0.7**
SHL				IAmb	IAmb	21 02 55.4	
	comp=Z,8.0nm,0.9s						
VNDA	**Vanda**	**72.06**	**178**	P	**P**	**21 03 18.2**	**+0.3**
	comp=Z,4.9nm,0.8s,baz=336,slow=5.9,SNR=15						
VNDA	**Vanda**	**72.06**	**178**	IAmb	IAmb	21 03 19.3	
	comp=Z,5.8nm,0.8s						
MKAR	**Makanchi Array**	**81.92**	**319**	P	**P**	**21 04 13.5**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=95,slow=7.9,SNR=5.1						
MKAR				pP	**pP**	**21 04 51.3**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=92,slow=8.1,SNR=2.5						
ILAR	**Eielson Array**	**82.23**	**22**	P	**P**	**21 04 13.9**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=247,slow=5.1,SNR=7.5						
ILAR				pP	**pP**	**21 04 54.1**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=231,slow=5.8,SNR=3.0						
ZALV	**Zalesovo Beam**	**82.64**	**326**	P	**P**	**21 04 16.2**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=100,slow=5.1,SNR=4.8						
ZALV				pP	**pP**	**21 04 54.4**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=93,slow=7.4,SNR=2.7						
QSPA	**South Pole Qui**	**84.44**	**180**	P	**P**	**21 04 25.6**	**-0.7**
QSPA				IAmb	IAmb	21 04 27.1	
	comp=Z,11nm,0.8s						
MAW	**Mawson**	**85.52**	**203**	P	**P**	**21 04 31.1**	**-0.4**
	comp=Z,7.3nm,0.7s,baz=115,slow=5.5,SNR=7.2						
TORD	**Torodi Ar. Bea**	**152.05**	**288**	PKPbc	**PKPbc**	**21 11 48.6**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=67,slow=2.6,SNR=3.2						
TORD				PKPab	**PKPab**	**21 11 58.0**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=68,slow=4.0,SNR=3.9						
TORD				pPKPbc	**pPKPbc**	**21 12 27.8**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=32,slow=2.2,SNR=3.2						

PGC 02 20:53:06.4±0.4**, 49°.05N×128°.57W, h10^{km}, MLSn3.0**/22**, Mw3.6**/22**, 192km Wsw of Gold R., Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEMF	**NEPTUNE Canada**	**1.16**	**198**	P	Pb	20 53 25.1	-3.1
NC89	**ODP889**	**1.20**	**108**	P	Pn	20 53 27.1	-1.9
NC89				S	Sb	20 53 42.1	-2.5
EDB	**Eliza Dome**	**1.25**	**48**	P	Pn	20 53 27.7	-2.2
EDB				S	Sb	20 53 42.3	-4.0
ETB	**Estevan Point**	**1.37**	**76**	Pn	Pn	20 53 29.9	-1.7
PACB	**Port Alice, BC**	**1.55**	**26**	Pn	Pn	20 53 31.6	-2.4
PACB				Sn	Sn	20 53 49.9	-4.3
MAYB	**Maynard**	**1.63**	**33**	Pn	Pn	20 53 33.2	-2.0
MAYB				Sn	Sn	20 53 52.5	-3.8
WOSB	**Woss**	**1.71**	**49**	Pn	Pn	20 53 34.9	-1.4
WOSB				Sn	Sn	20 53 54.9	-3.4
TOFB	**Tofino**	**1.75**	**86**	Pn	Pn	20 53 34.8	-2.0
TOFB				Sn	Sn	20 53 55.1	-4.1
GDR	**Gold River**	**1.81**	**65**	Pn	Pn	20 53 35.7	-1.9
GDR				Sn	Sn	20 53 55.9	-4.7
PHC	**Port Hardy**	**1.81**	**24**	Pn	Pn	20 53 35.5	-2.1
PHC				Sn	Sn	20 53 56.6	-4.0
TLCB	**Telegraph Cove**	**1.87**	**36**	Pn	Pn	20 53 37.0	-1.4
TLCB				Sn	Sn	20 53 59.1	-3.0
B012	**Ucluelet**	**2.00**	**92**	Sn	Sn	20 54 00.5	-4.7
OZB	**Mount Ozzard**	**2.03**	**91**	Pn	Pn	20 53 38.5	-2.1
OZB				Sn	Sn	20 54 01.5	-4.5
BTB	**Buttle Lake**	**2.04**	**77**	Pn	Pn	20 53 39.4	-1.5
BTB				Sn	Sn	20 54 03.6	-2.9
SPLB	**Strathcona Par**	**2.08**	**65**	Sn	Sn	20 54 04.9	-2.4
NCRB	**Newcastle Ridg**	**2.12**	**49**	Pn	Pn	20 53 41.2	-0.8
NCRB				Sn	Sn	20 54 05.8	-2.6
MWAB	**Mount Washingt**	**2.24**	**71**	Sn	Sn	20 54 08.6	-2.9
BFSB	**Bamfield**	**2.28**	**94**	Pn	Pn	20 53 41.9	-2.1
BFSB				Sn	Sn	20 54 08.5	-3.5
B928	**Bamfield**	**2.28**	**94**	Pn	Pn	20 53 42.0	-1.9
B928				Sn	Sn	20 54 08.3	-3.7
CBB	**Campbell River**	**2.31**	**64**	Pn	Pn	20 53 43.4	-1.0
CBB				Sn	Sn	20 54 09.8	-3.0
MGB	**Mount Grey**	**2.55**	**90**	Pn	Pn	20 53 46.1	-1.8
MGB				Sn	Sn	20 54 15.4	-3.7
PFB	**Port Renfrew**	**2.77**	**98**	Pn	Pn	20 53 49.2	-1.6
PFB				Sn	Sn	20 54 20.0	-4.4
TXB	**Texada**	**2.78**	**75**	Pn	Pn	20 53 50.0	-0.9
TXB				Sn	Sn	20 54 22.0	-2.5
B926	**Mesachie Lake**	**2.94**	**93**	Pn	Pn	20 53 51.9	-1.1
B926				Sn	Sn	20 54 24.3	-4.0
CLRS	**Cowichan Lake**	**2.94**	**93**	Pn	Pn	20 53 52.1	-1.0
NLLB	**Nanaimo Lost L**	**3.02**	**85**	Sn	Sn	20 54 26.6	-3.7
SHB	**Sechelt**	**3.12**	**78**	Pn	Pn	20 53 55.0	-0.7
SHB				Sn	Sn	20 54 30.4	-2.7
BBB	**Bella Bella**	**3.15**	**5**	Pn	Pn	20 53 54.9	-1.1
BBB				Sn	Sn	20 54 29.4	-4.2
BIB	**Bowen Island**	**3.47**	**82**	Pn	Pn	20 54 00.1	-0.3
HNBB	**Haney**	**3.94**	**84**	Pn	Pn	20 54 07.0	0.0
BUTB	**Butedale**	**4.02**	**1**	Pn	Pn	20 54 07.0	-1.0
BUTB				Sn	Sn	20 54 51.3	-3.8
VDB	**Vedder Mountai**	**4.26**	**88**	Pn	Pn	20 54 10.5	-0.7
BNKB	**Banks Island**	**4.37**	**349**	Pn	Pn	20 54 11.3	-1.5
LLLB	**Lillooet**	**4.60**	**68**	Pn	Pn	20 54 16.1	+0.1
LLLB				Sn	Sn	20 55 08.1	-1.4

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*NEIC **02** 21:03:11.0±1.4, 43°.76N±0°.05×105°.29W±0°.06, h0^{km}±2^{km}, ML3.0/44, Error ellipse: s-maj=9.8km s-min=5.7km az=143.0*

*IDC **02** 21:03:12.2±1.5, 44°.21N×105°.88W, h0^{km}, mb1 3.6/2, mb1mx3.2/43, mbtmp3.4/2, ML2.5/2, Error ellipse: s-maj=51.8km s-min=9.9km az=145.0*

ISC 02 21:03:10.8±1.1**, 43°.73N**±0°.06×**105°.32W**±0°.05**, h0^{km}, n35, σ0^{s}.87**/35**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.01**	**66**	Pg	**Pg**	**21 03 29.3**	**-0.8**
K22A	**Casper**	**1.39**	**220**		**Pn**	**21 03 35.9**	**-1.7**
K22A				IAML		21 03 59.8	
	comp=N,334nm,0.5s						
RWWY	**Rawlins**	**2.47**	**215**		**Pn**	**21 03 53.6**	**+1.1**
RWWY				IAML		21 04 28.2	
	comp=N,123nm,0.7s						
LAO	**LASA Array**	**3.03**	**348**		**Pn**	**21 03 59.2**	**-0.9**
LAO				IAML		21 04 57.3	
	comp=N,64nm,0.7s						
RLMT	**Red Lodge**	**3.15**	**298**		**Pn**	**21 04 01.7**	**-0.2**
RLMT				IAML		21 04 52.4	
	comp=N,40nm,0.6s						
RLMT				IAML		21 05 05.9	
	comp=N,34nm,1.2s						
BW06	**Boulder Array**	**3.24**	**254**		**Pn**	**21 04 03.2**	**+0.1**
BW06				IAML		21 04 51.4	
	comp=N,39nm,0.5s						
BW06				IAML		21 04 54.3	
	comp=N,35nm,0.7s						
PD31	**Pinedale Array**	**3.24**	**254**		**Pn**	**21 04 03.3**	**+0.1**
PDAR	**Pinedale Array**	**3.24**	**254**	Pn	**Pn**	**21 04 03.5**	**+0.3**
	comp=N,4.1nm,0.3s,baz=72,slow=16,SNR=44						
PDAR				Pg	**Pg**	**21 04 11.8**	**-1.1**
	comp=N,7.8nm,0.3s,baz=65,slow=20,SNR=27						
PDAR				Lg	Lg	21 04 47.0	
	comp=N,7.2nm,0.3s,baz=67,slow=31,SNR=1.9						
PDAR	**Pinedale Array**	**3.24**	**254**		**Pn**	**21 04 03.2**	**+0.1**
YMP	**Mirror Lake Pl**	**3.62**	**288**		**Pn**	**21 04 08.3**	**-0.1**
OGNE	**Ogallala**	**3.69**	**138**	Pn	**Pn**	**21 04 09.9**	**+0.7**
LOHW	**Long Hollow**	**3.83**	**270**		**Pn**	**21 04 12.0**	**+0.7**
LOHW				IAML		21 05 40.3	
	comp=N,17nm,1.9s						
H17A	**Grant Village**	**3.85**	**282**		**Pn**	**21 04 12.8**	**+1.3**
H17A				IAML		21 05 13.9	
	comp=N,22nm,0.5s						
H17A				IAML		21 05 21.1	
	comp=E,21nm,3.0s						
FLWY	**Flagg Ranch**	**3.90**	**277**		**Pn**	**21 04 12.6**	**+0.4**
FLWY				IAML		21 05 22.5	
	comp=E,32nm,1.7s						
FLWY				IAML		21 05 23.6	
	comp=E,32nm,1.4s						
ISCO	**Idaho Springs**	**3.93**	**183**		**Pn**	**21 04 13.5**	**+0.8**
ISCO				IAML		21 05 16.0	
	comp=E,18nm,0.4s						
ISCO				IAML		21 05 25.3	
	comp=E,17nm,1.3s						
MOOW	**Moose Ponds**	**3.93**	**272**		**Pn**	**21 04 13.6**	**+0.9**
YNR	**Norris Junctio**	**3.98**	**286**		**Pn**	**21 04 15.2**	**+1.9**
YNR				IAML		21 05 23.4	
	comp=E,16nm,3.4s						
REDW	**Red Top Meadow**	**4.04**	**267**		**Pn**	**21 04 14.8**	**+0.7**
REDW				IAML		21 05 30.0	
	comp=E,36nm,0.7s						
YHH	**Holmes Hill**	**4.11**	**287**		**Pn**	**21 04 15.7**	**+0.5**
YHH				IAML		21 05 26.0	
	comp=N,13nm,1.4s						
YHH				IAML		21 05 38.2	
	comp=E,13nm,3.4s						
FXWY	**Fox Creek**	**4.14**	**271**		**Pn**	**21 04 14.7**	**-0.8**
E28A	**Huff**	**4.34**	**47**		**Pn**	**21 04 18.3**	**+0.3**
RDMU	**Red Mountain**	**4.46**	**227**	Pn	**Pn**	**21 04 19.6**	**-0.3**
DGMT	**Dagmar**	**4.81**	**9**		**Pn**	**21 04 24.6**	**+0.1**
KSCO	**Kaye Shedlock'**	**5.13**	**156**		**Pn**	**21 04 29.2**	**+0.2**
HRY	**Holter Researc**	**5.48**	**305**		**Pn**	**21 04 33.6**	**-0.2**
P18A	**Preston Nutter**	**5.51**	**224**		**Pn**	**21 04 34.3**	**-0.1**
SPUT	**South Promonto**	**5.79**	**248**		**Pn**	**21 04 38.5**	**+0.3**
BCYI	**Bear Canyon**	**5.86**	**279**	Pn	**Pn**	**21 04 40.9**	**+1.8**
SDCO	**Great Sand Dun**	**5.97**	**181**	Pn	**Pn**	**21 04 40.4**	**-0.4**
SRU	**San Rafael Swe**	**6.04**	**222**		**Pn**	**21 04 42.0**	**+0.4**
TMUT	**Trail Mountain**	**6.25**	**227**		**Pn**	**21 04 45.1**	**+0.5**
ECSD	**EROS Data Cent**	**6.31**	**87**	Pn	**Pn**	**21 04 45.4**	**+0.3**
I10CA	**LAC DU BONNET**	**9.07**	**41**	*i*		22 01 40.0	
	baz=220,slow=326,SNR=5.4						
ULM	**Lac du Bonnet**	**9.17**	**41**	Pn	**Pn**	**21 05 23.9**	**-0.4**
	comp=E,0.4nm,0.3s,baz=220,slow=12,SNR=2.0						
ULM				Pg		21 05 56.9	
	comp=E,0.6nm,0.3s,baz=217,slow=15,SNR=3.4						
ULM				Lg	Lg	21 07 49.3	
	comp=E,0.3nm,0.3s,baz=112,slow=15,SNR=1.9						
NVAR	**Mina Array Bea**	**11.13**	**246**	Pn	**Pn**	**21 05 53.4**	**+2.0**
	comp=E,0.2nm,0.3s,baz=48,slow=12,SNR=2.4						

IDC 02 21:04:46.5±3.5**, 18°.73S×178°.11W, h607^{km}**±33^{km}**, mb3.2**/3**, mb1 3.4**/4**, mb1mx2.9**/34**, mbtmp4.2**/4**, Error ellipse: s-maj=99.6km s-min=64.9km az=2.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.79**	**285**	P	P	21 06 11.2	+0.1
	3.3nm,0.3s,baz=109,slow=13,SNR=9.9						
STKA	**Stephens Creek**	**38.49**	**242**	P	P	21 11 18.6	+0.1
	2.0nm,0.6s,baz=87,slow=9.9,SNR=7.2						
WRA	**Warramunga Arr**	**44.77**	**260**	P	P	21 12 07.7	-0.3
	1.2nm,0.3s,baz=97,slow=7.6,SNR=42						
ASAR	**Alice Springs**	**44.85**	**255**	P	P	21 12 08.3	-0.2
	3.9nm,0.7s,baz=89,slow=7.8,SNR=48						
ASAR				S	S	21 18 03.9	+0.5
	0.8nm,0.6s,baz=90,slow=15,SNR=7.8						

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*IDC **02** 21:17:27.7±2.8, 38°.37N×142°.16E, h43^{km}±22^{km}, mb3.7/5, mb1 3.8/8, mb1mx3.3/37, mbtmp3.8/8, ML3.1/3, MS2.4/1, Ms1 2.4/1, ms1mx2.2/31, Error ellipse: s-maj=32.5km s-min=12.5km az=127.0*

*NEIC **02** 21:17:27.5±1.9, 38°.22N±0°.07×142°.1E±0°.1, h47^{km}±10^{km}, mb4.2/12, Error ellipse: s-maj=13.3km s-min=8.4km az=125.0*

*JMA **02** 21:17:27.8±0.1, 38°.24N×142°.00E, h58^{km}±1^{km}, M3.7*
JMA Felt II J1.

ISC 02 21:17:26.9±1.5**, 38°.23N**±0°.05×**142°.15E**±0°.08**, h46^{km}**±13^{km}**, n57, σ1^{s}.07**/68**, mb4.0**/11**, 2C-9D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.55**	**279**	⇑P	**Pn**	**21 17 38.9**	**+0.4**
JIKH				S	**Sn**	**21 17 46.7**	**-0.1**
JIO	**Ouri**	**0.67**	**290**	⇓P	**Pn**	**21 17 40.3**	**+0.2**
JIO				S	**Sn**	**21 17 49.1**	**-0.5**
JKMT	**Kesennumamotoy**	**0.79**	**318**	⇓P	**Pn**	**21 17 42.2**	**+0.5**
JKMT				S	**Sn**	**21 17 52.5**	**+0.1**
OFUJ	**Ofunato**	**0.93**	**336**	⇓P	**Pn**	**21 17 44.3**	**+0.7**
OFUJ				S	**Sn**	**21 17 56.2**	**+0.3**
JMK	**Ichinoseki**	**1.03**	**315**	⇓P	**Pn**	**21 17 45.4**	**+0.5**
JMK				S	**Sn**	**21 17 58.1**	**-0.1**
JMM	**Marumori**	**1.13**	**252**	⇓P	**Pn**	**21 17 45.7**	**-0.6**
JMM				S	**Sn**	**21 17 59.1**	**-1.6**
JMM	**Marumori**	**1.13**	**252**		**Pn**	**21 17 45.7**	**-0.6**
JMM				Sn	**Sn**	**21 17 58.3**	**-2.3**
JOU	**Okura**	**1.18**	**277**	⇓P	**Pn**	**21 17 46.8**	**-0.2**
JOU				S	**Sn**	**21 18 00.8**	**-1.1**
JFK	**Kawauchi**	**1.33**	**230**	⇑P	**Pn**	**21 17 48.6**	**-0.4**
JFK				*e*S	**Sn**	**21 18 04.2**	**-1.3**
JOM	**Ohasama**	**1.41**	**332**	⇓P	**Pn**	**21 17 50.8**	**+0.6**
JOM				S	**Sn**	**21 18 08.4**	**+0.8**
JYK	**Kaneyama**	**1.57**	**297**	⇓P	**Pn**	**21 17 52.2**	**-0.1**
JYK				*e*S	**Sn**	**21 18 10.3**	**-1.0**
JFT	**Otama**	**1.60**	**244**	P	**Pn**	**21 17 52.9**	**+0.1**
JFT				S	**Sn**	**21 18 11.6**	**-0.6**
JYS	**Shirataka**	**1.64**	**270**	P	**Pn**	**21 17 53.5**	**+0.2**
JYS				S	**Sn**	**21 18 12.4**	**-0.9**
JRG	**Rokugo**	**1.67**	**315**	P	**Pn**	**21 17 53.9**	**+0.3**
JYA	**Atsumi**	**1.95**	**282**	⇓P	**Pn**	**21 17 57.5**	**0.0**
JYA				S	**Sn**	**21 18 19.9**	**-0.9**
JYT	**Yasato**	**2.53**	**219**		**Pn**	**21 18 05.3**	**-0.2**
JTM	**Tenmabayashi**	**2.69**	**342**		**Pn**	**21 18 08.0**	**+0.3**
JSD	**Sado**	**3.08**	**268**		**Pn**	**21 18 12.2**	**-0.8**
MJAR	**Matsushiro Arr**	**3.56**	**243**	P	**Pn**	**21 18 20.1**	**+0.4**
	0.3nm,0.3s,baz=53,slow=8.1,SNR=13						
MJAR				S	**Sn**	**21 19 03.2**	**+2.7**
	0.5nm,0.3s,baz=344,slow=15,SNR=5.2						
MJAR				LR	LR	21 20 08.5	
	comp=Z,50nm,18.6s,baz=75,slow=44						
MJAR	**Matsushiro Arr**	**3.56**	**243**		**Pn**	**21 18 19.7**	**0.0**
MAJO	**Matsushiro**	**3.56**	**243**		**Pn**	**21 18 20.9**	**+1.2**
MAT	**Matsushiro**	**3.56**	**243**	P	**Pn**	**21 18 20.7**	**+1.0**
MAT				*e*S	**Sn**	**21 19 05.0**	**+4.5**
MJB9	**Matsu-Tunnel**	**3.56**	**243**	Pn	**Pn**	**21 18 21.1**	**+1.3**
ERM	**Erimo**	**3.86**	**11**	Pn	**Pn**	**21 18 24.2**	**+0.5**
JGF	**Kuroka**	**4.65**	**237**	Pn	**Pn**	**21 18 35.9**	**+1.3**
INU	**Inuyama**	**5.02**	**237**	Pn	**Pn**	**21 18 41.2**	**+1.5**
ASAJ	**Asahikawa**	**5.89**	**3**	P	**Pn**	**21 18 51.6**	**0.0**
	1.9nm,0.3s,baz=200,slow=15,SNR=19						
ASAJ				S	**Sn**	**21 19 54.7**	**-3.1**
	2.6nm,0.3s,baz=315,slow=33,SNR=8.4						
JKA	**Kamikawa-asahi**	**5.89**	**3**		**Pn**	**21 18 51.3**	**-0.3**
JWT	**Wachi**	**6.16**	**244**	Pn	**Pn**	**21 18 56.3**	**+0.9**
USA0B	**Ussuriysk Arra**	**9.70**	**311**	Pn	**Pn**	**21 19 44.6**	**+0.8**
USRK	**Ussuriysk Ar.**	**9.70**	**311**	P	**Pn**	**21 19 44.5**	**+0.7**
	baz=124,slow=14,SNR=14						
SONM	**Songino Array**	**27.63**	**302**	P	**P**	**21 23 10.7**	**+0.5**
	0.8nm,0.6s,baz=105,slow=7.8,SNR=7.5						
SONM	**Songino Array**	**27.63**	**302**	P	**P**	**21 23 10.6**	**+0.5**
ENH	**Enshi**	**28.04**	**263**	P	**P**	**21 23 12.8**	**-1.0**
ENH				IAmb	IAmb	21 23 14.8	
	comp=Z,6.6nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.29**	**124**	T	T	21 53 37.8	
	baz=316,slow=76,SNR=95						
H11N1	**WAKE ISLAND Hy**	**28.30**	**124**	T	T	21 53 38.4	
	baz=316,slow=76,SNR=109						
H11N3	**WAKE ISLAND Hy**	**28.30**	**124**	T	T	21 53 39.1	
	baz=316,slow=76,SNR=69						
H11S1	**WAKE ISLAND Hy**	**29.05**	**126**	T	T	21 54 33.9	
	baz=318,slow=76,SNR=146						
H11S3	**WAKE ISLAND Hy**	**29.05**	**126**	T	T	21 54 34.0	
	baz=318,slow=76,SNR=142						
H11S2	**WAKE ISLAND Hy**	**29.06**	**126**	T	T	21 54 35.2	
	baz=318,slow=76,SNR=120						
ZAA0	**Zalesovo Array**	**41.56**	**311**	P	**P**	**21 25 09.8**	**0.0**
ZALV	**Zalesovo Beam**	**41.56**	**311**	P	**P**	**21 25 10.2**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=83,slow=8.6,SNR=11						
ZALV	**Zalesovo Beam**	**41.56**	**311**	P	**P**	**21 25 09.9**	**+0.2**
MK31	**Makanchi Array**	**43.99**	**301**	P	**P**	**21 25 29.4**	**-0.3**
MK31				IAmb	IAmb	21 25 40.3	
	comp=Z,3.6nm,1.3s						
MKAR	**Makanchi Array**	**43.99**	**301**	P	**P**	**21 25 29.6**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=84,slow=10,SNR=20						
MKAR	**Makanchi Array**	**43.99**	**301**	P	**P**	**21 25 29.5**	**-0.2**
SCM	**Sheep Creek Mo**	**48.16**	**37**	P	**P**	**21 26 03.2**	**+0.9**
ILAR	**Eielson Array**	**48.17**	**33**	P	**P**	**21 26 02.8**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=263,slow=6.6,SNR=7.4						
KDJ	**Kajisay**	**48.72**	**296**	P	**P**	**21 26 07.2**	**+0.2**
KDJ				IAmb	IAmb	21 26 23.6	
	comp=Z,2.4nm,0.9s						
KLU	**Klutina**	**48.86**	**37**	P	**P**	**21 26 08.6**	**+0.9**
BOOM	**Boomskoye usch**	**49.48**	**297**	P	**P**	**21 26 13.7**	**+0.9**
BOOM				IAmb	IAmb	21 26 37.7	
	comp=Z,2.3nm,0.8s						
AAK	**Ala-Archa**	**50.45**	**298**	P	**P**	**21 26 20.8**	**+0.7**
AAK				IAmb	IAmb	21 26 32.6	
	comp=Z,2.4nm,1.4s						
ABKAR	**Akbulak array**	**57.62**	**310**	P	**P**	**21 27 11.3**	**-0.8**
ABKAR	**Akbulak array**	**57.62**	**310**	P	**P**	**21 27 11.7**	**-0.4**
ABKAR				IAmb	IAmb	21 27 35.7	
	comp=Z,3.1nm,1.4s						
WR0	**Warramunga Arr**	**58.32**	**188**	P	**P**	**21 27 17.1**	**-0.1**
WRA	**Warramunga Arr**	**58.32**	**189**	P	**P**	**21 27 16.1**	**-1.2**
TXAR	**Lajitas Array**	**88.93**	**53**	P	**P**	**21 30 17.0**	**+0.2**
	comp=Z,0.2nm,0.8s,baz=283,slow=3.1,SNR=5.2						

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*INET **02** 21:19:26.6, 11°.28N×87°.69W, h15^{km}, MW4.3*

*IDC **02** 21:19:28.0±1.0, 11°.78N×87°.08W, h0^{km}, mb4.0/8, mb1 4.3/9, mb1mx3.9/35, mbtmp4.0/9, ML3.2/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/37, Error ellipse: s-maj=40.3km s-min=15.3km az=47.0*

*UCR **02** 21:19:31.5±1.6, 11°.48N×87°.43W, h36^{km}±999^{km}, MW4.5, mb4.5(NEIC)*

*SNET **02** 21:19:33.0±0.8, 11°.70N×87°.55W, h8^{km}±13^{km}, ML3.1*

*NEIC **02** 21:19:33.9±1.4, 11°.64N±0°.06×87°.23W±0°.05, h35^{km}±5^{km}, mb4.5/48, Error ellipse: s-maj=8.6km s-min=7.1km az=215.0*

ISC 02 21:19:33.2±1.2**, 11°.60N**±0°.05×**87°.27W**±0°.06**, h41^{km}**±11^{km}**, n131, σ0^{s}.95**/144**, mb4.5**/30**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**1.12**	**11**	Pn	**Pn**	**21 19 53.4**	**+0.9**
CRIN				Sn	**Sn**	**21 20 03.5**	**-3.3**
CNCH	**Conchagua**	**1.76**	**342**	*e*P	**Pn**	**21 20 01.2**	**-0.1**
CNCH				*e*S	**Sn**	**21 20 24.1**	**+1.5**
CNCH	**Conchagua**	**1.76**	**342**	*e*P	**Pn**	**21 20 01.2**	**-0.1**
CNCH				*e*S	**Sn**	**21 20 24.1**	**+1.5**
BOAB	**BOACO BROADBAN**	**.79**	**61**		**Pn**	**21 20 01.6**	**0.0**
LCND	**La Caada**	**1.81**	**341**	*e*P	**Pn**	**21 20 01.3**	**-0.5**
LCND				*e*S	**Sn**	**21 20 23.3**	**-0.3**
LCND	**La Caada**	**1.81**	**341**	*e*P	**Pn**	**21 20 01.3**	**-0.5**
LCND				*e*S	**Sn**	**21 20 23.3**	**-0.3**
LCND				IAML		21 20 34.0	
	comp=Z,662nm,0.3s						
HZTE	**Horizontes, Gu**	**1.87**	**118**	*e*P	**Pn**	**21 20 02.1**	**-0.6**
HZTE	**Horizontes, Gu**	**1.87**	**118**		**Pn**	**21 20 02.4**	**-0.3**
MATN	**Matagalpa**	**1.87**	**45**		**Pn**	**21 20 02.3**	**-0.5**
GBS3	**Finca Las Img**	**1.96**	**114**	*i* P	**Pn**	**21 20 04.1**	**+0.1**
BUEV	**Buena Vista**	**2.00**	**113**	*e*P	**Pn**	**21 20 04.3**	**-0.2**
ACON	**Acoyapa**	**2.09**	**80**	*e*P	**Pn**	**21 20 05.4**	**-0.3**
ACON	**Acoyapa**	**2.09**	**80**		**Pn**	**21 20 05.0**	**-0.7**
PACA	**Pacayal**	**2.13**	**331**	*e*P	**Pn**	**21 20 06.0**	**-0.4**
PACA	**Pacayal**	**2.13**	**331**	*e*P	**Pn**	**21 20 06.0**	**-0.4**
PACA				IAML		21 20 46.8	
	comp=Z,109nm,0.5s						
SAJU	**San Juanillo,**	**2.16**	**135**	*e*P	**Pn**	**21 20 04.7**	**-2.0**
GUAI	**GUAI**	**2.17**	**127**	*i* P	**Pn**	**21 20 06.4**	**-0.5**
PLVR	**Palo Verde**	**2.26**	**123**	*e*P	**Pn**	**21 20 07.6**	**-0.6**
DUNO	**Dulce Nombre,**	**2.31**	**131**	Pn	**Pn**	**21 20 08.9**	**+0.1**
GRZA	**Playa Garza**	**2.32**	**136**	*e*P	**Pn**	**21 20 07.2**	**-1.7**
PTEN	**Parque Tenorio**	**2.41**	**111**	*i* P	**Pn**	**21 20 10.6**	**+0.3**
INDI	**Punta indio, G**	**2.45**	**134**	*e*P	**Pn**	**21 20 09.8**	**-0.9**
TGUH	**Tegucigalpa,Un**	**2.45**	**0**	*e*P	**Pn**	**21 20 11.7**	**+0.9**
TGUH	**Tegucigalpa,Un**	**2.45**	**0**	*e*P	**Pn**	**21 20 11.7**	**+0.9**
TGUH	**Tegucigalpa,Un**	**2.45**	**0**		**Pn**	**21 20 11.2**	**+0.4**

SCLA	Alcaldia de Sa	2.53	326	*e*P	Pn	21 20 11.5	-0.4
SCLA				*e*S	Sn	21 20 41.3	-0.2
SCLA	Alcaldia de Sa	2.53	326	*e*P	Pn	21 20 11.5	-0.4
SCLA				*e*S	Sn	21 20 41.3	-0.2
SCLA				IAML		21 20 57.6	
	comp=Z,54nm,0.4s						
JTS	Las Juntas de	2.62	119	Pn	Pn	21 20 12.0	-1.1
JTS				Sn	Sn	21 20 43.0	-0.8
JTS				LR	LR	21 21 17.0	
	comp=Z,217nm,18.5s,slow=43						
JTS	Las Juntas de	2.62	119	*e*P	Pn	21 20 13.1	0.0
JTS	Las Juntas de	2.62	119		Pn	21 20 12.5	-0.6
SJTE	Alcalda de S	2.62	320	*e*P	Pn	21 20 12.3	-0.9
SJTE	Alcalda de S	2.62	320	*e*P	Pn	21 20 12.3	-0.9
SJTE				IAML		21 20 55.7	
	comp=Z,92nm,0.4s						
SNET	Serv Nac Est T	2.82	318	Pn	Pn	21 20 15.7	-0.2
CAO2	Cobano, Puntar	2.85	131	Pn	Pn	21 20 16.8	+0.6
LAFE	Finca La Fe, P	2.92	127	*e*P	Pn	21 20 15.7	-1.6
COVE	Coope Vega, Sa	2.95	107	Pn	Pn	21 20 17.9	+0.4
ESPN	Las Esperanzas	2.97	78	*e*P	Pn	21 20 18.2	+0.4
ESPN	Las Esperanzas	2.97	78	Pn	Pn	21 20 18.1	+0.2
JACO	JACO, Garabito	3.21	127	Pn	Pn	21 20 21.3	+0.1
MTO3	Montecristo	3.45	324	*e*P	Pn	21 20 24.0	-0.6
MTO3	Montecristo	3.45	324	*e*P	Pn	21 20 24.0	-0.6
MTO3	Montecristo	3.45	324		Pn	21 20 24.2	-0.5
HDC	Heredia	3.48	117	Pn	Pn	21 20 25.1	+0.1
ESQI	Esquipulas	3.57	326	Pn	Pn	21 20 26.7	+0.5
CVTR	Volcan Turrial	3.79	114	Pn	Pn	21 20 31.3	+1.7
RIMA	Rio Macho	3.81	118	Pn	Pn	21 20 30.6	+1.0
CDM	Cerro de Muert	4.00	120	*e*P	Pn	21 20 33.6	+1.2
PEZE	Perez Zeledon,	4.17	122	Pn	Pn	21 20 34.0	-0.4
SRBA	San Rafael, Bu	4.51	121	Pn	Pn	21 20 38.8	-0.4
DRK0	Durika	4.59	120	Pn	Pn	21 20 40.9	+0.6
APG	El Apazote	4.60	318	Pn	Pn	21 20 39.4	-1.1
	comp=Z,0.5nm,0.3s,baz=159,slow=11,SNR=3.2						
APG				Sn	Sn	21 21 34.0	+1.3
	comp=Z,0.7nm,0.3s,baz=114,slow=14,SNR=5.0						
RIOS	Rincon, Osa	4.69	128	Pn	Pn	21 20 41.9	+0.4
CDITO	Canoas	5.27	124		Pn	21 20 50.7	+1.2
BRU2	Volcan	5.30	121	Pn	Pn	21 20 50.2	+0.2
BCIP	Isla Barro Col	7.70	108	Pn	Pn	21 21 24.5	+1.6
CMIG	Matias Romero	9.18	307	Pn	Pn	21 21 42.7	-0.4
	comp=Z,0.7nm,0.3s,baz=120,slow=11,SNR=7.3						
SJCC	San Jacinto, C	12.00	97	Pn	Pn	21 22 21.3	-0.6
OCAC	Ocana	14.14	102	Pn	P	21 22 55.1	-2.9
ORTC	Ortega, Tolima	14.15	122	*e*P	P	21 23 00.6	+2.7
MARP	Paez Belalcaza	14.19	127	*e*P	P	21 23 02.7	+4.1
PRAC	Prado	14.55	122	*e*P	P	21 23 04.2	+1.8
HKT	Hockley	19.92	338	P	P	21 24 02.1	+0.7
342A	Flagon Creek P	20.23	347	P	P	21 24 05.2	+0.4
BIRV	Birongo	20.65	91	P	P	21 24 07.6	-2.0
BIRV				IAmb	IAmb	21 24 22.4	
	comp=Z,26nm,1.3s						
152A	Waverly Hall	21.11	6	P	P	21 24 14.9	+0.6
152A				IAmb	IAmb	21 24 19.2	
	comp=Z,20nm,0.9s						
GOGA	Godfrey	21.99	9	P	P	21 24 24.2	+0.4
Y49A	Blount Mountai	22.18	2	P	P	21 24 26.3	+0.5
Y52A	Lilburn	22.36	7	P	P	21 24 28.5	+0.7
Y52A				IAmb	IAmb	21 24 31.2	
	comp=Z,16nm,0.8s						
TX32	Lajitas Array	23.34	322	P	P	21 24 38.9	+0.8
TXAR	Lajitas Array	23.34	322	P	P	21 24 38.7	+0.6
	comp=Z,3.0nm,0.7s,baz=134,slow=10,SNR=33						
TXAR				PcP	PcP	21 28 25.3	+1.0
	comp=Z,0.8nm,0.9s,baz=144,slow=4.5,SNR=4.8						
TXAR	Lajitas Array	23.34	322	P	P	21 24 38.9	+0.8
MIAR	Mount Ida	23.56	347	P	P	21 24 39.7	-0.2
MIAR				IAmb	IAmb	21 24 41.6	
	comp=Z,9.8nm,0.8s						
W50A	Signal Mountai	23.57	4	P	P	21 24 40.4	+0.3
W50A				IAmb	IAmb	21 24 41.8	
	comp=Z,12nm,0.7s						
BG3	Lake Jocassee	23.63	9	P	P	21 24 40.8	+0.2
BG3				IAmb	IAmb	21 24 42.6	
	comp=Z,11nm,0.7s						
CPCT	Cooper Cave	23.88	6	P	P	21 24 43.2	+0.3
CPCT				IAmb	IAmb	21 24 45.6	
	comp=Z,16nm,1.1s						
WHAR	Wooly Hollow	24.02	350	P	P	21 24 43.9	-0.4
X37A	Clayton	24.05	343	P	P	21 24 45.3	+0.7
LOOK	Love County	24.06	339	P	P	21 24 46.0	+1.3
TKL	Tuckaleechee C	24.17	7	P	P	21 24 45.9	+0.3
	comp=Z,8.2nm,0.8s,baz=182,slow=10,SNR=9.4						
TKL	Tuckaleechee C	24.17	7	P	P	21 24 46.1	+0.4
TKL				IAmb	IAmb	21 24 47.2	
	comp=Z,10nm,0.8s						
V53A	Saluda	24.31	9	P	P	21 24 48.0	+1.0
V53A				IAmb	IAmb	21 24 49.6	
	comp=Z,9.0nm,0.8s						
CLTN	Cedars of Leba	24.40	2	P	P	21 24 47.8	0.0
CLTN				IAmb	IAmb	21 24 49.9	
	comp=Z,14nm,0.6s						
FCAR	Ozark Folk Cen	24.58	351	P	P	21 24 49.1	-0.3
LCAR	Lake Charles	24.62	352	P	P	21 24 49.4	-0.3
LCAR				IAmb	IAmb	21 24 49.7	
	comp=Z,9.0nm,0.7s						
W35A	Tecumseh	25.02	341	P	P	21 24 54.3	+0.9
W35A				IAmb	IAmb	21 24 56.2	
	comp=Z,11nm,0.7s						
TZTN	Tazewell	25.07	7	P	P	21 24 53.8	-0.1
TZTN				IAmb	IAmb	21 25 18.5	
	comp=Z,15nm,1.4s						
U40A	Yellville	25.16	349	P	P	21 24 54.4	-0.3
U40A				IAmb	IAmb	21 24 55.2	
	comp=Z,9.7nm,0.8s						
PBMO	Poplar Bluff	25.24	354	P	P	21 24 55.6	+0.3
PBMO				IAmb	IAmb	21 24 56.9	
	comp=Z,9.8nm,0.7s						
TUL1	Leonard	25.41	344	P	P	21 24 57.1	+0.2
T42A	Van Buren	25.56	353	P	P	21 24 57.4	-0.8
MNTX	Cornudas Mount	26.07	323	P	P	21 25 03.1	+0.1
S51A	Beattyville	26.14	7	P	P	21 25 03.7	+0.2
S51A				IAmb	IAmb	21 25 05.0	
	comp=Z,9.0nm,0.7s						
MSTX	Muleshoe	26.39	330	P	P	21 25 05.6	-0.4
MSTX				IAmb	IAmb	21 25 12.1	
	comp=Z,10.0nm,0.8s						
S39A	Bolivar	26.55	349	P	P	21 25 06.6	-0.6
S39A				IAmb	IAmb	21 25 07.7	
	comp=Z,12nm,0.8s						
CCM	Cathedral Cave	26.59	353	P	P	21 25 06.6	-1.0
Q51A	Peebles	27.54	7	P	P	21 25 16.4	+0.3
Q54A	Coxs Mills	27.87	11	P	P	21 25 19.6	+0.5
Q54A				IAmb	IAmb	21 25 19.9	
	comp=Z,15nm,1.2s						
P52A	Corning	28.30	8	P	P	21 25 23.1	+0.2
ETMB	Extrema	29.85	135	P	P	21 25 37.8	+0.9
ETMB				IAmb	IAmb	21 25 40.1	
	comp=Z,6.5nm,0.7s						
SSPA	Standing Stone	30.09	14	P	P	21 25 39.1	+0.3
SSPA				IAmb	IAmb	21 26 03.3	
	comp=Z,14nm,1.4s						
N59A	State Game Lan	30.91	17	P	P	21 25 47.0	+0.9
SAML	Samuel	31.47	129	P	P	21 25 51.0	-0.2
J56A	Wolcott	32.83	14	P	P	21 26 02.7	-0.1
ECSD	EROS Data Cent	33.03	348	P	P	21 26 03.5	-1.0
ECSD				IAmb	IAmb	21 26 04.0	
	comp=Z,10nm,1.1s						
J58A	Remsen	33.31	16	P	P	21 26 07.2	+0.1
LONY	Lake Ozonia	34.67	16	P	P	21 26 18.5	-0.3
BW06	Boulder Array	36.60	332	P	P	21 26 35.2	-0.5
PDAR	Pinedale Array	36.60	332	P	P	21 26 36.0	+0.3
	comp=Z,0.6nm,0.6s,baz=129,slow=9.9,SNR=7.5						
PDAR				PcP	PcP	21 28 59.4	+1.0
	comp=Z,0.7nm,0.7s,baz=134,slow=4.3,SNR=5.4						
PDAR	Pinedale Array	36.60	332	P	P	21 26 34.9	-0.8
HWUT	Hardware Ranch	36.69	329	P	P	21 26 36.8	+0.3
HWUT				IAmb	IAmb	21 26 42.9	
	comp=Z,5.4nm,0.8s						
REDW	Red Top Meadow	37.66	331	P	P	21 26 45.1	+0.4
REDW				IAmb	IAmb	21 26 51.3	
	comp=Z,8.7nm,1.1s						
TPAW	Teton Pass	37.81	332	P	P	21 26 46.6	+0.6
ULM	Lac du Bonnet	39.19	351	P	P	21 26 55.1	-2.0
	comp=Z,3.6nm,0.8s,baz=176,slow=9.1,SNR=5.4						
BCYI	Bear Canyon	39.60	330	P	P	21 27 02.0	+1.1
MCMT	McKenzie Canyo	39.71	331	P	P	21 27 02.7	+0.8
PLID	Pearl Lake	41.44	329	P	P	21 27 16.2	+0.1
SCHQ	Schefferville	46.05	16	P	P	21 27 50.6	-2.1
	comp=Z,3.4nm,0.6s,baz=210,slow=2.7,SNR=5.3						
SCHQ	Schefferville	46.05	16	P	P	21 27 51.2	-1.5
BDFB	Brasilia	47.36	124	P	P	21 28 03.7	+0.1
	comp=Z,3.6nm,0.6s,baz=289,slow=6.1,SNR=6.8						
YKA	Yellowknife Ar	54.48	345	P	P	21 28 55.8	-0.6
	comp=Z,0.9nm,0.8s,baz=259,slow=36,SNR=4.6						
BCAR	Beaver Creek A	64.10	336	P	P	21 30 03.1	+0.2
ILAR	Eielson Array	66.87	336	P	P	21 30 20.6	-0.1
	comp=Z,0.3nm,0.7s,baz=149,slow=5.7,SNR=5.5						
SONM	Songino Array	119.60	349	PKP	PKiKP	21 38 19.8	+0.8
	comp=Z,0.4nm,0.7s,baz=158,slow=43,SNR=2.8						
MKAR	Makanchi Array	121.13	8	PKP	PKPdf	21 38 21.2	-0.6
	comp=Z,0.4nm,0.8s,baz=323,slow=2.1,SNR=5.0						
ASAR	Alice Springs	139.11	247	PKP	PKiKP	21 38 57.8	-0.8
	comp=Z,0.6nm,0.6s,baz=208,slow=24,SNR=5.2						
ASAR	Alice Springs	139.11	247	PKPdf	PKiKP	21 38 57.6	-1.0
WRA	Warramunga Arr	139.19	253	PKP	PKPdf	21 38 57.0	+0.4
	comp=Z,1.1nm,0.9s,baz=82,slow=1.5,SNR=11						
WRA	Warramunga Arr	139.19	253		PKPdf	21 38 57.0	+0.4
CM31	Chiang Mai Arr	149.51	348	PKPbc	PKiKP	21 39 19.9	-0.2
CMAR	Chiang Mai Arr	149.51	348	PKP	PKPdf	21 39 15.1	+0.6
	comp=Z,3.1nm,0.7s,baz=338,slow=3.2,SNR=10						
CMAR				PKPbc	PKiKP	21 39 20.1	-0.1
	comp=Z,2.9nm,0.7s,baz=308,slow=3.0,SNR=12						
CMAR	Chiang Mai Arr	149.51	348		PKPdf	21 39 15.2	+0.7
CMAR				PKPbc	PKiKP	21 39 19.9	-0.3

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*NEIC **02** 21:28:56.3±1.4, 34°.39S±0°.07×109°.1W±0°.2, h10^{km}±1^{km}, mb4.6/19, Error ellipse: s-maj=28.9km s-min=12.6km az=266.0*

*GCMT **02** 21:28:57.3±0.2, 34°.59S±0°.02×109°.09W±0°.01, h12^{km}, MW4.9/113, Moment Tensor Solution. s46,c58; s113,c155; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.13±.08; $M_{\theta\theta}$0.02±.09; $M_{\phi\phi}$3.11±.07; $M_{r\theta}$0.27±.31; $M_{\theta\phi}$-0.64±.08; $M_{\phi r}$-0.75±.23; Best double couple: $M_0$3.28000×10^{16} NP1:ϕ_s171.00000°,δ38.00000°, λ-87.00000°. NP2:ϕ_s347.00000°,δ52.00000°, λ-93.00000°. Principal axes: T 3.3310, Plg7.0000°, Azm79.0000°; N -0.0980, Plg2.0000°, Azm348.0000°; P -3.2290, Plg83.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **02** 21:28:57.9±2.0, 33°.68S×110°.94W, h0^{km}, mb4.1/4, mb1 4.5/4, mb1mx4.0/26, mbtmp4.1/4, MS4.3/21, Ms1 4.3/21, ms1mx4.2/30 Error ellipse: s-maj=170.9km s-min=28.7km az=102.0*

ISC 02 21:28:54.9±0.7**, 34°.4S**±0°.1×**109°.3W**±0°.1**, h10^{km}, n64, σ1^{s}.14**/39**, mb4.6**/14**, MS4.4**/24**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	31.17	113	LR	LR	21 44 45.5	
	comp=Z,331nm,18.6s,baz=290,slow=29						
AC02	Maricunga	35.20	89	P	P	21 35 48.5	-1.4
AC02				IAmb	IAmb	21 35 56.8	
	comp=Z,7.9nm,1.1s						
NNA	Nana	36.99	61	LR	LR	21 47 07.1	
	comp=Z,855nm,20.8s,baz=222,slow=29						
LVC	Limon Verde	37.16	82	LR	LR	21 47 11.4	
	comp=Z,1μm,21.8s,baz=238,slow=28						
TAOE	Nuku Hiva Isla	38.05	305	*e*LR	LR	21 46 41.2	
	comp=Z,847nm,26.4s						
MEH	Mehetia	38.23	285	*e*T	T	22 16 40.0	
	comp=Z,30nm,0.2s						
PPT2	Papeete2	39.59	285	*e*S	S	21 42 26.3	-3.5
	comp=Z,120nm,25.2s						
PPT2				*e*LR	LR	21 47 09.9	
	comp=Z,2μm,25.5s						
PPT	Papeete	39.60	285	LR	LR	21 48 22.6	
	comp=Z,623nm,20.5s,baz=172,slow=31						
LPAZ	La Paz	41.01	74	LR	LR	21 49 46.3	
	comp=Z,335nm,18.1s,baz=240,slow=30						
OTAV	Otavalo	44.96	47	P	P	21 37 09.6	-1.3
OTAV				IAmb	IAmb	21 37 25.7	
	comp=Z,9.9nm,1.2s						
CPUP	Villa Florida	45.15	94	LR	LR	21 53 09.7	
	comp=Z,475nm,18.1s,baz=246,slow=31						
PLTB	Pedras Altas	46.24	103	P	P	21 37 20.5	+0.1
PLTB				IAmb	IAmb	21 37 23.7	
	comp=Z,13nm,1.1s						
SIV	San Ignacio	46.86	79	LR	LR	21 54 28.9	
	comp=Z,372nm,20.5s,baz=286,slow=32						
PTLB	Pontes e Lacer	48.72	80	P	P	21 37 39.1	-0.7
AQDB	Aquidauana	49.03	88	P	P	21 37 40.8	-1.4
SRBA	San Rafael, Bu	49.88	34	P	P	21 37 49.7	+1.0
JTS	Las Juntas de	50.09	32	LR	LR	21 53 44.0	
	comp=Z,464nm,18.9s,slow=30						
JTS	Las Juntas de	50.09	32	P	P	21 37 50.8	+0.5
JTS				IAmb	IAmb	21 37 55.3	
	comp=Z,7.9nm,0.9s						
ROSC	El Rosal	51.10	47	LR	LR	21 55 30.9	
	comp=Z,335nm,21.8s,baz=242,slow=31						
ROSC	El Rosal	51.10	47	P	P	21 37 58.1	-0.2
ZARC	Zaragoza, Cauc	52.89	45	P	P	21 38 11.0	-0.3
ZARC				IAmb	IAmb	21 38 15.5	
	comp=Z,6.4nm,1.1s						
CMIG	Matias Romero	53.01	17	LR	LR	21 55 10.0	
	comp=Z,242nm,19.5s,baz=193,slow=30						
MOIG	Morelia	54.33	9	P	P	21 38 20.5	-1.4
VNDA	Vanda	56.46	195	P	P	21 38 43.0	+6.7
	comp=Z,0.7nm,0.8s,baz=114,slow=7.2,SNR=1.9						
VNDA				LR	LR	21 57 24.1	
	comp=Z,198nm,21.9s,baz=94,slow=30						
PTGA	Pitinga	56.91	65	LR	LR	21 59 38.8	
	comp=Z,695nm,20.7s,baz=236,slow=32						
BDFB	Brasilia	57.76	87	LR	LR	22 01 14.8	
	comp=Z,395nm,18.1s,baz=268,slow=33						
AFI	Afiamalu	59.65	274	LR	LR	21 57 54.9	
	comp=Z,546nm,19.3s,baz=116,slow=30						
VNA3	Neumayer Olymp	60.83	159	P	P	21 39 07.2	+0.4
PCRV	Puerto La Cruz	61.29	52	LR	LR	22 04 26.3	
	comp=Z,336nm,19.6s,slow=34						
VNA1	Neumayer--Stat	61.48	158	P	P	21 39 13.1	+1.9
VNA2	Neumayer--Watz	61.64	159	P	P	21 39 12.8	+0.5
	baz=265,slow=5.7						
SNAA	Sanae	62.65	160	P	P	21 39 19.2	0.0
SNAA	Sanae	62.65	160	P	P	21 39 19.9	+0.7
SNAA				IAmb	IAmb	21 39 23.4	
	comp=Z,10nm,1.4s						
TXAR	Lajitas Array	63.61	5	P	P	21 39 28.0	+1.9
	comp=Z,0.7nm,1.0s,baz=168,slow=9.2,SNR=3.2						
TXAR				LR	LR	22 01 22.5	
	comp=Z,54nm,18.5s,baz=0.0,slow=31						
QSM	Queen of Sheba	70.36	353	P	P	21 40 10.7	+1.9
QSM				IAmb	IAmb	21 40 17.6	
	comp=Z,5.2nm,1.0s						
HHAR	Hobbs	71.77	13	P	P	21 40 18.0	+0.8
NVAR	Mina Array Bea	72.94	353	P	P	21 40 24.5	-0.1
	comp=Z,6.3nm,0.9s,baz=186,slow=7.3,SNR=14						
DZM	Mont Dzumac	73.33	254	*e*LR	LR	22 02 46.9	
	comp=Z,456nm,27.3s						
KVN	Kaiserville	73.54	353	P	P	21 40 29.5	+1.5
KVN				IAmb	IAmb	21 40 32.4	
	comp=Z,7.8nm,0.9s						
BMN	Battle Mountai	74.82	354	P	P	21 40 36.5	+1.1
BMN				IAmb	IAmb	21 40 39.5	
	comp=Z,6.2nm,0.9s						
PD31	Pinedale Array	76.80	360	P	P	21 40 46.7	0.0
PD31				IAmb	IAmb	21 40 50.2	
	comp=Z,6.1nm,1.2s						
PDAR	Pinedale Array	76.80	360	P	P	21 40 46.2	-0.5
	comp=Z,2.9nm,0.9s,baz=151,slow=3.4,SNR=12						
PDAR				LR	LR	22 09 31.2	
	comp=Z,126nm,19.9s,baz=211,slow=32						
PDAR	Pinedale Array	76.80	360	P	P	21 40 46.7	0.0
HLID	Hailey	77.73	356	P	P	21 40 52.3	+0.4
HLID				IAmb	IAmb	21 40 56.1	
	comp=Z,5.3nm,1.0s						
I07A	Izee	78.66	353	P	P	21 40 58.6	+1.7
BMO	Blue Mountains	79.22	354	P	P	21 41 00.6	+0.7
PLID	Pearl Lake	79.35	355	P	P	21 41 01.2	+0.3
ULM	Lac du Bonnet	85.12	9	LR	LR	22 16 02.9	
	comp=Z,88nm,18.3s,baz=158,slow=33						
STKA	Stephens Creek	86.26	234	LR	LR	22 13 25.3	
	comp=Z,167nm,18.8s,baz=132,slow=31						
H11S2	WAKE ISLAND Hy	95.47	289	T	T	23 28 28.0	
	baz=121						
H11S1	WAKE ISLAND Hy	95.48	289	T	T	23 28 33.5	
	baz=121						
H11S3	WAKE ISLAND Hy	95.48	289	T	T	23 28 28.7	
	baz=121						
SCHQ	Schefferville	96.07	23	LR	LR	22 20 34.2	
	comp=Z,102nm,21.5s,baz=210,slow=32						
ASAR	Alice Springs	96.74	235	LR	LR	22 20 27.5	
	comp=Z,114nm,19.9s,baz=172,slow=32						
BURAR	Bucovina Array	143.74	55	PKPdf	PKPdf	21 48 29.3	-0.7
NRIK	Noril'sk	143.77	350	PKP	PKiKP	21 48 33.4	+0.8
	comp=Z,1.1nm,0.4s,baz=76,slow=7.4,SNR=3.6						
ENH	Enshi	147.11	274	PKPdf	PKPdf	21 48 36.4	+0.2
ULN	Ulaanbaatar	149.80	308		PKPbc	21 48 45.4	+0.4
SONM	Songino Array	150.23	308	PKPbc	PKPbc	21 48 45.8	-0.2
	comp=Z,5.0nm,1.0s,baz=144,slow=1.9,SNR=16						
SONM	Songino Array	150.23	308		PKPbc	21 48 46.0	0.0
CM31	Chiang Mai Arr	150.28	245	PKPbc	PKPbc	21 48 45.9	-0.9
CMAR	Chiang Mai Arr	150.28	245	PKPbc	PKiKP	21 48 49.3	+1.7
	comp=Z,4.6nm,1.1s,baz=178,slow=1.5,SNR=19						
CMAR	Chiang Mai Arr	150.28	245		PKPbc	21 48 47.1	+0.3
TLY	Talaya	150.71	316	PKPbc	PKPbc	21 48 47.0	+0.1

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*VAO **02** 21:42:49.2±0.6, 14°.98S×72°.33W, h135^{km}, mb4.3*

*NEIC **02** 21:42:50.4±3.0, 14°.96S±0°.08×71°.98W±0°.09, h116^{km}±10^{km}, mb4.1/8, Error ellipse: s-maj=14.0km s-min=10.0km az=63.0*

*IDC **02** 21:42:53.1±1.8, 15°.06S×71°.84W, h132^{km}±16^{km}, mb3.6/4, mb1 3.8/10, mb1mx3.6/34, mbtmp4.2/10, Error ellipse: s-maj=31.5km s-min=16.3km az=24.0*

ISC 02 21:42:51.3±0.6**, 15°.01S**±0°.06×**71°.99W**±0°.07**, h124^{km}, n75, σ1^{s}.40**/82**, mb3.9**/6**, 1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	3.69	155	*e*P	Pn	21 43 47.7	+0.9
AP01				*e*S	Sn	21 44 29.9	0.0
AP01	Chacalluta	3.69	155		Pn	21 43 47.8	+0.9
PB12	IPOC Station P	3.92	156	⇓*i*P	Pn	21 43 50.0	0.0
PB12				*e*S	Sn	21 44 34.4	-1.0
PB12				IAML		21 44 36.7	
	comp=N,678nm,0.3s						
PB12	IPOC Station P	3.92	156	Pn	Pn	21 43 50.2	+0.3
PB12				Sn	Sn	21 44 34.3	-1.1
LPAZ	La Paz	3.93	109	P	Pn	21 43 52.3	+1.8
	comp=N,2.9nm,0.3s,baz=310,slow=10,SNR=39						
LPAZ				S	Sn	21 44 35.9	-0.4
	comp=N,1.5nm,0.3s,baz=22,slow=19,SNR=1.7						
PB16	IPOC Station P	4.07	145	*e*P	Pn	21 43 54.6	+2.2
PB16				*e*S	Sn	21 44 42.7	+3.0
PB16	IPOC Station P	4.07	145		Pn	21 43 53.9	+1.5
PSGCX	Pisagua	4.89	159		Pn	21 44 02.3	-0.7
PB11	IPOC Station P	5.22	155	Pn	Pn	21 44 06.8	-0.7
TA02	Huaiquique	5.52	162		Pn	21 44 10.4	-0.8
NNA	Nana	5.60	302	P	Pn	21 44 14.9	+2.6
	comp=N,14nm,0.3s,baz=154,slow=5.6,SNR=7.9						
NNA				S	Sn	21 45 15.5	-0.1
	comp=N,4.9nm,0.3s,baz=49,slow=19,SNR=4.7						
NNA	Nana	5.60	302	Pn	Pn	21 44 12.4	0.0
PB08	IPOC Station P	5.77	152		Pn	21 44 15.1	0.0
TA01	Diego Aracena	5.79	163		Pn	21 44 13.7	-1.1
PATCX	Punta Patache	6.04	163		Pn	21 44 17.3	-1.0
PB01	IPOC Station P	6.45	159		Pn	21 44 22.6	-1.4
PB07	IPOC Station P	6.97	164		Pn	21 44 29.8	-1.2
PB09	IPOC Station P	7.23	159		Pn	21 44 34.0	-0.5
CZSB	Cruzeiro do Su	7.27	354	*e*P	Pn	21 44 32.5	-2.4
CZSB	Cruzeiro do Su	7.27	354	Pn	Pn	21 44 32.4	-2.6
PB04	IPOC Station P	7.49	167		Pn	21 44 36.2	-1.7
ETMB	Extrema	7.65	48	*e*P	Pn	21 44 38.5	-1.6
ETMB	Extrema	7.65	48	Pn	Pn	21 44 38.2	-1.9
PB06	IPOC Station P	7.99	164		Pn	21 44 42.7	-2.0
LVC	Limon Verde	8.10	159	P	Pn	21 44 45.7	-0.7
	comp=N,3.3nm,0.3s,baz=30,slow=7.4,SNR=46						
LVC				S	Sn	21 46 11.0	-5.6
	comp=N,4.2nm,0.3s,baz=19,slow=24,SNR=5.1						
LVC	Limon Verde	8.10	159	*e*P	Pn	21 44 45.9	-0.5
PB15	IPOC Station P	8.49	164		Pn	21 44 50.2	-1.4
PB14	IPOC Station P	9.68	171	Pn	Pn	21 45 05.3	-2.3
SAML	Samuel	10.51	56	Pn	Pn	21 45 15.4	-3.3
SIV	San Ignacio	10.57	97	P	Pn	21 45 19.6	+0.1
	comp=N,0.9nm,0.3s,baz=288,slow=1.1,SNR=27						
TBTG	Tabatinga, AM	10.95	11	*e*P	Pn	21 45 21.5	-3.1
AC02	Maricunga	12.06	168	Pn	Pn	21 45 39.4	-0.3
PTLB	Pontes e Lacer	12.41	94	Pn	Pn	21 45 44.7	+0.9
AC04	Llanos de Chal	13.15	176	Pn	Pn	21 45 53.8	+0.5
PDRB	Porto dos Gac	15.23	79	*e*P	P	21 46 22.0	0.0
SALV	Santo Antonio	15.74	95	*e*P	P	21 46 28.8	+1.2
CLDB	Colider	16.31	77	*e*P	P	21 46 35.0	+1.1
CPUP	Villa Florida	17.73	132	P	P	21 46 48.8	-0.6
	comp=N,0.2nm,0.3s,baz=316,slow=14,SNR=4.1						
CPUP	Villa Florida	17.73	132	P	Pn	21 46 50.4	+0.1
NPGB	Novo Progresso	18.13	66	*e*P	Pn	21 46 54.7	-0.6
PTGA	Pitinga	18.51	41	P	Pn	21 46 58.4	-1.3
	comp=N,1.6nm,0.3s,baz=232,slow=17,SNR=10						
ITTB	Itaituba	19.18	58	*e*P	P	21 47 05.5	0.0
ARAG	Araguaiana, MT	19.47	95	*e*P	P	21 47 09.0	+0.4
BO02	Sierra Bellavi	19.73	177	P	Pn	21 47 13.1	-0.8
BO02				IAmb	IAmb	21 47 16.9	
	comp=Z,13nm,1.5s						
SNDB	Serra Nova Dou	20.35	84	*e*P	P	21 47 17.7	-0.4
BOAV	Boa Vista	20.69	34	*e*P	P	21 47 22.2	+0.4
PCMB	Pacaembu	20.73	111	*e*P	P	21 47 23.1	+1.0
ITAB	Concordia	22.12	127	*e*P	P	21 47 35.7	-1.1
ITAB	Concordia	22.12	127	P	P	21 47 38.2	+1.4
FRTB	Fartura	22.72	115	*e*P	P	21 47 42.6	-0.3
IPMB	Ipameri, GO	22.99	101	*e*P	P	21 47 45.3	-0.2
BDFB	Brasilia	23.13	95	P	P	21 47 46.0	-0.9
	comp=Z,5.8nm,0.5s,baz=260,slow=10.0,SNR=11						
BDFB	Brasilia	23.13	95	P	P	21 47 45.8	-1.1
BDFB				IAmb	IAmb	21 47 47.1	
	comp=Z,6.3nm,0.6s						
PEXB	Peixe	23.21	86	*e*P	P	21 47 47.2	-0.3
PRPB	Parauapebas	23.48	70	*e*P	P	21 47 49.6	-0.4
SDV	Santo Domingo	23.78	3	P	P	21 47 53.5	+0.6
SDV				IAmb	IAmb	21 48 00.3	
	comp=Z,8.9nm,0.9s						
BAUV	El Baul	24.12	10	P	P	21 47 56.2	+0.4
SMTB	Santa Maria do	24.63	78	*e*P	P	21 48 00.7	+0.3
JANB	Januaria	26.73	94	*e*P	P	21 48 18.5	-0.9
DIAM	Diamantina, MG	27.31	101	*e*P	P	21 48 24.9	+0.2
MAN01	Angra dos Reis	27.60	111	*e*P	P	21 48 27.1	-0.1
RIB01	Linhares ES	30.47	103	*e*P	P	21 48 52.0	-0.5
GUA01	Guaratinga, BA	30.99	97	*e*P	P	21 48 56.5	-0.8
NBPN	Ponto Novo - B	31.24	86	*e*P	P	21 48 59.1	-0.3
CMC01	Camacan, BA	31.32	95	*e*P	P	21 48 59.5	-0.7
GDU01	Guandu, BA	31.41	92	*e*P	P	21 49 00.1	-0.8
NBIT	Itapeh - BA	31.44	94	*e*P	P	21 49 00.6	-0.5
NBPA	Parau_RN	35.47	79	*e*P	P	21 49 36.8	+0.6
SNAA	Sanae	69.33	162	P	P	21 53 47.2	+2.1
SNAA				IAmb	IAmb	21 53 48.5	
	comp=Z,2.0nm,0.6s						
TORD	Torodi Ar. Bea	78.10	73	P	P	21 54 35.8	-1.4
	comp=Z,0.8nm,0.9s,baz=242,slow=5.1,SNR=7.7						
TORD	Torodi Ar. Bea	78.10	73	P	P	21 54 36.1	-1.1
ESDC	Sonseca Array	83.38	46	P	P	21 55 05.6	+0.8
	comp=Z,0.5nm,0.9s,baz=260,slow=7.4,SNR=2.9						
YKA	Yellowknife Ar	84.14	342	P	P	21 55 09.5	+1.4
	comp=Z,0.7nm,0.7s,baz=134,slow=5.2,SNR=3.7						
SONM	Songino Array	147.25	2	PKPbc	PKiKP	22 02 22.6	0.0
	comp=Z,0.9nm,0.9s,baz=331,slow=1.7,SNR=7.0						
KSRS	Korea Array	151.51	325	PKPbc	PKiKP	22 02 33.6	+2.2
	comp=Z,1.2nm,0.6s,baz=14,slow=2.6,SNR=2.7						

GCMT 02 21:45:30.0±0.3**, 34°.42S**±0°.04×**109°.03W**±0°.02**, h18^{km}**±1^{km}**, MW4.9**/86**, Moment Tensor Solution. s17,c18; s86,c101; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M_{rr}-2.61±.19; $M_{\theta\theta}$0.27±.10; $M_{\phi\phi}$2.34±.13; $M_{r\theta}$1.40±.32; $M_{\theta\phi}$-0.06±.08; $M_{\phi r}$-1.20±.25; **Best double couple:** $M_0$3.03500×10^{16} **NP1:**ϕ_s193.00000°**,**δ33.00000°**,** λ-57.00000°. **NP2:**ϕ_s335.00000°**,**δ62.00000°**,** λ-110.00000°. **Principal axes:** T 2.6820**,** Plg15.0000°**,** Azm80.0000°**;** N 0.7050**,** Plg17.0000°**,** Azm345.0000°**;** P -3.3880**,** Plg67.0000°**,** Azm208.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEH	Mehetia	38.45	285	*e*T	T	22 33 13.3	
	13nm,0.2s						
VNA3	Neumayer Olymp	60.73	159	P	P	21 55 38.6	-1.4
VNA1	Neumayer--Stat	61.38	158	P	P	21 55 42.5	-1.9
VNA2	Neumayer--Watz	61.54	159	P	P	21 55 44.3	-1.1
	baz=274,slow=6.2						
SNAA	Sanae	62.56	160	P	P	21 55 51.8	-0.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**73.54**	**254**	*e*LR	LR	22 19 19.0	
	comp=Z,239nm,27.6s						

IDC 02 21:50:18.2±2.0,**1°.05S**×**127°.58E**,**h0**^{km},**mb3.4**/2, **mb1 3.6**/3,**mb1mx3.1**/36,**mbtmp3.4**/3,**ML3.5**/1 **Error ellipse: s-maj=166.4km s-min=24.9km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.91**	**161**	P	P	21 54 51.8	+0.2
	0.1nm,0.3s,baz=340,slow=11,SNR=7.0						
ASAR	**Alice Springs**	**23.30**	**165**	P	P	21 55 27.9	-0.1
	0.4nm,0.6s,baz=344,slow=11,SNR=6.8						
MKAR	**Makanchi Array**	**61.96**	**326**	P	P	22 00 40.0	-0.1
	0.3nm,0.3s,baz=116,slow=8.1,SNR=12						

IDC 02 21:54:58.7±2.1,**1°.11S**×**127°.55E**,**h0**^{km},**mb3.4**/2, **mb1 3.6**/3,**mb1mx3.1**/34,**mbtmp3.4**/3,**ML3.5**/1,**MS3.3**/1, **Ms1 3.3**/1,**ms1mx2.4**/26,**Error ellipse: s-maj=172.2km s-min=25.2km az=67.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.86**	**161**	P	P	21 59 32.0	+0.4
	0.2nm,0.3s,baz=340,slow=11,SNR=7.0						
ASAR	**Alice Springs**	**23.25**	**165**	P	P	22 00 07.8	-0.2
	0.4nm,0.7s,baz=346,slow=12,SNR=6.0						
JOW	**Kunigami**	**27.79**	**1**	LR	LR	22 12 42.0	
	comp=Z,67nm,20.9s,baz=319,slow=38						
MKAR	**Makanchi Array**	**61.99**	**326**	P	P	22 05 20.7	-0.1
	0.3nm,0.4s,baz=114,slow=8.0,SNR=11						

IDC 02 21:55:29.5±2.9,**32°.79S**×**178°.50W**,**h0**^{km},**mb3.6**/2, **mb1 3.9**/3,**mb1mx3.5**/37,**mbtmp3.7**/3,**ML3.7**/1,**MS3.5**/2, **Ms1 3.5**/2,**ms1mx3.0**/27,**Error ellipse: s-maj=72.1km s-min=44.9km az=123.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.53**	**212**	Pn	Pn	21 57 06.6	-0.2
	1.6nm,0.3s,baz=302,slow=23,SNR=14						
URZ				Sn	Sn	21 58 18.8	-3.1
	1.1nm,0.3s,baz=298,slow=23,SNR=2.0						
DZM	**Mont Dzumac**	**17.08**	**305**	LR	LR	22 04 12.0	
	comp=Z,216nm,20.5s,baz=73,slow=31						
PMG	**Port Moresby**	**39.30**	**299**	LR	LR	22 17 39.5	
	comp=Z,46nm,19.0s,baz=107,slow=34						
ASAR	**Alice Springs**	**42.61**	**270**	P	P	22 03 27.5	-0.2
	0.2nm,0.3s,baz=113,slow=8.1,SNR=2.2						
WRA	**Warramunga Arr**	**43.82**	**275**	P	P	22 03 37.3	-0.2
	0.7nm,0.4s,baz=115,slow=7.2,SNR=12						
FINES	**FINESS Array B**	**147.22**	**338**	PKPbc	PKPbc	22 15 13.3	-0.7
	2.8nm,0.9s,baz=31,slow=4.4,SNR=8.6						

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*GCMT **02** 22:00:58.0±0.4,34°.69S±0°.04×108°.95W±0°.03,h22^{km}±1^{km}, MW4.9/60,Moment Tensor Solution. s29,c33; s60,c74; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.55±.19; $M_{\theta\theta}$0.37±.12; $M_{\phi\phi}$2.18±.13; $M_{r\theta}$-0.18±.21; $M_{\theta\phi}$-0.90±.10; $M_{\phi r}$-0.73±.18; Best double couple: $M_0$2.65600×10^{16} NP1:ϕ_s149.00000°,δ39.00000°,λ-104.00000°. NP2: ϕ_s347.00000°,δ52.00000°,λ-79.00000°. Principal axes: T 2.6200, Plg7.0000°, Azm69.0000°; N 0.0740, Plg9.0000°, Azm160.0000°; P -2.6920, Plg79.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 02 22:00:52.5±10.0,**33°.69S**×**107°.76W**,**h0**^{km},**mb3.3**/1, **mb1 3.8**/1,**mb1mx3.5**/24,**mbtmp3.3**/1,**MS3.9**/9,**Ms1 3.9**/9, **ms1mx3.9**/11,**1C Error ellipse: s-maj=775.2km s-min=70.1km az=107.0,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**30.29**	**114**	LR	LR	22 15 41.5	
	comp=Z,52nm,19.4s,baz=326,slow=29						
TAOE	**Nuku Hiva Isla**	**38.72**	**302**	*e*LR	LR	22 18 46.0	
	comp=Z,282nm,26.1s						
LPAZ	**La Paz**	**39.59**	**74**	LR	LR	22 21 48.0	
	comp=Z,128nm,18.1s,baz=242,slow=32						
PPT2	**Papeete2**	**40.67**	**283**	*e*LR	LR	22 19 12.5	
	comp=Z,607nm,25.5s						
PPT	**Papeete**	**40.68**	**283**	LR	LR	22 20 24.5	
	comp=Z,285nm,21.7s,baz=181,slow=29						
CPUP	**Villa Florida**	**43.92**	**94**	LR	LR	22 24 52.8	
	comp=Z,187nm,19.0s,baz=235,slow=33						
RAR	**Rarotonga**	**47.36**	**271**	LR	LR	22 23 49.6	
	comp=Z,155nm,18.6s,baz=136,slow=29						
ROSC	**El Rosal**	**49.68**	**46**	LR	LR	22 27 31.2	
	comp=Z,138nm,19.9s,baz=232,slow=32						
PTGA	**Pitinga**	**55.45**	**64**	LR	LR	22 31 29.9	
	comp=Z,283nm,21.0s,baz=264,slow=33						
VNDA	**Vanda**	**57.48**	**195**	LR	LR	22 29 37.4	
	comp=Z,65nm,21.5s,baz=92,slow=30						
URZ	**Urewera**	**59.41**	**242**	LR	LR	22 30 02.8	
	comp=Z,197nm,22.0s,baz=31,slow=30						
DZM	**Mont Dzumac**	**74.76**	**254**	*e*LR	LR	22 34 48.8	
	comp=Z,260nm,32.0s						
SYO	**Syowa Base**	**74.81**	**168**	⇑*e*P	P	22 12 26.8	-7.3
PDAR	**Pinedale Array**	**76.10**	**359**	P	P	22 12 42.0	0.0
	0.3nm,0.7s,baz=155,slow=6.6,SNR=1.9						
SONM	**Songino Array**	**150.79**	**309**	PKPbc	PKPbc	22 20 46.5	-0.1
	1.8nm,1.1s,baz=64,slow=3.7,SNR=4.0						
CMAR	**Chiang Mai Arr**	**151.74**	**244**	PKPbc	PKPbc	22 20 49.2	-0.3
	0.7nm,0.3s,baz=173,slow=2.9,SNR=5.8						

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*IDC **02** 22:05:31.9±1.1,30°.42S×71°.99W,h0^{km},mb4.0/5, mb1 3.9/9,mb1mx3.8/27,mbtmp3.8/9,ML3.7/4,Error ellipse: s-maj=35.4km s-min=24.6km az=102.0*

*NEIC **02** 22:05:32.8±2.2,30°.46S±0°.05×72°.12W±0°.05,h6^{km}±4^{km}, mb4.4/10,Mwr4.2/29,ML4.3(GUC),Error ellipse: s-maj=7.6km s-min=5.4km az=142.0*

*NEIC **02** 22:05:32.4,30°.48S×72°.13W,h11^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.94; $M_{\theta\theta}$0.00; $M_{\phi\phi}$-1.95; $M_{r\theta}$0.24; $M_{\theta\phi}$-0.24; $M_{\phi r}$-1.73; Fault plane solution: $M_0$2.63000×10^{15} NP1:ϕ_s177.18000°, δ65.99000°,λ81.94000°. NP2:ϕ_s16.37000°,δ25.25000°, λ107.47000°. Principal axes: T 2.6379, Plg68.0000°, Azm72.0000°; N -0.0245, Plg7.0000°, Azm180.0000°; P -2.6133, Plg21.0000°, Azm273.0000°;*

*GUC **02** 22:05:32.4±0.7,30°.49S×72°.17W,h20^{km}±6^{km},ML4.3*

*SJA **02** 22:05:33.0±1.0,30°.35S×72°.08W,h4^{km}±20^{km},ML4.3, MW4.3*

ISC 02 22:05:31.5±1.7,**30°.46S**±0°.03×**72°.10W**±0°.05,**h2**^{km}±10^{km}, **n90**,σ**1^{s}.23**/101,**mb4.3**/8,**3C-1D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.46**	**118**	⇑*i*P	**Pb**	**22 05 42.7**	**+0.3**
CO06				*i* S	**Sb**	**22 05 49.1**	**-0.5**
CO06	**Fray Jorge**	**0.46**	**118**	Pg	**Pb**	**22 05 42.7**	**+0.3**
CO06				Sg	**Sb**	**22 05 49.1**	**-0.5**
CO05	**La Serena**	**0.92**	**55**	*e*P	**Pg**	**22 05 50.1**	**+0.9**
CO05				*i* S	**Sb**	**22 06 03.6**	**+0.6**
CO05				IAML		22 06 07.3	
	comp=E,20μm,0.4s						
CO05	**La Serena**	**0.92**	**55**	Pg	**Pg**	**22 05 50.1**	**+0.9**
CO05				Sg	**Sb**	**22 06 04.0**	**+1.0**
GO04	**Tololo Observa**	**1.16**	**76**	⇑*i*P	**Pg**	**22 05 53.9**	**+0.1**
GO04				*i* S	**Sb**	**22 06 10.8**	**+0.7**
GO04	**Tololo Observa**	**1.16**	**76**	Pn	**Pg**	**22 05 53.8**	**0.0**
GO04				Sn	**Sn**	**22 06 11.6**	**-0.2**
GO04	**Tololo Observa**	**1.16**	**76**	*i* P	**Pg**	**22 05 54.1**	**+0.3**
GO04				*e*S	**Sb**	**22 06 10.7**	**+0.5**
LCO	**Las Campanas**	**1.89**	**41**	⇑*i*P	**Pn**	**22 06 05.5**	**+0.4**
LCO				*i* S	**Sn**	**22 06 29.8**	**+0.2**
LCO	**Las Campanas**	**1.89**	**41**	Pn	**Pn**	**22 06 05.5**	**+0.4**
VA06	**Catapilco**	**2.21**	**162**	*e*P	**Pn**	**22 06 09.2**	**0.0**
VA06				IAML		22 06 48.2	
	comp=E,2μm,0.4s						
AROD	**Rodeo**	**2.29**	**83**	*e*P	**Pb**	**22 06 15.0**	**+1.1**
AROD				*e*S	**Sg**	**22 06 45.0**	**-0.3**
AC04	**Llanos de Chal**	**2.42**	**22**	IAML		22 07 06.5	
	comp=N,761nm,0.3s						
AC04	**Llanos de Chal**	**2.42**	**22**	Pn	**Pn**	**22 06 11.7**	**-0.5**
ACDV	**Cuesta del Vie**	**2.59**	**84**	*e*P	**Pb**	**22 06 18.9**	**0.0**
ACDV				*e*S	**Sb**	**22 06 50.6**	**-0.7**
ACDV				IAML		22 06 57.4	
	comp=Z,1μm,0.6s						
ACCO	**Cerro Coronel**	**2.62**	**94**	*e*P	**Pb**	**22 06 19.5**	**0.0**
ACCO				IAML		22 07 02.9	
	comp=Z,1μm,0.9s						
VA03	**San Esteban**	**2.65**	**150**	IAML		22 07 02.7	
	comp=E,2μm,0.5s						
VA03	**San Esteban**	**2.65**	**150**		**Pn**	**22 06 16.1**	**+0.6**
RTLS	**Leoncito**	**2.75**	**120**	*e*P	**Pb**	**22 06 21.7**	**0.0**
RTLS				*e*S	**Sb**	**22 06 55.8**	**-0.2**
RTLS				IAML		22 07 06.9	
	comp=Z,419nm,0.5s						
MT02	**Curacav**	**2.91**	**164**	*e*P	**Pn**	**22 06 19.5**	**+0.5**
MT02				IAML		22 07 15.6	
	comp=E,415nm,0.4s						
MT02	**Curacav**	**2.91**	**164**		**Pn**	**22 06 18.4**	**-0.6**
AUSP	**Uspallata**	**2.91**	**128**	*i* P	**Pb**	**22 06 23.3**	**-1.2**
PEL	**Peldehue**	**2.94**	**156**	*e*P	**Pn**	**22 06 20.0**	**+0.6**
PEL				*i* S	**Sn**	**22 06 56.1**	**+0.8**
PEL				IAML		22 07 15.0	
	comp=N,763nm,0.3s						
PEL	**Peldehue**	**2.94**	**156**		**Pn**	**22 06 19.9**	**+0.6**
PEL	**Peldehue**	**2.94**	**156**	*i* P	**Pb**	**22 06 24.3**	**-0.4**
PEL				*e*S	**Sb**	**22 07 03.3**	**+2.2**
ZON	**Zonda**	**3.13**	**111**	Pn	**Pn**	**22 06 24.2**	**+2.1**
ZON	**Zonda**	**3.13**	**111**	*i* P	**Pb**	**22 06 27.2**	**-0.9**
ZON				⇓*e*S	**Sg**	**22 07 12.6**	**+0.4**
ZON				IAML		22 07 18.6	
	comp=Z,880nm,0.9s						
MT05	**Renca**	**3.15**	**159**	IAML		22 07 21.4	
	comp=E,1μm,0.4s						
MT05	**Renca**	**3.15**	**159**		**Pn**	**22 06 22.9**	**+0.6**
VA05	**Santo Domingo**	**3.22**	**173**		**Pn**	**22 06 22.5**	**-0.6**
SJA	**San Juan**	**3.22**	**110**	*e*P	**Pb**	**22 06 27.8**	**-1.8**
SJA				IAML		22 07 37.1	
	comp=Z,730nm,1.5s						
GO03	**Copiap**	**3.29**	**30**	Pn	**Pn**	**22 06 24.4**	**+0.1**
RTCV	**Cerro Valdivia**	**3.36**	**116**	*i* P	**Pb**	**22 06 30.2**	**-1.7**
RTCV				IAML		22 07 21.9	
	comp=Z,411nm,3.2s						
MT09	**Talagante**	**3.44**	**164**	IAML		22 07 25.7	
	comp=N,525nm,0.4s						
MT09	**Talagante**	**3.44**	**164**		**Pn**	**22 06 26.3**	**-0.1**
MT01	**Popeta**	**3.47**	**168**		**Pn**	**22 06 26.9**	**+0.3**
ASAL	**Salagasta**	**3.51**	**128**	*i* P	**Pb**	**22 06 32.2**	**-2.3**
ASAL				IAML		22 07 33.3	
	comp=Z,450nm,1.9s						
ARCO	**CERRO ARCO**	**3.60**	**132**	*e*P	**Pb**	**22 06 33.9**	**-2.2**
ARCO				IAML		22 07 36.5	
	comp=Z,633nm,1.0s						
LMEL	**Las Melosas**	**3.74**	**155**	*e*P	**Pn**	**22 06 31.9**	**+1.3**
LMEL				*i* S	**Sn**	**22 07 16.1**	**+0.8**
LMEL				IAML		22 07 37.7	
	comp=N,286nm,0.6s						
VCA	**Vinchina**	**3.80**	**64**	*e*P	**Pn**	**22 06 35.4**	**+4.0**
VCA				IAML		22 07 37.4	
	comp=Z,1μm,0.8s						
AAGR	**Agrelo**	**3.83**	**134**	*e*P	**Pb**	**22 06 36.5**	**-3.4**
AAGR				IAML		22 08 02.3	
	comp=Z,321nm,1.5s						
AVFE	**Valle Fertil**	**4.01**	**94**	*i* P	**Pb**	**22 06 40.9**	**-2.1**
AVFE				IAML		22 07 40.3	
	comp=Z,733nm,1.0s						
BO01	**Tunca**	**4.02**	**168**		**Pn**	**22 06 34.0**	**-0.2**
AVIZ	**Vizcacheras**	**4.28**	**136**	*i* P	Pb	22 06 43.2	-4.4
AC02	**Maricunga**	**4.46**	**37**		**Pn**	**22 06 42.0**	**+1.4**
BO02	**Sierra Bellavi**	**4.46**	**166**		**Pn**	**22 06 40.9**	**+0.5**
GO05	**Huala**	**4.54**	**178**		**Pn**	**22 06 39.2**	**-2.2**
APLL	**PUNTA DE LOS L**	**4.81**	**91**	*i* P	**Pn**	**22 06 48.4**	**+3.2**
APLL				IAML		22 07 56.7	
	comp=Z,464nm,1.3s						
PB14	**IPOC Station P**	**6.00**	**15**		**Pn**	**22 07 00.4**	**-1.3**
TCA	**Tanti**	**6.51**	**100**	*i* P	**Pn**	**22 07 09.6**	**+1.1**
TCA				IAML		22 08 52.6	
	comp=Z,206nm,1.1s						
PB10	**IPOC Station P**	**7.05**	**12**	Pn	**Pn**	**22 07 16.8**	**+0.9**
PB15	**IPOC Station P**	**7.59**	**19**	Pn	**Pn**	**22 07 23.7**	**+0.2**
PB04	**IPOC Station P**	**8.28**	**13**	Pn	**Pn**	**22 07 31.3**	**-1.6**
LVC	**Limon Verde**	**8.32**	**21**	Pn	**Pn**	**22 07 31.4**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=234,slow=11,SNR=3.8						
LVC				Sn	Sn	22 08 58.6	-10
	comp=Z,1.4nm,0.3s,baz=217,slow=7.4,SNR=3.0						
LVC	**Limon Verde**	**8.32**	**21**	Pn	**Pn**	**22 07 33.2**	**-0.5**
LC01	**Cunco**	**8.42**	**179**	Pn	**Pn**	**22 07 33.3**	**-1.3**
PB09	**IPOC Station P**	**9.00**	**17**	Pn	**Pn**	**22 07 43.9**	**+1.1**
PB01	**IPOC Station P**	**9.67**	**15**	Pn	**Pn**	**22 07 51.9**	**0.0**
PLCA	**Paso Flores**	**10.33**	**173**	Pn	**Pn**	**22 08 00.4**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=336,slow=13,SNR=5.6						
PLCA	**Paso Flores**	**10.33**	**173**	Pn	**Pn**	**22 08 00.8**	**-0.1**
PB08	**IPOC Station P**	**10.61**	**15**	Pn	**Pn**	**22 08 05.1**	**0.0**
TRQA	**Tornquist**	**11.29**	**135**	Pn	**Pn**	**22 08 14.5**	**+0.5**
ITQB	**Itaqui**	**13.43**	**91**	Pn	**Pn**	**22 08 45.0**	**+1.8**
CPUP	**Villa Florida**	**13.64**	**76**	Pn	**Pn**	**22 08 45.0**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=260,slow=17,SNR=1.9						
CPUP				Sn	**Sn**	**22 11 13.0**	**-5.2**
	comp=Z,0.2nm,0.3s,baz=114,slow=17,SNR=1.1						
CPUP	**Villa Florida**	**13.64**	**76**		**Pn**	**22 08 44.7**	**-1.4**
LPAZ	**La Paz**	**14.57**	**15**	Pn	**Pn**	**22 08 58.4**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=238,slow=13,SNR=1.7						
LPAZ	**La Paz**	**14.57**	**15**		**Pn**	**22 08 59.9**	**+0.5**
PLTB	**Pedras Altas**	**15.90**	**99**	Pn	**Pn**	**22 09 16.2**	**-0.3**
TRCB	**Terra Rica**	**18.99**	**71**	P	**P**	**22 09 54.3**	**-0.3**
TRCB				IAmb	IAmb	22 09 57.9	
	comp=Z,37nm,1.2s						
VILB	**Vilhena**	**20.60**	**35**	P	**P**	**22 10 11.5**	**-0.7**
VILB				IAmb	IAmb	22 10 25.1	
	comp=Z,17nm,0.9s						
ETMB	**Extrema**	**21.26**	**16**	P	**P**	**22 10 19.4**	**+0.2**
BDFB	**Brasilia**	**26.54**	**62**	P	**P**	**22 11 10.5**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=207,slow=4.5,SNR=3.4						
BOAV	**Boa Vista**	**34.49**	**21**	P	**P**	**22 12 21.4**	**+0.2**
BOAV				IAmb	IAmb	22 12 30.4	
	comp=Z,5.8nm,1.0s						
VNA3	**Neumayer Olymp**	**52.66**	**159**	P	**P**	**22 14 47.2**	**+0.2**
VNA2	**Neumayer--Watz**	**53.30**	**158**	P	**P**	**22 14 52.3**	**+0.7**
	baz=286,slow=8.2						
SNAA	**Sanae**	**54.89**	**159**	P	**P**	**22 15 03.6**	**+0.4**
SNAA	**Sanae**	**54.89**	**159**	P	**P**	**22 15 03.0**	**-0.3**
SNAA				IAmb	IAmb	22 15 14.7	
	comp=Z,4.7nm,1.2s						
QSPA	**South Pole Qui**	**59.77**	**180**	P	**P**	**22 15 38.5**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=114,slow=10.0,SNR=2.5						
TXAR	**Lajitas Array**	**66.64**	**330**	P	**P**	**22 16 24.5**	**+0.7**
	comp=Z,0.2nm,0.8s,baz=140,slow=6.0,SNR=4.1						
DBIC	**Dimbokro**	**74.12**	**72**	P	**P**	**22 17 10.4**	**+0.6**
	comp=Z,1.4nm,0.9s,baz=306,slow=5.0,SNR=1.2						
DBIC	**Dimbokro**	**74.12**	**72**	P	**P**	**22 17 10.3**	**+0.4**
KOWA	**Kowa**	**79.24**	**66**	P	**P**	**22 17 39.3**	**+0.5**
KOWA				IAmb	IAmb	22 17 52.0	
	comp=Z,8.6nm,1.5s						
TORD	**Torodi Ar. Bea**	**83.07**	**70**	P	**P**	**22 17 59.5**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=264,slow=4.7,SNR=8.8						
TORD	**Torodi Ar. Bea**	**83.07**	**70**	P	**P**	**22 17 59.8**	**+0.6**
TORD				IAmb	IAmb	22 18 09.1	
	comp=Z,4.0nm,1.4s						
LBTB	**Lobatse**	**83.85**	**115**	P	**P**	**22 18 03.3**	**0.0**
KKAR	**Karatay Array**	**147.77**	**56**	PKPbc	**PKPbc**	**22 25 18.5**	**+0.5**
AAK	**Ala-Archa**	**150.73**	**56**	PKPbc	**PKiKP**	**22 25 26.9**	**+0.7**
ZAA0	**Zalesovo Array**	**151.21**	**29**	PKPbc	**PKiKP**	**22 25 26.7**	**+0.1**
ZALV	**Zalesovo Beam**	**151.21**	**29**	PKPbc	**PKPbc**	**22 25 26.6**	**+0.5**
	comp=Z,5.8nm,0.7s,baz=305,slow=3.1,SNR=25						
ZALV	**Zalesovo Beam**	**151.21**	**29**		**PKiKP**	**22 25 26.8**	**+0.2**
KSH	**Kashi**	**152.44**	**62**	PKPbc	**PKiKP**	**22 25 30.7**	**+0.8**

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*NEIC **02** 22:07:52.9±2.2,0°.03S±0°.07×123°.19E±0°.04,h139^{km}±5^{km}, mb4.8/95,Error ellipse: s-maj=10.4km s-min=6.3km az=184.0*

*BJI **02** 22:07:53.0±0.0,0°.00N×123°.30E,h158^{km},mB5.1/21, mb4.7/44*

*IDC **02** 22:07:53.5±0.7,0°.02N×123°.16E,h154^{km}±6^{km},mb4.2/25, mb1 4.3/31,mb1mx4.3/41,mbtmp4.7/31,MS2.9/3, Ms1 3.0/3,ms1mx2.7/33,Error ellipse: s-maj=11.8km s-min=7.4km az=69.0*

*DJA **02** 22:07:54.2±0.1,0°S±2°×12°3E±°,h153^{km}±2^{km},M4.6/55, mB5.1/24,mb4.8/55,MLv5.0/22,Mw(mB)4.5/24*

*KLM **02** 22:07:55,0°.10S×123°.27E,h176^{km},mb5.0*

ISC 02 22:07:54.1±0.5,**0°.04S**±0°.04×**123°.18E**±0°.04,**h160**^{km}±4^{km}, **n324**,σ**1^{s}.28**/357,**mb4.7**/89,**27C-26D,Fault plane solution: NP1:**ϕ_s77.19383°,δ44.58057°,λ112.58997°. **NP2:**ϕ_s226.90338°,δ49.60457°,λ69.26582°. **Principal axes:** T Plg74.1319°, Azm70.6162°**;** N Plg15.6421°, Azm240.6871°**;** P Plg2.6021°, Azm331.4162°; **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**0.70**	**346**	P	**Pn**	**22 08 17.6**	**0.0**
GTOI				S	**Sn**	**22 08 35.8**	**+0.1**
KMSI	**Cibinong**	**1.01**	**52**	P	**Pn**	**22 08 19.4**	**-0.4**
MRSI	**Marisa**	**1.34**	**293**	P	**Pn**	**22 08 21.0**	**-1.8**
APSI	**Ampana**	**1.76**	**241**	P	**Pn**	**22 08 26.1**	**-1.0**
TOLI2	**Tolitoli**	**2.66**	**296**	Pn	**Pn**	**22 08 36.5**	**-1.1**
TOLI2				Sn	**Sn**	**22 09 08.6**	**-2.8**
TOLI2	**Tolitoli**	**2.66**	**296**	P	**Pn**	**22 08 39.1**	**+1.5**
MPSI	**Mapaga**	**3.31**	**277**	P	**Pn**	**22 08 45.5**	**-0.2**
SANI	**Sanana**	**3.44**	**125**	P	**Pn**	**22 08 44.3**	**-3.1**
SANI	**Sanana**	**3.44**	**125**	P	**Pn**	**22 08 44.7**	**-2.7**
TNTI	**Ternate**	**4.26**	**79**	P	**Pn**	**22 08 56.6**	**-1.4**
TNTI	**Ternate**	**4.26**	**79**	Pn	**Pn**	**22 08 56.6**	**-1.4**
TNTI				Sn	**Sn**	**22 09 44.3**	**-3.6**
TNTI	**Ternate**	**4.26**	**79**	P	**Pn**	**22 08 56.8**	**-1.2**
LBMI	**Labuha**	**4.36**	**98**	P	**Pn**	**22 08 57.6**	**-1.7**
TTSI	**Tana Toraja**	**4.49**	**228**	P	**Pn**	**22 09 01.8**	**+0.8**
SPSI	**Sidrap Palu**	**5.18**	**221**	P	**Pn**	**22 09 11.6**	**+1.6**
	1.1nm3μm167nm,0.7s						
BNSI	**Bone**	**5.31**	**215**	P	**Pn**	**22 09 13.2**	**+1.4**
	0.9nm2μm122nm,0.6s						
SMKI	**Samarinda**	**5.99**	**266**	P	**Pn**	**22 09 22.1**	**+1.3**
	2.2nm154nm,0.7s						
KAPI	**Kappang**	**6.01**	**215**	P	**Pn**	**22 09 20.6**	**-0.4**
	9.5nm,0.3s,baz=50,slow=10.0,SNR=14						
KAPI				S	**Sn**	**22 10 27.0**	**-2.2**
	6.0nm,0.3s,baz=68,slow=23,SNR=8.1						
KAPI	**Kappang**	**6.01**	**215**	P	**Pn**	**22 09 22.3**	**+1.2**
BKSI	**Bulukumba**	**6.07**	**210**	P	**Pn**	**22 09 22.8**	**+1.0**
	0.4nm715nm54nm,0.6s						
AAI	**Ambon**	**6.18**	**126**	P	**Pn**	**22 09 24.2**	**+0.9**
	1.9nm7μm404nm,0.6s						
BKB	**Balikpapan**	**6.40**	**259**	P	**Pn**	**22 09 27.2**	**+1.0**
	1.7nm4μm517nm,0.8s						
BKB	**Balikpapan**	**6.40**	**259**		**Pn**	**22 09 25.3**	**-1.0**
BKB	**Balikpapan**	**6.40**	**259**	P	**Pn**	**22 09 27.2**	**+1.0**
DDMP	**Don Marcelino,**	**6.61**	**22**	⇑*e*P	**Pn**	**22 09 31.4**	**+2.4**
MSAI	**Masohi**	**6.62**	**120**	P	**Pn**	**22 09 29.6**	**+0.5**
	0.2nm31nm,0.5s						
BSSI	**Bau Bau, Buton**	**6.63**	**204**	P	**Pn**	**22 09 30.7**	**+1.4**
	0.4nm1μm77nm,0.5s						
MYLDM	**Lahad Datu**	**6.98**	**318**	Pn	**Pn**	**22 09 35.3**	**+1.3**
KCP	**Kidapawan**	**7.26**	**15**	⇑*i*P	**Pn**	**22 09 41.2**	**+3.5**
DMPH	**Davao City--Mi**	**7.45**	**18**	⇑*e*P	Pn	22 09 45.1	+4.9
DAV	**Davao City (W)**	**7.46**	**19**	P	**Pn**	**22 09 42.8**	**+2.5**
	39nm,0.3s,baz=233,slow=20,SNR=1.4						
DAV				LR	LR	22 13 12.9	
	comp=Z,101nm,19.6s,baz=197,slow=43						
DAV	**Davao City (W)**	**7.46**	**19**		**Pn**	**22 09 43.0**	**+2.7**
KBKI	**Kotabaru**	**7.72**	**245**	P	**Pn**	**22 09 45.9**	**+2.1**
	0.3nm989nm84nm,0.6s						
PAGZ	**Pagadian**	**7.84**	**1**	⇓*e*P	**Pn**	**22 09 47.6**	**+2.2**
SWI	**Sorong**	**8.12**	**96**	P	**Pn**	**22 09 48.9**	**-0.2**
	0.2nm1μm60nm,0.5s						
SIJI	**Sorong**	**8.13**	**96**	P	**Pn**	**22 09 48.5**	**-0.7**
	5.7nm,0.3s,baz=288,slow=8.4,SNR=18						
SIJI				S	**Sn**	**22 11 18.3**	**-1.6**
	baz=259,slow=23,SNR=1.1						
MTKI	**Muara Teweh, K**	**8.33**	**264**	P	**Pn**	**22 09 53.6**	**+1.6**
	0.2nm39nm,0.9s						
MMRI	**Maumere**	**8.59**	**186**	Pn	**Pn**	**22 09 55.8**	**+0.4**
BBKI	**Banjar Baru**	**9.00**	**248**	P	**Pn**	**22 10 02.7**	**+1.9**
	3μm59nm,0.6s						
KKM	**Kota Kinabalu**	**9.22**	**311**	Pn	**Pn**	**22 10 05.8**	**+2.0**
KKM	**Kota Kinabalu**	**9.22**	**311**	P	**Pn**	**22 10 07.4**	**+3.6**
FAKI	**Fak Fak**	**9.50**	**108**	P	**Pn**	**22 10 05.2**	**-2.3**
	1μm38nm,1.0s						
FAKI	**Fak Fak**	**9.50**	**108**	Pn	**Pn**	**22 10 05.3**	**-2.1**
FAKI	**Fak Fak**	**9.50**	**108**	P	**Pn**	**22 10 06.1**	**-1.4**
SOEI	**Soe**	**9.71**	**174**	P	**Pn**	**22 10 11.9**	**+1.6**
	87nm,0.9s						
SOEI	**Soe**	**9.71**	**174**	Pn	**Pn**	**22 10 12.2**	**+1.9**
SOEI	**Soe**	**9.71**	**174**	P	**Pn**	**22 10 10.8**	**+0.5**
BATI	**Baumata**	**10.11**	**177**	P	**Pn**	**22 10 17.6**	**+2.1**
	6.3nm,0.3s,baz=337,slow=4.0,SNR=8.1						
BATI				LR	LR	22 14 21.8	
	comp=Z,132nm,21.6s,baz=53,slow=38						
BATI	**Baumata**	**10.11**	**177**	P	**Pn**	**22 10 17.3**	**+1.8**
	44nm,0.7s						
PLAI	**Plampang**	**10.25**	**212**	P	**Pn**	**22 10 18.6**	**+1.2**
SBUM	**Sibu**	**11.23**	**283**	Pn	**Pn**	**22 10 30.1**	**-0.2**
SAUI	**Saumlaki**	**11.30**	**134**	P	**Pn**	**22 10 31.4**	**+0.3**
	7μm108nm,0.9s						
SAUI	**Saumlaki**	**11.30**	**134**	Pn	**Pn**	**22 10 29.7**	**-1.4**
SAUI	**Saumlaki**	**11.30**	**134**	P	**Pn**	**22 10 31.1**	**0.0**
KMMI	**Kalianget**	**11.53**	**233**	P	**P**	**22 10 44.7**	**+3.5**
STKI	**Sintang**	**11.71**	**271**	P	**Pn**	**22 10 36.9**	**+0.5**
	19nm,0.4s						
JAGI	**Jajag, Banyuwa**	**12.29**	**227**	P	**Pn**	**22 10 46.0**	**+2.1**
	43nm,0.6s						
JAGI	**Jajag, Banyuwa**	**12.29**	**227**	P	**Pn**	**22 10 45.7**	**+1.8**
KSM	**Kuching**	**12.96**	**277**	P	**P**	**22 10 56.1**	**-1.0**
TGY	**Tagaytay City**	**14.23**	**351**	P	**P**	**22 11 12.2**	**+0.9**
	baz=93,slow=20,SNR=1.3						
DRS	**Darwin Rock St**	**14.49**	**148**	P	**Pn**	**22 11 11.2**	**-0.7**
UGM	**Wanagama**	**14.84**	**238**		**P**	**22 11 17.8**	**-0.3**
UGM	**Wanagama**	**14.84**	**238**	P	**P**	**22 11 19.9**	**+1.8**
MTN	**Manton Dam**	**14.96**	**148**	P	**Pn**	**22 11 17.1**	**-0.6**
	baz=15,SNR=13						
MTN	**Manton Dam**	**14.96**	**148**	Pn	**Pn**	**22 11 17.1**	**-0.6**
MTN	**Manton Dam**	**14.96**	**148**	P	**Pn**	**22 11 18.3**	**+0.6**
	26nm,0.5s						
KDU	**Kakadu**	**15.58**	**144**	P	**Pn**	**22 11 25.5**	**+0.2**
	baz=16,SNR=11						
KDU	**Kakadu**	**15.58**	**144**	P	**Pn**	**22 11 25.2**	**-0.1**
KNRA	**Kununurra**	**16.48**	**161**	P	**Pn**	**22 11 37.1**	**+0.8**
	baz=16,SNR=10						
KNRA	**Kununurra**	**16.48**	**161**	P	**Pn**	**22 11 36.4**	**+0.1**
KNRA				IAmb	IAmb	22 11 38.7	
	comp=Z,51nm,1.1s						
KNRA	**Kununurra**	**16.48**	**161**	P	**Pn**	**22 11 37.2**	**+0.9**
LEM	**Lembang**	**16.93**	**246**	P	**Pn**	**22 11 42.0**	**+0.1**
	comp=Z,4.3nm,0.3s,baz=145,slow=23,SNR=9.3						
PPBI	**Pangkal Pinang**	**17.17**	**263**	P	**Pn**	**22 11 45.8**	**+1.1**
CBJI	**Citeko**	**17.48**	**248**	P	**Pn**	**22 11 48.5**	**+0.1**
	comp=Z,188nm,0.8s						
DBJI	**Dramaga**	**17.62**	**248**	P	**Pn**	**22 11 49.5**	**-0.6**
JAY	**Jayapura**	**17.69**	**98**	P	**P**	**22 11 50.0**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=318,slow=7.5,SNR=1.9						
FITZ	**Fitzroy Crossi**	**18.10**	**172**	P	**P**	**22 11 54.6**	**+0.7**
	comp=Z,4.8nm,0.3s,baz=0.8,slow=7.9,SNR=138						
FITZ				S	**S**	**22 15 11.4**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=20,SNR=5.8						
DSRI	**Dabo**	**18.61**	**269**	P	**P**	**22 12 00.6**	**+1.1**
	comp=Z,1μmcomp=Z,131nm,0.7s						
CGJI	**Cibinong**	**18.63**	**249**	P	**Pn**	**22 12 02.0**	**+0.1**
	comp=Z,1μmcomp=Z,92nm,0.5s						
BLSI	**Bandar Lampung**	**18.67**	**253**	P	**Pn**	**22 12 06.5**	**+4.1**
DLV	**T Lat**	**18.83**	**310**	P	**Pn**	**22 12 04.3**	**-0.2**
DLV				IAmb	IAmb	22 12 09.8	
	comp=Z,36nm,0.6s						
DLV	**T Lat**	**18.83**	**310**	P	**Pn**	**22 12 05.3**	**+0.8**
KLSI		**19.00**	**256**	P	**Pn**	**22 12 05.8**	**-0.5**
	comp=Z,346nmcomp=Z,24nm,0.8s						
MYKOM	**Kota Tinggi**	**19.41**	**275**	P	**P**	**22 12 09.2**	**+1.0**
MYKOM				IAmb	IAmb	22 12 11.2	
	comp=Z,31nm,0.8s						
KASI	**Kota Agung**	**19.43**	**253**	P	**P**	**22 12 09.8**	**+1.4**
	comp=Z,858nmcomp=Z,48nm,0.5s						
MDSI	**Maura Dua**	**19.49**	**257**	P	**P**	**22 12 09.7**	**+0.7**
	comp=Z,16nm,1.1s						
JMBI	**JAMBI**	**19.60**	**265**	P	**Pn**	**22 12 13.0**	**-0.3**
LWLI	**Liwa**	**19.73**	**255**	P	**Pn**	**22 12 13.5**	**-1.4**
	comp=Z,3μmcomp=Z,48nm,0.6s						
XMI	**Christmas Isla**	**20.23**	**239**	P	**P**	**22 12 18.3**	**+1.2**
XMIS	**Christmas Isla**	**20.28**	**239**	P	**P**	**22 12 15.4**	**-2.2**
XMIS				IAmb	IAmb	22 12 18.3	
	comp=Z,59nm,0.9s						
XMIS	**Christmas Isla**	**20.28**	**239**	P	**P**	**22 12 18.9**	**+1.3**
	comp=Z,56nm,0.8s						
JRMM	**Jerantut**	**21.05**	**281**	P	**P**	**22 12 27.0**	**+1.2**
MASI	**Maura Aman, Be**	**21.16**	**261**	P	**P**	**22 12 27.8**	**+0.8**
	comp=Z,163nm,1.0s						
MBWA	**Marble Bar**	**21.25**	**189**	P	**P**	**22 12 27.4**	**-0.5**
PSA00	**Pilbara Seismi**	**21.64**	**188**	P	**P**	**22 12 31.2**	**-0.8**
PSA00	**Pilbara Seismi**	**21.64**	**188**	P	**P**	**22 12 30.5**	**-1.5**
PSA00				IAmb	IAmb	22 12 32.9	

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      comp=Z,5.5nm,0.8s
PSA00 Pilbara Seismi     21.64 188   P        P        22 12 31.7 -0.3
KRJI  Kerinci            21.81 265   P        P        22 12 35.2 +1.2
      comp=Z,495nm,0.9s
BKNI  Bangkinang         22.14 271   P        P        22 12 36.8 -0.5
WB0   Warramunga Arr     22.47 151   P        P        22 12 39.7 -0.5
WB0                                  IAmb     IAmb     22 12 41.1
      comp=Z,26nm,0.4s
IPM   Ipoh               22.59 282   P        P        22 12 43.0 +1.6
IPM   Ipoh               22.59 282   P        P        22 12 42.2 +0.8
IPM                                  IAmb     IAmb     22 12 45.0
      comp=Z,24nm,0.7s
IPM   Ipoh               22.59 282   P        P        22 12 43.3 +1.9
WRAB  Tennant Creek      22.59 152   P        P        22 12 41.6 +0.2
WRA   Warramunga Arr     22.59 152   P        P        22 12 41.1 -0.3
      comp=Z,19nm,0.5s,baz=332,slow=10,SNR=256
WRA                                  PcP      PcP      22 16 29.3 +0.1
      comp=Z,1.6nm,0.6s,baz=315,slow=2.6,SNR=2.6
WRA                                  S        S        22 16 36.0 -1.2
      comp=Z,0.7nm,0.6s,baz=320,slow=16,SNR=2.8
WRA                                  ScP      ScP      22 19 50.8 -1.2
      comp=Z,0.2nm,0.5s,baz=339,slow=3.1,SNR=1.6
WRA   Warramunga Arr     22.59 152   P        P        22 12 39.8 -1.6
WR0   Warramunga Arr     22.71 151   P        P        22 12 42.1 -0.3
PDSI  Padang             22.73 268   P        P        22 12 43.3 +0.5
      comp=Z,924nmcomp=Z,76nm,1.0s
KULM  Kulim              23.11 284   P        P        22 12 48.0 +1.7
KULM  Kulim              23.11 284   P        P        22 12 47.1 +0.9
KULM                                 IAmb     IAmb     22 12 49.2
      comp=Z,29nm,0.8s
UBPT  Khong Chiam        23.20 312   P        P        22 12 48.4 +1.4
UBPT                                 IAmb     IAmb     22 12 50.3
      comp=Z,70nm,1.5s
TPUB  Ta-pu              23.34 354   P        P        22 12 48.3 +0.1
TPUB                                 IAmb     IAmb     22 12 51.8
      comp=Z,40nm,0.7s
TPUB  Ta-pu              23.34 354   P        P        22 12 50.4 +2.2
SSLB  Suanglung          23.79 355   P        P        22 12 51.6 -0.7
SSLB                                 IAmb     IAmb     22 13 04.3
      comp=Z,21nm,0.9s
SSLB  Suanglung          23.79 355   P        P        22 12 54.6 +2.3
GIRL  Giralia            24.09 201   P        P        22 12 56.1 +1.1
      baz=24,SNR=7.9
GIRL  Giralia            24.09 201   P        P        22 12 55.7 +0.7
GIRL  Giralia            24.09 201   P        P        22 12 55.8 +0.7
      comp=Z,112nm,1.5s
SISI  Saibi              24.12 267   P        P        22 12 55.5  0.0
      comp=Z,888nmcomp=Z,92nm,0.6s
COEN  Coen               24.14 126   P        P        22 12 55.3 -0.4
COEN                                 IAmb     IAmb     22 12 58.0
      comp=Z,9.7nm,0.5s
COEN  Coen               24.14 126   P        P        22 12 55.2 -0.4
      comp=Z,14nm,0.9s
PSI   Prapat             24.41 277   P        P        22 12 58.5 +0.2
      comp=Z,4.1nm,0.3s,baz=98,slow=6.7,SNR=6.5
SRIT  Nakonsritamara     25.01 291   P        P        22 13 05.6 +2.1
SRIT                                 IAmb     IAmb     22 13 22.5
      comp=Z,22nm,0.8s
WRKA  Warakurna          25.33 169   P        P        22 13 06.6 +0.3
      baz=26,SNR=26
WRKA  Warakurna          25.33 169   P        P        22 13 06.8 +0.5
PMG   Port Moresby       25.62 112   P        P        22 13 08.5 -0.5
      comp=Z,7.2nm,0.3s,baz=286,slow=9.2,SNR=5.1
PMG   Port Moresby       25.62 112   P        P        22 13 08.5 -0.5
PMG                                  IAmb     IAmb     22 13 10.6
      comp=Z,23nm,1.1s
GSI   Gunungsitoli       25.64 273   P        P        22 13 09.6 +0.4
AS31  Alice Springs      25.69 157   P        P        22 13 09.6  0.0
AS31                                 PcP      PcP      22 16 36.4 +0.6
ASAR  Alice Springs      25.69 157   P        P        22 13 09.9 +0.4
      comp=Z,2.1nm,0.3s,baz=332,slow=8.7,SNR=45
ASAR                                 pP       pP       22 13 41.5 -1.1
      comp=Z,5.0nm,0.8s,baz=334,slow=6.9,SNR=5.2
ASAR                                 PcP      PcP      22 16 36.2 +0.3
      comp=Z,5.6nm,0.5s,baz=349,slow=2.2,SNR=23
ASAR                                 ScP      ScP      22 20 01.6 +1.0
      comp=Z,0.3nm,0.5s,baz=328,slow=3.1,SNR=1.9
ASAR  Alice Springs      25.69 157   P        P        22 13 09.0 -0.5
ASAR                                          PcP      22 16 36.2 +0.3
QIS   Mount Isa          25.96 143   P        P        22 13 12.8 +0.8
      baz=26,SNR=47
QIS   Mount Isa          25.96 143   P        P        22 13 13.0 +1.0
MEEK  Meekatharra        26.80 189   P        P        22 13 18.7 -0.8
      baz=27,SNR=30
MEEK  Meekatharra        26.80 189   P        P        22 13 19.5  0.0
SLVN  Son La             28.39 320   P        P        22 13 35.0 +1.3
RABL  Rabaul             29.25  98   P        P        22 13 42.5 +1.0
MORW  Morawa             29.66 193   P        P        22 13 44.5 -0.3
      baz=30,SNR=10
MORW  Morawa             29.66 193   P        P        22 13 44.3 -0.5
MORW  Morawa             29.66 193   P        P        22 13 44.7 -0.1
CM31  Chiang Mai Arr     30.09 309   P        P        22 13 49.5 +0.8
CM31                                 IAmb     IAmb     22 13 53.5
      comp=Z,14nm,0.8s
CMAR  Chiang Mai Arr     30.09 309   P        P        22 13 50.1 +1.3
      comp=Z,10nm,0.6s,baz=132,slow=7.5,SNR=34
CMAR                                 PcP      PcP      22 16 47.5 +0.8
      comp=Z,4.2nm,0.7s,baz=167,slow=1.9,SNR=18
CMAR                                 LR       LR       22 27 45.1
      comp=Z,13nm,18.9s,baz=5.0,slow=40
CMAR  Chiang Mai Arr     30.09 309   P        P        22 13 49.9 +1.2
CMAR                                          PcP      22 16 47.3 +0.7
OOD   Oodnadatta         30.09 158   P        P        22 13 48.4 -0.2
      comp=Z,12nm,2.4s
CTAO  Charters Tower     30.12 133   P        P        22 13 49.2 +0.1
CTAO                                 IAmb     IAmb     22 14 05.6
      comp=Z,15nm,1.2s
CHTO  Chiang Mai         30.29 310   P        P        22 13 51.7 +1.2
CHTO                                 IAmb     IAmb     22 13 55.2
      comp=Z,14nm,0.7s
CHTO                                          PcP      22 16 47.8 +0.6
CHTO  Chiang Mai         30.29 310   P        P        22 13 52.8 +2.3
GYA   Guiyang            30.78 330  ⇑P        P        22 13 57.4 +2.5
GYA                                  pP       pP       22 14 27.4 -1.1
GYA                                  pmax     pmax
      comp=Z,18nm,0.7s
FORT  Forrest            30.92 172   P        P        22 13 56.0 +0.1
      baz=31,SNR=17
FORT  Forrest            30.92 172   P        P        22 13 55.7 -0.1
FORT  Forrest            30.92 172   P        P        22 13 56.2 +0.4
BLDU  Ballidu            31.02 191   P        P        22 13 56.3 -0.4
      baz=31,SNR=57
BLDU  Ballidu            31.02 191   P        P        22 13 56.4 -0.4
KLBR  Kellerberrin       31.80 189   P        P        22 14 03.2 -0.3
      baz=32,SNR=14
KLBR  Kellerberrin       31.80 189   P        P        22 14 03.5 -0.1
      comp=Z,63nm,0.6s
MULG  Mulgathing         31.80 162   P        P        22 14 03.5 -0.1
      comp=Z,11nm,0.7s
KMI   Kunming            31.89 323  ⇓P        P        22 14 06.8 +2.1
KMI                                  sP       sP       22 14 54.4 -2.6
NJ2   Nanjing            32.18 353  eP        P        22 14 09.1 +2.2
NJ2                                  pmax     pmax
      comp=Z,4.0nm,0.5s
INKA  Innaminka          32.29 150   P        P        22 14 09.5 +1.6
MUN   Mundaring          32.44 191   P        P        22 14 09.0 -0.2
      baz=33,SNR=3.1
MUN   Mundaring          32.44 191   P        P        22 14 09.6 +0.4
      comp=Z,16nm,2.8s
JCJ   Chichijima         32.59  33   P        P        22 14 09.7 -0.9
      comp=Z,165nm,0.5s,baz=193,slow=2.0,SNR=16
JCJ   Chichijima         32.59  33   P        P        22 14 09.8 -0.8
JCJ   Chichijima         32.59  33   P        P        22 14 10.3 -0.3
ENH   Enshi              32.84 338   P        P        22 14 15.0 +2.2
NWAO  Narrogin (SRO)     33.19 189   P        P        22 14 15.3 -0.4
LCRK  Leigh Creek        33.45 156   P        P        22 14 18.2 +0.2
      comp=Z,12nm,0.6s
BBOO  Buckleboo          34.78 161   P        P        22 14 29.6 +0.2
      baz=35,SNR=9.1
BBOO  Buckleboo          34.78 161   P        P        22 14 29.3 -0.1
BBOO                                 IAmb     IAmb     22 14 53.3
      comp=Z,19nm,1.4s
BBOO  Buckleboo          34.78 161   P        P        22 14 29.0 -0.4
      comp=Z,24nm,2.5s
JMN   Monobe             35.07  16   P        P        22 14 31.9 -0.1
RK1H  Rockhampton Ha     35.25 133   P        P        22 14 34.3 +0.7
      comp=Z,24nm,0.7s
PATS  Pohnpei            35.71  78   P        P        22 14 38.3 +0.7
NAPP  Napperby           35.85 158   P        P        22 14 39.5 +1.0
      comp=Z,15nm,1.1s
RMQ   Roma               36.03 139   P        P        22 14 40.1 -0.1
      comp=Z,8.3nm,0.6s
STKA  Stephens Creek     36.14 153   P        P        22 14 41.5 +0.5
      comp=Z,12nm,0.5s,baz=329,slow=8.7,SNR=32
STKA                                 PcP      PcP      22 17 03.7 +0.3
      comp=Z,6.5nm,0.4s,baz=14,slow=3.0,SNR=10.0
STKA  Stephens Creek     36.14 153   P        P        22 14 41.9 +0.8
      baz=36,SNR=20
STKA  Stephens Creek     36.14 153   P        P        22 14 41.4 +0.3
STKA                                 PcP      PcP      22 17 03.8 +0.4
STKA  Stephens Creek     36.14 153   P        P        22 14 41.9 +0.8
      comp=Z,5.7nm,0.8s
HTT   Hallett            36.36 158   P        P        22 14 44.1 +1.2
      baz=36,SNR=19
HTT   Hallett            36.36 158   P        P        22 14 44.2 +1.2
XAN   Xi'an              36.45 340   P        P        22 14 44.8 +1.1
XAN                                  pP       pP       22 15 17.5 -0.5
XAN                                  pmax     pmax
      comp=Z,15nm,0.8s
XAN                                  pmax     pmax
      comp=Z,210nm,5.2s
EIDS  Eidsvold           36.88 135   P        P        22 14 46.2 -1.2
INU   Inuyama            37.50  19   P        P        22 14 52.2 -0.3
INU                                  IAmb     IAmb     22 15 07.8
      comp=Z,36nm,1.3s
KSRS  Korea Array        37.57   6   P        P        22 14 53.6 +0.6
      comp=Z,2.5nm,0.7s,baz=189,slow=9.4,SNR=5.8
KSRS                                 PcP      PcP      22 17 07.9 +0.4
      comp=Z,1.7nm,0.7s,baz=226,slow=1.7,SNR=2.2
CMSA  Cobar Meteorol     37.89 148   P        P        22 14 57.5 +1.6
      baz=38,SNR=14
CMSA  Cobar Meteorol     37.89 148   P        P        22 14 57.4 +1.6
MJAR  Matsushiro Arr     38.98  19   P        P        22 15 04.1 -0.8
      comp=Z,14nm,0.7s,baz=183,slow=9.8,SNR=12
MJAR  Matsushiro Arr     38.98  19   P        P        22 15 03.5 -1.4
MAJO  Matsushiro         38.98  19   P        P        22 15 04.2 -0.7
MAJO                                 IAmb     IAmb     22 15 04.6
      comp=Z,16nm,0.8s
MAT   Matsushiro         38.98  19   P        P        22 15 03.9 -1.0
SHL   Shillong           39.52 312   P        P        22 15 09.9 +0.2
SHL                                  IAmb     IAmb     22 15 11.7
      comp=Z,13nm,0.6s
LZH   Lanzhou            40.19 335  eP        P        22 15 16.3 +1.2
LZH                                  pP       pP       22 15 50.7 +0.8
LZH                                  sP       sP       22 16 04.7 -3.4
LZH                                  pmax     pmax
      comp=Z,12nm,1.0s
JSD   Sado               40.36  18   P        P        22 15 15.6 -0.7
JSD                                  IAmb     IAmb     22 15 30.3
      comp=Z,33nm,1.0s
ARPS  Mount Arapiles     40.43 157   P        P        22 15 18.1 +1.2
      baz=40,SNR=27
ARPS  Mount Arapiles     40.43 157   P        P        22 15 17.4 +0.6
      comp=Z,70nm,0.7s
ARMA  Armidale           40.54 141   P        P        22 15 20.2 +2.1
      baz=40,SNR=15
ARMA  Armidale           40.54 141   P        P        22 15 19.6 +1.6
ARMA                                 IAmb     IAmb     22 15 20.9
      comp=Z,18nm,0.7s
ARMA  Armidale           40.54 141   P        P        22 15 19.7 +1.6
      comp=Z,29nm,0.9s
YNG   Young              41.46 148   P        P        22 15 25.6 +0.3
      baz=42,SNR=6.2
YNG   Young              41.46 148   P        P        22 15 27.4 +2.0
      comp=Z,18nm,1.1s
HHC   Hu-ho-hao-te       42.05 347  eP        P        22 15 33.5 +3.4
HHC                                  pmax     pmax
      comp=Z,5.0nm,0.8s
HHC                                  pmax     pmax
      comp=Z,190nm,7.2s
LSA   Lhasa              42.51 317   P        P        22 15 36.2 +1.8
LSA                                  pmax     pmax
      comp=Z,90nm,0.7s
LSA   Lhasa              42.51 317   P        P        22 15 36.7 +2.3
LSA   Lhasa              42.51 317   P        P        22 15 35.9 +1.5
LSA                                  IAmb     IAmb     22 15 37.7
      comp=Z,16nm,0.6s
CAN   Canberra           42.56 148   P        P        22 15 36.1 +1.8
CAN   Canberra           42.56 148   P        P        22 15 36.1 +1.8
      comp=Z,54nm,0.5s
TOO   Toolangi           42.65 154   P        P        22 15 35.4 +0.4
      baz=43,SNR=4.9
TOO   Toolangi           42.65 154   P        P        22 15 35.7 +0.8
TOO                                  IAmb     IAmb     22 15 37.4
      comp=Z,12nm,0.8s
CNB   Canberra Magne     42.75 148   P        P        22 15 36.0 +0.2
      baz=43,SNR=5.7
CNB   Canberra Magne     42.75 148   P        P        22 15 37.8 +2.0
      comp=Z,12nm,1.1s
PALK  Pallekele          42.98 281   P        P        22 15 37.6 -0.4
PALK                                 IAmb     IAmb     22 15 53.2
      comp=Z,21nm,1.4s
CN2   Changchun          43.70   2  eP        P        22 15 41.5 -1.7
GTA   Gaotai             44.71 334  ⇑P        P        22 15 52.7 +1.2
GTA                                  pP       pP       22 16 27.0  0.0
GTA                                  sP       sP       22 16 44.5 -0.3
GTA                                  PcP      PcP      22 17 31.8 +0.7
GTA                                  pmax     pmax
      comp=Z,19nm,0.7s
USA0B Ussuriysk Arra     44.75   9   P        P        22 15 51.2 -0.3
USRK  Ussuriysk Ar.      44.75   9   P        P        22 15 51.2 -0.3
      comp=Z,8.4nm,0.6s,baz=199,slow=6.1,SNR=27
USRK  Ussuriysk Ar.      44.75   9   P        P        22 15 51.3 -0.2
MDJ   Mudanjiang         44.83   6   P        P        22 15 52.6 +0.4
MDJ                                  IAmb     IAmb     22 15 53.6
      comp=Z,12nm,0.6s
HYB   Hyderabad          47.22 294  i P       P        22 16 11.0 -0.4
JKA   Kamikawa-asahi     47.25  19   P        P        22 16 11.3 +0.2
JKA                                  IAmb     IAmb     22 16 12.3
      comp=Z,25nm,0.8s
DZM   Mont Dzumac        47.49 120   P        P        22 16 14.8 +1.3
      comp=Z,8.7nm,0.8s,baz=247,slow=8.6,SNR=5.7
DZM   Mont Dzumac        47.49 120   P        P        22 16 14.7 +1.3
DZM                                  IAmb     IAmb     22 16 15.9
      comp=Z,13nm,1.0s
DZM   Mont Dzumac        47.49 120   P        P        22 16 14.8 +1.3
      comp=Z,15nm,1.3s
LIFNC LIFOU              47.72 118   P        P        22 16 16.2 +1.0
OUENC Ouen Island, N     47.95 121   P        P        22 16 17.8 +0.9
OUENC                                IAmb     IAmb     22 16 46.1
      comp=Z,29nm,1.3s
ULN   Ulaanbaatar        49.74 346   P        P        22 16 30.3  0.0
ULN                                  IAmb     IAmb     22 16 32.1
      comp=Z,9.6nm,0.6s
SONM  Songino Array      49.87 345   P        P        22 16 31.3  0.0
      comp=Z,7.6nm,0.7s,baz=161,slow=9.4,SNR=50
SONM                                 PcP      PcP      22 17 48.9 -0.5
      comp=Z,2.7nm,0.5s,baz=158,slow=5.7,SNR=8.6
SONM  Songino Array      49.87 345   P        P        22 16 31.1 -0.2
SONM                                 IAmb     IAmb     22 16 33.0
      comp=Z,7.4nm,0.6s
WMQ   Urumqi             53.92 329  eP        P        22 17 03.3 +2.0
WMQ                                  pmax     pmax
      comp=Z,12nm,1.1s
WMQ                                  pmax     pmax
      comp=Z,170nm,5.1s
MSVF  Nonsavu            56.72 111   P        P        22 17 23.2 +1.5
      comp=Z,1.8nm,0.4s,baz=288,slow=11,SNR=4.3
MSVF  Nonsavu            56.72 111   P        P        22 17 23.6 +1.9
MSVF                                 IAmb     IAmb     22 17 50.1
      comp=Z,20nm,1.5s
NIL   Nilore             57.55 311   P        P        22 17 27.6 +0.4
NIL                                  IAmb     IAmb     22 17 29.8
      comp=Z,9.8nm,0.7s
TARG  Taragay, Kyrgy     58.31 321   P        P        22 17 33.3 +0.4
TARG                                 IAmb     IAmb     22 17 57.3
      comp=Z,4.7nm,0.6s
PRZ   Przheval'sk        58.36 322   P        P        22 17 33.6 +0.7
MK31  Makanchi Array     58.74 328   P        P        22 17 35.3  0.0
MK31                                 IAmb     IAmb     22 17 35.9
      comp=Z,9.8nm,1.4s
MKAR  Makanchi Array     58.74 328   P        P        22 17 35.3  0.0
      comp=Z,3.6nm,0.4s,baz=121,slow=8.5,SNR=136
MKAR                                 pP       pP       22 18 10.9 -1.7
      comp=Z,2.0nm,0.7s,baz=115,slow=8.2,SNR=3.0
MKAR                                 PcP      PcP      22 18 22.1 -1.2
      comp=Z,3.7nm,0.6s,baz=130,slow=4.4,SNR=9.3
MKAR                                 ScP      ScP      22 22 07.3 -1.6
      comp=Z,0.7nm,0.8s,baz=107,slow=5.9,SNR=6.1
MKAR  Makanchi Array     58.74 328   P        P        22 17 35.1 -0.2
MAKZ  Makanchi           58.92 328   P        P        22 17 36.2 -0.3
MAKZ                                 IAmb     IAmb     22 17 38.9
      comp=Z,7.6nm,1.1s
KDJ   Kajisay            58.92 321   P        P        22 17 37.2 +0.4
KDJ                                  IAmb     IAmb     22 17 38.2
      comp=Z,5.7nm,0.6s
BOOM  Boomskoye usch     59.89 321   P        P        22 17 43.5 +0.1
MLZ   Mavora Lakes       60.03 145   P        P        22 17 44.6 +0.4
PEA0B Petropavlovsk-     60.26  23   P        P        22 17 46.1 +0.7
PETK  Petropavlovsk-     60.26  23   P        P        22 17 46.8 +1.3
      comp=Z,7.2nm,0.7s,baz=212,slow=4.0,SNR=10.0
TKM2  Tokmak 2           60.33 321   P        P        22 17 46.6 +0.1
      SNR=18
UCH   Uchtor             60.66 320   P        P        22 17 49.9 +0.9
      SNR=7.8
LBZ   Lake Benmore       60.69 143   P        P        22 17 49.2 +0.6
AAK   Ala-Archa          60.88 321   P        P        22 17 50.5 +0.4
      SNR=7.6
AAK   Ala-Archa          60.88 321  i P       P        22 17 50.5 +0.4
      SNR=9.0
AAK   Ala-Archa          60.88 321   P        P        22 17 50.6 +0.4
KBL   Kabul              61.11 310   P        P        22 17 51.5 -0.4
KBL                                  IAmb     IAmb     22 17 54.2
      comp=Z,13nm,0.7s
AML   Almayashu          61.14 320   P        P        22 17 52.8 +0.7
      SNR=8.6
AML   Almayashu          61.14 320  i P       P        22 17 52.6 +0.5
      SNR=8.7
EKS2  Erkin-Say          61.35 320   P        P        22 17 53.5 +0.3
      SNR=7.3
GAR   Garm               61.97 315   P        P        22 17 57.0 -0.5
BKZ   Black Stump Fm     62.29 135   P        P        22 18 00.4 +0.9
URZ   Urewera            62.36 134   P        P        22 18 00.1 +0.3
      comp=Z,9.7nm,0.4s,baz=307,slow=20,SNR=5.1
ZAA0  Zalesovo Array     62.43 336   P        P        22 17 59.0 -1.0
ZALV  Zalesovo Beam      62.43 336   P        P        22 17 58.6 -1.4
      comp=Z,1.9nm,0.4s,baz=125,slow=5.3,SNR=12
ZALV                                 pP       pP       22 18 35.5 -2.3
      comp=Z,1.4nm,0.6s,baz=108,slow=5.1,SNR=3.0
CHGR  Chuyangaron        62.65 314   P        P        22 18 01.0 -0.9
CHGR                                 IAmb     IAmb     22 18 03.9
      comp=Z,12nm,0.7s
KURK  Kurchatov          63.10 330   P        P        22 18 04.0 -0.6
KURK                                 IAmb     IAmb     22 18 04.7
      comp=Z,13nm,0.7s
MA2   Magadan            63.23  15   P        P        22 18 06.3 +1.1
KKAR  Karatay Array      63.66 319   P        P        22 18 07.6 -0.8
BRVK  Borovoye           68.69 329   P        P        22 18 39.2 -1.0
UOSS  Minazif            69.22 297   P        P        22 18 42.7 -1.4
UOSS  Minazif            69.22 297   P        P        22 18 42.8 -1.4
HATD  Hatta, Dubai       69.27 297  i P       P        22 18 43.3 -1.1
      SNR=7.7
ASHO  Ashiyiah           69.31 296  i P       P        22 18 44.1 -0.6
      SNR=8.5
BANOM Banah              69.31 298   P        P        22 18 42.9 -1.8
MSFE  Esma-Masafi        69.34 297   P        P        22 18 44.8  0.0
ALNE  Al Ain             69.48 296  i P       P        22 18 43.9 -1.9
      SNR=12
FAQ   Al Faqa, Dubai     69.74 296   P        P        22 18 46.5 -0.8
ASUD  Al Ashush, Dub     69.95 296   P        P        22 18 48.3 -0.3
AJN   Ajban              70.25 296  i P       P        22 18 48.4 -1.9
      SNR=9.8
TIXI  Tiksi              71.67   2   P        P        22 18 56.6 -1.3
TIXI                                 IAmb     IAmb     22 18 58.2
      comp=Z,8.5nm,0.7s
ABKAR Akbulak array      72.88 322   P        P        22 19 04.6 -1.0
ABKAR Akbulak array      72.88 322   P        P        22 19 04.5 -1.1
ABKAR                                IAmb     IAmb     22 19 04.9
      comp=Z,2.2nm,0.7s
NRIK  Noril'sk           73.28 348   P        P        22 19 06.5 -1.1
      comp=Z,5.2nm,0.8s,baz=125,slow=6.3,SNR=12
NRIK  Noril'sk           73.28 348   P        P        22 19 06.9 -0.7
ARU   Arti               76.26 329   P        P        22 19 23.4 -1.6
ARU                                  IAmb     IAmb     22 19 24.1
      comp=Z,8.0nm,0.7s
VOI   Vohitsoka          77.36 248   P        P        22 19 30.7 -1.3
VOI                                  IAmb     IAmb     22 19 45.3
      comp=Z,18nm,1.3s
RAYN  Ar Rayn            78.72 294  i P       P        22 19 37.4 -2.0
      SNR=9.8
RAYN  Ar Rayn            78.72 294   P        P        22 19 37.4 -2.0
RAYN                                 IAmb     IAmb     22 19 40.1
      comp=Z,9.1nm,0.7s
AKUT  Akutan             79.02  35   P        P        22 19 40.8 +0.5
MAW   Mawson             79.02 200   P        P        22 19 39.4 -0.5
      comp=Z,5.0nm,0.8s,baz=34,slow=9.8,SNR=4.0
VNDA  Vanda              80.18 172   P        P        22 19 46.4 +0.3
      comp=Z,6.2nm,0.7s,baz=318,slow=6.5,SNR=41
VNDA  Vanda              80.18 172   P        P        22 19 46.8 +0.7
SBA   Scott Base         81.13 172   P        P        22 19 52.0 +0.9
SBA                                  IAmb     IAmb     22 20 19.9
      comp=Z,19nm,1.4s
O18K  Koktuh Hills       85.81  30   P        P        22 20 15.7 +0.3
O18K                                 IAmb     IAmb     22 20 38.7
      comp=Z,30nm,1.4s
KMBO  Kilima Mbogo       85.93 269   P        P        22 20 16.9 -0.4
      comp=Z,1.7nm,0.8s,baz=47,slow=5.7,SNR=6.1
SII   Sitkinak Islan     85.97  33   P        P        22 20 17.2 +0.9
K20K  Telida             86.78  27   P        P        22 20 20.7 +0.6
KLMR  Klimovskoe         86.94 331  eP        P        22 20 17.7 -3.2
KLMR                                 AMP               22 20 20.4
      comp=Z,17nm,0.6s
KLMR                                ePP       PP       22 23 39.5 -6.5
KDAK  Kodiak Island      86.95  32   P        P        22 20 21.3 +0.3
KDAK                                 IAmb     IAmb     22 20 38.8
      comp=Z,12nm,1.1s
IMAR  Indian Mountai     87.21  24   P        P        22 20 21.9 -0.1
CNPM  China Poot         87.79  31   P        P        22 20 25.1 +0.1
LODK  Lodwar             87.83 273   P        P        22 20 25.4 -0.8
MLY   Manley             88.38  25   P        P        22 20 27.7  0.0
BRTR  Keskin Array B     89.67 310   P        P        22 20 33.5 -1.0
      comp=Z,1.8nm,0.7s,baz=103,slow=5.5,SNR=5.2
QSPA  South Pole Qui     89.89 180   P        P        22 20 35.3 +0.5
ILAR  Eielson Array      90.01  25   P        P        22 20 33.5 -1.8
      comp=Z,0.6nm,0.5s,baz=239,slow=5.2,SNR=16
ILAR                                 PKKPbc   PKKPdf   22 38 05.7 +1.9
      comp=Z,0.3nm,0.6s,baz=107,slow=1.8,SNR=5.7
AKASG Malin Array Be     92.55 321   P        P        22 20 45.4 -2.0
      comp=Z,0.4nm,0.4s,baz=67,slow=5.1,SNR=5.6
ARCES ARCESS Array B     92.73 340   P        P        22 20 45.9 -1.9
      comp=Z,2.1nm,0.7s,baz=73,slow=5.3,SNR=7.6
ARCES                                PKKP     PKKPdf   22 37 58.1 -0.9
      comp=Z,0.7nm,0.5s,baz=276,slow=2.3,SNR=5.6
ARCES ARCESS Array B     92.73 340   P        P        22 20 45.9 -1.9
FINES FINESS Array B     93.44 331   P        P        22 20 49.1 -2.1
      comp=Z,0.9nm,0.5s,baz=55,slow=7.0,SNR=9.5
FINES                                PKiKP    PKiKP    22 25 36.1 -0.2
      comp=Z,1.3nm,0.7s,baz=48,slow=2.8,SNR=4.1
FINES FINESS Array B     93.44 331   P        P        22 20 49.0 -2.2
LSZ   Lusaka             94.81 255   P        P        22 20 58.1 -0.6
GERES GERESS Array B    102.76 320   PKiKP    PKiKP    22 25 52.3 -1.1
      comp=Z,0.3nm,0.6s,baz=49,slow=3.0,SNR=2.5
ELK   Elko              113.48  45   PKiKP    PKiKP    22 26 14.5 +0.6
      comp=Z,2.3nm,0.7s,baz=293,slow=3.1,SNR=11
PDAR  Pinedale Array    116.51  41   PKP      PKPdf    22 26 19.5 -0.2
      comp=Z,0.7nm,0.6s,baz=127,slow=1.5,SNR=7.5
PDAR                                 PKKPab   PKKPab   22 36 51.7 -1.6
      comp=Z,0.6nm,0.5s,baz=114,slow=6.2,SNR=7.0
ESDC  Sonseca Array     117.81 316   PKP      PKPdf    22 26 21.6 -0.5
      comp=Z,0.3nm,0.4s,baz=32,slow=2.2,SNR=6.3
ULM   Lac du Bonnet     119.94  28   PKP      PKPdf    22 26 24.3 -1.4
      comp=Z,3.3nm,0.7s,baz=225,slow=2.9,SNR=5.0
TORD  Torodi Ar. Bea    120.59 285   PKP      PKPdf    22 26 27.2 -0.7
      comp=Z,3.0nm,0.6s,baz=60,slow=1.7,SNR=25
TORD                                 PKKPab   PKKPab   22 36 34.8 -0.6
      comp=Z,0.9nm,0.7s,baz=278,slow=4.6,SNR=5.5
ANMO  Albuquerque       122.17  48   PKP      PKiKP    22 26 31.3 +0.4
      comp=Z,3.1nm,0.7s,baz=242,slow=4.5,SNR=4.0
SCHQ  Schefferville     124.78   7   PKP      PKiKP    22 26 35.1 -0.1
      comp=Z,2.3nm,0.6s,baz=265,slow=6.8,SNR=4.1
TXAR  Lajitas Array     126.70  53   PKP      PKiKP    22 26 39.9  0.0
      comp=Z,1.0nm,0.7s,baz=216,slow=1.3,SNR=11
TXAR  Lajitas Array     126.70  53            PKiKP    22 26 39.7 -0.2
DBIC  Dimbokro          127.75 278   PKP      PKPdf    22 26 41.6 -0.1
      comp=Z,1.3nm,0.6s,baz=135,slow=1.4,SNR=4.2
TKL   Tuckaleechee C    136.58  32   PKP      PKPdf    22 26 58.1 +0.3
      comp=Z,3.6nm,0.6s,baz=20,slow=9.9,SNR=3.6
PLCA  Paso Flores       137.54 165   PKP      PKPdf    22 26 59.3 -0.3
      comp=Z,2.4nm,1.0s,baz=109,slow=0.7,SNR=5.5
CPUP  Villa Florida     153.77 179   PKPbc    PKiKP    22 27 35.8 +0.7
      comp=Z,3.6nm,0.7s,baz=172,slow=1.3,SNR=5.6
LVC   Limon Verde       154.59 153   PKPbc    PKiKP    22 27 39.1 +1.7
      comp=Z,2.6nm,0.5s,baz=270,slow=6.1,SNR=2.2
LPAZ  La Paz            160.31 146   PKP      PKPdf    22 27 37.8 +1.4
      comp=Z,1.8nm,0.8s,baz=188,slow=1.6,SNR=4.9
LPAZ                                 PKPab    pPKPdf   22 28 18.1 +0.2
      comp=Z,3.4nm,0.9s,baz=184,slow=4.7,SNR=5.8
BDFB  Brasilia          162.15 209   PKPab    PKPab    22 28 25.9 +0.9
      comp=Z,1.6nm,0.4s,baz=150,slow=9.4,SNR=3.6
SIV   San Ignacio       163.52 165   PKP      PKPdf    22 27 39.4 +0.4
      comp=Z,2.1nm,0.8s,baz=243,slow=2.3,SNR=5.1
SIV                                  PKPab    PKPab    22 28 31.4 +0.6
      comp=Z,2.9nm,0.9s,baz=166,slow=2.6,SNR=6.6
```

JMA 02 22:10:21.3, 34°.87N × 136°.67E, h8 km ± 1 km, M2.7, 2C-3D

Broadband fault plane solution: P waves. NP1: ϕs222.00000°,δ28.00000°,λ140.00000°. **NP2:** ϕs349.00000°,δ72.00000°,λ68.00000°. **Principal axes:** T Plg57.0000°, Azm230.0000°; N Plg21.0000°, Azm356.0000°; P Plg24.0000°, Azm96.0000°; **Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSUJ	Tsu 2	0.26	232	⇓P	Pg	22 10 26.6	+0.1
TSUJ				S	Sg	22 10 30.3	+0.3
JEG	Eigenji	0.35	319	⇓P	Pg	22 10 28.4	+0.2
JEG				S	Sg	22 10 33.3	+0.4
JAA	Atsumi	0.46	121	⇓P	Pg	22 10 30.2	0.0
JAA				S	Sg	22 10 36.4	+0.2
JIE	Ise	0.48	176	⇑P	Pg	22 10 30.6	0.0
JIE				S	Sg	22 10 37.1	+0.3
JKN2	Miekihoku	0.71	208	P	Pg	22 10 34.6	-0.4
JKN2				S	Sg	22 10 43.9	-0.3
JYTA	Yamagatataniai	0.72	4	⇑P	Pg	22 10 35.7	+0.4
JHE	Heguri	0.84	255	P	Pg	22 10 37.0	-0.4
JHE				S	Sg	22 10 48.2	-0.2
MAT	Matsushiro	2.09	36	P	Pb	22 10 59.1	-0.3
MAT				S	Sb	22 11 25.5	0.0

IDC 02 22:12:54.9±1.2,**34°.05S**×**109°.59W,h0^{km},mb3.8**/2, **mb1 4.1**/2,**mb1mx3.7**/28,**mbtmp3.8**/2,**MS3.9**/10, **Ms1 4.0**/10,**ms1mx3.7**/35 **Error ellipse: s-maj=62.0km s-min=40.7km az=36.0,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	Paso Flores	31.53	114	P	P	22 19 19.4	+0.6
	1.5nm,0.9s,baz=271,slow=8.4,SNR=2.2						
PLCA				LR	LR	22 28 39.4	
	comp=Z,167nm,20.1s,baz=294,slow=30						
NNA	Nana	37.02	62	LR	LR	22 31 07.6	
	comp=Z,199nm,20.7s,baz=236,slow=30						
LVC	Limon Verde	37.35	83	LR	LR	22 31 41.9	
	comp=Z,222nm,18.2s,baz=233,slow=30						
TAOE	Nuku Hiva Isla	37.65	305	*e*LR	LR	22 30 35.8	
	comp=Z,284nm,27.4s						
MEH	Mehetia	37.91	285	*e*T	T	23 00 33.4	
	16nm,0.2s						
PPT2	Papeete2	39.27	284	*e*LR	LR	22 31 09.5	
	comp=Z,426nm,25.0s						
PPT	Papeete	39.28	284	LR	LR	22 32 31.1	
	comp=Z,279nm,19.9s,baz=178,slow=30						
LPAZ	La Paz	41.15	75	LR	LR	22 33 29.7	
	comp=Z,174nm,21.6s,baz=240,slow=30						
CPUP	Villa Florida	45.41	95	LR	LR	22 36 54.2	
	comp=Z,154nm,19.1s,baz=238,slow=32						
SIV	San Ignacio	47.03	80	LR	LR	22 38 40.6	
	comp=Z,102nm,18.3s,baz=286,slow=33						
ROSC	El Rosal	51.03	48	LR	LR	22 41 09.3	
	comp=Z,114nm,18.2s,baz=238,slow=33						
PTGA	Pitinga	56.98	65	LR	LR	22 43 49.8	
	comp=Z,167nm,19.1s,baz=272,slow=33						
ELK	Elko	74.60	356	LR	LR	22 52 05.2	
	comp=Z,68nm,20.4s,baz=81,slow=32						
PDAR	Pinedale Array	76.44	0	P	P	22 24 47.2	+0.8
	0.5nm,0.7s,baz=134,slow=3.9,SNR=5.3						
AKASG	Malin Array Be	145.83	48	PKPbc	PKPdf	22 32 32.8	-2.2
	0.2nm,0.4s,baz=278,slow=4.0,SNR=2.7						
SONM	Songino Array	149.83	308	PKPbc	PKPbc	22 32 45.9	-0.8
	1.7nm,0.8s,baz=96,slow=2.9,SNR=10.0						
CMAR	Chiang Mai Arr	150.21	246	PKPbc	PKPbc	22 32 48.3	0.0
	0.9nm,0.3s,baz=169,slow=1.7,SNR=8.8						

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*IDC **02** 22:27:34.8±1.2, 34°.15S×109°.43W, h0^{km}, mb4.0/4, mb1 4.2/4, mb1mx3.8/37, mbtmp4.0/4, MS3.7/3, Ms1 3.7/3, ms1mx3.4/20, Error ellipse: s-maj=55.6km s-min=29.8km az=12.0*

*NEIC **02** 22:27:37.3±1.7, 34°.3S±0°.2×109°.32W±0°.10, h10^{km}±1^{km}, mb4.5/10, Error ellipse: s-maj=27.3km s-min=9.8km az=336.0*

ISC 02 22:27:35.6±0.8,**34°.2S**±0°.2×**109°.5W**±0°.2,**h10^{km},n31,** σ**0^{s}62**/24,**mb4.4**/8,**MS3.9**/6,**Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	Paso Flores	31.39	113	P	P	22 33 56.7	-0.1
	2.7nm,1.0s,baz=272,slow=16,SNR=3.1						
NNA	Nana	37.06	61	LR	LR	22 46 15.3	
	comp=Z,144nm,18.6s,baz=242,slow=30						
LVC	Limon Verde	37.31	83	P	P	22 34 49.5	+1.0
	1.0nm,0.4s,baz=236,slow=22,SNR=1.4						
LVC	Limon Verde	37.31	83	P	P	22 34 48.8	+0.2
LVC				IAmb	IAmb	22 34 59.8	
	comp=Z,30nm,1.5s						
TAOE	Nuku Hiva Isla	37.81	305	*e*LR	LR	22 45 14.0	
	comp=Z,219nm,29.9s						
MEH	Mehetia	38.02	285	*e*T	T	23 15 20.9	
	comp=Z,14nm,0.3s						
PPT2	Papeete2	39.38	285	*e*LR	LR	22 45 50.9	
	comp=Z,339nm,25.8s						
OTAV	Otavalo	44.98	47	P	P	22 35 52.0	+0.3
OTAV				IAmb	IAmb	22 36 00.9	
	comp=Z,6.7nm,1.3s						
PLTB	Pedras Altas	46.45	103	P	P	22 36 03.0	+0.3
SIV	San Ignacio	47.00	80	P	P	22 36 07.2	0.0
	comp=Z,3.5nm,0.9s,baz=245,slow=10,SNR=7.1						
PTLB	Pontes e Lacer	48.87	80	P	P	22 36 21.7	0.0
PTLB				IAmb	IAmb	22 36 22.3	
	comp=Z,7.5nm,1.5s						
JTS	Las Juntas de	50.05	32	LR	LR	22 52 14.9	
	comp=Z,127nm,18.8s,slow=30						
APG	El Apazote	52.22	24	LR	LR	22 54 41.3	
	comp=Z,39nm,19.2s,baz=188,slow=31						
ZARC	Zaragoza, Cauc	52.90	45	P	P	22 36 52.0	0.0
MACA	Manacapuru-AM	54.88	67	P	P	22 37 05.6	-0.9
QSPA	South Pole Qui	55.96	180	P	P	22 37 14.6	+0.7
QSPA				IAmb	IAmb	22 37 26.1	
	comp=Z,4.3nm,1.2s						
VNA3	Neumayer Olymp	61.04	159	P	P	22 37 49.1	0.0
VNA1	Neumayer--Stat	61.69	158	P	P	22 37 52.0	-1.4
VNA2	Neumayer--Watz	61.85	159	P	P	22 37 54.3	-0.2
	baz=250,slow=6.5						
SNAA	Sanae	62.86	160	P	P	22 38 01.2	-0.1
SNAA	Sanae	62.86	160	P	P	22 38 01.2	-0.1
SNAA				IAmb	IAmb	22 38 16.3	
	comp=Z,3.7nm,1.1s						
DZM	Mont Dzumac	73.21	255	*e*LR	LR	23 01 26.6	
	comp=Z,104nm,24.1s						
PDAR	Pinedale Array	76.64	360	P	P	22 39 27.3	+0.7
	comp=Z,0.2nm,0.3s,baz=176,slow=2.7,SNR=4.2						
BURAR	Bucovina Array	143.79	54	PKPdf	PKPdf	22 47 09.7	-1.1
AKASG	Malin Array Be	145.91	48	PKPbc	PKPdf	22 47 13.8	-0.4
	comp=Z,0.3nm,0.4s,baz=270,slow=5.5,SNR=4.5						
AKASG	Malin Array Be	145.91	48		PKPdf	22 47 14.0	-0.2
ULN	Ulaanbaatar	149.56	308	PKPbc	PKiKP	22 47 25.9	-0.3
SONM	Songino Array	150.00	308	PKPbc	PKPbc	22 47 25.8	-0.4
	comp=Z,1.6nm,0.9s,baz=64,slow=0.9,SNR=8.6						
SONM	Songino Array	150.00	308		PKiKP	22 47 26.5	-0.6
CMAR	Chiang Mai Arr	150.19	245	PKPbc	PKiKP	22 47 29.1	+0.9
	comp=Z,0.5nm,0.3s,baz=189,slow=1.5,SNR=7.6						
CMAR	Chiang Mai Arr	150.19	245		PKiKP	22 47 28.1	0.0

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*IDC **02** 22:32:33.7±0.9, 11°.77N×87°.12W, h0^{km}, mb4.1/9, mb1 4.2/11, mb1mx3.9/38, mbtmp4.1/11, ML3.2/2, Error ellipse: s-maj=37.8km s-min=14.9km az=53.0*

*NEIC **02** 22:32:36.5±2.2, 11°.64N±0°.06×87°.24W±0°.06, h14^{km}±6^{km}, mb4.5/22, Error ellipse: s-maj=10.3km s-min=6.7km az=53.0*

*UCR **02** 22:32:37.4±1.1, 11°.10N×87°.51W, h34^{km}±999^{km}, MW4.6, mb4.5(NEIC)*

*INET **02** 22:32:38.5, 11°.58N×87°.29W, h18^{km}, MW3.8*

ISC 02 22:32:39.7±0.6,**11°.68N**±0°.06×**87°.14W**±0°.07,**h49^{km},n62,** σ**1^{s}15**/64,**mb4.3**/18,**Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	San Cristobal	1.01	5		Pn	22 32 57.4	-0.3
BOAB	BOACO BROADBAN	1.63	62	Pn	Pn	22 33 06.9	+0.9
MATN	Matagalpa	1.72	44	Pn	Pn	22 33 07.0	-0.3
HZTE	Horizontes, Gu	1.80	122	Pn	Pn	22 33 07.8	-0.6
ACON	Acoyapa	1.95	81	Pn	Pn	22 33 09.8	-0.6
DUNO	Dulce Nombre,	2.27	134	Pn	Pn	22 33 14.0	-0.9
ACAL	Aguas Claras	2.32	117	*i* P	Pn	22 33 16.3	+0.8
TGUH	Tegucigalpa,Un	2.36	357	Pn	Pn	22 33 14.2	-2.0
JTS	Las Juntas de	2.56	123	Pn	Pn	22 33 18.2	-0.6
JTS	Las Juntas de	2.56	123		Pn	22 33 17.2	-1.5
CAO2	Cobano, Puntar	2.82	135	Pn	Pn	22 33 23.1	+0.8
COVE	Coope Vega, Sa	2.86	109	Pn	Pn	22 33 23.4	+0.6
JACO	JACO, Garabito	3.16	129		Pn	22 33 25.4	-1.7
MTO3	Montecristo	3.46	322	Pn	Pn	22 33 30.6	-0.7
RIMA	Rio Macho	3.74	120		Pn	22 33 35.5	+0.2
PEZE	Perez Zeledon,	4.10	124	Pn	Pn	22 33 40.3	+0.2
SRBA	San Rafael, Bu	4.45	123	Pn	Pn	22 33 44.3	-0.5
APG	El Apazote	4.62	316	Pn	Pn	22 33 45.2	-2.0
	0.3nm,0.3s,baz=226,slow=16,SNR=2.1						
RIOS	Rincon, Osa	4.64	129	Pn	Pn	22 33 47.6	+0.2
CDITO	Canoas	5.22	126	Pn	Pn	22 33 56.2	+1.0
BRU2	Volcan	5.24	123	Pn	Pn	22 33 56.0	+0.3
CMIG	Matias Romero	9.22	307	Pn	Pn	22 34 48.5	-1.7
	0.8nm,0.3s,baz=154,slow=8.8,SNR=9.2						
CMIG				Sn	Sn	22 36 37.8	+5.1
	0.1nm,0.3s,baz=217,slow=16,SNR=1.2						
BAUV	El Baul	18.99	96	P	P	22 36 57.0	-0.4
BIRV	Birongo	20.52	91	P	P	22 37 13.1	-1.0
BIRV				IAmb	IAmb	22 37 28.9	
	comp=Z,19nm,1.1s						
TXAR	Lajitas Array	23.35	321	P	P	22 37 44.0	0.0
	comp=Z,1.6nm,0.7s,baz=136,slow=10,SNR=17						
TXAR				PcP	PcP	22 41 32.0	+2.1
	comp=Z,0.3nm,0.7s,baz=148,slow=7.3,SNR=4.1						
TXAR	Lajitas Array	23.35	321	P	P	22 37 43.5	-0.5
TX31	Lajitas Ar. Si	23.36	321	P	P	22 37 43.3	-0.8
TX31				IAmb	IAmb	22 37 45.9	
	comp=Z,9.6nm,0.9s						
MIAR	Mount Ida	23.50	347	P	P	22 37 45.5	+0.2
CPCT	Cooper Cave	23.78	5	P	P	22 37 49.1	+1.3
CPCT				IAmb	IAmb	22 37 50.9	
	comp=Z,15nm,1.3s						
H06E1	SOCORRO T-PHAS	23.99	290	T	T	23 02 41.0	
	SNR=10						
X37A	Clayton	24.00	343	P	P	22 37 51.1	+1.2
X37A				IAmb	IAmb	22 37 52.4	
	comp=Z,21nm,0.9s						
TKL	Tuckaleechee C	24.06	7	P	P	22 37 51.3	+0.8
	comp=Z,4.5nm,0.8s,baz=182,slow=11,SNR=5.4						
TKL	Tuckaleechee C	24.06	7	P	P	22 37 51.1	+0.6
V53A	Saluda	24.20	9	P	P	22 37 52.3	+0.5
LCAR	Lake Charles	24.55	352	P	P	22 37 54.3	-0.6
LCAR				IAmb	IAmb	22 37 55.1	
	comp=Z,6.3nm,0.8s						
U40A	Yellville	25.10	349	P	P	22 37 59.5	-0.4
U40A				IAmb	IAmb	22 38 00.7	
	comp=Z,6.3nm,0.8s						
TUL1	Leonard	25.36	343	P	P	22 38 01.9	-0.4
MSTX	Muleshoe	26.38	330	P	P	22 38 10.8	-0.9
MSTX				IAmb	IAmb	22 38 17.2	
	comp=Z,7.5nm,0.8s						
S39A	Bolivar	26.48	349	P	P	22 38 11.7	-0.7
S39A				IAmb	IAmb	22 38 12.8	
	comp=Z,7.0nm,0.8s						
Q51A	Peebles	27.44	6	P	P	22 38 21.6	+0.6
ETMB	Extrema	29.82	135	P	P	22 38 43.6	+1.2
ETMB				IAmb	IAmb	22 38 45.4	
	comp=Z,5.1nm,0.7s						
SSPA	Standing Stone	29.97	14	P	P	22 38 44.5	+1.0
SSPA				IAmb	IAmb	22 38 47.1	
	comp=Z,16nm,1.4s						
M57A	Sunshine Farm,	30.82	15	P	P	22 38 52.8	+1.8
L59A	Walton	32.18	17	P	P	22 39 04.5	+1.5
SADO	Sadowa	33.68	10	P	P	22 39 16.1	+0.1
	comp=Z,4.4nm,0.7s,baz=264,slow=17,SNR=5.3						
SADO	Sadowa	33.68	10	P	P	22 39 16.5	+0.5
SADO				IAmb	IAmb	22 39 16.8	
	comp=Z,5.7nm,0.8s						
G62A	West of Eustis	36.31	20	P	P	22 39 39.8	+1.1
PDAR	Pinedale Array	36.59	332	P	P	22 39 41.3	-0.1
	comp=Z,0.6nm,0.6s,baz=139,slow=7.2,SNR=4.1						
PDAR				PcP	PcP	22 42 03.9	0.0
	comp=Z,0.1nm,0.3s,baz=128,slow=1.5,SNR=3.6						
PDAR	Pinedale Array	36.59	332	P	P	22 39 41.6	+0.3
HWUT	Hardware Ranch	36.68	329	P	P	22 39 42.7	+0.5
SIV	San Ignacio	37.70	136	P	P	22 39 52.1	+1.2
	comp=Z,4.8nm,0.7s,baz=318,slow=7.9,SNR=13						
ULM	Lac du Bonnet	39.12	351	P	P	22 40 00.8	-1.6
	comp=Z,2.0nm,0.5s,baz=147,slow=12,SNR=3.9						
SCHQ	Schefferville	45.92	16	P	P	22 40 56.7	-0.8
	comp=Z,2.9nm,0.7s,baz=226,slow=3.6,SNR=3.6						
BDFB	Brasilia	47.30	124	P	P	22 41 09.4	+0.4
	comp=Z,3.7nm,0.6s,baz=308,slow=11,SNR=6.9						
BDFB	Brasilia	47.30	124	P	P	22 41 08.9	-0.1
BDFB				IAmb	IAmb	22 41 09.8	
	comp=Z,4.6nm,0.8s						
YKA	Yellowknife Ar	54.42	345	P	P	22 42 01.4	-0.3
	comp=Z,0.5nm,0.7s,baz=126,slow=8.6,SNR=2.8						
SONM	Songino Array	119.53	350	PKP	PKPdf	22 51 23.9	-0.5
	comp=Z,0.5nm,0.7s,baz=297,slow=1.0,SNR=3.7						
MKAR	Makanchi Array	121.03	8	PKP	PKPdf	22 51 26.3	-0.8
	comp=Z,0.3nm,0.6s,baz=310,slow=2.4,SNR=2.1						
ASAR	Alice Springs	139.26	247	PKP	PKiKP	22 52 03.3	-1.2
	comp=Z,0.1nm,0.4s,baz=100,slow=1.0,SNR=2.5						
WRA	Warramunga Arr	139.34	253	PKP	PKiKP	22 52 03.4	-1.3
	comp=Z,0.6nm,0.7s,baz=68,slow=0.1,SNR=3.2						
CMAR	Chiang Mai Arr	149.45	349	PKPbc	PKiKP	22 52 25.6	0.0
	comp=Z,2.1nm,0.8s,baz=345,slow=3.8,SNR=13						
CMAR	Chiang Mai Arr	149.45	349		PKPbc	22 52 24.7	+0.2

IDC 02 22:33:57.2±11.0,**33°.67S**×**110°.28W,h0^{km},mb3.5**/1, **mb1 4.0**/1,**mb1mx3.5**/33,**mbtmp3.5**/1,**Error ellipse: s-maj=738.5km s-min=73.9km az=111.0,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDAR	Pinedale Array	76.06	1	P	P	22 45 46.7	+0.1
	0.2nm,0.3s,baz=133,slow=3.8,SNR=2.9						
SONM	Songino Array	149.14	308	PKPbc	PKPbc	22 53 46.8	-0.6
	1.1nm,1.0s,baz=64,slow=3.4,SNR=4.0						
CMAR	Chiang Mai Arr	149.83	247	PKPbc	PKPbc	22 53 49.4	-0.4
	0.7nm,0.3s,baz=186,slow=1.8,SNR=1.6						

IDC 02 22:38:32.1±9.7,**33°.77S**×**110°.54W,h0^{km},mb3.9**/1, **mb1 4.3**/1,**mb1mx3.5**/31,**mbtmp3.9**/1,**MS3.7**/1,**Ms1 3.7**/1, **ms1mx3.3**/24,**Error ellipse: s-maj=649.9km s-min=66.9km az=111.0,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAOE	Nuku Hiva Isla	36.84	305	*e*LR	LR	22 56 17.6	
	comp=Z,377nm,27.6s						
MEH	Mehetia	37.07	286	*e*T	T	23 26 16.5	
	23nm,0.3s						
PPT2	Papeete2	38.43	285	*e*LR	LR	22 56 46.3	
	comp=Z,550nm,24.5s						
CMIG	Matias Romero	52.74	19	LR	LR	23 05 54.4	
	comp=Z,69nm,19.9s,baz=200,slow=31						
PDAR	Pinedale Array	76.17	1	P	P	22 50 22.2	+0.1
	1.0nm,1.0s,baz=142,slow=3.4,SNR=3.8						
SONM	Songino Array	149.03	308	PKPbc	PKPbc	22 58 21.4	-0.6
	1.6nm,0.9s,baz=100,slow=2.4,SNR=7.1						
CMAR	Chiang Mai Arr	149.59	247	PKPbc	PKPbc	22 58 23.6	-0.4
	0.6nm,0.3s,baz=188,slow=1.3,SNR=7.1						

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*IDC **02** 22:41:42.3±1.6, 34°.26S×109°.40W, h0^{km}, mb3.8/3, mb1 4.2/3, mb1mx3.7/33, mbtmp3.8/3, Error ellipse: s-maj=56.9km s-min=45.5km az=168.0*

ISC 02 22:41:43.2±1.1,**34°.4S**±0°.2×**109°.4W**±0°.3,**h10^{km},n9,** σ**0^{s}81**/9,**mb3.7**/3,**Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	41.11	75	P	P	22 49 28.4	+0.1
	1.0nm,0.8s,baz=250,slow=12,SNR=1.9						
VNA3	Neumayer Olymp	60.88	159	P	P	22 51 55.3	-0.2
VNA1	Neumayer--Stat	61.54	158	P	P	22 51 59.6	-0.3
VNA2	Neumayer--Watz	61.69	159	P	P	22 52 01.0	0.0
SNAA	Sanae	62.71	160	P	P	22 52 08.5	+0.6
NVAR	Mina Array Bea	72.91	353	P	P	22 53 13.7	+1.1
	1.4nm,0.9s,baz=184,slow=7.0						
PDAR	Pinedale Array	76.78	360	P	P	22 53 34.1	-0.9
	0.6nm,0.8s,baz=148,slow=5.3,SNR=3.9						
SONM	Songino Array	150.13	308	PKPbc	PKPbc	23 01 33.0	-1.1
	1.0nm,0.9s,baz=87,slow=1.9,SNR=5.3						
CMAR	Chiang Mai Arr	150.19	245	PKPbc	PKiKP	23 01 36.3	+0.6
	0.6nm,0.3s,baz=206,slow=0.9,SNR=5.6						

IDC 02 22:46:37.1±1.8,**5°.84S**×**130°.37E,h0^{km},mb3.6**/1, **mb1 3.6**/4,**mb1mx3.2**/51,**mbtmp3.5**/4,**ML3.4**/3,**Error ellipse: s-maj=80.4km s-min=28.2km az=81.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.02	10	Pn	Pn	22 47 53.3	-0.4
	2.8nm,0.3s,baz=43,slow=20,SNR=13						
SIJI				Sn	Sn	22 48 41.3	-11
	1.7nm,0.3s,baz=230,slow=22,SNR=2.6						
FITZ	Fitzroy Crossi	13.03	200	Sn	Sn	22 52 06.2	-3.3
	0.0nm,0.3s,baz=224,slow=7.7,SNR=1.6						
WRA	Warramunga Arr	14.54	165	Pn	Pn	22 50 02.5	-1.8
	0.1nm,0.3s,baz=347,slow=13,SNR=2.6						
WRA				Sn	Sn	22 52 37.4	-9.1
	0.2nm,0.3s,baz=347,slow=25,SNR=2.1						
ASAR	Alice Springs	18.05	169	P	P	22 50 50.5	+0.4
	0.1nm,0.3s,baz=349,slow=13,SNR=6.0						
MKAR	Makanchi Array	67.46	326	P	P	22 57 35.0	+0.1
	0.3nm,0.4s,baz=119,slow=8.2,SNR=4.7						

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*MAN **02** 22:50:55.0, 4°.59N×127°.42E, h23^{km}, mb4.8, ML3.7, MS3.7*

*DJA **02** 22:51:02.3±1.8, 5°N±16°×12°7E±°, h106^{km}±11^{km}, M4.3/7, mB4.7/1, mb4.4/2, MLv4.3/7, Mw(mB)3.9/1*

*IDC **02** 22:51:02.4±1.5, 5°.04N×127°.48E, h92^{km}±14^{km}, mb3.7/14, mb1 3.8/16, mb1mx3.4/68, mbtmp4.1/16, Error ellipse: s-maj=31.7km s-min=8.9km az=63.0*

*NEIC **02** 22:51:02.9±1.0, 5°.05N±0°.07×127°.4E±0°.1, h89^{km}±9^{km}, mb4.3/14, Error ellipse: s-maj=16.9km s-min=8.2km az=67.0*

ISC 02 22:51:03.1±0.5,**4°.96N**±0°.04×**127°.29E**±0°.07,**h100^{km},n50,** σ**1^{s}70**/59,**mb4.1**/20,**3C-3D,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.93	306	⇓*i*P	Pn	22 51 31.9	-2.9
DDMP				*i* S	Sn	22 51 56.7	-2.3
SGSI	Sangihe	2.16	234	P	Pn	22 51 36.6	-1.2
SGSI				S	Sn	22 52 02.3	-2.1
GSPH	General Santos	2.58	296	⇑*e*P	Pn	22 51 39.2	-4.2
GSPH				*i* S	Sn	22 52 03.9	-10
DAV	Davao City (W)	2.69	321	P	Pn	22 51 46.2	+1.3
	88nm,0.3s,baz=56,slow=7.3,SNR=7.1						
DAV				S	Sn	22 52 17.9	+1.0
	85nm,0.3s,baz=202,slow=14,SNR=1.9						
DAV	Davao City (W)	2.69	321		Pn	22 51 42.8	-2.0
DAV				Sn	Sn	22 52 15.8	-1.0
DMPH	Davao City--Mi	2.75	320	⇑*e*P	Pn	22 51 44.4	-1.2
DMPH				*e*S	Sn	22 52 25.1	+6.9
KCP	Kidapawan	2.98	313	⇓*e*P	Pn	22 51 46.9	-1.8
KCP				*i* S	Sn	22 52 26.8	+3.0
TNTI	Ternate	4.17	179	P	Pn	22 52 03.9	-0.7
TNTI	Ternate	4.17	179	Pn	Pn	22 52 04.8	+0.2
TNTI				Sn	Sn	22 52 53.6	+1.3
PAGZ	Pagadian	4.82	307	⇑*e*P	Pn	22 52 12.3	-1.2
GLSP	General Luna,	4.92	347	⇓*e*P	Pn	22 52 14.8	-0.1
LBMI	Labuha	5.57	178	P	Pn	22 52 23.7	+0.1
	0.2nm42nm,0.5s						
MRSI	Marisa	6.95	230	P	Pn	22 52 45.3	+2.9
SIJI	Sorong	7.03	145	P	Pn	22 52 42.5	-1.0
	3.3nm,0.3s,baz=331,slow=19,SNR=17						
SIJI				S	Sn	22 53 58.6	-3.2
	0.4nm,0.3s,baz=308,slow=23,SNR=1.1						
SANI	Sanana	7.09	191	P	Pn	22 52 41.3	-2.9
TOLI2	Tolitoli	7.54	240		Pn	22 52 48.5	-1.9
MYLDM	Lahad Datu	8.75	272	Pn	Pn	22 53 06.8	-0.1
FAKI	Fak Fak	9.27	148	Pn	Pn	22 53 12.8	-1.2
MTN	Manton Dam	18.10	168	P	P	22 55 07.6	+0.3
MTN				IAmb	IAmb	22 55 35.5	
	comp=Z,25nm,1.3s						
KNRA	Kununurra	20.56	176	P	P	22 55 35.0	+1.0
KNRA				IAmb	IAmb	22 55 58.5	
	comp=Z,15nm,1.1s						
FITZ	Fitzroy Crossi	22.97	184	P	P	22 55 59.9	+0.6
	comp=Z,1.9nm,0.7s,baz=19,slow=6.3,SNR=5.9						
WB0	Warramunga Arr	25.55	164	P	P	22 56 23.4	+0.6
WB0				IAmb	IAmb	22 56 25.9	
	comp=Z,9.8nm,0.6s						
WRA	Warramunga Arr	25.70	165	P	P	22 56 24.5	+0.3
	comp=Z,3.7nm,0.5s,baz=344,slow=10,SNR=47						
WRA	Warramunga Arr	25.70	165	P	P	22 56 25.0	+0.8
ASAR	Alice Springs	29.18	167	P	P	22 56 55.6	+0.3
	comp=Z,0.6nm,0.6s,baz=353,slow=8.1,SNR=8.4						
ASAR				PcP	PcP	23 00 01.6	+1.1
	comp=Z,0.3nm,0.4s,baz=3.3,slow=2.0,SNR=1.2						
JWT	Wachi	31.09	13	P	P	22 57 11.1	-0.9
BBOO	Buckleboo	38.48	168	P	P	22 58 16.6	+1.0
STKA	Stephens Creek	39.09	161	P	P	22 58 21.2	+0.5
	comp=Z,2.4nm,0.6s,baz=314,slow=7.4,SNR=7.4						
STKA	Stephens Creek	39.09	161	P	P	22 58 21.0	+0.4
SONM	Songino Array	46.32	341	P	P	22 59 20.9	+1.8
	comp=Z,0.3nm,0.6s,baz=131,slow=4.4,SNR=1.2						
PETK	Petropavlovsk-	54.09	22	P	P	23 00 17.7	+0.3
	comp=Z,4.8nm,1.0s,baz=173,slow=5.8,SNR=1.1						
MK31	Makanchi Array	56.87	325	P	P	23 00 37.8	+0.2
MK31				IAmb	IAmb	23 01 01.5	
	comp=Z,3.5nm,1.4s						
MKAR	Makanchi Array	56.87	325	P	P	23 00 37.8	+0.2
	comp=Z,0.8nm,0.5s,baz=116,slow=7.8,SNR=27						
MKAR	Makanchi Array	56.87	325	P	P	23 00 37.6	+0.1
MAKZ	Makanchi	57.06	324	P	P	23 00 39.2	+0.3
KURK	Kurchatov	61.01	327	P	P	23 01 06.6	+0.6
KURK				IAmb	IAmb	23 01 34.9	
	comp=Z,3.5nm,1.1s						
KURBB	Kurchatov Arra	61.01	327	P	P	23 01 05.5	-0.5
	comp=Z,1.2nm,0.6s,baz=126,slow=6.1,SNR=8.8						
BVAR	Borovoye Array	66.60	327	P	P	23 01 43.7	+1.0
	comp=Z,2.1nm,0.7s,baz=180,slow=10,SNR=12						
TIXI	Tiksi	66.61	1	P	P	23 01 40.8	-1.6
	comp=Z,0.6nm,0.3s,baz=137,slow=7.6,SNR=3.7						
TIXI	Tiksi	66.61	1	P	P	23 01 41.0	-1.4
BRVK	Borovoye	66.67	327	P	P	23 01 43.7	+0.6
BRVK				IAmb	IAmb	23 01 44.9	
	comp=Z,3.1nm,0.8s						
ABKAR	Akbulak array	71.55	320	P	P	23 02 13.7	+0.3
ABKAR				IAmb	IAmb	23 02 40.7	
	comp=Z,5.1nm,1.4s						
ABKAR	Akbulak array	71.55	320	P	P	23 02 13.4	0.0
AKTO	Aktyubinsk	73.05	321	P	P	23 02 22.8	+0.5
	comp=Z,1.9nm,0.7s,baz=82,slow=4.7,SNR=7.4						
ARU	Arti	74.20	327	P	P	23 02 29.2	+0.3
	comp=Z,0.4nm,0.4s,baz=23,slow=5.4,SNR=3.0						
MLY	Manley	82.13	25	P	P	23 03 12.5	-0.1
MLY				IAmb	IAmb	23 03 13.1	
	comp=Z,2.9nm,1.2s						
ILAR	Eielson Array	83.76	25	P	P	23 03 19.6	-1.3
	comp=Z,0.2nm,0.6s,baz=250,slow=5.9,SNR=4.7						
BMAR	Burnt Mountain	84.73	23	P	P	23 03 26.4	+0.6
ARCES	ARCESS Array B	89.49	340	P	P	23 03 48.1	-0.6
	comp=Z,3.2nm,0.8s,baz=26,slow=15,SNR=2.5						
TORD	Torodi Ar. Bea	123.05	289	PKP	PKiKP	23 09 49.2	0.0
	comp=Z,0.3nm,0.7s,baz=341,slow=2.7,SNR=2.5						

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*IDC **02** 22:55:03.3±0.7, 34°.40S×109°.25W, h0^{km}, mb4.1/12, mb1 4.3/12, mb1mx4.2/27, mbtmp4.1/12, MS4.4/14, Ms1 4.4/14, ms1mx4.3/23, Error ellipse: s-maj=23.7km s-min=20.3km az=103.0*

*NEIC **02** 22:55:06.5±1.5, 34°.4S±0°.1×109°.3W±0°.1, h10^{km}±1^{km}, mb4.8/51, Error ellipse: s-maj=20.8km s-min=16.4km az=165.0*

*GCMT **02** 22:55:07.4±0.2, 34°.44S±0°.02×109°.15W±0°.01, h12^{km}, MW5.0/117, Moment Tensor Solution. s55,c64; s117,c173; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.15±.10; $M_{\theta\theta}$0.17±.10; $M_{\phi\phi}$3.98±.09; $M_{r\theta}$1.73±.39; $M_{\theta\phi}$-0.49±.09; $M_{\phi r}$0.08±.31; Best double couple: $M_0$4.40500×10^{16} NP1:ϕs191.00000°,δ47.00000°, λ-63.00000°. NP2:ϕs334.00000°,δ49.00000°, λ-116.00000°. Principal axes: T 4.0450, Plg1.0000°, Azm82.0000°; N 0.7160, Plg20.0000°, Azm352.0000°; P -4.7640, Plg70.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 22:55:05.1±0.5,**34°.41S**±0°.10×**109°.33W**±0°.10,**h10^{km}, n102,** σ**1^{s}20**/91,**mb4.8**/38,**MS4.6**/16,**1C,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	7.26	360	LR	LR	22 59 01.5	

	comp=Z,2µm,18.3s,baz=192,slow=33						
PLCA	Paso Flores	31.19	113	P	P	23 01 23.7	-0.9
	2.9nm,1.0s,baz=228,slow=9.2,SNR=2.9						
ZON	Zonda	34.06	97	P	P	23 01 50.2	+0.4
ZON				IAmb	IAmb	23 01 59.8	
	comp=Z,14nm,1.2s						
AC02	Maricunga	35.23	89	P	P	23 02 00.3	-0.2
LVC	Limon Verde	37.19	82	P	P	23 02 15.0	-2.0
	comp=Z,5.5nm,1.0s,baz=225,slow=11,SNR=3.5						
LVC				LR	LR	23 13 21.8	
	comp=Z,1µm,21.9s,baz=210,slow=30						
LVC	Limon Verde	37.19	82	P	P	23 02 17.8	+0.7
LVC				IAmb	IAmb	23 02 23.8	
	comp=Z,24nm,1.4s						
TAOE	Nuku Hiva Isla	38.03	305	*e*LR	LR	23 12 53.5	
	comp=Z,1µm,26.6s,baz=136						
MEH	Mehetia	38.20	286	*e*T	T	23 42 52.3	
	comp=Z,27nm,0.2s						
ATAH	Atahualpa	39.36	54	P	P	23 02 34.1	-1.3
	comp=Z,4.5nm,0.7s,baz=43,slow=16,SNR=1.7						
TIAR	Tiarei	39.40	285	*e*T	T	23 44 19.4	
	comp=Z,0.5nm,0.2s						
PPT2	Papeete2	39.57	285	*e*S	S	23 08 37.4	-2.2
	comp=Z,152nm,25.2s						
PPT2				*e*LR	LR	23 13 19.4	
	comp=Z,2µm,25.5s,baz=118						
PPT	Papeete	39.58	285	LR	LR	23 14 50.6	
	comp=Z,940nm,18.7s,baz=167,slow=30						
LPAZ	La Paz	41.04	74	P	P	23 02 49.4	-0.3
	comp=Z,1.0nm,0.8s,baz=204,slow=9.5,SNR=1.5						
LPAZ				LR	LR	23 15 38.8	
	comp=Z,786nm,21.8s,baz=236,slow=30						
LPAZ	La Paz	41.04	74	P	P	23 02 49.9	+0.3
CZSB	Cruzeiro do Su	42.88	60	P	P	23 03 04.2	+0.3
ITQB	Itaqui	44.52	99	P	P	23 03 16.5	-0.5
ITQB				IAmb	IAmb	23 03 22.7	
	comp=Z,23nm,1.2s						
OTAV	Otavalo	44.99	47	P	P	23 03 20.6	-0.8
OTAV				IAmb	IAmb	23 03 40.6	
	comp=Z,24nm,1.8s						
CPUP	Villa Florida	45.17	94	LR	LR	23 19 01.7	
	comp=Z,691nm,19.4s,baz=250,slow=32						
RAR	Rarotonga	46.08	273	LR	LR	23 18 15.8	
	comp=Z,442nm,18.5s,baz=145,slow=30						
PTLB	Pontes e Lacer	48.75	80	P	P	23 03 51.2	+0.8
RIOS	Rincon, Osa	49.36	35	P	P	23 03 55.3	+0.3
BRU2	Volcan	49.83	35	P	P	23 03 59.4	+0.7
SRBA	San Rafael, Bu	49.90	34	P	P	23 04 00.3	+1.2
SRBA				IAmb	IAmb	23 04 13.1	
	comp=Z,20nm,1.8s						
JTS	Las Juntas de	50.11	32	P	P	23 04 01.2	+0.6
JTS				IAmb	IAmb	23 04 12.4	
	comp=Z,14nm,1.1s						
ROSC	El Rosal	51.12	47	P	P	23 04 07.3	-1.5
	comp=Z,5.9nm,0.4s,baz=15,slow=12,SNR=4.3						
ROSC				LR	LR	23 21 51.6	
	comp=Z,402nm,19.5s,baz=232,slow=32						
ROSC	El Rosal	51.12	47	P	P	23 04 09.3	+0.6
ZARC	Zaragoza, Cauc	52.91	45	P	P	23 04 22.3	+0.7
CMIG	Matias Romero	53.03	17	P	P	23 04 22.8	+0.4
	comp=Z,0.9nm,0.3s,baz=176,slow=5.4,SNR=2.2						
MOTC	Monteria, Cord	53.50	43	P	P	23 04 26.1	+0.1
MOTC				IAmb	IAmb	23 04 33.5	
	comp=Z,16nm,1.3s						
SJCC	San Jacinto, C	54.68	43	P	P	23 04 34.5	-0.1
MACA	Manacapuru-AM	54.81	67	P	P	23 04 33.2	-2.4
QSPA	South Pole Qui	55.79	180	P	P	23 04 42.6	+0.5
	comp=Z,2.5nm,0.8s,baz=123,slow=4.5,SNR=6.3						
QSPA				LR	LR	23 25 11.7	
	comp=Z,182nm,18.1s,baz=106,slow=32						
QSPA	South Pole Qui	55.79	180	P	P	23 04 43.2	+1.1
VNDA	Vanda	56.44	195	P	P	23 04 45.6	-0.9
	comp=Z,1.5nm,1.1s,baz=60,slow=10,SNR=2.4						
VNDA				LR	LR	23 23 45.1	
	comp=Z,256nm,21.2s,baz=96,slow=30						
VNDA	Vanda	56.44	195	P	P	23 04 47.8	+1.3
BDFB	Brasilia	57.79	87	P	P	23 04 57.5	+0.4
	comp=Z,0.9nm,0.3s,baz=339,slow=5.5,SNR=2.5						
BDFB				LR	LR	23 27 34.7	
	comp=Z,489nm,18.1s,baz=275,slow=34						
URZ	Urewera	57.92	243	LR	LR	23 24 21.3	
	comp=Z,674nm,20.1s,baz=30,slow=30						
BAUV	El Baul	58.20	50	P	P	23 04 59.7	0.0
VNA3	Neumayer Olymp	60.83	159	P	P	23 05 17.1	0.0
VNA1	Neumayer--Stat	61.48	158	P	P	23 05 25.5	+4.0
VNA2	Neumayer--Watz	61.64	159	P	P	23 05 23.3	+0.7
SNAA	Sanae	62.66	160	P	P	23 05 29.7	+0.2
SNAA	Sanae	62.66	160	P	P	23 05 29.7	+0.2
TXAR	Lajitas Array	63.62	6	P	P	23 05 36.7	+0.4
	comp=Z,0.5nm,1.0s,baz=103,slow=26,SNR=2.8						
TXAR				LR	LR	23 27 53.5	
	comp=Z,76nm,21.4s,baz=0.0,slow=31						
TXAR	Lajitas Array	63.62	6	P	P	23 05 37.5	+1.1
JCT	Junction City	65.16	9	P	P	23 05 46.9	+0.5
LENM	Lemitar	68.25	2	P	P	23 06 07.8	+1.6
MSTX	Muleshoe	68.30	6	P	P	23 06 08.2	+1.9
MSTX				IAmb	IAmb	23 06 16.6	
	comp=Z,7.7nm,1.1s						
X18A	Snowflake	68.58	359	P	P	23 06 09.6	+1.3
X18A				IAmb	IAmb	23 06 19.7	
	comp=Z,6.0nm,0.9s						
GSC	Goldstone, Bar	69.70	353	P	P	23 06 16.3	+1.2
GSC				IAmb	IAmb	23 06 24.5	
	comp=Z,5.6nm,0.6s						
QSM	Queen of Sheba	70.36	354	P	P	23 06 19.9	+0.9
QSM				IAmb	IAmb	23 06 31.2	
	comp=Z,8.3nm,1.3s						
U15A	North Rim	70.53	357	P	P	23 06 21.4	+1.1
U15A				IAmb	IAmb	23 06 31.1	
	comp=Z,17nm,1.7s						
PRN	Pahroc Range	71.65	355	P	P	23 06 28.6	+1.6
PRN				IAmb	IAmb	23 06 39.1	
	comp=Z,17nm,1.6s						
CCUT	Cedar City	71.69	357	P	P	23 06 29.4	+2.1
CCUT				IAmb	IAmb	23 06 39.1	
	comp=Z,11nm,1.4s						
HHAR	Hobbs	71.78	13	P	P	23 06 28.4	+0.8
TPH	Tonopah	72.49	353	P	P	23 06 33.8	+1.7
R11A	Troy Canyon, C	72.62	355	P	P	23 06 34.4	+1.6
LHV	Little Huntoon	72.79	352	P	P	23 06 34.9	+1.3
NV11	Mina Array Sit	72.94	353	P	P	23 06 35.6	+1.0
NV11				IAmb	IAmb	23 06 38.7	
	comp=Z,7.2nm,0.9s						
NVAR	Mina Array Bea	72.95	353	P	P	23 06 35.6	+0.8
	comp=Z,3.9nm,0.8s,baz=191,slow=6.9,SNR=8.4						
NVAR	Mina Array Bea	72.95	353	P	P	23 06 35.8	+1.1
MGMO	Mountain Grove	72.95	14	P	P	23 06 36.0	+1.4
MGMO				IAmb	IAmb	23 06 45.1	
	comp=Z,9.9nm,1.4s						
T42A	Van Buren	73.08	15	P	P	23 06 36.3	+1.1
T42A				IAmb	IAmb	23 06 45.9	
	comp=Z,9.2nm,1.2s						
SPR3	Spring Creek 3	73.19	356	P	P	23 06 37.6	+1.3
SPR3				IAmb	IAmb	23 06 47.1	
	comp=Z,12nm,1.3s						
DZM	Mont Dzumac	73.30	254	*e*LR	LR	23 28 44.0	
	comp=Z,532nm,24.9s						
KVN	Kaiserville	73.54	353	P	P	23 06 39.5	+1.2
KVN				IAmb	IAmb	23 06 50.5	
	comp=Z,10nm,1.1s						
SYO	Syowa Base	74.36	169⇑	*e*X	P	23 06 52.9	+10
JLU	Jordanelle	74.67	358	P	P	23 06 45.1	+0.2
JLU				IAmb	IAmb	23 06 59.2	
	comp=Z,18nm,1.6s						
BMN	Battle Mountai	74.83	354	P	P	23 06 46.2	+0.5
BMN				IAmb	IAmb	23 06 57.7	
	comp=Z,7.9nm,1.0s						
N35A	Tabor	75.95	11	P	P	23 06 52.0	0.0
MOD	Modoc Plateau	76.61	352	P	P	23 06 56.5	+0.7
BW06	Boulder Array	76.80	360	P	P	23 06 57.2	+0.2
BW06				IAmb	IAmb	23 07 07.4	
	comp=Z,7.8nm,1.2s						
PD31	Pinedale Array	76.80	360	P	P	23 06 57.3	+0.3
PDAR	Pinedale Array	76.80	360	P	P	23 06 56.0	-1.1
	comp=Z,1.7nm,0.9s,baz=152,slow=6.7,SNR=7.3						
PDAR				LR	LR	23 35 22.0	
	comp=Z,126nm,20.0s,baz=193,slow=32						
PDAR	Pinedale Array	76.80	360	P	P	23 06 57.0	0.0
LOHW	Long Hollow	77.66	359	P	P	23 07 02.2	+0.4
LOHW				IAmb	IAmb	23 07 12.5	
	comp=Z,12nm,1.5s						
HLID	Hailey	77.74	356	P	P	23 07 02.7	+0.5
HLID				IAmb	IAmb	23 07 14.3	
	comp=Z,9.1nm,1.1s						
FLWY	Flagg Ranch	78.13	359	P	P	23 07 05.4	+1.0
FLWY				IAmb	IAmb	23 07 17.8	
	comp=Z,17nm,1.6s						
BCYI	Bear Canyon	78.44	357	P	P	23 07 07.5	+1.4
MCMT	McKenzie Canyo	78.93	357	P	P	23 07 09.7	+0.9
PLID	Pearl Lake	79.36	355	P	P	23 07 11.6	+0.5
G08A	Pilot Rock	79.81	353	P	P	23 07 14.0	+0.6
G08A				IAmb	IAmb	23 07 25.2	
	comp=Z,17nm,1.6s						
JTMT	Jette	81.91	357	P	P	23 07 26.8	+2.2
JTMT				IAmb	IAmb	23 07 36.6	
	comp=Z,6.5nm,1.0s						
NEW	Newport	82.60	355	P	P	23 07 30.3	+2.2
STKA	Stephens Creek	86.23	234	LR	LR	23 40 54.5	
	comp=Z,266nm,18.0s,baz=145,slow=32						
BURAR	Bucovina Array	143.77	55	PKPdf	PKiKP	23 14 42.6	-1.1
AKASG	Malin Array Be	145.92	49	PKPbc	PKPdf	23 14 42.0	-1.8
	comp=Z,0.1nm,0.3s,baz=279,slow=3.4,SNR=5.5						
AKASG	Malin Array Be	145.92	49		PKPdf	23 14 41.8	-1.9
ENH	Enshi	147.08	274		PKPbc	23 14 48.4	-0.1
OBN	Obninsk	148.62	38	PKPdf	PKPdf	23 14 50.3	+2.2
ULN	Ulaanbaatar	149.78	307	PKPbc	PKPbc	23 14 54.5	-0.7
BRTR	Keskin Array B	150.12	69	PKPbc	PKPbc	23 14 55.7	-0.5
	comp=Z,0.6nm,0.4s,baz=306,slow=37,SNR=1.6						
SONM	Songino Array	150.22	308	PKPbc	PKPbc	23 14 55.4	-0.8
	comp=Z,1.6nm,0.7s,baz=142,slow=3.1,SNR=9.9						
SONM	Songino Array	150.22	308		PKPbc	23 14 56.5	+0.3
CM31	Chiang Mai Arr	150.25	245	PKPbc	PKiKP	23 14 58.2	+0.4
CMAR	Chiang Mai Arr	150.25	245	PKPbc	PKPbc	23 14 57.2	+0.2
	comp=Z,0.6nm,0.3s,baz=196,slow=1.5,SNR=7.5						
CMAR	Chiang Mai Arr	150.25	245		PKPbc	23 14 56.7	-0.3
CHTO	Chiang Mai	150.46	246	PKPbc	PKPbc	23 14 57.0	-0.5
TLY	Talaya	150.69	316	PKPbc	PKPbc	23 14 57.7	+0.6
ZALV	Zalesovo Beam	158.06	337	PKP	PKPdf	23 14 59.5	-2.2
	comp=Z,0.2nm,0.4s,baz=53,slow=0.7,SNR=1.4						
ZALV	Zalesovo Beam	158.06	337		PKPdf	23 14 59.1	-2.6
KURBB	Kurchatov Arra	162.81	343	PKPab	PKPab	23 15 55.3	-0.7
	comp=Z,0.2nm,0.3s,baz=89,slow=3.9,SNR=1.4						

IDC 02 22:58:47.7±2.2**, 33°.64S**×**111°.24W, h0^{km}, mb3.7**/1**, mb1 4.1**/1**, mb1mx3.6**/24**, mbtmp3.7**/1**, Error ellipse: s-maj=134.4km s-min=70.9km az=119.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDAR	Pinedale Array	76.05	1	P	P	23 10 37.2	+0.2
	0.3nm,0.8s,baz=154,slow=5.0,SNR=3.6						
AKASG	Malin Array Be	146.58	47	PKPbc	PKPdf	23 18 29.7	+0.5
	0.2nm,0.4s,baz=290,slow=2.8,SNR=1.7						
SONM	Songino Array	148.49	308	PKPbc	PKPbc	23 18 35.5	-0.8
	0.8nm,0.9s,baz=83,slow=3.5,SNR=3.9						
CMAR	Chiang Mai Arr	149.10	248	PKPbc	PKPbc	23 18 38.0	-0.5
	0.8nm,0.3s,baz=180,slow=0.3,SNR=1.7						

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*IDC **02** 23:07:49.0±0.8, 34°.29S×109°.20W, h0^{km}, mb4.1/6, mb1 4.3/6, mb1mx4.0/24, mbtmp4.1/6, MS4.3/11, Ms1 4.2/11, ms1mx4.0/22, Error ellipse: s-maj=27.5km s-min=24.8km az=87.0*

*GCMT **02** 23:07:49.9±0.3, 34°.50S±0°.03×109°.16W±0°.02, h19^{km}, MW5.1/103, Moment Tensor Solution. s26,c27; s103,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.72±.27; M$_{\theta\theta}$0.32±.15; M$_{\phi\phi}$4.40±.18; M$_{r\theta}$1.69±.43; M$_{\theta\phi}$-0.76±.11; M$_{\phi r}$-0.17±.34; Best double couple: M$_0$4.89900×10^{16} NP1:φ$_s$185.00000°, δ44.00000°, λ-66.00000°. NP2:φ$_s$333.00000°, δ50.00000°, λ-112.00000°. Principal axes: T 4.5630, Plg3.0000°, Azm79.0000°; N 0.6720, Plg17.0000°, Azm348.0000°; P -5.2350, Plg73.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **02** 23:07:50.9±1.3, 34°.4S±0°.1×109°.17W±0°.05, h10^{km}±1^{km}, mb4.7/27 Error ellipse: s-maj=21.5km s-min=7.8km az=184.0*

ISC 02 23:07:50.3±0.6**, 34°.3S**±0°.1×**109°.3W**±0°.1**, h10^{km}, n59, σ1^{s}13**/48**, mb4.6**/18**, MS4.3**/13**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	31.17	113	P	P	23 14 09.6	+0.1
	1.7nm,0.9s,baz=282,slow=9.3,SNR=3.8						
PLCA				LR	LR	23 22 21.6	
	comp=Z,90nm,21.2s,baz=299,slow=28						
PLCA	Paso Flores	31.17	113	P	P	23 14 08.1	-1.4
USHA	Ushuaia	34.90	139	LR	LR	23 25 12.6	
	comp=Z,567nm,20.4s,baz=275,slow=30						
LVC	Limon Verde	37.12	82	P	P	23 15 00.9	-0.7
	4.3nm,0.9s,baz=246,slow=9.3,SNR=2.0						
LVC				LR	LR	23 26 16.3	
	comp=Z,790nm,19.2s,baz=244,slow=30						
TAOE	Nuku Hiva Isla	38.03	305	*e*LR	LR	23 25 28.6	
	comp=Z,876nm,26.8s						
MEH	Mehetia	38.24	285	*e*T	T	23 55 36.5	
	26nm,0.2s						
ATAH	Atahualpa	39.27	54	LR	LR	23 27 42.5	
	comp=Z,587nm,19.4s,baz=236,slow=30						
PPT2	Papeete2	39.60	285	*e*S	S	23 21 22.9	-2.3
	140nm,24.5s						
PPT2				*e*LR	LR	23 26 05.5	
	comp=Z,2µm,25.2s,baz=108						
PMSA	Palmer Station	40.80	152	LR	LR	23 26 45.9	
	comp=Z,347nm,20.3s,baz=119,slow=28						
LPAZ	La Paz	40.97	74	P	P	23 15 34.2	+0.1
	1.6nm,1.0s,baz=238,slow=5.8,SNR=4.3						
LPAZ	La Paz	40.97	74	P	P	23 15 33.6	-0.5
CZSB	Cruzeiro do Su	42.79	60	P	P	23 15 48.1	-0.2
RAR	Rarotonga	46.13	273	LR	LR	23 30 16.8	
	comp=Z,267nm,20.6s,baz=158,slow=29						
SIV	San Ignacio	46.82	79	LR	LR	23 33 24.6	
	comp=Z,385nm,20.8s,baz=285,slow=33						
ROSC	El Rosal	51.02	47	LR	LR	23 34 36.8	
	comp=Z,287nm,19.6s,baz=230,slow=32						
ROSC	El Rosal	51.02	47	P	P	23 16 53.9	+0.8
QSPA	South Pole Qui	55.87	180	P	P	23 17 28.4	+0.5
	0.6nm,0.3s,baz=122,slow=7.2,SNR=2.2						
QSPA	South Pole Qui	55.87	180	P	P	23 17 27.9	+0.1
QSPA				IAmb	IAmb	23 17 39.0	
	comp=Z,23nm,1.7s						
VNDA	Vanda	56.54	195	P	P	23 17 33.2	+0.9
	comp=Z,2.5nm,1.3s,baz=128,slow=5.2,SNR=3.2						
VNDA				LR	LR	23 36 29.6	
	comp=Z,184nm,21.4s,baz=99,slow=30						
VNDA	Vanda	56.54	195	P	P	23 17 32.9	+0.6
VNDA				IAmb	IAmb	23 17 56.2	
	comp=Z,7.6nm,1.3s						
BDFB	Brasilia	57.73	87	LR	LR	23 40 01.6	
	comp=Z,359nm,19.0s,baz=262,slow=34						
BDFB	Brasilia	57.73	87	P	P	23 17 42.0	+0.3
BDFB				IAmb	IAmb	23 17 58.5	
	comp=Z,23nm,1.6s						
BAUV	El Baul	58.11	50	P	P	23 17 43.1	-1.0
BIRV	Birongo	60.40	50	P	P	23 17 59.3	-0.7
VNA3	Neumayer Olymp	60.89	159	P	P	23 18 02.4	-0.2
VNA1	Neumayer--Stat	61.54	158	P	P	23 18 07.7	+0.7
VNA2	Neumayer--Watz	61.70	159	P	P	23 18 07.7	-0.4
	baz=262,slow=6.4						
SNAA	Sanae	62.71	160	P	P	23 18 14.6	-0.4
SNAA	Sanae	62.71	160	P	P	23 18 14.2	-0.8
121A	Cookes Peak, D	66.52	1	P	P	23 18 42.8	+2.4
121A				IAmb	IAmb	23 18 44.7	
	comp=Z,11nm,1.4s						
ISA	Isabella, Lake	70.16	352	P	P	23 19 03.6	+0.7
ISA				IAmb	IAmb	23 19 06.4	
	comp=Z,3.3nm,0.8s						
TUL1	Leonard	71.00	12	P	P	23 19 08.4	+0.4
TUL1				IAmb	IAmb	23 19 28.3	
	comp=Z,9.9nm,1.1s						
CCUT	Cedar City	71.61	357	P	P	23 19 12.9	+0.9
CCUT				IAmb	IAmb	23 19 23.3	
	comp=Z,9.0nm,1.4s						
TPH	Tonopah	72.41	353	P	P	23 19 18.2	+1.5
R11A	Troy Canyon, C	72.55	355	P	P	23 19 18.9	+1.4
NVAR	Mina Array Bea	72.87	353	P	P	23 19 20.3	+0.8
	baz=186,slow=7.3						
SPR3	Spring Creek 3	73.11	356	P	P	23 19 21.4	+0.5
TMUT	Trail Mountain	73.28	358	P	P	23 19 23.4	+1.5
DZM	Mont Dzumac	73.38	254	*e*LR	LR	23 41 41.0	
	comp=Z,368nm,23.2s						
DZM	Mont Dzumac	73.38	254	LR	LR	23 44 27.5	
	comp=Z,204nm,19.3s,baz=132,slow=30						
KVN	Kaiserville	73.47	353	P	P	23 19 24.4	+1.4
KVN				IAmb	IAmb	23 19 36.1	
	comp=Z,7.6nm,1.1s						
RDMU	Red Mountain	74.53	360	P	P	23 19 30.1	+0.9
RDMU				IAmb	IAmb	23 19 31.8	
	comp=Z,11nm,1.5s						
BMN	Battle Mountai	74.75	354	P	P	23 19 31.6	+1.2
BMN				IAmb	IAmb	23 19 42.8	
	comp=Z,7.5nm,1.2s						
PD31	Pinedale Array	76.72	360	P	P	23 19 42.1	+0.4
PDAR	Pinedale Array	76.72	360	P	P	23 19 41.9	+0.2
	comp=Z,2.0nm,0.9s,baz=156,slow=7.6,SNR=11						
TPAW	Teton Pass	77.46	359	P	P	23 19 47.2	+1.3
TPAW				IAmb	IAmb	23 19 48.3	
	comp=Z,4.5nm,0.9s						
LOHW	Long Hollow	77.58	359	P	P	23 19 47.8	+1.4
LOHW				IAmb	IAmb	23 19 58.1	
	comp=Z,15nm,1.8s						
HLID	Hailey	77.66	356	P	P	23 19 47.9	+1.0
HLID				IAmb	IAmb	23 19 58.7	
	comp=Z,9.3nm,1.2s						
BCYI	Bear Canyon	78.36	357	P	P	23 19 51.5	+0.7
JTMT	Jette	81.83	357	P	P	23 20 10.0	+0.7
JTMT				IAmb	IAmb	23 20 12.4	
	comp=Z,5.4nm,1.0s						
AKASG	Malin Array Be	145.82	49	PKPbc	PKPdf	23 27 27.7	-0.9
	comp=Z,0.4nm,0.4s,baz=279,slow=3.6,SNR=6.3						
SONM	Songino Array	150.21	308	PKPbc	PKPbc	23 27 40.4	-0.9
	comp=Z,2.0nm,0.7s,baz=125,slow=2.1,SNR=15						
SONM	Songino Array	150.21	308		PKPbc	23 27 40.1	-1.2
CM31	Chiang Mai Arr	150.33	245	PKPbc	PKPbc	23 27 43.1	+0.8
CMAR	Chiang Mai Arr	150.33	245	PKPbc	PKPbc	23 27 43.0	+0.7
	comp=Z,0.9nm,0.5s,baz=190,slow=1.4,SNR=9.2						
CMAR	Chiang Mai Arr	150.33	245		PKPbc	23 27 41.6	-0.7
CHTO	Chiang Mai	150.55	246		PKPdf	23 27 40.6	+3.2
TLY	Talaya	150.67	316		PKPbc	23 27 41.4	-0.7
ZALV	Zalesovo Beam	158.01	337	PKPdf	PKPdf	23 27 44.8	-2.0

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*ATH **02** 23:09:27.7, 35°.54N×28°.60E, h10^{km}±31^{km}, ML2.2/2, Error ellipse: s-maj=31.6km s-min=2.0km az=0.0*

*ISK **02** 23:09:29.6, 35°.76N×28°.53E, h60^{km}±1^{km}, ML2.8/18*

*NIC **02** 23:09:29.8±0.0, 35°.74N×28°.65E, h53^{km}±5^{km}, Ml3.5/2*

*DDA **02** 23:09:29.8, 35°.88N×28°.53E, h42^{km}±1^{km}, ML2.5*

ISC 02 23:09:29.9±1.3**, 35°.77N**±0°.04×**28°.60E**±0°.03**, h62^{km}**±11^{km}**, n47, σ0^{s}98**/71**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.59	320	P	Pn	23 09 42.8	-0.2
ARG				S	Sn	23 09 52.7	+0.2
ARG				AML	AML	23 09 53.8	
	comp=N,224µm,0.1s						
ARG				AML	AML	23 09 55.9	
	comp=E,327µm,0.2s						
ARG	Arkhangelos	0.59	320	PG	Pn	23 09 42.8	-0.2
ARG				SG	Sn	23 09 52.4	-0.2
ARG	Arkhangelos	0.59	320	P	Pn	23 09 42.9	-0.1
ARG				S	Sn	23 09 53.3	+0.8
KSL	Kastellorizon	0.89	64	P	Pn	23 09 47.1	+0.6
KSL				S	Sn	23 09 59.6	+0.8
KSL				AML	AML	23 10 00.4	
	comp=E,528µm,0.7s						
KSL				AML	AML	23 10 01.1	
	comp=N,287µm,0.7s						
KSL	Kastellorizon	0.89	64	P	Pn	23 09 46.8	+0.3
KSL				S	Sn	23 09 58.9	0.0
AKAS	Kas	0.94	60	*i* P	Pn	23 09 47.1	-0.3
AKAS				*i* S	Sn	23 09 58.9	-1.5
AKAS				IAML		23 10 02.0	
	comp=E,197nm,0.4s						
AKAS				IAML		23 10 03.0	
	comp=N,224nm,0.4s						
AKAS	Kas	0.94	60	PG	Pn	23 09 48.1	+0.7
FETY	Fethiye	0.95	24	*i* P	Pn	23 09 47.4	-0.1
FETY				*i* S	Sn	23 09 59.6	-0.8
FETY	Fethiye	0.95	24	PG	Pn	23 09 47.9	+0.5
FETY				SG	Sn	23 10 01.6	+1.2
TURN	Turunc	1.04	344	*i* P	Pn	23 09 49.0	+0.4
TURN				*i* S	Sn	23 10 00.7	-1.8
TURN				IAML		23 10 04.0	
	comp=E,180nm,0.3s						
TURN				IAML		23 10 05.0	
	comp=N,108nm,0.3s						
TURN	Turunc	1.04	344	PG	Pn	23 09 49.3	+0.7
TURN				SG	Sn	23 10 02.8	+0.3
DALY	Dalyan (Mula)	1.05	3	*i* P	Pn	23 09 48.3	-0.3
DALY				*i* S	Sn	23 10 01.9	-0.6
DALY				IAML		23 10 14.0	
	comp=E,90nm,1.1s						
DALY	Dalyan (Mula)	1.05	3	PG	Pn	23 09 49.1	+0.5
DALY				SG	Sn	23 10 03.3	+0.8
DAT	Datca	1.26	320	*i* P	Pn	23 09 51.4	-0.2
DAT				*i* S	Sn	23 10 06.7	-1.1
DAT				IAML		23 10 11.0	
	comp=N,82nm,0.2s						
DAT	Datca	1.26	320	PN	Pn	23 09 51.9	+0.3
DAT				SN	Sn	23 10 07.8	0.0
ELL	Elmali	1.44	47	PN	Pn	23 09 55.2	+1.2
ELL	Elmali	1.44	47	P	Pn	23 09 54.8	+0.9
ELL				S	Sn	23 10 12.0	-0.1
CAEL	Denizli, Camel	1.47	23	*i* P	Pn	23 09 54.9	+0.5
MULA	Mugla, Merkez-	1.50	352	*i* P	Pn	23 09 55.8	+1.0
MULA				*i* S	Sn	23 10 12.8	-0.7
MULA				IAML		23 10 17.0	
	comp=E,42nm,0.3s						
AKUM	Antalya-Kumluc	1.52	68	*i* P	Pn	23 09 55.1	+0.2
AKUM				*i* S	Sn	23 10 12.8	-0.9
AKUM				IAML		23 10 15.0	
	comp=N,68nm,0.7s						
AKUM				IAML		23 10 23.0	
	comp=E,45nm,1.3s						
BDRM	Kayabasi	1.59	325	*i* P	Pn	23 09 55.0	-0.9
BDRM				*i* S	Sn	23 10 13.0	-2.5
BODT	Bodrum	1.66	322	PN	Pn	23 09 56.9	+0.2
GOLH	Golhisar	1.66	28	*i* P	Pn	23 09 58.6	+1.8
MLSB	Milas	1.66	337	PN	Pn	23 09 57.3	+0.5
MLSB				SN	Sn	23 10 17.5	+0.3
TAVA	DENIZLI_Tavas	1.71	8	*i* P	Pn	23 09 58.1	+0.5
TAVA				*i* S	Sn	23 10 15.2	-3.3
KORT	Korkueli	1.88	48	*i* P	Pn	23 10 01.7	+1.9
KORT	Korkueli	1.88	48	PN	Pn	23 10 01.3	+1.5
AYDN	Tasoluk	1.98	343	*i* P	Pn	23 10 02.1	+1.1
ANTB	Antalya	2.01	55	PN	Pn	23 10 03.0	+1.5
ZKR	Zakros	2.05	252	P	Pn	23 10 02.9	+0.9
ZKR	Zakros	2.05	252	PN	Pn	23 10 02.2	+0.2
ZKR				SN	Sn	23 10 26.1	-0.4
ZKR	Zakros	2.05	252	P	Pn	23 10 02.8	+0.9
GCAM	G?zelcaml?	2.22	331	PN	Pn	23 10 05.2	+0.9
AYDB	Zeytinkoy-Aydi	2.25	346	PN	Pn	23 10 05.8	+1.0
AYDB				SN	Sn	23 10 32.0	+0.5
NPS	Neapolis	2.48	259	P	Pn	23 10 09.6	+1.6
SANT	Santorini	2.61	284	PN	Pn	23 10 10.1	+0.4
KULA	Kula-Manisa	2.74	1	PN	Pn	23 10 12.9	+1.4
APE	Apeiranthos	2.79	299	PN	Pn	23 10 12.7	+0.5
BLCB	Balcova	2.89	335	PN	Pn	23 10 14.3	+0.8
USAK	Uak-Merkez	2.96	6	*i* P	Pn	23 10 14.2	-0.3
USAK				IAML		23 10 39.0	
	comp=N,43nm,0.7s						
USAK				*i* S	Sn	23 10 46.6	-2.2
AKMS	Akamas	3.15	103	P	Pn	23 10 16.5	-0.4
AKMS				AML	AML	23 10 52.2	
	comp=N,0.2nm,0.3s						
AKMS				AML	AML	23 10 52.9	
	comp=N,0.5nm,0.3s						
OSC1	CSNet OBS 1	3.16	135	P	Pn	23 10 17.0	-0.2
OSC1				S	Sn	23 10 53.3	-0.4
ALFC	Alefka	3.32	99	P	Pn	23 10 19.8	+0.3
ALFC				AML	AML	23 10 58.2	
	comp=N,0.3nm,0.3s						
ALFC				AML	AML	23 10 59.2	
	comp=N,0.3nm,0.2s						
NATA	Nata	3.40	106	P	Pn	23 10 20.1	-0.3
ASGA	Asgata	3.93	103	P	Pn	23 10 27.6	0.0
CSS	Mathiatis	3.95	100	P	Pn	23 10 27.8	-0.2
OSC2	CSNet OBS 4	4.05	130	P	Pn	23 10 30.0	+0.7

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*IDC **02** 23:15:59.2±0.9, 34°.17S×109°.28W, h0^{km}, mb3.9/7, mb1 4.2/7, mb1mx4.0/24, mbtmp3.9/7, MS4.1/6, Ms1 4.1/6, ms1mx3.9/20, Error ellipse: s-maj=30.9km s-min=24.9km az=108.0*

*GCMT **02** 23:16:00.5±0.3, 34°.54S±0°.04×109°.11W±0°.03, h20^{km}±1^{km},* *MW5.0/97, Moment Tensor Solution. s12,c13; s97,c125; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.68±.31; $M_{\theta\theta}$0.26±.16; $M_{\phi\phi}$3.42±.20; $M_{r\theta}$0.82±.36; $M_{\theta\phi}$-0.40±.10; $M_{\phi r}$-1.17±.30; Best double couple: $M_0$3.84500×10^{16} NP1:ϕ_s181.00000°,δ36.00000°,λ-76.00000°. NP2: ϕ_s344.00000°,δ55.00000°,λ-100.00000°. Principal axes: T 3.6910, Plg10.0000°, Azm81.0000°; N 0.3090, Plg8.0000°, Azm349.0000°; P -3.9990, Plg77.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **02** 23:16:00.5±1.6, 34°.40S±0°.05×108°.9W±0°.2, h10^{km}±1^{km}, mb4.7/29 Error ellipse: s-maj=27.1km s-min=7.7km az=281.0*

ISC 02 23:16:00.8±0.7**, 34°.3S**±0°.1×**108°.9W**±0°.1**, h10**^{km}**, n54, σ**1^{s}**19**/45**, mb4.7**/20**, MS4.2**/9**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	30.87	113	P	P	23 22 19.8	+2.4
	1.7nm,0.9s,baz=294,slow=10.0,SNR=2.6						
PLCA				LR	LR	23 32 23.7	
	comp=Z,170nm,18.6s,baz=293,slow=32						
BO02	Sierra Bellavi	31.24	102	P	P	23 22 18.8	-1.8
BO02				IAmb	IAmb	23 22 28.7	
	comp=Z,15nm,1.2s						
MT09	Talagante	31.26	100	P	P	23 22 19.3	-1.6
MT09				IAmb	IAmb	23 22 24.3	
	comp=Z,13nm,1.1s						
ZON	Zonda	33.68	97	P	P	23 22 41.5	-0.6
ZON				IAmb	IAmb	23 22 48.0	
	comp=Z,14nm,1.3s						
LVC	Limon Verde	36.78	82	P	P	23 23 12.6	+3.4
	comp=Z,2.2nm,0.5s,baz=242,slow=6.7,SNR=3.8						
LVC	Limon Verde	36.78	82	P	P	23 23 08.9	-0.3
LVC				IAmb	IAmb	23 23 14.9	
	comp=Z,14nm,1.2s						
TAOE	Nuku Hiva Isla	38.29	304	eLR	LR	23 33 37.0	
	comp=Z,700nm,26.6s						
MEH	Mehetia	38.56	285	eT	T	00 03 43.7	
	comp=Z,18nm,0.2s						
PPT2	Papeete2	39.92	284	eLR	LR	23 34 14.4	
	comp=Z,1µm,25.5s						
LPAZ	La Paz	40.63	74	P	P	23 23 44.3	+2.5
	comp=Z,0.8nm,0.6s,baz=244,slow=9.2,SNR=2.2						
LPAZ	La Paz	40.63	74	P	P	23 23 42.0	+0.1
PMSA	Palmer Station	40.67	152	LR	LR	23 36 04.3	
	comp=Z,268nm,18.2s,baz=294,slow=29						
ITQB	Itaqui	44.14	99	P	P	23 24 09.2	-0.4
CPUP	Villa Florida	44.79	94	P	P	23 24 14.5	-0.3
CPUP				IAmb	IAmb	23 24 16.7	
	comp=Z,15nm,1.4s						
PLTB	Pedras Altas	45.91	103	P	P	23 24 24.2	+0.5
RAR	Rarotonga	46.47	273	LR	LR	23 39 44.7	
	comp=Z,266nm,18.1s,baz=162,slow=31						
PTLB	Pontes e Lacer	48.34	80	P	P	23 24 43.1	+0.4
AQDB	Aquidauana	48.66	88	P	P	23 24 43.7	-1.5
AQDB				IAmb	IAmb	23 24 52.7	
	comp=Z,8.0nm,1.0s						
SRBA	San Rafael, Bu	49.58	34	P	P	23 24 53.6	+1.2
SRBA				IAmb	IAmb	23 24 56.2	
	comp=Z,9.0nm,1.3s						
JTS	Las Juntas de	49.81	31	P	P	23 24 55.5	+1.5
TRCB	Terra Rica	50.14	92	P	P	23 24 56.5	-0.1
ROSC	El Rosal	50.75	47	P	P	23 24 59.8	-1.8
ROSC				IAmb	IAmb	23 25 07.7	
	comp=Z,15nm,1.1s						
ZARC	Zaragoza, Cauc	52.55	44	P	P	23 25 14.4	-0.2
MACA	Manacapuru-AM	54.40	66	P	P	23 25 27.9	-0.4
QSPA	South Pole Qui	55.90	180	P	P	23 25 39.4	+0.7
	comp=Z,3.4nm,1.1s,baz=114,slow=6.2,SNR=5.2						
QSPA	South Pole Qui	55.90	180	P	P	23 25 37.2	-1.4
VNDA	Vanda	56.66	195	P	P	23 25 44.1	+0.5
	comp=Z,2.3nm,1.1s,baz=90,slow=6.1,SNR=3.3						
AFI	Afiamalu	60.01	273	LR	LR	23 45 57.2	
	comp=Z,353nm,18.5s,baz=126,slow=30						
VNA3	Neumayer Olymp	60.79	159	P	P	23 26 11.8	-0.7
VNA1	Neumayer--Stat	61.44	158	P	P	23 26 15.3	-1.5
VNA2	Neumayer--Watz	61.60	159	P	P	23 26 17.3	-0.7
	baz=241,slow=5.6						
SNAA	Sanae	62.62	160	P	P	23 26 24.0	-0.9
SNAA	Sanae	62.62	160	P	P	23 26 24.2	-0.8
TXAR	Lajitas Array	63.48	5	P	P	23 26 30.6	-0.4
	comp=Z,0.2nm,0.8s,baz=182,slow=8.7,SNR=2.7						
MSVF	Nonsavu	66.47	264	LR	LR	23 49 15.2	
	comp=Z,173nm,21.3s,baz=138,slow=30						
PFO	Pinyon Flats O	67.93	353	LR	LR	23 49 42.2	
	comp=Z,78nm,18.7s,baz=150,slow=30						
HHAR	Hobbs	71.58	13	P	P	23 27 21.8	-0.2
CCUT	Cedar City	71.60	356	P	P	23 27 23.3	+0.9
CCUT				IAmb	IAmb	23 27 32.9	
	comp=Z,7.7nm,1.3s						
KAN16	Harper SW Stat	71.86	9	P	P	23 27 23.4	-0.3
KAN16				IAmb	IAmb	23 27 26.5	
	comp=Z,10nm,1.1s						
LHV	Little Huntoon	72.73	352	P	P	23 27 30.4	+1.6
LHV				IAmb	IAmb	23 27 40.4	
	comp=Z,8.1nm,1.1s						
KVN	Kaiserville	73.48	352	P	P	23 27 33.6	+0.1
KVN				IAmb	IAmb	23 27 44.4	
	comp=Z,12nm,1.2s						
DZM	Mont Dzumac	73.72	254	eLR	LR	23 49 48.7	
	comp=Z,375nm,26.9s						
BMN	Battle Mountai	74.76	353	P	P	23 27 41.0	+0.1
BMN				IAmb	IAmb	23 27 51.6	
	comp=Z,7.9nm,1.1s						
Q51A	Peebles	76.69	20	P	P	23 27 50.2	-1.5
PD31	Pinedale Array	76.69	359	P	P	23 27 52.2	+0.2
PD31				IAmb	IAmb	23 28 01.8	
	comp=Z,6.9nm,1.2s						
PDAR	Pinedale Array	76.69	359	P	P	23 27 51.2	-0.9
	comp=Z,1.2nm,0.9s,baz=158,slow=5.4,SNR=7.0						
PDAR	Pinedale Array	76.69	359	P	P	23 27 52.0	0.0
HLID	Hailey	77.65	356	P	P	23 27 56.7	-0.6
HLID				IAmb	IAmb	23 28 08.1	
	comp=Z,6.8nm,1.1s						
QLMT	Earthquake Lak	78.79	358	P	P	23 28 03.6	0.0
MCMT	McKenzie Canyo	78.83	357	P	P	23 28 03.8	-0.1
ENH	Enshi	147.47	274		PKPdf	23 35 42.8	0.0
CMAR	Chiang Mai Arr	150.66	245	PKPbc	PKPbc	23 35 52.8	-0.8
	comp=Z,0.8nm,0.3s,baz=193,slow=1.3,SNR=12						
CMAR	Chiang Mai Arr	150.66	245		PKPdf	23 35 49.5	+1.4
CHTO	Chiang Mai	150.87	245		PKPdf	23 35 50.0	+1.6

*IDC **02** 23:23:33.4±1.3, 34°.68S×109°.19W, h0^{km}, mb3.9/6, mb1 4.2/6, mb1mx3.9/23, mbtmp3.9/6, Error ellipse: s-maj=44.4km s-min=28.6km az=12.0*

ISC 02 23:23:34.5±1.5**, 34°.7S**±0°.3×**109°.2W**±0°.2**, h10**^{km}**, n8, σ**0^{s}**73**/8**, mb4.0**/6**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	30.97	113	P	P	23 29 51.9	-0.1
	2.5nm,1.1s,baz=17,slow=4.9,SNR=2.3						
ATAH	Atahualpa	39.47	53	P	P	23 31 05.0	-0.8
	3.0nm,0.6s,baz=79,slow=12,SNR=2.1						
LPAZ	La Paz	41.03	74	P	P	23 31 19.1	+0.2
	0.6nm,0.6s,baz=227,slow=19,SNR=1.9						
SIV	San Ignacio	46.85	79	P	P	23 32 05.9	+0.9
	3.2nm,0.9s,baz=234,slow=9.8,SNR=5.6						
NVAR	Mina Array Bea	73.28	353	P	P	23 35 06.7	+0.6
	1.1nm,0.8s,baz=192,slow=7.1,SNR=4.2						
PDAR	Pinedale Array	77.13	360	P	P	23 35 28.5	+0.3
	0.4nm,0.7s,baz=177,slow=5.8,SNR=3.5						
CMAR	Chiang Mai Arr	150.20	244	PKPbc	PKiKP	23 43 27.2	+0.2
	1.0nm,0.3s,baz=264,slow=5.7,SNR=6.0						
SONM	Songino Array	150.49	307	PKPbc	PKPbc	23 43 25.3	-0.9
	0.8nm,0.8s,baz=137,slow=3.8,SNR=5.0						

*ISK **02** 23:27:06.6, 39°.28N×40°.24E, h5^{km}, ML5.5/53*

*MED_RC **02** 23:27:06.0±0.2, 39°.39N×40°.15E, h19^{km}, MW5.5/36, Moment Tensor Solution. Body waves: s9,c13;Mantle waves: s36,c71; Duration: $1^{s}2$ Moment tensor: Scale 10^{17}Nm; M_{rr}-0.77±.04; $M_{\theta\theta}$-1.13±.04; $M_{\phi\phi}$1.89±.04; $M_{r\theta}$0.77±.08; $M_{\theta\phi}$-0.35±.03; $M_{\phi r}$0.26±.06; Best double couple: $M_0$1.87000×10^{17} NP1:ϕ_s315.00000°,δ61.00000°, λ-154.00000°. NP2:ϕ_s212.00000°,δ67.00000°, λ-32.00000°. Principal axes: T 1.9400, Plg4.0000°, Azm265.0000°; N -0.1500, Plg52.0000°, Azm360.0000°; P -1.7900, Plg38.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*

*DDA **02** 23:27:07.1, 39°.26N×40°.22E, h11^{km}±4^{km}, MW5.3*

*IDC **02** 23:27:08.0±0.3, 39°.24N×40°.27E, h0^{km}, mb4.9/36, mb1 5.0/50, mb1mx5.0/52, mbtmp4.9/50, ML4.2/12, MS4.9/42, Ms1 4.9/42, ms1mx4.9/45, Error ellipse: s-maj=7.5km s-min=5.8km az=157.0*

*CFUSG **02** 23:27:07.5, 39°.23N×40°.26E, h5^{km}, mb4.5/1, MD3.3/2, Eastern Turkey Magtype MSH 3.7 from 2 stations*

*NEIC **02** 23:27:08.8, 39°.24N×40°.27E, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.13; $M_{\theta\theta}$-1.01; $M_{\phi\phi}$1.14; $M_{r\theta}$0.31; $M_{\theta\phi}$-0.29; $M_{\phi r}$-0.15; Fault plane solution: $M_0$1.17000×10^{17} NP1:ϕ_s216.71000°, δ72.53000°, λ-5.62000°. NP2:ϕ_s308.40000°, δ84.64000°, λ-162.45000°. Principal axes: T 1.2084, Plg8.0000°, Azm81.0000°; N -0.0759, Plg72.0000°, Azm325.0000°; P -1.1325, Plg16.0000°, Azm174.0000°;*

*BGR **02** 23:27:08.2±0.0, 38°.58N×40°.06E, h10^{km}, mb5.4, Ms4.7*

*MOS **02** 23:27:08.7±1.1, 39°.28N×40°.26E, h18^{km}, mb5.3/33, MS4.8/50, Error ellipse: s-maj=3.5km s-min=2.8km az=101.6*

*DSN **02** 23:27:09.8±0.9, 39°.20N×40°.34E, h5^{km}, mb5.8/21, Error ellipse: s-maj=14.4km s-min=7.7km az=108.0*

*NEIC **02** 23:27:09.9±1.4, 39°.28N±0°.04×40°.26E±0°.05, h10^{km}±1^{km}, mb5.5/285, Ms_20 5.1/101, Mwb5.3/19, Mww5.4, ML5.5(ISK), Error ellipse: s-maj=6.5km s-min=5.9km az=16.0*

*GCMT **02** 23:27:09.9±0.1, 39°.27N±0°.01×40°.13E±0°.01, h21^{km}, MW5.4/139, Moment Tensor Solution. s99,c160; s139,c289; Duration: $1^{s}3$ Moment tensor: Scale 10^{17} Nm; M_{rr}-0.60±.03; $M_{\theta\theta}$-1.29±.02; $M_{\phi\phi}$1.89±.02; $M_{r\theta}$0.67±.04; $M_{\theta\phi}$-0.15±.02; $M_{\phi r}$0.07±.04; Best double couple: $M_0$1.80300×10^{17} NP1:ϕ_s317.00000°,δ68.00000°, λ-157.00000°. NP2:ϕ_s218.00000°,δ69.00000°, λ-24.00000°. Principal axes: T 1.8980, Plg1.0000°, Azm267.0000°; N -0.1920, Plg59.0000°, Azm359.0000°; P -1.7090, Plg31.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **02** 23:27:14, 38°.92N×40°.52E, h12^{km}, Moment Tensor Solution. Duration: $10^{s}0$ Moment tensor: Scale 10^{17}Nm; M_{rr}0.06; $M_{\theta\theta}$-1.19; $M_{\phi\phi}$1.13; $M_{r\theta}$0.07; $M_{\theta\phi}$-0.93; $M_{\phi r}$-0.95; Fault plane solution: $M_0$1.77000×10^{17} NP1: ϕ_s112.00000°,δ64.00000°,λ168.00000°. NP2: ϕ_s208.00000°,δ79.00000°,λ27.00000°. Principal axes: T 1.9185, Plg27.0000°, Azm73.0000°; N -0.3582, Plg61.0000°, Azm228.0000°; P -1.5603, Plg10.0000°, Azm337.0000°;*

ISC 02 23:27:08.5±0.5**, 39°.26N**±0°.01×**40°.25E**±0°.01**, h3**^{km}±2^{km}**, n1651, σ**1^{s}**45**/1765**, mb5.4**/358**, MS5.0**/129**, 272C-211D, Fault plane solution: NP1:**ϕ_s241.15634°**,** δ88.11465°**,** λ-37.19964°. **NP2:**ϕ_s332.58682°**,** δ52.82390°**,** λ-177.63355°. **Principal axes:** T Plg23.8296°**,** Azm293.1518°**;** N Plg52.7595°**,** Azm58.6745°**;** P Plg26.7786°**,** Azm190.2726°**; Fault plane solution: NP1:**ϕ_s214.01476°**,** δ76.93720°**,** λ-8.44221°. **NP2:** ϕ_s305.93607°**,** δ81.77778°**,** λ-166.79909°. **Principal axes:** T Plg3.3649°**,** Azm79.5354°**;** N Plg74.4866°**,** Azm337.3065°**;** P Plg15.1261°**,** Azm170.4460°**; Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YEDI	Yedisu-Bingol	0.29	52	PG	Pg	23 27 13.7	-0.5
YEDI				SG	Sg	23 27 18.5	+0.4
YEDI	Yedisu-Bingol	0.29	52	Pg	Pg	23 27 13.6	-0.6
BINT	Bingol	0.42	154	P	Pg	23 27 15.8	-0.9
BNGB	Bingl	0.43	128	PG	Pg	23 27 16.2	-0.6
BNGB	Bingl	0.43	128	Pg	Pg	23 27 15.9	-0.9
ERZN	Erzincan	0.52	309	PG	Pg	23 27 17.3	-1.3
ERZN	Erzincan	0.52	309	Pg	Pg	23 27 17.2	-1.3
TNCL	Tunceli-Merkez	0.57	256	⇑iP	Pg	23 27 17.8	-1.6
TNCL				iS	Sg	23 27 26.0	-0.8
TNCL				IAML		23 27 29.0	
	comp=N,297µm,0.5s						
TNCL				IAML		23 27 31.0	
	comp=E,334µm,0.6s						
EUZM	Uzumlu	0.62	317	⇑iP	Pg	23 27 18.7	-1.8
EUZM				iS	Sg	23 27 27.7	-0.8
KOVA	Elazig, Kovanc	0.65	212	⇓iP	Pg	23 27 20.2	-0.8
KOVA				IAML		23 27 30.0	
	comp=E,264µm,1.0s						
KOVA				iS	Sg	23 27 30.4	+1.1
KOVA				IAML		23 27 32.0	
	comp=N,177µm,1.2s						
SLHN	Bingol, Solhan	0.67	116	⇑iP	Pg	23 27 20.7	-0.8
SLHN				iS	Sb	23 27 32.9	+0.1
SLHN				IAML		23 27 36.0	
	comp=E,110µm,0.9s						
SLHN				IAML		23 27 41.0	
	comp=N,80µm,0.8s						
HANI	Diyarbakir_Han	0.85	172	⇓iP	Pg	23 27 24.0	-0.8
HANI				iS	Sg	23 27 36.7	+0.8
VRTB	Varto-Mus	0.94	96	⇑iP	Pg	23 27 25.5	-1.1
VRTB				iS	Sn	23 27 44.1	+1.3
VRTB	Varto-Mus	0.94	96	PG	Pg	23 27 25.9	-0.7
VRTB	Varto-Mus	0.94	96	Pg	Pg	23 27 25.6	-1.0
EJDE	Erzurum, Palan	1.00	54	⇑iP	Pg	23 27 25.9	-1.9
EJDE				iS	Sb	23 27 42.0	-0.4
BAYB	BAYBURT	1.00	0	⇓iP	Pg	23 27 25.0	-2.7
BAYB				iS	Sg	23 27 40.3	-0.4
MUSM	Mu-Merkez	1.12	118	⇑iP	Pg	23 27 28.1	-1.9
MUSM				iS	Sg	23 27 44.1	-0.4
BAYT	Aydıntepe-Bayb	1.14	356	PN	Pg	23 27 28.4	-2.0
BAYT				SN	Sg	23 27 45.5	+0.4
BAYT	Aydıntepe-Bayb	1.14	356	Pn	Pg	23 27 28.4	-2.0
SVRC	Sivrice-ELAZID	1.15	220	PN	Pg	23 27 29.0	-1.5
SVRC				SN	Sb	23 27 46.9	+0.5
SVRC	Sivrice-ELAZID	1.15	220	Pn	Pg	23 27 28.8	-1.7
KELT	Kelkit	1.17	320	⇑iP	Pg	23 27 28.8	-2.2
KELT				iS	Sg	23 27 46.5	+0.2
KELT				IAML		23 27 55.0	
	comp=N,51µm,1.0s						
KELT				IAML		23 27 58.0	
	comp=E,34µm,1.6s						
KRIK	Erzurum-spir	1.20	26	⇑iP	Pg	23 27 30.7	-0.8
KRIK				iS	Sb	23 27 48.0	0.0
ELZG	Elazig	1.24	233	⇑iP	Pg	23 27 30.1	-2.3
ELZG				iS	Sg	23 27 48.8	+0.2
DYBB	Diyarbakir	1.30	184	PN	Pg	23 27 33.4	-0.1
DYBB				SN	Sn	23 27 52.9	+1.3
DYBB	Diyarbakir	1.30	184	Pn	Pg	23 27 32.9	-0.7
ILIC	ilic-Erzincan	1.32	279	PN	Pg	23 27 32.7	-1.1
REFA	Refahiye_ERZN	1.32	300	⇑iP	Pg	23 27 31.0	-2.7
REFA				iS	Sg	23 27 50.4	-0.4
REFA				IAML		23 28 05.0	
	comp=N,20µm,1.2s						
SVAN	Silvan-Diyarba	1.33	146	⇓iP	Pn	23 27 33.4	-0.6
SVAN				iS	Sg	23 27 51.5	+0.1
SVAN				IAML		23 28 00.0	
	comp=N,25µm,0.7s						
SVAN				IAML		23 28 01.0	
	comp=E,27µm,2.3s						
SVAN	Silvan-Diyarba	1.33	146	PN	Pn	23 27 33.4	-0.6
SVAN	Silvan-Diyarba	1.33	146	Pn	Pn	23 27 33.5	-0.6
DIYA	Diyarbakir	1.34	184	⇓iP	Pn	23 27 34.0	-0.1
DIYA				iS	Sn	23 27 54.3	+2.0
GUMT	Gumushane	1.34	334	PN	Pn	23 27 31.5	-2.7
KEMA	Kemaliye	1.36	271	⇑iP	Pn	23 27 31.8	-2.7
KEMA				iS	Sb	23 27 52.5	0.0
KEMA				IAML		23 27 59.0	
	comp=N,40µm,0.6s						
KOPR	Koprukoy-ERZUR	1.44	59	PN	Pn	23 27 34.9	-0.7
KOPR	Koprukoy-ERZUR	1.44	59	Pn	Pn	23 27 34.7	-0.9
ARPR	Arapgir-MALATY	1.50	264	PN	Pn	23 27 35.7	-0.7
ARPR				SN	Sg	23 27 56.7	+0.1
ARPR	Arapgir-MALATY	1.50	264	Pn	Pn	23 27 35.5	-0.9
HOMI	Horasan	1.50	58	⇑iP	Pn	23 27 35.6	-0.9
HOMI				iS	Sg	23 28 02.0	+5.1
GURO	Guroymak-BITLI	1.56	116	PN	Pn	23 27 36.9	-0.4
GURO	Guroymak-BITLI	1.56	116	Pn	Pn	23 27 35.4	-1.9
GURO				Sn	Sg	23 27 59.9	+1.2
GURO	Guroymak-BITLI	1.56	116	Pn	Pn	23 27 36.1	-1.2
ALUC	Giresun/Alucra	1.57	314	⇑iP	Pn	23 27 36.1	-1.4
ALUC				iS	Sg	23 28 00.2	+1.1
BTMN	Batman	1.58	149	⇓iP	Pn	23 27 37.8	+0.3
BTMN				iS	Sg	23 27 59.5	+0.2
BLIS	Bitlis-Merkez	1.68	119	⇑iP	Pn	23 27 37.7	-1.3
BLIS				iS	Sg	23 28 03.5	+0.9
MALT	Malatya	1.71	237	P	Pn	23 27 37.6	-1.6
MALT	Malatya	1.71	237	PN	Pn	23 27 38.7	-0.5
MALT	Malatya	1.71	237	Pn	Pn	23 27 37.6	-1.6
MACK	Trabzon	1.72	348	⇓iP	Pn	23 27 38.9	-0.5
MACK				iS	Sg	23 28 04.9	+1.0
KTUT	Trabzon	1.77	348	PN	Pn	23 27 39.9	-0.1
KTUT	Trabzon	1.77	348	Pn	Pn	23 27 39.0	-0.9
MLAZ	Malazgirt-MUS	1.79	93	PN	Pn	23 27 40.0	-0.5
MAZI	Mazidag	1.80	175	PN	Pn	23 27 40.5	-0.1
HEKM	Malatya_Hekimh	1.82	259	⇑iP	Pn	23 27 40.1	-0.8
HEKM				iS	Sg	23 28 07.8	+0.7
EATA	Eleskirt	1.84	70	⇑iP	Pn	23 27 41.1	-0.1
EATA				iS	Sg	23 28 11.3	+3.7
SUSE	Susehri	1.84	302	⇑iP	Pn	23 27 41.9	+0.8
SUSE				iS	Sg	23 28 10.5	+2.8
CHAY	Cayeli-Rize	1.86	11	PN	Pn	23 27 40.8	-0.5
CHOM	Cayeli-Rize	1.88	12	PN	Pn	23 27 40.9	-0.6
ADCV	BITLIS_Adilcev	1.98	102	⇑iP	Pn	23 27 43.2	+0.2
ADCV				iS	Sb	23 28 11.3	+0.8
MARD	Mardin	1.98	168	⇓iP	Pn	23 27 42.8	-0.3
MARD				iS	Sb	23 28 10.4	0.0
DDEM	Demirkent	2.00	35	⇑iP	Pn	23 27 42.6	-0.7
DDEM				iS	Sg	23 28 12.2	-0.6
CUZAR	Zara_SIVAS	2.02	289	⇑iP	Pn	23 27 43.0	-0.6
CUZAR				iS	Sg	23 28 13.7	+0.4
AKCD	Akcadag	2.06	243	⇑iP	Pn	23 27 43.4	-0.7
AKCD				iS	Sb	23 28 12.1	-0.5
MIDY	Mardin/Midyat-	2.06	154	⇓iP	Pn	23 27 43.8	-0.2
MIDY				iS	Sn	23 28 11.0	+0.8
MIDY				IAML		23 28 19.0	
	comp=E,13µm,0.6s						
SENK	Senkaya-Erzuru	2.08	50	PN	Pn	23 27 44.2	-0.2
DBAD	Bademkaya	2.08	32	⇑iP	Pn	23 27 43.7	-0.7
DBAD				iS	Sb	23 28 13.1	-0.1
URFA	Urfa	2.13	212	PN	Pn	23 27 45.2	+0.1
AGRB	Hanur-Agry	2.15	81	PN	Pn	23 27 45.2	-0.2
CUKAN	kangal_SIVAS	2.16	272	⇑iP	Pn	23 27 44.9	-0.6
CUKAN				iS	Sg	23 28 19.1	+1.2
DAGI	Agillar	2.22	35	⇑iP	Pn	23 27 45.9	-0.5
DAGI				iS	Sb	23 28 18.4	+1.1
PERV	Siirt/Pervari-	2.22	125	iP	Pn	23 27 47.3	+0.9
PERV				iS	Sg	23 28 19.4	-0.6
DARE	Darende-Malaty	2.26	253	PN	Pn	23 27 46.7	-0.2
SANL	SANLIURFA_Merk	2.31	206	⇓iP	Pn	23 27 47.6	+0.2
SANL				iS	Sg	23 28 21.4	-1.3
AKDM	Akdamar-Van	2.33	113	PN	Pn	23 27 48.2	+0.4
DBOC	Borcka	2.35	27	⇑iP	Pn	23 27 47.6	-0.4
DBOC				iS	Sg	23 28 23.9	-0.2
KOTA	Agri, Merkez-K	2.35	76	⇑iP	Pn	23 27 48.1	-0.1
KOTA				iS	Sg	23 28 28.1	+4.1
ATAB	Bozova	2.35	221	⇓iP	Pn	23 27 48.0	0.0
ATAB				iS	Sg	23 28 23.3	-0.8
CUGUR	Gurin_SVAS	2.38	258	⇑iP	Pn	23 27 48.2	-0.3
CUGUR				iS	Sg	23 28 25.4	+0.4
ERCV	ERCIS-VAN	2.41	95	PN	Pb	23 27 51.9	-0.8
SIRN	Sırnak	2.45	135	iP	Pn	23 27 50.1	+0.8
SIRT	Sirnak	2.46	135	PN	Pn	23 27 49.9	+0.4
SIRT	Sirnak	2.46	135	Pn	Pn	23 27 49.5	0.0
ORDU	Ordu-Boztepe	2.52	314	⇑iP	Pb	23 27 52.9	-1.6
ORDU				iS	Sg	23 28 28.2	-1.3
VANB	Van	2.54	104	PN	Pn	23 27 51.7	+1.0
TVAN	Van	2.57	105	iP	Pn	23 27 51.7	+0.5
KARS	Kars	2.57	57	P	Pn	23 27 50.8	-0.4
KARS	Kars	2.57	57	PN	Pn	23 27 50.5	-0.7
KARS	Kars	2.57	57	Pn	Pn	23 27 50.8	-0.4
SVSK	Karacayir	2.60	286	PN	Pn	23 27 51.3	0.0
VMUR	Van-Muradiye	2.60	95	iP	Pn	23 27 52.3	+0.8
ELBS	KAHRAMANMARAS_	2.61	250	⇑iP	Pn	23 27 51.2	-0.4
ELBS				iS	Sg	23 28 32.2	-0.1
ELBS				IAML		23 28 40.0	
	comp=N,21µm,1.2s						
DIGO	Kars	2.67	63	iP	Pn	23 27 52.2	-0.4
DIGO				iS	Sg	23 28 45.1	+11
SURC	SANLIURFA_SURC	2.70	209	⇓iP	Pn	23 27 52.9	+0.1
SURC				iS	Sg	23 28 35.1	-0.2
CUAYA	Sivas-Altinyay	2.72	271	⇑iP	Pn	23 27 53.0	-0.2
CUAYA				iS	Sb	23 28 33.8	+2.1
GZT	Gaziantep	2.84	229	iP	Pn	23 27 54.6	-0.3
GZT				iS	Sg	23 28 39.8	+0.1
CLDR	Caldiran	2.85	91	iP	Pn	23 27 55.2	+0.1
CLDR	Caldiran	2.85	91	PN	Pn	23 27 55.2	+0.1
EPOS	Posof	2.94	39	⇑iP	Pn	23 27 56.3	+0.1
EPOS				iS	Sg	23 28 42.6	-0.2
OZAP	Van, Ozalp-Mer	2.98	100	iP	Pn	23 27 58.0	+1.2
IGDI	IGDIR	3.02	77	iP	Pn	23 27 59.6	+2.3
ERBA	Erbaa	3.04	299	⇑iP	Pn	23 27 56.5	-1.0
ERBA				iS	Sg	23 28 46.3	+0.2
TOKT	Tokat	3.04	292	PN	Pn	23 27 57.6	0.0
TOKA	Tokat	3.09	291	⇑iP	Pn	23 27 58.1	-0.2
TOKA				iS	Sg	23 28 49.7	+1.8
KAHM	Kahramanmaras,	3.10	237	iP	Pn	23 27 58.5	+0.3
KAHM				iS	Sb	23 28 44.2	+1.8
CUSAR	Sarkisla-SIVAS	3.11	274	⇑iP	Pn	23 27 58.1	-0.5
CUSAR				iS	Sg	23 28 49.1	+0.7
SARI	SarD1z-Kayseri	3.11	255	PN	Pn	23 27 58.5	-0.1
KMRS	Kahramanmaras	3.16	237	PN	Pn	23 27 58.7	-0.4
TASB	TASBURUN-IGDIR	3.17	75	PN	Pn	23 27 59.4	+0.1
GAZ	Gaziantep	3.17	230	PN	Pn	23 27 59.6	+0.3
GAZ	Gaziantep	3.17	230	Pn	Pn	23 27 58.3	-1.1
HAKT	HAKKARI	3.20	121	iP	Pn	23 28 01.6	+1.6
BGD	Bogdanovka	3.25	51	P	Pn	23 28 00.4	-0.2
AKH	Akhalkalaki	3.28	48	PN	Pn	23 28 01.0	0.0
CUKT	Cukurca	3.32	126	iP	Pn	23 28 02.7	+1.3
CUKT	Cukurca	3.32	126	PN	Pn	23 28 02.2	+0.8
BNN	Bunyan	3.45	265	PN	Pn	23 28 03.5	+0.3
BNN	Bunyan	3.45	265	Pn	Pn	23 28 02.8	-0.4
ANDN	Andirin	3.49	243	iP	Pn	23 28 05.5	+1.6
ANDN				iS	Sb	23 28 56.7	+2.8
KAMA	Osmaniye	3.50	235	iP	Pn	23 28 04.2	+0.4
SAIM	ADANA	3.50	250	iP	Pn	23 28 05.2	+1.3
SAIM				iS	Sg	23 28 58.4	-2.7
HACI	Hacifakili, Ak	3.52	279	⇑iP	Pn	23 28 04.2	-0.1
HACI				iS	Sg	23 29 02.0	+0.3
KUZU	Kuzuini	3.52	226	iP	Pn	23 28 04.1	-0.1
GNI	Garni	3.58	74	Pn	Pn	23 28 05.7	+0.7
	comp=N,7.8nm,0.3s,baz=258,slow=2.6,SNR=62						
GNI				Pg	Pb	23 28 14.5	+2.0
	comp=N,57nm,0.3s,baz=243,slow=5.4,SNR=48						
GNI	Garni	3.58	74	P	Pn	23 28 05.0	-0.1
GNI	Garni	3.58	74	ceP	Pn	23 28 05.2	+0.2
GNI				pmax	pmax		
	comp=Z,321nm,0.7s						
GNI	Garni	3.58	74	PN	Pn	23 28 05.5	+0.5
GNI	Garni	3.58	74	P	Pb	23 28 08.9	-3.6
GNI	Garni	3.58	74	⇑P	Pn	23 28 05.2	+0.2
GNI	Garni	3.58	74	Pn	Pn	23 28 04.9	-0.1
YOVA	Hakkari_Yksek	3.58	116	iP	Pn	23 28 07.1	+1.9
GUNE	Kayseri	3.62	266	iP	Pn	23 28 05.2	-0.2
GUNE				iS	Sg	23 29 03.3	-1.3
HKOY	Hamitkoy-Ladik	3.65	298	PN	Pn	23 28 06.5	+0.5
KIZO	Buyukkizoglu-L	3.69	298	PN	Pn	23 28 07.2	+0.7
KVT	Kavak	3.70	301	PN	Pn	23 28 06.9	+0.3
CKRK	Yozgat, Cekere	3.75	284	⇑iP	Pn	23 28 07.3	-0.1
CKRK				iS	Sg	23 29 13.2	+4.1
YARM	Yarimca-Ladik(	3.78	298	PN	Pn	23 28 08.6	+0.9
KZRT	Kazreti	3.82	55	P	Pn	23 28 08.1	-0.1
YOZ	Yozgat	3.83	277	PN	Pn	23 28 08.7	+0.2
KOZT	Kozan	3.90	244	PN	Pn	23 28 10.2	+0.9
YAHY	KAYSERI_Yahyal	4.00	255	iP	Pn	23 28 11.1	+0.4
NAX	Nakhchivan	4.08	90	P	Pn	23 28 15.7	+3.9
ONI	Oni	4.12	35	P	Pn	23 28 12.0	-0.4
ONI	Oni	4.12	35		Pn	23 28 12.0	-0.4
COAL	Corum-Alaca	4.18	285	iP	Pn	23 28 13.2	0.0
COAL				iS	Sg	23 29 22.8	+0.1
KOZK	Kozakli-Nevseh	4.18	271	PN	Pn	23 28 14.3	+1.1
AKO	Adana	4.18	246	iP	Pb	23 28 24.2	+1.6
CEYT	Ceyhan	4.20	239	PN	Pn	23 28 14.0	+0.6
TAHT	Tahtakopru-Hat	4.32	229	PN	Pn	23 28 16.0	+1.0
SOC	Sochi	4.34	355	eP	Pn	23 28 13.8	-1.5
SOC				e		23 29 05.5	
SOC				pmax	pmax		
	comp=Z,2µm,0.9s						
SOC				MLR	MLR		
	comp=Z,3µm,11.0s						
NEY	Neytrino	4.40	24	iP	Pn	23 28 15.9	-0.5
CMRD	Camardi-Nigde	4.42	251	PN	Pn	23 28 17.7	+1.1
ZEI	Tsey	4.48	37	eP	Pn	23 28 17.4	-0.1

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ZEI                                 pmax   pmax
      comp=Z,364nm,1.0s
DIKM  Dikmen             4.50 304   PN     Pn     23 28 18.8 +1.3
GUDG  Gudauri            4.53  44   P      Pn     23 28 19.7 +1.5
KARA  Karaisali          4.55 246   PN     Pn     23 28 19.4 +1.2
NIG   Nigde              4.56 257   PN     Pn     23 28 19.8 +1.2
YAYL  Yayladag           4.60 227  i P     Pn     23 28 19.5 +0.5
YAYL  Yayladag           4.60 227   PN     Pn     23 28 20.4 +1.4
KRTS  Karatas            4.69 237   PN     Pn     23 28 21.1 +0.9
SNOP  Sinop              4.72 307   PN     Pn     23 28 21.8 +1.2
SNOP  Sinop              4.72 307   Pn     Pn     23 28 22.5 +1.9
SINO  SINOP_Merkez       4.73 307  i P     Pb     23 28 30.2 -1.7
GULA  Gulagac            4.78 261   PN     Pn     23 28 22.8 +1.2
SHA1  Shidzhatmaz        4.83  21  i P     Pn     23 28 23.3 +1.0
GANJ  Ganja              4.87  72   P      Pn     23 28 26.5 +3.9
KBZ   Khabaz             4.89  23   Pn     Pn     23 28 24.5 +1.6
      comp=Z,4.0nm,0.3s,baz=195,slow=11,SNR=62
KBZ                                 Sn     Sn     23 29 22.6 +2.7
      comp=Z,2.6nm,0.3s,baz=70,slow=18,SNR=0.9
KBZ                                 LR     LR     23 30 29.4
      comp=Z,18µm,19.1s,baz=200,slow=41
KBZ   Khabaz             4.89  23ceP       Pn     23 28 22.6 -0.3
NCK   Nalchik            4.93  30  i P     Pn     23 28 22.9 -0.5
KIV   Kislovodsk         5.04  20  i P     Pn     23 28 25.7 +0.7
      SNR=20
KIV   Kislovodsk         5.04  20  eP      Pn     23 28 25.5 +0.5
KIV                                eS      Sn     23 29 25.2 +1.5
KIV                                 pmax   pmax
      comp=Z,229nm,1.1s
KIV                                 MLR    MLR
      comp=Z,4µm,9.0s
KIV   Kislovodsk         5.04  20   PN     Pn     23 28 26.6 +1.6
KIV   Kislovodsk         5.04  20   P      Pn     23 28 26.1 +1.1
KIV   Kislovodsk         5.04  20  ⇑P      Pn     23 28 26.1 +1.1
KIV   Kislovodsk         5.04  20   Pn     Pn     23 28 25.5 +0.5
KVAR  Kislovodsk Arr     5.04  21   Pn     Pn     23 28 26.9 +1.8
      baz=271,slow=18,SNR=32
KVAR                                LR     LR     23 30 38.6
      comp=Z,17µm,18.5s,baz=98,slow=42
KAMT  Kaman              5.07 273   PN     Pn     23 28 27.4 +1.9
TOS   Tosya              5.09 292   PN     Pn     23 28 26.9 +1.2
MERS  Mersin             5.11 244   PN     Pn     23 28 27.2 +1.2
BR131 Keskin Array S     5.13 277   P      Pn     23 28 26.2 -0.1
BR131 Keskin Array S     5.13 277   P      Pn     23 28 26.6 +0.2
      SNR=74
BR131 Keskin Array S     5.13 277   Pn     Pn     23 28 26.2 -0.1
BRTR  Keskin Array B     5.13 277   Pn     Pn     23 28 27.0 +0.6
      comp=Z,12nm,0.3s,baz=102,slow=14,SNR=150
BRTR                                Lg     Lg     23 29 52.0
      baz=117,slow=21,SNR=2.2
BRTR                                LR     LR     23 30 29.1
      comp=Z,18µm,18.1s,baz=118,slow=39
BRTR  Keskin Array B     5.13 277  i P     Pn     23 28 26.3 -0.1
BRTR                                pmax   pmax
      comp=Z,199nm,0.6s
BRTR  Keskin Array B     5.13 277   PN     Pn     23 28 26.6 +0.2
BRTR  Keskin Array B     5.13 277   Pn     Pn     23 28 26.3 -0.1
PYA1  Pyatigorsk         5.25  23  i P     Pn     23 28 28.5 +0.6
BZK   Bozkurt            5.46 302  ⇑P      Pb     23 28 48.5 +4.0
BZK   Bozkurt            5.46 302          Pn     23 28 31.7 +0.9
GROC  Groznyy            5.75  45  eP      Pn     23 28 35.6 +1.0
GROC                               e              23 29 43.1
GROC                                pmax   pmax
      comp=Z,44nm,0.5s
GROC                                pmax   pmax
      comp=Z,165nm,1.0s
GROC                                smax   smax
      comp=E,296nm,1.2s
GROC                                smax   smax
      comp=N,658nm,2.7s
GROC                                smax   smax
      comp=E,168nm,1.2s
GROC                                smax   smax
      comp=N,170nm,1.1s
GROC                                MLR    MLR
      comp=Z,1µm,2.0s
ANTO  Ankara             5.79 278   P      Pn     23 28 35.6 +0.2
ANTO  Ankara             5.79 278          Pn     23 28 35.6 +0.2
BR231 Keskin MP Arra     5.80 278          Pn     23 28 36.1 +0.5
ANN   Anapa              5.92 340  eP      Pn     23 28 36.2 -0.8
ANN                                eS      Sn     23 29 45.1 -0.2
ANN                                 pmax   pmax
      comp=Z,54nm,0.6s
ANN                                 MLR    MLR
      comp=Z,8µm,11.0s
GOF   Gofitskoye         6.16  19⇑eP       Pn     23 28 42.3 +2.0
GOF                                 pmax   pmax
      comp=Z,348nm,0.8s
BHL   Bhannes            6.50 216  eP      Pn     23 28 45.3 +0.2
MAK   Makhachkala        6.61  54c iP      Pn     23 28 51.3 +4.8
MAK                                eS      Sn     23 30 12.9  +11
MAK                                 pmax   pmax
      comp=Z,336nm,1.2s
MAK                                 MLR    MLR
      comp=Z,24µm,10.0s
DQRL  Deir Qamar         6.70 216  eP      Pn     23 28 48.7 +0.9
RCY   Rachaya            6.76 213  eP      Pn     23 28 49.9 +1.2
QRWL  Qaraoun            6.78 214  eP      Pn     23 28 50.2 +1.3
SUDU  Sudak              6.85 327⇓iP       Pn     23 28 52.4 +2.6
SUDU                               i S     Sn     23 30 12.9 +4.8
SUDU  Sudak              6.85 327⇓iP       Pn     23 28 52.4 +2.6
SUDU                                Pm            23 28 59.2
      comp=Z,162nm,0.6s
SUDU                               i S     Sn     23 30 12.9 +4.8
SUDU                                Sm            23 30 27.4
      comp=N,159nm,0.6s
SUDU                                Sm            23 30 27.4
      comp=E,66nm,0.6s
SHBL  Chebaa             6.93 213  eP      Pn     23 28 51.9 +0.9
CSS   Mathiatis          6.99 234  ⇑P      Pn     23 28 55.5 +3.6
CSS   Mathiatis          6.99 234   Pn     Pn     23 28 52.8 +1.0
KDZE  Karadeniz Ereo     7.04 290  ⇑P      Pb     23 29 09.2 -2.2
MDUB  Mudurnu            7.07 283   Pn     Pn     23 28 53.4 +0.5
LEF   Lefka              7.18 237  ⇓P      Pn     23 28 59.1 +4.8
SIM   Simferopol'        7.29 323c iP      Pn     23 29 01.0 +5.2
SIM                                eS      Sn     23 30 25.0 +6.0
SIM                                 pmax   pmax
      comp=Z,94nm,0.8s
SIM   Simferopol'        7.29 323⇓eP       Pn     23 28 58.7 +2.9
SIM                                 Pm            23 29 09.3
      comp=Z,52nm,0.6s
SIM                                i S     Sn     23 30 23.2 +4.2
SIM                                 Sm            23 30 39.7
      comp=N,41nm,0.6s
SIM                                 Sm            23 30 39.7
      comp=E,52nm,0.6s
MMAI  Mount Meron Ar     7.36 214   Pn     Pn     23 28 58.6 +1.7
      comp=E,5.2nm,0.3s,baz=58,slow=15,SNR=33
MMAI                                Lg     Lg     23 31 01.7
      comp=E,8.7nm,0.3s,baz=23,slow=22,SNR=1.9
ASF   Jabal al Asfar     7.58 202   Pn     Pn     23 29 00.0 +0.1
      comp=E,3.0nm,0.3s,baz=24,slow=6.9,SNR=75
ASF                                 Lg     Lg     23 31 08.3
      comp=E,7.1nm,0.3s,baz=90,slow=20,SNR=3.5
ASF                                 LR     LR     23 32 20.5
      comp=E,8µm,19.4s,baz=24,slow=41
ISP   Isparta            7.76 262   P      Pn     23 29 02.8 +0.4
ISP   Isparta            7.76 262   Pn     Pn     23 29 02.8 +0.4
ELL   Elmali             8.54 256   P      Pn     23 29 14.3 +1.2
ELL   Elmali             8.54 256          Pn     23 29 14.3 +1.2
GHAJ  Ghor Haditha       8.81 207          Pn     23 29 17.6 +1.0
KULA  Kula-Manisa        9.07 269   P      Pn     23 29 22.0 +1.7
FETY  Fethiye            9.20 257   P      Pn     23 29 25.0 +2.9
BALB  Balikesir          9.58 276   Pn     Pn     23 29 28.5 +1.3
ARG   Arkhangelos       10.07 256   P      Pn     23 29 33.2 -0.8
ARG   Arkhangelos       10.07 256  ⇑P      Pn     23 29 36.4 +2.5
JURR  Jurilovca         10.09 307  ⇓P      Pn     23 29 35.8 +1.6
MFTR  Murfatlar         10.11 303  ⇓P      Pn     23 29 36.8 +2.3
TIRR  Tirgusor          10.24 304  ⇓P      Pn     23 29 34.8 -1.4
TIRR  Tirgusor          10.24 304  ⇓P      Pn     23 29 34.8 -1.4
TIRR  Tirgusor          10.24 304  ⇑P      Pn     23 29 36.7 +0.4
TIRR  Tirgusor          10.24 304          Pn     23 29 36.7 +0.4
DAT   Datca             10.31 260   P      Pn     23 29 37.9 +0.5
TLCR                    10.34 309  ⇑P      Pn     23 29 39.4 +1.8
TLCR                    10.34 309  ⇑P      Pn     23 29 39.4 +1.8
TPGR  Topolog           10.42 306  ⇑P      Pn     23 29 39.2 +0.4
ICOR  Ion Corvin        10.50 302  ⇑P      Pn     23 29 42.4 +2.7
EIL   Elat              10.51 206   Pn     Pn     23 29 40.5 +0.5
      comp=E,0.5nm,0.3s,baz=29,slow=5.2,SNR=19
EIL                                 LR     LR     23 33 36.7
      comp=E,10µm,18.9s,baz=327,slow=37
EIL   Elat              10.51 206  ⇓P      Pn     23 29 42.8 +2.7
TLBR  Topalu            10.51 304  ⇑P      Pn     23 29 40.0  0.0
PURM  Purcari           10.52 317  ⇓P      Pn     23 29 40.1  0.0
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HARR  Harsova           10.65 305  ⇑P      Pn     23 29 40.7 -1.2
HARR  Harsova           10.65 305  ⇑P      Pn     23 29 40.7 -1.2
CFR   Carcaliu          10.75 307  ⇓P      Pn     23 29 43.1 -0.1
CFR   Carcaliu          10.75 307  ⇓P      Pn     23 29 43.1 -0.1
EZN   Ezine             10.77 277   P      Pn     23 29 47.7 +4.2
PRK   Paraskevi         10.84 274   P      Pn     23 29 47.2 +2.7
ALN   Alexandroupoli    11.01 283   P      Pn     23 29 47.7 +0.9
ALN   Alexandroupoli    11.01 283          Pn     23 29 47.7 +0.9
TATR  Tatarca           11.01 309  ⇑P      Pn     23 29 51.3 +4.5
SCTR  Scanteiesti       11.09 309  ⇑P      Pn     23 29 55.4 +7.5
MIB   Mutribah          11.09 146  eP      Pn     23 29 45.0 -3.0
SCHL  Schela            11.10 308  ⇑P      Pn     23 29 50.1 +2.1
VLDR  Vladesti          11.12 310  ⇓P      Pn     23 29 49.9 +1.6
IZVR  Izvoarele         11.16 308  ⇓P      Pn     23 29 53.3 +4.5
RAZG  Razgrad           11.18 297  ⇑P      Pn     23 29 59.2  +10
SLCR  Slobozia Conac    11.18 308  ⇑P      Pn     23 29 53.6 +4.5
RST   Umm Al-Ruwaisa    11.21 148  eP      Pn     23 29 47.0 -2.7
VARL  Varlezi           11.29 310  ⇓P      Pn     23 29 49.3 -1.3
MILM  Milestii Mici     11.33 316  ⇑P      Pn     23 29 52.1 +1.0
MILM  Milestii Mici     11.33 316  eP      Pn     23 29 54.0 +2.9
MILM                               eS      Sn     23 32 04.0 +5.8
MILM                                pmax   pmax
      comp=Z,90nm,1.1s
MILM                                MLR    MLR
      comp=Z,5µm,15.0s
KIS   Kishinev          11.38 317  eP      Pn     23 29 53.0 +1.2
KIS   Kishinev          11.38 317  ⇑P      Pn     23 29 56.5 +4.7
KIS   Kishinev          11.38 317  eP      Pn     23 29 53.0 +1.2
KIS                                eS      Sn     23 32 00.0 +0.7
KIS                                 MLR    MLR
      comp=Z,2µm,14.0s
KIS                                 MLR    MLR
      comp=E,1µm,12.0s
RDO   Rodhopi           11.41 284   P      Pn     23 29 53.5 +1.2
RDO   Rodhopi           11.41 284  ⇑P      Pn     23 29 54.0 +1.7
UMR   Umm Al-Rimmam     11.47 145  eP      Pn     23 29 50.3 -2.9
GRER                    11.57 306  ⇑P      Pn     23 30 00.9 +6.5
BIR   Birlad            11.62 311  ⇓P      Pn     23 30 05.9  +11
BIR   Birlad            11.62 311  ⇓P      Pn     23 30 05.9  +11
ODBI  Odobesti          11.70 308  ⇑P      Pn     23 30 00.3 +4.1
ISR   Istrita           11.73 304  ⇓P      Pn     23 29 60.0 +3.3
ISR   Istrita           11.73 304  ⇓P      Pn     23 30 00.0 +3.3
VORD  Divnogorie        11.73 357  eP      Pn     23 29 57.2 +0.6
VORD                                pmax   pmax
      comp=Z,150nm,0.8s
VASR  Vaslui            11.73 313  ⇓P      Pn     23 30 02.7 +6.1
SULR                    11.74 302  ⇑P      Pn     23 30 03.2 +6.4
SGRR  Singureni         11.76 300  ⇑P      Pn     23 29 59.5 +2.4
KBD   Kabd              11.79 146  eP      Pn     23 29 54.9 -2.6
BISRR Bisoca            11.81 307  ⇓P      Pn     23 29 59.7 +1.9
RDF   Al-Radifah        11.94 147  eP      Pn     23 29 57.2 -2.5
VRI   Vrincioaia        11.95 308  ⇓P      Pn     23 30 01.4 +1.7
VRI   Vrincioaia        11.95 308  ⇓P      Pn     23 30 01.4 +1.7
VSR   Storozhevoye      11.98 357  eP      Pn     23 29 59.9 -0.2
VSR                                 pmax   pmax
      comp=Z,110nm,0.8s
VSR                                 MLR    MLR
      comp=Z,3µm,10.0s
VRH   Novokhopyorsk     11.99   4  eP      Pn     23 30 00.6 +0.4
VRH                                 pmax   pmax
      comp=Z,150nm,0.8s
VRH                                 MLR    MLR
      comp=Z,4µm,14.0s
PLOR  Plostina          11.99 308  ⇑P      Pn     23 30 01.4 +1.1
PLOR  Plostina          11.99 308  ⇑P      Pn     23 30 01.4 +1.1
NEHR  Nehoiu            12.02 305  ⇑P      Pn     23 30 03.7 +3.0
SANT  Santorini         12.05 261   Pn     Pn     23 30 02.3 +1.2
COPA  Copaceanca        12.24 298  ⇓P      Pn     23 30 04.4 +0.8
COVR  Voineasa-Covas    12.26 307  ⇓P      Pn     23 30 05.7 +1.7
MLR   Muntele Rosu      12.27 305  ⇑P      Pn     23 30 09.3 +5.2
MLR   Muntele Rosu      12.27 305   Pn     Pn     23 30 06.4 +2.2
      comp=Z,0.5nm,0.3s,baz=132,slow=3.7,SNR=13
MLR                                 LR     LR     23 35 34.6
      comp=Z,5µm,20.8s,baz=134,slow=41
MLR   Muntele Rosu      12.27 305  ⇑P      Pn     23 30 09.3 +5.2
MLR   Muntele Rosu      12.27 305          Pn     23 30 04.6 +0.4
TESR  Tescani           12.32 310  ⇑P      Pn     23 30 07.8 +3.0
SORM  Soroca            12.35 320  ⇓P      Pn     23 30 03.8 -1.3
SORM  Soroca            12.35 320  ⇓P      Pn     23 30 03.8 -1.3
VORR  Voronezh          12.44 357  eP      Pn     23 30 07.0 +0.7
VORR                                pmax   pmax
      comp=Z,300nm,2.0s
HUMR  Humele            12.53 300  ⇓P      Pn     23 30 15.3 +7.7
OZUR                    12.64 307  ⇓P      Pn     23 30 09.8 +0.7
GIRR  Girov             12.64 312  ⇑P      Pn     23 30 08.5 -0.6
NVR   Nevrokopi         12.69 285   P      Pn     23 30 10.4 +0.6
VLAD  Vladila           12.76 297  ⇑P      Pn     23 30 15.8 +5.0
VOIR                    12.82 304  ⇑P      Pn     23 30 13.8 +2.2
VOIR                    12.82 304  ⇑P      Pn     23 30 13.8 +2.2
DOPR  Dopca             12.83 306  ⇑P      Pn     23 30 12.3 +0.6
IDI   Anoyia            12.86 257   Pn     Pn     23 30 13.3 +1.2
      comp=Z,0.9nm,0.3s,baz=24,slow=8.4,SNR=8.3
IDI                                 LR     LR     23 35 56.3
      comp=Z,7µm,20.4s,baz=62,slow=41
IDI   Anoyia            12.86 257   P      Pn     23 30 13.4 +1.2
SRS   Serrai            12.87 284   P      Pn     23 30 13.9 +1.6
VLY   Voula,Athens      12.96 269   P      Pn     23 30 14.1 +0.6
PLG   Polygyros         12.97 280   P      Pn     23 30 13.9 +0.2
PRAR  RASCA             13.02 313  ⇓P      P      23 30 23.7 -1.2
ARR   Arges             13.06 303  ⇑P      Pn     23 30 17.9 +2.9
JOSR  Joseni            13.09 309  ⇑P      Pn     23 30 19.7 +4.4
VILL  Villia            13.28 271   P      P      23 30 23.7 -4.2
VTS   Vitosha           13.29 290  ⇓P      Pn     23 30 20.7 +2.5
VTS   Vitosha           13.29 290  ⇓P      Pn     23 30 20.7 +2.5
VTS   Vitosha           13.29 290  ⇑P      Pn     23 30 20.2 +2.1
VTS   Vitosha           13.29 290          Pn     23 30 19.4 +1.2
VAM   Vamos             13.34 258   P      Pn     23 30 21.2 +2.6
LPSR  Galich'ya Gora    13.38 357  eP      Pn     23 30 19.9 +0.8
LPSR                                pmax   pmax
      comp=Z,460nm,0.9s
LPSR                                MLR    MLR
      comp=Z,3µm,10.0s
LKR   Lokris            13.44 273   P      Pn     23 30 21.2 +1.1
IMMV  Iera Moni Meta    13.48 259   P      Pn     23 30 18.2 -2.4
BAIL  Bailesti          13.50 296  ⇓P      P      23 30 32.0 +1.7
EPID  Epidavros         13.53 268   P      P      23 30 27.1 -3.6
KRND  KRANIDI           13.56 267   P      Pn     23 30 22.1 +0.5
LTK   Loutraki          13.57 270   P      Pn     23 30 22.1 +0.3
GVDS  Gavdos            13.63 256   P      Pn     23 30 22.8 +0.1
GVD   Gavdhos           13.64 256   P      Pn     23 30 19.4 -3.4
VAY   Valandovo         13.65 284  i P     Pn     23 30 25.4 +2.4
LOT   Lotru             13.66 302  ⇓P      Pn     23 30 24.2 +1.1
BURAR Bucovina Array    13.73 312  ⇓P      Pn     23 30 28.1 +4.0
BURAR Bucovina Array    13.73 312  ⇓P      Pn     23 30 28.1 +4.0
BURAR Bucovina Array    13.73 312          Pn     23 30 23.6 -0.5
BUR08 Bucovina Ar. S    13.76 312          Pn     23 30 24.9 +0.5
SRE   Strehaia          13.78 299  ⇓P      P      23 30 38.3 +5.0
KNDR  Palaiochora Ch    13.79 258   P      Pn     23 30 25.6 +0.8
THAL  Thalero           13.80 270   P      P      23 30 35.7 +2.1
BOSS  Bosilegrad        13.83 289  eP      P      23 30 31.9 -2.0
AKASG Malin Array Be    13.83 329   Pn     Pn     23 30 24.4 -0.9
      comp=Z,2.4nm,0.3s,baz=132,slow=14,SNR=31
AKASG                               Sn     Sn     23 32 55.3 -4.0
      comp=Z,0.4nm,0.3s,baz=137,slow=24,SNR=7.0
AKASG                               LR     LR     23 37 12.0
      comp=Z,4µm,18.1s,baz=145,slow=44
AKASG Malin Array Be    13.83 329  i P     Pn     23 30 24.2 -1.1
AKASG                               pmax   pmax
      comp=Z,13nm,0.6s
AKASG Malin Array Be    13.83 329          Pn     23 30 23.7 -1.6
AKBB  Malin Array Si    13.83 329ceP       Pn     23 30 24.5 -0.8
AKBB  Malin Array Si    13.83 329          Pn     23 30 24.8 -0.5
ZAPS  Zavoj             13.84 293  eP      P      23 30 38.4 +4.3
PUNG  Punghina          13.86 297  ⇓P      P      23 30 39.7 +5.5
ANKY  Antikythira Is    13.86 261   P      Pn     23 30 28.3 +2.5
VLI   Veliai            13.89 265   P      Pn     23 30 24.9 -1.3
KTHA  Kythira Island    13.92 263   P      Pn     23 30 24.6 -2.1
STIP  Stip              13.96 286  i P     Pn     23 30 26.9 -0.4
KTHR  Kythira           13.97 263   P      Pn     23 30 26.9 -0.4
ARCR  ARCALIA           13.97 309  ⇑P      P      23 30 33.5 -2.0
GEYT  Alibeck           14.04  90   Pn     Pn     23 30 27.9 -0.4
      baz=305,slow=8.8,SNR=22
GEYT                                LR     LR     23 37 45.6
      comp=Z,2µm,19.1s,baz=295,slow=46
GEYT  Alibeck           14.04  90          Pn     23 30 26.7 -1.7
GYA0B ALIBECK ARRAY     14.04  90   Pn     Pn     23 30 27.3 -1.0
MAKR  Makrakomi, Fth    14.07 275   P      P      23 30 38.3 +1.7
GUR   Goura             14.07 270   P      Pn     23 30 28.8  0.0
BELG  Belogornoye       14.10  19   Pn     Pn     23 30 28.0 -0.9
      comp=Z,2.8nm,0.3s,baz=182,slow=1.8,SNR=19
BELG                                LR     LR     23 36 38.6
      comp=Z,4µm,19.2s,baz=209,slow=40
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BELG  Belogornoye       14.10  19  i P     Pn     23 30 27.0 -1.9
BELG                                pmax   pmax
      comp=Z,83nm,1.2s
THL   Klokotos Trika    14.11 277   P      Pn     23 30 26.9 -2.2
PRVS  Prvonek           14.13 289  eP      Pn     23 30 31.0 +1.5
KLV   Kalavryta, Ach    14.20 271   P      Pn     23 30 29.7 -0.8
TRIZ  Trizonia          14.20 272   P      Pn     23 30 30.4 -0.1
SERG  Sergoula          14.21 272   P      Pn     23 30 31.3 +0.7
ZAGS  Zajecar           14.24 294  eP      Pn     23 30 33.6 +2.7
DJES  Djerdap           14.25 298  ⇑P      P      23 30 43.7 +5.1
DJES  Djerdap           14.25 298  eP      P      23 30 43.5 +4.9
KZN   Kozani            14.25 280   P      Pn     23 30 31.3 +0.1
CJR   Cluj-Napoca       14.27 307  ⇑P      P      23 30 41.8 +2.9
CJR   Cluj-Napoca       14.27 307  ⇑P      P      23 30 41.8 +2.9
ANX   Ano Chora         14.29 273   P      Pn     23 30 32.9 +1.2
GZR   Gura Zlata        14.29 301  ⇓P      Pn     23 30 32.9 +1.2
LAKA  Lakka             14.30 272   P      P      23 30 38.0 -1.2
EFP   Efpalio           14.32 272   P      Pn     23 30 32.9 +0.8
EVR   Evrytania         14.33 274   P      Pn     23 30 33.6 +1.3
BARS  Barje             14.36 290  eP      P      23 30 36.3 -3.5
BARS  Barje             14.36 290  eP      P      23 30 43.8 +4.0
HERR  Herculane         14.38 299  ⇓P      P      23 30 38.6 -1.4
FNA   Florina           14.54 282   P      Pn     23 30 35.6 +0.4
ITM   Ithomi            14.55 268   P      Pn     23 30 36.1 +0.8
ITM   Ithomi            14.55 268  ⇑P      Pn     23 30 36.6 +1.3
ITM   Ithomi            14.55 268          Pn     23 30 36.3 +1.0
DRO   Drossia           14.56 271   P      Pn     23 30 35.4  0.0
BOVS  Bovan             14.57 293  ⇓P      Pn     23 30 37.7 +2.2
BOVS  Bovan             14.57 293  eP      P      23 30 45.2 +3.0
KPRO  Kipourio          14.58 279   P      Pn     23 30 35.4 -0.3
RLS   Riolos of Patr    14.73 271   P      Pn     23 30 40.0 +2.4
KUBS  Kucevo            14.76 296  eP      Pn     23 30 40.9 +2.8
BMR   Baia Mare         14.77 310  ⇓P      P      23 30 43.3 -1.0
BMR   Baia Mare         14.77 310  ⇓P      P      23 30 43.3 -1.0
PYL   PYLOS             14.77 267   P      Pn     23 30 36.7 -1.5
NEST  Nestorio          14.80 281   P      Pn     23 30 40.7 +2.0
MDVR  Moldovita         14.83 298  ⇓P      Pn     23 30 40.4 +1.3
DRGR                    14.85 306  ⇑P      Pn     23 30 39.7 +0.3
DRGR                    14.85 306  ⇑P      Pn     23 30 39.7 +0.3
MESR  Meseseni          14.86 308  ⇑P      P      23 30 48.9 +3.6
SELS  Selova            14.92 292  eP      Pn     23 30 41.0 +0.7
OHR   Ohrid             14.98 283  i P     Pn     23 30 43.1 +2.0
JAN   Janina            14.99 278   P      Pn     23 30 43.8 +2.5
KBN   Korca             14.99 281   P      Pn     23 30 41.0 -0.3
KBN   Korca             14.99 281   P      Pn     23 30 40.7 -0.6
KBN   Korca             14.99 281          Pn     23 30 40.7 -0.6
KBN   Korca             14.99 281   P      Pn     23 30 41.9 +0.6
      baz=250
SVIS  Svilajnac         15.05 296  eP      P      23 30 49.5 +2.0
BZS   Buzias            15.14 301  ⇑P      Pn     23 30 42.9 -0.2
BZS   Buzias            15.14 301  ⇑P      Pn     23 30 42.9 -0.2
LSK   Leskovik          15.15 280   P      P      23 30 48.8 +0.1
      baz=240
NYDR  Nydri-Lefkada     15.22 274   P      Pn     23 30 43.7 -0.5
TSLK  Tsoukalades, L    15.23 275   P      Pn     23 30 44.2 -0.3
LKD2  Lefkada island    15.24 274   P      Pn     23 30 45.0 +0.5
PHP   Peshkopia         15.27 285   P      Pn     23 30 45.5 +0.5
PHP   Peshkopia         15.27 285   P      Pn     23 30 46.2 +1.2
      baz=283
LTHK  Lithakia          15.28 270   P      Pn     23 30 43.3 -1.8
GRUS  Gruza             15.33 294  eP      Pn     23 30 47.4 +1.8
SIRR  Siria             15.33 303  ⇓P      Pn     23 30 46.6 +1.0
BANR  Banloc            15.39 300  ⇑P      P      23 30 53.0 +1.8
TRPA  Tarpa             15.55 311  ⇑P      P      23 30 53.5 +0.5
TRPA  Tarpa             15.55 311  eP      P      23 30 51.5 -1.4
TRPA  Tarpa             15.55 311  ePN     P      23 30 53.5 +0.5
BCI   Bajram Curri      15.59 288   P      P      23 30 51.6 -1.9
      baz=298
TRUS  Trudelj           15.61 295  eP      P      23 30 53.1 -0.6
LVV   L'vov             15.62 318  eP      P      23 30 53.1 -0.7
LVV                                eS      Sn     23 33 48.4 +5.4
LVV                                 MLR    MLR
      comp=Z,2µm,15.0s
SRN   Sarande           15.63 279   P      Pn     23 30 49.8 +0.2
      baz=240
TIR   Tirane            15.69 284  ⇑P      P      23 30 58.5 +3.9
TIR   Tirane            15.69 284   P      Pn     23 30 50.4  0.0
TIR                                 pmax   pmax
      comp=Z,237nm,1.1s
TIR   Tirane            15.69 284  ⇑P      P      23 30 52.8 -1.8
TIR   Tirane            15.69 284          Pn     23 30 50.4  0.0
TIR                                 IAmb   IAmb   23 31 02.2
      comp=Z,237nm,1.1s
TIR   Tirane            15.69 284   P      P      23 30 55.0 +0.4
      baz=273
SJES  Sjenica           15.76 291  eP      P      23 30 54.2 -1.3
DIVS  Divibare          15.88 294  ⇑P      Pn     23 30 53.6 +0.7
DIVS  Divibare          15.88 294   Pn     Pn     23 30 53.6 +0.7
DIVS                                IAmb   IAmb   23 31 03.7
      comp=Z,438nm,1.5s
DIVS  Divibare          15.88 294  eP      Pn     23 30 54.6 +1.7
UZH   Uzhgorod          15.94 312  eP      Pn     23 30 53.2 -0.3
UZH                                eS      Sn     23 33 49.2 -1.4
UZH                                 MLR    MLR
      comp=N,950nm,17.0s
UZH                                 MLR    MLR
      comp=E,910nm,17.0s
UZH                                 MLR    MLR
      comp=Z,360nm,17.0s
AMBH  Ambrzfalva        15.96 303  ⇑P      P      23 31 00.3 +2.7
AMBH  Ambrzfalva        15.96 303  ePN     P      23 30 57.8 +0.2
AMBH  Ambrzfalva        15.96 303  eP      P      23 31 00.7 +3.1
VLO   Vlora             15.98 281   P      Pn     23 30 54.5 +0.3
VLO                                 pmax   pmax
      comp=Z,276nm,1.2s
VLO   Vlora             15.98 281          Pn     23 30 54.5 +0.3
VLO   Vlora             15.98 281   P      P      23 30 58.2 +0.4
      baz=255
OBN   Obninsk           16.06 352  ⇑P      Pn     23 30 55.4 +0.4
OBN   Obninsk           16.06 352   Pn     Pn     23 30 53.4 -1.6
      comp=Z,0.9nm,0.3s,baz=347,slow=8.7,SNR=26
OBN                                 LR     LR     23 37 49.7
      comp=Z,645nm,18.1s,baz=171,slow=40
OBN   Obninsk           16.06 352⇑eP       Pn     23 30 53.1 -1.9
OBN                                eS      Sn     23 33 56.6 +3.2
OBN                                 pmax   pmax
      comp=Z,229nm,0.9s
OBN                                 MLR    MLR
      comp=Z,2µm,17.0s
OBN   Obninsk           16.06 352  ⇑P      Pn     23 30 54.9 -0.2
OBN   Obninsk           16.06 352          Pn     23 30 53.3 -1.8
KOLS  Kolonicke sedl    16.10 313  eP      P      23 30 59.9 +0.8
KOLS                                pmax   pmax
      comp=Z,240nm,1.3s
KOLS  Kolonicke sedl    16.10 313  eP      P      23 30 59.9 +0.8
SHMA  Al-Shehemyia      16.11 143   P      Pn     23 30 54.9 -1.0
PDG   Podgorica         16.20 288  ⇑P      Pn     23 30 58.5 +1.6
PDG   Podgorica         16.20 288  ⇑P      P      23 30 58.7 -1.5
PDG   Podgorica         16.20 288          Pn     23 30 57.6 +0.7
FRGS  Fruska Gora       16.23 298  ⇓P      Pn     23 30 58.6 +1.2
FRGS  Fruska Gora       16.23 298  eP      Pn     23 30 58.5 +1.1
BBLS  Lazi&#263;i       16.25 293  eP      Pn     23 30 59.0 +1.2
TEKS  Tekeris           16.29 296  eP      P      23 31 06.0 +4.7
RAYN  Ar Rayn           16.31 163  i P     Pn     23 30 55.5 -3.1
      SNR=59
RAYN  Ar Rayn           16.31 163   P      Pn     23 30 55.3 -3.3
RAYN                                pmax   pmax
      comp=Z,83nm,1.1s
RAYN  Ar Rayn           16.31 163   P      Pn     23 30 55.5 -3.1
RAYN  Ar Rayn           16.31 163  ⇑P      Pn     23 30 55.4 -3.1
RAYN  Ar Rayn           16.31 163   Pn     Pn     23 30 55.3 -3.3
CRVS  Cervenica-Dubn    16.55 312  eP      P      23 31 05.3 +1.2
CRVS                                pmax   pmax
      comp=Z,331nm,1.3s
CRVS  Cervenica-Dubn    16.55 312  eP      P      23 31 05.3 +1.2
MOS   Moscow            16.58 355  eP      Pn     23 30 59.1 -2.7
MOS                                eS      Sn     23 34 11.9 +5.7
MOS                                 pmax   pmax
      comp=Z,545nm,0.9s
MOS                                 MLR    MLR
      comp=N,3µm,11.0s
MOS                                 MLR    MLR
      comp=Z,3µm,11.0s
BSZH  Besenyszg         16.59 305  ⇓P      P      23 31 07.0 +2.5
BSZH  Besenyszg         16.59 305  ePN     Pn     23 31 03.1 +1.1
BSZH  Besenyszg         16.59 305  eP      P      23 31 07.8 +3.3
SCTE  Santa Cesarea     16.79 280          Pn     23 31 03.5 -1.0
AKTO  Aktyubinsk        16.79  42   Pn     Pn     23 31 02.4 -2.2
      comp=Z,0.2nm,0.3s,baz=238,slow=13,SNR=18
AKTO                                LR     LR     23 39 14.7
      comp=Z,8µm,18.5s,baz=231,slow=43
STHS  Stebnicka Huta    16.92 313  eP      P      23 31 09.3 +1.0
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STHS                             pmax  pmax
      comp=Z,112nm,1.4s
STHS  Stebnicka Huta   16.92 313 eP    P      23 31 09.3 +1.0
PSZ   Piszkesteto      17.06 307 ⇑P    Pn     23 31 07.5 -0.5
PSZ   Piszkesteto      17.06 307 ePN   Pn     23 31 08.0  0.0
PSZ   Piszkesteto      17.06 307 eP    P      23 31 09.1 -0.7
PSZ   Piszkesteto      17.06 307 ⇓P    Pn     23 31 08.8 +0.9
PSZ   Piszkesteto      17.06 307       Pn     23 31 07.5 -0.5
TRNA  Turayna          17.19 144  P    Pn     23 31 07.5 -2.1
ABKAR Akbulak array    17.24  48 ⇑P    Pn     23 31 07.0 -3.2
ABKAR Akbulak array    17.24  48       Pn     23 31 07.1 -3.0
ABKAR Akbulak array    17.24  48       Pn     23 31 07.3 -2.8
ABKAR                            IAmb  IAmb   23 31 16.6
      comp=Z,118nm,1.3s
MNK   Minsk            17.39 335 i P   Pn     23 31 11.0 -1.0
MNK                              i S   Sn     23 34 25.5 -0.3
MNK                              pmax  pmax
      comp=Z,238nm,1.0s
MNK                              pmax  pmax
      comp=E,31nm,1.1s
MNK                              pmax  pmax
      comp=N,214nm,1.1s
MNK                              MLR   MLR
      comp=E,370nm,18.0s
MNK                              MLR   MLR
      comp=N,4µm,17.0s
MNK                              MLR   MLR
      comp=Z,4µm,19.0s
MNK   Minsk            17.39 335 i P   Pn     23 31 11.1 -0.9
      comp=E,31nm,1.1s
MNK                              i P   Pn     23 31 11.1 -0.9
      comp=N,214nm,1.1s
MNK                              i P   Pn     23 31 11.1 -0.9
      comp=Z,238nm,1.1s,baz=329
MNK                              i PP  PnPn   23 31 21.2 -0.8
MNK                              i PPP PPP    23 31 28.9
MNK                              i S   Sn     23 34 25.6 -0.3
MNK                              i SSS SSS    23 34 53.3
MNK                              i PcP PcP    23 35 57.6 +4.1
MNK                              i LQ  LQ     23 36 20.9
MNK                              i LR  LR     23 37 40.4
MNK                              i LRM MLR    23 38 45.3
      comp=E,370nm,18.3s
MNK                              i LRM MLR    23 38 55.4
      comp=N,4µm,16.9s
MNK                              i LRM MLR    23 38 58.6
      comp=Z,4µm,18.6s
IZAB  Izabela          17.43 309 eP    P      23 31 15.7 +1.8
BUD   Budapest         17.45 305 eP    P      23 31 18.1 +4.1
NIE   Niedzica         17.46 312 eP    P      23 31 18.2 +4.0
KOVH  Kovagotottos     17.63 300 ePN   Pn     23 31 14.3 -0.7
KOVH  Kovagotottos     17.63 300 eP    P      23 31 15.8 -0.2
JRN   Qarnain Island   17.80 140  P    Pn     23 31 16.6 -0.6
      SNR=90
LANS  Liptovska Anna   17.83 310 eP    P      23 31 18.7 +0.4
LANS  Liptovska Anna   17.83 310 eP    P      23 31 18.7 +0.4
CSKK  Cskako           17.89 304 ePN   Pn     23 31 18.6 +0.3
CSKK  Cskako           17.89 304 eP    P      23 31 20.5 +1.5
VYHS  Vyhne            17.94 308 eP    Pn     23 31 18.9 +0.1
VYHS                             pmax  pmax
      comp=Z,498nm,2.2s
VYHS  Vyhne            17.94 308 eP    Pn     23 31 18.9 +0.1
BLY   Banja Luka       17.97 295 ⇓P    P      23 31 20.2 +0.4
SLWR  Sila             17.98 144  P    Pn     23 31 17.2 -2.2
TIH   Tihany           17.99 302 ePN   P      23 31 20.5 +0.5
TIH   Tihany           17.99 302 eP    P      23 31 23.0 +3.0
SRO   Srobarova        18.01 305 eP    P      23 31 21.4 +1.2
SRO                              pmax  pmax
      comp=Z,334nm,2.1s
SRO   Srobarova        18.01 305 eP    P      23 31 21.4 +1.2
NACGM Naroch           18.09 334 i P   Pn     23 31 20.7 +0.1
MATE  Matera           18.10 282 ⇓P    P      23 31 21.3 +0.1
MATE  Matera           18.10 282 ⇓P    P      23 31 21.9 +0.7
OJC   Ojcow            18.14 314 eP    Pn     23 31 19.1 -2.1
OJC   Ojcow            18.14 314  P    Pn     23 31 18.9 -2.3
OJC                              pmax  pmax
      comp=Z,53nm,1.1s
OJC   Ojcow            18.14 314 ⇓P    P      23 31 22.3 +0.7
OJC   Ojcow            18.14 314       Pn     23 31 18.9 -2.3
TIP   Timpagrande      18.20 277 ⇑P    P      23 31 22.8 +0.4
TIP   Timpagrande      18.20 277 ⇑P    Pn     23 31 21.2 -0.9
TIP   Timpagrande      18.20 277  P    P      23 31 22.3 -0.2
HRA   Herat            18.26  99  P    Pn     23 31 22.9 -0.1
MPLH  Magyarpolny      18.30 303 ePN   Pn     23 31 23.3 +0.1
MPLH  Magyarpolny      18.30 303 eP    P      23 31 24.4 +1.0
MRVN  Minervino Murg   18.46 283 ⇑P    P      23 31 24.2 -1.1
BEL   Belsk            18.47 319 eP    Pn     23 31 25.7 +0.4
EGYH  Egyhazaskeszo    18.51 304 eP    Pn     23 31 29.7 +3.9
GHWR  Ruwais           18.63 141  P    P      23 31 26.1 -1.1
SHME  Shamm            18.74 130 i P   P      23 31 28.2 -0.2
      SNR=31
SHME  Shamm            18.74 130  P    Pn     23 31 30.2 +1.5
      SNR=35
SUW   Suwalki          18.77 327 eP    Pn     23 31 30.2 +1.3
SUW   Suwalki          18.77 327 eP    P      23 31 25.4 -3.1
SUW   Suwalki          18.77 327  P    P      23 31 28.3 -0.2
SUW                              pmax  pmax
      comp=Z,316nm,0.9s
SUW   Suwalki          18.77 327 ⇑P    Pn     23 31 29.6 +0.7
SUW   Suwalki          18.77 327  P    P      23 31 28.3 -0.2
SUW                              IAmb  IAmb   23 31 33.6
      comp=Z,316nm,0.9s
SGRT  San Giovanni R   18.79 285  P    P      23 31 26.9 -2.0
JAVC  Velka Javorina   18.79 308 eP    Pn     23 31 29.3  0.0
SMOL  Smolenice        18.81 307 eP    Pn     23 31 30.8 +1.3
SMOL                             pmax  pmax
      comp=Z,174nm,2.1s
SMOL  Smolenice        18.81 307 eP    Pn     23 31 30.8 +1.3
ISAL  Salakas          18.85 335 eP    P      23 31 26.4 -3.0
UMQ   Umm Al-Quwin     18.85 132 i P   Pn     23 31 31.5 +1.3
      SNR=17
UMQ   Umm Al-Quwin     18.85 132  P    Pn     23 31 35.6 +5.5
      SNR=20
MODS  Modra-Piesok     18.86 306 eP    Pn     23 31 29.9 -0.2
MODS                             pmax  pmax
      comp=Z,258nm,1.6s
MODS  Modra-Piesok     18.86 306 eP    Pn     23 31 29.9 -0.2
MODS                             eS    S      23 35 03.1 -1.4
OKC   Ostrava-Krasne   18.90 311 eP    Pn     23 31 33.0 +2.4
OKC                              eS    S      23 35 07.6 +2.3
OKC                              AMS   AMS    23 40 40.0
      comp=Z,3µm,13.0s
OKC   Ostrava-Krasne   18.90 311 eP    Pn     23 31 33.0 +2.4
OKC                              eS    S      23 35 07.6 +2.3
OKC                              MLR   MLR
      comp=Z,3µm,13.0s
ZST   Bratislava       18.91 306 eP    Pn     23 31 31.8 +1.2
ZST                              pmax  pmax
      comp=Z,315nm,1.3s
ZST   Bratislava       18.91 306 eP    Pn     23 31 31.8 +1.2
ZST                              eS    S      23 35 09.4 +4.0
BANOM Banah            18.93 130 i P   P      23 31 30.2 -0.3
      SNR=43
BANOM Banah            18.93 130  P    Pn     23 31 31.0 -0.1
      SNR=70
BANOM                             P    Pn     23 31 31.0 -0.1
      SNR=70
KOGS  Kog              18.96 300 eP    Pn     23 31 31.1 -0.3
CEL   Celeste          19.01 275 ⇑P    P      23 31 29.6 -1.8
CEL   Celeste          19.01 275  P    P      23 31 31.3 -0.1
CEL                              IAmb  IAmb   23 31 36.4
      comp=Z,345nm,1.1s
SOP   Sopron           19.09 304 ePN   P      23 31 32.4 +0.3
SOP   Sopron           19.09 304 eP    Pn     23 31 34.5 +1.7
AJN   Ajban            19.23 135 i P   Pn     23 31 34.5 -0.1
      SNR=48
AJN   Ajban            19.23 135  P    Pn     23 31 35.0 +0.3
      SNR=82
AJN                               P    Pn     23 31 35.0 +0.3
      SNR=82
MORC  Moravsky Berou   19.23 311 ⇑P    Pn     23 31 36.1 +1.5
MORC  Moravsky Berou   19.23 311 eP    P      23 31 32.5 -1.2
MORC  Moravsky Berou   19.23 311  P    P      23 31 32.7 -1.0
MORC                             pmax  pmax
      comp=Z,67nm,1.1s
MORC  Moravsky Berou   19.23 311  P    P      23 31 32.7 -1.0
MASF  Masafi           19.26 131  P    P      23 31 34.2  0.0
      SNR=59
NAZ   Nazwa, Dubai     19.27 133 i P   Pn     23 31 35.0 -0.2
      SNR=182
NAZ   Nazwa, Dubai     19.27 133  P    Pn     23 31 35.1  0.0
      SNR=124
NAZ                               P    Pn     23 31 35.1  0.0
      SNR=124
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MSFE  Esma-Masafi      19.27 131 i P   P      23 31 34.0 -0.2
      SNR=69
MZWR  Madinat Zayed    19.30 139  P    P      23 31 34.2 -0.3
ASUD  Al Ashush, Dub   19.36 134 i P   Pn     23 31 36.5 +0.2
      SNR=88
ASUD  Al Ashush, Dub   19.36 134  P    Pn     23 31 36.0 -0.3
      SNR=50
ASUD                              P    Pn     23 31 36.0 -0.3
      SNR=50
ASUD                              P    Pn     23 31 36.0 -0.3
      SNR=50
MDH   Madha            19.40 131 i P   P      23 31 35.2 -0.4
      SNR=66
MDH   Madha            19.40 131  P    Pn     23 31 37.0 +0.3
      SNR=74
MDH                               P    Pn     23 31 37.0 +0.3
      SNR=74
FAQ   Al Faqa, Dubai   19.42 134 i P   Pn     23 31 36.7 -0.3
      SNR=96
FAQ   Al Faqa, Dubai   19.42 134  P    Pn     23 31 36.7 -0.3
      SNR=84
FAQ                               P    Pn     23 31 36.7 -0.3
      SNR=84
GROS  Grobnik          19.47 300 eP    P      23 31 36.4  0.0
GROS                             eS    S      23 35 21.6 +4.8
PABE  Paberze          19.56 332 eP    P      23 31 34.3 -2.8
PABE                             IAmb  IAmb   23 31 55.7
      comp=Z,279nm,1.2s
PABE  Paberze          19.56 332  P    P      23 31 36.0 -1.1
PABE                             IAmb  IAmb   23 31 55.4
      comp=Z,258nm,1.2s
CONA  Conrad Observa   19.61 304 i P   Pn     23 31 38.9 -0.3
      comp=Z,210nm,1.3s,SNR=66
CONA  Conrad Observa   19.61 304 eP    PcP    23 36 00.2 +2.6
      comp=Z,2.8nm,0.8s
UOSS  Minazif          19.61 132 i P   P      23 31 38.1 +0.1
      SNR=177
UOSS  Minazif          19.61 132  P    Pn     23 31 39.0 -0.3
UOSS                              P    Pn     23 31 39.0 -0.3
UOSS  Minazif          19.61 132 ⇑P    P      23 31 37.7 -0.3
UOSS  Minazif          19.61 132  P    P      23 31 37.1 -0.9
VRAC  Vranov           19.62 309 ⇑P    Pn     23 31 42.2 +3.0
VRAC  Vranov           19.62 309  P    Pn     23 31 40.7 +1.5
      comp=Z,0.4nm,0.3s,baz=94,slow=11,SNR=16
VRAC                             LR    LR     23 41 38.5
      comp=Z,2µm,18.7s,baz=126,slow=44
VRAC  Vranov           19.62 309 eP    Pn     23 31 38.8 -0.4
VRAC  Vranov           19.62 309 ⇑P    Pn     23 31 42.2 +3.0
ARSA  Arzberg          19.64 302 i P   Pn     23 31 39.5 -0.1
      comp=Z,56nm,1.4s,SNR=14
ARSA  Arzberg          19.64 302 eP    PcP    23 36 00.7 +3.2
      comp=Z,2.2nm,0.6s
KRUC  Moravsky         19.65 308 eP    P      23 31 38.3 +0.1
HATD  Hatta, Dubai     19.66 132 i P   Pn     23 31 39.7 -0.2
      SNR=119
HATD  Hatta, Dubai     19.66 132  P    Pn     23 31 40.2 +0.3
      SNR=238
HATD                              P    Pn     23 31 40.2 +0.3
      SNR=238
ASHO  Ashiyiah         19.73 133 i P   P      23 31 39.6 +0.3
      SNR=92
ASHO  Ashiyiah         19.73 133  P    P      23 31 39.9 +0.6
      SNR=255
VISS  Visnje           19.79 298 eP    P      23 31 39.9 +0.1
KRLC  Kraliky          19.80 311 eP    P      23 31 39.5 -0.5
KRLC                             AMS   AMS    23 41 00.0
      comp=Z,2µm,17.5s
KRLC  Kraliky          19.80 311 eP    P      23 31 39.5 -0.5
KRLC                             MLR   MLR
      comp=Z,2µm,17.5s
SOKA  Soboth           19.83 300 i P   P      23 31 40.9 +0.6
      comp=Z,98nm,1.3s,SNR=57
SOKA  Soboth           19.83 300 eP    PcP    23 35 58.9 +0.9
      comp=Z,7.5nm,0.9s
LJU   Ljubljana        20.05 298 eP    P      23 31 43.2 +0.6
LJU                              i Pn  sP     23 31 45.4 +0.6
LJU                              e            23 31 47.3
LJU                              eS    Sn     23 35 34.3 +4.3
ALNE  Al Ain           20.05 135 i P   P      23 31 42.8  0.0
      SNR=74
ALNE  Al Ain           20.05 135  P    P      23 31 42.1 -0.7
      SNR=102
KNDS  Knezji Dol       20.06 297 eP    P      23 31 42.8  0.0
KNDS                             eS    Sn     23 35 32.8 +2.3
OBKA  Obir             20.12 299 i P   P      23 31 44.3 +0.7
      comp=Z,135nm,1.3s,SNR=18
OBKA  Obir             20.12 299 eP    PcP    23 35 59.8 +1.3
      comp=Z,3.7nm,0.8s
DPC   Dobruska-Polom   20.19 311 eP    P      23 31 44.7 +0.6
DPC                              eS    S      23 35 32.0 +0.9
DPC                              AMS   AMS    23 41 20.0
      comp=Z,2µm,16.1s
DPC   Dobruska-Polom   20.19 311 eP    P      23 31 44.7 +0.6
DPC                              eS    S      23 35 32.0 +0.9
DPC                              MLR   MLR
      comp=Z,2µm,16.1s
KIRV  Kirov            20.22  14  P    P      23 31 44.2 -0.1
      comp=Z,108nm,0.7s,baz=204,slow=6.8,SNR=24
KIRV                             LR    LR     23 40 05.5
      comp=Z,4µm,19.2s,baz=206,slow=38
KIRV  Kirov            20.22  14ceP    P      23 31 43.8 -0.6
TREC  Trest            20.29 308 eP    Pn     23 31 47.4 +0.2
TREC                             eS    Sn     23 35 35.2 -0.7
TREC                             AMS   AMS    23 40 30.0
      comp=Z,3µm,21.3s
TREC  Trest            20.29 308 eP    Pn     23 31 47.4 +0.2
TREC                             eS    Sn     23 35 35.2 -0.7
TREC                             MLR   MLR
      comp=Z,3µm,21.3s
VAE   Valguarnera      20.32 273  P    Pn     23 31 48.5 +0.9
      comp=Z,95nm,0.9s,baz=75,slow=2.0,SNR=19
VAE                              LR    LR     23 40 09.7
      comp=Z,2µm,18.7s,baz=56,slow=38
OSTC  Ostas            20.33 312 eS    Sn     23 35 38.1 +1.1
OSTC                             AMS   AMS    23 41 30.0
      comp=Z,3µm,13.0s
KSP   Ksiaz            20.41 312 eP    P      23 31 47.2 +0.7
KSP   Ksiaz            20.41 312 ⇑P    Pn     23 31 48.0 -0.6
RAFF  Raffo Rosso      20.41 272  P    P      23 31 46.8 +0.1
SOHO  SOHO             20.43 133 i P   P      23 31 47.0 +0.1
      SNR=66
SOHO  SOHO             20.43 133  P    P      23 31 47.8 +1.0
SOHO                              P    P      23 31 47.8 +1.0
UPC   Upice            20.43 311 eP    Pn     23 31 48.7 -0.1
UPC                              AMS   AMS    23 41 30.0
      comp=Z,3µm,13.6s
UPC   Upice            20.43 311 eP    Pn     23 31 48.7 -0.1
UPC                              MLR   MLR
      comp=Z,3µm,13.6s
CHVC  Chvalec          20.44 312 eP    Pn     23 31 48.0 -0.9
CHVC                             AMS   AMS    23 41 30.0
      comp=Z,3µm,13.9s
KLNR  Kaliningrad      20.45 325 i P   P      23 31 47.0 +0.1
KLNR                             pmax  pmax
      comp=Z,255nm,1.1s
KLNR                             MLR   MLR
      comp=Z,3µm,15.0s
AQU   L'Aquila         20.52 287  P    P      23 31 47.4 -0.5
AQU                              pmax  pmax
      comp=Z,594nm,1.0s
AQU                              MLR   MLR
      comp=Z,4µm,22.0s
AQU   L'Aquila         20.52 287 ⇑P    P      23 31 48.1 +0.2
AQU   L'Aquila         20.52 287  P    P      23 31 47.4 -0.5
MOA   Molln            20.62 303 i P   P      23 31 48.9 +0.1
      comp=Z,133nm,1.1s,SNR=46
PBUR  Paburge          20.71 330 eP    P      23 31 46.8 -3.0
PBUR                             IAmb  IAmb   23 32 08.4
      comp=Z,540nm,1.2s
NRCA  Norcia           20.74 289  P    P      23 31 49.6 -0.7
NRCA                             IAmb  IAmb   23 32 01.2
      comp=Z,188nm,0.9s
MYKA  Terra Mystica    20.76 299 i P   Pn     23 31 52.9 +0.2
      comp=Z,87nm,1.0s,SNR=25
UMZA  Um Al Zommool    20.82 138  P    P      23 31 51.0 -0.1
UMZA                              P    P      23 31 51.0 -0.1
UMZA                              P    P      23 31 51.0 -0.1
CKRC  Cesky Krumlov    20.86 306 eP    P      23 31 52.5 +1.0
CKRC                             ex    x      23 31 55.2
CKRC                             AMS   AMS    23 40 50.0
      comp=Z,4µm,20.5s
PTCC  Patocco-Chiusa   20.91 299 ⇑P    P      23 31 52.2 +0.2
ARU   Arti             21.01  29  P    P      23 31 52.0 -0.9
      comp=Z,35nm,0.9s,baz=222,slow=7.4,SNR=68
ARU                              LR    LR     23 41 58.1
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      comp=Z,3µm,20.4s,baz=228,slow=42
ARU   Arti             21.01  29c iP   P      23 31 51.8 -1.1
ARU                              PPP   PPP    23 32 19.4
ARU                              S     S      23 35 48.2 +0.9
ARU                              SS    SnSn   23 36 09.5 +1.7
ARU                              SSS   SSS    23 36 30.5
ARU                              pmax  pmax
      comp=Z,115nm,0.9s
ARU                              MLR   MLR
      comp=Z,3µm,13.0s
ARU   Arti             21.01  29 ⇑P    P      23 31 51.2 -1.8
ARU   Arti             21.01  29  P    P      23 31 51.1 -1.8
ARQ   Araqi            21.05 134  P    P      23 31 53.3 -0.3
      SNR=146
ARQ                               P    P      23 31 53.3 -0.3
      SNR=146
ARQ                               P    P      23 31 53.3 -0.3
      SNR=146
KBA   Koelnbreinsper   21.05 301 i P   P      23 31 54.1 +0.5
      comp=Z,374nm,1.2s,SNR=79
KBA   Koelnbreinsper   21.05 301 eP    PcP    23 36 04.2 +3.9
      comp=Z,4.2nm,0.8s
GKP   Gorka Klasztor   21.07 319 eP    P      23 31 54.7 +1.0
GKP   Gorka Klasztor   21.07 319 eP    P      23 31 50.8 -2.8
CORL  Corleone         21.09 275  P    P      23 31 53.5 -0.5
CORL                             IAmb  IAmb   23 32 14.0
      comp=Z,256nm,1.2s
VSU   Vasula           21.10 340 eP    P      23 31 51.0 -2.9
VSU   Vasula           21.10 340 i P   P      23 31 54.2 +0.4
VSU   Vasula           21.10 340 ⇑P    P      23 31 54.6 +0.8
PRU   Pruhonice        21.11 309 eP    P      23 31 54.3 +0.3
PRU                              eS    Sn     23 35 54.2 -1.3
PRU                              AMS   AMS    23 42 20.0
      comp=Z,4µm,14.9s
PRU   Pruhonice        21.11 309 eP    P      23 31 54.3 +0.3
PRU                              eS    Sn     23 35 54.2 -1.3
PRU                              MLR   MLR
      comp=Z,4µm,14.9s
MURB  Monte Urbino     21.18 290  P    P      23 31 54.8 -0.2
ZOU   Zoufplan         21.20 299  P    P      23 31 55.1 -0.2
ZOU                              IAmb  IAmb   23 32 03.3
      comp=Z,254nm,1.1s
PRA   Prague           21.20 309 eP    P      23 31 55.5 +0.5
PRA                              eS    Sn     23 35 56.1 -1.7
PRA                              AMS   AMS    23 42 30.0
      comp=Z,4µm,14.1s
PRA   Prague           21.20 309 eP    P      23 31 55.5 +0.5
PRA                              eS    Sn     23 35 56.1 -1.7
PRA                              MLR   MLR
      comp=Z,4µm,14.1s
CLTB  Caltabellotta    21.22 274 ⇑P    P      23 31 57.5 +2.0
CLTB  Caltabellotta    21.22 274  P    P      23 31 54.8 -0.7
CLTB                             IAmb  IAmb   23 32 21.8
      comp=Z,281nm,1.4s
GEC2  GERESS Array S   21.26 305 eP    P      23 31 56.2 +0.4
      comp=Z,154nm,1.4s,baz=108,slow=10
GEC2                             eL    L      23 41 05.0
      comp=Z,3µm,20.9s
GEC2  GERESS Array S   21.26 305  P    P      23 31 54.5 -1.3
GERES GERESS Array B   21.26 305  P    P      23 31 56.3 +0.5
      comp=Z,19nm,0.8s,baz=106,slow=10.0,SNR=45
GERES                            PcP   PcP    23 36 00.7 +0.1
      comp=Z,4.5nm,0.9s,baz=101,slow=2.7,SNR=5.8
GERES                            LR    LR     23 41 15.9
      comp=Z,3µm,20.8s,baz=117,slow=40
GERES GERESS Array B   21.26 305  P    P      23 31 55.0 -0.8
PVCC  Panska Ves       21.29 310 eP    P      23 31 56.1 +0.1
PVCC                             AMS   AMS    23 40 50.0
      comp=Z,2µm,18.8s
PVCC  Panska Ves       21.29 310 eP    P      23 31 56.1 +0.1
PVCC                             MLR   MLR
      comp=Z,2µm,18.8s
HOQ   Hoqain           21.30 132  P    P      23 31 56.3 -0.1
      SNR=174
HOQ                               P    P      23 31 56.3 -0.1
      SNR=174
STAL  STALIGIAL        21.33 298  P    P      23 31 56.0 -0.5
STAL                             IAmb  IAmb   23 32 01.7
      comp=Z,214nm,1.2s
KHC   Kasperske Hory   21.42 306 eP    P      23 31 57.1 -0.4
KHC                              eS    Sn     23 36 02.6 -0.5
KHC                              AMS   AMS    23 40 50.0
      comp=Z,4µm,19.1s
KHC   Kasperske Hory   21.42 306 i P   P      23 31 57.0 -0.4
KHC                              pmax  pmax
      comp=Z,235nm,1.4s
KHC                              MLR   MLR
      comp=Z,7µm,21.0s
KHC   Kasperske Hory   21.42 306 ⇓P    P      23 31 57.4  0.0
KHC   Kasperske Hory   21.42 306  P    P      23 31 56.5 -1.0
PUL   Pulkovo          21.48 346 eP    P      23 31 55.0 -2.9
PUL   Pulkovo          21.48 346ceP    P      23 31 58.1 +0.2
PUL                              pmax  pmax
      comp=Z,537nm,1.0s
PUL                              MLR   MLR
      comp=Z,2µm,17.0s
MGAB  Montegabbione    21.48 289 ⇓P    P      23 31 58.1  0.0
ABTA  Abfaltersbach    21.54 299 i P   P      23 31 59.2 +0.3
      comp=Z,203nm,1.1s,SNR=45
ABTA  Abfaltersbach    21.54 299 eP    PcP    23 36 03.8 +2.6
      comp=Z,5.8nm,0.8s
RJOB  Jochberg         21.55 302 eP    P      23 31 59.8 +0.9
      comp=Z,173nm,1.1s,baz=108,slow=10
KLMR  Klimovskoe       21.63 359 eP    P      23 31 58.1 -1.4
KLMR                             e            23 32 16.9
KLMR                             eS    S      23 36 00.0 +0.7
KLMR                             pmax  pmax
      comp=Z,1µm,1.1s
KLMR                             MLR   MLR
      comp=Z,2µm,10.0s
KLMR  Klimovskoe       21.63 359 eP    P      23 31 58.1 -1.4
KLMR                             AMP          23 32 06.0
      comp=Z,1µm,1.1s
KLMR                             ePP   PnPn   23 32 16.9 -3.0
KLMR                             eS    S      23 36 00.1 +0.7
KLMR                             eS    S      23 36 00.1 +0.7
KLMR                             LQ    LQ     23 38 50.9
KLMR                             LQ    LQ     23 38 50.9
KLMR                             LR    LR     23 39 54.2
KLMR                             AMP          23 41 57.5
      comp=Z,2µm,9.6s
SLIT  Slitere, Latvi   21.78 333 eP    P      23 31 58.2 -3.0
SLIT  Slitere, Latvi   21.78 333 ⇑P    P      23 32 03.0 +1.8
BRG   Berggiesshubel   21.79 311 eP    P      23 32 03.6 +2.2
      comp=Z,180nm,1.6s,baz=108,slow=10
BRG   Berggiesshubel   21.79 311 eP    P      23 32 01.2 -0.1
BRG                              Amp          23 32 09.0
      comp=Z,90nm,1.3s
BRG   Berggiesshubel   21.79 311  S    S      23 36 05.0 +2.3
BIDO  Bidbid           21.82 131  P    P      23 32 04.8 +2.9
      SNR=77
BIDO                              P    P      23 32 04.8 +2.9
      SNR=77
WET   Wettzell         21.86 306 eP    P      23 32 04.4 +2.2
      comp=Z,152nm,1.3s,baz=108,slow=10
WET                              eL    L      23 41 24.0
      comp=Z,3µm,21.3s
BSY   Bisya            21.89 134  P    P      23 32 02.5 -0.2
      SNR=112
BSY                               P    P      23 32 02.5 -0.2
      SNR=112
TEOL  Teolo            21.93 295  P    P      23 32 02.2 -0.7
CTI   Castel Tesino    22.02 297  P    P      23 32 03.6 -0.5
CTI                              pmax  pmax
      comp=Z,126nm,1.1s
CTI   Castel Tesino    22.02 297  P    P      23 32 03.6 -0.5
SVE   Sverdlovsk       22.10  31deP    P      23 32 03.7 -0.9
SVE                              eS    S      23 36 07.2 -1.4
SVE                              pmax  pmax
      comp=Z,293nm,1.2s
SVE                              MLR   MLR
      comp=Z,4µm,15.0s
OSSC  Osservatorio P   22.12 290  P    P      23 32 04.6 -0.4
OSSC                             IAmb  IAmb   23 32 14.5
      comp=Z,137nm,0.9s
SMDO  Samad            22.13 132  P    P      23 32 05.3  0.0
      SNR=211
SMDO                              P    P      23 32 05.3  0.0
      SNR=211
MTSE  Matsula          22.14 337 eP    P      23 32 02.4 -2.7
FBE   Freiberg         22.15 311 eP    P      23 32 06.0 +0.7
      comp=Z,136nm,1.2s,baz=108,slow=10
TAS   Tashkent         22.21  75  P    P      23 32 05.8 -0.2
TAS                              pmax  pmax
      comp=Z,331nm,1.2s
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TAS	**Tashkent**	22.21	75	P	P	23 32 05.8	-0.2
WTTA	**Wattenberg**	22.23	300	*i* P	P	23 32 07.4	+1.0
	comp=Z,187nm,1.1s,SNR=66						
WTTA	**Wattenberg**	22.23	300	*e*P	PcP	23 36 03.4	+0.8
	comp=Z,7.7nm,0.8s						
WATA	**Walderalm**	22.28	301	*i* P	P	23 32 06.6	-0.3
	comp=Z,18nm,1.2s,SNR=106						
WATA	**Walderalm**	22.28	301	*e*P	PcP	23 36 05.7	+3.0
	comp=Z,4.1nm,0.4s						
WSAR	**Wadi Sarin**	22.34	130	P	P	23 32 07.3	-0.1
	comp=Z,23nm,0.8s,baz=353,slow=10.0,SNR=30						
WSAR				LR	LR	23 41 58.5	
	comp=Z,8µm,19.7s,baz=340,slow=40						
WSAR	**Wadi Sarin**	22.34	130	P	P	23 32 08.1	+0.7
	SNR=25						
ZCCA	**Zocca**	22.34	293	P	P	23 32 08.1	+0.7
CASP	**Castiglione de**	22.39	289	P	P	23 32 06.8	-1.2
CHGR	**Chuyangaron**	22.45	82	P	P	23 32 08.4	-0.3
CHGR				IAmb	IAmb	23 32 32.1	
	comp=Z,276nm,1.2s						
NKC	**Novy Kostel**	22.46	308	*e*P	P	23 32 08.7	+0.1
NKC				*e*S	Sn	23 36 24.4	-3.6
NKC				AMS	AMS	23 41 50.0	
	comp=Z,4µm,17.0s						
NKC	**Novy Kostel**	22.46	308	*e*P	P	23 32 08.7	+0.1
NKC				MLR	MLR		
	comp=Z,4µm,17.0s						
ROTZ	**Rotzenmuhle**	22.46	307	*e*P	P	23 32 09.2	+0.6
	comp=Z,71nm,1.5s,baz=108,slow=10						
CLL	**Collm**	22.50	311	P	P	23 32 08.5	-0.4
CLL				pmax	pmax		
	comp=Z,134nm,1.1s						
CLL				MLR	MLR		
	comp=Z,3µm,22.0s						
CLL	**Collm**	22.50	311	*e*P	P	23 32 10.0	+1.0
	comp=Z,183nm,2.0s						
CLL				*i*		23 32 13.1	
CLL				*e*Pmax		23 32 13.0	
CLL				*i*		23 32 14.0	
CLL				*i*		23 32 19.3	
	comp=Z,168nm,1.2s						
CLL				*i* PP	PnPn	23 32 31.0	-0.9
CLL				*e*S	S	23 36 21.0	+4.7
CLL				Lm	MLR	23 41 00.0	
	comp=N,3µm,20.7s						
CLL				Lm	MLR	23 41 00.0	
	comp=E,4µm,21.3s						
CLL				*e*		23 41 28.0	
CLL				*e*		23 42 07.0	
CLL				*e*Lmax		23 42 59.0	
CLL	**Collm**	22.50	311	*e*P	P	23 32 09.7	+0.7
	comp=E,103nm,1.1s,baz=108,slow=10						
CLL				*e*L	L	23 42 07.3	
	comp=E,2µm,20.2s						
CLL	**Collm**	22.50	311	P	P	23 32 08.5	-0.4
CLL				IAmb	IAmb	23 32 21.1	
	comp=Z,134nm,1.1s						
SQTA	**Sankt Quirin**	22.51	300	*i* P	P	23 32 08.1	-1.2
	comp=Z,210nm,1.2s,SNR=58						
SQTA	**Sankt Quirin**	22.51	300	*e*P	PcP	23 36 03.8	+0.6
	comp=Z,4.1nm,0.6s						
TANN	**Tannenbergstha**	22.51	309	*e*P	P	23 32 09.3	+0.1
	baz=108,slow=10						
WERN	**Wernitzgruen**	22.52	308	*e*P	P	23 32 09.6	+0.4
	comp=Z,121nm,1.1s,baz=108,slow=10						
RUE	**Ruedersdorf**	22.53	315	*e*P	P	23 32 06.0	-3.2
RUE	**Ruedersdorf**	22.53	315	*e*P	P	23 32 10.2	+1.0
	comp=Z,360nm,1.5s,baz=108,slow=10						
BRLS	**Borolday**	22.54	71	*e*P	P	23 32 05.9	-3.7
	baz=72						
BRLS				*e*S	S	23 36 13.0	-4.3
	baz=72						
BRLS	**Borolday**	22.54	71	*e*P	P	23 32 05.9	-3.7
BRLS				*e*S	S	23 36 13.0	-4.3
GUNZ	**Gunzen**	22.57	309	*e*P	P	23 32 09.9	+0.1
	comp=Z,74nm,1.2s,baz=108,slow=10						
MOTA	**Moosalm**	22.60	300	*i* P	P	23 32 08.8	-1.5
	comp=Z,14nm,0.8s,SNR=67						
WERD	**Werda**	22.61	309	*e*P	P	23 32 10.8	+0.6
	comp=Z,229nm,2.6s,baz=108,slow=10						
FUR	**Furstenfeldbru**	22.65	303	*e*P	P	23 32 11.6	+1.0
	comp=Z,171nm,1.0s,baz=108,slow=10						
FUR				*e*L	L	23 41 38.0	
	comp=Z,3µm,21.8s						
PRGR	**Permogore**	22.65	7	*e*P	P	23 32 10.2	-0.2
PRGR				pmax	pmax		
	comp=Z,86nm,0.9s						
JMDO	**Jabal Madar**	22.70	133	P	P	23 32 11.1	-0.3
	SNR=48						
JMDO				P	P	23 32 11.1	-0.3
	SNR=48						
IUG	**Iuzhnay**	22.71	73	*e*P	P	23 32 09.8	-1.7
	baz=73						
IUG	**Iuzhnay**	22.71	73	*e*P	P	23 32 09.7	-1.7
PLN	**Plauen**	22.71	309	*e*P	P	23 32 12.8	+1.5
	comp=Z,428nm,3.3s,baz=108,slow=10						
SALO	**Salr**	22.76	296	⇑P	P	23 32 13.2	+1.4
SALO	**Salr**	22.76	296	P	P	23 32 11.7	-0.1
SALO				IAmb	IAmb	23 32 17.3	
	comp=Z,209nm,0.9s						
VLC	**Villacollemand**	22.76	292	⇓P	P	23 32 12.6	+0.8
VLC	**Villacollemand**	22.76	292	P	P	23 32 11.9	+0.1
VLC				IAmb	IAmb	23 32 29.4	
	comp=Z,226nm,1.1s						
FETA	**Feichten**	22.80	300	*i* P	P	23 32 12.0	-0.3
	comp=Z,272nm,1.2s,SNR=124						
FETA	**Feichten**	22.80	300	*e*P	PcP	23 36 04.4	+0.6
	comp=Z,8.1nm,0.9s						
PRMA	**PARMA**	22.84	294	P	P	23 32 12.3	-0.3
RETA	**Reutte**	22.85	301	*i* P	P	23 32 11.3	-1.5
	comp=Z,3.1nm,0.6s,SNR=17						
RETA	**Reutte**	22.85	301	*e*P	PcP	23 36 04.6	+0.8
	comp=Z,3.8nm,0.8s						
WBK	**Wadi Bani Khal**	23.02	131	P	P	23 32 16.4	+1.7
	SNR=40						
WBK				P	P	23 32 16.4	+1.7
	SNR=40						
KKAR	**Karatay Array**	23.04	71	P	P	23 32 13.7	-1.1
KKAR	**Karatay Array**	23.04	71	P	P	23 32 13.7	-1.1
GRA1	**Grafenberg Arr**	23.05	306	P	P	23 32 14.4	-0.4
GRF	**Grafenberg Arr**	23.05	306	P	P	23 32 14.4	-0.4
GRF				pmax	pmax		
	comp=Z,751nm,1.2s						
GRF				MLR	MLR		
	comp=Z,3µm,21.0s						
GRF	**Grafenberg Arr**	23.05	306	*e*P	P	23 32 16.2	+1.4
	comp=Z,811nm,1.2s,baz=108,slow=10						
GRF				*e*L	L	23 42 12.2	
	comp=Z,3µm,21.3s						
GRFO	**Grafenberg**	23.05	306	P	P	23 32 14.5	-0.3
GRFO				pmax	pmax		
	comp=Z,698nm,1.2s						
GRFO				MLR	MLR		
	comp=Z,3µm,21.0s						
GRFO	**Grafenberg**	23.05	306	P	P	23 32 14.5	-0.3
MOX	**Moxa**	23.09	309	*e*P	P	23 32 16.6	+1.4
	comp=Z,50nm,1.2s,baz=108,slow=10						
MOX				*e*L	L	23 43 41.8	
	comp=Z,3µm,19.2s						
BSD	**Bornholm Skovb**	23.22	321	*e*P	P	23 32 13.4	-3.0
BSD	**Bornholm Skovb**	23.22	321	*e*P	P	23 32 16.6	+0.1
BSD				IAmb	IAmb	23 32 27.2	
	comp=Z,53nm,0.8s						
BSD	**Bornholm Skovb**	23.22	321	⇑P	P	23 32 19.1	+2.7
GAR	**Garm**	23.28	81	P	P	23 32 17.1	-0.3
UBR	**Ueberruh**	23.32	301	*e*P	P	23 32 17.6	-0.1
	comp=Z,62nm,1.0s,baz=108,slow=10						
DAVOX	**Davos/Dischmat**	23.34	299	P	P	23 32 17.8	-0.1
	comp=Z,76nm,1.0s,baz=102,slow=5.6,SNR=27						
DAVOX				PP	PnPn	23 32 41.5	-2.1
	comp=Z,55nm,1.1s,baz=118,slow=11,SNR=5.9						
DAVOX				LR	LR	23 43 23.9	
	comp=Z,3µm,18.8s,baz=92,slow=42						
MSSA	**Maissana**	23.39	292	P	P	23 32 17.7	-0.7
MSSA				IAmb	IAmb	23 32 33.5	
	comp=Z,138nm,1.0s						
DAVA	**Damuels**	23.41	300	*i* P	P	23 32 17.9	-0.8
	comp=Z,52nm,0.8s,SNR=57						
DAVA	**Damuels**	23.41	300	*e*P	PcP	23 36 05.6	+0.6
	comp=Z,8.9nm,0.9s						
KBL	**Kabul**	23.45	93	P	P	23 32 19.8	+0.5
KBL				pmax	pmax		
	comp=Z,330nm,2.0s						
KBL	**Kabul**	23.45	93	P	P	23 32 20.8	+1.5
	SNR=42						
KBL				P	P	23 32 20.8	+1.5
	SNR=42						
KBL				P	P	23 32 20.8	+1.5
	SNR=42						
KBL	**Kabul**	23.45	93	P	P	23 32 19.8	+0.5
KBL				IAmb	IAmb	23 32 55.9	
	comp=Z,330nm,1.9s						
BTK	**Batken**	23.50	78	P	P	23 32 18.1	-1.5
BTK				pmax	pmax		
	comp=Z,158nm,1.3s						
BTK	**Batken**	23.50	78	P	P	23 32 18.1	-1.5
BTK				IAmb	IAmb	23 32 53.3	
	comp=Z,158nm,1.2s						
JLN	**Jalan Bani Buh**	23.63	131	P	P	23 32 22.8	+1.9
	SNR=20						
JLN				P	P	23 32 22.8	+1.9
	SNR=20						
DZA	**Taraz**	23.64	71	*e*P	P	23 32 18.9	-2.0
	comp=Z,108nm,1.7s,baz=71						
DZA	**Taraz**	23.64	71	*e*P	P	23 32 18.9	-2.0
DZA				pmax	pmax		
	comp=Z,108nm,1.7s						
RGN	**Rugen**	23.72	319	*e*P	P	23 32 18.8	-2.6
RGN	**Rugen**	23.72	319	P	P	23 32 22.1	+0.7
PGF	**Pioggiola**	23.78	288	P	P	23 32 22.0	-0.3
VSL	**Villasalto**	23.81	280	⇓P	P	23 32 22.5	0.0
VSL	**Villasalto**	23.81	280	P	P	23 32 21.8	-0.7
VSL				IAmb	IAmb	23 32 26.7	
	comp=Z,101nm,1.0s						
DOK	**Doka**	23.83	146	P	P	23 32 22.1	-0.6
	SNR=8.2						
FIA1	**FINESS Array S**	23.88	343	P	P	23 32 22.6	-0.2
FINES	**FINESS Array B**	23.88	343	P	P	23 32 22.9	+0.1
	comp=Z,80nm,0.7s,baz=142,slow=9.6,SNR=71						
FINES				LR	LR	23 43 11.8	
	comp=Z,3µm,19.6s,baz=155,slow=40						
FINES	**FINESS Array B**	23.88	343	*i* P	P	23 32 22.7	-0.2
FINES				pmax	pmax		
	comp=Z,81nm,0.7s						
FINES	**FINESS Array B**	23.88	343	P	P	23 32 22.3	-0.6
FLTG	**Flechtingen**	23.89	313	P	P	23 32 22.8	-0.4
UBBA	**Unterbreizbach**	24.12	309	*e*P	P	23 32 26.7	+1.5
	comp=Z,84nm,1.4s,baz=108,slow=10						
STU	**Stuttgart**	24.13	303	P	P	23 32 24.2	-1.2
STU				pmax	pmax		
	comp=Z,253nm,1.3s						
STU				MLR	MLR		
	comp=Z,4µm,18.0s						
STU	**Stuttgart**	24.13	303	*e*P	P	23 32 25.1	-0.3
	comp=Z,723nm,1.4s,baz=108,slow=10						
STU	**Stuttgart**	24.13	303	P	P	23 32 24.2	-1.2
STU				IAMs_20	IAMs_20	23 43 20.7	
	comp=Z,4µm,18.0s						
ASSE	**Asse, Remlinge**	24.15	312	*e*P	P	23 32 26.5	+1.1
	comp=Z,41nm,1.2s,baz=108,slow=10						
CLZ	**Clausthal**	24.22	311	*e*P	P	23 32 26.7	+0.4
	comp=Z,136nm,1.0s,baz=108,slow=10						
WHFO	**Wadi Hawf**	24.30	147	P	P	23 32 26.4	-0.9
	SNR=6.8						
GTTG	**Gottingen**	24.37	310	*e*P	P	23 32 30.5	+2.9
	comp=Z,127nm,1.3s,baz=108,slow=10						
DEL	**Delary**	24.45	323	*i* P	P	23 32 29.0	+0.7
AAL	**Aland**	24.50	335	*e*P	P	23 32 25.5	-3.2
TAMR	**Tamra**	24.53	275	⇑P	P	23 32 30.6	+1.4
MONC	**Moncucco Torin**	24.55	294	⇑P	P	23 32 29.5	+0.1
ABTO	**Aybut**	24.61	149	P	P	23 32 29.0	-1.1
BFO	**Black Forest**	24.61	302	P	P	23 32 30.1	+0.2
BFO				pmax	pmax		
	comp=Z,63nm,1.1s						
BFO				MLR	MLR		
	comp=Z,3µm,21.0s						
BFO	**Black Forest**	24.61	302	*e*P	P	23 32 32.4	+2.5
	comp=Z,84nm,1.3s,baz=108,slow=10						
BFO				*e*L	L	23 42 48.1	
	comp=Z,3µm,21.7s						
BFO	**Black Forest**	24.61	302	P	P	23 32 32.4	+2.5
BFO	**Black Forest**	24.61	302	P	P	23 32 30.1	+0.2
KEST	**Kesra**	24.71	272	P	P	23 32 31.4	+0.4
	comp=Z,362nm,1.0s,baz=37,slow=3.5,SNR=104						
KEST	**Kesra**	24.71	272	P	P	23 32 31.6	+0.6
	SNR=78						
KEST				P	P	23 32 31.6	+0.6
	SNR=78						
KEST	**Kesra**	24.71	272	P	P	23 32 31.2	+0.2
BRVK	**Borovoye**	24.74	46	*ce*P	P	23 32 30.4	-0.6
BRVK				pmax	pmax		
	comp=Z,16nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,7µm,19.0s						
BRVK	**Borovoye**	24.74	46	P	P	23 32 34.7	+3.7
BRVK				P	P	23 32 34.7	+3.7
BRVK	**Borovoye**	24.74	46	⇓P	P	23 32 32.1	+1.1
BRVK	**Borovoye**	24.74	46	P	P	23 32 30.2	-0.8
BRVK				IAmb	IAmb	23 32 46.5	
	comp=Z,132nm,1.4s						
BRVK	**Borovoye**	24.74	46	IAMs_20	IAMs_20	23 43 42.3	
	comp=Z,7µm,19.0s						
BVAR	**Borovoye Array**	24.79	46	P	P	23 32 32.9	+1.5
	comp=Z,14nm,1.0s,baz=248,slow=15,SNR=17						
RBK	**Rabkut**	24.85	147	P	P	23 32 31.6	-0.6
	SNR=13						
TATN	**Tataouine**	24.90	264	⇑P	P	23 32 32.2	-0.4
TNS	**Taunus Mts**	24.92	307	*e*P	P	23 32 33.3	+0.6
	comp=Z,239nm,1.3s,baz=108,slow=10						
TNS				*e*L	L	23 43 19.3	
	comp=Z,4µm,20.7s						
DMTO	**DMTO**	24.98	145	P	P	23 32 33.0	-0.4
	SNR=9.2						
SHAO	**Shalim**	25.02	143	P	P	23 32 33.5	-0.2
BSEG	**Bad Segeberg**	25.03	316	*e*P	P	23 32 34.9	+1.4
	comp=Z,282nm,1.3s,baz=108,slow=10						
BSEG				*e*L	L	23 44 27.1	
	comp=Z,2µm,20.4s						
SENIN	**Lac Senin/Sane**	25.06	297	P	P	23 32 32.8	-1.4
SENIN				IAmb	IAmb	23 32 37.6	
	comp=Z,95nm,0.8s						
UPP	**Uppsala**	25.07	333	*e*P	P	23 32 31.1	-2.8
RETH	**Rethem/Aller,**	25.11	313	*e*P	P	23 32 35.6	+1.4
	comp=Z,290nm,1.2s,baz=108,slow=10						
BRZS	**Berezniki**	25.26	54	*e*P	P	23 32 33.3	-2.5
	comp=Z,38nm,1.4s,baz=54						
BRZS	**Berezniki**	25.26	54	*e*P	P	23 32 33.2	-2.5
BRZS				pmax	pmax		
	comp=Z,38nm,1.4s						
ECH	**Echery**	25.37	302	P	P	23 32 36.2	-0.5
ECH				pmax	pmax		
	comp=Z,100nm,1.2s						
ECH	**Echery**	25.37	302	⇑P	P	23 32 36.1	-0.6
ECH	**Echery**	25.37	302	P	P	23 32 36.2	-0.5
ECH				IAmb	IAmb	23 32 53.2	
	comp=Z,100nm,1.2s						
AML	**Almayashu**	25.43	73	P	P	23 32 38.4	+0.7
	SNR=22						
AML	**Almayashu**	25.43	73	*i* P	P	23 32 38.0	+0.2
	SNR=22						
AML	**Almayashu**	25.43	73	P	P	23 32 36.9	-0.9
BNI	**Bardonecchia**	25.43	294	P	P	23 32 37.1	-0.4
BNI				pmax	pmax		
	comp=Z,355nm,1.0s						
BNI	**Bardonecchia**	25.43	294	⇑P	P	23 32 36.8	-0.7
BNI	**Bardonecchia**	25.43	294	P	P	23 32 37.1	-0.4
EKS2	**Erkin-Say**	25.45	71	P	P	23 32 38.1	+0.5
	SNR=25						
BTLS	**Baital**	25.59	66	P	P	23 32 38.1	-0.6
AHRW	**Bad Neuenahr-A**	25.85	307	*e*P	P	23 32 44.8	+3.8
	comp=Z,139nm,1.1s,baz=108,slow=10						
IBBN	**Ibbenburen**	25.90	311	*e*P	P	23 32 43.3	+1.9
	comp=Z,126nm,1.2s,baz=108,slow=10						
USP	**Ospenovka**	25.95	70	P	P	23 32 41.5	-0.6
	SNR=7.9						
CMAH	**Djebel Manchou**	25.95	275	P	P	23 32 42.6	+0.5
BUG	**Bochum--Univer**	25.95	309	*e*P	P	23 32 44.0	+2.2
	comp=Z,128nm,1.5s,baz=108,slow=10						
AAK	**Ala-Archa**	25.98	71	P	P	23 32 42.9	+0.4
	comp=Z,13nm,1.1s,baz=252,slow=11,SNR=26						
AAK				LR	LR	23 44 51.6	
	comp=Z,2µm,19.4s,baz=280,slow=41						
AAK	**Ala-Archa**	25.98	71	P	P	23 32 42.9	+0.4
	SNR=20						
AAK	**Ala-Archa**	25.98	71	*i* P	P	23 32 42.9	+0.4
	SNR=26						
AAK	**Ala-Archa**	25.98	71	*ce*P	P	23 32 42.8	+0.4
AAK				pmax	pmax		
	comp=Z,136nm,1.7s						
AAK				MLR	MLR		
	comp=Z,7µm,17.0s						
AAK	**Ala-Archa**	25.98	71	P	P	23 32 41.8	-0.8
AAK	**Ala-Archa**	25.98	71	⇑P	P	23 32 42.8	+0.3
AAK	**Ala-Archa**	25.98	71	P	P	23 32 41.7	-0.8
AAK	**Ala-Archa**	25.98	71	P	P	23 32 41.8	-0.8
ABSA	**Djebel Ababsia**	26.00	274	P	P	23 32 43.2	+0.5
UCH	**Uchtor**	26.03	72	P	P	23 32 43.3	0.0
	SNR=7.0						
SGDS	**Sogindy**	26.03	70	*e*P	P	23 32 40.7	-2.2
	baz=70						
SGDS				*e*S	S	23 37 12.4	-2.0
	baz=70						
FRU1	**Bishkek**	26.07	71	P	P	23 32 43.1	-0.1
FRU1				pmax	pmax		
	comp=Z,93nm,1.1s						
FRU1	**Bishkek**	26.07	71	P	P	23 32 43.1	-0.1
FRU1				IAmb	IAmb	23 33 16.6	
	comp=Z,92nm,1.1s						
CHMS	**Chumysh**	26.15	71	P	P	23 32 43.9	+0.1
	SNR=15						
WLF	**Walferdange**	26.25	305	P	P	23 32 45.3	+0.6
WLF				pmax	pmax		
	comp=Z,117nm,1.2s						
WLF				MLR	MLR		
	comp=Z,2µm,20.0s						
WLF	**Walferdange**	26.25	305	*e*P	P	23 32 45.9	+1.2
	comp=Z,106nm,1.1s,baz=108,slow=10						
WLF	**Walferdange**	26.25	305	⇓P	P	23 32 45.9	+1.2
WLF	**Walferdange**	26.25	305	P	P	23 32 45.3	+0.6
WLF				IAmb	IAmb	23 32 51.0	
	comp=Z,117nm,1.2s						
RUSF	**Rustrel**	26.29	292	⇓P	P	23 32 49.4	+4.3
KBK	**Karagaybulak**	26.31	71	P	P	23 32 46.1	+0.6
	SNR=15						
BTNL	**Ternell**	26.45	307	*d*P	P	23 32 50.0	+3.5
	comp=Z,23nm,1.1s						
BHOU	**Houvegnez**	26.48	306	*d*P	P	23 32 50.3	+3.6
	comp=Z,19nm,1.1s						
MEM	**Membach**	26.53	307	*d*P	P	23 32 51.1	+3.9
	comp=Z,32nm,1.0s						
CKFL	**Kef-Lekhel**	26.55	274	P	P	23 32 48.9	+1.2
MUD	**Monsted U'grnd**	26.70	320	*i* P	P	23 32 54.3	+5.7
MUD				IAmb	IAmb	23 32 55.7	
	comp=Z,22nm,0.8s						
HFS	**Hagfors**	26.72	330	P	P	23 32 49.4	+0.6
	comp=Z,42nm,0.9s,baz=157,slow=4.2,SNR=22						
HFS				LR	LR	23 44 39.3	
	comp=Z,1µm,19.3s,baz=130,slow=39						
CASM	**Ain Smara**	26.77	274	P	P	23 32 49.3	-0.2
TKM2	**Tokmak 2**	26.77	71	P	P	23 32 49.4	-0.3
	SNR=22						
BEBN	**Eben Emael**	26.77	307	*d*P	P	23 32 52.8	+3.4
CTEI	**Djebel Teioual**	26.89	274	P	P	23 32 50.1	-0.6
RCHB	**Rochefort**	26.93	305	*d*P	P	23 32 54.4	+3.6
	comp=Z,30nm,1.2s						
BCLA	**Clavier**	26.93	306	*d*P	P	23 32 55.0	+4.2
	comp=Z,12nm,1.2s						
SSB	**Saint Sauveur**	26.95	295	P	P	23 32 51.4	+0.3
SSB				pmax	pmax		
	comp=Z,90nm,1.2s						
SSB	**Saint Sauveur**	26.95	295	⇑P	P	23 32 51.7	+0.7
SSB	**Saint Sauveur**	26.95	295	P	P	23 32 51.4	+0.3
SSB				IAmb	IAmb	23 32 55.6	
	comp=Z,90nm,1.2s						
NIL	**Nilore**	27.04	92	P	P	23 32 51.9	-0.1
NIL				pmax	pmax		
	comp=Z,80nm,1.3s						
NIL	**Nilore**	27.04	92	P	P	23 32 52.5	+0.6
NIL	**Nilore**	27.04	92	⇑P	P	23 32 52.6	+0.7
NIL	**Nilore**	27.04	92	P	P	23 32 51.9	-0.1
BOOM	**Boomskoye usch**	27.06	72	P	P	23 32 52.0	-0.2
BOOM				pmax	pmax		
	comp=Z,44nm,1.1s						
BOOM	**Boomskoye usch**	27.06	72	P	P	23 32 52.0	-0.2
BGES	**Gesves**	27.06	306	*d*P	P	23 32 55.8	+3.8
	comp=Z,12nm,1.3s						
DFRA	**Djebel Bou Aff**	27.16	275	P	P	23 32 53.4	+0.2
BMRD	**Maredsous**	27.25	306	*d*P	P	23 32 57.3	+3.7
	comp=Z,11nm,1.0s						
KUU	**Kurty**	27.25	68	*e*P	P	23 32 51.3	-2.5
	comp=Z,43nm,1.3s,baz=69						
KUU	**Kurty**	27.25	68	*e*P	P	23 32 51.2	-2.5
KUU				pmax	pmax		
	comp=Z,43nm,1.3s						
ULHL	**Ulahol**	27.30	72	P	P	23 32 55.2	+0.7
	SNR=12						
DOU	**Dourbes**	27.32	305	*d*P	P	23 32 56.5	+2.2
	comp=Z,20nm,1.3s						
KSH	**Kashi**	27.50	78	P	P	23 32 54.5	-1.7
KSH				S	S	23 37 33.5	-4.3
KSH				pmax	pmax		
	comp=Z,21nm,1.1s						
KSH				pmax	pmax		
	comp=Z,260nm,5.2s						
KSH				LR	LR		
	comp=Z,3µm,15.1s						
KSH				LR	LR		
	comp=Z,4µm,15.1s						
KSH				LR	LR		
	comp=Z,3µm,15.8s						
SNF	**Seneffe**	27.59	306	*d*P	P	23 32 59.8	+3.1
	comp=Z,22nm,0.8s						
UCC	**Uccle**	27.59	307	P	P	23 32 56.4	-0.3
UCC				pmax	pmax		
	comp=Z,14nm,1.4s						
UCC	**Uccle**	27.59	307	P	P	23 32 56.4	-0.3
SET	**Setif**	27.63	275	P	P	23 32 53.0	-4.3
ATD	**Arta Tunnel**	27.71	175	P	P	23 32 57.9	-0.2
AAA	**Alma-Ata**	27.71	70	*e*P	P	23 32 56.5	-1.6
	comp=Z,19nm,1.0s,baz=70						
AAA	**Alma-Ata**	27.71	70	*e*P	P	23 32 56.4	-1.6
AAA				pmax	pmax		
	comp=Z,19nm,1.0s						
OSL	**Oslo**	27.79	328	*e*P	P	23 32 57.3	-1.1
MDOK	**Medeo**	27.81	70	*e*P	P	23 32 56.9	-2.2
	baz=70						
MDOK	**Medeo**	27.81	70	*e*P	P	23 32 56.8	-2.2
NC602	**NORSAR Array S**	27.93	330	*e*P	P	23 32 58.0	-1.7
NC602	**NORSAR Array S**	27.93	330	P	P	23 32 60.0	+0.3
KDJ	**Kajisay**	28.01	72	P	P	23 33 00.4	-0.4
KDJ				pmax	pmax		
	comp=Z,98nm,1.8s						
KDJ	**Kajisay**	28.01	72	P	P	23 33 00.4	-0.4
KDJ				IAmb	IAmb	23 33 49.0	
	comp=Z,98nm,1.8s						
KONO	**Kongsberg**	28.10	327	*i* P	P	23 33 01.0	-0.2
KONO				pmax	pmax		
	comp=Z,32nm,1.0s						
KONO				MLR	MLR		
	comp=Z,2µm,17.0s						
KONO	**Kongsberg**	28.10	327	*e*P	P	23 32 59.5	-1.7
KONO	**Kongsberg**	28.10	327	P	P	23 33 01.6	+0.4
KONO				IAmb	IAmb	23 33 40.5	
	comp=Z,140nm,1.6s						
NB2	**NORSAR Subarra**	28.24	330	P	P	23 33 02.0	-0.5
	comp=Z,20nm,1.0s,baz=127,slow=9.3						
NB2	**NORSAR Subarra**	28.24	330	P	P	23 33 02.0	-0.5
	baz=127,slow=9.3						
NOA	**NORSAR Array B**	28.24	330	P	P	23 33 02.6	+0.1
	comp=Z,7.5nm,0.8s,baz=126,slow=8.9,SNR=17						
ARXS	**Arharly**	28.31	68	*e*P	P	23 33 02.5	-0.8
TARG	**Taragay, Kyrgy**	28.52	73	P	P	23 33 05.5	-0.1
TARG				IAmb	IAmb	23 34 03.6	
	comp=Z,117nm,2.0s						
CLF	**Chambon-Foret**	28.61	300	⇑P	P	23 33 07.3	+1.5
CLF	**Chambon-Foret**	28.61	300	P	P	23 33 06.5	+0.7
CLF				IAMs_20	IAMs_20	23 44 27.3	
	comp=Z,3µm,20.0s						
APA	**Apatity**	28.62	355	⇓*i*P	P	23 33 06.1	+0.4
APA				*i*		23 34 03.0	
APA				*i* S	S	23 37 55.0	+0.5
APA				*i* SS	SnSn	23 39 20.0	+6.4
APA				pmax	pmax		
	comp=Z,30nm,0.9s						
APA				MLR	MLR		
	comp=Z,2µm,20.0s						
TDK	**Taldyqorghan**	28.68	66	*e*P	P	23 33 04.3	-2.3
	baz=66						
TDK	**Taldyqorghan**	28.68	66	*e*P	P	23 33 04.3	-2.3
SATY	**Saty**	28.81	70	*e*P	P	23 33 05.7	-2.2
	comp=Z,27nm,1.8s,baz=70						
SATY	**Saty**	28.81	70	*e*P	P	23 33 05.6	-2.2
SATY				pmax	pmax		
	comp=Z,27nm,1.8s						
LVZ	**Lovozero**	28.86	356	*ce*P	P	23 33 07.6	-0.3
LVZ				pmax	pmax		
	comp=Z,61nm,1.3s						

LVZ				MLR	MLR		
	comp=Z,1μm,17.0s						
LVZ	Lovozero	28.86	356	⇓P	P	23 33 10.1	+2.2
LVZ	Lovozero	28.86	356	P	P	23 33 08.3	+0.4
LVZ				IAmb	IAmb	23 33 16.9	
	comp=Z,85nm,1.3s						
PRZ	Przheval'sk	28.87	71	P	P	23 33 08.5	+0.1
PRZ				pmax	pmax		
	comp=Z,66nm,1.4s						
PRZ	Przheval'sk	28.87	71	P	P	23 33 08.5	+0.1
KURBB	Kurchatov Arra	29.07	54	P	P	23 33 09.7	-0.2
	comp=Z,4.3nm,0.9s,baz=269,slow=9.2,SNR=25						
KURBB				PcP	PcP	23 36 18.5	+0.7
	comp=Z,6.3nm,0.8s,baz=266,slow=3.0,SNR=8.0						
KURK	Kurchatov	29.14	54*c*	*e*P	P	23 33 09.6	-0.9
KURK				pmax	pmax		
	comp=Z,30nm,2.5s						
KURK				MLR	MLR		
	comp=Z,9μm,17.0s						
KURK	Kurchatov	29.14	54	⇓P	P	23 33 10.2	-0.3
KURK	Kurchatov	29.14	54	P	P	23 33 09.8	-0.6
SKAR	Skarslia	29.20	328	*e*P	P	23 33 09.5	-1.5
SOCY	Socotra	29.59	152	P	P	23 33 12.0	-2.9
SOCY	Socotra	29.59	152	IAMs_20	IAMs_20	23 46 45.0	
	comp=Z,3μm,21.0s						
DOMB	Dombas	29.67	330	*e*P	P	23 33 13.8	-1.4
DHRM	DHARAMSHALA	29.94	92	*e*P	P	23 33 18.8	+0.8
DHRM				IAmb	IAmb	23 33 23.0	
	comp=Z,27nm,0.8s						
TBLU	Trondheim	29.97	333	*e*P	P	23 33 16.4	-1.3
SEM	Semipalatinsk	30.13	55	*e*P	P	23 33 17.6	-2.0
	baz=55						
SEM	Semipalatinsk	30.13	55	*e*P	P	23 33 17.5	-2.0
NSS	Namsos	30.24	336	*e*P	P	23 33 18.7	-1.4
FURI	Furi	30.26	183	P	P	23 33 23.1	+2.0
FURI				IAmb	IAmb	23 33 25.0	
	comp=Z,144nm,1.7s						
ASK	Askoy	30.43	326	*e*P	P	23 33 19.2	-2.5
MOL	Molde	30.55	331	*e*P	P	23 33 22.9	0.0
MOR8	Moi Rana	30.70	340	*e*P	P	23 33 23.3	-0.9
SMLA	Simla	31.07	94	*e*P	P	23 33 27.7	-0.1
SMLA				IAmb	IAmb	23 33 30.4	
	comp=Z,79nm,1.3s						
MAKZ	Makanchi	31.12	62	P	P	23 33 27.0	-1.2
MAKZ				pmax	pmax		
	comp=Z,26nm,1.2s						
MAKZ				MLR	MLR		
	comp=Z,4μm,18.0s						
MAKZ	Makanchi	31.12	62	⇑P	P	23 33 27.9	-0.3
MAKZ	Makanchi	31.12	62	P	P	23 33 27.0	-1.2
MAKZ				IAMs_20	IAMs_20	23 47 53.0	
	comp=Z,4μm,18.0s						
KTK1	Kautokeino	31.20	348	*e*P	P	23 33 28.7	+0.2
STOK	Stokkvaagen	31.21	339	*e*P	P	23 33 26.9	-1.7
KONS	Konsvik	31.30	339	*e*P	P	23 33 28.1	-1.3
MK31	Makanchi Array	31.34	62	P	P	23 33 29.9	-0.2
MK31				pmax	pmax		
	comp=Z,46nm,1.6s						
MK31	Makanchi Array	31.34	62	P	P	23 33 29.9	-0.2
MKAR	Makanchi Array	31.34	62	P	P	23 33 30.0	-0.1
	comp=Z,9.3nm,0.9s,baz=267,slow=7.0,SNR=28						
MKAR				PcP	PcP	23 36 23.7	-0.2
	comp=Z,5.7nm,0.8s,baz=278,slow=2.1,SNR=5.2						
MKAR				LR	LR	23 48 20.1	
	comp=Z,4μm,18.4s,baz=268,slow=41						
MKAR	Makanchi Array	31.34	62	*i* P	P	23 33 29.7	-0.4
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MKAR	Makanchi Array	31.34	62	P	P	23 33 29.8	-0.4
ARA0	ARCESS Array S	31.34	350	*e*P	P	23 33 28.5	-1.3
ARCES	ARCESS Array B	31.34	350	P	P	23 33 30.8	+1.0
	comp=Z,11nm,0.8s,baz=161,slow=8.9,SNR=18						
ARCES				LR	LR	23 47 01.7	
	comp=Z,3μm,19.9s,baz=160,slow=38						
ARCES	ARCESS Array B	31.34	350	P	P	23 33 28.8	-1.0
ARCES				pmax	pmax		
	comp=Z,176nm,1.8s						
ARCES	ARCESS Array B	31.34	350	P	P	23 33 28.8	-1.0
KEV	Kevo	31.36	351	P	P	23 33 30.4	+0.5
KEV				pmax	pmax		
	comp=Z,112nm,1.4s						
KEV	Kevo	31.36	351	P	P	23 33 30.4	+0.5
KEV				IAmb	IAmb	23 33 33.7	
	comp=Z,112nm,1.4s						
FAUS	Fauske	31.41	342	*e*P	P	23 33 29.7	-0.7
OJGS	Djebel Guires	31.44	276	P	P	23 33 43.0	+12
CART	Cartagena	32.16	280	P	P	23 33 37.4	0.0
ODJA	Bouhanifia	32.19	276	P	P	23 33 41.0	+3.3
NDI	New Delhi	32.22	98	*e*P	P	23 33 39.0	+1.0
MCH1	Michaelchurch	32.33	308	⇑P	P	23 33 40.0	+1.4
LOF	Lofoten	32.41	342	*e*P	P	23 33 36.8	-2.4
TRO	Tromso	32.48	346	*e*P	P	23 33 38.0	-1.7
HAMF	Hammerfest	32.61	350	*e*P	P	23 33 39.2	-1.7
EKA	Eskdalemuir Ar	32.91	314	P	P	23 33 43.9	+0.2
	comp=Z,19nm,0.6s,baz=107,slow=8.5,SNR=43						
EKA				PcP	PcP	23 36 28.0	+0.1
	comp=Z,8.9nm,1.0s,baz=96,slow=3.4,SNR=3.9						
EKA				LR	LR	23 49 05.0	
	comp=Z,894nm,19.7s,baz=215,slow=40						
ESK	Eskdalemuir	32.93	314	P	P	23 33 43.7	-0.2
ESK				pmax	pmax		
	comp=Z,167nm,1.7s						
ESK	Eskdalemuir	32.93	314	⇑P	P	23 33 44.9	+1.0
ESK	Eskdalemuir	32.93	314	P	P	23 33 43.7	-0.2
ZSN	Zaisan	33.08	61	*e*P	P	23 33 43.5	-1.9
	baz=61						
ZSN	Zaisan	33.08	61	*e*P	P	23 33 43.4	-1.9
ZAA0	Zalesovo Array	33.35	49	P	P	23 33 46.0	-1.6
ZALV	Zalesovo Beam	33.35	49	P	P	23 33 47.2	-0.4
	comp=Z,3.0nm,0.5s,baz=256,slow=8.0,SNR=13						
ZALV				PcP	PcP	23 36 30.6	+1.4
	comp=Z,1.6nm,0.7s,baz=270,slow=4.2,SNR=1.4						
ZALV				LR	LR	23 49 29.5	
	comp=Z,2μm,18.1s,baz=260,slow=40						
ZALV	Zalesovo Beam	33.35	49	*i* P	P	23 33 48.7	+1.1
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ZALV	Zalesovo Beam	33.35	49	P	P	23 33 45.8	-1.8
ESBB	Sonseca Array	33.87	285	P	P	23 33 51.1	-1.3
ESBB				IAmb	IAmb	23 33 55.5	
	comp=Z,76nm,1.0s						
ESDC	Sonseca Array	33.87	285	P	P	23 33 52.0	-0.4
	comp=Z,77nm,1.1s,baz=66,slow=8.0,SNR=48						
ESDC				PcP	PcP	23 36 31.4	+0.4
	comp=Z,8.6nm,1.2s,baz=48,slow=3.0,SNR=5.3						
ESDC				LR	LR	23 48 48.8	
	comp=Z,1μm,19.1s,baz=30,slow=38						
ESDC	Sonseca Array	33.87	285	P	P	23 33 51.0	-1.4
ESDC				IAmb	IAmb	23 33 56.6	
	comp=Z,66nm,1.2s						
TAF	Taforalt	34.11	276	P	P	23 33 57.1	+2.6
PAB	San Pablo	34.19	285	P	P	23 33 53.9	-1.3
PAB				pmax	pmax		
	comp=Z,90nm,1.3s						
PAB				MLR	MLR		
	comp=Z,1μm,20.0s						
PAB	San Pablo	34.19	285	⇓P	P	23 33 54.2	-1.0
PAB	San Pablo	34.19	285	P	P	23 33 53.9	-1.3
PAB				IAmb	IAmb	23 33 59.5	
	comp=Z,90nm,1.2s						
PAB	San Pablo	34.19	285	P	P	23 33 57.3	+2.1
FIGM	Figuig	34.22	271	P	P	23 33 58.0	+2.4
JBK	JBK	34.40	275	P	P	23 33 60.0	+2.8
GOG	Mont Gurugu	34.42	277	P	P	23 33 59.0	+1.8
TDRA	Tendrara	34.46	273	P	P	23 34 01.1	+3.4
DGZ	Jazzator, Alta	34.72	57*c*	*i*P	P	23 33 59.0	-0.7
DGZ				pmax	pmax		
	comp=Z,24nm,1.3s						
DGZ				MLR	MLR		
	comp=Z,6μm,17.0s						
BHPL	Bhopal	35.28	106	*e*P	P	23 34 05.2	+0.5
BHPL				IAmb	IAmb	23 34 09.2	
	comp=Z,89nm,1.2s						
WMQ	Urumqi	35.42	67	*e*P	P	23 34 06.0	+0.3
WMQ				pP	sP	23 34 11.9	+3.9
WMQ				sP	pP	23 34 13.9	+6.6
WMQ				S	S	23 39 44.3	+3.2
WMQ				SS	SnSn	23 42 01.7	+2.2
WMQ				pmax	pmax		
	comp=Z,31nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,260nm,3.9s						
WMQ				LR	LR		
	comp=Z,7μm,15.1s						
WMQ				LR	LR		
	comp=Z,5μm,13.1s						
WMQ				LR	LR		
	comp=Z,2μm,15.1s						
PBRG	Braganca	35.46	290	*e*P	P	23 34 07.8	+1.7
	comp=Z,43nm,1.3s						
POO	Poona	35.65	116	*e*P	P	23 34 06.0	-1.8
MVO	Moncorvo	35.81	289	*e*P	P	23 34 08.5	-0.6
	comp=Z,43nm,1.2s						
MVO				*e*S	S	23 39 52.5	+5.3
MVO				*e*LQ	LQ	23 43 41.1	
MVO				*e*LR	LR	23 45 30.2	
	comp=Z,1μm,20.0s						
LODK	Lodwar	35.95	188	P	P	23 34 10.4	0.0
	SNR=28						
LODK	Lodwar	35.95	188	P	P	23 34 10.2	-0.2
LODK				IAmb	IAmb	23 34 13.4	
	comp=Z,71nm,1.4s						
LODK				IAMs_20	IAMs_20	23 49 15.8	
	comp=Z,2μm,18.0s						
SMIR	Smir Dam	36.10	279	P	P	23 34 14.0	+2.4
PVRL	Vila Real	36.29	289	*e*P	P	23 34 13.8	+0.6
	comp=Z,65nm,1.8s						
POLO	Lamas de Olo	36.33	289	*e*P	P	23 34 13.2	-0.3
	comp=Z,31nm,1.2s						
MTE	Manteigas	36.37	287	*e*P	P	23 34 13.8	-0.1
	comp=Z,196nm,1.1s						
MTE				*e*S	S	23 39 57.7	+2.0
MTE				*e*LQ	LQ	23 42 47.2	
MTE				*e*LR	LR	23 45 53.5	
	comp=Z,1μm,18.0s						
MTE	Manteigas	36.37	287	⇑P	P	23 34 13.5	-0.4
MTE	Manteigas	36.37	287	P	P	23 34 13.4	-0.4
LCRM	LCR	36.41	276	P	P	23 34 17.0	+2.6
PCAB	Cabril	36.42	290	*e*P	P	23 34 15.7	+1.4
	comp=Z,46nm,1.2s						
PCBR	Castelo Branco	36.46	287	*e*P	P	23 34 14.3	-0.3
	comp=Z,153nm,1.1s						
SFS	San Fernando	36.47	281	IAMs_20	IAMs_20	23 50 09.6	
	comp=Z,2μm,19.0s						
PMRV	Marv??o	36.50	286	*e*P	P	23 34 13.8	-1.2
	comp=Z,91nm,1.1s						
PMRV				*e*S	S	23 40 02.1	+4.4
PMRV				*e*LQ	LQ	23 42 51.7	
PMRV				*e*LR	LR	23 44 04.7	
	comp=Z,1μm,18.0s						
PGAV	Gavieira, Arco	36.54	290	*e*P	P	23 34 17.7	+2.3
	comp=Z,94nm,1.5s						
PGAV				*e*S	S	23 40 07.5	+9.1
PGAV				*e*LQ	LQ	23 44 15.1	
PGAV				*e*LR	LR	23 45 19.5	
	comp=Z,2μm,20.0s						
MDT	Midelt	36.55	274	P	P	23 34 15.3	-0.2
	comp=Z,40nm,1.0s,baz=87,slow=8.9,SNR=31						
MDT	Midelt	36.55	274	P	P	23 34 17.1	+1.6
PVIS	Viseu	36.55	288	*e*P	P	23 34 14.8	-0.6
	comp=Z,117nm,1.2s						
PESTR	Estremoz	36.80	285	*e*P	P	23 34 16.8	-0.8
	comp=Z,121nm,1.1s						
PESTR	Estremoz	36.80	285	⇑P	P	23 34 16.7	-0.8
PESTR	Estremoz	36.80	285	P	P	23 34 16.2	-1.3
PESTR	Estremoz	36.80	285	P	P	23 34 19.6	+2.1
PYUN	Piuthan	36.96	94	*e*P	P	23 34 18.5	-0.7
	comp=Z,127nm,1.4s						
COI	Coimbra	37.06	287	*e*P	P	23 34 20.9	+1.2
	comp=Z,182nm,1.2s						
COI	Coimbra	37.06	287	P	P	23 34 19.3	-0.4
COI				pmax	pmax		
	comp=Z,146nm,1.0s						
COI				MLR	MLR		
	comp=Z,2μm,19.0s						
COI	Coimbra	37.06	287	P	P	23 34 19.3	-0.4
PCAS	Casmilo, Conde	37.16	287	*e*P	P	23 34 23.0	+2.4
	comp=Z,81nm,1.4s						
EVO	Evora	37.21	285	*e*P	P	23 34 20.0	-1.0
	comp=Z,44nm,1.3s						
PMTG	Montargil	37.22	286	*e*P	P	23 34 20.1	-1.0
	comp=Z,79nm,1.2s						
PBEJ	Beja	37.25	284	*e*P	P	23 34 21.5	+0.2
	comp=Z,73nm,1.2s						
GOLM	Goulmima	37.26	273	P	P	23 34 25.0	+3.3
PVAQ	Vaqueiros	37.33	283	*e*P	P	23 34 21.0	-1.0
	comp=Z,81nm,1.5s						
PVAQ				*e*S	S	23 40 11.6	+1.4
PVAQ				*e*LQ	LQ	23 43 50.8	
PVAQ				*e*LR	LR	23 45 02.0	
	comp=Z,555nm,18.0s						
PVAQ	Vaqueiros	37.33	283	P	P	23 34 21.8	-0.2
PVAQ	Vaqueiros	37.33	283	P	P	23 34 23.3	+1.4
DANN	Dangsing	37.44	93	*e*P	P	23 34 23.2	-0.2
	comp=Z,135nm,0.9s						
PCVE	Castro Verde	37.50	283	*e*P	P	23 34 22.1	-1.4
	comp=Z,98nm,1.1s						
PSBE	So Bento	37.53	286	*e*P	P	23 34 24.9	+1.2
	comp=Z,127nm,1.1s						
PBDV	Barranco-do-Ve	37.54	283	*e*P	P	23 34 23.2	-0.6
	comp=Z,128nm,1.2s						
MESJ	Messejana	37.57	284	*e*P	P	23 34 23.6	-0.5
MESJ				IAmb	IAmb	23 34 29.0	
	comp=Z,62nm,1.5s						
MESJ				*e*S	S	23 40 14.3	+0.3
MESJ	Messejana	37.57	284	*e*P	P	23 34 24.6	+0.5
	comp=Z,59nm,1.5s						
MESJ	Messejana	37.57	284	*e*P	P	23 34 23.6	-0.5
MESJ				*e*S	S	23 40 14.3	+0.3
KOLN	Koldanda	37.59	94	*e*P	P	23 34 24.3	-0.3
PNCL	Nicolau / Gran	37.73	284	*e*P	P	23 34 26.3	+1.0
	comp=Z,53nm,1.3s						
ZHG	ZHG	37.87	276	P	P	23 34 29.0	+2.2
LIS	Lisbon	38.01	285	*e*P	P	23 34 27.1	-0.6
LIS				IAmb	IAmb	23 34 33.1	
	comp=Z,307nm,1.2s						
LIS	Lisbon	38.01	285	*e*P	P	23 34 28.3	+0.5
	comp=Z,278nm,1.1s						
LIS	Lisbon	38.01	285	*e*P	P	23 34 27.2	-0.6
PMST	Lisbon--Monsan	38.03	285	*e*P	P	23 34 28.0	+0.1
	comp=Z,231nm,1.2s						
PMAFR	Mafra	38.04	286	*e*P	P	23 34 29.9	+1.8
	comp=Z,143nm,1.3s						
PTEO	Sao Teotonio	38.05	283	*e*P	P	23 34 30.1	+2.1
	comp=Z,75nm,1.8s						
MORF	Marmelete	38.06	283	*e*P	P	23 34 27.9	-0.4
MORF				IAmb	IAmb	23 34 31.3	
	comp=Z,81nm,1.5s						
MORF				*e*S	S	23 40 21.8	+0.2
MORF	Marmelete	38.06	283	*e*P	P	23 34 29.0	+0.7
	comp=Z,61nm,1.3s						
MORF	Marmelete	38.06	283	*e*P	P	23 34 27.9	-0.4
MORF				*e*S	S	23 40 21.8	+0.2
MORF	Marmelete	38.06	283	⇓P	P	23 34 29.2	+1.0
TZRR	Tazzarine	38.13	272	P	P	23 34 32.0	+3.0
PFVI	Vila Bisbo	38.25	283	*e*P	P	23 34 29.4	-0.4
	comp=Z,106nm,1.9s						
PFVI	Vila Bisbo	38.25	283	P	P	23 34 29.4	-0.4
PFVI				IAmb	IAmb	23 34 32.5	
	comp=Z,71nm,1.0s						
PFVI	Vila Bisbo	38.25	283	P	P	23 34 31.8	+2.0
GKN	Gorkha	38.28	93	*e*P	P	23 34 29.8	-0.6
ZGR	Zagora	38.46	271	P	P	23 34 34.0	+2.2
AVE	Averroes	38.53	276	⇓P	P	23 34 32.2	0.0
AVE	Averroes	38.53	276	P	P	23 34 34.5	+2.3
DMN	Daman	38.84	94	*e*P	P	23 34 35.2	+0.1
	comp=Z,271nm,1.3s						
KKN	Kakani	38.88	93	*e*P	P	23 34 35.2	-0.3
	comp=Z,15nm,0.2s						
PKIN	Phulchoki	39.08	93	*e*P	P	23 34 36.7	-0.5
PKI	Pulchoki	39.09	93	*e*P	P	23 34 36.9	-0.4
NRIK	Noril'sk	39.10	24	P	P	23 34 36.5	0.0
	comp=Z,73nm,0.9s,baz=243,slow=7.8,SNR=22						
NRIK				LR	LR	23 52 52.5	
	comp=Z,2μm,21.3s,baz=238,slow=40						
NRIK	Noril'sk	39.10	24*c*	*i*P	P	23 34 35.6	-0.9
NRIK				pmax	pmax		
	comp=Z,96nm,1.0s						
NRIK				MLR	MLR		
	comp=Z,2μm,21.0s						
NRIK	Noril'sk	39.10	24	P	P	23 34 36.3	-0.2
NRIK				IAmb	IAmb	23 34 41.1	
	comp=Z,83nm,0.9s						
GUN	Gumba	39.29	93	*e*P	P	23 34 38.8	-0.2
	comp=Z,318nm,1.3s						
HYB	Hyderabad	39.72	112	*i* P	P	23 34 41.5	-0.8
	comp=Z,50nm,1.0s						
HYB	Hyderabad	39.72	112	*e*P	P	23 34 41.0	-1.3
HYB				IAmb	IAmb	23 34 45.8	
	comp=Z,31nm,0.9s						
OUK	Oukaimeden	39.73	274	P	P	23 34 45.0	+2.4
SPB2	Spitsbergen Ar	40.26	353	P	P	23 34 46.6	+0.5
SPB2				IAmb	IAmb	23 34 50.2	
	comp=Z,120nm,1.1s						
SPA0	Spitsbergen Ar	40.26	353	*e*P	P	23 34 45.9	-0.3
SPITS	Spitsbergen Ar	40.26	353	P	P	23 34 46.4	+0.3
	comp=Z,50nm,0.9s,baz=142,slow=18,SNR=11						
SPITS	Spitsbergen Ar	40.26	353	P	P	23 34 46.8	+0.7
SPITS				pmax	pmax		
	comp=Z,263nm,1.4s						
KMBO	Kilima Mbogo	40.28	185	P	P	23 34 48.1	+0.9
	comp=Z,10nm,1.0s,baz=7.1,slow=8.7,SNR=23						
KMBO				LR	LR	23 51 05.7	
	comp=Z,1μm,18.3s,baz=312,slow=36						
KMBO	Kilima Mbogo	40.28	185	*i* P	P	23 34 48.7	+1.5
	SNR=14						
KMBO	Kilima Mbogo	40.28	185	P	P	23 34 48.1	+0.9
KMBO				P	P	23 34 48.1	+0.9
KMBO	Kilima Mbogo	40.28	185	P	P	23 34 47.6	+0.4
RAMN	Ramite	40.32	93	*e*P	P	23 34 47.0	-0.5
	comp=Z,32nm,0.6s						
TTIG	Tnine Tigouga,	40.46	273	P	P	23 34 51.1	+2.7
MBAR	Mbarara	40.62	195	P	P	23 34 49.6	-0.2
	comp=Z,7.6nm,0.5s,baz=4.2,slow=7.2,SNR=40						
MBAR	Mbarara	40.62	195	P	P	23 34 49.1	-0.7
MBAR				pmax	pmax		
	comp=Z,77nm,1.4s						
MBAR				MLR	MLR		
	comp=Z,2μm,18.0s						
MBAR	Mbarara	40.62	195	P	P	23 34 49.1	-0.7
MBAR	Mbarara	40.62	195	⇓P	P	23 34 49.5	-0.3
MBAR	Mbarara	40.62	195	P	P	23 34 49.1	-0.7
MBAR	Mbarara	40.62	195	IAMs_20	IAMs_20	23 52 04.6	
	comp=Z,2μm,18.0s						
ODAN	Odare	40.98	93	*e*P	P	23 34 52.7	-0.2
	comp=Z,297nm,1.3s						
TAPN	Taplejung	40.98	92	*e*P	P	23 34 52.5	-0.5
	comp=Z,100nm,1.1s						
KBS	Kingsbay	41.37	352	*i* P	P	23 34 55.5	+0.3
KBS				pmax	pmax		
	comp=Z,72nm,2.3s						
BOK	Bokaro	41.40	98	*e*P	P	23 34 55.4	-0.7
BOK				IAmb	IAmb	23 34 59.6	
	comp=Z,61nm,1.3s						
KIBK	Kibwezi	41.44	183	P	P	23 34 57.3	+0.8
	SNR=10						
KIBK	Kibwezi	41.44	183	P	P	23 34 56.7	+0.2
KIBK				IAMs_20	IAMs_20	23 50 25.0	
	comp=Z,2μm,19.0s						
CGR	Cap Guir	41.54	274	P	P	23 35 01.0	+3.8
GTK	Tadong	41.69	92	*e*P	P	23 34 58.9	+0.3
GTK				IAmb	IAmb	23 35 06.6	
	comp=Z,66nm,0.9s						
LSA	Lhasa	42.55	87	P	P	23 35 06.5	+0.4
LSA				LR	LR		
	comp=Z,3μm,20.3s						
LSA				LR	LR		
	comp=Z,3μm,15.7s						
LSA				LR	LR		
	comp=Z,3μm,15.0s						
LSA	Lhasa	42.55	87	*i* P	P	23 35 06.5	+0.4
	SNR=10						
LSA	Lhasa	42.55	87	P	P	23 35 05.6	-0.4
LSA				pmax	pmax		
	comp=Z,56nm,0.8s						
LSA				MLR	MLR		
	comp=Z,1μm,18.0s						
LSA	Lhasa	42.55	87	P	P	23 35 05.6	-0.4
LSA				IAmb	IAmb	23 35 10.8	
	comp=Z,56nm,0.8s						
TORD	Torodi Ar. Bea	42.79	243	P	P	23 35 06.7	-0.8
	comp=Z,13nm,0.9s,baz=35,slow=8.3,SNR=49						
TORD				PcP	PcP	23 36 59.2	+0.3
	comp=Z,8.0nm,0.9s,baz=39,slow=3.2,SNR=5.2						
TORD				ScP	ScP	23 40 52.3	+1.7
	comp=Z,1.0nm,0.9s,baz=56,slow=5.4,SNR=3.7						
TORD				LR	LR	23 56 37.4	
	comp=Z,863nm,18.6s,baz=45,slow=41						
TORD	Torodi Ar. Bea	42.79	243	P	P	23 35 06.2	-1.3
MOY	Mondy	43.16	53	*e*P	P	23 35 09.8	-0.5
MOY				pmax	pmax		
	comp=Z,50nm,1.8s						
TLY	Talaya	44.79	52	P	P	23 35 23.3	+0.1
	comp=Z,3.4nm,0.8s,baz=268,slow=7.1,SNR=6.6						
TLY	Talaya	44.79	52*c*	*i*P	P	23 35 23.2	-0.1
TLY				*e*S	S	23 42 02.2	+1.2
TLY				*e*SS	ScS	23 45 22.1	+0.5
TLY				pmax	pmax		
	comp=Z,90nm,1.5s						
TLY				MLR	MLR		
	comp=Z,7μm,17.0s						
TLY	Talaya	44.79	52	P	P	23 35 23.4	+0.1
ZAK	Zakamensk	44.80	54	*e*P	P	23 35 23.2	-0.3
ZAK				pmax	pmax		
	comp=Z,16nm,1.4s						
TRD	Trivandrum	44.91	123	*e*P	P	23 35 25.1	+0.5
SHL	Shillong	45.11	92	P	P	23 35 24.7	-1.7
SHL				pmax	pmax		
	comp=Z,68nm,1.3s						
SHL	Shillong	45.11	92	*e*P	P	23 35 25.1	-1.2
SHL	Shillong	45.11	92	P	P	23 35 24.7	-1.7
SHL				IAmb	IAmb	23 35 26.7	
	comp=Z,68nm,1.3s						
DAG	Danmarks Havn	45.12	344	*i* P	P	23 35 26.7	+1.2
DAG				IAmb	IAmb	23 35 29.4	
	comp=Z,50nm,1.2s						
DAG	Danmarks Havn	45.12	344	⇓P	P	23 35 26.8	+1.3
GTA	Gaotai	45.32	70	⇑P	P	23 35 27.5	-0.3
GTA				pP	sP	23 35 32.4	+2.3
GTA				sP	pP	23 35 34.8	+5.4
GTA				PP	PP	23 37 17.3	+3.8
GTA				S	S	23 42 08.9	-0.2
GTA				sS	sS	23 42 16.2	+4.4
GTA				SS	ScS	23 45 23.0	-2.6
GTA				pmax	pmax		
	comp=Z,120nm,6.5s						
GTA				LR	LR		
	comp=Z,1μm,18.2s						
GTA				LR	LR		
	comp=Z,1μm,17.4s						
GTA				LR	LR		
	comp=Z,2μm,17.1s						
PMPST	Porto Santo, M	45.46	281	*e*P	P	23 35 29.0	+0.2
	comp=Z,273nm,1.3s						
PMPS	Porto Santo	45.47	281	*e*P	P	23 35 30.1	+1.2
	comp=Z,143nm,1.3s						
MSEY	Mahe Island	45.92	159	P	P	23 35 32.1	-0.5
MSEY				pmax	pmax		
	comp=Z,58nm,1.2s						
MSEY				MLR	MLR		
	comp=Z,1μm,18.0s						
MSEY	Mahe Island	45.92	159	P	P	23 35 32.1	-0.5
MSEY				IAmb	IAmb	23 35 34.2	
	comp=Z,58nm,1.2s						
MSEY	Mahe Island	45.92	159	IAMs_20	IAMs_20	23 57 08.1	
	comp=Z,1μm,18.0s						
KOWA	Kowa	45.95	250	⇑P	P	23 35 32.4	-0.5
KOWA	Kowa	45.95	250	P	P	23 35 32.1	-0.7
KOWA				IAMs_20	IAMs_20	23 56 12.8	
	comp=Z,2μm,22.0s						
PMAR	Madeira	46.05	280	*e*P	P	23 35 34.1	+0.4
	comp=Z,248nm,1.6s						
NOR	Nord	46.71	350	*i* P	P	23 35 37.6	-0.5
NOR				IAmb	IAmb	23 35 41.6	
	comp=Z,22nm,0.9s						
NOR	Nord	46.71	350	⇑P	P	23 35 38.1	+0.1
KOHI	KOHIMA	46.76	90	*e*P	P	23 35 38.7	-0.6
KOHI				IAmb	IAmb	23 35 42.9	
	comp=Z,57nm,1.0s						
MOKO	MOKOCHONG	46.77	89	*e*P	P	23 35 39.2	-0.2
LKP	Lekhapani	47.31	87	*e*P	P	23 35 43.4	0.0
LKP				IAmb	IAmb	23 35 49.1	
	comp=Z,64nm,0.7s						
SONM	Songino Array	47.37	57	P	P	23 35 43.7	-0.1
	comp=Z,1.8nm,0.9s,baz=298,slow=8.6,SNR=12						
SONM				PcP	PcP	23 37 14.4	0.0
	comp=Z,5.4nm,0.7s,baz=251,slow=4.3,SNR=8.5						
SONM				LR	LR	23 58 05.7	
	comp=Z,10μm,18.1s,baz=290,slow=39						
SONM	Songino Array	47.37	57	P	P	23 35 43.3	-0.5
MACI	Morro de la Ar	47.76	275	P	P	23 35 47.4	+0.2
ULN	Ulaanbaatar	47.79	57*c*	*e*P	P	23 35 47.0	-0.1
ULN				pmax	pmax		
	comp=Z,76nm,1.7s						
ULN	Ulaanbaatar	47.79	57	⇑P	P	23 35 47.1	-0.1

ULN	**Ulaanbaatar**	**47.79**	**57**	P	**P**	**23 35 46.2**	**-0.9**
ULN				IAmb	IAmb	23 35 48.4	
	comp=Z,54nm,1.2s						
PALK	**Pallekele**	**48.29**	**120**	P	**P**	**23 35 51.0**	**-0.2**
PALK				pmax	pmax		
	comp=Z,74nm,1.2s						
PALK				MLR	MLR		
	comp=Z,1µm,20.0s						
PALK	**Pallekele**	**48.29**	**120**	⇓P	**P**	**23 35 52.0**	**+0.8**
PALK	**Pallekele**	**48.29**	**120**	P	**P**	**23 35 51.0**	**-0.2**
PALK				IAmb	IAmb	23 35 56.6	
	comp=Z,74nm,1.2s						
PALK	**Pallekele**	**48.29**	**120**	IAMs_20	IAMs_20	23 56 35.3	
	comp=Z,1µm,20.0s						
LZH	**Lanzhou**	**49.51**	**73**	*e*P	**P**	**23 36 00.5**	**0.0**
LZH				pP	sP	23 36 06.3	+3.5
LZH				sP	pP	23 36 09.5	+7.3
LZH				S	**S**	**23 43 11.1**	**+2.1**
LZH				sS	sS	23 43 20.1	+8.4
LZH				pmax	pmax		
	comp=Z,28nm,1.2s						
LZH				pmax	pmax		
	comp=Z,170nm,4.3s						
LZH				LR	LR		
	comp=Z,3µm,14.6s						
LZH				LR	LR		
	comp=Z,1µm,15.5s						
LZH				LR	LR		
	comp=Z,2µm,16.0s						
BOD	**Bodaibo**	**49.56**	**42**	*e*P	**P**	**23 35 59.3**	**-1.1**
BOD				pmax	pmax		
	comp=Z,94nm,1.3s						
SUMG	**Summit**	**49.70**	**337**	P	**P**	**23 36 01.2**	**-0.5**
SUMG				pmax	pmax		
	comp=Z,175nm,1.6s						
SUMG	**Summit**	**49.70**	**337**	*i* P	**P**	**23 36 03.5**	**+1.8**
SUMG				IAmb	IAmb	23 36 09.0	
	comp=Z,9.4nm,0.8s						
SUMG	**Summit**	**49.70**	**337**	⇓P	**P**	**23 36 03.5**	**+1.8**
SUMG	**Summit**	**49.70**	**337**	P	**P**	**23 36 01.2**	**-0.5**
ICESG	**Greenland Ices**	**50.42**	**333**	*i* P	**P**	**23 36 08.1**	**+0.9**
ICESG				IAmb	IAmb	23 36 11.3	
	comp=Z,19nm,0.9s						
CD2	**Chengdu**	**51.70**	**79**	P	**P**	**23 36 16.2**	**-0.8**
CD2				PP	**PP**	**23 38 13.3**	**-1.1**
CD2				S	**S**	**23 43 36.7**	**-2.5**
CD2				SS	**SS**	**23 47 15.4**	**+0.1**
CD2				pmax	pmax		
	comp=Z,30nm,1.7s						
CD2				LR	LR		
	comp=Z,2µm,15.8s						
CD2				LR	LR		
	comp=Z,1µm,14.4s						
CD2				LR	LR		
	comp=Z,2µm,13.7s						
DBIC	**Dimbokro**	**51.90**	**243**	P	**P**	**23 36 17.7**	**-0.8**
	comp=Z,20nm,0.6s,baz=51,slow=8.1,SNR=23						
DBIC				LR	LR	00 02 20.7	
	comp=Z,805nm,18.1s,baz=54,slow=41						
DBIC	**Dimbokro**	**51.90**	**243**	P	**P**	**23 36 17.3**	**-1.2**
DBIC				pmax	pmax		
	comp=Z,82nm,1.3s						
DBIC	**Dimbokro**	**51.90**	**243**	⇓P	**P**	**23 36 17.0**	**-1.5**
DBIC	**Dimbokro**	**51.90**	**243**	P	**P**	**23 36 17.3**	**-1.2**
DBIC				IAmb	IAmb	23 36 22.6	
	comp=Z,82nm,1.3s						
TIC	**Toumodi**	**52.03**	**244**	*e*P	**P**	**23 36 18.5**	**-1.0**
KIC	**Kosan Boka**	**52.04**	**243**	*e*P	**P**	**23 36 18.6**	**-1.0**
	comp=Z,49nm,0.7s						
BTO	**Baotou**	**52.19**	**65**	*e*P	**P**	**23 36 18.6**	**-2.0**
BTO				S	**S**	**23 43 41.2**	**-4.7**
BTO				LR	LR		
	comp=Z,11µm,21.2s						
BTO				LR	LR		
	comp=Z,8µm,19.0s						
NEEM	**North Greenlan**	**52.33**	**344**	*i* P	**P**	**23 36 21.9**	**+0.6**
NEEM				IAmb	IAmb	23 36 26.3	
	comp=Z,5.0nm,0.8s						
LIC	**Lamto**	**52.34**	**243**	*e*P	**P**	**23 36 20.8**	**-1.0**
	comp=Z,211nm,1.2s						
TIXI	**Tiksi**	**52.86**	**23**	*ce*P	**P**	**23 36 24.4**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,40nm,1.1s						
TIXI	**Tiksi**	**52.86**	**23**	⇑P	**P**	**23 36 24.5**	**-0.5**
TIXI	**Tiksi**	**52.86**	**23**	P	**P**	**23 36 24.0**	**-1.0**
SBV	**Sambava**	**53.21**	**168**	P	**P**	**23 36 31.0**	**+2.9**
DY2G	**Dye2**	**53.40**	**330**	*i* P	**P**	**23 36 30.2**	**+0.9**
DY2G				IAmb	IAmb	23 36 32.7	
	comp=Z,16nm,0.9s						
KMI	**Kunming**	**53.76**	**85**	⇑P	**P**	**23 36 30.9**	**-1.6**
KMI				pP	sP	23 36 34.7	-0.1
KMI				sP	pP	23 36 35.9	+1.7
KMI				PcP	**PcP**	**23 37 36.0**	**-2.5**
KMI				S	**S**	**23 44 06.9**	**-0.9**
KMI				sS	sS	23 44 14.8	+4.2
KMI				SS	**SS**	**23 47 48.7**	**+0.3**
KMI				pmax	pmax		
	comp=Z,310nm,3.5s						
KMI				LR	LR		
	comp=Z,680nm,17.0s						
KMI				LR	LR		
	comp=Z,1µm,14.7s						
KMI				LR	LR		
	comp=Z,1µm,20.9s						
PBA	**Port Blair**	**53.87**	**106**	P	**P**	**23 36 32.5**	**-0.6**
XAN	**Xi'an**	**54.15**	**73**	P	**P**	**23 36 34.5**	**-0.5**
XAN				sP	sP	23 36 39.0	+1.6
XAN				PP	**PP**	**23 38 37.1**	**+0.7**
XAN				S	**S**	**23 44 12.3**	**-0.3**
XAN				pmax	pmax		
	comp=Z,20nm,1.1s						
XAN				pmax	pmax		
	comp=Z,270nm,3.6s						
XAN				LR	LR		
	comp=Z,1µm,14.8s						
XAN				LR	LR		
	comp=Z,2µm,14.9s						
XAN				LR	LR		
	comp=Z,3µm,17.5s						
CHTO	**Chiang Mai**	**54.26**	**94**	P	**P**	**23 36 35.0**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,16nm,0.7s						
CHTO	**Chiang Mai**	**54.26**	**94**	⇑P	**P**	**23 36 34.9**	**-1.1**
CHTO	**Chiang Mai**	**54.26**	**94**	P	**P**	**23 36 35.0**	**-0.9**
CHTO	**Chiang Mai**	**54.26**	**94**	P	**P**	**23 36 34.3**	**-1.6**
CM31	**Chiang Mai Arr**	**54.46**	**95**	P	**P**	**23 36 36.2**	**-1.3**
CMAR	**Chiang Mai Arr**	**54.46**	**95**	P	**P**	**23 36 36.7**	**-0.7**
	comp=Z,8.5nm,0.8s,baz=298,slow=8.1,SNR=39						
CMAR				PcP	**PcP**	**23 37 41.1**	**+0.1**
	comp=Z,5.6nm,0.9s,baz=307,slow=5.1,SNR=2.3						
CMAR				LR	LR	00 04 23.2	
	comp=Z,568nm,21.6s,baz=319,slow=41						
CMAR	**Chiang Mai Arr**	**54.46**	**95**	*i* P	**P**	**23 36 36.9**	**-0.5**
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**54.46**	**95**	P	**P**	**23 36 36.6**	**-0.8**
DGAR	**Diego Garcia**	**55.20**	**140**	IAMs_20	IAMs_20	23 58 23.7	
	comp=Z,1µm,21.0s						
HIA	**Hailar**	**55.32**	**52**	P	**P**	**23 36 42.9**	**-0.4**
HIA				pmax	pmax		
	comp=Z,49nm,1.2s						
HIA				MLR	MLR		
	comp=Z,2µm,18.0s						
HIA	**Hailar**	**55.32**	**52**	P	**P**	**23 36 42.9**	**-0.4**
HIA				IAmb	IAmb	23 36 44.6	
	comp=Z,49nm,1.2s						
HIA	**Hailar**	**55.32**	**52**	IAMs_20	IAMs_20	00 02 54.3	
	comp=Z,2µm,18.0s						
LSZ	**Lusaka**	**55.41**	**194**	P	**P**	**23 36 43.7**	**-0.5**
LSZ				pmax	pmax		
	comp=Z,165nm,1.7s						
LSZ				MLR	MLR		
	comp=Z,2µm,21.0s						
LSZ	**Lusaka**	**55.41**	**194**	P	**P**	**23 36 43.7**	**-0.5**
LSZ	**Lusaka**	**55.41**	**194**	IAMs_20	IAMs_20	00 00 54.6	
	comp=Z,2µm,21.0s						
YAK	**Yakutsk**	**55.98**	**35**	*e*P	**P**	**23 36 46.9**	**-0.8**
YAK				e*PP	**pP**	**23 36 49.3**	**-0.1**
YAK				*e*		23 38 53.0	
YAK				*e*PPP	PPP	23 40 11.6	
YAK				*e*S	**S**	**23 44 39.5**	**+3.3**
YAK				e*SS	sS	23 44 57.8	+19
YAK				pmax	pmax		
	comp=Z,13nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,12nm,1.4s						
YAK				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YAK				smax	smax		
	comp=N,223nm,17.4s						
YAK				smax	smax		
	comp=E,89nm,11.9s						
YAK				MLR	MLR		
	comp=Z,2µm,17.0s						
YAK				MLR	MLR		
	comp=E,771nm,14.0s						
YAK				MLR	MLR		
	comp=N,516nm,12.0s						
YAK	**Yakutsk**	**55.98**	**35**	P	**P**	**23 36 46.1**	**-1.6**
YAK				IAmb	IAmb	23 37 00.3	
	comp=Z,86nm,1.6s						
YAK				IAMs_20	IAMs_20	00 04 51.3	
	comp=Z,1µm,18.0s						
GYA	**Guiyang**	**56.10**	**82**	⇓P	**P**	**23 36 48.4**	**-0.9**
GYA				pP	sP	23 36 53.4	+1.8
GYA				S	**S**	**23 44 36.8**	**-2.2**
GYA				SS	**SS**	**23 48 18.6**	**-6.4**
GYA				pmax	pmax		
	comp=Z,24nm,1.4s						
GYA				LR	LR		
	comp=Z,590nm,16.4s						
GYA				LR	LR		
	comp=Z,1µm,13.3s						
GYA				LR	LR		
	comp=Z,1µm,17.4s						
ENH	**Enshi**	**56.34**	**76**	P	**P**	**23 36 49.9**	**-1.0**
ENH				IAMs_20	IAMs_20	00 04 44.1	
	comp=Z,1µm,19.0s						
TULEG	**Thule**	**56.41**	**345**	*e*P	**P**	**23 36 50.9**	**+0.3**
TULEG	**Thule**	**56.41**	**345**	P	**P**	**23 36 50.5**	**-0.1**
TULEG				IAmb	IAmb	23 36 58.9	
	comp=Z,66nm,1.5s						
SLVN	**Son La**	**56.69**	**89**	P	**P**	**23 36 52.5**	**-1.0**
SLVN				IAmb	IAmb	23 36 54.6	
	comp=Z,71nm,1.3s						
BJI	**Beijing**	**56.72**	**63**	P	**P**	**23 36 53.0**	**-0.3**
BJI				S	**S**	**23 44 45.6**	**-1.0**
BJI				pmax	pmax		
	comp=Z,21nm,1.8s						
BJI				pmax	pmax		
	comp=Z,150nm,6.5s						
BJI				LR	LR		
	comp=Z,4µm,18.6s						
BJI				LR	LR		
	comp=Z,2µm,18.2s						
BJI				LR	LR		
	comp=Z,2µm,15.3s						
BJT	**Baijiatuau**	**56.72**	**63**	P	**P**	**23 36 52.8**	**-0.6**
BJT				pmax	pmax		
	comp=Z,22nm,1.1s						
BJT				MLR	MLR		
	comp=Z,1µm,20.0s						
BJT	**Baijiatuau**	**56.72**	**63**	P	**P**	**23 36 52.8**	**-0.6**
BJT	**Baijiatuau**	**56.72**	**63**	IAMs_20	IAMs_20	00 04 42.6	
	comp=Z,1µm,20.0s						
EUNU	**Eureka**	**57.31**	**350**	P	**P**	**23 36 57.5**	**+0.4**
EUNU				IAmb	IAmb	23 37 01.2	
	comp=Z,45nm,1.3s						
ZEA	**Zeya**	**57.92**	**44**	*e*P	**P**	**23 37 03.1**	**+1.5**
ZEA				pmax	pmax		
	comp=Z,20nm,1.4s						
ZEA				MLR	MLR		
	comp=E,1µm,20.0s						
ZEA				MLR	MLR		
	comp=N,1µm,12.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,19.0s						
WHN	**Wuhan**	**59.86**	**74**	⇓P	**P**	**23 37 15.3**	**-0.1**
WHN				S	**S**	**23 45 28.8**	**+1.0**
WHN				LR	LR		
	comp=Z,3µm,16.8s						
WHN				LR	LR		
	comp=Z,2µm,15.4s						
WHN				LR	LR		
	comp=Z,4µm,14.4s						
SNY	**Shenyang**	**60.91**	**58**	⇓P	P	23 37 30.4	+7.9
SNY				S	S	23 45 30.0	-11
SNY				pmax	pmax		
	comp=Z,27nm,1.6s						
SNY				pmax	pmax		
	comp=Z,320nm,3.1s						
SNY				LR	LR		
	comp=N,6µm,21.0s						
SNY				LR	LR		
	comp=E,4µm,22.3s						
SNY				LR	LR		
	comp=Z,8µm,16.9s						
SRIT	**Nakonsritamara**	**60.99**	**103**	P	**P**	**23 37 22.1**	**-1.2**
SRIT				IAmb	IAmb	23 37 25.3	
	comp=Z,51nm,1.3s						
VOI	**Vohitsoka**	**61.15**	**173**	P	**P**	**23 37 24.0**	**-0.3**
VOI				IAMs_20	IAMs_20	00 03 23.6	
	comp=Z,1µm,21.0s						
UBPT	**Khong Chiam**	**61.37**	**93**	P	**P**	**23 37 24.5**	**-1.4**
UBPT				IAmb	IAmb	23 37 31.1	
	comp=Z,30nm,1.2s						
TSUM	**Tsumeb**	**61.90**	**204**	⇑P	**P**	**23 37 29.3**	**-0.2**
TSUM	**Tsumeb**	**61.90**	**204**	P	**P**	**23 37 29.2**	**-0.2**
TSUM	**Tsumeb**	**61.90**	**204**	IAMs_20	IAMs_20	00 05 19.6	
	comp=Z,1µm,18.0s						
NJ2	**Nanjing**	**62.41**	**70**	⇓P	**P**	**23 37 32.0**	**-0.8**
NJ2				S	**S**	**23 46 03.4**	**+3.0**
NJ2				pmax	pmax		
	comp=Z,23nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,450nm,4.3s						
NJ2				LR	LR		
	comp=Z,2µm,19.1s						
NJ2				LR	LR		
	comp=Z,950nm,15.7s						
NJ2				LR	LR		
	comp=Z,1µm,16.2s						
KLR	**Kul'dur**	**62.45**	**48**	P	**P**	**23 37 32.5**	**-0.3**
	comp=Z,12nm,0.9s,baz=298,slow=7.7,SNR=15						
KLR	**Kul'dur**	**62.45**	**48**	*ce*P	**P**	**23 37 32.6**	**-0.1**
KLR				pmax	pmax		
	comp=Z,52nm,1.3s						
RES	**Resolute Bay**	**62.53**	**348**	P	**P**	**23 37 33.5**	**+0.7**
RES				pmax	pmax		
	comp=Z,13nm,1.3s						
RES	**Resolute Bay**	**62.53**	**348**	P	**P**	**23 37 33.5**	**+0.7**
TPTI		**62.71**	**110**	P	**P**	**23 37 33.5**	**-1.4**
	comp=Z,6.3nm,1.1s						
KCSI	**Kotacane, Aceh**	**62.96**	**109**	P	**P**	**23 37 33.7**	**-3.0**
	comp=Z,40nm,1.0s						
MDJ	**Mudanjiang**	**63.42**	**53**	IAMs_20	IAMs_20	00 06 54.5	
	comp=Z,1µm,19.0s						
KULM	**Kulim**	**63.92**	**105**	P	**P**	**23 37 41.6**	**-1.4**
KULM				IAmb	IAmb	23 37 45.6	
	comp=Z,30nm,1.0s						
GSI	**Gunungsitoli**	**64.33**	**111**	⇑P	**P**	**23 37 45.4**	**-0.3**
GSI	**Gunungsitoli**	**64.33**	**111**	P	**P**	**23 37 45.6**	**-0.1**
	comp=Z,50nm,1.1s						
GSI	**Gunungsitoli**	**64.33**	**111**	P	**P**	**23 37 44.2**	**-1.4**
GSI				IAmb	IAmb	23 37 49.0	
	comp=Z,42nm,1.0s						
GSI	**Gunungsitoli**	**64.33**	**111**	P	**P**	**23 37 45.5**	**-0.1**
IPM	**Ipoh**	**64.74**	**106**	P	**P**	**23 37 46.2**	**-2.1**
IPM	**Ipoh**	**64.74**	**106**	P	**P**	**23 37 46.5**	**-1.9**
USA0B	**Ussuriysk Arra**	**65.11**	**52**	P	**P**	**23 37 49.8**	**-0.6**
USA0B				pmax	pmax		
	comp=Z,118nm,1.8s						
USA0B	**Ussuriysk Arra**	**65.11**	**52**	P	**P**	**23 37 49.8**	**-0.6**
USRK	**Ussuriysk Ar.**	**65.11**	**52**	P	**P**	**23 37 49.3**	**-1.1**
	comp=Z,11nm,0.9s,baz=321,slow=6.4,SNR=11						
USRK				LR	LR	00 09 03.8	
	comp=Z,2µm,19.5s,baz=301,slow=39						
USRK	**Ussuriysk Ar.**	**65.11**	**52**	P	**P**	**23 37 50.4**	**0.0**
USRK	**Ussuriysk Ar.**	**65.11**	**52**	P	**P**	**23 37 50.4**	**0.0**
WIN	**Windhoek**	**65.20**	**204**	P	**P**	**23 37 51.3**	**0.0**
WIN				pmax	pmax		
	comp=Z,78nm,1.2s						
WIN	**Windhoek**	**65.20**	**204**	P	**P**	**23 37 51.3**	**0.0**
LBTB	**Lobatse**	**65.39**	**195**	P	**P**	**23 37 52.4**	**+0.1**
LBTB				pmax	pmax		
	comp=Z,76nm,0.9s						
LBTB	**Lobatse**	**65.39**	**195**	P	**P**	**23 37 52.4**	**+0.1**
BILL	**Bilibino**	**65.66**	**20**	⇑*e*P	**P**	**23 37 53.5**	**0.0**
BILL				i *SP	**sP**	**23 37 58.6**	**+2.8**
BILL				*e*		23 38 26.3	
BILL						23 40 20.0	
BILL				pmax	pmax		
	comp=Z,39nm,1.3s						
BILL	**Bilibino**	**65.66**	**20**	P	**P**	**23 37 53.5**	**0.0**
BILL				IAmb	IAmb	23 37 57.5	
	comp=Z,44nm,1.3s						
BILL				IAMs_20	IAMs_20	00 09 31.4	
	comp=Z,864nm,18.0s						
KS19	**Wonju Array Si**	**65.94**	**60**	P	**P**	**23 37 55.7**	**-0.2**
DRLN	**Deer Lake**	**65.95**	**315**	P	**P**	**23 37 55.6**	**-0.2**
KSAR	**Wonju Array Be**	**65.98**	**61**	P	**P**	**23 37 55.2**	**-0.9**
KSAR	**Wonju Array Be**	**65.98**	**61**	P	**P**	**23 37 55.2**	**-0.9**
KSRS	**Korea Array**	**66.00**	**61**	P	**P**	**23 37 55.5**	**-0.7**
	comp=Z,25nm,0.9s,baz=296,slow=5.8,SNR=32						
KSRS				LR	LR	00 10 08.1	
	comp=Z,3µm,18.8s,baz=308,slow=39						
MNSI	**Mandailing Nat**	**66.13**	**110**	P	**P**	**23 37 56.4**	**-0.9**
	comp=Z,36nm,0.9s						
MA2	**Magadan**	**66.17**	**31**	*i* P	**P**	**23 37 55.7**	**-1.3**
MA2				pmax	pmax		
	comp=Z,29nm,1.1s						
MA2				MLR	MLR		
	comp=Z,2µm,16.0s						
MA2	**Magadan**	**66.17**	**31**	IAMs_20	IAMs_20	00 10 16.5	
	comp=Z,1µm,20.0s						
MA2	**Magadan**	**66.17**	**31**	P	P	23 38 02.6	+5.6
SISI	**Saibi**	**67.22**	**112**	P	**P**	**23 38 04.5**	**+0.2**
	comp=Z,31nm,1.4s						
BKNI	**Bangkinang**	**67.52**	**109**	P	**P**	**23 38 07.2**	**+1.0**
	comp=Z,2µmcomp=Z,217nm,1.4s						
BKNI	**Bangkinang**	**67.52**	**109**	P	**P**	**23 38 04.5**	**-1.6**
BKNI	**Bangkinang**	**67.52**	**109**	P	**P**	**23 38 05.3**	**-0.9**
SCHQ	**Schefferville**	**67.53**	**323**	P	**P**	**23 38 05.8**	**0.0**
	comp=Z,8.0nm,0.8s,baz=82,slow=4.6,SNR=8.9						
SCHQ	**Schefferville**	**67.53**	**323**	P	**P**	**23 38 05.5**	**-0.3**
SCHQ				IAmb	IAmb	23 40 21.2	
	comp=Z,61nm,1.7s						
PDSI	**Padang**	**67.93**	**111**	P	**P**	**23 38 07.7**	**-1.1**
	comp=Z,30nm,1.1s						
UGL	**Uglegorsk**	**68.27**	**44**	*e*P	**P**	**23 38 11.2**	**+0.8**
UGL				pmax	pmax		
	comp=Z,80nm,1.0s						
A36M	**Sachs Harbour**	**68.58**	**355**	P	**P**	**23 38 12.6**	**+0.5**
A36M	**Sachs Harbour**	**68.58**	**355**	P	**P**	**23 38 12.1**	**+0.1**
	baz=12						
BOSA	**Boshof**	**68.95**	**194**	P	**P**	**23 38 14.4**	**-0.5**
	comp=Z,33nm,0.9s,baz=15,slow=6.5,SNR=35						
BOSA				LR	LR	00 09 59.8	
	comp=Z,938nm,19.3s,baz=15,slow=37						
BOSA	**Boshof**	**68.95**	**194**	P	**P**	**23 38 14.0**	**-0.9**
BOSA				pmax	pmax		
	comp=Z,46nm,1.0s						
BOSA	**Boshof**	**68.95**	**194**	P	**P**	**23 38 14.0**	**-0.9**
BOSA				IAmb	IAmb	23 38 15.3	
	comp=Z,46nm,0.9s						
A21K	**Barrow**	**69.07**	**6**	IAMs_20	IAMs_20	00 12 02.9	
	comp=Z,680nm,18.0s						
A21K	**Barrow**	**69.07**	**6**	P	**P**	**23 38 14.8**	**-0.3**
	baz=346						
KRJI	**Kerinci**	**69.47**	**111**	P	**P**	**23 38 21.1**	**+2.6**
	comp=Z,3µmcomp=Z,293nm,0.6s						
YSS	**Yuzh-Sakhalins**	**69.88**	**45**	*i* P	**P**	**23 38 19.0**	**-1.5**
YSS				pmax	pmax		
	comp=Z,32nm,1.2s						
GBN	**Guysborough**	**70.38**	**313**	P	**P**	**23 38 23.8**	**+0.2**
GBN				IAmb	IAmb	23 38 44.7	
	comp=Z,53nm,1.2s						
DSRI	**Dabo**	**70.67**	**107**	P	**P**	**23 38 25.8**	**0.0**
MASI	**Maura Aman, Be**	**70.75**	**111**	P	**P**	**23 38 28.6**	**+2.3**
	comp=Z,98nm,1.0s						
RDOG	**Red Dog Mine**	**71.60**	**9**	P	**P**	**23 38 31.3**	**+0.6**
	baz=341						
BATG	**Bathurst New B**	**71.75**	**317**	P	**P**	**23 38 32.1**	**+0.2**
BATG				IAmb	IAmb	23 38 36.6	
	comp=Z,90nm,1.8s						
LMN	**Caledonia Moun**	**71.95**	**315**	P	**P**	**23 38 33.6**	**+0.5**
HAL	**Halifax**	**72.02**	**313**	P	**P**	**23 38 33.2**	**-0.3**
HAL				pmax	pmax		
	comp=Z,56nm,0.9s						
HAL	**Halifax**	**72.02**	**313**	P	**P**	**23 38 33.2**	**-0.3**
TOLK	**Toolik Lake Re**	**72.17**	**4**	P	**P**	**23 38 35.1**	**+1.0**
TOLK				IAmb	IAmb	23 38 39.4	
	comp=Z,70nm,1.2s						
TOLK	**Toolik Lake Re**	**72.17**	**4**	P	**P**	**23 38 34.4**	**+0.3**
	baz=352						
JWT	**Wachi**	**72.22**	**59**	P	**P**	**23 38 34.7**	**-0.2**
JWT				IAmb	IAmb	23 39 06.0	
	comp=Z,97nm,1.6s						
PMBI	**Palembang**	**72.45**	**109**	IAMs_20	IAMs_20	00 14 29.4	
	comp=Z,715nm,19.0s						
INK	**Inuvik**	**72.66**	**358**	P	**P**	**23 38 37.0**	**+0.1**
	comp=Z,9.8nm,1.1s,baz=357,slow=11,SNR=8.9						
INK	**Inuvik**	**72.66**	**358**	P	**P**	**23 38 36.4**	**-0.5**
INK				pmax	pmax		
	comp=Z,36nm,1.6s						
INK	**Inuvik**	**72.66**	**358**	P	**P**	**23 38 36.4**	**-0.5**
INK	**Inuvik**	**72.66**	**358**	P	**P**	**23 38 36.2**	**-0.7**
	baz=5.0						
PPBI	**Pangkal Pinang**	**72.94**	**107**	P	**P**	**23 38 41.2**	**+1.8**
	comp=Z,22nm,1.1s						
MDSI	**Maura Dua**	**73.07**	**111**	P	**P**	**23 38 37.9**	**-2.3**
	comp=Z,1µmcomp=Z,23nm,1.0s						
ERM	**Erimo**	**73.08**	**49**	*i* P	**P**	**23 38 40.1**	**+0.2**
ERM				pmax	pmax		
	comp=Z,137nm,1.3s						
PQI	**Presque Isle**	**73.17**	**317**	P	**P**	**23 38 40.8**	**+0.4**
PQI				IAmb	IAmb	23 38 44.3	
	comp=Z,40nm,1.1s						
TNA	**Tin City**	**73.24**	**12**	P	**P**	**23 38 39.7**	**-0.7**
	baz=338						
MAJO	**Matsushiro**	**73.32**	**56**	*i* P	**P**	**23 38 39.9**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,35nm,1.4s						
MAJO	**Matsushiro**	**73.32**	**56**	P	**P**	**23 38 41.0**	**-0.4**
MAT	**Matsushiro**	**73.32**	**56**	P	**P**	**23 38 40.2**	**-1.2**
MAT				S	**S**	**23 48 09.0**	**-1.9**
PETK	**Petropavlovsk-**	**73.32**	**34**	LR	LR	00 15 23.2	
	comp=Z,977nm,18.0s,baz=301,slow=40						
MJAR	**Matsushiro Arr**	**73.32**	**56**	P	**P**	**23 38 41.0**	**-0.5**
	comp=Z,17nm,1.0s,baz=315,slow=5.9,SNR=18						
MJAR				LR	LR	00 13 55.3	
	comp=Z,2µm,19.1s,baz=315,slow=38						
MJAR	**Matsushiro Arr**	**73.32**	**56**	P	**P**	**23 38 40.6**	**-0.9**
MJAR				pmax	pmax		
	comp=Z,30nm,1.3s						
MJAR	**Matsushiro Arr**	**73.32**	**56**	P	**P**	**23 38 40.6**	**-0.9**
LWLI	**Liwa**	**73.35**	**111**	P	**P**	**23 38 40.8**	**-1.1**
	comp=Z,160nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**73.39**	**46**	*e*P	**P**	**23 38 42.1**	**+0.4**
YUK				*e*		23 38 59.7	
YUK				*e*		23 41 23.2	
YUK				*e*PPP	PPP	23 43 09.4	
YUK				*e*S	**S**	**23 48 12.3**	**+0.9**
YUK				*e*		23 48 51.1	
YUK				*e*SS	**SS**	**23 52 55.1**	**+2.6**
YUK				pmax	pmax		
	comp=N,262nm,0.9s						
YUK				pmax	pmax		
	comp=Z,317nm,0.9s						
YUK				pmax	pmax		
	comp=E,195nm,0.6s						
YUK				pmax	pmax		
	comp=Z,378nm,1.5s						
D62A	**Allapoint, All**	**73.45**	**318**	P	**P**	**23 38 42.6**	**+0.6**
SUR	**Sutherland**	**73.53**	**197**	P	**P**	**23 38 41.9**	**-0.7**
SUR				IAmb	IAmb	23 38 43.8	
	comp=Z,66nm,1.2s						
GGN	**Saint George**	**73.53**	**315**	P	**P**	**23 38 42.1**	**-0.4**
COLD	**Coldfoot**	**73.54**	**4**	P	**P**	**23 38 43.3**	**+1.1**
COLD				IAmb	IAmb	23 38 47.1	
	comp=Z,54nm,1.1s						
COLD	**Coldfoot**	**73.54**	**4**	P	**P**	**23 38 41.4**	**-0.8**
	baz=352						
BMAR	**Burnt Mountain**	**73.58**	**2**	P	**P**	**23 38 43.6**	**+1.1**
KLSI		**73.61**	**110**	P	**P**	**23 38 43.4**	**0.0**
	comp=Z,9.7nm,1.4s						
KSM	**Kuching**	**73.69**	**102**	P	**P**	**23 38 45.0**	**+1.1**
KSM	**Kuching**	**73.69**	**102**	P	**P**	**23 38 42.3**	**-1.6**
KSM				IAmb	IAmb	23 38 47.7	
	comp=Z,58nm,1.3s						
KSM	**Kuching**	**73.69**	**102**	P	**P**	**23 38 43.9**	**0.0**
PET	**Petropavlovsk**	**73.79**	**34**	*e*P	**P**	**23 38 43.7**	**-0.2**
PET				*e*S	**SKiKP**	**23 48 10.7**	**-3.1**
PET				*e*SS	**SS**	**23 52 55.6**	**-2.5**

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PET                               pmax      pmax
      comp=Z,110nm,1.3s
PET                               pmax      pmax
      comp=Z,200nm,6.6s
PET                               MLR       MLR
      comp=Z,2µm,20.0s
PET                               MLR       MLR
      comp=Z,2µm,20.0s
LMQ   La Malbaie       73.81 319  P         P         23 38 44.4 +0.2
F64A  Sherman          73.87 316  P         P         23 38 44.3 -0.2
G65A  Princeton        73.87 316  P         P         23 38 43.7 -0.7
G65A                              IAmb      IAmb      23 38 49.3
      comp=Z,57nm,1.4s
E62A  Clayton Lake     74.00 318  P         P         23 38 45.0 -0.3
E62A                              IAmb      IAmb      23 38 49.6
      comp=Z,78nm,1.6s
KASI  Kota Agung       74.01 111  P         P         23 38 45.7  0.0
      comp=Z,65nm,0.9s
GAMB  Gambell          74.22  14  P         P         23 38 44.7 -1.5
      baz=335
SBUM  Sibu             74.53 100  P         P         23 38 49.0 +0.2
SBUM  Sibu             74.53 100  P         P         23 38 48.3 -0.4
IMAR  Indian Mountai   74.53   6  P         P         23 38 48.5 +0.5
ANM   Nome             74.56  11  P         P         23 38 48.7 +0.5
ANM                               pmax      pmax
      comp=Z,78nm,1.2s
ANM   Nome             74.56  11  P         P         23 38 48.7 +0.5
ANM                               IAmb      IAmb      23 38 53.0
      comp=Z,78nm,1.2s
ANM   Nome             74.56  11  P         P         23 38 47.7 -0.5
      baz=340
EPYK  Eagle Plains     74.68 359  P         P         23 38 49.0 +0.1
EPYK                              IAmb      IAmb      23 38 53.2
      comp=Z,49nm,1.2s
EPYK  Eagle Plains     74.68 359  P         P         23 38 48.6 -0.3
      baz=2.4
PKME  Peaks-Kenny Pk   74.76 316  P         P         23 38 49.6 -0.1
      baz=49
H21K  Melozitna Rive   74.93   6  P         P         23 38 50.7 +0.4
H21K                              IAmb      IAmb      23 38 55.6
      comp=Z,81nm,1.1s
H21K  Melozitna Rive   74.93   6  P         P         23 38 50.5 +0.1
      baz=350
H24K  Noodor Dome      75.05   3  P         P         23 38 51.2 +0.1
H24K  Noodor Dome      75.05   3  P         P         23 38 50.4 -0.7
      baz=354
I21K  Tanana           75.46   5  P         P         23 38 53.9 +0.6
I21K                              IAmb      IAmb      23 38 58.5
      comp=Z,50nm,1.1s
I21K  Tanana           75.46   5  P         P         23 38 52.2 -1.2
      baz=350,SNR=28
GCSA  Galena City Sc   75.46   7  P         P         23 38 53.5 +0.2
      baz=346,SNR=5.7
STKI  Sintang          75.49 102  P         P         23 38 55.3 +1.0
      comp=Z,10µmcomp=Z,50nm,1.0s
CGJI  Cibinong         75.62 111  P         P         23 38 53.5 -1.5
      comp=Z,1µmcomp=Z,79nm,1.0s
I23K  Minto, Yukon-K   75.66   4  P         P         23 38 54.8 +0.3
I23K                              IAmb      IAmb      23 38 59.1
      comp=Z,45nm,1.4s
I23K  Minto, Yukon-K   75.66   4  P         P         23 38 53.8 -0.7
      baz=352,SNR=5.4
MLY   Manley           75.69   5  P         P         23 38 55.0 +0.1
MLY                               IAmb      IAmb      23 38 59.1
      comp=Z,43nm,1.2s
MLY   Manley           75.69   5  P         P         23 38 54.9 +0.1
      baz=351,SNR=21
MDM   Murphy Dome      75.91   4  P         P         23 38 55.4 -0.6
MDM                               IAmb      IAmb      23 39 01.0
      comp=Z,78nm,1.3s
COLA  College          76.01   4  P         P         23 38 56.8 +0.3
COLA                              pmax      pmax
      comp=Z,109nm,1.3s
COLA  College          76.01   4  P         P         23 38 56.8 +0.3
COLA  College          76.01   4  P         P         23 38 56.6 +0.1
      baz=354
TCOL  CIGO, UAF Yank   76.01   4  P         P         23 38 57.0 +0.5
TCOL  CIGO, UAF Yank   76.01   4  P         P         23 38 56.6 +0.1
      baz=354
IL31                   76.16   3  P         P         23 38 57.1 -0.2
ILAR  Eielson Array    76.16   3  P         P         23 38 57.8 +0.4
      comp=Z,7.5nm,1.0s,baz=324,slow=3.0,SNR=27
ILAR                              PP        PP        23 41 48.5 +1.1
      comp=Z,2.8nm,1.1s,baz=356,slow=6.6,SNR=4.6
ILAR                              PKKPbc    PKKPbc    23 58 12.2 +0.6
      comp=Z,0.3nm,0.8s,baz=190,slow=4.4,SNR=4.9
ILAR                              LR        LR        00 17 33.1
      comp=Z,208nm,19.7s,baz=12,slow=40
ILAR  Eielson Array    76.16   3  P         P         23 38 57.2 -0.2
ILAR  Eielson Array    76.16   3  P         P         23 38 57.2 -0.2
NEA2  Nenana           76.23   4  P         P         23 38 57.8  0.0
NEA2                              IAmb      IAmb      23 39 01.6
      comp=Z,49nm,1.3s
NEA2  Nenana           76.23   4  P         P         23 38 57.3 -0.4
      baz=353,SNR=17
CCB   Clear Creek Bu   76.24   4  P         P         23 38 57.6 -0.2
CCB                               IAmb      IAmb      23 39 01.4
      comp=Z,51nm,1.2s
J20K  Nowinta River    76.28   6  P         P         23 38 58.8 +0.7
J20K                              IAmb      IAmb      23 39 03.1
      comp=Z,62nm,1.4s
J20K                              IAMs_20   IAMs_20   00 12 20.4
      comp=Z,642nm,20.0s
J20K  Nowinta River    76.28   6  P         P         23 38 57.1 -1.0
      baz=348,SNR=18
MOQ   Mont Orford      76.30 318  P         P         23 38 59.3 +0.7
EGAK  Eagle            76.30   1  P         P         23 38 58.2 +0.1
EGAK                              IAmb      IAmb      23 39 03.0
      comp=Z,65nm,1.4s
SPMM  Sapulut          76.36  95  P         P         23 39 00.0 +0.6
WRH   Wood River Hil   76.40   4  P         P         23 38 58.8 +0.1
WRH                               IAmb      IAmb      23 39 02.3
      comp=Z,51nm,1.4s
HDA   Harding Lake     76.52   3  P         P         23 38 59.2 -0.2
HDA                               IAmb      IAmb      23 39 02.7
      comp=Z,42nm,1.1s
HDA   Harding Lake     76.52   3  P         P         23 38 58.5 -0.9
      baz=354,SNR=18
J26L  Joseph Creek     76.54   2  P         P         23 38 58.2 -1.5
      baz=357,SNR=12
YKA   Yellowknife Ar   76.59 348  P         P         23 39 00.1 +0.2
      comp=Z,22nm,1.0s,baz=20,slow=5.9,SNR=25
YKA                               LR        LR        00 13 53.8
      comp=Z,525nm,21.9s,baz=0.0,slow=37
BPAW  Bear Paw Mtn.    76.60   5  P         P         23 38 59.8 -0.1
BPAW                              IAmb      IAmb      23 39 04.3
      comp=Z,60nm,1.2s
BPAW  Bear Paw Mtn.    76.60   5  P         P         23 38 59.2 -0.7
      baz=351,SNR=14
CHUM  Lake Minchumin   76.72   6  P         P         23 39 01.1 +0.6
      baz=350
LBNH  Lisbon           76.85 317  P         P         23 39 02.1 +0.4
LBNH                              pmax      pmax
      comp=Z,32nm,1.1s
LBNH  Lisbon           76.85 317  P         P         23 39 02.1 +0.4
LBNH                              IAmb      IAmb      23 39 06.3
      comp=Z,32nm,1.1s
LBNH  Lisbon           76.85 317  P         P         23 39 01.5 -0.2
      baz=48
VLDQ  Val d'Or         76.94 322  P         P         23 39 02.8 +0.7
VLDQ                              IAmb      IAmb      23 39 07.0
      comp=Z,53nm,1.4s
DAWY  Dawson           77.02 360  P         P         23 39 02.6 +0.3
DAWY                              IAmb      IAmb      23 39 07.1
      comp=Z,47nm,1.2s
DAWY  Dawson           77.02 360  P         P         23 39 02.4 +0.1
      baz=0.3,SNR=24
WRGLY Wrigley          77.03 353  P         P         23 39 02.9 +0.6
      baz=13,SNR=5.3
SCRK  Sand Creek       77.05   2  P         P         23 39 03.0 +0.3
SCRK                              IAmb      IAmb      23 39 07.7
      comp=Z,83nm,1.4s
SCRK  Sand Creek       77.05   2  P         P         23 39 01.9 -0.7
      baz=357,SNR=36
K20K  Telida           77.09   7  P         P         23 39 03.4 +0.7
K20K                              IAmb      IAmb      23 39 06.9
      comp=Z,46nm,1.2s
K20K  Telida           77.09   7  P         P         23 39 01.6 -1.2
      baz=349,SNR=18
MCK   McKinley         77.09   4  P         P         23 39 02.8 +0.1
MCK                               pmax      pmax
      comp=Z,68nm,1.3s
MCK   McKinley         77.09   4  P         P         23 39 02.8 +0.1
MCK                               IAmb      IAmb      23 39 06.8
      comp=Z,68nm,1.3s
MCK   McKinley         77.09   4  P         P         23 39 01.6 -1.2
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      baz=353,SNR=16
CNJI  Cibinong         77.13 111  P         P         23 39 04.0 +0.4
      comp=Z,9µmcomp=Z,1µmcomp=Z,165nm,1.1s
KTH   Kantishna Hill   77.14   5  P         P         23 39 03.5 +0.4
CAST  Castle Rocks     77.19   6  P         P         23 39 01.9 -1.4
      baz=350
RIDG  Independent Ri   77.26   2  P         P         23 39 04.1 +0.3
RIDG  Independent Ri   77.26   2  P         P         23 39 02.3 -1.4
      baz=356,SNR=19
TTA   Tatalina         77.32   8  P         P         23 39 03.0 -1.1
      baz=347,SNR=7.1
DOT   Dot Lake         77.38   2  P         P         23 39 04.5 +0.2
DOT                               IAmb      IAmb      23 39 09.5
      comp=Z,76nm,1.3s
MYLDM Lahad Datu       77.64  93  P         P         23 39 06.0 -0.6
MYLDM                             IAmb      IAmb      23 39 40.9
      comp=Z,79nm,1.4s
MYLDM                             IAMs_20   IAMs_20   00 19 15.9
      comp=Z,952nm,19.0s
PPLA  Purkeypile       77.70   6  P         P         23 39 06.3  0.0
      baz=350
BCX   Boston College   77.72 315  IAMs_20   IAMs_20   00 14 22.3
      comp=Z,1µm,22.0s
HRV   Adam Dziewonsk   77.82 315  P         P         23 39 06.7 -0.4
      baz=47
DHY   Denali Highway   77.83   4  P         P         23 39 08.0 +1.0
DHY   Denali Highway   77.83   4  P         P         23 39 06.8 -0.2
      baz=354
M65A  Busby, Falmout   77.95 314  P         P         23 39 07.2 -0.7
      baz=48
L20K  Farewell, AK     77.97   7  P         P         23 39 06.5 -1.2
      baz=349,SNR=26
LONY  Lake Ozonia      77.97 318  P         P         23 39 08.6 +0.7
LONY                              IAmb      IAmb      23 39 12.4
      comp=Z,38nm,1.2s
LONY  Lake Ozonia      77.97 318  P         P         23 39 06.4 -1.6
      baz=46
BCAR  Beaver Creek A   78.01   1  P         P         23 39 08.1 +0.2
L27K  Beaver Creek,    78.01   1  P         P         23 39 08.1 +0.2
L27K  Beaver Creek,    78.01   1  P         P         23 39 07.3 -0.6
      baz=358,SNR=19
WAT1  Susitna Watana   78.01   4  P         P         23 39 06.9 -1.0
      baz=353
PAX   Paxson           78.01   3  P         P         23 39 07.8 -0.2
PAX                               pmax      pmax
      comp=Z,45nm,1.6s
PAX   Paxson           78.01   3  P         P         23 39 07.8 -0.2
PAX   Paxson           78.01   3  P         P         23 39 05.9 -2.1
      baz=356,SNR=6.0
L26K  Log Cabin Wild   78.02   2  P         P         23 39 07.7 -0.2
L26K  Log Cabin Wild   78.02   2  P         P         23 39 06.9 -1.1
      baz=357,SNR=16
MENT  Mentasta         78.10   2  P         P         23 39 08.7 +0.3
MENT                              IAmb      IAmb      23 39 12.8
      comp=Z,50nm,1.1s
L19K  White Mountain   78.17   7  P         P         23 39 09.4 +0.6
L19K                              IAmb      IAmb      23 39 13.2
      comp=Z,64nm,1.4s
L19K  White Mountain   78.17   7  P         P         23 39 07.5 -1.3
      baz=348,SNR=15
BRYW  Bryant College   78.20 315  IAMs_20   IAMs_20   00 14 12.1
      comp=Z,1µm,21.0s
MMPY  Sheldon Lake,    78.24 356  P         P         23 39 08.5 -0.6
      baz=6.7,SNR=9.2
WAT6  Susitna Watana   78.30   4  P         P         23 39 08.1 -1.6
      baz=354,SNR=23
L61B  Northampton      78.47 316  P         P         23 39 09.8 -1.0
      baz=47
M30M  Minto, Yukon     78.48 359  P         P         23 39 10.6  0.0
      baz=2.3,SNR=9.7
M19K  Big River Lodg   78.49   7  P         P         23 39 11.5 +1.0
M19K                              IAmb      IAmb      23 39 15.1
      comp=Z,72nm,1.3s
M19K  Big River Lodg   78.49   7  P         P         23 39 09.4 -1.2
      baz=348
HARP  HAARP            78.60   3  P         P         23 39 09.5 -1.6
      baz=356,SNR=5.1
M26K  Nabesna, AK      78.65   2  P         P         23 39 11.0 -0.4
      baz=357,SNR=14
BVCY  Beaver Creek     78.67   1  P         P         23 39 10.6 -1.0
      baz=359,SNR=21
M27K  Edge Creek, AK   78.72   1  P         P         23 39 13.4 +1.4
M27K                              IAmb      IAmb      23 39 17.4
      comp=Z,78nm,1.3s
M27K  Edge Creek, AK   78.72   1  P         P         23 39 10.5 -1.4
      baz=358
FARO  Faro, Yukon      78.73 357  P         P         23 39 10.9 -1.0
      baz=5.0,SNR=9.9
J59A  Piesco           78.74 318  P         P         23 39 12.8 +0.6
J59A                              IAmb      IAmb      23 39 17.1
      comp=Z,57nm,1.2s
M31M  Drury Creek, Y   78.80 357  P         P         23 39 11.5 -0.7
      baz=4.2,SNR=9.1
M24K  Tolsona, Glenn   78.85   3  P         P         23 39 13.0 +0.4
M24K  Tolsona, Glenn   78.85   3  P         P         23 39 11.0 -1.6
      baz=355
PLVO  Plevna           78.94 320  P         P         23 39 13.7 +0.4
GHO   Glory Hole Cre   79.04   4  P         P         23 39 14.1 +0.4
GHO                               IAmb      IAmb      23 39 17.4
      comp=Z,52nm,1.1s
GHO                               IAMs_20   IAMs_20   00 10 56.6
      comp=Z,594nm,20.0s
SML   Sawmill          79.04   4  P         P         23 39 13.4 -0.3
SML   Sawmill          79.04   4  P         P         23 39 12.2 -1.5
      baz=353,SNR=14
SCM   Sheep Creek Mo   79.07   4  P         P         23 39 14.2 +0.4
SCM                               pmax      pmax
      comp=Z,111nm,1.2s
SCM   Sheep Creek Mo   79.07   4  P         P         23 39 14.2 +0.4
SCM   Sheep Creek Mo   79.07   4  P         P         23 39 12.7 -1.1
      baz=354,SNR=15
TGTN  Hyland Airport   79.13 354  P         P         23 39 13.8 -0.3
      baz=9.0,SNR=7.9
PMR   Palmer           79.21   5  P         P         23 39 14.7 +0.3
PMR                               pmax      pmax
      comp=Z,63nm,1.4s
PMR   Palmer           79.21   5  P         P         23 39 14.7 +0.3
PMR                               IAmb      IAmb      23 39 18.1
      comp=Z,63nm,1.4s
PMR   Palmer           79.21   5  P         P         23 39 13.8 -0.7
      baz=353
YUK3  Moose Creek      79.31   0  P         P         23 39 14.1 -1.2
      baz=359,SNR=30
SPCR  Spurr Chakacha   79.38   6  P         P         23 39 14.3 -1.1
      baz=350
N25K  Chitina, Valde   79.41   2  P         P         23 39 15.6  0.0
N25K                              IAmb      IAmb      23 39 20.2
      comp=Z,50nm,1.5s
N25K  Chitina, Valde   79.41   2  P         P         23 39 14.7 -0.9
      baz=356
KNK   Knik Glacier     79.43   4  P         P         23 39 15.6 -0.1
      baz=353,SNR=6.4
KLU   Klutina          79.47   3  P         P         23 39 14.6 -1.4
      baz=355,SNR=14
J57A  Williamstown     79.55 318  P         P         23 39 17.4 +0.8
N19K  Bonanza Creek    79.55   7  P         P         23 39 14.5 -2.0
      baz=348
N31M  Braeburn, Yuko   79.56 358  P         P         23 39 15.4 -1.0
      baz=3.1,SNR=6.5
RC01  Rabbit Creek A   79.67   5  P         P         23 39 15.7 -1.3
      baz=352,SNR=7.4
MCARA McCarthy VSAT    79.67   2  P         P         23 39 17.9 +0.9
MCARA                             IAmb      IAmb      23 39 33.2
      comp=Z,74nm,1.5s
MCARA McCarthy VSAT    79.67   2  P         P         23 39 15.6 -1.4
      baz=357
WSPT  Westport, CT     79.70 315  IAMs_20   IAMs_20   00 14 57.5
      comp=Z,1µm,20.0s
YUK4  Talbot Arm       79.75 359  P         P         23 39 15.7 -1.9
      baz=0.9
VRDI  Verde Repeater   79.82   2  P         P         23 39 18.1 +0.1
DIV   Divide           79.84   3  P         P         23 39 19.4 +1.4
DIV                               IAmb      IAmb      23 39 22.8
      comp=Z,69nm,1.2s
CAPN  Captain Cook N   79.89   6  P         P         23 39 16.3 -1.8
      baz=351
L59A  Walton           79.91 317  P         P         23 39 19.0 +0.3
L59A                              IAmb      IAmb      23 39 23.4
      comp=Z,53nm,1.1s
PWL   Port Wells       79.99   4  P         P         23 39 19.1 +0.4
PWL                               IAmb      IAmb      23 39 28.1
      comp=Z,63nm,1.2s
PWL   Port Wells       79.99   4  P         P         23 39 17.5 -1.2
      baz=353
BMRM  Bremner River    80.05   2  P         P         23 39 18.1 -1.0
      baz=356,SNR=6.2
RSO   Redoubt South    80.06   6  P         P         23 39 19.4  0.0
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CTG   Chitna Glacier   80.12   1  P         P         23 39 18.3 -1.4
      baz=359
CTGM  Chitina Glacie   80.12   1  P         P         23 39 20.5 +0.8
PAL   Palisades        80.13 315  P         P         23 39 19.5 -0.3
      baz=46
SADO  Sadowa           80.16 321  P         P         23 39 20.8 +0.9
HYT   Haines Junctio   80.25 359  P         P         23 39 20.9 +0.6
HYT                               IAmb      IAmb      23 39 25.5
      comp=Z,78nm,1.3s
HYT   Haines Junctio   80.25 359  P         P         23 39 20.6 +0.3
      baz=1.8,SNR=22
LOGN  Logan Glacier    80.27   1  P         P         23 39 21.0 +0.6
LOGN                              IAmb      IAmb      23 39 25.3
      comp=Z,73nm,1.4s
CRQE  Cirque           80.31   2  P         P         23 39 20.5 -0.1
      baz=357
BBKI  Banjar Baru      80.32 103  P         P         23 39 21.9 +0.7
WHY   Whitehorse       80.36 358  P         P         23 39 21.4 +0.6
WHY   Whitehorse       80.36 358  P         P         23 39 21.0 +0.2
      baz=3.8,SNR=6.0
BINY  Binghamton       80.40 317  P         P         23 39 21.3  0.0
      baz=45,SNR=7.3
O18K  Koktuh Hills     80.42   8  P         P         23 39 21.4 +0.4
O18K                              IAmb      IAmb      23 39 26.2
      comp=Z,87nm,1.4s
O18K  Koktuh Hills     80.42   8  P         P         23 39 20.7 -0.4
      baz=348
SPIA  Saint Paul Isl   80.55  16  P         P         23 39 21.4 -0.4
      baz=336
WAX   Waxell Ridge     80.61   2  P         P         23 39 22.2  0.0
SEW   Seward           80.67   5  P         P         23 39 21.5 -0.8
      baz=352
P33M  Teslin, Yukon    80.72 356  P         P         23 39 22.5 -0.3
      baz=5.4,SNR=6.9
MESA  MESA             80.90   1  P         P         23 39 23.0 -0.9
      baz=358
BRLK  Bradley Lake     80.91   6  P         P         23 39 23.8 +0.1
BRLK                              IAmb      IAmb      23 39 27.7
      comp=Z,111nm,1.7s
FFC   Flin Flon        80.94 339  P         P         23 39 24.4 +0.5
FFC                               pmax      pmax
      comp=Z,15nm,1.0s
FFC   Flin Flon        80.94 339  P         P         23 39 24.4 +0.5
PINM  Pinnacle         81.00   0  P         P         23 39 23.7 -0.6
      baz=360
N59A  State Game Lan   81.19 316  P         P         23 39 24.3 -1.3
      baz=45,SNR=6.0
KBKI  Kotabaru         81.22 102  P         P         23 39 26.6 +0.6
      comp=Z,2µmcomp=Z,74nm,1.0s
SKAG  Skagway          81.57 358  P         P         23 39 26.7 -0.5
      baz=3.5
WVNY  West Valley, N   81.61 319  P         P         23 39 28.2 +0.4
WVNY                              IAmb      IAmb      23 39 32.0
      comp=Z,42nm,1.2s
MPSI  Mapaga           81.77  96  P         P         23 39 29.3 +0.4
      comp=Z,662nmcomp=Z,62nm,1.2s
P60A  Greenville       81.90 316  P         P         23 39 28.6 -0.7
      baz=45
TOLI2 Tolitoli         81.96  95  P         P         23 39 29.3 -0.7
TOLI2                             IAmb      IAmb      23 39 33.5
      comp=Z,38nm,1.0s
TOLI2 Tolitoli         81.96  95  P         P         23 39 29.4 -0.6
GMJI  Gumukmas         82.41 107  P         P         23 39 33.7 +1.4
      comp=Z,53nm,1.0s
SSPA  Standing Stone   82.52 317  P         P         23 39 32.9 +0.4
SSPA                              IAmb      IAmb      23 39 36.3
      comp=Z,60nm,1.4s
SSPA  Standing Stone   82.52 317  IAMs_20   IAMs_20   00 17 58.1
      comp=Z,953nm,19.0s
SSPA  Standing Stone   82.52 317  P         P         23 39 31.5 -1.0
      baz=44
ERPA  Erie             82.52 320  P         P         23 39 32.7 +0.2
ERPA  Erie             82.52 320  P         P         23 39 31.6 -0.9
      baz=42
E43A  Lone Tree Farm   82.56 326  P         P         23 39 33.5 +0.9
E43A                              IAmb      IAmb      23 39 37.1
      comp=Z,66nm,1.4s
ABJI  Asem Bagus       82.69 106  P         P         23 39 35.7 +2.0
      comp=Z,110nm,1.0s
KDAK  Kodiak Island    82.72   7  P         P         23 39 33.6 +0.4
KDAK                              pmax      pmax
      comp=Z,128nm,1.6s
KDAK  Kodiak Island    82.72   7  P         P         23 39 33.6 +0.4
M54A  Oil Creek Stat   82.80 319  P         P         23 39 33.8 -0.3
M54A                              IAMs_20   IAMs_20   00 16 36.5
      comp=Z,972nm,20.0s
M54A  Oil Creek Stat   82.80 319  P         P         23 39 32.7 -1.3
      baz=43,SNR=11
SDMD  Soldier's Deli   82.84 316  P         P         23 39 34.9 +0.7
ULM   Lac du Bonnet    82.88 333  P         P         23 39 34.5 +0.3
      comp=Z,9.8nm,0.8s,baz=46,slow=6.1,SNR=8.8
ULM                               LR        LR        00 16 12.5
      comp=Z,507nm,21.7s,baz=36,slow=36
ULM   Lac du Bonnet    82.88 333  P         P         23 39 34.0 -0.2
ULM                               pmax      pmax
      comp=Z,17nm,1.0s
ULM   Lac du Bonnet    82.88 333  P         P         23 39 34.0 -0.2
G45A  Suttons Bay      83.01 325  P         P         23 39 35.9 +0.8
JAGI  Jajag, Banyuwa   83.07 107  P         P         23 39 36.5 +0.8
      comp=Z,42nm,1.0s
JAGI  Jajag, Banyuwa   83.07 107  P         P         23 39 35.0 -0.7
JAGI                              IAmb      IAmb      23 39 36.7
      comp=Z,41nm,1.0s
JAGI                              IAMs_20   IAMs_20   00 12 59.9
      comp=Z,521nm,21.0s
JAGI  Jajag, Banyuwa   83.07 107  P         P         23 39 36.4 +0.8
O56A  Blue Knob Stat   83.14 318  IAMs_20   IAMs_20   00 16 21.5
      comp=Z,1µm,20.0s
O56A  Blue Knob Stat   83.14 318  P         P         23 39 35.7 -0.2
      baz=43,SNR=9.8
EYMN  Ely              83.16 330  P         P         23 39 35.5 -0.3
      baz=36
OHAK  Old Harbor       83.21   7  P         P         23 39 34.6 -1.2
      baz=350
MRSI  Marisa           83.26  95  P         P         23 39 36.7  0.0
      comp=Z,76nm,0.9s
M53A  WI Miller and    83.36 320  P         P         23 39 36.0 -0.9
      baz=42
N54A  Moraine State    83.37 319  P         P         23 39 36.3 -0.7
      baz=42,SNR=8.1
P57A  Homestead Farm   83.42 317  P         P         23 39 38.1 +0.9
P57A                              IAmb      IAmb      23 39 41.5
      comp=Z,57nm,1.2s
CHGN  Chignik          83.50  10  P         P         23 39 36.3 -1.0
      baz=346
F42A  Maple Grove Fa   83.54 326  P         P         23 39 38.0 +0.3
F42A                              IAmb      IAmb      23 39 42.2
      comp=Z,42nm,0.9s
B35A  Bob, Littlefor   83.68 331  P         P         23 39 39.1 +0.7
B35A                              IAmb      IAmb      23 39 44.1
      comp=Z,41nm,1.8s
COWI  Conover          83.69 327  P         P         23 39 39.8 +1.2
SII   Sitkinak Islan   83.77   8  P         P         23 39 37.6 -1.1
      baz=349
NBCL  Cascavel-CE      83.81 259 eP         P         23 39 39.2 -0.4
TTSI  Tana Toraja      83.85  99  P         P         23 39 39.0 -0.8
      comp=Z,1µmcomp=Z,28nm,0.8s
NBPA  Parau_RN         83.90 258 eP         P         23 39 40.9 +0.9
N53A  Lisbon           83.92 319  P         P         23 39 39.6 -0.2
CBN   Corbin Frederi   84.00 315  IAMs_20   IAMs_20   00 20 15.3
      comp=Z,728nm,19.0s
CBN   Corbin Frederi   84.00 315  P         P         23 39 39.7 -0.5
      baz=44
AAM   Ann Arbor        84.18 322  P         P         23 39 41.6 +0.5
AAM                               pmax      pmax
      comp=Z,78nm,1.2s
AAM                               MLR       MLR
      comp=Z,1µm,20.0s
AAM   Ann Arbor        84.18 322  P         P         23 39 41.6 +0.5
AAM   Ann Arbor        84.18 322  P         P         23 39 40.8 -0.2
      baz=40
MCWV  Mont Chateau     84.25 318  P         P         23 39 40.9 -0.6
      baz=42,SNR=9.6
Q56A  Snyder Ridge,    84.36 317  P         P         23 39 42.2 +0.1
Q56A                              IAmb      IAmb      23 39 46.1
      comp=Z,41nm,1.0s
SPSI  Sidrap Palu      84.40 100  P         P         23 39 43.1 +0.6
      comp=Z,1µmcomp=Z,25nm,0.7s
R58B  Mineral          84.44 316  P         P         23 39 42.0 -0.5
R58B                              IAmb      IAmb      23 39 46.3
      comp=Z,36nm,1.2s
AGMN  Agassiz Nation   84.52 332  P         P         23 39 42.5 -0.2
AGMN                              IAMs_20   IAMs_20   00 16 14.1
      comp=Z,954nm,21.0s
AGMN  Agassiz Nation   84.52 332  P         P         23 39 41.8 -0.9
      baz=33
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O53A	New Philadelph	84.52	319	P	P	23 39 43.2	+0.3
O53A	New Philadelph	84.52	319	P	P	23 39 42.3	-0.6
	baz=42,SNR=14						
M50A	Fremont	84.57	321	P	P	23 39 43.4	+0.4
N51A	Ashland	84.60	320	P	P	23 39 43.4	+0.1
NBLV	Livramento - P	84.79	256	*e*P	P	23 39 44.8	+0.2
G40A	Rib Lake	84.81	327	P	P	23 39 43.8	-0.4
BNSI	Bone	84.94	100	P	P	23 39 46.5	+1.3
	comp=Z,57µmcomp=Z,2µmcomp=Z,46nm,1.4s						
KAPI	Kappang	85.06	101	P	P	23 39 45.4	-0.4
KAPI				pmax	pmax		
	comp=Z,71nm,1.0s						
KAPI	Kappang	85.06	101	P	P	23 39 45.4	-0.4
KAPI	Kappang	85.06	101	P	P	23 39 46.4	+0.6
EDM	Edmonton	85.10	344	P	P	23 39 45.8	+0.2
EDM				pmax	pmax		
	comp=Z,188nm,1.9s						
EDM	Edmonton	85.10	344	P	P	23 39 45.8	+0.2
I42A	Draeger Farm,	85.36	326	P	P	23 39 47.3	+0.3
I42A				IAmb	IAmb	23 39 51.0	
	comp=Z,39nm,1.0s						
R55A	Marlinton	85.41	317	P	P	23 39 48.0	+0.5
R55A				IAmb	IAmb	23 39 51.5	
	comp=Z,33nm,1.0s						
ACSO	Alum Creek Sta	85.43	320	P	P	23 39 47.0	-0.4
	baz=41,SNR=11						
P52A	Corning	85.45	319	P	P	23 39 47.3	-0.3
	baz=41,SNR=20						
BKSI	Bulukumba	85.53	101	P	P	23 39 49.1	+0.9
	comp=Z,473nmcomp=Z,44nm,1.5s						
NBPB	Pedra_Branca-C	85.64	259	*e*P	P	23 39 50.0	+1.2
NBAN	Anadia - AL	85.80	254	*e*P	P	23 39 50.9	+1.3
SPMN	Marine on St.	85.91	329	P	P	23 39 48.9	-0.8
	baz=35						
PLAI	Plampang	86.01	105	P	P	23 39 51.3	+0.7
	comp=Z,66nm,1.4s						
PLAI	Plampang	86.01	105	P	P	23 39 50.9	+0.3
Q52A	Bidwell	86.02	319	P	P	23 39 50.5	+0.1
P51A	Williamsport	86.03	320	P	P	23 39 50.7	+0.3
P51A				IAmb	IAmb	23 39 53.7	
	comp=Z,31nm,0.9s						
O49A	Covington	86.13	321	P	P	23 39 50.7	-0.2
NBMA	Muriti-CE	86.19	257	*e*P	P	23 39 52.5	+0.9
N47A	Urbana	86.25	322	P	P	23 39 51.7	+0.2
N47A				IAmb	IAmb	23 39 54.8	
	comp=Z,47nm,1.3s						
R53A	Hurricane	86.34	318	P	P	23 39 52.1	+0.2
R53A				IAmb	IAmb	23 39 56.0	
	comp=Z,45nm,0.9s						
NBPS	Pedro II - PI	86.34	261	*e*P	P	23 39 52.2	-0.2
BLA	Blacksburg	86.37	317	P	P	23 39 51.8	-0.4
	baz=42						
CNNC	Cliffs of the	86.43	314	IAMs_20	IAMs_20	00 21 52.8	
	comp=Z,794nm,18.0s						
CNNC	Cliffs of the	86.43	314	P	P	23 39 51.9	-0.5
	baz=43						
Q51A	Peebles	86.52	319	P	P	23 39 52.5	-0.4
V58A	Windy Hill, Pi	86.70	315	P	P	23 39 54.2	+0.4
V58A				IAmb	IAmb	23 39 58.4	
	comp=Z,31nm,1.1s						
JFWS	Jewell Farm	86.72	326	P	P	23 39 54.4	+0.6
JFWS				pmax	pmax		
	comp=Z,42nm,1.2s						
JFWS	Jewell Farm	86.72	326	P	P	23 39 54.4	+0.6
JFWS				IAmb	IAmb	23 39 58.5	
	comp=Z,42nm,1.2s						
JFWS	Jewell Farm	86.72	326	P	P	23 39 52.9	-0.9
	baz=36						
P49A	Miami Univ. Ec	86.82	321	P	P	23 39 52.8	-1.5
	baz=40,SNR=6.4						
U56A	King	86.99	316	P	P	23 39 55.4	+0.2
U56A				IAmb	IAmb	23 40 00.1	
	comp=Z,32nm,0.9s						
DGMT	Dagmar	87.13	337	P	P	23 39 54.0	-1.6
	baz=27						
TNTI	Ternate	87.28	91	P	P	23 39 57.1	+0.2
TNTI	Ternate	87.28	91	P	P	23 39 55.9	-1.0
TNTI				IAmb	IAmb	23 39 57.4	
	comp=Z,44nm,1.1s						
TNTI	Ternate	87.28	91	P	P	23 39 56.2	-0.7
SFIN	Lafayette	87.31	323	P	P	23 39 54.9	-1.7
	baz=38						
ROSB	Rosrio	87.45	264	*e*P	P	23 39 58.4	+0.7
R50A	Paris	87.59	320	P	P	23 39 57.8	-0.2
R50A				IAmb	IAmb	23 40 03.0	
	comp=Z,31nm,1.1s						
S51A	Beattyville	87.71	319	P	P	23 39 58.9	+0.3
S51A				IAmb	IAmb	23 40 03.3	
	comp=Z,15nm,0.8s						
NBLA	Lagarto - SE	87.79	254	*e*P	P	23 39 60.0	+0.7
SANI	Sanana	87.98	94	P	P	23 39 59.1	-1.2
	comp=Z,35nm,1.0s						
SANI	Sanana	87.98	94	P	P	23 39 59.0	-1.2
HDIL	Hopedale	88.19	324	P	P	23 40 01.4	+0.6
HDIL	Hopedale	88.19	324	P	P	23 39 59.2	-1.7
	baz=37						
KMSC	Kings Mountain	88.40	316	P	P	23 40 00.5	-1.5
	baz=41						
TZTN	Tazewell	88.52	318	P	P	23 40 01.5	-1.0
	baz=40						
WCI	Wyandotte Cave	88.61	321	IAMs_20	IAMs_20	00 20 08.0	
	comp=Z,1µm,20.0s						
WCI	Wyandotte Cave	88.61	321	P	P	23 40 01.9	-1.0
	baz=38						
ECSD	EROS Data Cent	88.65	330	P	P	23 40 03.2	+0.1
ECSD				IAmb	IAmb	23 40 07.3	
	comp=Z,28nm,1.4s						
ECSD	EROS Data Cent	88.65	330	P	P	23 40 02.1	-0.9
	baz=32						
T50A	Nancy	88.82	319	P	P	23 40 03.6	-0.3
T50A				IAmb	IAmb	23 40 08.2	
	comp=Z,30nm,1.1s						
SUSD	Miller	88.92	332	P	P	23 40 04.5	+0.3
V52A	Sevierville	89.08	318	P	P	23 40 05.4	+0.2
V52A				IAmb	IAmb	23 40 09.3	
	comp=Z,73nm,1.9s						
OLIL	Olney	89.08	322	P	P	23 40 05.1	0.0
OLIL				IAmb	IAmb	23 40 09.2	
	comp=Z,46nm,1.1s						
EGMT	Eagleton	89.10	340	P	P	23 40 04.4	-0.7
	baz=23						
NHSC	New Hope	89.28	314	P	P	23 40 05.8	-0.3
	baz=42						
TKL	Tuckaleechee C	89.31	318	P	P	23 40 07.0	+0.7
TKL				pmax	pmax		
	comp=Z,17nm,0.9s						
TKL	Tuckaleechee C	89.31	318	P	P	23 40 07.0	+0.7
TKL				IAmb	IAmb	23 40 10.4	
	comp=Z,17nm,0.8s						
LAO	LASA Array	89.33	338	P	P	23 40 05.5	-0.7
	baz=25						
NBPN	Ponto Novo - B	89.50	256	*e*P	P	23 40 08.2	+0.8
TMAB	Tom-Au,PA,Br	90.20	267	*e*P	P	23 40 11.5	+0.9
SIUC	Southern Illin	90.43	322	P	P	23 40 12.1	+0.7
NEW	Newport	90.57	345	P	P	23 40 12.9	+0.9
NEW				pmax	pmax		
	comp=Z,67nm,1.4s						
NEW	Newport	90.57	345	P	P	23 40 12.8	+0.9
NEW	Newport	90.57	345	P	P	23 40 12.7	+0.8
	baz=17,SNR=23						
HRY	Holter Researc	90.84	341	P	P	23 40 13.3	-0.1
GOGA	Godfrey	90.86	316	P	P	23 40 13.5	0.0
	baz=40						
GDU01	Guandu, BA	90.87	253	*e*P	P	23 40 14.0	+0.3
RSSD	Black Hills	90.96	335	P	P	23 40 14.1	0.0
RSSD				pmax	pmax		
	comp=Z,30nm,1.5s						
RSSD	Black Hills	90.96	335	P	P	23 40 14.1	0.0
RSSD				IAmb	IAmb	23 40 18.7	
	comp=Z,30nm,1.5s						
RSSD	Black Hills	90.96	335	P	P	23 40 13.6	-0.5
	baz=27						
WVT	Waverly	91.01	320	P	P	23 40 13.3	-0.9
	baz=38						
CCM	Cathedral Cave	91.10	324	P	P	23 40 15.4	+0.9
CCM				pmax	pmax		
	comp=Z,20nm,1.1s						
CCM	Cathedral Cave	91.10	324	P	P	23 40 15.4	+0.9
CCM				IAmb	IAmb	23 40 18.8	
	comp=Z,20nm,1.1s						
CCM	Cathedral Cave	91.10	324	P	P	23 40 14.1	-0.4
	baz=36						
BGNE	Belgrade	91.23	330	P	P	23 40 15.4	+0.3
	baz=31						
MSO	Missoula	91.24	343	P	P	23 40 15.3	+0.1
	baz=20,SNR=12						
SWI	Sorong	91.33	90	P	P	23 40 16.5	+0.6
	comp=Z,24nm,1.2s						
BATI	Baumata	91.34	102	P	P	23 40 19.2	+3.3
	comp=Z,22nm,0.8s						
B05A	Bryant	91.46	348	P	P	23 40 15.6	-0.4
	baz=14						
SOEI	Soe	91.51	101	P	P	23 40 23.9	+7.1
SOEI	Soe	91.51	101	P	P	23 40 17.4	+0.6
NBIT	Itapeh - BA	91.55	252	*e*P	P	23 40 16.6	-0.2
RLMT	Red Lodge	91.64	339	P	P	23 40 18.2	+1.0
RLMT				IAmb	IAmb	23 40 22.4	
	comp=Z,16nm,1.1s						
RLMT	Red Lodge	91.64	339	P	P	23 40 18.1	+0.9
	baz=23,SNR=12						
BOZ	Bozeman (W)	91.83	341	P	P	23 40 19.1	+1.1
	baz=21,SNR=5.8						
CMC01	Camacan, BA	91.88	252	*e*P	P	23 40 18.6	+0.2
MCPB	Macapa, AP	92.02	271	*e*P	P	23 40 19.3	+0.2
PLAL	Pickwick Lake	92.04	320	P	P	23 40 19.3	+0.3
PLAL				IAmb	IAmb	23 40 21.8	
	comp=Z,28nm,1.1s						
S39A	Bolivar	92.34	325	P	P	23 40 20.8	+0.5
S39A				IAmb	IAmb	23 40 24.4	
	comp=Z,30nm,1.2s						
KSU1	Kansas State U	92.57	328	IAMs_20	IAMs_20	00 18 42.6	
	comp=Z,756nm,19.0s						
H17A	Grant Village	92.67	340	P	P	23 40 22.0	0.0
	baz=22,SNR=8.4						
LCAR	Lake Charles	92.67	323	P	P	23 40 22.0	+0.2
LCAR				IAmb	IAmb	23 40 26.3	
	comp=Z,36nm,1.2s						
GUA01	Guaratinga, BA	92.88	251	*e*P	P	23 40 23.5	+0.6
K22A	Casper	93.08	336	P	P	23 40 23.9	+0.1
K22A				IAmb	IAmb	23 40 27.4	
	comp=Z,16nm,1.0s						
U40A	Yellville	93.22	324	IAMs_20	IAMs_20	00 23 23.1	
	comp=Z,780nm,20.0s						
U40A	Yellville	93.22	324	P	P	23 40 24.4	-0.1
	baz=34						
MOOW	Moose Ponds	93.31	339	P	P	23 40 25.6	+0.7
MOOW				IAmb	IAmb	23 40 29.9	
	comp=Z,21nm,1.4s						
PLID	Pearl Lake	93.36	343	P	P	23 40 25.7	+0.6
PLID				IAMs_20	IAMs_20	00 24 23.5	
	comp=Z,866nm,20.0s						
FXWY	Fox Creek	93.49	340	P	P	23 40 26.3	+0.5
FXWY				IAmb	IAmb	23 40 31.4	
	comp=Z,17nm,1.2s						
SDDR	Presa de Saban	93.78	298	IAMs_20	IAMs_20	00 21 40.7	
	comp=Z,620nm,20.0s						
SMTB	Santa Maria do	93.87	262	*e*P	P	23 40 28.3	+0.6
BW06	Boulder Array	93.89	338	IAMs_20	IAMs_20	00 23 47.7	
	comp=Z,930nm,21.0s						
BW06	Boulder Array	93.89	338	P	P	23 40 27.3	-0.3
	baz=23,SNR=5.6						
PD31	Pinedale Array	93.89	338	P	P	23 40 28.4	+0.8
PDAR	Pinedale Array	93.89	338	P	P	23 40 28.1	+0.5
	comp=Z,2.2nm,0.9s,baz=29,slow=3.4,SNR=11						
PDAR				PP	PP	23 44 12.5	+0.4
	comp=Z,1.1nm,0.9s,baz=21,slow=8.7,SNR=4.4						
PDAR				PKKPbc	PKKPbc	23 57 28.9	-1.2
	comp=Z,0.8nm,0.8s,baz=214,slow=3.1,SNR=4.9						
PDAR				LR	LR	00 25 39.2	
	comp=Z,498nm,19.8s,baz=28,slow=37						
PDAR	Pinedale Array	93.89	338	P	P	23 40 28.4	+0.8
PRPB	Parauapebas	93.91	265	*e*P	P	23 40 28.3	+0.4
W41B	Gary Mavity, V	93.91	323	P	P	23 40 27.2	-0.4
	baz=35						
CBKS	Cedar Bluff	94.08	330	IAMs_20	IAMs_20	00 24 14.3	
	comp=Z,825nm,20.0s						
CBKS	Cedar Bluff	94.08	330	P	P	23 40 27.7	-0.6
	baz=30,SNR=5.1						
HLID	Hailey	94.43	342	P	P	23 40 29.1	-1.0
	baz=19						
N23A	Red Feather La	94.47	335	P	P	23 40 29.7	-0.7
	baz=26,SNR=8.4						
W39A	Magazine	94.61	324	P	P	23 40 29.6	-1.2
	baz=34						
X40A	Basin Creek Fa	94.75	323	P	P	23 40 30.3	-1.1
	baz=35						
MFID	Camas Ranch	94.91	343	P	P	23 40 33.9	+1.8
MFID				IAmb	IAmb	23 40 37.1	
	comp=Z,23nm,1.2s						
TUL1	Leonard	94.91	326	P	P	23 40 33.2	+1.0
TUL1				IAmb	IAmb	23 40 36.1	
	comp=Z,27nm,1.1s						
TUL1	Leonard	94.91	326	P	P	23 40 31.4	-0.8
	baz=33						
MIAR	Mount Ida	95.05	323	P	P	23 40 32.5	-0.3
	baz=34						
OK032	Salt Plains WL	95.19	328	IAMs_20	IAMs_20	00 25 10.8	
	comp=Z,808nm,18.0s						
OK034	N. Norfolk Rd.	95.23	326	IAMs_20	IAMs_20	00 27 22.0	
	comp=Z,739nm,18.0s						
OK030	Cody Creek RV	95.33	326	IAMs_20	IAMs_20	00 27 30.7	
	comp=Z,751nm,18.0s						
ISCO	Idaho Springs	95.35	334	P	P	23 40 35.4	+0.9
ISCO				pmax	pmax		
	comp=Z,16nm,1.6s						
ISCO	Idaho Springs	95.35	334	P	P	23 40 35.4	+0.9
ISCO	Idaho Springs	95.35	334	P	P	23 40 33.2	-1.3
	baz=26						
VBMS	Vicksburg	95.47	320	P	P	23 40 33.2	-1.5
	baz=36						
Z41A	Richland Creek	95.74	322	P	P	23 40 36.2	+0.3
	baz=35						
X37A	Clayton	95.83	325	IAMs_20	IAMs_20	00 25 05.1	
	comp=Z,859nm,19.0s						
O20A	White River Ci	95.90	336	P	P	23 40 36.0	-0.8
	baz=24						
Q24A	Divide	95.94	334	P	P	23 40 35.5	-1.7
	baz=26						
SDCO	Great Sand Dun	97.15	333	P	P	23 40 40.9	-1.7
	baz=26						
DUG	Dugway, Tooele	97.18	340	IAMs_20	IAMs_20	00 24 58.9	
	comp=Z,781nm,18.0s						
DUG	Dugway, Tooele	97.18	340	P	P	23 40 42.5	-0.1
	baz=21						
S22A	4UR Ranch, Cre	97.61	334	P	P	23 40 44.3	-0.4
	baz=25						
NPGB	Novo Progresso	98.75	268	*e*P	Pdif	23 40 49.9	+0.1
R11A	Troy Canyon, C	99.64	341	P	Pdif	23 40 53.1	-0.6
	baz=19						
NVAR	Mina Array Bea	100.22	343	PKKPbc	PKKPbc	23 57 11.2	-1.7
	baz=189,slow=5.4						
WUAZ	Wupatki	101.11	337	IAMs_20	IAMs_20	00 25 57.1	
	comp=Z,693nm,20.0s						
WRA	Warramunga Arr	105.41	103	PKiKP	PKiKP	23 45 33.4	+0.3
	comp=Z,1.0nm,0.9s,baz=313,slow=1.2,SNR=3.4						
ASAR	Alice Springs	107.28	107	PKiKP	PKiKP	23 45 36.4	-0.1
	comp=Z,0.9nm,0.7s,baz=327,slow=1.9,SNR=7.6						
SYO	Syowa Base	107.95	180⇓	*e*Pdiff	Pdif	23 41 31.0	+1.7
SYO	Syowa Base	107.95	180⇓	*e*PKiKP	PKiKP	23 45 37.0	+0.8
SNAA	Sanae	114.74	194	PKiKP	PKiKP	23 45 50.7	+1.5
SNAA	Sanae	114.74	194*c*	*i*PKIKP	PKiKP	23 45 51.6	+2.4
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
VNA1	Neumayer--Stat	115.01	196	PKiKP	PKiKP	23 45 51.7	+2.1
VNA2	Neumayer--Watz	115.04	196	PKiKP	PKiKP	23 45 52.6	+2.9
VNA3	Neumayer Olymp	115.76	196	PKiKP	PKiKP	23 45 52.6	+1.4
STKA	Stephens Creek	117.46	110	PKP	PKPdf	23 45 55.1	-0.4
	comp=Z,2.2nm,0.7s,baz=352,slow=7.4,SNR=5.0						
STKA	Stephens Creek	117.46	110		PKiKP	23 45 56.4	+0.8
BO02	Sierra Bellavi	125.97	252	PKPdf	PKiKP	23 46 13.2	+0.9
PLCA	Paso Flores	128.26	245	PKP	PKPdf	23 46 15.8	-0.3
	comp=Z,31nm,1.1s,baz=64,slow=2.2,SNR=14						
PLCA	Paso Flores	128.26	245	*e*P	PKiKP	23 46 17.4	+0.6
PLCA	Paso Flores	128.26	245	PKPdf	PKiKP	23 46 17.3	+0.6
LC01	Cunco	128.49	247	PKPdf	PKiKP	23 46 17.4	+0.3
QSPA	South Pole Qui	129.09	180		PKiKP	23 46 18.0	+0.5
LL04	Puerto Octay	129.63	245	PKPdf	PKPdf	23 46 18.6	0.0
PMSA	Palmer Station	130.66	213	*e*P	PKiKP	23 46 20.3	-0.4
DZM	Mont Dzumac	131.36	86	*e*LR	LR	00 28 12.5	
	comp=Z,601nm,23.1s						
VNDA	Vanda	134.72	165	PKP	PKPdf	23 46 27.1	0.0
	comp=Z,2.0nm,0.9s,baz=281,slow=1.9,SNR=8.2						
QRZ	Quartz Range	143.79	108		PKPdf	23 46 43.6	-1.1
THZ	Tophouse	144.27	110	PKPdf	PKPab	23 46 43.0	-0.6
KHZ	Kahutara	144.86	111	PKPdf	PKPab	23 46 44.9	-0.7
BSWZ	Blackbirch Sta	144.97	109		PKPab	23 46 44.9	-1.2
BKZ	Black Stump Fm	146.34	104	PKPdf	PKPdf	23 46 49.0	-0.3
URZ	Urewera	146.58	102	PKPbc	PKPdf	23 46 49.4	-0.2
	comp=Z,53nm,0.7s,baz=128,slow=20,SNR=20						
TAOE	Nuku Hiva Isla	149.73	1	*e*LR	LR	00 36 41.4	
	comp=Z,425nm,24.0s						
PPT2	Papeete2	156.78	24	*e*LR	LR	00 39 56.0	
	comp=Z,446nm,24.5s						

ANF ***02*** *23:27:34.7±0.1, 33.°06N×116.°42W, h11^{km}±2^{km}, ML3.2/24*
Error ellipse: s-maj=1.5km s-min=1.2km az=169.0
NEIC ***02*** *23:27:36.0±1.9, 32.°97N±0.°03×116.°42W±0.°03, h12^{km}±4^{km},*
Error ellipse: s-maj=4.9km s-min=2.5km az=153.0
PAS ***02*** *23:27:36.0±1.5, 33.°03N±0.°02×116.°43W±0.°02, h7^{km}±6^{km},*
ML3.3/217, ML2.9/58(NEIC), Error ellipse: s-maj=2.5km
s-min=2.2km az=63.0

ISC 02 23:27:35.6±0.8**, 33.°00N**±0.°02×**116.°41W**±0.°02**, h14**^{km}±6^{km}**,**
n54, σ0^{s}.92/79**, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MONP2	Monument Peak	0.11	184	P	Pg	23 27 39.1	+0.1
	baz=356,SNR=1000						
MONP2				S	Sg	23 27 41.2	-0.1
	baz=356						
BAR	Barrett	0.39	214		Pg	23 27 43.5	+0.1
BAR				Sg	Sb	23 27 49.0	-1.0
BAR				IAML		23 27 50.7	
	comp=N,2µm,0.2s						
IKP	In-Ko-Pah, Jac	0.43	144	P	Pb	23 27 44.8	-0.3
	baz=324,SNR=88						
IKP				S	Sb	23 27 50.9	-0.6
	baz=324						
TKX	Tecate	0.46	201		Pb	23 27 45.0	-0.5
TKX				Sg	Sb	23 27 51.2	-1.0
RMX	La Rumorosa	0.49	144		Pb	23 27 46.8	+0.8
RMX				Sg	Sb	23 27 54.5	+1.4
RMX				IAML		23 27 54.9	
	comp=E,1µm,0.3s						
RMX				IAML		23 27 55.2	
	comp=N,1µm,0.1s						
SUP	Superstition M	0.50	95		Pg	23 27 45.7	+0.3
SWSC	Sam W. Stewart	0.52	96	P	Pg	23 27 46.1	+0.3
	baz=279,SNR=106						
SWSC				S	Sg	23 27 53.0	+0.3
	baz=279						
109C	Camp Elliot, M	0.59	259		Pg	23 27 46.8	-0.3
109C				Sg	Sg	23 27 54.5	-0.5
109C	Camp Elliot, M	0.59	259	P	Pg	23 27 46.9	-0.3
	baz=76,SNR=126						
109C				S	Sg	23 27 54.5	-0.5
	baz=76						
PFO	Pinyon Flats O	0.61	356	Pg	Pg	23 27 46.8	-0.9
PFO				IAML		23 27 58.2	
	comp=N,583nm,0.2s						
CBX	Cerro Bola	0.72	197		Pg	23 27 49.6	0.0
CBX				Sg	Sb	23 27 59.5	-0.2
CBX				IAML		23 28 00.3	
	comp=E,614nm,0.4s						
CBX				IAML		23 28 01.2	
	comp=N,528nm,0.3s						
TJX	Tijuana	0.73	228		Pg	23 27 49.8	+0.1
TJX				Sg	Sb	23 28 00.0	+0.1
MURC	Murrieta	0.89	313	P	Pg	23 27 51.7	-1.1
	baz=132,SNR=108						
MURC				S	Sg	23 28 03.2	-1.3
	baz=132						
BC3	Big Chuckawall	1.04	51	P	Pb	23 27 54.2	-1.2
	baz=233,SNR=53						
BC3				S	Sb	23 28 07.2	-1.7
	baz=233						
BELC	Belle Mtn. Jos	1.06	19	P	Pb	23 27 54.8	-1.0
	baz=201,SNR=310						
BELC				S	Sb	23 28 07.8	-1.8
	baz=201						
CPBX	Cerro Prieto	1.10	121		Pn	23 27 57.6	+1.0
CCX	Cicese	1.15	191		Pb	23 27 57.1	-0.1
CCX				Sg	Sn	23 28 12.6	-0.2
BBRC	Big Bear Solar	1.33	342	P	Pn	23 27 59.5	-0.5
	baz=162,SNR=20						
BBRC				S	Sb	23 28 16.4	-1.1
	baz=162						
GLA	Glamis	1.33	87		Pn	23 27 58.6	-1.3
GLA				IAML		23 28 30.0	
	comp=E,208nm,0.6s						
GLA				IAML		23 28 30.0	
	comp=N,155nm,0.7s						
GLA	Glamis	1.33	87	P	Pn	23 27 58.6	-1.3
	baz=269,SNR=68						
IRM	Iron Mountain	1.57	42	P	Pn	23 28 01.9	-1.2
	baz=224						
IRM				S	Sn	23 28 22.1	-1.1
	baz=224						
BFSC	Mount Baldy Ra	1.61	320	Pb	Pn	23 28 04.1	+0.2
	baz=140						
BFSC				Sb	Sn	23 28 24.6	+0.1
	baz=140						
CIS	Catalina Islan	1.73	284	P	Pn	23 28 04.3	-0.9
	baz=102,SNR=28						
CIS				S	Sn	23 28 26.8	-0.3
	baz=102						
SCI2	San Clemente I	1.79	270	P	Pn	23 28 05.6	-0.6
	baz=88						
SCI2				S	Sn	23 28 28.3	-0.4
	baz=88						
HEC	Hector,Ludlow	1.83	2	Pg	Pb	23 28 08.9	0.0
	baz=183						
MWC	Mount Wilson	1.84	312		Pn	23 28 07.2	+0.3
MWC				IAML		23 28 33.6	
	comp=N,173nm,0.4s						
PASC	Pasadena Art C	1.89	309	Pn	Pn	23 28 08.8	+1.4
PASC				IAML		23 28 33.7	
	comp=E,95nm,0.8s						
GMRC	Granite Mounta	1.89	19	P	Pn	23 28 06.7	-0.9
	baz=200						
GMRC				Sb	Sb	23 28 34.0	+0.5
	baz=200						
RRX	Edison Barstow	1.93	346	Pg	Pb	23 28 10.9	+0.2
	baz=166						
RRX				Sb	Sb	23 28 35.1	+0.4
	baz=166						
DECC	Green Verdugo	2.03	309	Pb	Pn	23 28 11.5	+2.0
	baz=127						
DECC				Sb	Sn	23 28 36.8	+2.1
	baz=127						
113A	Mohawk Valley,	2.24	95		Pn	23 28 11.9	-0.4
EDW2	Edwards Air Fo	2.29	325	Pg	Pb	23 28 16.7	-0.1
	baz=145						
EDW2				Sb	Sb	23 28 44.8	-0.2
	baz=145						
NEE2	Needles Airpor	2.31	40	Pg	Pb	23 28 18.2	+1.1
	baz=221						
NEE2				Sb	Sb	23 28 46.7	+1.2
	baz=221						
GSC	Goldstone, Bar	2.32	352		Pn	23 28 13.0	-0.5
GSC				IAML		23 28 54.4	
	comp=E,80nm,0.6s						
GSC				IAML		23 28 56.9	
	comp=N,53nm,0.7s						
GSC	Goldstone, Bar	2.32	352	Pg	Pb	23 28 17.9	+0.7
	baz=172						
GSC				Sb	Sb	23 28 46.9	+1.0
	baz=172						
TUQ	Turquoise Moun	2.46	9	P	Pn	23 28 14.8	-0.7
	baz=190						
LRMC	Laurel Mtn Rad	2.69	337	Pg	Pb	23 28 24.9	+1.3
	baz=157						
SHOC	Shoshone, Teco	2.90	2	Pg	Pb	23 28 28.4	+1.3
	baz=183						
W13A	Hualapai Mount	2.96	44		Pn	23 28 22.6	+0.1
QSM	Queen of Sheba	2.98	353		Pn	23 28 22.4	-0.1
QSM				IAML		23 29 09.5	
	comp=E,34nm,0.8s						
QSM				IAML		23 29 15.7	
	comp=N,34nm,0.6s						
MPMC	Manual Prospec	3.18	344	Pg	Pb	23 28 34.0	+2.0
	baz=164						
GWY	Greenwater Val	3.19	356		Pn	23 28 25.1	-0.3
GWY				IAML		23 29 17.1	
	comp=E,34nm,0.6s						
GWY				IAML		23 29 18.9	
	comp=N,36nm,0.3s						
214A	Organ Pipe Nat	3.22	108		Pn	23 28 25.1	-0.7
SHPR	Sheep Range	3.65	16		Pn	23 28 31.8	0.0
LCH	Last Change Ra	4.34	347		Pn	23 28 42.1	+0.7
X16A	Lo Mia Camp, P	4.38	70		Pn	23 28 42.4	+0.5
X16A				IAML		23 29 59.9	
	comp=N,8.9nm,4.1s						
PRN	Pahroc Range	4.54	14		Pn	23 28 45.0	+1.0
PRN				IAML		23 30 08.2	
	comp=N,13nm,0.8s						

PRN				IAML		23 30 21.5	
	comp=E,12nm,0.9s						
LCMT	**Little Creek M**	**4.77**	**32**		**Pn**	**23 28 48.2**	**+0.9**
LCMT				IAML		23 30 17.1	
	comp=E,9.7nm,4.6s						
U15A	**North Rim**	**4.82**	**44**	Pn	**Pn**	**23 28 49.4**	**+1.3**
U15A				IAML		23 30 12.8	
	comp=E,9.2nm,1.1s						
U15A				IAML		23 30 24.6	
	comp=N,11nm,4.2s						
KNB	**Kanab**	**4.97**	**35**		**Pn**	**23 28 51.3**	**+1.2**
KNB				IAML		23 30 15.1	
	comp=E,14nm,1.0s						
KNB				IAML		23 30 19.6	
	comp=N,10.0nm,2.0s						
MDPB	**Devils Postpil**	**5.11**	**336**	Pn	**Pn**	**23 28 53.5**	**+1.5**
MDPB				IAML		23 30 26.1	
	comp=E,9.1nm,2.2s						
MDPB				IAML		23 30 34.8	
	comp=N,7.8nm,4.1s						
CCUT	**Cedar City**	**5.18**	**28**	Pn	**Pn**	**23 28 53.4**	**+0.4**
CCUT				IAML		23 31 00.1	
	comp=N,5.0nm,3.4s						
CCUT				IAML		23 31 41.8	
	comp=E,6.4nm,5.0s						
PKCU	**Pink Cliffs**	**5.56**	**36**	Pn	**Pn**	**23 28 59.4**	**+1.1**
MTPU	**Mount Pierson**	**6.10**	**33**	Pn	**Pn**	**23 29 06.0**	**+0.4**

IDC 02 23:29:06.8±1.4,30°.65N×128°.09E,h0^{km},mb3.4/3, mb1 3.6/5,mb1mx3.4/53,mbtmp3.4/5,ML3.4/2,MS3.1/2, Ms1 3.1/2,ms1mx2.8/20,Error ellipse: s-maj=40.3km s-min=21.8km az=95.0

NIED 02 23:29:06.7,30°.82N×128°.59E,h18^{km},MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-6.46; $M_{\theta\theta}$6.70; $M_{\phi\phi}$-0.23; $M_{r\theta}$0.94; $M_{\theta\phi}$2.52; $M_{\phi r}$-2.38; Fault plane solution: $M_0$7.50000×10^{14} NP1: ϕ_s272.00000°,δ50.00000°,λ-61.00000°. NP2:ϕ_s52.00000°, δ48.00000°,λ-120.00000°.

JMA 02 23:29:06.6±0.2,30°.82N×128°.59E,h18^{km},M3.6

ISC 02 23:29:07.7±1.2,30°.79N±0°.05×128°.70E±0°.08,h10^{km},n14, σ0^{s}.83/17,mb3.6/3,Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**1.25**	**44**	P	**Pn**	**23 29 29.5**	**-1.7**
JSJ				S	**Sb**	**23 29 46.3**	**-1.1**
JKC	**Kuchinoerabu**	**1.33**	**104**	P	**Pn**	**23 29 32.0**	**-0.3**
JKC				*e*S	**Sn**	**23 29 50.2**	**+0.1**
JNN	**Nakanoshima**	**1.39**	**132**	P	**Pn**	**23 29 32.9**	**-0.2**
JNN				*e*S	**Sn**	**23 29 52.1**	**+0.6**
JYAK	**Yakushimahirau**	**1.66**	**109**	P	**Pn**	**23 29 35.8**	**-1.0**
JSU	**Suzuyama**	**1.67**	**64**	P	**Pn**	**23 29 36.5**	**-0.5**
JMTN	**Minamitane**	**1.94**	**101**	P	**Pn**	**23 29 40.4**	**-0.3**
JTN	**Tanegashima 3**	**1.97**	**93**	P	**Pn**	**23 29 41.1**	**-0.1**
JTZ	**Takazaki**	**2.33**	**61**	P	**Pn**	**23 29 46.4**	**+0.3**
JNU	**Nakatsue**	**2.98**	**38**	Pn	**Pb**	**23 30 02.2**	**+1.4**
	6.0nm,0.3s,baz=232,slow=6.6,SNR=10						
JNU				Sn	**Sg**	**23 30 43.8**	**+0.4**
	9.8nm,0.3s,baz=351,slow=20,SNR=6.0						
JOW	**Kunigami**	**3.96**	**185**	LR	LR	23 31 47.7	
	comp=Z,211nm,19.8s,baz=244,slow=42						
KSRS	**Korea Array**	**6.68**	**355**	Pn	**Pn**	**23 30 46.2**	**+0.4**
	0.4nm,0.3s,baz=182,slow=14,SNR=5.8						
KSRS				Lg	Lg	23 32 29.9	
	0.5nm,0.3s,baz=180,slow=30,SNR=2.9						
KSRS				LR	LR	23 33 28.8	
	comp=Z,150nm,19.7s,baz=154,slow=39						
SONM	**Songino Array**	**24.11**	**321**	P	**P**	**23 34 22.6**	**-1.0**
	0.4nm,0.8s,baz=133,slow=8.1,SNR=2.1						
WRA	**Warramunga Arr**	**50.73**	**173**	P	**P**	**23 38 07.6**	**-0.2**
	0.6nm,0.8s,baz=353,slow=7.6,SNR=2.7						
ASAR	**Alice Springs**	**54.37**	**174**	P	**P**	**23 38 35.0**	**+0.2**
	0.4nm,0.5s,baz=3.3,slow=14,SNR=8.1						

IDC 02 23:29:48.4±1.9,34°.58S×108°.20W,h0^{km},mb3.7/2, mb1 4.2/2,mb1mx3.7/19,mbtmp3.7/2,MS3.6/2,Ms1 3.5/2, ms1mx3.3/22,Error ellipse: s-maj=110.0km s-min=60.3km az=106.0

ISC 02 23:29:54.1±1.1,33°.8S±0°.3×106°.8W±0°.8,h10^{km},n11, σ0^{s}.52/9,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**29.54**	**114**	LR	LR	23 44 01.7	
	comp=Z,47nm,18.5s,baz=290,slow=28						
JTS	**Las Juntas de**	**48.53**	**29**	LR	LR	23 54 31.6	
	comp=Z,138nm,20.6s,slow=30						
VNA3	**Neumayer Olymp**	**60.64**	**158**	P	**P**	**23 40 05.5**	**+0.7**
VNA1	**Neumayer--Stat**	**61.27**	**158**	P	**P**	**23 40 08.9**	**-0.2**
VNA2	**Neumayer--Watz**	**61.45**	**158**	P	**P**	**23 40 10.7**	**+0.4**
SNAA	**Sanae**	**62.52**	**160**	P	**P**	**23 40 16.8**	**-0.8**
NVAR	**Mina Array Bea**	**72.65**	**351**	P	**P**	**23 41 22.4**	**+0.3**
	0.6nm,0.7s,baz=182,slow=5.3,SNR=2.9						
PDAR	**Pinedale Array**	**76.23**	**358**	P	**P**	**23 41 42.4**	**-0.4**
	0.4nm,0.7s,baz=161,slow=9.2,SNR=1.6						
AKASG	**Malin Array Be**	**143.96**	**49**	PKPbc	**PKPab**	**23 49 26.8**	**+0.1**
	0.1nm,0.3s,baz=282,slow=4.8,SNR=4.8						
SONM	**Songino Array**	**151.46**	**309**	PKPbc	**PKPdf**	**23 49 42.2**	**+0.2**
	0.4nm,0.6s,baz=64,slow=3.4,SNR=4.1						
CMAR	**Chiang Mai Arr**	**152.37**	**243**	PKPbc	**PKPdf**	**23 49 43.9**	**-0.2**
	0.4nm,0.3s,baz=183,slow=2.4,SNR=4.1						

ATH 02 23:31:40.2,38°.44N×20°.49E,h8^{km}±3^{km},ML2.1/1,Error ellipse: s-maj=4.0km s-min=0.8km az=109.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.06**	**72**	P	Pg	23 31 41.6	-0.5
FSK				S	Sg	23 31 42.8	-0.6
FSK				AML	AML	23 31 43.0	
	comp=N,2713μm,0.4s						
FSK				AML	AML	23 31 43.1	
	comp=E,8379μm,0.1s						
KEF4	**Livadi, Kephal**	**0.19**	**196**	P	Pg	23 31 43.9	-0.2
KEF4				S	Sg	23 31 47.1	+0.3
EVGI	**Lefkada island**	**0.22**	**36**	P	Pg	23 31 44.7	0.0
EVGI				S	Sg	23 31 48.1	+0.4
LXRA	**Lixouri, Kepha**	**0.24**	**190**	P	Pg	23 31 45.1	0.0
DRAG	**Dragano-Lefkad**	**0.25**	**15**	P	Pg	23 31 44.8	-0.5
KEF3	**Kipouria, Keph**	**0.26**	**206**	P	Pg	23 31 44.9	-0.6
KEF3				S	Sg	23 31 48.9	-0.1
VLS	**Valsamata**	**0.28**	**164**	P	Pg	23 31 45.2	-0.5
VLS				S	Sg	23 31 49.9	+0.5
NYDR	**Nydri-Lefkada**	**0.32**	**31**	P	Pg	23 31 46.3	-0.1
NYDR				S	Sg	23 31 51.2	+0.5
LKD2	**Lefkada island**	**0.37**	**20**	P	Pg	23 31 47.4	-0.1
TSLK	**Tsoukalades, L**	**0.40**	**18**	P	Pg	23 31 48.2	0.0

ISU 02 23:31:59,41°.40N×71°.50E,h5^{km},Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MINT	**Mingtut**	**1.01**	**203**	*e*P	Pn	23 32 20.0	+0.1
MINT				*e*S	Sn	23 32 37.0	+2.4
CHMG	**Chimgan**	**1.13**	**278**	*e*P	Pg	23 32 20.0	-0.7
CHMG				*e*S	Sg	23 32 35.0	-0.3

ISK 02 23:32:07.7,39°.27N×40°.23E,h4^{km},ML3.6/22

DDA 02 23:32:07.9,39°.26N×40°.20E,h7^{km}±2^{km},ML3.4

ISC 02 23:32:07.6±1.1,39°.30N±0°.02×40°.22E±0°.02,h7^{km}±11^{km}, n43,σ0^{s}.87/58,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YEDI	**Yedisu-Bingol**	**0.29**	**61**	PG	**Pb**	**23 32 14.5**	**-0.7**
YEDI				SG	**Sb**	**23 32 19.3**	**-1.0**
BNGB	**Bingl**	**0.47**	**131**	PG	**Pg**	**23 32 16.9**	**+0.2**
BNGB				SG	**Sg**	**23 32 23.4**	**+0.5**
ERZN	**Erzincan**	**0.48**	**307**	PG	**Pg**	**23 32 17.6**	**+0.6**
ERZN				SG	**Sb**	**23 32 25.9**	**0.0**
TNCL	**Tunceli-Merkez**	**0.56**	**251**	*i* P	**Pg**	**23 32 18.6**	**+0.1**
TNCL				*i* S	**Sg**	**23 32 25.1**	**-0.6**
TNCL				IAML		23 32 30.0	
	comp=N,2μm,0.7s						
TNCL				IAML		23 32 30.0	
	comp=Z,2μm,0.4s						
EUZM	**Uzumlu**	**0.57**	**315**	*i* P	**Pb**	**23 32 19.5**	**-0.6**
EUZM				*i* S	**Sb**	**23 32 28.6**	**+0.1**
KARO	**Karliova-Bingo**	**0.64**	**89**	PG	**Pb**	**23 32 20.7**	**-0.6**
KARO				SG	**Sb**	**23 32 30.6**	**+0.1**
KOVA	**Elazig, Kovanc**	**0.67**	**208**	*i* P	**Pg**	**23 32 20.7**	**+0.1**
KOVA				*i* S	**Sg**	**23 32 29.8**	**+0.4**
KOVA				IAML		23 32 31.0	
	comp=E,4μm,0.3s						
SLHN	**Bingol, Solhan**	**0.71**	**118**	*i* P	**Pb**	**23 32 22.7**	**+0.3**
SLHN				*i* S	**Sb**	**23 32 32.1**	**-0.4**
SLHN				IAML		23 32 37.0	
	comp=N,1μm,0.5s						
HANI	**Diyarbakir_Han**	**0.89**	**171**	*i* P	**Pg**	**23 32 24.4**	**-0.3**
BAYB	**BAYBURT**	**0.96**	**2**	*i* P	**Pg**	**23 32 25.3**	**-0.8**
VRTB	**Varto-Mus**	**0.97**	**98**	PG	**Pn**	**23 32 26.9**	**-0.9**
EJDE	**Erzurum, Palan**	**0.99**	**57**	*i* P	**Pb**	**23 32 27.0**	**-0.4**
BAYT	**Aydıntepe-Bayb**	**1.09**	**357**	PN	**Pn**	**23 32 29.4**	**-0.2**
KELT	**Kelkit**	**1.13**	**319**	*i* P	**Pn**	**23 32 29.9**	**-0.2**
SVRC	**Sivrice-ELAZID**	**1.16**	**218**	PN	**Pg**	**23 32 29.6**	**-0.4**
KRIK	**Erzurum-spir**	**1.17**	**27**	*i* P	**Pg**	**23 32 29.9**	**-0.3**
KRIK				*i* S	**Sn**	**23 32 48.6**	**+1.6**
ELZG	**Elazig**	**1.25**	**231**	*i* P	**Pn**	**23 32 31.3**	**-0.4**
REFA	**Refahiye_ERZN**	**1.28**	**299**	*i* P	**Pn**	**23 32 31.5**	**-0.5**
REFA				*i* S	**Sb**	**23 32 48.3**	**-0.5**
ILIC	**ilic-Erzincan**	**1.29**	**277**	PN	**Pn**	**23 32 31.6**	**-0.6**
KEMA	**Kemaliye**	**1.34**	**269**	*i* P	**Pn**	**23 32 32.1**	**-0.8**
DYBB	**Diyarbakir**	**1.34**	**183**	PN	**Pg**	**23 32 34.5**	**+1.1**
DIYA	**Diyarbakir**	**1.38**	**183**	*i* P	**Pg**	**23 32 34.3**	**+0.3**
DIYA				*i* S	**Sg**	**23 32 53.8**	**+1.9**
DIYA				IAML		23 32 55.0	
	comp=E,797nm,0.7s						
DIYA				IAML		23 33 04.0	
	comp=N,754nm,2.0s						
SVAN	**Silvan-Diyarba**	**1.38**	**146**	*i* P	**Pg**	**23 32 35.4**	**+1.4**
SVAN	**Silvan-Diyarba**	**1.38**	**146**	PN	**Pg**	**23 32 34.5**	**+0.5**
KOPR	**Koprukoy-ERZUR**	**1.44**	**61**	PN	**Pg**	**23 32 34.8**	**-0.4**
ARPR	**Arapgir-MALATY**	**1.48**	**263**	PN	**Pg**	**23 32 36.1**	**+0.1**
ALUC	**Giresun/Alucra**	**1.53**	**314**	*i* P	**Pg**	**23 32 37.3**	**+0.3**
ALUC				*i* S	**Sg**	**23 32 57.4**	**+0.6**
ALUC				IAML		23 33 01.0	
	comp=E,595nm,1.4s						
ALUC				IAML		23 33 13.0	
	comp=N,339nm,0.6s						
GURO	**Guroymak-BITLI**	**1.60**	**117**	PN	**Pg**	**23 32 37.6**	**-0.7**
MALT	**Malatya**	**1.71**	**236**	PN	**Pb**	**23 32 39.2**	**-0.3**
KTUT	**Trabzon**	**1.72**	**348**	PN	**Pb**	**23 32 39.6**	**0.0**
SUSE	**Susehri**	**1.80**	**301**	*i* P	**Pg**	**23 32 44.2**	**+2.0**
SUSE				*i* S	**Sg**	**23 33 05.0**	**-0.6**
HEKM	**Malatya_Hekimh**	**1.81**	**257**	*i* P	**Pb**	**23 32 41.6**	**+0.4**
HEKM				*i* S	**Sb**	**23 33 04.1**	**-0.1**
HEKM				IAML		23 33 16.0	
	comp=N,550nm,0.6s						
HEKM				IAML		23 33 18.0	
	comp=E,422nm,0.8s						
MLAZ	**Malazgirt-MUS**	**1.81**	**94**	PN	**Pb**	**23 32 40.6**	**-0.7**
CHOM	**Cayeli-Rize**	**1.84**	**13**	PN	**Pb**	**23 32 41.4**	**-0.3**
MAZI	**Mazidag**	**1.84**	**174**	PN	**Pb**	**23 32 41.2**	**-0.5**
CUZAR	**Zara_SIVAS**	**1.98**	**288**	*i* P	**Pb**	**23 32 44.2**	**+0.1**
CUZAR				*i* S	**Sg**	**23 33 12.5**	**+1.1**
CUZAR				IAML		23 33 28.0	
	comp=N,199nm,2.1s						
AKCD	**Akcadag**	**2.06**	**242**	*i* P	**Pb**	**23 32 44.2**	**-1.2**
SENK	**Senkaya-Erzuru**	**2.07**	**52**	PN	**Pb**	**23 32 44.6**	**-1.0**
URFA	**Urfa**	**2.16**	**211**	PN	**Pb**	**23 32 45.7**	**-1.3**
AGRB	**Hanur-Agry**	**2.16**	**82**	PN	**Pb**	**23 32 45.7**	**-1.5**
DARE	**Darende-Malaty**	**2.26**	**252**	PN	**Pb**	**23 32 47.2**	**-1.5**
KARS	**Kars**	**2.57**	**58**	PN	**Pn**	**23 32 51.5**	**+1.8**
SVSK	**Karacayir**	**2.57**	**285**	PN	**Pb**	**23 32 51.8**	**-2.1**

IDC 02 23:37:27.8±10.0,33°.76S×111°.24W,h0^{km},mb3.7/1, mb1 4.1/1,mb1mx3.6/27,mbtmp3.7/1,Error ellipse: s-maj=680.9km s-min=72.3km az=113.0,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDAR	**Pinedale Array**	**76.17**	**1**	P	P	23 49 17.7	0.0
	0.1nm,0.4s,baz=157,slow=4.9,SNR=3.5						
SONM	**Songino Array**	**148.56**	**308**	PKPbc	PKPbc	23 57 16.0	-0.5
	0.8nm,0.7s,baz=60,slow=3.5,SNR=4.5						
CMAR	**Chiang Mai Arr**	**149.05**	**248**	PKPbc	PKPbc	23 57 17.8	-0.7
	0.4nm,0.3s,baz=149,slow=1.9,SNR=1.1						

IDC 02 23:41:40.8±1.9,34°.33S×109°.20W,h0^{km},mb4.0/2, mb1 4.5/2,mb1mx3.8/28,mbtmp4.0/2,MS3.0/1,Ms1 3.0/1, ms1mx2.9/20,Error ellipse: s-maj=108.9km s-min=57.1km az=105.0

ISC 02 23:41:43.9±1.1,33°.8S±0°.3×105°.9W±0°.9,h10^{km},n10, σ1^{s}.14/9,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**7.26**	**335**	LR	LR	23 45 29.3	
	comp=Z,109nm,20.1s,baz=134,slow=32						
VNA3	**Neumayer Olymp**	**60.37**	**158**	P	**P**	**23 51 53.7**	**+0.9**
VNA1	**Neumayer--Stat**	**61.00**	**158**	P	**P**	**23 51 55.0**	**-2.0**
VNA2	**Neumayer--Watz**	**61.18**	**158**	P	**P**	**23 51 59.3**	**+1.1**
	baz=264,slow=4.4						
SNAA	**Sanae**	**62.26**	**160**	P	**P**	**23 52 06.3**	**+0.6**
NVAR	**Mina Array Bea**	**72.75**	**350**	P	**P**	**23 53 12.4**	**-0.1**
	1.6nm,0.8s,baz=180,slow=7.0,SNR=6.8						
PDAR	**Pinedale Array**	**76.24**	**357**	P	**P**	**23 53 33.4**	**+0.8**
	1.2nm,1.0s,baz=149,slow=3.9,SNR=6.0						
AKASG	**Malin Array Be**	**143.33**	**49**	PKPbc	**PKiKP**	**00 01 20.5**	**-0.8**
	0.1nm,0.3s,baz=292,slow=3.5,SNR=4.5						
SONM	**Songino Array**	**152.06**	**310**	PKPbc	**PKPdf**	**00 01 32.5**	**-0.2**
	1.4nm,0.8s,baz=93,slow=2.9,SNR=6.9						
CMAR	**Chiang Mai Arr**	**153.10**	**242**	PKPbc	**PKPdf**	**00 01 34.9**	**-0.1**
	0.9nm,0.3s,baz=158,slow=1.0,SNR=2.1						

IDC 02 23:46:14.4±1.2,34°.40S×109°.26W,h0^{km},mb4.4/6, mb1 4.5/6,mb1mx4.1/26,mbtmp4.4/6,Error ellipse: s-maj=51.4km s-min=27.4km az=172.0

NEIC 02 23:46:16.6±1.2,34°.4S±0°.1×109°.0W±0°.2,h10^{km}±1^{km}, mb4.8/30,Error ellipse: s-maj=26.8km s-min=20.5km az=282.0

ISC 02 23:46:15.3±0.6,34°.5S±0°.1×109°.1W±0°.1,h10^{km},n51, σ1^{s}.01/51,mb4.8/20,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	**33.88**	**97**	P	**P**	**23 52 58.2**	**-0.1**
AC02	**Maricunga**	**35.05**	**88**	P	**P**	**23 53 09.8**	**+0.8**
AC02				IAmb	IAmb	23 53 11.3	
	comp=Z,14nm,0.9s						
LVC	**Limon Verde**	**37.02**	**82**	P	**P**	**23 53 27.5**	**+1.7**
	comp=Z,3.5nm,0.5s,baz=250,slow=11,SNR=4.2						
LVC	**Limon Verde**	**37.02**	**82**	P	**P**	**23 53 25.0**	**-0.8**
LVC				IAmb	IAmb	23 53 28.7	
	comp=Z,23nm,1.2s						
ATAH	**Atahualpa**	**39.28**	**53**	P	**P**	**23 53 45.8**	**+0.9**
	comp=Z,7.6nm,0.8s,baz=231,slow=6.5,SNR=4.3						
LPAZ	**La Paz**	**40.90**	**74**	P	**P**	**23 53 59.8**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=232,slow=9.4,SNR=6.5						
LPAZ	**La Paz**	**40.90**	**74**	P	**P**	**23 53 58.0**	**-0.6**
CZSB	**Cruzeiro do Su**	**42.78**	**60**	P	**P**	**23 54 13.1**	**-0.1**
CZSB				IAmb	IAmb	23 54 13.6	
	comp=Z,24nm,1.1s						
OTAV	**Otavalo**	**44.92**	**46**	P	**P**	**23 54 30.9**	**-0.1**
OTAV				IAmb	IAmb	23 54 45.0	
	comp=Z,12nm,1.4s						
PLTB	**Pedras Altas**	**46.07**	**103**	P	**P**	**23 54 39.7**	**+0.2**
PLTB				IAmb	IAmb	23 54 40.7	
	comp=Z,16nm,0.9s						
ETMB	**Extrema**	**46.23**	**68**	P	**P**	**23 54 40.7**	**-0.2**
PTLB	**Pontes e Lacer**	**48.59**	**80**	P	**P**	**23 54 59.5**	**+0.2**
PTLB				IAmb	IAmb	23 55 00.7	
	comp=Z,16nm,1.4s						
AQDB	**Aquidauana**	**48.88**	**88**	P	**P**	**23 55 01.3**	**-0.2**
AQDB				IAmb	IAmb	23 55 02.5	
	comp=Z,12nm,0.8s						
SAML	**Samuel**	**49.11**	**70**	P	**P**	**23 55 02.6**	**-0.6**
BRU2	**Volcan**	**49.81**	**35**	P	**P**	**23 55 09.6**	**+1.0**
JTS	**Las Juntas de**	**50.10**	**32**	P	**P**	**23 55 11.2**	**+0.5**
JTS				IAmb	IAmb	23 55 14.8	
	comp=Z,24nm,1.4s						
ROSC	**El Rosal**	**51.06**	**47**	P	**P**	**23 55 19.8**	**+1.3**
	comp=Z,6.9nm,0.3s,baz=105,slow=9.4,SNR=6.7						
ROSC	**El Rosal**	**51.06**	**47**	P	**P**	**23 55 18.0**	**-0.4**
ZARC	**Zaragoza, Cauc**	**52.86**	**44**	P	**P**	**23 55 30.9**	**-0.5**
MOTC	**Monteria, Cord**	**53.45**	**43**	P	**P**	**23 55 35.7**	**0.0**
MOTC				IAmb	IAmb	23 55 44.4	
	comp=Z,23nm,1.6s						
SJCC	**San Jacinto, C**	**54.63**	**42**	P	**P**	**23 55 43.8**	**-0.7**
MACA	**Manacapuru-AM**	**54.69**	**66**	P	**P**	**23 55 43.5**	**-1.4**
QSPA	**South Pole Qui**	**55.69**	**180**	P	**P**	**23 55 53.2**	**+1.6**
QSPA				IAmb	IAmb	23 56 15.8	
	comp=Z,9.3nm,1.4s						
ZAIG	**Zacatecas**	**57.30**	**7**	P	**P**	**23 56 03.7**	**+0.1**
ZAIG				IAmb	IAmb	23 56 06.2	
	comp=Z,18nm,1.7s						
BDFB	**Brasilia**	**57.62**	**87**	P	**P**	**23 56 06.7**	**+0.8**
	comp=Z,2.5nm,0.8s,baz=205,slow=7.0,SNR=3.8						
BAUV	**El Baul**	**58.13**	**50**	P	**P**	**23 56 07.9**	**-1.4**
BOAV	**Boa Vista**	**58.51**	**61**	P	**P**	**23 56 10.8**	**-1.2**
BOAV				IAmb	IAmb	23 56 24.1	
	comp=Z,16nm,1.5s						
VNA3	**Neumayer Olymp**	**60.67**	**159**	P	**P**	**23 56 27.5**	**+1.3**
VNA1	**Neumayer--Stat**	**61.32**	**158**	P	**P**	**23 56 27.7**	**-2.9**
VNA2	**Neumayer--Watz**	**61.48**	**159**	P	**P**	**23 56 28.7**	**-3.0**
SNAA	**Sanae**	**62.50**	**160**	P	P	23 56 32.9	-5.8
SNAA	**Sanae**	**62.50**	**160**	P	**P**	**23 56 39.9**	**+1.3**
SNAA				IAmb	IAmb	23 56 40.5	
	comp=Z,6.2nm,1.2s						
JCT	**Junction City**	**65.23**	**9**	P	**P**	**23 56 56.8**	**-0.2**
JCT				IAmb	IAmb	23 57 03.6	
	comp=Z,12nm,1.2s						
WHTX	**Lake Whitney,**	**67.05**	**11**	P	**P**	**23 57 08.3**	**-0.2**
KVN	**Kaiserville**	**73.66**	**353**	P	**P**	**23 57 49.9**	**+0.7**
BMN	**Battle Mountai**	**74.94**	**354**	P	**P**	**23 57 56.9**	**+0.4**
N35A	**Tabor**	**76.02**	**10**	P	**P**	**23 58 02.9**	**+0.4**
PDAR	**Pinedale Array**	**76.90**	**360**	P	**P**	**23 58 08.0**	**+0.2**
	comp=Z,2.2nm,1.1s,baz=164,slow=8.2,SNR=6.2						
PDAR	**Pinedale Array**	**76.90**	**360**	P	**P**	**23 58 08.2**	**+0.4**
HLID	**Hailey**	**77.85**	**356**	P	**P**	**23 58 13.0**	**0.0**
HLID				IAmb	IAmb	23 58 20.2	
	comp=Z,6.1nm,1.1s						
AKASG	**Malin Array Be**	**145.85**	**49**	PKPbc	**PKPdf**	**00 05 53.0**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=283,slow=3.6,SNR=5.8						
AKASG	**Malin Array Be**	**145.85**	**49**	PKPdf	**PKPdf**	**00 05 53.0**	**-0.8**
AKBB	**Malin Array Si**	**145.85**	**49**	PKPdf	**PKPdf**	**00 05 53.0**	**-0.7**
ENH	**Enshi**	**147.27**	**273**		**PKPbc**	**00 05 58.8**	**-0.4**
ULN	**Ulaanbaatar**	**149.98**	**307**		**PKiKP**	**00 06 06.1**	**-0.6**
CMAR	**Chiang Mai Arr**	**150.37**	**245**	PKPbc	**PKiKP**	**00 06 08.7**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=173,slow=1.7,SNR=10						
CMAR	**Chiang Mai Arr**	**150.37**	**245**		**PKiKP**	**00 06 08.0**	**-0.2**
SONM	**Songino Array**	**150.42**	**308**	PKPbc	**PKPbc**	**00 06 06.2**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=92,slow=4.3,SNR=8.9						
SONM	**Songino Array**	**150.42**	**308**	PKPdf	**PKPdf**	**00 06 03.0**	**+1.4**
SONM				PKPbc	**PKiKP**	**00 06 07.3**	**-0.3**
CHTO	**Chiang Mai**	**150.59**	**245**	PKPbc	**PKiKP**	**00 06 08.4**	**-0.3**
ZAA0	**Zalesovo Array**	**158.22**	**337**	PKPdf	**PKPdf**	**00 06 10.7**	**-1.3**

IDC 02 23:50:28.8±1.8,17°.13N×122°.42E,h0^{km},mb3.4/4, mb1 3.6/4,mb1mx3.4/27,mbtmp3.4/4,Error ellipse: s-maj=176.6km s-min=23.0km az=66.0

MAN 02 23:50:31.9,17°.22N×122°.54E,h17^{km},mb4.6,ML3.5, MS3.3

ISC 02 23:50:29.8±2.0,17°.19N±0°.06×122°.52E±0°.07,h4^{km}±13^{km}, n17,σ1^{s}.34/16,mb3.4/4,4C-3D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAUP	**Cauayan**	**0.71**	**250**	⇑*e*P	**Pn**	**23 50 46.3**	**-0.3**
CAUP				*e*S	**Sn**	**23 51 01.4**	**+3.4**
SGCP	**Mt. Cagua**	**1.14**	**337**	⇑*e*P	**Pg**	**23 50 52.0**	**+0.3**
SGCP				*i* S	**Sb**	**23 51 07.5**	**+0.1**
APYP	**Conner**	**1.39**	**299**	⇑*e*P	**Pg**	**23 50 56.7**	**+0.2**
APYP				*i* S	**Sg**	**23 51 15.9**	**+1.4**
SAMP	**Sagada Mountai**	**1.55**	**266**	⇓*i*P	**Pn**	**23 50 57.9**	**-0.3**
SAMP				*e*S	**Sg**	**23 51 19.1**	**-0.5**
SMPP	**San Manuel, Pa**	**2.04**	**240**	⇓*i*P	**Pb**	**23 51 05.9**	**-1.6**
SMPP				*e*S	**Sb**	**23 51 33.1**	**-0.2**
SIPP	**Brgy, Tapao**	**2.10**	**291**	⇓*i*P	**Pb**	**23 51 08.4**	**0.0**
SIPP				*i* S	Sg	23 51 48.9	+12
JCNP	**Jose Panganiba**	**2.89**	**177**	⇑*e*P	**Pn**	**23 51 18.5**	**+1.9**
SONM	**Songino Array**	**33.31**	**340**	P	**P**	**23 57 08.4**	**-0.4**
	0.5nm,0.8s,baz=167,slow=8.7,SNR=2.2						
WRA	**Warramunga Arr**	**38.68**	**162**	P	**P**	**23 57 54.1**	**-0.8**
	0.6nm,0.6s,baz=342,slow=9.3,SNR=3.4						
H11S3	**WAKE ISLAND Hy**	**41.99**	**81**	T	T	00 43 15.5	
	baz=276,slow=75,SNR=778						
H11S1	**WAKE ISLAND Hy**	**42.00**	**81**	T	T	00 43 16.5	
	baz=276,slow=75,SNR=827						
H11S2	**WAKE ISLAND Hy**	**42.01**	**81**	T	T	00 43 17.1	
	baz=276,slow=75,SNR=954						
H11N1	**WAKE ISLAND Hy**	**42.08**	**79**	T	T	00 43 19.4	
	baz=274,slow=74,SNR=674						
H11N2	**WAKE ISLAND Hy**	**42.08**	**79**	T	T	00 43 19.4	
	baz=274,slow=74,SNR=588						
H11N3	**WAKE ISLAND Hy**	**42.10**	**79**	T	T	00 43 23.6	
	baz=274,slow=74,SNR=575						
ASAR	**Alice Springs**	**42.10**	**164**	P	**P**	**23 58 22.5**	**-0.7**
	0.4nm,0.6s,baz=343,slow=7.6,SNR=4.5						
MKAR	**Makanchi Array**	**44.37**	**321**	P	**P**	**23 58 40.8**	**-0.6**
	0.2nm,0.4s,baz=111,slow=7.6,SNR=8.0						

IDC 02 23:50:48.1±1.6,34°.02S×109°.34W,h0^{km},mb3.7/2, mb1 4.0/2,mb1mx3.7/20,mbtmp3.7/2,Error ellipse: s-maj=74.3km s-min=45.9km az=166.0,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**40.95**	**75**	P	P	23 58 33.1	-0.2
	0.9nm,0.7s,baz=304,slow=3.6,SNR=2.1						
PDAR	**Pinedale Array**	**76.42**	**360**	P	P	00 02 39.8	+0.3
	0.6nm,0.8s,baz=159,slow=5.3,SNR=4.4						
SONM	**Songino Array**	**149.97**	**308**	PKPbc	PKPbc	00 10 38.9	-1.4
	1.4nm,1.1s,baz=101,slow=0.9,SNR=3.9						
CMAR	**Chiang Mai Arr**	**150.40**	**246**	PKPbc	PKPbc	00 10 42.3	+0.3
	0.8nm,0.4s,baz=191,slow=0.9,SNR=5.3						

IDC 03 00:02:08.6±1.7,32°.83S×113°.29W,h0^{km},mb3.7/2, mb1 4.0/2,mb1mx3.6/25,mbtmp3.7/2,MS3.4/1,Ms1 3.4/1, ms1mx3.1/18,Error ellipse: s-maj=71.4km s-min=45.2km az=171.0,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**6.64**	**32**	LR	LR	00 05 50.1	
	comp=Z,275nm,18.6s,baz=106,slow=33						
LPAZ	**La Paz**	**43.90**	**79**	P	P	00 10 17.8	-0.1
	0.6nm,0.6s,baz=231,slow=6.5,SNR=1.7						
PDAR	**Pinedale Array**	**75.30**	**3**	P	P	00 13 53.8	+0.1
	0.7nm,0.8s,baz=153,slow=6.1,SNR=5.4						
SONM	**Songino Array**	**146.64**	**309**	PKPbc	PKPdf	00 21 51.0	+0.5
	1.0nm,0.7s,baz=106,slow=2.7,SNR=6.3						
CMAR	**Chiang Mai Arr**	**147.76**	**252**	PKPbc	PKPbc	00 21 55.3	-0.6
	1.0nm,0.3s,baz=203,slow=1.1,SNR=6.3						

IDC 03 00:13:24.9±3.8,36°.39N×70°.32E,h172^{km}±28^{km},mb3.5/7, mb1 3.3/13,mb1mx3.1/56,mbtmp3.8/13,Error ellipse: s-maj=39.2km s-min=18.2km az=157.0

SOME 03 00:13:38.6,38°.45N×71°.70E,h5^{km}

NNC 03 00:13:39.3±12.0,37°.33N×71°.70E,h0^{km},mb4.1,mpv3.7, Error ellipse: s-maj=100.4km s-min=80.1km az=167.0

ISC 03 00:13:27.8±0.7,36°.54N±0°.06×70°.39E±0°.07,h200^{km},n43, σ1^{s}.73/53,mb3.9/6,4C,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.98**	**155**	P	**Pn**	**00 14 18.0**	**+0.6**
CEP				S	**Sn**	**00 14 55.0**	**-1.1**
CHCP	**Chirah Chowk**	**3.72**	**140**	P	**Pn**	**00 14 27.1**	**+1.0**
IUG	**Iuzhnay**	**5.61**	**357**	*e*P	**Pn**	**00 14 53.1**	**+3.1**
	428nm,0.1s						
IUG				*e*S	**Sn**	**00 15 53.0**	**-2.1**
	152nm,0.7s						
CHM	**Chimkent**	**5.81**	**354**	*e*P	**Pn**	**00 14 55.5**	**+3.0**
	39nm,0.6s						
CHM				*e*S	**Sn**	**00 15 57.3**	**-2.2**
	288nm,0.7s						
AML	**Almayashu**	**6.15**	**24**	P	**Pn**	**00 14 57.8**	**+0.6**
	SNR=45						
DZA	**Taraz**	**6.39**	**6**	*e*P	**Pn**	**00 15 03.2**	**+3.2**
	24nm,0.2s						
DZA				*e*S	**Sn**	**00 16 10.8**	**-2.3**
	186nm,0.3s						
BRLS	**Borolday**	**6.50**	**356**	*e*P	**Pn**	**00 15 00.3**	**-1.1**
	6.1nm,0.7s						
BRLS				*e*S	Sn	00 16 06.1	-10

	14nm,0.2s						
UCH	**Uchtor**	**6.52**	**28**	P	**Pn**	**00 15 02.8**	**+0.7**
	SNR=28						
MRKS	**Merke**	**6.58**	**19**	*e*P	**Pn**	**00 15 05.0**	**+2.5**
	7.0nm,0.1s						
MRKS				*e*S	**Sn**	**00 16 14.7**	**-3.0**
	67nm,0.6s						
KK09	**Karatay Array**	**6.58**	**1**	⇑Pn	**Pn**	**00 15 03.8**	**+1.3**
	4.0nm,0.5s,baz=170,slow=12						
KK09				⇑Sn	**Sn**	**00 16 15.6**	**-2.0**
	6.2nm,0.4s,baz=162,slow=25						
EKS2	**Erkin-Say**	**6.65**	**22**	P	**Pn**	**00 15 04.4**	**+0.8**
	SNR=8.1						
AAK	**Ala-Archa**	**6.87**	**26**	P	**Pn**	**00 15 06.9**	**+0.6**
	1.3nm,0.3s,baz=197,slow=6.1,SNR=26						
AAK				S	**Sn**	**00 16 21.5**	**-3.1**
	1.7nm,0.3s,baz=159,slow=23,SNR=14						
AAK	**Ala-Archa**	**6.87**	**26**	P	**Pn**	**00 15 07.2**	**+0.8**
	SNR=8.1						
AAK	**Ala-Archa**	**6.87**	**26**	Pn	**Pn**	**00 15 06.9**	**+0.6**
	3.6nm,0.6s						
AAK				Sn	Sn	00 16 14.9	-10
	11nm,0.6s						
TKM2	**Tokmak 2**	**7.53**	**31**	P	**Pn**	**00 15 15.5**	**+0.5**
	SNR=16						
TKM2	**Tokmak 2**	**7.53**	**31**	⇑Pn	**Pn**	**00 15 15.3**	**+0.2**
	5.5nm,0.5s						
TKM2				⇑Sn	Sn	00 16 28.7	-12
	4.8nm,0.7s						
KST	**Kastek**	**7.79**	**32**	*e*P	**Pn**	**00 15 21.9**	**+3.6**
	4.7nm,0.0s						
KST				*e*S	**Sn**	**00 16 44.8**	**-1.4**
	10nm,0.5s						
DGS	**Degeres**	**7.87**	**30**	*e*P	**Pn**	**00 15 22.4**	**+3.0**
	1.0nm,0.0s						
DGS				*e*S	**Sn**	**00 16 46.2**	**-2.0**
	4.6nm,0.7s						
MTBS	**Maitube**	**8.06**	**33**	*e*P	**Pn**	**00 15 24.5**	**+2.8**
	1.2nm,0.2s						
MTBS				*e*S	**Sn**	**00 16 49.6**	**-3.0**
	4.8nm,0.4s						
GEYT	**Alibeck**	**9.88**	**282**	P	**Pn**	**00 15 44.2**	**-1.3**
	0.3nm,0.3s,baz=124,slow=12,SNR=2.2						
MKAR	**Makanchi Array**	**13.55**	**37**	P	**Pn**	**00 16 33.1**	**+1.1**
	0.2nm,0.3s,baz=218,slow=9.1,SNR=15						
PYUN	**Piuthan**	**13.57**	**125**	*e*P	**Pn**	**00 16 30.6**	**-2.0**
	9.7nm,0.3s						
DANN	**Dangsing**	**13.92**	**122**	*e*P	**Pn**	**00 16 36.3**	**-0.8**
	7.5nm,0.4s						
KOLN	**Koldanda**	**14.19**	**124**	*e*P	**Pn**	**00 16 38.8**	**-1.5**
	6.1nm,0.3s						
GKN	**Gorkha**	**14.74**	**121**	*e*P	**Pn**	**00 16 45.7**	**-1.3**
	18nm,0.3s						
KURBB	**Kurchatov Arra**	**15.25**	**20**	P	**Pn**	**00 16 52.2**	**-0.6**
	0.1nm,0.3s,baz=210,slow=10.0,SNR=6.6						
DMN	**Daman**	**15.31**	**121**	*e*P	**Pn**	**00 16 53.4**	**-0.7**
	15nm,0.5s						
KKN	**Kakani**	**15.32**	**120**	*e*P	**Pn**	**00 16 53.2**	**-0.9**
	13nm,0.3s						
PKIN	**Phulchoki**	**15.53**	**121**	*e*P	**Pn**	**00 16 56.5**	**-0.3**
	19nm,0.4s						
PKI	**Pulchoki**	**15.54**	**121**	*e*P	**Pn**	**00 16 56.5**	**-0.5**
	43nm,0.7s						
GUN	**Gumba**	**15.66**	**119**	*e*P	**Pn**	**00 16 58.0**	**-0.5**
	22nm,0.5s						
BVAR	**Borovoye Array**	**16.49**	**0**	P	**P**	**00 17 06.6**	**-0.2**
	0.2nm,0.3s,baz=182,slow=14,SNR=2.9						
AKTO	**Aktyubinsk**	**16.51**	**331**	P	**P**	**00 17 06.2**	**-0.9**
	0.3nm,0.3s,baz=122,slow=7.1,SNR=5.6						
RAMN	**Ramite**	**16.76**	**120**	*e*P	**P**	**00 17 10.7**	**+0.4**
	20nm,0.4s						
TAPN	**Taplejung**	**17.30**	**117**	*e*P	**Pn**	**00 17 17.9**	**0.0**
	10nm,0.4s						
ODAN	**Odare**	**17.37**	**119**	*e*P	**Pn**	**00 17 18.2**	**-0.5**
	18nm,0.6s						
ZALV	**Zalesovo Beam**	**20.09**	**25**	P	**P**	**00 17 46.4**	**+0.5**
	2.3nm,0.3s,baz=214,slow=10,SNR=23						
BELG	**Belogornoye**	**22.55**	**322**	P	**P**	**00 18 11.8**	**+1.0**
	5.0nm,0.8s,baz=106,slow=7.4,SNR=4.2						
SONM	**Songino Array**	**28.72**	**56**	P	**P**	**00 19 07.6**	**+1.1**
	0.4nm,0.7s,baz=266,slow=9.7,SNR=2.6						
NRIK	**Noril'sk**	**34.18**	**11**	P	**P**	**00 19 55.6**	**+1.9**
	2.3nm,0.5s,baz=193,slow=6.2,SNR=4.8						
FINES	**FINESS Array B**	**37.18**	**326**	P	**P**	**00 20 20.2**	**+1.0**
	2.1nm,0.7s,baz=90,slow=9.7,SNR=4.6						
ARCES	**ARCESS Array B**	**40.92**	**338**	P	**P**	**00 20 50.7**	**+0.6**
	2.6nm,0.7s,baz=112,slow=8.8,SNR=7.7						
TORD	**Torodi Ar. Bea**	**65.22**	**268**	P	**P**	**00 23 46.5**	**-1.7**
	0.3nm,0.5s,baz=44,slow=5.3,SNR=5.5						

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*THE **03** 00:14:53.8, 38°.47N×20°.56E, h6^{km}±1^{km}, ML2.5/3, Error ellipse: s-maj=1.1km s-min=0.4km az=261.0*

*ATH **03** 00:14:53.4, 38°.47N×20°.59E, h9^{km}±1^{km}, ML2.3/4, Error ellipse: s-maj=2.0km s-min=0.6km az=282.0*

ISC 03 00:14:53.4±0.8, **38°.47N**±0°.02×**20°.59E**±0°.03, **h8**^{km}±5^{km}, **n45**, σ**0^{s}59**/70, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.02**	**247**	P	**Pg**	**00 14 54.9**	**0.0**
FSK				S	**Sg**	**00 14 55.8**	**-0.2**
	14µm,0.2s						
FSK	**Fiskardo**	**0.02**	**247**	P	**Pg**	**00 14 54.8**	**-0.1**
FSK				S	**Sg**	**00 14 55.7**	**-0.3**
FSK				AML	AML	00 14 55.9	
	comp=N,14240µm,0.2s						
FSK				AML	AML	00 14 56.2	
	comp=E,42485µm,0.2s						
EVGI	**Lefkada island**	**0.16**	**19**	P	**Pg**	**00 14 57.0**	**+0.2**
EVGI				S	**Sg**	**00 15 00.1**	**+0.9**
EVGI	**Lefkada island**	**0.16**	**19**	P	**Pg**	**00 14 57.0**	**+0.2**
EVGI				S	**Sg**	**00 14 59.9**	**+0.7**
DRAG	**Dragano-Lefkad**	**0.21**	**357**	P	**Pg**	**00 14 57.6**	**-0.3**
DRAG				S	**Sg**	**00 15 01.3**	**+0.5**
DRAG	**Dragano-Lefkad**	**0.21**	**357**	P	**Pg**	**00 14 57.5**	**-0.3**
DRAG				S	**Sg**	**00 15 00.9**	**+0.1**
KEF4	**Livadi, Kephal**	**0.25**	**212**	P	**Pg**	**00 14 58.4**	**0.0**
KEF4	**Livadi, Kephal**	**0.25**	**212**	P	**Pg**	**00 14 58.4**	**0.0**
KEF4				S	**Sg**	**00 15 02.6**	**+0.9**
NYDR	**Nydri-Lefkada**	**0.26**	**19**	P	**Pg**	**00 14 58.6**	**0.0**
NYDR				S	**Sg**	**00 15 03.0**	**+0.9**
NYDR	**Nydri-Lefkada**	**0.26**	**19**	P	**Pg**	**00 14 58.4**	**-0.2**
NYDR				S	**Sg**	**00 15 02.7**	**+0.6**
DMLN	**Damoulianata-K**	**0.29**	**217**	P	**Pg**	**00 14 58.8**	**-0.3**
DMLN				S	**Sg**	**00 15 03.9**	**+1.0**
DMLN	**Damoulianata-K**	**0.29**	**217**	P	**Pg**	**00 14 58.8**	**-0.3**
DMLN				S	**Sg**	**00 15 03.5**	**+0.6**
VLS	**Valsamata**	**0.29**	**180**	P	**Pg**	**00 14 59.1**	**-0.1**
VLS				S	**Sg**	**00 15 04.3**	**+1.2**
	comp=E,2µm,0.2s						
VLS	**Valsamata**	**0.29**	**180**	P	**Pg**	**00 14 59.0**	**-0.2**
VLS				S	**Sg**	**00 15 03.9**	**+0.8**
VLS				AML	AML	00 15 04.5	
	comp=E,3586µm,0.2s						
VLS				AML	AML	00 15 04.6	
	comp=N,2666µm,0.3s						
LXRA	**Lixouri, Kepha**	**0.29**	**204**	P	**Pg**	**00 14 59.2**	**-0.1**
LXRA				S	**Sg**	**00 15 04.2**	**+1.1**
LKD2	**Lefkada island**	**0.32**	**9**	P	**Pg**	**00 14 59.5**	**-0.4**
LKD2				S	**Sg**	**00 15 04.7**	**+0.5**
KEF3	**Kipouria, Keph**	**0.33**	**216**	P	**Pg**	**00 14 59.1**	**-0.8**
KEF3				S	**Sg**	**00 15 04.1**	**-0.1**
	comp=N,2µm,0.2s						
KEF3	**Kipouria, Keph**	**0.33**	**216**	P	**Pg**	**00 14 58.9**	**-0.9**
KEF3				S	**Sg**	**00 15 03.7**	**-0.5**
PSDA	**Pessada-Kefalo**	**0.35**	**181**	P	**Pg**	**00 15 00.2**	**-0.2**
PSDA				S	**Sg**	**00 15 06.4**	**+1.3**
PSDA	**Pessada-Kefalo**	**0.35**	**181**	P	**Pg**	**00 15 00.0**	**-0.3**
PSDA				S	**Sg**	**00 15 05.7**	**+0.6**
TSLK	**Tsoukalades, L**	**0.36**	**8**	P	**Pg**	**00 14 59.9**	**-0.6**
TSLK				S	**Sg**	**00 15 05.6**	**+0.3**
VTN	**Vitineika**	**0.72**	**139**	P	**Pg**	**00 15 08.0**	**+0.6**
LTHK	**Lithakia**	**0.78**	**166**	P	**Pg**	**00 15 08.0**	**-0.5**
LTHK				S	**Sb**	**00 15 20.8**	**+0.8**
LTHK	**Lithakia**	**0.78**	**166**	P	**Pg**	**00 15 07.5**	**-1.0**
LTHK				S	**Sg**	**00 15 19.3**	**+0.7**
LTHK				AML	AML	00 15 21.7	
	comp=E,236µm,0.2s						
LTHK				AML	AML	00 15 21.8	
	comp=N,393µm,0.2s						
RLS	**Riolos of Patr**	**0.80**	**120**	P	**Pg**	**00 15 08.9**	**0.0**
RLS	**Riolos of Patr**	**0.80**	**120**	P	**Pg**	**00 15 08.7**	**-0.2**
DRO	**Drossia**	**1.02**	**120**	P	**Pg**	**00 15 13.2**	**+0.1**
DRO				S	**Sn**	**00 15 28.9**	**+0.3**
DRO	**Drossia**	**1.02**	**120**	P	**Pg**	**00 15 12.9**	**-0.1**
EFP	**Efpalio**	**1.03**	**92**	P	**Pg**	**00 15 13.1**	**-0.2**
EFP	**Efpalio**	**1.03**	**92**	P	**Pg**	**00 15 12.4**	**-0.9**
ANX	**Ano Chora**	**1.05**	**83**	P	**Pg**	**00 15 13.6**	**0.0**
ANX				S	**Sn**	**00 15 29.4**	**-0.1**
ANX	**Ano Chora**	**1.05**	**83**	P	**Pg**	**00 15 13.5**	**-0.2**
EVR	**Evrytania**	**1.05**	**64**	P	**Pg**	**00 15 13.0**	**-0.7**
IGT	**Igoumenitsa**	**1.08**	**349**	P	**Pg**	**00 15 13.7**	**-0.6**
IGT				S	**Sn**	**00 15 30.5**	**+0.4**
IGT	**Igoumenitsa**	**1.08**	**349**	P	**Pg**	**00 15 13.6**	**-0.6**
IGT				AML	AML	00 15 32.2	
	comp=E,119µm,0.4s						
IGT				AML	AML	00 15 32.3	
	comp=N,101µm,0.3s						
LAKA	**Lakka**	**1.11**	**101**	P	**Pg**	**00 15 13.9**	**-1.0**
SERG	**Sergoula**	**1.15**	**92**	P	**Pb**	**00 15 14.5**	**-1.2**
KLV	**Kalavryta, Ach**	**1.30**	**109**	P	**Pn**	**00 15 17.4**	**-0.5**
KLV	**Kalavryta, Ach**	**1.30**	**109**	P	**Pn**	**00 15 17.0**	**-0.9**
KEK	**Kerkira**	**1.39**	**334**	P	**Pn**	**00 15 19.4**	**+0.3**
KEK	**Kerkira**	**1.39**	**334**	P	**Pb**	**00 15 19.6**	**0.0**
AGG	**Agios Georgios**	**1.47**	**67**	P	**Pn**	**00 15 20.8**	**+0.6**
GUR	**Goura**	**1.48**	**111**	P	**Pn**	**00 15 20.1**	**-0.3**
SRN	**Sarande**	**1.48**	**342**	P	**Pn**	**00 15 20.2**	**-0.2**
KPRO	**Kipourio**	**1.60**	**22**	P	**Pn**	**00 15 22.4**	**+0.3**

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*PDG **03** 00:16:02.1±0.2, 42°.35N×18°.67E, h8^{km}, MD2.5/3, ML2.6/13, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*

*RHSSO **03** 00:16:02.4±0.4, 42°.31N×18°.67E, h3^{km}±1^{km}, ML2.7/13*

*TIR **03** 00:16:02.1, 42°.39N×18°.73E, h4^{km}±1^{km}, Md2.9, Ml2.8*

*BEO **03** 00:16:04.1±0.3, 42°.37N×18°.70E, h2^{km}±1^{km}, ML2.4/15*

ISC 03 00:16:02.5±1.0, **42°.37N**±0°.02×**18°.69E**±0°.01, **h3**^{km}±9^{km}, **n84**, σ**1^{s}46**/155, **23C-20D**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HCY	**Herceg Novi**	**0.16**	**298**	⇑*i*Pg	**Pg**	**00 16 05.7**	**0.0**
HCY				*e*Sg	**Sg**	**00 16 08.6**	**+0.7**
HCY	**Herceg Novi**	**0.16**	**298**	⇑*i*Pg	**Pg**	**00 16 05.7**	**0.0**
HCY				*i* Sg	**Sg**	**00 16 08.6**	**+0.7**
BUM	**Brajici-Budva**	**0.17**	**115**	⇓*i*Pg	**Pg**	**00 16 05.6**	**-0.2**
BUM				*i* Sg	**Sg**	**00 16 08.2**	**+0.2**
CEME	**Cevo**	**0.24**	**44**	⇓*i*Pg	**Pg**	**00 16 07.2**	**0.0**
CEME				*i* Sg	**Sg**	**00 16 11.4**	**+1.0**
DRME	**Dracevica, Mon**	**0.41**	**117**	⇑*i*Pg	**Pg**	**00 16 10.2**	**-0.2**
DRME				*e*Sg	**Sg**	**00 16 16.2**	**+0.4**
DRME	**Dracevica, Mon**	**0.41**	**117**	⇑*i*Pg	**Pg**	**00 16 10.0**	**-0.4**
DRME				*i* Sg	**Sg**	**00 16 16.5**	**+0.7**
PDG	**Podgorica**	**0.42**	**82**	⇓P	**Pg**	**00 16 10.4**	**-0.3**
PDG				⇑S	**Sg**	**00 16 15.9**	**-0.2**
PDG	**Podgorica**	**0.42**	**82**	⇓*i*Pg	**Pg**	**00 16 10.1**	**-0.6**
PDG				*e*Sg	**Sg**	**00 16 17.1**	**+0.9**
PDG	**Podgorica**	**0.42**	**82**	*e*Pg	**Pg**	**00 16 10.3**	**-0.3**
PDG				*e*Sg	**Sb**	**00 16 17.6**	**-1.9**
TTG	**Podgorica**	**0.42**	**82**	⇓*i*Pg	**Pg**	**00 16 10.1**	**-0.6**
TTG				*i* Sg	**Sg**	**00 16 17.3**	**+1.1**
TREB	**Trebinje**	**0.43**	**324**	⇑*i*Pg	**Pg**	**00 16 10.7**	**0.0**
TREB				*e*Sg	**Sb**	**00 16 18.3**	**-1.3**
TREB	**Trebinje**	**0.43**	**324**	*e*Pg	**Pg**	**00 16 10.9**	**+0.2**
TREB				*e*Sg	**Sb**	**00 16 18.7**	**-0.9**
NKME	**Niksic**	**0.44**	**26**	⇓*i*Pg	**Pg**	**00 16 10.6**	**-0.4**
NKME				*i* Sg	**Sg**	**00 16 17.8**	**+1.0**
NKY	**Niksic**	**0.49**	**27**	⇓*i*Pg	**Pg**	**00 16 11.6**	**-0.5**
NKY				*i* Sg	**Sg**	**00 16 19.6**	**+1.1**
BRY	**Bratogost**	**0.54**	**348**	*e*Pg	**Pg**	**00 16 12.7**	**-0.2**
BRY				*e*Sg	**Sb**	**00 16 22.0**	**-1.1**
BRY	**Bratogost**	**0.54**	**348**	⇑*i*Pg	**Pg**	**00 16 12.5**	**-0.4**
BRY				*i* Sg	**Sb**	**00 16 21.6**	**-1.5**
ULC	**Ulcinj**	**0.58**	**134**	⇓*i*Pg	**Pg**	**00 16 12.7**	**-1.0**
ULC				*i* Sg	**Sg**	**00 16 21.7**	**+0.5**
KOME	**Kolasin**	**0.78**	**52**	⇑*i*Pg	**Pg**	**00 16 16.3**	**-1.1**
KOME				*i* Sg	**Sb**	**00 16 29.6**	**-0.2**
UPM	**Unac-Piva**	**0.85**	**11**	⇑*i*Pg	**Pg**	**00 16 17.9**	**-0.9**
UPM				*e*Sg	**Sb**	**00 16 31.9**	**0.0**
UPM	**Unac-Piva**	**0.85**	**11**	⇑*i*Pg	**Pg**	**00 16 18.3**	**-0.5**
UPM				*e*Sg	**Sb**	**00 16 31.7**	**-0.2**
STON	**Ston**	**0.88**	**305**	⇑*i*Pg	**Pg**	**00 16 18.5**	**-1.0**
STON				*e*Sg	**Sb**	**00 16 31.9**	**-0.9**
STON	**Ston**	**0.88**	**305**	*e*Pg	**Pg**	**00 16 18.3**	**-1.1**
STON				Sg	**Sb**	**00 16 31.8**	**-1.0**
STON	**Ston**	**0.88**	**305**	*e*Pg	**Pg**	**00 16 19.1**	**-0.4**
STON				*e*Sg	**Sn**	**00 16 33.6**	**-1.7**
PVY	**Plav**	**0.96**	**76**	⇓*i*Pg	**Pg**	**00 16 20.3**	**-0.7**
PVY				*i* Sg	**Sn**	**00 16 35.8**	**-1.7**
IVA	**Berane**	**1.02**	**60**	⇑*i*Pg	**Pg**	**00 16 21.7**	**-0.4**
IVA				*e*Sg	**Sn**	**00 16 37.8**	**-1.0**
BCI	**Bajram Curri**	**1.02**	**90**	P	**Pg**	**00 16 21.5**	**-0.6**
	baz=90						
BCI				S	**Sn**	**00 16 36.7**	**-2.0**
	baz=90						
BCI				AMP			
	comp=N,1.0nm,0.4s,baz=90						
PLE	**Pljevlja**	**1.09**	**28**	⇑*i*Pg	**Pg**	**00 16 22.6**	**-0.8**
PLE				*i* Sg	**Sn**	**00 16 40.2**	**-0.3**
SJES	**Sjenica**	**1.30**	**46**	*e*Pg	**Pb**	**00 16 27.2**	**-0.5**
SJES				*e*Sg	**Sg**	**00 16 46.3**	**+2.1**
RUDO	**Rudo**	**1.34**	**22**	*e*Pg	**Pn**	**00 16 27.0**	**-1.2**
RUDO				*e*Sg	**Sg**	**00 16 47.5**	**+1.8**
TIR	**Tirane**	**1.35**	**139**	⇑P	**Pg**	**00 16 30.1**	**+1.8**
TIR				S	**Sg**	**00 16 48.9**	**+3.0**
TIR	**Tirane**	**1.35**	**139**	P	**Pg**	**00 16 28.8**	**+0.4**
	baz=140						
TIR				S	**Sg**	**00 16 48.1**	**+2.3**
	baz=140						
TIR				AMP			
	comp=E,0.3nm,0.5s,baz=140						
TIR	**Tirane**	**1.35**	**139**	*e*Pg	**Pg**	**00 16 28.9**	**+0.5**
TIR				*e*Sg	**Sg**	**00 16 47.4**	**+1.6**
LSTV	**Lastovo**	**1.39**	**287**	*e*Pg	**Pb**	**00 16 28.3**	**-0.7**
LSTV				Sg	**Sg**	**00 16 47.9**	**+0.9**
PHP	**Peshkopia**	**1.48**	**117**	P	**Pn**	**00 16 29.4**	**-0.7**
	baz=118						
PHP				S	**Sg**	**00 16 51.8**	**+1.9**
	baz=118						
PHP				AMP			
	comp=N,0.4nm,0.5s,baz=118						
MAKA	**Makarska**	**1.53**	**307**	*e*Pn	**Pn**	**00 16 30.3**	**-0.5**
MAKA				Sn	**Sg**	**00 16 53.0**	**+1.3**
BBLS	**Lazići**	**1.58**	**19**	*e*Pn	**Pb**	**00 16 32.2**	**-0.3**
BBLS				*e*Sn	**Sg**	**00 16 54.3**	**+0.9**
BBLS	**Lazići**	**1.58**	**19**	*e*Pn	**Pg**	**00 16 33.2**	**+0.3**
BBLS				*e*Sn	**Sg**	**00 16 54.5**	**+1.1**
RICI	**Ricice**	**1.60**	**315**	*e*Pn	**Pb**	**00 16 31.6**	**-1.2**
RICI				Sn	**Sg**	**00 16 56.3**	**+2.3**
HAPS	**Han Pijesak,Bl**	**1.72**	**6**	*e*Pn	**Pb**	**00 16 34.5**	**-0.5**
HAPS				*e*Sn	**Sg**	**00 16 57.7**	**-0.2**
DIVS	**Divibare**	**1.97**	**28**	*e*Pn	**Pb**	**00 16 37.6**	**-1.5**
DIVS				*e*Sn	**Sb**	**00 17 02.9**	**-1.3**
DIVS	**Divibare**	**1.97**	**28**	*e*Pn	**Pb**	**00 16 38.5**	**-0.6**
DIVS				*e*Sn	**Sg**	**00 17 04.7**	**-1.2**
SELS	**Selova**	**1.98**	**64**	*e*Pn	**Pb**	**00 16 38.0**	**-1.2**
SELS				*e*Sn	**Sb**	**00 17 04.5**	**+0.2**
GRUS	**Gruza**	**2.12**	**44**	*e*Pn	**Pb**	**00 16 40.9**	**-0.7**
GRUS				*e*Sn	**Sb**	**00 17 07.4**	**-1.0**
TRUS	**Trudelj**	**2.24**	**34**	*e*Pn	**Pb**	**00 16 42.0**	**-1.6**
TRUS				*e*Sn	**Sb**	**00 17 10.0**	**-1.7**
MATE	**Matera**	**2.28**	**222**	⇓P	**Pb**	**00 16 43.6**	**-0.6**
MATE				⇑S	**Sg**	**00 17 14.2**	**-1.4**
BARS	**Barje**	**2.35**	**78**	*e*Pn	**Pg**	**00 16 51.4**	**+3.8**
BARS				*e*Sn	Sg	00 17 27.9	+10
MGRS	**Mrkonjic Grad**	**2.35**	**331**	*e*Pn	**Pn**	**00 16 43.1**	**+0.9**
MGRS				*e*Sn	**Sb**	**00 17 12.8**	**-2.4**
DOB	**Doboj**	**2.40**	**350**	*e*Pn	**Pn**	**00 16 43.4**	**+0.7**
DOB				*e*Sn	**Sb**	**00 17 13.6**	**-2.8**
BLJ	**Bijeljina**	**2.45**	**10**	*e*Pn	**Pn**	**00 16 44.0**	**+0.6**
PRVS	**Prvonek**	**2.51**	**86**	*e*Pn	**Pb**	**00 16 45.9**	**-2.4**
PRVS				*e*Sn	**Sb**	**00 17 16.6**	**-3.0**
BOVS	**Bovan**	**2.55**	**59**	⇑P	**Pb**	**00 16 46.3**	**-2.6**
BOVS				⇓S	**Sn**	**00 17 16.6**	**+0.2**
ZIRJ	**Zirje**	**2.58**	**301**	*e*Pn	**Pn**	**00 16 46.0**	**+0.8**
ZIRJ				Sn	**Sb**	**00 17 18.7**	**-2.7**
BLY	**Banja Luka**	**2.62**	**336**	*e*Pn	**Pn**	**00 16 46.0**	**+0.3**
BLY				*e*Sn	**Sb**	**00 17 19.2**	**-3.4**
BLY	**Banja Luka**	**2.62**	**336**	*e*Pn	**Pb**	**00 16 48.3**	**-1.8**
BLY				*e*Sn	**Sb**	**00 17 21.0**	**-1.6**
MORI	**Morici**	**2.65**	**305**	*e*Pn	**Pn**	**00 16 47.3**	**+1.2**
MORI				Sn	**Sb**	**00 17 19.9**	**-3.5**
FRGS	**Fruska Gora**	**2.90**	**16**	⇓S	**Sb**	**00 17 27.3**	**-3.6**
FRGS	**Fruska Gora**	**2.90**	**16**	*e*Pn	**Pn**	**00 16 50.3**	**+0.6**
FRGS				*e*Sn	**Sn**	**00 17 26.0**	**+0.9**
FRGS	**Fruska Gora**	**2.90**	**16**	*e*Pn	**Pn**	**00 16 50.3**	**+0.6**
FRGS				*e*Sn	**Sn**	**00 17 26.0**	**+0.9**
FRGS	**Fruska Gora**	**2.90**	**16**	⇑P	**Pn**	**00 16 50.0**	**+0.3**
ZAGS	**Zajecar**	**2.97**	**60**	*e*Pn	**Pn**	**00 16 51.8**	**+1.2**
ZAGS				*e*Sn	**Sn**	**00 17 27.7**	**+1.0**
UDBI	**Udbina**	**3.03**	**316**	*e*Pn	**Pn**	**00 16 52.3**	**+0.8**
UDBI				Sn	**Sn**	**00 17 30.2**	**+1.9**
DUGI	**Dugi Otok**	**3.11**	**303**	*e*Pn	**Pn**	**00 16 53.7**	**+1.2**
DUGI				Sn	**Sn**	**00 17 31.2**	**+1.0**
BLKB	**Belogradchik**	**3.18**	**66**	⇓S	**Sn**	**00 17 33.0**	**+1.0**
MDVR	**Moldovita**	**3.26**	**41**	⇓S	**Sn**	**00 17 35.3**	**+1.3**
MDVR	**Moldovita**	**3.26**	**41**	⇓P	**Pn**	**00 16 55.6**	**+1.0**
PLIT	**Plitvice**	**3.35**	**319**	*e*Pn	**Pn**	**00 16 57.9**	**+2.1**
PLIT				Sn	**Sn**	**00 17 38.0**	**+1.7**
VTS	**Vitosha**	**3.37**	**84**	⇑P	**Pn**	**00 16 57.3**	**+1.1**
VTS				⇓S	**Sn**	**00 17 38.1**	**+1.2**
VTS	**Vitosha**	**3.37**	**84**	*e*Pn	**Pn**	**00 16 58.2**	**+1.9**
VTS				*e*Sn	**Sn**	**00 17 37.6**	**+0.7**
MOSL	**Moslavina**	**3.53**	**337**	*e*Pn	**Pn**	**00 16 59.6**	**+1.3**
MOSL				Sn	**Sn**	**00 17 43.1**	**+2.5**
HERR	**Herculane**	**3.69**	**46**	⇓P	**Pn**	**00 17 01.8**	**+1.3**
HERR				⇑S	**Sn**	**00 17 45.3**	**+0.8**
MORH	**Mrgy, Hungar**	**3.84**	**360**	*e*Pn	**Pn**	**00 17 03.0**	**+0.4**
MORH				*e*Sn	**Sn**	**00 17 48.6**	**+0.4**
BZS	**Buzias**	**3.87**	**32**	⇓P	**Pn**	**00 17 03.5**	**+0.5**
BZS				⇑S	**Sn**	**00 17 49.9**	**+0.9**
BZS	**Buzias**	**3.87**	**32**	*e*Pn	**Pn**	**00 17 04.1**	**+1.1**
BZS				*e*Sn	**Sn**	**00 17 49.6**	**+0.6**
CRES	**Cresnjev**	**4.16**	**327**	*e*Pn	**Pn**	**00 17 07.1**	**+0.1**
CRES				*e*Sn	**Sn**	**00 17 55.3**	**-0.9**
GZR	**Gura Zlata**	**4.22**	**43**	⇑S	**Sn**	**00 17 58.7**	**+0.9**
GZR	**Gura Zlata**	**4.22**	**43**	⇓P	**Pn**	**00 17 09.6**	**+1.7**
SMRN	**Sveta Marina**	**4.23**	**311**	*e*Pn	**Pn**	**00 17 09.4**	**+1.5**
SMRN				Sn	**Sn**	**00 17 58.6**	**+0.8**
SIRR	**Siria**	**4.44**	**28**	⇓S	**Sn**	**00 18 04.2**	**+1.1**
SIRR	**Siria**	**4.44**	**28**	⇑P	**Pn**	**00 17 11.7**	**+0.9**
CEY	**Cerknica**	**4.56**	**319**	*e*Pn	**Pn**	**00 17 12.9**	**+0.5**
CEY				*e*Sn	**Sn**	**00 18 04.4**	**-1.5**
SOKA	**Soboth**	**5.04**	**330**	*e*Pn	**Pn**	**00 17 22.9**	**+3.8**
	comp=N,1.1nm,0.5s						
SOKA				*e*Sn	**Sn**	**00 18 22.7**	**+4.9**
	comp=N,0.3nm,0.2s						
OBKA	**Obir**	**5.09**	**326**	*e*Pn	**Pn**	**00 17 22.3**	**+2.5**
	comp=N,0.6nm,0.2s						
OBKA				*e*Sn	**Sn**	**00 18 22.8**	**+3.7**
	comp=N,2.1nm,0.5s						
DRGR		**5.27**	**32**	⇑S	**Sn**	**00 18 24.8**	**+1.2**
ARSA	**Arzberg**	**5.37**	**336**	*e*Sn	**Sn**	**00 18 27.9**	**+1.9**
	comp=N,0.5nm,0.3s						

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*IDC **03** 00:21:06.2±0.8, 34°.35S×109°.45W, h0^{km}, mb4.4/11, mb1 4.5/11, mb1mx4.3/26, mbtmp4.4/11, Error ellipse: s-maj=24.6km s-min=22.5km az=140.0*

*NEIC **03** 00:21:08.6±0.9, 34°.4S±0°.1×109°.1W±0°.1, h10^{km}±1^{km}, mb4.9/70, Error ellipse: s-maj=21.4km s-min=15.0km az=227.0*

ISC 03 00:21:07.6±0.5, **34°.43S**±0°.10×**109°.2W**±0°.1, **h10**^{km}, **n112**, σ**0^{s}91**/112, **mb4.8**/42, **2D**, **Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**37.08**	**82**	P	**P**	**00 28 20.4**	**+1.8**
	7.2nm,1.1s,baz=213,slow=10,SNR=3.0						
LVC	**Limon Verde**	**37.08**	**82**	P	**P**	**00 28 16.3**	**-2.3**
LVC				IAmb	IAmb	00 28 22.2	
	comp=Z,21nm,1.4s						
TAOE	**Nuku Hiva Isla**	**38.13**	**305**	*e*LR	LR	00 38 53.7	
	comp=Z,613nm,25.2s						
MEH	**Mehetia**	**38.32**	**285**	*e*T	T	01 08 49.7	
	comp=Z,22nm,0.2s						
ATAH	**Atahualpa**	**39.29**	**53**	P	**P**	**00 28 38.9**	**+1.6**
	comp=Z,4.6nm,0.7s,baz=238,slow=15,SNR=2.9						
PPT2	**Papeete2**	**39.68**	**285**	*e*LR	LR	00 39 23.0	
	comp=Z,1µm,25.2s						
LPAZ	**La Paz**	**40.94**	**74**	P	**P**	**00 28 52.3**	**+1.0**
	comp=Z,1.5nm,0.8s,baz=225,slow=1.3,SNR=5.0						
LPAZ	**La Paz**	**40.94**	**74**	P	**P**	**00 28 50.6**	**-0.6**
CZSB	**Cruzeiro do Su**	**42.80**	**60**	P	**P**	**00 29 05.5**	**-0.3**
CZSB				IAmb	IAmb	00 29 07.8	
	comp=Z,17nm,1.1s						
OTAV	**Otavalo**	**44.92**	**46**	P	**P**	**00 29 22.8**	**-0.6**
PLTB	**Pedras Altas**	**46.16**	**103**	P	**P**	**00 29 32.3**	**-0.2**
PLTB				IAmb	IAmb	00 29 34.3	
	comp=Z,22nm,1.3s						
TBTG	**Tabatinga, AM**	**47.24**	**59**	P	**P**	**00 29 39.8**	**-1.3**
PTLB	**Pontes e Lacer**	**48.65**	**80**	P	**P**	**00 29 52.0**	**0.0**
PTLB				IAmb	IAmb	00 29 54.2	
	comp=Z,12nm,1.3s						
AQDB	**Aquidauana**	**48.95**	**88**	P	**P**	**00 29 54.2**	**-0.1**
SAML	**Samuel**	**49.15**	**70**	P	**P**	**00 29 55.7**	**-0.2**
VILB	**Vilhena**	**49.15**	**77**	P	**P**	**00 29 55.9**	**0.0**
VILB				IAmb	IAmb	00 29 58.1	
	comp=Z,16nm,1.3s						
CDITO	**Canoas**	**49.51**	**35**	P	**P**	**00 29 58.6**	**0.0**
BRU2	**Volcan**	**49.79**	**35**	P	**P**	**00 30 00.8**	**-0.1**
BRU2				IAmb	IAmb	00 30 09.6	
	comp=Z,18nm,0.9s						
SRBA	**San Rafael, Bu**	**49.86**	**34**	P	**P**	**00 30 01.2**	**-0.1**
JTS	**Las Juntas de**	**50.08**	**32**	P	**P**	**00 30 04.8**	**+1.9**
	comp=Z,6.3nm,0.9s						
JTS	**Las Juntas de**	**50.08**	**32**	P	**P**	**00 30 03.6**	**+0.7**
JTS				IAmb	IAmb	00 30 11.0	
	comp=Z,13nm,1.2s						
ROSC	**El Rosal**	**51.06**	**47**	P	**P**	**00 30 12.7**	**+1.9**
	comp=Z,6.8nm,0.4s,baz=221,slow=19,SNR=7.1						
ROSC	**El Rosal**	**51.06**	**47**	P	**P**	**00 30 10.3**	**-0.5**
MTO3	**Montecristo**	**52.10**	**25**	P	**P**	**00 30 18.2**	**0.0**
ZARC	**Zaragoza, Cauc**	**52.85**	**45**	P	**P**	**00 30 23.7**	**0.0**
SJCC	**San Jacinto, C**	**54.62**	**43**	P	**P**	**00 30 36.7**	**0.0**
MACA	**Manacapuru-AM**	**54.72**	**66**	P	**P**	**00 30 36.8**	**-0.6**
QSPA	**South Pole Qui**	**55.77**	**180**	P	**P**	**00 30 45.9**	**+1.4**
	comp=Z,6.3nm,1.0s,baz=132,slow=7.7,SNR=5.3						
QSPA	**South Pole Qui**	**55.77**	**180**	P	**P**	**00 30 45.4**	**+0.9**
QSPA				IAmb	IAmb	00 30 47.5	
	comp=Z,13nm,1.2s						
SDV	**Santo Domingo**	**56.48**	**48**	P	**P**	**00 30 49.2**	**-1.0**
SDV				IAmb	IAmb	00 30 49.9	
	comp=Z,12nm,1.1s						
BDFB	**Brasilia**	**57.68**	**87**	P	**P**	**00 30 59.5**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=233,slow=7.5,SNR=3.9						
BAUV	**El Baul**	**58.13**	**50**	P	**P**	**00 31 01.0**	**-0.7**
VNA3	**Neumayer Olymp**	**60.77**	**159**	P	**P**	**00 31 19.1**	**-0.1**
VNA1	**Neumayer--Stat**	**61.42**	**158**	P	**P**	**00 31 24.9**	**+1.4**
VNA2	**Neumayer--Watz**	**61.58**	**159**	P	**P**	**00 31 25.1**	**+0.4**
	baz=235,slow=5.2						
SNAA	**Sanae**	**62.59**	**160**	P	**P**	**00 31 31.5**	**-0.1**
SNAA	**Sanae**	**62.59**	**160**	P	**P**	**00 31 31.7**	**+0.1**
SNAA				IAmb	IAmb	00 31 33.2	
	comp=Z,9.1nm,1.1s						
TXAR	**Lajitas Array**	**63.64**	**5**	P	**P**	**00 31 37.9**	**-1.1**
	comp=Z,0.9nm,1.0s,baz=183,slow=9.0,SNR=5.4						
435B	**Jarrell**	**65.78**	**11**	P	**P**	**00 31 53.3**	**+0.5**
435B				IAmb	IAmb	00 31 54.6	
	comp=Z,14nm,1.1s						
WHTX	**Lake Whitney,**	**66.99**	**11**	P	**P**	**00 32 01.1**	**+0.6**
Z35A	**Perchaven, San**	**68.33**	**11**	P	**P**	**00 32 09.0**	**+0.1**
X18A	**Snowflake**	**68.61**	**359**	P	**P**	**00 32 11.3**	**+0.4**
X18A				IAmb	IAmb	00 32 12.8	
	comp=Z,4.3nm,0.8s						
GSC	**Goldstone, Bar**	**69.74**	**353**	P	**P**	**00 32 18.6**	**+0.8**
GSC				IAmb	IAmb	00 32 19.9	
	comp=Z,8.8nm,1.1s						
ISA	**Isabella, Lake**	**70.27**	**352**	P	**P**	**00 32 21.9**	**+0.9**
ISA				IAmb	IAmb	00 32 23.1	
	comp=Z,8.5nm,1.1s						
QSM	**Queen of Sheba**	**70.40**	**353**	P	**P**	**00 32 22.8**	**+1.1**
QSM				IAmb	IAmb	00 32 23.8	
	comp=Z,9.0nm,1.3s						
TUL1	**Leonard**	**71.09**	**11**	P	**P**	**00 32 25.8**	**-0.1**
TUL1				IAmb	IAmb	00 32 27.2	
	comp=Z,12nm,0.9s						
CCUT	**Cedar City**	**71.72**	**357**	P	**P**	**00 32 31.3**	**+1.3**
LCH	**Last Change Ra**	**71.73**	**353**	P	**P**	**00 32 31.2**	**+1.3**
HHAR	**Hobbs**	**71.78**	**13**	P	**P**	**00 32 30.3**	**+0.2**
U38A	**Gravette**	**71.85**	**13**	P	**P**	**00 32 30.6**	**+0.1**
U38A				IAmb	IAmb	00 32 31.5	
	comp=Z,11nm,1.1s						
KAN13	**South Haven SW**	**71.92**	**10**	P	**P**	**00 32 31.5**	**+0.6**
U40A	**Yellville**	**72.06**	**14**	P	**P**	**00 32 32.3**	**+0.6**
U40A				IAmb	IAmb	00 32 32.7	
	comp=Z,12nm,1.1s						

TPH	Tonopah	72.53	353	P	P	00 32 36.0	+1.3
SWET	Sewanee	72.62	20	P	P	00 32 35.3	+0.1
SWET				IAmb	IAmb	00 32 36.3	
	comp=Z,11nm,1.0s						
LHV	Little Huntoon	72.83	352	P	P	00 32 37.6	+1.3
LHV				IAmb	IAmb	00 32 39.0	
	comp=Z,11nm,1.0s						
NV11	Mina Array Sit	72.97	353	P	P	00 32 38.3	+1.0
NVAR	Mina Array Bea	72.99	353	P	P	00 32 38.2	+0.7
	comp=Z,6.7nm,0.9s,baz=185,slow=7.2,SNR=15						
HICK	Hickman	73.02	17	P	P	00 32 38.3	+0.8
SPR3	Spring Creek 3	73.22	356	P	P	00 32 39.3	+0.3
PAULI	Pauline	73.51	23	P	P	00 32 40.6	+0.3
KVN	Kaiserville	73.58	353	P	P	00 32 41.5	+0.6
KVN				IAmb	IAmb	00 32 43.6	
	comp=Z,12nm,1.0s						
V53A	Saluda	73.97	22	P	P	00 32 43.1	0.0
V53A				IAmb	IAmb	00 32 45.1	
	comp=Z,16nm,1.1s						
SYO	Syowa Base	74.32	169	⇓*e*P	P	00 32 44.1	-0.7
SYO	Syowa Base	74.32	169	⇓*e*PcP	PcP	00 32 57.0	-2.5
PAHR	Pah Rah Range	74.37	352	P	P	00 32 46.6	+1.1
BEKR	Beckworth	74.65	351	P	P	00 32 47.7	+0.6
JLU	Jordanelle	74.69	358	P	P	00 32 48.0	+0.5
BMN	Battle Mountai	74.86	354	P	P	00 32 49.1	+0.7
BMN				IAmb	IAmb	00 32 50.8	
	comp=Z,13nm,1.1s						
OGNE	Ogallala	75.30	6	P	P	00 32 51.9	+1.1
N35A	Tabor	75.96	11	P	P	00 32 55.0	+0.5
MOD	Modoc Plateau	76.65	352	P	P	00 32 59.5	+0.9
MOD				IAmb	IAmb	00 33 00.5	
	comp=Z,6.6nm,1.1s						
K22A	Casper	76.75	2	P	P	00 32 59.9	+0.8
K22A				IAmb	IAmb	00 33 01.6	
	comp=Z,14nm,1.1s						
PD31	Pinedale Array	76.83	360	P	P	00 32 59.5	-0.1
PDAR	Pinedale Array	76.83	360	P	P	00 32 58.7	-1.0
	comp=Z,3.9nm,1.1s,baz=160,slow=5.6,SNR=16						
PDAR	Pinedale Array	76.83	360	P	P	00 32 59.3	-0.4
WVOR	Wild Horse Val	76.98	353	P	P	00 33 01.2	+0.9
REDW	Red Top Meadow	77.44	359	P	P	00 33 03.2	+0.1
REDW				IAmb	IAmb	00 33 05.8	
	comp=Z,14nm,1.6s						
HLID	Hailey	77.77	356	P	P	00 33 05.4	+0.6
HLID				IAmb	IAmb	00 33 06.7	
	comp=Z,8.8nm,1.0s						
J08A	Circle Bar Ran	77.88	353	P	P	00 33 06.4	+1.1
J08A				IAmb	IAmb	00 33 07.6	
	comp=Z,12nm,1.3s						
MAW	Mawson	78.10	177	P	P	00 33 08.1	+1.8
MAW				IAmb	IAmb	00 33 20.7	
	comp=Z,11nm,1.6s						
RSSD	Black Hills	78.32	4	P	P	00 33 08.5	+0.6
RSSD				IAmb	IAmb	00 33 09.3	
	comp=Z,12nm,1.4s						
BCYI	Bear Canyon	78.47	357	P	P	00 33 09.5	+0.8
PINE	Pine Mountain	78.59	351	P	P	00 33 09.9	+0.6
PINE				IAmb	IAmb	00 33 16.2	
	comp=Z,17nm,1.2s						
I07A	Izee	78.71	352	P	P	00 33 10.8	+0.9
I07A				IAmb	IAmb	00 33 12.7	
	comp=Z,16nm,1.1s						
MCMT	McKenzie Canyo	78.96	357	P	P	00 33 11.8	+0.3
BMO	Blue Mountains	79.26	354	P	P	00 33 13.4	+0.5
PLID	Pearl Lake	79.39	355	P	P	00 33 14.3	+0.6
G08A	Pilot Rock	79.84	353	P	P	00 33 16.9	+0.8
F36A	Milaca	81.17	11	P	P	00 33 23.0	0.0
F36A				IAmb	IAmb	00 33 29.1	
	comp=Z,19nm,1.6s						
NEW	Newport	82.63	355	P	P	00 33 31.6	+0.8
NEW				IAmb	IAmb	00 33 32.4	
	comp=Z,12nm,1.1s						
ULM	Lac du Bonnet	85.14	9	P	P	00 33 42.9	-0.6
	comp=Z,4.7nm,1.1s,baz=159,slow=11,SNR=2.9						
BURAR	Bucovina Array	143.69	55	PKPdf	PKPbc	00 40 40.5	+0.4
AKASG	Malin Array Be	145.85	49	PKPbc	PKPdf	00 40 44.8	-1.3
	comp=Z,0.3nm,0.3s,baz=276,slow=3.6,SNR=8.6						
AKASG	Malin Array Be	145.85	49	PKPdf	PKPdf	00 40 45.4	-0.6
KLMR	Klimovskoe	146.78	28	*e*	PKPdf	00 40 47.7	+0.4
KLMR				AMP		00 40 52.7	
	comp=Z,30nm,1.4s						
ENH	Enshi	147.19	274		PKPbc	00 40 51.5	+0.1
HHC	Hu-ho-hao-te	147.32	293	*e*P	PKPbc	00 40 51.9	+0.4
XAN	Xi'an	148.61	280	P	PKPbc	00 40 55.1	+0.1
XAN				pmax	pmax		
	comp=Z,17nm,0.9s						
ULN	Ulaanbaatar	149.88	307	PKPbc	PKPbc	00 40 57.1	-0.8
SONM	Songino Array	150.32	308	PKP	PKPdf	00 40 53.1	-0.6
	comp=Z,1.7nm,1.1s,baz=22,slow=1.6,SNR=3.6						
SONM				PKPbc	sPKPdf	00 40 58.1	+1.1
	comp=Z,6.7nm,1.0s,baz=101,slow=2.0,SNR=26						
SONM	Songino Array	150.32	308	PKPbc	PKPbc	00 40 58.4	-0.5
CM31	Chiang Mai Arr	150.34	245	PKPbc	PKPbc	00 40 59.7	0.0
CMAR	Chiang Mai Arr	150.34	245	PKPbc	PKPbc	00 41 00.1	+0.4
	comp=Z,4.2nm,0.9s,baz=176,slow=1.3,SNR=21						
CMAR	Chiang Mai Arr	150.34	245	PKPbc	PKPbc	00 40 59.3	-0.4
CHTO	Chiang Mai	150.55	245	PKPbc	PKPbc	00 40 59.5	-0.6
TLY	Talaya	150.79	316	PKPbc	PKPbc	00 40 59.3	-0.5
ZALV	Zalesovo Beam	158.13	337	PKP	PKPdf	00 41 03.2	-1.1
	comp=Z,0.2nm,0.3s,baz=1.9,slow=4.3,SNR=4.8						
ZALV				PKPab	PKPab	00 41 37.5	-0.4
	comp=Z,1.4nm,0.9s,baz=33,slow=5.5,SNR=5.0						
ZALV	Zalesovo Beam	158.13	337	PKPdf	PKPdf	00 41 02.4	-1.9
ZALV				PKPab	PKPab	00 41 37.7	-0.2
KURBB	Kurchatov Arra	162.86	343	PKP	PKPdf	00 41 06.9	-2.7
	comp=Z,0.8nm,1.0s,baz=345,slow=1.1,SNR=4.2						
KURBB				PKPab	PKPab	00 41 57.5	-1.1
	comp=Z,1.0nm,1.0s,baz=22,slow=3.3,SNR=4.2						
ABKAR	Akbulak array	163.15	25	PKPab	PKPab	00 41 59.1	-0.8
ABKAR	Akbulak array	163.15	25	PKPab	PKPab	00 41 59.9	-0.1
WMQ	Urumqi	163.91	311	*e*P	PKPdf	00 41 12.2	+1.3
WMQ				pmax	pmax		
	comp=Z,160nm,4.5s						

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*IDC **03** 00:23:52.5±0.7, 34°.56S×109°.32W, h0^{km}, mb4.4/11, mb1 4.5/11, mb1mx4.4/24, mbtmp4.4/11, MS4.6/12, Ms1 4.6/12, ms1mx4.4/19, Error ellipse: s-maj=23.9km s-min=20.1km az=178.0*

*NEIC **03** 00:23:55.7±1.1, 34°.5S±0°.1×109°.2W±0°.2, h10^{km}±1^{km}, mb5.0/119, Error ellipse: s-maj=23.6km s-min=18.8km az=281.0*

*GCMT **03** 00:23:57.7±0.2, 34°.69S±0°.02×109°.17W±0°.01, h12^{km}, MW5.1/106, Moment Tensor Solution. s54,c71; s106,c169; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.57±.16; $M_{\theta\theta}$-2.11±.15; $M_{\phi\phi}$4.68±.12; $M_{r\theta}$-2.24±.44; $M_{\theta\phi}$-3.72±.12; $M_{\phi r}$0.14±.36; Best double couple: $M_0$5.85900×10^{16} NP1:ϕ_s16.00000°, δ59.00000°, λ-24.00000°. NP2:ϕ_s118.00000°, δ70.00000°, λ-147.00000°. Principal axes: T 6.4450, Plg7.0000°, Azm245.0000°; N -1.1740, Plg52.0000°, Azm146.0000°; P -5.2720, Plg37.0000°, Azm340.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 00:23:54.7±0.4, **34°.49S**±0°.08×**109°.25W**±0°.09, **h10**^{km}, **n297**, σ**0^s.98**/277, **mb5.0**/67, **MS4.7**/14, **9C-9D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LL04	Puerto Octay	29.69	113	P	P	00 30 01.3	+0.6
LL02	Futaleuf	30.19	118	P	P	00 30 05.5	+0.3
COYC	Coyhaique	30.28	123	P	P	00 30 06.2	+0.2
COYC				IAmb	IAmb	00 30 10.8	
	comp=Z,22nm,1.1s						
VA05	Santo Domingo	31.07	99	P	P	00 30 12.8	-0.3
VA05				IAmb	IAmb	00 30 14.6	
	comp=Z,37nm,1.1s						
PLCA	Paso Flores	31.10	113	P	P	00 30 12.6	-0.7
	comp=Z,3.6nm,0.9s,baz=242,slow=10,SNR=3.5						
PLCA	Paso Flores	31.10	113	*e*P	P	00 30 15.0	+1.6
PLCA	Paso Flores	31.10	113	P	P	00 30 13.9	+0.6
MT01	Popeta	31.32	100	P	P	00 30 15.4	+0.1
MT01				IAmb	IAmb	00 30 17.6	
	comp=Z,57nm,1.7s						
BO01	Tunca	31.35	101	P	P	00 30 15.5	0.0
BO01				IAmb	IAmb	00 30 18.0	
	comp=Z,42nm,1.4s						
GO09	Cerro Castillo	31.41	134	P	P	00 30 16.5	+0.7
MG05	Puerto Natales	31.44	134	P	P	00 30 17.4	+1.3
BO02	Sierra Bellavi	31.52	102	P	P	00 30 17.8	+0.7
BO02				IAmb	IAmb	00 30 22.0	
	comp=Z,17nm,0.9s						
MT09	Talagante	31.55	100	P	P	00 30 17.4	0.0
MT09				IAmb	IAmb	00 30 22.3	
	comp=Z,40nm,1.3s						
MT05	Renca	31.84	99	P	P	00 30 20.1	+0.2
PEL	Peldehue	31.94	99	P	P	00 30 20.5	-0.3
VA03	San Esteban	32.14	98	P	P	00 30 22.4	-0.2
VA03				IAmb	IAmb	00 30 25.7	
	comp=Z,54nm,1.4s						
GO03	Copiap	33.97	89	P	P	00 30 38.3	-0.3
ZON	Zonda	33.99	97	P	P	00 30 38.7	0.0
ZON				IAmb	IAmb	00 30 42.4	
	comp=Z,50nm,1.3s						
AC02	Maricunga	35.17	89	P	P	00 30 49.5	0.0
AC02				IAmb	IAmb	00 30 51.8	
	comp=Z,75nm,1.7s						
PB15	IPOC Station P	36.40	83	P	P	00 30 59.9	+0.2
PATCX	Punta Patache	36.98	79	P	P	00 31 04.9	+0.3
LVC	Limon Verde	37.13	82	P	P	00 31 06.6	+0.5
	comp=Z,16nm,1.0s,baz=233,slow=8.4,SNR=6.8						
LVC	Limon Verde	37.13	82	P	P	00 31 06.6	+0.5
LVC				IAmb	IAmb	00 31 10.5	
	comp=Z,52nm,1.2s						
PB09	IPOC Station P	37.24	81	P	P	00 31 08.1	+1.2
TA02	Huaiquique	37.27	78	P	P	00 31 07.4	+0.4
TA02				IAmb	IAmb	00 31 11.1	
	comp=Z,52nm,0.9s						
PSGCX	Pisagua	37.62	77	P	P	00 31 11.1	+1.0
PSGCX				IAmb	IAmb	00 31 16.0	
	comp=Z,63nm,1.4s						
TRQA	Tornquist	37.96	109	P	P	00 31 12.8	+0.2
TRQA				IAmb	IAmb	00 31 16.7	
	comp=Z,36nm,1.4s						
PB12	IPOC Station P	37.98	76	P	P	00 31 12.6	-0.4
PB12				IAmb	IAmb	00 31 15.3	
	comp=Z,72nm,1.3s						
TAOE	Nuku Hiva Isla	38.13	305	*e*LR	LR	00 41 25.3	
	comp=Z,541nm,24.9s						
MEH	Mehetia	38.29	286	*e*T	T	01 11 34.4	
	comp=Z,70nm,0.2s						
PB16	IPOC Station P	38.78	76	P	P	00 31 20.7	+0.3
ATAH	Atahualpa	39.36	53	P	P	00 31 25.7	+0.7
	comp=Z,13nm,0.9s,baz=217,slow=11,SNR=6.1						
TIAR	Tiarei	39.48	285	*e*T	T	01 13 04.6	
	comp=Z,1.4nm,0.2s						
PPT2	Papeete2	39.65	285	*e*LR	LR	00 42 08.9	
	comp=Z,2µm,26.2s						
PPT	Papeete	39.66	285	LR	LR	00 43 48.5	
	comp=Z,1µm,18.0s,baz=154,slow=30						
PMSA	Palmer Station	40.65	152	*e*P	P	00 31 35.9	+1.3
LPAZ	La Paz	41.00	74	P	P	00 31 39.2	+0.3
	comp=Z,14nm,1.2s,baz=236,slow=6.0,SNR=17						
LPAZ				LR	LR	00 44 29.9	
	comp=Z,1µm,20.9s,baz=212,slow=30						
LPAZ	La Paz	41.00	74	*e*P	P	00 31 40.3	+1.4
LPAZ	La Paz	41.00	74	P	P	00 31 39.8	+1.0
LPAZ				IAmb	IAmb	00 31 42.9	
	comp=Z,48nm,1.6s						
CZSB	Cruzeiro do Su	42.87	60	*e*P	P	00 31 54.0	+0.6
CZSB	Cruzeiro do Su	42.87	60	P	P	00 31 53.6	+0.2
CZSB				IAmb	IAmb	00 31 56.1	
	comp=Z,39nm,1.2s						
ITQB	Itaqui	44.44	99	*e*P	P	00 32 06.0	+0.1
ITQB	Itaqui	44.44	99	P	P	00 32 05.7	-0.2
OTAV	Otavalo	45.00	46	*e*P	P	00 32 12.0	+1.0
OTAV	Otavalo	45.00	46	P	P	00 32 11.2	+0.2
OTAV				IAmb	IAmb	00 32 15.3	
	comp=Z,41nm,1.8s						
CPUP	Villa Florida	45.10	94	P	P	00 32 10.7	-0.6
	comp=Z,4.3nm,0.9s,baz=267,slow=13,SNR=3.6						
CPUP				LR	LR	00 47 30.5	
	comp=Z,1µm,20.9s,baz=264,slow=31						
CPUP	Villa Florida	45.10	94	*e*P	P	00 32 11.1	-0.1
CPUP	Villa Florida	45.10	94	P	P	00 32 10.8	-0.6
PLTB	Pedras Altas	46.19	103	*e*P	P	00 32 19.8	0.0
PLTB	Pedras Altas	46.19	103	P	P	00 32 18.9	-0.9
ETMB	Extrema	46.33	68	*e*P	P	00 32 20.9	-0.3
ETMB	Extrema	46.33	68	P	P	00 32 20.8	-0.3
ETMB				IAmb	IAmb	00 32 22.8	
	comp=Z,21nm,1.6s						
CPSB	Cacapava Do Su	46.77	101	*e*P	P	00 32 24.6	+0.2
SIV	San Ignacio	46.84	79	LR	LR	00 49 41.0	
	comp=Z,458nm,18.6s,baz=264,slow=33						
TBTG	Tabatinga, AM	47.31	59	*e*P	P	00 32 28.4	-0.4
TBTG	Tabatinga, AM	47.31	59	P	P	00 32 27.5	-1.3
PTLB	Pontes e Lacer	48.70	80	*e*P	P	00 32 39.6	+0.1
PTLB	Pontes e Lacer	48.70	80	P	P	00 32 39.1	-0.4
PTLB				IAmb	IAmb	00 32 42.3	
	comp=Z,32nm,1.5s						
AQDB	Aquidauana	48.99	88	*e*P	P	00 32 42.0	+0.2
AQDB	Aquidauana	48.99	88	P	P	00 32 41.7	-0.1
ITAB	Concordia	49.01	98	*e*P	P	00 32 43.8	+2.0
SAML	Samuel	49.21	70	P	P	00 32 43.0	-0.5
VILB	Vilhena	49.21	77	*e*P	P	00 32 44.1	+0.6
VILB	Vilhena	49.21	77	P	P	00 32 43.4	-0.1
VILB				IAmb	IAmb	00 32 47.0	
	comp=Z,41nm,1.3s						
CNLB	Canela	49.26	101	*e*P	P	00 32 44.0	+0.2
RIOS	Rincon, Osa	49.39	34	P	P	00 32 44.8	0.0
RIOS				IAmb	IAmb	00 32 52.6	
	comp=Z,32nm,1.4s						
CDITO	Canoas	49.59	35	P	P	00 32 47.1	+0.8
BRU2	Volcan	49.86	35	P	P	00 32 49.4	+0.8
PEZE	Perez Zeledon,	49.92	34	P	P	00 32 49.4	+0.5
PEZE				IAmb	IAmb	00 32 56.9	
	comp=Z,34nm,1.2s						
SRBA	San Rafael, Bu	49.93	34	P	P	00 32 49.8	+0.8
PTGB	Pitanga	50.10	95	*e*P	P	00 32 50.4	+0.1
JTS	Las Juntas de	50.15	32	P	P	00 32 51.0	+0.5
	comp=Z,4.3nm,0.7s						
JTS	Las Juntas de	50.15	32	P	P	00 32 51.1	+0.5
JTS				IAmb	IAmb	00 32 59.7	
	comp=Z,16nm,1.1s						
RIMA	Rio Macho	50.17	33	P	P	00 32 51.6	+0.7
RIMA				IAmb	IAmb	00 33 04.2	
	comp=Z,19nm,1.3s						
TRCB	Terra Rica	50.46	92	P	P	00 32 53.2	+0.2
ROSC	El Rosal	51.13	47	P	P	00 32 59.2	+0.7
	comp=Z,8.6nm,0.5s,baz=225,slow=10.0,SNR=6.9						
ROSC				LR	LR	00 50 34.6	
	comp=Z,577nm,21.6s,baz=225,slow=31						
ROSC	El Rosal	51.13	47	P	P	00 32 59.5	+1.1
SALV	Santo Antonio	51.27	83	*e*P	P	00 32 59.1	0.0
PCMB	Pacaembu	52.13	92	*e*P	P	00 33 05.5	0.0
MTO3	Montecristo	52.17	25	P	P	00 33 06.0	0.0
TGUH	Tegucigalpa,Un	52.61	27	P	P	00 33 08.9	-0.2
TGUH				IAmb	IAmb	00 33 31.7	
	comp=Z,16nm,0.7s						
FRTB	Fartura	52.75	95	*e*P	P	00 33 10.9	+0.8
PDRB	Porto dos Gac	52.76	78	*e*P	P	00 33 10.6	+0.4
ZARC	Zaragoza, Cauc	52.93	45	P	P	00 33 11.0	-0.4
MOTC	Monteria, Cord	53.51	43	P	P	00 33 16.5	+0.8
ITRB	Iturama	53.77	90	*e*P	P	00 33 18.1	+0.5
CLDB	Colider	53.93	78	*e*P	P	00 33 18.6	-0.2
PET01	Itanhaem-SP	54.22	97	*e*P	P	00 33 21.4	+0.6
PETF	Flores	54.35	23	P	P	00 33 22.2	+0.5
PETF				IAmb	IAmb	00 33 22.9	
	comp=Z,41nm,1.8s						
ARAG	Araguaiana, MT	54.56	85	*e*P	P	00 33 23.2	-0.2
BB19B	Bebedouro	54.64	93	*e*P	P	00 33 24.4	+0.4
SJCC	San Jacinto, C	54.70	43	P	P	00 33 24.4	0.0
SJCC				IAmb	IAmb	00 33 31.9	
	comp=Z,39nm,1.3s						
MACA	Manacapuru-AM	54.79	66	*e*P	P	00 33 24.3	-0.7
MACA	Manacapuru-AM	54.79	66	P	P	00 33 24.1	-0.9
RCLB	Rio Claro- Sao	54.84	95	*e*P	P	00 33 25.2	-0.3
VAO	Valinhos	55.04	96	*e*P	P	00 33 27.1	+0.2
QSPA	South Pole Qui	55.71	180	P	P	00 33 32.1	+1.0
VNDA	Vanda	56.38	195	P	P	00 33 34.8	-0.8
	comp=Z,0.8nm,0.8s,baz=77,slow=6.9,SNR=2.2						
VNDA				LR	LR	00 51 07.7	
	comp=Z,453nm,19.6s,baz=182,slow=29						
VNDA	Vanda	56.38	195	P	P	00 33 36.6	+1.0
IPMB	Ipameri, GO	56.38	90	*e*P	P	00 33 36.1	-0.5
NPGB	Novo Progresso	56.51	74	*e*P	P	00 33 36.7	-0.7
SDV	Santo Domingo	56.55	48	*e*P	P	00 33 37.0	-0.8
SDV	Santo Domingo	56.55	48	P	P	00 33 36.7	-1.1
SDV				IAmb	IAmb	00 33 44.0	
	comp=Z,15nm,1.1s						
PTGA	Pitinga	56.91	65	LR	LR	00 54 41.1	
	comp=Z,1µm,20.2s,baz=248,slow=32						
SNDB	Serra Nova Dou	56.97	82	*e*P	P	00 33 40.9	+0.2
MAN01	Angra dos Reis	57.57	97	*e*P	P	00 33 46.2	+1.2
BDFB	Brasilia	57.73	87	P	P	00 33 45.1	-1.1
	comp=Z,5.4nm,0.9s,baz=244,slow=7.5,SNR=6.9						
BDFB				LR	LR	00 56 16.1	
	comp=Z,523nm,18.9s,baz=252,slow=34						
BDFB	Brasilia	57.73	87	P	P	00 33 45.9	-0.3
BDFB				IAmb	IAmb	00 33 49.2	
	comp=Z,30nm,1.4s						
ITTB	Itaituba	57.84	71	*e*P	P	00 33 45.5	-1.3
BAUV	El Baul	58.21	50	P	P	00 33 48.2	-1.1
VAS01	Vassouras-RJ	58.26	97	*e*P	P	00 33 50.7	+0.9
BOAV	Boa Vista	58.60	62	*e*P	P	00 33 51.3	-0.8
BOAV	Boa Vista	58.60	62	P	P	00 33 51.1	-1.1
BOAV				IAmb	IAmb	00 33 58.1	
	comp=Z,13nm,1.0s						
DUB01	Friburgo-RJ	59.23	97	*e*P	P	00 33 57.3	+0.8
PEXB	Peixe	59.35	84	*e*P	P	00 33 57.6	+0.2
DIAM	Diamantina, MG	59.98	92	*e*P	P	00 34 02.7	+0.9
MALB	Monte Alegre	60.54	70	*e*P	P	00 34 05.7	+0.2
MC01	Montes Claros	60.55	91	*e*P	P	00 34 06.5	+0.8
VNA3	Neumayer Olymp	60.73	159	P	P	00 34 06.6	+0.5
JANB	Januaria	61.08	89	*e*P	P	00 34 09.8	+0.4
ALF01	Guarapari-ES	61.28	96	*e*P	P	00 34 11.6	+1.1
PCRV	Puerto La Cruz	61.32	52	LR	LR	00 56 58.2	
	comp=Z,679nm,21.8s,slow=32						
VNA1	Neumayer--Stat	61.38	158	P	P	00 34 11.2	+0.8
PRPB	Parauapebas	61.46	77	*e*P	P	00 34 12.6	+0.8
VNA2	Neumayer--Watz	61.54	159	P	P	00 34 12.1	+0.6
	baz=251,slow=5.6						
SMTB	Santa Maria do	61.72	81	*e*P	P	00 34 14.4	+0.8
SJMB	Sao Joao De Ma	61.83	94	*e*P	P	00 34 14.9	+0.6
SDBA	SAO DESIDERIO	61.99	86	*e*P	P	00 34 15.9	+0.5
BSFB	Barra de Sao F	62.04	94	*e*P	P	00 34 16.1	+0.4
RIB01	Linhares ES	62.18	95	*e*P	P	00 34 17.3	+0.6
SNAA	Sanae	62.55	160	P	P	00 34 18.3	-0.1
SNAA	Sanae	62.55	160	P	P	00 34 18.6	+0.1
SNAA				IAmb	IAmb	00 34 19.8	
	comp=Z,16nm,1.1s						
NAN01	Guarapari, ES	63.13	94	*e*P	P	00 34 23.4	+0.4
MCPB	Macapa, AP	63.19	70	*e*P	P	00 34 23.7	+0.3
TX31	Lajitas Ar. Si	63.70	5	P	P	00 34 27.4	+0.9
TX32	Lajitas Array	63.70	5	P	P	00 34 26.7	+0.2
TX32				IAmb	IAmb	00 34 32.5	
	comp=Z,16nm,1.7s						
TXAR	Lajitas Array	63.70	5	P	P	00 34 26.4	-0.1
	comp=Z,0.4nm,0.9s,baz=179,slow=11,SNR=3.7						
GUA01	Guaratinga, BA	64.02	93	*e*P	P	00 34 29.6	+0.7
CMC01	Camacan, BA	64.89	92	*e*P	P	00 34 35.0	+0.4
TMAB	Tom-Au,PA,Br	65.08	75	*e*P	P	00 34 36.9	+1.1
NBIT	Itapeh - BA	65.18	91	*e*P	P	00 34 37.3	+0.9
JCT	Junction City	65.24	9	P	P	00 34 36.7	+0.3
JCT				IAmb	IAmb	00 34 45.1	
	comp=Z,13nm,1.2s						
GDU01	Guandu, BA	65.69	90	*e*P	P	00 34 40.0	+0.3
435B	Jarrell	65.85	11	P	P	00 34 41.1	+0.7
435B				IAmb	IAmb	00 34 49.0	
	comp=Z,14nm,1.0s						
MNTX	Cornudas Mount	65.94	4	P	P	00 34 42.0	+1.1
PRSN	Puerto Rico Se	65.97	44	P	P	00 34 42.4	+1.1
MDP	Montagnes des	66.23	65	LR	LR	01 00 24.9	
	comp=Z,890nm,19.3s,baz=258,slow=33						
TUC	Tucson	66.47	359	P	P	00 34 45.1	+0.7
NBPN	Ponto Novo - B	66.70	87	*e*P	P	00 34 45.9	-0.4
113A	Mohawk Valley,	67.04	356	P	P	00 34 48.5	+0.6
113A				IAmb	IAmb	00 34 56.1	
	comp=Z,16nm,1.6s						
WHTX	Lake Whitney,	67.06	11	P	P	00 34 48.6	+0.6
WHTX				IAmb	IAmb	00 34 55.9	
	comp=Z,20nm,1.1s						
IKP	In-Ko-Pah, Jac	67.10	354	P	P	00 34 49.6	+1.2
	baz=174						
NATX	Nacogdoches	67.32	13	P	P	00 34 50.9	+1.2
MONP2	Monument Peak	67.37	353	P	P	00 34 51.0	+0.8
	baz=174						
GLA	Glamis	67.39	355	P	P	00 34 51.6	+1.4
GLA				IAmb	IAmb	00 34 56.9	
	comp=Z,19nm,1.5s						
BC3	Big Chuckawall	68.04	354	P	P	00 34 55.3	+0.9
	baz=174						
PFO	Pinyon Flats O	68.09	354	P	P	00 34 55.4	+0.7
PFO				IAmb	IAmb	00 35 03.0	
	comp=Z,11nm,1.1s						
Y14A	Wickenburg	68.17	357	P	P	00 34 55.8	+0.7
Y14A				IAmb	IAmb	00 34 58.1	
	comp=Z,15nm,1.6s						
LENM	Lemitar	68.33	2	P	P	00 34 57.1	+0.8
MSTX	Muleshoe	68.38	6	P	P	00 34 59.3	+2.8
	baz=186						
BELC	Belle Mtn. Jos	68.43	354	P	P	00 34 58.6	+1.8
	baz=174						
IRM	Iron Mountain	68.52	355	P	P	00 34 58.6	+1.4
	baz=175						
X16A	Lo Mia Camp, P	68.58	358	P	P	00 34 58.9	+1.1
NBLA	Lagarto - SE	68.61	89	*e*P	P	00 34 58.2	-0.2
X18A	Snowflake	68.67	359	P	P	00 34 59.2	+0.8
GMRC	Granite Mounta	69.18	354	P	P	00 35 02.1	+0.6
	baz=174						
HEC	Hector,Ludlow	69.28	354	P	P	00 35 04.5	+2.5
	baz=174						
EDW2	Edwards Air Fo	69.50	352	P	P	00 35 03.7	+0.4
	baz=172						
PKM	Mcpherson Peak	69.73	351	P	P	00 35 05.2	+0.3
	baz=171						
NBMA	Muriti-CE	69.79	85	*e*P	P	00 35 04.5	-1.2
GSC	Goldstone, Bar	69.79	353	P	P	00 35 05.9	+0.7
GSC				IAmb	IAmb	00 35 21.6	
	comp=Z,11nm,1.1s						
GSC	Goldstone, Bar	69.79	353	P	P	00 35 06.8	+1.6
	baz=173						
TUQ	Turquoise Moun	69.85	354	P	P	00 35 07.3	+1.7
	baz=174						
LRMC	Laurel Mtn Rad	70.06	353	P	P	00 35 07.3	+0.4
	baz=173						
NBPB	Pedra_Branca-C	70.14	83	*e*P	P	00 35 07.9	+0.1
ISA	Isabella, Lake	70.33	352	P	P	00 35 09.1	+0.7
ISA	Isabella, Lake	70.33	352	P	P	00 35 09.7	+1.3
	baz=172						
QSM	Queen of Sheba	70.46	353	P	P	00 35 10.3	+1.1
NBAN	Anadia - AL	70.58	88	*e*P	P	00 35 09.9	-0.7
MPMC	Manual Prospec	70.61	353	P	P	00 35 11.5	+1.1
	baz=173						
GWY	Greenwater Val	70.66	354	P	P	00 35 11.2	+0.6
W39A	Magazine	70.82	13	P	P	00 35 11.8	+0.4
	baz=193						
SHPR	Sheep Range	70.85	355	P	P	00 35 12.5	+0.7
SHPR				IAmb	IAmb	00 35 27.2	
	comp=Z,15nm,1.5s						
FURC	Furnace Creek,	70.95	354	P	P	00 35 13.8	+1.7
	baz=173						
NBMO	Morrinhos-CE	71.03	81	*e*P	P	00 35 12.7	-0.5
CWC	Cottonwood Cre	71.05	352	P	P	00 35 14.0	+1.1
	baz=172						
W41B	Gary Mavity, V	71.11	15	P	P	00 35 13.4	+0.3
	baz=195						
TUL1	Leonard	71.16	12	P	P	00 35 13.8	+0.3
TUL1				IAmb	IAmb	00 35 21.0	
	comp=Z,9.0nm,0.9s						
TUL1	Leonard	71.16	12	P	P	00 35 13.7	+0.3
	baz=192						
NBLV	Livramento - P	71.31	86	*e*P	P	00 35 15.7	+0.7
MVCO	Mesa Verde	71.34	1	P	P	00 35 16.3	+1.5
MVCO				IAmb	IAmb	00 35 23.4	
	comp=Z,17nm,1.4s						
TIN	Tinemaha, Big	71.67	352	P	P	00 35 18.0	+1.3
	baz=172						
PRN	Pahroc Range	71.74	355	P	P	00 35 18.1	+1.1
PRN				IAmb	IAmb	00 35 37.8	
	comp=Z,15nm,1.5s						
FCAR	Ozark Folk Cen	71.82	15	P	P	00 35 17.8	+0.3
HHAR	Hobbs	71.85	13	P	P	00 35 17.9	+0.3
NBPA	Parau_RN	72.05	85	*e*P	P	00 35 20.1	+0.7
KAN01	Argonia South	72.08	10	P	P	00 35 19.7	+0.8
U40A	Yellville	72.13	14	P	P	00 35 19.8	+0.5
	baz=194						
TPH	Tonopah	72.58	353	P	P	00 35 22.7	+0.5
R11A	Troy Canyon, C	72.71	355	P	P	00 35 23.7	+0.7
R11A				IAmb	IAmb	00 35 39.3	
	comp=Z,19nm,1.6s						
R11A	Troy Canyon, C	72.71	355	P	P	00 35 24.3	+1.3
	baz=174						
Q16A	Castle Valley	73.07	358	P	P	00 35 25.8	+0.7
Q16A				IAmb	IAmb	00 37 50.1	
	comp=Z,6.4nm,0.5s						
SRU	San Rafael Swe	73.25	359	P	P	00 35 26.5	+0.4
SPR3	Spring Creek 3	73.28	356	P	P	00 35 26.8	+0.3

SPR3				IAmb	IAmb	00 35 34.7	
	comp=Z,17nm,1.4s						
TMUT	Trail Mountain	73.44	358	P	P	00 35 28.6	+1.1
V53A	Saluda	74.04	22	P	P	00 35 31.0	+0.3
SYO	Syowa Base	74.27	169	⇑eP	P	00 35 29.2	-2.4
SYO	Syowa Base	74.27	169	⇓eX	P	00 35 31.0	-0.6
SYO	Syowa Base	74.27	169	⇓ePcP	PcP	00 35 45.1	-1.3
DUG	Dugway, Tooele	74.39	357	P	P	00 35 33.4	+0.7
RDMU	Red Mountain	74.70	360	P	P	00 35 35.2	+0.7
RDMU				IAmb	IAmb	00 35 42.9	
	comp=Z,26nm,1.5s						
JLU	Jordanelle	74.75	358	P	P	00 35 35.2	+0.2
JLU				IAmb	IAmb	00 35 43.5	
	comp=Z,26nm,1.6s						
CTU	Camp Tracy	74.85	358	P	P	00 35 36.1	+0.7
BMN	Battle Mountai	74.92	354	P	P	00 35 36.7	+0.9
BMN				IAmb	IAmb	00 35 44.0	
	comp=Z,17nm,1.1s						
ELK	Elko	75.07	355	P	P	00 35 38.5	+1.7
N35A	Tabor	76.03	11	P	P	00 35 42.6	+0.7
N35A				IAmb	IAmb	00 35 48.4	
	comp=Z,28nm,1.2s						
PD31	Pinedale Array	76.89	360	P	P	00 35 47.1	0.0
PDAR	Pinedale Array	76.89	360	P	P	00 35 47.1	0.0
	comp=Z,4.5nm,1.0s,baz=169,slow=5.4,SNR=14						
WVOR	Wild Horse Val	77.04	353	P	P	00 35 48.7	+0.9
REDW	Red Top Meadow	77.50	359	P	P	00 35 50.5	0.0
REDW				IAmb	IAmb	00 35 59.4	
	comp=Z,13nm,1.3s						
TPAW	Teton Pass	77.63	359	P	P	00 35 51.1	-0.1
TPAW				IAmb	IAmb	00 36 07.9	
	comp=Z,18nm,1.4s						
HLID	Hailey	77.83	356	P	P	00 35 52.6	+0.4
HLID				IAmb	IAmb	00 35 59.0	
	comp=Z,12nm,1.1s						
FLWY	Flagg Ranch	78.22	359	P	P	00 35 55.2	+0.7
FLWY				IAmb	IAmb	00 36 02.8	
	comp=Z,19nm,1.2s						
RSSD	Black Hills	78.39	4	P	P	00 35 55.7	+0.3
RSSD				IAmb	IAmb	00 36 03.7	
	comp=Z,16nm,1.4s						
ECSD	EROS Data Cent	78.70	9	P	P	00 35 57.2	+0.3
ECSD				IAmb	IAmb	00 36 02.1	
	comp=Z,33nm,1.9s						
I07A	Izee	78.76	352	P	P	00 35 58.4	+1.1
I07A				IAmb	IAmb	00 36 06.0	
	comp=Z,16nm,1.1s						
QLMT	Earthquake Lak	78.98	358	P	P	00 35 59.8	+1.2
MCMT	McKenzie Canyo	79.02	357	P	P	00 35 59.8	+0.9
BMO	Blue Mountains	79.31	354	P	P	00 36 00.9	+0.5
G08A	Pilot Rock	79.90	353	P	P	00 36 04.2	+0.7
G08A				IAmb	IAmb	00 36 16.7	
	comp=Z,30nm,1.7s						
WVNY	West Valley, N	81.52	22	P	P	00 36 12.3	+0.1
JTMT	Jette	81.99	357	P	P	00 36 15.7	+1.0
JTMT				IAmb	IAmb	00 36 22.7	
	comp=Z,15nm,1.1s						
K62A	Royalston	83.93	27	P	P	00 36 24.9	+0.2
NCB	Newcomb	84.36	25	P	P	00 36 27.0	+0.2
STKA	Stephens Creek	86.23	234	LR	LR	01 08 42.3	
	comp=Z,275nm,19.3s,baz=131,slow=31						
H11S2	WAKE ISLAND Hy	95.53	289	T	T	02 23 20.5	
	baz=126,slow=76,SNR=9.4						
H11S1	WAKE ISLAND Hy	95.54	289	T	T	02 23 21.0	
	baz=126,slow=76,SNR=9.1						
H11S3	WAKE ISLAND Hy	95.55	288	T	T	02 23 21.7	
	baz=126,slow=76,SNR=7.0						
YKA	Yellowknife Ar	96.75	357	LR	LR	01 16 07.0	
	comp=Z,106nm,19.3s,baz=0.0,slow=32						
H01W1	Cape Leeuwin H	99.92	215	T	T	02 29 36.7	
	baz=143						
H01W2	Cape Leeuwin H	99.92	215	T	T	02 29 35.6	
	baz=143						
H01W3	Cape Leeuwin H	99.94	215	T	T	02 29 35.6	
	baz=143						
TORD	Torodi Ar. Bea	114.52	91	PP	PP	00 43 29.8	-2.6
	comp=Z,3.5nm,1.2s,baz=236,slow=6.4,SNR=6.4						
ESDC	Sonseca Array	121.77	61	PKP	PKPdf	00 42 48.0	-0.9
	comp=Z,0.2nm,0.4s,baz=270,slow=5.1,SNR=4.1						
CLL	Collm	135.69	49	e(pPKiKP)		00 43 22.0	
NJ2	Nanjing	140.00	280	eP	Pdif	00 40 36.9	-1.1
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NJ2	Nanjing	140.00	280	ePKP	PKiKP	00 43 25.4	-0.5
ARR	Arges	143.46	59	⇑P	PKPbc	00 43 26.3	-0.3
BUR08	Bucovina Ar. S	143.75	55	PKPdf	PKPbc	00 43 27.8	+0.4
BURAR	Bucovina Array	143.76	55	⇓P	PKPab	00 43 27.0	+0.3
BURAR	Bucovina Array	143.76	55	PKPdf	PKPbc	00 43 27.7	+0.2
NRIK	Noril'sk	143.87	350	PKP	PKPab	00 43 26.4	+0.1
	comp=Z,1.0nm,0.4s,baz=17,slow=6.8,SNR=2.1						
DOPR	Dopca	143.97	58	⇓P	PKPdf	00 43 29.4	-0.8
MLR	Muntele Rosu	144.38	58	⇓P	PKPab	00 43 29.2	0.0
MLR	Muntele Rosu	144.38	58	PKP	PKPab	00 43 28.2	-0.9
	comp=Z,4.2nm,0.7s,baz=320,slow=4.2,SNR=4.6						
MLR	Muntele Rosu	144.38	58	PKPdf	PKPab	00 43 28.8	-0.4
IZVR	Izvoarele	145.66	58	⇑P	PKPdf	00 43 32.5	-0.6
SCHL	Schela	145.71	58	⇓P	PKPdf	00 43 32.8	-0.3
SORM	Soroca	145.81	53	⇑P	PKPdf	00 43 33.0	-0.2
SCTR	Scanteiesti	145.81	58	⇑P	PKPdf	00 43 32.8	-0.5
HARR	Harsova	145.82	60	⇓P	PKPdf	00 43 33.6	+0.2
ATD	Arta Tunnel	145.83	125	PKPdf	PKPdf	00 43 33.5	-0.9
VLDR	Vladesti	145.86	58	⇓P	PKPdf	00 43 33.6	+0.2
AKASG	Malin Array Be	145.92	49	PKPbc	PKPdf	00 43 32.3	-1.0
	comp=Z,1.7nm,0.7s,baz=277,slow=3.7,SNR=11						
CFR	Carcaliu	145.94	59	⇑P	PKPdf	00 43 33.6	+0.1
TPGR	Topolog	146.16	59	⇑P	PKPab	00 43 35.7	0.0
TIRR	Tirgusor	146.17	60	⇓P	PKPdf	00 43 31.8	-2.2
MILM	Milestii Mici	146.26	56	⇑P	PKPdf	00 43 34.2	+0.2
KLMR	Klimovskoe	146.86	28	e	PKPdf	00 43 34.4	-0.2
KLMR				AMP		00 43 39.0	
	comp=Z,43nm,1.5s						
ENH	Enshi	147.15	274	PKPbc	PKPbc	00 43 38.8	+0.5
HHC	Hu-ho-hao-te	147.30	293	ePKPbc	PKPdf	00 43 36.5	+0.3
ISP	Isparta	147.53	72	PKPbc	PKPbc	00 43 39.4	+0.1
GYA	Guiyang	148.16	265	PKPbc	PKPbc	00 43 40.7	-0.6
BTO	Baotou	148.46	293	ePKPbc	PKPdf	00 43 35.8	-2.3
OBN	Obninsk	148.65	38	⇑P	PKPbc	00 43 40.9	-0.6
OBN	Obninsk	148.65	38	PKPbc	PKPbc	00 43 40.2	-1.2
	comp=Z,1.6nm,0.5s,baz=18,slow=6.4,SNR=5.0						
OBN	Obninsk	148.65	38		PKPbc	00 43 39.9	-1.5
EIL	Elat	149.39	89	PKPbc	PKPbc	00 43 43.4	-0.8
	comp=Z,8.4nm,1.1s,baz=263,slow=8.1,SNR=3.9						
BR231	Keskin MP Arra	149.43	69	PKPbc	PKPbc	00 43 43.5	-0.7
ANTO	Ankara	149.45	69	PKPbc	PKPbc	00 43 43.5	-0.6
ULN	Ulaanbaatar	149.88	307		PKPbc	00 43 44.3	-0.8
BRTR	Keskin Array B	150.09	69	PKPbc	PKPbc	00 43 44.0	-1.8
	comp=Z,4.0nm,0.9s,baz=258,slow=4.3,SNR=8.7						
BRTR	Keskin Array B	150.09	69		PKPbc	00 43 45.0	-0.8
CMAR	Chiang Mai Arr	150.27	245	PKPbc	PKiKP	00 43 47.5	0.0
	comp=Z,4.4nm,0.9s,baz=192,slow=1.4,SNR=17						
CMAR	Chiang Mai Arr	150.27	245		PKPbc	00 43 46.4	-0.2
SONM	Songino Array	150.32	308	PKPbc	PKPbc	00 43 45.3	-0.8
	comp=Z,6.3nm,0.9s,baz=117,slow=2.2,SNR=23						
SONM	Songino Array	150.32	308		PKPbc	00 43 44.9	-1.1
CHTO	Chiang Mai	150.49	245	PKPbc	PKPbc	00 43 47.3	+0.2
TLY	Talaya	150.80	316	PKPbc	PKPbc	00 43 46.6	-0.3
CD2	Chengdu	152.06	272	PKPbc	PKPdf	00 43 44.4	+0.5
GTA	Gaotai	156.31	290	ePKPbc	PKPdf	00 43 56.1	+6.3
GTA				sPKP		00 44 16.8	
GTA				PKPab	sPKPab	00 44 25.8	+4.5
ARU	Arti	156.53	17	PKPab	PKPab	00 44 16.2	-1.9
	comp=Z,0.4nm,0.5s,baz=309,slow=7.0,SNR=3.6						
ZALV	Zalesovo Beam	158.17	337	PKP	PKPdf	00 43 49.3	-2.1
	comp=Z,1.2nm,0.9s,baz=38,slow=2.6,SNR=5.5						
ZALV				PKPab	PKPab	00 44 24.6	-0.7
	comp=Z,0.7nm,0.5s,baz=20,slow=4.6,SNR=2.7						
ZALV	Zalesovo Beam	158.17	337		PKPdf	00 43 49.4	-2.0
AKTO	Aktyubinsk	161.55	26	PKPab	PKPab	00 44 38.3	-1.8
	comp=Z,1.0nm,0.7s,baz=290,slow=1.0,SNR=3.6						
KURBB	Kurchatov Arra	162.91	343	PKP	PKPdf	00 43 54.8	-1.9
	comp=Z,1.7nm,1.1s,baz=30,slow=0.9,SNR=6.8						
KURBB				PKPab	PKPab	00 44 45.5	-0.5
	comp=Z,1.7nm,1.0s,baz=23,slow=4.2,SNR=4.6						
WMQ	Urumqi	163.92	310	ePKP	PKPdf	00 43 59.2	+1.2
WMQ				LR	LR		
	comp=Z,150nm,18.1s						

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*SJA **03** 00:25:16.6±0.7, 31.°63S×72.°18W, h40^{km}±13^{km}, ML3.6, MW4.0*

*GUC **03** 00:25:17.8±0.8, 31.°65S×71.°97W, h39^{km}±3^{km}, ML3.6*

*NEIC **03** 00:25:19.3±0.6, 31.°62S±0.°03×72.°0W±0.°1, h34^{km}±9^{km}, mb4.2/3, ML3.6(GUC), Error ellipse: s-maj=17.4km s-min=4.5km az=85.0*

ISC 03 00:25:18.1±1.5, **31.°65S**±0.°03×**72.°24W**±0.°06, **h35**^{km}±5^{km}, **n60**, σ1.s**24**/95, **mb4.2**/3, **1C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	1.10	28	eP	Pn	00 25 36.1	-0.8
CO06				*i* S	Sn	00 25 49.9	-1.0
CO06				IAML		00 25 52.4	
	comp=E,3µm,0.3s						
CO06	Fray Jorge	1.10	28	Pn	Pn	00 25 36.1	-0.8
CO06				Sn	Sn	00 25 49.5	-1.4
VA06	Catapilco	1.21	139	eP	Pn	00 25 37.0	-1.5
VA06				*i* S	Sn	00 25 50.8	-2.9
VA06				IAML		00 25 55.6	
	comp=E,3µm,0.4s						
VA03	San Esteban	1.81	128	eP	Pn	00 25 46.2	-0.7
VA03				*i* S	Sn	00 26 07.2	-1.5
VA03				IAML		00 26 09.2	
	comp=E,2µm,0.4s						
VA03	San Esteban	1.81	128		Pn	00 25 46.0	-0.9
VA03				Sn	Sn	00 26 06.3	-2.4
VA03	San Esteban	1.81	128	eP	Pn	00 25 46.4	-0.5
VA03				IAML		00 26 11.0	
	comp=Z,1µm,0.4s						
MT02	Curacav	1.86	150	⇑*i*P	Pn	00 25 47.5	0.0
MT02				*i* S	Sn	00 26 09.8	+0.1
MT02	Curacav	1.86	150		Pn	00 25 47.2	-0.2
MT02	Curacav	1.86	150	eP	Pn	00 25 47.4	0.0
MT02				eS	Sn	00 26 10.1	+0.4
MT02				IAML		00 26 23.4	
	comp=Z,207nm,0.7s						
GO04	Tololo Observa	1.92	40	eP	Pn	00 25 47.5	-1.0
GO04				*i* S	Sn	00 26 10.8	-0.7
GO04	Tololo Observa	1.92	40	Pn	Pn	00 25 47.5	-1.0
GO04	Tololo Observa	1.92	40	eP	Pn	00 25 48.0	-0.5
CO05	La Serena	1.92	27	eP	Pn	00 25 48.4	+0.1
CO05				*i* S	Sn	00 26 11.6	+0.3
CO05				IAML		00 26 15.5	
	comp=N,1µm,0.4s						
PEL	Peldehue	1.99	139	eP	Pn	00 25 48.8	-0.5
PEL				*i* S	Sn	00 26 11.8	-1.2
PEL				IAML		00 26 16.4	
	comp=N,530nm,0.4s						
PEL	Peldehue	1.99	139		Pn	00 25 49.0	-0.3
PEL	Peldehue	1.99	139	eP	Pn	00 25 49.3	0.0
PEL				eS	Sn	00 26 13.9	+0.9
VA05	Santo Domingo	2.07	166	eP	Pn	00 25 50.1	-0.3
VA05				IAML		00 26 27.0	
	comp=E,670nm,0.5s						
VA05	Santo Domingo	2.07	166		Pn	00 25 50.5	+0.1
MT05	Renca	2.15	144	eP	Pn	00 25 51.7	+0.1
MT05				*i* S	Sn	00 26 16.7	-0.4
MT05				IAML		00 26 29.1	
	comp=E,913nm,0.4s						
MT05	Renca	2.15	144	Pn	Pn	00 25 51.3	-0.3
MT05	Renca	2.15	144	eP	Pn	00 25 51.8	+0.2
MT05				eS	Sn	00 26 17.7	+0.7
MT05				IAML		00 26 20.8	
	comp=Z,236nm,0.9s						
MT01	Popeta	2.36	160	eP	Pn	00 25 55.1	+0.7
MT01				*i* S	Sn	00 26 22.6	+0.4
MT01				IAML		00 26 36.2	
	comp=E,232nm,0.6s						
MT01	Popeta	2.36	160		Pn	00 25 55.0	+0.7
MT01	Popeta	2.36	160	eP	Pn	00 25 55.1	+0.7
MT01				eS	Sn	00 26 23.1	+1.0
MT01				IAML		00 26 34.0	
	comp=Z,162nm,0.6s						
MT09	Talagante	2.37	154	eP	Pn	00 25 55.8	+1.1
MT09				*i* S	Sn	00 26 22.9	+0.4
MT09				IAML		00 26 36.9	
	comp=E,312nm,0.6s						
MT09	Talagante	2.37	154		Pn	00 25 55.6	+0.9
AUSP	Uspallata	2.49	104	eP	Pn	00 25 56.8	+0.4
AUSP				eS	Sn	00 26 26.2	+0.5
RTLS	Leoncito	2.51	94	eP	Pn	00 25 57.0	+0.3
RTLS				eS	Sn	00 26 20.6	-5.6
RTLS				IAML		00 26 29.4	
	comp=Z,445nm,0.6s						
BO04	La Punta	2.71	150	eP	Pn	00 25 59.6	+0.4
BO04				*i* S	Sn	00 26 30.9	+0.2
BO04				IAML		00 26 42.2	
	comp=E,329nm,0.4s						
LMEL	Las Melosas	2.79	143	eP	Pn	00 26 01.1	+0.8
LMEL				*i* S	Sn	00 26 32.2	-0.6
LMEL				IAML		00 26 43.1	
	comp=E,275nm,0.1s						
AROD	Rodeo	2.79	59	eP	Pn	00 26 01.6	+0.9
AROD				eS	Sn	00 26 36.1	+2.9
BO01	Tunca	2.91	161	eP	Pn	00 26 02.8	+1.0
BO01	Tunca	2.91	161		Pn	00 26 02.8	+1.0
BO01	Tunca	2.91	161	eP	Pn	00 26 02.9	+1.0
BO01				IAML		00 26 51.1	
	comp=Z,84nm,1.1s						
ACCO	Cerro Coronel	2.92	70	eP	Pn	00 26 03.1	+0.8
ACCO				eS	Sn	00 26 38.6	+2.3
LCO	Las Campanas	2.94	27	eP	Pn	00 26 02.1	-0.4
LCO				*i* S	Sn	00 26 36.0	-0.9
LCO	Las Campanas	2.94	27	Pn	Pn	00 26 02.3	-0.3
LCO	Las Campanas	2.94	27	eP	Pn	00 26 02.2	-0.4
LCO				eS	Sn	00 26 35.9	-0.9
ASAL	Salagasta	3.04	109	eP	Pn	00 26 05.1	+1.4
ASAL				eS	Sn	00 26 38.6	-0.3
ZON	Zonda	3.04	89	eP	Pn	00 26 04.5	+0.8
ZON				eS	Sn	00 26 37.6	-1.3
ZON				IAML		00 26 55.0	
	comp=Z,156nm,0.5s						
ARCO	CERRO ARCO	3.04	114	eP	Pn	00 26 06.4	+2.5
ARCO				eS	Sn	00 26 38.6	-0.5
ARCO				IAML		00 26 55.5	
	comp=Z,155nm,0.5s						
GO05	Huala	3.37	176	eP	Pn	00 26 08.9	+0.7
GO05				*i* S	Sn	00 26 45.4	-1.5
GO05	Huala	3.37	176		Pn	00 26 08.9	+0.7
GO05	Huala	3.37	176	eP	Pn	00 26 09.0	+0.8
BO02	Sierra Bellavi	3.37	159	eP	Pn	00 26 09.4	+1.1
BO02	Sierra Bellavi	3.37	159	Pn	Pn	00 26 09.3	+1.1
AC04	Llanos de Chal	3.57	17	Pn	Pn	00 26 11.1	0.0
AC04	Llanos de Chal	3.57	17	eP	Pn	00 26 11.0	0.0
AC04				eS	Sn	00 26 53.6	+1.6
AC04				IAML		00 27 10.4	
	comp=Z,99nm,0.8s						
AVFE	Valle Fertil	4.21	78	eP	Pn	00 26 20.4	+0.5
AVFE				eS	Sn	00 27 08.6	+0.7
AVFE				IAML		00 27 14.2	
	comp=Z,123nm,0.5s						
GO03	Copiap	4.40	24	eP	Pn	00 26 22.3	-0.2
GO03	Copiap	4.40	24	Pn	Pn	00 26 20.8	-1.7
RFA	San Rafael	4.44	136	eP	Pn	00 26 23.1	+0.1
RFA				eP	Pn	00 26 25.0	+2.0
RFA				eP	Pn	00 26 27.1	+4.1
RFA				eS	Sn	00 27 27.1	+14
VCA	Vinchina	4.54	51	eP	Pn	00 26 14.8	-10
VCA				eS	Sn	00 27 18.1	+2.1
VCA				IAML		00 27 35.5	
	comp=Z,175nm,0.7s						
APLL	PUNTA DE LOS L	5.06	77	eP	Pn	00 26 31.2	-0.3
APLL				eS	Sn	00 27 29.6	+0.9
ACLC	CERRO LA CRUZ	5.07	65	eP	Pn	00 26 31.4	-0.3
ACLC				eS	Sn	00 27 28.8	-0.3
ACLC				eS	Sn	00 27 29.6	+0.5
AC02	Maricunga	5.51	30	Pn	Pn	00 26 37.5	-0.6
TRQA	Tornquist	10.57	130	Pn	Pn	00 27 46.5	-0.7
DBIC	Dimbokro	74.60	72	P	P	00 36 53.2	-0.7
DBIC				IAmb	IAmb	00 36 55.5	
	comp=Z,15nm,1.4s						
KOWA	Kowa	79.83	66	P	P	00 37 23.5	+0.3
KOWA				IAmb	IAmb	00 37 43.4	
	comp=Z,3.2nm,1.1s						
TORD	Torodi Ar. Bea	83.57	70	P	P	00 37 42.8	-0.2
TORD				IAmb	IAmb	00 37 44.1	
	comp=Z,0.7nm,0.8s						

IDC 03 00:31:42.2±1.7, **34.°19S**×**109.°63W**, **h0**^{km}, **mb3.5**/3, **mb1 3.9**/3, **mb1mx3.8**/16, **mbtmp3.5**/3, **Error ellipse: s-maj=60.5km s-min=45.8km az=159.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	41.23	75	P	P	00 39 29.6	-0.2
	0.8nm,0.6s,baz=210,slow=8.1,SNR=2.5						
TXAR	Lajitas Array	63.43	6	P	P	00 42 14.3	+0.5
	0.3nm,0.9s,baz=186,slow=7.2,SNR=1.7						
PDAR	Pinedale Array	76.59	0	P	P	00 43 34.1	-0.4
	0.6nm,0.8s,baz=168,slow=5.4,SNR=3.6						
SONM	Songino Array	149.88	308	PKPbc	PKPbc	00 51 33.6	-0.6
	1.3nm,1.1s,baz=64,slow=3.4,SNR=3.4						
CMAR	Chiang Mai Arr	150.11	246	PKPbc	PKPbc	00 51 35.2	-0.3
	0.8nm,0.4s,baz=176,slow=1.1,SNR=4.8						

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*CFUSG **03** 00:36:24.4, 39.°34N×40.°20E, h15^{km}, mb3.6/1, Eastern Turkey*

*ISK **03** 00:36:24.6, 39.°27N×40.°22E, h1^{km}, ML3.9/26*

*DDA **03** 00:36:25.7, 39.°27N×40.°20E, h10^{km}±5^{km}, MW4.0*

*IDC **03** 00:36:26.4±0.8, 39.°36N×40.°25E, h0^{km}, mb3.5/8, mb1 3.6/14, mb1mx3.4/43, mbtmp3.5/14, ML3.0/5, MS3.7/5, Ms1 3.7/5, ms1mx3.0/44, Error ellipse: s-maj=14.2km s-min=8.3km az=162.0*

*NEIC **03** 00:36:28.4±2.6, 39.°27N±0.°04×40.°29E±0.°07, h10^{km}±1^{km}, mb4.3/13, ML3.9(ISK), Error ellipse: s-maj=9.2km s-min=5.7km az=63.0*

ISC 03 00:36:26.0±1.1, **39.°27N**±0.°02×**40.°21E**±0.°01, **h0**^{km}±8^{km}, **n123**, σ1.s**60**/154, **mb4.0**/12, **MS3.9**/4, **12C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YEDI	Yedisu-Bingol	0.31	56	PG	Pg	00 36 32.1	+0.2
YEDI				SG	Sg	00 36 36.9	+1.0
BNGB	Bingl	0.46	127	PG	Pg	00 36 34.5	-0.2
BNGB				SG	Sg	00 36 41.9	+1.3
ERZN	Erzincan	0.50	310	PG	Pg	00 36 35.3	-0.3
ERZN				SG	Sb	00 36 43.4	-2.2
TNCL	Tunceli-Merkez	0.54	254	⇑*i*P	Pg	00 36 36.2	-0.2
TNCL				*i* S	Sb	00 36 44.2	-2.7
TNCL				IAML		00 36 48.0	
	comp=E,8µm,0.3s						
EUZM	Uzumlu	0.59	318	⇑*i*P	Pg	00 36 37.3	-0.1
EUZM				*i* S	Sb	00 36 47.0	-1.4
KOVA	Elazig, Kovanc	0.64	209	⇓*i*P	Pg	00 36 38.5	+0.2
KOVA				IAML		00 36 48.0	
	comp=E,4µm,0.4s						
KOVA				*i* S	Sb	00 36 48.1	-1.6
KOVA				IAML		00 36 49.0	
	comp=N,4µm,0.4s						
KARO	Karliova-Bingo	0.65	86	PG	Pg	00 36 38.2	-0.3
KARO				SG	Sb	00 36 48.2	-1.8
SLHN	Bingol, Solhan	0.70	116	⇑*i*P	Pg	00 36 39.1	-0.4
SLHN				*i* S	Sb	00 36 51.5	0.0
SLHN				IAML		00 36 53.0	
	comp=N,5µm,0.5s						
SLHN				IAML		00 36 56.0	
	comp=E,8µm,0.4s						
HANI	Diyarbakir_Han	0.86	170	⇓*i*P	Pg	00 36 42.3	-0.3
HANI				*i* S	Sn	00 36 56.9	-1.9
EMRE	Erzurum,Aziziy	0.96	37	⇑*i*P	Pg	00 36 44.3	-0.2
EMRE				*i* S	Sb	00 36 57.9	-1.2
VRTB	Varto-Mus	0.97	96	*i* P	Pg	00 36 43.7	-0.9
VRTB				*i* S	Sg	00 36 57.6	+0.4
VRTB	Varto-Mus	0.97	96	PG	Pg	00 36 44.2	-0.4
VRTB				SG	Sb	00 36 58.4	-0.8
BAYB	BAYBURT	0.99	2	*i* P	Pg	00 36 43.5	-1.5
BAYB				*i* S	Sg	00 36 57.8	-0.1
EJDE	Erzurum, Palan	1.01	56	⇑*i*P	Pg	00 36 44.2	-1.2
EJDE				*i* S	Sb	00 37 00.1	-0.7
ERZM	Erzurum	1.09	54	⇑*i*P	Pg	00 36 46.5	-0.5
ERZM				*i* S	Sn	00 37 05.3	+0.4
BAYT	Aydıntepe-Bayb	1.13	357	PN	Pg	00 36 46.9	-0.7
SVRC	Sivrice-ELAZID	1.14	219	PN	Pb	00 36 47.3	-1.3
MUSM	Mu-Merkez	1.15	118	⇑*i*P	Pb	00 36 46.2	-2.6
MUSM				*i* S	Sn	00 37 03.9	-2.0
KELT	Kelkit	1.15	320	*i* P	Pn	00 36 47.9	-1.7
KELT				*i* S	Sn	00 37 06.3	+0.2
KRIK	Erzurum-spir	1.20	27	⇑*i*P	Pg	00 36 49.0	0.0
KRIK				*i* S	Sn	00 37 06.6	-0.9
ELZG	Elazig	1.23	232	*i* P	Pn	00 36 48.5	-2.2
ELZG				*i* S	Sb	00 37 04.1	-2.6
REFA	Refahiye_ERZN	1.29	300	*i* P	Pn	00 36 49.5	-1.9
REFA				*i* S	Sn	00 37 08.5	-1.0
REFA				IAML		00 37 16.0	
	comp=N,555nm,0.8s						
ILIC	ilic-Erzincan	1.29	279	PN	Pb	00 36 50.1	-1.1
DYBB	Diyarbakir	1.31	183	PN	Pg	00 36 51.0	-0.2
GUMT	Gumushane	1.32	335	PN	Pg	00 36 50.8	-0.5
KEMA	Kemaliye	1.34	271	⇑*i*P	Pn	00 36 50.2	-1.8
KEMA				*i* S	Sg	00 37 10.3	+1.3
DIYA	Diyarbakir	1.34	183	⇓*i*P	Pg	00 36 52.1	+0.3
DIYA				*i* S	Sg	00 37 12.5	+3.3
SVAN	Silvan-Diyarba	1.35	145	⇓*i*P	Pg	00 36 51.7	-0.3
SVAN				*i* S	Sg	00 37 11.0	+1.5
SVAN				IAML		00 37 14.0	
	comp=N,712nm,0.4s						
SVAN				IAML		00 37 16.0	
	comp=E,584nm,0.6s						
SVAN	Silvan-Diyarba	1.35	145	PN	Pb	00 36 51.5	-0.8
EKAR	Karacoban	1.44	90	*i* P	Pg	00 36 53.9	+0.4
KOPR	Koprukoy-ERZUR	1.46	60	PN	Pb	00 36 52.8	-1.3
ARPR	Arapgir-MALATY	1.47	264	PN	Pb	00 36 52.9	-1.4
HOMI	Horasan	1.52	59	*i* P	Pn	00 36 53.4	-1.3
HOMI				*i* S	Sg	00 37 19.2	+4.4
ALUC	Giresun/Alucra	1.55	314	⇑*i*P	Pb	00 36 54.6	-1.1
ALUC				*i* S	Sg	00 37 19.1	+3.4
GURO	Guroymak-BITLI	1.59	116	PN	Pn	00 36 54.8	-0.7
GURO	Guroymak-BITLI	1.59	116		Pn	00 36 54.4	-1.1
MALT	Malatya	1.69	236	PN	Pb	00 36 56.3	-1.7
MACK	Trabzon	1.71	349	*i* P	Pb	00 36 57.7	-0.7
MACK				*i* S	Sg	00 37 25.3	+4.3
BLIS	Bitlis-Merkez	1.71	119	*i* P	Pb	00 36 57.4	-1.0
BLIS				*i* S	Sn	00 37 18.6	-1.2
BLIS				IAML		00 37 28.0	
	comp=N,930nm,0.8s						
KTUT	Trabzon	1.75	349	PN	Pb	00 36 57.4	-1.6
HEKM	Malatya_Hekimh	1.80	258	*i* P	Pb	00 36 58.7	-1.3
HEKM				*i* S	Sg	00 37 25.8	+2.0
MAZI	Mazidag	1.81	174	PN	Pb	00 36 58.4	-1.8
SUSE	Susehri	1.81	302	*i* P	Pg	00 37 00.1	-0.7
SUSE				*i* S	Sg	00 37 26.2	+1.9
MLAZ	Malazgirt-MUS	1.82	93	PN	Pb	00 36 58.4	-1.9
EATA	Eleskirt	1.86	71	*i* P	Pb	00 37 00.1	-1.0
EATA				*i* S	Sg	00 37 30.3	+4.6
CUZAR	Zara_SIVAS	1.99	289	*i* P	Pb	00 37 02.1	-1.1
CUZAR				*i* S	Sg	00 37 32.1	+2.2
MARD	Mardin	2.00	167	*i* P	Pn	00 36 60.0	-1.2
DDEM	Demirkent	2.01	35	*i* P	Pn	00 37 01.0	-0.2
DDEM				*i* S	Sg	00 37 30.6	+0.1
ADCV	BITLIS_Adilcev	2.01	102	*i* P	Pb	00 37 03.2	-0.3
AKCD	Akcadag	2.04	242	*i* P	Pb	00 37 02.4	-1.6
AKCD				*i* S	Sg	00 37 30.4	-1.1
MIDY	Mardin/Midyat-	2.08	153	*i* P	Pb	00 37 03.5	-1.1
MIDY				*i* S	Sb	00 37 31.1	0.0
MIDY				IAML		00 37 35.0	
	comp=E,537nm,0.7s						
MIDY				IAML		00 37 36.0	
	comp=N,617nm,0.7s						
DBAD	Bademkaya	2.08	33	*i* P	Pb	00 37 02.8	-2.0
DBAD				*i* S	Sg	00 37 31.6	-1.4
SENK	Senkaya-Erzuru	2.09	51	PN	Pn	00 37 02.1	-0.4
CUKAN	kangal_SIVAS	2.13	272	*i* P	Pb	00 37 04.4	-1.2
CUKAN				*i* S	Sg	00 37 34.0	-0.6
AGRB	Hanur-Agry	2.17	81	PN	Pn	00 37 03.3	-0.3
DAGI	Agillar	2.23	35	*i* P	Pn	00 37 04.4	+0.1
DAGI				*i* S	Sg	00 37 37.2	-0.4
DARE	Darende-Malaty	2.24	253	PN	Pn	00 37 04.2	-0.3
PERV	Siirt/Pervari-	2.25	125	*i* P	Pb	00 37 07.0	-0.6
SANL	SANLIURFA_Merk	2.31	205	*i* P	Pb	00 37 06.4	-2.1
AKDM	Akdamar-Van	2.36	113	PN	Pn	00 37 06.6	+0.5
CUGUR	Gurin_SVAS	2.36	258	*i* P	Pb	00 37 09.1	-0.3
CUGUR				*i* S	Sg	00 37 43.0	+1.2
KOTA	Agri, Merkez-K	2.37	76	*i* P	Pb	00 37 08.2	-1.6
SIRT	Sirnak	2.48	135	PN	Pn	00 37 07.8	0.0
SIRT	Sirnak	2.48	135		Pn	00 37 08.2	+0.4
VANB	Van	2.56	104	PN	Pn	00 37 09.3	+0.4
KARS	Kars	2.59	57	PN	Pn	00 37 09.2	-0.1
KARS	Kars	2.59	57		Pn	00 37 09.6	+0.3
CLDR	Caldiran	2.88	91	*i* P	Pg	00 37 19.7	-1.5
CLDR	Caldiran	2.88	91	PN	Pn	00 37 13.3	-0.1
OZAP	Van, Ozalp-Mer	3.01	100	*i* P	Pg	00 37 22.9	-0.7
IGDI	IGDIR	3.05	77	*i* P	Pb	00 37 21.1	-0.1
GAZ	Gaziantep	3.16	229		Pb	00 37 20.3	-2.7
CUKT	Cukurca	3.35	126	*i* P	Pg	00 37 29.4	-0.8

BNN	Bunyan	3.43	264	Pn	Pn	00 37 22.4	+1.7
GNI	Garni	3.60	74	Pn	Pn	00 37 23.8	+0.6
	comp=N,0.5nm,0.3s,baz=259,slow=5.2,SNR=5.0						
GNI				Pg	Pg	00 37 32.3	-2.8
	comp=N,6.7nm,0.3s,baz=338,slow=0.9,SNR=30						
GNI	Garni	3.60	74	Pn	Pn	00 37 24.1	+0.8
ONI	Oni	4.13	35		Pn	00 37 30.7	+0.4
KBZ	Khabaz	4.89	23	Pn	Pn	00 37 40.5	-0.3
	comp=N,0.1nm,0.3s,baz=210,slow=14,SNR=2.0						
KBZ				Lg	Lg	00 39 01.2	
	baz=265,slow=22,SNR=1.7						
KIV	Kislovodsk	5.04	21		Pn	00 37 43.7	+0.8
KVAR	Kislovodsk Arr	5.04	21	Pn	Pn	00 37 43.7	+0.8
	baz=225,slow=18,SNR=2.7						
BR131	Keskin Array S	5.11	277	Pn	Pn	00 37 44.9	+1.0
BRTR	Keskin Array B	5.11	277	Pn	Pn	00 37 45.0	+1.1
	comp=N,1.9nm,0.3s,baz=104,slow=14,SNR=24						
BRTR				Lg	Lg	00 39 11.3	
	baz=93,slow=25,SNR=1.8						
BRTR				LR	LR	00 39 56.7	
	comp=N,170nm,19.1s,baz=190,slow=41						
BRTR	Keskin Array B	5.11	277	Pn	Pn	00 37 46.6	+2.7
BR231	Keskin MP Arra	5.78	278		Pn	00 37 57.0	+3.9
SUDU	Sudak	6.83	327	*e*P	Pn	00 38 05.8	-1.5
SUDU				Pm		00 38 07.2	
	comp=Z,19nm,1.0s						
MMAI	Mount Meron Ar	7.35	213	Pn	Pn	00 38 17.4	+2.7
	comp=Z,0.7nm,0.3s,baz=49,slow=14,SNR=5.5						
MMAI				Lg	Lg	00 40 24.1	
	comp=Z,1.1nm,0.3s,baz=28,slow=28,SNR=2.2						
ASF	Jabal al Asfar	7.58	202	Pn	Pn	00 38 18.8	+1.1
	comp=Z,0.3nm,0.3s,baz=358,slow=22,SNR=6.0						
ASF				Lg	Lg	00 40 29.2	
	comp=Z,0.8nm,0.3s,baz=356,slow=20,SNR=2.4						
GHAJ	Ghor Haditha	8.81	207	Pn	Pn	00 38 35.9	+1.4
EIL	Elat	10.51	206	Lg	Lg	00 42 02.6	
	comp=Z,0.1nm,0.3s,baz=62,slow=18,SNR=1.6						
BURAR	Bucovina Array	13.71	312	Pn	P	00 39 46.2	-4.4
BUR08	Bucovina Ar. S	13.73	312	Pn	P	00 39 46.6	-4.3
AKASG	Malin Array Be	13.81	329	Pn	Pn	00 39 44.0	+1.1
	comp=Z,0.1nm,0.3s,baz=137,slow=14,SNR=2.2						
GZR	Gura Zlata	14.27	301	⇑P	P	00 40 02.2	+5.4
DRGR		14.83	306	⇓P	P	00 40 08.5	+5.5
SIRR	Siria	15.30	303	⇑P	P	00 40 13.4	+5.2
RAYN	Ar Rayn	16.33	162	Pn	Pn	00 40 15.7	-1.0
AKTO	Aktyubinsk	16.80	43	Pn	P	00 40 22.1	-2.7
	comp=Z,0.1nm,0.3s,baz=236,slow=11,SNR=4.6						
ABKAR	Akbulak array	17.25	48	Pn	P	00 40 28.1	-1.7
ABKAR	Akbulak array	17.25	48	Pn	P	00 40 27.6	-2.3
ABKAR				IAmb	IAmb	00 40 43.1	
	comp=Z,3.0nm,1.2s						
UOSS	Minazif	19.64	132	P	P	00 40 55.0	-1.2
UOSS				IAmb	IAmb	00 41 11.0	
	comp=Z,8.7nm,0.9s						
NRCA	Norcia	20.71	289	P	Pn	00 41 07.5	-2.7
ARU	Arti	21.01	29	P	P	00 41 11.8	+0.8
	comp=Z,3.2nm,0.8s,baz=225,slow=9.3,SNR=5.1						
ARU				LR	LR	00 50 40.9	
	comp=Z,157nm,18.7s,baz=58,slow=41						
ARU	Arti	21.01	29	P	P	00 41 11.5	+0.5
ARU				IAmb	IAmb	00 41 18.3	
	comp=Z,7.5nm,0.8s						
GERES	GERESS Array B	21.23	305	P	P	00 41 15.0	+1.6
	comp=Z,0.2nm,0.3s,baz=104,slow=10,SNR=2.6						
GERES	GERESS Array B	21.23	305	P	P	00 41 15.4	+2.0
WSAR	Wadi Sarin	22.36	130	P	P	00 41 26.9	+1.2
	comp=Z,2.9nm,0.6s,baz=339,slow=9.7,SNR=5.9						
FINES	FINESS Array B	23.86	343	P	P	00 41 40.7	0.0
	comp=Z,2.6nm,0.7s,baz=146,slow=10,SNR=12						
FINES	FINESS Array B	23.86	343	P	P	00 41 42.6	+1.9
FIA1	FINESS Array S	23.86	343	P	P	00 41 42.2	+1.5
KEST	Kesra	24.68	272	P	P	00 41 49.8	+1.0
	comp=Z,4.5nm,1.0s,baz=25,slow=5.4,SNR=3.5						
KEST	Kesra	24.68	272	P	P	00 41 49.7	+1.0
KEST				IAmb	IAmb	00 41 56.0	
	comp=Z,8.2nm,1.1s						
BVAR	Borovoye Array	24.80	46	P	P	00 41 49.6	+0.1
	comp=Z,0.6nm,0.6s,baz=228,slow=19,SNR=2.6						
SENIN	Lac Senin/Sane	25.03	297	P	P	00 41 54.0	+2.1
SENIN				IAmb	IAmb	00 42 17.4	
	comp=Z,8.2nm,1.5s						
BNI	Bardonecchia	25.40	294	P	P	00 41 56.0	+0.8
BNI				IAmb	IAmb	00 42 12.7	
	comp=Z,9.2nm,1.3s						
KURBB	Kurchatov Arra	29.08	54	P	P	00 42 29.2	+1.2
	comp=Z,0.2nm,0.7s,baz=264,slow=8.5,SNR=2.4						
ESDC	Sonseca Array	33.85	285	P	P	00 43 12.4	+2.3
	comp=Z,0.1nm,0.3s,baz=65,slow=8.2,SNR=1.5						
TORD	Torodi Ar. Bea	42.77	243	LR	LR	01 04 24.6	
	comp=Z,100nm,19.4s,baz=75,slow=39						
KOWA	Kowa	45.93	250	P	P	00 44 52.6	+1.9
KOWA				IAmb	IAmb	00 45 11.3	
	comp=Z,6.2nm,1.5s						
DBIC	Dimbokro	51.88	243	P	P	00 45 36.2	-0.2
DBIC				IAmb	IAmb	00 45 49.4	
	comp=Z,11nm,1.4s						
LBTB	Lobatse	65.39	195	P	P	00 47 10.7	+0.3
BOSA	Boshof	68.96	194	LR	LR	01 17 44.6	
	comp=Z,108nm,18.1s,baz=216,slow=36						
BOSA	Boshof	68.96	194	P	P	00 47 32.5	-0.6
PETK	Petropavlovsk-	73.32	34	LR	LR	01 25 03.6	
	comp=Z,143nm,18.1s,baz=123,slow=40						

IDC 03 00:37:02.9±1.6**,34°.25S**×**109°.27W,h0km,mb3.6**/2**, mb1 3.9**/2**,mb1mx3.7**/17**,mbtmp3.6**/2**,Error ellipse: s-maj=76.6km s-min=45.6km az=166.0,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	40.95	75	P	P	00 44 47.9	-0.2
	1.1nm,0.9s,baz=213,slow=8.5,SNR=2.6						
PDAR	Pinedale Array	76.65	360	P	P	00 48 56.0	+0.5
	0.4nm,0.8s,baz=152,slow=7.8,SNR=3.7						
SONM	Songino Array	150.16	308	PKPbc	PKPbc	00 56 54.0	-1.5
	1.5nm,0.9s,baz=102,slow=2.2,SNR=5.8						
CMAR	Chiang Mai Arr	150.36	245	PKPbc	PKiKP	00 56 57.1	-0.4
	0.8nm,0.3s,baz=197,slow=1.9,SNR=5.2						

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*IDC **03** 00:48:24.7±1.7,34°.67S×108°.81W,h0km,mb4.8/2, mb1 5.2/2,mb1mx4.0/28,mbtmp4.8/2,Error ellipse: s-maj=104.5km s-min=52.4km az=105.0*

*NEIC **03** 00:48:28.2±1.1,34°.5S±0°.2×108°.6W±0°.1,h10km±1km, mb4.7/18,Error ellipse: s-maj=25.7km s-min=19.3km az=167.0*

ISC 03 00:48:27.0±0.7**,34°.4S**±0°.2×**108°.7W**±0°.1**,h10km,n36, σ1s05**/38**,mb4.6**/10**,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	Zonda	33.58	97	P	P	00 55 08.0	+0.6
LPAZ	La Paz	40.57	74	P	P	00 56 06.9	-0.7
PTLB	Pontes e Lacer	48.27	80	P	P	00 57 08.3	-0.2
PTLB				IAmb	IAmb	00 57 13.2	
	comp=Z,7.5nm,1.3s						
AQDB	Aquidauana	48.57	88	P	P	00 57 09.6	-1.2
AQDB				IAmb	IAmb	00 57 20.5	
	comp=Z,8.0nm,1.3s						
BRU2	Volcan	49.55	35	P	P	00 57 19.2	+0.8
ROSC	El Rosal	50.76	47	P	P	00 57 28.1	+0.1
ZARC	Zaragoza, Cauc	52.57	44	P	P	00 57 41.8	+0.8
MACA	Manacapuru-AM	54.36	66	P	P	00 57 53.0	-1.2
VNA3	Neumayer Olymp	60.66	159	P	P	00 58 39.8	+2.0
VNA1	Neumayer--Stat	61.30	158	P	P	00 58 44.0	+1.8
VNA2	Neumayer--Watz	61.46	158	P	P	00 58 45.4	+2.1
	baz=261,slow=6.3						
SNAA	Sanae	62.49	160	P	P	00 58 51.6	+1.3
SNAA	Sanae	62.49	160	P	P	00 58 50.2	-0.1
SNAA				IAmb	IAmb	00 59 02.4	
	comp=Z,8.2nm,1.3s						
435B	Jarrell	65.69	11	P	P	00 59 12.5	+0.9
MSTX	Muleshoe	68.25	5	P	P	00 59 28.1	+0.2
MSTX				IAmb	IAmb	00 59 39.6	
	comp=Z,10nm,1.2s						
X18A	Snowflake	68.58	359	P	P	00 59 31.2	+1.0
X18A				IAmb	IAmb	00 59 39.2	
	comp=Z,6.6nm,1.5s						
CCUT	Cedar City	71.72	356	P	P	00 59 50.4	+1.0
NV11	Mina Array Sit	73.00	352	P	P	00 59 58.4	+1.5
NVAR	Mina Array Bea	73.01	352	P	P	00 59 58.4	+1.4
	comp=Z,1.0nm,0.6s,baz=182,slow=7.5,SNR=7.7						
KVN	Kaiserville	73.60	352	P	P	01 00 01.5	+1.0
BMN	Battle Mountai	74.88	353	P	P	01 00 08.9	+1.1
BMN				IAmb	IAmb	01 00 19.6	
	comp=Z,9.1nm,1.4s						
PD31	Pinedale Array	76.80	359	P	P	01 00 19.2	+0.3
PD31				IAmb	IAmb	01 00 29.5	
	comp=Z,9.4nm,1.6s						
PDAR	Pinedale Array	76.80	359	P	P	01 00 19.4	+0.4
	comp=Z,16nm,0.3s,baz=160,slow=4.7,SNR=4.3						
HLID	Hailey	77.77	356	P	P	01 00 24.4	+0.2
HLID				IAmb	IAmb	01 00 36.1	
	comp=Z,8.2nm,1.4s						
MCMT	McKenzie Canyo	78.95	357	P	P	01 00 31.8	+1.0
NEW	Newport	82.64	354	P	P	01 00 50.9	+0.7
NEW				IAmb	IAmb	01 01 02.6	
	comp=Z,9.7nm,1.4s						
AKASG	Malin Array Be	145.54	49	PKPbc	PKPdf	01 08 04.3	-0.7
	comp=Z,0.1nm,0.2s,baz=269,slow=3.1,SNR=5.8						
AKASG	Malin Array Be	145.54	49		PKPdf	01 08 04.7	-0.2
ENH	Enshi	147.57	273		PKPbc	01 08 11.2	-0.6
OBN	Obninsk	148.31	39	PKPdf	PKPdf	01 08 09.4	0.0
SONM	Songino Array	150.60	308	PKPbc	PKPbc	01 08 17.2	-1.8
	comp=Z,1.0nm,0.7s,baz=90,slow=1.7,SNR=5.2						
SONM	Songino Array	150.60	308		PKPbc	01 08 17.9	-1.2
CMAR	Chiang Mai Arr	150.69	244	PKPbc	PKPbc	01 08 19.1	-0.8
	comp=Z,0.5nm,0.3s,baz=161,slow=1.2,SNR=8.8						
CMAR	Chiang Mai Arr	150.69	244		PKPbc	01 08 18.6	-1.3
CMAR				PKPab	pPKPab	01 08 28.9	-0.3
CHTO	Chiang Mai	150.91	245	PKPbc	PKPbc	01 08 19.4	-1.0
CHTO					pPKPab	01 08 29.5	-0.6
TLY	Talaya	151.03	316	PKPbc	PKiKP	01 08 20.4	+0.1

IDC 03 00:59:21.7±2.7**,27°.54N**×**88°.54E,h0km,mb3.4**/4**, mb1 3.4**/5**,mb1mx3.3**/38**,mbtmp3.3**/5**,ML3.3**/1**,MS3.2**/2**, Ms1 3.2**/2**,ms1mx2.7**/43**,Error ellipse: s-maj=101.1km s-min=25.8km az=71.0,Sikkim**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	19.84	347	P	P	01 03 53.9	-0.2
	0.1nm,0.3s,baz=170,slow=9.1,SNR=4.3						
SONM	Songino Array	24.59	30	P	P	01 04 43.6	0.0
	0.8nm,0.9s,baz=219,slow=11,SNR=3.6						
ZALV	Zalesovo Beam	26.53	355	P	P	01 05 01.1	+0.2
	0.3nm,0.4s,baz=160,slow=4.6,SNR=2.1						
PSI	Prapat	26.53	156	LR	LR	01 17 14.6	
	comp=Z,43nm,21.0s,baz=342,slow=40						
MJAR	Matsushiro Arr	42.66	65	LR	LR	01 26 58.9	
	comp=Z,44nm,21.9s,baz=120,slow=39						
WRA	Warramunga Arr	64.76	132	P	P	01 10 03.2	+0.9
	0.6nm,1.0s,baz=324,slow=6.8,SNR=2.4						
ASAR	Alice Springs	67.14	135	P	P	01 10 16.7	-0.9
	0.1nm,0.3s,baz=320,slow=7.1,SNR=1.6						

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*IDC **03** 00:59:32.1±1.1,34°.77S×109°.59W,h0km,mb4.3/6, mb1 4.4/6,mb1mx4.2/26,mbtmp4.3/6,MS4.0/9,Ms1 4.0/9, ms1mx3.9/19,Error ellipse: s-maj=41.2km s-min=26.7km az=15.0*

*NEIC **03** 00:59:34.4±2.0,34°.65S±0°.09×109°.3W±0°.2,h10km±1km, mb4.7/42,Error ellipse: s-maj=25.0km s-min=12.0km az=246.0*

*GCMT **03** 00:59:36.4±0.4,34°.69S±0°.02×109°.37W±0°.03,h20km±1km, MW4.9/80,Moment Tensor Solution. s10,c11; s80,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.21±.13; $M_{\theta\theta}$-1.31±.11; $M_{\phi\phi}$1.51±.12; $M_{r\theta}$-0.36±.22; $M_{\theta\phi}$-1.94±.10; $M_{\phi r}$0.48±.22; Best double couple: $M_0$2.46300×10^{16} NP1:ϕ_s287.00000°,δ84.00000°,λ169.00000°. NP2: ϕ_s19.00000°,δ79.00000°,λ6.00000°. Principal axes: T 2.6210, Plg12.0000°, Azm243.0000°; N -0.3230, Plg78.0000°, Azm78.0000°; P -2.3040, Plg3.0000°, Azm333.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 00:59:34.0±0.6**,34°.7S**±0°.1×**109°.3W**±0°.1**,h10km,n84, σ0s96**/76**,mb4.7**/27**,MS4.0**/8**,2C,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	7.53	360	LR	LR	01 03 33.5	
	comp=Z,2µm,18.2s,baz=195,slow=32						
MT09	Talagante	31.59	99	P	P	01 05 56.6	-0.4
MT09				IAmb	IAmb	01 06 11.2	
	comp=Z,12nm,1.1s						
AC02	Maricunga	35.23	88	P	P	01 06 29.8	+0.5
LVC	Limon Verde	37.22	82	P	P	01 06 48.3	+2.1
	comp=Z,6.3nm,0.9s,baz=242,slow=7.8,SNR=3.9						
LVC	Limon Verde	37.22	82	P	P	01 06 45.5	-0.7
LVC				IAmb	IAmb	01 06 52.5	
	comp=Z,18nm,1.2s						
PB09	IPOC Station P	37.34	81	P	P	01 06 45.9	-1.0
PB01	IPOC Station P	37.51	79	P	P	01 06 48.0	-0.3
PB01				IAmb	IAmb	01 07 00.2	
	comp=Z,24nm,1.2s						
PB08	IPOC Station P	38.23	78	P	P	01 06 53.8	-0.9
PB08				IAmb	IAmb	01 06 57.3	
	comp=Z,14nm,1.2s						
LPAZ	La Paz	41.11	74	P	P	01 07 19.8	+0.7
	comp=Z,3.1nm,0.9s,baz=261,slow=8.5,SNR=5.4						
LPAZ				LR	LR	01 20 30.5	
	comp=Z,147nm,19.1s,baz=233,slow=30						
LPAZ	La Paz	41.11	74	P	P	01 07 19.5	+0.5
CZSB	Cruzeiro do Su	43.02	60	P	P	01 07 34.2	+0.3
CPUP	Villa Florida	45.15	94	LR	LR	01 23 40.7	
	comp=Z,164nm,18.0s,baz=243,slow=32						
RAR	Rarotonga	46.10	273	LR	LR	01 22 41.4	
	comp=Z,169nm,21.0s,baz=128,slow=30						
ETMB	Extrema	46.46	68	P	P	01 08 01.7	+0.3
ETMB				IAmb	IAmb	01 08 06.2	
	comp=Z,12nm,1.5s						
AQDB	Aquidauana	49.06	88	P	P	01 08 21.5	-0.1
AQDB				IAmb	IAmb	01 08 26.1	
	comp=Z,7.5nm,1.0s						
ROSC	El Rosal	51.31	47	LR	LR	01 26 26.6	
	comp=Z,148nm,19.8s,baz=240,slow=31						
ROSC	El Rosal	51.31	47	P	P	01 08 38.4	-0.7
ZARC	Zaragoza, Cauc	53.11	45	P	P	01 08 51.1	-0.9
MACA	Manacapuru-AM	54.92	66	P	P	01 09 05.5	+0.3
QSPA	South Pole Qui	55.52	180	P	P	01 09 10.3	+1.2
QSPA				IAmb	IAmb	01 09 18.1	
	comp=Z,9.7nm,1.3s						
BDFB	Brasilia	57.80	87	P	P	01 09 26.6	+0.7
	comp=Z,1.7nm,0.6s,baz=233,slow=15,SNR=3.7						
BAUV	El Baul	58.38	50	P	P	01 09 29.2	-0.5
VNA3	Neumayer Olymp	60.58	159	P	P	01 09 43.5	-0.8
VNA1	Neumayer--Stat	61.23	158	P	P	01 09 47.9	-0.8
VNA2	Neumayer--Watz	61.38	159	P	P	01 09 49.3	-0.5
	baz=259,slow=6.4						
SNAA	Sanae	62.40	160	P	P	01 09 55.3	-1.4
SNAA	Sanae	62.40	160	P	P	01 09 55.6	-1.1
SNAA				IAmb	IAmb	01 10 01.8	
	comp=Z,6.0nm,1.1s						
TXAR	Lajitas Array	63.90	6	P	P	01 10 07.3	+0.3
	comp=Z,1.4nm,1.0s,baz=174,slow=9.1,SNR=8.3						
TXAR				LR	LR	01 30 21.7	
	comp=Z,66nm,19.0s,baz=0.0,slow=29						
TXAR	Lajitas Array	63.90	6	P	P	01 10 06.1	-0.9
JCT	Junction City	65.43	9	P	P	01 10 16.1	-0.9
MNTX	Cornudas Mount	66.13	4	P	P	01 10 19.4	-2.0
MNTX				IAmb	IAmb	01 10 28.1	
	comp=Z,6.9nm,1.5s						
TUC	Tucson	66.65	359	P	P	01 10 25.6	+0.7
TUC				IAmb	IAmb	01 10 29.3	
	comp=Z,3.7nm,0.8s						
X16A	Lo Mia Camp, P	68.77	358	P	P	01 10 37.9	-0.4
X18A	Snowflake	68.86	359	P	P	01 10 37.8	-1.0
X18A				IAmb	IAmb	01 10 43.5	
	comp=Z,6.8nm,1.0s						
GSC	Goldstone, Bar	69.97	353	P	P	01 10 45.6	+0.1
GSC				IAmb	IAmb	01 10 50.0	
	comp=Z,4.5nm,0.9s						
U15A	North Rim	70.80	357	P	P	01 10 51.0	+0.2
U15A				IAmb	IAmb	01 10 54.9	
	comp=Z,7.7nm,1.1s						
SHPR	Sheep Range	71.03	355	P	P	01 10 53.2	+1.0
TUL1	Leonard	71.36	12	P	P	01 10 53.6	-0.3
TUL1				IAmb	IAmb	01 10 57.0	
	comp=Z,8.7nm,0.9s						
PRN	Pahroc Range	71.92	355	P	P	01 10 58.2	+0.7
CCUT	Cedar City	71.97	357	P	P	01 10 58.1	+0.3
CCUT				IAmb	IAmb	01 11 02.8	
	comp=Z,8.6nm,1.0s						
SZCU	Shurtz Canyon	72.00	357	P	P	01 10 57.9	-0.1
SZCU				IAmb	IAmb	01 11 02.4	
	comp=Z,6.8nm,1.1s						
TPH	Tonopah	72.76	353	P	P	01 11 03.4	+0.8
MVU	Marysvale	72.87	358	P	P	01 11 04.9	+1.7
LHV	Little Huntoon	73.06	352	P	P	01 11 03.5	-0.5
LHV				IAmb	IAmb	01 11 09.1	
	comp=Z,7.7nm,1.0s						
SRU	San Rafael Swe	73.43	359	P	P	01 11 04.9	-1.6
SPR3	Spring Creek 3	73.46	356	P	P	01 11 06.3	-0.5
SPR3				IAmb	IAmb	01 11 10.8	
	comp=Z,5.9nm,1.0s						
SYO	Syowa Base	74.09	169	⇑*e*pP	P	01 11 10.2	+0.4
SYO	Syowa Base	74.09	169	⇑*e*sP	sP	01 11 13.3	+0.4
BMN	Battle Mountai	75.10	354	P	P	01 11 15.4	-0.7
BMN				IAmb	IAmb	01 11 20.8	
	comp=Z,6.3nm,0.9s						
ELK	Elko	75.25	355	P	P	01 11 16.6	-0.5
BW06	Boulder Array	77.08	360	P	P	01 11 26.9	-0.5
BW06				IAmb	IAmb	01 11 31.1	
	comp=Z,8.9nm,1.1s						
PDAR	Pinedale Array	77.08	360	P	P	01 11 26.2	-1.2
	comp=Z,7.2nm,0.8s,baz=161,slow=5.7,SNR=9.9						
TPAW	Teton Pass	77.81	359	P	P	01 11 31.4	-0.2
TPAW				IAmb	IAmb	01 11 35.6	
	comp=Z,7.1nm,0.9s						
HLID	Hailey	78.01	356	P	P	01 11 32.8	+0.2
RSSD	Black Hills	78.58	4	P	P	01 11 34.8	-0.9
BCYI	Bear Canyon	78.71	357	P	P	01 11 35.6	-0.9
I07A	Izee	78.94	353	P	P	01 11 37.6	+0.1
QLMT	Earthquake Lak	79.16	358	P	P	01 11 38.9	-0.1
MCMT	McKenzie Canyo	79.20	357	P	P	01 11 38.3	-0.9
BMO	Blue Mountains	79.49	354	P	P	01 11 40.4	-0.2
ULM	Lac du Bonnet	85.40	9	P	P	01 12 11.5	+0.4
	comp=Z,2.5nm,0.6s,baz=205,slow=7.5,SNR=3.2						
STKA	Stephens Creek	86.07	234	LR	LR	01 44 15.1	
	comp=Z,117nm,19.1s,baz=158,slow=31						
SCHQ	Schefferville	96.34	23	LR	LR	01 50 25.4	
	comp=Z,73nm,20.0s,baz=178,slow=32						
ASAR	Alice Springs	96.56	235	LR	LR	01 51 05.2	
	comp=Z,77nm,18.1s,baz=220,slow=32						
YKA	Yellowknife Ar	96.93	358	P	P	01 13 06.6	+1.7
	comp=Z,0.6nm,0.7s,baz=166,slow=5.2,SNR=3.1						
BURAR	Bucovina Array	143.92	55	PKPdf	PKPdf	01 19 10.2	+0.8
NRIK	Noril'sk	144.04	350	PKP	PKPdf	01 19 08.6	-0.2
	comp=Z,1.6nm,0.4s,baz=100,slow=4.9,SNR=4.8						
MLR	Muntele Rosu	144.53	59	PKP	PKPdf	01 19 11.1	+0.5
	comp=Z,4.2nm,0.7s,baz=261,slow=19,SNR=4.1						
MLR	Muntele Rosu	144.53	59		PKPdf	01 19 11.0	+0.4
AKASG	Malin Array Be	146.09	49	PKPbc	PKPdf	01 19 11.4	-1.5
	comp=Z,2.5nm,0.8s,baz=279,slow=3.4,SNR=4.8						
ENH	Enshi	147.10	273	PKPdf	PKPdf	01 19 15.6	+0.3
BR231	Keskin MP Arra	149.56	69	PKPbc	PKPbc	01 19 22.3	-1.4
CMAR	Chiang Mai Arr	150.13	245	PKPbc	PKPbc	01 19 24.0	-1.6
	comp=Z,1.8nm,0.3s,baz=180,slow=1.2,SNR=11						
CMAR	Chiang Mai Arr	150.13	245		PKPbc	01 19 23.3	-2.3
BRTR	Keskin Array B	150.22	69	PKPbc	PKiKP	01 19 27.2	+1.0
	comp=Z,5.3nm,1.0s,baz=225,slow=3.9,SNR=6.4						
BRTR	Keskin Array B	150.22	69		PKPbc	01 19 24.9	-0.4
CHTO	Chiang Mai	150.35	245	PKPdf	PKPdf	01 19 21.5	+0.6
SONM	Songino Array	150.38	307	PKPbc	PKPbc	01 19 23.0	-2.4
	comp=Z,3.1nm,0.9s,baz=96,slow=2.0,SNR=7.6						
SONM	Songino Array	150.38	307		PKPdf	01 19 21.6	+1.4
ARU	Arti	156.73	17	PKPab	PKPab	01 19 58.9	+0.7
	comp=Z,0.2nm,0.3s,baz=342,slow=18,SNR=3.7						
ZALV	Zalesovo Beam	158.32	337	PKPab	PKPab	01 20 06.6	+1.5
	comp=Z,2.0nm,0.8s,baz=17,slow=1.5,SNR=7.5						
ZALV	Zalesovo Beam	158.32	337		PKPab	01 20 06.0	+0.8
AKTO	Aktyubinsk	161.75	27	PKPab	PKPab	01 20 21.0	+0.8
	comp=Z,1.1nm,0.5s,baz=329,slow=5.6,SNR=3.0						
KURBB	Kurchatov Arra	163.07	343	PKPab	PKPab	01 20 26.0	+0.1
	comp=Z,0.9nm,0.9s,baz=20,slow=4.6,SNR=5.0						

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*IDC **03** 01:05:59.0±2.3,38°.89N×16°.06E,h0km,mb3.8/3, mb1 3.8/4,mb1mx3.4/42,mbtmp3.7/4,ML2.5/1,MS4.0/1, Ms1 4.0/1,ms1mx2.6/60,Error ellipse: s-maj=61.2km s-min=34.2km az=140.0*

*ROM **03** 01:06:10.8±0.2,38°.38N±0°.01×15°.23E±0°.02,h171km±1km, ML3.0/40,Error ellipse: s-maj=1.4km s-min=0.8km az=129.0*

*THE **03** 01:06:18.7,38°.60N×15°.79E,h20km±30km,ML2.8/1,Error ellipse: s-maj=35.4km s-min=3.6km az=258.0*

ISC 03 01:06:11.5±1.0**,38°.41N**±0°.05×**15°.23E**±0°.04**,h165km**±6km**, n111,σ1s15**/109**,mb3.8**/3**,12C-15D,Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VPL	Vulcano Piano	0.20	261	P	Pn	01 06 33.8	+0.2
VPL				AML	AML		
	comp=N,3730µm,0.3s						
VPL				AML	AML		
	comp=E,4535µm,0.8s						
LLI	Lipari	0.22	279	⇓P	Pn	01 06 34.2	+0.6
LLI				AML	AML		
	comp=E,2750µm,0.4s						
LLI				AML	AML		
	comp=N,3875µm,0.5s						
MSRU	Castanea	0.26	124	⇓P	Pn	01 06 33.6	-0.1
MSRU				S	Sn	01 06 50.5	-0.2
MSRU				AML	AML		
	comp=E,4480µm,0.4s						
MSRU				AML	AML		
	comp=N,2660µm,0.8s						
MPNC	Port Mandanici	0.28	160	⇓P	Pn	01 06 33.8	-0.1
MPNC				S	Sn	01 06 51.2	+0.3
MCSR	Castroreale	0.35	177	⇓P	Pn	01 06 34.5	+0.4
MCSR				S	Sn	01 06 51.6	+0.2
MCSR				AML	AML		
	comp=E,2395µm,0.3s						
MCSR				AML	AML		
	comp=N,2305µm,0.8s						
IST3	Stromboli F	0.39	0	⇑P	Pn	01 06 35.1	+1.0
IST3				AML	AML		
	comp=N,492µm,0.2s						
IST3				AML	AML		
	comp=E,358µm,0.4s						
NOV	Novara	0.39	191	⇓P	Pn	01 06 34.8	+0.6
NOV				S	Sn	01 06 52.3	+0.8
NOV				AML	AML		
	comp=E,910µm,1.6s						
NOV				AML	AML		
	comp=N,1165µm,1.5s						
AIO	Antillo	0.44	180	⇓P	Pn	01 06 34.8	+0.4
AIO				S	Sn	01 06 51.7	-0.2
AIO				AML	AML		
	comp=N,740µm,0.3s						
AIO				AML	AML		
	comp=E,826µm,0.5s						
MUCR	Ucria	0.46	218	⇑P	Pn	01 06 34.6	0.0
MUCR				AML	AML		
	comp=N,368µm,0.5s						
MUCR				AML	AML		
	comp=E,261µm,1.1s						
MSCL	Scilla	0.47	112	⇑P	Pn	01 06 34.8	+0.2
MSCL				S	Sn	01 06 52.3	+0.2
MSCL				AML	AML		
	comp=N,1920µm,1.0s						
MSCL				AML	AML		
	comp=E,2645µm,0.9s						
MSCL				AML	AML		
	comp=N,1925µm,1.0s						
GMB	Gambarie	0.53	117	P	Pn	01 06 35.3	+0.4
GMB				S	Sn	01 06 53.5	+0.9
CEL	Celeste	0.54	106	P	Pn	01 06 35.2	+0.4
CEL				S	Sn	01 06 52.8	+0.2
CEL				AML	AML		
	comp=E,910µm,0.4s						
CEL				AML	AML		
	comp=N,1250µm,0.4s						
CEL				AML	AML		
	comp=N,1255µm,0.4s						
CEL				AML	AML		
	comp=N,1565µm,0.5s						
CEL				AML	AML		
	comp=E,1096µm,0.4s						
CEL				AML	AML		
	comp=E,913µm,0.4s						
IFIL	Filicudi I Eol	0.54	287	⇓P	Pn	01 06 34.9	+0.1
IFIL				AML	AML		
	comp=N,492µm,1.1s						
IFIL				AML	AML		
	comp=E,1205µm,0.3s						
JOPP	Joppolo	0.55	69	⇓P	Pn	01 06 35.0	+0.2

```
JOPP                                 S      Sn      01 06 52.3  -0.4
JOPP                                 AML    AML
      comp=E,817µm,0.4s
JOPP                                 AML    AML
      comp=N,760µm,1.1s
MSFR  San Fratello       0.63 233 ⇓P     Pn      01 06 35.5 +0.2
MSFR                                 AML    AML
      comp=E,100µm,1.0s
MSFR                                 AML    AML
      comp=N,110µm,0.4s
MSFR                                 AML    AML
      comp=E,100µm,1.0s
MNO   Monte Soro         0.64 222  P      Pn      01 06 36.3 +0.8
MNO                                  AML    AML
      comp=E,341µm,0.6s
MNO                                  AML    AML
      comp=N,926µm,0.9s
IACL  Alicudi            0.70 280 ⇓P     Pn      01 06 35.8 +0.2
IACL                                 AML    AML
      comp=N,286µm,1.4s
IACL                                 AML    AML
      comp=E,213µm,0.6s
SOI   Samo               0.73 117 ⇓P     Pn      01 06 36.3 +0.5
SOI                                  S      Sn      01 06 54.3  -0.1
SOI                                  AML    AML
      comp=E,1047µm,0.6s
SOI                                  AML    AML
      comp=E,1048µm,0.6s
SOI                                  AML    AML
      comp=N,1300µm,0.7s
GALF  Gagliano Caste     0.87 217  P      Pn      01 06 37.3 +0.4
GALF                                 AML    AML
      comp=E,210µm,0.6s
GALF                                 AML    AML
      comp=E,210µm,0.6s
GALF                                 AML    AML
      comp=N,204µm,0.6s
ECNV  Catenanuova        0.91 207  P      Pn      01 06 38.0 +0.9
ECNV                                 AML    AML
      comp=N,375µm,0.8s
ECNV                                 AML    AML
      comp=E,306µm,0.7s
PLAC  Placanica          0.95  87  P      Pn      01 06 38.2 +0.9
PLAC                                 AML    AML
      comp=E,1460µm,0.7s
PLAC                                 AML    AML
      comp=E,1810µm,0.4s
PLAC                                 AML    AML
      comp=N,1500µm,0.6s
PLAC                                 AML    AML
      comp=N,1690µm,0.4s
PLLN  Pollina            0.95 244 ⇓P     Pn      01 06 39.1 +1.7
GRI   Girifalco          1.02  66 ⇑P     Pn      01 06 38.9 +1.0
GRI                                  AML    AML
      comp=N,520µm,0.3s
GRI                                  AML    AML
      comp=E,547µm,0.6s
GIB   Gibilmanna         1.04 246 ⇓P     Pn      01 06 37.9  -0.2
GIB                                  S      Sn      01 06 58.7 +0.2
GIB                                  AML    AML
      comp=E,310µm,0.8s
GIB                                  AML    AML
      comp=N,410µm,0.6s
GIB                                  AML    AML
      comp=N,410µm,0.6s
CSLB  Castelbuono        1.04 243  P      Pn      01 06 37.7  -0.3
CSLB                                 AML    AML
      comp=N,66µm,0.8s
CSLB                                 AML    AML
      comp=E,69µm,0.7s
PETRA Petralia Sopra     1.05 237  P      Pn      01 06 38.6 +0.3
PETRA                                AML    AML
      comp=N,313µm,1.0s
PETRA                                AML    AML
      comp=E,249µm,0.7s
PETRA                                AML    AML
      comp=N,312µm,1.0s
HLNI  Lentini            1.10 195  P      Pn      01 06 38.0  -0.5
HLNI                                 AML    AML
      comp=E,103µm,0.6s
HLNI                                 AML    AML
      comp=E,103µm,0.6s
HLNI                                 AML    AML
      comp=N,103µm,0.7s
HAGA  Augusta            1.12 183  P      Pn      01 06 38.4  -0.4
HAGA                                 AML    AML
      comp=N,222µm,0.7s
HAGA                                 AML    AML
      comp=E,240µm,0.8s
CAR1  CAROLEI            1.14  42 ⇑P     Pn      01 06 39.2 +0.3
CAR1                                 S      Sn      01 06 59.8  -0.3
CAR1                                 AML    AML
      comp=E,599µm,0.5s
CAR1                                 AML    AML
      comp=N,453µm,0.8s
CAR1                                 AML    AML
      comp=N,454µm,0.8s
AGST  Augusta-Monte      1.15 180  P      Pn      01 06 38.3  -0.7
CET2  Cetraro            1.25  27  P      Pn      01 06 40.5 +0.6
CET2                                 S      Sn      01 07 01.8   0.0
CET2                                 AML    AML
      comp=E,426µm,1.0s
CET2                                 AML    AML
      comp=N,376µm,0.8s
SSY   Sortino            1.26 186  P      Pn      01 06 39.5  -0.6
SSY                                  AML    AML
      comp=E,208µm,0.9s
SSY                                  AML    AML
      comp=E,208µm,0.9s
SSY                                  AML    AML
      comp=N,328µm,0.3s
SERS  Sersale            1.30  61  P      Pn      01 06 41.3 +0.9
SERS                                 AML    AML
      comp=E,384µm,1.2s
SERS                                 AML    AML
      comp=N,234µm,0.3s
SERS                                 AML    AML
      comp=N,317µm,1.2s
SERS                                 AML    AML
      comp=E,226µm,1.5s
MEU   Monte Lauro        1.33 190  P      Pn      01 06 40.4  -0.3
MEU                                  AML    AML
      comp=E,314µm,0.4s
MEU                                  AML    AML
      comp=N,218µm,0.4s
ALJA  Alia               1.34 241  AML    AML
      comp=N,140µm,0.6s
ALJA                                 AML    AML
      comp=E,151µm,0.6s
RAFF  Raffo Rosso        1.37 210 ⇑P     Pn      01 06 41.0   0.0
RAFF                                 AML    AML
      comp=E,158µm,0.7s
RAFF                                 AML    AML
      comp=N,340µm,0.9s
RAFF                                 AML    AML
      comp=E,157µm,0.7s
RAFF                                 AML    AML
      comp=N,340µm,0.9s
CELI  Celico             1.41  45  AML    AML
      comp=E,313µm,0.7s
CELI                                 AML    AML
      comp=E,312µm,0.7s
CELI                                 AML    AML
      comp=N,357µm,0.8s
TIP   Timpagrande        1.42  57  AML    AML
      comp=N,161µm,0.5s
TIP                                  AML    AML
      comp=E,162µm,0.8s
TIP                                  AML    AML
      comp=N,205µm,0.5s
TIP                                  AML    AML
      comp=E,148µm,0.8s
HAVL  Avola              1.45 183  AML    AML
      comp=N,348µm,1.0s
HAVL                                 AML    AML
      comp=E,425µm,0.9s
MPG   Monte Pellegri     1.49 261 ⇓P     Pn      01 06 42.2   0.0
MPG                                  S      Sn      01 07 05.6  -0.2
MPG                                  AML    AML
      comp=E,112µm,1.1s
MPG                                  AML    AML
      comp=N,176µm,0.4s
TDS   Terranova Siba     1.52  34 ⇑P     Pn      01 06 43.1 +0.8
TDS                                  S      Sn      01 07 06.6 +0.4
TDS                                  AML    AML
      comp=N,100µm,1.0s
TDS                                  AML    AML
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      comp=E,58µm,0.9s
CLTA  Licata             1.60 219  AML    AML
      comp=N,372µm,0.7s
CLTA                                 AML    AML
      comp=E,304µm,0.8s
PIPA  Pietrapaola        1.64  49  AML    AML
      comp=N,120µm,0.7s
PIPA                                 AML    AML
      comp=E,136µm,1.2s
CUC   Castrocucco        1.65  16  P      Pn      01 06 44.5 +0.8
BULG  Bulgheria - Ca     1.67   4 ⇑P     Pn      01 06 45.1 +1.1
BULG                                 AML    AML
      comp=N,109µm,0.3s
BULG                                 AML    AML
      comp=E,61µm,1.4s
FAVR  Favara             1.68 228  AML    AML
      comp=E,94µm,1.3s
FAVR                                 AML    AML
      comp=N,109µm,1.6s
SALB  San Lorenzo Be     1.70  30  AML    AML
      comp=N,72µm,0.6s
SALB                                 AML    AML
      comp=E,126µm,1.4s
HPAC  Pachino            1.71 183  AML    AML
      comp=E,225µm,0.8s
HPAC                                 AML    AML
      comp=N,348µm,0.9s
MGR   Morigerati         1.74   8 ⇑P     Pn      01 06 45.8 +1.1
MGR                                  AML    AML
      comp=E,49µm,1.2s
MGR                                  AML    AML
      comp=N,60µm,0.4s
CLTB  Caltabellotta      1.79 243  AML    AML
      comp=E,438µm,0.5s
CLTB                                 AML    AML
      comp=N,538µm,0.4s
SIRI  Monte Sirino -     1.84  15  P      Pn      01 06 46.6 +0.8
SIRI                                 AML    AML
      comp=E,88µm,0.6s
SIRI                                 AML    AML
      comp=N,64µm,0.5s
MTSN  Montesano sull     1.90  12 ⇑P     Pn      01 06 47.3 +0.8
MTSN                                 AML    AML
      comp=E,57µm,0.3s
MTSN                                 AML    AML
      comp=N,48µm,0.8s
CMPR  Campora            1.91   2  AML    AML
      comp=N,100µm,0.4s
CMPR                                 AML    AML
      comp=E,48µm,0.3s
MCEL  Monticello         1.96  13  AML    AML
      comp=N,46µm,0.5s
MCEL                                 AML    AML
      comp=E,44µm,1.6s
CDRU  Civita di Ruta     2.08   2  AML    AML
      comp=E,28µm,1.1s
CDRU                                 AML    AML
      comp=N,39µm,0.9s
CRAC  Craco              2.16  25  P      Pn      01 06 51.0 +1.7
CRAC                                 AML    AML
      comp=N,557µm,0.3s
CRAC                                 AML    AML
      comp=E,460µm,0.3s
MRLC  Muro Lucano        2.35   5 ⇑P     Pn      01 06 53.8 +2.2
MRLC                                 AML    AML
      comp=N,81µm,0.5s
MRLC                                 AML    AML
      comp=E,45µm,0.4s
MIGL  Miglionico         2.38  23 ⇑P     Pn      01 06 52.5 +0.6
MIGL                                 AML    AML
      comp=N,205µm,1.2s
MIGL                                 AML    AML
      comp=E,223µm,1.5s
ACER  Acerenza           2.44  13  P      Pn      01 06 53.9 +1.2
ACER                                 AML    AML
      comp=E,64µm,0.6s
ACER                                 AML    AML
      comp=N,70µm,1.6s
MATE  Matera             2.51  27 ⇓P     Pn      01 06 53.5 +0.2
MATE                                 AML    AML
      comp=E,60µm,0.4s
MATE                                 AML    AML
      comp=N,88µm,1.6s
AMUR  Altamura           2.71  23  AML    AML
      comp=N,125µm,0.5s
AMUR                                 AML    AML
      comp=E,129µm,0.4s
MRVN  Minervino Murg     2.75  15  AML    AML
      comp=N,35µm,1.3s
MRVN                                 AML    AML
      comp=E,21µm,0.5s
SCTE  Santa Cesarea      3.01  56  AML    AML
      comp=E,141µm,0.9s
SCTE                                 AML    AML
      comp=N,167µm,1.6s
KEK   Kerkira            3.79  68  P      Pn      01 07 09.9 +0.5
KEK                                  S      Sn      01 07 48.7  -5.8
      comp=N,48nm,0.7s
IGT   Igoumenitsa        4.13  73  P      Pn      01 07 14.5 +0.7
AQU   L'Aquila           4.18 341  ePn    Pn      01 07 16.9 +2.5
VLS   Valsamata          4.22  92  P      Pn      01 07 15.8 +0.8
LTHK  Lithakia           4.48  97  P      Pn      01 07 19.8 +1.5
TIR   Tirane             4.62  49  P      Pn      01 07 21.0 +0.9
HCY   Herceg Novi        4.74  31  ePn    Pn      01 07 20.9  -0.8
DRME  Dracevica, Mon     4.83  37  ePn    Pn      01 07 22.5  -0.4
STON  Ston               4.84  22  ePn    Pn      01 07 23.5 +0.6
TREB  Trebinje           4.91  28  ePn    Pn      01 07 23.7  -0.3
NEST  Nestorio           4.93  64  P      Pn      01 07 25.5 +1.2
KPRO  Kipourio           5.01  70  P      Pn      01 07 27.1 +1.8
PDG   Podgorica          5.05  36  ePn    Pn      01 07 25.5  -0.3
DRO   Drossia            5.13  93  P      Pn      01 07 29.3 +2.5
BRY   Bratogost          5.14  28  ePn    Pn      01 07 27.4 +0.3
EVR   Evrytania          5.17  82  P      Pn      01 07 30.1 +2.6
ANX   Ano Chora          5.25  86  P      Pn      01 07 31.3 +2.8
FNA   Florina            5.30  62  P      Pn      01 07 30.8 +1.6
SERG  Sergoula           5.36  88  P      Pn      01 07 31.5 +1.6
KEST  Kesra              5.41 242  Pn     Pn      01 07 32.1 +1.5
      comp=N,0.1nm,0.3s,baz=315,slow=11,SNR=2.9
KLV   Kalavryta, Ach     5.46  92  P      Pn      01 07 32.5 +1.2
UPM   Unac-Piva          5.54  29  ePn    Pn      01 07 33.3 +0.9
AGG   Agios Georgios     5.59  82  P      Pn      01 07 35.6 +2.7
GUR   Goura              5.62  93  P      Pn      01 07 36.1 +2.7
SJES  Sjenica            6.03  35  ePn    Pn      01 07 40.1 +1.3
RUDO  Rudo               6.07  30  ePn    Pn      01 07 39.6 +0.4
GRG   Griva              6.09  63  P      Pn      01 07 41.0 +1.5
MGRS  Mrkonjic Grad      6.16  12  ePn    Pn      01 07 41.6 +1.2
BBLS  Lazi&#263;i        6.29  29  ePn    Pn      01 07 42.7 +0.5
BBLS  Lazi&#263;i        6.29  29  ePn    Pn      01 07 43.3 +1.1
HAPS  Han Pijesak,BI     6.33  25  ePn    Pn      01 07 43.6 +0.9
VLI   Veliai             6.35 103  P      Pn      01 07 47.0 +4.0
BLY   Banja Luka         6.50  12  ePn    Pn      01 07 45.1 +0.3
SELS  Selova             6.56  41  ePn    Pn      01 07 45.6  -0.1
PRVS  Prvonek            6.63  50  ePn    Pn      01 07 47.9 +1.2
BARS  Barje              6.67  47  ePn    Pn      01 07 47.2 +0.1
SOH   Sokhos             6.72  66  P      Pn      01 07 50.0 +2.2
DIVS  Divibare           6.72  31  ePn    Pn      01 07 47.8  -0.1
DIVS  Divibare           6.72  31  ePn    Pn      01 07 47.7  -0.1
GRUS  Gruza              6.86  35  ePn    Pn      01 07 49.6   0.0
TRUS  Trudelj            6.99  32  ePn    Pn      01 07 51.2  -0.2
ZAPS  Zavoj              7.42  47  ePn    Pn      01 07 58.0 +0.9
ZAGS  Zajecar            7.55  42  ePn    Pn      01 07 58.9 +0.1
MORH  Mrgy, Hungar       8.20  17  ePn    Pn      01 08 07.5 +0.2
FINES FINESS Array B    24.03  13  P      P       01 11 09.9  -0.9
      comp=N,1.9nm,0.7s,baz=193,slow=7.8,SNR=12
TORD  Torodi Ar. Bea    27.89 209  LR     LR      01 25 17.2
      comp=N,272nm,19.9s,baz=245,slow=40
ARCES ARCESS Array B    31.67   7  P      P       01 12 18.2  -0.7
      comp=N,1.8nm,0.8s,baz=191,slow=8.0,SNR=1.6
MKAR  Makanchi Array    48.70  57  P      P       01 14 38.7  -0.4
      comp=N,0.5nm,0.5s,baz=294,slow=6.5,SNR=7.9
```

IDC 03 01:13:32.3±2.2**, 33°.04S**×**113°.23W, h0^{km}, mb3.6**/2**, mb1 4.1**/2**, mb1mx3.6**/25**, mbtmp3.6**/2**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx3.0**/22**, Error ellipse: s-maj=130.6km s-min=50.7km az=118.0, Southern East Pacific Rise**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC      h  m  s     ISC
RPN   Rapa Nui           6.79  31   LR     LR      01 17 10.7
      comp=Z,217nm,19.1s,baz=171,slow=32
TXAR  Lajitas Array     62.69   9   P      P       01 23 59.2 +0.2
      0.5nm,1.1s,baz=173,slow=7.8,SNR=2.8
PDAR  Pinedale Array    75.51   3   P      P       01 25 18.3  -0.2
      1.2nm,1.0s,baz=166,slow=4.2,SNR=5.7
```

```
SONM  Songino Array    146.81 308  PKPbc  PKPbc   01 33 15.8  -0.5
      1.9nm,0.9s,baz=106,slow=3.7,SNR=8.5
AKASG Malin Array Be   147.38  46  PKPbc  PKPbc   01 33 16.9  -0.7
      0.2nm,0.4s,baz=274,slow=3.6,SNR=1.8
CMAR  Chiang Mai Arr   147.74 251  PKPbc  PKPbc   01 33 18.6  -0.9
      1.6nm,0.3s,baz=169,slow=2.0,SNR=7.6
```

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*ISK **03** 01:14:20.7, 39°.29N×40°.24E, h5^{km}, ML3.6/22*
*DDA **03** 01:14:21.7, 39°.29N×40°.22E, h15^{km}±2^{km}, MW3.8*
*IDC **03** 01:14:21.5±0.9, 39°.24N×40°.25E, h0^{km}, mb3.7/3, mb1 3.5/9, mb1mx3.2/52, mbtmp3.5/9, ML3.0/5, MS2.3/1, Ms1 2.3/1, ms1mx2.2/49, Error ellipse: s-maj=16.8km s-min=8.4km az=162.0*
ISC 03 01:14:21.9±1.1**, 39°.28N**±0°.02×**40°.23E**±0°.02**, h3^{km}**±9^{km}**, n68, σ1^{s}.12**/92**, 12C-6D, Turkey**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC      h  m  s     ISC
YEDI  Yedisu-Bingol      0.29  58   PG     Pg      01 14 27.8 +0.3
YEDI                                SG     Sg      01 14 32.4 +1.0
BNGB  Bingl              0.46 130   PG     Pg      01 14 30.5  -0.2
BNGB                                SG     Sb      01 14 37.8  -2.0
ERZN  Erzincan           0.49 308   PG     Pg      01 14 31.6 +0.2
ERZN                                SG     Sb      01 14 40.1  -0.9
TNCL  Tunceli-Merkez     0.56 253⇑iP     Pg      01 14 32.6   0.0
TNCL                               iS      Sb      01 14 41.5  -1.3
EUZM  Uzumlu             0.59 316⇓iP     Pg      01 14 33.1  -0.1
EUZM                               iS      Sg      01 14 41.8 +0.9
KOVA  Elazig, Kovanc     0.66 209⇑iP     Pb      01 14 35.2  -1.0
KOVA                               iS      Sb      01 14 45.3  -0.5
KOVA                                IAML           01 14 46.0
      comp=N,3µm,0.7s
KOVA                                IAML           01 14 46.0
      comp=E,7µm,0.3s
SLHN  Bingol, Solhan     0.70 117⇑iP     Pg      01 14 35.2  -0.1
SLHN                               iS      Sb      01 14 46.8  -0.1
SLHN                                IAML           01 14 49.0
      comp=N,2µm,0.4s
HANI  Diyarbakir_Han     0.88 171⇓iP     Pb      01 14 38.8  -1.0
HANI                               iS      Sn      01 14 53.8  -0.7
EMRE  Erzurum,Aziziy     0.94  38⇑iP     Pb      01 14 40.0  -1.1
EMRE                               iS      Sb      01 14 53.6  -0.5
VRTB  Varto-Mus          0.96  97⇑iP     Pg      01 14 40.0  -0.4
VRTB                               iS      Sb      01 14 54.6 +0.1
VRTB  Varto-Mus          0.96  97   PG     Pg      01 14 40.0  -0.4
BAYB  BAYBURT            0.97   1⇓iP     Pg      01 14 39.0  -1.6
BAYB                               iS      Sb      01 14 53.7  -1.2
EJDE  Erzurum, Palan     1.00  56⇑iP     Pg      01 14 39.8  -1.2
EJDE                               iS      Sb      01 14 55.0  -0.6
ERZM  Erzurum            1.08  54⇑iP     Pg      01 14 42.3  -0.3
ERZM                               iS      Sn      01 14 59.9 +0.2
BAYT  Aydıntepe-Bayb     1.11 357   PN     Pg      01 14 42.7  -0.5
KELT  Kelkit             1.15 319  iP      Pg      01 14 43.5  -0.4
KELT                               iS      Sn      01 15 00.3  -1.0
MUSM  Mu-Merkez          1.15 119⇑iP     Pg      01 14 42.5  -1.3
MUSM                               iS      Sg      01 14 57.5  -1.2
SVRC  Sivrice-ELAZID     1.16 219   PN     Pg      01 14 43.8  -0.2
SVRC                                SN     Sn      01 15 01.3  -0.2
KRIK  Erzurum-spir       1.18  27⇑iP     Pb      01 14 44.6  -0.5
KRIK                               iS      Sn      01 15 03.6 +1.3
ELZG  Elazig             1.25 231⇑iP     Pg      01 14 45.2  -0.6
ELZG                               iS      Sn      01 15 03.7   0.0
REFA  Refahiye_ERZN      1.29 299⇓iP     Pg      01 14 45.8  -0.8
REFA                               iS      Sn      01 15 04.5  -0.3
ILIC  ilic-Erzincan      1.30 278   PN     Pn      01 14 45.9  -1.1
DYBB  Diyarbakir         1.33 183   PN     Pg      01 14 47.7 +0.3
KEMA  Kemaliye           1.35 270⇑iP     Pn      01 14 46.4  -1.2
KEMA                               iS      Sn      01 15 05.7  -0.4
DIYA  Diyarbakir         1.36 184⇓iP     Pg      01 14 48.9 +0.9
DIYA                               iS      Sn      01 15 08.8 +2.4
SVAN  Silvan-Diyarba     1.36 146⇓iP     Pg      01 14 48.1 +0.1
SVAN                               iS      Sn      01 15 07.2 +0.9
SVAN  Silvan-Diyarba     1.36 146   PN     Pg      01 14 47.9  -0.1
KOPR  Koprukoy-ERZUR     1.44  60   PN     Pn      01 14 48.4  -0.7
ARPR  Arapgir-MALATY     1.48 263   PN     Pn      01 14 49.4  -0.2
HOMI  Horasan            1.50  59⇑iP     Pn      01 14 49.5  -0.4
HOMI                               iS      Sg      01 15 12.7 +2.5
ALUC  Giresun/Alucra     1.54 314  iP      Pg      01 14 51.1  -0.4
ALUC                               iS      Sg      01 15 14.0 +2.4
GURO  Guroymak-BITLI     1.59 117   PN     Pb      01 14 50.8  -1.1
BTMN  Batman             1.61 149  iP      Pg      01 14 52.6  -0.2
MALT  Malatya            1.71 236   PN     Pb      01 14 53.1  -0.9
BLIS  Bitlis-Merkez      1.71 120  iP      Pb      01 14 53.5  -0.6
KTUT  Trabzon            1.74 348   PN     Pb      01 14 53.7  -0.7
MLAZ  Malazgirt-MUS      1.81  94   PN     Pb      01 14 54.4  -1.3
MAZI  Mazidag            1.83 175   PN     Pb      01 14 54.9  -1.2
DDEM  Demirkent          1.99  36  iP      Pn      01 14 56.8 +0.3
CUZAR Zara_SIVAS         1.99 288  iP      Pb      01 14 58.2  -0.6
ADCV  BITLIS_Adilcev     2.00 103  iP      Pb      01 14 58.6  -0.4
MARD  Mardin             2.01 167  iP      Pb      01 14 58.0  -1.2
SENK  Senkaya-Erzuru     2.07  51   PN     Pn      01 14 58.1 +0.3
MIDY  Mardin/Midyat-     2.09 153  iP      Pb      01 14 58.6  -1.8
CUKAN kangal_SIVAS       2.14 272  iP      Pb      01 14 60.0  -1.5
DARE  Darende-Malaty     2.26 252   PN     Pn      01 15 00.9 +0.7
SANL  SANLIURFA_Merk     2.32 205  iP      Pb      01 15 02.7  -1.8
AKDM  Akdamar-Van        2.35 113   PN     Pn      01 15 02.3 +0.7
KOTA  Agri, Merkez-K     2.36  76  iP      Pn      01 15 02.6 +0.9
SIRN  Sırnak             2.48 135  iP      Pb      01 15 07.1   0.0
SIRT  Sirnak             2.49 135   PN     Pn      01 15 04.5 +1.2
RSDY  Resadiye-TOKAT     2.50 297   PN     Pn      01 15 04.3 +0.9
VANB  Van                2.56 105   PN     Pn      01 15 05.7 +1.3
KARS  Kars               2.57  58   PN     Pn      01 15 05.3 +0.8
CLDR  Caldiran           2.87  92   PN     Pn      01 15 09.9 +1.2
OZAP  Van, Ozalp-Mer     3.00 101  iP      Pg      01 15 18.9  -0.4
CUKT  Cukurca            3.35 126  iP      Pg      01 15 24.1  -2.0
GNI   Garni              3.59  75   Pn     Pn      01 15 19.6 +1.1
      comp=N,0.5nm,0.3s,baz=238,slow=10.0,SNR=5.7
GNI                                 Pg     Pg      01 15 28.0  -2.6
      comp=N,7.8nm,0.3s,baz=256,slow=5.4,SNR=36
GNI                                 Lg     Lg      01 16 15.8
      baz=148,slow=12,SNR=1.7
GNI                                 LR     LR      01 16 21.2
      comp=N,49nm,20.9s,baz=344,slow=33
KBZ   Khabaz             4.87  23   Pn     Pn      01 15 39.8 +3.8
      comp=N,0.2nm,0.3s,baz=210,slow=22,SNR=5.0
KVAR  Kislovodsk Arr     5.02  21   Pn     Pn      01 15 39.8 +1.6
      baz=186,slow=19,SNR=2.0
BRTR  Keskin Array B     5.12 277   Pn     Pn      01 15 41.1 +1.6
      comp=N,1.2nm,0.3s,baz=102,slow=14,SNR=17
BRTR                                Lg     Lg      01 17 07.7
      baz=230,slow=36,SNR=1.2
MMAI  Mount Meron Ar     7.37 213   Pn     Pn      01 16 11.4 +1.0
      comp=N,0.4nm,0.3s,baz=66,slow=15,SNR=2.2
MMAI                                Lg     Lg      01 18 14.7
      comp=N,0.3nm,0.3s,baz=20,slow=30,SNR=1.3
ASF   Jabal al Asfar     7.59 202   Pn     Pn      01 16 14.8 +1.3
      comp=N,0.2nm,0.3s,baz=348,slow=19,SNR=1.5
ASF                                 Lg     Lg      01 18 19.5
      comp=N,0.1nm,0.3s,baz=134,slow=22,SNR=2.2
AKTO  Aktyubinsk        16.79  43   Pn     P       01 18 19.6  -0.5
      comp=N,0.2nm,0.3s,baz=251,slow=13,SNR=6.9
ARU   Arti              21.00  29   P      Pn      01 19 07.9  -0.8
      comp=N,0.7nm,0.6s,baz=208,slow=8.0,SNR=5.0
KLMR  Klimovskoe        21.60 359   e      P       01 19 13.6 +1.0
KLMR                                AMP            01 19 23.0
      comp=Z,28nm,1.4s
FINES FINESS Array B    23.84 343   P      P       01 19 35.9  -0.1
      comp=Z,3.9nm,1.1s,baz=148,slow=13,SNR=1.6
KEST  Kesra             24.69 271   P      P       01 19 44.6 +0.4
      comp=Z,1.4nm,0.6s,baz=7.3,slow=4.5,SNR=4.7
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*IDC **03** 01:17:49.4±10.0, 33°.48S×111°.46W, h0^{km}, mb3.7/1, mb1 4.1/1, mb1mx3.4/27, mbtmp3.7/1, Error ellipse: s-maj=647.5km s-min=72.9km az=113.0*
ISC 03 01:17:46.1±1.2**, 34°.4S**±0°.3×**109°.4W**±0°.8**, h10^{km}, n7, σ0^{s}.46**/7**, Southern East Pacific Rise**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC      h  m  s     ISC
VNA3  Neumayer Olymp    60.88 159   P      P       01 27 58.5   0.0
VNA1  Neumayer--Stat    61.53 158   P      P       01 28 03.1 +0.4
VNA2  Neumayer--Watz    61.68 159   P      P       01 28 04.1 +0.2
      baz=257,slow=6.5
SNAA  Sanae             62.70 160   P      P       01 28 10.1  -0.6
PDAR  Pinedale Array    76.77 360   P      P       01 29 37.8   0.0
      0.1nm,0.4s,baz=152,slow=4.0,SNR=3.2
SONM  Songino Array    150.17 308   PKPbc  PKPbc   01 37 36.8  -0.3
      1.8nm,1.0s,baz=84,slow=2.7,SNR=6.0
CMAR  Chiang Mai Arr   150.24 245   PKPbc  PKiKP   01 37 39.2 +0.4
      0.7nm,0.3s,baz=158,slow=2.6,SNR=1.0
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*IDC **03** 01:24:05.8±8.0, 33°.89S×110°.72W, h0km, mb3.8/2, mb1 4.3/2, mb1mx3.9/22, mbtmp3.8/2, MS4.0/2, Ms1 4.0/2, ms1mx3.3/25, Error ellipse: s-maj=530.2km s-min=49.5km az=114.0*

*NEIC **03** 01:24:06.2±1.4, 34°.24S±0°.03×109°.0W±0°.2, h10km±1km, mb4.8/26, Error ellipse: s-maj=30.5km s-min=5.3km az=271.0*

ISC 03 01:24:05.0±0.9**, 34°.3S**±0°.1×**109°.1W**±0°.2**, h10km, n39, σ0ˢ79**/36**, mb4.8**/16**, MS4.0**/3**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	7.18	358	Pn	Pn	01 25 49.7	-0.4
GO05	Huala	30.46	102	P	P	01 30 18.4	+0.4
GO05				IAmb	IAmb	01 30 24.3	
	comp=Z,22nm,1.5s						
GO09	Cerro Castillo	31.43	134	P	P	01 30 27.1	+0.9
VA03	San Esteban	32.03	98	P	P	01 30 32.0	+0.1
VA03				IAmb	IAmb	01 30 41.9	
	comp=Z,8.4nm,0.7s						
CO05	La Serena	32.23	93	P	P	01 30 33.2	-0.4
GO04	Tololo Observa	32.52	93	P	P	01 30 36.8	+0.4
PPT2	Papeete2	39.74	284	eLR	LR	01 31 41.3	
	comp=Z,270nm,25.5s						
LPAZ	La Paz	40.83	74	P	P	01 31 46.4	-1.3
PTLB	Pontes e Lacer	48.55	80	P	P	01 32 48.3	-0.2
PTLB				IAmb	IAmb	01 32 50.3	
	comp=Z,15nm,1.6s						
ZARC	Zaragoza, Cauc	52.72	45	P	P	01 33 20.3	+0.2
PTGA	Pitinga	56.73	65	LR	LR	01 54 58.3	
	comp=Z,106nm,18.1s,baz=242,slow=32						
VNA3	Neumayer Olymp	60.83	159	P	P	01 34 16.7	-0.3
VNA1	Neumayer--Stat	61.48	158	P	P	01 34 21.5	+0.2
VNA2	Neumayer--Watz	61.64	159	P	P	01 34 22.2	-0.3
	baz=250,slow=6.4						
SNAA	Sanae	62.66	160	P	P	01 34 28.8	-0.6
TXAR	Lajitas Array	63.53	5	P	P	01 34 36.4	+0.8
	comp=Z,0.4nm,0.7s,baz=181,slow=5.0,SNR=3.8						
TXAR	Lajitas Array	63.53	5	P	P	01 34 36.2	+0.6
ISA	Isabella, Lake	70.18	352	P	P	01 35 19.5	+1.6
ISA				IAmb	IAmb	01 35 27.9	
	comp=Z,9.1nm,1.3s						
QSM	Queen of Sheba	70.31	353	P	P	01 35 20.0	+1.5
QSM				IAmb	IAmb	01 35 21.2	
	comp=Z,9.6nm,1.4s						
CCUT	Cedar City	71.63	356	P	P	01 35 27.5	+0.7
CCUT				IAmb	IAmb	01 35 38.4	
	comp=Z,11nm,1.6s						
HHAR	Hobbs	71.66	13	P	P	01 35 26.6	-0.2
TPH	Tonopah	72.44	353	P	P	01 35 31.0	-0.6
LHV	Little Huntoon	72.74	352	P	P	01 35 33.2	+0.1
LHV				IAmb	IAmb	01 35 48.6	
	comp=Z,7.8nm,1.0s						
RYN	Ryan	73.12	352	P	P	01 35 37.1	+1.5
SPR3	Spring Creek 3	73.12	356	P	P	01 35 36.6	+0.8
SPR3				IAmb	IAmb	01 35 46.4	
	comp=Z,11nm,1.5s						
KVN	Kaiserville	73.49	353	P	P	01 35 37.7	-0.1
KVN				IAmb	IAmb	01 35 49.9	
	comp=Z,17nm,1.5s						
EMB	Emerald Bay	73.65	351	P	P	01 35 39.4	+0.6
EMB				IAmb	IAmb	01 35 49.7	
	comp=Z,18nm,1.7s						
RDMU	Red Mountain	74.53	360	P	P	01 35 44.4	+0.5
RDMU				IAmb	IAmb	01 35 54.3	
	comp=Z,21nm,1.7s						
BMN	Battle Mountai	74.77	354	P	P	01 35 46.3	+1.1
BMN				IAmb	IAmb	01 35 47.9	
	comp=Z,9.8nm,1.2s						
K22A	Casper	76.65	2	P	P	01 35 54.8	-1.1
K22A				IAmb	IAmb	01 36 06.2	
	comp=Z,13nm,1.3s						
BW06	Boulder Array	76.73	360	P	P	01 35 56.4	0.0
PD31	Pinedale Array	76.73	360	P	P	01 35 56.9	+0.5
PDAR	Pinedale Array	76.73	360	P	P	01 35 56.2	-0.2
	comp=Z,1.8nm,0.9s,baz=158,slow=4.3,SNR=9.7						
PDAR	Pinedale Array	76.73	360	P	P	01 35 56.4	-0.1
HLID	Hailey	77.67	356	P	P	01 36 02.8	+1.1
HLID				IAmb	IAmb	01 36 04.3	
	comp=Z,9.3nm,1.2s						
I07A	Izee	78.62	352	P	P	01 36 06.2	-0.6
ASAR	Alice Springs	96.92	235	LR	LR	02 15 46.1	
	comp=Z,58nm,19.3s,baz=281,slow=32						
SONM	Songino Array	150.32	308	PKPbc	PKPbc	01 43 55.0	-1.3
	comp=Z,3.0nm,0.9s,baz=80,slow=3.2,SNR=8.9						
CMAR	Chiang Mai Arr	150.46	245	PKPbc	PKPbc	01 43 56.8	-0.5
	comp=Z,1.4nm,0.4s,baz=162,slow=1.0,SNR=6.3						

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*NEIC **03** 01:28:39.2±2.0, 34°.2S±0°.2×109°.0W±0°.3, h10km±1km, mb4.7/11, Error ellipse: s-maj=44.8km s-min=9.6km az=230.0*

*IDC **03** 01:28:40.7±9.0, 33°.91S×109°.93W, h0km, mb3.9/1, mb1 4.3/1, mb1mx3.7/23, mbtmp3.9/1, MS3.9/12, Ms1 3.9/12, ms1mx3.7/27, Error ellipse: s-maj=608.8km s-min=61.7km az=111.0*

ISC 03 01:28:39.4±0.9**, 34°.2S**±0°.2×**108°.9W**±0°.3**, h10km, n35, σ1ˢ70**/20**, mb4.7**/8**, MS3.9**/15**, 1C, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LL05	Los Muermos	28.78	115	P	P	01 34 36.7	-0.7
PLCA	Paso Flores	30.98	114	LR	LR	01 43 47.9	
	comp=Z,114nm,21.6s,baz=285,slow=28						
NNA	Nana	36.61	61	LR	LR	01 46 52.1	
	comp=Z,262nm,20.2s,baz=238,slow=29						
LVC	Limon Verde	36.82	82	LR	LR	01 47 07.6	
	comp=Z,218nm,19.1s,baz=236,slow=29						
TAOE	Nuku Hiva Isla	38.17	304	eLR	LR	01 46 16.7	
	comp=Z,229nm,25.2s						
ATAH	Atahualpa	38.95	53	LR	LR	01 48 31.9	
	comp=Z,171nm,19.7s,baz=219,slow=30						
PPT2	Papeete2	39.84	284	eLR	LR	01 46 54.5	
	comp=Z,455nm,25.2s						
PPT	Papeete	39.85	284	LR	LR	01 47 37.1	
	comp=Z,282nm,21.1s,baz=146,slow=29						
LPAZ	La Paz	40.65	74	LR	LR	01 49 14.1	
	comp=Z,169nm,21.9s,baz=220,slow=30						
CPUP	Villa Florida	44.85	94	LR	LR	01 52 06.6	
	comp=Z,145nm,21.6s,baz=242,slow=31						
SIV	San Ignacio	46.51	79	LR	LR	01 52 56.1	
	comp=Z,164nm,20.7s,baz=284,slow=31						
ROSC	El Rosal	50.72	47	LR	LR	01 55 03.5	
	comp=Z,136nm,21.8s,baz=228,slow=31						
VNDA	Vanda	56.76	195	LR	LR	01 57 22.1	
	comp=Z,90nm,19.8s,baz=123,slow=30						
BDFB	Brasilia	57.44	87	LR	LR	02 01 47.2	
	comp=Z,134nm,19.3s,baz=142,slow=34						
VNA3	Neumayer Olymp	60.92	159	P	P	01 38 54.4	+2.4
VNA1	Neumayer--Stat	61.57	158	P	P	01 38 59.5	+3.1
VNA2	Neumayer--Watz	61.73	159	P	P	01 38 59.6	+2.1
	baz=241,slow=5.6						
SNAA	Sanae	62.76	160	P	P	01 38 59.8	-4.6
SNAA	Sanae	62.76	160	P	P	01 39 03.6	-0.8
SNAA				IAmb	IAmb	01 39 12.4	
	comp=Z,6.3nm,1.3s						
TXAR	Lajitas Array	63.36	5	LR	LR	02 01 08.7	
	comp=Z,40nm,18.1s,baz=0.0,slow=31						
HHAR	Hobbs	71.48	13	P	P	01 40 00.0	0.0
R11A	Troy Canyon, C	72.42	355	P	P	01 40 05.1	-0.7
R11A				IAmb	IAmb	01 40 10.4	
	comp=Z,15nm,1.9s						
LHV	Little Huntoon	72.61	352	P	P	01 40 06.1	-0.6
LHV				IAmb	IAmb	01 40 20.0	
	comp=Z,9.6nm,1.2s						
KVN	Kaiserville	73.35	353	P	P	01 40 10.6	-0.8
DZM	Mont Dzumac	73.69	254	eLR	LR	02 02 31.8	
	comp=Z,153nm,27.4s						
PAHR	Pah Rah Range	74.15	352	P	P	01 40 16.9	+0.9
PAHR				IAmb	IAmb	01 40 20.1	
	comp=Z,26nm,1.9s						
SYO	Syowa Base	74.52	169	⇑ePcP	PcP	01 40 31.4	-0.8
BGU	Big Grassy Mou	74.83	357	P	P	01 40 20.6	+0.6
BGU				IAmb	IAmb	01 40 22.4	
	comp=Z,13nm,1.8s						
PDAR	Pinedale Array	76.57	360	P	P	01 40 31.4	+1.5
	comp=Z,1.0nm,0.8s,baz=152,slow=6.7,SNR=6.8						
TPAW	Teton Pass	77.32	358	P	P	01 40 35.1	+0.9
TPAW				IAmb	IAmb	01 40 37.4	
	comp=Z,6.3nm,1.2s						
HLID	Hailey	77.53	356	P	P	01 40 34.7	-0.6
HLID				IAmb	IAmb	01 40 39.1	
	comp=Z,12nm,1.4s						
MCMT	McKenzie Canyo	78.71	357	P	P	01 40 41.9	0.0
WB0	Warramunga Arr	99.36	239	P	Pdif	01 42 22.1	-0.3
SONM	Songino Array	150.34	308	PKPbc	PKiKP	01 48 31.4	-0.2
	comp=Z,2.7nm,0.8s,baz=93,slow=2.9,SNR=10						
CMAR	Chiang Mai Arr	150.65	245	PKPbc	PKiKP	01 48 33.2	+0.3
	comp=Z,1.0nm,0.3s,baz=166,slow=2.1,SNR=7.2						

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*JMA **03** 01:37:45.1±0.1, 24°.80N×121°.77E, h78km±2km, M3.8*

*NEIC **03** 01:37:46.2±1.1, 24°.77N±0°.04×121°.83E±0°.04, h72km±6km, mb4.0/8, ML4.5(TAP), Error ellipse: s-maj=5.8km s-min=5.4km az=210.0*

*IDC **03** 01:37:46.4±1.0, 24°.77N×121°.89E, h80km±9km, mb3.5/7, mb1 3.7/8, mb1mx3.4/35, mbtmp3.9/8, MS3.5/2, Ms1 3.5/2, ms1mx2.7/38, Error ellipse: s-maj=25.7km s-min=16.0km az=65.0*

*TAP **03** 01:37:46.1, 24°.79N×121°.81E, h71km, ML4.4, B*

ISC 03 01:37:46.5±0.6**, 24°.83N**±0°.03×**121°.82E**±0°.02**, h76km**±3km**, n146, σ0ˢ83**/233**, mb3.9**/9**, 33C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NTC	Toucheng	0.03	22	eP	Pn	01 37 56.9	-0.4
	baz=27						
NTC				eS	Sn	01 38 04.5	-0.7
	baz=27						
ILA	Ilan	0.09	225	⇓iP	Pn	01 37 57.2	-0.2
	baz=243						
ILA				S	Sn	01 38 05.5	+0.1
	baz=243						
EGS		0.10	82	eP	Pn	01 37 57.2	-0.2
	baz=74						
TIPB	Shuangxi	0.14	2	⇓iP	Pn	01 37 57.2	-0.4
	baz=354						
TIPB				S	Sn	01 38 04.8	-0.9
	baz=354						
TWE	Neicheng	0.18	232	⇑iP	Pn	01 37 57.3	-0.3
	baz=239						
TWE				i S	Sn	01 38 05.4	-0.4
	baz=239						
NDS	Dongshan	0.22	206	P	Pn	01 37 57.7	-0.1
	baz=209						
NDS				S	Sn	01 38 06.1	-0.1
	baz=209						
TWC	Suao	0.22	173	⇓iP	Pn	01 37 57.5	-0.3
	baz=159						
TWC				S	Sn	01 38 05.7	-0.5
	baz=159						
TWB1	Santiao Chiao	0.23	41	⇓iP	Pn	01 37 57.6	-0.3
	baz=46						
TWB1				i S	Sn	01 38 05.5	-0.8
	baz=46						
NWF	Wu-fen Shan	0.24	352	⇑iP	Pn	01 37 57.7	-0.4
	baz=355						
NWF				i S	Sn	01 38 06.0	-0.6
	baz=355						
WFSB	Wu-fen Shan	0.24	352	⇑iP	Pn	01 37 57.7	-0.3
	baz=355						
WFSB				S	Sn	01 38 05.6	-0.7
	baz=355						
TWA	Mucha	0.26	305	⇑iP	Pn	01 37 57.6	-0.4
	baz=319						
TWA				i S	Sn	01 38 06.1	-0.5
	baz=319						
NWLT	Wulai	0.29	260	⇑iP	Pn	01 37 57.6	-0.7
	baz=276						
NWLT				S	Sn	01 38 05.4	-1.5
	baz=276						
ENTT	Nioudou	0.30	231	⇑iP	Pn	01 37 57.9	-0.4
	baz=246						
ENTT				i S	Sn	01 38 06.4	-0.6
	baz=246						
NHDH	Xindian Distri	0.30	296	⇑iP	Pn	01 37 57.9	-0.3
	baz=296						
NHDH				S	Sn	01 38 06.3	-0.6
	baz=296						
NHY	Taipei	0.31	313	P	Pn	01 37 58.0	-0.3
	baz=326						
NHY				S	Sn	01 38 06.6	-0.4
	baz=326						
TNOU	National Taiwa	0.32	353	P	Pn	01 37 58.0	-0.4
	baz=355						
TNOU				S	Sn	01 38 06.3	-0.8
	baz=355						
TATO	Taipei	0.33	296	eP	Pn	01 37 57.9	-0.6
	baz=298						
TATO				eS	Sn	01 38 06.0	-1.3
	baz=298						
TATO	Taipei	0.33	296		Pn	01 37 57.9	-0.6
TATO				Sn	Sn	01 38 06.4	-0.9
TAP	Taipei	0.35	306	⇑iP	Pn	01 37 58.2	-0.3
	baz=320						
TAP				i S	Sn	01 38 07.2	-0.3
	baz=320						
NDT	Datong Townshi	0.36	231	⇑iP	Pn	01 37 58.3	-0.4
	baz=245						
NDT				i S	Sn	01 38 06.9	-0.8
	baz=245						
BACT	New Taipei Cit	0.38	296	eP	Pn	01 37 58.6	-0.2
	baz=298						
BACT				eS	Sn	01 38 08.0	+0.1
	baz=298						
EWUT	Wuta	0.39	186	P	Pn	01 37 58.8	0.0
	baz=184						
EWUT				S	Sn	01 38 07.8	-0.1
	baz=184						
YM01	YM01	0.39	324	⇑iP	Pn	01 37 58.6	-0.3
	baz=335						
YM01				i S	Sn	01 38 07.5	-0.6
	baz=335						
ENA	Nanau	0.41	190	⇑iP	Pn	01 37 58.7	-0.3
	baz=188						
ENA				S	Sn	01 38 08.5	+0.3
	baz=188						
YHNB	Yeheng	0.43	248	⇑iP	Pn	01 37 58.6	-0.7
	baz=253						
YHNB				S	Sn	01 38 07.2	-1.5
	baz=253						
YHNB	Yeheng	0.43	248		Pn	01 37 58.6	-0.7
YHNB				Sn	Sn	01 38 07.2	-1.5
ANP	Anpu	0.45	323	eP	Pn	01 37 59.0	-0.5
	baz=327						
ANP				eS	Sn	01 38 08.4	-0.6
	baz=327						
NSK	Sanguang	0.45	250	⇑iP	Pn	01 37 58.7	-0.7
	baz=254						
NSK				i S	Sn	01 38 07.4	-1.5
	baz=254						
TWS1	Kuangyinshan	0.45	307	⇑iP	Pn	01 37 59.3	-0.1
	baz=320						
TWS1				i S	Sn	01 38 09.0	+0.1
	baz=320						
NTST	Danshui	0.47	315	P	Pn	01 37 59.5	0.0
	baz=325						
NTST				S	Sn	01 38 09.2	+0.1
	baz=325						
TWY	Chenhua	0.49	336	⇑iP	Pn	01 37 59.6	0.0
	baz=340						
TWY				S	Sn	01 38 09.7	+0.3
	baz=340						
EHP	Heping Village	0.52	188	eP	Pn	01 38 00.2	+0.2
	baz=191						
EHP				eS	Sn	01 38 10.8	+0.8
	baz=191						
NNS	Nan Shan	0.56	226	⇑iP	Pn	01 38 00.1	-0.5
	baz=233						
NNS				i S	Sn	01 38 10.2	-0.6
	baz=233						
NNSB	Datong	0.56	225	⇑iP	Pn	01 38 00.1	-0.4
	baz=232						
NNSB				S	Sn	01 38 09.8	-1.1
	baz=232						
NCU	National Centr	0.59	284	⇑iP	Pn	01 38 00.5	-0.2
	baz=279						
NCU				i S	Sn	01 38 11.3	+0.1
	baz=279						
NCUH	Zhongli	0.59	283	P	Pn	01 38 00.4	-0.3
	baz=279						
NCUH				S	Sn	01 38 10.8	-0.4
	baz=279						
NACB	Ninganchiao	0.69	197	eP	Pn	01 38 00.7	-1.0
	baz=204						
NACB				eS	Sn	01 38 11.9	-0.9
	baz=204						
NACB	Ninganchiao	0.69	197		Pn	01 38 00.2	-1.5
NACB				Sn	Sn	01 38 11.7	-1.2
ETL	Fush Village	0.69	195	eP	Pn	01 38 00.9	-0.8
	baz=204						
ETLH	Xiulin Townshi	0.69	206	eP	Pn	01 38 01.1	-0.8
	baz=207						
ETLH				eS	Sn	01 38 12.1	-1.1
	baz=207						
LIOB	Emei	0.75	256	⇑iP	Pn	01 38 02.0	-0.4
	baz=259						
LIOB				S	Sn	01 38 13.5	-0.7
	baz=259						
SBCB	Hsinchu	0.76	267	⇑iP	Pn	01 38 02.2	-0.2
	baz=270						
SBCB				S	Sn	01 38 13.8	-0.5
	baz=270						
NSTT	Nanjuang	0.77	255	⇑iP	Pn	01 38 02.0	-0.5
	baz=257						
NSTT				i S	Sn	01 38 13.8	-0.7
	baz=257						
HSN	Hsinchu	0.77	268	⇑iP	Pn	01 38 01.9	-0.6
	baz=273						
HSN				i S	Sn	01 38 13.6	-0.9
	baz=273						
TWD	Chiawan	0.77	195	eP	Pn	01 38 01.3	-1.3
	baz=203						
TWD				eS	Sn	01 38 12.6	-1.9
	baz=203						
FUSS	Fushou	0.78	222	P	Pn	01 38 03.1	+0.1
	baz=223						
FUSS				S	Sn	01 38 14.4	-0.7
	baz=223						
TWT	Tachien	0.82	226	⇑iP	Pn	01 38 03.5	+0.2
	baz=227						
TWT				i S	Sn	01 38 16.0	+0.2
	baz=227						
PCYT	Pengchaiyu	0.83	16	eP	Pn	01 38 03.4	+0.2
	baz=12						
PCYT				eS	Sn	01 38 15.6	0.0
	baz=12						
TDCB	Techi	0.83	226	⇑iP	Pn	01 38 03.5	+0.1
	baz=227						
TDCB				S	Sn	01 38 15.8	-0.2
	baz=227						
WHF	Hehuan Shan	0.85	217	⇑iP	Pn	01 38 03.5	-0.4
	baz=209						
WHF				S	Sn	01 38 16.1	-0.7
	baz=209						
HWA	Hwalien	0.87	193	eP	Pn	01 38 03.3	-0.4
	baz=202						
CHGB	Renai	0.97	218	⇑iP	Pn	01 38 05.0	0.0
	baz=217						
CHGB				i S	Sn	01 38 18.4	-0.5
	baz=217						
WHP	Taichung City	0.97	235	⇑iP	Pn	01 38 05.1	+0.1
	baz=245						
WHP				S	Sn	01 38 18.5	-0.2
	baz=245						
NSY	Sanyi	1.05	247	⇑iP	Pn	01 38 05.8	-0.1
	baz=257						
NSY				i S	Sn	01 38 20.2	-0.1
	baz=257						
OWD	Renai	1.05	214	eP	Pn	01 38 05.9	-0.1
	baz=206						
TWQ1	Liyutan	1.07	243	⇑iP	Pn	01 38 05.7	-0.4
	baz=254						
TWQ1				i S	Sn	01 38 19.8	-0.9
	baz=254						
ESL	Shilin	1.07	199	P	Pn	01 38 04.3	-1.9
	baz=199						
JYNG	Yonagunijimaku	1.09	110	P	Pn	01 38 05.8	-0.6
JYNG				S	Sn	01 38 20.3	-1.0
WCS	Beigang Elemen	1.13	227	eP	Pn	01 38 06.7	-0.2
	baz=236						
WCS				eS	Sn	01 38 22.5	+0.4
	baz=236						
YOJ	Yonaguni jima	1.15	108	eP	Pn	01 38 06.4	-0.6
	baz=100						
YOJ				eS	Sn	01 38 21.4	-1.1
	baz=100						
YOJ	Yonaguni jima	1.15	108	P	Pn	01 38 06.5	-0.6
YOJ				eS	Sn	01 38 21.8	-0.6
YOJ	Yonaguni jima	1.15	108		Pn	01 38 06.2	-0.8
YOJ				Sn	Sn	01 38 21.1	-1.3
WDJ	Dajia District	1.18	246	eP	Pn	01 38 07.0	-0.4
	baz=255						
WDJ				eS	Sn	01 38 22.9	-0.2
	baz=255						
EGFH	Guangfu	1.21	197	eP	Pn	01 38 08.0	+0.1
	baz=197						
TCU	Taichung	1.24	237	eP	Pn	01 38 08.1	-0.2
	baz=237						
TCU				eS	Sn	01 38 24.5	-0.2
	baz=237						
SMLT	Sun Moon Lake	1.26	222	⇑iP	Pn	01 38 08.6	0.0
	baz=221						
SMLT				S	Sn	01 38 25.5	+0.2
	baz=221						
TYC	Yuchr	1.27	224	⇑iP	Pn	01 38 08.5	-0.1
	baz=223						
TYC				S	Sn	01 38 25.7	+0.3
	baz=223						
SSLB	Suanglung	1.30	217	⇑P	Pn	01 38 09.1	0.0
	baz=229						
SSLB				S	Sn	01 38 26.6	+0.4
	baz=229						
SSLB	Suanglung	1.30	217		Pn	01 38 08.5	-0.6
WCHH	Zhanghua	1.37	237	eP	Pn	01 38 09.4	-0.5
	baz=238						
WCHH				eS	Sn	01 38 26.8	-0.8
	baz=238						
HGSD	Ruisui	1.38	195	eP	Pn	01 38 10.0	0.0
	baz=201						
HGSD				eS	Sn	01 38 27.6	-0.2
	baz=201						
EHY	Hungye	1.40	199	eP	Pn	01 38 09.1	-1.2
	baz=192						
WNT	Mingjian	1.40	228	eP	Pn	01 38 10.2	-0.2
	baz=228						
WJS	Zhushan	1.41	225	eP	Pn	01 38 09.9	-0.6
	baz=236						
WJS				eS	Sn	01 38 28.4	-0.2
	baz=236						
YULB	Yu-li	1.51	199	eP	Pn	01 38 10.6	-1.2
	baz=194						
YULB	Yu-li	1.51	199		Pn	01 38 10.2	-1.6
EYUL	Yuli	1.55	197	eP	Pn	01 38 13.2	+1.0
	baz=197						
ALS	Alishan	1.61	215	P	Pn	01 38 13.7	+0.3
	baz=225						
ALS				eS	Sn	01 38 34.7	+1.1
	baz=225						
WRL	Guolierlin Hig	1.61	235	eP	Pn	01 38 12.4	-0.6
	baz=236						
WRL				eS	Sn	01 38 31.6	-1.5
	baz=236						
CHN5	Tsauling	1.61	221	⇑P	Pn	01 38 13.0	-0.2
	baz=220						
CHN5				S	Sn	01 38 33.4	+0.1
	baz=220						
WDLH	Douliu	1.63	226	eP	Pn	01 38 13.1	-0.3
	baz=236						
WDLH				eS	Sn	01 38 33.8	+0.1
	baz=236						
FULB	Fuli	1.69	197	eP	Pn	01 38 14.4	+0.2
	baz=196						
WTK	Tuku	1.73	229	eP	Pn	01 38 14.2	-0.4
	baz=230						
WTK				eS	Sn	01 38 35.2	-0.8
	baz=230						
CHKT	Chengkung	1.77	194	eP	Pn	01 38 14.8	-0.5
	baz=181						
CHKT				eS	Sn	01 38 36.1	-0.9
	baz=181						
ELDTW	Lidau	1.79	204	eP	Pn	01 38 15.2	-0.4
	baz=197						
IRIF	Iriomote-Funau	1.81	105	P	Pn	01 38 14.8	-0.9
IRIF				S	Sn	01 38 37.0	-0.9
CHY	Chiayi	1.84	224	eP	Pn	01 38 15.8	-0.3
	baz=234						
CHY				eS	Sn	01 38 38.1	-0.5
	baz=234						
TPUB	Ta-pu	1.87	216	eP	Pn	01 38 16.7	+0.1
	baz=227						
TPUB	Ta-pu	1.87	216		Pn	01 38 15.7	-0.9
WSF	Szhu	1.88	231	eP	Pn	01 38 15.6	-1.0
	baz=232						
WSF				S	Sn	01 38 39.3	-0.3
	baz=232						
STYH	Taoyuan	1.91	210	eP	Pn	01 38 17.4	+0.4

	baz=221						
STYH				*e*S	**Sn**	**01 38 41.9**	**+1.7**
	baz=221						
EDH	**Donghe**	**1.91**	**194**	*e*P	**Pn**	**01 38 16.9**	**-0.1**
	baz=200						
EDH				*e*S	**Sn**	**01 38 38.6**	**-1.6**
	baz=200						
WTP	**Ta-pu**	**1.92**	**215**	*e*P	**Pn**	**01 38 17.9**	**+0.7**
	baz=214						
WTP				*e*S	**Sn**	**01 38 42.7**	**+2.0**
	baz=214						
HATJ	**Hateruma jima**	**1.97**	**113**	P	**Pn**	**01 38 17.7**	**-0.1**
HATJ				*e*S	**Sn**	**01 38 41.8**	**+0.2**
TWK	**Hsinying**	**1.98**	**218**	*e*P	**Pn**	**01 38 18.3**	**+0.3**
	baz=218						
TWK				*e*S	**Sn**	**01 38 44.3**	**+2.3**
	baz=218						
LONT	**Longtian**	**2.02**	**198**	*e*P	**Pn**	**01 38 19.1**	**+0.6**
	baz=189						
CHN1	**Nanshi**	**2.02**	**216**	*e*P	**Pn**	**01 38 18.4**	**-0.1**
	baz=215						
CHN1				*e*S	**Sn**	**01 38 43.5**	**+0.5**
	baz=215						
ICHU	**Yijhu**	**2.03**	**224**	*e*P	**Pn**	**01 38 18.0**	**-0.7**
	baz=225						
ICHU				*e*S	**Sn**	**01 38 42.1**	**-1.0**
	baz=225						
SGST	**Jiashian**	**2.08**	**213**	*e*P	**Pn**	**01 38 18.0**	**-1.2**
	baz=225						
JKRS	**Kuro-shima**	**2.08**	**106**	P	**Pn**	**01 38 19.3**	**0.0**
JKRS				S	**Sn**	**01 38 44.4**	**0.0**
CHN8	**Yiju**	**2.08**	**225**	*e*P	**Pn**	**01 38 18.6**	**-0.8**
	baz=226						
TWG	**Pinlang**	**2.11**	**199**		**Pn**	**01 38 18.6**	**-1.2**
TWGBT	**Beinan**	**2.12**	**199**	*e*P	**Pn**	**01 38 18.9**	**-0.9**
	baz=190						
MATB	**Ma-tsu**	**2.14**	**308**	*e*P	**Pn**	**01 38 19.2**	**-1.0**
	baz=307						
JIJ	**Ishigaki jima**	**2.17**	**102**	P	**Pn**	**01 38 19.9**	**-0.6**
JIJ				S	**Sn**	**01 38 45.4**	**-1.0**
JISG	**Ishigakijimahi**	**2.28**	**96**	P	**Pn**	**01 38 21.4**	**-0.6**
JISG				S	**Sn**	**01 38 49.2**	**+0.1**
SSD	**Sandimen**	**2.34**	**208**	*e*P	**Pn**	**01 38 23.3**	**+0.4**
	baz=219						
ECL	**Taimali**	**2.36**	**200**	*e*P	**Pn**	**01 38 22.8**	**-0.3**
	baz=192						
TSMG	**Majia**	**2.37**	**207**	*e*P	**Pn**	**01 38 23.9**	**+0.6**
	baz=219						
PHUB	**P'eng-hu**	**2.44**	**238**	*e*P	**Pn**	**01 38 22.5**	**-1.5**
	baz=240						
PHUB				*e*S	**Sn**	**01 38 49.3**	**-3.6**
	baz=240						
PTMZ	**Houxiangcun**	**2.46**	**275**	*e*P	**Pn**	**01 38 23.4**	**-1.0**
	baz=275						
MASBT	**Mashibuluo**	**2.46**	**206**	*e*P	**Pn**	**01 38 24.8**	**+0.4**
	baz=218						
LYJJ	**Jianjiangzhen**	**2.53**	**313**	*e*P	**Pn**	**01 38 24.5**	**-0.8**
	baz=312						
XPSS	**Dashiqiu**	**2.55**	**325**	*e*P	**Pn**	**01 38 25.0**	**-0.7**
	baz=325						
EAST	**Anshuo**	**2.59**	**200**	*e*P	**Pn**	**01 38 27.0**	**+0.7**
	baz=191						
JTJ	**Tarama**	**2.63**	**94**	*e*S	**Sn**	**01 38 59.2**	**+1.6**
SLIU	**Shizi**	**2.77**	**200**	*e*P	**Pn**	**01 38 29.2**	**+0.6**
	baz=199						
MHZQ	**Yeshan**	**2.82**	**297**	*e*P	**Pn**	**01 38 28.3**	**-1.0**
	baz=295						
KNM	**Kinmen**	**3.11**	**263**	*e*P	**Pn**	**01 38 33.9**	**+0.7**
	baz=263						
KNMB	**Chin-men Tao**	**3.14**	**264**	Pn	**Pn**	**01 38 32.6**	**-1.1**
AXDP	**Jialang**	**3.50**	**272**	*e*P	**Pn**	**01 38 37.9**	**-0.6**
	baz=271						
ZPLA	**Ao Xicun**	**3.82**	**257**	*e*P	**Pn**	**01 38 41.4**	**-1.4**
	baz=257						
JOW	**Kunigami**	**6.15**	**70**	P	**Pn**	**01 39 15.3**	**+0.6**
	3.3nm,0.3s,baz=100,slow=20,SNR=1.5						
JOW	**Kunigami**	**6.15**	**70**		**Pn**	**01 39 12.1**	**-2.6**
UBPT	**Khong Chiam**	**18.04**	**241**	P	**P**	**01 41 51.3**	**-0.4**
UBPT				IAmb	IAmb	01 41 53.2	
	comp=Z,10nm,1.3s						
CMAR	**Chiang Mai Arr**	**22.17**	**258**	P	**P**	**01 42 37.4**	**+0.9**
	comp=Z,1.2nm,0.3s,baz=64,slow=11,SNR=4.1						
CMAR				pP	**pP**	**01 42 53.6**	**+1.5**
	comp=Z,1.4nm,0.3s,baz=348,slow=13,SNR=2.1						
SONM	**Songino Array**	**26.01**	**336**	P	**P**	**01 43 13.4**	**+0.9**
	comp=Z,3.6nm,0.9s,baz=151,slow=9.5,SNR=18						
SONM				pP	**pP**	**01 43 31.5**	**+1.5**
	comp=Z,2.9nm,0.9s,baz=146,slow=10,SNR=8.3						
SONM	**Songino Array**	**26.01**	**336**	P	**P**	**01 43 13.3**	**+0.9**
SONM				IAmb	IAmb	01 43 14.7	
	comp=Z,6.3nm,1.2s						
WMQ	**Urumqi**	**33.63**	**313**	*e*P	**P**	**01 44 21.8**	**+1.9**
BATI	**Baumata**	**34.87**	**177**	LR	LR	02 00 19.9	
	comp=Z,114nm,21.1s,baz=140,slow=39						
MK31	**Makanchi Array**	**38.28**	**315**	P	**P**	**01 45 00.1**	**+0.6**
MK31				IAmb	IAmb	01 45 00.9	
	comp=Z,3.6nm,1.4s						
MKAR	**Makanchi Array**	**38.28**	**315**	P	**P**	**01 44 59.5**	**0.0**
	comp=Z,0.3nm,0.6s,baz=93,slow=9.6,SNR=5.3						
MKAR				pP	**pP**	**01 45 18.2**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=103,slow=10,SNR=3.6						
ZALV	**Zalesovo Beam**	**40.02**	**326**	P	**P**	**01 45 13.3**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=111,slow=8.1,SNR=4.4						
ZALV				pP	**pP**	**01 45 32.1**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=114,slow=6.6,SNR=4.4						
KURK	**Kurchatov**	**41.97**	**319**	P	**P**	**01 45 30.4**	**+0.5**
PMG	**Port Moresby**	**42.06**	**141**	LR	LR	01 59 57.4	
	comp=Z,39nm,21.8s,baz=96,slow=32						
KKAR	**Karatay Array**	**45.54**	**307**	P	**P**	**01 45 58.5**	**-0.2**
WB0	**Warramunga Arr**	**45.99**	**163**	P	**P**	**01 46 00.8**	**-1.5**
WB0				IAmb	IAmb	01 46 08.0	
	comp=Z,3.3nm,1.1s						
WRA	**Warramunga Arr**	**46.14**	**164**	P	**P**	**01 46 01.9**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=345,slow=8.7,SNR=14						
WB2	**Warramunga Arr**	**46.15**	**164**	P	**P**	**01 46 02.2**	**-1.4**
ASAR	**Alice Springs**	**49.61**	**165**	P	**P**	**01 46 29.4**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=346,slow=6.9,SNR=9.2						
ASAR	**Alice Springs**	**49.61**	**165**	P	**P**	**01 46 28.7**	**-1.7**
ABKAR	**Akbulak array**	**53.41**	**314**	P	**P**	**01 46 58.9**	**+0.5**
ABKAR	**Akbulak array**	**53.41**	**314**	P	**P**	**01 46 58.5**	**+0.1**
FIA1	**FINESS Array S**	**71.18**	**330**	P	**P**	**01 48 57.5**	**+0.7**
FINES	**FINESS Array B**	**71.18**	**330**	P	**P**	**01 48 56.5**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=33,slow=7.3,SNR=4.7						
FINES	**FINESS Array B**	**71.18**	**330**	P	**P**	**01 48 55.7**	**-1.2**

IDC 03 01:40:06.0±8.2**, 33°.16S**×**112°.77W, h0^{km}, mb3.6**/2**, mb1 4.1**/2**, mb1mx3.6**/24**, mbtmp3.6**/2**, MS3.8**/4**, Ms1 3.8**/4**, ms1mx3.4**/19**, Error ellipse: s-maj=514.5km s-min=50.5km az=116.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**39.01**	**66**	LR	LR	01 58 58.0	
	comp=Z,118nm,18.0s,baz=212,slow=29						
LPAZ	**La Paz**	**43.53**	**78**	LR	LR	02 00 33.5	
	comp=Z,80nm,21.1s,baz=234,slow=28						
ROSC	**El Rosal**	**52.48**	**51**	LR	LR	02 07 36.2	
	comp=Z,84nm,19.6s,baz=274,slow=31						
URZ	**Urewera**	**55.93**	**243**	LR	LR	02 08 43.2	
	comp=Z,104nm,18.3s,baz=31,slow=31						
TXAR	**Lajitas Array**	**62.74**	**9**	P	P	01 50 33.4	+0.4
	0.5nm,1.1s,baz=200,slow=7.6,SNR=2.5						
PDAR	**Pinedale Array**	**75.61**	**2**	P	P	01 51 52.6	-0.2
	0.4nm,0.5s,baz=156,slow=4.6,SNR=8.1						
SONM	**Songino Array**	**147.19**	**308**	PKPbc	PKPbc	01 59 50.2	-0.8
	2.3nm,0.9s,baz=63,slow=0.6,SNR=4.5						
CMAR	**Chiang Mai Arr**	**148.07**	**251**	PKPbc	PKPbc	01 59 53.5	-0.7
	1.0nm,0.3s,baz=191,slow=1.5,SNR=7.5						

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*KLM **03** 01:48:14, 2°.68N×95°.52E, h10^{km}, mb4.9*
*NEIC **03** 01:48:16.9±1.3, 2°.76N±0°.04×95°.69E±0°.09, h28^{km}±5^{km}, mb4.8/46, Error ellipse: s-maj=13.3km s-min=2.9km az=68.0*
*DJA **03** 01:48:17.4±0.8, 3°N±2°×9°6E±°, h26^{km}±7^{km}, M4.7/36, mb4.8/36, mB5.2/15, MLv4.9/13, Mw(mB)4.6/15, MwMwp4.9/2, Mwp5.2/2*
*IDC **03** 01:48:19.1±2.7, 2°.78N×95°.76E, h45^{km}±25^{km}, mb4.2/18, mb1 4.3/21, mb1mx4.0/48, mbtmp4.5/21, ML4.3/3, MS4.0/10, Ms1 4.0/10, ms1mx3.6/38, Error ellipse: s-maj=21.1km s-min=12.3km az=44.0*
ISC 03 01:48:16.1±0.4**, 2°.78N**±0°.05×**95°.71E**±0°.04**, h27^{km}, n174,** σ1^{s}.**35**/175**, mb4.8**/61**, MS4.2**/12**, 1C-1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPTI		**1.55**	**72**	P	**Pn**	**01 48 42.8**	**+0.8**
TPTI				S	**Sb**	**01 49 03.6**	**+0.2**
KCSI	**Kotacane, Aceh**	**2.19**	**70**	P	**Pb**	**01 48 53.1**	**-2.0**
KCSI				S	**Sb**	**01 49 20.3**	**-1.6**
GSI	**Gunungsitoli**	**2.37**	**128**	P	**Pn**	**01 48 53.7**	**+0.4**
GSI				S	**Sn**	**01 49 20.7**	**-0.8**
GSI	**Gunungsitoli**	**2.37**	**128**		**Pn**	**01 48 53.9**	**+0.6**
GSI				Sn	**Sn**	**01 49 20.3**	**-1.2**
GSI	**Gunungsitoli**	**2.37**	**128**	P	**Pn**	**01 48 54.3**	**+1.0**
LHMI	**Lhok Sumawe**	**2.73**	**27**	P	**Pn**	**01 49 00.8**	**+2.5**
LHMI	**Lhok Sumawe**	**2.73**	**27**	Pn	**Pn**	**01 48 59.6**	**+1.3**
LHMI	**Lhok Sumawe**	**2.73**	**27**	P	**Pn**	**01 49 00.8**	**+2.5**
TSI	**Tuntungan**	**2.94**	**76**	P	**Pn**	**01 49 04.3**	**+3.1**
PSI	**Prapat**	**3.21**	**89**	P	**Pn**	**01 49 06.8**	**+1.8**
	17nm,0.3s,baz=284,slow=6.6,SNR=90						
PSI				S	**Sn**	**01 49 43.2**	**+0.7**
	7.7nm,0.3s,baz=106,slow=18,SNR=5.4						
PSI				LR	LR	01 50 43.1	
	comp=Z,2µm,18.9s,baz=256,slow=46						
RPSI	**Rantau Prapat**	**3.22**	**91**		**Pn**	**01 49 06.8**	**+1.9**
MNSI	**Mandailing Nat**	**4.34**	**117**	P	**Pn**	**01 49 21.6**	**+1.2**
SISI	**Saibi**	**5.30**	**140**	P	**Pn**	**01 49 34.9**	**+1.4**
	0.7nm1µm82nm,0.9s						
KULM	**Kulim**	**5.53**	**63**	Pn	**Pn**	**01 49 38.2**	**+1.5**
IPM	**Ipoh**	**5.57**	**72**	P	**Pn**	**01 49 40.0**	**+2.6**
IPM	**Ipoh**	**5.57**	**72**	Pn	**Pn**	**01 49 38.6**	**+1.3**
IPM	**Ipoh**	**5.57**	**72**	P	**Pn**	**01 49 41.1**	**+3.7**
BKNI	**Bangkinang**	**5.86**	**114**	P	**Pn**	**01 49 42.3**	**+1.0**
	1.1nm2µm119nm,0.8s						
BKNI	**Bangkinang**	**5.86**	**114**		**Pn**	**01 49 41.2**	**-0.1**
BKNI	**Bangkinang**	**5.86**	**114**	P	**Pn**	**01 49 44.0**	**+2.7**
PDSI	**Padang**	**6.00**	**128**	P	**Pn**	**01 49 43.2**	**-0.1**
	0.4nm8µm48nm,0.5s						
SRIT	**Nakonsritamara**	**6.96**	**34**		**Pn**	**01 49 56.8**	**+0.4**
PPSI	**Pulau Pagai**	**6.98**	**142**	P	**Pn**	**01 49 57.3**	**+0.6**
	0.7nm115nm,1.0s						
KRJI	**Kerinci**	**7.52**	**130**	P	**Pn**	**01 50 05.1**	**+1.0**
	2.2nm13µm348nm,0.5s						
MASI	**Maura Aman, Be**	**8.79**	**132**	P	**Pn**	**01 50 22.3**	**+0.8**
	100nm,0.7s						
LHSI	**Lahat**	**10.20**	**130**	P	**Pn**	**01 50 42.0**	**+1.1**
	69nm,0.7s						
MDSI	**Maura Dua**	**11.12**	**130**	P	**Pn**	**01 50 53.4**	**-0.1**
	354nm32nm,0.7s						
KLSI		**11.68**	**129**	P	**Pn**	**01 51 01.4**	**+0.3**
	18nm,1.3s						
KSM	**Kuching**	**14.65**	**95**	Pn	**Pn**	**01 51 39.9**	**-1.8**
LEM	**Lembang**	**15.24**	**129**	LR	LR	01 58 32.0	
	comp=Z,742nm,18.7s,baz=286,slow=40						
PALK	**Pallekele**	**15.60**	**287**	P	**P**	**01 51 58.5**	**+0.2**
	0.6nm,0.3s,baz=244,slow=7.9,SNR=5.1						
PALK				S	Sn	01 54 29.9	-17
	1.5nm,0.3s,baz=313,slow=12,SNR=6.3						
PALK	**Pallekele**	**15.60**	**287**	P	**Pn**	**01 51 52.6**	**-1.7**
DLV	**T Lat**	**15.60**	**54**	P	**Pn**	**01 51 54.2**	**-0.3**
UBPT	**Khong Chiam**	**15.72**	**37**	Pn	**Pn**	**01 51 55.1**	**-0.8**
UBPT				IAmb	IAmb	01 52 10.7	
	comp=Z,70nm,1.2s						
CM31	**Chiang Mai Arr**	**15.90**	**11**	Pn	**Pn**	**01 51 57.6**	**-0.6**
CM31				IAmb	IAmb	01 52 08.9	
	comp=Z,53nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.90**	**11**	P	**Pn**	**01 51 58.6**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=200,slow=11,SNR=93						
CMAR				LR	LR	01 57 59.6	
	comp=Z,449nm,20.3s,baz=235,slow=36						
CMAR	**Chiang Mai Arr**	**15.90**	**11**		**Pn**	**01 51 58.9**	**+0.6**
STKI	**Sintang**	**15.99**	**99**	P	**P**	**01 52 01.7**	**-1.0**
CHTO	**Chiang Mai**	**16.25**	**11**	Pn	**Pn**	**01 52 02.8**	**+0.1**
CHTO	**Chiang Mai**	**16.25**	**11**	P	**Pn**	**01 52 03.7**	**+1.0**
SBUM	**Sibu**	**16.50**	**91**	Pn	**Pn**	**01 52 06.2**	**+0.3**
MTKI	**Muara Teweh, K**	**19.54**	**101**	P	**Pn**	**01 52 43.8**	**+0.6**
SLVN	**Son La**	**20.10**	**23**		**P**	**01 52 47.7**	**-0.2**
BBKI	**Banjar Baru**	**20.11**	**108**	P	Pn	01 52 51.1	+1.1
	comp=Z,4µmcomp=Z,39nm,0.9s						
KKM	**Kota Kinabalu**	**20.70**	**80**	P	**P**	**01 52 53.6**	**-1.0**
KKM	**Kota Kinabalu**	**20.70**	**80**	P	Pn	01 52 56.5	-0.6
KBKI	**Kotabaru**	**21.32**	**106**	P	**P**	**01 53 02.9**	**+1.7**
	comp=Z,29nm,1.0s						
MYLDM	**Lahad Datu**	**22.86**	**83**	P	**P**	**01 53 17.9**	**+0.2**
BOK	**Bokaro**	**22.95**	**336**	*e*P	**P**	**01 53 18.4**	**-0.2**
BOK				IAmb	IAmb	01 53 23.1	
	comp=Z,51nm,0.9s						
BOK				*e*S	**S**	**01 57 27.5**	**+0.3**
SHL	**Shillong**	**22.96**	**351**	*e*P	**P**	**01 53 16.1**	**-2.6**
SHL				IAmb	IAmb	01 53 20.8	
	comp=Z,24nm,0.7s						
SHL	**Shillong**	**22.96**	**351**	P	**P**	**01 53 16.1**	**-2.6**
SHL				IAmb	IAmb	01 53 21.0	
	comp=Z,34nm,0.8s						
MPSI	**Mapaga**	**24.30**	**95**	P	**P**	**01 53 33.3**	**+1.6**
	comp=Z,12nm,1.0s						
SPSI	**Sidrap Palu**	**24.96**	**105**	P	**P**	**01 53 38.3**	**+0.6**
	comp=Z,14nm,0.8s						
TOLI2	**Tolitoli**	**25.12**	**93**	P	**P**	**01 53 37.2**	**-1.8**
TOLI2				IAmb	IAmb	01 53 50.4	
	comp=Z,20nm,0.9s						
TOLI2	**Tolitoli**	**25.12**	**93**	P	**P**	**01 53 41.4**	**+2.3**
KAPI	**Kappang**	**25.24**	**108**	P	**P**	**01 53 40.6**	**+0.5**
	comp=Z,25nm,0.7s,baz=300,slow=8.2,SNR=10						
KAPI	**Kappang**	**25.24**	**108**	P	**P**	**01 53 39.0**	**-1.1**
KAPI	**Kappang**	**25.24**	**108**	P	**P**	**01 53 42.0**	**+1.8**
ODAN	**Odare**	**25.24**	**342**	*e*P	**P**	**01 53 41.6**	**+1.3**
	comp=Z,124nm,0.9s						
H08S2	**Diego Garcia H**	**25.37**	**246**	T	T	02 19 48.3	
	baz=67,slow=76,SNR=5824						
H08S3	**Diego Garcia H**	**25.37**	**246**	T	T	02 19 47.0	
	baz=67,slow=76,SNR=7871						
H08S1	**Diego Carcia H**	**25.38**	**246**	T	T	02 19 48.2	
	baz=67,slow=76,SNR=994						
BNSI	**Bone**	**25.40**	**106**	P	**P**	**01 53 43.8**	**+2.2**
	comp=Z,42nm,1.2s						
RAMN	**Ramite**	**25.57**	**341**	*e*P	**P**	**01 53 45.1**	**+1.8**
	comp=Z,48nm,0.7s						
TAPN	**Taplejung**	**25.61**	**343**	*e*P	**P**	**01 53 44.9**	**+1.2**
	comp=Z,108nm,0.7s						
BKSI	**Bulukumba**	**25.68**	**108**	P	**P**	**01 53 45.8**	**+1.6**
	comp=Z,411nmcomp=Z,46nm,0.9s						
BSSI	**Bau Bau, Buton**	**26.29**	**110**	P	**P**	**01 53 51.8**	**+2.1**
	comp=Z,42nm,0.9s						
PKI	**Pulchoki**	**26.55**	**339**	*e*P	**P**	**01 53 53.7**	**+1.4**
PKIN	**Phulchoki**	**26.56**	**339**	*e*P	**P**	**01 53 53.7**	**+1.4**
DMN	**Daman**	**26.69**	**339**	*e*P	**P**	**01 53 54.9**	**+1.4**
GUN	**Gumba**	**26.70**	**340**	*e*P	**P**	**01 53 54.9**	**+1.3**
	comp=Z,90nm,0.7s						
KKN	**Kakani**	**26.80**	**339**	*e*P	**P**	**01 53 55.8**	**+1.4**
BHPL	**Bhopal**	**26.97**	**320**	*e*P	**P**	**01 53 55.8**	**+0.1**
LSA	**Lhasa**	**27.12**	**351**	P	**P**	**01 53 59.1**	**+1.5**
LSA				pmax	pmax		
	comp=Z,72nm,0.8s						
LSA	**Lhasa**	**27.12**	**351**	P	**P**	**01 53 56.1**	**-1.5**
LSA				IAmb	IAmb	01 54 01.9	
	comp=Z,21nm,0.8s						
GKN	**Gorkha**	**27.22**	**338**	*e*P	**P**	**01 53 59.6**	**+1.5**
GTOI	**Gorontalo**	**27.37**	**94**	P	**P**	**01 53 59.3**	**-0.2**
	comp=Z,4µmcomp=Z,9.0nm,0.8s						
KOLN	**Koldanda**	**27.41**	**336**	*e*P	**P**	**01 54 01.4**	**+1.5**
	comp=Z,102nm,0.9s						
DANN	**Dangsing**	**27.87**	**337**	*e*P	**P**	**01 54 05.4**	**+1.3**
	comp=Z,103nm,1.0s						
PYUN	**Piuthan**	**27.96**	**335**	*e*P	**P**	**01 54 05.9**	**+1.1**
WHN	**Wuhan**	**32.77**	**31**	⇓P	**P**	**01 54 48.4**	**+1.4**
SMLA	**Simla**	**33.19**	**330**	*e*P	**P**	**01 54 51.5**	**+0.8**
SMLA				IAmb	IAmb	01 54 58.8	
	comp=Z,5.7nm,0.8s						
XAN	**Xi'an**	**33.46**	**20**	P	**P**	**01 54 52.8**	**-0.3**
XAN				pP	pP	01 55 01.4	+0.3
XAN				sP	sP	01 55 04.6	+0.2
XAN				pmax	pmax		
	comp=Z,77nm,0.9s						
XAN				pmax	pmax		
	comp=Z,180nm,4.3s						
XAN				LR	LR		
	comp=N,590nm,13.4s						
XAN				LR	LR		
	comp=E,410nm,14.1s						
XAN				LR	LR		
	comp=Z,750nm,13.2s						
LZH	**Lanzhou**	**33.99**	**12**	⇑P	**P**	**01 54 58.0**	**+0.2**
LZH				pP	pP	01 55 01.4	-4.4
LZH				sP	sP	01 55 04.8	-4.3
LZH				pmax	pmax		
	comp=Z,45nm,1.3s						
LZH				LR	LR		
	comp=N,340nm,13.4s						
LZH				LR	LR		
	comp=E,510nm,13.6s						
LZH				LR	LR		
	comp=Z,330nm,15.7s						
SIJI	**Sorong**	**35.73**	**95**	P	**P**	**01 55 12.9**	**-0.1**
	comp=Z,10nm,0.6s,baz=308,slow=8.9,SNR=8.0						
GTA	**Gaotai**	**36.66**	**5**	*e*P	**P**	**01 55 20.9**	**+0.2**
GTA				pP	pP	01 55 27.8	-0.9
GTA				sP	sP	01 55 31.4	-0.6
GTA				pmax	pmax		
	comp=Z,22nm,1.2s						
GTA				pmax	pmax		
	comp=Z,95nm,6.0s						
GTA				LR	LR		
	comp=N,160nm,17.8s						
GTA				LR	LR		
	comp=E,200nm,17.1s						
GTA				LR	LR		
	comp=Z,210nm,18.5s						
FAKI	**Fak Fak**	**36.96**	**99**	P	**P**	**01 55 22.1**	**-1.4**
FAKI				IAmb	IAmb	01 55 24.4	
	comp=Z,18nm,0.9s						
NIL	**Nilore**	**37.20**	**328**	P	**P**	**01 55 24.4**	**-0.9**
NIL				IAmb	IAmb	01 55 39.8	
	comp=Z,14nm,0.8s						
BTO	**Baotou**	**39.82**	**17**	*e*P	**P**	**01 55 48.7**	**+1.4**
BTO				LR	LR		
	comp=N,2µm,14.3s						
BTO				LR	LR		
	comp=E,2µm,14.9s						
KSH	**Kashi**	**40.73**	**336**	P	**P**	**01 55 53.8**	**-1.1**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
H01W3	**Cape Leeuwin H**	**41.27**	**157**	T	T	02 39 35.9	
	baz=333,slow=76,SNR=254						
H01W2	**Cape Leeuwin H**	**41.28**	**157**	T	T	02 39 40.1	
	baz=333,slow=76,SNR=714						
H01W1	**Cape Leeuwin H**	**41.28**	**157**	T	T	02 39 43.2	
	baz=333,slow=76,SNR=478						
BJT	**Baijiatuau**	**41.45**	**24**	P	**P**	**01 56 00.8**	**+0.2**
BJT				IAmb	IAmb	01 56 03.7	
	comp=Z,25nm,0.8s						
TARG	**Taragay, Kyrgy**	**41.98**	**340**	P	**P**	**01 56 04.6**	**-0.8**
TARG				IAmb	IAmb	01 56 15.4	
	comp=Z,13nm,0.8s						
KDJ	**Kajisay**	**42.55**	**340**	P	**P**	**01 56 09.7**	**-0.1**
KDJ				IAmb	IAmb	01 56 19.7	
	comp=Z,15nm,0.7s						
GAR	**Garm**	**42.84**	**331**	P	**P**	**01 56 12.0**	**-0.2**
GAR				IAmb	IAmb	01 56 21.7	
	comp=Z,19nm,0.8s						
UZB	**Uzynbulak**	**42.86**	**342**	*e*P	**P**	**01 56 11.6**	**-0.7**
	comp=Z,17nm,0.9s,baz=342						
SATY	**Saty**	**42.97**	**341**	*e*P	**P**	**01 56 12.4**	**-0.7**
	comp=Z,16nm,1.0s,baz=341						
CHGR	**Chuyangaron**	**43.16**	**329**	P	**P**	**01 56 14.5**	**-0.1**
CHGR				IAmb	IAmb	01 56 23.3	
	comp=Z,21nm,0.8s						
BOOM	**Boomskoye usch**	**43.31**	**339**	P	**P**	**01 56 15.1**	**-0.8**
BTK	**Batken**	**43.42**	**332**	P	**P**	**01 56 16.1**	**-0.8**
BTK				IAmb	IAmb	01 56 26.8	
	comp=Z,16nm,0.8s						
MDOK	**Medeo**	**43.51**	**340**	*e*P	**P**	**01 56 17.1**	**-0.5**
	baz=340						
UCH	**Uchtor**	**43.62**	**337**	P	**P**	**01 56 20.0**	**+1.2**
	SNR=16						
TKM2	**Tokmak 2**	**43.81**	**339**	P	**P**	**01 56 21.6**	**+1.5**
	SNR=10						
KBK	**Karagaybulak**	**43.82**	**338**	P	**P**	**01 56 22.4**	**+2.4**
	SNR=11						
AML	**Almayashu**	**43.87**	**336**	P	**P**	**01 56 22.5**	**+1.8**
	SNR=17						
AAK	**Ala-Archa**	**43.98**	**337**	P	**P**	**01 56 21.2**	**-0.1**
AAK				IAmb	IAmb	01 56 37.0	
	comp=Z,14nm,1.2s						
WRA	**Warramunga Arr**	**44.13**	**122**	P	**P**	**01 56 23.0**	**+0.3**
	comp=Z,8.8nm,0.7s,baz=298,slow=9.3,SNR=56						
WRA				LR	LR	02 15 30.2	
	comp=Z,219nm,20.5s,baz=300,slow=37						
WRA	**Warramunga Arr**	**44.13**	**122**	P	**P**	**01 56 22.0**	**-0.8**
WRAB	**Tennant Creek**	**44.14**	**122**	P	**P**	**01 56 24.0**	**+1.2**
WB2	**Warramunga Arr**	**44.14**	**122**	P	**P**	**01 56 22.7**	**-0.1**
WB2				IAmb	IAmb	01 56 24.1	
	comp=Z,15nm,1.0s						
EKS2	**Erkin-Say**	**44.28**	**337**	P	**P**	**01 56 25.6**	**+1.9**
	SNR=8.8						
KUU	**Kurty**	**44.40**	**340**	*e*P	**P**	**01 56 23.5**	**-1.0**
	comp=Z,45nm,1.5s,baz=340						
USP	**Ospenovka**	**44.52**	**338**	P	**P**	**01 56 27.1**	**+1.6**
	SNR=17						
SGDS	**Sogindy**	**44.62**	**338**	*e*P	**P**	**01 56 25.6**	**-0.7**
	baz=338						
TDK	**Taldyqorghan**	**44.73**	**343**	*e*P	**P**	**01 56 26.7**	**-0.4**
	comp=Z,9.7nm,0.5s,baz=343						
MK31	**Makanchi Array**	**45.37**	**347**	P	**P**	**01 56 33.0**	**+0.7**
MKAR	**Makanchi Array**	**45.37**	**347**	P	**P**	**01 56 33.2**	**+1.0**
	comp=Z,14nm,0.4s,baz=160,slow=8.9,SNR=249						
MKAR				LR	LR	02 18 32.0	
	comp=Z,123nm,21.2s,baz=161,slow=40						
MKAR	**Makanchi Array**	**45.37**	**347**	P	**P**	**01 56 32.8**	**+0.6**
IUG	**Iuzhnay**	**45.44**	**333**	*e*P	**P**	**01 56 31.9**	**-1.0**
	baz=333						
KSRS	**Korea Array**	**45.44**	**37**	P	**P**	**01 56 33.3**	**+0.5**
	comp=Z,6.7nm,0.9s,baz=228,slow=9.0,SNR=15						
KSRS				LR	LR	02 17 56.6	
	comp=Z,141nm,21.4s,baz=220,slow=39						
MAKZ	**Makanchi**	**45.46**	**347**	P	**P**	**01 56 33.3**	**+0.4**
DZA	**Taraz**	**45.47**	**335**	*e*P	**P**	**01 56 33.1**	**0.0**
	baz=335						
ZSN	**Zaisan**	**45.48**	**350**	*e*P	**P**	**01 56 32.5**	**-0.5**
	comp=Z,22nm,1.0s,baz=350						
ASAR	**Alice Springs**	**45.53**	**127**	P	**P**	**01 56 34.4**	**+0.6**
	comp=Z,3.5nm,0.7s,baz=300,slow=8.0,SNR=36						
ASAR	**Alice Springs**	**45.53**	**127**	P	**P**	**01 56 33.9**	**0.0**
SONM	**Songino Array**	**45.83**	**10**	P	**P**	**01 56 36.7**	**+0.8**
	comp=Z,11nm,0.8s,baz=192,slow=8.8,SNR=59						
SONM				PcP	**PcP**	**01 58 14.3**	**+1.3**
	comp=Z,4.1nm,0.7s,baz=202,slow=3.3,SNR=7.8						
SONM				LR	LR	02 17 55.1	
	comp=Z,226nm,19.0s,baz=173,slow=39						
SONM	**Songino Array**	**45.83**	**10**	P	**P**	**01 56 36.3**	**+0.4**
SONM				IAmb	IAmb	01 56 43.9	
	comp=Z,17nm,0.8s						
ULN	**Ulaanbaatar**	**45.97**	**11**	P	**P**	**01 56 37.0**	**-0.1**
ULN				IAmb	IAmb	01 56 44.9	
	comp=Z,10nm,0.8s						
KKAR	**Karatay Array**	**45.99**	**334**	P	**P**	**01 56 38.2**	**+1.0**
BTLS	**Baital**	**46.20**	**339**	*e*P	**P**	**01 56 38.3**	**-0.4**
	baz=339						
BRLS	**Borolday**	**46.23**	**334**	*e*P	**P**	**01 56 37.7**	**-1.4**
	baz=334						
CN2	**Changchun**	**48.62**	**29**	*e*P	**P**	**01 56 58.9**	**+1.4**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
GEYT	**Alibeck**	**49.05**	**320**	P	**P**	**01 57 02.5**	**+1.5**
	comp=Z,4.3nm,0.7s,baz=196,slow=20,SNR=6.9						
GEYT	**Alibeck**	**49.05**	**320**	P	**P**	**01 57 00.5**	**-0.6**
GEYT				IAmb	IAmb	01 57 10.6	
	comp=Z,5.1nm,0.7s						
SEM	**Semipalatinsk**	**49.23**	**347**	*e*P	**P**	**01 57 01.6**	**-0.8**
	baz=347						
KURK	**Kurchatov**	**49.90**	**346**	P	**P**	**01 57 08.5**	**+1.3**
KURK				IAmb	IAmb	01 57 09.5	
	comp=Z,18nm,1.1s						
BRZS	**Berezniki**	**50.94**	**341**	*e*P	**P**	**01 57 14.3**	**-0.8**
	baz=341						
MJAR	**Matsushiro Arr**	**51.57**	**44**	LR	LR	02 21 43.5	
	comp=Z,76nm,18.0s,baz=230,slow=39						
ZAA0	**Zalesovo Array**	**51.79**	**352**	P	**P**	**01 57 22.0**	**+0.6**
ZALV	**Zalesovo Beam**	**51.79**	**352**	P	**P**	**01 57 22.3**	**+0.9**
	comp=Z,20nm,0.7s,baz=182,slow=6.6,SNR=117						
USRK	**Ussuriysk Ar.**	**52.23**	**33**	P	**P**	**01 57 25.8**	**+0.9**
	comp=Z,5.0nm,0.9s,baz=234,slow=7.4,SNR=7.5						
USRK	**Ussuriysk Ar.**	**52.23**	**33**	P	**P**	**01 57 25.1**	**+0.3**
RAYN	**Ar Rayn**	**52.70**	**298**	P	**P**	**01 57 28.8**	**-0.1**
BRVK	**Borovoye**	**54.35**	**341**	P	**P**	**01 57 40.5**	**+0.2**
BRVK				IAmb	IAmb	01 57 41.7	
	comp=Z,13nm,0.8s						
CTAO	**Charters Tower**	**54.54**	**117**	P	**P**	**01 57 42.6**	**+0.3**
CTAO				IAmb	IAmb	01 57 44.3	
	comp=Z,16nm,0.9s						
CTAO	**Charters Tower**	**54.54**	**117**	P	**P**	**01 57 43.9**	**+1.6**
ABKAR	**Akbulak array**	**55.43**	**332**	P	**P**	**01 57 48.9**	**+0.7**
ABKAR	**Akbulak array**	**55.43**	**332**	P	**P**	**01 57 48.9**	**+0.7**

STKA	Stephens Creek	55.51	132	P	P	01 57 49.1	0.0
	comp=Z,3.9nm,0.8s,baz=274,slow=4.3,SNR=5.9						
STKA	Stephens Creek	55.51	132	P	P	01 57 48.8	-0.3
KMBO	Kilima Mbogo	58.56	267	P	P	01 58 12.0	+0.6
	comp=Z,2.1nm,0.7s,baz=54,slow=5.8,SNR=4.4						
KMBO	Kilima Mbogo	58.56	267	P	P	01 58 10.9	-0.4
ARU	Arti	61.16	337	P	P	01 58 28.5	+0.4
YAK	Yakutsk	64.35	17	P	P	01 58 49.2	0.0
NRIK	Noril'sk	66.68	357	P	P	01 59 05.1	+0.9
	comp=Z,4.5nm,0.8s,baz=157,slow=4.0,SNR=8.5						
NRIK	Noril'sk	66.68	357	P	P	01 59 04.8	+0.6
NRIK				IAmb	IAmb	01 59 05.2	
	comp=Z,8.2nm,1.1s						
KLMR	Klimovskoe	71.70	335	eP	P	01 59 34.4	-1.0
KLMR				AMP		01 59 46.0	
	comp=Z,35nm,1.4s						
AKASG	Malin Array Be	73.11	322	P	P	01 59 43.4	-0.7
	comp=Z,0.7nm,0.6s,baz=90,slow=4.7,SNR=7.2						
AKASG	Malin Array Be	73.11	322	P	P	01 59 43.7	-0.3
BOSA	Boshof	74.28	239	LR	LR	02 29 54.5	
	comp=Z,157nm,18.5s,baz=34,slow=34						
MNK	Minsk	74.99	326	i P	P	01 59 51.6	-3.4
	comp=E,1.0nm,0.9s						
MNK				i P	P	01 59 51.6	-3.4
	comp=N,7.0nm,0.9s						
MNK				i P	P	01 59 51.6	-3.4
	comp=Z,10.0nm,0.9s,baz=107						
MNK				i pP	PcP	02 00 08.2	-0.5
MNK				i sP	sP	02 00 19.0	+12
MNK				i PP	PP	02 02 40.0	-2.9
MNK				i PPP	PPP	02 04 51.4	
MNK				i S	S	02 09 25.8	-5.2
MNK				i sS	SKSac	02 10 01.3	-0.8
MNK				i SSS	SSS	02 21 05.2	
MNK				i LR	LR	02 29 21.7	
MNK				i LRM	MLR	02 34 49.2	
	comp=N,117nm,18.0s						
MNK				i LRM	MLR	02 35 05.3	
	comp=E,9.0nm,18.1s						
MNK				i LRM	MLR	02 37 21.8	
	comp=Z,126nm,18.1s						
NACGM	Naroch	75.72	326	i P	P	01 59 55.9	-3.3
LVZ	Lovozero	76.85	340	P	P	02 00 05.7	+0.3
FINES	FINESS Array B	77.92	333	P	P	02 00 11.7	+0.3
	comp=Z,1.9nm,0.7s,baz=132,slow=8.5,SNR=5.7						
FINES	FINESS Array B	77.92	333	P	P	02 00 11.5	+0.1
ARCES	ARCESS Array B	80.56	340	P	P	02 00 26.1	+0.4
	comp=Z,2.3nm,0.8s,baz=99,slow=6.3,SNR=10						
ARCES				LR	LR	02 40 04.0	
	comp=Z,106nm,18.2s,baz=175,slow=38						
ARCES	ARCESS Array B	80.56	340	P	P	02 00 26.6	+0.9
GERES	GERESS Array B	82.65	319	P	P	02 00 38.1	+0.8
	comp=Z,1.3nm,0.9s,baz=100,slow=5.8,SNR=7.6						
CLL	Collm	83.28	321	e(P)	P	02 00 41.0	+0.6
TORD	Torodi Ar. Bea	93.28	283	P	P	02 01 30.5	+1.3
	comp=Z,0.3nm,0.8s,baz=81,slow=5.7,SNR=3.0						
TXAR	Lajitas Array	143.07	29	PKhKP	PKPpre	02 07 45.8	
	comp=Z,0.8nm,0.8s,baz=259,slow=1.0,SNR=7.8						
CPUP	Villa Florida	145.10	225	PKPbc	PKPdf	02 07 52.7	+0.8
	comp=Z,1.1nm,0.4s,baz=358,slow=15,SNR=1.9						

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*TEH **03** 01:49:20.0, 31°.71N×51°.20E, h8^{km}, ML3.1*

*OMAN **03** 01:49:23.9±0.8, 31°.47N×51°.32E, h5^{km}, mb5.4/5, ms2.9/2, Error ellipse: s-maj=28.6km s-min=11.8km az=226.0*

*DSN **03** 01:49:25.1±1.7, 31°.62N×51°.67E, h15^{km}, ML3.2/7, Error ellipse: s-maj=43.0km s-min=12.6km az=43.0*

ISC 03 01:49:20.5±0.8**, 31°.71N**±0°.03×**51°.21E**±0°.03**, h10^{km}, n53, σ1^{s}.65**/60**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBRJ	Brojen	0.21	13	ePg	Pg	01 49 24.7	-0.3
SHK1	Shahrekord	0.68	336	ePg	Pg	01 49 32.6	-1.0
KLNJ	Kolanjah	0.77	154	ePg	Pg	01 49 34.9	-0.5
KLNJ				e		01 49 51.8	
	comp=Z,14µm,0.3s						
IGAR	Gharneh	0.99	45	ePg	Pb	01 49 39.5	-0.4
IGAR				e		01 49 56.4	
	comp=Z,8µm,0.2s						
IRAM	Ramesheh	1.01	84	ePg	Pg	01 49 39.5	-0.4
IRAM				e		01 50 03.0	
	comp=Z,4µm,0.3s						
IPIR	Pirpir	1.01	345	ePg	Pb	01 49 39.7	-0.6
ABEH	Behbahan	1.37	217	ePg	Pg	01 49 46.8	0.0
IZEF	Zefreh	1.52	38	ePn	Pb	01 49 48.7	-0.2
IZEF				e		01 49 53.1	
	comp=Z,2µm,0.4s						
AMIS	Naft Sefid	1.64	269	ePg	Pg	01 49 51.5	-0.3
IKLH	Kolahrood	1.64	11	ePn	Pb	01 49 50.5	-0.5
IKLH				e		01 49 59.3	
	comp=Z,2µm,0.2s						
NASN	Na'in	1.74	51	ePg	Pb	01 49 52.8	+0.1
QAMS	Qamsar	2.03	5	ePn	Pb	01 49 57.8	+0.2
QAMS				e		01 50 37.6	
	comp=Z,2µm,0.4s						
KAZ1	Kazerun	2.11	170	ePn	Pb	01 49 57.9	-0.9
AHWZ	Ahwaz	2.22	261	ePn	Pb	01 49 59.3	-1.3
KHMZ	Khomeyn	2.28	333	ePn	Pb	01 50 01.6	-0.3
SHI	Shiraz	2.35	151	ePn	Pb	01 50 02.0	-0.9
KRSH	Karshahi	2.39	19	ePn	Pb	01 50 02.5	-1.2
KRSH				e		01 50 44.8	
	comp=Z,1µm,0.7s						
ANAR	Anarak	2.60	55	ePn	Pb	01 50 05.9	-1.3
ICHK	Chekchek	2.77	78	e		01 50 54.6	
	comp=Z,624nm,0.6s						
ICHK				ePn	Pn	01 50 06.6	+1.4
ISFB	Sefidab	2.78	18	ePn	Pb	01 50 07.4	-2.9
ASAO	Ashtian	3.00	341	ePn	Pb	01 50 11.6	-2.6
IQOM	Qom	3.13	358	ePn	Pn	01 50 12.4	+2.3
IDOB	Doab	3.29	310	ePn	Pn	01 50 14.6	+2.4
IVRN	Varamin	3.31	7	ePn	Pn	01 50 14.8	+2.4
HSAM	Samen	3.32	320	ePn	Pn	01 50 14.9	+2.2
IKFM	Kafar-mosalman	3.36	304	ePn	Pn	01 50 15.1	+2.1
HAGD	Aghdareh	3.56	331	ePn	Pn	01 50 18.4	+2.4
GHIR	Ghir-Karzin	3.74	155	ePn	Pn	01 50 20.9	+2.5
IRAZ	Razeghan	3.84	344	ePn	Pn	01 50 22.6	+2.8
IDMV	Damavand	3.92	10	ePn	Pn	01 50 23.5	+2.5
IFIR	Firoozkooh	4.13	18	ePn	Pn	01 50 26.3	+2.4
QABG	Abgarm-Qazvin	4.21	342	ePn	Pn	01 50 27.2	+2.2
IANJ	Anjilo	4.38	30	ePn	Pn	01 50 29.8	+2.5
KHGB	Koh Gabri	4.71	105	ePn	Pn	01 50 35.1	+3.2
IDHR	Dehrash	5.02	308	ePn	Pn	01 50 36.6	+0.5
SAKB	Bahrain	5.74	186	P	Pn	01 50 47.6	+1.9
SHMA	Al-Shehemyia	5.83	182	P	Pn	01 50 48.5	+1.5
SHMA				S	Sn	01 51 56.6	+2.6
GENO	Geno	6.09	134	ePn	Pn	01 50 52.7	+1.9
BANOM	Banah	7.29	141	Pn	Pn	01 51 07.6	+0.5
BANOM				S	Sn	01 52 27.5	-2.4
BANOM	Banah	7.29	141	P	Pn	01 51 08.0	+0.9
	SNR=8.5						
BANOM				S	Sn	01 52 28.6	-1.3
MSFE	Esma-Masafi	7.68	144	P	Pn	01 51 12.5	+0.1
NAZ	Nazwa, Dubai	7.76	149	P	Pn	01 51 14.9	+1.4
NAZ	Nazwa, Dubai	7.76	149	P	Pn	01 51 15.2	+1.8
	SNR=6.6						
NAZ				S	Sn	01 52 40.7	-0.7
ASUD	Al Ashush, Dub	7.94	152	P	Pn	01 51 17.2	+1.3
ASUD	Al Ashush, Dub	7.94	152	P	Pn	01 51 17.9	+2.0
	SNR=11						
ASUD				S	Sn	01 52 45.6	-0.2
UOSS	Minazif	8.05	146	P	Pn	01 51 17.7	+0.2
HATD	Hatta, Dubai	8.11	146	P	Pn	01 51 19.4	+1.1
ALNE	Al Ain	8.62	151	P	Pn	01 51 25.5	+0.2
ALNE	Al Ain	8.62	151	P	Pn	01 51 26.1	+0.9
ALNE				S	Sn	01 53 00.1	-2.5
SOHO	SOHO	8.89	147	P	Pn	01 51 28.2	-0.8
UMZA	Um Al Zommool	9.62	158	P	Pn	01 51 39.6	+0.5
DOK	Doka	13.30	168	P	Pn	01 52 28.7	-0.7
WHFO	Wadi Hawf	13.92	170	P	Pn	01 52 36.5	-1.4
	SNR=12						
WHFO				P	Pn	01 52 36.5	-1.4
	SNR=12						

IDC 03 01:55:44.5±6.2**, 5°.99S**×**127°.44E, h318^{km}**±73^{km}**, mb2.9**/2**, mb1 3.0**/5**, mb1mx2.7**/35**, mbtmp3.7**/5**, Error ellipse: s-maj=105.1km s-min=20.4km az=54.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	7.71	277	P	Pn	01 57 34.8	-0.1
	1.6nm,0.3s,baz=60,slow=18,SNR=14						
WRA	Warramunga Arr	15.41	155	P	P	01 59 05.3	+0.1
	0.2nm,0.3s,baz=334,slow=11,SNR=5.4						
ASAR	Alice Springs	18.65	161	P	P	01 59 40.2	0.0
	0.2nm,0.3s,baz=343,slow=12,SNR=5.2						
SONM	Songino Array	56.71	343	P	P	02 04 56.3	+0.5
	0.6nm,1.0s,baz=146,slow=10,SNR=2.7						
MKAR	Makanchi Array	66.00	328	P	P	02 05 57.2	-0.3
	0.3nm,0.4s,baz=116,slow=8.8,SNR=7.6						

UCR 03 01:59:07.3±1.0**, 10°.28N**×**85°.90W, h8^{km}**±4^{km}**, MW3.8, 12C-1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAJU	San Juanillo,	0.28	139	eP	Pg	01 59 13.4	+0.5
SAJU				eS	Sb	01 59 18.6	-1.0
GUAI	GUAI	0.38	92	⇓iP	Pg	01 59 15.1	+0.3
GUAI				i S	Sb	01 59 21.6	-0.9
HZTE	Horizontes, Gu	0.52	35	eP	Pb	01 59 18.2	-0.6
INDI	Punta indio, G	0.57	137	eP	Pg	01 59 17.8	-0.5
INDI				eS	Sb	01 59 27.0	-0.8
GBS3	Finca Las Img	0.66	41	⇑iP	Pg	01 59 20.0	0.0
GBS3				i S	Sb	01 59 30.3	-0.2
LAPC	Finca la Perla	0.66	43	⇑iP	Pg	01 59 20.0	-0.2
GPS3	Bodega del ICE	0.70	48	⇑iP	Pg	01 59 20.7	-0.1
BUEV	Buena Vista	0.70	43	⇑iP	Pg	01 59 20.7	-0.2
GB1A	Borinquen Arri	0.72	43	⇑iP	Pg	01 59 21.0	-0.3
LIM1	Limonal	0.76	57	⇑iP	Pg	01 59 21.5	-0.4
COLC	Colonia	0.78	61	⇑iP	Pg	01 59 21.9	-0.4
GUAB	Guayabo de Bag	0.78	57	⇑iP	Pg	01 59 21.8	-0.6
BUAI	Buenos Aires	0.81	43	⇑iP	Pg	01 59 22.5	-0.4
CUI	Cuipilapa	0.81	63	⇑iP	Pg	01 59 22.5	-0.4
HORNC	Hornillas	0.83	59	⇑iP	Pg	01 59 22.6	-0.7
ACAL	Aguas Claras	0.92	68	⇑iP	Pg	01 59 24.2	-0.7
VMAR	Armenia, Volca	0.93	55	eP	Pg	01 59 24.6	-0.5
JTS	Las Juntas de	0.93	89	eP	Pg	01 59 24.0	-1.2
ARE1	Arenal 1	1.17	81	eP	Pg	01 59 28.8	-1.1
CEDE	Laguna Cedeo	1.19	80	i P	Pg	01 59 29.1	-1.1
JACO	JACO, Garabito	1.37	117	eP	Pn	01 59 31.3	-1.4
SRA1	San Ramn	1.41	98	eP	Pn	01 59 32.0	-1.5
LCR2	La Lucha 2	1.94	106	eP	Pn	01 59 40.5	-0.3

IDC 03 02:08:10.2±2.0**, 33°.30S**×**111°.75W, h0^{km}, mb3.9**/1**, mb1 4.4**/1**, mb1mx3.6**/29**, mbtmp3.9**/1**, MS3.5**/7**, Ms1 3.5**/7**, ms1mx3.3**/19**, Error ellipse: s-maj=119.0km s-min=60.2km az=119.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	33.48	115	LR	LR	02 24 07.2	
	comp=Z,78nm,19.0s,baz=292,slow=29						
PPT	Papeete	37.35	285	LR	LR	02 25 40.1	
	comp=Z,48nm,18.9s,baz=95,slow=28						
PMSA	Palmer Station	42.67	152	LR	LR	02 28 22.9	
	comp=Z,71nm,22.0s,baz=303,slow=28						
LPAZ	La Paz	42.73	78	LR	LR	02 29 42.0	
	comp=Z,30nm,20.4s,baz=220,slow=30						
CPUP	Villa Florida	47.28	97	LR	LR	02 32 50.2	
	comp=Z,66nm,18.7s,baz=216,slow=31						
ROSC	El Rosal	51.91	50	LR	LR	02 36 01.1	
	comp=Z,32nm,18.6s,baz=252,slow=32						
VNDA	Vanda	56.99	195	LR	LR	02 36 07.1	
	comp=Z,94nm,20.6s,baz=314,slow=29						
PDAR	Pinedale Array	75.73	2	P	P	02 19 57.5	-0.2
	1.2nm,0.9s,baz=180,slow=3.9,SNR=7.3						
AKASG	Malin Array Be	146.66	47	PKPbc	PKPbc	02 27 52.8	-0.6
	0.1nm,0.3s,baz=280,slow=3.5,SNR=5.8						
SONM	Songino Array	147.95	308	PKPbc	PKPbc	02 27 57.2	-0.1
	1.6nm,1.0s,baz=109,slow=3.0,SNR=8.7						
CMAR	Chiang Mai Arr	148.82	249	PKPbc	PKPbc	02 27 59.2	-1.1
	1.5nm,0.3s,baz=175,slow=1.1,SNR=7.5						

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*NEIC **03** 02:11:36.6±0.9, 38°.61N±0°.01×119°.40W±0°.01, h7^{km}±7^{km}, Error ellipse: s-maj=2.5km s-min=0.8km az=220.0*

*REN **03** 02:11:36.9±1.0, 38°.62N±0°.02×119°.40W±0°.02, h10^{km}±6^{km}, ML3.3/13, ML3.1/42(NEIC), Error ellipse: s-maj=3.0km s-min=2.2km az=59.0*

*ANF **03** 02:11:37.0±1.1, 38°.58N×119°.40W, h7^{km}±8^{km}, ML3.2/9, Error ellipse: s-maj=16.7km s-min=6.5km az=56.0*

ISC 03 02:11:36.7±1.1**, 38°.61N**±0°.02×**119°.39W**±0°.02**, h6^{km}**±11^{km}**, n68, σ0^{s}.73**/75**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EBP	Ebbets Pass	0.33	265		Pg	02 11 43.4	+0.2
BFC	Buffalo Canyon	0.33	329		Pg	02 11 43.4	+0.2
YERR	Yerington	0.39	18		Pg	02 11 44.6	+0.2
YERR				Sg	Sg	02 11 50.2	+0.6
GNO	Genoa	0.48	311		Pg	02 11 46.3	+0.3
PNTR	Pine Nut	0.50	341	Pg	Pg	02 11 46.6	+0.1
PNTR				Sg	Sg	02 11 53.5	+0.4
PNTR				IAML		02 11 54.0	
	comp=N,1µm,0.4s						
LUL	Lundy Lake	0.58	163		Pg	02 11 48.3	+0.3
EMB	Emerald Bay	0.66	303		Pg	02 11 49.5	0.0
EMB				Sg	Sg	02 11 58.2	+0.1
EMB				IAML		02 11 59.4	
	comp=N,979nm,0.5s						
EMB				IAML		02 11 59.7	
	comp=E,711nm,0.2s						
RYN	Ryan	0.68	88		Pg	02 11 50.0	+0.1
RYN				IAML		02 12 00.1	
	comp=E,1µm,0.3s						
RYN				IAML		02 12 05.7	
	comp=N,853nm,0.2s						
VCNR	Virginia City	0.71	344		Pg	02 11 50.3	-0.2
VCNR				IAML		02 12 00.7	
	comp=N,918nm,0.4s						
VCNR				IAML		02 12 01.3	
	comp=E,677nm,0.6s						
RUBR	Rubicon Trail	0.74	307		Pg	02 11 50.9	-0.1
LHV	Little Huntoon	0.79	117		Pg	02 11 52.0	+0.1
LHV				IAML		02 12 04.1	
	comp=N,803nm,0.6s						
MPK	Martis Peak	0.84	324	Pg	Pg	02 11 52.8	-0.2
MPK				IAML		02 12 05.1	
	comp=E,519nm,0.2s						
MPK				IAML		02 12 05.5	
	comp=N,631nm,0.3s						
CMB	Columbia Colle	0.97	234		Pg	02 11 54.6	-0.8
CMB	Columbia Colle	0.97	234	IAML		02 12 07.7	
	comp=N,517nm,0.4s						
CMB				IAML		02 12 08.9	
	comp=E,449nm,0.1s						
MDPB	Devils Postpil	1.01	166		Pg	02 11 55.5	-0.6
MDPB				IAML		02 12 13.3	
	comp=E,326nm,0.7s						
DONR	Donner Summit	1.03	316		Pg	02 11 56.0	-0.6
MLAC	Mammoth, Mammo	1.08	156	P	Pg	02 11 57.4	0.0
	baz=336						
MLAC				S	Sb	02 12 12.1	-0.2
	baz=336						
IND	Independence	1.08	320		Pg	02 11 57.2	-0.3
PEAR	Peavine Mounta	1.09	336		Pg	02 11 57.4	-0.2
PAHR	Pah Rah Range	1.09	0		Pg	02 11 57.4	-0.4
KBF	Kyburz Flat	1.10	325		Pg	02 11 57.5	-0.3
KVN	Kaiserville	1.10	66		Pg	02 11 57.5	-0.4
KVN				IAML		02 12 14.4	
	comp=N,574nm,0.3s						
BENR	Benton	1.11	144		Pg	02 11 57.6	-0.4
BABR	Babbit Peak	1.13	331		Pg	02 11 58.1	-0.4
ORC	Owens River	1.14	149		Pg	02 11 58.3	-0.3
LOY	Loyalton	1.23	328		Pg	02 11 59.8	-0.6
RCCR	Rock Creek Can	1.24	155		Pg	02 12 00.2	-0.4
KCC	Kaiser Creek	1.29	177		Pn	02 12 00.6	-0.7
MLNR	Milner Canyon	1.31	141		Pn	02 12 01.6	-0.2
WVA	Winnemucca Val	1.37	346		Pn	02 12 02.5	-0.1
BEKR	Beckworth	1.46	329		Pn	02 12 02.9	-0.9
BEKR				IAML		02 12 24.2	
	comp=E,314nm,0.6s						
POCCA	Poleta Canyon	1.53	144		Pb	02 12 05.1	-0.5
BMRR	Black Mountain	1.65	335		Pb	02 12 07.0	-0.6
DSP	Deep Springs	1.68	137		Pn	02 12 06.9	+0.4
Q09A	Carvers	1.74	82		Pb	02 12 08.4	-0.8
TPH	Tonopah	1.79	107		Pn	02 12 07.8	-0.5
TIN	Tinemaha, Big	1.81	149	Pb	Pb	02 12 10.1	-0.2
	baz=330						
TIN				Sb	Sg	02 12 33.9	-0.9
	baz=330						
ORV	Oroville	1.89	300		Pn	02 12 10.3	+0.8
ORV	Oroville	1.89	300	IAML		02 12 38.1	
	comp=E,170nm,0.3s						
LCH	Last Change Ra	1.95	134		Pn	02 12 10.2	-0.3
WENL	Wente Vineyard	2.11	243		Pb	02 12 14.8	-0.5
CWC	Cottonwood Cre	2.41	154	P	Pn	02 12 17.6	+0.8
	baz=335						
CWC				S	Sn	02 12 46.9	+0.2
	baz=335						
SAO	San Andreas Ge	2.46	222	Pn	Pn	02 12 16.9	-0.5
BMN	Battle Mountai	2.47	42		Pn	02 12 16.4	-1.3
O03E	Paynes Creek	2.51	313	P	Pn	02 12 19.1	+1.0
	baz=131						
O03E				Sb	Sb	02 12 54.2	+0.9
	baz=131						
PMPB	Monarch Peak	2.64	206	Pn	Pn	02 12 19.2	-0.7
GDXM	Geysers	2.67	275	Pn	Pn	02 12 19.9	-0.4
VES	Vestal, Richgr	2.78	175	P	Pn	02 12 21.7	-0.1
	baz=355						
VES				Sb	Sb	02 13 02.9	+1.8
	baz=355						
MCCM	Marconi Confer	2.78	261		Pn	02 12 21.5	-0.2
MCCM				IAML		02 12 59.5	
	comp=N,68nm,0.8s						
MCCM				IAML		02 13 00.7	
	comp=E,60nm,0.7s						
FURC	Furnace Creek,	2.94	136	Pb	Pb	02 12 29.9	+0.4
	baz=318						
PAGB	Antelope Grade	2.96	194	Pn	Pn	02 12 23.9	-0.4
R11A	Troy Canyon, C	3.00	94	Pn	Pn	02 12 25.2	+0.3
R11A	Troy Canyon, C	3.00	94	P	Pn	02 12 24.5	-0.5
	baz=276						
R11A				Sb	Sb	02 13 10.0	+2.3
	baz=276						
ISA	Isabella, Lake	3.04	166	Pn	Pn	02 12 25.1	-0.2
ISA	Isabella, Lake	3.04	166	P	Pn	02 12 25.2	-0.2
	baz=346						
ISA				Sb	Sb	02 13 10.7	+2.2
	baz=346						
O02D	Mt. Diablo Mer	3.06	302	Pb	Pb	02 12 30.6	-1.0
	baz=120						
WDC	Whiskeytown Da	3.12	310	Pn	Pn	02 12 26.4	-0.1
GWY	Greenwater Val	3.25	137	Pn	Pn	02 12 28.2	-0.2
QSM	Queen of Sheba	3.32	142	Pn	Pn	02 12 28.7	-0.5
N02D	Trinity Center	3.47	314	P	Pn	02 12 31.4	0.0
	baz=132						
PRN	Pahroc Range	3.63	108		Pn	02 12 32.7	-1.0
ELK	Elko	3.85	55		Pn	02 12 35.8	-0.8
ELK	Elko	3.85	55	IAML		02 13 40.8	
	comp=E,20nm,0.5s						
GSC	Goldstone, Bar	3.90	147	Pn	Pn	02 12 35.7	-1.6
SHPR	Sheep Range	3.97	121		Pn	02 12 38.6	+0.3
SPR3	Spring Creek 3	3.97	83	Pn	Pn	02 12 36.6	-1.9
BGU	Big Grassy Mou	5.42	63		Pn	02 12 58.2	0.0
KNB	Kanab	5.44	105	Pn	Pn	02 12 57.8	-0.7

IDC 03 02:13:46.0±8.0**, 30°.53S**×**176°.73W, h0^{km}, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.7**/35**, mbtmp3.6**/3**, Error ellipse: s-maj=336.5km s-min=45.6km az=154.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.19	266	P	P	02 21 56.7	-0.3
	0.3nm,0.7s,baz=108,slow=8.0,SNR=1.7						
WRA	Warramunga Arr	45.20	272	P	P	02 22 04.8	-0.2
	0.6nm,0.8s,baz=112,slow=7.0,SNR=5.0						
SNAA	Sanae	77.99	178	P	P	02 25 46.0	+0.2
ILAR	Eielson Array	97.81	12	P	P	02 27 22.2	-0.4
	0.8nm,1.0s,baz=208,slow=5.1,SNR=3.1						
FINES	FINESS Array B	145.63	341	PKPbc	PKPdf	02 33 25.3	-0.2
	13nm,1.4s,baz=354,slow=2.8,SNR=1.3						

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*IDC **03** 02:15:38.9±1.6, 34°.30S×109°.24W, h0^{km}, mb3.6/4, mb1 4.1/4, mb1mx3.8/25, mbtmp3.6/4, MS3.7/1, Ms1 3.7/1, ms1mx3.0/16, Error ellipse: s-maj=53.9km s-min=43.9km az=166.0*

ISC 03 02:15:39.8±1.1**, 34°.4S**±0°.2×**109°.3W**±0°.3**, h10^{km}, n10, σ0^{s}.53**/8**, mb3.6**/4**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPT	Papeete	39.64	285	LR	LR	02 34 57.4	
	comp=Z,87nm,18.8s,baz=109,slow=29						
LPAZ	La Paz	40.99	74	P	P	02 23 23.9	+0.1
	1.0nm,0.7s,baz=192,slow=7.7,SNR=3.9						
VNA3	Neumayer Olymp	60.80	159	P	P	02 25 51.5	-0.1
VNA1	Neumayer--Stat	61.45	158	P	P	02 26 03.1	+7.2
VNA2	Neumayer--Watz	61.61	159	P	P	02 25 57.1	+0.1
	baz=259,slow=3.8						
TXAR	Lajitas Array	63.63	5	P	P	02 26 10.7	-0.4
	0.3nm,0.8s,baz=174,slow=9.1,SNR=2.4						
NVAR	Mina Array Bea	72.97	353	P	P	02 27 10.4	+0.8
	1.0nm,0.8s,baz=180,slow=7.2,SNR=4.0						
PDAR	Pinedale Array	76.82	360	P	P	02 27 31.7	-0.1
	0.3nm,0.7s,baz=200,slow=7.7,SNR=2.9						
SONM	Songino Array	150.27	308	PKPbc	PKPbc	02 35 30.3	-0.7
	1.5nm,1.0s,baz=48,slow=2.1,SNR=6.3						
CMAR	Chiang Mai Arr	150.30	245	PKPbc	PKiKP	02 35 33.0	+0.4
	1.2nm,0.4s,baz=165,slow=2.1,SNR=4.2						

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*SOME **03** 02:18:55.1, 41°.43N×83°.23E, h5^{km}*

*NNC **03** 02:18:56.7±1.4, 41°.44N×83°.20E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=12.3km s-min=8.5km az=178.0*

ISC 03 02:18:59.0±2.3**, 41°.6N**±0°.1×**83°.18E**±0°.07**, h10^{km}, n32, σ2^{s}.93**/48**, 4C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	3.21	303	⇑Pn	Pn	02 19 49.5	-0.1
	6.3nm,0.7s						
PDGK				⇓Lg	Lg	02 20 40.6	
	28nm,0.6s						
UZB	Uzynbulak	3.43	298	eP	Pb	02 20 01.9	+2.0
	6.4nm,0.4s						
UZB				eS	Sg	02 20 50.0	+0.9
	26nm,0.5s						
UZB	Uzynbulak	3.43	298	Pg	Pb	02 20 01.9	+2.0
	6.4nm,0.4s						
UZB				Lg	Lg	02 20 50.0	
	26nm,0.5s						
DJR	Jarkent	3.67	319	Pg	Pg	02 20 07.0	-2.3
	8.6nm,0.4s						
DJR				Lg	Lg	02 20 58.8	
	8.2nm,0.6s						
KURS	Kuram	4.14	298	eP	Pg	02 20 15.9	-2.3
	6.1nm,0.8s						
KURS				eS	Sg	02 21 13.6	+1.8
	19nm,0.9s						
KURS	Kuram	4.14	298	Pg	Pg	02 20 15.9	-2.3
	6.1nm,0.8s						
KURS				Lg	Lg	02 21 13.6	
	19nm,0.9s						
KAPS	Kapalarasan	4.59	324	eP	Pb	02 20 22.0	+2.4
	4.4nm,0.5s						
KAPS				eS	Sg	02 21 24.4	-1.9
	4.9nm,0.5s						
KAPS	Kapalarasan	4.59	324	Pg	Pb	02 20 22.2	+2.6
	4.2nm,0.5s						
KAPS				Lg	Lg	02 21 24.8	
	4.7nm,0.4s						
ARXS	Arharly	4.70	305	eP	Pg	02 20 25.6	-3.3
	1.6nm,0.6s						
ARXS				eS	Sg	02 21 30.9	+1.0
	11nm,0.5s						
ARXS	Arharly	4.70	305	Pg	Pb	02 20 25.3	+3.8
	2.5nm,0.7s						
ARXS				Lg	Lg	02 21 30.9	
	11nm,0.5s						
KOTS	Kotyrbulak	4.77	292	eP	Pb	02 20 24.4	+1.7
	3.3nm,0.4s						
KOTS				eS	Sg	02 21 28.8	-3.2
	26nm,0.7s						
KOTS	Kotyrbulak	4.77	292	Pg	Pb	02 20 24.4	+1.7
	3.3nm,0.4s						
KOTS				Lg	Lg	02 21 28.8	
	26nm,0.7s						
MDOK	Medeo	4.79	291	eP	Pg	02 20 27.9	-2.8
	2.5nm,0.4s						
MDOK				eS	Sg	02 21 34.3	+1.6
	13nm,0.7s						
MDOK	Medeo	4.79	291	Pg	Pg	02 20 28.0	-2.8
	3.2nm,0.5s						
MDOK				Lg	Lg	02 21 34.2	
	11nm,0.7s						

TNSS	Tian-Shan	4.83	289	eP	Pg	02 20 27.8	-3.6
	2.2nm,0.5s						
TNSS				eS	Sg	02 21 34.9	+1.0
	7.6nm,0.8s						
TNSS	Tian-Shan	4.83	289	Pg	Pg	02 20 27.8	-3.6
	2.2nm,0.5s						
TNSS				Lg	Lg	02 21 34.9	
	7.6nm,0.8s						
IZV	Izvestkoviy	5.06	288	eP	Pb	02 20 31.2	+3.4
	2.6nm,0.6s						
IZV				eS	Sg	02 21 39.9	-1.6
	18nm,0.8s						
IZV	Izvestkoviy	5.06	288	Pg	Pb	02 20 31.2	+3.4
	2.6nm,0.6s						
IZV				Lg	Lg	02 21 39.9	
	18nm,0.8s						
MK31	Makanchi Array	5.20	353	Pn	Pn	02 20 18.5	+1.7
	1.0nm,0.6s,baz=182,slow=12,SNR=15						
MK31				⇑Pg	Pg	02 20 36.4	-2.2
	0.9nm,0.4s,baz=168,slow=16,SNR=6.2						
MK31				⇑Lg	Lg	02 21 51.1	
	4.8nm,0.6s,baz=166,slow=27,SNR=4.2						
MTBS	Maitube	5.22	289	eP	Pb	02 20 34.4	+4.1
	2.1nm,0.1s						
MTBS				eS	Sg	02 21 46.5	0.0
	9.2nm,0.0s						
MTBS	Maitube	5.22	289	Pg	Pb	02 20 34.5	+4.1
	2.5nm,0.3s						
MTBS				Lg	Lg	02 21 46.6	
	8.6nm,0.5s						
KTBS	Karatobe	5.22	296	eP	Pb	02 20 34.6	+4.3
	1.9nm,0.4s						
KTBS				eS	Sg	02 21 46.3	-0.2
	16nm,0.6s						
KTBS	Karatobe	5.22	296	Pg	Pb	02 20 34.6	+4.3
	1.9nm,0.4s						
KTBS				Lg	Lg	02 21 46.3	
	16nm,0.6s						
KUU	Kurty	5.52	296	eP	Pb	02 20 39.6	+4.3
	2.3nm,0.1s						
KUU				eS	Sg	02 21 54.5	-1.5
	6.0nm,0.7s						
KUU	Kurty	5.52	296	Pg	Pb	02 20 39.7	+4.3
	1.3nm,0.1s						
KUU				Lg	Lg	02 21 54.5	
	4.7nm,0.4s						
KST	Kastek	5.53	287	eP	Pb	02 20 39.2	+3.6
	2.8nm,0.1s						
KST				eS	Sg	02 21 54.0	-2.4
	9.6nm,0.9s						
KST	Kastek	5.53	287	Pg	Pb	02 20 39.2	+3.6
	2.6nm,0.5s						
KST				Lg	Lg	02 21 54.2	
	10nm,0.7s						
DGS	Degeres	5.71	289	eP	Pg	02 20 45.3	-3.0
	2.6nm,0.6s						
DGS				eS	Sg	02 22 04.2	+2.0
	8.3nm,0.6s						
TKM2	Tokmak 2	5.77	285	⇑Pn	Pn	02 20 23.1	-1.8
	1.5nm,1.0s						
TKM2				⇓Lg	Lg	02 22 00.1	
	6.5nm,0.6s						
KRBS	Karabastau	5.90	293	eP	Pb	02 20 46.6	+4.7
	1.1nm,0.4s						
KRBS				eS	Sg	02 22 06.6	-1.8
	3.8nm,0.5s						
KRBS	Karabastau	5.90	293	Pg	Pb	02 20 46.6	+4.7
	1.1nm,0.4s						
KRBS				Lg	Lg	02 22 06.6	
	3.8nm,0.5s						
ZSN	Zaisan	5.94	11	eP	Pg	02 20 48.6	-4.1
	1.8nm,0.2s						
ZSN				eS	Sg	02 22 09.9	+0.3
	6.6nm,0.4s						

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*IDC **03** 02:20:47.0±2.7, 9°.81N×124°.00E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.4/46, mbtmp3.6/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/35, Error ellipse: s-maj=286.8km s-min=22.9km az=65.0*

*MAN **03** 02:20:49.7, 9°.74N×123°.67E, h8^{km}, mb4.7, ML3.6, MS3.5*

ISC 03 02:20:49.7±1.0**, 9°.74N**±0°.03×**123°.63E**±0°.03**, h12**^{km}±7^{km}**, n16, σ1^{s}.12**/24**, mb3.6**/4**, 8C-3D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.23	103	⇓iP	Pg	02 20 54.5	-0.1
TBP				i S	Sg	02 20 58.2	+0.2
SNPH	Sibulan	0.56	225	⇑iP	Pg	02 21 01.5	+0.9
SNPH				i S	Sg	02 21 09.6	+1.6
LLP	Lapu-Lapu	0.66	30	⇑iP	Pg	02 21 02.2	-0.4
LLP				i S	Sb	02 21 11.7	-0.6
CNOP	Candoni, Negro	0.98	275	⇑eP	Pg	02 21 08.5	-0.1
CNOP				i S	Sg	02 21 19.2	-2.3
DCPH	Dipolog City	1.19	194	⇑eP	Pb	02 21 11.4	-0.7
DCPH				i S	Sg	02 21 26.6	-1.4
OCLP	Ormoc	1.62	36	⇑eP	Pn	02 21 17.8	-0.2
OCLP				eS	Sg	02 21 43.4	+1.6
PAGZ	Pagadian	1.90	187	⇑iP	Pn	02 21 23.3	+1.4
JAP	San Jose, Anti	1.94	301	⇓eP	Pg	02 21 27.5	+0.7
RCP	Roxas	2.00	334	⇑eP	Pn	02 21 24.6	+1.2
RCP				eS	Sb	02 21 51.1	+0.1
BUKP	Musuan	2.33	143	⇓eP	Pn	02 21 27.8	-0.1
BUKP				eS	Sb	02 22 01.1	+0.7
GLSP	General Luna,	2.46	89	⇑iP	Pn	02 21 30.4	+0.8
GLSP				eS	Sn	02 22 00.6	+1.0
DAV	Davao City (W)	3.28	144	LR	LR	02 23 21.5	
	comp=Z,197nm,18.3s,baz=358,slow=49						
WRA	Warramunga Arr	31.33	160	P	P	02 27 08.2	-1.9
	0.2nm,0.6s,baz=341,slow=9.2,SNR=1.9						
ASAR	Alice Springs	34.69	163	P	P	02 27 38.8	-0.7
	0.7nm,0.6s,baz=342,slow=6.7,SNR=11						
MKAR	Makanchi Array	50.90	324	P	P	02 29 51.6	+0.9
	1.5nm,1.0s,baz=131,slow=5.6,SNR=4.8						
KURBB	Kurchatov Arra	55.05	327	P	P	02 30 21.0	-0.2
	0.3nm,0.5s,baz=122,slow=7.7,SNR=4.8						

IDC 03 02:36:51.1±1.8**, 5°.46N**×**121°.83E, h0**^{km}**, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.4**/33**, mbtmp3.6**/3**, Error ellipse: s-maj=248.8km s-min=25.8km az=62.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	28.08	154	P	P	02 42 44.0	-0.7
	0.3nm,0.5s,baz=331,slow=11,SNR=8.4						
ASAR	Alice Springs	31.25	158	P	P	02 43 13.9	+1.1
	0.3nm,0.5s,baz=355,slow=9.3,SNR=2.9						
MKAR	Makanchi Array	53.41	327	P	P	02 46 12.6	-0.1
	0.4nm,0.4s,baz=125,slow=6.9,SNR=9.3						

IDC 03 02:48:01.8±76.0**, 22°.05S**×**177°.83E, h0**^{km}**, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.7**/20**, mbtmp3.7**/3**, Error ellipse: s-maj=1335.0km s-min=163.9km az=83.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	33.61	245	P	P	02 54 43.9	-0.1
	0.5nm,0.4s,baz=105,slow=16,SNR=1.2						
ASAR	Alice Springs	40.39	259	P	P	02 55 41.4	-0.4
	1.0nm,0.9s,baz=80,slow=8.3,SNR=5.9						
WRA	Warramunga Arr	40.56	265	P	P	02 55 43.4	+0.2
	0.5nm,0.6s,baz=102,slow=8.6,SNR=7.0						

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*TUL **03** 02:55:07.1±0.8, 36°.83N±0°.02×98°.28W±0°.05, h5^{km}±7^{km}, ML2.5, mb_Lg2.2/12(NEIC), Error ellipse: s-maj=5.7km s-min=2.7km az=69.0*

NEIC 03 02:55:06.9±0.6**, 36°.82N**±0°.02×**98°.32W**±0°.05**, h9**^{km}±7^{km}**, Error ellipse: s-maj=6.1km s-min=1.6km az=69.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.09	100	Pg	Pg	02 55 08.9	-0.4
OK032				Sg	Sg	02 55 10.2	-0.8
KAN14	Manchester OK	0.32	64		Pg	02 55 13.1	-0.2
KAN14				Sg	Sg	02 55 17.4	-0.1
KAN10	Anthony SW Sta	0.35	31	Pg	Pg	02 55 13.8	-0.1
KAN10				Sg	Sg	02 55 18.8	+0.2
GC02	Grant County #	0.37	85	Pg	Pg	02 55 14.1	-0.2
GC02				Sg	Sg	02 55 19.0	-0.2
CROK	Carrier	0.42	139	Pg	Pg	02 55 15.1	0.0
KAN16	Harper SW Stat	0.45	27	Pg	Pg	02 55 15.9	+0.1
KAN05	Bluff City Nor	0.46	51		Pg	02 55 15.8	-0.1
KAN08	Anthony NE Sta	0.49	35		Pg	02 55 16.5	0.0
KAN17	Caldwell West	0.50	63	Pg	Pg	02 55 16.4	-0.2
KAN12	Harper NE Stat	0.54	28	Pg	Pg	02 55 17.3	-0.2
KAN01	Argonia South	0.56	53	Pg	Pg	02 55 17.6	-0.2
KAN09	Caldwell North	0.65	61	Pg	Pg	02 55 19.0	-0.4
U32A	Winter Ranch,	0.70	231	Pg	Pg	02 55 20.9	+0.4
KAN13	South Haven SW	0.70	74		Pg	02 55 20.1	-0.4
OK029	Liberty Lake	1.24	145	Pn	Pn	02 55 30.2	-0.2
BCOK	Bluff Creek, N	1.30	153		Pn	02 55 30.7	-0.5
QUOK	Quay	1.45	116	Pn	Pn	02 55 33.4	0.0
T35A	Sooner Cattle	1.45	86	Pn	Pn	02 55 33.3	-0.1
OK025	Westminster Rd	1.47	147		Pn	02 55 33.9	+0.3
OK031	S. Brethren Rd	1.48	125	Pn	Pn	02 55 33.7	0.0
OK030	Cody Creek RV	1.53	125		Pn	02 55 34.5	+0.1
OK034	N. Norfolk Rd.	1.53	121		Pn	02 55 34.3	-0.1
OKCFA	Oklahoma City	1.57	153	Pn	Pb	02 55 35.7	-0.4
OKCFA				IAmb_Lg		02 55 60.0	
	comp=Z,13nm,0.8s						
OKCSW	OKLAHOMA CITY	1.58	153	Pn	Pn	02 55 35.5	+0.4
R32A	Long Quarter,	1.63	349		Pn	02 55 36.1	+0.2
W35A	Tecumseh	2.04	144	Pn	Pn	02 55 41.6	+0.2
W35A				IAmb_Lg		02 56 14.2	
	comp=Z,12nm,0.8s						
TUL1	Leonard	2.23	113	Pn	Pn	02 55 44.5	+0.4
X34A	Smith Ranch, M	2.25	170		Pn	02 55 44.8	+0.5
X34A				IAmb_Lg		02 56 21.3	
	comp=Z,11nm,0.7s						
KSU1	Kansas State U	2.65	30		Pn	02 55 50.0	+0.2
AMTX	Amarillo	3.34	236	IAmb_Lg		02 56 52.7	
	comp=Z,4.4nm,0.8s						
KSCO	Kaye Shedlock’	4.05	304	IAmb_Lg		02 57 17.4	
	comp=Z,4.7nm,0.9s						
WHAR	Wooly Hollow	5.12	106	IAmb_Lg		02 58 02.5	
	comp=Z,5.8nm,1.3s						

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*IDC **03** 02:59:07.0±2.2, 30°.05N×51°.12E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.5/41, mbtmp3.8/6, MS3.6/1, Ms1 3.6/1, ms1mx2.6/28, Error ellipse: s-maj=50.5km s-min=26.1km az=158.0*

*TEH **03** 02:59:09.1, 29°.95N×51°.40E, h8^{km}, ML3.5*

*DSN **03** 02:59:11.9±1.5, 29°.63N×51°.33E, h15^{km}, ML3.6/9, Error ellipse: s-maj=20.8km s-min=6.6km az=9.0*

*THR **03** 02:59:11.7±0.6, 29°.90N×51°.35E, h34^{km}±9^{km}, ML3.4*

*OMAN **03** 02:59:14.0±1.8, 29°.43N×51°.37E, h10^{km}, mb4.9/11, ml4.1/2, Error ellipse: s-maj=19.0km s-min=12.8km az=153.0*

ISC 03 02:59:08.9±0.6**, 29°.87N**±0°.04×**51°.33E**±0°.04**, h15**^{km}**, n104, σ2^{s}.06**/118**, mb4.1**/13**, 1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ1	Kazerun	0.36	131	ePg	Pg	02 59 16.4	+0.1
KAZ1				eSg	Sb	02 59 23.0	+0.4
KAZ1				e		02 59 24.4	
	comp=Z,43µm,0.1s						
AHBU	AHRAM	1.00	182	ePg	Pn	02 59 31.0	+2.7
SHI	Shiraz	1.06	102	ePg	Pb	02 59 29.1	+0.1
SHI				e		02 59 55.9	
	comp=Z,13µm,0.3s						
KLNJ	Kolanjah	1.16	11	ePg	Pn	02 59 29.1	-1.8
KLNJ				e		02 59 53.4	
	comp=Z,15µm,0.4s						
ABEH	Behbahan	1.18	308	ePg	Pn	02 59 32.3	+1.4
IBRJ	Brojen	2.04	358	ePn	Pn	02 59 44.8	+1.9
IBRJ				e		03 00 19.1	
	comp=Z,4µm,0.8s						
QIR1	Qir	2.04	132	ePn	Pb	02 59 45.3	-0.4
IRAM	Ramesheh	2.14	25	ePn	Pn	02 59 46.8	+2.6
IRAM				e		03 00 23.9	
	comp=Z,3µm,0.5s						
GHIR	Ghir-Karzin	2.14	137	ePn	Pb	02 59 47.3	-0.2
GHIR				IAML		03 00 24.9	
	comp=N,346nm,0.4s						
GHIR				IAML		03 00 33.4	
	comp=E,211nm,0.5s						
GHIR	Ghir-Karzin	2.14	137	ePn	Pb	02 59 47.3	-0.2
JHRM	Jahrom	2.39	124	ePn	Pn	02 59 50.2	+2.6
SHK1	Shahrekord	2.48	351	ePn	Pn	02 59 51.0	+2.0
SHK1				e		03 00 40.5	
	comp=Z,2µm,0.8s						
AMIS	Naft Sefid	2.51	316	ePn	Pn	02 59 51.2	+2.0
IGAR	Gharneh	2.60	13	ePn	Pn	02 59 53.2	+2.6
IGAR				e		03 00 02.5	
	comp=Z,2µm,0.4s						
IPIR	Pirpir	2.83	353	ePn	Pn	02 59 55.8	+1.9
IPIR				e		03 00 54.8	
	comp=Z,1µm,1.0s						
ISAD	Sadrabad	2.88	44	ePn	Pn	02 59 57.4	+2.9
IZEF	Zefreh	3.14	16	ePn	Pn	02 59 59.8	+1.8
IZEF				e		03 00 13.6	
	comp=Z,666nm,0.5s						
UMR	Umm Al-Rimmam	3.16	265	eP	Pn	02 59 59.6	+1.6
QRN	Al-Qurain	3.18	250	eP	Pn	03 00 00.0	+1.7
NASN	Na'in	3.19	23	ePn	Pn	03 00 00.9	+2.2
NASN				IAML		03 00 40.4	
	comp=N,43nm,0.1s						
NASN				IAML		03 00 41.4	
	comp=E,67nm,0.5s						
NASN	Na'in	3.19	23	ePn	Pn	03 00 00.9	+2.2
IMEH	Mehriz	3.21	61	ePn	Pn	03 00 01.3	+2.2
IMEH				e		03 00 20.1	
	comp=Z,534nm,0.4s						
KBD	Kabd	3.24	259	eP	Pn	03 00 01.6	+2.4
RDF	Al-Radifah	3.43	255	eP	Pn	03 00 03.8	+2.0
IKLH	Kolahrood	3.45	4	ePn	Pn	03 00 04.3	+2.0
IKLH				e		03 01 20.2	
	comp=Z,653nm,0.7s						
MIB	Mutribah	3.46	270	⇓eP	Pn	03 00 04.8	+2.6
ICHK	Chekchek	3.55	47	ePn	Pn	03 00 05.7	+2.0
ICHK				e		03 00 52.7	
	comp=Z,690nm,0.4s						
YZKH	Yazd	3.76	47	ePn	Pn	03 00 09.2	+2.7
YZKH				IAML		03 00 56.4	
	comp=N,26nm,0.7s						
YZKH				IAML		03 00 58.2	
	comp=E,19nm,0.6s						
YZKH	Yazd	3.76	47	ePn	Pn	03 00 09.2	+2.7
RST	Umm Al-Ruwaisa	3.78	266	eP	Pn	03 00 09.2	+2.6
ANAR	Anarak	3.90	31	ePn	Pn	03 00 09.9	+1.6
SHMA	Al-Shehemyia	4.01	185	P	Pn	03 00 12.9	+3.2
KHMZ	Khomeyn	4.03	344	ePn	Pn	03 00 13.1	+2.8
KHMZ	Khomeyn	4.03	344	ePn	Pn	03 00 13.1	+2.8
KRSH	Karshahi	4.15	9	ePn	Pn	03 00 13.4	+1.6
KHGB	Koh Gabri	4.49	82	ePn	Pn	03 00 18.8	+2.2
ISFB	Sefidab	4.54	10	ePn	Pn	03 00 18.4	+1.3
GHVR	GHOM	4.60	360	ePn	Pn	03 00 21.0	+3.1
GHVR				IAML		03 01 32.2	
	comp=E,44nm,0.9s						
GHVR	GHOM	4.60	360	ePn	Pn	03 00 21.0	+3.1
KRBR	Kerman	4.72	87	ePn	Pn	03 00 22.8	+3.0
KRBR				IAML		03 01 21.1	
	comp=N,35nm,0.6s						
KRBR				IAML		03 01 25.3	
	comp=E,32nm,0.6s						
KRBR	Kerman	4.72	87	ePn	Pn	03 00 22.8	+3.0
TVBK	TV Kerman	4.72	87	ePn	Pn	03 00 21.9	+2.1
TVBK				e		03 01 24.1	
	comp=Z,806nm,0.4s						
ASAO	Ashtian	4.80	347	ePn	Pn	03 00 23.2	+2.4
ASAO				IAML		03 01 20.6	
	comp=E,22nm,0.6s						
ASAO				IAML		03 01 20.9	
	comp=N,23nm,0.5s						
ASAO	Ashtian	4.80	347	ePn	Pn	03 00 23.2	+2.4
HSAM	Samen	4.91	333	ePn	Pn	03 00 24.8	+2.4
GENO	Geno	4.92	119	ePn	Pn	03 00 23.5	+1.1
GENO				e		03 01 30.6	
	comp=Z,599nm,0.3s						
IQOM	Qom	4.97	358	ePn	Pn	03 00 24.1	+0.9
JRN	Qarnain Island	5.09	164	P	Pn	03 00 26.4	+1.8
JRN				S	Sn	03 01 25.4	+2.3
TRNA	Turayna	5.11	181	P	Pn	03 00 27.7	+2.8
TRNA				S	Sn	03 01 27.1	+3.5
IVRN	Varamin	5.13	4	ePn	Pn	03 00 26.6	+1.4
HAGD	Aghdareh	5.28	340	ePn	Pn	03 00 28.6	+1.2
CHMN	Cheshme madani	5.40	89	ePn	Pn	03 00 31.6	+2.4
CHMN				e		03 01 24.2	
	comp=Z,172nm,0.8s						
TPRV	Parvadeh(Tabas	5.56	54	ePn	Pn	03 00 33.0	+1.8
IRAZ	Razeghan	5.65	348	ePn	Pn	03 00 35.2	+2.7
SHME	Shamm	5.71	131	P	Pn	03 00 34.8	+1.6
SHME				S	Sn	03 01 38.5	+0.1
SLWR	Sila	5.78	177	P	Pn	03 00 37.0	+2.8
SLWR				S	Sn	03 01 41.7	+1.4
BANOM	Banah	5.90	131	P	Pn	03 00 36.9	+1.1
BANOM				S	Sn	03 01 42.6	-0.5
BANOM	Banah	5.90	131	P	Pn	03 00 37.3	+1.5
BANOM				S	Sn	03 01 43.3	+0.1
KHNJ	Kahnooj	5.91	107	ePn	Pn	03 00 38.0	+2.1
IANJ	Anjilo	6.00	21	ePn	Pn	03 00 38.3	+1.0
TNSJ	Nastanj	6.07	46	ePn	Pn	03 00 40.7	+2.5
ISHM	Shahmirzad	6.15	15	ePn	Pn	03 00 40.9	+1.5
TKDS	Koohdasht(Taba	6.19	51	ePn	Pn	03 00 42.1	+2.3
MASF	Masafi	6.20	135	P	Pn	03 00 41.1	+1.2
MASF				S	Sn	03 01 50.7	+0.2
NAZ	Nazwa, Dubai	6.20	141	P	Pn	03 00 41.5	+1.6
NAZ	Nazwa, Dubai	6.20	141	P	Pn	03 00 41.9	+2.0
NAZ				S	Sn	03 01 49.2	-1.3
AJN	Ajban	6.21	147	P	Pn	03 00 40.3	+0.4
AJN				S	Sn	03 01 49.9	-0.8
MSFE	Esma-Masafi	6.21	135	P	Pn	03 00 40.9	+0.9
MSFE				S	Sn	03 01 50.7	-0.1
ASUD	Al Ashush, Dub	6.32	145	P	Pn	03 00 42.1	+0.6
ASUD	Al Ashush, Dub	6.32	145	P	Pn	03 00 43.7	+2.2
	SNR=11						
ASUD				S	Sn	03 01 54.7	+1.2
FAQ	Al Faqa, Dubai	6.36	142	P	Pn	03 00 43.3	+1.2
IDHR	Dehrash	6.38	320	ePn	Pn	03 00 44.4	+1.9
UOSS	Minazif	6.54	137	P	Pn	03 00 44.7	+0.1
UOSS	Minazif	6.54	137	P	Pn	03 00 45.6	+0.9
UOSS				S	Sn	03 01 56.9	-2.1
HATD	Hatta, Dubai	6.59	138	P	Pn	03 00 46.0	+0.7
HATD	Hatta, Dubai	6.59	138	P	Pn	03 00 45.7	+0.4
ASHO	Ashiyiah	6.66	140	P	Pn	03 00 47.0	+0.7
ASHO	Ashiyiah	6.66	140	P	Pn	03 00 47.4	+1.2
ASHO				S	Sn	03 01 59.6	-2.4
IGLO	Ghaloghah	6.94	17	ePn	Pn	03 00 53.2	+2.9
ALNE	Al Ain	7.00	145	P	Pn	03 00 52.3	+1.3
BSRN	Basiran	7.02	71	ePn	Pn	03 00 53.9	+2.6
BSRN	Basiran	7.02	71	ePn	Pn	03 00 53.9	+2.6
SOHO	SOHO	7.36	140	P	Pn	03 00 56.1	+0.3
UMZA	Um Al Zommool	7.91	153	S	Sn	03 02 30.0	-2.6
RAYN	Ar Rayn	8.19	221	P	Pn	03 01 06.8	-0.4
WSAR	Wadi Sarin	9.29	134	P	Pn	03 01 22.6	+0.3
WSAR				S	Sn	03 03 01.1	-5.5
WBK	Wadi Bani Khal	9.96	135	P	Pn	03 01 33.3	+1.8
WBK				S	Sn	03 03 20.9	-2.2
JLN	Jalan Bani Buh	10.57	135	P	Pn	03 01 41.0	+1.1
WHFO	Wadi Hawf	12.10	169	P	Pn	03 02 00.2	-0.6
	SNR=13						
WHFO				S	Sn	03 04 06.0	-10
ABTO	Aybut	12.59	171	S	Sn	03 04 19.1	-8.4
AKASG	Malin Array Be	26.60	328	P	P	03 04 45.5	-0.9
	comp=Z,0.5nm,0.4s,baz=134,slow=9.3,SNR=4.8						
MKAR	Makanchi Array	29.34	46	P	P	03 05 10.5	-0.5
	comp=Z,0.2nm,0.4s,baz=238,slow=8.6,SNR=6.3						
ZALV	Zalesovo Beam	34.12	36	P	P	03 05 54.0	+1.1
	comp=Z,1.4nm,0.5s,baz=247,slow=8.8,SNR=10						
WTTA	Wattenberg	35.11	311	eP	P	03 06 01.7	0.0
	comp=Z,1.9nm,0.5s						
WATA	Walderalm	35.17	311	eP	P	03 06 02.0	-0.2
	comp=Z,1.5nm,0.4s						
SQTA	Sankt Quirin	35.38	311	eP	P	03 06 03.9	-0.2
	comp=Z,1.7nm,0.4s						
MOTA	Moosalm	35.48	311	eP	P	03 06 04.1	-0.8
	comp=Z,0.5nm,0.3s						
FETA	Feichten	35.65	310	eP	P	03 06 05.8	-0.6
	comp=Z,1.8nm,0.8s						
FINES	FINESS Array B	35.71	339	P	P	03 06 05.6	-0.8
	comp=Z,2.2nm,0.9s,baz=138,slow=11,SNR=3.3						
RETA	Reutte	35.74	311	eP	P	03 06 06.8	-0.3
	comp=Z,0.5nm,0.3s						
DAVA	Damuels	36.27	310	eP	P	03 06 11.3	-0.5
	comp=Z,2.7nm,0.4s						
NOA	NORSAR Array B	40.87	331	P	P	03 06 46.7	-3.4
	comp=Z,0.7nm,0.9s,baz=124,slow=7.0,SNR=2.7						
OPO	Ambohidratompo	48.32	185	LR	LR	03 27 41.9	
	comp=Z,56nm,18.7s,baz=26,slow=35						
TORD	Torodi Ar. Bea	48.70	261	P	P	03 07 52.4	-0.5
	comp=Z,1.1nm,0.6s,baz=55,slow=8.0,SNR=8.8						

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*IDC **03** 03:02:32.8±0.5, 34°.56S×109°.38W, h0^{km}, mb4.6/16, mb1 4.7/17, mb1mx4.6/35, mbtmp4.6/17, ML4.2/1, MS4.6/13, Ms1 4.6/13, ms1mx4.5/16, Error ellipse: s-maj=18.6km s-min=15.4km az=147.0*

*MOS **03** 03:02:32.7±0.9, 34°.53S×109°.24W, h10^{km}, mb5.2/28, Error ellipse: s-maj=15.6km s-min=9.4km az=80.7*

*NEIC **03** 03:02:34.5±1.2, 34°.57S±0°.09×109°.4W±0°.2, h10^{km}±1^{km}, mb5.2/270, Error ellipse: s-maj=24.7km s-min=15.9km az=271.0*

*GCMT **03** 03:02:38.5±0.1, 34°.58S±0°.01×109°.17W±0°.01, h12^{km}, MW5.2/134, Moment Tensor Solution. s98,c155; s134,c233; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.33±.01; M$_{\theta\theta}$-0.43±.01; M$_{\phi\phi}$0.76±.01; M$_{r\theta}$-0.07±.04; M$_{\theta\phi}$-0.64±.01; M$_{\phi r}$-0.22±.04; Best double couple: M$_0$0.91400×10^{17} NP1:φ$_s$113.00000°, δ70.00000°, λ-170.00000°. NP2:φ$_s$19.00000°, δ81.00000°, λ-20.00000°. Principal axes: T 1.0590, Plg7.0000°, Azm67.0000°; N -0.2910, Plg68.0000°, Azm176.0000°; P -0.7680, Plg20.0000°, Azm334.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 03:02:34.5±0.3**, 34°.60S**±0°.07×**109°.27W**±0°.07**, h10**^{km}**, n528, σ1^{s}.08**/454**, mb5.2**/152**, MS4.8**/19**, 6C-15D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA02	Isla de Pascua	7.42	359		Pn	03 04 22.5	-0.2
RPN	Rapa Nui	7.45	360	Pn	Pn	03 04 24.1	+0.8
	3.9nm,0.3s,baz=183,slow=12,SNR=6.2						
RPN				LR	LR	03 06 32.5	
	comp=Z,5µm,19.4s,baz=174,slow=32						
RPN				T	T	03 11 46.1	
	25nm,0.3s,baz=258,slow=15,SNR=3.7						
RPN	Rapa Nui	7.45	360		Pn	03 04 24.0	+0.8
VA04	Juan Fernndez	25.17	97	P	P	03 08 00.1	0.0
VA04				IAmb	IAmb	03 08 00.3	
	comp=Z,82nm,1.1s						
LL05	Los Muermos	28.86	114	P	P	03 08 34.0	+0.8
LL02	Futaleuf	30.16	118	P	P	03 08 46.4	+1.8
GO05	Huala	30.55	102	P	P	03 08 48.8	+0.7
VA05	Santo Domingo	31.07	99	P	P	03 08 53.7	+1.0
VA05				IAmb	IAmb	03 08 55.4	
	comp=Z,28nm,0.9s						
PLCA	Paso Flores	31.07	113	P	P	03 08 53.8	+1.0
	comp=Z,5.7nm,0.9s,baz=278,slow=9.2,SNR=6.6						
PLCA				LR	LR	03 18 15.0	
	comp=Z,786nm,19.6s,baz=276,slow=30						
PLCA	Paso Flores	31.07	113	P	P	03 08 53.7	+0.9
PLCA				pmax	pmax		
	comp=Z,15nm,1.2s						
PLCA	Paso Flores	31.07	113	eP	P	03 08 53.5	+0.7
PLCA	Paso Flores	31.07	113	P	P	03 08 53.7	+0.9
MT01	Popeta	31.32	100	P	P	03 08 55.6	+0.7
BO01	Tunca	31.35	101	P	P	03 08 55.1	0.0
GO09	Cerro Castillo	31.35	133	P	P	03 08 55.9	+0.9
GO09				IAmb	IAmb	03 08 57.8	
	comp=Z,34nm,0.9s						
MG05	Puerto Natales	31.38	134	P	P	03 08 55.3	+0.1
BO02	Sierra Bellavi	31.52	102	P	P	03 08 57.4	+0.6
MT02	Curacav	31.54	99	P	P	03 08 56.7	-0.3
MT02				IAmb	IAmb	03 09 09.1	
	comp=Z,34nm,1.4s						
MT09	Talagante	31.55	100	P	P	03 08 56.0	-1.1
MT09				IAmb	IAmb	03 08 59.1	
	comp=Z,30nm,1.1s						
MT05	Renca	31.84	99	P	P	03 09 00.2	+0.6
MT05				IAmb	IAmb	03 09 02.2	
	comp=Z,43nm,1.1s						
VA03	San Esteban	32.14	98	P	P	03 09 01.7	-0.7
VA03				IAmb	IAmb	03 09 05.1	
	comp=Z,38nm,1.1s						
ZON	Zonda	33.99	96	P	P	03 09 19.1	+0.6
ZON				pmax	pmax		
	comp=Z,24nm,1.0s						
ZON	Zonda	33.99	96	P	P	03 09 19.1	+0.6
ZON				IAmb	IAmb	03 09 21.9	
	comp=Z,24nm,1.0s						

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PB15  IPOC Station P  36.43  83  P     P     03 09 39.8 +0.1
PB15                             IAmb  IAmb  03 09 42.5
        comp=Z,42nm,1.0s
PB06  IPOC Station P  36.58  82  P     P     03 09 40.5 -0.4
PB06                             IAmb  IAmb  03 09 47.6
        comp=Z,42nm,0.9s
PATCX Punta Patache   37.01  79  P     P     03 09 44.0 -0.5
TA01  Diego Aracena   37.12  78  P     P     03 09 45.8 +0.5
TA01                             IAmb  IAmb  03 09 52.1
        comp=Z,58nm,1.0s
LVC   Limon Verde     37.16  82  P     P     03 09 47.5 +1.4
        comp=Z,30nm,1.0s,baz=237,slow=9.6,SNR=8.4
LVC   Limon Verde     37.16  82  P     P     03 09 45.4 -0.7
LVC                              pmax  pmax
        comp=Z,43nm,1.0s
LVC   Limon Verde     37.16  82 eP     P     03 09 44.9 -1.2
LVC   Limon Verde     37.16  82  P     P     03 09 45.4 -0.7
LVC                              IAmb  IAmb  03 09 53.9
        comp=Z,43nm,1.0s
PB09  IPOC Station P  37.27  81  P     P     03 09 47.5 +0.6
PB01  IPOC Station P  37.44  79  P     P     03 09 48.7 +0.5
PB01                             IAmb  IAmb  03 09 54.9
        comp=Z,38nm,1.0s
PB11  IPOC Station P  37.95  78  P     P     03 09 50.9 -1.8
PB11                             IAmb  IAmb  03 09 59.1
        comp=Z,67nm,1.1s
PB12  IPOC Station P  38.02  75  P     P     03 09 52.5 -0.5
PB08  IPOC Station P  38.16  78  P     P     03 09 53.3 -1.4
PB08                             IAmb  IAmb  03 10 01.7
        comp=Z,43nm,1.0s
TAOE  Nuku Hiva Isla  38.18 305 eLQ    LQ    03 18 44.2
        comp=Z,2µm,31.3s
TAOE                            eLR    LR    03 20 20.8
        comp=Z,272nm,22.1s
MEH   Mehetia         38.31 286 eT     T     03 50 24.0
        comp=Z,115nm,0.2s
PB16  IPOC Station P  38.82  76  P     P     03 09 59.4 -1.0
ATAH  Atahualpa       39.43  53  P     P     03 10 07.4 +2.1
        comp=Z,22nm,1.0s,baz=230,slow=4.1,SNR=9.3
TIAR  Tiarei          39.50 285 eT     T     03 51 51.3
        comp=Z,2.5nm,0.2s
PAE   Paea            39.63 285 eT     T     03 51 59.9
        comp=Z,1.4nm,0.3s
PPT2  Papeete2        39.66 285 eS     S     03 16 15.3 +4.9
        comp=Z,194nm,24.0s
PPT2                            eLQ    LQ    03 19 22.5
        comp=Z,2µm,26.2s
PPT2                            eLR    LR    03 20 50.0
        comp=Z,3µm,25.5s,baz=120
PPT   Papeete         39.68 285  LR    LR    03 22 02.1
        comp=Z,976nm,19.9s,baz=111,slow=30
LPAZ  La Paz          41.04  74  P     P     03 10 19.6 +0.6
        comp=Z,11nm,1.0s,baz=231,slow=6.3,SNR=25
LPAZ                             LR    LR    03 23 18.7
        comp=Z,1µm,18.1s,baz=222,slow=30
LPAZ  La Paz          41.04  74  P     P     03 10 18.3 -0.6
LPAZ                             pmax  pmax
        comp=Z,83nm,1.7s
LPAZ  La Paz          41.04  74  P     P     03 10 18.3 -0.6
LPAZ                             IAmb  IAmb  03 10 26.4
        comp=Z,83nm,1.6s
CZSB  Cruzeiro do Su  42.93  60 eP     P     03 10 33.5 -0.2
CZSB  Cruzeiro do Su  42.93  60  P     P     03 10 33.4 -0.2
ITQB  Itaqui          44.44  99 eP     P     03 10 44.8 -0.9
ITQB  Itaqui          44.44  99  P     P     03 10 45.9 +0.2
OTAV  Otavalo         45.08  46  P     P     03 10 51.2 -0.2
OTAV                             pmax  pmax
        comp=Z,74nm,1.6s
OTAV  Otavalo         45.08  46 eP     P     03 10 52.9 +1.5
OTAV  Otavalo         45.08  46 eP     P     03 10 51.7 +0.3
OTAV  Otavalo         45.08  46  P     P     03 10 51.2 -0.2
CPUP  Villa Florida   45.11  94  P     P     03 10 50.3 -0.7
        comp=Z,6.9nm,1.0s,baz=274,slow=9.1,SNR=4.4
CPUP                             LR    LR    03 26 39.7
        comp=Z,1µm,18.3s,baz=254,slow=32
CPUP  Villa Florida   45.11  94  P     P     03 10 50.1 -1.0
CPUP                             pmax  pmax
        comp=Z,16nm,1.2s
CPUP  Villa Florida   45.11  94 eP     P     03 10 50.4 -0.6
CPUP  Villa Florida   45.11  94  P     P     03 10 50.1 -1.0
PLTB  Pedras Altas    46.17 103 eP     P     03 10 58.7 -0.8
PLTB  Pedras Altas    46.17 103  P     P     03 10 58.3 -1.2
PLTB                             IAmb  IAmb  03 11 05.4
        comp=Z,37nm,1.2s
ETMB  Extrema         46.38  68 eP     P     03 11 01.1 -0.2
ETMB  Extrema         46.38  68  P     P     03 11 01.0 -0.2
ETMB                             IAmb  IAmb  03 11 06.9
        comp=Z,34nm,1.4s
CPSB  Cacapava Do Su  46.77 101 eP     P     03 11 03.4 -0.7
PTLC  Puerto Leguiza  47.28  50 eP     P     03 11 06.2 -2.1
TBTG  Tabatinga, AM   47.38  59 eP     P     03 11 08.6 -0.4
TBTG  Tabatinga, AM   47.38  59  P     P     03 11 08.2 -0.8
POPC  Popayan, Colom  47.97  46 eP     P     03 11 14.8 +0.9
MARP  Paez Belalcaza  48.65  47 eP     P     03 11 19.7 +0.5
PTLB  Pontes e Lacer  48.73  80 eP     P     03 11 19.3 -0.2
PTLB  Pontes e Lacer  48.73  80  P     P     03 11 19.1 -0.4
PTLB                             IAmb  IAmb  03 11 25.8
        comp=Z,49nm,1.4s
AQDB  Aquidauana      49.01  88 eP     P     03 11 21.1 -0.5
AQDB  Aquidauana      49.01  88  P     P     03 11 21.2 -0.4
AQDB                             IAmb  IAmb  03 11 23.1
        comp=Z,26nm,1.1s
VILB  Vilhena         49.25  76 eP     P     03 11 24.4 +0.8
VILB  Vilhena         49.25  76  P     P     03 11 23.8 +0.3
CNLB  Canela          49.26 101 eP     P     03 11 24.2 +0.7
SAML  Samuel          49.26  70  P     P     03 11 22.6 -0.9
SAML                             pmax  pmax
        comp=Z,924nm,1.5s
SAML  Samuel          49.26  70  P     P     03 11 22.6 -0.9
YOTC  Yotoco, Valle   49.32  46 eP     P     03 11 24.0 -0.1
ORTC  Ortega, Tolima  49.92  47 eP     P     03 11 28.6  0.0
BRU2  Volcan          49.96  35  P     P     03 11 28.2 -0.7
ORTG  Ortega, Santa   50.09  31  P     P     03 11 29.9  0.0
PTGB  Pitanga         50.10  95 eP     P     03 11 31.8 +1.7
JTS   Las Juntas de   50.25  32 i P    P     03 11 32.3 +1.3
JTS                              pmax  pmax
        comp=Z,49nm,1.2s
ANIL  Santa Ana       50.29  46 eP     P     03 11 34.0 +2.4
ANIL                            eP     sP    03 11 35.1 +0.3
TRCB  Terra Rica      50.47  92 eP     P     03 11 33.9 +1.1
GUY2C Guyana, Caldas  50.90  46 eP     P     03 11 36.0 -0.4
TER01 Tubaro-SC       50.95 101 eP     P     03 11 37.7 +1.4
CBOC  Ciudad Bolivar  51.03  45 eP     P     03 11 40.7 +3.6
ROSC  El Rosal        51.21  47  P     P     03 11 39.0 +0.3
        comp=Z,28nm,1.0s,baz=113,slow=3.9,SNR=6.9
ROSC                             LR    LR    03 29 13.0
        comp=Z,1µm,21.4s,baz=228,slow=31
ROSC  El Rosal        51.21  47  P     P     03 11 38.7 -0.1
ROSC                             pmax  pmax
        comp=Z,157nm,1.4s
ROSC  El Rosal        51.21  47 eP     P     03 11 44.4 +5.6
ROSC  El Rosal        51.21  47  P     P     03 11 38.7 -0.1
SALV  Santo Antonio   51.30  83 eP     P     03 11 39.3 +0.2
NORC  Norcasia        51.46  46 eP     P     03 11 40.5 +0.3
PCMB  Pacaembu        52.15  92 eP     P     03 11 45.4  0.0
MTO3  Montecristo     52.27  25  P     P     03 11 45.6 -0.8
MTO3                             IAmb  IAmb  03 11 53.2
        comp=Z,38nm,1.5s
TIJ01 Guaruva-PR      52.35  97 eP     P     03 11 45.6 -1.4
PTBC  PUERTO BERRIO,  52.48  46 eP     P     03 11 51.2 +3.4
PDRB  Porto dos Gac   52.80  78 eP     P     03 11 50.0 -0.2
ZARC  Zaragoza, Cauc  53.01  45  P     P     03 11 50.9 -0.9
MOTC  Monteria, Cord  53.60  43  P     P     03 11 55.6 -0.4
ITRB  Iturama         53.79  90 eP     P     03 11 57.9 +0.4
CLDB  Colider         53.97  77 eP     P     03 11 58.6 -0.2
PET01 Itanhaem-SP     54.22  97 eP     P     03 11 59.4 -1.2
PETF  Flores          54.45  23  P     P     03 12 01.9 -0.3
ARAG  Araguaiana, MT  54.59  85 eP     P     03 12 03.4 +0.1
BB19B Bebedouro       54.65  93 eP     P     03 12 04.0 +0.2
SJCC  San Jacinto, C  54.79  43  P     P     03 12 04.5 -0.3
MACA  Manacapuru-AM   54.84  66 eP     P     03 12 03.5 -1.6
MACA  Manacapuru-AM   54.84  66  P     P     03 12 04.2 -1.0
RCLB  Rio Claro- Sao  54.84  95 eP     P     03 12 06.0 +0.9
VAO   Valinhos        55.05  95 eP     P     03 12 08.0 +1.3
QSPA  South Pole Qui  55.60 180  P     P     03 12 11.1 +1.0
        comp=Z,3.6nm,0.8s,baz=128,slow=4.3,SNR=11
QSPA  South Pole Qui  55.60 180  P     P     03 12 11.0 +0.8
VNDA  Vanda           56.27 195  P     P     03 12 14.6  0.0
        comp=Z,1.0nm,0.7s,baz=117,slow=8.3,SNR=5.2
VNDA                             LR    LR    03 31 11.7
        comp=Z,324nm,21.2s,baz=98,slow=30
VNDA  Vanda           56.27 195  P     P     03 12 14.4 -0.2
VNDA                             pmax  pmax
        comp=Z,13nm,1.2s
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VNDA  Vanda           56.27 195  P     P     03 12 14.4 -0.2
IPMB  Ipameri, GO     56.40  90 eP     P     03 12 16.0 -0.4
NPGB  Novo Progresso  56.55  74 eP     P     03 12 16.0 -1.5
SDV   Santo Domingo   56.63  48 eP     P     03 12 17.6 -0.5
SDV   Santo Domingo   56.63  48  P     P     03 12 16.6 -1.6
PTGA  Pitinga         56.97  65  P     P     03 12 19.8 -0.6
        comp=Z,6.0nm,0.6s,baz=257,slow=7.6,SNR=5.8
SNDB  Serra Nova Dou  57.00  82 eP     P     03 12 20.9 +0.2
ZAIG  Zacatecas       57.41   7  P     P     03 12 22.6 -0.9
MAN01 Angra dos Reis  57.57  97 eP     P     03 12 26.2 +1.6
BDFB  Brasilia        57.74  87  P     P     03 12 26.8 +0.7
        comp=Z,9.8nm,1.0s,baz=257,slow=6.5,SNR=10
BDFB                             LR    LR    03 35 04.3
        comp=Z,990nm,18.3s,baz=241,slow=34
BDFB  Brasilia        57.74  87  P     P     03 12 25.8 -0.2
BDFB                             pmax  pmax
        comp=Z,39nm,1.4s
BDFB  Brasilia        57.74  87  P     P     03 12 25.8 -0.2
BDFB                             IAmb  IAmb  03 12 31.9
        comp=Z,39nm,1.4s
BSCB  Bom Sucesso     57.77  95 eP     P     03 12 26.4 +0.2
ITTB  Itaituba        57.88  71 eP     P     03 12 25.5 -1.4
VAS01 Vassouras-RJ    58.27  97 eP     P     03 12 31.6 +2.1
BOAV  Boa Vista       58.67  62 eP     P     03 12 32.8 +0.5
BOAV  Boa Vista       58.67  62  P     P     03 12 31.9 -0.5
BOAV                             IAmb  IAmb  03 12 37.1
        comp=Z,40nm,1.3s
DUB01 Friburgo-RJ     59.23  97 eP     P     03 12 36.6 +0.3
PEXB  Peixe           59.38  84 eP     P     03 12 36.9 -0.4
DIAM  Diamantina, MG  59.99  92 eP     P     03 12 41.8 +0.2
MC01  Montes Claros   60.56  91 eP     P     03 12 46.7 +1.2
VNA3  Neumayer Olymp  60.64 159  P     P     03 12 45.3 +0.2
JANB  Januaria        61.10  89 eP     P     03 12 49.1 -0.1
ALF01 Guarapari-ES    61.28  96 eP     P     03 12 49.8 -0.4
VNA1  Neumayer--Stat  61.29 158  P     P     03 12 49.8 +0.3
VNA2  Neumayer--Watz  61.44 159  P     P     03 12 50.7 +0.1
        baz=252,slow=6.3
PRPB  Parauapebas     61.49  77 eP     P     03 12 53.7 +1.9
SMTB  Santa Maria do  61.75  81 eP     P     03 12 53.8 +0.3
SJMB  Sao Joao De Ma  61.83  94 eP     P     03 12 53.8 -0.2
SDBA  SAO DESIDERIO   62.01  86 eP     P     03 12 55.5 +0.2
BSFB  Barra de Sao F  62.05  94 eP     P     03 12 55.3 -0.2
RIB01 Linhares ES     62.18  95 eP     P     03 12 56.5 +0.1
SOR   Soroa           62.29  27  P     P     03 12 57.0 +0.2
SOR                              pmax  pmax
        comp=Z,123nm,1.7s
SOR   Soroa           62.29  27  P     P     03 12 57.0 +0.2
SNAA  Sanae           62.46 160  P     P     03 12 57.5  0.0
SNAA  Sanae           62.46 160 i P    P     03 12 56.9 -0.6
SNAA                             pmax  pmax
        comp=Z,21nm,1.5s
SNAA  Sanae           62.46 160  P     P     03 12 57.1 -0.4
SNAA                             IAmb  IAmb  03 13 07.1
        comp=Z,20nm,1.2s
NAN01 Guarapari, ES   63.13  94 eP     P     03 13 03.0 +0.3
MCPB  Macapa, AP      63.24  70 eP     P     03 13 04.4 +0.9
833A  Chaparral WMA,  63.27  10  P     P     03 13 03.4 +0.2
        baz=189
TX31  Lajitas Ar. Si  63.81   5  P     P     03 13 06.8 -0.1
TX32  Lajitas Array   63.81   5  P     P     03 13 07.0 +0.1
TX32                             IAmb  IAmb  03 13 14.7
        comp=Z,20nm,1.6s
TXAR  Lajitas Array   63.81   5  P     P     03 13 07.1 +0.2
        comp=Z,4.3nm,1.1s,baz=183,slow=7.5,SNR=17
TXAR                             LR    LR    03 36 00.9
        comp=Z,93nm,19.4s,baz=0.0,slow=32
TXAR  Lajitas Array   63.81   5  P     P     03 13 06.5 -0.4
TXAR  Lajitas Array   63.81   5  P     P     03 13 06.5 -0.4
GUA01 Guaratinga, BA  64.03  93 eP     P     03 13 08.8 +0.1
CMC01 Camacan, BA     64.90  92 eP     P     03 13 15.5 +1.2
NBIT  Itapeh - BA     65.19  91 eP     P     03 13 16.7 +0.5
JCT   Junction City   65.34   9  P     P     03 13 16.4 -0.4
JCT                              pmax  pmax
        comp=Z,36nm,1.2s
JCT   Junction City   65.34   9  P     P     03 13 16.4 -0.4
JCT   Junction City   65.34   9  P     P     03 13 16.5 -0.4
        baz=189,SNR=8.9
HKT   Hockley         65.44  13 i P    P     03 13 15.6 -1.7
HKT                              pmax  pmax
        comp=Z,12nm,1.4s
HKT   Hockley         65.44  13  P     P     03 13 17.3  0.0
GDU01 Guandu, BA      65.70  90 eP     P     03 13 20.4 +0.8
435B  Jarrell         65.96  11  P     P     03 13 20.3 -0.5
435B                             IAmb  IAmb  03 13 28.2
        comp=Z,28nm,1.1s
435B  Jarrell         65.96  11  P     P     03 13 20.8 +0.1
        baz=191
MNTX  Cornudas Mount  66.05   4  P     P     03 13 19.9 -1.5
MNTX  Cornudas Mount  66.05   4  P     P     03 13 20.8 -0.5
        baz=184,SNR=16
MSVF  Nonsavu         66.10 264  P     P     03 13 23.4 +1.2
        comp=Z,6.4nm,0.8s,baz=189,slow=8.6,SNR=3.8
MSVF  Nonsavu         66.10 264 i P    P     03 13 18.3 -3.9
MSVF                             pmax  pmax
        comp=Z,25nm,1.3s
214A  Organ Pipe Nat  66.29 357  P     P     03 13 23.2 +0.3
214A                             IAmb  IAmb  03 13 25.0
        comp=Z,24nm,1.2s
214A  Organ Pipe Nat  66.29 357  P     P     03 13 23.2 +0.3
        baz=177,SNR=5.4
TUC   Tucson          66.57 359  P     P     03 13 25.4 +0.6
TUC                              pmax  pmax
        comp=Z,20nm,1.4s
TUC   Tucson          66.57 359  P     P     03 13 25.4 +0.6
TUC                              IAmb  IAmb  03 13 31.6
        comp=Z,20nm,1.4s
TUC   Tucson          66.57 359  P     P     03 13 24.7  0.0
        baz=179
NBPN  Ponto Novo - B  66.72  87 eP     P     03 13 27.2 +1.1
121A  Cookes Peak, D  66.79   1  P     P     03 13 26.6 +0.3
121A  Cookes Peak, D  66.79   1  P     P     03 13 26.5 +0.2
        baz=181
CBX   Cerro Bola      66.92 353  P     P     03 13 27.4 +0.4
113A  Mohawk Valley,  67.15 356  P     P     03 13 28.4 +0.1
113A                             IAmb  IAmb  03 13 36.3
        comp=Z,29nm,1.5s
RMX   La Rumorosa     67.15 354  P     P     03 13 28.4 -0.2
RMX                              IAmb  IAmb  03 13 30.5
        comp=Z,30nm,1.2s
WHTX  Lake Whitney,   67.16  11  P     P     03 13 28.1 -0.3
WHTX  Lake Whitney,   67.16  11  P     P     03 13 28.1 -0.3
        baz=191
IKP   In-Ko-Pah, Jac  67.20 354  P     P     03 13 29.3 +0.5
        baz=174,SNR=6.4
BAR   Barrett         67.28 353  P     P     03 13 28.7 -0.6
BAR                              IAmb  IAmb  03 13 31.3
        comp=Z,31nm,1.2s
NATX  Nacogdoches     67.42  13  P     P     03 13 30.1  0.0
NATX  Nacogdoches     67.42  13  P     P     03 13 30.1  0.0
        baz=193
SWSC  Sam W. Stewart  67.47 354  P     P     03 13 30.7 +0.4
        baz=174
MONP2 Monument Peak   67.47 353  P     P     03 13 30.9 +0.3
        baz=174,SNR=7.4
ABTX  Abilene, Hawle  67.48   9  P     P     03 13 30.2 -0.3
ABTX                             IAmb  IAmb  03 13 37.2
        comp=Z,23nm,1.4s
ABTX  Abilene, Hawle  67.48   9  P     P     03 13 30.4  0.0
        baz=189
GLA   Glamis          67.50 355  P     P     03 13 30.8 +0.2
GLA                              pmax  pmax
        comp=Z,19nm,1.2s
GLA   Glamis          67.50 355  P     P     03 13 30.8 +0.2
GLA                              IAmb  IAmb  03 13 32.7
        comp=Z,19nm,1.1s
GLA   Glamis          67.50 355  P     P     03 13 30.8 +0.2
        baz=175
109C  Camp Elliot, M  67.53 353  P     P     03 13 31.1 +0.3
        baz=173
DWPF  Disney Wildern  67.70  26  P     P     03 13 31.8 -0.1
        baz=205
SCI2  San Clemente I  67.79 352  P     P     03 13 32.2 -0.1
        baz=172
BC3   Big Chuckawall  68.14 354  P     P     03 13 35.1 +0.3
        baz=175,SNR=18
SNCC  San Nicolas Is  68.17 351  P     P     03 13 34.0 -0.8
        baz=171
TPFO  Pinon Flats     68.18 354  P     P     03 13 35.7 +0.7
        baz=174,SNR=8.5
CIS   Catalina Islan  68.19 352  P     P     03 13 34.7 -0.2
        baz=172
PFO   Pinyon Flats O  68.19 354  P     P     03 13 34.4 -0.6
PFO                              pmax  pmax
        comp=Z,24nm,1.2s
PFO   Pinyon Flats O  68.19 354  P     P     03 13 34.4 -0.6
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PFO                              IAmb  IAmb  03 13 37.3
        comp=Z,24nm,1.1s
MURC  Murrieta        68.25 353  P     P     03 13 35.1 -0.2
        baz=173
Y14A  Wickenburg      68.27 357  P     P     03 13 35.5  0.0
Y14A                             IAmb  IAmb  03 13 37.5
        comp=Z,20nm,1.2s
BNM   Barren Site     68.44   2  P     P     03 13 36.3 -0.4
LENM  Lemitar         68.44   2  P     P     03 13 35.8 -0.8
MSTX  Muleshoe        68.48   6  P     P     03 13 35.7 -1.2
MSTX                             IAmb  IAmb  03 13 38.4
        comp=Z,20nm,1.1s
MSTX  Muleshoe        68.48   6  P     P     03 13 36.3 -0.6
        baz=186,SNR=8.1
Z35A  Perchaven, San  68.51  11  P     P     03 13 36.4 -0.4
Z35A                             IAmb  IAmb  03 13 38.0
        comp=Z,20nm,1.0s
BELC  Belle Mtn. Jos  68.53 354  P     P     03 13 37.8 +0.6
        baz=174,SNR=21
IRM   Iron Mountain   68.62 355  P     P     03 13 37.7 +0.1
        baz=175,SNR=7.6
X16A  Lo Mia Camp, P  68.69 358  P     P     03 13 37.9 -0.4
PDMCI Parker Dam,Lak  68.69 356  P     P     03 13 38.2 +0.2
        baz=176
X18A  Snowflake       68.77 359  P     P     03 13 38.5 -0.2
X18A                             IAmb  IAmb  03 13 40.9
        comp=Z,26nm,1.1s
BFSC  Mount Baldy Ra  68.93 353  P     P     03 13 39.9 +0.2
        baz=173,SNR=8.5
MWC   Mount Wilson    68.96 352  P     P     03 13 39.5 -0.4
MWC                              pmax  pmax
        comp=Z,20nm,1.2s
MWC   Mount Wilson    68.96 352  P     P     03 13 39.5 -0.4
MWC                              IAmb  IAmb  03 13 46.9
        comp=Z,20nm,1.2s
143A  Socs Landing,   69.02  16  P     P     03 13 39.7 -0.3
ANMO  Albuquerque     69.23   2 i P    P     03 13 38.7 -2.9
ANMO                             pmax  pmax
        comp=Z,10.0nm,1.5s
ANMO  Albuquerque     69.23   2  P     P     03 13 39.7 -1.9
ANMO  Albuquerque     69.23   2  P     P     03 13 40.8 -0.8
        baz=183
Z41A  Richland Creek  69.25  15  P     P     03 13 41.2 -0.2
        baz=194
GMRC  Granite Mounta  69.28 354  P     P     03 13 42.5 +0.6
        baz=174,SNR=9.0
W18A  Petrified Fore  69.36 360  P     P     03 13 42.2 -0.1
        baz=180
HEC   Hector,Ludlow   69.38 354  P     P     03 13 42.4  0.0
        baz=174
W13A  Hualapai Mount  69.47 356  P     P     03 13 43.6 +0.5
W13A                             IAmb  IAmb  03 13 54.2
        comp=Z,20nm,1.4s
AMTX  Amarillo        69.49   7  P     P     03 13 43.1  0.0
AMTX                             IAmb  IAmb  03 13 49.2
        comp=Z,51nm,1.9s
AMTX  Amarillo        69.49   7  P     P     03 13 42.8 -0.2
        baz=187
RRX   Edison Barstow  69.49 353  P     P     03 13 43.2 +0.2
        baz=173
WLAR  White Oak Lake  69.60  14  P     P     03 13 43.5 -0.1
WLAR                             IAmb  IAmb  03 13 50.7
        comp=Z,35nm,1.3s
EDW2  Edwards Air Fo  69.60 352  P     P     03 13 43.8 +0.1
        baz=172,SNR=9.2
WUAZ  Wupatki         69.78 358  P     P     03 13 44.1 -0.8
WUAZ                             IAmb  IAmb  03 13 56.0
        comp=Z,22nm,1.4s
WUAZ  Wupatki         69.78 358  P     P     03 13 44.6 -0.3
        baz=178
NBMA  Muriti-CE       69.81  85 eP     P     03 13 45.8 +0.2
PKM   Mcpherson Peak  69.83 351  P     P     03 13 44.6 -0.7
        baz=171
GSC   Goldstone, Bar  69.90 353  P     P     03 13 44.1 -1.5
GSC                              pmax  pmax
        comp=Z,29nm,1.1s
GSC   Goldstone, Bar  69.90 353  P     P     03 13 44.1 -1.5
GSC                              IAmb  IAmb  03 13 48.0
        comp=Z,30nm,1.1s
GSC   Goldstone, Bar  69.90 353  P     P     03 13 46.1 +0.6
        baz=174,SNR=22
ARVC  Arvin           69.94 352  P     P     03 13 46.1 +0.3
        baz=172
TUQ   Turquoise Moun  69.95 354  P     P     03 13 46.5 +0.6
        baz=174,SNR=13
X37A  Clayton         70.05  12        P     03 13 45.8 -0.6
X37A                             IAmb  IAmb  03 13 52.5
        comp=Z,20nm,1.2s
LRMC  Laurel Mtn Rad  70.16 353  P     P     03 13 47.7 +0.5
        baz=173,SNR=22
NBPB  Pedra_Branca-C  70.16  83 eP     P     03 13 48.7 +1.0
SMMC  Simmler         70.27 351  P     P     03 13 47.7 -0.1
        baz=171
Z47A  Carrollton      70.32  19  P     P     03 13 47.4 -0.6
Z47A                             IAmb  IAmb  03 13 58.5
        comp=Z,22nm,0.9s
MIAR  Mount Ida       70.34  14  P     P     03 13 48.3 +0.1
MIAR                             pmax  pmax
        comp=Z,6.0nm,1.0s
MIAR  Mount Ida       70.34  14  P     P     03 13 48.3 +0.1
MIAR  Mount Ida       70.34  14  P     P     03 13 47.9 -0.2
        baz=194
W35A  Tecumseh        70.35  11        P     03 13 47.4 -0.9
ISA   Isabella, Lake  70.43 352  P     P     03 13 48.8  0.0
ISA                              pmax  pmax
        comp=Z,24nm,1.2s
ISA   Isabella, Lake  70.43 352  P     P     03 13 48.8  0.0
ISA                              IAmb  IAmb  03 13 51.2
        comp=Z,24nm,1.1s
ISA   Isabella, Lake  70.43 352  P     P     03 13 49.2 +0.4
        baz=172,SNR=15
X40A  Basin Creek Fa  70.43  14  P     P     03 13 48.5 -0.2
        baz=194
QSM   Queen of Sheba  70.56 353  P     P     03 13 48.9 -0.6
QSM                              IAmb  IAmb  03 13 51.8
        comp=Z,34nm,1.2s
VES   Vestal, Richgr  70.67 352  P     P     03 13 50.1  0.0
        baz=172,SNR=7.2
MPMC  Manual Prospec  70.71 353  P     P     03 13 51.0 +0.3
        baz=173,SNR=34
PAGB  Antelope Grade  70.72 351  P     P     03 13 50.2 -0.3
PAGB                             IAmb  IAmb  03 13 57.5
        comp=Z,23nm,1.4s
U15A  North Rim       70.72 357  P     P     03 13 50.1 -0.7
U15A                             IAmb  IAmb  03 13 53.0
        comp=Z,22nm,1.1s
BCOK  Bluff Creek, N  70.74  10        P     03 13 50.1 -0.5
BCOK                             IAmb  IAmb  03 13 52.0
        comp=Z,20nm,0.9s
GWY   Greenwater Val  70.76 354  P     P     03 13 50.9 -0.1
GWY                              IAmb  IAmb  03 13 53.0
        comp=Z,21nm,1.1s
152A  Waverly Hall    70.78  22  P     P     03 13 50.3 -0.6
OK029 Liberty Lake    70.90  10        P     03 13 50.8 -0.8
OK029                            IAmb  IAmb  03 13 58.3
        comp=Z,42nm,1.5s
W39A  Magazine        70.93  13  P     P     03 13 50.0 -1.7
W39A                             IAmb  IAmb  03 13 58.0
        comp=Z,20nm,1.2s
W39A  Magazine        70.93  13  P     P     03 13 52.2 +0.5
        baz=194
SHPR  Sheep Range     70.95 355  P     P     03 13 51.6 -0.5
SHPR                             IAmb  IAmb  03 13 54.6
        comp=Z,23nm,1.2s
FURC  Furnace Creek,  71.06 354  P     P     03 13 53.1 +0.7
        baz=174,SNR=12
OK030 Cody Creek RV   71.12  11  P     P     03 13 52.0 -0.9
OK030                            IAmb  IAmb  03 13 58.4
        comp=Z,41nm,1.5s
CWC   Cottonwood Cre  71.15 352  P     P     03 13 53.5 +0.2
        baz=172
W41B  Gary Mavity, V  71.21  15  P     P     03 13 53.2 -0.3
        baz=195,SNR=9.5
OK034 N. Norfolk Rd.  71.22  11        P     03 13 53.2 -0.2
OK034                            IAmb  IAmb  03 13 59.8
        comp=Z,31nm,1.4s
Z51A  Franklin        71.24  21  P     P     03 13 53.2 -0.5
Z51A                             IAmb  IAmb  03 14 04.4
        comp=Z,27nm,1.2s
TUL1  Leonard         71.27  12        P     03 13 53.1 -0.7
TUL1                             IAmb  IAmb  03 14 04.2
        comp=Z,26nm,1.1s
TUL1  Leonard         71.27  12  P     P     03 13 53.4 -0.4
        baz=192,SNR=6.5
WHAR  Wooly Hollow    71.32  15  P     P     03 13 52.7 -1.4
KNB   Kanab           71.33 357  P     P     03 13 54.0 -0.4
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KNB				pmax	pmax		
	comp=Z,20nm,1.2s						
KNB	Kanab	71.33	357	P	P	03 13 54.0	-0.4
KNB				IAmb	IAmb	03 13 56.4	
	comp=Z,20nm,1.2s						
LCMT	Little Creek M	71.34	357	P	P	03 13 54.1	-0.4
QUOK	Quay	71.38	11		P	03 13 54.1	-0.3
QUOK				IAmb	IAmb	03 14 05.0	
	comp=Z,25nm,1.2s						
Y49A	Blount Mountai	71.39	20	P	P	03 13 53.8	-0.9
MVCO	Mesa Verde	71.45	1	P	P	03 13 54.6	-0.5
MVCO				IAmb	IAmb	03 13 56.9	
	comp=Z,24nm,1.2s						
MVCO	Mesa Verde	71.45	1	P	P	03 13 55.0	-0.2
	baz=181,SNR=9.4						
T25A	Trinidad	71.52	4	P	P	03 13 55.1	-0.4
T25A	Trinidad	71.52	4	P	P	03 13 55.1	-0.4
	baz=184						
PKCU	Pink Cliffs	71.73	357	P	P	03 13 56.3	-0.7
TIN	Tinemaha, Big	71.78	352	P	P	03 13 57.7	+0.7
	baz=172,SNR=19						
X48A	Hartselle	71.78	19	P	P	03 13 57.2	+0.3
OK032	Salt Plains WL	71.78	9		P	03 13 56.9	0.0
OK032				IAmb	IAmb	03 14 03.1	
	comp=Z,40nm,1.5s						
PRN	Pahroc Range	71.84	355	P	P	03 13 57.1	-0.3
PRN				IAmb	IAmb	03 14 00.1	
	comp=Z,21nm,1.2s						
GOGA	Godfrey	71.86	23	P	P	03 13 57.3	-0.1
	baz=202						
BLOK	Blackwell	71.88	10		P	03 13 57.0	-0.4
BLOK				IAmb	IAmb	03 14 04.3	
	comp=Z,32nm,1.4s						
CCUT	Cedar City	71.89	357	P	P	03 13 57.3	-0.5
CCUT				IAmb	IAmb	03 14 00.2	
	comp=Z,29nm,1.1s						
LCH	Last Change Ra	71.89	353	P	P	03 13 56.5	-1.3
SAO	San Andreas Ge	71.90	350	P	P	03 13 56.3	-1.3
SAO				pmax	pmax		
	comp=Z,25nm,1.5s						
SAO	San Andreas Ge	71.90	350	P	P	03 13 56.3	-1.3
SAO				IAmb	IAmb	03 14 08.6	
	comp=Z,25nm,1.5s						
SZCU	Shurtz Canyon	71.92	357	P	P	03 13 57.4	-0.6
FCAR	Ozark Folk Cen	71.93	15	P	P	03 13 56.9	-0.9
HHAR	Hobbs	71.95	13	P	P	03 13 56.6	-1.4
HHAR				IAmb	IAmb	03 14 08.6	
	comp=Z,23nm,1.0s						
KAN14	Manchester OK	71.97	10	P	P	03 13 56.6	-1.4
S22A	4UR Ranch, Cre	72.02	2	P	P	03 13 58.8	+0.2
	baz=182,SNR=11						
U38A	Gravette	72.02	13	P	P	03 13 57.8	-0.5
U38A				IAmb	IAmb	03 14 08.4	
	comp=Z,22nm,1.2s						
SDCO	Great Sand Dun	72.06	3	P	P	03 13 58.5	-0.4
SDCO	Great Sand Dun	72.06	3	P	P	03 13 58.7	-0.2
	baz=183,SNR=9.5						
NBPA	Parau_RN	72.07	85	*e*P	P	03 14 00.6	+1.4
KAN17	Caldwell West	72.08	10		P	03 13 58.6	-0.1
KAN17				IAmb	IAmb	03 14 05.8	
	comp=Z,39nm,1.2s						
NBRF	Rio Formoso -	72.08	88	*e*P	P	03 14 01.2	+1.9
KAN13	South Haven SW	72.09	10	P	P	03 13 58.6	-0.2
Y52A	Lilburn	72.09	22	P	P	03 13 58.6	-0.2
T35A	Sooner Cattle	72.14	11	P	P	03 13 58.5	-0.5
KAN01	Argonia South	72.19	10		P	03 13 58.7	-0.7
KAN09	Caldwell North	72.19	10		P	03 13 57.5	-1.8
U40A	Yellville	72.23	14	P	P	03 13 59.2	-0.4
	baz=194,SNR=6.8						
MLAC	Mammoth, Mammo	72.41	352	P	P	03 14 00.6	-0.4
	baz=172						
NHSC	New Hope	72.68	25	P	P	03 14 02.2	-0.1
	baz=205						
R11A	Troy Canyon, C	72.82	355	IAmb	IAmb	03 14 14.8	
	comp=Z,35nm,1.4s						
R11A	Troy Canyon, C	72.82	355	P	P	03 14 04.3	+1.1
	baz=175,SNR=22						
TCRU	Three Creeks R	72.90	357	IAmb	IAmb	03 14 06.2	
	comp=Z,18nm,1.1s						
V48A	Smith Brothers	73.05	19	IAmb	IAmb	03 14 09.8	
	comp=Z,38nm,1.4s						
WVT	Waverly	73.15	18	P	P	03 14 04.4	-0.7
WVT				pmax	pmax		
	comp=Z,31nm,1.6s						
WVT	Waverly	73.15	18	P	P	03 14 04.4	-0.7
WVT				IAmb	IAmb	03 14 11.1	
	comp=Z,31nm,1.6s						
WVT	Waverly	73.15	18	P	P	03 14 04.8	-0.2
	baz=198						
Q16A	Castle Valley	73.17	358	IAmb	IAmb	03 14 07.2	
	comp=Z,23nm,1.1s						
W52A	Murphy	73.27	21	IAmb	IAmb	03 14 16.8	
	comp=Z,28nm,1.2s						
Q24A	Divide	73.29	3	P	P	03 14 06.1	-0.1
	baz=184						
DZM	Mont Dzumac	73.30	254	*e*S	SKiKP	03 23 40.0	+1.7
	comp=Z,359nm,25.2s						
DZM	Mont Dzumac	73.30	254	*e*LR	LR	03 36 38.2	
	comp=Z,1μm,28.1s						
SRU	San Rafael Swe	73.35	359	IAmb	IAmb	03 14 07.7	
	comp=Z,22nm,1.1s						
RYN	Ryan	73.36	352	IAmb	IAmb	03 14 09.0	
	comp=Z,23nm,1.1s						
SPR3	Spring Creek 3	73.38	356	IAmb	IAmb	03 14 08.2	
	comp=Z,31nm,1.2s						
S39A	Bolivar	73.44	13	IAmb	IAmb	03 14 13.4	
	comp=Z,54nm,2.0s						
KSCO	Kaye Shedlock'	73.50	5	P	P	03 14 08.0	+0.8
	baz=186,SNR=5.9						
TMUT	Trail Mountain	73.55	358	IAmb	IAmb	03 14 11.1	
	comp=Z,21nm,1.1s						
CBKS	Cedar Bluff	73.58	8	P	P	03 14 07.9	+0.3
	baz=188						
P17A	Butcher Ranch,	73.72	359	IAmb	IAmb	03 14 10.1	
	comp=Z,20nm,1.1s						
YERR	Yerington	73.80	352	IAmb	IAmb	03 14 11.7	
	comp=Z,26nm,1.2s						
V51A	Loudon	73.80	21	IAmb	IAmb	03 14 15.4	
	comp=Z,27nm,1.2s						
TKL	Tuckaleechee C	73.84	21	IAmb	IAmb	03 14 14.7	
	comp=Z,34nm,1.4s						
EMB	Emerald Bay	73.89	351	IAmb	IAmb	03 14 12.2	
	comp=Z,28nm,1.2s						
PNTR	Pine Nut	73.94	352	IAmb	IAmb	03 14 12.4	
	comp=Z,21nm,1.1s						
RUBR	Rubicon Trail	73.97	351	IAmb	IAmb	03 14 12.7	
	comp=Z,38nm,1.2s						
U49A	Red Boiling Sp	74.06	20	IAmb	IAmb	03 14 16.1	
	comp=Z,36nm,1.5s						
ISCO	Idaho Springs	74.11	3	P	P	03 14 11.5	+0.5
	baz=183,SNR=5.3						
KMSC	Kings Mountain	74.13	24	IAmb	IAmb	03 14 17.1	
	comp=Z,56nm,1.6s						
KMSC	Kings Mountain	74.13	24	P	P	03 14 10.6	-0.2
	baz=204						
V53A	Saluda	74.14	22	IAmb	IAmb	03 14 18.0	
	comp=Z,43nm,1.4s						
T47A	Sharon Grove	74.15	18	IAmb	IAmb	03 14 21.3	
	comp=Z,29nm,1.1s						
SYO	Syowa Base	74.17	169	⇓*e*P	P	03 14 10.9	+0.2
SYO	Syowa Base	74.17	169	⇑*e*pP	pP	03 14 12.4	-0.6
SYO	Syowa Base	74.17	169	⇓*e*sP	sP	03 14 13.2	-0.7
MPK	Martis Peak	74.20	351	IAmb	IAmb	03 14 14.1	
	comp=Z,31nm,1.2s						
CCM	Cathedral Cave	74.20	15	P	P	03 14 10.5	-0.7
CCM				pmax	pmax		
	comp=Z,42nm,1.7s						
CCM	Cathedral Cave	74.20	15	P	P	03 14 10.5	-0.7
CCM				IAmb	IAmb	03 14 17.8	
	comp=Z,42nm,1.6s						
CCM	Cathedral Cave	74.20	15	P	P	03 14 11.4	+0.2
	baz=195						
KSU1	Kansas State U	74.26	10	P	P	03 14 11.7	+0.2
	baz=191						
S44A	Carbondale	74.29	16	IAmb	IAmb	03 14 22.3	
	comp=Z,25nm,1.1s						
SIUC	Southern Illin	74.32	16	IAmb	IAmb	03 14 19.0	
	comp=Z,57nm,1.6s						
O20A	White River Ci	74.37	1	IAmb	IAmb	03 14 24.0	
	comp=Z,31nm,1.4s						
O20A	White River Ci	74.37	1	P	P	03 14 12.4	0.0
	baz=181						
DUG	Dugway, Tooele	74.50	357	P	P	03 14 13.1	0.0
	baz=177,SNR=10						
PAHR	Pah Rah Range	74.53	352	IAmb	IAmb	03 14 15.7	
	comp=Z,23nm,1.2s						
TZTN	Tazewell	74.73	21	IAmb	IAmb	03 14 21.4	
	comp=Z,35nm,1.4s						
TZTN	Tazewell	74.73	21	P	P	03 14 14.0	-0.3
	baz=202						
T50A	Nancy	74.80	20	IAmb	IAmb	03 14 20.3	
	comp=Z,48nm,1.8s						
RDMU	Red Mountain	74.80	360	IAmb	IAmb	03 14 17.1	
	comp=Z,31nm,1.1s						
JLU	Jordanelle	74.86	358	IAmb	IAmb	03 14 26.9	
	comp=Z,43nm,1.5s						
BMN	Battle Mountai	75.02	354	IAmb	IAmb	03 14 18.3	
	comp=Z,41nm,1.1s						
N23A	Red Feather La	75.19	3	P	P	03 14 17.6	+0.4
	baz=183,SNR=7.3						
O03E	Paynes Creek	75.42	350	P	P	03 14 18.0	-0.3
	baz=170						
O02D	Mt. Diablo Mer	75.45	349	P	P	03 14 18.9	+0.4
	baz=169						
OGNE	Ogallala	75.47	6	P	P	03 14 19.0	+0.4
	baz=186						
WCI	Wyandotte Cave	75.53	19	P	P	03 14 18.9	0.0
	baz=199						
WDC	Whiskeytown Da	75.80	350	IAmb	IAmb	03 14 31.6	
	comp=Z,24nm,1.1s						
R49A	Shelbyville	75.89	19	P	P	03 14 20.3	-0.6
N02D	Trinity Center	76.21	350	P	P	03 14 23.4	+0.6
	baz=169,SNR=5.1						
BLA	Blacksburg	76.32	23	P	P	03 14 23.6	+0.2
	baz=204						
U59A	Littleton	76.44	26	P	P	03 14 23.1	-1.0
M02C	Callahan	76.64	350	P	P	03 14 25.6	+0.3
	baz=169						
MOD	Modoc Plateau	76.80	352	IAmb	IAmb	03 14 37.5	
	comp=Z,26nm,1.2s						
M04C	Macdoel	76.88	350	P	P	03 14 27.0	+0.3
	baz=170						
K22A	Casper	76.92	2	P	P	03 14 27.1	+0.2
	baz=182,SNR=7.9						
BW06	Boulder Array	76.99	360	IAmb	IAmb	03 14 28.6	
	comp=Z,30nm,1.2s						
BW06	Boulder Array	76.99	360	P	P	03 14 26.8	-0.7
	baz=180,SNR=23						
PD31	Pinedale Array	76.99	360	IAmb	IAmb	03 14 28.6	
	comp=Z,25nm,1.1s						
PDAR	Pinedale Array	76.99	360	P	P	03 14 26.7	-0.7
	comp=Z,16nm,1.0s,baz=172,slow=5.4,SNR=52						
PDAR				LR	LR	03 43 19.8	
	comp=Z,181nm,19.0s,baz=168,slow=32						
Q51A	Peebles	77.09	20	IAmb	IAmb	03 14 38.5	
	comp=Z,21nm,1.0s						
WVOR	Wild Horse Val	77.14	353	IAmb	IAmb	03 14 30.6	
	comp=Z,28nm,1.1s						
P49A	Miami Univ. Ec	77.18	19	P	P	03 14 28.4	+0.2
	baz=201						
L04D	Klamath Falls	77.38	350	P	P	03 14 29.3	-0.2
	baz=169						
REDW	Red Top Meadow	77.60	359	IAmb	IAmb	03 14 41.3	
	comp=Z,24nm,1.3s						
K05A	Summer Lake	77.69	351	IAmb	IAmb	03 14 34.5	
	comp=Z,40nm,1.2s						
SNOW	Snow King Moun	77.70	359	IAmb	IAmb	03 14 36.2	
	comp=Z,34nm,1.2s						
TPAW	Teton Pass	77.73	359	IAmb	IAmb	03 14 33.1	
	comp=Z,24nm,1.1s						
LOHW	Long Hollow	77.85	359	IAmb	IAmb	03 14 34.2	
	comp=Z,21nm,1.3s						
HLID	Hailey	77.93	356	P	P	03 14 32.7	+0.1
	baz=176,SNR=49						
MAW	Mawson	77.94	177	LR	LR	03 46 46.2	
	comp=Z,308nm,19.0s,baz=201,slow=34						
P52A	Corning	78.01	21	P	P	03 14 32.6	-0.2
	baz=203						
K02D	Willamette Mer	78.04	349	P	P	03 14 33.2	+0.1
	baz=168						
J05D	Fort Rock, OR	78.28	351	P	P	03 14 35.3	+0.8
	baz=170,SNR=10						
FLWY	Flagg Ranch	78.32	359	IAmb	IAmb	03 14 46.2	
	comp=Z,40nm,1.2s						
RSSD	Black Hills	78.49	4	P	P	03 14 35.1	-0.6
RSSD				pmax	pmax		
	comp=Z,20nm,1.3s						
RSSD	Black Hills	78.49	4	P	P	03 14 35.1	-0.6
RSSD	Black Hills	78.49	4	P	P	03 14 35.7	0.0
	baz=184						
PINE	Pine Mountain	78.74	351	IAmb	IAmb	03 14 39.5	
	comp=Z,35nm,1.1s						
ECSD	EROS Data Cent	78.81	9	IAmb	IAmb	03 14 43.1	
	comp=Z,42nm,1.8s						
ECSD	EROS Data Cent	78.81	9	P	P	03 14 36.8	-0.4
	baz=191,SNR=6.4						
O53A	New Philadelph	78.85	22	P	P	03 14 37.4	-0.1
	baz=203						
I07A	Izee	78.86	352	IAmb	IAmb	03 14 40.8	
	comp=Z,36nm,1.0s						
YMR	Madison River	78.91	359	IAmb	IAmb	03 14 50.1	
	comp=Z,36nm,1.4s						
I03D	Drain, OR	78.98	350	P	P	03 14 38.0	-0.1
	baz=168						
JFWS	Jewell Farm	79.08	14	P	P	03 14 39.7	+1.0
	baz=196						
YHL	Hebgen Lake	79.10	359	IAmb	IAmb	03 14 51.4	
	comp=Z,35nm,1.4s						
SUSD	Miller	79.23	8	P	P	03 14 39.5	0.0
	baz=189						
I05D	Terrebonne, OR	79.33	351	P	P	03 14 40.8	+0.7
	baz=170,SNR=6.3						
RLMT	Red Lodge	79.35	0	P	P	03 14 40.1	-0.3
	baz=180,SNR=10						
I37A	Lemond, Waseca	79.57	12	IAmb	IAmb	03 14 49.2	
	comp=Z,47nm,1.6s						
BOZ	Bozeman (W)	79.85	358	P	P	03 14 43.1	+0.1
	baz=178,SNR=7.7						
N54A	Moraine State	79.88	22	P	P	03 14 43.5	+0.4
	baz=204						
G08A	Pilot Rock	80.00	353	IAmb	IAmb	03 14 55.4	
	comp=Z,32nm,1.2s						
HOOD	Mount Hood Mea	80.34	351	IAmb	IAmb	03 14 56.5	
	comp=Z,30nm,1.1s						
M54A	Oil Creek Stat	80.47	22	P	P	03 14 46.6	+0.3
	baz=204						
F10A	Beach Ranch, E	80.52	354	IAmb	IAmb	03 14 57.8	
	comp=Z,35nm,1.2s						
SPMN	Marine on St.	80.84	12	P	P	03 14 48.6	+0.5
	baz=194						
F05D	White Salmon	80.87	351	P	P	03 14 48.7	+0.4
	baz=170						
LAO	LASA Array	80.96	2	IAmb	IAmb	03 14 50.9	
	comp=Z,37nm,1.3s						
LAO	LASA Array	80.96	2	P	P	03 14 49.3	+0.5
	baz=183,SNR=8.0						
F04A	Amboy	81.04	351	IAmb	IAmb	03 15 00.5	
	comp=Z,37nm,1.1s						
MSO	Missoula	81.17	357	P	P	03 14 50.5	+0.5
	baz=176						
E08A	Dider Farm, El	81.20	353	IAmb	IAmb	03 15 01.1	
	comp=Z,49nm,1.5s						
N59A	State Game Lan	81.23	25	P	P	03 14 50.7	+0.3
	baz=207						
F36A	Milaca	81.34	11	IAmb	IAmb	03 15 01.3	
	comp=Z,21nm,1.1s						
E07A	Sunnyside	81.35	353	IAmb	IAmb	03 15 02.3	
	comp=Z,25nm,1.2s						
D08A	Wollman Farm,	81.75	353	P	P	03 14 52.2	-0.7
JTMT	Jette	82.10	357	IAmb	IAmb	03 15 06.7	
	comp=Z,35nm,1.2s						
EGMT	Eagleton	82.25	360	IAmb	IAmb	03 14 58.2	
	comp=Z,20nm,1.2s						
EGMT	Eagleton	82.25	360	P	P	03 14 56.3	+0.7
	baz=180,SNR=5.4						
C09A	Chrisman Ranch	82.42	354	IAmb	IAmb	03 15 07.8	
	comp=Z,22nm,1.1s						
D03D	Eldon	82.70	351	P	P	03 14 58.8	+0.9
	baz=169						
KSCT	Kent School, K	82.75	26	P	P	03 14 58.3	0.0
NEW	Newport	82.79	355	P	P	03 14 58.9	+0.5
	baz=174						
DGMT	Dagmar	82.82	3	P	P	03 14 58.6	0.0
	baz=184						
B05A	Bryant	83.29	351	P	P	03 15 00.8	-0.1
	baz=170						
SADO	Sadowa	83.60	21	IAmb	IAmb	03 15 12.9	
	comp=Z,23nm,1.1s						
ULM	Lac du Bonnet	85.31	9	P	P	03 15 10.0	-1.1
	comp=Z,6.6nm,1.0s,baz=191,slow=8.9,SNR=4.1						
STKA	Stephens Creek	86.16	234	P	P	03 15 15.4	-0.7
	comp=Z,2.7nm,0.8s,baz=166,slow=9.1,SNR=3.4						
STKA				LR	LR	03 48 01.4	
	comp=Z,513nm,18.8s,baz=154,slow=32						
SCHQ	Schefferville	96.25	23	LR	LR	03 53 55.7	
	comp=Z,273nm,20.2s,baz=212,slow=32						
ASAR	Alice Springs	96.65	235	P	P	03 16 03.9	-1.4
	comp=Z,0.4nm,0.9s,baz=156,slow=4.7,SNR=2.2						
MA2	Magadan	124.00	323	*i* PKIKP	PKPdf	03 21 31.3	-0.9
TIXI	Tiksi	132.38	339	*i* PKIKP	PKPdf	03 21 46.3	-1.5
TIXI	Tiksi	132.38	339	PKPdf	PKPdf	03 21 48.0	+0.1
MOTA	Moosalm	134.27	55	*e*P	PKiKP	03 21 54.2	+0.5
	comp=Z,10nm,1.2s						
SQTA	Sankt Quirin	134.33	55	*e*P	PKiKP	03 21 54.6	+0.8
	comp=Z,7.4nm,1.1s						
CLL	Collm	135.76	50	*e*PKIKP	PKPdf	03 21 55.0	+0.2
CLL	Collm	135.76	50	*e*PKPdf	PKPdf	03 21 55.0	+0.2
GERES	GERESS Array B	136.13	53	PKP	PKiKP	03 21 57.0	-0.3
	comp=Z,0.4nm,0.7s,baz=270,slow=3.7,SNR=4.5						
GSI	Gunungsitoli	138.47	223	P	Pdif	03 19 02.1	-9.4
NJ2	Nanjing	140.01	280	*e*PKP	PKPdf	03 22 03.6	+0.4
HIA	Hailar	141.40	308	*i* PKIKP	PKPdf	03 22 04.6	-0.6
DRGR		142.17	56	⇓P	PKiKP	03 22 08.3	-1.4
DRGR		142.17	56	⇓PKIKP	PKiKP	03 22 08.3	-1.4
BOD	Bodaibo	143.03	322	*e*PKHKP	PKPpre	03 22 02.2	
BOD				pmax	pmax		
	comp=Z,23nm,1.8s						
VOIR		143.82	59	⇑P	PKiKP	03 22 13.1	-0.1
VOIR		143.82	59	⇑PKIKP	PKiKP	03 22 13.1	-0.1
BURAR	Bucovina Array	143.83	55	⇓P	PKPbc	03 22 08.0	+0.6
BURAR	Bucovina Array	143.83	55	⇓PKIKP	PKPbc	03 22 08.0	+0.6
BURAR	Bucovina Array	143.83	55		PKPbc	03 22 08.2	+0.8
NRIK	Noril'sk	143.97	350	PKP	PKPbc	03 22 07.4	+0.4
	comp=Z,3.4nm,0.8s,baz=100,slow=3.7,SNR=3.8						
NRIK	Noril'sk	143.97	350	*i* PKIKP	PKPab	03 22 06.0	-0.4
DOPR	Dopca	144.04	58	⇓P	PKiKP	03 22 11.8	-1.7
MNK	Minsk	144.28	43	*i* PKIKP	PKPab	03 22 08.2	+0.2
MNK				*i*		03 25 24.9	
MNK				*i* PPP	PPP	03 28 36.6	
MNK				*i*		03 29 14.9	
MNK				*i* SS	SS	03 44 10.6	-0.7
MNK				pmax	pmax		
	comp=Z,20nm,1.0s						
MNK				pmax	pmax		
	comp=N,17nm,1.0s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,137nm,21.0s						
MNK				MLR	MLR		
	comp=E,47nm,21.0s						
MNK				MLR	MLR		
	comp=N,236nm,21.0s						
MNK	Minsk	144.28	43	*i* PKP	PKPbc	03 22 08.2	-0.1
	comp=E,3.0nm,1.0s						
MNK				*i* PKP	PKPbc	03 22 08.2	-0.1
	comp=N,17nm,1.0s						
MNK				*i* PKP	PKPbc	03 22 08.2	-0.1
	comp=Z,20nm,1.0s,baz=287						
MNK				*i* PP	PP	03 25 24.9	-0.7
MNK				*i* SKP		03 26 29.1	
MNK				*i* PPP	PPP	03 28 36.6	
MNK				*i* SKS	SKSdf	03 29 14.9	-4.3
MNK				*i* SKKS		03 31 01.0	
MNK				*i* SS	SS	03 44 10.6	-0.6
MNK				*i* SSS	SSS	03 52 51.0	
MNK				*i* LR	LR	04 17 24.2	
MNK				*i* LRM	MLR	04 26 35.9	
	comp=Z,137nm,20.5s						
MNK				*i* LRM	MLR	04 26 38.2	
	comp=E,47nm,20.5s						
MNK				*i* LRM	MLR	04 26 40.4	
	comp=N,236nm,20.5s						
MLR	Muntele Rosu	144.45	58	⇑P	PKPab	03 22 08.8	-0.4
MLR	Muntele Rosu	144.45	58	⇑PKIKP	PKPab	03 22 08.8	-0.4
MLR	Muntele Rosu	144.45	58	PKPdf	PKPab	03 22 09.0	-0.2
TESR	Tescani	144.89	57	⇑P	PKPab	03 22 10.5	-0.1
PLOR	Plostina	144.93	58	⇓P	PKiKP	03 22 16.6	+1.2
PLOR	Plostina	144.93	58	⇓PKIKP	PKiKP	03 22 16.6	+1.2
BALB	Balikesir	145.70	69		PKPdf	03 22 12.7	-0.4
SORM	Soroca	145.88	54	⇓P	PKPdf	03 22 11.9	-1.1
SORM	Soroca	145.88	54	⇓PKP2	PKPdf	03 22 11.9	-1.1
VLDR	Vladesti	145.93	58	⇓P	PKiKP	03 22 19.2	+1.8
AKASG	Malin Array Be	146.00	49	PKPbc	PKPdf	03 22 11.8	-1.4
	comp=N,1.2nm,0.6s,baz=283,slow=3.1,SNR=8.5						
CFR	Carcaliu	146.00	59	⇓P	PKPdf	03 22 13.0	-0.4
CFR	Carcaliu	146.00	59	⇓PKP2	PKPdf	03 22 13.0	-0.4
KLMR	Klimovskoe	146.96	28	*e*PKP2	PKPdf	03 22 14.2	-0.2
KLMR				pmax	pmax		
	comp=Z,81nm,1.4s						
KLMR	Klimovskoe	146.96	28	*e*PKPdf	PKPdf	03 22 14.3	-0.2
KLMR				AMP		03 22 25.2	
	comp=Z,81nm,1.4s						
HHC	Hu-ho-hao-te	147.33	293	*e*P	PKPdf	03 22 15.2	-0.7
HHC	Hu-ho-hao-te	147.33	293	*e*PKPbc	PKPbc	03 22 18.6	+0.3
HHC				LR	LR		
	comp=Z,320nm,15.3s						
HHC				LR	LR		
	comp=Z,440nm,15.3s						
GYA	Guiyang	148.13	265	PKPbc	PKPdf	03 22 18.0	+0.3
BTO	Baotou	148.49	293	*e*PKPbc	PKPdf	03 22 17.2	-0.6
XAN	Xi'an	148.58	280	PKPbc	PKPbc	03 22 21.9	+0.1
PRGR	Permogore	148.58	23	*e*PKP2	PKiKP	03 22 21.7	-0.6
PRGR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
OBN	Obninsk	148.74	38	⇓*i*PKP2	PKiKP	03 22 22.2	-0.6
OBN				SSS	SSS	03 50 36.0	
OBN				pmax	pmax		
	comp=Z,23nm,1.1s						
OBN				MLR	MLR		
	comp=Z,216nm,20.0s						
OBN	Obninsk	148.74	38	PKPdf	PKPdf	03 22 17.8	+0.3
MOS	Moscow	148.98	37	*e*PKP2	PKPab	03 22 25.7	-0.4
MOS				pmax	pmax		
	comp=Z,71nm,1.6s						
ULN	Ulaanbaatar	149.93	307	PKHKP	PKPpre	03 22 19.7	
ULN	Ulaanbaatar	149.93	307	PKPdf	PKPdf	03 22 19.7	-0.3
BRTR	Keskin Array B	150.14	69	PKPbc	PKPbc	03 22 24.1	-1.6
	comp=Z,4.2nm,1.0s,baz=180,slow=2.5,SNR=9.1						
CMAR	Chiang Mai Arr	150.21	245	PKPbc	PKiKP	03 22 26.7	-0.3
	comp=Z,5.6nm,0.8s,baz=134,slow=0.7,SNR=3.5						
SONM	Songino Array	150.37	307	PKPbc	PKPbc	03 22 24.8	-1.1
	comp=Z,16nm,1.0s,baz=126,slow=1.7,SNR=44						
SONM	Songino Array	150.37	307	PKIKP	PKPdf	03 22 19.7	-0.9
SONM	Songino Array	150.37	307	PKPdf	PKPdf	03 22 19.7	-0.9
TLY	Talaya	150.87	316	*e*PKIKP	PKPbc	03 22 26.1	-0.7
TLY				pmax	pmax		
	comp=Z,47nm,1.0s						
TLY	Talaya	150.87	316	PKPdf	PKPdf	03 22 20.5	-0.6
LPSR	Galich'ya Gora	151.11	42	*e*PKIKP	PKPbc	03 22 26.7	-0.5
LPSR				pmax	pmax		
	comp=Z,20nm,1.3s						
ZAK	Zakamensk	151.57	314	*e*PKIKP	PKPbc	03 22 27.8	-0.8
ZAK				pmax	pmax		
	comp=Z,17nm,1.0s						
VSR	Storozhevoye	151.82	44	*e*PKIKP	PKPbc	03 22 28.7	-0.3
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORD	Divnogorie	152.00	45	*e*PKIKP	PKPbc	03 22 29.1	-0.2
VORD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CD2	Chengdu	152.05	272	PKPbc	PKPdf	03 22 23.3	-0.3
ANN	Anapa	152.60	58	*e*PKIKP	PKPdf	03 22 27.2	+3.3
ANN				pmax	pmax		
	comp=Z,106nm,1.3s						
LZH	Lanzhou	153.02	283	*e*P	PKPbc	03 22 31.8	-0.6
LZH				pP	PKPab	03 22 42.1	-1.7
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
VRH	Novokhopyorsk	153.28	43	*e*PKIKP	PKPbc	03 22 32.1	-0.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GTA	Gaotai	156.34	290	*e*PKP	PKPdf	03 22 31.7	+2.2
GTA				pPKP	sPKPdf	03 22 38.2	+5.4
GTA				sPKP		03 22 41.7	
GTA				PKPab	sPKPab	03 23 02.6	+1.6
KIV	Kislovodsk	156.46	58	*e*PKIKP	PKPdf	03 22 26.8	-2.7
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARU	Arti	156.63	17	*i* PKIKP	PKPdf	03 22 36.7	+7.6
ZALV	Zalesovo Beam	158.26	337	PKP	PKPdf	03 22 29.2	-2.0
	comp=Z,1.6nm,0.9s,baz=90,slow=1.5,SNR=5.2						
ZALV				PKPab	PKPab	03 23 05.0	-0.3
	comp=Z,4.8nm,1.0s,baz=0.0,slow=2.9,SNR=7.3						
HYB	Hyderabad	161.51	204	*i* PKP	PKPdf	03 22 40.5	+4.4
KURK	Kurchatov	162.90	343	PKIKP	PKPdf	03 22 35.3	-1.1
KURK	Kurchatov	162.90	343	PKPdf	PKPdf	03 22 35.2	-1.1
WMQ	Urumqi	163.97	310	*e*PKP	PKPdf	03 22 38.2	+0.4

WMQ				LR	LR		
	comp=Z,200nm,20.5s						
MKAR	**Makanchi Array**	**165.01**	**328**	PKP	**PKPdf**	**03 22 36.3**	**-2.3**
	comp=Z,1.3nm,1.0s,baz=72,slow=4.7,SNR=5.3						
KSH	**Kashi**	**173.55**	**321**	PKP	**PKPdf**	**03 22 40.9**	**-3.3**

TRN 03 03:08:58.2,10°.05N×60°.91W,h58^{km},MD3.5,Trinidad

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBH	**Brigand Hill**	**0.46**	**340**	*e*P	Pn	03 09 09.6	0.0
TPP	**Pointe-a-Pierr**	**0.59**	**297**	*e*P	Pn	03 09 12.0	+0.9
TRN	**Trinidad (W)**	**0.77**	**321**	*e*P	Pn	03 09 12.8	-0.4
TOSP	**Speyside**	**1.29**	**17**	*e*P	Pn	03 09 20.1	0.0
TOSP				*e*S	Sn	03 09 35.8	-0.6
GRFF	**Grenada Fort F**	**2.15**	**338**	*e*P	Pn	03 09 32.6	+0.9
GRFF				*e*S	Sn	03 09 57.7	+0.5
GRGR	**Grenville**	**2.19**	**341**	*e*P	Pn	03 09 32.6	+0.3
GRGR				*e*S	Sn	03 09 57.6	-0.8
GCMP	**Grenada, Carri**	**2.47**	**348**	*e*P	Pn	03 09 35.9	-0.2
GCMP				*e*S	Sn	03 10 03.7	-1.5
SVOC	**Richmond Hill,**	**3.10**	**354**	*e*P	Pn	03 09 45.3	+0.7
SVOC				*e*S	Sn	03 10 19.7	-0.8
SVB	**Belmont**	**3.22**	**354**	*e*P	Pn	03 09 46.9	+0.5
SVB				*e*S	Sn	03 10 22.7	-0.8
SVV	**Soufriere Volc**	**3.26**	**355**	*e*P	Pn	03 09 48.4	+1.5
SVV				*e*S	Sn	03 10 23.8	-0.8
MCLT	**Moule a Chique**	**3.64**	**360**	*e*P	Pn	03 09 53.2	+1.1
MCLT				*e*S	Sn	03 10 33.2	-0.6
SLBI	**Saint Lucia, B**	**3.95**	**359**	*e*P	Pn	03 09 56.5	+0.2
SLBI				*e*S	Sn	03 10 39.2	-2.2
MPOM	**Morne Pois Mar**	**4.37**	**1**	*e*P	Pn	03 10 02.2	+0.1
MPOM	**Morne Pois Mar**	**4.37**	**1**	*e*S	Sn	03 10 49.2	-2.5
DSLB	**Salisbury**	**5.38**	**355**	*e*P	Pn	03 10 16.7	+0.8
MAGL	**Barre de l'ile**	**5.88**	**357**	*e*P	Pn	03 10 23.6	+0.8
CBE	**Ff, Capester**	**6.02**	**354**	*e*P	Pn	03 10 25.4	+0.6
ANBD	**Bethesda, Anti**	**7.01**	**353**	*e*P	Pn	03 10 39.1	+0.9
BAUV	**El Baul**	**7.12**	**262**	*e*P	Pn	03 10 39.9	+0.1
BAUV	**El Baul**	**7.12**	**262**	*e*S	Sn	03 11 55.0	-4.3
ANWB	**Willy Bob**	**7.62**	**354**	*e*P	Pn	03 10 47.7	+1.0

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*KLM **03** 03:15:10,2°.72N×95°.35E,h10^{km},mb4.9*

*BJI **03** 03:15:12.9±0.0,2°.64N×95°.55E,h39^{km},mB4.9/24, mb5.0/47,Ms4.5/18,Ms7 4.2/20*

*IDC **03** 03:15:13.4±0.8,2°.76N×95°.67E,h21^{km}±3^{km},mb4.3/16, mb1 4.3/18,mb1mx4.0/43,mbtmp4.4/18,ML4.5/2,MS4.3/2, Ms1 4.3/2,ms1mx3.3/37,Error ellipse: s-maj=23.6km s-min=11.8km az=44.0*

*DJA **03** 03:15:14.7±0.7,3°N±3°×9°6E±°,h28^{km}±5^{km},M4.8/19, mB5.4/7,mb4.7/19,MLv4.8/13,Mw(mB)4.8/7*

*NEIC **03** 03:15:14.4±0.9,2°.70N±0°.07×95°.62E±0°.09,h29^{km}±3^{km}, mb4.7/36,Error ellipse: s-maj=14.0km s-min=7.7km az=61.0*

ISC 03 03:15:13.2±0.5,2°.71N±0°.05×95°.62E±0°.05,h23^{km}±3^{km}, h23^{km}:pP-P,n145,σ1^{s}.18/157,mb4.7/54,MS4.2/7,4C-1D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.76**	**113**	P	**Pb**	**03 15 28.1**	**+0.2**
SNSI				S	**Sn**	**03 15 39.4**	**-0.1**
TPTI		**1.65**	**71**	P	**Pn**	**03 15 40.6**	**-0.2**
TPTI				S	**Sn**	**03 16 02.0**	**+0.7**
KCSI	**Kotacane, Aceh**	**2.29**	**69**	P	**Pn**	**03 15 50.8**	**+1.1**
GSI	**Gunungsitoli**	**2.40**	**126**	P	**Pn**	**03 15 51.8**	**+0.6**
GSI				S	**Sn**	**03 16 20.2**	**+0.3**
GSI	**Gunungsitoli**	**2.40**	**126**	Pn	**Pn**	**03 15 51.2**	**0.0**
GSI				Sn	**Sn**	**03 16 18.6**	**-1.3**
GSI	**Gunungsitoli**	**2.40**	**126**	P	**Pn**	**03 15 51.7**	**+0.6**
LHMI	**Lhok Sumawe**	**2.83**	**28**	P	**Pn**	**03 15 58.1**	**+1.0**
LHMI	**Lhok Sumawe**	**2.83**	**28**		**Pn**	**03 15 57.5**	**+0.5**
LHMI	**Lhok Sumawe**	**2.83**	**28**	P	**Pn**	**03 15 58.7**	**+1.6**
TSI	**Tuntungan**	**3.04**	**75**	P	**Pn**	**03 16 01.6**	**+1.6**
RPSI	**Rantau Prapat**	**3.30**	**90**		**Pn**	**03 16 04.3**	**+0.8**
PSI	**Prapat**	**3.30**	**88**	Pn	**Pn**	**03 16 04.3**	**+0.6**
	17nm,0.3s,baz=289,slow=6.0,SNR=58						
PSI				Sn	**Sn**	**03 16 41.8**	**-0.4**
	8.3nm,0.3s,baz=86,slow=20,SNR=5.2						
MNSI	**Mandailing Nat**	**4.39**	**116**	P	**Pn**	**03 16 19.1**	**+0.6**
SISI	**Saibi**	**5.30**	**139**	P	**Pn**	**03 16 30.6**	**-0.5**
	0.5nm51nm,0.8s						
KULM	**Kulim**	**5.63**	**63**	P	**Pn**	**03 16 37.0**	**+1.4**
KULM	**Kulim**	**5.63**	**63**	Pn	**Pn**	**03 16 36.6**	**+0.9**
IPM	**Ipoh**	**5.67**	**72**	P	**Pn**	**03 16 37.0**	**+0.8**
IPM	**Ipoh**	**5.67**	**72**	Pn	**Pn**	**03 16 37.5**	**+1.3**
IPM	**Ipoh**	**5.67**	**72**	P	**Pn**	**03 16 37.5**	**+1.3**
PPI	**Padang Panjang**	**5.72**	**123**	P	**Pn**	**03 16 37.4**	**+0.6**
	828nm45nm,0.6s						
BKNI	**Bangkinang**	**5.91**	**114**	Pn	**Pn**	**03 16 40.8**	**+1.3**
PDSI	**Padang**	**6.03**	**127**	P	**Pn**	**03 16 41.5**	**+0.4**
	0.3nm3µm30nm,0.5s						
JRMM	**Jerantut**	**6.94**	**80**	P	**Pn**	**03 16 54.0**	**+0.4**
SRIT	**Nakonsritamara**	**7.06**	**34**	Pn	**Pn**	**03 16 56.2**	**+1.0**
KRJI	**Kerinci**	**7.54**	**129**	P	**Pn**	**03 17 01.8**	**-0.1**
	1.7nm158nm,0.6s						
MYKOM	**Kota Tinggi**	**8.27**	**96**	Pn	**Pn**	**03 17 12.9**	**+1.0**
MASI	**Maura Aman, Be**	**8.80**	**131**	P	**Pn**	**03 17 19.7**	**+0.4**
	66nm,0.8s						
MDSI	**Maura Dua**	**11.14**	**130**	P	**Pn**	**03 17 51.5**	**+0.2**
	1µm19nm,0.6s						
LWLI	**Liwa**	**11.40**	**132**	P	Pn	03 18 05.4	+10
KLSI		**11.70**	**129**	P	**Pn**	**03 17 59.1**	**+0.2**
	11nm,0.8s						
LEM	**Lembang**	**15.27**	**128**	LR	LR	03 25 20.8	
	comp=Z,325nm,20.5s,baz=285,slow=40						
PALK	**Pallekele**	**15.54**	**288**	Pn	**P**	**03 18 58.5**	**+3.2**
	0.4nm,0.3s,baz=211,slow=12,SNR=2.1						
PALK	**Pallekele**	**15.54**	**288**	Pn	**Pn**	**03 18 51.5**	**+0.4**
UBPT	**Khong Chiam**	**15.82**	**37**	Pn	**Pn**	**03 18 54.1**	**-0.6**
CM31	**Chiang Mai Arr**	**15.98**	**12**	Pn	**Pn**	**03 18 58.1**	**+1.3**
CMAR	**Chiang Mai Arr**	**15.98**	**12**	Pn	**Pn**	**03 18 56.4**	**-0.4**
	1.6nm,0.3s,baz=200,slow=11,SNR=73						
CMAR	**Chiang Mai Arr**	**15.98**	**12**	Pn	**Pn**	**03 18 57.0**	**+0.1**
CHTO	**Chiang Mai**	**16.33**	**11**	Pn	**Pn**	**03 19 00.3**	**-1.0**
CHTO	**Chiang Mai**	**16.33**	**11**	P	**P**	**03 19 03.1**	**-0.9**
SBUM	**Sibu**	**16.58**	**91**	Pn	**Pn**	**03 19 04.1**	**-0.4**
SLVN	**Son La**	**20.19**	**23**	P	**P**	**03 19 47.2**	**+0.6**
KKM	**Kota Kinabalu**	**20.79**	**80**		**P**	**03 19 52.7**	**-0.5**
KKM				IAmb	IAmb	03 19 56.3	
	comp=Z,40nm,0.7s						
KKM	**Kota Kinabalu**	**20.79**	**80**	P	Pn	03 19 54.7	-1.0
SPMM	**Sapulut**	**20.89**	**84**	P	**P**	**03 19 55.0**	**+0.8**
QIZ	**Qiongzhong**	**21.37**	**40**	P	**P**	**03 20 01.1**	**+1.8**
QIZ				LR	LR		
	comp=Z,460nm,15.3s						
QIZ				LR	LR		
	comp=Z,450nm,11.0s						
QIZ				LR	LR		
	comp=Z,410nm,11.2s						
HYB	**Hyderabad**	**22.24**	**312**	*i* P	**P**	**03 20 11.0**	**+2.3**
MYLDM	**Lahad Datu**	**22.95**	**83**	P	**P**	**03 20 15.8**	**-0.4**
MYLDM				IAmb	IAmb	03 20 25.2	
	comp=Z,41nm,1.2s						
SHL	**Shillong**	**23.01**	**351**	P	**P**	**03 20 12.6**	**-4.3**
SHL				IAmb	IAmb	03 20 18.4	
	comp=Z,24nm,0.7s						
KMI	**Kunming**	**23.32**	**16**	⇑P	**P**	**03 20 21.3**	**+1.3**
KMI				pP	sP	03 20 29.7	+0.3
KMI				S	**S**	**03 24 27.3**	**-4.4**
KMI				sS	pS	03 24 39.5	+0.3
KMI				pmax	pmax		
	comp=Z,32nm,0.9s						
KMI				LR	LR		
	comp=Z,500nm,14.7s						
KMI				LR	LR		
	comp=Z,460nm,17.7s						
KMI				LR	LR		
	comp=Z,620nm,14.7s						
MPSI	**Mapaga**	**24.38**	**95**	P	**P**	**03 20 30.0**	**0.0**
	comp=Z,8.1nm,1.0s						
TOLI2	**Tolitoli**	**25.19**	**93**	P	**P**	**03 20 36.8**	**-0.6**
TOLI2				IAmb	IAmb	03 20 41.8	
	comp=Z,9.2nm,0.6s						
TOLI2	**Tolitoli**	**25.19**	**93**	P	**P**	**03 20 37.8**	**+0.4**
H08S2	**Diego Garcia H**	**25.27**	**246**	T	T	03 46 43.5	
	baz=66						
H08S3	**Diego Garcia H**	**25.27**	**246**	T	T	03 46 42.8	
	baz=66						
ODAN	**Odare**	**25.28**	**343**	*e*P	**P**	**03 20 39.8**	**+1.5**
	comp=Z,78nm,0.8s						
H08S1	**Diego Carcia H**	**25.28**	**246**	T	T	03 46 44.4	
	baz=66						
KAPI	**Kappang**	**25.30**	**108**	P	**P**	**03 20 38.9**	**+0.5**
	comp=Z,6.1nm,0.4s,baz=304,slow=8.5,SNR=6.1						
KAPI	**Kappang**	**25.30**	**108**	P	**P**	**03 20 37.7**	**-0.7**
KAPI				IAmb	IAmb	03 20 46.8	
	comp=Z,16nm,0.8s						
KAPI	**Kappang**	**25.30**	**108**	P	**P**	**03 20 39.5**	**+1.1**
RAMN	**Ramite**	**25.61**	**341**	*e*P	**P**	**03 20 43.0**	**+1.7**
	comp=Z,54nm,0.6s						
TAPN	**Taplejung**	**25.64**	**344**	*e*P	**P**	**03 20 42.8**	**+1.1**
	comp=Z,81nm,0.8s						
BKSI	**Bulukumba**	**25.74**	**108**	P	**P**	**03 20 46.1**	**+3.7**
PKI	**Pulchoki**	**26.58**	**339**	*e*P	**P**	**03 20 52.4**	**+2.2**
	comp=Z,27nm,0.7s						
PKIN	**Phulchoki**	**26.59**	**339**	*e*P	**P**	**03 20 51.4**	**+1.2**
	comp=Z,23nm,0.6s						
DMN	**Daman**	**26.72**	**339**	*e*P	**P**	**03 20 53.3**	**+1.9**
	comp=Z,23nm,0.6s						
GUN	**Gumba**	**26.73**	**341**	*e*P	**P**	**03 20 52.9**	**+1.3**
	comp=Z,87nm,0.7s						
KKN	**Kakani**	**26.83**	**339**	*e*P	**P**	**03 20 53.3**	**+1.0**
LSA	**Lhasa**	**27.18**	**351**	P	**P**	**03 20 56.0**	**+0.3**
LSA				pmax	pmax		
	comp=Z,48nm,0.6s						
LSA	**Lhasa**	**27.18**	**351**	P	**P**	**03 20 55.2**	**-0.5**
LSA				IAmb	IAmb	03 20 59.3	
	comp=Z,17nm,0.7s						
GKN	**Gorkha**	**27.25**	**338**	*e*P	**P**	**03 20 57.2**	**+1.1**
	comp=Z,68nm,0.8s						
GTOI	**Gorontalo**	**27.45**	**94**	P	**P**	**03 20 56.5**	**-1.3**
	comp=Z,5.9nm,0.8s						
DANN	**Dangsing**	**27.90**	**337**	*e*P	**P**	**03 21 02.4**	**+0.4**
	comp=Z,40nm,0.6s						
PYUN	**Piuthan**	**27.98**	**336**	*e*P	**P**	**03 21 03.5**	**+0.8**
	comp=Z,113nm,1.4s						
KMSI	**Cibinong**	**28.42**	**94**	P	**P**	**03 21 08.7**	**+2.2**
CD2	**Chengdu**	**29.08**	**14**	P	**P**	**03 21 14.0**	**+1.8**
CD2				S	**S**	**03 26 05.9**	**+3.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,650nm,16.7s						
CD2				LR	LR		
	comp=Z,590nm,16.2s						
XAN	**Xi'an**	**33.55**	**20**	P	**P**	**03 21 50.3**	**-1.3**
XAN				pP	pP	03 21 58.8	+0.4
XAN				sP	sP	03 22 02.2	+1.0
XAN				pmax	pmax		
	comp=Z,57nm,0.7s						
XAN				pmax	pmax		
	comp=Z,220nm,3.8s						
LZH	**Lanzhou**	**34.07**	**12**	⇑P	**P**	**03 21 55.5**	**-0.7**
LZH				pP	sP	03 22 07.1	+1.3
LZH				sP	pP	03 22 12.8	+10
LZH				PP	**PnPn**	**03 23 07.7**	**-2.3**
LZH				pmax	pmax		
	comp=Z,34nm,1.3s						
LZH				LR	LR		
	comp=Z,460nm,12.4s						
LZH				LR	LR		
	comp=Z,470nm,13.0s						
LZH				LR	LR		
	comp=Z,230nm,15.7s						
SIJI	**Sorong**	**35.81**	**95**	P	**P**	**03 22 10.4**	**-0.9**
	comp=Z,3.9nm,0.4s,baz=178,slow=2.2,SNR=3.6						
NJ2	**Nanjing**	**36.46**	**34**	*e*P	**P**	**03 22 18.9**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
GTA	**Gaotai**	**36.73**	**5**	⇓P	**P**	**03 22 18.8**	**-0.2**
GTA				pP	pP	03 22 24.9	-0.9
GTA				pmax	pmax		
	comp=Z,14nm,1.0s						
GTA				pmax	pmax		
	comp=Z,80nm,4.5s						
GTA				LR	LR		
	comp=Z,160nm,16.7s						
GTA				LR	LR		
	comp=Z,210nm,16.7s						
GTA				LR	LR		
	comp=Z,140nm,16.7s						
FAKI	**Fak Fak**	**37.03**	**98**	P	**P**	**03 22 21.1**	**-0.7**
FAKI				IAmb	IAmb	03 22 21.8	
	comp=Z,9.5nm,0.8s						
NIL	**Nilore**	**37.21**	**328**	P	**P**	**03 22 22.9**	**-0.1**
H01W3	**Cape Leeuwin H**	**41.24**	**157**	T	T	04 06 34.4	
	baz=333,slow=76,SNR=214						
H01W2	**Cape Leeuwin H**	**41.25**	**157**	T	T	04 06 35.5	
	baz=333,slow=76,SNR=255						
H01W1	**Cape Leeuwin H**	**41.25**	**157**	T	T	04 06 33.2	
	baz=333,slow=76,SNR=167						
WMQ	**Urumqi**	**41.54**	**351**	*e*P	**P**	**03 22 59.9**	**+0.8**
WMQ				pP	pP	03 23 06.8	+0.8
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.5s						
BJT	**Baijiatuau**	**41.55**	**24**	P	**P**	**03 22 59.2**	**+0.1**
BJT				IAmb	IAmb	03 23 01.1	
	comp=Z,15nm,0.8s						
BJI	**Beijing**	**41.57**	**24**	P	**P**	**03 23 00.3**	**+1.0**
BJI				pmax	pmax		
	comp=Z,23nm,1.0s						
TARG	**Taragay, Kyrgy**	**42.02**	**340**	P	**P**	**03 23 01.9**	**-1.5**
TARG				IAmb	IAmb	03 23 06.4	
	comp=Z,6.6nm,0.7s						
DRK	**Karamyk**	**42.53**	**332**	P	**P**	**03 23 07.2**	**-0.3**
GAR	**Garm**	**42.85**	**331**	P	**P**	**03 23 09.6**	**-0.3**
GAR				IAmb	IAmb	03 23 10.8	
	comp=Z,13nm,0.9s						
UZB	**Uzynbulak**	**42.89**	**342**	*e*P	**P**	**03 23 09.6**	**-0.7**
	comp=Z,7.9nm,0.7s,baz=342						
SATY	**Saty**	**43.01**	**341**	*e*P	**P**	**03 23 10.8**	**-0.4**
	baz=341						
CHGR	**Chuyangaron**	**43.17**	**329**	P	**P**	**03 23 11.9**	**-0.5**
CHGR				IAmb	IAmb	03 23 20.8	
	comp=Z,13nm,0.7s						
BOOM	**Boomskoye usch**	**43.34**	**339**	P	**P**	**03 23 14.0**	**+0.1**
MDOK	**Medeo**	**43.55**	**340**	*e*P	**P**	**03 23 15.6**	**+0.1**
	baz=340						
AAK	**Ala-Archa**	**44.01**	**337**	P	**P**	**03 23 18.7**	**-0.6**
WB0	**Warramunga Arr**	**44.14**	**122**	P	**P**	**03 23 20.0**	**-0.4**
WB0				IAmb	IAmb	03 23 27.7	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	**44.17**	**122**	P	**P**	**03 23 20.8**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=299,slow=9.4,SNR=34						
WB2	**Warramunga Arr**	**44.18**	**122**	P	**P**	**03 23 20.4**	**-0.4**
WB2				IAmb	IAmb	03 23 23.5	
	comp=Z,16nm,1.5s						
KUU	**Kurty**	**44.43**	**340**	*e*P	**P**	**03 23 21.7**	**-0.7**
	baz=340						
SGDS	**Sogindy**	**44.66**	**338**	*e*P	**P**	**03 23 24.1**	**-0.2**
	baz=338						
TDK	**Taldyqorghan**	**44.76**	**343**	*e*P	**P**	**03 23 24.9**	**-0.1**
	comp=Z,12nm,0.5s,baz=342						
MK31	**Makanchi Array**	**45.42**	**347**	*i* PKP2	**P**	**03 23 30.4**	**+0.1**
MK31	**Makanchi Array**	**45.42**	**347**	P	**P**	**03 23 30.7**	**+0.4**
MKAR	**Makanchi Array**	**45.42**	**347**	P	**P**	**03 23 30.7**	**+0.4**
	comp=Z,19nm,0.7s,baz=158,slow=8.7,SNR=185						
MKAR				pP	**pP**	**03 23 37.2**	**-0.1**
	comp=Z,17nm,0.7s,baz=166,slow=8.6,SNR=21						
MKAR	**Makanchi Array**	**45.42**	**347**	*ce*PKP2	**P**	**03 23 30.7**	**+0.4**
MKAR	**Makanchi Array**	**45.42**	**347**	pmax	pmax		
	comp=Z,19nm,0.7s						
IUG	**Iuzhnay**	**45.46**	**333**	*e*P	**P**	**03 23 31.0**	**+0.2**
	baz=333						
MAKZ	**Makanchi**	**45.50**	**347**	P	**P**	**03 23 30.0**	**-0.9**
ZSN	**Zaisan**	**45.53**	**350**	*e*P	**P**	**03 23 31.1**	**-0.1**
	comp=Z,13nm,0.9s,baz=350						
ZSN	**Zaisan**	**45.53**	**350**	*e*PKP2	**P**	**03 23 31.0**	**-0.1**
ZSN	**Zaisan**	**45.53**	**350**	pmax	pmax		
	comp=Z,13nm,0.9s						
KSRS	**Korea Array**	**45.54**	**37**	P	**P**	**03 23 30.9**	**-0.4**
	comp=Z,3.9nm,0.6s,baz=219,slow=9.0,SNR=10						
KSRS				pP	**pP**	**03 23 37.0**	**-1.3**
	comp=Z,5.0nm,0.9s,baz=232,slow=8.9,SNR=5.5						
ASAR	**Alice Springs**	**45.56**	**127**	P	**P**	**03 23 31.8**	**0.0**
	comp=Z,1.6nm,0.8s,baz=298,slow=8.0,SNR=23						
ASAR	**Alice Springs**	**45.56**	**127**	P	**P**	**03 23 31.4**	**-0.4**
SONM	**Songino Array**	**45.91**	**10**	P	**P**	**03 23 34.1**	**-0.1**
	comp=Z,5.6nm,0.6s,baz=191,slow=9.0,SNR=21						
SONM				pP	**pP**	**03 23 40.6**	**-0.6**
	comp=Z,11nm,0.8s,baz=190,slow=9.4,SNR=7.5						
SONM				PcP	**PcP**	**03 25 11.5**	**+0.4**
	comp=Z,3.6nm,0.6s,baz=195,slow=3.5,SNR=10						
SONM	**Songino Array**	**45.91**	**10**	P	**P**	**03 23 33.9**	**-0.3**
SONM				IAmb	IAmb	03 23 41.4	
	comp=Z,11nm,0.7s						
KKAR	**Karatay Array**	**46.02**	**334**	P	**P**	**03 23 35.8**	**+0.7**
CN2	**Changchun**	**48.71**	**29**	*e*P	**P**	**03 23 56.2**	**+0.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
GEYT	**Alibeck**	**49.05**	**320**	P	**P**	**03 23 59.7**	**+0.9**
	comp=Z,4.0nm,0.6s,baz=185,slow=14,SNR=5.9						
GEYT				pP	**pP**	**03 24 06.5**	**+0.7**
	comp=Z,5.0nm,0.7s,baz=189,slow=9.8,SNR=4.8						
SEM	**Semipalatinsk**	**49.28**	**347**	*e*P	**P**	**03 23 59.6**	**-0.8**
	baz=347						
KURK	**Kurchatov**	**49.95**	**346**	P	**P**	**03 24 05.0**	**-0.3**
BRZS	**Berezniki**	**50.97**	**341**	*e*P	**P**	**03 24 13.0**	**-0.1**
	baz=341						
ZAA0	**Zalesovo Array**	**51.84**	**352**	P	**P**	**03 24 19.6**	**+0.2**
ZALV	**Zalesovo Beam**	**51.84**	**352**	P	**P**	**03 24 19.7**	**+0.2**
	comp=Z,19nm,0.6s,baz=181,slow=7.0,SNR=61						
ZALV				pP	**pP**	**03 24 26.6**	**+0.1**
	comp=Z,9.0nm,0.5s,baz=180,slow=7.6,SNR=10						
ZALV	**Zalesovo Beam**	**51.84**	**352**	P	**P**	**03 24 19.6**	**+0.1**
USRK	**Ussuriysk Ar.**	**52.33**	**33**	P	**P**	**03 24 22.4**	**-0.9**
	comp=Z,2.4nm,0.7s,baz=234,slow=7.5,SNR=6.9						
BRVK	**Borovoye**	**54.38**	**341**	P	**P**	**03 24 38.2**	**-0.1**
ABKAR	**Akbulak array**	**55.45**	**332**	P	**P**	**03 24 45.9**	**-0.2**
ABKAR	**Akbulak array**	**55.45**	**332**	P	**P**	**03 24 45.9**	**-0.2**
ABKAR				IAmb	IAmb	03 24 47.4	
	comp=Z,13nm,1.0s						
STKA	**Stephens Creek**	**55.53**	**132**	P	**P**	**03 24 48.1**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=315,slow=16,SNR=1.6						
STKA				pP	**pP**	**03 24 54.5**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=329,slow=8.7,SNR=3.1						
ARU	**Arti**	**61.19**	**338**	P	**P**	**03 25 25.9**	**-0.1**
NRIK	**Noril'sk**	**66.74**	**357**	P	**P**	**03 26 02.2**	**-0.1**
	comp=Z,2.2nm,0.5s,baz=166,slow=7.9,SNR=4.0						
NRIK	**Noril'sk**	**66.74**	**357**	P	**P**	**03 26 02.1**	**-0.1**
NRIK				IAmb	IAmb	03 26 04.2	
	comp=Z,3.2nm,0.8s						
TIXI	**Tiksi**	**71.99**	**11**	P	**P**	**03 26 33.8**	**-0.9**
TIXI				IAmb	IAmb	03 26 41.3	
	comp=Z,6.2nm,0.8s						
AKASG	**Malin Array Be**	**73.11**	**322**	P	**P**	**03 26 41.4**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=83,slow=4.8,SNR=4.2						
AKASG				pP	**pP**	**03 26 47.6**	**-1.5**
	comp=Z,1.3nm,0.6s,baz=90,slow=5.0,SNR=4.3						
MNK	**Minsk**	**75.00**	**326**	*i* P	**P**	**03 26 50.5**	**-2.3**
	comp=E,3.0nm,1.0s						
MNK				*i* P	**P**	**03 26 50.5**	**-2.3**
	comp=N,14nm,1.0s						
MNK				*i* P	**P**	**03 26 50.5**	**-2.3**
	comp=Z,8.0nm,0.9s,baz=107						
MNK				*i* PcP	**sP**	**03 27 03.8**	**+1.0**
MNK				*i* PP	**PP**	**03 29 38.5**	**-2.2**
MNK				*i* PPP	PPP	03 31 24.6	
MNK				*i* S	**S**	**03 36 26.9**	**-2.3**
MNK				*i* SS	**SS**	**03 41 17.1**	**-1.0**
MNK				*i* SSS	SSS	03 44 39.9	
MNK				*i* LQ	LQ	03 50 49.1	
MNK				*i* LR	LR	03 54 30.1	
MNK				*i* LRM	MLR	04 02 11.1	
	comp=Z,131nm,19.5s						
MNK				*i* LRM	MLR	04 02 14.1	
	comp=N,131nm,19.7s						
MNK				*i* LRM	MLR	04 02 50.4	
	comp=E,38nm,19.6s						
NACGM	**Naroch**	**75.72**	**326**	*i* P	**P**	**03 26 55.9**	**-1.0**
FINES	**FINESS Array B**	**77.94**	**333**	P	**P**	**03 27 09.3**	**0.0**
	comp=E,2.3nm,0.7s,baz=116,slow=8.7,SNR=6.0						
FINES				pP	**pP**	**03 27 16.2**	**-0.4**
	comp=E,2.1nm,0.7s,baz=107,slow=5.6,SNR=2.4						
ARCES	**ARCESS Array B**	**80.59**	**340**	P	**P**	**03 27 23.9**	**+0.3**
	comp=E,1.8nm,0.6s,baz=68,slow=4.2,SNR=10						
ARCES				pP	**PcP**	**03 27 30.5**	**0.0**
	comp=E,1.8nm,0.6s,baz=91,slow=5.0,SNR=2.0						
SYO	**Syowa Base**	**80.95**	**198**	⇑*e*X	**P**	**03 27 23.4**	**-2.1**
GERES	**GERESS Array B**	**82.65**	**319**	P	**P**	**03 27 35.9**	**+0.8**
	comp=E,0.6nm,0.6s,baz=96,slow=6.7,SNR=5.9						
GERES				pP	**pP**	**03 27 42.1**	**-0.3**
	comp=E,1.0nm,0.8s,baz=99,slow=4.3,SNR=5.4						
TORD	**Torodi Ar. Bea**	**93.21**	**283**	LR	LR	04 07 48.6	
	comp=E,364nm,18.2s,baz=275,slow=34						
TXAR	**Lajitas Array**	**143.16**	**29**	PKP	PKPbc	03 34 43.7	+0.4
	comp=E,0.4nm,0.7s,baz=228,slow=1.5,SNR=5.2						

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*IDC **03** 03:17:33.5±0.8,2°.72N×95°.65E,h20^{km}±3^{km},mb4.3/18, mb1 4.3/20,mb1mx4.0/41,mbtmp4.4/20,ML4.2/2,MS3.8/5, Ms1 3.8/5,ms1mx3.4/36,Error ellipse: s-maj=23.8km s-min=11.4km az=42.0*

*BJI **03** 03:17:33.1±0.0,2°.64N×95°.58E,h37^{km},mB5.0/19, mb4.9/43,Ms4.6/11,Ms7 4.3/11*

*NEIC **03** 03:17:33.5±1.8,2°.62N±0°.04×95°.5E±0°.1,h29^{km}±7^{km}, mb4.8/27,Error ellipse: s-maj=15.3km s-min=3.0km az=71.0*

*DJA **03** 03:17:35.5±1.0,3°N±3°×9°6E±°,h26^{km}±8^{km},M4.6/13, mB5.2/1,mb4.5/13,MLv4.6/11,Mw(mB)4.6/1*

ISC 03 03:17:33.7±0.5,2°.71N±0°.05×95°.60E±0°.05,h25^{km},n106, σ1^{s}.41/107,mb4.8/42,MS4.1/8,3C-1D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.78**	**113**	P	**Pb**	**03 17 48.7**	**0.0**
TPTI		**1.67**	**71**	P	**Pn**	**03 18 00.5**	**-0.8**
KCSI	**Kotacane, Aceh**	**2.31**	**70**	P	**Pn**	**03 18 10.5**	**+0.3**
GSI	**Gunungsitoli**	**2.42**	**125**	P	**Pn**	**03 18 12.0**	**+0.3**
GSI	**Gunungsitoli**	**2.42**	**125**	Pn	**Pn**	**03 18 11.6**	**-0.1**
GSI				Sn	**Sn**	**03 18 38.5**	**-1.9**
LHMI	**Lhok Sumawe**	**2.84**	**28**	P	**Pn**	**03 18 19.7**	**+2.3**
LHMI	**Lhok Sumawe**	**2.84**	**28**	Pn	**Pn**	**03 18 18.6**	**+1.2**
TSI	**Tuntungan**	**3.06**	**75**	P	**Pn**	**03 18 19.4**	**-1.1**
RPSI	**Rantau Prapat**	**3.32**	**90**		**Sn**	**03 19 04.9**	**+2.2**
PSI	**Prapat**	**3.32**	**88**	Pn	**Pn**	**03 18 25.5**	**+1.3**
	13nm,0.3s,baz=309,slow=8.2,SNR=6.0						
PSI				Sn	**Sn**	**03 19 04.9**	**+2.0**
	8.2nm,0.3s,baz=155,slow=19,SNR=3.2						
PSI				LR	LR	03 20 01.3	
	comp=Z,1µm,18.6s,baz=264,slow=45						
MNSI	**Mandailing Nat**	**4.41**	**116**	P	**Pn**	**03 18 39.7**	**+0.7**
SISI	**Saibi**	**5.31**	**139**	P	**Pn**	**03 18 52.2**	**+0.7**
	0.5nm76nm,0.9s						
KULM	**Kulim**	**5.65**	**63**	Pn	**Pn**	**03 18 57.2**	**+1.1**
IPM	**Ipoh**	**5.69**	**72**	Pn	**Pn**	**03 18 58.4**	**+1.7**
PPI	**Padang Panjang**	**5.73**	**123**	P	**Pn**	**03 18 59.2**	**+1.9**
MDSI	**Maura Dua**	**11.16**	**130**	P	Pn	03 20 24.3	+13
KSM	**Kuching**	**14.75**	**94**	P	**P**	**03 21 09.7**	**+3.1**
PALK	**Pallekele**	**15.52**	**288**	Pn	**P**	**03 21 16.7**	**+1.5**
	0.4nm,0.3s,baz=219,slow=10,SNR=4.3						
PALK	**Pallekele**	**15.52**	**288**	P	**Pn**	**03 21 10.9**	**-0.2**
UBPT	**Khong Chiam**	**15.83**	**37**	P	**Pn**	**03 21 15.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**15.99**	**12**	Pn	**P**	**03 21 19.1**	**-1.2**
	0.5nm,0.3s,baz=201,slow=11,SNR=17						
CMAR	**Chiang Mai Arr**	**15.99**	**12**	Pn	**Pn**	**03 21 17.3**	**+0.3**
STKI	**Sintang**	**16.08**	**99**	P	**Pn**	**03 21 18.4**	**+0.1**
CHTO	**Chiang Mai**	**16.33**	**11**	Pn	**Pn**	**03 21 20.6**	**-0.9**
CHTO	**Chiang Mai**	**16.33**	**11**	P	**P**	**03 21 23.4**	**-0.8**
SBUM	**Sibu**	**16.60**	**91**	Pn	**Pn**	**03 21 23.3**	**-1.6**
BBKI	**Banjar Baru**	**20.18**	**108**	P	Pn	03 22 25.0	+16
SLVN	**Son La**	**20.20**	**23**		**P**	**03 22 06.6**	**-0.2**
KKM	**Kota Kinabalu**	**20.81**	**80**		**P**	**03 22 14.0**	**+0.4**
KKM				IAmb	IAmb	03 22 16.7	
	comp=Z,54nm,0.9s						
KKM	**Kota Kinabalu**	**20.81**	**80**	P	**P**	**03 22 14.4**	**+0.8**
MYLDM	**Lahad Datu**	**22.97**	**83**	P	**P**	**03 22 35.4**	**-1.2**
MYLDM				IAmb	IAmb	03 22 49.8	
	comp=Z,38nm,0.8s						
SHL	**Shillong**	**23.00**	**351**	P	**P**	**03 22 34.3**	**-2.7**
SHL				IAmb	IAmb	03 22 38.7	
	comp=Z,22nm,0.8s						
KMI	**Kunming**	**23.32**	**17**	⇓P	**P**	**03 22 41.8**	**+1.5**
KMI				sP	sP	03 22 57.2	+6.8
KMI				S	**S**	**03 26 54.6**	**+2.9**
KMI				pmax	pmax		
	comp=Z,29nm,1.2s						
KMI				LR	LR		
	comp=Z,650nm,14.6s						
KMI				LR	LR		
	comp=Z,350nm,17.7s						
KMI				LR	LR		
	comp=Z,730nm,14.6s						
TOLI2	**Tolitoli**	**25.21**	**93**	P	**P**	**03 22 57.7**	**0.0**
TOLI2				IAmb	IAmb	03 23 14.8	
	comp=Z,18nm,1.1s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TOLI2	Tolitoli	25.21	93	P	P	03 23 03.5	+5.7
H08S2	Diego Garcia H	25.25	246	T	T	03 49 06.9	
	baz=66,slow=75,SNR=9636						
H08S3	Diego Garcia H	25.25	246	T	T	03 49 07.9	
	baz=66,slow=75						
H08S1	Diego Carcia H	25.27	246	T	T	03 49 09.0	
	baz=66,slow=75,SNR=3367						
KAPI	Kappang	25.32	108	P	P	03 22 59.3	+0.6
	comp=Z,18nm,0.9s,baz=302,slow=4.4,SNR=7.4						
KAPI				pP	pP	03 23 06.0	0.0
	comp=Z,14nm,0.8s,baz=284,slow=15,SNR=5.1						
KAPI	Kappang	25.32	108	P	P	03 22 58.5	-0.2
KAPI				IAmb	IAmb	03 23 00.2	
	comp=Z,23nm,0.9s						
BNSI	Bone	25.48	106	P	P	03 23 00.2	0.0
	comp=Z,28nm,1.1s						
BKSI	Bulukumba	25.76	108	P	P	03 23 02.5	-0.2
LSA	Lhasa	27.17	351	P	P	03 23 16.2	+0.4
LSA				IAmb	IAmb	03 23 19.6	
	comp=Z,15nm,0.6s						
GTOI	Gorontalo	27.47	94	P	pP	03 23 28.7	+3.1
WHN	Wuhan	32.88	31	⇑P	P	03 24 05.9	+0.1
XAN	Xi'an	33.55	20	P	P	03 24 10.7	-1.0
XAN				pP	pP	03 24 19.4	+0.2
XAN				pmax	pmax		
	comp=Z,53nm,0.9s						
LZH	Lanzhou	34.07	12	⇑P	P	03 24 15.8	-0.6
LZH				pP	sP	03 24 26.0	-0.9
LZH				pmax	pmax		
	comp=Z,31nm,1.3s						
SIJI	Sorong	35.83	95	P	P	03 24 30.5	-1.2
	comp=Z,4.2nm,0.3s,baz=329,slow=7.5,SNR=4.3						
FITZ	Fitzroy Crossi	36.10	126	P	P	03 24 33.0	-0.9
	comp=Z,2.6nm,0.8s,baz=333,slow=11						
NJ2	Nanjing	36.47	34	eP	P	03 24 40.0	+3.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
GTA	Gaotai	36.73	5	⇑P	P	03 24 38.5	-0.6
GTA				pP	pP	03 24 45.5	-1.1
GTA				sP	sP	03 24 49.4	-0.3
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA				pmax	pmax		
	comp=Z,180nm,4.6s						
GTA				LR	LR		
	comp=Z,160nm,16.4s						
GTA				LR	LR		
	comp=Z,160nm,16.0s						
GTA				LR	LR		
	comp=Z,190nm,14.9s						
BTO	Baotou	39.91	17	eP	P	03 25 06.7	+0.8
BTO				S	S	03 31 11.0	+1.5
BTO				LR	LR		
	comp=Z,2μm,23.1s						
BTO				LR	LR		
	comp=Z,2μm,21.6s						
HHC	Hu-ho-hao-te	40.61	19	eP	P	03 25 12.7	+1.1
HHC				S	S	03 31 13.7	-6.3
HHC				pmax	pmax		
	comp=Z,28nm,0.9s						
HHC				pmax	pmax		
	comp=Z,220nm,5.3s						
HHC				LR	LR		
	comp=Z,570nm,14.5s						
HHC				LR	LR		
	comp=Z,410nm,14.5s						
HHC				LR	LR		
	comp=Z,440nm,15.3s						
H01W3	Cape Leeuwin H	41.25	157	T	T	04 08 55.4	
	baz=333,slow=76,SNR=47						
H01W2	Cape Leeuwin H	41.26	157	T	T	04 08 56.3	
	baz=333,slow=76,SNR=45						
H01W1	Cape Leeuwin H	41.26	157	T	T	04 09 01.7	
	baz=333,slow=76,SNR=38						
WMQ	Urumqi	41.53	351	eP	P	03 25 20.9	+1.7
WMQ				pP	pP	03 25 27.1	+0.4
WMQ				sP	sP	03 25 33.6	+3.8
WMQ				pmax	pmax		
	comp=Z,26nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.7s						
BJT	Baijiatuau	41.55	24	P	P	03 25 18.9	-0.4
BJT				IAmb	IAmb	03 25 21.5	
	comp=Z,19nm,0.9s						
BJI	Beijing	41.58	24	P	P	03 25 20.7	+1.3
BJI				pmax	pmax		
	comp=Z,28nm,1.1s						
TARG	Taragay, Kyrgy	42.01	340	P	P	03 25 22.3	-1.2
TARG				IAmb	IAmb	03 25 33.2	
	comp=Z,9.5nm,0.8s						
DRK	Karamyk	42.52	332	P	P	03 25 27.2	-0.3
UZB	Uzynbulak	42.89	342	eP	P	03 25 30.2	-0.1
	baz=342						
SATY	Saty	43.00	341	eP	P	03 25 31.3	+0.1
	baz=341						
BOOM	Boomskoye usch	43.33	339	P	P	03 25 32.7	-1.3
BOOM				IAmb	IAmb	03 25 44.5	
	comp=Z,8.9nm,0.9s						
MDOK	Medeo	43.54	340	i P	P	03 25 35.4	-0.2
	baz=340						
WRA	Warramunga Arr	44.19	122	P	P	03 25 40.9	-0.1
	comp=Z,5.0nm,0.8s,baz=300,slow=9.1,SNR=8.0						
KUU	Kurty	44.42	340	eP	P	03 25 41.3	-1.3
	comp=Z,12nm,1.3s,baz=340						
SGDS	Sogindy	44.65	338	eP	P	03 25 44.5	+0.1
	baz=338						
MK31	Makanchi Array	45.41	347	P	P	03 25 49.9	-0.4
MKAR	Makanchi Array	45.41	347	P	P	03 25 50.9	+0.6
	comp=Z,21nm,0.9s,baz=161,slow=7.7,SNR=24						
MKAR				pP	pP	03 25 57.5	-0.3
	comp=Z,18nm,0.8s,baz=167,slow=8.3,SNR=21						
MKAR				LR	LR	03 48 00.8	
	comp=Z,103nm,18.0s,baz=162,slow=40						
MKAR	Makanchi Array	45.41	347	P	P	03 25 49.6	-0.7
IUG	Iuzhnay	45.45	333	eP	P	03 25 51.7	+0.8
	baz=333						
MAKZ	Makanchi	45.49	347	P	P	03 25 50.8	-0.2
MAKZ				IAmb	IAmb	03 25 58.8	
	comp=Z,14nm,0.8s						
ZSN	Zaisan	45.52	350	eP	P	03 25 51.0	-0.2
	comp=Z,17nm,0.9s,baz=350						
KSRS	Korea Array	45.55	37	P	P	03 25 51.5	-0.1
	comp=Z,4.6nm,0.8s,baz=228,slow=9.5,SNR=6.9						
KSRS				pP	pP	03 25 56.8	-2.4
	comp=Z,4.6nm,0.8s,baz=229,slow=9.8,SNR=4.7						
ASAR	Alice Springs	45.57	127	P	P	03 25 52.0	0.0
	comp=Z,1.9nm,0.7s,baz=298,slow=8.2,SNR=10						
ASAR	Alice Springs	45.57	127	P	P	03 25 50.1	-1.9
SONM	Songino Array	45.91	10	P	P	03 25 54.4	+0.1
	comp=Z,6.8nm,0.9s,baz=194,slow=8.7,SNR=10						
SONM				pP	pP	03 26 00.6	-1.4
	comp=Z,11nm,0.9s,baz=188,slow=8.6,SNR=13						
SONM				PcP	PcP	03 27 32.2	+1.0
	comp=Z,3.2nm,0.7s,baz=187,slow=4.0,SNR=8.0						
SONM				LR	LR	03 46 30.3	
	comp=Z,192nm,20.8s,baz=182,slow=38						
SONM	Songino Array	45.91	10	P	P	03 25 53.7	-0.7
SONM				IAmb	IAmb	03 26 01.8	
	comp=Z,12nm,0.8s						
KKAR	Karatay Array	46.01	334	P	P	03 25 53.9	-1.2
CN2	Changchun	48.72	29	eP	P	03 26 16.7	+0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GEYT	Alibeck	49.04	320	P	P	03 26 20.3	+1.5
	comp=Z,3.7nm,0.7s,baz=180,slow=13,SNR=4.7						
GEYT				pP	pP	03 26 26.9	+0.5
	comp=Z,4.0nm,0.7s,baz=142,slow=5.6,SNR=4.0						
SEM	Semipalatinsk	49.27	347	eP	P	03 26 19.9	-0.7
	baz=347						
KURK	Kurchatov	49.94	346	P	P	03 26 24.6	-0.8
BRZS	Berezniki	50.96	341	eP	P	03 26 32.6	-0.5
	comp=Z,15nm,1.8s,baz=341						
ZAA0	Zalesovo Array	51.84	352	P	P	03 26 39.6	0.0
ZALV	Zalesovo Beam	51.84	352	P	P	03 26 40.0	+0.5
	comp=Z,14nm,0.7s,baz=182,slow=7.0,SNR=21						
ZALV	Zalesovo Beam	51.84	352	P	P	03 26 38.8	-0.8
USRK	Ussuriysk Ar.	52.34	33	P	P	03 26 43.8	+0.3
	comp=Z,2.5nm,0.7s,baz=240,slow=3.8,SNR=5.6						
BRVK	Borovoye	54.38	341	P	P	03 26 58.3	0.0
BRVK				IAmb	IAmb	03 27 06.4	
	comp=Z,9.8nm,0.8s						
ABKAR	Akbulak array	55.44	332	P	P	03 27 05.8	-0.3
ABKAR	Akbulak array	55.44	332	P	P	03 27 06.6	+0.5
ABKAR				IAmb	IAmb	03 27 19.7	
	comp=Z,19nm,1.1s						
STKA	Stephens Creek	55.55	132	P	P	03 27 07.8	+0.6
	comp=Z,3.1nm,0.9s,baz=300,slow=7.1,SNR=3.5						
ARU	Arti	61.18	338	P	P	03 27 44.7	-1.4
ARU				IAmb	IAmb	03 27 53.6	
	comp=Z,10.0nm,0.9s						
NRIK	Noril'sk	66.74	357	P	P	03 28 22.1	-0.3
	comp=Z,1.6nm,0.3s,baz=172,slow=6.4,SNR=5.0						
NRIK	Noril'sk	66.74	357	P	P	03 28 21.3	-1.1
NRIK				IAmb	IAmb	03 28 23.5	
	comp=Z,5.8nm,1.0s						
KLMR	Klimovskoe	71.71	335	eP	P	03 28 53.0	-0.4
KLMR				AMP		03 29 08.7	
	comp=Z,16nm,1.2s						
TIXI	Tiksi	71.99	11	P	P	03 28 53.5	-1.3
TIXI				IAmb	IAmb	03 29 01.6	
	comp=Z,8.2nm,0.9s						
IDI	Anoyia	72.73	306	LR	LR	04 04 24.4	
	comp=Z,24nm,19.7s,baz=110,slow=39						
AKASG	Malin Array Be	73.09	322	P	P	03 29 01.4	-0.4
	comp=Z,0.8nm,0.6s,baz=89,slow=4.9,SNR=2.7						
AKASG				pP	pP	03 29 08.1	-1.6
	comp=Z,0.9nm,0.6s,baz=92,slow=4.7,SNR=3.9						
BOSA	Boshof	74.16	239	LR	LR	03 56 01.5	
	comp=Z,187nm,20.3s,baz=214,slow=31						
FINES	FINESS Array B	77.93	333	P	P	03 29 29.4	0.0
	comp=Z,2.9nm,0.8s,baz=131,slow=6.3,SNR=1.8						
FINES				pP	pP	03 29 36.4	-0.9
	comp=Z,2.4nm,0.7s,baz=127,slow=5.0,SNR=2.1						
ARCES	ARCESS Array B	80.58	340	P	P	03 29 44.1	+0.4
	comp=Z,2.8nm,0.8s,baz=81,slow=7.5,SNR=4.6						
GERES	GERESS Array B	82.63	319	P	P	03 29 56.2	+1.1
	comp=Z,1.0nm,0.9s,baz=98,slow=5.5,SNR=4.4						
TORD	Torodi Ar. Bea	93.19	283	P	P	03 30 48.6	+1.9
	comp=Z,1.2nm,1.2s,baz=101,slow=5.3,SNR=1.9						
TXAR	Lajitas Array	143.17	29	PKP	PKPbc	03 37 04.2	+0.8
	comp=Z,0.3nm,0.7s,baz=258,slow=1.2,SNR=4.2						

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*INET **03** 03:19:15.8, 9°.68N×84°.14W, h45^{km}, MW2.6*

UPA 03 03:19:16.1±1.1**, 9°.62N×84°.16W, h27**^{km}±8^{km}**, MW4.0, 2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HDC	Heredia	0.38	7	⇓iP	Pn	03 19 25.5	-0.4
HDC				eS	Sb	03 19 31.1	+0.7
BATAN	Batan	0.91	59	eP	Pn	03 19 31.6	-1.5
BATAN				eS	Sb	03 19 44.7	-0.3
DRK0	Durika	0.97	111	eP	Pn	03 19 33.0	-1.2
DRK0				eS	Sb	03 19 46.8	-0.3
JTS	Las Juntas de	1.02	311	⇓iP	Pn	03 19 33.5	-1.2
JTS				eS	Sn	03 19 47.4	-0.7
CDITO	Canoas	1.65	129	eP	Pn	03 19 43.3	0.0
BRU2	Volcan	1.67	119	eP	Pn	03 19 43.2	-0.5
BRU2				eS	Sn	03 20 04.1	-0.3
BCO2	Palmira	1.85	119	eP	Pn	03 19 45.8	-0.4
BCO2				eS	Sn	03 20 08.5	-0.3
PTPM	Petroterminale	1.90	138	eP	Pn	03 19 46.6	-0.1
PTPM				eS	Sn	03 20 09.9	+0.1
DVD	David	2.06	125	eP	Pn	03 19 49.6	+0.7
DVD				eS	Sn	03 20 14.0	+0.2

GCMT 03 03:39:07.0±0.5**, 34°.52S**±0°.05×**109°.10W**±0°.04**, h28**^{km}±1^{km}**, MW4.9**/61**, Moment Tensor Solution. s34,c38; s61,c77; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** M$_{rr}$-2.97±.21; M$_{\theta\theta}$0.77±.13; M$_{\phi\phi}$2.21±.14; M$_{r\theta}$0.87±.24; M$_{\theta\phi}$-0.55±.11; M$_{\phi r}$-0.43±.23; **Best double couple:** M$_0$2.83200×10^{16} **NP1:**ϕ_s170.00000°, δ39.00000°, λ-74.00000°. **NP2:**ϕ_s330.00000°, δ53.00000°, λ-102.00000°. **Principal axes:** T 2.4840, Plg7.0000°, Azm69.0000°; N 0.7020, Plg10.0000°, Azm337.0000°; P -3.1800, Plg78.0000°, Azm195.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAOE	Nuku Hiva Isla	38.25	305	eLR	LR	03 56 44.0	
	comp=Z,270nm,25.8s						
MEH	Mehetia	38.42	285	eT	T	04 26 46.3	
	16nm,0.2s						
PPT2	Papeete2	39.78	285	eLR	LR	03 57 21.2	
	comp=Z,522nm,25.0s,baz=109						

IDC 03 03:48:24.5±1.4**, 23°.50S×64°.64W, h0**^{km}**, mb3.6**/3**, mb1 3.8**/7**, mb1mx3.6**/30**, mbtmp3.6**/7**, ML3.3**/4 **Error ellipse: s-maj=35.3km s-min=17.9km az=30.0, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	4.03	282	Pn	Pn	03 49 29.5	+1.7
	0.4nm,0.3s,baz=89,slow=8.1,SNR=6.2						
CPUP	Villa Florida	7.21	115	Pn	Pn	03 50 10.9	-0.3
	0.5nm,0.3s,baz=286,slow=14,SNR=8.5						
CPUP				Pg	Pb	03 50 35.9	+5.2
	0.9nm,0.3s,baz=286,slow=14,SNR=5.5						
CPUP				Lg	Lg	03 52 14.7	
	1.8nm,0.3s,baz=222,slow=2.7,SNR=2.9						
LPAZ	La Paz	7.89	335	Pn	Pn	03 50 22.4	+1.3
	0.1nm,0.3s,baz=168,slow=14,SNR=1.4						
LPAZ				Sn	Sn	03 51 50.7	-0.7
	0.3nm,0.3s,baz=247,slow=13,SNR=1.8						
SIV	San Ignacio	8.19	25	Pn	Pn	03 50 26.7	+2.0
	1.4nm,0.3s,baz=228,slow=8.3,SNR=37						
SIV				Sn	Sn	03 51 56.8	-1.2
	1.4nm,0.3s,baz=288,slow=20,SNR=1.7						
TXAR	Lajitas Array	64.56	322	P	P	03 59 03.0	-0.8
	0.2nm,0.7s,baz=158,slow=9.7,SNR=2.3						
TORD	Torodi Ar. Bea	74.38	68	P	P	04 00 04.8	+0.1
	2.8nm,0.7s,baz=254,slow=5.9,SNR=19						
PDAR	Pinedale Array	77.85	328	P	P	04 00 23.8	-0.3
	0.1nm,0.5s,baz=134,slow=5.2,SNR=1.6						
MKAR	Makanchi Array	144.75	41	PKP	PKPab	04 08 02.2	0.0
	1.0nm,0.8s,baz=286,slow=4.9,SNR=3.8						

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*NEIC **03** 03:56:47.1±1.7, 30°.19S±0°.04×72°.17W±0°.05, h10^{km}±1^{km}, mb4.6/12, Mwr4.2/34, ML4.4(GUC), Error ellipse: s-maj=8.0km s-min=6.5km az=252.0*

*IDC **03** 03:56:47.5±1.0, 30°.19S×71°.94W, h0^{km}, mb4.1/7, mb1 4.2/10, mb1mx4.1/28, mbtmp4.0/10, ML3.9/3, MS3.4/2, Ms1 3.4/2, ms1mx3.0/21, Error ellipse: s-maj=29.4km s-min=26.5km az=36.0*

*NEIC **03** 03:56:47.6, 30°.18S×72°.21W, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.87; M$_{\theta\theta}$0.23; M$_{\phi\phi}$-2.10; M$_{r\theta}$-0.06; M$_{\theta\phi}$-0.56; M$_{\phi r}$-0.41; Fault plane solution: M$_0$2.11000×10^{15} NP1:ϕ_s191.61000°, δ50.76000°, λ88.22000°. NP2:ϕ_s14.42000°, δ39.27000°, λ92.18000°. Principal axes: T 1.9107, Plg84.0000°, Azm89.0000°; N 0.3572, Plg1.0000°, Azm193.0000°; P -2.2679, Plg6.0000°, Azm283.0000°;*

*GUC **03** 03:56:48.5±0.6, 30°.25S×72°.17W, h35^{km}±2^{km}, ML4.4*

ISC 03 03:56:48.3±0.9**, 30°.20S**±0°.03×**72°.14W**±0°.08**, h20**^{km}±7^{km}**, n82,** σ**1^{s}46**/94**, mb4.5**/12**, 4C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.64	137	eP	Pn	03 57 00.8	-1.5
CO06				i S	Sn	03 57 09.2	-2.7
CO06	Fray Jorge	0.64	137	Pn	Pn	03 57 01.0	-1.3
CO06					Sn	03 57 07.7	-4.2
CO05	La Serena	0.83	70	eP	Pn	03 57 04.2	-0.7
CO05				i S	Sb	03 57 16.1	+1.2
CO05				IAML		03 57 20.3	
	comp=E,14μm,0.5s						
CO05	La Serena	0.83	70		Pn	03 57 04.3	-0.7
CO05					Sn	03 57 14.7	-1.9
GO04	Tololo Observa	1.16	89	eP	Pn	03 57 09.5	-0.2
GO04				i S	Sb	03 57 25.7	+1.1
GO04				IAML		03 57 31.2	
	comp=N,27μm,0.4s						
GO04	Tololo Observa	1.16	89		Pn	03 57 08.5	-1.2
GO04				Sn	Sb	03 57 25.4	+0.8
LCO	Las Campanas	1.73	47	eP	Pn	03 57 17.6	+0.2
LCO				i S	Sb	03 57 41.8	+0.9
LCO	Las Campanas	1.73	47		Pn	03 57 17.4	-0.1
LCO				Sn	Sn	03 57 37.3	-1.8
AC04	Llanos de Chal	2.20	25	⇓iP	Pn	03 57 23.2	-0.6
AC04				i S	Sn	03 57 49.1	-1.3
AC04				IAML		03 58 07.0	
	comp=E,703nm,0.2s						
AC04	Llanos de Chal	2.20	25		Pn	03 57 22.9	-0.8
AC04				Sn	Sn	03 57 48.9	-1.4
VA06	Catapilco	2.46	163	eP	Pn	03 57 27.6	+0.3
VA06				i S	Sn	03 57 57.0	+0.3
VA06				IAML		03 58 13.3	
	comp=N,2μm,0.5s						
VA03	San Esteban	2.89	152	i S	Sn	03 58 08.4	+0.8
VA03	San Esteban	2.89	152		Pn	03 57 33.3	0.0
GO03	Copiap	3.09	33	eP	Pn	03 57 36.2	+0.1
GO03				IAML		03 58 34.2	
	comp=E,1μm,0.9s						
GO03	Copiap	3.09	33		Pn	03 57 36.2	+0.1
MT02	Curacav	3.16	165	eP	Pn	03 57 37.1	+0.1
MT02				i S	Sn	03 58 13.4	-0.8
MT02				IAML		03 58 39.0	
	comp=E,465nm,0.3s						
MT02	Curacav	3.16	165		Pn	03 57 36.7	-0.3
PEL	Peldehue	3.18	157	eP	Pn	03 57 37.8	+0.5
PEL				i S	Sn	03 58 15.3	+0.6
PEL				IAML		03 58 35.5	
	comp=E,863nm,0.5s						
PEL	Peldehue	3.18	157		Pn	03 57 36.0	-1.3
MT05	Renca	3.40	160	eP	Pn	03 57 40.9	+0.7
MT05				i S	Sn	03 58 20.4	+0.4
MT05				IAML		03 58 37.0	
	comp=E,1μm,0.4s						
MT05	Renca	3.40	160		Pn	03 57 40.4	+0.1
VA05	Santo Domingo	3.47	173	eP	Pn	03 57 40.7	-0.5
VA05				IAML		03 58 45.2	
	comp=E,733nm,0.5s						
VA05	Santo Domingo	3.47	173		Pn	03 57 40.9	-0.3
FCH	Farellones	3.49	154	⇑iP	Pn	03 57 43.5	+1.7
FCH				i S	Sn	03 58 24.0	+1.3
FCH				IAML		03 58 47.0	
	comp=E,450nm,0.6s						
MT09	Talagante	3.69	165	eP	Pn	03 57 45.1	+0.7
MT09				i S	Sn	03 58 27.3	-0.1
MT09				IAML		03 58 57.5	
	comp=N,453nm,0.4s						
MT09	Talagante	3.69	165		Pn	03 57 44.8	+0.3
MT01	Popeta	3.73	169	⇑iP	Pn	03 57 45.0	+0.2
MT01	Popeta	3.73	169		Pn	03 57 44.8	+0.1
LMEL	Las Melosas	3.99	156	eP	Pn	03 57 50.2	+1.7
BO04	La Punta	3.99	161	⇑iP	Pn	03 57 49.5	+1.1
BO01	Tunca	4.27	168	eP	Pn	03 57 52.4	+0.2
BO01	Tunca	4.27	168		Pn	03 57 52.2	0.0
AC02	Maricunga	4.28	39		Pn	03 57 53.6	+0.8
BO02	Sierra Bellavi	4.72	166	eP	Pn	03 57 59.1	+0.6
BO02	Sierra Bellavi	4.72	166		Pn	03 57 58.6	+0.2
GO05	Huala	4.80	178	⇑iP	Pn	03 57 58.5	-0.9
GO05	Huala	4.80	178		Pn	03 57 58.6	-0.9
PB14	IPOC Station P	5.77	16	Pn	Pn	03 58 12.4	-0.6
VA04	Juan Fernndez	6.64	237	Pn	Pn	03 58 24.0	-0.7
LVC	Limon Verde	8.10	22	Pn	Pn	03 58 43.6	-1.5
	comp=N,0.5nm,0.3s,baz=191,slow=5.2,SNR=3.4						
LVC				Sn	Sn	04 00 12.9	-3.4
	comp=N,0.8nm,0.3s,baz=221,slow=19,SNR=1.3						
LVC	Limon Verde	8.10	22		Pn	03 58 43.3	-1.9
LC01	Cunco	8.68	179	Pn	Pn	03 58 51.5	-1.2
PLCA	Paso Flores	10.59	173	Pn	Pn	03 59 20.2	+1.3
	comp=N,0.8nm,0.3s,baz=338,slow=11,SNR=29						
PLCA				LR	LR	04 03 46.3	
	comp=N,140nm,19.5s,baz=348,slow=40						
PLCA	Paso Flores	10.59	173	Pn	Pn	03 59 19.1	+0.2
TRQA	Tornquist	11.49	136		Pn	03 59 30.6	-0.7
LPAZ	La Paz	14.33	16	Pn	Pn	04 00 09.9	-0.8
	comp=N,0.1nm,0.3s,baz=164,slow=11,SNR=1.9						
LPAZ	La Paz	14.33	16	Pn	Pn	04 00 10.1	-0.7
COYC	Coyhaique	15.34	180		P	04 00 24.1	-4.1
COYC				IAmb	IAmb	04 00 31.6	
	comp=Z,19nm,0.9s						
PLTB	Pedras Altas	15.98	100	Pn	P	04 00 33.0	-2.4
SIV	San Ignacio	17.41	38	P	P	04 00 52.7	+1.3
	comp=Z,0.3nm,0.3s,baz=228,slow=10,SNR=5.9						
NNA	Nana	18.64	345	LR	LR	04 07 01.5	
	comp=Z,146nm,18.7s,baz=74,slow=33						
PTLB	Pontes e Lacer	18.93	42	P	Pn	04 01 08.5	-0.3
SAML	Samuel	22.75	23	P	P	04 01 49.3	0.0
BDFB	Brasilia	26.45	62	P	P	04 02 24.6	+0.4
	comp=Z,3.6nm,0.8s,baz=231,slow=10,SNR=5.4						
BDFB	Brasilia	26.45	62	P	P	04 02 24.1	-0.2
OTAV	Otavalo	30.86	348	P	P	04 03 02.9	-1.0
OTAV				IAmb	IAmb	04 03 19.6	
	comp=Z,8.4nm,1.1s						
VNA3	Neumayer Olymp	52.91	159	P	P	04 06 04.5	+2.0
VNA1	Neumayer--Stat	53.20	158	P	P	04 06 06.8	+2.1
VNA2	Neumayer--Watz	53.55	158	P	P	04 06 09.1	+1.8
	baz=285,slow=7.9						
SNAA	Sanae	55.14	159	P	P	04 06 20.5	+1.7
SNAA	Sanae	55.14	159	P	P	04 06 19.8	+0.9
QSPA	South Pole Qui	60.02	180	P	P	04 06 54.0	+0.6
QSPA				IAmb	IAmb	04 06 56.7	
	comp=Z,9.2nm,1.2s						
TXAR	Lajitas Array	66.40	330	P	P	04 07 39.0	+3.0
	comp=Z,0.4nm,0.7s,baz=152,slow=8.1,SNR=5.1						
TXAR	Lajitas Array	66.40	330	P	P	04 07 36.2	+0.2
LIC	Lamto	73.69	73	eP	P	04 08 22.1	+1.0
	comp=Z,30nm,1.2s						
TIC	Toumodi	73.93	72	eP	P	04 08 24.5	+2.0
KIC	Kosan Boka	74.00	73	eP	P	04 08 24.3	+1.4
	comp=Z,14nm,0.9s						
DBIC	Dimbokro	74.08	72	P	P	04 08 25.2	+1.9
	comp=Z,8.4nm,0.8s,baz=233,slow=4.9,SNR=13						
DBIC	Dimbokro	74.08	72	P	P	04 08 23.5	+0.1
ECSD	EROS Data Cent	76.92	342	P	P	04 08 40.1	+1.2
ECSD				IAmb	IAmb	04 08 44.8	
	comp=Z,3.7nm,0.8s						
KOWA	Kowa	79.17	66	P	P	04 08 54.1	+2.0
	comp=Z,2.9nm,0.8s,baz=254,slow=5.1,SNR=11						
KOWA	Kowa	79.17	66	P	P	04 08 53.3	+1.2
KOWA				IAmb	IAmb	04 08 54.7	
	comp=Z,5.7nm,1.1s						
PDAR	Pinedale Array	80.35	333	P	P	04 09 02.0	+3.9
	comp=Z,0.3nm,0.5s,baz=140,slow=8.5,SNR=4.1						
PDAR	Pinedale Array	80.35	333	P	P	04 08 57.2	-0.9
NVAR	Mina Array Bea	80.73	325	P	P	04 09 03.2	+2.9
	comp=Z,0.2nm,0.5s,baz=156,slow=7.4,SNR=1.5						
TORD	Torodi Ar. Bea	83.02	70	P	P	04 09 14.4	+1.9
	comp=Z,4.7nm,0.7s,baz=260,slow=4.7,SNR=28						
TORD	Torodi Ar. Bea	83.02	70	P	P	04 09 12.9	+0.3
TORD				IAmb	IAmb	04 09 15.0	
	comp=Z,4.0nm,0.8s						
WRA	Warramunga Arr	124.00	210	PKP	PKiKP	04 15 46.7	+0.6
	comp=Z,0.3nm,0.5s,baz=160,slow=1.6,SNR=2.1						
H11S2	WAKE ISLAND Hy	125.65	272	T	T	06 34 37.8	
	baz=115,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	125.66	272	T	T	06 34 37.8	
	baz=115,slow=75,SNR=11						
H11S3	WAKE ISLAND Hy	125.66	272	T	T	06 34 35.3	
	baz=115,slow=75,SNR=9.1						
ZALV	Zalesovo Beam	151.00	29	PKPbc	PKPab	04 16 41.7	-5.1
	comp=Z,3.1nm,0.7s,baz=307,slow=3.5,SNR=12						

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*RSPR **03** 04:02:16.8, 19°.58N×65°.32W, h68^{km}±5^{km}, MD3.7/13*

*NEIC **03** 04:02:16.1±1.2, 19°.58N±0°.09×65°.25W±0°.08, h38^{km}±46^{km}, Error ellipse: s-maj=15.0km s-min=8.4km az=217.0*

ISC 03 04:02:17.0±2.4**, 19°.6N**±0°.1×**65°.32W**±0°.06**, h50**^{km}**, n49,** σ**0^{s}60**/53**, 10C-3D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	1.24	178	⇑eP	Pn	04 02 38.1	+0.1
CUPR	Culebra, Puert	1.24	178	eS	Sn	04 02 54.1	+0.6
CUPR	Culebra, Puert	1.24	178		Pn	04 02 38.1	+0.1
CUPR	Culebra, Puert	1.24	178	IAML		04 02 53.5	
	comp=N,571nm,0.9s						
CUPR	Culebra, Puert	1.24	178		Sn	04 02 54.1	+0.6
STVI	Saint Thomas	1.24	164	⇑eP	Pn	04 02 38.0	0.0
STVI	Saint Thomas	1.24	164	eS	Sn	04 02 54.0	+0.3
STVI	Saint Thomas	1.24	164		Pn	04 02 38.0	0.0
STVI					Sn	04 02 54.0	+0.3
STVI	Saint Thomas	1.24	164	IAML		04 03 06.6	
	comp=N,651nm,1.0s						
TBVI	Tortola	1.31	149	⇑eP	Pn	04 02 38.7	-0.2
TBVI	Tortola	1.31	149	eS	Sn	04 02 55.9	+0.6
CBYP	Canovanas	1.37	202	Pn	Pn	04 02 38.0	-1.8
CBYP				IAML		04 03 03.5	
	comp=E,1μm,0.2s						
GCPR	Guaynabo City	1.43	210	⇑eP	Pn	04 02 40.2	-0.4
GCPR	Guaynabo City	1.43	210	eS	Sn	04 02 59.0	+0.7

GCPR	Guaynabo City	1.43	210		Pn	04 02 40.2	-0.4
GCPR					Sn	04 02 59.0	+0.7
EMPR	Esperanza - Ma	1.56	227	⇑eP	Pn	04 02 41.9	-0.5
EMPR	Esperanza - Ma	1.56	227	eS	Sn	04 03 02.4	+0.9
EMPR	Esperanza - Ma	1.56	227		Pn	04 02 41.9	-0.5
EMPR					Sn	04 03 02.4	+0.9
EMPR	Esperanza - Ma	1.56	227	IAML		04 03 32.7	
	comp=N,674nm,1.2s						
SJG	San Juan	1.63	209		Pn	04 02 42.5	-0.8
SJG				IAML		04 03 09.6	
	comp=N,311nm,0.7s						
SJG				IAML		04 03 22.2	
	comp=N,329nm,0.8s						
PDPR	Patillas Dam,	1.66	204		Pn	04 02 42.2	-1.5
IGPR	InterUniversit	1.74	205	⇓eP	Pn	04 02 44.5	-0.3
IGPR	InterUniversit	1.74	205	eS	Sn	04 03 06.4	+0.5
IGPR	InterUniversit	1.74	205		Sn	04 03 06.4	+0.5
AOPR	Arecibo Observ	1.81	229	⇓eP	Pn	04 02 45.6	-0.2
AOPR	Arecibo Observ	1.81	229	eS	Sn	04 03 08.1	+0.5
AOPR	Arecibo Observ	1.81	229		Pn	04 02 45.6	-0.2
AOPR					Sn	04 03 08.1	+0.5
CDVI	St. Croix	1.86	163	⇑eP	Pn	04 02 45.2	-1.3
CDVI	St. Croix	1.86	163	eS	Sn	04 03 09.7	+0.8
CDVI	St. Croix	1.86	163		Pn	04 02 45.2	-1.3
CDVI					Sn	04 03 09.7	+0.8
CELP	Cerrillos	1.89	219	⇑eP	Pn	04 02 46.9	0.0
CELP	Cerrillos	1.89	219	eS	Sn	04 03 09.7	+0.1
CELP	Cerrillos	1.89	219		Pn	04 02 46.9	0.0
CELP					Sn	04 03 09.7	+0.1
CELP	Cerrillos	1.89	219	IAML		04 03 20.7	
	comp=N,355nm,1.0s						
OBIP	Obispado Ponce	1.93	219		Pn	04 02 47.4	0.0
AGPR	Aguadilla, PR	2.01	238	⇑eP	Pn	04 02 47.9	-0.5
AGPR	Aguadilla, PR	2.01	238	eS	Sn	04 03 12.7	+0.3
AGPR	Aguadilla, PR	2.01	238		Pn	04 02 47.9	-0.5
AGPR					Sn	04 03 12.7	+0.3
AGPR	Aguadilla, PR	2.01	238	IAML		04 03 32.9	
	comp=E,316nm,1.2s						
AGPR				IAML		04 03 39.6	
	comp=N,238nm,1.8s						
PRSN	Puerto Rico Se	2.18	233		Pn	04 02 50.7	-0.1
PRSN				IAML		04 03 28.5	
	comp=E,441nm,0.3s						
PRSN				IAML		04 03 32.2	
	comp=N,464nm,0.4s						
MLPR	Magueyes Islan	2.27	226	⇑eP	Pn	04 02 52.0	-0.1
MLPR	Magueyes Islan	2.27	226	eS	Sn	04 03 18.6	-0.2
MLPR	Magueyes Islan	2.27	226		Pn	04 02 52.0	-0.1
MLPR					Sn	04 03 18.6	-0.2
CRPR	Cabo Rojo, PR	2.29	228	⇓eP	Pn	04 02 52.1	-0.2
CRPR	Cabo Rojo, PR	2.29	228	eS	Sn	04 03 19.2	0.0
CRPR	Cabo Rojo, PR	2.29	228		Pn	04 02 52.1	-0.2
CRPR					Sn	04 03 19.2	0.0
CRPR	Cabo Rojo, PR	2.29	228	IAML		04 03 39.4	
	comp=N,195nm,1.4s						
CRPR				IAML		04 04 01.5	
	comp=E,156nm,1.2s						
IDE	Isla Desecheo	2.34	241	⇑eP	Pn	04 02 52.8	-0.3
IDE				eS	Sn	04 03 21.0	+0.3
SDDR	Presa de Saban	5.66	265		Pn	04 03 38.6	-0.1

IDC 03 04:09:56.2±5.9,7°.85S×147°.78E,h65km±42km,mb3.3/3,mb1 3.5/4,mb1mx3.2/43,mbtmp3.6/4,ML3.9/1,Error ellipse: s-maj=58.9km s-min=44.2km az=104.0

ISC 03 04:09:53.7±2.9,7°.7S±0°.2×147°.8E±0°.5,h50km,n6,σ0s.44/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	1.81	199	P	Pn	04 10 23.0	+0.5
	66nm,0.3s,baz=30,slow=8.4,SNR=52						
PMG				S	Sn	04 10 43.9	-0.4
	197nm,0.3s,baz=40,slow=18,SNR=40						
WRA	Warramunga Arr	17.83	226	P	P	04 13 58.2	-0.3
	0.4nm,0.3s,baz=45,slow=12,SNR=18						
ASAR	Alice Springs	20.72	218	P	P	04 14 30.4	+0.3
	0.4nm,0.3s,baz=54,slow=9.4,SNR=6.8						
FITZ	Fitzroy Crossi	23.89	242	P	P	04 15 03.1	+0.2
	1.3nm,0.5s,baz=48,slow=11,SNR=6.8						
STKA	Stephens Creek	24.75	193	P	P	04 15 10.3	-0.3
	2.3nm,0.8s,baz=346,slow=6.8,SNR=3.5						
TORD	Torodi Ar. Bea	146.21	282	PKPbc	PKPab	04 29 30.2	-0.2
	0.4nm,0.6s,baz=63,slow=2.2,SNR=2.3						

ANF 03 04:20:14.9±0.4,32°.76N×115°.43W,h22km±3km,ML2.4/12, Error ellipse: s-maj=3.7km s-min=2.2km az=4.0

ECX 03 04:20:16.4±0.7,32°.81N×115°.46W,h15km±2km,MD2.3, ML2.5

ISC 03 04:20:15.3±0.9,32°.80N±0°.02×115°.44W±0°.02,h18km±2km, n37,σ0s.55/60,7C-4D,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DREC	Desert Rsrch C	0.01	336	⇓iP	Pg	04 20 18.3	-0.2
DREC				eS	Sg	04 20 21.0	+0.4
ICBC	Inst. de Cultu	0.14	190	eP	Pg	04 20 19.6	+0.2
ICBC				i S	Sg	04 20 22.8	+0.6
UABX	UABC, Campus M	0.17	179	eP	Pg	04 20 20.1	+0.3
UABX				i S	Sg	04 20 23.7	+0.9
POT2	Potabilizadora	0.18	164	⇑eP	Pg	04 20 20.4	+0.5
POT2				i S	Sg	04 20 23.9	+0.8
COK2	Cook Ranch 2	0.25	282	⇑iP	Pg	04 20 21.8	+0.8
WESC	Westside Schoo	0.25	261	eP	Pg	04 20 21.6	+0.6
COA	Coachella	0.28	76	i P	Pb	04 20 22.2	+0.5
SGL	Mount Signal	0.28	238	⇑iP	Pg	04 20 21.7	+0.2
SGL				eS	Sg	04 20 25.7	-0.1
SWSC	Sam W. Stewart	0.33	296	P	Pg	04 20 22.9	+0.5
	baz=118,SNR=47						
SWSC				S	Sb	04 20 28.3	+0.6
	baz=118						
SWSC	Sam W. Stewart	0.33	296	⇑iP	Pg	04 20 22.9	+0.5
EMSC	East Mesa	0.39	99	eP	Pb	04 20 24.3	+0.6
CPBX	Cerro Prieto	0.40	163	⇓eP	Pg	04 20 23.8	+0.3
CPBX				eS	Sb	04 20 30.1	+0.5
CPBX				IAML		04 20 33.9	
	comp=N,4μm,0.2s						
CPBX				⇓e		04 20 33.9	
YUH2	Yuha Desert	0.43	250	eP	Pg	04 20 24.2	+0.1
YUH2				eS	Sg	04 20 30.1	0.0
CRR	Carrizo Plain	0.45	281	eP	Pg	04 20 24.9	+0.4
RMX	La Rumorosa	0.57	250	eP	Pb	04 20 26.3	-0.4
RMX				eS	Sg	04 20 33.8	-0.7
GLA	Glamis	0.58	64	P	Pb	04 20 26.9	+0.1
	baz=242,SNR=21						
GLA				S	Sb	04 20 34.5	-0.2
	baz=242						
GLA	Glamis	0.58	64	⇑eP	Pb	04 20 26.8	+0.1
GLA				eS	Sb	04 20 34.5	-0.2
IKP	In-Ko-Pah, Jac	0.58	255	P	Pb	04 20 26.9	0.0
	baz=77,SNR=25						
IKP				S	Sb	04 20 35.0	+0.3
	baz=77						
IKP	In-Ko-Pah, Jac	0.58	255	⇑eP	Pb	04 20 27.0	+0.1
IKP				eS	Sb	04 20 35.1	+0.3
SLH	Sleepy Hollow	0.79	300	eP	Pb	04 20 30.2	-0.2
YMD	Yuma Desert	0.80	108	eP	Pb	04 20 30.6	+0.1
MONP2	Monument Peak	0.83	277	P	Pb	04 20 31.0	-0.3
	baz=98,SNR=31						
MONP2				S	Sb	04 20 42.0	-0.2
	baz=98						
MONP2	Monument Peak	0.83	277	eP	Pb	04 20 31.2	-0.1
BC3	Big Chuckawall	0.85	359	P	Pb	04 20 31.6	-0.1
	baz=179,SNR=53						
BC3				S	Sb	04 20 43.3	+0.5
	baz=179						
BAR	Barrett	1.04	264	eP	Pb	04 20 34.4	-0.4
BAR				eS	Sb	04 20 47.9	-0.2
BAR				IAML		04 20 50.3	
	comp=N,77nm,0.2s						
BAR				IAML		04 20 51.0	
	comp=E,64nm,0.5s						
BAR				⇑e		04 20 51.0	
MATG	Mataguay Scout	1.09	292	eP	Pb	04 20 35.0	-0.6
MATG				eS	Sb	04 20 49.3	-0.2
CBX	Cerro Bola	1.14	245	eP	Pn	04 20 36.4	-0.1
CBX				eS	Sb	04 20 51.3	+0.3
CBX				IAML		04 20 52.8	
	comp=E,161nm,0.9s						
CBX				IAML		04 20 53.1	
	comp=N,147nm,1.0s						
CBX				⇓e		04 20 53.1	
TPFO	Pinon Flats	1.17	314	P	Pn	04 20 36.5	-0.4
	baz=134,SNR=8.9						
TPFO				S	Sg	04 20 53.6	+0.3
	baz=134						
EML	El Monte Cty P	1.18	275	eP	Pn	04 20 36.3	-0.6
OLP	Otay Lakes Par	1.27	262	eP	Pn	04 20 38.0	-0.1
OLP				eS	Sb	04 20 53.9	-0.6
ECBX	El Chinero	1.36	166	eP	Pb	04 20 40.6	+0.3
ECBX				eS	Sg	04 20 58.6	-0.8
IRM	Iron Mountain	1.38	10	S	Sb	04 20 58.4	+0.6
	baz=190						
109C	Camp Elliot, M	1.40	274	P	Pn	04 20 40.2	+0.3
	baz=94						
109C				S	Sn	04 20 58.0	+0.1
	baz=94						
MURC	Murrieta	1.67	299	S	Sn	04 21 06.0	+1.3
	baz=119						
GMRC	Granite Mounta	1.99	355	Sb	Sg	04 21 18.5	-0.9
	baz=175						
214A	Organ Pipe Nat	2.38	110	P	Pn	04 20 52.5	-0.9
	baz=291						
214A				S	Sn	04 21 20.3	-1.8
	baz=291						
RRX	Edison Barstow	2.44	328	S	Sn	04 21 24.0	+0.3
	baz=148						

IDC 03 04:20:60.0±4.2,4°.93S×150°.57E,h0km,mb3.3/2, mb1 3.6/2,mb1mx3.3/24,mbtmp3.3/2,Error ellipse: s-maj=169.1km s-min=51.8km az=115.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.73	225	P	P	04 25 51.7	-1.4
	1.0nm,0.8s,baz=52,slow=10,SNR=6.5						
ASAR	Alice Springs	24.60	219	P	P	04 26 23.5	+1.4
	0.4nm,0.9s,baz=60,slow=7.9,SNR=4.3						
TORD	Torodi Ar. Bea	148.22	287	PKPbc	PKPbc	04 40 48.2	-0.9
	0.4nm,0.5s,baz=58,slow=1.7,SNR=5.4						

KRNET 03 04:32:33.9±0.1,39°.72N×72°.52E,h9km,mb2.9

NNC 03 04:32:33.9±5.1,39°.81N×72°.69E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=37.5km s-min=17.1km az=173.0

SOME 03 04:32:35.6,39°.80N×72°.43E,h5km

ISC 03 04:32:33.8±1.3,39°.78N±0°.04×72°.51E±0°.03,h5km±12km, n26,σ2s.16/45,14C-8D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.63	242	⇑iP	Pg	04 32 45.5	-0.4
	baz=47						
DRK				⇑iS	Sg	04 32 53.5	-0.5
	baz=47						
OHH	Osh	0.77	16	⇓iP	Pb	04 32 49.8	+0.1
	baz=14						
OHH				⇓iS	Sb	04 33 01.0	+0.4
	baz=14						
SFK	Sufi-Kurgan	0.80	73	⇓eP	Pb	04 32 49.7	-0.5
	baz=69						
SFK				⇓eS	Sb	04 33 00.5	-0.9
	baz=69						
BTK	Batken	1.33	283	⇓eP	Pn	04 32 59.3	+0.2
	baz=85						
BTK				⇓iS	Sn	04 33 17.8	+0.5
	baz=85						
TRKS	Terek-Say	2.04	330	⇑iP	Pb	04 33 11.1	-0.2
	baz=30						
TRKS				⇑iS	Sg	04 33 37.9	-1.3
	baz=30						
AML	Almayashu	2.51	20	⇑iP	Pb	04 33 18.5	-1.1
	baz=20						
AML				⇑iS	Sb	04 33 50.9	-0.1
	baz=20						
MNAS	Manas	2.71	360	⇑eP	Pb	04 33 21.0	-1.7
	baz=60						
MNAS				⇑iS	Sb	04 33 55.8	-0.5
	baz=60						
UCH	Uchtor	2.88	31	⇑eP	Pb	04 33 23.6	-2.2
	baz=31						
UCH				⇑iS	Sb	04 33 59.4	-2.1
	baz=31						
MRKS	Merke	3.01	10	eP	Pg	04 33 30.6	-0.9
	5.0nm,0.5s						
MRKS				eS	Sg	04 34 10.2	-0.3
	20nm,0.2s						
MRKS	Merke	3.01	10	Pg	Pb	04 33 28.6	+0.7
	5.0nm,0.4s						
MRKS				Lg	Lg	04 34 10.2	
	20nm,0.2s						
IUG	Iuzhnay	3.02	322	eP	Pg	04 33 30.8	-0.9
	73nm,0.5s						
IUG				eS	Sg	04 34 10.8	0.0
	19nm,0.5s						
IUG	Iuzhnay	3.02	322	Pg	Pb	04 33 28.8	+0.7
	86nm,0.3s						
IUG				Lg	Lg	04 34 10.8	
	13nm,0.4s						
EKS2	Erkin-Say	3.03	18	⇑iP	Pb	04 33 25.8	-2.5
	baz=18						
EKS2				⇑iS	Sb	04 34 03.4	-2.3
	baz=18						
DZA	Taraz	3.23	344	eP	Pg	04 33 37.4	+1.7
	66nm,0.1s						
DZA				eS	Sg	04 34 22.0	+4.3
	110nm,0.2s						
KK09	Karatay Array	3.67	336	⇑Pg	Pg	04 33 43.0	-1.0
	1.8nm,0.6s,baz=144,slow=16						
KK09				⇑Lg	Lg	04 34 31.5	
	1.6nm,0.3s,baz=152,slow=28						
BRLS	Borolday	3.82	329	eP	Pb	04 33 42.8	+1.1
	0.8nm,0.2s						
BRLS				eS	Sb	04 34 31.2	+2.9
	3.8nm,0.6s						
BRLS	Borolday	3.82	329	Pg	Pb	04 33 40.9	-0.7
	0.9nm,0.2s						
BRLS				Lg	Lg	04 34 31.2	
	4.1nm,0.4s						
TKM2	Tokmak 2	3.90	35	⇓Pg	Pb	04 33 40.4	-2.7
	1.3nm,0.7s						
TKM2				⇓Lg	Lg	04 34 31.8	
KST	Kastek	4.17	37	eP	Pg	04 33 54.4	+0.8
	1.5nm,0.3s						
KST				eS	Sg	04 34 50.8	+3.2
	5.1nm,0.4s						
DGS	Degeres	4.24	34	eP	Pg	04 33 55.3	+0.4
	2.7nm,0.3s						
DGS				eS	Sg	04 34 52.6	+2.8
	3.8nm,0.6s						
DGS	Degeres	4.24	34	Pg	Pg	04 33 52.2	-2.7
	2.6nm,0.5s						
DGS				Lg	Lg	04 34 50.5	
	3.8nm,0.6s						
TNSS	Tian-Shan	4.66	44	eP	Pg	04 34 03.1	0.0
	0.4nm,0.2s						
TNSS				eS	Sg	04 35 05.8	+2.4
	2.0nm,0.7s						
MDOK	Medeo	4.80	44	eP	Pg	04 34 07.9	+2.2
	1.3nm,0.3s						
MDOK				eS	Sg	04 35 14.7	+6.8
	5.2nm,0.5s						
KUU	Kurty	5.01	34	eP	Pg	04 34 06.5	-3.2
	1.0nm,0.3s						
KUU				eS	Sg	04 35 12.1	-2.4
	4.0nm,0.4s						
KUU	Kurty	5.01	34	Pg	Pb	04 34 04.4	+2.5
	0.9nm,0.5s						
KUU				Lg	Lg	04 35 11.5	
	3.9nm,0.5s						
BTLS	Baital	5.38	12	eP	Pg	04 34 13.9	-2.9
	0.3nm,0.2s						
BTLS				eS	Sg	04 35 24.4	-2.1
	1.9nm,0.3s						

RSPR 03 04:34:45.5,19°.64N×65°.35W,h10km±4km

NEIC 03 04:34:48.6±0.8,19°.08N±0°.04×65°.49W±0°.04,h10km±2km, ML3.2/16,Error ellipse: s-maj=7.6km s-min=5.2km az=333.0

IDC 03 04:34:49.8±5.4,19°.48N×65°.29W,h55km±53km,mb3.4/9, mb1 3.7/11,mb1mx3.5/38,mbtmp3.8/11,ML3.2/2,MS3.1/5, Ms1 3.1/5,ms1mx2.8/29,Error ellipse: s-maj=29.8km s-min=18.8km az=32.0

ISC 03 04:34:44.9±0.7,19°.43N±0°.05×65°.34W±0°.04,h16km,n57, σ1s.38/58,mb3.7/8,MS3.0/4,7C-6D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	1.11	177	⇑eP	Pg	04 35 06.9	+0.4
CUPR	Culebra, Puert	1.11	177	eS	Sg	04 35 24.2	+3.1
CUPR	Culebra, Puert	1.11	177		Pn	04 35 06.0	+0.1
CUPR				Sn	Sb	04 35 17.1	-3.0
STVI	Saint Thomas	1.13	161	⇓eP	Pg	04 35 06.9	+0.1
STVI	Saint Thomas	1.13	161	eS	Sg	04 35 24.1	+2.5
STVI	Saint Thomas	1.13	161		Pg	04 35 06.6	-0.2
STVI					Sb	04 35 19.9	-0.7
TBVI	Tortola	1.22	146	⇓eP	Pg	04 35 08.2	-0.2
TBVI	Tortola	1.22	146	eS	Sg	04 35 25.7	+1.5
CBYP	Canovanas	1.25	203		Pn	04 35 05.1	-2.7
CBYP				IAML		04 35 30.7	
	comp=E,1μm,0.2s						
GCPR	Guaynabo City	1.32	213	⇓eP	Pb	04 35 09.0	-0.3
GCPR	Guaynabo City	1.32	213	eS	Sg	04 35 27.7	+0.2
GCPR	Guaynabo City	1.32	213		Pn	04 35 07.7	-1.0
GCPR				Sg	Sn	04 35 20.5	-5.4
EMPR	Esperanza - Ma	1.47	230	⇑eP	Pb	04 35 11.2	-0.7
EMPR	Esperanza - Ma	1.47	230	eS	Sb	04 35 30.9	+0.5
EMPR	Esperanza - Ma	1.47	230		Pn	04 35 10.7	-0.1
EMPR				IAML		04 35 40.9	
	comp=N,748nm,0.8s						
SJG	San Juan	1.52	211		Pn	04 35 10.9	-0.6
PDPR	Patillas Dam,	1.54	205		Pn	04 35 11.2	-0.6
PDPR				IAML		04 35 48.7	
	comp=E,390nm,0.8s						
IGPR	InterUniversit	1.63	207	⇑eP	Pb	04 35 14.4	-0.2
IGPR	InterUniversit	1.63	207	eS	Sg	04 35 36.3	-1.1
AOPR	Arecibo Observ	1.72	231	⇓eP	Pn	04 35 14.3	+0.1
AOPR	Arecibo Observ	1.72	231	eS	Sb	04 35 36.8	-0.7
AOPR	Arecibo Observ	1.72	231		Pn	04 35 13.3	-0.9
CDVI	St. Croix	1.75	162	⇑eP	Pb	04 35 16.2	-0.6
CDVI	St. Croix	1.75	162	eS	Sg	04 35 40.7	-0.7
CDVI	St. Croix	1.75	162	Pn	Pb	04 35 16.2	-0.6
CELP	Cerrillos	1.79	221	⇑eP	Pn	04 35 15.7	+0.5
CELP	Cerrillos	1.79	221	eS	Sb	04 35 39.9	+0.4
CELP	Cerrillos	1.79	221	Pn	Pn	04 35 14.8	-0.4
CELP				IAML		04 35 50.0	
	comp=N,397nm,1.1s						
CELP				IAML		04 36 04.0	
	comp=E,316nm,0.9s						
OBIP	Obispado Ponce	1.83	221	⇓eP	Pn	04 35 16.2	+0.5
OBIP	Obispado Ponce	1.83	221	eS	Sb	04 35 40.2	-0.5
OBIP	Obispado Ponce	1.83	221		Pn	04 35 15.6	-0.1
OBIP				IAML		04 35 47.4	
	comp=N,289nm,1.1s						
AGPR	Aguadilla, PR	1.93	241	⇓eP	Pn	04 35 17.3	+0.2
AGPR	Aguadilla, PR	1.93	241	eS	Sn	04 35 41.5	+0.5
AGPR	Aguadilla, PR	1.93	241	Pn	Pn	04 35 17.1	-0.1
AGPR				IAML		04 36 05.1	
	comp=N,286nm,1.7s						
PRSN	Puerto Rico Se	2.09	235		Pn	04 35 19.4	+0.1
MLPR	Magueyes Islan	2.17	228	⇑eP	Pn	04 35 20.9	+0.5
MLPR	Magueyes Islan	2.17	228	eS	Sn	04 35 48.2	+1.2
MLPR	Magueyes Islan	2.17	228	Pn	Pn	04 35 20.2	-0.3
CRPR	Cabo Rojo, PR	2.19	230	⇑eP	Pn	04 35 21.1	+0.3
CRPR	Cabo Rojo, PR	2.19	230	eS	Sn	04 35 49.0	+1.4
CRPR	Cabo Rojo, PR	2.19	230		Pn	04 35 20.8	+0.1
SMRT	St. Maarten	2.54	122		Pb	04 35 29.7	-0.5
SDDR	Presa de Saban	5.64	266	Pn	Pn	04 36 08.8	+0.6
PCRV	Puerto La Cruz	9.22	176	P	Pn	04 37 01.1	+3.7
	comp=N,0.6nm,0.3s,baz=239,slow=5.9,SNR=1.9						
ROSC	El Rosal	16.94	212	P	P	04 38 45.1	+1.4
	comp=N,1.1nm,0.3s,baz=134,slow=23,SNR=6.1						
ROSC				LR	LR	04 47 31.9	
	comp=N,71nm,18.2s,baz=57,slow=45						
PTGA	Pitinga	20.71	165	P	P	04 39 24.6	-0.1
	comp=N,1.4nm,0.3s,baz=339,slow=16,SNR=6.1						
PTGA				LR	LR	04 47 53.8	
	comp=N,24nm,20.8s,baz=102,slow=38						
APG	El Apazote	24.39	264	P	P	04 40 05.0	+2.0
	comp=N,2.0nm,0.7s,baz=66,slow=16,SNR=5.5						
APG				LR	LR	04 51 00.5	
	comp=N,25nm,21.6s,baz=19,slow=40						
ATAH	Atahualpa	29.36	207	LR	LR	04 54 06.2	
	comp=N,64nm,21.0s,baz=122,slow=39						
LPAZ	La Paz	35.60	185	P	P	04 41 43.6	+1.0
	comp=N,1.2nm,0.9s,baz=13,slow=7.8,SNR=3.8						
TXAR	Lajitas Array	36.14	293	P	P	04 41 47.8	+1.1
	comp=N,0.7nm,0.9s,baz=104,slow=5.3,SNR=4.8						
PDAR	Pinedale Array	43.80	312	P	P	04 42 49.9	-0.5
	comp=N,0.2nm,0.7s,baz=79,slow=9.3,SNR=1.7						
YKA	Yellowknife Ar	54.64	334	P	P	04 44 10.6	-2.0
	comp=N,0.7nm,0.7s,baz=117,slow=7.8,SNR=3.0						
ESDC	Sonseca Array	56.00	55	LR	LR	05 06 52.8	
	comp=N,32nm,18.1s,baz=10.0,slow=34						
DBIC	Dimbokro	60.00	94	P	P	04 44 51.7	+0.4
	comp=N,1.6nm,0.8s,baz=280,slow=5.6,SNR=3.8						
TORD	Torodi Ar. Bea	64.31	84	P	P	04 45 20.3	+0.1
	comp=N,0.3nm,0.8s,baz=293,slow=6.4,SNR=3.5						
ILAR	Eielson Array	69.01	333	P	P	04 45 49.5	0.0
	comp=N,0.3nm,0.6s,baz=106,slow=4.5,SNR=7.5						
ASAR	Alice Springs	161.61	253	PKPab	PKPab	04 55 29.2	-1.7
	comp=N,0.4nm,0.7s,baz=108,slow=6.0,SNR=4.7						

KRNET 03 04:49:00.5±0.1,40°.88N×78°.45E,mb3.5

SOME 03 04:49:02.7,40°.95N×78°.38E,h10km

NNC 03 04:49:05.3±1.0,41°.03N×78°.39E,h0km,mb4.0,mpv3.7, Error ellipse: s-maj=7.2km s-min=5.4km az=170.0

ISC 03 04:48:56.3±2.9,40°.4N±0°.1×78°.62E±0°.06,h1km±18km,n61, σ2s.81/73,27C-9D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	2.04	328	⇑iP	Pn	04 49 29.8	-2.1
	baz=23						
KDJ				⇑iS	Sn	04 49 51.5	-6.6
	baz=23						
PRZ	Przheval'sk	2.08	355	⇑iP	Pn	04 49 30.9	-1.7
	baz=59						
PRZ				⇑iS	Sn	04 49 53.1	-6.1
	baz=59						
ANVS	Anan'yevo	2.48	344	⇑eP	Pn	04 49 37.5	-0.5
	baz=43						
ANVS				⇑iS	Sn	04 50 04.6	-4.5
	baz=43						
ULHL	Ulahol	2.57	316	⇑iP	Pn	04 49 39.7	+0.5
	baz=10.0						
ULHL				⇑iS	Sn	04 50 08.3	-2.9
	baz=10.0						
SATY	Saty	2.66	357	eP	Pn	04 49 42.9	+2.5
	37nm,0.5s						
SATY				eS	Sn	04 50 11.9	-1.3
	160nm,0.5s						
SATY	Saty	2.66	357	Pg	Pn	04 49 43.7	+3.3
	66nm,0.6s						
SATY				Lg	Lg	04 50 11.9	
	160nm,0.5s						
UZB	Uzynbulak	2.75	6	eP	Pn	04 49 44.5	+2.8
	14nm,0.3s						
UZB				eS	Sn	04 50 14.6	-1.2
	92nm,0.5s						
UZB	Uzynbulak	2.75	6	Pg	Pn	04 49 43.2	+1.4
	24nm,0.6s						
UZB				Lg	Lg	04 50 14.6	
	92nm,0.5s						
BOOM	Boomskoye usch	2.90	317	⇑eP	Pn	04 49 44.2	+0.4
	baz=11						
BOOM				⇑iS	Sn	04 50 16.2	-3.1
	baz=11						
TNSS	Tian-Shan	2.91	335	eP	Pn	04 49 46.1	+2.0
	23nm,0.3s						
TNSS				eS	Sn	04 50 17.9	-2.1
	39nm,0.4s						
TNSS	Tian-Shan	2.91	335	Pg	Pn	04 49 47.1	+2.9
	32nm,0.4s						
TNSS				Lg	Lg	04 50 17.9	
	39nm,0.4s						
TNSS	Tian-Shan	2.91	335	Pg	Pn	04 49 47.0	+2.8
TNSS				Lg	Lg	04 50 22.3	
PDGK	Podgornoye	2.99	12	Pg	Pn	04 49 50.2	+5.2
	14nm,0.4s						
PDGK				Lg	Lg	04 50 22.1	
	56nm,0.4s						
PDGK	Podgornoye	2.99	12	⇑Pn	Pn	04 49 46.4	+1.4
	21nm,0.6s						
PDGK				⇑Lg	Lg	04 50 21.9	
	166nm,0.9s						
MDOK	Medeo	2.99	337	eP	Pn	04 49 48.5	+3.4
	17nm,0.3s						

MDOK	100nm,0.6s			*e*S	Sn	04 50 21.4	-0.3
MDOK	Medeo 31nm,0.6s	2.99	337	⇓Pn	Pn	04 49 46.4	+1.3
MDOK	132nm,0.8s			⇑Lg	Lg	04 50 21.2	
MDOK	Medeo 33nm,0.6s	2.99	337	Pg	Pn	04 49 49.6	+4.5
MDOK	100nm,0.6s			Lg	Lg	04 50 21.4	
IZV	Izvestkoviy 27nm,0.5s	3.03	331	*e*P	Pn	04 49 48.9	+3.4
IZV	128nm,0.7s			*e*S	Sn	04 50 22.1	-0.4
IZV	Izvestkoviy 27nm,0.6s	3.03	331	Pg	Pn	04 49 49.9	+4.4
IZV	128nm,0.7s			Lg	Lg	04 50 22.1	
KOTS	Kotyrbulak 22nm,0.5s	3.04	339	*e*P	Pn	04 49 48.9	+3.2
KOTS	342nm,0.6s			*e*S	Sn	04 50 21.9	-1.0
KOTS	Kotyrbulak 20nm,0.2s	3.04	339	Pg	Pn	04 49 49.8	+4.1
KOTS	342nm,0.6s			Lg	Lg	04 50 21.9	
KURS	Kuram 15nm,0.5s	3.10	354	*e*P	Pn	04 49 50.7	+4.3
KURS	72nm,1.5s			*e*S	Sn	04 50 25.6	+1.5
KURS	Kuram 38nm,0.8s	3.10	354	Pg	Pn	04 49 52.0	+5.6
KURS	72nm,0.8s			Lg	Lg	04 50 25.4	
MTBS	Maitube 12nm,0.3s	3.18	330	*e*P	Pn	04 49 50.0	+2.4
MTBS	64nm,0.6s			*e*S	Sn	04 50 23.6	-2.5
MTBS	Maitube 11nm,0.2s	3.18	330	Pg	Pn	04 49 50.7	+3.2
MTBS	64nm,0.6s			Lg	Lg	04 50 23.6	
KST	Kastek 26nm,0.3s	3.30	324	*e*P	Pn	04 49 53.4	+4.1
KST	97nm,0.5s			*e*S	Sn	04 50 30.0	+0.8
KST	Kastek 31nm,0.4s	3.30	324	Pg	Pn	04 49 54.3	+5.1
KST	97nm,0.5s			Lg	Lg	04 50 30.0	
TKM2	Tokmak 2 8.1nm,0.4s	3.38	319	⇓Pn	Pn	04 49 51.9	+1.4
TKM2	31nm,0.5s			⇓Lg	Lg	04 50 33.9	
TKM2	Tokmak 2 baz=15	3.38	319	⇓*e*P	Pn	04 49 50.8	+0.3
TKM2	baz=15			⇓*i*S	Sn	04 50 27.6	-3.8
DGS	Degeres 11nm,0.3s	3.54	324	*e*P	Pn	04 49 58.0	+5.5
DGS	93nm,0.5s			*e*S	Sn	04 50 38.0	+2.8
DGS	Degeres 22nm,0.4s	3.54	324	Pg	Pn	04 49 59.1	+6.5
DGS	93nm,0.5s			Lg	Lg	04 50 38.0	
KBK	Karagaybulak baz=5.0	3.56	310	⇑*e*P	Pn	04 49 53.8	+1.0
KBK	baz=5.0			⇑*i*S	Sn	04 50 32.8	-2.8
UCH	Uchtor baz=96	3.59	302	⇑*i*P	Pn	04 49 54.9	+1.4
UCH	baz=96			⇑*i*S	Sn	04 50 34.5	-2.3
KTBS	Karatobe 10nm,0.4s	3.60	337	*e*P	Pn	04 49 58.7	+5.3
KTBS	157nm,0.5s			*e*S	Sn	04 50 39.0	+2.4
KTBS	Karatobe 10nm,0.4s	3.60	337	Pg	Pn	04 49 59.8	+6.4
KTBS				Lg	Lg	04 50 38.9	
BLB	Baldybastay 40nm,0.5s	3.69	358	Pg	Pn	04 50 01.2	+6.6
BLB	97nm,0.2s			Lg	Lg	04 50 42.3	
ARXS	Arharly 7.0nm,0.5s	3.85	351	*e*P	Pn	04 50 02.9	+6.2
ARXS	89nm,0.8s			*e*S	Sn	04 50 45.6	+3.0
ARXS	Arharly 14nm,0.3s	3.85	351	Pg	Pn	04 50 03.5	+6.7
ARXS	89nm,0.8s			Lg	Lg	04 50 45.7	
KUU	Kurty 3.3nm,0.4s	3.87	335	*e*P	Pn	04 50 02.6	+5.6
KUU	60nm,0.6s			*e*S	Sn	04 50 45.5	+2.3
KUU	Kurty 7.2nm,0.6s	3.87	335	Pg	Pn	04 50 04.0	+7.0
KUU	60nm,0.6s			Lg	Lg	04 50 45.5	
KRBS	Karabastau 6.4nm,0.2s	3.95	327	*e*P	Pn	04 50 04.7	+6.6
KRBS	33nm,0.6s			*e*S	Sn	04 50 49.2	+4.1
KRBS	Karabastau 8.4nm,0.4s	3.95	327	Pg	Pn	04 50 05.6	+7.5
KRBS	33nm,0.6s			Lg	Lg	04 50 49.2	
DJR	Jarkent 3.3nm,0.5s	4.02	12	*e*P	Pn	04 50 06.6	+7.6
DJR	44nm,0.5s			*e*S	Sb	04 50 52.8	-4.2
DJR	Jarkent 9.5nm,0.6s	4.02	12	Pg	Pb	04 50 07.9	0.0
DJR	44nm,0.5s			Lg	Lg	04 50 52.8	
AML	Almayashu baz=91	4.09	296	*e*P	Pn	04 50 02.4	+2.0
AML	baz=91			*i* S	Sn	04 50 47.7	-1.4
USP	Ospenovka baz=10.0	4.20	314	⇑*e*P	Pn	04 50 02.4	+0.9
USP	baz=10.0			⇑*i*S	Sn	04 50 47.7	-3.6
EKS2	Erkin-Say baz=99	4.28	303	⇑*e*P	Pn	04 50 04.7	+2.0
EKS2	baz=99			⇑*i*S	Sn	04 50 51.0	-2.3
TDK	Taldyqorghan 36nm,0.3s	4.59	358	*e*P	Pb	04 50 18.9	+1.1
TDK	70nm,0.8s			*e*S	Sb	04 51 13.6	0.0
TDK	Taldyqorghan 44nm,0.3s	4.59	358	Pg	Pb	04 50 19.8	+2.1
TDK	70nm,0.8s			Lg	Lg	04 51 13.6	
MRKS	Merke 6.9nm,0.4s	4.67	302	*e*P	Pb	04 50 20.6	+1.5
MRKS	12nm,0.3s			*e*S	Sb	04 51 16.3	+0.4
MRKS	Merke 7.6nm,0.4s	4.67	302	Pg	Pb	04 50 21.7	+2.6
MRKS	12nm,0.3s			Lg	Lg	04 51 16.3	
KAPS	Kapalarasan 2.8nm,0.4s	4.91	6	*e*P	Pb	04 50 23.9	+0.9
KAPS	35nm,0.4s			*e*S	Sb	04 51 22.5	-0.1
KAPS	Kapalarasan 7.3nm,0.5s	4.91	6	Pg	Pb	04 50 25.2	+2.2
KAPS	35nm,0.4s			Lg	Lg	04 51 22.5	
BTLS	Baital 2.5nm,0.6s	5.73	325	*e*P	Pb	04 50 39.1	+2.2
BTLS	6.6nm,0.7s			*e*S	Sb	04 51 48.5	+2.4
BTLS	Baital 2.9nm,0.5s	5.73	325	Pg	Pb	04 50 38.0	+1.1
BTLS	6.6nm,0.7s			Lg	Lg	04 51 44.8	
KK09	Karatay Array 2.5nm,0.6s	6.65	297	⇓Pg	Pb	04 50 59.3	+6.6
KK09	3.1nm,0.6s			⇑Lg	Lg	04 52 23.6	
MAKZ	Makanchi 2.8nm,1.1s	6.84	20	⇑Pn	Pn	04 50 40.0	+2.2
MAKZ	1.9nm,0.7s			⇓Sn	Sn	04 51 52.6	-3.8
MAKZ	4.8nm,0.9s			⇓Lg	Lg	04 52 25.3	
MK31	Makanchi Array 0.5nm,0.5s,baz=211,slow=14,SNR=6.2	6.92	21	⇑Pn	Pn	04 50 39.4	+0.5
MK31	2.2nm,0.6s			⇑Sn	Sn	04 51 54.6	-3.5
MK31	4.9nm,0.7s,baz=211,slow=28,SNR=4.4			⇓Lg	Lg	04 52 27.5	
BRLS	Borolday 3.1nm,0.3s	7.08	295	*e*P	Pb	04 51 07.6	+7.6
BRLS	3.1nm,0.6s			*e*S	Sg	04 52 38.0	-5.4
KURBB	Kurchatov Arra 15nm,0.8s	10.22	360	⇑Lg	Lg	04 54 09.3	
KURK	Kurchatov 5.6nm,1.0s	10.31	360	⇑Lg	Lg	04 54 13.6	

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*IDC **03** 05:00:49.5±45.0, 1°.67N×121°.81E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.4/40, mbtmp3.6/3, MS3.4/2, Ms1 3.4/2, ms1mx2.6/38, Error ellipse: s-maj=751.8km s-min=360.0km az=150.0*

*DJA **03** 05:00:53.1±1.0, 1°N±8°×12°0E±°, h17^{km}±8^{km}, M3.2/6, MLv3.2/6*

ISC 03 05:00:54.1±2.1**, 0°.6N**±0°.2×**119°.63E**±0°.09**, h34**^{km}**, n10, σ0^{s}.90**/8**, mb3.5**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	Mapaga	0.34	128	P	Pb	05 01 03.1	+0.6
MRSI	Marisa	2.32	92	P	Pn	05 01 31.2	+1.4
APSI	Ampana	2.49	126	P	Pn	05 01 32.5	+0.3
BKB	Balikpapan	3.27	237	P	Pn	05 01 43.4	+0.5
GTOI	Gorontalo	3.39	89	P	Pn	05 01 43.9	-0.7
WRA	Warramunga Arr 1.0nm,0.7s,baz=332,slow=9.5,SNR=10	24.95	146	P	P	05 06 13.8	-0.8
ASAR	Alice Springs 0.2nm,0.4s,baz=335,slow=9.8,SNR=5.6	27.78	151	P	P	05 06 39.5	-0.7
STKA	Stephens Creek 0.8nm,0.5s,baz=326,slow=9.8,SNR=3.4	38.38	149	P	P	05 08 11.9	-0.3
HNR	Honiara comp=Z,35nm,19.2s,baz=333,slow=39	41.35	105	LR	LR	05 26 43.8	
OBN	Obninsk comp=Z,26nm,20.1s,baz=336,slow=37	85.57	325	LR	LR	05 54 06.4	

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*KRNET **03** 05:02:49.6±0.1, 41°.00N×79°.74E, mb2.6*

*SOME **03** 05:02:52.6, 42°.37N×79°.68E, h10^{km}*

ISC 03 05:02:50.8±2.4**, 42°.30N**±0°.07×**79°.70E**±0°.08**, h2**^{km}±16^{km}**, n12, σ1^{s}.17**/24**, 6C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak 2.7nm,0.3s	0.99	330	*e*P	Pg	05 03 10.1	+0.3
UZB	7.2nm,0.3s			*e*S	Sg	05 03 22.9	+0.3
SATY	Saty 1.0nm,0.3s	1.22	309	*e*P	Pb	05 03 14.7	0.0
SATY	6.5nm,0.3s			*e*S	Sb	05 03 30.6	-0.4
TARG	Taragay, Kyrgy baz=97	1.52	249	⇑*i*P	Pn	05 03 18.8	-0.6
TARG	baz=97			⇑*i*S	Sg	05 03 39.8	+0.1
KDJ	Kajisay baz=1.0	1.88	266	⇓*i*P	Pb	05 03 26.4	+0.4
KDJ	baz=1.0			⇓*i*S	Sg	05 03 53.8	+2.6
DJR	Jarkent 0.5nm,0.1s	2.04	2	*e*P	Pb	05 03 29.2	+0.6
DJR	23nm,0.2s			*e*S	Sg	05 03 55.7	-0.6
MDOK	Medeo 2.6nm,0.3s	2.14	295	*e*P	Pb	05 03 30.5	+0.2
MDOK	5.4nm,0.5s			*e*S	Sb	05 03 57.8	+0.4
TNSS	Tian-Shan 1.0nm,0.3s	2.16	291	*e*P	Pb	05 03 31.6	+0.7
TNSS	2.9nm,0.2s			*e*S	Sb	05 03 59.4	+1.1
ARXS	Arharly 1.2nm,0.4s	2.35	325	*e*P	Pb	05 03 34.1	+0.1
ARXS	4.1nm,0.2s			*e*S	Sb	05 04 04.1	+0.6
ULHL	Ulahol baz=97	2.57	270	⇑*i*P	Pb	05 03 36.1	-1.6
ULHL	baz=97			⇑*i*S	Sb	05 04 09.7	-0.1
BOOM	Boomskoye usch baz=99	2.79	275	⇓*i*P	Pb	05 03 40.6	-0.9
BOOM	baz=99			⇓*i*S	Sb	05 04 17.6	+1.4
KAPS	Kapalarasan 0.4nm,0.2s	3.00	355	*e*P	Pb	05 03 46.1	+1.2
KAPS	2.9nm,0.1s			*e*S	Sg	05 04 24.8	-2.3
TKM2	Tokmak 2 baz=3.0	3.09	283	⇑*e*P	Pb	05 03 46.3	-0.4
TKM2	baz=3.0			⇑*i*S	Sg	05 04 28.1	-2.1

IDC 03 05:07:35.4±3.0**, 50°.85N**×**29°.83W, h0**^{km}**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.2**/48**, mbtmp3.3**/3**, Error ellipse: s-maj=85.9km s-min=37.1km az=67.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array 0.6nm,0.7s,baz=308,slow=9.7,SNR=6.5	21.25	112	P	P	05 12 23.2	+0.3
TORD	Torodi Ar. Bea 0.1nm,0.4s,baz=342,slow=7.5,SNR=3.3	45.48	134	P	P	05 15 56.0	-0.3
MKAR	Makanchi Array 0.3nm,0.7s,baz=327,slow=5.9,SNR=2.6	66.55	44	P	P	05 18 26.7	-0.2
ASAR	Alice Springs 0.4nm,0.7s,baz=336,slow=2.1,SNR=4.6	150.07	31	PKPbc	PKPbc	05 27 27.9	-0.1

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*IDC **03** 05:11:13.1±1.3, 55°.65S×25°.89W, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.5/22, mbtmp3.7/3, Error ellipse: s-maj=58.5km s-min=33.2km az=85.0*

ISC 03 05:11:18.3±1.1**, 55°.6S**±0°.2×**26°.0W**±0°.3**, h32**^{km}**, n8, σ0^{s}.69**/8**, mb3.8**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.96	160	P	P	05 15 15.0	+0.6
VNA3	Neumayer Olymp	17.19	162	P	P	05 15 17.1	+0.1
VNA2	Neumayer--Watz baz=320,slow=14	17.36	159	P	P	05 15 19.4	+0.6
SNAA	Sanae	18.88	157	P	P	05 15 36.0	+0.4
VNDA	Vanda 1.1nm,0.6s,baz=175,slow=7.9,SNR=9.3	47.03	182	P	P	05 19 45.3	-0.6
LPAZ	La Paz 0.7nm,0.6s,baz=157,slow=4.9,SNR=2.2	50.67	304	P	P	05 20 15.8	+0.6
TORD	Torodi Ar. Bea 0.4nm,0.6s,baz=202,slow=7.7,SNR=2.7	72.36	28	P	P	05 22 40.8	0.0
ILAR	Eielson Array 0.4nm,0.7s,baz=124,slow=2.7,SNR=5.9	150.31	312	PKPbc	PKPbc	05 31 03.7	-0.9

IDC 03 05:12:10.8±3.9**, 23°.09S**×**178°.53W, h0**^{km}**, mb4.0**/3**, mb1 4.1**/3**, mb1mx3.8**/28**, mbtmp4.0**/3**, Error ellipse: s-maj=189.0km s-min=39.9km az=148.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek 0.9nm,0.4s,baz=100,slow=12,SNR=4.2	36.28	247	P	P	05 19 16.3	+0.2
ASAR	Alice Springs 0.9nm,0.6s,baz=94,slow=8.0,SNR=10	43.51	259	P	P	05 20 16.1	-0.2
WRA	Warramunga Arr 1.6nm,0.5s,baz=98,slow=6.9,SNR=36	43.82	265	P	P	05 20 18.8	-0.1
ARCES	ARCESS Array B 6.1nm,1.1s,baz=56,slow=1.6,SNR=1.5	131.36	349	PKP	PKiKP	05 31 24.9	-0.5
AKASG	Malin Array Be 0.5nm,0.4s,baz=45,slow=4.4,SNR=6.5	145.00	329	PKPbc	PKPab	05 31 49.1	0.0
BRTR	Keskin Array B 0.4nm,0.4s,baz=126,slow=1.7,SNR=1.1	148.15	309	PKPbc	PKPdf	05 31 56.4	+0.6

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*NNC **03** 05:47:32.0±4.9, 53°.46N×87°.99E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=40.1km s-min=21.7km az=60.0, Suspected Mining explosion.*

*IDC **03** 05:47:34.8±2.8, 53°.57N×87°.84E, h0^{km}, mb1 3.3/2, mb1mx3.1/36, mbtmp3.3/2, ML3.1/2, Error ellipse: s-maj=26.7km s-min=20.1km az=82.0*

ISC 03 05:47:33.4±1.8**, 52°.33N**±0°.06×**86°.5E**±0°.1**, h0**^{km}**, n8, σ2^{s}.47**/11**, 7C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=98,slow=337,SNR=4.3	1.91	328	*i*		05 57 55.5	
ZAA0	Zalesovo Array 0.9nm,0.3s	1.91	328	⇓Pg	Pn	05 48 06.8	-0.5
ZAA0	8.8nm,0.8s			⇑Lg	Lg	05 48 33.9	
ZALV	Zalesovo Beam 5.7nm,0.3s,baz=101,slow=15,SNR=52	1.91	328	Pn	Pn	05 48 07.2	0.0
ZALV	7.3nm,0.3s,baz=98,slow=25,SNR=24			Sn	Sb	05 48 33.5	-0.1
KURK	Kurchatov 1.9nm,1.0s	5.19	255	⇑Pn	Pg	05 49 09.8	-3.0
KURK	4.6nm,0.7s			⇑Lg	Lg	05 50 55.1	
KURBB	Kurchatov Arra 0.4nm,0.3s,baz=62,slow=14,SNR=14	5.28	254	Pn	Pg	05 49 11.8	-2.6
KURBB	0.1nm,0.3s,baz=48,slow=34,SNR=1.7			Sn	Sg	05 50 23.4	+0.6
KURBB	0.1nm,0.3s,baz=64,slow=32,SNR=5.6			Lg	Lg	05 51 00.6	
KURBB	Kurchatov Arra 2.8nm,0.3s	5.28	254	⇑Pn	Pb	05 49 09.7	+3.3
KURBB	7.2nm,0.6s			⇑Sn	Sg	05 50 23.0	+0.2
KURBB	6.6nm,0.6s			⇓Lg	Lg	05 50 58.2	
MK31	Makanchi Array 1.0nm,0.6s,baz=29,slow=13,SNR=10	6.19	208	⇑Pn	Pb	05 49 25.4	+3.4
MK31	1.6nm,0.8s			⇓Sn	Sg	05 50 51.8	-0.3
MK31	3.2nm,1.1s,baz=32,slow=30			⇑Lg	Lg	05 51 33.9	
MKAR	Makanchi Array 0.3nm,0.3s,baz=30,slow=14,SNR=10	6.19	208	Pn	Pg	05 49 28.8	-3.2
MKAR	0.1nm,0.3s,baz=30,slow=30,SNR=2.8			Lg	Lg	05 51 35.1	

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*KRNET **03** 06:19:18.2±0.1, 40°.83N×78°.46E, h17^{km}, mb3.8*

*IDC **03** 06:19:20.9±5.3, 40°.95N×78°.50E, h0^{km}, mb3.4/1, mb1 3.3/3, mb1mx3.2/32, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=82.4km s-min=37.3km az=93.0*

*NNC **03** 06:19:24.0±0.9, 41°.02N×78°.40E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=6.6km s-min=5.1km az=176.0*

*SOME **03** 06:19:23.2, 40°.98N×78°.30E, h15^{km}*

ISC 03 06:19:23.8±1.4**, 41°.05N**±0°.04×**78°.26E**±0°.03**, h7**^{km}±10^{km}**, n85, σ1^{s}.85**/120**, 21C-24D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy baz=31	0.76	334	⇓*i*P	Pg	06 19 37.5	-1.0
TARG	baz=31			⇓*i*S	Sb	06 19 51.9	+1.5
KDJ	Kajisay baz=24	1.35	324	⇓*i*P	Pn	06 19 48.1	-1.2
KDJ	baz=24			⇓*e*S	Sg	06 20 09.9	+2.6
PRZ	Przheval'sk baz=58	1.44	4	⇑*i*P	Pn	06 19 49.0	-1.5
PRZ	baz=58			⇑*i*S	Sg	06 20 11.7	+1.6
ANVS	Anan'yevo baz=43	1.79	346	⇓*i*P	Pn	06 19 55.5	+0.1
ANVS	baz=43			⇓*i*S	Sg	06 20 22.7	+1.3
ULHL	Ulahol SNR=56	1.93	309	P	Pb	06 19 59.6	+0.2
ULHL	Ulahol baz=11	1.93	309	⇑*i*P	Pn	06 19 57.8	+0.5
ULHL	baz=11			⇑*i*S	Sg	06 20 26.3	+0.5
SATY	Saty 91nm,0.5s	2.01	3	*e*P	Pg	06 20 02.7	+0.2
SATY	350nm,0.6s			*e*S	Sg	06 20 31.0	+2.4
SATY	Saty baz=2.8	2.01	3	*e*Pb	Pb	06 20 00.3	-0.6
SATY	baz=2.8			*e*Pg	Pg	06 20 01.5	-0.9
SATY	Saty 141nm,0.6s	2.01	3	Pg	Pg	06 20 02.6	+0.2
SATY	365nm,0.6s			Lg	Lg	06 20 30.9	
UZB	Uzynbulak 26nm,0.6s	2.17	15	*e*P	Pb	06 20 04.4	+0.7
UZB	168nm,0.4s			*e*S	Sg	06 20 33.7	-0.1
UZB	Uzynbulak baz=14	2.17	15	*e*Pg	Pb	06 20 03.9	+0.2
UZB	Uzynbulak 37nm,0.2s	2.17	15	Pg	Pb	06 20 04.3	+0.7
UZB	168nm,0.4s			Lg	Lg	06 20 33.7	
TNSS	Tian-Shan 35nm,0.3s	2.21	334	*e*P	Pg	06 20 05.8	-0.5
TNSS	131nm,0.6s			*e*S	Sg	06 20 36.9	+1.9
TNSS	Tian-Shan baz=334	2.21	334	*e*Pb	Pb	06 20 03.9	-0.6
TNSS	Tian-Shan 49nm,0.5s	2.21	334	Pg	Pg	06 20 06.2	-0.1
TNSS	145nm,0.8s			Lg	Lg	06 20 36.9	
BOOM	Boomskoye usch baz=12	2.25	311	⇓*e*P	Pn	06 20 02.3	+0.6
BOOM	baz=12			⇓*i*S	Sb	06 20 34.2	+1.1
MDOK	Medeo 59nm,0.6s	2.30	337	*e*P	Pg	06 20 08.2	+0.3
MDOK	269nm,0.5s			*e*S	Sg	06 20 39.8	+2.2
MDOK	Medeo baz=337	2.30	337	*e*Pg	Pb	06 20 05.9	+0.2
MDOK	Medeo 60nm,0.6s	2.30	337	⇑Pn	Pb	06 20 04.9	-0.8
MDOK	339nm,0.8s			⇑Lg	Lg	06 20 39.8	
KSH	Kashi	2.32	230	Pn	Pg	06 20 06.6	-1.7
KSH				Sn	Sg	06 20 45.0	+6.6
KSH	comp=Z,110nm,0.6s			pmax	pmax		
KSH	comp=N,490nm,0.7s			smax	smax		
KSH	comp=E,230nm,0.5s			smax	smax		
IZV	Izvestkoviy comp=E,53nm,0.6s	2.33	329	*e*P	Pg	06 20 08.4	-0.2
IZV	comp=E,313nm,0.6s			*e*S	Sg	06 20 40.5	+1.7
IZV	Izvestkoviy comp=E,53nm,0.6s	2.33	329	Pg	Pg	06 20 08.4	-0.2
IZV	comp=E,313nm,0.6s			Lg	Lg	06 20 40.5	
KOTS	Kotyrbulak comp=E,50nm,0.4s	2.34	339	*e*P	Pg	06 20 09.3	+0.5
KOTS	comp=E,717nm,0.6s			*e*S	Sg	06 20 42.1	+2.9
KOTS	Kotyrbulak comp=E,40nm,0.5s	2.34	339	Pg	Pg	06 20 09.3	+0.5
KOTS	comp=E,717nm,0.6s			Lg	Lg	06 20 42.1	
KNDC	Almaty comp=E,122nm,0.8s	2.37	337	⇑Pg	Pb	06 20 07.2	+0.3
KNDC	comp=E,564nm,0.6s			⇑Lg	Lg	06 20 42.1	
AAA	Alma-Ata comp=E,106nm,0.2s	2.38	336	*e*P	Pg	06 20 09.3	-0.1
AAA	comp=E,372nm,0.3s			*e*S	Sg	06 20 42.6	+2.3
AAA	Alma-Ata baz=336	2.38	336	*e*Pg	Pb	06 20 07.9	+0.8
AAA	Alma-Ata comp=E,106nm,0.2s	2.38	336	Pg	Pg	06 20 09.4	-0.1
AAA	comp=E,372nm,0.3s			Lg	Lg	06 20 42.6	

KURS	**Kuram** comp=E,85nm,0.7s	**2.44**	**359**	*e*P	**Pg**	**06 20 10.5**	**-0.1**
KURS	comp=E,164nm,0.5s			*e*S	**Sg**	**06 20 44.2**	**+1.9**
PDGK	**Podgornoye** comp=E,32nm,0.4s	**2.46**	**21**	Pg	**Pb**	**06 20 07.9**	**-0.6**
PDGK	comp=E,131nm,0.5s			Lg	Lg	06 20 40.2	
PDGK	**Podgornoye** comp=E,37nm,0.5s	**2.46**	**21**	⇑Pn	**Pn**	**06 20 04.8**	**+0.4**
PDGK	comp=E,226nm,0.6s			⇓Lg	Lg	06 20 40.6	
MTBS	**Maitube** comp=E,19nm,0.6s	**2.49**	**327**	*e*P	**Pg**	**06 20 11.0**	**-0.5**
MTBS	comp=E,153nm,0.6s			*e*S	**Sg**	**06 20 44.7**	**+1.0**
KST	**Kastek** comp=E,68nm,0.8s	**2.63**	**320**	*e*P	**Pg**	**06 20 13.2**	**-1.0**
KST	comp=E,202nm,0.7s			*e*S	**Sg**	**06 20 48.7**	**+0.6**
KST	**Kastek** comp=E,68nm,0.8s	**2.63**	**320**	Pg	**Pg**	**06 20 13.2**	**-1.0**
KST	comp=E,202nm,0.7s			Lg	Lg	06 20 48.7	
TKM2	**Tokmak 2** SNR=12	**2.73**	**314**	P	**Pb**	**06 20 10.8**	**-2.3**
TKM2	**Tokmak 2** comp=E,19nm,0.6s	**2.73**	**314**	⇓Pn	**Pb**	**06 20 10.6**	**-2.5**
TKM2	comp=E,94nm,0.7s			⇑Lg	Lg	06 20 51.9	
TKM2	**Tokmak 2** baz=15	**2.73**	**314**	⇓*i*P	**Pn**	**06 20 08.9**	**+0.6**
TKM2	baz=15			⇓*i*S	**Sb**	**06 20 45.6**	**-1.2**
DGS	**Degeres** comp=E,48nm,0.5s	**2.87**	**321**	*e*P	**Pg**	**06 20 17.8**	**-1.0**
DGS	comp=E,187nm,0.5s			*e*S	**Sg**	**06 20 56.6**	**+0.6**
DGS	**Degeres** comp=E,48nm,0.5s	**2.87**	**321**	Pg	**Pg**	**06 20 17.8**	**-1.0**
DGS	comp=E,187nm,0.5s			Lg	Lg	06 20 56.6	
KTBS	**Karatobe** comp=E,29nm,0.3s	**2.91**	**337**	*e*P	**Pg**	**06 20 18.7**	**-0.8**
KTBS	comp=E,378nm,0.7s			*e*S	**Sg**	**06 20 58.1**	**+0.9**
KTBS	**Karatobe** comp=E,29nm,0.3s	**2.91**	**337**	Pg	**Pg**	**06 20 18.7**	**-0.8**
KTBS	comp=E,378nm,0.7s			Lg	Lg	06 20 58.1	
KBK	**Karagaybulak** baz=6.0	**2.95**	**304**	⇓*i*P	**Pn**	**06 20 11.9**	**+0.6**
KBK	baz=6.0			⇓*i*S	**Sb**	**06 20 50.8**	**-2.3**
UCH	**Uchtor** SNR=15	**3.04**	**294**	P	**Pn**	**06 20 13.7**	**+0.9**
UCH	**Uchtor** baz=96	**3.04**	**294**	⇓*e*P	**Pn**	**06 20 13.1**	**+0.3**
UCH	baz=96			⇓*i*S	**Sb**	**06 20 52.6**	**-3.5**
BLB	**Baldybastay** comp=E,107nm,0.5s	**3.05**	**3**	Pg	**Pb**	**06 20 19.9**	**+1.3**
BLB	comp=E,232nm,0.6s			Lg	Lg	06 21 00.6	
KUU	**Kurty** comp=E,7.0nm,0.4s	**3.18**	**334**	*e*P	**Pb**	**06 20 21.9**	**+1.2**
KUU	comp=E,123nm,0.4s			*e*S	**Sg**	**06 21 04.0**	**-1.9**
KUU	**Kurty** baz=334	**3.18**	**334**	*e*Pg	**Pb**	**06 20 22.6**	**+2.0**
ARXS	**Arharly** comp=E,42nm,0.5s	**3.18**	**354**	*e*P	**Pb**	**06 20 22.3**	**+1.6**
ARXS	comp=E,172nm,0.7s			*e*S	**Sg**	**06 21 04.4**	**-1.6**
CHMS	**Chumysh** baz=9.0	**3.26**	**308**	⇑*i*P	**Pn**	**06 20 16.3**	**+0.9**
CHMS	baz=9.0			⇑*i*S	**Sb**	**06 20 58.3**	**-3.6**
KRBS	**Karabastau** comp=E,16nm,0.4s	**3.27**	**325**	*e*P	**Pb**	**06 20 24.3**	**+2.1**
KRBS	comp=E,83nm,0.8s			*e*S	**Sg**	**06 21 08.0**	**-0.7**
KRBS	**Karabastau** comp=E,16nm,0.4s	**3.27**	**325**	Pg	**Pb**	**06 20 24.3**	**+2.1**
KRBS	comp=E,83nm,0.8s			Lg	Lg	06 21 08.0	
DJR	**Jarkent** comp=E,14nm,0.5s	**3.47**	**18**	*e*P	**Pb**	**06 20 26.4**	**+0.8**
DJR	comp=E,96nm,0.5s			*e*S	**Sb**	**06 21 11.5**	**+3.4**
DJR	**Jarkent** comp=E,14nm,0.5s	**3.47**	**18**	Pg	**Pb**	**06 20 26.5**	**+0.8**
DJR	comp=E,96nm,0.5s			Lg	Lg	06 21 11.5	
USP	**Ospenovka** SNR=7.0	**3.57**	**310**	P	**Pb**	**06 20 26.0**	**-1.2**
USP	**Ospenovka** baz=11	**3.57**	**310**	⇓*e*P	**Pn**	**06 20 20.6**	**+1.0**
USP	baz=11			⇓*i*S	**Sn**	**06 21 05.7**	**+3.6**
AML	**Almayashu** SNR=7.5	**3.59**	**289**	P	**Pb**	**06 20 28.8**	**+0.9**
AML	**Almayashu** baz=91	**3.59**	**289**	⇑*e*P	**Pn**	**06 20 20.2**	**-0.1**
AML	baz=91			⇑*i*S	**Sn**	**06 21 05.1**	**+2.0**
SGDS	**Sogindy** baz=313	**3.61**	**313**	*e*Pb	**Pb**	**06 20 27.6**	**-0.4**
SGDS	baz=313			*e*Pg	**Pg**	**06 20 30.1**	**-2.9**
EKS2	**Erkin-Say** SNR=14	**3.71**	**297**	P	**Pb**	**06 20 30.5**	**+0.7**
EKS2	**Erkin-Say** baz=99	**3.71**	**297**	⇑*e*P	**Pn**	**06 20 22.5**	**+0.8**
EKS2	baz=99			⇑*i*S	**Sn**	**06 21 08.9**	**+3.1**
TDK	**Taldyqorghan** comp=E,61nm,0.6s	**3.96**	**2**	*e*P	**Pg**	**06 20 38.0**	**-1.5**
TDK	comp=E,141nm,0.7s			*e*S	**Sg**	**06 21 31.5**	**+0.7**
TDK	**Taldyqorghan** baz=1.4	**3.96**	**2**	*e*Pg	**Pb**	**06 20 36.3**	**+2.4**
TDK	**Taldyqorghan** comp=E,61nm,0.6s	**3.96**	**2**	Pg	**Pg**	**06 20 38.0**	**-1.5**
TDK	comp=E,141nm,0.7s			Lg	Lg	06 21 31.5	
KAPS	**Kapalarasan** comp=E,14nm,0.4s	**4.31**	**10**	*e*P	**Pg**	**06 20 44.0**	**-2.5**
KAPS	comp=E,78nm,0.6s			*e*S	**Sg**	**06 21 41.4**	**-0.9**
KAPS	**Kapalarasan** comp=E,14nm,0.4s	**4.31**	**10**	Pg	**Pg**	**06 20 44.0**	**-2.5**
KAPS	comp=E,78nm,0.6s			Lg	Lg	06 21 41.4	
MNAS	**Manas** baz=92	**4.54**	**290**	⇑*i*P	**Pn**	**06 20 33.7**	**+0.6**
MNAS	baz=92			⇑*i*S	**Sn**	**06 21 28.2**	**+2.1**
BTLS	**Baital** comp=E,5.2nm,0.6s	**5.04**	**324**	*e*P	**Pb**	**06 20 56.6**	**+4.2**
BTLS	comp=E,13nm,0.6s			*e*S	**Sg**	**06 22 03.8**	**-2.0**
BTLS	**Baital** baz=324	**5.04**	**324**	*e*Pg	**Pb**	**06 20 56.2**	**+3.8**
BTLS	**Baital** comp=E,5.2nm,0.6s	**5.04**	**324**	Pg	**Pb**	**06 20 56.6**	**+4.2**
BTLS	comp=E,13nm,0.6s			Lg	Lg	06 22 03.8	
DZA	**Taraz** baz=292	**5.48**	**292**	*e*Pg	**Pb**	**06 21 04.3**	**+4.4**
KK09	**Karatay Array** comp=E,4.9nm,0.6s	**6.13**	**292**	⇓Pg	**Pg**	**06 21 17.7**	**-3.6**
KK09	comp=E,9.0nm,0.6s			⇓Lg	Lg	06 22 42.9	
IUG	**Iuzhnay** comp=E,299nm,0.8s	**6.26**	**283**	*e*P	Pg	06 21 19.4	-4.3
IUG	comp=E,35nm,0.8s			*e*S	**Sg**	**06 22 42.9**	**-2.0**
IUG	**Iuzhnay** baz=283	**6.26**	**283**	*e*Pg	Pb	06 21 17.8	+4.5
MAKZ	**Makanchi** comp=E,1.8nm,0.8s	**6.35**	**24**	⇓Pn	**Pn**	**06 20 57.5**	**-0.4**
MAKZ	comp=E,14nm,1.1s			⇓Lg	Lg	06 22 44.2	
MK31	**Makanchi Array** comp=E,0.5nm,0.4s,baz=203,slow=12,SNR=14	**6.44**	**26**	Pn	**Pn**	**06 20 58.7**	**-0.4**
MK31	comp=E,0.8nm,0.3s,baz=201,slow=14,SNR=4.2			⇑Pg	**Pb**	**06 21 18.9**	**+2.7**
MK31	comp=E,3.5nm,0.6s,baz=237,slow=31,SNR=4.0			⇓Sn	**Sn**	**06 22 13.2**	**+0.3**
MK31	comp=E,7.1nm,0.6s,baz=209,slow=26,SNR=3.7			⇑Lg	Lg	06 22 45.4	
MKAR	**Makanchi Array** comp=E,0.4nm,0.3s,baz=206,slow=14,SNR=14	**6.44**	**26**	Pn	**Pn**	**06 20 58.1**	**-1.0**
MKAR	comp=E,0.7nm,0.3s,baz=207,slow=19,SNR=1.9			Sn	**Sn**	**06 22 13.5**	**+0.7**
MKAR	comp=E,0.9nm,0.3s,baz=206,slow=26,SNR=4.0			Lg	Lg	06 22 43.5	
BRLS	**Borolday** comp=E,2.6nm,0.9s	**6.58**	**290**	*e*P	**Pg**	**06 21 26.6**	**-3.1**
BRLS	comp=E,8.0nm,0.8s			*e*S	**Sg**	**06 22 55.9**	**+1.1**
BRLS	**Borolday** baz=288	**6.58**	**290**	*e*Pn	**Pn**	**06 21 01.3**	**+0.4**
WMQ	**Urumqi**	**7.51**	**65**	*e*P	**Pn**	**06 21 10.8**	**-3.0**
WMQ	comp=N,22nm,1.1s			smax	smax		
WMQ	comp=E,19nm,1.1s			smax	smax		
ZSN	**Zaisan** comp=E,2.7nm,0.3s	**7.96**	**34**	*e*P	Pb	06 21 48.5	+6.3
ZSN	comp=E,9.4nm,0.9s			*e*S	Sg	06 23 32.9	-6.5
ZSN	**Zaisan** baz=34	**7.96**	**34**	*e*Pg	Pb	06 21 49.3	+7.2
KURBB	**Kurchatov Arra** comp=E,31nm,0.8s	**9.58**	**1**	⇓Lg	Lg	06 24 27.1	
KURK	**Kurchatov** comp=E,7.2nm,0.8s	**9.67**	**1**	⇑Lg	Lg	06 24 33.0	
ZALV	**Zalesovo Beam** baz=204,slow=14,SNR=1.4	**13.64**	**17**	Pn	**Pn**	**06 22 36.9**	**-0.6**
SONM	**Songino Array** comp=E,1.9nm,0.9s,baz=257,slow=9.5,SNR=11	**21.13**	**62**	P	**P**	**06 24 06.1**	**-3.1**

IDC 03 06:29:58.1±2.7, 54°.15N×86°.57E, h0km, mb1 3.0/2, mb1mx2.9/44, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=21.5km s-min=12.7km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=79,slow=339,SNR=21	**1.05**	**259**	*i*		06 35 33.3	
ZALV	**Zalesovo Beam** 0.9nm,0.3s,baz=74,slow=16,SNR=11	**1.05**	**259**	Pg	Pg	06 30 16.4	-1.8
ZALV	1.5nm,0.3s,baz=78,slow=29,SNR=24			Lg	Lg	06 30 33.4	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=55,slow=14,SNR=8.2	**6.06**	**238**	Pn	Pn	06 31 29.9	+1.0
KURBB	0.0nm,0.3s,baz=58,slow=30,SNR=5.5			Lg	Lg	06 33 11.9	
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=26,slow=14,SNR=6.8	**7.86**	**202**	Pn	Pn	06 31 54.8	+1.2
MKAR	0.1nm,0.3s,baz=18,slow=29,SNR=2.8			Sn	Sn	06 33 22.0	-1.1
MKAR	0.1nm,0.3s,baz=26,slow=37,SNR=3.5			Lg	Lg	06 34 09.4	

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*IDC **03** 06:32:37.6±1.1, 33°.93S×109°.22W, h0km, mb3.9/5, mb1 4.2/5, mb1mx4.0/19, mbtmp3.9/5, MS4.0/13, Ms1 4.0/13, ms1mx3.9/19, Error ellipse: s-maj=44.4km s-min=29.2km az=22.0*

*NEIC **03** 06:32:39.9±1.7, 33°.97S±0°.10×109°.2W±0°.2, h10km±1km, mb4.7/31, Error ellipse: s-maj=25.4km s-min=16.6km az=268.0*

*GCMT **03** 06:32:39.9±0.3, 34°.12S±0°.04×109°.07W±0°.02, h17km±1km, MW4.9/79, Moment Tensor Solution. s29,c33; s79,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.41±.15; $M_{\theta\theta}$0.30±.09; $M_{\phi\phi}$2.11±.10; $M_{r\theta}$0.20±.33; $M_{\theta\phi}$-0.26±.07; $M_{\phi r}$-0.95±.24; Best double couple: $M_0$2.47700×10^{16} NP1:ϕ_s173.00000°,δ33.00000°,λ-88.00000°. NP2: ϕ_s351.00000°,δ57.00000°,λ-91.00000°. Principal axes: T 2.3450, Plg12.0000°, Azm82.0000°; N 0.2640, Plg1.0000°, Azm351.0000°; P -2.6100, Plg78.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 06:32:40.1±0.6, 33°.92S±0°.09×109°.1W±0°.1, h10km, n61, σ1ˢ.84/50, mb4.7/21, MS4.2/16, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA02	**Isla de Pascua**	**6.75**	**358**	Pn	**Pn**	**06 34 19.6**	**+0.5**
RPN	**Rapa Nui** comp=Z,96nm,18.3s,baz=164,slow=31	**6.78**	**358**	LR	LR	06 36 04.7	
RPN	**Rapa Nui**	**6.78**	**358**	Pn	**Pn**	**06 34 19.2**	**-0.3**
LC01	**Cunco**	**30.25**	**110**	P	**P**	**06 38 51.3**	**+0.3**
PLCA	**Paso Flores** 4.6nm,1.1s,baz=249,slow=9.4,SNR=4.3	**31.23**	**114**	P	**P**	**06 39 00.0**	**+0.2**
PLCA	comp=Z,83nm,20.4s,baz=297,slow=31			LR	LR	06 48 49.6	
PLCA	**Paso Flores**	**31.23**	**114**	P	**P**	**06 39 00.3**	**+0.5**
MT01	**Popeta**	**31.32**	**101**	P	**P**	**06 39 01.7**	**+1.0**
MT01	comp=Z,18nm,1.5s			IAmb	IAmb	06 39 24.7	
NNA	**Nana**	**36.63**	**61**	P	**P**	**06 39 46.2**	**-0.7**
NNA	comp=Z,34nm,1.2s			IAmb	IAmb	06 40 02.5	
PATCX	**Punta Patache**	**36.77**	**79**	P	**P**	**06 39 48.0**	**-0.1**
PATCX	comp=Z,20nm,1.0s			IAmb	IAmb	06 40 05.1	
TAOE	**Nuku Hiva Isla** comp=Z,472nm,27.2s	**37.89**	**304**	*e*LR	LR	06 50 15.9	
MEH	**Mehetia** comp=Z,23nm,0.2s	**38.24**	**285**	*e*T	T	07 20 13.3	
PPT2	**Papeete2** comp=Z,102nm,25.2s	**39.61**	**284**	*e*S	**S**	**06 46 10.1**	**-5.1**
PPT2	comp=Z,788nm,25.8s			*e*LR	LR	06 50 50.0	
LPAZ	**La Paz** comp=Z,1.0nm,0.7s,baz=281,slow=5.2,SNR=2.8	**40.75**	**75**	P	**P**	**06 40 20.4**	**-1.8**
LPAZ	comp=Z,297nm,22.0s,baz=238,slow=30			LR	LR	06 53 09.9	
LPAZ	**La Paz**	**40.75**	**75**	P	**P**	**06 40 20.8**	**-1.3**
PMSA	**Palmer Station**	**41.10**	**153**	P	**P**	**06 40 23.7**	**0.0**
CZSB	**Cruzeiro do Su**	**42.50**	**61**	P	**P**	**06 40 35.6**	**-0.2**
CZSB	comp=Z,12nm,1.2s			IAmb	IAmb	06 40 48.0	
CPUP	**Villa Florida** comp=Z,220nm,18.4s,baz=230,slow=32	**45.04**	**95**	LR	LR	06 57 02.4	
PLTB	**Pedras Altas**	**46.22**	**103**	P	**P**	**06 41 04.0**	**-1.4**
ROSC	**El Rosal** comp=Z,93nm,19.3s,baz=238,slow=32	**50.67**	**47**	LR	LR	06 59 18.9	
ZARC	**Zaragoza, Cauc**	**52.45**	**45**	P	**P**	**06 41 52.8**	**-0.4**
QSPA	**South Pole Qui**	**56.28**	**180**	P	**P**	**06 42 19.9**	**-0.7**
QSPA	comp=Z,5.5nm,1.1s			IAmb	IAmb	06 42 20.2	
VNDA	**Vanda** comp=Z,72nm,18.3s,baz=110,slow=32	**56.96**	**195**	LR	LR	07 02 32.9	
BDFB	**Brasilia** comp=Z,2.6nm,0.9s,baz=81,slow=27,SNR=4.6	**57.60**	**88**	P	**P**	**06 42 30.6**	**-0.1**
BDFB	comp=Z,207nm,21.0s,baz=324,slow=33			LR	LR	07 04 39.4	
BDFB	**Brasilia**	**57.60**	**88**	P	**P**	**06 42 29.9**	**-0.7**
BDFB	comp=Z,9.6nm,1.3s			IAmb	IAmb	06 42 32.1	
RAO	**Raoul Island** comp=Z,137nm,18.2s,baz=125,slow=33	**57.80**	**254**	LR	LR	07 04 22.0	
URZ	**Urewera** comp=Z,251nm,19.5s,baz=31,slow=30	**58.29**	**243**	LR	LR	07 01 46.9	
AFI	**Afiamalu** comp=Z,298nm,18.1s,baz=96,slow=30	**59.76**	**273**	LR	LR	07 02 44.0	
SNAA	**Sanae**	**63.05**	**160**	P	**P**	**06 43 04.7**	**-2.4**
TX31	**Lajitas Ar. Si**	**63.13**	**5**	P	**P**	**06 43 07.4**	**-0.6**
TX32	**Lajitas Array**	**63.13**	**5**	P	**P**	**06 43 07.2**	**-0.9**
TX32	comp=Z,9.8nm,1.6s			IAmb	IAmb	06 43 09.3	
TXAR	**Lajitas Array** comp=Z,0.3nm,0.9s,baz=202,slow=4.7,SNR=2.4	**63.13**	**5**	P	**P**	**06 43 08.9**	**+0.9**
JCT	**Junction City**	**64.66**	**9**		**S**	**06 51 58.1**	**+0.1**
FDF	**Fort de France**	**66.53**	**52**	P	**P**	**06 43 29.6**	**-0.9**
109C	**Camp Elliot, M**	**66.88**	**353**	P	**P**	**06 43 31.0**	**-1.2**
BRAL	**Brewton**	**68.01**	**20**	P	**P**	**06 43 39.7**	**+0.3**
GSC	**Goldstone, Bar**	**69.24**	**353**	P	**P**	**06 43 47.6**	**+0.4**
GSC	comp=Z,6.1nm,1.4s			IAmb	IAmb	06 44 09.9	
TIGA	**Tifton**	**69.33**	**23**	P	**P**	**06 43 48.1**	**+0.5**
W35A	**Tecumseh**	**69.67**	**11**	P	**P**	**06 43 48.8**	**-0.9**
W35A	comp=Z,9.6nm,1.3s			IAmb	IAmb	06 43 50.7	
PMPB	**Monarch Peak**	**70.62**	**350**	P	**P**	**06 43 55.9**	**+0.3**
PMPB	comp=Z,14nm,1.4s			IAmb	IAmb	06 44 21.9	
Y49A	**Blount Mountai**	**70.72**	**20**	P	**P**	**06 43 54.7**	**-1.5**
Y49A	comp=Z,6.4nm,1.1s			IAmb	IAmb	06 44 14.5	
R11A	**Troy Canyon, C**	**72.16**	**355**	P	**P**	**06 44 04.6**	**-0.4**
PBMO	**Poplar Bluff**	**72.47**	**16**	P	**P**	**06 44 07.2**	**+0.6**
KVN	**Kaiserville**	**73.08**	**353**	P	**P**	**06 44 10.3**	**-0.2**
KVN	comp=Z,9.7nm,1.4s			IAmb	IAmb	06 44 11.6	
ISCO	**Idaho Springs**	**73.43**	**3**	P	**P**	**06 44 12.8**	**+0.1**
ISCO	comp=Z,8.8nm,1.6s			IAmb	IAmb	06 44 29.9	
KSU1	**Kansas State U**	**73.58**	**10**	P	**P**	**06 44 12.9**	**-0.3**
KSU1	comp=Z,13nm,1.4s			IAmb	IAmb	06 44 15.1	
DZM	**Mont Dzumac** comp=Z,235nm,27.5s	**73.60**	**254**	*e*LR	LR	07 06 31.0	
PDAR	**Pinedale Array** comp=Z,0.5nm,0.8s,baz=207,slow=6.3,SNR=4.4	**76.32**	**360**	P	**P**	**06 44 27.8**	**-1.5**
PDAR	**Pinedale Array**	**76.32**	**360**	P	**P**	**06 44 28.1**	**-1.2**
WVOR	**Wild Horse Val**	**76.49**	**353**	P	**P**	**06 44 29.1**	**-1.0**
WVOR	comp=Z,5.7nm,1.4s			IAmb	IAmb	06 44 37.4	
I07A	**Izee**	**78.21**	**352**	P	**P**	**06 44 39.0**	**-0.7**
I07A	comp=Z,8.0nm,1.3s			IAmb	IAmb	06 44 47.0	
D08A	**Wollman Farm,**	**81.09**	**353**	P	**P**	**06 44 55.3**	**+0.3**
D08A	comp=Z,13nm,1.5s			IAmb	IAmb	06 45 15.7	
STKA	**Stephens Creek** comp=Z,86nm,18.1s,baz=191,slow=32	**86.65**	**234**	LR	LR	07 18 59.5	
SCHQ	**Schefferville** comp=Z,83nm,18.7s,baz=78,slow=35	**95.58**	**23**	LR	LR	07 28 41.1	
ASAR	**Alice Springs** comp=Z,66nm,19.1s,baz=160,slow=32	**97.13**	**235**	LR	LR	07 23 56.3	
WRA	**Warramunga Arr** comp=Z,68nm,18.0s,baz=135,slow=34	**99.27**	**239**	LR	LR	07 27 59.1	
BRTR	**Keskin Array B** comp=Z,4.6nm,1.1s,baz=248,slow=1.3,SNR=5.1	**149.79**	**68**	PKPbc	**PKPdf**	**06 52 29.6**	**+4.0**
BRTR	**Keskin Array B**	**149.79**	**68**		**PKPdf**	**06 52 22.8**	**-2.9**
BRTR				PKPbc	**pPKPdf**	**06 52 30.2**	**+2.1**
BRTR				PKPab	**sPKPbc**	**06 52 36.7**	**+3.1**
SONM	**Songino Array** comp=Z,1.5nm,0.9s,baz=93,slow=1.7,SNR=7.9	**150.05**	**308**	PKPbc	**PKPdf**	**06 52 28.5**	**+2.8**
SONM	**Songino Array**	**150.05**	**308**		**PKPdf**	**06 52 28.9**	**+3.1**
CMAR	**Chiang Mai Arr** comp=Z,6.1nm,1.0s,baz=182,slow=1.5,SNR=23	**150.60**	**245**	PKPbc	**PKPdf**	**06 52 31.8**	**+4.4**
CMAR	**Chiang Mai Arr**	**150.60**	**245**		**PKPdf**	**06 52 32.1**	**+4.8**
CMAR				PKPab	**sPKPbc**	**06 52 38.6**	**+2.5**

JMA 03 06:57:47.1±0.1, 37°.93N×144°.61E, h40km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.58**	**297**	P	Pn	06 58 27.8	+1.5
OFUJ				*e*S	Sn	06 58 58.2	+1.8
JIO	**Ouri**	**2.62**	**283**	P	Pn	06 58 28.5	+1.6
JIO				S	Sn	06 58 58.9	+1.4
JMK	**Ichinoseki**	**2.85**	**292**	P	Pn	06 58 31.9	+1.8
JOM	**Ohasama**	**3.02**	**302**	P	Pn	06 58 34.5	+2.1
JOM				*e*S	Sn	06 59 10.1	+2.8
JFT	**Otama**	**3.41**	**264**	*e*S	Sn	06 59 19.2	+2.2
JANG	**Nango**	**3.43**	**316**	*e*S	Sn	06 59 18.9	+1.5
JCH	**Churui**	**4.78**	**349**	P	Pn	06 58 56.6	+0.1
JRY	**Ryogami san**	**4.95**	**249**	P	Pn	06 59 00.0	+1.0
JRY				*e*S	Sn	06 59 53.8	-1.2
JTKR	**Abashiri--Toko**	**6.06**	**355**	*e*S	Sn	07 00 18.4	-3.7

IDC 03 06:58:07.0±7.0, 3°.30N×128°.23E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/38, mbtmp3.7/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/40, Error ellipse: s-maj=144.5km s-min=109.5km az=80.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata** comp=Z,29nm,21.8s,baz=262,slow=38	**14.16**	**199**	LR	LR	07 07 00.3	
LEM	**Lembang** comp=Z,92nm,19.4s,baz=168,slow=36	**22.90**	**244**	LR	LR	07 12 01.3	
WRA	**Warramunga Arr** 1.1nm,0.4s,baz=346,slow=11,SNR=25	**23.86**	**166**	P	P	07 03 22.9	+0.7
ASAR	**Alice Springs** 0.2nm,0.4s,baz=355,slow=8.2,SNR=4.2	**27.36**	**169**	P	P	07 03 54.0	-0.1
STKA	**Stephens Creek** 0.6nm,0.3s,baz=337,slow=10,SNR=3.7	**37.22**	**161**	P	P	07 05 19.4	-0.8

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*IDC **03** 06:58:44.5±1.0, 18°.89S×177°.68W, h627km±14km, mb3.4/10, mb1 3.6/13, mb1mx3.3/38, mbtmp4.4/13, Error ellipse: s-maj=21.2km s-min=10.3km az=154.0*

*NEIC **03** 06:58:46.1±1.8, 18°.7S±0°.1×177°.7W±0°.1, h637km±10km, mb4.2/31, Error ellipse: s-maj=22.3km s-min=11.5km az=127.0*

ISC 03 06:58:43.6±0.6, 18°.8S±0°.1×177°.63W±0°.08, h600km, n48, σ2ˢ.07/51, mb4.2/26, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 8.2nm,0.3s,baz=137,slow=8.2,SNR=50	**4.24**	**284**	P	**P**	**07 00 14.2**	**+3.3**
MSVF	**Nonsavu**	**4.24**	**284**	P	**P**	**07 00 14.2**	**+3.3**
MSVF				S	**S**	**07 01 29.9**	**+7.9**
AFI	**Afiamalu** 4.2nm,0.3s,baz=48,slow=2.1,SNR=4.4	**7.43**	**50**	P	**P**	**07 00 38.7**	**+1.0**
AFI	3.2nm,0.3s,baz=336,slow=4.6,SNR=4.9			S	**S**	**07 02 13.5**	**+2.5**
SANVU	**Saraoutou**	**14.88**	**281**	P	**P**	**07 01 50.9**	**+0.2**
KNTN	**Kanton**	**16.95**	**21**	P	**P**	**07 02 08.3**	**-1.4**
OUZ	**Omahuta**	**18.11**	**204**	P	**P**	**07 02 23.5**	**+3.4**
URZ	**Urewera** 2.5nm,0.3s,baz=302,slow=23,SNR=14	**19.92**	**192**	P	**P**	**07 02 34.9**	**-1.6**
URZ	**Urewera**	**19.92**	**192**	P	**P**	**07 02 35.3**	**-1.2**
URZ	comp=Z,9.6nm,0.6s			IAmb	IAmb	07 02 42.4	
CAN	**Canberra**	**33.77**	**234**	P	**P**	**07 04 38.1**	**+0.9**
CAN	comp=Z,18nm,1.4s			IAmb	IAmb	07 04 59.6	
CTA	**Charters Tower** comp=Z,6.0nm,0.4s,baz=88,slow=12,SNR=8.8	**34.05**	**262**	P	**P**	**07 04 39.2**	**-0.5**
CTAO	**Charters Tower**	**34.05**	**262**	P	**P**	**07 04 39.3**	**-0.4**
PMG	**Port Moresby** comp=Z,13nm,0.5s,baz=103,slow=6.6,SNR=6.7	**35.35**	**280**	P	**P**	**07 04 50.1**	**-0.5**
PMG	**Port Moresby**	**35.35**	**280**	P	**P**	**07 04 50.6**	**0.0**
COEN	**Coen**	**37.86**	**271**	P	**P**	**07 05 11.1**	**-0.1**
BBOO	**Buckleboo**	**43.63**	**242**	P	**P**	**07 05 56.3**	**-0.3**
BBOO	comp=Z,7.0nm,1.1s			IAmb	IAmb	07 06 10.7	
JAY	**Jayapura** comp=Z,14nm,0.5s,baz=161,slow=4.9,SNR=9.1	**43.87**	**287**	P	**P**	**07 05 57.4**	**-1.3**
HON	**Honolulu**	**44.27**	**27**	P	**P**	**07 06 00.6**	**-0.9**
WB0	**Warramunga Arr**	**45.18**	**261**	P	**P**	**07 06 07.5**	**-1.2**
WB0	comp=Z,8.8nm,0.6s			IAmb	IAmb	07 06 07.9	
WB2	**Warramunga Arr**	**45.20**	**260**	P	**P**	**07 06 07.7**	**-1.0**
WB2	comp=Z,11nm,1.1s			IAmb	IAmb	07 06 08.1	
WRA	**Warramunga Arr** comp=Z,3.0nm,0.4s,baz=97,slow=7.5,SNR=76	**45.21**	**260**	P	**P**	**07 06 07.7**	**-1.2**
WRA	comp=Z,0.5nm,0.8s,baz=92,slow=15,SNR=3.1			S	**S**	**07 12 02.2**	**-4.2**
WRA	**Warramunga Arr**	**45.21**	**260**	P	**P**	**07 06 07.4**	**-1.4**
AS31	**Alice Springs**	**45.27**	**255**	P	**P**	**07 06 08.2**	**-1.1**
ASAR	**Alice Springs** comp=Z,3.8nm,0.5s,baz=88,slow=8.1,SNR=31	**45.27**	**255**	P	**P**	**07 06 08.4**	**-0.9**
ASAR	comp=Z,1.1nm,0.6s,baz=91,slow=16,SNR=7.9			S	**S**	**07 12 03.0**	**-4.3**
MTN	**Manton Dam**	**49.52**	**269**	P	**P**	**07 06 38.8**	**-2.3**
MTN	comp=Z,17nm,1.4s			IAmb	IAmb	07 07 07.6	
KNRA	**Kununurra**	**51.14**	**265**	P	**P**	**07 06 51.6**	**-1.3**
KNRA	comp=Z,6.3nm,0.7s			IAmb	IAmb	07 06 52.2	
FITZ	**Fitzroy Crossi** comp=Z,1.0nm,0.5s,baz=89,slow=5.7,SNR=1.7	**53.62**	**261**	P	**P**	**07 07 09.5**	**-0.9**
VNDA	**Vanda**	**59.62**	**185**	P	**P**	**07 07 52.0**	**+1.5**
QSPA	**South Pole Qui**	**71.26**	**180**	P	**P**	**07 09 03.7**	**+0.4**
YBH	**Yreka Blue Hor** comp=Z,1.2nm,0.5s,baz=176,slow=4.3,SNR=4.8	**78.75**	**39**	P	**P**	**07 09 44.9**	**-0.4**

K05A	**Summer Lake**	**80.42**	**39**	P	**P**	**07 09 53.7**	**-0.4**
K05A				IAmb	IAmb	07 10 09.9	
	comp=Z,8.1nm,1.3s						
M19K	**Big River Lodg**	**82.53**	**11**	P	**P**	**07 10 02.5**	**-1.7**
M19K				IAmb	IAmb	07 10 03.5	
	comp=Z,9.0nm,1.4s						
L19K	**White Mountain**	**82.71**	**11**	P	**P**	**07 10 03.9**	**-1.2**
L19K				IAmb	IAmb	07 10 05.0	
	comp=Z,12nm,1.4s						
PWL	**Port Wells**	**82.82**	**14**	P	**P**	**07 10 03.7**	**-1.9**
TTA	**Tatalina**	**83.22**	**10**	P	**P**	**07 10 06.4**	**-1.2**
TTA				IAmb	IAmb	07 10 21.9	
	comp=Z,6.2nm,1.4s						
KNK	**Knik Glacier**	**83.28**	**14**	P	**P**	**07 10 06.7**	**-1.2**
KNK				IAmb	IAmb	07 10 07.2	
	comp=Z,6.6nm,1.0s						
GHO	**Glory Hole Cre**	**83.50**	**13**	P	**P**	**07 10 07.4**	**-1.7**
GHO				IAmb	IAmb	07 10 08.6	
	comp=Z,8.3nm,1.0s						
BMRM	**Bremner River**	**83.81**	**16**	P	**P**	**07 10 09.0**	**-1.6**
BMRM				IAmb	IAmb	07 10 18.5	
	comp=Z,11nm,1.1s						
SCM	**Sheep Creek Mo**	**83.91**	**14**	P	**P**	**07 10 09.4**	**-1.7**
SCM				IAmb	IAmb	07 10 36.9	
	comp=Z,8.4nm,1.3s						
N25K	**Chitina, Valde**	**84.36**	**15**	P	**P**	**07 10 11.9**	**-1.5**
N25K				IAmb	IAmb	07 10 25.4	
	comp=Z,8.9nm,1.4s						
PLID	**Pearl Lake**	**84.67**	**39**	P	**P**	**07 10 14.7**	**-0.8**
TRF	**Thorofare Moun**	**84.72**	**12**	P	**P**	**07 10 12.8**	**-2.3**
TRF				IAmb	IAmb	07 10 29.8	
	comp=Z,10.0nm,1.4s						
TXAR	**Lajitas Array**	**85.85**	**57**	P	**P**	**07 10 21.5**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=223,slow=6.7,SNR=9.2						
WRH	**Wood River Hil**	**86.08**	**12**	P	**P**	**07 10 19.2**	**-2.1**
ILAR	**Eielson Array**	**86.59**	**13**	P	**P**	**07 10 21.4**	**-2.4**
	comp=Z,0.6nm,0.5s,baz=224,slow=4.7,SNR=17						
PDAR	**Pinedale Array**	**87.49**	**43**	P	**P**	**07 10 27.8**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=233,slow=2.8,SNR=6.2						
PDAR	**Pinedale Array**	**87.49**	**43**	P	**P**	**07 10 28.3**	**-0.5**
DAWY	**Dawson**	**87.74**	**16**	P	**P**	**07 10 28.5**	**-0.7**
OK029	**Liberty Lake**	**93.16**	**53**		pwP	07 13 13.0	+5.8

JMA 03 07:31:49.6±0.2**,37°.68N**×**135°.87E,h11**^{km}±2^{km}**,M4.0,Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHG	**Hegura jima**	**0.85**	**78**	P	Pg	07 32 05.8	-0.2
JHG				S	Sg	07 32 17.3	+0.2
JJH	**Hakui**	**1.05**	**136**	P	Pb	07 32 08.9	-0.8
JJH				S	Sg	07 32 22.9	-0.5
JSZ	**Suzu**	**1.21**	**101**	P	Pn	07 32 11.7	-0.7
JSZ				S	Sb	07 32 28.0	-0.1
JKG	**Kaga**	**1.45**	**165**	P	Pn	07 32 15.7	0.0
JKG				S	Sn	07 32 34.1	-0.6
JTT	**Ttatey**	**1.59**	**132**	P	Pb	07 32 18.5	-0.4
JTT				S	Sb	07 32 39.4	+0.4
JGN	**Niukaw**	**1.86**	**141**	P	Pb	07 32 23.2	-0.4
JGN				S	Sb	07 32 46.6	-0.3
MAT	**Matsushiro**	**2.19**	**121**	P	Pn	07 32 26.6	+0.7
MAT				*e*S	Sn	07 32 53.0	0.0

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*NNC **03** 07:40:02.3±2.2,53°.69N×87°.06E,h0^{km},mb2.9,mpv2.8, Error ellipse: s-maj=19.0km s-min=9.3km az=41.0, Suspected Mining explosion.*

*IDC **03** 07:40:05.0±2.4,53°.72N×86°.90E,h0^{km},mb1 3.0/2, mb1mx2.9/36,mbtmp3.0/2,ML2.8/2,Error ellipse: s-maj=22.1km s-min=12.5km az=73.0*

ISC 03 07:39:59.8±2.7**,52°.96N**±0°.06×**86°.6E**±0°.2**,h0**^{km}**,n8,** σ**1s.16**/9**,6C-3D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.45**	**314**	*i*		07 47 00.0	
	baz=100,slow=337,SNR=17						
ZAA0	**Zalesovo Array**	**1.45**	**314**	⇑P	**Pg**	**07 40 27.6**	**-0.1**
	0.7nm,0.6s						
ZAA0				⇑S	**Sg**	**07 40 46.1**	**-0.3**
	6.9nm,0.8s						
ZALV	**Zalesovo Beam**	**1.45**	**314**	Pg	**Pb**	**07 40 27.8**	**+0.1**
	2.0nm,0.3s,baz=99,slow=17,SNR=19						
ZALV				Lg	Lg	07 40 45.9	
	2.8nm,0.3s,baz=100,slow=29,SNR=23						
KURK	**Kurchatov**	**5.43**	**249**	⇑Lg	Lg	07 43 13.9	
	3.2nm,0.7s						
KURBB	**Kurchatov Arra**	**5.53**	**248**	Pn	**Pb**	**07 41 36.2**	**-0.9**
	0.1nm,0.3s,baz=57,slow=13,SNR=8.5						
KURBB				Lg	Lg	07 43 14.6	
	0.1nm,0.3s,baz=60,slow=34,SNR=4.2						
KURBB	**Kurchatov Arra**	**5.53**	**248**	⇑Pn	**Pb**	**07 41 36.1**	**-0.9**
	2.3nm,0.7s						
KURBB				⇓Sn	**Sb**	**07 42 44.7**	**+0.9**
	3.4nm,0.6s						
KURBB				⇓Lg	Lg	07 43 16.5	
	6.2nm,0.7s						
MK31	**Makanchi Array**	**6.77**	**206**	⇑Pn	Pb	07 41 52.0	-6.3
	0.4nm,0.5s,baz=26,slow=12,SNR=10						
MK31				⇓Sn	**Sb**	**07 43 20.4**	**+0.8**
	0.5nm,0.5s						
MK31				⇑Lg	Lg	07 44 04.2	
	2.1nm,0.8s,baz=24,slow=29						
MKAR	**Makanchi Array**	**6.77**	**206**	Pn	**Pb**	**07 41 57.4**	**-0.9**
	0.2nm,0.3s,baz=28,slow=13,SNR=12						
MKAR				Sn	**Sb**	**07 43 21.7**	**+2.0**
	0.1nm,0.3s,baz=24,slow=27,SNR=3.4						
MKAR				Lg	Lg	07 44 03.1	
	0.1nm,0.3s,baz=27,slow=27,SNR=2.6						

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*RSPR **03** 07:47:50.7,19°.61N×65°.30W,h81^{km}±16^{km},MD3.4/6*

*NEIC **03** 07:47:54.6±1.0,19°.31N±0°.10×65°.40W±0°.06,h53^{km}±43^{km}, Error ellipse: s-maj=15.6km s-min=4.5km az=153.0*

ISC 03 07:47:49.6±2.8**,19°.5N**±0°.1×**65°.3W**±0°.1**,h16**^{km}**,n22,** σ**0s.54**/22**,6C,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**1.22**	**166**	⇑*e*P	**Pg**	**07 48 13.0**	**-0.2**
STVI	**Saint Thomas**	**1.22**	**166**	*e*S	**Sg**	**07 48 30.3**	**+1.3**
STVI	**Saint Thomas**	**1.22**	**166**	Pn	**Pg**	**07 48 12.9**	**-0.2**
CUPR	**Culebra, Puert**	**1.22**	**181**	⇑*e*P	**Pb**	**07 48 12.3**	**0.0**
CUPR	**Culebra, Puert**	**1.22**	**181**	*e*S	**Sb**	**07 48 27.3**	**-0.6**
CUPR	**Culebra, Puert**	**1.22**	**181**		**Pn**	**07 48 11.9**	**-0.2**
CBYP	**Canovanas**	**1.38**	**204**	⇑*e*P	**Pn**	**07 48 13.7**	**-0.6**
CBYP	**Canovanas**	**1.38**	**204**	Pn	**Pn**	**07 48 14.0**	**-0.3**
GCPR	**Guaynabo City**	**1.45**	**212**	Pn	**Pn**	**07 48 14.0**	**-1.2**
SJG	**San Juan**	**1.65**	**211**	Pn	**Pn**	**07 48 17.4**	**-0.5**
SJG				IAML		07 48 40.8	
	38nm,0.3s						
SJG				IAML		07 48 43.1	
	47nm,0.2s						
PDPR	**Patillas Dam,**	**1.67**	**205**	Pn	**Pn**	**07 48 17.9**	**-0.3**
PDPR				IAML		07 49 08.2	
	comp=E,73nm,1.8s						
IGPR	**InterUniversit**	**1.75**	**207**	⇑*e*P	**Pn**	**07 48 19.6**	**+0.3**
IGPR	**InterUniversit**	**1.75**	**207**	*e*S	**Sn**	**07 48 41.9**	**+0.5**
AOPR	**Arecibo Observ**	**1.84**	**230**	⇑*e*P	**Pn**	**07 48 20.2**	**-0.3**
AOPR	**Arecibo Observ**	**1.84**	**230**	*e*S	**Sn**	**07 48 43.3**	**-0.2**
AOPR	**Arecibo Observ**	**1.84**	**230**		**Pn**	**07 48 20.5**	**-0.1**
CELP	**Cerrillos**	**1.91**	**221**	Pn	**Pn**	**07 48 20.9**	**-0.7**
CELP				IAML		07 48 47.0	
	comp=N,28nm,0.5s						
OBIP	**Obispado Ponce**	**1.95**	**221**	Pn	**Pn**	**07 48 22.6**	**+0.5**
OBIP				IAML		07 48 58.3	
	comp=N,35nm,2.6s						
LSP	**Las Mesas**	**2.19**	**232**	⇑*e*P	**Pn**	**07 48 25.5**	**+0.1**
MLPR	**Magueyes Islan**	**2.29**	**227**	Pn	**Pn**	**07 48 26.9**	**+0.1**
MLPR				IAML		07 49 25.0	
	comp=N,38nm,3.0s						
MLPR				IAML		07 49 32.9	
	comp=E,28nm,3.0s						
CRPR	**Cabo Rojo, PR**	**2.31**	**229**	Pn	**Pn**	**07 48 27.3**	**+0.2**
CRPR				IAML		07 49 34.4	
	comp=N,46nm,3.2s						
SDDR	**Presa de Saban**	**5.71**	**265**	Pn	**Pn**	**07 49 14.1**	**+0.2**

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*JMA **03** 07:52:33.1±0.3,44°.19N×148°.15E,h0^{km},M3.6*

*SKHL **03** 07:52:34.5±0.4,44°.50N×148°.40E,h51^{km}±4^{km},mb4.3/2*

ISC 03 07:52:32.4±3.2**,44°.44N**±0°.09×**148°.3E**±0°.2**,h10**^{km}**,n12,** σ**1s.03**/21**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.84**	**339**	*i* P	**Pg**	**07 52 48.5**	**-0.1**
KUR				AMB	AMB	07 52 49.0	
	180nm,0.4s						
KUR				*i* S	**Sg**	**07 52 59.0**	**-0.6**
KUR				A	A	07 53 04.1	
	840nm,0.3s						
KUR				A	A	07 53 04.1	
	370nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.79**	**258**	*e*P	**Pn**	**07 53 03.3**	**0.0**
YUK				AMB	AMB	07 53 05.3	
	180nm,0.5s						
YUK				*e*S	**Sn**	**07 53 25.1**	**-1.0**
YUK				A	A	07 53 32.2	
	440nm,0.7s						
YUK				A	A	07 53 32.2	
	820nm,0.7s						
GRPR	**Tuman**	**1.86**	**257**	*e*P	**Pn**	**07 53 05.0**	**+0.7**
GRPR				*e*S	**Sn**	**07 53 27.4**	**-0.5**
GRPR				A	A	07 53 32.0	
	330nm,0.4s						
GRPR				A	A	07 53 32.0	
	190nm,0.4s						
GLVR	**Golovnino**	**2.12**	**251**	*e*S	**Sn**	**07 53 34.2**	**+0.1**
NEM2	**Nemuro 2**	**2.13**	**240**	P	**Pn**	**07 53 07.7**	**-0.3**
NEM2				*e*S	**Sn**	**07 53 32.6**	**-1.9**
NMR	**Nemuro--Hokkai**	**2.14**	**241**	*e*P	**Pn**	**07 53 07.9**	**-0.2**
NMR				*e*S	**Sn**	**07 53 33.2**	**-1.5**
JNK	**Nakash**	**2.71**	**253**	P	**Pn**	**07 53 16.9**	**+0.9**
JNK				*e*S	**Sn**	**07 53 49.0**	**+0.1**
AKK	**Akkeshi**	**2.88**	**241**	*e*S	**Sn**	**07 53 52.4**	**-0.5**
JAK	**Akkeshi**	**2.98**	**242**	P	**Pn**	**07 53 19.7**	**+0.1**
JAK				*e*S	**Sn**	**07 53 54.3**	**-1.1**
JAR	**Ashorobuto**	**3.46**	**252**	P	**Pn**	**07 53 28.1**	**+1.8**
JAR				*e*S	**Sn**	**07 54 08.4**	**+1.0**
JCH	**Churui**	**4.02**	**245**	P	**Pn**	**07 53 35.4**	**+1.4**
JCH				*e*S	**Sn**	**07 54 21.2**	**+0.1**
JNBK	**Urakawa-nobuka**	**4.58**	**244**	P	**Pn**	**07 53 43.2**	**+1.6**

NOU 03 07:57:33.6,15°.69S×**167°.63E,h98**^{km}**,MLv4.0**/8**,Vanuatu Islands,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.48**	**300**	P	Pn	07 57 50.3	+1.3
DVP	**Devils Point**	**2.09**	**165**	P	Pn	07 58 07.9	+0.6
YATNC	**Mamie plateau,**	**6.37**	**186**	P	Pn	07 59 04.7	-0.3
DZM	**Mont Dzumac**	**6.45**	**190**	P	Pn	07 59 06.3	+0.2

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*IDC **03** 07:59:34.6±1.2,37°.13N×135°.08E,h373^{km}±21^{km},mb2.9/1, mb1 3.0/5,mb1mx2.5/47,mbtmp3.6/5,Error ellipse: s-maj=30.6km s-min=26.8km az=35.0*

*JMA **03** 07:59:34.7±0.1,37°.06N×135°.13E,h370^{km},M3.3*

ISC 03 07:59:34.5±1.1**,37°.1N**±0°.1×**135°.1E**±0°.1**,h372**^{km}**,n9,** σ**0s.43**/9**,Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	**Wachi**	**1.86**	**172**	P	**Pn**	**08 00 26.6**	**-0.4**
MJAR	**Matsushiro Arr**	**2.58**	**102**	P	**Pn**	**08 00 32.7**	**+0.6**
	0.2nm,0.3s,baz=272,slow=6.3,SNR=14						
JSD	**Sado**	**2.69**	**69**	P	**Pn**	**08 00 33.1**	**+0.2**
JOD2	**Odawara 2**	**3.74**	**119**	P	**Pn**	**08 00 42.3**	**0.0**
JMM	**Marumori**	**4.61**	**79**	P	**Pn**	**08 00 51.1**	**+0.2**
KSRS	**Korea Array**	**5.71**	**275**	P	**Pn**	**08 01 03.1**	**+0.4**
	0.3nm,0.3s,baz=94,slow=12,SNR=8.7						
USRK	**Ussuriysk Ar.**	**7.45**	**343**	P	**Pn**	**08 01 22.7**	**+0.4**
	baz=165,slow=7.4,SNR=4.5						
ASAJ	**Asahikawa**	**9.03**	**37**	P	**Pn**	**08 01 40.4**	**-0.4**
	2.0nm,0.3s,baz=230,slow=12,SNR=6.5						
WRA	**Warramunga Arr**	**56.76**	**181**	P	**P**	**08 08 41.1**	**0.0**
	0.4nm,0.8s,baz=355,slow=7.5,SNR=8.2						

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*INET **03** 08:09:20.2,11°.95N×88°.07W,h15^{km},MW3.7*

SNET 03 08:09:15.7±1.4**,11°.74N**×**87°.94W,h10**^{km}±137^{km}**,ML3.4, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCND	**La Caada**	**1.56**	**2**	*e*P	Pn	08 09 43.5	0.0
ALJI	**Alcalda de J**	**1.69**	**339**	*e*P	Pn	08 09 44.7	-0.6
ALJI				*e*S	Sn	08 10 06.2	-0.8
ALJI				IAML		08 10 13.3	
	comp=Z,310nm,0.5s						
COEB	**Comit de Eme**	**1.84**	**342**	*e*P	Pn	08 09 46.8	-0.7
COEB				*e*S	Sb	08 10 12.4	-0.2
COEB				IAML		08 10 24.2	
	comp=Z,356nm,0.4s						
PQSS	**Presa 15 de Se**	**1.97**	**342**	*e*P	Pn	08 09 49.1	0.0
COEG	**Centro de Oper**	**2.08**	**334**	*e*P	Pn	08 09 50.2	-0.5
COEG				IAML		08 10 25.3	
	comp=Z,248nm,0.4s						
SCLA	**Alcaldia de Sa**	**2.10**	**339**	*e*P	Pn	08 09 50.8	-0.1
SJTE	**Alcalda de S**	**2.13**	**331**	*e*P	Pn	08 09 50.9	-0.6
JAYA	**Jayaque - finc**	**2.41**	**322**	*e*P	Pn	08 09 54.6	-0.7
JAYA				*e*S	Sn	08 10 25.8	+0.9

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*SOME **03** 08:12:41.2,44°.67N×82°.22E,h15^{km}*

*NNC **03** 08:12:43.3±2.2,44°.71N×82°.10E,h0^{km},mb3.1,mpv3.0, Error ellipse: s-maj=26.2km s-min=6.6km az=120.0*

ISC 03 08:12:41.2±1.3**,44°.66N**±0°.05×**82°.30E**±0°.06**,h10**^{km}**,n15,** σ**0s.80**/25**,5C-1D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.83**	**261**	*e*P	**Pb**	**08 13 14.6**	**-0.1**
	6.0nm,0.1s						
DJR				*e*S	**Sg**	**08 13 38.6**	**-1.3**
	5.1nm,0.3s						
KTMS	**Ketmen**	**1.85**	**230**	*e*P	**Pb**	**08 13 15.2**	**0.0**
	3.5nm,0.1s						
KTMS				*e*S	**Sg**	**08 13 39.7**	**-1.0**
	19nm,0.4s						
MK31	**Makanchi Array**	**2.14**	**360**	⇑Pn	**Pb**	**08 13 19.8**	**-0.2**
	1.6nm,0.2s,baz=181,slow=13,SNR=149						
MK31				⇑Sn	**Sb**	**08 13 47.5**	**+0.9**
	3.1nm,0.3s,baz=180,slow=26,SNR=23						
MAKZ	**Makanchi**	**2.16**	**354**	⇑Pn	**Pb**	**08 13 19.5**	**-0.9**
	0.8nm,0.2s						
MAKZ				⇑Sn	**Sb**	**08 13 47.8**	**+0.5**
	5.2nm,0.7s						
KAPS	**Kapalarasan**	**2.18**	**288**	*e*P	**Pb**	**08 13 20.4**	**-0.4**
	4.0nm,0.2s						
KAPS				*e*S	**Sb**	**08 13 48.2**	**+0.3**
	8.3nm,0.2s						
KAPS	**Kapalarasan**	**2.18**	**288**	Pg	**Pb**	**08 13 20.1**	**-0.7**
	4.0nm,0.2s						
KAPS				Lg	Lg	08 13 48.4	
	9.4nm,0.3s						
PDGK	**Podgornoye**	**2.42**	**238**	Pg	**Pb**	**08 13 24.3**	**-0.6**
	2.4nm,0.2s						
PDGK				Lg	Lg	08 13 55.9	
	3.8nm,0.4s						
PDGK	**Podgornoye**	**2.42**	**238**	⇑Pn	**Pn**	**08 13 21.8**	**+0.8**
	1.6nm,0.5s						
PDGK				⇓Sn	**Sb**	**08 13 55.9**	**+0.9**
	6.6nm,0.6s						
UZB	**Uzynbulak**	**2.81**	**239**	*e*P	**Pb**	**08 13 30.6**	**-0.9**
	5.0nm,0.2s						
UZB				*e*S	**Sb**	**08 14 06.5**	**+0.5**
	3.3nm,0.2s						
UZB	**Uzynbulak**	**2.81**	**239**	Pg	**Pb**	**08 13 30.8**	**-0.8**
	4.9nm,0.2s						
UZB				Lg	Lg	08 14 06.5	
	2.7nm,0.2s						
ARXS	**Arharly**	**3.23**	**264**	*e*P	**Pb**	**08 13 38.4**	**-0.3**
	1.3nm,0.2s						
ARXS				*e*S	**Sb**	**08 14 19.7**	**+1.5**
	4.5nm,0.2s						
ARXS	**Arharly**	**3.23**	**264**	Pg	**Pb**	**08 13 38.5**	**-0.3**
	1.3nm,0.1s						
ARXS				Lg	Lg	08 14 19.9	
	3.8nm,0.2s						
SATY	**Saty**	**3.24**	**242**	*e*P	**Pb**	**08 13 38.0**	**-0.8**
	2.7nm,0.1s						
SATY				*e*S	**Sb**	**08 14 19.1**	**+0.7**
	5.0nm,0.3s						
SATY	**Saty**	**3.24**	**242**	Pg	**Pb**	**08 13 38.1**	**-0.8**
	2.1nm,0.1s						
SATY				Lg	Lg	08 14 19.1	
	5.2nm,0.3s						
ZSN	**Zaisan**	**3.32**	**32**	*e*P	**Pb**	**08 13 39.4**	**-0.7**
	2.0nm,0.2s						
ZSN				*e*S	**Sb**	**08 14 21.1**	**+0.7**
	3.2nm,0.5s						

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*IDC **03** 08:24:03.2±0.7,31°.25N×141°.90E,h0^{km},mb3.9/13, mb1 4.1/17,mb1mx3.8/50,mbtmp3.9/17,ML3.5/4,MS3.6/3, Ms1 3.6/3,ms1mx3.0/45,Error ellipse: s-maj=22.9km s-min=14.5km az=68.0*

*NIED **03** 08:24:04.8,31°.54N×142°.17E,h16^{km},MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.27; M$_{\theta\theta}$-0.12; M$_{\phi\phi}$-1.15; M$_{r\theta}$-0.05; M$_{\theta\phi}$0.09; M$_{\phi r}$0.06; Fault plane solution: M$_0$1.21000×10^{15} NP1: φ$_s$353.00000°,δ46.00000°,λ87.00000°. NP2: φ$_s$177.00000°,δ44.00000°,λ93.00000°.*

*JMA **03** 08:24:04.7±0.4,31°.54N×142°.17E,h16^{km},M4.3*

*NEIC **03** 08:24:07.6±1.6,31°.30N±0°.07×142°.0E±0°.1,h26^{km}±5^{km}, mb4.3/10,Error ellipse: s-maj=17.2km s-min=6.9km az=60.0*

ISC 03 08:24:07.5±0.6**,31°.31N**±0°.06×**141°.95E**±0°.10**,h29**^{km}**,n41,** σ**1s.37**/42**,mb4.2**/17**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.55**	**315**	*e*S	**Sn**	**08 25 16.9**	**0.0**
JHJ2	**Mitsune**	**2.55**	**315**	Pn	**Pb**	**08 24 48.6**	**-4.0**
JHJ	**Hachijo jima 2**	**2.57**	**315**	Pn	**Pn**	**08 24 47.5**	**+0.2**
	11nm,0.3s,baz=90,slow=20,SNR=1.5						
JHJ				Sn	**Sn**	**08 25 17.4**	**-0.2**
	26nm,0.3s,baz=77,slow=19,SNR=2.6						
BSO1	**Boso 1**	**3.43**	**346**	P	**Pn**	**08 24 56.6**	**-1.9**
BSO1				*e*S	**Sn**	**08 25 35.6**	**-2.4**
JCJ	**Chichijima**	**4.21**	**177**	Pn	**Pn**	**08 25 09.9**	**+0.2**
	20nm,0.3s,baz=288,slow=19,SNR=2.5						
JCJ				Sn	**Sn**	**08 25 54.2**	**-3.6**
	19nm,0.3s,baz=294,slow=20,SNR=2.2						
JHU	**Hanno**	**5.05**	**335**	P	**Pn**	**08 25 19.9**	**-1.3**
JHU				*e*S	**Sn**	**08 26 16.4**	**-2.2**
JAG	**Ashikaga**	**5.51**	**339**	P	**Pn**	**08 25 27.0**	**-0.6**
MJAR	**Matsushiro Arr**	**6.07**	**330**	Pn	**Pn**	**08 25 35.5**	**+0.1**
	0.6nm,0.3s,baz=153,slow=12,SNR=22						
MJAR				Sn	**Sn**	**08 26 44.5**	**+0.6**
	0.2nm,0.3s,baz=163,slow=14,SNR=1.7						
MJAR	**Matsushiro Arr**	**6.07**	**330**	Pn	**Pn**	**08 25 36.1**	**+0.8**
MAJO	**Matsushiro**	**6.08**	**330**	Pn	**Pn**	**08 25 36.4**	**+1.0**
MAT	**Matsushiro**	**6.08**	**330**	P	**Pn**	**08 25 36.3**	**+0.9**
MAT				*e*S	**Sn**	**08 26 44.7**	**+0.8**
JMM	**Marumori**	**6.61**	**352**		**Pn**	**08 25 40.8**	**-1.8**
KSRS	**Korea Array**	**13.10**	**302**	LR	LR	08 32 32.4	
	comp=Z,113nm,18.1s,baz=120,slow=39						
KLR	**Kul'dur**	**19.48**	**340**	P	**Pn**	**08 28 31.9**	**-1.5**
	0.1nm,0.3s,baz=162,slow=20,SNR=3.1						
SONM	**Songino Array**	**31.65**	**312**	P	**P**	**08 30 29.1**	**+0.9**
	2.9nm,1.0s,baz=113,slow=7.0,SNR=8.2						
SONM	**Songino Array**	**31.65**	**312**	IAmb	IAmb	08 30 32.7	
	comp=Z,4.5nm,1.1s						
SEY	**Seymchan**	**32.34**	**9**	P	**P**	**08 30 35.6**	**+1.7**
	comp=Z,1.6nm,0.7s,baz=182,slow=23,SNR=2.0						
CMAR	**Chiang Mai Arr**	**40.81**	**262**	LR	LR	08 50 46.4	
	comp=Z,34nm,18.0s,baz=335,slow=39						
ZALV	**Zalesovo Beam**	**46.24**	**317**	P	**P**	**08 32 29.5**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=79,slow=7.9,SNR=6.2						
MK31	**Makanchi Array**	**47.72**	**307**	P	**P**	**08 32 41.6**	**-0.1**
MK31				IAmb	IAmb	08 32 55.6	
	comp=Z,3.3nm,0.9s						
MKAR	**Makanchi Array**	**47.72**	**307**	P	**P**	**08 32 41.6**	**0.0**
	comp=Z,1.7nm,0.7s,baz=90,slow=9.4,SNR=12						
KURK	**Kurchatov**	**49.95**	**312**	P	**P**	**08 32 58.3**	**-0.3**
KURK				IAmb	IAmb	08 33 18.2	
	comp=Z,4.7nm,0.9s						
KURBB	**Kurchatov Arra**	**50.02**	**312**	P	**P**	**08 32 58.9**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=87,slow=7.6,SNR=11						
PRZ	**Przheval'sk**	**50.95**	**301**	P	**P**	**08 33 06.4**	**-0.2**
WR0	**Warramunga Arr**	**51.47**	**189**	P	**P**	**08 33 09.4**	**-0.9**
WR0				IAmb	IAmb	08 33 11.6	
	comp=Z,9.1nm,1.1s						
WRA	**Warramunga Arr**	**51.48**	**189**	P	**P**	**08 33 09.6**	**-0.9**
	comp=Z,3.3nm,1.0s,baz=6.4,slow=7.5,SNR=12						
WRA	**Warramunga Arr**	**51.48**	**189**	P	**P**	**08 33 09.8**	**-0.6**
ILAR	**Eielson Array**	**54.15**	**30**	P	**P**	**08 33 29.5**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=259,slow=6.1,SNR=5.3						
BVAR	**Borovoye Array**	**54.85**	**316**	P	**P**	**08 33 34.7**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=150,slow=6.1,SNR=4.4						
AS31	**Alice Springs**	**55.20**	**189**	P	**P**	**08 33 37.6**	**-0.2**
ASAR	**Alice Springs**	**55.21**	**189**	P	**P**	**08 33 37.1**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=18,slow=13,SNR=17						
KKAR	**Karatay Array**	**56.52**	**304**	P	**P**	**08 33 48.0**	**+0.9**
CHGR	**Chuyangaron**	**58.67**	**299**	P	**P**	**08 34 03.2**	**+0.7**
ABKAR	**Akbulak array**	**62.05**	**313**	P	**P**	**08 34 26.2**	**+1.0**
ABKAR				IAmb	IAmb	08 34 28.3	
	comp=Z,1.9nm,0.8s						
KBZ	**Khabaz**	**75.01**	**312**	LR	LR	09 10 00.5	
	comp=Z,119nm,18.1s,baz=336,slow=37						
NVAR	**Mina Array Bea**	**78.09**	**52**	P	**P**	**08 36 04.1**	**0.0**
	comp=Z,0.8nm,0.8s,baz=306,slow=7.7,SNR=2.2						
AKASG	**Malin Array Be**	**79.11**	**323**	P	**P**	**08 36 09.8**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=43,slow=6.2,SNR=4.5						
AKASG	**Malin Array Be**	**79.11**	**323**	IAmb	IAmb	08 36 22.9	
	comp=Z,2.0nm,1.2s						
PDAR	**Pinedale Array**	**81.38**	**45**	P	**P**	**08 36 22.7**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=270,slow=1.7,SNR=2.4						
CLL	**Collm**	**86.28**	**331**	*e*P	**P**	**08 36 49.0**	**+2.6**
TXAR	**Lajitas Array**	**93.24**	**53**	P	**P**	**08 37 21.2**	**+1.4**
	comp=Z,1.4nm,0.8s,baz=300,slow=2.3,SNR=16						

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*IDC **03** 08:24:12.7±3.8,3°.88S×102°.62E,h0^{km},mb3.7/6, mb1 3.8/6,mb1mx3.3/49,mbtmp3.7/6,MS3.0/2,Ms1 3.0/2, ms1mx2.5/43,Error ellipse: s-maj=161.9km s-min=20.1km az=55.0*

*DJA **03** 08:24:15.8±0.9,4°S±3°×10°2E±°,h27^{km}±10^{km},M3.9/11, MLv3.9/11*

ISC 03 08:24:15.9±1.0**,4°.38S**±0°.08×**102°.01E**±0°.07**,h35**^{km}**,n23,** σ**1s.48**/17**,mb3.8**/6**,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**0.93**	**39**	P	**Pn**	**08 24 33.9**	**+1.3**
MASI	**Maura Aman, Be**	**1.25**	**11**	P	**Pn**	**08 24 35.0**	**-2.0**
MASI				S	**Sn**	**08 24 55.0**	**+2.4**
LHSI	**Lahat**	**1.61**	**70**	P	**Pn**	**08 24 43.3**	**+1.4**
LWLI	**Liwa**	**2.14**	**107**	P	**Pn**	**08 24 50.5**	**+1.2**
MDSI	**Maura Dua**	**2.17**	**93**	P	**Pn**	**08 24 50.7**	**+1.1**
KRJI	**Kerinci**	**2.33**	**347**	P	**Pn**	**08 24 52.4**	**+0.4**
PPSI	**Pulau Pagai**	**2.56**	**309**	P	**Pn**	**08 24 56.2**	**+1.3**
KASI	**Kota Agung**	**2.73**	**115**	P	**Pn**	**08 24 57.3**	**0.0**
KLSI		**2.73**	**97**	P	**Pn**	**08 24 58.6**	**+1.2**
SISI	**Saibi**	**4.20**	**316**	P	**Pn**	**08 25 19.6**	**+2.0**
DAV	**Davao City (W)**	**26.13**	**64**	LR	LR	08 39 50.4	
	comp=Z,36nm,21.0s,baz=8.5,slow=37						
FITZ	**Fitzroy Crossi**	**26.84**	**122**	P	**P**	**08 29 54.4**	**+1.0**
	1.5nm,1.0s,baz=0.0,slow=5.1						
FITZ				LR	LR	08 43 00.8	
	comp=Z,24nm,18.1s,baz=217,slow=42						
H08S2	**Diego Garcia H**	**29.52**	**262**	T	T	09 00 38.7	
	baz=85,slow=75,SNR=16						
H08S3	**Diego Garcia H**	**29.53**	**262**	T	T	09 00 45.1	
	baz=85,slow=75,SNR=22						
H08S1	**Diego Carcia H**	**29.54**	**262**	T	T	09 00 41.4	
	baz=85,slow=75,SNR=6.9						
H01W3	**Cape Leeuwin H**	**32.37**	**161**	T	T	09 04 44.1	
	baz=338						
H01W2	**Cape Leeuwin H**	**32.38**	**161**	T	T	09 04 46.1	
	baz=338						
H01W1	**Cape Leeuwin H**	**32.38**	**161**	T	T	09 04 42.7	
	baz=338						
WRA	**Warramunga Arr**	**35.08**	**119**	P	**P**	**08 31 04.5**	**-1.5**
	0.2nm,0.4s,baz=304,slow=8.9,SNR=6.5						
ASAR	**Alice Springs**	**36.25**	**125**	P	**P**	**08 31 14.8**	**-1.2**
	0.1nm,0.4s,baz=306,slow=8.1,SNR=1.8						
SONM	**Songino Array**	**52.13**	**4**	P	**P**	**08 33 22.4**	**-0.6**
	1.3nm,0.6s,baz=189,slow=9.0,SNR=7.3						
MKAR	**Makanchi Array**	**53.85**	**343**	P	**P**	**08 33 34.7**	**-0.8**
	1.1nm,0.6s,baz=144,slow=7.5,SNR=5.6						
ZALV	**Zalesovo Beam**	**59.87**	**348**	P	**P**	**08 34 16.8**	**-1.2**
	1.2nm,0.3s,baz=170,slow=5.9,SNR=4.0						

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*IDC **03** 08:32:40.5±0.5,29°.71S×71°.52W,h0^{km},mb4.7/15, mb1 4.7/20,mb1mx4.7/23,mbtmp4.6/20,ML4.3/5,MS4.0/10,* *Ms1 4.0/10,ms1mx3.8/20,Error ellipse: s-maj=19.6km s-min=13.4km az=86.0*

*SJA **03** 08:32:44.5±0.6,29°.64S×71°.71W,h31^{km}±3^{km},ML5.0, MW4.8*

*NEIC **03** 08:32:45.8,29°.73S×71°.69W,h37^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$6.33; M$_{\theta\theta}$0.19; M$_{\phi\phi}$-6.52; M$_{r\theta}$0.80; M$_{\theta\phi}$-1.73; M$_{\phi r}$1.86; Fault plane solution: M$_0$6.96000×10^{15} NP1:ϕ_s190.36000°, δ36.73000°,λ84.87000°. NP2:ϕ_s16.75000°,δ53.44000°, λ93.82000°. Principal axes: T 6.6409, Plg81.0000°, Azm304.0000°; N 0.5923, Plg3.0000°, Azm194.0000°; P -7.2332, Plg8.0000°, Azm104.0000°;*

*GUC **03** 08:32:45.8±0.5,29°.84S×71°.54W,h48^{km}±2^{km},ML5.1*

*NEIC **03** 08:32:46.1±0.9,29°.75S±0°.05×71°.67W±0°.05,h35^{km}±3^{km}, mb5.1/92,Mwr4.5/48,ML5.1(GUC),Error ellipse: s-maj=7.7km s-min=5.3km az=137.0*

*BJI **03** 08:32:46.5±0.0,29°.80S×71°.70W,h33^{km},Ms5.4/2, Ms7 5.3/3*

*VAO **03** 08:32:47.1±0.8,29°.58S×71°.51W,h34^{km},mb4.7*

ISC 03 08:32:45.1±1.0,**29°.69S**±0°.03×**71°.77W**±0°.05,**h30**^{km}±6^{km}, **n410,**σ**1^{s}51**/441,**mb5.1**/59,**MS4.1**/8,**1C-5D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	La Serena	0.51	116	⇑*i*P	Pb	08 32 55.2	-0.5
CO05				*i* S	Sb	08 33 01.8	-1.2
CO05				IAML		08 33 02.8	
	comp=E,268μm,0.4s						
CO05	La Serena	0.51	116		Pb	08 32 55.2	-0.5
GO04	Tololo Observa	0.97	120	*e*P	Pn	08 33 01.8	-1.1
GO04				*e*S	Sn	08 33 13.2	-2.5
GO04				IAML		08 33 18.2	
	comp=E,308μm,0.4s						
GO04	Tololo Observa	0.97	120		Pn	08 33 02.0	-0.8
GO04	Tololo Observa	0.97	120	*e*P	Pb	08 33 03.4	-0.1
GO04				*e*S	Sn	08 33 14.5	-1.2
CO06	Fray Jorge	0.98	173	⇓*i*P	Pn	08 33 02.4	-0.5
CO06				*i* S	Sn	08 33 14.6	-1.2
CO06	Fray Jorge	0.98	173		Pn	08 33 02.4	-0.5
LCO	Las Campanas	1.15	54	*e*P	Pn	08 33 05.4	-0.1
LCO				*e*S	Sn	08 33 20.1	-0.3
LCO	Las Campanas	1.15	54	Pn	Pn	08 33 05.8	+0.4
LCO	Las Campanas	1.15	54	*e*P	Pn	08 33 05.8	+0.4
LCO				*e*S	Sn	08 33 17.9	-2.4
AC04	Llanos de Chal	1.60	22	⇓*i*P	Pn	08 33 12.0	+0.6
AC04				*e*S	Sn	08 33 32.6	+1.5
AC04	Llanos de Chal	1.60	22	Pn	Pn	08 33 12.1	+0.6
AC04	Llanos de Chal	1.60	22	*e*P	Pn	08 33 12.0	+0.6
AC04				*e*S	Sn	08 33 31.6	+0.6
GO03	Copiap	2.49	33	*e*P	Pn	08 33 24.3	+0.6
GO03				*e*S	Sb	08 33 57.7	-1.8
GO03				IAML		08 34 07.5	
	comp=E,6μm,0.4s						
GO03	Copiap	2.49	33	Pn	Pn	08 33 24.5	+0.8
GO03	Copiap	2.49	33	*e*P	Pn	08 33 24.4	+0.8
GO03				*e*S	Sb	08 33 59.1	-0.4
VA06	Catapilco	2.89	172	⇓*i*P	Pn	08 33 28.9	-0.2
VA06				*i* S	Sn	08 33 58.7	-4.0
VA06				IAML		08 34 24.8	
	comp=N,7μm,0.4s						
RTLS	Leoncito	2.99	135	*e*P	Pn	08 33 33.3	+2.5
RTLS				*e*S	Sb	08 34 12.6	-1.4
RTLS				IAML		08 34 26.3	
	comp=Z,4μm,1.1s						
VA03	San Esteban	3.23	162	*e*P	Pn	08 33 34.9	+1.1
VA03				*e*S	Sn	08 34 10.7	-0.8
VA03				IAML		08 34 32.8	
	comp=E,6μm,0.5s						
VA03	San Esteban	3.23	162		Pn	08 33 35.0	+1.1
VA03	San Esteban	3.23	162	*e*P	Pn	08 33 35.0	+1.1
VA03				IAML		08 34 32.8	
	comp=Z,4μm,0.8s						
ZON	Zonda	3.24	126	*e*P	Pn	08 33 35.7	+1.8
ZON				*e*S	Sb	08 34 26.1	+5.1
ZON				IAML		08 34 31.5	
	comp=Z,3μm,0.7s						
AUSP	Uspallata	3.25	142	*e*P	Pn	08 33 36.9	+2.6
AUSP				*e*S	Sb	08 34 31.3	+10
VCA	Vinchina	3.26	74	*e*P	Pn	08 33 15.9	-18
VCA				*e*S	Sn	08 34 13.6	+1.5
VCA				IAML		08 34 39.2	
	comp=Z,6μm,0.7s						
VA01	Torpederas	3.32	178		Pn	08 33 34.4	-0.6
RTCV	Cerro Valdivia	3.52	129	*e*P	Pn	08 33 40.0	+2.2
PEL	Peldehue	3.56	165	*e*P	Pn	08 33 38.1	-0.3
PEL				*e*S	Sn	08 34 18.6	-0.9
PEL				IAML		08 34 40.4	
	comp=N,2μm,0.5s						
PEL	Peldehue	3.56	165		Pn	08 33 38.9	+0.5
PEL	Peldehue	3.56	165	*e*P	Pn	08 33 39.0	+0.5
PEL				*e*S	Sn	08 34 23.6	+4.1
MT02	Curacav	3.59	172	*e*P	Pn	08 33 38.3	-0.4
MT02				*e*S	Sn	08 34 19.9	-0.4
MT02				IAML		08 34 36.7	
	comp=N,2μm,0.5s						
MT02	Curacav	3.59	172		Pn	08 33 38.4	-0.4
AC02	Maricunga	3.68	40	*e*P	Pn	08 33 41.8	+1.4
AC02				*e*S	Sn	08 34 28.1	+5.1
AC02	Maricunga	3.68	40	Pn	Pn	08 33 41.9	+1.5
AC02	Maricunga	3.68	40	*e*P	Pn	08 33 41.6	+1.2
AC02				IAML		08 34 42.7	
	comp=Z,3μm,0.8s						
MT05	Renca	3.79	167	*e*P	Pn	08 33 41.8	+0.3
MT05				*e*S	Sn	08 34 24.9	-0.3
MT05	Renca	3.79	167	Pn	Pn	08 33 42.0	+0.5
MT05	Renca	3.79	167	*e*P	Pn	08 33 42.1	+0.5
MT05				IAML		08 35 12.7	
	comp=Z,2μm,1.2s						
ASAL	Salagasta	3.83	140	*e*P	Pn	08 33 44.9	+2.8
FCH	Farellones	3.84	161	*e*P	Pn	08 33 43.6	+1.2
AVFE	Valle Fertil	3.85	106	*e*P	Pn	08 33 43.9	+1.4
AVFE				*e*S	Sb	08 34 39.6	+0.8
AVFE				IAML		08 34 45.2	
	comp=Z,3μm,0.8s						
VA05	Santo Domingo	3.95	178	*e*P	Pn	08 33 42.9	-0.8
VA05				*e*S	Sn	08 34 28.5	-0.5
VA05	Santo Domingo	3.95	178		Pn	08 33 43.4	-0.3
ARCO	CERRO ARCO	3.97	143	*e*P	Pn	08 33 41.6	-2.5
ARCO				*e*P	Pn	08 33 47.2	+3.2
ARCO				*e*S	Sb	08 34 50.1	+8.1
ARCO				IAML		08 34 55.2	
	comp=Z,2μm,1.1s						
MT09	Talagante	4.12	171	*e*P	Pn	08 33 46.5	+0.3
MT09	Talagante	4.12	171		Pn	08 33 46.5	+0.3
MT01	Popeta	4.18	174	*e*P	Pn	08 33 46.5	-0.3
MT01	Popeta	4.18	174		Pn	08 33 46.6	-0.3
ACLC	CERRO LA CRUZ	4.20	88	*e*P	Pn	08 33 48.7	+1.4
ACLC				*e*S	Sb	08 34 53.6	+4.7
ACLC				IAML		08 35 01.4	
	comp=Z,2μm,0.6s						
AAGR	Agrelo	4.21	144	*e*P	Pn	08 33 50.5	+3.1
APLL	PUNTA DE LOS L	4.60	100	*e*P	Pn	08 33 53.6	+1.0
ACHE	Chepes	4.64	110	*e*P	Pn	08 33 54.4	+1.0
BO01	Tunca	4.72	173		Pn	08 33 54.0	-0.3
BO02	Sierra Bellavi	5.15	171	Pn	Pn	08 34 00.5	+0.2
PB14	IPOC Station P	5.19	14	Pn	Pn	08 34 00.1	-1.0
PB14	IPOC Station P	5.19	14	*e*P	Pn	08 34 01.3	+0.3
PB14				*e*S	Sn	08 34 58.5	-1.6
PB14				IAML		08 35 37.8	
	comp=Z,565nm,0.7s						
GO05	Huala	5.30	181		Pn	08 34 01.3	-1.0
CYA	Choya	5.37	78	*e*P	Pn	08 33 59.1	-4.1
CYA				*e*P	Pn	08 34 04.3	+1.1
CYA				*e*S	Sn	08 35 03.6	-0.5
CYA				IAML		08 35 41.7	
	comp=Z,739nm,0.7s						
RFA	San Rafael	5.78	152	*e*P	Pn	08 34 09.7	+0.7
RFA				IAML		08 36 05.8	
	comp=Z,452nm,0.8s						
FSA	Cafayete	6.24	57	*e*P	Pn	08 34 12.6	-2.8
FSA				*e*P	Pn	08 34 17.1	+1.7
PB10	IPOC Station P	6.25	10		Pn	08 34 16.4	+1.1
PB10	IPOC Station P	6.25	10	*e*P	Pn	08 34 14.0	-1.3
PB10				*e*S	Sn	08 35 22.9	-2.9
PB10				IAML		08 36 30.1	
	comp=Z,216nm,0.9s						
AHML	Horco Molle	6.37	64	*e*P	Pn	08 34 13.6	-3.4
AHML				*e*P	Pn	08 34 17.4	+0.4
PB15	IPOC Station P	6.78	18		Pn	08 34 22.1	-0.6
PB15	IPOC Station P	6.78	18	*e*P	Pn	08 34 22.2	-0.6
PB15				*e*S	Sn	08 35 37.6	-1.5
PB15				IAML		08 36 31.4	
	comp=Z,857nm,0.5s						
PB05	IPOC Station P	6.96	12	*e*P	Pn	08 34 22.5	-2.6
VA04	Juan Fernndez	7.19	235	*e*P	Pn	08 34 26.3	-1.9
VA04	Juan Fernndez	7.19	235		Pn	08 34 27.2	-1.0
LVC	Limon Verde	7.51	21	Pn	Pn	08 34 30.0	-2.9
	comp=Z,2.7nm,0.3s,baz=186,slow=8.2,SNR=22						
LVC				Sn	Sn	08 35 54.0	-3.2
	comp=Z,8.9nm,0.3s,baz=219,slow=13,SNR=1.4						
LVC				LR	LR	08 37 23.0	
	comp=Z,1μm,18.8s,baz=220,slow=38						
LVC	Limon Verde	7.51	21		Pn	08 34 32.4	-0.5
PB03	IPOC Station P	7.83	14	*e*P	Pn	08 34 35.6	-1.5
PB09	IPOC Station P	8.19	17		Pn	08 34 41.9	-0.2
PB01	IPOC Station P	8.86	14	*e*P	Pn	08 34 48.0	-3.2
LC01	Cunco	9.18	181		Pn	08 34 53.9	-1.6
LR03	Panguipulli	9.93	183		Pn	08 35 04.6	-1.1
PLCA	Paso Flores	11.06	175	Pn	Pn	08 35 19.3	-2.0
	comp=Z,0.3nm,0.3s,baz=333,slow=12,SNR=12						
PLCA				Lg	Lg	08 38 22.0	
	comp=Z,0.2nm,0.3s,baz=47,slow=19,SNR=2.4						
PLCA				LR	LR	08 39 57.9	
	comp=Z,590nm,19.2s,baz=2.0,slow=40						
PLCA	Paso Flores	11.06	175		Pn	08 35 19.9	-1.3
LL04	Puerto Octay	11.20	183		Pn	08 35 22.0	-1.1
TRQA	Tornquist	11.64	138		Pn	08 35 28.2	-1.1
ITQB	Itaqui	13.17	94	*e*P	Pn	08 35 48.7	-1.4
ITQB	Itaqui	13.17	94		Pn	08 35 49.0	-1.0
CPUP	Villa Florida	13.19	79	Pn	Pn	08 35 47.0	-3.4
	comp=Z,0.7nm,0.3s,baz=248,slow=13,SNR=7.5						
CPUP				Lg	Lg	08 39 23.9	
	comp=Z,1.1nm,0.3s,baz=163,slow=20,SNR=2.4						
CPUP				LR	LR	08 41 20.4	
	comp=Z,898nm,18.6s,baz=256,slow=40						
CPUP	Villa Florida	13.19	79	*e*P	Pn	08 35 50.1	-0.3
CPUP	Villa Florida	13.19	79		Pn	08 35 48.5	-1.8
LPAZ	La Paz	13.76	15	Pn	Pn	08 35 56.3	-2.4
	comp=Z,1.8nm,0.3s,baz=186,slow=7.2,SNR=37						
LPAZ				LR	LR	08 41 52.3	
	comp=Z,442nm,18.4s,baz=170,slow=40						
LPAZ	La Paz	13.76	15	*e*P	Pn	08 35 57.0	-1.7
LPAZ	La Paz	13.76	15		Pn	08 35 59.5	+0.8
PLTB	Pedras Altas	15.76	102	*e*P	Pn	08 36 24.4	-0.5
PLTB	Pedras Altas	15.76	102		Pn	08 36 24.0	-0.9
CPSB	Cacapava Do Su	15.89	97	*e*P	Pn	08 36 26.7	+0.1
SIV	San Ignacio	16.81	38	Pn	Pn	08 36 36.9	-1.5
	comp=Z,1.1nm,0.3s,baz=231,slow=12,SNR=28						
AQDB	Aquidauana	17.19	61	*e*P	Pn	08 36 43.2	+0.1
CNLB	Canela	18.21	94	*e*P	P	08 36 56.5	+0.7
PTLB	Pontes e Lacer	18.34	42	*e*P	P	08 36 57.1	0.0
PTLB	Pontes e Lacer	18.34	42	P	Pn	08 36 57.7	+0.5
TRCB	Terra Rica	18.47	73	*e*P	P	08 36 57.6	-1.1
TER01	Tubaro-SC	19.81	92	*e*P	P	08 37 13.4	+0.1
VILB	Vilhena	19.81	35	*e*P	P	08 37 13.1	-0.3
VILB	Vilhena	19.81	35	P	P	08 37 13.4	0.0
PCMB	Pacaembu	20.14	71	*e*P	P	08 37 16.4	-0.5
SALV	Santo Antonio	20.16	51	*e*P	P	08 37 16.7	-0.5
ETMB	Extrema	20.45	16	*e*P	P	08 37 20.8	+0.6
ETMB	Extrema	20.45	16	P	P	08 37 20.9	+0.6
TIJ01	Guaruva-PR	20.64	83	*e*P	P	08 37 21.8	-0.6
FRTB	Fartura	20.83	78	*e*P	P	08 37 23.7	-0.8
ITRB	Iturama	21.81	68	*e*P	P	08 37 33.4	-1.6
CZSB	Cruzeiro do Su	21.87	358	*e*P	P	08 37 37.2	+1.6
MG05	Puerto Natales	21.97	181	P	P	08 37 36.3	0.0
SAML	Samuel	22.15	23	P	P	08 37 38.4	-0.2
PET01	Itanhaem-SP	22.46	82	*e*P	P	08 37 42.7	+0.8
BB19B	Bebedouro	22.66	73	*e*P	P	08 37 42.4	-1.6
PDRB	Porto dos Gac	22.79	41	*e*P	P	08 37 43.2	-2.3
RCLB	Rio Claro- Sao	22.92	77	*e*P	P	08 37 45.9	-0.9
ARAG	Araguaiana, MT	23.03	57	*e*P	P	08 37 45.7	-2.2
VAO	Valinhos	23.18	79	*e*P	P	08 37 47.6	-1.9
ATAH	Atahualpa	23.29	343	P	P	08 37 51.3	+0.4
	comp=Z,5.5nm,0.7s,baz=157,slow=15,SNR=2.9						
CLDB	Colider	23.93	42	*e*P	P	08 37 55.1	-1.5
PARB	Paraibuna	24.21	81	*e*P	P	08 37 57.9	-1.4
IPMB	Ipameri, GO	24.44	67	*e*P	P	08 38 00.3	-1.1
USHA	Ushuaia	25.24	175	P	P	08 38 07.9	-0.3
	comp=Z,27nm,0.9s,baz=331,slow=8.9,SNR=10						
TBTG	Tabatinga, AM	25.43	4	*e*P	P	08 38 10.9	+0.6
BSCB	Bom Sucesso	25.84	77	*e*P	P	08 38 13.3	-0.8
BDFB	Brasilia	25.93	63	P	P	08 38 13.2	-1.8
	comp=Z,13nm,0.7s,baz=234,slow=9.2,SNR=23						
BDFB	Brasilia	25.93	63	P	P	08 38 13.9	-1.0
SNDB	Serra Nova Dou	25.94	51	*e*P	P	08 38 13.7	-1.3
VAS01	Vassouras-RJ	26.46	80	*e*P	P	08 38 19.6	-0.1
NPGB	Novo Progresso	27.31	38	*e*P	P	08 38 26.2	-1.2
PEXB	Peixe	27.95	56	*e*P	P	08 38 32.1	-1.0
DIAM	Diamantina, MG	27.99	72	*e*P	P	08 38 32.5	-1.1
MACA	Manacapuru-AM	28.41	24	*e*P	P	08 38 36.9	-0.2
MACA	Manacapuru-AM	28.41	24	P	P	08 38 36.8	-0.3
MACA				IAmb	IAmb	08 38 37.6	
	comp=Z,23nm,0.6s						
MC01	Montes Claros	28.57	69	*e*P	P	08 38 36.9	-1.7
JANB	Januaria	29.17	66	*e*P	P	08 38 42.3	-1.7
ITTB	Itaituba	29.41	34	*e*P	P	08 38 45.1	-0.9
ALF01	Guarapari-ES	29.44	79	*e*P	P	08 38 45.6	-0.7
SJMB	Sao Joao De Ma	29.88	75	*e*P	P	08 38 48.8	-1.4
BSFB	Barra de Sao F	30.10	76	*e*P	P	08 38 50.4	-1.8
RIB01	Linhares ES	30.27	77	*e*P	P	08 38 53.3	-0.3
SDBA	SAO DESIDERIO	30.28	61	*e*P	P	08 38 53.2	-0.7
OTAV	Otavalo	30.44	347	*e*P	P	08 38 58.0	+2.4
SMTB	Santa Maria do	30.70	52	*e*P	P	08 38 57.0	-0.5
NAN01	Guarapari, ES	31.16	75	*e*P	P	08 38 59.9	-1.7
PRPB	Parauapebas	31.23	46	*e*P	P	08 39 00.6	-1.6
GUA01	Guaratinga, BA	32.04	73	*e*P	P	08 39 08.1	-1.2
MALB	Monte Alegre	32.30	34	*e*P	P	08 39 10.5	-1.1
POPC	Popayan, Colom	32.39	351	*e*P	P	08 39 15.4	+2.9
CMC01	Camacan, BA	32.89	71	*e*P	P	08 39 15.7	-1.1
NBIT	Itapeh - BA	33.19	71	*e*P	P	08 39 18.8	-0.5
PRAC	Prado	33.35	354	*e*P	P	08 39 21.3	+0.5
ORTC	Ortega, Tolima	33.58	354	*e*P	P	08 39 23.8	+1.0
VILC	Villavicencio,	33.66	357	*e*P	P	08 39 25.6	+2.1
BOAV	Boa Vista	33.67	21	*e*P	P	08 39 23.7	+0.2
BOAV	Boa Vista	33.67	21	P	P	08 39 23.6	+0.1
BOAV				IAmb	IAmb	08 39 24.3	
	comp=Z,18nm,0.8s						
GDU01	Guandu, BA	33.72	69	*e*P	P	08 39 22.5	-1.5
ROSC	El Rosal	34.42	355	P	P	08 39 30.1	-0.3
	comp=Z,4.8nm,0.4s,baz=229,slow=20,SNR=1.8						
ROSC				LR	LR	08 54 41.5	
	comp=Z,90nm,18.9s,baz=222,slow=38						
ROSC	El Rosal	34.42	355	IAmb	IAmb	08 39 36.7	
	comp=Z,17nm,1.0s						
PLMC	San Jos del P	34.67	352	*e*P	P	08 39 32.9	+0.6
MCPB	Macapa, AP	34.70	36	*e*P	P	08 39 32.9	+0.5
NBPN	Ponto Novo - B	34.87	64	*e*P	P	08 39 32.9	-1.1
GUY2C	Guyana, Caldas	34.89	354	*e*P	P	08 39 32.6	-2.0
NORC	Norcasia	35.18	355	*e*P	P	08 39 38.7	+2.1
TMAB	Tom-Au,PA,Br	35.27	44	*e*P	P	08 39 37.4	0.0
RUSC	La Rusia	35.41	358	*e*P	P	08 39 40.2	+1.2
CBOC	Ciudad Bolivar	35.59	353	*e*P	P	08 39 42.1	+1.8
HELC	Santa Helena	35.86	354	*e*P	P	08 39 38.9	-3.9
PTBC	PUERTO BERRIO,	36.12	355	*e*P	P	08 39 41.6	-3.0
NBLA	Lagarto - SE	36.69	67	*e*P	P	08 39 48.0	-1.6
DBBC	Dabeiba	36.75	353	*e*P	P	08 39 51.4	+1.3
ZARC	Zaragoza, Cauc	37.09	355	*e*P	P	08 39 53.0	+0.1
ZARC	Zaragoza, Cauc	37.09	355	P	P	08 39 53.7	+0.9
ZARC				IAmb	IAmb	08 39 55.4	
	comp=Z,17nm,0.8s						
ROSB	Rosrio	37.39	50	*e*P	P	08 39 54.3	-1.2
NBMA	Muriti-CE	38.14	61	*e*P	P	08 40 00.8	-1.0
NBPS	Pedro II - PI	38.15	55	*e*P	P	08 40 01.1	-0.9
SDV	Santo Domingo	38.37	2	*e*P	P	08 40 04.5	+0.6
SDV	Santo Domingo	38.37	2	P	P	08 40 03.5	-0.4
NBAN	Anadia - AL	38.67	66	*e*P	P	08 40 04.6	-1.7
NBPB	Pedra_Branca-C	38.71	58	*e*P	P	08 40 06.3	-0.4
SJCC	San Jacinto, C	39.50	355	P	P	08 40 13.6	+0.4
SJCC				IAmb	IAmb	08 40 17.5	
	comp=Z,26nm,1.0s						
NBLV	Livramento - P	39.56	63	*e*P	P	08 40 12.7	-1.1
NBPA	Parau_RN	40.43	61	*e*P	P	08 40 21.1	+0.2
NBPV	Pedro Velho	41.41	63	*e*P	P	08 40 28.6	-0.4
ORTG	Ortega, Santa	41.95	340	P	P	08 40 35.0	+1.6
MLPR	Magueyes Islan	47.60	6	P	P	08 41 18.0	-0.3
OBIP	Obispado Ponce	47.72	7	P	P	08 41 19.2	0.0
CELP	Cerrillos	47.75	7	P	P	08 41 18.8	-0.7
SC01	Santiago de lo	48.85	1	P	P	08 41 27.8	-0.1
VNA3	Neumayer Olymp	53.27	159	P	P	08 42 00.2	-0.4
SOR	Soroa	53.29	347	P	P	08 42 00.8	-0.5
SOR				IAmb	IAmb	08 42 02.9	
	comp=Z,20nm,1.0s						
VNA1	Neumayer--Stat	53.55	158	P	P	08 42 02.6	-0.1
VNA2	Neumayer--Watz	53.90	158	P	P	08 42 04.7	-0.6
	baz=285,slow=8.3						
SNAA	Sanae	55.49	159	P	P	08 42 16.0	-0.9
SNAA	Sanae	55.49	159	P	P	08 42 15.9	-1.0
QSPA	South Pole Qui	60.53	180	P	P	08 42 51.9	-0.4
QSPA				IAmb	IAmb	08 42 53.4	
	comp=Z,9.4nm,0.8s						
TIGA	Tifton	61.83	349	P	P	08 43 02.3	+1.1
	baz=168						
NHSC	New Hope	62.97	352	P	P	08 43 10.4	+1.6
	baz=172						
344A	Westbrook Farm	63.43	342	P	P	08 43 13.5	+1.6
833A	Chaparral WMA,	63.45	333	P	P	08 43 14.1	+2.0
	baz=153						
VBMS	Vicksburg	64.09	342	P	P	08 43 16.4	+0.2
VBMS	Vicksburg	64.09	342	P	P	08 43 17.5	+1.2
	baz=162						
Z47A	Carrollton	64.43	345	P	P	08 43 18.9	+0.4
Z47A				IAmb	IAmb	08 43 20.0	
	comp=Z,18nm,0.7s						
143A	Socs Landing,	64.79	342	P	P	08 43 22.2	+1.4
X51A	Calhoun	65.10	348	P	P	08 43 23.0	+0.2
KMSC	Kings Mountain	65.12	351	P	P	08 43 23.2	+0.2
	baz=171						
X48A	Hartselle	65.41	346	P	P	08 43 25.0	+0.2
X48A				IAmb	IAmb	08 43 26.4	
	comp=Z,26nm,0.8s						
Y45A	Yeager Farm, C	65.41	344	P	P	08 43 25.6	+0.7
Y45A				IAmb	IAmb	08 43 26.9	
	comp=Z,21nm,0.7s						
JCT	Junction City	65.53	334	P	P	08 43 27.3	+1.6
	baz=153						
Z41A	Richland Creek	65.70	341	P	P	08 43 28.2	+1.5
	baz=160						
W50A	Signal Mountai	65.80	348	P	P	08 43 27.5	+0.1
W50A				IAmb	IAmb	08 43 28.6	
	comp=Z,14nm,0.7s						
TKL	Tuckaleechee C	65.98	349	P	P	08 43 28.5	0.0
TKL				IAmb	IAmb	08 43 29.3	
	comp=Z,11nm,0.8s						
WHTX	Lake Whitney,	66.02	336	P	P	08 43 30.1	+1.3
	baz=156						
TXAR	Lajitas Array	66.12	330	P	P	08 43 31.3	+1.7
	comp=Z,3.1nm,0.7s,baz=152,slow=8.6,SNR=43						
PLAL	Pickwick Lake	66.14	345	P	P	08 43 29.3	-0.2
PLAL				IAmb	IAmb	08 43 30.4	
	comp=Z,11nm,0.7s						
V48A	Smith Brothers	66.61	347	P	P	08 43 33.3	+0.7
V48A				IAmb	IAmb	08 43 34.2	
	comp=Z,38nm,1.3s						
CLTN	Cedars of Leba	66.86	347	P	P	08 43 34.3	+0.2
CLTN				IAmb	IAmb	08 43 35.7	
	comp=Z,14nm,0.8s						
MIAR	Mount Ida	67.13	341	P	P	08 43 36.8	+0.9
	baz=160						
U49A	Red Boiling Sp	67.16	348	P	P	08 43 35.9	-0.1
Z35A	Perchaven, San	67.17	337	P	P	08 43 37.2	+1.1
WVT	Waverly	67.20	346	P	P	08 43 36.4	+0.2
WVT				IAmb	IAmb	08 43 37.7	
	comp=Z,27nm,1.1s						
WVT	Waverly	67.20	346	P	P	08 43 36.8	+0.6
	baz=165						
W41B	Gary Mavity, V	67.35	342	P	P	08 43 37.6	+0.4
	baz=161						
ABTX	Abilene, Hawle	67.38	335	P	P	08 43 39.1	+1.5
	baz=154						
GNAR	Gosnell	67.53	344	P	P	08 43 39.7	+1.3
UTMT	University of	67.62	345	P	P	08 43 39.6	+0.7
LOOK	Love County	67.75	337		P	08 43 40.1	+0.3
LOOK				IAmb	IAmb	08 43 41.7	
	comp=Z,9.8nm,0.8s						
W39A	Magazine	67.80	341	P	P	08 43 41.4	+1.3
W39A				IAmb	IAmb	08 43 42.8	
	comp=Z,19nm,0.9s						
W39A	Magazine	67.80	341	P	P	08 43 41.5	+1.5
	baz=159,SNR=8.2						
T47A	Sharon Grove	67.88	347	P	P	08 43 40.7	+0.2
T47A				IAmb	IAmb	08 43 42.1	
	comp=Z,26nm,1.1s						
LCAR	Lake Charles	67.91	343	P	P	08 43 41.1	+0.3
LCAR				IAmb	IAmb	08 43 42.4	
	comp=Z,20nm,0.8s						
FCAR	Ozark Folk Cen	67.99	342	P	P	08 43 41.5	+0.2
PARMO	Parma	68.14	344	P	P	08 43 42.9	+0.8
T45A	Paducah	68.23	346	P	P	08 43 43.2	+0.5
VNDA	Vanda	68.36	191	P	P	08 43 44.2	+1.0
	comp=Z,3.8nm,0.9s,baz=128,slow=5.5,SNR=16						
VNDA	Vanda	68.36	191	P	P	08 43 43.6	+0.5
PBMO	Poplar Bluff	68.41	344	P	P	08 43 44.2	+0.4
X34A	Smith Ranch, M	68.52	337		P	08 43 45.2	+0.5
X34A				IAmb	IAmb	08 43 47.0	
	comp=Z,16nm,0.8s						
U40A	Yellville	68.63	342	P	P	08 43 45.8	+0.5
U40A				IAmb	IAmb	08 43 47.2	
	comp=Z,14nm,1.1s						
U40A	Yellville	68.63	342	P	P	08 43 45.9	+0.7
	baz=160,SNR=7.0						
T42A	Van Buren	68.81	343	P	P	08 43 46.5	+0.1
HHAR	Hobbs	68.86	341	P	P	08 43 46.9	+0.2
MNTX	Cornudas Mount	68.90	330	P	P	08 43 47.4	+0.3
MNTX	Cornudas Mount	68.90	330	P	P	08 43 47.8	+0.7
	baz=149						
WCI	Wyandotte Cave	68.92	348	P	P	08 43 47.3	+0.2
	baz=166						
SIUC	Southern Illin	69.02	345	P	P	08 43 48.1	+0.5
TUL1	Leonard	69.06	339	P	P	08 43 48.9	+0.9
TUL1				IAmb	IAmb	08 43 49.8	
	comp=Z,21nm,0.8s						
TUL1	Leonard	69.06	339	P	P	08 43 48.7	+0.8
	baz=158						
OK025	Westminster Rd	69.25	338		P	08 43 49.5	+0.3
OK025				IAmb	IAmb	08 43 50.7	
	comp=Z,22nm,0.9s						
P52A	Corning	69.64	351	P	P	08 43 51.9	+0.4
	baz=170						
MEH	Mehetia	69.72	261	*e*T	T	10 00 01.9	
	comp=Z,14nm,0.2s						
MSTX	Muleshoe	69.78	333	P	P	08 43 53.1	+0.6
MSTX				IAmb	IAmb	08 43 54.8	
	comp=Z,17nm,0.9s						
MSTX	Muleshoe	69.78	333	P	P	08 43 53.3	+0.7
	baz=152						
CCM	Cathedral Cave	69.82	344	P	P	08 43 53.4	+0.8
CCM				IAmb	IAmb	08 43 54.5	
	comp=Z,18nm,0.8s						
CCM	Cathedral Cave	69.82	344	P	P	08 43 53.6	+1.0
	baz=162						
P49A	Miami Univ. Ec	69.92	349	P	P	08 43 53.2	0.0
	baz=168						
AMTX	Amarillo	70.16	334	P	P	08 43 56.0	+1.1
	baz=153						
R40A	Maddies Statio	70.30	343	P	P	08 43 56.0	+0.5
R40A				IAmb	IAmb	08 43 57.4	
	comp=Z,28nm,0.9s						
ACSO	Alum Creek Sta	70.35	351	P	P	08 43 55.8	0.0
	baz=170						
N59A	State Game Lan	70.35	357	P	P	08 43 57.2	+1.4
	baz=176						
P46A	Rosedale	70.44	347	P	P	08 43 56.2	-0.1
P46A				IAmb	IAmb	08 43 57.3	
	comp=Z,18nm,0.8s						
121A	Cookes Peak, D	70.69	328	P	P	08 44 00.5	+2.2
	baz=147						
TIAR	Tiarei	70.95	260	*e*T	T	10 01 34.8	
	comp=Z,1.3nm,0.2s						
PPT2	Papeete2	71.14	260	*e*S	S	08 53 26.0	+10
	comp=Z,45nm,23.8s						
PPT2	Papeete2	71.14	260	*e*LR	LR	09 05 47.9	
	comp=Z,125nm,22.8s						
N49A	Columbus Grove	71.20	350	P	P	08 44 00.7	-0.3
N49A				IAmb	IAmb	08 44 01.9	
	comp=Z,24nm,0.8s						
P40A	Paris	71.41	344	P	P	08 44 03.1	+0.8
BINY	Binghamton	71.64	357	P	P	08 44 05.8	+2.2
	baz=176						
L56A	Greenwood	71.67	355	P	P	08 44 04.6	+0.7
L61B	Northampton	71.79	359	P	P	08 44 06.0	+1.5
	baz=179						
HRV	Adam Dziewonsk	71.84	0	P	P	08 44 06.4	+1.6
	baz=180						
ERPA	Erie	71.86	354	P	P	08 44 07.1	+2.2
	baz=172						
TUC	Tucson	71.92	326	P	P	08 44 06.9	+1.3
	baz=145						

ANMO	Albuquerque	72.14	331	P	P	08 44 07.7	+0.7
ANMO	Albuquerque	72.14	331	P	P	08 44 09.5	+2.5
	baz=149						
214A	Organ Pipe Nat	72.65	324	P	P	08 44 11.0	+1.1
214A				IAmb	IAmb	08 44 13.6	
	comp=Z,19nm,1.1s						
214A	Organ Pipe Nat	72.65	324	P	P	08 44 12.5	+2.6
	baz=143						
CBKS	Cedar Bluff	72.98	337	P	P	08 44 12.9	+1.1
CBKS				IAmb	IAmb	08 44 14.2	
	comp=Z,18nm,0.8s						
CBKS	Cedar Bluff	72.98	337	P	P	08 44 13.1	+1.3
	baz=155,SNR=6.1						
T25A	Trinidad	73.19	333	P	P	08 44 15.1	+1.8
T25A				IAmb	IAmb	08 44 16.6	
	comp=Z,24nm,1.2s						
T25A	Trinidad	73.19	333	P	P	08 44 15.5	+2.3
	baz=151						
LIC	Lamto	73.23	73	*e*P	P	08 44 12.3	-1.4
	comp=Z,36nm,1.2s						
TIC	Toumodi	73.47	72	*e*P	P	08 44 13.6	-1.6
KIC	Kosan Boka	73.54	73	*e*P	P	08 44 14.3	-1.3
	comp=Z,23nm,1.0s						
DBIC	Dimbokro	73.61	72	P	P	08 44 15.4	-0.6
	comp=Z,8.4nm,0.8s,baz=239,slow=5.6,SNR=12						
DBIC				LR	LR	09 15 12.5	
	comp=Z,69nm,18.9s,baz=270,slow=35						
L40A	Anamosa	73.62	345	P	P	08 44 15.7	+0.4
L40A				IAmb	IAmb	08 44 16.9	
	comp=Z,28nm,0.8s						
W18A	Petrified Fore	73.73	328	P	P	08 44 18.0	+1.5
W18A				IAmb	IAmb	08 44 20.6	
	comp=Z,18nm,0.9s						
W18A	Petrified Fore	73.73	328	P	P	08 44 18.7	+2.3
	baz=146						
SDCO	Great Sand Dun	74.15	333	P	P	08 44 20.1	+1.2
SDCO	Great Sand Dun	74.15	333	P	P	08 44 20.7	+1.8
	baz=150,SNR=11						
KSCO	Kaye Shedlock’	74.16	335	P	P	08 44 20.5	+1.8
	baz=152						
GLA	Glamis	74.55	323	P	P	08 44 23.5	+2.4
	baz=142						
S22A	4UR Ranch, Cre	74.68	332	P	P	08 44 24.4	+2.4
	baz=149						
WUAZ	Wupatki	74.82	327	P	P	08 44 25.1	+2.4
	baz=145						
BGNE	Belgrade	74.84	340	P	P	08 44 22.6	+0.1
IKP	In-Ko-Pah, Jac	74.91	322	P	P	08 44 25.4	+2.2
	baz=141						
MVCO	Mesa Verde	74.93	330	P	P	08 44 25.5	+2.0
	baz=148,SNR=13						
SWSC	Sam W. Stewart	74.97	323	P	P	08 44 25.5	+2.0
	baz=141						
Q24A	Divide	75.06	334	P	P	08 44 26.4	+2.2
	baz=150,SNR=14						
PDMCI	Parker Dam,Lak	75.19	325	P	P	08 44 27.0	+2.3
	baz=143						
MONP2	Monument Peak	75.26	322	P	P	08 44 27.7	+2.3
	baz=141						
BC3	Big Chuckawall	75.35	323	P	P	08 44 27.6	+1.9
	baz=142,SNR=9.8						
IRM	Iron Mountain	75.58	324	P	P	08 44 29.3	+2.3
	baz=142,SNR=6.7						
OGNE	Ogallala	75.67	337	P	P	08 44 29.2	+1.8
	baz=153						
BELC	Belle Mtn. Jos	75.90	323	P	P	08 44 31.3	+2.4
	baz=141						
ISCO	Idaho Springs	75.97	334	P	P	08 44 31.2	+1.8
	baz=150,SNR=11						
U15A	North Rim	75.99	327	P	P	08 44 29.9	+0.3
MURC	Murrieta	76.22	322	P	P	08 44 33.3	+2.6
	baz=140,SNR=6.0						
GMRC	Granite Mounta	76.34	324	P	P	08 44 33.8	+2.4
	baz=142,SNR=9.9						
ECSD	EROS Data Cent	76.54	342	P	P	08 44 32.8	+0.6
ECSD				IAmb	IAmb	08 44 34.2	
	comp=Z,20nm,0.8s						
ECSD	EROS Data Cent	76.54	342	P	P	08 44 33.2	+1.0
	baz=158						
BBRC	Big Bear Solar	76.58	323	P	P	08 44 35.5	+2.6
	baz=141						
HEC	Hector,Ludlow	76.72	324	P	P	08 44 36.1	+2.6
	baz=141,SNR=6.2						
BFSC	Mount Baldy Ra	76.96	322	P	P	08 44 37.3	+2.4
	baz=140,SNR=5.8						
TUQ	Turquoise Moun	76.98	324	P	P	08 44 37.6	+2.6
	baz=142,SNR=11						
SPMN	Marine on St.	76.98	345	P	P	08 44 34.7	+0.1
	baz=161						
N23A	Red Feather La	77.04	334	P	P	08 44 37.3	+1.9
	baz=150,SNR=8.4						
MAW	Mawson	77.23	164	P	P	08 44 35.7	-0.1
	comp=Z,8.5nm,0.9s,baz=224,slow=7.2,SNR=8.2						
O20A	White River Ci	77.29	332	P	P	08 44 39.0	+2.2
	baz=148,SNR=20						
DECC	Green Verdugo	77.33	322	P	P	08 44 39.2	+2.4
	baz=140						
GSC	Goldstone, Bar	77.33	324	P	P	08 44 39.3	+2.4
	baz=141,SNR=8.0						
SHOC	Shoshone, Teco	77.52	324	P	P	08 44 39.8	+1.9
	baz=141						
EDW2	Edwards Air Fo	77.63	323	P	P	08 44 40.4	+1.8
	baz=140,SNR=6.9						
SCZ2	Santa Cruz Isl	77.84	321	P	P	08 44 42.1	+2.3
	baz=139						
LRMC	Laurel Mtn Rad	77.92	323	P	P	08 44 42.2	+1.9
	baz=140,SNR=7.5						
RWWY	Rawlins	78.21	334	P	P	08 44 42.9	+1.0
FURC	Furnace Creek,	78.26	324	P	P	08 44 44.0	+2.1
	baz=141,SNR=11						
MPMC	Manual Prospec	78.26	324	P	P	08 44 44.3	+2.0
	baz=141,SNR=8.1						
ISA	Isabella, Lake	78.47	323	P	P	08 44 45.9	+2.7
	baz=140,SNR=12						
PKM	Mcpherson Peak	78.61	321	P	P	08 44 47.0	+2.8
	baz=139,SNR=11						
MPU	Maple Canyon	78.62	330	P	P	08 44 45.5	+1.3
MPU				IAmb	IAmb	08 44 47.2	
	comp=Z,13nm,0.9s						
KOWA	Kowa	78.67	66	LR	LR	09 19 28.7	
	comp=Z,138nm,18.3s,baz=210,slow=36						
K22A	Casper	78.77	335	P	P	08 44 46.9	+2.0
	baz=150,SNR=19						
CWC	Cottonwood Cre	78.86	324	P	P	08 44 47.6	+2.1
	baz=140						
VES	Vestal, Richgr	78.93	323	P	P	08 44 47.8	+2.1
	baz=139,SNR=8.8						
SMMC	Simmler	79.02	322	P	P	08 44 49.0	+2.8
	baz=139,SNR=6.5						
R11A	Troy Canyon, C	79.10	326	P	P	08 44 49.1	+2.3
	baz=142,SNR=7.7						
RSSD	Black Hills	79.17	337	P	P	08 44 48.9	+1.9
	baz=152						
DUG	Dugway, Tooele	79.29	329	P	P	08 44 49.8	+2.1
	baz=144,SNR=11						
TIN	Tinemaha, Big	79.41	324	P	P	08 44 50.8	+2.4
	baz=140						
BGU	Big Grassy Mou	79.98	330	P	P	08 44 52.5	+1.0
PD31	Pinedale Array	80.04	333	P	P	08 44 52.4	+0.5
PD31				IAmb	IAmb	08 44 54.4	
	comp=Z,30nm,1.7s						
PDAR	Pinedale Array	80.04	333	P	P	08 44 53.0	+1.1
	comp=Z,3.3nm,0.6s,baz=137,slow=7.1,SNR=35						
PDAR				LR	LR	09 17 38.5	
	comp=Z,102nm,18.6s,baz=28,slow=34						
PDAR	Pinedale Array	80.04	333	P	P	08 44 52.4	+0.5
BW06	Boulder Array	80.04	333	P	P	08 44 52.0	+0.1
BW06				IAmb	IAmb	08 44 54.4	
	comp=Z,34nm,1.7s						
BW06	Boulder Array	80.04	333	P	P	08 44 53.2	+1.3
	baz=147,SNR=8.5						
AGMN	Agassiz Nation	80.59	344	P	P	08 44 55.0	+0.6
AGMN	Agassiz Nation	80.59	344	P	P	08 44 55.7	+1.3
	baz=159						
AHID	Auburn Hatcher	80.67	332	P	P	08 44 55.9	+0.7
AHID				IAmb	IAmb	08 44 57.8	
	comp=Z,52nm,1.6s						
ELK	Elko	80.83	328	P	P	08 44 57.0	+0.9
MDND	Maddock	81.14	341	P	P	08 44 58.7	+1.4
	baz=156						
H17A	Grant Village	81.81	333	P	P	08 45 03.3	+2.0
	baz=147						
BOSA	Boshof	81.88	118	P	P	08 45 00.9	-1.1
	comp=Z,7.6nm,0.8s,baz=262,slow=5.0,SNR=9.6						
BOSA				LR	LR	09 16 05.9	
	comp=Z,49nm,21.3s,baz=192,slow=32						
BOSA	Boshof	81.88	118	IAmb	IAmb	08 45 02.1	
	comp=Z,12nm,0.9s						
RLMT	Red Lodge	81.92	334	P	P	08 45 03.4	+1.6
	baz=148						
MPK	Martis Peak	82.03	324	P	P	08 45 02.4	-0.2
MPK				IAmb	IAmb	08 45 06.2	
	comp=Z,19nm,1.0s						
LAO	LASA Array	82.16	337	P	P	08 45 03.5	+0.7
LAO				IAmb	IAmb	08 45 05.2	
	comp=Z,21nm,0.9s						
LAO	LASA Array	82.16	337	P	P	08 45 04.0	+1.2
	baz=150						
ULM	Lac du Bonnet	82.42	345	P	P	08 45 04.1	+0.1
	comp=Z,12nm,0.9s,baz=148,slow=3.6,SNR=11						
TORD	Torodi Ar. Bea	82.54	70	P	P	08 45 04.4	-1.1
	comp=Z,8.0nm,0.8s,baz=264,slow=5.2,SNR=34						
TORD				LR	LR	09 20 29.8	
	comp=Z,100nm,18.6s,baz=310,slow=35						
TORD	Torodi Ar. Bea	82.54	70	P	P	08 45 04.8	-0.7
HLID	Hailey	82.72	330	P	P	08 45 07.8	+1.9
	baz=144						
ORV	Oroville	82.98	324	P	P	08 45 08.6	+1.4
ORV				IAmb	IAmb	08 45 10.6	
	comp=Z,27nm,1.1s						
DGMT	Dagmar	83.06	339	P	P	08 45 08.1	+0.7
DGMT	Dagmar	83.06	339	P	P	08 45 08.9	+1.5
	baz=152						
BOZ	Bozeman (W)	83.23	333	P	P	08 45 10.3	+1.7
	baz=146						
O03E	Paynes Creek	83.69	324	P	P	08 45 11.7	+0.8
	baz=138						
O02D	Mt. Diablo Mer	84.11	323	P	P	08 45 14.8	+1.7
	baz=137						
SCHQ	Schefferville	84.29	3	P	P	08 45 13.5	0.0
	comp=Z,8.9nm,1.0s,baz=191,slow=13,SNR=3.9						
EGMT	Eagleton	84.55	335	P	P	08 45 16.1	+0.9
	baz=148						
N02D	Trinity Center	84.65	324	P	P	08 45 17.1	+1.3
	baz=137						
M04C	Macdoel	84.81	325	P	P	08 45 18.4	+1.7
	baz=138						
M02C	Callahan	85.03	324	P	P	08 45 19.7	+2.0
	baz=137						
MSO	Missoula	85.16	332	P	P	08 45 21.2	+3.0
	baz=144						
L04D	Klamath Falls	85.36	325	P	P	08 45 21.0	+1.6
	baz=138						
J05D	Fort Rock, OR	85.63	326	P	P	08 45 22.7	+1.9
	baz=138						
L02E	Cave Junction	85.97	324	P	P	08 45 23.8	+1.5
	baz=137						
JTMT	Jette	86.03	333	P	P	08 45 23.1	+0.5
JTMT				IAmb	IAmb	08 45 24.9	
	comp=Z,10nm,0.6s						
K02D	Willamette Mer	86.40	324	P	P	08 45 26.6	+2.1
	baz=137						
I05D	Terrebonne, OR	86.47	327	P	P	08 45 26.8	+2.1
	baz=138						
H04D	Lebanon	87.28	326	P	P	08 45 30.2	+1.6
	baz=138						
F05D	White Salmon	87.68	328	P	P	08 45 32.5	+2.0
	baz=138						
C09A	Chrisman Ranch	87.72	331	P	P	08 45 31.2	+0.5
C09A				IAmb	IAmb	08 45 32.8	
	comp=Z,17nm,1.3s						
LTY	Liberty	88.35	329	P	P	08 45 32.9	-0.9
B05A	Bryant	89.74	329	P	P	08 45 41.5	+1.4
	baz=138						
ESDC	Sonseca Array	93.42	46	P	P	08 45 57.3	-0.3
	comp=Z,1.5nm,0.9s,baz=245,slow=3.9,SNR=5.3						
YKA	Yellowknife Ar	98.06	341	P	P	08 46 17.7	-0.3
	comp=Z,2.9nm,1.0s,baz=138,slow=4.6,SNR=8.6						
DZM	Mont Dzumac	103.95	234	*e*LR	LR	09 21 00.3	
	comp=Z,74nm,24.9s						
ASAR	Alice Springs	121.49	208	PKP	PKPdf	08 51 35.0	-1.2
	comp=Z,1.5nm,0.8s,baz=140,slow=2.1,SNR=13						
ASAR				PKKPbc	PKKPbc	09 01 35.8	-0.3
	comp=Z,1.0nm,0.8s,baz=332,slow=3.0,SNR=8.5						
WRA	Warramunga Arr	124.61	210	PKP	PKPdf	08 51 41.5	-0.7
	comp=Z,3.5nm,0.5s,baz=161,slow=1.5,SNR=63						
WRA				PKKPbc	PKKPbc	09 01 23.4	-0.5
	comp=Z,0.8nm,0.8s,baz=341,slow=4.2,SNR=7.5						
KLMR	Klimovskoe	125.76	34	*e*PKPdf	PKPdf	08 51 42.7	-0.3
KLMR				AMP		08 51 54.0	
	comp=Z,14nm,1.6s						
EKS2	Erkin-Say	149.54	55	P	PKPbc	08 52 32.1	+0.5
	SNR=9.6						
AML	Almayashu	149.60	56	P	PKiKP	08 52 33.1	-0.1
	SNR=8.8						
USP	Ospenovka	149.90	54	P	PKiKP	08 52 33.3	0.0
	SNR=8.7						
AAK	Ala-Archa	150.06	55	P	PKiKP	08 52 33.9	+0.1
	SNR=16						
UCH	Uchtor	150.17	56	P	PKiKP	08 52 34.7	+0.3
	SNR=19						
HYB	Hyderabad	150.27	108	*i* PKP	PKPbc	08 52 34.0	+0.1
ZALV	Zalesovo Beam	150.40	28	PKPbc	PKPbc	08 52 33.6	+0.5
	comp=Z,37nm,0.6s,baz=308,slow=3.3,SNR=77						
TKM2	Tokmak 2	150.77	54	P	PKPbc	08 52 35.0	+0.4
	SNR=11						
ULHL	Ulahol	151.41	55	P	PKiKP	08 52 37.0	+0.4
	SNR=13						
KSH	Kashi	151.82	61	PKPbc	PKPbc	08 52 36.3	-0.8
KSH				sPKP		08 52 45.4	
KSH				SKS	SKSdf	08 59 35.2	-0.9
KSH				LR	LR		
	comp=Z,570nm,8.9s						
KLR	Kul'dur	153.53	324	PKPbc	PKiKP	08 52 41.1	+0.6
	comp=Z,3.8nm,1.1s,baz=286,slow=3.0,SNR=3.3						
KLR				PKPab	PKPab	08 52 52.0	-0.9
	comp=Z,1.0nm,0.5s,baz=15,slow=5.9,SNR=4.3						
MKAR	Makanchi Array	153.60	43	PKP	PKPdf	08 52 33.2	+0.3
	comp=Z,2.0nm,1.1s,baz=289,slow=4.4,SNR=4.0						
MKAR				PKPbc	PKPbc	08 52 40.6	-0.1
	comp=Z,1.9nm,0.7s,baz=334,slow=2.4,SNR=9.7						
MKAR				PKPab	pPKPbc	08 52 51.3	+1.2
	comp=Z,4.5nm,0.8s,baz=318,slow=3.0,SNR=11						
MJAR	Matsushiro Arr	154.05	293	PKPab	PKPab	08 52 56.6	+1.0
	comp=Z,4.3nm,0.8s,baz=91,slow=2.9,SNR=7.2						
MAT	Matsushiro	154.05	293	*e*PKP	PKPdf	08 52 30.7	-3.2
WMQ	Urumqi	158.41	44	*e*PKP	PKPdf	08 52 39.4	0.0
SONM	Songino Array	161.83	4	PKPab	PKPab	08 53 29.1	+0.3
	comp=Z,3.2nm,0.9s,baz=335,slow=2.6,SNR=12						
CMAR	Chiang Mai Arr	165.97	141	PKPab	PKPab	08 53 46.7	-0.9
	comp=Z,1.2nm,0.5s,baz=231,slow=4.5,SNR=6.2						
GTA	Gaotai	168.09	33	*e*PKP	PKPdf	08 52 49.7	+0.9
GTA				PKPab	PKPab	08 53 57.6	+0.9
GTA				LR	LR		
	comp=Z,150nm,19.6s						
GTA				LR	LR		
	comp=Z,150nm,19.3s						
GTA				LR	LR		
	comp=Z,190nm,19.3s						
HHC	Hu-ho-hao-te	168.54	347	*e*PKP	PKPdf	08 52 48.3	-0.8
NJ2	Nanjing	170.57	287	*e*PKP	PKPdf	08 52 50.6	+0.2
KMI	Kunming	173.32	132	⇓PKP	PKPdf	08 52 51.6	-0.6
KMI				sPKP		08 53 05.4	
CD2	Chengdu	175.94	71	PKP	PKPdf	08 52 52.1	-0.5
GYA	Guiyang	176.49	156	⇓PKP	PKPdf	08 52 53.2	+0.3

IDC 03 09:18:23.5±3.0**, 53°.78N**×**86°.91E, h0**^{km}**, mb1 3.0**/2**, mb1mx2.9**/50**, mbtmp3.0**/2**, ML2.2**/2**, Error ellipse: s-maj=28.4km s-min=16.2km az=67.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.25	279	*i*		09 24 40.0	
	baz=99,slow=337,SNR=8.2						
ZALV	Zalesovo Beam	1.25	279	Pg	Pg	09 18 46.7	-0.7
	0.5nm,0.3s,baz=96,slow=17,SNR=9.3						
ZALV				Lg	Lg	09 19 04.3	
	0.6nm,0.3s,baz=94,slow=24,SNR=3.6						
KURBB	Kurchatov Arra	6.05	242	Pn	Pn	09 19 55.0	+0.9
	0.0nm,0.3s,baz=60,slow=13,SNR=1.9						
MKAR	Makanchi Array	7.59	205	Pn	Pn	09 20 16.5	+1.2
	0.1nm,0.3s,baz=24,slow=13,SNR=5.0						

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*IDC **03** 09:40:02.9±1.8, 54°.36N×161°.10W, h0^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.3/44, mbtmp3.5/7, ML3.1/2, MS3.5/2, Ms1 3.5/2, ms1mx2.9/50, Error ellipse: s-maj=42.1km s-min=24.0km az=168.0*

*AEIC **03** 09:40:07.6±2.9, 54°.51N±0°.08×160°.8W±0°.1, h5^{km}±6^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=59.0*

*NEIC **03** 09:40:08.6±2.6, 54°.4N±0°.1×160°.8W±0°.1, h24^{km}±9^{km}, ML3.5/13, ML3.3(AEIC), Error ellipse: s-maj=17.7km s-min=7.3km az=158.0*

ISC 03 09:40:05.5±1.2**, 54°.4N**±0°.1×**160°.77W**±0°.07**, h10**^{km}**, n41, σ1**^{s}**.52**/32**, mb3.7**/5**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	0.83	55		Pg	09 40 22.6	+1.1
SDPT	Sand Point	1.02	9		Pg	09 40 24.5	-0.5
SDPT				IAML		09 40 42.9	
	comp=N,883nm,0.6s						
SDPT				IAML		09 40 43.2	
	comp=E,1µm,0.5s						
FALS	False Pass	1.62	289		Pn	09 40 34.6	+0.5
CHGN	Chignik	2.38	34		Pn	09 40 45.5	+1.0
CHGN				IAML		09 41 19.7	
	comp=N,193nm,0.4s						
AKUT	Akutan	2.94	268	Pn	Pn	09 40 54.2	+2.0
AKUT				IAML		09 42 08.0	
	comp=E,90nm,3.2s						
CHIR	Chirikof Islan	3.31	61	Pn	Pn	09 40 57.7	+0.4
CHIR				IAML		09 42 42.2	
	comp=E,150nm,3.4s						
UNV	Unalaska Valle	3.41	264	Pn	Pn	09 41 00.6	+1.9
SII	Sitkinak Islan	4.36	57	Pn	Pn	09 41 12.2	+0.6
OHAK	Old Harbor	5.11	53	Pn	Pn	09 41 21.7	-0.3
OHAK				IAML		09 42 43.7	
	comp=N,46nm,3.8s						
OHAK				IAML		09 43 05.9	
	comp=E,40nm,4.2s						
KDAK	Kodiak Island	5.73	50	Pn	Pn	09 41 30.5	-0.1
P18K	Big Mountain,	5.90	29	Pn	Pn	09 41 34.2	+1.3
Q19K	Cape Douglas,	6.04	38	Pn	Pn	09 41 36.0	+1.2
O18K	Koktuh Hills	6.30	26		Pn	09 41 40.7	+2.4
N19K	Bonanza Creek	7.31	25		Pn	09 41 54.3	+2.0
SVW2	Sparrevohn	7.32	20	Pn	Pn	09 41 54.3	+2.1
CNPM	China Poot	7.35	41	Pn	Pn	09 41 55.2	+2.3
M19K	Big River Lodg	8.29	21		Pn	09 42 07.9	+2.2
L19K	White Mountain	8.45	19	Pn	Pn	09 42 10.0	+2.2
TTA	Tatalina	8.96	14	Pn	Pn	09 42 15.4	+0.6
J20K	Nowinta River	10.42	16	Pn	Pn	09 42 36.4	+1.7
ANM	Nome	10.51	349	Pn	Pn	09 42 36.3	+0.3
RAGM	Ragged Mountai	10.57	49	Pn	Pn	09 42 36.8	-0.1
KLU	Klutina	10.64	42	Pn	Pn	09 42 37.3	-0.6
DHY	Denali Highway	11.16	33	Pn	Pn	09 42 42.6	-2.4
H21K	Melozitna Rive	12.01	16	Pn	Pn	09 42 56.9	+0.4
TABL	Table Mountain	12.19	52	Pn	Pn	09 43 00.1	+0.9
ILAR	Eielson Array	12.56	28	Pn	Pn	09 42 59.6	-4.4
	comp=E,0.0nm,0.3s,baz=218,slow=12,SNR=2.0						
EPYK	Eagle Plains	16.78	35	P	Pn	09 44 02.2	+1.9
INK	Inuvik	18.90	32	P	P	09 44 24.2	-1.5
	comp=E,0.1nm,0.3s,baz=227,slow=13,SNR=5.2						
INK				LR	LR	09 51 05.7	
	comp=E,90nm,21.4s,baz=114,slow=35						
PETK	Petropavlovsk-	24.35	284	P	P	09 45 21.4	-1.9
	comp=E,3.6nm,0.9s,baz=92,slow=12,SNR=7.1						
YKA	Yellowknife Ar	25.00	52	P	P	09 45 29.9	+0.8
	comp=E,0.5nm,0.6s,baz=268,slow=9.3,SNR=4.5						
H11N2	WAKE ISLAND Hy	42.43	228	T	T	10 33 27.7	
	baz=28						
H11N3	WAKE ISLAND Hy	42.44	228	T	T	10 33 26.8	
	baz=28						
H11N1	WAKE ISLAND Hy	42.45	228	T	T	10 33 34.3	
	baz=28						
H11S1	WAKE ISLAND Hy	43.60	228	T	T	10 34 54.9	
	baz=27						
H11S2	WAKE ISLAND Hy	43.61	228	T	T	10 35 01.4	
	baz=27						
H11S3	WAKE ISLAND Hy	43.62	228	T	T	10 34 55.9	
	baz=27						
TXAR	Lajitas Array	47.72	98	P	P	09 48 42.6	+0.2
	comp=E,0.3nm,0.8s,baz=318,slow=6.9,SNR=2.6						
MKAR	Makanchi Array	66.00	318	P	P	09 50 49.3	-2.4
	comp=E,0.3nm,0.5s,baz=30,slow=5.2,SNR=2.4						
AFI	Afiamalu	68.63	191	LR	LR	10 13 30.3	
	comp=E,70nm,21.4s,baz=278,slow=29						
AKASG	Malin Array Be	74.99	353	P	P	09 51 44.6	-1.9
	comp=E,0.7nm,0.5s,baz=10,slow=6.1,SNR=2.9						

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*IDC **03** 09:40:49.9±1.5, 17°.53S×178°.76W, h625^{km}±17^{km}, mb3.3/6, mb1 3.6/7, mb1mx3.0/33, mbtmp4.2/7, Error ellipse: s-maj=69.1km s-min=13.5km az=154.0*

ISC 03 09:40:48.3±1.4**, 17°.5S**±0°.5×**178°.7W**±0°.3**, h600**^{km}**, n8, σ1**^{s}**.59**/10**, mb3.8**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.08	266	P	P	09 42 11.6	+3.6
	4.9nm,0.3s,baz=222,slow=22,SNR=29						
DZM	Mont Dzumac	14.67	250	P	P	09 43 53.2	-0.4
	0.3nm,0.3s,baz=90,slow=5.1,SNR=2.1						
STKA	Stephens Creek	38.56	241	P	P	09 47 20.8	-0.4
	2.1nm,0.6s,baz=75,slow=9.8,SNR=8.2						
WRA	Warramunga Arr	44.41	259	P	P	09 48 07.0	-0.4
	2.1nm,0.3s,baz=94,slow=7.4,SNR=131						
WRA				S	S	09 53 58.6	-1.3
	0.1nm,0.7s,baz=100,slow=24,SNR=1.1						
ASAR	Alice Springs	44.61	254	P	P	09 48 08.9	0.0
	9.9nm,0.5s,baz=86,slow=8.8,SNR=216						
ASAR				S	S	09 54 01.3	-1.3
	0.7nm,0.8s,baz=93,slow=16,SNR=6.3						
ILAR	Eielson Array	85.58	13	P	P	09 52 23.0	-0.7
	0.4nm,0.5s,baz=220,slow=4.5,SNR=11						
TXAR	Lajitas Array	86.04	58	P	P	09 52 26.6	-0.3
	1.0nm,0.8s,baz=221,slow=6.5,SNR=11						
PDAR	Pinedale Array	87.28	44	P	P	09 52 32.1	-0.4
	0.5nm,0.6s,baz=231,slow=4.0,SNR=7.1						

NNC 03 09:53:26.0±3.4**, 53°.53N**×**87°.70E, h0**^{km}**, mb3.7, mpv3.3, 7C-6D, Error ellipse: s-maj=27.4km s-min=18.1km az=72.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.76	285	⇓Pn	Pn	09 53 57.1	-0.7
	4.4nm,0.6s						
ZAA0				⇓Lg	Lg	09 54 24.1	
	12nm,0.5s						
KURK	Kurchatov	6.26	247	⇑Pn	Pn	09 55 00.6	+1.1
	2.0nm,0.6s						
KURK				⇓Sn	Sn	09 56 09.9	-1.8
	1.6nm,0.4s						
KURK				⇑Lg	Lg	09 56 43.7	
	11nm,0.8s						
KURBB	Kurchatov Arra	6.36	246	⇑Pn	Pn	09 55 02.6	+1.7
	3.5nm,0.4s						
KURBB				⇑Sn	Sn	09 56 12.8	-1.2
	1.6nm,0.3s						
KURBB				⇓Lg	Lg	09 56 46.7	
	20nm,1.1s						
MK31	Makanchi Array	7.58	209	⇑Pn	Pn	09 55 19.4	+1.7
	1.7nm,0.8s,baz=32,slow=13,SNR=11						
MK31				⇑Sn	Sn	09 56 47.7	+3.4
	2.0nm,0.8s,baz=241,slow=51,SNR=5.8						
MK31				⇓Lg	Lg	09 57 25.6	
	3.0nm,0.7s,baz=30,slow=27,SNR=4.4						
MAKZ	Makanchi	7.66	211	⇑Sn	Sn	09 56 49.0	+2.7
	6.3nm,1.3s						
MAKZ				⇓Lg	Lg	09 57 27.2	
	2.9nm,0.7s						

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*IDC **03** 09:57:16.7±2.4, 22°.30N×143°.37E, h129^{km}±21^{km}, mb3.7/16, mb1 3.8/18, mb1mx3.6/64, mbtmp4.1/18, Error ellipse: s-maj=22.9km s-min=11.4km az=85.0*

*NEIC **03** 09:57:17.3±1.0, 22°.29N±0°.06×143°.6E±0°.2, h136^{km}±8^{km}, mb4.2/14, Error ellipse: s-maj=26.5km s-min=5.1km az=74.0*

ISC 03 09:57:15.4±0.7**, 22°.26N**±0°.08×**143°.5E**±0°.2**, h118**^{km}**, n42, σ0**^{s}**.80**/37**, mb4.0**/23**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	4.96	346	P	Pn	09 58 29.8	+1.9
	27nm,0.3s,baz=256,slow=22,SNR=6.4						
JCJ				S	Sn	09 59 22.9	-1.3
	21nm,0.3s,baz=287,slow=19,SNR=2.6						
MJAR	Matsushiro Arr	14.96	343	P	Pn	10 00 40.6	-0.1
	0.2nm,0.3s,baz=179,slow=9.0,SNR=9.7						
MJAR	Matsushiro Arr	14.96	343	Pn	Pn	10 00 41.2	+0.4
MAJO	Matsushiro	14.96	343	Pn	Pn	10 00 41.5	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
MAT	Matsushiro	14.96	343	P	Pn	10 00 40.0	-0.8
KSRS	Korea Array	20.25	322	P	P	10 01 41.8	+0.5
	3.5nm,0.7s,baz=144,slow=8.4,SNR=12						
SSLB	Suanglung	20.80	279	P	P	10 01 48.3	+0.9
TPUB	Ta-pu	21.10	277	P	P	10 01 51.5	+0.8
H11N1	WAKE ISLAND Hy	21.99	92	T	T	10 24 57.5	
	baz=280						
H11N2	WAKE ISLAND Hy	21.99	92	T	T	10 24 59.1	
	baz=280						
H11N3	WAKE ISLAND Hy	22.01	92	T	T	10 24 53.2	
	baz=280						
H11S3	WAKE ISLAND Hy	22.06	96	T	T	10 24 59.3	
	baz=283,slow=75						
H11S1	WAKE ISLAND Hy	22.07	96	T	T	10 25 03.1	
	baz=283,slow=75						
H11S2	WAKE ISLAND Hy	22.08	96	T	T	10 25 01.0	
	baz=283,slow=75						
USRK	Ussuriysk Ar.	23.86	339	P	P	10 02 18.8	+1.0
	4.5nm,0.8s,baz=154,slow=12,SNR=5.0						
KLR	Kul'dur	28.48	344	P	P	10 03 00.2	+0.8
	6.3nm,0.6s,baz=159,slow=8.1,SNR=28						
MTN	Manton Dam	36.93	200	P	P	10 04 12.2	-0.9
MTN				IAmb	IAmb	10 04 21.6	
	comp=Z,12nm,1.5s						
SONM	Songino Array	39.09	320	P	P	10 04 30.6	-0.5
	comp=Z,0.9nm,0.4s,baz=127,slow=8.2,SNR=10						
SONM	Songino Array	39.09	320	IAmb	IAmb	10 04 31.8	
	comp=Z,2.2nm,1.2s						
KNRA	Kununurra	40.37	202	P	P	10 04 42.1	+0.3
KNRA				IAmb	IAmb	10 04 50.2	
	comp=Z,14nm,1.3s						
WB0	Warramunga Arr	42.70	193	P	P	10 05 00.6	-0.3
WB0				IAmb	IAmb	10 05 02.2	
	comp=Z,6.7nm,1.4s						
WR0	Warramunga Arr	42.86	192	P	P	10 05 02.1	0.0
WR0				IAmb	IAmb	10 05 08.3	
	comp=Z,5.1nm,1.4s						
WRAB	Tennant Creek	42.87	193	P	P	10 05 02.7	+0.5
WRAB				IAmb	IAmb	10 05 12.2	
	comp=Z,5.7nm,1.4s						
WB2	Warramunga Arr	42.88	193	P	P	10 05 02.3	0.0
WB2				IAmb	IAmb	10 05 04.8	
	comp=Z,2.6nm,0.9s						
WRA	Warramunga Arr	42.88	193	P	P	10 05 02.1	-0.2
	comp=Z,0.9nm,0.3s,baz=23,slow=7.3,SNR=61						
WRA				PcP	PcP	10 06 51.1	-0.1
	comp=Z,0.6nm,0.7s,baz=2.2,slow=3.5,SNR=6.1						
WRA	Warramunga Arr	42.88	193	P	P	10 05 01.8	-0.5
AS31	Alice Springs	46.59	192	P	P	10 05 30.7	-1.0
ASAR	Alice Springs	46.59	192	P	P	10 05 31.6	-0.1
	comp=Z,0.4nm,0.3s,baz=14,slow=6.8,SNR=19						
ASAR				PcP	PcP	10 07 03.7	-0.2
	comp=Z,0.3nm,0.8s,baz=23,slow=3.1,SNR=2.2						
STKA	Stephens Creek	53.86	182	P	P	10 06 27.1	+0.8
	comp=Z,0.6nm,0.4s,baz=10.0,slow=8.7,SNR=4.8						
ZALV	Zalesovo Beam	53.95	321	P	P	10 06 25.6	-1.2
	comp=Z,2.1nm,0.5s,baz=104,slow=7.8,SNR=8.1						
MKAR	Makanchi Array	54.53	312	P	P	10 06 30.6	-0.6
	comp=Z,0.4nm,0.4s,baz=84,slow=9.2,SNR=5.4						
KURK	Kurchatov	57.26	317	P	P	10 06 50.0	-0.5
KURK	Kurchatov	57.26	317	IAmb	IAmb	10 06 50.7	
	comp=Z,4.1nm,1.1s						
KURBB	Kurchatov Arra	57.31	317	P	P	10 06 50.0	-0.8
	comp=Z,3.1nm,0.5s,baz=91,slow=7.8,SNR=18						
ILAR	Eielson Array	61.41	27	P	P	10 07 17.9	-0.9
	comp=Z,0.6nm,0.7s,baz=257,slow=5.9,SNR=6.1						
BVAR	Borovoye Array	62.43	319	P	P	10 07 25.4	-0.5
	comp=Z,1.5nm,0.4s,baz=170,slow=9.0,SNR=8.8						
INK	Inuvik	66.94	24	P	P	10 07 55.2	+0.4
	comp=Z,1.4nm,1.0s,baz=59,slow=5.4,SNR=3.7						
ABKAR	Akbulak array	69.35	316	P	P	10 08 09.3	-0.9
ABKAR				IAmb	IAmb	10 08 10.4	
	comp=Z,1.5nm,0.7s						
YKA	Yellowknife Ar	75.83	28	P	P	10 08 48.8	+0.5
	comp=Z,0.8nm,0.4s,baz=292,slow=5.8,SNR=17						
ARCES	ARCESS Array B	78.48	342	P	P	10 09 02.5	-0.6
	comp=Z,1.7nm,0.6s,baz=55,slow=4.6,SNR=7.6						
FINES	FINESS Array B	82.80	335	P	P	10 09 24.6	-1.6
	comp=Z,3.8nm,0.9s,baz=66,slow=3.3,SNR=8.8						
PLCA	Paso Flores	145.91	131	PKPbc	PKPbc	10 16 41.6	+0.3
	comp=Z,1.0nm,0.5s,baz=250,slow=7.3,SNR=8.7						

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*IDC **03** 10:00:44.9±1.8, 16°.70N×145°.68E, h214km±15km, mb3.2/11, mb1 3.3/12, mb1mx3.0/62, mbtmp3.7/12, Error ellipse: s-maj=32.0km s-min=12.8km az=87.0*

*NEIC **03** 10:00:46.0±0.6, 16°.7N±0°.1×145°.7E±0°.3, h217km±12km, mb3.8/3, Error ellipse: s-maj=44.3km s-min=13.2km az=78.0*

ISC 03 10:00:44.2±0.8**, 16°.77N**±0°.08×**145°.6E**±0°.2**, h200**km**, n17, σ1^s.50**/17**, mb3.6**/14**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	0.44	165	Pn	Pn	10 01 14.6	+3.3
GUMO	Guam	3.24	193	P	Pn	10 01 38.5	+1.7
	5.6nm,0.3s,baz=353,slow=19,SNR=1.9						
GUMO				S	Sn	10 02 18.8	+0.9
	17nm,0.3s,baz=16,slow=22,SNR=2.4						
KSRS	Korea Array	25.83	326	P	P	10 05 58.5	+1.4
	2.0nm,0.8s,baz=151,slow=9.3,SNR=4.2						
WB0	Warramunga Arr	37.94	197	P	P	10 07 40.3	-2.4
WB0				IAmb	IAmb	10 07 46.5	
	comp=Z,2.2nm,0.9s						
WB2	Warramunga Arr	38.12	197	P	P	10 07 43.0	-1.2
WB2				IAmb	IAmb	10 08 10.8	
	comp=Z,5.4nm,1.2s						
WRA	Warramunga Arr	38.12	197	P	P	10 07 42.9	-1.3
	comp=Z,0.7nm,0.5s,baz=31,slow=8.8,SNR=9.4						
FITZ	Fitzroy Crossi	39.83	210	P	P	10 07 58.0	-0.4
	comp=Z,0.3nm,0.3s,baz=25,slow=9.5						
ASAR	Alice Springs	41.78	196	P	P	10 08 12.8	-1.4
	comp=Z,0.3nm,0.4s,baz=18,slow=7.9,SNR=9.2						
SONM	Songino Array	44.59	323	P	P	10 08 36.6	-0.1
	comp=Z,0.4nm,0.6s,baz=133,slow=7.5,SNR=2.8						
STKA	Stephens Creek	48.52	185	P	P	10 09 06.4	-0.7
	comp=Z,0.5nm,0.4s,baz=29,slow=6.1,SNR=4.0						
MKAR	Makanchi Array	59.73	315	P	P	10 10 28.7	+0.8
	comp=Z,0.5nm,0.4s,baz=85,slow=9.3,SNR=4.9						
KURK	Kurchatov	62.64	319	P	P	10 10 47.2	-0.1
KURK	Kurchatov	62.64	319	IAmb	IAmb	10 10 59.4	
	comp=Z,1.8nm,1.1s						
KURBB	Kurchatov Arra	62.68	319	P	P	10 10 47.2	-0.5
	comp=Z,1.1nm,0.5s,baz=97,slow=7.0,SNR=12						
ILAR	Eielson Array	65.41	26	P	P	10 11 04.2	-1.0
	comp=Z,0.2nm,0.6s,baz=254,slow=5.6,SNR=4.3						
BVAR	Borovoye Array	67.89	321	P	P	10 11 19.8	-1.3
	comp=Z,0.8nm,0.4s,baz=110,slow=8.1,SNR=4.5						
YKA	Yellowknife Ar	79.73	28	P	P	10 12 29.4	-0.2
	comp=Z,0.2nm,0.5s,baz=288,slow=5.2,SNR=1.7						

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*IDC **03** 10:10:34.0±1.1, 34°.27N×25°.02E, h0km, mb4.0/11, mb1 4.0/16, mb1mx3.9/42, mbtmp3.9/16, ML3.8/5, Error ellipse: s-maj=19.1km s-min=18.2km az=49.0*

*THE **03** 10:10:36.3, 34°.19N×25°.03E, h0km±1km, ML3.1/6, Error ellipse: s-maj=2.5km s-min=0.7km az=177.0*

*ATH **03** 10:10:37.0, 34°.28N×25°.02E, h11km±3km, ML3.3/7, Error ellipse: s-maj=7.2km s-min=1.8km az=194.0*

*HLW **03** 10:10:37.5, 34°.21N×25°.26E, h10km±18km, Md3.3, Ml3.8*

ISC 03 10:10:34.4±1.3**, 34°.12N**±0°.03×**25°.01E**±0°.03**, h8**km±8km**, n59, σ1^s.30**/76**, mb3.9**/11**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.91	350	P	Pg	10 10 51.8	-0.1
SIVA				AML	AML	10 11 09.9	
	comp=N,12098µm,0.5s						
SIVA				AML	AML	10 11 10.3	
	comp=E,18244µm,0.5s						
TMBK	Timbaki Herakl	0.97	348	P	Pb	10 10 53.5	0.0
TMBK				S	Sn	10 11 08.3	0.0
	comp=E,2µm,0.4s						
GVD	Gavdhos	1.05	314	P	Pn	10 10 55.5	+0.1
GVD				S	Sn	10 11 11.3	+1.1
GVD	Gavdhos	1.05	314	P	Pn	10 10 55.2	-0.1
GVD				S	Sg	10 11 07.3	-0.8
GVD				AML	AML	10 11 14.3	
	comp=N,9166µm,0.4s						
GVD				AML	AML	10 11 14.9	
	comp=E,9597µm,0.4s						
GVDS	Gavdos	1.05	314	P	Pn	10 10 55.8	+0.4
GVDS				S	Sn	10 11 11.8	+1.6
	comp=E,2µm,0.4s						
FRMA	Ierapetra Chan	1.07	34	P	Pn	10 10 56.6	+0.9
FRMA				S	Sn	10 11 12.5	+1.7
IDI	Anoyia	1.17	355	Pn	Pg	10 10 56.2	-0.6
	comp=E,34nm,0.3s,baz=187,slow=21,SNR=120						
IDI				Sn	Sb	10 11 12.3	0.0
	comp=E,110nm,0.3s,baz=222,slow=21,SNR=8.4						
IDI	Anoyia	1.17	355	P	Pg	10 10 56.3	-0.6
IDI				S	Sn	10 11 13.4	+0.1
	comp=E,942nm,0.4s						
IDI	Anoyia	1.17	355	P	Pg	10 10 56.1	-0.8
IDI				AML	AML	10 11 19.1	
	comp=N,1808µm,0.6s						
IDI				AML	AML	10 11 20.3	
	comp=E,2286µm,0.4s						
KSTL	Kastelli Herak	1.18	2	P	Pb	10 10 55.7	-1.4
HRKL	Herakleio	1.19	4	P	Pn	10 10 57.9	+0.6
NPS	Neapolis	1.24	23	P	Pn	10 10 57.8	-0.3
NPS	Neapolis	1.24	23	P	Pn	10 10 57.4	-0.7
NPS				AML	AML	10 11 20.7	
	comp=E,1786µm,0.5s						
NPS				AML	AML	10 11 26.4	
	comp=N,1511µm,0.7s						
PRNS	Prines Rethymn	1.31	342	P	Pb	10 10 59.1	-0.2
PRNS				S	Sn	10 11 18.1	+1.4
	comp=N,470nm,0.5s						
STIA	Sitia Lasithi	1.40	39	P	Pg	10 11 01.6	+0.4
ZKR	Zakros	1.41	45	P	Pb	10 11 01.3	+0.4
ZKR				S	Sg	10 11 20.0	+0.4
	comp=N,610nm,0.5s						
ZKR	Zakros	1.41	45	P	Pn	10 11 00.9	+0.6
ZKR				AML	AML	10 11 32.9	
	comp=N,682µm,0.5s						
ZKR				AML	AML	10 11 34.1	
	comp=E,1611µm,0.6s						
VAM	Vamos	1.45	333	P	Pb	10 11 01.5	-0.1
VAM				S	Sg	10 11 20.7	-0.2
	comp=E,858nm,0.4s						
VAM	Vamos	1.45	333	P	Pb	10 11 01.3	-0.3
VAM				S	Sn	10 11 19.2	-0.9
VAM				AML	AML	10 11 28.8	
	comp=E,1978µm,0.5s						
VAM				AML	AML	10 11 31.9	
	comp=N,2046µm,0.4s						
KNDR	Palaiochora Ch	1.56	316	P	Pg	10 11 04.5	+0.2
KNDR				S	Sg	10 11 25.2	+0.7
IMMV	Iera Moni Meta	1.58	328	P	Pb	10 11 03.8	-0.1
IMMV	Iera Moni Meta	1.58	328	P	Pb	10 11 03.4	-0.5
IMMV				AML	AML	10 11 42.0	
	comp=N,2195µm,0.6s						
IMMV				AML	AML	10 11 46.1	
	comp=E,1806µm,0.7s						
RODP	Rodopos	1.77	325	P	Pb	10 11 06.7	-0.4
ANKY	Antikythira Is	2.24	322	P	Pb	10 11 13.8	-1.2
ANKY	Antikythira Is	2.24	322	P	Pb	10 11 13.9	-1.2
THR6	Thira Island,	2.25	8	P	Pn	10 11 12.9	+0.9
THR6	Thira Island,	2.25	8	P	Pn	10 11 13.5	+1.5
THR3	Thira Island,	2.31	8	P	Pn	10 11 14.3	+1.6
THR3	Thira Island,	2.31	8	P	Pb	10 11 15.3	-0.9
THR5	Thira Island,	2.31	7	P	Pb	10 11 14.7	-1.6
THR5	Thira Island,	2.31	7	P	Pn	10 11 14.5	+1.8
MHLO	Agia Marina, M	2.61	349	P	Pn	10 11 18.3	+1.4
MHLO				S	Sn	10 11 49.8	+1.0
SLUM	Salum	2.63	176	P	Pb	10 11 20.6	-1.1
	baz=181						
SLUM				S	Sb	10 11 52.5	-1.6
	baz=181						
SLUM				AMP		10 12 00.0	
	baz=181						
KTHA	Kythira Island	2.66	324	P	Pn	10 11 17.8	+0.2
KTHR	Kythira	2.69	323	P	Pn	10 11 19.1	+1.1
APE	Apeiranthos	2.97	8	P	Pn	10 11 22.9	+1.0
ARG	Arkhangelos	3.30	50	P	Pn	10 11 28.2	+1.9
KRND	KRANIDI	3.59	336	P	Pn	10 11 31.9	+1.6
KRND				S	Sn	10 12 14.3	+1.4
LTK	Loutraki	4.23	338	P	Pn	10 11 40.6	+1.4
SWA2		4.88	175	P	Pn	10 11 51.7	+3.6
	baz=177						
SWA2				S	Sn	10 12 45.5	+0.9
	baz=177						
SWA2				AMP		10 13 00.0	
	baz=177						
GLL	Jalalah	7.28	127	P	Pn	10 12 23.0	+2.0
	baz=128						
SUZ	Suez	7.89	121	P	Pn	10 12 30.9	+1.4
	baz=122						
MMAI	Mount Meron Ar	8.74	94	Sn	Sn	10 14 19.0	-1.0
	comp=E,2.2nm,0.3s,baz=262,slow=22,SNR=2.0						
BRTR	Keskin Array B	8.89	49	Pn	Pn	10 12 45.0	+1.7
	comp=E,0.1nm,0.3s,baz=220,slow=15,SNR=2.6						
EIL	Elat	9.54	115	Pn	Pn	10 12 52.4	+0.3
	comp=E,1.0nm,0.3s,baz=332,slow=1.7,SNR=6.4						
EIL				Sn	Sn	10 14 34.7	-4.9
	comp=E,0.6nm,0.3s,baz=217,slow=15,SNR=1.4						
AKASG	Malin Array Be	16.86	9	Pn	Pn	10 14 30.2	-0.4
	comp=E,1.3nm,0.3s,baz=201,slow=11,SNR=5.5						
KBZ	Khabaz	16.88	50	Pn	P	10 14 34.0	+1.1
	comp=E,0.2nm,0.3s,baz=238,slow=8.1,SNR=3.8						
GERES	GERESS Array B	16.95	334	Pn	P	10 14 32.8	-1.0
	comp=E,0.3nm,0.3s,baz=148,slow=12,SNR=12						
ESDC	Sonseca Array	23.77	292	P	P	10 15 47.9	+0.6
	comp=E,1.0nm,0.9s,baz=69,slow=8.4,SNR=2.8						
HFS	Hagfors	27.06	348	P	P	10 16 15.8	-1.2
	comp=E,2.5nm,0.8s,baz=163,slow=11,SNR=1.7						
FINES	FINESS Array B	27.35	1	P	P	10 16 17.6	-2.0
	comp=E,5.0nm,1.0s,baz=172,slow=12,SNR=1.5						
NOA	NORSAR Array B	28.37	346	P	P	10 16 28.1	-0.8
	comp=E,1.0nm,0.7s,baz=156,slow=9.4,SNR=2.8						
EKA	Eskdalemuir Ar	28.82	326	P	P	10 16 33.0	+0.2
	comp=E,0.2nm,0.3s,baz=123,slow=9.3,SNR=2.5						
TORD	Torodi Ar. Bea	29.73	231	P	P	10 16 43.6	+2.4
	comp=E,1.1nm,0.6s,baz=32,slow=8.5,SNR=6.2						
ARCES	ARCESS Array B	35.47	0	P	P	10 17 28.5	-2.5
	comp=E,4.0nm,1.1s,baz=185,slow=10.0,SNR=3.6						
MKAR	Makanchi Array	44.46	56	P	P	10 18 46.6	+0.8
	comp=E,1.6nm,0.6s,baz=276,slow=6.8,SNR=11						
ZALV	Zalesovo Beam	45.82	45	P	P	10 18 56.4	-0.2
	comp=E,2.3nm,0.4s,baz=272,slow=8.8,SNR=5.4						
SONM	Songino Array	60.24	50	P	P	10 20 44.0	+0.8
	comp=E,0.5nm,0.5s,baz=291,slow=6.2,SNR=5.0						
KSRS	Korea Array	79.01	52	P	P	10 22 38.3	-0.7
	comp=E,0.7nm,0.6s,baz=312,slow=4.5,SNR=1.5						

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*DJA **03** 10:27:33.6±0.2, 0°S±2°×12°4E±°, h59km±6km, M4.5/25, mb4.7/17, mB5.1/10, MLv4.7/25, Mw(mB)4.4/10*

*IDC **03** 10:27:33.2±2.5, 0°.04N×124°.34E, h75km±25km, mb3.8/9, mb1 4.0/11, mb1mx3.7/41, mbtmp4.2/11, MS3.2/7, Ms1 3.2/7, ms1mx2.9/49, Error ellipse: s-maj=21.5km s-min=14.3km az=87.0*

*NEIC **03** 10:27:34.4±2.8, 0°.01S±0°.09×124°.29E±0°.05, h86km±9km, mb4.3/11, Error ellipse: s-maj=13.0km s-min=7.0km az=166.0*

ISC 03 10:27:33.3±0.5**, 0°.01S**±0°.06×**124°.39E**±0°.05**, h73**km**, n60, σ1^s.60**/59**, mb4.1**/13**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.70	325	P	Pn	10 27 48.2	-0.3
KMSI				S	Sn	10 27 59.8	+0.1
GTOI	Gorontalo	1.52	295	P	Pn	10 28 01.5	+2.9
GTOI				S	Sn	10 28 22.0	+4.3
MRSI	Marisa	2.49	281	P	Pn	10 28 10.8	-0.9
SANI	Sanana	2.58	142	P	Pn	10 28 11.3	-1.6
APSI	Ampana	2.88	252	P	Pn	10 28 19.7	+2.8
TNTI	Ternate	3.08	75	P	Pn	10 28 19.3	-0.3
TNTI	Ternate	3.08	75		Pn	10 28 20.6	+1.0
LBMI	Labuha	3.17	101	P	Pn	10 28 21.2	+0.3
TOLI2	Tolitoli	3.77	287		Pn	10 28 29.6	+0.5
MPSI	Mapaga	4.50	274	P	Pn	10 28 40.3	+1.3
AAI	Ambon	5.28	134	P	Pn	10 28 48.9	-0.7
	1.0nm2µm122nm,0.6s						
TTSI	Tana Toraja	5.47	236	P	Pn	10 28 53.3	+1.0
	1.3nm4µm270nm,0.5s						
MSAI	Masohi	5.62	126	P	Pn	10 28 54.0	-0.3
	0.4nm1µm66nm,0.9s						
SPSI	Sidrap Palu	6.06	230	P	Pn	10 29 01.3	+0.9
	1.5nm5µm340nm,0.5s						
BNSI	Bone	6.11	224	P	Pn	10 29 02.2	+1.2
	0.7nm2µm227nm,0.7s						
BKSI	Bulukumba	6.79	219	P	Pn	10 29 11.2	+1.0
	0.3nm733nm78nm,0.7s						
KAPI	Kappang	6.80	223	P	Pn	10 29 12.1	+1.7
	10nm,0.3s,baz=34,slow=6.0,SNR=36						
KAPI				S	Sn	10 30 25.8	-0.6
	5.8nm,0.3s,baz=234,slow=22,SNR=5.6						
KAPI				LR	LR	10 32 17.6	
	comp=Z,116nm,19.4s,baz=14,slow=42						
KAPI	Kappang	6.80	223		Pn	10 29 11.6	+1.2
SWI	Sorong	6.92	97	P	Pn	10 29 12.0	-0.1
	0.2nm28nm,1.1s						
SIJI	Sorong	6.93	97	P	Pn	10 29 14.0	+1.7
	2.4nm,0.3s,baz=282,slow=7.7,SNR=4.1						
SIJI				S	Sn	10 30 35.4	+5.7
	1.1nm,0.3s,baz=95,slow=23,SNR=1.5						
BSSI	Bau Bau, Buton	7.23	212	P	Pn	10 29 17.3	+0.9
	0.5nm1µm110nm,0.7s						
MYLDM	Lahad Datu	7.82	311		Pn	10 29 27.4	+3.0
FAKI	Fak Fak	8.37	110	P	Pn	10 29 30.7	-1.3
	30nm,0.7s						
FAKI	Fak Fak	8.37	110		Pn	10 29 31.6	-0.4
KBKI	Kotabaru	8.85	248	P	Pn	10 29 52.1	+14
EDFI	Ende, Flores	9.09	197	P	Pn	10 29 41.7	-0.2
	11nm,0.7s						
BATI	Baumata	10.16	184	LR	LR	10 34 08.8	
	comp=Z,119nm,20.6s,baz=352,slow=39						
KDU	Kakadu	14.94	148	P	Pn	10 30 58.7	-1.7
	baz=15,SNR=8.3						
KNRA	Kununurra	16.16	165	P	Pn	10 31 16.1	+0.1
	baz=16,SNR=7.9						
KNRA	Kununurra	16.16	165	P	P	10 31 17.5	-0.4
KNRA				IAmb	IAmb	10 31 31.1	
	comp=Z,21nm,0.9s						
LEM	Lembang	18.05	248	LR	LR	10 39 23.5	
	comp=Z,61nm,18.7s,baz=73,slow=39						
WB0	Warramunga Arr	21.95	154	P	P	10 32 19.4	-1.7
WB0				IAmb	IAmb	10 32 26.8	
	comp=Z,32nm,1.5s						
WRAB	Tennant Creek	22.08	154	P	P	10 32 21.3	-1.2
WRAB				IAmb	IAmb	10 32 27.8	
	comp=Z,13nm,0.7s						
WRA	Warramunga Arr	22.08	154	P	P	10 32 21.6	-0.9
	comp=Z,7.8nm,0.6s,baz=332,slow=11,SNR=68						
WRA				PcP	PcP	10 36 17.3	-0.6
	comp=Z,0.1nm,0.5s,baz=329,slow=2.0,SNR=1.2						
WRA	Warramunga Arr	22.08	154	P	P	10 32 21.0	-1.5
WB2	Warramunga Arr	22.09	154	P	P	10 32 21.8	-0.8
WR0	Warramunga Arr	22.19	154	P	P	10 32 22.7	-0.9
WR0				IAmb	IAmb	10 32 29.1	
	comp=Z,9.1nm,0.6s						
COEN	Coen	23.20	127	P	P	10 32 34.3	+0.1
COEN				IAmb	IAmb	10 32 58.9	
	comp=Z,6.4nm,0.8s						
WRKA	Warakurna	25.17	172	P	P	10 32 52.5	+0.5
	baz=25,SNR=15						
AS31	Alice Springs	25.27	159		P	10 32 53.5	+0.6
ASAR	Alice Springs	25.27	159	P	P	10 32 53.2	+0.3
	comp=Z,2.7nm,0.4s,baz=336,slow=6.2,SNR=19						
ASAR				PcP	PcP	10 36 25.5	+0.9
	comp=Z,0.8nm,0.5s,baz=353,slow=2.1,SNR=7.9						
ASAR	Alice Springs	25.27	159		P	10 32 53.4	+0.5
QIS	Mount Isa	25.28	145	P	P	10 32 54.3	+1.3
	baz=25,SNR=46						
PSI	Prapat	25.61	276	LR	LR	10 44 09.1	
	comp=Z,33nm,20.0s,baz=178,slow=39						
JOW	Kunigami	26.94	8	LR	LR	10 44 29.5	
	comp=Z,84nm,18.8s,baz=288,slow=38						
STKA	Stephens Creek	35.64	154	P	P	10 34 24.5	+0.2
	comp=Z,3.7nm,0.7s,baz=331,slow=7.7,SNR=10						
STKA				LR	LR	10 49 36.1	
	comp=Z,28nm,19.0s,baz=32,slow=37						
STKA	Stephens Creek	35.64	154	P	P	10 34 25.6	+1.3
	baz=36,SNR=8.6						
STKA	Stephens Creek	35.64	154	P	P	10 34 25.2	+0.9
STKA				IAmb	IAmb	10 34 26.2	
	comp=Z,0.9nm,0.7s						
HTT	Hallett	35.95	159	P	P	10 34 29.9	+2.9
	baz=36,SNR=3.7						
CMSA	Cobar Meteorol	37.29	149	P	P	10 34 40.2	+1.8
	baz=37,SNR=24						
MJAR	Matsushiro Arr	38.56	18	P	P	10 34 47.5	-1.5
	comp=Z,1.6nm,0.6s,baz=181,slow=10.0,SNR=4.5						
ARMA	Armidale	39.82	142	P	P	10 35 02.1	+2.4
	baz=40,SNR=5.3						
USRK	Ussuriysk Ar.	44.53	8	P	P	10 35 36.8	-0.8
	comp=Z,1.3nm,0.6s,baz=183,slow=5.9,SNR=2.2						
SONM	Songino Array	50.15	344	P	P	10 36 20.7	-0.7
	comp=Z,0.5nm,0.4s,baz=148,slow=11,SNR=2.8						
MKAR	Makanchi Array	59.35	328	P	P	10 37 27.0	-0.9
	comp=Z,0.7nm,0.4s,baz=124,slow=8.2,SNR=6.1						
PETK	Petropavlovsk-	59.75	23	P	P	10 37 30.4	-0.1
	comp=Z,2.0nm,0.7s,baz=216,slow=4.1,SNR=1.9						
BTK	Batken	62.89	316	P	P	10 37 49.7	-2.4
SEY	Seymchan	66.18	14	LR	LR	11 04 22.0	
	comp=Z,37nm,19.8s,baz=46,slow=33						
VNDA	Vanda	80.05	172	P	P	10 39 34.3	-0.2
	comp=Z,0.8nm,0.7s,baz=334,slow=5.3,SNR=6.1						
VNDA	Vanda	80.05	172	IAmb	IAmb	10 39 49.8	
	comp=Z,4.0nm,1.3s						

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*TAP **03** 10:31:31.5, 24°.13N×122°.31E, h29km, ML3.2, D*

*JMA **03** 10:31:31.8±0.1, 24°.04N×122°.28E, h27km±3km, M2.8*

ISC 03 10:31:31.5±1.1**, 24°.08N**±0°.02×**122°.28E**±0°.02**, h24**km±12km**, n101, σ0^s.82**/178**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.55	295	*e*P	Pb	10 31 43.0	+0.5
	baz=289						
EWUT	Wuta	0.59	308	P	Pb	10 31 42.7	-0.6
	baz=310						
EWUT				S	Sb	10 31 50.5	-0.6
	baz=310						
ENA	Nanau	0.61	305	P	Pb	10 31 43.8	+0.2
	baz=307						
ENA				S	Sb	10 31 52.2	+0.5
	baz=307						
ETL	Fush Village	0.61	278	P	Pb	10 31 44.2	+0.6
	baz=258						
ETL				S	Sn	10 31 53.7	-0.1
	baz=258						
TWD	Chiawan	0.63	270	*i* P	Pb	10 31 44.1	+0.2
	baz=266						
TWD				S	Sn	10 31 55.2	+0.9
	baz=266						
NACB	Ninganchiao	0.64	279	P	Pb	10 31 44.0	0.0
	baz=260						
NACB				S	Sn	10 31 53.8	-0.7
	baz=260						
TWC	Suao	0.66	323	*i* P	Pb	10 31 43.4	-1.0
	baz=319						
TWC				*i* S	Sb	10 31 51.0	-2.3
	baz=319						
TEYL	Yanliau Villag	0.66	252	P	Pb	10 31 44.9	+0.5
	baz=240						
TEYL				S	Sn	10 31 55.0	-0.1
	baz=240						
JYNG	Yonagunijimaku	0.71	58	P	Pn	10 31 45.6	-0.5
JYNG				S	Sb	10 31 54.6	0.0
ETM	Tongmen	0.73	261	P	Pb	10 31 45.0	-0.7
	baz=258						
ETM				S	Sb	10 31 55.4	+0.1
	baz=258						
ETLH	Xiulin Townshi	0.74	280	P	Pb	10 31 45.9	0.0
	baz=276						
ETLH				S	Sb	10 31 56.1	+0.4
	baz=276						
NDS	Dongshan	0.76	317	P	Pb	10 31 45.4	-0.7
	baz=312						
NDS				S	Sb	10 31 55.8	-0.2
	baz=312						
YOJ	Yonaguni jima	0.77	60	P	Pb	10 31 44.7	-1.5
	baz=61						
YOJ				S	Sn	10 31 57.6	0.0
	baz=61						
YOJ	Yonaguni jima	0.77	60	P	Pn	10 31 46.6	-0.3
YOJ				*e*S	Sn	10 31 56.6	-1.0
ESL	Shilin	0.82	251	*i* P	Pn	10 31 46.6	-1.1
	baz=249						
ESL				*i* S	Sb	10 31 58.0	+0.1
	baz=249						
TWE	Neicheng	0.85	319	*i* P	Pn	10 31 47.6	-0.5
	baz=320						
TWE				*i* S	Sb	10 31 58.0	-0.7
	baz=320						
ENTT	Nioudou	0.86	311	P	Pn	10 31 47.8	-0.4
	baz=307						
ENTT				S	Sb	10 31 58.8	-0.2
	baz=307						
NDT	Datong Townshi	0.88	307	*i* P	Pb	10 31 48.4	+0.3
	baz=312						
NDT				S	Sb	10 31 59.9	+0.5

	baz=312						
NTC	**Toucheng** baz=328	0.88	332	*e*P	Pb	10 31 48.3	+0.2
NTC	baz=328			*e*S	Sb	10 31 59.1	-0.3
EGFH	**Guangfu** baz=241	0.88	243	*e*P	Pn	10 31 47.5	-1.0
EGFH	baz=241			S	Sb	10 31 59.7	+0.1
NNSB	**Datong** baz=289	0.89	293	P	Pn	10 31 48.3	-0.5
NNSB	baz=289			S	Sn	10 32 00.8	-0.3
NNS	**Nan Shan** baz=290	0.91	294	*i* P	Pn	10 31 48.5	-0.5
NNS	baz=290			*i* S	Sn	10 32 02.1	+0.8
WHF	**Hehuan Shan** baz=271	0.93	274	*i* P	Pn	10 31 48.9	-0.6
WHF	baz=271			*i* S	Sn	10 32 02.4	0.0
TWB1	**Santiao Chiao** baz=356	0.96	344	*e*P	Pn	10 31 49.1	-0.5
TWB1	baz=356			*e*S	Sb	10 32 01.9	0.0
FUSS	**Fushou** baz=277	0.96	280	*i* P	Pn	10 31 49.9	0.0
FUSS	baz=277			*e*S	Sn	10 32 02.8	-0.2
HGSD	**Ruisui** baz=232	0.98	234	P	Pn	10 31 49.0	-0.8
HGSD	baz=232			S	Sb	10 32 02.9	+0.5
TIPB	**Shuangxi** baz=331	0.98	335	*i* P	Pn	10 31 49.8	-0.1
TIPB	baz=331			*i* S	Sn	10 32 01.6	-1.5
NWLT	**Wulai** baz=311	1.00	314	*i* P	Pb	10 31 51.2	+1.0
NWLT	baz=311			*e*S	Sn	10 32 02.9	-0.5
CHGB	**Renai** baz=255	1.01	269	P	Pn	10 31 50.2	-0.3
CHGB	baz=255			*e*S	Sb	10 32 04.2	+0.6
YHNB	**Yeheng** baz=290	1.02	306	P	Pb	10 31 50.5	0.0
YHNB	baz=290			S	Sb	10 32 04.2	+0.7
OWD	**Renai** baz=261	1.02	263	*i* P	Pn	10 31 50.2	-0.3
OWD	baz=261			S	Sn	10 32 02.5	-1.6
TWT	**Tachien** baz=277	1.03	280	P	Pb	10 31 51.0	+0.2
TWT	baz=277			S	Sn	10 32 03.1	-1.3
NSK	**Sanguang** baz=290	1.03	305	P	Pn	10 31 50.4	-0.2
NSK	baz=290			S	Sb	10 32 04.7	+0.7
TDCB	**Techi** baz=277	1.04	280	P	Pn	10 31 50.7	-0.1
TDCB	baz=277			S	Sn	10 32 04.1	-0.6
EHY	**Hungye** baz=226	1.05	237	P	Pn	10 31 49.6	-1.2
EHY	baz=226			S	Sn	10 32 04.2	-0.5
NWF	**Wu-fen Shan** baz=331	1.09	335	*i* P	Pn	10 31 51.2	-0.2
NWF	baz=331			*i* S	Sn	10 32 05.1	-0.7
VWDT	**VWDT** baz=241	1.09	253	P	Pn	10 31 51.3	-0.1
VWDT	baz=241			S	Sb	10 32 05.9	+0.2
TWA	**Mucha** baz=337	1.10	325	P	Pb	10 31 52.0	+0.1
YULB	**Yu-li** baz=248	1.13	233	P	Pn	10 31 51.3	-0.7
YULB	baz=248			S	Sn	10 32 05.6	-1.2
EYUL	**Yuli** baz=246	1.15	231	P	Pn	10 31 51.0	-1.1
EYUL	baz=246			*e*S	Sn	10 32 06.1	-1.0
WHP	**Taichung City** baz=266	1.24	279	*i* P	Pb	10 31 54.3	0.0
WHP	baz=266			S	Sb	10 32 11.5	+1.6
YM01	**YM01** baz=339	1.25	329	P	Pn	10 31 53.1	-0.5
YM01	baz=339			*e*S	Sn	10 32 08.4	-1.3
SSLB	**Suanglung** baz=245	1.25	257	P	Pn	10 31 53.6	0.0
WCS	**Beigang Elemen** baz=259	1.25	269	*e*P	Pn	10 31 53.9	+0.3
WCS	baz=259			*e*S	Sb	10 32 10.1	-0.2
FULB	**Fuli** baz=215	1.26	226	P	Pn	10 31 52.5	-1.2
FULB	baz=215			S	Sn	10 32 09.2	-0.8
SMLT	**Sun Moon Lake** baz=260	1.28	262	*i* P	Pn	10 31 54.3	+0.2
SMLT	baz=260			S	Sb	10 32 11.9	+0.8
LIOB	**Emei** baz=293	1.29	296	*i* P	Pb	10 31 55.2	+0.1
LIOB	baz=293			*e*S	Sb	10 32 12.7	+1.4
TWS1	**Kuangyinshan** baz=329	1.29	322	P	Pn	10 31 52.5	-1.6
TWS1	baz=329			*e*S	Sn	10 32 10.1	-0.4
CHKT	**Chengkung** baz=211	1.29	221	P	Pn	10 31 53.1	-1.0
CHKT	baz=211			S	Sn	10 32 08.2	-2.4
NSTT	**Nanjuang** baz=293	1.29	295	P	Pb	10 31 55.2	0.0
NSTT	baz=293			S	Sb	10 32 12.1	+0.7
ANP	**Anpu** baz=325	1.30	328	*e*P	Pn	10 31 54.8	+0.4
TYC	**Yuchr** baz=261	1.32	263	P	Pn	10 31 54.8	+0.3
TYC	baz=261			S	Sn	10 32 11.2	-0.1
NCUH	**Zhongli** baz=308	1.34	312	*e*P	Pn	10 31 54.2	-0.6
NCUH	baz=308			*e*S	Sn	10 32 11.8	0.0
IRIF	**Iriomote-Funau**	1.34	79	P	Pb	10 31 55.7	-0.4
IRIF				*e*S	Sb	10 32 13.3	+0.5
TWY	**Chenhua** baz=329	1.34	333	*e*P	Pb	10 31 56.3	+0.2
YUS	**Yu-Shan** baz=244	1.35	245	*e*P	Pn	10 31 55.4	-0.1
YUS	baz=244			*e*S	Sn	10 32 12.2	-0.7
HATJ	**Hateruma jima**	1.39	91	P	Pb	10 31 57.9	+1.1
TWQ1	**Liyutan** baz=279	1.41	281	P	Pn	10 31 56.4	+0.7
TWQ1	baz=279			S	Sb	10 32 16.0	+1.3
EDH	**Donghe** baz=211	1.42	219	P	Pn	10 31 55.2	-0.7
EDH	baz=211			S	Sn	10 32 12.5	-1.4
NSY	**Sanyi** baz=281	1.43	284	P	Pb	10 31 58.7	+1.1
NSY	baz=281			S	Sb	10 32 16.1	+0.8
WJS	**Zhushan** baz=259	1.45	260	P	Pb	10 31 58.2	+0.4
WJS	baz=259			*e*S	Sb	10 32 17.8	+2.0
ELDTW	**Lidau** baz=221	1.46	233	P	Pn	10 31 55.8	-0.7
ELDTW	baz=221			S	Sn	10 32 13.4	-1.6
ALS	**Alishan** baz=247	1.47	248	*i* P	Pn	10 31 57.6	+0.8
ALS	baz=247			*i* S	Sn	10 32 15.8	+0.4
WNT	**Mingjian** baz=261	1.48	263	P	Pb	10 31 58.2	-0.1
WNT	baz=261			S	Sb	10 32 17.8	+1.1
CHN5	**Tsauling** baz=252	1.55	252	P	Pb	10 31 59.0	-0.6
CHN5	baz=252			S	Sb	10 32 19.3	+0.5
JKRS	**Kuro-shima**	1.58	84	P	Pb	10 32 00.1	0.0
JKRS				*e*S	Sb	10 32 20.0	+0.3
LDUT	**Ludao** baz=210	1.59	208	*e*S	Sn	10 32 16.6	-1.3
WDLH	**Douliu** baz=244	1.65	257	*e*P	Pb	10 32 02.0	+0.8
WDLH	baz=244			*e*S	Sb	10 32 21.0	-0.5
STYH	**Taoyuan** baz=237	1.65	237	*e*P	Pn	10 31 59.4	+0.4
STYH	baz=237			*e*S	Sn	10 32 19.9	+0.3
TWGBT	**Beinan** baz=234	1.67	222	*e*P	Pn	10 31 58.4	-1.0
TWGBT	baz=234			*e*S	Sn	10 32 19.6	-0.5
TWG	**Pinlang** baz=234	1.68	222	*e*P	Pn	10 31 58.7	-0.7
TWG	baz=234			*e*S	Sn	10 32 19.6	-0.6
TPUB	**Ta-pu** baz=243	1.70	243	P	Pb	10 32 01.4	-0.8
TPUB	baz=243			*e*S	Sb	10 32 23.8	+0.6
CHN4	**Tsaushan** baz=245	1.71	245	P	Pn	10 32 00.3	+0.4
CHN4	baz=245			S	Sb	10 32 23.1	-0.4
JIJ	**Ishigaki jima**	1.72	80	P	Pn	10 32 00.7	+0.7
JIJ				*e*S	Sn	10 32 22.0	+0.8
WTP	**Ta-pu** baz=242	1.74	242	P	Pn	10 32 01.4	+1.0
WTP	baz=242			*e*S	Sb	10 32 24.9	+0.5
WRL	**Guolierlin Hig** baz=263	1.75	265	*e*P	Pb	10 32 01.8	-1.2
WRL	baz=263			*e*S	Sn	10 32 22.9	+0.9
TWK	**Hsinying** baz=244	1.83	244	*e*P	Pb	10 32 03.2	-1.3
TWK	baz=244			*e*S	Sb	10 32 26.7	-0.3
CHN1	**Nanshi** baz=242	1.84	241	*e*P	Pn	10 32 03.2	+1.5
CHN1	baz=242			*e*S	Sb	10 32 27.1	0.0
SGST	**Jiashian** baz=238	1.85	238	*e*P	Pn	10 32 03.2	+1.4
SGST	baz=238			*e*S	Sb	10 32 27.1	-0.3
SLGT	**Liugui** baz=226	1.85	235	*e*P	Pb	10 32 03.8	-0.9
SLGT	baz=226			*e*S	Sb	10 32 27.3	-0.2
ECL	**Taimali** baz=221	1.92	220	P	Pn	10 32 01.2	-1.5
ECL	baz=221			*e*S	Sn	10 32 25.2	-0.9
JISG	**Ishigakijimahi**	1.92	74	P	Pn	10 32 03.6	+0.9
JISG				S	Sn	10 32 26.2	+0.1
WSF	**Szhu** baz=243	1.94	257	*e*P	Pn	10 32 04.4	+1.4
ICHU	**Yijhu** baz=249	1.97	249	*e*P	Pn	10 32 04.9	+1.4
CHN3	**Shinhua** baz=241	2.02	241	*e*P	Pn	10 32 05.2	+1.0
SCST	**Cishan** baz=225	2.03	235	*e*P	Pn	10 32 05.5	+1.2
TSMG	**Majia** baz=223	2.03	228	*e*P	Pn	10 32 05.9	+1.6
TSMG	baz=223			*e*S	Sn	10 32 30.1	+1.1
CHN8	**Yiju** baz=249	2.04	249	*e*P	Pn	10 32 05.6	+1.3
MASBT	**Mashibuluo** baz=222	2.11	226	*e*P	Pn	10 32 05.8	+0.4
MASBT	baz=222			*e*S	Sn	10 32 30.9	+0.1
TWM1	**Shoushan** baz=222	2.12	234	*e*P	Pn	10 32 06.4	+0.8
EAST	**Anshuo** baz=219	2.14	218	*e*P	Pn	10 32 07.0	+1.1
JTJ	**Tarama**	2.27	75	*e*S	Sn	10 32 35.9	+1.0
SCZT	**Fangliau** baz=218	2.29	222	*e*P	Pn	10 32 09.2	+1.4
SLIU	**Shizi** baz=218	2.30	217	*e*P	Pn	10 32 09.1	+1.0
TWKBT	**Hengchun** baz=214	2.52	213	*e*P	Pn	10 32 11.5	+0.4
TWK1	**Hengchun** baz=214	2.52	213	*e*P	Pn	10 32 12.5	+1.4
PHUB	**P'eng-hu** baz=258	2.55	258	*e*P	Pn	10 32 11.3	-0.1
VCHM	**Qimei** baz=252	2.76	252	*e*P	Pn	10 32 14.2	-0.1
MATB	**Ma-tsu** baz=312	2.96	315	*e*P	Pn	10 32 18.2	+1.2
PTMZ	**Houxiangcun** baz=288	3.04	289	*e*P	Pn	10 32 18.1	0.0
XPSS	**Dashiqiu** baz=333	3.41	327	*e*P	Pn	10 32 23.1	-0.2

KRNET ***03*** *10:31:38.8±0.1, 41°.19N×70°.21E, h8^{km}, mb2.7*
NNC ***03*** *10:31:40.5±1.1, 40°.98N×70°.33E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=8.7km s-min=4.8km az=35.0*
ISC 03 10:31:39.3±0.9**, 41°.11N**±0°.03×**70°.13E**±0°.04**, h10**^{km}**, n10, σ1^{s}.59**/18**, 17C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	**Tashkent** baz=82	0.67	289	⇑*i*P	Pb	10 31 52.1	-0.9
TAS	baz=82			⇑*i*S	Sb	10 32 02.2	-0.1
TRKS	**Terek-Say** baz=69	0.87	61	⇓*i*P	Pg	10 31 53.6	-2.4
TRKS	baz=69			⇓*i*S	Sg	10 32 04.4	-3.0
BTK	**Batken** baz=58	1.17	153	⇑*i*P	Pn	10 32 01.8	0.0
BTK	baz=58			⇑*i*S	Sn	10 32 19.2	+1.3
KK09	**Karatay Array** 2.5nm,0.5s,baz=182,slow=14	2.03	8	⇑Pn	Pg	10 32 17.6	-0.6
KK09	2.2nm,0.5s,baz=192,slow=27			⇑Sn	Sg	10 32 46.0	+1.4
OHH	**Osh** baz=8.0	2.10	105	⇑*i*P	Pb	10 32 16.4	-1.0
OHH	baz=8.0			⇑*i*S	Sb	10 32 44.4	+0.8
GAR	**Garm** baz=78	2.11	176	⇑*i*P	Pg	10 32 18.6	-1.1
GAR	baz=78			⇑*i*S	Sg	10 32 47.6	+0.5
MNAS	**Manas** baz=52	2.25	51	⇑*i*P	Pn	10 32 18.0	+1.4
MNAS	baz=52			⇑*i*S	Sb	10 32 46.3	-1.6
CHGR	**Chuyangaron** baz=98	2.56	197	⇑*i*P	Pb	10 32 25.4	+0.1
CHGR	baz=98			⇑*i*S	Sb	10 32 57.8	+0.9
AAK	**Ala-Archa** 2.0nm,0.8s	3.60	63	⇑Pg	Pb	10 32 45.1	+2.0
AAK	3.8nm,0.9s			⇓Lg	Lg	10 33 33.4	
TKM2	**Tokmak 2** 1.1nm,0.6s	4.46	64	⇑Pg	Pb	10 33 00.0	+2.3
TKM2	1.4nm,0.5s			⇑Lg	Lg	10 33 59.6	

TUL ***03*** *10:42:14.5±0.9, 36°.37N±0°.01×96°.96W±0°.02, h4^{km}±7^{km}, ML2.6, mb_Lg2.3/13(NEIC), Error ellipse: s-maj=2.2km s-min=1.5km az=67.0*
NEIC 03 10:42:14.6±0.8**, 36°.37N**±0°.01×**96°.95W**±0°.02**, h12**^{km}±3^{km}**, Error ellipse: s-maj=2.9km s-min=2.1km az=77.0,**

Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	**Quay**	0.28	135	Pg	Pg	10 42 20.3	-0.1
QUOK				Sg	Sg	10 42 24.4	+0.1
OK034	**N. Norfolk Rd.**	0.41	152	Pg	Pg	10 42 22.8	+0.1
OK034				Sg	Sg	10 42 28.4	+0.2
OK031	**S. Brethren Rd**	0.43	167	Pg	Pg	10 42 23.1	0.0
OK031				Sg	Sg	10 42 28.9	+0.1
BLOK	**Blackwell**	0.44	332	Pg	Pg	10 42 23.5	+0.1
OK030	**Cody Creek RV**	0.46	163		Pg	10 42 23.8	+0.1
OK030				Sg	Sg	10 42 29.6	-0.3
T35A	**Sooner Cattle**	0.65	33	Pg	Pg	10 42 27.3	0.0
T35A				Sg	Sg	10 42 35.8	0.0
OK029	**Liberty Lake**	0.70	215	Pg	Pg	10 42 28.2	-0.1
OK029				Sg	Sg	10 42 37.7	+0.2
KAN13	**South Haven SW**	0.77	327		Pg	10 42 29.4	-0.1
KAN13				Sg	Sg	10 42 39.5	-0.1
CROK	**Carrier**	0.84	279	Pg	Pg	10 42 30.8	-0.1
CROK				Sg	Sg	10 42 41.4	-0.5
OK025	**Westminster Rd**	0.85	202	Pg	Pg	10 42 30.7	-0.3
GC02	**Grant County #**	0.87	304	Pg	Pg	10 42 31.3	-0.2
GC02				Sg	Sg	10 42 42.6	-0.3
BCOK	**Bluff Creek, N**	0.89	217	Pg	Pg	10 42 31.4	-0.4
BCOK				Sg	Sb	10 42 43.6	-0.1
KAN09	**Caldwell North**	0.93	325	Pg	Pg	10 42 32.4	-0.2
KAN09				Sg	Sg	10 42 44.9	+0.1
KAN17	**Caldwell West**	0.94	316	Pg	Pg	10 42 32.4	-0.3
KAN14	**Manchester OK**	1.00	306		Pb	10 42 33.6	-0.3
KAN01	**Argonia South**	1.01	321	Pg	Pb	10 42 34.0	-0.1
KAN01				Sg	Sg	10 42 47.5	+0.1
KAN01	comp=Z,12nm,0.8s			IAmb_Lg		10 42 48.1	
OKCFA	**Oklahoma City**	1.03	203		Pb	10 42 34.0	-0.5
OKCFA				Sg	Sb	10 42 47.5	-0.5
OKCSW	**OKLAHOMA CITY**	1.04	202	Pg	Pb	10 42 34.3	-0.3
KAN05	**Bluff City Nor**	1.04	315		Pn	10 42 35.0	-0.1
TUL1	**Leonard**	1.05	116		Pb	10 42 34.3	-0.3
OK032	**Salt Plains WL**	1.10	294	Pg	Pb	10 42 35.2	-0.3
KAN06	**Argonia West S**	1.14	321	Pn	Pg	10 42 36.9	+0.3
KAN08	**Anthony NE Sta**	1.18	317		Pn	10 42 36.6	-0.4
KAN10	**Anthony SW Sta**	1.19	310		Pb	10 42 37.2	+0.2
KAN16	**Harper SW Stat**	1.23	314		Pn	10 42 37.5	-0.2
KAN12	**Harper NE Stat**	1.25	318	Pn	Pb	10 42 38.1	0.0
U32A	**Winter Ranch,**	1.65	271		Pb	10 42 44.8	-0.2
X34A	**Smith Ranch, M**	1.91	202		Pn	10 42 47.8	+0.9
X34A	comp=Z,28nm,1.2s			IAmb_Lg		10 43 18.7	
U38A	**Gravette**	2.07	87		Pb	10 42 51.3	-0.8
X37A	**Clayton**	2.20	144	Pn	Pn	10 42 52.2	+1.3
X37A	comp=Z,9.8nm,1.1s			IAmb_Lg		10 43 23.0	
R32A	**Long Quarter,**	2.48	326	Pn	Pn	10 42 56.9	+2.0
KSU1	**Kansas State U** comp=Z,9.1nm,0.8s	2.74	6	IAmb_Lg		10 43 46.7	
S39A	**Bolivar** comp=Z,7.3nm,0.7s	3.19	65	IAmb_Lg		10 44 02.4	
U40A	**Yellville**	3.31	89	Pn	Pn	10 43 08.2	+2.0
CCM	**Cathedral Cave** comp=Z,5.1nm,0.7s	4.86	68	IAmb_Lg		10 44 50.7	
K31A	**O'Neill** comp=Z,7.9nm,0.8s	6.40	348	IAmb_Lg		10 45 52.0	

ISK ***03*** *10:48:47.7, 39°.25N×40°.24E, h4^{km}, ML2.5/4*
DDA ***03*** *10:48:48.0, 39°.25N×40°.14E, h17^{km}±8^{km}, ML1.6*
ISC 03 10:48:47.7±1.2**, 39°.25N**±0°.04×**40°.18E**±0°.05**, h7**^{km}±21^{km}**, n7, σ0^{s}.37**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YEDI	**Yedisu-Bingol**	0.34	57	PG	**Pg**	**10 48 54.2**	**-0.3**
YEDI				SG	**Sg**	**10 48 59.1**	**+0.1**
BNGB	**Bingl**	0.47	124	PG	**Pg**	**10 48 56.6**	**-0.3**
BNGB				SG	**Sg**	**10 49 03.4**	**+0.4**
ERZN	**Erzincan**	0.48	314	PG	**Pb**	**10 48 58.5**	**-0.2**
ERZN				SG	**Sb**	**10 49 06.4**	**+0.3**
TNCL	**Tunceli-Merkez**	0.51	255	*i* P	**Pb**	**10 48 58.7**	**-0.4**
TNCL				*i* S	**Sb**	**10 49 06.6**	**-0.2**
TNCL	comp=E,89nm,0.4s			IAML		10 49 10.0	
TNCL	comp=N,65nm,0.3s			IAML		10 49 10.0	
KOVA	**Elazig, Kovanc**	0.62	208	*i* P	**Pb**	**10 49 00.6**	**-0.3**
KOVA	comp=E,54nm,0.4s			IAML		10 49 10.0	
KOVA	comp=N,30nm,0.5s			IAML		10 49 10.0	
KOVA				*i* S	**Sb**	**10 49 10.3**	**+0.5**
KARO	**Karliova-Bingo**	0.68	85	PG	**Pg**	**10 49 00.8**	**0.0**
KARO				SG	**Sg**	**10 49 10.2**	**+0.5**
KEMA	**Kemaliye**	1.31	271	*i* P	**Pg**	**10 49 12.9**	**+0.1**
KEMA	comp=N,11nm,0.3s			IAML		10 49 34.0	
KEMA	comp=E,7.1nm,0.3s			IAML		10 49 36.0	

IDC ***03*** *10:48:49.8±0.9, 6°.37S×147°.33E, h72^{km}±7^{km}, mb3.6/7, mb1 3.8/11, mb1mx3.5/43, mbtmp4.0/11, MS3.1/4, Ms1 3.1/4, ms1mx2.8/27, Error ellipse: s-maj=34.5km s-min=14.5km az=89.0*
ISC 03 10:48:49.1±0.8**, 6°.27S**±0°.07×**147°.4E**±0°.2**, h63**^{km}**, n13, σ1^{s}.81**/17**, mb3.9**/7**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby** 19nm,0.3s,baz=38,slow=5.3,SNR=45	3.12	184	P	**Pn**	**10 49 35.8**	**-0.1**
PMG	20nm,0.3s,baz=56,slow=9.8,SNR=4.7			S	**Sn**	**10 50 15.9**	**+3.9**
PMG	comp=Z,313nm,19.3s,baz=0.5,slow=48			LR	LR	10 51 15.7	
JAY	**Jayapura** comp=Z,79nm,18.8s,baz=188,slow=38	7.62	299	LR	LR	10 53 37.5	
CTA	**Charters Tower** 0.4nm,0.3s,baz=357,slow=16,SNR=2.1	13.78	184	P	**Pn**	**10 52 00.5**	**-1.0**
SIJI	**Sorong** 1.4nm,0.3s,baz=142,slow=8.4,SNR=1.6	16.94	288	P	**Pn**	**10 52 42.2**	**+0.1**
SIJI	comp=Z,73nm,19.0s,baz=67,slow=40			LR	LR	11 00 12.3	
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=44,slow=12,SNR=22	18.57	222	P	**P**	**10 52 59.9**	**-1.2**
ASAR	**Alice Springs** 2.6nm,0.5s,baz=53,slow=8.3,SNR=44	21.61	215	P	**P**	**10 53 33.4**	**-0.6**
ASAR	comp=Z,70nm,18.2s,baz=16,slow=41			LR	LR	11 03 38.0	
STKA	**Stephens Creek** 1.7nm,0.5s,baz=21,slow=11,SNR=2.0	26.04	191	P	**P**	**10 54 13.9**	**-2.6**
STKA	2.8nm,0.6s,baz=18,slow=12,SNR=4.5			pP	**pP**	**10 54 32.5**	**+0.8**
PETK	**Petropavlovsk-** 2.7nm,0.9s,baz=206,slow=9.5,SNR=1.8	59.80	7	P	**P**	**10 58 48.9**	**+1.3**
SONM	**Songino Array** 0.3nm,0.4s,baz=113,slow=3.7,SNR=2.5	64.82	331	P	**P**	**10 59 22.5**	**+1.0**
SONM	0.5nm,0.6s,baz=147,slow=3.1,SNR=2.9			pP	**pP**	**10 59 41.3**	**+2.7**
VNDA	**Vanda** 1.0nm,0.5s,baz=328,slow=7.2,SNR=13	71.62	177	P	**P**	**11 00 03.6**	**+0.2**
VNDA	2.6nm,0.8s,baz=334,slow=8.6,SNR=5.6			pP	**pP**	**11 00 20.8**	**-0.2**
MKAR	**Makanchi Array** 0.8nm,0.9s,baz=106,slow=9.4,SNR=2.2	77.94	320	P	**P**	**11 00 38.7**	**-1.8**
MKAR	0.2nm,0.3s,baz=100,slow=9.5,SNR=2.6			pP	**pP**	**11 01 00.1**	**+1.8**
ILAR	**Eielson Array** 0.3nm,0.7s,baz=244,slow=3.9,SNR=2.3	85.58	23	P	**P**	**11 01 19.1**	**-1.2**
TORD	**Torodi Ar. Bea** 1.7nm,0.7s,baz=66,slow=4.2,SNR=8.1	145.51	284	PKPbc	**PKPdf**	**11 08 19.6**	**-1.6**

IDC ***03*** *10:50:39.9±0.8, 52°.53N×169°.45W, h0^{km}, mb3.9/14, mb1 4.0/16, mb1mx3.7/67, mbtmp3.8/16, ML2.8/2, MS3.5/1, Ms1 3.5/1, ms1mx2.7/51, Error ellipse: s-maj=27.0km s-min=13.9km az=179.0*
AEIC ***03*** *10:50:46±2.5, 52°.4N±0°.1×169°.29W±0°.10, h23^{km}±4^{km}, Error ellipse: s-maj=14.8km s-min=8.1km az=172.0*
NEIC ***03*** *10:50:47.9±1.4, 52°.5N±0°.1×169°.5W±0°.1, h57^{km}±9^{km}, mb4.3/34, ML3.8(AEIC), Error ellipse: s-maj=15.6km s-min=8.4km az=167.0*
ISC 03 10:50:45.9±0.7**, 52°.5N**±0°.1×**169°.36W**±0°.07**, h40**^{km}**, n76, σ1^{s}.55**/62**, mb4.2**/31**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNV	Unalaska Valle	2.19	51		Pn	10 51 20.8	+1.0
AKUT	Akutan	2.71	51		Pn	10 51 28.6	+1.7
GSTR	Great Sitkin T	4.13	267	Pn	Pn	10 51 48.0	+1.5
FALS	False Pass	4.25	54		Pn	10 51 51.0	+2.9
ADK	Adak	4.55	265	Pn	Pn	10 51 53.3	+1.2
SPIA	Saint Paul Isl	4.72	354		Pn	10 51 57.7	+3.2
SDPT	Sand Point	5.98	58	Pn	Pn	10 52 13.2	+1.4
CNBA	Chernabura Isl	6.26	64	Pn	Pn	10 52 16.9	+1.2
CHGN	Chignik	7.44	55	Pn	Pn	10 52 32.5	+0.7
SII	Sitkinak Islan	9.71	59	Pn	Pn	10 53 04.1	+1.1
OHAK	Old Harbor	10.40	57	Pn	Pn	10 53 10.3	-2.0
P18K	Big Mountain,	10.50	43	Pn	Pn	10 53 15.3	+1.6
Q19K	Cape Douglas,	10.95	48	Pn	Pn	10 53 22.1	+2.3
N19K	Bonanza Creek	11.66	39	Pn	Pn	10 53 33.2	+3.6
L19K	White Mountain	12.44	33	Pn	Pn	10 53 43.6	+3.4
TNA	Tin City	13.13	3	Pn	Pn	10 53 52.3	+2.7
J20K	Nowinta River	14.12	28	Pn	P	10 54 07.4	-2.6
ILAR	Eielson Array	16.85	34	Pn	Pn	10 54 34.5	-4.0
	0.0nm,0.3s,baz=234,slow=10,SNR=1.3						
HYT	Haines Junctio	19.22	52		Pn	10 55 08.9	+1.3
DAWY	Dawson	19.34	42	P	P	10 55 08.5	+0.9
PETK	Petropavlovsk-	19.84	285	P	P	10 55 11.8	-1.2
	0.4nm,0.3s,baz=73,slow=16,SNR=4.4						
SKAG	Skagway	20.10	56	P	P	10 55 17.5	+1.7
SKAG				IAmb	IAmb	10 55 38.0	
	comp=Z,10nm,0.9s						
SEY	Seymchan	22.59	312	P	P	10 55 41.9	-0.7
	comp=Z,2.4nm,0.8s,baz=114,slow=15,SNR=5.1						
DLBC	Dease Lake	22.82	59	LR	LR	11 04 06.3	
	comp=Z,127nm,20.4s,baz=330,slow=35						
INK	Inuvik	23.24	33	P	P	10 55 47.2	-2.0
	comp=Z,2.0nm,1.0s,baz=268,slow=4.6,SNR=5.4						
INK	Inuvik	23.24	33	IAmb	IAmb	10 55 49.9	
	comp=Z,7.1nm,1.3s						
YKA	Yellowknife Ar	30.16	49	P	P	10 56 51.8	+0.1
	comp=Z,0.2nm,0.4s,baz=271,slow=7.9,SNR=5.5						
B08A	Colville Reser	31.62	77	P	P	10 57 05.7	+1.0
B08A				IAmb	IAmb	10 57 16.1	
	comp=Z,9.7nm,1.5s						
HUMO	Hull Mountain	32.33	89	P	P	10 57 11.5	+0.4
NEW	Newport	32.97	76	P	P	10 57 17.1	+0.4
	comp=Z,2.1nm,0.7s,baz=288,slow=10,SNR=6.0						
NEW	Newport	32.97	76	IAmb	IAmb	10 57 17.7	
	comp=Z,2.2nm,0.6s						
KLR	Kul'dur	36.42	289	P	P	10 57 44.4	-2.0
	comp=Z,0.6nm,0.2s,baz=17,slow=23,SNR=2.1						
KVN	Kaiserville	37.40	90	P	P	10 57 55.5	+0.5
KVN				IAmb	IAmb	10 58 19.9	
	comp=Z,3.3nm,1.2s						
EGMT	Eagleton	37.42	72	P	P	10 57 55.7	+0.7
H11N2	WAKE ISLAND Hy	37.55	218	T	T	11 38 33.2	
	baz=24,slow=76						
H11N3	WAKE ISLAND Hy	37.56	218	T	T	11 38 21.7	
	baz=24						
BOZ	Bozeman (W)	37.56	77	P	P	10 57 56.8	+0.5
BOZ				IAmb	IAmb	10 57 57.1	
	comp=Z,1.8nm,0.6s						
H11N1	WAKE ISLAND Hy	37.57	218	T	T	11 38 43.8	
	baz=24,slow=76						
ELK	Elko	38.12	86	P	P	10 58 01.3	+0.2
	comp=Z,1.3nm,0.8s,baz=308,slow=10,SNR=6.3						
ELK	Elko	38.12	86	IAmb	IAmb	10 58 03.1	
	comp=Z,1.3nm,0.8s						
YHL	Hebgen Lake	38.23	78	P	P	10 58 03.0	+0.9
YHH	Holmes Hill	38.46	77	P	P	10 58 04.8	+0.7
YHH				IAmb	IAmb	10 58 05.1	
	comp=Z,2.0nm,0.7s						
H11S1	WAKE ISLAND Hy	38.74	218	T	T	11 39 17.1	
	baz=23,slow=76,SNR=168						
H11S2	WAKE ISLAND Hy	38.76	218	T	T	11 39 27.8	
	baz=23,slow=76,SNR=135						
H11S3	WAKE ISLAND Hy	38.76	218	T	T	11 39 13.7	
	baz=23,slow=76,SNR=131						
HVU	Hansel Valley	39.01	83	P	P	10 58 09.1	+0.7
HVU				IAmb	IAmb	10 58 10.0	
	comp=Z,3.0nm,0.8s						
DUG	Dugway, Tooele	39.92	85	P	P	10 58 17.1	+1.0
PD31	Pinedale Array	40.37	79	P	P	10 58 20.3	+0.4
PDAR	Pinedale Array	40.37	79	P	P	10 58 19.9	0.0
	comp=Z,1.3nm,0.6s,baz=298,slow=4.3,SNR=16						
NLU	North Lily Min	40.52	84	P	P	10 58 22.1	+0.9
TMUT	Trail Mountain	41.45	85	P	P	10 58 29.7	+0.8
TMUT				IAmb	IAmb	10 58 30.6	
	comp=Z,5.0nm,0.9s						
RDMU	Red Mountain	41.67	82	P	P	10 58 31.2	+0.6
RDMU				IAmb	IAmb	10 58 32.5	
	comp=Z,4.7nm,0.9s						
SRU	San Rafael Swe	41.98	84	P	P	10 58 33.9	+0.8
SRU				IAmb	IAmb	10 58 35.4	
	comp=Z,4.3nm,0.8s						
U15A	North Rim	42.61	89	P	P	10 58 39.8	+1.4
O20A	White River Ci	42.74	82	P	P	10 58 39.5	+0.2
PV21	Cone Mtn., Par	43.27	84	P	P	10 58 43.5	-0.1
PV21				IAmb	IAmb	10 58 44.3	
	comp=Z,4.0nm,0.7s						
PV22	Blue Mesa, Par	43.40	84	P	P	10 58 44.6	-0.1
PV22				IAmb	IAmb	10 58 45.4	
	comp=Z,3.5nm,0.8s						
PV04	Paradox Valley	43.42	84	P	P	10 58 43.6	-1.1
PV17	East Wray Mesa	43.46	84	P	P	10 58 44.8	-0.4
PV16	Nyswonger Mesa	43.47	84	P	P	10 58 45.5	+0.3
PV16				IAmb	IAmb	10 58 46.5	
	comp=Z,7.0nm,1.1s						
PV12	Saucer Basin,	43.53	84	IAmb	IAmb	10 58 47.0	
	comp=Z,3.9nm,0.8s						
PV03	Paradox Valley	43.54	84	P	P	10 58 45.3	-0.5
PV03				IAmb	IAmb	10 58 46.5	
	comp=Z,5.1nm,0.7s						
PV01	Paradox Valley	43.79	84	IAmb	IAmb	10 58 48.6	
	comp=Z,5.9nm,0.7s						
T25A	Trinidad	46.95	82	P	P	10 59 13.2	+0.4
T25A				IAmb	IAmb	10 59 14.3	
	comp=Z,4.2nm,0.8s						
SONM	Songino Array	51.24	301	PcP	PcP	11 01 00.9	+0.9
	comp=Z,0.4nm,0.5s,baz=57,slow=5.3,SNR=2.0						
TX31	Lajitas Ar. Si	52.74	89	P	P	10 59 56.5	-0.2
TX32	Lajitas Array	52.74	89	IAmb	IAmb	10 59 57.6	
	comp=Z,3.1nm,0.8s						
TXAR	Lajitas Array	52.74	89	P	P	10 59 56.5	-0.3
	comp=Z,2.0nm,0.6s,baz=299,slow=5.3,SNR=32						
HHC	Hu-ho-hao-te	52.88	291	eP	P	11 00 00.8	+3.1
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,6.9s						
ZALV	Zalesovo Beam	57.34	318	P	P	11 00 28.8	-0.6
	comp=Z,1.0nm,0.3s,baz=73,slow=5.1,SNR=7.1						
WMQ	Urumqi	63.46	308	eP	P	11 01 16.5	+5.0
MKAR	Makanchi Array	63.73	313	P	P	11 01 12.7	-0.5
	comp=Z,0.8nm,0.8s,baz=44,slow=6.8,SNR=4.0						
FINES	FINESS Array B	65.75	352	P	P	11 01 24.4	-1.7
	comp=Z,2.3nm,0.9s,baz=26,slow=6.7,SNR=1.2						
CMAR	Chiang Mai Arr	76.60	283	P	P	11 02 32.5	+0.3
	comp=Z,1.3nm,0.4s,baz=28,slow=6.5,SNR=12						
WRA	Warramunga Arr	87.08	232	P	P	11 03 27.6	+0.4
	comp=Z,0.2nm,1.0s,baz=196,slow=20,SNR=1.1						
ASAR	Alice Springs	90.48	230	P	P	11 03 41.4	-1.8
	comp=Z,0.5nm,1.0s,baz=28,slow=4.6,SNR=3.1						

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*IDC **03** 11:36:04.1±3.8, 30°.84S×71°.90W, h0^{km}, mb3.8/1, mb1 3.9/4, mb1mx3.7/34, mbtmp3.7/4, ML3.7/3, MS3.0/1, Ms1 3.0/1, ms1mx2.6/20, Error ellipse: s-maj=97.3km s-min=39.2km az=102.0*

*NEIC **03** 11:36:10.3±1.3, 30°.87S±0°.06×72°.0W±0°.1, h40^{km}±7^{km}, mb4.2/1, ML4.0(GUC), Error ellipse: s-maj=18.4km s-min=7.8km az=99.0*

*GUC **03** 11:36:10.5±0.7, 30°.94S×71°.49W, h29^{km}±4^{km}, ML3.9*

ISC 03 11:36:09.6±1.3**, 30°.87S**±0°.03×**71°.92W**±0°.09**, h29**^{km}±8^{km}**, n52, σ1^{s}.37**/63**, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.31	51	⇑iP	Pb	11 36 17.3	+0.3
CO06				eS	Sb	11 36 22.1	0.0
CO06				IAML		11 36 22.5	
	comp=E,22µm,0.1s						
CO05	La Serena	1.11	32	⇑eP	Pn	11 36 29.2	0.0
CO05				eS	Sn	11 36 42.8	-0.8
CO05	La Serena	1.11	32		Pn	11 36 29.1	0.0
GO04	Tololo Observa	1.19	55	⇓eP	Pn	11 36 28.7	-1.8
GO04				eS	Sn	11 36 41.0	-4.8
GO04				IAML		11 36 44.4	
	comp=E,12µm,0.4s						
GO04	Tololo Observa	1.19	55	Pn	Pn	11 36 28.7	-1.8
VA06	Catapilco	1.77	163	⇓iP	Pn	11 36 38.2	0.0
VA06				eS	Sn	11 36 59.5	-0.3
VA06				IAML		11 37 06.8	
	comp=E,2µm,0.4s						
LCO	Las Campanas	2.13	30	eP	Pn	11 36 43.7	+0.3
LCO				eS	Sn	11 37 09.1	0.0
LCO	Las Campanas	2.13	30	Pn	Pn	11 36 43.8	+0.3
VA01	Torpederas	2.16	174		Pn	11 36 43.6	0.0
VA03	San Esteban	2.22	149	eP	Pn	11 36 44.8	+0.2
VA03				eS	Sn	11 37 10.2	-0.8
VA03				IAML		11 37 23.6	
	comp=E,2µm,0.2s						
VA03	San Esteban	2.22	149		Pn	11 36 44.5	0.0
MT02	Curacav	2.47	165	eP	Pn	11 36 48.2	+0.3
MT02				eS	Sn	11 37 18.1	+0.8
MT02	Curacav	2.47	165		Pn	11 36 49.3	+1.3
PEL	Peldehue	2.50	156	eP	Pn	11 36 48.8	+0.5
PEL				eS	Sn	11 37 17.7	-0.2
PEL				IAML		11 37 28.8	
	comp=N,665nm,0.3s						
PEL	Peldehue	2.50	156		Pn	11 36 48.5	+0.2
MT05	Renca	2.71	159	eP	Pn	11 36 52.2	+1.0
MT05				eS	Sn	11 37 23.2	+0.1
MT05				IAML		11 37 39.6	
	comp=E,1µm,0.3s						
MT05	Renca	2.71	159		Pn	11 36 51.7	+0.5
AC04	Llanos de Chal	2.75	16	⇓iP	Pn	11 36 52.0	+0.2
AC04				iS	Sn	11 37 26.6	+2.5
AC04				IAML		11 37 40.0	
	comp=E,315nm,0.4s						
AC04	Llanos de Chal	2.75	16	Pn	Pn	11 36 51.6	-0.2
VA05	Santo Domingo	2.79	175	eP	Pn	11 36 53.6	+1.3
VA05				IAML		11 37 40.8	
	comp=E,612nm,0.3s						
VA05	Santo Domingo	2.79	175		Pn	11 36 53.4	+1.1
FCH	Farellones	2.81	151	eP	Pn	11 36 53.5	+0.6
FCH				iS	Sn	11 37 28.6	+2.6
ZON	Zonda	2.85	105		Pn	11 36 54.0	+0.7
MT09	Talagante	3.00	165	⇑eP	Pn	11 36 56.1	+0.7
MT09				eS	Sn	11 37 29.9	-0.6
MT09				IAML		11 37 39.2	
	comp=N,506nm,0.2s						
MT09	Talagante	3.00	165		Pn	11 36 56.0	+0.7
MT01	Popeta	3.04	169	eP	Pn	11 36 55.8	0.0
MT01				eS	Sn	11 37 32.0	+0.8
MT01				IAML		11 37 47.9	
	comp=E,284nm,0.2s						
MT01	Popeta	3.04	169		Pn	11 36 55.6	-0.1
BO04	La Punta	3.30	161	eP	Pn	11 36 59.9	+0.5
BO04				iS	Sn	11 37 37.2	-0.5
BO04				IAML		11 37 55.5	
	comp=N,328nm,0.7s						
LMEL	Las Melosas	3.31	154	eP	Pn	11 37 00.2	+0.7
LMEL				iS	Sn	11 37 37.2	-0.8
LMEL				IAML		11 37 55.0	
	comp=N,498nm,0.2s						
GO03	Copiap	3.58	25	eP	Pn	11 37 03.7	+0.5
GO03				eS	Sn	11 37 46.7	+2.1
GO03	Copiap	3.58	25	Pn	Pn	11 37 03.5	+0.3
BO01	Tunca	3.58	169	eP	Pn	11 37 03.3	+0.1
BO01				IAML		11 37 58.0	
	comp=E,144nm,0.4s						
BO01	Tunca	3.58	169		Pn	11 37 03.3	+0.1
BO02	Sierra Bellavi	4.03	167	eP	Pn	11 37 09.9	+0.5
BO02	Sierra Bellavi	4.03	167	Pn	Pn	11 37 10.0	+0.6
GO05	Huala	4.13	180	Pn	Pn	11 37 09.7	-1.0
AC02	Maricunga	4.70	32	eP	Pn	11 37 20.4	+1.4
AC02				iS	Sn	11 38 12.0	-1.0
AC02	Maricunga	4.70	32	Pn	Pn	11 37 20.5	+1.4
LC01	Cunco	8.01	180	Pn	Pn	11 38 03.4	-0.6
PB06	IPOC Station P	8.39	15	Pn	Pn	11 38 11.4	+1.9
PLCA	Paso Flores	9.91	174	Pn	Pn	11 38 28.9	-1.1
	comp=E,0.1nm,0.3s,baz=356,slow=7.4,SNR=3.3						
TRQA	Tornquist	10.89	134	Pn	Pn	11 38 42.4	-1.0
CPUP	Villa Florida	13.59	74	Pn	Pn	11 39 18.6	-1.8
	comp=E,0.3nm,0.3s,baz=238,slow=9.3,SNR=2.2						
CPUP				Sn	Sn	11 41 56.0	+5.6
	comp=E,0.2nm,0.3s,baz=74,slow=13,SNR=1.4						
CPUP				LR	LR	11 44 58.1	
	comp=E,60nm,19.5s,baz=232,slow=39						
LPAZ	La Paz	14.92	14	Pn	Pn	11 39 38.1	-1.1
	comp=E,0.1nm,0.3s,baz=188,slow=13,SNR=3.4						
TORD	Torodi Ar. Bea	83.05	70	P	P	11 48 31.2	-1.5
	comp=E,0.4nm,0.5s,baz=237,slow=4.9,SNR=5.5						
TORD	Torodi Ar. Bea	83.05	70	IAmb	IAmb	11 48 36.1	
	comp=Z,3.1nm,1.4s						
H11S2	WAKE ISLAND Hy	125.86	271	T	T	14 13 57.9	
	baz=117,slow=74,SNR=12						
H11S1	WAKE ISLAND Hy	125.87	271	T	T	14 13 57.3	
	baz=117,slow=74,SNR=14						
H11S3	WAKE ISLAND Hy	125.88	271	T	T	14 13 58.4	
	baz=117,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	126.19	273	T	T	14 14 20.7	
	baz=116						
H11N1	WAKE ISLAND Hy	126.21	273	T	T	14 14 25.9	
	baz=116						
H11N2	WAKE ISLAND Hy	126.21	273	T	T	14 14 23.3	
	baz=116						

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*IDC **03** 11:41:29.3±0.8, 16°.67N×93°.49W, h149^{km}±9^{km}, mb4.0/14, mb1 4.1/16, mb1mx3.7/49, mbtmp4.4/16, MS2.7/1, Ms1 2.7/1, ms1mx2.5/26, Error ellipse: s-maj=26.7km s-min=11.1km az=42.0*

*NEIC **03** 11:41:30.8±1.9, 16°.58N±0°.06×93°.58W±0°.05, h152^{km}±5^{km}, mb4.7/242, Md4.5/52(MEX), Error ellipse: s-maj=9.3km s-min=6.3km az=211.0*

*MEX **03** 11:41:31.9±0.8, 16°.60N×93°.60W, h154^{km}±5^{km}, MD4.6*

*INET **03** 11:41:37.7, 16°.50N×93°.14W, h15^{km}, MW4.1*

ISC 03 11:41:30.3±0.5**, 16°.58N**±0°.04×**93°.56W**±0°.03**, h158**^{km}±5^{km}**, n390, σ1^{s}.28**/324**, mb4.6**/98**, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		0.46	65		Pn	11 41 52.3	-0.1
TGIG					Sn	11 42 08.0	-1.3
TGIG		0.46	65	iP	Pn	11 41 52.3	-0.1
TGIG				eS	Sn	11 42 08.0	-1.3
TGBT	Tuxtla Gutierr	0.49	66		Pn	11 41 52.5	+0.1
TGBT					Sn	11 42 08.5	-0.8
TGBT	Tuxtla Gutierr	0.49	66	eP	Pn	11 41 52.5	+0.1
TGBT				iS	Sn	11 42 08.5	-0.8
UXUV	UXUV	0.92	323	eP	Pn	11 41 55.1	-0.1
UXUV				eS	Sn	11 42 12.2	-2.1
PCIG		0.93	159		Pn	11 41 55.1	-0.2
PCIG					Sn	11 42 13.7	-0.6
PCIG		0.93	159	iP	Pn	11 41 55.1	-0.2
PCIG				eS	Sn	11 42 13.7	-0.6
CMIG	Matias Romero	1.37	292	P	Pn	11 41 58.7	-0.4
	226nm,0.3s,baz=120,slow=6.3,SNR=1733						
CMIG				LR	LR	11 42 05.7	
	comp=Z,70nm,21.7s,baz=272,slow=26						
CMIG				S	Sn	11 42 19.3	-1.9
	1µm,0.3s,baz=245,slow=18,SNR=25						
CMIG	Matias Romero	1.37	292		Pn	11 41 58.7	-0.4
CMIG					Sn	11 42 19.6	-1.6
CMIG	Matias Romero	1.37	292	iP	Pn	11 41 58.7	-0.4
CMIG				eS	Sn	11 42 19.6	-1.6
CCIG	Comitan	1.40	102		Pn	11 41 59.8	+0.2
CCIG	Comitan	1.40	102		Sn	11 42 22.3	+0.3
CCIG	Comitan	1.40	102	iP	Pn	11 41 59.7	+0.2
CCIG				iS	Sn	11 42 22.3	+0.3
VHSA	Villahermosa	1.52	23	eP	Pn	11 41 59.9	-0.7
TUIG	Tuzandepetl	1.67	330		Pn	11 42 02.3	+0.1
TUIG					Sn	11 42 25.7	-1.1
TUIG	Tuzandepetl	1.67	330	iP	Pn	11 42 02.3	+0.1
TUIG				eS	Sn	11 42 25.7	-1.1
MIHL	Minatitlan	1.69	326	iP	Pn	11 42 03.1	+0.7
MIHL				iS	Sn	11 42 28.0	+0.9
THIG		2.08	143		Pn	11 42 07.3	+0.5
THIG					Sn	11 42 35.1	+0.2
THIG		2.08	143	iP	Pn	11 42 07.3	+0.5
THIG				eS	Sn	11 42 35.1	+0.2
HUEH	Huehuetenango	2.34	122		Pn	11 42 10.1	-0.1
NEUV	Arroyo Zacate	2.42	298	eP	Pn	11 42 10.3	-0.5
NEUV				eS	Sn	11 42 39.8	-2.4
HUIG	Huatulco	2.58	252		Pn	11 42 10.0	-2.8
HUIG					Sn	11 42 42.0	-3.5
HUIG	Huatulco	2.58	252	iP	Pn	11 42 10.0	-2.8
HUIG				eS	Sn	11 42 42.0	-3.5
RTAL	Retalhuleu	2.72	138		Pn	11 42 15.2	+0.6
PANG	Puerto Angel	2.94	252		Sn	11 42 51.0	-2.6
PANG	Puerto Angel	2.94	252	iS	Sn	11 42 51.0	-2.6
OXLC	Oaxaca	3.05	280	eP	Pn	11 42 19.1	+0.4
OXLC				iS	Sn	11 42 56.6	+0.3
OXBJ	Oaxaca	3.07	280		Pn	11 42 19.5	+0.4
OXBJ	Oaxaca	3.07	280	eP	Pn	11 42 19.5	+0.4
VHO	Vista Hermosa	3.08	280	iP	Pn	11 42 19.5	+0.3
VHO				eS	Sn	11 42 54.2	-2.8
SCIG	Sabancuy	3.28	43		Pn	11 42 21.2	-0.3
SCIG					Sn	11 42 58.5	-2.8
SCIG	Sabancuy	3.28	43	iP	Pn	11 42 21.2	-0.3
SCIG				eS	Sn	11 42 58.5	-2.8
APG	El Apazote	3.37	117	P	Pn	11 42 22.1	-0.8
	18nm,0.3s,baz=321,slow=12,SNR=86						
APG				S	Sn	11 42 58.8	-4.8
	65nm,0.3s,baz=305,slow=12,SNR=8.0						
APG				LR	LR	11 43 21.4	
	comp=Z,136nm,21.5s,baz=77,slow=34						
PEIG	Puerto Escondi	3.49	261	iP	Pn	11 42 21.8	-2.5
PEIG				iS	Sn	11 42 59.5	-6.7
PETF	Flores	3.55	84		Pn	11 42 25.0	0.0
TOIG	Toxpalan	3.67	295	iP	Pn	11 42 26.7	+0.1
TOIG				eS	Sn	11 43 07.9	-2.5
OZST	Orizaba	4.06	304	iS	Sn	11 43 18.5	-1.0
TPIG	Tehuac#an	4.06	297		Pn	11 42 32.2	+0.4
TPIG					Sn	11 43 16.1	-3.4
TPIG	Tehuac#an	4.06	297	iP	Pn	11 42 32.2	+0.4
TPIG				eS	Sn	11 43 16.1	-3.4
THEZ	Tehuacan	4.11	298	eP	Pn	11 42 32.6	+0.3
THEZ				iS	Sn	11 43 18.6	-2.0
JAUV	Jalcomulco	4.15	312	iP	Pn	11 42 31.5	-1.2
JAUV				eS	Sn	11 43 18.9	-2.5
HLIG	Huajuapan de L	4.24	288	iP	Pn	11 42 34.7	+0.6
HLIG				eS	Sn	11 43 21.7	-2.1
PNIG	Pinotepa	4.39	268		Pn	11 42 34.3	-1.5
PNIG					Sn	11 43 24.6	-2.3
PNIG	Pinotepa	4.39	268	iP	Pn	11 42 34.3	-1.5
PNIG				eS	Sn	11 43 24.6	-2.3
ESQI	Esquipulas	4.53	116		Pn	11 42 37.7	-0.1
FTIG	Fresnillo de T	4.56	287	eP	Pn	11 42 39.0	+0.7
FTIG				eS	Sn	11 43 23.9	-7.3
MTO3	Montecristo	4.59	118		Pn	11 42 37.9	-0.9
HMTT	Tlapaneco	4.93	285		Pn	11 42 44.6	+1.5
HMTT					Sn	11 43 40.5	+0.7
HMTT	Tlapaneco	4.93	285	eP	Pn	11 42 44.6	+1.5
HMTT				iS	Sn	11 43 40.5	+0.7
UNM	Universidad Na	6.01	298		Pn	11 42 58.8	+1.4
TGUH	Tegucigalpa,Un	6.56	112	Pn	Pn	11 43 04.9	+0.2
CRIN	San Cristobal	7.39	121		Pn	11 43 17.0	+1.4
MOIG	Morelia	7.88	294	Pn	Pn	11 43 23.3	+1.0
MATN	Matagalpa	8.23	115		Pn	11 43 27.7	+0.8
BOAB	BOACO BROADBAN	8.68	117	Pn	Pn	11 43 34.1	+1.4
HZTE	Horizontes, Gu	9.69	126		Pn	11 43 47.3	+1.1
DUNO	Dulce Nombre,	10.16	128		Pn	11 43 52.7	+0.3
DUNO					Sn	11 45 43.6	-1.6
JTS	Las Juntas de	10.45	126	P	Pn	11 43 54.7	-1.4
JTS				S	Sn	11 45 48.2	-3.8
JTS	Las Juntas de	10.45	126	Pn	Pn	11 43 56.4	+0.2
ZAIG	Zacatecas	10.48	307	Pn	Pn	11 43 58.2	+1.4
JACO	JACO, Garabito	11.06	127	Pn	Pn	11 44 06.3	+2.1
RIMA	Rio Macho	11.62	124		Pn	11 44 12.0	+0.3
SOR	Soroa	11.70	56		Pn	11 44 11.6	-0.9
PEZE	Perez Zeledon,	11.99	125		Pn	11 44 17.3	+0.9
SRBA	San Rafael, Bu	12.33	125	Pn	Pn	11 44 21.5	+0.7
735A	Kenedy	12.83	343	Pn	Pn	11 44 27.9	+0.8
833A	Chaparral WMA,	12.87	336	P	Pn	11 44 28.9	+1.3
	baz=153,SNR=30						
HKT	Hockley	13.47	352		P	11 44 37.5	-1.4
441A	DeRidder	14.11	1		Pn	11 44 43.5	+0.2
435B	Jarrell	14.61	346	Pn	P	11 44 50.3	-1.3
435B	Jarrell	14.61	346	P	P	11 44 50.5	-1.1
	baz=164,SNR=7.7						
342A	Flagon Creek P	14.77	4		P	11 44 52.3	-1.2
JCT	Junction City	14.97	339	P	P	11 44 55.4	-0.2
JCT	Junction City	14.97	339	P	Pn	11 44 54.6	+0.5
	baz=156,SNR=17						
344A	Westbrook Farm	15.03	9	P	P	11 44 56.0	-0.3
344A				IAmb	IAmb	11 44 57.2	
	comp=Z,45nm,0.8s						
NATX	Nacogdoches	15.15	356		P	11 44 57.3	-0.3
NATX	Nacogdoches	15.15	356	P	Pn	11 44 55.8	-0.3
	baz=175						
346A	Big Creek Wild	15.21	13	P	P	11 44 58.4	+0.1
HPIG		15.24	315	P	P	11 44 59.6	+0.7
HPIG				IAmb	IAmb	11 45 04.0	
	comp=Z,29nm,0.8s						
BRAL	Brewton	15.69	21	P	Pn	11 45 00.5	-2.3
	baz=203						
TX31	Lajitas Ar. Si	15.73	326	P	P	11 45 05.5	+1.4
TXAR	Lajitas Array	15.73	326	P	P	11 45 05.2	+1.0
	comp=Z,3.7nm,0.3s,baz=150,slow=10,SNR=183						
WHTX	Lake Whitney,	15.75	348	P	P	11 45 05.0	+0.7
WHTX	Lake Whitney,	15.75	348	P	P	11 45 03.9	-0.3
	baz=166,SNR=15						
VBMS	Vicksburg	15.81	10	P	P	11 45 04.6	-0.3
VBMS	Vicksburg	15.81	10	P	P	11 45 04.0	-0.9
	baz=190,SNR=5.8						
146A	Union	16.50	13	IAmb	IAmb	11 45 15.1	
	comp=Z,22nm,0.8s						
Z41A	Richland Creek	16.62	2	P	Pn	11 45 14.2	0.0
	baz=182,SNR=20						
Z38A	Mt. Pleasant	16.66	356	P	Pn	11 45 14.8	+0.2
Z38A				IAmb	IAmb	11 45 23.8	
	comp=Z,41nm,0.7s						
250A	Grady	16.70	22	IAmb	IAmb	11 45 34.2	
	comp=Z,26nm,0.9s						
ABTX	Abilene, Hawle	16.90	342	P	Pn	11 45 17.9	+0.4
	baz=159,SNR=28						
Z35A	Perchaven, San	17.01	349	P	Pn	11 45 18.3	-0.6
WLAR	White Oak Lake	17.04	1		Pn	11 45 20.0	+0.8
WLAR				IAmb	IAmb	11 45 38.2	
	comp=Z,42nm,0.8s						
Z47A	Carrollton	17.27	16	IAmb	IAmb	11 45 30.7	
	comp=Z,33nm,0.8s						
CCAR	Cane Creek	17.34	5	P	Pn	11 45 22.9	+0.1
CCAR				IAmb	IAmb	11 45 26.4	
	comp=Z,43nm,0.8s						
Y45A	Yeager Farm, C	17.59	11	P	Pn	11 45 26.1	+0.3
LOOK	Love County	17.64	350		Pn	11 45 25.9	-0.5
X40A	Basin Creek Fa	17.85	2	P	P	11 45 27.4	+0.1
	baz=182						
MIAR	Mount Ida	17.89	360	P	P	11 45 27.9	+0.1
MIAR				IAmb	IAmb	11 45 33.6	
	comp=Z,28nm,0.9s						
MIAR	Mount Ida	17.89	360	P	P	11 45 27.3	-0.5
	baz=180,SNR=19						
152A	Waverly Hall	17.91	25	IAmb	IAmb	11 45 31.3	
	comp=Z,22nm,0.8s						
Z51A	Franklin	18.30	23	IAmb	IAmb	11 45 35.8	
	comp=Z,21nm,0.8s						
MNTX	Cornudas Mount	18.50	327	P	P	11 45 35.5	+1.0
	baz=141,SNR=22						
W39A	Magazine	18.54	359	IAmb	IAmb	11 45 49.0	
	comp=Z,29nm,0.8s						
W39A	Magazine	18.54	359	P	P	11 45 34.0	-0.9
	baz=179						
W41B	Gary Mavity, V	18.56	3	P	P	11 45 34.8	-0.3
	baz=184,SNR=7.0						
PLAL	Pickwick Lake	18.97	14	IAmb	IAmb	11 45 43.9	
	comp=Z,27nm,0.9s						
GOGA	Godfrey	19.07	27	P	P	11 45 39.4	-1.2
	baz=211						
SJCC	San Jacinto, C	19.08	108		P	11 45 42.8	+1.9
MSTX	Muleshoe	19.20	336	P	P	11 45 43.0	+0.9
MSTX	Muleshoe	19.20	336	P	P	11 45 42.6	+0.4
	baz=152,SNR=35						
Y52A	Lilburn	19.22	25	IAmb	IAmb	11 45 58.3	
	comp=Z,21nm,0.7s						
FPAL	Fort Paine	19.25	20	IAmb	IAmb	11 45 48.3	
	comp=Z,23nm,1.0s						
FCAR	Ozark Folk Cen	19.28	4	IAmb	IAmb	11 45 43.7	
	comp=Z,18nm,0.8s						
TUL1	Leonard	19.36	355	P	P	11 45 43.2	-0.5
	baz=173,SNR=13						
OK031	S. Brethren Rd	19.52	352	IAmb	IAmb	11 45 51.5	
	comp=Z,43nm,1.1s						
LCAR	Lake Charles	19.53	6	IAmb	IAmb	11 46 00.2	
	comp=Z,16nm,0.7s						
OK034	N. Norfolk Rd.	19.56	352	IAmb	IAmb	11 46 04.7	
	comp=Z,30nm,0.6s						
AMTX	Amarillo	19.63	340	P	P	11 45 47.4	+0.6
	baz=156						

U40A	Yellville baz=182,SNR=8.2	19.71	2	P	P	11 45 47.2	-0.3
QUOK	Quay comp=Z,47nm,1.0s	19.71	352	IAmb	IAmb	11 45 54.2	
SWET	Sewanee	19.77	19	P	P	11 45 48.5	+0.2
W50A	Signal Mountai comp=Z,16nm,0.8s	19.96	20	IAmb	IAmb	11 45 56.9	
V48A	Smith Brothers comp=Z,18nm,1.0s	20.01	16	IAmb	IAmb	11 45 55.9	
WVT	Waverly	20.13	14	P	P	11 45 52.9	+0.9
WVT	Waverly baz=196	20.13	14	P	P	11 45 52.2	+0.1
U32A	Winter Ranch, comp=Z,38nm,0.9s	20.31	347	IAmb	IAmb	11 45 57.2	
PBMO	Poplar Bluff	20.31	7	P	P	11 45 53.0	-0.9
BLOK	Blackwell comp=Z,26nm,0.8s	20.36	352	IAmb	IAmb	11 46 14.2	
121A	Cookes Peak, D baz=137,SNR=42	20.45	324	P	P	11 45 57.0	+1.2
319A	Douglas comp=Z,34nm,0.9s	20.54	319	IAmb	IAmb	11 46 00.8	
GC02	Grant County #	20.55	350		P	11 45 57.7	+1.2
KAN13	South Haven SW	20.65	351	P	P	11 45 59.0	+1.4
KAN14	Manchester OK	20.67	350	P	P	11 45 59.4	+1.6
KAN14	comp=Z,14nm,0.8s			IAmb	IAmb	11 46 19.0	
KAN05	Bluff City Nor comp=Z,23nm,0.7s	20.80	350	IAmb	IAmb	11 46 20.5	
KAN01	Argonia South comp=Z,34nm,1.0s	20.83	351	IAmb	IAmb	11 46 18.0	
TKL	Tuckaleechee C comp=Z,3.1nm,0.8s,baz=177,slow=13,SNR=4.1	20.91	23	P	P	11 45 59.7	-0.7
TKL	Tuckaleechee C comp=Z,21nm,1.0s	20.91	23	IAmb	IAmb	11 46 19.9	
KAN12	Harper NE Stat	21.01	350		P	11 46 02.2	+0.8
U49A	Red Boiling Sp comp=Z,18nm,0.8s	21.02	18	IAmb	IAmb	11 46 08.4	
S39A	Bolivar	21.03	1	P	P	11 46 00.9	-0.8
T47A	Sharon Grove	21.12	14	P	P	11 46 02.1	-0.5
T47A	comp=Z,16nm,0.8s			IAmb	IAmb	11 46 23.3	
Y22D	IRIS PASSCAL I baz=142,SNR=6.3	21.16	328	P	P	11 46 04.6	+1.4
CCM	Cathedral Cave	21.49	5	P	P	11 46 05.5	-1.1
CCM	Cathedral Cave baz=186	21.49	5	P	P	11 46 05.1	-1.5
ANMO	Albuquerque comp=Z,24nm,0.8s,baz=142,slow=11,SNR=105	21.63	330	P	P	11 46 09.3	+1.0
ANMO	Albuquerque	21.63	330	P	P	11 46 09.8	+1.5
ANMO	comp=Z,19nm,0.7s			IAmb	IAmb	11 46 10.6	
ANMO	Albuquerque baz=144	21.63	330	P	P	11 46 08.8	+0.5
R40A	Maddies Statio comp=Z,14nm,0.7s	21.66	3	IAmb	IAmb	11 46 11.2	
TUC	Tucson	22.11	318	P	P	11 46 14.8	+1.6
TUC	comp=Z,24nm,1.1s			IAmb	IAmb	11 46 16.5	
TUC	Tucson baz=131	22.11	318	P	P	11 46 14.8	+1.6
R32A	Long Quarter, comp=Z,19nm,0.8s	22.23	349	IAmb	IAmb	11 46 15.5	
WCI	Wyandotte Cave baz=198	22.49	15	P	P	11 46 15.5	-1.1
KSU1	Kansas State U comp=Z,24nm,0.7s	22.60	354	IAmb	IAmb	11 46 45.8	
KSU1	Kansas State U baz=172,SNR=7.3	22.60	354	P	P	11 46 15.8	-1.8
T25A	Trinidad comp=Z,32nm,0.8s	22.62	337	IAmb	IAmb	11 46 20.8	
T25A	Trinidad baz=152,SNR=47	22.62	337	P	P	11 46 18.6	+0.5
CBKS	Cedar Bluff comp=Z,23nm,0.9s	22.80	347	IAmb	IAmb	11 46 48.1	
CBKS	Cedar Bluff baz=164	22.80	347	P	P	11 46 19.4	-0.2
P40A	Paris comp=Z,23nm,1.0s	22.91	3	IAmb	IAmb	11 46 19.9	
X18A	Snowflake comp=Z,23nm,1.2s	23.14	324	IAmb	IAmb	11 46 28.0	
214A	Organ Pipe Nat baz=126	23.23	315	P	P	11 46 25.6	+2.0
SDCO	Great Sand Dun baz=150,SNR=23	23.57	336	P	P	11 46 26.5	-0.3
KSCO	Kaye Shedlock' baz=158,SNR=12	23.72	342	P	P	11 46 28.3	+0.3
S22A	4UR Ranch, Cre baz=147,SNR=17	24.11	334	P	P	11 46 31.8	0.0
N35A	Tabor comp=Z,42nm,1.2s	24.26	356	IAmb	IAmb	11 46 34.2	
MVCO	Mesa Verde comp=Z,28nm,0.8s	24.43	330	IAmb	IAmb	11 46 37.6	
MVCO	Mesa Verde baz=143,SNR=28	24.43	330	P	P	11 46 36.5	+1.9
Q24A	Divide baz=152	24.50	338	P	P	11 46 35.9	+0.6
WUAZ	Wupatki baz=135,SNR=9.0	24.66	323	P	P	11 46 38.3	+1.6
BGNE	Belgrade baz=169	25.06	352	P	P	11 46 38.7	-1.3
SCIA	State Center	25.24	1	P	P	11 46 40.9	-0.8
SCIA	comp=Z,15nm,0.7s			IAmb	IAmb	11 46 41.4	
SCIA	State Center baz=180	25.24	1	P	P	11 46 40.9	-0.8
GLA	Glamis comp=Z,14nm,0.7s	25.25	314	IAmb	IAmb	11 46 45.0	
GLA	Glamis baz=125	25.25	314	P	P	11 46 44.6	+2.7
PV15	Paradox Valley comp=Z,14nm,1.0s	25.33	332	IAmb	IAmb	11 46 53.3	
PV02	Paradox Valley comp=Z,21nm,1.0s	25.34	331	IAmb	IAmb	11 46 46.2	
OGNE	Ogallala comp=Z,25nm,0.9s	25.36	345	IAmb	IAmb	11 46 45.3	
SMCO	Snowmass comp=Z,23nm,1.1s	25.39	335	IAmb	IAmb	11 46 49.0	
ISCO	Idaho Springs baz=152	25.41	338	P	P	11 46 44.5	+0.9
PV05	Paradox Valley comp=Z,22nm,0.8s	25.41	330	IAmb	IAmb	11 46 46.3	
PV03	Paradox Valley comp=Z,27nm,1.0s	25.43	331	IAmb	IAmb	11 46 46.8	
PV18	Skein Mesa, Pa comp=Z,31nm,1.0s	25.45	331	IAmb	IAmb	11 46 46.9	
PV07	Paradox Valley comp=Z,22nm,0.9s	25.49	332	IAmb	IAmb	11 46 47.5	
PV16	Nyswonger Mesa comp=Z,29nm,1.0s	25.51	331	IAmb	IAmb	11 46 47.4	
PV19	Morning Glory comp=Z,18nm,0.8s	25.54	331	IAmb	IAmb	11 46 47.6	
PDMCI	Parker Dam,Lak baz=128	25.54	318	P	P	11 46 46.4	+1.9
PV20	West Nyswonger comp=Z,22nm,1.0s	25.56	331	IAmb	IAmb	11 46 47.7	
PV14	Lion Creek, Pa comp=Z,28nm,1.0s	25.61	331	IAmb	IAmb	11 46 48.2	
PV10	Paradox Valley comp=Z,24nm,0.9s	25.62	331	IAmb	IAmb	11 46 47.7	
PV21	Cone Mtn., Par comp=Z,18nm,1.2s	25.74	331	IAmb	IAmb	11 46 49.3	
SWSC	Sam W. Stewart baz=123	25.86	313	P	P	11 46 49.6	+2.2
IKP	In-Ko-Pah, Jac baz=122	25.92	312	P	P	11 46 50.4	+2.4
BC3	Big Chuckawall baz=125,SNR=14	26.03	315	P	P	11 46 51.5	+2.5
IRM	Iron Mountain baz=126,SNR=5.3	26.11	316	P	P	11 46 51.0	+1.3
MONP2	Monument Peak baz=122	26.27	312	P	P	11 46 52.3	+1.0
K31A	O'Neill comp=Z,21nm,0.9s	26.34	351	IAmb	IAmb	11 46 56.6	
JFWS	Jewell Farm baz=187	26.40	5	P	P	11 46 50.3	-1.8
N23A	Red Feather La baz=152	26.49	339	P	P	11 46 54.1	+0.8
BELC	Belle Mtn. Jos baz=125,SNR=6.3	26.59	315	P	P	11 46 56.3	+2.2
PFO	Pinyon Flats O comp=Z,4.4nm,0.9s,baz=137,slow=5.8,SNR=8.6	26.69	314	P	P	11 46 55.2	+0.2
PFO	Pinyon Flats O	26.69	314	P	P	11 46 57.7	+2.7
O20A	White River Ci baz=147	26.71	334	P	P	11 46 54.7	-0.5
GMRC	Granite Mounta baz=127,SNR=9.3	26.83	317	P	P	11 46 58.4	+2.2
P18A	Preston Nutter comp=Z,17nm,1.3s	27.18	331	IAmb	IAmb	11 47 02.4	
ECSD	EROS Data Cent comp=Z,15nm,0.7s	27.19	355	IAmb	IAmb	11 46 59.0	
ECSD	EROS Data Cent baz=173,SNR=16	27.19	355	P	P	11 46 57.9	-1.3
MVU	Marysvale comp=Z,8.2nm,0.7s	27.29	327	IAmb	IAmb	11 47 04.4	
P17A	Butcher Ranch, comp=Z,13nm,1.0s	27.29	330	IAmb	IAmb	11 47 03.2	
HEC	Hector,Ludlow baz=126	27.30	316	P	P	11 47 02.3	+1.9
BBRC	Big Bear Solar baz=124	27.37	314	P	P	11 47 03.1	+2.0
TUQ	Turquoise Moun baz=127,SNR=5.1	27.39	318	P	P	11 47 03.4	+2.1
RWWY	Rawlins comp=Z,16nm,1.0s	27.64	338	IAmb	IAmb	11 47 07.0	
SCI2	San Clemente I baz=120	27.84	311	P	P	11 47 07.9	+2.8
BFSC	Mount Baldy Ra baz=123	27.87	314	P	P	11 47 07.6	+2.1
GSC	Goldstone, Bar baz=126	27.89	316	P	P	11 47 07.5	+1.9
MWC	Mount Wilson comp=Z,12nm,1.1s	28.14	313	IAmb	IAmb	11 47 11.2	
MPU	Maple Canyon comp=Z,10nm,0.9s	28.15	330	IAmb	IAmb	11 47 10.8	
GWY	Greenwater Val	28.33	318	P	P	11 47 11.8	+2.2
EDW2	Edwards Air Fo baz=123	28.45	314	P	P	11 47 12.3	+1.7
SPMN	Marine on St. baz=181	28.57	1	P	P	11 47 10.3	-1.0
LRMC	Laurel Mtn Rad baz=125	28.58	316	P	P	11 47 13.6	+1.9
FURC	Furnace Creek, baz=127	28.63	318	P	P	11 47 14.0	+2.1
CTU	Camp Tracy comp=Z,10nm,1.0s	28.73	330	IAmb	IAmb	11 47 16.0	
MPMC	Manual Prospec baz=126,SNR=8.0	28.79	317	P	P	11 47 15.6	+2.0
RSSD	Black Hills baz=158	28.85	344	P	P	11 47 14.5	+0.3
DUG	Dugway, Tooele baz=139	28.86	328	P	P	11 47 15.9	+1.7
R11A	Troy Canyon, C baz=132,SNR=5.8	29.05	323	P	P	11 47 17.2	+1.2
ARVC	Arvin baz=123	29.16	314	P	P	11 47 19.1	+2.4
F36A	Milaca comp=Z,14nm,1.1s	29.20	0	IAmb	IAmb	11 47 16.3	
ISA	Isabella, Lake baz=124	29.21	315	P	P	11 47 19.4	+2.1
F33A	5 Mile Ranch, comp=Z,8.4nm,0.9s	29.26	356	IAmb	IAmb	11 47 16.6	
HWUT	Hardware Ranch comp=Z,22nm,1.4s	29.36	332	IAmb	IAmb	11 47 21.3	
CWC	Cottonwood Cre baz=126	29.40	317	P	P	11 47 20.4	+1.4
BW06	Boulder Array baz=147	29.46	336	P	P	11 47 19.6	0.0
PDAR	Pinedale Array comp=Z,1.1nm,0.7s,baz=126,slow=15,SNR=10	29.46	336	P	P	11 47 18.8	-0.9
BGU	Big Grassy Mou comp=Z,9.0nm,0.9s	29.53	329	IAmb	IAmb	11 47 23.1	
SPUT	South Promonto comp=Z,9.2nm,0.9s	29.54	330	IAmb	IAmb	11 47 23.1	
BINY	Binghamton baz=216	29.65	27	P	P	11 47 19.9	-1.1
PKM	Mcpherson Peak baz=121	29.72	313	P	P	11 47 24.2	+2.3
VES	Vestal, Richgr baz=123	29.73	315	P	P	11 47 24.2	+2.5
HVU	Hansel Valley comp=Z,15nm,0.8s	30.06	331	IAmb	IAmb	11 47 27.8	
SMMC	Simmler baz=121	30.07	313	P	P	11 47 28.6	+3.8
AHID	Auburn Hatcher comp=Z,19nm,1.5s	30.09	334	IAmb	IAmb	11 47 27.3	
LOHW	Long Hollow comp=Z,8.5nm,0.9s	30.59	335	IAmb	IAmb	11 47 31.8	
TPAW	Teton Pass comp=Z,14nm,1.0s	30.63	335	IAmb	IAmb	11 47 32.5	
LHV	Little Huntoon comp=Z,11nm,0.7s	30.75	320	IAmb	IAmb	11 47 35.0	
MOOW	Moose Ponds comp=Z,9.1nm,0.9s	30.76	335	IAmb	IAmb	11 47 33.2	
H17A	Grant Village baz=147	31.23	336	P	P	11 47 36.1	+0.9
EYMN	Ely baz=184	31.33	3	P	P	11 47 35.6	-0.1
YMP	Mirror Lake Pl comp=Z,9.2nm,1.0s	31.36	337	IAmb	IAmb	11 47 58.2	
RLMT	Red Lodge baz=150	31.37	338	P	P	11 47 36.7	+0.4
BMN	Battle Mountai comp=Z,8.7nm,0.9s	31.39	324	IAmb	IAmb	11 47 39.9	
MDND	Maddock baz=169	31.58	352	P	P	11 47 37.4	-0.5
YMR	Madison River comp=Z,15nm,0.9s	31.61	336	IAmb	IAmb	11 47 41.4	
YERR	Yerington comp=Z,5.5nm,0.7s	31.65	320	IAmb	IAmb	11 47 42.0	
AGMN	Agassiz Nation comp=Z,11nm,0.7s	31.69	357	IAmb	IAmb	11 47 38.5	
AGMN	Agassiz Nation baz=176,SNR=8.0	31.69	357	P	P	11 47 37.4	-1.4
B35A	Bob, Littlefor comp=Z,7.9nm,0.7s	31.70	360	IAmb	IAmb	11 47 38.7	
LAO	LASA Array baz=156	31.81	343	P	P	11 47 40.6	+0.6
YHL	Hebgen Lake comp=Z,11nm,1.2s	31.85	336	IAmb	IAmb	11 47 44.5	
PNTR	Pine Nut	31.94	320	P	P	11 47 44.9	+3.5
PNTR	comp=Z,6.9nm,0.8s			IAmb	IAmb	11 47 46.2	
HLID	Hailey comp=Z,10nm,0.9s	32.20	331	IAmb	IAmb	11 47 46.9	
HLID	Hailey baz=140,SNR=19	32.20	331	P	P	11 47 44.9	+1.3
BOZ	Bozeman (W) comp=Z,12nm,1.4s	32.65	336	IAmb	IAmb	11 47 51.9	
BOZ	Bozeman (W) baz=146	32.65	336	P	P	11 47 48.5	+1.1
DLMT	Dillon comp=Z,16nm,1.1s	32.84	335	IAmb	IAmb	11 47 52.0	
DGMT	Dagmar comp=Z,22nm,1.3s	32.98	347	IAmb	IAmb	11 47 51.2	
DGMT	Dagmar baz=161	32.98	347	P	P	11 47 50.5	+0.3
ULM	Lac du Bonnet comp=Z,7.3nm,0.6s,baz=182,slow=9.7,SNR=9.5	33.64	357	P	P	11 47 53.3	-2.4
ULM	Lac du Bonnet comp=Z,9.8nm,0.8s	33.64	357	IAmb	IAmb	11 47 54.7	
EGMT	Eagleton comp=Z,18nm,1.1s	34.07	340	IAmb	IAmb	11 48 01.4	
EGMT	Eagleton baz=151,SNR=6.4	34.07	340	P	P	11 47 59.8	+0.2
PLID	Pearl Lake comp=Z,11nm,0.8s	34.10	331	IAmb	IAmb	11 48 02.4	
MSO	Missoula comp=Z,14nm,1.1s	34.58	335	IAmb	IAmb	11 48 06.0	
MSO	Missoula baz=144,SNR=7.7	34.58	335	P	P	11 48 04.7	+0.6
YBH	Yreka Blue Hor comp=Z,2.4nm,0.8s,baz=100,slow=19,SNR=2.4	35.42	321	P	P	11 48 11.4	+0.1
YBH	Yreka Blue Hor	35.42	321	P	P	11 48 10.7	-0.7
JTMT	Jette	35.45	336	P	P	11 48 12.6	+1.0
JTMT	comp=Z,10.0nm,1.0s			IAmb	IAmb	11 48 13.3	
D08A	Wollman Farm, comp=Z,12nm,1.2s	36.93	331	IAmb	IAmb	11 48 26.9	
NEW	Newport comp=Z,2.8nm,0.8s,baz=136,slow=8.2,SNR=5.8	37.03	334	P	P	11 48 22.9	-1.9
NEW	Newport baz=140	37.03	334	P	P	11 48 25.2	+0.4
C09A	Chrisman Ranch comp=Z,14nm,0.6s	37.18	332	IAmb	IAmb	11 48 28.0	
F05D	White Salmon baz=132	37.35	327	P	P	11 48 29.5	+1.9
FFC	Flin Flon	38.62	352	P	P	11 48 37.6	-0.4
FFC	comp=Z,12nm,0.6s			IAmb	IAmb	11 48 38.3	
B05A	Bryant baz=134	39.30	330	P	P	11 48 43.6	-0.1
LPAZ	La Paz comp=Z,2.9nm,0.7s,baz=329,slow=4.9,SNR=10	41.18	141	P	P	11 49 00.1	-0.2
LPAZ	La Paz	41.18	141	P	P	11 49 00.2	-0.1
YKA	Yellowknife Ar comp=Z,9.6nm,0.5s,baz=152,slow=7.4,SNR=146	48.19	347	P	P	11 49 53.9	-0.5
YKA	Yellowknife Ar	48.19	347	P	P	11 49 54.0	-0.5
DLBC	Dease Lake comp=Z,14nm,0.8s	49.70	336	IAmb	IAmb	11 50 09.4	
TGTN	Hyland Airport baz=135,SNR=6.3	51.20	340	P	P	11 50 18.1	+0.8
P33M	Teslin, Yukon baz=129	51.94	336	P	P	11 50 23.9	+1.0
WHY	Whitehorse baz=127	53.02	336	P	P	11 50 31.5	+0.6
FARO	Faro, Yukon baz=130	53.44	338	P	P	11 50 34.5	+0.7
M31M	Drury Creek, Y baz=129	53.80	338	P	P	11 50 36.8	+0.5
N31M	Braeburn, Yuko baz=127	53.87	336	P	P	11 50 37.7	+0.7
HYT	Haines Junctio baz=125	54.16	335	P	P	11 50 40.3	+1.1
YUK6	Outpost Mounta baz=124	54.57	335	P	P	11 50 43.2	+1.0
M30M	Minto, Yukon baz=126	54.91	337	P	P	11 50 45.6	+1.1
YUK4	Talbot Arm baz=124	54.91	335	P	P	11 50 46.1	+1.4
MAYO	Mayo, Yukon baz=128	55.21	338	P	P	11 50 47.5	+1.0
YUK3	Moose Creek baz=122	55.88	335	P	P	11 50 52.6	+1.1
BVCY	Beaver Creek baz=122	56.38	336	P	P	11 50 56.1	+1.2
MCARA	McCarthy VSAT baz=119	56.73	334	P	P	11 50 57.9	+0.6
DAWY	Dawson baz=124	56.74	338	P	P	11 50 57.7	+0.3
M27K	Edge Creek, AK baz=121	56.75	335	P	P	11 50 58.7	+1.0
BCAR	Beaver Creek A	57.09	336	P	P	11 51 00.8	+0.9
L27K	Beaver Creek, comp=Z,8.1nm,0.9s	57.10	336	IAmb	IAmb	11 51 02.1	
L27K	Beaver Creek, baz=121	57.10	336	P	P	11 51 00.4	+0.5
I29M	Ogilvie Camp, baz=126	57.11	339	P	P	11 50 59.8	-0.2
BMRM	Bremner River baz=117	57.20	333	P	P	11 51 01.4	+0.6
M26K	Nabesna, AK baz=120	57.22	335	P	P	11 51 01.2	+0.3
N25K	Chitina, Valde comp=Z,8.5nm,0.8s	57.50	334	IAmb	IAmb	11 51 05.7	
N25K	Chitina, Valde baz=118	57.50	334	P	P	11 51 03.2	+0.3
INK	Inuvik comp=Z,5.3nm,0.6s,baz=125,slow=7.3,SNR=44	57.55	344	P	P	11 51 02.5	-0.5
INK	Inuvik comp=Z,8.6nm,0.9s	57.55	344	IAmb	IAmb	11 51 03.9	
INK	Inuvik baz=133,SNR=8.6	57.55	344	P	P	11 51 02.3	-0.7
L26K	Log Cabin Wild baz=120	57.68	336	P	P	11 51 04.8	+0.8
KLU	Klutina comp=Z,9.1nm,0.8s	58.01	333	IAmb	IAmb	11 51 08.9	
KLU	Klutina baz=116	58.01	333	P	P	11 51 07.7	+1.3
HARP	HAARP baz=118	58.10	335	P	P	11 51 07.7	+0.7
RES	Resolute Bay comp=Z,2.6nm,0.7s,baz=184,slow=12,SNR=12	58.12	360	P	P	11 51 05.5	-1.4
GLI	Glacier Island baz=115	58.26	332	P	P	11 51 08.8	+0.7
DOT	Dot Lake comp=Z,8.3nm,1.0s	58.27	336	IAmb	IAmb	11 51 10.2	
M24K	Tolsona, Glenn baz=116	58.39	334	P	P	11 51 10.1	+1.0
SCRK	Sand Creek baz=120	58.40	336	P	P	11 51 10.0	+0.9
PAX	Paxson comp=Z,8.1nm,0.8s	58.50	335	IAmb	IAmb	11 51 11.5	
PAX	Paxson baz=118,SNR=6.6	58.50	335	P	P	11 51 10.4	+0.6
J26L	Joseph Creek baz=120	58.51	337	P	P	11 51 11.0	+1.1
RIDG	Independent Ri baz=119	58.62	336	P	P	11 51 11.2	+0.6
SCM	Sheep Creek Mo baz=115	58.76	333	P	P	11 51 12.1	+0.5
PWL	Port Wells baz=114	58.80	332	P	P	11 51 12.6	+0.8
SEW	Seward baz=112	59.02	331	P	P	11 51 14.1	+0.8
KNK	Knik Glacier baz=114	59.08	333	P	P	11 51 13.4	-0.4
SML	Sawmill baz=114	59.19	333	P	P	11 51 15.2	+0.7
WAT6	Susitna Watana baz=115,SNR=7.6	59.26	334	P	P	11 51 15.8	+0.7
DHY	Denali Highway baz=116	59.32	335	P	P	11 51 16.2	+0.7
PMR	Palmer baz=113	59.45	333	P	P	11 51 16.9	+0.7
RC01	Rabbit Creek A baz=112	59.52	332	P	P	11 51 17.2	+0.5
WAT1	Susitna Watana baz=114	59.70	334	P	P	11 51 18.7	+0.7
HDA	Harding Lake comp=Z,5.7nm,0.6s	59.75	336	IAmb	IAmb	11 51 19.4	
HDA	Harding Lake baz=117,SNR=6.0	59.75	336	P	P	11 51 18.4	+0.1
IL31	comp=Z,7.9nm,0.9s	59.89	337	IAmb	IAmb	11 51 20.7	
ILAR	Eielson Array comp=Z,4.0nm,0.8s,baz=132,slow=5.1,SNR=49	59.89	337	P	P	11 51 19.2	0.0
ILAR	Eielson Array	59.89	337	P	P	11 51 19.6	+0.4
MCK	McKinley comp=Z,9.8nm,0.9s	60.24	335	IAmb	IAmb	11 51 23.2	
MCK	McKinley baz=114	60.24	335	P	P	11 51 21.8	+0.1
CUT	Chulitna baz=112	60.26	333	P	P	11 51 22.2	+0.5
COLA	College baz=116	60.30	336	P	P	11 51 21.8	-0.1
TCOL	CIGO, UAF Yank baz=116	60.31	336	P	P	11 51 21.9	-0.1
Q19K	Cape Douglas, baz=107	60.63	329	P	P	11 51 25.1	+0.8
P19K	Oil Pt baz=108	60.65	330	P	P	11 51 24.4	-0.1
NEA2	Nenana baz=115	60.65	336	P	P	11 51 24.8	+0.4
TRF	Thorofare Moun baz=113	60.68	334	P	P	11 51 25.7	+0.9
SPCR	Spurr Chakacha baz=110	60.68	332	P	P	11 51 25.1	+0.4
H24K	Noodor Dome comp=Z,9.4nm,0.9s	60.75	337	IAmb	IAmb	11 51 26.6	
H24K	Noodor Dome baz=117	60.75	337	P	P	11 51 25.6	+0.5
KTH	Kantishna Hill comp=Z,13nm,1.0s	60.98	334	IAmb	IAmb	11 51 27.9	
I23K	Minto, Yukon-K baz=115	61.00	336	P	P	11 51 27.3	+0.6
BPAW	Bear Paw Mtn. comp=Z,13nm,0.9s	61.22	335	IAmb	IAmb	11 51 29.5	
BPAW	Bear Paw Mtn. baz=113	61.22	335	P	P	11 51 28.7	+0.5
PPLA	Purkeypile baz=111	61.27	334	P	P	11 51 29.1	+0.4
O19K	Port Alsworth baz=107	61.34	330	P	P	11 51 29.7	+0.7
CAST	Castle Rocks comp=Z,9.6nm,0.8s	61.41	334	IAmb	IAmb	11 51 30.4	
CAST	Castle Rocks baz=111,SNR=6.5	61.41	334	P	P	11 51 29.6	+0.1
MLY	Manley baz=113,SNR=13	61.48	336	P	P	11 51 30.6	+0.6
N19K	Bonanza Creek	61.60	331	P	P	11 51 31.3	+0.3
N19K	comp=Z,9.0nm,0.8s			IAmb	IAmb	11 51 32.0	
N19K	Bonanza Creek baz=108	61.60	331	P	P	11 51 31.2	+0.3
CHUM	Lake Minchumin baz=111	61.68	335	P	P	11 51 31.6	+0.3
L20K	Farewell, AK baz=109,SNR=10	61.85	333	P	P	11 51 32.9	+0.3
M19K	Big River Lodg baz=108	61.90	332	P	P	11 51 32.9	+0.1
I21K	Tanana baz=112	62.03	336	P	P	11 51 33.9	+0.3
L19K	White Mountain baz=108	62.19	332	P	P	11 51 35.1	+0.3

COLD	**Coldfoot** baz=115	62.19	338	P	P	11 51 35.7	+1.0
K20K	**Telida** baz=109	62.23	334	P	P	11 51 34.8	-0.2
H21K	**Melozitna Rive** baz=112	62.53	336	P	P	11 51 36.5	-0.5
J20K	**Nowinta River** comp=Z,11nm,0.9s	62.54	335	IAmb	IAmb	11 51 38.1	
J20K	**Nowinta River** baz=110,SNR=7.0	62.54	335	P	P	11 51 36.5	-0.5
TOLK	**Toolik Lake Re** comp=Z,6.9nm,0.8s	62.60	340	IAmb	IAmb	11 51 39.0	
TOLK	**Toolik Lake Re** baz=116	62.60	340	P	P	11 51 37.6	+0.2
TTA	**Tatalina**	62.93	333	P	P	11 51 39.7	-0.1
TTA	comp=Z,7.1nm,0.8s			IAmb	IAmb	11 51 40.6	
TTA	**Tatalina** baz=107	62.93	333	P	P	11 51 39.9	+0.1
EUNU	**Eureka**	63.60	1	P	P	11 51 43.3	-0.6
FALS	**False Pass** baz=96	65.02	323	P	P	11 51 54.3	+0.9
UNV	**Unalaska Valle** baz=94	66.73	322	P	P	11 52 05.4	+1.1
BILL	**Bilibino**	78.52	338	P	P	11 53 14.6	+0.9
BILL	comp=Z,7.9nm,0.6s			IAmb	IAmb	11 53 15.5	
ARCES	**ARCESS Array B** comp=Z,2.8nm,0.8s,baz=321,slow=3.3,SNR=7.3	84.17	18	P	P	11 53 43.4	0.0
SEY	**Seymchan** comp=Z,3.1nm,0.7s,baz=89,slow=4.9,SNR=9.5	85.79	335	P	P	11 53 51.8	+0.1
WRA	**Warramunga Arr** comp=Z,0.2nm,0.8s,baz=82,slow=3.0,SNR=2.0	134.51	258	PKP	PKPdf	12 00 29.0	-1.6
WRA	comp=Z,0.5nm,1.1s,baz=87,slow=3.0,SNR=4.6			pPKP	pPKPdf	12 01 12.0	-0.5

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*JMA **03** 11:49:38.9, 24.°01N×122.°27E, h33^{km}±3^{km}, M2.9*
*TAP **03** 11:49:39.8, 24.°21N×122.°25E, h33^{km}, ML3.5, D*
ISC 03 11:49:39.4±1.1**, 24.°15N**±0.°02×**122.°26E**±0.°02**, h27**^{km}±11^{km}**,**
n117, σ0.^{s}89/222**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	**Wuta** baz=305	0.53	304	P	Pn	11 49 50.5	-0.7
EWUT	baz=305			S	Sn	11 49 57.7	-1.7
ENA	**Nanau** baz=301	0.55	300	P	Pb	11 49 50.5	0.0
ENA	baz=301			*e*S	Sn	11 49 58.7	-1.1
ETL	**Fush Village** baz=251	0.58	271	*e*P	Pb	11 49 50.2	-0.9
ETL	baz=251			*e*S	Sn	11 50 00.8	0.0
TWC	**Suao** baz=318	0.59	320	*i* P	Pb	11 49 50.6	-0.6
TWC	baz=318			*i* S	Sb	11 49 58.3	-1.0
NACB	**Ninganchiao** baz=254	0.61	272	P	Pb	11 49 51.2	-0.3
NACB	baz=254			*e*S	Sn	11 50 01.0	-0.3
TWD	**Chiawan** baz=246	0.61	263	*e*P	Pn	11 49 51.1	-1.3
TWD	baz=246			*e*S	Sn	11 50 01.4	0.0
HWA	**Hwalien** baz=248	0.62	254	*e*P	Pb	11 49 52.6	+0.8
HWA	baz=248			*e*S	Sn	11 50 02.1	+0.4
NDS	**Dongshan** baz=315	0.69	314	P	Pb	11 49 52.8	-0.1
NDS	baz=315			S	Sb	11 50 01.5	-0.6
JYNG	**Yonagunijimaku**	0.69	64	P	Pn	11 49 53.1	-0.4
JYNG				S	Sn	11 50 02.7	-0.6
ETLH	**Xiulin Townshi** baz=269	0.71	274	P	Pn	11 49 52.7	-1.2
ETLH	baz=269			*e*S	Sb	11 50 03.0	+0.2
YOJ	**Yonaguni jima** baz=69	0.75	66	*e*P	Pn	11 49 53.9	-0.4
YOJ	baz=69			*e*S	Sb	11 50 04.1	+0.4
YOJ	**Yonaguni jima**	0.75	66	P	Pn	11 49 53.9	-0.4
YOJ				S	Sb	11 50 04.1	+0.4
EGS	baz=335	0.75	337	*e*P	Pb	11 49 53.7	-0.2
EGS	baz=335			*e*S	Sn	11 50 03.2	-1.6
ILA	**Ilan** baz=320	0.77	323	*e*P	Pb	11 49 54.5	+0.2
ILA	baz=320			*e*S	Sb	11 50 05.5	+1.1
TWE	**Neicheng** baz=318	0.78	316	P	Pb	11 49 54.5	0.0
TWE	baz=318			S	Sb	11 50 04.6	-0.2
ENTT	**Nioudou** baz=304	0.80	308	P	Pb	11 49 54.8	+0.1
ENTT	baz=304			S	Sb	11 50 04.9	-0.3
NTC	**Toucheng** baz=339	0.80	331	*e*P	Pb	11 49 55.1	+0.3
NTC	baz=339			*e*S	Sn	11 50 03.9	-2.2
NDT	**Datong Townshi** baz=307	0.82	303	P	Pb	11 49 55.3	+0.3
NDT	baz=307			S	Sb	11 50 06.2	+0.5
ESL	**Shilin** baz=231	0.83	246	*e*P	Pn	11 49 53.6	-1.8
ESL	baz=231			*e*S	Sn	11 50 05.2	-1.6
NNSB	**Datong** baz=285	0.85	289	P	Pb	11 49 55.5	-0.2
NNSB	baz=285			*e*S	Sb	11 50 06.7	0.0
NNS	**Nan Shan** baz=285	0.86	290	P	Pn	11 49 55.6	-0.3
NNS	baz=285			*e*S	Sb	11 50 07.2	+0.1
TWB1	**Santiao Chiao** baz=342	0.89	344	*e*P	Pn	11 49 55.4	-0.8
TWB1	baz=342			*e*S	Sb	11 50 07.0	-0.7
EGFH	**Guangfu** baz=235	0.90	238	*e*P	Pn	11 49 54.8	-1.6
EGFH	baz=235			*e*S	Sn	11 50 07.2	-1.4
TIPB	**Shuangxi** baz=332	0.91	334	P	Pb	11 49 57.0	+0.5
TIPB	baz=332			*e*S	Sb	11 50 07.3	-1.0
WHF	**Hehuan Shan** baz=265	0.91	270	P	Pn	11 49 56.2	-0.7
WHF	baz=265			*e*S	Sn	11 50 08.6	-0.8
NWLT	**Wulai** baz=309	0.93	312	*e*P	Pb	11 49 57.3	+0.3
NWLT	baz=309			*e*S	Sb	11 50 09.1	+0.1
FUSS	**Fushou** baz=272	0.93	276	*e*P	Pn	11 49 56.5	-0.5
FUSS	baz=272			*e*S	Sn	11 50 08.8	-1.0
NSK	**Sanguang** baz=287	0.97	302	*e*P	Pb	11 49 57.6	-0.1
NSK	baz=287			*e*S	Sb	11 50 10.5	+0.3
TWT	**Tachien** baz=263	1.00	276	*e*P	Pn	11 49 57.8	0.0
TWT	baz=263			*e*S	Sb	11 50 10.8	-0.2
CHGB	**Renai** baz=249	1.00	265	*e*P	Pn	11 49 57.4	-0.6
CHGB	baz=249			*e*S	Sn	11 50 10.8	-0.5
HGSD	**Ruisui** baz=218	1.01	230	*e*P	Pn	11 49 56.1	-1.8
HGSD	baz=218			*e*S	Sn	11 50 12.0	+0.7
OWD	**Renai** baz=255	1.01	259	*e*P	Pn	11 49 57.4	-0.7
OWD	baz=255			*e*S	Sn	11 50 11.2	-0.3
NWF	**Wu-fen Shan** baz=346	1.01	335	*e*P	Pb	11 49 58.4	-0.1
NWF	baz=346			*e*S	Sb	11 50 12.1	+0.7
TDCB	**Techi** baz=263	1.01	276	*e*P	Pn	11 49 57.9	-0.2
TDCB	baz=263			*e*S	Sb	11 50 11.2	-0.2
TWA	**Mucha** baz=321	1.03	323	*e*P	Pb	11 49 59.8	+1.2
TWA	baz=321			*e*S	Sb	11 50 11.0	-0.8
NHDH	**Xindian Distri** baz=327	1.05	320	*e*P	Pb	11 49 59.8	+0.8
NHDH	baz=327			*e*S	Sb	11 50 13.3	+1.0
EHY	**Hungye** baz=231	1.07	233	*e*P	Pn	11 49 57.2	-1.6
EHY	baz=231			*e*S	Sn	11 50 11.8	-1.1
VWDT	**VWDT** baz=235	1.10	249	P	Pn	11 49 58.7	-0.4
VWDT	baz=235			S	Sn	11 50 13.5	+0.1
TAP	**Taipei** baz=319	1.12	322	*e*S	Sb	11 50 12.9	-1.4
YULB	**Yu-li** baz=240	1.16	230	*e*P	Pn	11 49 58.6	-1.4
YULB	baz=240			*e*S	Sn	11 50 14.4	-0.6
YM01	**YM01** baz=339	1.17	328	*e*P	Pb	11 50 01.6	+0.5
YM01	baz=339			*e*S	Sb	11 50 16.1	+0.2
EYUL	**Yuli** baz=239	1.18	227	*e*P	Pn	11 49 59.2	-1.0
EYUL	baz=239			*e*S	Sn	11 50 14.1	-1.3
WHP	**Taichung City** baz=263	1.21	276	*e*P	Pn	11 50 01.1	+0.3
WHP	baz=263			*e*S	Sn	11 50 16.0	-0.3
TWS1	**Kuangyinshan** baz=328	1.22	321	*e*P	Pb	11 50 01.7	-0.2
TWS1	baz=328			*e*S	Sn	11 50 15.4	-1.0
ANP	**Anpu** baz=338	1.23	327	*e*P	Pn	11 50 00.5	-0.5
ANP	baz=338			*e*S	Sn	11 50 14.9	-1.9
LIOB	**Emei** baz=290	1.24	294	*e*P	Pb	11 50 02.2	0.0
LIOB	baz=290			*e*S	Sb	11 50 16.7	-1.0
WCS	**Beigang Elemen** baz=254	1.24	266	*e*P	Pn	11 50 01.0	0.0
WCS	baz=254			*e*S	Sn	11 50 16.6	-0.3
NSTT	**Nanjuang** baz=289	1.24	293	*e*P	Pb	11 50 02.2	-0.1
NSTT	baz=289			*e*S	Sn	11 50 16.1	-0.9
NTST	**Danshui** baz=335	1.25	324	*e*P	Pn	11 50 00.7	-0.5
NTST	baz=335			*e*S	Sn	11 50 16.0	-1.1
SSLB	**Suanglung** baz=250	1.25	253	*e*P	Pn	11 50 00.7	-0.5
SSLB	baz=250			*e*S	Sn	11 50 17.6	+0.3
TWY	**Chenhua** baz=329	1.27	332	*e*P	Pn	11 50 01.2	-0.2
TWY	baz=329			*e*S	Sn	11 50 16.2	-1.5
NCUH	**Zhongli** baz=306	1.27	310	*e*P	Pb	11 50 02.8	0.0
NCUH	baz=306			*e*S	Sn	11 50 16.9	-0.8
SMLT	**Sun Moon Lake** baz=255	1.27	258	P	Pn	11 50 01.5	-0.1
SMLT	baz=255			*e*S	Sn	11 50 17.9	-0.1
FULB	**Fuli** baz=211	1.30	223	*e*P	Pn	11 50 01.2	-0.7
FULB	baz=211			*e*S	Sn	11 50 19.0	+0.5
TYC	**Yuchr** baz=246	1.31	259	*e*P	Pn	11 50 01.8	-0.2
TYC	baz=246			*e*S	Sn	11 50 18.3	-0.3
SBCB	**Hsinchu** baz=295	1.33	299	*e*P	Pn	11 50 02.3	0.0
SBCB	baz=295			*e*S	Sb	11 50 20.4	+0.2
CHKT	**Chengkung** baz=208	1.33	218	*e*P	Pn	11 50 01.8	-0.6
CHKT	baz=208			*e*S	Sn	11 50 17.8	-1.4
IRIF	**Iriomote-Funau**	1.35	82	P	Pn	11 50 02.9	+0.3
YUS	**Yu-Shan** baz=239	1.37	241	*e*P	Pn	11 50 03.0	-0.3
YUS	baz=239			*e*S	Sn	11 50 20.1	-0.7
TWQ1	**Liyutan** baz=274	1.37	278	*e*P	Pn	11 50 03.2	+0.3
TWQ1	baz=274			*e*S	Sn	11 50 20.1	-0.1
NSY	**Sanyi** baz=277	1.39	281	*e*P	Pb	11 50 04.9	+0.1
NSY	baz=277			*e*S	Sb	11 50 22.8	+0.6
NMLH	**Miaoli** baz=283	1.40	286	*e*P	Pn	11 50 03.2	0.0
NMLH	baz=283			*e*S	Sb	11 50 22.8	+0.6
WJS	**Zhushan** baz=254	1.44	257	*e*P	Pb	11 50 05.3	-0.3
WJS	baz=254			*e*S	Sb	11 50 24.8	+1.3
TCU	**Taichung** baz=266	1.45	270	*e*P	Pb	11 50 05.5	-0.3
TCU	baz=266			*e*S	Sb	11 50 24.5	+0.7
EDH	**Donghe** baz=208	1.47	217	*e*P	Pn	11 50 03.5	-0.7
EDH	baz=208			*e*S	Sn	11 50 21.0	-1.5
WNT	**Mingjian** baz=256	1.47	260	*e*P	Pb	11 50 05.8	-0.3
WNT	baz=256			*e*S	Sb	11 50 24.8	+0.5
ALS	**Alishan** baz=232	1.48	245	*e*P	Pn	11 50 04.8	+0.2
ALS	baz=232			*e*S	Sn	11 50 23.2	0.0
PCYT	**Pengchaiyu** baz=339	1.48	353	*e*P	Pn	11 50 04.4	0.0
PCYT	baz=339			*e*S	Sn	11 50 21.4	-1.5
ELDTW	**Lidau** baz=228	1.49	230	*e*P	Pn	11 50 04.9	+0.3
ELDTW	baz=228			*e*S	Sn	11 50 21.3	-2.0
WDJ	**Dajia District** baz=274	1.49	278	*e*P	Pn	11 50 04.6	+0.1
WDJ	baz=274			*e*S	Sn	11 50 22.8	-0.4
CHN5	**Tsauling** baz=235	1.55	249	*e*P	Pn	11 50 06.0	+0.6
CHN5	baz=235			*e*S	Sn	11 50 25.1	+0.4
WCHH	**Zhanghua** baz=264	1.56	268	*e*P	Pb	11 50 06.7	-0.9
WCHH	baz=264			*e*S	Sb	11 50 27.0	+0.1
JKRS	**Kuro-shima**	1.60	87	P	Pn	11 50 06.4	+0.4
LONT	**Longtian** baz=219	1.62	220	*e*P	Pn	11 50 04.7	-1.6
LONT	baz=219			*e*S	Sn	11 50 24.5	-1.8
LDUT	**Ludao** baz=207	1.64	206	*e*S	Sn	11 50 25.9	-0.9
WDLH	**Douliu** baz=238	1.64	254	*e*P	Pn	11 50 07.5	+0.9
WDLH	baz=238			*e*S	Sn	11 50 27.9	+1.0
STYH	**Taoyuan** baz=225	1.68	235	*e*P	Pn	11 50 07.0	-0.1
STYH	baz=225			*e*S	Sn	11 50 27.7	0.0
TWGBT	**Beinan** baz=218	1.72	219	*e*P	Pn	11 50 06.9	-0.7
TWGBT	baz=218			*e*S	Sn	11 50 28.3	-0.4
TWG	**Pinlang** baz=219	1.72	220	*e*P	Pn	11 50 07.2	-0.4
TWG	baz=219			*e*S	Sn	11 50 28.5	-0.2
TPUB	**Ta-pu** baz=238	1.72	241	*e*P	Pn	11 50 08.3	+0.6
TPUB	baz=238			*e*S	Sn	11 50 29.5	+0.7
CHN4	**Tsaushan** baz=232	1.73	243	*e*P	Pn	11 50 09.1	+1.4
CHN4	baz=232			*e*S	Sb	11 50 31.4	-0.3
TTN	**Taitung** baz=207	1.73	217	*e*S	Sn	11 50 28.1	-0.9
JIJ	**Ishigaki jima**	1.73	83	P	Pn	11 50 07.7	-0.1
JIJ				*e*S	Sn	11 50 29.3	+0.3
WRL	**Guolierlin Hig** baz=259	1.74	262	*e*P	Pb	11 50 09.4	-1.3
WRL	baz=259			*e*S	Sb	11 50 31.9	-0.3
WTP	**Ta-pu** baz=237	1.76	239	*e*P	Pn	11 50 09.0	+0.8
WTP	baz=237			*e*S	Sn	11 50 30.1	+0.3
WTK	**Tuku** baz=240	1.78	255	*e*P	Pb	11 50 10.6	-0.7
WTK	baz=240			*e*S	Sb	11 50 33.2	+0.1
CHY	**Chiayi** baz=246	1.81	249	*e*P	Pn	11 50 10.4	+1.6
CHY	baz=246			*e*S	Sb	11 50 33.2	-0.8
WTCT	**Ta-ch'eng** baz=258	1.83	261	*e*P	Pn	11 50 09.9	+0.7
WTCT	baz=258			*e*S	Sb	11 50 34.0	-0.9
TWK	**Hsinying** baz=239	1.85	242	*e*P	Pn	11 50 10.4	+0.9
TWK	baz=239			*e*S	Sn	11 50 32.5	+0.5
CHN1	**Nanshi** baz=237	1.86	239	*e*P	Pn	11 50 10.5	+0.9
CHN1	baz=237			*e*S	Sb	11 50 34.5	-1.1
SNST	**Tainan City** baz=238	1.86	240	*e*P	Pb	11 50 11.7	-1.2
SNST	baz=238			*e*S	Sb	11 50 34.9	-0.9
SGST	**Jiashian** baz=233	1.87	236	*e*P	Pn	11 50 10.3	+0.5
SGST	baz=233			*e*S	Sn	11 50 33.7	+1.1
SLGT	**Liugui** baz=230	1.88	232	*e*P	Pn	11 50 11.0	+1.2
SLGT	baz=230			*e*S	Sn	11 50 33.6	+0.9
JISG	**Ishigakijimahi**	1.92	77	P	Pn	11 50 10.5	+0.1
WSF	**Szhu** baz=266	1.94	255	*e*P	Pn	11 50 11.6	+0.9
WSF	baz=266			*e*S	Sb	11 50 36.9	-0.9
ECL	**Taimali** baz=217	1.96	218	*e*S	Sn	11 50 33.2	-1.4
ICHU	**Yijhu** baz=244	1.98	247	*e*P	Pn	11 50 12.6	+1.3
ICHU	baz=244			*e*S	Sb	11 50 37.5	-1.5
SSD	**Sandimen** baz=219	2.05	227	*e*P	Pn	11 50 13.5	+1.3
SSD	baz=219			*e*S	Sn	11 50 38.4	+1.4
TSMG	**Majia** baz=219	2.07	226	*e*P	Pn	11 50 13.7	+1.2
TSMG	baz=219			*e*S	Sn	11 50 38.4	+1.0
MASBT	**Mashibuluo** baz=216	2.14	225	*e*P	Pn	11 50 13.6	+0.1
MASBT	baz=216			*e*S	Sn	11 50 41.0	+1.8
EAST	**Anshuo** baz=216	2.19	217	*e*P	Pn	11 50 13.5	-0.7
EAST	baz=216			*e*S	Sn	11 50 39.3	-1.1
SSPT	**Xinbi** baz=216	2.28	223	*e*S	Sn	11 50 43.8	+1.3
SCZT	**Fangliau** baz=215	2.33	221	*e*P	Pn	11 50 17.5	+1.5
SCZT	baz=215			*e*S	Sn	11 50 45.0	+1.2
SLIU	**Shizi** baz=215	2.35	215	*e*P	Pn	11 50 17.0	+0.6
SLIU	baz=215			*e*S	Sn	11 50 44.6	+0.2
PHUB	**P'eng-hu** baz=253	2.54	256	*e*P	Pn	11 50 20.4	+1.5
PHUB	baz=253			*e*S	Sn	11 50 49.6	+0.5
PNG	**Penghu** baz=254	2.55	257	*e*P	Pn	11 50 20.3	+1.2
PNG	baz=254			*e*S	Sn	11 50 49.2	0.0
HEN	**Hengchun** baz=214	2.56	214	*e*S	Sn	11 50 50.4	+1.0
TWKBT	**Hengchun** baz=212	2.58	212	*e*P	Pn	11 50 21.2	+1.7
TWKBT	baz=212			*e*S	Sn	11 50 51.6	+1.7
VCHM	**Qimei** baz=237	2.76	251	*e*S	Sn	11 50 55.5	+1.1
MATB	**Ma-tsu** baz=309	2.89	314	*e*P	Pn	11 50 24.3	+0.5
MATB	baz=309			*e*S	Sn	11 50 58.5	+0.8
PTMZ	**Houxiangcun** baz=284	2.99	288	*e*P	Pn	11 50 26.3	+1.1
PTMZ	baz=284			*e*S	Sn	11 51 00.3	+0.1
LYJJ	**Jianjiangzhen** baz=312	3.29	317	*e*P	Pn	11 50 29.8	+0.5
LYJJ	baz=312			*e*S	Sn	11 51 08.3	+0.8
XPSS	**Dashiqiu** baz=332	3.34	326	*e*P	Pn	11 50 30.1	+0.2
XPSS	baz=332			*e*S	Sn	11 51 10.2	+1.4
KNM	**Kinmen** baz=259	3.50	275	*e*S	Sn	11 51 15.8	+3.0
MHZQ	**Yeshan** baz=299	3.51	304	*e*S	Sn	11 51 13.4	+0.4
KNMB	**Chin-men Tao** baz=260	3.55	276	*e*P	Pn	11 50 33.6	+0.8
KNMB	baz=260			*e*S	Sn	11 51 14.4	+0.5
AXDP	**Jialang** baz=278	3.98	282	*e*P	Pn	11 50 40.4	+1.6
AXDP	baz=278			*e*S	Sn	11 51 25.0	+0.4

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*NNC **03** 11:51:40.5±1.2, 44.°20N×80.°50E, h0^{km}, mb2.8, mpv3.0,*
Error ellipse: s-maj=9.2km s-min=5.0km az=96.0
*SOME **03** 11:51:42.4, 44.°17N×80.°38E, h5^{km}*
ISC 03 11:51:39.2±1.3**, 44.°21N**±0.°03×**80.°66E**±0.°04**, h13**^{km}±11^{km}**,**
n17, σ0.^{s}64/33**, 5C, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent** 3.2nm,0.1s	0.64	282	⇑*e*P	Pb	11 51 52.0	-0.2
DJR	24nm,0.2s			*e*S	Sg	11 51 59.0	-1.0
DJR	**Jarkent** 3.9nm,0.1s	0.64	282	P	Pb	11 51 52.0	-0.2
DJR	21nm,0.2s			S	Sg	11 51 59.0	-1.0
KTMS	**Ketmen** 64nm,0.1s	0.79	196	*e*P	Pn	11 51 56.3	0.0
KTMS	310nm,0.1s			*e*S	Sb	11 52 06.4	+0.8
PDGK	**Podgornoye** 1.3nm,0.1s	1.22	224	P	Pg	11 52 02.8	+0.1
PDGK				S	Sb	11 52 17.8	-0.2

	4.0nm,0.2s						
PDGK	**Podgornoye**	**1.22**	**224**	⇑P	**Pg**	**11 52 02.7**	**+0.1**
	1.1nm,0.4s						
PDGK				⇑S	**Sb**	**11 52 17.7**	**-0.2**
	2.8nm,0.3s						
KAPS	**Kapalarasan**	**1.42**	**320**	*e*P	**Pg**	**11 52 07.7**	**+1.2**
	1.0nm,0.1s						
KAPS				*e*S	**Sg**	**11 52 25.6**	**+0.6**
	4.7nm,0.2s						
KAPS	**Kapalarasan**	**1.42**	**320**	P	**Pg**	**11 52 07.4**	**+0.9**
	1.0nm,0.1s						
KAPS				S	**Sb**	**11 52 23.6**	**-0.1**
	1.9nm,0.1s						
BLB	**Baldybastay**	**1.57**	**267**	P	**Pb**	**11 52 08.4**	**+0.2**
	9.2nm,0.1s						
BLB				S	**Sn**	**11 52 27.3**	**0.0**
	18nm,0.2s						
UZB	**Uzynbulak**	**1.59**	**229**	*e*P	**Pb**	**11 52 09.2**	**+0.7**
	3.0nm,0.2s						
UZB				*e*S	**Sb**	**11 52 28.6**	**0.0**
	6.7nm,0.2s						
UZB	**Uzynbulak**	**1.59**	**229**	P	**Pb**	**11 52 09.3**	**+0.7**
	2.1nm,0.1s						
UZB				S	**Sb**	**11 52 28.6**	**0.0**
	5.6nm,0.2s						
KURS	**Kuram**	**1.94**	**249**	*e*P	**Pb**	**11 52 15.3**	**+0.9**
	2.2nm,0.3s						
KURS				*e*S	**Sb**	**11 52 38.9**	**+0.4**
	2.0nm,0.4s						
SATY	**Saty**	**2.00**	**236**	*e*P	**Pb**	**11 52 15.6**	**+0.1**
	7.1nm,0.2s						
SATY				*e*S	**Sb**	**11 52 39.3**	**-1.1**
	13nm,0.1s						
SATY	**Saty**	**2.00**	**236**	P	**Pb**	**11 52 15.5**	**+0.1**
	7.1nm,0.2s						
SATY				S	**Sb**	**11 52 39.2**	**-1.1**
	13nm,0.1s						
ARXS	**Arharly**	**2.03**	**271**	*e*P	**Pb**	**11 52 16.1**	**+0.1**
	2.7nm,0.2s						
ARXS				*e*S	**Sb**	**11 52 40.6**	**-0.8**
	8.1nm,0.4s						
ARXS	**Arharly**	**2.03**	**271**	P	**Pb**	**11 52 16.0**	**0.0**
	2.7nm,0.2s						
ARXS				S	**Sb**	**11 52 40.9**	**-0.4**
	8.1nm,0.4s						
MK31	**Makanchi Array**	**2.83**	**23**	⇑Pg	**Pb**	**11 52 30.3**	**+0.7**
	2.0nm,1.0s,baz=206,slow=16,SNR=2.7						
MK31				⇑Lg	Lg	11 53 09.3	
	0.1nm,0.2s,baz=209,slow=27,SNR=9.6						
ZSN	**Zaisan**	**4.38**	**41**	*e*P	**Pg**	**11 53 02.1**	**-0.9**
	2.7nm,0.2s						
ZSN				*e*S	**Sg**	**11 53 59.4**	**-0.4**
	3.1nm,0.5s						

JMA ***03*** *11:59:17.0±0.1, 24°.01N×122°.29E, h25^{km}±3^{km}, M2.4*
TAP ***03*** *11:59:18.2, 24°.19N×122°.20E, h20^{km}, ML2.9, D*
ISC 03 11:59:17.4±1.2**, 24°.12N**±0°.02×**122°.25E**±0°.02**, h21**^{km}±4^{km}**,**
n79, σ0^{s}.74/149**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.53**	**307**	P	**Pb**	**11 59 27.9**	**-0.2**
	baz=303						
EWUT				*e*S	**Sb**	**11 59 35.6**	**+0.2**
	baz=303						
ENA	**Nanau**	**0.55**	**303**	P	**Pb**	**11 59 28.6**	**+0.2**
	baz=299						
ENA				S	**Sb**	**11 59 35.9**	**-0.1**
	baz=299						
ETL	**Fush Village**	**0.57**	**274**	*e*P	**Pn**	**11 59 29.8**	**-0.5**
	baz=266						
ETL				*e*S	**Sn**	**11 59 38.3**	**-0.8**
	baz=266						
NACB	**Ninganchiao**	**0.60**	**275**	P	**Pb**	**11 59 29.4**	**+0.2**
	baz=268						
NACB				*e*S	**Sn**	**11 59 38.6**	**-1.0**
	baz=268						
HWA	**Hwalien**	**0.60**	**256**	*e*P	**Pn**	**11 59 30.4**	**-0.4**
	baz=248						
HWA				*e*S	**Sn**	**11 59 39.1**	**-0.7**
	baz=248						
TWC	**Suao**	**0.60**	**323**	P	**Pb**	**11 59 29.0**	**-0.4**
	baz=323						
TWC				S	**Sb**	**11 59 36.6**	**-0.9**
	baz=323						
NDS	**Dongshan**	**0.70**	**316**	P	**Pb**	**11 59 31.1**	**+0.2**
	baz=315						
NDS				S	**Sb**	**11 59 39.9**	**-0.3**
	baz=315						
ETLH	**Xiulin Townshi**	**0.70**	**277**	*e*P	**Pn**	**11 59 31.9**	**-0.3**
	baz=271						
ETLH				*e*S	**Sn**	**11 59 42.5**	**+0.1**
	baz=271						
EGS		**0.77**	**338**	*e*P	**Pb**	**11 59 32.4**	**+0.3**
	baz=340						
EGS				*e*S	**Sb**	**11 59 42.2**	**0.0**
	baz=340						
YOJ	**Yonaguni jima**	**0.78**	**64**	*e*P	**Pn**	**11 59 33.6**	**+0.5**
	baz=69						
YOJ				*e*S	**Sn**	**11 59 44.4**	**+0.4**
	baz=69						
YOJ	**Yonaguni jima**	**0.78**	**64**	P	**Pb**	**11 59 32.3**	**+0.1**
YOJ				S	**Sb**	**11 59 42.3**	**+0.1**
ILA	**Ilan**	**0.78**	**325**	*e*P	**Pb**	**11 59 32.6**	**+0.2**
	baz=324						
ILA				*e*S	**Sb**	**11 59 42.8**	**+0.3**
	baz=324						
TWE	**Neicheng**	**0.80**	**319**	P	**Pb**	**11 59 33.1**	**+0.5**
	baz=318						
TWE				S	**Sb**	**11 59 42.5**	**-0.4**
	baz=318						
ESL	**Shilin**	**0.81**	**248**	*e*P	**Pn**	**11 59 33.2**	**-0.3**
	baz=241						
ESL				*e*S	**Sn**	**11 59 44.5**	**-0.4**
	baz=241						
ENTT	**Nioudou**	**0.81**	**310**	P	**Pb**	**11 59 33.0**	**+0.2**
	baz=308						
ENTT				S	**Sb**	**11 59 42.8**	**-0.4**
	baz=308						
NDT	**Datong Townshi**	**0.82**	**306**	P	**Pn**	**11 59 33.9**	**+0.1**
	baz=303						
NDT				*e*S	**Sb**	**11 59 43.3**	**-0.4**
	baz=303						
NTC	**Toucheng**	**0.82**	**333**	*e*P	**Pb**	**11 59 33.5**	**+0.5**
	baz=333						
NTC				*e*S	**Sb**	**11 59 44.2**	**+0.6**
	baz=333						
NNSB	**Datong**	**0.84**	**291**	P	**Pb**	**11 59 33.8**	**+0.4**
	baz=287						
NNSB				*e*S	**Sn**	**11 59 45.7**	**-0.3**
	baz=287						
NNS	**Nan Shan**	**0.86**	**292**	*e*P	**Pb**	**11 59 33.9**	**+0.3**
	baz=288						
NNS				*e*S	**Sb**	**11 59 45.0**	**+0.2**
	baz=288						
EGFH	**Guangfu**	**0.88**	**239**	*e*P	**Pn**	**11 59 35.5**	**+1.0**
	baz=233						
EGFH				*e*S	**Sn**	**11 59 47.8**	**+1.3**
	baz=233						
WHF	**Hehuan Shan**	**0.90**	**272**	*e*P	**Pb**	**11 59 34.8**	**+0.3**
	baz=266						
WHF				*e*S	**Sb**	**11 59 46.6**	**+0.4**
	baz=266						
TWB1	**Santiao Chiao**	**0.91**	**345**	*e*P	**Pb**	**11 59 34.6**	**+0.1**
	baz=347						
TWB1				*e*S	**Sb**	**11 59 46.7**	**+0.5**
	baz=347						
FUSS	**Fushou**	**0.92**	**278**	P	**Pn**	**11 59 35.5**	**+0.1**
	baz=273						
FUSS				*e*S	**Sn**	**11 59 47.9**	**-0.2**
	baz=273						
TIPB	**Shuangxi**	**0.93**	**336**	P	**Pb**	**11 59 35.0**	**+0.1**
	baz=336						
TIPB				S	**Sb**	**11 59 47.2**	**+0.5**
	baz=336						
NWLT	**Wulai**	**0.94**	**314**	P	**Pb**	**11 59 35.4**	**+0.4**
	baz=312						
NWLT				*e*S	**Sb**	**11 59 47.3**	**+0.2**
	baz=312						
YHNB	**Yeheng**	**0.96**	**305**	P	**Pb**	**11 59 35.8**	**+0.3**
	baz=302						
YHNB				S	**Sb**	**11 59 48.1**	**+0.3**
	baz=302						
NSK	**Sanguang**	**0.98**	**304**	P	**Pb**	**11 59 35.8**	**+0.1**
	baz=302						
NSK				*e*S	**Sb**	**11 59 48.5**	**+0.3**
	baz=302						
HGSD	**Ruisui**	**0.98**	**230**	*e*P	**Pn**	**11 59 36.9**	**+1.0**
	baz=225						
HGSD				*e*S	**Sn**	**11 59 50.6**	**+1.5**
	baz=225						
CHGB	**Renai**	**0.98**	**267**	*e*P	**Pb**	**11 59 35.7**	**-0.1**
	baz=262						
CHGB				*e*S	**Sn**	**11 59 49.8**	**+0.3**
	baz=262						
TWT	**Tachien**	**0.99**	**278**	*e*P	**Pn**	**11 59 36.5**	**+0.4**
	baz=273						
TWT				*e*S	**Sn**	**11 59 49.7**	**+0.2**
	baz=273						
OWD	**Renai**	**0.99**	**260**	*e*P	**Pn**	**11 59 36.8**	**+0.6**
	baz=256						
OWD				*e*S	**Sn**	**11 59 50.1**	**+0.4**
	baz=256						
TDCB	**Techi**	**1.00**	**278**	*e*P	**Pn**	**11 59 36.9**	**+0.5**
	baz=273						
TDCB				*e*S	**Sn**	**11 59 50.0**	**+0.1**
	baz=273						
NWF	**Wu-fen Shan**	**1.03**	**336**	*e*P	**Pn**	**11 59 36.8**	**0.0**
	baz=336						
NWF				*e*S	**Sb**	**11 59 49.9**	**+0.1**
	baz=336						
TWA	**Mucha**	**1.04**	**325**	*e*P	**Pn**	**11 59 36.7**	**-0.1**
	baz=324						
TWA				*e*S	**Sb**	**11 59 49.9**	**-0.1**
	baz=324						
EHY	**Hungye**	**1.05**	**234**	*e*P	**Pb**	**11 59 37.9**	**+1.1**
	baz=229						
EHY				*e*S	**Sn**	**11 59 52.2**	**+1.4**
	baz=229						
NHDH	**Xindian Distri**	**1.06**	**322**	*e*P	**Pn**	**11 59 37.2**	**+0.2**
	baz=321						
NHDH				*e*S	**Sb**	**11 59 50.7**	**+0.1**
	baz=321						
VWDT	**VWDT**	**1.08**	**250**	*e*P	**Pb**	**11 59 38.1**	**+0.8**
	baz=245						
VWDT				*e*S	**Sn**	**11 59 52.4**	**+0.9**
	baz=245						
YULB	**Yu-li**	**1.13**	**230**	*e*P	**Pb**	**11 59 39.3**	**+1.0**
	baz=226						
YULB				*e*S	**Sn**	**11 59 54.7**	**+1.8**
	baz=226						
EYUL	**Yuli**	**1.15**	**228**	*e*P	**Pb**	**11 59 39.6**	**+1.0**
	baz=223						
EYUL				*e*S	**Sn**	**11 59 54.9**	**+1.6**
	baz=223						
YM01	**YM01**	**1.19**	**329**	*e*P	**Pn**	**11 59 38.8**	**0.0**
	baz=329						
YM01				*e*S	**Sn**	**11 59 53.8**	**-0.6**
	baz=329						
WHP	**Taichung City**	**1.20**	**278**	*e*P	**Pb**	**11 59 39.4**	**0.0**
	baz=274						
WHP				*e*S	**Sn**	**11 59 54.8**	**+0.1**
	baz=274						
WCS	**Beigang Elemen**	**1.22**	**267**	*e*P	**Pb**	**11 59 40.0**	**+0.2**
	baz=263						
WCS				*e*S	**Sb**	**11 59 55.8**	**+0.7**
	baz=263						
SSLB	**Suanglung**	**1.23**	**254**	*e*P	**Pb**	**11 59 40.1**	**+0.2**
	baz=250						
SSLB				*e*S	**Sb**	**11 59 56.2**	**+0.8**
	baz=250						
LIOB	**Emei**	**1.24**	**295**	*e*P	**Pn**	**11 59 39.8**	**+0.3**
	baz=292						
LIOB				*e*S	**Sn**	**11 59 55.4**	**-0.1**
	baz=292						
NSTT	**Nanjuang**	**1.24**	**294**	*e*P	**Pn**	**11 59 39.8**	**+0.3**
	baz=292						
NSTT				*e*S	**Sn**	**11 59 55.4**	**-0.2**
	baz=292						
ANP	**Anpu**	**1.25**	**328**	*e*P	**Pn**	**11 59 39.7**	**0.0**
	baz=328						
ANP				*e*S	**Sn**	**11 59 55.1**	**-0.7**
	baz=328						
SMLT	**Sun Moon Lake**	**1.25**	**259**	*e*P	**Pb**	**11 59 40.4**	**0.0**
	baz=255						
SMLT				*e*S	**Sb**	**11 59 56.6**	**+0.4**
	baz=255						
NTST	**Danshui**	**1.27**	**325**	*e*S	**Sn**	**11 59 55.9**	**-0.3**
	baz=324						
FULB	**Fuli**	**1.27**	**224**	*e*P	**Pb**	**11 59 41.3**	**+0.7**
	baz=220						
FULB				*e*S	**Sb**	**11 59 58.0**	**+1.5**
	baz=220						
NCUH	**Zhongli**	**1.28**	**311**	*e*P	**Pn**	**11 59 40.3**	**+0.3**
	baz=310						
NCUH				*e*S	**Sn**	**11 59 56.4**	**-0.1**
	baz=310						
TWY	**Chenhua**	**1.29**	**333**	*e*P	**Pn**	**11 59 40.2**	**+0.1**
	baz=333						
TWY				*e*S	**Sn**	**11 59 56.1**	**-0.6**
	baz=333						
TYC	**Yuchr**	**1.29**	**261**	*e*P	**Pb**	**11 59 40.8**	**-0.1**
	baz=256						
TYC				*e*S	**Sb**	**11 59 57.3**	**+0.2**
	baz=256						
CHKT	**Chengkung**	**1.30**	**219**	*e*P	**Pb**	**11 59 41.8**	**+0.7**
	baz=214						
CHKT				*e*S	**Sb**	**11 59 59.1**	**+1.7**
	baz=214						
IRIF	**Iriomote-Funau**	**1.37**	**81**	P	**Pn**	**11 59 41.0**	**-0.3**
WJS	**Zhushan**	**1.42**	**258**	*e*P	**Pb**	**11 59 43.0**	**-0.2**
	baz=254						
WJS				*e*S	**Sb**	**12 00 00.9**	**0.0**
	baz=254						
EDH	**Donghe**	**1.44**	**217**	*e*S	**Sb**	**12 00 02.4**	**+1.1**
	baz=214						
WNT	**Mingjian**	**1.45**	**261**	*e*S	**Sb**	**12 00 01.3**	**-0.4**
	baz=257						
ALS	**Alishan**	**1.45**	**245**	*e*P	**Pb**	**11 59 43.5**	**-0.4**
	baz=241						
ALS				*e*S	**Sb**	**12 00 01.6**	**-0.5**
	baz=241						
ELDTW	**Lidau**	**1.46**	**231**	*e*P	**Pb**	**11 59 43.9**	**0.0**
	baz=227						
ELDTW				*e*S	**Sb**	**12 00 02.4**	**+0.2**
	baz=227						
CHN5	**Tsauling**	**1.53**	**250**	*e*P	**Pb**	**11 59 44.6**	**-0.5**
	baz=247						
CHN5				*e*S	**Sb**	**12 00 03.9**	**-0.1**
	baz=247						
JKRS	**Kuro-shima**	**1.61**	**86**	P	**Pn**	**11 59 44.7**	**+0.1**
JKRS				*e*S	**Sn**	**12 00 05.3**	**+0.5**
WDLH	**Douliu**	**1.62**	**255**	*e*S	**Sb**	**12 00 06.1**	**-0.6**
	baz=251						
STYH	**Taoyuan**	**1.65**	**235**	*e*P	**Pb**	**11 59 46.5**	**-0.5**
	baz=232						
STYH				*e*S	**Sb**	**12 00 07.3**	**-0.1**
	baz=232						
TPUB	**Ta-pu**	**1.69**	**241**	*e*P	**Pb**	**11 59 47.2**	**-0.7**
	baz=238						
TPUB				*e*S	**Sb**	**12 00 08.2**	**-0.6**
	baz=238						
CHN4	**Tsaushan**	**1.70**	**243**	*e*P	**Pb**	**11 59 47.2**	**-0.7**
	baz=240						
CHN4				*e*S	**Sb**	**12 00 08.2**	**-0.6**
	baz=240						
WRL	**Guolierlin Hig**	**1.72**	**263**	*e*S	**Sn**	**12 00 08.2**	**+0.7**
	baz=260						
WTP	**Ta-pu**	**1.73**	**240**	*e*P	**Pb**	**11 59 47.7**	**-0.9**
	baz=236						
WTP				*e*S	**Sb**	**12 00 09.0**	**-0.9**
	baz=236						
JIJ	**Ishigaki jima**	**1.75**	**82**	P	**Pn**	**11 59 46.1**	**-0.3**
JIJ				*e*S	**Sn**	**12 00 07.7**	**-0.4**
WTK	**Tuku**	**1.75**	**256**	*e*S	**Sn**	**12 00 09.1**	**+0.8**
	baz=253						
TWK	**Hsinying**	**1.82**	**242**	*e*P	**Pb**	**11 59 48.8**	**-1.3**
	baz=239						
TWK				*e*S	**Sn**	**12 00 11.1**	**+1.0**
	baz=239						
CHN1	**Nanshi**	**1.83**	**240**	*e*P	**Pb**	**11 59 49.1**	**-1.1**
	baz=236						
CHN1				*e*S	**Sb**	**12 00 11.5**	**-1.2**
	baz=236						
SGST	**Jiashian**	**1.84**	**236**	*e*P	**Pb**	**11 59 49.4**	**-1.0**
	baz=233						
SGST				*e*S	**Sb**	**12 00 11.9**	**-1.1**
	baz=233						
SLGT	**Liugui**	**1.85**	**233**	*e*P	**Pb**	**11 59 49.4**	**-1.2**
	baz=230						
SLGT				*e*S	**Sb**	**12 00 12.6**	**-0.6**
	baz=230						
JISG	**Ishigakijimahi**	**1.94**	**76**	P	**Pn**	**11 59 49.3**	**+0.2**
JISG				*e*S	**Sn**	**12 00 12.7**	**-0.1**
SSD	**Sandimen**	**2.02**	**228**	*e*P	**Pb**	**11 59 52.0**	**-1.4**
	baz=224						
SSD				*e*S	**Sb**	**12 00 16.8**	**-1.4**
	baz=224						
TSMG	**Majia**	**2.04**	**227**	*e*S	**Sb**	**12 00 16.8**	**-1.8**
	baz=224						
MASBT	**Mashibuluo**	**2.11**	**225**	*e*P	**Pb**	**11 59 53.3**	**-1.7**
	baz=222						
MASBT				*e*S	**Sb**	**12 00 18.9**	**-1.8**
	baz=222						
EAST	**Anshuo**	**2.16**	**217**	*e*P	**Pb**	**11 59 54.1**	**-1.6**
	baz=214						
EAST				*e*S	**Sb**	**12 00 20.0**	**-2.1**
	baz=214						
SLIU	**Shizi**	**2.32**	**215**	*e*S	**Sb**	**12 00 24.5**	**-2.2**
	baz=213						

KMA 03 12:00:26.9±0.2**, 36°.93N**×**126°.56E, h12**^{km}±2^{km}**, Error**
ellipse: s-maj=2.2km s-min=1.1km az=124.0, South
Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSSES	**Seosan**	**0.16**	**212**	P	Pg	12 00 30.8	+0.2
	SNR=46						
KSSES	**Seosan**	**0.16**	**212**	P	Pg	12 00 30.8	+0.2
	SNR=46						
KSSES				S	Sg	12 00 33.4	+0.2
HAWB	**Hwaseong-si**	**0.23**	**48**	P	Pg	12 00 31.9	+0.2
	SNR=16						
HAWB	**Hwaseong-si**	**0.23**	**48**	P	Pg	12 00 31.9	+0.2
	SNR=16						
HAWB				S	Sg	12 00 35.2	+0.1
SHHB	**Siheung-si**	**0.43**	**15**	P	Pg	12 00 35.4	-0.1
KSSWO	**Suwon**	**0.47**	**44**	P	Pb	12 00 36.7	-0.5
KSDEI	**Deokjeokdo**	**0.49**	**312**	P	Pg	12 00 36.5	0.0
	SNR=6.1						
KSDEI	**Deokjeokdo**	**0.49**	**312**	P	Pg	12 00 36.5	0.0
	SNR=6.1						
KSCEA	**Cheonan**	**0.57**	**101**	P	Pg	12 00 38.0	0.0
	SNR=21						
KSCEA	**Cheonan**	**0.57**	**101**	P	Pg	12 00 38.0	0.0
	SNR=21						
PORA	**Boryeong**	**0.60**	**180**	P	Pg	12 00 38.5	-0.1
KSBON	**Boeun**	**1.08**	**113**	P	Pb	12 00 47.2	-0.4
	SNR=6.0						
KSBON	**Boeun**	**1.08**	**113**	P	Pb	12 00 47.2	-0.4
	SNR=6.0						
KSCHC	**Chuncheon**	**1.31**	**49**	P	Pg	12 00 52.0	-0.1
	SNR=6.8						

IDC ***03*** *12:05:58.9±2.1, 23°.75N×121°.65E, h0^{km}, mb3.3/3,*
mb1 3.7/4, mb1mx3.3/42, mbtmp3.5/4, ML3.4/1, Error
ellipse: s-maj=76.6km s-min=31.5km az=99.0
TAP ***03*** *12:06:04.8, 23°.80N×121°.66E, h36^{km}, ML4.0, B*
JMA ***03*** *12:06:04.1±0.1, 23°.76N×121°.65E, h34^{km}±2^{km}, M3.6*
ISC 03 12:06:04.9±0.9**, 23°.79N**±0°.01×**121°.64E**±0°.02**, h34**^{km}±2^{km}**,**
n162, σ0^{s}.86/266**, mb3.5**/3**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.09**	**331**	P	**Pb**	**12 06 11.6**	**+0.9**
	baz=332						
TEYL				S	**Sb**	**12 06 17.1**	**+2.4**
	baz=332						
TEGC	**Jichi Village**	**0.13**	**228**	*i* P	**Pb**	**12 06 11.9**	**+0.9**
	baz=230						
TEGC				*e*S	**Sb**	**12 06 18.2**	**+3.1**
	baz=230						
HWA	**Hwalien**	**0.19**	**349**	*i* P	**Pb**	**12 06 12.2**	**+0.7**
	baz=345						
HWA				*e*S	**Sb**	**12 06 18.9**	**+2.9**
	baz=345						
ESL	**Shilin**	**0.19**	**276**	*i* P	**Pb**	**12 06 11.7**	**+0.1**
	baz=274						
ESL				S	**Sb**	**12 06 17.2**	**+1.0**
	baz=274						
ETM	**Tongmen**	**0.22**	**321**	P	**Pb**	**12 06 12.2**	**+0.3**
	baz=317						
ETM				S	**Sb**	**12 06 17.4**	**+0.8**
	baz=317						
EGFH	**Guangfu**	**0.23**	**238**	*i* P	**Pb**	**12 06 12.3**	**+0.3**
	baz=239						
EGFH				S	**Sb**	**12 06 18.4**	**+1.7**
	baz=239						
TWD	**Chiawan**	**0.29**	**351**	*i* P	**Pb**	**12 06 12.9**	**+0.3**
	baz=349						
TWD				*i* S	**Sb**	**12 06 19.6**	**+1.7**
	baz=349						
HGSD	**Ruisui**	**0.36**	**214**	P	**Pn**	**12 06 15.0**	**+1.2**
	baz=216						
HGSD				S	**Sn**	**12 06 21.7**	**+2.2**
	baz=216						
ETL	**Fush Village**	**0.36**	**357**	*i* P	**Pb**	**12 06 13.8**	**+0.2**
	baz=354						
NACB	**Ninganchiao**	**0.38**	**353**	*i* P	**Pb**	**12 06 14.0**	**+0.1**
	baz=350						
NACB				*e*S	**Sb**	**12 06 20.3**	**+0.3**
	baz=350						
EHY	**Hungye**	**0.41**	**226**	*i* P	**Pb**	**12 06 13.9**	**-0.4**
	baz=226						
EHY				*e*S	**Sb**	**12 06 20.1**	**-0.6**
	baz=226						
ETLH	**Xiulin Townshi**	**0.44**	**340**	*i* P	**Pb**	**12 06 14.6**	**-0.2**
	baz=337						
ETLH				*e*S	**Sb**	**12 06 20.8**	**-0.6**
	baz=337						
OWD	**Renai**	**0.46**	**291**	*i* P	**Pb**	**12 06 15.1**	**+0.1**
	baz=289						
OWD				*e*S	**Sb**	**12 06 21.9**	**-0.1**
	baz=289						
VWDT	**VWDT**	**0.46**	**265**	P	**Pb**	**12 06 15.4**	**+0.4**
	baz=265						
VWDT				*e*S	**Sb**	**12 06 22.0**	**+0.1**
	baz=265						
WHF	**Hehuan Shan**	**0.49**	**315**	*i* P	**Pb**	**12 06 15.6**	**-0.3**
	baz=314						
WHF				*e*S	**Sb**	**12 06 23.3**	**0.0**
	baz=314						
CHGB	**Renai**	**0.51**	**302**	*i* P	**Pb**	**12 06 16.0**	**+0.2**
	baz=300						
ECBN	**Changbin**	**0.51**	**200**	P	**Pn**	**12 06 16.3**	**+0.5**
	baz=202						
ECBN				*e*S	**Sn**	**12 06 24.9**	**+1.6**
	baz=202						
YULB	**Yu-li**	**0.51**	**219**	*i* P	**Pb**	**12 06 15.2**	**-0.6**
	baz=220						
YULB				*e*S	**Sb**	**12 06 22.2**	**-1.0**
	baz=220						
EHP	**Heping Village**	**0.52**	**10**	*e*S	**Sn**	**12 06 24.4**	**+0.7**
	baz=8.0						
EYUL	**Yuli**	**0.54**	**214**	P	**Pn**	**12 06 15.7**	**-0.5**
	baz=215						
EYUL				*e*S	**Sb**	**12 06 23.4**	**-0.4**
	baz=215						
TWF1	**Yuli**	**0.54**	**216**	*i* P	**Pn**	**12 06 15.7**	**-0.6**
	baz=216						
TWF1				*e*S	**Sb**	**12 06 23.2**	**-0.9**
	baz=216						
FUSS	**Fushou**	**0.58**	**321**	*i* P	**Pn**	**12 06 17.0**	**0.0**
	baz=319						
FUSS				*e*S	**Sb**	**12 06 24.9**	**-0.5**
	baz=319						
TWT	**Tachien**	**0.63**	**317**	*i* P	**Pn**	**12 06 18.0**	**+0.4**
	baz=314						
SSLB	**Suanglung**	**0.63**	**270**	*e*P	**Pn**	**12 06 17.4**	**0.0**
	baz=269						
ENA	**Nanau**	**0.64**	**8**	*i* P	**Pn**	**12 06 17.7**	**+0.2**
	baz=7.0						
TDCB	**Techi**	**0.64**	**316**	*i* P	**Pn**	**12 06 18.0**	**+0.4**
	baz=314						
TDCB				*e*S	**Sn**	**12 06 25.9**	**-0.8**
	baz=314						
EWUT	**Wuta**	**0.66**	**11**	P	**Pb**	**12 06 18.4**	**+0.2**
	baz=9.0						
EWUT				S	**Sb**	**12 06 27.8**	**+0.6**
	baz=9.0						
WPL	**Puli Township**	**0.67**	**289**	P	**Pn**	**12 06 18.0**	**+0.1**
	baz=288						
FULB	**Fuli**	**0.67**	**209**	*i* P	**Pn**	**12 06 18.2**	**+0.1**
	baz=209						
NNSB	**Datong**	**0.68**	**339**	*i* P	**Pn**	**12 06 18.4**	**+0.2**
	baz=337						
NNSB				*e*S	**Sn**	**12 06 26.9**	**-0.7**
	baz=337						
SMLT	**Sun Moon Lake**	**0.69**	**278**	*i* P	**Pn**	**12 06 18.6**	**+0.3**
	baz=277						

```
NNS   Nan Shan          0.69 339 i P    Pn   12 06 18.4  0.0
      baz=338
NNS                              eS     Sn   12 06 27.7 -0.3
      baz=338
DPDB  Guoxing           0.70 290 i P    Pn   12 06 18.8 +0.4
      baz=289
YUS   Yu-Shan           0.70 245 i P    Pn   12 06 19.2 +0.3
      baz=244
YUS                              eS     Sn   12 06 28.2 -0.7
      baz=244
WCS   Beigang Elemen    0.72 292 eP     Pn   12 06 17.9 -0.8
      baz=290
TYC   Yuchr             0.73 279 i P    Pn   12 06 19.1 +0.3
      baz=278
CHKT  Chengkung         0.74 200 i P    Pn   12 06 19.3 +0.4
      baz=201
CHKT                             i S    Sb   12 06 30.1 +0.8
      baz=201
ECS   Chishang          0.80 209   P    Pn   12 06 19.7 -0.1
      baz=210
ECS                              eS     Sn   12 06 30.5  0.0
      baz=210
WHP   Taichung City     0.80 307 i P    Pn   12 06 20.5 +0.6
      baz=306
NDT   Datong Townshi    0.81 352 i P    Pn   12 06 20.4 +0.3
      baz=350
ALS   Alishan           0.82 250 i P    Pn   12 06 21.0 +0.6
      baz=249
ALS                              i S    Sn   12 06 31.8 +0.4
      baz=249
ELDTW Lidau             0.83 224 eP     Pn   12 06 19.8 -0.6
      baz=224
ELDTW                            eS     Sn   12 06 31.1 -0.4
      baz=224
TWC   Suao              0.83  13 i P    Pb   12 06 21.2 +0.2
      baz=12
NDS   Dongshan          0.84   5   P    Pn   12 06 20.2 -0.1
      baz=3.0
WJS   Zhushan           0.84 272 i P    Pb   12 06 21.7 +0.5
      baz=271
ENTT  Nioudou           0.84 355 i P    Pn   12 06 20.8 +0.3
      baz=354
EDH   Donghe            0.88 201 i P    Pn   12 06 21.6 +0.7
      baz=201
EDH                              eS     Sb   12 06 33.9 +0.7
      baz=201
WNT   Mingjian          0.88 276 i P    Pb   12 06 22.3 +0.4
      baz=275
WNT1  Nantou City       0.89 277 eP     Pb   12 06 23.1 +1.1
      baz=277
WWF   Wufeng            0.90 286 i P    Pb   12 06 23.0 +0.8
      baz=285
YHNB  Yeheng            0.91 344   P    Pn   12 06 21.8 +0.4
      baz=343
YHNB                             eS     Sn   12 06 32.8 -0.5
      baz=343
CHN5  Tsauling          0.91 258 i P    Pn   12 06 22.4 +1.0
      baz=257
CHN5                             i S    Sb   12 06 35.0 +0.8
      baz=257
NSK   Sanguang          0.92 344 i P    Pn   12 06 22.0 +0.5
      baz=342
NSK                              i S    Sn   12 06 33.5  0.0
      baz=342
TWE   Neicheng          0.92   1 i P    Pn   12 06 21.9 +0.4
      baz=1.0
TCU   Taichung          0.95 292 eP     Pb   12 06 23.8 +0.7
      baz=291
TCU                              eS     Sb   12 06 38.0 +2.6
      baz=291
TWQ1  Liyutan           0.97 305 i P    Pb   12 06 23.8 +0.4
      baz=304
TWQ1                             eS     Sb   12 06 36.6 +0.8
      baz=304
NWLT  Wulai             0.99 353 i P    Pn   12 06 23.1 +0.7
      baz=351
WYL   Yuanlin Townsh    0.99 280 eP     Pb   12 06 24.2 +0.6
      baz=279
WYL                              eS     Sb   12 06 38.3 +1.9
      baz=279
WGK   Gukeng            1.00 264 i P    Pb   12 06 23.8 +0.1
      baz=263
WGK                              eS     Sb   12 06 37.6 +1.0
      baz=263
LONT  Longtian          1.00 208 eP     Pn   12 06 21.4 -1.2
      baz=209
LONT                               S    Sb   12 06 37.1 +0.3
      baz=209
STYH  Taoyuan           1.01 232 i P    Pn   12 06 23.6 +0.8
      baz=232
NSY   Sanyi             1.02 308 eP     Pb   12 06 24.6 +0.5
      baz=307
NSY                              eS     Sb   12 06 38.8 +1.6
      baz=307
WDLH  Douliu            1.02 264   P    Pb   12 06 24.5 +0.4
      baz=264
WDLH                               S    Sb   12 06 37.7 +0.5
      baz=264
NSTT  Nanjuang          1.02 325 i P    Pb   12 06 24.4 +0.2
      baz=324
LIOB  Emei              1.02 326 i P    Pb   12 06 24.7 +0.4
      baz=325
STYT  Tauyuan           1.03 233 i P    Pn   12 06 24.1 +1.1
      baz=232
WCHH  Zhanghua          1.03 286 i P    Pb   12 06 24.8 +0.5
      baz=285
TPUB  Ta-pu             1.05 242   P    Pb   12 06 24.6 -0.1
      baz=242
TPUB                               S    Sb   12 06 38.6 +0.3
      baz=242
CHN4  Tsaushan          1.06 246 i P    Pn   12 06 23.4  0.0
      baz=245
CHN4                             i S    Sn   12 06 37.8 +0.8
      baz=245
NJD   Zhudong           1.07 332 eP     Pb   12 06 25.6 +0.7
      baz=330
NJD                              eS     Sb   12 06 40.4 +1.8
      baz=330
NTC   Toucheng          1.07   9 eP     Pb   12 06 25.6 +0.7
      baz=8.0
NTC                              eS     Sb   12 06 38.6 -0.1
      baz=8.0
WDJ   Dajia District    1.07 301 i P    Pb   12 06 25.0  0.0
      baz=300
WDJ                              eS     Sb   12 06 39.3 +0.6
      baz=300
NMLH  Miaoli            1.07 314   P    Pn   12 06 24.7 +1.1
      baz=312
NMLH                               S    Sb   12 06 39.3 +0.5
      baz=312
EGS                     1.08  14   P    Pn   12 06 24.5 +0.8
      baz=13
EGS                              eS     Sb   12 06 38.5 -0.5
      baz=13
WTP   Ta-pu             1.09 240 eP     Pb   12 06 25.7 +0.3
      baz=240
TWGBT Beinan            1.10 208 eP     Pb   12 06 25.2 -0.3
      baz=208
TWG   Pinlang           1.10 209 eP     Pn   12 06 23.7 -0.3
      baz=208
CHN2  Minshiung         1.10 257 eP     Pn   12 06 25.2 +1.2
      baz=256
CHN2                               S    Sb   12 06 40.3 +0.7
      baz=256
LDUT  Ludao             1.13 188 i P    Pn   12 06 24.9 +0.6
      baz=189
LDUT                               S    Sn   12 06 39.4 +0.8
      baz=189
TTN   Taitung           1.13 204   P    Pn   12 06 24.8 +0.4
      baz=204
TTN                                S    Sb   12 06 40.0 -0.4
      baz=204
NJN   Zhunan            1.13 322   P    Pb   12 06 25.8 -0.3
      baz=320
NJN                                S    Sb   12 06 41.0 +0.5
      baz=320
HSN1  Hsinchu           1.13 330 eP     Pb   12 06 26.5 +0.4
      baz=328
HSN1                             eS     Sb   12 06 41.7 +1.2
      baz=328
WTK   Tuku              1.16 265 eP     Pb   12 06 27.1 +0.7
      baz=264
CHY   Chiayi            1.16 255 eS     Sb   12 06 42.1 +1.0
      baz=255
SBCB  Hsinchu           1.16 329 eP     Pb   12 06 27.6 +1.0
      baz=328
SBCB                               S    Sn   12 06 40.2 +0.7
      baz=328
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WRL   Guolierlin Hig    1.16 276   P    Pb   12 06 26.3 -0.3
      baz=275
WRL                                S    Sn   12 06 41.1 +1.6
      baz=275
NHDH  Xindian Distri    1.17 355 eP     Pb   12 06 26.4 -0.2
      baz=353
HSN   Hsinchu           1.18 329 eS     Sb   12 06 43.2 +1.5
      baz=330
TWA   Mucha             1.18 357   P    Pn   12 06 26.1 +1.0
      baz=356
TWA                                S    Sn   12 06 41.0 +0.9
      baz=356
TWK   Hsinying          1.18 244 eP     Pb   12 06 27.1 +0.1
      baz=243
TWK                              eS     Sb   12 06 42.3 +0.3
      baz=243
TIPB  Shuangxi          1.18   8 eP     Pb   12 06 26.8 -0.2
      baz=7.0
TATO  Taipei            1.19 353   P    Pn   12 06 25.8 +0.7
      baz=352
TATO                               S    Sn   12 06 41.1 +1.0
      baz=352
CHN1  Nanshi            1.19 240 eP     Pb   12 06 27.1 +0.1
      baz=239
SNST  Tainan City       1.20 242 eP     Pb   12 06 27.4 +0.3
      baz=241
SNST                             eS     Sb   12 06 42.9 +0.5
      baz=241
SGST  Jiashian          1.21 234   P    Pn   12 06 26.8 +1.4
      baz=234
SGST                             eS     Sb   12 06 42.4 -0.1
      baz=234
SLGT  Liugui            1.21 229   P    Pb   12 06 27.3 -0.1
      baz=229
SLGT                               S    Sb   12 06 42.5 -0.3
      baz=229
NCUH  Zhongli           1.24 340   P    Pb   12 06 27.4 -0.5
      baz=339
NCUH                             eS     Sb   12 06 44.5 +0.8
      baz=339
NTY   Taoyuan           1.24 345   P    Pb   12 06 27.4 -0.4
      baz=344
NTY                              eS     Sb   12 06 44.2 +0.6
      baz=344
NHY   Taipei            1.24 357   S    Sn   12 06 42.8 +1.3
      baz=356
NCU   National Centr    1.24 341   P    Pn   12 06 26.6 +0.7
      baz=339
NCU                              eS     Sb   12 06 44.6 +0.9
      baz=339
TAP   Taipei            1.25 354   P    Pn   12 06 26.2 +0.3
      baz=353
TAP                              eS     Sb   12 06 43.6 -0.1
      baz=353
TWB1  Santiao Chiao     1.25  15 eP     Pb   12 06 27.8 -0.3
      baz=14
TWB1                             eS     Sb   12 06 44.0 +0.2
      baz=14
WTCT  Ta-ch'eng         1.25 273 eP     Pb   12 06 27.7 -0.3
      baz=273
WTCT                             eS     Sb   12 06 44.4 +0.6
      baz=273
NWF   Wu-fen Shan       1.28   6 i P    Pb   12 06 27.9 -0.7
      baz=4.0
WFSB  Wu-fen Shan       1.28   6   P    Pn   12 06 27.7 +1.3
      baz=4.0
WFSB                             eS     Sb   12 06 45.4 +0.8
      baz=4.0
WSF   Szhu              1.31 263 i P    Pn   12 06 28.0 +1.2
      baz=263
WSF                              eS     Sb   12 06 45.8 +0.2
      baz=263
TWS1  Kuangyinshan      1.32 351 eP     Pb   12 06 28.8 -0.4
      baz=350
TWS1                               S    Sn   12 06 44.7 +1.4
      baz=350
ICHU  Yijhu             1.32 251 eP     Pb   12 06 29.1 -0.1
      baz=251
ICHU                             eS     Sb   12 06 46.4 +0.5
      baz=251
NHW   Xinwu Township    1.32 336   P    Pn   12 06 28.6 +1.5
      baz=335
NHW                              eS     Sb   12 06 46.0 +0.1
      baz=335
YM01  YM01              1.35 357   P    Pn   12 06 28.8 +1.3
      baz=356
YM01                               S    Sn   12 06 44.8 +0.6
      baz=356
ECL   Taimali           1.35 208 eP     Pn   12 06 28.1 +0.7
      baz=208
ECL                                S    Sn   12 06 45.5 +1.4
      baz=208
TNOU  National Taiwa    1.35   5 eP     Pn   12 06 26.1 -1.4
      baz=4.0
TNOU                             eS     Sn   12 06 45.5 +1.2
      baz=4.0
JYNG  Yonagunijimaku    1.36  61   P    Pn   12 06 27.7 +0.2
JYNG                               S    Sn   12 06 45.4 +1.1
CHN3  Shinhua           1.38 239 eP     Pb   12 06 30.6 +0.5
      baz=239
CHN3                             eS     Sb   12 06 49.0 +1.7
      baz=239
NTST  Danshui           1.38 353 i P    Pn   12 06 28.5 +0.7
      baz=351
NTST                               S    Sn   12 06 45.6 +0.8
      baz=351
CHN8  Yiju              1.39 252 eP     Pn   12 06 29.1 +1.2
      baz=251
CHN8                             eS     Sn   12 06 46.9 +1.8
      baz=251
ANP   Anpu              1.39 355   P    Pn   12 06 28.7 +0.6
      baz=354
ANP                              eS     Sn   12 06 46.3 +1.0
      baz=354
SCST  Cishan            1.39 230 eP     Pb   12 06 31.4 +1.0
      baz=229
SSD   Sandimen          1.40 222   P    Pn   12 06 29.7 +1.6
      baz=221
SSD                              eS     Sn   12 06 46.7 +1.4
      baz=221
SSHA  Shanhua           1.41 243 eP     Pb   12 06 30.5 -0.1
      baz=242
SSHA                             eS     Sb   12 06 49.7 +1.4
      baz=242
YOJ   Yonaguni jima     1.42  62   P    Pn   12 06 28.9 +0.6
      baz=61
YOJ                                S    Sn   12 06 46.7 +1.0
      baz=61
YOJ   Yonaguni jima     1.42  62   P    Pn   12 06 29.3 +1.0
YOJ                              eS     Sn   12 06 47.0 +1.2
TSMG  Majia             1.42 220 eP     Pb   12 06 30.4 -0.5
      baz=220
TSMG                             eS     Sb   12 06 48.6 -0.1
      baz=220
SCLT  Jiali             1.47 245 i P    Pn   12 06 30.0 +1.0
      baz=245
SCLT                             eS     Sb   12 06 50.2 +0.2
      baz=245
TWM1  Shoushan          1.48 230 eP     Pb   12 06 32.1 +0.2
      baz=229
MASBT Mashibuluo        1.50 219   P    Pn   12 06 30.4 +1.0
      baz=218
MASBT                            eS     Sn   12 06 48.1 +0.3
      baz=218
SGLT  Jiouru            1.50 225   P    Pb   12 06 31.4 -0.8
      baz=225
EAST  Anshuo            1.58 208 eP     Pb   12 06 32.7 -1.0
      baz=207
EAST                             eS     Sn   12 06 50.9 +0.9
      baz=207
TAW   Tawu              1.59 206 eS     Sn   12 06 50.2 +0.3
      baz=206
SSPT  Xinbi             1.64 217 eP     Pb   12 06 34.3 -0.2
      baz=217
SCZT  Fangliau          1.70 214 eP     Pb   12 06 34.6 -1.0
      baz=213
LAY   Lan-yu            1.75 183   P    Pn   12 06 33.6 +0.7
      baz=183
LAY                              eS     Sn   12 06 54.1 +0.1
      baz=183
SLIU  Shizi             1.75 207 eP     Pn   12 06 34.1 +1.2
      baz=206
SLIU                             eS     Sn   12 06 55.1 +1.0
      baz=206
PHUB  P'eng-hu          1.92 262   P    Pn   12 06 36.0 +0.7
      baz=261
PHUB                               S    Sn   12 06 58.4 +0.2
      baz=261
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PNG   Penghu            1.93 264   P    Pn   12 06 36.4 +1.0
      baz=263
PNG                                S    Sn   12 06 59.0 +0.6
      baz=263
HEN   Hengchun          1.97 205 i P    Pn   12 06 36.8 +0.9
      baz=205
HEN                                S    Sn   12 07 01.0 +1.6
      baz=205
IRIF  Iriomote-Funau    1.98  74   P    Pn   12 06 37.0 +0.9
IRIF                               S    Sn   12 07 00.9 +1.2
HATJ  Hateruma jima     2.00  82   P    Pn   12 06 37.0 +0.7
HATJ                               S    Sn   12 07 00.4 +0.3
TWK1  Hengchun          2.00 203   P    Pn   12 06 37.7 +1.4
      baz=203
TWK1                               S    Sn   12 07 00.4 +0.3
      baz=203
TWKBT Hengchun          2.00 203   P    Pn   12 06 37.1 +0.8
      baz=203
TWKBT                            eS     Sn   12 07 00.6 +0.4
      baz=203
VCHM  Qimei             2.11 254 eP     Pn   12 06 37.4 -0.5
      baz=254
VCHM                               S    Sn   12 07 03.2 +0.2
      baz=254
JKRS  Kuro-shima        2.21  78   P    Pn   12 06 40.6 +1.4
JKRS                               S    Sn   12 07 06.7 +1.4
JIJ   Ishigaki jima     2.35  76   P    Pn   12 06 41.6 +0.4
JIJ                                S    Sn   12 07 09.0 +0.1
JISG  Ishigakijimahi    2.56  72   P    Pn   12 06 44.5 +0.5
JISG                               S    Sn   12 07 14.0  0.0
PTMZ  Houxiangcun       2.61 299 eP     Pn   12 06 44.3 -0.5
      baz=298
MATB  Ma-tsu            2.81 327 eP     Pn   12 06 46.8 -0.7
      baz=326
MSUT  Lienchiang        2.83 327 eP     Pn   12 06 47.8 -0.1
      baz=326
JTJ   Tarama            2.92  73   P    Pn   12 06 50.0 +1.1
JTJ                                S    Sn   12 07 23.3 +0.5
KNM   Kinmen            3.00 283 eP     Pn   12 06 51.8 +1.7
      baz=281
KNMB  Chin-men Tao      3.05 283 eP     Pn   12 06 50.4 -0.3
      baz=282
LYJJ  Jianjiangzhen     3.23 329 eP     Pn   12 06 52.4 -0.9
      baz=327
MHZQ  Yeshan            3.30 315 eP     Pn   12 06 53.5 -0.8
      baz=313
MHZQ                             eS     Sn   12 07 31.2 -1.1
      baz=313
JIRB  Irabujima         3.38  72   P    Pn   12 06 56.0 +0.7
JIRB                             eS     Sn   12 07 34.3  0.0
XPSS  Dashiqiu          3.39 337 eP     Pn   12 06 54.5 -1.0
      baz=336
JMJ   Miyako jima 2     3.48  72   P    Pn   12 06 57.9 +1.1
      baz=72
JMJ                                S    Sn   12 07 36.6 -0.2
      baz=72
JMJ2  Miyako jima3      3.49  74   P    Pn   12 06 58.1 +1.2
JMJ2                             eS     Sn   12 07 36.8 -0.2
AXDP  Jialang           3.53 289 eP     Pn   12 06 57.3  0.0
      baz=288
ZPLA  Ao Xicun          3.57 273 eP     Pn   12 06 57.9  0.0
      baz=272
JOW   Kunigami          6.72  62   Pn   Pn   12 07 39.2 -2.0
      1.7nm,0.3s,baz=223,slow=19,SNR=1.1
WRA   Warramunga Arr   45.20 163   P    P    12 14 17.5 -1.4
      0.3nm,0.5s,baz=344,slow=8.8,SNR=8.8
ILAR  Eielson Array    69.37  27   P    P    12 17 08.8 -0.2
      0.2nm,0.7s,baz=277,slow=4.8,SNR=1.4
YKA   Yellowknife Ar   83.16  23   P    P    12 18 26.3 -1.0
      0.2nm,0.5s,baz=308,slow=4.9,SNR=1.4
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*NIED **03** 12:08:34.5, 31°.20N×129°.20E, h9^{km}, MW4.6, Moment Tensor Solution.   s3   Moment tensor: Scale 10^{15}Nm; M_{rr}-2.70; $M_{\theta\theta}$1.72; $M_{\phi\phi}$0.98; $M_{r\theta}$0.36; $M_{\theta\phi}$4.69; $M_{\phi r}$5.39; Fault plane solution: $M_0$7.53000×10^{15} NP1: ϕ_s192.00000°, δ77.00000°, λ-127.00000°.   NP2: ϕ_s85.00000°, δ39.00000°, λ-22.00000°.*

*JMA **03** 12:08:34.4±0.2, 31°.20N×129°.20E, h9^{km}±2^{km}, M4.4*

JMA Felt I J1.

*BJI **03** 12:08:37.5±0.0, 31°.30N×129°.10E, h10^{km}, mB4.6/16, mb4.2/32, ML4.2/3, Ms4.5/27, Ms7 4.2/25*

*NEIC **03** 12:08:40.8±2.3, 31°.26N±0°.03×129°.43E±0°.07, h40^{km}±8^{km}, mb4.5/24, Error ellipse: s-maj=10.4km s-min=1.8km az=117.0*

*IDC **03** 12:08:40.8±2.2, 31°.27N×129°.37E, h42^{km}±20^{km}, mb3.9/18, mb1 4.0/22, mb1mx3.9/42, mbtmp4.1/22, ML3.5/4, MS3.8/13, Ms1 3.8/13, ms1mx3.6/35, Error ellipse: s-maj=18.7km s-min=12.5km az=81.0*

*KMA **03** 12:08:43.2, 31°.60N×128°.94E, h15^{km}*

ISC 03 12:08:36.5±1.4, **31°.19N**±0°.03×**129°.33E**±0°.04, **h11**^{km}±9^{km}, **n96**, σ**1^{s}.27**/99, **mb4.3**/30, **MS4.0**/12, **2C-3D, Kyushu**

```
Code  Station Name       Δ°  AZ°   Phase ID      Time       Res
                                 Op     ISC   h  m  s      ISC
JSJ   Shimokoshiki      0.58  34 ⇓P     Pg   12 08 46.5 -1.4
JSJ                              eS     Sg   12 08 55.7 +0.1
JSU   Suzuyama          1.01  72 ⇓P     Pg   12 08 55.4 -0.6
JSU                              eS     Sn   12 09 10.3 -0.5
JSU   Suzuyama          1.01  72        Pg   12 08 55.9 -0.1
JKC   Kuchinoerabu      1.04 134 ⇑P     Pg   12 08 55.5 -1.0
JKC                              eS     Sb   12 09 10.2  0.0
JYAK  Yakushimahirau    1.39 133   P    Pn   12 09 00.1 -1.7
JYAK                             eS     Sn   12 09 19.8 -0.4
JNN   Nakanoshima       1.43 161   P    Pn   12 09 01.4 -0.9
JZO   Okuchi            1.43  49 ⇓P     Pn   12 09 01.8 -0.7
JTN   Tanegashima 3     1.52 110   P    Pn   12 09 02.7 -0.8
JFU   Fukue jima 2      1.54 341   P    Pn   12 09 01.3 -2.6
JFU                              eS     Sn   12 09 20.8 -3.1
JTZ   Takazaki          1.66  64   P    Pn   12 09 05.3 -0.2
JNU   Nakatsue          2.33  34   P    Pb   12 09 18.7 +0.2
      44nm,0.3s,baz=232,slow=8.9,SNR=58
JNU                                S    Sb   12 09 47.5 +0.3
      29nm,0.3s,baz=158,slow=19,SNR=4.9
JNU   Nakatsue          2.33  34   Pn   Pb   12 09 17.9 -0.6
JTU   Tsushima          3.32   1   Pn   Pn   12 09 31.4 +3.0
KSNAH Namhae            3.80 342   P    Pn   12 09 33.7 -1.2
      SNR=6.2
KOHB  KOHEUNG           3.83 334   P    Pn   12 09 34.4 -0.9
      SNR=14
HANB  Haenam            4.08 326   P    Pn   12 09 38.0 -0.8
      SNR=7.2
KSSCH SUNCHEON          4.24 336   P    Pn   12 09 40.4 -0.6
      SNR=10
JOW   Kunigami          4.44 192   P    Pn   12 09 48.2 +4.3
      5.9nm,0.3s,baz=12,slow=13,SNR=6.3
JMN   Monobe            4.60  55   Pn   Pn   12 09 47.0 +1.0
JHS   Saijyo            4.95  39   Pn   Pn   12 09 53.3 +2.5
KSJEO Jeonju            5.03 341   P    Pn   12 09 51.1 -0.8
      SNR=6.5
KSBON Boeun             5.44 347   P    Pn   12 09 58.2 +0.7
      SNR=12
KOJ2  Gongju-si         5.57 342   P    Pn   12 09 60.0 +0.7
      SNR=8.4
KSCEA Cheonan           5.87 344   P    Pn   12 10 03.5 +0.1
      SNR=12
PYTK  Pyeongtaek        6.07 343   P    Pn   12 10 05.9 -0.2
      SNR=9.0
HAWB  Hwaseong-si       6.25 341   P    Pn   12 10 08.0 -0.6
      SNR=14
KSAR  Wonju Array Be    6.35 350   Pn   Pn   12 10 10.5 +0.5
KSRS  Korea Array       6.35 350   P    Pn   12 10 10.1  0.0
      2.4nm,0.3s,baz=169,slow=14,SNR=39
KSRS                               S    Sn   12 11 22.1 -0.4
      1.1nm,0.3s,baz=176,slow=24,SNR=3.1
KSRS                               Lg   Lg   12 11 50.3
      2.2nm,0.3s,baz=167,slow=31,SNR=5.4
KSSWO Suwon             6.37 343   P    Pn   12 10 10.1 -0.1
      SNR=6.7
KS19  Wonju Array Si    6.41 350        Pn   12 10 10.1 -0.7
JWT   Wachi             6.52  50   Pn   Pn   12 10 13.5 +1.2
KSSEO Seoul             6.59 343   P    Pn   12 10 13.3  0.0
      SNR=6.0
KSSEO Seoul             6.59 343   P    Pn   12 10 13.1 -0.1
      SNR=5.9
KSSOD Songwoldong       6.66 344   P    Pn   12 10 14.3 +0.2
      SNR=7.8
KSGAH Ganghwa           6.92 341   P    Pn   12 10 17.6 -0.2
      SNR=13
SSE   Sheshan           6.98 271   Pn   Pn   12 10 20.7 +2.0
SSE                                Sn   Sn   12 11 39.6 +1.5
SSE                                smax smax
      comp=N,74nm,0.8s
```

SSE				smax	smax		
	comp=E,55nm,1.4s						
SSE				LR	LR		
	comp=N,1µm,14.4s						
SSE				LR	LR		
	comp=E,500nm,17.2s						
INU	**Inuyama**	**7.65**	**55**	Pn	**Pn**	**12 10 30.6**	**+2.7**
NJ2	**Nanjing**	**8.97**	**278**	*e*P	**Pn**	**12 10 44.8**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,23nm,0.9s						
NJ2				smax	smax		
	comp=N,110nm,1.0s						
NJ2				smax	smax		
	comp=E,100nm,0.9s						
NJ2				LR	LR		
	comp=N,2µm,9.5s						
NJ2				LR	LR		
	comp=E,960nm,9.2s						
NJ2				LR	LR		
	comp=Z,1µm,12.8s						
MJAR	**Matsushiro Arr**	**9.11**	**52**	P	**Pn**	**12 10 49.9**	**+2.1**
	0.1nm,0.3s,baz=245,slow=14,SNR=4.7						
MJAR				LR	LR	12 14 44.0	
	comp=Z,679nm,18.6s,baz=245,slow=40						
WHN	**Wuhan**	**12.89**	**271**	P	**Pn**	**12 11 39.9**	**+0.3**
WHN				LR	LR		
	comp=N,2µm,7.8s						
WHN				LR	LR		
	comp=E,1µm,6.5s						
USRK	**Ussuriysk Ar.**	**13.15**	**8**	LR	LR	12 16 21.4	
	comp=Z,194nm,21.2s,baz=177,slow=35						
ASAJ	**Asahikawa**	**16.61**	**35**	P	**Pn**	**12 12 28.6**	**-0.5**
	0.3nm,0.3s,baz=198,slow=11,SNR=4.6						
ASAJ				LR	LR	12 18 22.6	
	comp=Z,180nm,19.0s,baz=141,slow=35						
JKA	**Kamikawa-asahi**	**16.61**	**35**		**Pn**	**12 12 28.6**	**-0.6**
JKA	**Kamikawa-asahi**	**16.61**	**35**	IAmb	IAmb	12 12 54.2	
	comp=Z,50nm,1.2s						
XAN	**Xi'an**	**17.43**	**285**	P	**P**	**12 12 41.6**	**+0.7**
XAN				S	**S**	**12 15 58.1**	**-3.9**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN				LR	LR		
	comp=Z,750nm,11.3s						
XAN				LR	LR		
	comp=Z,1µm,12.7s						
XAN				LR	LR		
	comp=Z,1µm,11.7s						
KLR	**Kul'dur**	**18.11**	**5**	P	**P**	**12 12 51.3**	**+3.1**
	comp=Z,0.5nm,0.3s,baz=206,slow=6.7,SNR=11						
LZH	**Lanzhou**	**21.75**	**290**	*e*P	**P**	**12 13 30.6**	**+2.4**
LZH				pP	sP	12 13 33.7	+1.2
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				LR	LR		
	comp=Z,1µm,13.0s						
LZH				LR	LR		
	comp=Z,720nm,12.7s						
LZH				LR	LR		
	comp=Z,760nm,15.2s						
GUMO	**Guam**	**22.61**	**137**	LR	LR	12 21 23.1	
	comp=Z,134nm,19.5s,baz=336,slow=34						
ULN	**Ulaanbaatar**	**23.80**	**321**	P	**P**	**12 13 48.8**	**-0.6**
ULN				IAmb	IAmb	12 13 55.3	
	comp=Z,21nm,1.2s						
SONM	**Songino Array**	**24.14**	**320**	P	**P**	**12 13 51.6**	**-0.9**
	comp=Z,4.8nm,1.0s,baz=140,slow=9.5,SNR=17						
SONM	**Songino Array**	**24.14**	**320**	P	**P**	**12 13 52.0**	**-0.5**
GTA	**Gaotai**	**25.36**	**297**	⇑P	**P**	**12 14 03.0**	**-0.7**
GTA				pP	pP	12 14 07.2	+0.3
GTA				sP	sP	12 14 10.2	+2.0
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
GTA				pmax	pmax		
	comp=Z,160nm,5.3s						
GTA				LR	LR		
	comp=Z,510nm,16.0s						
GTA				LR	LR		
	comp=Z,430nm,17.5s						
GTA				LR	LR		
	comp=Z,380nm,17.5s						
PETK	**Petropavlovsk-**	**30.03**	**35**	LR	LR	12 25 59.2	
	comp=Z,82nm,20.0s,baz=225,slow=35						
CHTO	**Chiang Mai**	**30.07**	**253**	P	**P**	**12 14 46.8**	**+0.9**
CMAR	**Chiang Mai Arr**	**30.25**	**252**	P	**P**	**12 14 48.8**	**+1.2**
	comp=Z,1.1nm,0.3s,baz=50,slow=7.3,SNR=7.9						
CMAR				PcP	**PcP**	**12 17 49.1**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=38,slow=1.4,SNR=2.5						
CMAR				LR	LR	12 28 20.6	
	comp=Z,142nm,19.6s,baz=34,slow=39						
ZALV	**Zalesovo Beam**	**39.02**	**319**	P	**P**	**12 16 02.2**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=107,slow=7.6,SNR=2.3						
MK31	**Makanchi Array**	**39.13**	**307**	P	**P**	**12 16 02.8**	**-1.1**
MKAR	**Makanchi Array**	**39.13**	**307**	P	**P**	**12 16 03.3**	**-0.7**
	comp=Z,1.6nm,0.7s,baz=90,slow=9.6,SNR=12						
MKAR				LR	LR	12 34 58.3	
	comp=Z,159nm,18.3s,baz=84,slow=40						
MKAR	**Makanchi Array**	**39.13**	**307**	P	**P**	**12 16 02.6**	**-1.4**
MAKZ	**Makanchi**	**39.34**	**307**	P	**P**	**12 16 05.2**	**-0.6**
KURK	**Kurchatov**	**42.03**	**313**	P	**P**	**12 16 26.5**	**-1.3**
KURK				IAmb	IAmb	12 16 32.1	
	comp=Z,6.9nm,1.1s						
KURBB	**Kurchatov Arra**	**42.07**	**313**	P	**P**	**12 16 27.2**	**-1.0**
	comp=Z,3.2nm,1.0s,baz=101,slow=9.1,SNR=11						
TARG	**Taragay, Kyrgy**	**42.20**	**299**	P	**P**	**12 16 29.7**	**-0.1**
TARG				IAmb	IAmb	12 16 34.3	
	comp=Z,7.2nm,1.1s						
BRVK	**Borovoye**	**47.40**	**315**	P	**P**	**12 17 10.7**	**+0.1**
KKAR	**Karatay Array**	**47.48**	**302**	P	**P**	**12 17 10.4**	**-1.0**
CHGR	**Chuyangaron**	**49.13**	**296**	P	**P**	**12 17 24.5**	**+0.2**
WB0	**Warramunga Arr**	**50.90**	**174**	P	**P**	**12 17 37.5**	**-0.2**
WB0				IAmb	IAmb	12 17 52.1	
	comp=Z,3.6nm,0.8s						
WRAB	**Tennant Creek**	**51.06**	**174**	P	**P**	**12 17 38.8**	**-0.2**
WRAB				IAmb	IAmb	12 17 42.6	
	comp=Z,8.3nm,1.4s						
WRA	**Warramunga Arr**	**51.07**	**174**	P	**P**	**12 17 38.0**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=352,slow=8.1,SNR=5.0						
WRA				LR	LR	12 40 16.2	
	comp=Z,22nm,19.6s,baz=225,slow=37						
WRA	**Warramunga Arr**	**51.07**	**174**	P	**P**	**12 17 38.4**	**-0.6**
WB2	**Warramunga Arr**	**51.07**	**174**	P	**P**	**12 17 38.3**	**-0.7**
WB2				IAmb	IAmb	12 17 57.2	
	comp=Z,3.9nm,1.0s						
ABKAR	**Akbulak array**	**54.05**	**311**	P	**P**	**12 18 00.1**	**-0.8**
ABKAR				IAmb	IAmb	12 18 04.7	
	comp=Z,5.1nm,0.8s						
ASAR	**Alice Springs**	**54.72**	**175**	P	**P**	**12 18 05.8**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=3.3,slow=9.5,SNR=7.9						
PPLA	**Purkeypile**	**57.55**	**32**	P	**P**	**12 18 26.4**	**+0.5**
I23K	**Minto, Yukon-K**	**58.55**	**29**	P	**P**	**12 18 31.2**	**-1.4**
I23K				IAmb	IAmb	12 18 38.1	
	comp=Z,8.5nm,1.4s						
RND	**Reindeer**	**58.99**	**31**	P	**P**	**12 18 35.7**	**-0.3**
RND				IAmb	IAmb	12 18 40.8	
	comp=Z,8.7nm,1.1s						
MDM	**Murphy Dome**	**59.05**	**29**	P	**P**	**12 18 36.3**	**+0.1**
ILAR	**Eielson Array**	**59.64**	**30**	P	**P**	**12 18 39.4**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=283,slow=7.0,SNR=9.7						
M26K	**Nabesna, AK**	**61.82**	**32**	P	**P**	**12 18 55.1**	**-0.1**
L27K	**Beaver Creek,**	**62.18**	**31**	P	**P**	**12 18 58.0**	**+0.4**
L27K				IAmb	IAmb	12 19 03.2	
	comp=Z,6.6nm,1.0s						
BCAR	**Beaver Creek A**	**62.20**	**31**	P	**P**	**12 18 58.5**	**+0.8**
STKA	**Stephens Creek**	**63.80**	**168**	P	**P**	**12 19 09.5**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=320,slow=7.9,SNR=4.6						
STKA				LR	LR	12 49 51.7	
	comp=Z,30nm,18.2s,baz=25,slow=39						
STKA	**Stephens Creek**	**63.80**	**168**	IAmb	IAmb	12 19 16.5	
	comp=Z,0.7nm,1.0s						
ARCES	**ARCESS Array B**	**65.77**	**338**	P	**P**	**12 19 21.4**	**+0.4**
	comp=Z,6.2nm,0.9s,baz=55,slow=7.4,SNR=2.8						
ARCES				LR	LR	12 52 43.2	
	comp=Z,270nm,19.3s,baz=255,slow=40						
KBZ	**Khabaz**	**66.82**	**308**	P	**P**	**12 19 29.9**	**+1.7**
	comp=Z,4.3nm,0.7s,baz=99,slow=1.2,SNR=5.9						
FINES	**FINESS Array B**	**69.05**	**330**	P	**P**	**12 19 41.1**	**-0.8**
	comp=Z,2.4nm,0.5s,baz=69,slow=6.3,SNR=21						
AKASG	**Malin Array Be**	**72.42**	**319**	P	**P**	**12 20 02.8**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=57,slow=6.4,SNR=3.0						
YKA	**Yellowknife Ar**	**73.64**	**26**	P	**P**	**12 20 09.6**	**0.0**
	comp=Z,1.3nm,0.8s,baz=304,slow=5.7,SNR=5.2						
BRTR	**Keskin Array B**	**74.78**	**307**	P	**P**	**12 20 17.0**	**0.0**
	comp=Z,1.3nm,0.8s,baz=79,slow=0.7,SNR=2.5						
BRTR				LR	LR	12 55 44.4	
	comp=Z,148nm,18.4s,baz=355,slow=38						
NB2	**NORSAR Subarra**	**75.31**	**334**	P	**P**	**12 20 21.7**	**+2.3**
	comp=Z,4.2nm,0.9s,baz=51,slow=6.2						
NOA	**NORSAR Array B**	**75.31**	**334**	P	**P**	**12 20 18.8**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=51,slow=5.7,SNR=4.6						
VYHS	**Vyhne**	**79.33**	**321**	*e*P	**P**	**12 20 40.1**	**-2.1**
GERES	**GERESS Array B**	**81.83**	**323**	LR	LR	12 58 51.9	
	comp=Z,164nm,18.2s,baz=7.0,slow=37						
PDAR	**Pinedale Array**	**88.70**	**39**	P	**P**	**12 21 29.8**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=207,slow=1.8,SNR=5.2						
ULM	**Lac du Bonnet**	**89.57**	**27**	P	**P**	**12 21 33.6**	**-0.4**
	comp=Z,5.8nm,0.8s,baz=314,slow=6.5,SNR=3.0						
ESDC	**Sonseca Array**	**97.23**	**326**	LR	LR	13 09 13.0	
	comp=Z,92nm,19.1s,baz=355,slow=37						

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*IDC **03** 12:21:12.9±1.0, 35°.55N×141°.01E, h0^{km}, mb3.5/7, mb1 3.7/9, mb1mx3.4/31, mbtmp3.5/9, ML3.3/2, MS3.6/1, Ms1 3.6/1, ms1mx2.6/41, Error ellipse: s-maj=25.3km s-min=20.3km az=64.0*

*JMA **03** 12:21:15.5±0.2, 35°.66N×141°.00E, h15^{km}±1^{km}, M4.2*

JMA Felt II J1.

*NIED **03** 12:21:15.6, 35°.66N×141°.00E, h15^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.35; $M_{\theta\theta}$-0.86; $M_{\phi\phi}$5.21; $M_{r\theta}$0.81; $M_{\theta\phi}$-0.93; $M_{\phi r}$-3.93; Fault plane solution: $M_0$6.29000×10^{14} NP1: ϕ_s349.00000°, δ65.00000°, λ-92.00000°. NP2: ϕ_s175.00000°, δ25.00000°, λ-85.00000°.*

ISC 03 12:21:15.0±1.4, 35°.65N±0°.07×141°.03E±0°.08, h13^{km}±7^{km}, n22, σ0^{s}.96/19, mb3.5/7, 3C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.15**	**291**	⇑P	**Pg**	**12 21 19.0**	**+0.3**
CHOJ				S	**Sg**	**12 21 21.6**	**+0.3**
JSMT	**Sammumatsuo**	**0.47**	**269**	⇑P	**Pb**	**12 21 24.7**	**-0.5**
JCN	**Nagara**	**0.71**	**251**	⇑P	**Pn**	**12 21 29.8**	**-0.9**
JYT	**Yasato**	**0.89**	**311**	*e*S	**Sg**	**12 21 43.3**	**-0.7**
BSO3	**Boso 3**	**0.95**	**207**	P	**Pn**	**12 21 32.8**	**-0.9**
MJAR	**Matsushiro Arr**	**2.45**	**292**	Pn	**Pn**	**12 21 53.5**	**-1.2**
	1.1nm,0.3s,baz=96,slow=8.8,SNR=41						
MJAR				Sn	**Sn**	**12 22 25.4**	**+0.9**
	1.5nm,0.3s,baz=102,slow=25,SNR=2.6						
MAT	**Matsushiro**	**2.46**	**292**	P	**Pn**	**12 21 54.4**	**-0.3**
MAT				*e*S	**Sb**	**12 22 28.9**	**-0.2**
ASAJ	**Asahikawa**	**8.54**	**8**	Pn	**Pn**	**12 23 17.3**	**-1.0**
	1.0nm,0.3s,baz=224,slow=9.6,SNR=7.4						
ASAJ				Sn	**Sn**	**12 24 53.0**	**-1.4**
	0.1nm,0.3s,baz=210,slow=20,SNR=1.5						
H11N2	**WAKE ISLAND Hy**	**27.74**	**118**	T	T	12 55 57.8	
	baz=311,slow=75,SNR=78						
H11N1	**WAKE ISLAND Hy**	**27.75**	**118**	T	T	12 56 04.3	
	baz=311,slow=75,SNR=46						
H11N3	**WAKE ISLAND Hy**	**27.76**	**118**	T	T	12 55 58.2	
	baz=311,slow=75,SNR=45						
SONM	**Songino Array**	**28.33**	**306**	P	**P**	**12 27 10.1**	**+1.6**
	0.3nm,0.6s,baz=93,slow=8.6,SNR=2.0						
H11S1	**WAKE ISLAND Hy**	**28.40**	**120**	T	T	12 56 48.1	
	baz=312,slow=75,SNR=289						
H11S3	**WAKE ISLAND Hy**	**28.40**	**120**	T	T	12 56 48.1	
	baz=312,slow=75,SNR=200						
H11S2	**WAKE ISLAND Hy**	**28.41**	**120**	T	T	12 56 48.9	
	baz=312,slow=75,SNR=127						
ZALV	**Zalesovo Beam**	**42.63**	**314**	P	**P**	**12 29 10.6**	**-0.2**
	0.5nm,0.4s,baz=101,slow=7.5,SNR=2.7						
MKAR	**Makanchi Array**	**44.60**	**303**	P	**P**	**12 29 27.1**	**+0.2**
	0.7nm,0.6s,baz=94,slow=8.7,SNR=5.8						
ILAR	**Eielson Array**	**50.83**	**32**	P	**P**	**12 30 15.8**	**+1.0**
	0.2nm,0.5s,baz=263,slow=5.6,SNR=4.9						
FITZ	**Fitzroy Crossi**	**55.41**	**198**	LR	LR	12 51 41.8	
	comp=Z,50nm,19.9s,baz=0.0,slow=33						
WRA	**Warramunga Arr**	**55.65**	**188**	P	**P**	**12 30 49.5**	**-1.3**
	0.8nm,0.7s,baz=5.3,slow=7.7,SNR=14						
ASAR	**Alice Springs**	**59.38**	**188**	P	**P**	**12 31 16.7**	**-0.3**
	0.2nm,0.5s,baz=17,slow=14,SNR=1.3						
PDAR	**Pinedale Array**	**78.86**	**45**	P	**P**	**12 33 18.8**	**+0.7**
	0.2nm,0.7s,baz=308,slow=4.5,SNR=1.7						

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*IDC **03** 12:34:01.2±10.0, 21°.56N×143°.18E, h323^{km}±101^{km}, mb3.0/8, mb1 3.2/8, mb1mx2.8/39, mbtmp3.7/8, Error ellipse: s-maj=44.3km s-min=17.4km az=80.0*

ISC 03 12:33:60.0±1.2, 21°.6N±0°.2×143°.2E±0°.3, h311^{km}, n8, σ0^{s}.65/8, mb3.0/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.64**	**323**	P	**P**	**12 38 16.5**	**0.0**
	1.0nm,0.7s,baz=147,slow=10.0,SNR=2.1						
CMAR	**Chiang Mai Arr**	**41.60**	**274**	P	**P**	**12 41 19.2**	**+0.6**
	0.6nm,0.6s,baz=72,slow=6.0,SNR=3.0						
WRA	**Warramunga Arr**	**42.15**	**192**	P	**P**	**12 41 22.9**	**0.0**
	0.2nm,0.3s,baz=18,slow=7.9,SNR=13						
ASAR	**Alice Springs**	**45.85**	**192**	P	**P**	**12 41 51.8**	**-0.2**
	0.1nm,0.3s,baz=13,slow=6.7,SNR=1.4						
MKAR	**Makanchi Array**	**54.80**	**313**	P	**P**	**12 42 58.2**	**-0.3**
	0.4nm,0.9s,baz=104,slow=6.1,SNR=1.3						
YKA	**Yellowknife Ar**	**76.57**	**28**	P	**P**	**12 45 16.6**	**+0.4**
	0.5nm,0.6s,baz=292,slow=6.0,SNR=4.6						
ARCES	**ARCESS Array B**	**79.06**	**342**	P	**P**	**12 45 30.1**	**+0.3**
	4.5nm,0.9s,baz=71,slow=9.6,SNR=5.6						
FINES	**FINESS Array B**	**83.31**	**334**	P	**P**	**12 45 50.9**	**-1.2**
	2.1nm,0.8s,baz=70,slow=4.6,SNR=4.8						

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*IDC **03** 13:04:27.2±2.8, 22°.77N×11°.40W, h0^{km}, mb3.5/1, mb1 3.8/4, mb1mx3.4/50, mbtmp3.8/4, ML3.7/3, Error ellipse: s-maj=87.2km s-min=29.9km az=73.0*

ISC 03 13:04:27.3±2.0, 22°.7N±0°.2×11°.6W±0°.3, h10^{km}, n7, σ1^{s}.48/7, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOWA	**Kowa**	**10.87**	**137**	Pn	**Pn**	**13 07 05.2**	**+2.1**
	0.8nm,0.3s,baz=317,slow=15,SNR=19						
KOWA				Sn	**Sn**	**13 09 03.5**	**-1.4**
	0.3nm,0.3s,baz=80,slow=18,SNR=4.4						
MDT	**Midelt**	**11.80**	**30**	Lg	Lg	13 10 33.0	
	0.1nm,0.3s,baz=59,slow=21,SNR=2.4						
TORD	**Torodi Ar. Bea**	**15.80**	**125**	Pn	**Pn**	**13 08 10.6**	**+0.5**
	0.1nm,0.3s,baz=315,slow=12,SNR=2.4						
DBIC	**Dimbokro**	**17.22**	**157**	Pn	**Pn**	**13 08 27.0**	**-1.1**
	0.5nm,0.3s,baz=348,slow=13,SNR=6.3						
GERES	**GERESS Array B**	**32.88**	**31**	P	**P**	**13 11 01.4**	**-0.2**
	0.4nm,0.4s,baz=210,slow=9.1,SNR=2.1						
WRA	**Warramunga Arr**	**148.17**	**92**	PKPbc	**PKPbc**	**13 24 14.8**	**+0.6**
	0.2nm,0.6s,baz=287,slow=2.4,SNR=5.5						
ASAR	**Alice Springs**	**148.30**	**99**	PKPbc	**PKiKP**	**13 24 15.4**	**-0.8**
	0.4nm,0.8s,baz=277,slow=3.1,SNR=4.6						

GUC 03 13:07:38.8±0.7, 33°.93S×71°.46W, h51^{km}±2^{km}, ML3.8, 5C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MT01	**Popeta**	**0.18**	**68**	⇑*e*P	Pn	13 07 46.8	-0.4
MT01				*e*S	Sn	13 07 52.6	-0.5
MT01				IAML		13 07 53.7	
	comp=N,23µm,0.1s						
MT09	**Talagante**	**0.42**	**68**	⇓*e*P	Pn	13 07 49.1	-0.2
MT09				*e*S	Sn	13 07 57.0	0.0
MT09				IAML		13 07 58.6	
	comp=N,23µm,0.1s						
BO01	**Tunca**	**0.55**	**146**	⇑*e*P	Pn	13 07 50.8	+0.1
BO01				*e*S	Sn	13 07 59.5	+0.1
BO01				IAML		13 08 00.1	
	comp=N,13µm,0.2s						
BO04	**La Punta**	**0.70**	**95**	⇓*e*P	Pn	13 07 52.8	0.0
BO04				*e*S	Sn	13 08 03.4	+0.5
MT02	**Curacav**	**0.72**	**22**	⇓*e*P	Pn	13 07 52.8	-0.1
MT02				*e*S	Sn	13 08 02.6	-0.5
MT05	**Renca**	**0.81**	**48**	*e*P	Pn	13 07 54.1	+0.1
MT05				⇓*i*P		13 07 54.4	
MT05				*e*S	Sn	13 08 05.6	+0.5
MT05				IAML		13 08 08.9	
	comp=N,3µm,0.4s						
BO02	**Sierra Bellavi**	**1.02**	**147**	⇓*e*P	Pn	13 07 57.3	+0.3
BO02				*e*S	Sn	13 08 11.0	+0.7
BO02				IAML		13 08 15.7	
	comp=N,4µm,0.3s						
ROCH	**El Roble**	**1.03**	**21**	⇓*e*P		13 07 57.5	
ROCH				*e*P	Pn	13 07 57.4	+0.3
ROCH				*e*S	Sn	13 08 11.7	+1.1
ROCH				*e*S		13 08 11.8	
ROCH				IAML		13 08 14.5	
	comp=N,2µm,0.2s						
ROCH				IAML		13 08 14.7	
	comp=N,3µm,0.3s						
LMEL	**Las Melosas**	**1.04**	**86**	⇓*e*P	Pn	13 07 57.7	+0.4
LMEL				*e*S	Sn	13 08 11.9	+1.0
LMEL				IAML		13 08 14.8	
	comp=N,4µm,0.2s						
GO05	**Huala**	**1.14**	**200**	⇑*e*P	Pn	13 07 58.6	+0.1
GO05				*e*S	Sn	13 08 14.5	+1.3
VA06	**Catapilco**	**1.37**	**6**	⇑*e*P	Pn	13 08 02.5	+0.9
VA06				*e*S	Sn	13 08 20.2	+1.6
VA06				IAML		13 08 29.0	
	comp=E,2µm,0.5s						
VA03	**San Esteban**	**1.39**	**33**	⇓*e*P	Pn	13 08 02.6	+0.7
VA03				*e*S	Sn	13 08 20.9	+1.7
VA03				IAML		13 08 24.2	
	comp=E,3µm,0.2s						
LC01	**Cunco**	**4.97**	**184**	⇑*e*P	Pn	13 08 51.1	+0.2

DNK 03 13:09:47.2±2.2, 55°.48N×13°.56E, h1^{km}±10^{km}, ML1.2, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJUU	**Bjuv**	**0.67**	**333**	*i* P	Pg	13 09 59.4	-0.6
BSD	**Bornholm Skovb**	**0.86**	**115**	*e*P	Pg	13 10 03.8	+0.2
BSD				IAML		13 10 19.9	
	comp=Z,4.0nm,0.3s						
DEL	**Delary**	**1.01**	**10**	*i* P	Pg	13 10 04.8	-1.7
DEL				*i* S	Sb	13 10 20.6	-0.6
DEL				IAML		13 10 21.7	
	comp=Z,1.7nm,0.3s						
BLEU	**Blekinge**	**1.52**	**56**	*i* P	Pn	13 10 13.8	-1.6
BLEU				*i* S	Sb	13 10 33.8	-2.0
BLEU				IAML		13 10 35.6	
	comp=Z,1.0nm,0.3s						
FABU	**Falkenberg**	**1.60**	**343**	*i* P	Pn	13 10 15.1	-1.5
FABU				*i* S	Sn	13 10 35.6	-2.3
ONAU	**Onsala**	**2.13**	**335**	*i* P	Pn	13 10 23.8	0.0
ONAU				*i* S	Sn	13 10 51.5	+0.6
BORU	**Boraas**	**2.20**	**349**	*i* S	Sn	13 10 53.8	+1.0

BER 03 13:10:42.8±1.3, 60°.71N×11°.19E, h0^{km}, ML0.6, Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NAO01	**NORSAR Array S**	**0.20**	**312**	*e*P	Pg	13 10 45.9	-0.7
NAO01				*e*S	Sg	13 10 49.9	+0.7
NAO01				IAML		13 10 53.6	
	comp=Z,6.5nm,0.6s						
NB201	**NORSAR Array S**	**0.34**	**9**	*e*P	Pg	13 10 48.2	-1.1
NB201				*e*S	Sg	13 10 53.9	+0.1
NB201				IAML		13 10 58.8	
	comp=Z,6.7nm,0.8s						
SKAR	**Skarslia**	**1.42**	**270**	*e*S	Sg	13 11 25.9	-2.4
SKAR				IAML		13 11 31.1	
	comp=Z,1.8nm,0.9s						
STRU	**Stroemstad**	**1.68**	**180**	*e*S	Sn	13 11 33.2	-2.4

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*ISK **03** 13:19:28.6, 39°.62N×26°.02E, h5^{km}, ML2.9/16*

*DDA **03** 13:19:28.6, 39°.61N×26°.02E, h11^{km}±1^{km}, ML2.6*

*THE **03** 13:19:29.4, 39°.63N×26°.00E, h6^{km}±1^{km}, ML2.6/9, Error ellipse: s-maj=1.5km s-min=0.6km az=62.0*

*ATH **03** 13:19:29.4, 39°.63N×25°.99E, h16^{km}±3^{km}, ML2.5/8, Error ellipse: s-maj=3.7km s-min=0.9km az=126.0*

ISC 03 13:19:29.0±0.9, 39°.62N±0°.01×26°.01E±0°.02, h9^{km}±7^{km}, n69, σ0^{s}.65/104, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.15**	**141**	*i* P	**Pg**	**13 19 32.2**	**-0.2**
KOCA				IAML		13 19 34.0	
	comp=E,2µm,0.5s						
KOCA				*i* S	**Sg**	**13 19 34.5**	**-0.2**
KOCA				IAML		13 19 36.0	
	comp=N,2µm,0.6s						
GPNR	**Gulpinar-Canak**	**0.19**	**151**	PG	**Pg**	**13 19 32.6**	**-0.4**
GPNR				SG	**Sg**	**13 19 35.4**	**-0.3**
BOZC	**Bozcaada**	**0.22**	**8**	PG	**Pg**	**13 19 33.8**	**+0.2**
BOZC				SG	**Sg**	**13 19 37.5**	**+0.9**
EZN	**Ezine**	**0.32**	**50**	P	**Pg**	**13 19 35.2**	**-0.1**
EZN				S	**Sg**	**13 19 39.8**	**+0.3**
	comp=N,3µm,0.3s						
EZN	**Ezine**	**0.32**	**50**	PG	**Pg**	**13 19 35.4**	**+0.1**
EZN				SG	**Sg**	**13 19 39.6**	**+0.1**
PRK	**Paraskevi**	**0.43**	**152**	P	**Pb**	**13 19 38.3**	**-0.4**
PRK				S	**Sb**	**13 19 44.6**	**-0.6**
	comp=N,2µm,0.6s						
PRK	**Paraskevi**	**0.43**	**152**	P	**Pb**	**13 19 38.4**	**-0.4**
PRK				S	**Sb**	**13 19 44.4**	**-0.8**
PRK				AML	AML	13 19 44.7	
	comp=N,4470µm,0.4s						
PRK				AML	AML	13 19 45.6	
	comp=E,3781µm,0.4s						
SIGR	**SIGRI**	**0.43**	**196**	P	**Pg**	**13 19 37.4**	**+0.1**
SIGR				S	**Sg**	**13 19 43.7**	**+0.7**
	comp=E,935nm,0.3s						
SIGR	**SIGRI**	**0.43**	**196**	P	**Pg**	**13 19 37.5**	**+0.1**
SIGR				S	**Sg**	**13 19 43.8**	**+0.7**
SIGR				AML	AML	13 19 45.6	
	comp=N,1915µm,0.3s						
SIGR				AML	AML	13 19 46.4	
	comp=E,1590µm,0.2s						
SIGR	**SIGRI**	**0.43**	**196**	PG	**Pg**	**13 19 37.5**	**+0.1**
ECEA	**Canakkale, Ece**	**0.44**	**17**	*i* P	**Pg**	**13 19 37.9**	**+0.3**
ECEA				*i* S	**Sb**	**13 19 44.8**	**-0.8**
ECEA				IAML		13 19 45.0	
	comp=N,926nm,0.4s						
ECEA				IAML		13 19 45.0	
	comp=E,781nm,0.6s						
GOKA	**anakkale-Gk**	**0.57**	**352**	*i* P	**Pg**	**13 19 40.1**	**0.0**
GOKA				*i* S	**Sg**	**13 19 48.3**	**+0.7**
GOKA				IAML		13 19 53.0	
	comp=E,284nm,0.2s						
GADA	**Gvkgeada**	**0.57**	**351**	P	**Pg**	**13 19 40.1**	**-0.1**
GADA				S	**Sg**	**13 19 48.5**	**+0.8**
GADA	**Gvkgeada**	**0.57**	**351**	PG	**Pg**	**13 19 40.0**	**-0.1**
LIA	**Limnos Island**	**0.69**	**294**	P	**Pg**	**13 19 43.0**	**+0.6**
LIA				S	**Sb**	**13 19 52.9**	**-0.1**
	comp=E,452nm,0.4s						
LIA	**Limnos Island**	**0.69**	**294**	P	**Pg**	**13 19 43.0**	**+0.6**
LIA				S	**Sg**	**13 19 52.0**	**+0.5**
LIA				AML	AML	13 19 56.0	
	comp=E,1034µm,0.4s						
LIA				AML	AML	13 19 58.5	
	comp=N,780µm,0.4s						
BUHA	**Balikesir, Bur**	**0.83**	**98**	*i* P	**Pg**	**13 19 44.5**	**-0.5**
BUHA				*i* S	**Sg**	**13 19 55.7**	**-0.1**
BUHA				IAML		13 19 59.0	
	comp=N,147nm,0.6s						
BUHA				IAML		13 19 59.0	
	comp=E,131nm,0.3s						
GELI	**Tayfur-Gelibol**	**0.85**	**25**	PG	**Pg**	**13 19 45.1**	**-0.3**
GELI				SG	**Sb**	**13 19 57.9**	**+0.4**
DKL	**Dikili**	**0.89**	**128**	PG	**Pg**	**13 19 46.1**	**+0.1**
DKL				SG	**Sb**	**13 19 58.9**	**+0.5**
CAND	**Candarli**	**0.91**	**137**	PG	**Pg**	**13 19 46.5**	**0.0**
SMTH	**Samothraki Isl**	**0.92**	**337**	P	**Pg**	**13 19 46.8**	**0.0**
SMTH				S	**Sb**	**13 20 00.3**	**+0.7**
	comp=E,225nm,0.3s						
SMTH	**Samothraki Isl**	**0.92**	**337**	P	**Pg**	**13 19 46.8**	**0.0**
SMTH				S	**Sg**	**13 19 58.2**	**-0.7**
SMTH				AML	AML	13 20 02.5	
	comp=N,512µm,0.2s						
SMTH				AML	AML	13 20 03.0	
	comp=E,280µm,0.1s						
LPK	**Lapseki**	**0.94**	**37**	PG	**Pg**	**13 19 47.3**	**+0.1**
ENZZ	**Sultanice-Enez**	**0.99**	**6**	PG	**Pb**	**13 19 48.4**	**+0.1**
ZEDA	**zmir-Bergama**	**1.05**	**128**	*i* P	**Pb**	**13 19 48.6**	**-0.8**
ZEDA				*i* S	**Sb**	**13 20 03.6**	**+0.3**
ZEDA				IAML		13 20 04.0	
	comp=N,236nm,0.4s						
FOCM	**Foa**	**1.07**	**148**	PG	**Pb**	**13 19 49.4**	**-0.2**
CAVK	**Edirne/Enez-Ca**	**1.07**	**6**	*i* P	**Pb**	**13 19 48.8**	**-1.0**
CAVK				*i* S	**Sb**	**13 20 03.6**	**-0.3**
CAVK				IAML		13 20 06.0	
	comp=N,120nm,0.3s						
CAVK				IAML		13 20 07.0	

	comp=E,114nm,0.3s						
ERIK	Erikli-Kesan	1.11	20	PN	Pb	13 19 49.8	-0.6
ENEZ	Enez	1.12	6	P	Pb	13 19 50.1	-0.4
ENEZ				S	Sn	13 20 06.4	+0.1
	comp=E,532nm,0.3s						
ENEZ	Enez	1.12	6	PN	Pb	13 19 50.5	0.0
ENEZ				SN	Sn	13 20 06.6	+0.3
PSRA	Psara	1.13	198	P	Pb	13 19 50.5	-0.3
PSRA				S	Sb	13 20 05.8	+0.2
CHOS	Chios island	1.23	178	P	Pn	13 19 51.5	-1.0
CHOS				S	Sn	13 20 10.3	+1.0
	comp=E,220nm,0.3s						
CHOS	Chios island	1.23	178	P	Pn	13 19 50.7	-1.8
CHOS				AML	AML	13 20 11.9	
	comp=N,402µm,0.3s						
CHOS				AML	AML	13 20 15.2	
	comp=E,509µm,0.2s						
CHOS	Chios island	1.23	178	PN	Pn	13 19 52.7	+0.2
KRBG	Karabiga-Canak	1.25	52	PN	Pn	13 19 52.2	-0.5
ALN	Alexandroupoli	1.27	1	P	Pn	13 19 52.7	-0.3
ALN				S	Sg	13 20 10.2	+0.2
	comp=E,135nm,0.4s						
ALN	Alexandroupoli	1.27	1	P	Pn	13 19 52.6	-0.4
ALN				S	Sb	13 20 08.1	-1.5
ALN				AML	AML	13 20 11.5	
	comp=N,248µm,0.5s						
ALN				AML	AML	13 20 13.3	
	comp=E,318µm,0.3s						
ALN	Alexandroupoli	1.27	1	PN	Pn	13 19 53.0	0.0
KESN	Edirne-Kesan	1.31	23	*i* P	Pn	13 19 53.4	-0.4
KESN				*i* S	Sn	13 20 11.5	0.0
KESN				IAML		13 20 13.0	
	comp=Z,110nm,0.5s						
KNL	Balıkesir	1.33	60	*i* P	Pn	13 19 53.2	-0.5
KNL				*i* S	Sg	13 20 11.7	-0.2
KNL				IAML		13 20 13.0	
	comp=E,224nm,0.6s						
KNL				IAML		13 20 14.0	
	comp=N,250nm,0.7s						
STEP	BALIKESIR_Sava	1.34	100	*i* P	Pn	13 19 53.5	-0.4
STEP				IAML		13 20 18.0	
	comp=N,80nm,0.6s						
STEP				IAML		13 20 19.0	
	comp=E,76nm,0.6s						
GONE	Gonen-Balikesi	1.36	71	PN	Pn	13 19 54.0	-0.1
GONE				SN	Sg	13 20 13.3	+0.6
RKY	Sarkoy-Tekirda	1.39	40	PN	Pb	13 19 55.0	-0.2
THAS	Thassos island	1.40	315	P	Pn	13 19 53.9	-0.7
THAS				S	Sn	13 20 12.5	-0.6
	comp=E,85nm,0.4s						
THAS	Thassos island	1.40	315	P	Pn	13 19 54.0	-0.7
THAS				S	Sn	13 20 11.5	-1.6
THAS				AML	AML	13 20 13.1	
	comp=N,158µm,0.3s						
THAS				AML	AML	13 20 17.2	
	comp=E,186µm,0.5s						
ZEYE	Izmir, Urla-Ze	1.43	164	*i* P	Pn	13 19 54.0	-1.2
ZEYE				*i* S	Sg	13 20 15.4	+0.3
ZEYE				IAML		13 20 18.0	
	comp=N,130nm,0.5s						
ZEYE				IAML		13 20 20.0	
	comp=E,98nm,0.5s						
BALB	Balikesir	1.44	89	PN	Pn	13 19 55.5	+0.2
MAR6	Marsite Statio	1.45	41	PN	Pb	13 19 55.8	-0.3
BLCB	Balcova	1.47	147	P	Pg	13 19 57.3	0.0
BLCB				S	Sg	13 20 16.5	+0.1
BLCB	Balcova	1.47	147	PN	Pb	13 19 56.3	-0.3
MAR3	Marsite Statio	1.49	41	PN	Pn	13 19 55.6	-0.3
MRMT	Marmara Adasi	1.56	51	PN	Pb	13 19 57.6	-0.5
RDO	Rodhopi	1.56	347	P	Pn	13 19 56.9	-0.1
RDO	Rodhopi	1.56	347	PN	Pn	13 19 57.4	+0.5
UKOP	Uzunkopru-Edir	1.58	17	PN	Pn	13 19 57.7	+0.6
EDC	Edincik	1.60	62	PN	Pb	13 19 58.1	-0.6
DGB	zmir	1.71	156	*i* P	Pb	13 20 00.6	0.0
DGB				*i* S	Sb	13 20 22.4	+0.3
TKR	Tekirdag	1.79	40	PN	Pb	13 20 01.1	-0.9
SMG	Samos	2.02	161	P	Pn	13 20 04.6	+1.4
SMG				AML	AML	13 20 34.9	
	comp=E,183µm,0.9s						
SMG				AML	AML	13 20 38.3	
	comp=N,211µm,0.3s						
GCAM	G?zelcaml?	2.15	153	PN	Pn	13 20 05.8	+0.9
AYDB	Zeytinkoy-Aydi	2.23	138	PN	Pn	13 20 06.9	+0.7
EDRB	Edirne	2.29	14	PN	Pn	13 20 08.1	+1.2
SLVT	Silivri	2.32	46	PN	Pn	13 20 08.2	+0.8
KULA	Kula-Manisa	2.34	117	PN	Pn	13 20 08.5	+0.8
CTKS	Kestanelik-??a	2.50	49	PN	Pn	13 20 10.8	+1.1
CTYL	Yalikoy Yolu	2.54	42	PN	Pn	13 20 11.4	+1.1
BGKT	Bogazkoy	2.62	53	PN	Pn	13 20 13.0	+1.5
KAVV	Kandilli-Istan	2.74	57	PN	Pn	13 20 14.4	+1.3
YLV	Yalova	2.75	69	PN	Pn	13 20 14.6	+1.3

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*IDC **03** 13:29:34.9±3.0, 31°.66S×72°.12W, h0^{km}, mb3.6/1, mb1 3.5/2, mb1mx3.4/15, mbtmp3.4/2, ML3.5/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/27, Error ellipse: s-maj=141.3km s-min=45.4km az=92.0*

*SJA **03** 13:29:34.5±0.6, 31°.82S×72°.26W, h7^{km}±3^{km}, ML4.0, MW3.7*

*GUC **03** 13:29:36.9±0.6, 31°.69S×72°.12W, h40^{km}±5^{km}, ML3.6*

ISC 03 13:29:38.5±1.4, **31°.71S**±0°.03×**72°.33W**±0°.06, **h30**^{km}±10^{km}, **n43, σ1^{s}.93**/75, **1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	1.20	30	*i* P	Pn	13 29 56.5	-2.6
CO06				*i* S	Sn	13 30 11.1	-3.2
VA06	Catapilco	1.22	134	⇓*i*P	Pn	13 29 57.1	-2.3
VA06				*i* S	Sn	13 30 11.8	-3.1
VA06				IAML		13 30 17.2	
	comp=E,3µm,0.4s						
ROC1	El Roble	1.68	139	*e*P	Pn	13 30 04.3	-1.7
ROC1				*e*S	Sn	13 30 25.6	-1.1
ROCH	El Roble	1.68	139	*e*P	Pn	13 30 04.3	-1.7
ROCH				*i* P	Pn	13 30 04.3	-1.7
ROCH				*e*S	Sn	13 30 23.4	-3.2
ROCH				*e*S	Sn	13 30 24.8	-1.8
ROCH				IAML		13 30 33.0	
	comp=N,1µm,0.4s						
ROCH				IAML		13 30 33.1	
	comp=N,2µm,0.5s						
VA03	San Esteban	1.83	125	*e*P	Pn	13 30 06.5	-1.5
VA03				*i* S	Sn	13 30 27.7	-2.5
VA03				IAML		13 30 35.8	
	comp=E,2µm,0.6s						
VA03	San Esteban	1.83	125	*e*P	Pn	13 30 07.0	-1.0
VA03				*e*S	Sn	13 30 31.2	+0.9
VA03				IAML		13 30 37.1	
	comp=Z,1µm,0.7s						
MT02	Curacav	1.84	147	*e*P	Pn	13 30 06.6	-1.4
MT02				*i* S	Sn	13 30 27.4	-2.9
MT02				IAML		13 30 40.7	
	comp=N,449nm,0.7s						
MT02	Curacav	1.84	147	*e*P	Pn	13 30 06.9	-1.2
MT02				*e*P	Pn	13 30 07.0	-1.0
MT02				*e*S	Sn	13 30 31.9	+1.6
PEL	Peldehue	1.99	136	IAML		13 30 41.2	
	comp=N,672nm,0.6s						
PEL	Peldehue	1.99	136	*e*P	Pn	13 30 09.3	-0.8
PEL				*e*S	Sb	13 30 37.6	-0.9
CO05	La Serena	2.02	28	*e*P	Pn	13 30 11.6	+1.1
CO05				IAML		13 30 43.4	
	comp=E,870nm,0.7s						
GO04	Tololo Observa	2.02	41	*e*P	Pn	13 30 08.7	-2.1
GO04				*e*S	Sn	13 30 33.1	-2.0
GO04	Tololo Observa	2.02	41	*e*P	Pn	13 30 11.0	+0.3
GO04				*e*S	Sb	13 30 40.3	+0.8
VA05	Santo Domingo	2.03	163	IAML		13 30 48.6	
	comp=N,1µm,0.5s						
MT05	Renca	2.15	142	*e*P	Pn	13 30 10.2	-2.0
MT05				*e*S	Sn	13 30 36.6	-1.3
MT05				IAML		13 30 45.4	
	comp=E,1µm,0.3s						
MT01	Popeta	2.33	157	*e*P	Pn	13 30 13.8	-0.9
MT01				IAML		13 30 59.5	
	comp=Z,283nm,0.4s						
MT01	Popeta	2.33	157	*e*P	Pn	13 30 14.0	-0.8
MT01				*e*S	Sn	13 30 42.8	+0.4
MT09	Talagante	2.35	152	*e*P	Pn	13 30 14.3	-0.8
MT09				*e*S	Sn	13 30 42.3	-0.7
MT09				IAML		13 30 57.9	
	comp=N,444nm,0.6s						
RTLS	Leoncito	2.58	93	*e*P	Pn	13 30 19.0	+0.5
RTLS				*e*S	Sb	13 30 53.1	-2.7
RTLS				IAML		13 30 54.9	
	comp=Z,671nm,0.5s						
BO04	La Punta	2.69	148	*e*P	Pn	13 30 19.5	-0.2
BO04				*e*S	Sn	13 30 51.4	0.0
BO04				IAML		13 31 04.0	
	comp=E,451nm,0.4s						
LMEL	Las Melosas	2.78	140	*e*P	Pn	13 30 19.9	-1.1
LMEL				*i* S	Sn	13 30 52.1	-1.6
LMEL				IAML		13 31 00.6	
	comp=N,256nm,0.1s						
BO01	Tunca	2.87	159	*e*P	Pn	13 30 21.6	-0.6
BO01				*e*S	Sn	13 30 53.8	-1.8
BO01				IAML		13 31 12.3	
	comp=E,147nm,0.4s						
BO01	Tunca	2.87	159	*e*P	Pn	13 30 21.5	-0.6
BO01				*e*S	Sn	13 30 54.3	-1.3
BO01				IAML		13 31 11.3	
	comp=Z,270nm,0.8s						
LCO	Las Campanas	3.04	28	*e*P	Pn	13 30 22.8	-2.0
LCO				*e*S	Sn	13 30 57.3	-3.0
LCO	Las Campanas	3.04	28	*e*P	Pn	13 30 28.0	+3.3
ASAL	Salagasta	3.09	107	*e*P	Pn	13 30 23.3	-2.0
ASAL				*e*P	Pn	13 30 28.0	+2.7
ASAL				*e*S	Sn	13 31 02.6	+1.3
GO05	Huala	3.30	174	*e*P	Pn	13 30 27.9	-0.3
GO05				*e*P	Pn	13 30 28.0	-0.2
GO05				*e*S	Sb	13 31 19.1	+2.9
BO02	Sierra Bellavi	3.33	158	*e*P	Pn	13 30 28.0	-0.6
BO02				*e*S	Sn	13 31 08.7	+1.5
BO02				IAML		13 31 25.4	
	comp=Z,264nm,0.9s						
AC04	Llanos de Chal	3.66	18	*e*P	Pn	13 30 34.9	+1.8
AC04				*e*S	Sb	13 31 24.1	-2.4
AVFE	Valle Fertil	4.31	77	*e*P	Pn	13 30 43.7	+1.7
AVFE				*e*S	Sn	13 31 33.8	+2.5
AVFE				IAML		13 31 47.3	
	comp=Z,131nm,1.7s						
VCA	Vinchina	4.64	51	*e*P	Pn	13 30 46.6	-0.1
VCA				*e*S	Sb	13 31 54.8	0.0
VCA				IAML		13 32 01.2	
	comp=Z,198nm,0.6s						
ACHE	Chepes	4.87	85	*e*P	Pn	13 30 50.6	+0.7
ACHE				*e*S	Sn	13 31 49.6	+4.2
APLL	PUNTA DE LOS L	5.15	77	*e*P	Pn	13 30 55.1	+1.5
APLL				*e*S	Sb	13 32 04.3	-5.0
ACLC	CERRO LA CRUZ	5.17	65	*e*P	Pn	13 30 50.6	-3.4
ACLC				*e*P	Pn	13 30 56.0	+2.0
ACLC				*e*S	Sn	13 31 56.3	+3.7
ACLC				IAML		13 32 07.3	
	comp=Z,140nm,0.5s						
MRA	San Martin	5.66	99	*e*P	Pn	13 30 56.3	-4.3
MRA				*e*P	Pn	13 31 00.5	0.0
MRA				*e*S	Sb	13 32 25.1	+1.2
MRA				IAML		13 32 37.6	
	comp=Z,66nm,0.6s						
H03N1	Juan Fernandez	5.82	251	T	T	13 37 48.6	
	baz=81,slow=72						
H03N3	Juan Fernandez	5.83	251	T	T	13 37 44.9	
	baz=81,slow=72						
H03N2	Juan Fernandez	5.83	251	T	T	13 37 58.0	
	baz=81,slow=72						
TCA	Tanti	6.61	89	*e*P	Pn	13 31 14.0	+0.3
TCA				*e*S	Sn	13 32 29.6	+1.4
TCA				IAML		13 33 00.3	
	comp=Z,59nm,1.6s						
PLCA	Paso Flores	9.11	171	Pn	Pn	13 31 48.0	+0.1
	comp=Z,0.1nm,0.3s,baz=355,slow=12,SNR=1.2						
RPN	Rapa Nui	32.45	268	LR	LR	13 44 59.6	
	comp=Z,55nm,20.0s,baz=32,slow=28						
TORD	Torodi Ar. Bea	83.67	70	P	P	13 42 05.0	+0.4
	comp=Z,0.4nm,0.8s,baz=240,slow=5.8,SNR=2.0						
ZALV	Zalesovo Beam	152.40	30	PKPbc	PKPbc	13 49 32.2	+1.2
	comp=Z,0.3nm,0.5s,baz=310,slow=3.2,SNR=2.6						
ZALV				PKPab	pPKPbc	13 49 41.1	+1.4
	comp=Z,0.7nm,0.5s,baz=300,slow=3.9,SNR=4.2						

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*IDC **03** 13:36:52.2±0.9, 31°.67S×72°.18W, h0^{km}, mb3.7/5, mb1 3.8/9, mb1mx3.8/30, mbtmp3.7/9, ML3.7/4, MS3.0/1, Ms1 3.1/1, ms1mx2.6/23, Error ellipse: s-maj=45.2km s-min=19.7km az=90.0*

*GUC **03** 13:36:54.8±0.8, 31°.71S×72°.03W, h30^{km}±3^{km}, ML3.8*

ISC 03 13:36:56.5±1.6, **31°.69S**±0°.04×**72°.10W**±0°.10, **h29**^{km}±11^{km}, **n35, σ1^{s}.13**/42, **mb4.0**/5, **5C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	1.09	21	*e*P	Pn	13 37 13.7	-2.1
CO06				*e*S	Sn	13 37 28.5	-1.4
CO06				IAML		13 37 36.5	
	comp=E,2µm,0.2s						
VA06	Catapilco	1.10	142	⇑*e*P	Pn	13 37 13.5	-2.4
VA06				*e*S	Sn	13 37 28.1	-2.0
VA06				IAML		13 37 37.0	
	comp=E,4µm,0.7s						
ROCH	El Roble	1.57	144	*e*P	Pn	13 37 21.4	-1.2
ROCH				⇑*e*P	Pn	13 37 21.3	-1.4
ROCH				*e*S	Sn	13 37 41.1	-1.0
ROCH				*e*S	Sn	13 37 41.2	-0.9
ROCH				IAML		13 37 50.4	
	comp=N,4µm,0.5s						
ROCH				IAML		13 37 53.9	
	comp=N,3µm,0.4s						
VA03	San Esteban	1.69	130	*e*P	Pn	13 37 23.3	-0.8
VA03				*e*S	Sn	13 37 44.9	0.0
VA03				IAML		13 37 54.2	
	comp=N,3µm,0.4s						
MT02	Curacav	1.76	153	*e*P	Pn	13 37 24.0	-1.0
MT02				*e*S	Sn	13 37 46.0	-0.5
MT02				IAML		13 38 02.1	
	comp=E,803nm,0.3s						
PEL	Peldehue	1.87	141	⇑*e*P	Pn	13 37 25.8	-0.9
PEL				*e*S	Sn	13 37 49.3	0.0
PEL				IAML		13 38 01.0	
	comp=E,2µm,0.3s						
GO04	Tololo Observa	1.88	37	*e*P	Pn	13 37 26.2	-0.7
GO04				*e*S	Sn	13 37 50.4	+0.5
CO05	La Serena	1.92	23	⇑*e*P	Pn	13 37 27.4	+0.2
CO05				*e*S	Sn	13 37 51.4	+1.1
CO05				IAML		13 38 06.5	
	comp=E,1µm,0.4s						
VA05	Santo Domingo	2.00	168	⇑*e*P	Pn	13 37 26.7	-1.6
VA05				*e*S	Sn	13 37 53.7	+1.4
VA05				IAML		13 38 09.7	
	comp=N,2µm,0.5s						
MT05	Renca	2.04	146	IAML		13 38 04.6	
	comp=E,2µm,0.3s						
FCH	Farellones	2.23	137	*e*P	Pn	13 37 31.6	-0.2
FCH				*e*S	Sn	13 37 59.8	+1.3
FCH				IAML		13 38 10.6	
	comp=E,465nm,0.1s						
MT01	Popeta	2.28	162	*e*P	Pn	13 37 31.0	-1.2
MT01				*e*S	Sn	13 38 00.1	+0.9
MT01				IAML		13 38 17.2	
	comp=E,836nm,0.7s						
LMEL	Las Melosas	2.67	144	*e*P	Pn	13 37 38.2	+0.5
LMEL				*e*S	Sn	13 38 10.0	+0.7
LMEL				IAML		13 38 27.5	
	comp=E,465nm,0.3s						
H03N1	Juan Fernandez	6.01	251	T	T	13 45 18.7	
	baz=77,slow=71						
H03N3	Juan Fernandez	6.03	251	T	T	13 45 04.6	
	baz=77,slow=71						
H03N2	Juan Fernandez	6.03	251	T	T	13 45 18.6	
	baz=77,slow=71						
PLCA	Paso Flores	9.11	173	Pn	Pn	13 39 05.3	-0.7
	comp=E,0.5nm,0.3s,baz=332,slow=11,SNR=9.9						
LVC	Limon Verde	9.48	18	Pn	Pn	13 39 09.2	-2.2
	comp=E,0.2nm,0.3s,baz=248,slow=19,SNR=1.1						
CPUP	Villa Florida	13.98	71	LR	LR	13 45 40.6	
	comp=E,67nm,19.3s,baz=226,slow=38						
LPAZ	La Paz	15.76	14	Pn	Pn	13 40 38.3	+1.3
	comp=E,0.1nm,0.3s,baz=191,slow=6.3,SNR=3.8						
SIV	San Ignacio	18.58	35	P	P	13 41 11.6	+0.2
	comp=E,0.1nm,0.3s,baz=218,slow=12,SNR=1.8						
VNA3	Neumayer Olymp	51.51	159	P	P	13 45 60.0	+0.9
VNA1	Neumayer--Stat	51.81	158	P	P	13 46 00.2	-1.1
VNA2	Neumayer--Watz	52.16	158	P	P	13 46 03.3	-0.6
	baz=288,slow=8.5						
SNAA	Sanae	53.74	158	P	P	13 46 16.0	+0.4
SNAA	Sanae	53.74	158	P	P	13 46 16.0	+0.4
	comp=E,1.5nm,0.8s,baz=297,slow=4.6,SNR=6.5						
QSPA	South Pole Qui	58.54	180	P	P	13 46 50.7	+0.7
	comp=E,1.1nm,0.9s,baz=172,slow=2.0,SNR=5.4						
TXAR	Lajitas Array	67.71	330	P	P	13 47 51.8	+0.5
	comp=E,0.2nm,0.7s,baz=161,slow=8.4,SNR=2.0						
PDAR	Pinedale Array	81.69	333	P	P	13 49 11.7	-0.5
	comp=E,0.3nm,0.8s,baz=156,slow=6.8,SNR=2.2						
TORD	Torodi Ar. Bea	83.48	70	P	P	13 49 22.6	+0.9
	comp=E,0.8nm,0.7s,baz=250,slow=4.7,SNR=5.1						
H11S2	WAKE ISLAND Hy	125.72	271	T	T	16 14 54.4	
	baz=117						
H11S1	WAKE ISLAND Hy	125.73	271	T	T	16 14 54.8	
	baz=117						
H11S3	WAKE ISLAND Hy	125.74	271	T	T	16 14 53.5	
	baz=117						
KURBB	Kurchatov Arra	151.19	40	PKPbc	PKPbc	13 56 47.0	+0.5
	comp=E,0.2nm,0.4s,baz=310,slow=2.7,SNR=2.7						
ZALV	Zalesovo Beam	152.28	30	PKPbc	PKPbc	13 56 48.6	-0.3
	comp=E,0.6nm,0.5s,baz=328,slow=3.5,SNR=3.0						
ZALV				PKPab	pPKPbc	13 56 58.7	+1.1
	comp=E,1.2nm,0.5s,baz=306,slow=5.1,SNR=5.0						

IDC 03 13:53:43.4±2.1, **21°.66N**×**94°.10E, h0**^{km}**, mb3.5**/2, **mb1 3.6**/3, **mb1mx3.1**/60, **mbtmp3.4**/3, **ML3.3**/1, **Error ellipse: s-maj=63.9km s-min=21.8km az=49.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	5.56	124	Pn	Pn	13 55 07.8	+0.4
	0.2nm,0.3s,baz=305,slow=15,SNR=5.5						
CMAR				Lg	Lg	13 56 38.9	
	0.3nm,0.3s,baz=303,slow=36,SNR=5.9						
MKAR	Makanchi Array	26.84	342	P	P	13 59 25.3	-0.2
	0.3nm,0.4s,baz=146,slow=10,SNR=6.5						
WRA	Warramunga Arr	57.07	134	P	P	14 03 31.8	+0.2
	0.2nm,0.7s,baz=322,slow=7.5,SNR=1.6						

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*IDC **03** 13:54:09.9±3.4, 31°.68S×72°.14W, h0^{km}, mb3.8/1, mb1 3.7/2, mb1mx3.5/25, mbtmp3.6/2, ML3.8/1, Error ellipse: s-maj=146.2km s-min=46.6km az=94.0*

*NEIC **03** 13:54:11.6±1.9, 31°.78S±0°.04×72°.3W±0°.1, h10^{km}±1^{km}, mb4.2/3, Error ellipse: s-maj=15.4km s-min=7.5km az=273.0*

ISC 03 13:54:11.3±1.0, **31°.73S**±0°.08×**72°.4W**±0°.1, **h10**^{km}**, n37, σ1^{s}.34**/29, **mb4.2**/3, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	1.23	32	Pn	Pn	13 54 31.9	-2.7
MT02	Curacav	1.86	146		Pn	13 54 42.2	-1.0
VA03	San Esteban	1.87	124		Pn	13 54 41.8	-1.6
PEL	Peldehue	2.02	135	Pn	Pn	13 54 44.2	-1.2
VA05	Santo Domingo	2.03	161		Pn	13 54 44.7	-0.9
GO04	Tololo Observa	2.07	42		Pn	13 54 44.9	-1.4
MT05	Renca	2.17	140		Pn	13 54 46.3	-1.3
MT01	Popeta	2.34	156		Pn	13 54 48.9	-0.9
MT09	Talagante	2.36	150		Pn	13 54 50.1	-0.1
BO01	Tunca	2.88	158		Pn	13 54 56.8	-0.4
LCO	Las Campanas	3.08	29		Pn	13 55 01.8	+1.6
ZON	Zonda	3.17	88		Pn	13 55 00.1	-1.3
GO05	Huala	3.30	173		Pn	13 55 02.1	-0.9
BO02	Sierra Bellavi	3.34	157		Pn	13 55 03.8	+0.1
AC04	Llanos de Chal	3.69	18		Pn	13 55 06.6	-1.9
AC02	Maricunga	5.65	31		Pn	13 55 34.0	-1.7
H03N1	Juan Fernandez	5.76	251	T	T	14 02 27.7	
	baz=78,slow=72,SNR=598						
H03N3	Juan Fernandez	5.78	251	T	T	14 02 32.5	
	baz=78,slow=72,SNR=507						
H03N2	Juan Fernandez	5.78	251	T	T	14 02 36.7	
	baz=78,slow=72,SNR=448						
PLCA	Paso Flores	9.11	171	Pn	Pn	13 56 22.9	0.0
	0.3nm,0.3s,baz=342,slow=12,SNR=7.9						
PLCA	Paso Flores	9.11	171		Pn	13 56 22.1	-0.8
PB07	IPOC Station P	10.21	13	Pn	Pn	13 56 40.9	+2.8
PB09	IPOC Station P	10.28	17	Pn	Pn	13 56 45.6	+6.5
TRQA	Tornquist	10.62	129	Pn	Pn	13 56 45.7	+2.1
PB08	IPOC Station P	11.90	15	Pn	Pn	13 57 02.5	+1.0
PB11	IPOC Station P	12.17	12	Pn	Pn	13 57 05.8	+1.0
VNA3	Neumayer Olymp	51.57	158	P	P	14 03 17.9	+0.8
VNA2	Neumayer--Watz	52.22	158	P	P	14 03 22.6	+0.6
	baz=282,slow=8.8						
SNAA	Sanae	53.80	158	P	P	14 03 34.1	+0.4
SNAA	Sanae	53.80	158	P	P	14 03 33.2	-0.5
SNAA				IAmb	IAmb	14 03 59.0	
	comp=Z,3.3nm,1.3s						
QSPA	South Pole Qui	58.50	180	P	P	14 04 06.8	-0.7
QSPA				IAmb	IAmb	14 04 18.3	
	comp=Z,3.0nm,1.2s						
TORD	Torodi Ar. Bea	83.72	70	P	P	14 06 40.0	-0.9
	comp=Z,0.4nm,0.5s,baz=229,slow=4.0,SNR=3.1						
TORD	Torodi Ar. Bea	83.72	70	IAmb	IAmb	14 06 49.1	
	comp=Z,3.6nm,1.4s						
H11S2	WAKE ISLAND Hy	125.47	271	T	T	16 32 10.3	
	baz=117						
H11S1	WAKE ISLAND Hy	125.48	271	T	T	16 32 10.9	
	baz=117						
H11S3	WAKE ISLAND Hy	125.49	271	T	T	16 32 12.1	
	baz=117						
ZALV	Zalesovo Beam	152.44	30	PKPbc	PKPbc	14 14 07.1	-0.1
	comp=Z,0.4nm,0.4s,baz=315,slow=3.2,SNR=2.1						

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*IDC **03** 13:57:31.7±7.6, 42°.05N×143°.96E, h91^{km}±60^{km}, mb3.1/4, mb1 3.0/5, mb1mx2.8/50, mbtmp3.4/5, ML2.6/1, Error ellipse: s-maj=170.7km s-min=63.2km az=63.0*

*JMA **03** 13:57:41.3±0.1, 42°.79N×143°.35E, h111^{km}±1^{km}, M2.8*

ISC 03 13:57:39.9±1.0, **42°.68N**±0°.06×**143°.46E**±0°.05, **h120**^{km}±6^{km}, **n26, σ1^{s}.55**/32, **mb3.4**/4, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCH	Churui	0.10	227	P	Pn	13 57 56.7	+0.3
JCH				*e*S	Sn	13 58 08.2	-0.5
JOB	Onbets	0.36	51	P	Pn	13 57 57.9	+0.8
JOB				*e*S	Sn	13 58 10.6	+0.5
JTHR	Tokachihiroo	0.41	197	P	Pn	13 57 58.4	+1.0
JTHR				*e*S	Sn	13 58 11.1	+0.7
JAR	Ashorobuto	0.66	20	P	Pn	13 57 58.9	-0.1
JAR				*e*S	Sn	13 58 12.0	-1.4
JFR	Furan	0.80	308	P	Pn	13 57 59.8	-0.3
JFR				*e*S	Sn	13 58 13.5	-1.8
JBT2	Biratori 2	0.81	277	P	Pn	13 58 00.1	-0.1
JBT2				*e*S	Sn	13 58 14.9	-0.6
JAK	Akkeshi	0.97	70	P	Pn	13 58 02.1	+0.5
JAK				*e*S	Sn	13 58 17.5	-0.5
JIAM	Iburiatsuma	1.13	268	P	Pn	13 58 04.8	+1.5
JAB	Ashibetsu	1.22	313	P	Pn	13 58 03.7	-0.5
JKK2	Kamakawa 2	1.30	337	P	Pn	13 58 05.0	-0.1
JTKR	Abashiri--Toko	1.33	14	P	Pn	13 58 04.7	-0.7
JTKR				*e*S	Sn	13 58 22.6	-2.2
JEW	Eniwo	1.49	277	P	Pn	13 58 07.2	0.0
ASAJ	Asahikawa	1.57	337	P	Pn	13 58 07.9	-0.2
	1.0nm,0.3s,baz=217,slow=10,SNR=10						
ASAJ				S	Sn	13 58 36.0	+6.4
	1.8nm,0.3s,baz=219,slow=17,SNR=5.1						
JRA	Rausu	1.75	43	P	Pn	13 58 11.8	+1.5
JRA				*e*S	Sn	13 58 35.0	+1.6
NEM2	Nemuro 2	1.81	67	P	Pn	13 58 11.2	+0.2
NEM2				*e*S	Sn	13 58 33.1	-1.7
JKB	Kayabe	1.96	247	P	Pn	13 58 13.1	+0.2
JKB				*e*S	Sn	13 58 37.5	-0.6
SONM	Songino Array	26.41	294	P	P	14 03 05.5	+0.2
	0.3nm,0.5s,baz=91,slow=10,SNR=2.8						
H11N2	WAKE ISLAND Hy	30.23	132	T	T	14 35 16.2	
	baz=327,slow=74						
H11N1	WAKE ISLAND Hy	30.24	132	T	T	14 35 18.3	
	baz=327						
H11N3	WAKE ISLAND Hy	30.25	132	T	T	14 35 23.7	
	baz=327,slow=74						
H11S1	WAKE ISLAND Hy	31.12	134	T	T	14 36 29.4	
	baz=328						
H11S3	WAKE ISLAND Hy	31.13	134	T	T	14 36 25.4	
	baz=328						
H11S2	WAKE ISLAND Hy	31.14	134	T	T	14 36 31.0	
	baz=328						
ZALV	Zalesovo Beam	39.50	307	P	P	14 04 58.8	+0.4
	0.5nm,0.5s,baz=91,slow=8.3,SNR=2.7						
MKAR	Makanchi Array	42.68	297	P	P	14 05 23.8	-0.9
	0.2nm,0.6s,baz=84,slow=9.8,SNR=1.6						
BVAR	Borovoye Array	48.09	309	P	P	14 06 06.9	-0.2
	0.4nm,0.3s,baz=101,slow=5.4,SNR=4.3						

GCMT **03** *14:09:14.0±0.4, 34°.12S±0°.05×108°.96W±0°.04, h20km±1km, MW4.9/65, Moment Tensor Solution. s22,c26; s65,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.06±.19; $M_{\theta\theta}$0.23±.12; $M_{\phi\phi}$1.83±.13; $M_{r\theta}$0.54±.25; $M_{\theta\phi}$-0.36±.07; $M_{\phi r}$-1.62±.21; Best double couple: $M_0$2.61800×10^{16} NP1:ϕ_s171.00000°,δ25.00000°,λ-83.00000°. NP2: ϕ_s344.00000°,δ65.00000°,λ-93.00000°. Principal axes: T 2.5380, Plg20.0000°, Azm76.0000°; N 0.1590, Plg3.0000°, Azm345.0000°; P -2.6980, Plg69.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 03 14:09:12.3±7.6**, 33°.38S×110°.98W, h0km, mb3.5**/2**, mb1 4.0**/2**, mb1mx3.7**/27**, mbtmp3.5**/2**, MS3.8**/8**, Ms1 3.8**/8**, ms1mx3.7**/19 **Error ellipse: s-maj=504.6km s-min=49.2km az=114.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	32.86	115	LR	LR	14 24 55.0	
	comp=Z,177nm,21.1s,baz=301,slow=29						
TAOE	Nuku Hiva Isla	36.31	306	eLR	LR	14 26 49.6	
	comp=Z,286nm,26.9s						
MEH	Mehetia	36.61	286	eT	T	14 56 46.7	
	19nm,0.2s						
NNA	Nana	37.75	64	LR	LR	14 27 45.9	
	comp=Z,189nm,19.1s,baz=284,slow=30						
PPT2	Papeete2	37.98	285	eS	S	14 22 43.8	+18
	68nm,25.8s						
PPT2				eLR	LR	14 27 21.3	
	comp=Z,460nm,25.5s,baz=123						
PPT	Papeete	37.99	285	LR	LR	14 27 12.7	
	comp=Z,51nm,18.1s,baz=107,slow=28						
LPAZ	La Paz	42.12	77	LR	LR	14 29 42.0	
	comp=Z,144nm,21.6s,baz=240,slow=29						
CPUP	Villa Florida	46.63	96	LR	LR	14 33 35.0	
	comp=Z,146nm,18.3s,baz=250,slow=31						
ROSC	El Rosal	51.47	50	LR	LR	14 35 50.1	
	comp=Z,75nm,18.5s,baz=275,slow=31						
VNDA	Vanda	57.08	195	LR	LR	14 38 09.9	
	comp=Z,57nm,19.4s,baz=123,slow=30						
AFI	Afiamalu	58.18	274	LR	LR	14 39 06.5	
	comp=Z,203nm,19.0s,baz=102,slow=31						
TXAR	Lajitas Array	62.75	7	P	P	14 19 40.1	+0.8
	0.2nm,0.9s,baz=202,slow=6.8,SNR=1.7						
DZM	Mont Dzumac	72.25	255	eLR	LR	14 42 57.4	
	comp=Z,158nm,29.9s						
PDAR	Pinedale Array	75.79	1	P	P	14 20 59.4	-0.6
	0.7nm,0.9s,baz=159,slow=4.5,SNR=4.7						
SONM	Songino Array	148.50	308	PKPbc	PKPbc	14 29 00.2	-0.6
	1.5nm,0.9s,baz=77,slow=2.1,SNR=7.0						
CMAR	Chiang Mai Arr	149.40	248	PKPbc	PKPbc	14 29 03.4	-0.4
	3.7nm,0.9s,baz=175,slow=1.4,SNR=26						

IDC **03** *14:14:21.8±1.0, 26°.98N×52°.88E, h0km, mb3.8/12, mb1 3.9/13, mb1mx3.7/41, mbtmp3.8/13, ML3.5/1, Error ellipse: s-maj=24.8km s-min=20.2km az=0.0*
TEH **03** *14:14:25.6, 27°.21N×53°.27E, h5km, ML3.3*
THR **03** *14:14:25.5±0.4, 27°.11N×53°.39E, h14km±7km, ML3.3*
DSN **03** *14:14:27.9±0.8, 26°.99N×53°.14E, h10km, ML3.2/6, Error ellipse: s-maj=14.0km s-min=5.2km az=10.0*

ISC 03 14:14:23.8±0.7**, 27°.04N**±0°.05×**53°.03E**±0°.07**, h10km, n49, σ1s.88**/50**, mb3.7**/11**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	0.32	22	ePg	Pg	14 14 29.2	-1.1
GHIR	Ghir-Karzin	1.24	358	ePg	Pg	14 14 48.2	+0.5
GHIR				eSg	Sn	14 15 05.1	+0.9
GHIR				IAML		14 15 13.3	
	comp=E,636nm,0.4s						
GHIR				IAML		14 15 13.3	
	comp=N,712nm,0.4s						
GHIR	Ghir-Karzin	1.24	358	ePg	Pg	14 14 48.2	+0.5
LAR1	LAR	1.35	62	ePg	Pn	14 14 48.6	-0.2
LAR1				e		14 15 13.1	
	comp=Z,18μm,0.6s						
QIR1	Qir	1.43	1	ePg	Pg	14 14 51.5	+0.2
JHRM	Jahrom	1.54	18	ePg	Pb	14 14 52.9	+0.4
GENO	Geno	2.82	82	ePn	Pn	14 15 09.6	+0.4
GENO				e		14 16 15.0	
	comp=Z,895nm,1.0s						
SHME	Shamm	2.96	109	P	Pn	14 15 14.3	+3.4
NAZ	Nazwa, Dubai	3.13	130	P	Pn	14 15 16.4	+3.1
NAZ	Nazwa, Dubai	3.13	130	ePn	Pn	14 15 17.3	+4.1
BANOM	Banah	3.14	110	P	Pn	14 15 15.3	+1.9
ASUD	Al Ashush, Dub	3.18	139	P	Pn	14 15 17.5	+3.6
ASUD	Al Ashush, Dub	3.18	139	ePn	Pb	14 15 18.8	-1.6
MSFE	Esma-Masafi	3.27	120	P	Pn	14 15 17.2	+1.9
MSFE	Esma-Masafi	3.27	120	ePn	Pn	14 15 16.8	+1.5
MDH	Madha	3.41	120	ePn	Pn	14 15 18.9	+1.8
UOSS	Minazif	3.54	125	ePn	Pn	14 15 21.4	+2.5
HATD	Hatta, Dubai	3.56	128	ePn	Pn	14 15 22.2	+3.0
ASHO	Ashiyiah	3.60	130	P	Pn	14 15 22.3	+2.6
ASHO				S	Sn	14 16 04.5	+2.1
ASHO	Ashiyiah	3.60	130	ePn	Pn	14 15 23.0	+3.2
KLNJ	Kolanjah	4.15	343	ePn	Pn	14 15 28.6	+1.0
SOHO	SOHO	4.29	132	ePn	Pn	14 15 31.8	+2.6
TVBK	TV Kerman	4.41	47	e	Pg	14 15 55.5	+7.3
	comp=Z,648nm,0.7s						
KHGB	Koh Gabri	4.50	42	ePn	Pn	14 15 33.4	+1.2
KHGB				e		14 16 39.0	
	comp=Z,212nm,0.7s						
CHMN	Cheshme madani	4.87	54	ePn	Pn	14 15 39.1	+1.7
CHMN				e		14 15 41.2	
	comp=Z,292nm,0.3s						
KBAM	BAM	5.23	65	ePn	Pn	14 15 44.2	+2.0
KBAM				e		14 16 47.7	
	comp=Z,204nm,0.8s						
YZKH	Yazd	5.50	14	ePn	Pn	14 15 47.6	+1.7
YZKH	Yazd	5.50	14	ePn	Pn	14 15 47.6	+1.7
AMIS	Naft Sefid	5.65	326	ePn	Pn	14 15 50.4	+2.5
ANAR	Anarak	6.16	5	ePn	Pn	14 15 55.4	+0.4
WSAR	Wadi Sarin	6.33	125	Pn	Pn	14 15 59.0	+1.7
	comp=Z,0.9nm,0.3s,baz=319,slow=11,SNR=8.5						
WSAR				Sn	Sn	14 17 06.9	-2.8
	comp=Z,0.2nm,0.3s,baz=245,slow=11,SNR=2.6						
TPRV	Parvadeh(Tabas	6.76	27	ePn	Pn	14 16 03.5	+0.3
ISFB	Sefidab	7.32	355	ePn	Pn	14 16 12.4	+1.5
TKDS	Koohdasht(Taba	7.44	27	ePn	Pn	14 16 13.3	+0.7
TNSJ	Nastanj	7.56	23	ePn	Pn	14 16 14.8	+0.6
RAYN	Ar Rayn	7.66	244	P	Pn	14 16 20.3	+4.8
SRVN	Saravan	8.35	85	ePn	Pn	14 16 26.6	+1.5
BRTR	Keskin Array B	20.49	313	P	P	14 19 02.4	+0.3
	comp=Z,1.4nm,0.8s,baz=152,slow=4.1,SNR=3.4						
BVAR	Borovoye Array	29.00	22	P	P	14 20 23.9	+0.3
	comp=Z,0.6nm,0.4s,baz=217,slow=16,SNR=7.4						
AKASG	Malin Array Be	29.78	329	P	P	14 20 30.2	-0.3
	comp=Z,0.6nm,0.4s,baz=117,slow=7.1,SNR=4.0						
MKAR	Makanchi Array	30.32	42	P	P	14 20 36.4	+0.9
	comp=Z,0.5nm,0.8s,baz=207,slow=9.2,SNR=2.0						
ZALV	Zalesovo Beam	35.62	32	P	P	14 21 21.3	-0.3
	comp=Z,0.7nm,0.4s,baz=244,slow=10,SNR=5.3						
FINES	FINESS Array B	38.87	340	P	P	14 21 48.5	-0.5
	comp=Z,3.3nm,0.9s,baz=125,slow=23,SNR=2.0						
SONM	Songino Array	46.15	49	P	P	14 22 48.6	0.0
	comp=Z,0.3nm,0.5s,baz=254,slow=8.3,SNR=3.6						
TORD	Torodi Ar. Bea	49.83	264	P	P	14 23 13.9	-3.5
	comp=Z,0.6nm,0.7s,baz=56,slow=6.1,SNR=6.2						
DBIC	Dimbokro	58.45	261	P	P	14 24 20.0	-0.4
	comp=Z,2.1nm,0.7s,baz=60,slow=9.5,SNR=3.5						
YKA	Yellowknife Ar	90.23	354	P	P	14 27 24.7	+0.3
	comp=Z,0.5nm,0.7s,baz=8.0,slow=5.1,SNR=4.6						
WRA	Warramunga Arr	91.52	112	P	P	14 27 31.1	0.0
	comp=Z,0.4nm,1.0s,baz=321,slow=3.9,SNR=4.6						
ASAR	Alice Springs	92.91	115	P	P	14 27 37.5	-0.1
	comp=Z,0.2nm,0.9s,baz=288,slow=4.9,SNR=4.1						

MOS **03** *14:31:09.4±0.9, 22°.51N×121°.48E, h13km, mb5.0/43, Error ellipse: s-maj=9.4km s-min=5.0km az=112.5*
NEIC **03** *14:31:12.9±1.4, 22°.60N±0°.04×121°.40E±0°.04, h22km±4km, mb5.1/79, ML5.3(TAP), Error ellipse: s-maj=7.8km s-min=3.6km az=224.0*
TAP **03** *14:31:13.9, 22°.60N×121°.39E, h26km, ML5.3, C*
ASIES **03** *14:31:13.4, 22°.58N×121°.44E, h26km, MW4.7*
BJI **03** *14:31:13.6±0.0, 22°.75N×121°.35E, h10km, mB4.9/37, mb4.5/57, ML4.5/7, Ms4.6/63, Ms7 4.5/56*
NIED **03** *14:31:13.1, 22°.64N×121°.47E, h22km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.57; $M_{\theta\theta}$-0.27; $M_{\phi\phi}$0.84; $M_{r\theta}$1.17; $M_{\theta\phi}$0.21; $M_{\phi r}$1.35; Fault plane solution: $M_0$1.95000×10^{16} NP1: ϕ_s219.00000°,δ81.00000°,λ-75.00000°. NP2: ϕ_s339.00000°,δ17.00000°,λ-148.00000°.*
JMA **03** *14:31:13.1, 22°.64N×121°.47E, h22km±3km, M4.7*
IDC **03** *14:31:16.8±2.0, 22°.52N×121°.45E, h52km±18km, mb4.5/39, mb1 4.5/40, mb1mx4.5/53, mbtmp4.7/40, ML4.2/1, MS4.2/30, Ms1 4.2/30, ms1mx4.0/57, Error ellipse: s-maj=12.7km s-min=8.1km az=70.0*

ISC 03 14:31:13.5±0.5**, 22°.58N**±0°.02×**121°.47E**±0°.02**, h25km**±3km**, h24km:pP-P, n649, σ1s.31**/747**, mb5.0**/165**, MS4.4**/36**, 37C-64D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao	0.09	0	⇓iP	Pb	14 31 18.9	+0.9
	baz=48						
LDUT				iS	Sb	14 31 22.4	+1.3
	baz=48						
TTN	Taitung	0.34	300	⇑iP	Pb	14 31 21.1	-0.1
	baz=310						
TTN				eS	Sb	14 31 27.2	+0.8
	baz=310						
EDH	Donghe	0.42	339	⇑iP	Pb	14 31 22.1	-0.3
	baz=352						
EDH				iS	Sb	14 31 28.0	-0.5
	baz=352						
TWGBT	Beinan	0.43	303	⇓iP	Pb	14 31 21.9	-0.6
	baz=293						
TWGBT				S	Sb	14 31 28.5	-0.2
	baz=293						
TWG	Pinlang	0.44	303	⇓iP	Pb	14 31 22.0	-0.7
	baz=293						
TWG				iS	Sb	14 31 28.1	-0.8
	baz=293						
TWG	Pinlang	0.44	303		Pb	14 31 20.8	-1.9
LONT	Longtian	0.45	316	iP	Pb	14 31 22.3	-0.6
	baz=326						
LONT				S	Sb	14 31 29.3	0.0
	baz=326						
ECL	Taimali	0.48	272	⇓iP	Pb	14 31 22.1	-1.2
	baz=270						
ECL				iS	Sb	14 31 27.9	-2.1
	baz=270						
CHKT	Chengkung	0.53	350	⇑iP	Pb	14 31 23.7	-0.5
	baz=4.0						
CHKT				iS	Sb	14 31 30.8	-0.6
	baz=4.0						
LAY	Lan-yu	0.54	172	⇓iP	Pb	14 31 24.9	+0.4
	baz=163						
LAY				S	Sb	14 31 32.8	+0.9
	baz=163						
ECS	Chishang	0.56	336	⇑iP	Pb	14 31 24.8	0.0
	baz=328						
ECS				S	Sb	14 31 33.4	+1.0
	baz=328						
TAW	Tawu	0.57	247	⇓iP	Pb	14 31 23.8	-1.1
	baz=253						
TAW				eS	Sb	14 31 30.5	-2.2
	baz=253						
EAST	Anshuo	0.61	251	⇓iP	Pb	14 31 24.4	-1.2
	baz=256						
EAST				iS	Sb	14 31 31.3	-2.4
	baz=256						
FULB	Fuli	0.64	345	⇑iP	Pb	14 31 25.3	-0.7
	baz=359						
FULB				S	Sb	14 31 34.7	+0.1
	baz=359						
SLIU	Shizi	0.72	240	⇓P	Pb	14 31 26.1	-1.3
	baz=236						
ECBN	Changbin	0.73	359	⇑iP	Pb	14 31 26.8	-0.8
	baz=10.0						
ECBN				eS	Sb	14 31 36.8	-0.5
	baz=10.0						
ELDTW	Lidau	0.74	326	⇓iP	Pb	14 31 26.2	-1.5
	baz=322						
ELDTW				eS	Sb	14 31 36.2	-1.3
	baz=322						
TSMG	Majia	0.77	279	⇓P	Pb	14 31 26.7	-1.5
	baz=279						
MASBT	Mashibuluo	0.77	273	⇓iP	Pb	14 31 26.9	-1.4
	baz=267						
MASBT				S	Sb	14 31 35.1	-3.3
	baz=267						
EYUL	Yuli	0.78	350	⇓P	Pb	14 31 27.6	-0.8
	baz=340						
EYUL				S	Sb	14 31 38.9	+0.4
	baz=340						
TWF1	Yuli	0.79	348	⇓iP	Pb	14 31 27.4	-1.2
	baz=340						
TWF1				iS	Sb	14 31 38.4	-0.4
	baz=340						
SSD	Sandimen	0.79	282	⇓iP	Pb	14 31 26.9	-1.7
	baz=280						
SSD				eS	Sb	14 31 36.4	-2.5
	baz=280						
SCZT	Fangliau	0.81	255	⇓iP	Pb	14 31 27.6	-1.4
	baz=253						
SCZT				eS	Sb	14 31 37.4	-2.1
	baz=253						
YULB	Yu-li	0.82	349	⇓iP	Pb	14 31 27.8	-1.4
	baz=340						
YULB				S	Sb	14 31 39.2	-0.7
	baz=340						
YULB	Yu-li	0.82	349		Pb	14 31 27.8	-1.4
YULB					Sb	14 31 37.8	-2.1
SSPT	Xinbi	0.84	264	eP	Pb	14 31 28.6	-0.8
	baz=264						
SSPT				eS	Sb	14 31 38.6	-1.6
	baz=264						
TSEB	Hengchuen, Pin	0.86	218	eP	Pb	14 31 28.9	-0.8
	baz=216						
SLGT	Liugui	0.86	299	⇓P	Pb	14 31 28.7	-1.2
	baz=300						
STYH	Taoyuan	0.87	313	⇓P	Pb	14 31 28.7	-1.2
	baz=323						
STYT	Tauyuan	0.88	312	P	Pb	14 31 28.7	-1.4
	baz=322						
TWKBT	Hengchun	0.88	224	⇑iP	Pb	14 31 29.1	-1.0
	baz=212						
TWKBT				eS	Sb	14 31 39.4	-2.1
	baz=212						
TWK1	Hengchun	0.88	224	⇑iP	Pb	14 31 29.1	-1.1
	baz=212						
TWK1				eS	Sb	14 31 39.0	-2.6
	baz=212						
HEN	Hengchun	0.89	230	⇑P	Pb	14 31 29.4	-0.8
	baz=227						
HEN				S	Sb	14 31 40.3	-1.3
	baz=227						
TSPT	Pingtung City	0.90	276	⇓eP	Pb	14 31 30.2	-0.3
	baz=269						
TSPT				eS	Sn	14 31 42.8	-0.1
	baz=269						
SNW	Nanwan	0.91	227	eP	Pb	14 31 30.2	-0.4
	baz=223						
HGSD	Ruisui	0.91	357	⇑eP	Pb	14 31 29.2	-1.4
	baz=12						
HGSD				eS	Sn	14 31 43.5	+0.4
	baz=12						
SGLT	Jiouru	0.92	279	eP	Pb	14 31 30.2	-0.5
	baz=283						
EHY	Hungye	0.93	352	⇓P	Pb	14 31 29.6	-1.5
	baz=343						
EHY				eS	Sb	14 31 41.9	-1.1
	baz=343						
SCST	Cishan	0.95	289	⇓iP	Pn	14 31 31.0	-0.3
	baz=288						
SCST				eS	Sn	14 31 45.0	+0.9
	baz=288						
SGST	Jiashian	0.96	302	⇓iP	Pn	14 31 30.1	-1.3
	baz=303						
SGST				eS	Sb	14 31 43.5	-0.2
	baz=303						
TWM1	Shoushan	1.00	284	⇓iP	Pb	14 31 32.4	+0.3
	baz=288						
TWM1				eS	Sn	14 31 47.2	+2.0
	baz=288						
YUS	Yu-Shan	1.02	332	⇓iP	Pn	14 31 31.5	-1.3
	baz=336						
YUS				iS	Sb	14 31 44.8	-1.2
	baz=336						
WTP	Ta-pu	1.03	310	⇓iP	Pn	14 31 32.1	-0.3
	baz=318						
WTP				eS	Sn	14 31 47.5	+1.4
	baz=318						
WLCH	Liuqiu	1.03	257	⇓eP	Pb	14 31 34.9	+2.2
	baz=242						
TWP	Hsiaoliuchiu	1.05	257	⇓eP	Pb	14 31 34.6	+1.6
	baz=241						
TPUB	Ta-pu	1.05	313	⇓iP	Pn	14 31 32.5	-0.2
	baz=315						
TPUB				S	Sb	14 31 45.9	-0.6
	baz=315						
TPUB	Ta-pu	1.05	313	Pn	Pn	14 31 31.9	-0.9
TPUB	Ta-pu	1.05	313	P	Pn	14 31 32.7	-0.1
CHN1	Nanshi	1.06	305	⇓iP	Pb	14 31 33.0	-0.1
	baz=312						
CHN1				S	Sb	14 31 46.5	-0.1
	baz=312						
SNJT	Kaohsiung City	1.06	280	eP	Pb	14 31 34.5	+1.3
	baz=279						
SNJT				eS	Sn	14 31 49.5	+2.7
	baz=279						
KAU	Kaohsiung	1.07	270	⇓iP	Pb	14 31 35.1	+1.7
	baz=266						
KAU				eS	Sn	14 31 51.1	+4.0
	baz=266						
EGFH	Guangfu	1.08	358	eP	Pn	14 31 32.1	-1.1
	baz=349						
SNST	Tainan City	1.10	306	⇓iP	Pb	14 31 33.8	-0.1
	baz=315						
SNST				eS	Sb	14 31 49.4	+1.6
	baz=315						
ALS	Alishan	1.11	327	⇓iP	Pn	14 31 33.3	-0.5
	baz=329						
ALS				eS	Sn	14 31 48.8	+0.4
	baz=329						
TEGC	Jichi Village	1.13	3	eP	Pn	14 31 32.9	-0.8
	baz=18						
CHN3	Shinhua	1.13	296	⇓iP	Pb	14 31 35.2	+0.8
	baz=296						
CHN3				eS	Sb	14 31 52.0	+3.4
	baz=296						
TWK	Hsinying	1.13	307	⇓iP	Pn	14 31 34.1	+0.2
	baz=317						
TWK				S	Sb	14 31 49.8	+0.9
	baz=317						
SSHA	Shanhua	1.22	297	P	Pb	14 31 36.1	+0.2
	baz=297						
SSHA				eS	Sb	14 31 53.5	+2.2
	baz=297						
ESL	Shilin	1.23	358	P	Pn	14 31 33.6	-1.6
	baz=1.0						
ESL				eS	Sn	14 31 50.4	-0.7
	baz=1.0						
TAI1	Yung-k'ang	1.23	292	P	Pb	14 31 36.2	+0.1
	baz=291						
TAI1				eS	Sb	14 31 53.2	+1.6
	baz=291						
CHN5	Tsauling	1.25	324	P	Pn	14 31 35.9	+0.4
	baz=326						
CHN5				S	Sb	14 31 52.6	+0.5
	baz=326						
TEYL	Yanliau Villag	1.29	5	eP	Pn	14 31 35.9	-0.1
	baz=18						
SSLB	Suanglung	1.29	339	⇓iP	Pn	14 31 35.8	-0.2
	baz=351						
SSLB	Suanglung	1.29	339		Pn	14 31 35.7	-0.4
SSLB	Suanglung	1.29	339	P	Pn	14 31 36.4	+0.3
SCLT	Jiali	1.32	297	⇓iP	Pb	14 31 37.1	-0.4
	baz=296						
SCLT				eS	Sb	14 31 55.1	+1.1
	baz=296						
CHN2	Minshiung	1.32	316	⇓iP	Pb	14 31 37.6	0.0
	baz=315						
CHN2				iS	Sb	14 31 55.0	+0.9
	baz=315						
CHY	Chiayi	1.33	314	⇓P	Pb	14 31 37.6	-0.1
	baz=313						
CHY				S	Sb	14 31 54.7	+0.4
	baz=313						
ICHU	Yijhu	1.34	306	⇓P	Pb	14 31 37.5	-0.5
	baz=305						
ICHU				S	Sb	14 31 54.8	0.0
	baz=305						
ETM	Tongmen	1.38	1	eP	Pn	14 31 36.4	-0.8
	baz=353						
CHN8	Yiju	1.39	304	⇓iP	Pn	14 31 38.0	+0.7
	baz=303						
CHN8				iS	Sb	14 31 56.2	+0.1
	baz=303						
OWD	Renai	1.40	349	eP	Pn	14 31 37.2	-0.3
	baz=3.0						
HWA	Hwalien	1.40	5	eP	Pn	14 31 37.4	-0.1
	baz=17						
WDLH	Douliu	1.40	322	eP	Pb	14 31 38.7	-0.2
	baz=322						
WDLH				eS	Sb	14 31 56.4	0.0
	baz=322						
SMLT	Sun Moon Lake	1.40	338	⇓iP	Pn	14 31 38.1	+0.5
	baz=340						
SMLT				S	Sn	14 31 55.8	+0.4
	baz=340						
WJS	Zhushan	1.41	331	P	Pb	14 31 39.0	-0.2
	baz=332						
WJS				eS	Sb	14 31 56.9	+0.1
	baz=332						
TYC	Yuchr	1.43	337	⇓iP	Pb	14 31 38.7	-0.8
	baz=348						
TYC				eS	Sn	14 31 56.6	+0.6
	baz=348						
WNT	Mingjian	1.48	331	⇓iP	Pb	14 31 40.4	0.0
	baz=332						
WNT				iS	Sb	14 31 59.0	+0.2
	baz=332						
WTK	Tuku	1.48	318	P	Pn	14 31 39.4	+0.7
	baz=317						
WTK				S	Sn	14 31 57.8	+0.5
	baz=317						
CHGB	Renai	1.50	350	P	Pn	14 31 39.1	+0.1
	baz=4.0						
TWD	Chiawan	1.50	4	⇑P	Pn	14 31 38.1	-0.7
	baz=355						
TWD				eS	Sn	14 31 57.9	+0.3
	baz=355						
WCS	Beigang Elemen	1.56	341	eP	Pn	14 31 40.5	+0.8
	baz=353						
WCS				eS	Sb	14 32 00.2	-0.7
	baz=353						
WSF	Szhu	1.56	313	⇓iP	Pn	14 31 40.2	+0.5
	baz=312						
WSF				iS	Sn	14 31 59.6	+0.5
	baz=312						
WHF	Hehuan Shan	1.57	353	⇑iP	Pn	14 31 39.8	-0.5
	baz=7.0						
ETL	Fush Village	1.58	5	P	Pn	14 31 39.7	-0.3
	baz=17						
NACB	Ninganchiao	1.59	4	P	Pn	14 31 39.7	-0.4
	baz=355						
NACB				eS	Sn	14 31 59.4	-0.6
	baz=355						
NACB	Ninganchiao	1.59	4		Pn	14 31 38.8	-1.3
NACB				Sn	Sn	14 31 59.3	-0.6
ETLH	Xiulin Townshi	1.62	0	eP	Pn	14 31 40.2	-0.5
	baz=1.0						
ETLH				eS	Sn	14 32 00.2	-0.6
	baz=1.0						
WRL	Guolierlin Hig	1.66	323	P	Pn	14 31 41.6	+0.6
	baz=322						
WRL				eS	Sn	14 32 01.6	+0.1
	baz=322						
FUSS	Fushou	1.67	353	eP	Pn	14 31 42.0	+0.5
	baz=4.0						
FUSS				eS	Sn	14 32 02.8	+0.5
	baz=4.0						
WTCT	Ta-ch'eng	1.68	320	P	Pn	14 31 41.7	+0.3
	baz=319						
WTCT				eS	Sn	14 32 01.9	-0.2
	baz=319						
TWT	Tachien	1.69	351	P	Pn	14 31 42.0	+0.3
	baz=352						
TDCB	Techi	1.69	350	⇓eP	Pn	14 31 42.0	+0.4
	baz=1.0						
TDCB				eS	Sn	14 32 02.9	+0.3
	baz=1.0						
WCHH	Zhanghua	1.71	331	P	Pb	14 31 43.2	-1.1
	baz=330						
WCHH				S	Sb	14 32 04.3	-1.1
	baz=330						
TCU	Taichung	1.72	335	P	Pb	14 31 43.5	-1.0
	baz=334						
TCU				eS	Sn	14 32 04.0	+0.8
	baz=334						
EHP	Heping Village	1.74	8	eP	Pn	14 31 41.3	-0.9

	baz=19						
WHP	Taichung City	1.76	344	⇑P	Pb	14 31 44.5	-0.6
	baz=354						
WHP				S	Sb	14 32 06.7	-0.1
	baz=354						
NNSB	Datong	1.84	358	eP	Pn	14 31 43.8	+0.1
	baz=358						
NNSB				eS	Sn	14 32 07.0	+0.7
	baz=358						
NNS	Nan Shan	1.85	357	P	Pn	14 31 43.7	-0.1
	baz=9.0						
ENA	Nanau	1.86	8	eP	Pn	14 31 43.5	-0.2
	baz=358						
TWQ1	Liyutan	1.87	340	⇓P	Pb	14 31 45.6	-1.5
	baz=338						
TWQ1				S	Sb	14 32 09.1	-1.0
	baz=338						
EWUT	Wuta	1.88	9	eP	Pn	14 31 44.3	+0.2
	baz=355						
EWUT				eS	Sn	14 32 07.8	+0.8
	baz=355						
WDJ	Dajia District	1.92	337	eP	Pb	14 31 46.2	-1.6
	baz=335						
WDJ				eS	Sb	14 32 10.6	-0.7
	baz=335						
NSY	Sanyi	1.94	341	P	Pb	14 31 47.0	-1.2
	baz=338						
NSY				S	Sb	14 32 11.7	-0.3
	baz=338						
PHUB	P'eng-hu	1.98	298	P	Pn	14 31 44.7	-0.8
	baz=297						
PHUB				eS	Sn	14 32 07.2	-2.3
	baz=297						
NDT	Datong Townshi	2.01	1	eP	Pn	14 31 47.2	+1.3
	baz=2.0						
PNG	Penghu	2.02	300	⇓iP	Pn	14 31 45.7	-0.3
	baz=298						
PNG				i S	Sn	14 32 08.6	-1.9
	baz=298						
NMLH	Miaoli	2.04	342	eP	Pn	14 31 47.8	+1.4
	baz=339						
NMLH				eS	Sb	14 32 13.6	-1.4
	baz=339						
TWC	Suao	2.05	10	P	Pn	14 31 46.7	+0.2
	baz=358						
ENTT	Nioudou	2.05	2	eP	Pn	14 31 47.3	+0.8
	baz=4.0						
NDS	Dongshan	2.06	6	eP	Pn	14 31 47.2	+0.6
	baz=358						
YHNB	Yeheng	2.08	358	eP	Pn	14 31 47.9	+0.9
	baz=10.0						
YHNB	Yeheng	2.08	358		Pn	14 31 47.9	+0.9
YHNB	Yeheng	2.08	358	P	Pn	14 31 48.7	+1.7
NSTT	Nanjuang	2.09	348	P	Pn	14 31 48.3	+1.4
	baz=345						
NSTT				S	Sb	14 32 14.3	-1.9
	baz=345						
NSK	Sanguang	2.09	357	eP	Pn	14 31 47.8	+0.7
	baz=9.0						
NSK				eS	Sn	14 32 13.5	+1.2
	baz=9.0						
LIOB	Emei	2.10	349	eP	Pn	14 31 48.3	+1.2
	baz=347						
TWE	Neicheng	2.14	5	eP	Pn	14 31 48.3	+0.6
	baz=5.0						
BBP	Basco	2.18	168	⇓eP	Pn	14 31 48.6	+0.4
NWLT	Wulai	2.19	1	eP	Pn	14 31 48.9	+0.5
	baz=13						
SBCB	Hsinchu	2.25	349	eP	Pn	14 31 50.3	+1.1
	baz=347						
HSN	Hsinchu	2.26	348	eP	Pn	14 31 50.7	+1.4
	baz=348						
NTC	Toucheng	2.29	8	eP	Pn	14 31 49.9	+0.2
	baz=358						
JYNG	Yonagunijimaku	2.30	36	P	Pn	14 31 50.9	+1.0
JYNG				S	Sn	14 32 17.8	+0.3
YOJ	Yonaguni jima	2.35	37	eP	Pn	14 31 51.1	+0.6
	baz=52						
YOJ				eS	Sn	14 32 17.9	-0.7
	baz=52						
YOJ	Yonaguni jima	2.35	37	P	Pn	14 31 51.5	+0.9
YOJ				eS	Sn	14 32 18.4	-0.2
YOJ	Yonaguni jima	2.35	37	P	Pn	14 31 51.4	+0.9
YOJ	Yonaguni jima	2.35	37	Pn	Pn	14 31 51.4	+0.9
YOJ	Yonaguni jima	2.35	37	P	Pn	14 31 52.2	+1.7
NHDH	Xindian Distri	2.37	1	eP	Pn	14 31 52.6	+1.7
	baz=12						
TATO	Taipei	2.38	0		Pn	14 31 52.0	+1.0
TWA	Mucha	2.39	3	eP	Pn	14 31 52.4	+1.2
	baz=4.0						
NCU	National Centr	2.39	354	eP	Pb	14 31 53.6	-2.4
	baz=337						
TIPB	Shuangxi	2.40	8	eP	Pn	14 31 53.0	+1.7
	baz=358						
TWB1	Santiao Chiao	2.46	11	eP	Pn	14 31 53.2	+1.0
	baz=359						
NWF	Wu-fen Shan	2.50	7	P	Pn	14 31 54.1	+1.5
	baz=5.0						
TWS1	Kuangyinshan	2.51	359	eP	Pn	14 31 55.1	+2.3
	baz=10.0						
YM01	YM01	2.56	2	eP	Pn	14 31 54.6	+1.1
	baz=360						
ANP	Anpu	2.59	1	eP	Pb	14 31 56.9	-2.5
	baz=13						
HATJ	Hateruma jima	2.60	55	P	Pn	14 31 55.0	+1.0
HATJ				S	Sn	14 32 24.5	-0.4
TWY	Chenhua	2.69	3	eP	Pn	14 31 57.7	+2.5
	baz=1.0						
IRIF	Iriomote-Funau	2.71	49	P	Pn	14 31 56.7	+1.1
IRIF				eS	Sn	14 32 28.5	+0.9
JKRS	Kuro-shima	2.86	54	P	Pn	14 31 58.8	+1.2
JKRS				S	Sn	14 32 30.9	-0.3
JIJ	Ishigaki jima	3.03	54	P	Pn	14 32 00.6	+0.7
JIJ				S	Sn	14 32 34.2	-1.2
PTMZ	Houxiangcun	3.26	319	eP	Pn	14 32 02.5	-0.6
	baz=319						
JISG	Ishigakijimahi	3.29	52	P	Pn	14 32 03.9	+0.5
JISG				eS	Sn	14 32 39.9	-1.8
KNM	Kinmen	3.33	304	eP	Pn	14 32 05.3	+1.2
	baz=298						
KNM				eS	Sn	14 32 43.2	+0.3
	baz=298						
KNMB	Chin-men Tao	3.39	304	eP	Pn	14 32 04.3	-0.6
	baz=303						
KNMB	Chin-men Tao	3.39	304	Pn	Pn	14 32 04.4	-0.5
QZH	Quanzhou	3.53	312	⇓iPn	Pn	14 32 06.3	-0.5
QZH				Sn	Sn	14 32 44.9	-2.9
QZH				smax	smax		
	comp=N,2µm,0.3s						
QZH				smax	smax		
	comp=E,1µm,0.4s						
QZH				LR	LR		
	comp=Z,4µm,16.1s						
JTJ	Tarama	3.61	55	P	Pn	14 32 08.7	+0.9
JTJ				i S	Sn	14 32 49.3	-0.3
ZPLA	Ao Xicun	3.67	292	eP	Pn	14 32 08.5	-0.3
	baz=291						
MATB	Ma-tsu	3.82	339	eP	Pn	14 32 10.0	-0.8
	baz=335						
AXDP	Jialang	3.95	306	eP	Pn	14 32 12.3	-0.3
	baz=305						
JIRB	Irabujima	4.07	56	P	Pn	14 32 15.0	+0.8
JIRB				S	Sn	14 32 59.9	-1.1
JMJ2	Miyako jima3	4.14	58	P	Pn	14 32 16.2	+1.0
JMJ2				S	Sn	14 33 02.5	-0.3
MHZQ	Yeshan	4.15	328	eP	Pn	14 32 14.9	-0.4
	baz=326						
JMJ	Miyako jima 2	4.15	57	P	Pn	14 32 16.8	+1.4
JIKM	Ikemajima	4.17	55	P	Pn	14 32 16.5	+0.8
JIKM				S	Sn	14 33 02.8	-0.9
JOGS	Gusukube	4.21	58	P	Pn	14 32 17.1	+0.9
JOGS				S	Sn	14 33 04.7	+0.1
LYJJ	Jianjiangzhen	4.25	339	eP	Pn	14 32 16.0	-0.7
	baz=335						
XPSS	Dashiqiu	4.48	345	eP	Pn	14 32 19.6	-0.4
	baz=341						
JOW	Kunigami	7.50	54	P	Pn	14 33 00.2	-1.2
	12nm,0.3s,baz=148,slow=18,SNR=18						
JOW				S	Sn	14 34 22.2	-3.4
	13nm,0.3s,baz=129,slow=26,SNR=5.7						
JOW	Kunigami	7.50	54	Pn	Pn	14 33 00.6	-0.7
GZH	Guangzhou	7.51	275	Pn	Pn	14 32 59.0	-2.5
GZH				Sn	Sn	14 34 21.8	-4.1
GZH				smax	smax		
	comp=N,570nm,0.7s						
GZH				smax	smax		
	comp=E,500nm,1.0s						
SSE	Sheshan	8.49	358	P	Pn	14 33 20.4	+5.5
SSE				S	Sn	14 34 51.2	+1.3
SSE				pmax	pmax		
	comp=Z,37nm,0.7s						
SSE				pmax	pmax		
	comp=Z,140nm,4.3s						
SSE				LR	LR		
	comp=N,890nm,14.8s						
SSE				LR	LR		
	comp=E,570nm,14.6s						
NJ2	Nanjing	9.72	347	eP	Pn	14 33 31.6	-0.1
NJ2				sP		14 33 39.5	
NJ2				S	Sn	14 35 19.7	-0.4
NJ2				pmax	pmax		
	comp=Z,30nm,0.5s						
NJ2				smax	smax		
	comp=N,180nm,0.8s						
NJ2				smax	smax		
	comp=E,160nm,0.9s						
NJ2				LR	LR		
	comp=N,3µm,10.1s						
NJ2				LR	LR		
	comp=E,1µm,10.4s						
NJ2				LR	LR		
	comp=Z,3µm,12.9s						
SJMP	San Jose	10.07	182	⇑eP	Pn	14 33 38.2	+1.5
WHN	Wuhan	10.17	323	⇑P	Pn	14 33 37.6	-0.4
WHN				S	Sn	14 35 31.5	+0.2
WHN				LR	LR		
	comp=N,3µm,4.1s						
WHN				LR	LR		
	comp=E,3µm,6.3s						
WHN				LR	LR		
	comp=Z,4µm,16.4s						
QIZ	Qiongzhong	11.43	254	P	Pn	14 33 54.9	-0.4
QIZ				S	Sn	14 36 02.3	0.0
QIZ				pmax	pmax		
	comp=Z,110nm,2.0s						
QIZ				LR	LR		
	comp=N,2µm,14.3s						
QIZ				LR	LR		
	comp=E,2µm,15.7s						
QIZ				LR	LR		
	comp=Z,2µm,14.5s						
CNOP	Candoni, Negro	12.73	175	⇑eP	P	14 34 22.4	-1.6
PPR	Puerto Princes	13.00	192	⇑iP	P	14 34 24.1	-2.9
ENH	Enshi	13.18	308	Pn	Pn	14 34 20.1	+0.8
JNU	Nakatsue	13.39	36	P	P	14 34 28.1	-3.2
	0.9nm,0.3s,baz=196,slow=17,SNR=2.4						
JNU	Nakatsue	13.39	36		Pn	14 34 25.4	+3.3
GLSP	General Luna,	13.48	160	⇑eP	P	14 34 32.2	-0.2
GYA	Guiyang	14.02	289	⇓iP	Pn	14 34 32.1	+1.4
GYA				S	Sn	14 37 06.4	+0.8
GYA				pmax	pmax		
	comp=Z,55nm,0.7s						
GYA				pmax	pmax		
	comp=Z,140nm,3.5s						
GYA				LR	LR		
	comp=N,1µm,15.0s						
GYA				LR	LR		
	comp=E,2µm,11.5s						
GYA				LR	LR		
	comp=Z,2µm,17.6s						
TIA	Tai'an	14.10	345	P	P	14 34 41.0	+1.9
TIA				pmax	pmax		
	comp=Z,14nm,1.4s						
TIA				AMB	AMB		
	comp=Z,260nm,3.9s						
TIA				LR	LR		
	comp=N,2µm,15.2s						
TIA				LR	LR		
	comp=E,1µm,8.9s						
TIA				LR	LR		
	comp=Z,2µm,14.0s						
BATP	Bataraza	14.15	195	⇓eP	P	14 34 40.7	+0.9
BUKP	Musuan	15.02	166	⇑iP	P	14 34 51.2	+1.7
KSRS	Korea Array	15.84	19	P	P	14 34 56.8	-1.6
	comp=Z,1.0nm,0.3s,baz=196,slow=11,SNR=22						
KSRS				PcP	PcP	14 39 54.8	+1.7
	comp=Z,0.1nm,0.3s,baz=204,slow=1.9,SNR=5.4						
KSRS				LR	LR	14 41 07.9	
	comp=Z,290nm,20.6s,baz=208,slow=37						
KS19	Wonju Array Si	15.86	19	P	Pn	14 34 56.2	+1.0
XAN	Xi'an	15.87	319	P	Pn	14 34 55.9	+0.5
XAN				pP	P	14 35 00.9	+2.0
XAN				PP	sP	14 35 09.9	+1.5
XAN				S	Sn	14 37 54.0	+3.4
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN				LR	LR		
	comp=Z,1µm,12.7s						
XAN				LR	LR		
	comp=Z,1µm,13.6s						
XAN				LR	LR		
	comp=Z,2µm,14.4s						
DAV	Davao City (W)	15.92	165	LR	LR	14 40 57.1	
	comp=Z,1µm,21.4s,baz=336,slow=37						
KKM	Kota Kinabalu	17.20	198	P	Pn	14 35 12.8	+0.3
KKM	Kota Kinabalu	17.20	198	P	Pn	14 35 12.5	+0.1
KMI	Kunming	17.32	282	⇑P	Pn	14 35 14.1	+0.2
KMI				sP	pP	14 35 20.9	-0.7
KMI				S	Sn	14 38 20.1	-6.0
KMI				sS	S	14 38 32.2	-2.3
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,81nm,4.3s						
KMI				LR	LR		
	comp=Z,1µm,14.5s						
KMI				LR	LR		
	comp=Z,1µm,17.8s						
KMI				LR	LR		
	comp=Z,1µm,17.5s						
MYLDM	Lahad Datu	17.54	190	P	P	14 35 17.2	-0.2
CD2	Chengdu	17.85	301	P	P	14 35 20.9	+0.1
CD2				S	Sn	14 38 39.7	+1.1
CD2				pmax	pmax		
	comp=Z,50nm,0.9s						
CD2				LR	LR		
	comp=Z,2µm,10.8s						
CD2				LR	LR		
	comp=Z,1µm,9.8s						
CD2				LR	LR		
	comp=Z,2µm,14.7s						
BJI	Beijing	17.98	347	P	P	14 35 23.1	+1.0
BJI				sP	pP	14 35 28.9	+0.2
BJI				S	S	14 38 46.1	-1.1
BJI				pmax	pmax		
	comp=Z,20nm,1.6s						
BJI				LR	LR		
	comp=Z,1µm,13.0s						
BJI				LR	LR		
	comp=Z,960nm,16.3s						
BJI				LR	LR		
	comp=Z,2µm,13.5s						
SPMM	Sapulut	18.41	196	P	Pn	14 35 33.0	+5.7
INU	Inuyama	18.59	43	P	P	14 35 29.0	+0.1
INU	Inuyama	18.59	43	P	Pn	14 35 31.1	+1.8
JCJ	Chichijima	19.33	72	LR	LR	14 42 56.9	
	comp=Z,154nm,19.0s,baz=156,slow=36						
HHC	Hu-ho-hao-te	20.04	338	eP	Pn	14 35 47.3	+0.6
HHC				pmax	pmax		
	comp=Z,27nm,1.1s						
HHC				pmax	pmax		
	comp=Z,300nm,5.2s						
HHC				LR	LR		
	comp=Z,2µm,15.7s						
HHC				LR	LR		
	comp=Z,820nm,14.0s						
HHC				LR	LR		
	comp=Z,2µm,16.2s						
MAJO	Matsushiro	20.10	42	⇑eP	P	14 35 42.8	-2.6
MAJO				pmax	pmax		
	comp=Z,12nm,1.4s						
MAJO	Matsushiro	20.10	42	P	Pn	14 35 47.1	-0.2
MAT	Matsushiro	20.10	42	P	Pn	14 35 48.0	+0.7
MJAR	Matsushiro Arr	20.10	42	P	Pn	14 35 48.0	+0.7
	comp=Z,14nm,0.8s,baz=207,slow=8.1,SNR=15						
MJAR				LR	LR	14 43 54.2	
	comp=Z,322nm,21.4s,baz=265,slow=38						
LZH	Lanzhou	20.38	315	⇑P	Pn	14 35 51.5	+0.7
LZH				pP	sP	14 35 56.7	-1.5
LZH				sP	pP	14 35 59.9	+4.7
LZH				PP	PnPn	14 36 10.2	+4.2
LZH				S	S	14 39 37.1	+1.1
LZH				SS	SnSn	14 40 01.2	+6.5
LZH				pmax	pmax		
	comp=Z,44nm,1.3s						
LZH				pmax	pmax		
	comp=Z,400nm,4.6s						
LZH				LR	LR		
	comp=Z,1µm,12.6s						
LZH				LR	LR		
	comp=Z,1µm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,15.2s						
BTO	Baotou	20.41	334	eP	Pn	14 35 52.5	+1.4
BTO				LR	LR		
	comp=Z,5µm,15.7s						
BTO				LR	LR		
	comp=Z,7µm,17.0s						
TOLI2	Tolitoli	21.35	182	P	P	14 36 00.1	+1.1
TOLI2				IAmb	IAmb	14 36 03.8	
	comp=Z,48nm,0.7s						
TOLI2	Tolitoli	21.35	182	P	P	14 36 00.4	+1.3
CHTO	Chiang Mai	21.40	264	P	P	14 36 00.6	+1.0
CHTO				pmax	pmax		
	comp=Z,20nm,0.9s						
CHTO	Chiang Mai	21.40	264	P	P	14 36 00.6	+1.0
CHTO	Chiang Mai	21.40	264	P	P	14 36 01.3	+1.7
CN2	Changchun	21.42	8	eP	P	14 35 56.0	-3.6
CN2				eS	S	14 39 53.5	-2.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CN2				pmax	pmax		
	comp=Z,400nm,4.0s						
CN2				LR	LR		
	comp=N,1µm,15.0s						
CN2				LR	LR		
	comp=E,1µm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,13.2s						
CMAR	Chiang Mai Arr	21.49	263	P	P	14 36 02.3	+1.7
	comp=Z,14nm,0.9s,baz=70,slow=8.6,SNR=67						
CMAR				PcP	PcP	14 40 02.9	-0.3
	comp=Z,1.9nm,0.7s,baz=52,slow=0.6,SNR=8.6						
CMAR				LR	LR	14 45 48.1	
	comp=Z,813nm,18.0s,baz=116,slow=41						
GTOI	Gorontalo	21.86	176	P	P	14 36 03.4	-1.2
	comp=Z,828nmcomp=Z,106nm,1.2s						
SBUM	Sibu	21.93	205	P	P	14 36 06.0	+0.7
SBUM	Sibu	21.93	205	P	P	14 36 03.4	-2.0
MRSI	Marisa	21.98	179	P	P	14 36 06.5	+0.7
	comp=Z,3µmcomp=Z,253nm,1.1s						
KMSI	Cibinong	22.01	173	P	P	14 36 06.7	+0.6
	comp=Z,2µmcomp=Z,176nm,1.0s						
MPSI	Mapaga	22.16	184	P	P	14 36 08.8	+1.0
	comp=Z,852nmcomp=Z,84nm,0.9s						
VLA	Vladivostok	22.24	20	⇑eP	P	14 36 05.1	-3.3
VLA				pmax	pmax		
	comp=Z,37nm,1.1s						
TNTI	Ternate	22.42	164	P	P	14 36 09.1	-1.5
	comp=Z,1µmcomp=Z,122nm,0.9s						
TNTI	Ternate	22.42	164	P	P	14 36 09.2	-1.4
TNTI				IAmb	IAmb	14 36 13.4	
	comp=Z,83nm,0.8s						
TNTI	Ternate	22.42	164	P	P	14 36 10.1	-0.5
USA0B	Ussuriysk Arra	23.24	19	P	P	14 36 17.1	-1.8
USA0B				pmax	pmax		
	comp=Z,71nm,1.9s						
USA0B	Ussuriysk Arra	23.24	19	P	P	14 36 17.1	-1.8
USRK	Ussuriysk Ar.	23.24	19	P	P	14 36 20.1	+1.1
	comp=Z,10nm,0.7s,baz=205,slow=9.1,SNR=13						
USRK				LR	LR	14 45 42.9	
	comp=Z,279nm,21.1s,baz=178,slow=37						
USRK	Ussuriysk Ar.	23.24	19	P	P	14 36 19.4	+0.5
USRK	Ussuriysk Ar.	23.24	19	P	P	14 36 19.4	+0.5
SMKI	Samarinda	23.26	191	P	P	14 36 20.9	+1.6
	comp=Z,238nm,0.4s						
APSI	Ampana	23.35	180	P	P	14 36 20.8	+0.6
	comp=Z,3µmcomp=Z,304nm,1.4s						
KSM	Kuching	23.62	209	P	P	14 36 22.0	-0.8
KSM	Kuching	23.62	209	P	P	14 36 22.0	-0.8
KSM				IAmb	IAmb	14 36 25.8	
	comp=Z,37nm,0.9s						
KSM	Kuching	23.62	209	P	P	14 36 23.9	+1.1
LBMI	Labuha	23.81	165	P	P	14 36 23.6	-1.1
	comp=Z,1µmcomp=Z,180nm,1.1s						
BKB	Balikpapan	24.11	191	P	P	14 36 28.6	+1.1
	comp=Z,3µmcomp=Z,272nm,0.9s						
BKB	Balikpapan	24.11	191	P	P	14 36 26.7	-0.8
MTKI	Muara Teweh, K	24.24	196	P	P	14 36 29.2	+0.5
	comp=Z,4µmcomp=Z,163nm,1.0s						
STKI	Sintang	24.40	205	P	P	14 36 30.9	+0.7
	comp=Z,17nm,0.9s						
SANI	Sanana	24.87	169	P	P	14 36 31.0	-3.4
	comp=Z,898nmcomp=Z,104nm,1.2s						
SANI	Sanana	24.87	169	P	P	14 36 32.9	-1.5
GTA	Gaotai	24.92	317	⇑P	P	14 36 35.8	+1.0
GTA				pP	pP	14 36 40.6	-1.2
GTA				sP	sP	14 36 43.1	-1.5
GTA				PcP	PcP	14 40 15.0	+4.9
GTA				ScP	ScP	14 43 47.6	0.0
GTA				pmax	pmax		
	comp=Z,140nm,4.4s						
GTA				LR	LR		
	comp=Z,430nm,16.0s						
GTA				LR	LR		
	comp=Z,800nm,16.4s						
GTA				LR	LR		
	comp=Z,790nm,17.5s						
SWI	Sorong	25.18	156	P	P	14 36 37.3	+0.1
	comp=Z,39nm,0.9s						
SIJI	Sorong	25.19	156	P	P	14 36 36.4	-0.9
	comp=Z,23nm,0.4s,baz=327,slow=14,SNR=28						
TTSI	Tana Toraja	25.52	184	P	P	14 36 40.3	+0.1
	comp=Z,693nmcomp=Z,48nm,1.0s						
KBKI	Kotabaru	26.24	192	P	P	14 36 47.5	+0.7
	comp=Z,751nmcomp=Z,64nm,1.1s						
SPSI	Sidrap Palu	26.43	184	P	P	14 36 49.1	+0.6
	comp=Z,660nmcomp=Z,58nm,1.2s						
ERM	Erimo	26.55	38	⇑eP	P	14 36 47.7	-1.6
ERM				pmax	pmax		
	comp=Z,29nm,0.9s						
BBKI	Banjar Baru	26.68	195	P	P	14 36 51.5	+0.7
	comp=Z,2µmcomp=Z,49nm,1.3s						
IPM	Ipoh	26.74	231	P	P	14 36 51.3	-0.1
IPM	Ipoh	26.74	231	P	P	14 36 51.8	+0.4
MSAI	Masohi	26.78	163	P	P	14 36 52.1	+0.4
	comp=Z,5.8nm,0.8s						
MYKOM	Kota Tinggi	26.83	222	P	P	14 36 54.0	+1.8
MYKOM	Kota Tinggi	26.83	222	P	P	14 36 52.5	+0.3
MYKOM				IAmb	IAmb	14 36 56.2	
	comp=Z,58nm,0.8s						
BNSI	Bone	26.85	183	P	P	14 36 49.4	-2.9
	comp=Z,37nm,1.3s						
AAI	Ambon	26.92	165	P	P	14 36 51.3	-1.6
	comp=Z,75nm,0.8s						
FAKI	Fak Fak	27.44	156	P	P	14 36 56.9	-0.8
	comp=Z,43nm,0.8s						
FAKI	Fak Fak	27.44	156	P	P	14 36 56.7	-1.0
FAKI				IAmb	IAmb	14 37 01.9	
	comp=Z,32nm,0.6s						
FAKI	Fak Fak	27.44	156	P	P	14 36 59.1	+1.4
KAPI	Kappang	27.48	184	P	P	14 36 57.8	-0.1
	comp=Z,6.3nm,0.3s,baz=4.3,slow=1.1,SNR=7.0						
KAPI				LR	LR	14 48 05.3	
	comp=Z,283nm,21.6s,baz=25,slow=37						
KAPI	Kappang	27.48	184	P	P	14 36 59.7	+1.8
ASAJ	Asahikawa	27.65	34	P	P	14 37 00.7	+1.4
	comp=Z,8.4nm,0.4s,baz=248,slow=5.1,SNR=26						
ASAJ	Asahikawa	27.65	34	P	P	14 37 00.0	+0.7
ASAJ				pmax	pmax		
	comp=Z,165nm,1.6s						
JKA	Kamikawa-asahi	27.65	34	P	P	14 36 60.0	+0.7
ULN	Ulaanbaatar	27.75	339	⇑eP	P	14 37 00.2	-0.1
ULN				pmax	pmax		
	comp=Z,12nm,1.7s						
KLR	Kul'dur	27.82	15	P	P	14 37 02.8	+2.1
	comp=Z,8.2nm,0.9s,baz=232,slow=5.6,SNR=19						
KLR				PcP	PcP	14 40 16.2	-0.3
	comp=Z,1.5nm,0.6s,baz=9.1,slow=7.8,SNR=3.8						
KLR	Kul'dur	27.82	15	i P	P	14 37 03.2	+2.5
SONM	Songino Array	27.94	338	P	P	14 37 01.9	-0.1
	comp=Z,2.3nm,0.5s,baz=157,slow=10.0,SNR=13						
SONM				ScP	ScP	14 43 52.3	-4.0
	comp=Z,1.3nm,0.9s,baz=171,slow=6.0,SNR=5.9						
SONM				LR	LR	14 49 45.5	
	comp=Z,975nm,18.9s,baz=152,slow=40						
SONM	Songino Array	27.94	338	P	P	14 37 00.7	-1.3
SONM				pmax	pmax		

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          comp=Z,5.0nm,0.8s
SONM  Songino Array   27.94 338   P      P        14 37 00.7  -1.3
LSA   Lhasa           28.07 291   P      P        14 37 05.2  +1.4
LSA                               LR     LR
          comp=Z,740nm,10.3s
LSA                               LR     LR
          comp=Z,2µm,17.8s
LSA                               LR     LR
          comp=Z,3µm,18.2s
BNDI  Bandanaira      28.17 162   P      P        14 37 03.9  -0.2
YUK   Yuzh-Kuril'sk   29.36  37⇓iP      P        14 37 14.5   0.0
PSI   Prapat          29.41 231   P      P        14 37 16.2  +0.9
          comp=Z,8.7nm,0.9s,baz=28,slow=6.1,SNR=8.3
YSS   Yuzh-Sakhalins  29.76  30⇑eP      P        14 37 17.4  -0.6
YSS                               pmax   pmax
          comp=Z,36nm,0.8s
MNSI  Mandailing Nat  30.37 228   P      P        14 37 24.2  +0.5
          comp=Z,30nm,0.7s
TAPN  Taplejung       30.91 286  eP      P        14 37 29.9  +1.1
          comp=Z,23nm,0.9s
PDSI  Padang          31.05 224   P      P        14 37 38.4  +8.6
BLJI  Banyuglugur     31.11 195   P      P        14 37 30.9  +0.7
          comp=Z,32nm,0.7s
EDFI  Ende, Flores    31.14 180   P      P        14 37 30.0  -0.5
          comp=Z,726nmcomp=Z,66nm,1.0s
ODAN  Odare           31.19 285  eP      P        14 37 32.6  +1.4
          comp=Z,7.6nm,0.5s
ZAK   Zakamensk       31.19 337  eP      P        14 37 30.6  -0.2
ZAK                               pmax   pmax
          comp=Z,5.0nm,1.1s
JAY   Jayapura        31.22 141   LR     LR       14 48 43.0
          comp=Z,185nm,18.6s,baz=338,slow=34
TWSI  Taliwang, Sumb  31.45 189   P      P        14 37 34.1  +0.9
          comp=Z,28nm,1.2s
LHSI  Lahat           31.57 216   P      P        14 37 38.5  +4.3
          comp=Z,2µmcomp=Z,29nm,0.5s
KLSI                  31.66 213   P      P        14 37 36.9  +1.8
          comp=Z,15nm,0.9s
MASI  Maura Aman, Be  31.72 219   P      P        14 37 42.1  +6.4
MDSI  Maura Dua       31.77 214   P      P        14 37 37.2  +1.2
          comp=Z,20nm,1.0s
RAMN  Ramite          31.90 285  eP      P        14 37 38.4  +1.0
          comp=Z,20nm,0.8s
TLY   Talaya          32.16 339  eP      P        14 37 38.6  -0.5
TLY                               pmax   pmax
          comp=Z,10.0nm,0.9s
TLY                               MLR    MLR
          comp=Z,4µm,13.0s
SOEI  Soe             32.25 175   P      P        14 37 40.0  -0.4
          comp=Z,55nm,1.0s
SOEI  Soe             32.25 175   P      P        14 37 41.7  +1.3
          comp=Z,56nm,0.9s
SISI  Saibi           32.26 225   P      P        14 37 44.1  +3.8
          comp=Z,19nm,1.2s
LWLI  Liwa            32.28 214   P      P        14 37 42.4  +1.7
          comp=Z,52nm,0.7s
DBJI  Dramaga         32.34 208   P      P        14 37 46.0  +4.9
KASI  Kota Agung      32.49 213   P      P        14 37 44.7  +2.3
          comp=Z,39nm,0.9s
GUN   Gumba           32.55 287  eP      P        14 37 44.2  +0.9
          comp=Z,35nm,0.8s
BATI  Baumata         32.65 176   P      P        14 37 42.1  -1.7
          comp=Z,81nm,0.9s,baz=212,slow=1.6,SNR=7.5
BATI                              LR     LR       14 52 25.9
          comp=Z,165nm,20.2s,baz=349,slow=39
BATI  Baumata         32.65 176   P      P        14 37 42.4  -1.4
          comp=Z,50nm,1.1s
PKI   Pulchoki        32.96 286  eP      P        14 37 47.5  +0.7
          comp=Z,27nm,1.0s
PKIN  Phulchoki       32.97 286  eP      P        14 37 48.2  +1.3
          comp=Z,29nm,0.9s
DMN   Daman           33.23 286  eP      P        14 37 50.5  +1.4
KOLN  Koldanda        34.57 287  eP      P        14 38 01.6  +0.9
          comp=Z,35nm,0.8s
WMQ   Urumqi          34.96 315  eP      P        14 38 06.5  +2.8
WMQ                               pP     sP       14 38 12.3  -1.2
WMQ                               pmax   pmax
          comp=Z,16nm,1.1s
WMQ                               pmax   pmax
          comp=Z,260nm,4.5s
PYUN  Piuthan         35.11 287  eP      P        14 38 06.4  +1.1
          comp=Z,20nm,0.7s
MTN   Manton Dam      36.46 164   P      P        14 38 14.3  -2.4
MTN                               IAmb   IAmb     14 38 15.7
          comp=Z,17nm,0.8s
DGZ   Jazzator, Alta  38.03 324⇑eP      P        14 38 29.6  -0.3
DGZ                               pmax   pmax
          comp=Z,5.0nm,0.8s
ZSN   Zaisan          38.38 319  eP      P        14 38 32.5  -0.3
          baz=319
ZSN   Zaisan          38.38 319  eP      P        14 38 32.4  -0.3
KNRA  Kununurra       38.69 169   P      P        14 38 34.1  -1.4
KNRA  Kununurra       38.69 169   P      P        14 38 34.2  -1.3
MK31  Makanchi Array  39.68 317  i P     P        14 38 44.8  +1.2
MK31                              pmax   pmax
          comp=Z,22nm,0.6s
MK31  Makanchi Array  39.68 317   P      P        14 38 43.5  -0.2
MK31                              IAmb   IAmb     14 38 47.1
          comp=Z,22nm,0.8s
MKAR  Makanchi Array  39.68 317   P      P        14 38 43.7  +0.1
          comp=Z,20nm,0.6s,baz=108,slow=8.2,SNR=123
MKAR                              ScP    ScP      14 44 34.4  -3.0
          comp=Z,2.2nm,1.1s,baz=92,slow=6.1,SNR=5.5
MKAR                              LR     LR       14 56 39.1
          comp=Z,414nm,18.1s,baz=111,slow=38
MKAR  Makanchi Array  39.68 317   P      P        14 38 42.1  -1.5
MKAR  Makanchi Array  39.68 317   P      P        14 38 42.1  -1.5
YAK   Yakutsk         39.83   6deP      P        14 38 44.9  +0.3
YAK                               pmax   pmax
          comp=Z,5.0nm,0.9s
MAKZ  Makanchi        39.88 317   P      P        14 38 46.6  +1.3
MAKZ  Makanchi        39.88 317   P      P        14 38 44.1  -1.1
MAKZ                              IAmb   IAmb     14 38 48.9
          comp=Z,31nm,0.8s
RABL  Rabaul          40.10 128   P      P        14 38 48.9  +1.4
RABL                              IAmb   IAmb     14 38 50.4
          comp=Z,44nm,0.7s
RABL  Rabaul          40.10 128   P      P        14 38 49.0  +1.6
PDGK  Podgornoye      40.32 311   P      P        14 38 49.0  -0.2
PMG   Port Moresby    40.55 139   P      P        14 38 51.3  +0.2
          comp=Z,26nm,0.9s,baz=359,slow=3.8,SNR=9.7
PMG   Port Moresby    40.55 139   P      P        14 38 50.5  -0.6
PMG                               pmax   pmax
          comp=Z,24nm,0.8s
PMG   Port Moresby    40.55 139   P      P        14 38 50.5  -0.6
PMG                               IAmb   IAmb     14 38 52.5
          comp=Z,24nm,0.8s
PMG   Port Moresby    40.55 139   P      P        14 38 52.1  +1.0
PMG   Port Moresby    40.55 139   P      P        14 38 52.2  +1.1
UZB   Uzynbulak       40.60 311  eP      P        14 38 51.2  -0.3
          baz=311
UZB   Uzynbulak       40.60 311  eP      P        14 38 51.1  -0.3
SATY  Saty            41.01 310  eP      P        14 38 54.1  -0.8
          baz=310
SATY  Saty            41.01 310  eP      P        14 38 54.0  -0.8
PETK  Petropavlovsk-  41.06  33   P      P        14 38 56.0  +1.1
          comp=Z,5.8nm,0.8s,baz=88,slow=26,SNR=12
PETK                              LR     LR       14 56 14.1
          comp=Z,186nm,20.5s,baz=239,slow=36
PETK  Petropavlovsk-  41.06  33   P      P        14 38 54.1  -0.8
PETK  Petropavlovsk-  41.06  33   P      P        14 38 54.1  -0.8
PET   Petropavlovsk   41.49  33d iP      P        14 38 59.6  +1.2
PET                               pmax   pmax
          comp=Z,71nm,1.0s
TDK   Taldyqorghan    41.57 313  eP      P        14 38 58.6  -0.8
          comp=Z,17nm,1.2s,baz=313
TDK   Taldyqorghan    41.57 313  eP      P        14 38 58.5  -0.8
TDK                               pmax   pmax
          comp=Z,17nm,1.2s
KDJ   Kajisay         41.64 309   P      P        14 38 57.7  -2.4
KDJ                               pmax   pmax
          comp=Z,7.0nm,0.8s
KDJ   Kajisay         41.64 309   P      P        14 38 57.6  -2.4
ZAA0  Zalesovo Array  41.73 328   P      P        14 38 58.8  -1.6
ZAA0                              IAmb   IAmb     14 39 06.1
          comp=Z,24nm,0.8s
ZALV  Zalesovo Beam   41.73 328   P      P        14 39 00.6  +0.2
          comp=Z,24nm,0.7s,baz=117,slow=8.5,SNR=53
ZALV                              PcP    PcP      14 40 55.2  -1.3
          comp=Z,2.2nm,0.7s,baz=100,slow=3.6,SNR=2.3
ZALV                              LR     LR       14 56 11.7
          comp=Z,233nm,18.7s,baz=121,slow=36
MDOK  Medeo           41.99 310  eP      P        14 39 02.2  -0.8
          baz=310
MDOK  Medeo           41.99 310  eP      P        14 39 02.1  -0.8
KSH   Kashi           42.00 304   P      P        14 39 07.2  +4.2
KSH                               pmax   pmax
          comp=Z,5.0nm,0.6s
COEN  Coen            42.08 148   P      P        14 39 02.4  -1.3
COEN                              IAmb   IAmb     14 39 04.6
          comp=Z,54nm,0.8s
COEN  Coen            42.08 148   P      P        14 39 04.1  +0.4
H11N1 WAKE ISLAND Hy  42.34  85   T      T        15 24 20.5
          baz=283,slow=74,SNR=339
H11N2 WAKE ISLAND Hy  42.34  85   T      T        15 24 20.9
          baz=283,slow=74,SNR=722
ULHL  Ulahol          42.35 309   P      P        14 39 04.5  -1.4
          SNR=8.7
H11N3 WAKE ISLAND Hy  42.36  85   T      T        15 24 22.1
          baz=283,slow=74,SNR=446
MA2   Magadan         42.37  22⇓eP      P        14 39 04.3  -1.2
MA2                               pmax   pmax
          comp=Z,7.0nm,0.8s
SEM   Semipalatinsk   42.42 321  eP      P        14 39 05.5  -0.9
          comp=Z,16nm,0.8s,baz=321
SEM   Semipalatinsk   42.42 321  eP      P        14 39 05.4  -0.9
SEM                               pmax   pmax
          comp=Z,16nm,0.8s
H11S3 WAKE ISLAND Hy  42.42  87   T      T        15 24 26.5
          baz=284,slow=75,SNR=690
H11S1 WAKE ISLAND Hy  42.43  87   T      T        15 24 24.7
          baz=284,slow=75,SNR=673
H11S2 WAKE ISLAND Hy  42.44  87   T      T        15 24 24.4
          baz=284,slow=75,SNR=575
KUU   Kurty           42.68 311  eP      P        14 39 08.5  +0.1
          baz=311
KUU   Kurty           42.68 311  eP      P        14 39 08.4  +0.1
TKM2  Tokmak 2        42.97 309   P      P        14 39 13.0  +2.1
          SNR=11
TKM2  Tokmak 2        42.97 309  i P     P        14 39 12.1  +1.2
TKM2                              pmax   pmax
          comp=Z,11nm,0.9s
KBK   Karagaybulak    43.37 309   P      P        14 39 17.1  +3.0
          SNR=10
KURK  Kurchatov       43.49 321deP      P        14 39 15.2  +0.5
KURK                              pmax   pmax
          comp=Z,64nm,1.7s
KURK  Kurchatov       43.49 321   P      P        14 39 14.8  +0.1
KURK                              IAmb   IAmb     14 39 17.8
          comp=Z,23nm,0.6s
KURBB Kurchatov Arra  43.51 321   P      P        14 39 14.9   0.0
MBWA  Marble Bar      43.51 182   P      P        14 39 14.1  -1.0
CHMS  Chumysh         43.59 309   P      P        14 39 17.7  +2.0
          SNR=6.3
UCH   Uchtor          43.60 308   P      P        14 39 19.1  +2.8
          SNR=15
SGDS  Sogindy         43.77 310  eP      P        14 39 17.4  +0.2
          baz=310
USP   Ospenovka       43.83 310   P      P        14 39 19.5  +1.8
          SNR=13
PSA00 Pilbara Seismi  43.91 182   P      P        14 39 16.7  -1.7
PSA00 Pilbara Seismi  43.91 182   P      P        14 39 16.3  -2.1
PSA00                             IAmb   IAmb     14 39 18.4
          comp=Z,51nm,1.4s
PSA00 Pilbara Seismi  43.91 182   P      P        14 39 17.4  -1.0
WB0   Warramunga Arr  43.94 162   P      P        14 39 16.9  -1.7
WB0                               IAmb   IAmb     14 39 18.1
          comp=Z,30nm,0.9s
WRAB  Tennant Creek   44.09 162c iP      P        14 39 18.3  -1.5
WRAB                              pmax   pmax
          comp=Z,53nm,1.3s
WRAB  Tennant Creek   44.09 162   P      P        14 39 18.3  -1.5
WRAB                              IAmb   IAmb     14 39 19.4
          comp=Z,37nm,0.9s
WRAB  Tennant Creek   44.09 162   P      P        14 39 18.6  -1.2
WRA   Warramunga Arr  44.09 162   P      P        14 39 18.1  -1.8
          comp=Z,25nm,0.8s,baz=344,slow=8.7,SNR=146
WRA   Warramunga Arr  44.09 162  i P     P        14 39 18.1  -1.8
WRA                               pmax   pmax
          comp=Z,26nm,0.8s
WRA   Warramunga Arr  44.09 162   P      P        14 39 16.6  -3.3
WB2   Warramunga Arr  44.10 162   P      P        14 39 18.1  -1.8
WB2                               IAmb   IAmb     14 39 19.4
          comp=Z,37nm,0.8s
WR0   Warramunga Arr  44.16 162   P      P        14 39 18.0  -2.5
WR0                               IAmb   IAmb     14 39 19.9
          comp=Z,33nm,0.8s
AML   Almayashu       44.18 308   P      P        14 39 23.5  +2.6
          SNR=13
EKS2  Erkin-Say       44.22 309   P      P        14 39 26.6  +5.7
          SNR=5.5
BTLS  Baital          44.55 312  eP      P        14 39 23.5   0.0
          baz=312
BTLS  Baital          44.55 312  eP      P        14 39 23.4   0.0
SEY   Seymchan        45.39  19   LR     LR       14 59 19.1
          comp=Z,120nm,19.4s,baz=214,slow=37
GIRL  Giralia         45.50 189   P      P        14 39 31.9  +0.9
DZA   Taraz           46.03 308  eP      P        14 39 35.0  -0.3
          baz=308
DZA   Taraz           46.03 308  eP      P        14 39 34.9  -0.3
MTSU  Mount Surprise  46.22 149   P      P        14 39 38.0  +1.1
QIS   Mount Isa       46.38 156   P      P        14 39 38.0  -0.1
KKAR  Karatay Array   46.66 309   P      P        14 39 39.1  -1.0
KKAR  Karatay Array   46.66 309   P      P        14 39 39.1  -1.0
BRZS  Berezniki       46.79 318  eP      P        14 39 40.8  -0.3
          baz=318
BRZS  Berezniki       46.79 318  eP      P        14 39 40.7  -0.3
IUG   Iuzhnay         46.87 307  eP      P        14 39 41.1  -0.7
          baz=307
IUG   Iuzhnay         46.87 307  eP      P        14 39 41.1  -0.7
AS31  Alice Springs   47.53 164   P      P        14 39 46.5  -0.6
AS31                              IAmb   IAmb     14 39 48.7
          comp=Z,7.0nm,0.5s
ASAR  Alice Springs   47.53 164   P      P        14 39 46.1  -0.9
          comp=Z,8.3nm,0.6s,baz=351,slow=11,SNR=220
ASAR                              PcP    PcP      14 41 16.6  -0.3
          comp=Z,4.2nm,0.7s,baz=350,slow=3.4,SNR=6.9
ASAR                              LR     LR       15 02 07.1
          comp=Z,70nm,19.4s,baz=12,slow=39
WRKA  Warakurna       47.80 172   P      P        14 39 48.6  -0.5
CTA   Charters Tower  48.83 148   P      P        14 39 57.9  +0.8
CTAO  Charters Tower  48.83 148   P      P        14 39 56.7  -0.4
CTAO                              pmax   pmax
          comp=Z,35nm,0.7s
CTAO  Charters Tower  48.83 148   P      P        14 39 56.7  -0.4
CTAO  Charters Tower  48.83 148   P      P        14 39 57.9  +0.8
MEEK  Meekatharra     49.01 183   P      P        14 39 57.5  -0.8
BRVK  Borovoye        49.15 322ceP      P        14 40 00.2  +1.0
BRVK                              pmax   pmax
          comp=Z,19nm,0.8s
BRVK  Borovoye        49.15 322   P      P        14 39 58.4  -0.8
BRVK                              IAmb   IAmb     14 40 03.1
          comp=Z,17nm,0.7s
TIXI  Tiksi           49.27   3   LR     LR       15 03 25.8
          comp=Z,339nm,18.1s,baz=192,slow=39
TIXI  Tiksi           49.27   3⇑eP      P        14 39 59.8   0.0
TIXI                              pmax   pmax
          comp=Z,8.0nm,1.3s
HNR   Honiara         49.33 126   P      P        14 40 00.2  -0.8
          comp=Z,22nm,0.4s,baz=210,slow=7.6,SNR=4.2
NRIK  Noril'sk        51.01 345   P      P        14 40 12.8  -0.3
          comp=Z,8.6nm,0.7s,baz=118,slow=7.0,SNR=10.0
NRIK                              LR     LR       15 03 30.2
          comp=Z,387nm,20.8s,baz=138,slow=38
NRIK  Noril'sk        51.01 345⇑eP      P        14 40 12.4  -0.7
NRIK                              pmax   pmax
          comp=Z,12nm,0.8s
MORW  Morawa          51.61 186   P      P        14 40 16.3  -1.7
MORW  Morawa          51.61 186   P      P        14 40 17.6  -0.4
OOD   Oodnadatta      51.93 164   P      P        14 40 20.2  -0.2
BLDU  Ballidu         53.09 185   P      P        14 40 28.0  -0.9
BILL  Bilibino        53.10  19⇑eP      P        14 40 29.1  +0.5
BILL                             e*PP    pP       14 40 34.9  -0.6
BILL                                              14 41 36.0
BILL                              pmax   pmax
          comp=Z,4.0nm,0.7s
BILL                              MLR    MLR
          comp=Z,170nm,18.0s
INKA  Innaminka       53.38 159   P      P        14 40 31.9  +0.8
FORT  Forrest         53.43 173   P      P        14 40 30.4  -1.0
FORT  Forrest         53.43 173   P      P        14 40 31.3  -0.1
QLP   Quilpie         53.61 155   P      P        14 40 32.8  -0.1
RK1H  Rockhampton Ha  53.71 146   P      P        14 40 34.0  +0.4
MULG  Mulgathing      53.93 167   P      P        14 40 35.0  -0.1
KLBR  Kellerberrin    53.98 184   P      P        14 40 35.1  -0.4
MUN   Mundaring       54.48 185   P      P        14 40 38.9  -0.2
AB31  Akbulak array   54.75 315  eP      P        14 40 41.8  +0.8
ABKAR Akbulak array   54.75 315   P      P        14 40 41.6  +0.7
ABKAR Akbulak array   54.75 315   P      P        14 40 41.5  +0.5
LCRK  Leigh Creek     55.12 162   P      P        14 40 43.9  +0.1
NWAO  Narrogin (SRO)  55.34 184   P      P        14 40 45.1  -0.2
RMQ   Roma            55.47 150   P      P        14 40 47.0  +0.6
SVE   Sverdlovsk      55.49 324⇓eP      P        14 40 47.3  +1.1
SVE                               pmax   pmax
          comp=Z,18nm,0.8s
EIDS  Eidsvold        55.65 147   P      P        14 40 45.4  -2.2
EIDS                              IAmb   IAmb     14 41 25.6
          comp=Z,51nm,1.5s
GEYT  Alibeck         55.84 301   P      P        14 40 49.9  +0.8
          comp=Z,7.0nm,0.7s,baz=58,slow=20,SNR=7.4
AKTO  Aktyubinsk      56.10 316   LR     LR       15 06 31.9
          comp=Z,326nm,21.5s,baz=111,slow=38
ARU   Arti            56.54 324   LR     LR       15 05 22.1
          comp=Z,330nm,19.5s,baz=83,slow=36
ARU   Arti            56.54 324d iP      P        14 40 53.9  +0.2
ARU                               S      S        14 48 45.9  +2.1
ARU                               SS     SS       14 52 27.3  -3.7
ARU                               pmax   pmax
          comp=Z,11nm,0.5s
ARU   Arti            56.54 324   P      P        14 40 52.9  -0.8
BBOO  Buckleboo       56.81 165   P      P        14 40 55.6  -0.3
BBOO  Buckleboo       56.81 165   P      P        14 40 55.9   0.0
STKA  Stephens Creek  57.48 160   P      P        14 41 00.2  -0.3
          comp=Z,11nm,0.8s,baz=333,slow=6.6,SNR=26
STKA                              LR     LR       15 08 33.2
          comp=Z,70nm,19.4s,baz=23,slow=39
STKA  Stephens Creek  57.48 160   P      P        14 41 00.2  -0.3
STKA                              pmax   pmax
          comp=Z,5.0nm,1.1s
STKA  Stephens Creek  57.48 160   P      P        14 41 00.2  -0.3
STKA  Stephens Creek  57.48 160   P      P        14 41 00.6   0.0
HTT   Hallett         58.13 163   P      P        14 41 05.5  +0.3
CMSA  Cobar Meteorol  58.60 156   P      P        14 41 09.3  +0.8
KOUNC Koumac, New Ca  59.86 133   P      P        14 41 19.3  +1.9
ARMA  Armidale        60.13 150   P      P        14 41 18.6  -0.6
ARMA                              IAmb   IAmb     14 41 21.2
          comp=Z,24nm,0.8s
ARMA  Armidale        60.13 150   P      P        14 41 20.5  +1.3
KIRV  Kirov           61.68 326   LR     LR       15 10 33.9
          comp=Z,417nm,19.1s,baz=88,slow=38
KIRV  Kirov           61.68 326⇓eP      P        14 41 29.2   0.0
ARPS  Mount Arapiles  62.08 162   P      P        14 41 32.4  +0.2
YNG   Young           62.09 155   P      P        14 41 33.3  +1.0
DZM   Mont Dzumac     62.36 132   P      P        14 41 35.5  +1.0
          comp=Z,8.9nm,0.9s,baz=238,slow=9.6,SNR=5.7
DZM   Mont Dzumac     62.36 132   P      P        14 41 33.4  -1.1
DZM                               IAmb   IAmb     14 41 44.9
          comp=Z,19nm,1.2s
BELG  Belogornoye     62.66 318⇑eP      P        14 41 34.1  -1.8
BELG                              pmax   pmax
          comp=Z,2.0nm,0.9s
CAN   Canberra        63.23 155   P      P        14 41 39.1  -0.8
CAN                               pmax   pmax
          comp=Z,25nm,1.2s
CAN   Canberra        63.23 155   P      P        14 41 39.1  -0.8
CAN                               IAmb   IAmb     14 41 41.7
          comp=Z,25nm,1.2s
PRGR  Permogore       63.68 329  eP      P        14 41 39.2  -3.3
PRGR                              pmax   pmax
          comp=Z,8.0nm,0.5s
TOO   Toolangi        63.96 159   P      P        14 41 43.8  -0.9
TOO                               pmax   pmax
          comp=Z,52nm,1.3s
TOO   Toolangi        63.96 159   P      P        14 41 43.8  -0.9
SDPT  Sand Point      65.00  38   P      P        14 41 49.8  -1.5
          baz=274
CHNA  Chernabura Isl  65.55  39   P      P        14 41 53.7  -1.2
          baz=275
GNI   Garni           65.93 305   LR     LR       15 14 53.3
          comp=Z,184nm,18.3s,baz=28,slow=40
CHGN  Chignik         66.08  37   P      P        14 41 57.5  -0.8
          baz=275
ZEI   Tsey            66.12 308  eP      P        14 41 55.0  -4.1
ZEI                               pmax   pmax
          comp=Z,3.0nm,0.6s
VRH   Novokhopyorsk   66.41 318  eP      P        14 42 00.0  -0.4
VRH                               pmax   pmax
          comp=Z,10.0nm,0.6s
KLMR  Klimovskoe      66.66 328  eP      P        14 42 01.4  -0.4
KLMR                              pmax   pmax
          comp=Z,25nm,1.4s
KLMR  Klimovskoe      66.66 328  eP      P        14 42 01.5  -0.4
KLMR                              AMP             14 42 09.3
          comp=Z,25nm,1.4s
KBZ   Khabaz          66.69 309   P      P        14 42 02.8  +0.4
          comp=Z,5.6nm,0.8s,baz=165,slow=4.1,SNR=8.9
KBZ   Khabaz          66.69 309⇓eP      P        14 42 02.2  -0.2
KBZ                               pmax   pmax
          comp=Z,9.0nm,0.9s
TTA   Tatalina        66.76  30   P      P        14 42 02.8  +0.2
TTA                               pmax   pmax
          comp=Z,40nm,1.9s
TTA   Tatalina        66.76  30   P      P        14 42 02.8  +0.2
TTA                               IAmb   IAmb     14 42 29.1
          comp=Z,40nm,1.9s
TTA   Tatalina        66.76  30   P      P        14 42 02.8  +0.2
          baz=274
KIV   Kislovodsk      66.80 310  eP      P        14 42 04.8  +1.5
KIV                               pmax   pmax
          comp=Z,15nm,1.0s
SVW2  Sparrevohn      67.12  32   P      P        14 42 05.1  +0.3
SVW2                              IAmb   IAmb     14 44 29.2
          comp=Z,41nm,1.8s
L19K  White Mountain  67.36  30   P      P        14 42 06.1  -0.3
L19K                              IAmb   IAmb     14 42 08.4
          comp=Z,10nm,0.9s
L19K  White Mountain  67.36  30   P      P        14 42 06.9  +0.5
          baz=276
O18K  Koktuh Hills    67.43  33   P      P        14 42 07.7  +0.8
          baz=276
P18K  Big Mountain,   67.47  33   P      P        14 42 07.8  +0.6
          baz=276
J20K  Nowinta River   67.49  28   P      P        14 42 06.5  -0.7
J20K                              IAmb   IAmb     14 42 09.2
          comp=Z,9.5nm,0.7s
J20K  Nowinta River   67.49  28   P      P        14 42 07.9  +0.7
          baz=275
IMAR  Indian Mountai  67.50  26   P      P        14 42 06.9  -0.2
K20K  Telida          67.61  29   P      P        14 42 08.4  +0.5
          baz=276
M19K  Big River Lodg  67.61  31   P      P        14 42 07.5  -0.4
M19K                              IAmb   IAmb     14 44 13.6
          comp=Z,50nm,1.9s
M19K  Big River Lodg  67.61  31   P      P        14 42 08.3  +0.3
          baz=276
N19K  Bonanza Creek   67.68  32   P      P        14 42 07.7  -0.8
N19K                              IAmb   IAmb     14 43 52.1
          comp=Z,36nm,1.6s
N19K  Bonanza Creek   67.68  32   P      P        14 42 08.9  +0.4
          baz=276
CHIR  Chirikof Islan  67.69  37   P      P        14 42 09.7  +1.2
          baz=278
L20K  Farewell, AK    67.78  30   P      P        14 42 09.9  +0.8
          baz=276
O19K  Port Alsworth   67.83  32   P      P        14 42 10.2  +0.9
          baz=277
H21K  Melozitna Rive  67.92  26   P      P        14 42 09.0  -0.8
H21K                              IAmb   IAmb     14 42 12.1
          comp=Z,12nm,0.8s
H21K  Melozitna Rive  67.92  26   P      P        14 42 10.8  +1.0
          baz=276
LPSR  Galich'ya Gora  67.93 319  eP      P        14 42 09.6  -0.5
LPSR                              pmax   pmax
          comp=Z,10.0nm,0.6s
VSR   Storozhevoye    68.00 318  eP      P        14 42 10.3  -0.2
VSR                               pmax   pmax
          comp=Z,20nm,1.1s
LVZ   Lovozero        68.11 336⇑eP      P        14 42 09.2  -1.8
LVZ                               pmax   pmax
          comp=Z,124nm,1.9s
I21K  Tanana          68.31  27   P      P        14 42 13.2  +0.9
          baz=277
MSVF  Nonsavu         68.31 121   P      P        14 42 13.7  +0.7
          comp=Z,11nm,0.8s,baz=285,slow=4.6,SNR=5.4
CHUM  Lake Minchumin  68.33  28   P      P        14 42 13.4  +1.1
          baz=277
CAST  Castle Rocks    68.49  29   P      P        14 42 14.4  +1.0
          baz=278
PPLA  Purkeypile      68.51  29   P      P        14 42 12.8  -1.0
PPLA                              IAmb   IAmb     14 42 47.8
          comp=Z,53nm,1.8s
PPLA  Purkeypile      68.51  29   P      P        14 42 14.4  +0.7
          baz=278
APA   Apatity         68.62 336⇓iP      P        14 42 14.5  +0.3
APA                               pmax   pmax
          comp=Z,8.0nm,0.8s
APA                               MLR    MLR
```

	comp=Z,3µm,23.0s						
SPCR	**Spurr Chakacha**	**68.73**	**31**	P	**P**	**14 42 15.5**	**+0.4**
	baz=278						
COLD	**Coldfoot**	**68.77**	**25**	P	**P**	**14 42 16.2**	**+1.0**
	baz=278						
OHAK	**Old Harbor**	**68.78**	**36**	P	**P**	**14 42 15.6**	**+0.3**
	baz=279						
TOLK	**Toolik Lake Re**	**68.81**	**23**	P	**P**	**14 42 16.3**	**+0.8**
	baz=278						
MLY	**Manley**	**68.85**	**27**	P	**P**	**14 42 16.3**	**+0.6**
	baz=278						
BPAW	**Bear Paw Mtn.**	**68.88**	**28**	P	**P**	**14 42 15.6**	**-0.3**
BPAW				IAmb	IAmb	14 42 45.7	
	comp=Z,20nm,0.9s						
OBN	**Obninsk**	**68.92**	**322**	⇓*e*P	**P**	**14 42 14.2**	**-2.0**
OBN				*PP	**pP**	**14 42 19.0**	**-4.7**
OBN				*SP	**sP**	**14 42 23.7**	**-2.8**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TRF	**Thorofare Moun**	**69.28**	**29**	P	**P**	**14 42 19.2**	**+0.6**
	baz=279						
I23K	**Minto, Yukon-K**	**69.41**	**27**	P	**P**	**14 42 19.5**	**+0.4**
	baz=279						
CUT	**Chulitna**	**69.46**	**30**	P	**P**	**14 42 19.8**	**+0.4**
	baz=280						
CNPM	**China Poot**	**69.47**	**33**	P	**P**	**14 42 19.1**	**-0.5**
NEA2	**Nenana**	**69.62**	**27**	P	**P**	**14 42 21.1**	**+0.6**
	baz=280						
MCK	**McKinley**	**69.83**	**28**	P	**P**	**14 42 22.2**	**+0.4**
	baz=280						
H24K	**Noodor Dome**	**69.90**	**26**	P	**P**	**14 42 22.5**	**+0.3**
H24K	**Noodor Dome**	**69.90**	**26**	P	**P**	**14 42 23.2**	**+0.9**
	baz=280						
MDM	**Murphy Dome**	**69.92**	**27**	P	**P**	**14 42 21.9**	**-0.4**
MDM				IAmb	IAmb	14 42 24.1	
	comp=Z,13nm,0.8s						
RC01	**Rabbit Creek A**	**69.93**	**31**	P	**P**	**14 42 21.9**	**-0.6**
	baz=280						
WRH	**Wood River Hil**	**70.06**	**27**	P	**P**	**14 42 23.0**	**-0.1**
TCOL	**CIGO, UAF Yank**	**70.09**	**27**	P	**P**	**14 42 25.0**	**+1.7**
	baz=281						
COLA	**College**	**70.09**	**27**	⇑*e*P	**P**	**14 42 23.3**	**0.0**
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PMR	**Palmer**	**70.13**	**31**	P	**P**	**14 42 23.4**	**-0.2**
	baz=281						
GHO	**Glory Hole Cre**	**70.19**	**30**	P	**P**	**14 42 23.4**	**-0.7**
GHO				IAmb	IAmb	14 42 26.7	
	comp=Z,9.8nm,0.8s						
POKR	**Poker Plat Res**	**70.22**	**27**	P	**P**	**14 42 23.1**	**-1.1**
POKR				IAmb	IAmb	14 42 26.8	
	comp=Z,8.4nm,0.8s						
POKR	**Poker Plat Res**	**70.22**	**27**	P	**P**	**14 42 25.3**	**+1.1**
	baz=281						
SML	**Sawmill**	**70.46**	**30**	P	**P**	**14 42 25.1**	**-0.7**
SML				IAmb	IAmb	14 42 29.2	
	comp=Z,13nm,0.8s						
SML	**Sawmill**	**70.46**	**30**	P	**P**	**14 42 25.9**	**+0.2**
	baz=281						
KNK	**Knik Glacier**	**70.48**	**31**	P	**P**	**14 42 25.9**	**+0.1**
	baz=281						
ILAR	**Eielson Array**	**70.52**	**27**	P	**P**	**14 42 24.9**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=297,slow=5.1,SNR=27						
ILAR				LR	LR	15 17 32.6	
	comp=Z,47nm,20.2s,baz=316,slow=39						
ILAR	**Eielson Array**	**70.52**	**27**	P	**P**	**14 42 25.0**	**-1.0**
KEV	**Kevo**	**70.56**	**338**	P	**P**	**14 42 25.9**	**-0.2**
KEV				pmax	pmax		
	comp=Z,182nm,1.9s						
KEV	**Kevo**	**70.56**	**338**	P	**P**	**14 42 25.9**	**-0.2**
HDA	**Harding Lake**	**70.56**	**27**	P	**P**	**14 42 24.5**	**-1.8**
	baz=282						
WAT6	**Susitna Watana**	**70.58**	**29**	P	**P**	**14 42 26.1**	**-0.4**
	baz=282						
DHY	**Denali Highway**	**70.64**	**29**	P	**P**	**14 42 26.5**	**-0.4**
DHY	**Denali Highway**	**70.64**	**29**	P	**P**	**14 42 27.2**	**+0.3**
	baz=282						
PWL	**Port Wells**	**70.65**	**31**	P	**P**	**14 42 26.5**	**-0.4**
PWL				IAmb	IAmb	14 42 28.1	
	comp=Z,13nm,0.8s						
PWL	**Port Wells**	**70.65**	**31**	P	**P**	**14 42 26.7**	**-0.1**
	baz=282						
BMAR	**Burnt Mountain**	**70.88**	**24**	P	**P**	**14 42 27.9**	**-0.3**
SCM	**Sheep Creek Mo**	**70.92**	**30**	P	**P**	**14 42 28.6**	**0.0**
	baz=282						
SPB2	**Spitsbergen Ar**	**71.10**	**348**	P	**P**	**14 42 29.2**	**-0.1**
SPA0	**Spitsbergen Ar**	**71.10**	**348**	*e*P	**P**	**14 42 29.6**	**+0.3**
SPITS	**Spitsbergen Ar**	**71.10**	**348**	P	**P**	**14 42 29.1**	**-0.2**
SPITS				pmax	pmax		
	comp=Z,198nm,1.8s						
ARA0	**ARCESS Array S**	**71.12**	**338**	*e*P	**P**	**14 42 30.2**	**+0.7**
ARCES	**ARCESS Array B**	**71.12**	**338**	P	**P**	**14 42 29.4**	**-0.1**
	comp=Z,5.1nm,0.6s,baz=70,slow=8.4,SNR=16						
ARCES				LR	LR	15 17 07.7	
	comp=Z,369nm,18.1s,baz=285,slow=39						
ARCES	**ARCESS Array B**	**71.12**	**338**	P	**P**	**14 42 29.0**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,113nm,1.9s						
ARCES	**ARCESS Array B**	**71.12**	**338**	P	**P**	**14 42 29.0**	**-0.5**
M24K	**Tolsona, Glenn**	**71.39**	**30**	P	**P**	**14 42 30.9**	**-0.5**
M24K	**Tolsona, Glenn**	**71.39**	**30**	P	**P**	**14 42 31.9**	**+0.5**
	baz=283						
PAX	**Paxson**	**71.52**	**29**	P	**P**	**14 42 32.6**	**+0.5**
	baz=283						
RIDG	**Independent Ri**	**71.61**	**28**	P	**P**	**14 42 33.2**	**+0.5**
	baz=284						
KLU	**Klutina**	**71.65**	**30**	P	**P**	**14 42 33.3**	**+0.3**
	baz=284						
SCRK	**Sand Creek**	**71.92**	**28**	P	**P**	**14 42 34.0**	**-0.6**
	baz=284						
J26L	**Joseph Creek**	**71.97**	**27**	P	**P**	**14 42 34.1**	**-0.7**
	baz=285						
KTK1	**Kautokeino**	**72.03**	**338**	*e*P	**P**	**14 42 35.5**	**+0.4**
N25K	**Chitina, Valde**	**72.24**	**30**	P	**P**	**14 42 36.7**	**+0.1**
	baz=285						
BMRM	**Bremner River**	**72.40**	**31**	P	**P**	**14 42 37.8**	**+0.3**
	baz=285						
L26K	**Log Cabin Wild**	**72.44**	**28**	P	**P**	**14 42 38.2**	**+0.6**
	baz=285						
GLB	**Gilahina Butte**	**72.65**	**30**	P	**P**	**14 42 38.0**	**-0.9**
M26K	**Nabesna, AK**	**72.76**	**29**	P	**P**	**14 42 40.6**	**+1.0**
	baz=286						
JETT	**Jettan, Norway**	**72.83**	**339**	*e*P	**P**	**14 42 40.9**	**+1.1**
FIA1	**FINESS Array S**	**72.96**	**330**	P	**P**	**14 42 39.9**	**-0.7**
FINES	**FINESS Array B**	**72.96**	**330**	P	**P**	**14 42 40.4**	**-0.2**
	comp=Z,8.3nm,0.7s,baz=53,slow=5.7,SNR=21						
FINES				LR	LR	15 19 24.5	
	comp=Z,613nm,18.3s,baz=334,slow=40						
FINES	**FINESS Array B**	**72.96**	**330**	*i* P	**P**	**14 42 40.9**	**+0.3**
FINES				pmax	pmax		
	comp=Z,8.0nm,0.7s						
FINES	**FINESS Array B**	**72.96**	**330**	P	**P**	**14 42 40.3**	**-0.3**
MCARA	**McCarthy VSAT**	**73.03**	**30**	P	**P**	**14 42 41.7**	**+0.6**
	baz=286						
L27K	**Beaver Creek,**	**73.10**	**28**	P	**P**	**14 42 42.4**	**+0.9**
	baz=286						
BCAR	**Beaver Creek A**	**73.11**	**28**	P	**P**	**14 42 41.2**	**-0.4**
CRQE	**Cirque**	**73.17**	**31**	P	**P**	**14 42 42.9**	**+0.7**
	baz=286						
M27K	**Edge Creek, AK**	**73.28**	**29**	P	**P**	**14 42 42.5**	**-0.2**
M27K	**Edge Creek, AK**	**73.28**	**29**	P	**P**	**14 42 43.8**	**+1.1**
	baz=287						
TRO	**Tromso**	**73.30**	**339**	*e*P	**P**	**14 42 43.2**	**+0.7**
DAWY	**Dawson**	**73.84**	**27**	P	**P**	**14 42 46.1**	**+0.2**
	baz=288						
MESA	**MESA**	**73.88**	**31**	P	**P**	**14 42 45.8**	**-0.6**
	baz=287						
CTG	**Chitna Glacier**	**73.93**	**30**	P	**P**	**14 42 47.8**	**+1.2**
	baz=288						
NOR	**Nord**	**73.95**	**354**	*i* P	**P**	**14 42 44.7**	**-1.5**
NOR				IAmb	IAmb	14 42 47.0	
	comp=Z,9.2nm,0.7s						
AKASG	**Malin Array Be**	**74.24**	**319**	P	**P**	**14 42 47.5**	**-0.9**
	comp=Z,2.2nm,0.6s,baz=60,slow=6.4,SNR=6.6						
AKASG				LR	LR	15 17 46.1	
	comp=Z,175nm,19.7s,baz=320,slow=38						
BRTR	**Keskin Array B**	**74.33**	**307**	P	**P**	**14 42 50.0**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=92,slow=9.2,SNR=6.3						
BRTR				LR	LR	15 18 57.3	
	comp=Z,170nm,19.7s,baz=12,slow=38						
BRTR	**Keskin Array B**	**74.33**	**307**	*i* P	**P**	**14 42 51.0**	**+1.6**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NACGM	**Naroch**	**74.45**	**323**	*i* P	**P**	**14 42 45.2**	**-4.3**
INK	**Inuvik**	**74.61**	**22**	P	**P**	**14 42 49.8**	**-0.4**
	comp=Z,6.4nm,0.8s,baz=292,slow=3.9						
INK	**Inuvik**	**74.61**	**22**	P	**P**	**14 42 49.9**	**-0.2**
	baz=292						
PINM	**Pinnacle**	**74.71**	**31**	P	**P**	**14 42 52.2**	**+1.1**
	baz=289						
MMAI	**Mount Meron Ar**	**74.91**	**300**	P	**P**	**14 42 53.4**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=69,slow=9.4,SNR=2.0						
STEI	**Steigen**	**75.17**	**338**	*e*P	**P**	**14 42 53.5**	**0.0**
PNL	**Peninsula**	**75.26**	**31**	P	**P**	**14 42 53.8**	**-0.4**
	baz=289						
FAUS	**Fauske**	**75.38**	**337**	*e*P	**P**	**14 42 55.6**	**+1.0**
M30M	**Minto, Yukon**	**75.44**	**28**	P	**P**	**14 42 56.2**	**+1.0**
	baz=291						
PABE	**Paberze**	**75.80**	**324**	*e*P	**P**	**14 42 57.1**	**-0.1**
MOR8	**Moi Rana**	**76.18**	**336**	*e*P	**P**	**14 42 59.0**	**-0.3**
M31M	**Drury Creek, Y**	**76.62**	**28**	P	**P**	**14 43 01.7**	**-0.2**
	baz=293						
SUW	**Suwalki**	**76.73**	**323**	*e*P	**P**	**14 43 01.8**	**-0.8**
SKAG	**Skagway**	**77.27**	**31**	P	**P**	**14 43 04.7**	**-0.8**
	baz=293						
NSS	**Namsos**	**77.83**	**335**	*e*P	**P**	**14 43 08.9**	**+0.4**
MLR	**Muntele Rosu**	**77.95**	**314**	P	**P**	**14 43 09.1**	**-0.7**
	comp=Z,3.4nm,0.6s,baz=270,slow=2.0,SNR=4.8						
MLR	**Muntele Rosu**	**77.95**	**314**	P	**P**	**14 43 08.2**	**-1.6**
MLR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MLR	**Muntele Rosu**	**77.95**	**314**	P	**P**	**14 43 08.2**	**-1.6**
DAG	**Danmarks Havn**	**77.98**	**351**	*i* P	**P**	**14 43 08.0**	**-1.2**
DAG				IAmb	IAmb	14 43 10.0	
	comp=Z,11nm,1.0s						
NC405	**NORSAR Array S**	**79.51**	**332**	P	**P**	**14 43 16.6**	**-1.4**
CRVS	**Cervenica-Dubn**	**79.58**	**319**	*e*P	**P**	**14 43 22.4**	**+3.8**
CRVS	**Cervenica-Dubn**	**79.58**	**319**	*e*P	**P**	**14 43 22.4**	**+3.8**
NB2	**NORSAR Subarra**	**79.76**	**332**	P	**P**	**14 43 17.7**	**-1.6**
	comp=Z,2.0nm,0.5s,baz=60,slow=5.6						
NB2	**NORSAR Subarra**	**79.76**	**332**	P	**P**	**14 43 17.7**	**-1.6**
	baz=60,slow=5.6						
NOA	**NORSAR Array B**	**79.76**	**332**	P	**P**	**14 43 18.5**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=83,slow=5.5,SNR=13						
NOA				LR	LR	15 22 39.5	
	comp=Z,404nm,18.2s,baz=35,slow=39						
NC204	**NORSAR Array S**	**79.84**	**333**	P	**P**	**14 43 18.3**	**-1.5**
URZ	**Urewera**	**79.91**	**139**	P	**P**	**14 43 19.7**	**-0.6**
	comp=Z,8.5nm,0.8s,baz=298,slow=23,SNR=6.5						
NAO01	**NORSAR Array S**	**79.99**	**332**	P	**P**	**14 43 19.4**	**-1.2**
NEEM	**North Greenlan**	**80.09**	**358**	⇑*i*P	**P**	**14 43 21.3**	**+0.1**
NEEM				IAmb	IAmb	14 43 21.6	
	comp=Z,34nm,0.7s						
BKZ	**Black Stump Fm**	**80.11**	**140**	P	**P**	**14 43 20.8**	**-0.6**
BKZ				IAmb	IAmb	14 43 24.4	
	comp=Z,38nm,1.3s						
DOMB	**Dombas**	**80.17**	**334**	*e*P	**P**	**14 43 22.1**	**+0.6**
DBG	**Daneborg**	**80.21**	**350**	*i* P	**P**	**14 43 21.0**	**-0.5**
DBG				IAmb	IAmb	14 43 22.5	
	comp=Z,21nm,0.8s						
MOL	**Molde**	**80.51**	**335**	*e*P	**P**	**14 43 23.2**	**0.0**
AKN	**Aaknes**	**80.94**	**334**	*e*P	**P**	**14 43 26.9**	**+1.3**
VYHS	**Vyhne**	**81.34**	**319**	*e*P	**P**	**14 43 28.2**	**+0.2**
VYHS	**Vyhne**	**81.34**	**319**	*e*P	**P**	**14 43 28.2**	**+0.2**
KRLC	**Kraliky**	**81.89**	**321**	*e*P	**P**	**14 43 31.5**	**+0.5**
KRLC	**Kraliky**	**81.89**	**321**	*e*P	**P**	**14 43 31.5**	**+0.5**
DPC	**Dobruska-Polom**	**82.04**	**321**	*e*P	**P**	**14 43 32.2**	**+0.5**
DPC	**Dobruska-Polom**	**82.04**	**321**	*e*P	**P**	**14 43 32.2**	**+0.5**
ASK	**Askoy**	**82.58**	**333**	*e*P	**P**	**14 43 35.1**	**+0.8**
CONA	**Conrad Observa**	**83.38**	**319**	*e*P	**P**	**14 43 39.0**	**+0.2**
	comp=Z,9.5nm,1.3s						
CLL	**Collm**	**83.49**	**323**	*e*P	**P**	**14 43 38.0**	**-1.1**
CLL	**Collm**	**83.49**	**323**	*e*P	**P**	**14 43 38.0**	**-1.1**
ITM	**Ithomi**	**83.84**	**308**	P	**P**	**14 43 40.2**	**-1.1**
CKRC	**Cesky Krumlov**	**83.90**	**321**	*e*P	**P**	**14 43 45.4**	**+4.0**
SUMG	**Summit**	**84.12**	**354**	*i* P	**P**	**14 43 41.5**	**-1.0**
SUMG				IAmb	IAmb	14 43 43.1	
	comp=Z,23nm,0.8s						
KHC	**Kasperske Hory**	**84.18**	**321**	*e*P	**P**	**14 43 42.7**	**-0.1**
KHC	**Kasperske Hory**	**84.18**	**321**	*e*P	**P**	**14 43 42.7**	**-0.1**
GERES	**GERESS Array B**	**84.24**	**321**	P	**P**	**14 43 42.8**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=52,slow=5.2,SNR=12						
GERES				LR	LR	15 23 13.6	
	comp=Z,302nm,18.9s,baz=10,slow=37						
YKA	**Yellowknife Ar**	**84.34**	**23**	P	**P**	**14 43 42.7**	**-0.6**
	comp=Z,3.4nm,0.9s,baz=314,slow=4.6,SNR=14						
MOA	**Molln**	**84.37**	**320**	*e*P	**P**	**14 43 44.7**	**+1.0**
	comp=Z,5.4nm,0.8s						
SOKA	**Soboth**	**84.44**	**318**	*e*P	**P**	**14 43 44.1**	**-0.1**
	comp=Z,3.3nm,0.9s						
KMBO	**Kilima Mbogo**	**85.09**	**267**	P	**P**	**14 43 47.8**	**-0.5**
	comp=Z,2.2nm,0.5s,baz=33,slow=8.4,SNR=2.9						
ZOU	**Zoufplan**	**85.76**	**319**	P	**P**	**14 43 50.0**	**-0.9**
ZOU				IAmb	IAmb	14 43 59.4	
	comp=Z,18nm,1.6s						
ABTA	**Abfaltersbach**	**85.94**	**319**	*e*P	**P**	**14 43 52.1**	**+0.3**
	comp=Z,2.5nm,0.5s						
WTTA	**Wattenberg**	**86.22**	**320**	*e*P	**P**	**14 43 54.4**	**+1.2**
	comp=Z,7.2nm,1.0s						
MOTA	**Moosalm**	**86.49**	**320**	*e*P	**P**	**14 43 55.2**	**+0.7**
	comp=Z,7.6nm,1.0s						
DAVOX	**Davos/Dischmat**	**87.50**	**320**	P	**P**	**14 44 00.1**	**+0.6**
	comp=Z,2.8nm,0.6s,baz=307,slow=11,SNR=5.4						
ICESG	**Greenland Ices**	**87.57**	**353**	*i* P	**P**	**14 43 58.3**	**-1.3**
ICESG				IAmb	IAmb	14 44 00.7	
	comp=Z,32nm,1.0s						
EKA	**Eskdalemuir Ar**	**89.24**	**332**	P	**P**	**14 44 07.8**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=65,slow=6.8,SNR=4.2						
DY2G	**Dye2**	**90.74**	**355**	*i* P	**P**	**14 44 13.5**	**-0.9**
DY2G				IAmb	IAmb	14 44 15.2	
	comp=Z,25nm,0.7s						
KEST	**Kesra**	**93.51**	**311**	P	**P**	**14 44 27.1**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=291,slow=3.9,SNR=4.0						
ESDC	**Sonseca Array**	**99.83**	**320**	LR	LR	15 31 37.9	
	comp=Z,159nm,18.2s,baz=355,slow=36						
SYO	**Syowa Base**	**108.00**	**202**	⇓*e*Pdiff	**Pdif**	**14 45 30.6**	**-0.9**
SYO	**Syowa Base**	**108.00**	**202**	⇓*e*pPdiff	pPdif	14 45 40.8	+1.8
TORD	**Torodi Ar. Bea**	**111.15**	**295**	PKiKP	**PKiKP**	**14 49 44.4**	**-1.5**
	comp=Z,0.8nm,0.7s,baz=36,slow=3.1,SNR=3.5						
TXAR	**Lajitas Array**	**112.53**	**42**	PKiKP	**PKiKP**	**14 49 46.6**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=188,slow=1.7,SNR=6.8						
DBIC	**Dimbokro**	**119.99**	**292**	PKP	**PKiKP**	**14 50 02.9**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=178,slow=0.5,SNR=4.8						
SNAA	**Sanae**	**121.80**	**198**	PKPdf	**PKPdf**	**14 50 04.4**	**-0.4**
VNA2	**Neumayer--Watz**	**123.45**	**198**	PKPdf	**PKPdf**	**14 50 06.9**	**-0.9**
	baz=79,slow=1.2						
VNA1	**Neumayer--Stat**	**123.84**	**198**	PKPdf	**PKPdf**	**14 50 08.0**	**-0.6**
VNA3	**Neumayer Olymp**	**123.91**	**197**	PKPdf	**PKPdf**	**14 50 07.6**	**-1.1**
PLCA	**Paso Flores**	**159.25**	**153**	PKPab	**PKPab**	**14 51 46.3**	**-0.8**
	comp=Z,2.5nm,0.8s,baz=283,slow=7.2,SNR=4.7						

NEIC ***03*** *14:48:15.6±2.3, 30°.47S±0°.03×72°.35W±0°.05, h10^{km}±1^{km}, mb4.4/3, ML4.0(GUC), Error ellipse: s-maj=8.7km s-min=2.9km az=117.0*

IDC ***03*** *14:48:18.2±1.1, 30°.67S×71°.49W, h0^{km}, mb4.0/4, mb1 4.0/8, mb1mx3.8/31, mbtmp3.9/8, ML3.7/4, MS3.2/2, Ms1 3.2/2, ms1mx2.8/36, Error ellipse: s-maj=41.4km s-min=21.9km az=94.0*

GUC ***03*** *14:48:19.7±0.7, 30°.55S×72°.02W, h39^{km}±2^{km}, ML4.0*

ISC 03 14:48:17.3±1.9**, 30°.50S**±0°.04×**72°.21W**±0°.09**, h17**^{km}±10^{km}**, n48, σ1§41**/54**, mb4.4**/5**, 2C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.53**	**110**	⇓*i*P	**Pg**	**14 48 27.9**	**+0.1**
CO06				*i* S	**Sg**	**14 48 33.9**	**-1.0**
CO06	**Fray Jorge**	**0.53**	**110**	Pg	**Pg**	**14 48 27.9**	**+0.1**
CO05	**La Serena**	**1.02**	**56**	*e*P	**Pb**	**14 48 36.5**	**-0.1**
CO05				*i* S	**Sb**	**14 48 49.6**	**-0.1**
CO05	**La Serena**	**1.02**	**56**		**Pb**	**14 48 36.2**	**-0.3**
GO04	**Tololo Observa**	**1.26**	**75**	⇓*i*P	**Pn**	**14 48 40.0**	**-0.4**
GO04				*i* S	**Sb**	**14 48 56.8**	**-0.1**
GO04				IAML		14 49 01.1	
	comp=N,8µm,0.5s						
LCO	**Las Campanas**	**1.98**	**42**	⇑*e*P	**Pn**	**14 48 50.6**	**+0.3**
LCO				*e*S	**Sn**	**14 49 15.7**	**+0.8**
LCO	**Las Campanas**	**1.98**	**42**		**Pn**	**14 48 50.7**	**+0.3**
VA06	**Catapilco**	**2.20**	**159**	*e*P	**Pn**	**14 48 53.8**	**+0.7**
VA06				*e*S	**Sn**	**14 49 20.4**	**+0.4**
AC04	**Llanos de Chal**	**2.49**	**24**		**Pn**	**14 48 56.9**	**-0.3**
VA01	**Torpederas**	**2.56**	**169**		**Pn**	**14 48 58.6**	**+0.6**
VA03	**San Esteban**	**2.67**	**148**	*e*P	**Pn**	**14 49 00.5**	**+0.9**
VA03				*e*S	**Sn**	**14 49 31.1**	**-0.5**
VA03				IAML		14 49 43.6	
	comp=E,943nm,0.4s						
VA03	**San Esteban**	**2.67**	**148**		**Pn**	**14 48 58.3**	**-1.3**
ROCH	**El Roble**	**2.67**	**158**	⇑*e*P	**Pn**	**14 49 00.7**	**+1.0**
ROCH				⇓*i*P	**Pn**	**14 49 00.8**	**+1.0**
ROCH				*e*S	**Sn**	**14 49 31.8**	**0.0**
ROCH				*e*S	**Sn**	**14 49 32.1**	**+0.3**
ROCH				IAML		14 49 49.8	
	comp=N,761nm,0.3s						
ROCH				IAML		14 49 50.0	
	comp=N,1µm,0.4s						
MT02	**Curacav**	**2.90**	**162**	*e*P	**Pn**	**14 49 03.8**	**+1.1**
MT02				*e*S	**Sn**	**14 49 37.2**	**-0.1**
MT02				IAML		14 49 55.0	
	comp=E,258nm,0.4s						
MT02	**Curacav**	**2.90**	**162**		**Pn**	**14 49 03.8**	**+1.1**
PEL	**Peldehue**	**2.94**	**154**	*e*P	**Pn**	**14 49 04.2**	**+0.9**
PEL				*e*S	**Sn**	**14 49 38.5**	**+0.2**
PEL				IAML		14 49 54.1	
	comp=N,417nm,0.4s						
PEL	**Peldehue**	**2.94**	**154**		**Pn**	**14 49 04.0**	**+0.7**
MT05	**Renca**	**3.15**	**157**	IAML		14 49 59.2	
	comp=E,1µm,0.3s						
ZON	**Zonda**	**3.21**	**110**		**Pn**	**14 49 05.6**	**-1.4**
MT09	**Talagante**	**3.43**	**163**	*e*P	**Pn**	**14 49 11.5**	**+1.4**
MT09	**Talagante**	**3.43**	**163**		**Pn**	**14 49 10.6**	**+0.5**
MT01	**Popeta**	**3.45**	**167**		**Pn**	**14 49 11.0**	**+0.7**
BO01	**Tunca**	**4.00**	**167**		**Pn**	**14 49 17.7**	**-0.1**
BO02	**Sierra Bellavi**	**4.45**	**165**		**Pn**	**14 49 25.3**	**+1.2**
GO05	**Huala**	**4.50**	**177**	Pn	**Pn**	**14 49 23.8**	**-1.0**
AC02	**Maricunga**	**4.54**	**37**	Pn	**Pn**	**14 49 27.1**	**+1.3**
PB14	**IPOC Station P**	**6.07**	**16**	Pn	**Pn**	**14 49 45.0**	**-1.6**
LC01	**Cunco**	**8.38**	**178**	Pn	**Pn**	**14 50 17.4**	**-0.7**
LVC	**Limon Verde**	**8.39**	**21**	Pn	**Pn**	**14 50 22.8**	**+4.2**
	comp=E,0.3nm,0.3s,baz=202,slow=3.5,SNR=2.4						
LVC				Sn	**Sn**	**14 51 48.7**	**-4.5**
	comp=E,0.4nm,0.3s,baz=187,slow=15,SNR=1.2						
LVC				Lg	Lg	14 52 23.4	
	comp=E,0.3nm,0.3s,baz=8.8,slow=17,SNR=2.6						
PB01	**IPOC Station P**	**9.73**	**15**	Pn	**Pn**	**14 50 34.3**	**-2.3**
PLCA	**Paso Flores**	**10.30**	**173**	Pn	**Pn**	**14 50 45.0**	**+0.6**
	comp=E,0.2nm,0.3s,baz=328,slow=9.6,SNR=6.3						
PLCA	**Paso Flores**	**10.30**	**173**	Pn	**Pn**	**14 50 42.1**	**-2.3**
CPUP	**Villa Florida**	**13.74**	**76**	LR	LR	14 57 06.7	
	comp=E,85nm,19.9s,baz=302,slow=40						
LPAZ	**La Paz**	**14.63**	**16**	Pn	**Pn**	**14 51 47.3**	**+3.1**
	comp=E,0.1nm,0.3s,baz=146,slow=4.5,SNR=2.8						
SIV	**San Ignacio**	**17.68**	**38**	P	**P**	**14 52 24.1**	**+0.3**
	comp=E,0.3nm,0.3s,baz=211,slow=9.9,SNR=13						
SIV				LR	LR	15 00 03.9	
	comp=E,100nm,22.0s,baz=284,slow=40						
BDFB	**Brasilia**	**26.64**	**62**	P	**P**	**14 53 55.0**	**-0.4**
	comp=E,2.9nm,0.6s,baz=250,slow=11,SNR=4.2						
SNAA	**Sanae**	**54.88**	**159**	P	**P**	**14 57 48.1**	**+1.5**
	comp=E,2.4nm,0.5s,baz=272,slow=10,SNR=15						
SNAA	**Sanae**	**54.88**	**159**	P	**P**	**14 57 45.9**	**-0.7**
SNAA				IAmb	IAmb	14 57 49.2	
	comp=Z,2.7nm,0.7s						
QSPA	**South Pole Qui**	**59.73**	**180**	P	**P**	**14 58 20.5**	**-0.5**
QSPA				IAmb	IAmb	14 58 28.4	
	comp=Z,5.0nm,1.4s						
TXAR	**Lajitas Array**	**66.62**	**330**	P	P	14 59 14.8	+7.8
	comp=Z,0.1nm,0.6s,baz=161,slow=5.7,SNR=2.9						
TORD	**Torodi Ar. Bea**	**83.17**	**70**	P	**P**	**15 00 44.0**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=259,slow=4.9,SNR=12						
TORD	**Torodi Ar. Bea**	**83.17**	**70**	P	**P**	**15 00 40.4**	**-2.5**
TORD				IAmb	IAmb	15 00 45.1	
	comp=Z,2.2nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**125.60**	**272**	T	T	17 26 04.5	
	baz=118						
H11S1	**WAKE ISLAND Hy**	**125.61**	**272**	T	T	17 26 03.1	
	baz=118						
H11S3	**WAKE ISLAND Hy**	**125.61**	**272**	T	T	17 26 04.0	
	baz=118						
KURBB	**Kurchatov Arra**	**150.34**	**39**	PKPbc	**PKiKP**	**15 08 09.9**	**+1.8**
	comp=Z,1.6nm,0.7s,baz=303,slow=3.2,SNR=11						
ZALV	**Zalesovo Beam**	**151.29**	**29**	PKPbc	**PKiKP**	**15 08 11.8**	**+1.8**
	comp=Z,5.8nm,0.7s,baz=300,slow=2.9,SNR=25						
MKAR	**Makanchi Array**	**154.45**	**43**	PKPbc	**PKiKP**	**15 08 17.6**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=262,slow=0.9,SNR=3.5						

IDC 03 14:51:53.9±49.0**, 19°.05S**×**175°.48W, h0**^{km}**, mb4.0**/3**, mb1 4.1**/3**, mb1mx3.7**/39**, mbtmp4.0**/3**, Error ellipse: s-maj=914.3km s-min=174.4km az=82.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.55**	**243**	P	P	14 59 35.2	+0.1
	0.7nm,0.4s,baz=81,slow=10,SNR=3.3						
WRA	**Warramunga Arr**	**47.17**	**260**	P	P	15 00 28.4	-0.2
	1.0nm,0.6s,baz=97,slow=8.1,SNR=28						
ASAR	**Alice Springs**	**47.17**	**255**	P	P	15 00 28.4	-0.2
	2.4nm,0.8s,baz=88,slow=8.3,SNR=18						

VAO ***03*** *14:55:11.9±0.8, 23°.01S×70°.89W, h10^{km}, mb4.2*

SJA ***03*** *14:55:37.4±0.8, 22°.50S×68°.95W, h114^{km}±4^{km}, ML4.3, MW4.2*

IDC ***03*** *14:55:38.3±0.5, 22°.61S×68°.91W, h95^{km}±4^{km}, mb3.9/5, mb1 3.9/8, mb1mx3.7/29, mbtmp4.1/8, MS3.1/1, Ms1 3.1/1, ms1mx2.5/31, Error ellipse: s-maj=23.7km s-min=14.4km az=103.0*

NEIC ***03*** *14:55:38.5±1.7, 22°.51S±0°.04×68°.85W±0°.09, h96^{km}±5^{km}, Error ellipse: s-maj=12.4km s-min=5.3km az=107.0*

GUC ***03*** *14:55:39.3±0.7, 22°.52S×68°.81W, h87^{km}±3^{km}, ML4.2*

ISC 03 14:55:38.2±0.5**, 22°.49S**±0°.03×**68°.86W**±0°.04**, h95**^{km}±4^{km}**, n112, σ1§46**/150**, mb4.2**/7**, 2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.13**	**202**	LR	LR	14 55 39.6	
	comp=Z,75nm,20.1s,baz=95,slow=419						
LVC				P	**Pn**	**14 55 52.2**	**+0.2**
	867nm,0.3s,baz=8.4,slow=1.7,SNR=5267						
LVC				S	**Sn**	**14 56 02.1**	**-0.2**
	1µm,0.3s,baz=277,slow=20,SNR=15						
LVC	**Limon Verde**	**0.13**	**202**	*e*P	**Pn**	**14 55 51.9**	**-0.2**
LVC				*e*S	**Sn**	**14 56 02.1**	**-0.2**
LVC	**Limon Verde**	**0.13**	**202**		**Pn**	**14 55 52.5**	**+0.4**
LVC	**Limon Verde**	**0.13**	**202**	*e*P	**Pn**	**14 55 52.5**	**+0.4**
LVC				*e*S	**Sn**	**14 56 03.0**	**+0.7**
PB06	**IPOC Station P**	**0.69**	**252**	*e*P	**Pn**	**14 55 55.9**	**+0.7**
PB06				*e*S	**Sn**	**14 56 08.7**	**+0.6**
PB06				IAML		14 56 09.5	
	comp=E,14µm,0.1s						
PB06	**IPOC Station P**	**0.69**	**252**		**Pn**	**14 55 55.7**	**+0.5**
PB06	**IPOC Station P**	**0.69**	**252**	*e*P	**Pn**	**14 55 56.0**	**+0.8**
PB06				*e*S	**Sn**	**14 56 04.9**	**-3.1**
PB06				IAML		14 56 11.6	
	comp=Z,10µm,0.3s						
PB09	**IPOC Station P**	**0.78**	**333**	*e*P	**Pn**	**14 55 57.4**	**+1.3**
PB09				*e*S	**Sn**	**14 56 10.9**	**+1.5**
PB09				IAML		14 56 12.3	
	comp=N,10µm,0.5s						
PB09	**IPOC Station P**	**0.78**	**333**		**Pn**	**14 55 56.9**	**+0.8**
PB09	**IPOC Station P**	**0.78**	**333**	*e*P	**Pn**	**14 55 57.4**	**+1.3**
PB09				*e*S	**Sn**	**14 56 12.8**	**+3.4**
PB09				IAML		14 56 15.0	
	comp=Z,4µm,0.5s						
PB15	**IPOC Station P**	**0.91**	**218**	*e*P	**Pn**	**14 55 58.5**	**+1.0**
PB15				*e*S	**Sn**	**14 56 12.7**	**+0.7**
PB15	**IPOC Station P**	**0.91**	**218**		**Pn**	**14 55 58.5**	**+1.0**
PB15	**IPOC Station P**	**0.91**	**218**	*e*P	**Pn**	**14 55 58.5**	**+1.0**
PB15				*e*S	**Sn**	**14 56 13.8**	**+1.8**
PB15				*e*S	**Sn**	**14 56 14.5**	**+2.5**
PB03	**IPOC Station P**	**0.94**	**298**	⇓*e*P	**Pn**	**14 55 58.5**	**+0.7**
PB03				*e*S	**Sn**	**14 56 13.1**	**+0.7**
PB03				IAML		14 56 13.8	
	comp=N,10µm,0.4s						
PB03	**IPOC Station P**	**0.94**	**298**	*e*P	**Pn**	**14 55 58.4**	**+0.7**
PB03				IAML		14 56 13.5	
	comp=Z,6µm,0.5s						
PB03				*e*S	**Sn**	**14 56 13.6**	**+1.2**
PB04	**IPOC Station P**	**1.21**	**277**	*e*P	**Pn**	**14 56 01.2**	**+0.5**
PB04				*e*S	**Sn**	**14 56 19.0**	**+1.2**
PB04				IAML		14 56 23.3	
	comp=N,6µm,0.3s						
PB04	**IPOC Station P**	**1.21**	**277**		**Pn**	**14 56 01.4**	**+0.7**
PB04	**IPOC Station P**	**1.21**	**277**	*e*P	**Pn**	**14 56 01.3**	**+0.5**
PB04				*e*S	**Sn**	**14 56 19.6**	**+1.8**
PB04				IAML		14 56 22.4	
	comp=Z,5µm,0.5s						
PB07	**IPOC Station P**	**1.22**	**308**	⇓*e*P	**Pn**	**14 56 01.8**	**+0.9**
PB07				*e*S	**Sn**	**14 56 19.1**	**+1.0**
PB07				IAML		14 56 24.8	
	comp=N,5µm,0.5s						
PB07	**IPOC Station P**	**1.22**	**308**		**Pn**	**14 56 01.1**	**+0.2**
PB07	**IPOC Station P**	**1.22**	**308**	*e*P	**Pn**	**14 56 01.5**	**+0.6**
PB07				*e*S	**Sn**	**14 56 19.6**	**+1.5**

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PB07                                     IAML                14 56 20.4
           comp=Z,3µm,0.3s
PB05  IPOC Station P    1.29 254  eP          Pn         14 56 02.2 +0.4
PB05                              eS          Sn         14 56 20.2 +0.6
PB05                               IAML                  14 56 25.4
           comp=N,5µm,0.3s
PB05  IPOC Station P    1.29 254  eP          Pn         14 56 02.0 +0.2
PB05                              eS          Sn         14 56 20.8 +1.2
PB05                               IAML                  14 56 24.1
           comp=Z,3µm,1.0s
PB02  IPOC Station P    1.51 320  eP          Pn         14 56 05.4 +1.0
PB02                              eS          Sn         14 56 25.4 +1.1
PB02                               IAML                  14 56 31.6
           comp=E,7µm,0.4s
PB02  IPOC Station P    1.51 320  eP          Pn         14 56 05.4 +1.0
PB02                              eS          Sn         14 56 25.5 +1.2
PB02                               IAML                  14 56 33.8
           comp=Z,6µm,0.3s
PB01  IPOC Station P    1.55 338  eP          Pn         14 56 06.1 +1.1
PB01                              eS          Sn         14 56 26.1 +0.9
PB01                               IAML                  14 56 28.5
           comp=E,4µm,0.5s
PB01  IPOC Station P    1.55 338              Pn         14 56 05.5 +0.6
PB01  IPOC Station P    1.55 338  eP          Pn         14 56 06.0 +1.1
PB01                              eS          Sn         14 56 26.3 +1.1
PB01                               IAML                  14 56 27.8
           comp=Z,2µm,0.2s
PB10  IPOC Station P    1.87 237  eP          Pn         14 56 09.2 +0.4
PB10                              eS          Sn         14 56 30.7  -1.5
PB10                               IAML                  14 56 39.9
           comp=N,2µm,0.6s
PB10  IPOC Station P    1.87 237   Pn         Pn         14 56 09.4 +0.6
PB10  IPOC Station P    1.87 237  eP          Pn         14 56 09.0 +0.2
PB10                              eS          Sn         14 56 31.0  -1.2
PB10                              eS          Sn         14 56 31.2  -1.0
PB10                              eS          Sn         14 56 38.3 +6.1
PB10                              eS          Sn         14 56 39.0 +6.9
PB10                               IAML                  14 56 40.2
           comp=Z,1µm,0.4s
PATCX Punta Patache     2.05 324              Pn         14 56 11.7 +0.4
PATCX Punta Patache     2.05 324  eP          Pn         14 56 11.9 +0.6
PATCX                             eP          Pn         14 56 11.9 +0.6
PATCX                             eP          Pn         14 56 12.3 +0.9
PATCX                             eS          Sn         14 56 37.6 +1.0
PATCX                              IAML                  14 56 42.7
           comp=Z,1µm,0.5s
TA01  Diego Aracena     2.28 327  eP          Pn         14 56 14.2   0.0
TA01                              eS          Sn         14 56 42.8 +1.0
TA01                               IAML                  14 56 49.9
           comp=E,2µm,0.6s
TA01  Diego Aracena     2.28 327   Pn         Pn         14 56 14.2   0.0
TA01  Diego Aracena     2.28 327  eP          Pn         14 56 14.4 +0.3
TA01                               IAML                  14 56 55.3
           comp=Z,864nm,0.4s
PB08  IPOC Station P    2.35 353  eP          Pn         14 56 16.9 +1.4
PB08                              eS          Sn         14 56 46.2 +2.1
PB08                               IAML                  14 56 54.8
           comp=N,1µm,0.8s
PB08  IPOC Station P    2.35 353              Pn         14 56 17.0 +1.4
PB08  IPOC Station P    2.35 353  eP          Pn         14 56 17.0 +1.4
PB08                              eS          Sn         14 56 28.0   -16
TA02  Huaiquique        2.51 331   Pn         Pn         14 56 17.2   0.0
TA02  Huaiquique        2.51 331  eP          Pn         14 55 58.5   -19
TA02                              eP          Pn         14 56 17.8 +0.6
TA02                              eS          Sn         14 56 38.3  -8.9
TA02                               IAML                  14 56 56.3
           comp=Z,865nm,0.2s
PB14  IPOC Station P    2.56 213   Pn         Pn         14 56 18.6 +0.4
PB14  IPOC Station P    2.56 213  eP          Pn         14 56 18.4 +0.2
PB14                              eS          Sn         14 56 48.0  -0.8
PB14                              eS          Sn         14 56 51.3 +2.4
PB14                               IAML                  14 56 58.4
           comp=Z,2µm,0.3s
PB11  IPOC Station P    2.81 344   Pn         Pn         14 56 21.6 +0.1
YJA   Yavi              3.11  85  eP          Pn         14 56 28.6 +2.9
PSGCX Pisagua           3.11 337              Pn         14 56 24.2  -1.2
PSGCX Pisagua           3.11 337  eP          Pn         14 56 11.0   -14
PSGCX                             eP          Pn         14 56 20.8  -4.6
PSGCX                             eP          Pn         14 56 24.3  -1.2
PSGCX                             eP          Pn         14 56 24.3  -1.2
PSGCX                              IAML                  14 57 30.6
           comp=Z,441nm,0.7s
AZAP  Zapla             3.89 117  eP          Pn         14 56 38.4 +2.4
PB12  IPOC Station P    4.09 340   Pn         Pn         14 56 37.4  -1.3
PB12  IPOC Station P    4.09 340  eP          Pn         14 56 39.2 +0.5
PB12                              eS          Sn         14 57 25.3  -0.3
PB16  IPOC Station P    4.18 351              Pn         14 56 41.3 +1.0
ASTB  Santa Barbara     4.30 111  eP          Pn         14 56 43.4 +1.9
AC02  Maricunga         4.33 183   Pn         Pn         14 56 42.9 +0.6
AC02  Maricunga         4.33 183  eP          Pn         14 56 42.9 +0.6
AC02                              eS          Sn         14 57 13.8   -18
AC02                               IAML                  14 58 08.5
           comp=Z,304nm,0.9s
ALOL  LOMAS DE OLMED    4.68 107  eP          Pn         14 56 48.3 +1.8
GO03  Copiap            5.23 194   Pn         Pn         14 56 52.3  -1.8
AC04  Llanos de Chal    6.03 199   Pn         Pn         14 57 03.0  -1.9
LPAZ  La Paz            6.21   6   P          Pn         14 57 09.8 +2.0
           comp=Z,2.2nm,0.3s,baz=224,slow=5.8,SNR=31
VCA   Vinchina          6.25 175   IAML                  14 58 41.5
           comp=Z,50nm,0.9s
CO06  Fray Jorge        8.52 196   Pn         Pn         14 57 35.9  -2.9
SIV   San Ignacio       9.79  50   P          Pn         14 57 54.0  -2.1
           comp=Z,9.2nm,0.3s,baz=246,slow=9.7,SNR=90
SIV                                S          Sn         14 59 32.8   -11
           baz=265,slow=17,SNR=1.2
MT02  Curacav          10.92 190   Pn         Pn         14 58 10.5  -0.9
CPUP  Villa Florida    11.18 112   P          Pn         14 58 14.7  -0.2
           comp=Z,0.2nm,0.3s,baz=297,slow=14,SNR=1.9
PTLB  Pontes e Lacer   11.55  54   Pn         Pn         14 58 17.8  -2.2
BO02  Sierra Bellavi   12.37 187   Pn         Pn         14 58 28.7  -2.2
AQDB  Aquidauana       12.41  83  eP          Pn         14 58 34.0 +2.5
VILB  Vilhena          12.56  42  eP          Pn         14 58 33.2  -0.4
ITQB  Itaqui           13.11 126  eP          Pn         14 58 36.4  -4.2
SALV  Santo Antonio    14.05  64  eP          P          14 58 57.6  -0.2
PDRB  Porto dos Gac    15.84  49  eP          P          14 59 17.9 +0.1
ITAB  Concordia        15.89 111   Pn         Pn         14 59 15.0  -1.4
PCMB  Pacaembu         16.34  90  eP          P          14 59 25.0 +1.8
PLTB  Pedras Altas     16.41 127   Pn         Pn         14 59 20.6  -2.2
PLTB                               IAmb       IAmb       14 59 44.3
           comp=Z,18nm,1.4s
TRQA  Tornquist        16.60 161              Pn         14 59 25.1  -0.1
TRQA                               IAmb       IAmb       14 59 27.5
           comp=Z,7.9nm,0.6s
CLDB  Colider          17.01  49  eP          P          14 59 31.4 +0.7
ARAG  Araguaiana, MT   17.46  70  eP          Pn         14 59 37.5 +1.8
ITRB  Iturama          17.48  84  eP          Pn         14 59 38.4 +2.4
FRTB  Fartura          17.80  96  eP          Pn         14 59 40.5 +0.7
PLCA  Paso Flores      18.25 184   P          P          14 59 43.9  -0.3
           comp=Z,0.2nm,0.3s,baz=20,slow=14,SNR=5.4
PLCA                               LR         LR         15 07 39.8
           comp=Z,57nm,20.1s,baz=315,slow=40
PLCA  Paso Flores      18.25 184   P          P          14 59 43.8  -0.3
TIJ01 Guaruva-PR       18.37 103  eP          Pn         14 59 46.9 +0.1
LL04  Puerto Octay     18.61 188   P          P          14 59 47.6  -0.4
PET01 Itanhaem-SP      19.89  99  eP          P          15 00 02.5 +0.4
NPGB  Novo Progresso   20.12  42  eP          P          15 00 04.2  -0.5
VAO   Valinhos         20.20  96  eP          P          15 00 06.0 +0.4
MACA  Manacapuru-AM    20.79  24  eP          P          15 00 09.0  -2.8
ITTB  Itaituba         22.05  37  eP          P          15 00 23.6  -1.7
PTGA  Pitinga          23.29  23   P          P          15 00 36.3  -1.6
           comp=Z,1.4nm,0.4s,baz=232,slow=11,SNR=6.8
JANB  Januaria         24.36  77  eP          P          15 00 47.4  -0.2
SMTB  Santa Maria do   24.51  60  eP          P          15 00 49.1 +0.3
BOAV  Boa Vista        26.04  19   P          P          15 01 02.4  -0.3
BOAV                               IAmb       IAmb       15 01 27.3
           comp=Z,9.0nm,1.4s
CMC01 Camacan, BA      28.61  81  eP          P          15 01 25.3  -0.4
GDU01 Guandu, BA       29.12  78  eP          P          15 01 30.2  -0.1
NBPN  Ponto Novo - B   29.73  72  eP          P          15 01 35.5  -0.2
NBLA  Lagarto - SE     31.80  74  eP          P          15 01 53.8  -0.2
NBAN  Anadia - AL      33.71  73  eP          P          15 02 09.7  -0.9
NBLV  Livramento - P   34.22  69  eP          P          15 02 13.7  -1.4
VNA3  Neumayer Olymp   59.13 161   P          P          15 05 29.3 +0.8
VNA2  Neumayer--Watz   59.71 160   P          P          15 05 33.0 +0.6
           baz=286,slow=7.9
SNAA  Sanae            61.33 161   P          P          15 05 44.3 +0.8
SNAA  Sanae            61.33 161   P          P          15 05 42.8  -0.7
           comp=Z,2.7nm,0.8s,baz=285,slow=9.4,SNR=11
SNAA                               pP         pP         15 06 08.5 +0.4
           comp=Z,1.3nm,0.8s,baz=262,slow=5.4,SNR=3.0
SNAA  Sanae            61.33 161   P          P          15 05 43.7 +0.2
SNAA                               IAmb       IAmb       15 06 09.4
           comp=Z,3.3nm,1.0s
QSPA  South Pole Qui   67.71 180   P          P          15 06 26.7 +1.5
PDAR  Pinedale Array   74.99 330   P          P          15 07 10.1 +0.7
           comp=Z,0.2nm,0.5s,baz=139,slow=11,SNR=3.7
TORD  Torodi Ar. Bea   77.64  70   P          P          15 07 24.1  -0.6
           comp=Z,1.4nm,0.5s,baz=256,slow=5.4,SNR=12
TORD                               pP         pP         15 07 49.3  -0.8
           comp=Z,3.4nm,0.7s,baz=252,slow=5.2,SNR=9.0
TORD  Torodi Ar. Bea   77.64  70              P          15 07 24.4  -0.3
TORD                               IAmb       IAmb       15 07 50.5
           comp=Z,3.2nm,0.7s
BOSA  Boshof           82.94 118   P          P          15 07 53.5 +0.3
           comp=Z,1.8nm,0.5s,baz=234,slow=7.3,SNR=4.0
YKA   Yellowknife Ar   92.13 341   P          P          15 08 36.7 +0.3
           comp=Z,1.4nm,0.6s,baz=134,slow=4.6,SNR=16
YKA                                pP         pP         15 09 02.5  -0.1
           comp=Z,1.0nm,0.7s,baz=135,slow=4.6,SNR=4.6
ASAR  Alice Springs   129.06 207   PKP        PKPdf      15 14 35.8  -0.1
           comp=Z,0.5nm,0.7s,baz=112,slow=1.9,SNR=10
WRA   Warramunga Arr  132.13 210   PKP        PKPdf      15 14 41.8 +0.1
           comp=Z,0.7nm,0.5s,baz=156,slow=1.7,SNR=17
ZALV  Zalesovo Beam   142.82  26   PKP        PKPdf      15 15 00.4 +0.2
           comp=Z,1.0nm,0.5s,baz=290,slow=4.3,SNR=6.0
MKAR  Makanchi Array  146.40  37   PKPbc      PKPbc      15 15 07.8  -0.3
           comp=Z,0.9nm,0.5s,baz=342,slow=2.7,SNR=8.6
MKAR                               pPKPbc     pPKPbc     15 15 35.0 +0.1
           comp=Z,1.2nm,0.8s,baz=262,slow=0.9,SNR=4.0
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*IDC **03** 15:00:19.1±1.2, 38°.64N×20°.44E, h0km, mb3.6/7, mb1 3.7/11, mb1mx3.5/47, mbtmp3.6/11, ML3.6/4, Error ellipse: s-maj=21.2km s-min=18.7km az=75.0*

*IASPEI **03** 15:00:20.5±0.8, 38°.53N±0°.02×20°.57E±0°.03, h15km±4km, mb3.6/7, Error ellipse: s-maj=4.5km s-min=2.3km az=98.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ATH **03** 15:00:21.2, 38°.53N×20°.60E, h12km±1km, ML3.2/20, Error ellipse: s-maj=1.7km s-min=0.6km az=287.0*

*THE **03** 15:00:21.1, 38°.54N×20°.53E, h11km±1km, ML3.4/12, Error ellipse: s-maj=1.0km s-min=0.4km az=285.0*

ISC 03 15:00:20.5±0.7**, 38°.54N**±0°.02×**20°.55E**±0°.03**, h16**km±4km**, n91, σ1s25**/121**, mb3.6**/7**, Greece**

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Code  Station Name       Δ°  AZ°    Phase ID              Time     Res
                                   Op         ISC        h  m  s   ISC
FSK   Fiskardo          0.08 175   P          Pg         15 00 23.7 +0.1
FSK                                S          Sg         15 00 25.5  -0.2
FSK   Fiskardo          0.08 175   P          Pg         15 00 23.8 +0.1
FSK                                S          Sg         15 00 25.5  -0.2
FSK                                AML        AML        15 00 25.5
FSK                                AML        AML        15 00 26.1
EVGI  Lefkada island    0.12  44   P          Pb         15 00 24.1  -0.3
EVGI                               S          Sb         15 00 26.3  -0.6
           38µm,0.3s
EVGI  Lefkada island    0.12  44   P          Pb         15 00 24.2  -0.3
EVGI                               S          Sb         15 00 26.4  -0.6
DRAG  Dragano-Lefkad    0.15   6   P          Pb         15 00 24.5  -0.4
DRAG                               S          Sb         15 00 27.4  -0.5
           97µm,0.5s
DRAG  Dragano-Lefkad    0.15   6   P          Pb         15 00 24.6  -0.4
DRAG                               S          Sg         15 00 27.0  -0.1
NYDR  Nydri-Lefkada     0.21  33   P          Pb         15 00 25.5  -0.4
NYDR                               S          Sb         15 00 29.1  -0.5
           17µm,0.4s
NYDR  Nydri-Lefkada     0.21  33   P          Pb         15 00 25.6  -0.4
NYDR                               S          Sb         15 00 28.8  -0.8
LKD2  Lefkada island    0.26  18   P          Pb         15 00 26.5  -0.4
LKD2                               S          Sg         15 00 30.3 +0.1
           8µm,0.6s
LKD2  Lefkada island    0.26  18   P          Pb         15 00 26.5  -0.4
LKD2                               S          Sg         15 00 30.1  -0.1
LKD2                               AML        AML        15 00 32.0
           comp=N,14610µm,0.4s
LKD2                               AML        AML        15 00 37.3
           comp=E,11943µm,0.6s
KEF4  Livadi, Kephal    0.30 200   P          Pb         15 00 27.1  -0.4
KEF4                               S          Sb         15 00 32.1   0.0
KEF4  Livadi, Kephal    0.30 200   P          Pb         15 00 27.1  -0.4
KEF4                               S          Sb         15 00 31.9  -0.2
TSLK  Tsoukalades, L    0.30  15   P          Pb         15 00 27.2  -0.3
TSLK                               S          Sb         15 00 32.3 +0.1
           comp=E,9µm,0.7s
TSLK  Tsoukalades, L    0.30  15   P          Pb         15 00 27.4  -0.1
TSLK                               S          Sb         15 00 32.1  -0.1
TSLK                               AML        AML        15 00 35.2
           comp=N,16143µm,0.4s
TSLK                               AML        AML        15 00 35.5
           comp=E,21773µm,0.9s
DMLN  Damoulianata-K    0.33 205   P          Pb         15 00 27.6  -0.4
DMLN                               S          Sb         15 00 32.9  -0.2
           comp=E,71µm,0.4s
DMLN  Damoulianata-K    0.33 205   P          Pb         15 00 27.7  -0.4
DMLN                               S          Sb         15 00 32.5  -0.6
LXRA  Lixouri, Kepha    0.35 195   P          Pb         15 00 28.0  -0.3
LXRA                               S          Sb         15 00 33.1  -0.5
VLS   Valsamata         0.36 176   P          Pb         15 00 27.8  -0.8
VLS                                S          Sb         15 00 33.9  -0.1
           comp=E,54µm,0.2s
ARGA  Argostoli. Kep    0.36 189   P          Pb         15 00 29.1 +0.5
ARGA                               S          Sb         15 00 34.8 +0.8
KEF3  Kipouria, Keph    0.37 206   P          Pb         15 00 27.8  -0.9
KEF3                               S          Sb         15 00 33.3  -1.0
KEF3  Kipouria, Keph    0.37 206   P          Pb         15 00 27.8  -0.9
KEF3                               S          Sb         15 00 33.2  -1.1
PSDA  Pessada-Kefalo    0.42 177   P          Pb         15 00 29.0  -0.6
PSDA                               S          Sb         15 00 35.4  -0.3
           comp=E,6µm,0.2s
PSDA  Pessada-Kefalo    0.42 177   P          Pb         15 00 29.2  -0.4
PSDA                               S          Sb         15 00 35.5  -0.3
VTN   Vitineika         0.80 141   P          Pn         15 00 36.2  -0.8
VTN   Vitineika         0.80 141   P          Pn         15 00 36.0  -1.0
ZAK2  Zakynthos         0.80 160   P          Pn         15 00 35.9  -1.2
ZAK2                               S          Sn         15 00 48.3  -0.3
LTHK  Lithakia          0.86 165   P          Pb         15 00 36.2  -0.8
LTHK                               S          Sn         15 00 49.7  -0.4
           comp=E,4µm,0.2s
LTHK  Lithakia          0.86 165   P          Pb         15 00 36.3  -0.6
LTHK                               S          Sn         15 00 49.1  -1.0
LTHK                               AML        AML        15 00 57.7
           comp=N,7898µm,0.3s
LTHK                               AML        AML        15 00 59.1
           comp=E,7323µm,0.5s
RLS   Riolos of Patr    0.86 123   P          Pn         15 00 36.8  -1.2
RLS                                S          Sn         15 00 51.1 +0.8
           comp=E,932nm,0.7s
RLS   Riolos of Patr    0.86 123   P          Pn         15 00 36.8  -1.2
RLS                                AML        AML        15 00 57.9
           comp=N,1633µm,0.5s
RLS                                AML        AML        15 01 01.8
           comp=E,2212µm,0.7s
IGT   Igoumenitsa       1.01 350   P          Pn         15 00 40.1 +0.1
IGT                                S          Sn         15 00 54.9 +1.0
           comp=E,2µm,1.1s
IGT   Igoumenitsa       1.01 350   P          Pn         15 00 40.0  -0.1
IGT                                AML        AML        15 00 58.2
           comp=E,3841µm,0.9s
IGT                                AML        AML        15 01 04.4
           comp=N,2028µm,0.8s
EVR   Evrytania         1.05  69   P          Pn         15 00 40.0  -0.7
EVR                                AML        AML        15 01 06.0
           comp=N,1854µm,1.0s
EVR                                AML        AML        15 01 11.2
           comp=E,1549µm,0.7s
EFP   Efpalio           1.07  96   P          Pn         15 00 40.1  -0.7
EFP                                AML        AML        15 01 06.3
           comp=E,1961µm,0.7s
EFP                                AML        AML        15 01 10.7
           comp=N,2089µm,0.6s
ANX   Ano Chora         1.07  87   P          Pb         15 00 39.7  -1.0
ANX                                AML        AML        15 01 09.0
           comp=E,2282µm,0.5s
ANX                                AML        AML        15 01 12.6
           comp=N,2772µm,1.0s
DRO   Drossia           1.08 122   P          Pn         15 00 41.3 +0.3
DRO                                S          Sn         15 00 57.8 +2.1
           comp=N,2µm,0.5s
DRO   Drossia           1.08 122   P          Pn         15 00 40.8  -0.2
DRO                                AML        AML        15 01 00.1
           comp=E,5695µm,0.4s
DRO                                AML        AML        15 01 03.0
           comp=N,3568µm,0.4s
JAN   Janina            1.14  12   P          Pg         15 00 43.4 +0.9
JAN                                AML        AML        15 01 02.8
           comp=N,1838µm,0.4s
JAN                                AML        AML        15 01 02.9
           comp=E,2977µm,0.6s
LAKA  Lakka             1.16 104   P          Pg         15 00 41.8  -1.1
LAKA                               AML        AML        15 01 12.0
           comp=N,1417µm,0.8s
LAKA                               AML        AML        15 01 19.1
           comp=E,1330µm,0.6s
SERG  Sergoula          1.19  96   P          Pg         15 00 42.4  -1.0
SERG                               AML        AML        15 01 16.2
           comp=N,1893µm,1.0s
SERG                               AML        AML        15 01 16.9
           comp=E,1577µm,0.7s
TRIZ  Trizonia          1.21  98   P          Pg         15 00 42.6  -1.1
KASA  Kassiopi          1.30 338   P          Pg         15 00 46.1 +0.5
KASA                               AML        AML        15 01 05.7
           comp=E,3373µm,0.6s
KASA                               AML        AML        15 01 06.3
           comp=N,2235µm,0.5s
KEK   Kerkira           1.31 334   P          Pg         15 00 45.8   0.0
KEK                                AML        AML        15 01 10.2
           comp=N,1817µm,0.5s
KEK                                AML        AML        15 01 16.2
           comp=E,1860µm,0.5s
MAKR  Makrakomi, Fth    1.32  68   P          Pg         15 00 45.5  -0.5
MAKR                               AML        AML        15 01 13.8
           comp=E,3718µm,0.4s
MAKR                               AML        AML        15 01 17.1
           comp=N,3564µm,0.9s
KLV   Kalavryta, Ach    1.35 111   P          Pg         15 00 45.0  -1.5
KLV                                AML        AML        15 01 22.0
           comp=N,778µm,0.6s
KLV                                AML        AML        15 01 23.5
           comp=E,852µm,0.9s
AGG   Agios Georgios    1.47  70   P          Pg         15 00 48.1  -0.7
AGG                                AML        AML        15 01 16.6
           comp=E,1510µm,0.6s
AGG                                AML        AML        15 01 17.0
           comp=N,1130µm,0.8s
GUR   Goura             1.53 113   P          Pg         15 00 48.1  -1.9
THL   Klokotos Trika    1.53  48   P          Pg         15 00 49.0  -1.0
THL                                AML        AML        15 01 15.5
           comp=N,1000µm,0.8s
THL                                AML        AML        15 01 22.3
           comp=E,896µm,0.6s
ITM   Ithomi            1.74 141   P          Pg         15 00 52.7  -1.2
ITM                                AML        AML        15 01 25.6
           comp=N,955µm,0.7s
ITM                                AML        AML        15 01 31.0
           comp=E,724µm,0.6s
ATAL  Atalanti          1.94  85   P          Pb         15 00 55.4  -0.1
LTK   Loutraki          1.97 104   P          Pb         15 00 54.8  -1.2
VIL2  Platees           2.16  98   P          Pb         15 00 59.0  -0.3
OHR   Ohrid             2.58   4  i Pn        Pb         15 01 05.3  -1.1
VAY   Valandovo         3.18  29  i Pn        Pb         15 01 16.4  -0.3
STIP  Stip              3.39  21  i Pn        Pb         15 01 18.4  -1.8
SKO   Skopje            3.50  11  i Pn        Pg         15 01 24.6  -2.9
DRME  Dracevica, Mon    3.79 344  ePn         Pn         15 01 19.2 +0.9
PDG   Podgorica         4.01 346  ePn         Pn         15 01 22.3 +1.0
PRVS  Prvonek           4.13  16  ePn         Pn         15 01 25.8 +2.8
HCY   Herceg Novi       4.21 339  ePn         Pn         15 01 23.7  -0.3
BOSS  Bosilegrad        4.22  20  ePn         Pn         15 01 27.8 +3.6
BARS  Barje             4.38  12  ePn         Pn         15 01 28.1 +1.7
TREB  Trebinje          4.50 339  ePn         Pn         15 01 27.9  -0.1
SELS  Selova            4.70   5  ePn         Pn         15 01 31.5 +0.8
SJES  Sjenica           4.74 355  ePn         Pn         15 01 33.3 +1.9
IDI   Anoyia            4.75 132   Pn         Pn         15 01 32.5 +0.9
           comp=E,0.3nm,0.3s,baz=264,slow=24,SNR=1.6
IDI                                Sn         Sn         15 02 30.3 +3.9
           comp=E,1.1nm,0.3s,baz=350,slow=20,SNR=2.9
UPM   Unac-Piva         4.83 346  ePn         Pn         15 01 32.7   0.0
STON  Ston              4.84 334  ePn         Pn         15 01 32.4  -0.3
ZAPS  Zavoj             4.99  18  ePn         Pb         15 01 45.7  -1.7
RUDO  Rudo              5.15 350  ePn         Pn         15 01 38.9 +1.9
GRUS  Gruza             5.35   1  ePn         Pn         15 01 41.5 +1.9
BBLS  Lazi&#263;i       5.39 351  ePn         Pb         15 01 47.4  -7.0
BBLS  Lazi&#263;i       5.39 351  ePn         Pb         15 01 51.1  -3.3
DIVS  Divibare          5.57 356  ePn         Pn         15 01 43.1 +0.3
DIVS  Divibare          5.57 356  ePn         Pn         15 01 43.4 +0.6
HAPS  Han Pijesak,Bl    5.67 348  ePn         Pn         15 01 44.9 +0.7
MGRS  Mrkonjic Grad     6.42 337  ePn         Pn         15 01 58.2 +3.7
MLR   Muntele Rosu      8.02  28   Pn         Pn         15 02 15.7  -0.8
           comp=E,0.6nm,0.3s,baz=68,slow=8.8,SNR=3.2
MLR                                Sn         Sn         15 03 37.4  -9.5
           comp=E,0.4nm,0.3s,baz=227,slow=14,SNR=1.3
CRES  Cresnjev          8.21 334  ePn         Pn         15 02 18.8  -0.1
CEY   Cerknica          8.51 330  ePn         Pn         15 02 23.5 +0.4
SOKA  Soboth            9.09 335  i Pn        Pn         15 02 31.5 +0.4
           comp=E,3.0nm,0.5s
SOKA                              eSn         Sn         15 04 09.0  -4.2
OBKA  Obir              9.11 333   Sn         Sn         15 04 10.9  -2.7
           comp=E,3.7nm,0.5s
GERES GERESS Array B   11.43 337   Pn         Pn         15 03 00.8  -2.3
           comp=E,0.1nm,0.3s,baz=157,slow=13,SNR=2.1
ESDC  Sonseca Array    19.05 281   P          P          15 04 42.1   0.0
           comp=E,0.1nm,0.3s,baz=77,slow=9.9,SNR=5.4
HFS   Hagfors          22.05 351   P          P          15 05 15.3 +1.1
           comp=E,1.1nm,0.4s,baz=165,slow=12,SNR=7.4
EKA   Eskdalemuir Ar   23.15 324   P          P          15 05 25.9   0.0
           comp=E,1.4nm,0.7s,baz=122,slow=12,SNR=3.1
FINES FINESS Array B   23.19   7   P          P          15 05 25.8  -0.5
           comp=E,5.4nm,1.1s,baz=173,slow=11,SNR=6.5
NOA   NORSAR Array B   23.27 348   P          P          15 05 28.2 +1.1
           comp=E,1.2nm,1.0s,baz=166,slow=10,SNR=1.7
TORD  Torodi Ar. Bea   30.33 219   P          P          15 06 32.0 +0.6
           comp=E,0.7nm,0.6s,baz=26,slow=9.8,SNR=5.1
MKAR  Makanchi Array   45.09  59   P          P          15 08 37.9 +2.1
           comp=E,0.3nm,0.5s,baz=277,slow=6.3,SNR=4.6
ZALV  Zalesovo Beam    45.43  48   P          P          15 08 40.9 +2.6
           comp=E,1.6nm,0.7s,baz=275,slow=8.6,SNR=1.9
```

IDC 03 15:08:30.4±10.0**, 4°.89S**×**153°.43E, h146**km±64km**, mb3.3**/3**, mb1 3.5**/4**, mb1mx3.2**/26**, mbtmp3.8**/4**, Error ellipse: s-maj=101.6km s-min=78.3km az=177.0, New Ireland region**

```
Code  Station Name       Δ°  AZ°    Phase ID              Time     Res
                                   Op         ISC        h  m  s   ISC
PMG   Port Moresby      7.68 234   P          Pn         15 10 19.7 +0.1
           3.4nm,0.3s,baz=44,slow=11,SNR=11
PMG                                S          Sn         15 11 45.8 +0.6
           0.7nm,0.3s,baz=51,slow=16,SNR=1.5
WRA   Warramunga Arr   23.86 230   P          P          15 13 31.4 +0.8
           1.4nm,0.7s,baz=53,slow=9.7,SNR=26
ASAR  Alice Springs    26.52 223   P          P          15 13 54.2  -0.4
           0.6nm,0.8s,baz=55,slow=8.8,SNR=14
STKA  Stephens Creek   29.05 201   P          P          15 14 16.6  -0.5
           0.4nm,0.2s,baz=8.1,slow=14,SNR=3.1
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*BJI **03** 15:29:04.4±0.0, 5°.85S×150°.04E, h142km, mB5.4/39, mb5.3/75*

*IDC **03** 15:29:08.2±0.5, 5°.62S×149°.62E, h139km±4km, mb4.7/22, mb1 4.8/26, mb1mx4.7/36, mbtmp5.2/26, MS4.0/13, Ms1 4.0/13, ms1mx3.8/31, Error ellipse: s-maj=9.8km s-min=6.7km az=110.0*

*MOS **03** 15:29:08.7±1.1, 5°.59S×149°.66E, h160km, mb5.3/38, Error ellipse: s-maj=9.1km s-min=5.3km az=97.9*

*NEIC **03** 15:29:08.5±2.5, 5°.66S±0°.05×149°.75E±0°.05, h144km±4km, mb5.3/247, Error ellipse: s-maj=7.7km s-min=7.4km az=139.0*

*GCMT **03** 15:29:09.5±0.1, 5°.67S±0°.01×149°.74E±0°.01, h141km, MW5.3/140, Moment Tensor Solution. s103,c157; s140,c250; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.81±.02; $M_{\theta\theta}$0.76±.02; $M_{\phi\phi}$0.05±.02; $M_{r\theta}$-0.95±.01; $M_{\theta\phi}$0.16±.02; $M_{\phi r}$-0.13±.01; Best double couple: $M_0$1.25200×10^{17} NP1:ϕ_s255.00000°, δ20.00000°, λ-96.00000°. NP2:ϕ_s81.00000°, δ70.00000°, λ-88.00000°. Principal axes: T 1.2430, Plg25.0000°, Azm170.0000°; N 0.0190, Plg2.0000°, Azm260.0000°; P -1.2620, Plg65.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **03** 15:29:10.0±0.3, 6°S±2°×15°0E±°, h144km±4km, M5.0/43, mb5.0/43, mB5.4/24, MLv5.8/3, Mw(mB)4.8/24, MwMwp5.0/6, Mwp5.2/6*

ISC 03 15:29:08.5±0.3**, 5°.67S**±0°.03×**149°.73E**±0°.03**, h144**km±2km**, h144**km**:pP-P, n716, σ1s41**/738**, mb5.3**/200**, 17C-13D, New**

Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.83	59		Pn	15 29 52.9	-0.7
RABL				Sn	Sn	15 30 28.4	+0.1
MANU	Manus Island	4.30	327		Pn	15 30 14.4	+1.7
MANU				Sn	Sn	15 31 02.7	+0.2
PMG	Port Moresby	4.51	214	P	Pn	15 30 16.4	+1.1
	398nm,0.3s,baz=12,slow=4.8,SNR=219						
PMG				S	Sn	15 31 07.9	+0.6
	266nm,0.3s,baz=93,slow=14,SNR=5.7						
PMG				LR	LR	15 31 09.4	
	comp=Z,992nm,22.0s,baz=82,slow=27						
PMG	Port Moresby	4.51	214	Pn	Pn	15 30 16.6	+1.2
PMG				Sn	Sn	15 31 06.5	-0.9
PMG	Port Moresby	4.51	214	P	Pn	15 30 17.3	+2.0
PMG	Port Moresby	4.51	214	P	Pn	15 30 17.3	+2.0
JAY	Jayapura	9.53	289	P	Pn	15 31 21.1	-1.4
	0.8nm,0.3s,baz=112,slow=7.1,SNR=15						
JAY	Jayapura	9.53	289	P	Pn	15 31 22.9	+0.4
	824nm64nm,1.4s						
COEN	Coen	10.47	218	Pn	Pn	15 31 35.1	+0.2
COEN				Sn	Sn	15 33 26.3	-4.4
COEN	Coen	10.47	218	P	Pn	15 31 36.8	+1.9
HNR	Honiara	10.79	111	P	Pn	15 31 40.1	+0.9
	1.6nm,0.3s,baz=232,slow=3.8,SNR=12						
HNR				S	Sn	15 33 39.1	+0.6
	4.0nm,0.3s,baz=97,slow=23,SNR=1.7						
HNR	Honiara	10.79	111	Pn	Pn	15 31 38.8	-0.4
HNR	Honiara	10.79	111	P	Pn	15 31 43.2	+4.0
SMPI	Sarmi	11.59	288	P	Pn	15 31 51.0	+1.4
	1µm70nm,1.9s						
MTSU	Mount Surprise	13.47	203	P	P	15 32 16.5	-1.8
	baz=14,SNR=38						
MTSU	Mount Surprise	13.47	203	P	P	15 32 17.4	-0.8
SRPI	Serui, Papua	13.98	285	P	P	15 32 26.8	+2.9
CTA	Charters Tower	14.73	193	P	P	15 32 32.5	+0.4
	3.6nm,0.3s,baz=13,slow=14,SNR=45						
CTA				S	S	15 35 18.3	-3.1
	0.4nm,0.3s,baz=354,slow=19,SNR=1.9						
CTAO	Charters Tower	14.73	193	P	P	15 32 32.3	+0.1
CTAO	Charters Tower	14.73	193		P	15 32 32.3	+0.1
CTAO	Charters Tower	14.73	193	P	P	15 32 33.2	+1.0
PATS	Pohnpei	15.09	35	P	Pn	15 32 35.0	+0.6
	baz=15,SNR=6.5						
PATS	Pohnpei	15.09	35		Pn	15 32 34.5	+0.1
RK1H	Rockhampton Ha	17.63	178	P	Pn	15 33 07.2	+1.9
FAKI	Fak Fak	17.65	278	P	P	15 33 04.4	0.0
FAKI	Fak Fak	17.65	278	P	Pn	15 33 06.2	+0.6
QIS	Mount Isa	17.77	213	P	Pn	15 33 07.4	+0.4
	baz=18,SNR=100						
QIS	Mount Isa	17.77	213	P	Pn	15 33 08.1	+1.1
KDU	Kakadu	18.40	247	P	P	15 33 12.8	+0.1
	baz=18,SNR=44						
KDU	Kakadu	18.40	247	P	P	15 33 13.4	+0.7
SAUI	Saumlaki	18.45	262	P	Pn	15 33 30.5	+15
SAUI	Saumlaki	18.45	262	P	P	15 33 14.1	+0.9
SAUI				IAmb	IAmb	15 34 12.2	
	comp=Z,174nm,1.1s						
SIJI	Sorong	19.04	284	P	Pn	15 33 21.2	-0.8
	comp=Z,1.4nm,0.3s,baz=164,slow=19,SNR=9.6						
SWI	Sorong	19.05	284	P	Pn	15 33 23.2	+1.1
	comp=Z,2µmcomp=Z,966nmcomp=Z,58nm,1.6s						
EIDS	Eidsvold	19.64	176	P	Pn	15 33 28.7	-0.2
	baz=20,SNR=34						
EIDS	Eidsvold	19.64	176	P	Pn	15 33 28.3	-0.6
EIDS	Eidsvold	19.64	176	P	Pn	15 33 28.8	0.0
MTN	Manton Dam	19.68	247	P	P	15 33 26.5	-0.1
	baz=20,SNR=39						
MTN	Manton Dam	19.68	247	P	P	15 33 26.1	-0.6
MTN	Manton Dam	19.68	247	P	P	15 33 27.2	+0.6
SANVU	Saraoutou	19.72	121	P	P	15 33 28.1	+1.1
SANVU	Saraoutou	19.72	121	P	Pn	15 33 29.4	-0.5
GUMO	Guam	19.73	346	P	P	15 33 28.0	+0.9
	comp=Z,8.1nm,0.3s,baz=168,slow=5.9,SNR=10						
GUMO	Guam	19.73	346	P	P	15 33 27.1	0.0
GUMO				pmax	pmax		
	comp=Z,880nm,1.4s						
GUMO	Guam	19.73	346	P	P	15 33 27.1	0.0
DRS	Darwin Rock St	19.77	249	P	P	15 33 28.5	+1.0
KOUNC	Koumac, New Ca	20.46	138	P	Pn	15 33 37.5	-1.1
WB0	Warramunga Arr	20.47	225	P	P	15 33 35.3	+0.2
WB0				IAmb	IAmb	15 33 41.6	
	comp=Z,106nm,1.0s						
WR0	Warramunga Arr	20.50	225	P	P	15 33 35.1	-0.2
WR0				IAmb	IAmb	15 34 09.4	
	comp=Z,69nm,0.8s						
WRAB	Tennant Creek	20.61	225*c*	*i*P	P	15 33 37.3	+0.7
WRAB				pmax	pmax		
	comp=Z,99nm,1.0s						
WRAB	Tennant Creek	20.61	225	P	P	15 33 36.4	-0.2
WRAB				IAmb	IAmb	15 33 40.8	
	comp=Z,105nm,1.1s						
WRAB	Tennant Creek	20.61	225	P	P	15 33 37.5	+0.9
WB2	Warramunga Arr	20.62	225	P	P	15 33 36.4	-0.2
WB2				IAmb	IAmb	15 33 40.4	
	comp=Z,76nm,0.6s						
WRA	Warramunga Arr	20.63	225	P	P	15 33 37.4	+0.7
	comp=Z,54nm,0.5s,baz=50,slow=11,SNR=335						
WRA				pP	pP	15 34 02.6	+1.4
	comp=Z,38nm,0.9s,baz=52,slow=12,SNR=3.7						
WRA				S	S	15 37 17.4	-2.1
	comp=Z,62nm,0.9s,baz=44,slow=20,SNR=20						
WRA				ScP	ScP	15 41 05.0	+0.1
	comp=Z,23nm,1.1s,baz=42,slow=2.7,SNR=9.1						
WRA				PKiKP	PKiKP	15 45 28.5	-1.2
	comp=Z,1.2nm,1.1s,baz=321,slow=1.2,SNR=4.6						
WRA	Warramunga Arr	20.63	225	P	P	15 33 37.2	+0.5
RMQ	Roma	20.73	182	P	Pn	15 33 40.2	-1.6
	baz=21,SNR=102						
RMQ	Roma	20.73	182	P	Pn	15 33 40.4	-1.4
QLP	Quilpie	21.45	194	P	P	15 33 47.1	+1.6
	baz=22,SNR=66						
QLP	Quilpie	21.45	194	P	P	15 33 47.2	+1.7
AAI	Ambon	21.55	274	P	P	15 34 01.5	+15
	comp=Z,37nm,0.7s						
ANA2	Anatahan	22.23	350	P	P	15 33 52.6	-0.9
LIFNC	LIFOU	22.68	133	P	P	15 33 57.8	-0.1
LIFNC	LIFOU	22.68	133	P	P	15 33 59.7	+1.8
LBMI	Labuha	22.75	282	P	P	15 34 01.0	+2.4
	comp=Z,944nmcomp=Z,1µmcomp=Z,39nm,2.0s						
KNRA	Kununurra	22.86	243	P	P	15 33 59.3	-0.3
	baz=23,SNR=225						
KNRA	Kununurra	22.86	243	P	P	15 33 58.7	-0.9
KNRA				IAmb	IAmb	15 34 01.8	
	comp=Z,80nm,0.6s						
KNRA	Kununurra	22.86	243	P	P	15 33 59.8	+0.2
NOUC	Port Laguerre	22.89	137	P	P	15 34 01.5	+1.7
DZM	Mont Dzumac	22.96	137	*e*P	P	15 34 02.2	+1.6
	comp=Z,690nm,1.2s						
DZM				*e*S	S	15 37 57.5	-2.5
	comp=Z,905nm,23.7s						
DZM				*e*LR	LR	15 39 48.0	
	comp=Z,1µm,31.2s						
DZM	Mont Dzumac	22.96	137	P	P	15 34 02.0	+1.4
	comp=Z,92nm,0.4s,baz=253,slow=9.8,SNR=198						
DZM	Mont Dzumac	22.96	137	P	P	15 34 01.2	+0.6
DZM	Mont Dzumac	22.96	137	P	P	15 34 02.4	+1.8
ONTNC	Ouen Toro	23.13	137	P	P	15 34 00.4	-1.6
ONTNC				IAmb	IAmb	15 34 04.4	
	comp=Z,146nm,1.1s						
ONTNC	Ouen Toro	23.13	137	P	P	15 34 04.1	+2.1
TNTI	Ternate	23.23	285	P	P	15 34 04.4	+1.3
YATNC	Mamie plateau,	23.26	136	P	P	15 34 05.8	+2.5
OUENC	Ouen Island, N	23.47	137	P	P	15 34 04.1	-1.0
OUENC				IAmb	IAmb	15 34 08.2	
	comp=Z,203nm,1.4s						
OUENC	Ouen Island, N	23.47	137	P	P	15 34 07.2	+2.1
AS31	Alice Springs	23.50	219	P	P	15 34 06.4	+0.8
AS31				IAmb	IAmb	15 34 08.5	
	comp=Z,39nm,0.3s						
ASAR	Alice Springs	23.51	219	P	P	15 34 06.8	+1.3
	comp=Z,41nm,0.4s,baz=58,slow=8.6,SNR=1484						
ASAR				pP	pP	15 34 33.0	+0.6
	comp=Z,30nm,0.8s,baz=35,slow=13,SNR=5.2						
ASAR				S	S	15 38 09.8	+1.1
	comp=Z,13nm,0.8s,baz=32,slow=18,SNR=7.1						
ASAR				ScP	ScP	15 41 12.8	+0.6
	comp=Z,20nm,1.1s,baz=44,slow=3.4,SNR=21						
ASAR				LR	LR	15 44 04.0	
	comp=Z,729nm,18.9s,baz=64,slow=38						
ASAR	Alice Springs	23.51	219	P	P	15 34 06.7	+1.1
ASAR					ScP	15 41 12.6	+0.4
INKA	Innaminka	23.56	200	P	P	15 34 07.3	+1.4
MARNC	Mare, Loyalty	23.69	133	P	P	15 34 07.9	+0.7
MARNC	Mare, Loyalty	23.69	133	P	P	15 34 09.5	+2.3
SANI	Sanana	23.96	278	P	P	15 34 12.3	+2.6
	comp=Z,2µmcomp=Z,602nmcomp=Z,21nm,1.2s						
PINNC	Pines Island,	24.01	136	P	P	15 34 11.3	+1.2
PINNC				IAmb	IAmb	15 34 39.6	
	comp=Z,286nm,1.9s						
ARMA	Armidale	24.69	176	P	P	15 34 18.6	+2.3
	baz=25,SNR=37						
ARMA	Armidale	24.69	176	P	P	15 34 17.9	+1.6
ARMA	Armidale	24.69	176	P	P	15 34 18.9	+2.6
SOEI	Soe	25.55	259	P	P	15 34 27.6	+3.3
	comp=Z,2µmcomp=Z,48nm,1.5s						
SOEI	Soe	25.55	259	P	P	15 34 24.6	+0.3
SOEI				IAmb	IAmb	15 35 20.5	
	comp=Z,164nm,1.6s						
SOEI	Soe	25.55	259	P	P	15 34 24.7	+0.3
OOD	Oodnadatta	25.74	210	P	P	15 34 26.9	+1.2
CMSA	Cobar Meteorol	26.02	188	P	P	15 34 29.3	+1.2
	baz=26,SNR=23						
CMSA	Cobar Meteorol	26.02	188	P	P	15 34 29.5	+1.4
BATI	Baumata	26.20	258	LR	LR	15 47 41.6	
	comp=Z,608nm,18.4s,baz=120,slow=43						
BATI	Baumata	26.20	258	P	P	15 34 34.1	+4.0
	comp=Z,637nmcomp=Z,46nm,1.3s						
FITZ	Fitzroy Crossi	26.57	240	P	P	15 34 33.6	+0.3
	comp=Z,36nm,0.6s,baz=65,slow=6.0,SNR=170						
FITZ				pP	pP	15 35 01.9	-1.4
	comp=Z,58nm,0.9s,baz=64,slow=11,SNR=6.7						
FITZ				S	S	15 38 55.5	-1.9
	comp=Z,10nm,0.9s,baz=268,slow=17,SNR=3.2						
FITZ				LR	LR	15 45 34.8	
	comp=Z,460nm,20.5s,baz=52,slow=37						
LCRK	Leigh Creek	26.93	202	P	P	15 34 37.3	+0.9
STKA	Stephens Creek	27.17	195	P	P	15 34 39.0	+0.5
	comp=Z,6.7nm,0.5s,baz=13,slow=8.2,SNR=21						
STKA				LR	LR	15 45 58.7	
	comp=Z,489nm,18.4s,baz=48,slow=37						
STKA	Stephens Creek	27.17	195	P	P	15 34 39.0	+0.5
	baz=27,SNR=16						
STKA	Stephens Creek	27.17	195	P	P	15 34 38.1	-0.4
STKA				pmax	pmax		
	comp=Z,15nm,1.4s						
STKA	Stephens Creek	27.17	195	P	P	15 34 38.1	-0.4
STKA	Stephens Creek	27.17	195	P	P	15 34 39.4	+0.9
LHI	Lord Howe Isla	27.17	162	P	P	15 34 38.4	0.0
MGCD	Mangrove Creek	27.43	177	P	P	15 34 43.2	+2.4
EDFI	Ende, Flores	27.98	262	P	P	15 34 55.2	+9.1
WRKA	Warakurna	28.17	225	P	P	15 34 48.0	+0.5
	baz=28,SNR=46						
WRKA	Warakurna	28.17	225	P	P	15 34 48.5	+1.0
APSI	Ampana	28.43	279	P	P	15 34 51.1	+1.2
	comp=Z,8.7nm,1.0s						
YNG	Young	28.52	182	P	P	15 34 52.3	+1.8
	baz=29,SNR=9.4						
YNG	Young	28.52	182	P	P	15 34 52.3	+1.8
MULG	Mulgathing	28.59	209	P	P	15 34 52.0	+0.8
FUNA	Funafuti	29.37	97	P	P	15 34 57.8	-0.4
HTT	Hallett	29.40	199	P	P	15 34 59.6	+1.3
	baz=30,SNR=11						
HTT	Hallett	29.40	199	P	P	15 34 59.3	+1.0
PTPS	Port Pirie	29.47	200	P	P	15 35 00.2	+1.3
CNB	Canberra Magne	29.51	181	P	P	15 35 01.2	+2.0
	baz=30,SNR=16						
CNB	Canberra Magne	29.51	181	P	P	15 35 01.3	+2.0
CAN	Canberra	29.52	181	P	P	15 34 59.3	-0.1
CAN				pmax	pmax		
	comp=Z,64nm,1.1s						
CAN	Canberra	29.52	181	P	P	15 34 59.3	-0.1
CAN				IAmb	IAmb	15 35 02.7	
	comp=Z,64nm,1.1s						
CAN	Canberra	29.52	181	P	P	15 35 01.4	+2.0
TOLI2	Tolitoli	29.68	282	P	P	15 35 00.9	-0.1
BBOO	Buckleboo	29.86	204	P	P	15 35 00.2	-2.2
	baz=30,SNR=5.7						
BBOO	Buckleboo	29.86	204	P	P	15 35 01.6	-0.8
BBOO	Buckleboo	29.86	204	P	P	15 35 02.9	+0.5
	comp=Z,21nm,1.1s						
MSVF	Nonsavu	30.16	116	P	P	15 35 10.4	+5.2
	comp=Z,27nm,1.0s,baz=283,slow=6.4,SNR=6.5						
MSVF	Nonsavu	30.16	116⇑	*e*P	P	15 35 03.6	-1.6
MSVF				pmax	pmax		
	comp=Z,12nm,1.3s						
MSVF	Nonsavu	30.16	116	P	P	15 35 05.1	-0.2
MSVF				IAmb	IAmb	15 35 24.4	
	comp=Z,60nm,1.3s						
MSVF	Nonsavu	30.16	116	P	P	15 35 07.5	+2.3
ARPS	Mount Arapiles	31.79	192	P	P	15 35 20.9	+1.7
	baz=32,SNR=16						
ARPS	Mount Arapiles	31.79	192	P	P	15 35 21.0	+1.7
TOO	Toolangi	31.99	186	P	P	15 35 23.1	+2.0
	baz=32,SNR=13						
TOO	Toolangi	31.99	186	P	P	15 35 22.2	+1.1
TOO				pmax	pmax		
	comp=Z,86nm,1.1s						
TOO	Toolangi	31.99	186	P	P	15 35 22.2	+1.1
TOO				IAmb	IAmb	15 35 24.3	
	comp=Z,86nm,1.1s						
TOO	Toolangi	31.99	186	P	P	15 35 23.2	+2.1
FORT	Forrest	32.23	217	P	P	15 35 24.0	+0.8
	baz=32,SNR=7.4						
FORT	Forrest	32.23	217	P	P	15 35 23.9	+0.7
FORT				IAmb	IAmb	15 36 34.1	
	comp=Z,53nm,0.9s						
FORT	Forrest	32.23	217	P	P	15 35 24.1	+0.8
MBWA	Marble Bar	32.90	239	P	P	15 35 30.0	+0.8
PSA00	Pilbara Seismi	32.97	238	P	P	15 35 29.4	-0.5
PSA00				IAmb	IAmb	15 35 31.1	
	comp=Z,62nm,0.9s						
PSA00					pP	15 35 58.5	-1.9
PSA00	Pilbara Seismi	32.97	238	P	P	15 35 29.3	-0.5
PSA00				IAmb	IAmb	15 35 31.1	
	comp=Z,32nm,1.0s						
PSA00	Pilbara Seismi	32.97	238	P	P	15 35 30.4	+0.6
MYLDM	Lahad Datu	32.99	288	P	P	15 35 29.7	-0.4
MYLDM				IAmb	IAmb	15 35 34.3	
	comp=Z,46nm,1.3s						
JCJ	Chichijima	33.38	348	LR	LR	15 48 51.5	
	comp=Z,43nm,19.8s,baz=180,slow=36						
JCJ	Chichijima	33.38	348	P	P	15 35 34.2	+1.0
GLAD	Gladstone	35.20	182	P	P	15 35 51.0	+2.3
KKM	Kota Kinabalu	35.42	289	P	P	15 35 51.3	+0.2
MEEK	Meekatharra	36.26	231	P	P	15 35 58.7	+0.6
	baz=36,SNR=45						
MEEK	Meekatharra	36.26	231	P	P	15 35 58.8	+0.7
MOO	Moorlands	36.69	183	P	P	15 36 04.1	+2.6
	baz=37,SNR=3.1						
OUZ	Omahuta	36.73	146	P	P	15 36 02.5	+0.7
OUZ				IAmb	IAmb	15 36 05.7	
	comp=Z,80nm,1.4s						
OUZ	Omahuta	36.73	146	P	P	15 36 04.7	+2.9
TAU	Tasmania Unive	37.15	183	P	P	15 36 06.7	+1.4
TAU				pmax	pmax		
	comp=Z,67nm,1.0s						
TAU	Tasmania Unive	37.15	183	P	P	15 36 06.7	+1.4
TAU				IAmb	IAmb	15 36 09.0	
	comp=Z,67nm,0.9s						
TAU	Tasmania Unive	37.15	183	P	P	15 36 07.7	+2.4
GIRL	Giralia	38.18	240	P	P	15 36 15.7	+1.4
	baz=38,SNR=12						
GIRL	Giralia	38.18	240	P	P	15 36 14.5	+0.2
GIRL	Giralia	38.18	240	P	P	15 36 16.0	+1.7
SBUM	Sibu	38.32	281	P	P	15 36 18.0	+2.4
SBUM	Sibu	38.32	281	P	P	15 36 15.6	0.0
JOW	Kunigami	38.41	328	LR	LR	15 50 38.6	
	comp=Z,259nm,19.9s,baz=54,slow=34						
JOW	Kunigami	38.41	328	P	P	15 36 16.9	+0.8
JOW	Kunigami	38.41	328	P	P	15 36 17.9	+1.8
JMJ	Miyako jima 2	38.52	323	P	P	15 36 18.8	+1.8
STKI	Sintang	38.62	277	P	P	15 36 33.1	+15
MORW	Morawa	39.44	230	P	P	15 36 25.6	+0.9
	baz=40,SNR=7.8						
MORW	Morawa	39.44	230	P	P	15 36 23.9	-0.9
MORW				IAmb	IAmb	15 36 26.4	
	comp=Z,46nm,1.2s						
MORW	Morawa	39.44	230	P	P	15 36 25.2	+0.5
KLBR	Kellerberrin	39.51	225	P	P	15 36 25.4	+0.2
	baz=40,SNR=14						
KLBR	Kellerberrin	39.51	225	P	P	15 36 25.5	+0.2
YOJ	Yonaguni jima	39.68	320	P	P	15 36 26.4	-0.3
YOJ				pmax	pmax		
	comp=Z,521nm,1.3s						
YOJ	Yonaguni jima	39.68	320	P	P	15 36 26.4	-0.3
BLDU	Ballidu	39.73	227	P	P	15 36 27.7	+0.6
	baz=40,SNR=13						
BLDU	Ballidu	39.73	227	P	P	15 36 27.9	+0.8
HIZ	Hauiti	39.85	149	P	P	15 36 26.4	-1.6
HIZ				IAmb	IAmb	15 37 33.4	
	comp=Z,56nm,1.2s						
HIZ	Hauiti	39.85	149	P	P	15 36 30.3	+2.3
KSM	Kuching	40.01	279	P	P	15 36 32.0	+2.4
KSM	Kuching	40.01	279	P	P	15 36 28.4	-1.1
YULB	Yu-li	40.06	317	P	P	15 36 28.8	-1.1
YULB				IAmb	IAmb	15 36 46.2	
	comp=Z,100nm,1.4s						
NACB	Ninganchiao	40.40	318	P	P	15 36 32.3	-0.3
TPUB	Ta-pu	40.46	316	P	P	15 36 32.5	-0.6
TPUB	Ta-pu	40.46	316	P	P	15 36 32.7	-0.5
QRZ	Quartz Range	40.53	153	P	P	15 36 35.2	+1.7
QRZ	Quartz Range	40.53	153	P	P	15 36 36.1	+2.6
SSLB	Suanglung	40.56	317	P	P	15 36 33.0	-1.0
SSLB				IAmb	IAmb	15 36 38.1	
	comp=Z,226nm,1.8s						
SSLB	Suanglung	40.56	317	P	P	15 36 34.2	+0.2
NWAO	Narrogin (SRO)	40.63	224	P	P	15 36 34.7	+0.3
WTVZ	West Tongariro	40.68	149	P	P	15 36 38.7	+3.7
NNVZ	North Ngauruho	40.71	149	P	P	15 36 39.0	+3.8
NGZ	Ngauruhoe	40.73	149	P	P	15 36 38.7	+3.3
TMVZ	Te Maari	40.74	149	P	P	15 36 38.9	+3.4
OTVZ	Oturere	40.76	149	P	P	15 36 35.2	-0.4
MUN	Mundaring	40.82	226	P	P	15 36 36.3	+0.2
	baz=41,SNR=5.3						
MUN	Mundaring	40.82	226	P	P	15 36 36.8	+0.8
MUGZ	Murupara	40.84	147	P	P	15 36 40.0	+3.9
URZ	Urewera	40.87	146	P	P	15 36 37.6	+1.3
	comp=Z,9.9nm,0.3s,baz=301,slow=24,SNR=35						
URZ	Urewera	40.87	146	P	P	15 36 37.7	+1.4
URZ	Urewera	40.87	146	P	P	15 36 35.2	-1.1
URZ	Urewera	40.87	146	P	P	15 36 38.3	+2.0
YHNB	Yeheng	40.88	319	P	P	15 36 36.0	-0.7
YHNB	Yeheng	40.88	319	P	P	15 36 37.5	+0.8
TATO	Taipei	41.02	319	P	P	15 36 36.3	-1.4
BKZ	Black Stump Fm	41.19	148	P	P	15 36 38.6	-0.4
BKZ	Black Stump Fm	41.19	148	P	P	15 36 41.1	+2.1
NNZ	Nelson	41.23	153	P	P	15 36 39.5	+0.3
JSU	Suzuyama	41.29	335	P	P	15 36 40.8	+1.0
JSU				IAmb	IAmb	15 37 01.3	
	comp=Z,157nm,1.3s						
TWGZ	Tauwhareparae	41.30	146	P	P	15 36 42.1	+2.2
TKGZ	Te Karaka	41.41	146	P	P	15 36 42.9	+2.1
THZ	Tophouse	41.45	154	P	P	15 36 40.8	-0.3
THZ				IAmb	IAmb	15 36 49.5	
	comp=Z,96nm,1.4s						
JSG	Sagara	41.58	346	P	P	15 36 41.1	-1.0
TSZ	Takapari Road	41.58	149	P	P	15 36 43.9	+1.8
CNGZ	Carnagh Statio	41.64	146	P	P	15 36 44.7	+2.1
TUWZ	Tuamarina	41.65	152	P	P	15 36 42.4	-0.3
FOZ	Fox Glacier	41.66	158	P	P	15 36 43.2	+0.6
FOZ				IAmb	IAmb	15 38 11.5	
	comp=Z,202nm,1.7s						
BSWZ	Blackbirch Sta	41.85	153	P	P	15 36 44.0	-0.3
JMN	Monobe	41.96	340	P	P	15 36 45.9	+0.6
JMN				IAmb	IAmb	15 36 46.1	
	comp=Z,246nm,1.8s						
LTZ	Lake Taylor	42.01	155	P	P	15 36 45.5	-0.1
LTZ				IAmb	IAmb	15 36 48.7	
	comp=Z,181nm,1.6s						
CMWZ	Cape Campbell	42.03	152	P	P	15 36 46.5	+0.7
BHW	Baring Head	42.07	152	P	P	15 36 47.0	+1.0
BFZ	Birch Farm	42.19	150	P	P	15 36 47.8	+0.8
BFZ				IAmb	IAmb	15 36 49.5	
	comp=Z,204nm,1.5s						
BFZ	Birch Farm	42.19	150	P	P	15 36 48.8	+1.8
KHZ	Kahutara	42.26	154	P	P	15 36 48.0	+0.5
KHZ	Kahutara	42.26	154	P	P	15 36 49.2	+1.7
MSWZ	Moikau Station	42.26	151	P	P	15 36 48.1	+0.5
RPZ	Rata Peaks	42.29	157	P	P	15 36 48.6	+0.8
RPZ				IAmb	IAmb	15 36 50.9	
	comp=Z,152nm,1.3s						
RPZ	Rata Peaks	42.29	157	P	P	15 36 50.3	+2.5
OXZ	Oxford	42.36	156	P	P	15 36 48.4	0.0
OXZ				IAmb	IAmb	15 37 51.9	
	comp=Z,218nm,2.0s						
PLWZ	Palliser	42.38	151	P	P	15 36 49.1	+0.5
DCZ	Deep Cove	42.45	162	P	P	15 36 47.5	-1.5
DCZ				IAmb	IAmb	15 36 52.2	
	comp=Z,78nm,1.2s						
WKZ	Wanaka	42.49	160	P	P	15 36 49.1	-0.4
WKZ				IAmb	IAmb	15 36 52.4	
	comp=Z,105nm,1.3s						
INU	Inuyama	42.52	345	P	P	15 36 50.4	+0.7
INU				IAmb	IAmb	15 36 51.5	
	comp=Z,97nm,1.2s						
INU	Inuyama	42.52	345	P	P	15 36 50.2	+0.5
JNU	Nakatsue	42.52	336	P	P	15 36 50.4	+0.5
LBZ	Lake Benmore	42.53	158	P	P	15 36 50.4	+0.7
LBZ				IAmb	IAmb	15 37 07.0	
	comp=Z,241nm,1.9s						
JYT	Yasato	42.62	349	P	P	15 36 51.6	+1.1
JGF	Kuroka	42.67	345	P	P	15 36 50.8	-0.1
MLZ	Mavora Lakes	42.67	161	P	P	15 36 50.5	-0.4
MLZ				IAmb	IAmb	15 36 54.0	
	comp=Z,76nm,1.3s						
KNMB	Chin-men Tao	42.77	316	P	P	15 36 53.0	+1.1
JWT	Wachi	42.91	343	P	P	15 36 53.3	+0.4
MQZ	McQueen's Vall	42.92	155	P	P	15 36 54.4	+1.5
MQZ				IAmb	IAmb	15 36 55.0	
	comp=Z,237nm,1.6s						
PYZ	Puysegur Point	42.94	163	P	P	15 36 53.8	+0.8
PYZ				IAmb	IAmb	15 37 26.1	
	comp=Z,144nm,1.2s						
QZH	Quanzhou	42.94	316⇑	*i*P	P	15 36 54.5	+1.2
QZH				pmax	pmax		
	comp=Z,78nm,1.0s						
WHZ	Wether Hill Ro	43.08	161	P	P	15 36 54.9	+0.8
WHZ				IAmb	IAmb	15 37 28.7	
	comp=Z,101nm,1.6s						
ODZ	Otahua Downs	43.26	158	P	P	15 36 56.9	+1.3
ODZ				IAmb	IAmb	15 36 59.0	
	comp=Z,147nm,1.7s						
ODZ	Otahua Downs	43.26	158	P	P	15 36 57.4	+1.8
MJAR	Matsushiro Arr	43.35	346	P	P	15 36 56.5	+0.1
	comp=Z,56nm,1.0s,baz=155,slow=10.0,SNR=35						
MJAR				LR	LR	15 52 45.0	
	comp=Z,122nm,21.2s,baz=220,slow=33						
MJAR	Matsushiro Arr	43.35	346	P	P	15 36 55.9	-0.5
MJAR				pmax	pmax		
	comp=Z,56nm,1.2s						
MJAR	Matsushiro Arr	43.35	346	P	P	15 36 55.9	-0.5
MJAR				IAmb	IAmb	15 36 59.1	
	comp=Z,56nm,1.2s						
MAJO	Matsushiro	43.35	346*c*	*i*P	P	15 36 56.9	+0.4
MAJO				pmax	pmax		
	comp=Z,129nm,1.2s						
MAJO	Matsushiro	43.35	346	P	P	15 36 56.1	-0.4
MAJO	Matsushiro	43.35	346	P	P	15 36 56.3	-0.2
MAT	Matsushiro	43.35	346	P	P	15 36 55.9	-0.6
MJB9	Matsu-Tunnel	43.36	346	P	P	15 36 56.8	+0.3
JHS	Saijyo	43.37	340	P	P	15 36 57.3	+0.7
JMM	Marumori	44.10	350	P	P	15 37 02.3	-0.1
JMM				IAmb	IAmb	15 37 05.4	
	comp=Z,84nm,0.8s						
QIZ	Qiongzhong	46.32	303	P	P	15 37 19.5	-0.7
QIZ				pP	pP	15 37 52.4	0.0
QIZ				S	S	15 43 59.3	+2.5
QIZ				sS	sS	15 44 54.2	+0.8
QIZ				pmax	pmax		
	comp=Z,14nm,1.0s						
TJN	Taejon	46.78	335⇑	*i*P	P	15 37 24.7	+1.2
JTM	Tenmabayashi	46.91	351	P	P	15 37 23.6	-0.8
KSRS	Korea Array	47.48	336	P	P	15 37 29.9	+1.1
	comp=Z,32nm,0.9s,baz=151,slow=8.7,SNR=42						
KSRS				pP	pwP	15 38 02.4	-0.9
	comp=Z,4.1nm,0.7s,baz=156,slow=8.4,SNR=1.9						
KSRS	Korea Array	47.48	336	P	P	15 37 30.0	+1.1
KSAR	Wonju Array Be	47.48	336	P	P	15 37 27.6	-1.3
KSAR	Wonju Array Be	47.48	336	P	P	15 37 27.6	-1.3
KS19	Wonju Array Si	47.54	336	P	P	15 37 28.3	-1.0
KS19				IAmb	IAmb	15 37 33.6	
	comp=Z,228nm,1.8s						
NJ2	Nanjing	47.66	324⇓	*i*P	P	15 37 31.1	+0.7
NJ2				pmax	pmax		
	comp=Z,63nm,1.3s						
ERM	Erimo	47.83	353	P	P	15 37 31.9	+0.4
ERM				pmax	pmax		
	comp=Z,322nm,1.7s						
ERM	Erimo	47.83	353	P	P	15 37 31.9	+0.4
ERM	Erimo	47.83	353	P	P	15 37 32.1	+0.6

JEM	Erimo	47.83	353	P	P	15 37 47.2	+16
INCN	Inchon	48.03	335	P	P	15 37 32.8	-0.4
INCN				pmax	pmax		
	comp=Z,274nm,1.5s						
INCN	Inchon	48.03	335	P	P	15 37 32.8	-0.4
JEW	Eniwo	48.86	352	P	P	15 37 39.3	-0.1
WHN	Wuhan	49.43	319	⇑P	P	15 37 46.0	+2.1
WHN				pP	pwP	15 38 18.5	0.0
WHN				pmax	pmax		
	comp=Z,180nm,1.2s						
ASAJ	Asahikawa	49.97	353	P	P	15 37 47.0	-0.8
ASAJ				pmax	pmax		
	comp=Z,442nm,1.5s						
JKA	Kamikawa-asahi	49.97	353	P	P	15 37 47.0	-0.8
KULM	Kulim	50.20	282	P	P	15 37 48.8	-1.3
KUR	Kuril'sk	50.70	358	ceP	P	15 37 54.8	+1.6
KUR				pmax	pmax		
	comp=Z,998nm,1.2s						
VLA	Vladivostok	51.18	343	d iP	P	15 37 58.1	+1.2
VLA				pmax	pmax		
	comp=Z,127nm,1.3s						
DL2	Dalian	51.42	332	P	P	15 37 59.8	+1.0
DL2				pmax	pmax		
	comp=Z,140nm,1.0s						
TIA	Tai'an	51.66	326	P	P	15 38 01.1	+0.5
TIA				pmax	pmax		
	comp=Z,78nm,1.3s						
USRK	Ussuriysk Ar.	52.15	344	P	P	15 38 05.3	+1.3
	comp=Z,58nm,1.0s,baz=168,slow=7.6,SNR=38						
USRK	Ussuriysk Ar.	52.15	344	P	P	15 38 04.0	-0.1
USA0B	Ussuriysk Arra	52.15	344	P	P	15 38 04.5	+0.4
USA0B				pmax	pmax		
	comp=Z,196nm,1.3s						
USA0B	Ussuriysk Arra	52.15	344	P	P	15 38 04.5	+0.4
SLVN	Son La	52.34	302	P	P	15 38 05.4	-0.5
GYA	Guiyang	52.54	310	⇑P	P	15 38 09.2	+1.8
GYA				pP	pwP	15 38 43.1	+0.7
GYA				S	S	15 45 24.5	+1.1
GYA				sS	sS	15 46 25.8	+4.5
GYA				pmax	pmax		
	comp=Z,12nm,0.9s						
GYA				LR	LR		
	comp=Z,150nm,9.3s						
GSI	Gunungsitoli	52.54	276	P	P	15 38 05.0	-2.6
ENH	Enshi	52.56	315	P	P	15 38 07.6	+0.2
YSS	Yuzh-Sakhalins	52.76	354	⇑eP	P	15 38 09.6	+1.2
YSS				pmax	pmax		
	comp=Z,170nm,1.3s						
YSS	Yuzh-Sakhalins	52.76	354	P	P	15 38 08.0	-0.5
YSS	Yuzh-Sakhalins	52.76	354	P	P	15 38 09.3	+0.9
MDJ	Mudanjiang	53.23	342	P	P	15 38 12.9	+0.9
MDJ				pmax	pmax		
	comp=Z,120nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,720nm,4.3s						
MDJ	Mudanjiang	53.23	342	P	P	15 38 11.3	-0.7
MDJ	Mudanjiang	53.23	342	P	P	15 38 13.1	+1.1
CN2	Changchun	53.90	338	eP	P	15 38 17.7	+0.8
CN2				pmax	pmax		
	comp=Z,50nm,1.3s						
BJT	Baijiatuau	54.97	329	P	P	15 38 23.9	-0.8
BJT				pmax	pmax		
	comp=Z,114nm,1.5s						
BJT	Baijiatuau	54.97	329	P	P	15 38 23.9	-0.8
BJT				IAmb	IAmb	15 38 27.5	
	comp=Z,114nm,1.5s						
KMI	Kunming	54.98	306	⇓P	P	15 38 26.8	+1.5
KMI				pP	pwP	15 39 00.2	-0.4
KMI				pmax	pmax		
	comp=Z,29nm,1.1s						
KMI				LR	LR		
	comp=Z,270nm,19.2s						
KMI				LR	LR		
	comp=Z,240nm,15.4s						
KMI				LR	LR		
	comp=Z,200nm,15.4s						
BJI	Beijing	54.98	329	P	P	15 38 25.6	+0.8
BJI				pP	pP	15 38 54.9	-3.0
BJI				sP	sP	15 39 17.4	+3.7
BJI				pmax	pmax		
	comp=Z,62nm,1.6s						
XAN	Xi'an	55.19	319	P	P	15 38 26.5	0.0
XAN				pP	pP	15 38 59.8	+0.1
XAN				PP	PP	15 40 31.3	-0.3
XAN				S	S	15 45 59.0	+0.2
XAN				sS	sS	15 46 57.6	+0.6
XAN				pmax	pmax		
	comp=Z,65nm,1.3s						
XAN				pmax	pmax		
	comp=Z,380nm,5.7s						
TIY	Taiyuan	55.38	324	eP	P	15 38 29.4	+1.6
CM31	Chiang Mai Arr	55.51	297	P	P	15 38 27.3	-1.7
CMAR	Chiang Mai Arr	55.51	297	P	P	15 38 28.4	-0.6
	comp=Z,2.2nm,0.7s,baz=127,slow=5.6,SNR=13						
CMAR				PKPPKP	P'P'df	16 08 37.8	+5.4
	comp=Z,1.8nm,1.0s,baz=279,slow=3.1,SNR=9.9						
CMAR	Chiang Mai Arr	55.51	297	i P	P	15 38 28.3	-0.7
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	Chiang Mai Arr	55.51	297	P	P	15 38 27.8	-1.2
CHTO	Chiang Mai	55.63	297	P	P	15 38 28.1	-1.7
CHTO				pmax	pmax		
	comp=Z,13nm,1.4s						
CHTO	Chiang Mai	55.63	297	P	P	15 38 28.1	-1.7
TYV	Tymovskoe	56.63	355	eP	P	15 38 37.3	+1.0
TYV				eS	S	15 46 18.6	+1.5
TYV				pmax	pmax		
	comp=Z,136nm,1.0s						
TYV				pmax	pmax		
	comp=Z,600nm,3.3s						
TYV				smax	smax		
	comp=N,500nm,3.7s						
TYV				smax	smax		
	comp=E,600nm,3.7s						
TYV				smax	smax		
	comp=E,26nm,1.1s						
KLR	Kul'dur	56.88	346	d iP	P	15 38 39.1	+1.0
KLR				pmax	pmax		
	comp=Z,196nm,1.5s						
CD2	Chengdu	57.02	313	P	P	15 38 41.0	+1.4
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
GRNR	Gornyy	57.37	350	⇓iP	P	15 38 42.7	+1.1
GRNR				pmax	pmax		
	comp=E,10.0nm,1.1s						
GRNR				pmax	pmax		
	comp=N,30nm,1.3s						
GRNR				pmax	pmax		
	comp=Z,50nm,1.2s						
GRNR				MLR	MLR		
	comp=N,200nm,14.0s						
GRNR				MLR	MLR		
	comp=E,250nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,430nm,15.0s						
HHC	Hu-ho-hao-te	58.02	326	eP	P	15 38 48.0	+1.6
HHC				S	S	15 46 36.2	+0.3
HHC				sS	sS	15 47 34.1	+0.1
HHC				pmax	pmax		
	comp=Z,63nm,1.3s						
HHC				pmax	pmax		
	comp=Z,250nm,5.1s						
HHC				LR	LR		
	comp=Z,400nm,14.5s						
HHC				LR	LR		
	comp=Z,490nm,15.3s						
HHC				LR	LR		
	comp=Z,530nm,16.2s						
BTO	Baotou	58.72	325	eP	P	15 38 53.8	+2.5
BTO				S	S	15 46 46.8	+1.9
BTO				LR	LR		
	comp=Z,570nm,12.1s						
BTO				LR	LR		
	comp=Z,1µm,16.5s						
PEA0B	Petropavlovsk-	58.94	6	d iP	P	15 38 52.6	+0.1
PEA0B	Petropavlovsk-	58.94	6	P	P	15 38 52.5	+0.1
PETK	Petropavlovsk-	58.94	6	P	P	15 38 52.1	-0.3
	comp=Z,205nm,1.1s,baz=90,slow=30,SNR=131						
PETK				LR	LR	16 01 36.3	
	comp=Z,29nm,19.6s,baz=193,slow=33						
PET	Petropavlovsk	58.95	6	ceP	P	15 38 53.0	+0.5
PET				pmax	pmax		
	comp=Z,107nm,1.3s						
PET	Petropavlovsk	58.95	6	P	P	15 38 51.1	-1.4
PET	Petropavlovsk	58.95	6	P	P	15 38 52.9	+0.5
KHLH	Kahului Airpor	59.05	62	P	P	15 38 52.1	-1.7
KHU	Kahuku	59.21	64	P	P	15 38 54.1	-1.1
KHU				pmax	pmax		
	comp=Z,280nm,1.4s						
KHU	Kahuku	59.21	64	P	P	15 38 54.1	-1.1
HMH	Humu‘ula Sheep	59.45	63	P	P	15 38 55.4	-1.6
LZH	Lanzhou	59.76	318	⇑P	P	15 38 59.6	+1.0
LZH				pP	pwP	15 39 33.8	-0.6
LZH				sP	sP	15 39 50.9	+3.1
LZH				S	S	15 46 58.2	-0.5
LZH				sS	sS	15 48 03.0	+6.1
LZH				pmax	pmax		
	comp=Z,84nm,1.3s						
LZH				pmax	pmax		
	comp=Z,280nm,6.5s						
LZH				LR	LR		
	comp=Z,440nm,14.6s						
LZH				LR	LR		
	comp=Z,480nm,15.3s						
LZH				LR	LR		
	comp=Z,340nm,17.9s						
PPT2	Papeete2	60.39	107	eS	S	15 47 06.2	-0.9
	comp=Z,350nm,26.2s						
HIA	Hailar	60.63	338	P	P	15 39 04.4	+0.3
HIA				pmax	pmax		
	comp=Z,93nm,1.1s						
HIA	Hailar	60.63	338	P	P	15 39 04.4	+0.3
PMOR	Pomariorio Ree	61.89	104	eP	P	15 39 15.5	+2.4
	comp=Z,139nm,1.1s						
ZEA	Zeya	62.14	345	eP	P	15 39 15.2	+1.1
ZEA				pmax	pmax		
	comp=E,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=N,90nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,150nm,1.3s						
VAH	Vaihoa	62.15	104	eP	P	15 39 17.3	+2.4
	comp=Z,56nm,1.0s						
KIWB	Kanaga Island	63.89	22	P	P	15 39 25.6	-0.1
ADK	Adak	64.09	22	P	P	15 39 26.2	-0.8
ADK				pmax	pmax		
	comp=Z,185nm,1.2s						
ADK	Adak	64.09	22	P	P	15 39 26.2	-0.8
ADK	Adak	64.09	22	P	P	15 39 27.9	+0.9
SHL	Shillong	64.14	302	P	P	15 39 26.0	-2.1
SHL				pmax	pmax		
	comp=Z,48nm,1.1s						
SHL	Shillong	64.14	302	P	P	15 39 26.0	-2.1
SHL				IAmb	IAmb	15 39 30.9	
	comp=Z,48nm,1.1s						
GTA	Gaotai	64.25	319	⇓P	P	15 39 28.4	-0.1
GTA				pP	pP	15 40 02.6	-0.1
GTA				pmax	pmax		
	comp=Z,21nm,1.2s						
GTA				pmax	pmax		
	comp=Z,230nm,6.9s						
GTA				LR	LR		
	comp=Z,360nm,17.4s						
GTA				LR	LR		
	comp=Z,220nm,18.5s						
GTA				LR	LR		
	comp=Z,310nm,17.8s						
MA2	Magadan	65.04	1	deP	P	15 39 33.0	0.0
MA2				pmax	pmax		
	comp=Z,143nm,1.7s						
MA2	Magadan	65.04	1	P	P	15 39 31.4	-1.6
ULN	Ulaanbaatar	65.16	330	deP	P	15 39 34.5	+0.3
ULN				pmax	pmax		
	comp=Z,45nm,1.0s						
ULN	Ulaanbaatar	65.16	330	P	P	15 39 33.4	-0.8
ULN				IAmb	IAmb	15 39 36.9	
	comp=Z,46nm,1.1s						
ULN				pP	pP	15 40 07.6	-0.9
ATKA	Atka Island	65.31	24	P	P	15 39 36.1	+1.3
	comp=Z,125nm,1.6s						
SONM	Songino Array	65.47	329	P	P	15 39 36.4	+0.2
	comp=Z,13nm,0.7s,baz=145,slow=6.2,SNR=67						
SONM				PKPPKP	P'P'df	16 08 19.6	+4.9
	comp=Z,4.1nm,1.1s,baz=266,slow=1.4,SNR=10						
SONM				LR	LR	16 09 49.6	
	comp=Z,140nm,19.5s,baz=168,slow=37						
SONM	Songino Array	65.47	329	P	P	15 39 35.5	-0.7
SONM				IAmb	IAmb	15 39 39.4	
	comp=Z,63nm,1.3s						
SONM				pP	pP	15 40 10.3	-0.2
SONM					P'P'bc	16 08 17.9	-1.6
LSA	Lhasa	66.23	306	P	P	15 39 40.8	-1.1
LSA				pmax	pmax		
	comp=Z,17nm,0.5s						
LSA	Lhasa	66.23	306	P	P	15 39 40.5	-1.4
LSA				pmax	pmax		
	comp=Z,74nm,1.7s						
LSA	Lhasa	66.23	306	P	P	15 39 40.5	-1.4
LSA				IAmb	IAmb	15 39 45.5	
	comp=Z,74nm,1.7s						
CASY	Casey	66.31	196	P	P	15 39 40.6	-0.5
NIKH	Nikolski High	68.08	26	P	P	15 39 51.7	-0.8
	baz=225						
TAPN	Taplejung	68.26	302	eP	P	15 39 53.7	-0.8
ODAN	Odare	68.37	302	eP	P	15 39 53.4	-1.7
ZAK	Zakamensk	68.68	330	eP	P	15 39 56.2	-0.2
ZAK				e		15 40 20.5	
ZAK				pmax	pmax		
	comp=Z,42nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,12nm,1.1s						
RAMN	Ramite	69.07	302	eP	P	15 39 58.1	-1.4
	comp=Z,16nm,0.4s						
YAK	Yakutsk	69.25	350	c iP	P	15 40 00.4	+0.9
YAK				e		15 40 16.0	
YAK				e*PP	pP	15 40 36.0	+1.7
YAK				eS	S	15 48 53.1	-0.7
YAK				pmax	pmax		
	comp=Z,96nm,1.4s						
YAK				pmax	pmax		
	comp=N,48nm,1.5s						
YAK				pmax	pmax		
	comp=E,15nm,1.5s						
YAK				smax	smax		
	comp=N,247nm,19.0s						
YAK	Yakutsk	69.25	350	P	P	15 39 59.2	-0.2
YAK					pP	15 40 34.6	+0.3
TLY	Talaya	69.33	331	⇓iP	P	15 40 02.2	+1.9
TLY				pmax	pmax		
	comp=Z,23nm,1.1s						
TLY	Talaya	69.33	331	P	P	15 40 00.8	+0.5
BOD	Bodaibo	69.54	341	eP	P	15 40 01.9	+0.5
BOD				pmax	pmax		
	comp=Z,23nm,1.4s						
TAOE	Nuku Hiva Isla	69.55	97	eLR	LR	16 01 22.8	
	comp=Z,98nm,22.6s						
TAOE	Nuku Hiva Isla	69.55	97	P	P	15 40 00.5	-2.0
UNV	Unalaska Valle	69.70	26	P	P	15 40 01.3	-1.2
UNV	Unalaska Valle	69.70	26	P	P	15 40 01.6	-0.9
	baz=227						
GUN	Gumba	69.97	302	eP	P	15 40 03.6	-1.5
	comp=Z,32nm,0.5s						
AKUT	Akutan	70.22	26	P	P	15 40 05.3	-0.2
PKI	Pulchoki	70.27	302	eP	P	15 40 04.9	-2.0
PKIN	Phulchoki	70.28	302	eP	P	15 40 05.1	-1.8
	comp=Z,6.2nm,0.4s						
KKN	Kakani	70.44	302	eP	P	15 40 06.3	-1.5
DMN	Daman	70.54	302	eP	P	15 40 07.0	-1.4
SPIA	Saint Paul Isl	70.56	22	P	P	15 40 08.1	+0.5
	baz=223						
MOY	Mondy	70.61	330	eP	P	15 40 08.7	+0.5
MOY				pmax	pmax		
	comp=Z,72nm,1.8s						
GKN	Gorkha	71.05	302	eP	P	15 40 09.5	-1.9
FALS	False Pass	71.73	26	P	P	15 40 13.0	-1.7
	baz=230						
KOLN	Koldanda	71.86	301	eP	P	15 40 14.4	-1.9
DANN	Dangsing	71.89	302	eP	P	15 40 14.4	-2.2
	comp=Z,11nm,0.4s						
VNDA	Vanda	72.10	177	P	P	15 40 16.9	+0.4
	comp=Z,5.4nm,0.7s,baz=332,slow=6.9,SNR=38						
VNDA				pP	pP	15 40 50.5	-1.3
	comp=Z,8.7nm,0.8s,baz=333,slow=6.5,SNR=8.3						
VNDA	Vanda	72.10	177	P	P	15 40 17.0	+0.4
VNDA	Vanda	72.10	177	P	P	15 40 16.4	-0.2
VNDA				pP	pP	15 40 49.8	-2.0
PYUN	Piuthan	72.47	302	eP	P	15 40 17.7	-2.3
	comp=Z,31nm,0.9s						
SBA	Scott Base	72.70	176	P	P	15 40 19.9	-0.2
SBA				*PP	pP	15 40 54.3	-1.1
SBA				pmax	pmax		
	comp=Z,76nm,1.6s						
SBA	Scott Base	72.70	176	P	P	15 40 19.9	-0.2
SBA					pP	15 40 54.3	-1.1
SBA				IAmb	IAmb	15 40 56.8	
	comp=Z,76nm,1.6s						
SDPT	Sand Point	73.36	27	P	P	15 40 22.9	-1.4
SDPT				IAmb	IAmb	15 40 24.6	
	comp=Z,158nm,1.3s						
SDPT	Sand Point	73.36	27	P	P	15 40 20.2	-4.0
	baz=232						
CNBA	Chernabura Isl	73.44	28	P	P	15 40 24.0	-0.8
CNBA				IAmb	IAmb	15 40 25.5	
	comp=Z,66nm,1.2s						
CHNA	Chernabura Isl	73.45	28	P	P	15 40 20.3	-4.5
	baz=233						
WMQ	Urumqi	74.33	318	eP	P	15 40 32.1	+1.7
WMQ				pP	pP	15 41 05.6	+0.1
WMQ				sP	sP	15 41 17.9	-2.9
WMQ				pmax	pmax		
	comp=Z,35nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,560nm,6.7s						
BILL	Bilibino	74.46	6	c iP	P	15 40 30.5	0.0
BILL				e		15 40 40.4	
BILL				e		15 43 23.3	
BILL				eS	S	15 49 53.7	+0.5
BILL				e*SS	sS	15 50 55.1	+1.7
BILL				pmax	pmax		
	comp=Z,87nm,1.3s						
BILL	Bilibino	74.46	6	P	P	15 40 30.0	-0.5
BILL				IAmb	IAmb	15 40 32.1	
	comp=Z,84nm,1.2s						
CHGN	Chignik	74.86	27	P	P	15 40 31.6	-1.4
CHGN				IAmb	IAmb	15 40 33.4	
	comp=Z,102nm,1.4s						
CHGN	Chignik	74.86	27	P	P	15 40 30.7	-2.2
	baz=234						
GAMB	Gambell	75.06	17	P	P	15 40 32.0	-1.9
	baz=220						
CHIR	Chirikof Islan	75.88	28	P	P	15 40 38.8	-0.1
CHIR	Chirikof Islan	75.88	28	P	P	15 40 35.8	-3.0
	baz=237						
DGZ	Jazzator, Alta	76.95	324	c iP	P	15 40 45.3	0.0
DGZ				pmax	pmax		
	comp=Z,22nm,1.0s						
SII	Sitkinak Islan	76.95	28	P	P	15 40 43.5	-1.4
SII				IAmb	IAmb	15 40 46.1	
	comp=Z,176nm,1.4s						
SII	Sitkinak Islan	76.95	28	P	P	15 40 44.1	-0.8
	baz=238						
SII	Sitkinak Islan	76.95	28	P	P	15 40 45.2	+0.3
TNA	Tin City	77.48	17	P	P	15 40 47.1	-0.4
TNA				IAmb	IAmb	15 40 50.7	
	comp=Z,148nm,1.8s						
TNA	Tin City	77.48	17	P	P	15 40 45.7	-1.9
	baz=223						
ANM	Nome	77.53	18	P	P	15 40 47.2	-0.7
ANM				pmax	pmax		
	comp=Z,73nm,1.3s						
ANM	Nome	77.53	18	P	P	15 40 47.2	-0.7
ANM				IAmb	IAmb	15 40 50.8	
	comp=Z,73nm,1.3s						
ANM	Nome	77.53	18	P	P	15 40 46.2	-1.8
	baz=226						
OHAK	Old Harbor	77.72	28	P	P	15 40 48.1	-1.0
OHAK				IAmb	IAmb	15 40 50.1	
	comp=Z,118nm,1.5s						
OHAK	Old Harbor	77.72	28	P	P	15 40 47.5	-1.6
	baz=239						
P18K	Big Mountain,	78.02	25	P	P	15 40 48.2	-2.6
P18K				IAmb	IAmb	15 40 50.9	
	comp=Z,125nm,1.9s						
P18K	Big Mountain,	78.02	25	P	P	15 40 49.1	-1.8
	baz=236						
O18K	Koktuh Hills	78.29	25	P	P	15 40 51.4	-0.9
O18K				IAmb	IAmb	15 40 52.6	
	comp=Z,54nm,1.6s						
TIXI	Tiksi	78.37	353	⇑eP	P	15 40 52.0	-0.5
TIXI				pmax	pmax		
	comp=Z,19nm,1.4s						
TIXI	Tiksi	78.37	353	P	P	15 40 50.9	-1.5
Q19K	Cape Douglas,	78.46	26	P	P	15 40 51.7	-1.5
Q19K	Cape Douglas,	78.46	26	P	P	15 40 52.0	-1.2
	baz=238						
SVW2	Sparrevohn	78.83	24	P	P	15 40 54.9	-0.3
O19K	Port Alsworth	78.85	25	P	P	15 40 53.8	-1.5
	baz=237						
MK31	Makanchi Array	78.99	320	P	P	15 40 54.4	-2.0
MK31				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MK31	Makanchi Array	78.99	320	P	P	15 40 54.4	-2.0
MKAR	Makanchi Array	78.99	320	P	P	15 40 55.0	-1.4
	comp=Z,8.4nm,1.0s,baz=95,slow=8.6,SNR=34						
MKAR				pP	pP	15 41 30.4	-1.5
	comp=Z,1.0nm,0.5s,baz=79,slow=7.5,SNR=2.0						
MKAR				PP	PP	15 43 56.2	-1.2
	comp=Z,2.6nm,0.9s,baz=108,slow=7.8,SNR=3.5						
MKAR	Makanchi Array	78.99	320	i P	P	15 40 55.0	-1.4
MKAR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MKAR	Makanchi Array	78.99	320	P	P	15 40 54.4	-2.0
MKAR					pP	15 41 29.2	-2.7
P19K	Oil Pt	79.02	26	P	P	15 40 55.2	-1.1
P19K	Oil Pt	79.02	26	P	P	15 40 55.2	-1.1
	baz=238						
N19K	Bonanza Creek	79.12	24	P	P	15 40 55.4	-1.4
N19K				IAmb	IAmb	15 40 57.9	
	comp=Z,68nm,1.6s						
N19K	Bonanza Creek	79.12	24	P	P	15 40 56.6	-0.3
	baz=237,SNR=7.5						
MAKZ	Makanchi	79.19	320	P	P	15 40 56.3	-1.2
MAKZ				pmax	pmax		
	comp=Z,25nm,1.2s						
MAKZ	Makanchi	79.19	320	P	P	15 40 56.3	-1.2
O20K	Slope Mountain	79.51	26	P	P	15 40 57.9	-1.1
	baz=239						
RSO	Redoubt South	79.65	25	P	P	15 40 58.6	-1.3
TTA	Tatalina	79.70	22	P	P	15 40 59.5	-0.5
TTA				pmax	pmax		
	comp=Z,42nm,1.2s						
TTA	Tatalina	79.70	22	P	P	15 40 59.5	-0.5
TTA	Tatalina	79.70	22	P	P	15 40 59.6	-0.5
	baz=235,SNR=13						
HOM	Homer	79.72	26	P	P	15 41 00.4	+0.4
	baz=240						
L19K	White Mountain	79.72	23	P	P	15 40 59.9	-0.1
L19K				IAmb	IAmb	15 41 02.1	
	comp=Z,32nm,0.8s						
M19K	Big River Lodg	79.75	23	P	P	15 41 00.2	0.0
M19K	Big River Lodg	79.75	23	P	P	15 40 59.8	-0.4
	baz=237						
CNPM	China Poot	79.83	26	P	P	15 41 00.2	-0.4
BRLK	Bradley Lake	80.10	26	P	P	15 41 01.3	-0.8
BRLK				IAmb	IAmb	15 41 02.4	
	comp=Z,88nm,1.7s						
BRSE	Bradley Lake S	80.15	26	P	P	15 41 01.9	-0.5
	baz=240						
ZAA0	Zalesovo Array	80.19	327	P	P	15 41 00.7	-2.0
ZALV	Zalesovo Beam	80.19	327	P	P	15 41 01.1	-1.6
	comp=Z,4.6nm,0.4s,baz=114,slow=5.3,SNR=30						
ZALV				pP	pP	15 41 37.6	-0.7
	comp=Z,3.9nm,0.7s,baz=106,slow=5.3,SNR=3.0						
ZALV				PP	PP	15 44 08.2	+1.0
	comp=Z,2.3nm,0.9s,baz=107,slow=9.5,SNR=3.8						
ZALV				LR	LR	16 17 57.3	
	comp=Z,129nm,18.4s,baz=96,slow=37						
ZALV	Zalesovo Beam	80.19	327	P	P	15 41 00.4	-2.3
PRZ	Przheval'sk	80.23	315	P	P	15 41 03.2	-0.2
PRZ				pmax	pmax		
	comp=Z,54nm,1.4s						
PRZ	Przheval'sk	80.23	315	P	P	15 41 03.2	-0.2
PRZ					pP	15 41 38.0	-1.2
PRZ				IAmb	IAmb	15 41 41.7	
	comp=Z,54nm,1.4s						
SPCR	Spurr Chakacha	80.26	25	P	P	15 41 02.0	-1.1
	baz=239						
L20K	Farewell, AK	80.27	23	P	P	15 41 02.8	-0.2
	baz=237,SNR=15						
SPU	Mount Spurr	80.32	25	P	P	15 41 01.6	-1.7
TARG	Taragay, Kyrgy	80.44	314	P	P	15 41 03.1	-1.8
TARG				pP	pP	15 41 37.9	-2.8
GCSA	Galena City Sc	80.44	20	P	P	15 41 03.2	-0.6
	baz=234						
CAPN	Captain Cook N	80.48	25	P	P	15 41 03.9	-0.2

CAPN	Captain Cook N	80.48	25	P	P	15 41 04.2	+0.1
	baz=240						
RDOG	Red Dog Mine	80.65	16	P	P	15 41 05.2	+0.3
	baz=228						
K20K	Telida	80.67	22	P	P	15 41 04.8	-0.3
K20K				IAmb	IAmb	15 41 06.5	
	comp=Z,84nm,1.4s						
K20K					pP	15 41 41.6	+0.5
K20K	Telida	80.67	22	P	P	15 41 04.8	-0.3
	baz=237,SNR=17						
SEW	Seward	80.90	26	P	P	15 41 05.4	-0.8
SEW				IAmb	IAmb	15 41 06.9	
	comp=Z,115nm,1.6s						
SEW	Seward	80.90	26	P	P	15 41 05.3	-1.0
	baz=242						
O22K	Cooper Landing	80.96	26	P	P	15 41 04.8	-1.8
O22K				IAmb	IAmb	15 41 08.5	
	comp=Z,88nm,1.4s						
O22K	Cooper Landing	80.96	26	P	P	15 41 05.6	-1.0
	baz=241						
KDJ	Kajisay	81.00	314	P	P	15 41 05.5	-2.1
KDJ				*PP	pP	15 41 42.3	-1.1
KDJ				pmax	pmax		
	comp=Z,25nm,1.3s						
KDJ	Kajisay	81.00	314	P	P	15 41 05.5	-2.1
KDJ				pP	pP	15 41 42.3	-1.1
J20K	Nowinta River	81.09	22	P	P	15 41 06.4	-0.9
J20K				IAmb	IAmb	15 41 08.7	
	comp=Z,110nm,1.5s						
J20K	Nowinta River	81.09	22	P	P	15 41 06.0	-1.3
	baz=237,SNR=17						
PPLA	Purkeypile	81.15	23	P	P	15 41 06.7	-1.2
PPLA				IAmb	IAmb	15 41 08.8	
	comp=Z,93nm,1.6s						
PPLA	Purkeypile	81.15	23	P	P	15 41 06.4	-1.4
	baz=239,SNR=5.5						
KSH	Kashi	81.19	311	P	P	15 41 10.0	+1.5
KSH				pP	pP	15 41 46.1	+1.8
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RC01	Rabbit Creek A	81.25	25	P	P	15 41 07.2	-0.9
RC01				IAmb	IAmb	15 41 09.2	
	comp=Z,128nm,1.6s						
RC01	Rabbit Creek A	81.25	25	P	P	15 41 07.2	-0.9
	baz=241,SNR=11						
M22K	Willow	81.41	25	P	P	15 41 07.3	-1.7
	baz=241,SNR=7.7						
CAST	Castle Rocks	81.46	23	P	P	15 41 08.4	-0.9
CAST				IAmb	IAmb	15 41 09.5	
	comp=Z,65nm,1.2s						
CAST	Castle Rocks	81.46	23	P	P	15 41 08.1	-1.2
	baz=239,SNR=9.6						
CHUM	Lake Minchumin	81.62	22	P	P	15 41 09.5	-0.5
	baz=238,SNR=31						
PWL	Port Wells	81.74	26	P	P	15 41 10.2	-0.6
PWL				IAmb	IAmb	15 41 11.4	
	comp=Z,35nm,0.6s						
PWL	Port Wells	81.74	26	P	P	15 41 10.1	-0.6
	baz=242,SNR=12						
PMR	Palmer	81.74	25	P	P	15 41 08.8	-1.9
PMR				pmax	pmax		
	comp=Z,92nm,1.8s						
PMR	Palmer	81.74	25	P	P	15 41 08.8	-1.9
PMR				IAmb	IAmb	15 41 10.9	
	comp=Z,92nm,1.8s						
PMR	Palmer	81.74	25	P	P	15 41 09.6	-1.1
	baz=242,SNR=10						
GHO	Glory Hole Cre	81.92	25	P	P	15 41 09.8	-2.0
GHO				IAmb	IAmb	15 41 12.7	
	comp=Z,134nm,2.0s						
KNK	Knik Glacier	81.94	25	P	P	15 41 10.5	-1.4
KNK	Knik Glacier	81.94	25	P	P	15 41 10.4	-1.4
	baz=242,SNR=6.3						
NIL	Nilore	81.95	305	P	P	15 41 11.4	-1.2
NIL				pmax	pmax		
	comp=Z,27nm,1.3s						
NIL	Nilore	81.95	305	P	P	15 41 11.4	-1.2
KTH	Kantishna Hill	81.98	23	P	P	15 41 10.5	-1.6
KTH				IAmb	IAmb	15 41 12.3	
	comp=Z,59nm,1.2s						
BOOM	Boomskoye usch	81.98	314	P	P	15 41 11.5	-1.2
BOOM				pP	pP	15 41 48.7	+0.1
Q23K	Middleton Isla	81.99	28	P	P	15 41 11.5	-0.6
	baz=244						
TRF	Thorofare Moun	82.18	23	P	P	15 41 11.7	-1.5
TRF				IAmb	IAmb	15 41 12.7	
	comp=Z,67nm,1.6s						
TRF	Thorofare Moun	82.18	23	P	P	15 41 11.2	-2.0
	baz=240						
SML	Sawmill	82.18	25	IAmb	IAmb	15 41 13.7	
	comp=Z,124nm,1.4s						
SML	Sawmill	82.18	25	P	P	15 41 12.3	-0.8
	baz=242,SNR=13						
BPAW	Bear Paw Mtn.	82.23	22	IAmb	IAmb	15 41 13.2	
	comp=Z,62nm,1.4s						
BPAW	Bear Paw Mtn.	82.23	22	P	P	15 41 12.0	-1.3
	baz=240,SNR=5.2						
GLI	Glacier Island	82.29	26	P	P	15 41 12.8	-0.9
GLI				IAmb	IAmb	15 41 14.2	
	comp=Z,29nm,0.6s						
GLI	Glacier Island	82.29	26	P	P	15 41 12.2	-1.4
	baz=244						
H21K	Melozitna Rive	82.38	21	P	P	15 41 13.5	-0.6
I21K	Tanana	82.42	21	IAmb	IAmb	15 41 15.4	
	comp=Z,63nm,1.2s						
I21K	Tanana	82.42	21	P	P	15 41 13.9	-0.3
	baz=239,SNR=8.6						
FID	Port Fidalgo	82.50	26	IAmb	IAmb	15 41 15.2	
	comp=Z,106nm,1.8s						
WAT1	Susitna Watana	82.57	24	P	P	15 41 13.9	-1.2
	baz=242						
KURK	Kurchatov	82.58	323	⇓*e*P	P	15 41 13.7	-1.7
KURK				pmax	pmax		
	comp=Z,34nm,1.3s						
KURK	Kurchatov	82.58	323	P	P	15 41 14.2	-1.2
SCM	Sheep Creek Mo	82.62	25	IAmb	IAmb	15 41 16.1	
	comp=Z,77nm,1.3s						
SCM	Sheep Creek Mo	82.62	25	P	P	15 41 14.7	-0.7
	baz=243,SNR=7.2						
RND	Reindeer	82.72	23	P	P	15 41 14.5	-1.4
RND				pmax	pmax		
	comp=Z,53nm,0.9s						
RND	Reindeer	82.72	23	P	P	15 41 14.5	-1.4
RND				IAmb	IAmb	15 41 16.2	
	comp=Z,53nm,0.9s						
WAT6	Susitna Watana	82.78	24	P	P	15 41 15.1	-1.2
	baz=243,SNR=20						
MLY	Manley	82.80	22	IAmb	IAmb	15 41 16.9	
	comp=Z,30nm,0.5s						
MLY	Manley	82.80	22	P	P	15 41 15.0	-1.3
	baz=240,SNR=41						
MCK	McKinley	82.84	23	P	P	15 41 14.5	-2.0
	baz=242,SNR=47						
DIV	Divide	82.98	26	IAmb	IAmb	15 41 18.2	
	comp=Z,78nm,1.5s						
KLU	Klutina	83.07	26	P	P	15 41 16.8	-1.0
KLU				IAmb	IAmb	15 41 18.7	
	comp=Z,70nm,1.4s						
KLU	Klutina	83.07	26	P	P	15 41 17.2	-0.6
	baz=245,SNR=18						
KAIM	Kayak Island	83.09	28	P	P	15 41 18.0	+0.2
	baz=246						
RAGM	Ragged Mountai	83.16	27	IAmb	IAmb	15 41 20.7	
	comp=Z,137nm,1.6s						
NEA2	Nenana	83.20	22	IAmb	IAmb	15 41 18.5	
	comp=Z,39nm,1.0s						
NEA2	Nenana	83.20	22	P	P	15 41 16.3	-2.0
	baz=241,SNR=14						
M24K	Tolsona, Glenn	83.23	25	IAmb	IAmb	15 41 19.7	
	comp=Z,136nm,1.4s						
M24K	Tolsona, Glenn	83.23	25	P	P	15 41 18.4	-0.1
	baz=244,SNR=11						
I23K	Minto, Yukon-K	83.36	22	P	P	15 41 18.0	-1.0
I23K	Minto, Yukon-K	83.36	22	P	P	15 41 17.8	-1.3
	baz=241,SNR=12						
BMRM	Bremner River	83.43	27	IAmb	IAmb	15 41 20.3	
	comp=Z,75nm,1.4s						
BMRM	Bremner River	83.43	27	P	P	15 41 18.7	-0.9
	baz=246,SNR=8.1						
WRH	Wood River Hil	83.52	23	P	P	15 41 18.3	-1.6
WRH				IAmb	IAmb	15 41 20.1	
	comp=Z,49nm,1.0s						
MAW	Mawson	83.60	203	P	P	15 41 19.8	-0.5
	comp=Z,17nm,1.1s,baz=65,slow=6.9,SNR=6.7						
MAW	Mawson	83.60	203	P	P	15 41 19.3	-1.0
MAW				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MAW	Mawson	83.60	203	P	P	15 41 19.3	-1.0
MDM	Murphy Dome	83.69	22	IAmb	IAmb	15 41 21.1	
	comp=Z,64nm,1.6s						
N25K	Chitina, Valde	83.69	26	P	P	15 41 20.6	-0.3
	baz=246						
CCB	Clear Creek Bu	83.71	23	P	P	15 41 19.0	-1.8
CCB				IAmb	IAmb	15 41 20.3	
	comp=Z,88nm,1.4s						
HARP	HAARP	83.78	25	P	P	15 41 19.6	-1.7
	baz=245						
TCOL	CIGO, UAF Yank	83.79	22	IAmb	IAmb	15 41 20.6	
	comp=Z,86nm,1.3s						
TCOL	CIGO, UAF Yank	83.79	22	P	P	15 41 19.6	-1.7
	baz=242,SNR=7.9						
COLA	College	83.80	22	*d i*P	P	15 41 19.3	-2.0
COLA				pmax	pmax		
	comp=Z,41nm,1.1s						
COLA	College	83.80	22	P	P	15 41 19.5	-1.8
COLA				IAmb	IAmb	15 41 20.6	
	comp=Z,86nm,1.3s						
COLA	College	83.80	22	P	P	15 41 19.5	-1.8
	baz=242						
PAX	Paxson	83.89	25	P	P	15 41 20.8	-1.2
	baz=245,SNR=8.9						
HDA	Harding Lake	83.93	23	P	P	15 41 20.2	-1.7
HDA				IAmb	IAmb	15 41 21.6	
	comp=Z,73nm,1.6s						
HDA	Harding Lake	83.93	23	P	P	15 41 20.3	-1.7
	baz=243,SNR=20						
GLB	Gilahina Butte	83.97	26	IAmb	IAmb	15 41 23.1	
	comp=Z,71nm,1.5s						
VRDI	Verde Repeater	84.05	27	P	P	15 41 21.6	-1.2
VRDI				IAmb	IAmb	15 41 23.7	
	comp=Z,56nm,1.4s						
COLD	Coldfoot	84.09	20	IAmb	IAmb	15 41 24.0	
	comp=Z,51nm,1.3s						
COLD	Coldfoot	84.09	20	P	P	15 41 22.3	-0.4
	baz=240,SNR=18						
IL31		84.12	23	IAmb	IAmb	15 41 22.0	
	comp=Z,71nm,1.4s						
ILAR	Eielson Array	84.12	23	P	P	15 41 20.8	-2.2
	comp=Z,20nm,0.6s,baz=248,slow=4.8,SNR=216						
ILAR				LR	LR	16 17 42.7	
	comp=Z,75nm,19.1s,baz=255,slow=35						
H24K	Noodor Dome	84.23	22	P	P	15 41 22.0	-1.5
H24K	Noodor Dome	84.23	22	P	P	15 41 22.2	-1.4
	baz=242,SNR=11						
MCARA	McCarthy VSAT	84.30	26	P	P	15 41 23.2	-0.7
	baz=247						
QSPA	South Pole Qui	84.30	180	P	P	15 41 24.7	+0.6
QSPA				IAmb	IAmb	15 41 59.7	
	comp=Z,67nm,1.2s						
MESA	MESA	84.33	28	P	P	15 41 22.8	-1.6
	baz=248						
A21K	Barrow	84.42	15	P	P	15 41 23.6	-0.7
	baz=234						
RIDG	Independent Ri	84.47	24	IAmb	IAmb	15 41 26.0	
	comp=Z,110nm,1.5s						
RIDG	Independent Ri	84.47	24	P	P	15 41 23.8	-1.0
	baz=245,SNR=13						
M26K	Nabesna, AK	84.70	26	P	P	15 41 25.5	-0.5
	baz=247						
DOT	Dot Lake	84.75	24	P	P	15 41 25.4	-0.8
DOT				IAmb	IAmb	15 41 26.7	
	comp=Z,82nm,1.3s						
BARN	Barnard Glacie	84.79	27	IAmb	IAmb	15 41 27.9	
	comp=Z,72nm,1.5s						
L26K	Log Cabin Wild	84.80	25	P	P	15 41 25.9	-0.5
	baz=247,SNR=13						
CTG	Chitna Glacier	84.90	27	P	P	15 41 27.0	-0.1
	baz=249						
CTGM	Chitina Glacie	84.90	27	IAmb	IAmb	15 41 28.3	
	comp=Z,62nm,1.4s						
SCRK	Sand Creek	84.92	24	P	P	15 41 26.2	-1.0
	baz=246,SNR=14						
TOLK	Toolik Lake Re	85.00	19	IAmb	IAmb	15 41 28.4	
	comp=Z,36nm,1.2s						
TOLK	Toolik Lake Re	85.00	19	P	P	15 41 26.9	-0.5
	baz=241						
PINM	Pinnacle	85.09	28	P	P	15 41 27.3	-0.8
	baz=250						
M27K	Edge Creek, AK	85.17	26	P	P	15 41 27.9	-0.5
M27K				IAmb	IAmb	15 41 29.8	
	comp=Z,125nm,1.5s						
M27K	Edge Creek, AK	85.17	26	P	P	15 41 28.4	-0.1
	baz=248,SNR=18						
J26L	Joseph Creek	85.30	24	P	P	15 41 28.3	-0.7
	baz=246,SNR=20						
PNL	Peninsula	85.35	29	P	P	15 41 28.9	-0.4
	baz=251						
L27K	Beaver Creek,	85.45	25	IAmb	IAmb	15 41 30.9	
	comp=Z,64nm,1.4s						
L27K	Beaver Creek,	85.45	25	P	P	15 41 29.3	-0.4
	baz=248,SNR=20						
YUK3	Moose Creek	85.58	27	P	P	15 41 30.3	-0.3
	baz=250,SNR=9.1						
BVCY	Beaver Creek	85.63	26	P	P	15 41 30.4	-0.2
	baz=249,SNR=12						
NRIK	Noril'sk	85.81	342	P	P	15 41 30.0	-1.2
	comp=Z,4.9nm,0.3s,baz=211,slow=1.3,SNR=14						
NRIK				pP	pP	15 42 06.8	-0.6
	comp=Z,10nm,0.9s,baz=130,slow=5.0,SNR=3.1						
NRIK				LR	LR	16 19 15.9	
	comp=Z,219nm,18.7s,baz=318,slow=35						
NRIK	Noril'sk	85.81	342	*ce*P	P	15 41 30.7	-0.5
NRIK				pmax	pmax		
	comp=Z,24nm,1.2s						
NRIK	Noril'sk	85.81	342	P	P	15 41 30.1	-1.1
YUK4	Talbot Arm	86.25	27	P	P	15 41 34.2	+0.3
	baz=251,SNR=9.9						
YUK6	Outpost Mounta	86.26	28	P	P	15 41 33.1	-0.9
	baz=251						
HYT	Haines Junctio	86.62	28	P	P	15 41 35.7	+0.1
	baz=252,SNR=17						
DAWY	Dawson	86.83	25	P	P	15 41 36.2	-0.3
	baz=250,SNR=40						
SKAG	Skagway	87.26	30	IAmb	IAmb	15 41 39.9	
	comp=Z,60nm,1.5s						
SKAG	Skagway	87.26	30	P	P	15 41 38.0	-0.5
	baz=254						
CRAG	Craig	87.39	34	P	P	15 41 38.7	-0.5
	baz=256						
M30M	Minto, Yukon	87.47	26	P	P	15 41 39.5	0.0
	baz=253,SNR=14						
N31M	Braeburn, Yuko	87.61	28	P	P	15 41 40.5	+0.2
	baz=254,SNR=9.3						
I29M	Ogilvie Camp,	87.70	24	P	P	15 41 40.0	-0.5
	baz=251,SNR=9.1						
WHY	Whitehorse	87.81	28	P	P	15 41 40.9	-0.4
	baz=254,SNR=7.2						
WRAK	Wrangell Islan	88.04	33	P	P	15 41 44.4	+2.1
	baz=257						
MAYO	Mayo, Yukon	88.16	26	P	P	15 41 42.8	0.0
	baz=254,SNR=6.9						
BRVK	Borovoye	88.18	324	*ce*P	P	15 41 42.4	-0.6
BRVK				pmax	pmax		
	comp=Z,12nm,1.7s						
BRVK	Borovoye	88.18	324	P	P	15 41 42.0	-1.0
M31M	Drury Creek, Y	88.44	27	P	P	15 41 43.7	-0.5
	baz=255,SNR=7.4						
P33M	Teslin, Yukon	88.68	29	P	P	15 41 44.9	-0.5
	baz=256						
FARO	Faro, Yukon	88.92	27	P	P	15 41 45.6	-0.8
	baz=256,SNR=10						
DLBC	Dease Lake	89.69	31	P	P	15 41 49.0	-1.2
	comp=Z,8.3nm,1.2s,baz=37,slow=3.7,SNR=4.7						
DLBC	Dease Lake	89.69	31	IAmb	IAmb	15 41 51.7	
	comp=Z,34nm,1.5s						
INK	Inuvik	90.36	21	P	P	15 41 51.9	-1.0
	comp=Z,14nm,0.9s,baz=237,slow=6.0,SNR=25						
INK	Inuvik	90.36	21	P	P	15 41 51.8	-1.0
	baz=256						
WTLY	Watson Lake, Y	90.63	30	P	P	15 41 53.3	-1.2
	baz=260						
TGTN	Hyland Airport	91.13	28	P	P	15 41 56.3	-0.4
	baz=260,SNR=6.4						
J01E	Myrtle Point	91.16	47	P	P	15 41 56.9	-0.3
	baz=263						
O02D	Mt. Diablo Mer	91.69	50	P	P	15 41 59.3	-0.6
	baz=264						
M02C	Callahan	91.77	49	P	P	15 42 00.4	+0.3
	baz=264						
HUMO	Hull Mountain	91.81	48	IAmb	IAmb	15 42 02.1	
	comp=Z,17nm,1.0s						
N02D	Trinity Center	91.83	49	P	P	15 42 01.0	+0.5
	baz=264						
YBH	Yreka Blue Hor	91.91	48	P	P	15 42 00.4	-0.4
	comp=Z,17nm,1.1s,baz=184,slow=3.7,SNR=8.9						
YBH	Yreka Blue Hor	91.91	48	P	P	15 41 59.7	-1.1
YBH				pmax	pmax		
	comp=Z,20nm,1.1s						
YBH	Yreka Blue Hor	91.91	48	P	P	15 41 59.7	-1.1
YBH				IAmb	IAmb	15 42 02.6	
	comp=Z,20nm,1.1s						
L04D	Klamath Falls	92.26	48	P	P	15 42 02.1	-0.4
	baz=264						
O03E	Paynes Creek	92.45	50	P	P	15 42 03.4	0.0
	baz=265						
E04D	Cinebar	92.49	44	P	P	15 42 03.1	-0.2
	baz=264						
ORV	Oroville	92.62	51	IAmb	IAmb	15 42 04.7	
	comp=Z,26nm,1.6s						
J05D	Fort Rock, OR	93.14	47	P	P	15 42 06.9	+0.3
	baz=265						
SMMC	Simmler	93.46	55	P	P	15 42 08.1	0.0
	baz=266						
PKM	Mcpherson Peak	93.57	55	P	P	15 42 09.3	+0.5
	baz=266						
A36M	Sachs Harbour	93.80	18	P	P	15 42 07.6	-1.2
A36M				IAmb	IAmb	15 42 09.2	
	comp=Z,16nm,0.8s						
A36M	Sachs Harbour	93.80	18	P	P	15 42 07.4	-1.4
	baz=264						
ABKAR	Akbulak array	94.11	319	PP	PP	15 45 50.3	-8.8
CIS	Catalina Islan	94.63	57	P	P	15 42 13.4	-0.1
	baz=266						
ISA	Isabella, Lake	94.72	55	P	P	15 42 14.0	+0.1
	baz=266						
LHV	Little Huntoon	94.85	52	IAmb	IAmb	15 42 16.3	
	comp=Z,14nm,1.1s						
WVOR	Wild Horse Val	94.98	48	P	P	15 42 13.4	-1.6
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
WVOR	Wild Horse Val	94.98	48	P	P	15 42 13.4	-1.6
EDW2	Edwards Air Fo	95.06	56	P	P	15 42 15.5	0.0
	baz=267,SNR=6.1						
CWC	Cottonwood Cre	95.08	54	P	P	15 42 14.9	-0.8
	baz=267						
KVN	Kaiserville	95.21	51	IAmb	IAmb	15 42 17.8	
	comp=Z,18nm,1.4s						
BFSC	Mount Baldy Ra	95.31	56	P	P	15 42 16.5	-0.2
	baz=267						
ARU	Arti	95.33	326	PP	PP	15 46 06.8	-1.5
LRMC	Laurel Mtn Rad	95.35	55	P	P	15 42 16.9	0.0
	baz=267,SNR=14						
LCH	Last Change Ra	95.48	53	P	P	15 42 17.0	-0.4
MPMC	Manual Prospec	95.54	54	P	P	15 42 17.5	-0.3
	baz=267,SNR=13						
QSM	Queen of Sheba	96.04	55	P	P	15 42 19.3	-0.6
QSM				IAmb	IAmb	15 42 21.4	
	comp=Z,18nm,1.2s						
GSC	Goldstone, Bar	96.06	55	P	P	15 42 20.1	0.0
GSC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GSC	Goldstone, Bar	96.06	55	P	P	15 42 20.1	0.0
GSC	Goldstone, Bar	96.06	55	P	P	15 42 20.1	0.0
	baz=267						
FURC	Furnace Creek,	96.07	54	P	P	15 42 20.1	+0.2
	baz=267						
GWY	Greenwater Val	96.21	54	P	P	15 42 20.5	-0.3
GWY				IAmb	IAmb	15 42 21.7	
	comp=Z,10nm,1.3s						
MONP2	Monument Peak	96.27	58	P	P	15 42 21.2	+0.1
	baz=267						
PFO	Pinyon Flats O	96.27	57	P	P	15 42 21.5	+0.4
	comp=Z,4.6nm,0.8s,baz=352,slow=3.1,SNR=4.7						
HEC	Hector,Ludlow	96.42	56	P	P	15 42 21.6	-0.1
	baz=268						
SHOC	Shoshone, Teco	96.52	55	P	P	15 42 21.8	-0.2
	baz=268						
IKP	In-Ko-Pah, Jac	96.52	58	P	P	15 42 22.4	+0.2
	baz=267						
BELC	Belle Mtn. Jos	96.67	57	P	P	15 42 22.6	-0.3
	baz=268,SNR=5.8						
TUQ	Turquoise Moun	96.79	55	P	P	15 42 23.2	-0.2
	baz=268,SNR=6.8						
SWSC	Sam W. Stewart	96.79	58	P	P	15 42 23.5	+0.2
	baz=268						
GMRC	Granite Mounta	96.98	56	P	P	15 42 24.5	+0.3
	baz=268						
PLID	Pearl Lake	96.99	45	P	P	15 42 21.9	-2.3
BC3	Big Chuckawall	97.11	57	P	P	15 42 24.4	-0.4
	baz=268						
R11A	Troy Canyon, C	97.15	52	P	P	15 42 24.4	-0.6
	baz=268						
IRM	Iron Mountain	97.38	56	P	P	15 42 25.7	-0.3
	baz=268						
SHPR	Sheep Range	97.44	54	IAmb	IAmb	15 42 28.5	
	comp=Z,13nm,1.4s						
PRN	Pahroc Range	97.55	53	IAmb	IAmb	15 42 29.4	
	comp=Z,17nm,1.3s						
YKA	Yellowknife Ar	97.61	28	P	P	15 42 24.8	-1.5
	comp=Z,0.9nm,0.6s,baz=274,slow=4.9,SNR=11						
YKA	Yellowknife Ar	97.61	28	*i* P	P	15 42 25.5	-0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	97.61	28	P	P	15 42 24.4	-1.9
GLA	Glamis	97.61	58	P	Pdif	15 42 27.1	0.0
	baz=268						
HLID	Hailey	98.11	47	P	P	15 42 28.6	-0.7
	baz=270						
SPR3	Spring Creek 3	98.14	52	IAmb	IAmb	15 42 31.9	
	comp=Z,13nm,1.3s						
PDMCI	Parker Dam,Lak	98.22	56	P	P	15 42 29.0	-0.6
	baz=269						
DUG	Dugway, Tooele	99.32	50	P	Pdif	15 42 34.2	-0.4
	baz=270						
KNB	Kanab	99.32	54	IAmb	IAmb	15 44 55.3	
	comp=Z,9.8nm,1.4s						
HVU	Hansel Valley	99.33	49	IAmb	IAmb	15 42 35.9	
	comp=Z,11nm,1.2s						
BOZ	Bozeman (W)	100.07	45	P	Pdif	15 42 37.4	-0.4
	baz=272						
SNAA	Sanae	100.74	189	P	Pdif	15 42 40.4	+0.2
SNAA	Sanae	100.74	189	P	Pdif	15 42 38.9	-1.3
SNAA	Sanae	100.74	189	Pdif	Pdif	15 42 38.9	-1.3
H17A	Grant Village	100.86	46	P	Pdif	15 42 40.9	-0.7
	baz=273						
EGMT	Eagleton	101.22	42	P	Pdif	15 42 42.8	-0.1
	baz=274						
BW06	Boulder Array	101.69	48	P	Pdif	15 42 44.4	-0.9
	baz=273						
PDAR	Pinedale Array	101.69	48	P	Pdif	15 42 43.5	-1.7
	comp=Z,1.6nm,0.7s,baz=215,slow=1.9,SNR=11						
PDAR	Pinedale Array	101.69	48		Pdif	15 42 42.7	-2.5
VNA3	Neumayer Olymp	102.04	187	P	Pdif	15 42 46.2	+0.3
VNA2	Neumayer--Watz	102.05	188	P	Pdif	15 42 46.6	+0.6
	baz=159,slow=4.5						
VNA1	Neumayer--Stat	102.42	187	P	Pdif	15 42 48.1	+0.6
MVCO	Mesa Verde	102.77	53	P	Pdif	15 42 50.6	+0.4
	baz=273						
N23A	Red Feather La	104.51	49	P	Pdif	15 42 57.5	-0.4
	baz=275						
APA	Apatity	105.07	339	⇓*i*P	Pdif	15 42 57.4	-2.0
APA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,3µm,16.0s						
ARCES	ARCESS Array B	106.78	342	Pdiff	Pdif	15 43 06.2	-0.8
	comp=Z,6.7nm,1.1s,baz=78,slow=6.3,SNR=3.9						
ARCES				PKiKP	PKiKP	15 47 15.7	-0.6
	comp=Z,4.0nm,1.0s,baz=44,slow=0.6,SNR=6.2						
ARCES				PKKPbc	PKKPbc	15 58 35.2	-3.0
	comp=Z,1.0nm,0.3s,baz=241,slow=2.3,SNR=26						
FINES	FINESS Array B	110.55	335	Pdiff	Pdif	15 43 22.9	-0.9
	comp=Z,4.1nm,0.9s,baz=80,slow=5.1,SNR=11						
FINES				PKiKP	PKiKP	15 47 23.7	+0.2
	comp=Z,3.7nm,0.9s,baz=123,slow=7.0,SNR=4.9						
FINES				PKKPbc	PKKPbc	15 58 22.7	-3.2
	comp=Z,3.1nm,1.0s,baz=222,slow=2.6,SNR=3.8						
AKASG	Malin Array Be	113.39	323	PKKPbc	PKKPbc	15 58 14.9	-1.3
	comp=Z,0.7nm,0.4s,baz=255,slow=4.5,SNR=6.1						
NOA	NORSAR Array B	116.65	339	PKKPbc	PKKPbc	15 58 02.6	-2.8
	comp=Z,1.9nm,0.9s,baz=51,slow=3.5,SNR=3.9						
VYHS	Vyhne	120.44	324	*e*PKIKP	PKiKP	15 47 50.8	+7.7
VYHS	Vyhne	120.44	324	*e*	PKiKP	15 47 50.8	+7.7
PLCA	Paso Flores	120.88	145	PKP	PKiKP	15 47 44.3	0.0
	comp=Z,2.6nm,0.5s,baz=204,slow=1.1,SNR=3.0						
MODS	Modra-Piesok	121.40	325	*e*PKIKP	PKPdf	15 47 44.3	-0.5
MODS	Modra-Piesok	121.40	325	*e*PKP	PKPdf	15 47 44.3	-0.5
CKRC	Cesky Krumlov	122.83	326	*e*PKPDF	PKiKP	15 47 48.7	+0.9
KHC	Kasperske Hory	123.05	327	*e*PKPDF	PKPdf	15 47 47.1	-0.9
KHC	Kasperske Hory	123.05	327	*e*PKIKP	PKPdf	15 47 47.1	-0.9
GERES	GERESS Array B	123.15	327	PKP	PKPdf	15 47 47.1	-1.2

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              comp=Z,0.8nm,0.4s,baz=74,slow=1.9,SNR=9.3
GERES                                  PKKPbc  PKKPbc   15 57 40.7  -0.4
              comp=Z,0.2nm,0.5s,baz=191,slow=1.4,SNR=4.6
BO02  Sierra Bellavi      124.54 140   PKPdf   PKPdf    15 47 48.7  -2.6
LCO   Las Campanas        128.04 134   PKIKP   PKiKP    15 47 59.1   0.0
LCO   Las Campanas        128.04 134   PKPdf   PKiKP    15 47 59.1   0.0
ATAH  Atahualpa           130.32 104   PKP     PKiKP    15 48 04.6  +0.4
              comp=Z,23nm,0.9s
ATAH                                   SKPbc   SKPbc    15 51 17.2  +3.7
              comp=Z,6.8nm,0.8s,baz=242,slow=7.0,SNR=6.7
OTAV  Otavalo             131.60  95   PKIKP   PKPdf    15 48 01.2  -4.7
OTAV  Otavalo             131.60  95   PKPdf   PKPdf    15 48 01.2  -4.7
ROSC  El Rosal            136.13  89   PKP     PKiKP    15 48 15.2  -0.8
              comp=Z,17nm,0.5s,baz=63,slow=10,SNR=5.1
ROSC                                   SKPbc   SKPbc    15 51 35.6  +2.5
              comp=Z,26nm,0.3s,baz=6.9,slow=5.3,SNR=5.6
LPAZ  La Paz              136.65 121   PKhKP   PKPpre   15 48 05.7
              comp=Z,1.7nm,0.5s,baz=285,slow=2.3,SNR=5.2
LPAZ                                   PKP     PKPdf    15 48 16.1  +0.7
              comp=Z,5.8nm,0.6s,baz=280,slow=1.6,SNR=10
LPAZ                                   SKPbc   SKPbc    15 51 37.4  +2.6
              comp=Z,4.2nm,1.0s,baz=239,slow=2.0,SNR=7.6
LPAZ  La Paz              136.65 121           PKPpre   15 48 02.7
LPAZ                                   PKPdf   PKPdf    15 48 15.7  +0.2
CPUP  Villa Florida       138.77 142   PKP     PKPdf    15 48 17.5  -0.8
              comp=Z,11nm,1.1s,baz=292,slow=3.3,SNR=4.8
ETMB  Extrema             141.02 113   PKPdf   PKPdf    15 48 17.0  -5.7
SIV   San Ignacio         142.68 126   PKhKP   PKPpre   15 48 22.0
              comp=Z,20nm,0.8s,baz=233,slow=3.2,SNR=23
SIV                                    SKPbc   SKiKP    15 51 52.7  +1.0
              comp=Z,14nm,1.0s,baz=231,slow=2.1,SNR=12
AQDB  Aquidauana          143.95 137   PKPdf   PKPab    15 48 25.0  -0.3
SAML  Samuel              144.12 114   PKIKP   PKPab    15 48 25.1  -1.0
SAML  Samuel              144.12 114   PKPdf   PKPab    15 48 25.1  -1.0
PTLB  Pontes e Lacer      144.53 127   PKPdf   PKPab    15 48 27.3  -0.3
VILB  Vilhena             144.98 122   PKPdf   PKPbc    15 48 28.3  -0.9
CBE   Ff, Capester        147.58  69  eP       PKiKP    15 48 38.8  -0.1
TDBA  Terre de Bas,       147.61  69  eP       PKiKP    15 48 38.5  -0.4
TORD  Torodi Ar. Bea      147.63 286   PKPbc   PKPdf    15 48 35.3  +1.1
              comp=Z,3.2nm,0.4s,baz=82,slow=2.4,SNR=42
TORD                                   pPKPbc  pPKPdf   15 49 12.6  -0.1
              comp=Z,2.6nm,0.5s,baz=54,slow=3.0,SNR=2.2
TORD  Torodi Ar. Bea      147.63 286           PKPdf    15 48 33.4  -0.7
DSLB  Salisbury           147.91  70  eP       PKiKP    15 48 39.1  -0.4
BIM   Bigot               148.46  71  eP       PKiKP    15 48 40.8  +0.1
TRMF  Trois Ilets         148.47  71  eP       PKiKP    15 48 41.5  +0.8
ZAM   Aeronautique        148.49  71  eP       PKiKP    15 48 40.9  +0.3
SVB   Belmont             148.54  74  eP       PKPbc    15 48 39.6  +0.2
LPMF  Morne Lapointe      148.55  71  eP       PKiKP    15 48 40.7  -0.1
SLBI  Saint Lucia, B      148.66  72  eP       PKiKP    15 48 40.4  -0.6
MPOM  Morne Pois Mar      148.68  72  eP       PKiKP    15 48 40.5  -0.5
TOSP  Speyside            149.56  77  eP       PKPab    15 48 48.7  +1.2
BOAV  Boa Vista           149.65  95           PKPbc    15 48 41.8  -0.5
PTGA  Pitinga             149.67 101   PKP     PKPdf    15 48 38.0  +0.5
              comp=Z,33nm,0.7s,baz=248,slow=3.7,SNR=7.8
PTGA                                   PKPbc   PKPbc    15 48 42.7  +0.4
              comp=Z,52nm,0.5s,baz=272,slow=4.6,SNR=59
BDFB  Brasilia            152.49 141   PKP     PKPdf    15 48 42.9  +1.1
              comp=Z,9.5nm,1.0s,baz=258,slow=12,SNR=3.7
BDFB                                   PKPbc   PKiKP    15 48 49.2  +0.1
              comp=Z,14nm,0.4s,baz=229,slow=2.1,SNR=14
BDFB                                   PKPab   PKPab    15 49 00.7  +1.2
              comp=Z,16nm,0.9s,baz=14,slow=2.4,SNR=5.3
BDFB  Brasilia            152.49 141   PKPdf   PKPdf    15 48 41.0  -0.9
BDFB                                   PKPbc   PKPbc    15 48 48.2  -0.6
BDFB                                   PKPab   PKPab    15 49 00.4  +0.9
KOWA  Kowa                152.73 291   PKPdf   PKPdf    15 48 41.0  -1.1
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*NEIC **03** 15:32:02.2±2.7, 3°12S±0°06×75°73W±0°07, h110^{km}±7^{km}, mb4.8/53, Error ellipse: s-maj=10.5km s-min=8.5km az=74.0*

*VAO **03** 15:32:04.5±0.4, 3°06S×75°59W, h125^{km}, mb4.4*

*IDC **03** 15:32:04.2±0.5, 3°18S×75°72W, h131^{km}±5^{km}, mb3.8/13, mb1 4.0/18, mb1mx3.8/39, mbtmp4.2/18, MS3.8/2, Ms1 3.8/2, ms1mx2.9/36, Error ellipse: s-maj=12.8km s-min=10.8km az=93.0*

ISC 03 15:32:00.8±0.3, **3°11S**±0°04×**75°76W**±0°05, **h100**^{km}, **n196**, σ**2^{s}11**/198, **mb4.6**/27, **2C**, **Northern Peru**

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Code  Station Name         Δ°   AZ°     Phase ID         Time      Res
                                      Op      ISC      h  m  s    ISC
PTLC  Puerto Leguiza        3.40  16⇑iP       Pn       15 32 52.6  +0.7
PTLC                                eS        Sn       15 33 18.4   -13
PTLC                                i                  15 33 32.3
              comp=Z,1μm,0.5s
OTAV  Otavalo               4.28 321 eP       Pn       15 33 07.6  +3.3
OTAV  Otavalo               4.28 321 eP       Pn       15 33 08.8  +4.6
OTAV  Otavalo               4.28 321  Pn      Pn       15 33 08.6  +4.4
CUSE  Cuicocha Este         4.30 322 eP       Pn       15 33 11.4  +6.9
TULM  Tulcn-Chalpat         4.31 332 eP       Pn       15 33 08.9  +4.2
TULM                                 eS       Sn       15 33 43.0   -11
TULM                                 i                 15 33 50.2
              comp=Z,365nm,0.6s
PAC1  Pacto, Paraso         4.52 318 eP       Pn       15 33 11.4  +4.1
CMBC  Cumbal                4.53 333 eP       Pn       15 33 13.3  +5.7
CPAS1 Pasto                 4.55 340 eP       Pn       15 33 12.4  +4.5
GCUF  Volcan Galeras        4.59 340 eP       Pn       15 33 12.4  +3.8
CCUFI Cufio, Nario          4.59 340 eP       Pn       15 33 13.3  +4.8
ATAH  Atahualpa             4.78 213  P       Pn       15 33 14.8  +3.8
              comp=Z,24nm,0.3s,baz=19,slow=9.9,SNR=86
ATAH                                  S       Sn       15 34 06.7  +1.1
              comp=Z,50nm,0.3s,baz=164,slow=20,SNR=20
GARC  Garzon, Huila         5.27   3 eP       Pn       15 33 20.0  +2.5
SOTA  Rioblanco             5.28 351 eP       Pn       15 33 22.6  +4.8
SOTA                                 eS       Sn       15 33 59.3   -18
SOTA                                 i                 15 34 20.9
              comp=Z,178nm,0.7s
PCON  Cinco Dias            5.44 353 eP       Pn       15 33 24.8  +4.7
CZSB  Cruzeiro do Su        5.50 147 eP       Pn       15 33 23.6  +3.3
CZSB  Cruzeiro do Su        5.50 147  Pn      Pn       15 33 23.7  +3.3
CZSB                                  Sn      Sn       15 34 23.6  +1.2
MACC  Macarena, Meta        5.56  20 eP       Pn       15 33 24.8  +3.6
MACC  Macarena, Meta        5.56  20 eP       Pn       15 33 21.9  +0.7
POPC  Popayan, Colom        5.69 351 eP       Pn       15 33 25.8  +2.6
TUMC  Tumaco                5.73 329  Pn      Pn       15 33 25.1  +1.6
BETC  Betania               5.76   3 eP       Pn       15 33 28.6  +4.6
MARP  Paez Belalcaza        5.92 358 eP       Pn       15 33 30.5  +4.2
TBTG  Tabatinga, AM         5.93 101 eP       Pn       15 33 25.8  -0.5
TBTG  Tabatinga, AM         5.93 101  Pn      Pn       15 33 29.6  +3.4
TBTG                                  Sn      Sn       15 34 34.7  +1.8
PRAC  Prado                 6.83   7 eP       Pn       15 33 41.1  +2.5
ORTC  Ortega, Tolima        6.99   4 eP       Pn       15 33 43.9  +3.2
YOTC  Yotoco, Valle         7.07 355 eP       Pn       15 33 45.9  +4.0
VILC  Villavicencio,        7.46  16 eP       Pn       15 33 51.6  +4.4
ANIL  Santa Ana             7.56   3 eP       Pn       15 33 55.4  +6.8
PLMC  San Jos del P         7.98 356 eP       Pn       15 33 59.2  +5.0
ROSC  El Rosal              8.03  10 eP       Pn       15 34 09.8   +15
ROSC  El Rosal              8.03  10  Pn      Pn       15 33 58.4  +3.3
GUY2C Guyana, Caldas        8.29   3 eP       Pn       15 34 05.0  +6.2
NORC  Norcasia              8.66   6 eP       Pn       15 34 06.9  +3.4
SPBC  San Pablo de B        8.87  11 eP       Pn       15 34 10.7  +4.5
NNA   Nana                  8.88 187  P       Pn       15 34 09.4  +2.9
              comp=Z,38nm,0.3s,baz=348,slow=12,SNR=26
NNA                                   S       Sn       15 35 39.5  -5.4
              comp=Z,69nm,0.3s,baz=239,slow=22,SNR=9.0
NNA   Nana                  8.88 187  Pn      Pn       15 34 08.7  +2.2
NNA                                   Sn      Sn       15 35 39.2  -5.7
CBOC  Ciudad Bolivar        8.92 358 eP       Pn       15 34 10.7  +3.7
RUSC  La Rusia              9.33  17 eP       Pn       15 34 17.4  +4.5
PTBC  PUERTO BERRIO,        9.67   8 eP       Pn       15 34 21.2  +4.1
ZARC  Zaragoza, Cauc       10.57   5 eP       Pn       15 34 30.8  +1.4
ZARC  Zaragoza, Cauc       10.57   5  Pn      Pn       15 34 30.2  +0.8
PAMC  Pamplona, Colo       10.82  16 eP       Pn       15 34 38.5  +5.3
OCAC  Ocana                11.53  12          Pn       15 34 43.7  +1.2
ETMB  Extrema              11.58 126  Pn      Pn       15 34 42.0  -1.0
MOTC  Monteria, Cord       11.81   0          Pn       15 34 46.7  +0.6
SOCV  Socops               12.33  23 eP       Pn       15 34 52.8  -0.2
BCIP  Isla Barro Col       12.86 342  Pn      Pn       15 35 03.5  +3.6
SJCC  San Jacinto, C       12.94   3  Pn      Pn       15 35 02.7  +1.7
SDV   Santo Domingo        12.97  23 eP       Pn       15 35 03.5  +2.0
SDV   Santo Domingo        12.97  23  Pn      Pn       15 35 02.3  +0.7
SAML  Samuel               13.78 115  Pn      Pn       15 35 10.1  -1.8
BAUV  El Baul              14.23  33  Pn      Pn       15 35 18.1  +0.3
DRK0  Durika               14.38 329          Pn       15 35 20.9  +1.0
SRBA  San Rafael, Bu       14.42 328  Pn      Pn       15 35 20.4  +0.1
PEZE  Perez Zeledon,       14.71 328          Pn       15 35 25.9  +1.9
MACA  Manacapuru-AM        15.05  91 eP       Pn       15 35 28.9  +0.5
MACA  Manacapuru-AM        15.05  91  Pn      Pn       15 35 28.3   0.0
MACA                                  IAmb    IAmb     15 35 43.8
              comp=Z,36nm,0.7s
LPAZ  La Paz               15.09 151  P       Pn       15 35 28.9  -0.5
              comp=Z,1.1nm,0.3s,baz=336,slow=8.9,SNR=19
LPAZ  La Paz               15.09 151 eP       Pn       15 35 25.4  -4.0
LPAZ  La Paz               15.09 151 eP       Pn       15 35 29.2  -0.1
LPAZ  La Paz               15.09 151  Pn      Pn       15 35 27.7  -1.7
RIMA  Rio Macho            15.13 328  P       Pn       15 35 30.7  +1.2
URIC  Uribia, Colomb       15.18  14  Pn      Pn       15 35 28.3  -1.7
URIC                                  IAmb    IAmb     15 35 51.6
              comp=Z,69nm,1.3s
CVTR  Volcan Turrial       15.29 329  P       Pn       15 35 29.2  -2.5
CVTR                                  IAmb    IAmb     15 35 40.4
              comp=Z,59nm,1.0s
JACO  JACO, Garabito       15.48 325  P       Pn       15 35 33.2  -0.6
CAO2  Cobano, Puntar       15.76 324  P       Pn       15 35 37.6  +0.3
PTGA  Pitinga              15.95  82  P       Pn       15 35 41.5  +1.8
              comp=Z,2.5nm,0.3s,baz=271,slow=22,SNR=27
PTGA                                  S       Sn       15 38 30.6  -5.8
              comp=Z,2.8nm,0.3s,baz=342,slow=20,SNR=6.3
JTS   Las Juntas de        16.16 326  P       P        15 35 45.4  +1.9
JTS   Las Juntas de        16.16 326          Pn       15 35 42.9  +0.7
PB12  IPOC Station P       16.30 161          Pn       15 35 43.8  -0.2
DUNO  Dulce Nombre,        16.30 324  P       Pn       15 35 42.8  -1.2
PB16  IPOC Station P       16.32 158  P       Pn       15 35 44.0  -0.8
PB16                                  IAmb    IAmb     15 35 51.8
              comp=Z,63nm,0.7s
HZTE  Horizontes, Gu       16.87 325  P       Pn       15 35 50.5  -0.4
HZTE                                  IAmb    IAmb     15 35 57.7
              comp=Z,80nm,1.4s
PSGCX Pisagua              17.28 162  P       P        15 35 55.5  -0.5
PSGCX                                 IAmb    IAmb     15 36 01.6
              comp=Z,76nm,1.1s
PSGCX                                         Sn       15 39 08.0  -0.5
ESPN  Las Esperanzas       17.42 331  P       P        15 35 56.8  -0.6
PB11  IPOC Station P       17.59 161  P       P        15 35 59.4  -0.1
PB11                                  IAmb    IAmb     15 36 05.1
              comp=Z,63nm,0.6s
ACON  Acoyapa              17.67 328  P       P        15 35 59.5  -0.6
TA02  Huaiquique           17.91 163  P       P        15 36 03.0  +0.1
PB08  IPOC Station P       18.11 160  P       P        15 36 05.5  +0.1
PB08                                  IAmb    IAmb     15 36 12.2
              comp=Z,28nm,0.8s
TA01  Diego Aracena        18.18 163  P       P        15 36 05.8   0.0
VILB  Vilhena              18.23 123 eP       Pn       15 36 08.3  +0.9
VILB  Vilhena              18.23 123  P       P        15 36 04.8  -1.6
BOAB  BOACO BROADBAN18.33 328  P       P        15 36 08.2  +0.7
BOAB                                  IAmb    IAmb     15 36 31.6
              comp=Z,51nm,1.3s
PATCX Punta Patache        18.43 163  P       P        15 36 10.0  +1.4
PB01  IPOC Station P       18.84 162  P       P        15 36 13.5  +0.4
PB01                                  IAmb    IAmb     15 36 20.0
              comp=Z,34nm,0.7s
MATN  Matagalpa            18.87 328  P       P        15 36 11.8  -1.6
SIV   San Ignacio          19.30 132  P       P        15 36 19.4  +1.2
              comp=Z,1.3nm,0.3s,baz=312,slow=11,SNR=8.8
PB07  IPOC Station P       19.36 163  P       P        15 36 19.2  +0.3
PB09  IPOC Station P       19.62 162  P       P        15 36 21.8  +0.1
PB04  IPOC Station P       19.87 165  P       P        15 36 25.3  +0.9
ITTB  Itaituba             20.02  94 eP       P        15 36 25.7  -0.2
PB06  IPOC Station P       20.38 163  P       P        15 36 27.4  -2.4
PB06                                  IAmb    IAmb     15 36 37.4
              comp=Z,38nm,0.7s
PTLB  Pontes e Lacer       20.45 128 eP       P        15 36 31.6  +1.1
PTLB  Pontes e Lacer       20.45 128  P       P        15 36 30.0  -0.5
LVC   Limon Verde          20.49 162  P       Pn       15 36 34.9  +0.6
              comp=Z,38nm,0.5s,baz=353,slow=8.1,SNR=27
LVC                                   S       S        15 40 19.0  +3.6
              comp=Z,2.7nm,0.5s,baz=336,slow=22,SNR=8.1
LVC   Limon Verde          20.49 162 eP       P        15 36 33.9  +2.6
LVC   Limon Verde          20.49 162  P       P        15 36 31.7  +0.5
TGUH  Tegucigalpa,Un       20.53 326  P       P        15 36 30.4  -1.1
TGUH                                  IAmb    IAmb     15 36 40.5
              comp=Z,22nm,0.8s
PDRB  Porto dos Gac        20.66 115 eP       P        15 36 33.5  +0.8
NPGB  Novo Progresso       20.68 102 eP       P        15 36 32.7  -0.4
PB15  IPOC Station P       20.89 164  P       P        15 36 36.2  +0.9
PB15                                  IAmb    IAmb     15 36 48.7
              comp=Z,48nm,0.6s
PB10  IPOC Station P       20.90 167  P       P        15 36 34.3  -0.9
PB10                                  IAmb    IAmb     15 36 46.2
              comp=Z,26nm,0.8s
CLDB  Colider              21.24 112 eP       P        15 36 40.0  +0.9
MTDJ  Mount Denham         21.27 355  P       P        15 36 37.7  -1.7
MTDJ                                  IAmb    IAmb     15 36 45.1
              comp=Z,76nm,1.1s
MALB  Monte Alegre         21.50  87 eP       P        15 36 41.9   0.0
PB14  IPOC Station P       22.00 167  P       P        15 36 44.6  -2.8
MTO3  Montecristo          22.01 323  P       P        15 36 47.6  +0.1
MCLT  Moule a Chique       22.25  41  P       P        15 36 52.0  +2.2
DR12  Loma Pena Alta       22.65  16  P       P        15 36 53.2  -0.7
APG   El Apazote           23.16 321  P       P        15 37 00.6  +1.5
              comp=Z,5.1nm,0.6s,baz=147,slow=4.6,SNR=2.6
SALV  Santo Antonio        23.48 124 eP       P        15 37 03.1  +1.3
STVI  Saint Thomas         23.83  26  P       P        15 37 03.5  -1.4
STVI                                  IAmb    IAmb     15 37 39.7
              comp=Z,53nm,1.4s
MCPB  Macapa, AP           23.84  84 eP       P        15 37 05.6  +0.5
MDP   Montagnes des        24.49  71  P       P        15 37 11.4  +0.4
              comp=Z,7.3nm,0.4s,baz=247,slow=8.1,SNR=15
PP1B  Ponte de Pedra       25.03 127 eP       P        15 37 17.0  +1.2
SNDB  Serra Nova Dou       25.77 111 eP       P        15 37 23.1  +0.5
PRPB  Parauapebas          26.03  98 eP       P        15 37 25.0  +0.1
AQDB  Aquidauana           26.08 133 eP       P        15 37 26.3  +1.0
ARAG  Araguaiana, MT       26.69 120 eP       P        15 37 31.1  +0.3
PEXB  Peixe                28.61 110 eP       P        15 37 48.3  +0.2
CPUP  Villa Florida        29.08 144 eP       P        15 37 52.8  +0.9
IPMB  Ipameri, GO          30.77 121 eP       P        15 38 06.9  -0.3
MT09  Talagante            30.83 172  P       P        15 38 07.9  +0.3
MT09                                  IAmb    IAmb     15 38 10.2
              comp=Z,14nm,1.0s
MT01  Popeta               30.88 173  P       P        15 38 07.8  -0.1
MT01                                  IAmb    IAmb     15 38 31.7
              comp=Z,18nm,1.4s
JANB  Januaria             33.18 113 eP       P        15 38 27.9  -0.4
NBPS  Pedro II - PI        34.26  93 eP       P        15 38 37.6  -0.1
PLTB  Pedras Altas         35.31 146  P       P        15 38 45.5  -1.0
PLTB                                  IAmb    IAmb     15 39 20.5
              comp=Z,27nm,1.5s
LC01  Cunco                35.79 175  P       P        15 38 50.6  +0.1
LC01                                  IAmb    IAmb     15 38 52.7
              comp=Z,11nm,1.1s
VAS01 Vassouras-RJ         36.68 124 eP       P        15 38 58.6  +0.3
SJMB  Sao Joao De Ma       37.20 117 eP       P        15 39 01.6  -1.1
GDU01 Guandu, BA           37.25 109 eP       P        15 39 02.9  -0.3
NBCL  Cascavel-CE          37.40  93 eP       P        15 39 03.4  -1.1
DUB01 Friburgo-RJ          37.48 123 eP       P        15 39 03.8  -1.4
NBIT  Itapeh - BA          37.67 110 eP       P        15 39 07.0  +0.2
CMC01 Camacan, BA          37.70 111 eP       P        15 39 06.7  -0.3
PLCA  Paso Flores          37.75 174  P       P        15 39 08.6  +1.5
              comp=Z,4.4nm,1.0s,baz=353,slow=12,SNR=5.5
PLCA  Paso Flores          37.75 174 eP       P        15 39 08.7  +1.5
PLCA  Paso Flores          37.75 174  P       P        15 39 07.1   0.0
CAM01 Campos-RJ            37.98 122 eP       P        15 39 10.2  +1.0
RIB01 Linhares ES          38.11 118 eP       P        15 39 09.7  -0.7
ALF01 Guarapari-ES         38.30 120 eP       P        15 39 11.3  -0.6
NBLA  Lagarto - SE         38.45 104 eP       P        15 39 12.3  -1.0
NBLV  Livramento - P       38.89  98 eP       P        15 39 17.2  +0.2
NBAN  Anadia - AL          39.74 101 eP       P        15 39 24.0  -0.1
U54A  Nelsons Funny        39.83 352  P       P        15 39 24.7  +0.1
U54A                                  IAmb    IAmb     15 39 29.8
              comp=Z,16nm,1.1s
T59A  Double "B" Far       39.91 358  P       P        15 39 25.5  +0.4
T59A                                  IAmb    IAmb     15 39 57.3
              comp=Z,32nm,1.5s
V48A  Smith Brothers       40.01 346  P       P        15 39 25.3  -0.6
V48A                                  IAmb    IAmb     15 39 26.6
              comp=Z,13nm,0.7s
TZTN  Tazewell             40.12 350  P       P        15 39 27.1  +0.2
TZTN                                  IAmb    IAmb     15 40 00.3
              comp=Z,36nm,1.6s
NBRF  Rio Formoso -        40.77 100 eP       P        15 39 32.4  -0.2
TXAR  Lajitas Array        41.91 322  P       P        15 39 42.9  +1.1
              comp=Z,0.3nm,0.4s,baz=150,slow=7.7,SNR=11
TXAR                                  PcP     PcP      15 41 36.0  +0.3
              comp=Z,1.0nm,0.7s,baz=142,slow=5.7,SNR=7.8
ANMO  Albuquerque          47.58 325  P       P        15 40 28.2  +1.4
              comp=Z,1.0nm,0.5s,baz=131,slow=9.7,SNR=3.2
USHA  Ushuaia              51.90 175  LR      LR       16 03 57.4
              comp=Z,66nm,18.0s,baz=228,slow=37
PDAR  Pinedale Array       54.93 330  P       P        15 41 22.2  +0.5
              comp=Z,0.2nm,0.3s,baz=115,slow=11,SNR=2.3
PDAR                                  PcP     PcP      15 42 21.4  -1.1
              comp=Z,0.2nm,0.4s,baz=132,slow=7.6,SNR=3.9
BBB   Bella Bella          70.55 329  LR      LR       16 16 33.5
              comp=Z,62nm,19.3s,baz=273,slow=38
LIC   Lamto                71.22  82 eP       P        15 43 09.1  -0.7
              comp=Z,8.0nm,0.3s
TIC   Toumodi              71.27  82 eP       P        15 43 09.5  -0.6
DBIC  Dimbokro             71.44  82  P       P        15 43 10.5  -0.6
              comp=Z,2.8nm,0.3s,baz=298,slow=4.1,SNR=13
DBIC  Dimbokro             71.44  82  IAmb    IAmb     15 43 44.2
              comp=Z,34nm,1.8s
KIC   Kosan Boka           71.52  82 eP       P        15 43 10.7  -0.9
              comp=Z,12nm,0.3s
YKA   Yellowknife Ar       71.74 342  P       P        15 43 11.2  -0.7
              comp=Z,0.5nm,0.3s,baz=139,slow=6.1,SNR=7.9
YKA                                   pP      sP       15 43 44.4  -3.9
              comp=Z,0.5nm,0.5s,baz=140,slow=6.1,SNR=5.8
KOWA  Kowa                 73.16  74  P       P        15 43 20.3  -1.0
KOWA                                  IAmb    IAmb     15 43 21.6
              comp=Z,5.1nm,0.6s
ESDC  Sonseca Array        78.08  49  P       P        15 43 48.4  -0.6
              comp=Z,1.1nm,1.1s,baz=322,slow=3.9,SNR=2.0
TORD  Torodi Ar. Bea       78.51  76  P       P        15 43 50.8  -1.0
              comp=Z,1.7nm,0.4s,baz=281,slow=5.7,SNR=26
TORD                                  pP      pP       15 44 23.4  +5.7
              comp=Z,0.7nm,0.3s,baz=281,slow=5.9,SNR=6.6
TORD  Torodi Ar. Bea       78.51  76  P       P        15 43 50.5  -1.3
VNA3  Neumayer Olymp       79.52 162  P       P        15 43 56.8  +0.6
VNA1  Neumayer--Stat       79.73 162  P       P        15 43 58.1  +0.8
VNA2  Neumayer--Watz       80.10 162  P       P        15 43 59.7  +0.4
              baz=289,slow=5.5
A36M  Sachs Harbour        81.34 346  P       P        15 44 04.8  -1.0
A36M                                  IAmb    IAmb     15 44 41.5
              comp=Z,11nm,0.8s
INK   Inuvik               81.49 341  P       P        15 44 06.9  +0.2
              comp=Z,3.1nm,0.9s,baz=104,slow=7.4,SNR=4.3
INK                                   pP      sP       15 44 40.0  -3.6
              comp=Z,2.1nm,0.6s,baz=100,slow=3.7,SNR=8.0
SNAA  Sanae                81.72 162  P       P        15 44 08.4  +0.4
ILAR  Eielson Array        84.86 336  P       P        15 44 24.0  -0.1
              comp=Z,1.4nm,0.8s,baz=113,slow=2.4,SNR=5.5
ILAR                                  pP      sP       15 44 57.9  -3.2
              comp=Z,0.8nm,0.7s,baz=112,slow=4.8,SNR=6.4
QSPA  South Pole Qui       86.96 180          P        15 44 35.2  +0.5
VNDA  Vanda                93.66 191  P       P        15 45 06.2  +0.6
              comp=Z,1.2nm,0.7s,baz=93,slow=5.1,SNR=3.9
KOLS  Kolonicke sedl       97.61  41 ePDIFF   P        15 45 24.2   0.0
ZALV  Zalesovo Beam       126.88  14  PKP     PKPdf    15 50 52.6  -0.3
              comp=Z,2.6nm,0.6s,baz=270,slow=1.2,SNR=12
ZALV                                  pPKP    sPKPdf   15 51 28.9  -2.0
              comp=Z,2.3nm,0.6s,baz=252,slow=3.3,SNR=7.6
MKAR  Makanchi Array      132.49  20  PKP     PKPdf    15 51 03.5  -0.4
              comp=Z,0.6nm,0.4s,baz=306,slow=2.6,SNR=10
MKAR                                  pPKP    sPKPdf   15 51 39.3  -2.6
              comp=Z,1.0nm,0.6s,baz=356,slow=3.9,SNR=5.0
ASAR  Alice Springs       140.72 226  PKhKP   PKPpre   15 51 12.2
              comp=Z,1.4nm,0.6s,baz=124,slow=3.8,SNR=28
WRA   Warramunga Arr      142.61 231  PKhKP   PKPpre   15 51 18.1
              comp=Z,3.2nm,0.6s,baz=125,slow=2.9,SNR=61
WRA   Warramunga Arr      142.61 231          PKPdf    15 51 17.8  -5.5
GTA   Gaotai              143.65   6 ePKPbc   PKPab    15 51 21.0  -0.4
GTA                                   sPKP             15 52 03.3
LZH   Lanzhou             147.19   1 ⇑PKPbc   PKPbc    15 51 33.9  +0.7
LZH                                   pPKP    sPKPdf   15 52 10.1  +1.2
LZH                                   sPKP             15 52 19.3
PYUN  Piuthan             147.93  37 eP       PKPdf    15 51 35.0  +2.6
              comp=Z,21nm,0.7s
DANN  Dangsing            148.20  36 eP       PKPbc    15 51 36.2  -0.1
              comp=Z,32nm,0.7s
KOLN  Koldanda            148.54  37 eP       PKPdf    15 51 36.3  +2.9
              comp=Z,5.9nm,0.5s
GKN   Gorkha              148.97  35 eP       PKPbc    15 51 37.7  -0.4
              comp=Z,4.7nm,0.4s
KKN   Kakani              149.50  35 eP       PKPbc    15 51 39.4  -0.1
              comp=Z,12nm,0.6s
PKIN  Phulchoki           149.73  35 eP       PKPbc    15 51 39.4  -0.8
              comp=Z,10nm,0.7s
PKI   Pulchoki            149.74  35 eP       PKPbc    15 51 39.5  -0.8
              comp=Z,9.1nm,0.7s
GUN   Gumba               149.74  34 eP       PKPbc    15 51 40.3   0.0
              comp=Z,8.7nm,0.6s
RAMN  Ramite              150.89  34 eP       PKPbc    15 51 42.2  -0.7
              comp=Z,10nm,0.4s
TAPN  Taplejung           151.17  32 eP       PKPbc    15 51 42.7  -0.9
              comp=Z,19nm,0.6s
ODAN  Odare               151.40  33 eP       PKPbc    15 51 43.7  -0.4
              comp=Z,23nm,0.7s
CMAR  Chiang Mai Arr      163.89  18  PKP     PKPdf    15 51 52.8  -0.5
              comp=Z,0.5nm,0.7s,baz=275,slow=1.5,SNR=5.7
CMAR  Chiang Mai Arr      163.89  18          PKPdf    15 51 50.9  -2.4
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*NEIC **03** 15:41:15.9±2.2, 5°56N±0°08×127°2E±0°1, h93^{km}±7^{km}, mb4.2/25, Error ellipse: s-maj=17.7km s-min=9.6km az=61.0*

*MAN **03** 15:41:15.9, 5°55N×127°31E, h57^{km}, mb5.1, ML4.0, MS4.1*

*DJA **03** 15:41:17.4±1.6, 5°N±17°×12°7E±°, h129^{km}±13^{km}, M4.3/9, mb4.2/7, mB4.7/2, MLv4.3/9, Mw(mB)3.9/2*

*IDC **03** 15:41:18.4±1.8, 5°57N×126°99E, h114^{km}±14^{km}, mb3.8/9, mb1 3.9/11, mb1mx3.6/35, mbtmp4.2/11, Error ellipse: s-maj=54.6km s-min=10.9km az=61.0*

ISC 03 15:41:16.3±0.9, **5°53N**±0°04×**127°14E**±0°07, **h104**^{km}±8^{km}, **n57**, σ**1^{s}46**/65, **mb4.2**/20, **4C-3D**, **Philippine Islands region**

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Code  Station Name         Δ°   AZ°     Phase ID         Time      Res
                                      Op      ISC      h  m  s    ISC
DDMP  Don Marcelino,        1.54 292⇑iP       Pn       15 41 43.0  -0.2
MATI  Mati                  1.66 328⇓eP       Pn       15 41 45.3  +0.5
MATI                                 eS       Sn       15 42 06.0  -0.5
DAV   Davao City (W)        2.18 315  P       Pn       15 41 50.8  -0.6
              79nm,0.3s,baz=31,slow=1.2,SNR=4.5
DAV                                   S       Sn       15 42 18.8  +0.5
              68nm,0.3s,baz=210,slow=12,SNR=7.4
DAV   Davao City (W)        2.18 315          Pn       15 41 50.4  -1.0
DMPH  Davao City--Mi        2.24 314⇑eP       Pn       15 41 53.7  +1.4
DMPH                                 eS       Sn       15 42 21.9  +2.2
GSPH  General Santos        2.25 284⇑iP       Pn       15 41 50.8  -1.7
GSPH                                 i S      Sn       15 42 16.6  -3.4
SGSI  Sangihe               2.43 221  P       Pn       15 41 55.0  +0.3
SGSI                                  S       Sn       15 42 24.4  +0.3
BUKP  Musuan                3.12 319⇓eP       Pn       15 42 05.4  +1.6
BUKP                                 i S      Sn       15 42 44.9  +4.4
GLSP  General Luna,         4.35 347⇓eP       Pn       15 42 21.5  +1.2
GLSP                                 eS       Sn       15 43 05.0  -5.0
PAGZ  Pagadian              4.39 302⇑eP       Pn       15 42 22.2  +1.4
TNTI  Ternate               4.73 177  Pn      Pn       15 42 26.1  +0.7
LBMI  Labuha                6.13 177  P       Pn       15 42 45.2  +0.7
              0.1nm14nm,1.4s
GTOI  Gorontalo             6.37 220  P       Pn       15 42 47.5  -0.2
              0.0nm11nm,0.8s
MRSI  Marisa                7.22 226  P       Pn       15 42 58.9  -0.4
              0.2nm755nm62nm,0.6s
SWI   Sorong                7.56 147  P       Pn       15 43 05.1  +1.2
              0.1nm25nm,0.5s
SIJI  Sorong                7.57 147  P       Pn       15 43 06.3  +2.2
              6.6nm,0.3s,baz=206,slow=22,SNR=38
SIJI                                  S       Sn       15 44 27.4  -1.0
              1.2nm,0.3s,baz=207,slow=22,SNR=7.6
TOLI2 Tolitoli              7.71 236          Pn       15 43 05.3  -0.7
MYLDM Lahad Datu            8.61 268  Pn      Pn       15 43 18.9  +0.7
FAKI  Fak Fak               9.82 149  Pn      Pn       15 43 31.3  -3.3
SBUM  Sibu                 15.19 259          P        15 44 48.6  +0.5
KSM   Kuching              17.27 257          P        15 45 11.8  +0.7
MTN   Manton Dam           18.68 168  P       P        15 45 25.0  -1.5
MTN                                   IAmb    IAmb     15 45 43.2
              comp=Z,13nm,1.3s
JAGI  Jajag, Banyuwa       19.00 223  P       P        15 45 29.7  -0.3
GUMO  Guam                 19.22  64  P       P        15 45 29.6  -2.8
KNRA  Kununurra            21.13 176  P       P        15 45 52.3  -0.7
KNRA                                  IAmb    IAmb     15 45 58.5
              comp=Z,15nm,1.1s
WB0   Warramunga Arr       26.13 164  P       P        15 46 41.9  +1.0
WB0                                   IAmb    IAmb     15 46 56.9
              comp=Z,7.8nm,1.2s
WRAB  Tennant Creek        26.27 165  P       P        15 46 43.4  +1.2
WRAB                                  IAmb    IAmb     15 46 43.5
              comp=Z,12nm,1.5s
WRA   Warramunga Arr       26.28 165  P       P        15 46 45.8  +3.5
              comp=Z,1.2nm,0.4s,baz=340,slow=11,SNR=24
WRA   Warramunga Arr       26.28 165  P       P        15 46 42.4  +0.2
WB2   Warramunga Arr       26.28 165  P       P        15 46 43.1  +0.8
WB2                                   IAmb    IAmb     15 46 44.3
              comp=Z,15nm,1.4s
WR0   Warramunga Arr       26.35 164  P       P        15 46 42.6  -0.3
WR0                                   IAmb    IAmb     15 46 59.7
              comp=Z,11nm,1.4s
AS31  Alice Springs        29.75 167  P       P        15 47 15.1  +1.9
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ASAR	Alice Springs	29.75	167	P	P	15 47 14.2	+1.0
	comp=Z,0.3nm,0.4s,baz=344,slow=7.4,SNR=8.5						
ASAR				PcP	PcP	15 50 15.8	+1.0
	comp=Z,0.7nm,0.3s,baz=350,slow=2.3,SNR=19						
CMAR	Chiang Mai Arr	30.37	297	P	P	15 47 17.1	-1.6
	comp=Z,0.6nm,0.6s,baz=109,slow=7.2,SNR=5.5						
KSAR	Wonju Array Be	31.78	1	P	P	15 47 32.1	+1.3
BBOO	Buckleboo	39.05	168	P	P	15 48 33.9	+0.7
STKA	Stephens Creek	39.66	161	P	P	15 48 39.8	+1.5
	comp=Z,1.0nm,0.6s,baz=302,slow=7.6,SNR=2.8						
STKA	Stephens Creek	39.66	161	P	P	15 48 38.3	0.0
SONM	Songino Array	45.75	341	P	P	15 49 28.1	+0.7
	comp=Z,1.1nm,0.8s,baz=150,slow=8.2,SNR=4.5						
SONM	Songino Array	45.75	341	P	P	15 49 27.5	+0.1
MK31	Makanchi Array	56.33	324	P	P	15 50 47.2	+0.6
MK31				IAmb	IAmb	15 50 48.3	
	comp=Z,2.8nm,1.0s						
MKAR	Makanchi Array	56.33	324	P	P	15 50 47.4	+0.8
	comp=Z,1.5nm,0.4s,baz=117,slow=7.6,SNR=30						
MAKZ	Makanchi	56.52	324	P	P	15 50 47.8	-0.1
KDJ	Kajisay	57.30	317	P	P	15 50 53.8	+0.1
KDJ				IAmb	IAmb	15 50 57.1	
	comp=Z,7.8nm,1.6s						
ZAA0	Zalesovo Array	59.19	332	P	P	15 51 05.5	-0.9
ZAA0				IAmb	IAmb	15 51 29.7	
	comp=Z,4.7nm,1.1s						
ZALV	Zalesovo Beam	59.19	332	P	P	15 51 06.7	+0.3
	comp=Z,1.5nm,0.4s,baz=130,slow=6.2,SNR=6.5						
ZALV	Zalesovo Beam	59.19	332	P	P	15 51 05.5	-0.9
AAK	Ala-Archa	59.32	317	P	P	15 51 07.1	-0.7
AAK				IAmb	IAmb	15 51 42.5	
	comp=Z,1.8nm,0.9s						
KURK	Kurchatov	60.47	327	P	P	15 51 16.2	+1.0
GAR	Garm	61.03	312	P	P	15 51 19.9	+0.5
BRVK	Borovoye	66.13	326	P	P	15 51 53.0	+0.5
ABKAR	Akbulak array	71.03	320	P	P	15 52 23.4	+0.3
ABKAR				IAmb	IAmb	15 52 24.1	
	comp=Z,2.8nm,0.8s						
ABKAR	Akbulak array	71.03	320	P	P	15 52 23.5	+0.4
RAYN	Ar Rayn	80.16	293	P	P	15 53 14.9	-0.9
RAYN				IAmb	IAmb	15 53 16.0	
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	88.92	340	P	P	15 53 57.9	-1.0
	comp=Z,4.6nm,1.0s,baz=37,slow=3.0,SNR=3.8						
FINES	FINESS Array B	90.45	332	P	P	15 54 06.0	-0.1
	comp=Z,5.6nm,1.0s,baz=108,slow=4.2,SNR=4.7						
TORD	Torodi Ar. Bea	122.73	289	PKP	PKiKP	16 00 01.1	-0.2
	comp=Z,0.3nm,0.3s,baz=83,slow=2.0,SNR=5.0						

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*IDC **03** 15:55:13.3±0.5, 33°.92S×109°.44W, h0^{km}, mb4.5/21, mb1 4.7/21, mb1mx4.5/34, mbtmp4.5/21, MS4.5/16, Ms1 4.5/16, ms1mx4.5/18, Error ellipse: s-maj=18.4km s-min=14.4km az=105.0*

*MOS **03** 15:55:13.3±1.2, 33°.90S×109°.38W, h10^{km}, mb5.2/20, Error ellipse: s-maj=13.3km s-min=9.4km az=82.4*

*NEIC **03** 15:55:15.1±1.5, 34°.0S±0°.1×109°.3W±0°.2, h15^{km}±3^{km}, mb5.0/127, Error ellipse: s-maj=19.7km s-min=16.2km az=108.0*

*GCMT **03** 15:55:17.1±0.1, 34°.10S±0°.01×109°.12W±0°.01, h12^{km}, MW5.2/133, Moment Tensor Solution. s89,c124; s133,c207; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.69±.01; $M_{\theta\theta}$-0.03±.01; $M_{\phi\phi}$0.71±.01; $M_{r\theta}$0.23±.03; $M_{\theta\phi}$0.03±.01; $M_{\phi r}$-0.47±.03; Best double couple: $M_0$0.87300×10^{17} NP1:ϕ_s197.00000°, δ30.00000°, λ-63.00000°. NP2:ϕ_s346.00000°, δ64.00000°, λ-105.00000°. Principal axes: T 0.8600, Plg17.0000°, Azm87.0000°; N 0.0270, Plg13.0000°, Azm353.0000°; P -0.8870, Plg68.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **03** 15:55:18.0±0.0, 34°.00S×109°.50W, h25^{km}, mB5.3/1, Ms5.5/4, Ms7 5.2/5*

ISC 03 15:55:14.9±0.3**, 34°.01S**±0°.08×**109°.32W**±0°.07**, h10**^{km}**, n385,** σ**1^{s}.30**/360**, mb5.0**/87**, MS4.8**/20**, 39C-6D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	6.86	360	LR	LR	15 58 51.1	
	comp=Z,1µm,19.7s,baz=163,slow=32						
GO07	Milladeo Hill,	29.14	119	P	P	16 01 13.6	-2.4
LL05	Los Muermos	29.15	115	P	P	16 01 14.1	-2.0
LL04	Puerto Octay	29.94	114	P	P	16 01 22.4	-0.7
LL03	Petrohue	29.95	115	P	P	16 01 21.0	-2.2
LR03	Panguipulli	29.98	112	P	P	16 01 22.3	-1.2
LC01	Cunco	30.37	110	P	P	16 01 25.7	-1.2
LL02	Futaleuf	30.47	119	P	P	16 01 25.5	-2.3
COYC	Coyhaique	30.59	123	P	P	16 01 27.6	-1.3
COYC				IAmb	IAmb	16 01 38.0	
	comp=Z,33nm,1.4s						
GO05	Huala	30.71	103	P	P	16 01 28.9	-1.2
GO05				IAmb	IAmb	16 01 37.2	
	comp=Z,30nm,1.2s						
VA05	Santo Domingo	31.21	100	P	P	16 01 29.9	-4.5
VA05				IAmb	IAmb	16 01 41.6	
	comp=Z,32nm,1.1s						
VA01	Torpederas	31.31	99	P	P	16 01 31.7	-3.6
PLCA	Paso Flores	31.34	114	P	P	16 01 36.7	+1.1
	comp=Z,12nm,1.0s,baz=270,slow=8.4,SNR=13						
PLCA				LR	LR	16 11 00.3	
	comp=Z,2µm,21.8s,baz=304,slow=30						
PLCA	Paso Flores	31.34	114	P	P	16 01 34.6	-1.0
PLCA				IAmb	IAmb	16 01 38.1	
	comp=Z,21nm,1.1s						
BO01	Tunca	31.50	102	P	P	16 01 36.8	-0.2
BO01				IAmb	IAmb	16 01 50.1	
	comp=Z,24nm,1.3s						
BO02	Sierra Bellavi	31.68	102	P	P	16 01 37.6	-1.0
BO02				IAmb	IAmb	16 02 12.8	
	comp=Z,24nm,1.3s						
MT09	Talagante	31.70	101	P	P	16 01 38.0	-0.9
PEL	Peldehue	32.08	99	P	P	16 01 41.0	-1.1
PEL				pmax	pmax		
	comp=Z,40nm,1.3s						
PEL	Peldehue	32.08	99	P	P	16 01 41.0	-1.1
PEL				IAmb	IAmb	16 01 56.3	
	comp=Z,40nm,1.3s						
VA03	San Esteban	32.27	99	P	P	16 01 43.1	-0.8
VA03				IAmb	IAmb	16 01 47.2	
	comp=Z,33nm,1.2s						
LCO	Las Campanas	33.17	92	*e*P	P	16 01 54.7	+2.7
LCO	Las Campanas	33.17	92	P	P	16 01 54.7	+2.7
LCO				IAmb	IAmb	16 01 55.4	
	comp=Z,27nm,1.2s						
ZON	Zonda	34.11	97	P	P	16 02 00.2	+0.3
ZON				pmax	pmax		
	comp=Z,36nm,1.4s						
ZON	Zonda	34.11	97	P	P	16 02 00.1	+0.3
ZON				IAmb	IAmb	16 02 08.4	
	comp=Z,36nm,1.4s						
LVC	Limon Verde	37.13	83	P	P	16 02 27.3	+1.1
	comp=Z,6.2nm,1.2s,baz=259,slow=4.7,SNR=4.2						
LVC	Limon Verde	37.13	83	P	P	16 02 27.4	+1.1
LVC				pmax	pmax		
	comp=Z,21nm,1.4s						
LVC	Limon Verde	37.13	83	*e*P	P	16 02 26.0	-0.3
LVC	Limon Verde	37.13	83	IAmb	IAmb	16 02 34.8	
	comp=Z,21nm,1.4s						
PB01	IPOC Station P	37.38	80	P	P	16 02 28.6	+0.4
TAOE	Nuku Hiva Isla	37.81	304	*e*S	S	16 08 30.4	+7.5
	comp=Z,238nm,28.4s						
TAOE				*e*LR	LR	16 12 53.5	
	comp=Z,2µm,26.7s,baz=153						
MEH	Mehetia	38.11	285	*e*T	T	16 42 50.6	
	comp=Z,42nm,0.2s						
TRQA	Tornquist	38.17	110	*e*P	P	16 02 35.6	+1.0
ATAH	Atahualpa	39.12	54	P	P	16 02 43.0	-0.2
	comp=Z,6.4nm,0.8s,baz=287,slow=11,SNR=4.7						
TIAR	Tiarei	39.31	284	*e*T	T	16 44 18.3	
	comp=Z,0.6nm,0.2s						
PPT2	Papeete2	39.47	284	*e*S	S	16 08 50.6	+2.6
	comp=Z,387nm,25.5s						
PPT2				*e*LR	LR	16 13 26.9	
	comp=Z,4µm,25.8s,baz=116						
PPT	Papeete	39.49	284	LR	LR	16 14 48.3	
	comp=Z,2µm,18.7s,baz=96,slow=30						
LPAZ	La Paz	40.93	75	P	P	16 02 59.5	+1.1
	comp=Z,3.1nm,0.5s,baz=254,slow=7.2,SNR=10						
LPAZ				LR	LR	16 15 56.2	
	comp=Z,900nm,18.1s,baz=242,slow=30						
LPAZ	La Paz	40.93	75	*e*P	P	16 02 57.8	-0.6
LPAZ	La Paz	40.93	75	*e*P	P	16 02 57.8	-0.6
LPAZ	La Paz	40.93	75	P	P	16 02 57.8	-0.6
PMSA	Palmer Station	41.10	152	*e*P	P	16 03 01.7	+3.2
CZSB	Cruzeiro do Su	42.68	61	*e*P	P	16 03 12.7	+0.6
CZSB	Cruzeiro do Su	42.68	61	P	P	16 03 11.5	-0.6
CZSB				IAmb	IAmb	16 03 25.2	
	comp=Z,50nm,1.3s						
ITQB	Itaqui	44.58	99	*e*P	P	16 03 27.2	0.0
ITQB	Itaqui	44.58	99	P	P	16 03 26.0	-1.1
OTAV	Otavalo	44.71	47	*e*P	P	16 03 29.9	+1.0
CPUP	Villa Florida	45.20	95	P	P	16 03 32.8	+0.6
	comp=Z,7.3nm,1.1s,baz=168,slow=3.8,SNR=2.8						
CPUP				LR	LR	16 19 40.1	
	comp=Z,1µm,18.4s,baz=251,slow=32						
CPUP	Villa Florida	45.20	95	*e*P	P	16 03 32.3	+0.1
CPUP	Villa Florida	45.20	95	IAmb	IAmb	16 03 44.4	
	comp=Z,28nm,1.6s						
ETMB	Extrema	46.21	69	*e*P	P	16 03 39.4	-1.0
ETMB	Extrema	46.21	69	P	P	16 03 38.4	-1.9
ETMB				IAmb	IAmb	16 03 47.0	
	comp=Z,23nm,1.6s						
PLTB	Pedras Altas	46.35	103	*e*P	P	16 03 40.9	-0.4
PLTB	Pedras Altas	46.35	103	P	P	16 03 40.0	-1.3
CPSB	Cacapava Do Su	46.93	102	*e*P	P	16 03 46.9	+1.1
TBTG	Tabatinga, AM	47.12	60	*e*P	P	16 03 47.5	+0.1
PTLB	Pontes e Lacer	48.68	81	*e*P	P	16 04 00.6	+1.1
PTLB	Pontes e Lacer	48.68	81	P	P	16 03 58.5	-1.0
AQDB	Aquidauana	49.04	88	*e*P	P	16 04 03.3	+1.1
SAML	Samuel	49.10	70	P	P	16 04 01.8	-1.0
SAML				pmax	pmax		
	comp=Z,237nm,1.1s						
SAML	Samuel	49.10	70	P	P	16 04 01.8	-1.0
ITAB	Concordia	49.14	98	*e*P	P	16 04 03.3	+0.3
VILB	Vilhena	49.16	77	*e*P	P	16 04 04.5	+1.3
SRBA	San Rafael, Bu	49.57	35	P	P	16 04 06.0	-0.4
SRBA				IAmb	IAmb	16 04 14.9	
	comp=Z,30nm,1.5s						
JTS	Las Juntas de	49.77	32	P	P	16 04 08.5	+0.6
	comp=Z,11nm,0.9s						
JTS	Las Juntas de	49.77	32⇓	*e*P	P	16 04 07.6	-0.3
JTS				pmax	pmax		
	comp=Z,23nm,1.2s						
JTS	Las Juntas de	49.77	32	P	P	16 04 07.5	-0.3
PTGB	Pitanga	50.20	95	*e*P	P	16 04 12.7	+1.6
TRCB	Terra Rica	50.55	93	*e*P	P	16 04 15.2	+1.4
ROSC	El Rosal	50.85	47	P	P	16 04 17.5	+1.0
	comp=Z,12nm,0.5s,baz=67,slow=2.5,SNR=4.5						
ROSC				LR	LR	16 21 56.5	
	comp=Z,448nm,19.1s,baz=240,slow=32						
ROSC	El Rosal	50.85	47	IAmb	IAmb	16 04 19.7	
	comp=Z,24nm,1.0s						
PP1B	Ponte de Pedra	51.09	86	*e*P	P	16 04 19.4	+1.5
SALV	Santo Antonio	51.27	83	*e*P	P	16 04 20.0	+0.8
MTO3	Montecristo	51.76	25	P	P	16 04 24.0	+1.0
MTO3				IAmb	IAmb	16 04 31.8	
	comp=Z,38nm,1.7s						
PCMB	Pacaembu	52.21	92	*e*P	P	16 04 26.9	+0.7
ZARC	Zaragoza, Cauc	52.63	45	P	P	16 04 28.0	-1.3
CMIG	Matias Romero	52.65	17	LR	LR	16 21 21.0	
	comp=Z,292nm,18.6s,baz=199,slow=30						
PDRB	Porto dos Gac	52.72	78	*e*P	P	16 04 30.3	+0.3
FRTB	Fartura	52.85	95	*e*P	P	16 04 31.6	+0.6
MOTC	Monteria, Cord	53.20	43	P	P	16 04 31.6	-1.9
ITRB	Iturama	53.84	91	*e*P	P	16 04 39.2	+1.0
CLDB	Colider	53.89	78	*e*P	P	16 04 38.8	+0.1
SJCC	San Jacinto, C	54.39	43	P	P	16 04 40.4	-1.8
ARAG	Araguaiana, MT	54.58	85	*e*P	P	16 04 44.5	+0.8
MACA	Manacapuru-AM	54.65	67	*e*P	P	16 04 43.8	-0.4
MACA	Manacapuru-AM	54.65	67	P	P	16 04 42.2	-2.0
BB19B	Bebedouro	54.72	93	*e*P	P	16 04 44.4	-0.3
SBA	Scott Base	55.75	195	P	P	16 04 50.7	-0.5
SBA				pmax	pmax		
	comp=Z,46nm,1.5s						
SBA	Scott Base	55.75	195	P	P	16 04 50.7	-0.5
QSPA	South Pole Qui	56.19	180	P	P	16 04 56.3	+1.6
	comp=Z,12nm,1.0s,baz=119,slow=3.0,SNR=21						
QSPA				PcP	PcP	16 05 53.5	+1.2
	comp=Z,6.6nm,0.9s,baz=124,slow=2.5,SNR=4.8						
QSPA	South Pole Qui	56.19	180	P	P	16 04 55.6	+0.9
NPGB	Novo Progresso	56.44	74	*e*P	P	16 04 56.5	-0.5
VNDA	Vanda	56.83	195	P	P	16 04 58.8	-0.1
	comp=Z,2.7nm,1.0s,baz=103,slow=3.5,SNR=5.8						
VNDA				LR	LR	16 24 04.6	
	comp=Z,302nm,21.6s,baz=94,slow=30						
VNDA	Vanda	56.83	195	P	P	16 04 58.9	-0.1
VNDA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VNDA	Vanda	56.83	195	P	P	16 04 58.9	-0.1
SNDB	Serra Nova Dou	56.96	82	*e*P	P	16 05 01.2	+0.4
ITTB	Itaituba	57.74	72	*e*P	P	16 05 05.3	-1.0
BDFB	Brasilia	57.77	88	P	P	16 05 06.2	-0.4
	comp=Z,1.6nm,0.3s,baz=245,slow=6.4,SNR=4.3						
BDFB				LR	LR	16 27 26.6	
	comp=Z,938nm,19.7s,baz=253,slow=33						
BDFB	Brasilia	57.77	88	IAmb	IAmb	16 05 19.8	
	comp=Z,34nm,1.5s						
BSCB	Bom Sucesso	57.87	95	*e*P	P	16 05 07.6	+0.4
BOAV	Boa Vista	58.43	62	*e*P	P	16 05 09.9	-1.2
BOAV	Boa Vista	58.43	62	P	P	16 05 09.0	-2.1
BOAV				IAmb	IAmb	16 05 13.4	
	comp=Z,32nm,1.6s						
DUB01	Friburgo-RJ	59.35	97	*e*P	P	16 05 19.3	+1.8
PEXB	Peixe	59.36	84	*e*P	P	16 05 18.5	+0.9
DIAM	Diamantina, MG	60.06	93	*e*P	P	16 05 22.8	+0.2
MALB	Monte Alegre	60.44	70	*e*P	P	16 05 24.9	-0.1
MC01	Montes Claros	60.61	91	*e*P	P	16 05 27.6	+1.4
JANB	Januaria	61.13	89	*e*P	P	16 05 29.9	+0.1
VNA3	Neumayer Olymp	61.20	159	P	P	16 05 29.2	-0.2
PRPB	Parauapebas	61.41	77	*e*P	P	16 05 31.0	-0.7
SMTB	Santa Maria do	61.71	81	*e*P	P	16 05 34.5	+0.8
VNA1	Neumayer--Stat	61.85	158	P	P	16 05 34.1	+0.4
SJMB	Sao Joao De Ma	61.92	94	*e*P	P	16 05 35.8	+0.8
VNA2	Neumayer--Watz	62.01	159	P	P	16 05 34.7	-0.1
	baz=268,slow=5.0						
SDBA	SAO DESIDERIO	62.01	86	*e*P	P	16 05 35.7	-0.1
BSFB	Barra de Sao F	62.14	95	*e*P	P	16 05 37.0	+0.5
RIB01	Linhares ES	62.28	95	*e*P	P	16 05 38.1	+0.6
833A	Chaparral WMA,	62.71	10	P	P	16 05 40.8	+0.9
	baz=189						
SNAA	Sanae	63.02	160⇓	*e*P	P	16 05 41.6	-0.1
SNAA				pmax	pmax		
	comp=Z,28nm,2.5s						
SNAA	Sanae	63.02	160	P	P	16 05 39.6	-2.0
SNAA				IAmb	IAmb	16 05 55.4	
	comp=Z,24nm,1.5s						
MCPB	Macapa, AP	63.09	71	*e*P	P	16 05 43.2	+0.4
TX32	Lajitas Array	63.23	6	P	P	16 05 42.4	-1.1
TX32				IAmb	IAmb	16 05 52.8	
	comp=Z,14nm,1.5s						
TXAR	Lajitas Array	63.23	6	P	P	16 05 43.3	-0.2
	comp=Z,1.4nm,0.9s,baz=183,slow=8.8,SNR=8.9						
TXAR				LR	LR	16 29 07.9	
	comp=Z,115nm,18.1s,baz=0.0,slow=32						
TXAR	Lajitas Array	63.23	6	P	P	16 05 41.8	-1.7
TX31	Lajitas Ar. Si	63.23	6	P	P	16 05 42.2	-1.3
GUA01	Guaratinga, BA	64.11	93	*e*P	P	16 05 50.5	+0.9
CMC01	Camacan, BA	64.96	92	*e*P	P	16 05 55.4	+0.2
NBIT	Itapeh - BA	65.25	92	*e*P	P	16 05 58.3	+1.2
MNTX	Cornudas Mount	65.47	4	P	P	16 05 55.9	-2.1
MNTX				IAmb	IAmb	16 06 01.4	
	comp=Z,22nm,1.8s						
214A	Organ Pipe Nat	65.70	357	P	P	16 06 00.9	+1.4
	baz=177						
GDU01	Guandu, BA	65.75	91	*e*P	P	16 06 00.2	-0.1
TUC	Tucson	65.98	359	P	P	16 05 58.8	-2.6
TUC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TUC	Tucson	65.98	359	P	P	16 05 58.8	-2.6
MSVF	Nonsavu	66.11	264	*i* P	P	16 05 58.6	-4.1
MSVF				pmax	pmax		
	comp=Z,62nm,1.6s						
121A	Cookes Peak, D	66.21	1	P	P	16 06 03.4	+0.5
	baz=181						
CBX	Cerro Bola	66.33	353	P	P	16 06 01.6	-2.1
CBYP	Canovanas	66.46	45	P	P	16 06 00.1	-4.6
RMX	La Rumorosa	66.57	354	P	P	16 06 03.0	-2.2
RMX				IAmb	IAmb	16 06 09.5	
	comp=Z,14nm,1.2s						
IKP	In-Ko-Pah, Jac	66.62	354	P	P	16 06 07.3	+1.8
	baz=174						
BAR	Barrett	66.70	353	P	P	16 06 05.5	-0.4
BAR				IAmb	IAmb	16 06 10.4	
	comp=Z,26nm,1.6s						
NBPN	Ponto Novo - B	66.74	88	*e*P	P	16 06 07.5	+0.8
MONP2	Monument Peak	66.89	354	P	P	16 06 07.3	-0.1
	baz=174						
GLA	Glamis	66.91	355	P	P	16 06 08.2	+0.9
	baz=175						
BC3	Big Chuckawall	67.56	354	P	P	16 06 12.6	+1.2
	baz=174						
TPFO	Pinon Flats	67.60	354	P	P	16 06 12.7	+1.0
	baz=174						
PFO	Pinyon Flats O	67.60	354	P	P	16 06 11.7	0.0
	comp=Z,5.9nm,1.0s,baz=153,slow=7.7,SNR=4.0						
PFO	Pinyon Flats O	67.60	354	P	P	16 06 11.6	-0.2
PFO				pmax	pmax		
	comp=Z,14nm,1.4s						
PFO	Pinyon Flats O	67.60	354	P	P	16 06 11.6	-0.2
PFO				IAmb	IAmb	16 06 21.4	
	comp=Z,14nm,1.4s						
LENM	Lemitar	67.86	2	P	P	16 06 11.2	-2.3
MSTX	Muleshoe	67.91	6	P	P	16 06 12.1	-1.5
MSTX				IAmb	IAmb	16 06 16.9	
	comp=Z,25nm,1.4s						
MSTX	Muleshoe	67.91	6	P	P	16 06 13.8	+0.1
	baz=186						
ROSB	Rosrio	67.92	78	*e*P	P	16 06 15.3	+1.2
BELC	Belle Mtn. Jos	67.95	354	P	P	16 06 15.2	+1.3
	baz=174						
IRM	Iron Mountain	68.03	355	P	P	16 06 16.1	+1.7
	baz=175						
X16A	Lo Mia Camp, P	68.10	358	P	P	16 06 13.8	-1.2
PDMCI	Parker Dam,Lak	68.11	356	P	P	16 06 16.6	+1.8
	baz=176						
X18A	Snowflake	68.19	359	P	P	16 06 13.9	-1.6
X18A				IAmb	IAmb	16 06 25.1	
	comp=Z,16nm,1.2s						
BFSC	Mount Baldy Ra	68.34	353	P	P	16 06 17.7	+1.3
	baz=173						
ANMO	Albuquerque	68.65	3	P	P	16 06 18.6	+0.2
	comp=Z,1.4nm,0.6s,baz=188,slow=5.4,SNR=3.7						
ANMO	Albuquerque	68.65	3⇑	*e*P	P	16 06 18.3	-0.1
ANMO				pmax	pmax		
	comp=Z,12nm,2.8s						
NBLA	Lagarto - SE	68.67	89	*e*P	P	16 06 19.1	+0.2
GMRC	Granite Mounta	68.70	354	P	P	16 06 19.3	+0.7
	baz=174						
HEC	Hector,Ludlow	68.80	354	P	P	16 06 20.9	+1.7
	baz=174						
EDW2	Edwards Air Fo	69.02	352	P	P	16 06 21.3	+0.8
	baz=172						
352A	Blakely	69.08	22	P	P	16 06 20.8	-0.2
WUAZ	Wupatki	69.20	358	P	P	16 06 20.9	-0.9
WUAZ				IAmb	IAmb	16 06 32.0	
	comp=Z,13nm,1.3s						
PKM	Mcpherson Peak	69.24	351	P	P	16 06 22.7	+0.6
	baz=171						
NBPS	Pedro II - PI	69.25	81	*e*P	P	16 06 23.3	+0.8
GSC	Goldstone, Bar	69.31	353	P	P	16 06 21.6	-0.8
GSC				pmax	pmax		
	comp=Z,18nm,1.3s						
GSC	Goldstone, Bar	69.31	353	P	P	16 06 21.6	-0.8
GSC				IAmb	IAmb	16 06 32.2	
	comp=Z,18nm,1.3s						
GSC	Goldstone, Bar	69.31	353	P	P	16 06 23.7	+1.3
	baz=173						
TUQ	Turquoise Moun	69.36	354	P	P	16 06 23.5	+0.7
	baz=174						
LRMC	Laurel Mtn Rad	69.57	353	P	P	16 06 25.0	+1.0
	baz=173						
NBMA	Muriti-CE	69.81	85	*e*P	P	16 06 27.1	+1.1
ISA	Isabella, Lake	69.84	352	P	P	16 06 25.2	-0.4
ISA				pmax	pmax		
	comp=Z,11nm,1.2s						
ISA	Isabella, Lake	69.84	352	P	P	16 06 25.2	-0.4
ISA	Isabella, Lake	69.84	352	P	P	16 06 26.5	+0.9
	baz=172						
SHOC	Shoshone, Teco	69.86	354	P	P	16 06 26.5	+0.8
	baz=174						
QSM	Queen of Sheba	69.97	353	P	P	16 06 26.1	-0.2
QSM				IAmb	IAmb	16 06 30.4	
	comp=Z,13nm,1.1s						
MPMC	Manual Prospec	70.13	353	P	P	16 06 28.7	+1.2
	baz=173						
U15A	North Rim	70.13	357	P	P	16 06 26.2	-1.5
U15A				IAmb	IAmb	16 06 37.2	
	comp=Z,15nm,1.2s						
NBPB	Pedra_Branca-C	70.14	83	*e*P	P	16 06 28.0	0.0
GWY	Greenwater Val	70.17	354	P	P	16 06 27.4	-0.4
GWY				IAmb	IAmb	16 06 37.2	
	comp=Z,18nm,1.6s						
SHPR	Sheep Range	70.37	355	P	P	16 06 28.5	-0.4
W39A	Magazine	70.37	13	P	P	16 06 29.4	+0.7
	baz=194						
FURC	Furnace Creek,	70.47	354	P	P	16 06 30.5	+1.2
	baz=173						
CWC	Cottonwood Cre	70.57	353	P	P	16 06 30.7	+0.5
	baz=172						
W41B	Gary Mavity, V	70.66	15	P	P	16 06 30.3	-0.3
	baz=195						
KNB	Kanab	70.74	357	P	P	16 06 30.5	-0.7
KNB				pmax	pmax		
	comp=Z,17nm,1.5s						
KNB	Kanab	70.74	357	P	P	16 06 30.5	-0.7
KNB				IAmb	IAmb	16 07 08.6	
	comp=Z,17nm,1.5s						
LCMT	Little Creek M	70.76	357	P	P	16 06 31.4	+0.2
MVCO	Mesa Verde	70.86	1	P	P	16 06 31.3	-0.8
MVCO				IAmb	IAmb	16 06 54.4	
	comp=Z,13nm,1.2s						
NBMO	Morrinhos-CE	71.02	81	*e*P	P	16 06 33.9	+0.6
PRN	Pahroc Range	71.26	355	P	P	16 06 34.1	-0.2
PRN				IAmb	IAmb	16 06 39.4	
	comp=Z,20nm,1.4s						
CCUT	Cedar City	71.30	357	P	P	16 06 34.7	0.0
LCH	Last Change Ra	71.31	353	P	P	16 06 34.9	+0.3
LCH				IAmb	IAmb	16 06 48.8	
	comp=Z,24nm,1.8s						
SZCU	Shurtz Canyon	71.33	357	P	P	16 06 34.6	-0.2
SZCU				IAmb	IAmb	16 06 39.5	
	comp=Z,32nm,1.8s						
NBLV	Livramento - P	71.34	86	*e*P	P	16 06 35.5	+0.1
HHAR	Hobbs	71.39	13	P	P	16 06 33.9	-1.1
HHAR				IAmb	IAmb	16 06 43.5	
	comp=Z,24nm,1.4s						
S22A	4UR Ranch, Cre	71.43	2	P	P	16 06 36.2	+0.7
	baz=182						
SDCO	Great Sand Dun	71.48	3	P	P	16 06 35.0	-0.9
U40A	Yellville	71.68	14	P	P	16 06 37.2	+0.5
	baz=194						
NBCL	Cascavel-CE	71.94	83	*e*P	P	16 06 39.4	+0.5
PV14	Lion Creek, Pa	72.02	0	P	P	16 06 37.6	-1.5
PV04	Paradox Valley	72.04	0	P	P	16 06 38.6	-0.4
NBPA	Parau_RN	72.06	85	*e*P	P	16 06 40.3	+0.7
TPH	Tonopah	72.10	353	P	P	16 06 38.5	-1.0
TPH				pmax	pmax		
	comp=Z,137nm,1.5s						
TPH	Tonopah	72.10	353	P	P	16 06 38.5	-1.0
NBRF	Rio Formoso -	72.11	88	*e*P	P	16 06 39.9	-0.1
PV22	Blue Mesa, Par	72.18	0	P	P	16 06 39.2	-0.7
PV21	Cone Mtn., Par	72.21	0	P	P	16 06 39.6	-0.5
R11A	Troy Canyon, C	72.23	355	P	P	16 06 39.3	-0.9
R11A	Troy Canyon, C	72.23	355	P	P	16 06 41.0	+0.8
	baz=175						
TCRU	Three Creeks R	72.31	357	P	P	16 06 39.5	-1.3
LHV	Little Huntoon	72.40	352	P	P	16 06 40.3	-0.6
Q16A	Castle Valley	72.58	358	P	P	16 06 41.6	-0.7
Q24A	Divide	72.71	3	P	P	16 06 43.3	0.0
	baz=184						
SRU	San Rafael Swe	72.77	359	P	P	16 06 42.6	-0.8
SRU				pmax	pmax		
	comp=Z,16nm,1.4s						
SRU	San Rafael Swe	72.77	359	P	P	16 06 42.6	-0.8
SRU				IAmb	IAmb	16 06 52.1	
	comp=Z,16nm,1.4s						
RYN	Ryan	72.78	352	P	P	16 06 43.2	-0.2
SPR3	Spring Creek 3	72.79	356	P	P	16 06 42.2	-1.5
SPR3				IAmb	IAmb	16 06 52.6	
	comp=Z,15nm,1.3s						
SMCO	Snowmass	72.86	2	P	P	16 06 43.4	-0.8
SMCO				IAmb	IAmb	16 06 47.7	
	comp=Z,28nm,1.9s						
TMUT	Trail Mountain	72.96	358	P	P	16 06 43.6	-1.1
KVN	Kaiserville	73.15	353	P	P	16 06 45.5	-0.2
KVN				pmax	pmax		
	comp=Z,26nm,1.2s						
KVN	Kaiserville	73.15	353	P	P	16 06 45.5	-0.2
KVN				IAmb	IAmb	16 06 50.4	

	comp=Z,26nm,1.2s						
YERR	Yerington	73.21	352	P	P	16 06 43.6	-2.4
YERR				IAmb	IAmb	16 06 51.0	
	comp=Z,24nm,1.4s						
P18A	Preston Nutter	73.28	359	P	P	16 06 45.5	-1.1
TKL	Tuckaleechee C	73.31	22	P	P	16 06 46.6	+0.2
	comp=Z,2.2nm,0.5s,baz=147,slow=5.8,SNR=4.2						
DZM	Mont Dzumac	73.42	254	*e*S	S	16 16 14.7	-2.6
	comp=Z,249nm,24.4s						
DZM	Mont Dzumac	73.42	254	*e*LR	LR	16 29 09.4	
	comp=Z,1μm,27.8s						
NLU	North Lily Min	73.64	358	P	P	16 06 47.2	-1.4
NLU				IAmb	IAmb	16 06 53.0	
	comp=Z,35nm,1.9s						
DUG	Dugway, Tooele	73.91	357	P	P	16 06 49.2	-0.9
DUG				pmax	pmax		
	comp=Z,33nm,1.8s						
DUG	Dugway, Tooele	73.91	357	P	P	16 06 49.2	-0.9
DUG				IAmb	IAmb	16 06 54.4	
	comp=Z,33nm,1.8s						
PAHR	Pah Rah Range	73.94	352	P	P	16 06 49.0	-1.2
RDMU	Red Mountain	74.22	360	P	P	16 06 51.1	-0.8
RDMU				IAmb	IAmb	16 07 00.9	
	comp=Z,16nm,1.2s						
JLU	Jordanelle	74.27	358	P	P	16 06 51.0	-1.3
BMN	Battle Mountai	74.43	354	P	P	16 06 52.0	-1.1
BMN				pmax	pmax		
	comp=Z,52nm,1.7s						
BMN	Battle Mountai	74.43	354	P	P	16 06 52.0	-1.1
ELK	Elko	74.59	355	P	P	16 06 53.6	-0.6
	comp=Z,3.1nm,1.0s,baz=220,slow=2.9,SNR=7.4						
ELK	Elko	74.59	355	P	P	16 06 53.6	-0.6
ELK				IAmb	IAmb	16 06 58.1	
	comp=Z,26nm,1.9s						
N23A	Red Feather La	74.60	3	P	P	16 06 55.6	+1.3
	baz=183						
BGU	Big Grassy Mou	74.65	357	P	P	16 06 53.1	-1.3
BGU				IAmb	IAmb	16 06 58.4	
	comp=Z,34nm,2.0s						
SYO	Syowa Base	74.75	169	⇑*e*P	P	16 06 54.2	-0.3
SYO	Syowa Base	74.75	169	⇓*e*pP	pP	16 06 57.1	+0.4
M02C	Callahan	76.06	350	P	P	16 07 04.1	+1.7
	baz=168						
BW06	Boulder Array	76.41	360	P	P	16 07 03.2	-1.4
BW06				IAmb	IAmb	16 07 12.9	
	comp=Z,15nm,1.2s						
PD31	Pinedale Array	76.41	360	P	P	16 07 03.4	-1.2
PD31				IAmb	IAmb	16 07 12.9	
	comp=Z,15nm,1.3s						
PDAR	Pinedale Array	76.41	360	P	P	16 07 04.0	-0.5
	comp=Z,3.9nm,0.9s,baz=158,slow=6.8,SNR=22						
PDAR				LR	LR	16 36 56.5	
	comp=Z,180nm,20.1s,baz=66,slow=33						
PDAR	Pinedale Array	76.41	360	P	P	16 07 03.0	-1.5
WVOR	Wild Horse Val	76.56	353	P	P	16 07 04.5	-0.7
WVOR				pmax	pmax		
	comp=Z,26nm,1.5s						
WVOR	Wild Horse Val	76.56	353	P	P	16 07 04.5	-0.7
WVOR				IAmb	IAmb	16 07 09.9	
	comp=Z,26nm,1.5s						
REDW	Red Top Meadow	77.02	359	P	P	16 07 07.0	-0.9
REDW				IAmb	IAmb	16 07 21.2	
	comp=Z,20nm,1.6s						
TPAW	Teton Pass	77.15	359	P	P	16 07 07.8	-1.0
LOHW	Long Hollow	77.26	359	P	P	16 07 07.9	-1.4
LOHW				IAmb	IAmb	16 07 21.6	
	comp=Z,29nm,1.9s						
FXWY	Fox Creek	77.30	359	P	P	16 07 08.3	-1.2
FXWY				IAmb	IAmb	16 07 13.4	
	comp=Z,30nm,1.9s						
HLID	Hailey	77.34	356	P	P	16 07 09.2	-0.6
HLID				IAmb	IAmb	16 07 19.3	
	comp=Z,18nm,1.1s						
MOOW	Moose Ponds	77.40	359	P	P	16 07 09.4	-0.6
MOOW				IAmb	IAmb	16 07 32.7	
	comp=Z,28nm,2.0s						
J08A	Circle Bar Ran	77.45	353	P	P	16 07 08.7	-1.5
J08A				IAmb	IAmb	16 07 15.4	
	comp=Z,26nm,1.5s						
P52A	Corning	77.48	21	P	P	16 07 11.3	+1.0
	baz=203						
J05D	Fort Rock, OR	77.69	351	P	P	16 07 12.8	+1.1
	baz=170						
FLWY	Flagg Ranch	77.73	359	P	P	16 07 10.5	-1.4
FLWY				IAmb	IAmb	16 07 21.0	
	comp=Z,19nm,1.2s						
J04D	Umpqua Nationa	77.77	350	P	P	16 07 12.9	+0.8
	baz=169						
RSSD	Black Hills	77.91	4	P	P	16 07 11.7	-1.2
RSSD				pmax	pmax		
	comp=Z,23nm,1.7s						
RSSD	Black Hills	77.91	4	P	P	16 07 11.7	-1.2
RSSD				IAmb	IAmb	16 07 16.9	
	comp=Z,23nm,1.7s						
O52A	Adamsville	78.01	21	P	P	16 07 12.6	-0.7
ECSD	EROS Data Cent	78.24	9	P	P	16 07 13.8	-0.7
ECSD				IAmb	IAmb	16 07 27.6	
	comp=Z,21nm,1.5s						
I07A	Izee	78.28	353	P	P	16 07 14.8	-0.1
YMR	Madison River	78.33	359	P	P	16 07 14.1	-1.1
YHH	Holmes Hill	78.44	359	P	P	16 07 15.5	-0.4
MAW	Mawson	78.53	177	P	P	16 07 17.1	+1.2
	comp=Z,12nm,1.1s,baz=209,slow=5.8,SNR=5.0						
MAW				LR	LR	16 38 33.0	
	comp=Z,154nm,20.4s,baz=232,slow=33						
MCMT	McKenzie Canyo	78.53	357	P	P	16 07 14.9	-1.4
I05D	Terrebonne, OR	78.75	351	P	P	16 07 19.5	+2.2
	baz=170						
BMO	Blue Mountains	78.83	354	P	P	16 07 16.6	-1.2
BMO				pmax	pmax		
	comp=Z,33nm,1.7s						
BMO	Blue Mountains	78.83	354	P	P	16 07 16.6	-1.2
BMO				IAmb	IAmb	16 07 22.2	
	comp=Z,33nm,1.6s						
PLID	Pearl Lake	78.96	355	P	P	16 07 17.3	-1.4
PLID				IAmb	IAmb	16 07 32.4	
	comp=Z,26nm,1.6s						
BOZ	Bozeman (W)	79.27	358	P	P	16 07 19.0	-1.3
BOZ				pmax	pmax		
	comp=Z,35nm,1.9s						
BOZ	Bozeman (W)	79.27	358	P	P	16 07 19.0	-1.3
BOZ				IAmb	IAmb	16 07 33.2	
	comp=Z,35nm,1.9s						
G08A	Pilot Rock	79.42	353	P	P	16 07 20.2	-0.8
G08A				IAmb	IAmb	16 07 35.5	
	comp=Z,36nm,1.6s						
F10A	Beach Ranch, E	79.94	354	P	P	16 07 22.9	-0.9
TOO	Toolangi	80.49	231	P	P	16 07 26.0	-1.3
TOO				pmax	pmax		
	comp=Z,85nm,2.0s						
TOO	Toolangi	80.49	231	P	P	16 07 26.0	-1.3
HAWA	Hanford	80.56	353	P	P	16 07 27.0	-0.1
HAWA				IAmb	IAmb	16 07 55.5	
	comp=Z,44nm,1.9s						
JTMT	Jette	81.51	357	P	P	16 07 31.2	-1.1
JTMT				IAmb	IAmb	16 07 41.6	
	comp=Z,34nm,1.5s						
NEW	Newport	82.20	355	P	P	16 07 36.1	+0.3
	comp=Z,9.6nm,1.1s,baz=154,slow=4.8,SNR=6.0						
NEW	Newport	82.20	355	P	P	16 07 35.5	-0.3
STKA	Stephens Creek	86.47	234	P	P	16 07 58.8	+0.8
	comp=Z,3.1nm,0.9s,baz=200,slow=8.7,SNR=4.0						
STKA				LR	LR	16 41 37.5	
	comp=Z,321nm,18.0s,baz=137,slow=32						
H11S2	WAKE ISLAND Hy	95.32	289	T	T	17 54 37.2	
	baz=126,slow=75,SNR=6.1						
H11S1	WAKE ISLAND Hy	95.33	289	T	T	17 54 42.4	
	baz=126,slow=75,SNR=5.6						
H11S3	WAKE ISLAND Hy	95.34	289	T	T	17 54 34.4	
	baz=126,slow=75,SNR=4.8						
SCHQ	Schefferville	95.73	23	LR	LR	16 46 26.2	
	comp=Z,206nm,21.3s,baz=256,slow=32						
YKA	Yellowknife Ar	96.26	358	P	P	16 08 41.2	-1.5
	comp=Z,0.2nm,0.4s,baz=165,slow=5.2,SNR=4.5						
ASAR	Alice Springs	96.94	236	P	P	16 08 47.0	0.0
	comp=Z,1.7nm,1.0s,baz=138,slow=3.5,SNR=4.9						
ASAR				LR	LR	16 47 13.1	
	comp=Z,308nm,19.3s,baz=146,slow=32						
ASAR	Alice Springs	96.94	236	P	P	16 08 47.0	0.0
WRA	Warramunga Arr	99.09	239	LR	LR	16 50 36.0	
	comp=Z,355nm,18.1s,baz=140,slow=34						
H01W1	Cape Leeuwin H	100.28	215	T	T	18 01 32.4	
	baz=143,slow=76,SNR=5.5						
H01W2	Cape Leeuwin H	100.28	215	T	T	18 01 34.8	
	baz=143,slow=76,SNR=6.0						
H01W3	Cape Leeuwin H	100.29	215	T	T	18 01 32.3	
	baz=143,slow=76,SNR=6.0						
TORD	Torodi Ar. Bea	114.58	90	PKP	PKPdf	16 13 55.0	-0.9
	comp=Z,0.5nm,0.6s,baz=297,slow=6.5,SNR=3.7						
ESDC	Sonseca Array	121.59	61	PKP	PKPdf	16 14 07.0	-1.7
	comp=Z,1.1nm,0.9s,baz=327,slow=2.5,SNR=6.3						
TIXI	Tiksi	131.82	339	⇑*i*PKIKP	PKPdf	16 14 27.0	-0.2
TIXI	Tiksi	131.82	339	PKPdf	PKPdf	16 14 25.5	-1.7
VLA	Vladivostok	132.23	300	⇑*i*PKIKP	PKPdf	16 14 28.4	-0.4
CLL	Collm	135.42	49	*e*PKIKP	PKPdf	16 14 35.0	+0.5
CLL				*e*		16 14 42.0	
CLL	Collm	135.42	49	*e*PKPdf	PKPdf	16 14 35.0	+0.5
CLL				*e*		16 14 42.0	
CLL				*e*PP	PP	16 17 14.0	+2.2
KHC	Kasperske Hory	135.74	52	⇓*i*PKIKP	PKPdf	16 14 35.8	+0.5
GERES	GERESS Array B	135.81	53	PKP	PKPdf	16 14 36.1	+0.6
	comp=Z,0.7nm,0.7s,baz=159,slow=1.1,SNR=7.6						
BRG	Berggiesshubel	136.01	50	*e*PKP	PKiKP	16 14 37.2	-0.1
BRG				Amp		16 14 38.5	
	comp=Z,10.0nm,1.4s						
BRG	Berggiesshubel	136.01	50	P	PKiKP	16 14 44.1	+6.8
BRG				Amp		16 14 45.8	
	comp=Z,16nm,1.4s						
NJ2	Nanjing	139.85	281	*e*PKP	PKPdf	16 14 43.2	-0.1
LVV	L'vov	142.52	51	*e*PKIKP	PKiKP	16 14 53.8	+3.1
ARR	Arges	143.26	58	⇑P	PKPbc	16 14 46.6	+0.4
NRIK	Noril'sk	143.38	350	PKP	PKPbc	16 14 47.4	+1.7
	comp=Z,2.3nm,0.5s,baz=43,slow=22,SNR=5.0						
NRIK	Noril'sk	143.38	350	⇑*e*PKIKP	PKPbc	16 14 47.0	+1.3
BUR08	Bucovina Ar. S	143.52	54	PKPdf	PKPab	16 14 46.0	0.0
BURAR	Bucovina Array	143.53	54	⇑P	PKPbc	16 14 47.4	+0.5
BURAR	Bucovina Array	143.53	54	⇑PKIKP	PKPbc	16 14 47.4	+0.5
BURAR	Bucovina Array	143.53	54	PKPdf	PKPab	16 14 45.3	-0.7
VOIR		143.55	58	⇑P	PKPbc	16 14 47.4	+0.4
VOIR		143.55	58	⇑PKIKP	PKPbc	16 14 47.4	+0.4
OZUR		144.03	57	⇑P	PKPbc	16 14 49.0	+0.5
MLR	Muntele Rosu	144.18	58	⇑P	PKPab	16 14 48.6	0.0
MLR	Muntele Rosu	144.18	58	⇑PKIKP	PKPab	16 14 48.6	0.0
MLR	Muntele Rosu	144.18	58	PKPdf	PKPab	16 14 47.1	-1.5
ALN	Alexandroupoli	144.22	66	PKIKP	PKPab	16 14 48.0	-0.7
ALN	Alexandroupoli	144.22	66	PKPdf	PKPab	16 14 48.0	-0.7
TESR	Tescani	144.60	56	⇑P	PKPab	16 14 50.2	+0.2
PLOR	Plostina	144.65	57	⇑P	PKPab	16 14 50.5	+0.3
PLOR	Plostina	144.65	57	⇑PKIKP	PKPab	16 14 50.5	+0.3
VRI	Vrincioaia	144.71	57	⇑P	PKPab	16 14 49.9	-0.5
VRI	Vrincioaia	144.71	57	⇑PKIKP	PKPab	16 14 49.9	-0.5
BISRR	Bisoca	144.71	58	⇑P	PKPbc	16 14 51.0	+0.4
VASR	Vaslui	145.38	56	⇑P	PKPbc	16 14 52.9	+0.3
IZVR	Izvoarele	145.45	58	⇑P	PKPdf	16 14 52.7	-0.1
VARL	Varlezi	145.48	57	⇑P	PKPdf	16 14 53.3	+0.5
BALB	Balikesir	145.53	68		PKPdf	16 14 51.7	-1.4
SORM	Soroca	145.57	53	⇑P	PKPdf	16 14 52.2	-0.7
SORM	Soroca	145.57	53	⇑PKIKP	PKPdf	16 14 52.2	-0.7
SCTR	Scanteiesti	145.60	57	⇑P	PKPdf	16 14 53.5	+0.4
HARR	Harsova	145.62	59	⇑P	PKPdf	16 14 53.6	+0.5
HARR	Harsova	145.62	59	⇑PKIKP	PKPdf	16 14 53.6	+0.5
VLDR	Vladesti	145.65	57	⇑P	PKPdf	16 14 53.6	+0.5
AKASG	Malin Array Be	145.65	48	PKPbc	PKPdf	16 14 51.8	-1.2
	comp=Z,3.9nm,0.6s,baz=281,slow=3.4,SNR=17						
AKASG	Malin Array Be	145.65	48	PKP2	PKPdf	16 14 51.1	-1.9
AKASG	Malin Array Be	145.65	48	PKPdf	PKPdf	16 14 51.1	-1.9
AKBB	Malin Array Si	145.65	48	⇓*e*PKIKP	PKPdf	16 14 52.3	-0.7
AKBB	Malin Array Si	145.65	48	PKPdf	PKPdf	16 14 51.1	-1.9
TLBR	Topalu	145.71	59	⇑P	PKPbc	16 14 54.0	+0.3
CFR	Carcaliu	145.74	58	⇑P	PKPdf	16 14 53.1	-0.2
CFR	Carcaliu	145.74	58	⇑PKP2	PKPdf	16 14 53.1	-0.2
TPGR	Topolog	145.96	59	⇑P	PKPbc	16 14 55.1	+0.5
TIRR	Tirgusor	145.98	59	⇑P	PKPbc	16 14 55.0	+0.5
TIRR	Tirgusor	145.98	59	⇑PKP2	PKPbc	16 14 55.0	+0.5
MILM	Milestii Mici	146.04	55	⇑P	PKPdf	16 14 53.2	-0.6
MILM	Milestii Mici	146.04	55	⇑PKP2	PKPdf	16 14 53.2	-0.6
KLMR	Klimovskoe	146.46	27	*e*PKP2	PKPdf	16 14 54.2	+0.2
KLMR				pmax	pmax		
	comp=Z,65nm,1.5s						
KLMR	Klimovskoe	146.46	27	*e*PKPdf	PKPdf	16 14 54.3	+0.2
KLMR				AMP		16 15 04.1	
	comp=Z,65nm,1.5s						
PURM	Purcari	146.81	56	⇑P	PKPdf	16 14 56.4	+1.3
HHC	Hu-ho-hao-te	147.05	294	*e*PKPbc	PKPab	16 14 59.3	-0.2
BTO	Baotou	148.22	294	*e*PKPbc	PKPbc	16 15 01.2	0.0
BTO				SS	SS	16 37 30.9	-7.0
OBN	Obninsk	148.31	38	⇓*i*PKP2	PKPbc	16 15 00.3	-0.4
OBN				PPP	PPP	16 21 50.0	
OBN						16 22 05.0	
OBN				SS	SS	16 37 33.0	-4.1
OBN				SSS	SSS	16 43 15.0	
OBN				pmax	pmax		
	comp=Z,56nm,1.3s						
OBN				MLR	MLR		
	comp=Z,295nm,10.0s						
XAN	Xi'an	148.43	281	PKPbc	PKPbc	16 15 02.1	+0.3
XAN				pPKP	pPKPab	16 15 08.2	+0.6
XAN				sPKP		16 15 12.7	
MOS	Moscow	148.53	36	*e*PKP2	PKiKP	16 15 02.5	-0.3
ANTO	Ankara	149.32	68	PKP2	PKPbc	16 15 03.2	-0.8
ANTO						17 14 57.5	
ANTO	Ankara	149.32	68	PKPdf	PKPdf	16 14 57.5	-2.1
ANTO					PKPbc	16 15 03.2	-0.8
ULN	Ulaanbaatar	149.54	308	⇑*e*PKHKP	PKPpre	16 15 00.4	
ULN	Ulaanbaatar	149.54	308		PKPdf	16 14 58.9	-0.9
ULN				PKPbc	PKPbc	16 15 04.2	-0.1
BRTR	Keskin Array B	149.97	68	PKPbc	PKPbc	16 15 05.0	-0.6
	comp=Z,15nm,1.1s,baz=211,slow=2.2,SNR=20						
BRTR	Keskin Array B	149.97	68	PKP2	PKPbc	16 15 04.7	-1.0
BRTR						17 14 57.7	
BRTR	Keskin Array B	149.97	68	PKPdf	PKPdf	16 14 57.7	-3.0
BRTR					PKPbc	16 15 04.7	-1.0
SONM	Songino Array	149.98	308	PKPbc	PKPbc	16 15 03.4	-2.0
	comp=Z,12nm,1.2s,baz=127,slow=1.6,SNR=20						
SONM	Songino Array	149.98	308	PKIKP	PKPdf	16 14 58.4	-2.1
SONM						16 15 04.0	
SONM	Songino Array	149.98	308	PKPdf	PKPdf	16 14 58.4	-2.1
SONM					sPKPdf	16 15 04.0	+0.5
CMAR	Chiang Mai Arr	150.42	246	PKPbc	PKPbc	16 15 07.8	+0.7
	comp=Z,24nm,1.1s,baz=179,slow=1.4,SNR=50						
CMAR	Chiang Mai Arr	150.42	246	PKIKP	PKPbc	16 15 07.4	+0.3
CMAR	Chiang Mai Arr	150.42	246	PKPdf	PKPdf	16 15 01.5	-0.3
CMAR				PKPbc	PKPbc	16 15 07.4	+0.3
LPSR	Galich'ya Gora	150.70	41	*e*PKIKP	PKPdf	16 15 04.1	+2.9
LPSR				pmax	pmax		
	comp=Z,30nm,1.0s						
KMI	Kunming	150.84	261	⇑PKPbc	PKPdf	16 15 00.4	-2.2
KMI				sPKP		16 15 09.7	
ZAK	Zakamensk	151.13	314	*e*PKIKP	PKPdf	16 15 04.7	+2.6
ZAK				pmax	pmax		
	comp=Z,14nm,1.1s						
VSR	Storozhevoye	151.44	43	*e*PKIKP	PKPbc	16 15 06.6	-1.9
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORD	Divnogorie	151.61	44	*e*PKIKP	PKPbc	16 15 06.6	-2.3
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CD2	Chengdu	151.98	273	PKPbc	PKPdf	16 15 02.5	-1.5
GTA	Gaotai	156.09	291	*e*PKP	PKPdf	16 15 10.5	+0.9
GTA				sPKP		16 15 20.0	
GTA				PKPab	pPKPab	16 15 40.2	+0.6
GTA				LR	LR		
	comp=Z,240nm,18.5s						
GTA				LR	LR		
	comp=Z,400nm,17.4s						
GTA				LR	LR		
	comp=Z,340nm,18.2s						
ZALV	Zalesovo Beam	157.70	338	PKP	PKPdf	16 15 08.3	-2.7
	comp=Z,0.7nm,0.5s,baz=126,slow=2.0,SNR=6.8						
ZALV	Zalesovo Beam	157.70	338	PKPdf	PKPdf	16 15 08.1	-2.9
ZALV				PKPab	PKPab	16 15 43.6	+0.2
WMQ	Urumqi	163.56	312	*e*PKP	PKPdf	16 15 16.9	-0.9
WMQ				LR	LR		
	comp=Z,200nm,24.1s						
KSH	Kashi	173.06	324	PKP	PKPdf	16 15 27.6	+3.2

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*IDC **03** 16:08:53.2±3.3, 30.°03S×138.°92E, h0^{km}, mb1 2.9/3, mb1mx2.9/16, mbtmp2.6/3, ML2.8/3, Error ellipse: s-maj=116.6km s-min=17.6km az=46.0*

*AUST **03** 16:08:54.8±2.4, 30.°02S×139.°00E, h6^{km}±17^{km}, Error ellipse: s-maj=13.4km s-min=10.4km az=123.0*

ISC 03 16:08:54.4±0.9**, 29.°98S**±0.°05×**138.°97E**±0.°04**, h10^{km}, n11, σ1.^{s}36**/21**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCRK	Leigh Creek	0.80	234	P	Pb	16 09 10.5	+0.1
	baz=0.8						
LCRK				S	Sb	16 09 20.4	-0.9
	baz=0.8						
INKA	Innaminka	2.73	35	P	Pn	16 09 39.0	+0.7
	baz=2.7						
INKA				S	Sn	16 10 13.5	+2.2
	baz=2.7						
STKA	Stephens Creek	2.94	131	Pn	Pn	16 09 42.5	+1.2
	0.5nm,0.3s,baz=304,slow=13,SNR=5.9						
STKA				Pg	Pg	16 09 50.1	-0.8
	0.6nm,0.3s,baz=317,slow=17,SNR=4.6						
STKA				Sn	Sn	16 10 17.0	+0.3
	1.5nm,0.3s,baz=192,slow=15,SNR=6.0						
STKA				Lg	Lg	16 10 26.1	
	2.4nm,0.3s,baz=31,slow=19,SNR=5.7						
STKA	Stephens Creek	2.94	131	P	Pn	16 09 41.9	+0.6
	baz=2.9						
STKA				S	Sn	16 10 17.4	+0.7
	baz=2.9						
HTT	Hallett	3.44	181	P	Pn	16 09 48.6	+0.4
	baz=3.4						
HTT				S	Sn	16 10 28.3	-0.7
	baz=3.4						
OOD	Oodnadatta	3.61	306	P	Pn	16 09 52.2	+1.8
	baz=3.7						
OOD				S	Sn	16 10 31.8	-1.2
	baz=3.7						
BBOO	Buckleboo	3.76	221	P	Pn	16 09 54.3	+1.9
	baz=3.8						
BBOO				S	Sn	16 10 38.3	+1.5
	baz=3.8						
MULG	Mulgathing	4.26	265	P	Pn	16 10 01.1	+1.7
	baz=4.3						
MULG				S	Sn	16 10 49.7	+0.5
	baz=4.3						
ARPS	Mount Arapiles	7.18	161	P	Pn	16 10 40.1	+0.6
	baz=7.2						
ASAR	Alice Springs	7.75	323	Pn	Pn	16 10 48.0	+0.6
	0.1nm,0.3s,baz=147,slow=12,SNR=2.0						
ASAR				Sn	Sn	16 12 12.3	-3.0
	0.1nm,0.3s,baz=150,slow=22,SNR=4.5						
WRA	Warramunga Arr	10.84	336	Pn	Pn	16 11 29.1	-0.7
	0.1nm,0.3s,baz=160,slow=11,SNR=15						
WRA				Sn	Sn	16 13 20.1	-11
	0.1nm,0.3s,baz=179,slow=30,SNR=4.8						

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*ISK **03** 16:42:11.3, 39.°30N×40.°19E, h5^{km}, ML3.9/26*

*IDC **03** 16:42:12.7±0.8, 39.°32N×40.°22E, h0^{km}, mb3.6/7, mb1 3.7/15, mb1mx3.4/67, mbtmp3.6/15, ML3.2/7, MS3.1/1, Ms1 3.0/1, ms1mx2.6/55, Error ellipse: s-maj=15.7km s-min=8.8km az=170.0*

*DDA **03** 16:42:12.2, 39.°29N×40.°19E, h10^{km}±4^{km}, MW4.0*

ISC 03 16:42:12.9±1.1**, 39.°30N**±0.°02×**40.°20E**±0.°01**, h1^{km}**±8^{km}**, n88, σ1.^{s}02**/130**, mb3.8**/6**, 10C-10D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YEDI	Yedisu-Bingol	0.30	63	PG	Pg	16 42 18.7	-0.1
YEDI				SG	Sg	16 42 23.7	+1.0
ERZN	Erzincan	0.46	308	PG	Pg	16 42 21.5	-0.3
ERZN				SG	Sg	16 42 29.1	+1.2
BNGB	Bingl	0.49	129	PG	Pg	16 42 21.5	-0.8
BNGB				SG	Sg	16 42 28.8	+0.2
TNCL	Tunceli-Merkez	0.54	250	⇑*i*P	Pg	16 42 22.5	-0.8
TNCL				*i* S	Sg	16 42 30.3	0.0
EUZM	Uzumlu	0.56	317	⇑*i*P	Pg	16 42 23.0	-0.6
EUZM				*i* S	Sg	16 42 32.1	+1.2
KARO	Karliova-Bingo	0.66	89	PG	Pg	16 42 25.2	-0.4
KARO				SG	Sg	16 42 35.7	+1.5
KOVA	Elazig, Kovanc	0.67	207	⇓*i*P	Pg	16 42 25.2	-0.5
KOVA				*i* S	Sg	16 42 35.3	+1.0
ECAT	Cat-ERZURUM	0.68	63	⇑*i*P	Pg	16 42 25.1	-0.8
ECAT				*i* S	Sg	16 42 35.5	+0.9
SLHN	Bingol, Solhan	0.73	118	⇑*i*P	Pg	16 42 26.1	-0.9
SLHN				*i* S	Sb	16 42 38.3	-0.7
HANI	Diyarbakir_Han	0.90	170	⇓*i*P	Pg	16 42 29.4	-0.8
HANI				*i* S	Sn	16 42 44.6	-1.8
EMRE	Erzurum,Aziziy	0.94	39	⇑*i*P	Pg	16 42 30.7	-0.4
EMRE				*i* S	Sb	16 42 45.0	-0.4
BAYB	BAYBURT	0.96	3	⇓*i*P	Pg	16 42 29.3	-2.0
BAYB				*i* S	Sg	16 42 44.4	+0.7
VRTB	Varto-Mus	0.99	98	⇑*i*P	Pg	16 42 30.9	-1.0
VRTB				*i* S	Sn	16 42 48.9	+0.2
VRTB	Varto-Mus	0.99	98	PG	Pg	16 42 30.9	-1.0
EJDE	Erzurum, Palan	1.01	58	⇑*i*P	Pg	16 42 30.7	-1.6
EJDE				*i* S	Sg	16 42 46.1	+0.8
ERZM	Erzurum	1.09	56	*i* P	Pg	16 42 33.0	-0.8
ERZM				*i* S	Sb	16 42 49.1	-0.3
BAYT	Aydıntepe-Bayb	1.09	358	PN	Pg	16 42 33.0	-0.9
KELT	Kelkit	1.11	320	⇓*i*P	Pg	16 42 33.5	-0.8
KELT				*i* S	Sn	16 42 50.4	-1.5
SVRC	Sivrice-ELAZID	1.16	217	PN	Pb	16 42 34.2	-1.6
KRIK	Erzurum-spir	1.18	28	*i* P	Pb	16 42 35.4	-0.8
KRIK				*i* S	Sb	16 42 52.0	-0.1
MUSM	Mu-Merkez	1.18	119	⇑*i*P	Pb	16 42 33.4	-2.7
MUSM				*i* S	Sb	16 42 50.0	-1.9
ELZG	Elazig	1.24	230	⇓*i*P	Pn	16 42 35.7	-1.8
ELZG				*i* S	Sg	16 42 53.8	+1.0
REFA	Refahiye_ERZN	1.26	299	⇑*i*P	Pn	16 42 35.4	-2.4
REFA				*i* S	Sg	16 42 54.1	+0.7
ILIC	ilic-Erzincan	1.27	277	PN	Pn	16 42 36.1	-1.8
ILIC				SN	Sn	16 42 54.9	-0.8
KEMA	Kemaliye	1.32	269	⇑*i*P	Pn	16 42 36.2	-2.3
KEMA				*i* S	Sg	16 42 56.1	+0.7
DYBB	Diyarbakir	1.35	182	PN	Pn	16 42 38.4	-0.5
DYBB				SN	Sg	16 42 57.9	+1.7
DIYA	Diyarbakir	1.38	182	⇓*i*P	Pn	16 42 39.2	-0.1
DIYA				*i* S	Sg	16 42 59.6	+2.4
SVAN	Silvan-Diyarba	1.39	145	⇓*i*P	Pn	16 42 38.9	-0.6
SVAN				*i* S	Sg	16 42 59.8	+2.1
SVAN	Silvan-Diyarba	1.39	145	PN	Pn	16 42 39.0	-0.5
SVAN				SN	Sg	16 42 59.0	+1.4
KOPR	Koprukoy-ERZUR	1.45	61	PN	Pn	16 42 39.6	-0.9
ARPR	Arapgir-MALATY	1.46	262	PN	Pn	16 42 39.8	-0.8
ALUC	Giresun/Alucra	1.51	314	*i* P	Pn	16 42 40.8	-0.5
ALUC				*i* S	Sg	16 43 02.7	+1.2
HOMI	Horasan	1.51	60	*i* P	Pn	16 42 40.7	-0.6
BTMN	Batman	1.64	149	⇓*i*P	Pn	16 42 43.1	+0.2
BTMN				*i* S	Sb	16 43 05.2	0.0
MACK	Trabzon	1.67	349	*i* P	Pb	16 42 43.9	-0.7
MALT	Malatya	1.70	235	PN	Pn	16 42 43.0	-0.8
KTUT	Trabzon	1.71	349	PN	Pn	16 42 44.1	+0.2
BLIS	Bitlis-Merkez	1.74	120	*i* P	Pn	16 42 44.5	+0.1
BLIS				*i* S	Sg	16 43 09.6	+0.7
SUSE	Susehri	1.78	301	*i* P	Pb	16 42 46.7	+0.2
SUSE				*i* S	Sg	16 43 11.5	+1.3
HEKM	Malatya_Hekimh	1.79	257	*i* P	Pn	16 42 44.9	-0.2
HEKM				*i* S	Sg	16 43 10.6	+0.2
MLAZ	Malazgirt-MUS	1.83	94	PN	Pn	16 42 45.2	-0.5
MAZI	Mazidag	1.85	174	PN	Pn	16 42 45.6	-0.3
EATA	Eleskirt	1.86	72	*i* P	Pn	16 42 46.8	+0.6
CUZAR	Zara_SIVAS	1.96	288	*i* P	Pn	16 42 47.9	+0.5
CUZAR				*i* S	Sg	16 43 16.0	0.0
DDEM	Demirkent	1.99	36	*i* P	Pn	16 42 47.3	-0.5
MARD	Mardin	2.04	167	⇓*i*P	Pn	16 42 48.1	-0.3
MARD				*i* S	Sb	16 43 16.9	+0.2
AKCD	Akcadag	2.04	241	*i* P	Pn	16 42 49.0	+0.5
AKCD				*i* S	Sb	16 43 17.7	+0.9
DBAD	Bademkaya	2.06	33	*i* P	Pn	16 42 48.1	-0.7
DBAD				*i* S	Sg	16 43 18.7	-0.6
SENK	Senkaya-Erzuru	2.08	52	PN	Pn	16 42 49.4	+0.3
MIDY	Mardin/Midyat-	2.12	153	*i* P	Pn	16 42 49.5	0.0
MIDY				*i* S	Sb	16 43 18.5	-0.4
CUKAN	kangal_SIVAS	2.12	271	*i* P	Pn	16 42 49.9	+0.3
CUKAN				*i* S	Sg	16 43 20.4	-0.5
URFA	Urfa	2.15	211	PN	Pn	16 42 50.4	+0.4
AGRB	Hanur-Agry	2.18	82	PN	Pn	16 42 50.4	-0.1
DAGI	Agillar	2.21	36	*i* P	Pn	16 42 50.2	-0.6
DAGI				*i* S	Sb	16 43 22.2	+0.6
DARE	Darende-Malaty	2.24	252	PN	Pn	16 42 51.2	0.0
PERV	Siirt/Pervari-	2.28	126	*i* P	Pb	16 42 53.4	-1.6
PERV				*i* S	Sg	16 43 25.7	-0.6
SANL	SANLIURFA_Merk	2.33	204	⇓*i*P	Pn	16 42 52.8	+0.4
SANL				*i* S	Sg	16 43 30.4	+2.6
KOTA	Agri, Merkez-K	2.38	77	*i* P	Pb	16 42 56.3	-0.3
AKDM	Akdamar-Van	2.38	113	PN	Pn	16 42 53.5	+0.3
BCA	Borcka	2.40	27	PN	Pn	16 42 53.2	-0.2
RSDY	Resadiye-TOKAT	2.46	297	PN	Pn	16 42 54.5	+0.3
SIRN	Sırnak	2.51	135	*i* P	Pn	16 42 55.5	+0.6
SIRT	Sirnak	2.52	135	PN	Pn	16 42 55.4	+0.4
KARS	Kars	2.58	58	PN	Pn	16 42 56.2	+0.2

VANB	Van	2.59	105	PN	Pn	16 42 57.0	+1.0
CUAYA	Sivas-Altinyay	2.68	270	*i* P	Pn	16 42 56.7	-0.6
CUAYA				*i* S	Sg	16 43 39.3	+0.4
CLDR	Caldiran	2.90	92	PN	Pn	16 43 00.5	+0.2
CUSAR	Sarkisla-SIVAS	3.06	273	*i* P	Pn	16 43 02.8	+0.2
ABS	Abastumani	3.16	38	P	Pn	16 43 04.4	+0.5
ABS				S	Sb	16 43 50.6	+1.6
HCB	Kahramanmara	3.24	234	*i* P	Pn	16 43 07.5	+2.6
GNI	Garni	3.61	75	Pn	Pn	16 43 10.5	+0.4
	0.5nm,0.3s,baz=265,slow=9.5,SNR=3.7						
GNI				Pg	Pb	16 43 19.1	+1.5
	14nm,0.3s,baz=278,slow=5.3,SNR=26						
GNI				Lg	Lg	16 43 59.3	
	baz=184,slow=19,SNR=1.0						
TKB	Tkibuli	3.71	34	P	Pn	16 43 11.8	+0.5
ONI	Oni	4.11	36	P	Pn	16 43 18.0	+1.2
KBZ	Khabaz	4.87	24	Pn	Pn	16 43 28.2	+1.1
	0.2nm,0.3s,baz=74,slow=4.4,SNR=5.3						
KBZ				LR	LR	16 45 33.9	
	comp=Z,226nm,21.4s,baz=214,slow=42						
KVAR	Kislovodsk Arr	5.01	21	Pn	Pn	16 43 30.4	+1.1
	baz=270,slow=19,SNR=2.3						
BRTR	Keskin Array B	5.09	277	Pn	Pn	16 43 31.1	+0.7
	1.1nm,0.3s,baz=101,slow=14,SNR=21						
BRTR				Lg	Lg	16 44 49.2	
	baz=58,slow=39,SNR=1.5						
MMAI	Mount Meron Ar	7.37	213	Pn	Pn	16 44 02.5	+0.8
	0.6nm,0.3s,baz=268,slow=23,SNR=3.1						
ASF	Jabal al Asfar	7.60	202	Pn	Pn	16 44 05.7	+0.8
	0.3nm,0.3s,baz=194,slow=23,SNR=8.0						
ASF				Lg	Lg	16 46 05.8	
	0.2nm,0.3s,baz=68,slow=21,SNR=1.4						
EIL	Elat	10.54	206	Lg	Lg	16 47 40.8	
	0.2nm,0.3s,baz=24,slow=19,SNR=1.8						
AKASG	Malin Array Be	13.77	329	Pn	Pn	16 45 29.6	+0.4
	0.3nm,0.3s,baz=137,slow=14,SNR=3.1						
AKTO	Aktyubinsk	16.79	43	Pn	Pn	16 46 08.0	-1.2
	0.1nm,0.3s,baz=237,slow=10,SNR=9.0						
ARU	Arti	20.99	29	P	P	16 46 56.2	-1.2
	0.8nm,0.6s,baz=174,slow=6.6,SNR=2.2						
GERES	GERESS Array B	21.20	305	P	P	16 47 01.7	+1.9
	0.8nm,0.7s,baz=118,slow=12,SNR=4.4						
WSAR	Wadi Sarin	22.40	130	P	P	16 47 14.0	+1.2
	2.0nm,0.6s,baz=324,slow=8.7,SNR=2.6						
FINES	FINESS Array B	23.82	343	P	P	16 47 27.7	+0.7
	2.6nm,0.6s,baz=134,slow=11,SNR=6.9						
KEST	Kesra	24.67	271	P	P	16 47 35.4	+0.1
	5.7nm,0.8s,baz=98,slow=1.2,SNR=6.2						
ESDC	Sonseca Array	33.82	285	P	P	16 48 57.5	+0.8
	0.9nm,0.8s,baz=67,slow=8.5,SNR=5.2						
CMAR	Chiang Mai Arr	54.51	95	P	P	16 51 41.9	-0.6
	0.3nm,0.4s,baz=292,slow=7.3,SNR=4.5						

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*IDC **03** 16:48:11.0±2.5, 9°.41S×120°.72E, h102^{km}±25^{km}, mb3.6/3, mb1 3.4/9, mb1mx3.0/50, mbtmp3.7/9, Error ellipse: s-maj=37.7km s-min=10.0km az=54.0*

*DJA **03** 16:48:12.6±0.4, 9°S±3°×12°1E±°, h90^{km}±6^{km}, M4.0/12, mb4.4/2, MLv3.8/12*

ISC 03 16:48:10.8±0.7, 9°.49S±0°.05×120°.79E±0°.04, h113^{km}±8^{km}, n31, σ2^{s}34/41, mb3.8/3, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASI	Baing, Sumba	0.75	196	P	Pn	16 48 31.2	+1.3
BASI				S	Sn	16 48 44.5	+0.2
EDFI	Ende, Flores	1.16	50	P	Pn	16 48 34.3	+0.3
EDFI				S	Sn	16 48 50.3	-1.3
WBSI	Waikabubak, Su	1.39	264	P	Pn	16 48 37.1	+0.6
WBSI				S	Sn	16 48 55.0	-1.0
MMRI	Maumere	1.67	59	P	Pn	16 48 41.1	+1.3
MMRI				S	Sn	16 49 02.1	+0.2
MMRI	Maumere	1.67	59	P	Pn	16 48 41.3	+1.5
BATI	Baumata	2.92	104	P	Pn	16 48 58.2	+2.3
	3.4nm,0.3s,baz=298,slow=9.1,SNR=8.8						
BATI				S	Sn	16 49 32.4	+1.8
	15nm,0.3s,baz=250,slow=3.8,SNR=17						
BATI	Baumata	2.92	104	P	Pn	16 48 58.5	+2.6
PLAI	Plampang	3.05	282	P	Pn	16 48 58.9	+1.4
PLAI				S	Sn	16 49 33.3	-0.2
PLAI	Plampang	3.05	282	P	Pn	16 48 59.2	+1.7
BSSI	Bau Bau, Buton	3.34	355	P	Pn	16 49 01.7	+0.2
SOEI	Soe	3.44	95	P	Pn	16 49 05.4	+2.6
SOEI	Soe	3.44	95	P	Pn	16 49 04.4	+1.6
TWSI	Taliwang, Sumb	3.93	281	P	Pn	16 49 10.8	+1.5
BKSI	Bulukumba	4.20	351	P	Pn	16 49 13.7	+0.8
KAPI	Kappang	4.57	347	P	Pn	16 49 15.6	-2.3
	baz=76,slow=20,SNR=1.0						
KAPI				S	Sn	16 50 08.7	-1.3
	1.1nm,0.3s,baz=245,slow=21,SNR=6.2						
IGBI	Denpasar	5.61	276	P	Pn	16 49 33.3	+1.4
	0.4nm72nm,0.9s						
JAGI	Jajag, Banyuwa	6.63	278	P	Pn	16 49 44.6	-1.2
JAGI	Jajag, Banyuwa	6.63	278	P	Pn	16 49 45.5	-0.3
FITZ	Fitzroy Crossi	9.76	152	P	Pn	16 50 28.8	+0.6
	0.2nm,0.3s,baz=325,slow=16,SNR=19						
FITZ				S	Sn	16 52 10.9	-5.1
	0.7nm,0.3s,baz=196,slow=23,SNR=11						
KNRA	Kununurra	9.91	129	P	Pn	16 50 30.3	0.0
DRS	Darwin Rock St	10.35	107	P	Pn	16 50 36.3	+0.2
MTN	Manton Dam	10.68	109	P	Pn	16 50 40.4	-0.3
MBWA	Marble Bar	11.64	185	P	Pn	16 50 54.3	+0.8
KDU	Kakadu	11.90	107	P	Pn	16 50 56.5	-0.4
FAKI	Fak Fak	13.13	61	P	Pn	16 51 13.1	+0.1
SIJI	Sorong	13.49	51	P	Pn	16 51 19.9	+2.1
	0.5nm,0.3s,baz=296,slow=23,SNR=1.9						
WRA	Warramunga Arr	16.71	130	P	P	16 51 60.0	+1.3
	0.2nm,0.3s,baz=306,slow=13,SNR=18						
WRA				S	Sn	16 54 54.9	-9.2
	0.3nm,0.3s,baz=227,slow=4.0,SNR=8.6						
ASAR	Alice Springs	18.86	140	P	Pn	16 52 25.6	+1.4
	0.2nm,0.3s,baz=318,slow=11,SNR=31						
ASAR				S	S	16 55 46.4	-4.5
	0.0nm,0.3s,baz=166,slow=41,SNR=1.4						
STKA	Stephens Creek	29.47	142	P	P	16 54 07.2	+3.1
	1.1nm,0.5s,baz=319,slow=11,SNR=5.1						
MKAR	Makanchi Array	65.71	332	P	P	16 58 44.1	+0.9
	0.6nm,0.7s,baz=145,slow=7.2,SNR=4.9						
ZALV	Zalesovo Beam	70.14	338	P	P	16 59 10.5	-0.3
	0.5nm,0.3s,baz=140,slow=5.7,SNR=4.2						

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*PRU **03** 16:50:01.4±0.0, 51°.52N×16°.11E, h0^{km}*

*VIE **03** 16:50:02.7, 51°.38N×16°.22E, h0^{km}, ML2.5/1 64 km WNW of Wroclaw Suspected Mining induced.*

ISC 03 16:49:60.0±1.2, 51°.59N±0°.06×16°.12E±0°.03, h0^{km}, n25, σ0^{s}91/52, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.76	172	*e*Pg	Pg	16 50 14.6	+0.1
KSP				*e*Sg	Sg	16 50 24.2	-0.1
CHVC	Chvalec	1.01	182	*e*PG	Pg	16 50 19.1	-0.2
CHVC				*e*SG	Sg	16 50 31.7	-0.6
	comp=Z,28nm,0.6s						
OSTC	Ostas	1.04	177	*e*PG	Pg	16 50 19.2	-0.7
OSTC				*e*SG	Sg	16 50 32.5	-0.8
	comp=Z,21nm,0.3s						
UPC	Upice	1.09	184	*e*PG	Pg	16 50 20.5	-0.3
UPC				*e*SG	Sg	16 50 34.6	-0.3
	comp=Z,54nm,0.4s						
DPC	Dobruska-Polom	1.25	174	*e*PG	Pg	16 50 23.4	-0.5
DPC				*e*SG	Sg	16 50 38.6	-1.5
	comp=Z,29nm,0.8s						
PVCC	Panska Ves	1.45	223	*e*PG	Pn	16 50 26.9	-0.5
PVCC				*e*SG	Sg	16 50 45.8	-0.7
	comp=Z,94nm,0.4s						
BRG	Berggiesshubel	1.55	243	Pg	Pb	16 50 29.5	0.0
BRG				Sg	Sn	16 50 49.8	+0.2
BRG				Amp		16 50 50.3	
	comp=Z,30nm,0.4s						
KRLC	Kraliky	1.58	164	*e*PG	Pn	16 50 28.6	-0.6
KRLC				*e*SG	Sn	16 50 49.6	-0.7
	comp=Z,21nm,0.6s						
PRA	Prague	1.86	216	*e*SG	Sn	16 50 58.0	+0.7
	comp=Z,18nm,0.4s						
PRU	Pruhonice	1.89	213	*e*PG	Pn	16 50 33.4	-0.2
PRU				*e*SG	Sn	16 50 58.9	+0.8
	comp=Z,12nm,0.4s						
CLL	Collm	1.97	263	*i* Pn	Pn	16 50 33.5	-1.1
CLL				*e*Pg	Pb	16 50 37.0	+0.2
CLL				*i*		16 50 40.6	
CLL				*e*Sg	Sb	16 51 03.0	+1.1
	comp=Z,12nm,0.6s						
MORC	Moravsky Berou	2.03	153	*e*PN	Pn	16 50 34.8	-0.7
MORC				*e*SG	Sb	16 51 03.3	-0.3
OKC	Ostrava-Krasne	2.18	143	*e*PG	Pb	16 50 39.9	-0.3
OKC				*e*SG	Sg	16 51 08.6	-1.3
	comp=Z,16nm,0.7s						
VRAC	Vranov	2.31	172	*e*PN	Pn	16 50 39.7	+0.5
VRAC				*e*SG	Sb	16 51 11.6	+0.1
KRUC	Moravsky	2.54	176	*e*PN	Pn	16 50 42.9	+0.5
KRUC				*e*SG	Sg	16 51 20.2	-1.3
NKC	Novy Kostel	2.69	241	*e*PN	Pn	16 50 44.2	-0.4
NKC				*e*PG	Pb	16 50 49.5	+0.4
NKC				*e*SG	Sg	16 51 25.6	-0.9
	comp=Z,30nm,0.7s						
OJC	Ojcow	2.70	119	*e*Pg	Pg	16 50 52.3	+0.6
OJC				*e*Sg	Sg	16 51 27.0	+0.2
JAVC	Velka Javorina	2.91	159	*e*PN	Pn	16 50 48.1	+0.5
KHC	Kasperske Hory	2.96	214	*e*PN	Pn	16 50 48.0	-0.2
KHC				*e*PG	Pb	16 50 53.4	-0.1
KHC				*e*SG	Sg	16 51 32.8	-2.0
	comp=Z,6.7nm,0.3s						
CKRC	Cesky Krumlov	3.01	203	*e*PN	Pn	16 50 49.3	+0.4
CKRC				*e*PG	Pb	16 50 54.5	+0.1
CKRC				*e*SG	Sb	16 51 33.8	+2.1
LANS	Liptovska Anna	3.25	137	*e*PG	Pg	16 51 01.4	-0.8
LANS				*e*SG	Sg	16 51 43.8	-0.5
MODS	Modra-Piesok	3.31	167	*e*PG	Pg	16 51 03.8	+0.5
MODS				*e*SG	Sg	16 51 45.3	-0.9
CONA	Conrad Observa	3.67	183	*i* Pn	Pn	16 50 58.8	+0.7
	comp=Z,1.0nm,0.3s						
CONA				*e*Sg	Sg	16 51 56.3	-1.6
	comp=Z,6.2nm,0.4s						
MOA	Molln	3.94	199	*e*Pn	Pn	16 51 01.7	0.0
	comp=Z,2.4nm,0.3s						
MOA				Sg	Sg	16 52 05.7	-0.7
	comp=Z,3.5nm,0.3s						
ARSA	Arzberg	4.36	185	*i* Pn	Pn	16 51 10.7	+3.2
	comp=Z,1.8nm,0.3s						
ARSA				*e*Sg	Sg	16 52 20.9	+0.8
	comp=Z,3.3nm,0.5s						

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*GCG **03** 16:55:49.8±0.6, 14°.89N×92°.73W, h17^{km}, MD3.7*

*MEX **03** 16:55:49.0±0.7, 14°.92N×92°.69W, h89^{km}±8^{km}, MD4.0*

ISC 03 16:55:49.3±1.4, 14°.95N±0°.07×92°.84W±0°.05, h63^{km}±14^{km}, n11, σ1^{s}45/22, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.56	94	*i* P	Pn	16 56 01.6	-0.5
THIG				*i* S	Sn	16 56 11.2	-0.2
PATR	El Naranjo	0.61	74	*i* P	Pn	16 56 02.0	-0.9
PATR				*i* S	Sn	16 56 12.5	-0.3
PAVE	Pavencul	0.69	69	*i* P	Pn	16 56 03.3	-0.5
PAVE				*i* S	Sn	16 56 14.3	0.0
PCIG		0.84	334	*i* P	Pn	16 56 06.6	+1.2
PCIG				*i* S	Sn	16 56 20.3	+3.0
STG3	Santiaguito 3,	1.25	101	*e*P	Pn	16 56 10.3	-0.7
STG3				*e*S	Sn	16 56 26.7	-0.3
CCIG	Comitan	1.49	27	*i* P	Pn	16 56 12.5	-1.6
CCIG				*i* S	Sn	16 56 32.6	-0.1
TGIG		1.84	352	*i* P	Pn	16 56 18.3	-0.4
TGIG				*i* S	Sn	16 56 40.2	-0.9
FUG	Fuego 3	2.00	104	*e*P	Pn	16 56 21.3	+0.3
FUG				*e*S	Sn	16 56 45.7	+0.7
PCG	Pacaya	2.23	104	*e*P	Pn	16 56 25.4	+1.2
PCG				*e*S	Sn	16 56 52.6	+1.8
CMIG	Matias Romero	2.90	318	*i* P	Pn	16 56 33.9	+0.8
CMIG				*i* S	Sn	16 57 07.8	+1.0
HUIG	Huatulco	3.26	285	*i* P	Pn	16 56 37.9	-0.1
HUIG				*i* S	Sn	16 57 11.7	-3.8

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*IDC **03** 17:31:19.2±1.3, 36°.40N×142°.47E, h0^{km}, mb3.8/7, mb1 3.8/10, mb1mx3.4/45, mbtmp3.8/10, ML3.4/3, Error ellipse: s-maj=34.1km s-min=18.3km az=80.0*

*JMA **03** 17:31:21.8±0.2, 36°.44N×142°.37E, h39^{km}, M3.3*

ISC 03 17:31:20.4±1.0, 36°.41N±0°.05×142°.38E±0°.07, h15^{km}, n23, σ1^{s}58/24, mb3.6/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	1.44	299	P	Pb	17 31 46.1	-0.9
JHYU	Hitachinakayam	1.45	268	P	Pg	17 31 46.4	-1.8
JHYU				S	Sn	17 32 03.8	-1.0
JHO	Hitachi	1.47	278	P	Pb	17 31 46.3	-1.1
JHO				*e*S	Sn	17 32 04.6	-0.8
JMM	Marumori	1.93	319	P	Pb	17 31 52.7	-2.5
JFT	Otama	1.97	305	P	Pb	17 31 54.5	-1.5
BSO1	Boso 1	2.10	213	P	Pb	17 31 55.9	-1.8
JAG	Ashikaga	2.36	271	P	Pn	17 31 59.2	+0.6
JMK	Ichinoseki	2.70	340	P	Pn	17 32 03.8	+0.6
JRY	Ryogami san	2.84	263	P	Pn	17 32 05.9	+0.7
MJAR	Matsushiro Arr	3.36	273	Pn	Pn	17 32 13.4	+1.0
	0.6nm,0.3s,baz=216,slow=26,SNR=22						
MAT	Matsushiro	3.37	273	P	Pn	17 32 14.4	+2.0
MAT				*e*S	Sn	17 32 53.9	+1.8
JHJ	Hachijo jima 2	3.92	214	Pn	Pn	17 32 19.4	-0.6
	18nm,0.3s,baz=128,slow=18,SNR=1.9						
JHJ				Sn	Sn	17 33 02.9	-2.9
	16nm,0.3s,baz=118,slow=22,SNR=1.2						
ASAJ	Asahikawa	7.70	1	Pn	Pn	17 33 11.2	-0.6
	0.7nm,0.3s,baz=206,slow=11,SNR=6.5						
ASAJ				Sn	Sn	17 34 36.3	-2.5
	0.3nm,0.3s,baz=234,slow=3.6,SNR=2.9						
H11N2	WAKE ISLAND Hy	27.16	121	T	T	18 05 40.7	
	baz=313,slow=75,SNR=6.4						
H11N1	WAKE ISLAND Hy	27.17	121	T	T	18 05 34.0	
	baz=313,slow=75,SNR=7.9						
H11N3	WAKE ISLAND Hy	27.18	121	T	T	18 05 40.5	
	baz=313,slow=75,SNR=6.0						
SEY	Seymchan	27.26	10	P	P	17 37 05.1	+1.4
	0.9nm,0.7s,baz=172,slow=23,SNR=1.5						
SONM	Songino Array	28.78	305	P	P	17 37 19.1	+1.5
	2.2nm,0.8s,baz=105,slow=9.2,SNR=15						
ZALV	Zalesovo Beam	42.91	313	P	P	17 39 19.2	+1.1
	0.5nm,0.4s,baz=79,slow=8.0,SNR=4.3						
MKAR	Makanchi Array	45.11	303	P	P	17 39 39.4	+3.5
	1.3nm,0.6s,baz=85,slow=9.5,SNR=9.6						
KURBB	Kurchatov Arra	46.99	309	P	P	17 39 51.5	+0.8
	1.4nm,0.7s,baz=83,slow=7.8,SNR=13						
WRA	Warramunga Arr	56.56	189	P	P	17 41 03.5	+1.1
	0.4nm,0.6s,baz=7.2,slow=7.4,SNR=7.6						
ASAR	Alice Springs	60.29	189	P	P	17 41 29.7	+1.4
	0.1nm,0.4s,baz=1.3,slow=6.3,SNR=9.5						

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*DJA **03** 17:45:52.5±0.6, 8°S±4°×12°1E±°, h167^{km}±6^{km}, M2.9/7, MLv2.9/7*

*IDC **03** 17:45:56.7±6.0, 8°.53S×121°.11E, h202^{km}±26^{km}, mb3.3/1, mb1 2.8/5, mb1mx2.7/42, mbtmp3.2/5, Error ellipse: s-maj=96.2km s-min=70.5km az=28.0*

ISC 03 17:45:50.1±1.1, 8°.43S±0°.08×120°.73E±0°.05, h200^{km}, n13, σ3^{s}17/20, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	1.00	109	P	Pn	17 46 20.2	+0.2
EDFI				S	Sn	17 46 41.5	-1.5
BASI	Baing, Sumba	1.78	185	P	Pn	17 46 27.2	+0.8
BASI				S	Sn	17 46 54.3	-0.6
WBSI	Waikabubak, Su	1.79	228	P	Pn	17 46 26.3	-0.2
WBSI				S	Sn	17 46 52.5	-2.4
BSSI	Bau Bau, Buton	2.29	354	P	Pn	17 46 30.5	-1.2
PLAI	Plampang	2.95	262	P	Pn	17 46 39.5	+0.4
PLAI				S	Sn	17 47 15.4	-2.0
BATI	Baumata	3.39	122	P	Pn	17 46 46.9	+2.5
	1.2nm,0.3s,baz=258,slow=2.6,SNR=6.2						
BATI				S	Sn	17 47 19.9	-7.1
	2.0nm,0.3s,baz=235,slow=3.3,SNR=2.3						
BATI	Baumata	3.39	122	P	Pn	17 46 46.9	+2.5
SOEI	Soe	3.73	111	P	Pn	17 46 51.2	+2.5
TWSI	Taliwang, Sumb	3.82	265	P	Pn	17 46 49.8	+0.1
FITZ	Fitzroy Crossi	10.73	154	P	Pn	17 48 21.9	+3.1
	0.1nm,0.3s,baz=342,slow=11,SNR=1.3						
FITZ				S	Sn	17 50 10.8	-7.7
	baz=210,slow=15,SNR=1.7						
WRA	Warramunga Arr	17.45	132	P	Pn	17 49 42.6	+0.9
	0.1nm,0.3s,baz=308,slow=12,SNR=1.8						
WRA				S	S	17 52 51.5	+0.4
	0.0nm,0.3s,baz=142,slow=51,SNR=2.0						
ASAR	Alice Springs	19.71	142	P	Pn	17 50 07.7	-0.9
	0.1nm,0.3s,baz=322,slow=8.5,SNR=17						
STKA	Stephens Creek	30.34	143	P	P	17 51 47.1	+4.0
	1.0nm,0.7s,baz=342,slow=11,SNR=3.8						

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*IDC **03** 17:58:58.7±0.8, 33°.98S×109°.43W, h0^{km}, mb4.1/6, mb1 4.4/6, mb1mx4.1/31, mbtmp4.1/6, MS4.5/16, Ms1 4.5/16, ms1mx4.4/18, Error ellipse: s-maj=31.9km s-min=22.3km az=80.0*

*NEIC **03** 17:59:01.0±2.0, 34°.0S±0°.1×109°.5W±0°.2, h14^{km}±3^{km}, mb4.7/19, Error ellipse: s-maj=25.7km s-min=16.0km az=111.0*

*GCMT **03** 17:59:03.0±0.1, 34°.06S±0°.01×109°.14W±0°.01, h12^{km}, MW5.2/133, Moment Tensor Solution. s93,c139; s133,c215; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.45±.10; $M_{\theta\theta}$-0.43±.11; $M_{\phi\phi}$6.88±.09; $M_{r\theta}$1.23±.33; $M_{\theta\phi}$0.35±.10; $M_{\phi r}$-2.42±.26; Best double couple: $M_0$7.21300×10^{16} NP1:ϕ_s194.00000°, δ36.00000°, λ-72.00000°. NP2:ϕ_s352.00000°, δ56.00000°, λ-103.00000°. Principal axes: T 7.3080, Plg10.0000°, Azm91.0000°; N -0.1950, Plg11.0000°, Azm359.0000°; P -7.1180, Plg75.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 17:58:60.0±0.6, 33°.9S±0°.1×109°.4W±0°.1, h10^{km}, n55, σ1^{s}07/33, mb4.6/15, MS4.6/16, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	6.78	1	LR	LR	18 02 44.9	
	comp=Z,2μm,20.0s,baz=125,slow=33						
PLCA	Paso Flores	31.44	114	P	P	18 05 23.2	+1.7
	2.5nm,0.8s,baz=267,slow=5.9,SNR=5.1						
PLCA				LR	LR	18 14 45.2	
	comp=Z,1μm,21.6s,baz=304,slow=30						
PLCA	Paso Flores	31.44	114	IAmb	IAmb	18 05 46.4	
	comp=Z,22nm,1.9s						
MEH	Mehetia	38.02	285	*e*T	T	18 46 35.5	
	comp=Z,37nm,0.2s						
PB16	IPOC Station P	38.77	77	P	P	18 06 24.9	-0.6
PB16				IAmb	IAmb	18 06 46.7	
	comp=Z,27nm,1.9s						
TIAR	Tiarei	39.22	284	*e*T	T	18 48 05.3	
	comp=Z,0.7nm,0.2s						
PPT2	Papeete2	39.39	284	*e*S	S	18 12 33.3	+1.5
	comp=Z,388nm,25.2s						
PPT2				*e*LR	LR	18 17 10.3	
	comp=Z,3μm,25.8s,baz=119						
PPT	Papeete	39.40	284	LR	LR	18 18 32.7	
	comp=Z,1μm,19.8s,baz=108,slow=30						
LPAZ	La Paz	40.98	75	P	P	18 06 43.8	-0.1
	comp=Z,0.7nm,0.4s,baz=238,slow=5.2,SNR=4.8						
LPAZ				LR	LR	18 19 31.7	
	comp=Z,1μm,21.9s,baz=241,slow=30						
LPAZ	La Paz	40.98	75	P	P	18 06 44.1	+0.2
CPUP	Villa Florida	45.27	95	LR	LR	18 23 24.7	
	comp=Z,964nm,18.6s,baz=245,slow=32						
ETMB	Extrema	46.25	69	P	P	18 07 30.4	+4.7
ETMB				IAmb	IAmb	18 07 31.8	
	comp=Z,9.0nm,1.4s						
PTLB	Pontes e Lacer	48.73	81	P	P	18 07 45.9	+0.9
PTLB				IAmb	IAmb	18 07 52.5	
	comp=Z,17nm,1.7s						
ROSC	El Rosal	50.85	48	LR	LR	18 26 18.8	
	comp=Z,384nm,20.9s,baz=232,slow=32						
ZARC	Zaragoza, Cauc	52.62	45	P	P	18 08 14.0	-0.3
QSPA	South Pole Qui	56.27	180	P	P	18 08 40.4	0.0
	comp=Z,4.4nm,1.1s,baz=106,slow=1.3,SNR=8.9						
QSPA				PcP	PcP	18 09 38.2	+0.4
	comp=Z,2.2nm,0.8s,baz=111,slow=2.7,SNR=3.6						
QSPA	South Pole Qui	56.27	180	P	P	18 08 40.0	-0.4
QSPA				IAmb	IAmb	18 08 56.0	
	comp=Z,13nm,1.4s						
VNDA	Vanda	56.89	195	LR	LR	18 27 28.1	
	comp=Z,305nm,21.6s,baz=103,slow=30						
BDFB	Brasilia	57.83	88	LR	LR	18 31 11.4	
	comp=Z,840nm,19.6s,baz=267,slow=33						
VNA3	Neumayer Olymp	61.30	159	P	P	18 09 15.7	+0.6
VNA2	Neumayer--Watz	62.10	159	P	P	18 09 20.4	-0.2
	baz=266,slow=4.7						
SNAA	Sanae	63.12	160	P	P	18 09 27.0	-0.4
TXAR	Lajitas Array	63.16	6	P	P	18 09 29.5	+1.4
	comp=Z,0.8nm,0.9s,baz=186,slow=11,SNR=6.1						
TXAR				LR	LR	18 30 55.2	
	comp=Z,131nm,20.4s,baz=0.0,slow=30						
X18A	Snowflake	68.11	360	P	P	18 09 57.0	-3.1
X18A				IAmb	IAmb	18 10 03.3	
	comp=Z,6.2nm,0.8s						
R11A	Troy Canyon, C	72.14	355	P	P	18 10 26.0	+1.2
R11A				IAmb	IAmb	18 10 40.8	
	comp=Z,11nm,1.8s						
LHV	Little Huntoon	72.31	352	P	P	18 10 26.7	+1.2
NVAR	Mina Array Bea	72.47	353	P	P	18 10 28.0	+1.2
	comp=Z,4.6nm,0.8s,baz=188,slow=7.5,SNR=12						
KVN	Kaiserville	73.06	353	P	P	18 10 30.2	0.0
KVN				IAmb	IAmb	18 10 34.4	
	comp=Z,8.2nm,1.0s						
BMN	Battle Mountai	74.35	354	P	P	18 10 37.1	-0.6
PD31	Pinedale Array	76.33	360	P	P	18 10 50.0	+0.8
PDAR	Pinedale Array	76.33	360	P	P	18 10 49.9	+0.7
	comp=Z,1.7nm,0.8s,baz=147,slow=6.8,SNR=15						
PDAR				LR	LR	18 39 33.3	
	comp=Z,141nm,19.3s,baz=29,slow=32						
PDAR	Pinedale Array	76.33	360	P	P	18 10 48.8	-0.3
HLID	Hailey	77.26	356	P	P	18 10 53.5	-0.8
HLID				IAmb	IAmb	18 11 07.7	
	comp=Z,9.4nm,1.2s						
MOOW	Moose Ponds	77.32	359	P	P	18 10 55.1	+0.4
MOOW				IAmb	IAmb	18 11 09.1	
	comp=Z,17nm,1.8s						
YHH	Holmes Hill	78.36	359	P	P	18 11 01.6	+1.0
YHH				IAmb	IAmb	18 11 15.7	
	comp=Z,10nm,1.6s						
ULM	Lac du Bonnet	84.67	9	LR	LR	18 45 40.1	
	comp=Z,149nm,20.2s,baz=126,slow=33						
STKA	Stephens Creek	86.46	234	LR	LR	18 45 13.3	
	comp=Z,274nm,18.7s,baz=127,slow=32						
H11S2	WAKE ISLAND Hy	95.23	289	T	T	19 58 20.1	
	baz=126,slow=75,SNR=7.9						
H11S1	WAKE ISLAND Hy	95.25	289	T	T	19 58 23.3	
	baz=126,slow=75,SNR=7.8						
H11S3	WAKE ISLAND Hy	95.25	289	T	T	19 58 20.8	
	baz=126,slow=75,SNR=7.0						
SCHQ	Schefferville	95.68	23	LR	LR	18 49 46.7	
	comp=Z,197nm,19.9s,baz=201,slow=32						
YKA	Yellowknife Ar	96.18	358	LR	LR	18 49 59.9	
	comp=Z,64nm,19.4s,baz=0.0,slow=32						
ASAR	Alice Springs	96.93	236	LR	LR	18 50 48.5	
	comp=Z,264nm,20.0s,baz=145,slow=32						
VRDI	Verde Repeater	98.80	344	P	Pdif	18 12 40.7	+1.2
WRA	Warramunga Arr	99.07	239	LR	LR	18 54 21.0	
	comp=Z,264nm,18.1s,baz=150,slow=34						
H01W1	Cape Leeuwin H	100.30	215	T	T	20 05 22.8	
	baz=143,slow=76,SNR=5.8						
H01W2	Cape Leeuwin H	100.31	215	T	T	20 05 11.6	
	baz=143,slow=76,SNR=6.4						
H01W3	Cape Leeuwin H	100.32	215	T	T	20 05 23.6	
	baz=143,slow=76,SNR=5.1						
AKASG	Malin Array Be	145.65	48	PKPbc	PKPdf	18 18 37.0	-1.1
	comp=Z,1.9nm,0.6s,baz=277,slow=3.7,SNR=7.3						
AKASG	Malin Array Be	145.65	48		PKPdf	18 18 36.8	-1.3
SONM	Songino Array	149.88	308	PKPbc	PKPbc	18 18 49.5	-0.8
	comp=Z,1.3nm,0.7s,baz=120,slow=2.6,SNR=10						
SONM	Songino Array	149.88	308		PKPbc	18 18 48.9	-1.3
BRTR	Keskin Array B	150.01	68	PKPbc	PKPbc	18 18 49.6	-1.2
	comp=Z,2.2nm,1.0s,baz=254,slow=2.6,SNR=5.3						
BRTR	Keskin Array B	150.01	68		PKPdf	18 18 44.9	-0.9
CMAR	Chiang Mai Arr	150.39	246	PKPbc	PKiKP	18 18 52.5	-0.4
	comp=Z,5.1nm,0.8s,baz=183,slow=1.8,SNR=34						

IDC 03 17:59:18.8±1.5, 18°.23S×175°.38E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.6/36, mbtmp3.5/4, ML4.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.7/23, Error ellipse: s-maj=115.8km s-min=22.2km az=169.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.59	80	Pn	Pn	18 00 01.5	-0.5
	4.8nm,0.3s,baz=264,slow=15,SNR=18						
MSVF				Sn	Sn	18 00 36.5	+2.1
	1.8nm,0.3s,baz=357,slow=22,SNR=1.6						
HNR	Honiara	17.33	298	LR	LR	18 08 41.3	
	comp=Z,60nm,19.1s,baz=130,slow=32						
WRA	Warramunga Arr	38.75	261	P	P	18 06 43.9	-1.3

	0.4nm,0.7s,baz=93,slow=9.1,SNR=3.0						
ASAR	**Alice Springs**	**39.01**	**255**	P	P	18 06 47.9	+0.5
	0.8nm,0.9s,baz=84,slow=8.9,SNR=11						
CMAR	**Chiang Mai Arr**	**83.46**	**292**	P	P	18 11 49.3	+0.4
	0.4nm,0.6s,baz=107,slow=3.1,SNR=4.6						

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*IDC **03** 17:59:47.2±5.4, 20°.32N×94°.79E, h148^{km}±49^{km}, mb3.5/7, mb1 3.5/8, mb1mx3.1/51, mbtmp3.9/8, MS3.5/1, Ms1 3.5/1, ms1mx2.6/41, Error ellipse: s-maj=98.9km s-min=21.6km az=58.0*

ISC 03 17:59:45.9±1.2**, 20°.5N**±0°.3×**94°.8E**±0°.2**, h126^{km}, n20, σ1^{s}.27**/20**, mb3.8**/7**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**4.40**	**116**	P	**Pn**	**18 00 51.8**	**+0.9**
	1.9nm,0.3s,baz=298,slow=14,SNR=88						
ODAN	**Odare**	**9.30**	**315**	*e*P	**Pn**	**18 01 57.6**	**+0.5**
ODAN				*e*S	**Sn**	**18 03 38.0**	**-2.2**
TAPN	**Taplejung**	**9.43**	**318**	*e*P	**Pn**	**18 01 59.5**	**+0.6**
	13nm,0.3s						
RAMN	**Ramite**	**9.90**	**312**	*e*P	**Pn**	**18 02 06.8**	**+1.7**
GUN	**Gumba**	**11.00**	**314**	*e*P	**Pn**	**18 02 21.2**	**+1.1**
PKI	**Pulchoki**	**11.12**	**311**	*e*P	**Pn**	**18 02 22.7**	**+1.2**
PKIN	**Phulchoki**	**11.13**	**311**	*e*P	**Pn**	**18 02 22.7**	**+1.1**
	6.6nm,0.3s						
KKN	**Kakani**	**11.34**	**312**	*e*P	**Pn**	**18 02 25.7**	**+1.3**
	3.9nm,0.3s						
GKN	**Gorkha**	**11.92**	**311**	*e*P	**Pn**	**18 02 33.4**	**+1.4**
KOLN	**Koldanda**	**12.54**	**308**	*e*P	**Pn**	**18 02 41.6**	**+1.5**
DANN	**Dangsing**	**12.75**	**310**	*e*P	**Pn**	**18 02 43.6**	**+0.7**
PYUN	**Piuthan**	**13.17**	**308**	*e*P	**Pn**	**18 02 50.4**	**+2.1**
AAK	**Ala-Archa**	**27.94**	**327**	LR	LR	18 19 24.9	
	comp=Z,114nm,21.6s,baz=340,slow=42						
MKAR	**Makanchi Array**	**28.19**	**342**	P	**P**	**18 05 26.9**	**+0.4**
	1.2nm,0.5s,baz=161,slow=8.3,SNR=11						
KURBB	**Kurchatov Arra**	**32.73**	**341**	P	**P**	**18 06 06.8**	**+0.4**
	2.4nm,0.6s,baz=152,slow=8.3,SNR=19						
ZALV	**Zalesovo Beam**	**34.30**	**350**	P	**P**	**18 06 20.1**	**+0.2**
	1.7nm,0.3s,baz=167,slow=8.5,SNR=9.3						
ARU	**Arti**	**44.84**	**332**	P	**P**	**18 07 47.3**	**+0.1**
	0.7nm,0.3s,baz=106,slow=19,SNR=5.6						
WRA	**Warramunga Arr**	**55.78**	**134**	P	**P**	**18 09 08.3**	**-1.8**
	0.3nm,0.8s,baz=301,slow=6.1,SNR=1.5						
AKASG	**Malin Array Be**	**59.02**	**318**	P	**P**	**18 09 31.8**	**-0.5**
	0.1nm,0.2s,baz=82,slow=6.6,SNR=1.8						
FINES	**FINESS Array B**	**62.08**	**330**	P	**P**	**18 09 52.8**	**-0.1**
	1.1nm,0.8s,baz=116,slow=6.3,SNR=0.8						

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*UPP **03** 18:00:25.7±0.1, 67°.06N×20°.93E, h0^{km}, ML2.2, Explosion*
*IDC **03** 18:00:26.7±1.1, 67°.09N×21°.24E, h0^{km}, mb1 3.0/3, mb1mx2.8/47, mbtmp2.9/3, ML1.9/3, Error ellipse: s-maj=17.7km s-min=8.6km az=111.0*
*NAO **03** 18:00:26.6±0.9, 67°.06N×21°.30E, ML2.4*
*BER **03** 18:00:28.3±3.2, 66°.99N×20°.98E, h0^{km}, ML1.8, ML2.4(NAO), Suspected explosion*

ISC 03 18:00:25.4±0.8**, 67°.07N**±0°.03×**20°.93E**±0°.03**, h0^{km}, n33, σ0^{s}.69**/51**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	**Masugnsbyn**	**0.57**	**46**	P	**Pg**	**18 00 36.6**	**+0.3**
PAJU	**Pajala**	**0.86**	**92**	P	**Pg**	**18 00 41.6**	**-0.3**
HARU	**Harads**	**0.91**	**179**	P	**Pg**	**18 00 42.6**	**-0.2**
RATU	**Laukkuluspa**	**0.92**	**326**	P	**Pg**	**18 00 42.7**	**-0.3**
RATU				S	**Sb**	**18 00 56.3**	**-0.7**
SALU	**Saltoluokta**	**0.99**	**290**	P	**Pg**	**18 00 44.4**	**-0.1**
SALU				S	**Sb**	**18 00 58.6**	**-0.5**
SALU	**Saltoluokta**	**0.99**	**290**	*e*P	**Pb**	**18 00 45.1**	**-0.4**
LANU	**Lannavaara**	**1.07**	**22**	P	**Pg**	**18 00 45.2**	**-0.7**
NIKU	**Nikkaluokta**	**1.08**	**319**	P	**Pg**	**18 00 45.9**	**-0.3**
KOVU	**Salmi**	**1.20**	**346**	P	**Pg**	**18 00 47.9**	**-0.4**
KALU	**Kalix**	**1.56**	**140**	P	**Pn**	**18 00 54.1**	**-0.2**
SJUU	**Sjulsmark**	**1.59**	**170**	P	**Pn**	**18 00 54.8**	**0.0**
HEF	**Hetta**	**1.70**	**36**	Pn	**Pn**	**18 00 56.3**	**0.0**
HEF				Sn	**Sb**	**18 01 19.4**	**-0.1**
HEF	**Hetta**	**1.70**	**36**	Pn	**Pn**	**18 00 56.3**	**0.0**
HEF				Sn	**Sb**	**18 01 19.4**	**-0.1**
LILU	**Lilltraesk**	**1.84**	**194**	P	**Pn**	**18 00 58.8**	**+0.6**
KIF	**Kilpisjarvi**	**1.95**	**359**	Pn	**Pb**	**18 01 01.4**	**-0.3**
KIF				Sn	**Sg**	**18 01 28.9**	**+1.0**
KIF	**Kilpisjarvi**	**1.95**	**359**	Pn	**Pb**	**18 01 01.4**	**-0.3**
KIF				Sn	**Sg**	**18 01 28.9**	**+1.0**
KTK1	**Kautokeino**	**2.14**	**23**	Pn	**Pb**	**18 01 03.7**	**-1.3**
KTK1				Sn	**Sb**	**18 01 32.1**	**+0.1**
KTK1	**Kautokeino**	**2.14**	**23**	*e*P	**Pb**	**18 01 03.8**	**-1.3**
KTK1				*e*S	**Sn**	**18 01 28.1**	**-1.4**
KTK1				IAML		18 01 40.2	
	comp=Z,9.9nm,0.3s						
FAUS	**Fauske**	**2.22**	**281**	*e*P	**Pb**	**18 01 05.2**	**-1.2**
FAUS				*e*S	**Sn**	**18 01 31.3**	**-0.1**
FAUS				IAML		18 01 43.7	
	comp=Z,17nm,0.3s						
JETT	**Jettan, Norway**	**2.51**	**356**	Pn	**Pb**	**18 01 10.2**	**-1.2**
JETT				Sn	**Sb**	**18 01 42.5**	**-0.2**
ARA0	**ARCESS Array S**	**3.01**	**32**	Pn	**Pn**	**18 01 14.8**	**+0.6**
	baz=213,slow=14						
ARA0				Sn	**Sn**	**18 01 51.7**	**+0.7**
	baz=218,slow=22						
ARA0				Lg	Lg	18 01 57.2	
	baz=212,slow=28						
ARA0	**ARCESS Array S**	**3.01**	**32**	Pn	**Pn**	**18 01 14.8**	**+0.6**
	baz=213,slow=14						
ARA0				Sn	**Sn**	**18 01 51.7**	**+0.7**
	baz=218,slow=22						
ARCES	**ARCESS Array B**	**3.01**	**32**	Pn	**Pn**	**18 01 14.3**	**0.0**
	baz=213,slow=14,SNR=32						
ARCES				Sn	**Sn**	**18 01 52.0**	**+1.1**
	baz=164,slow=9.9,SNR=5.3						
APA0	**Apatity Array**	**4.70**	**78**	Pn	**Pn**	**18 01 37.0**	**-0.5**
	baz=270,slow=11						
APA0				Sn	**Sn**	**18 02 32.8**	**+0.2**
	baz=283,slow=22						
APA0	**Apatity Array**	**4.70**	**78**	Pn	**Pn**	**18 01 37.0**	**-0.5**
	baz=270,slow=11						
APA0				Sn	**Sn**	**18 02 32.8**	**+0.2**
	baz=283,slow=22						
FIA0	**FINESS Array S**	**6.07**	**156**	Pn	**Pn**	**18 01 57.4**	**+1.0**
	baz=347,slow=16						
FIA0				Sn	**Sn**	**18 03 05.5**	**-0.9**
	baz=346,slow=28						
FIA0	**FINESS Array S**	**6.07**	**156**	Pn	**Pn**	**18 01 57.4**	**+1.0**
	baz=347,slow=16						
FINES	**FINESS Array B**	**6.07**	**156**	Pn	**Pn**	**18 01 57.5**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=340,slow=13,SNR=2.5						
FINES				Sn	**Sn**	**18 03 07.1**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=350,slow=23,SNR=1.7						
FINES				Lg	Lg	18 03 36.6	
	comp=Z,0.2nm,0.3s,baz=352,slow=25,SNR=2.6						
NOA	**NORSAR Array B**	**7.39**	**220**	Pn	**Pn**	**18 02 15.1**	**+0.6**
	comp=Z,0.0nm,0.3s,baz=32,slow=13,SNR=1.7						
NOA				Sn	**Sn**	**18 03 39.9**	**+1.0**
	comp=Z,0.0nm,0.3s,baz=110,slow=12,SNR=2.2						
NOA				Lg	Lg	18 04 21.8	
	comp=Z,0.0nm,0.3s,baz=21,slow=14,SNR=1.2						
NRA0	**NORESS Array S**	**7.58**	**217**	Pn	**Pn**	**18 02 17.6**	**+0.7**
	baz=23,slow=14						
NRA0	**NORESS Array S**	**7.58**	**217**	Pn	**Pn**	**18 02 17.6**	**+0.7**
	baz=23,slow=14						
HFS	**Hagfors**	**7.67**	**208**	Pn	**Pn**	**18 02 18.0**	**-0.1**
	baz=21,slow=14						
HFS	**Hagfors**	**7.67**	**208**	Pn	**Pn**	**18 02 18.0**	**-0.1**
	baz=21,slow=14						

NOU 03 18:34:55.7, 14°.77S×167°.08E, h81^{km}, MLv4.5/11**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.68**	**170**	P	Pn	18 35 12.6	+1.3
DVP	**Devils Point**	**3.12**	**160**	P	Pn	18 35 43.0	+0.2
MARNC	**Mare, Loyalty**	**6.74**	**172**	P	Pn	18 36 31.6	-0.4
	1.1nm,1.2s						
YATNC	**Mamie plateau,**	**7.25**	**181**	P	Pn	18 36 38.6	-0.4
	30nm,1.4s						
NOUC	**Port Laguerre**	**7.33**	**186**	P	Pn	18 36 39.9	-0.2
	14nm,1.3s						
ONTNC	**Ouen Toro**	**7.52**	**184**	P	Pn	18 36 42.8	+0.1
	26nm,1.4s						
OUENC	**Ouen Island, N**	**7.61**	**182**	P	Pn	18 36 44.5	+0.6
	21nm,1.7s						

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*IDC **03** 18:54:10.2±5.8, 36°.13N×140°.33E, h75^{km}±45^{km}, mb3.0/2, mb1 3.2/3, mb1mx3.0/37, mbtmp3.4/3, ML2.9/1, Error ellipse: s-maj=59.4km s-min=32.5km az=67.0*
*JMA **03** 18:54:11.8, 35°.97N×140°.09E, h61^{km}, M3.2 Broadband fault plane solution: P waves. NP1:ϕ_s208.00000°, δ18.00000°, λ109.00000°. NP2:ϕ_s8.00000°, δ73.00000°, λ84.00000°. Principal axes: T Plg61.0000°, Azm270.0000°; N Plg6.0000°, Azm10.0000°; P Plg28.0000°, Azm103.0000°;*
JMA Felt I J1.

ISC 03 18:54:10.8±1.2**, 35°.98N**±0°.06×**140°.16E**±0°.08**, h69^{km}**±9^{km}**, n13, σ0^{s}.88**/20**, 1C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.25**	**7**	⇑P	**Pn**	**18 54 21.8**	**+0.2**
JYT				S	**Sn**	**18 54 29.2**	**-0.2**
JAG	**Ashikaga**	**0.72**	**308**	⇓P	**Pn**	**18 54 26.1**	**+0.2**
JAG				S	**Sn**	**18 54 36.6**	**-0.4**
JRY	**Ryogami san**	**1.02**	**272**	⇓P	**Pn**	**18 54 29.7**	**+0.2**
JKT	**Katashina**	**1.07**	**317**	⇓P	**Pn**	**18 54 30.5**	**+0.2**
JKT				S	**Sn**	**18 54 44.6**	**-0.1**
JOD2	**Odawara 2**	**1.13**	**231**	⇓P	**Pn**	**18 54 30.7**	**-0.2**
JOD2				S	**Sn**	**18 54 45.0**	**-0.9**
BSO3	**Boso 3**	**1.21**	**166**	P	**Pn**	**18 54 33.1**	**+1.3**
JYN	**Shimob**	**1.40**	**250**	⇓P	**Pn**	**18 54 34.9**	**+0.4**
JYN				S	**Sn**	**18 54 51.8**	**-0.4**
JFNN	**Fujinakano**	**1.43**	**237**	P	**Pn**	**18 54 35.1**	**+0.2**
MJAR	**Matsushiro Arr**	**1.67**	**290**	P	**Pn**	**18 54 37.9**	**-0.1**
	4.0nm,0.3s,baz=102,slow=18,SNR=167						
MJAR				S	**Sn**	**18 55 00.1**	**+1.5**
	1.0nm,0.3s,baz=72,slow=20,SNR=2.6						
MAT	**Matsushiro**	**1.67**	**290**	P	**Pn**	**18 54 39.0**	**+0.9**
MAT				S	**Sn**	**18 55 00.5**	**+1.8**
KSRS	**Korea Array**	**9.93**	**282**	P	**Pn**	**18 56 31.8**	**+1.1**
	0.1nm,0.3s,baz=92,slow=15,SNR=2.0						
MKAR	**Makanchi Array**	**43.83**	**303**	P	**P**	**19 02 09.0**	**-1.0**
	0.5nm,0.9s,baz=90,slow=9.7,SNR=2.5						
WRA	**Warramunga Arr**	**55.89**	**187**	P	**P**	**19 03 41.3**	**-0.2**
	0.2nm,0.4s,baz=1.6,slow=7.6,SNR=7.3						

TAP 03 18:56:13.9, 24°.85N×122°.02E, h9^{km}, ML1.9, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		**0.08**	**269**	P	Pg	18 56 16.4	+0.3
	baz=266						
EGS				S	Sg	18 56 18.7	+1.0
	baz=266						
TWB1	**Santiao Chiao**	**0.16**	**350**	P	Pg	18 56 18.2	+0.8
	baz=352						
TWB1				S	Sg	18 56 20.9	+1.0
	baz=352						
NTC	**Toucheng**	**0.17**	**273**	*e*P	Pg	18 56 18.7	+1.1
	baz=272						
NTC				*e*S	Sg	18 56 22.1	+2.0
	baz=272						
TIPB	**Shuangxi**	**0.22**	**306**	*i* P	Pg	18 56 19.6	+1.2
	baz=305						
TIPB				*i* S	Sg	18 56 23.1	+1.7
	baz=305						
ILA	**Ilan**	**0.26**	**252**	P	Pb	18 56 20.3	-0.4
	baz=250						
ILA				S	Sb	18 56 24.4	-0.9
	baz=250						
TWC	**Suao**	**0.28**	**213**	*e*P	Pb	18 56 20.5	-0.6
	baz=211						
TWC				S	Sb	18 56 25.1	-0.8
	baz=211						
NWF	**Wu-fen Shan**	**0.31**	**316**	*e*P	Pg	18 56 20.9	+0.8
	baz=316						
NWF				*i* S	Sb	18 56 26.8	-0.1
	baz=316						
TWE	**Neicheng**	**0.34**	**249**	*i* P	Pb	18 56 21.7	-0.5
	baz=247						
TWE				*i* S	Sb	18 56 26.6	-1.1
	baz=247						
NDS	**Dongshan**	**0.35**	**233**	*e*P	Pg	18 56 21.5	+0.7
	baz=232						
NDS				S	Sb	18 56 27.2	-0.6
	baz=232						
TWA	**Mucha**	**0.42**	**289**	*e*P	Pg	18 56 22.8	+0.7
	baz=288						
TWA				*e*S	Sb	18 56 29.4	-0.6
	baz=288						
EWUT	**Wuta**	**0.46**	**209**	P	Pb	18 56 23.9	-0.3
	baz=208						
EWUT				*e*S	Sb	18 56 31.5	+0.6
	baz=208						
ENTT	**Nioudou**	**0.46**	**244**	P	Pb	18 56 24.0	-0.2
	baz=242						
ENTT				S	Sb	18 56 31.1	-0.1
	baz=242						
NHDH	**Xindian Distri**	**0.46**	**285**	*e*P	Pb	18 56 23.9	-0.3
	baz=284						
NHDH				S	Sb	18 56 31.2	0.0
	baz=284						
NWLT	**Wulai**	**0.47**	**262**	*e*P	Pb	18 56 24.7	+0.2
	baz=261						
NWLT				*e*S	Sb	18 56 31.5	-0.1
	baz=261						
ENA	**Nanau**	**0.49**	**211**	P	Pb	18 56 24.4	-0.3
	baz=210						
ENA				S	Sb	18 56 31.8	-0.1
	baz=210						
TAP	**Taipei**	**0.50**	**293**	P	Pb	18 56 24.5	-0.4
	baz=292						
TAP				S	Sb	18 56 32.5	+0.1
	baz=292						
YM01	**YM01**	**0.51**	**306**	P	Pb	18 56 25.6	+0.6
	baz=306						
YM01				S	Sb	18 56 32.7	+0.2
	baz=306						
NDT	**Datong Townshi**	**0.52**	**242**	P	Pb	18 56 25.0	-0.3
	baz=242						
NDT				*e*S	Sb	18 56 33.3	+0.4
	baz=242						
TWY	**Chenhua**	**0.57**	**318**	P	Pg	18 56 25.5	+0.5
	baz=318						
TWY				S	Sb	18 56 34.1	-0.3
	baz=318						
YHNB	**Yeheng**	**0.61**	**253**	*e*P	Pb	18 56 26.4	-0.4
	baz=253						
YHNB				*e*S	Sb	18 56 36.0	+0.4
	baz=253						
NSK	**Sanguang**	**0.62**	**254**	*e*P	Pg	18 56 26.5	+0.5
	baz=253						
NSK				*e*S	Sb	18 56 36.1	+0.2
	baz=253						
NNS	**Nan Shan**	**0.71**	**236**	*e*P	Pb	18 56 28.2	-0.4
	baz=234						
NNSB	**Datong**	**0.71**	**234**	*e*P	Pb	18 56 28.8	+0.2
	baz=234						
ETL	**Fush Village**	**0.77**	**208**	*e*P	Pb	18 56 29.9	+0.4
	baz=207						
ETL				*e*S	Sb	18 56 41.3	+1.1
	baz=207						
NACB	**Ninganchiao**	**0.77**	**210**	*e*P	Pb	18 56 29.4	-0.2
	baz=209						
PCYT	**Pengchaiyu**	**0.78**	**3**	*e*P	Pb	18 56 29.5	-0.2
	baz=4.0						
PCYT				*e*S	Sb	18 56 41.1	+0.7
	baz=4.0						
ETLH	**Xiulin Townshi**	**0.80**	**218**	*e*P	Pb	18 56 30.4	+0.3
	baz=217						
ETLH				*e*S	Sb	18 56 42.3	+1.2
	baz=217						
FUSS	**Fushou**	**0.92**	**230**	*e*P	Pb	18 56 32.3	0.0
	baz=229						
FUSS				*e*S	Sb	18 56 45.7	+0.9
	baz=229						
LIOB	**Emei**	**0.93**	**258**	*e*P	Pb	18 56 32.3	0.0
	baz=257						
LIOB				*e*S	Sn	18 56 46.0	-0.8
	baz=257						

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*JMA **03** 19:08:13.4±0.2, 23°.99N×122°.43E, h21^{km}±4^{km}, M2.2*
*TAP **03** 19:08:14.2, 24°.09N×122°.44E, h34^{km}±1^{km}, ML2.8, D*

ISC 03 19:08:13.9±1.0**, 24°.05N**±0°.03×**122°.41E**±0°.02**, h27^{km}**±12^{km}**, n51, σ0^{s}.66**/88**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.63**	**50**	P	**Pb**	**19 08 25.9**	**-0.5**
JYNG				S	**Sn**	**19 08 35.7**	**-0.7**
YOJ	**Yonaguni jima**	**0.69**	**53**	P	**Pb**	**19 08 27.1**	**-0.2**
	baz=54						
YOJ				*i* S	**Sb**	**19 08 36.3**	**-0.1**
	baz=54						
YOJ	**Yonaguni jima**	**0.69**	**53**	P	**Pb**	**19 08 26.9**	**-0.4**
YOJ				S	**Sn**	**19 08 37.2**	**-0.5**
EWUT	**Wuta**	**0.70**	**305**	*i* P	**Pb**	**19 08 27.7**	**+0.1**
	baz=300						
EWUT				*e*S	**Sb**	**19 08 37.4**	**+0.5**
	baz=300						
ENA	**Nanau**	**0.72**	**302**	*i* P	**Pb**	**19 08 28.0**	**0.0**
	baz=297						
ENA				*e*S	**Sb**	**19 08 37.5**	**0.0**
	baz=297						
ETL	**Fush Village**	**0.73**	**279**	*e*P	**Pb**	**19 08 27.9**	**-0.2**
	baz=261						
ETL				S	**Sn**	**19 08 39.2**	**+0.3**
	baz=261						
TWD	**Chiawan**	**0.75**	**273**	*i* P	**Pb**	**19 08 28.2**	**-0.2**
	baz=268						
TWD				*e*S	**Sb**	**19 08 38.6**	**+0.5**
	baz=268						
NACB	**Ninganchiao**	**0.76**	**280**	*e*P	**Pb**	**19 08 28.1**	**-0.4**
	baz=262						
NACB				*e*S	**Sb**	**19 08 38.1**	**-0.4**
	baz=262						
TWC	**Suao**	**0.76**	**318**	*e*P	**Pb**	**19 08 28.1**	**-0.6**
	baz=304						
TWC				*e*S	**Sb**	**19 08 37.2**	**-1.4**
	baz=304						
ETM	**Tongmen**	**0.85**	**265**	*e*P	**Pn**	**19 08 29.6**	**-0.6**
	baz=261						
ETM				S	**Sb**	**19 08 41.7**	**+0.7**
	baz=261						
NDS	**Dongshan**	**0.86**	**313**	P	**Pn**	**19 08 30.1**	**-0.3**
	baz=309						
NDS				*e*S	**Sb**	**19 08 41.8**	**+0.2**
	baz=309						
ETLH	**Xiulin Townshi**	**0.87**	**281**	*i* P	**Pn**	**19 08 30.2**	**-0.2**
	baz=264						
ETLH				*e*S	**Sb**	**19 08 42.0**	**+0.3**
	baz=264						
EGS		**0.91**	**331**	P	**Pn**	**19 08 31.1**	**+0.1**
	baz=317						
EGS				S	**Sb**	**19 08 43.1**	**+0.3**
	baz=317						
ESL	**Shilin**	**0.93**	**256**	*i* P	**Pn**	**19 08 31.0**	**-0.3**
	baz=243						
ESL				*e*S	**Sb**	**19 08 43.4**	**+0.1**
	baz=243						
TWE	**Neicheng**	**0.96**	**315**	*i* P	**Pn**	**19 08 31.7**	**0.0**
	baz=312						
NTC	**Toucheng**	**0.97**	**327**	P	**Pb**	**19 08 32.4**	**+0.3**
	baz=323						
NTC				*e*S	**Sb**	**19 08 44.1**	**-0.3**
	baz=323						
ENTT	**Nioudou**	**0.97**	**308**	*i* P	**Pb**	**19 08 32.4**	**+0.2**
	baz=304						
EGFH	**Guangfu**	**0.98**	**248**	P	**Pn**	**19 08 32.1**	**+0.2**
	baz=244						
EGFH				S	**Sb**	**19 08 45.8**	**+1.1**
	baz=244						
NDT	**Datong Townshi**	**0.99**	**304**	*i* P	**Pb**	**19 08 32.9**	**+0.4**
	baz=300						
NNS	**Nan Shan**	**1.03**	**293**	*e*P	**Pb**	**19 08 34.2**	**+1.0**
	baz=289						
NNS				S	**Sb**	**19 08 47.1**	**+0.8**
	baz=289						
TWB1	**Santiao Chiao**	**1.03**	**338**	*e*P	**Pn**	**19 08 31.7**	**-1.1**
	baz=351						
TWB1				*e*S	**Sn**	**19 08 45.6**	**-0.7**
	baz=351						
WHF	**Hehuan Shan**	**1.05**	**276**	*i* P	**Pn**	**19 08 33.3**	**-0.1**
	baz=272						
HGSD	**Ruisui**	**1.06**	**239**	P	**Pn**	**19 08 32.8**	**-0.3**
	baz=236						
HGSD				*e*S	**Sn**	**19 08 45.5**	**-1.5**
	baz=236						
TIPB	**Shuangxi**	**1.07**	**330**	*i* P	**Pn**	**19 08 33.3**	**+0.1**
	baz=318						
TIPB				*e*S	**Sn**	**19 08 46.7**	**-0.5**
	baz=318						
FUSS	**Fushou**	**1.09**	**281**	*i* P	**Pn**	**19 08 34.0**	**+0.3**
	baz=278						
NWLT	**Wulai**	**1.10**	**311**	*i* P	**Pb**	**19 08 34.4**	**0.0**
	baz=308						
NWLT				*e*S	**Sb**	**19 08 48.7**	**+0.2**
	baz=308						
CHGB	**Renai**	**1.13**	**271**	P	**Pn**	**19 08 34.7**	**+0.4**
	baz=256						
CHGB				S	**Sn**	**19 08 49.3**	**+0.2**
	baz=256						
OWD	**Renai**	**1.14**	**266**	P	**Pn**	**19 08 34.5**	**+0.3**
	baz=262						
ECBN	**Changbin**	**1.14**	**231**	*e*P	**Pn**	**19 08 33.6**	**-0.6**
	baz=228						
ECBN				*e*S	**Sn**	**19 08 48.7**	**-0.2**
	baz=228						
NSK	**Sanguang**	**1.15**	**303**	*i* P	**Pn**	**19 08 34.8**	**+0.4**
	baz=287						
TDCB	**Techi**	**1.17**	**280**	*i* P	**Pn**	**19 08 35.1**	**+0.5**
	baz=267						
TDCB				*i* S	**Sn**	**19 08 50.0**	**+0.2**
	baz=267						
VWDT	**VWDT**	**1.20**	**256**	P	**Pb**	**19 08 36.0**	**0.0**
	baz=253						
VWDT				S	**Sn**	**19 08 51.1**	**+0.7**
	baz=253						
YULB	**Yu-li**	**1.21**	**238**	P	**Pn**	**19 08 35.3**	**+0.1**
	baz=250						
YULB				*e*S	**Sn**	**19 08 50.1**	**-0.6**
	baz=250						
EYUL	**Yuli**	**1.22**	**236**	*e*P	**Pb**	**19 08 36.5**	**+0.2**
	baz=233						
EYUL				*e*S	**Sb**	**19 08 52.1**	**+0.4**
	baz=233						
TWF1	**Yuli**	**1.23**	**236**	P	**Pn**	**19 08 35.9**	**+0.4**
	baz=249						
TWF1				S	**Sn**	**19 08 51.6**	**+0.4**
	baz=249						
IRIF	**Iriomote-Funau**	**1.24**	**76**	P	**Pb**	**19 08 36.3**	**-0.3**
IRIF				*e*S	**Sb**	**19 08 53.7**	**+1.5**
HATJ	**Hateruma jima**	**1.27**	**89**	S	**Sb**	**19 08 53.0**	**-0.2**
FULB	**Fuli**	**1.33**	**231**	P	**Pn**	**19 08 36.7**	**-0.1**
	baz=228						
FULB				*e*S	**Sn**	**19 08 52.4**	**-1.3**
	baz=228						
CHKT	**Chengkung**	**1.35**	**226**	*e*S	**Sn**	**19 08 52.6**	**-1.4**
	baz=223						
SSLB	**Suanglung**	**1.36**	**259**	P	**Pn**	**19 08 38.1**	**+0.8**
	baz=247						
WHP	**Taichung City**	**1.36**	**280**	P	**Pb**	**19 08 38.7**	**-0.1**
	baz=266						
WHP				S	**Sb**	**19 08 55.9**	**+0.1**
	baz=266						
ECS	**Chishang**	**1.45**	**229**	*e*P	**Pb**	**19 08 40.5**	**+0.2**
	baz=218						
ECS				S	**Sn**	**19 08 57.4**	**+0.8**
	baz=218						
JKRS	**Kuro-shima**	**1.47**	**82**	P	**Pb**	**19 08 40.9**	**+0.3**
JKRS				S	**Sb**	**19 08 59.9**	**+1.0**
EDH	**Donghe**	**1.48**	**224**	*e*P	**Pn**	**19 08 38.1**	**-0.6**
	baz=214						
EDH				*e*S	**Sn**	**19 08 55.3**	**-1.9**
	baz=214						
WJS	**Zhushan**	**1.56**	**262**	*e*S	**Sn**	**19 08 59.9**	**+0.6**
	baz=259						
JIJ	**Ishigaki jima**	**1.61**	**78**	P	**Pn**	**19 08 40.6**	**0.0**
JIJ				S	**Sn**	**19 09 00.8**	**+0.2**
LDUT	**Ludao**	**1.62**	**213**	*e*P	**Pn**	**19 08 39.9**	**-0.8**
	baz=210						
LDUT				*e*S	**Sn**	**19 08 58.5**	**-2.2**
	baz=210						
JISG	**Ishigakijimahi**	**1.81**	**72**	P	**Pn**	**19 08 43.2**	**-0.2**
JISG				S	**Sn**	**19 09 05.5**	**0.0**
LAY	**Lan-yu**	**2.15**	**202**	*e*P	**Pn**	**19 08 48.4**	**+0.4**
	baz=200						
JTJ	**Tarama**	**2.17**	**74**	*e*S	**Sn**	**19 09 15.8**	**+1.4**
EAST	**Anshuo**	**2.19**	**221**	P	**Pn**	**19 08 49.4**	**+0.7**
	baz=219						

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*IDC **03** 19:13:36.0±0.9, 34°.56S×109°.45W, h0^{km}, mb3.9/7,* *mb1 4.2/7, mb1mx4.0/31, mbtmp3.9/7, MS4.2/11, Ms1 4.1/11, ms1mx4.0/21, Error ellipse: s-maj=29.7km s-min=25.3km az=37.0*

*NEIC **03** 19:13:38.2±2.0, 34°.82S±0°.10×109°.3W±0°.2, h10^{km}±1^{km}, mb4.8/15, Error ellipse: s-maj=28.6km s-min=15.9km az=264.0*

*GCMT **03** 19:13:39.2±0.3, 34°.71S±0°.03×109°.17W±0°.02, h19^{km}±1^{km}, MW4.9/89, Moment Tensor Solution. s26,c31; s89,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.97±.21; $M_{\theta\theta}$-0.68±.13; $M_{\phi\phi}$2.65±.14; $M_{r\theta}$0.81±.36; $M_{\theta\phi}$-1.63±.11; $M_{\phi r}$-0.10±.25; Best double couple: $M_0$2.90100×10^{16} NP1:ϕ_s187.00000°, δ50.00000°, λ-45.00000°. NP2: ϕ_s310.00000°, δ57.00000°, λ-130.00000°. Principal axes: T 3.3440, Plg4.0000°, Azm67.0000°; N -0.8920, Plg33.0000°, Azm334.0000°; P -2.4570, Plg57.0000°, Azm164.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 19:13:37.4±0.6**, 34°.7S**±0°.1×**109°.5W**±0°.1**, h10^{km}, n51, σ1^s.15**/37**, mb4.5**/13**, MS4.3**/12**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	31.20	113	P	P	19 19 57.6	+0.8
	1.6nm,0.8s,baz=266,slow=14,SNR=2.6						
PLCA				LR	LR	19 29 17.7	
	comp=Z,248nm,20.9s,baz=276,slow=30						
PLCA	Paso Flores	31.20	113	P	P	19 19 56.0	-0.8
PLCA				IAmb	IAmb	19 20 16.1	
	comp=Z,11nm,1.4s						
ZON	Zonda	34.15	96	P	P	19 20 20.8	-1.9
ZON				IAmb	IAmb	19 20 24.9	
	comp=Z,16nm,1.1s						
LVC	Limon Verde	37.33	82	P	P	19 20 50.5	+0.1
	comp=Z,3.3nm,0.6s,baz=220,slow=9.5,SNR=4.4						
LVC	Limon Verde	37.33	82	P	P	19 20 50.5	+0.1
LVC				IAmb	IAmb	19 20 54.0	
	comp=Z,16nm,1.2s						
PB09	IPOC Station P	37.44	81	P	P	19 20 52.1	+0.9
PB09				IAmb	IAmb	19 20 55.8	
	comp=Z,23nm,1.0s						
MEH	Mehetia	38.16	286	eT	T	20 01 18.6	
	comp=Z,45nm,0.2s						
PB08	IPOC Station P	38.33	79	P	P	19 20 58.1	-0.8
TIAR	Tiarei	39.36	285	eT	T	20 02 48.0	
	comp=Z,0.8nm,0.2s						
PPT2	Papeete2	39.52	285	eS	S	19 27 08.7	-2.4
	comp=Z,75nm,27.2s						
PPT2				eLR	LR	19 31 53.8	
	comp=Z,992nm,25.5s,baz=121						
PPT	Papeete	39.53	285	LR	LR	19 32 47.9	
	comp=Z,533nm,20.7s,baz=148,slow=29						
LPAZ	La Paz	41.21	74	P	P	19 21 23.4	+0.2
	comp=Z,2.3nm,0.7s,baz=241,slow=7.6,SNR=9.6						
LPAZ				LR	LR	19 34 55.3	
	comp=Z,171nm,18.0s,baz=218,slow=31						
LPAZ	La Paz	41.21	74	P	P	19 21 21.8	-1.5
ITQB	Itaqui	44.59	99	P	P	19 21 48.7	-1.0
CPUP	Villa Florida	45.27	94	LR	LR	19 37 23.2	
	comp=Z,365nm,20.1s,baz=254,slow=32						
RAR	Rarotonga	45.98	273	LR	LR	19 37 15.8	
	comp=Z,138nm,18.7s,baz=120,slow=31						
PTLB	Pontes e Lacer	48.90	80	P	P	19 22 23.5	-0.2
PTLB				IAmb	IAmb	19 22 25.1	
	comp=Z,9.0nm,1.3s						
SAML	Samuel	49.43	70	P	P	19 22 27.5	-0.2
ROSC	El Rosal	51.37	47	LR	LR	19 40 26.2	
	comp=Z,234nm,18.7s,baz=236,slow=31						
QSPA	South Pole Qui	55.55	180	P	P	19 23 13.6	+1.0
	comp=Z,0.6nm,0.3s,baz=137,slow=1.3,SNR=3.1						
QSPA	South Pole Qui	55.55	180	P	P	19 23 13.1	+0.4
QSPA				IAmb	IAmb	19 23 21.4	
	comp=Z,11nm,1.4s						
VNDA	Vanda	56.19	195	LR	LR	19 42 22.7	
	comp=Z,93nm,20.1s,baz=102,slow=31						
BDFB	Brasilia	57.91	87	LR	LR	19 45 57.9	
	comp=Z,221nm,18.5s,baz=139,slow=34						
VNA3	Neumayer Olymp	60.65	159	P	P	19 23 49.5	+1.4
VNA1	Neumayer--Stat	61.30	158	P	P	19 23 54.2	+1.7
VNA2	Neumayer--Watz	61.46	159	P	P	19 23 54.3	+0.7
	baz=266,slow=6.4						
SNAA	Sanae	62.47	160	P	P	19 24 01.0	+0.6
SNAA	Sanae	62.47	160	P	P	19 24 00.6	+0.1
SNAA				IAmb	IAmb	19 24 02.2	
	comp=Z,16nm,1.5s						
TXAR	Lajitas Array	63.87	6	P	P	19 24 11.9	+1.7
	comp=Z,0.2nm,0.8s,baz=182,slow=9.0,SNR=1.5						
X16A	Lo Mia Camp, P	68.73	358	P	P	19 24 42.6	+1.2
X16A				IAmb	IAmb	19 24 59.4	
	comp=Z,5.9nm,0.7s						
NVAR	Mina Array Bea	73.17	353	P	P	19 25 08.2	-0.1
	comp=Z,0.9nm,0.5s,baz=187,slow=5.0,SNR=3.7						
P17A	Butcher Ranch,	73.76	359	P	P	19 25 12.1	+0.4
PDAR	Pinedale Array	77.04	360	P	P	19 25 29.1	-1.4
	comp=Z,1.2nm,0.9s,baz=160,slow=4.7,SNR=6.9						
PDAR	Pinedale Array	77.04	360	P	P	19 25 30.4	-0.2
HLID	Hailey	77.97	356	P	P	19 25 37.3	+1.7
HLID				IAmb	IAmb	19 25 44.2	
	comp=Z,8.9nm,1.1s						
RSSD	Black Hills	78.55	4	P	P	19 25 40.5	+1.6
STKA	Stephens Creek	86.00	234	LR	LR	19 58 35.6	
	comp=Z,121nm,18.9s,baz=197,slow=31						
H11S2	WAKE ISLAND Hy	95.41	289	T	T	21 13 06.6	
	baz=126,slow=75,SNR=8.7						
H11S1	WAKE ISLAND Hy	95.43	289	T	T	21 13 08.5	
	baz=126,slow=75,SNR=5.6						
H11S3	WAKE ISLAND Hy	95.43	289	T	T	21 13 07.2	
	baz=126,slow=75,SNR=4.8						
ASAR	Alice Springs	96.49	236	LR	LR	20 10 20.4	
	comp=Z,87nm,18.1s,baz=158,slow=35						
WRA	Warramunga Arr	98.66	239	LR	LR	20 08 49.8	
	comp=Z,162nm,18.0s,baz=150,slow=34						
AKASG	Malin Array Be	146.16	49	PKPbc	PKPdf	19 33 15.0	-1.3
	comp=Z,0.5nm,0.6s,baz=286,slow=3.7,SNR=2.0						
ULN	Ulaanbaatar	149.84	307		PKPbc	19 33 27.3	-0.2
CMAR	Chiang Mai Arr	150.05	245	PKPbc	PKPbc	19 33 29.6	+0.9
	comp=Z,1.5nm,0.9s,baz=184,slow=2.1,SNR=11						
CMAR	Chiang Mai Arr	150.05	245		PKPdf	19 33 22.8	-0.9
SONM	Songino Array	150.27	307	PKPbc	PKPbc	19 33 27.7	-0.9
	comp=Z,0.8nm,0.7s,baz=134,slow=4.3,SNR=6.1						
SONM	Songino Array	150.27	307		PKPbc	19 33 27.2	-1.3
BRTR	Keskin Array B	150.31	69	PKPbc	PKPbc	19 33 27.4	-1.6
	comp=Z,3.0nm,1.2s,baz=216,slow=6.1,SNR=5.9						
BRTR	Keskin Array B	150.31	69		PKPbc	19 33 28.8	-0.1
MKAR	Makanchi Array	164.97	327	PKPab	PKPab	19 34 39.3	+1.4
	comp=Z,0.6nm,0.9s,baz=72,slow=1.8,SNR=2.9						

IDC 03 19:16:57.6±17.0**, 0°.81S**×**127°.49E, h0^{km}, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.3**/36**, mbtmp3.4**/3**, Error ellipse: s-maj=262.6km s-min=160.0km az=152.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.16	161	P	Pn	19 21 34.9	-0.7
	0.3nm,0.5s,baz=340,slow=11,SNR=5.9						
ASAR	Alice Springs	23.56	165	P	P	19 22 09.4	-0.6
	0.5nm,0.7s,baz=354,slow=11,SNR=5.2						
STKA	Stephens Creek	33.66	158	P	P	19 23 40.0	-0.3
	0.4nm,0.5s,baz=325,slow=14,SNR=2.9						

NOU 03 19:19:59.2, 14°.66S×**167°.45E, h128^{km}, MLv4.3**/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.82	197	P	Pn	19 20 20.4	+0.1
DVP	Devils Point	3.13	167	P	Pn	19 20 47.6	+0.2
YATNC	Mamie plateau,	7.38	184	P	Pn	19 21 42.5	-1.8
NOUC	Port Laguerre	7.48	188	P	Pn	19 21 45.8	+0.1
OUENC	Ouen Island, N	7.74	184	P	Pn	19 21 51.2	+2.1
	19nm,1.5s						

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*IDC **03** 19:48:33.3±1.3, 31°.48N×49°.60E, h0^{km}, mb3.5/8, mb1 3.7/12, mb1mx3.5/46, mbtmp3.6/12, ML3.8/4, MS3.6/2, Ms1 3.6/2, ms1mx2.8/51, Error ellipse: s-maj=26.5km s-min=21.1km az=180.0*

*TEH **03** 19:48:36.4, 31°.49N×49°.64E, h9^{km}, ML3.5*

*THR **03** 19:48:37.2±1.1, 31°.48N×49°.67E, h15^{km}±999^{km}, ML3.2*

*DSN **03** 19:48:44.9±1.2, 30°.64N×49°.68E, h10^{km}, ML3.3/8, Error ellipse: s-maj=17.3km s-min=7.1km az=10.0*

*OMAN **03** 19:48:46.7±1.1, 30°.56N×49°.72E, h10^{km}, mb5.1/12, Error ellipse: s-maj=13.8km s-min=7.9km az=33.0*

ISC 03 19:48:34.3±0.5**, 31°.35N**±0°.04×**49°.51E**±0°.04**, h10^{km}, n78, σ2^s.57**/91**, mb3.4**/8**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMIS	Naft Sefid	0.37	329	ePg	Pb	19 48 43.9	+0.9
AMIS				e		19 48 55.8	
	comp=Z,70μm,0.4s						
AHWZ	Ahwaz	0.74	269	ePg	Pn	19 48 53.1	+2.3
AHWZ				e		19 49 16.7	
	comp=Z,20μm,0.2s						
ABEH	Behbahan	0.98	139	ePg	Pn	19 48 56.2	+2.0
IBRJ	Brojen	1.59	69	e		19 49 28.8	
	comp=Z,4μm,0.6s						
IBRJ				ePg	Pn	19 49 03.9	+1.1
KLNJ	Kolanjah	1.82	100	e		19 49 39.4	
	comp=Z,11μm,0.7s						
KLNJ				ePn	Pb	19 49 09.2	+1.3
UMR	Umm Al-Rimmam	2.37	221	eP	Pg	19 49 19.3	-0.4
IGAR	Gharneh	2.40	63	ePn	Pn	19 49 15.5	+1.6
IGAR				e		19 49 49.2	
	comp=Z,3μm,0.3s						
KHMZ	Khomeyn	2.42	9	ePn	Pn	19 49 16.0	+1.9
KHMZ	Khomeyn	2.42	9	ePn	Pn	19 49 16.0	+1.9
MIB	Mutribah	2.42	231	eP	Pg	19 49 20.4	-0.3
KAZ1	Kazerun	2.52	132	ePn	Pn	19 49 19.4	+4.1
KAZ1				e		19 50 16.8	
	comp=Z,9μm,0.1s						
IKFM	Kafar-mosalman	2.59	328	ePn	Pb	19 49 19.8	-1.0
IKLH	Kolahrood	2.63	41	ePn	Pn	19 49 19.3	+2.2
RST	Umm Al-Ruwaisa	2.84	230	eP	Pb	19 49 26.0	+0.8
AHBU	AHRAM	2.92	148	ePn	Pb	19 49 26.3	-0.1
QRN	Al-Qurain	2.94	208	eP	Pb	19 49 27.3	+0.5
RDF	Al-Radifah	2.95	216	eP	Pb	19 49 28.1	+1.1
NASN	Na'in	3.15	62	ePn	Pn	19 49 26.5	+2.2
NASN				IAML		19 50 17.4	
	comp=N,34nm,0.5s						
NASN	Na'in	3.15	62	ePn	Pn	19 49 26.5	+2.2
ASAO	Ashtian	3.22	8	ePn	Pn	19 49 27.5	+2.3
ASAO				IAML		19 50 21.9	
	comp=E,50nm,0.6s						
ASAO				IAML		19 50 23.2	
	comp=N,75nm,0.6s						
ASAO	Ashtian	3.22	8	ePn	Pn	19 49 27.5	+2.3
KRSH	Karshahi	3.43	40	ePn	Pn	19 49 29.7	+1.7
GHVR	GHOM	3.47	25	ePn	Pn	19 49 30.5	+2.1
GHVR				IAML		19 50 24.6	
	comp=N,24nm,0.3s						
GHVR				IAML		19 50 29.8	
	comp=E,50nm,0.4s						
GHVR	GHOM	3.47	25	ePn	Pn	19 49 30.5	+2.1
ANAR	Anarak	4.02	62	ePn	Pn	19 49 37.5	+1.4
GHIR	Ghir-Karzin	4.29	134	ePn	Pn	19 49 43.3	+3.4
GHIR				IAML		19 50 38.1	
	comp=N,28nm,0.2s						
GHIR				IAML		19 50 39.4	
	comp=E,28nm,0.5s						
GHIR	Ghir-Karzin	4.29	134	ePn	Pn	19 49 43.3	+3.4
IMEH	Mehriz	4.37	88	ePn	Pn	19 49 43.7	+2.8
YZKH	Yazd	4.45	75	ePn	Pn	19 49 43.8	+1.9
YZKH	Yazd	4.45	75	ePn	Pn	19 49 43.8	+1.9
IDMV	Damavand	4.72	26	ePn	Pn	19 49 46.6	+0.8
ILAS	Lasjerd	4.95	35	ePn	Pn	19 49 49.8	+0.8
IFIR	Firoozkooh	5.07	31	ePn	Pn	19 49 51.9	+1.3
SAKB	Bahrain	5.42	170	P	Pn	19 49 56.8	+1.6
IANJ	Anjilo	5.52	41	ePn	Pn	19 49 56.2	-0.6
SHMA	Al-Shehemyia	5.62	166	P	Pn	19 50 00.1	+2.2
TRNA	Turayna	6.76	167	P	Pn	19 50 15.2	+1.6
GENO	Geno	7.02	122	ePn	Pn	19 50 20.0	+2.7
SHME	Shamm	7.86	131	P	Pn	19 50 31.5	+2.8
SHME	Shamm	7.86	131	P	Pn	19 50 30.2	+1.5
SHME				S	Sn	19 51 55.2	-2.6
BANOM	Banah	8.05	130	P	Pn	19 50 33.1	+1.8
BANOM				S	Sn	19 52 00.1	-2.4
BANOM	Banah	8.05	130	P	Pn	19 50 33.6	+2.3
	SNR=12						
BANOM				S	Sn	19 52 00.0	-2.4
NAZ	Nazwa, Dubai	8.34	138	P	Pn	19 50 38.2	+2.9
NAZ	Nazwa, Dubai	8.34	138	P	Pn	19 50 39.2	+3.9
NAZ				S	Sn	19 52 07.7	-1.9
MSFE	Esma-Masafi	8.36	134	P	Pn	19 50 38.0	+2.4
ASUD	Al Ashush, Dub	8.44	141	P	Pn	19 50 39.7	+3.0
ASUD	Al Ashush, Dub	8.44	141	P	Pn	19 50 40.4	+3.7
	SNR=18						
ASUD				S	Sn	19 52 10.0	-2.1
MDH	Madha	8.49	134	P	Pn	19 50 40.1	+2.7
FAQ	Al Faqa, Dubai	8.49	139	P	Pn	19 50 40.7	+3.3
RAYN	Ar Rayn	8.57	205	P	Pn	19 50 41.2	+2.7
HATD	Hatta, Dubai	8.74	136	P	Pn	19 50 44.4	+3.6
ASHO	Ashiyiah	8.80	137	P	Pn	19 50 43.6	+1.9
ASHO				S	Sn	19 52 18.0	-3.0
ASHO	Ashiyiah	8.80	137	P	Pn	19 50 46.0	+4.2
	SNR=6.2						
ASHO				S	Sn	19 52 18.5	-2.6
SOHO	SOHO	9.50	137	P	Pn	19 50 54.7	+3.5
SOHO				S	Sn	19 52 35.9	-2.2
GEYT	Alibeck	9.66	45	Pn	Pn	19 50 52.8	-0.6
	comp=E,1.7nm,0.3s,baz=233,slow=15,SNR=16						
ARQ	Araqi	10.12	140	P	Pn	19 51 03.5	+3.8
	SNR=6.9						
ARQ				S	Sn	19 52 49.8	-3.6
ASF	Jabal al Asfar	10.77	278	Pn	Pn	19 51 09.1	+0.4
	comp=E,0.4nm,0.3s,baz=91,slow=6.2,SNR=6.8						
ASF				Sn	Sn	19 53 04.5	-4.8
	comp=E,0.1nm,0.3s,baz=208,slow=13,SNR=1.4						
BSY	Bisya	10.97	140	P	Pn	19 51 14.6	+3.2
BSY				S	Sn	19 53 09.6	-4.6
SMDO	Samad	11.22	135	P	Pn	19 51 18.4	+3.6
SMDO				S	Sn	19 53 17.4	-3.0
WSAR	Wadi Sarin	11.44	133	Pn	Pn	19 51 17.9	0.0
	comp=E,0.6nm,0.3s,baz=331,slow=7.8,SNR=12						
WSAR				Sn	Sn	19 53 19.4	-6.3
	comp=E,0.4nm,0.3s,baz=101,slow=14,SNR=1.9						
WSAR	Wadi Sarin	11.44	133	P	Pn	19 51 21.0	+3.2
	SNR=6.8						
WSAR				S	Sn	19 53 21.0	-4.8
JMDO	Jabal Madar	11.78	137	P	Pn	19 51 26.0	+3.6
WBK	Wadi Bani Khal	12.11	134	P	Pn	19 51 30.2	+3.2
WBK				S	Sn	19 53 38.2	-4.1
JLN	Jalan Bani Buh	12.73	134	P	Pn	19 51 38.2	+2.8
DOK	Doka	13.35	161	P	Pn	19 51 46.0	+2.1
DOK				S	Sn	19 54 06.2	-6.2
KBZ	Khabaz	13.42	339	LR	LR	19 56 54.7	
	comp=E,146nm,21.4s,baz=322,slow=38						
WHFO	Wadi Hawf	13.92	163	P	Pn	19 51 53.0	+1.3
	SNR=16						
WHFO				S	Sn	19 54 19.4	-6.9
BRTR	Keskin Array B	15.37	307	Pn	P	19 52 19.2	+3.1
	comp=E,0.1nm,0.3s,baz=133,slow=11,SNR=5.6						
AKTO	Aktyubinsk	20.10	16	P	P	19 53 06.3	-1.6
	comp=E,0.3nm,0.3s,baz=176,slow=6.1,SNR=4.1						
BELG	Belogornoye	21.08	357	P	P	19 53 17.3	-1.2
	comp=E,7.5nm,0.9s,baz=186,slow=14,SNR=1.7						
AKASG	Malin Array Be	24.52	328	P	P	19 53 54.0	+0.3
	comp=E,0.3nm,0.4s,baz=128,slow=7.4,SNR=2.6						
BVAR	Borovoye Array	26.44	29	P	P	19 54 11.0	-0.2
	comp=E,0.2nm,0.5s,baz=221,slow=15,SNR=1.9						
MKAR	Makanchi Array	29.50	49	P	P	19 54 38.0	-0.6
	comp=E,0.3nm,0.8s,baz=234,slow=10,SNR=4.6						
FINES	FINESS Array B	33.78	340	P	P	19 55 15.3	-0.7
	comp=E,1.3nm,0.7s,baz=140,slow=12,SNR=8.0						
ESDC	Sonseca Array	43.76	296	LR	LR	20 17 44.1	
	comp=E,110nm,18.0s,baz=335,slow=40						
CMAR	Chiang Mai Arr	46.29	94	P	P	19 57 00.1	-0.2
	comp=E,0.1nm,0.5s,baz=289,slow=8.1,SNR=1.7						
TORD	Torodi Ar. Bea	47.41	259	P	P	19 57 11.1	+1.9
	comp=E,0.8nm,0.8s,baz=58,slow=7.4,SNR=4.6						
YKA	Yellowknife Ar	85.62	353	P	P	20 01 12.0	-0.6
	comp=E,0.2nm,0.5s,baz=20,slow=5.5,SNR=1.5						

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*NEIC **03** 20:11:48.2±1.6, 47°.617N±0°.007×122°.35W±0°.03, h29^{km}±8^{km}, Error ellipse: s-maj=3.1km s-min=0.9km az=79.0*

*SEA **03** 20:11:48.9±1.4, 47°.61N±0°.02×122°.34W±0°.03, h26^{km}±6^{km}, ML2.5/55, ML2.3/20(NEIC), Error ellipse: s-maj=3.2km s-min=2.6km az=222.0*

*PGC **03** 20:11:48.9, 47°.61N×122°.34W, h26^{km}, ML2.5, ML2.1/10, 1km northwest of Seattle, Wa Washington*

ISC 03 20:11:48.3±0.9**, 47°.61N**±0°.02×**122°.36W**±0°.02**, h32^{km}**±4^{km}**, n88, σ0^s.67**/128**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SP2	Seward Park 2	0.09	127		Pb	20 11 53.6	-0.2
NIHS	Ingelmoor High	0.16	35		Sb	20 11 57.5	-1.0
VVHS	Vashon High Sc	0.20	199		Pb	20 11 54.3	-0.4
VVHS					Sb	20 11 59.4	+0.3
LYNC	Lynnwood City	0.22	12		Pb	20 11 54.8	-0.1
HICC	Highline Commu	0.23	170		Pb	20 11 54.8	-0.2
HICC					Sb	20 12 00.2	+0.7
PNLK	Pine Lake Midd	0.23	98		Sb	20 11 59.6	+0.1
GMW	Gold Mountain	0.30	258		Pb	20 11 55.4	-0.5
GMW					Sb	20 12 00.6	-0.5
KIMR	Kitsap County	0.30	249		Pb	20 11 55.7	-0.2
KIMR					Sb	20 12 01.3	+0.3
GNW	Green Mountain	0.32	262		Pb	20 11 55.6	-0.6
GNW					Sb	20 12 01.0	-0.5
GNW	Green Mountain	0.32	262	P	Pb	20 11 55.6	-0.6
GNW				S	Sb	20 12 00.9	-0.5
ELW	Echo Lake	0.35	109		Pb	20 11 56.1	-0.5
ELW					Sb	20 12 01.8	-0.4
PAYL	Puyallup Schoo	0.42	176		Pb	20 11 57.5	-0.1
PAYL					Sn	20 12 05.0	+0.3
RATT	Rattlesnake La	0.42	116		Pb	20 11 57.0	-0.6
RATT					Sb	20 12 03.3	-0.7
B013	Quilcene	0.42	299		Pb	20 11 57.2	-0.4
B013					Sb	20 12 03.6	-0.3
C04A	Brinnon	0.43	285		Pb	20 11 57.2	-0.5
C04A					Sb	20 12 03.7	-0.4
MBPA	Monroe Substat	0.43	48		Sb	20 12 03.5	-0.6
HTW	Haystack Looko	0.44	64		Pb	20 11 57.4	-0.6
C05A	Tolt Reservoir	0.46	79		Pb	20 11 57.8	-0.4
C05A					Sb	20 12 03.9	-1.1
C05A	Tolt Reservoir	0.46	79	P	Pb	20 11 57.6	-0.5
C05A				S	Sb	20 12 03.9	-1.1
HDW	Hoodsport	0.47	275		Pb	20 11 58.0	-0.4
HDW					Sb	20 12 05.2	-0.2
HDW	Hoodsport	0.47	275	P	Pb	20 11 58.0	-0.4
HDW				S	Sb	20 12 04.9	-0.5
D05A	Enumclaw	0.49	149		Pb	20 11 58.7	0.0
D05A	Enumclaw	0.49	149	Sg	Sb	20 12 05.1	-0.7
D05A				IAML		20 12 06.6	
	comp=E,140nm,0.6s						
D05A	Enumclaw	0.49	149	P	Pb	20 11 58.7	0.0
D05A				S	Sb	20 12 06.0	+0.2
D03D	Eldon	0.50	261		Pb	20 11 58.4	-0.4
PCEP	Pierce County	0.50	175		Pb	20 11 58.5	-0.3
PCEP					Sb	20 12 06.3	+0.3
D04E	Lakebay	0.52	213		Pn	20 11 59.4	0.0
D04E					Sn	20 12 08.4	+1.4
GHW	Garrison Hill	0.57	174		Pb	20 11 59.4	-0.6
GHW					Sb	20 12 07.4	-0.6
B941	Kapowsin	0.63	171		Pb	20 12 00.1	-0.8
B941					Sb	20 12 08.8	-0.8
JCW	Jim Creek	0.65	26		Pb	20 12 00.9	-0.4
JCW					Sb	20 12 09.9	-0.3
JCW	Jim Creek	0.65	26	P	Pb	20 12 00.9	-0.4
B05A	Bryant	0.68	15		Pb	20 12 01.2	-0.5
B05A					Sb	20 12 10.5	-0.3
FMW	Mount Fremont	0.82	145		Pn	20 12 03.5	-0.4
FMW					Sb	20 12 14.3	-0.9
FMW	Mount Fremont	0.82	145	P	Pn	20 12 03.5	-0.4
FMW				S	Sb	20 12 14.2	-0.9
CPW	Capitol Peak	0.83	220	P	Pn	20 12 03.4	-0.4
CPW				S	Sb	20 12 15.1	0.0
RCS	Mount Rainier-	0.86	150		Pn	20 12 04.1	-0.3
REMR	Mount Rainier-	0.87	156		Pn	20 12 04.2	-0.3
B04A	Port Angeles	0.89	300		Pn	20 12 04.4	-0.2
B04A					Sn	20 12 16.9	+0.5
PANH	Panhandle Gap,	0.90	147		Pn	20 12 04.8	-0.1
SR41	SR410 Landslid	0.92	142		Pn	20 12 04.9	-0.1
SR41					Sb	20 12 17.0	-0.7
LON	Longmire	0.94	156		Pn	20 12 05.1	-0.3
RPW	Rockport	1.01	34		Pb	20 12 06.9	-0.4
RPW	Rockport	1.01	34	P	Pb	20 12 06.8	-0.4
RPW				S	Sb	20 12 20.0	-0.3
WRW	Wenatchee Ridg	1.03	76		Pn	20 12 06.9	+0.3
VGZ	Gonzales	1.03	321	P	Pn	20 12 06.3	-0.2
VGZ				S	Sn	20 12 19.1	-0.7
C06D	Leavenworth	1.04	72		Pb	20 12 07.3	-0.4
WPW	White Pass	1.07	148		Pn	20 12 07.7	+0.6
B06A	Marblemount	1.08	33		Pb	20 12 07.8	-0.5
B06A				IAML		20 12 24.0	
	comp=N,77nm,0.4s						
B06A	Marblemount	1.08	33	P	Pb	20 12 07.9	-0.5
B06A				S	Sb	20 12 22.0	-0.2
MCW	Mount Constitu	1.11	344		Pb	20 12 08.6	-0.5
MCW	Mount Constitu	1.11	344	P	Pb	20 12 08.4	-0.6
MCW				S	Sn	20 12 22.2	+0.2
TWW	Teanaway	1.12	115		Pb	20 12 09.9	+0.8
GLK	Glacier Lake	1.17	154		Pb	20 12 10.0	0.0
LTY	Liberty	1.20	107	Pn	Pn	20 12 08.0	-0.9
LTY				IAML		20 12 26.3	
	comp=E,80nm,0.2s						
LTY				IAML		20 12 26.6	
	comp=N,48nm,0.1s						
LTY	Liberty	1.20	107	P	Pb	20 12 10.2	-0.2
LTY				S	Sb	20 12 25.4	-0.3
MBW	Mount Baker	1.21	14		Pb	20 12 10.8	0.0
MBW	Mount Baker	1.21	14	P	Pb	20 12 10.6	-0.2
B011	North Saanich	1.27	325		Pn	20 12 10.5	+0.7
B011	North Saanich	1.27	325	P	Pn	20 12 10.3	+0.5
B011				S	Sn	20 12 26.3	+0.6
B009	North Saanich	1.27	325	P	Pn	20 12 10.3	+0.5
B009				S	Sn	20 12 26.4	+0.7
B010	North Saanich	1.27	325	P	Pn	20 12 10.4	+0.6
B010				S	Sn	20 12 26.1	+0.3
PGC	Sidney	1.27	325	Pn	Pn	20 12 08.9	-0.9
PGC				IAML		20 12 34.5	
	comp=E,56nm,2.8s						
PGC				IAML		20 12 51.5	
	comp=N,55nm,4.2s						
PGC	Sidney	1.27	325	P	Pn	20 12 10.2	+0.4
PGC				S	Sn	20 12 26.4	+0.6
TBM	Table Mountain	1.27	110		Pb	20 12 12.1	+0.4
B201	Coldwater, Mou	1.31	177		Pn	20 12 11.2	+0.8
NAC	Naches	1.36	129		Pb	20 12 14.0	+0.7
B202	Windy Ridge, M	1.38	174		Pn	20 12 12.3	+1.0
A05A	Maple Falls	1.40	7	P	Pb	20 12 13.3	-0.5
A05A				S	Sb	20 12 30.9	-0.4
EBG	Ellensburg	1.41	119		Pb	20 12 14.2	+0.2
FL2	Flat Top 2	1.42	180		Pn	20 12 13.0	+1.1
VDB	Vedder Mountai	1.43	7		Pb	20 12 13.7	-0.6
VDB	Vedder Mountai	1.43	7	P	Pb	20 12 13.5	-0.7
VDB				S	Sb	20 12 32.1	0.0
B203	Quarry, Mount	1.44	179		Pn	20 12 13.4	+1.2
JLK	June Lake	1.47	174		Pb	20 12 14.2	-0.9
LVP	Lakeview Peak	1.54	181		Pb	20 12 15.2	-1.1
ASR	Mount Adams--S	1.55	160		Pb	20 12 15.8	-0.7
B023	Clatskanie	1.58	198		Pb	20 12 15.7	-1.1
F04A	Amboy	1.68	181	Pn	Pn	20 12 15.8	+0.4
HNBB	Haney	1.68	355	P	Pn	20 12 17.0	+1.5
HNBB				S	Sb	20 12 38.1	-1.3
B926	Mesachie Lake	1.69	316	S	Sn	20 12 37.5	+1.3
CLRS	Cowichan Lake	1.69	316		Pn	20 12 16.8	+1.2
CLRS				IAML		20 12 30.4	
	comp=N,41nm,3.5s						
CLRS	Cowichan Lake	1.69	316	P	Pn	20 12 16.9	+1.3
PFB	Port Renfrew	1.69	305	P	Pn	20 12 17.1	+1.4
PFB				S	Sb	20 12 38.6	-1.1
NLLB	Nanaimo Lost L	1.95	327	S	Sb	20 12 45.2	-1.7
E07A	Sunnyside	2.01	121	Pn	Pn	20 12 20.4	+0.4
E07A				IAML		20 12 51.2	
	comp=N,37nm,0.4s						
B08A	Colville Reser	2.17	69	Pn	Pn	20 12 22.7	+0.6
B08A				IAML		20 12 48.3	
	comp=E,13nm,4.1s						
B08A	Colville Reser	2.17	69	Sg	Sb	20 12 54.4	+1.1
HAWA	Hanford	2.29	121	Pn	Pn	20 12 22.5	-1.2
HAWA				IAML		20 13 16.0	
	comp=E,17nm,4.2s						
HAWA				IAML		20 13 20.1	
	comp=E,22nm,5.0s						

MAN 03 20:17:00.0, 16°.53N×**120°.74E, h31^{km}, mb4.4, ML3.2, MS3.0, Luzon**

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

LQP	Lukban	2.53	162	eP	Pn	20 17 38.6	-0.6

IDC 03 20:23:13.4±2.3,0°.66N×126°.79E,h0^{km},mb3.2/3, mb1 3.4/3,mb1mx3.2/33,mbtmp3.2/3,MS3.2/1,Ms1 3.2/1, ms1mx2.4/22,Error ellipse: s-maj=180.2km s-min=28.8km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.77	161	P	P	20 28 06.8	-0.2
	0.4nm,0.6s,baz=339,slow=11,SNR=5.2						
ASAR	Alice Springs	25.15	164	P	P	20 28 40.7	+0.2
	0.5nm,0.8s,baz=342,slow=9.3,SNR=6.1						
PSI	Prapat	27.93	275	LR	LR	20 41 26.0	
	comp=Z,45nm,19.3s,baz=285,slow=39						
MKAR	Makanchi Array	60.11	326	P	P	20 33 22.6	-0.1
	0.3nm,0.6s,baz=117,slow=8.1,SNR=2.3						

IDC 03 20:29:22.0±2.3,0°.78N×127°.05E,h0^{km},mb3.2/3, mb1 3.4/3,mb1mx3.2/32,mbtmp3.2/3,MS3.2/1,Ms1 3.2/1, ms1mx2.4/21,Error ellipse: s-maj=179.2km s-min=29.0km az=66.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	Lembang	20.81	248	LR	LR	20 43 23.3	
	comp=Z,63nm,20.0s,baz=350,slow=40						
WRA	Warramunga Arr	21.80	161	P	P	20 34 15.0	-0.9
	0.3nm,0.5s,baz=340,slow=11,SNR=5.8						
ASAR	Alice Springs	25.20	165	P	P	20 34 50.2	+0.7
	0.3nm,0.5s,baz=332,slow=10,SNR=4.7						
MKAR	Makanchi Array	60.15	326	P	P	20 39 31.5	-0.1
	0.2nm,0.5s,baz=118,slow=7.3,SNR=1.8						

IDC 03 20:40:37.6±1.2,32°.92N×130°.88E,h0^{km},mb3.3/2, mb1 3.6/3,mb1mx3.2/35,mbtmp3.3/3,ML2.4/1,MS3.2/1, Ms1 3.2/1,ms1mx2.5/24,Error ellipse: s-maj=49.6km s-min=6.9km az=88.0

JMA 03 20:40:38.5,32°.97N×130°.92E,h6^{km}±1^{km},M3.2

JMA Felt III J1.

ISC 03 20:40:39.1±1.3,32°.96N±0°.04×130°.94E±0°.08,h7^{km}±11^{km}, n9,σ1^{s}21/11,3C,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNU	Nakatsue	0.17	343	Pg	Pg	20 40 42.0	-0.7
	912nm,0.3s,baz=272,slow=23,SNR=82						
JNU				Lg	Lg	20 40 44.0	
	913nm,0.3s,baz=284,slow=22,SNR=32						
JNU	Nakatsue	0.17	343	⇑P	Pg	20 40 41.9	-0.7
JNU				S	Sg	20 40 44.5	-0.5
JTA	Tamana	0.34	271	⇑P	Pg	20 40 45.2	-0.5
JTA				eS	Sg	20 40 50.0	-0.2
JIU3	Izumi3	0.42	194	⇑P	Pg	20 40 47.0	-0.2
JIU3				S	Sg	20 40 53.2	+0.5
KSRS	Korea Array	5.12	332	Pg	Pb	20 42 11.0	+2.0
	0.3nm,0.3s,baz=149,slow=17,SNR=3.4						
KSRS				Lg	Lg	20 43 14.2	
	0.3nm,0.3s,baz=153,slow=28,SNR=1.5						
JOW	Kunigami	6.53	201	LR	LR	20 44 41.3	
	comp=Z,197nm,18.5s,baz=275,slow=38						
MJAR	Matsushiro Arr	6.97	57	Pn	Pn	20 42 22.3	+0.6
	0.1nm,0.3s,baz=240,slow=14,SNR=2.4						
WRA	Warramunga Arr	52.70	176	P	P	20 49 52.6	-1.8
	0.4nm,0.8s,baz=356,slow=8.4,SNR=1.8						
ASAR	Alice Springs	56.38	177	P	P	20 50 20.2	-0.9
	0.3nm,0.7s,baz=11,slow=12,SNR=5.0						

IDC 03 20:57:21.8±10.0,17°.81S×176°.21W,h0^{km},mb3.6/3, mb1 3.9/3,mb1mx3.6/25,mbtmp3.6/3,Error ellipse: s-maj=450.8km s-min=40.3km az=142.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.71	259	P	P	21 05 52.7	-0.2
	0.2nm,0.5s,baz=95,slow=8.4,SNR=2.8						
ASAR	Alice Springs	46.84	254	P	P	21 05 53.9	-0.1
	0.5nm,0.7s,baz=88,slow=8.2,SNR=6.6						
ILAR	Eielson Array	85.33	12	P	P	21 10 00.3	0.0
	1.0nm,1.1s,baz=213,slow=6.5,SNR=4.5						

IDC 03 21:02:04.1±6.5,28°.11N×65°.59E,h0^{km},mb3.5/5, mb1 3.7/5,mb1mx3.4/29,mbtmp3.5/5,Error ellipse: s-maj=194.2km s-min=33.6km az=92.0,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.80	31	P	P	21 07 08.8	+0.5
	1.1nm,0.8s,baz=213,slow=10,SNR=5.9						
ZALV	Zalesovo Beam	29.42	23	P	P	21 08 08.9	-0.2
	0.5nm,0.4s,baz=223,slow=9.1,SNR=3.6						
SONM	Songino Array	37.17	47	P	P	21 09 16.6	-0.4
	0.6nm,0.9s,baz=254,slow=8.4,SNR=3.7						
WRA	Warramunga Arr	81.82	118	P	P	21 14 24.6	-0.8
	0.3nm,0.9s,baz=321,slow=4.3,SNR=1.9						
ASAR	Alice Springs	83.56	121	P	P	21 14 35.2	+0.8
	0.1nm,0.4s,baz=297,slow=4.9,SNR=4.7						

NNC 03 21:08:13.6±4.4,44°.26N×85°.01E,h0^{km},mb3.2,mpv3.0, Error ellipse: s-maj=32.1km s-min=17.0km az=119.0

SOME 03 21:08:15.0,44°.47N×84°.83E,h5^{km}

ISC 03 21:08:14.0±2.5,44°.41N±0°.09×84°.9E±0°.1,h10^{km},n12, σ1^{s}87/18,2C-4D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	3.01	324	⇓Pg	Pg	21 09 10.9	-0.6
	0.3nm,0.3s,baz=139,slow=17,SNR=24						
MK31				⇑Lg	Lg	21 09 54.2	
	0.8nm,0.2s,baz=142,slow=31,SNR=8.0						
ZSN	Zaisan	3.04	360	eP	Pg	21 09 11.3	-1.0
	1.4nm,0.1s						
ZSN				eS	Sg	21 09 51.3	-0.4
	6.1nm,0.4s						
MAKZ	Makanchi	3.15	321	⇓Pg	Pg	21 09 14.1	-0.3
	7.4nm,1.4s						
MAKZ				⇓Lg	Lg	21 09 58.2	
	1.7nm,0.5s						
DJR	Jarkent	3.66	271	eP	Pg	21 09 22.9	-1.1
	1.5nm,0.5s						
DJR				eS	Sg	21 10 11.4	0.0
	5.9nm,0.3s						
DJR	Jarkent	3.66	271	Pg	Pg	21 09 23.0	-1.1
	2.1nm,0.3s						
DJR				Lg	Lg	21 10 11.4	
	5.9nm,0.3s						
KAPS	Kapalarasan	4.03	285	eP	Pb	21 09 27.3	+2.2
	0.9nm,0.2s						
KAPS				eS	Sg	21 10 19.0	-4.4
	2.5nm,0.0s						
KAPS	Kapalarasan	4.03	285	Pg	Pg	21 09 33.2	+2.0
	0.9nm,0.2s						
KAPS				Lg	Lg	21 10 27.6	
	5.3nm,0.3s						
PDGK	Podgornoye	4.05	256	⇑Pg	Pb	21 09 26.3	+0.8
	2.5nm,0.9s						
PDGK				⇓Lg	Lg	21 10 21.2	
	9.3nm,1.1s						
UZB	Uzynbulak	4.43	256	eP	Pg	21 09 38.6	-0.2
	2.2nm,0.3s						
UZB				eS	Sg	21 10 38.8	+2.6
	3.4nm,0.3s						
BLB	Baldybastay	4.62	268	Pg	Pg	21 09 40.5	-1.8
	1.9nm,0.3s						
BLB				Lg	Lg	21 10 39.9	
	5.8nm,0.3s						
SATY	Saty	4.89	256	eP	Pg	21 09 45.2	-2.4
	1.3nm,0.2s						
SATY				eS	Sg	21 10 50.0	-0.9
	3.9nm,0.0s						
ARXS	Arharly	5.07	270	eP	Pg	21 09 49.5	-1.6
	1.0nm,0.5s						
ARXS				eS	Sg	21 10 57.4	+0.6
	3.4nm,0.3s						

VAO 03 21:09:44.8±1.0,20°.72S×69°.57W,h117^{km},mb4.0

NEIC 03 21:09:45.3±0.9,20°.77S±0°.03×69°.29W±0°.07,h110^{km}±6^{km}, ML4.0(GUC),Error ellipse: s-maj=9.3km s-min=2.4km az=107.0

IDC 03 21:09:46.4±1.4,20°.76S×69°.14W,h107^{km}±16^{km},mb3.4/6, mb1 3.6/8,mb1mx3.5/23,mbtmp3.8/8,Error ellipse: s-maj=27.4km s-min=14.6km az=102.0

GUC 03 21:09:46.4±0.7,20°.78S×69°.26W,h104^{km}±3^{km},ML4.0

ISC 03 21:09:45.6±0.6,20°.78S±0°.03×69°.31W±0°.05,h108^{km}±5^{km}, n73,σ0^{s}99/94,mb3.5/5,14C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.31	212	⇓iP	Pn	21 10 01.2	-0.1
PB01				iS	Sn	21 10 12.7	-0.3
PB01	IPOC Station P	0.31	212		Pn	21 10 00.9	-0.4
PB01				Sn	Sn	21 10 12.7	-0.3
PB08	IPOC Station P	0.66	13	⇓iP	Pn	21 10 04.1	+0.2
PB08				iS	Sn	21 10 17.4	-0.1
PB08	IPOC Station P	0.66	13		Pn	21 10 03.3	-0.6
PB08				Sn	Sn	21 10 17.5	0.0
HMBC	Humberstone	0.74	313	⇑iP	Pn	21 10 04.3	+0.1
HMBC				iS	Sn	21 10 18.1	-0.1
HMBC				IAML		21 10 19.4	
	comp=N,7µm,0.2s						
PB02	IPOC Station P	0.76	226	⇑iP	Pn	21 10 05.0	+0.6
PB02				iS	Sn	21 10 19.1	+0.5
PATCX	Punta Patache	0.79	267	⇑iP	Pn	21 10 05.0	+0.4
PATCX				iS	Sn	21 10 19.8	+0.8
PATCX				IAML		21 10 20.4	
	comp=N,7µm,0.1s						
PATCX	Punta Patache	0.79	267		Pn	21 10 04.7	+0.1
PATCX				Sn	Sn	21 10 19.5	+0.5
TA01	Diego Aracena	0.84	285	⇑iP	Pn	21 10 05.1	+0.1
TA01				eS	Sn	21 10 19.6	-0.1
TA01				IAML		21 10 20.6	
	comp=E,5µm,0.1s						
TA01	Diego Aracena	0.84	285		Pn	21 10 05.0	0.0
TA01				Sn	Sn	21 10 19.7	0.0
TA02	Huaiquique	0.92	303	⇑eP	Pn	21 10 06.0	+0.2
TA02				eS	Sn	21 10 21.1	+0.1
TA02				IAML		21 10 21.9	
	comp=N,9µm,0.3s						
TA02	Huaiquique	0.92	303		Pn	21 10 05.8	0.0
TA02				Sn	Sn	21 10 21.1	+0.1
PB09	IPOC Station P	1.01	176	⇑iP	Pn	21 10 07.5	+0.6
PB09				eS	Sn	21 10 23.6	+0.6
PB09				IAML		21 10 26.1	
	comp=N,3µm,0.2s						
PB09	IPOC Station P	1.01	176		Pn	21 10 07.3	+0.4
PB11	IPOC Station P	1.07	342	⇑iP	Pn	21 10 07.7	+0.2
PB11				iS	Sn	21 10 24.1	+0.1
PB11	IPOC Station P	1.07	342	Pn	Pn	21 10 07.4	-0.1
PB07	IPOC Station P	1.08	210	⇑iP	Pn	21 10 08.0	+0.3
PB07				iS	Sn	21 10 24.2	-0.1
PB07				IAML		21 10 25.3	
	comp=E,4µm,0.4s						
PB07	IPOC Station P	1.08	210		Pn	21 10 07.7	0.0
PB03	IPOC Station P	1.32	198	⇑iP	Pn	21 10 10.7	+0.4
PB03				iS	Sn	21 10 29.1	0.0
PB03				IAML		21 10 30.8	
	comp=E,2µm,0.2s						
PB04	IPOC Station P	1.73	207	⇑iP	Pn	21 10 15.4	+0.1
PB04				iS	Sn	21 10 37.1	-0.7
PB04				IAML		21 10 38.8	
	comp=E,1µm,0.4s						
PB04	IPOC Station P	1.73	207		Pn	21 10 15.4	+0.1
LVC	Limon Verde	1.86	168	P	Pn	21 10 18.1	+1.0
	comp=E,60nm,0.3s,baz=349,slow=9.8,SNR=269						
LVC				S	Sn	21 10 41.8	+0.9
	comp=E,231nm,0.3s,baz=255,slow=21,SNR=44						
LVC				LR	LR	21 11 30.7	
	comp=E,42nm,21.9s,baz=242,slow=56						
LVC	Limon Verde	1.86	168	eP	Pn	21 10 18.0	+1.0
LVC				eS	Sn	21 10 41.8	+0.9
LVC	Limon Verde	1.86	168	eP	Pn	21 10 18.1	+1.0
LVC	Limon Verde	1.86	168		Pn	21 10 17.8	+0.8
PB06	IPOC Station P	1.93	187	⇑iP	Pn	21 10 17.9	+0.2
PB06				eS	Sn	21 10 40.2	-2.0
PB06				IAML		21 10 43.1	
	comp=E,964nm,0.4s						
PB06	IPOC Station P	1.93	187		Pn	21 10 17.9	+0.2
PB05	IPOC Station P	2.22	202	⇑iP	Pn	21 10 21.3	-0.1
PB05				eS	Sn	21 10 46.3	-2.5
PB05				IAML		21 10 49.4	
	comp=E,715nm,0.3s						
PB12	IPOC Station P	2.36	336	⇑iP	Pn	21 10 22.8	-0.5
PB12	IPOC Station P	2.36	336	Pn	Pn	21 10 22.7	-0.6
PB15	IPOC Station P	2.42	183	⇑eP	Pn	21 10 24.5	+0.5
PB15	IPOC Station P	2.42	183		Pn	21 10 24.3	+0.2
PB16	IPOC Station P	2.44	356	eP	Pn	21 10 26.1	+1.3
PB16	IPOC Station P	2.44	356	Pn	Pn	21 10 25.6	+0.8
AP01	Chacalluta	2.59	338	Pn	Pn	21 10 26.4	+0.3
PB10	IPOC Station P	2.95	203	Pn	Pn	21 10 29.9	-1.0
PB14	IPOC Station P	3.96	195	Pn	Pn	21 10 42.9	-1.7
LPAZ	La Paz	4.61	14	P	Pn	21 10 55.7	+2.0
	comp=E,4.0nm,0.3s,baz=201,slow=5.3,SNR=59						
LPAZ				S	Sn	21 11 36.0	-10
	comp=E,1.4nm,0.3s,baz=178,slow=11,SNR=5.4						
LPAZ	La Paz	4.61	14	Pn	Pn	21 10 54.2	+0.5
AC02	Maricunga	6.03	178	Pn	Pn	21 11 12.0	-0.8
GO03	Copiap	6.83	187	Pn	Pn	21 11 21.6	-1.7
SIV	San Ignacio	9.16	60	P	Pn	21 11 52.2	-2.6
	comp=E,2.6nm,0.3s,baz=251,slow=10,SNR=18						
ETMB	Extrema	11.30	16	eP	Pn	21 12 23.2	-0.6
ETMB	Extrema	11.30	16	Pn	Pn	21 12 22.8	-1.1
VILB	Vilhena	11.69	50	Pn	Pn	21 12 26.9	-2.2
CPUP	Villa Florida	12.29	119	eP	Pn	21 12 39.4	+2.4
PP1B	Ponte de Pedra	14.00	79	eP	P	21 13 01.2	-2.4
ITQB	Itaqui	14.48	130	eP	P	21 13 07.1	-1.9
PDRB	Porto dos Gac	15.13	55	eP	P	21 13 16.4	+0.1
TRCB	Terra Rica	15.62	100	eP	P	21 13 22.4	+0.6
CLDB	Colider	16.30	55	eP	P	21 13 28.3	-1.0
PCMB	Pacaembu	16.85	96	eP	P	21 13 36.7	+1.4
ITAB	Concordia	16.95	116	eP	P	21 13 38.7	+2.4
ARAG	Araguaiana, MT	17.37	76	eP	Pn	21 13 41.0	-0.3
PLTB	Pedras Altas	17.81	131	eP	Pn	21 13 46.1	-0.4
FRTB	Fartura	18.48	102	eP	Pn	21 13 54.0	-0.6
NPGB	Novo Progresso	19.21	47	eP	Pn	21 14 02.1	-1.2
SNDB	Serra Nova Dou	19.36	66	eP	P	21 14 02.5	-0.3
BB19B	Bebedouro	19.42	95	eP	Pn	21 14 04.2	-1.6
IPMB	Ipameri, GO	20.10	86	eP	P	21 14 10.9	0.0
RCLB	Rio Claro- Sao	20.32	99	eP	P	21 14 13.8	+0.6
BDFB	Brasilia	20.86	79	P	P	21 14 19.2	+0.1
	comp=E,1.6nm,0.3s,baz=288,slow=15,SNR=3.3						
ITTB	Itaituba	20.99	41	eP	P	21 14 19.2	-1.2
PEXB	Peixe	21.90	70	eP	P	21 14 30.6	+0.5
PTGA	Pitinga	21.92	26	P	P	21 14 29.1	-1.2
	comp=E,3.3nm,0.3s,baz=202,slow=17,SNR=7.5						
JANB	Januaria	24.44	81	eP	P	21 14 55.2	+0.7
TXAR	Lajitas Array	59.83	325	P	P	21 19 41.1	+1.3
	comp=E,0.2nm,0.5s,baz=155,slow=9.4,SNR=3.3						
PDAR	Pinedale Array	73.31	330	P	P	21 21 06.4	+0.9
	comp=E,0.1nm,0.5s,baz=157,slow=4.9,SNR=1.6						
TORD	Torodi Ar. Bea	77.47	71	P	P	21 21 29.3	-0.4
	comp=E,0.3nm,0.6s,baz=253,slow=4.9,SNR=4.5						
YKA	Yellowknife Ar	90.39	341	P	P	21 22 34.6	+0.4
	comp=E,0.5nm,0.6s,baz=128,slow=5.0,SNR=5.1						
ZALV	Zalesovo Beam	141.46	24	PKP	PKPdf	21 29 05.4	+1.8
	comp=E,0.5nm,0.5s,baz=323,slow=2.2,SNR=2.9						
MKAR	Makanchi Array	145.27	35	PKPbc	PKPab	21 29 11.7	+1.0
	comp=E,0.6nm,0.5s,baz=317,slow=3.9,SNR=10.0						
SONM	Songino Array	152.79	6	PKPbc	PKiKP	21 29 31.2	+1.0
	comp=E,0.6nm,0.8s,baz=293,slow=1.1,SNR=3.9						

TUL 03 21:18:06±1.2,36°.51N±0°.02×98°.98W±0°.04,h5^{km}±2^{km}, ML2.6,mb_Lg2.2/11(NEIC),Error ellipse: s-maj=5.6km s-min=3.1km az=124.0

NEIC 03 21:18:05.8±0.9,36°.52N±0°.02×98°.99W±0°.04,h4^{km}±7^{km}, Error ellipse: s-maj=4.8km s-min=2.4km az=122.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.14	186	Pg	Pg	21 18 08.9	+0.4
U32A				Sg	Sg	21 18 10.7	+0.3
OK032	Salt Plains WL	0.69	65	Pg	Pg	21 18 17.7	-1.3
OK032				Sg	Sg	21 18 28.8	+0.9
CROK	Carrier	0.81	90	Pg	Pg	21 18 21.3	0.0
KAN14	Manchester OK	0.93	61		Pg	21 18 23.7	0.0
KAN10	Anthony SW Sta	0.94	49	Pg	Pg	21 18 23.7	-0.1
GC02	Grant County #	0.96	69		Pg	21 18 24.2	-0.1
KAN16	Harper SW Stat	1.02	46		Pg	21 18 25.4	-0.1
KAN08	Anthony NE Sta	1.08	49	Pg	Pg	21 18 26.2	-0.3
KAN12	Harper NE Stat	1.11	45	Pg	Pg	21 18 26.9	-0.2
KAN06	Argonia West S	1.16	51	Pg	Pg	21 18 27.7	-0.4
KAN01	Argonia South	1.17	57		Pg	21 18 27.9	-0.4
KAN09	Caldwell North	1.26	60		Pg	21 18 29.6	-0.4
KAN13	South Haven SW	1.31	67		Pn	21 18 30.3	-0.6
BCOK	Bluff Creek, N	1.41	127		Pn	21 18 31.9	-0.3
OK029	Liberty Lake	1.43	120	Pn	Pn	21 18 32.4	-0.1
BLOK	Blackwell	1.44	80		Pn	21 18 32.6	-0.2
OK025	Westminster Rd	1.63	124	Pn	Pn	21 18 35.0	-0.2
OK031	S. Brethren Rd	1.82	107		Pn	21 18 38.3	+0.3
QUOK	Quay	1.87	100	Pn	Pn	21 18 39.0	+0.5
QUOK				IAmb_Lg		21 19 05.6	
	comp=Z,9.3nm,0.8s						
OK034	N. Norfolk Rd.	1.90	105	Pn	Pn	21 18 39.6	+0.5
R32A	Long Quarter,	1.92	6		Pn	21 18 39.7	+0.4
T35A	Sooner Cattle	2.03	78		Pn	21 18 40.8	+0.1
T35A				IAmb_Lg		21 19 12.8	
	comp=Z,13nm,0.8s						
X34A	Smith Ranch, M	2.13	153	Pn	Pn	21 18 42.6	+0.4
CBKS	Cedar Bluff	2.37	346	Pn	Pn	21 18 46.6	+1.1
TUL1	Leonard	2.65	102	Pn	Pn	21 18 49.1	-0.2
AMTX	Amarillo	2.73	234	Pg	Pb	21 18 55.7	+0.4
LOOK	Love County	2.92	149	Pn	Pn	21 18 53.7	+0.7
LOOK				IAmb_Lg		21 19 39.9	
	comp=Z,11nm,0.7s						
U38A	Gravette	3.71	90	Pn	Pn	21 19 04.1	+0.3
KSCO	Kaye Shedlock'	3.81	312	IAmb_Lg		21 20 17.3	
	comp=Z,9.8nm,0.7s						
ABTX	Abilene, Hawle	3.92	188	IAmb_Lg		21 20 16.7	
	comp=Z,4.1nm,0.8s						
MSTX	Muleshoe	4.01	232	IAmb_Lg		21 20 24.0	
	comp=Z,3.2nm,0.8s						

SEA 03 21:27:22.9±1.6,47°.60N±0°.04×122°.34W±0°.07,h25^{km}±8^{km}, ML2.2/18,Error ellipse: s-maj=8.0km s-min=4.1km az=46.0

NEIC 03 21:27:21.6±0.3,47°.60N±0°.04×122°.35W±0°.03,h32^{km}±9^{km}, Error ellipse: s-maj=5.8km s-min=2.7km az=185.0, Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMW	Gold Mountain	0.30	261		Pb	21 27 29.4	0.0
GNW	Green Mountain	0.32	264		Pb	21 27 29.6	0.0
GNW					Sb	21 27 34.9	-0.1
RATT	Rattlesnake La	0.41	115		Pb	21 27 30.9	+0.1
RATT					Sb	21 27 37.3	+0.1
C04A	Brinnon	0.44	286		Sb	21 27 37.7	0.0
D05A	Enumclaw	0.48	149		Pb	21 27 31.4	-0.5
HDW	Hoodsport	0.48	276		Pb	21 27 32.0	+0.1
HDW					Sb	21 27 39.1	+0.1
D03D	Eldon	0.50	263		Pb	21 27 32.4	+0.1
D03D					Sn	21 27 40.1	0.0
GSM	Grass Mountain	0.55	136		Sn	21 27 41.2	-0.2
GHW	Garrison Hill	0.56	174		Pn	21 27 33.3	0.0
GHW					Sn	21 27 41.3	-0.2
B941	Kapowsin	0.62	172		Pb	21 27 34.1	0.0
B941					Sb	21 27 42.7	+0.2
JCW	Jim Creek	0.66	25		Pb	21 27 34.9	+0.1
JCW					Sb	21 27 43.8	0.0
B05A	Bryant	0.69	14		Pb	21 27 35.2	0.0
B05A					Sb	21 27 44.4	-0.2
FMW	Mount Fremont	0.81	145		Pb	21 27 37.4	0.0

ANF 03 21:35:58.8±0.3,32°.85N×96°.91W,h5^{km},ML3.3/13,Error ellipse: s-maj=3.5km s-min=3.2km az=110.0

NEIC 03 21:35:59±1.2,32°.86N±0°.02×96°.92W±0°.01,h5^{km}±1^{km}, mb_Lg2.8/47,Error ellipse: s-maj=3.3km s-min=2.5km az=149.0

ISC 03 21:35:58.4±1.3,32°.85N±0°.03×96°.91W±0°.04,h0^{km}±12^{km}, n45,σ0^{s}58/37,Central Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Z35A	Perchaven, San	0.56	329	Pg	Pg	21 36 09.5	+0.4
Z35A				Sg	Sg	21 36 16.9	+0.5
Z35A	Perchaven, San	0.56	329	P	Pg	21 36 09.5	+0.4
	baz=150,SNR=60						
Z35A				S	Sg	21 36 16.9	+0.5
	baz=150						
WHTX	Lake Whitney,	0.97	208		Pg	21 36 17.0	+0.1
WHTX	Lake Whitney,	0.97	208	P	Pg	21 36 17.1	+0.1
	baz=27,SNR=142						
WHTX				S	Sg	21 36 29.8	+0.3
	baz=27						
LOOK	Love County	1.16	349		Pg	21 36 20.2	-0.5
237A	Washetta, Mont	1.26	132		Pg	21 36 22.4	-0.1
237A				IAmb_Lg		21 36 39.0	
	comp=Z,58nm,0.7s						
237A	Washetta, Mont	1.26	132	P	Pg	21 36 22.6	+0.1
	baz=313						
237A				S	Sn	21 36 40.9	+0.1
	baz=313						
Z38A	Mt. Pleasant	1.67	75	Pn	Pn	21 36 28.3	-0.6
Z38A				IAmb_Lg		21 36 51.5	
	comp=Z,39nm,0.7s						
Z38A	Mt. Pleasant	1.67	75	S	Sn	21 36 50.9	-0.1
	baz=257						
X34A	Smith Ranch, M	1.91	337	Pn	Pb	21 36 33.2	-0.9
435B	Jarrell	2.14	196	S	Sb	21 37 06.3	+1.3
	baz=15						
X37A	Clayton	2.16	36		Pn	21 36 36.2	+0.6
X37A	Clayton	2.16	36	P	Pn	21 36 35.6	0.0
	baz=217,SNR=18						
X37A				S	Sn	21 37 04.0	+0.9
	baz=217						
NATX	Nacogdoches	2.19	119	Pn	Pn	21 36 36.2	+0.2
NATX				IAmb_Lg		21 37 12.0	
	comp=Z,27nm,0.9s						
NATX	Nacogdoches	2.19	119	P	Pn	21 36 36.1	+0.1
	baz=300						
ABTX	Abilene, Hawle	2.31	265		Pn	21 36 36.9	-0.8
ABTX				IAmb_Lg		21 37 16.2	
	comp=Z,39nm,0.8s						
ABTX	Abilene, Hawle	2.31	265	P	Pn	21 36 37.3	-0.4
	baz=83,SNR=119						
ABTX				S	Sb	21 37 10.5	+0.5
	baz=83						
OKCFA	Oklahoma City	2.60	350	IAmb_Lg		21 37 23.2	
	comp=Z,30nm,0.8s						
OK025	Westminster Rd	2.75	353	IAmb_Lg		21 37 26.4	
	comp=Z,32nm,0.8s						
BCOK	Bluff Creek, N	2.86	349	IAmb_Lg		21 37 32.1	
	comp=Z,28nm,0.7s						
TUL1	Leonard	3.19	17	Pn	Pn	21 36 49.7	-0.1
MIAR	Mount Ida	3.26	58	Pn	Pn	21 36 50.2	-0.4
WLAR	White Oak Lake	3.29	74	Pn	Pn	21 36 50.5	-0.6
JCT	Junction City	3.41	227		Pn	21 36 52.6	-0.2
JCT				IAmb_Lg		21 37 44.9	
	comp=Z,29nm,0.8s						
JCT	Junction City	3.41	227	P	Pn	21 36 52.5	-0.4
	baz=45,SNR=16						
W39A	Magazine	3.50	47	Pn	Pn	21 36 54.4	+0.4
W39A				IAmb_Lg		21 37 55.3	
	comp=Z,24nm,0.8s						
W39A	Magazine	3.50	47	P	Pn	21 36 54.1	+0.2
	baz=229,SNR=29						
X40A	Basin Creek Fa	3.77	63	Pn	Pn	21 36 56.8	-1.0
X40A	Basin Creek Fa	3.77	63	P	Pn	21 36 56.8	-1.0
	baz=246,SNR=16						
X40A				P	Pn	21 36 56.8	-1.0
	baz=246,SNR=16						
U32A	Winter Ranch,	3.92	335	IAmb_Lg		21 38 08.0	
	comp=Z,25nm,0.9s						
T35A	Sooner Cattle	4.07	5	IAmb_Lg		21 38 10.9	
	comp=Z,27nm,1.2s						
U38A	Gravette	4.14	29	IAmb_Lg		21 38 16.0	
	comp=Z,14nm,0.7s						
KAN14	Manchester OK	4.19	348	IAmb_Lg		21 38 12.1	
	comp=Z,27nm,1.2s						
KAN09	Caldwell North	4.32	352	IAmb_Lg		21 38 23.5	
	comp=Z,30nm,1.2s						
KAN01	Argonia South	4.35	351	IAmb_Lg		21 38 16.6	
	comp=Z,16nm,1.0s						
KAN06	Argonia West S	4.46	350	IAmb_Lg		21 38 21.3	
	comp=Z,24nm,1.1s						
KAN16	Harper SW Stat	4.47	348	IAmb_Lg		21 38 29.7	
	comp=Z,12nm,0.9s						
W41B	Gary Mavity, V	4.52	58	P	Pn	21 37 07.7	-0.3
	baz=240,SNR=16						
U40A	Yellville	4.84	43	IAmb_Lg		21 38 36.1	

	comp=Z,13nm,0.8s						
U40A	**Yellville**	**4.84**	**43**	P	**Pn**	**21 37 12.2**	**-0.3**
	baz=225,SNR=12						
U40A				P	**Pn**	**21 37 12.2**	**-0.3**
	baz=225,SNR=12						
MGMO	**Mountain Grove**	**5.74**	**40**	IAmb_Lg		21 39 01.5	
	comp=Z,19nm,0.9s						
CBKS	**Cedar Bluff**	**6.38**	**340**	IAmb_Lg		21 39 30.1	
	comp=Z,8.6nm,0.8s						
R40A	**Maddies Statio**	**6.62**	**34**	IAmb_Lg		21 39 32.7	
	comp=Z,8.9nm,0.9s						
TX31	**Lajitas Ar. Si**	**6.77**	**241**	P	**Pn**	**21 37 38.1**	**-1.0**
	baz=57,SNR=10						
ANMO	**Albuquerque**	**8.21**	**287**	IAmb_Lg		21 40 24.1	
	comp=Z,7.7nm,0.7s						

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*IDC **03** 21:50:54.2±1.0, 3°.33S×130°.90E, h0^{km}, mb3.9/9, mb1 4.1/13, mb1mx3.8/52, mbtmp3.9/13, ML3.8/3, MS3.1/3, Ms1 3.1/3, ms1mx2.8/39, Error ellipse: s-maj=38.6km s-min=17.0km az=81.0*

*DJA **03** 21:50:58.0±0.4, 3°S±4°×13°1E±°, h10^{km}, M3.7/9, MLv3.7/9*

*NEIC **03** 21:50:59.5±2.9, 3°.30S±0°.09×130°.93E±0°.08, h39^{km}±7^{km}, mb4.1/8, Error ellipse: s-maj=12.7km s-min=11.6km az=186.0*

ISC 03 21:50:58.5±0.6**, 3°.30S**±0°.05×**130°.92E**±0°.05**, h30^{km}, n31, σ1^s.49**/33**, mb3.8**/8**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.38**	**74**	P	**Pn**	**21 51 21.9**	**+0.1**
FAKI				S	**Sb**	**21 51 44.3**	**+3.3**
FAKI	**Fak Fak**	**1.38**	**74**		**Pn**	**21 51 21.8**	**+0.1**
MSAI	**Masohi**	**1.99**	**269**	P	**Pn**	**21 51 31.8**	**+1.7**
MSAI				S	**Sn**	**21 51 55.6**	**+1.6**
SIJI	**Sorong**	**2.44**	**8**	Pn	**Pn**	**21 51 35.5**	**-0.9**
	20nm,0.3s,baz=76,slow=3.9,SNR=20						
SIJI				Sn	**Sn**	**21 52 03.3**	**-1.9**
	14nm,0.3s,baz=172,slow=23,SNR=6.3						
SIJI				LR	LR	21 53 12.0	
	comp=Z,231nm,19.1s,baz=156,slow=56						
SWI	**Sorong**	**2.44**	**8**	P	**Pn**	**21 51 35.4**	**-1.0**
SWI				S	**Sn**	**21 52 04.4**	**-0.9**
AAI	**Ambon**	**2.75**	**262**	P	**Pn**	**21 51 41.3**	**+0.7**
LBMI	**Labuha**	**4.32**	**308**	P	**Pn**	**21 52 02.0**	**-0.2**
SANI	**Sanana**	**5.08**	**284**	P	**Pn**	**21 52 11.0**	**-1.7**
BATI	**Baumata**	**9.95**	**226**	Pn	**Pn**	**21 53 19.8**	**+0.2**
	1.8nm,0.3s,baz=66,slow=15,SNR=1.3						
KAPI	**Kappang**	**11.27**	**261**	LR	LR	21 59 07.4	
	comp=Z,88nm,19.4s,baz=92,slow=44						
DAV	**Davao City (W)**	**11.60**	**333**	LR	LR	21 59 01.8	
	comp=Z,114nm,18.5s,baz=126,slow=42						
FITZ	**Fitzroy Crossi**	**15.59**	**199**	Pn	**Pn**	**21 54 33.5**	**-2.8**
	baz=22,slow=13						
FITZ				Sn	Sn	21 57 17.7	-10
	0.1nm,0.3s,baz=53,slow=12,SNR=1.4						
WB0	**Warramunga Arr**	**16.71**	**169**	P	**Pn**	**21 54 49.7**	**-1.0**
WB0				IAmb	IAmb	21 55 01.2	
	comp=Z,20nm,1.6s						
WRAB	**Tennant Creek**	**16.87**	**169**	Pn	**Pn**	**21 54 50.0**	**-2.5**
WRAB				IAmb	IAmb	21 54 56.7	
	comp=Z,16nm,0.5s						
WRA	**Warramunga Arr**	**16.87**	**169**	Pn	**Pn**	**21 54 49.9**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=348,slow=11,SNR=12						
WRA				Sn	Sn	21 57 49.1	-10
	comp=Z,0.3nm,0.3s,baz=348,slow=23,SNR=4.0						
WRA	**Warramunga Arr**	**16.87**	**169**	Pn	**Pn**	**21 54 52.3**	**-0.4**
WB2	**Warramunga Arr**	**16.88**	**169**	Pn	**Pn**	**21 54 51.0**	**-1.7**
AS31	**Alice Springs**	**20.45**	**172**	P	**P**	**21 55 34.3**	**+0.5**
AS31				IAmb	IAmb	21 55 41.1	
	comp=Z,5.5nm,0.5s						
ASAR	**Alice Springs**	**20.45**	**172**	P	**P**	**21 55 34.0**	**+0.3**
	comp=Z,9.3nm,0.5s,baz=351,slow=10,SNR=92						
ASAR				S	**S**	**21 59 20.4**	**-1.0**
	comp=Z,0.8nm,0.9s,baz=347,slow=23,SNR=5.6						
ASAR	**Alice Springs**	**20.45**	**172**	P	**P**	**21 55 33.9**	**+0.1**
PSA00	**Pilbara Seismi**	**21.11**	**210**	P	**P**	**21 55 38.9**	**-2.0**
MORW	**Morawa**	**29.27**	**207**	P	**P**	**21 56 57.5**	**-0.7**
STKA	**Stephens Creek**	**30.15**	**162**	P	**P**	**21 57 05.2**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=333,slow=16,SNR=2.3						
STKA	**Stephens Creek**	**30.15**	**162**	IAmb	IAmb	21 57 17.4	
	comp=Z,3.9nm,1.9s						
CMAR	**Chiang Mai Arr**	**38.20**	**306**	P	**P**	**21 58 16.6**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=133,slow=6.3,SNR=4.3						
SONM	**Songino Array**	**55.27**	**340**	P	**P**	**22 00 29.8**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=163,slow=5.4,SNR=2.9						
MKAR	**Makanchi Array**	**65.68**	**326**	P	**P**	**22 01 40.2**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=120,slow=6.1,SNR=5.1						
ZALV	**Zalesovo Beam**	**68.71**	**333**	P	**P**	**22 01 58.6**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=162,slow=7.3,SNR=4.0						
KURBB	**Kurchatov Arra**	**69.88**	**327**	P	**P**	**22 02 06.9**	**+0.4**
	comp=Z,1.1nm,0.2s,baz=128,slow=5.5,SNR=2.7						
BVAR	**Borovoye Array**	**75.46**	**327**	P	**P**	**22 02 40.0**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=38,slow=42,SNR=2.9						
ILAR	**Eielson Array**	**89.63**	**25**	P	**P**	**22 03 55.8**	**+2.6**
	comp=Z,0.2nm,0.5s,baz=241,slow=5.6,SNR=1.6						

IDC 03 21:57:57.9±2.3**, 32°.08S**×**67°.66W, h0^{km}, mb3.4**/2**, mb1 3.8**/3**, mb1mx3.6**/20**, mbtmp3.6**/3**, ML3.9**/1**, Error ellipse: s-maj=93.8km s-min=49.6km az=38.0, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**15.73**	**358**	Pn	Pn	22 01 41.7	+0.3
	0.2nm,0.3s,baz=190,slow=12,SNR=6.5						
TXAR	**Lajitas Array**	**70.00**	**327**	P	P	22 09 11.2	-0.2
	0.1nm,0.4s,baz=145,slow=10.0,SNR=1.6						
TORD	**Torodi Ar. Bea**	**80.09**	**68**	P	P	22 10 09.7	-0.2
	0.4nm,0.6s,baz=261,slow=5.4,SNR=5.0						
KURBB	**Kurchatov Arra**	**148.95**	**43**	PKPbc	PKPbc	22 17 47.5	+0.3
	0.9nm,0.2s,baz=282,slow=3.4,SNR=4.2						
ZALV	**Zalesovo Beam**	**150.61**	**34**	PKPbc	PKPbc	22 17 51.2	-0.1
	0.8nm,0.6s,baz=311,slow=1.9,SNR=4.2						
MKAR	**Makanchi Array**	**152.73**	**49**	PKPbc	PKPbc	22 17 55.9	-0.5
	1.0nm,0.9s,baz=277,slow=1.6,SNR=7.3						

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*NIED **03** 22:38:13.0, 30°.85N×128°.60E, h17^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-2.87; M$_{\theta\theta}$4.10; M$_{\phi\phi}$-1.24; M$_{r\theta}$-3.31; M$_{\theta\phi}$6.70; M$_{\phi r}$-2.00; Fault plane solution: M$_0$7.81000×10^{14} NP1: φ$_s$281.00000°, δ82.00000°, λ16.00000°. NP2: φ$_s$189.00000°, δ74.00000°, λ172.00000°.*

JMA 03 22:38:12.9±0.2**, 30°.85N**×**128°.60E, h17^{km}, M3.6, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**1.26**	**49**	P	Pn	22 38 35.3	-0.5
JKC	**Kuchinoerabu**	**1.43**	**105**	P	Pn	22 38 38.3	+0.3
JKC				*e*S	Sn	22 38 56.2	-0.2
JNN	**Nakanoshima**	**1.49**	**132**	P	Pn	22 38 39.5	+0.6
JNN				S	Sb	22 38 59.1	+0.3
JSU	**Suzuyama**	**1.72**	**67**	P	Pn	22 38 42.7	+0.6
JYAK	**Yakushimahirau**	**1.76**	**110**	P	Pn	22 38 41.9	-0.7
JFU	**Fukue jima 2**	**1.81**	**4**	P	Pn	22 38 44.2	+1.0
JMTN	**Minamitane**	**2.03**	**102**	P	Pn	22 38 46.7	+0.3
JTN	**Tanegashima 3**	**2.06**	**95**	P	Pn	22 38 47.2	+0.5
JTZ	**Takazaki**	**2.37**	**63**	P	Pn	22 38 52.5	+1.5
JIU3	**Izumi3**	**2.54**	**47**	P	Pn	22 38 54.4	+1.1

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*JMA **03** 23:16:18.6±0.1, 22°.60N×121°.49E, h19^{km}±4^{km}, M3.6*

*TAP **03** 23:16:19.9, 22°.61N×121°.38E, h26^{km}, ML3.7, B*

ISC 03 23:16:19.4±0.9**, 22°.58N**±0°.02×**121°.42E**±0°.02**, h27^{km}**±6^{km}**, n117, σ1^s.03**/187**, 4C-10D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.10**	**24**	⇓*i*P	**Pb**	**23 16 24.8**	**+0.4**
	baz=50						
LDUT				*i* S	**Sb**	**23 16 28.4**	**+0.6**
	baz=50						
TTN	**Taitung**	**0.31**	**305**	⇑*i*P	**Pb**	**23 16 27.0**	**+0.3**
	baz=305						
TTN				*e*S	**Sb**	**23 16 32.5**	**+0.7**
	baz=305						
TWGBT	**Beinan**	**0.40**	**307**	⇑*i*P	**Pb**	**23 16 27.9**	**-0.2**
	baz=307						
TWGBT				*e*S	**Sb**	**23 16 33.5**	**-0.4**
	baz=307						
TWG	**Pinlang**	**0.41**	**307**	⇑*i*P	**Pb**	**23 16 27.9**	**-0.3**
	baz=307						
TWG				*e*S	**Sb**	**23 16 33.5**	**-0.6**
	baz=307						
EDH	**Donghe**	**0.41**	**344**	⇓*i*P	**Pb**	**23 16 27.9**	**-0.4**
	baz=349						
EDH				*i* S	**Sb**	**23 16 33.8**	**-0.5**
	baz=349						
LONT	**Longtian**	**0.42**	**320**	*i* P	**Pb**	**23 16 28.1**	**-0.4**
	baz=322						
LONT				*e*S	**Sb**	**23 16 33.8**	**-0.9**
	baz=322						
ECL	**Taimali**	**0.43**	**273**	⇓*i*P	**Pb**	**23 16 28.0**	**-0.6**
	baz=268						
ECL				*i* S	**Sb**	**23 16 33.8**	**-1.1**
	baz=268						
CHKT	**Chengkung**	**0.52**	**354**	⇓*i*P	**Pb**	**23 16 29.6**	**-0.5**
	baz=359						
CHKT				*i* S	**Sb**	**23 16 36.8**	**-0.5**
	baz=359						
TAW	**Tawu**	**0.54**	**246**	⇓*i*P	**Pb**	**23 16 29.8**	**-0.5**
	baz=241						
TAW				*e*S	**Sb**	**23 16 37.1**	**-0.6**
	baz=241						
ECS	**Chishang**	**0.55**	**340**	*e*P	**Pb**	**23 16 30.9**	**+0.3**
	baz=343						
ECS				*e*S	**Sn**	**23 16 39.6**	**-0.2**
	baz=343						
LAY	**Lan-yu**	**0.55**	**168**	*i* P	**Pb**	**23 16 30.9**	**+0.3**
	baz=164						
LAY				*e*S	**Sb**	**23 16 38.2**	**+0.1**
	baz=164						
EAST	**Anshuo**	**0.57**	**250**	⇓*i*P	**Pb**	**23 16 30.3**	**-0.6**
	baz=245						
EAST				*e*S	**Sb**	**23 16 37.2**	**-1.4**
	baz=245						
FULB	**Fuli**	**0.63**	**349**	⇓*i*P	**Pb**	**23 16 31.1**	**-0.8**
	baz=352						
FULB				*e*S	**Sb**	**23 16 40.4**	**0.0**
	baz=352						
SLIU	**Shizi**	**0.68**	**238**	⇓*i*P	**Pb**	**23 16 31.9**	**-0.8**
	baz=234						
SLIU				*e*S	**Sb**	**23 16 40.6**	**-1.2**
	baz=234						
ELDTW	**Lidau**	**0.71**	**328**	P	**Pb**	**23 16 32.4**	**-0.9**
	baz=330						
ELDTW				*e*S	**Sb**	**23 16 41.7**	**-1.2**
	baz=330						
TSMG	**Majia**	**0.73**	**280**	*i* P	**Pb**	**23 16 32.6**	**-1.0**
	baz=278						
TSMG				*e*S	**Sb**	**23 16 41.3**	**-1.9**
	baz=278						
MASBT	**Mashibuluo**	**0.73**	**273**	*i* P	**Pb**	**23 16 32.8**	**-0.8**
	baz=270						
MASBT				*e*S	**Sb**	**23 16 41.3**	**-1.9**
	baz=270						
ECBN	**Changbin**	**0.74**	**2**	⇑P	**Pb**	**23 16 33.0**	**-0.7**
	baz=5.0						
ECBN				*e*S	**Sb**	**23 16 43.6**	**+0.3**
	baz=5.0						
SSD	**Sandimen**	**0.75**	**283**	*i* P	**Pb**	**23 16 32.8**	**-1.1**
	baz=281						
SSD				*e*S	**Sb**	**23 16 41.4**	**-2.4**
	baz=281						
SCZT	**Fangliau**	**0.77**	**255**	⇓*i*P	**Pb**	**23 16 33.5**	**-0.8**
	baz=251						
SCZT				S	**Sb**	**23 16 43.3**	**-1.0**
	baz=251						
EYUL	**Yuli**	**0.77**	**353**	*e*P	**Pb**	**23 16 33.6**	**-0.7**
	baz=355						
EYUL				*e*S	**Sn**	**23 16 46.8**	**+1.5**
	baz=355						
TWF1	**Yuli**	**0.78**	**351**	*e*P	**Pb**	**23 16 33.5**	**-0.9**
	baz=354						
TWF1				*e*S	**Sb**	**23 16 44.2**	**-0.5**
	baz=354						
SSPT	**Xinbi**	**0.80**	**263**	⇓P	**Pb**	**23 16 34.6**	**0.0**
	baz=261						
SSPT				*e*S	**Sb**	**23 16 45.2**	**+0.1**
	baz=261						
YULB	**Yu-li**	**0.82**	**352**	P	**Pb**	**23 16 33.9**	**-1.1**
	baz=354						
YULB				*e*S	**Sb**	**23 16 44.8**	**-1.0**
	baz=354						
SLGT	**Liugui**	**0.83**	**300**	*e*P	**Pb**	**23 16 34.5**	**-0.8**
	baz=300						
TSEB	**Hengchuen, Pin**	**0.83**	**216**	*e*P	**Pb**	**23 16 35.2**	**0.0**
	baz=215						
TSEB				*e*S	**Sn**	**23 16 46.8**	**+0.2**
	baz=215						
STYH	**Taoyuan**	**0.84**	**315**	P	**Pb**	**23 16 34.6**	**-0.7**
	baz=315						
STYH				*e*S	**Sb**	**23 16 45.3**	**-1.0**
	baz=315						
STYT	**Tauyuan**	**0.85**	**314**	*e*P	**Pb**	**23 16 34.8**	**-0.8**
	baz=314						
TWKBT	**Hengchun**	**0.85**	**222**	*e*P	**Pb**	**23 16 34.7**	**-0.9**
	baz=219						
TWKBT				*e*S	**Sb**	**23 16 46.6**	**0.0**
	baz=219						
HEN	**Hengchun**	**0.85**	**228**	*e*P	**Pb**	**23 16 35.2**	**-0.5**
	baz=225						
HEN				*e*S	**Sb**	**23 16 46.5**	**-0.2**
	baz=225						
TWK1	**Hengchun**	**0.85**	**222**	*e*P	**Pb**	**23 16 34.9**	**-0.8**
	baz=219						
TWK1				*e*S	**Sb**	**23 16 46.4**	**-0.2**
	baz=219						
HGSD	**Ruisui**	**0.91**	**0**	*e*P	**Pn**	**23 16 35.0**	**-1.4**
	baz=2.0						
HGSD				*e*S	**Sb**	**23 16 47.6**	**-0.7**
	baz=2.0						
SGST	**Jiashian**	**0.92**	**303**	*e*P	**Pn**	**23 16 36.1**	**-0.6**
	baz=303						
EHY	**Hungye**	**0.93**	**354**	*e*P	**Pn**	**23 16 35.8**	**-0.9**
	baz=357						
TWM1	**Shoushan**	**0.96**	**285**	*e*P	**Pb**	**23 16 39.1**	**+1.7**
	baz=284						
WLCH	**Liuqiu**	**0.99**	**257**	*e*P	**Pb**	**23 16 40.4**	**+2.5**
	baz=255						
WTP	**Ta-pu**	**1.00**	**312**	*e*P	**Pb**	**23 16 38.1**	**0.0**
	baz=312						
WTP				*e*S	**Sn**	**23 16 51.4**	**+0.4**
	baz=312						
YUS	**Yu-Shan**	**1.01**	**334**	*e*P	**Pn**	**23 16 37.6**	**-0.6**
	baz=336						
YUS				*e*S	**Sb**	**23 16 50.5**	**-1.1**
	baz=336						
TWP	**Hsiaoliuchiu**	**1.01**	**257**	*e*P	**Pb**	**23 16 40.5**	**+2.2**
	baz=255						
CHN1	**Nanshi**	**1.02**	**306**	*e*P	**Pb**	**23 16 38.9**	**+0.3**
	baz=306						
CHN1				*e*S	**Sb**	**23 16 53.0**	**+1.4**
	baz=306						
TPUB	**Ta-pu**	**1.03**	**315**	*e*P	**Pb**	**23 16 38.5**	**0.0**
	baz=315						
TPUB				*e*S	**Sb**	**23 16 54.1**	**+2.5**
	baz=315						
KAU	**Kaohsiung**	**1.03**	**270**	*e*P	**Pb**	**23 16 41.0**	**+2.4**
	baz=268						
SNST	**Tainan City**	**1.07**	**307**	*e*P	**Pb**	**23 16 39.6**	**+0.4**
	baz=307						
SNST				*e*S	**Sb**	**23 16 54.2**	**+1.4**
	baz=307						
CHN4	**Tsaushan**	**1.09**	**315**	*e*P	**Pn**	**23 16 38.0**	**-0.9**
	baz=316						
CHN4				*e*S	**Sn**	**23 16 53.1**	**+0.1**
	baz=316						
EGFH	**Guangfu**	**1.09**	**0**	*e*P	**Pn**	**23 16 38.1**	**-0.8**
	baz=2.0						
ALS	**Alishan**	**1.09**	**329**	*e*P	**Pn**	**23 16 39.4**	**+0.2**
	baz=330						
TWK	**Hsinying**	**1.10**	**309**	*e*P	**Pb**	**23 16 40.1**	**+0.2**
	baz=309						
TWK				*e*S	**Sb**	**23 16 55.8**	**+2.0**
	baz=309						
TEGC	**Jichi Village**	**1.13**	**5**	*e*P	**Pn**	**23 16 39.0**	**-0.5**
	baz=8.0						
VWDT	**VWDT**	**1.20**	**348**	*e*P	**Pn**	**23 16 40.5**	**+0.1**
	baz=349						
VWDT				*e*S	**Sn**	**23 16 55.7**	**-0.1**
	baz=349						
CHN5	**Tsauling**	**1.23**	**326**	*e*P	**Pb**	**23 16 42.1**	**+0.1**
	baz=327						
CHN5				*e*S	**Sb**	**23 17 00.4**	**+2.9**
	baz=327						
ESL	**Shilin**	**1.23**	**0**	*e*P	**Pn**	**23 16 40.1**	**-0.7**
	baz=3.0						
ESL				*e*S	**Sn**	**23 16 55.6**	**-1.0**
	baz=3.0						
SSLB	**Suanglung**	**1.28**	**340**	*e*P	**Pb**	**23 16 42.3**	**-0.6**
	baz=341						
SSLB				*e*S	**Sn**	**23 16 57.6**	**-0.3**
	baz=341						
CHN2	**Minshiung**	**1.29**	**318**	*e*P	**Pn**	**23 16 42.2**	**+0.5**
	baz=318						
TEYL	**Yanliau Villag**	**1.29**	**7**	*e*P	**Pn**	**23 16 41.5**	**-0.2**
	baz=9.0						
TEYL				*e*S	**Sn**	**23 16 57.9**	**-0.3**
	baz=9.0						
CHY	**Chiayi**	**1.30**	**315**	*e*P	**Pb**	**23 16 43.3**	**+0.1**
	baz=315						
ICHU	**Yijhu**	**1.31**	**307**	*e*P	**Pb**	**23 16 43.3**	**-0.1**
	baz=306						
ICHU				*e*S	**Sb**	**23 16 59.3**	**-0.5**
	baz=306						
WDLH	**Douliu**	**1.37**	**324**	*e*P	**Pb**	**23 16 45.0**	**+0.5**
	baz=324						
WDLH				*e*S	**Sb**	**23 17 03.4**	**+1.7**
	baz=324						
ETM	**Tongmen**	**1.38**	**3**	*e*P	**Pn**	**23 16 42.4**	**-0.5**
	baz=4.0						
SMLT	**Sun Moon Lake**	**1.39**	**340**	*e*P	**Pb**	**23 16 44.5**	**-0.3**
	baz=341						
SMLT				*e*S	**Sb**	**23 17 03.1**	**+1.1**
	baz=341						
OWD	**Renai**	**1.39**	**351**	*e*P	**Pn**	**23 16 43.3**	**+0.1**
	baz=352						
WJS	**Zhushan**	**1.39**	**333**	*e*P	**Pb**	**23 16 45.6**	**+0.8**
	baz=334						
WJS				*e*S	**Sb**	**23 17 05.3**	**+3.1**
	baz=334						
TYC	**Yuchr**	**1.42**	**339**	*e*P	**Pb**	**23 16 45.5**	**+0.3**
	baz=340						
TYC				*e*S	**Sb**	**23 17 04.7**	**+1.8**
	baz=340						
WTK	**Tuku**	**1.46**	**319**	*e*P	**Pb**	**23 16 45.4**	**-0.5**
	baz=320						
WTK				*e*S	**Sb**	**23 17 04.5**	**+0.5**
	baz=320						
WNT	**Mingjian**	**1.46**	**332**	*e*P	**Pb**	**23 16 46.6**	**+0.7**
	baz=333						
CHGB	**Renai**	**1.49**	**351**	*e*P	**Pn**	**23 16 45.1**	**+0.4**
	baz=352						
CHGB				*e*S	**Sn**	**23 17 03.2**	**-0.2**
	baz=352						
TWD	**Chiawan**	**1.50**	**6**	*e*P	**Pn**	**23 16 44.4**	**-0.3**
	baz=8.0						
TWD				*e*S	**Sn**	**23 17 04.1**	**+0.8**
	baz=8.0						
WCS	**Beigang Elemen**	**1.55**	**342**	*e*P	**Pb**	**23 16 47.0**	**-0.3**
	baz=343						
WHF	**Hehuan Shan**	**1.57**	**355**	*e*P	**Pn**	**23 16 46.0**	**+0.1**
	baz=356						
WHF				*e*S	**Sn**	**23 17 05.7**	**+0.2**
	baz=356						
NACB	**Ninganchiao**	**1.60**	**6**	*e*P	**Pn**	**23 16 45.5**	**-0.4**
	baz=7.0						
NACB				*e*S	**Sn**	**23 17 05.0**	**-0.7**
	baz=7.0						
ETLH	**Xiulin Townshi**	**1.62**	**2**	*e*P	**Pn**	**23 16 45.5**	**-0.8**
	baz=3.0						
ETLH				*e*S	**Sn**	**23 17 05.6**	**-0.8**
	baz=3.0						
WRL	**Guolierlin Hig**	**1.63**	**324**	*e*P	**Pn**	**23 16 47.6**	**+1.2**
	baz=324						
FUSS	**Fushou**	**1.67**	**354**	*e*P	**Pn**	**23 16 47.8**	**+0.6**
	baz=356						
FUSS				*e*S	**Sn**	**23 17 08.2**	**+0.4**
	baz=356						
TWT	**Tachien**	**1.68**	**352**	*e*P	**Pn**	**23 16 48.4**	**+1.2**
	baz=353						
TDCB	**Techi**	**1.69**	**352**	*e*P	**Pn**	**23 16 48.0**	**+0.7**
	baz=353						
WCHH	**Zhanghua**	**1.69**	**332**	*e*P	**Pb**	**23 16 49.5**	**-0.4**
	baz=333						
WHP	**Taichung City**	**1.75**	**346**	*e*P	**Pb**	**23 16 50.1**	**-0.8**
	baz=346						
WHP				*e*S	**Sb**	**23 17 12.8**	**+0.4**
	baz=346						
NNSB	**Datong**	**1.84**	**359**	*e*P	**Pn**	**23 16 49.6**	**+0.2**
	baz=360						
NNSB				*e*S	**Sn**	**23 17 11.8**	**-0.1**
	baz=360						
NNS	**Nan Shan**	**1.85**	**359**	*e*P	**Pb**	**23 16 51.1**	**-1.6**
	baz=360						
TWQ1	**Liyutan**	**1.86**	**341**	*e*P	**Pb**	**23 16 52.1**	**-0.6**
	baz=342						
TWQ1				*e*S	**Sb**	**23 17 15.7**	**+0.1**
	baz=342						
EWUT	**Wuta**	**1.89**	**10**	*e*P	**Pn**	**23 16 49.9**	**0.0**
	baz=11						
EWUT				*e*S	**Sn**	**23 17 12.2**	**-0.5**
	baz=11						
NSY	**Sanyi**	**1.93**	**342**	*e*P	**Pb**	**23 16 53.0**	**-0.9**
	baz=343						
PHUB	**P'eng-hu**	**1.94**	**299**	*e*P	**Pn**	**23 16 50.8**	**+0.2**
	baz=298						
PHUB				*e*S	**Sn**	**23 17 13.2**	**-1.0**
	baz=298						
VCHM	**Qimei**	**1.94**	**289**	*e*P	**Pn**	**23 16 51.0**	**+0.3**
	baz=288						
PNG	**Penghu**	**1.98**	**300**	*e*P	**Pn**	**23 16 51.8**	**+0.6**
	baz=300						
NDT	**Datong Townshi**	**2.02**	**2**	*e*P	**Pb**	**23 16 53.6**	**-1.9**
	baz=3.0						
NMLH	**Miaoli**	**2.04**	**344**	*e*P	**Pb**	**23 16 54.4**	**-1.4**
	baz=344						
ENTT	**Nioudou**	**2.06**	**4**	*e*P	**Pn**	**23 16 52.5**	**+0.3**
	baz=5.0						
TWC	**Suao**	**2.06**	**11**	*e*P	**Pn**	**23 16 53.0**	**+0.7**
	baz=12						
NDS	**Dongshan**	**2.06**	**7**	*e*P	**Pn**	**23 16 53.2**	**+0.9**
	baz=9.0						
YHNB	**Yeheng**	**2.08**	**359**	*e*P	**Pn**	**23 16 54.0**	**+1.4**
	baz=360						
NSK	**Sanguang**	**2.09**	**358**	*e*P	**Pn**	**23 16 51.0**	**-1.7**
	baz=360						
LIOB	**Emei**	**2.09**	**350**	*e*P	**Pn**	**23 16 54.6**	**+1.9**
	baz=351						
TWE	**Neicheng**	**2.15**	**6**	*e*P	**Pn**	**23 16 54.8**	**+1.4**
	baz=7.0						
NWLT	**Wulai**	**2.19**	**2**	*e*P	**Pn**	**23 16 55.5**	**+1.4**
	baz=3.0						
NTC	**Toucheng**	**2.30**	**9**	*e*P	**Pb**	**23 16 58.4**	**-1.7**
	baz=10.0						
JYNG	**Yonagunijimaku**	**2.33**	**37**	P	**Pn**	**23 16 57.1**	**+1.1**
JYNG				S	**Sn**	**23 17 25.0**	**+1.3**
YOJ	**Yonaguni jima**	**2.38**	**38**	*e*P	**Pn**	**23 16 57.5**	**+1.0**
	baz=39						
YOJ				*e*S	**Sn**	**23 17 25.4**	**+0.5**
	baz=39						
YOJ	**Yonaguni jima**	**2.38**	**38**	P	**Pn**	**23 16 57.9**	**+1.3**
YOJ				*e*S	**Sn**	**23 17 26.5**	**+1.7**
TATO	**Taipei**	**2.39**	**1**	*e*P	**Pb**	**23 17 00.5**	**-1.2**
	baz=3.0						
TIPB	**Shuangxi**	**2.41**	**9**	*e*P	**Pn**	**23 16 59.0**	**+1.8**
	baz=10.0						
NWF	**Wu-fen Shan**	**2.50**	**7**	*e*P	**Pn**	**23 16 60.0**	**+1.5**
	baz=8.0						
WFSB	**Wu-fen Shan**	**2.50**	**7**	*e*P	**Pn**	**23 17 00.0**	**+1.6**
	baz=8.0						
YM01	**YM01**	**2.56**	**3**	*e*P	**Pb**	**23 17 02.8**	**-1.9**
	baz=4.0						
HATJ	**Hateruma jima**	**2.64**	**56**	P	**Pn**	**23 17 00.8**	**+0.6**
HATJ				S	**Sn**	**23 17 30.3**	**-1.0**
IRIF	**Iriomote-Funau**	**2.75**	**50**	P	**Pn**	**23 17 02.7**	**+1.0**
IRIF				S	**Sn**	**23 17 34.4**	**+0.4**
JKRS	**Kuro-shima**	**2.89**	**55**	P	**Pn**	**23 17 04.3**	**+0.6**
JKRS				S	**Sn**	**23 17 36.9**	**-0.7**
JIJ	**Ishigaki jima**	**3.06**	**54**	P	**Pn**	**23 17 06.6**	**+0.5**
JIJ				S	**Sn**	**23 17 40.2**	**-1.7**
PTMZ	**Houxiangcun**	**3.23**	**320**	*e*P	**Pn**	**23 17 09.0**	**+0.6**
	baz=319						
PTMZ				*e*S	**Sn**	**23 17 44.8**	**-1.3**
	baz=319						
KNM	**Kinmen**	**3.30**	**304**	*e*P	**Pn**	**23 17 11.5**	**+2.2**
	baz=302						
JISG	**Ishigakijimahi**	**3.32**	**52**	P	**Pn**	**23 17 10.2**	**+0.6**
JISG				*e*S	**Sn**	**23 17 49.4**	**+1.3**
KNMB	**Chin-men Tao**	**3.36**	**305**	*e*P	**Pn**	**23 17 10.2**	**0.0**
	baz=304						
KNMB				*e*S	**Sn**	**23 17 47.5**	**-1.6**
	baz=304						
ZPLA	**Ao Xicun**	**3.64**	**292**	*e*P	**Pn**	**23 17 14.6**	**+0.6**
	baz=292						
JTJ	**Tarama**	**3.64**	**55**	S	**Sn**	**23 17 55.3**	**-0.8**
MATB	**Ma-tsu**	**3.81**	**340**	*e*P	**Pn**	**23 17 17.1**	**+0.8**

	baz=339						
AXDP	Jialang	3.92	307	*e*P	Pn	23 17 18.4	+0.6
	baz=306						
JIRB	Irabujima	4.10	56	*e*S	Sn	23 18 06.7	-0.7
JMJ2	Miyako jima3	4.18	58	P	Pn	23 17 22.3	+0.9
JMJ2				*e*S	Sn	23 18 09.3	0.0

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*NEIC **03** 23:29:48.5±1.8, 10°.26S±0°.04×71°.4W±0°.2, h623^{km}±10^{km}, mb4.0/15, Error ellipse: s-maj=24.4km s-min=4.4km az=97.0*

*IDC **03** 23:29:49.4±2.3, 10°.33S×71°.30W, h638^{km}±35^{km}, mb3.0/7, mb1 3.2/8, mb1mx2.9/27, mbtmp3.9/8, Error ellipse: s-maj=37.0km s-min=24.5km az=42.0*

ISC 03 23:29:49.1±0.6, **10°.35S**±0°.09×**71°.3W**±0°.1, **h650**^{km}, **n38**, σ1^{s}.**32**/38, **mb3.8**/11, **Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	2.95	332	P	P	23 31 09.0	-3.3
ETMB	Extrema	5.02	84	P	P	23 31 22.6	-2.8
LPAZ	La Paz	6.66	153	P	P	23 31 38.8	-0.3
	1.0nm,0.3s,baz=319,slow=2.8,SNR=6.2						
LPAZ	La Paz	6.66	153	P	P	23 31 38.6	-0.5
SAML	Samuel	8.11	81	P	P	23 31 49.3	-2.0
PB16	IPOC Station P	8.13	168	P	P	23 31 51.9	-0.1
PB12	IPOC Station P	8.27	174	P	P	23 31 51.9	-0.9
PSGCX	Pisagua	9.27	173	P	P	23 32 00.5	-1.6
PB11	IPOC Station P	9.49	171	P	P	23 32 04.1	-0.1
PB08	IPOC Station P	9.95	168	P	P	23 32 07.4	-1.4
TA01	Diego Aracena	10.22	174	P	P	23 32 09.6	-1.3
PB01	IPOC Station P	10.78	171	P	P	23 32 16.6	+0.1
VILB	Vilhena	11.16	104	P	P	23 32 19.4	-0.8
PB07	IPOC Station P	11.39	173	P	P	23 32 23.0	+0.6
BOAV	Boa Vista	16.59	41	P	P	23 33 10.2	+0.2
BOAV				IAmb	IAmb	23 33 17.6	
	comp=Z,5.3nm,1.2s						
GO03	Copiap	17.18	177	P	P	23 33 13.1	-2.2
ZARC	Zaragoza, Cauc	18.07	349	P	P	23 33 22.8	-0.8
ZARC				IAmb	IAmb	23 33 23.4	
	comp=Z,5.5nm,1.1s						
BAUV	El Baul	19.43	10	P	P	23 33 35.4	-0.4
BAUV				IAmb	IAmb	23 33 49.5	
	comp=Z,7.2nm,1.0s						
PLCA	Paso Flores	30.27	179	P	P	23 35 11.8	+1.2
	comp=Z,2.4nm,1.0s,baz=14,slow=12,SNR=3.0						
PLCA	Paso Flores	30.27	179	P	P	23 35 11.7	+1.1
PLCA				IAmb	IAmb	23 35 29.0	
	comp=Z,2.3nm,0.9s						
V61A	Roper	46.16	354	P	P	23 37 16.0	-2.0
Y49A	Blount Mountai	46.25	343	P	P	23 37 18.1	-0.6
P53A	Whipple	50.46	350	P	P	23 37 50.3	+0.8
P53A				IAmb	IAmb	23 38 09.4	
	comp=Z,12nm,1.1s						
S44A	Carbondale	50.67	342	P	P	23 37 51.5	+0.4
T42A	Van Buren	50.67	339	P	P	23 37 51.2	+0.1
FVM	French Village	51.31	341	P	P	23 37 56.2	+0.5
FVM				IAmb	IAmb	23 37 56.5	
	comp=Z,6.3nm,0.5s						
DRLN	Deer Lake	60.57	10	P	P	23 38 59.3	+0.4
DRLN				IAmb	IAmb	23 39 06.4	
	comp=Z,6.0nm,0.8s						
EYMN	Ely	60.74	345	P	P	23 39 00.6	+0.5
EYMN				IAmb	IAmb	23 39 03.4	
	comp=Z,13nm,1.1s						
MTPU	Mount Pierson	61.46	324	P	P	23 39 03.4	-2.0
PDAR	Pinedale Array	63.38	329	P	P	23 39 18.9	+1.5
	comp=Z,0.6nm,0.9s,baz=118,slow=9.3,SNR=2.3						
ULM	Lac du Bonnet	64.05	343	P	P	23 39 21.9	+0.7
	comp=Z,1.7nm,0.3s,baz=174,slow=3.8,SNR=2.4						
ULM	Lac du Bonnet	64.05	343	P	P	23 39 21.6	+0.4
ULM				IAmb	IAmb	23 39 39.8	
	comp=Z,3.5nm,1.1s						
TORD	Torodi Ar. Bea	76.10	74	P	P	23 40 34.2	+1.3
	comp=Z,0.5nm,0.3s,baz=245,slow=4.7,SNR=21						
ESDC	Sonseca Array	79.67	46	P	P	23 40 53.4	+1.9
	comp=Z,0.5nm,1.0s,baz=297,slow=4.2,SNR=2.2						
YKA	Yellowknife Ar	79.96	341	P	P	23 40 54.0	+1.6
	comp=Z,0.2nm,0.5s,baz=137,slow=5.7,SNR=6.6						
INK	Inuvik	89.73	341	P	P	23 41 40.4	+0.9
	comp=Z,1.1nm,0.4s,baz=124,slow=7.3,SNR=5.4						
MKAR	Makanchi Array	137.31	27	PKP	PKiKP	23 48 01.9	-0.8
	comp=Z,0.7nm,0.9s,baz=9.1,slow=3.6,SNR=2.8						
SONM	Songino Array	142.59	3	PKP	PKPdf	23 48 10.6	+0.4
	comp=Z,0.2nm,0.3s,baz=329,slow=2.9,SNR=2.1						

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*FUNV **03** 23:45:36.5, 8°.47N×71°.51W, h3^{km}, MW3.0*

ISC 03 23:45:34.6±1.5, **8°.48N**±0°.04×**71°.50W**±0°.04, **h4**^{km}±15^{km}, **n13**, σ1^{s}.**30**/25, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.66	107	*e*P	Pb	23 45 47.8	-0.9
SOCV				*e*S	Sb	23 45 56.9	-1.4
CAPV	Capacho	1.01	233	*e*P	Pg	23 45 55.4	+1.4
CAPV				*e*S	Sn	23 46 09.3	-1.3
TORV	Torococo	1.65	49	*e*P	Pn	23 46 04.6	+0.1
TORV				*e*S	Sn	23 46 25.4	-0.9
OCAC	Ocana	1.82	263	*e*P	Pg	23 46 09.6	+0.1
OCAC				*e*S	Sg	23 46 33.8	+0.7
OCAC				*i*		23 46 37.2	
	comp=Z,74nm,0.4s						
CURV	Curarigua	2.15	45	*e*S	Sb	23 46 39.3	-2.0
LL6C	La Loma 6 Bece	2.15	306	*e*P	Pb	23 46 14.8	+0.6
LL6C				*e*S	Sg	23 46 42.2	-1.6
ELOV	Elorza	2.48	126	*e*P	Pn	23 46 16.7	+1.0
ELOV				*e*S	Sn	23 46 46.4	0.0
BARC	Barichara	2.51	222	*e*P	Pg	23 46 23.2	+0.5
BARC				*e*S	Sg	23 46 53.8	-1.5
BARC				*i*		23 46 58.8	
	comp=Z,12nm,0.7s						
SMLC	San Martn de	2.57	277	*e*P	Pb	23 46 21.2	0.0
SMLC				*e*S	Sg	23 46 55.1	-2.0
SIQV	Siquisique	2.73	38	*e*P	Pn	23 46 21.0	+1.8
SIQV				*e*S	Sn	23 46 52.2	-0.5
MAPV	Macapo	3.29	66	*e*P	Pn	23 46 28.8	+1.9
MAPV				*e*S	Sn	23 47 07.7	+1.1
BAUV	El Baul	3.45	82	*e*P	Pn	23 46 30.9	+1.8
BAUV				*e*S	Sn	23 47 10.8	+0.4
BENV	Beln	4.12	69	*e*P	Pn	23 46 39.9	+1.4
BENV				*e*S	Sn	23 47 27.1	-0.1

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*BJI **03** 23:55:53.0±0.0, 0°.10N×123°.70E, h139^{km}, mB5.0/18, mb4.7/41*

*NEIC **03** 23:55:54.5±1.5, 0°.08N±0°.08×123°.64E±0°.06, h133^{km}±6^{km}, mb4.6/68, Error ellipse: s-maj=11.1km s-min=8.1km az=196.0*

*DJA **03** 23:55:54.6±0.1, 0°N±2°×12°4E±°, h120^{km}±2^{km}, M4.7/45, mB5.2/19, mb4.7/45, MLv5.0/24, Mw(mB)4.6/19*

*IDC **03** 23:55:55.1±0.7, 0°.06N×123°.62E, h144^{km}±6^{km}, mb4.1/22, mb1 4.3/28, mb1mx4.0/44, mbtmp4.6/28, MS3.4/4, Ms1 3.5/4, ms1mx3.0/31, Error ellipse: s-maj=11.2km s-min=6.8km az=77.0*

ISC 03 23:55:54.5±0.5, **0°.09N**±0°.04×**123°.66E**±0°.04, **h138**^{km}±4^{km}, **n200**, σ1^{s}.**33**/215, **mb4.6**/69, **1D**, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.58	34	P	Pn	23 56 15.2	+0.3
KMSI				S	Sn	23 56 29.2	-1.2
MRSI	Marisa	1.76	283	P	Pn	23 56 24.3	-1.8
MRSI				S	Sn	23 56 46.8	-3.4
APSI	Ampana	2.24	244	P	Pn	23 56 30.6	-1.2
APSI				S	Sn	23 57 00.1	-0.4
TOLI2	Tolitoli	3.05	290	Pn	Pn	23 56 40.9	-1.1
TOLI2				Sn	Sn	23 57 13.6	-5.2
TOLI2	Tolitoli	3.05	290	P	Pn	23 56 41.9	-0.2
SANI	Sanana	3.15	132	P	Pn	23 56 40.4	-3.0
SANI				S	Sn	23 57 14.2	-6.9
SANI	Sanana	3.15	132	P	Pn	23 56 40.7	-2.7
MPSI	Mapaga	3.77	274	P	Pn	23 56 51.4	0.0
TNTI	Ternate	3.77	80	P	Pn	23 56 51.2	-0.3
TNTI	Ternate	3.77	80	Pn	Pn	23 56 51.0	-0.5
TNTI	Ternate	3.77	80	P	Pn	23 56 50.8	-0.7
LBMI	Labuha	3.91	101	P	Pn	23 56 52.6	-0.7
TTSI	Tana Toraja	4.94	231	P	Pn	23 57 06.1	-0.8
SPSI	Sidrap Palu	5.59	224	P	Pn	23 57 14.6	-1.1
	1.1nm2µm94nm,0.7s						
BNSI	Bone	5.70	218	P	Pn	23 57 15.0	-2.1
	0.7nm1µm113nm,0.7s						
AAI	Ambon	5.88	130	P	Pn	23 57 19.7	+0.1
	1.7nm4µm590nm,1.1s						
MSAI	Masohi	6.28	123	P	Pn	23 57 25.9	+1.1
	0.5nm701nm47nm,0.5s						
KAPI	Kappang	6.39	218	P	Pn	23 57 26.4	0.0
	3.4nm,0.3s,baz=56,slow=6.9,SNR=7.0						
KAPI				S	Sn	23 58 36.2	-2.1
	5.1nm,0.3s,baz=44,slow=18,SNR=8.7						
KAPI	Kappang	6.39	218	Pn	Pn	23 57 25.7	-0.7
KAPI	Kappang	6.39	218	P	Pn	23 57 27.5	+1.1
BKSI	Bulukumba	6.43	213	P	Pn	23 57 26.5	-0.4
	0.5nm807nm40nm,0.7s						
BKB	Balikpapan	6.89	259	P	Pn	23 57 33.3	+0.2
	0.7nm209nm,0.7s						
BKB	Balikpapan	6.89	259		Pn	23 57 32.6	-0.5
BKB	Balikpapan	6.89	259	P	Pn	23 57 33.3	+0.2
BSSI	Bau Bau, Buton	6.95	207	P	Pn	23 57 34.1	+0.2
	0.5nm966nm113nm,0.7s						
MYLDM	Lahad Datu	7.22	315	Pn	Pn	23 57 36.8	-0.8
SWI	Sorong	7.66	97	P	Pn	23 57 43.0	-0.4
	0.4nm97nm,1.1s						
SIJI	Sorong	7.67	97	P	Pn	23 57 44.3	+0.8
	8.1nm,0.3s,baz=289,slow=9.4,SNR=33						
SIJI				S	Sn	23 59 10.6	+1.6
	baz=53,slow=20,SNR=1.5						
BNDI	Bandanaira	7.74	126	P	Pn	23 57 43.9	-0.6
KBKI	Kotabaru	8.21	246	P	Pn	23 57 51.7	+0.9
	42nm,0.8s						
EDFI	Ende, Flores	8.99	193	P	Pn	23 58 01.1	-0.3
	10nm,1.0s						
FAKI	Fak Fak	9.09	109	P	Pn	23 58 00.7	-1.9
	881nm81nm,1.0s						
FAKI	Fak Fak	9.09	109	Pn	Pn	23 58 00.8	-1.9
FAKI	Fak Fak	9.09	109	P	Pn	23 58 01.4	-1.3
BBKI	Banjar Baru	9.49	248	P	Pn	23 58 08.8	+0.8
	6µm23nm,0.6s						
KKM	Kota Kinabalu	9.50	309	Pn	Pn	23 58 09.2	+1.0
KKM	Kota Kinabalu	9.50	309	P	Pn	23 58 12.8	+4.6
SOEI	Soe	9.79	176	P	Pn	23 58 12.1	-0.1
	1µm86nm,0.9s						
SOEI	Soe	9.79	176	Pn	Pn	23 58 11.9	-0.2
SOEI	Soe	9.79	176	P	Pn	23 58 11.7	-0.5
BATI	Baumata	10.22	180	P	Pn	23 58 19.3	+1.5
	2.5nm,0.3s,baz=360,slow=19,SNR=9.7						
BATI	Baumata	10.22	180	P	Pn	23 58 19.2	+1.4
	34nm,0.9s						
SAUI	Saumlaki	11.06	137	P	Pn	23 58 29.2	+0.3
	13µm150nm,1.2s						
SAUI	Saumlaki	11.06	137	Pn	Pn	23 58 28.9	+0.1
SAUI	Saumlaki	11.06	137	P	Pn	23 58 28.1	-0.8
SBUM	Sibu	11.67	282	Pn	Pn	23 58 35.7	-1.2
STKI	Sintang	12.18	270	P	P	23 58 52.1	+1.8
JAGI	Jajag, Banyuwa	12.72	228	Pn	Pn	23 58 51.4	+0.7
KSM	Kuching	13.42	276	P	P	23 59 03.9	-0.2
KSM	Kuching	13.42	276	P	P	23 59 03.5	-0.6
DRS	Darwin Rock St	14.36	150	P	Pn	23 59 12.1	+0.5
MTN	Manton Dam	14.83	150		Pn	23 59 16.1	-1.4
MTN	Manton Dam	14.83	150	P	Pn	23 59 18.0	+0.5
SMRI	Semarang	14.97	241	Pn	Pn	23 59 17.7	-1.6
KDU	Kakadu	15.41	146	P	Pn	23 59 24.2	-0.5
KNRA	Kununurra	16.45	162	P	Pn	23 59 37.2	-0.3
KNRA	Kununurra	16.45	162	P	P	23 59 38.5	+0.8
JAY	Jayapura	17.24	99	P	Pn	23 59 47.9	+0.8
	0.8nm,0.3s,baz=198,slow=6.4,SNR=2.5						
LEM	Lembang	17.41	246	P	Pn	23 59 49.5	+0.1
	3.8nm,0.3s,baz=15,slow=12,SNR=5.0						
LEM				LR	LR	00 08 08.7	
	comp=Z,34nm,19.6s,baz=130,slow=42						
CBJI	Citeko	17.98	249	P	Pn	23 59 56.1	+0.2
FITZ	Fitzroy Crossi	18.17	174	P	P	23 59 56.7	+0.1
	2.0nm,0.3s,baz=2.8,slow=7.5,SNR=100						
DSRI	Dabo	19.09	268	P	P	00 00 07.7	+1.0
	1µm28nm,1.1s						
CGJI	Cibinong	19.12	249	P	P	00 00 07.9	+0.9
	1µm44nm,0.8s						
DLV	T Lat	19.12	309	P	P	00 00 08.0	+0.8
DLV	T Lat	19.12	309	P	Pn	00 00 11.0	+1.5
KLSI		19.49	256	P	Pn	00 00 15.0	+1.3
	20nm,1.2s						
MYKOM	Kota Tinggi	19.88	275	P	P	00 00 15.8	+0.6
MYKOM				IAmb	IAmb	00 00 18.0	
	comp=Z,17nm,0.8s						
MDSI	Maura Dua	19.98	257	P	P	00 00 17.0	+0.6
	comp=Z,8.7nm,1.0s						
MASI	Maura Aman, Be	21.65	261	P	P	00 00 38.4	+4.2
	comp=Z,70nm,0.9s						
PSA00	Pilbara Seismi	21.84	190	P	P	00 00 35.5	-0.6
PSA00	Pilbara Seismi	21.84	190	P	P	00 00 35.1	-1.1
PSA00				IAmb	IAmb	00 00 39.4	
	comp=Z,11nm,0.9s						
PSA00	Pilbara Seismi	21.84	190	P	P	00 00 38.3	+2.1
WB0	Warramunga Arr	22.36	153	P	P	00 00 40.4	-1.1
WB0				IAmb	IAmb	00 00 43.9	
	comp=Z,30nm,0.9s						
WRAB	Tennant Creek	22.48	153	P	P	00 00 41.7	-0.9
WRAB				IAmb	IAmb	00 00 50.0	
	comp=Z,23nm,0.9s						
WRA	Warramunga Arr	22.49	153	P	P	00 00 42.2	-0.5
	comp=Z,11nm,0.5s,baz=335,slow=10,SNR=132						
WRA				pP	pwP	00 01 10.1	0.0
	comp=Z,5.8nm,0.7s,baz=329,slow=12,SNR=3.5						
WRA				PcP	PcP	00 04 32.5	+0.5
	comp=Z,0.9nm,0.7s,baz=342,slow=2.0,SNR=2.2						
WRA				S	S	00 04 37.1	-2.3
	comp=Z,7.1nm,1.0s,baz=335,slow=16,SNR=5.8						
WRA				ScP	ScP	00 07 55.9	-1.1
	comp=Z,1.8nm,0.9s,baz=329,slow=2.4,SNR=6.5						
WRA	Warramunga Arr	22.49	153	P	P	00 00 41.4	-1.2
WB2	Warramunga Arr	22.49	153	IAmb	IAmb	00 00 44.0	
	comp=Z,18nm,0.8s						
WR0	Warramunga Arr	22.59	152	P	P	00 00 43.0	-0.7
WR0				IAmb	IAmb	00 00 45.6	
	comp=Z,17nm,0.8s						
IPM	Ipoh	23.03	281	P	P	00 00 48.2	+0.4
IPM	Ipoh	23.03	281	P	P	00 00 51.3	+3.4
PDSI	Padang	23.22	268	P	P	00 00 51.0	+1.4
TPUB	Ta-pu	23.26	353	P	P	00 00 50.1	+0.2
YULB	Yu-li	23.28	355	P	P	00 00 50.0	-0.1
YULB				IAmb	IAmb	00 01 02.7	
	comp=Z,31nm,1.1s						
UBPT	Khong Chiam	23.47	311	P	P	00 00 51.9	+0.1
UBPT				IAmb	IAmb	00 00 56.1	
	comp=Z,19nm,1.0s						
KULM	Kulim	23.55	283	P	P	00 00 52.2	-0.5
KULM				IAmb	IAmb	00 00 55.5	
	comp=Z,16nm,0.9s						
SSLB	Suanglung	23.71	354	P	P	00 00 53.7	-0.3
SSLB				IAmb	IAmb	00 01 11.6	
	comp=Z,19nm,0.8s						
COEN	Coen	23.84	127	P	P	00 00 54.5	-0.7
COEN				IAmb	IAmb	00 00 57.9	
	comp=Z,15nm,0.8s						
COEN	Coen	23.84	127	P	P	00 00 56.2	+1.0
RPSI	Rantau Prapat	24.86	276	P	P	00 01 04.3	-0.2
PSI	Prapat	24.87	276	P	P	00 01 04.3	-0.4
	comp=Z,2.7nm,0.4s,baz=169,slow=10,SNR=9.3						
PMG	Port Moresby	25.23	113	P	P	00 01 10.5	+2.7
	comp=Z,11nm,0.4s,baz=270,slow=10,SNR=4.2						
PMG	Port Moresby	25.23	113	P	P	00 01 08.4	+0.5
PMG				IAmb	IAmb	00 01 12.7	
	comp=Z,18nm,0.9s						
WRKA	Warakurna	25.38	170	P	P	00 01 09.6	+0.5
AS31	Alice Springs	25.62	158	P	P	00 01 11.6	+0.3
ASAR	Alice Springs	25.62	158	P	P	00 01 11.8	+0.5
	comp=Z,5.4nm,0.8s,baz=344,slow=14,SNR=47						
ASAR				pP	pwP	00 01 41.6	-1.4
	comp=Z,7.6nm,0.7s,baz=322,slow=6.4,SNR=6.0						
ASAR				PcP	PcP	00 04 39.2	+0.5
	comp=Z,3.2nm,0.8s,baz=348,slow=2.2,SNR=8.4						
ASAR				S	S	00 05 28.7	-0.7
	comp=Z,1.3nm,0.9s,baz=346,slow=18,SNR=4.3						
ASAR				ScP	ScP	00 08 05.5	0.0
	comp=Z,1.6nm,0.9s,baz=347,slow=2.6,SNR=5.9						
ASAR	Alice Springs	25.62	158	P	P	00 01 12.5	+1.2
QIS	Mount Isa	25.77	144	P	P	00 01 14.6	+1.8
CM31	Chiang Mai Arr	30.38	308	P	P	00 01 54.7	+0.9
CM31				IAmb	IAmb	00 01 57.9	
	comp=Z,13nm,1.0s						
CMAR	Chiang Mai Arr	30.38	308	P	P	00 01 54.9	+1.2
	comp=Z,7.7nm,1.0s,baz=139,slow=7.5,SNR=32						
CMAR				PcP	PcP	00 04 51.0	+0.5
	comp=Z,1.0nm,0.3s,baz=150,slow=2.0,SNR=7.8						
CMAR				LR	LR	00 15 03.1	
	comp=Z,40nm,19.7s,baz=172,slow=38						
CMAR	Chiang Mai Arr	30.38	308	P	P	00 01 54.2	+0.5
CHTO	Chiang Mai	30.58	309	P	P	00 01 55.5	0.0
CHTO				IAmb	IAmb	00 01 59.5	
	comp=Z,10nm,0.8s						
CHTO	Chiang Mai	30.58	309	P	P	00 01 57.6	+2.1
	comp=Z,9.5nm,1.0s						
FORT	Forrest	30.98	173	P	P	00 01 58.1	-0.7
JCJ	Chichijima	32.23	32	P	P	00 02 10.3	+0.5
	comp=Z,168nm,0.5s,baz=265,slow=6.9,SNR=6.5						
JCJ	Chichijima	32.23	32	P	P	00 02 09.8	0.0
ENH	Enshi	32.91	337	P	P	00 02 15.9	+0.2
JNU	Nakatsue	33.56	11	P	P	00 02 21.9	+0.5
	comp=Z,32nm,0.5s,baz=207,slow=2.3,SNR=9.3						
JNU	Nakatsue	33.56	11	P	P	00 02 21.5	+0.1
STKA	Stephens Creek	36.04	154	P	P	00 02 43.4	+0.7
	comp=Z,11nm,0.5s,baz=332,slow=8.4,SNR=38						
STKA	Stephens Creek	36.04	154	P	P	00 02 43.0	+0.3
STKA	Stephens Creek	36.04	154	P	P	00 02 43.8	+1.1
	comp=Z,4.6nm,1.2s						
HTT	Hallett	36.30	158	P	P	00 02 46.8	+1.9
	comp=Z,15nm,1.2s						
XAN	Xi'an	36.50	339	P	P	00 02 47.8	+1.2
XAN				pmax	pmax		
	comp=Z,11nm,1.1s						
KSRS	Korea Array	37.39	6	P	P	00 02 54.3	+0.2
	comp=Z,1.0nm,0.5s,baz=185,slow=8.4,SNR=4.4						
KSRS				LR	LR	00 20 50.6	
	comp=Z,33nm,18.1s,baz=3.0,slow=40						
CMSA	Cobar Meteorol	37.75	148	P	P	00 02 58.8	+1.7
	comp=Z,24nm,1.0s						
MJAR	Matsushiro Arr	38.70	19	P	P	00 03 05.2	+0.1
	comp=Z,10nm,0.7s,baz=185,slow=9.7,SNR=15						
MJAR	Matsushiro Arr	38.70	19	IAmb	IAmb	00 03 06.4	
	comp=Z,5.3nm,0.9s						
MAT	Matsushiro	38.71	19	P	P	00 03 04.4	-0.7
SHL	Shillong	39.78	312	P	P	00 03 14.6	+0.2
SHL				IAmb	IAmb	00 03 16.7	
	comp=Z,18nm,1.1s						
LZH	Lanzhou	40.28	335	*e*P	P	00 03 20.7	+2.4
LZH				sP	sP	00 04 03.1	-1.5
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
BJI	Beijing	40.35	351	P	P	00 03 20.4	+1.8
BJI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ARPS	Mount Arapiles	40.36	157	P	P	00 03 20.0	+1.2
	comp=Z,41nm,0.8s						
HHC	Hu-ho-hao-te	42.04	346	*e*P	P	00 03 34.3	+1.7
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,5.2s						
CAN	Canberra	42.42	149	P	P	00 03 36.4	+0.7
CAN				IAmb	IAmb	00 03 39.4	
	comp=Z,11nm,0.6s						
CAN	Canberra	42.42	149	P	P	00 03 38.8	+3.1
	comp=Z,32nm,1.9s						
TOO	Toolangi	42.55	154	P	P	00 03 36.7	-0.1
TOO				IAmb	IAmb	00 03 39.9	
	comp=Z,12nm,1.1s						
TOO	Toolangi	42.55	154	P	P	00 03 39.8	+3.1
	comp=Z,11nm,1.1s						
ODAN	Odare	43.87	310	*e*P	P	00 03 48.4	+0.7
	comp=Z,26nm,0.9s						
TAPN	Taplejung	43.88	311	*e*P	P	00 03 48.5	+0.6
RAMN	Ramite	44.52	310	*e*P	P	00 03 53.8	+0.9
	comp=Z,19nm,0.5s						
USRK	Ussuriysk Ar.	44.55	9	P	P	00 03 53.0	+0.5
	comp=Z,5.9nm,0.6s,baz=184,slow=5.8,SNR=13						
USRK	Ussuriysk Ar.	44.55	9	P	P	00 03 52.1	-0.4
MDJ	Mudanjiang	44.65	6	P	P	00 03 53.4	+0.1
GTA	Gaotai	44.80	334	⇓P	P	00 03 56.6	+1.8
GTA				pP	pP	00 04 26.6	+0.6
GTA				sP	sP	00 04 41.1	-0.4
GTA				PcP	PcP	00 05 35.7	+1.2
GTA				pmax	pmax		
	comp=Z,13nm,1.1s						
GUN	Gumba	45.56	311	*e*P	P	00 04 02.2	+1.0
	comp=Z,54nm,0.9s						
PKI	Pulchoki	45.75	310	*e*P	P	00 04 02.7	0.0
PKIN	Phulchoki	45.76	310	*e*P	P	00 04 03.1	+0.4
KKN	Kakani	45.96	310	*e*P	P	00 04 04.8	+0.6
DMN	Daman	46.00	310	*e*P	P	00 04 05.4	+0.8
GKN	Gorkha	46.55	310	*e*P	P	00 04 09.0	+0.2
KOLN	Koldanda	47.24	309	*e*P	P	00 04 14.1	-0.1
	comp=Z,64nm,0.8s						
DANN	Dangsing	47.40	310	*e*P	P	00 04 15.7	+0.2
HYB	Hyderabad	47.60	294	*i* P	P	00 04 16.0	-0.9
PYUN	Piuthan	47.87	309	*e*P	P	00 04 19.4	+0.3
	comp=Z,88nm,0.8s						
KLR	Kul'dur	49.45	7	P	P	00 04 30.6	+0.1
	comp=Z,3.9nm,0.8s,baz=245,slow=2.9,SNR=8.5						
ULN	Ulaanbaatar	49.73	345	P	P	00 04 32.9	+0.1
SONM	Songino Array	49.87	345	P	P	00 04 34.0	+0.1
	comp=Z,4.1nm,0.8s,baz=158,slow=8.5,SNR=33						
SONM				pP	pP	00 05 05.5	-0.1
	comp=Z,2.3nm,0.8s,baz=162,slow=7.6,SNR=3.6						
SONM				PcP	PcP	00 05 52.1	-0.3
	comp=Z,2.5nm,0.7s,baz=162,slow=4.6,SNR=5.1						
SONM	Songino Array	49.87	345	P	P	00 04 33.6	-0.3
WMQ	Urumqi	54.06	328	*e*P	P	00 05 01.9	-3.0
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,7.3s						
NIL	Nilore	57.83	311	P	P	00 05 30.9	-1.0
NIL				IAmb	IAmb	00 05 36.7	
	comp=Z,6.7nm,0.9s						
TARG	Taragay, Kyrgy	58.51	321	P	P	00 05 37.0	0.0
PRZ	Przheval'sk	58.55	322	P	P	00 05 37.3	+0.4
PRZ				IAmb	IAmb	00 05 39.5	
	comp=Z,7.5nm,0.7s						
KSH	Kashi	58.55	318	P	P	00 05 37.1	+0.2
KSH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MK31	Makanchi Array	58.89	328	IAmb	IAmb	00 05 40.4	
	comp=Z,5.0nm,0.7s						
MKAR	Makanchi Array	58.89	328	P	P	00 05 39.0	0.0
	comp=Z,6.5nm,0.6s,baz=126,slow=8.0,SNR=60						
MKAR				PcP	PcP	00 06 26.3	-0.5
	comp=Z,3.1nm,0.7s,baz=152,slow=3.1,SNR=11						
MAKZ	Makanchi	59.06	328	P	P	00 05 39.9	-0.3
MAKZ				IAmb	IAmb	00 05 40.7	
	comp=Z,8.2nm,1.1s						
DCZ	Deep Cove	59.37	146	P	P	00 05 42.2	-0.1
PETK	Petropavlovsk-	59.95	23	P	P	00 05 45.8	-0.3
	comp=Z,7.4nm,0.8s,baz=201,slow=7.9,SNR=6.7						
BOOM	Boomskoye usch	60.09	321	P	P	00 05 46.6	-0.9
AAK	Ala-Archa	61.08	320	P	P	00 05 53.9	-0.3
DRK	Karamyk	61.38	316	P	P	00 05 56.2	-0.3
DRK				IAmb	IAmb	00 05 58.9	
	comp=Z,5.4nm,0.8s						
KBL	Kabul	61.39	310	P	P	00 05 55.6	-0.9
KBL				IAmb	IAmb	00 05 58.0	
	comp=Z,10nm,0.8s						
YAK	Yakutsk	61.96	3	P	P	00 05 59.2	-0.2
GAR	Garm	62.22	315	P	P	00 06 01.3	-0.5
BTK	Batken	62.32	316	P	P	00 06 01.7	-0.7
BTK				IAmb	IAmb	00 06 05.9	
	comp=Z,3.6nm,0.8s						
ZAA0	Zalesovo Array	62.51	335	IAmb	IAmb	00 06 04.1	
	comp=Z,6.7nm,0.8s						
ZALV	Zalesovo Beam	62.51	335	P	P	00 06 02.6	-0.7
	comp=Z,6.5nm,0.7s,baz=123,slow=5.9,SNR=28						
ZALV				PcP	PcP	00 06 39.6	-1.6
	comp=Z,1.5nm,0.6s,baz=126,slow=4.3,SNR=3.7						
ZALV	Zalesovo Beam	62.51	335	P	P	00 06 01.9	-1.4
MA2	Magadan	62.98	15	P	P	00 06 07.1	+0.8
KURK	Kurchatov	63.23	330	P	P	00 06 07.3	-0.8
KKAR	Karatay Array	63.88	319	P	P	00 06 12.0	-0.6
TIXI	Tiksi	71.53	2	P	P	00 06 58.5	-1.4
TIXI				IAmb	IAmb	00 07 00.3	
	comp=Z,15nm,1.0s						
NRIK	Noril'sk	73.25	347	P	P	00 07 09.9	-0.3
	comp=Z,5.6nm,0.9s,baz=137,slow=7.2,SNR=8.8						
NRIK	Noril'sk	73.25	347	IAmb	IAmb	00 07 10.7	
	comp=Z,6.2nm,0.9s						
ARU	Arti	76.40	329	P	P	00 07 27.2	-1.4
ARU				IAmb	IAmb	00 07 27.9	
	comp=Z,6.7nm,0.8s						
RAYN	Ar Rayn	79.11	294	P	P	00 07 43.4	-1.0
MAW	Mawson	79.30	200	P	P	00 07 44.7	+0.3
	comp=Z,5.0nm,0.8s,baz=12,slow=9.3,SNR=3.6						
VNDA	Vanda	80.24	172	P	P	00 07 49.7	+0.4

	comp=Z,2.5nm,0.8s,baz=327,slow=6.0,SNR=11						
VNDA	Vanda	80.24	172	P	P	00 07 49.9	+0.6
GURO	Guroymak-BITLI	83.39	309	P	P	00 08 06.2	-0.6
GURO				IAmb	IAmb	00 08 08.7	
	comp=Z,4.8nm,0.9s						
KLMR	Klimovskoe	87.06	331	*e*P	P	00 08 22.0	-2.3
KLMR				AMP		00 08 24.1	
	comp=Z,16nm,0.8s						
H21K	Melozitna Rive	87.25	24	P	P	00 08 25.7	+0.5
MLY	Manley	88.06	25	IAmb	IAmb	00 08 31.7	
	comp=Z,5.6nm,0.9s						
COLD	Coldfoot	88.42	23	P	P	00 08 31.5	+0.8
COLD				IAmb	IAmb	00 08 32.8	
	comp=Z,7.4nm,0.9s						
RND	Reindeer	88.80	27	IAmb	IAmb	00 08 33.1	
	comp=Z,8.0nm,0.8s						
ILAR	Eielson Array	89.69	25	P	P	00 08 36.1	-0.6
	comp=Z,1.0nm,0.6s,baz=241,slow=5.2,SNR=21						
BRTR	Keskin Array B	89.96	310	P	P	00 08 37.1	-1.7
	comp=Z,1.5nm,1.0s,baz=113,slow=6.7,SNR=3.3						
PAX	Paxson	90.32	27	P	P	00 08 40.2	+0.4
PAX				IAmb	IAmb	00 08 41.3	
	comp=Z,5.2nm,1.0s						
BMAR	Burnt Mountain	90.60	23	P	P	00 08 42.3	+1.3
L27K	Beaver Creek,	91.98	27	P	P	00 08 48.5	+1.1
BARN	Barnard Glacie	92.20	29	P	P	00 08 50.1	+1.4
AKASG	Malin Array Be	92.75	321	P	P	00 08 49.1	-2.1
	comp=Z,0.2nm,0.4s,baz=67,slow=4.4,SNR=4.1						
ARCES	ARCESS Array B	92.78	340	P	P	00 08 49.5	-1.4
	comp=Z,2.9nm,0.6s,baz=69,slow=4.1,SNR=6.4						
ARCES				LR	LR	00 55 10.7	
	comp=Z,157nm,18.6s,baz=320,slow=38						
FINES	FINESS Array B	93.56	331	P	P	00 08 52.7	-2.0
	comp=Z,1.5nm,0.8s,baz=101,slow=7.5,SNR=4.1						
LSZ	Lusaka	95.30	255	P	P	00 09 02.5	-1.3
TORD	Torodi Ar. Bea	121.02	285	PKP	PKPdf	00 14 31.3	-0.5
	comp=Z,1.3nm,0.6s,baz=65,slow=1.6,SNR=9.3						
TORD				pPKP	pPKPdf	00 15 09.9	+2.4
	comp=Z,0.9nm,0.8s,baz=46,slow=1.0,SNR=3.0						
TORD	Torodi Ar. Bea	121.02	285		PKPdf	00 14 31.4	-0.4
SCHQ	Schefferville	124.59	7	PKP	PKiKP	00 14 38.2	+0.3
	comp=Z,6.1nm,1.0s,baz=27,slow=2.3,SNR=4.2						
TXAR	Lajitas Array	126.24	53	PKP	PKiKP	00 14 42.5	+0.4
	comp=Z,0.5nm,0.8s,baz=242,slow=2.7,SNR=5.2						
DBIC	Dimbokro	128.20	279	PKP	PKPdf	00 14 45.9	+0.3
	comp=Z,3.4nm,1.0s,baz=146,slow=3.6,SNR=2.5						

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*THE **03** 23:58:37.8, 37°.66N×21°.47E, h16^{km}, ML3.5/18, Error ellipse: s-maj=0.9km s-min=0.5km az=162.0*

*ATH **03** 23:58:38.0, 37°.69N×21°.44E, h26^{km}±3^{km}, ML3.3/17, Error ellipse: s-maj=3.5km s-min=1.0km az=331.0*

ISC 03 23:58:37.8±1.0**, 37°.67N**±0°.02×**21°.46E**±0°.02**, h18**^{km}±6^{km}**, n72, σ0**^{s}**86**/98**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTN	Vitineika	0.33	318	P	Pg	23 58 45.2	+0.4
VTN	Vitineika	0.33	318	P	Pg	23 58 45.2	+0.4
DRO	Drossia	0.34	35	P	Pg	23 58 45.0	0.0
DRO				S	Sb	23 58 50.7	+0.1
	32µm,0.4s						
DRO	Drossia	0.34	35	P	Pg	23 58 45.1	0.0
DRO				S	Sb	23 58 50.9	+0.4
DRO				AML	AML	23 58 54.1	
	comp=E,82469µm,0.4s						
DRO				AML	AML	23 58 55.8	
	comp=N,50506µm,0.6s						
RLS	Riolos of Patr	0.38	1	P	Pg	23 58 45.4	-0.4
RLS				S	Sb	23 58 51.9	+0.1
	comp=N,13µm,0.3s						
RLS	Riolos of Patr	0.38	1	P	Pg	23 58 45.4	-0.4
RLS				S	Sb	23 58 52.1	+0.4
RLS				AML	AML	23 58 53.0	
	comp=N,24489µm,0.3s						
RLS				AML	AML	23 58 53.1	
	comp=E,29101µm,0.3s						
LTHK	Lithakia	0.50	274	P	Pg	23 58 47.5	-0.3
LTHK				S	Sb	23 58 55.2	+0.3
	comp=E,40µm,0.2s						
LTHK	Lithakia	0.50	274	P	Pg	23 58 47.6	-0.3
LTHK				S	Sb	23 58 55.2	+0.3
LTHK				AML	AML	23 58 56.7	
	comp=E,86483µm,0.2s						
LTHK				AML	AML	23 58 58.5	
	comp=N,70610µm,0.3s						
ITM	Ithomi	0.62	143	P	Pb	23 58 50.1	0.0
ITM				S	Sb	23 58 58.5	+0.1
	comp=N,965nm,0.4s						
ITM	Ithomi	0.62	143	P	Pb	23 58 50.0	0.0
ITM				AML	AML	23 59 07.8	
	comp=N,2210µm,0.3s						
ITM				AML	AML	23 59 09.3	
	comp=E,2037µm,0.4s						
KLV	Kalavryta, Ach	0.66	56	P	Pg	23 58 50.0	-0.8
KLV				S	Sn	23 59 01.3	-1.0
	comp=E,1µm,0.6s						
KLV	Kalavryta, Ach	0.66	56	P	Pg	23 58 50.0	-0.8
LAKA	Lakka	0.70	36	P	Pg	23 58 50.7	-0.8
LAKA				S	Sb	23 59 02.1	+1.3
	comp=E,9µm,0.7s						
LAKA	Lakka	0.70	36	P	Pg	23 58 50.8	-0.8
GUR	Goura	0.75	69	P	Pg	23 58 51.5	-0.9
GUR				S	Sg	23 59 02.0	-0.4
	comp=E,3µm,0.4s						
GUR	Goura	0.75	69	P	Pg	23 58 51.6	-0.9
GUR				AML	AML	23 59 11.4	
	comp=N,5696µm,0.5s						
GUR				AML	AML	23 59 16.1	
	comp=E,5221µm,0.8s						
ALIK	Aliki, Aigiali	0.78	41	P	Pb	23 58 52.5	-0.4
ALIK				S	Sb	23 59 04.2	+1.1
PYL	PYLOS	0.81	164	P	Pb	23 58 53.1	-0.3
PYL				S	Sb	23 59 04.6	+0.6
PYL	PYLOS	0.81	164	P	Pb	23 58 53.1	-0.3
PSDA	Pessada-Kefalo	0.82	303	P	Pb	23 58 52.3	-1.3
PSDA				S	Sn	23 59 06.3	+0.1
PSDA	Pessada-Kefalo	0.82	303	P	Pb	23 58 52.6	-1.0
EFP	Efpalio	0.83	25	P	Pb	23 58 53.0	-0.8
EFP				S	Sn	23 59 06.3	-0.1
	comp=E,2µm,0.5s						
EFP	Efpalio	0.83	25	P	Pb	23 58 52.9	-0.8
EFP				AML	AML	23 59 10.5	
	comp=E,2784µm,0.5s						
EFP				AML	AML	23 59 12.9	
	comp=N,3098µm,0.4s						
TRIZ	Trizonia	0.84	35	P	Pb	23 58 53.4	-0.6
TRIZ				S	Sg	23 59 05.8	+0.4
TRIZ	Trizonia	0.84	35	P	Pb	23 58 53.4	-0.6
VLS	Valsamata	0.85	306	P	Pb	23 58 53.2	-1.0
VLS				S	Sn	23 59 07.2	+0.2
	comp=N,2µm,0.4s						
VLS	Valsamata	0.85	306	P	Pb	23 58 53.1	-1.0
VLS				AML	AML	23 59 12.7	
	comp=E,3182µm,0.4s						
VLS				AML	AML	23 59 13.3	
	comp=N,4523µm,0.5s						
SERG	Sergoula	0.88	32	P	Pb	23 58 53.9	-0.6
SERG				S	Sg	23 59 07.0	+0.5
	comp=N,2µm,0.4s						
SERG	Sergoula	0.88	32	P	Pb	23 58 53.9	-0.6
SERG				AML	AML	23 59 10.4	
	comp=N,5502µm,0.5s						
SERG				AML	AML	23 59 12.8	
	comp=E,3958µm,0.4s						
ANX	Ano Chora	0.99	21	P	Pb	23 58 55.7	-0.8
ANX				S	Sb	23 59 09.9	+0.7
	comp=E,2µm,0.6s						
ANX	Ano Chora	0.99	21	P	Pb	23 58 55.7	-0.8
ANX				AML	AML	23 59 18.1	
	comp=N,4867µm,0.5s						
ANX				AML	AML	23 59 18.9	
	comp=E,4953µm,0.7s						
KEF4	Livadi, Kephal	1.00	306	P	Pb	23 58 56.1	-0.6
KEF4				S	Sn	23 59 12.2	+1.5
	comp=E,10µm,0.7s						
THAL	Thalero	1.02	69	P	Pb	23 58 56.8	-0.1
THAL	Thalero	1.02	69	P	Pb	23 58 56.8	-0.1
KEF3	Kipouria, Keph	1.03	301	P	Pb	23 58 55.9	-1.2
KEF3				S	Sn	23 59 12.6	+1.3
	comp=E,6µm,0.4s						
DMLN	Damoulianata-K	1.03	304	P	Pb	23 58 56.2	-0.9
DMLN				S	Sn	23 59 13.1	+1.7
FSK	Fiskardo	1.06	318	P	Pb	23 58 56.8	-0.8
FSK				S	Sg	23 59 12.6	+0.4
	comp=E,1µm,0.5s						
FSK	Fiskardo	1.06	318	P	Pb	23 58 56.7	-0.8
FSK				AML	AML	23 59 17.0	
	comp=N,2406µm,0.6s						
FSK				AML	AML	23 59 19.0	
	comp=E,2158µm,0.2s						
EVGI	Lefkada island	1.14	326	P	Pn	23 58 58.1	-0.8
EVGI				S	Sn	23 59 14.8	+0.7
	comp=E,2µm,0.3s						
EVGI	Lefkada island	1.14	326	P	Pn	23 58 58.3	-0.6
NYDR	Nydri-Lefkada	1.20	330	P	Pn	23 58 58.9	-0.8
NYDR				S	Sg	23 59 17.2	+0.5
	comp=E,1µm,0.8s						
NYDR	Nydri-Lefkada	1.20	330	P	Pn	23 58 58.8	-0.8
DRAG	Dragano-Lefkad	1.23	326	P	Pn	23 58 59.5	-0.6
DRAG				S	Sn	23 59 17.3	+1.0
	comp=E,9µm,0.2s						
DRAG	Dragano-Lefkad	1.23	326	P	Pn	23 58 59.5	-0.6
LTK	Loutraki	1.24	73	P	Pb	23 59 00.9	+0.2
LTK				AML	AML	23 59 29.9	
	comp=N,2210µm,0.6s						
LTK				AML	AML	23 59 30.4	
	comp=E,1892µm,0.6s						
EVR	Evrytania	1.27	12	P	Pn	23 59 00.8	0.0
EVR				AML	AML	23 59 31.1	
	comp=E,1244µm,0.8s						
EVR				AML	AML	23 59 33.0	
	comp=N,1623µm,0.9s						
LKD2	Lefkada island	1.28	331	P	Pn	23 59 00.7	-0.2
LKD2				S	Sb	23 59 18.1	+0.5
	comp=N,2µm,0.6s						
LKD2	Lefkada island	1.28	331	P	Pn	23 59 00.5	-0.4
LKD2				AML	AML	23 59 28.3	
	comp=E,3034µm,0.6s						
LKD2				AML	AML	23 59 28.7	
	comp=N,3562µm,0.7s						
TSLK	Tsoukalades, L	1.31	331	P	Pn	23 59 01.5	+0.2
EPID	Epidavros	1.32	92	P	Pb	23 59 02.5	+0.4
MAKR	Makrakomi, Fth	1.44	21	P	Pb	23 59 04.1	0.0
MAKR				AML	AML	23 59 32.2	
	comp=N,2232µm,0.5s						
MAKR				AML	AML	23 59 34.4	
	comp=E,3001µm,0.6s						
AGG	Agios Georgios	1.51	27	P	Pb	23 59 05.3	0.0
AGG				AML	AML	23 59 36.4	
	comp=E,1556µm,0.9s						
AGG				AML	AML	23 59 36.7	
	comp=N,1042µm,0.9s						
VLI	Veliai	1.52	129	P	Pg	23 59 06.5	-0.5
VLI				AML	AML	23 59 37.5	
	comp=N,741µm,0.7s						
VLI				AML	AML	23 59 43.3	
	comp=E,815µm,1.1s						
VIL2	Platees	1.53	69	P	Pb	23 59 05.9	+0.3
LKR	Lokris	1.56	51	P	Pb	23 59 06.2	+0.1
LKR				AML	AML	23 59 33.9	
	comp=N,1064µm,0.4s						
LKR				AML	AML	23 59 34.5	
	comp=E,1700µm,0.4s						
ATAL	Atalanti	1.60	50	P	Pb	23 59 06.5	-0.3
VLY	Voula,Athens	1.86	84	P	Pb	23 59 10.4	-0.8
ATHU	Athens Univers	1.86	80	P	Pb	23 59 11.2	-0.1
DRME	Dracevica, Mon	4.83	339	*e*Pn	Pn	23 59 50.2	+0.5
PDG	Podgorica	5.04	341	*e*Pn	Pn	23 59 52.9	+0.4
HCY	Herceg Novi	5.28	335	*e*Pn	Pn	23 59 55.6	-0.3
TREB	Trebinje	5.57	336	*e*Pn	Pn	00 00 00.3	+0.5
UPM	Unac-Piva	5.86	341	*e*Pn	Pn	00 00 06.0	+2.1
STON	Ston	5.93	332	*e*Pn	Pn	00 00 04.4	-0.4
RUDO	Rudo	6.15	346	*e*Pn	Pn	00 00 08.6	+0.9
BBLS	Lazići	6.38	346	*e*Pn	Pn	00 00 13.0	+2.0
DIVS	Divibare	6.51	351	*e*Pn	Pn	00 00 12.3	-0.5
HAPS	Han Pijesak,Bl	6.68	344	*e*Pn	Pn	00 00 16.1	+0.9
FRGS	Fruska Gora	7.58	351	*e*Pn	Pn	00 00 28.2	+0.8
BLY	Banja Luka	7.77	337	*e*Pn	Pn	00 00 25.6	-4.3
MORH	Mrgy, Hungar	8.79	347	*e*Pn	Pn	00 00 44.1	+0.2
CRES	Cresnjev	9.29	333	*e*Pn	Pn	00 00 50.0	-0.9

DJA 04 00:20:55.2±1.1**, 10°S**±10°×**11°1E**±°**, h44**^{km}±177^{km}**, M3.9**/8**, mb3.9**/3**, mB4.9**/1**, MLv4.0**/8**, Mw(mB)4.2**/1**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	Wanagama	2.42	345	P	Pn	00 21 32.0	-0.3
UGM				S	Sn	00 22 01.7	+1.0
GMJI	Gumukmas	3.00	49	P	Pn	00 21 39.6	-0.6
GMJI				S	Sn	00 22 11.9	-3.0
SMRI	Semarang	3.27	347	P	Pn	00 21 43.8	-0.2
JAGI	Jajag, Banyuwa	3.45	59	P	Pn	00 21 46.6	+0.2
JAGI				S	Sn	00 22 23.2	-2.9
BLJI	Banyuglugur	3.47	44	P	Pn	00 21 47.5	+0.8
CMJI	Cimerak	3.64	312	P	Pn	00 21 48.8	-0.2
CNJI	Cibinong	4.95	306	P	Pn	00 22 06.8	-0.2
TWSI	Taliwang, Sumb	5.84	75	P	Pn	00 22 19.6	+0.2
	0.1nm1µm5.4nm,1.1s						
PLAI	Plampang	6.68	78	P	Pn	00 22 30.4	-0.4

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*TUL **04** 00:21:23.3±1.2, 36°.52N±0°.03×99°.02W±0°.03, h1^{km}±6^{km}, ML2.5, mb_Lg2.2/10(NEIC), Error ellipse: s-maj=4.6km s-min=2.6km az=142.0*

NEIC 04 00:21:24.2±1.6**, 36°.53N**±0°.03×**98°.99W**±0°.03**, h5**^{km}±2^{km}**, Error ellipse: s-maj=5.0km s-min=4.5km az=163.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.15	185	Pg	Pg	00 21 26.4	-0.9
U32A				Sg	Sg	00 21 28.7	-0.6
OK032	Salt Plains WL	0.68	66	Pg	Pg	00 21 37.4	+0.1
CROK	Carrier	0.81	92	Pg	Pg	00 21 39.7	0.0
KAN14	Manchester OK	0.92	62	Pg	Pg	00 21 41.2	-0.7
KAN10	Anthony SW Sta	0.93	50	Pg	Pb	00 21 42.6	-0.1
GC02	Grant County #	0.96	70	Pg	Pg	00 21 42.6	0.0
KAN16	Harper SW Stat	1.01	47	Pg	Pg	00 21 43.6	+0.1
KAN08	Anthony NE Sta	1.07	49	Pg	Pg	00 21 44.6	0.0
KAN12	Harper NE Stat	1.10	46	Pg	Pb	00 21 45.5	-0.1
KAN17	Caldwell West	1.10	62	Pg	Pg	00 21 45.3	0.0
KAN06	Argonia West S	1.15	51		Pg	00 21 46.1	-0.1
KAN01	Argonia South	1.16	57	Pg	Pg	00 21 46.3	-0.1
KAN09	Caldwell North	1.25	61	Pg	Pg	00 21 47.8	-0.3
KAN13	South Haven SW	1.30	68		Pn	00 21 48.4	-0.6
BCOK	Bluff Creek, N	1.42	128		Pn	00 21 50.2	-0.4
BCOK					Sn	00 22 09.6	-0.1
OK029	Liberty Lake	1.44	120	Pn	Pn	00 21 50.3	-0.6
OK029					Sb	00 22 10.0	-0.2
BLOK	Blackwell	1.44	80	Pn	Pn	00 21 51.2	+0.2
OK025	Westminster Rd	1.64	125	Pn	Pn	00 21 53.0	-0.7
OK025					Sb	00 22 15.8	-0.1
OKCFA	Oklahoma City	1.67	131	Pn	Pn	00 21 53.9	-0.2
OK031	S. Brethren Rd	1.83	108	Pn	Pn	00 21 56.8	+0.5
OK030	Cody Creek RV	1.88	108	Pn	Pn	00 21 57.9	+0.9
R32A	Long Quarter,	1.90	7		Pn	00 21 58.2	+0.9
OK034	N. Norfolk Rd.	1.91	105	Pn	Pn	00 21 58.0	+0.7
T35A	Sooner Cattle	2.02	78	Pn	Pn	00 21 59.9	+0.9
T35A				IAmb_Lg		00 22 33.1	
	comp=Z,12nm,0.8s						
X34A	Smith Ranch, M	2.15	154	Pn	Pn	00 22 01.7	+1.1
X34A				IAmb_Lg		00 22 35.7	
	comp=Z,18nm,0.8s						
CBKS	Cedar Bluff	2.35	346	Pn	Pn	00 22 04.4	+0.8
AMTX	Amarillo	2.74	234	Pn	Pn	00 22 08.3	-0.7
AMTX				IAmb_Lg		00 22 48.7	
	comp=Z,9.0nm,0.7s						
LOOK	Love County	2.94	149	Pn	Pn	00 22 11.8	+0.3
ABTX	Abilene, Hawle	3.94	188		Pb	00 22 36.2	+2.1
ABTX				IAmb_Lg		00 23 25.7	
	comp=Z,6.2nm,0.9s						
MSTX	Muleshoe	4.02	232	Pg	Pb	00 22 35.2	-0.4
HHAR	Hobbs	4.08	92	IAmb_Lg		00 23 40.6	
	comp=Z,5.1nm,0.7s						

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*NEIC **04** 00:27:40.6±1.1, 36°.74N±0°.04×98°.05W±0°.05, h5^{km}±2^{km}, Error ellipse: s-maj=7.0km s-min=5.8km az=106.0*

*TUL **04** 00:27:40.5±1.2, 36°.76N±0°.04×98°.05W±0°.04, h7^{km}±3^{km}, ML3.6, mb_Lg3.5/94(NEIC), Error ellipse: s-maj=5.9km s-min=4.5km az=142.0*

*ANF **04** 00:27:40.8±0.2, 36°.74N×98°.06W, h7^{km}, ML4.2/16, Error ellipse: s-maj=2.1km s-min=1.9km az=42.0*

ISC 04 00:27:40.9±1.0**, 36°.74N**±0°.02×**98°.05W**±0°.02**, h3**^{km}±9^{km}**, n108, σ1**^{s}**12**/101**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.15	297	Pg	Pg	00 27 43.4	-0.4
OK032				Sg	Sg	00 27 45.8	+0.1
GC02	Grant County #	0.19	52	Pg	Pg	00 27 44.6	0.0
KAN14	Manchester OK	0.23	17		Pg	00 27 45.1	-0.2
KAN14				Sg	Sg	00 27 48.3	0.0
CROK	Carrier	0.24	168	Pg	Pg	00 27 45.7	+0.3
CROK				Sg	Sg	00 27 49.4	+0.9
KAN17	Caldwell West	0.38	36	Pg	Pg	00 27 47.9	-0.3
KAN10	Anthony SW Sta	0.39	354	Pg	Pg	00 27 47.8	-0.6
KAN10				Sg	Sg	00 27 53.2	-0.2
KAN01	Argonia South	0.47	29	Pg	Pg	00 27 49.6	-0.4
KAN01					Sg	00 27 56.0	-0.2
KAN16	Harper SW Stat	0.49	358	Pg	Pg	00 27 49.9	-0.4
KAN16				Sg	Sg	00 27 56.5	-0.2
KAN08	Anthony NE Sta	0.49	7		Pg	00 27 50.0	-0.4
KAN08				Sg	Sg	00 27 56.5	-0.2
KAN09	Caldwell North	0.53	41	Pg	Pg	00 27 50.4	-0.5
KAN09				Sg	Sg	00 27 57.4	-0.4
KAN06	Argonia West S	0.53	16		Pg	00 27 50.7	-0.4
KAN06				Sg	Sg	00 27 57.8	-0.2
KAN13	South Haven SW	0.53	59		Pg	00 27 50.7	-0.4
KAN13				Sg	Sg	00 27 57.9	-0.2
KAN12	Harper NE Stat	0.56	4	Pg	Pg	00 27 51.2	-0.5
KAN12				Sg	Sg	00 27 58.6	-0.3
BLOK	Blackwell	0.67	88	Pg	Pg	00 27 53.3	-0.3
BLOK				Sg	Sg	00 28 02.4	+0.1
U32A	Winter Ranch,	0.85	245		Pg	00 27 56.6	-0.6
U32A				Sg	Sg	00 28 08.2	+0.1
U32A	Winter Ranch,	0.85	245	P	Pg	00 27 56.5	-0.6
	baz=63,SNR=32						
U32A				S	Sg	00 28 08.2	+0.1
	baz=63						
OK029	Liberty Lake	1.05	153	Pg	Pg	00 28 00.5	-0.5
BCOK	Bluff Creek, N	1.13	162		Pg	00 28 01.8	-0.8
QUOK	Quay	1.22	117	Pn	Pg	00 28 03.6	-0.6
T35A	Sooner Cattle	1.24	81	Pn	Pb	00 28 03.7	-1.3
T35B	Sooner Cattle	1.24	81	P	Pb	00 28 03.7	-1.3
	baz=263,SNR=244						
T35B				S	Sg	00 28 20.3	-0.5
	baz=263						
OK031	S. Brethren Rd	1.25	128		Pn	00 28 03.8	-1.4
OK025	Westminster Rd	1.29	153		Pn	00 28 04.8	-1.0
OK034	N. Norfolk Rd.	1.30	124		Pn	00 28 04.7	-1.3
OK030	Cody Creek RV	1.30	128		Pn	00 28 04.7	-1.3
OKCFA	Oklahoma City	1.40	160	Pn	Pn	00 28 06.3	-1.1
OKCFA	Oklahoma City	1.40	160	P	Pn	00 28 06.4	-1.1
	baz=340,SNR=10.0						
OKCFA				S	Sg	00 28 26.2	+0.3
	baz=340						
OKCSW	OKLAHOMA CITY	1.42	159	Pn	Pn	00 28 06.6	-1.0
R32A	Long Quarter,	1.76	343		Pn	00 28 12.3	-0.1
R32A	Long Quarter,	1.76	343	P	Pn	00 28 12.3	-0.1
	baz=162						
R32A				S	Sb	00 28 35.1	-1.4
	baz=162						
TUL1	Leonard	2.00	114	Pn	Pn	00 28 15.6	+0.1
TUL1	Leonard	2.00	114	P	Pn	00 28 14.9	-0.7
	baz=296,SNR=53						
TUL1				S	Sb	00 28 41.6	-1.5
	baz=296						
X34A	Smith Ranch, M	2.14	175		Pn	00 28 18.2	+0.7
CBKS	Cedar Bluff	2.47	328		Pn	00 28 21.7	-0.4
CBKS	Cedar Bluff	2.47	328	P	Pn	00 28 21.8	-0.3
	baz=146						
CBKS				S	Sn	00 28 52.8	-0.1
	baz=146						
KSU1	Kansas State U	2.62	25		Pn	00 28 23.7	-0.4
KSU1				IAmb_Lg		00 29 07.0	
	comp=Z,203nm,0.8s						
KSU1	Kansas State U	2.62	25	P	Pn	00 28 23.8	-0.4
	baz=206						
KSU1				S	Sn	00 28 56.4	-0.1
	baz=206						
LOOK	Love County	2.83	165	Pn	Pn	00 28 27.0	0.0
LOOK				IAmb_Lg		00 29 18.2	
	comp=Z,123nm,0.9s						
U38A	Gravette	2.96	95	Pn	Pn	00 28 28.4	-0.4
U38A				IAmb_Lg		00 29 19.7	
	comp=Z,111nm,0.7s						
U38A	Gravette	2.96	95	P	Pn	00 28 28.8	0.0
	baz=277,SNR=9.5						
X37A	Clayton	3.06	134	Pn	Pn	00 28 29.9	-0.2
X37A				IAmb_Lg		00 29 20.5	
	comp=Z,109nm,1.1s						
X37A	Clayton	3.06	134	P	Pn	00 28 30.1	0.0
	baz=316,SNR=26						
X37A				S	Sn	00 29 07.6	+0.4
	baz=316						
HHAR	Hobbs	3.34	97		Pn	00 28 33.5	-0.5
HHAR	Hobbs	3.34	97	P	Pn	00 28 34.0	0.0
	baz=280						
Z35A	Perchaven, San	3.46	169		Pn	00 28 35.4	-0.2
Z35A	Perchaven, San	3.46	169	P	Pn	00 28 36.1	+0.4
	baz=349,SNR=7.2						
Z35A				S	Sn	00 29 17.4	+0.2
	baz=349						
AMTX	Amarillo	3.48	239		Pb	00 28 43.4	+0.1
W39A	Magazine	3.78	113	Pn	Pn	00 28 39.9	-0.2
W39A	Magazine	3.78	113	P	Pn	00 28 39.6	-0.5
	baz=296,SNR=14						
S39A	Bolivar	3.89	74	Pn	Pn	00 28 40.7	-0.9
S39A				IAmb_Lg		00 29 48.6	
	comp=Z,86nm,0.8s						
S39A	Bolivar	3.89	74	P	Pn	00 28 40.9	-0.7
	baz=258,SNR=28						
N33A	J Bar K, Exete	4.02	6	Pn	Pn	00 28 42.5	-1.0
U40A	Yellville	4.20	94	Pn	Pn	00 28 45.1	-0.7
U40A				IAmb_Lg		00 29 57.4	
	comp=Z,123nm,0.7s						
U40A	Yellville	4.20	94	P	Pn	00 28 45.2	-0.7
	baz=277,SNR=33						
U40A				P	Pn	00 28 45.2	-0.7
	baz=277,SNR=33						
MIAR	Mount Ida	4.25	120	Pn	Pn	00 28 47.2	+0.7
MIAR				IAmb_Lg		00 30 05.6	
	comp=Z,134nm,1.1s						
MIAR	Mount Ida	4.25	120	P	Pn	00 28 46.8	+0.3
	baz=303,SNR=14						
KSCO	Kaye Shedlock’	4.28	303	Pn	Pn	00 28 45.7	-1.4
Z38A	Mt. Pleasant	4.28	143	Pn	Pn	00 28 46.0	-1.0
Z38A				Pg	Pg	00 29 01.3	-1.7
Z38A				IAmb_Lg		00 30 02.8	
	comp=Z,102nm,0.7s						
P38A	Dawn	4.58	50	IAmb_Lg		00 30 14.8	
	comp=Z,86nm,0.9s						
MGMO	Mountain Grove	4.65	83		Pn	00 28 51.7	-0.3
MGMO				IAmb_Lg		00 30 16.8	
	comp=Z,65nm,0.7s						
BGNE	Belgrade	4.67	359	Pg	Pg	00 29 08.4	-1.8
BGNE				IAmb_Lg		00 30 18.7	
	comp=Z,107nm,0.8s						
MSTX	Muleshoe	4.75	236	Pn	Pn	00 28 55.6	+2.1
MSTX					Pg	00 29 10.4	-1.4
WHTX	Lake Whitney,	4.76	174	P	Pn	00 28 53.2	-0.3
	baz=354,SNR=8.3						
X40A	Basin Creek Fa	4.80	116	P	Pn	00 28 53.9	-0.2
	baz=300,SNR=11						
X40A				P	Pn	00 28 53.9	-0.2
	baz=300,SNR=11						
FCAR	Ozark Folk Cen	4.86	98	IAmb_Lg		00 30 20.9	
	comp=Z,60nm,0.7s						
WHAR	Wooly Hollow	4.88	105	IAmb_Lg		00 30 28.1	
	comp=Z,69nm,0.7s						
W41B	Gary Mavity, V	4.96	107	P	Pn	00 28 55.9	-0.3
	baz=290,SNR=8.2						
WLAR	White Oak Lake	5.06	126	IAmb_Lg		00 30 31.2	
	comp=Z,74nm,0.8s						
T25A	Trinidad	5.12	276	IAmb_Lg		00 30 25.4	
	comp=Z,107nm,0.9s						
OGNE	Ogallala	5.23	325	Pg	Pg	00 29 16.8	-4.2
OGNE				IAmb_Lg		00 30 38.9	
	comp=Z,79nm,0.9s						
L34A	Svendsen Farm,	5.38	13	Pg	Pg	00 29 19.4	-4.6
P40A	Paris	5.49	58		Pb	00 29 20.4	+3.0
N38A	Joes South For	5.53	41		Pn	00 29 03.0	-1.1
N38A				IAmb_Lg		00 30 38.8	
	comp=Z,99nm,0.7s						
N38A	Joes South For	5.53	41	P	Pn	00 29 03.0	-1.1
	baz=224,SNR=6.8						
CCM	Cathedral Cave	5.57	74	Pg	Pg	00 29 23.0	-4.7
CCM				IAmb_Lg		00 30 42.1	

	comp=Z,87nm,1.1s						
T42A	Van Buren	5.58	85	Pg	Pb	00 29 21.9	+3.0
T42A				IAmb_Lg		00 30 39.6	
	comp=Z,61nm,1.2s						
LCAR	Lake Charles	5.60	95		Pn	00 29 04.9	-0.2
LCAR				IAmb_Lg		00 30 39.3	
	comp=Z,62nm,0.7s						
NATX	Nacogdoches	5.70	150	Pg	Pg	00 29 30.3	+0.2
CCAR	Cane Creek	5.85	117	IAmb_Lg		00 30 52.3	
	comp=Z,73nm,0.8s						
K31A	O'Neill	5.90	355	Pg	Pb	00 29 28.2	+3.8
K31A				IAmb_Lg		00 30 52.4	
	comp=Z,75nm,0.7s						
435B	Jarrell	5.95	176	IAmb_Lg		00 30 58.2	
	comp=Z,62nm,0.8s						
PBMO	Poplar Bluff	6.12	87	IAmb_Lg		00 30 57.5	
	comp=Z,71nm,0.8s						
FVM	French Village	6.20	76	IAmb_Lg		00 30 56.8	
	comp=Z,85nm,0.9s						
SCIA	State Center	6.38	34	Pg	Pg	00 29 37.9	-5.1
SCIA				IAmb_Lg		00 31 06.8	
	comp=Z,67nm,0.7s						
SLM	Saint Louis	6.48	71	IAmb_Lg		00 31 04.3	
	comp=Z,58nm,0.8s						
GNAR	Gosnell	6.53	94	IAmb_Lg		00 31 24.8	
	comp=Z,93nm,0.7s						
143A	Socs Landing,	6.79	124	IAmb_Lg		00 31 35.0	
	comp=Z,58nm,0.9s						
HENM	Henderson Moun	6.89	88	IAmb_Lg		00 31 16.9	
	comp=Z,88nm,0.8s						
HALT	Halls	7.08	94	IAmb_Lg		00 31 44.2	
	comp=Z,80nm,0.8s						
SIUC	Southern Illin	7.11	79	IAmb_Lg		00 31 30.3	
	comp=Z,58nm,0.7s						
P43A	Skaggs, Pawnee	7.31	64		Pn	00 29 27.7	-0.9
P43A				Pg	Pg	00 29 56.0	-4.9
UTMT	University of	7.40	90		Lg	00 31 33.4	
Q44A	Meyer Farm, Va	7.47	70	IAmb_Lg		00 31 51.3	
	comp=Z,52nm,0.8s						
L40A	Anamosa	7.50	43	IAmb_Lg		00 31 40.0	
	comp=Z,42nm,0.8s						
Y22D	IRIS PASSCAL I	7.72	252	IAmb_Lg		00 31 58.0	
	comp=Z,66nm,1.1s						
SUSD	Miller	7.73	355		Lg	00 31 49.0	
SUSD				IAmb_Lg		00 31 51.6	
	comp=Z,35nm,0.7s						
HDIL	Hopedale	7.84	58		Pn	00 29 34.6	-1.2
HDIL				IAmb_Lg		00 32 03.0	
	comp=Z,53nm,0.7s						
I37A	Lemond, Waseca	8.09	25	IAmb_Lg		00 32 03.2	
	comp=Z,65nm,1.1s						
OLIL	Olney	8.13	73		Lg	00 31 58.2	
OLIL				IAmb_Lg		00 32 13.2	
	comp=Z,59nm,1.0s						
O44A	Mansfield	8.25	63	IAmb_Lg		00 32 06.7	
	comp=Z,46nm,0.8s						
L42A	Oliver, Polo	8.35	48	IAmb_Lg		00 32 07.1	
	comp=Z,43nm,0.7s						
MVCO	Mesa Verde	8.38	276		Lg	00 32 07.1	
JFWS	Jewell Farm	8.60	42	IAmb_Lg		00 32 36.8	
	comp=Z,40nm,0.8s						
RWWY	Rawlins	8.66	308	IAmb_Lg		00 32 25.4	
	comp=Z,34nm,1.1s						
K22A	Casper	8.80	315	IAmb_Lg		00 32 34.2	
	comp=Z,26nm,0.8s						
Z47A	Carrollton	8.91	110	IAmb_Lg		00 32 35.7	
	comp=Z,28nm,0.9s						
I40A	Norwalk	9.12	36	IAmb_Lg		00 32 43.3	
	comp=Z,37nm,1.2s						
K43A	Burlington	9.56	48	IAmb_Lg		00 33 00.4	
	comp=Z,45nm,1.0s						

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*BJI **04** 00:37:03.0±0.0, 36.°00N×140.°10E, h66^{km}, mB5.0/6, mb4.5/20*

*NEIC **04** 00:37:04.7±1.1, 35.°92N±0.°04×140.°15E±0.°09, h69^{km}±4^{km}, mb4.4/25, Error ellipse: s-maj=10.3km s-min=6.2km az=100.0*

*JMA **04** 00:37:05.6, 35.°97N×140.°06E, h61^{km}±1^{km}, M4.1 Broadband fault plane solution: P waves. NP1: ϕ_s200.00000°, δ27.00000°, λ105.00000°. NP2:ϕ_s3.00000°, δ64.00000°, λ83.00000°. Principal axes: T Plg70.0000°, Azm258.0000°; N Plg7.0000°, Azm7.0000°; P Plg19.0000°, Azm99.0000°;*

JMA Felt II J1.

*NIED **04** 00:37:05.6, 35.°97N×140.°06E, h61^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.23; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$-1.07; $M_{r\theta}$0.24; $M_{\theta\phi}$-0.28; $M_{\phi r}$1.06; Fault plane solution: $M_0$1.61000×10^{15} NP1:ϕ_s14.00000°, δ66.00000°, λ89.00000°. NP2:ϕ_s197.00000°, δ24.00000°, λ93.00000°.*

*IDC **04** 00:37:06.0±1.6, 35.°92N×140.°07E, h82^{km}±13^{km}, mb3.6/18, mb1 3.8/23, mb1mx3.5/53, mbtmp3.9/23, MS3.0/3, Ms1 3.1/3, ms1mx2.7/46 Error ellipse: s-maj=17.0km s-min=12.0km az=72.0*

ISC 04 00:37:04.2±0.7**, 35.°90N**±0.°04×**140.°18E**±0.°04**, h68**^{km}±6^{km}**, n98, σ1^{s}23**/101**, mb4.2**/33**, 3C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIHU	Itakohorinouch	0.28	77	⇑P	Pn	00 37 16.9	+1.9
JYT	Yasato	0.32	2	⇑P	Pn	00 37 15.7	+0.4
JYT				S	Sn	00 37 23.2	-0.2
JYT	Yasato	0.32	2		Pn	00 37 15.7	+0.4
JYT				Sn	Sn	00 37 23.5	+0.1
TOK	Tokyo	0.41	238	P	Pn	00 37 18.2	+2.3
JAG	Ashikaga	0.79	312	⇓P	Pn	00 37 19.9	-0.1
JAG				S	Sn	00 37 30.3	-1.3
JRY	Ryogami san	1.04	277	⇓P	Pn	00 37 23.3	+0.1
JRY				S	Sn	00 37 36.4	-0.9
JOD2	Odawara 2	1.10	235	⇓P	Pn	00 37 24.2	+0.4
JOD2				S	Sn	00 37 37.6	-0.9
BSO3	Boso 3	1.13	166	P	Pn	00 37 25.6	+1.6
JKT	Katashina	1.14	319	⇓P	Pn	00 37 24.2	-0.3
JKT				S	Sn	00 37 38.7	-1.0
JIM2	Oshima 3	1.33	208	S	Sn	00 37 43.9	-0.1
JYN	Shimob	1.39	254	⇓P	Pn	00 37 28.3	+0.6
JYN				S	Sn	00 37 44.9	-0.5
MJAR	Matsushiro Arr	1.72	292	P	Pn	00 37 31.3	-0.7
	16nm,0.3s,baz=104,slow=5.5,SNR=295						
MJAR				S	Sn	00 37 53.1	0.0
	5.6nm,0.3s,baz=146,slow=16,SNR=3.3						
MJAR				LR	LR	00 38 20.9	
	comp=Z,228nm,18.0s,baz=295,slow=47						
MJAR	Matsushiro Arr	1.72	292	Pn	Pn	00 37 31.6	-0.4
MAJO	Matsushiro	1.72	292	Pn	Pn	00 37 32.2	+0.2
MAT	Matsushiro	1.72	292	P	Pn	00 37 32.4	+0.4
MAT				*e*S	Sn	00 37 52.6	-0.5
MJB9	Matsu-Tunnel	1.72	292		Pn	00 37 32.1	+0.1
JMM	Marumori	2.02	14		Pn	00 37 36.6	+0.7
JSG	Sagara	2.04	234		Pn	00 37 37.1	+0.8
JGF	Kuroka	2.32	263	Pn	Pn	00 37 41.0	+0.8
JSD	Sado	2.63	325		Pn	00 37 43.7	-0.6
INU	Inuyama	2.64	259	Pn	Pn	00 37 44.3	-0.1
JHJ	Hachijo jima 2	2.80	187	P	Pn	00 37 49.1	+2.5
	79nm,0.3s,baz=36,slow=9.4,SNR=6.6						
JHJ				S	Sn	00 38 18.4	-0.8
	43nm,0.3s,baz=80,slow=23,SNR=1.9						
JHJ2	Mitsune	2.80	186	Pn	Pn	00 37 48.4	+1.7
JWT	Wachi	3.94	262	Pn	Pn	00 38 01.9	-0.3
JTM	Tenmabayashi	4.92	8	Pn	Pn	00 38 16.5	+1.0
JMN	Monobe	5.62	249	Pn	Pn	00 38 26.2	+1.0
JHS	Saijyo	5.84	263	Pn	Pn	00 38 29.6	+1.4
ERM	Erimo	6.53	20	Pn	Pn	00 38 36.7	-0.8
ASAJ	Asahikawa	8.41	12	P	Pn	00 39 03.4	+0.2
	2.1nm,0.3s,baz=166,slow=12,SNR=1.8						
ASAJ				S	Sn	00 40 34.0	-2.6
	0.7nm,0.3s,baz=316,slow=29,SNR=1.5						
JKA	Kamikawa-asahi	8.41	12	Pn	Pn	00 39 03.4	+0.2
JCJ	Chichijima	8.95	168	P	Pn	00 39 08.3	-2.3
	13nm,0.3s,baz=286,slow=21,SNR=1.5						
JCJ				S	Sn	00 40 43.3	-6.5
	9.9nm,0.3s,baz=307,slow=18,SNR=2.6						
KSRS	Korea Array	9.97	283	P	Pn	00 39 27.2	+2.7
	0.5nm,0.3s,baz=96,slow=14,SNR=5.4						
KSRS				LR	LR	00 42 57.6	
	comp=Z,90nm,19.6s,baz=26,slow=36						
USA0B	Ussuriysk Arra	10.39	325	Pn	Pn	00 39 30.4	+0.1
USRK	Ussuriysk Ar.	10.39	325	P	Pn	00 39 33.0	+2.7
	baz=129,slow=11,SNR=7.7						
USRK	Ussuriysk Ar.	10.39	325	Pn	Pn	00 39 30.5	+0.3
CN2	Changchun	13.78	309	*e*P	P	00 40 20.1	-2.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KLR	Kul'dur	14.68	338	P	Pn	00 40 27.6	-0.4
	0.2nm,0.3s,baz=222,slow=7.8,SNR=5.8						
KLR				LR	LR	00 45 52.1	
	comp=Z,46nm,19.6s,baz=328,slow=36						
TPUB	Ta-pu	21.09	239	P	P	00 41 42.4	-0.6
TPUB				IAmb	IAmb	00 41 59.0	
	comp=Z,44nm,1.3s						
HHC	Hu-ho-hao-te	22.92	291	*e*P	P	00 42 03.3	+0.8
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,5.9s						
ULN	Ulaanbaatar	27.20	306	P	P	00 42 41.6	+0.1
SONM	Songino Array	27.62	306	P	P	00 42 44.2	-1.1
	comp=Z,1.5nm,1.0s,baz=116,slow=8.7,SNR=3.7						
SONM	Songino Array	27.62	306	P	P	00 42 44.8	-0.5
H11N2	WAKE ISLAND Hy	28.47	117	T	T	01 13 15.3	
	baz=308,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	28.48	117	T	T	01 13 00.8	
	baz=308,slow=75,SNR=9.4						
H11N3	WAKE ISLAND Hy	28.49	117	T	T	01 12 55.1	
	baz=308,slow=75,SNR=11						
H11S3	WAKE ISLAND Hy	29.12	120	T	T	01 14 03.5	
	baz=314,slow=76,SNR=5.9						
H11S1	WAKE ISLAND Hy	29.12	119	T	T	01 14 01.1	
	baz=314,slow=76,SNR=10						
H11S2	WAKE ISLAND Hy	29.14	120	T	T	01 13 56.3	
	baz=314,slow=76,SNR=7.4						
LZH	Lanzhou	29.30	281	⇑P	P	00 43 02.0	+1.7
LZH				pP	pP	00 43 20.2	+3.6
LZH				sP	sP	00 43 29.3	+4.7
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
CMAR	Chiang Mai Arr	40.25	256	P	P	00 44 35.9	+1.4
	comp=Z,1.0nm,0.3s,baz=36,slow=11,SNR=1.1						
CMAR				LR	LR	01 01 40.8	
	comp=Z,21nm,18.0s,baz=330,slow=37						
WMQ	Urumqi	40.48	298	*e*P	P	00 44 38.1	+1.9
ZAA0	Zalesovo Array	41.95	313	P	P	00 44 47.5	-0.6
ZALV	Zalesovo Beam	41.95	313	P	P	00 44 48.1	0.0
	comp=Z,2.6nm,0.6s,baz=90,slow=6.7,SNR=15						
ZALV				PcP	PcP	00 46 41.9	-0.3
	comp=Z,0.4nm,0.4s,baz=92,slow=4.9,SNR=3.3						
ZALV	Zalesovo Beam	41.95	313	P	P	00 44 47.6	-0.4
NRIK	Noril'sk	43.88	336	P	P	00 45 05.2	+1.8
	comp=Z,0.9nm,0.4s,baz=180,slow=7.1,SNR=2.1						
MK31	Makanchi Array	43.89	303	P	P	00 45 03.6	-0.3
MK31				IAmb	IAmb	00 45 05.2	
	comp=Z,4.9nm,1.0s						
MKAR	Makanchi Array	43.89	303	P	P	00 45 03.5	-0.4
	comp=Z,4.1nm,0.9s,baz=91,slow=11,SNR=15						
MKAR	Makanchi Array	43.89	303	P	P	00 45 03.3	-0.5
MAKZ	Makanchi	44.10	303	P	P	00 45 04.8	-0.7
MAKZ				IAmb	IAmb	00 45 06.5	
	comp=Z,4.2nm,0.9s						
KURK	Kurchatov	45.86	309	P	P	00 45 19.1	-0.3
KURK				IAmb	IAmb	00 45 21.5	
	comp=Z,7.2nm,0.8s						
KULM	Kulim	47.39	239	P	P	00 45 32.9	+1.1
PRZ	Przheval'sk	47.40	298	P	P	00 45 32.0	+0.2
TARG	Taragay, Kyrgy	48.02	297	IAmb	IAmb	00 45 38.9	
	comp=Z,7.4nm,1.1s						
BOOM	Boomskoye usch	49.17	298	P	P	00 45 44.8	-0.6
BOOM				IAmb	IAmb	00 45 47.4	
	comp=Z,2.6nm,0.8s						
MTN	Manton Dam	49.23	192	P	P	00 45 45.7	-0.1
MTN				IAmb	IAmb	00 45 46.6	
	comp=Z,5.1nm,1.1s						
KSH	Kashi	49.97	295	P	P	00 45 57.0	+5.6
KSH				pmax	pmax		
	comp=Z,5.0nm,1.5s						
AAK	Ala-Archa	50.16	299	P	P	00 45 52.5	-0.3
	comp=Z,0.7nm,0.4s,baz=105,slow=12,SNR=4.0						
AAK	Ala-Archa	50.16	299	IAmb	IAmb	00 45 56.1	
	comp=Z,4.5nm,1.3s						
BRVK	Borovoye	50.66	313	P	P	00 45 56.5	+0.2
BRVK				IAmb	IAmb	00 46 00.3	
	comp=Z,3.3nm,1.1s						
POKR	Poker Plat Res	50.73	31	P	P	00 45 57.7	+1.0
POKR				IAmb	IAmb	00 46 00.6	
	comp=Z,5.7nm,0.9s						
HDA	Harding Lake	50.97	32	P	P	00 45 59.9	+1.4
IL31		50.98	32	P	P	00 45 59.4	+0.9
ILAR	Eielson Array	50.98	32	P	P	00 45 59.9	+1.4
	comp=Z,1.0nm,0.8s,baz=272,slow=6.1,SNR=10						
ILAR	Eielson Array	50.98	32	P	P	00 45 58.8	+0.3
BMAR	Burnt Mountain	51.80	28	P	P	00 46 05.1	+0.4
KKAR	Karatay Array	52.84	300	P	P	00 46 12.3	-0.4
BCAR	Beaver Creek A	53.38	34	P	P	00 46 16.3	-0.1
CHGR	Chuyangaron	55.26	296	P	P	00 46 29.7	-0.8
FITZ	Fitzroy Crossi	55.45	197	P	P	00 46 32.6	+0.8
	comp=Z,3.3nm,1.0s,baz=36,slow=5.9,SNR=5.7						
WRA	Warramunga Arr	55.82	187	P	P	00 46 34.8	+0.4
	comp=Z,1.3nm,0.5s,baz=1.9,slow=7.6,SNR=31						
KBL	Kabul	56.90	291	P	P	00 46 41.6	-0.7
KBL				IAmb	IAmb	00 46 43.1	
	comp=Z,2.8nm,1.1s						
A36M	Sachs Harbour	57.67	22	P	P	00 46 47.7	+0.8
A36M				IAmb	IAmb	00 46 50.6	
	comp=Z,4.8nm,0.9s						
ABKAR	Akbulak array	57.91	310	P	P	00 46 47.9	-1.1
ABKAR	Akbulak array	57.91	310	IAmb	IAmb	00 46 50.3	
	comp=Z,2.3nm,0.9s						
AKTO	Aktyubinsk	58.69	312	P	P	00 46 54.3	-0.1
	comp=Z,1.0nm,0.7s,baz=72,slow=14,SNR=2.3						
AS31	Alice Springs	59.54	187	P	P	00 47 00.6	+0.1
ASAR	Alice Springs	59.54	187	P	P	00 46 59.8	-0.8
	comp=Z,0.5nm,0.7s,baz=16,slow=11,SNR=7.8						
CRAG	Craig	59.56	41	P	P	00 47 00.2	-0.1
FINES	FINESS Array B	69.35	332	P	P	00 48 04.0	-0.1
	comp=Z,2.5nm,0.9s,baz=63,slow=8.8,SNR=7.0						
AKASG	Malin Array Be	74.58	322	P	P	00 48 34.9	-0.6
	comp=Z,1.2nm,0.5s,baz=50,slow=5.5,SNR=8.4						
NOA	NORSAR Array B	74.84	337	P	P	00 48 36.0	-1.0
	comp=Z,0.7nm,0.7s,baz=39,slow=5.9,SNR=3.3						
BRTR	Keskin Array B	78.85	311	P	P	00 48 59.2	-0.9
	comp=Z,0.3nm,0.4s,baz=126,slow=3.5,SNR=5.4						
PDAR	Pinedale Array	79.17	45	P	P	00 49 02.9	+1.1
	comp=Z,0.2nm,0.5s,baz=48,slow=2.2,SNR=2.1						
PDAR	Pinedale Array	79.17	45	P	P	00 49 02.4	+0.5
GERES	GERESS Array B	83.14	328	P	P	00 49 22.5	-0.1
	comp=Z,0.2nm,0.3s,baz=12,slow=5.3,SNR=2.3						
TXAR	Lajitas Array	91.60	52	P	P	00 50 05.8	+1.8
	comp=Z,0.3nm,0.6s,baz=304,slow=3.4,SNR=4.2						
LPAZ	La Paz	148.12	60	PKPbc	PKPbc	00 56 43.5	+0.1
	comp=Z,1.1nm,0.8s,baz=289,slow=1.9,SNR=3.6						
CPUP	Villa Florida	162.25	62	PKPab	PKPab	00 57 44.5	-1.0
	comp=Z,0.7nm,0.4s,baz=264,slow=5.9,SNR=3.3						

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*IDC **04** 00:42:12.7±1.3, 37.°12N×141.°33E, h0^{km}, mb3.7/7, mb1 3.8/10, mb1mx3.4/49, mbtmp3.7/10, ML2.2/2, Error ellipse: s-maj=27.9km s-min=21.2km az=101.0*

*JMA **04** 00:42:21.0±0.1, 37.°14N×141.°07E, h55^{km}±1^{km}, M3.9*

JMA Felt II J1.

*NIED **04** 00:42:21.0, 37.°14N×141.°07E, h55^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.96; $M_{\theta\theta}$-3.16; $M_{\phi\phi}$-0.80; $M_{r\theta}$2.55; $M_{\theta\phi}$-1.35; $M_{\phi r}$1.70; Fault plane solution: $M_0$4.94000×10^{14} NP1:ϕ_s60.00000°, δ64.00000°, λ85.00000°. NP2:ϕ_s251.00000°, δ26.00000°, λ99.00000°.*

ISC 04 00:42:18.7±1.2**, 37.°05N**±0.°04×**141.°32E**±0.°08**, h45**^{km}±10^{km}**, n30, σ1^{s}16**/36**, mb3.6**/7**, 4C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.42	277	⇑P	Pn	00 42 29.9	+1.1
ONAJ				S	Sn	00 42 36.1	+0.1
JFK	Kawauchi	0.48	311	⇓P	Pn	00 42 30.3	+0.9
JFK				*i* S	Sn	00 42 36.8	-0.3
JFFD	Fukushimafurud	0.61	274	⇑P	Pn	00 42 31.6	+0.5
JFFD				S	Sn	00 42 39.1	-0.9
JHO	Hitachi	0.75	234	⇑P	Pn	00 42 34.0	+1.1
JHO				S	Sn	00 42 43.0	-0.2
JMST	Minamisoumatoc	0.76	333	⇓P	Pn	00 42 33.5	+0.5
JMST				S	Sn	00 42 42.5	-0.9
JFT	Otama	0.92	301	⇓P	Pn	00 42 35.5	+0.3
JFT				S	Sn	00 42 45.8	-1.4
JMM	Marumori	0.92	333	⇓P	Pn	00 42 35.6	+0.4
JMM				S	Sn	00 42 46.4	-0.8
JFY	Yanaizu	1.34	286	P	Pn	00 42 40.5	-0.5
JIO	Ouri	1.40	1	P	Pn	00 42 43.0	+1.2
JIO				*e*S	Sn	00 42 58.6	-0.4
JOU	Okura	1.41	338	P	Pn	00 42 42.5	+0.5
JYS	Shirataka	1.54	320	⇓P	Pn	00 42 44.0	+0.3
JAG	Ashikaga	1.63	248	⇑P	Pn	00 42 45.3	+0.4
JAG				S	Sn	00 43 03.0	-1.7
JKT	Katashina	1.69	261	P	Pn	00 42 46.8	+1.0
MJAR	Matsushiro Arr	2.55	259	Pn	Pn	00 42 57.3	-0.3
	0.7nm,0.3s,baz=82,slow=16,SNR=8.4						
MJAR				Sn	Sn	00 43 29.9	+2.4
	1.5nm,0.3s,baz=44,slow=40,SNR=2.5						
MAT	Matsushiro	2.55	259	P	Pn	00 42 58.7	+1.1
MAT				S	Sn	00 43 28.7	+1.2
JHJ	Hachijo jima 2	4.12	198	Pn	Pn	00 43 16.1	-3.0
	29nm,0.3s,baz=234,slow=23,SNR=1.6						
JHJ				Sn	Sn	00 44 08.2	+2.1
	33nm,0.3s,baz=254,slow=23,SNR=1.7						
USRK	Ussuriysk Ar.	10.06	318	Pn	Pn	00 44 39.4	-1.1
	baz=137,slow=33,SNR=1.4						
SONM	Songino Array	27.71	304	P	P	00 48 01.8	-1.0
	0.6nm,0.5s,baz=104,slow=9.0,SNR=5.3						
H11N2	WAKE ISLAND Hy	28.22	121	T	T	01 18 24.3	
	baz=313,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	28.23	121	T	T	01 18 21.5	
	baz=313,slow=75,SNR=27						
H11N3	WAKE ISLAND Hy	28.24	121	T	T	01 18 22.2	
	baz=313,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	28.93	123	T	T	01 19 07.8	
	baz=314,slow=75,SNR=34						
H11S3	WAKE ISLAND Hy	28.93	123	T	T	01 19 07.9	
	baz=314,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy	28.95	123	T	T	01 19 09.0	
	baz=314,slow=75,SNR=13						
ZALV	Zalesovo Beam	41.85	312	P	P	00 50 03.7	-0.3
	1.4nm,0.5s,baz=101,slow=6.2,SNR=7.5						
MKAR	Makanchi Array	44.05	302	P	P	00 50 21.4	-0.6
	0.9nm,0.7s,baz=86,slow=9.3,SNR=5.9						
ILAR	Eielson Array	49.52	32	P	P	00 51 05.6	+1.2
	0.5nm,0.9s,baz=270,slow=6.2,SNR=2.2						
WRA	Warramunga Arr	57.07	188	P	P	00 52 01.6	+1.3
	0.2nm,0.6s,baz=343,slow=8.3,SNR=1.4						
FINES	FINESS Array B	68.77	332	P	P	00 53 17.3	-0.2
	2.0nm,0.9s,baz=57,slow=7.0,SNR=4.0						
AKASG	Malin Array Be	74.24	322	P	P	00 53 50.2	-0.5
	0.5nm,0.4s,baz=40,slow=15,SNR=3.7						

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*IDC **04** 01:13:10.6±0.9, 49.°63N×18.°67E, h0^{km}, mb3.7/1, mb1 3.5/7, mb1mx3.3/40, mbtmp3.4/7, ML2.9/6, Error ellipse: s-maj=18.3km s-min=6.9km az=156.0*

*LDG **04** 01:13:10.6±0.2, 49.°74N×18.°64E, h1^{km}, Ml3.1/7, Error ellipse: s-maj=6.3km s-min=2.7km az=26.0, Suspected Mining induced.*

*BGR **04** 01:13:11.6±0.5, 49.°87N×18.°55E, h1^{km}, ML3.3/11, Error ellipse: s-maj=6.7km s-min=5.6km az=47.0*

*IPEC **04** 01:13:11.4±0.3, 49.°83N×18.°57E, h0^{km}, ML3.0/3, Error ellipse: s-maj=2.1km s-min=1.7km az=74.0, Mining induced.*

*KRSZO **04** 01:13:11.2±0.8, 49.°81N×18.°61E, h14^{km}±7^{km}, ML3.3/18, Error ellipse: s-maj=3.2km s-min=2.9km az=31.0*

ISC 04 01:13:09.9±0.6**, 49.°84N**±0.°02×**18.°56E**±0.°02**, h0**^{km}**, n147, σ1^{s}46**/209**, 13C-19D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.27	269	⇓*i*PG	Pb	01 13 17.0	-0.5
OKC				*e*SG	Sg	01 13 20.4	+2.0
	comp=Z,898nm,0.6s						
OKC	Ostrava-Krasne	0.27	269	Pg	Pb	01 13 17.1	-0.5
	comp=Z,4.2nm,SNR=37						
RAC	Raciborz	0.34	316	*e*PG	Pb	01 13 19.0	+0.2
RAC				*e*SG	Sb	01 13 24.6	-0.1
MORC	Moravsky Berou	0.66	265	⇓P	Pb	01 13 24.3	-0.1
MORC				⇓S	Sb	01 13 32.9	-1.1
MORC	Moravsky Berou	0.66	265	*e*Pg	Pb	01 13 24.2	-0.1
	baz=85						
MORC				*e*Sg	Sg	01 13 32.2	+1.1
	comp=Z,409nm,0.7s,baz=85						
MORC	Moravsky Berou	0.66	265	*e*Pg	Pg	01 13 23.5	+1.0
MORC				*e*Sg	Sb	01 13 33.0	-1.1
MORC	Moravsky Berou	0.66	265	Pg	Pb	01 13 24.3	-0.1
	comp=Z,1.1nm,SNR=11						
OJC	Ojcow	0.88	64	*e*Pg	Pg	01 13 27.6	+0.8
OJC				*e*Sg	Sb	01 13 40.1	-0.3
LANS	Liptovska Anna	0.91	139	*e*PG	Pb	01 13 28.4	-0.2
LANS				*e*SG	Sb	01 13 41.7	+0.4
LANS				*e*LG	Lg	01 13 44.5	
JAVC	Velka Javorina	1.15	211	*e*PG	Pn	01 13 33.7	+0.5
JAVC				*e*SG	Sb	01 13 47.4	-0.6
JAVC	Velka Javorina	1.15	211	*e*Pg	Pn	01 13 33.6	+0.4
	baz=31						
JAVC	Velka Javorina	1.15	211	*e*Pn	Pn	01 13 33.1	-0.1
JAVC				*e*Sg	Sn	01 13 51.2	+1.6
KRLC	Kraliky	1.17	282	⇓*i*PG	Pg	01 13 32.5	+0.2
KRLC				*e*SG	Sb	01 13 49.2	+0.4
NIE	Niedzica	1.21	110	*e*Pg	Pn	01 13 34.5	+0.5
NIE				*e*Sg	Sn	01 13 52.4	+1.2
VYHS	Vyhne	1.36	172	Pn	Pg	01 13 35.9	-0.1
	comp=Z,0.1nm,SNR=4.1						
VYHS	Vyhne	1.36	172	*e*PG	Pg	01 13 35.8	-0.1
VYHS				*e*SG	Sn	01 13 54.9	0.0
VYHS				*e*LG	Lg	01 13 56.6	
VRAC	Vranov	1.39	248	⇑P	Pn	01 13 36.5	0.0
VRAC				⇑S	Sn	01 13 55.7	+0.1
VRAC	Vranov	1.39	248	Pg	Pn	01 13 36.5	0.0
	comp=Z,75nm,0.3s,baz=69,slow=14,SNR=517						
VRAC				Lg	Lg	01 13 55.4	
	comp=Z,8.3nm,0.3s,baz=252,slow=18,SNR=3.6						
VRAC	Vranov	1.39	248	*e*Pg	Pb	01 13 37.0	+0.3
	baz=67						
VRAC				*e*Sg	Sb	01 13 55.1	+0.2
	comp=Z,174nm,0.6s,baz=67						
VRAC	Vranov	1.39	248	*e*Pn	Pg	01 13 36.2	-0.2
VRAC				*e*Sg	Sn	01 13 55.6	+0.1
VRAC	Vranov	1.39	248	x	x	01 13 36.2	
	comp=Z,1.2nm,SNR=20						
SMOL	Smolenice	1.52	210	*e*PG	Pb	01 13 38.6	-0.4
SMOL				*e*SG	Sn	01 13 58.6	-0.3
SMOL				*e*LG	Lg	01 14 00.5	
DPC	Dobruska-Polom	1.53	290	⇓*i*PG	Pn	01 13 38.6	+0.1
DPC				*e*SG	Sn	01 13 59.9	+0.9
	comp=Z,76nm,0.5s						
DPC	Dobruska-Polom	1.53	290	*e*Pn	Pn	01 13 38.8	+0.3
DPC				*e*Sg	Sn	01 14 00.2	+1.2
KRUC	Moravsky	1.61	242	*e*Pg	Pb	01 13 40.5	0.0
	baz=61						
KRUC				*e*Sg	Sg	01 14 01.9	+0.2
	comp=Z,126nm,0.6s,baz=61						
KRUC	Moravsky	1.61	242	*e*Pn	Pn	01 13 39.1	-0.6
KRUC				*e*Sg	Sg	01 14 02.2	+0.5
OSTC	Ostas	1.67	296	⇓*e*PG	Pn	01 13 40.6	+0.2
OSTC				*e*SG	Sn	01 14 03.0	+0.6
	comp=Z,108nm,0.6s						
MODS	Modra-Piesok	1.70	210	Pn	Pn	01 13 39.9	-0.9
	comp=Z,3.0nm,SNR=3.1						
MODS	Modra-Piesok	1.70	210	*e*PG	Pn	01 13 40.0	-0.7
MODS				*e*SG	Sn	01 14 02.3	-0.9
KSP	Ksiaz	1.76	305	*e*Pb	Pn	01 13 42.0	+0.4
KSP				*e*Pg	Pg	01 13 44.0	+0.4
KSP				*e*Sg	Sg	01 14 08.1	+1.6
UPC	Upice	1.77	293	⇓*e*PG	Pn	01 13 41.8	+0.1
UPC				*e*SG	Sn	01 14 05.6	+0.7
	comp=Z,80nm,0.6s						
CHVC	Chvalec	1.77	296	*e*PG	Pn	01 13 41.9	+0.1
CHVC				*e*SG	Sg	01 14 08.6	+1.8
	comp=Z,65nm,0.6s						
KECS	Kecovo	1.86	136	Pn	Pn	01 13 43.0	0.0
KECS	Kecovo	1.86	136	*e*PG	Pn	01 13 43.0	0.0
ZST	Bratislava	1.91	211	Pg	Pn	01 13 44.2	+0.6
	comp=Z,2.2nm,SNR=1.7						
ZST	Bratislava	1.91	211	*e*PG	Pn	01 13 44.0	+0.4
ZST				*e*SG	Sb	01 14 09.2	-0.7
SRO	Srobarova	2.04	185	Pn	Pn	01 13 46.2	+0.8
SRO	Srobarova	2.04	185	*e*PG	Pn	01 13 46.2	+0.8
TREC	Trest	2.07	256	⇓*e*PG	Pb	01 13 48.0	-0.4
TREC				*e*SG	Sg	01 14 15.7	-0.8
TREC	Trest	2.07	256	*e*Pn	Pn	01 13 45.9	-0.1
CRVS	Cervenica-Dubn	2.12	115	Pb	Pb	01 13 49.0	-0.2
	comp=Z,0.1nm,SNR=3.5						
CRVS	Cervenica-Dubn	2.12	115	*e*PG	Pg	01 13 50.3	-0.1
PSZ	Piszkesteto	2.12	155	⇓P	Pn	01 13 46.7	+0.1
PSZ				⇑S	Sn	01 14 14.4	+0.7

PSZ	Piszkesteto	2.12	155	eP	Pn	01 13 46.9	+0.3
PSZ	Piszkesteto	2.12	155	Pn	Pn	01 13 46.9	+0.3
CSKK	Cskako	2.49	185	ePN	Pn	01 13 51.6	-0.1
CSKK	Cskako	2.49	185	eS	Sn	01 14 22.0	-0.7
CSKK	Cskako	2.49	185	Pn	Pn	01 13 51.6	-0.1
	SNR=20						
CSKK				Sn	Sn	01 14 22.0	-0.7
SOP	Sopron	2.54	212	ePN	Pn	01 13 52.6	+0.3
SOP	Sopron	2.54	212	Pg	Pn	01 13 52.6	+0.3
	comp=Z,0.2nm,SNR=3.3						
EGYH	Egyhazaskeszo	2.56	199	ePN	Pn	01 13 52.6	0.0
EGYH	Egyhazaskeszo	2.56	199	Pn	Pn	01 13 52.6	0.0
	comp=Z,0.2nm,SNR=1.7						
KOLS	Kolonicke sedl	2.59	109	Pg	Pg	01 14 02.8	+3.3
KOLS	Kolonicke sedl	2.59	109	ePG	Pg	01 14 00.2	+0.7
PRU	Pruhonice	2.60	275	⇓ePN	Pn	01 13 52.7	-0.5
PRU				ePG	Pb	01 13 57.1	-0.2
PRU				eSG	Sg	01 14 32.2	-1.2
	comp=Z,46nm,0.6s						
PRU	Pruhonice	2.60	275	ePn	Pn	01 13 53.3	+0.1
PRU				eSg	Sg	01 14 32.6	-0.8
CONA	Conrad Observa	2.62	224	i Pn	Pn	01 13 53.3	-0.2
	comp=Z,13nm,0.3s,SNR=34						
CONA				Sg	Sb	01 14 31.0	+0.7
	comp=Z,23nm,0.4s						
CONA	Conrad Observa	2.62	224	Pn	Pn	01 13 53.3	-0.2
	comp=Z,0.2nm,SNR=3.1						
PVCC	Panska Ves	2.66	286	⇓ePN	Pn	01 13 53.7	-0.2
PVCC				ePG	Pb	01 13 59.4	+1.1
PVCC				eSG	Sg	01 14 35.3	+0.2
	comp=Z,84nm,0.4s						
PVCC	Panska Ves	2.66	286	ePn	Pn	01 13 53.8	-0.1
PRA	Prague	2.67	276	⇓eSG	Sg	01 14 35.9	+0.2
MPLH	Magyarpolny	2.76	195	ePN	Pn	01 13 55.3	-0.1
MPLH				ePG	Pg	01 14 02.9	+0.1
MPLH	Magyarpolny	2.76	195	Pn	Pn	01 13 55.3	-0.1
	comp=Z,0.3nm,SNR=1.8						
MPLH				Pg	Pg	01 14 02.9	+0.1
BSZH	Besenyszg	2.79	155	ePG	Pg	01 14 05.4	+2.1
BSZH	Besenyszg	2.79	155	Pg	Pg	01 14 05.4	+2.1
	comp=Z,0.2nm,SNR=1.6						
BSZH				Pn	Pb	01 14 06.6	+6.1
CKRC	Cesky Krumlov	2.96	251	ePN	Pn	01 13 59.4	+1.2
CKRC				ePG	Pb	01 14 04.9	+1.4
CKRC				eSG	Sg	01 14 45.1	+0.1
	comp=Z,52nm,0.4s						
CKRC	Cesky Krumlov	2.96	251	eSg	Sg	01 14 47.9	+2.9
BRG	Berggiesshubel	3.13	291	ePg	Pg	01 14 08.7	-1.1
BRG	Berggiesshubel	3.13	291	Pg	Pb	01 14 08.1	+1.7
BRG				Sg	Sg	01 14 50.0	-0.4
BRG				Amp		01 14 56.7	
	comp=Z,25nm,0.5s						
TRPA	Tarpa	3.13	122	⇑P	Pn	01 14 00.3	-0.2
TRPA	Tarpa	3.13	122	ePN	Pn	01 14 00.3	-0.2
TRPA	Tarpa	3.13	122	Pg	Pn	01 14 00.3	-0.2
	comp=Z,0.1nm,SNR=2.3						
ARSA	Arzberg	3.29	219	i Pn	Pn	01 14 03.5	+0.8
	comp=Z,3.0nm,0.3s,SNR=4.5						
ARSA				eSg	Sg	01 14 59.9	+4.5
	comp=Z,8.8nm,0.5s						
ARSA	Arzberg	3.29	219	Pg	Pn	01 14 03.4	+0.8
	comp=Z,0.1nm,SNR=1.7						
KHC	Kasperske Hory	3.33	259	⇓ePN	Pn	01 14 03.8	+0.6
KHC				ePG	Pb	01 14 10.8	+1.1
KHC				eSG	Sg	01 14 57.1	+0.5
	comp=Z,34nm,0.4s						
KHC	Kasperske Hory	3.33	259	eSg	Sg	01 14 56.9	+0.2
GEC2	GERESS Array S	3.33	254	ePn	Pn	01 14 03.3	0.0
GERES	GERESS Array B	3.33	254	Pn	Pn	01 14 03.4	+0.1
	comp=Z,1.0nm,0.3s,baz=63,slow=14,SNR=17						
GERES				Pg	Pg	01 14 12.4	-1.3
	comp=Z,11nm,0.3s,baz=69,slow=18,SNR=72						
GERES				Sn	Sn	01 14 43.8	+0.2
	comp=Z,3.6nm,0.3s,baz=83,slow=26,SNR=5.2						
GERES				Lg	Lg	01 14 56.5	
	comp=Z,6.7nm,0.3s,baz=73,slow=24,SNR=6.1						
MOA	Molln	3.47	236	i Pn	Pn	01 14 05.0	-0.1
	comp=Z,3.7nm,0.3s,SNR=11						
MOA				i Pg	Pb	01 14 14.0	+1.9
	comp=Z,7.3nm,0.3s						
MOA				i Sg	Sg	01 15 00.4	-0.8
	comp=Z,38nm,0.5s						
FBE	Freiberg	3.50	290	eSg	Sg	01 15 01.4	-0.9
MORH	Mrgy, Hungar	3.63	179	ePN	Pn	01 14 07.1	-0.2
MORH	Mrgy, Hungar	3.63	179	eS	Sn	01 14 48.2	-2.7
MORH	Mrgy, Hungar	3.63	179	Pn	Pn	01 14 07.1	-0.2
	comp=Z,0.2nm,SNR=2.1						
MORH				Sn	Sn	01 14 48.2	-2.7
WET	Wettzell	3.77	261	ePn	Pn	01 14 09.5	+0.2
WET				eSg	Sg	01 15 09.9	-1.0
KOVH	Kovagotottos	3.77	185	ePN	Pn	01 14 09.5	+0.2
KOVH	Kovagotottos	3.77	185	Pn	Pn	01 14 09.5	+0.2
	comp=Z,0.1nm,SNR=1.3						
AMBH	Ambrzfalva	3.79	157	ePN	Pn	01 14 11.2	+1.8
AMBH	Ambrzfalva	3.79	157	Pn	Pn	01 14 11.2	+1.8
	comp=Z,0.2nm,SNR=1.9						
CLL	Collm	3.83	295	ePg	Pg	01 14 23.0	-0.3
CLL				eSg	Sg	01 15 13.0	+0.1
	comp=Z,26nm,0.5s						
BMR	Baia Mare	3.92	122	⇑P	Pn	01 14 11.4	+0.1
BMR				⇑S	Sn	01 14 57.7	-0.3
BMR	Baia Mare	3.92	122	Pg	Pn	01 14 11.3	-0.1
	comp=Z,0.2nm,SNR=2.0						
NKC	Novy Kostel	3.96	278	⇓eSG	Sg	01 15 15.8	-1.2
NKC	Novy Kostel	3.96	278	ePn	Pn	01 14 12.7	+0.8
TANN	Tannenbergstha	3.96	281	ePn	Pn	01 14 12.5	+0.5
MESR	Meseseni	3.97	131	⇑P	Pn	01 14 13.0	+1.0
WERN	Wernitzgruen	4.01	279	ePn	Pn	01 14 13.4	+0.8
GUNZ	Gunzen	4.04	280	ePn	Pn	01 14 13.7	+0.7
ROHR	Rohrbach	4.04	278	ePn	Pn	01 14 13.3	+0.3
DRGR		4.12	136	⇓P	Pn	01 14 14.8	+0.6
DRGR				⇓S	Sn	01 15 02.5	-0.6
DRGR		4.12	136	Pn	Pn	01 14 14.7	+0.6
SIRR	Siria	4.14	149	⇓P	Pn	01 14 14.7	+0.4
SIRR	Siria	4.14	149	Pg	Pn	01 14 14.5	+0.2
PLN	Plauen	4.17	281	eSg	Sg	01 15 23.4	-0.2
OBKA	Obir	4.28	220	i Pn	Pn	01 14 17.1	+0.7
	comp=Z,3.2nm,0.3s,SNR=8.3						
OBKA				i Pg	Pg	01 14 32.3	+0.4
	comp=Z,3.0nm,0.4s						
KBA	Koelnbreinsper	4.44	233	i Pn	Pn	01 14 19.6	+1.1
	comp=Z,5.5nm,0.4s,SNR=13						
MOX	Moxa	4.53	283	ePn	Pn	01 14 20.5	+0.9
CJR	Cluj-Napoca	4.60	131	⇑P	Pn	01 14 21.4	+0.8
CJR				⇑S	Sn	01 15 14.4	-0.4
BZS	Buzias	4.71	153	⇑P	Pn	01 14 22.8	+0.7
BZS	Buzias	4.71	153	Pb	Pn	01 14 23.0	+0.9
ARCR	ARCALIA	4.74	123	⇑P	Pn	01 14 22.2	-0.3
ARCR	ARCALIA	4.74	123	Pb	Pb	01 14 31.9	-1.9
BURAR	Bucovina Array	4.94	114	⇓P	Pn	01 14 25.5	+0.1
ABTA	Abfaltersbach	5.09	235	ePn	Pb	01 14 40.5	+0.8
	comp=Z,4.3nm,0.6s						
ABTA				eSg	Sg	01 15 55.2	+1.9
	comp=Z,8.0nm,0.6s						
WTTA	Wattenberg	5.27	243	Sg	Sg	01 16 00.6	+1.4
	comp=Z,16nm,0.5s						
GZR	Gura Zlata	5.29	146	⇑P	Pn	01 14 31.2	+1.0
GZR	Gura Zlata	5.29	146	Pg	Pn	01 14 32.6	+2.5
MDVR	Moldovita	5.50	156	⇓P	Pn	01 14 33.7	+0.7
MDVR				⇑S	Sn	01 15 38.0	+1.0
MOTA	Moosalm	5.54	246	i Pn	Pn	01 14 36.5	+2.8
	comp=Z,0.6nm,0.3s						
MOTA				ePg	Pg	01 14 56.9	+0.8
	comp=Z,5.5nm,0.6s						
MOTA				i Sg	Sg	01 16 09.7	+1.8
	comp=Z,25nm,0.7s						
SQTA	Sankt Quirin	5.54	245	i Pn	Pn	01 14 35.0	+1.3
	comp=Z,1.1nm,0.3s						
LOT	Lotru	5.63	139	Pg	Pb	01 14 44.3	-4.8
RETA	Reutte	5.68	248	i Pn	Pn	01 14 36.8	+1.2
	comp=Z,1.1nm,0.3s						
RETA				Sg	Sg	01 16 11.0	-1.2
	comp=Z,14nm,0.5s						
FETA	Feichten	5.93	245	ePn	Pb	01 14 53.9	-0.2
	comp=Z,1.9nm,0.4s						
FETA				eSg	Sg	01 16 22.3	+2.1
	comp=Z,3.5nm,0.5s						
DAVA	Damuels	6.30	249	i Pn	Pn	01 14 46.6	+2.4
	comp=Z,1.0nm,0.3s						
DAVOX	Davos/Dischmat	6.55	245	Pn	Pn	01 14 49.0	+1.4
	comp=Z,0.8nm,0.3s,baz=56,slow=8.2,SNR=12						
DAVOX				Sn	Sn	01 16 02.6	-0.4
	comp=Z,0.5nm,0.3s,baz=294,slow=11,SNR=3.0						
DAVOX				Lg	Lg	01 16 38.5	
	comp=Z,0.7nm,0.3s,baz=154,slow=23,SNR=2.6						
PABE	Paberze	6.55	28	eP	Pn	01 14 48.3	+0.9
AKASG	Malin Array Be	6.89	79	Pn	Pn	01 14 50.2	-1.9
	comp=Z,0.7nm,0.3s,baz=260,slow=13,SNR=5.3						
AKASG				Sn	Sn	01 16 06.2	-4.9
	comp=Z,1.2nm,0.3s,baz=262,slow=23,SNR=4.1						
CDF	Champ du Feu	7.54	263	eP	Pn	01 15 05.4	+4.3
CDF				eSg	Sg	01 17 06.7	-5.2
	comp=Z,11nm,0.7s						
HINF	Hinteralfeld	7.99	260	ePn	Pn	01 15 06.5	-0.7
HINF	Hinteralfeld	7.99	260	ePg	Pg	01 15 39.8	-3.0
HINF				eSg	Sg	01 17 20.9	-5.3
	comp=Z,2.8nm,0.5s						
HAU	Haudompre	8.25	262	eSg	Sg	01 17 29.3	-5.4
	comp=Z,4.0nm,0.4s						
LPG	La Plagne	9.07	246	eP	Pn	01 15 25.8	+3.5
LPL	La Plagne	9.07	246	eP	Pn	01 15 25.1	+2.8
BAIF	Baives	9.26	277	ePn	Pn	01 15 24.8	+0.3
BAIF	Baives	9.26	277	ePg	Pn	01 16 05.8	+41
MTSE	Matsula	9.40	17	eP	Pn	01 15 26.6	+0.2
MBDF	Montbardon	9.50	242	ePn	Pn	01 15 25.6	-2.4
MBDF	Montbardon	9.50	242	eP	Pn	01 15 31.2	+3.2
MBDF				eSn	Sn	01 17 01.4	-14
	comp=Z,0.6nm,0.3s						
VSU	Vasula	9.87	26	eP	Pn	01 15 34.6	+1.8
ORIF	Oris-en-Rattie	9.91	245	eP	Pn	01 15 36.4	+2.9
ORIF				eSn	Sn	01 17 11.6	-14
	comp=Z,0.7nm,0.5s						
AVF	Avril sur Loir	10.58	259	ePg	Pn	01 16 27.8	+45
SMRF	Simiane la Rot	10.64	241	ePn	Pn	01 15 41.4	-2.1
SMRF				eSn	Sn	01 17 29.3	-14
	comp=Z,0.5nm,0.5s						
VIVF	Saint-Julien-l	10.66	247	ePn	Pn	01 15 42.0	-1.7
HFS	Hagfors	10.68	347	Pn	Pn	01 15 42.8	-1.2
	comp=Z,0.1nm,0.3s,baz=160,slow=22,SNR=1.6						
TCF	Toulx Ste Croi	11.50	258	eP	Pn	01 15 59.7	+4.4
TCF				eSn	Sn	01 17 51.4	-13
	comp=Z,0.3nm,0.2s						
NOA	NORSAR Array B	11.96	343	Pn	Pn	01 15 59.7	-1.8
	comp=Z,0.0nm,0.3s,baz=148,slow=12,SNR=4.6						
FINES	FINESS Array B	12.36	17	Pn	Pn	01 16 04.0	-2.9
	comp=Z,0.3nm,0.3s,baz=199,slow=12,SNR=11						
FINES				Sn	Sn	01 18 14.8	-11
	comp=Z,0.1nm,0.3s,baz=199,slow=21,SNR=2.4						
ARCES	ARCESS Array B	20.04	7	P	P	01 17 44.9	+0.9
	comp=Z,3.4nm,0.9s,baz=198,slow=11,SNR=4.8						

IDC 04 01:34:26.0±56.0**, 19°.03S×169°.45E, h0^{km}, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.8**/24**, mbtmp4.0**/3**, Error ellipse: s-maj=947.7km s-min=120.0km az=75.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	28.12	237	P	P	01 40 21.4	+1.6
	1.2nm,0.5s,baz=51,slow=10,SNR=3.4						
WRA	Warramunga Arr	33.07	262	P	P	01 41 02.5	-1.2
	0.3nm,0.4s,baz=101,slow=8.4,SNR=10						
ASAR	Alice Springs	33.37	256	P	P	01 41 06.3	0.0
	3.3nm,0.4s,baz=83,slow=8.9,SNR=69						

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*IDC **04** 01:48:37.1±0.6, 34°.00S×109°.39W, h0^{km}, mb4.3/9, mb1 4.5/9, mb1mx4.3/24, mbtmp4.3/9, MS4.5/21, Ms1 4.5/21, ms1mx4.5/22, Error ellipse: s-maj=27.0km s-min=19.3km az=97.0*

*NEIC **04** 01:48:40.0±0.9, 33°.98S±0°.10×109°.3W±0°.2, h10^{km}±1^{km}, mb4.8/74, Error ellipse: s-maj=22.9km s-min=16.8km az=276.0*

*GCMT **04** 01:48:40.0±0.1, 34°.06S±0°.01×109°.16W±0°.01, h12^{km}, MW5.1/127, Moment Tensor Solution. s76,c111; s127,c197; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.69±.09; $M_{\theta\theta}$-0.10±.10; $M_{\phi\phi}$5.79±.08; $M_{r\theta}$1.81±.32; $M_{\theta\phi}$0.34±.08; $M_{\phi r}$-0.99±.26; Best double couple: $M_0$6.09800×10^{16} NP1:ϕ_s199.00000°,δ43.00000°, λ-65.00000°. NP2:ϕ_s347.00000°,δ52.00000°, λ-111.00000°. Principal axes: T 5.8810, Plg5.0000°, Azm92.0000°; N 0.4340, Plg17.0000°, Azm0.0000°; P -6.3150, Plg73.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 01:48:38.9±0.4**, 34°.01S**±0°.08×**109°.30W**±0°.09**, h10^{km}, n143, σ1^s.14**/113**, mb4.8**/44**, MS4.6**/22**, 1C-23D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA02	Isla de Pascua	6.83	359	Pn	Pn	01 50 19.4	+0.2
RPN	Rapa Nui	6.86	360	LR	LR	01 52 23.8	
	comp=Z,3μm,18.7s,baz=179,slow=33						
RPN	Rapa Nui	6.86	360	Pn	Pn	01 50 20.6	+1.0
LL05	Los Muermos	29.13	115	P	P	01 54 40.3	+0.4
LL04	Puerto Octay	29.92	114	P	P	01 54 45.4	-1.5
LR03	Panguipulli	29.96	112	P	P	01 54 48.2	+0.9
PLCA	Paso Flores	31.32	114	P	P	01 55 00.3	+0.8
	3.4nm,1.0s,baz=248,slow=9.3,SNR=4.6						
PLCA				LR	LR	02 04 23.9	
	comp=Z,1μm,21.6s,baz=304,slow=30						
PLCA	Paso Flores	31.32	114	P	P	01 54 58.9	-0.6
ZON	Zonda	34.08	97	P	P	01 55 24.5	+0.8
PB01	IPOC Station P	37.36	80	P	P	01 55 53.1	+1.2
TAOE	Nuku Hiva Isla	37.83	304	eLR	LR	02 06 08.5	
	comp=Z,2μm,26.6s						
MEH	Mehetia	38.13	285	eT	T	02 36 15.0	
	39nm,0.2s						
TRQA	Tornquist	38.16	110	P	P	01 55 58.6	+0.2
TIAR	Tiarei	39.33	284	eT	T	02 37 48.3	
	0.6nm,0.2s						
PPT2	Papeete2	39.50	284	eS	S	02 02 10.0	-2.3
	323nm,25.5s						
PPT2				eLQ	LQ	02 05 14.9	
	253nm,24.0s						
PPT2				eLR	LR	02 06 49.7	
	comp=Z,3μm,25.8s,baz=120						
PPT	Papeete	39.51	284	LR	LR	02 08 19.5	
	comp=Z,1μm,18.1s,baz=87,slow=30						
LPAZ	La Paz	40.91	75	P	P	01 56 22.7	+0.5
	1.2nm,0.8s,baz=130,slow=4.1,SNR=3.9						
LPAZ				LR	LR	02 09 10.7	
	comp=Z,1μm,21.9s,baz=234,slow=30						
LPAZ	La Paz	40.91	75	P	P	01 56 22.0	-0.3
CZSB	Cruzeiro do Su	42.66	61	P	P	01 56 35.8	-0.1
CZSB				IAmb	IAmb	01 56 58.0	
	comp=Z,18nm,1.1s						
ITQB	Itaqui	44.55	99	P	P	01 56 51.2	+0.2
OTAV	Otavalo	44.69	47	P	P	01 56 52.9	+0.2
CPUP	Villa Florida	45.18	95	LR	LR	02 12 54.2	
	comp=Z,943nm,18.3s,baz=244,slow=32						
RAR	Rarotonga	46.09	273	LR	LR	02 10 59.5	
	comp=Z,830nm,20.1s,baz=102,slow=29						
SAML	Samuel	49.08	70	P	P	01 57 26.5	-0.1
CDITO	Canoas	49.21	36	P	P	01 57 28.6	+1.1
JTS	Las Juntas de	49.76	32	P	P	01 57 32.0	+0.3
TRCB	Terra Rica	50.52	93	P	P	01 57 37.8	+0.2
ROSC	El Rosal	50.83	47	P	P	01 57 41.1	+0.8
	comp=Z,6.2nm,0.4s,baz=264,slow=1.0,SNR=4.9						
ROSC				LR	LR	02 15 19.3	
	comp=Z,379nm,19.1s,baz=228,slow=32						
ROSC	El Rosal	50.83	47	P	P	01 57 40.6	+0.3
MTO3	Montecristo	51.75	25	P	P	01 57 47.0	+0.1
MTO3				IAmb	IAmb	01 57 48.9	
	comp=Z,15nm,1.3s						
TGUH	Tegucigalpa,Un	52.20	27	P	P	01 57 50.9	+0.7
ZARC	Zaragoza, Cauc	52.61	45	P	P	01 57 52.8	-0.3
MOTC	Monteria, Cord	53.19	43	P	P	01 57 57.4	0.0
MOTC				IAmb	IAmb	01 57 59.2	
	comp=Z,10nm,0.9s						
MACA	Manacapuru-AM	54.63	67	P	P	01 58 07.0	-1.0
QSPA	South Pole Qui	56.19	180	P	P	01 58 18.9	+0.1
	comp=Z,4.3nm,1.0s,baz=117,slow=3.6,SNR=6.5						
QSPA				PcP	PcP	01 59 16.1	-0.2
	comp=Z,5.5nm,1.1s,baz=97,slow=1.4,SNR=4.3						
QSPA	South Pole Qui	56.19	180	P	P	01 58 19.8	+1.1
QSPA				IAmb	IAmb	01 58 20.0	
	comp=Z,16nm,1.3s						
VNDA	Vanda	56.84	195	P	P	01 58 23.9	+0.9
	comp=Z,1.7nm,1.1s,baz=74,slow=6.7,SNR=3.0						
VNDA				LR	LR	02 17 05.7	
	comp=Z,319nm,21.7s,baz=92,slow=30						
VNDA	Vanda	56.84	195	P	P	01 58 24.6	+1.5
RAO	Raoul Island	57.64	254	LR	LR	02 17 16.7	
	comp=Z,422nm,19.2s,baz=103,slow=30						
BDFB	Brasilia	57.74	88	LR	LR	02 20 59.9	
	comp=Z,772nm,19.4s,baz=269,slow=34						
URZ	Urewera	58.13	243	LR	LR	02 17 57.7	
	comp=Z,874nm,20.1s,baz=31,slow=30						
BOAV	Boa Vista	58.41	62	P	P	01 58 34.4	-0.5
BOAV				IAmb	IAmb	01 58 34.6	
	comp=Z,16nm,1.3s						
HPIG		60.71	4	P	P	01 58 51.0	+0.3
HPIG				IAmb	IAmb	01 58 53.8	
	comp=Z,14nm,1.3s						
VNA3	Neumayer Olymp	61.19	159	P	P	01 58 52.9	-0.5
VNA1	Neumayer--Stat	61.84	158	P	P	01 58 58.5	+0.8
VNA2	Neumayer--Watz	62.00	159	P	P	01 58 58.4	-0.4
	baz=269,slow=6.0						
HSIG		62.71	358	P	P	01 59 05.6	+1.7
SNAA	Sanae	63.02	160	P	P	01 59 05.0	-0.6
TXAR	Lajitas Array	63.23	6	P	P	01 59 07.7	+0.2
	comp=Z,1.8nm,1.0s,baz=188,slow=7.6,SNR=9.1						
TXAR				LR	LR	02 21 16.6	
	comp=Z,122nm,19.3s,baz=0.0,slow=31						
JCT	Junction City	64.77	9	P	P	01 59 17.7	+0.2
SFX	San Felipe	64.91	355	P	P	01 59 19.1	+0.7
SFX				IAmb	IAmb	01 59 22.1	
	comp=Z,12nm,1.1s						
MNTX	Cornudas Mount	65.46	4	P	P	01 59 21.4	-0.6
MNTX				IAmb	IAmb	01 59 35.6	
	comp=Z,8.9nm,1.5s						
214A	Organ Pipe Nat	65.70	357	P	P	01 59 24.6	+1.1
214A				IAmb	IAmb	01 59 24.8	
	comp=Z,5.1nm,0.9s						
TUC	Tucson	65.98	359	P	P	01 59 26.2	+0.8
TUC				IAmb	IAmb	01 59 26.4	
	comp=Z,7.0nm,1.1s						
MSVF	Nonsavu	66.14	264	LR	LR	02 21 18.1	
	comp=Z,306nm,20.3s,baz=172,slow=30						
121A	Cookes Peak, D	66.20	1	P	P	01 59 27.1	+0.1
121A				IAmb	IAmb	01 59 41.8	
	comp=Z,8.3nm,1.1s						
MSTX	Muleshoe	67.90	6	P	P	01 59 38.0	+0.4
MSTX				IAmb	IAmb	01 59 39.9	
	comp=Z,6.6nm,1.0s						
X16A	Lo Mia Camp, P	68.10	358	P	P	01 59 39.9	+1.0
X16A				IAmb	IAmb	01 59 40.7	
	comp=Z,6.3nm,1.2s						
X18A	Snowflake	68.19	359	P	P	01 59 40.2	+0.7
X18A				IAmb	IAmb	01 59 41.3	
	comp=Z,9.8nm,0.9s						
GSC	Goldstone, Bar	69.31	353	P	P	01 59 46.7	+0.4
GSC				IAmb	IAmb	01 59 47.9	
	comp=Z,12nm,1.1s						
ISA	Isabella, Lake	69.84	352	P	P	01 59 50.3	+0.7
ISA				IAmb	IAmb	01 59 51.1	
	comp=Z,11nm,1.1s						
QSM	Queen of Sheba	69.97	353	P	P	01 59 50.6	+0.2
QSM				IAmb	IAmb	01 59 52.4	
	comp=Z,14nm,1.2s						
U15A	North Rim	70.13	357	P	P	01 59 52.6	+0.9
U15A				IAmb	IAmb	01 59 53.5	
	comp=Z,7.0nm,1.1s						
KNB	Kanab	70.74	357	IAmb	IAmb	01 59 57.0	
	comp=Z,11nm,1.5s						
PKCU	Pink Cliffs	71.15	357	IAmb	IAmb	02 00 00.0	
	comp=Z,14nm,1.3s						
CCUT	Cedar City	71.30	357	P	P	01 59 59.4	+0.7
CCUT				IAmb	IAmb	02 00 00.8	
	comp=Z,11nm,1.1s						
NVAR	Mina Array Bea	72.56	353	P	P	02 00 07.0	+0.8
	comp=Z,9.8nm,0.9s,baz=183,slow=7.9,SNR=27						
NVAR				LR	LR	02 25 11.3	
	comp=Z,175nm,19.3s,baz=102,slow=30						
SPR3	Spring Creek 3	72.79	356	P	P	02 00 08.1	+0.3
SPR3				IAmb	IAmb	02 00 08.3	
	comp=Z,8.0nm,1.2s						
TMUT	Trail Mountain	72.96	358	IAmb	IAmb	02 00 18.9	
	comp=Z,8.5nm,1.2s						
KVN	Kaiserville	73.15	353	P	P	02 00 10.2	+0.6
NLU	North Lily Min	73.64	358	P	P	02 00 12.6	0.0
NLU				IAmb	IAmb	02 00 13.7	
	comp=Z,8.4nm,1.2s						
RDMU	Red Mountain	74.21	360	IAmb	IAmb	02 00 17.0	
	comp=Z,9.8nm,1.0s						
JLU	Jordanelle	74.27	358	IAmb	IAmb	02 00 17.0	
	comp=Z,9.9nm,1.3s						
BMN	Battle Mountai	74.43	354	P	P	02 00 17.8	+0.7
BMN				IAmb	IAmb	02 00 19.0	
	comp=Z,16nm,1.1s						
PD31	Pinedale Array	76.41	360	P	P	02 00 28.1	-0.3
PDAR	Pinedale Array	76.41	360	P	P	02 00 28.2	-0.3
	comp=Z,3.5nm,0.9s,baz=163,slow=5.7,SNR=13						
PDAR				LR	LR	02 28 33.9	
	comp=Z,130nm,18.5s,baz=184,slow=31						
PDAR	Pinedale Array	76.41	360	P	P	02 00 27.8	-0.7
WVOR	Wild Horse Val	76.56	353	IAmb	IAmb	02 00 40.3	
	comp=Z,7.7nm,0.9s						
TPAW	Teton Pass	77.14	359	IAmb	IAmb	02 00 33.2	
	comp=Z,7.9nm,1.1s						
HLID	Hailey	77.34	356	IAmb	IAmb	02 00 35.5	
	comp=Z,10nm,1.1s						
RSSD	Black Hills	77.91	4	P	P	02 00 37.3	+0.4
RSSD				IAmb	IAmb	02 00 38.3	
	comp=Z,11nm,1.4s						
BCYI	Bear Canyon	78.04	357	P	P	02 00 38.5	+0.9
I07A	Izee	78.28	353	IAmb	IAmb	02 00 41.1	
	comp=Z,11nm,1.0s						
MAW	Mawson	78.53	177	LR	LR	02 32 17.2	
	comp=Z,186nm,19.6s,baz=224,slow=33						
G08A	Pilot Rock	79.42	353	IAmb	IAmb	02 00 46.5	
	comp=Z,16nm,1.2s						
F36A	Milaca	80.77	11	IAmb	IAmb	02 00 53.4	
	comp=Z,21nm,1.4s						
JTMT	Jette	81.51	357	IAmb	IAmb	02 01 12.8	
	comp=Z,12nm,1.3s						
NEW	Newport	82.20	355	IAmb	IAmb	02 01 04.7	
	comp=Z,12nm,1.3s						
ULM	Lac du Bonnet	84.73	9	LR	LR	02 35 29.6	
	comp=Z,101nm,20.2s,baz=152,slow=33						
STKA	Stephens Creek	86.49	234	LR	LR	02 35 00.1	
	comp=Z,279nm,18.2s,baz=140,slow=32						
H11S2	WAKE ISLAND Hy	95.34	289	T	T	03 48 01.0	
	SNR=6.9						
H11S1	WAKE ISLAND Hy	95.36	289	T	T	03 48 03.3	
	baz=126,slow=74,SNR=7.4						
H11S3	WAKE ISLAND Hy	95.36	289	T	T	03 48 01.1	
	baz=320,slow=74,SNR=6.2						
SCHQ	Schefferville	95.71	23	LR	LR	02 40 11.9	
	comp=Z,193nm,21.7s,baz=202,slow=32						
ASAR	Alice Springs	96.96	236	P	P	02 02 09.2	-1.9
	comp=Z,0.6nm,0.9s,baz=135,slow=3.3,SNR=3.6						
ASAR				LR	LR	02 40 36.2	
	comp=Z,268nm,19.7s,baz=146,slow=32						
WRA	Warramunga Arr	99.11	239	LR	LR	02 43 59.1	
	comp=Z,293nm,18.1s,baz=135,slow=34						
ARR	Arges	143.24	58	⇓P	PKPab	02 08 09.4	+0.5
BURAR	Bucovina Array	143.51	54	⇓P	PKPab	02 08 10.2	+0.3
BURAR	Bucovina Array	143.51	54	PKPdf	PKPab	02 08 10.3	+0.4
DOPR	Dopca	143.75	57	⇓P	PKPdf	02 08 13.8	-0.2
MLR	Muntele Rosu	144.16	58	⇓P	PKPab	02 08 12.6	+0.1
MLR	Muntele Rosu	144.16	58	PKPdf	PKPab	02 08 12.5	+0.1
NEHR	Nehoiu	144.41	58	⇓P	PKPab	02 08 12.8	-0.5
TESR	Tescani	144.58	56	⇓P	PKPab	02 08 13.0	-0.9
RAZG	Razgrad	144.61	61	⇓P	PKPab	02 08 13.4	-0.7
PLOR	Plostina	144.63	57	⇓P	PKPab	02 08 13.2	-0.9
VRI	Vrincioaia	144.68	57	⇓P	PKPab	02 08 13.4	-0.9
PGOR	Pogoanele	144.92	59	⇓P	PKPab	02 08 15.4	+0.2
VASR	Vaslui	145.35	56	⇓P	PKPbc	02 08 15.6	-0.9
IZVR	Izvoarele	145.43	58	⇓P	PKPbc	02 08 15.6	-1.2
VARL	Varlezi	145.46	57	⇓P	PKPbc	02 08 16.5	-0.4
BALB	Balikesir	145.51	68		PKPdf	02 08 16.5	-0.7
ICOR	Ion Corvin	145.54	60	⇓P	PKPdf	02 08 16.5	-0.5
SCTR	Scanteiesti	145.58	57	⇓P	PKPdf	02 08 16.3	-0.7
HARR	Harsova	145.60	59	⇓P	PKPdf	02 08 16.4	-0.7
VLDR	Vladesti	145.63	57	⇓P	PKPdf	02 08 16.8	-0.4
AKASG	Malin Array Be	145.63	48	PKPbc	PKPdf	02 08 15.5	-1.5
	comp=Z,6.8nm,0.9s,baz=281,slow=3.3,SNR=25						
AKBB	Malin Array Si	145.63	48		PKPdf	02 08 15.6	-1.3
TLBR	Topalu	145.69	59	⇓P	PKPdf	02 08 17.1	-0.2
CFR	Carcaliu	145.72	58	⇓P	PKPdf	02 08 16.6	-0.7
TPGR	Topolog	145.94	59	⇓P	PKPdf	02 08 17.6	-0.1
TIRR	Tirgusor	145.96	59	⇓P	PKPdf	02 08 17.8	+0.1
MILM	Milestii Mici	146.02	55	⇓P	PKPdf	02 08 17.4	-0.3
JURR	Jurilovca	146.27	59	⇓P	PKPbc	02 08 19.3	-0.1
KLMR	Klimovskoe	146.45	27	ePKPdf	PKPdf	02 08 16.7	-1.3
KLMR				AMP		02 08 20.9	
	comp=Z,31nm,1.3s						
HHC	Hu-ho-hao-te	147.07	294	eP	PKPdf	02 08 17.5	-2.4

ENH	**Enshi**	**147.08**	**274**	PKPbc	**PKPbc**	**02 08 22.8**	**+0.5**
GYA	**Guiyang**	**148.16**	**266**	⇑PKPbc	**PKPbc**	**02 08 25.6**	**+0.2**
GYA				PKPab	**sPKPab**	**02 08 36.0**	**+4.6**
GYA				PP	**PP**	**02 12 00.1**	**+6.1**
BTO	**Baotou**	**148.24**	**294**	*e*PKPbc	**PKPdf**	**02 08 21.7**	**-0.1**
OBN	**Obninsk**	**148.29**	**38**	PKPbc	**PKPbc**	**02 08 23.8**	**-0.8**
XAN	**Xi'an**	**148.45**	**281**	P	**PKPbc**	**02 08 25.0**	**-0.9**
XAN				pmax	pmax		
	comp=Z,24nm,1.1s						
CSS	**Mathiatis**	**149.29**	**78**	PKPbc	**PKPbc**	**02 08 27.3**	**-0.7**
ULN	**Ulaanbaatar**	**149.56**	**308**	PKPbc	**PKPbc**	**02 08 27.6**	**-0.8**
ULN				PKPab	**PKPab**	**02 08 34.0**	**+0.5**
BR131	**Keskin Array S**	**149.95**	**68**	PKPbc	**PKPbc**	**02 08 28.9**	**-0.7**
BRTR	**Keskin Array B**	**149.95**	**68**	PKPbc	**PKPbc**	**02 08 27.7**	**-1.9**
	comp=Z,8.9nm,1.1s,baz=203,slow=0.9,SNR=20						
SONM	**Songino Array**	**149.99**	**308**	PKPbc	**PKPbc**	**02 08 28.4**	**-1.0**
	comp=Z,5.9nm,1.0s,baz=114,slow=1.4,SNR=22						
SONM	**Songino Array**	**149.99**	**308**		**PKPbc**	**02 08 28.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**150.44**	**246**	PKPbc	**PKPbc**	**02 08 31.6**	**+0.5**
	comp=Z,13nm,0.9s,baz=182,slow=1.4,SNR=52						
CMAR	**Chiang Mai Arr**	**150.44**	**246**		**PKPbc**	**02 08 31.1**	**-0.1**
LZH	**Lanzhou**	**152.86**	**284**	*e*PKPbc	**PKPdf**	**02 08 26.9**	**-2.4**
LZH				sPKP		02 08 36.5	
GTA	**Gaotai**	**156.11**	**291**	*e*PKPbc	**PKPdf**	**02 08 33.1**	**-0.5**
GTA				pPKP	sPKPdf	02 08 38.3	+1.5
GTA				sPKP		02 08 43.0	
ZALV	**Zalesovo Beam**	**157.71**	**338**	PKP	**PKPdf**	**02 08 32.1**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=90,slow=1.5,SNR=4.9						
ZALV				PKPab	**PKPab**	**02 09 05.9**	**-1.5**
	comp=Z,1.4nm,0.8s,baz=38,slow=8.1,SNR=4.8						
WMQ	**Urumqi**	**163.57**	**312**	*e*P	**PKPdf**	**02 08 42.8**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,120nm,7.3s						

ATH ***04*** *02:27:05.2, 37°.82N×21°.23E, h24^{km}±2^{km}, ML2.5/16, Error ellipse: s-maj=2.9km s-min=0.7km az=260.0*
THE ***04*** *02:27:06.0, 37°.86N×21°.24E, h20^{km}±2^{km}, ML2.7/8, Error ellipse: s-maj=2.0km s-min=0.7km az=290.0*
ISC 04 02:27:05.7±0.9, **37°.83N**±0°.03×**21°.24E**±0°.02, **h25**^{km}±5^{km}, **n70**, σ**0^s.79**/88, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTN	**Vitineika**	**0.10**	**335**	P	**Pb**	**02 27 10.0**	**-0.3**
VTN				S	**Sb**	**02 27 13.1**	**-0.3**
VTN	**Vitineika**	**0.10**	**335**	P	**Pb**	**02 27 10.0**	**-0.3**
ZAK2	**Zakynthos**	**0.27**	**262**	P	**Pb**	**02 27 12.4**	**+0.1**
ZAK2				S	**Sb**	**02 27 17.8**	**+1.1**
	5μm,0.4s						
RLS	**Riolos of Patr**	**0.29**	**38**	P	**Pb**	**02 27 11.9**	**-0.7**
RLS				S	**Sb**	**02 27 16.8**	**-0.5**
	2μm,0.2s						
RLS	**Riolos of Patr**	**0.29**	**38**	P	**Pb**	**02 27 11.9**	**-0.7**
RLS				S	**Sb**	**02 27 16.8**	**-0.5**
RLS				AML	AML	02 27 17.9	
	comp=N,6564μm,0.3s						
RLS				AML	AML	02 27 18.3	
	comp=E,2782μm,0.2s						
LTHK	**Lithakia**	**0.34**	**250**	P	**Pb**	**02 27 12.6**	**-0.7**
LTHK				S	**Sb**	**02 27 19.3**	**+0.8**
	comp=E,3μm,0.3s						
LTHK	**Lithakia**	**0.34**	**250**	P	**Pb**	**02 27 12.6**	**-0.7**
LTHK				S	**Sb**	**02 27 17.6**	**-0.9**
DRO	**Drossia**	**0.39**	**71**	P	**Pb**	**02 27 13.3**	**-0.8**
DRO				S	**Sb**	**02 27 20.7**	**+0.7**
	comp=E,2μm,0.3s						
DRO	**Drossia**	**0.39**	**71**	P	**Pb**	**02 27 13.4**	**-0.8**
DRO				S	**Sb**	**02 27 19.8**	**-0.2**
DRO				AML	AML	02 27 21.5	
	comp=N,2718μm,0.3s						
DRO				AML	AML	02 27 23.8	
	comp=E,4480μm,0.2s						
PSDA	**Pessada-Kefalo**	**0.59**	**299**	P	**Pb**	**02 27 16.4**	**-1.1**
PSDA				S	**Sb**	**02 27 25.2**	**-0.2**
PSDA	**Pessada-Kefalo**	**0.59**	**299**	P	**Pb**	**02 27 16.4**	**-1.1**
PSDA				S	**Sb**	**02 27 25.2**	**-0.2**
VLS	**Valsamata**	**0.62**	**304**	P	**Pb**	**02 27 16.9**	**-1.0**
VLS				S	**Sb**	**02 27 26.6**	**+0.3**
	comp=E,370nm,0.3s						
VLS	**Valsamata**	**0.62**	**304**	P	**Pb**	**02 27 17.0**	**-1.0**
VLS				AML	AML	02 27 28.4	
	comp=E,592μm,0.2s						
VLS				AML	AML	02 27 28.4	
	comp=N,872μm,0.4s						
LAKA	**Lakka**	**0.71**	**55**	P	**Pb**	**02 27 18.9**	**-0.6**
LAKA	**Lakka**	**0.71**	**55**	P	**Pb**	**02 27 18.7**	**-0.8**
LAKA				S	**Sb**	**02 27 28.9**	**-0.1**
LAKA				AML	AML	02 27 34.2	
	comp=E,1577μm,0.4s						
LAKA				AML	AML	02 27 35.9	
	comp=N,2033μm,0.5s						
LXRA	**Lixouri, Kepha**	**0.73**	**301**	P	**Pb**	**02 27 19.2**	**-0.6**
KLV	**Kalavryta, Ach**	**0.75**	**73**	P	**Pb**	**02 27 19.1**	**-1.1**
KLV				S	**Sb**	**02 27 30.3**	**+0.2**
KLV	**Kalavryta, Ach**	**0.75**	**73**	P	**Pb**	**02 27 19.2**	**-1.1**
KLV				S	**Sb**	**02 27 29.7**	**-0.3**
KLV				AML	AML	02 27 32.7	
	comp=N,455μm,0.3s						
KLV				AML	AML	02 27 39.3	
	comp=E,312μm,0.5s						
KEF4	**Livadi, Kephal**	**0.77**	**304**	P	**Pb**	**02 27 19.5**	**-0.9**
KEF4				S	**Sn**	**02 27 32.2**	**+0.4**
KEF4	**Livadi, Kephal**	**0.77**	**304**	P	**Pb**	**02 27 19.6**	**-0.9**
DMLN	**Damoulianata-K**	**0.80**	**301**	P	**Pb**	**02 27 20.1**	**-0.8**
DMLN	**Damoulianata-K**	**0.80**	**301**	P	**Pb**	**02 27 19.8**	**-1.1**
EFP	**Efpalio**	**0.80**	**41**	P	**Pb**	**02 27 20.1**	**-0.8**
EFP	**Efpalio**	**0.80**	**41**	P	**Pb**	**02 27 20.1**	**-0.8**
EFP				AML	AML	02 27 34.7	
	comp=E,648μm,0.4s						
EFP				AML	AML	02 27 37.5	
	comp=N,520μm,0.5s						
KEF3	**Kipouria, Keph**	**0.80**	**298**	P	**Pb**	**02 27 19.8**	**-1.1**
KEF3				S	**Sn**	**02 27 33.2**	**+0.8**
	comp=N,830nm,0.3s						
KEF3	**Kipouria, Keph**	**0.80**	**298**	P	**Pb**	**02 27 19.8**	**-1.1**
ALIK	**Aliki, Aigiali**	**0.81**	**58**	P	**Pb**	**02 27 20.8**	**-0.4**
FSK	**Fiskardo**	**0.83**	**320**	P	**Pb**	**02 27 20.6**	**-0.8**
FSK				AML	AML	02 27 39.1	
	comp=N,236μm,0.3s						
FSK				AML	AML	02 27 40.5	
	comp=E,289μm,0.2s						
ITM	**Ithomi**	**0.85**	**140**	P	**Pb**	**02 27 20.8**	**-1.0**
ITM				S	**Sn**	**02 27 34.6**	**+0.9**
	comp=E,165nm,0.5s						
ITM	**Ithomi**	**0.85**	**140**	P	**Pb**	**02 27 21.0**	**-0.7**
ITM				AML	AML	02 27 41.1	
	comp=E,350μm,0.4s						
ITM				AML	AML	02 27 41.8	
	comp=N,312μm,0.6s						
TRIZ	**Trizonia**	**0.85**	**51**	P	**Pb**	**02 27 20.9**	**-0.9**
TRIZ	**Trizonia**	**0.85**	**51**	P	**Pb**	**02 27 20.8**	**-1.0**
SERG	**Sergoula**	**0.87**	**48**	P	**Pb**	**02 27 21.3**	**-0.8**
SERG	**Sergoula**	**0.87**	**48**	P	**Pb**	**02 27 21.4**	**-0.8**
SERG				AML	AML	02 27 39.4	
	comp=N,617μm,0.3s						
SERG				AML	AML	02 27 41.3	
	comp=E,725μm,0.2s						
GUR	**Goura**	**0.88**	**83**	P	**Pb**	**02 27 21.2**	**-1.2**
GUR				S	**Sn**	**02 27 35.1**	**+0.5**
	comp=E,480nm,0.3s						
GUR	**Goura**	**0.88**	**83**	P	**Pb**	**02 27 21.1**	**-1.2**
GUR				AML	AML	02 27 40.5	
	comp=N,1117μm,0.4s						
GUR				AML	AML	02 27 40.6	
	comp=E,742μm,0.3s						
EVGI	**Lefkada island**	**0.92**	**330**	P	**Pb**	**02 27 22.2**	**-0.7**
EVGI	**Lefkada island**	**0.92**	**330**	P	**Pb**	**02 27 22.4**	**-0.6**
ANX	**Ano Chora**	**0.94**	**35**	P	**Pb**	**02 27 22.6**	**-0.7**
ANX	**Ano Chora**	**0.94**	**35**	P	**Pb**	**02 27 22.5**	**-0.7**
ANX				AML	AML	02 27 42.0	
	comp=N,630μm,0.4s						
ANX				AML	AML	02 27 43.5	
	comp=E,730μm,0.4s						
NYDR	**Nydri-Lefkada**	**0.98**	**334**	P	**Pb**	**02 27 23.1**	**-0.9**
DRAG	**Dragano-Lefkad**	**1.00**	**329**	P	**Pb**	**02 27 23.5**	**-0.9**
PYL	**PYLOS**	**1.01**	**157**	P	**Pn**	**02 27 23.5**	**-0.9**
LKD2	**Lefkada island**	**1.06**	**335**	P	**Pn**	**02 27 24.9**	**-0.1**
LKD2				AML	AML	02 27 48.2	
	comp=E,636μm,0.7s						
LKD2				AML	AML	02 27 52.4	
	comp=N,485μm,0.5s						
TSLK	**Tsoukalades, L**	**1.10**	**335**	P	**Pb**	**02 27 25.9**	**-0.1**
TSLK				AML	AML	02 27 49.7	
	comp=E,371μm,0.3s						
TSLK				AML	AML	02 27 51.7	
	comp=N,576μm,0.6s						
THAL	**Thalero**	**1.15**	**79**	P	**Pn**	**02 27 26.2**	**+0.1**
THAL	**Thalero**	**1.15**	**79**	P	**Pn**	**02 27 25.9**	**-0.2**
THAL				AML	AML	02 27 52.9	
	comp=N,726μm,0.3s						
THAL				AML	AML	02 27 56.2	
	comp=E,1027μm,0.4s						
EVR	**Evrytania**	**1.18**	**22**	P	**Pb**	**02 27 27.1**	**-0.3**
EVR	**Evrytania**	**1.18**	**22**	P	**Pn**	**02 27 26.8**	**+0.1**
EVR				AML	AML	02 27 50.1	
	comp=N,227μm,0.5s						
EVR				AML	AML	02 27 51.7	
	comp=E,208μm,0.7s						
MAKR	**Makrakomi, Fth**	**1.38**	**30**	P	**Pb**	**02 27 30.9**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.38**	**30**	P	**Pb**	**02 27 30.4**	**-0.4**
LTK	**Loutraki**	**1.38**	**81**	P	**Pb**	**02 27 30.6**	**-0.3**
LTK	**Loutraki**	**1.38**	**81**	P	**Pb**	**02 27 30.5**	**-0.3**
AGG	**Agios Georgios**	**1.47**	**35**	P	**Pb**	**02 27 32.4**	**0.0**
AGG	**Agios Georgios**	**1.47**	**35**	P	**Pb**	**02 27 31.9**	**-0.5**
AGG				AML	AML	02 28 02.5	
	comp=E,105μm,0.4s						
AGG				AML	AML	02 28 03.2	
	comp=N,96μm,0.6s						
EPID	**Epidavros**	**1.51**	**98**	P	**Pb**	**02 27 33.1**	**+0.1**
KRND	**KRANIDI**	**1.58**	**106**	P	**Pb**	**02 27 34.1**	**-0.2**
KRND	**KRANIDI**	**1.58**	**106**	P	**Pb**	**02 27 34.0**	**-0.2**
LKR	**Lokris**	**1.61**	**59**	P	**Pb**	**02 27 34.2**	**-0.6**
LKR	**Lokris**	**1.61**	**59**	P	**Pb**	**02 27 34.3**	**-0.4**
ATAL	**Atalanti**	**1.65**	**58**	P	**Pb**	**02 27 35.3**	**-0.1**
VIL2	**Platees**	**1.65**	**76**	P	**Pb**	**02 27 35.8**	**+0.4**
VLI	**Veliai**	**1.75**	**129**	P	**Pb**	**02 27 36.9**	**-0.2**
IGT	**Igoumenitsa**	**1.84**	**338**	P	**Pn**	**02 27 36.8**	**+1.0**
ATH	**Athens Observa**	**1.97**	**85**	P	**Pb**	**02 27 40.1**	**-0.7**
ATHU	**Athens Univers**	**2.02**	**85**	P	**Pb**	**02 27 40.0**	**-1.6**
VLY	**Voula,Athens**	**2.02**	**89**	P	**Pn**	**02 27 40.1**	**+1.9**
KPRO	**Kipourio**	**2.13**	**3**	P	**Pb**	**02 27 42.6**	**-1.0**
DION	**Dionisos Attik**	**2.15**	**82**	P	**Pb**	**02 27 42.1**	**-1.8**
DION	**Dionisos Attik**	**2.15**	**82**	P	**Pb**	**02 27 42.5**	**-1.4**

INET ***04*** *02:56:26.6, 9°.04N×83°.94W, h1^{km}, ML4.1*
UPA 04 02:56:25.9±0.8, **8°.93N**×**84°.14W**, **h10**^{km}±3^{km}, **MW4.7**, **3C-4D**, **Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK0	**Durika**	**0.94**	**69**	*e*P	Pg	02 56 43.2	-0.9
DRK0				*e*S	Sg	02 56 56.7	+0.3
PIRO	**Carate, Puerto**	**0.95**	**123**	*e*P	Pg	02 56 43.2	-1.0
PIRO				*e*S	Sb	02 56 57.1	+0.1
HDC	**Heredia**	**1.07**	**1**	*e*P	Pg	02 56 45.6	-0.9
HDC				*e*S	Sb	02 57 01.0	+0.4
CDITO	**Canoas**	**1.30**	**106**	⇑*i*P	Pn	02 56 48.5	-1.6
CDITO				*e*S	Sb	02 57 06.5	-0.7
MLIR3	**Monte Lirio, C**	**1.31**	**96**	⇓*e*P	Pn	02 56 49.4	-0.9
MLIR3				*e*S	Sb	02 57 07.1	-0.3
BATAN	**Batan**	**1.38**	**33**	*e*P	Pn	02 56 50.4	-0.9
BATAN				*e*S	Sb	02 57 08.9	-0.6
LESP3	**La Esperanza,**	**1.43**	**111**	⇓*i*P	Pn	02 56 50.8	-1.1
LESP3				*e*S	Sn	02 57 09.8	-0.9
BRU2	**Volcan**	**1.44**	**95**	⇓*i*P	Pn	02 56 51.2	-1.0
BRU2				*e*S	Sn	02 57 10.8	-0.3
PTPM	**Petroterminale**	**1.44**	**120**	*e*P	Pn	02 56 51.0	-1.0
PTPM				*e*S	Sn	02 57 10.3	-0.7
BC3P	**Paso Ancho**	**1.51**	**94**	⇑*e*P	Pn	02 56 52.2	-1.0
BC3P				*e*S	Sn	02 57 12.9	-0.2
JTS	**Las Juntas de**	**1.57**	**329**	*e*P	Pn	02 56 52.8	-1.1
JTS				*e*S	Sn	02 57 13.2	-1.1
BCO2	**Palmira**	**1.60**	**97**	⇑*i*P	Pn	02 56 53.2	-1.2
BCO2				*i* S	Sn	02 57 14.5	-0.8
LNBQ3	**Los Naranjos,**	**1.68**	**95**	*e*P	Pn	02 56 54.0	-1.4
CNI2	**El Empalme, Bo**	**1.72**	**73**	*e*P	Pn	02 56 54.4	-1.5
CNI2				*e*S	Sn	02 57 15.4	-2.5
DVD	**David**	**1.74**	**106**	*e*P	Pn	02 56 55.4	-0.8
DVD				*e*S	Sn	02 57 17.5	-0.9
LOCO3	**Loma Colorada,**	**1.78**	**107**	*e*P	Pn	02 56 56.0	-0.7
LOMA3	**Las Lomas, Chi**	**1.80**	**106**	*e*P	Pn	02 56 56.3	-0.6
LOMA3				*e*S	Sn	02 57 18.7	-1.1
GUAL3	**Gualaca, Chiri**	**1.86**	**102**	*e*P	Pn	02 56 57.1	-0.7
GUAL3				*e*S	Sn	02 57 20.6	-0.8
CHIR3	**Chiriqui UPA,**	**1.86**	**106**	*e*P	Pn	02 56 57.5	-0.4
CHIR3				*e*S	Sn	02 57 20.7	-0.8
CHGR2	**Aguacate**	**1.97**	**90**	⇓*i*P	Pn	02 56 58.3	-1.0
CHGR2				*e*S	Sn	02 57 23.2	-0.9
REME3	**Remedios, Chir**	**2.38**	**107**	*e*P	Pn	02 57 04.6	-0.4
REME3				*e*S	Sn	02 57 33.6	-0.7
PNME	**Penonome**	**3.79**	**96**	*e*P	Pn	02 57 24.3	-0.1
PNME				*e*S	Sn	02 58 07.8	-1.3
AZU	**Azuero**	**3.99**	**106**	*e*P	Pn	02 57 26.9	-0.1
AZU				*e*S	Sn	02 58 12.7	-1.2
BCIP	**Isla Barro Col**	**4.25**	**86**	*e*P	Pn	02 57 30.5	-0.2
BCIP				*e*S	Sn	02 58 19.2	-1.3

FUNV ***04*** *03:14:13.6, 8°.52N×71°.49W, h5^{km}, MW3.0*
ISC 04 03:14:12.9±1.2, **8°.53N**±0°.04×**71°.44W**±0°.03, **h7**^{km}±11^{km}, **n10**, σ**0^s.93**/19, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIGV	**El Vigia**	**0.32**	**13**	*e*S	**Sg**	**03 14 25.0**	**+1.6**
SOCV	**Socops**	**0.62**	**113**	*e*P	**Pg**	**03 14 24.5**	**-0.4**
SOCV				*e*S	**Sg**	**03 14 32.7**	**-0.4**
CAPV	**Capacho**	**1.09**	**233**	*e*P	**Pg**	**03 14 33.2**	**-0.6**
CAPV				*e*S	**Sg**	**03 14 48.0**	**0.0**
PAMC	**Pamplona, Colo**	**1.72**	**227**	*e*P	**Pb**	**03 14 45.3**	**+0.2**
PAMC				*e*S	**Sg**	**03 15 08.8**	**+0.5**
PAMC				*i*		03 15 11.6	
	comp=Z,24nm,0.5s						
OCAC	**Ocana**	**1.89**	**261**	*e*P	**Pn**	**03 14 47.0**	**+1.3**
OCAC				*e*S	**Sb**	**03 15 11.7**	**0.0**
OCAC				*i*		03 15 13.4	
	comp=Z,65nm,0.5s						
LL6C	**La Loma 6 Bece**	**2.17**	**304**	*e*P	**Pb**	**03 14 51.4**	**-1.2**
LL6C				*e*S	**Sb**	**03 15 19.0**	**-0.8**
ELOV	**Elorza**	**2.46**	**128**	*e*P	**Pn**	**03 14 54.2**	**+0.7**
ELOV				*e*S	**Sn**	**03 15 24.1**	**+0.2**
SIQV	**Siquisique**	**2.65**	**37**	*e*P	**Pn**	**03 14 56.8**	**+0.6**
SIQV				*e*S	**Sn**	**03 15 28.8**	**+0.1**
BAUV	**El Baul**	**3.38**	**83**	*e*P	**Pn**	**03 15 07.2**	**+1.0**
BAUV				*e*S	**Sn**	**03 15 46.0**	**-0.7**
BENV	**Beln**	**4.05**	**69**	*e*P	**Pn**	**03 15 16.6**	**+1.2**
BENV				*e*S	**Sn**	**03 16 01.9**	**-1.3**

GCG ***04*** *03:17:48.7±0.5, 12°.99N×89°.24W, h118^{km}±40^{km}, MD4.1*
INET ***04*** *03:17:50.0, 13°.01N×89°.55W, h15^{km}, ML4.1*
SNET ***04*** *03:17:52.2±0.7, 13°.14N×89°.41W, h54^{km}±7^{km}, ML4.3*
UCR ***04*** *03:17:53.7±2.1, 13°.20N×89°.33W, h49^{km}±16^{km}, ML4.3*
IDC ***04*** *03:17:53.2±2.5, 13°.95N×88°.73W, h52^{km}±30^{km}, mb3.3/5, mb1 3.8/7, mb1mx3.5/37, mbtmp3.7/7, ML3.6/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/22, Error ellipse: s-maj=81.9km s-min=21.0km az=41.0*
ISC 04 03:17:53.2±0.9, **13°.29N**±0°.09×**89°.33W**±0°.05, **h66**^{km}, **n52**, σ**1^s.06**/58, **mb3.5**/4, **12D**, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.19**	**2**	⇓*i*P	**Pn**	**03 18 02.4**	**-0.9**
LALI				*e*S	**Sn**	**03 18 09.9**	**-0.8**
LALI	**Alcalda de L**	**0.19**	**2**	⇓*i*P	**Pn**	**03 18 02.4**	**-0.9**
LALI				*e*S	**Sn**	**03 18 09.9**	**-0.8**
JAYA	**Jayaque - finc**	**0.38**	**342**	⇓*i*P	**Pn**	**03 18 04.0**	**-0.8**
JAYA				*e*S	**Sn**	**03 18 12.8**	**-0.4**
JAYA				IAML		03 18 19.4	
	comp=Z,11μm,0.2s						
JAYA	**Jayaque - finc**	**0.38**	**342**	⇓*i*P	**Pn**	**03 18 04.0**	**-0.8**
JAYA				*e*S	**Sn**	**03 18 12.8**	**-0.4**
JAYA				IAML		03 18 19.4	
	comp=Z,11μm,0.2s						
ITCA	**Escuela Especi**	**0.38**	**7**	*e*P	**Pn**	**03 18 04.4**	**-0.4**
ITCA	**Escuela Especi**	**0.38**	**7**	*e*P	**Pn**	**03 18 04.4**	**-0.4**
BOQS	**Boqueron**	**0.44**	**6**	*e*P	**Pn**	**03 18 05.5**	**0.0**
BOQS	**Boqueron**	**0.44**	**6**	*e*P	**Pn**	**03 18 05.5**	**0.0**
IGN	**Direccin Gen**	**0.45**	**20**	*e*P	**Pn**	**03 18 05.2**	**-0.1**
IGN	**Direccin Gen**	**0.45**	**20**	*e*P	**Pn**	**03 18 05.2**	**-0.1**
CEDA	**San Andres**	**0.51**	**353**	⇓*i*P	**Pn**	**03 18 06.0**	**+0.1**
CEDA				IAML		03 18 22.7	
	comp=Z,21μm,0.4s						
CEDA	**San Andres**	**0.51**	**353**	⇓*i*P	**Pn**	**03 18 06.0**	**+0.1**
CEDA				IAML		03 18 22.7	
	comp=Z,21μm,0.4s						
LBRS	**Las Brisas**	**0.52**	**32**	*e*P	**Pn**	**03 18 06.7**	**+0.6**
LBRS	**Las Brisas**	**0.52**	**32**	*e*P	**Pn**	**03 18 06.7**	**+0.6**
COEG	**Centro de Oper**	**0.54**	**53**	⇓*e*P	**Pn**	**03 18 06.2**	**0.0**
COEG				IAML		03 18 22.8	
	comp=Z,7μm,0.4s						
COEG	**Centro de Oper**	**0.54**	**53**	⇓*e*P	**Pn**	**03 18 06.2**	**0.0**
COEG				IAML		03 18 22.8	
	comp=Z,7μm,0.4s						
CEVE	**Cerro Verde**	**0.60**	**332**	⇓*e*P	**Pn**	**03 18 06.9**	**-0.2**
CEVE				IAML		03 18 19.5	
	comp=Z,14μm,0.3s						
CEVE	**Cerro Verde**	**0.60**	**332**	⇓*e*P	**Pn**	**03 18 06.9**	**-0.2**
CEVE				IAML		03 18 19.5	
	comp=Z,14μm,0.3s						
ALJI	**Alcalda de J**	**0.74**	**87**	*e*P	**Pn**	**03 18 07.7**	**-0.6**
ALJI				IAML		03 18 08.6	
	comp=Z,6μm,0.2s						
ALJI	**Alcalda de J**	**0.74**	**87**	*e*P	**Pn**	**03 18 07.7**	**-0.6**
ALJI				IAML		03 18 08.6	
	comp=Z,6μm,0.2s						
COEB	**Comit de Eme**	**0.80**	**75**	⇓*i*P	**Pn**	**03 18 09.0**	**-0.2**
COEB				IAML		03 18 22.9	
	comp=Z,14μm,0.2s						
COEB	**Comit de Eme**	**0.80**	**75**	⇓*i*P	**Pn**	**03 18 09.0**	**-0.2**
COEB				IAML		03 18 22.9	
	comp=Z,14μm,0.2s						
CNRM	**Centro Naciona**	**1.14**	**81**	*e*P	**Pn**	**03 18 14.1**	**+0.7**
CNRM	**Centro Naciona**	**1.14**	**81**	*e*P	**Pn**	**03 18 14.1**	**+0.7**
ESQI	**Esquipulas**	**1.26**	**359**	*e*P	**Pn**	**03 18 16.2**	**+1.1**
CNCH	**Conchagua**	**1.45**	**90**	*e*P	**Pn**	**03 18 17.8**	**+0.2**
CNCH				*e*S	**Sn**	**03 18 37.8**	**+1.9**
CNCH	**Conchagua**	**1.45**	**90**	*e*P	**Pn**	**03 18 17.8**	**+0.2**
CNCH				*e*S	**Sn**	**03 18 37.8**	**+1.9**
NBG	**Las Nubes**	**1.62**	**323**	*e*P	**Pn**	**03 18 22.5**	**+2.5**
PCG	**Pacaya**	**1.66**	**311**	*e*P	**Pn**	**03 18 22.2**	**+1.8**
MRL	**Marmol**	**1.81**	**349**	*e*P	**Pn**	**03 18 24.6**	**+2.1**
FUG	**Fuego 3**	**1.87**	**308**	*e*P	**Pn**	**03 18 24.4**	**+1.2**
FUG				*e*S	**Sn**	**03 18 47.3**	**+1.4**
APG	**El Apazote**	**2.03**	**327**	P	**Pn**	**03 18 24.5**	**-0.9**
	comp=Z,5.3nm,0.3s,baz=134,slow=7.7,SNR=55						
APG				LR	LR	03 19 08.5	
	comp=Z,74nm,21.5s,baz=97,slow=38						
STG3	**Santiaguito 3,**	**2.59**	**303**	*e*P	**Pn**	**03 18 34.0**	**+0.9**
GBS3	**Finca Las Img**	**4.54**	**123**	*e*P	**Pn**	**03 19 01.0**	**+1.5**
LAPC	**Finca la Perla**	**4.56**	**123**	*e*P	**Pn**	**03 19 00.3**	**+0.5**
BUEV	**Buena Vista**	**4.57**	**122**	*e*P	**Pn**	**03 19 01.6**	**+1.6**
GUAI	**GUAI**	**4.79**	**128**	*e*P	**Pn**	**03 19 03.2**	**+0.2**
HORNC	**Hornillas**	**4.80**	**122**	*e*P	**Pn**	**03 19 03.0**	**-0.1**
COLC	**Colonia**	**4.81**	**122**	*e*P	**Pn**	**03 19 03.7**	**+0.5**
CUI	**Cuipilapa**	**4.84**	**122**	*e*P	**Pn**	**03 19 04.1**	**+0.4**
ACAL	**Aguas Claras**	**4.96**	**122**	*e*P	**Pn**	**03 19 05.7**	**+0.4**
JTS	**Las Juntas de**	**5.22**	**124**	P	**Pn**	**03 19 09.3**	**+0.4**
JTS				LR	LR	03 21 36.2	
	comp=Z,64nm,20.6s,slow=43						
CASO	**Castillo**	**5.32**	**122**	*e*P	**Pn**	**03 19 11.0**	**+0.8**
CMIG	**Matias Romero**	**6.56**	**306**	P	**Pn**	**03 19 27.7**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=144,slow=10.0,SNR=9.9						
TXAR	**Lajitas Array**	**20.78**	**322**	P	**P**	**03 22 29.4**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=136,slow=10,SNR=15						
PDAR	**Pinedale Array**	**34.18**	**333**	P	**P**	**03 24 32.2**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=140,slow=10,SNR=3.6						
YKA	**Yellowknife Ar**	**52.33**	**345**	P	**P**	**03 26 56.0**	**-2.0**
	comp=Z,3.0nm,0.9s,baz=149,slow=6.3,SNR=7.9						
ILAR	**Eielson Array**	**64.52**	**336**	P	**P**	**03 28 20.6**	**-2.3**
	comp=Z,0.5nm,0.8s,baz=112,slow=4.0,SNR=4.8						
TORD	**Torodi Ar. Bea**	**88.01**	**77**	P	P	03 30 33.7	-3.2
	comp=Z,0.4nm,1.0s,baz=294,slow=6.4,SNR=1.7						
WRA	**Warramunga Arr**	**137.73**	**255**	PKP	**PKPdf**	**03 37 13.2**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=88,slow=1.6,SNR=8.7						
ASAR	**Alice Springs**	**137.87**	**249**	PKP	**PKPdf**	**03 37 12.8**	**+1.7**
	comp=Z,0.2nm,0.7s,baz=94,slow=1.8,SNR=2.1						
CMAR	**Chiang Mai Arr**	**147.41**	**345**	PKPbc	**PKPbc**	**03 37 31.9**	**+1.3**
	comp=Z,1.5nm,0.3s,baz=326,slow=3.9,SNR=4.6						

SNET ***04*** *03:21:02.6±1.3, 14°.11N×89°.64W, h6^{km}±8^{km}, ML3.2, MW3.6*
GCG ***04*** *03:21:03.4±0.7, 14°.19N×89°.77W, h0^{km}±8^{km}, MD3.1*
ISC 04 03:21:03.0±0.9, **14°.11N**±0°.03×**89°.66W**±0°.03, **h13**^{km}±8^{km}, **n30**, σ**0^s.70**/43, **12C-10D**, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UNIC	**Universidad Ca**	**0.17**	**139**	⇓*i*P	**Pg**	**03 21 06.5**	**-0.4**
UNIC				*e*S	**Sg**	**03 21 09.7**	**0.0**
UNIC				IAML		03 21 10.5	
	comp=Z,6μm,0.1s						
RTR	**El Retiro**	**0.21**	**175**	⇑*i*P	**Pg**	**03 21 07.0**	**-0.7**
SNJE	**San Jose**	**0.25**	**167**	⇓*i*P	**Pg**	**03 21 07.9**	**-0.4**
SBLS	**San Blas**	**0.27**	**172**	⇓*i*P	**Pg**	**03 21 08.2**	**-0.6**
CEVE	**Cerro Verde**	**0.28**	**172**	⇓*i*P	**Pg**	**03 21 08.5**	**-0.4**
CEVE				*e*S	**Sg**	**03 21 15.1**	**+2.1**
TACO	**Tacachico**	**0.33**	**115**	⇓*i*P	**Pg**	**03 21 09.6**	**-0.2**
TACO				*e*S	**Sg**	**03 21 13.7**	**-0.6**
CEDA	**San Andres**	**0.40**	**139**	⇓*i*P	**Pg**	**03 21 10.6**	**-0.4**
CEDA				*e*S	**Sg**	**03 21 16.4**	**0.0**
MTO3	**Montecristo**	**0.41**	**46**	*i* P	**Pg**	**03 21 10.7**	**-0.6**
MTO3				*e*S	**Sg**	**03 21 17.4**	**+0.5**
JAYA	**Jayaque - finc**	**0.50**	**155**	⇓*i*P	**Pg**	**03 21 12.3**	**-0.5**
	comp=Z,1μm,0.2s						
JAYA				*e*S	**Sg**	**03 21 19.3**	**-0.2**
JAYA				IAML		03 21 21.0	
	comp=Z,1μm,0.2s						
PMON	**Piamonte**	**0.52**	**139**	⇑*i*P	**Pg**	**03 21 13.2**	**-0.1**
BOQS	**Boqueron**	**0.53**	**135**	⇑*i*P	**Pg**	**03 21 13.2**	**-0.1**
BOQS				*e*S	**Sg**	**03 21 21.0**	**+0.5**
ESQI	**Esquipulas**	**0.55**	**35**	⇑*i*P	**Pg**	**03 21 13.6**	**-0.1**
ESQI				*e*S	**Sg**	**03 21 21.4**	**+0.3**
SNET	**Serv Nac Est T**	**0.59**	**135**	⇓*i*P	**Pg**	**03 21 14.2**	**-0.4**
SNET				IAML		03 21 26.6	
	comp=Z,1μm,0.3s						
UESS	**Universidad de**	**0.59**	**131**	⇑*i*P	**Pg**	**03 21 14.2**	**-0.5**
UDBS	**Universidad Do**	**0.63**	**128**	⇑*i*P	**Pg**	**03 21 14.7**	**-0.6**
	comp=Z,4μm,0.3s						
UDBS				IAML		03 21 25.8	
	comp=Z,4μm,0.3s						
LFU	**La Fuente**	**0.64**	**124**	*i* P	**Pg**	**03 21 15.4**	**-0.2**
LFU				*e*S	**Sg**	**03 21 24.2**	**+0.1**
LLGN	**La Laguna**	**0.70**	**86**	*i* P	**Pg**	**03 21 16.1**	**-0.5**
LLGN				IAML		03 21 27.5	
	comp=Z,762nm,0.4s						
LALI	**Alcalda de L**	**0.70**	**152**	⇓*i*P	**Pg**	**03 21 15.8**	**-0.8**
LBRS	**Las Brisas**	**0.71**	**121**	⇓*i*P	**Pg**	**03 21 16.7**	**-0.1**
LFRS	**El Faro**	**0.76**	**129**	*i* P	**Pg**	**03 21 17.2**	**-0.5**
LFRS				*e*S	**Sg**	**03 21 27.4**	**-0.3**
SJTE	**Alcalda de S**	**0.81**	**128**	⇑*i*P	**Pg**	**03 21 17.9**	**-0.7**
PAVA	**Las Pavas**	**0.81**	**119**	⇑*i*P	**Pg**	**03 21 18.2**	**-0.5**
	comp=Z,1μm,0.2s						
PAVA				IAML		03 21 31.3	
	comp=Z,1μm,0.2s						
NBG	**Las Nubes**	**0.81**	**306**	*e*P	**Pg**	**03 21 18.2**	**-0.6**
NBG				*e*S	**Sb**	**03 21 30.6**	**+0.4**
COEG	**Centro de Oper**	**0.90**	**123**	⇑*i*P	**Pg**	**03 21 19.8**	**-0.7**
MRL	**Marmol**	**0.97**	**359**	⇑*e*P	**Pb**	**03 21 21.5**	**-0.2**
MRL				*e*S	**Sn**	**03 21 36.1**	**-0.1**
UESV	**Universidad de**	**0.97**	**119**	⇑*i*P	**Pg**	**03 21 20.7**	**-1.0**
SCLA	**Alcaldia de Sa**	**0.99**	**114**	*i* P	**Pg**	**03 21 21.2**	**-1.0**
FUG	**Fuego 3**	**1.19**	**287**	*e*P	**Pg**	**03 21 24.6**	**-1.3**
FUG				*e*S	**Sb**	**03 21 40.5**	**-0.4**
COEB	**Comit de Eme**	**1.26**	**119**	⇑*i*P	**Pg**	**03 21 25.6**	**-1.6**
STG3	**Santiaguito 3,**	**1.94**	**288**	*e*P	**Pn**	**03 21 36.9**	**+1.1**

IDC ***04*** *03:35:50.9±1.0, 61°.81S×156°.01W, h0^{km}, mb4.0/5, mb1 4.2/5, mb1mx4.0/30, mbtmp4.0/5, MS3.8/11, Ms1 3.8/11, ms1mx3.8/15, Error ellipse: s-maj=46.7km s-min=26.6km az=6.0*
NEIC ***04*** *03:35:52.8±1.5, 61°.7S±0°.2×156°.0W±0°.3, h10^{km}±1^{km}, mb4.2/6, Error ellipse: s-maj=40.4km s-min=25.6km az=7.0*
GCMT ***04*** *03:35:57.8±0.3, 62°.22S±0°.02×155°.59W±0°.04, h19^{km}±2^{km}, MW4.8/68, Moment Tensor Solution. s15,c17; s68,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.68±.17; $M_{\theta\theta}$1.74±.15; $M_{\phi\phi}$-1.06±.11; $M_{r\theta}$-0.29±.27; $M_{\theta\phi}$1.62±.09; $M_{\phi r}$0.33±.27; Best double couple: $M_0$2.21500×10^{16} NP1:ϕ_s202.00000°, δ75.00000°, λ-168.00000°. NP2: ϕ_s109.00000°, δ79.00000°, λ-15.00000°. Principal axes: T 2.4870, Plg2.0000°, Azm156.0000°; N -0.5440,*

Plg71.0000°, Azm253.0000°; P -1.9440, Plg19.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 04 03:35:52.0±0.8**, 61°.7S**±0°.2×**155°.9W**±0°.2**, h10^{km}, n32, σ0^{s}.79**/17**, mb4.2**/4**, MS3.9**/14**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBA	Scott Base	20.06	202	P	P	03 40 24.8	0.0
SBA				IAmb	IAmb	03 40 30.5	
	comp=Z,35nm,1.5s						
VNDA	Vanda	20.82	204	P	P	03 40 32.1	-0.9
	comp=Z,2.2nm,1.0s,baz=79,slow=11,SNR=4.5						
VNDA				LR	LR	03 46 18.1	
	comp=Z,163nm,18.5s,baz=70,slow=30						
VNDA	Vanda	20.82	204	P	P	03 40 34.1	+1.0
VNDA				IAmb	IAmb	03 40 40.5	
	comp=Z,11nm,1.2s						
URZ	Urewera	28.77	312	LR	LR	03 50 30.1	
	comp=Z,266nm,21.7s,baz=211,slow=30						
MEH	Mehetia	44.10	11	eT	T	04 31 20.6	
	comp=Z,10nm,0.2s						
PPT2	Papeete2	44.26	9	eLQ	LQ	03 54 17.8	
	comp=Z,563nm,30.0s						
PPT2				eLR	LR	03 56 36.7	
	comp=Z,431nm,25.0s,baz=183						
PPT	Papeete	44.28	9	LR	LR	03 58 10.6	
	comp=Z,183nm,21.2s,baz=200,slow=30						
VAH	Vaihoa	46.75	11	eT	T	04 34 45.5	
	comp=Z,20nm,0.2s						
DZM	Mont Dzumac	47.26	310	eLR	LR	03 57 56.0	
	comp=Z,468nm,22.8s						
MAW	Mawson	47.98	199	LR	LR	04 02 38.0	
	comp=Z,176nm,18.1s,baz=113,slow=34						
STKA	Stephens Creek	49.51	277	P	P	03 44 43.2	+0.8
	comp=Z,3.5nm,0.9s,baz=145,slow=11,SNR=5.6						
STKA				LR	LR	04 03 44.5	
	comp=Z,74nm,18.0s,baz=188,slow=34						
STKA	Stephens Creek	49.51	277	IAmb	IAmb	03 44 46.4	
	comp=Z,1.4nm,1.1s						
PLCA	Paso Flores	53.08	109	LR	LR	04 03 12.0	
	comp=Z,42nm,19.2s,baz=214,slow=31						
TAOE	Nuku Hiva Isla	53.98	19	eLR	LR	04 01 05.1	
	comp=Z,129nm,23.1s						
ASAR	Alice Springs	60.07	275	P	P	03 45 59.7	+0.7
	comp=Z,2.3nm,1.0s,baz=148,slow=7.2,SNR=14						
ASAR				LR	LR	04 09 16.0	
	comp=Z,62nm,18.9s,baz=150,slow=33						
WRA	Warramunga Arr	63.05	278	P	P	03 46 18.7	-0.4
	comp=Z,2.8nm,1.1s,baz=160,slow=5.8,SNR=8.0						
WRA	Warramunga Arr	63.05	278	IAmb	IAmb	03 46 23.3	
	comp=Z,0.5nm,1.4s						
CPUP	Villa Florida	71.10	110	LR	LR	04 15 24.5	
	comp=Z,48nm,19.2s,baz=212,slow=33						
PB16	IPOC Station P	72.34	96	P	P	03 47 18.6	+0.1
LPAZ	La Paz	74.76	96	P	P	03 47 34.1	+1.3
	comp=Z,1.2nm,0.9s,baz=219,slow=6.5,SNR=3.5						
LPAZ				LR	LR	04 13 13.4	
	comp=Z,51nm,21.4s,baz=17,slow=30						
LPAZ	La Paz	74.76	96	IAmb	IAmb	03 47 42.2	
	comp=Z,4.8nm,1.1s						
BDFB	Brasilia	84.59	113	LR	LR	04 22 12.3	
	comp=Z,132nm,22.0s,baz=172,slow=33						
BOSA	Boshof	90.03	181	LR	LR	04 26 36.8	
	comp=Z,56nm,19.0s,baz=205,slow=34						
ILAR	Eielson Array	126.32	5	PKP	PKiKP	03 54 54.2	+0.7
	comp=Z,1.9nm,1.2s,baz=228,slow=3.5,SNR=5.6						
MKAR	Makanchi Array	144.23	273	PKP	PKPdf	03 55 25.7	-1.3
	comp=Z,0.7nm,0.7s,baz=143,slow=2.9,SNR=2.7						
BTK	Batken	144.53	254	PKPdf	PKPdf	03 55 27.1	-0.6
AAK	Ala-Archa	144.84	261	PKP	PKPdf	03 55 27.9	-0.4
	comp=Z,5.5nm,0.8s,baz=158,slow=6.8,SNR=9.6						
AAK	Ala-Archa	144.84	261		PKPdf	03 55 28.2	-0.1
ZALV	Zalesovo Beam	147.87	284	PKPbc	PKPbc	03 55 35.2	-0.6
	comp=Z,0.4nm,0.3s,baz=132,slow=2.2,SNR=3.6						
PFVI	Vila Bisbo	148.02	125	PKPbc	PKPbc	03 55 36.5	-0.3
TULEG	Thule	148.08	26	PKPbc	PKiKP	03 55 36.7	-0.8
ESDC	Sonseca Array	152.09	129	PKPbc	PKPbc	03 55 46.3	-0.3
	comp=Z,1.8nm,1.1s,baz=268,slow=3.5,SNR=4.4						

SKO 04 03:38:24.4, 41°.34N×20°.91E, h8^{km}, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.24	200	i Pg	Pg	03 38 29.5	+0.2
OHR				i Sg	Sg	03 38 33.2	+0.6
OHR				eLg	Lg	03 38 36.5	
	comp=E,25nm,0.6s						
OHR	Ohrid	0.24	200	i Pg	Pg	03 38 29.3	0.0
OHR				i Sg	Sg	03 38 33.2	+0.6
OHR				eLg	Lg	03 38 36.5	
	comp=E,25nm,0.6s						
FNA	Florina	0.66	147	i Pg	Pg	03 38 37.3	+0.2
FNA				i Sg	Sb	03 38 47.8	+0.3
FNA	Florina	0.66	147	i Pg	Pg	03 38 37.1	0.0
FNA				i Sg	Sb	03 38 47.3	-0.2
STIP	Stip	1.02	69	i Pg	Pn	03 38 48.2	+3.1
STIP				i Sg	Sn	03 39 05.0	+5.4
STIP				eLg	Lg	03 39 05.6	
	comp=N,1.9nm,0.3s						
STIP	Stip	1.02	69	i Pg	Pn	03 38 48.1	+3.0
STIP				i Sg	Sn	03 39 05.1	+5.5
STIP				eLg	Lg	03 39 09.4	
	comp=E,2.8nm,0.5s						
GRG	Griva	1.19	108	i Pg	Pn	03 38 47.6	+0.2
GRG	Griva	1.19	108	i Pg	Pn	03 38 47.6	+0.2
GRG				i Sg	Sn	03 39 04.8	+1.0
ULC	Ulcinj	1.40	297	i Pg	Pg	03 38 53.8	+2.6
KNT	Kendrikon	1.51	96	i Pg	Pg	03 38 53.6	+0.2
KNT				i Sg	Sg	03 39 14.4	+1.4

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*MAN **04** 03:44:04.7, 9°.55N×126°.31E, h14^{km}, mb4.9, ML3.8, MS3.8*

*IDC **04** 03:44:08.1±2.8, 9°.58N×126°.05E, h75^{km}±27^{km}, mb4.0/20, mb1 4.1/22, mb1mx4.0/43, mbtmp4.3/22, MS2.9/5, Ms1 2.9/5, ms1mx2.8/34, Error ellipse: s-maj=25.6km s-min=10.6km az=79.0*

*NEIC **04** 03:44:11.9±1.6, 9°.61N±0°.08×126°.16E±0°.09, h106^{km}±5^{km}, mb4.5/27, Error ellipse: s-maj=13.5km s-min=9.8km az=129.0*

ISC 04 03:44:02.0±1.5**, 9°.63N**±0°.04×**126°.43E**±0°.05**, h17^{km}**±9^{km}**, n73, σ1^{s}.58**/56**, mb4.4**/34**, 3C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.94	279	⇓iP	Pg	03 44 20.0	-0.3
SCPH				i S	Sg	03 44 31.3	-1.4
BIPH	Bislig	1.44	183	⇓eP	Pg	03 44 30.6	+0.8
BIPH				eS	Sb	03 44 47.5	+1.1
MSLP	Maasin	1.63	288	eP	Pn	03 44 32.2	+2.3
MSLP				i S	Sb	03 44 52.1	+0.2
LLP	Lapu-Lapu	2.52	286	⇓iP	Pn	03 44 44.4	+2.2
LLP				i S	Sn	03 45 15.3	+2.7
TBP	Tagbilaran	2.53	272	⇓iP	Pn	03 44 44.0	+1.6
TBP				i S	Sn	03 45 14.1	+1.2
DAV	Davao City (W)	2.68	198	P	Pb	03 44 49.0	-0.5
	86nm,0.3s,baz=246,slow=10.0,SNR=1.8						
DAV				S	Sg	03 45 27.0	-1.2
	114nm,0.3s,baz=344,slow=22,SNR=8.0						
DAV				LR	LR	03 46 04.3	
	comp=Z,612nm,20.9s,baz=322,slow=46						
DAV	Davao City (W)	2.68	198		Pg	03 44 55.2	+1.8
KCP	Kidapawan	2.92	207	⇑iP	Pn	03 44 50.2	+2.4
KCP				i S	Sn	03 45 25.5	+2.9
SNPH	Sibulan	3.17	265	⇑iP	Pn	03 44 53.5	+2.4
SNPH				i S	Sn	03 45 30.6	+2.1
DCPH	Dipolog City	3.21	251	⇑eP	Pn	03 44 53.3	+1.6
DCPH				i S	Sn	03 45 30.6	+0.9
PAGZ	Pagadian	3.50	240	⇓iP	Pn	03 44 57.7	+2.1
PAGZ				i S	Sn	03 45 38.4	+1.7
RCP	Roxas	4.10	298	⇓eP	Pn	03 45 06.8	+2.9
SIJI	Sorong	11.49	155	LR	LR	03 51 16.1	
	comp=Z,20nm,21.7s,baz=172,slow=37						
TPUB	Ta-pu	14.68	338	Pn	Pn	03 47 33.0	+4.0
SBUM	Sibu	15.82	244	Pn	Pn	03 47 44.7	+0.5
KAPI	Kappang	16.00	205	LR	LR	03 54 34.7	
	comp=Z,52nm,18.8s,baz=20,slow=40						
BATI	Baumata	19.90	188	P	P	03 48 33.2	+0.4
	6.0nm,0.3s,baz=6.4,slow=4.0,SNR=4.8						
MTN	Manton Dam	22.81	168	P	P	03 49 04.2	0.0
MTN				IAmb	IAmb	03 49 06.7	
	comp=Z,28nm,1.4s						
JNU	Nakatsue	23.74	9	P	P	03 49 15.7	+2.2
	comp=Z,22nm,0.7s,baz=168,slow=2.7,SNR=4.9						
JNU	Nakatsue	23.74	9	IAmb	IAmb	03 49 18.4	
	comp=Z,63nm,1.1s						
KNRA	Kununurra	25.25	175	P	P	03 49 27.4	0.0
FITZ	Fitzroy Crossi	27.56	182	P	P	03 49 48.0	-0.2
	comp=Z,6.1nm,0.6s,baz=14,slow=8.4,SNR=48						
KSRS	Korea Array	27.73	3	LR	LR	04 02 34.5	
	comp=Z,13nm,18.2s,baz=210,slow=40						
CMAR	Chiang Mai Arr	28.04	291	P	P	03 49 49.8	-2.8
	comp=Z,1.3nm,0.3s,baz=277,slow=28,SNR=4.7						
CMAR				LR	LR	04 01 25.4	
	comp=Z,35nm,19.4s,baz=144,slow=37						
WRA	Warramunga Arr	30.40	165	P	P	03 50 11.9	-1.6
	comp=Z,0.9nm,0.5s,baz=346,slow=8.0,SNR=20						
WB2	Warramunga Arr	30.40	165	P	P	03 50 12.0	-1.6
WB2				IAmb	IAmb	03 50 36.6	
	comp=Z,7.0nm,1.3s						
BJT	Baijiatuau	31.61	345	P	P	03 50 22.1	-1.9
BJT				IAmb	IAmb	03 50 28.1	
	comp=Z,10.0nm,1.3s						
AS31	Alice Springs	33.89	168	P	P	03 50 43.5	-0.6
ASAR	Alice Springs	33.89	168	P	P	03 50 43.2	-0.9
	comp=Z,0.8nm,0.3s,baz=348,slow=7.2,SNR=19						
ASAR				PcP	PcP	03 53 21.8	-1.0
	comp=Z,0.6nm,0.6s,baz=332,slow=2.2,SNR=5.2						
USRK	Ussuriysk Ar.	34.78	7	P	P	03 50 52.2	+0.7
	comp=Z,3.6nm,0.7s,baz=180,slow=6.6,SNR=7.7						
SHL	Shillong	36.40	300	P	P	03 51 04.4	-1.6
KLR	Kul'dur	39.72	5	P	P	03 51 33.9	+0.4
	comp=Z,2.3nm,0.6s,baz=183,slow=6.0,SNR=10						
H11S3	WAKE ISLAND Hy	39.95	73	T	T	04 34 32.1	
	baz=262,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	39.97	73	T	T	04 34 41.5	
	baz=262,slow=75,SNR=34						
H11S2	WAKE ISLAND Hy	39.97	73	T	T	04 34 27.8	
	baz=262,slow=75,SNR=42						
FORT	Forrest	40.21	178	P	P	03 51 36.1	-1.6
H11N1	WAKE ISLAND Hy	40.31	71	T	T	04 34 53.1	
	baz=263,slow=75,SNR=37						
H11N2	WAKE ISLAND Hy	40.32	71	T	T	04 34 50.5	
	baz=263,slow=75,SNR=39						
H11N3	WAKE ISLAND Hy	40.33	71	T	T	04 35 07.3	
	baz=263,slow=75,SNR=32						
SONM	Songino Array	41.67	340	P	P	03 51 47.8	-2.0
	comp=Z,0.4nm,0.5s,baz=149,slow=8.9,SNR=2.9						
SONM				PcP	PcP	03 53 45.2	-1.2
	comp=Z,0.3nm,0.4s,baz=156,slow=3.6,SNR=3.7						
BBOO	Buckleboo	43.19	168	P	P	03 52 02.0	-0.1
STKA	Stephens Creek	43.75	161	P	P	03 52 06.2	-0.5
	comp=Z,1.8nm,0.3s,baz=359,slow=4.3,SNR=7.2						
PETK	Petropavlovsk-	50.15	24	P	P	03 52 57.8	+1.3
	comp=Z,2.5nm,0.7s,baz=219,slow=5.3,SNR=2.3						
MK31	Makanchi Array	52.63	323	P	P	03 53 13.4	-1.8
MKAR	Makanchi Array	52.63	323	P	P	03 53 12.9	-2.3
	comp=Z,2.2nm,0.6s,baz=119,slow=7.8,SNR=25						
MKAR	Makanchi Array	52.63	323	P	P	03 53 13.8	-1.4
MAKZ	Makanchi	52.82	323	P	P	03 53 15.1	-1.5
MAKZ				IAmb	IAmb	03 53 16.8	
	comp=Z,3.3nm,0.8s						
ZALV	Zalesovo Beam	55.26	331	P	P	03 53 31.3	-2.9
	comp=Z,0.6nm,0.4s,baz=125,slow=7.4,SNR=4.2						
KURK	Kurchatov	56.68	326	P	P	03 53 42.9	-1.6
KURK				IAmb	IAmb	03 53 50.0	
	comp=Z,5.2nm,1.2s						
KURBB	Kurchatov Arra	56.69	326	P	P	03 53 41.8	-2.7
	comp=Z,1.3nm,0.4s,baz=123,slow=7.0,SNR=9.2						
BTK	Batken	57.72	311	P	P	03 53 50.0	-2.2
BTK				IAmb	IAmb	03 54 07.3	
	comp=Z,5.1nm,0.4s						
GAR	Garm	57.82	310	P	P	03 53 50.1	-2.8
GAR				IAmb	IAmb	03 53 55.6	
	comp=Z,9.1nm,1.1s						
KKAR	Karatay Array	58.81	315	P	P	03 53 57.8	-1.8
TIXI	Tiksi	61.98	1	P	P	03 54 20.5	-0.2
TIXI				IAmb	IAmb	03 54 21.4	
	comp=Z,7.8nm,0.8s						
BILL	Bilibino	63.97	16	P	P	03 54 34.4	+0.3
BILL				IAmb	IAmb	03 54 36.4	
	comp=Z,5.7nm,0.9s						
ABKAR	Akbulak array	67.46	319	P	P	03 54 53.7	-3.2
ARU	Arti	69.84	327	P	P	03 55 08.9	-2.7
ARU				IAmb	IAmb	03 55 10.3	
	comp=Z,5.7nm,0.7s						
RAYN	Ar Rayn	77.95	292	P	P	03 55 56.1	-3.8
RAYN				IAmb	IAmb	03 56 07.2	
	comp=Z,5.9nm,1.3s						
I23K	Minto, Yukon-K	78.89	25	IAmb	IAmb	03 56 20.5	
	comp=Z,11nm,1.5s						
ILAR	Eielson Array	79.94	26	P	P	03 56 08.8	-1.1
	comp=Z,0.9nm,0.7s,baz=248,slow=4.6,SNR=12						
BMAR	Burnt Mountain	80.79	23	P	P	03 56 14.3	-0.2
ARCES	ARCESS Array B	84.84	340	P	P	03 56 34.1	-1.4
	comp=Z,3.0nm,0.6s,baz=76,slow=6.4,SNR=13						
A36M	Sachs Harbour	86.47	17	P	P	03 56 43.6	+0.2
A36M				IAmb	IAmb	03 56 48.0	
	comp=Z,5.7nm,0.9s						
FINES	FINESS Array B	86.53	332	P	P	03 56 42.2	-1.7
	comp=Z,3.0nm,0.4s,baz=75,slow=4.8,SNR=28						
AKASG	Malin Array Be	87.16	321	P	P	03 56 44.9	-2.4
	comp=Z,0.4nm,0.4s,baz=66,slow=4.9,SNR=2.4						
VNDA	Vanda	89.28	173	P	P	03 56 56.2	-0.5
	comp=Z,1.1nm,0.7s,baz=338,slow=5.9,SNR=5.4						
VNDA	Vanda	89.28	173	IAmb	IAmb	03 57 19.2	
	comp=Z,4.6nm,1.4s						
KMBO	Kilima Mbogo	89.38	269	P	P	03 56 56.0	-2.9
KMBO				IAmb	IAmb	03 56 59.2	
	comp=Z,2.3nm,0.9s						
NOA	NORSAR Array B	93.40	334	P	P	03 57 13.7	-2.6
	comp=Z,0.4nm,0.5s,baz=60,slow=1.9,SNR=1.6						
YKA	Yellowknife Ar	94.27	24	P	P	03 57 20.8	+0.6
	comp=Z,1.4nm,0.7s,baz=301,slow=4.5,SNR=7.9						
PLCA	Paso Flores	145.56	157	PKPbc	PKPdf	04 03 39.8	-0.1
	comp=Z,2.8nm,0.7s,baz=265,slow=2.5,SNR=12						
PLCA	Paso Flores	145.56	157		PKPdf	04 03 40.2	+0.4
LC01	Cunco	146.56	154	PKPbc	PKPdf	04 03 40.5	-1.0

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*IDC **04** 04:02:12.2±1.5, 36°.08N×71°.41E, h85^{km}±5^{km}, mb3.5/7, mb1 3.6/11, mb1mx3.3/56, mbtmp3.9/11, Error ellipse: s-maj=22.7km s-min=3.2km az=153.0*

*NNC **04** 04:02:18.6±2.5, 36°.70N×70°.96E, h113^{km}±51^{km}, mb3.5, mpv4.1, Error ellipse: s-maj=22.8km s-min=15.5km az=147.0*

ISC 04 04:02:12.9±0.7**, 36°.26N**±0°.08×**71°.37E**±0°.06**, h100^{km}, n33, σ2^{s}.61**/34**, mb3.8**/6**, 3C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.47	170	P	Pn	04 02 58.5	+6.7
CEP				S	Sn	04 03 31.0	+10
CHCP	Chirah Chowk	3.02	148	P	Pn	04 03 06.1	+7.1
THW	Thamme Wali	3.47	175	P	Pn	04 03 11.4	+6.4
AML	Almayashu	6.14	16	P	Pn	04 03 42.1	+0.7
	SNR=97						
UCH	Uchtor	6.44	21	P	Pn	04 03 47.0	+1.4
	SNR=14						
EKS2	Erkin-Say	6.66	15	P	Pn	04 03 49.4	+1.1
	SNR=7.8						
AAK	Ala-Archa	6.81	20	P	Pn	04 03 51.8	+1.5
	4.4nm,0.3s,baz=184,slow=6.2,SNR=30						
AAK				S	Sn	04 05 04.2	-2.3
	1.4nm,0.3s,baz=135,slow=22,SNR=8.5						
AAK	Ala-Archa	6.81	20	P	Pn	04 03 51.9	+1.5
	SNR=9.6						
KK02	Karatay Array	6.87	355	⇑P	Pn	04 03 51.6	+0.6
	6.2nm,0.4s,baz=180,slow=13						
KK02				⇓S	Sn	04 05 02.8	-4.8
	15nm,0.5s						
USP	Ospenovka	7.40	18	P	Pn	04 03 58.6	+0.3
	SNR=7.8						
TKM2	Tokmak 2	7.41	25	P	Pn	04 03 59.9	+1.3
	SNR=15						
TKM2	Tokmak 2	7.41	25	P	Pn	04 03 59.5	+0.9
	8.1nm,0.6s						
GEYT	Alibeck	10.72	283	P	Pn	04 04 43.5	+0.1
	1.3nm,0.3s,baz=104,slow=12,SNR=14						
GEYT				S	Sn	04 06 36.2	-5.1
	1.8nm,0.3s,baz=315,slow=55,SNR=3.6						
GYA0B	ALIBECK ARRAY	10.72	283	⇓P	Pn	04 04 43.6	+0.3
GYA0B				⇓S	Sn	04 06 36.9	-4.5
PYUN	Piuthan	12.76	126	eP	Pn	04 05 11.3	+0.5
	9.7nm,0.4s						
DANN	Dangsing	13.10	123	eP	Pn	04 05 15.5	0.0
	12nm,0.4s						
MKAR	Makanchi Array	13.32	34	P	Pn	04 05 18.4	+0.6
	0.1nm,0.3s,baz=210,slow=14,SNR=2.6						
GKN	Gorkha	13.92	122	eP	P	04 05 26.6	-4.2
	13nm,0.3s						
PKIN	Phulchoki	14.71	122	eP	P	04 05 37.1	-2.6
	3.6nm,0.2s						
PKI	Pulchoki	14.72	122	eP	P	04 05 36.7	-3.2
	4.0nm,0.3s						
GUN	Gumba	14.84	120	eP	P	04 05 37.8	-3.4
	4.9nm,0.4s						
KURBB	Kurchatov Arra	15.26	18	P	Pn	04 05 39.3	-3.5
	0.1nm,0.3s,baz=175,slow=12,SNR=4.9						
AB31	Akbulak array	15.44	331	P	Pn	04 05 44.1	-1.0
	0.5nm,0.3s,baz=121,slow=13,SNR=38						
AB31				⇑S	Sn	04 08 27.0	-8.6
	1.7nm,0.6s,baz=146,slow=22,SNR=6.7						
AKTO	Aktyubinsk	17.14	330	P	Pn	04 06 07.3	+1.3
	0.6nm,0.3s,baz=124,slow=7.9,SNR=10						
AKTO	Aktyubinsk	17.14	330	⇓P	P	04 06 04.3	-1.9
	4.3nm,0.8s						
AKTO				⇑S	Sn	04 09 08.5	-8.0
	6.1nm,1.1s						
ZALV	Zalesovo Beam	20.02	24	P	P	04 06 38.3	+0.8
	3.0nm,0.3s,baz=220,slow=11,SNR=11						
AKASG	Malin Array Be	33.33	309	P	P	04 08 44.4	+3.3
	0.3nm,0.2s,baz=98,slow=9.9,SNR=5.9						
FINES	FINESS Array B	37.85	326	P	P	04 09 22.4	+2.8
	1.1nm,0.7s,baz=88,slow=8.8,SNR=6.6						
ARCES	ARCESS Array B	41.48	338	P	P	04 09 52.6	+3.0
	2.2nm,0.9s,baz=138,slow=9.7,SNR=1.2						
HFS	Hagfors	43.44	322	P	P	04 10 08.6	+3.0
	3.2nm,0.8s,baz=98,slow=11,SNR=4.5						
NB2	NORSAR Subarra	44.76	323	P	P	04 10 19.2	+3.1
	comp=Z,0.4nm,0.4s,baz=99,slow=7.9						
NOA	NORSAR Array B	44.76	323	P	P	04 10 19.3	+3.1
	comp=Z,0.3nm,0.3s,baz=104,slow=7.1,SNR=3.8						
TORD	Torodi Ar. Bea	66.01	269	P	P	04 12 50.8	+1.6
	comp=Z,0.3nm,0.6s,baz=44,slow=6.1,SNR=2.1						

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*IDC **04** 04:04:37.8±0.9, 51°.45N×16°.10E, h0^{km}, mb1 3.5/6, mb1mx3.2/48, mbtmp3.4/6, ML2.6/6, Error ellipse: s-maj=18.6km s-min=8.6km az=103.0*

*PRU **04** 04:04:38.0±0.0, 51°.45N×16°.10E, h0^{km}*

*VIE **04** 04:04:40.4±1.0, 51°.22N×15°.99E, h0^{km}, mb2.5/4, ml2.5/5, Error ellipse: s-maj=5.9km s-min=5.2km az=158.0 72 km WNW of Wroclaw Suspected Mining induced.*

ISC 04 04:04:35.5±0.7**, 51°.54N**±0°.03×**16°.12E**±0°.03**, h0^{km}, n37, σ1^{s}.11**/77**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.71	171	ePg	Pg	04 04 49.6	+0.6
KSP				eSg	Sg	04 04 58.1	-0.1
CHVC	Chvalec	0.96	182	ePG	Pb	04 04 54.5	-0.4
CHVC				eSG	Sg	04 05 06.3	+0.1
	comp=Z,34nm,0.3s						
OSTC	Ostas	0.99	176	ePG	Pb	04 04 55.0	-0.5
OSTC				eSG	Sg	04 05 07.2	0.0
	comp=Z,32nm,0.3s						
UPC	Upice	1.04	184	ePG	Pg	04 04 55.6	+0.3
UPC				eSG	Sg	04 05 08.5	-0.3
DPC	Dobruska-Polom	1.20	174	ePG	Pg	04 04 58.3	-0.2
DPC				eSG	Sg	04 05 13.7	-0.3
PVCC	Panska Ves	1.41	224	ePG	Pb	04 05 02.9	+0.3
PVCC				eSG	Sn	04 05 21.7	+0.1
	comp=Z,138nm,0.3s						
BRG	Berggiesshubel	1.52	245	Pg	Pg	04 05 05.4	+0.7
BRG				Sg	Sn	04 05 25.5	+1.0
BRG				Amp		04 05 26.1	
	comp=Z,40nm,0.3s						
KRLC	Kraliky	1.53	164	ePG	Pg	04 05 04.7	0.0
KRLC				eSG	Sg	04 05 23.2	-1.3
	comp=Z,39nm,0.5s						
PRU	Pruhonice	1.85	213	ePN	Pn	04 05 08.3	-0.1
PRU				ePG	Pb	04 05 09.7	-0.4
PRU				eSG	Sb	04 05 33.6	-0.2
	comp=Z,21nm,0.5s						
CLL	Collm	1.96	264	ePn	Pn	04 05 10.0	0.0
CLL				ePg	Pg	04 05 13.0	-0.1
CLL				i		04 05 16.4	
CLL				eSg	Sg	04 05 39.0	+0.5
	comp=Z,12nm,0.7s						
MORC	Moravsky Berou	1.99	152	ePN	Pn	04 05 10.6	+0.2
MORC				eSG	Sb	04 05 37.8	0.0
OKC	Ostrava-Krasne	2.14	142	ePG	Pb	04 05 15.1	0.0
OKC				eSG	Sb	04 05 42.0	-0.2
	comp=Z,25nm,0.4s						
VRAC	Vranov	2.26	172	Pn	Pn	04 05 15.0	+0.9
	comp=Z,1.5nm,0.3s,baz=339,slow=15,SNR=11						
VRAC				Lg	Lg	04 05 46.4	
	comp=Z,3.5nm,0.3s,baz=280,slow=22,SNR=11						
VRAC	Vranov	2.26	172	ePN	Pn	04 05 14.4	+0.4
VRAC				eSG	Sb	04 05 45.4	-0.2
KRUC	Moravsky	2.49	176	ePN	Pn	04 05 17.7	+0.5
KRUC				eSG	Sb	04 05 52.6	+0.4
NKC	Novy Kostel	2.67	242	ePN	Pn	04 05 20.8	+1.1
NKC				ePG	Pg	04 05 27.1	+0.5
NKC				eSG	Sg	04 06 02.4	+1.3
	comp=Z,24nm,0.3s						
OJC	Ojcow	2.68	118	ePn	Pn	04 05 20.2	+0.4
OJC				ePg	Pg	04 05 28.4	+1.6
OJC				eSg	Sg	04 06 03.2	+1.7
JAVC	Velka Javorina	2.87	159	ePN	Pn	04 05 23.2	+0.7
JAVC				eSG	Sb	04 06 04.5	+1.4
KHC	Kasperske Hory	2.91	215	ePN	Pn	04 05 23.8	+0.7
KHC				ePG	Pb	04 05 29.5	+1.3
KHC				eSN	Sn	04 05 57.7	-1.0
KHC				eSG	Sg	04 06 07.2	-1.7
	comp=Z,9.5nm,0.4s						
CKRC	Cesky Krumlov	2.96	204	ePN	Pn	04 05 25.8	+2.0
CKRC				ePG	Pb	04 05 30.6	+1.5
CKRC				eSG	Sg	04 06 09.3	-1.3
	comp=Z,10nm,0.4s						
GERES	GERESS Array B	3.12	211	Pn	Pn	04 05 27.3	+1.4
	comp=Z,0.7nm,0.3s,baz=28,slow=13,SNR=21						
GERES				Pg	Pb	04 05 33.0	+1.3
	comp=Z,2.5nm,0.3s,baz=31,slow=17,SNR=43						
GERES				Lg	Lg	04 06 14.7	
	comp=Z,2.8nm,0.3s,baz=32,slow=26,SNR=8.2						
SMOL	Smolenice	3.15	164	ePG	Pg	04 05 36.5	+0.7
SMOL				eSG	Sg	04 06 16.4	-0.1
LANS	Liptovska Anna	3.22	137	ePG	Pg	04 05 37.2	+0.1
LANS				eSG	Sg	04 06 17.6	-1.1
MODS	Modra-Piesok	3.26	166	ePG	Pg	04 05 36.6	-1.3
MODS				eSG	Sg	04 06 18.3	-1.8
VYHS	Vyhne	3.52	149	ePN	Pn	04 05 32.5	+1.1
VYHS				ePG	Pg	04 05 44.9	+2.0
CONA	Conrad Observa	3.62	183	i Pn	Pn	04 05 34.0	+1.1
	comp=Z,1.7nm,0.3s						
CONA				i Sg	Sg	04 06 30.4	-1.4
	comp=Z,8.2nm,0.3s						
MOA	Molln	3.89	199	i Pn	Pn	04 05 37.5	+1.0
	comp=Z,1.1nm,0.2s						
MOA				eSg	Sg	04 06 39.5	-0.8
	comp=Z,9.9nm,0.5s						
ARSA	Arzberg	4.31	185	Pn	Pn	04 05 44.8	+2.5
	comp=Z,1.2nm,0.2s						
ARSA				eSg	Sg	04 06 51.2	-2.8
	comp=Z,6.9nm,0.6s						
BLEU	Blekinge	4.77	358	e	Pn	04 05 49.4	+0.8
	baz=186,slow=5.3						
BLEU				i P	Pn	04 05 50.2	+1.6
BLEU				eS	Sn	04 06 43.3	-1.2
BLEU				IAML		04 06 48.6	
	comp=Z,0.3nm,0.4s						
KBA	Koelnbreinsper	4.82	203	i Pn	Pn	04 05 50.5	+1.1
	comp=Z,0.7nm,0.3s						
KBA				eSg	Sg	04 07 09.3	-1.0
	comp=Z,3.9nm,0.4s						
BJUU	Bjuv	4.89	339	i P	Pn	04 05 50.8	+0.6
BJUU				eS	Sn	04 06 45.5	-2.1
DEL	Delary	5.11	346	e	Pn	04 05 52.4	-0.8
	baz=173,slow=12						
DEL				i P	Pn	04 05 54.0	+0.8
DEL				eS	Sn	04 06 52.2	-0.6
DEL				IAML		04 06 53.7	
	comp=Z,0.8nm,0.4s						
ABTA	Abfaltersbach	5.35	208	eSg	Sg	04 07 25.1	-2.2
	comp=Z,4.1nm,0.5s						
DAVOX	Davos/Dischmat	6.28	223	Pn	Pn	04 06 10.4	+0.9
	comp=Z,0.1nm,0.3s,baz=95,slow=5.4,SNR=3.7						
HFS	Hagfors	8.72	352	Pn	Pn	04 06 43.3	+0.6
	comp=Z,0.1nm,0.3s,baz=158,slow=12,SNR=1.3						
FINES	FINESS Array B	11.33	25	Pn	Pn	04 07 18.0	-0.4
	comp=Z,0.1nm,0.3s,baz=211,slow=11,SNR=4.3						

ARCES	**ARCESS Array B**	18.59	10	Pn	**P**	**04 08 51.6**	**-2.2**
	baz=198,slow=13,SNR=1.8						

BJI **04** *04:25:47.2±0.0,21°.42N×145°.85E,h9^{km},mB5.4/54, mb5.6/83,Ms5.1/88,Ms7 4.9/83*

MOS **04** *04:25:48.3±0.9,21°.35N×145°.73E,h10^{km},mb5.9/104, MS4.9/39,Error ellipse: s-maj=7.8km s-min=3.6km az=114.8*

NEIC **04** *04:25:50.8±1.7,21°.49N±0°.06×145°.75E±0°.08,h10^{km}±1^{km}, mb5.6/446,Ms_20 5.0/123,Mww5.4,Error ellipse: s-maj=12.2km s-min=9.7km az=82.0*

IDC **04** *04:25:52.9±1.8,21°.36N×145°.87E,h29^{km}±12^{km},mb5.4/32, mb1 5.5/37,mb1mx5.4/39,mbtmp5.5/37,ML5.4/4,MS4.7/38, Ms1 4.7/38,ms1mx4.7/52,Error ellipse: s-maj=14.6km s-min=9.6km az=92.0*

JMA **04** *04:25:54.0±0.4,22°.50N×146°.54E,h0^{km},M6.6*

GCMT **04** *04:25:55.8±0.1,21°.58N±0°.01×146°.01E±0°.01,h23^{km}, MW5.4/140,Moment Tensor Solution. s106,c172; s140,c256; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.18±.02; M$_{\theta\theta}$0.39±.02; M$_{\phi\phi}$-0.20±.02; M$_{r\theta}$-0.98±.05; M$_{\theta\phi}$-1.41±.02; M$_{\phi r}$0.27±.03; Best double couple: M$_0$1.72900×10^{17} NP1:φ$_s$357.00000°,δ57.00000°, λ2.00000°. NP2:φ$_s$265.00000°,δ88.00000°,λ147.00000°. Principal axes: T 1.9480, Plg24.0000°, Azm216.0000°; N -0.4380, Plg57.0000°, Azm83.0000°; P -1.5100, Plg21.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **04** *04:25:56,21°.57N×145°.83E,h14^{km},Moment Tensor Solution. Duration: 12^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.59; M$_{\theta\theta}$0.67; M$_{\phi\phi}$-0.09; M$_{r\theta}$-0.77; M$_{\theta\phi}$-1.48; M$_{\phi r}$0.10; Fault plane solution: M$_0$1.79000×10^{17} NP1: φ$_s$352.00000°,δ59.00000°,λ-10.00000°. NP2:φ$_s$87.00000°, δ81.00000°,λ-148.00000°. Principal axes: T 1.9959, Plg15.0000°, Azm216.0000°; N -0.5465, Plg57.0000°, Azm102.0000°; P -1.4494, Plg28.0000°, Azm314.0000°;*

ISC 04 04:25:51.0±0.5**,21°.44N**±0°.03×**145°.77E**±0°.04**,h16**^{km}±2^{km}**, h16**^{km}**:pP-P,n1376,σ1^{s}39**/1321**,mb5.7**/450**,MS5.0**/155**, 134C-247D,Fault plane solution: NP1:**φ$_s$1.57024°, δ45.20761°**,**λ-9.27936°. **NP2:**φ$_s$98.13679°**,**δ83.42912°, λ-134.83025°. **Principal axes:** T Plg24.6623°, Azm221.4046°**;** N Plg44.4573°**,** Azm104.6266°**;** P Plg35.3873°**,** Azm330.4399°**; Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARN	**Sarigan**	4.71	180	P	**Pn**	**04 27 03.3**	**+1.8**
ANA2	**Anatahan**	5.07	181	Pn	**Pn**	**04 27 08.2**	**+1.8**
ANA2	**Anatahan**	5.07	181	P	**Pn**	**04 27 09.0**	**+2.6**
JHH2	**Haha-jima-NKT2**	6.13	328	P	**Pn**	**04 27 22.9**	**+2.0**
JHH2				S	**Sn**	**04 28 29.5**	**-1.2**
CBIJ	**Chichi jima**	6.51	331	P	**Pn**	**04 27 27.1**	**+0.9**
CBIJ				eS	**Sn**	**04 28 37.4**	**-2.8**
JCJ	**Chichijima**	6.51	331	Pn	**Pn**	**04 27 27.1**	**+0.9**
	279nm,0.3s,baz=194,slow=7.1,SNR=32						
JCJ				Sn	**Sn**	**04 28 38.7**	**-1.5**
	329nm,0.3s,baz=305,slow=22,SNR=13						
JCJ				LR	LR	04 30 23.6	
	comp=Z,7µm,18.8s,baz=142,slow=41						
JCJ	**Chichijima**	6.51	331	Pn	**Pn**	**04 27 26.4**	**+0.2**
GUMO	**Guam**	7.85	186	Pn	**Pn**	**04 27 45.9**	**+1.3**
	87nm,0.3s,baz=358,slow=3.0,SNR=19						
GUMO				Sn	**Sn**	**04 29 15.2**	**+2.0**
	150nm,0.3s,baz=5.9,slow=22,SNR=5.5						
GUMO	**Guam**	7.85	186	Pn	**Pn**	**04 27 47.5**	**+2.9**
GUMO	**Guam**	7.85	186	P	**Pn**	**04 27 47.5**	**+2.9**
BSO1	**Boso 1**	13.83	343	P	**Pn**	**04 29 03.3**	**-2.5**
BSO1				eS	**Sn**	**04 31 30.0**	**-8.8**
JMZ	**Minamidaito 2**	14.03	291	Pn	**Pn**	**04 29 07.6**	**-1.6**
JSG	**Sagara**	14.78	335		**Pn**	**04 29 18.0**	**-1.4**
JOD2	**Odawara 2**	14.97	338	P	**Pn**	**04 29 21.0**	**-1.0**
JYT	**Yasato**	15.52	343		**Pn**	**04 29 27.5**	**-1.7**
JYT				IAmb	IAmb	04 29 37.2	
	comp=Z,561nm,1.0s						
JRY	**Ryogami san**	15.72	339	P	**Pn**	**04 29 30.8**	**-1.0**
JRY				eS	**Sn**	**04 32 18.8**	**-6.9**
INU	**Inuyama**	15.84	333	Pn	**Pn**	**04 29 32.4**	**-1.0**
INU				IAmb	IAmb	04 29 41.2	
	comp=Z,376nm,0.9s						
INU	**Inuyama**	15.84	333	P	**P**	**04 29 35.5**	**-1.6**
	comp=Z,487nm,1.2s						
JGF	**Kuroka**	15.92	334	Pn	**Pn**	**04 29 34.4**	**0.0**
JGF				IAmb	IAmb	04 29 42.3	
	comp=Z,465nm,0.7s						
JMN	**Monobe**	16.14	322		**Pn**	**04 29 38.5**	**+1.2**
JMN				IAmb	IAmb	04 29 41.4	
	comp=Z,740nm,1.0s						
JTO	**Tosashimizu**	16.19	317	P	**P**	**04 29 40.3**	**-0.7**
MJAR	**Matsushiro Arr**	16.43	338	Pn	**Pn**	**04 29 41.0**	**0.0**
	comp=Z,0.5nm,0.3s,baz=156,slow=8.9,SNR=61						
MJAR				Sn	**Sn**	**04 32 37.0**	**-6.0**
	comp=Z,0.3nm,0.3s,baz=127,slow=26,SNR=4.3						
MJAR	**Matsushiro Arr**	16.43	338	P	**Pn**	**04 29 39.9**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,123nm,1.0s						
MJAR	**Matsushiro Arr**	16.43	338	Pn	**Pn**	**04 29 39.9**	**-1.0**
MAJO	**Matsushiro**	16.43	338	c iP	**Pn**	**04 29 40.4**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,88nm,0.5s						
MAJO	**Matsushiro**	16.43	338		**Pn**	**04 29 40.3**	**-0.7**
MAJO				IAmb	IAmb	04 29 50.0	
	comp=Z,244nm,0.7s						
MAJO	**Matsushiro**	16.43	338	P	**P**	**04 29 44.0**	**+0.4**
MAT	**Matsushiro**	16.43	338	P	**Pn**	**04 29 39.8**	**-1.1**
MAT				S	**Sn**	**04 32 34.7**	**-8.3**
MJB9	**Matsu-Tunnel**	16.43	338		**Pn**	**04 29 40.3**	**-0.7**
MJB9				IAmb	IAmb	04 29 50.0	
	comp=Z,264nm,0.8s						
JWT	**Wachi**	16.52	329	Pn	**Pn**	**04 29 41.7**	**-0.4**
JOW	**Kunigami**	16.84	292	Pn	**P**	**04 29 48.2**	**-0.1**
	comp=Z,18nm,0.3s,baz=122,slow=9.2,SNR=33						
JOW	**Kunigami**	16.84	292	P	**P**	**04 29 50.3**	**+2.0**
JOW	**Kunigami**	16.84	292	Pn	**Pn**	**04 29 46.0**	**-0.2**
JOW				IAmb	IAmb	04 29 52.3	
	comp=Z,277nm,0.6s						
JOW	**Kunigami**	16.84	292	P	**P**	**04 29 49.9**	**+1.6**
JSU	**Suzuyama**	16.97	309	Pn	**Pn**	**04 29 46.9**	**-0.9**
JSU				IAmb	IAmb	04 29 55.7	
	comp=Z,510nm,0.8s						
JHS	**Saijyo**	17.49	323	P	**P**	**04 29 56.0**	**+0.6**
JHS	**Saijyo**	17.49	323	IAmb	IAmb	04 29 57.9	
	comp=Z,948nm,1.2s						
JNU	**Nakatsue**	17.60	315	P	**P**	**04 29 58.2**	**+1.5**
	comp=Z,7.6nm,0.3s,baz=114,slow=5.9,SNR=62						
JNU	**Nakatsue**	17.60	315	P	**P**	**04 29 57.6**	**+0.9**
	comp=Z,1µm,1.2s						
JKE	**Kume jima 2**	18.02	289	P	**P**	**04 30 02.8**	**+1.5**
PATS	**Pohnpei**	18.91	138	P	**P**	**04 30 10.2**	**-1.0**
PATS				IAmb	IAmb	04 30 14.9	
	comp=Z,268nm,0.5s						
JTU	**Tsushima**	19.43	316	P	**P**	**04 30 16.6**	**-0.1**
JTM	**Tenmabayashi**	19.70	349	IAmb	IAmb	04 30 43.1	
	comp=Z,451nm,1.0s						
H11N1	**WAKE ISLAND Hy**	19.85	91	P	**Pn**	**04 30 22.3**	**-0.6**
	baz=262,slow=14,SNR=13						
H11N1				T	T	04 48 49.3	
	baz=276,slow=75,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	19.85	91	P	**P**	**04 30 22.0**	**+0.8**
	baz=262,slow=14,SNR=9.5						
H11N2				T	T	04 48 45.1	
	baz=276,slow=75,SNR=3.7						
H11N3	**WAKE ISLAND Hy**	19.87	91	P	**Pn**	**04 30 22.5**	**-0.6**
	baz=262,slow=14,SNR=7.6						
H11N3				T	T	04 48 48.2	
	baz=276,slow=75,SNR=3.2						
H11S3	**WAKE ISLAND Hy**	19.88	95	P	**P**	**04 30 21.7**	**+0.1**
	baz=214,slow=28,SNR=5.7						
H11S3				T	T	04 48 48.1	
	baz=280,slow=75,SNR=2.4						
H11S1	**WAKE ISLAND Hy**	19.89	95	P	**Pn**	**04 30 22.6**	**-0.7**
	baz=214,slow=28,SNR=4.6						
H11S1				T	T	04 48 50.6	
	baz=280,slow=75,SNR=3.9						
H11S2	**WAKE ISLAND Hy**	19.89	95	P	**P**	**04 30 22.5**	**+0.7**
	baz=214,slow=28,SNR=6.2						
H11S2				T	T	04 48 52.2	
	baz=280,slow=75,SNR=3.5						
KSBUS	**Busan**	20.07	317	P	Pn	04 30 26.2	+0.7
	SNR=17						
KUJA	**Jangpyeong**	20.17	315	P	Pn	04 30 31.0	+4.3
	SNR=7.8						
JOT	**Ohata**	20.28	350	P	Pn	04 30 28.4	+0.5
KSMAS	**Masan**	20.36	316	P	Pn	04 30 32.5	+3.5
	SNR=8.0						
ERM	**Erimo**	20.64	354	⇑eP	**P**	**04 30 30.8**	**+1.1**
ERM				pmax	pmax		
	comp=Z,183nm,1.0s						
ERM				MLR	MLR		
	comp=Z,3µm,17.0s						
ERM	**Erimo**	20.64	354	P	**P**	**04 30 27.9**	**-1.9**
ERM				IAmb	IAmb	04 30 39.9	
	comp=Z,304nm,1.1s						
ERM	**Erimo**	20.64	354	P	Pn	04 30 31.8	-0.3
KOHB	**KOHEUNG**	20.91	313	P	Pn	04 30 34.1	-1.2
	SNR=8.2						
KSADO	**Andong**	20.91	319	P	**P**	**04 30 34.0**	**+1.2**
	SNR=28						
BOSB	**Boseong-gun**	21.03	313	P	**P**	**04 30 35.1**	**+1.0**
	SNR=12						
KSEUS	**ULSEONG**	21.03	319	P	**P**	**04 30 35.3**	**+1.2**
	SNR=12						
EUSB	**Uiseong**	21.04	319	P	**P**	**04 30 35.0**	**+0.8**
	SNR=15						
YOJ	**Yonaguni jima**	21.17	283	P	**P**	**04 30 37.0**	**+1.3**
KSSCH	**SUNCHEON**	21.18	314	P	**P**	**04 30 36.9**	**+1.1**
	SNR=15						
KSKWJ	**Gwangju**	21.40	314	P	**P**	**04 30 39.2**	**+1.0**
	SNR=14						
KSKWJ	**Gwangju**	21.40	314	P	**P**	**04 30 39.2**	**+1.0**
	SNR=14						
KSKWJ	**Gwangju**	21.40	314	P	**P**	**04 30 39.2**	**+1.0**
	SNR=14						
YOJB	**Youngju**	21.48	319	P	**P**	**04 30 40.0**	**+1.1**
	SNR=13						
KSJEU	**Jeongeup**	21.64	314	P	**P**	**04 30 41.9**	**+1.3**
	SNR=9.2						
OKEB	**Okgye-meyeon**	21.70	322	P	**P**	**04 30 41.2**	**-0.2**
	SNR=9.4						
KSYOW	**Yeongwol**	21.71	320	P	**P**	**04 30 42.0**	**+0.6**
	SNR=22						
GOCB	**Gochang-gun**	21.77	314	P	**P**	**04 30 43.0**	**+0.9**
	SNR=8.2						
JECH	**Jecheon**	21.86	320	P	**P**	**04 30 44.0**	**+1.0**
	SNR=27						
TJN	**Taejon**	21.88	317	deP	**P**	**04 30 43.4**	**+0.2**
TJN	**Taejon**	21.88	317	P	**P**	**04 30 45.5**	**+2.3**
	comp=Z,806nm,1.3s						
SMKB	**Mukjeong-gil**	22.00	314	P	**P**	**04 30 46.0**	**+1.5**
	SNR=6.6						
KSGUS	**GUNSAN**	22.05	315	P	P	04 30 53.5	+8.5
	SNR=6.8						
EMSB	**Eumseong**	22.09	318	P	**P**	**04 30 47.0**	**+1.6**
	SNR=16						
KSRS	**Korea Array**	22.21	320	P	**P**	**04 30 49.0**	**+2.2**
	comp=Z,172nm,0.7s,baz=149,slow=7.4,SNR=126						
KSRS				S	**S**	**04 34 55.3**	**+4.4**
	comp=Z,17nm,1.3s,baz=152,slow=15,SNR=5.2						
KSRS				ScP	**ScP**	**04 38 17.9**	**-2.1**
	comp=Z,1.8nm,0.7s,baz=128,slow=2.1,SNR=4.6						
KSCEA	**Cheonan**	22.22	318	P	**P**	**04 30 46.9**	**0.0**
	SNR=20						
KSAR	**Wonju Array Be**	22.23	320	P	**P**	**04 30 46.5**	**-0.5**
KSAR	**Wonju Array Be**	22.23	320	P	**P**	**04 30 46.5**	**-0.5**
KS19	**Wonju Array Si**	22.28	320	IAmb	IAmb	04 30 57.6	
	comp=Z,269nm,0.8s						
KSICN	**Icheon**	22.42	319	P	**P**	**04 30 51.6**	**+2.6**
	SNR=19						
NACB	**Ninganchiao**	22.44	282	P	**P**	**04 30 49.0**	**-0.4**
KSIJA	**INJE**	22.46	321	P	**P**	**04 30 49.2**	**-0.2**
	SNR=14						
KSCHC	**Chuncheon**	22.49	320	P	**P**	**04 30 52.0**	**+2.2**
	SNR=12						
YUK	**Yuzh-Kuril'sk**	22.54	0	eP	**P**	**04 30 51.3**	**+1.1**
YUK				ePPP	PPP	04 31 20.8	
YUK				eS	**S**	**04 35 00.0**	**+3.3**
YUK				eSS	**SnSn**	**04 35 29.6**	**+3.6**
YUK				eSSS	SSS	04 35 42.9	
YUK				pmax	pmax		
	comp=Z,495nm,1.2s						
YUK				pmax	pmax		
	comp=N,554nm,1.0s						
YUK				pmax	pmax		
	comp=E,492nm,1.0s						
YUK				pmax	pmax		
	comp=Z,678nm,1.9s						
YUK				MLR	MLR		
	comp=E,449nm,15.0s						
YUK				MLR	MLR		
	comp=Z,670nm,15.0s						
YUK				MLR	MLR		
	comp=N,997nm,13.0s						
SEHB	**SEOHWA**	22.57	322	P	**P**	**04 30 50.6**	**0.0**
	SNR=9.4						
TATO	**Taipei**	22.58	284	P	**P**	**04 30 51.6**	**+0.7**
OYDB	**Oeyeondo**	22.63	315	P	**P**	**04 30 55.0**	**+3.7**
	SNR=5.6						
YHNB	**Yeheng**	22.67	283	IAmb	IAmb	04 30 54.3	
	comp=Z,172nm,0.7s						
YHNB	**Yeheng**	22.67	283	P	**P**	**04 30 52.0**	**+0.1**
	comp=Z,253nm,0.7s						
KSSWO	**Suwon**	22.68	318	P	**P**	**04 30 53.0**	**+1.2**
	SNR=18						
YULB	**Yu-li**	22.70	280	P	**P**	**04 30 49.6**	**-2.6**
GAPB	**Gapyeong**	22.73	320	P	**P**	**04 30 56.0**	**+3.7**
	SNR=9.1						
ASAJ	**Asahikawa**	22.77	354	P	**P**	**04 30 55.2**	**+2.6**
	comp=Z,220nm,0.8s,baz=213,slow=12,SNR=39						
ASAJ				S	**S**	**04 35 06.2**	**+5.2**
	comp=Z,43nm,0.9s,baz=51,slow=24,SNR=5.1						
KSSEO	**Seoul**	22.85	319	P	**P**	**04 30 55.3**	**+1.7**
	SNR=30						
KSSEO	**Seoul**	22.85	319	P	**P**	**04 30 56.0**	**+2.4**
	SNR=30						
HWCB	**Hwacheon**	22.87	321	P	**P**	**04 30 56.0**	**+2.1**
	SNR=10						
KSSOD	**Songwoldong**	22.87	319	P	**P**	**04 30 56.1**	**+2.3**
	SNR=25						
SHHB	**Siheung-si**	22.89	318	P	**P**	**04 30 56.0**	**+2.0**
	SNR=8.8						
MSLP	**Maasin**	23.01	244	eP	**P**	**04 30 57.7**	**+2.2**
SSLB	**Suanglung**	23.02	281	IAmb	IAmb	04 30 59.6	
	comp=Z,207nm,0.7s						
SSLB	**Suanglung**	23.02	281	P	**P**	**04 30 57.0**	**+1.5**
INCN	**Inchon**	23.02	318	P	**P**	**04 30 55.5**	**+0.1**
INCN				pmax	pmax		
	comp=Z,361nm,0.8s						
INCN				MLR	MLR		
	comp=Z,3µm,20.0s						
INCN	**Inchon**	23.02	318	P	**P**	**04 30 55.9**	**+0.5**
INCN				P	**P**	**04 30 55.9**	**+0.5**
INCN	**Inchon**	23.02	318	P	**P**	**04 30 55.5**	**+0.1**
INCN	**Inchon**	23.02	318	P	**P**	**04 30 56.8**	**+1.4**
KSDDC	**Dongducheon**	23.03	320	P	**P**	**04 30 57.2**	**+1.8**
	SNR=10						
JCNP	**Jose Panganiba**	23.06	256	eP	**P**	**04 30 57.3**	**+1.3**
KSMUS	**Musan**	23.20	319	P	**P**	**04 30 59.4**	**+2.2**
	SNR=11						
TPUB	**Ta-pu**	23.32	279	P	**P**	**04 30 57.4**	**-1.1**
TPUB	**Ta-pu**	23.32	279	P	**P**	**04 30 59.8**	**+1.3**
APYP	**Conner**	23.36	266	eP	**P**	**04 30 58.0**	**-1.0**
MANU	**Manus Island**	23.39	176	P	**P**	**04 30 57.7**	**-1.5**
MANU				IAmb	IAmb	04 31 05.5	
	comp=Z,122nm,0.8s						
KUR	**Kuril'sk**	23.80	4	c iP	**P**	**04 31 04.0**	**+1.1**
KUR				pmax	pmax		
	comp=Z,530nm,1.1s						
KUR				MLR	MLR		
	comp=Z,1µm,19.0s						
SSE	**Sheshan**	24.01	299	P	**P**	**04 31 04.5**	**-0.6**
SSE				S	**S**	**04 35 21.7**	**+0.2**
SSE				pmax	pmax		
	comp=Z,130nm,0.8s						
SSE				LR	LR		
	comp=Z,860nm,21.0s						
SSE				LR	LR		
	comp=Z,560nm,21.0s						
TBP	**Tagbilaran**	24.08	244	⇑iP	**P**	**04 31 06.2**	**+0.3**
RCP	**Roxas**	24.13	250	⇑eP	**P**	**04 31 07.9**	**+1.5**
LQP	**Lukban**	24.17	256	eP	**P**	**04 31 05.5**	**-1.5**
DAV	**Davao City (W)**	24.18	237	P	**P**	**04 31 07.9**	**+1.0**
	comp=Z,143nm,0.4s,baz=71,slow=21,SNR=4.9						
DAV				LR	LR	04 39 30.4	
	comp=Z,2µm,20.6s,baz=51,slow=34						
DAV	**Davao City (W)**	24.18	237	P	**P**	**04 31 06.3**	**-0.5**
DAV	**Davao City (W)**	24.18	237	IAMs_20	IAMs_20	04 39 09.7	
	comp=Z,3µm,20.0s						
DMPH	**Davao City--Mi**	24.23	237	⇓eP	**P**	**04 31 07.6**	**+0.3**
SMPI	**Sarmi**	24.29	197	P	**P**	**04 31 08.6**	**+0.8**
	comp=Z,148nm,1.6s						
JAY	**Jayapura**	24.32	192	P	**P**	**04 31 07.2**	**-0.9**
	comp=Z,91nm,0.9s,baz=349,slow=5.0,SNR=18						
JAY				LR	LR	04 40 11.0	
	comp=Z,3µm,18.5s,baz=15,slow=35						
JAY	**Jayapura**	24.32	192	P	**P**	**04 31 07.5**	**-0.6**
	comp=Z,976nmcomp=Z,78nm,1.0s						
VLA	**Vladivostok**	24.54	335	d iP	**P**	**04 31 11.9**	**+2.1**
VLA				pmax	pmax		
	comp=Z,307nm,0.9s						
KCP	**Kidapawan**	24.60	237	⇓eP	**P**	**04 31 11.5**	**+0.8**
TEY	**Ternei**	24.72	344	⇓eP	**P**	**04 31 13.0**	**+1.5**
TEY				pmax	pmax		
	comp=Z,70nm,0.8s						
TEY				pmax	pmax		
	comp=N,40nm,0.8s						
TEY				pmax	pmax		
	comp=E,20nm,0.8s						
SRPI	**Serui, Papua**	24.97	203	P	**P**	**04 31 13.8**	**-0.2**
	comp=E,865nmcomp=E,106nm,0.5s						
QZH	**Quanzhou**	25.21	283	P	**P**	**04 31 17.3**	**+1.2**
QZH				S	**S**	**04 35 44.4**	**+3.4**
QZH				pmax	pmax		
	comp=E,50nm,0.6s						
QZH				pmax	pmax		
	comp=E,340nm,4.1s						
QZH				LR	LR		
	comp=E,730nm,9.7s						
QZH				LR	LR		
	comp=E,1µm,11.2s						
QZH				LR	LR		
	comp=E,1µm,11.7s						
USA0B	**Ussuriysk Arra**	25.41	336	P	**P**	**04 31 19.4**	**+1.6**
USA0B				pmax	pmax		
	comp=Z,556nm,0.9s						
USA0B	**Ussuriysk Arra**	25.41	336	P	**P**	**04 31 19.4**	**+1.6**
USRK	**Ussuriysk Ar.**	25.41	336	P	**P**	**04 31 20.0**	**+2.2**
	comp=Z,422nm,0.8s,baz=140,slow=8.8,SNR=186						
USRK				LR	LR	04 41 32.4	
	comp=Z,2µm,19.8s,baz=139,slow=37						
YSS	**Yuzh-Sakhalins**	25.57	355	eP	**P**	**04 31 20.8**	**+1.6**
YSS				eS	**S**	**04 35 47.2**	**+0.9**
YSS				e		04 36 55.2	
YSS				pmax	pmax		
	comp=N,150nm,0.7s						
YSS				pmax	pmax		
	comp=Z,310nm,0.7s						
YSS				MLR	MLR		
	comp=N,3µm,13.0s						
YSS				MLR	MLR		
	comp=Z,3µm,13.0s						
YSS	**Yuzh-Sakhalins**	25.57	355	P	**P**	**04 31 19.9**	**+0.8**
YSS	**Yuzh-Sakhalins**	25.57	355	P	**P**	**04 31 20.7**	**+1.6**
NJ2	**Nanjing**	26.19	299	⇑P	**P**	**04 31 24.2**	**-0.8**
NJ2				pP	**pwP**	**04 31 34.5**	**-0.9**
NJ2				S	**S**	**04 35 51.0**	**-5.4**
NJ2				sS	**sS**	**04 36 02.4**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,130nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,520nm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,19.9s						
NJ2				LR	LR		
	comp=Z,2µm,19.4s						
NJ2				LR	LR		
	comp=Z,1µm,20.1s						
RABL	**Rabaul**	26.23	165	P	**P**	**04 31 25.4**	**-0.1**
RABL	**Rabaul**	26.23	165	P	**P**	**04 31 25.3**	**-0.1**
	comp=Z,532nm,1.1s						
SWI	**Sorong**	26.31	214	P	**P**	**04 31 27.2**	**+1.0**
	comp=Z,69nm,0.9s						
SIJI	**Sorong**	26.31	214	P	**P**	**04 31 26.9**	**+0.7**
	comp=Z,29nm,0.9s,baz=20,slow=10,SNR=23						
MDJ	**Mudanjiang**	26.70	334	P	**P**	**04 31 30.8**	**+1.4**
MDJ				pP	sP	04 31 33.7	-0.4
MDJ				sP	pP	04 31 35.0	+2.4
MDJ				S	**S**	**04 36 08.1**	**+3.8**
MDJ				sS	sS	04 36 11.0	+1.8
MDJ				pmax	pmax		
	comp=Z,130nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,1µm,6.5s						
MDJ				LR	LR		
	comp=Z,2µm,16.1s						
MDJ				LR	LR		
	comp=Z,2µm,15.8s						
MDJ				LR	LR		
	comp=Z,3µm,16.7s						
MDJ	**Mudanjiang**	26.70	334	P	**P**	**04 31 30.0**	**+0.6**
MDJ				IAmb	IAmb	04 31 37.7	
	comp=Z,104nm,0.8s						
DL2	**Dalian**	27.05	315	⇑iP	**P**	**04 31 34.9**	**+2.3**
DL2				S	**S**	**04 36 17.1**	**+7.2**
DL2				pmax	pmax		
	comp=Z,250nm,1.0s						
DL2				pmax	pmax		
	comp=Z,350nm,5.2s						
DL2				LR	LR		
	comp=Z,1µm,15.5s						
DL2				LR	LR		
	comp=Z,1µm,14.8s						
DL2				LR	LR		
	comp=Z,2µm,15.6s						
TNTI	**Ternate**	27.28	224	P	**P**	**04 31 36.4**	**+1.5**
	comp=Z,48nm,0.7s						
TNTI	**Ternate**	27.28	224	P	**P**	**04 31 33.9**	**-1.0**
FAKI	**Fak Fak**	27.59	210	P	**P**	**04 31 36.6**	**-1.1**
	comp=Z,979nmcomp=Z,78nm,1.0s						
FAKI	**Fak Fak**	27.59	210	P	**P**	**04 31 36.5**	**-1.1**
FAKI				IAMs_20	IAMs_20	04 40 52.5	
	comp=Z,2µm,19.0s						
SNY	**Shenyang**	27.61	322	⇓P	**P**	**04 31 37.8**	**+0.2**
SNY				pmax	pmax		
	comp=Z,120nm,0.9s						
SNY				pmax	pmax		
	comp=Z,650nm,5.4s						
SNY				LR	LR		
	comp=Z,2µm,20.1s						
SNY				LR	LR		
	comp=Z,2µm,21.6s						
SNY				LR	LR		
	comp=Z,2µm,23.0s						
CN2	**Changchun**	27.97	328	eP	**P**	**04 31 42.9**	**+2.1**
CN2				sP	pwP	04 31 50.1	-1.0
CN2				PcP	**PcP**	**04 34 54.5**	**-1.3**
CN2				S	**S**	**04 36 22.5**	**-1.8**
CN2				pmax	pmax		
	comp=Z,40nm,1.0s						
CN2				pmax	pmax		
	comp=Z,600nm,4.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
LBMI	**Labuha**	28.28	221	P	**P**	**04 31 45.1**	**+1.2**
	comp=Z,2µmcomp=Z,185nm,1.1s						
TYV	**Tymovskoe**	29.47	356	eP	**P**	**04 31 55.6**	**+1.5**
TYV				pmax	pmax		
	comp=Z,85nm,1.0s						
TYV				pmax	pmax		
	comp=Z,800nm,2.8s						
WHN	**Wuhan**	29.58	294	⇑P	**P**	**04 31 56.0**	**+0.7**
WHN				S	**S**	**04 36 50.4**	**+0.5**
WHN				pmax	pmax		
	comp=Z,120nm,0.7s						
WHN				LR	LR		
	comp=Z,7µm,20.7s						
WHN				LR	LR		
	comp=Z,2µm,14.4s						
WHN				LR	LR		
	comp=Z,3µm,20.3s						
MSAI	**Masohi**	29.64	216	P	**P**	**04 31 55.9**	**-0.1**
	comp=Z,11nm,0.6s						
KMSI	**Cibinong**	29.70	229	P	**P**	**04 31 57.5**	**+1.1**
	comp=Z,144nm,0.8s						
KLR	**Kul'dur**	29.90	341	P	**P**	**04 31 59.8**	**+1.9**
	comp=Z,382nm,0.7s,baz=150,slow=7.4,SNR=720						
KLR	**Kul'dur**	29.90	341	d iP	**P**	**04 31 59.6**	**+1.7**
KLR				pmax	pmax		
	comp=Z,357nm,0.6s						

KLR				MLR	MLR		
	comp=Z,1µm,16.0s						
GRNR	**Gornyy**	**30.18**	**348**	⇓iP	**P**	**04 32 02.8**	**+2.4**
GRNR				pmax	pmax		
	comp=E,40nm,0.7s						
GRNR				pmax	pmax		
	comp=N,50nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,110nm,0.8s						
GRNR				MLR	MLR		
	comp=E,720nm,12.0s						
GRNR				MLR	MLR		
	comp=N,820nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,600nm,11.0s						
SANI	**Sanana**	**30.32**	**222**	P	**P**	**04 32 00.0**	**-2.0**
	comp=Z,28nm,0.9s						
AAI	**Ambon**	**30.33**	**217**	P	**P**	**04 32 02.6**	**+0.6**
	comp=Z,1µmcomp=Z,102nm,0.8s						
GTOI	**Gorontalo**	**30.34**	**230**	P	**P**	**04 32 02.0**	**-0.1**
	comp=Z,503nmcomp=Z,38nm,1.0s						
PMG	**Port Moresby**	**30.68**	**177**	LR	LR	04 43 48.6	
	comp=Z,1µm,21.9s,baz=2.5,slow=35						
PMG	**Port Moresby**	**30.68**	**177**	P	**P**	**04 32 03.5**	**-1.6**
PMG				pmax	pmax		
	comp=Z,71nm,0.8s						
PMG	**Port Moresby**	**30.68**	**177**	P	**P**	**04 32 03.5**	**-1.6**
PMG				IAmb	IAmb	04 32 25.8	
	comp=Z,71nm,0.8s						
PMG	**Port Moresby**	**30.68**	**177**	P	**P**	**04 32 04.1**	**-1.0**
	comp=Z,96nm,0.8s						
MRSI	**Marisa**	**31.22**	**231**	P	**P**	**04 32 10.7**	**+0.8**
	comp=Z,1µmcomp=Z,94nm,1.3s						
BJT	**Baijiatuau**	**31.26**	**313**	P	**P**	**04 32 09.2**	**-0.9**
BJT				pmax	pmax		
	comp=Z,19nm,0.8s						
BJT				MLR	MLR		
	comp=Z,2µm,19.0s						
BJT	**Baijiatuau**	**31.26**	**313**	P	**P**	**04 32 09.2**	**-0.9**
BJI	**Beijing**	**31.27**	**313**	P	**P**	**04 32 10.3**	**+0.2**
BJI				pP	**pP**	**04 32 13.5**	**+0.2**
BJI				sP	**sP**	**04 32 15.4**	**+0.7**
BJI				S	**S**	**04 37 18.4**	**+2.3**
BJI				pmax	pmax		
	comp=Z,24nm,0.9s						
BJI				pmax	pmax		
	comp=Z,400nm,5.8s						
BJI				LR	LR		
	comp=Z,860nm,19.6s						
BJI				LR	LR		
	comp=Z,2µm,16.1s						
BJI				LR	LR		
	comp=Z,2µm,18.2s						
TOLI2	**Tolitoli**	**31.65**	**234**	P	**P**	**04 32 14.1**	**+0.4**
TOLI2				IAmb	IAmb	04 32 22.9	
	comp=Z,126nm,1.0s						
APSI	**Ampana**	**32.38**	**230**	P	**P**	**04 32 20.9**	**+0.7**
	comp=Z,898nmcomp=Z,125nm,1.0s						
KKM	**Kota Kinabalu**	**32.44**	**246**	P	**P**	**04 32 22.3**	**+1.5**
KKM				IAmb	IAmb	04 32 40.2	
	comp=Z,106nm,1.0s						
KKM	**Kota Kinabalu**	**32.44**	**246**	P	**P**	**04 32 20.3**	**-0.5**
SAUI	**Saumlaki**	**32.50**	**207**	P	**P**	**04 32 22.3**	**+1.1**
	comp=Z,7µmcomp=Z,263nm,1.2s						
SAUI	**Saumlaki**	**32.50**	**207**	P	**P**	**04 32 20.9**	**-0.3**
MPSI	**Mapaga**	**32.82**	**234**	P	**P**	**04 32 24.7**	**+0.7**
	comp=Z,1µmcomp=Z,60nm,0.9s						
PEA0B	**Petropavlovsk-**	**32.92**	**13**	d iP	**P**	**04 32 25.7**	**+1.2**
PEA0B	**Petropavlovsk-**	**32.92**	**13**	P	**P**	**04 32 25.1**	**+0.6**
PEA0B				IAmb	IAmb	04 32 27.3	
	comp=Z,110nm,1.1s						
PETK	**Petropavlovsk-**	**32.92**	**13**	P	**P**	**04 32 25.9**	**+1.4**
	comp=Z,64nm,0.8s,baz=189,slow=8.8,SNR=44						
PETK				LR	LR	04 43 57.9	
	comp=Z,2µm,21.2s,baz=193,slow=33						
PETK	**Petropavlovsk-**	**32.92**	**13**	P	**P**	**04 32 24.6**	**+0.1**
SPMM	**Sapulut**	**32.93**	**244**	P	**P**	**04 32 26.0**	**+1.0**
TIY	**Taiyuan**	**33.00**	**307**	⇑P	**P**	**04 32 26.9**	**+1.4**
TIY				S	**S**	**04 37 42.6**	**-0.9**
TIY				pmax	pmax		
	comp=Z,63nm,1.0s						
TIY				LR	LR		
	comp=Z,740nm,12.8s						
TIY				LR	LR		
	comp=Z,410nm,10.2s						
TIY				LR	LR		
	comp=Z,460nm,15.0s						
PET	**Petropavlovsk**	**33.05**	**14**	eP	**P**	**04 32 27.3**	**+1.7**
PET				e		04 33 39.9	
PET				eS	**S**	**04 37 49.5**	**+5.9**
PET				pmax	pmax		
	comp=Z,229nm,0.8s						
PET				MLR	MLR		
	comp=Z,1µm,17.0s						
PET	**Petropavlovsk**	**33.05**	**14**	P	**P**	**04 32 26.5**	**+0.9**
PET	**Petropavlovsk**	**33.05**	**14**	P	**P**	**04 32 26.8**	**+1.2**
HNR	**Honiara**	**33.69**	**154**	IAMs_20	IAMs_20	04 45 23.6	
	comp=Z,3µm,20.0s						
ENH	**Enshi**	**33.70**	**293**	P	**P**	**04 32 30.8**	**-0.8**
ENH				IAmb	IAmb	04 32 32.4	
	comp=Z,77nm,0.8s						
QIZ	**Qiongzhong**	**33.75**	**272**	P	**P**	**04 32 31.6**	**-0.5**
QIZ				S	**S**	**04 37 54.7**	**-0.6**
QIZ				LR	LR		
	comp=Z,310nm,12.2s						
QIZ				LR	LR		
	comp=Z,670nm,16.2s						
QIZ				LR	LR		
	comp=Z,920nm,15.8s						
MIDW	**Midway**	**34.03**	**71**	P	**P**	**04 32 34.8**	**+0.3**
MIDW				IAmb	IAmb	04 32 39.0	
	comp=Z,78nm,0.9s						
HIA	**Hailar**	**34.62**	**330**	d iP	**P**	**04 32 40.8**	**+1.4**
HIA				pmax	pmax		
	comp=Z,145nm,0.9s						
HIA				MLR	MLR		
	comp=Z,2µm,18.0s						
HIA	**Hailar**	**34.62**	**330**	P	**P**	**04 32 40.1**	**+0.7**
HIA	**Hailar**	**34.62**	**330**	IAMs_20	IAMs_20	04 47 20.0	
	comp=Z,2µm,19.0s						
XAN	**Xi'an**	**34.76**	**299**	P	**P**	**04 32 40.8**	**0.0**
XAN				sP	pwP	04 32 48.3	-3.0
XAN				PP	**PnPn**	**04 33 58.0**	**+1.0**
XAN				S	**S**	**04 38 10.5**	**-0.2**
XAN				sS	sS	04 38 17.6	+1.3
XAN				SS	**SnSn**	**04 40 23.4**	**-0.8**
XAN				ScS	**ScS**	**04 43 01.8**	**-0.7**
XAN				pmax	pmax		
	comp=Z,44nm,0.8s						
XAN				pmax	pmax		
	comp=Z,480nm,5.2s						
XAN				LR	LR		
	comp=Z,820nm,14.1s						
XAN				LR	LR		
	comp=Z,650nm,14.6s						
XAN				LR	LR		
	comp=Z,1µm,17.0s						
HHC	**Hu-ho-hao-te**	**34.79**	**312**	⇓iP	**P**	**04 32 41.8**	**+0.8**
HHC				pP	sP	04 32 46.2	+0.6
HHC				sP	pwP	04 32 48.8	-2.6
HHC				S	**S**	**04 38 11.1**	**0.0**
HHC				sS	sS	04 38 18.3	+1.5
HHC				pmax	pmax		
	comp=Z,130nm,1.1s						
HHC				LR	LR		
	comp=Z,1µm,14.6s						
HHC				LR	LR		
	comp=Z,2µm,16.3s						
HHC				LR	LR		
	comp=Z,2µm,16.9s						
TTSI	**Tana Toraja**	**35.18**	**229**	P	**P**	**04 32 46.2**	**+1.7**
	comp=Z,98nm,1.3s						
ZEA	**Zeya**	**35.21**	**341**	eP	**P**	**04 32 45.9**	**+1.6**
ZEA				pmax	pmax		
	comp=N,130nm,1.0s						
ZEA				pmax	pmax		
	comp=E,50nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,220nm,0.9s						
ZEA				MLR	MLR		
	comp=N,700nm,13.0s						
ZEA				MLR	MLR		
	comp=E,1µm,13.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,15.0s						
COEN	**Coen**	**35.27**	**184**	P	**P**	**04 32 43.8**	**-1.4**

COEN	**Coen**	**35.27**	**184**	P	**P**	**04 32 44.6**	**-0.6**
SMKI	**Samarinda**	**35.37**	**236**	P	**P**	**04 32 49.7**	**+3.6**
	comp=Z,3µmcomp=Z,223nm,1.1s						
BTO	**Baotou**	**35.78**	**310**	eP	**P**	**04 32 51.1**	**+1.5**
BTO				S	**S**	**04 38 31.2**	**+4.8**
BTO				LR	LR		
	comp=Z,6µm,16.8s						
BTO				LR	LR		
	comp=Z,4µm,17.6s						
SPSI	**Sidrap Palu**	**35.86**	**228**	P	**P**	**04 32 51.3**	**+1.0**
	comp=Z,1µmcomp=Z,108nm,0.7s						
BNSI	**Bone**	**35.94**	**227**	P	**P**	**04 32 53.0**	**+2.0**
	comp=Z,4µmcomp=Z,2µmcomp=Z,127nm,1.5s						
GYA	**Guiyang**	**35.99**	**286**	⇑P	**P**	**04 32 53.7**	**+2.1**
GYA				S	**S**	**04 38 30.6**	**+0.7**
GYA				ScS	**ScS**	**04 43 10.3**	**+0.7**
GYA				pmax	pmax		
	comp=Z,25nm,0.8s						
GYA				pmax	pmax		
	comp=Z,300nm,4.7s						
GYA				LR	LR		
	comp=Z,680nm,18.5s						
GYA				LR	LR		
	comp=Z,740nm,16.7s						
GYA				LR	LR		
	comp=Z,1µm,17.6s						
BKB	**Balikpapan**	**36.13**	**235**	P	**P**	**04 32 54.0**	**+1.4**
	comp=Z,2µmcomp=Z,208nm,1.1s						
KDU	**Kakadu**	**36.34**	**202**	P	**P**	**04 32 54.2**	**-0.1**
BKSI	**Bulukumba**	**36.60**	**226**	P	**P**	**04 32 56.4**	**-0.3**
	comp=Z,544nmcomp=Z,52nm,1.7s						
KAPI	**Kappang**	**36.63**	**227**	LR	LR	04 47 39.3	
	comp=Z,555nm,19.9s,baz=88,slow=36						
KAPI	**Kappang**	**36.63**	**227**	P	**P**	**04 32 56.5**	**-0.4**
KAPI				pmax	pmax		
	comp=Z,114nm,1.2s						
KAPI	**Kappang**	**36.63**	**227**	P	**P**	**04 32 58.3**	**+1.4**
KAPI				P	**P**	**04 32 58.3**	**+1.4**
KAPI	**Kappang**	**36.63**	**227**	P	**P**	**04 32 56.5**	**-0.4**
KAPI				IAmb	IAmb	04 33 18.4	
	comp=Z,114nm,1.1s						
KAPI	**Kappang**	**36.63**	**227**	P	**P**	**04 32 57.4**	**+0.5**
DRS	**Darwin Rock St**	**36.69**	**205**	P	**P**	**04 32 57.1**	**-0.2**
DLV	**T Lat**	**36.85**	**261**	IAmb	IAmb	04 33 19.8	
	comp=Z,88nm,1.0s						
BSSI	**Bau Bau, Buton**	**36.96**	**225**	P	**P**	**04 33 00.9**	**+1.2**
	comp=Z,1µmcomp=Z,88nm,1.0s						
MTN	**Manton Dam**	**36.97**	**204**	P	**P**	**04 32 59.0**	**-0.8**
MTN				IAmb	IAmb	04 33 01.0	
	comp=Z,94nm,1.0s						
MTN	**Manton Dam**	**36.97**	**204**	P	**P**	**04 32 59.9**	**+0.1**
MTKI	**Muara Teweh, K**	**37.48**	**237**	P	**P**	**04 33 05.5**	**+1.3**
	comp=Z,195nm,0.8s						
SOEI	**Soe**	**37.51**	**216**	P	**P**	**04 33 02.4**	**-2.1**
	comp=Z,123nm,0.8s						
SOEI	**Soe**	**37.51**	**216**	IAmb	IAmb	04 33 24.3	
	comp=Z,83nm,0.8s						
SBUM	**Sibu**	**37.70**	**245**	P	**P**	**04 33 08.0**	**+1.9**
SBUM	**Sibu**	**37.70**	**245**	P	**P**	**04 33 05.6**	**-0.5**
MMRI	**Maumere**	**37.77**	**220**	P	**P**	**04 33 05.5**	**-1.2**
MMRI				IAmb	IAmb	04 33 26.3	
	comp=Z,165nm,1.1s						
KBKI	**Kotabaru**	**38.01**	**233**	P	**P**	**04 33 09.4**	**+0.8**
	comp=Z,2µmcomp=Z,37nm,1.5s						
EDFI	**Ende, Flores**	**38.20**	**221**	P	**P**	**04 33 09.7**	**-0.6**
	comp=Z,483nmcomp=Z,27nm,1.0s						
BATI	**Baumata**	**38.21**	**217**	LR	LR	04 47 10.1	
	comp=Z,713nm,20.5s,baz=56,slow=33						
BATI	**Baumata**	**38.21**	**217**	P	**P**	**04 33 09.7**	**-0.6**
	comp=Z,71nm,0.7s						
MA2	**Magadan**	**38.27**	**4**	d iP	**P**	**04 33 11.9**	**+1.6**
MA2				pmax	pmax		
	comp=Z,266nm,1.3s						
MA2	**Magadan**	**38.27**	**4**	P	**P**	**04 33 10.5**	**+0.2**
MA2	**Magadan**	**38.27**	**4**	P	**P**	**04 33 11.9**	**+1.6**
CD2	**Chengdu**	**38.67**	**293**	P	**P**	**04 33 14.2**	**0.0**
CD2				sP	sP	04 33 18.7	-0.1
CD2				S	**S**	**04 39 12.0**	**+1.5**
CD2				pmax	pmax		
	comp=Z,250nm,0.8s						
CD2				LR	LR		
	comp=Z,3µm,17.8s						
CD2				LR	LR		
	comp=Z,2µm,17.3s						
CD2				LR	LR		
	comp=Z,2µm,15.3s						
BBKI	**Banjar Baru**	**39.11**	**234**	P	**P**	**04 33 18.2**	**+0.3**
	comp=Z,2µmcomp=Z,34nm,1.1s						
LZH	**Lanzhou**	**39.24**	**301**	⇓P	**P**	**04 33 20.0**	**+1.0**
LZH				pP	sP	04 33 24.0	+0.4
LZH				PcP	**PcP**	**04 35 27.5**	**-0.5**
LZH				S	**S**	**04 39 19.4**	**+0.3**
LZH				sS	sS	04 39 29.8	+5.1
LZH				pmax	pmax		
	comp=Z,170nm,1.3s						
LZH				pmax	pmax		
	comp=Z,520nm,5.4s						
LZH				LR	LR		
	comp=Z,2µm,14.2s						
LZH				LR	LR		
	comp=Z,1µm,13.6s						
LZH				LR	LR		
	comp=Z,2µm,16.5s						
MTSU	**Mount Surprise**	**39.35**	**182**	P	**P**	**04 33 19.1**	**-0.7**
CIT	**Chita**	**39.40**	**329**	eP	**P**	**04 33 21.8**	**+1.8**
CIT				e		04 33 28.4	
CIT				pmax	pmax		
	comp=Z,379nm,1.6s						
KMI	**Kunming**	**39.58**	**284**	⇑P	**P**	**04 33 22.4**	**+0.4**
KMI				pP	pP	04 33 25.0	-0.3
KMI				S	**S**	**04 39 20.5**	**-4.0**
KMI				sS	sS	04 39 29.7	-0.5
KMI				SS	**SS**	**04 42 12.5**	**-7.0**
KMI				pmax	pmax		
	comp=Z,15nm,1.0s						
KMI				LR	LR		
	comp=Z,600nm,19.0s						
KMI				LR	LR		
	comp=Z,570nm,17.1s						
KMI				LR	LR		
	comp=Z,690nm,19.7s						
STKI	**Sintang**	**39.63**	**242**	P	**P**	**04 33 23.7**	**+1.4**
	comp=Z,8µmcomp=Z,144nm,1.5s						
KSM	**Kuching**	**39.84**	**245**	P	**P**	**04 33 25.0**	**+1.0**
KSM	**Kuching**	**39.84**	**245**	P	**P**	**04 33 24.9**	**+1.0**
	comp=Z,50nm,1.4s						
BASI	**Baing, Sumba**	**40.02**	**221**	P	**P**	**04 33 24.6**	**-0.9**
	comp=Z,3µmcomp=Z,394nm,1.0s						
WBSI	**Waikabubak, Su**	**40.31**	**223**	P	**P**	**04 33 26.3**	**-1.6**
	comp=Z,1µmcomp=Z,115nm,0.8s						
KNRA	**Kununurra**	**40.48**	**206**	P	**P**	**04 33 29.1**	**-0.1**
KNRA				IAmb	IAmb	04 33 44.1	
	comp=Z,134nm,0.9s						
KNRA	**Kununurra**	**40.48**	**206**	P	**P**	**04 33 30.0**	**+0.8**
ULN	**Ulaanbaatar**	**40.70**	**320**	d iP	**P**	**04 33 32.1**	**+1.1**
ULN				pmax	pmax		
	comp=Z,139nm,1.3s						
ULN				MLR	MLR		
	comp=Z,996nm,20.0s						
ULN	**Ulaanbaatar**	**40.70**	**320**	P	**P**	**04 33 32.4**	**+1.5**
ULN				P	**P**	**04 33 32.4**	**+1.5**
ULN	**Ulaanbaatar**	**40.70**	**320**	P	**P**	**04 33 31.5**	**+0.5**
ULN				IAmb	IAmb	04 33 33.0	
	comp=Z,69nm,0.8s						
PLAI	**Plampang**	**40.74**	**225**	P	**P**	**04 33 30.5**	**-0.9**
	comp=Z,2µmcomp=Z,108nm,1.0s						
SONM	**Songino Array**	**41.09**	**319**	P	**P**	**04 33 35.3**	**+1.2**
	comp=Z,34nm,0.6s,baz=136,slow=8.2,SNR=258						
SONM				ScP	**ScP**	**04 39 21.3**	**-1.6**
	comp=Z,5.5nm,1.1s,baz=161,slow=6.6,SNR=6.0						
SONM				LR	LR	04 52 34.6	
	comp=Z,1µm,18.2s,baz=116,slow=39						
SONM	**Songino Array**	**41.09**	**319**	P	**P**	**04 33 34.1**	**0.0**
SONM				pmax	pmax		
	comp=Z,47nm,0.7s						
SONM	**Songino Array**	**41.09**	**319**	P	**P**	**04 33 34.1**	**0.0**
PBKI	**Pangkalan Bun**	**41.10**	**238**	P	**P**	**04 33 35.0**	**+0.6**
	comp=Z,5µmcomp=Z,335nm,0.9s						
CTA	**Charters Tower**	**41.27**	**179**	P	**P**	**04 33 35.1**	**-0.7**
	comp=Z,35nm,1.1s						
CTAO	**Charters Tower**	**41.27**	**179**	P	**P**	**04 33 34.5**	**-1.2**
CTAO				pmax	pmax		
	comp=Z,38nm,0.9s						
CTAO				MLR	MLR		
	comp=Z,1µm,18.0s						
CTAO	**Charters Tower**	**41.27**	**179**	P	**P**	**04 33 34.5**	**-1.2**

CTAO	**Charters Tower**	**41.27**	**179**	IAMs_20	IAMs_20	04 51 39.7	
	comp=Z,1µm,18.0s						
CTAO	**Charters Tower**	**41.27**	**179**	P	**P**	**04 33 35.0**	**-0.7**
TWSI	**Taliwang, Sumb**	**41.27**	**226**	P	**P**	**04 33 36.1**	**+0.3**
	comp=Z,752nmcomp=Z,70nm,1.0s						
ADK	**Adak**	**42.02**	**34**	P	**P**	**04 33 42.2**	**+0.7**
YAK	**Yakutsk**	**42.06**	**349**	eP	**P**	**04 33 42.3**	**+0.6**
YAK				e		04 35 20.1	
YAK				eS	**S**	**04 40 03.4**	**+3.3**
YAK				pmax	pmax		
	comp=Z,166nm,0.6s						
YAK				pmax	pmax		
	comp=N,42nm,0.9s						
YAK				pmax	pmax		
	comp=E,14nm,0.8s						
YAK				pmax	pmax		
	comp=Z,185nm,2.7s						
YAK				pmax	pmax		
	comp=N,184nm,2.5s						
YAK				smax	smax		
	comp=N,702nm,5.3s						
YAK				smax	smax		
	comp=E,175nm,3.3s						
YAK				MLR	MLR		
	comp=N,1µm,21.0s						
YAK	**Yakutsk**	**42.06**	**349**	P	**P**	**04 33 41.5**	**-0.2**
YAK				IAMs_20	IAMs_20	04 49 29.6	
	comp=Z,1µm,22.0s						
KMMI	**Kalianget**	**42.13**	**231**	P	**P**	**04 33 45.1**	**+2.2**
	comp=Z,2µmcomp=Z,154nm,1.4s						
QIS	**Mount Isa**	**42.17**	**189**	P	**P**	**04 33 42.7**	**-0.4**
SANVU	**Saraoutou**	**42.26**	**148**	IAmb	IAmb	04 34 05.6	
	comp=Z,75nm,0.8s						
SANVU				IAMs_20	IAMs_20	04 50 17.0	
	comp=Z,2µm,20.0s						
SANVU	**Saraoutou**	**42.26**	**148**	P	**P**	**04 33 44.6**	**+0.8**
	comp=Z,116nm,1.0s						
WB0	**Warramunga Arr**	**42.44**	**196**	IAmb	IAmb	04 33 46.0	
	comp=Z,170nm,0.8s						
WR0	**Warramunga Arr**	**42.58**	**196**	IAmb	IAmb	04 33 47.3	
	comp=Z,146nm,1.0s						
WRAB	**Tennant Creek**	**42.61**	**196**	c iP	**P**	**04 33 46.0**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,288nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,2µm,21.0s						
WRAB	**Tennant Creek**	**42.61**	**196**	P	**P**	**04 33 46.0**	**-0.6**
WRAB	**Tennant Creek**	**42.61**	**196**	IAMs_20	IAMs_20	04 51 09.8	
	comp=Z,2µm,21.0s						
WRAB	**Tennant Creek**	**42.61**	**196**	P	**P**	**04 33 46.7**	**+0.1**
WB2	**Warramunga Arr**	**42.62**	**196**	P	**P**	**04 33 46.1**	**-0.6**
WRA	**Warramunga Arr**	**42.62**	**196**	P	**P**	**04 33 46.0**	**-0.7**
	comp=Z,131nm,0.8s,baz=16,slow=8.6,SNR=335						
WRA				ScP	**ScP**	**04 39 28.3**	**-0.9**
	comp=Z,13nm,1.0s,baz=12,slow=3.9,SNR=12						
WRA				S	**S**	**04 40 09.4**	**+0.2**
	comp=Z,12nm,1.1s,baz=17,slow=15,SNR=7.2						
WRA				LR	LR	04 51 10.8	
	comp=Z,2µm,21.7s,baz=5.0,slow=36						
BLJI	**Banyuglugur**	**42.88**	**231**	P	**P**	**04 33 50.6**	**+1.7**
	comp=Z,1µmcomp=Z,89nm,1.0s						
JAGI	**Jajag, Banyuwa**	**42.97**	**230**	P	**P**	**04 33 50.0**	**+0.3**
	comp=Z,83nm,0.8s						
JAGI	**Jajag, Banyuwa**	**42.97**	**230**	P	**P**	**04 33 49.0**	**-0.7**
GTA	**Gaotai**	**42.98**	**305**	⇓P	**P**	**04 33 50.8**	**+1.0**
GTA				pP	pwP	04 33 57.7	-2.5
GTA				sP	sP	04 34 01.9	+7.5
GTA				ScP	**ScP**	**04 39 29.2**	**-1.5**
GTA				S	**S**	**04 40 14.5**	**-0.2**
GTA				sS	sS	04 40 27.9	+7.5
GTA				pmax	pmax		
	comp=Z,75nm,1.3s						
GTA				pmax	pmax		
	comp=Z,140nm,5.5s						
GTA				LR	LR		
	comp=Z,1µm,20.0s						
GTA				LR	LR		
	comp=Z,560nm,18.5s						
GTA				LR	LR		
	comp=Z,590nm,17.8s						
BOD	**Bodaibo**	**43.04**	**336**	eP	**P**	**04 33 50.4**	**+0.6**
BOD				pmax	pmax		
	comp=Z,170nm,1.2s						
GMJI	**Gumukmas**	**43.34**	**230**	P	**P**	**04 33 53.2**	**+0.5**
	comp=Z,69nm,0.9s						
ATKA	**Atka Island**	**43.50**	**35**	P	**P**	**04 33 54.1**	**+0.6**
	comp=Z,128nm,1.6s						
CHTO	**Chiang Mai**	**43.92**	**275**	P	**P**	**04 33 56.7**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,15nm,0.7s						
CHTO	**Chiang Mai**	**43.92**	**275**	P	**P**	**04 33 58.3**	**+0.9**
CHTO				P	**P**	**04 33 58.3**	**+0.9**
CHTO	**Chiang Mai**	**43.92**	**275**	P	**P**	**04 33 56.7**	**-0.7**
CHTO	**Chiang Mai**	**43.92**	**275**	P	**P**	**04 33 58.0**	**+0.6**
CM31	**Chiang Mai Arr**	**43.99**	**275**	P	**P**	**04 33 59.3**	**+1.3**
CM31	**Chiang Mai Arr**	**43.99**	**275**	P	**P**	**04 33 58.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**43.99**	**275**	P	**P**	**04 33 58.8**	**+0.8**
	comp=Z,5.6nm,0.6s,baz=54,slow=9.3,SNR=20						
CMAR				LR	LR	04 50 45.3	
	comp=Z,315nm,20.9s,baz=126,slow=34						
ZAK	**Zakamensk**	**44.03**	**322**	eP	**P**	**04 33 58.7**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,74nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,13nm,1.2s						
NGJI	**Ngawi**	**44.19**	**233**	P	**P**	**04 34 01.4**	**+1.9**
	comp=Z,697nmcomp=Z,70nm,0.9s						
TLY	**Talaya**	**44.39**	**323**	d iP	**P**	**04 34 02.2**	**+1.4**
TLY				eS	**S**	**04 40 39.2**	**+4.5**
TLY				pmax	pmax		
	comp=Z,198nm,1.5s						
TLY				MLR	MLR		
	comp=Z,1µm,14.0s						
TLY	**Talaya**	**44.39**	**323**	P	**P**	**04 34 02.2**	**+1.4**
TLY				P	**P**	**04 34 02.2**	**+1.4**
TLY	**Talaya**	**44.39**	**323**	P	**P**	**04 34 01.4**	**+0.6**
TLY				IAmb	IAmb	04 34 03.8	
	comp=Z,124nm,1.5s						
SMRI	**Semarang**	**44.76**	**235**	P	**P**	**04 34 04.4**	**+0.3**
	comp=Z,136nm,0.8s						
SMRI	**Semarang**	**44.76**	**235**	P	**P**	**04 34 04.2**	**+0.1**
SMRI				IAmb	IAmb	04 34 24.2	
	comp=Z,98nm,0.9s						
RK1H	**Rockhampton Ha**	**44.79**	**174**	P	**P**	**04 34 02.7**	**-1.4**
	comp=Z,54nm,0.8s						
MYKOM	**Kota Tinggi**	**45.24**	**250**	IAmb	IAmb	04 34 29.4	
	comp=Z,85nm,1.4s						
UGM	**Wanagama**	**45.25**	**234**	P	**P**	**04 34 08.8**	**+0.8**
	comp=Z,332nm,1.0s						
PPBI	**Pangkal Pinang**	**45.30**	**244**	P	**P**	**04 34 08.6**	**+0.2**
KOUNC	**Koumac, New Ca**	**45.49**	**155**	P	**P**	**04 34 10.3**	**+0.6**
	comp=Z,90nm,0.9s						
DSRI	**Dabo**	**45.73**	**247**	P	**P**	**04 34 12.8**	**+1.0**
	comp=Z,5µmcomp=Z,54nm,1.3s						
MOY	**Mondy**	**45.88**	**322**	eP	**P**	**04 34 13.4**	**+0.7**
MOY				pmax	pmax		
	comp=Z,87nm,1.9s						
SRIT	**Nakonsritamara**	**46.21**	**261**	P	**P**	**04 34 15.5**	**-0.1**
AS31	**Alice Springs**	**46.29**	**195**	P	**P**	**04 34 15.4**	**-0.7**
ASAR	**Alice Springs**	**46.30**	**195**	P	**P**	**04 34 15.2**	**-0.9**
	comp=Z,64nm,0.7s,baz=12,slow=7.1,SNR=514						
ASAR				PcP	**PcP**	**04 35 51.9**	**+0.4**
	comp=Z,13nm,0.7s,baz=30,slow=4.1,SNR=5.1						
ASAR				ScP	**ScP**	**04 39 43.5**	**-0.7**
	comp=Z,6.0nm,1.0s,baz=16,slow=3.5,SNR=8.7						
ASAR				S	**S**	**04 40 57.8**	**-4.9**
	comp=Z,4.6nm,1.1s,baz=14,slow=18,SNR=8.3						
ASAR				LR	LR	04 53 25.8	
	comp=Z,2µm,19.9s,baz=27,slow=36						
ASAR				PKP2bc		05 05 53.5	
	comp=Z,0.6nm,0.9s,baz=160,slow=6.3,SNR=4.2						
IPM	**Ipoh**	**46.53**	**255**	P	**P**	**04 34 20.0**	**+1.8**
IPM	**Ipoh**	**46.53**	**255**	P	**P**	**04 34 17.1**	**-1.2**
IPM				IAmb	IAmb	04 34 38.7	
	comp=Z,48nm,0.9s						
IPM	**Ipoh**	**46.53**	**255**	P	**P**	**04 34 19.3**	**+1.1**
KULM	**Kulim**	**46.53**	**256**	P	**P**	**04 34 18.1**	**-0.1**
KULM				IAmb	IAmb	04 34 36.1	
	comp=Z,42nm,0.9s						
NIKH	**Nikolski High**	**46.75**	**36**	P	**P**	**04 34 19.1**	**-0.2**
	baz=246						
LEM	**Lembang**	**46.80**	**237**	LR	LR	04 56 10.0	
	comp=Z,616nm,19.1s,baz=53,slow=39						
LEM	**Lembang**	**46.80**	**237**	P	**P**	**04 34 20.7**	**+0.3**
	comp=Z,119nm,0.9s						
EIDS	**Eidsvold**	**46.81**	**173**	P	**P**	**04 34 18.9**	**-1.2**

MOKO	MOKOCHONG	46.88	286	*e*P	P	04 34 22.0	+1.1
JMBI	JAMBI	47.12	246	P	P	04 34 26.2	+3.4
	comp=Z,218nm,1.2s						
CBJI	Citeko	47.16	238	P	P	04 34 24.7	+1.7
	comp=Z,330nm,0.9s						
TNG	Tangerang	47.17	239	P	P	04 34 25.0	+1.9
DBJI	Dramaga	47.31	238	P	P	04 34 18.8	-5.5
	comp=Z,8µmcomp=Z,97nm,1.0s						
CNJI	Cibinong	47.47	237	P	P	04 34 24.2	-1.3
	comp=Z,1µmcomp=Z,128nm,1.0s						
ITAN	ITANAGAR	47.51	288	*e*P	P	04 34 27.6	+1.9
IMP	Imphal	47.55	285	*e*P	P	04 34 25.4	-0.7
SBJI	Serang	47.55	239	P	P	04 34 27.6	+1.5
	comp=Z,10µmcomp=Z,308nm,1.5s						
RGRI	Rengat	47.60	249	P	P	04 34 27.9	+1.4
NOUC	Port Laguerre	47.69	154	P	P	04 34 27.8	+0.9
	comp=Z,142nm,1.2s						
DZM	Mont Dzumac	47.72	154	*e*P	P	04 34 27.6	+0.3
	comp=Z,481nm,1.1s						
DZM	Mont Dzumac	47.72	154	*e*LR	LR	04 47 56.8	
	comp=Z,3µm,22.3s						
RMQ	Roma	47.73	176	P	P	04 34 25.9	-1.3
	comp=Z,51nm,1.0s						
QLP	Quilpie	47.76	182	P	P	04 34 25.5	-1.9
	comp=Z,94nm,1.1s						
BLSI	Bandar Lampung	47.83	241	P	P	04 34 29.1	+0.8
MARNC	Mare, Loyalty	47.88	152	P	P	04 34 28.6	+0.2
YATNC	Mamie plateau,	47.89	153	P	P	04 34 28.4	-0.2
	comp=Z,114nm,1.1s						
ONTNC	Ouen Toro	47.93	154	P	P	04 34 29.3	+0.5
ONTNC	Ouen Toro	47.93	154	P	P	04 34 29.0	+0.2
CGJI	Cibinong	48.19	239	P	P	04 34 29.5	-1.5
	comp=Z,3µmcomp=Z,239nm,0.7s						
OUENC	Ouen Island, N	48.19	153	P	P	04 34 31.3	+0.4
OUENC	Ouen Island, N	48.19	153	P	P	04 34 30.4	-0.5
MDSI	Maura Dua	48.21	243	P	P	04 34 31.7	+0.5
	comp=Z,700nmcomp=Z,44nm,1.3s						
BILL	Bilibino	48.33	10*c*	*i*P	P	04 34 32.4	+1.0
BILL				*i*		04 34 38.6	
BILL				*i*		04 35 58.4	
BILL				*i* S	S	04 41 23.9	-6.7
BILL				pmax	pmax		
	comp=Z,79nm,0.9s						
BILL				MLR	MLR		
	comp=Z,525nm,17.0s						
BILL	Bilibino	48.33	10	P	P	04 34 32.0	+0.6
LHSI	Lahat	48.39	244	P	P	04 34 33.7	+1.1
UNV	Unalaska Valle	48.39	36	P	P	04 34 31.6	-0.5
UNV	Unalaska Valle	48.39	36	P	P	04 34 31.8	-0.3
	baz=247						
BKNI	Bangkinang	48.40	250	P	P	04 34 33.9	+1.2
	comp=Z,276nm,1.1s						
BKNI	Bangkinang	48.40	250	P	P	04 34 32.9	+0.2
BKNI				IAMs_20	IAMs_20	04 56 03.2	
	comp=Z,933nm,19.0s						
KASI	Kota Agung	48.53	241	P	P	04 34 33.4	-0.2
	comp=Z,125nm,1.3s						
LWLI	Liwa	48.60	242	P	P	04 34 34.1	-0.3
	comp=Z,6µmcomp=Z,102nm,1.0s						
PINNC	Pines Island,	48.62	153	P	P	04 34 34.9	+0.8
	comp=Z,140nm,1.5s						
KSI	Kapahiang	49.08	245	P	P	04 34 38.5	+0.5
	comp=Z,21µmcomp=Z,502nm,0.6s						
MASI	Maura Aman, Be	49.10	245	P	P	04 34 39.8	+1.6
	comp=Z,5µmcomp=Z,425nm,1.1s						
INKA	Innaminka	49.13	186	P	P	04 34 38.5	+0.5
	comp=Z,74nm,1.0s						
WRKA	Warakurna	49.22	201	P	P	04 34 38.7	-0.1
	comp=Z,146nm,1.1s						
SHL	Shillong	49.31	286	P	P	04 34 39.4	-0.5
SHL				pmax	pmax		
	comp=Z,73nm,0.7s						
SHL	Shillong	49.31	286	IAmb	IAmb	04 34 41.1	
	comp=Z,58nm,0.6s						
SHL	Shillong	49.31	286	P	P	04 34 40.2	+0.4
	SNR=19						
SHL	Shillong	49.31	286	P	P	04 34 39.4	-0.5
SHL				IAmb	IAmb	04 34 41.3	
	comp=Z,74nm,0.7s						
PPI	Padang Panjang	49.34	250	P	P	04 34 41.1	+1.2
	comp=Z,28nm,0.8s						
MBWA	Marble Bar	49.39	213	P	P	04 34 40.1	0.0
MBWA				P	P	04 34 40.1	0.0
MBWA	Marble Bar	49.39	213	P	P	04 34 39.7	-0.4
MNSI	Mandailing Nat	49.47	252	P	P	04 34 41.7	+0.8
	comp=Z,124nm,1.1s						
PDSI	Padang	49.50	249	P	P	04 34 41.8	+0.6
	comp=Z,34nm,0.5s						
LSA	Lhasa	49.57	291	P	P	04 34 43.8	+1.7
LSA				S	S	04 41 44.6	-5.6
LSA				pmax	pmax		
	comp=Z,320nm,0.8s						
LSA				LR	LR		
	comp=Z,1µm,14.2s						
LSA				LR	LR		
	comp=Z,1µm,19.2s						
LSA				LR	LR		
	comp=Z,2µm,19.2s						
LSA	Lhasa	49.57	291	P	P	04 34 43.9	+1.8
LSA	Lhasa	49.57	291	P	P	04 34 42.4	+0.3
LSA				pmax	pmax		
	comp=Z,88nm,0.7s						
LSA	Lhasa	49.57	291	P	P	04 34 42.4	+0.3
PSA00	Pilbara Seismi	49.68	212	P	P	04 34 41.6	-0.7
PSA00				IAmb	IAmb	04 34 43.3	
	comp=Z,81nm,1.1s						
PSA00	Pilbara Seismi	49.68	212	P	P	04 34 42.5	+0.2
	comp=Z,75nm,1.1s						
KCSI	Kotacane, Aceh	49.88	256	P	P	04 34 43.3	-0.8
	comp=Z,1µmcomp=Z,59nm,1.4s						
OOD	Oodnadatta	49.90	192	P	P	04 34 43.7	-0.2
	comp=Z,41nm,0.9s						
LHMI	Lhok Sumawe	49.92	258	P	P	04 34 45.1	+0.7
LHMI				IAmb	IAmb	04 35 04.4	
	comp=Z,79nm,0.8s						
MSVF	Nonsavu	50.16	138*c*	*e*P	P	04 34 47.1	+1.0
MSVF				pmax	pmax		
	comp=Z,38nm,1.1s						
MSVF				MLR	MLR		
	comp=Z,447nm,17.0s						
MSVF	Nonsavu	50.16	138	P	P	04 34 46.0	-0.2
MSVF				IAmb	IAmb	04 35 05.4	
	comp=Z,54nm,0.9s						
MSVF	Nonsavu	50.16	138	P	P	04 34 45.9	-0.2
FALS	False Pass	50.45	36	IAmb	IAmb	04 34 55.5	
	comp=Z,67nm,0.8s						
FALS	False Pass	50.45	36	P	P	04 34 47.5	-0.3
	baz=250						
SISI	Saibi	50.90	250	P	P	04 34 52.7	+0.9
	comp=Z,1µmcomp=Z,79nm,1.0s						
GAMB	Gambell	50.91	23	IAMs_20	IAMs_20	04 57 08.0	
	comp=Z,1µm,20.0s						
GSI	Gunungsitoli	51.02	253	IAMs_20	IAMs_20	04 55 02.5	
	comp=Z,981nm,19.0s						
TIXI	Tiksi	51.17	353*d*	*i*P	P	04 34 53.2	+0.2
TIXI				pmax	pmax		
	comp=Z,29nm,0.8s						
TIXI	Tiksi	51.17	353	P	P	04 34 52.5	-0.5
ARMA	Armidale	51.86	174	P	P	04 34 57.9	-0.9
	comp=Z,29nm,0.9s						
LCRK	Leigh Creek	52.09	188	P	P	04 34 59.4	-0.9
	comp=Z,76nm,0.8s						
SDPT	Sand Point	52.20	36	P	P	04 35 00.8	-0.1
	baz=252						
CHNA	Chernabura Isl	52.53	36	P	P	04 35 02.6	-0.7
	baz=253						
WMQ	Urumqi	52.60	309⇓	*i*P	P	04 35 05.6	+1.4
WMQ				pP	sP	04 35 08.9	0.0
WMQ				sP	pwP	04 35 14.4	-0.3
WMQ				S	S	04 42 30.6	-0.3
WMQ				pmax	pmax		
	comp=Z,73nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,220nm,3.7s						
WMQ				LR	LR		
	comp=Z,790nm,14.3s						
WMQ				LR	LR		
	comp=Z,1µm,10.3s						
WMQ				LR	LR		
	comp=Z,730nm,19.3s						
MULG	Mulgathing	52.64	193	P	P	04 35 03.1	-1.3
	comp=Z,89nm,0.8s						
CMSA	Cobar Meteorol	52.67	180	P	P	04 35 03.1	-1.5
	comp=Z,50nm,1.1s						
TAPN	Taplejung	52.81	289	*e*P	P	04 35 07.1	+0.8
	comp=Z,194nm,0.8s						
TAPN	Taplejung	52.81	289	*e*P	P	04 35 07.0	+0.8
	comp=Z,194nm,0.8s						
ODAN	Odare	53.16	288	*e*P	P	04 35 09.8	+1.0
	comp=Z,176nm,0.6s						
ODAN	Odare	53.16	288	*e*P	P	04 35 09.3	+0.5
	comp=Z,176nm,0.6s						
STKA	Stephens Creek	53.16	184	P	P	04 35 06.7	-1.5
	comp=Z,14nm,0.7s,baz=6.2,slow=7.3,SNR=27						
STKA				LR	LR	04 57 26.8	
	comp=Z,1µm,22.0s,baz=1.2,slow=36						
STKA	Stephens Creek	53.16	184	P	P	04 35 06.7	-1.5
STKA	Stephens Creek	53.16	184	P	P	04 35 06.6	-1.6
	comp=Z,6.1nm,1.1s						
TNA	Tin City	53.26	22	IAmb	IAmb	04 35 10.8	
	comp=Z,83nm,1.0s						
TNA	Tin City	53.26	22	P	P	04 35 09.6	+1.0
	baz=237,SNR=5.6						
GIRL	Giralia	53.52	217	P	P	04 35 11.8	+0.8
GIRL	Giralia	53.52	217	P	P	04 35 11.7	+0.7
	comp=Z,179nm,1.2s						
DGZ	Jazzator, Alta	53.57	317*d*	*i*P	P	04 35 12.5	+1.2
DGZ				pmax	pmax		
	comp=Z,115nm,1.0s						
DGZ				MLR	MLR		
	comp=Z,1µm,16.0s						
CHGN	Chignik	53.60	35	P	P	04 35 10.7	-0.5
	baz=253						
ANM	Nome	53.67	24	IAmb	IAmb	04 35 14.1	
	comp=Z,168nm,1.4s						
ANM				IAMs_20	IAMs_20	04 58 44.0	
	comp=Z,1µm,20.0s						
RAMN	Ramite	53.84	288	*e*P	P	04 35 15.0	+1.2
	comp=Z,135nm,0.6s						
LHI	Lord Howe Isla	54.18	166	P	P	04 35 15.3	-0.4
GUN	Gumba	54.35	290	*e*P	P	04 35 18.6	+0.9
	comp=Z,222nm,0.7s						
GUN	Gumba	54.35	290	*e*P	P	04 35 18.5	+0.9
	comp=Z,222nm,0.7s						
MEEK	Meekatharra	54.55	210	P	P	04 35 17.3	-1.3
	comp=Z,40nm,0.8s						
FORT	Forrest	54.63	199	P	P	04 35 18.6	-0.4
FORT	Forrest	54.63	199	P	P	04 35 18.0	-1.0
	comp=Z,247nm,0.9s						
POHA	Pohakuloa	54.69	80	P	P	04 35 18.9	-1.2
WHYH	Whyalla	54.73	188	P	P	04 35 19.1	-0.5
	comp=Z,30nm,1.1s						
BBOO	Buckleboo	54.73	190	P	P	04 35 18.7	-1.0
BBOO	Buckleboo	54.73	190	P	P	04 35 18.1	-1.6
	comp=Z,38nm,0.9s						
PKI	Pulchoki	54.81	289	*e*P	P	04 35 21.2	+0.2
	comp=Z,94nm,0.8s						
PKIN	Phulchoki	54.82	289	*e*P	P	04 35 21.3	+0.3
	comp=Z,71nm,0.5s						
PKIN	Phulchoki	54.82	289	*e*P	P	04 35 21.8	+0.8
	comp=Z,100nm,0.8s						
KKN	Kakani	54.89	290	*e*P	P	04 35 22.0	+0.6
	comp=Z,137nm,0.7s						
KKN	Kakani	54.89	290	*e*P	P	04 35 22.6	+1.2
	comp=Z,137nm,0.7s						
ZSN	Zaisan	54.95	314	*e*P	P	04 35 21.6	+0.4
	comp=Z,21nm,0.8s,baz=314						
ZSN				*e*S	S	04 43 04.4	+2.0
	baz=314						
ZSN	Zaisan	54.95	314	*e*P	P	04 35 21.6	+0.4
ZSN				*e*S	S	04 43 04.4	+2.0
ZSN				pmax	pmax		
	comp=Z,21nm,0.8s						
HTT	Hallett	54.95	187	P	P	04 35 20.6	-0.7
	comp=Z,41nm,1.2s						
BOK	Bokaro	54.97	285	*e*P	P	04 35 22.8	+1.0
BOK				IAmb	IAmb	04 35 24.2	
	comp=Z,65nm,0.8s						
CHIR	Chirikof Islan	54.98	36	P	P	04 35 21.7	+0.4
	baz=256						
DMN	Daman	55.07	289	*e*P	P	04 35 23.3	+0.5
	comp=Z,154nm,0.8s						
GKN	Gorkha	55.43	290	*e*P	P	04 35 25.9	+0.7
	comp=Z,340nm,0.9s						
YNG	Young	55.48	177	P	P	04 35 24.4	-0.7
	comp=Z,40nm,1.0s						
ZAA0	Zalesovo Array	55.91	321	P	P	04 35 27.9	-0.1
ZAA0				IAmb	IAmb	04 35 29.4	
	comp=Z,108nm,1.1s						
ZALV	Zalesovo Beam	55.91	321	P	P	04 35 28.3	+0.3
	comp=Z,54nm,0.6s,baz=101,slow=7.0,SNR=230						
ZALV				PcP	PcP	04 36 26.4	-0.1
	comp=Z,26nm,0.7s,baz=113,slow=4.7,SNR=5.5						
ZALV				LR	LR	05 00 53.3	
	comp=Z,661nm,18.4s,baz=96,slow=38						
ZALV				PKPPKP	P'P'df	05 05 37.8	+4.3
	comp=Z,0.3nm,0.4s,baz=270,slow=4.2,SNR=3.6						
SII	Sitkinak Islan	55.94	35	IAmb	IAmb	04 35 48.3	
	comp=Z,82nm,0.9s						
SII	Sitkinak Islan	55.94	35	P	P	04 35 28.7	+0.5
	baz=257,SNR=7.7						
SII	Sitkinak Islan	55.94	35	P	P	04 35 28.5	+0.3
	comp=Z,85nm,1.4s						
P18K	Big Mountain,	56.10	32	P	P	04 35 28.8	-0.6
	baz=254						
DANN	Dangsing	56.15	290	*e*P	P	04 35 31.7	+1.2
	comp=Z,2µm,0.7s						
O18K	Koktuh Hills	56.24	31	P	P	04 35 31.1	+0.8
	baz=254						
RDOG	Red Dog Mine	56.25	21	IAMs_20	IAMs_20	05 01 20.4	
	comp=Z,981nm,19.0s						
KOLN	Koldanda	56.37	290	*e*P	P	04 35 32.7	+0.7
	comp=Z,271nm,0.8s						
KOLN	Koldanda	56.37	290	*e*P	P	04 35 32.6	+0.6
	comp=Z,271nm,0.8s						
SVW2	Sparrevohn	56.42	30	IAmb	IAmb	04 35 33.8	
	comp=Z,37nm,0.8s						
CAN	Canberra	56.53	177	IAMs_20	IAMs_20	05 00 58.8	
	comp=Z,1µm,20.0s						
CAN	Canberra	56.53	177	P	P	04 35 32.0	-0.6
CNB	Canberra Magne	56.54	176	P	P	04 35 32.2	-0.6
	comp=Z,39nm,1.1s						
OHAK	Old Harbor	56.56	35	P	P	04 35 32.2	-0.4
OHAK				IAmb	IAmb	04 35 34.0	
	comp=Z,81nm,1.4s						
OHAK	Old Harbor	56.56	35	P	P	04 35 32.9	+0.3
	baz=257,SNR=6.5						
MK31	Makanchi Array	56.64	313	P	P	04 35 33.9	+0.4
MK31				pmax	pmax		
	comp=Z,47nm,1.0s						
MK31	Makanchi Array	56.64	313	P	P	04 35 33.9	+0.4
MK31				IAmb	IAmb	04 35 35.4	
	comp=Z,47nm,0.9s						
MKAR	Makanchi Array	56.64	313	P	P	04 35 34.3	+0.8
	comp=Z,36nm,0.8s,baz=92,slow=9.7,SNR=162						
MKAR				PcP	PcP	04 36 29.8	+0.1
	comp=Z,14nm,0.6s,baz=69,slow=4.0,SNR=4.5						
MKAR				S	S	04 43 27.4	+2.3
	comp=Z,2.0nm,0.9s,baz=80,slow=15,SNR=5.6						
MKAR				LR	LR	05 02 18.9	
	comp=Z,904nm,18.1s,baz=83,slow=38						
MKAR	Makanchi Array	56.64	313	P	P	04 35 33.6	+0.2
O19K	Port Alsworth	56.76	31	IAMs_20	IAMs_20	04 54 54.4	
	comp=Z,1µm,22.0s						
O19K	Port Alsworth	56.76	31	P	P	04 35 34.5	+0.5
	baz=255,SNR=29						
Q19K	Cape Douglas,	56.77	33	P	P	04 35 33.4	-0.8
	baz=256						
TTA	Tatalina	56.80	28	IAmb	IAmb	04 35 36.3	
	comp=Z,57nm,1.1s						
TTA	Tatalina	56.80	28	P	P	04 35 34.6	+0.2
	baz=251,SNR=24						
N19K	Bonanza Creek	56.85	30	IAmb	IAmb	04 35 37.0	
	comp=Z,79nm,0.9s						
N19K				IAMs_20	IAMs_20	04 56 59.4	
	comp=Z,2µm,22.0s						
N19K	Bonanza Creek	56.85	30	P	P	04 35 35.0	+0.2
	baz=254,SNR=26						
PYUN	Piuthan	56.86	290	*e*P	P	04 35 36.2	+0.7
	comp=Z,269nm,0.8s						
MAKZ	Makanchi	56.86	313	P	P	04 35 34.9	-0.1
MAKZ				pmax	pmax		
	comp=Z,84nm,1.0s						
MAKZ				MLR	MLR		
	comp=Z,1µm,18.0s						
MAKZ	Makanchi	56.86	313	P	P	04 35 34.9	-0.1
MAKZ				IAmb	IAmb	04 35 37.1	
	comp=Z,84nm,0.9s						
MAKZ				IAMs_20	IAMs_20	05 02 22.6	
	comp=Z,1µm,18.0s						
GCSA	Galena City Sc	57.06	25	P	P	04 35 36.5	+0.5
	baz=249,SNR=7.9						
KDAK	Kodiak Island	57.06	34	P	P	04 35 36.3	+0.2
KDAK				pmax	pmax		
	comp=Z,79nm,1.2s						
KDAK				MLR	MLR		
	comp=Z,1µm,20.0s						
KDAK	Kodiak Island	57.06	34	P	P	04 35 36.3	+0.2
KDAK				IAmb	IAmb	04 35 37.4	
	comp=Z,79nm,1.1s						
KDAK	Kodiak Island	57.06	34	IAMs_20	IAMs_20	05 03 18.1	
	comp=Z,1µm,20.0s						
L19K	White Mountain	57.08	29	IAmb	IAmb	04 35 38.3	
	comp=Z,57nm,1.1s						
L19K				IAMs_20	IAMs_20	05 02 18.6	
	comp=Z,1µm,18.0s						
L19K	White Mountain	57.08	29	P	P	04 35 37.2	+1.0
	baz=253,SNR=16						
P19K	Oil Pt	57.16	32	P	P	04 35 36.3	-0.6
	baz=256						
M19K	Big River Lodg	57.20	29	IAMs_20	IAMs_20	04 59 26.6	
	comp=Z,1µm,20.0s						
M19K	Big River Lodg	57.20	29	P	P	04 35 38.2	+1.1
	baz=253						
O20K	Slope Mountain	57.56	32	P	P	04 35 39.3	-0.4
	baz=256						
L20K	Farewell, AK	57.60	29	P	P	04 35 40.8	+0.9
	baz=254,SNR=15						
K20K	Telida	57.77	28	IAMs_20	IAMs_20	04 59 07.5	
	comp=Z,1µm,20.0s						
K20K	Telida	57.77	28	P	P	04 35 42.5	+1.3
	baz=253						
MORW	Morawa	57.82	211	P	P	04 35 41.1	-0.7
MORW				IAmb	IAmb	04 35 42.1	
	comp=Z,38nm,0.8s						
MORW	Morawa	57.82	211	P	P	04 35 40.7	-1.1
	comp=Z,61nm,0.8s						
J20K	Nowinta River	57.98	27	IAMs_20	IAMs_20	05 00 25.1	
	comp=Z,1µm,20.0s						
J20K	Nowinta River	57.98	27	P	P	04 35 44.0	+1.5
	baz=252,SNR=95						
ARPS	Mount Arapiles	58.01	184	P	P	04 35 42.0	-1.0
	comp=Z,78nm,1.0s						
SPCR	Spurr Chakacha	58.02	30	P	P	04 35 43.1	+0.1
	baz=256,SNR=6.5						
CNPM	China Poot	58.12	32	IAmb	IAmb	04 35 44.2	
	comp=Z,91nm,0.8s						
SEM	Semipalatinsk	58.25	317	*i* P	P	04 35 44.4	-0.6
	comp=Z,62nm,0.8s,baz=317						
SEM				*e*S	S	04 43 47.5	+1.1
	baz=317						
SEM	Semipalatinsk	58.25	317	*i* P	P	04 35 44.3	-0.6
SEM				*e*S	S	04 43 47.5	+1.1
SEM				pmax	pmax		
	comp=Z,62nm,0.8s						
BRLK	Bradley Lake	58.34	32	IAmb	IAmb	04 35 45.4	
	comp=Z,49nm,0.8s						
BRSE	Bradley Lake S	58.41	32	P	P	04 35 44.9	-0.8
	baz=258,SNR=8.4						
PPLA	Purkeypile	58.46	28	IAmb	IAmb	04 35 48.4	
	comp=Z,42nm,0.8s						
PPLA	Purkeypile	58.46	28	P	P	04 35 46.9	+0.8
	baz=255,SNR=12						
COCO	West Island	58.52	240	P	P	04 35 48.8	+1.8
COCO				pmax	pmax		
	comp=Z,149nm,0.9s						
COCO	West Island	58.52	240	P	P	04 35 48.8	+1.8
PDGK	Podgornoye	58.54	308	P	P	04 35 47.5	+0.5
SHLS	Shalkode	58.56	308	*e*P	P	04 35 45.2	-1.9
	comp=Z,43nm,0.8s,baz=308						
SHLS	Shalkode	58.56	308	*e*P	P	04 35 45.2	-1.9
SHLS				pmax	pmax		
	comp=Z,43nm,0.8s						
CAST	Castle Rocks	58.65	28	IAMs_20	IAMs_20	05 01 18.0	
	comp=Z,2µm,20.0s						
CAST	Castle Rocks	58.65	28	P	P	04 35 48.1	+0.8
	baz=255,SNR=15						
CHUM	Lake Minchumin	58.67	27	P	P	04 35 48.6	+1.2
	baz=254,SNR=41						
BLSP	Bilaspur	58.69	283	*e*P	P	04 35 48.9	+0.7
TOO	Toolangi	58.69	180	P	P	04 35 47.4	-0.4
TOO				pmax	pmax		
	comp=Z,38nm,1.0s						
TOO	Toolangi	58.69	180	P	P	04 35 47.4	-0.4
TOO				IAmb	IAmb	04 35 48.5	
	comp=Z,38nm,0.9s						
TOO	Toolangi	58.69	180	P	P	04 35 47.6	-0.2
	comp=Z,42nm,1.2s						
BRAT	Ballarat	58.70	182	P	P	04 35 47.8	+0.1
	comp=Z,13nm,1.1s						
BLDU	Ballidu	58.80	209	P	P	04 35 47.6	-1.1
	comp=Z,87nm,1.2s						
UZB	Uzynbulak	58.88	308	*e*P	P	04 35 49.4	0.0
	comp=Z,34nm,0.9s,baz=308						
UZB				*e*S	S	04 43 56.2	+1.4
	baz=308						
UZB	Uzynbulak	58.88	308	*e*P	P	04 35 49.4	0.0
UZB				*e*S	S	04 43 56.2	+1.4
UZB				pmax	pmax		
	comp=Z,34nm,0.9s						
H21K	Melozitna Rive	58.98	25	IAMs_20	IAMs_20	04 58 18.7	
	comp=Z,1µm,21.0s						
H21K	Melozitna Rive	58.98	25	P	P	04 35 50.6	+1.1
	baz=253						
O22K	Cooper Landing	59.05	31	P	P	04 35 49.8	-0.2
	baz=259,SNR=7.8						
NRIK	Noril'sk	59.08	339	P	P	04 35 51.2	+1.1
	comp=Z,90nm,0.7s,baz=107,slow=8.4,SNR=98						
NRIK				LR	LR	05 02 11.0	
	comp=Z,2µm,20.9s,baz=118,slow=37						
NRIK	Noril'sk	59.08	339*d*	*i*P	P	04 35 51.0	+0.9
NRIK				pmax	pmax		
	comp=Z,143nm,0.9s						
NRIK				MLR	MLR		
	comp=Z,2µm,19.0s						
NRIK	Noril'sk	59.08	339	P	P	04 35 50.4	+0.3
SEW	Seward	59.11	32	P	P	04 35 50.4	-0.1
	baz=259,SNR=16						
M22K	Willow	59.13	30	P	P	04 35 49.8	-0.7
	baz=258,SNR=13						
I21K	Tanana	59.17	26	IAMs_20	IAMs_20	05 02 38.4	
	comp=Z,1µm,20.0s						
I21K	Tanana	59.17	26	P	P	04 35 52.1	+1.3
	baz=254						
RC01	Rabbit Creek A	59.17	31	P	P	04 35 50.4	-0.4
	baz=258,SNR=14						
KLBR	Kellerberrin	59.17	208	P	P	04 35 50.2	-1.0
	comp=Z,199nm,0.9s						
CUT	Chulitna	59.20	29	IAmb	IAmb	04 36 10.8	
	comp=Z,49nm,0.8s						
CUT				IAMs_20	IAMs_20	05 00 42.9	
	comp=Z,1µm,20.0s						
CUT	Chulitna	59.20	29	P	P	04 35 50.4	-0.7
	baz=257						
BPAW	Bear Paw Mtn.	59.29	27	P	P	04 35 52.6	+0.8
	baz=255,SNR=88						
KURK	Kurchatov	59.30	317*d*	*i*P	P	04 35 52.3	+0.3
KURK				pmax	pmax		
	comp=Z,117nm,0.7s						
KURK				MLR	MLR		
	comp=Z,1µm,17.0s						
KURK	Kurchatov	59.30	317	P	P	04 35 52.5	+0.6
KURK				P	P	04 35 52.5	+0.6
KURK	Kurchatov	59.30	317	P	P	04 35 52.1	+0.1
KURK	Kurchatov	59.30	317	IAMs_20	IAMs_20	05 03 20.1	
	comp=Z,1µm,20.0s						
TDK	Taldyqorghan	59.30	310	*e*P	P	04 35 52.9	+0.7
	comp=Z,120nm,1.0s,baz=310						
TDK	Taldyqorghan	59.30	310	*e*P	P	04 35 52.8	+0.7
TDK				pmax	pmax		
	comp=Z,120nm,1.0s						
SATY	Saty	59.34	308	*e*P	P	04 35 53.1	+0.5
	comp=Z,62nm,1.3s,baz=308						
SATY				*e*S	S	04 44 02.3	+1.6
	baz=308						
SATY	Saty	59.34	308	*e*P	P	04 35 53.0	+0.5
SATY				*e*S	S	04 44 02.3	+1.6
SATY				pmax	pmax		
	comp=Z,62nm,1.3s						
KURBB	Kurchatov Arra	59.36	317	P	P	04 35 52.6	+0.3
TRF	Thorofare Moun	59.44	28	IAMs_20	IAMs_20	05 04 48.9	
	comp=Z,1µm,19.0s						
TRF	Thorofare Moun	59.44	28	P	P	04 35 52.7	-0.2
	baz=256						
PMR	Palmer	59.56	30	IAmb	IAmb	04 35 54.2	
	comp=Z,56nm,0.9s						
PMR	Palmer	59.56	30	P	P	04 35 53.1	-0.4
	baz=259,SNR=15						
MLY	Manley	59.64	26	IAmb	IAmb	04 35 56.0	
	comp=Z,64nm,0.8s						

MLY				IAMs_20	IAMs_20	05 03 47.0	
	comp=Z,1µm,19.0s						
MLY	**Manley**	**59.64**	**26**	P	**P**	**04 35 55.0**	**+0.9**
	baz=255,SNR=66						
A21K	**Barrow**	**59.69**	**18**	P	**P**	**04 35 55.3**	**+1.1**
A21K				IAMs_20	IAMs_20	04 58 35.0	
	comp=Z,906nm,22.0s						
A21K	**Barrow**	**59.69**	**18**	P	**P**	**04 35 55.3**	**+1.1**
	baz=246,SNR=21						
GHO	**Glory Hole Cre**	**59.69**	**30**	IAmb	IAmb	04 35 56.6	
	comp=Z,38nm,0.8s						
GHO				IAMs_20	IAMs_20	04 59 22.7	
	comp=Z,1µm,21.0s						
ARXS	**Arharly**	**59.73**	**309**	*e*P	**P**	**04 35 55.9**	**+0.7**
PWL	**Port Wells**	**59.80**	**31**	IAMs_20	IAMs_20	04 58 54.2	
	comp=Z,1µm,19.0s						
PWL	**Port Wells**	**59.80**	**31**	P	**P**	**04 35 55.2**	**-0.1**
	baz=260						
KNK	**Knik Glacier**	**59.84**	**30**	IAmb	IAmb	04 35 56.6	
	comp=Z,66nm,0.8s						
KNK				IAMs_20	IAMs_20	05 00 36.7	
	comp=Z,1µm,20.0s						
KNK	**Knik Glacier**	**59.84**	**30**	P	**P**	**04 35 55.5**	**0.0**
	baz=259,SNR=16						
SML	**Sawmill**	**59.97**	**30**	IAMs_20	IAMs_20	04 57 34.2	
	comp=Z,1µm,21.0s						
SML	**Sawmill**	**59.97**	**30**	P	**P**	**04 35 56.6**	**+0.1**
	baz=259,SNR=39						
RND	**Reindeer**	**60.05**	**28**	IAmb	IAmb	04 35 57.6	
	comp=Z,44nm,0.8s						
RND				IAMs_20	IAMs_20	04 58 16.2	
	comp=Z,1µm,21.0s						
MCK	**McKinley**	**60.09**	**28**	IAmb	IAmb	04 35 58.1	
	comp=Z,73nm,0.9s						
MCK				IAMs_20	IAMs_20	05 01 44.1	
	comp=Z,1µm,20.0s						
MCK	**McKinley**	**60.09**	**28**	P	**P**	**04 35 56.9**	**-0.3**
	baz=258,SNR=30						
MUN	**Mundaring**	**60.19**	**209**	P	**P**	**04 35 58.0**	**-0.2**
NEA2	**Nenana**	**60.22**	**27**	IAMs_20	IAMs_20	05 02 15.6	
	comp=Z,1µm,19.0s						
NEA2	**Nenana**	**60.22**	**27**	P	**P**	**04 35 58.0**	**-0.1**
	baz=257,SNR=79						
I23K	**Minto, Yukon-K**	**60.23**	**26**	IAMs_20	IAMs_20	04 58 15.8	
	comp=Z,2µm,22.0s						
I23K	**Minto, Yukon-K**	**60.23**	**26**	P	**P**	**04 35 58.9**	**+0.8**
	baz=256,SNR=46						
KDJ	**Kajisay**	**60.27**	**307**	P	**P**	**04 35 59.8**	**+0.7**
KDJ				pmax	pmax		
	comp=Z,162nm,1.4s						
KDJ	**Kajisay**	**60.27**	**307**	P	**P**	**04 35 59.8**	**+0.7**
MDOK	**Medeo**	**60.33**	**308**	*e*P	**P**	**04 36 00.2**	**+0.8**
	baz=308						
MDOK				*e*S	**S**	**04 44 15.2**	**+1.7**
	baz=308						
MDOK	**Medeo**	**60.33**	**308**	*e*P	**P**	**04 36 00.1**	**+0.8**
MDOK				*e*S	**S**	**04 44 15.1**	**+1.7**
CHKK	**Chushkaly**	**60.34**	**309**	*e*P	**P**	**04 35 59.2**	**-0.1**
	baz=309						
KNDC	**Almaty**	**60.38**	**308**	P	**P**	**04 36 01.4**	**+1.7**
WAT6	**Susitna Watana**	**60.39**	**29**	P	**P**	**04 35 59.6**	**+0.1**
	baz=259,SNR=69						
GLI	**Glacier Island**	**60.40**	**31**	IAmb	IAmb	04 36 00.5	
	comp=Z,73nm,0.8s						
GLI	**Glacier Island**	**60.40**	**31**	P	**P**	**04 35 59.5**	**+0.1**
	baz=261						
TNSS	**Tian-Shan**	**60.41**	**308**	*e*P	**P**	**04 36 00.9**	**+0.7**
	baz=308						
AAA	**Alma-Ata**	**60.42**	**308**	*e*P	**P**	**04 36 01.1**	**+1.1**
	baz=308						
AAA				*e*S	**S**	**04 44 17.1**	**+2.6**
	baz=308						
AAA	**Alma-Ata**	**60.42**	**308**	*e*P	**P**	**04 36 01.0**	**+1.1**
AAA				*e*S	**S**	**04 44 17.1**	**+2.6**
COLD	**Coldfoot**	**60.43**	**24**	IAmb	IAmb	04 36 01.7	
	comp=Z,66nm,0.8s						
COLD	**Coldfoot**	**60.43**	**24**	P	**P**	**04 36 00.7**	**+1.2**
	baz=254,SNR=82						
SCM	**Sheep Creek Mo**	**60.45**	**30**	IAMs_20	IAMs_20	04 59 44.7	
	comp=Z,1µm,20.0s						
SCM	**Sheep Creek Mo**	**60.45**	**30**	P	**P**	**04 36 00.1**	**+0.4**
	baz=260,SNR=44						
NWAO	**Narrogin (SRO)**	**60.54**	**207**	P	**P**	**04 36 00.3**	**-0.4**
NWAO				P	**P**	**04 36 00.3**	**-0.4**
NWAO	**Narrogin (SRO)**	**60.54**	**207**	P	**P**	**04 36 00.1**	**-0.5**
Q23K	**Middleton Isla**	**60.55**	**33**	P	**P**	**04 36 00.2**	**-0.2**
	baz=262						
WRH	**Wood River Hil**	**60.61**	**27**	IAmb	IAmb	04 36 01.5	
	comp=Z,47nm,0.7s						
DHY	**Denali Highway**	**60.65**	**29**	IAmb	IAmb	04 36 02.4	
	comp=Z,46nm,0.7s						
DHY				IAMs_20	IAMs_20	04 58 13.9	
	comp=Z,1µm,22.0s						
DHY	**Denali Highway**	**60.65**	**29**	P	**P**	**04 36 01.1**	**-0.1**
	baz=259						
MDM	**Murphy Dome**	**60.66**	**26**	IAmb	IAmb	04 36 02.8	
	comp=Z,34nm,0.6s						
MDM				IAMs_20	IAMs_20	04 58 41.0	
	comp=Z,1µm,21.0s						
FID	**Port Fidalgo**	**60.68**	**31**	IAmb	IAmb	04 36 02.4	
	comp=Z,62nm,0.7s						
FID				IAMs_20	IAMs_20	05 00 02.3	
	comp=Z,948nm,20.0s						
TCOL	**CIGO, UAF Yank**	**60.79**	**27**	IAmb	IAmb	04 36 04.4	
	comp=Z,56nm,0.7s						
TCOL	**CIGO, UAF Yank**	**60.79**	**27**	P	**P**	**04 36 01.3**	**-0.6**
	baz=258,SNR=18						
COLA	**College**	**60.80**	**27**	*ce*P	**P**	**04 36 01.9**	**-0.1**
COLA				pmax	pmax		
	comp=Z,32nm,0.8s						
COLA				MLR	MLR		
	comp=Z,1µm,18.0s						
COLA	**College**	**60.80**	**27**	P	**P**	**04 36 01.8**	**-0.1**
COLA				IAmb	IAmb	04 36 04.4	
	comp=Z,56nm,0.7s						
COLA	**College**	**60.80**	**27**	P	**P**	**04 36 01.2**	**-0.7**
	baz=258						
KUU	**Kurty**	**60.81**	**309**	*e*P	**P**	**04 36 03.0**	**+0.5**
	comp=Z,190nm,1.0s,baz=309						
KUU				*e*S	**S**	**04 44 21.3**	**+1.9**
	baz=309						
KUU	**Kurty**	**60.81**	**309**	*e*P	**P**	**04 36 03.0**	**+0.5**
KUU				*e*S	**S**	**04 44 21.2**	**+1.9**
KUU				pmax	pmax		
	comp=Z,190nm,1.0s						
ULHL	**Ulahol**	**60.97**	**307**	P	**P**	**04 36 05.5**	**+1.7**
	SNR=15						
H24K	**Noodor Dome**	**60.99**	**26**	IAmb	IAmb	04 36 05.8	
	comp=Z,49nm,0.7s						
H24K				IAMs_20	IAMs_20	04 59 43.9	
	comp=Z,1µm,21.0s						
H24K	**Noodor Dome**	**60.99**	**26**	P	**P**	**04 36 04.1**	**+0.7**
	baz=257						
EYAK	**Cordova Ski Ar**	**61.00**	**32**	IAmb	IAmb	04 36 04.6	
	comp=Z,39nm,0.7s						
POKR	**Poker Plat Res**	**61.02**	**26**	IAmb	IAmb	04 36 04.3	
	comp=Z,41nm,1.1s						
POKR				IAMs_20	IAMs_20	04 59 24.7	
	comp=Z,1µm,21.0s						
POKR	**Poker Plat Res**	**61.02**	**26**	P	**P**	**04 36 03.2**	**-0.3**
	baz=258,SNR=13						
M24K	**Tolsona, Glenn**	**61.03**	**30**	P	**P**	**04 36 04.3**	**+0.6**
	baz=261,SNR=11						
TOLK	**Toolik Lake Re**	**61.04**	**22**	P	**P**	**04 36 05.0**	**+1.3**
	baz=254,SNR=124						
KLU	**Klutina**	**61.05**	**31**	P	**P**	**04 36 04.5**	**+0.6**
	baz=262,SNR=19						
DIV	**Divide**	**61.07**	**31**	P	**P**	**04 36 03.8**	**-0.2**
DIV				IAmb	IAmb	04 36 05.2	
	comp=Z,44nm,0.6s						
HDA	**Harding Lake**	**61.08**	**27**	IAmb	IAmb	04 36 04.2	
	comp=Z,45nm,0.8s						
HDA				IAMs_20	IAMs_20	05 01 18.4	
	comp=Z,1µm,20.0s						
HDA	**Harding Lake**	**61.08**	**27**	P	**P**	**04 36 03.1**	**-0.8**
	baz=259,SNR=27						
BOOM	**Boomskoye usch**	**61.17**	**308**	P	**P**	**04 36 05.9**	**+0.7**
BOOM				pmax	pmax		
	comp=Z,111nm,0.7s						
BOOM	**Boomskoye usch**	**61.17**	**308**	P	**P**	**04 36 05.9**	**+0.7**
IL31		**61.18**	**27**	IAmb	IAmb	04 36 04.7	
	comp=Z,67nm,0.8s						
ILAR	**Eielson Array**	**61.18**	**27**	P	**P**	**04 36 03.6**	**-0.9**
	comp=Z,45nm,0.7s,baz=258,slow=5.2,SNR=489						
ILAR				LR	LR	05 03 51.9	
	comp=Z,917nm,18.7s,baz=259,slow=37						
ILAR				PKPPKP		05 05 14.6	
	comp=Z,0.8nm,1.1s,baz=113,slow=1.0,SNR=4.2						
ILAR	**Eielson Array**	**61.18**	**27**	P	**P**	**04 36 03.5**	**-1.1**
JHNI	**Jhansi**	**61.23**	**288**	*e*P	**P**	**04 36 05.0**	**-0.7**
KSH	**Kashi**	**61.37**	**304**	⇓*i*P	**P**	**04 36 10.5**	**+4.0**
KSH				S	**S**	**04 44 31.8**	**+5.0**
KSH				SS	**SS**	**04 48 32.5**	**+5.2**
KSH				pmax	pmax		
	comp=Z,150nm,0.8s						
KSH				pmax	pmax		
	comp=Z,370nm,6.5s						
KSH				LR	LR		
	comp=Z,990nm,9.4s						
KSH				LR	LR		
	comp=Z,510nm,9.1s						
KSH				LR	LR		
	comp=Z,430nm,9.1s						
TKM2	**Tokmak 2**	**61.40**	**308**	P	**P**	**04 36 08.1**	**+1.3**
	SNR=97						
TKM2	**Tokmak 2**	**61.40**	**308**	P	**P**	**04 36 08.0**	**+1.2**
SMLA	**Simla**	**61.42**	**295**	IAmb	IAmb	04 36 10.0	
	comp=Z,99nm,0.5s						
PAX	**Paxson**	**61.48**	**29**	P	**P**	**04 36 07.1**	**+0.3**
	baz=261,SNR=37						
HARP	**HAARP**	**61.54**	**30**	P	**P**	**04 36 07.8**	**+0.6**
	baz=262,SNR=32						
KAIM	**Kayak Island**	**61.59**	**33**	P	**P**	**04 36 08.0**	**+0.6**
	baz=264						
BMRM	**Bremner River**	**61.61**	**31**	P	**P**	**04 36 08.2**	**+0.5**
BMRM				IAMs_20	IAMs_20	04 59 57.7	
	comp=Z,1µm,21.0s						
BMRM	**Bremner River**	**61.61**	**31**	P	**P**	**04 36 08.0**	**+0.3**
	baz=263,SNR=11						
N25K	**Chitina, Valde**	**61.70**	**31**	IAmb	IAmb	04 36 10.0	
	comp=Z,46nm,0.7s						
N25K	**Chitina, Valde**	**61.70**	**31**	P	**P**	**04 36 08.7**	**+0.4**
	baz=263,SNR=17						
NDI	**New Delhi**	**61.78**	**292**	*e*P	**P**	**04 36 08.5**	**-0.8**
NDI				*e*P	**pP**	**04 36 09.0**	**-3.7**
RIDG	**Independent Ri**	**61.88**	**28**	P	**P**	**04 36 09.3**	**-0.1**
	baz=261,SNR=30						
KBK	**Karagaybulak**	**61.89**	**308**	P	**P**	**04 36 11.4**	**+1.4**
	SNR=55						
AYAN	**Aya Nagar**	**61.90**	**292**	*e*P	**P**	**04 36 09.7**	**-0.4**
DHRM	**DHARAMSHALA**	**61.98**	**296**	*e*P	**P**	**04 36 10.8**	**0.0**
DHRM				IAmb	IAmb	04 36 27.9	
	comp=Z,64nm,0.4s						
BHK	**Bhakra**	**62.01**	**295**	*e*P	**P**	**04 36 11.9**	**+1.1**
CHMS	**Chumysh**	**62.02**	**308**	P	**P**	**04 36 12.3**	**+1.6**
	SNR=7.5						
GLB	**Gilahina Butte**	**62.05**	**31**	IAMs_20	IAMs_20	05 04 11.2	
	comp=Z,1µm,19.0s						
SGDS	**Sogindy**	**62.07**	**309**	*e*P	**P**	**04 36 11.6**	**+0.4**
	comp=Z,17nm,0.9s,baz=309						
FRU1	**Bishkek**	**62.12**	**308**	P	**P**	**04 36 12.0**	**+0.6**
FRU1				pmax	pmax		
	comp=Z,96nm,0.9s						
FRU1	**Bishkek**	**62.12**	**308**	P	**P**	**04 36 12.0**	**+0.6**
USP	**Ospenovka**	**62.18**	**309**	P	**P**	**04 36 12.9**	**+1.1**
	SNR=43						
VRDI	**Verde Repeater**	**62.20**	**31**	IAmb	IAmb	04 36 13.2	
	comp=Z,46nm,0.8s						
OUZ	**Omahuta**	**62.23**	**154**	P	**P**	**04 36 12.6**	**+0.7**
OUZ				IAmb	IAmb	04 36 36.1	
	comp=Z,40nm,1.1s						
AAK	**Ala-Archa**	**62.23**	**308**	P	**P**	**04 36 12.4**	**+0.1**
	SNR=10						
AAK	**Ala-Archa**	**62.23**	**308**	*i* P	**P**	**04 36 13.5**	**+1.2**
	SNR=44						
AAK	**Ala-Archa**	**62.23**	**308**	*d i*P	**P**	**04 36 13.2**	**+0.9**
AAK				pmax	pmax		
	comp=Z,122nm,0.8s						
AAK				MLR	MLR		
	comp=Z,2µm,19.0s						
AAK	**Ala-Archa**	**62.23**	**308**	P	**P**	**04 36 13.7**	**+1.4**
AAK				P	**P**	**04 36 13.7**	**+1.4**
AAK	**Ala-Archa**	**62.23**	**308**	P	**P**	**04 36 12.5**	**+0.1**
AAK				IAmb	IAmb	04 36 14.5	
	comp=Z,38nm,0.8s						
UCH	**Uchtor**	**62.25**	**307**	P	**P**	**04 36 14.6**	**+1.8**
	SNR=121						
MENT	**Mentasta**	**62.27**	**29**	IAmb	IAmb	04 36 39.1	
	comp=Z,36nm,0.8s						
SCRK	**Sand Creek**	**62.29**	**28**	IAMs_20	IAMs_20	05 04 46.3	
	comp=Z,1µm,18.0s						
SCRK	**Sand Creek**	**62.29**	**28**	P	**P**	**04 36 12.2**	**0.0**
	baz=262,SNR=110						
CRQM	**Cirque**	**62.30**	**32**	IAMs_20	IAMs_20	05 06 19.1	
	comp=Z,1µm,19.0s						
BTLS	**Baital**	**62.39**	**311**	*e*P	**P**	**04 36 13.5**	**+0.4**
	comp=Z,40nm,1.0s,baz=311						
BTLS	**Baital**	**62.39**	**311**	*e*P	**P**	**04 36 13.5**	**+0.4**
BTLS				pmax	pmax		
	comp=Z,40nm,1.0s						
WAX	**Waxell Ridge**	**62.42**	**32**	IAmb	IAmb	04 36 14.8	
	comp=Z,73nm,1.0s						
MCARA	**McCarthy VSAT**	**62.42**	**31**	IAMs_20	IAMs_20	05 04 22.0	
	comp=Z,1µm,19.0s						
MCARA	**McCarthy VSAT**	**62.42**	**31**	P	**P**	**04 36 13.4**	**+0.3**
	baz=264,SNR=24						
L26K	**Log Cabin Wild**	**62.45**	**29**	IAmb	IAmb	04 36 14.8	
	comp=Z,32nm,0.8s						
L26K				IAMs_20	IAMs_20	04 59 44.7	
	comp=Z,1µm,20.0s						
L26K	**Log Cabin Wild**	**62.45**	**29**	P	**P**	**04 36 13.8**	**+0.6**
	baz=263,SNR=30						
TGL	**Tana Glacier**	**62.46**	**32**	IAmb	IAmb	04 36 14.9	
	comp=Z,54nm,1.0s						
TGL				IAMs_20	IAMs_20	05 06 42.9	
	comp=Z,1µm,21.0s						
KUDL	**Kundal**	**62.51**	**291**	*e*P	**P**	**04 36 14.4**	**+0.2**
M26K	**Nabesna, AK**	**62.54**	**30**	IAmb	IAmb	04 36 15.4	
	comp=Z,37nm,1.1s						
M26K				IAMs_20	IAMs_20	04 59 28.7	
	comp=Z,2µm,22.0s						
M26K	**Nabesna, AK**	**62.54**	**30**	P	**P**	**04 36 14.1**	**+0.2**
	baz=264,SNR=13						
J26L	**Joseph Creek**	**62.55**	**27**	P	**P**	**04 36 13.8**	**-0.1**
	baz=262,SNR=114						
BMAR	**Burnt Mountain**	**62.60**	**24**	P	**P**	**04 36 14.7**	**+0.6**
ISLE	**Juniper Island**	**62.68**	**32**	IAmb	IAmb	04 36 16.3	
	comp=Z,44nm,0.9s						
ISLE				IAMs_20	IAMs_20	04 59 57.9	
	comp=Z,1µm,21.0s						
BHPL	**Bhopal**	**62.69**	**286**	*e*P	**P**	**04 36 15.7**	**+0.2**
BHPL				IAmb	IAmb	04 36 16.6	
	comp=Z,22nm,0.6s						
EKS2	**Erkin-Say**	**62.76**	**308**	P	**P**	**04 36 16.9**	**+1.1**
	SNR=36						
MESA	**MESA**	**62.84**	**32**	P	**P**	**04 36 17.0**	**+0.9**
	baz=266,SNR=6.4						
AML	**Almayashu**	**62.86**	**307**	P	**P**	**04 36 18.4**	**+1.6**
	SNR=93						
AML	**Almayashu**	**62.86**	**307**	*i* P	**P**	**04 36 18.4**	**+1.6**
	SNR=94						
AML	**Almayashu**	**62.86**	**307**	P	**P**	**04 36 18.6**	**+1.8**
YAH	**Yahtse**	**62.96**	**32**	IAmb	IAmb	04 36 18.7	
	comp=Z,54nm,0.8s						
BARN	**Barnard Glacie**	**63.05**	**31**	IAmb	IAmb	04 36 18.9	
	comp=Z,36nm,0.6s						
BARN				IAMs_20	IAMs_20	05 01 24.6	
	comp=Z,918nm,20.0s						
M27K	**Edge Creek, AK**	**63.05**	**30**	IAmb	IAmb	04 36 18.5	
	comp=Z,28nm,0.8s						
M27K				IAMs_20	IAMs_20	04 59 57.3	
	comp=Z,1µm,21.0s						
M27K	**Edge Creek, AK**	**63.05**	**30**	P	**P**	**04 36 17.8**	**+0.4**
	baz=265						
HYB	**Hyderabad**	**63.09**	**279**	*i* P	**P**	**04 36 19.0**	**+0.7**
	comp=Z,50nm,1.0s						
HYB	**Hyderabad**	**63.09**	**279**	*e*P	**P**	**04 36 18.7**	**+0.5**
HYB				IAmb	IAmb	04 36 19.8	
	comp=Z,26nm,0.8s						
BRZS	**Berezniki**	**63.10**	**316**	*e*P	**P**	**04 36 17.6**	**-0.2**
	comp=Z,28nm,0.9s,baz=316						
BRZS	**Berezniki**	**63.10**	**316**	*e*P	**P**	**04 36 17.6**	**-0.2**
BRZS				pmax	pmax		
	comp=Z,28nm,0.9s						
L27K	**Beaver Creek,**	**63.14**	**29**	IAmb	IAmb	04 36 19.4	
	comp=Z,36nm,0.7s						
L27K	**Beaver Creek,**	**63.14**	**29**	P	**P**	**04 36 18.4**	**+0.5**
	baz=265,SNR=34						
BCAR	**Beaver Creek A**	**63.16**	**29**	P	**P**	**04 36 17.7**	**-0.3**
CTG	**Chitna Glacier**	**63.20**	**31**	P	**P**	**04 36 19.0**	**+0.6**
	baz=266,SNR=19						
CTGM	**Chitina Glacie**	**63.20**	**31**	IAmb	IAmb	04 36 20.1	
	comp=Z,67nm,1.0s						
CTGM				IAMs_20	IAMs_20	05 01 29.6	
	comp=Z,1µm,20.0s						
TABL	**Table Mountain**	**63.26**	**32**	IAMs_20	IAMs_20	05 00 03.3	
	comp=Z,1µm,21.0s						
LOGN	**Logan Glacier**	**63.35**	**32**	IAmb	IAmb	04 36 21.1	
	comp=Z,46nm,0.9s						
OTUK	**Ortayu**	**63.40**	**314**	P	**P**	**04 36 20.0**	**+0.2**
BVCY	**Beaver Creek**	**63.53**	**30**	P	**P**	**04 36 20.9**	**+0.5**
	baz=266,SNR=18						
EGAK	**Eagle**	**63.61**	**27**	IAMs_20	IAMs_20	05 04 47.9	
	comp=Z,1µm,20.0s						
YUK3	**Moose Creek**	**63.68**	**31**	P	**P**	**04 36 21.8**	**+0.2**
	baz=266,SNR=14						
PCA	**Pinnacle**	**63.68**	**32**	IAmb	IAmb	04 36 22.7	
	comp=Z,45nm,0.7s						
PINM	**Pinnacle**	**63.69**	**32**	P	**P**	**04 36 21.7**	**+0.1**
	baz=268						
BCPM	**Bancas Point**	**63.99**	**33**	IAMs_20	IAMs_20	05 01 55.6	
	comp=Z,1µm,21.0s						
TAU	**Tasmania Unive**	**64.04**	**179**	P	**P**	**04 36 23.4**	**-0.4**
TAU				pmax	pmax		
	comp=Z,58nm,1.2s						
TAU	**Tasmania Unive**	**64.04**	**179**	P	**P**	**04 36 23.4**	**-0.4**
TAU				IAmb	IAmb	04 36 25.0	
	comp=Z,58nm,1.2s						
TAU	**Tasmania Unive**	**64.04**	**179**	P	**P**	**04 36 22.9**	**-0.9**
PNL	**Peninsula**	**64.10**	**33**	P	**P**	**04 36 24.7**	**+0.5**
	baz=268						
PALK	**Pallekele**	**64.19**	**268**	P	**P**	**04 36 25.7**	**+0.1**
PALK				pmax	pmax		
	comp=Z,35nm,0.9s						
PALK	**Pallekele**	**64.19**	**268**	P	**P**	**04 36 26.6**	**+1.1**
PALK				P	**P**	**04 36 26.6**	**+1.1**
PALK	**Pallekele**	**64.19**	**268**	P	**P**	**04 36 25.6**	**+0.1**
PALK				IAmb	IAmb	04 36 43.3	
	comp=Z,35nm,0.9s						
NIL	**Nilore**	**64.29**	**298**	P	**P**	**04 36 26.3**	**+0.4**
NIL				pmax	pmax		
	comp=Z,231nm,1.1s						
NIL	**Nilore**	**64.29**	**298**	P	**P**	**04 36 27.6**	**+1.7**
NIL				P	**P**	**04 36 27.6**	**+1.7**
NIL	**Nilore**	**64.29**	**298**	P	**P**	**04 36 26.3**	**+0.4**
DAWY	**Dawson**	**64.31**	**28**	IAmb	IAmb	04 36 27.3	
	comp=Z,53nm,0.8s						
DAWY	**Dawson**	**64.31**	**28**	P	**P**	**04 36 26.1**	**+0.6**
	baz=266,SNR=44						
AJM	**Ajmer**	**64.45**	**290**	*e*P	**P**	**04 36 26.3**	**-0.8**
BRVK	**Borovoye**	**64.49**	**320**	*d i*P	**P**	**04 36 27.6**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,220nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,691nm,20.0s						
BRVK	**Borovoye**	**64.49**	**320**	P	**P**	**04 36 27.8**	**+1.0**
BRVK				P	**P**	**04 36 27.8**	**+1.0**
BRVK	**Borovoye**	**64.49**	**320**	P	**P**	**04 36 26.9**	**+0.1**
BRVK				IAMs_20	IAMs_20	05 04 42.2	
	comp=Z,1µm,21.0s						
YUK4	**Talbot Arm**	**64.52**	**31**	P	**P**	**04 36 28.8**	**+1.6**
	baz=268,SNR=58						
DZA	**Taraz**	**64.53**	**308**	*e*P	**P**	**04 36 27.6**	**+0.2**
	comp=Z,20nm,0.6s,baz=308						
DZA	**Taraz**	**64.53**	**308**	*e*P	**P**	**04 36 27.5**	**+0.2**
DZA				pmax	pmax		
	comp=Z,20nm,0.6s						
YUK6	**Outpost Mounta**	**64.65**	**32**	P	**P**	**04 36 29.1**	**+1.1**
	baz=269,SNR=21						
J29M	**Klondike Camp**	**64.85**	**28**	P	**P**	**04 36 30.1**	**+1.0**
	baz=267,SNR=5.1						
I29M	**Ogilvie Camp,**	**64.86**	**27**	P	**P**	**04 36 29.4**	**+0.4**
	baz=267						
HYT	**Haines Junctio**	**65.07**	**32**	P	**P**	**04 36 32.0**	**+1.3**
	baz=270,SNR=39						
BTK	**Batken**	**65.25**	**305**	IAmb	IAmb	04 36 34.1	
	comp=Z,83nm,1.4s						
M30M	**Minto, Yukon**	**65.43**	**30**	P	**P**	**04 36 33.8**	**+0.9**
	baz=269,SNR=25						
IUG	**Iuzhnay**	**65.57**	**308**	*e*P	**P**	**04 36 34.5**	**+0.2**
	baz=308						
IUG				*e*S	**S**	**04 45 20.5**	**+1.3**
	baz=308						
IUG	**Iuzhnay**	**65.57**	**308**	*e*P	**P**	**04 36 34.4**	**+0.2**
IUG				*e*S	**S**	**04 45 20.4**	**+1.3**
BRLS	**Borolday**	**65.60**	**309**	*e*P	P	04 36 46.1	+12
BRLS				pmax	pmax		
	comp=Z,6µm,0.6s						
MAYO	**Mayo, Yukon**	**65.84**	**29**	P	**P**	**04 36 36.5**	**+1.0**
	baz=270,SNR=23						
N31M	**Braeburn, Yuko**	**65.90**	**31**	P	**P**	**04 36 37.0**	**+1.1**
	baz=271,SNR=23						
SKAG	**Skagway**	**66.17**	**33**	IAmb	IAmb	04 36 39.7	
	comp=Z,51nm,1.0s						
SKAG	**Skagway**	**66.17**	**33**	P	**P**	**04 36 38.5**	**+0.9**
	baz=272,SNR=14						
TAS	**Tashkent**	**66.22**	**307**	P	**P**	**04 36 39.0**	**+0.6**
TAS				pmax	pmax		
	comp=Z,72nm,0.6s						
TAS	**Tashkent**	**66.22**	**307**	P	**P**	**04 36 39.0**	**+0.6**
URZ	**Urewera**	**66.28**	**153**	IAmb	IAmb	04 36 52.9	
	comp=Z,46nm,1.1s						
SIT	**Sitka**	**66.28**	**36**	P	**P**	**04 36 38.9**	**+0.6**
	baz=273						
BESE	**Bessie Mountai**	**66.45**	**34**	IAmb	IAmb	04 36 41.5	
	comp=Z,59nm,0.8s						
M31M	**Drury Creek, Y**	**66.55**	**30**	P	**P**	**04 36 40.6**	**+0.6**
	baz=272,SNR=31						
JIS	**Juneau Island**	**66.72**	**34**	IAmb	IAmb	04 36 43.2	
	comp=Z,63nm,0.9s						
QRZ	**Quartz Range**	**66.76**	**158**	P	**P**	**04 36 41.0**	**-0.5**
BKZ	**Black Stump Fm**	**66.79**	**154**	P	**P**	**04 36 41.4**	**-0.5**
BKZ				IAmb	IAmb	04 37 03.6	
	comp=Z,45nm,1.0s						
BKZ	**Black Stump Fm**	**66.79**	**154**	P	**P**	**04 36 41.2**	**-0.6**
INK	**Inuvik**	**66.84**	**24**	IAmb	IAmb	04 36 42.9	
	comp=Z,61nm,0.9s						
INK	**Inuvik**	**66.84**	**24**	P	**P**	**04 36 41.8**	**+0.1**
	baz=270,SNR=46						
FARO	**Faro, Yukon**	**67.03**	**30**	P	**P**	**04 36 43.5**	**+0.4**
	baz=272,SNR=22						
POO	**Poona**	**67.10**	**282**	*e*P	**P**	**04 36 44.4**	**+0.1**
POO				IAmb	IAmb	04 36 45.6	
	comp=Z,58nm,0.7s						
KAD	**Karad**	**67.13**	**280**	*e*P	**P**	**04 36 44.8**	**+0.2**
TRD	**Trivandrum**	**67.26**	**270**	*e*P	**P**	**04 36 46.5**	**+1.1**
TRD				IAmb	IAmb	04 36 47.1	
	comp=Z,56nm,0.5s						
P33M	**Teslin, Yukon**	**67.40**	**32**	P	**P**	**04 36 46.2**	**+0.6**
	baz=274,SNR=31						
KBL	**Kabul**	**67.56**	**300**	P	**P**	**04 36 47.5**	**+0.3**
KBL				pmax	pmax		
	comp=Z,157nm,0.9s						
KBL	**Kabul**	**67.56**	**300**	P	**P**	**04 36 47.5**	**+0.3**
CRAG	**Craig**	**67.62**	**37**	P	**P**	**04 36 47.6**	**+0.7**
	baz=276						
WRAK	**Wrangell Islan**	**67.97**	**36**	IAmb	IAmb	04 36 50.4	
	comp=Z,30nm,0.8s						
WRAK	**Wrangell Islan**	**67.97**	**36**	P	**P**	**04 36 49.3**	**+0.3**
	baz=276						
BFZ	**Birch Farm**	**68.00**	**155**	P	**P**	**04 36 48.9**	**-0.4**
KHZ	**Kahutara**	**68.52**	**158**	P	**P**	**04 36 51.3**	**-1.2**
RPZ	**Rata Peaks**	**68.86**	**161**	P	**P**	**04 36 54.0**	**-0.8**
RPZ	**Rata Peaks**	**68.86**	**161**	P	**P**	**04 36 53.7**	**-1.0**
DLBC	**Dease Lake**	**68.99**	**34**	P	**P**	**04 36 55.7**	**+0.1**
DCZ	**Deep Cove**	**69.37**	**164**	IAmb	IAmb	04 37 00.8	
	comp=Z,72nm,1.0s						
RUBB	**Prince Rupert**	**69.41**	**38**	IAmb	IAmb	04 36 59.6	
	comp=Z,52nm,1.0s						
WTLY	**Watson Lake, Y**	**69.41**	**32**	P	**P**	**04 36 58.8**	**+0.7**
	baz=277						
A36M	**Sachs Harbour**	**69.48**	**19**	P	**P**	**04 36 58.5**	**+0.3**
A36M				IAmb	IAmb	04 36 59.6	
	comp=Z,67nm,0.9s						
A36M	**Sachs Harbour**	**69.48**	**19**	P	**P**	**04 36 58.6**	**+0.3**
	baz=276,SNR=29						
TGTN	**Hyland Airport**	**69.49**	**31**	P	**P**	**04 36 59.5**	**+0.9**
	baz=277,SNR=40						
MLZ	**Mavora Lakes**	**69.53**	**163**	IAmb	IAmb	04 37 06.6	
	comp=Z,82nm,1.2s						
SVE	**Sverdlovsk**	**69.70**	**324**	*c i*P	**P**	**04 37 00.8**	**+1.0**
SVE				pmax	pmax		
	comp=Z,173nm,1.1s						
ODZ	**Otahua Downs**	**69.94**	**161**	P	**P**	**04 37 01.1**	**-0.3**
ARU	**Arti**	**70.89**	**324**	*c i*P	**P**	**04 37 07.6**	**+0.4**
ARU						04 37 25.3	
ARU				S	**S**	**04 46 26.4**	**+4.6**
ARU				pmax	pmax		
	comp=Z,248nm,1.4s						
ARU				MLR	MLR		

	comp=Z,708nm,19.0s						
ARU	**Arti**	70.89	324	P	P	04 37 07.6	+0.4
AB31	**Akbulak array**	71.40	316	i P	P	04 37 10.2	-0.2
ABKAR	**Akbulak array**	71.40	316	P	P	04 37 10.5	+0.1
WRGLY	**Wrigley**	71.44	29	P	P	04 37 11.0	+0.6
	baz=281,SNR=27						
AKTO	**Aktyubinsk**	72.38	318	P	P	04 37 15.4	-0.9
HRA	**Herat**	73.07	301	IAmb	IAmb	04 37 23.0	
	comp=Z,37nm,0.8s						
CBB	**Campbell River**	73.17	42	IAmb	IAmb	04 37 22.9	
	comp=Z,45nm,1.1s						
PPT	**Papeete**	74.25	116	LR	LR	05 05 31.3	
	comp=Z,550nm,18.6s,baz=292,slow=32						
PPT2	**Papeete2**	74.26	116	eS	S	04 47 00.7	-0.9
	comp=Z,935nm,29.2s						
PPT2	**Papeete2**	74.26	116	eLR	LR	05 00 16.7	
	comp=Z,1µm,26.2s						
NLWA	**Neilton Lookou**	74.78	45	IAmb	IAmb	04 37 32.7	
	comp=Z,99nm,1.2s						
EUNU	**Eureka**	75.02	8	IAmb	IAmb	04 37 32.8	
	comp=Z,59nm,0.8s						
A04D	**Lummi Island**	75.18	43	P	P	04 37 33.6	+0.9
	baz=286						
LLLB	**Lillooet**	75.19	41	IAmb	IAmb	04 37 34.6	
	comp=Z,49nm,0.9s						
KIRV	**Kirov**	75.19	327	d iP	P	04 37 33.1	+0.5
E03A	**Lebam**	75.20	46	IAmb	IAmb	04 37 34.7	
	comp=Z,82nm,0.9s						
D03D	**Eldon**	75.25	44	P	P	04 37 34.3	+1.2
	baz=286,SNR=6.7						
GEYT	**Alibeck**	75.37	305	P	P	04 37 34.0	-0.1
	comp=Z,26nm,0.9s,baz=166,slow=4.1,SNR=24						
GEYT				LR	LR	05 13 14.1	
	comp=Z,241nm,20.8s,baz=60,slow=38						
GEYT	**Alibeck**	75.37	305	P	P	04 37 34.4	+0.3
YKA	**Yellowknife Ar**	75.55	28	P	P	04 37 34.2	-0.4
	comp=Z,38nm,0.7s,baz=290,slow=5.9,SNR=207						
YKA				LR	LR	05 13 46.8	
	comp=Z,780nm,18.6s,baz=0.0,slow=38						
I02E	**Swisshome, OR**	75.67	48	P	P	04 37 36.6	+1.0
	baz=286						
B05A	**Bryant**	75.69	44	P	P	04 37 36.5	+0.9
	baz=286,SNR=10						
F04D	**Rainier, OR**	75.70	46	P	P	04 37 36.0	+0.3
	baz=286						
G03D	**McMinnville, O**	75.77	47	P	P	04 37 36.2	+0.1
	baz=286						
E04D	**Cinebar**	75.86	45	P	P	04 37 37.5	+0.9
	baz=286						
J01E	**Myrtle Point**	75.87	49	P	P	04 37 37.4	+0.6
	baz=286						
PRGR	**Permogore**	76.06	331	eP	P	04 37 38.2	+0.7
PRGR				e		04 37 54.4	
PRGR				e		04 40 25.6	
PRGR				pmax	pmax		
	comp=Z,134nm,0.8s						
D05A	**Enumclaw**	76.06	45	IAmb	IAmb	04 37 39.9	
	comp=Z,63nm,0.7s						
I03D	**Drain, OR**	76.13	48	P	P	04 37 38.6	+0.4
	baz=286						
F04A	**Amboy**	76.13	46	IAmb	IAmb	04 37 39.8	
	comp=Z,58nm,0.8s						
K02D	**Willamette Mer**	76.19	49	P	P	04 37 38.8	+0.1
	baz=286						
H04D	**Lebanon**	76.32	47	P	P	04 37 40.1	+0.8
	baz=287						
L02E	**Cave Junction**	76.39	50	P	P	04 37 40.2	+0.4
	baz=287						
SPA0	**Spitsbergen Ar**	76.49	351	eP	P	04 37 40.5	+0.7
SPB2	**Spitsbergen Ar**	76.49	351	IAmb	IAmb	04 37 42.1	
	comp=Z,33nm,0.9s						
SPITS	**Spitsbergen Ar**	76.49	351	P	P	04 37 40.6	+0.9
SPITS				pmax	pmax		
	comp=Z,55nm,1.2s						
C06D	**Leavenworth**	76.56	44	P	P	04 37 40.8	+0.1
	baz=287						
KBS	**Kingsbay**	76.60	352	deP	P	04 37 41.0	+0.7
KBS				pmax	pmax		
	comp=Z,107nm,2.5s						
KBS				MLR	MLR		
	comp=Z,418nm,17.0s						
KBS	**Kingsbay**	76.60	352	eP	P	04 37 41.2	+0.9
KBS	**Kingsbay**	76.60	352	P	P	04 37 40.2	-0.1
KBS				IAmb	IAmb	04 37 41.7	
	comp=Z,38nm,0.8s						
KHMM	**Horse Mountain**	76.66	51	IAmb	IAmb	04 37 43.7	
	comp=Z,92nm,1.2s						
HUMO	**Hull Mountain**	76.72	49	P	P	04 37 42.4	+0.7
HUMO				IAmb	IAmb	04 37 43.5	
	comp=Z,52nm,1.4s						
I04A	**Tendick Farm,**	76.75	48	P	P	04 37 42.0	+0.2
	baz=287,SNR=6.7						
RES	**Resolute Bay**	76.76	14	IAmb	IAmb	04 37 42.7	
	comp=Z,45nm,0.8s						
F05D	**White Salmon**	76.79	46	P	P	04 37 42.7	+0.7
	baz=287,SNR=5.6						
HOOD	**Mount Hood Mea**	76.83	46	IAmb	IAmb	04 38 04.5	
	comp=Z,57nm,0.8s						
LTY	**Liberty**	76.90	44	IAmb	IAmb	04 37 43.4	
	comp=Z,30nm,0.8s						
G05D	**Wamic, OR**	77.08	46	P	P	04 37 42.2	-1.4
	baz=287						
J04D	**Umpqua Nationa**	77.12	49	P	P	04 37 44.6	+0.5
	baz=287,SNR=8.6						
M02C	**Callahan**	77.14	50	P	P	04 37 44.8	+0.7
	baz=287,SNR=8.0						
YBH	**Yreka Blue Hor**	77.15	50	P	P	04 37 44.3	+0.1
YBH				pmax	pmax		
	comp=Z,28nm,0.9s						
YBH	**Yreka Blue Hor**	77.15	50	P	P	04 37 44.3	+0.1
L04D	**Klamath Falls**	77.29	50	P	P	04 37 45.5	+0.4
	baz=288,SNR=9.7						
I05D	**Terrebonne, OR**	77.33	47	P	P	04 37 45.3	+0.2
	baz=288						
N02D	**Trinity Center**	77.38	51	P	P	04 37 46.2	+0.8
	baz=288,SNR=6.7						
HSPB	**Hornsund (broa**	77.43	350	eP	P	04 37 46.1	+1.1
O02D	**Mt. Diablo Mer**	77.55	52	P	P	04 37 47.3	+0.8
	baz=288,SNR=5.1						
K04D	**Chiloquin, OR**	77.56	49	P	P	04 37 47.0	+0.5
	baz=288,SNR=6.1						
E07A	**Sunnyside**	77.65	45	IAmb	IAmb	04 37 48.0	
	comp=Z,35nm,0.7s						
J05D	**Fort Rock, OR**	77.72	48	P	P	04 37 48.1	+0.7
	baz=288,SNR=16						
M04C	**Macdoel**	77.75	50	P	P	04 37 48.0	+0.3
	baz=288,SNR=14						
F07A	**Phinny Hill Vi**	77.81	45	IAmb	IAmb	04 37 49.4	
	comp=Z,49nm,1.3s						
HAWA	**Hanford**	77.91	45	IAmb	IAmb	04 37 49.3	
	comp=Z,27nm,0.7s						
LVZ	**Lovozero**	77.92	339	⇑eP	P	04 37 48.4	+0.5
LVZ				pmax	pmax		
	comp=Z,78nm,0.8s						
LVZ	**Lovozero**	77.92	339	P	P	04 37 47.8	-0.2
LVZ				IAmb	IAmb	04 37 49.9	
	comp=Z,88nm,1.0s						
GDXM	**Geysers**	77.96	53	IAmb	IAmb	04 37 51.1	
	comp=Z,61nm,1.2s						
BELG	**Belogornoye**	78.10	322	d iP	P	04 37 49.7	+0.6
BELG				pmax	pmax		
	comp=Z,86nm,1.0s						
BELG				MLR	MLR		
	comp=Z,105nm,21.0s						
K05A	**Summer Lake**	78.13	49	IAmb	IAmb	04 38 12.6	
	comp=Z,100nm,1.2s						
O03E	**Paynes Creek**	78.24	51	P	P	04 37 50.2	0.0
	baz=288,SNR=10						
APA	**Apatity**	78.49	339	⇓iP	P	04 37 49.4	-1.6
APA				i		04 38 07.1	
APA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
APA				MLR	MLR		
	comp=Z,2µm,17.0s						
G08A	**Pilot Rock**	78.64	46	P	P	04 37 53.1	+0.6
TAOE	**Nuku Hiva Isla**	78.64	104	eLR	LR	05 02 16.0	
	comp=Z,436nm,23.1s						
ORV	**Oroville**	78.69	52	IAmb	IAmb	04 37 53.7	
	comp=Z,59nm,1.3s						
MOD	**Modoc Plateau**	78.81	49	IAmb	IAmb	04 37 54.7	
	comp=Z,72nm,1.5s						
NEW	**Newport**	78.86	43	IAmb	IAmb	04 37 54.9	
	comp=Z,59nm,1.3s						
NEW	**Newport**	78.86	43	P	P	04 37 53.7	+0.2
	baz=290,SNR=18						
JLN	**Jalan Bani Buh**	78.98	290	P	P	04 37 55.0	+0.4
JLN				P	P	04 37 55.0	+0.4
KLMR	**Klimovskoe**	79.09	331	eP	P	04 37 53.4	-1.0
KLMR				e		04 40 50.1	
KLMR				eS	S	04 47 50.4	-2.5
KLMR				pmax	pmax		
	comp=Z,75nm,0.9s						
KLMR	**Klimovskoe**	79.09	331	eP	P	04 37 53.4	-1.0
KLMR				AMP		04 37 55.2	
	comp=Z,75nm,0.9s						
KLMR				ePP	PP	04 40 50.2	-3.0
KLMR				eS	S	04 47 50.5	-2.5
KLMR				eS	S	04 47 50.5	-2.5
KLMR				LR	LR	05 14 14.7	
WBK	**Wadi Bani Khal**	79.22	290	P	P	04 37 56.8	+0.8
WBK				P	P	04 37 56.8	+0.8
WSAR	**Wadi Sarin**	79.32	291	P	P	04 37 57.3	+0.8
KEV	**Kevo**	79.36	342	P	P	04 37 56.3	+0.6
KEV				pmax	pmax		
	comp=Z,78nm,1.2s						
KEV	**Kevo**	79.36	342	P	P	04 37 56.3	+0.6
KEV				IAmb	IAmb	04 37 57.2	
	comp=Z,78nm,1.2s						
EDM	**Edmonton**	79.36	37	IAmb	IAmb	04 37 56.8	
	comp=Z,37nm,0.8s						
J08A	**Circle Bar Ran**	79.61	48	IAmb	IAmb	04 37 59.3	
	comp=Z,69nm,1.1s						
BIDO	**Bidbid**	79.67	291	P	P	04 37 59.2	+0.9
	SNR=10						
HAMF	**Hammerfest**	79.77	343	eP	P	04 37 58.3	+0.3
SMDO	**Samad**	79.88	291	P	P	04 38 00.1	+0.5
SMDO				P	P	04 38 00.1	+0.5
BMO	**Blue Mountains**	79.89	46	IAmb	IAmb	04 38 00.6	
	comp=Z,69nm,1.2s						
ARA0	**ARCESS Array S**	79.92	342	eP	P	04 37 59.5	+0.7
ARCES	**ARCESS Array B**	79.92	342	P	P	04 37 59.5	+0.7
	comp=Z,54nm,0.8s,baz=59,slow=7.1,SNR=78						
ARCES				LR	LR	05 16 40.4	
	comp=Z,578nm,21.8s,baz=50,slow=38						
ARCES	**ARCESS Array B**	79.92	342	P	P	04 37 58.7	-0.2
ARCES				pmax	pmax		
	comp=Z,57nm,0.9s						
ARCES	**ARCESS Array B**	79.92	342	P	P	04 37 58.6	-0.2
ARCES				IAmb	IAmb	04 38 00.5	
	comp=Z,57nm,0.9s						
CMB	**Columbia Colle**	80.00	53	P	P	04 38 00.0	0.0
CMB				pmax	pmax		
	comp=Z,37nm,0.9s						
CMB	**Columbia Colle**	80.00	53	P	P	04 37 60.0	0.0
TULEG	**Thule**	80.01	8	⇓iP	P	04 37 59.8	+0.6
TULEG				IAmb	IAmb	04 38 00.4	
	comp=Z,107nm,0.8s						
JMDO	**Jabal Madar**	80.06	290	P	P	04 38 01.2	+0.7
	SNR=8.2						
JMDO				P	P	04 38 01.2	+0.7
	SNR=8.2						
PMPB	**Monarch Peak**	80.29	55	IAmb	IAmb	04 38 22.4	
	comp=Z,69nm,1.2s						
HOQ	**Hoqain**	80.35	292	P	P	04 38 03.0	+1.0
	SNR=11						
HOQ				P	P	04 38 03.0	+1.0
	SNR=11						
BANOM	**Banah**	80.46	294	i P	P	04 38 03.5	+0.9
	SNR=52						
BANOM	**Banah**	80.46	294	P	P	04 38 04.0	+1.4
	SNR=14						
SHME	**Shamm**	80.55	294	i P	P	04 38 03.8	+0.8
	SNR=44						
SHME	**Shamm**	80.55	294	P	P	04 38 04.3	+1.2
	SNR=19						
SHME				P	P	04 38 04.3	+1.2
	SNR=19						
WALA	**Waterton Lakes**	80.57	41	IAmb	IAmb	04 38 04.8	
	comp=Z,57nm,1.0s						
MDH	**Madha**	80.66	293	P	P	04 38 03.4	-0.2
MDH	**Madha**	80.66	293	P	P	04 38 04.0	+0.4
MDH				P	P	04 38 04.0	+0.4
BSY	**Bisya**	80.73	291	P	P	04 38 04.9	+0.8
BSY				P	P	04 38 04.9	+0.8
MASF	**Masafi**	80.76	294	P	P	04 38 05.2	+1.0
	SNR=16						
MASF				P	P	04 38 05.2	+1.0
	SNR=16						
MSFE	**Esma-Masafi**	80.76	294	i P	P	04 38 04.9	+0.6
	SNR=20						
JTMT	**Jette**	80.82	42	IAmb	IAmb	04 38 05.6	
	comp=Z,82nm,1.3s						
NEEM	**North Greenlan**	80.82	4	⇓iP	P	04 38 04.8	+0.9
NEEM				IAmb	IAmb	04 38 05.5	
	comp=Z,126nm,0.9s						
SOHO	**SOHO**	80.84	292	i P	P	04 38 05.0	+0.4
	SNR=26						
SOHO	**SOHO**	80.84	292	P	P	04 38 05.5	+0.8
SOHO				P	P	04 38 05.5	+0.8
UOSS	**Minazif**	80.86	293	i P	P	04 38 05.4	+0.7
	SNR=18						
UOSS	**Minazif**	80.86	293	P	P	04 38 05.4	+0.7
UOSS	**Minazif**	80.86	293	P	P	04 38 04.6	-0.2
UOSS				IAmb	IAmb	04 38 26.5	
	comp=Z,63nm,1.1s						
PAGB	**Antelope Grade**	80.87	55	IAmb	IAmb	04 38 06.2	
	comp=Z,63nm,1.0s						
KTK1	**Kautokeino**	80.88	342	eP	P	04 38 04.5	+0.5
HATD	**Hatta, Dubai**	80.96	293	i P	P	04 38 05.9	+0.6
	SNR=29						
HATD	**Hatta, Dubai**	80.96	293	P	P	04 38 06.1	+0.8
	SNR=13						
HATD				P	P	04 38 06.1	+0.8
	SNR=13						
ASHO	**Ashiyiah**	81.07	293	i P	P	04 38 06.5	+0.6
	SNR=23						
ASHO	**Ashiyiah**	81.07	293	P	P	04 38 06.8	+0.9
	SNR=12						
ARQ	**Araqi**	81.12	292	P	P	04 38 07.3	+1.1
	SNR=8.8						
ARQ				P	P	04 38 07.3	+1.1
	SNR=8.8						
RYN	**Ryan**	81.18	52	IAmb	IAmb	04 38 07.7	
	comp=Z,48nm,1.1s						
SMMC	**Simmler**	81.21	56	P	P	04 38 06.8	+0.4
	baz=290						
MLAC	**Mammoth, Mammo**	81.29	53	P	P	04 38 07.3	+0.2
	baz=290						
NAZ	**Nazwa, Dubai**	81.31	293	i P	P	04 38 07.4	+0.3
	SNR=21						
NAZ	**Nazwa, Dubai**	81.31	293	P	P	04 38 07.8	+0.6
	SNR=13						
NAZ				P	P	04 38 07.8	+0.6
	SNR=13						
LHV	**Little Huntoon**	81.33	52	IAmb	IAmb	04 38 08.8	
	comp=Z,40nm,0.9s						
JETT	**Jettan, Norway**	81.33	343	eP	P	04 38 07.7	+1.2
VOG	**Valley Oaks Go**	81.33	54	P	P	04 38 06.5	-0.6
	baz=290						
DQM	**DQM**	81.36	288	P	P	04 38 08.2	+0.8
DQM				P	P	04 38 08.2	+0.8
MSO	**Missoula**	81.38	43	P	P	04 38 06.6	-0.7
	baz=292,SNR=7.6						
MFID	**Camas Ranch**	81.39	47	IAmb	IAmb	04 38 08.8	
	comp=Z,50nm,1.1s						
NVAR	**Mina Array Bea**	81.41	52	P	P	04 38 08.0	+0.3
	comp=Z,35nm,0.8s,baz=264,slow=6.1,SNR=148						
NVAR				LR	LR	05 06 55.1	
	comp=Z,676nm,20.4s,baz=280,slow=30						
NVAR	**Mina Array Bea**	81.41	52	P	P	04 38 07.3	-0.4
FAQ	**Al Faqa, Dubai**	81.45	293	i P	P	04 38 08.0	+0.1
	SNR=16						
FAQ	**Al Faqa, Dubai**	81.45	293	P	P	04 38 08.5	+0.6
	SNR=6.5						
FAQ				P	P	04 38 08.5	+0.6
	SNR=6.5						
MAK	**Makhachkala**	81.46	313	eP	P	04 38 03.0	-4.6
MAK				eS	S	04 48 10.4	-8.1
MAK				pmax	pmax		
	comp=Z,304nm,1.3s						
PKM	**Mcpherson Peak**	81.50	56	P	P	04 38 08.6	+0.4
	baz=290,SNR=11						
ALNE	**Al Ain**	81.55	292	i P	P	04 38 09.2	+0.8
	SNR=5.5						
ALNE	**Al Ain**	81.55	292	P	P	04 38 09.6	+1.2
	SNR=12						
ALNE				P	P	04 38 09.6	+1.2
	SNR=12						
DAG	**Danmarks Havn**	81.55	356	i P	P	04 38 07.2	-0.3
DAG				IAmb	IAmb	04 38 08.1	
	comp=Z,152nm,2.1s						
TRO	**Tromso**	81.67	344	eP	P	04 38 08.4	+0.2
ASUD	**Al Ashush, Dub**	81.72	293	i P	P	04 38 10.3	+1.1
	SNR=20						
ASUD	**Al Ashush, Dub**	81.72	293	P	P	04 38 10.3	+1.1
	SNR=11						
SBC	**Santa Barbara**	81.73	56	P	P	04 38 08.4	-0.8
	baz=290						
VES	**Vestal, Richgr**	81.73	55	P	P	04 38 08.5	-0.6
	baz=290,SNR=16						
VRH	**Novokhopyorsk**	81.94	322	eP	P	04 38 09.8	-0.1
VRH				e		04 38 10.1	
VRH				eS	S	04 48 20.0	-3.2
VRH				pmax	pmax		
	comp=Z,190nm,0.8s						
VRH				pmax	pmax		
	comp=Z,220nm,0.8s						
VRH				smax	smax		
	comp=N,130nm,1.8s						
TIN	**Tinemaha, Big**	81.95	53	P	P	04 38 10.9	+0.5
	baz=291,SNR=8.7						
AJN	**Ajban**	82.03	293	i P	P	04 38 11.1	+0.2
	SNR=11						
AJN	**Ajban**	82.03	293	P	P	04 38 11.5	+0.6
	SNR=8.9						
AJN				P	P	04 38 11.5	+0.6
	SNR=8.9						
ARVC	**Arvin**	82.17	55	P	P	04 38 11.3	-0.2
	baz=291,SNR=5.7						
MOS	**Moscow**	82.21	327	eP	P	04 38 10.4	-0.8
MOS				e		04 41 15.2	
MOS				eS	S	04 48 22.7	-3.0
MOS				pmax	pmax		
	comp=Z,80nm,0.9s						
MOS				MLR	MLR		
	comp=Z,800nm,17.0s						
ISA	**Isabella, Lake**	82.25	55	P	P	04 38 11.3	-0.7
	baz=291,SNR=11						
CWC	**Cottonwood Cre**	82.28	54	P	P	04 38 11.6	-0.7
	baz=291						
SNCC	**San Nicolas Is**	82.29	57	P	P	04 38 11.8	-0.4
	baz=291						
HLID	**Hailey**	82.30	46	P	P	04 38 12.3	+0.1
	baz=292,SNR=22						
LCH	**Last Change Ra**	82.32	53	P	P	04 38 11.2	-1.2
UMZA	**Um Al Zommool**	82.51	291	P	P	04 38 13.9	+0.4
UMZA				P	P	04 38 13.9	+0.4
GROC	**Groznyy**	82.54	313	eP	P	04 38 13.3	+0.1
GROC				e		04 38 18.2	
GROC				e		04 41 23.5	
GROC				pmax	pmax		
	comp=Z,63nm,0.7s						
VALR	**Valaam**	82.56	334	d iP	P	04 38 12.7	-0.2
VALR				pmax	pmax		
	comp=Z,103nm,0.9s						
ELK	**Elko**	82.78	49	IAmb	IAmb	04 38 16.1	
	comp=Z,34nm,1.1s						
MPMC	**Manual Prospec**	82.86	54	P	P	04 38 15.2	-0.1
	baz=291,SNR=39						
DECC	**Green Verdugo**	82.86	56	P	P	04 38 14.5	-0.7
	baz=291						
EDW2	**Edwards Air Fo**	82.90	55	P	P	04 38 15.4	0.0
	baz=291,SNR=16						
LPSR	**Galich'ya Gora**	82.92	324	eP	P	04 38 15.3	+0.3
LPSR				e		04 38 15.6	
LPSR				eS	S	04 48 31.5	-1.6
LPSR				pmax	pmax		
	comp=Z,250nm,0.8s						
LPSR				pmax	pmax		
	comp=Z,230nm,0.8s						
LPSR				smax	smax		
	comp=N,70nm,1.9s						
LRMC	**Laurel Mtn Rad**	82.92	55	P	P	04 38 15.5	-0.1
	baz=291,SNR=6.4						
OBN	**Obninsk**	83.03	327	LR	LR	05 16 53.7	
	comp=N,106nm,21.2s,baz=49,slow=37						
OBN	**Obninsk**	83.03	327	d iP	P	04 38 14.5	-1.0
OBN				i		04 38 22.3	
OBN				i S	S	04 48 29.7	-4.4
OBN				pmax	pmax		
	comp=Z,92nm,1.0s						
OBN				MLR	MLR		
	comp=Z,962nm,17.0s						
OBN	**Obninsk**	83.03	327	P	P	04 38 15.5	0.0
FMP	**Fort Macarthur**	83.08	57	P	P	04 38 15.7	-0.5
	baz=291						
CIS	**Catalina Islan**	83.10	57	P	P	04 38 15.7	-0.7
	baz=291						
SCI2	**San Clemente I**	83.15	57	P	P	04 38 17.5	+0.9
	baz=291						
FURC	**Furnace Creek,**	83.18	54	P	P	04 38 16.8	+0.1
	baz=292,SNR=20						
MZWR	**Madinat Zayed**	83.25	293	P	P	04 38 18.1	+0.8
MZWR				P	P	04 38 18.1	+0.8
BOZ	**Bozeman (W)**	83.34	44	P	P	04 38 17.5	-0.1
	baz=294,SNR=24						
QSM	**Queen of Sheba**	83.36	54	IAmb	IAmb	04 38 18.7	
	comp=Z,42nm,0.9s						
BFSC	**Mount Baldy Ra**	83.39	56	P	P	04 38 17.2	-0.8
	baz=291						
VSR	**Storozhevoye**	83.39	323	eP	P	04 38 17.3	-0.2
VSR				e		04 38 17.6	
VSR				eS	S	04 48 36.5	-1.5
VSR				pmax	pmax		
	comp=Z,260nm,1.0s						
VSR				pmax	pmax		
	comp=Z,310nm,1.1s						
VSR				smax	smax		
	comp=N,210nm,3.2s						
VORD	**Divnogorie**	83.43	322	eP	P	04 38 17.4	-0.3
VORD				pmax	pmax		
	comp=Z,120nm,0.7s						
GWY	**Greenwater Val**	83.43	54	P	P	04 38 17.5	-0.7
GWY				IAmb	IAmb	04 38 19.1	
	comp=Z,48nm,0.8s						
R11A	**Troy Canyon, C**	83.43	51	P	P	04 38 18.1	-0.2
	baz=292						
EGMT	**Eagleton**	83.51	41	P	P	04 38 18.1	-0.3
	baz=295,SNR=6.4						
PUL	**Pulkovo**	83.63	333	ceP	P	04 38 18.8	+0.3
PUL				pmax	pmax		
	comp=Z,60nm,0.5s						
GOF	**Gofitskoye**	83.64	316	⇑eP	P	04 38 18.1	-0.8
GOF				pmax	pmax		
	comp=Z,79nm,1.4s						
GSC	**Goldstone, Bar**	83.65	55	IAmb	IAmb	04 38 20.3	
	comp=Z,37nm,1.1s						
GSC	**Goldstone, Bar**	83.65	55	P	P	04 38 19.1	-0.2
	baz=292,SNR=20						
SHAO	**Shalim**	83.71	287	P	P	04 38 20.6	+0.9
SHAO	**Shalim**	83.71	287	P	P	04 38 20.9	+1.1
SHAO				P	P	04 38 20.9	+1.1
STEI	**Steigen**	83.82	343	eP	P	04 38 19.8	+0.5
SHOC	**Shoshone, Teco**	83.83	54	P	P	04 38 19.8	-0.3
	baz=292,SNR=12						
NCK	**Nalchik**	83.90	314	⇑iP	P	04 38 21.0	+0.7
NCK				pmax	pmax		
	comp=Z,97nm,0.7s						
NCK				MLR	MLR		
	comp=Z,943nm,18.0s						
BBRC	**Big Bear Solar**	83.95	56	P	P	04 38 20.3	-0.7
	baz=292						
MURC	**Murrieta**	83.98	56	P	P	04 38 20.4	-0.6
	baz=292,SNR=8.5						
ZEI	**Tsey**	83.98	314	eP	P	04 38 20.7	-0.3
ZEI				pmax	pmax		
	comp=Z,60nm,1.4s						
PYA1	**Pyatigorsk**	84.00	315	⇓eP	P	04 38 21.1	+0.3
PYA1				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GHWR	**Ruwais**	84.05	293	P	P	04 38 22.1	+0.8
GHWR				P	P	04 38 22.1	+0.8
DBG	**Daneborg**	84.05	356	i P	P	04 38 19.4	-1.1
DBG				IAmb	IAmb	04 38 21.3	
	comp=Z,12nm,0.9s						
HVU	**Hansel Valley**	84.10	47	IAmb	IAmb	04 38 41.4	
	comp=Z,52nm,1.4s						
YHH	**Holmes Hill**	84.17	44	P	P	04 38 22.3	+0.3
YHH				IAmb	IAmb	04 38 23.9	
	comp=Z,45nm,1.3s						
HEC	**Hector,Ludlow**	84.19	55	P	P	04 38 21.8	-0.2
	baz=292,SNR=13						
FAUS	**Fauske**	84.20	343	eP	P	04 38 21.4	+0.1
KBZ	**Khabaz**	84.27	315	P	P	04 38 23.2	+1.1
	comp=Z,44nm,0.8s,baz=162,slow=2.9,SNR=72						
KBZ				LR	LR	05 19 48.3	
	comp=Z,885nm,19.6s,baz=60,slow=38						
KBZ	**Khabaz**	84.27	315	d iP	P	04 38 22.5	+0.4
KBZ				pmax	pmax		

	comp=Z,50nm,0.8s						
KBZ				MLR	MLR		
	comp=Z,835nm,18.0s						
TUQ	**Turquoise Moun**	**84.27**	**54**	P	**P**	**04 38 22.3**	**-0.2**
	baz=292,SNR=10.0						
109C	**Camp Elliot, M**	**84.31**	**57**	IAmb	IAmb	04 38 23.2	
	comp=Z,26nm,0.9s						
109C	**Camp Elliot, M**	**84.31**	**57**	P	**P**	**04 38 22.0**	**-0.5**
	baz=292						
YNR	**Norris Junctio**	**84.31**	**44**	IAmb	IAmb	04 38 25.4	
	comp=Z,66nm,1.0s						
KIV	**Kislovodsk**	**84.32**	**315**	*i* P	**P**	**04 38 25.7**	**+3.2**
	SNR=5.6						
KIV	**Kislovodsk**	**84.32**	**315**	*e*P	**P**	**04 38 23.0**	**+0.5**
KIV				*e*		04 48 45.6	
KIV				*e*SS	SS	04 54 20.1	+3.2
KIV				pmax	pmax		
	comp=Z,39nm,1.1s						
KIV				pmax	pmax		
	comp=Z,63nm,3.1s						
KIV				MLR	MLR		
	comp=Z,667nm,20.0s						
KIV	**Kislovodsk**	**84.32**	**315**	P	**P**	**04 38 24.1**	**+1.6**
KIV				P	**P**	**04 38 24.1**	**+1.6**
KIV	**Kislovodsk**	**84.32**	**315**	P	**P**	**04 38 22.9**	**+0.3**
KIV				IAmb	IAmb	04 38 51.4	
	comp=Z,34nm,0.8s						
YUF	**Upper Falls**	**84.42**	**44**	IAmb	IAmb	04 38 25.6	
	comp=Z,69nm,1.4s						
DMTO	**DMTO**	**84.42**	**287**	P	**P**	**04 38 24.1**	**+0.7**
FIA1	**FINESS Array S**	**84.44**	**335**	P	**P**	**04 38 21.7**	**-0.9**
FINES	**FINESS Array B**	**84.44**	**335**	P	**P**	**04 38 22.1**	**-0.5**
	comp=Z,82nm,0.5s,baz=67,slow=5.0,SNR=627						
FINES				LR	LR	05 18 07.5	
	comp=Z,601nm,21.6s,baz=54,slow=37						
GNI	**Garni**	**84.45**	**311**	LR	LR	05 18 37.3	
	comp=Z,375nm,21.6s,baz=64,slow=37						
GNI	**Garni**	**84.45**	**311**	P	**P**	**04 38 25.3**	**+2.0**
GNI	**Garni**	**84.45**	**311**	*de*P	**P**	**04 38 24.1**	**+0.8**
GNI				pmax	pmax		
	comp=Z,90nm,1.3s						
GNI				MLR	MLR		
	comp=Z,357nm,19.0s						
GNI	**Garni**	**84.45**	**311**	P	**P**	**04 38 25.5**	**+2.2**
GNI				P	**P**	**04 38 25.5**	**+2.2**
GNI	**Garni**	**84.45**	**311**	P	**P**	**04 38 23.8**	**+0.4**
H17A	**Grant Village**	**84.51**	**44**	IAmb	IAmb	04 38 27.0	
	comp=Z,44nm,1.1s						
H17A	**Grant Village**	**84.51**	**44**	P	**P**	**04 38 25.6**	**+1.9**
	baz=295,SNR=27						
ECR	**Eagle Creek**	**84.54**	**46**	P	**P**	**04 38 24.4**	**+0.6**
PFO	**Pinyon Flats O**	**84.55**	**56**	P	**P**	**04 38 23.5**	**-0.4**
PFO				pmax	pmax		
	comp=Z,27nm,0.9s						
PFO	**Pinyon Flats O**	**84.55**	**56**	P	**P**	**04 38 23.5**	**-0.4**
PFO				IAmb	IAmb	04 38 24.5	
	comp=Z,27nm,0.9s						
PFO	**Pinyon Flats O**	**84.55**	**56**	P	**P**	**04 38 23.5**	**-0.4**
	baz=292,SNR=18						
TPFO	**Pinon Flats**	**84.55**	**56**	P	**P**	**04 38 23.4**	**-0.5**
	baz=292,SNR=15						
LKWY	**Lake**	**84.56**	**44**	IAmb	IAmb	04 38 27.2	
	comp=Z,32nm,0.9s						
FLWY	**Flagg Ranch**	**84.56**	**45**	IAmb	IAmb	04 38 26.0	
	comp=Z,51nm,0.8s						
NEY	**Neytrino**	**84.58**	**314**	⇑*e*P	**P**	**04 38 24.5**	**+0.5**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KHOR	**Al-Khor Airpor**	**84.61**	**295**	P	**P**	**04 38 25.0**	**+0.7**
PSUT	**Pine Spring**	**84.62**	**51**	IAmb	IAmb	04 38 48.9	
	comp=Z,33nm,0.9s						
YMP	**Mirror Lake Pl**	**84.64**	**44**	IAmb	IAmb	04 38 26.8	
	comp=Z,58nm,0.9s						
DUG	**Dugway, Tooele**	**84.70**	**49**	IAmb	IAmb	04 38 25.8	
	comp=Z,43nm,1.2s						
DUG	**Dugway, Tooele**	**84.70**	**49**	P	**P**	**04 38 24.6**	**0.0**
	baz=294,SNR=28						
GMRC	**Granite Mounta**	**84.72**	**55**	P	**P**	**04 38 24.6**	**-0.2**
	baz=292,SNR=18						
BELC	**Belle Mtn. Jos**	**84.75**	**56**	P	**P**	**04 38 24.4**	**-0.6**
	baz=292,SNR=16						
FFC	**Flin Flon**	**84.76**	**33**	P	**P**	**04 38 24.4**	**0.0**
FFC				pmax	pmax		
	comp=Z,45nm,0.9s						
FFC	**Flin Flon**	**84.76**	**33**	P	**P**	**04 38 24.4**	**0.0**
FFC				IAmb	IAmb	04 38 25.4	
	comp=Z,45nm,0.8s						
AKH	**Akhalkalaki**	**84.81**	**312**	⇓P	**P**	**04 38 26.1**	**+0.9**
TKX	**Tecate**	**84.82**	**57**	P	**P**	**04 38 24.4**	**-0.8**
TKX				IAmb	IAmb	04 38 46.6	
	comp=Z,18nm,0.4s						
DOK	**Doka**	**84.83**	**288**	P	**P**	**04 38 26.3**	**+0.8**
DOK				P	**P**	**04 38 26.3**	**+0.8**
AHID	**Auburn Hatcher**	**84.84**	**46**	IAmb	IAmb	04 38 26.4	
	comp=Z,27nm,0.9s						
MONP2	**Monument Peak**	**84.84**	**57**	P	**P**	**04 38 25.2**	**-0.4**
	baz=292,SNR=9.7						
SHMA	**Al-Shehemyia**	**84.99**	**296**	P	**P**	**04 38 26.8**	**+0.7**
HWUT	**Hardware Ranch**	**85.00**	**47**	IAmb	IAmb	04 38 27.2	
	comp=Z,25nm,0.8s						
SLWR	**Sila**	**85.02**	**294**	P	**P**	**04 38 27.4**	**+1.1**
SLWR				P	**P**	**04 38 27.4**	**+1.1**
RLMT	**Red Lodge**	**85.05**	**43**	P	**P**	**04 38 27.1**	**+0.8**
	baz=296,SNR=54						
RBK	**Rabkut**	**85.16**	**287**	P	**P**	**04 38 27.9**	**+0.7**
RBK				P	**P**	**04 38 27.9**	**+0.7**
IKP	**In-Ko-Pah, Jac**	**85.18**	**57**	P	**P**	**04 38 26.6**	**-0.4**
	baz=292,SNR=6.4						
TRNA	**Turayna**	**85.19**	**295**	P	**P**	**04 38 27.8**	**+0.7**
RMX	**La Rumorosa**	**85.22**	**57**	P	**P**	**04 38 27.2**	**-0.1**
BC3	**Big Chuckawall**	**85.31**	**56**	P	**P**	**04 38 27.4**	**-0.3**
	baz=293,SNR=21						
SAKB	**Bahrain**	**85.31**	**296**	P	**P**	**04 38 28.8**	**+1.1**
SWSC	**Sam W. Stewart**	**85.31**	**57**	P	**P**	**04 38 26.8**	**-0.8**
	baz=292,SNR=5.6						
IRM	**Iron Mountain**	**85.35**	**55**	P	**P**	**04 38 27.4**	**-0.4**
	baz=293,SNR=9.0						
WHFO	**Wadi Hawf**	**85.40**	**287**	P	**P**	**04 38 28.6**	**+0.2**
WHFO				P	**P**	**04 38 28.6**	**+0.2**
KONS	**Konsvik**	**85.43**	**343**	*e*P	**P**	**04 38 28.1**	**+0.6**
JLU	**Jordanelle**	**85.49**	**48**	IAmb	IAmb	04 38 29.7	
	comp=Z,35nm,0.8s						
NEE2	**Needles Airpor**	**85.52**	**55**	P	**P**	**04 38 28.2**	**-0.4**
	baz=293						
STOK	**Stokkvaagen**	**85.58**	**343**	*e*P	**P**	**04 38 28.3**	**+0.1**
MVU	**Marysvale**	**85.81**	**50**	P	**P**	**04 38 30.3**	**-0.1**
BW06	**Boulder Array**	**85.87**	**46**	P	**P**	**04 38 29.9**	**-0.6**
	baz=296,SNR=16						
PDAR	**Pinedale Array**	**85.87**	**46**	P	**P**	**04 38 29.9**	**-0.7**
	comp=Z,10nm,0.7s,baz=203,slow=1.4,SNR=79						
PDAR				LR	LR	05 10 22.7	
	comp=Z,494nm,21.9s,baz=328,slow=31						
VSU	**Vasula**	**85.90**	**333**	*e*P	**P**	**04 38 30.0**	**0.0**
VSU	**Vasula**	**85.90**	**333**	*d i*P	**P**	**04 38 29.5**	**-0.5**
VSU				pmax	pmax		
	comp=Z,186nm,0.9s						
VSU				MLR	MLR		
	comp=Z,1µm,16.0s						
KNB	**Kanab**	**85.97**	**52**	IAmb	IAmb	04 38 32.7	
	comp=Z,65nm,1.0s						
GLA	**Glamis**	**86.02**	**56**	IAmb	IAmb	04 38 32.2	
	comp=Z,65nm,1.4s						
GLA	**Glamis**	**86.02**	**56**	P	**P**	**04 38 31.1**	**-0.1**
	baz=293,SNR=12						
ABTO	**Aybut**	**86.02**	**287**	P	**P**	**04 38 32.1**	**+0.6**
ABTO				P	**P**	**04 38 32.1**	**+0.6**
PDMCI	**Parker Dam,Lak**	**86.06**	**55**	P	**P**	**04 38 31.2**	**-0.1**
	baz=293,SNR=11						
SUMG	**Summit**	**86.18**	**1**	P	**P**	**04 38 32.7**	**+1.0**
SUMG				pmax	pmax		
	comp=Z,101nm,1.1s						
SUMG	**Summit**	**86.18**	**1**	*i* P	**P**	**04 38 32.0**	**+0.3**
SUMG				IAmb	IAmb	04 38 33.6	
	comp=Z,93nm,1.1s						
SUMG	**Summit**	**86.18**	**1**	P	**P**	**04 38 32.7**	**+1.0**
FCC	**Fort Churchill**	**86.20**	**27**	IAmb	IAmb	04 38 32.2	
	comp=Z,68nm,1.1s						
LAO	**LASA Array**	**86.26**	**41**	P	**P**	**04 38 32.3**	**+0.2**
	baz=298,SNR=21						
UMR	**Umm Al-Rimmam**	**86.30**	**300**	*e*P	**P**	**04 38 32.2**	**-0.4**
NUUG	**Nuugaatsiaq**	**86.35**	**6**	*e*P	**P**	**04 38 32.4**	**+0.5**
Q16A	**Castle Valley**	**86.38**	**50**	IAmb	IAmb	04 38 33.9	
	comp=Z,34nm,0.8s						
SOC	**Sochi**	**86.42**	**316**	*e*P	**P**	**04 38 32.2**	**-0.7**
SOC				*e*		04 41 53.5	
SOC				*e*S	**SKSac**	**04 48 58.3**	**-0.6**
SOC				*e*SS	**SS**	**04 54 46.0**	**-1.7**
SOC				*e*SSS	SSS	04 58 21.4	
SOC				pmax	pmax		
	comp=Z,26nm,0.8s						
SOC				MLR	MLR		
	comp=Z,683nm,17.0s						
QRN	**Al-Qurain**	**86.44**	**299**	*e*P	**P**	**04 38 32.8**	**-0.5**
P17A	**Butcher Ranch,**	**86.45**	**49**	P	**P**	**04 38 33.0**	**-0.4**
P17A				IAmb	IAmb	04 38 34.5	
	comp=Z,34nm,0.9s						
MIB	**Mutribah**	**86.50**	**301**	*e*P	**P**	**04 38 33.1**	**-0.5**
DGMT	**Dagmar**	**86.63**	**39**	IAmb	IAmb	04 38 34.3	
	comp=Z,36nm,0.8s						
DGMT	**Dagmar**	**86.63**	**39**	P	**P**	**04 38 33.1**	**-0.8**
	baz=299						
RDF	**Al-Radifah**	**86.67**	**300**	*e*P	**P**	**04 38 34.0**	**-0.4**
P18A	**Preston Nutter**	**86.74**	**49**	IAmb	IAmb	04 38 35.8	
	comp=Z,22nm,0.7s						
SRU	**San Rafael Swe**	**86.76**	**49**	IAmb	IAmb	04 38 35.6	
	comp=Z,50nm,0.7s						
RDMU	**Red Mountain**	**86.80**	**48**	IAmb	IAmb	04 38 36.1	
	comp=Z,42nm,0.8s						
RST	**Umm Al-Ruwaisa**	**86.89**	**300**	*e*P	**P**	**04 38 34.2**	**-1.3**
MTSE	**Matsula**	**86.98**	**334**	*e*P	**P**	**04 38 35.3**	**0.0**
GURO	**Guroymak-BITLI**	**87.02**	**310**	P	**P**	**04 38 35.7**	**-0.4**
Y14A	**Wickenburg**	**87.07**	**55**	IAmb	IAmb	04 38 37.4	
	comp=Z,51nm,0.7s						
NSS	**Namsos**	**87.20**	**342**	*e*P	**P**	**04 38 36.1**	**-0.1**
SOCY	**Socotra**	**87.25**	**282**	P	**P**	**04 38 37.8**	**+0.2**
ANN	**Anapa**	**87.33**	**317**	*e*P	**P**	**04 38 34.4**	**-2.9**
ANN				pmax	pmax		
	comp=Z,99nm,1.3s						
WUAZ	**Wupatki**	**87.65**	**53**	IAmb	IAmb	04 38 40.7	
	comp=Z,39nm,0.9s						
WUAZ	**Wupatki**	**87.65**	**53**	P	**P**	**04 38 39.4**	**+0.1**
	baz=295,SNR=34						
MNK	**Minsk**	**87.65**	**329**	*i* P	**P**	**04 38 39.3**	**+0.7**
MNK				*i* PPP	PPP	04 43 59.8	
MNK				*i* S	**SKSac**	**04 49 06.2**	**+0.2**
MNK				*i* SS	**SS**	**04 55 09.4**	**+4.5**
MNK				*i* SSS	SSS	04 58 43.0	
MNK				pmax	pmax		
	comp=N,21nm,1.0s						
MNK				pmax	pmax		
	comp=E,5.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,105nm,1.0s						
MNK				MLR	MLR		
	comp=E,48nm,15.0s						
MNK				MLR	MLR		
	comp=Z,453nm,17.0s						
MNK				MLR	MLR		
	comp=N,362nm,19.0s						
MNK	**Minsk**	**87.65**	**329**	*i* P	**P**	**04 38 39.4**	**+0.7**
	comp=E,5.0nm,1.0s						
MNK				*i* P	**P**	**04 38 39.4**	**+0.7**
	comp=N,21nm,1.0s						
MNK				*i* P	**P**	**04 38 39.4**	**+0.7**
	comp=Z,105nm,1.0s,baz=236						
MNK				*i* PP	PP	04 41 55.3	-8.0
MNK				*i* PPP	PPP	04 43 59.9	
MNK				*i* S	**SKSac**	**04 49 06.2**	**+0.2**
MNK				*i* SS	**SS**	**04 55 09.4**	**+4.5**
MNK				*i* SSS	SSS	04 58 43.0	
MNK				*i* LQ	LQ	05 12 19.5	
MNK				*i* LR	LR	05 16 37.3	
MNK				*i* LRM	MLR	05 19 38.6	
	comp=E,48nm,14.9s						
MNK				*i* LRM	MLR	05 20 34.2	
	comp=Z,453nm,17.0s						
MNK				*i* LRM	MLR	05 20 55.9	
	comp=N,362nm,19.4s						
O20A	**White River Ci**	**87.91**	**48**	IAmb	IAmb	04 38 41.1	
	comp=Z,28nm,0.8s						
O20A	**White River Ci**	**87.91**	**48**	P	**P**	**04 38 40.0**	**-0.4**
	baz=296,SNR=21						
RWWY	**Rawlins**	**87.91**	**46**	IAmb	IAmb	04 38 41.4	
	comp=Z,34nm,1.1s						
K22A	**Casper**	**87.92**	**45**	IAmb	IAmb	04 38 42.4	
	comp=Z,23nm,0.9s						
K22A	**Casper**	**87.92**	**45**	P	**P**	**04 38 40.1**	**-0.4**
	baz=298,SNR=9.5						
NACGM	**Naroch**	**87.94**	**330**	*i* P	**P**	**04 38 39.6**	**-0.4**
214A	**Organ Pipe Nat**	**88.02**	**56**	IAmb	IAmb	04 38 42.2	
	comp=Z,26nm,0.8s						
214A	**Organ Pipe Nat**	**88.02**	**56**	P	**P**	**04 38 41.1**	**+0.2**
	baz=294,SNR=18						
TBLU	**Trondheim**	**88.66**	**342**	*e*P	**P**	**04 38 41.8**	**-1.4**
UPP	**Uppsala**	**88.67**	**337**	*e*P	**P**	**04 38 42.3**	**-1.0**
ILULI	**Ilulissat**	**88.79**	**6**	IAmb	IAmb	04 38 44.9	
	comp=Z,27nm,0.8s						
RSSD	**Black Hills**	**88.83**	**43**	P	**P**	**04 38 44.4**	**-0.3**
RSSD				pmax	pmax		
	comp=Z,16nm,1.1s						
RSSD	**Black Hills**	**88.83**	**43**	P	**P**	**04 38 44.4**	**-0.3**
RSSD	**Black Hills**	**88.83**	**43**	P	**P**	**04 38 43.8**	**-1.0**
	baz=299						
PABE	**Paberze**	**88.88**	**331**	*e*P	**P**	**04 38 44.3**	**-0.1**
MVCO	**Mesa Verde**	**89.02**	**50**	IAmb	IAmb	04 39 10.7	
	comp=Z,38nm,1.3s						
MVCO	**Mesa Verde**	**89.02**	**50**	P	**P**	**04 38 45.8**	**0.0**
	baz=296,SNR=17						
W18A	**Petrified Fore**	**89.03**	**53**	P	**P**	**04 38 46.1**	**+0.3**
	baz=296,SNR=5.4						
AKASG	**Malin Array Be**	**89.10**	**325**	P	**P**	**04 38 44.6**	**-1.0**
	comp=Z,35nm,0.7s,baz=52,slow=4.8,SNR=135						
AKASG				LR	LR	05 22 29.2	
	comp=Z,491nm,19.0s,baz=45,slow=38						
AKASG	**Malin Array Be**	**89.10**	**325**	IAmb	IAmb	04 38 45.6	
	comp=Z,37nm,0.8s						
AKBB	**Malin Array Si**	**89.10**	**325**	*d i*P	**P**	**04 38 44.2**	**-1.4**
AKBB	**Malin Array Si**	**89.10**	**325**	P	**P**	**04 38 44.7**	**-0.9**
N23A	**Red Feather La**	**89.12**	**46**	P	**P**	**04 38 46.8**	**+0.5**
	baz=298,SNR=24						
SIM	**Simferopol'**	**89.33**	**319**	*c i*P	**P**	**04 38 45.2**	**-1.6**
SIM				pmax	pmax		
	comp=Z,84nm,1.1s						
TUC	**Tucson**	**89.44**	**55**	P	**P**	**04 38 47.0**	**-0.7**
TUC				pmax	pmax		
	comp=Z,37nm,1.5s						
TUC	**Tucson**	**89.44**	**55**	P	**P**	**04 38 47.0**	**-0.7**
TUC	**Tucson**	**89.44**	**55**	P	**P**	**04 38 48.1**	**+0.5**
	baz=295						
PBUR	**Paburge**	**89.46**	**332**	*e*P	**P**	**04 38 47.3**	**+0.1**
MDND	**Maddock**	**89.60**	**38**	P	**P**	**04 38 47.4**	**-0.6**
	baz=302						
E28A	**Huff**	**89.63**	**39**	IAmb	IAmb	04 38 58.6	
	comp=Z,31nm,1.1s						
ICESG	**Greenland Ices**	**89.65**	**2**	*e*P	**P**	**04 38 46.3**	**-2.0**
ICESG				IAmb	IAmb	04 38 50.2	
	comp=Z,48nm,0.3s						
NC303	**NORSAR Array S**	**89.85**	**340**	IAmb	IAmb	04 38 49.3	
	comp=Z,56nm,1.0s						
ISCO	**Idaho Springs**	**89.86**	**47**	P	**P**	**04 38 49.4**	**-0.4**
ISCO				pmax	pmax		
	comp=Z,25nm,1.2s						
ISCO				MLR	MLR		
	comp=Z,1µm,19.0s						
ISCO	**Idaho Springs**	**89.86**	**47**	P	**P**	**04 38 49.4**	**-0.4**
ISCO	**Idaho Springs**	**89.86**	**47**	P	**P**	**04 38 50.0**	**+0.2**
	baz=298,SNR=18						
DOMB	**Dombas**	**89.95**	**341**	*e*P	**P**	**04 38 49.8**	**+0.5**
S22A	**4UR Ranch, Cre**	**89.97**	**49**	P	**P**	**04 38 50.4**	**+0.1**
	baz=297,SNR=19						
MOL	**Molde**	**89.98**	**342**	*e*P	**P**	**04 38 49.8**	**+0.4**
NB2	**NORSAR Subarra**	**90.04**	**340**	P	**P**	**04 38 48.9**	**-0.9**
	comp=Z,14nm,0.7s,baz=44,slow=4.8						
NB2	**NORSAR Subarra**	**90.04**	**340**	P	**P**	**04 38 48.9**	**-0.9**
	baz=44,slow=4.8						
NOA	**NORSAR Array B**	**90.04**	**340**	P	**P**	**04 38 48.9**	**-0.9**
	comp=Z,20nm,0.8s,baz=46,slow=4.8,SNR=62						
NOA				PP	**PP**	**04 42 21.3**	**-0.9**
	comp=Z,6.7nm,0.9s,baz=38,slow=7.6,SNR=5.4						
NOA				LR	LR	05 23 55.6	
	comp=Z,490nm,20.5s,baz=40,slow=39						
NC602	**NORSAR Array S**	**90.16**	**339**	*e*P	**P**	**04 38 50.1**	**-0.2**
NC602	**NORSAR Array S**	**90.16**	**339**	IAmb	IAmb	04 38 50.6	
	comp=Z,41nm,0.8s						
SUW	**Suwalki**	**90.16**	**330**	*e*P	**P**	**04 38 49.8**	**-0.7**
NAO01	**NORSAR Array S**	**90.29**	**340**	IAmb	IAmb	04 38 51.8	
	comp=Z,67nm,1.1s						
ULM	**Lac du Bonnet**	**90.31**	**34**	P	**P**	**04 38 50.3**	**-1.0**
	comp=Z,13nm,1.0s,baz=335,slow=5.8,SNR=10.0						
ULM				LR	LR	05 16 59.0	
	comp=Z,514nm,22.0s,baz=308,slow=34						
ULM	**Lac du Bonnet**	**90.31**	**34**	IAmb	IAmb	04 38 51.8	
	comp=Z,37nm,1.2s						
AKN	**Aaknes**	**90.45**	**342**	*e*P	**P**	**04 38 52.1**	**+0.4**
RAYN	**Ar Rayn**	**90.47**	**295**	*i* P	**P**	**04 38 52.2**	**-0.4**
	SNR=18						
RAYN	**Ar Rayn**	**90.47**	**295**	P	**P**	**04 38 51.6**	**-1.0**
RAYN				pmax	pmax		
	comp=Z,34nm,1.1s						
RAYN	**Ar Rayn**	**90.47**	**295**	P	**P**	**04 38 52.4**	**-0.2**
RAYN	**Ar Rayn**	**90.47**	**295**	P	**P**	**04 38 51.6**	**-1.0**
RAYN				IAmb	IAmb	04 39 10.5	
	comp=Z,34nm,1.1s						
Q24A	**Divide**	**90.57**	**47**	P	**P**	**04 38 53.1**	**0.0**
	baz=298,SNR=7.9						
HSIG		**90.69**	**58**	P	**P**	**04 38 52.6**	**-0.8**
HSIG				IAmb	IAmb	04 38 54.5	
	comp=Z,25nm,0.7s						
SDCO	**Great Sand Dun**	**90.90**	**49**	P	**P**	**04 38 54.5**	**-0.1**
	baz=298,SNR=19						
FRB	**Frobisher Bay**	**90.96**	**15**	LR	LR	05 21 59.7	
	comp=Z,288nm,20.5s,baz=328,slow=37						
SFJD	**Kangerlussuaq**	**90.98**	**6**	*e*P	**P**	**04 38 54.2**	**+0.2**
SFJD				IAmb	IAmb	04 38 55.1	
	comp=Z,12nm,0.8s						
SORM	**Soroca**	**91.01**	**324**	⇑P	**P**	**04 38 53.7**	**-0.8**
SORM	**Soroca**	**91.01**	**324**	⇑P	**P**	**04 38 53.7**	**-0.8**
SKAR	**Skarslia**	**91.24**	**341**	*e*P	**P**	**04 38 55.8**	**+0.4**
CASY	**Casey**	**91.40**	**194**	P	**P**	**04 38 55.7**	**0.0**
AGMN	**Agassiz Nation**	**91.44**	**36**	IAmb	IAmb	04 38 56.9	
	comp=Z,33nm,0.8s						
AGMN	**Agassiz Nation**	**91.44**	**36**	P	**P**	**04 38 55.8**	**-0.8**
	baz=305						
ANMO	**Albuquerque**	**91.52**	**51**	LR	LR	05 12 53.7	
	comp=Z,327nm,21.9s,baz=314,slow=31						
ANMO	**Albuquerque**	**91.52**	**51**	⇓*e*P	**P**	**04 38 57.1**	**-0.4**
ANMO				pmax	pmax		
	comp=Z,22nm,0.9s						
ANMO	**Albuquerque**	**91.52**	**51**	P	**P**	**04 38 57.5**	**0.0**
ANMO	**Albuquerque**	**91.52**	**51**	P	**P**	**04 38 57.8**	**+0.4**
	baz=298						
STRU	**Stroemstad**	**91.56**	**338**	*i* P	**P**	**04 38 55.9**	**-0.9**
KONO	**Kongsberg**	**91.62**	**339**	*e*P	**P**	**04 38 56.9**	**-0.2**
121A	**Cookes Peak, D**	**91.62**	**54**	IAmb	IAmb	04 38 60.0	
	comp=Z,23nm,1.1s						
121A	**Cookes Peak, D**	**91.62**	**54**	P	**P**	**04 38 58.8**	**+0.8**
	baz=297,SNR=7.3						
OGNE	**Ogallala**	**91.69**	**45**	IAmb	IAmb	04 38 58.5	
	comp=Z,40nm,1.1s						
OGNE	**Ogallala**	**91.69**	**45**	P	**P**	**04 38 57.2**	**-0.7**
	baz=300,SNR=6.9						
SUSD	**Miller**	**91.80**	**40**	P	**P**	**04 38 57.4**	**-1.0**
	baz=303						
BLEU	**Blekinge**	**91.82**	**335**	*i* P	**P**	**04 38 56.8**	**-1.3**
BLEU				IAmb	IAmb	04 38 57.5	
	comp=Z,0.5nm,0.5s						
T25A	**Trinidad**	**91.95**	**49**	IAmb	IAmb	04 39 00.7	
	comp=Z,20nm,0.9s						
T25A	**Trinidad**	**91.95**	**49**	P	**P**	**04 38 59.5**	**+0.1**
	baz=299,SNR=12						
BORU	**Boraas**	**92.03**	**337**	*i* P	**P**	**04 38 58.0**	**-1.0**
TJOU	**Tjoern**	**92.15**	**338**	*i* P	**P**	**04 38 58.0**	**-1.6**
BR131	**Keskin Array S**	**92.26**	**314**	P	**P**	**04 38 59.7**	**-1.0**
BR131				pmax	pmax		
	comp=Z,19nm,0.8s						
BR131	**Keskin Array S**	**92.26**	**314**	P	**P**	**04 38 59.9**	**-0.8**
BR131				P	**P**	**04 38 59.9**	**-0.8**
BR131	**Keskin Array S**	**92.26**	**314**	P	**P**	**04 38 59.6**	**-1.0**
BR131				IAmb	IAmb	04 39 00.7	
	comp=Z,19nm,0.8s						
BRTR	**Keskin Array B**	**92.26**	**314**	P	**P**	**04 38 59.8**	**-1.0**
	comp=Z,9.9nm,0.7s,baz=82,slow=3.1,SNR=40						
BRTR				PP	**PP**	**04 42 41.0**	**+0.3**
	comp=Z,3.7nm,0.9s,baz=74,slow=7.5,SNR=3.7						
BRTR				LR	LR	05 26 39.9	
	comp=Z,237nm,18.5s,baz=50,slow=40						
KSCO	**Kaye Shedlock'**	**92.26**	**46**	P	**P**	**04 39 00.7**	**-0.1**
	baz=300,SNR=12						
LVV	**L'vov**	**92.33**	**327**	*e*P	**P**	**04 39 00.1**	**-0.5**
BER	**Bergen**	**92.37**	**342**	*e*P	**P**	**04 39 00.8**	**+0.3**
TLCR		**92.39**	**321**	⇑P	**P**	**04 39 00.4**	**-0.6**
TLCR		**92.39**	**321**	⇑P	**P**	**04 39 00.4**	**-0.6**
VLDR	**Vladesti**	**92.45**	**322**	⇓P	**P**	**04 39 00.9**	**-0.3**
DEL	**Delary**	**92.47**	**336**	*i* P	**P**	**04 38 59.8**	**-1.3**
DEL				IAmb	IAmb	04 39 00.7	
	comp=Z,2.1nm,0.5s						
ONAU	**Onsala**	**92.52**	**337**	*i* P	**P**	**04 38 59.9**	**-1.4**
B35A	**Bob, Littlefor**	**92.56**	**35**	IAmb	IAmb	04 39 02.4	
	comp=Z,37nm,1.1s						
BEL	**Belsk**	**92.66**	**329**	*e*P	**P**	**04 39 02.1**	**0.0**
ANTO	**Ankara**	**92.74**	**315**	IAMs_20	IAMs_20	05 22 04.1	
	comp=Z,593nm,21.0s						
CFR	**Carcaliu**	**92.79**	**321**	⇓P	**P**	**04 39 00.6**	**-2.2**
CFR	**Carcaliu**	**92.79**	**321**	⇓P	**P**	**04 39 00.6**	**-2.2**
TPGR	**Topolog**	**92.81**	**321**	⇓P	**P**	**04 39 02.4**	**-0.5**
TESR	**Tescani**	**92.89**	**323**	⇓P	**P**	**04 39 02.7**	**-0.6**
BUR08	**Bucovina Ar. S**	**93.02**	**324**	P	**P**	**04 39 03.0**	**-1.0**
BURAR	**Bucovina Array**	**93.03**	**324**	⇑P	**P**	**04 39 03.5**	**-0.5**
BURAR	**Bucovina Array**	**93.03**	**324**	⇑P	**P**	**04 39 03.5**	**-0.5**
BURAR	**Bucovina Array**	**93.03**	**324**	IAmb	IAmb	04 39 04.9	
	comp=Z,20nm,0.8s						
BJUU	**Bjuv**	**93.08**	**336**	*i* P	**P**	**04 39 03.0**	**-0.9**
KWP	**Kalwaria Pacla**	**93.12**	**327**	*e*P	**P**	**04 39 04.3**	**0.0**
HARR	**Harsova**	**93.19**	**321**	⇑P	**P**	**04 39 04.4**	**-0.3**
HARR	**Harsova**	**93.19**	**321**	⇑P	**P**	**04 39 04.4**	**-0.3**
VRI	**Vrincioaia**	**93.22**	**322**	⇓P	**P**	**04 39 05.5**	**+0.6**
VRI	**Vrincioaia**	**93.22**	**322**	⇓P	**P**	**04 39 05.5**	**+0.6**
PLOR	**Plostina**	**93.27**	**322**	⇑P	**P**	**04 39 07.9**	**+2.8**
PLOR	**Plostina**	**93.27**	**322**	⇑P	**P**	**04 39 07.9**	**+2.8**
GKP	**Gorka Klasztor**	**93.33**	**332**	*e*P	**P**	**04 39 04.5**	**-0.6**
BISRR	**Bisoca**	**93.41**	**322**	⇓P	**P**	**04 39 06.3**	**+0.5**
ECSD	**EROS Data Cent**	**93.60**	**40**	IAmb	IAmb	04 39 06.8	
	comp=Z,34nm,1.2s						
ECSD	**EROS Data Cent**	**93.60**	**40**	P	**P**	**04 39 05.5**	**-1.1**
	baz=304,SNR=12						
OZUR		**93.61**	**323**	⇑P	**P**	**04 39 06.7**	**0.0**
KOLS	**Kolonicke sedl**	**93.78**	**327**	*e*P	**P**	**04 39 08.0**	**+0.6**
KOLS				pmax	pmax		
	comp=Z,29nm,1.0s						
KOLS	**Kolonicke sedl**	**93.78**	**327**	*e*P	**P**	**04 39 08.0**	**+0.6**
MNTX	**Cornudas Mount**	**93.82**	**54**	P	**P**	**04 39 08.0**	**+0.1**
	baz=298,SNR=22						
MLR	**Muntele Rosu**	**93.88**	**322**	⇑P	**P**	**04 39 08.7**	**+0.6**
MLR	**Muntele Rosu**	**93.88**	**322**	⇑P	**P**	**04 39 08.7**	**+0.6**
DOPR	**Dopca**	**93.91**	**323**	⇓P	**P**	**04 39 07.7**	**-0.3**
BMR	**Baia Mare**	**93.92**	**325**	⇑P	**P**	**04 39 08.5**	**+0.5**
BMR	**Baia Mare**	**93.92**	**325**	⇑P	**P**	**04 39 08.5**	**+0.5**
BGNE	**Belgrade**	**93.94**	**43**	P	**P**	**04 39 07.2**	**-1.1**
BGNE				IAmb	IAmb	04 39 17.1	
	comp=Z,55nm,1.3s						
BGNE	**Belgrade**	**93.94**	**43**	P	**P**	**04 39 07.8**	**-0.5**
	baz=303						
UZH	**Uzhgorod**	**93.96**	**326**	*e*P	**P**	**04 39 05.7**	**-2.4**
UZH				*e*		04 39 10.3	
EYMN	**Ely**	**94.00**	**35**	P	**P**	**04 39 07.8**	**-0.6**
	baz=308						
TRPA	**Tarpa**	**94.14**	**326**	⇑P	**P**	**04 39 09.1**	**+0.1**
TRPA	**Tarpa**	**94.14**	**326**	*e*P	**P**	**04 39 08.4**	**-0.6**
F36A	**Milaca**	**94.16**	**37**	IAmb	IAmb	04 39 09.4	
	comp=Z,27nm,0.9s						
CRVS	**Cervenica-Dubn**	**94.21**	**327**	*e*P	**P**	**04 39 09.5**	**+0.1**
CRVS				pmax	pmax		
	comp=Z,65nm,1.2s						
CRVS	**Cervenica-Dubn**	**94.21**	**327**	*e*P	**P**	**04 39 09.5**	**+0.1**
CBKS	**Cedar Bluff**	**94.30**	**45**	IAmb	IAmb	04 39 10.1	
	comp=Z,20nm,1.0s						
CBKS	**Cedar Bluff**	**94.30**	**45**	P	**P**	**04 39 08.8**	**-1.2**
	baz=302						
VOIR		**94.42**	**323**	⇑P	**P**	**04 39 09.9**	**-0.6**
VOIR		**94.42**	**323**	⇑P	**P**	**04 39 09.9**	**-0.6**
NIE	**Niedzica**	**94.47**	**328**	*e*P	**P**	**04 39 11.0**	**+0.5**
MSTX	**Muleshoe**	**94.66**	**51**	P	**P**	**04 39 10.8**	**-1.1**
	baz=300						
ARR	**Arges**	**94.70**	**323**	⇑P	**P**	**04 39 11.9**	**+0.2**
L34A	**Svendsen Farm,**	**94.74**	**41**	IAmb	IAmb	04 39 11.5	
	comp=Z,26nm,0.9s						
DRGR		**94.89**	**325**	⇑P	**P**	**04 39 12.3**	**-0.3**
DRGR		**94.89**	**325**	⇑P	**P**	**04 39 12.3**	**-0.3**
SPMN	**Marine on St.**	**94.95**	**37**	IAmb	IAmb	04 39 13.2	
	comp=Z,22nm,0.8s						
SPMN	**Marine on St.**	**94.95**	**37**	P	**P**	**04 39 12.2**	**-0.6**
	baz=307						
AMTX	**Amarillo**	**94.98**	**50**	IAmb	IAmb	04 39 14.3	
	comp=Z,25nm,1.0s						
AMTX	**Amarillo**	**94.98**	**50**	P	**P**	**04 39 13.0**	**-0.3**
	baz=300						
LANS	**Liptovska Anna**	**95.05**	**328**	*e*P	**P**	**04 39 13.7**	**+0.5**

LANS	Liptovska Anna	95.05	328	eP	P	04 39 13.6	+0.4
R32A	Long Quarter,	95.19	45	IAmb	IAmb	04 39 14.2	
	comp=Z,30nm,1.4s						
OKC	Ostrava-Krasne	95.24	329	eP	P	04 39 13.8	-0.2
OKC	Ostrava-Krasne	95.24	329	eP	P	04 39 13.8	-0.2
I37A	Lemond, Waseca	95.33	38	IAmb	IAmb	04 39 14.7	
	comp=Z,43nm,1.4s						
KSP	Ksiaz	95.42	331	eP	P	04 39 14.5	-0.4
KSP				ePP	PP	04 43 04.0	-0.8
MORC	Moravsky Berou	95.57	329	eP	P	04 39 14.9	-0.7
MORC				ePP	PP	04 43 06.7	+0.7
PSZ	Piszkesteto	95.65	327	⇓P	P	04 39 15.6	-0.4
PSZ	Piszkesteto	95.65	327	eP	P	04 39 15.2	-0.9
PSZ	Piszkesteto	95.65	327	⇓P	P	04 39 15.6	-0.4
PSZ	Piszkesteto	95.65	327	P	P	04 39 14.6	-1.4
OSTC	Ostas	95.66	330	eP	P	04 39 15.6	-0.3
CHVC	Chvalec	95.71	330	eP	P	04 39 15.8	-0.4
CHVC				ePP	PP	04 43 09.3	+2.3
KRLC	Kraliky	95.73	330	eP	P	04 39 16.0	-0.3
KRLC	Kraliky	95.73	330	eP	P	04 39 16.0	-0.3
DPC	Dobruska-Polom	95.75	330	eP	P	04 39 16.4	0.0
DPC				ePP	PP	04 43 08.8	+1.4
DPC				AMS	AMS	05 28 00.0	
	comp=Z,1µm,23.1s						
DPC	Dobruska-Polom	95.75	330	eP	P	04 39 16.4	0.0
DPC				e		04 43 08.8	
DPC				MLR	MLR		
	comp=Z,1µm,23.1s						
UPC	Upice	95.78	330	eP	P	04 39 16.2	-0.3
UPC	Upice	95.78	330	eP	P	04 39 16.2	-0.3
VYHS	Vyhne	95.80	328	eP	P	04 39 16.1	-0.5
VYHS				pmax	pmax		
	comp=Z,40nm,1.6s						
VYHS	Vyhne	95.80	328	eP	P	04 39 16.1	-0.5
JAVC	Velka Javorina	96.13	328	eP	P	04 39 18.8	+0.6
JAVC				ePP	PP	04 43 13.2	+2.8
KSU1	Kansas State U	96.19	44	IAmb	IAmb	04 39 18.5	
	comp=Z,14nm,0.9s						
KSU1	Kansas State U	96.19	44	P	P	04 39 17.5	-1.1
	baz=304						
BZS	Buzias	96.22	324	⇑P	P	04 39 17.0	-1.6
BZS	Buzias	96.22	324	⇑P	P	04 39 17.0	-1.6
HERR	Herculane	96.24	323	⇑P	P	04 39 16.2	-2.5
TX31	Lajitas Ar. Si	96.24	55	IAmb	IAmb	04 39 20.9	
	comp=Z,24nm,1.1s						
TXAR	Lajitas Array	96.24	55	P	P	04 39 18.9	-0.3
	comp=Z,5.3nm,1.0s,baz=287,slow=2.2,SNR=28						
TXAR				PKKPbc	PKKPdf	04 56 07.8	+2.1
	comp=Z,0.8nm,0.8s,baz=126,slow=6.4,SNR=6.1						
TXAR				LR	LR	05 19 05.3	
	comp=Z,261nm,19.6s,baz=0.0,slow=33						
VRAC	Vranov	96.34	329	⇓P	P	04 39 18.9	-0.2
VRAC	Vranov	96.34	329	eP	P	04 39 18.7	-0.4
VRAC				ePP	PP	04 43 12.7	+0.8
VRAC	Vranov	96.34	329	⇓P	P	04 39 18.9	-0.2
G40A	Rib Lake	96.37	36	IAmb	IAmb	04 39 19.7	
	comp=Z,15nm,0.8s						
BRG	Berggiesshubel	96.46	332	ePP	PP	04 43 13.8	+1.1
BRG	Berggiesshubel	96.46	332	iP	P	04 39 19.2	-0.3
BRG				Amp		04 39 19.9	
	comp=Z,12nm,0.7s						
SMOL	Smolenice	96.48	328	eP	P	04 39 20.0	+0.3
SMOL	Smolenice	96.48	328	eP	P	04 39 20.0	+0.3
CLL	Collm	96.56	332	iP	P	04 39 19.0	-1.0
CLL				e		04 43 14.0	
CLL				pmax	pmax		
	comp=Z,24nm,1.1s						
CLL				pmax	pmax		
	comp=Z,18nm,1.0s						
CLL				MLR	MLR		
	comp=Z,600nm,20.6s						
CLL	Collm	96.56	332	iP	P	04 39 19.0	-1.0
	comp=Z,24nm,1.1s						
CLL				e		04 39 37.0	
CLL				ePP	PP	04 43 14.0	+0.5
	comp=Z,18nm,1.0s						
CLL				ePS	PS	04 51 54.0	-7.8
CLL				e		04 53 36.0	
CLL				eSS	SS	04 57 12.0	-0.8
CLL				e		05 02 06.0	
CLL				eSSSS		05 04 42.0	
CLL				LmH		05 27 00.0	
	comp=N,500nm,21.3s						
CLL				LmH		05 27 00.0	
	comp=E,600nm,18.7s						
CLL				LmV		05 30 00.0	
	comp=N,400nm,21.4s						
CLL				LmV		05 30 00.0	
	comp=E,400nm,18.5s						
CLL				LmV		05 30 00.0	
	comp=Z,600nm,20.6s						
KRUC	Moravsky	96.61	329	eP	P	04 39 19.7	-0.6
KRUC				ePP	PP	04 43 14.9	+1.0
MODS	Modra-Piesok	96.65	328	eP	P	04 39 19.7	-0.8
MODS				pmax	pmax		
	comp=Z,59nm,1.9s						
MODS	Modra-Piesok	96.65	328	eP	P	04 39 19.7	-0.8
FBE	Freiberg	96.69	332	ePP	PP	04 43 16.1	+1.6
MDVR	Moldovita	96.69	324	⇓P	P	04 39 20.0	-0.8
SCIA	State Center	96.69	40	P	P	04 39 20.0	-0.8
	baz=307						
PRU	Pruhonice	96.82	331	ePP	PP	04 43 17.0	+1.4
ASSE	Asse, Remlinge	96.93	334	ePP	PP	04 43 17.7	+1.5
RETH	Rethem/Aller,	97.00	335	ePP	PP	04 43 17.9	+1.1
VTS	Vitosha	97.16	321	⇑P	P	04 39 22.4	-0.7
VTS	Vitosha	97.16	321	⇑P	P	04 39 22.4	-0.7
MPLH	Magyarpolny	97.34	327	eP	P	04 39 22.6	-1.0
FRGS	Fruska Gora	97.49	325	⇓P	P	04 39 23.8	-0.5
PLN	Plauen	97.53	332	ePP	PP	04 43 22.7	+1.8
NKC	Novy Kostel	97.58	332	eP	P	04 39 24.1	-0.6
NKC	Novy Kostel	97.58	332	eP	P	04 39 24.1	-0.6
ABTX	Abilene, Hawle	97.59	51	IAmb	IAmb	04 39 26.6	
	comp=Z,16nm,0.9s						
ABTX	Abilene, Hawle	97.59	51	P	P	04 39 24.9	-0.3
	baz=301,SNR=6.9						
MOX	Moxa	97.64	333	ePP	PP	04 43 22.7	+0.9
MOX				eL	L	05 27 59.1	
	comp=Z,520nm,21.2s						
CONA	Conrad Observa	97.65	329	eP	Pdif	04 39 25.2	0.0
	comp=Z,7.6nm,0.7s						
CONA				eP	PP	04 43 22.4	+0.4
	comp=Z,14nm,1.6s						
CKRC	Cesky Krumlov	97.76	330	eP	Pdif	04 39 25.9	+0.3
KOVH	Kovagotottos	97.78	326	eP	P	04 39 24.5	-1.1
JFWS	Jewell Farm	97.82	38	P	P	04 39 24.3	-1.6
	baz=309						
P38A	Dawn	97.85	42	P	P	04 39 24.8	-1.2
P38A				IAmb	IAmb	04 39 35.3	
	comp=Z,23nm,1.4s						
KHC	Kasperske Hory	97.88	331	eP	P	04 39 25.3	-0.7
KHC				ePP	PP	04 43 25.0	+1.3
KHC				AMS	AMS	05 27 20.0	
	comp=Z,900nm,20.9s						
KHC	Kasperske Hory	97.88	331	eP	P	04 39 25.3	-0.7
KHC				e		04 43 25.0	
KHC				MLR	MLR		
	comp=Z,900nm,20.9s						
KHC	Kasperske Hory	97.88	331	IAmb	IAmb	04 39 26.4	
	comp=Z,10nm,0.9s						
GEC2	GERESS Array S	98.02	330	ePP	PP	04 43 26.2	+1.2
GERES	GERESS Array B	98.02	330	P	P	04 39 26.1	-0.7
	comp=Z,4.8nm,0.8s,baz=43,slow=5.3,SNR=25						
GERES				PP	PP	04 43 27.3	+2.4
	comp=Z,6.5nm,1.1s,baz=56,slow=8.3,SNR=5.8						
GERES				LR	LR	05 26 31.4	
	comp=Z,349nm,20.6s,baz=52,slow=37						
GERES	GERESS Array B	98.02	330	P	P	04 39 25.7	-1.1
WET	Wettzell	98.18	331	ePP	PP	04 43 28.1	+2.0
GRF	Grafenberg Arr	98.52	332	eL	L	05 26 34.4	
	comp=Z,368nm,21.5s						
JCT	Junction City	98.58	53	P	P	04 39 28.8	-0.8
	baz=301						
SCHQ	Schefferville	99.08	18	P	Pdif	04 39 30.9	-0.4
	comp=Z,6.1nm,0.8s,baz=336,slow=7.9,SNR=4.0						
SCHQ				LR	LR	05 25 32.0	
	comp=Z,345nm,20.8s,baz=302,slow=36						
VNDA	Vanda	99.20	176	P	Pdif	04 39 30.4	-0.7
	comp=Z,1.9nm,1.0s,baz=38,slow=7.2,SNR=4.0						
VNDA				LR	LR	05 24 48.9	
	comp=Z,181nm,18.0s,baz=352,slow=36						
OBKA	Obir	99.28	328	eP	Pdif	04 39 31.5	-1.0
	comp=Z,4.0nm,0.8s						
OBKA				eP	PP	04 43 34.9	+0.3
	comp=Z,18nm,1.1s						
PDG	Podgorica	99.56	323	⇑P	Pdif	04 39 33.4	-0.3
PDG	Podgorica	99.56	323	IAmb	IAmb	04 39 33.8	
	comp=Z,15nm,0.9s						
FUR	Furstenfeldbru	99.62	331	ePP	PP	04 43 38.1	+1.0
MYKA	Terra Mystica	99.64	329	eP	Pdif	04 39 32.9	-1.2
	comp=Z,1.9nm,0.3s						
MYKA				eP	PP	04 43 39.4	+2.1
	comp=Z,12nm,1.0s						
ABTA	Abfaltersbach	100.09	329	iP	Pdif	04 39 34.4	-1.7
	comp=Z,7.5nm,0.9s,SNR=10						
ABTA				eP	PP	04 43 40.3	-0.4
	comp=Z,7.7nm,1.1s						
WATA	Walderalm	100.10	330	eP	Pdif	04 39 36.8	+0.7
	comp=Z,3.0nm,0.6s						
U40A	Yellville	100.20	44	P	Pdif	04 39 36.6	-0.1
	baz=306						
W39A	Magazine	100.26	46	P	Pdif	04 39 35.8	-1.2
	baz=306						
MOTA	Moosalm	100.31	331	eP	Pdif	04 39 36.7	-0.4
	comp=Z,1.5nm,0.5s						
MOTA				eP	PP	04 43 41.9	-0.5
	comp=Z,32nm,1.3s						
RETA	Reutte	100.36	331	eP	Pdif	04 39 36.7	-0.5
	comp=Z,1.4nm,0.6s						
RETA				eP	PP	04 43 43.0	+0.3
	comp=Z,12nm,1.3s						
FETA	Feichten	100.72	331	eP	Pdif	04 39 38.2	-0.8
	comp=Z,2.7nm,0.7s						
MIAR	Mount Ida	100.78	46	P	Pdif	04 39 38.3	-0.9
	baz=306						
DAVA	Damuels	100.91	331	eP	Pdif	04 39 39.3	-0.5
	comp=Z,4.0nm,0.7s						
DAVA				P	PP	04 43 43.9	-3.0
	comp=Z,15nm,1.4s						
TIP	Timpagrande	103.13	322	IAMs_20	IAMs_20	05 31 55.4	
	comp=Z,520nm,20.0s						
ESDC	Sonseca Array	112.95	335	PP	PP	04 45 10.8	-4.3
	comp=Z,6.7nm,1.1s,baz=28,slow=6.5,SNR=8.6						
ESDC				PKKPbc	PKKPab	04 55 27.8	+2.8
	comp=Z,1.6nm,1.1s,baz=232,slow=3.8,SNR=5.9						
SYO	Syowa Base	115.62	203	⇓ePdiff	Pdif	04 40 47.4	+3.1
SYO	Syowa Base	115.62	203	⇓eX	Pdif	04 40 54.6	+10
MDT	Midelt	119.08	332	PKP	PKiKP	04 44 39.9	+0.1
	comp=Z,2.1nm,0.8s,baz=15,slow=1.2,SNR=2.3						
LBTB	Lobatse	125.28	254	PKIKP	PKPdf	04 44 51.3	-0.4
LBTB	Lobatse	125.28	254		PKPdf	04 44 51.3	-0.4
BOSA	Boshof	126.09	250	PKP	PKPdf	04 44 53.4	+0.2
	comp=Z,2.3nm,0.7s,baz=97,slow=4.0,SNR=4.9						
SNAA	Sanae	126.61	192	PKPdf	PKPdf	04 44 52.6	-0.3
SNAA	Sanae	126.61	192	PKIKP	PKPdf	04 44 53.0	+0.1
SNAA	Sanae	126.61	192	PKPdf	PKPdf	04 44 53.0	+0.1
VNA2	Neumayer--Watz	128.06	191	PKPdf	PKPdf	04 44 55.7	+0.1
VNA3	Neumayer Olymp	128.16	190	PKPdf	PKPdf	04 44 55.7	-0.1
VNA1	Neumayer--Stat	128.44	191	PKPdf	PKPdf	04 44 56.4	+0.1
TORD	Torodi Ar. Bea	130.75	311	PKP	PKPdf	04 45 01.1	-1.3
	comp=Z,4.6nm,0.7s,baz=343,slow=2.1,SNR=22						
TORD				PP	PP	04 47 12.6	-4.5
	comp=Z,5.7nm,1.0s,baz=33,slow=6.1,SNR=6.4						
TORD				SKPbc	SKPbc	04 48 23.2	-2.6
	comp=Z,5.9nm,1.0s,baz=28,slow=4.3,SNR=5.8						
TORD	Torodi Ar. Bea	130.75	311	PKPdf	PKPdf	04 45 01.3	-1.1
ZARC	Zaragoza, Cauc	130.85	59		PKPdf	04 45 01.4	-1.2
TSUM	Tsumeb	131.54	263	PKPdf	PKiKP	04 45 04.8	-0.1
OTAV	Otavalo	131.77	69	PKIKP	PKPdf	04 45 04.7	-0.2
OTAV	Otavalo	131.77	69	eP	PKPdf	04 45 04.8	-0.1
OTAV	Otavalo	131.77	69	PKPdf	PKPdf	04 45 04.7	-0.2
PMSA	Palmer Station	132.43	163	eP	PKPdf	04 45 04.2	+0.3
SDV	Santo Domingo	133.25	54	eP	PKPdf	04 45 07.3	-0.1
KOWA	Kowa	133.58	318		PKPdf	04 45 07.0	-0.7
DBIC	Dimbokro	139.86	311	PKP	PKPdf	04 45 17.5	-1.9
	comp=Z,6.6nm,0.8s,baz=83,slow=0.3,SNR=9.1						
TIC	Toumodi	140.00	311	ePKP1	PKPdf	04 45 13.6	-6.1
KIC	Kosan Boka	140.00	310	ePKP1	PKPdf	04 45 13.0	-6.6
	comp=Z,21nm,0.8s						
LIC	Lamto	140.30	311	ePKP1	PKPdf	04 45 13.9	-6.3
	comp=Z,58nm,1.0s						
CZSB	Cruzeiro do Su	140.48	76	eP	PKPdf	04 45 20.4	-0.1
TBTG	Tabatinga, AM	141.37	69	eP	PKPdf	04 45 22.6	+0.5
TBTG	Tabatinga, AM	141.37	69	PKPdf	PKPdf	04 45 20.7	-1.4
LL04	Puerto Octay	142.38	130	PKPdf	PKPdf	04 45 22.3	-0.8
PLCA	Paso Flores	143.77	130	PKP	PKPbc	04 45 23.6	+0.3
	comp=Z,12nm,0.8s,baz=223,slow=4.1,SNR=38						
PLCA	Paso Flores	143.77	130	PKIKP	PKPbc	04 45 23.7	+0.4
PLCA	Paso Flores	143.77	130	eP	PKPbc	04 45 23.7	+0.5
PLCA	Paso Flores	143.77	130	PKPdf	PKPbc	04 45 23.6	+0.4
BOAV	Boa Vista	145.03	51	eP	PKPbc	04 45 26.3	-1.6
BOAV	Boa Vista	145.03	51		PKPbc	04 45 25.9	-1.9
MT01	Popeta	145.13	119	PKPbc	PKPdf	04 45 28.0	-0.1
BO02	Sierra Bellavi	145.32	121	PKPbc	PKPdf	04 45 28.9	+0.3
PEL	Peldehue	145.73	118	PKP2	PKPab	04 45 30.0	0.0
PEL	Peldehue	145.73	118		PKPab	04 45 30.0	0.0
GO04	Tololo Observa	146.07	112	PKPbc	PKPdf	04 45 30.6	+0.4
LCO	Las Campanas	146.26	110	PKP2	PKPbc	04 45 31.5	-0.2
LCO	Las Campanas	146.26	110		PKPbc	04 45 31.5	-0.2
PATCX	Punta Patache	146.53	96	PKPbc	PKPbc	04 45 31.9	-0.6
PB11	IPOC Station P	146.84	94		PKPdf	04 45 31.9	+0.3
HOPE	Hope Point	147.16	178	PKP2	PKPbc	04 45 33.0	-0.1
HOPE	Hope Point	147.16	178		PKPbc	04 45 33.0	-0.1
ETMB	Extrema	147.18	74	eP	PKPdf	04 45 30.8	-1.4
PB09	IPOC Station P	147.49	97		PKPdf	04 45 33.9	+1.2
LPAZ	La Paz	147.56	87	PKP	PKPdf	04 45 33.9	+0.4
	comp=Z,14nm,0.6s,baz=281,slow=3.7,SNR=48						
LPAZ				PKPbc	pPKPdf	04 45 36.6	-0.3
	comp=Z,14nm,0.6s,baz=340,slow=3.2,SNR=63						
LPAZ	La Paz	147.56	87	eP	PKPdf	04 45 33.5	0.0
LVC	Limon Verde	147.87	99	PKP2	PKPbc	04 45 35.1	-1.4
LVC	Limon Verde	147.87	99	eP	PKPdf	04 45 33.7	+0.2
LVC	Limon Verde	147.87	99		PKPbc	04 45 35.1	-1.4
MACA	Manacapuru-AM	148.51	58	eP	PKPdf	04 45 34.4	0.0
SAML	Samuel	149.49	70	PKP2	PKPbc	04 45 39.9	-0.5
SAML				MLR	MLR		
	comp=Z,8µm,22.0s						
SAML	Samuel	149.49	70	PKPbc	PKPbc	04 45 39.9	-0.5
TRQA	Tornquist	150.92	131	PKIKP	PKPbc	04 45 42.9	-0.3
TRQA	Tornquist	150.92	131	eP	PKPdf	04 45 38.5	+0.9
TRQA	Tornquist	150.92	131		PKPbc	04 45 42.9	-0.3
MALB	Monte Alegre	152.44	48	eP	PKPdf	04 45 41.0	+0.4
VILB	Vilhena	153.83	75	eP	PKPdf	04 45 43.6	+1.1
PTLB	Pontes e Lacer	155.65	80	eP	PKPdf	04 45 45.3	+0.3
TMAB	Tom-Au,PA,Br	156.73	37	eP	PKPdf	04 45 47.6	+1.2
CLDB	Colider	156.81	66	eP	PKPdf	04 45 47.3	+0.8
ITQB	Itaqui	158.22	117	eP	PKPdf	04 45 49.7	+1.9
CPUP	Villa Florida	158.34	108	eP	PKPdf	04 45 49.6	+1.5
PRPB	Parauapebas	158.60	47	eP	PKPdf	04 45 49.9	+1.0
SALV	Santo Antonio	158.94	78	eP	PKPdf	04 45 49.9	+0.8
ROSB	Rosrio	159.21	29	eP	PKPdf	04 45 49.9	+0.3
PLTB	Pedras Altas	159.88	125	eP	PKPdf	04 45 49.4	-0.4
AQDB	Aquidauana	159.93	91	eP	PKPdf	04 45 51.4	+1.2
PP1B	Ponte de Pedra	160.17	82	eP	PKPdf	04 45 51.4	+0.9
CPSB	Cacapava Do Su	160.57	121	eP	PKPdf	04 45 52.5	+2.0
NBMO	Morrinhos-CE	161.12	18	eP	PKPdf	04 45 53.3	+1.6
NBPS	Pedro II - PI	161.67	23	eP	PKPdf	04 45 53.0	+0.6
SMTB	Santa Maria do	162.06	48	eP	PKPdf	04 45 53.6	+0.9
ARAG	Araguaiana, MT	162.39	74	eP	PKPdf	04 45 54.2	+1.3
NBCL	Cascavel-CE	162.44	14	eP	PKPdf	04 45 54.6	+1.6
ITAB	Concordia	162.70	113	eP	PKPdf	04 45 54.5	+1.6
CNLB	Canela	163.07	121	eP	PKPdf	04 45 54.8	+1.5
PTGB	Pitanga	163.27	105	eP	PKPdf	04 45 54.9	+1.3
NBPB	Pedra_Branca-C	163.37	19	eP	PKPdf	04 45 55.7	+1.7
PCMB	Pacaembu	164.15	94	eP	PKPdf	04 45 55.7	+1.2
NBPA	Parau_RN	164.16	11	eP	PKPdf	04 45 54.9	+0.3
NBPV	Pedro Velho	165.03	4	eP	PKPdf	04 45 56.9	+1.4
FRTB	Fartura	165.69	100	eP	PKPdf	04 45 57.7	+2.0
BDFB	Brasilia	165.72	69	PKP	PKPdf	04 45 55.7	-0.3
	comp=Z,5.5nm,0.9s,baz=153,slow=11,SNR=7.3						
BDFB				PKPab	PKPab	04 46 54.4	-0.7
	comp=Z,7.3nm,0.9s,baz=289,slow=3.7,SNR=4.5						
NBLV	Livramento - P	165.76	11	eP	PKPdf	04 45 58.5	+2.4
TIJ01	Guaruva-PR	165.90	109	eP	PKPdf	04 45 58.3	+2.4
IPMB	Ipameri, GO	166.39	78	eP	PKPdf	04 45 57.3	+0.8
SDBA	SAO DESIDERIO	166.41	50	eP	PKPdf	04 45 57.0	+0.4
RCLB	Rio Claro- Sao	167.62	97	eP	PKPdf	04 45 59.2	+2.0
PET01	Itanhaem-SP	167.64	106	eP	PKPdf	04 45 59.5	+2.4
NBPN	Ponto Novo - B	168.01	29	eP	PKPdf	04 45 58.0	+0.3
JANB	Januaria	168.52	58	eP	PKPdf	04 45 58.6	+0.6
NBLA	Lagarto - SE	169.07	19	eP	PKPdf	04 45 59.8	+1.5
MC01	Montes Claros	169.69	65	eP	PKPdf	04 46 01.8	+3.0

KMA 04 04:27:12.3±0.5, 36.78N×127.89E, h15km±4km Error ellipse: s-maj=3.0km s-min=1.5km az=56.0, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSCHJ	Chungju	0.11	39	P	Pg	04 27 15.8	+0.1
KSCHJ				S	Sg	04 27 18.2	+0.2
KSMGY	Mungyeong	0.19	133	P	Pg	04 27 16.9	+0.1
	SNR=21						
KSMGY	Mungyeong	0.19	133	P	Pg	04 27 16.9	+0.1
	SNR=21						
KSMGY				S	Sg	04 27 20.0	+0.3
JNPA	Jeungpyeong Ac	0.26	273	P	Pg	04 27 17.9	0.0
JNPA	Jeungpyeong Ac	0.26	273	P	Pg	04 27 17.9	0.0
EMSB	Eumseong	0.28	312	P	Pg	04 27 18.3	0.0
EMSB	Eumseong	0.28	312	P	Pg	04 27 18.3	0.0
KSBON	Boeun	0.29	194	P	Pg	04 27 17.8	-0.7
	SNR=23						
KSBON	Boeun	0.29	194	P	Pg	04 27 17.8	-0.7
	SNR=23						
KSSAJ	Sangju	0.43	150	P	Pg	04 27 20.9	0.0
	SNR=10						
KSSAJ	Sangju	0.43	150	P	Pg	04 27 20.9	0.0
	SNR=10						

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*NEIC **04** 04:38:03.4±1.8, 47.46N±0.02×121.97W±0.03, h26km±6km, Error ellipse: s-maj=3.3km s-min=2.8km az=48.0*

*SEA **04** 04:38:04±1.6, 47.47N±0.02×121.95W±0.03, h24km±7km, ML2.4/52, ML2.3/20(NEIC), Error ellipse: s-maj=3.3km s-min=2.5km az=224.0*

PNSN 04 04:38:04.0, 47.47N×121.95W, h23km, MD2.4, Fault plane solution: NP1:ϕ_s15.00000°, δ85.00000°, λ20.00000°.**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELW	Echo Lake	0.06	67		Pb	04 38 07.9	-0.3
ELW					Sb	04 38 11.1	+0.1
RATT	Rattlesnake La	0.11	114		Pb	04 38 08.1	-0.4
RATT					Sb	04 38 11.5	-0.1
RAW	Raver	0.13	174		Pb	04 38 08.5	-0.2
CDMR	Cedar Moraine	0.14	110		Pb	04 38 08.5	-0.3
ALCT	Alcott Element	0.19	342		Pb	04 38 09.5	+0.2
ALCT					Sb	04 38 14.3	+1.5
SP2	Seward Park 2	0.22	293		Pb	04 38 09.8	+0.1
SP2					Sb	04 38 14.9	+1.3
KNEL	Kent Elementar	0.22	246		Sb	04 38 15.5	+1.9
EARN	East Ridge Ele	0.28	348		Pb	04 38 10.7	+0.2
D05A	Enumclaw	0.28	185		Pb	04 38 10.6	-0.1
D05A	Enumclaw	0.28	185	IAML		04 38 15.7	
	comp=E,122nm,0.3s						
D05A				IAML		04 38 16.0	
	comp=N,293nm,0.3s						
C05A	Tolt Reservoir	0.29	38		Pb	04 38 10.3	-0.5
TTW	Tolt Reservoir	0.29	38		Pb	04 38 10.2	-0.6
TTW					Sb	04 38 14.9	-0.4
GSM	Grass Mountain	0.29	158		Pb	04 38 10.2	-0.6
GSM					Sb	04 38 15.2	-0.3
NOWS	NOAA--Sand Poi	0.30	317		Pb	04 38 11.5	+0.6
FINN	Finn Hill Juni	0.31	323		Pb	04 38 11.6	+0.6
ALKI	Alki Wastewate	0.33	289		Pb	04 38 12.0	+0.6
HTW	Haystack Looko	0.36	20		Pb	04 38 11.1	-0.7
HTW					Sb	04 38 16.6	-0.6
PAYL	Puyallup Schoo	0.37	222		Pb	04 38 11.7	-0.2
PAYL					Sb	04 38 18.6	+1.3
MBPA	Monroe Substat	0.43	6		Sb	04 38 19.1	0.0
GHW	Garrison Hill	0.48	207		Pb	04 38 12.9	-0.9
B941	Kapowsin	0.52	201		Pb	04 38 13.3	-1.1
B941					Sb	04 38 20.7	-0.8
RVC	Mount Rainier-	0.53	181		Pb	04 38 13.9	-0.8
GMW	Gold Mountain	0.57	278		Pb	04 38 14.4	-0.9
FMW	Mount Fremont	0.57	160		Pb	04 38 14.5	-1.0
OBSR	Observation Ro	0.58	171		Pb	04 38 14.9	-0.8
PCFR	Pierce County	0.58	215		Pb	04 38 14.7	-0.9
GNW	Green Mountain	0.60	279		Pb	04 38 14.8	-1.0
GNW					Sb	04 38 23.3	-0.6
RCS	Mount Rainier-	0.62	166		Pb	04 38 15.4	-0.9
D04E	Lakebay	0.63	243		Pb	04 38 16.0	-0.3
PANH	Panhandle Gap,	0.65	161		Pb	04 38 15.8	-1.0
REMR	Mount Rainier-	0.66	173		Pb	04 38 15.9	-1.0
REMR					Sb	04 38 24.9	-0.8
JCW	Jim Creek	0.72	1		Pb	04 38 17.2	-0.7
LON	Longmire	0.73	172		Pb	04 38 16.9	-1.2
B013	Quilcene	0.73	298		Pb	04 38 16.8	-1.3
B013					Sb	04 38 26.7	-0.9
HDW	Hoodsport	0.77	284		Pb	04 38 17.3	-1.4
HDW					Sb	04 38 27.8	-1.0
D03D	Eldon	0.77	275		Pb	04 38 17.5	-1.3
D03D					Sb	04 38 28.3	-0.5
B05A	Bryant	0.80	353		Pb	04 38 18.4	-0.8
B05A					Sb	04 38 29.2	-0.4
TWW	Teanaway	0.81	114		Pb	04 38 19.3	-0.1
WPW	White Pass	0.82	160		Pb	04 38 18.7	-1.0
WRW	Wenatchee Ridg	0.82	62		Pb	04 38 18.9	-0.8
C06D	Leavenworth	0.85	57		Pb	04 38 19.2	-0.8
GPW	Glacier Peak	0.85	40		Pb	04 38 19.5	-0.8
LTY	Liberty	0.90	103		Pb	04 38 20.2	-0.7
LTY					Sb	04 38 32.2	-0.3
LTY	Liberty	0.90	103	IAML		04 38 33.2	
	comp=E,63nm,0.3s						
GLK	Glacier Lake	0.94	165		Pb	04 38 21.1	-0.5
SQM	Sequim	0.95	310		Pb	04 38 20.9	-0.9
CMW	Cultus Mountai	0.96	353		Pb	04 38 21.6	-0.5
TBM	Table Mountain	0.97	108		Pb	04 38 22.1	-0.1
E04D	Cinebar	1.01	205		Pn	04 38 21.6	-1.1
SLFW	Sugar Loaf	1.01	73		Pn	04 38 22.5	-0.4
RPW	Rockport	1.02	17		Pn	04 38 22.2	-0.8
NAC	Naches	1.07	133		Pn	04 38 23.1	-0.5
B06A	Marblemount	1.09	17		Pn	04 38 23.3	-0.6
EBG	Ellensburg	1.10	120		Pb	04 38 24.3	-0.1
B201	Coldwater, Mou	1.19	190		Pn	04 38 24.5	-0.7
B017	Montesano	1.19	247		Pn	04 38 24.9	-0.2
ERK	Elk Rock	1.20	193		Pn	04 38 24.6	-0.7
B04A	Port Angeles	1.20	300		Pn	04 38 24.6	-0.8
B04A	Port Angeles	1.20	300	IAML		04 39 01.2	
	comp=N,42nm,2.7s						
B202	Windy Ridge, M	1.23	186		Pn	04 38 25.4	-0.5
VALT	Mount Saint He	1.27	187		Pn	04 38 26.2	-0.2
SEPW	September Lobe	1.28	187		Pn	04 38 26.7	0.0
WISH	Wishkah	1.29	255	Pn	Pn	04 38 26.3	-0.2
SHW	Mount Saint He	1.29	189		Pn	04 38 26.9	+0.1
FL2	Flat Top 2	1.30	192		Pn	04 38 26.6	-0.3
NLWA	Neilton Lookou	1.30	267	Pn	Pn	04 38 25.5	-1.3
NLWA				IAML		04 38 37.6	
	comp=N,70nm,4.5s						
NLWA				IAML		04 38 44.0	
	comp=N,71nm,3.0s						
SWF2	Southwest Flan	1.30	188		Pn	04 38 27.3	+0.4
MBW	Mount Baker	1.31	2		Pn	04 38 27.2	+0.1
BMW	Boistfort Moun	1.32	222		Pn	04 38 26.6	-0.6
B203	Quarry, Mount	1.33	191		Pn	04 38 26.9	-0.3
CBSW	Chelan Butte S	1.34	75		Pb	04 38 28.2	-0.2
ASR	Mount Adams--S	1.34	169		Pn	04 38 27.6	+0.1
MCW	Mount Constitu	1.35	334		Pn	04 38 27.0	-0.4
WTV	Waterville	1.37	80		Pb	04 38 29.1	0.0
SHUK	Shuksan-Mt. Ba	1.40	8		Pn	04 38 28.3	+0.1
B019	Raymond	1.42	235		Pn	04 38 28.6	+0.3
RVW	Rose Valley	1.43	203		Pn	04 38 28.7	+0.2
LVP	Lakeview Peak	1.44	193		Pn	04 38 28.8	+0.1
B011	North Saanich	1.55	320		Pn	04 38 29.7	-0.4
PGC	Sidney	1.55	320		Pn	04 38 29.9	-0.3
PGC	Sidney	1.55	320	IAML		04 38 42.0	
	comp=N,40nm,3.4s						
PGC				IAML		04 39 27.1	
	comp=E,43nm,4.4s						
VDB	Vedder Mountai	1.56	356		Pn	04 38 31.0	+0.7
B023	Clatskanie	1.56	210		Pn	04 38 30.5	+0.2
F04A	Amboy	1.57	192	Pn	Pn	04 38 30.5	+0.1
F04A				IAML		04 38 52.4	
	comp=N,43nm,0.5s						
E07A	Sunnyside	1.70	122	Pn	Pn	04 38 32.3	0.0
E07A				IAML		04 38 56.9	
	comp=N,32nm,0.5s						
E07A				IAML		04 38 58.2	
	comp=E,22nm,0.3s						
MDW	Midway	1.73	119		Pb	04 38 33.9	-1.1
HAWA	Hanford	1.98	122	Pn	Pn	04 38 35.3	-0.7
HAWA				IAML		04 39 17.4	
	comp=E,19nm,4.1s						

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*IDC **04** 04:44:44.9±1.0, 36.77N×32.82W, h0km, mb3.8/10, mb1 3.9/10, mb1mx3.7/54, mbtmp3.8/10, MS3.8/3,*

Ms1 3.8/3, ms1mx3.1/63, Error ellipse: s-maj=32.6km s-min=19.3km az=23.0

ISC 04 04:44:46.5±1.0, 36°.8N±0°.2×32°.8W±0°.1, h10^{km}, n12, σ0^{s}.68/10, mb3.8/10, MS3.9/3, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	Sonseca Array	22.80	74	P	P	04 49 49.7	+0.4
	1.5nm,1.0s,baz=288,slow=13,SNR=4.7						
ESDC				LR	LR	04 56 26.7	
	comp=Z,117nm,21.7s,baz=330,slow=31						
TORD	Torodi Ar. Bea	38.80	118	P	P	04 52 11.3	-0.2
	1.1nm,0.6s,baz=315,slow=7.4,SNR=8.6						
DBIC	Dimbokro	39.35	133	P	P	04 52 16.4	+0.3
	4.9nm,1.1s,baz=341,slow=7.1,SNR=4.1						
FINES	FINESS Array B	43.76	36	P	P	04 52 51.6	-0.2
	2.1nm,0.8s,baz=232,slow=9.4,SNR=3.4						
AKASG	Malin Array Be	45.61	52	P	P	04 53 06.2	-0.5
	0.5nm,0.4s,baz=280,slow=7.1,SNR=2.7						
IDI	Anoyia	46.06	74	LR	LR	05 11 13.4	
	comp=Z,124nm,18.8s,baz=58,slow=34						
PDAR	Pinedale Array	57.40	302	P	P	04 54 36.3	+0.9
	0.3nm,0.7s,baz=53,slow=8.0,SNR=2.7						
TXAR	Lajitas Array	58.65	285	P	P	04 54 43.2	-1.0
	0.7nm,0.7s,baz=82,slow=6.9,SNR=7.3						
INK	Inuvik	60.14	335	P	P	04 54 53.2	-0.5
	1.6nm,0.6s,baz=100,slow=6.1,SNR=2.7						
ILAR	Eielson Array	66.53	335	P	P	04 55 37.0	+0.9
	0.1nm,0.6s,baz=46,slow=6.4,SNR=1.8						
MKAR	Makanchi Array	78.51	39	P	P	04 56 48.0	+0.2
	0.9nm,0.8s,baz=312,slow=6.4,SNR=4.6						
BOSA	Boshof	84.87	131	LR	LR	05 32 17.5	
	comp=Z,100nm,21.8s,baz=91,slow=34						

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*IDC **04** 04:54:12.4±0.7, 1°.53N×30°.53W, h0^{km}, mb4.2/13, mb1 4.4/13, mb1mx4.0/68, mbtmp4.2/13, MS3.8/8, Ms1 3.8/8, ms1mx3.6/41, Error ellipse: s-maj=24.9km s-min=17.2km az=171.0*

*NEIC **04** 04:54:15.6±1.8, 1°.7N±0°.2×30°.6W±0°.1, h10^{km}±1^{km}, mb4.7/43, Error ellipse: s-maj=26.4km s-min=21.1km az=162.0*

ISC 04 04:54:14.4±0.6, 1°.6N±0°.1×30°.6W±0°.1, h10^{km}, n65, σ0^{s}.89/39, mb4.6/35, MS3.7/8, 1D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N3	ASCENSION HYDR	18.57	121	T	T	05 17 34.5	
	baz=299,slow=75,SNR=115						
H10N2	ASCENSION HYDR	18.58	121	T	T	05 17 35.0	
	baz=299,slow=75,SNR=108						
H10N1	ASCENSION HYDR	18.59	121	T	T	05 17 36.1	
	baz=299,slow=75,SNR=144						
H10S3	ASCENSION HYDR	19.01	124	T	T	05 18 09.8	
	baz=281,slow=74,SNR=56						
H10S2	ASCENSION HYDR	19.03	124	T	T	05 18 06.6	
	baz=299,slow=74,SNR=21						
MDP	Montagnes des	22.31	279	LR	LR	05 06 49.5	
	comp=Z,113nm,19.8s,baz=71,slow=34						
BDFB	Brasilia	24.33	225	P	P	04 59 32.8	+0.1
	4.9nm,0.8s,baz=35,slow=8.7,SNR=6.6						
BDFB				LR	LR	05 08 30.6	
	comp=Z,209nm,18.8s,baz=332,slow=35						
BDFB	Brasilia	24.33	225	IAmb	IAmb	04 59 37.4	
	comp=Z,5.5nm,0.8s						
LIC	Lamto	25.88	79	*e*PKP1	P	04 59 48.2	+1.5
	comp=Z,88nm,1.1s						
TIC	Toumodi	25.95	78	*e*PKP1	P	04 59 48.9	+1.5
DBIC	Dimbokro	26.12	78	P	P	04 59 48.5	-0.4
	comp=Z,19nm,0.9s,baz=272,slow=10,SNR=17						
DBIC				LR	LR	05 08 19.7	
	comp=Z,175nm,19.2s,baz=280,slow=32						
DBIC	Dimbokro	26.12	78	P	P	04 59 50.0	+1.1
DBIC				IAmb	IAmb	04 59 52.2	
	comp=Z,24nm,0.9s						
KIC	Kosan Boka	26.18	79	*e*PKP1	P	04 59 49.2	-0.3
	comp=Z,40nm,0.9s						
KOWA	Kowa	29.18	63	P	P	05 00 15.7	-0.6
	comp=Z,4.1nm,0.9s,baz=248,slow=8.6,SNR=8.5						
KOWA				LR	LR	05 10 13.3	
	comp=Z,214nm,20.5s,baz=214,slow=33						
KOWA	Kowa	29.18	63	P	P	05 00 15.9	-0.4
PTGA	Pitinga	29.49	266	LR	LR	05 10 22.6	
	comp=Z,116nm,18.4s,baz=84,slow=33						
H05S1	Guadeloupe/Mar	32.50	295	T	T	05 34 54.3	
	SNR=3.7						
TORD	Torodi Ar. Bea	33.92	69	P	P	05 00 57.7	-0.4
	comp=Z,4.5nm,0.9s,baz=255,slow=7.1,SNR=16						
TORD				LR	LR	05 13 15.3	
	comp=Z,194nm,18.0s,baz=275,slow=34						
CPUP	Villa Florida	37.95	221	LR	LR	05 16 54.4	
	comp=Z,133nm,18.6s,baz=62,slow=36						
MDT	Midelt	39.47	35	P	P	05 01 46.5	+1.3
	comp=Z,2.1nm,0.9s,baz=274,slow=9.3,SNR=3.6						
LPAZ	La Paz	41.14	243	LR	LR	05 19 05.7	
	comp=Z,193nm,18.0s,baz=40,slow=36						
PB12	IPOC Station P	43.97	241	P	P	05 02 23.1	+0.8
ESDC	Sonseca Array	44.95	29	P	P	05 02 30.4	+0.6
	comp=Z,2.0nm,1.1s,baz=224,slow=9.1,SNR=6.4						
ESDC	Sonseca Array	44.95	29	P	P	05 02 31.8	+2.0
TKL	Tuckaleechee C	59.75	311	P	P	05 04 21.5	+1.7
	comp=Z,6.0nm,0.9s,baz=111,slow=2.0,SNR=3.7						
TKL	Tuckaleechee C	59.75	311	IAmb	IAmb	05 04 31.0	
	comp=Z,19nm,1.4s						
SWET	Sewanee	61.23	310	P	P	05 04 29.8	-0.2
BOSA	Boshof	61.29	124	P	P	05 04 29.6	-1.0
	comp=Z,5.6nm,1.0s,baz=289,slow=5.9,SNR=5.8						
BOSA	Boshof	61.29	124	P	P	05 04 30.4	-0.3
T47A	Sharon Grove	62.73	311	P	P	05 04 40.2	+0.2
W39A	Magazine	67.36	308	P	P	05 05 10.0	-0.1
AKASG	Malin Array Be	70.03	36	P	P	05 05 25.8	-0.6
	comp=Z,0.3nm,0.4s,baz=247,slow=6.0,SNR=4.1						
AKASG	Malin Array Be	70.03	36	IAmb	IAmb	05 05 31.1	
	comp=Z,4.4nm,1.5s						
N35A	Tabor	70.26	313	P	P	05 05 27.3	-0.8
KSU1	Kansas State U	70.52	311	P	P	05 05 28.6	-1.1
KSU1				IAmb	IAmb	05 05 34.1	
	comp=Z,9.7nm,0.7s						
L34A	Svendsen Farm,	71.08	314	P	P	05 05 32.6	-0.6
JCT	Junction City	71.33	302	P	P	05 05 34.7	-0.2
JCT				IAmb	IAmb	05 05 36.1	
	comp=Z,7.7nm,1.0s						
ECSD	EROS Data Cent	71.73	316	P	P	05 05 36.2	-0.8
ECSD				IAmb	IAmb	05 05 41.5	
	comp=Z,3.9nm,0.8s						
BGNE	Belgrade	72.23	313	P	P	05 05 38.7	-1.4
TXAR	Lajitas Array	74.49	300	P	P	05 05 54.0	+0.3
	comp=Z,0.9nm,0.8s,baz=110,slow=6.1,SNR=6.1						
KSCO	Kaye Shedlock'	75.08	310	P	P	05 05 57.3	+0.3
MNTX	Cornudas Mount	76.24	302	P	P	05 06 03.2	-0.5
SDCO	Great Sand Dun	77.11	308	IAmb	IAmb	05 06 10.8	
	comp=Z,5.4nm,1.2s						
ISCO	Idaho Springs	77.49	310	P	P	05 06 11.3	+0.3
ISCO				IAmb	IAmb	05 06 13.5	
	comp=Z,14nm,1.5s						
ANMO	Albuquerque	77.52	305	P	P	05 06 11.4	+0.4
ANMO				IAmb	IAmb	05 06 13.1	
	comp=Z,5.8nm,1.4s						
SMCO	Snowmass	78.45	310	IAmb	IAmb	05 06 18.0	
	comp=Z,7.5nm,1.4s						
O20A	White River Ci	79.54	310	IAmb	IAmb	05 06 23.4	
	comp=Z,11nm,1.1s						
PDAR	Pinedale Array	80.82	313	P	P	05 06 27.8	-1.2
	comp=Z,0.5nm,0.6s,baz=110,slow=7.1,SNR=5.6						
P18A	Preston Nutter	81.02	310	IAmb	IAmb	05 06 32.4	
	comp=Z,8.0nm,1.2s						
SRU	San Rafael Swe	81.19	309	IAmb	IAmb	05 06 37.1	
	comp=Z,4.5nm,0.9s						
X16A	Lo Mia Camp, P	81.56	304	IAmb	IAmb	05 06 35.9	
	comp=Z,7.4nm,1.5s						
LOHW	Long Hollow	81.67	314	P	P	05 06 33.5	+0.1
LOHW				IAmb	IAmb	05 06 34.4	
	comp=Z,8.3nm,1.4s						
TMUT	Trail Mountain	81.73	309	IAmb	IAmb	05 06 35.9	
	comp=Z,9.2nm,1.5s						
YMR	Madison River	82.03	315	P	P	05 06 35.9	+0.5
YMR				IAmb	IAmb	05 06 37.0	
	comp=Z,9.2nm,1.2s						
HWUT	Hardware Ranch	82.19	312	IAmb	IAmb	05 06 41.8	
	comp=Z,4.6nm,0.8s						
NLU	North Lily Min	82.45	310	IAmb	IAmb	05 06 45.2	
	comp=Z,8.5nm,1.4s						
CCUT	Cedar City	83.30	307	IAmb	IAmb	05 06 44.6	
	comp=Z,14nm,1.5s						
SYO	Syowa Base	84.49	160	⇓*e*P	P	05 06 48.1	+0.9
ELK	Elko	84.91	311	IAmb	IAmb	05 06 52.2	
	comp=Z,5.6nm,1.4s						
R11A	Troy Canyon, C	85.09	308	IAmb	IAmb	05 06 56.4	
	comp=Z,6.1nm,0.7s						
YKA	Yellowknife Ar	85.81	332	P	P	05 06 52.8	-1.2
	comp=Z,1.3nm,0.8s,baz=114,slow=5.7,SNR=4.1						
BMO	Blue Mountains	86.55	315	IAmb	IAmb	05 07 01.0	
	comp=Z,17nm,1.4s						
NVAR	Mina Array Bea	87.23	308	P	P	05 07 01.9	+0.2
	comp=Z,1.7nm,1.0s,baz=173,slow=3.7,SNR=5.2						
FITZ	Fitzroy Crossi	151.47	127	PKPbc	PKPbc	05 14 09.0	-0.7
	comp=Z,1.7nm,0.9s,baz=216,slow=3.6,SNR=6.4						
ASAR	Alice Springs	153.41	147	PKPbc	PKPbc	05 14 13.1	-1.0
	comp=Z,1.5nm,1.1s,baz=187,slow=2.0,SNR=6.1						

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*INET **04** 04:55:40.5, 13°.15N×89°.38W, h54^{km}, ML4.0*

*SNET **04** 04:55:40.5±0.9, 13°.22N×89°.37W, h58^{km}±4^{km}, ML4.2*

*UCR **04** 04:55:40.6±0.8, 13°.21N×89°.37W, h58^{km}±4^{km}, ML4.2*

*IDC **04** 04:55:41.4±2.3, 13°.36N×89°.21W, h76^{km}±20^{km}, mb3.1/2, mb1 3.5/5, mb1mx3.2/47, mbtmp3.5/5, Error ellipse: s-maj=60.7km s-min=17.3km az=44.0*

*GCG **04** 04:55:43.0±0.7, 13°.52N×89°.62W, h0^{km}±12^{km}, MD3.9*

ISC 04 04:55:40.3±1.2, 13°.18N±0°.08×89°.37W±0°.04, h57^{km}±7^{km}, n84, σ0^{s}.66/126, 4C-24D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.31	9	⇓*i*P	Pn	04 55 50.1	-0.1
LALI				*e*S	Sn	04 55 58.0	+0.7
LALI	Alcalda de L	0.31	9	⇓*i*P	Pn	04 55 50.1	-0.1
LALI				*e*S	Sn	04 55 58.0	+0.7
JAYA	Jayaque - finc	0.48	351	⇓*i*P	Pn	04 55 51.7	-0.3
JAYA				*e*S	Sn	04 56 00.7	+0.4
JAYA				IAML		04 56 01.6	
	comp=Z,6μm,0.2s						
JAYA	Jayaque - finc	0.48	351	⇓*i*P	Pn	04 55 51.7	-0.3
JAYA				*e*S	Sn	04 56 00.7	+0.4
JAYA				IAML		04 56 01.6	
	comp=Z,6μm,0.2s						
ITCA	Escuela Especi	0.50	11	*e*P	Pn	04 55 52.0	-0.1
ITCA				*e*S	Sn	04 56 01.2	+0.6
ITCA	Escuela Especi	0.50	11	*e*P	Pn	04 55 52.0	-0.1
ITCA				*e*S	Sn	04 56 01.2	+0.6
SNET	Serv Nac Est T	0.52	15	⇓*e*P	Pn	04 55 52.4	0.0
SNET				*e*S	Sn	04 56 02.0	+0.9
SNET				IAML		04 56 04.5	
	comp=Z,14μm,0.2s						
SNET	Serv Nac Est T	0.52	15	⇓*e*P	Pn	04 55 52.4	0.0
SNET				*e*S	Sn	04 56 02.0	+0.9
SNET				IAML		04 56 04.5	
	comp=Z,14μm,0.2s						
PMON	Piamonte	0.53	6	⇓*i*P	Pn	04 55 52.6	+0.2
PMON				*e*S	Sn	04 56 02.2	+0.9
PMON	Piamonte	0.53	6	⇓*i*P	Pn	04 55 52.6	+0.2
PMON				*e*S	Sn	04 56 02.2	+0.9
LFRS	El Faro	0.54	34	*e*P	Pn	04 55 52.7	+0.2
LFRS	El Faro	0.54	34	*e*P	Pn	04 55 52.7	+0.2
SEMO	Seminario San	0.54	15	*e*P	Pn	04 55 52.5	0.0
UTEC	Universidad Te	0.54	18	*e*P	Pn	04 55 52.7	+0.1
UTEC				*e*S	Sn	04 56 02.5	+1.0
UTEC	Universidad Te	0.54	18	*e*P	Pn	04 55 52.7	+0.1
UTEC				*e*S	Sn	04 56 02.5	+1.0
OPAM	Oficina de Pla	0.56	18	*e*P	Pn	04 55 52.9	+0.2
OPAM				*e*S	Sn	04 56 02.7	+1.0
OPAM				IAML		04 56 05.4	
	comp=Z,6μm,0.2s						
OPAM	Oficina de Pla	0.56	18	*e*P	Pn	04 55 52.9	+0.2
OPAM				*e*S	Sn	04 56 02.7	+1.0
OPAM				IAML		04 56 05.4	
	comp=Z,6μm,0.2s						
BOQS	Boqueron	0.56	9	⇓*i*P	Pn	04 55 53.2	+0.3
BOQS				*e*S	Sn	04 56 02.6	+0.6
BOQS	Boqueron	0.56	9	⇓*i*P	Pn	04 55 53.2	+0.3
BOQS				*e*S	Sn	04 56 02.6	+0.6
SJTE	Alcalda de S	0.56	39	⇓*i*P	Pn	04 55 52.9	+0.2
SJTE				*e*S	Sn	04 56 02.4	+0.6
SJTE				IAML		04 56 03.7	
	comp=Z,5μm,0.2s						
SJTE	Alcalda de S	0.56	39	⇓*i*P	Pn	04 55 52.9	+0.2
SJTE				*e*S	Sn	04 56 02.4	+0.6
SJTE				IAML		04 56 03.7	
	comp=Z,5μm,0.2s						
UESS	Universidad de	0.56	17	*e*P	Pn	04 55 53.0	+0.2
UESS				*e*S	Sn	04 56 02.8	+1.0
UESS				IAML		04 56 07.0	
	comp=Z,8μm,0.2s						
UESS	Universidad de	0.56	17	*e*P	Pn	04 55 53.0	+0.2
UESS				*e*S	Sn	04 56 02.8	+1.0
UESS				IAML		04 56 07.0	
	comp=Z,8μm,0.2s						
IGN	Direccin Gen	0.57	20	*e*P	Pn	04 55 52.9	+0.1
IGN	Direccin Gen	0.57	20	*e*P	Pn	04 55 52.9	+0.1
UDBS	Universidad Do	0.57	22	*e*P	Pn	04 55 52.9	0.0
UDBS				IAML		04 56 05.0	
	comp=Z,7μm,0.2s						
UDBS	Universidad Do	0.57	22	*e*P	Pn	04 55 52.9	0.0
UDBS				IAML		04 56 05.0	
	comp=Z,7μm,0.2s						
LFU	La Fuente	0.62	24	*e*P	Pn	04 55 53.9	+0.5
LFU				*e*S	Sn	04 56 03.3	+0.3
LFU	La Fuente	0.62	24	*e*P	Pn	04 55 53.9	+0.5
LFU				*e*S	Sn	04 56 03.3	+0.3
CEDA	San Andres	0.62	358	⇓*e*P	Pn	04 55 53.7	+0.3
CEDA				*e*S	Sn	04 56 03.9	+0.9
CEDA				IAML		04 56 10.4	
	comp=Z,10μm,0.5s						
CEDA	San Andres	0.62	358	⇓*e*P	Pn	04 55 53.7	+0.3
CEDA				*e*S	Sn	04 56 03.9	+0.9
CEDA				IAML		04 56 10.4	
	comp=Z,10μm,0.5s						
LBRS	Las Brisas	0.64	30	*e*P	Pn	04 55 54.3	+0.6
LBRS	Las Brisas	0.64	30	*e*P	Pn	04 55 54.3	+0.6
COEG	Centro de Oper	0.65	47	⇓*i*P	Pn	04 55 53.8	0.0
COEG				*e*S	Sn	04 56 04.0	+0.4
COEG				IAML		04 56 11.2	
	comp=Z,5μm,0.2s						
COEG	Centro de Oper	0.65	47	⇓*i*P	Pn	04 55 53.8	0.0
COEG				*e*S	Sn	04 56 04.0	+0.4
COEG				IAML		04 56 11.2	
	comp=Z,5μm,0.2s						
PAVA	Las Pavas	0.68	39	⇓*i*P	Pn	04 55 54.7	+0.5
PAVA				*e*S	Sn	04 56 05.3	+1.0
PAVA	Las Pavas	0.68	39	⇓*i*P	Pn	04 55 54.7	+0.5
PAVA				*e*S	Sn	04 56 05.3	+1.0
CEVE	Cerro Verde	0.69	339	⇓*e*P	Pn	04 55 54.5	+0.1
CEVE				IAML		04 56 07.2	
	comp=Z,8μm,0.3s						
CEVE	Cerro Verde	0.69	339	⇓*e*P	Pn	04 55 54.5	+0.1
CEVE				IAML		04 56 07.2	
	comp=Z,8μm,0.3s						
SBLS	San Blas	0.70	340	*e*P	Pn	04 55 54.5	-0.1
SBLS	San Blas	0.70	340	*e*P	Pn	04 55 54.5	-0.1
SNJE	San Jose	0.72	342	*e*P	Pn	04 55 54.7	-0.1
SNJE				*e*S	Sn	04 56 06.4	+0.9
SNJE	San Jose	0.72	342	*e*P	Pn	04 55 54.7	-0.1
SNJE				*e*S	Sn	04 56 06.4	+0.9
UESV	Universidad de	0.73	51	⇓*e*P	Pn	04 55 54.8	+0.1
UESV				IAML		04 56 09.7	
	comp=Z,3μm,0.3s						
UESV	Universidad de	0.73	51	⇓*e*P	Pn	04 55 54.8	+0.1
UESV				IAML		04 56 09.7	
	comp=Z,3μm,0.3s						
RTR	El Retiro	0.76	340	*e*P	Pn	04 55 55.5	+0.2
RTR				*e*S	Sn	04 56 06.8	+0.5
RTR	El Retiro	0.76	340	*e*P	Pn	04 55 55.5	+0.2
RTR				*e*S	Sn	04 56 06.8	+0.5
TACO	Tacachico	0.79	1	⇑*e*P	Pn	04 55 55.6	+0.1
TACO				*e*S	Sn	04 56 06.8	+0.2
TACO	Tacachico	0.79	1	⇑*e*P	Pn	04 55 55.6	+0.1
TACO				*e*S	Sn	04 56 06.8	+0.2
ALJI	Alcalda de J	0.79	79	*e*P	Pn	04 55 55.5	0.0
ALJI				IAML		04 56 07.7	
	comp=Z,5μm,0.2s						
ALJI				*e*S	Sn	04 56 07.8	+1.1
ALJI	Alcalda de J	0.79	79	*e*P	Pn	04 55 55.5	0.0
ALJI				IAML		04 56 07.7	
	comp=Z,5μm,0.2s						
ALJI				*e*S	Sn	04 56 07.8	+1.1
SCLA	Alcaldia de Sa	0.81	50	*e*P	Pn	04 55 56.4	+0.5
SCLA	Alcaldia de Sa	0.81	50	*e*P	Pn	04 55 56.4	+0.5
UNIC	Universidad Ca	0.82	348	*e*P	Pn	04 55 56.1	+0.2
UNIC	Universidad Ca	0.82	348	*e*P	Pn	04 55 56.1	+0.2
COEB	Comit de Eme	0.88	69	⇓*i*P	Pn	04 55 56.7	0.0
COEB				*e*S	Sn	04 56 09.5	+0.7
COEB				IAML		04 56 10.5	
	comp=Z,6μm,0.2s						
COEB	Comit de Eme	0.88	69	⇓*i*P	Pn	04 55 56.7	0.0
COEB				*e*S	Sn	04 56 09.5	+0.7
COEB				IAML		04 56 10.5	
	comp=Z,6μm,0.2s						
PQSS	Presa 15 de Se	0.91	61	*e*P	Pn	04 55 57.1	+0.2
PQSS				IAML		04 56 12.3	
	comp=Z,2μm,0.1s						
PACA	Pacayal	1.06	74	*e*P	Pn	04 56 00.3	+1.2
PACA				IAML		04 56 16.5	
	comp=Z,3μm,0.2s						
PACA	Pacayal	1.06	74	*e*P	Pn	04 56 00.3	+1.2
PACA				IAML		04 56 16.5	
	comp=Z,3μm,0.2s						
LLGN	La Laguna	1.06	23	*e*P	Pn	04 55 59.3	+0.1
LLGN	La Laguna	1.06	23	*e*P	Pn	04 55 59.3	+0.1
VSM	San Miguel	1.10	77	*e*P	Pn	04 56 00.2	+0.5
VSM	San Miguel	1.10	77	*e*P	Pn	04 56 00.2	+0.5
CNRM	Centro Naciona	1.21	76	*e*P	Pn	04 56 01.5	+0.5
CNRM	Centro Naciona	1.21	76	*e*P	Pn	04 56 01.5	+0.5
MTO3	Montecristo	1.21	1	⇑*e*P	Pn	04 56 01.4	+0.2
MTO3	Montecristo	1.21	1	⇑*e*P	Pn	04 56 01.4	+0.2
ESQI	Esquipulas	1.37	1	*e*P	Pn	04 56 03.9	+0.6
LCND	La Caada	1.45	85	*e*P	Pn	04 56 04.6	+0.4
LCND				IAML		04 56 26.8	
	comp=Z,5μm,0.3s						
LCND	La Caada	1.45	85	*e*P	Pn	04 56 04.0	-0.2
LCND				*e*P	Pn	04 56 04.6	+0.4
LCND				IAML		04 56 26.8	
	comp=Z,5μm,0.3s						
CNCH	Conchagua	1.50	86	*e*P	Pn	04 56 05.7	+0.6
CNCH				IAML		04 56 28.9	
	comp=Z,312μm,0.1s						
CNCH	Conchagua	1.50	86	*e*P	Pn	04 56 05.7	+0.6
CNCH				IAML		04 56 28.9	
	comp=Z,312μm,0.1s						
FUG	Fuego 3	1.91	312	*e*S	Sn	04 56 32.8	-0.7
MRL	Marmol	1.91	351	*e*P	Pn	04 56 12.3	+1.6
APG	El Apazote	2.10	330	P	Pn	04 56 13.2	-0.1
	comp=Z,0.6nm,0.3s,baz=266,slow=9.5,SNR=3.6						
APG				S	Sn	04 56 39.5	+1.0
	comp=Z,5.2nm,0.3s,baz=221,slow=17,SNR=3.0						
TGUH	Tegucigalpa,Un	2.22	67	*e*P	Pn	04 56 15.3	+0.5
TGUH	Tegucigalpa,Un	2.22	67	*e*P	Pn	04 56 15.3	+0.5
STG3	Santiaguito 3,	2.62	306	*e*P	Pn	04 56 21.6	+1.3
STG3				*e*S	Sn	04 56 52.5	+1.4
JTS	Las Juntas de	5.19	123	P	Pn	04 56 56.3	+0.8
CMIG	Matias Romero	6.59	307	P	Pn	04 57 16.3	+1.7
	comp=Z,0.8nm,0.3s,baz=152,slow=9.5,SNR=7.1						
CMIG				S	Sn	04 58 30.0	+1.6
	comp=Z,0.9nm,0.3s,baz=71,slow=19,SNR=2.1						
TXAR	Lajitas Array	20.84	323	P	P	05 00 17.3	-0.2
	comp=Z,0.5nm,0.6s,baz=136,slow=10,SNR=10						
YKA	Yellowknife Ar	52.43	346	P	P	05 04 44.2	-2.6
	comp=Z,0.4nm,0.4s,baz=149,slow=6.4,SNR=9.9						
WRA	Warramunga Arr	137.66	255	PKP	PKPdf	05 14 59.5	+0.6
	comp=Z,0.3nm,0.8s,baz=78,slow=2.0,SNR=1.2						

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*IDC **04** 04:56:16.5±0.9, 30°.54S×71°.91W, h0^{km}, mb4.4/9, mb1 4.3/13, mb1mx4.0/45, mbtmp4.3/13, ML3.9/4, MS3.4/2, Ms1 3.4/2, ms1mx3.0/29, Error ellipse: s-maj=33.2km s-min=17.0km az=102.0*

*NEIC **04** 04:56:17.4±1.1, 30°.54S±0°.03×72°.12W±0°.04, h14^{km}±3^{km}, mb4.5/12, Mwr4.2/51, ML4.6(GUC), Error ellipse: s-maj=6.2km s-min=4.0km az=51.0*

*GUC **04** 04:56:18.2±0.6, 30°.62S×72°.07W, h19^{km}±4^{km}, ML4.6*

*NEIC **04** 04:56:18, 30°.62S×72°.07W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.13; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$-1.98; $M_{r\theta}$0.11; $M_{\theta\phi}$0.26; $M_{\phi r}$-0.97; Fault plane solution: $M_0$2.29000×10^{15} NP1:ϕ_s172.57000°, δ57.58000°, λ90.49000°. NP2:ϕ_s351.66000°, δ32.42000°, λ89.23000°. Principal axes: T 2.3444, Plg77.0000°, Azm84.0000°; N -0.1086, Plg0.0000°, Azm352.0000°; P -2.2358, Plg13.0000°, Azm262.0000°;*

*VAO **04** 04:56:19.2±0.6, 30°.56S×71°.88W, h17^{km}, mb4.3*

ISC 04 04:56:17.3±1.5, 30°.55S±0°.03×72°.00W±0°.07, h12^{km}±8^{km}, n111, σ1^{s}.08/121, mb4.5/11, 4C-6D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.34	112	⇓*i*P	Pn	04 56 26.4	-1.8
CO06				*i* S	Sn	04 56 31.6	+2.9
CO06	Fray Jorge	0.34	112		Pn	04 56 26.3	-1.8
CO05	La Serena	0.91	47	⇓*i*P	Pn	04 56 36.3	+0.3
CO05				*i* S	Sn	04 56 49.9	+0.9
CO05	La Serena	0.91	47		Pn	04 56 36.2	+0.3
GO04	Tololo Observa	1.11	70	⇓*i*P	Pg	04 56 39.4	+0.8
GO04				*i* S	Sn	04 56 55.2	+0.9
GO04				IAML		04 56 58.1	
	comp=N,50μm,0.4s						
GO04	Tololo Observa	1.11	70		Pg	04 56 39.4	+0.8
CO03	El Pedregal	1.17	105	⇓*i*P	Pg	04 56 39.6	-0.2
CO03				*e*S	Sg	04 56 56.1	+1.1
CO03	El Pedregal	1.17	105		Pg	04 56 39.6	-0.2
LCO	Las Campanas	1.91	37	⇑*i*P	Pb	04 56 50.7	-1.4
LCO				*e*S	Sg	04 57 17.2	-1.4
LCO	Las Campanas	1.91	37	Pn	Pn	04 56 50.2	+0.3
VA06	Catapilco	2.10	163	⇑*i*P	Pn	04 56 52.4	+0.2
VA06				*e*S	Sb	04 57 19.5	-1.8
VA06				IAML		04 57 28.0	
	comp=N,4μm,0.4s						
AC04	Llanos de Chal	2.47	19	Pn	Pn	04 56 57.3	-0.1
VA01	Torpederas	2.48	173		Pn	04 56 57.6	0.0
VA03	San Esteban	2.53	151	⇑*i*P	Pn	04 56 59.8	+1.5
VA03				*e*S	Sb	04 57 31.4	-2.6
VA03				IAML		04 57 40.7	
	comp=E,3μm,0.4s						
VA03	San Esteban	2.53	151		Pn	04 56 59.6	+1.2
ROCH	El Roble	2.56	161	⇑*e*P	Pn	04 56 59.2	+0.3
ROCH				*e*S	Sn	04 57 30.5	+0.4
ROCH				IAML		04 57 42.2	
	comp=N,2μm,0.5s						
MT02	Curacav	2.80	165	*e*P	Pn	04 57 03.1	+1.1
MT02				*e*S	Sn	04 57 35.8	+0.1
MT02	Curacav	2.80	165		Pn	04 57 01.8	-0.2
PEL	Peldehue	2.82	157		Pn	04 57 02.9	+0.7
MT05	Renca	3.03	160	*e*P	Pn	04 57 06.5	+1.3
MT05				*e*S	Sn	04 57 43.3	+1.8
MT05				IAML		04 57 57.1	
	comp=E,2μm,0.4s						
MT05	Renca	3.03	160	Pn	Pn	04 57 05.4	+0.2
VA05	Santo Domingo	3.12	174	*e*P	Pn	04 57 06.8	+0.5
VA05				*e*S	Sn	04 57 44.5	+1.0
VA05				IAML		04 58 12.9	
	comp=E,1μm,0.5s						
VA05	Santo Domingo	3.12	174		Pn	04 57 05.7	-0.6
GO03	Copiap	3.33	28	Pn	Pn	04 57 09.7	+0.4
MT09	Talagante	3.33	165	⇓*i*P	Pn	04 57 10.5	+1.1
MT09				*e*S	Sn	04 57 48.0	-1.0
MT09				IAML		04 58 12.7	
	comp=E,1μm,0.4s						
MT09	Talagante	3.33	165		Pn	04 57 09.8	+0.5
MT01	Popeta	3.37	169	⇓*i*P	Pn	04 57 09.9	+0.1
MT01				*e*S	Sn	04 57 48.6	-1.1
MT01	Popeta	3.37	169		Pn	04 57 09.7	0.0
BO04	La Punta	3.63	161	*e*P	Pn	04 57 14.7	+1.3
BO04				*e*S	Sn	04 57 56.0	-0.2
BO01	Tunca	3.91	169		Pn	04 57 16.9	-0.3
BO02	Sierra Bellavi	4.36	167	Pn	Pn	04 57 23.6	+0.2
GO05	Huala	4.45	179	Pn	Pn	04 57 23.6	-1.1
AC02	Maricunga	4.48	35	Pn	Pn	04 57 26.0	+0.5
PB14	IPOC Station P	6.07	14	Pn	Pn	04 57 46.0	-1.2
VA04	Juan Fernndez	6.56	240	Pn	Pn	04 57 50.8	-2.9
PB10	IPOC Station P	7.13	11	Pn	Pn	04 58 01.4	0.0
LVC	Limon Verde	8.38	20	Pn	Pn	04 58 17.0	-2.0
	comp=E,0.4nm,0.3s,baz=256,slow=15,SNR=2.6						
LVC				Sn	Sn	04 59 50.0	-3.7
	baz=278,slow=14,SNR=1.2						
LVC				LR	LR	05 01 25.8	
	comp=E,304nm,19.5s,baz=208,slow=37						
LVC	Limon Verde	8.38	20	*e*P	Pn	04 58 18.6	-0.3
PLCA	Paso Flores	10.23	174	Pn	Pn	04 58 43.6	-0.5
	comp=E,0.3nm,0.3s,baz=341,slow=12,SNR=14						
PLCA				LR	LR	05 03 02.1	
	comp=E,172nm,19.5s,baz=352,slow=40						

PLCA	**Paso Flores**	**10.23**	**174**	*e*P	**Pn**	**04 58 44.5**	**+0.5**
TRQA	**Tornquist**	**11.16**	**135**		**Pn**	**04 58 57.9**	**+1.1**
ITQB	**Itaqui**	**13.34**	**90**	*e*P	**Pn**	**04 59 26.0**	**-0.6**
ITQB	**Itaqui**	**13.34**	**90**		**Pn**	**04 59 26.0**	**-0.6**
LPAZ	**La Paz**	**14.63**	**15**	Pn	**Pn**	**04 59 46.0**	**+1.1**
	comp=E,0.3nm,0.3s,baz=191,slow=8.6,SNR=14						
LPAZ	**La Paz**	**14.63**	**15**	*e*P	**Pn**	**04 59 46.6**	**+1.8**
LPAZ	**La Paz**	**14.63**	**15**	Pn	**Pn**	**04 59 41.7**	**-3.1**
SIV	**San Ignacio**	**17.61**	**37**	P	**P**	**05 00 23.6**	**-0.1**
	comp=E,0.8nm,0.3s,baz=214,slow=10,SNR=38						
PTLB	**Pontes e Lacer**	**19.11**	**41**	*e*P	**Pn**	**05 00 40.9**	**-0.1**
PTLB	**Pontes e Lacer**	**19.11**	**41**	P	**P**	**05 00 39.1**	**-1.0**
TER01	**Tubaro-SC**	**20.00**	**90**	*e*P	**Pn**	**05 00 51.3**	**-0.3**
PP1B	**Ponte de Pedra**	**20.23**	**54**	*e*P	Pn	05 00 52.9	-1.5
PCMB	**Pacaembu**	**20.62**	**69**	*e*P	**P**	**05 00 57.1**	**+0.4**
VILB	**Vilhena**	**20.63**	**34**	*e*P	**P**	**05 00 57.1**	**+0.3**
VILB	**Vilhena**	**20.63**	**34**	P	**P**	**05 00 56.1**	**-0.7**
SALV	**Santo Antonio**	**20.87**	**49**	*e*P	Pn	05 01 00.1	-1.8
ETMB	**Extrema**	**21.32**	**16**	*e*P	**P**	**05 01 05.6**	**+1.3**
ETMB	**Extrema**	**21.32**	**16**	P	**P**	**05 01 05.1**	**+0.8**
ETMB				IAmb	IAmb	05 01 09.7	
	comp=Z,22nm,1.1s						
CZSB	**Cruzeiro do Su**	**22.71**	**358**	P	**P**	**05 01 16.5**	**-2.7**
CZSB				IAmb	IAmb	05 01 25.8	
	comp=Z,26nm,1.3s						
VAO	**Valinhos**	**23.55**	**77**	*e*P	**P**	**05 01 28.1**	**+0.4**
PDRB	**Porto dos Gac**	**23.57**	**40**	*e*P	**P**	**05 01 28.9**	**+0.9**
ARAG	**Araguaiana, MT**	**23.67**	**56**	*e*P	**P**	**05 01 29.0**	**+0.1**
IPMB	**Ipameri, GO**	**24.98**	**65**	*e*P	**P**	**05 01 41.0**	**0.0**
BSCB	**Bom Sucesso**	**26.24**	**75**	*e*P	**P**	**05 01 52.6**	**0.0**
TBTG	**Tabatinga, AM**	**26.30**	**5**	P	**P**	**05 01 51.7**	**-1.2**
BDFB	**Brasilia**	**26.51**	**61**	P	**P**	**05 01 55.1**	**+0.1**
	comp=Z,8.7nm,0.7s,baz=233,slow=9.7,SNR=13						
BDFB	**Brasilia**	**26.51**	**61**	P	**P**	**05 01 54.9**	**-0.1**
BDFB				IAmb	IAmb	05 01 55.9	
	comp=Z,9.2nm,0.7s						
SNDB	**Serra Nova Dou**	**26.64**	**51**	*e*P	**P**	**05 01 57.5**	**+1.5**
NPGB	**Novo Progresso**	**28.11**	**37**	*e*P	**P**	**05 02 09.1**	**-0.2**
PEXB	**Peixe**	**28.60**	**55**	*e*P	**P**	**05 02 13.9**	**+0.3**
MC01	**Montes Claros**	**29.07**	**68**	*e*P	**P**	**05 02 16.0**	**-1.9**
MACA	**Manacapuru-AM**	**29.27**	**24**	*e*P	**P**	**05 02 20.1**	**+0.6**
JANB	**Januaria**	**29.71**	**65**	*e*P	**P**	**05 02 23.8**	**+0.3**
ITTB	**Itaituba**	**30.23**	**34**	*e*P	**P**	**05 02 28.0**	**-0.1**
BSFB	**Barra de Sao F**	**30.52**	**75**	*e*P	**P**	**05 02 30.6**	**0.0**
SDBA	**SAO DESIDERIO**	**30.88**	**60**	*e*P	**P**	**05 02 34.8**	**+0.9**
PTGA	**Pitinga**	**31.78**	**23**	P	**P**	**05 02 42.3**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=147,slow=11,SNR=4.4						
PRPB	**Parauapebas**	**31.98**	**45**	*e*P	**P**	**05 02 43.6**	**+0.1**
NBPN	**Ponto Novo - B**	**35.43**	**63**	*e*P	**P**	**05 03 13.4**	**-0.2**
MCPB	**Macapa, AP**	**35.50**	**36**	*e*P	**P**	**05 03 14.4**	**+0.3**
ZARC	**Zaragoza, Cauc**	**37.92**	**355**	P	**P**	**05 03 34.8**	**+0.1**
NBMA	**Muriti-CE**	**38.73**	**60**	*e*P	**P**	**05 03 41.1**	**-0.6**
NBPS	**Pedro II - PI**	**38.81**	**54**	*e*P	**P**	**05 03 42.5**	**+0.1**
VNA3	**Neumayer Olymp**	**52.55**	**159**	P	**P**	**05 05 31.1**	**+0.9**
VNA2	**Neumayer--Watz**	**53.19**	**158**	P	**P**	**05 05 35.8**	**+0.9**
	baz=286,slow=7.9						
SNAA	**Sanae**	**54.77**	**159**	P	**P**	**05 05 47.4**	**+0.8**
SNAA	**Sanae**	**54.77**	**159**	P	**P**	**05 05 47.3**	**+0.8**
	comp=Z,4.5nm,0.6s,baz=271,slow=7.2,SNR=67						
SNAA	**Sanae**	**54.77**	**159**	P	**P**	**05 05 46.7**	**+0.1**
QSPA	**South Pole Qui**	**59.68**	**180**	P	**P**	**05 06 22.8**	**+1.4**
	comp=Z,1.9nm,0.5s,baz=175,slow=0.9,SNR=8.6						
QSPA	**South Pole Qui**	**59.68**	**180**	P	**P**	**05 06 21.1**	**-0.4**
QSPA				IAmb	IAmb	05 06 48.0	
	comp=Z,5.1nm,1.2s						
TXAR	**Lajitas Array**	**66.76**	**330**	P	**P**	**05 07 10.5**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=146,slow=9.8,SNR=2.1						
DBIC	**Dimbokro**	**74.07**	**72**	P	**P**	**05 07 55.2**	**+1.5**
	comp=Z,3.6nm,0.9s,baz=89,slow=0.4,SNR=3.7						
DBIC	**Dimbokro**	**74.07**	**72**	P	**P**	**05 07 53.7**	**0.0**
SUR	**Sutherland**	**76.48**	**120**	P	**P**	**05 08 09.0**	**+1.4**
	comp=Z,8.2nm,1.0s,baz=312,slow=12,SNR=2.4						
KOWA	**Kowa**	**79.20**	**66**	P	**P**	**05 08 23.2**	**+0.6**
	comp=Z,2.1nm,0.5s,baz=226,slow=3.6,SNR=14						
KOWA	**Kowa**	**79.20**	**66**	IAmb	IAmb	05 08 24.5	
	comp=Z,3.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**83.02**	**70**	P	**P**	**05 08 43.2**	**+0.2**
	comp=Z,2.8nm,0.7s,baz=261,slow=4.8,SNR=20						
TORD	**Torodi Ar. Bea**	**83.02**	**70**	P	**P**	**05 08 42.3**	**-0.7**
TORD				IAmb	IAmb	05 08 44.5	
	comp=Z,3.6nm,0.8s						
WRA	**Warramunga Arr**	**123.77**	**210**	PKP	**PKPdf**	**05 15 15.9**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=147,slow=1.4,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	**125.78**	**272**	T	T	07 34 02.2	
	baz=114,slow=74,SNR=87						
H11S1	**WAKE ISLAND Hy**	**125.79**	**272**	T	T	07 34 04.5	
	baz=114,slow=74,SNR=97						
H11S3	**WAKE ISLAND Hy**	**125.80**	**272**	T	T	07 34 03.0	
	baz=114,slow=74,SNR=82						
BRVK	**Borovoye**	**144.60**	**40**	PKPdf	**PKPdf**	**05 15 53.2**	**-0.2**
KBL	**Kabul**	**147.06**	**73**	PKPbc	**PKPbc**	**05 16 00.1**	**-0.5**
KKAR	**Karatay Array**	**147.75**	**57**	PKPbc	**PKPdf**	**05 15 59.7**	**+0.6**
GAR	**Garm**	**148.10**	**64**		**PKiKP**	**05 16 04.4**	**-0.5**
ZALV	**Zalesovo Beam**	**151.25**	**29**	PKPbc	**PKiKP**	**05 16 11.3**	**+0.5**
	comp=Z,15nm,0.5s,baz=295,slow=3.1,SNR=63						
ZALV	**Zalesovo Beam**	**151.25**	**29**		**PKPbc**	**05 16 09.8**	**-0.4**
KSH	**Kashi**	**152.41**	**62**	PKPbc	**PKiKP**	**05 16 14.3**	**+0.5**
KSH				pPKP	sPKPbc	05 16 21.9	+4.2
MKAR	**Makanchi Array**	**154.36**	**44**	PKPbc	**PKiKP**	**05 16 17.9**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=8.5,slow=2.5,SNR=4.5						
MKAR				PKPab	**PKPab**	**05 16 32.6**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=260,slow=3.6,SNR=4.1						
MKAR	**Makanchi Array**	**154.36**	**44**		**PKPab**	**05 16 31.1**	**-0.5**
LZH	**Lanzhou**	**173.47**	**31**	*e*PKP	**PKPdf**	**05 16 25.9**	**-1.1**

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*IDC **04** 05:08:11.2±0.3, 36°.89N×98°.37W, h0^{km}, mb3.5/2, mb1 3.8/7, mb1mx3.6/45, mbtmp3.5/7, ML3.5/5, Error ellipse: s-maj=3.1km s-min=2.6km az=115.0*

*NEIC **04** 05:08:12.9, 36°.83N×98°.26W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M$_{rr}$-4.92; M$_{\theta\theta}$3.62; M$_{\phi\phi}$1.30; M$_{r\theta}$-4.34; M$_{\theta\phi}$4.00; M$_{\phi r}$0.83; Fault plane solution: M$_0$7.41000×10^{13} NP1:φ$_s$206.00000°, δ38.00000°, λ-137.00000°. NP2:φ$_s$80.00000°, δ65.00000°, λ-60.00000°. Principal axes: T 7.4168, Plg15.0000°, Azm149.0000°; N 0.0012, Plg27.0000°, Azm246.0000°; P -7.4181, Plg59.0000°, Azm33.0000°;*

*TUL **04** 05:08:12.9±0.5, 36°.83N±0°.02×98°.27W±0°.03, h5^{km}±6^{km}, ML3.7, mb_Lg3.6/95(NEIC), Mwr3.2/7(SLM) Error ellipse: s-maj=3.8km s-min=2.4km az=78.0*

*NEIC **04** 05:08:13.8±0.5, 36°.83N±0°.02×98°.27W±0°.03, h5^{km}±5^{km}, Error ellipse: s-maj=3.4km s-min=2.0km az=65.0*

*ANF **04** 05:08:13.1±0.6, 36°.83N×98°.26W, h4^{km}±5^{km}, ML4.4/26, Error ellipse: s-maj=2.4km s-min=2.0km az=58.0*

ISC 04 05:08:13.0±0.8**, 36°.84N**±0°.02×**98°.26W**±0°.02**, h9**^{km}±5^{km}**, n151, σ1^{s}17**/142**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	**Salt Plains WL**	**0.06**	**136**	Pg	**Pg**	**05 08 14.7**	**-0.3**
OK032				Sg	**Sg**	**05 08 16.0**	**-0.4**
KAN14	**Manchester OK**	**0.26**	**65**		**Pg**	**05 08 18.9**	**+0.5**
KAN10	**Anthony SW Sta**	**0.31**	**25**	Pg	**Pg**	**05 08 19.7**	**+0.5**
KAN10					**Sg**	**05 08 24.5**	**+1.2**
GC02	**Grant County #**	**0.32**	**89**	Pg	**Pg**	**05 08 19.8**	**+0.4**
GC02				Sg	**Sg**	**05 08 24.6**	**+0.9**
CROK	**Carrier**	**0.41**	**147**	Pg	**Pg**	**05 08 21.0**	**0.0**
KAN16	**Harper SW Stat**	**0.41**	**22**	Pg	**Pg**	**05 08 21.6**	**+0.5**
KAN16				Sg	**Sg**	**05 08 27.8**	**+1.2**
KAN17	**Caldwell West**	**0.44**	**63**	Pg	**Pg**	**05 08 22.1**	**+0.4**
KAN08	**Anthony NE Sta**	**0.45**	**31**		**Pg**	**05 08 22.3**	**+0.5**
KAN08				Sg	**Sg**	**05 08 28.8**	**+1.1**
KAN12	**Harper NE Stat**	**0.50**	**25**	Pg	**Pg**	**05 08 23.2**	**+0.4**
KAN01	**Argonia South**	**0.51**	**52**	Pg	**Pg**	**05 08 23.4**	**+0.5**
KAN06	**Argonia West S**	**0.52**	**38**		**Pg**	**05 08 23.6**	**+0.5**
KAN09	**Caldwell North**	**0.59**	**60**	Pg	**Pg**	**05 08 24.9**	**+0.4**
KAN13	**South Haven SW**	**0.65**	**75**		**Pg**	**05 08 25.8**	**+0.2**
U32A	**Winter Ranch,**	**0.76**	**232**		**Pg**	**05 08 27.0**	**-0.6**
U32A	**Winter Ranch,**	**0.76**	**232**	P	**Pg**	**05 08 27.0**	**-0.6**
	baz=52,SNR=170						
BLOK	**Blackwell**	**0.84**	**95**	Pg	**Pg**	**05 08 29.1**	**-0.2**
OK029	**Liberty Lake**	**1.23**	**148**		**Pb**	**05 08 35.7**	**-0.8**
BCOK	**Bluff Creek, N**	**1.30**	**156**	Pg	**Pn**	**05 08 36.6**	**-0.7**
T35A	**Sooner Cattle**	**1.40**	**87**		**Pn**	**05 08 39.1**	**+0.3**
T35B	**Sooner Cattle**	**1.40**	**87**	P	**Pn**	**05 08 39.1**	**+0.3**
	baz=267,SNR=257						
T35B				S	**Sg**	**05 08 58.0**	**-0.2**
	baz=267						
QUOK	**Quay**	**1.42**	**118**		**Pn**	**05 08 39.2**	**+0.2**
OK009	**Oakdale Elemen**	**1.43**	**152**		**Pn**	**05 08 39.4**	**+0.2**
OK031	**S. Brethren Rd**	**1.45**	**127**		**Pn**	**05 08 39.6**	**+0.1**
OK025	**Westminster Rd**	**1.47**	**149**		**Pn**	**05 08 39.9**	**+0.2**
OK034	**N. Norfolk Rd.**	**1.50**	**123**		**Pn**	**05 08 40.4**	**+0.2**
OK030	**Cody Creek RV**	**1.50**	**127**		**Pn**	**05 08 40.5**	**+0.3**
R32A	**Long Quarter,**	**1.62**	**347**		**Pb**	**05 08 42.9**	**-0.2**
R32A	**Long Quarter,**	**1.62**	**347**	P	**Pb**	**05 08 42.9**	**-0.2**
	baz=167,SNR=132						
R32A				S	**Sb**	**05 09 04.7**	**+1.2**
	baz=167						
TUL1	**Leonard**	**2.20**	**114**		**Pn**	**05 08 50.5**	**+0.7**
TUL1	**Leonard**	**2.20**	**114**	P	**Pn**	**05 08 50.4**	**+0.7**
	baz=296,SNR=221						
TUL1	**Leonard**	**2.20**	**114**	P	**Pn**	**05 08 50.3**	**+0.6**
	baz=296,SNR=95						
TUL1				Sb	**Sb**	**05 09 21.5**	**+1.2**
	baz=296						
X34A	**Smith Ranch, M**	**2.27**	**171**		**Pn**	**05 08 51.8**	**+1.1**
CBKS	**Cedar Bluff**	**2.29**	**330**	Pn	**Pn**	**05 08 52.3**	**+1.3**
CBKS	**Cedar Bluff**	**2.29**	**330**	P	**Pn**	**05 08 52.1**	**+1.1**
	baz=149,SNR=99						
CBKS				S	**Sb**	**05 09 21.9**	**-1.0**
	baz=149						
CBKS	**Cedar Bluff**	**2.29**	**330**	P	**Pn**	**05 08 52.2**	**+1.2**
	baz=149,SNR=62						
CBKS				S	**Sn**	**05 09 20.2**	**+0.9**
	baz=149						
KSU1	**Kansas State U**	**2.60**	**30**	Pn	**Pn**	**05 08 56.8**	**+1.5**
KSU1				IAmb_Lg		05 09 43.3	
	comp=Z,225nm,0.9s						
KSU1	**Kansas State U**	**2.60**	**30**	P	**Pn**	**05 08 56.8**	**+1.5**
	baz=210,SNR=31						
KSU1	**Kansas State U**	**2.60**	**30**	P	**Pn**	**05 08 55.8**	**+0.5**
	baz=210,SNR=36						
KSU1				Sb	**Sb**	**05 09 34.0**	**+2.0**
	baz=210						
LOOK	**Love County**	**2.98**	**162**		**Pn**	**05 09 01.5**	**+1.0**
LOOK				IAmb_Lg		05 09 52.2	
	comp=Z,130nm,0.8s						
U38A	**Gravette**	**3.14**	**96**	Pn	**Pn**	**05 09 03.5**	**+0.8**
U38A				IAmb_Lg		05 09 57.7	
	comp=Z,207nm,0.7s						
U38A	**Gravette**	**3.14**	**96**	P	**Pn**	**05 09 03.8**	**+1.1**
	baz=278,SNR=78						
X37A	**Clayton**	**3.25**	**133**		**Pn**	**05 09 05.1**	**+0.8**
X37A				IAmb_Lg		05 10 02.3	
	comp=Z,138nm,0.8s						
X37A	**Clayton**	**3.25**	**133**	P	**Pn**	**05 09 05.1**	**+0.8**
	baz=315,SNR=82						
X37A				S	**Sn**	**05 09 45.9**	**+2.8**
	baz=315						
AMTX	**Amarillo**	**3.40**	**236**	Pn	**Pn**	**05 09 07.9**	**+1.6**
AMTX				IAmb_Lg		05 10 00.9	
	comp=Z,104nm,0.7s						
AMTX	**Amarillo**	**3.40**	**236**	P	**Pn**	**05 09 07.9**	**+1.6**
	baz=54,SNR=6.8						
AMTX	**Amarillo**	**3.40**	**236**	P	**Pn**	**05 09 07.7**	**+1.3**
	baz=54						
AMTX				Sb	**Sb**	**05 09 57.8**	**+2.9**
	baz=54						
HHAR	**Hobbs**	**3.52**	**98**		**Pn**	**05 09 09.0**	**+1.0**
HHAR				IAmb_Lg		05 10 13.1	
	comp=Z,150nm,0.9s						
HHAR	**Hobbs**	**3.52**	**98**	P	**Pn**	**05 09 09.0**	**+1.0**
	baz=280						
Z35A	**Perchaven, San**	**3.60**	**166**		**Pn**	**05 09 09.7**	**+0.7**
Z35A				IAmb_Lg		05 10 16.2	
	comp=Z,152nm,1.1s						
Z35A	**Perchaven, San**	**3.60**	**166**	P	**Pn**	**05 09 09.7**	**+0.7**
	baz=347,SNR=25						
Z35A				S	**Sn**	**05 09 53.5**	**+1.9**
	baz=347						
N33B	**J Bar K, Exete**	**3.94**	**9**	P	**Pn**	**05 09 13.9**	**+0.2**
	baz=189,SNR=15						
N33A	**J Bar K, Exete**	**3.94**	**9**		**Pn**	**05 09 13.7**	**0.0**
N33A				IAmb_Lg		05 10 21.9	
	comp=Z,102nm,0.8s						
W39A	**Magazine**	**3.98**	**113**		**Pn**	**05 09 15.0**	**+0.7**
W39A				IAmb_Lg		05 10 27.3	
	comp=Z,182nm,0.7s						
W39A	**Magazine**	**3.98**	**113**	P	**Pn**	**05 09 15.3**	**+1.0**
	baz=296,SNR=45						
W39A	**Magazine**	**3.98**	**113**	P	**Pn**	**05 09 15.3**	**+1.0**
	baz=296,SNR=7.0						
W39A				S	**Sn**	**05 10 01.2**	**+0.1**
	baz=296						
S39A	**Bolivar**	**4.03**	**76**		**Pn**	**05 09 15.8**	**+0.9**
S39A				IAmb_Lg		05 10 21.9	
	comp=Z,100nm,0.7s						
S39A	**Bolivar**	**4.03**	**76**	P	**Pn**	**05 09 15.9**	**+0.9**
	baz=259,SNR=54						
KSCO	**Kaye Shedlock'**	**4.07**	**303**		**Pn**	**05 09 16.9**	**+1.2**
KSCO	**Kaye Shedlock'**	**4.07**	**303**	P	**Pn**	**05 09 16.7**	**+1.1**
	baz=121,SNR=12						
KSCO	**Kaye Shedlock'**	**4.07**	**303**	P	**Pn**	**05 09 16.7**	**+1.1**
	baz=121						
KSCO				S	**Sn**	**05 10 04.1**	**+0.5**
	baz=121						
ABTX	**Abilene, Hawle**	**4.36**	**196**		**Pn**	**05 09 19.5**	**0.0**
ABTX	**Abilene, Hawle**	**4.36**	**196**	P	**Pn**	**05 09 19.6**	**0.0**
	baz=15						
ABTX	**Abilene, Hawle**	**4.36**	**196**	P	**Pn**	**05 09 19.3**	**-0.2**
	baz=15						
ABTX				Sb	**Sb**	**05 10 27.3**	**+4.7**
	baz=15						
U40A	**Yellville**	**4.38**	**95**	IAmb_Lg		05 10 31.5	
	comp=Z,130nm,0.7s						
U40A	**Yellville**	**4.38**	**95**	P	**Pn**	**05 09 20.4**	**+0.6**
	baz=278,SNR=34						
U40A				P	**Pn**	**05 09 20.4**	**+0.6**
	baz=278,SNR=34						
U40A	**Yellville**	**4.38**	**95**	P	**Pn**	**05 09 20.3**	**+0.6**
	baz=278,SNR=14						
U40A				S	**Sn**	**05 10 10.7**	**-0.1**
	baz=278						
MIAR	**Mount Ida**	**4.45**	**120**	IAmb_Lg		05 10 33.5	
	comp=Z,127nm,0.8s						
MIAR	**Mount Ida**	**4.45**	**120**	P	**Pn**	**05 09 21.9**	**+1.2**
	baz=302,SNR=55						
MIAR	**Mount Ida**	**4.45**	**120**	P	**Pn**	**05 09 21.7**	**+1.0**
	baz=302,SNR=6.6						
MIAR				S	**Sn**	**05 10 12.7**	**+0.1**
	baz=302						
Z38A	**Mt. Pleasant**	**4.47**	**142**	IAmb_Lg		05 10 38.2	
	comp=Z,121nm,0.8s						
Z38A	**Mt. Pleasant**	**4.47**	**142**	P	**Pn**	**05 09 21.7**	**+0.7**
	baz=324,SNR=6.7						
BGNE	**Belgrade**	**4.56**	**1**	Pn	**Pn**	**05 09 22.8**	**+0.6**
BGNE	**Belgrade**	**4.56**	**1**	P	**Pn**	**05 09 23.1**	**+0.9**
	baz=181,SNR=69						
BGNE	**Belgrade**	**4.56**	**1**	P	**Pn**	**05 09 23.2**	**+1.0**
	baz=181,SNR=17						
BGNE				S	**Sn**	**05 10 15.4**	**0.0**
	baz=181						
P38A	**Dawn**	**4.64**	**52**	IAmb_Lg		05 10 52.6	
	comp=Z,79nm,0.8s						
P38A	**Dawn**	**4.64**	**52**	P	**Pn**	**05 09 24.3**	**+0.9**
	baz=234,SNR=23						
MSTX	**Muleshoe**	**4.67**	**233**		**Pn**	**05 09 24.7**	**+0.8**
MSTX	**Muleshoe**	**4.67**	**233**	P	**Pn**	**05 09 24.6**	**+0.8**
	baz=51,SNR=8.5						
MSTX	**Muleshoe**	**4.67**	**233**	P	**Pn**	**05 09 24.2**	**+0.4**
	baz=51,SNR=6.5						
MSTX				Sb	**Sb**	**05 10 35.8**	**+4.2**
	baz=51						
MGMO	**Mountain Grove**	**4.81**	**85**	IAmb_Lg		05 10 48.2	
	comp=Z,106nm,0.8s						
WHTX	**Lake Whitney,**	**4.89**	**172**	P	**Pn**	**05 09 26.9**	**+0.3**
	baz=352,SNR=24						
WHTX	**Lake Whitney,**	**4.89**	**172**	P	**Pn**	**05 09 27.0**	**+0.3**
	baz=352						
WHTX				Sb	**Sb**	**05 10 42.4**	**+4.7**
	baz=352						
T25A	**Trinidad**	**4.93**	**275**	P	**Pn**	**05 09 28.5**	**+1.0**
	baz=92						
T25A				S	**Sn**	**05 10 24.8**	**-0.1**
	baz=92						
R40A	**Maddies Statio**	**4.97**	**71**	IAmb_Lg		05 10 57.7	
	comp=Z,78nm,1.1s						
X40A	**Basin Creek Fa**	**5.00**	**116**	IAmb_Lg		05 10 53.7	
	comp=Z,74nm,0.7s						
X40A	**Basin Creek Fa**	**5.00**	**116**	P	**Pn**	**05 09 29.4**	**+1.1**
	baz=300,SNR=50						
X40A				P	**Pn**	**05 09 29.4**	**+1.1**
	baz=300,SNR=50						
X40A	**Basin Creek Fa**	**5.00**	**116**	P	**Pn**	**05 09 29.2**	**+0.9**
	baz=300,SNR=25						
X40A				S	**Sn**	**05 10 26.6**	**+0.3**
	baz=300						
FCAR	**Ozark Folk Cen**	**5.04**	**99**	IAmb_Lg		05 10 54.8	
	comp=Z,75nm,0.7s						
OGNE	**Ogallala**	**5.04**	**325**	IAmb_Lg		05 10 54.3	
	comp=Z,121nm,0.7s						
OGNE	**Ogallala**	**5.04**	**325**	P	**Pn**	**05 09 30.3**	**+1.4**
	baz=143,SNR=23						
OGNE	**Ogallala**	**5.04**	**325**	P	**Pn**	**05 09 30.6**	**+1.7**
	baz=143,SNR=8.6						
OGNE				S	**Sn**	**05 10 28.6**	**+1.2**
	baz=143						
WHAR	**Wooly Hollow**	**5.08**	**106**	IAmb_Lg		05 11 00.6	
	comp=Z,89nm,0.7s						
W41B	**Gary Mavity, V**	**5.15**	**107**	P	**Pn**	**05 09 30.9**	**+0.6**
	baz=291,SNR=21						
W41B	**Gary Mavity, V**	**5.15**	**107**	P	**Pn**	**05 09 30.8**	**+0.5**
	baz=291						
W41B				S	**Sn**	**05 10 29.7**	**-0.2**
	baz=291						
237A	**Washetta, Mont**	**5.24**	**157**	IAmb_Lg		05 11 09.0	
	comp=Z,106nm,1.0s						
237A	**Washetta, Mont**	**5.24**	**157**	P	**Pn**	**05 09 31.1**	**-0.5**
	baz=338,SNR=31						
WLAR	**White Oak Lake**	**5.26**	**125**	IAmb_Lg		05 11 08.9	
	comp=Z,84nm,0.7s						
N38A	**Joes South For**	**5.56**	**43**	IAmb_Lg		05 11 20.1	
	comp=Z,137nm,0.9s						
N38A	**Joes South For**	**5.56**	**43**	P	**Pn**	**05 09 36.6**	**+0.6**
	baz=226,SNR=11						
P40A	**Paris**	**5.58**	**59**	IAmb_Lg		05 11 16.6	
	comp=Z,127nm,0.8s						
CCM	**Cathedral Cave**	**5.71**	**76**	P	**Pn**	**05 09 38.6**	**+0.6**
	baz=260						
Z41A	**Richland Creek**	**5.73**	**127**	S	**Sn**	**05 10 42.4**	**-1.7**
	baz=310						
LCAR	**Lake Charles**	**5.78**	**96**	IAmb_Lg		05 11 19.4	
	comp=Z,80nm,0.7s						
K31A	**O'Neill**	**5.78**	**356**	IAmb_Lg		05 11 27.9	
	comp=Z,123nm,0.7s						
Q24A	**Divide**	**5.84**	**293**	P	**Pn**	**05 09 40.7**	**+0.5**
	baz=109						
Q24A				S	**Sn**	**05 10 47.2**	**-0.2**
	baz=109						
NATX	**Nacogdoches**	**5.88**	**149**	IAmb_Lg		05 11 35.4	
	comp=Z,52nm,0.9s						
NATX	**Nacogdoches**	**5.88**	**149**	S	**Sn**	**05 10 45.3**	**-2.6**
	baz=331						
CCAR	**Cane Creek**	**6.05**	**117**	IAmb_Lg		05 11 35.1	
	comp=Z,101nm,0.9s						
435B	**Jarrell**	**6.07**	**175**	IAmb_Lg		05 11 27.1	
	comp=Z,98nm,0.8s						
435B	**Jarrell**	**6.07**	**175**	P	**Pn**	**05 09 42.8**	**-0.3**
	baz=355,SNR=5.7						
435B	**Jarrell**	**6.07**	**175**	P	**Pn**	**05 09 42.7**	**-0.3**
	baz=355						
PBMO	**Poplar Bluff**	**6.28**	**88**	IAmb_Lg		05 11 41.1	
	comp=Z,90nm,0.7s						
FVM	**French Village**	**6.34**	**77**	IAmb_Lg		05 11 44.4	
	comp=Z,70nm,0.8s						
SCIA	**State Center**	**6.39**	**36**	IAmb_Lg		05 11 43.0	
	comp=Z,66nm,0.8s						
JCT	**Junction City**	**6.48**	**192**	P	**Pn**	**05 09 47.6**	**-1.0**
	baz=11						
ISCO	**Idaho Springs**	**6.49**	**299**	P	**Pn**	**05 09 49.6**	**+0.6**
	baz=115						
LPAR	**Lepanto**	**6.55**	**99**	IAmb_Lg		05 11 55.9	
	comp=Z,94nm,0.8s						
SLM	**Saint Louis**	**6.61**	**72**	IAmb_Lg		05 11 40.4	
	comp=Z,47nm,0.8s						
ANMO	**Albuquerque**	**6.92**	**257**	Pn	**Pn**	**05 09 53.4**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=83,slow=16,SNR=2.7						
ANMO				Lg	Lg	05 11 47.4	
	comp=Z,3.7nm,0.3s,baz=340,slow=19,SNR=10						
N41A	**Harden Midland**	**6.95**	**54**	IAmb_Lg		05 11 59.8	
	comp=Z,62nm,0.7s						
143A	**Socs Landing,**	**6.99**	**124**	IAmb_Lg		05 12 11.2	
	comp=Z,51nm,0.8s						
ECSD	**EROS Data Cent**	**7.00**	**10**	P	**Pn**	**05 09 55.0**	**-0.6**
	baz=191						
K38A	**Parkersburg**	**7.17**	**34**	IAmb_Lg		05 12 12.0	
	comp=Z,78nm,0.7s						
N23A	**Red Feather La**	**7.23**	**306**	P	**Pn**	**05 10 00.1**	**+1.0**
	baz=122						
S44A	**Carbondale**	**7.23**	**81**	IAmb_Lg		05 12 10.7	
	comp=Z,61nm,0.8s						
SIUC	**Southern Illin**	**7.26**	**80**	IAmb_Lg		05 12 06.9	
	comp=Z,90nm,0.8s						
L40A	**Anamosa**	**7.54**	**44**	IAmb_Lg		05 12 16.2	
	comp=Z,68nm,1.0s						
W45A	**Hickory Valley**	**7.54**	**100**	IAmb_Lg		05 12 13.1	
	comp=Z,86nm,0.8s						
SUSD	**Miller**	**7.61**	**356**	IAmb_Lg		05 12 19.9	
	comp=Z,54nm,0.9s						
MNTX	**Cornudas Mount**	**7.81**	**231**	P	**Pn**	**05 10 06.9**	**-0.1**
	baz=47,SNR=20						
MNTX	**Cornudas Mount**	**7.81**	**231**	P	**Pn**	**05 10 07.3**	**+0.3**
	baz=47,SNR=6.2						
HDIL	**Hopedale**	**7.93**	**59**	P	**Pn**	**05 10 08.8**	**+0.3**
	baz=245						
735A	**Kenedy**	**7.98**	**177**	IAmb_Lg		05 12 38.5	
	comp=Z,34nm,0.7s						
O44A	**Mansfield**	**8.36**	**64**	IAmb_Lg		05 12 41.8	
	comp=Z,68nm,0.9s						
L42A	**Oliver, Polo**	**8.41**	**50**	IAmb_Lg		05 12 47.3	
	comp=Z,47nm,0.8s						
WVT	**Waverly**	**8.43**	**92**	P	**Pn**	**05 10 14.8**	**-0.6**
	baz=278						
RSSD	**Black Hills**	**8.49**	**331**	P	**Pn**	**05 10 17.7**	**+1.3**
	baz=147						
K22A	**Casper**	**8.61**	**315**	IAmb_Lg		05 13 03.6	
	comp=Z,50nm,1.0s						
K22A	**Casper**	**8.61**	**315**	P	**Pn**	**05 10 18.5**	**+0.6**
	baz=130						
JFWS	**Jewell Farm**	**8.64**	**43**	IAmb_Lg		05 12 57.5	
	comp=Z,61nm,0.7s						
JFWS	**Jewell Farm**	**8.64**	**43**	P	**Pn**	**05 10 18.3**	**+0.1**
	baz=228,SNR=18						
JFWS	**Jewell Farm**	**8.64**	**43**	P	**Pn**	**05 10 18.3**	**+0.1**
	baz=228,SNR=5.3						
TXAR	**Lajitas Array**	**8.75**	**213**	Pn	**Pn**	**05 10 19.2**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=33,slow=11,SNR=46						
TXAR				Pg	Pg	05 10 50.1	-11
	comp=Z,0.8nm,0.3s,baz=33,slow=13,SNR=5.4						
TXAR				Lg	Lg	05 12 49.4	
	comp=Z,1.8nm,0.3s,baz=39,slow=26,SNR=9.4						
SPMN	**Marine on St.**	**9.33**	**24**	P	**Pn**	**05 10 28.6**	**+1.0**
	baz=208						
SFIN	**Lafayette**	**9.42**	**65**	P	**Pn**	**05 10 29.4**	**+0.5**
	baz=251						
E28A	**Huff**	**9.89**	**350**	IAmb_Lg		05 13 41.9	
	comp=Z,40nm,0.8s						
PDAR	**Pinedale Array**	**10.51**	**308**	Pn	**Pn**	**05 10 41.9**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=126,slow=16,SNR=4.3						
PDAR				Pg		05 11 22.8	
	comp=Z,0.5nm,0.3s,baz=120,slow=16,SNR=4.3						
PDAR				Lg	Lg	05 13 44.4	
	comp=Z,1.1nm,0.3s,baz=118,slow=38,SNR=5.8						
TKL	**Tuckaleechee C**	**11.76**	**91**	Pn	**Pn**	**05 11 00.8**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=270,slow=15,SNR=8.6						
TKL				Lg	Lg	05 14 23.7	
	comp=Z,0.6nm,0.3s,baz=12,slow=22,SNR=5.1						
ULM	**Lac du Bonnet**	**13.51**	**7**	Pn	**Pn**	**05 11 21.5**	**-3.3**
	comp=Z,0.5nm,0.3s,baz=182,slow=14,SNR=2.1						
ULM				Sn	Sn	05 13 43.5	-11
	comp=Z,0.3nm,0.3s,baz=68,slow=13,SNR=3.1						
ULM				Lg	Lg	05 15 17.4	
	comp=Z,0.5nm,0.3s,baz=172,slow=4.0,SNR=3.9						
YKA	**Yellowknife Ar**	**27.60**	**344**	P	**P**	**05 13 59.8**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=146,slow=8.4,SNR=1.8						
ILAR	**Eielson Array**	**39.94**	**330**	P	**P**	**05 15 46.6**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=104,slow=6.6,SNR=4.1						

IDC 04 05:41:32.6±2.1**, 3°.97N**×**127°.24E, h0**^{km}**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.2**/58**, mbtmp3.6**/4**, Error ellipse: s-maj=150.9km s-min=28.0km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.76**	**164**	P	P	05 46 55.2	-1.1
	1.6nm,0.7s,baz=343,slow=11,SNR=25						
ASAR	**Alice Springs**	**28.23**	**167**	P	P	05 47 29.2	+1.7
	0.2nm,0.6s,baz=346,slow=12,SNR=5.1						
STKA	**Stephens Creek**	**38.17**	**160**	P	P	05 48 53.5	-0.5
	1.0nm,0.6s,baz=336,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**57.65**	**325**	P	P	05 51 24.7	-0.1
	0.2nm,0.4s,baz=118,slow=7.5,SNR=1.9						

RSNC ***04*** *05:41:54.1±1.1, 4°.68N×76°.21W, h121^{km}±4^{km}, ML3.3, Mw3.7*
UPA ***04*** *05:41:55.5±0.8, 4°.78N×76°.28W, h17^{km}±16^{km}, MW4.6*
ISC 04 05:41:53.4±1.2, **4°.69N**±0°.02×**76°.22W**±0°.03, **h124**^{km}±7^{km}, **n48**, σ**1^{s}12**/90, **8C-7D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLMC	San Jos del P	0.23	344	⇓iP	Pn	05 42 10.4	-0.3
PLMC				eS	Sn	05 42 23.7	0.0
YOTC	Yotoco, Valle	0.71	190	⇓iP	Pn	05 42 13.3	-0.1
YOTC				eS	Sn	05 42 28.2	-0.3
YOTC				i		05 42 30.8	
	comp=Z,427nm,0.2s						
ANIL	Santa Ana	0.84	103	eP	Pn	05 42 14.3	-0.3
ANIL				eS	Sn	05 42 30.2	-0.4
GUY2C	Guyana, Caldas	1.01	58	eP	Pn	05 42 16.6	+0.3
GUY2C				eS	Sn	05 42 33.6	-0.1
GUY2C				i		05 42 35.3	
	comp=Z,427nm,0.4s						
CIBA1	Ibague, SGC	1.01	104	eP	Pn	05 42 17.1	+1.0
CIBA1				eS	Sn	05 42 33.0	-0.2
PIZC	Pizarro, Choco	1.17	284	⇑iP	Pn	05 42 18.4	+1.0
PIZC				eS	Sn	05 42 36.5	+0.8
PIZC				i		05 42 45.7	
	comp=Z,609nm,0.5s						
CBOC	Ciudad Bolivar	1.19	10	eP	Pn	05 42 17.8	-0.1
CBOC				eS	Sn	05 42 36.6	+0.2
CBOC				i		05 42 38.8	
	comp=Z,260nm,0.2s						
ORTC	Ortega, Tolima	1.24	128	⇓iP	Pn	05 42 18.6	+0.3
ORTC				eS	Sn	05 42 37.0	-0.2
ORTC				i		05 42 38.5	
	comp=Z,621nm,0.4s						
NORC	Norcasia	1.60	57	⇑iP	Pn	05 42 22.9	+0.5
NORC				eS	Sn	05 42 44.4	0.0
NORC				i		05 42 46.7	
	comp=Z,260nm,0.3s						
HELC	Santa Helena	1.65	25	eP	Pn	05 42 23.3	+0.2
HELC				eS	Sn	05 42 45.7	-0.1
HELC				i		05 42 48.7	
	comp=Z,180nm,0.7s						
HELC	Santa Helena	1.65	25	eP	Pn	05 42 23.4	+0.2
HELC				eS	Sn	05 42 42.6	-3.2
PRAC	Prado	1.65	126	⇑iP	Pn	05 42 23.4	+0.6
PRAC				eS	Sn	05 42 45.6	+0.4
PRAC				i		05 42 46.7	
	comp=N,281nm,0.3s						
PRAC				i		05 42 48.1	
	comp=Z,375nm,0.2s						
MARP	Paez Belalcaza	1.85	172	⇓iP	Pn	05 42 26.3	+0.7
MARP				eS	Sn	05 42 49.7	-0.4
MARP				i		05 42 51.3	
	comp=Z,198nm,0.2s						
ROSC	El Rosal	1.90	85	⇑iP	Pn	05 42 28.4	+2.1
ROSC				eS	Sn	05 42 53.5	+2.3
SOLC	Bahia Solano	1.93	322	eP	Pn	05 42 26.4	+0.1
SOLC				eS	Sn	05 42 51.1	-0.2
SOLC				i		05 42 52.5	
	comp=Z,89nm,0.2s						
BETC	Betania	2.14	159	⇑eP	Pn	05 42 29.6	+0.7
BETC				eS	Sn	05 42 55.4	-0.6
BETC				i		05 42 58.8	
	comp=Z,186nm,0.3s						
POPC	Popayan, Colom	2.18	192	eP	Pn	05 42 29.3	-0.3
POPC				eS	Sn	05 42 56.6	-0.6
POPC				i		05 42 57.3	
	comp=Z,80nm,0.2s						
DBBC	Dabeiba	2.31	0	eP	Pn	05 42 31.7	+0.5
DBBC				i		05 43 07.9	
	comp=Z,446nm,0.3s						
SPBC	San Pablo de B	2.34	66	⇑iP	Pn	05 42 32.5	+1.0
SPBC				eS	Sn	05 43 02.4	+1.7
SPBC				i		05 43 13.1	
	comp=Z,42nm,0.8s						
PCON	Cinco Dias	2.35	184	eP	Pn	05 42 33.3	+1.3
PCON				eS	Sn	05 43 02.1	+0.6
PCON				i		05 43 04.0	
	comp=Z,178nm,0.4s						
PTBC	PUERTO BERRIO,	2.54	44	⇑iP	Pn	05 42 34.1	+0.2
PTBC				eS	Sn	05 43 04.2	-1.0
PTBC				i		05 43 06.5	
	comp=Z,75nm,0.3s						
SOTA	Rioblanco	2.56	189	eP	Pn	05 42 35.2	+0.5
SOTA				eS	Sn	05 43 05.7	-0.6
GARC	Garzon, Huila	2.59	164	⇓iP	Pn	05 42 35.0	+0.2
GARC				eS	Sn	05 43 05.7	-0.8
GARC				i		05 43 06.6	
	comp=Z,344nm,0.3s						
BBAC	Balboa, Cauca	2.84	201	eS	Sn	05 43 11.3	-0.9
PTAC	Punta Ardita,	2.91	327	eP	Pn	05 42 38.6	-0.1
PTAC				eS	Sn	05 43 11.4	-2.2
PTAC				i		05 43 12.8	
	comp=Z,233nm,0.6s						
ZARC	Zaragoza, Cauc	3.10	26	eS	Sn	05 43 17.4	-0.6
UREC	San Jos de Ur	3.12	13	eP	Pn	05 42 41.9	+0.4
UREC				eS	Sn	05 43 17.2	-1.3
UREC				i		05 43 19.4	
	comp=Z,58nm,0.2s						
UREC	San Jos de Ur	3.12	13	eP	Pn	05 42 42.2	+0.8
UREC				eS	Sn	05 43 17.9	-0.6
MACC	Macarena, Meta	3.46	137	⇓eP	Pn	05 42 46.0	0.0
MACC				eS	Sn	05 43 24.4	-2.2
MACC				i		05 43 27.5	
	comp=Z,53nm,0.4s						
BRRC	Barranca, Sant	3.46	46	eP	Pn	05 42 45.6	-0.4
BRRC				eS	Sn	05 43 25.2	-1.5
BRRC				i		05 43 30.2	
	comp=Z,34nm,0.4s						
BARC	Barichara	3.57	58	eP	Pn	05 42 48.2	+0.7
BARC				eS	Sn	05 43 29.2	-0.2
BARC				i		05 43 36.4	
	comp=Z,26nm,0.6s						
GCUF	Volcan Galeras	3.62	198	eP	Pn	05 42 48.1	-0.3
GCUF				eS	Sn	05 43 29.1	-1.8
MONA	Monteria	4.09	8	eP	Pn	05 42 55.4	+1.0
MONA				eS	Sn	05 43 41.3	-0.3
GUVC	San Jose del G	4.17	121	eP	Pn	05 42 55.5	+0.1
GUVC				eS	Sn	05 43 42.1	-1.3
GUVC				i		05 44 03.6	
	comp=Z,47nm,0.4s						
PAMC	Pamplona, Colo	4.38	53	eP	Pn	05 42 58.9	+0.3
PAMC				eS	Sn	05 43 46.2	-2.9
PAMC				i		05 43 51.4	
	comp=Z,25nm,0.4s						
OCAC	Ocana	4.56	39	eP	Pn	05 43 01.0	+0.4
OCAC				eS	Sn	05 43 51.1	-1.8
OCAC				i		05 43 56.2	
	comp=Z,78nm,0.4s						
SMLC	San Martn de	4.61	27	eP	Pn	05 43 02.5	+1.2
SMLC				eS	Sn	05 43 50.6	-3.4
SMLC				i		05 43 53.1	
	comp=Z,48nm,0.2s						
CUSE	Cuicocha Este	4.87	207	eP	Pn	05 43 05.7	+0.6
CUSE				eS	Sn	05 43 58.5	-2.2
CUSE				i		05 44 01.7	
	comp=Z,41nm,0.3s						
PCRI3	Pocri, Los San	4.87	308	eS	Sn	05 44 00.1	-0.2
AZU	Azuero	5.07	308	⇓eP	Pn	05 43 09.2	+1.7
AZU				eS	Sn	05 44 04.9	-0.2
SJCC	San Jacinto, C	5.28	11	eP	Pn	05 43 12.0	+1.8
SJCC				eS	Sn	05 44 10.5	+0.4
CHIT3	Chitre	5.29	308	eP	Pn	05 43 12.3	+2.0
CHIT3				eS	Sn	05 44 10.2	0.0
CHPO	Chepo, Panama	5.30	327	⇑eP	Pn	05 43 10.6	+0.1
CHPO				eS	Sn	05 44 10.1	-0.4
CACAO	El Cacao, Vera	5.32	300	eP	Pn	05 43 12.5	+1.8
CACAO				eS	Sn	05 44 10.2	-0.8
UPA	Univ. de Panam	5.39	323	eP	Pn	05 43 00.6	-11
UPA				eS	Sn	05 44 33.0	+20
BCIP	Isla Barro Col	5.72	321	eP	Pn	05 43 16.2	+0.1
BCIP				eS	Sn	05 44 20.9	+0.2
BCIP	Isla Barro Col	5.72	321	eP	Pn	05 43 17.5	+1.3
BCIP				eS	Sn	05 44 19.9	-0.7
GMAL	Guarumal, Vera	5.84	302	eP	Pn	05 43 19.5	+1.7
GMAL				eS	Sn	05 44 23.9	+0.2

IDC ***04*** *05:48:03.5±1.8, 5°.93N×127°.10E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.2/62, mbtmp3.6/5, Error ellipse: s-maj=111.5km s-min=27.0km az=68.0*
ISC 04 05:48:13.9±1.5, **5°.8N**±0°.3×**126°.9E**±0°.4, **h83**^{km}, **n7**, σ**1^{s}09**/9, **mb3.6**/5, **1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	Davao City--Mi	1.90	313	⇑eP	Pn	05 48 43.6	-1.0
DMPH				eS	Sn	05 49 09.8	+1.8
KCP	Kidapawan	2.19	304	⇓eP	Pn	05 48 47.2	-1.2
FITZ	Fitzroy Crossi	23.77	183	P	P	05 53 19.1	+0.1
	0.6nm,0.7s,baz=2.6,slow=6.9,SNR=1.5						
WRA	Warramunga Arr	26.59	164	P	P	05 53 44.5	-0.1
	1.2nm,0.5s,baz=345,slow=10,SNR=17						
ASAR	Alice Springs	30.06	167	P	P	05 54 15.4	0.0
	0.3nm,0.5s,baz=345,slow=6.6,SNR=6.6						
ASAR				PcP	PcP	05 57 16.9	+1.2
	0.3nm,0.5s,baz=350,slow=2.5,SNR=4.2						
STKA	Stephens Creek	39.98	160	P	P	05 55 40.5	-0.1
	1.2nm,0.6s,baz=329,slow=8.5,SNR=2.8						
MKAR	Makanchi Array	55.99	324	P	P	05 57 43.6	-0.3
	0.4nm,0.6s,baz=121,slow=7.4,SNR=2.3						

IDC ***04*** *05:53:04.5±7.7, 43°.19N×148°.45E, h0^{km}, mb3.9/8, mb1 3.9/9, mb1mx3.7/60, mbtmp3.8/9, ML3.2/1, Error ellipse: s-maj=193.7km s-min=28.6km az=170.0*
JMA ***04*** *05:53:08.0±0.4, 43°.26N×148°.09E, h9^{km}, M3.6*
MOS ***04*** *05:53:09.1±1.3, 43°.29N×148°.33E, h43^{km}, mb4.0/1, Error ellipse: s-maj=23.4km s-min=14.2km az=131.6*
SKHL ***04*** *05:53:10.5±0.4, 43°.30N×148°.30E, h47^{km}±3^{km}, mb4.5/5*
ISC 04 05:53:05.8±2.3, **43°.32N**±0°.08×**148°.24E**±0°.07, **h2**^{km}±11^{km}, **n30**, σ**1^{s}22**/35, **mb4.0**/8, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	Shikotan	1.17	299	eP	Pb	05 53 29.2	+0.5
SHO				AMB	AMB	05 53 30.4	
	320nm,0.3s						
SHO				eS	Sg	05 53 43.5	+0.2
SHO				A	A	05 53 46.4	
	2μm,0.7s						
SHO				A	A	05 53 46.4	
	2μm,0.7s						
NEM2	Nemuro 2	1.82	272	P	Pn	05 53 38.5	+0.3
NEM2				eS	Sn	05 54 00.6	-1.3
NMR	Nemuro--Hokkai	1.83	273	ePN	Pg	05 53 41.4	+0.4
NMR				eS	Sg	05 54 03.7	-1.1
NMR	Nemuro--Hokkai	1.83	273	eP	Pg	05 53 41.1	+0.1
NMR				AMB	AMB	05 53 42.3	
	70nm,0.2s						
NMR				eS	Sb	05 54 02.5	-1.0
NMR				A	A	05 54 07.7	
	290nm,0.4s						
NMR				A	A	05 54 07.7	
	290nm,0.4s						
YUK	Yuzh-Kuril'sk	1.87	293	ePN	Pb	05 53 40.2	-0.5
YUK				eS	Sn	05 54 01.8	-1.2
YUK	Yuzh-Kuril'sk	1.87	293	eP	Pb	05 53 40.2	-0.5
YUK				AMB	AMB	05 53 41.9	
	260nm,0.5s						
YUK				eS	Sn	05 54 01.8	-1.2
YUK				A	A	05 54 12.6	
	770nm,0.6s						
YUK				A	A	05 54 12.6	
	970nm,0.6s						
KUR	Kuril'sk	1.94	352	ePN	Pn	05 53 41.3	+1.5
KUR				eS	Sn	05 54 03.1	-1.5
KUR				pmax	pmax		
	comp=Z,164nm,0.5s						
KUR				pmax	pmax		
	comp=E,41nm,0.2s						
KUR				pmax	pmax		
	comp=N,33nm,0.5s						
KUR				smax	smax		
	comp=N,312nm,0.2s						
KUR				smax	smax		
	comp=E,175nm,0.3s						
KUR	Kuril'sk	1.94	352	eP	Pn	05 53 41.3	+1.5
KUR				AMB	AMB	05 53 49.0	
	comp=E,160nm,0.5s						
KUR				eS	Sn	05 54 03.1	-1.5
KUR				A	A	05 54 08.0	
	comp=E,310nm,0.3s						
KUR				A	A	05 54 08.0	
	comp=E,180nm,0.3s						
JRA	Rausu	2.35	286	P	Pn	05 53 46.1	+0.7
JRA				eS	Sn	05 54 14.4	-0.4
JNSB	Nemuroshibetsu	2.40	282	P	Pn	05 53 47.0	+0.9
AKK	Akkeshi	2.50	264	eP	Pb	05 53 50.0	-1.5
AKK				eS	Sn	05 54 18.5	-0.2
JNK	Nakash	2.58	277	P	Pn	05 53 49.1	+0.5
JTKR	Abashiri--Toko	3.21	283	P	Pn	05 53 58.9	+1.6
JAR	Ashorobuto	3.26	271	P	Pn	05 53 59.4	+1.4
JCH	Churui	3.65	261	P	Pn	05 54 05.3	+2.0
ASAJ	Asahikawa	4.17	283	Pn	Pn	05 54 10.6	+0.1
	comp=E,1.0nm,0.3s,baz=124,slow=18,SNR=1.5						
ASAJ				Sn	Sn	05 55 02.6	+2.8
	comp=E,1.2nm,0.3s,baz=324,slow=17,SNR=1.8						
H11N2	WAKE ISLAND Hy	28.26	140	T	T	06 29 43.6	
	baz=331,slow=75,SNR=8.3						
H11N1	WAKE ISLAND Hy	28.27	140	T	T	06 29 43.0	
	baz=331,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	28.27	140	T	T	06 29 45.2	
	baz=331,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	29.23	142	T	T	06 31 01.8	
	baz=332,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	29.24	142	T	T	06 31 00.7	
	baz=332,slow=76,SNR=9.7						
H11S2	WAKE ISLAND Hy	29.25	142	T	T	06 31 01.8	
	baz=332,slow=76,SNR=7.6						
SONM	Songino Array	29.37	294	P	P	05 59 10.8	+0.5
	comp=E,0.8nm,0.7s,baz=91,slow=9.8,SNR=3.8						
ILAR	Eielson Array	41.37	36	P	P	06 00 50.8	-2.1
	comp=E,0.2nm,0.9s,baz=270,slow=6.3,SNR=1.1						
MKAR	Makanchi Array	45.49	298	P	P	06 01 26.8	+0.3
	comp=E,1.0nm,0.6s,baz=77,slow=9.4,SNR=7.6						
AKTO	Aktyubinsk	58.42	311	P	P	06 03 03.5	+0.8
	comp=E,1.2nm,0.7s,baz=84,slow=8.8,SNR=4.1						
FINES	FINESS Array B	65.62	333	P	P	06 03 52.0	+1.1
	comp=E,1.7nm,0.7s,baz=60,slow=8.2,SNR=5.8						
NOA	NORSAR Array B	70.29	339	P	P	06 04 21.2	+0.9
	comp=E,1.0nm,0.7s,baz=32,slow=6.6,SNR=5.1						
HFS	Hagfors	70.39	338	P	P	06 04 20.0	-0.9
	comp=E,2.7nm,0.8s,baz=60,slow=8.8,SNR=5.7						
AKASG	Malin Array Be	72.40	324	P	P	06 04 33.3	+0.1
	comp=E,0.5nm,0.5s,baz=42,slow=6.9,SNR=4.2						

IDC ***04*** *06:11:17.8±0.9, 2°.16S×138°.53E, h0^{km}, mb3.9/6, mb1 4.1/8, mb1mx3.9/32, mbtmp3.9/8, ML3.8/2, Error ellipse: s-maj=21.7km s-min=15.1km az=17.0*
DJA ***04*** *06:11:20.5±0.4, 2°S±5°×13°8E±°, h10^{km}, M4.2/6, mB6.1/1, mb4.4/6, MLv4.2/4, Mw(mB)5.7/1*
ISC 04 06:11:20.1±0.8, **2°.2S**±0°.1×**138°.49E**±0°.06, **h10**^{km}, **n14**, σ**1^{s}29**/14, **mb4.2**/5, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	Sarmi	0.33	42	P	Pg	06 11 27.6	+1.0
JAY	Jayapura	2.23	97	Pn	Pn	06 11 57.4	+0.2
	15nm,0.3s,baz=235,slow=11,SNR=58						
JAY				Lg	Lg	06 12 27.3	
	18nm,0.3s,baz=135,slow=20,SNR=6.6						
JAY	Jayapura	2.23	97	P	Pn	06 11 57.7	+0.5
SRPI	Serui, Papua	2.28	279	P	Pn	06 11 57.4	-0.4
FAKI	Fak Fak	6.27	264	P	Pn	06 12 53.1	+0.3
	0.2nm31nm,0.7s						
GTOI	Gorontalo	15.74	280	P	Pn	06 15 03.9	+1.8
	5.1nm,0.7s						
WRA	Warramunga Arr	18.06	193	P	Pn	06 15 30.8	-0.6
	0.4nm,0.3s,baz=15,slow=12,SNR=18						
WRA				S	Sn	06 18 40.2	-13
	0.1nm,0.3s,baz=14,slow=25,SNR=2.7						
FITZ	Fitzroy Crossi	20.19	218	P	P	06 15 54.8	-0.3
	1.4nm,0.9s,baz=90,slow=20,SNR=9.3						
FITZ				S	S	06 19 29.3	-13
	4.6nm,0.7s,baz=195,slow=13,SNR=8.0						
ASAR	Alice Springs	21.77	191	P	P	06 16 12.2	+0.1
	1.9nm,0.7s,baz=24,slow=10,SNR=23						
BBKI	Banjar Baru	23.65	266	P	P	06 16 34.3	+2.3
CMAR	Chiang Mai Arr	44.01	300	P	P	06 19 28.1	-0.1
	1.6nm,0.3s,baz=120,slow=6.5,SNR=7.9						
MKAR	Makanchi Array	69.28	322	P	P	06 22 27.4	-0.3
	2.9nm,0.8s,baz=112,slow=8.4,SNR=15						
ZALV	Zalesovo Beam	71.42	330	P	P	06 22 38.9	-1.6
	1.2nm,0.6s,baz=104,slow=6.3,SNR=5.4						
ILAR	Eielson Array	85.49	24	P	P	06 23 55.8	-2.2
	0.5nm,0.8s,baz=254,slow=3.5,SNR=5.2						

IDC ***04*** *06:15:21.3±0.8, 2°.12S×138°.49E, h0^{km}, mb4.0/7, mb1 4.2/9, mb1mx4.0/33, mbtmp4.1/9, ML4.0/2, MS3.6/9, Ms1 3.6/9, ms1mx3.3/39, Error ellipse: s-maj=19.9km s-min=14.9km az=19.0*
DJA ***04*** *06:15:22.4±0.4, 2°S±7°×13°8E±°, h10^{km}, M4.5/4, mb4.9/3, MLv4.3/4*
NEIC ***04*** *06:15:26.2±2.0, 2°.2S±0°.1×138°.50E±0°.07, h31^{km}±7^{km}, mb4.0/11, Error ellipse: s-maj=17.3km s-min=10.8km az=179.0*
ISC 04 06:15:22.8±0.6, **2°.22S**±0°.06×**138°.39E**±0°.05, **h10**^{km}, **n36**, σ**2^{s}11**/33, **mb4.0**/8, **MS3.6**/4, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	Sarmi	0.40	54	P	Pb	06 15 30.8	-1.2
SMPI				S	Sb	06 15 36.4	-1.7
SRPI	Serui, Papua	2.17	279	P	Pn	06 15 58.3	-0.8
JAY	Jayapura	2.33	97	Pn	Pn	06 16 01.3	-0.1
	19nm,0.3s,baz=230,slow=11,SNR=20						
JAY				Lg	Lg	06 16 32.4	
	36nm,0.3s,baz=114,slow=20,SNR=8.8						
JAY	Jayapura	2.33	97	P	Pn	06 16 01.2	-0.1
JAY				S	Sn	06 16 32.2	+2.1
FAKI	Fak Fak	6.17	263	P	Pn	06 16 53.4	-0.7
	0.1nm34nm,1.2s						
FAKI	Fak Fak	6.17	263		Pn	06 16 56.4	+2.3
SIJI	Sorong	7.25	281	LR	LR	06 20 29.4	
	comp=Z,461nm,19.6s,baz=329,slow=42						
PMG	Port Moresby	11.27	130	LR	LR	06 23 50.7	
	comp=Z,344nm,18.4s,baz=304,slow=45						
COEN	Coen	12.58	158	Pn	Pn	06 18 26.2	+4.1
MTN	Manton Dam	12.76	214	Pn	Pn	06 18 23.9	-0.6
SOEI	Soe	15.90	241		Pn	06 19 07.5	+0.4
KNRA	Kununurra	16.39	215	Pn	Pn	06 19 13.3	+0.1
KNRA				IAmb	IAmb	06 19 15.0	
	comp=Z,16nm,0.6s						
BATI	Baumata	16.64	241	Pn	P	06 19 20.0	+1.2
	comp=Z,15nm,0.3s,baz=80,slow=3.4,SNR=5.5						
GUMO	Guam	16.98	22	LR	LR	06 24 02.3	
	comp=Z,87nm,20.4s,baz=72,slow=31						
TOLI2	Tolitoli	17.91	280		P	06 19 34.6	+1.7
TOLI2				IAmb	IAmb	06 19 46.0	
	comp=Z,13nm,1.1s						
WRAB	Tennant Creek	18.04	192	P	Pn	06 19 34.4	+0.6
WRAB				IAmb	IAmb	06 19 56.4	
	comp=Z,9.7nm,0.8s						
WB2	Warramunga Arr	18.05	192	P	Pn	06 19 33.8	-0.1
WB2				IAmb	IAmb	06 19 56.6	
	comp=Z,15nm,1.0s						
WRA	Warramunga Arr	18.05	192	P	P	06 19 34.7	+0.3
	comp=Z,0.8nm,0.3s,baz=17,slow=12,SNR=8.7						
WRA				S	Sn	06 22 47.3	-8.2
	comp=Z,0.3nm,0.3s,baz=8.1,slow=23,SNR=4.4						
WRA				LR	LR	06 27 06.3	
	comp=Z,405nm,18.3s,baz=355,slow=39						
KAPI	Kappang	18.80	261	LR	LR	06 29 36.0	
	comp=Z,64nm,18.2s,baz=106,slow=45						
CTAO	Charters Tower	19.35	157	P	Pn	06 19 52.5	+2.8
CTAO				IAmb	IAmb	06 20 12.9	
	comp=Z,10nm,1.1s						
FITZ	Fitzroy Crossi	20.13	218	P	Pn	06 19 58.8	-0.3
	comp=Z,3.9nm,0.9s,baz=90,slow=12,SNR=2.1						
FITZ				S	S	06 23 32.9	-11
	comp=Z,7.5nm,0.9s,baz=190,slow=15,SNR=6.9						
AS31	Alice Springs	21.75	191	P	P	06 20 13.9	-0.8
AS31				IAmb	IAmb	06 20 33.5	
	comp=Z,3.1nm,0.7s						
ASAR	Alice Springs	21.75	191	P	P	06 20 15.1	+0.3
	comp=Z,4.0nm,0.8s,baz=8.6,slow=10,SNR=14						
ASAR				S	S	06 24 12.0	-3.6
	comp=Z,3.3nm,0.8s,baz=12,slow=22,SNR=8.7						
ASAR				LR	LR	06 29 39.2	
	comp=Z,314nm,20.4s,baz=20,slow=39						
ASAR	Alice Springs	21.75	191	P	P	06 20 14.4	-0.4
HNR	Honiara	22.60	109	LR	LR	06 29 36.8	
	comp=Z,62nm,18.7s,baz=274,slow=38						
PSA00	Pilbara Seismi	26.37	222	P	P	06 21 00.0	+0.5
PSA00				IAmb	IAmb	06 21 01.2	
	comp=Z,3.6nm,0.7s						
STKA	Stephens Creek	29.65	174	P	P	06 21 29.7	+1.0
	comp=Z,1.1nm,0.8s,baz=343,slow=12,SNR=3.8						
STKA				LR	LR	06 34 31.5	
	comp=Z,225nm,18.0s,baz=5.7,slow=39						
KSRS	Korea Array	40.66	347	LR	LR	06 37 29.6	
	comp=Z,60nm,21.9s,baz=0.0,slow=33						
CMAR	Chiang Mai Arr	43.92	300	P	P	06 23 30.2	0.0
	comp=Z,1.3nm,0.3s,baz=120,slow=5.3,SNR=1.4						
MK31	Makanchi Array	69.21	322	P	P	06 26 30.5	+0.5
MKAR	Makanchi Array	69.21	322	P	P	06 26 31.0	+1.1
	comp=Z,3.7nm,0.9s,baz=116,slow=8.4,SNR=8.8						
MKAR	Makanchi Array	69.21	322		P	06 26 30.6	+0.6
ZALV	Zalesovo Beam	71.36	330	P	P	06 26 42.2	-0.7
	comp=Z,1.3nm,0.6s,baz=102,slow=4.9,SNR=6.5						
ILAR	Eielson Array	85.53	25	P	P	06 27 59.4	-1.6
	comp=Z,0.7nm,0.9s,baz=257,slow=4.4,SNR=4.8						
TORD	Torodi Ar. Bea	135.81	287	PKP	PKPdf	06 34 44.1	-0.8
	comp=Z,0.6nm,0.9s,baz=35,slow=5.3,SNR=2.9						
LPAZ	La Paz	147.99	126	PKPbc	PKPbc	06 35 10.0	-0.4
	comp=Z,1.4nm,0.7s,baz=302,slow=4.0,SNR=5.0						

IDC 04 06:23:15.5±2.5, **4°.22N**×**128°.16E**, **h0**^{km}, **mb3.6**/3, **mb1 3.7**/3, **mb1mx3.4**/34, **mbtmp3.6**/3, **Error ellipse: s-maj=238.2km s-min=8.5km az=67.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.77	166	P	P	06 28 39.1	0.0
	0.4nm,0.3s,baz=345,slow=10,SNR=21						
ASAR	Alice Springs	28.28	169	P	P	06 29 12.3	+1.5
	0.2nm,0.6s,baz=344,slow=11,SNR=1.2						
MKAR	Makanchi Array	57.98	324	P	P	06 33 09.9	-0.1
	0.7nm,0.4s,baz=122,slow=7.1,SNR=8.0						

IDC 04 06:39:58.0±17.0, **1°.13S**×**127°.69E**, **h0**^{km}, **mb3.4**/2, **mb1 3.5**/3, **mb1mx3.3**/38, **mbtmp3.3**/3, **ML3.5**/1, **Error ellipse: s-maj=263.0km s-min=154.0km az=151.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.80	161	P	P	06 44 29.2	-1.0
	0.1nm,0.3s,baz=340,slow=11,SNR=6.8						
ASAR	Alice Springs	23.20	165	P	P	06 45 07.5	+0.8
	0.2nm,0.4s,baz=346,slow=9.8,SNR=4.3						
STKA	Stephens Creek	33.29	158	P	P	06 46 37.4	0.0
	0.6nm,0.3s,baz=348,slow=9.3,SNR=1.8						

IDC 04 06:41:37.3±2.1, **7°.36S**×**111°.89E**, **h0**^{km}, **mb3.5**/4, **mb1 3.7**/4, **mb1mx3.4**/45, **mbtmp3.5**/4, **Error ellipse: s-maj=141.1km s-min=17.6km az=52.0, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.11	122	P	P	06 47 04.0	0.0
	0.5nm,0.6s,baz=296,slow=11,SNR=3.1						
ASAR	Alice Springs	26.63	130	P	P	06 47 17.9	0.0
	0.3nm,0.3s,baz=305,slow=8.4,SNR=9.5						
STKA	Stephens Creek	36.89	135	P	P	06 48 48.0	+0.2
	1.1nm,0.5s,baz=322,slow=5.8,SNR=2.9						
MKAR	Makanchi Array	59.99	337	P	P	06 51 45.7	0.0
	0.1nm,0.4s,baz=143,slow=8.4,SNR=1.9						

IDC ***04*** *06:52:12.0±0.5, 51°.54N×96°.19E, h0^{km}, mb3.8/1, mb1 3.4/3, mb1mx3.2/46, mbtmp3.4/3, ML2.5/2, Error ellipse: s-maj=5.4km s-min=2.9km az=8.0*
MOS ***04*** *06:52:18.1±1.7, 52°.28N×95°.76E, h10^{km}, mb3.5/1, Error ellipse: s-maj=41.5km s-min=20.7km az=13.1*
ISC 04 06:52:17.0±0.8, **52°.07N**±0°.08×**95°.91E**±0°.03, **h10**^{km}, **n22**, σ**2^{s}66**/22, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZLR	Kyzyl	0.97	249	Pg	Pg	06 52 31.9	-3.8
KZLR				Sg	Sg	06 52 44.8	-3.5
ORL	Orlik	2.44	77	ePN	Pn	06 52 57.1	+0.1
ORL				e		06 53 29.9	
ORL				pmax	pmax		
	comp=Z,74nm,0.3s						
ORL				smax	smax		

	comp=N,179nm,0.6s						
CERR	**Cheremushki**	**2.86**	**288**	Pg	**Pb**	**06 53 05.9**	**-2.2**
CERR				Sg	**Sg**	**06 53 49.1**	**+0.4**
DJO	**Djoy, Khakassi**	**2.96**	**286**	Pg	**Pb**	**06 53 10.1**	**+0.3**
DJO				Sg	**Sg**	**06 53 49.5**	**-2.5**
MOY	**Mondy**	**3.18**	**95**	Pg	**Pn**	**06 53 08.2**	**+1.1**
MOY				Sg	**Sn**	**06 53 48.6**	**+3.5**
MOY	**Mondy**	**3.18**	**95**	*e*PN	**Pn**	**06 53 07.8**	**+0.7**
MOY				*e*		06 53 48.7	
MOY				pmax	pmax		
	comp=Z,55nm,0.8s						
MOY				smax	smax		
	comp=N,409nm,0.8s						
ARS	**Arshan**	**4.03**	**90**	*e*PN	Pn	06 53 24.9	+6.1
ARS				*e*		06 54 16.6	
ARS				pmax	pmax		
	comp=Z,50nm,0.5s						
ARS				smax	smax		
	comp=E,479nm,0.7s						
SHRR	**Shira**	**4.22**	**307**	Pg	**Pg**	**06 53 34.8**	**-3.0**
SHRR				Sg	**Sg**	**06 54 33.5**	**+1.1**
LUZB	**Luzhba, Kemero**	**4.54**	**293**	Sg	**Sg**	**06 54 42.5**	**-0.1**
TLY	**Talaya**	**4.81**	**92**	Pg	Pn	06 53 36.2	+6.8
	comp=E,0.0nm,0.3s,baz=279,slow=11,SNR=8.5						
TLY				Lg	Lg	06 54 39.6	
	comp=E,0.1nm,0.3s,baz=184,slow=14,SNR=11						
TLY	**Talaya**	**4.81**	**92**	Pg	Pn	06 53 36.9	+7.4
TLY				Sg	**Sb**	**06 54 39.0**	**-0.3**
ZAK	**Zakamensk**	**4.93**	**107**	Pg	Pn	06 53 39.3	+8.1
ZAK				Sg	**Sb**	**06 54 44.2**	**+1.4**
ZAK	**Zakamensk**	**4.93**	**107**	*e*PN	Pn	06 53 38.1	+6.9
ZAK				*e*		06 54 39.0	
ZAK				pmax	pmax		
	comp=Z,17nm,0.5s						
ZAK				smax	smax		
	comp=N,153nm,1.1s						
TASR	**Tashtagol**	**4.96**	**281**	Pg	**Pg**	**06 53 48.1**	**-3.9**
TASR				Sg	**Sg**	**06 54 55.9**	**-0.4**
CUR	**Chagan-Uzun**	**5.15**	**251**	Pg	**Pb**	**06 53 44.8**	**-2.5**
CUR				Sg	**Sb**	**06 54 53.9**	**+4.6**
ULGR	**Ulagan, Altay**	**5.19**	**257**	Sg	**Sb**	**06 54 55.9**	**+5.7**
ARTR	**Artybash**	**5.34**	**271**	Sg	**Sg**	**06 55 10.5**	**+2.0**
ZALV	**Zalesovo Beam**	**6.95**	**290**	Pn	**Pn**	**06 54 00.2**	**+1.4**
	comp=N,0.3nm,0.3s,baz=100,slow=14,SNR=3.5						
ZALV				Lg	Lg	06 55 57.9	
	comp=N,1.0nm,0.3s,baz=110,slow=24,SNR=7.9						
SONM	**Songino Array**	**7.98**	**118**	Pg	Pb	06 54 30.4	-5.0
	comp=N,0.4nm,0.3s,baz=308,slow=19,SNR=6.8						
SONM				Lg	Lg	06 56 13.2	
	comp=N,1.0nm,0.3s,baz=302,slow=29,SNR=13						
MKAR	**Makanchi Array**	**10.31**	**245**	Pn	Pn	06 54 40.4	-4.5
	comp=N,0.1nm,0.3s,baz=42,slow=13,SNR=2.3						
MKAR				Lg	Lg	06 57 37.1	
	comp=N,0.1nm,0.3s,baz=51,slow=30,SNR=3.2						
KURBB	**Kurchatov Arra**	**10.97**	**269**	Lg	Lg	06 58 06.6	
	comp=N,0.1nm,0.3s,baz=74,slow=30,SNR=5.8						
TIXI	**Tiksi**	**24.46**	**25**	P	**P**	**06 57 37.2**	**+1.6**
	comp=N,0.9nm,0.4s,baz=246,slow=6.7,SNR=4.6						

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*IASPEI **04** 07:01:10.9±1.0, 41°.89N±0°.02×23°.18E±0°.03, h11^{km}±7^{km}, Error ellipse: s-maj=4.9km s-min=3.4km az=81.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*SOF **04** 07:01:10.7, 41°.91N×23°.27E, h2^{km}, MD2.8*

*SKO **04** 07:01:10.3, 41°.89N×23°.21E, h22^{km}*

*BEO **04** 07:01:12.3±0.6, 41°.90N×23°.19E, h0^{km}, ML2.2/6*

ISC 04 07:01:11.1±0.9**, 41°.87N**±0°.02×**23°.13E**±0°.03**, h9**^{km}±7^{km}**, n22, σ1ˢ.22**/37**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.04**	**259**	P	**Pg**	**07 01 13.3**	**+0.4**
MMB	**Musomiste**	**0.53**	**122**	P	**Pg**	**07 01 20.8**	**-0.6**
VAY	**Valandovo**	**0.69**	**218**	*i* Pg	**Pb**	**07 01 25.8**	**+0.4**
VAY				*i* Sg	**Sb**	**07 01 36.1**	**+1.2**
VAY				*e*Lg	Lg	07 01 36.2	
	comp=E,62nm,0.3s						
VAY	**Valandovo**	**0.69**	**218**	*e*Pg	**Pb**	**07 01 25.7**	**+0.4**
VAY				*e*Sg	**Sb**	**07 01 35.6**	**+0.6**
STIP	**Stip**	**0.73**	**256**	*i* Pg	**Pg**	**07 01 22.1**	**-3.0**
STIP				*i* Sg	**Sg**	**07 01 30.6**	**-4.1**
STIP				*e*Lg	Lg	07 01 31.6	
	comp=N,81nm,0.2s						
KNT	**Kendrikon**	**0.73**	**194**	*i* Pg	**Pg**	**07 01 25.4**	**+0.2**
KNT				*i* Sg	**Sg**	**07 01 35.5**	**+0.7**
VTS	**Vitosha**	**0.75**	**6**	P	**Pg**	**07 01 24.5**	**-1.0**
VTS	**Vitosha**	**0.75**	**6**	*i* Pg	**Pg**	**07 01 24.5**	**-1.0**
VTS				*i* Sg	**Sg**	**07 01 34.1**	**-1.3**
VTS	**Vitosha**	**0.75**	**6**	*e*Pg	**Pg**	**07 01 24.6**	**-1.0**
VTS				*e*Sg	**Sg**	**07 01 33.9**	**-1.4**
BOSS	**Bosilegrad**	**0.79**	**322**	*e*Pg	**Pg**	**07 01 26.3**	**0.0**
BOSS				*e*Sg	**Sg**	**07 01 36.7**	**+0.1**
SRS	**Serrai**	**0.83**	**155**	*i* Pg	**Pg**	**07 01 26.5**	**-0.6**
SRS				*i* Sg	**Sb**	**07 01 38.3**	**-0.6**
PRVS	**Prvonek**	**1.01**	**309**	*e*Pg	**Pn**	**07 01 31.3**	**-0.1**
PRVS				*e*Sg	**Sn**	**07 01 45.7**	**0.0**
PGB	**Panagyurishte**	**1.02**	**48**	P	**Pg**	**07 01 28.5**	**-2.3**
SOH	**Sokhos**	**1.06**	**171**	*i* Pg	**Pg**	**07 01 31.0**	**-0.5**
GRG	**Griva**	**1.07**	**211**	*i* Pg	**Pn**	**07 01 32.1**	**-0.1**
GRG				*i* Sg	**Sn**	**07 01 47.1**	**-0.1**
PLD	**Plovdiv**	**1.19**	**78**	*i* Pg	**Pg**	**07 01 34.2**	**+0.2**
PLD				*i* Sg	**Sn**	**07 01 49.9**	**-0.3**
THE	**Thessaloniki**	**1.25**	**186**	*i* Pg	**Pg**	**07 01 35.0**	**0.0**
THE				*i* Sg	**Sn**	**07 01 52.0**	**+0.5**
BARS	**Barje**	**1.36**	**314**	*i* Pn	**Pg**	**07 01 37.1**	**0.0**
BARS				*i* Sn	**Sg**	**07 01 56.7**	**+2.0**
ZAPS	**Zavoj**	**1.45**	**345**	*e*Pg	**Pg**	**07 01 39.0**	**+0.1**
ZAPS				*e*Sg	**Sg**	**07 01 58.6**	**+1.0**
KDZ	**Kurdzhali**	**1.72**	**97**	P	**Pn**	**07 01 41.6**	**+0.4**
SELS	**Selova**	**2.00**	**313**	*e*Pn	**Pn**	**07 01 45.9**	**+0.8**
SELS				*e*Sn	**Sb**	**07 02 13.3**	**+0.5**
ZAGS	**Zajecar**	**2.05**	**341**	*e*Sn	**Sb**	**07 02 14.9**	**+1.0**

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*NNC **04** 07:09:59.0±0.3, 50°.00N×78°.67E, h0^{km}, mb3.1, mpv3.0, Error ellipse: s-maj=3.6km s-min=1.9km az=72.0, Suspected Mining explosion.*

*IDC **04** 07:10:00.3±0.1, 50°.05N×78°.81E, h0^{km}, mb1 2.7/2, mb1mx2.7/36, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=1.0km s-min=0.6km az=111.0*

ISC 04 07:09:59.6±0.8**, 50°.08N**±0°.03×**78°.60E**±0°.04**, h0**^{km}**, n21, σ0ˢ.78**/34**, 11C-14D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.51**	**354**	⇓P	**Pb**	**07 10 10.6**	**-0.8**
KUR07				⇑S	**Sb**	**07 10 19.6**	**+0.3**
KUR06	**Kurchatov Arra**	**0.53**	**355**	⇓P	**Pb**	**07 10 11.1**	**-0.7**
KUR06				⇓S	**Sb**	**07 10 19.9**	**0.0**
KUR14	**Kurchatov Arra**	**0.54**	**360**	⇓P	**Pb**	**07 10 11.0**	**-0.9**
KUR14				⇓S	**Sb**	**07 10 19.8**	**-0.4**
KUR15	**Kurchatov Arra**	**0.54**	**358**	⇓P	**Pb**	**07 10 11.2**	**-0.8**
KUR15				⇓S	**Sb**	**07 10 20.5**	**+0.1**
KURBB	**Kurchatov Arra**	**0.55**	**356**	Pg	**Pb**	**07 10 11.6**	**-0.5**
	1.2nm,0.3s,baz=167,slow=18,SNR=89						
KURBB				Lg	Lg	07 10 20.5	
	0.9nm,0.3s,baz=161,slow=34,SNR=17						
KURBB	**Kurchatov Arra**	**0.55**	**356**	⇑P	**Pb**	**07 10 11.2**	**-0.8**
	9.6nm,0.3s						
KURBB				⇑S	**Sb**	**07 10 20.1**	**-0.4**
KUR16	**Kurchatov Arra**	**0.55**	**354**	⇑P	**Pb**	**07 10 11.4**	**-0.7**
KUR16				⇓S	**Sb**	**07 10 20.3**	**-0.4**
KUR17	**Kurchatov Arra**	**0.56**	**352**	⇓P	**Pb**	**07 10 11.5**	**-0.8**
KUR17				⇓S	**Sb**	**07 10 20.4**	**-0.5**
KUR05	**Kurchatov Arra**	**0.57**	**356**	⇑P	**Pb**	**07 10 11.7**	**-0.7**
KUR05				⇓S	**Sb**	**07 10 20.5**	**-0.6**
KUR04	**Kurchatov Arra**	**0.59**	**357**	⇑P	**Pb**	**07 10 12.2**	**-0.6**
KUR04				⇓S	**Sb**	**07 10 21.2**	**-0.3**
KURK	**Kurchatov**	**0.64**	**1**	⇑P	**Pb**	**07 10 12.6**	**-1.1**
	4.7nm,0.4s						
KURK				⇑S	**Sb**	**07 10 22.8**	**-0.3**
	10nm,0.6s						
SEM	**Semipalatinsk**	**1.11**	**72**	P	**Pg**	**07 10 20.4**	**-0.5**
	6.3nm,0.2s						
SEM				S	**Sg**	**07 10 35.6**	**+0.3**
	20nm,0.1s						
BRZS	**Berezniki**	**3.82**	**271**	Pg	**Pg**	**07 11 11.1**	**-1.6**
	1.7nm,0.2s						
BRZS				Lg	Lg	07 12 03.0	
	4.5nm,0.5s						
MAKZ	**Makanchi**	**3.97**	**144**	Pg	**Pb**	**07 11 09.7**	**-0.7**
MAKZ				⇓Lg	Lg	07 12 00.2	
	3.2nm,0.5s						
MK31	**Makanchi Array**	**4.11**	**142**	⇑Pn	**Pn**	**07 11 02.9**	**-0.7**
	0.1nm,0.1s,baz=324,slow=10,SNR=12						
MK31				⇑Pg	**Pb**	**07 11 11.8**	**-0.9**
	0.4nm,0.3s,baz=324,slow=15,SNR=6.5						
MK31				Lg	Lg	07 12 06.7	
	1.9nm,0.4s,baz=326,slow=26,SNR=9.5						
MKAR	**Makanchi Array**	**4.11**	**142**	Pn	**Pn**	**07 11 03.1**	**-0.5**
	0.2nm,0.3s,baz=322,slow=10,SNR=18						
MKAR				Pg	**Pb**	**07 11 13.5**	**+0.8**
	0.4nm,0.3s,baz=327,slow=16,SNR=4.2						
MKAR				Sn	**Sn**	**07 11 53.1**	**+0.8**
	0.3nm,0.3s,baz=322,slow=24,SNR=2.1						
MKAR				Lg	Lg	07 12 05.4	
	1.0nm,0.3s,baz=326,slow=27,SNR=11						
OTUK	**Ortayu**	**4.50**	**248**	⇑Pn	**Pn**	**07 11 10.1**	**+1.2**
	0.7nm,0.5s						
OTUK				⇓Lg	Lg	07 12 22.6	
	1.9nm,0.6s						
KAPS	**Kapalarasan**	**4.82**	**174**	Pg	**Pb**	**07 11 23.8**	**-1.2**
	1.3nm,0.4s						
KAPS				Lg	Lg	07 12 25.2	
	3.1nm,0.6s						
I46RU	**ZALESOVO INFRA**	**5.46**	**42**	*i*		07 43 50.0	
	baz=223,slow=308,SNR=2.7						
ZALV	**Zalesovo Beam**	**5.46**	**42**	Pn	**Pn**	**07 11 23.3**	**+1.2**
	0.4nm,0.3s,baz=230,slow=11,SNR=4.5						
KUU	**Kurty**	**6.38**	**195**	Pg	**Pb**	**07 11 52.1**	**+0.6**
	1.9nm,0.1s						
KUU				Lg	Lg	07 13 13.1	
	1.7nm,0.1s						

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*NNC **04** 07:36:11.8±8.7, 51°.31N×82°.51E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=77.3km s-min=58.1km az=14.0, Suspected Mining explosion.*

*IDC **04** 07:36:21.1±1.9, 51°.24N×81°.76E, h0^{km}, mb1 2.2/3, mb1mx1.9/47, mbtmp2.2/3, ML1.7/3, Error ellipse: s-maj=19.3km s-min=13.9km az=41.0*

ISC 04 07:36:17.8±1.3**, 51°.44N**±0°.07×**81°.76E**±0°.06**, h0**^{km}**, n7, σ0ˢ.35**/8**, 4C-1D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.11**	**251**	⇓Pn	**Pn**	**07 36 54.6**	**+0.3**
	0.9nm,0.4s						
KURK				⇑Sn	**Sg**	**07 37 25.6**	**+0.1**
	11nm,1.0s						
KURBB	**Kurchatov Arra**	**2.20**	**249**	Pn	**Pb**	**07 36 57.8**	**-0.5**
	0.2nm,0.3s,baz=71,slow=18,SNR=8.6						
KURBB				Lg	Lg	07 37 28.6	
	0.2nm,0.3s,baz=74,slow=31,SNR=8.3						
KURBB	**Kurchatov Arra**	**2.20**	**249**	⇑Pn	**Pn**	**07 36 55.9**	**+0.5**
	1.5nm,0.3s,baz=73,slow=18						
KURBB				⇑Sn	**Sg**	**07 37 28.3**	**0.0**
	12nm,0.6s						
ZALV	**Zalesovo Beam**	**3.13**	**35**	Pn	**Pb**	**07 37 14.0**	**-0.2**
	0.4nm,0.3s,baz=211,slow=16,SNR=4.3						
I46RU	**ZALESOVO INFRA**	**3.13**	**35**	*i*		07 52 50.0	
	baz=214,slow=324,SNR=0.8						
MK31	**Makanchi Array**	**4.66**	**176**	⇑Lg	Lg	07 38 37.5	
	2.9nm,0.9s,baz=10.0,slow=24,SNR=3.7						
MKAR	**Makanchi Array**	**4.66**	**176**	Pn	**Pn**	**07 37 29.3**	**-0.1**
	0.1nm,0.3s,baz=10.0,slow=12,SNR=2.7						
MKAR				Pg	**Pb**	**07 37 40.4**	**+0.1**
	0.3nm,0.3s,baz=348,slow=13,SNR=7.7						
MKAR				Lg	Lg	07 38 41.3	
	0.2nm,0.3s,baz=13,slow=27,SNR=3.5						

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*IDC **04** 07:37:19.8±0.6, 34°.02S×109°.31W, h0^{km}, mb4.3/11, mb1 4.4/12, mb1mx4.3/29, mbtmp4.3/12, ML4.0/1, MS4.1/17, Ms1 4.1/17, ms1mx4.0/28, Error ellipse: s-maj=23.7km s-min=17.3km az=109.0*

*GCMT **04** 07:37:21.3±0.3, 34°.17S±0°.04×109°.24W±0°.02, h12^{km}, MW4.8/69, Moment Tensor Solution. s32,c35; s69,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.10±.08; $M_{\theta\theta}$0.12±.09; $M_{\phi\phi}$1.98±.06; $M_{r\theta}$-1.00±.37; $M_{\theta\phi}$-0.24±.07; $M_{\phi r}$0.09±.25; Best double couple: $M_0$2.25200×10^{16} NP1:ϕ_s12.00000°, δ45.00000°, λ-60.00000°. NP2: ϕ_s153.00000°, δ52.00000°, λ-117.00000°. Principal axes: T 2.0220, Plg3.0000°, Azm261.0000°; N 0.4570, Plg21.0000°, Azm170.0000°; P -2.4820, Plg69.0000°, Azm360.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **04** 07:37:22.3±0.7, 34°.04S±0°.09×109°.4W±0°.2, h10^{km}±1^{km}, mb4.9/48 Error ellipse: s-maj=22.2km s-min=15.5km az=82.0*

ISC 04 07:37:21.3±0.5**, 34°.00S**±0°.08×**109°.5W**±0°.1**, h10**^{km}**, n96, σ0ˢ.97**/77**, mb4.8**/34**, MS4.3**/19**, 1C, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.85**	**1**	Pn	**Pn**	**07 38 59.6**	**-2.2**
	2.7nm,0.3s,baz=360,slow=21,SNR=2.8						
RPN				LR	LR	07 41 06.4	
	comp=Z,824nm,18.2s,baz=159,slow=33						
RPN	**Rapa Nui**	**6.85**	**1**	Pn	**Pn**	**07 39 01.5**	**-0.3**
H03S2	**Juan Fernandez**	**25.29**	**98**	T	T	08 09 06.5	
	baz=267,SNR=26						
H03S3	**Juan Fernandez**	**25.30**	**98**	T	T	08 09 06.2	
	baz=267,SNR=230						
H03S1	**Juan Fernandez**	**25.30**	**98**	T	T	08 09 06.6	
	baz=267,SNR=26						
H03N2	**Juan Fernandez**	**25.35**	**97**	T	T	08 09 11.8	
	baz=266,slow=73,SNR=14						
H03N3	**Juan Fernandez**	**25.35**	**97**	T	T	08 09 13.1	
	baz=266,slow=73,SNR=16						
H03N1	**Juan Fernandez**	**25.36**	**97**	T	T	08 09 07.7	
	baz=266,slow=73,SNR=14						
PLCA	**Paso Flores**	**31.45**	**114**	P	**P**	**07 43 40.9**	**-2.1**
	5.3nm,1.2s,baz=267,slow=8.5,SNR=5.9						
PLCA				LR	LR	07 52 29.0	
	comp=Z,206nm,21.2s,baz=299,slow=29						
PLCA	**Paso Flores**	**31.45**	**114**	P	**P**	**07 43 42.9**	**-0.1**
MG05	**Puerto Natales**	**31.90**	**135**	P	**P**	**07 43 46.7**	**0.0**
MG05				IAmb	IAmb	07 43 56.9	
	comp=Z,30nm,1.4s						
TAOE	**Nuku Hiva Isla**	**37.71**	**304**	*e*LR	LR	07 54 43.5	
	comp=Z,625nm,26.3s						
MEH	**Mehetia**	**38.00**	**285**	*e*T	T	08 25 00.0	
	comp=Z,27nm,0.2s						
TRQA	**Tornquist**	**38.28**	**110**	P	**P**	**07 44 41.2**	**-0.6**
ATAH	**Atahualpa**	**39.20**	**54**	P	**P**	**07 44 49.9**	**-0.3**
	comp=Z,3.0nm,0.7s,baz=343,slow=2.6,SNR=5.4						
PPT2	**Papeete2**	**39.37**	**284**	*e*S	**S**	**07 50 50.8**	**-2.0**
	comp=Z,100nm,26.0s						
PPT2				*e*LR	LR	07 55 32.3	
	comp=Z,957nm,25.2s,baz=117						
PPT	**Papeete**	**39.38**	**284**	LR	LR	07 57 18.9	
	comp=Z,405nm,18.7s,baz=94,slow=30						
LPAZ	**La Paz**	**41.03**	**75**	P	**P**	**07 45 05.0**	**-0.7**
	comp=Z,1.4nm,0.9s,baz=230,slow=7.6,SNR=6.2						
LPAZ				LR	LR	07 57 52.6	
	comp=Z,328nm,21.8s,baz=240,slow=30						
LPAZ	**La Paz**	**41.03**	**75**	P	**P**	**07 45 05.7**	**+0.1**
CZSB	**Cruzeiro do Su**	**42.77**	**61**	P	**P**	**07 45 18.5**	**-0.6**
CZSB				IAmb	IAmb	07 45 20.4	
	comp=Z,19nm,1.1s						
OTAV	**Otavalo**	**44.78**	**47**	P	**P**	**07 45 36.0**	**+0.2**
CPUP	**Villa Florida**	**45.30**	**95**	LR	LR	08 01 36.4	
	comp=Z,294nm,18.1s,baz=244,slow=32						
RAR	**Rarotonga**	**45.96**	**273**	LR	LR	08 00 29.4	
	comp=Z,344nm,20.3s,baz=102,slow=30						
SIV	**San Ignacio**	**46.91**	**80**	LR	LR	08 02 33.0	
	comp=Z,246nm,19.9s,baz=286,slow=32						
PTLB	**Pontes e Lacer**	**48.78**	**81**	P	**P**	**07 46 06.9**	**+0.2**
SAML	**Samuel**	**49.20**	**71**	P	**P**	**07 46 09.6**	**-0.3**
SAML				IAmb	IAmb	07 46 20.5	
	comp=Z,13nm,1.5s						
BRU2	**Volcan**	**49.56**	**36**	P	**P**	**07 46 13.8**	**+1.1**
JTS	**Las Juntas de**	**49.82**	**32**	LR	LR	08 02 03.6	
	comp=Z,196nm,19.4s,slow=30						
JTS	**Las Juntas de**	**49.82**	**32**	P	**P**	**07 46 16.2**	**+1.7**
RIMA	**Rio Macho**	**49.85**	**34**	P	**P**	**07 46 15.8**	**+0.8**
RIMA				IAmb	IAmb	07 46 39.5	
	comp=Z,15nm,1.4s						
ROSC	**El Rosal**	**50.92**	**48**	P	**P**	**07 46 23.6**	**+0.2**
	comp=Z,4.4nm,0.6s,baz=100,slow=10,SNR=3.7						
ROSC				LR	LR	08 04 01.5	
	comp=Z,129nm,19.4s,baz=226,slow=32						
ROSC	**El Rosal**	**50.92**	**48**	P	**P**	**07 46 24.0**	**+0.6**
APG	**El Apazote**	**51.98**	**24**	LR	LR	08 03 45.3	
	comp=Z,58nm,22.0s,baz=212,slow=30						
TLIG	**Tlapa**	**52.31**	**13**	P	**P**	**07 46 34.0**	**+0.7**
ZARC	**Zaragoza, Cauc**	**52.69**	**45**	P	**P**	**07 46 36.0**	**-0.2**
MACA	**Manacapuru-AM**	**54.74**	**67**	P	**P**	**07 46 50.2**	**-1.0**
QSPA	**South Pole Qui**	**56.20**	**180**	P	**P**	**07 47 01.4**	**+0.1**
	comp=Z,5.3nm,1.0s,baz=130,slow=3.2,SNR=10						
QSPA	**South Pole Qui**	**56.20**	**180**	P	**P**	**07 47 02.0**	**+0.8**
VNDA	**Vanda**	**56.81**	**195**	P	**P**	**07 47 06.3**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=114,slow=7.8,SNR=4.1						
VNDA				LR	LR	08 05 46.1	
	comp=Z,120nm,20.6s,baz=104,slow=30						
VNDA	**Vanda**	**56.81**	**195**	P	**P**	**07 47 07.0**	**+1.8**
ZAIG	**Zacatecas**	**56.83**	**8**	P	**P**	**07 47 07.0**	**+0.7**
ZAIG				IAmb	IAmb	07 47 10.1	
	comp=Z,16nm,1.5s						
PTGA	**Pitinga**	**56.85**	**65**	LR	LR	08 08 01.9	
	comp=Z,303nm,20.3s,baz=256,slow=32						
BDFB	**Brasilia**	**57.87**	**88**	LR	LR	08 09 23.3	
	comp=Z,249nm,19.4s,baz=170,slow=33						
PCRV	**Puerto La Cruz**	**61.15**	**52**	LR	LR	08 12 56.0	
	comp=Z,247nm,19.0s,slow=35						
VNA3	**Neumayer Olymp**	**61.25**	**159**	P	**P**	**07 47 35.5**	**-0.6**
VNA2	**Neumayer--Watz**	**62.06**	**159**	P	**P**	**07 47 41.3**	**-0.3**
SNAA	**Sanae**	**63.07**	**160**	P	**P**	**07 47 47.8**	**-0.6**
SNAA	**Sanae**	**63.07**	**160**	P	**P**	**07 47 47.8**	**-0.6**
SNAA				IAmb	IAmb	07 48 05.4	
	comp=Z,9.0nm,1.4s						
TX31	**Lajitas Ar. Si**	**63.23**	**6**	P	**P**	**07 47 50.8**	**+0.9**
TX32	**Lajitas Array**	**63.23**	**6**	P	**P**	**07 47 50.8**	**+0.9**
TX32				IAmb	IAmb	07 47 57.8	
	comp=Z,8.9nm,1.5s						
TXAR	**Lajitas Array**	**63.23**	**6**	P	**P**	**07 47 49.5**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=186,slow=11,SNR=7.0						
TXAR	**Lajitas Array**	**63.23**	**6**	P	**P**	**07 47 51.1**	**+1.2**
JCT	**Junction City**	**64.78**	**9**	P	**P**	**07 48 00.4**	**+0.4**
JCT				IAmb	IAmb	07 48 02.5	
	comp=Z,16nm,1.4s						
435B	**Jarrell**	**65.40**	**11**	P	**P**	**07 48 04.4**	**+0.5**
214A	**Organ Pipe Nat**	**65.68**	**357**	P	**P**	**07 48 06.8**	**+1.0**
214A				IAmb	IAmb	07 48 13.9	
	comp=Z,11nm,1.1s						
TUC	**Tucson**	**65.97**	**359**	P	**P**	**07 48 08.6**	**+0.8**
WHTX	**Lake Whitney,**	**66.60**	**11**	P	**P**	**07 48 12.4**	**+0.7**
Y14A	**Wickenburg**	**67.66**	**357**	P	**P**	**07 48 19.6**	**+1.1**
Y14A				IAmb	IAmb	07 48 20.6	
	comp=Z,15nm,1.5s						
X16A	**Lo Mia Camp, P**	**68.08**	**358**	P	**P**	**07 48 22.4**	**+1.1**
X16A				IAmb	IAmb	07 48 23.3	
	comp=Z,7.7nm,1.3s						
GSC	**Goldstone, Bar**	**69.28**	**354**	P	**P**	**07 48 29.8**	**+1.2**
ISA	**Isabella, Lake**	**69.81**	**352**	P	**P**	**07 48 32.7**	**+0.9**
ISA				IAmb	IAmb	07 48 34.3	
	comp=Z,20nm,1.5s						
QSM	**Queen of Sheba**	**69.95**	**354**	P	**P**	**07 48 33.6**	**+1.1**
QSM				IAmb	IAmb	07 48 35.0	
	comp=Z,19nm,1.4s						
GWY	**Greenwater Val**	**70.15**	**354**	P	**P**	**07 48 34.9**	**+0.9**
GWY				IAmb	IAmb	07 48 36.2	
	comp=Z,19nm,1.5s						
KNB	**Kanab**	**70.72**	**357**	P	**P**	**07 48 38.0**	**+0.5**
KNB				IAmb	IAmb	07 48 45.5	
	comp=Z,12nm,1.4s						
PRN	**Pahroc Range**	**71.23**	**355**	P	**P**	**07 48 41.9**	**+1.3**
PRN				IAmb	IAmb	07 49 02.8	
	comp=Z,11nm,1.3s						
TPH	**Tonopah**	**72.07**	**354**	P	**P**	**07 48 46.9**	**+1.3**
NVAR	**Mina Array Bea**	**72.53**	**353**	P	**P**	**07 48 50.2**	**+1.8**
	comp=Z,5.5nm,0.9s,baz=185,slow=8.0,SNR=28						
NVAR	**Mina Array Bea**	**72.53**	**353**	P	**P**	**07 48 49.6**	**+1.1**
DZM	**Mont Dzumac**	**73.32**	**254**	*e*LR	LR	08 11 17.9	
	comp=Z,278nm,30.6s						
JLU	**Jordanelle**	**74.25**	**358**	P	**P**	**07 48 59.2**	**+0.6**
BMN	**Battle Mountai**	**74.41**	**354**	P	**P**	**07 49 00.5**	**+1.1**
BMN				IAmb	IAmb	07 49 07.5	
	comp=Z,20nm,1.3s						
ELK	**Elko**	**74.56**	**355**	P	**P**	**07 49 01.1**	**+0.7**
SYO	**Syowa Base**	**74.78**	**169**	⇑*e*P	**P**	**07 49 01.4**	**+0.3**
K22A	**Casper**	**76.33**	**2**	P	**P**	**07 49 11.4**	**+1.0**
PDAR	**Pinedale Array**	**76.39**	**360**	P	**P**	**07 49 10.8**	**0.0**
	comp=Z,2.1nm,0.8s,baz=152,slow=5.9,SNR=16						
WVOR	**Wild Horse Val**	**76.53**	**353**	P	**P**	**07 49 12.4**	**+0.9**
WVOR				IAmb	IAmb	07 49 20.5	
	comp=Z,16nm,1.3s						
REDW	**Red Top Meadow**	**77.00**	**359**	P	**P**	**07 49 14.7**	**+0.4**
REDW				IAmb	IAmb	07 49 34.9	
	comp=Z,13nm,1.4s						
HLID	**Hailey**	**77.32**	**356**	P	**P**	**07 49 16.9**	**+1.0**
HLID				IAmb	IAmb	07 49 18.2	
	comp=Z,13nm,1.2s						
FLWY	**Flagg Ranch**	**77.72**	**359**	P	**P**	**07 49 19.4**	**+1.2**
FLWY				IAmb	IAmb	07 49 41.7	
	comp=Z,19nm,1.4s						
YMR	**Madison River**	**78.31**	**359**	P	**P**	**07 49 22.2**	**+0.7**
YMR				IAmb	IAmb	07 49 29.6	
	comp=Z,13nm,1.3s						
BMO	**Blue Mountains**	**78.80**	**354**	P	**P**	**07 49 25.3**	**+1.3**
BMO				IAmb	IAmb	07 49 26.1	
	comp=Z,18nm,1.5s						
STKA	**Stephens Creek**	**86.39**	**234**	P	**P**	**07 50 03.9**	**-0.2**
	comp=Z,2.8nm,1.1s,baz=70,slow=6.1,SNR=3.7						
STKA				LR	LR	08 23 42.6	
	comp=Z,105nm,19.0s,baz=196,slow=32						
ASAR	**Alice Springs**	**96.86**	**236**	P	**P**	**07 50 51.8**	**-1.3**
	comp=Z,0.9nm,1.1s,baz=85,slow=3.0,SNR=4.9						
ASAR				LR	LR	08 29 56.3	
	comp=Z,91nm,18.8s,baz=150,slow=33						
WRA	**Warramunga Arr**	**99.00**	**239**	LR	LR	08 32 49.6	
	comp=Z,91nm,18.1s,baz=170,slow=34						
AKASG	**Malin Array Be**	**145.72**	**48**	PKPbc	**PKPdf**	**07 56 58.7**	**-0.8**
	comp=Z,2.7nm,0.8s,baz=283,slow=3.2,SNR=19						
SONM	**Songino Array**	**149.89**	**308**	PKPbc	**PKPbc**	**07 57 11.1**	**-0.5**
	comp=Z,6.1nm,1.1s,baz=95,slow=1.6,SNR=14						
SONM	**Songino Array**	**149.89**	**308**		**PKPbc**	**07 57 10.7**	**-0.8**
BRTR	**Keskin Array B**	**150.06**	**68**	PKPbc	**PKPbc**	**07 57 11.6**	**-0.7**
	comp=Z,5.2nm,1.1s,baz=190,slow=3.8,SNR=12						
BRTR	**Keskin Array B**	**150.06**	**68**		**PKPbc**	**07 57 10.9**	**-1.3**
CMAR	**Chiang Mai Arr**	**150.33**	**246**	PKPbc	**PKPbc**	**07 57 14.2**	**+0.9**
	comp=Z,12nm,1.0s,baz=178,slow=1.4,SNR=43						
TLY	**Talaya**	**150.33**	**317**	PKPbc	**PKPbc**	**07 57 12.8**	**+0.4**
	comp=Z,4.2nm,0.8s,baz=151,slow=2.3,SNR=6.4						
TLY	**Talaya**	**150.33**	**317**		**PKPbc**	**07 57 12.3**	**-0.1**
CD2	**Chengdu**	**151.88**	**273**	PKPbc	**PKPdf**	**07 57 10.0**	**-0.2**
LZH	**Lanzhou**	**152.73**	**284**	*e*PKPbc	**PKPdf**	**07 57 13.0**	**+1.5**
LZH				sPKP		07 57 19.1	
ZALV	**Zalesovo Beam**	**157.65**	**337**	PKP	**PKPdf**	**07 57 15.7**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=191,slow=1.5,SNR=1.3						
KSH	**Kashi**	**172.98**	**323**	PKP	**PKPdf**	**07 57 31.7**	**+0.9**

NNC 04 07:46:01.0±1.2**, 53°.32N**×**90°.44E, h0**^{km}**, mb4.0, mpv3.8, 8C-4D, Error ellipse: s-maj=8.8km s-min=7.3km az=84.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.41**	**283**	⇑Pn	Pn	07 46 55.6	+0.3
	4.8nm,0.8s						
ZAA0				⇑Lg	Lg	07 47 47.2	
	23nm,0.8s						
ZSN	**Zaisan**	**6.87**	**213**	Pg	Pg	07 49 07.9	+55
	4.7nm,0.2s						
ZSN				Lg	Lg	07 49 43.4	
	28nm,1.0s						
SEM	**Semipalatinsk**	**6.95**	**249**	Pg	Pg	07 49 08.9	+55
	17nm,1.1s						
SEM				Lg	Lg	07 49 45.0	
	41nm,0.4s						
KURK	**Kurchatov**	**7.75**	**255**	⇑Pn	Pn	07 47 54.8	-0.1
	5.6nm,0.8s						
KURK				⇓Sn	Sn	07 49 25.4	+2.2
	18nm,0.9s						
KURK				⇓Lg	Lg	07 50 08.4	
	74nm,1.1s						
KURBB	**Kurchatov Arra**	**7.84**	**255**	⇑Sn	Sn	07 49 26.9	+1.4
	65nm,0.8s						
KURBB				⇑Lg	Lg	07 50 11.0	
	79nm,0.9s						
MK31	**Makanchi Array**	**8.37**	**222**	Pn	Pn	07 48 03.3	-0.2
	4.6nm,1.1s,baz=35,slow=11,SNR=17						
MK31				⇓Sn	Sn	07 49 40.4	+1.7

	2.5nm,0.7s,baz=39,slow=21,SNR=4.4						
MK31				⇑Lg	Lg	07 50 27.7	
	30nm,1.1s,baz=33,slow=26,SNR=3.9						
MAKZ	Makanchi	8.49	223	⇑Pn	Pn	07 48 04.8	-0.3
	3.8nm,1.1s						
MAKZ				⇑Sn	Sn	07 49 42.3	+0.8
	7.6nm,0.8s						
MAKZ				⇓Lg	Lg	07 50 30.7	
	28nm,1.1s						
KAPS	Kapalarasan	10.80	226	Pg		07 50 16.4	
	4.5nm,1.7s						
KAPS				Lg	Lg	07 51 41.1	
	5.9nm,0.6s						
DJR	Jarkent	11.39	222	Pg		07 50 29.0	
	1.7nm,0.4s						
DJR				Lg	Lg	07 52 02.8	
	4.1nm,0.9s						
BRZS	Berezniki	11.53	260	Pg		07 50 41.9	
	2.0nm,0.5s						
BRZS				Lg	Lg	07 52 24.8	
	5.0nm,0.6s						
ARXS	Arharly	12.32	227	Pg		07 50 44.6	
	1.1nm,0.5s						
ARXS				Lg	Lg	07 52 29.6	
	7.7nm,1.0s						

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*FUNV **04** 07:59:03.8, 8°.50N×71°.45W, h5^{km}, MW4.0*

*IDC **04** 07:59:17.5±1.1, 6°.40N×77°.72W, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.5/36, mbtmp3.6/4, ML2.1/1, MS3.4/4, Ms1 3.4/4, ms1mx2.9/29, Error ellipse: s-maj=40.9km s-min=19.8km az=31.0*

ISC 04 07:59:03.1±1.1**, 8°.51N**±0°.03×**71°.40W**±0°.03**, h6**^{km}±8^{km}**, n28, σ1^{s}28**/42**, MS3.3**/4**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIGV	El Vigia	0.33	6	eP	Pg	07 59 09.5	-0.2
VIGV				eS	Sg	07 59 14.3	+0.2
SOCV	Socops	0.58	112	eP	Pg	07 59 14.3	-0.1
SOCV				eS	Sg	07 59 21.6	-0.3
SDV	Santo Domingo	0.84	63	eP	Pg	07 59 19.3	-0.1
SDV				eS	Sg	07 59 31.1	+0.7
SDV				i		07 59 32.6	
	comp=Z,993nm,0.2s						
CAPV	Capacho	1.11	235	eP	Pg	07 59 22.9	-1.5
CAPV				eS	Sg	07 59 38.6	-0.2
TORV	Torococo	1.56	48	eP	Pn	07 59 30.9	-0.6
TORV				eS	Sn	07 59 52.1	-0.1
PAMC	Pamplona, Colo	1.73	228	eP	Pb	07 59 35.2	-0.5
PAMC				eS	Sb	07 59 58.0	+0.1
PAMC				i		08 00 01.3	
	comp=Z,415nm,0.4s						
MCQV	Machiques	1.90	324	eP	Pn	07 59 36.7	+0.6
MCQV				eS	Sn	08 00 00.9	+0.5
OCAC	Ocana	1.92	262	eP	Pn	07 59 36.8	+0.3
OCAC				eS	Sn	08 00 02.0	+0.9
OCAC				i		08 00 04.0	
	comp=Z,4µm,0.5s						
ELOV	Elorza	2.42	128	eP	Pn	07 59 44.7	+1.4
ELOV				eS	Sn	08 00 14.5	+1.4
ELOV	Elorza	2.42	128	eP	Pn	07 59 44.5	+1.2
ELOV				eS	Sn	08 00 13.5	+0.3
DABV	Dabajuro	2.52	17	eP	Pn	07 59 45.3	+0.8
DABV				eS	Sn	08 00 15.6	0.0
BARC	Barichara	2.60	223	eP	Pn	07 59 47.3	+1.4
BARC				eS	Sb	08 00 22.4	-0.2
BARC				i		08 00 31.3	
	comp=Z,193nm,0.5s						
SIQV	Siquisique	2.64	36	eP	Pn	07 59 47.4	+1.0
SIQV				eS	Sn	08 00 19.3	+0.5
BRRC	Barranca, Sant	2.68	239	eP	Pn	07 59 48.0	+1.1
BRRC				eS	Sb	08 00 26.3	+1.5
BRRC				i		08 00 32.4	
	comp=Z,92nm,0.6s						
BAUV	El Baul	3.35	82	eP	Pn	07 59 56.9	+0.8
BAUV				eS	Sn	08 00 35.8	-0.3
JACV	Jacura	3.60	44	eP	Pn	08 00 00.6	+1.0
BENV	Beln	4.02	69	eP	Pn	08 00 06.5	+1.2
BENV				eS	Sn	08 00 51.9	-1.0
ROSC	El Rosal	4.66	219	Pn	Pn	08 00 16.5	+2.1
	comp=Z,3.4nm,0.3s,baz=135,slow=23,SNR=18						
ROSC				Lg	Lg	08 01 15.5	
	comp=Z,6.9nm,0.3s,baz=14,slow=23,SNR=2.7						
BIRV	Birongo	5.42	68	eP	Pn	08 00 23.8	-0.8
BIRV				eS	Sn	08 01 23.1	-4.3
GUVC	San Jose del G	6.05	192	eP	Pn	08 00 33.2	0.0
GUVC				eS	Sn	08 01 41.2	-1.6
LPAZ	La Paz	24.85	173	LR	LR	08 15 17.7	
	comp=Z,46nm,19.1s,baz=274,slow=39						
TKL	Tuckaleechee C	29.30	339	LR	LR	08 19 06.4	
	comp=Z,91nm,19.2s,baz=188,slow=40						
SCHQ	Schefferville	46.34	4	LR	LR	08 31 27.7	
	comp=Z,26nm,18.2s,baz=83,slow=39						
PDAR	Pinedale Array	47.77	322	P	P	08 07 41.4	-0.2
	comp=Z,0.3nm,0.4s,baz=125,slow=11,SNR=7.8						
PLCA	Paso Flores	49.00	179	P	P	08 07 53.0	+2.3
	comp=Z,1.8nm,1.1s,baz=9.2,slow=8.6,SNR=3.7						
ESDC	Sonseca Array	67.27	51	LR	LR	08 39 58.0	
	comp=Z,43nm,22.0s,baz=240,slow=33						
ASAR	Alice Springs	151.47	235	PKPbc	PKPbc	08 18 56.7	-2.3
	comp=Z,0.2nm,0.8s,baz=109,slow=2.6,SNR=5.4						
WRA	Warramunga Arr	152.63	243	PKPbc	PKPbc	08 18 60.0	-1.7
	comp=Z,0.3nm,0.6s,baz=110,slow=2.7,SNR=7.3						

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*GUC **04** 08:44:37.6±0.6, 30°.80S×71°.46W, h53^{km}±2^{km}, ML4.5*

*IDC **04** 08:44:38.2±0.6, 30°.76S×71°.40W, h45^{km}±4^{km}, mb4.2/12, mb1 4.3/16, mb1mx4.1/31, mbtmp4.3/16, MS3.4/10, Ms1 3.4/10, ms1mx3.3/22, Error ellipse: s-maj=19.7km s-min=15.0km az=80.0*

*NEIC **04** 08:44:38.7±1.5, 30°.78S±0°.05×71°.48W±0°.09, h45^{km}±5^{km}, mb4.6/25, Mwr4.4/32, ML4.5(GUC), Error ellipse: s-maj=11.5km s-min=6.9km az=98.0*

*VAO **04** 08:44:38.6±0.4, 30°.75S×71°.35W, h42^{km}, mb4.4*

*NEIC **04** 08:44:38.6, 30°.77S×71°.52W, h48^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$4.27; M$_{\theta\theta}$0.35; M$_{\phi\phi}$-4.62; M$_{r\theta}$0.70; M$_{\theta\phi}$-0.08; M$_{\phi r}$-1.11; Fault plane solution: M$_0$4.65000×10^{15} NP1:φ$_s$171.36000°, δ52.75000°, λ78.00000°. NP2:φ$_s$10.71000°, δ38.87000°, λ105.29000°. Principal axes: T 4.5249, Plg78.0000°, Azm36.0000°; N 0.2336, Plg10.0000°, Azm179.0000°; P -4.7586, Plg7.0000°, Azm270.0000°;*

ISC 04 08:44:38.1±0.5**, 30°.78S**±0°.03×**71°.45W**±0°.05**, h44**^{km}±4^{km}**, n150, σ0^{s}87**/155**, mb4.5**/22**, MS3.6**/5**, 1C-8D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.19	304	⇓eP	Pn	08 44 45.9	+0.1
CO06				i S	Sn	08 44 51.8	+0.6
CO06				IAML		08 44 52.3	
	comp=N,117µm,0.3s						
CO06	Fray Jorge	0.19	304		Pn	08 44 46.1	+0.4
CO03	El Pedregal	0.66	95	⇓iP	Pn	08 44 51.4	+0.3
CO03				eS	Sn	08 45 01.1	+0.5
CO03	El Pedregal	0.66	95		Pn	08 44 51.4	+0.3
GO04	Tololo Observa	0.83	43	⇓iP	Pn	08 44 53.7	+0.1
GO04				i S	Sn	08 45 05.9	+1.1
GO04				IAML		08 45 13.9	
	comp=N,47µm,0.3s						
GO04	Tololo Observa	0.83	43		Pn	08 44 54.2	+0.6
CO05	La Serena	0.88	12	⇓iP	Pn	08 44 54.1	+0.1
CO05				i S	Sn	08 45 05.8	+0.2
CO05				IAML		08 45 11.8	
	comp=E,31µm,0.3s						
CO05	La Serena	0.88	12		Pn	08 44 54.4	+0.4
VA06	Catapilco	1.78	176	eP	Pn	08 45 07.2	+0.9
VA06				eS	Sn	08 45 28.3	+0.5
VA06				IAML		08 45 45.1	
	comp=E,6µm,0.5s						
LCO	Las Campanas	1.88	20	⇓iP	Pn	08 45 08.6	+0.6
LCO				i S	Sn	08 45 32.6	+2.0
LCO	Las Campanas	1.88	20	Pn	Pn	08 45 08.7	+0.8
VA03	San Esteban	2.12	159	⇓eP	Pn	08 45 12.6	+1.5
VA03				eS	Sn	08 45 37.7	+1.3
VA03				IAML		08 45 51.9	
	comp=E,3µm,0.4s						
VA03	San Esteban	2.12	159		Pn	08 45 12.9	+1.7
ROCH	El Roble	2.22	170	⇓eP	Pn	08 45 13.6	+1.0
ROCH				eS	Sn	08 45 39.3	+0.4
ROCH				IAML		08 45 57.2	
	comp=N,3µm,0.4s						
VA01	Torpederas	2.24	184	eP	Pn	08 45 12.8	+0.1
VA01				eS	Sn	08 45 39.6	+0.5
VA01	Torpederas	2.24	184	Pn	Pn	08 45 13.2	+0.4
PEL	Peldehue	2.44	165	⇑eP	Pn	08 45 17.2	+1.6
PEL				eS	Sn	08 45 45.0	+0.8
PEL				IAML		08 46 02.1	
	comp=N,2µm,0.7s						
PEL	Peldehue	2.44	165		Pn	08 45 17.2	+1.6
MT02	Curacav	2.49	174	eP	Pn	08 45 17.5	+1.4
MT02				eS	Sn	08 45 46.2	+1.0
MT02	Curacav	2.49	174		Pn	08 45 17.9	+1.8
AC04	Llanos de Chal	2.59	7	Pn	Pn	08 45 18.1	+0.6
MT05	Renca	2.67	167	eP	Pn	08 45 20.5	+1.8
MT05				eS	Sn	08 45 50.5	+0.6
MT05				IAML		08 46 07.9	
	comp=E,3µm,0.3s						
MT09	Talagante	3.01	173	⇓eP	Pn	08 45 24.5	+1.1
MT09				eS	Sn	08 45 58.4	0.0
MT09				IAML		08 46 21.3	
	comp=N,1µm,0.5s						
MT09	Talagante	3.01	173		Pn	08 45 25.4	+1.9
GO03	Copiap	3.35	19	Pn	Pn	08 45 29.0	+1.1
BO01	Tunca	3.62	175		Pn	08 45 32.6	+1.0
PB14	IPOC Station P	6.20	9		Pn	08 46 07.3	0.0
VA04	Juan Fernndez	6.87	244		Pn	08 46 14.6	-1.7
PB15	IPOC Station P	7.75	14		Pn	08 46 27.3	-1.2
LC01	Cunco	8.11	182		Pn	08 46 32.5	-0.7
LVC	Limon Verde	8.45	16	P	Pn	08 46 37.9	-0.4
	comp=N,0.8nm,0.3s,baz=134,slow=12,SNR=10						
LVC				S	Sn	08 48 24.6	+12
	comp=N,2.5nm,0.3s,baz=267,slow=22,SNR=3.3						
LVC				LR	LR	08 49 15.6	
	comp=N,62nm,20.8s,baz=214,slow=33						
LVC	Limon Verde	8.45	16	eP	Pn	08 46 37.0	-1.3
PLCA	Paso Flores	9.96	176	P	Pn	08 46 58.8	+0.2
	comp=N,0.1nm,0.3s,baz=342,slow=8.3,SNR=5.8						
PLCA				LR	LR	08 51 20.8	
	comp=N,142nm,19.5s,baz=346,slow=40						
PLCA	Paso Flores	9.96	176	eP	Pn	08 46 58.9	+0.3
LL04	Puerto Octay	10.14	184	Pn	Pn	08 47 00.1	-0.9
TRQA	Tornquist	10.67	135	eP	Pn	08 47 08.6	+0.3
TRQA	Tornquist	10.67	135		Pn	08 47 08.3	0.0
ITQB	Itaqui	12.87	89	eP	Pn	08 47 36.4	-2.0
ITQB	Itaqui	12.87	89		Pn	08 47 38.3	-0.1
CPUP	Villa Florida	13.18	74	LR	LR	08 53 17.4	
	comp=N,212nm,19.4s,baz=230,slow=40						
CPUP	Villa Florida	13.18	74	eP	Pn	08 47 40.6	-2.0
LPAZ	La Paz	14.74	13	P	Pn	08 48 05.0	+0.6
	comp=N,0.3nm,0.3s,baz=184,slow=6.7,SNR=34						
LPAZ	La Paz	14.74	13		Pn	08 48 05.6	+1.2
PLTB	Pedras Altas	15.30	98	eP	Pn	08 48 09.9	-1.1
CPSB	Cacapava Do Su	15.52	93	eP	Pn	08 48 13.6	-0.3
AQDB	Aquidauana	17.50	58	eP	Pn	08 48 38.6	-0.3
SIV	San Ignacio	17.52	35	P	Pn	08 48 38.8	-0.3
	comp=N,0.7nm,0.3s,baz=215,slow=9.9,SNR=38						
SIV				LR	LR	08 56 04.1	
	comp=N,99nm,21.4s,baz=276,slow=39						
CNLB	Canela	17.89	91	eP	P	08 48 44.0	0.0
PTGB	Pitanga	18.18	75	eP	Pn	08 48 48.2	+0.9
PTLB	Pontes e Lacer	18.98	39	eP	P	08 48 56.2	+0.4
PTLB	Pontes e Lacer	18.98	39	P	P	08 48 55.7	-0.1
NNA	Nana	19.36	344	LR	LR	08 54 48.5	
	comp=N,78nm,20.0s,baz=165,slow=32						
TER01	Tubaro-SC	19.53	89	eP	P	08 49 02.3	+0.5
PP1B	Ponte de Pedra	19.98	53	eP	P	08 49 07.0	+0.1
PCMB	Pacaembu	20.26	68	eP	P	08 49 10.3	+0.3
TIJ01	Guaruva-PR	20.53	80	eP	P	08 49 10.8	-2.1
VILB	Vilhena	20.56	33	eP	P	08 49 12.7	-0.4
VILB	Vilhena	20.56	33	P	P	08 49 12.8	-0.4
VILB				IAmb	IAmb	08 49 29.6	
	comp=Z,16nm,0.8s						
SALV	Santo Antonio	20.67	48	eP	P	08 49 14.1	-0.2
FRTB	Fartura	20.83	74	eP	P	08 49 15.5	-0.6
ETMB	Extrema	21.42	14	eP	P	08 49 23.1	+0.7
ETMB	Extrema	21.42	14	P	P	08 49 22.9	+0.5
ITRB	Iturama	22.00	65	eP	P	08 49 28.5	-0.1
PET01	Itanhaem-SP	22.37	79	eP	P	08 49 33.5	+1.0
BB19B	Bebedouro	22.73	70	eP	P	08 49 35.9	-0.6
CZSB	Cruzeiro do Su	22.96	357	eP	P	08 49 39.7	+0.9
SAML	Samuel	23.05	21	P	P	08 49 41.3	+1.6
VAO	Valinhos	23.14	76	eP	P	08 49 40.1	-0.6
ARAG	Araguaiana, MT	23.41	55	eP	P	08 49 42.0	-1.3
PDRB	Porto dos Gac	23.45	39	eP	P	08 49 43.5	-0.1
USHA	Ushuaia	24.14	176	P	P	08 49 49.5	-0.2
	comp=Z,6.6nm,0.6s,baz=347,slow=11,SNR=6.9						
ATAH	Atahualpa	24.41	343	LR	LR	08 57 33.9	
	comp=Z,59nm,19.9s,baz=176,slow=32						
IPMB	Ipameri, GO	24.64	64	eP	P	08 49 54.5	-0.3
BSCB	Bom Sucesso	25.84	74	eP	P	08 50 05.9	+0.3
BDFB	Brasilia	26.21	60	P	P	08 50 07.3	-1.7
	comp=Z,11nm,0.8s,baz=249,slow=9.1,SNR=13						
BDFB				LR	LR	09 01 25.1	
	comp=Z,108nm,20.9s,baz=295,slow=38						
BDFB	Brasilia	26.21	60	P	P	08 50 08.3	-0.7
BDFB				IAmb	IAmb	08 50 09.2	
	comp=Z,10nm,0.8s						
VAS01	Vassouras-RJ	26.40	78	eP	P	08 50 11.8	+1.2
SNDB	Serra Nova Dou	26.42	49	eP	P	08 50 10.6	-0.2
TBTG	Tabatinga, AM	26.49	3	eP	P	08 50 12.1	+0.8
DUB01	Friburgo-RJ	27.38	79	eP	P	08 50 18.9	-0.5
NPGB	Novo Progresso	28.02	36	eP	P	08 50 23.7	-1.3
PEXB	Peixe	28.35	54	eP	P	08 50 28.1	0.0
MC01	Montes Claros	28.72	67	eP	P	08 50 30.8	-0.6
MACA	Manacapuru-AM	29.29	22	eP	P	08 50 36.1	-0.3
MACA	Manacapuru-AM	29.29	22	P	P	08 50 36.1	-0.3
MACA				IAmb	IAmb	08 50 36.5	
	comp=Z,7.6nm,0.8s						
JANB	Januaria	29.38	64	eP	P	08 50 36.9	-0.4
ALF01	Guarapari-ES	29.39	77	eP	P	08 50 37.2	-0.1
BSFB	Barra de Sao F	30.12	74	eP	P	08 50 43.1	-0.7
ITTB	Itaituba	30.16	33	eP	P	08 50 43.4	-0.7
RIB01	Linhares ES	30.27	75	eP	P	08 50 46.0	+1.0
SDBA	SAO DESIDERIO	30.59	59	eP	P	08 50 48.1	+0.1
SMTB	Santa Maria do	31.16	51	eP	P	08 50 53.5	+0.5
NAN01	Guarapari, ES	31.20	73	eP	P	08 50 52.6	-0.7
PTGA	Pitinga	31.81	22	P	P	08 50 57.7	-0.9
	comp=Z,5.6nm,0.9s,baz=208,slow=8.2,SNR=7.1						
BOAV	Boa Vista	34.60	19	eP	P	08 51 22.8	-0.1
NBPN	Ponto Novo - B	35.12	62	eP	P	08 51 26.6	-0.8
MCPB	Macapa, AP	35.41	35	eP	P	08 51 29.6	-0.4
NBLA	Lagarto - SE	36.89	65	eP	P	08 51 41.7	-0.9
NBMA	Muriti-CE	38.44	60	eP	P	08 51 55.6	-0.2
NBAN	Anadia - AL	38.87	65	eP	P	08 51 58.4	-1.0
BAUV	El Baul	39.63	5	P	P	08 52 05.3	-0.3
BAUV				IAmb	IAmb	08 52 06.4	
	comp=Z,15nm,0.8s						
NBPA	Parau_RN	40.73	59	eP	P	08 52 14.8	0.0
BIRV	Birongo	41.32	8	P	P	08 52 20.1	+0.6
BIRV				IAmb	IAmb	08 52 20.6	
	comp=Z,12nm,0.9s						
NBPV	Pedro Velho	41.66	62	eP	P	08 52 23.1	+0.7
MLPR	Magueyes Islan	48.65	6	P	P	08 53 17.5	-0.3
CRPR	Cabo Rojo, PR	48.68	6	P	P	08 53 17.9	0.0
CELP	Cerrillos	48.80	6	P	P	08 53 19.2	+0.4
VNA3	Neumayer Olymp	52.16	159	P	P	08 53 44.1	+0.3
VNA3	Neumayer Olymp	52.16	159	pP	pP	08 53 57.6	+1.2
VNA3	Neumayer Olymp	52.16	159	sP	sP	08 54 01.7	+0.1
VNA2	Neumayer--Watz	52.80	158	P	P	08 53 48.7	+0.3
	baz=290,slow=7.3						
VNA2	Neumayer--Watz	52.80	158	pP	pP	08 54 00.8	-0.2
VNA2	Neumayer--Watz	52.80	158	sP	sP	08 54 06.1	-0.1
SNAA	Sanae	54.38	159	P	P	08 54 00.1	0.0
SNAA	Sanae	54.38	159	pP	pP	08 54 12.8	0.0
SNAA	Sanae	54.38	159	sP	sP	08 54 17.4	-0.6
SNAA	Sanae	54.38	159	P	P	08 54 00.7	+0.6
SNAA				IAmb	IAmb	08 54 18.7	
	comp=Z,3.9nm,0.8s						
TKL	Tuckaleechee C	67.09	349	P	P	08 55 26.1	-0.7
	comp=Z,4.0nm,0.7s,baz=151,slow=10,SNR=4.7						
TX31	Lajitas Ar. Si	67.19	330	P	P	08 55 28.6	+0.9
TX31				IAmb	IAmb	08 55 29.3	
	comp=Z,5.8nm,0.8s						
TX32	Lajitas Array	67.19	330	P	P	08 55 29.0	+1.3
TXAR	Lajitas Array	67.19	330	P	P	08 55 27.6	-0.1
	comp=Z,1.5nm,0.7s,baz=150,slow=8.5,SNR=20						
TXAR				pP	pP	08 55 41.0	+0.4
	comp=Z,0.6nm,0.7s,baz=157,slow=6.8,SNR=4.8						
TXAR	Lajitas Array	67.19	330	P	P	08 55 29.1	+1.4
VNDA	Vanda	67.35	191	LR	LR	09 22 54.3	
	comp=Z,58nm,18.6s,baz=252,slow=34						
MNTX	Cornudas Mount	69.97	330	P	P	08 55 45.2	+0.2
CCM	Cathedral Cave	70.93	344	P	P	08 55 51.3	+0.7
CCM				IAmb	IAmb	08 55 51.9	
	comp=Z,11nm,0.8s						
R40A	Maddies Statio	71.41	343	P	P	08 55 53.7	+0.2
LIC	Lamto	73.30	72	eP	P	08 56 04.7	-0.6
	comp=Z,13nm,0.6s						
TIC	Toumodi	73.54	72	eP	P	08 56 06.2	-0.6
KIC	Kosan Boka	73.61	72	eP	P	08 56 06.6	-0.6
	comp=Z,20nm,0.8s						
DBIC	Dimbokro	73.69	72	P	P	08 56 07.6	0.0
	comp=Z,12nm,0.9s,baz=224,slow=6.2,SNR=13						
DBIC				pP	pP	08 56 20.8	+0.1
	comp=Z,3.4nm,0.6s,baz=233,slow=5.6,SNR=2.0						
DBIC				LR	LR	09 26 07.4	
	comp=Z,35nm,20.3s,baz=66,slow=34						
DBIC	Dimbokro	73.69	72	P	P	08 56 07.2	-0.4
DBIC				IAmb	IAmb	08 56 08.5	
	comp=Z,14nm,0.9s						
T25A	Trinidad	74.28	333	P	P	08 56 13.0	+2.2
T25A				IAmb	IAmb	08 56 13.9	
	comp=Z,4.7nm,0.8s						
MAW	Mawson	76.12	164	P	P	08 56 22.0	+1.3
	comp=Z,3.8nm,0.8s,baz=191,slow=12,SNR=4.0						
ECSD	EROS Data Cent	77.65	342	P	P	08 56 30.1	+0.6
BOSA	Boshof	81.13	118	P	P	08 56 49.3	0.0
	comp=Z,3.9nm,0.8s,baz=265,slow=4.7,SNR=5.6						
BOSA	Boshof	81.13	118	IAmb	IAmb	08 56 50.6	
	comp=Z,4.2nm,0.8s						
PDAR	Pinedale Array	81.13	333	P	P	08 56 49.1	+0.2
	comp=Z,0.4nm,0.5s,baz=139,slow=7.0,SNR=4.0						
NVAR	Mina Array Bea	81.54	325	P	P	08 56 52.0	+0.8
	comp=Z,1.2nm,0.9s,baz=161,slow=6.1,SNR=6.7						
NVAR				pP	pP	08 57 04.8	+0.5
	comp=Z,0.4nm,0.6s,baz=163,slow=5.8,SNR=3.5						
TORD	Torodi Ar. Bea	82.65	70	P	P	08 56 57.4	+0.2
	comp=Z,3.0nm,0.7s,baz=267,slow=5.3,SNR=15						
TORD				pP	pP	08 57 11.2	+0.8
	comp=Z,2.9nm,0.7s,baz=277,slow=4.9,SNR=7.5						
TORD				LR	LR	09 30 52.7	
	comp=Z,40nm,21.1s,baz=195,slow=34						
TORD	Torodi Ar. Bea	82.65	70	P	P	08 56 55.8	-1.4
LBTB	Lobatse	83.20	115	P	P	08 57 00.4	+0.2
LBTB				IAmb	IAmb	08 57 01.4	
	comp=Z,12nm,0.9s						
ULM	Lac du Bonnet	83.53	345	P	P	08 57 01.2	+0.3
	comp=Z,4.8nm,0.8s,baz=150,slow=3.3,SNR=6.4						
ULM	Lac du Bonnet	83.53	345	IAmb	IAmb	08 57 02.0	
	comp=Z,6.0nm,0.8s						
ASAR	Alice Springs	120.65	207	PKP	PKPdf	09 03 24.7	-1.0
	comp=Z,0.7nm,1.1s,baz=132,slow=4.1,SNR=3.5						
ASAR				pPKP	pPKPdf	09 03 38.0	-1.4
	comp=Z,0.2nm,0.5s,baz=101,slow=1.9,SNR=2.7						
WRA	Warramunga Arr	123.81	210	PKP	PKPdf	09 03 30.9	-0.8
	comp=Z,0.3nm,0.8s,baz=152,slow=1.8,SNR=1.8						
WRA				pPKP	pPKPdf	09 03 44.1	-1.4
	comp=Z,0.4nm,0.5s,baz=159,slow=1.6,SNR=3.1						
H11S2	WAKE ISLAND Hy	126.26	271	T	T	11 22 28.0	
	baz=115,slow=75,SNR=105						
H11S1	WAKE ISLAND Hy	126.27	271	T	T	11 22 31.0	
	baz=115,slow=75,SNR=92						
H11S3	WAKE ISLAND Hy	126.28	271	T	T	11 22 24.1	
	baz=115,slow=75,SNR=78						
ZALV	Zalesovo Beam	151.22	30	PKPbc	PKPbc	09 04 25.4	-0.7
	comp=Z,9.7nm,0.7s,baz=301,slow=3.2,SNR=38						
ZALV				pPKPbc	sPKPdf	09 04 39.7	+0.9
	comp=Z,4.6nm,0.7s,baz=301,slow=2.7,SNR=7.4						
MKAR	Makanchi Array	154.19	44	PKPbc	PKPbc	09 04 32.5	-0.5
	comp=Z,0.8nm,0.8s,baz=333,slow=1.9,SNR=4.4						

IDC 04 08:47:16.6±12.0**, 0°.61N**×**124°.42E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.0**/49**, mbtmp3.4**/3**, Error ellipse: s-maj=198.1km s-min=188.7km az=16.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.62	155	P	P	08 52 19.2	-0.1
	0.6nm,0.4s,baz=333,slow=11,SNR=20						
ASAR	Alice Springs	25.83	160	P	P	08 52 50.4	+0.5
	0.2nm,0.3s,baz=345,slow=13,SNR=5.3						
STKA	Stephens Creek	36.17	155	P	P	08 54 20.5	-0.5
	0.5nm,0.4s,baz=333,slow=8.6,SNR=5.0						

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*MAN **04** 09:17:18.2, 9°.92N×126°.00E, h14^{km}, mb5.0, ML3.9, MS3.9*

*NEIC **04** 09:17:22.0±1.5, 9°.97N±0°.05×126°.0E±0°.1, h92^{km}±6^{km}, mb4.6/18, Error ellipse: s-maj=19.5km s-min=7.1km az=78.0*

*IDC **04** 09:17:22.4±2.8, 9°.94N×125°.91E, h99^{km}±26^{km}, mb4.0/21, mb1 4.1/22, mb1mx3.7/59, mbtmp4.4/22, MS3.3/17, Ms1 3.3/17, ms1mx3.2/46, Error ellipse: s-maj=26.1km s-min=11.2km az=68.0*

ISC 04 09:17:18.4±1.2**, 10°.03N**±0°.06×**126°.08E**±0°.08**, h61**^{km}±10^{km}**, n73, σ1^{s}63**/67**, mb4.4**/27**, 2C-9D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.63	247	⇓iP	Pn	09 17 29.8	-2.1
SCPH				i S	Sn	09 17 39.1	-2.6
MSLP	Maasin	1.20	275	⇓iP	Pn	09 17 39.2	+0.1
MSLP				i S	Sn	09 17 56.6	+1.9
BIPH	Bislig	1.85	171	⇓eP	Pn	09 17 49.2	+1.3
BIPH				eS	Sn	09 18 11.1	+0.8
LLP	Lapu-Lapu	2.10	278	⇓iP	Pn	09 17 52.3	+1.1
LLP				i S	Sn	09 18 18.8	+2.5
TBP	Tagbilaran	2.21	262	⇓iP	Pn	09 17 53.6	+0.9
TBP				i S	Sn	09 18 21.9	+2.9
DAV	Davao City (W)	2.98	190	P	Pn	09 18 06.7	+3.4
	52nm,0.3s,baz=282,slow=6.8,SNR=3.7						
DAV				S	Sn	09 18 38.3	+0.5
	44nm,0.3s,baz=96,slow=17,SNR=5.8						
DAV				LR	LR	09 19 24.6	
	comp=Z,710nm,20.5s,baz=348,slow=43						
DAV	Davao City (W)	2.98	190		Pn	09 18 06.1	+2.9
DMPH	Davao City--Mi	2.98	191	⇑eP	Pn	09 18 03.8	+0.5
DMPH				eS	Sn	09 18 42.6	+4.8
DCPH	Dipolog City	3.05	242	⇓eP	Pn	09 18 05.0	+0.9
KCP	Kidapawan	3.15	198	⇓iP	Pn	09 18 07.3	+1.6
KCP				i S	Sn	09 18 44.3	+2.1
CNOP	Candoni, Negro	3.39	267	⇓eP	Pn	09 18 10.1	+1.2
PAGZ	Pagadian	3.43	231	eP	Pn	09 18 10.2	+0.8
RCP	Roxas	3.61	295	⇑eP	Pn	09 18 13.9	+2.0
JAP	San Jose, Anti	4.12	280	⇓eP	Pn	09 18 22.6	+3.7
LQP	Lukban	6.01	313	eP	Pn	09 18 40.2	-4.8
MYLDM	Lahad Datu	8.92	238	Pn	Pn	09 19 27.6	+3.0
SIJI	Sorong	11.99	154	LR	LR	09 25 32.8	
	comp=Z,72nm,20.0s,baz=36,slow=41						
SBUM	Sibu	15.69	242	Pn	Pn	09 20 55.6	-0.2
KAPI	Kappang	16.21	203	LR	LR	09 27 35.1	
	comp=Z,78nm,20.3s,baz=27,slow=38						
JOW	Kunigami	16.85	7	LR	LR	09 28 28.4	
	comp=Z,46nm,19.0s,baz=313,slow=39						
GUMO	Guam	18.73	77	LR	LR	09 26 42.2	
	comp=Z,99nm,20.9s,baz=97,slow=30						
JAY	Jayapura	19.17	130	LR	LR	09 28 42.7	
	comp=Z,83nm,19.7s,baz=327,slow=35						
BATI	Baumata	20.24	187	LR	LR	09 29 58.6	
	comp=Z,105nm,21.8s,baz=334,slow=38						
MTN	Manton Dam	23.27	167	P	P	09 22 21.5	+0.6
MTN				IAmb	IAmb	09 22 31.7	
	comp=Z,19nm,1.2s						
KNRA	Kununurra	25.68	174	P	P	09 22 42.3	-0.5
KNRA				IAmb	IAmb	09 22 52.5	
	comp=Z,43nm,1.4s						
KSRS	Korea Array	27.36	3	P	P	09 23 00.0	+2.3
	comp=Z,26nm,0.7s,baz=152,slow=11,SNR=2.7						
CMAR	Chiang Mai Arr	27.57	291	P	P	09 23 00.0	0.0
	comp=Z,1.2nm,0.3s,baz=104,slow=7.2,SNR=15						
CMAR				LR	LR	09 34 04.2	
	comp=Z,49nm,18.4s,baz=157,slow=36						
CHTO	Chiang Mai	27.66	291	P	P	09 23 00.9	+0.2
MJAR	Matsushiro Arr	28.60	21	LR	LR	09 34 22.1	
	comp=Z,49nm,20.4s,baz=100,slow=36						
WRA	Warramunga Arr	30.87	165	P	P	09 23 27.6	-1.5
	comp=Z,1.2nm,0.8s,baz=343,slow=9.4,SNR=12						
WRA				LR	LR	09 38 03.1	
	comp=Z,45nm,18.7s,baz=240,slow=40						
WB2	Warramunga Arr	30.87	165	P	P	09 23 28.4	-0.8
AS31	Alice Springs	34.35	167	P	P	09 23 58.6	-1.0
ASAR	Alice Springs	34.35	167	P	P	09 23 58.6	-1.0
	comp=Z,1.2nm,0.5s,baz=351,slow=6.8,SNR=28						
ASAR				PcP	PcP	09 26 34.7	+0.2
	comp=Z,0.7nm,0.6s,baz=333,slow=2.8,SNR=5.7						

ASAR				S	S	09 29 18.4	-4.5
	comp=Z,0.8nm,0.9s,baz=358,slow=22,SNR=5.5						
ASAR				LR	LR	09 38 48.2	
	comp=Z,26nm,21.1s,baz=342,slow=38						
USRK	Ussuriysk Ar.	34.43	8	LR	LR	09 39 41.3	
	comp=Z,36nm,18.4s,baz=133,slow=39						
KLR	Kul'dur	39.37	6	LR	LR	09 43 46.7	
	comp=Z,40nm,18.1s,baz=272,slow=40						
H11N1	WAKE ISLAND Hy	40.51	71	T	T	10 08 12.8	
	baz=264,slow=74,SNR=99						
H11N2	WAKE ISLAND Hy	40.52	71	T	T	10 08 12.9	
	baz=264,slow=74,SNR=88						
H11N3	WAKE ISLAND Hy	40.53	71	T	T	10 08 11.7	
	baz=264,slow=74,SNR=105						
FORT	Forrest	40.61	177	P	P	09 24 52.5	+0.2
SONM	Songino Array	41.18	340	P	P	09 24 57.6	+0.6
	comp=Z,2.2nm,0.7s,baz=161,slow=9.8,SNR=11						
SONM	Songino Array	41.18	340	IAmb	IAmb	09 24 58.4	
	comp=Z,6.4nm,1.4s						
BBOO	Buckleboo	43.65	168	P	P	09 25 17.1	+0.1
STKA	Stephens Creek	44.23	161	P	P	09 25 23.3	+1.5
	comp=Z,0.9nm,0.3s,baz=38,slow=2.9,SNR=5.8						
TLY	Talaya	45.40	341	P	P	09 25 32.0	+1.2
	comp=Z,3.1nm,0.7s,baz=158,slow=6.2,SNR=4.3						
PETK	Petropavlovsk-	49.94	24	P	P	09 26 07.0	+1.1
	comp=Z,3.3nm,0.8s,baz=228,slow=9.9,SNR=1.9						
PETK				LR	LR	09 46 59.5	
	comp=Z,38nm,20.4s,baz=332,slow=36						
MK31	Makanchi Array	52.10	323	P	P	09 26 21.9	-0.5
MK31				IAmb	IAmb	09 26 24.3	
	comp=Z,4.7nm,1.0s						
MKAR	Makanchi Array	52.10	323	P	P	09 26 22.3	-0.1
	comp=Z,4.1nm,0.7s,baz=120,slow=8.3,SNR=37						
MKAR				LR	LR	09 49 12.2	
	comp=Z,76nm,18.1s,baz=348,slow=37						
MKAR	Makanchi Array	52.10	323	P	P	09 26 21.6	-0.8
MAKZ	Makanchi	52.30	323	P	P	09 26 23.6	-0.2
MAKZ				IAmb	IAmb	09 26 24.3	
	comp=Z,4.6nm,0.9s						
NIL	Nilore	53.71	304	P	P	09 26 33.9	-0.6
NIL				IAmb	IAmb	09 26 36.4	
	comp=Z,6.9nm,0.8s						
ZALV	Zalesovo Beam	54.75	331	P	P	09 26 40.8	-0.8
	comp=Z,1.7nm,0.6s,baz=116,slow=6.8,SNR=5.2						
KURK	Kurchatov	56.16	326	P	P	09 26 51.1	-0.7
KURBB	Kurchatov Arra	56.16	326	P	P	09 26 51.2	-0.6
	comp=Z,3.5nm,0.6s,baz=124,slow=6.8,SNR=25						
KKAR	Karatay Array	58.29	315	P	P	09 27 06.2	-0.8
TIXI	Tiksi	61.60	1	P	P	09 27 29.5	+0.5
BVAR	Borovoye Array	61.76	326	P	P	09 27 30.4	-0.1
	comp=Z,2.1nm,0.8s,baz=179,slow=12,SNR=9.3						
BVAR				PcP	PcP	09 28 10.2	-1.0
	comp=Z,1.1nm,0.6s,baz=209,slow=8.5,SNR=3.9						
AFI	Afiamalu	66.08	110	LR	LR	09 50 55.8	
	comp=Z,35nm,21.6s,baz=285,slow=30						
ARU	Arti	69.32	327	P	P	09 28 18.4	-0.9
	comp=Z,4.0nm,0.2s,baz=100,slow=4.5,SNR=11						
ARU	Arti	69.32	327	IAmb	IAmb	09 28 19.2	
	comp=Z,7.5nm,0.6s						
BELG	Belogornoye	75.08	322	P	P	09 28 52.0	-1.6
	comp=Z,16nm,0.9s,baz=114,slow=5.1,SNR=8.0						
ILAR	Eielson Array	79.74	26	P	P	09 29 19.4	-0.1
	comp=Z,1.2nm,0.8s,baz=231,slow=5.1,SNR=16						
ARCES	ARCESS Array B	84.36	340	P	P	09 29 43.3	-0.4
	comp=Z,2.7nm,0.8s,baz=72,slow=5.1,SNR=6.1						
ARCES	ARCESS Array B	84.36	340	P	P	09 29 43.8	+0.2
ARCES				IAmb	IAmb	09 30 04.7	
	comp=Z,16nm,1.3s						
HYT	Haines Junctio	84.44	29	P	P	09 29 46.3	+1.9
HYT				IAmb	IAmb	09 29 47.5	
	comp=Z,7.1nm,0.9s						
BRTR	Keskin Array B	85.54	309	P	P	09 29 49.6	-0.7
	comp=Z,1.8nm,0.8s,baz=125,slow=6.2,SNR=6.0						
FINES	FINESS Array B	86.01	332	P	P	09 29 51.5	-0.5
	comp=Z,1.8nm,0.4s,baz=82,slow=4.8,SNR=26						
AKASG	Malin Array Be	86.63	321	P	P	09 29 54.6	-0.7
	comp=Z,0.3nm,0.3s,baz=65,slow=4.6,SNR=5.0						
VNDA	Vanda	89.71	173	P	P	09 30 08.2	-1.1
	comp=Z,1.8nm,1.1s,baz=328,slow=8.8,SNR=2.7						
VNDA	Vanda	89.71	173	P	P	09 30 08.1	-1.2
VNDA				IAmb	IAmb	09 30 10.1	
	comp=Z,4.0nm,1.2s						
NOA	NORSAR Array B	92.89	334	LR	LR	10 14 24.6	
	comp=Z,43nm,18.5s,baz=25,slow=37						
YKA	Yellowknife Ar	94.06	24	P	P	09 30 30.3	+0.5
	comp=Z,0.4nm,0.7s,baz=292,slow=4.4,SNR=4.0						
TORD	Torodi Ar. Bea	120.18	292	PKP	PKPdf	09 36 02.2	-1.2
	comp=Z,0.9nm,0.7s,baz=50,slow=1.7,SNR=4.4						
PLCA	Paso Flores	146.06	157	PKPbc	PKPab	09 36 52.4	-0.2
	comp=Z,1.3nm,0.8s,baz=192,slow=4.2,SNR=4.9						

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*KRNET **04** 09:19:25.7±0.1, 41°.03N×69°.52E, h18^{km}, mb2.9*
*NNC **04** 09:19:33.2±10.0, 41°.21N×69°.76E, h0^{km}, mb3.4, mpv2.9, Error ellipse: s-maj=75.0km s-min=33.9km az=26.0*
ISC 04 09:19:25.3±1.2, **41°.00N**±0°.04×**69°.53E**±0°.05, **h8**^{km}±12^{km}, **n13, σ1^s.61**/23, **18C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	Tashkent	0.37	331	⇓*i*P	Pg	09 19 32.7	+0.2
	baz=31						
TAS				⇓*i*S	Sg	09 19 38.1	+0.7
	baz=31						
TRKS	Terek-Say	1.32	66	⇑*i*P	Pb	09 19 50.1	-0.4
	baz=70						
TRKS				⇑*i*S	Sb	09 20 07.2	-0.4
	baz=70						
BTK	Batken	1.36	134	⇓*i*P	Pb	09 19 51.2	+0.1
	baz=34						
BTK				⇓*i*S	Sg	09 20 09.9	+0.9
	baz=34						
GAR	Garm	2.09	163	⇑*i*P	Pb	09 20 02.5	-1.0
	baz=63						
GAR				⇑*i*S	Sb	09 20 29.7	0.0
	baz=63						
KK02	Karatay Array	2.22	19	⇓Pg	Pg	09 20 08.9	+1.0
	3.5nm,0.5s,baz=206,slow=16						
KK02				⇑Lg	Lg	09 20 36.4	
	5.9nm,0.3s,baz=194,slow=28						
DRK	Karamyk	2.31	130	⇓*i*P	Pb	09 20 05.6	-1.8
	baz=31						
DRK				⇓*i*S	Sb	09 20 34.8	-1.3
	baz=31						
CHGR	Chuyangaron	2.36	187	⇑*i*P	Pb	09 20 06.1	-2.0
	baz=87						
CHGR				⇑*i*S	Sb	09 20 36.0	-1.5
	baz=87						
MNAS	Manas	2.67	55	⇑*i*P	Pb	09 20 10.6	-2.9
	baz=56						
MNAS				⇑*i*S	Sb	09 20 42.9	-3.6
	baz=56						
AML	Almayashu	3.32	69	⇑*e*P	Pn	09 20 19.5	+1.6
	baz=69						
AML				⇑*i*S	Sn	09 20 58.7	+0.9
	baz=69						
EKS2	Erkin-Say	3.58	61	⇑*i*P	Pn	09 20 23.1	+1.9
	baz=61						
EKS2				⇑*i*S	Sn	09 21 04.5	+0.7
	baz=61						
UCH	Uchtor	3.93	70	⇑*i*P	Pn	09 20 28.2	+1.8
	baz=71						
UCH				⇑*i*S	Sn	09 21 13.4	+0.5
	baz=71						
AAK	Ala-Archa	4.05	65	⇑Pg	Pg	09 20 43.6	+0.7
	2.4nm,0.5s						
TKM2	Tokmak 2	4.91	65	⇑Pg	Pg	09 20 58.2	-1.2
	0.7nm,0.3s						
TKM2				⇑Lg	Lg	09 22 00.9	
	4.5nm,0.8s						

ISC 04 09:31:21.8±1.0, **48°.66N**±0°.09×**18°.38E**±0°.05, **h14**^{km}±10^{km}, **n6, σ0^s.35**/12, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOLL	Kolacno	0.08	171	*e*PG	Pg	09 31 24.4	-0.3
KOLL				*e*SG	Sg	09 31 27.1	+0.5
VYHS	Vyhne	0.34	118	*e*PG	Pg	09 31 28.6	-0.2
VYHS				*e*SG	Sg	09 31 33.1	-0.4
JAVC	Velka Javorina	0.51	294	*e*PG	Pb	09 31 33.2	+0.5
JAVC				*e*SG	Sb	09 31 39.7	-0.4
LANS	Liptovska Anna	0.87	55	*e*PG	Pn	09 31 40.0	+0.2
LANS				*e*SG	Sg	09 31 50.1	0.0
MORC	Moravsky Berou	1.25	334	*e*PG	Pn	09 31 44.9	-0.1
MORC				*e*SG	Sb	09 32 01.3	0.0
VRAC	Vranov	1.35	300	*e*PG	Pb	09 31 47.0	+0.1
VRAC				*e*SG	Sg	09 32 05.2	-0.1

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*IDC **04** 09:45:30.9±0.5, 32°.77N×138°.85E, h0^{km}, mb3.4/2, mb1 3.5/3, mb1mx2.9/39, mbtmp3.3/3, ML2.3/1, MS3.3/2, Ms1 3.3/2, ms1mx2.6/30, Error ellipse: s-maj=8.1km s-min=4.4km az=138.0*
*JMA **04** 09:45:34.6±0.1, 33°.41N×140°.74E, h63^{km}±4^{km}, M3.1*
ISC 04 09:45:32.9±1.5, **33°.32N**±0°.07×**140°.9E**±0°.1, **h50**^{km}, **n11, σ1^s.33**/14, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.92	257	P	Pn	09 45 50.7	+1.1
JHJ2				S	Sn	09 46 02.8	+1.0
JHJ	Hachijo jima 2	0.95	258	Pn	Pn	09 45 50.6	+0.6
	85nm,0.3s,baz=158,slow=22,SNR=35						
JHJ				Sn	Sn	09 46 03.1	+0.7
	145nm,0.3s,baz=162,slow=23,SNR=5.7						
BSO1	Boso 1	1.33	3	P	Pn	09 45 56.4	+1.7
BSO3	Boso 3	1.51	348	P	Pn	09 45 58.6	+1.2
KTJ3	Kamata3	2.21	317	P	Pn	09 46 07.7	+0.6
KTJ3				S	Sn	09 46 32.1	-1.1
JOD2	Odawara 2	2.45	323	P	Pn	09 46 11.0	+0.6
JOD2				S	Sn	09 46 36.9	-2.2
MJAR	Matsushiro Arr	3.90	326	Pn	Pn	09 46 31.8	+1.5
	0.2nm,0.3s,baz=177,slow=9.7,SNR=3.3						
MJAR				Sn	Sn	09 47 15.3	+0.5
	0.1nm,0.3s,baz=160,slow=25,SNR=3.4						
YAK	Yakutsk	29.61	349	LR	LR	10 04 02.2	
	comp=Z,67nm,18.3s,baz=267,slow=37						
SEY	Seymchan	30.51	10	LR	LR	10 04 21.5	
	comp=Z,41nm,18.9s,baz=340,slow=36						
WRA	Warramunga Arr	53.33	188	P	P	09 54 46.3	-0.9
	0.3nm,0.5s,baz=3.5,slow=7.5,SNR=11						
ASAR	Alice Springs	57.06	188	P	P	09 55 12.6	-1.4
	0.2nm,0.5s,baz=8.8,slow=8.5,SNR=5.0						

BER 04 09:49:21.2±0.7, **66°.40N**×**13°.35E, h6**^{km}±12^{km}, **ML0.4, 1C, Confirmed Earthquake, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KONS	Konsvik	0.13	317	⇑*i*P	Pg	09 49 23.7	-0.3
KONS				*e*S	Sg	09 49 25.8	-0.1
KONS				IAML		09 49 26.0	
	comp=Z,9.0nm,0.2s						
STOK	Stokkvaagen	0.15	243	*e*P	Pg	09 49 24.1	-0.2
STOK				*e*S	Sg	09 49 26.3	0.0
NBB40	Tonnes	0.17	310	*e*P	Pg	09 49 24.4	-0.3
NBB40				*e*S	Sg	09 49 26.9	-0.1
MOR8	Moi Rana	0.50	117	*e*P	Pg	09 49 30.9	+0.1
MOR8				*e*S	Sb	09 49 39.5	-0.4
FAUS	Fauske	1.25	37	*e*S	Sg	09 50 01.1	-0.2

UPP 04 09:50:10.0±0.2, **57°.73N**×**18°.64E, h0**^{km}, **ML1.6, Explosion, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOTU	Gotland	0.06	217	P	Pg	09 50 11.4	+0.3
GOTU				S	Sg	09 50 12.2	+0.3
BYXU	Byxelkrok	0.99	244	P	Pg	09 50 28.9	+0.1
VSTU	Vaestervik	1.13	267	P	Pg	09 50 31.1	-0.5
VIKU	Vikbolandet	1.28	308	P	Pg	09 50 33.5	-1.1
NYNU	Nynaeshamn	1.32	346	P	Pg	09 50 33.7	-1.5
NYNU				S	Sg	09 50 52.1	-0.2
LNKU	Linkoeping	1.74	288	P	Pn	09 50 41.6	+0.2
ESKU	Eskilstuna	1.91	323	P	Pn	09 50 44.5	+0.8
NRTU	Norrtaelje	1.95	360	P	Pn	09 50 44.6	+0.4
BACU	Backbrunna	2.27	340	P	Pn	09 50 49.8	+1.1
FIBU	Brunna	2.27	343	P	Pn	09 50 49.7	+1.0

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*SOME **04** 10:32:27.6, 40°.42N×72°.55E, h10^{km}*
*NNC **04** 10:32:29.6±1.7, 40°.50N×72°.61E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=13.2km s-min=5.6km az=170.0*
*KRNET **04** 10:32:31.1±0.1, 40°.54N×72°.62E, h16^{km}, mb2.8*
ISC 04 10:32:30.8±1.2, **40°.54N**±0°.03×**72°.61E**±0°.02, **h3**^{km}±15^{km}, **n23, σ1^s.02**/39, **18C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.14	97	⇓*i*P	Pg	10 32 33.5	0.0
	baz=96						
OHH				⇓*i*S	Sg	10 32 35.7	+0.4
	baz=96						
SFK	Sufi-Kurgan	0.86	127	⇑*e*P	Pb	10 32 47.5	-1.1
	baz=27						
SFK				⇑*e*S	Sg	10 32 59.8	+1.2
	baz=27						
SALK	Salom-Alik	0.98	69	⇑*e*P	Pb	10 32 49.8	-0.8
	baz=69						
SALK				⇑*e*S	Sb	10 33 03.7	-0.3
	baz=69						
DRK	Karamyk	1.23	211	⇑*i*P	Pg	10 32 54.5	+0.2
	baz=11						
DRK				⇑*i*S	Sg	10 33 11.3	+1.1
	baz=11						
BTK	Batken	1.45	251	⇑*i*P	Pg	10 32 58.7	+0.1
	baz=51						
BTK				⇑*i*S	Sg	10 33 19.0	+1.6
	baz=51						
TRKS	Terek-Say	1.49	312	⇓*i*P	Pb	10 32 58.3	-0.9
	baz=11						
TRKS				⇓*i*S	Sg	10 33 18.3	-0.3
	baz=11						
AML	Almayashu	1.79	27	⇓*i*P	Pb	10 33 04.5	0.0
	baz=27						
AML				⇓*i*S	Sb	10 33 28.7	+1.3
	baz=27						
MNAS	Manas	1.95	358	⇑*i*P	Pb	10 33 07.5	+0.5
	baz=58						
MNAS				⇑*i*S	Sg	10 33 33.9	+0.5
	baz=58						
UCH	Uchtor	2.21	40	⇓*i*P	Pb	10 33 11.3	-0.4
	baz=40						
UCH				⇓*i*S	Sb	10 33 40.4	+0.7
	baz=40						
MRKS	Merke	2.25	12	*e*P	Pb	10 33 11.9	-0.3
	10nm,0.5s						
MRKS				*e*S	Sg	10 33 42.9	-0.3
	29nm,0.4s						
MRKS	Merke	2.25	12	Pg	Pb	10 33 11.9	-0.3
	10nm,0.5s						
MRKS				Lg	Lg	10 33 42.9	
	29nm,0.4s						
EKS2	Erkin-Say	2.29	22	⇑*i*P	Pb	10 33 12.4	-0.5
	baz=22						
EKS2				⇑*i*S	Sb	10 33 42.6	+0.9
	baz=22						
GAR	Garm	2.34	230	⇓*e*P	Pb	10 33 13.1	-0.6
	baz=30						
GAR				⇓*i*S	Sg	10 33 43.9	-2.1
	baz=30						
IUG	Iuzhnay	2.52	310	*e*P	Pb	10 33 17.0	+0.2
	108nm,0.3s						
IUG				*e*S	Sg	10 33 51.7	0.0
	18nm,0.2s						
IUG	Iuzhnay	2.52	310	Pg	Pb	10 33 17.0	+0.2
	108nm,0.3s						
IUG				Lg	Lg	10 33 51.7	
	18nm,0.2s						
AAK	Ala-Archa	2.53	33	⇑Pg	Pb	10 33 16.4	-0.5
	4.0nm,0.5s						
AAK				⇑Lg	Lg	10 33 51.6	
	7.2nm,0.5s						
AAK	Ala-Archa	2.53	33	⇑*i*P	Pb	10 33 15.8	-1.1
	baz=33						
AAK				⇑*i*S	Sb	10 33 48.3	-0.2
	baz=33						
KK02	Karatay Array	3.00	329	⇓Pg	Pb	10 33 23.3	-1.6
	0.7nm,0.5s,baz=148,slow=13						
KK02				⇑Lg	Lg	10 34 05.4	
	2.5nm,0.5s,baz=148,slow=30						
TKM2	Tokmak 2	3.27	42	⇑Pg	Pb	10 33 29.0	-0.5
	2.2nm,0.9s						
TKM2				⇓Lg	Lg	10 34 14.6	
	2.1nm,0.6s						
DGS	Degeres	3.59	40	*e*P	Pb	10 33 36.5	+1.6
	2.7nm,0.3s						
DGS				*e*S	Sg	10 34 25.3	-0.7
	3.5nm,0.4s						
DGS	Degeres	3.59	40	Pg	Pb	10 33 36.6	+1.6
	2.7nm,0.3s						
DGS				Lg	Lg	10 34 25.3	
	3.5nm,0.4s						
KRBS	Karabastau	3.89	35	*e*P	Pb	10 33 41.1	+1.0
	1.5nm,0.5s						
KRBS				*e*S	Sg	10 34 33.1	-2.7
	2.2nm,0.3s						
KRBS	Karabastau	3.89	35	Pg	Pb	10 33 41.1	+1.0
	1.5nm,0.5s						
KRBS				Lg	Lg	10 34 33.1	
	2.2nm,0.3s						

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*IDC **04** 10:33:42.3±3.9, 0°.12N×123°.36E, h139^{km}±32^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.1/48, mbtmp3.6/4, Error ellipse: s-maj=129.8km s-min=21.2km az=64.0*
*DJA **04** 10:33:42.9±0.5, 0°S±6°×12°3E±°, h104^{km}±10^{km}, M3.9/8, MLv3.9/8*
ISC 04 10:33:42.1±0.9, **0°.06S**±0°.10×**122°.94E**±0°.07, **h150**^{km}, **n10, σ2^s.37**/14, **mb3.5**/3, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.69	6	P	Pn	10 34 04.1	-0.4
GTOI				S	Sn	10 34 18.4	-3.3
MRSI	Marisa	1.13	298	P	Pn	10 34 06.1	-1.9
MRSI				S	Sn	10 34 23.5	-4.3
APSI	Ampana	1.55	237	P	Pn	10 34 10.5	-1.6
MPSI	Mapaga	3.07	277	P	Pn	10 34 30.9	+0.6
SANI	Sanana	3.63	123	P	Pn	10 34 35.3	-2.3
LBMI	Labuha	4.59	97	P	Pn	10 34 49.5	-0.7
FITZ	Fitzroy Crossi	18.12	172	P	Pn	10 37 44.1	-0.3
	0.4nm,0.3s,baz=8.4,slow=9.4,SNR=12						
WRA	Warramunga Arr	22.70	151	P	P	10 38 31.5	+0.3
	1.1nm,0.5s,baz=336,slow=9.6,SNR=23						
ASAR	Alice Springs	25.77	156	P	P	10 39 00.7	+1.6
	0.2nm,0.4s,baz=341,slow=11,SNR=8.9						
ASAR				PcP	PcP	10 42 26.6	+1.5
	0.1nm,0.3s,baz=344,slow=2.0,SNR=4.4						
ASAR				ScP	ScP	10 45 54.4	+3.5
	0.1nm,0.3s,baz=336,slow=3.3,SNR=4.1						
MKAR	Makanchi Array	58.63	328	P	P	10 43 25.2	+1.8
	0.3nm,0.3s,baz=126,slow=8.4,SNR=5.5						

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*JMA **04** 10:34:13.7±0.3, 43°.81N×147°.32E, h13^{km}, M3.5*
*SKHL **04** 10:34:15.4±0.7, 44°.00N×147°.30E, h40^{km}±2^{km}, mb4.1/4*
ISC 04 10:34:10.8±2.1, **43°.98N**±0°.09×**147°.49E**±0°.10, **h13**^{km}±14^{km}, **n16, σ1^s.55**/26, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.49	258	*e*P	Pn	10 34 24.4	+1.0
SHO				AMB	AMB	10 34 24.7	
	50nm,0.2s						
SHO				*e*S	Sb	10 34 31.9	+3.7
SHO				A	A	10 34 34.4	
	460nm,0.2s						
SHO				A	A	10 34 34.4	
	680nm,0.2s						
YUK	Yuzh-Kuril'sk	1.18	273	*e*P	Pn	10 34 33.7	+0.8
YUK				AMB	AMB	10 34 34.0	
	110nm,0.2s						
YUK				*e*S	Sb	10 34 46.4	-1.6
YUK				A	A	10 34 49.8	
	630nm,0.2s						
YUK				A	A	10 34 49.8	
	680nm,0.2s						
GRPR	Tuman	1.24	271	*e*P	Pg	10 34 34.2	-0.4
GRPR				AMB	AMB	10 34 34.7	
	70nm,0.2s						
GRPR				*e*S	Sb	10 34 47.9	-1.9
GRPR				A	A	10 34 50.0	
	560nm,0.2s						
GRPR				A	A	10 34 50.0	
	490nm,0.2s						
KUR	Kuril'sk	1.28	12	*e*P	Pg	10 34 35.4	-0.1
KUR				AMB	AMB	10 34 39.1	
	40nm,0.5s						
KUR				*e*S	Sb	10 34 50.1	-1.1
KUR				A	A	10 34 52.0	
	280nm,0.2s						
KUR				A	A	10 34 52.0	
	170nm,0.2s						
NEM2	Nemuro 2	1.41	245	P	Pn	10 34 36.4	+0.4
NEM2				*e*S	Sb	10 34 52.6	-2.0
NMR	Nemuro--Hokkai	1.41	245	*e*P	Pb	10 34 37.1	+0.1
NMR				*e*S	Sn	10 34 53.3	-1.3
JRA	Rausu	1.71	269	P	Pb	10 34 41.9	-0.1
JNSB	Nemuroshibetsu	1.81	264	P	Pb	10 34 43.2	-0.5
JKHN	Kushirohamanak	1.91	243	P	Pn	10 34 43.8	+0.8
JNK	Nakash	2.04	260	P	Pn	10 34 46.2	+1.4
JNK				*e*S	Sn	10 35 10.3	+0.2
AKK	Akkeshi	2.15	244	*e*P	Pn	10 34 47.8	+1.5
AKK				*e*S	Sn	10 35 11.1	-1.7
JAK	Akkeshi	2.26	245	P	Pn	10 34 48.4	+0.7
JAK				*e*S	Sn	10 35 14.0	-1.4
JTKR	Abashiri--Toko	2.58	271	P	Pn	10 34 54.4	+2.2
JAR	Ashorobuto	2.78	257	P	Pn	10 34 57.2	+2.2
JAR				*e*S	Sn	10 35 29.1	+0.7
JOB	Onbets	2.87	249	P	Pn	10 34 57.8	+1.6
JCH	Churui	3.31	247	P	Pn	10 35 03.1	+0.9

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*EAF **04** 11:25:07.0±1.7, 25°.76S×28°.76E, h2^{km}±30^{km}, MD3.6*
BUL 04 11:25:07.0±1.7, **25°.76S**×**28°.76E, h2**^{km}±30^{km}, **MD3.7, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	2.95	284	*i* P	Pn	11 25 55.5	+0.5
LBTB				*i* S	Sn	11 26 28.5	-2.6
LBTB	Lobatse	2.95	284	*i* P	Pn	11 25 55.5	+0.5
LBTB				*i* S	Sn	11 26 28.5	-2.6
CNG	Changalane	3.13	101	*i* P	Pn	11 25 56.8	-0.5
CNG	Changalane	3.13	101	*i* P	Pn	11 25 56.8	-0.5
MSNA	Messina	3.59	19	*i* P	Pn	11 26 03.1	-0.6
MSNA	Messina	3.59	19	*i* P	Pn	11 26 03.1	-0.6
BLWY	Bulawayo	5.59	359	*i* P	Pn	11 26 29.1	-2.2
BLWY				*i* S	Sn	11 27 32.0	-4.2
BLWY	Bulawayo	5.59	359	*i* P	Pn	11 26 29.1	-2.2
BLWY				*i* S	Sn	11 27 32.0	-4.2

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*KRNET **04** 11:28:36.5±0.1, 41°.14N×70°.05E, h8^{km}, mb2.8*
ISC 04 11:28:38.0±0.9, **41°.08N**±0°.04×**70°.03E**±0°.04, **h10**^{km}, **n9, σ1^s.72**/17, **13C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	Tashkent	0.60	294	⇑*i*P	Pg	11 28 48.1	-1.6
	baz=88						
TAS				⇑*i*S	Sg	11 28 56.6	-1.1
	baz=88						
TRKS	Terek-Say	0.95	61	⇑*i*P	Pg	11 28 53.5	-2.9
	baz=69						
TRKS				⇑*i*S	Sg	11 29 06.5	-2.3
	baz=69						
BTK	Batken	1.19	149	⇑*i*P	Pn	11 28 59.9	-0.8
	baz=52						
BTK				⇑*i*S	Sb	11 29 17.2	+1.2
	baz=52						
KK02	Karatay Array	2.06	10	⇑Pn	Pg	11 29 15.7	-1.7
	5.4nm,0.7s,baz=184,slow=14						
KK02				⇓Sn	Sg	11 29 45.2	+1.1
	9.4nm,0.6s,baz=185,slow=32						
GAR	Garm	2.09	174	⇑*i*P	Pb	11 29 16.1	0.0
	baz=74						
GAR				⇑*i*S	Sb	11 29 44.1	+2.0
	baz=74						
MNAS	Manas	2.33	52	⇑*e*P	Pn	11 29 17.6	+1.1
	baz=53						
MNAS				⇑*i*S	Sb	11 29 47.3	-1.7
	baz=53						
AML	Almayashu	2.94	68	⇑*i*P	Pn	11 29 26.4	+1.2
	baz=69						
AML				⇑*i*S	Sn	11 30 02.3	+1.5
	baz=69						
UCH	Uchtor	3.55	70	*i* P	Pn	11 29 35.0	+1.4
	baz=71						
UCH				*i* S	Sn	11 30 16.8	+0.9
	baz=71						
TKM2	Tokmak 2	4.54	64	⇓Pg	Pb	11 29 59.8	+1.9
	1.4nm,0.5s						

TKM2				⇓Lg	Lg	11 31 00.5	
	4.3nm,0.9s						

KMA 04 11:29:12.9±0.1, 36°.36N×128°.83E, h10^{km}±1^{km}, Error ellipse: s-maj=1.7km s-min=0.8km az=321.0, South Korea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSADO	**Andong**	**0.11**	**59**	P	Pg	11 29 15.6	0.0
	SNR=46						
KSADO	**Andong**	**0.11**	**59**	P	Pg	11 29 15.6	0.0
	SNR=46						
EUSB	**Uiseong**	**0.12**	**270**	P	Pg	11 29 15.7	0.0
	SNR=27						
EUSB	**Uiseong**	**0.12**	**270**	P	Pg	11 29 15.7	0.0
	SNR=27						
KSEUS	**ULSEONG**	**0.12**	**268**	P	Pg	11 29 15.7	0.0
	SNR=16						
KSEUS	**ULSEONG**	**0.12**	**268**	P	Pg	11 29 15.7	0.0
	SNR=16						
KSEUS				S	Sg	11 29 17.5	-0.3
KSCHS	**CHEONGSONG**	**0.20**	**80**	P	Pg	11 29 17.3	+0.1
ADOA	**Andong Acc Bor**	**0.24**	**334**	P	Pg	11 29 17.9	0.0
KSGUM	**GUMI**	**0.46**	**255**	P	Pg	11 29 21.7	-0.1
KSPHA	**Pohang**	**0.46**	**110**	P	Pg	11 29 22.2	+0.2
KSDAU	**Deagu-acc**	**0.50**	**200**	P	Pg	11 29 22.7	0.0
KSULJ	**Uljin**	**0.58**	**53**	P	Pg	11 29 24.1	0.0
	SNR=12						
KSULJ	**Uljin**	**0.58**	**53**	P	Pg	11 29 24.1	0.0
	SNR=12						
KSDAG	**Daegu**	**0.59**	**175**	P	Pg	11 29 24.4	0.0
	SNR=10						

NNC 04 11:32:28.2±8.7, 37°.32N×70°.92E, h0^{km}, mb4.2, mpv3.9, 3C-3D, Error ellipse: s-maj=65.6km s-min=48.5km az=173.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK02	**Karatay Array**	**5.79**	**357**	⇑P	Pn	11 33 56.7	+1.4
	5.7nm,0.4s,baz=176,slow=12						
KK02				⇓S	Sn	11 35 03.8	+1.4
	6.2nm,0.4s,baz=181,slow=23						
AAK	**Ala-Archa**	**5.98**	**26**	⇓S	Sn	11 35 08.7	+1.3
	16nm,1.2s						
TKM2	**Tokmak 2**	**6.64**	**31**	⇑P	Pn	11 34 06.2	-1.0
	3.7nm,0.5s						
TKM2				⇑S	Sn	11 35 23.7	-0.1
	4.1nm,0.8s						
AB31	**Akbulak array**	**14.34**	**330**	⇓Pg	Pn	11 35 49.4	-3.0
	0.4nm,0.3s,baz=4.7,slow=15,SNR=17						
AB31				Lg	Lg	11 36 52.6	
	2.5nm,0.4s,baz=358,slow=28,SNR=11						

*SJA **04** 11:32:39.4±0.9, 23°.55S×64°.79W, h20^{km}±4^{km}, ML4.5, MW4.7*

*VAO **04** 11:32:39.9±0.4, 23°.56S×64°.83W, h10^{km}, mb4.4*

*IDC **04** 11:32:42.8±2.9, 23°.68S×64°.63W, h34^{km}±22^{km}, mb4.0/11, mb1 4.1/16, mb1mx4.1/28, mbtmp4.1/16, ML4.3/5, MS3.7/10, Ms1 3.7/10, ms1mx3.6/22, Error ellipse: s-maj=20.3km s-min=14.2km az=46.0*

*NEIC **04** 11:32:43.0±1.9, 23°.67S±0°.07×64°.60W±0°.07, h28^{km}±4^{km}, mb4.9/30, Md4.7(SJA), Error ellipse: s-maj=9.9km s-min=9.3km az=63.0*

ISC 04 11:32:43.4±0.4, 23°.63S±0°.04×64°.73W±0°.05, h35^{km}, n133, σ1^{s}59/133, mb4.7/23, MS3.8/6, 1C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASTB	**Santa Barbara**	**0.41**	**142**	*i* P	**Pn**	**11 32 50.0**	**-2.9**
ASTB				*i* S	**Sn**	**11 33 00.1**	**+0.6**
ASTB				IAML		11 33 07.0	
	comp=Z,2μm,0.8s						
AZAP	**Zapla**	**0.67**	**207**	*i* P	Pn	11 32 53.6	-3.0
AZAP				*i* S	**Sn**	**11 33 04.8**	**-1.3**
AZAP				IAML		11 33 13.1	
	comp=Z,30μm,0.3s						
ALOL	**LOMAS DE OLMED**	**0.71**	**106**	*i* P	**Pn**	**11 32 54.9**	**-2.1**
HJA	**Humahuaca**	**0.75**	**304**	*i* P	Pn	11 32 53.4	-4.4
HJA				*i* S	**Sn**	**11 33 04.2**	**-4.0**
HJA				IAML		11 33 07.2	
	comp=Z,10μm,0.6s						
SLA	**San Lorenzo**	**1.30**	**213**	*i* P	**Pn**	**11 33 05.7**	**+0.5**
SLA				*i* S	**Sn**	**11 33 24.3**	**+2.8**
SLA				IAML		11 33 29.4	
	comp=Z,13μm,0.6s						
YJA	**Yavi**	**1.61**	**333**	*i* P	**Pn**	**11 33 08.6**	**-1.1**
YJA				*i* S	**Sn**	**11 33 30.7**	**+1.2**
YJA				IAML		11 33 34.9	
	comp=Z,4μm,0.4s						
FSA	**Cafayete**	**2.72**	**204**	*i* P	**Pn**	**11 33 25.4**	**+0.6**
AHML	**Horco Molle**	**3.19**	**190**	*i* P	**Pn**	**11 33 31.0**	**-0.1**
AHML				*e*S	**Sn**	**11 34 09.9**	**+1.8**
AHML				IAML		11 34 25.1	
	comp=Z,2μm,0.6s						
LVC	**Limon Verde**	**3.98**	**284**	Pn	**Pn**	**11 33 43.7**	**+1.5**
	comp=Z,2.3nm,0.3s,baz=96,slow=9.8,SNR=4.7						
LVC	**Limon Verde**	**3.98**	**284**	Pn	**Pn**	**11 33 45.5**	**+3.3**
PB15	**IPOC Station P**	**4.37**	**275**	Pn	**Pn**	**11 33 51.1**	**+3.6**
PB09	**IPOC Station P**	**4.54**	**293**	Pn	**Pn**	**11 33 54.0**	**+4.2**
PB06	**IPOC Station P**	**4.55**	**281**		**Pn**	**11 33 52.6**	**+2.8**
CYA	**Choya**	**4.89**	**191**	*i* P	**Pn**	**11 33 54.0**	**-0.5**
CYA				IAML		11 35 38.9	
	comp=Z,612nm,1.3s						
PB01	**IPOC Station P**	**5.10**	**299**	Pn	**Pn**	**11 33 59.4**	**+2.0**
PB07	**IPOC Station P**	**5.12**	**291**		**Pn**	**11 33 59.8**	**+2.0**
PB04	**IPOC Station P**	**5.16**	**283**		**Pn**	**11 34 01.6**	**+3.3**
PB14	**IPOC Station P**	**5.28**	**258**		**Pn**	**11 34 03.0**	**+3.0**
PB10	**IPOC Station P**	**5.34**	**270**		**Pn**	**11 34 03.6**	**+3.0**
PB08	**IPOC Station P**	**5.37**	**309**		**Pn**	**11 34 04.4**	**+3.0**
PATCX	**Punta Patache**	**5.75**	**298**		**Pn**	**11 34 07.7**	**+1.5**
TA01	**Diego Aracena**	**5.90**	**300**		**Pn**	**11 34 09.8**	**+1.5**
VCA	**Vinchina**	**5.97**	**211**	*i* P	**Pn**	**11 34 11.5**	**+2.1**
VCA				IAML		11 36 42.8	
	comp=Z,301nm,1.1s						
PB11	**IPOC Station P**	**5.98**	**309**		**Pn**	**11 34 11.4**	**+1.8**
TA02	**Huaiquique**	**6.02**	**303**		**Pn**	**11 34 12.3**	**+2.4**
ACLC	**CERRO LA CRUZ**	**6.11**	**199**	*i* P	**Pn**	**11 34 10.3**	**-1.0**
ACLC				IAML		11 36 14.1	
	comp=Z,270nm,0.9s						
PSGCX	**Pisagua**	**6.42**	**308**		**Pn**	**11 34 17.9**	**+2.3**
PB16	**IPOC Station P**	**6.90**	**319**		**Pn**	**11 34 26.0**	**+3.4**
CPUP	**Villa Florida**	**7.24**	**113**	Pn	**Pn**	**11 34 24.5**	**-2.1**
	comp=Z,3.8nm,0.3s,baz=296,slow=12,SNR=34						
CPUP				Lg	Lg	11 36 30.6	
	comp=Z,11nm,0.3s,baz=9.9,slow=19,SNR=2.6						
CPUP	**Villa Florida**	**7.24**	**113**	*e*P	**Pn**	**11 34 25.6**	**-1.1**
CPUP				*e*S	**Sn**	**11 35 52.8**	**+5.2**
CPUP	**Villa Florida**	**7.24**	**113**	Pn	**Pn**	**11 34 25.4**	**-1.2**
CPUP	**Villa Florida**	**7.24**	**113**	*i* P	**Pn**	**11 34 25.5**	**-1.1**
AC04	**Llanos de Chal**	**7.31**	**230**	Pn	**Pn**	**11 34 28.3**	**+0.7**
AVFE	**Valle Fertil**	**7.41**	**199**	*i* P	**Pn**	**11 34 28.2**	**-0.9**
LCO	**Las Campanas**	**7.58**	**224**	Pn	**Pn**	**11 34 32.4**	**+0.8**
ACHE	**Chepes**	**7.70**	**192**	*i* P	**Pn**	**11 34 31.8**	**-1.4**
LPAZ	**La Paz**	**7.97**	**336**	Pn	**Pn**	**11 34 38.5**	**+1.2**
	comp=Z,2.4nm,0.3s,baz=143,slow=9.4,SNR=28						
LPAZ	**La Paz**	**7.97**	**336**	*e*P	Pn	11 34 33.1	-4.1
LPAZ				*e*S	**Sn**	**11 36 05.5**	**-1.0**
LPAZ	**La Paz**	**7.97**	**336**	Pn	**Pn**	**11 34 39.5**	**+2.2**
SIV	**San Ignacio**	**8.34**	**25**	Pn	**Pn**	**11 34 41.7**	**-0.2**
	comp=Z,8.9nm,0.3s,baz=217,slow=14,SNR=32						
SIV				LR	LR	11 38 49.8	
	comp=Z,441nm,18.9s,baz=246,slow=44						
ZON	**Zonda**	**8.63**	**203**	Pn	**Pn**	**11 34 45.4**	**-0.4**
AQDB	**Aquidauana**	**8.94**	**71**	*e*P	**Pn**	**11 34 48.3**	**-1.8**
AQDB				*e*S	**Sn**	**11 36 35.2**	**+5.5**
AQDB	**Aquidauana**	**8.94**	**71**	Pn	**Pn**	**11 34 49.8**	**-0.3**
RTLS	**Leoncito**	**9.09**	**205**	*i* P	**Pn**	**11 34 52.2**	**-0.2**
ITQB	**Itaqui**	**9.42**	**131**	*e*P	**Pn**	**11 34 55.2**	**-1.4**
PTLB	**Pontes e Lacer**	**9.69**	**34**	*e*P	**Pn**	**11 34 58.5**	**-1.8**
PTLB	**Pontes e Lacer**	**9.69**	**34**	Pn	**Pn**	**11 34 59.8**	**-0.6**
PP1B	**Ponte de Pedra**	**11.00**	**59**	*e*P	**Pn**	**11 35 16.5**	**-1.8**
TRCB	**Terra Rica**	**11.16**	**88**	*e*P	**Pn**	**11 35 19.7**	**-0.7**
VILB	**Vilhena**	**11.45**	**23**	*e*P	**Pn**	**11 35 21.7**	**-2.9**
VILB	**Vilhena**	**11.45**	**23**	Pn	**Pn**	**11 35 25.0**	**+0.5**
PTGB	**Pitanga**	**11.62**	**98**	*e*P	**Pn**	**11 35 26.6**	**-0.2**
ITAB	**Concordia**	**11.94**	**110**	*e*P	**Pn**	**11 35 30.7**	**-0.4**
PCMB	**Pacaembu**	**12.60**	**83**	*e*P	**Pn**	**11 35 40.0**	**-0.3**
PLTB	**Pedras Altas**	**12.76**	**132**	*e*P	**Pn**	**11 35 41.6**	**-0.6**
CNLB	**Canela**	**13.66**	**117**	*e*P	**Pn**	**11 35 54.5**	**-0.1**
ETMB	**Extrema**	**13.80**	**354**	*e*P	**Pn**	**11 35 54.2**	**-2.4**
ETMB	**Extrema**	**13.80**	**354**	Pn	**Pn**	**11 35 56.1**	**-0.5**
ITRB	**Iturama**	**13.92**	**76**	*e*P	**Pn**	**11 35 57.8**	**-0.5**
FRTB	**Fartura**	**13.92**	**92**	*e*P	**Pn**	**11 35 58.1**	**-0.1**
PDRB	**Porto dos Gac**	**14.17**	**34**	*e*P	**Pn**	**11 36 00.1**	**-1.5**
PDRB				*e*S	**Sn**	**11 38 39.4**	**+1.8**
ARAG	**Araguaiana, MT**	**14.49**	**59**	*e*P	**Pn**	**11 36 05.4**	**-0.6**
CLDB	**Colider**	**15.28**	**35**	*e*P	**Pn**	**11 36 14.8**	**-1.7**
NNA	**Nana**	**16.32**	**313**	LR	LR	11 43 30.2	
	comp=Z,240nm,18.1s,baz=124,slow=39						
LC01	**Cunco**	**16.39**	**200**		**Pn**	**11 36 31.6**	**+0.9**
LR03	**Panguipulli**	**17.21**	**200**	P	**Pn**	**11 36 41.2**	**+0.2**
BDFB	**Brasilia**	**17.62**	**66**	LR	LR	11 43 16.1	
	comp=Z,201nm,21.4s,baz=132,slow=36						
PLCA	**Paso Flores**	**17.75**	**195**	P	**Pn**	**11 36 45.9**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=49,slow=12,SNR=3.7						
PLCA				Lg	Lg	11 42 08.2	
	comp=Z,0.1nm,0.3s,baz=22,slow=10,SNR=4.0						
PLCA				LR	LR	11 44 01.4	
	comp=Z,177nm,20.8s,baz=24,slow=38						
LL03	**Petrohue**	**18.61**	**198**	P	**P**	**11 36 57.9**	**+0.2**
BSCB	**Bom Sucesso**	**18.65**	**86**	*e*P	**P**	**11 36 58.6**	**+0.2**
NPGB	**Novo Progresso**	**18.79**	**30**	*e*P	**P**	**11 36 59.3**	**-0.5**
PEXB	**Peixe**	**19.36**	**57**	*e*P	**P**	**11 37 06.0**	**-0.1**
LL02	**Futaleuf**	**20.38**	**195**	P	**P**	**11 37 16.6**	**-0.5**
DUB01	**Friburgo-RJ**	**20.66**	**90**	*e*P	**P**	**11 37 20.6**	**+0.3**
MACA	**Manacapuru-AM**	**20.72**	**11**	P	**P**	**11 37 21.3**	**+0.5**
MACA				IAmb	IAmb	11 37 24.4	
	comp=Z,120nm,1.4s						
GO07	**Milladeo Hill,**	**20.80**	**199**	P	**P**	**11 37 21.0**	**-0.5**
ATAH	**Atahualpa**	**21.00**	**319**	P	**P**	**11 37 25.8**	**+1.4**
	comp=Z,3.7nm,0.8s,baz=140,slow=5.4,SNR=6.3						
ATAH				LR	LR	11 47 15.1	
	comp=Z,178nm,20.4s,baz=130,slow=41						
ITTB	**Itaituba**	**21.02**	**26**	*e*P	**P**	**11 37 23.2**	**-1.0**
JANB	**Januaria**	**21.05**	**70**	*e*P	**P**	**11 37 24.6**	**0.0**
SDBA	**SAO DESIDERIO**	**21.88**	**63**	*e*P	**P**	**11 37 33.4**	**0.0**
SMTB	**Santa Maria do**	**22.02**	**51**	*e*P	**P**	**11 37 34.6**	**-0.2**
PRPB	**Parauapebas**	**22.52**	**42**	*e*P	**P**	**11 37 39.7**	**-0.6**
COYC	**Coyhaique**	**22.70**	**193**	P	**P**	**11 37 41.2**	**-0.6**
COYC				IAmb	IAmb	11 37 42.8	
	comp=Z,40nm,1.3s						
PTGA	**Pitinga**	**23.22**	**12**	P	**P**	**11 37 46.3**	**-1.2**
	comp=Z,3.3nm,0.8s,baz=194,slow=8.4,SNR=4.3						
PTGA				LR	LR	11 48 10.2	
	comp=Z,432nm,20.2s,baz=184,slow=40						
NBPN	**Ponto Novo - B**	**26.60**	**66**	*e*P	**P**	**11 38 18.9**	**+0.3**
ROSC	**El Rosal**	**29.80**	**340**	LR	LR	11 50 28.4	
	comp=Z,210nm,18.7s,baz=216,slow=36						
HOPE	**Hope Point**	**37.20**	**153**	P	**P**	**11 39 51.2**	**+0.2**
RIMA	**Rio Macho**	**38.10**	**328**	P	**P**	**11 40 00.1**	**+0.9**
RIMA				IAmb	IAmb	11 40 23.1	
	comp=Z,14nm,1.3s						
VNA3	**Neumayer Olymp**	**56.84**	**162**	P	**P**	**11 42 23.5**	**-0.5**
VNA1	**Neumayer--Stat**	**57.01**	**161**	P	**P**	**11 42 24.9**	**-0.2**
VNA2	**Neumayer--Watz**	**57.38**	**161**	P	**P**	**11 42 27.4**	**-0.5**
	baz=295,slow=6.6						
SNAA	**Sanae**	**59.02**	**161**	P	**P**	**11 42 38.7**	**-0.6**
SNAA	**Sanae**	**59.02**	**161**	P	**P**	**11 42 37.3**	**-2.0**
	comp=Z,6.2nm,1.1s,baz=238,slow=8.8,SNR=6.8						
SNAA	**Sanae**	**59.02**	**161**	P	**P**	**11 42 38.8**	**-0.6**
SNAA				IAmb	IAmb	11 42 40.2	
	comp=Z,16nm,1.3s						
X48A	**Hartselle**	**61.52**	**339**	P	**P**	**11 42 56.4**	**-0.4**
WVT	**Waverly**	**63.32**	**339**	P	**P**	**11 43 06.9**	**-1.8**
GNAR	**Gosnell**	**63.91**	**337**	P	**P**	**11 43 13.6**	**+0.9**
Z35A	**Perchaven, San**	**64.56**	**330**	P	**P**	**11 43 17.1**	**+0.1**
TXAR	**Lajitas Array**	**64.61**	**323**	P	**P**	**11 43 16.6**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=144,slow=8.0,SNR=5.1						
FCAR	**Ozark Folk Cen**	**64.62**	**336**	P	**P**	**11 43 16.6**	**-0.7**
FCAR				IAmb	IAmb	11 43 21.1	
	comp=Z,21nm,1.5s						
PBMO	**Poplar Bluff**	**64.79**	**337**	P	**P**	**11 43 17.6**	**-0.8**
LIC	**Lamto**	**65.35**	**71**	*e*PKP1	**P**	**11 43 22.9**	**+0.3**
	comp=Z,29nm,1.3s						
TIC	**Toumodi**	**65.56**	**70**	*e*PKP1	**P**	**11 43 23.2**	**-0.8**
KIC	**Kosan Boka**	**65.67**	**71**	*e*PKP1	**P**	**11 43 23.9**	**-0.7**
	comp=Z,11nm,0.5s						
DBIC	**Dimbokro**	**65.72**	**70**	P	**P**	**11 43 23.9**	**-1.0**
	comp=Z,5.9nm,0.6s,baz=225,slow=6.4,SNR=10						
DBIC				LR	LR	12 08 57.9	
	comp=Z,43nm,21.7s,baz=150,slow=33						
DBIC	**Dimbokro**	**65.72**	**70**	IAmb	IAmb	11 43 25.8	
	comp=Z,12nm,0.9s						
QSPA	**South Pole Qui**	**66.58**	**180**	P	**P**	**11 43 30.0**	**+0.1**
QSPA				IAmb	IAmb	11 43 31.6	
	comp=Z,24nm,1.1s						
S39A	**Bolivar**	**66.66**	**336**	P	**P**	**11 43 29.3**	**-1.2**
S39A				IAmb	IAmb	11 43 35.4	
	comp=Z,19nm,1.3s						
KOWA	**Kowa**	**70.40**	**64**	P	**P**	**11 43 54.1**	**-0.2**
KOWA				IAmb	IAmb	11 43 59.1	
	comp=Z,29nm,1.4s						
ANMO	**Albuquerque**	**70.42**	**325**	P	**P**	**11 43 54.4**	**+0.1**
ANMO				IAmb	IAmb	11 43 55.5	
	comp=Z,9.7nm,1.4s						
SDCO	**Great Sand Dun**	**72.08**	**327**	P	**P**	**11 44 04.5**	**+0.2**
SDCO				IAmb	IAmb	11 44 09.6	
	comp=Z,8.1nm,1.1s						
SYO	**Syowa Base**	**73.14**	**159**	⇑*e*P	P	11 44 06.2	-3.7
ISCO	**Idaho Springs**	**73.73**	**328**	P	**P**	**11 44 14.4**	**+0.3**
TORD	**Torodi Ar. Bea**	**74.50**	**68**	P	**P**	**11 44 18.2**	**-0.5**
	comp=Z,10nm,0.7s,baz=257,slow=6.0,SNR=57						
TORD				LR	LR	12 18 41.4	
	comp=Z,40nm,18.2s,baz=325,slow=37						
TORD	**Torodi Ar. Bea**	**74.50**	**68**	P	**P**	**11 44 17.4**	**-1.4**
TORD				IAmb	IAmb	11 44 19.4	
	comp=Z,21nm,1.4s						
SRU	**San Rafael Swe**	**75.69**	**325**	P	**P**	**11 44 25.7**	**+0.4**
SRU				IAmb	IAmb	11 44 26.7	
	comp=Z,9.5nm,1.4s						
PDAR	**Pinedale Array**	**77.91**	**328**	P	**P**	**11 44 37.5**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=124,slow=8.8,SNR=5.6						
ULM	**Lac du Bonnet**	**78.56**	**340**	P	**P**	**11 44 40.2**	**-0.7**
	comp=Z,1.8nm,0.5s,baz=169,slow=2.8,SNR=3.0						
ULM	**Lac du Bonnet**	**78.56**	**340**	IAmb	IAmb	11 44 43.9	
	comp=Z,16nm,1.4s						
BOSA	**Boshof**	**79.05**	**116**	P	**P**	**11 44 42.9**	**-1.6**
	comp=Z,7.8nm,1.2s,baz=235,slow=5.8,SNR=4.1						
BOSA	**Boshof**	**79.05**	**116**	P	**P**	**11 44 44.0**	**-0.5**
BOSA				IAmb	IAmb	11 44 44.9	
	comp=Z,13nm,1.2s						
NVAR	**Mina Array Bea**	**79.57**	**320**	P	**P**	**11 44 47.4**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=136,slow=5.3,SNR=4.8						
NVAR	**Mina Array Bea**	**79.57**	**320**	P	**P**	**11 44 47.2**	**+0.1**
HLID	**Hailey**	**80.92**	**326**	P	**P**	**11 44 55.0**	**+0.8**
LSZ	**Lusaka**	**86.60**	**105**	P	**P**	**11 45 23.9**	**0.0**
LSZ				IAmb	IAmb	11 45 26.4	
	comp=Z,8.5nm,1.0s						
KEST	**Kesra**	**91.55**	**52**	LR	LR	12 28 10.4	
	comp=Z,65nm,19.1s,baz=210,slow=36						
YKA	**Yellowknife Ar**	**94.50**	**339**	P	**P**	**11 46 00.5**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=129,slow=4.9,SNR=2.3						
ASAR	**Alice Springs**	**129.63**	**202**	PKP	**PKPdf**	**11 51 49.5**	**0.0**
	comp=Z,0.8nm,0.7s,baz=120,slow=1.8,SNR=7.6						
WRA	**Warramunga Arr**	**132.87**	**205**	PKP	**PKPdf**	**11 51 55.6**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=156,slow=1.9,SNR=15						
ZALV	**Zalesovo Beam**	**142.07**	**29**	PKP	**PKPdf**	**11 52 12.2**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=247,slow=1.1,SNR=5.3						
MKAR	**Makanchi Array**	**144.90**	**41**	PKP	**PKPab**	**11 52 15.7**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=314,slow=3.1,SNR=14						
KLR	**Kul'dur**	**151.34**	**337**	PKPbc	**PKPbc**	**11 52 32.3**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=106,slow=3.4,SNR=4.1						
SONM	**Songino Array**	**154.83**	**14**	PKP	**PKPdf**	**11 52 32.4**	**0.0**
	comp=Z,0.8nm,0.9s,baz=324,slow=4.0,SNR=4.9						

*IDC **04** 11:33:03.1±1.9, 6°.20S×154°.70E, h43^{km}±17^{km}, mb4.4/19, mb1 4.6/22, mb1mx4.5/30, mbtmp4.7/22, ML4.5/2, MS3.7/16, Ms1 3.7/16, ms1mx3.6/32, Error ellipse: s-maj=16.4km s-min=13.1km az=82.0*

*BJI **04** 11:33:03.3±0.0, 6°.50S×154°.71E, h69^{km}, mB5.2/18, mb4.9/34, Ms5.1/2, Ms7 4.8/2*

*NEIC **04** 11:33:06.5±1.2, 6°.30S±0°.08×154°.70E±0°.07, h67^{km}±4^{km}, mb4.7/51, Error ellipse: s-maj=11.6km s-min=10.0km az=211.0*

*DJA **04** 11:33:06.5±0.5, 6°S±3°×15°5E±°, h74^{km}±5^{km}, M4.9/30, mB5.2/7, mb5.1/30, MLv5.1/3, Mw(mB)4.5/7*

ISC 04 11:33:03.9±0.3, 6°.25S±0°.05×154°.72E±0°.05, h48^{km}, n172, σ1^{s}16/173, mb4.9/75, MS3.7/15, 1C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.26**	**309**		**Pn**	**11 33 55.8**	**+3.1**
RABL	**Rabaul**	**3.26**	**309**	P	Pn	11 33 58.3	+5.7
HNR	**Honiara**	**6.07**	**122**	P	**Pn**	**11 34 32.2**	**+1.1**
	17nm,0.3s,baz=242,slow=3.3,SNR=16						
HNR				S	Sn	11 35 48.8	+9.5
	22nm,0.3s,baz=36,slow=13,SNR=5.9						
HNR				LR	LR	11 36 53.0	
	comp=Z,732nm,20.5s,baz=300,slow=38						
HNR	**Honiara**	**6.07**	**122**		**Pn**	**11 34 33.7**	**+2.6**
HNR	**Honiara**	**6.07**	**122**	P	Pn	11 34 36.8	+5.7
PMG	**Port Moresby**	**8.12**	**247**	P	**Pn**	**11 34 59.8**	**+0.6**
	6.8nm,0.3s,baz=53,slow=8.3,SNR=38						
PMG				S	**Sn**	**11 36 32.5**	**+2.8**
	4.7nm,0.3s,baz=238,slow=22,SNR=8.3						
PMG				LR	LR	11 38 00.8	
	comp=Z,883nm,20.1s,baz=44,slow=37						
PMG	**Port Moresby**	**8.12**	**247**	Pn	**Pn**	**11 35 00.1**	**+0.9**
PMG	**Port Moresby**	**8.12**	**247**	P	**Pn**	**11 35 00.4**	**+1.2**
PMG	**Port Moresby**	**8.12**	**247**	P	**Pn**	**11 35 00.4**	**+1.2**
MANU	**Manus Island**	**8.44**	**299**	Pn	**Pn**	**11 35 05.4**	**+1.7**
PATS	**Pohnpei**	**13.49**	**15**	Pn	**Pn**	**11 36 13.9**	**+1.2**
COEN	**Coen**	**13.70**	**235**	Pn	**Pn**	**11 36 17.5**	**+1.9**
MTSU	**Mount Surprise**	**15.57**	**220**	P	**Pn**	**11 36 39.1**	**-1.3**
EIDS	**Eidsvold**	**19.33**	**190**	P	**P**	**11 37 25.0**	**-0.3**
EIDS	**Eidsvold**	**19.33**	**190**	P	**Pn**	**11 37 26.3**	**-0.4**
NOUC	**Port Laguerre**	**19.33**	**146**	P	**Pn**	**11 37 27.6**	**+0.9**
DZM	**Mont Dzumac**	**19.38**	**145**	*e*P	**Pn**	**11 37 26.7**	**-0.8**
	84nm,1.1s						
DZM				*e*S	**Sn**	**11 41 04.2**	**-0.1**
	169nm,25.2s						
DZM				*e*LR	LR	11 42 08.8	
	comp=Z,493nm,25.6s						
DZM	**Mont Dzumac**	**19.38**	**145**	P	**Pn**	**11 37 27.1**	**-0.4**
	1.1nm,0.3s,baz=9.9,slow=7.2,SNR=12						
DZM	**Mont Dzumac**	**19.38**	**145**		**Pn**	**11 37 26.9**	**-0.6**
DZM				IAmb	IAmb	11 37 28.5	
	comp=Z,31nm,0.9s						
DZM	**Mont Dzumac**	**19.38**	**145**	P	**Pn**	**11 37 28.5**	**+1.0**
YATNC	**Mamie plateau,**	**19.63**	**144**	P	**Pn**	**11 37 32.2**	**+1.9**
OUENC	**Ouen Island, N**	**19.88**	**145**	P	**P**	**11 37 31.9**	**+0.6**
OUENC				IAmb	IAmb	11 37 35.2	
	comp=Z,59nm,1.4s						
QIS	**Mount Isa**	**20.42**	**224**	P	**P**	**11 37 37.9**	**+0.6**
	comp=Z,16nm,0.8s						
RMQ	**Roma**	**20.91**	**195**	P	**P**	**11 37 42.1**	**-0.4**
GUMO	**Guam**	**22.00**	**334**	LR	LR	11 47 50.4	
	comp=Z,81nm,18.2s,baz=123,slow=40						
QLP	**Quilpie**	**22.55**	**205**	P	**P**	**11 38 00.2**	**+0.1**
FAKI	**Fak Fak**	**22.64**	**277**	P	**P**	**11 38 02.0**	**+0.9**
KDU	**Kakadu**	**22.84**	**252**	P	**P**	**11 38 03.6**	**+0.4**
WB0	**Warramunga Arr**	**23.89**	**234**	P	**P**	**11 38 13.1**	**-0.2**
WB0				IAmb	IAmb	11 38 14.2	
	comp=Z,21nm,0.9s						
SIJI	**Sorong**	**24.00**	**282**	P	**P**	**11 38 13.8**	**-0.6**
	comp=Z,6.7nm,0.4s,baz=106,slow=10,SNR=4.7						
SIJI				LR	LR	11 48 26.1	
	comp=Z,131nm,19.2s,baz=196,slow=38						
WRAB	**Tennant Creek**	**24.01**	**234**	P	**P**	**11 38 14.2**	**-0.3**
WRAB				IAmb	IAmb	11 38 15.3	
	comp=Z,28nm,0.8s						
WRAB	**Tennant Creek**	**24.01**	**234**	P	**P**	**11 38 15.1**	**+0.7**
WRA	**Warramunga Arr**	**24.02**	**234**	P	**P**	**11 38 14.6**	**0.0**
	comp=Z,22nm,0.9s,baz=56,slow=9.8,SNR=113						
WRA				PcP	**PcP**	**11 41 55.9**	**+0.2**
	comp=Z,5.0nm,0.7s,baz=61,slow=2.2,SNR=13						
WRA				S	**S**	**11 42 32.1**	**+3.5**
	comp=Z,2.8nm,1.1s,baz=56,slow=16,SNR=7.2						
WRA				ScP	**ScP**	**11 45 31.0**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=50,slow=2.5,SNR=4.9						
WRA				LR	LR	11 47 35.9	
	comp=Z,266nm,18.9s,baz=65,slow=36						
WRA	**Warramunga Arr**	**24.02**	**234**	P	**P**	**11 38 13.5**	**-1.1**
MTN	**Manton Dam**	**24.15**	**253**	P	**P**	**11 38 15.2**	**-0.6**
MTN				IAmb	IAmb	11 38 35.2	
	comp=Z,12nm,0.5s						
MTN	**Manton Dam**	**24.15**	**253**	P	**P**	**11 38 16.7**	**+1.0**
	comp=Z,15nm,0.7s						
ARMA	**Armidale**	**24.21**	**187**	P	**P**	**11 38 16.3**	**0.0**
ARMA				IAmb	IAmb	11 38 17.6	
	comp=Z,35nm,0.9s						
ARMA	**Armidale**	**24.21**	**187**	P	**P**	**11 38 17.5**	**+1.2**
INKA	**Innaminka**	**25.16**	**210**	P	**P**	**11 38 24.5**	**-0.2**
MSVF	**Nonsavu**	**25.48**	**119**	LR	LR	11 47 35.5	
	comp=Z,292nm,18.5s,baz=328,slow=34						
AS31	**Alice Springs**	**26.46**	**227**	P	**P**	**11 38 35.4**	**-1.4**
ASAR	**Alice Springs**	**26.46**	**227**	P	**P**	**11 38 35.9**	**-0.9**
	comp=Z,4.2nm,0.6s,baz=59,slow=8.9,SNR=73						
ASAR				PcP	**PcP**	**11 42 01.1**	**0.0**
	comp=Z,5.1nm,0.7s,baz=63,slow=2.5,SNR=20						
ASAR				ScP	**ScP**	**11 45 38.5**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=52,slow=2.9,SNR=5.0						
ASAR				LR	LR	11 48 49.2	
	comp=Z,201nm,19.4s,baz=88,slow=36						
CMSA	**Cobar Meteorol**	**26.54**	**197**	P	**P**	**11 38 36.5**	**-0.7**
KNRA	**Kununurra**	**27.12**	**248**	P	**P**	**11 38 42.6**	**0.0**
KNRA				IAmb	IAmb	11 39 11.0	
	comp=Z,12nm,0.8s						
LBMI	**Labuha**	**27.72**	**281**	P	**P**	**11 38 49.0**	**+0.9**
	comp=Z,776nmcomp=Z,48nm,0.8s						
OOD	**Oodnadatta**	**28.02**	**218**	P	**P**	**11 38 50.3**	**-0.3**
STKA	**Stephens Creek**	**28.29**	**204**	P	**P**	**11 38 51.5**	**-1.5**
	comp=Z,2.7nm,0.6s,baz=0.1,slow=7.8,SNR=8.4						
STKA				PcP	**PcP**	**11 42 05.0**	**-0.3**
	comp=Z,5.3nm,0.7s,baz=33,slow=1.7,SNR=8.7						
STKA				LR	LR	11 50 08.2	
	comp=Z,217nm,19.3s,baz=22,slow=36						
STKA	**Stephens Creek**	**28.29**	**204**	P	**P**	**11 38 52.0**	**-1.0**
STKA	**Stephens Creek**	**28.29**	**204**	P	**P**	**11 38 51.8**	**-1.2**
SANI	**Sanana**	**28.95**	**277**	P	**P**	**11 38 59.0**	**0.0**
	comp=Z,47nm,0.8s						
SANI	**Sanana**	**28.95**	**277**	P	**P**	**11 38 59.1**	**0.0**
KMSI	**Cibinong**	**31.42**	**281**	P	**P**	**11 39 21.3**	**+0.4**
	comp=Z,2μmcomp=Z,176nm,0.7s						
WRKA	**Warakurna**	**31.45**	**231**	P	**P**	**11 39 20.1**	**-1.0**
	comp=Z,26nm,0.8s						
BBOO	**Buckleboo**	**31.62**	**211**	P	**P**	**11 39 20.9**	**-1.6**
BBOO				IAmb	IAmb	11 39 33.8	
	comp=Z,12nm,1.1s						
TOO	**Toolangi**	**32.29**	**194**	P	**P**	**11 39 28.4**	**+0.1**
GTOI	**Gorontalo**	**32.38**	**281**	P	**P**	**11 39 30.8**	**+1.5**
	comp=Z,304nmcomp=Z,42nm,0.7s						
ARPS	**Mount Arapiles**	**32.58**	**199**	P	**P**	**11 39 30.7**	**-0.1**
	comp=Z,46nm,0.8s						
BRAT	**Ballarat**	**32.67**	**196**	P	**P**	**11 39 32.6**	**+1.1**
EDFI	**Ende, Flores**	**32.83**	**264**	P	**P**	**11 39 32.2**	**-1.2**
	comp=Z,42nm,0.8s						
MRSI	**Marisa**	**33.39**	**280**	P	**P**	**11 39 37.9**	**-0.3**
	comp=Z,36nm,0.7s						
APSI	**Ampana**	**33.41**	**278**	P	**P**	**11 39 39.5**	**+1.1**
	comp=Z,49nm,0.9s						
BSSI	**Bau Bau, Buton**	**34.02**	**268**	P	**P**	**11 39 44.4**	**+0.7**
	comp=Z,18nm,0.7s						
TOLI2	**Tolitoli**	**34.66**	**281**	P	**P**	**11 39 47.2**	**-1.9**
FORT	**Forrest**	**34.94**	**222**		**P**	**11 39 48.9**	**-2.5**
WBSI	**Waikabubak, Su**	**35.14**	**262**	P	**P**	**11 39 56.6**	**+3.3**
	comp=Z,44nm,0.7s						
MPSI	**Mapaga**	**35.36**	**279**	P	**P**	**11 39 54.3**	**-0.9**
	comp=Z,82nm,0.8s						
PLAI	**Plampang**	**36.70**	**264**	P	**P**	**11 40 04.9**	**-1.8**
	comp=Z,56nm,0.8s						
PLAI	**Plampang**	**36.70**	**264**	P	**P**	**11 40 06.3**	**-0.4**
PSA00	**Pilbara Seismi**	**36.99**	**242**	P	**P**	**11 40 08.0**	**-1.0**
PSA00				IAmb	IAmb	11 40 18.1	
	comp=Z,8.4nm,0.6s						
PSA00	**Pilbara Seismi**	**36.99**	**242**	P	**P**	**11 40 08.7**	**-0.4**
PSA00				IAmb	IAmb	11 40 17.6	
	comp=Z,5.6nm,0.9s						
TAU	**Tasmania Unive**	**37.09**	**189**	P	**P**	**11 40 09.5**	**-0.1**
TWSI	**Taliwang, Sumb**	**37.58**	**264**	P	**P**	**11 40 12.9**	**-1.3**
URZ	**Urewera**	**37.79**	**151**	P	**P**	**11 40 15.5**	**-0.1**
	comp=Z,24nm,1.1s,baz=123,slow=23,SNR=4.7						
BKZ	**Black Stump Fm**	**38.21**	**152**	P	**P**	**11 40 18.9**	**-0.4**
TUWZ	**Tuamarina**	**39.00**	**157**	P	**P**	**11 40 25.8**	**+0.1**
KHZ	**Kahutara**	**39.69**	**158**	P	**P**	**11 40 33.3**	**+1.9**
MEEK	**Meekatharra**	**39.90**	**235**	P	**P**	**11 40 33.1**	**-0.4**
	comp=Z,31nm,0.8s						
JAGI	**Jajag, Banyuwa**	**40.28**	**264**	P	**P**	**11 40 35.3**	**-1.5**
	comp=Z,79nm,0.8s						
JAGI	**Jajag, Banyuwa**	**40.28**	**264**	P	**P**	**11 40 35.1**	**-1.7**
JAGI	**Jajag, Banyuwa**	**40.28**	**264**	P	**P**	**11 40 36.7**	**-0.1**
KKM	**Kota Kinabalu**	**40.32**	**287**	P	**P**	**11 40 37.1**	**-0.1**
KKM				IAmb	IAmb	11 40 38.7	
	comp=Z,15nm,0.8s						

JOW	Kunigami	41.69	323	LR	LR	11 58 11.0	
	comp=Z,42nm,19.4s,baz=186,slow=36						
KLBR	Kellerberrin	42.76	229	P	P	11 40 55.9	-0.9
	comp=Z,53nm,0.8s						
MORW	Morawa	42.97	233	P	P	11 40 57.8	-0.8
MORW				IAmb	IAmb	11 40 58.1	
	comp=Z,12nm,0.8s						
TPUB	Ta-pu	44.40	313	P	P	11 41 10.1	-0.1
SSLB	Suanglung	44.46	313	P	P	11 41 11.2	+0.5
SSLB				IAmb	IAmb	11 41 29.9	
	comp=Z,15nm,1.0s						
KSM	Kuching	44.99	278	P	P	11 41 15.4	+0.4
JWT	Wachi	45.14	338	P	P	11 41 18.4	+2.6
KSRS	Korea Array	50.16	332	P	P	11 41 53.5	-1.2
	comp=Z,3.4nm,0.8s,baz=142,slow=7.3,SNR=5.9						
KSRS				LR	LR	12 03 03.0	
	comp=Z,32nm,18.1s,baz=6.5,slow=36						
NJ2	Nanjing	51.17	320	eP	P	11 42 05.9	+3.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Ar.	54.24	340	P	P	11 42 25.3	+0.4
	comp=Z,3.3nm,0.8s,baz=133,slow=13,SNR=4.3						
KULM	Kulim	55.18	281	P	P	11 42 31.7	-0.5
KULM				IAmb	IAmb	11 42 32.8	
	comp=Z,8.8nm,0.7s						
PPT2	Papeete2	55.48	107	eLR	LR	11 58 55.0	
	comp=Z,90nm,27.2s						
MNSI	Mandailing Nat	55.48	275	P	P	11 42 33.3	-1.1
	comp=Z,1µmcomp=Z,22nm,0.9s						
CN2	Changchun	56.41	335	eP	P	11 42 41.6	+1.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA	Guiyang	56.78	307	⇑P	P	11 42 44.9	+1.2
GYA				pmax	pmax		
	comp=Z,13nm,1.1s						
XAN	Xi'an	58.98	316	P	P	11 42 57.8	-1.1
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,110nm,5.2s						
PETK	Petropavlovsk-	59.19	2	P	P	11 42 59.9	+0.1
	comp=Z,6.1nm,0.8s,baz=151,slow=3.4,SNR=4.3						
PETK				LR	LR	12 04 44.6	
	comp=Z,71nm,21.6s,baz=150,slow=32						
PETK	Petropavlovsk-	59.19	2	P	P	11 43 00.8	+1.0
KMI	Kunming	59.37	304	⇓P	P	11 43 03.3	+1.3
KMI				pP	sP	11 43 19.9	-0.7
KMI				pmax	pmax		
	comp=Z,28nm,0.8s						
CMAR	Chiang Mai Arr	60.22	295	P	P	11 43 08.8	+1.1
	comp=Z,3.8nm,0.6s,baz=112,slow=5.0,SNR=27						
CMAR				LR	LR	12 07 45.9	
	comp=Z,22nm,21.0s,baz=172,slow=35						
HHC	Hu-ho-hao-te	61.33	324	eP	P	11 43 17.9	+3.0
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,61nm,5.8s						
LZH	Lanzhou	63.59	315	eP	P	11 43 31.0	+0.8
LZH				pP	pP	11 43 45.3	+1.9
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
CASY	Casey	67.21	198	P	P	11 43 52.6	-0.2
CASY				IAmb	IAmb	11 43 54.0	
	comp=Z,20nm,1.2s						
GTA	Gaotai	68.01	317	eP	P	11 43 58.7	+0.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
UNV	Unalaska Valle	68.16	24	P	P	11 43 59.1	+0.2
SONM	Songino Array	68.56	327	P	P	11 44 01.1	-0.7
	comp=Z,2.9nm,0.9s,baz=142,slow=5.7,SNR=8.5						
SONM				LR	LR	12 14 14.3	
	comp=Z,33nm,19.9s,baz=330,slow=36						
SONM	Songino Array	68.56	327	P	P	11 44 02.0	+0.2
VNDA	Vanda	71.33	178	P	P	11 44 17.2	-0.9
	comp=Z,2.7nm,1.0s,baz=336,slow=7.1,SNR=5.3						
VNDA	Vanda	71.33	178	P	P	11 44 18.8	+0.7
SBA	Scott Base	71.84	177	P	P	11 44 21.7	+0.5
SBA				IAmb	IAmb	11 44 42.0	
	comp=Z,15nm,1.2s						
TAPN	Taplejung	72.78	301	eP	P	11 44 28.0	-0.2
	comp=Z,42nm,0.9s						
RAMN	Ramite	73.62	300	eP	P	11 44 33.5	+0.5
	comp=Z,9.4nm,0.4s						
GUN	Gumba	74.50	301	eP	P	11 44 38.0	-0.3
	comp=Z,35nm,0.7s						
BILL	Bilibino	74.57	4	P	P	11 44 37.9	+0.6
BILL				IAmb	IAmb	11 44 41.3	
	comp=Z,7.2nm,0.7s						
PKI	Pulchoki	74.81	301	eP	P	11 44 39.4	-0.7
DMN	Daman	75.08	301	eP	P	11 44 41.4	-0.1
GKN	Gorkha	75.58	301	eP	P	11 44 43.6	-0.7
OHAK	Old Harbor	75.98	26	P	P	11 44 45.9	+0.2
OHAK				IAmb	IAmb	11 44 48.9	
	comp=Z,21nm,1.4s						
KOLN	Koldanda	76.41	300	eP	P	11 44 48.0	-1.1
	comp=Z,23nm,0.8s						
DANN	Dangsing	76.42	301	eP	P	11 44 47.0	-2.2
	comp=Z,14nm,0.6s						
PYUN	Piuthan	77.02	301	eP	P	11 44 50.3	-2.2
	comp=Z,15nm,0.7s						
SVW2	Sparrevohn	77.42	22	P	P	11 44 54.9	+1.1
SVW2				IAmb	IAmb	11 44 56.3	
	comp=Z,5.8nm,0.7s						
WMQ	Urumqi	78.10	317	eP	P	11 45 00.0	+2.0
CNPM	China Poot	78.20	25	P	P	11 44 58.2	0.0
M19K	Big River Lodg	78.37	22	P	P	11 44 59.7	+0.7
M19K				IAmb	IAmb	11 45 10.9	
	comp=Z,10nm,1.1s						
L19K	White Mountain	78.37	22	P	P	11 44 59.8	+0.8
L19K				IAmb	IAmb	11 45 00.7	
	comp=Z,10nm,0.8s						
TTA	Tatalina	78.43	21	P	P	11 45 00.0	+0.6
HYB	Hyderabad	78.77	289	iP	P	11 45 01.5	-0.7
	comp=Z,38nm,0.8s						
K20K	Telida	79.39	21	P	P	11 45 05.4	+0.8
K20K				IAmb	IAmb	11 45 06.2	
	comp=Z,7.3nm,1.0s						
J20K	Nowinta River	79.87	20	P	P	11 45 08.1	+1.0
J20K				IAmb	IAmb	11 45 08.7	
	comp=Z,8.7nm,0.9s						
IMAR	Indian Mountai	81.12	19	P	P	11 45 14.1	+0.3
MCK	McKinley	81.47	22	P	P	11 45 15.3	-0.5
MCK				IAmb	IAmb	11 45 15.8	
	comp=Z,12nm,0.9s						
DGAR	Diego Garcia	81.57	263	P	P	11 45 15.6	-1.8
MK31	Makanchi Array	82.67	319	P	P	11 45 21.6	-0.8
MKAR	Makanchi Array	82.67	319	P	P	11 45 21.7	-0.7
	comp=Z,3.4nm,0.8s,baz=100,slow=5.2,SNR=15						
MKAR				LR	LR	12 22 50.8	
	comp=Z,69nm,19.6s,baz=346,slow=36						
MKAR	Makanchi Array	82.67	319	P	P	11 45 22.0	-0.4
ILAR	Eielson Array	82.79	22	P	P	11 45 21.1	-1.5
	comp=Z,2.7nm,0.8s,baz=239,slow=5.6,SNR=26						
ILAR				LR	LR	12 16 51.9	
	comp=Z,120nm,21.2s,baz=242,slow=32						
ILAR	Eielson Array	82.79	22	P	P	11 45 21.6	-1.0
ZAA0	Zalesovo Array	83.41	326	P	P	11 45 26.9	+0.9
ZALV	Zalesovo Beam	83.41	326	P	P	11 45 24.4	-1.7
	comp=Z,1.9nm,0.6s,baz=111,slow=5.2,SNR=8.2						
ZALV	Zalesovo Beam	83.41	326	P	P	11 45 25.0	-1.1
M27K	Edge Creek, AK	83.58	25	P	P	11 45 27.2	+0.3
M27K				IAmb	IAmb	11 45 29.1	
	comp=Z,6.9nm,0.8s						
QSPA	South Pole Qui	83.72	180	P	P	11 45 27.7	0.0
BCAR	Beaver Creek A	83.93	24	P	P	11 45 29.7	+1.0
HYT	Haines Junctio	84.84	27	P	P	11 45 34.5	+1.2
HYT				IAmb	IAmb	11 45 35.0	
	comp=Z,4.4nm,0.7s						
MAW	Mawson	84.97	203	P	P	11 45 33.7	-0.1
	comp=Z,11nm,0.6s,baz=105,slow=7.1,SNR=20						
MAW	Mawson	84.97	203	P	P	11 45 33.9	+0.2
MAW				IAmb	IAmb	11 45 37.5	
	comp=Z,8.4nm,1.4s						
KSH	Kashi	85.32	310	P	P	11 45 37.9	+1.6
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURK	Kurchatov	86.08	322	P	P	11 45 38.4	-1.2
AAK	Ala-Archa	87.04	313	P	P	11 45 44.7	0.0
NRIK	Noril'sk	87.95	341	P	P	11 45 46.5	-1.7
	comp=Z,4.9nm,0.5s,baz=144,slow=3.4,SNR=5.7						
NVAR	Mina Array Bea	91.48	52	P	P	11 46 05.6	-0.2
	comp=Z,7.2nm,0.9s,baz=253,slow=6.4,SNR=33						
NVAR	Mina Array Bea	91.48	52	P	P	11 46 06.9	+1.1
A36M	Sachs Harbour	92.83	18	P	P	11 46 10.1	-0.8
YKA	Yellowknife Ar	95.81	28	P	P	11 46 24.3	-0.5
	comp=Z,1.8nm,0.8s,baz=261,slow=4.7,SNR=5.1						
PDAR	Pinedale Array	98.41	48	P	P	11 46 36.4	-1.0
	comp=Z,1.3nm,0.7s,baz=232,slow=3.2,SNR=9.9						
PDAR				LR	LR	12 27 34.2	
	comp=Z,63nm,18.2s,baz=289,slow=33						
PDAR	Pinedale Array	98.41	48	P	P	11 46 37.1	-0.2
VNA2	Neumayer--Watz	102.06	186	Pdiff	Pdif	11 46 52.4	-0.4
BOSA	Boshof	120.26	232	PKP	PKPdf	11 51 50.2	-0.5
	comp=Z,2.6nm,0.7s,baz=16,slow=4.3,SNR=5.4						
CLL	Collm	125.03	332	e(PKPdf)	PKPdf	11 51 57.0	-1.9
PMRV	Marv??o	143.24	337	ePKPdf	PKPab	11 52 29.0	0.0
PNCL	Nicolau / Gran	144.82	337	ePKPdf	PKPab	11 52 34.4	-0.6
PCVE	Castro Verde	145.04	336	ePKPdf	PKPbc	11 52 35.2	-0.6
PTEO	Sao Teotonio	145.39	336	ePKPdf	PKPbc	11 52 36.5	-0.4
MORF	Marmelete	145.57	336	ePKPdf	PKPdf	11 52 37.5	+0.1
BDFB	Brasilia	148.69	134	PKPbc	PKiKP	11 52 48.2	-0.4
	comp=Z,4.6nm,0.7s,baz=104,slow=9.2,SNR=4.6						
TORD	Torodi Ar. Bea	152.56	286	PKPbc	PKPbc	11 52 54.5	-1.6
	comp=Z,6.9nm,0.7s,baz=49,slow=2.1,SNR=41						
KIC	Kosan Boka	159.58	271	eP	PKPab	11 53 35.4	-1.5
	comp=Z,47nm,1.2s						
DBIC	Dimbokro	159.70	272	PKPab	PKPab	11 53 36.9	-0.6
	comp=Z,7.8nm,0.8s,baz=126,slow=4.2,SNR=9.9						
TIC	Toumodi	159.86	272	eP	PKPab	11 53 37.0	-1.2
LIC	Lamto	159.86	271	eP	PKPab	11 53 36.3	-1.8
	comp=Z,39nm,1.1s						

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*ATH **04** 12:02:14.0, 35°.41N×21°.39E, h118^{km}±14^{km}, ML3.2/5, Error ellipse: s-maj=14.1km s-min=2.5km az=45.0*

*IDC **04** 12:02:20.6±0.9, 35°.70N×21°.50E, h0^{km}, mb3.8/4, mb1 3.9/4, mb1mx3.5/35, mbtmp3.8/4, MS3.1/1, Ms1 3.1/1, ms1mx2.5/44, Error ellipse: s-maj=26.0km s-min=16.8km az=130.0*

*THE **04** 12:02:29.5, 36°.04N×21°.75E, h12^{km}±1^{km}, ML2.9/4, Error ellipse: s-maj=2.4km s-min=0.9km az=236.0*

ISC 04 12:02:25.6±1.2, **35°.75N**±0°.09×**21°.53E**±0°.06, **h29**^{km}, **n34**, σ**1^{s}.50**/37, **mb3.7**/4, **Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	PYLOS	1.16	9	P	Pn	12 02 45.5	-0.3
PYL	PYLOS	1.16	9	P	Pn	12 02 44.8	-1.0
KTHR	Kythira	1.30	67	P	Pn	12 02 48.6	+0.7
KTHR				S	Sn	12 03 03.5	-0.8
	655nm,0.4s						
KTHA	Kythira Island	1.34	67	P	Pn	12 02 49.5	+1.1
KTHA				S	Sn	12 03 05.5	+0.2
	520nm,0.5s						
ANKY	Antikythira Is	1.45	85	P	Pn	12 02 52.0	+2.2
ANKY				S	Sn	12 03 09.7	+1.9
	520nm,0.7s						
ITM	Ithomi	1.46	13	P	Pn	12 02 50.3	+0.2
ITM	Ithomi	1.46	13	P	Pn	12 02 50.2	+0.2
ITM				AML	AML	12 03 15.8	
	comp=E,642µm,0.6s						
ITM				AML	AML	12 03 19.6	
	comp=N,509µm,0.4s						
VLI	Veliai	1.50	49	P	Pn	12 02 51.6	+1.1
VLI				S	Sn	12 03 07.3	-1.7
	comp=N,445nm,0.8s						
VLI	Veliai	1.50	49	P	Pn	12 02 51.1	+0.6
VLI				AML	AML	12 03 14.6	
	comp=N,816µm,0.5s						
VLI				AML	AML	12 03 18.8	
	comp=E,975µm,1.0s						
KRND	KRANIDI	2.09	38	P	Pn	12 03 00.3	+1.6
DRO	Drossia	2.20	4	P	Pn	12 03 01.4	+1.2
DRO				AML	AML	12 03 49.2	
	comp=E,612µm,0.6s						
DRO				AML	AML	12 03 51.0	
	comp=N,372µm,0.5s						
GUR	Goura	2.28	16	P	Pn	12 03 02.7	+1.3
GUR				AML	AML	12 03 49.5	
	comp=N,340µm,0.7s						
GUR				AML	AML	12 03 51.4	
	comp=E,289µm,0.8s						
KLV	Kalavryta, Ach	2.34	12	P	Pn	12 03 03.6	+1.4
PSDA	Pessada-Kefalo	2.48	343	P	Pn	12 03 04.8	+0.8
MHLO	Agia Marina, M	2.51	67	P	Pn	12 03 04.4	0.0
LAKA	Lakka	2.51	8	P	Pn	12 03 06.4	+1.9
LTK	Loutraki	2.55	27	P	Pn	12 03 05.6	+0.7
LTK				AML	AML	12 03 53.5	
	comp=N,151µm,0.4s						
LTK				AML	AML	12 03 55.0	
	comp=E,203µm,0.8s						
KEF3	Kipouria, Keph	2.62	339	P	Pn	12 03 07.3	+1.3
TRIZ	Trizonia	2.65	9	P	Pn	12 03 07.5	+1.2
DMLN	Damoulianata-K	2.65	340	P	Pn	12 03 07.7	+1.3
EFP	Efpalio	2.69	6	P	Pn	12 03 09.1	+2.2
SERG	Sergoula	2.69	9	P	Pn	12 03 09.0	+2.1
ANX	Ano Chora	2.86	6	P	Pn	12 03 12.0	+2.7
EVGI	Lefkada island	2.95	347	P	Pn	12 03 12.5	+2.1
NYDR	Nydri-Lefkada	3.03	348	P	Pn	12 03 13.9	+2.3
LKD2	Lefkada island	3.11	347	P	Pn	12 03 15.1	+2.4
KPRO	Kipourio	4.20	358	P	Pn	12 03 30.0	+2.3
OHR	Ohrid	5.38	354	iP	Pn	12 03 45.1	+1.1
STIP	Stip	5.96	5	iP	Pn	12 03 53.3	+1.5
VRAC	Vranov	14.02	347	LR	LR	12 11 08.2	
	comp=E,79nm,20.4s,baz=222,slow=38						
FINES	FINESS Array B	25.88	5	P	P	12 07 54.0	-0.6
	comp=E,3.1nm,0.9s,baz=173,slow=15,SNR=1.5						
TORD	Torodi Ar. Bea	28.73	223	P	P	12 08 19.3	-1.3
	comp=E,0.4nm,0.9s,baz=41,slow=7.6,SNR=1.7						
ARCES	ARCESS Array B	33.91	3	P	P	12 09 05.4	-0.2
	comp=E,5.6nm,1.1s,baz=185,slow=9.1,SNR=5.3						
MKAR	Makanchi Array	45.93	57	P	P	12 10 45.3	-0.4
	comp=E,0.2nm,0.4s,baz=274,slow=7.8,SNR=8.1						

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*IDC **04** 12:57:42.4±1.8, 5°.73N×126°.36E, h108^{km}±16^{km}, mb3.8/10, mb1 4.0/13, mb1mx3.7/39, mbtmp4.3/13, MS2.6/2, Ms1 2.6/2, ms1mx2.5/28, Error ellipse: s-maj=35.7km s-min=11.5km az=68.0*

*NEIC **04** 12:57:42.0±1.0, 5°.78N±0°.09×126°.5E±0°.2, h102^{km}±8^{km}, mb4.1/16, Error ellipse: s-maj=24.2km s-min=9.7km az=66.0*

*DJA **04** 12:57:42.9±0.6, 5°N±4°×12°6E±°, h10^{km}, M4.3/13, mB4.8/5, mb4.5/13, MLv4.4/11, Mw(mB)4.0/5*

*MAN **04** 12:57:43.4, 5°.76N×126°.45E, h5^{km}, mb4.7, ML3.6, MS3.5*

ISC 04 12:57:41.6±0.6, **5°.77N**±0°.07×**126°.52E**±0°.09, **h100**^{km}, **n47**, σ**0^{s}.99**/48, **mb4.1**/16, **1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.59	324	P	Pn	12 58 09.5	+0.5
	71nm,0.3s,baz=319,slow=4.9,SNR=2.0						
DAV				S	Sn	12 58 40.7	+11
	128nm,0.3s,baz=278,slow=21,SNR=7.8						
KCP	Kidapawan	1.87	311	⇑iP	Pn	12 58 12.6	0.0
KCP				iS	Sn	12 58 36.5	+0.2
SGSI	Sangihe	2.30	205	P	Pn	12 58 16.5	-1.6
TNTI	Ternate	5.04	170	Pn	Pn	12 58 55.2	+0.3
KMSI	Cibinong	5.75	206	P	Pn	12 59 03.2	-1.4
	0.3nm56nm,0.6s						
GTOI	Gorontalo	6.19	215	P	Pn	12 59 09.7	-0.8
	0.1nm404nm37nm,0.6s						
LBMI	Labuha	6.45	171	P	Pn	12 59 14.9	+0.9
	0.2nm540nm29nm,0.8s						
MRSI	Marisa	6.97	221	P	Pn	12 59 21.8	+0.7
	0.2nm914nm35nm,0.5s						
TOLI2	Tolitoli	7.36	231		Pn	12 59 24.7	-1.7
SANI	Sanana	7.79	184	P	Pn	12 59 29.7	-2.6
	0.2nm1µm30nm,1.1s						
MYLDM	Lahad Datu	8.00	266	Pn	Pn	12 59 37.2	+2.0
SIJI	Sorong	8.13	144	P	Pn	12 59 39.1	+2.2
	1.8nm,0.3s,baz=353,slow=14,SNR=4.4						
SIJI				LR	LR	13 02 44.6	
	comp=Z,38nm,20.5s,baz=82,slow=37						
TTSI	Tana Toraja	11.02	218	P	Pn	13 00 17.4	+1.1
	42nm,0.8s						
SPSI	Sidrap Palu	11.79	215	P	Pn	13 00 27.0	+0.5
	12nm,0.7s						
KAPI	Kappang	12.67	212	P	Pn	13 00 36.6	-1.6
	0.7nm,0.3s,baz=210,slow=18,SNR=9.9						
SBUM	Sibu	14.63	258	P	P	13 01 08.8	+1.5
EDFI	Ende, Flores	15.21	198	P	P	13 01 14.8	+0.9
	5.1nm,0.6s						
BATI	Baumata	16.13	190	P	Pn	13 01 22.1	-0.5
	9.3nm,0.3s,baz=23,slow=1.5,SNR=9.6						
BATI	Baumata	16.13	190	P	P	13 01 25.0	+1.0
KSM	Kuching	16.73	256	P	Pn	13 01 30.5	+0.5
KSM				IAmb	IAmb	13 01 33.5	
	comp=Z,6.6nm,0.8s						
JAGI	Jajag, Banyuwa	18.77	221	P	P	13 01 53.2	+0.1
MTN	Manton Dam	19.06	166	P	P	13 01 55.9	-0.3
KNRA	Kununurra	21.43	174	P	P	13 02 21.2	-0.6
KNRA				IAmb	IAmb	13 02 22.2	
	comp=Z,11nm,0.7s						
FITZ	Fitzroy Crossi	23.74	182	P	P	13 02 44.9	+0.1
	comp=Z,3.1nm,0.5s,baz=1.1,slow=8.6,SNR=27						
WB0	Warramunga Arr	26.54	163	P	P	13 03 09.2	-1.0
WB0				IAmb	IAmb	13 03 30.8	
	comp=Z,7.4nm,1.4s						
WRAB	Tennant Creek	26.68	163	P	P	13 03 10.9	-0.6
WRAB				IAmb	IAmb	13 03 30.1	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	26.69	163	P	P	13 03 10.4	-1.1
	comp=Z,0.5nm,0.5s,baz=343,slow=10.0,SNR=24						
PSA00	Pilbara Seismi	27.95	193	P	P	13 03 22.2	-0.6
PSA00				IAmb	IAmb	13 03 44.2	
	comp=Z,11nm,1.2s						
CMAR	Chiang Mai Arr	29.70	298	P	P	13 03 38.0	-0.4
	comp=Z,0.5nm,0.6s,baz=119,slow=7.3,SNR=1.5						
AS31	Alice Springs	30.14	166	P	P	13 03 41.5	-0.7
ASAR	Alice Springs	30.14	166	P	P	13 03 42.0	-0.2
	comp=Z,1.7nm,0.5s,baz=343,slow=7.0,SNR=51						
ASAR				PcP	PcP	13 06 42.0	+0.5
	comp=Z,0.8nm,0.7s,baz=356,slow=2.2,SNR=7.4						
KSRS	Korea Array	31.56	2	LR	LR	13 18 17.9	
	comp=Z,9.8nm,18.7s,baz=350,slow=39						
BBOO	Buckleboo	39.43	167	P	P	13 05 02.2	+0.3
STKA	Stephens Creek	40.11	160	P	P	13 05 08.1	+0.5
	comp=Z,2.1nm,0.5s,baz=348,slow=7.3,SNR=9.7						
SONM	Songino Array	45.31	341	PcP	PcP	13 07 28.8	+1.2
	comp=Z,0.4nm,0.6s,baz=116,slow=3.4,SNR=2.5						
MK31	Makanchi Array	55.77	325	P	P	13 07 07.8	-0.4
MK31				IAmb	IAmb	13 07 25.9	
	comp=Z,1.9nm,1.1s						
MKAR	Makanchi Array	55.77	325	P	P	13 07 07.8	-0.4
	comp=Z,1.1nm,0.5s,baz=121,slow=7.7,SNR=19						
KURK	Kurchatov	59.92	327	P	P	13 07 36.8	-0.2
KURBB	Kurchatov Arra	59.92	327	P	P	13 07 35.9	-1.2
	comp=Z,0.8nm,0.5s,baz=118,slow=8.2,SNR=8.0						
ABKAR	Akbulak array	70.45	320	P	P	13 08 44.9	-0.3
ABKAR				IAmb	IAmb	13 08 49.9	
	comp=Z,1.9nm,0.9s						
ABKAR	Akbulak array	70.45	320	P	P	13 08 44.6	-0.5
CASY	Casey	72.81	187	P	P	13 08 58.5	-0.4
ILAR	Eielson Array	83.36	26	P	P	13 09 57.8	+0.5
	comp=Z,0.6nm,1.1s,baz=262,slow=5.4,SNR=1.7						
VNDA	Vanda	85.47	173	P	P	13 10 07.6	0.0
	comp=Z,0.6nm,0.6s,baz=321,slow=6.6,SNR=2.1						
VNDA	Vanda	85.47	173	P	P	13 10 07.9	+0.3
VNDA				IAmb	IAmb	13 10 23.5	
	comp=Z,2.6nm,1.1s						
FINES	FINESS Array B	89.94	332	P	P	13 10 28.9	-0.6
	comp=Z,10nm,1.1s,baz=116,slow=4.4,SNR=3.8						
TORD	Torodi Ar. Bea	122.06	289	PKP	PKPdf	13 16 24.4	-1.1
	comp=Z,0.7nm,0.6s,baz=73,slow=1.7,SNR=5.3						

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*RSPR **04** 13:07:19.5, 19°.55N×65°.33W, h66^{km}±18^{km}, MD3.6/12*

*NEIC **04** 13:07:20.9±1.4, 19°.45N±0°.08×65°.40W±0°.05, h35^{km}±45^{km}, Error ellipse: s-maj=11.6km s-min=6.3km az=198.0*

ISC 04 13:07:17.6±2.0, **19°.50N**±0°.10×**65°.31W**±0°.07, **h16**^{km}, **n45**, σ**0^{s}.63**/47, **11C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	1.18	179	⇑eP	Pn	13 07 39.4	-0.1
CUPR	Culebra, Puert	1.18	179	eS	Sg	13 07 56.2	+0.3
CUPR	Culebra, Puert	1.18	179		Pn	13 07 39.4	-0.1
CUPR					Sg	13 07 56.2	+0.3
STVI	Saint Thomas	1.19	164	⇑eP	Pg	13 07 40.5	-0.1
STVI	Saint Thomas	1.19	164	eS	Sg	13 07 57.1	+1.1
STVI	Saint Thomas	1.19	164		Pg	13 07 40.5	-0.1
STVI					Sg	13 07 57.1	+1.1
TBVI	Tortola	1.26	149	⇑eP	Pg	13 07 41.5	-0.4
TBVI	Tortola	1.26	149	eS	Sg	13 07 58.5	+0.2
CBYP	Canovanas	1.32	203	⇑eP	Pn	13 07 40.9	-0.6
CBYP	Canovanas	1.32	203	eS	Sn	13 07 58.7	-0.1
CBYP	Canovanas	1.32	203		Pn	13 07 40.9	-0.6
CBYP					Sn	13 07 58.7	-0.1
CBYP	Canovanas	1.32	203	IAML		13 08 03.4	
	comp=N,614nm,0.2s						
GCPR	Guaynabo City	1.39	212	⇑eP	Pn	13 07 42.1	-0.2
GCPR	Guaynabo City	1.39	212	eS	Sn	13 08 00.3	0.0
GCPR	Guaynabo City	1.39	212		Pn	13 07 42.1	-0.2
GCPR					Sn	13 08 00.3	0.0
EMPR	Esperanza - Ma	1.54	229	⇑eP	Pn	13 07 44.4	+0.1
EMPR	Esperanza - Ma	1.54	229	eS	Sn	13 08 04.1	+0.1
EMPR	Esperanza - Ma	1.54	229		Pn	13 07 44.4	+0.1
EMPR					Sn	13 08 04.1	+0.1
EMPR	Esperanza - Ma	1.54	229	IAML		13 08 17.9	
	comp=E,608nm,1.4s						
EMPR				IAML		13 08 25.5	
	comp=N,372nm,1.7s						
SJG	San Juan	1.59	210		Pn	13 07 45.5	+0.4
SJG				IAML		13 08 31.3	
	comp=N,133nm,0.9s						
PDPR	Patillas Dam,	1.62	205		Pn	13 07 45.6	+0.2
PDPR				IAML		13 08 08.2	
	comp=E,152nm,0.7s						
IGPR	InterUniversit	1.70	207	⇓eP	Pn	13 07 46.5	-0.1
AOPR	Arecibo Observ	1.78	230	⇑eP	Pn	13 07 47.2	-0.6
AOPR	Arecibo Observ	1.78	230	eS	Sn	13 08 09.9	-0.2
AOPR	Arecibo Observ	1.78	230		Pn	13 07 47.2	-0.6
AOPR					Sn	13 08 09.9	-0.2
CDVI	St. Croix	1.81	163		Pb	13 07 50.2	-0.2
CELP	Cerrillos	1.86	221		Pn	13 07 48.8	0.0
CELP				IAML		13 08 19.2	
	comp=N,136nm,1.2s						
OBIP	Obispado Ponce	1.90	221	⇓eP	Pn	13 07 50.0	+0.6
OBIP	Obispado Ponce	1.90	221	eS	Sn	13 08 13.0	+0.1
OBIP	Obispado Ponce	1.90	221		Pn	13 07 50.0	+0.6
OBIP					Sn	13 08 13.0	+0.1
OBIP	Obispado Ponce	1.90	221	IAML		13 08 35.6	
	comp=N,140nm,0.9s						
AGPR	Aguadilla, PR	1.99	239	Pn	Pn	13 07 50.2	-0.3
AGPR				IAML		13 08 41.4	
	comp=E,166nm,1.9s						
AGPR				IAML		13 09 09.4	
	comp=N,210nm,2.8s						
GBPR	Guanica, Bosqu	2.12	225	⇑eP	Pn	13 07 53.4	+1.0
GBPR	Guanica, Bosqu	2.12	225	eS	Sn	13 08 15.3	-3.1
PRSN	Puerto Rico Se	2.15	234	Pn	Pn	13 07 53.0	+0.1
PRSN				IAML		13 08 23.3	
	comp=E,244nm,0.3s						
MLPR	Magueyes Islan	2.24	228	⇑eP	Pn	13 07 54.1	+0.1
MLPR	Magueyes Islan	2.24	228		Pn	13 07 54.1	+0.1
MLPR	Magueyes Islan	2.24	228	IAML		13 08 42.5	
	comp=N,87nm,2.3s						
MLPR				IAML		13 09 00.1	
	comp=E,82nm,1.5s						
CRPR	Cabo Rojo, PR	2.26	229	⇑eP	Pn	13 07 54.4	+0.1
CRPR	Cabo Rojo, PR	2.26	229		Pn	13 07 54.4	+0.1
CRPR	Cabo Rojo, PR	2.26	229	IAML		13 08 36.9	
	comp=N,141nm,1.2s						
CRPR				IAML		13 08 41.0	
	comp=E,98nm,1.1s						
IDE	Isla Desecheo	2.33	242	⇑eP	Pn	13 07 55.2	0.0
IDE	Isla Desecheo	2.33	242	eS	Sn	13 08 23.8	+0.2
DR12	Loma Pena Alta	3.91	260	Pn	Pn	13 08 16.8	-0.3
SDDR	Presa de Saban	5.67	266		Pn	13 08 42.2	+1.0

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*YARS **04** 13:27:01.1±0.0, 57°.45N×120°.80E, h18^{km}*

*MOS **04** 13:27:01.4±0.9, 57°.45N×120°.72E, h12^{km}, mb4.9/42, MS4.2/7, Error ellipse: s-maj=6.7km s-min=4.8km az=88.2*

MOS Felt (III-IV) at Novaja Chara.

*IDC **04** 13:27:01.4±0.4, 57°.39N×120°.64E, h0^{km}, mb4.5/33, mb1 4.6/41, mb1mx4.5/61, mbtmp4.5/41, ML4.2/6, MS3.7/23, Ms1 3.8/23, ms1mx3.6/37, Error ellipse: s-maj=9.9km s-min=9.2km az=156.0*

*BJI **04** 13:27:02.2±0.0, 57°.59N×120°.94E, h19^{km}, mB4.9/33, mb4.6/53, ML5.5/2, Ms4.9/50, Ms7 4.6/48*

*GCMT **04** 13:27:02.1±0.3, 57°.56N±0°.02×120°.78E±0°.07, h20^{km}±1^{km}, MW4.8/82, Moment Tensor Solution. s24,c27; s82,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.94±.13; $M_{\theta\theta}$1.80±.09; $M_{\phi\phi}$0.13±.08; $M_{r\theta}$0.22±.16; $M_{\theta\phi}$-0.47±.05; $M_{\phi r}$0.29±.19; Best double couple: $M_0$1.96400×10^{16} NP1:ϕ_s114.00000°, δ44.00000°, λ-76.00000°. NP2:*

ϕ_s275.00000°,δ48.00000°,λ-103.00000°. Principal axes: T 1.9260, Plg2.0000°, Azm14.0000°; N 0.0740, Plg9.0000°, Azm284.0000°; P -2.0010, Plg80.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

BYKL **04** *13:27:03.7±0.4,57.°32N×120.°75E,Mw4.6/16(IEC), #STATIONS HRV RSSD COLA KDAK ADK ERM MAJO INCN TATO ENH LSA OBN LVZ KEV KBS SFJD FELT I=III-IV MSK at Novaya Chara*

NEIC **04** *13:27:04.3±1.7,57.°46N±0.°07×120.°7E±0.°1,h16^{km}±4^{km}, mb4.7/98,Error ellipse: s-maj=10.3km s-min=8.0km az=153.0*

ISC 04 13:27:03.4±0.4**,57.°49N**±0.°02×**120.°91E**±0.°02**,h12**^{km}±2^{km}, **h13^{km}:pP-P,n609,σ1^{s}89**/715**,mb4.8**/141**,MS4.0**/30, **54C-47D,Fault plane solution: NP1:**ϕ_s91.42684°, δ46.12544°,λ-88.64893°. **NP2:**ϕ_s269.47788°,δ43.89112°, λ-91.40480°. **Principal axes:** T Plg1.1173°, Azm180.4714°; N Plg0.9739°, Azm270.4904°; P Plg88.5177°, Azm41.5574°; **Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNR	**Khani**	**0.76**	**222**	⇑*i*Pg	**Pg**	**13 27 14.5**	**-3.7**
KHNR				*e*Sg	**Sg**	**13 27 22.0**	**-6.1**
YKLR	**Yuktali**	**0.98**	**155**	*i* Pg	**Pg**	**13 27 20.0**	**-2.4**
	811nm,0.3s						
YKLR				*e*Sg	**Sg**	**13 27 31.8**	**-3.4**
	5μm,0.2s						
CRS	**Chara**	**1.55**	**249**	*e*Pg	**Pn**	**13 27 28.8**	**-2.1**
	10μm,0.6s						
CRS				*e*Sg	**Sn**	**13 27 47.4**	**-3.6**
	11μm,0.6s						
CRS	**Chara**	**1.55**	**249**	⇓*i*Pg	**Pn**	**13 27 29.2**	**-1.7**
	256nm,0.9s						
CRS				⇓*i*Pg	**Pn**	**13 27 29.2**	**-1.7**
	1μm,0.9s						
CRS				⇑*i*Pg	**Pn**	**13 27 29.2**	**-1.7**
	4μm,0.9s						
CRS				*e*		13 27 32.7	
CRS				max		13 27 33.3	
	12μm,0.8s						
CRS				*e*Sg	**Sn**	**13 27 47.0**	**-3.9**
CRS				Smax		13 27 49.2	
	18μm,1.2s						
CRS	**Chara**	**1.55**	**249**	⇑*i*P	**Pn**	**13 27 29.2**	**-1.7**
CRS				*e*		13 27 47.2	
CRS				pmax	pmax		
	comp=Z,10μm,0.8s						
CRS				smax	smax		
	comp=N,11μm,0.9s						
CRS	**Chara**	**1.55**	**249**		**Pn**	**13 27 29.2**	**-1.7**
CLNS	**Chul'man**	**2.27**	**105**	*i* Pg	**Pb**	**13 27 42.5**	**-1.7**
	comp=N,585nm,0.4s						
CLNS				*e*Sg	**Sb**	**13 28 12.7**	**+0.6**
	comp=N,4μm,0.5s						
IENR	**Iengra**	**2.51**	**119**	*i* Pn	**Pn**	**13 27 42.1**	**-1.9**
IENR				*e*Pg	**Pb**	**13 27 47.5**	**-0.9**
	comp=N,1μm,0.4s						
IENR				*e*Sg	**Sb**	**13 28 20.7**	**+1.5**
	comp=N,3μm,0.5s						
IENR	**Iengra**	**2.51**	**119**	⇓*i*Pn	**Pn**	**13 27 45.3**	**+1.3**
IENR				*e*Pg	**Pb**	**13 27 49.1**	**+0.7**
IENR				*e*		13 27 56.7	
IENR				*e*Sg	**Sg**	**13 28 21.7**	**-2.3**
IENR				*e*SgSg	Sb	13 28 31.1	+12
ALDR	**Aldan**	**2.64**	**63**	*e*Pg	**Pb**	**13 27 49.5**	**-1.2**
	comp=N,82nm,0.2s						
ALDR				*e*Sg	**Sb**	**13 28 25.7**	**+2.6**
	comp=N,2μm,0.2s						
OLMR	**Olekminsk**	**2.91**	**356**	*e*Pg	**Pb**	**13 27 54.2**	**-1.0**
	comp=N,951nm,0.4s						
OLMR				*e*Sg	**Sb**	**13 28 33.0**	**+2.4**
	comp=N,8μm,0.6s						
NLYR	**Nelyaty**	**3.02**	**253**	⇓*i*Pn	**Pn**	**13 27 50.3**	**-0.7**
NLYR				*e*Pg	**Pb**	**13 27 55.0**	**-2.1**
NLYR				*e*		13 27 58.2	
NLYR				max		13 27 58.5	
	comp=N,7μm,0.5s						
NLYR				*e*Sg	**Sb**	**13 28 31.7**	**-2.1**
NLYR				Smax		13 28 37.5	
	comp=N,19μm,1.0s						
NLYR	**Nelyaty**	**3.02**	**253**	*e*P	**Pn**	**13 27 50.5**	**-0.5**
NLYR				*e*		13 28 32.0	
NLYR				pmax	pmax		
	comp=Z,6μm,0.4s						
NLYR				smax	smax		
	comp=N,13μm,0.9s						
TUP	**Tupik**	**3.12**	**190**	*e*Pn	**Pn**	**13 27 50.3**	**-2.1**
TUP				*e*Pg	**Pb**	**13 27 56.1**	**-2.6**
	comp=N,2μm,0.4s						
TUP				*e*Sn	**Sn**	**13 28 26.6**	**-2.8**
TUP				*e*Sg	**Sb**	**13 28 34.6**	**-2.1**
	comp=N,12μm,0.7s						
TUP	**Tupik**	**3.12**	**190**	⇑*i*Pn	**Pn**	**13 27 50.7**	**-1.6**
TUP				*e*		13 27 53.9	
TUP				*e*Pg	**Pb**	**13 27 56.9**	**-1.8**
TUP				Pmax		13 27 59.4	
	comp=N,3μm,0.9s						
TUP				*e*PgPg	**Pg**	**13 28 01.8**	**-1.3**
TUP				*e*Sn	**Sn**	**13 28 26.0**	**-3.4**
TUP				*e*Sg	**Sb**	**13 28 34.5**	**-2.1**
TUP				*e*SgSg	**Sg**	**13 28 41.8**	**-1.6**
TUP				max		13 28 44.3	
	comp=N,12μm,1.1s						
TUP	**Tupik**	**3.12**	**190**	*e*P	**Pn**	**13 27 50.6**	**-1.7**
TUP				*e*S	**Sn**	**13 28 26.0**	**-3.4**
TUP				pmax	pmax		
	comp=Z,2μm,0.4s						
TUP				smax	smax		
	comp=N,12μm,0.7s						
BOD	**Bodaibo**	**3.73**	**278**	⇓*i*Pn	**Pn**	**13 28 00.2**	**-0.5**
BOD				*e*Pg	**Pb**	**13 28 09.3**	**+0.2**
BOD				Pmax		13 28 12.5	
	comp=N,841nm,1.3s						
BOD				*e*Sn	**Sn**	**13 28 41.4**	**-3.0**
BOD				*e*Sg	**Sb**	**13 28 55.9**	**+1.8**
BOD				Smax		13 29 04.3	
	comp=N,7μm,0.8s						
BOD	**Bodaibo**	**3.73**	**278**	*e*P	**Pn**	**13 27 59.8**	**-0.9**
SVKR	**Severomuysk**	**4.27**	**254**	*e*Pn	**Pn**	**13 28 07.4**	**-0.8**
SVKR				*e*Pg	**Pb**	**13 28 17.8**	**-0.6**
SVKR				Pmax		13 28 25.2	
	comp=N,2μm,0.5s						
SVKR				*e*		13 28 57.2	
SVKR				*e*Sg	**Sb**	**13 29 12.4**	**+2.6**
SVKR				Smax		13 29 23.1	
	comp=N,7μm,0.8s						
UKT	**Uakit**	**4.51**	**247**	*e*Pn	**Pn**	**13 28 11.0**	**-0.5**
UKT				*e*Pg	**Pb**	**13 28 21.3**	**-1.1**
UKT				Pmax		13 28 27.7	
	comp=N,705nm,0.6s						
UKT				*e*Sn	**Sn**	**13 28 58.6**	**-5.2**
UKT				*e*Sg	**Sb**	**13 29 17.5**	**+0.8**
UKT				Smax		13 29 25.0	
	comp=N,3μm,0.9s						
VTMR	**Vitim**	**4.81**	**298**	*e*Pn	**Pn**	**13 28 13.4**	**-2.1**
VTMR				*i* Pg	**Pb**	**13 28 27.5**	**0.0**
	comp=N,219nm,0.2s						
VTMR				*i* Sn	**Sn**	**13 29 07.9**	**-3.1**
VTMR				*e*Sg	**Sb**	**13 29 29.4**	**+4.2**
	comp=N,6μm,0.4s						
ZEA	**Zeya**	**5.20**	**134**	*e*Pn	**Pn**	**13 28 20.9**	**0.0**
ZEA				*e*Pg	**Pb**	**13 28 34.7**	**+0.6**
ZEA				Pmax		13 28 34.9	
	comp=N,90nm,0.8s						
ZEA				*e*Sn	**Sn**	**13 29 19.8**	**-0.8**
ZEA				*e*Sg	**Sb**	**13 29 42.2**	**+5.8**
ZEA				Smax		13 29 46.6	
	comp=N,2μm,1.2s						
ZEA	**Zeya**	**5.20**	**134**	*e*P	**Pn**	**13 28 20.9**	**0.0**
ZEA				*e*S	**Sn**	**13 29 19.8**	**-0.8**
ZEA				pmax	pmax		
	comp=Z,90nm,0.8s						
ZEA				smax	smax		
	comp=E,2μm,1.2s						
ZEA				smax	smax		
	comp=E,1μm,1.1s						
ZEA				MLR	MLR		
	comp=E,4μm,7.0s						
ZEA				MLR	MLR		
	comp=N,4μm,6.0s						
ZEA				MLR	MLR		
	comp=Z,5μm,5.0s						
ZEA	**Zeya**	**5.20**	**134**		**Pn**	**13 28 21.7**	**+0.8**
YOA	**Uoyan**	**5.23**	**259**	*e*Pg	**Pb**	**13 28 36.4**	**+1.7**
YOA				*e*		13 28 44.1	
YOA				max		13 28 46.7	
	comp=Z,4μm,1.4s						
YOA				*e*Sg	**Sb**	**13 29 42.1**	**+4.8**
YOA				Smax		13 30 09.7	
	comp=Z,23μm,1.6s						
BMKR	**Bomnak**	**5.24**	**119**	*e*Pn	**Pn**	**13 28 22.2**	**+0.8**
	comp=Z,80nm,0.6s						
BMKR				*e*Sg	**Sg**	**13 29 47.2**	**-4.2**
	comp=Z,2μm,1.2s						
CGD	**Chagda**	**5.30**	**72**	*i* Pn	**Pn**	**13 28 21.8**	**-0.5**
CGD				*e*Pg	**Pb**	**13 28 38.3**	**+2.5**
	comp=Z,1μm,0.5s						
CGD				*i* Sn	**Sn**	**13 29 22.8**	**-0.3**
CGD				*e*Sg	**Sg**	**13 29 48.1**	**-5.2**
	comp=Z,9μm,0.3s						
KMO	**Kumora**	**5.59**	**257**	*e*Pn	**Pn**	**13 28 25.7**	**-0.5**
KMO				*e*Pg	**Pb**	**13 28 41.7**	**+0.9**
KMO				Pmax		13 28 49.2	
	comp=Z,410nm,0.5s						
KMO				*e*Sn	**Sn**	**13 29 27.1**	**-3.2**
KMO				*e*Sg	**Sb**	**13 29 52.6**	**+5.0**
KMO				Smax		13 29 59.1	
	comp=Z,5μm,1.0s						
KMO	**Kumora**	**5.59**	**257**	*e*P	**Pn**	**13 28 25.6**	**-0.6**
KMO				pmax	pmax		
	comp=Z,364nm,0.7s						
BLSR	**Buluus**	**5.68**	**43**	*e*Pn	**Pn**	**13 28 27.3**	**-0.1**
BLSR				*e*Pg	**Pb**	**13 28 44.5**	**+2.2**
	comp=Z,270nm,0.5s						
BLSR				*e*Sn	**Sn**	**13 29 32.1**	**-0.3**
BLSR				*e*Sg	**Sg**	**13 30 00.5**	**-5.0**
	comp=Z,2μm,0.4s						
YLYR	**Ulyunkhan**	**6.04**	**248**	*e*Pn	**Pn**	**13 28 32.1**	**-0.4**
YLYR				*e*Pg	**Pb**	**13 28 49.0**	**+0.5**
YLYR				Pmax		13 29 04.2	
	comp=Z,196nm,1.0s						
YLYR				*e*Sg	**Sb**	**13 30 06.2**	**+5.5**
YLYR				*e*		13 30 15.8	
YLYR				max		13 30 21.6	
	comp=Z,3μm,1.3s						
TBGR	**Tabaga**	**6.20**	**42**	*i* Pn	**Pn**	**13 28 34.2**	**-0.3**
TBGR				*i* Pg	**Pb**	**13 28 53.8**	**+2.7**
	comp=Z,4μm,0.6s						
TBGR				*e*Sn	**Sn**	**13 29 44.2**	**-1.1**
TBGR				*e*Sg	**Sg**	**13 30 16.4**	**-5.8**
	comp=Z,22nm,0.3s						
YAK	**Yakutsk**	**6.35**	**41**	Pn	**Pn**	**13 28 38.0**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=16,slow=0.4,SNR=17						
YAK				Sn	**Sn**	**13 29 48.8**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=184,slow=20,SNR=7.2						
YAK				Lg	Lg	13 30 20.2	
	comp=Z,5.0nm,0.3s,baz=313,slow=23,SNR=11						
YAK				LR	LR	13 31 17.6	
	comp=Z,845nm,19.2s,baz=266,slow=39						
YAK	**Yakutsk**	**6.35**	**41**	*e*Pn	**Pn**	**13 28 36.5**	**-0.2**
YAK				*e*Pg	**Pb**	**13 28 56.7**	**+3.0**
	comp=Z,371nm,0.8s						
YAK				*e*Sn	**Sn**	**13 29 48.5**	**-0.6**
YAK				*e*Sg	**Sg**	**13 30 21.2**	**-5.9**
	comp=Z,2μm,0.8s						
YAK	**Yakutsk**	**6.35**	**41**	*e*P	**Pn**	**13 28 38.4**	**+1.7**
YAK				*e*		13 29 45.7	
YAK				pmax	pmax		
	comp=Z,319nm,0.9s						
YAK				smax	smax		
	comp=N,169nm,0.6s						
YAK				smax	smax		
	comp=E,132nm,0.6s						
YAK				smax	smax		
	comp=N,1μm,5.2s						
YAK				smax	smax		
	comp=E,1μm,5.2s						
YAK	**Yakutsk**	**6.35**	**41**	Pn	**Pn**	**13 28 36.7**	**0.0**
NIZ	**Nizh Angarsk**	**6.50**	**260**	*e*Pn	**Pn**	**13 28 39.4**	**+0.6**
NIZ				*e*Pg	**Pb**	**13 28 57.8**	**+1.4**
NIZ				Pmax		13 29 05.2	
	comp=E,288nm,0.6s						
NIZ				*e*Sn	**Sn**	**13 29 47.4**	**-5.5**
NIZ				*e*Sg	**Sb**	**13 30 20.0**	**+6.0**
NIZ				Smax		13 30 50.5	
	comp=E,2μm,2.1s						
NIZ	**Nizh Angarsk**	**6.50**	**260**	*e*P	**Pn**	**13 28 41.6**	**+2.8**
NIZ				*e*S	**Sn**	**13 29 49.8**	**-3.1**
NIZ				pmax	pmax		
	comp=Z,288nm,1.0s						
NIZ				smax	smax		
	comp=N,2μm,2.0s						
CIT	**Chita**	**6.93**	**221**	*e*Pn	**Pn**	**13 28 44.5**	**-0.3**
CIT				*e*Pg	**Pb**	**13 29 05.1**	**+1.4**
CIT				Pmax		13 29 10.1	
	comp=N,920nm,1.2s						
CIT				*e*Sg	**Sb**	**13 30 32.1**	**+5.7**
CIT				Smax		13 30 37.0	
	comp=N,9μm,1.7s						
CIT	**Chita**	**6.93**	**221**	*e*P	**Pn**	**13 28 43.4**	**-1.4**
CIT				*e*S	**Sn**	**13 29 58.5**	**-5.0**
CIT				pmax	pmax		
	comp=Z,925nm,1.0s						
CIT				smax	smax		
	comp=N,9μm,1.8s						
SYVR	**Suvo**	**7.28**	**243**	*e*Pn	**Pn**	**13 28 48.7**	**-0.7**
SYVR				*e*Pg	**Pb**	**13 29 12.0**	**+2.5**
SYVR				Pmax		13 29 17.3	
	comp=N,604nm,1.5s						
SYVR				*e*Sn	**Sn**	**13 30 05.8**	**-6.1**
SYVR				*e*Sg	**Sb**	**13 30 44.1**	**+7.9**
SYVR				Smax		13 30 57.0	
	comp=N,5μm,1.9s						
SYVR	**Suvo**	**7.28**	**243**	*e*P	**Pn**	**13 28 48.7**	**-0.7**
SYVR				pmax	pmax		
	comp=Z,611nm,1.4s						
HIA	**Hailar**	**8.26**	**185**	*e*	**Pn**	**13 28 58.8**	**-4.2**
HIA				*e*Pg	Pb	13 29 30.8	+4.4
HIA				*e*Sn	**Sn**	**13 30 31.0**	**-5.2**
HIA				*e*Sg	Sb	13 31 15.1	+11
HIA	**Hailar**	**8.26**	**185**	P	**Pn**	**13 28 59.0**	**-4.0**
HIA	**Hailar**	**8.26**	**185**	Pn	**Pn**	**13 28 59.0**	**-4.0**
OGRR	**Ongureny**	**8.47**	**249**	*e*Pn	**Pn**	**13 29 06.8**	**+1.0**
OGRR				*e*		13 29 38.6	
OGRR				max		13 29 44.1	
	comp=Z,81nm,1.4s						
OGRR				*e*Sg	Sb	13 31 22.0	+12
OGRR				Smax		13 31 40.2	
	comp=Z,1μm,1.9s						
OGRR	**Ongureny**	**8.47**	**249**	*e*P	**Pn**	**13 29 07.7**	**+1.9**
OGRR				pmax	pmax		
	comp=Z,81nm,1.5s						
KELR	**Kotokel**	**8.74**	**243**	*e*Pn	**Pn**	**13 29 09.8**	**+0.3**
KELR				*e*Pg	Pg	13 29 39.1	-11
KELR				*e*Sg	Sg	13 31 29.5	-14
KPC	**Khapcheranga**	**9.29**	**217**	*e*Pn	**Pn**	**13 29 15.5**	**-1.7**
KPC				*e*Pg		13 29 47.0	
KPC				Pmax		13 29 59.3	
	comp=Z,53nm,1.2s						
KPC				*e*Sn	**Sn**	**13 30 53.1**	**-8.4**
KPC				*e*Sg		13 31 43.8	
KPC				Smax		13 31 56.4	
	comp=Z,2μm,1.2s						
KPC	**Khapcheranga**	**9.29**	**217**	*e*P	**Pn**	**13 29 15.4**	**-1.7**
KPC				*e*S	Sn	13 30 52.3	-9.2
KPC				pmax	pmax		
	comp=Z,28nm,0.9s						
KPC				smax	smax		
	comp=N,2μm,1.4s						
UUDB	**Ulan-Yde**	**9.51**	**239**	*e*Pn	**Pn**	**13 29 20.3**	**+0.3**
UUDB				*e*Pg		13 29 52.1	
UUDB				Pmax		13 29 56.0	
	comp=N,406nm,1.4s						
UUDB				*e*Sg	Sn	13 31 52.6	+46
UUDB				Smax		13 32 12.4	
	comp=N,3μm,1.7s						
TRG	**Tyrgan**	**9.59**	**247**	*e*	**Pn**	**13 29 23.8**	**+2.7**
TRG				*e*Pg		13 29 53.7	
TRG				Pmax		13 30 28.6	
	comp=N,55nm,1.1s						
TRG				*e*Sn	**Sn**	**13 31 01.9**	**-6.7**
TRG				*e*Sg		13 31 54.6	
TRG				Smax		13 32 10.6	
	comp=N,865nm,1.8s						
TRG	**Tyrgan**	**9.59**	**247**	*e*P	**Pn**	**13 29 23.9**	**+2.8**
TRG				*e*S	**Sn**	**13 31 04.2**	**-4.4**
TRG				pmax	pmax		
	comp=Z,55nm,1.2s						
TRG				smax	smax		
	comp=N,860nm,1.9s						
FFNB	**Fofonovo**	**9.81**	**242**	*e*Pn	**Pn**	**13 29 24.1**	**-0.1**
FFNB				*e*Pg		13 29 58.3	
FFNB				*e*		13 31 42.1	
FFNB				*e*Sg	Sn	13 32 03.2	+49
KAB	**Kabansk**	**9.87**	**243**	*e*Pg	Pn	13 29 59.0	+34
KAB				Pmax		13 30 12.4	
	comp=N,331nm,0.7s						
KAB				*e*Sg	Sn	13 32 03.3	+48
KAB				Smax		13 32 31.6	
	comp=N,9μm,1.4s						
HRMR	**Khuramsha**	**10.00**	**240**	*e*Pn	**Pn**	**13 29 26.3**	**-0.4**
HRMR				*e*Pg		13 30 01.8	
HRMR				Pmax		13 30 07.5	
	comp=N,161nm,0.8s						
HRMR				*e*Sn	**Sn**	**13 31 10.8**	**-7.9**
HRMR				*e*Sg		13 32 08.6	
HRMR				Smax		13 32 23.0	
	comp=N,6μm,0.8s						
KLR	**Kul'dur**	**10.49**	**137**	Pn	**Pn**	**13 29 33.8**	**+0.3**
	comp=N,1.5nm,0.3s,baz=334,slow=13,SNR=42						
KLR				Sn	Sn	13 31 21.7	-9.1
	comp=N,4.2nm,0.3s,baz=55,slow=20,SNR=7.8						
KLR				Lg	Lg	13 32 32.5	
	comp=N,2.4nm,0.3s,baz=254,slow=14,SNR=3.7						
KLR				LR	LR	13 34 05.4	
	comp=N,202nm,19.4s,baz=330,slow=40						
KLR	**Kul'dur**	**10.49**	**137**	*i* P	**Pn**	**13 29 35.0**	**+1.5**
LSTR	**Listvyanka**	**10.86**	**246**	*e*Pn	**Pn**	**13 29 39.1**	**+0.5**
LSTR				max		13 29 45.8	
	comp=N,62nm,1.2s						
LSTR				*e*Sg		13 32 35.4	
LSTR				Smax		13 33 20.5	
	comp=N,1μm,2.2s						
IRK	**Irkutsk**	**10.92**	**248**	*e*Sg		13 32 37.4	
IRK				Smax		13 32 59.2	
	comp=N,1μm,1.2s						
IRK	**Irkutsk**	**10.92**	**248**	*e*P	**Pn**	**13 29 38.6**	**-0.7**
IRK				pmax	pmax		
	comp=Z,236nm,0.2s						
IVK	**Ivanovka**	**11.11**	**246**	*e*Pn	**Pn**	**13 29 42.9**	**+1.0**
IVK				max		13 29 50.2	
	comp=Z,38nm,1.7s						
IVK				*e*		13 30 23.1	
IVK				*e*Sg		13 32 42.5	
IVK				Smax		13 33 08.2	
	comp=Z,549nm,1.7s						
TLY	**Talaya**	**11.57**	**247**	Lg	Lg	13 33 01.6	
	comp=Z,0.0nm,0.3s,baz=269,slow=18,SNR=8.4						
TLY				LR	LR	13 34 03.7	
	comp=Z,734nm,20.4s,baz=30,slow=37						
TLY	**Talaya**	**11.57**	**247**	*e*	Pn	13 29 59.8	+12
TLY				*e*		13 30 32.5	
TLY				max		13 30 40.5	
	comp=Z,20nm,0.6s						
TLY				*e*Sg		13 32 56.7	
TLY				Smax		13 33 36.3	
	comp=Z,344nm,2.4s						
ARS	**Arshan**	**12.04**	**250**	*e*Pn	**Pn**	**13 29 56.8**	**+2.1**
ARS				max		13 30 01.5	
	comp=Z,59nm,1.6s						
ARS				*e*Sg		13 33 12.5	
ARS				Smax		13 33 20.3	
	comp=Z,2μm,2.5s						
ZAK	**Zakamensk**	**12.56**	**243**	*e*Pn	**Pn**	**13 30 02.9**	**+1.0**
ZAK				*e*Pg	P	13 30 48.4	+35
ZAK				Pmax		13 30 52.5	
	comp=Z,67nm,1.3s						
ZAK				*e*Sg		13 33 28.1	
ZAK				Smax		13 33 41.5	
	comp=Z,1μm,1.4s						
ZAK	**Zakamensk**	**12.56**	**243**	*e*P	**Pn**	**13 30 02.6**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,19nm,1.2s						
ULN	**Ulaanbaatar**	**12.76**	**227**	*ce*P	**Pn**	**13 30 02.3**	**-2.3**
ULN				pmax	pmax		
	comp=Z,33nm,2.5s						
ULN	**Ulaanbaatar**	**12.76**	**227**	Pn	**Pn**	**13 30 06.0**	**+1.4**
MOY	**Mondy**	**12.91**	**252**	*e*P	**Pn**	**13 30 09.6**	**+2.9**
MOY				pmax	pmax		
	comp=Z,47nm,2.4s						
SONM	**Songino Array**	**13.05**	**228**	Pn	**Pn**	**13 30 07.0**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=32,slow=13,SNR=17						
SONM				Sn	**Sn**	**13 32 34.4**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=24,slow=15,SNR=2.7						
SONM				Lg	Lg	13 33 46.7	
	comp=Z,6.3nm,0.3s,baz=68,slow=16,SNR=6.6						
SONM				LR	LR	13 35 36.4	
	comp=Z,433nm,19.3s,baz=30,slow=40						
SONM	**Songino Array**	**13.05**	**228**	Pn	**Pn**	**13 30 07.7**	**-0.8**
MDJ	**Mudanjiang**	**13.98**	**153**	P	**P**	**13 30 28.8**	**-0.3**
MDJ				sP	Pn	13 30 36.9	+16
MDJ				S	**Sn**	**13 33 02.4**	**+6.4**
MDJ				sS	S	13 33 10.2	-7.5
MDJ				pmax	pmax		
	comp=Z,13nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,670nm,4.6s						
MDJ				LR	LR		
	comp=N,2μm,10.1s						
MDJ				LR	LR		
	comp=E,5μm,12.2s						
MDJ				LR	LR		
	comp=Z,3μm,7.3s						
CN2	**Changchun**	**13.99**	**166**	*e*P	**P**	**13 30 30.8**	**+1.5**
CN2				*e*pP	Pn	13 30 34.0	+13
CN2				*e*S	**S**	**13 33 09.7**	**-8.4**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,2μm,7.0s						
CN2				LR	LR		
	comp=E,2μm,7.0s						
CN2				LR	LR		
	comp=Z,3μm,9.0s						
TIXI	**Tiksi**	**14.60**	**10**	Pn	**Pn**	**13 30 26.2**	**-3.3**
	comp=Z,3.8nm,0.3s,baz=177,slow=9.2,SNR=43						
TIXI				Sn	Sn	13 33 00.8	-10
	comp=Z,8.0nm,0.3s,baz=341,slow=9.2,SNR=4.1						
TIXI				LR	LR	13 36 34.3	
	comp=Z,312nm,20.1s,baz=202,slow=39						
TIXI	**Tiksi**	**14.60**	**10**	*i* P	**Pn**	**13 30 27.8**	**-1.6**
TIXI	**Tiksi**	**14.60**	**10**	Pn	**Pn**	**13 30 25.3**	**-4.1**
USA0B	**Ussuriysk Arra**	**15.00**	**148**	P	**Pn**	**13 30 37.2**	**+2.2**
USA0B				pmax	pmax		
	comp=Z,32nm,1.1s						
USA0B	**Ussuriysk Arra**	**15.00**	**148**		**Pn**	**13 30 37.2**	**+2.2**
USA0B				IAmb	IAmb	13 30 47.5	
	comp=Z,32nm,1.1s						
USRK	**Ussuriysk Ar.**	**15.00**	**148**	Pn	**Pn**	**13 30 36.4**	**+1.4**
	baz=340,slow=12,SNR=4.8						
USRK				Lg	Lg	13 34 55.4	
	baz=330,slow=26,SNR=8.1						
USRK	**Ussuriysk Ar.**	**15.00**	**148**	Pn	**Pn**	**13 30 36.7**	**+1.7**
MA2	**Magadan**	**15.67**	**70**	P	**Pn**	**13 30 44.3**	**+0.6**
MA2				pmax	pmax		
	comp=Z,29nm,0.9s						
MA2	**Magadan**	**15.67**	**70**	Pn	**Pn**	**13 30 44.2**	**+0.6**
SEY	**Seymchan**	**16.44**	**58**	Pn	**Pn**	**13 30 54.2**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=264,slow=9.1,SNR=19						
SEY				Lg	Lg	13 35 43.5	
	comp=Z,0.6nm,0.3s,baz=348,slow=20,SNR=9.8						
SEY				LR	LR	13 37 36.8	
	comp=Z,194nm,20.8s,baz=270,slow=38						
HHC	**Hu-ho-hao-te**	**17.71**	**204**	*e*P	**P**	**13 31 13.3**	**+2.7**
HHC				pmax	pmax		
	comp=Z,17nm,1.2s						
HHC				pmax	pmax		
	comp=Z,290nm,5.9s						
HHC				LR	LR		
	comp=Z,2μm,9.5s						
HHC				LR	LR		
	comp=Z,2μm,8.8s						
HHC				LR	LR		
	comp=Z,2μm,8.9s						
BJI	**Beijing**	**17.73**	**192**	P	**P**	**13 31 15.6**	**+4.9**
BJI				pP	**sP**	**13 31 18.5**	**+2.2**
BJI				sP	**pP**	**13 31 21.3**	**+6.8**
BJI				S	**S**	**13 34 32.4**	**-1.9**
BJI				sS	**sS**	**13 34 38.5**	**-1.9**

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BJI                               SS      SnSn     13 34 51.1  +11
BJI                               pmax    pmax
      comp=Z,23nm,1.2s
BJI                               LR      LR
      comp=Z,3µm,7.7s
BJI                               LR      LR
      comp=Z,1µm,6.4s
BJI                               LR      LR
      comp=Z,2µm,8.7s
BJT   Baijiatuau        17.75 192   P     Pn       13 31 08.8 -1.3
BJT                               pmax    pmax
      comp=Z,27nm,1.2s
BJT   Baijiatuau        17.75 192   Pn    Pn       13 31 08.8 -1.3
BTO   Baotou            18.30 207  eP     P        13 31 21.2 +4.1
BTO                                 S     S        13 34 48.6 +2.5
BTO                                 LR    LR
      comp=Z,4µm,9.0s
BTO                                 LR    LR
      comp=Z,4µm,8.6s
NRIK  Noril'sk          18.75 323   P     P        13 31 19.2 -2.5
      comp=Z,3.5nm,0.3s,baz=135,slow=8.1,SNR=21
NRIK                                S     Sn       13 34 38.1  -13
      comp=Z,0.7nm,0.3s,baz=325,slow=8.2,SNR=6.1
NRIK  Noril'sk          18.75 323   P     P        13 31 17.1 -4.6
NRIK                              pmax    pmax
      comp=Z,39nm,0.7s
NRIK  Noril'sk          18.75 323   P     P        13 31 17.1 -4.6
NRIK                              IAmb    IAmb     13 31 25.1
      comp=Z,39nm,0.7s
ASAJ  Asahikawa         19.04 125   P     Pn       13 31 25.4 -0.4
      comp=Z,0.6nm,0.3s,baz=330,slow=15,SNR=6.0
ASAJ  Asahikawa         19.04 125   P     Pn       13 31 27.3 +1.5
ASAJ                              pmax    pmax
      comp=Z,54nm,1.1s
JKA   Kamikawa-asahi    19.04 125   P     Pn       13 31 27.3 +1.5
JKA                               IAmb    IAmb     13 31 36.6
      comp=Z,54nm,1.1s
INCN  Inchon            20.37 167   P     P        13 31 40.0 +0.3
INCN                              pmax    pmax
      comp=Z,81nm,1.0s
INCN  Inchon            20.37 167   P     P        13 31 40.0 +0.3
ZAA0  Zalesovo Array    20.48 276   P     P        13 31 39.7 -1.0
ZAA0                              IAmb    IAmb     13 31 46.9
      comp=Z,70nm,1.4s
ZALV  Zalesovo Beam     20.48 276   P     P        13 31 40.3 -0.4
      comp=Z,16nm,0.7s,baz=66,slow=7.3,SNR=37
ZALV  Zalesovo Beam     20.48 276 i P     P        13 31 40.2 -0.4
ZALV                              pmax    pmax
      comp=Z,15nm,0.7s
ZALV  Zalesovo Beam     20.48 276         P        13 31 39.8 -0.9
KS19  Wonju Array Si    20.52 164   P     Pn       13 31 43.0 -0.5
KS19                              IAmb    IAmb     13 31 52.6
      comp=Z,38nm,1.1s
KSRS  Korea Array       20.57 164   P     P        13 31 42.6 +0.8
      comp=Z,18nm,0.9s,baz=352,slow=10,SNR=23
KSRS                                LR    LR       13 39 52.7
      comp=Z,165nm,20.5s,baz=348,slow=38
KSAR  Wonju Array Be    20.58 164   P     P        13 31 41.5 -0.4
KSAR  Wonju Array Be    20.58 164   P     P        13 31 41.5 -0.4
DGZ   Jazzator, Alta    21.16 263 i P     P        13 31 45.6 -2.7
PEA0B Petropavlovsk-    21.21  86   P     P        13 31 49.1 +0.4
PEA0B                             pmax    pmax
      comp=Z,136nm,1.4s
PEA0B Petropavlovsk-    21.21  86   P     P        13 31 49.1 +0.4
PETK  Petropavlovsk-    21.21  86   P     P        13 31 49.5 +0.8
      comp=Z,22nm,0.9s,baz=333,slow=8.3,SNR=13
PETK  Petropavlovsk-    21.21  86   P     P        13 31 50.2 +1.5
PETK  Petropavlovsk-    21.21  86   P     P        13 31 50.2 +1.5
TJN   Taejon            21.55 166 i P     P        13 31 52.4  0.0
PET   Petropavlovsk     21.77  86  eP     P        13 31 57.3 +2.7
PET                                eS     S        13 35 50.1 -4.7
PET                               pmax    pmax
      comp=Z,69nm,0.8s
PET                               MLR     MLR
      comp=Z,500nm,16.0s
PET   Petropavlovsk     21.77  86   P     P        13 31 55.9 +1.4
PET                               IAmb    IAmb     13 31 59.0
      comp=Z,42nm,0.9s
BILL  Bilibino          22.70  44 i P     P        13 32 05.7 +1.3
BILL                              i                13 32 31.1
BILL                               eS     S        13 36 13.8 +1.6
BILL                              pmax    pmax
      comp=Z,12nm,0.8s
BILL                              MLR     MLR
      comp=Z,124nm,14.0s
BILL  Bilibino          22.70  44   P     P        13 32 04.6 +0.2
BILL                              IAmb    IAmb     13 32 12.8
      comp=Z,22nm,0.9s
GTA   Gaotai            22.70 226 ⇓P      P        13 32 03.8 -1.0
GTA                                 pP    pP       13 32 07.9 -0.8
GTA                                 sP    sP       13 32 10.9 +0.4
GTA                                 sS    Sn       13 36 22.7 -4.3
GTA                               pmax    pmax
      comp=Z,240nm,4.9s
GTA                                 LR    LR
      comp=Z,1µm,9.3s
GTA                                 LR    LR
      comp=Z,2µm,8.0s
GTA                                 LR    LR
      comp=Z,1µm,10.2s
ZSN   Zaisan            23.87 261  eP     P        13 32 16.3 -0.1
      baz=260
ZSN   Zaisan            23.87 261  eP     P        13 32 16.3 -0.1
MAT   Matsushiro        23.91 144   P     P        13 32 16.3 -0.5
MAT                                eS     S        13 36 35.4 +2.7
MJAR  Matsushiro Arr    23.91 144   P     P        13 32 16.6 -0.3
      comp=Z,16nm,1.1s,baz=334,slow=8.7,SNR=8.5
MJAR  Matsushiro Arr    23.91 144   P     P        13 32 16.5 -0.3
MJAR                              pmax    pmax
      comp=Z,15nm,1.3s
MJAR  Matsushiro Arr    23.91 144   P     P        13 32 16.5 -0.3
LZH   Lanzhou           24.25 215  eP     P        13 32 21.2 +1.0
LZH                                 pP    sP       13 32 25.8 -0.3
LZH                                 sP    pP       13 32 30.2 +5.8
LZH                                 S     S        13 36 44.2 +5.7
LZH                                 SS    SnSn     13 37 24.0 +3.3
LZH                               pmax    pmax
      comp=Z,23nm,1.3s
LZH                               pmax    pmax
      comp=Z,240nm,4.6s
LZH                                 LR    LR
      comp=Z,1µm,11.4s
LZH                                 LR    LR
      comp=Z,1µm,10.8s
LZH                                 LR    LR
      comp=Z,990nm,14.6s
SEM   Semipalatinsk     24.64 271  eP     P        13 32 22.1 -1.7
      baz=271
SEM   Semipalatinsk     24.64 271  eP     P        13 32 22.0 -1.7
WMQ   Urumqi            24.80 251  eP     P        13 32 27.1 +2.0
XAN   Xi'an             24.82 204   P     P        13 32 25.3  0.0
XAN                                 pP    sP       13 32 31.0 -0.1
XAN                                 sP    pP       13 32 34.2 +4.8
XAN                                 PP    PnPn     13 33 00.8 +3.3
XAN                                 S     S        13 36 46.6 -0.9
XAN                                 sS    sS       13 36 56.3 +2.0
XAN                               pmax    pmax
      comp=Z,12nm,1.0s
XAN                               pmax    pmax
      comp=Z,160nm,3.7s
XAN                                 LR    LR
      comp=Z,900nm,7.9s
XAN                                 LR    LR
      comp=Z,790nm,8.3s
XAN                                 LR    LR
      comp=Z,1µm,11.5s
KURK  Kurchatov         25.36 273ceP      P        13 32 29.1 -0.8
KURK                              pmax    pmax
      comp=Z,16nm,0.8s
KURK  Kurchatov         25.36 273   P     P        13 32 28.6 -1.3
KURK                              IAmb    IAmb     13 32 33.8
      comp=Z,15nm,0.8s
KURBB Kurchatov Arra    25.46 273   P     P        13 32 28.8 -2.0
      comp=Z,8.6nm,0.8s,baz=62,slow=9.2,SNR=26
NJ2   Nanjing           25.47 184  eP     P        13 32 34.5 +3.4
NJ2                               pmax    pmax
      comp=Z,12nm,0.5s
NJ2                                 LR    LR
      comp=Z,770nm,14.7s
NJ2                                 LR    LR
      comp=Z,430nm,11.4s
NJ2                                 LR    LR
      comp=Z,700nm,10.9s
MK31  Makanchi Array    25.65 262   P     P        13 32 30.7 -2.0
MK31                              pmax    pmax
      comp=Z,9.0nm,0.7s
MK31  Makanchi Array    25.65 262   P     P        13 32 30.7 -2.0
MKAR  Makanchi Array    25.65 262   P     P        13 32 32.1 -0.6
      comp=Z,8.8nm,0.7s,baz=57,slow=8.8,SNR=32
MKAR                                LR    LR       13 43 01.0
      comp=Z,316nm,21.0s,baz=36,slow=38
MKAR  Makanchi Array    25.65 262   P     P        13 32 32.0 -0.7
MAKZ  Makanchi          25.81 262   P     P        13 32 32.8 -1.3
MAKZ                              pmax    pmax
      comp=Z,11nm,1.1s
MAKZ  Makanchi          25.81 262   P     P        13 32 32.8 -1.3
ENH   Enshi             28.34 201   P     P        13 32 56.2 -0.8
ENH                               IAmb    IAmb     13 33 01.6
      comp=Z,15nm,0.9s
BVAR  Borovoye Array    28.58 283   P     P        13 32 58.0 -0.9
      comp=Z,4.4nm,0.8s,baz=126,slow=2.6,SNR=15
BVAR  Borovoye Array    28.58 283   P     P        13 32 58.0 -0.9
BRVK  Borovoye          28.62 283ceP      P        13 32 57.8 -1.5
BRVK                              pmax    pmax
      comp=Z,4.0nm,0.7s
BRVK  Borovoye          28.62 283   P     P        13 32 56.4 -2.8
BRVK                              IAmb    IAmb     13 33 22.1
      comp=Z,11nm,0.8s
TDK   Taldyqorghan      28.88 263  eP     P        13 33 01.5 -0.3
      baz=263
TDK   Taldyqorghan      28.88 263  eP     P        13 33 01.4 -0.3
BRZS  Berezniki         28.96 276  eP     P        13 33 01.4 -0.9
      baz=276
BRZS  Berezniki         28.96 276  eP     P        13 33 01.4 -0.9
SHLS  Shalkode          29.56 259  eP     P        13 33 04.9 -2.9
      baz=258
SHLS  Shalkode          29.56 259  eP     P        13 33 04.9 -2.9
SATY  Saty              30.19 260  eP     P        13 33 13.2 -0.3
      baz=260
SATY  Saty              30.19 260  eP     P        13 33 13.1 -0.3
CHKK  Chushkaly         30.41 263  eP     P        13 33 14.5 -0.7
      baz=262
MDOK  Medeo             30.84 261  eP     P        13 33 18.7 -0.6
      baz=261
MDOK  Medeo             30.84 261  eP     P        13 33 18.6 -0.6
JOW   Kunigami          31.08 167   LR    LR       13 46 50.5
      comp=Z,211nm,18.8s,baz=126,slow=38
BTLS  Baital            31.20 267  eP     P        13 33 20.7 -1.5
      baz=267
BTLS  Baital            31.20 267  eP     P        13 33 20.6 -1.5
KDJ   Kajisay           31.48 260   P     P        13 33 24.4 -0.5
KDJ                               pmax    pmax
      comp=Z,7.0nm,1.2s
KDJ   Kajisay           31.48 260   P     P        13 33 24.4 -0.5
SVE   Sverdlovsk        31.76 295  eP     P        13 33 27.1 +0.1
SVE                               pmax    pmax
      comp=Z,25nm,0.6s
BOOM  Boomskoye usch    31.90 262   P     P        13 33 29.3 +0.8
BOOM                              pmax    pmax
      comp=Z,10.0nm,0.8s
BOOM  Boomskoye usch    31.90 262   P     P        13 33 29.3 +0.8
BOOM                              IAmb    IAmb     13 33 30.0
      comp=Z,10.0nm,0.8s
SGDS  Sogindy           31.94 264  eP     P        13 33 27.7 -1.1
      baz=264
AAK   Ala-Archa         32.57 263ceP      P        13 33 34.0 -0.4
AAK                               pmax    pmax
      comp=Z,24nm,0.9s
AAK   Ala-Archa         32.57 263   P     P        13 33 34.3 -0.1
AAK                               IAmb    IAmb     13 33 35.5
      comp=Z,9.0nm,0.8s
GYA   Guiyang           32.62 204 ⇓P      P        13 33 39.3 +4.4
GYA                                 PcP   PcP      13 36 24.8 +4.0
GYA                                 S     S        13 38 53.3 +2.9
GYA                               pmax    pmax
      comp=Z,13nm,1.4s
GYA                               pmax    pmax
      comp=Z,270nm,4.2s
GYA                                 LR    LR
      comp=Z,480nm,9.0s
ARU   Arti              32.96 295   P     P        13 33 36.7 -0.8
      comp=Z,1.8nm,0.4s,baz=88,slow=8.5,SNR=7.4
ARU   Arti              32.96 295c iP     P        13 33 36.9 -0.6
ARU                                 S     S        13 38 56.9 +1.9
ARU                                 SS    SnSn     13 40 52.9 +0.8
ARU                               pmax    pmax
      comp=Z,12nm,1.0s
ARU                               MLR     MLR
      comp=Z,390nm,15.0s
ARU   Arti              32.96 295   P     P        13 33 36.8 -0.7
ARU                               IAmb    IAmb     13 33 40.3
      comp=Z,11nm,1.0s
KSH   Kashi             33.99 258   P     P        13 33 51.3 +4.5
KSH                               pmax    pmax
      comp=Z,6.0nm,0.8s
DZA   Taraz             34.10 266  eP     P        13 33 47.0 -0.5
      baz=266
DZA   Taraz             34.10 266  eP     P        13 33 47.0 -0.5
KKAR  Karatay Array     34.40 267   P     P        13 33 49.5 -0.6
KKAR  Karatay Array     34.40 267   P     P        13 33 49.5 -0.6
KMI   Kunming           34.86 210 ⇑P      P        13 33 54.2 -0.3
KMI                                 pP    sP       13 34 00.6 +0.2
KMI                               pmax    pmax
      comp=Z,19nm,0.9s
KMI                                 LR    LR
      comp=Z,420nm,9.5s
KMI                                 LR    LR
      comp=Z,340nm,9.7s
KMI                                 LR    LR
      comp=Z,430nm,9.3s
IUG   Iuzhnay           35.31 267  eP     P        13 33 57.9 -0.3
      baz=266
IUG   Iuzhnay           35.31 267  eP     P        13 33 57.8 -0.3
ABKAR Akbulak array     36.15 284   P     P        13 34 03.9 -1.2
ABKAR Akbulak array     36.15 284   P     P        13 34 03.9 -1.2
ABKAR                             IAmb    IAmb     13 34 08.0
      comp=Z,4.3nm,0.8s
KIRV  Kirov             36.22 303   P     P        13 34 04.7 -0.9
      comp=Z,15nm,0.5s,baz=357,slow=2.3,SNR=6.2
KIRV  Kirov             36.22 303ceP      P        13 34 04.8 -0.8
BTK   Batken            36.35 263   P     P        13 34 07.1 +0.1
BTK                               pmax    pmax
      comp=Z,26nm,0.7s
BTK   Batken            36.35 263   P     P        13 34 07.1 +0.1
PRGR  Permogore         36.39 309  eP     P        13 34 06.4 -0.6
PRGR                              pmax    pmax
      comp=Z,13nm,0.6s
AKTO  Aktyubinsk        36.45 287   P     P        13 34 06.7 -1.0
      comp=Z,3.4nm,0.7s,baz=76,slow=14,SNR=11
SPA0  Spitsbergen Ar    37.29 341  eP     P        13 34 14.4 -0.1
SPITS Spitsbergen Ar    37.29 341   P     P        13 34 13.9 -0.6
      comp=Z,6.9nm,0.6s,baz=59,slow=13,SNR=6.6
GAR   Garm              37.38 263   P     P        13 34 15.7 -0.1
GCSA  Galena City Sc    37.66  44   P     P        13 34 19.2 +1.5
      baz=299
TAPN  Taplejung         38.13 232  eP     P        13 34 22.8 +0.3
      comp=Z,46nm,1.1s
SLVN  Son La            38.20 206   P     P        13 34 22.9 +0.1
SLVN                              IAmb    IAmb     13 34 24.4
      comp=Z,17nm,0.9s
IMAR  Indian Mountai    38.20  41   P     P        13 34 23.7 +1.4
CHGR  Chuyangaron       38.25 263   P     P        13 34 22.8 -0.4
TOLK  Toolik Lake Re    38.30  36   P     P        13 34 24.8 +1.6
TOLK  Toolik Lake Re    38.30  36   P     P        13 34 25.0 +1.8
      baz=300
GUN   Gumba             38.44 235  eP     P        13 34 25.4 +0.2
H21K  Melozitna Rive    38.70  41   P     P        13 34 28.3 +1.7
H21K                              IAmb    IAmb     13 34 33.5
      comp=Z,14nm,0.8s
H21K  Melozitna Rive    38.70  41   P     P        13 34 28.4 +1.8
      baz=301,SNR=10
COLD  Coldfoot          38.80  38   P     P        13 34 27.8 +0.4
COLD  Coldfoot          38.80  38   P     P        13 34 28.8 +1.5
      baz=301
KKN   Kakani            38.81 235  eP     P        13 34 28.5 +0.4
TTA   Tatalina          38.91  46   P     P        13 34 30.0 +1.6
      baz=302
GKN   Gorkha            38.91 236  eP     P        13 34 29.2 +0.3
      comp=Z,78nm,0.8s
PKI   Pulchoki          38.94 235  eP     P        13 34 29.5 +0.2
PKIN  Phulchoki         38.94 235  eP     P        13 34 29.7 +0.4
J20K  Nowinta River     38.97  44   P     P        13 34 30.6 +1.7
J20K                              IAmb    IAmb     13 34 36.1
      comp=Z,13nm,0.9s
J20K  Nowinta River     38.97  44   P     P        13 34 30.5 +1.6
      baz=302
DANN  Dangsing          39.02 238  eP     P        13 34 30.5 +0.6
      comp=Z,80nm,0.8s
DMN   Daman             39.04 236  eP     P        13 34 30.5 +0.4
I21K  Tanana            39.24  42   P     P        13 34 32.2 +1.2
I21K                              IAmb    IAmb     13 34 38.2
      comp=Z,12nm,0.8s
I21K  Tanana            39.24  42   P     P        13 34 33.0 +1.9
      baz=302
QIZ   Qiongzhong        39.27 197   P     P        13 34 33.7 +2.0
QIZ                                 S     S        13 40 35.0 +3.0
QIZ                                 LR    LR
      comp=Z,520nm,13.0s
QIZ                                 LR    LR
      comp=Z,260nm,5.0s
QIZ                                 LR    LR
      comp=Z,520nm,12.5s
KLMR  Klimovskoe        39.34 310  eP     P        13 34 30.7 -1.1
KLMR                              pmax    pmax
      comp=Z,63nm,0.8s
KLMR  Klimovskoe        39.34 310  eP     P        13 34 30.8 -1.1
KLMR                              AMP              13 34 35.4
      comp=Z,63nm,0.8s
K20K  Telida            39.43  45   P     P        13 34 34.6 +1.9
K20K                              IAmb    IAmb     13 34 39.8
      comp=Z,12nm,0.9s
K20K  Telida            39.43  45   P     P        13 34 34.6 +1.9
      baz=302
HAMF  Hammerfest        39.58 329  eP     P        13 34 33.6 -0.2
PYUN  Piuthan           39.58 238  eP     P        13 34 34.9 +0.4
      comp=Z,100nm,1.0s
KOLN  Koldanda          39.58 237  eP     P        13 34 34.9 +0.3
      comp=Z,37nm,0.7s
ARA0  ARCESS Array S    39.65 327  eP     P        13 34 33.8 -0.6
ARCES ARCESS Array B    39.65 327   P     P        13 34 33.9 -0.5
      comp=Z,6.8nm,0.6s,baz=52,slow=8.6,SNR=8.1
ARCES                               LR    LR       13 53 21.0
      comp=Z,105nm,18.4s,baz=15,slow=40
ARCES ARCESS Array B    39.65 327   P     P        13 34 33.5 -1.0
ARCES                             pmax    pmax
      comp=Z,15nm,1.0s
ARCES ARCESS Array B    39.65 327   P     P        13 34 33.5 -1.0
ARCES                             IAmb    IAmb     13 34 40.3
      comp=Z,15nm,0.9s
L19K  White Mountain    39.76  47   P     P        13 34 37.0 +1.5
      baz=303
MLY   Manley            39.77  42   P     P        13 34 36.4 +0.9
MLY                               IAmb    IAmb     13 34 42.7
      comp=Z,12nm,0.8s
MLY   Manley            39.77  42   P     P        13 34 37.2 +1.7
      baz=303,SNR=14
CHUM  Lake Minchumin    39.81  44   P     P        13 34 37.7 +1.8
      baz=303,SNR=16
L20K  Farewell, AK      39.98  46   P     P        13 34 39.1 +1.8
      baz=304
M19K  Big River Lodg    40.10  47   P     P        13 34 40.1 +1.8
      baz=304
CAST  Castle Rocks      40.15  44   P     P        13 34 39.7 +1.0
CAST  Castle Rocks      40.15  44   P     P        13 34 40.5 +1.8
      baz=304
BPAW  Bear Paw Mtn.     40.19  43   P     P        13 34 40.3 +1.3
      baz=304
I23K  Minto, Yukon-K    40.20  41   P     P        13 34 40.0 +1.0
I23K                              IAmb    IAmb     13 34 46.4
      comp=Z,13nm,0.9s
I23K  Minto, Yukon-K    40.20  41   P     P        13 34 40.7 +1.8
      baz=304
H24K  Noodor Dome       40.33  39   P     P        13 34 42.0 +1.8
H24K  Noodor Dome       40.33  39   P     P        13 34 42.5 +2.3
      baz=304,SNR=9.3
PPLA  Purkeypile        40.40  45   P     P        13 34 42.6 +1.7
      baz=304
KTH   Kantishna Hill    40.51  44   P     P        13 34 43.3 +1.6
KTH                               IAmb    IAmb     13 34 48.9
      comp=Z,17nm,0.8s
BMAR  Burnt Mountain    40.54  36   P     P        13 34 43.2 +1.4
NEA2  Nenana            40.61  42   P     P        13 34 44.1 +1.7
      baz=304
KTK1  Kautokeino        40.61 327  eP     P        13 34 42.1 -0.4
N19K  Bonanza Creek     40.67  48   P     P        13 34 43.3 +0.2
      baz=305
MDM   Murphy Dome       40.70  41   P     P        13 34 43.7 +0.5
MDM                               IAmb    IAmb     13 34 51.7
      comp=Z,13nm,0.8s
TRF   Thorofare Moun    40.80  43   P     P        13 34 45.5 +1.3
TRF   Thorofare Moun    40.80  43   P     P        13 34 46.5 +2.3
      baz=305
TCOL  CIGO, UAF Yank    40.88  41   P     P        13 34 46.0 +1.4
TCOL                              IAmb    IAmb     13 34 52.0
      comp=Z,14nm,0.8s
TCOL  CIGO, UAF Yank    40.88  41   P     P        13 34 46.6 +2.0
      baz=305
COLA  College           40.88  41 i P     P        13 34 44.5 -0.1
COLA                              pmax    pmax
      comp=Z,10.0nm,0.8s
COLA  College           40.88  41   P     P        13 34 46.2 +1.6
COLA                              IAmb    IAmb     13 34 52.0
      comp=Z,15nm,0.8s
COLA  College           40.88  41   P     P        13 34 46.6 +1.9
      baz=305
POKR  Poker Plat Res    40.89  40   P     P        13 34 47.6 +2.8
POKR  Poker Plat Res    40.89  40   P     P        13 34 47.1 +2.3
      baz=305
O18K  Koktuh Hills      40.92  50   P     P        13 34 46.9 +1.8
      baz=305
WRH   Wood River Hil    41.03  41   P     P        13 34 46.6 +0.8
WRH                               IAmb    IAmb     13 34 52.7
      comp=Z,9.8nm,0.8s
O19K  Port Alsworth     41.09  49   P     P        13 34 47.7 +1.3
      baz=305
JETT  Jettan, Norway    41.12 328  eP     P        13 34 46.4 -0.2
MCK   McKinley          41.14  43   P     P        13 34 48.6 +1.7
      baz=305
P18K  Big Mountain,     41.18  51   P     P        13 34 48.5 +1.3
      baz=306
IL31                    41.28  40   P     P        13 34 48.9 +1.0
IL31                              IAmb    IAmb     13 34 54.3
      comp=Z,11nm,0.8s
ILAR  Eielson Array     41.28  40   P     P        13 34 49.5 +1.5
      comp=Z,5.1nm,0.6s,baz=292,slow=4.6,SNR=97
SPCR  Spurr Chakacha    41.36  47   P     P        13 34 51.0 +2.2
      baz=306
KBL   Kabul             41.38 259   P     P        13 34 48.4 -1.0
KBL                               pmax    pmax
      comp=Z,12nm,0.8s
KBL   Kabul             41.38 259   P     P        13 34 48.4 -1.0
KBL                               IAmb    IAmb     13 34 50.1
      comp=Z,12nm,0.8s
CUT   Chulitna          41.41  45   P     P        13 34 50.7 +1.6
      baz=306
SPU   Mount Spurr       41.43  47   P     P        13 34 49.0 -0.3
HDA   Harding Lake      41.47  41   P     P        13 34 51.1 +1.6
      baz=306
TRO   Tromso            41.49 329  eP     P        13 34 49.7 +0.1
RSO   Redoubt South     41.57  48   P     P        13 34 52.2 +1.6
J25K  Salcha River,     41.90  40   P     P        13 34 54.2 +1.1
      baz=307
CHTO  Chiang Mai        41.91 212   P     P        13 34 52.2 -1.4
CHTO                              pmax    pmax
      comp=Z,21nm,1.5s
CHTO  Chiang Mai        41.91 212   P     P        13 34 52.2 -1.4
CHTO                              IAmb    IAmb     13 34 57.9
      comp=Z,21nm,1.4s
DHY   Denali Highway    42.10  43   P     P        13 34 56.3 +1.4
DHY                               IAmb    IAmb     13 35 01.6
      comp=Z,23nm,0.8s
DHY   Denali Highway    42.10  43   P     P        13 34 56.2 +1.4
      baz=307
CM31  Chiang Mai Arr    42.25 212   P     P        13 34 56.7 +0.4
CMAR  Chiang Mai Arr    42.25 212   P     P        13 34 56.3 -0.1
      comp=Z,2.4nm,0.8s,baz=6.8,slow=7.8,SNR=14
CMAR                                LR    LR       13 54 25.9
      comp=Z,48nm,20.8s,baz=36,slow=39
CMAR  Chiang Mai Arr    42.25 212 i P     P        13 34 56.2 -0.1
CMAR                              pmax    pmax
      comp=Z,3.0nm,0.8s
CMAR  Chiang Mai Arr    42.25 212   P     P        13 34 55.4 -0.9
WAT6  Susitna Watana    42.26  43   P     P        13 34 57.3 +1.1
      baz=307
PMR   Palmer            42.33  45   P     P        13 34 57.8 +1.3
      baz=307
RC01  Rabbit Creek A    42.39  46   P     P        13 34 58.1 +1.0
      baz=307
SML   Sawmill           42.50  45   P     P        13 34 59.1 +1.0
SML   Sawmill           42.50  45   P     P        13 34 59.4 +1.3
      baz=307,SNR=14
J26L  Joseph Creek      42.59  40   P     P        13 34 59.4 +0.6
      baz=308
RIDG  Independent Ri    42.61  41   P     P        13 34 59.5 +0.6
      baz=308
KNK   Knik Glacier      42.69  45   P     P        13 35 01.0 +1.4
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	baz=308						
SCRK	**Sand Creek**	**42.77**	**40**	P	**P**	**13 35 00.2**	**-0.1**
	baz=308						
BRSE	**Bradley Lake S**	**42.81**	**48**	P	**P**	**13 35 01.1**	**+0.6**
	baz=308						
PAX	**Paxson**	**42.86**	**42**	P	**P**	**13 35 01.6**	**+0.7**
	baz=308						
SCM	**Sheep Creek Mo**	**42.87**	**44**	P	**P**	**13 35 01.6**	**+0.6**
	baz=308						
DOT	**Dot Lake**	**42.94**	**41**	P	**P**	**13 35 02.5**	**+0.9**
DOT				IAmb	IAmb	13 35 07.2	
	comp=Z,18nm,0.8s						
A36M	**Sachs Harbour**	**42.95**	**25**	P	**P**	**13 35 02.8**	**+1.3**
A36M				IAmb	IAmb	13 35 08.1	
	comp=Z,20nm,0.8s						
A36M	**Sachs Harbour**	**42.95**	**25**	P	**P**	**13 35 02.6**	**+1.2**
	baz=314,SNR=19						
PWL	**Port Wells**	**43.08**	**46**	P	**P**	**13 35 04.2**	**+1.6**
	baz=308						
M24K	**Tolsona, Glenn**	**43.13**	**43**	P	**P**	**13 35 05.0**	**+1.9**
	baz=308						
MOS	**Moscow**	**43.13**	**305**	eP	**P**	**13 35 05.1**	**+2.0**
MOS				e		13 36 47.2	
MOS				eS	**S**	**13 41 31.1**	**+2.4**
MOS				pmax	pmax		
	comp=Z,48nm,1.2s						
KDAK	**Kodiak Island**	**43.26**	**51**	P	**P**	**13 35 05.5**	**+1.4**
	baz=308						
HARP	**HAARP**	**43.32**	**43**	P	**P**	**13 35 05.7**	**+1.1**
	baz=309						
INK	**Inuvik**	**43.33**	**31**	P	**P**	**13 35 05.5**	**+0.9**
	comp=Z,4.8nm,1.0s,baz=330,slow=10,SNR=7.6						
INK	**Inuvik**	**43.33**	**31**	P	**P**	**13 35 05.2**	**+0.7**
INK				pmax	pmax		
	comp=Z,11nm,1.2s						
INK	**Inuvik**	**43.33**	**31**	P	**P**	**13 35 05.2**	**+0.7**
INK	**Inuvik**	**43.33**	**31**	P	**P**	**13 35 06.4**	**+1.9**
	baz=311						
MENT	**Mentasta**	**43.51**	**41**	P	**P**	**13 35 07.2**	**+1.1**
L26K	**Log Cabin Wild**	**43.58**	**41**	P	**P**	**13 35 06.6**	**-0.1**
	baz=309						
DAG	**Danmarks Havn**	**43.59**	**347**	i P	**P**	**13 35 06.0**	**-0.6**
DAG				IAmb	IAmb	13 35 11.4	
	comp=Z,11nm,0.7s						
KLU	**Klutina**	**43.60**	**44**	P	**P**	**13 35 08.7**	**+1.7**
	baz=309						
STEI	**Steigen**	**43.61**	**328**	eP	**P**	**13 35 06.3**	**-0.5**
EPYK	**Eagle Plains**	**43.65**	**35**	P	**P**	**13 35 08.2**	**+0.9**
	baz=310						
I29M	**Ogilvie Camp,**	**43.80**	**37**	P	**P**	**13 35 10.4**	**+1.9**
	baz=310						
FAUS	**Fauske**	**43.96**	**328**	eP	**P**	**13 35 09.3**	**-0.3**
OBN	**Obninsk**	**43.99**	**305**	i P	**P**	**13 35 08.0**	**-2.0**
OBN				i		13 36 54.5	
OBN				pmax	pmax		
	comp=Z,14nm,1.1s						
OBN				MLR	MLR		
	comp=Z,214nm,14.0s						
N25K	**Chitina, Valde**	**44.03**	**43**	P	**P**	**13 35 12.2**	**+1.8**
	baz=310						
L27K	**Beaver Creek,**	**44.10**	**40**	P	**P**	**13 35 11.4**	**+0.6**
L27K	**Beaver Creek,**	**44.10**	**40**	P	**P**	**13 35 12.4**	**+1.6**
	baz=310						
M26K	**Nabesna, AK**	**44.10**	**42**	P	**P**	**13 35 12.7**	**+1.7**
	baz=310						
BCAR	**Beaver Creek A**	**44.11**	**40**	P	**P**	**13 35 12.3**	**+1.3**
VRH	**Novokhopyorsk**	**44.12**	**297**	eP	**P**	**13 35 10.2**	**-0.9**
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
FIA1	**FINESS Array S**	**44.26**	**317**	P	**P**	**13 35 11.3**	**-0.8**
FINES	**FINESS Array B**	**44.26**	**317**	P	**P**	**13 35 11.7**	**-0.4**
	comp=Z,21nm,0.7s,baz=37,slow=8.9,SNR=31						
FINES				LR	LR	13 56 17.2	
	comp=Z,91nm,19.2s,baz=48,slow=40						
FINES	**FINESS Array B**	**44.26**	**317**	P	**P**	**13 35 11.5**	**-0.6**
EYAK	**Cordova Ski Ar**	**44.27**	**45**	P	**P**	**13 35 13.5**	**+1.3**
	baz=310						
DAWY	**Dawson**	**44.28**	**38**	P	**P**	**13 35 13.8**	**+1.4**
	baz=311						
BMRM	**Bremner River**	**44.43**	**44**	P	**P**	**13 35 15.3**	**+1.8**
	baz=310						
LPSR	**Galich'ya Gora**	**44.53**	**301**	eP	**P**	**13 35 12.6**	**-1.8**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
M27K	**Edge Creek, AK**	**44.53**	**41**	P	**P**	**13 35 15.6**	**+1.1**
M27K				IAmb	IAmb	13 35 21.9	
	comp=Z,7.8nm,0.8s						
M27K	**Edge Creek, AK**	**44.53**	**41**	P	**P**	**13 35 16.2**	**+1.7**
	baz=310						
GEYT	**Alibeck**	**44.73**	**272**	P	**P**	**13 35 15.6**	**-0.7**
	comp=Z,9.6nm,0.8s,baz=338,slow=1.6,SNR=11						
GEYT	**Alibeck**	**44.73**	**272**	P	**P**	**13 35 16.2**	**0.0**
GEYT				IAmb	IAmb	13 35 20.5	
	comp=Z,20nm,1.2s						
GYA0B	**ALIBECK ARRAY**	**44.73**	**272**	P	**P**	**13 35 16.2**	**0.0**
MCARA	**McCarthy VSAT**	**44.75**	**43**	P	**P**	**13 35 18.9**	**+2.8**
	baz=311						
MOR8	**Moi Rana**	**45.02**	**327**	eP	**P**	**13 35 16.4**	**-1.8**
NEEM	**North Greenlan**	**45.23**	**358**	i P	**P**	**13 35 20.2**	**+0.1**
VSR	**Storozhevoye**	**45.33**	**299**	eP	**P**	**13 35 19.2**	**-1.5**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YUK3	**Moose Creek**	**45.42**	**41**	P	**P**	**13 35 23.6**	**+1.9**
	baz=312						
BGLC	**Bering Glacier**	**45.48**	**44**	P	**P**	**13 35 22.7**	**+0.9**
	baz=311						
CTG	**Chitna Glacier**	**45.64**	**43**	P	**P**	**13 35 25.2**	**+1.9**
	baz=312						
MAYO	**Mayo, Yukon**	**45.76**	**37**	P	**P**	**13 35 26.0**	**+1.9**
	baz=313						
DBG	**Daneborg**	**45.94**	**346**	i P	**P**	**13 35 25.0**	**-0.3**
M30M	**Minto, Yukon**	**46.15**	**39**	P	**P**	**13 35 29.7**	**+2.5**
	baz=313						
YUK4	**Talbot Arm**	**46.35**	**41**	P	**P**	**13 35 30.0**	**+1.0**
	baz=313						
NSS	**Namsos**	**46.92**	**326**	eP	**P**	**13 35 32.8**	**-0.2**
HYT	**Haines Junctio**	**47.12**	**41**	P	**P**	**13 35 37.2**	**+2.3**
	baz=314						
M31M	**Drury Creek, Y**	**47.22**	**38**	P	**P**	**13 35 37.6**	**+2.0**
	baz=315						
PNL	**Peninsula**	**47.23**	**43**	P	**P**	**13 35 37.6**	**+1.9**
	baz=314						
N31M	**Braeburn, Yuko**	**47.26**	**39**	P	**P**	**13 35 38.2**	**+2.3**
	baz=315,SNR=7.0						
FARO	**Faro, Yukon**	**47.55**	**38**	P	**P**	**13 35 39.4**	**+1.3**
	baz=316						
WHY	**Whitehorse**	**48.15**	**40**	P	**P**	**13 35 43.7**	**+0.8**
	baz=316						
MNK	**Minsk**	**48.16**	**309**	i P	**P**	**13 35 43.1**	**+0.2**
MNK				i		13 37 35.5	
MNK				i PPP	PPP	13 38 23.1	
MNK				i S	**S**	**13 42 40.2**	**-1.0**
MNK				i SSS	SSS	13 47 21.1	
MNK				pmax	pmax		
	comp=N,25nm,0.8s						
MNK				pmax	pmax		
	comp=Z,22nm,0.9s						
MNK				pmax	pmax		
	comp=E,7.0nm,1.3s						
MNK				MLR	MLR		
	comp=Z,240nm,16.0s						
MNK				MLR	MLR		
	comp=E,57nm,18.0s						
MNK				MLR	MLR		
	comp=N,344nm,23.0s						
MNK	**Minsk**	**48.16**	**309**	i P	**P**	**13 35 43.1**	**+0.2**
	comp=E,7.0nm,1.3s						
MNK				i P	**P**	**13 35 43.1**	**+0.2**
	comp=N,25nm,0.8s						
MNK				i P	**P**	**13 35 43.1**	**+0.2**
	comp=Z,22nm,0.9s,baz=229						
MNK				i PP	**PP**	**13 37 35.6**	**+0.7**
MNK				i PPP	PPP	13 38 23.1	
MNK				i S	**S**	**13 42 40.3**	**-0.9**
MNK				i SS	**SS**	**13 46 16.9**	**+7.1**
MNK				i SSS	SSS	13 47 21.1	
MNK				i LQ	LQ	13 52 34.5	
MNK				i LR	LR	13 56 14.5	
MNK				i LRM	MLR	13 57 35.5	
	comp=E,57nm,18.0s						
MNK				i LRM	MLR	13 57 42.0	
	comp=Z,240nm,15.8s						
MNK				i LRM	MLR	13 57 47.1	
	comp=N,344nm,22.8s						
NACGM	**Naroch**	**48.35**	**310**	i P	**P**	**13 35 44.5**	**+0.2**
KIV	**Kislovodsk**	**48.57**	**289**	⇑P	**P**	**13 35 48.3**	**+2.0**
KIV	**Kislovodsk**	**48.57**	**289**	eP	**P**	**13 35 46.6**	**+0.3**
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV				MLR	MLR		
	comp=Z,174nm,16.0s						
KBZ	**Khabaz**	**48.62**	**289**	LR	LR	13 59 44.0	
	comp=Z,192nm,18.6s,baz=51,slow=40						
SKAG	**Skagway**	**48.85**	**41**	P	**P**	**13 35 49.8**	**+1.7**
	baz=316						
P33M	**Teslin, Yukon**	**49.18**	**39**	P	**P**	**13 35 52.4**	**+1.6**
	baz=317						
SUMG	**Summit**	**49.44**	**352**	P	**P**	**13 35 53.0**	**0.0**
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SUMG	**Summit**	**49.44**	**352**	i P	**P**	**13 35 53.0**	**0.0**
SUMG				IAmb	IAmb	13 35 57.4	
	comp=Z,6.3nm,0.7s						
SUMG	**Summit**	**49.44**	**352**	P	**P**	**13 35 53.0**	**0.0**
SUMG				IAmb	IAmb	13 35 57.5	
	comp=Z,4.5nm,0.6s						
NC303	**NORSAR Array S**	**49.52**	**323**	P	**P**	**13 35 52.8**	**-0.5**
DOMB	**Dombas**	**49.64**	**325**	eP	**P**	**13 35 53.6**	**-0.6**
MOL	**Molde**	**49.70**	**326**	eP	**P**	**13 35 54.0**	**-0.6**
TGTN	**Hyland Airport**	**49.71**	**36**	P	**P**	**13 35 56.0**	**+1.3**
	baz=319						
NB2	**NORSAR Subarra**	**49.71**	**323**	P	**P**	**13 35 53.9**	**-0.9**
	comp=Z,31nm,1.1s,baz=39,slow=7.9						
NB2	**NORSAR Subarra**	**49.71**	**323**	P	**P**	**13 35 53.9**	**-0.9**
	baz=39,slow=7.9						
NOA	**NORSAR Array B**	**49.71**	**323**	P	**P**	**13 35 54.1**	**-0.7**
	comp=Z,9.7nm,0.9s,baz=42,slow=7.7,SNR=13						
NC602	**NORSAR Array S**	**49.83**	**323**	eP	**P**	**13 35 55.0**	**-0.6**
WRGLY	**Wrigley**	**49.87**	**32**	P	**P**	**13 35 57.3**	**+1.4**
	baz=321						
AKN	**Aaknes**	**50.17**	**326**	eP	**P**	**13 35 58.6**	**+0.4**
AKASG	**Malin Array Be**	**50.25**	**304**	P	**P**	**13 35 57.6**	**-1.3**
	comp=Z,10nm,0.6s,baz=41,slow=8.7,SNR=24						
AKASG	**Malin Array Be**	**50.25**	**304**	i P	**P**	**13 35 58.7**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKASG	**Malin Array Be**	**50.25**	**304**	P	**P**	**13 35 58.9**	**-0.1**
AKBB	**Malin Array Si**	**50.25**	**304**	ceP	**P**	**13 35 58.8**	**-0.1**
AKBB	**Malin Array Si**	**50.25**	**304**	P	**P**	**13 35 57.8**	**-1.1**
AKBB				IAmb	IAmb	13 36 01.9	
	comp=Z,17nm,1.1s						
SOC	**Sochi**	**50.34**	**291**	eP	**P**	**13 35 57.2**	**-2.5**
SOC				e		13 37 51.2	
SOC				ePPP	PPP	13 38 47.5	
SOC				eS	**S**	**13 43 09.5**	**-2.5**
SOC				eSS	**SS**	**13 46 40.6**	**-4.5**
SOC				pmax	pmax		
	comp=Z,13nm,0.8s						
SOC				MLR	MLR		
	comp=Z,232nm,12.0s						
WTLY	**Watson Lake, Y**	**50.60**	**37**	P	**P**	**13 36 03.1**	**+1.6**
	baz=319						
OSL	**Oslo**	**50.70**	**322**	eP	**P**	**13 36 02.0**	**-0.2**
SKAR	**Skarslia**	**50.92**	**324**	eP	**P**	**13 36 03.7**	**-0.2**
KONO	**Kongsberg**	**51.29**	**323**	eP	**P**	**13 36 06.4**	**-0.3**
WRAK	**Wrangell Islan**	**52.17**	**42**	P	**P**	**13 36 13.8**	**+0.5**
	baz=319						
SORM	**Soroca**	**52.50**	**302**	⇑P	**P**	**13 36 15.1**	**-0.7**
YKA	**Yellowknife Ar**	**52.88**	**29**	P	**P**	**13 36 18.8**	**+0.3**
	comp=Z,2.1nm,0.6s,baz=329,slow=6.6,SNR=6.2						
YKA				LR	LR	14 02 36.6	
	comp=Z,51nm,18.4s,baz=0.0,slow=40						
LVV	**L'vov**	**53.18**	**307**	eP	**P**	**13 36 20.5**	**-0.3**
KWP	**Kalwaria Pacla**	**53.89**	**307**	eP	**P**	**13 36 26.7**	**+0.6**
BUR08	**Bucovina Ar. S**	**54.29**	**304**	P	**P**	**13 36 29.6**	**+0.5**
BURAR	**Bucovina Array**	**54.30**	**304**	⇑P	**P**	**13 36 29.1**	**-0.1**
BURAR	**Bucovina Array**	**54.30**	**304**	P	**P**	**13 36 29.3**	**+0.1**
KOLS	**Kolonicke sedl**	**54.61**	**307**	eP	**P**	**13 36 31.5**	**+0.2**
KOLS				pmax	pmax		
	comp=Z,21nm,0.7s						
KOLS	**Kolonicke sedl**	**54.61**	**307**	eP	**P**	**13 36 31.5**	**+0.2**
OJC	**Ojcow**	**54.68**	**309**	eP	**P**	**13 36 31.5**	**-0.3**
OJC				epP	**pP**	**13 36 35.2**	**-1.0**
UZH	**Uzhgorod**	**54.83**	**307**	eP	**P**	**13 36 31.3**	**-1.5**
UZH				e		13 36 34.2	
TPGR	**Topolog**	**54.91**	**300**	⇑P	**P**	**13 36 33.9**	**+0.4**
CRVS	**Cervenica-Dubn**	**54.98**	**307**	eP	**P**	**13 36 33.9**	**-0.1**
CRVS	**Cervenica-Dubn**	**54.98**	**307**	eP	**P**	**13 36 33.9**	**-0.1**
NIE	**Niedzica**	**55.08**	**308**	eP	**P**	**13 36 36.0**	**+1.3**
NIE				epP	**sP**	**13 36 40.2**	**-0.5**
TRPA	**Tarpa**	**55.10**	**306**	⇑P	**P**	**13 36 35.1**	**+0.3**
TRPA	**Tarpa**	**55.10**	**306**	eP	**P**	**13 36 34.9**	**+0.1**
MLR	**Muntele Rosu**	**55.58**	**302**	⇑P	**P**	**13 36 38.6**	**+0.2**
ISR	**Istrita**	**55.58**	**301**	⇑P	**P**	**13 36 39.5**	**+1.0**
KSP	**Ksiaz**	**55.64**	**312**	eP	**P**	**13 36 38.5**	**-0.2**
KSP				epP	**pP**	**13 36 42.0**	**-1.1**
LANS	**Liptovska Anna**	**55.64**	**309**	eP	**P**	**13 36 39.6**	**+0.8**
LANS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LANS	**Liptovska Anna**	**55.64**	**309**	eP	**P**	**13 36 39.6**	**+0.8**
UOSS	**Minazif**	**55.77**	**263**	P	**P**	**13 36 38.7**	**-1.3**
UOSS				IAmb	IAmb	13 36 42.2	
	comp=Z,6.7nm,0.8s						
OSTC	**Ostas**	**55.89**	**312**	eP	**P**	**13 36 40.2**	**-0.3**
CHVC	**Chvalec**	**55.93**	**312**	eP	**P**	**13 36 40.7**	**-0.1**
CHVC				ex	x	13 36 44.0	
MORC	**Moravsky Berou**	**55.95**	**310**	⇑P	**P**	**13 36 41.4**	**+0.3**
MORC	**Moravsky Berou**	**55.95**	**310**	eP	**P**	**13 36 41.1**	**+0.1**
DPC	**Dobruska-Polom**	**56.01**	**312**	eP	**P**	**13 36 41.6**	**+0.2**
DPC				epP	**pP**	**13 36 44.8**	**-1.0**
DPC	**Dobruska-Polom**	**56.01**	**312**	eP	**P**	**13 36 41.6**	**+0.2**
DPC				e		13 36 41.8	
DPC				e		13 36 44.8	
VOIR		**56.03**	**302**	⇑P	**P**	**13 36 42.2**	**+0.5**
KRLC	**Kraliky**	**56.03**	**311**	eP	**P**	**13 36 41.8**	**+0.2**
KRLC				epP	**pP**	**13 36 44.6**	**-1.4**
KRLC	**Kraliky**	**56.03**	**311**	eP	**P**	**13 36 41.8**	**+0.2**
KRLC				e		13 36 44.6	
DRGR		**56.04**	**305**	⇑P	**P**	**13 36 42.1**	**+0.4**
BRTR	**Keskin Array B**	**56.25**	**292**	P	**P**	**13 36 43.4**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=62,slow=4.2,SNR=6.3						
BRTR				LR	LR	14 06 19.3	
	comp=Z,80nm,20.3s,baz=7.5,slow=42						
ARR	**Arges**	**56.27**	**303**	⇑P	**P**	**13 36 44.2**	**+0.9**
PSZ	**Piszkesteto**	**56.40**	**308**	⇓P	**P**	**13 36 44.8**	**+0.5**
PSZ	**Piszkesteto**	**56.40**	**308**	eP	**P**	**13 36 44.0**	**-0.3**
PSZ				ePP	**sP**	**13 36 53.4**	**+3.1**
VYHS	**Vyhne**	**56.41**	**309**	eP	**P**	**13 36 44.7**	**+0.4**
VYHS				pmax	pmax		
	comp=Z,11nm,1.0s						
VYHS	**Vyhne**	**56.41**	**309**	eP	**P**	**13 36 44.7**	**+0.4**
FLTG	**Flechtingen**	**56.43**	**316**	eP	**P**	**13 36 43.4**	**-0.9**
	comp=Z,10nm,0.9s,baz=37,slow=7.3						
BRG	**Berggiesshubel**	**56.55**	**313**	eP	**P**	**13 36 44.7**	**-0.5**
	comp=Z,8.6nm,0.8s,baz=37,slow=7.3						
BRG	**Berggiesshubel**	**56.55**	**313**	i P	**P**	**13 36 45.1**	**0.0**
BRG				Amp		13 36 45.9	
	comp=Z,7.3nm,0.7s						
BRG	**Berggiesshubel**	**56.55**	**313**	P	**P**	**13 36 48.2**	**+3.0**
BRG				Amp		13 36 48.9	
	comp=Z,7.7nm,0.7s						
CLL	**Collm**	**56.57**	**314**	⇓iP	**P**	**13 36 44.7**	**-0.6**
CLL				i		13 36 47.9	
CLL				e		13 37 40.0	
CLL				pmax	pmax		
	comp=Z,17nm,1.0s						
CLL	**Collm**	**56.57**	**314**	⇓iP	**P**	**13 36 44.7**	**-0.6**
	comp=Z,17nm,1.0s						
CLL				i		13 36 47.9	
CLL				i pP	**sP**	**13 36 50.1**	**-1.3**
CLL				ePcP	**PcP**	**13 37 40.0**	**-1.7**
CLL				LmH		13 59 00.0	
	comp=N,200nm,19.8s						
CLL				LmH		13 59 00.0	
	comp=E,300nm,19.5s						
CLL	**Collm**	**56.57**	**314**	eP	**P**	**13 36 44.6**	**-0.6**
	comp=E,24nm,1.4s,baz=37,slow=7.3						
PVCC	**Panska Ves**	**56.57**	**313**	eP	**P**	**13 36 45.6**	**+0.3**
PVCC	**Panska Ves**	**56.57**	**313**	eP	**P**	**13 36 45.6**	**+0.3**
JAVC	**Velka Javorina**	**56.61**	**310**	eP	**P**	**13 36 46.8**	**+1.0**
VRAC	**Vranov**	**56.71**	**311**	eP	**P**	**13 36 46.4**	**0.0**
SIRR	**Siria**	**56.91**	**305**	⇓P	**P**	**13 36 48.6**	**+0.8**
KRUC	**Moravsky**	**56.98**	**311**	eP	**P**	**13 36 48.6**	**+0.3**
SMOL	**Smolenice**	**56.98**	**310**	eP	**P**	**13 36 49.1**	**+0.8**
SMOL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SMOL	**Smolenice**	**56.98**	**310**	eP	**P**	**13 36 49.1**	**+0.8**
PRU	**Pruhonice**	**57.01**	**312**	eP	**P**	**13 36 49.0**	**+0.6**
PRU	**Pruhonice**	**57.01**	**312**	eP	**P**	**13 36 49.0**	**+0.6**
NEUB	**Neuenburg**	**57.12**	**315**	eP	**P**	**13 36 48.5**	**-0.7**
	comp=Z,14nm,0.6s,baz=37,slow=7.3						
SRO	**Srobarova**	**57.16**	**308**	eP	**P**	**13 36 50.1**	**+0.6**
SRO	**Srobarova**	**57.16**	**308**	eP	**P**	**13 36 50.1**	**+0.6**
PSI	**Prapat**	**57.24**	**206**	P	**P**	**13 36 50.5**	**-0.1**
	comp=Z,8.1nm,0.7s,baz=346,slow=6.9,SNR=10						
TANN	**Tannenbergstha**	**57.49**	**314**	eP	**P**	**13 36 51.5**	**-0.4**
	comp=Z,4.6nm,0.7s,baz=37,slow=7.3						
WERD	**Werda**	**57.52**	**314**	eP	**P**	**13 36 51.9**	**-0.2**
	comp=Z,7.2nm,0.8s,baz=37,slow=7.3						
PLN	**Plauen**	**57.55**	**314**	eP	**P**	**13 36 52.1**	**-0.2**
	comp=Z,14nm,0.7s,baz=37,slow=7.3						
GUNZ	**Gunzen**	**57.58**	**314**	eP	**P**	**13 36 52.5**	**-0.1**
	comp=Z,8.6nm,0.8s,baz=37,slow=7.3						
WERN	**Wernitzgruen**	**57.62**	**314**	eP	**P**	**13 36 52.8**	**-0.1**
	comp=Z,9.7nm,0.7s,baz=37,slow=7.3						
MOX	**Moxa**	**57.63**	**315**	eP	**P**	**13 36 52.6**	**-0.2**
	comp=Z,14nm,0.7s,baz=37,slow=7.3						
HERR	**Herculane**	**57.65**	**304**	⇑P	**P**	**13 36 52.8**	**-0.2**
MPLH	**Magyarpolny**	**57.99**	**308**	eP	**P**	**13 36 55.6**	**+0.2**
MPLH				ePP	sP	13 37 10.9	+9.5
SOP	**Sopron**	**58.00**	**309**	eP	**P**	**13 36 54.9**	**-0.5**
CKRC	**Cesky Krumlov**	**58.02**	**312**	eP	**P**	**13 36 56.9**	**+1.3**
KHC	**Kasperske Hory**	**58.07**	**312**	eP	**P**	**13 36 56.2**	**+0.2**
KHC				epP	**pP**	**13 36 59.4**	**-1.0**
KHC	**Kasperske Hory**	**58.07**	**312**	eP	**P**	**13 36 56.2**	**+0.2**
KHC				e		13 36 59.4	
KHC	**Kasperske Hory**	**58.07**	**312**	P	**P**	**13 36 55.8**	**-0.2**
CONA	**Conrad Observa**	**58.09**	**310**	eP	**P**	**13 36 57.2**	**+1.0**
	comp=Z,10nm,1.2s						
ROTZ	**Rotzenmuhle**	**58.10**	**314**	eP	**P**	**13 36 56.1**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=37,slow=7.3						
UBBA	**Unterbreizbach**	**58.10**	**316**	eP	**P**	**13 36 55.7**	**-0.3**
	comp=Z,22nm,1.6s,baz=37,slow=7.3						
GEC2	**GERESS Array S**	**58.25**	**312**	eP	**P**	**13 36 57.1**	**-0.2**
	comp=Z,11nm,0.9s,baz=37,slow=7.3						
GEC2	**GERESS Array S**	**58.25**	**312**	P	**P**	**13 36 56.3**	**-1.0**
GEC2				IAmb	IAmb	13 36 58.1	
	comp=Z,9.9nm,0.9s						
GERES	**GERESS Array B**	**58.25**	**312**	P	**P**	**13 36 57.2**	**-0.2**
	comp=Z,6.0nm,0.7s,baz=46,slow=7.6,SNR=34						
GERES				LR	LR	14 03 14.2	
	comp=Z,127nm,19.5s,baz=21,slow=37						
MORH	**Mrgy, Hungar**	**58.27**	**307**	⇑P	**P**	**13 36 57.3**	**-0.1**
MORH	**Mrgy, Hungar**	**58.27**	**307**	eP	**P**	**13 36 56.3**	**-1.1**
WET	**Wettzell**	**58.34**	**313**	eP	**P**	**13 36 57.9**	**+0.1**
	comp=Z,18nm,1.1s,baz=37,slow=7.3						
GRF	**Grafenberg Arr**	**58.55**	**314**	eP	**P**	**13 36 59.3**	**0.0**
	comp=Z,7.6nm,0.6s,baz=37,slow=7.3						
FRGS	**Fruska Gora**	**58.59**	**306**	⇑P	**P**	**13 36 59.5**	**-0.2**
KOVH	**Kovagotottos**	**58.60**	**307**	eP	**P**	**13 36 58.9**	**-0.8**
KOVH				ePP	**sP**	**13 37 09.7**	**+3.9**
ARSA	**Arzberg**	**58.77**	**310**	eP	**P**	**13 37 01.5**	**+0.6**
	comp=Z,7.0nm,0.8s						
MOA	**Molln**	**58.81**	**311**	eP	**P**	**13 37 01.7**	**+0.5**
	comp=Z,5.5nm,0.7s						
GSI	**Gunungsitoli**	**59.02**	**208**	P	**P**	**13 37 01.5**	**-1.4**
	comp=Z,62nm,0.9s						
DSRI	**Dabo**	**59.25**	**199**	P	**P**	**13 37 04.8**	**+0.3**
SOKA	**Soboth**	**59.43**	**310**	eP	**P**	**13 37 06.0**	**+0.4**
	comp=Z,7.7nm,1.0s						
RJOB	**Jochberg**	**59.50**	**312**	eP	**P**	**13 37 06.4**	**+0.4**
	comp=Z,11nm,1.0s,baz=37,slow=7.3						
BTNL	**Ternell**	**59.73**	**318**	dP	**P**	**13 37 07.1**	**-0.4**
BTNL				dPcP	**PcP**	**13 37 53.0**	**-1.2**
MEM	**Membach**	**59.75**	**318**	dP	**P**	**13 37 07.1**	**-0.5**
	comp=Z,9.1nm,0.8s						
OBKA	**Obir**	**59.77**	**310**	i P	**P**	**13 37 08.4**	**+0.6**
	comp=Z,16nm,0.6s,SNR=7.6						
KBA	**Koelnbreinsper**	**59.80**	**311**	eP	**P**	**13 37 09.1**	**+0.9**
	comp=Z,14nm,0.8s						
PDKS	**Podkum**	**59.94**	**309**	i P	**P**	**13 37 08.9**	**-0.1**
MYKA	**Terra Mystica**	**60.04**	**311**	eP	**P**	**13 37 10.1**	**+0.3**
	comp=Z,10nm,0.6s						
PRED	**Cave del Predi**	**60.22**	**310**	P	**P**	**13 37 10.4**	**-0.6**
WATA	**Walderalm**	**60.31**	**312**	eP	**P**	**13 37 11.6**	**-0.1**
	comp=Z,8.1nm,0.5s						
WTTA	**Wattenberg**	**60.34**	**312**	i P	**P**	**13 37 12.8**	**+0.9**
	comp=Z,15nm,0.6s,SNR=5.7						
ABTA	**Abfaltersbach**	**60.41**	**311**	eP	**P**	**13 37 13.0**	**+0.8**
	comp=Z,8.2nm,0.9s						
GBRS	**Gornja Briga**	**60.44**	**309**	i P	**P**	**13 37 12.1**	**-0.3**
MOTA	**Moosalm**	**60.49**	**313**	eP	**P**	**13 37 13.2**	**+0.3**
	comp=Z,8.5nm,0.6s						
RETA	**Reutte**	**60.51**	**313**	eP	**P**	**13 37 13.3**	**+0.3**
	comp=Z,5.5nm,0.8s						
SQTA	**Sankt Quirin**	**60.55**	**313**	eP	**P**	**13 37 13.8**	**+0.5**
	comp=Z,10nm,0.7s						
STAL	**STALIGIAL**	**60.72**	**311**	P	**P**	**13 37 12.9**	**-1.4**
SKDS	**Skadanscina**	**60.76**	**310**	i P	**P**	**13 37 14.0**	**-0.6**
FETA	**Feichten**	**60.90**	**313**	eP	**P**	**13 37 16.1**	**+0.4**
	comp=Z,10nm,1.0s						
BBKI	**Banjar Baru**	**60.95**	**187**	P	**P**	**13 37 14.6**	**-1.5**
	comp=Z,12nm,0.8s						
PDG	**Podgorica**	**60.99**	**304**	⇓P	**P**	**13 37 15.5**	**-0.7**
DAVA	**Damuels**	**61.02**	**313**	eP	**P**	**13 37 14.3**	**-2.2**
	comp=Z,13nm,1.2s						
B05A	**Bryant**	**62.46**	**42**	P	**P**	**13 37 27.8**	**+1.8**
	baz=327						
RAYN	**Ar Rayn**	**62.68**	**271**	P	**P**	**13 37 26.4**	**-1.5**
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RAYN	**Ar Rayn**	**62.68**	**271**	P	**P**	**13 37 26.4**	**-1.5**
RAYN				IAmb	IAmb	13 37 27.7	
	comp=Z,5.4nm,1.1s						
SGRT	**San Giovanni R**	**63.09**	**306**	P	**P**	**13 37 29.1**	**-1.3**
C06D	**Leavenworth**	**63.18**	**42**	P	**P**	**13 37 32.2**	**+1.3**
	baz=328						
MATE	**Matera**	**63.56**	**305**	⇑P	**P**	**13 37 32.9**	**-0.5**
AQU	**L'Aquila**	**63.61**	**308**	P	**P**	**13 37 32.8**	**-1.0**
AQU				pmax	pmax		
	comp=Z,41nm,1.0s						
AQU	**L'Aquila**	**63.61**	**308**	P	**P**	**13 37 32.8**	**-1.0**
TIP	**Timpagrande**	**64.73**	**304**	⇑P	**P**	**13 37 41.4**	**+0.2**
F10A	**Beach Ranch, E**	**66.15**	**40**	P	**P**	**13 37 51.2**	**+0.9**
MSO	**Missoula**	**66.52**	**38**	P	**P**	**13 37 54.4**	**+1.7**
	baz=332						
J04D	**Umpqua Nationa**	**66.71**	**45**	P	**P**	**13 37 55.7**	**+1.6**
	baz=329						
EGMT	**Eagleton**	**66.80**	**34**	P	**P**	**13 37 55.7**	**+1.3**
	baz=333						
J05D	**Fort Rock, OR**	**67.00**	**45**	P	**P**	**13 37 57.0**	**+1.1**
	baz=329						
SOEI	**Soe**	**67.06**	**176**	P	**P**	**13 37 54.7**	**-1.7**
	comp=Z,21nm,0.9s						
BATI	**Baumata**	**67.49**	**177**	P	**P**	**13 37 57.4**	**-1.6**
	comp=Z,11nm,0.9s						
L04D	**Klamath Falls**	**67.50**	**46**	P	**P**	**13 38 00.5**	**+1.5**
	baz=329						
SCHQ	**Schefferville**	**67.86**	**5**	P	**P**	**13 38 01.1**	**+0.1**
	comp=Z,11nm,0.9s,baz=5.8,slow=4.5,SNR=5.6						
SCHQ	**Schefferville**	**67.86**	**5**	P	**P**	**13 38 00.4**	**-0.6**
DGMT	**Dagmar**	**68.01**	**31**	P	**P**	**13 38 03.0**	**+1.0**
	baz=336						
BOZ	**Bozeman (W)**	**68.37**	**37**	P	**P**	**13 38 05.5**	**+1.1**
	baz=333						
N02D	**Trinity Center**	**68.41**	**47**	P	**P**	**13 38 06.2**	**+1.5**
	baz=329						
ULM	**Lac du Bonnet**	**68.43**	**24**	LR	LR	14 09 09.4	
	comp=Z,50nm,21.7s,baz=297,slow=37						
O02D	**Mt. Diablo Mer**	**69.05**	**47**	P	**P**	**13 38 10.1**	**+1.4**
	baz=329						
HLID	**Hailey**	**69.23**	**40**	P	**P**	**13 38 11.6**	**+1.6**
	baz=332,SNR=6.1						
RLMT	**Red Lodge**	**69.54**	**35**	P	**P**	**13 38 12.9**	**+1.1**
	baz=334						
MTN	**Manton Dam**	**70.58**	**169**	P	**P**	**13 38 16.9**	**-1.2**
MTN				IAmb	IAmb	13 38 21.7	
	comp=Z,5.5nm,0.8s						
KEST	**Kesra**	**70.86**	**307**	P	**P**	**13 38 19.8**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=291,slow=5.1,SNR=5.4						
KEST				LR	LR	14 12 52.3	
	comp=Z,119nm,19.6s,baz=280,slow=39						
BMN	**Battle Mountai**	**70.97**	**43**	P	**P**	**13 38 22.2**	**+1.6**
BMN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BMN	**Battle Mountai**	**70.97**	**43**	P	**P**	**13 38 22.2**	**+1.6**
HVU	**Hansel Valley**	**71.37**	**39**	P	**P**	**13 38 24.2**	**+1.2**
HVU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HVU	**Hansel Valley**	**71.37**	**39**	P	**P**	**13 38 24.2**	**+1.2**
HVU				IAmb	IAmb	13 38 25.8	
	comp=Z,4.8nm,0.9s						
EYMN	**Ely**	**71.55**	**22**	P	**P**	**13 38 23.5**	**-0.3**
	baz=342						
BW06	**Boulder Array**	**71.56**	**37**	P	**P**	**13 38 24.8**	**+0.5**

BW06	**Boulder Array**	71.56	37	P	P	13 38 24.7	+0.5
	baz=334,SNR=5.5						
PD31	**Pinedale Array**	71.56	37	P	P	13 38 24.5	+0.3
PDAR	**Pinedale Array**	71.56	37	P	P	13 38 24.8	+0.5
	comp=Z,1.4nm,0.6s,baz=22,slow=2.6,SNR=20						
PDAR				LR	LR	14 12 58.1	
	comp=Z,53nm,21.1s,baz=354,slow=38						
PDAR	**Pinedale Array**	71.56	37	P	P	13 38 25.0	+0.8
HWUT	**Hardware Ranch**	71.94	39	P	P	13 38 27.8	+1.3
RSSD	**Black Hills**	72.03	32	P	P	13 38 27.3	+0.3
	baz=337						
NVAR	**Mina Array Bea**	72.31	45	P	P	13 38 30.3	+1.5
	comp=Z,2.4nm,0.9s,baz=320,slow=2.7,SNR=11						
ESDC	**Sonseca Array**	72.73	318	P	P	13 38 31.0	-0.1
	comp=Z,5.6nm,0.8s,baz=20,slow=6.5,SNR=28						
ESDC				LR	LR	14 12 03.7	
	comp=Z,89nm,18.7s,baz=20,slow=37						
DUG	**Dugway, Tooele**	72.77	40	P	P	13 38 33.1	+1.7
	baz=333,SNR=7.8						
SUSD	**Miller**	73.12	29	P	P	13 38 34.2	+0.9
	baz=339						
KNRA	**Kununurra**	73.18	172	P	P	13 38 33.1	-0.6
KNRA				IAmb	IAmb	13 38 38.2	
	comp=Z,14nm,1.4s						
R11A	**Troy Canyon, C**	73.40	43	P	P	13 38 36.6	+1.4
	baz=332						
CWC	**Cottonwood Cre**	74.14	46	P	P	13 38 40.5	+1.0
	baz=332						
O20A	**White River Ci**	74.36	37	P	P	13 38 42.0	+1.2
	baz=335,SNR=8.4						
ECSD	**EROS Data Cent**	74.38	27	P	P	13 38 40.3	-0.3
	baz=340						
FURC	**Furnace Creek,**	74.58	45	P	P	13 38 43.1	+1.2
	baz=332						
ISA	**Isabella, Lake**	74.66	47	P	P	13 38 44.0	+1.5
	baz=332						
MPMC	**Manual Prospec**	74.70	46	P	P	13 38 44.0	+1.2
	baz=332						
PKM	**Mcpherson Peak**	74.81	48	P	P	13 38 45.1	+1.6
	baz=331						
LRMC	**Laurel Mtn Rad**	75.13	46	P	P	13 38 46.8	+1.5
	baz=332						
FITZ	**Fitzroy Crossi**	75.40	175	P	P	13 38 45.6	-0.9
	comp=Z,7.3nm,0.7s,baz=358,slow=5.5,SNR=23						
ISCO	**Idaho Springs**	75.50	35	P	P	13 38 48.4	+0.8
ISCO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ISCO	**Idaho Springs**	75.50	35	P	P	13 38 48.4	+0.8
ISCO	**Idaho Springs**	75.50	35	P	P	13 38 48.6	+1.0
	baz=336						
EDW2	**Edwards Air Fo**	75.53	47	P	P	13 38 48.7	+1.2
	baz=332						
KNB	**Kanab**	75.59	42	P	P	13 38 49.9	+1.9
KNB				pmax	pmax		
	comp=Z,18nm,1.0s						
KNB	**Kanab**	75.59	42	P	P	13 38 49.9	+1.9
GSC	**Goldstone, Bar**	75.63	46	P	P	13 38 49.6	+1.5
	baz=332						
HEC	**Hector,Ludlow**	76.22	45	P	P	13 38 52.4	+0.9
	baz=332						
BFSC	**Mount Baldy Ra**	76.23	47	P	P	13 38 52.1	+0.5
	baz=332						
Q24A	**Divide**	76.41	35	P	P	13 38 53.4	+0.6
	baz=337						
GMRC	**Granite Mounta**	76.52	45	P	P	13 38 53.7	+0.5
	baz=333						
MVCO	**Mesa Verde**	76.92	38	P	P	13 38 56.9	+1.3
	baz=335						
S22A	**4UR Ranch, Cre**	76.99	37	P	P	13 38 56.4	+0.3
	baz=336						
BELC	**Belle Mtn. Jos**	77.08	46	P	P	13 38 56.3	-0.1
	baz=333						
PFO	**Pinyon Flats O**	77.25	46	P	P	13 38 57.4	+0.1
	baz=332						
TPFO	**Pinon Flats**	77.26	46	P	P	13 38 58.6	+1.2
	baz=332						
IRM	**Iron Mountain**	77.27	45	P	P	13 38 58.4	+1.1
	baz=333						
SDCO	**Great Sand Dun**	77.42	36	P	P	13 38 58.6	+0.1
SDCO				IAmb	IAmb	13 39 04.5	
	comp=Z,9.0nm,1.4s						
SDCO	**Great Sand Dun**	77.42	36	P	P	13 38 58.5	+0.1
	baz=337						
WUAZ	**Wupatki**	77.45	41	P	P	13 38 58.9	+0.4
	baz=334						
PDMCI	**Parker Dam,Lak**	77.52	44	P	P	13 39 00.2	+1.6
	baz=333						
BC3	**Big Chuckawall**	77.60	45	P	P	13 39 00.8	+1.5
	baz=333						
WB0	**Warramunga Arr**	77.78	167	P	P	13 38 59.1	-1.0
WB0				IAmb	IAmb	13 38 59.3	
	comp=Z,3.7nm,0.7s						
MONP2	**Monument Peak**	77.90	46	P	P	13 39 02.6	+1.5
	baz=333						
WRA	**Warramunga Arr**	77.95	167	P	P	13 38 59.8	-1.2
	comp=Z,4.3nm,0.8s,baz=351,slow=6.6,SNR=35						
WRA				LR	LR	14 17 49.0	
	comp=Z,18nm,18.0s,baz=220,slow=39						
WRA	**Warramunga Arr**	77.95	167	P	P	13 39 00.4	-0.6
WB2	**Warramunga Arr**	77.95	167	P	P	13 39 00.4	-0.6
WB2				IAmb	IAmb	13 39 00.8	
	comp=Z,6.6nm,0.9s						
SWSC	**Sam W. Stewart**	78.09	46	P	P	13 39 03.2	+1.3
	baz=333						
IKP	**In-Ko-Pah, Jac**	78.24	46	P	P	13 39 04.1	+1.3
	baz=333						
GLA	**Glamis**	78.38	45	P	P	13 39 04.2	+0.7
	baz=333						
ANMO	**Albuquerque**	79.66	38	P	P	13 39 11.8	+1.1
	baz=336						
214A	**Organ Pipe Nat**	80.12	44	P	P	13 39 14.7	+1.6
	baz=334						
SSPA	**Standing Stone**	80.97	14	P	P	13 39 17.8	+0.4
	baz=350						
AMTX	**Amarillo**	81.24	34	P	P	13 39 18.4	-0.6
AMTX				IAmb	IAmb	13 39 25.1	
	comp=Z,15nm,1.1s						
AMTX	**Amarillo**	81.24	34	P	P	13 39 19.7	+0.6
	baz=339						
P52A	**Corning**	81.32	18	P	P	13 39 18.4	-0.9
	baz=348						
121A	**Cookes Peak, D**	81.41	40	P	P	13 39 20.0	-0.1
	baz=336						
AS31	**Alice Springs**	81.57	168	P	P	13 39 19.3	-1.4
ASAR	**Alice Springs**	81.57	168	P	P	13 39 19.6	-1.0
	comp=Z,2.5nm,0.7s,baz=354,slow=5.0,SNR=53						
ASAR	**Alice Springs**	81.57	168	P	P	13 39 19.4	-1.2
ASAR	**Alice Springs**	81.57	168	P	P	13 39 19.4	-1.2
MSTX	**Muleshoe**	81.75	35	P	P	13 39 22.7	+0.9
	baz=338						
U40A	**Yellville**	82.28	27	P	P	13 39 24.4	-0.1
	baz=343						
LCAR	**Lake Charles**	82.96	26	P	P	13 39 27.3	-0.7
LCAR				IAmb	IAmb	13 39 29.1	
	comp=Z,4.5nm,0.9s						
MNTX	**Cornudas Mount**	82.99	38	P	P	13 39 28.7	+0.5
	baz=337						
W39A	**Magazine**	83.15	28	P	P	13 39 29.3	+0.4
	baz=342						
W41B	**Gary Mavity, V**	83.56	27	P	P	13 39 30.5	-0.6
	baz=343						
WVT	**Waverly**	83.64	23	P	P	13 39 31.5	0.0
	baz=345						
ABTX	**Abilene, Hawle**	83.96	33	P	P	13 39 33.7	+0.5
ABTX	**Abilene, Hawle**	83.96	33	P	P	13 39 33.9	+0.7
	baz=340						
BLA	**Blacksburg**	83.96	17	P	P	13 39 32.8	-0.3
	baz=349						
X40A	**Basin Creek Fa**	84.06	27	P	P	13 39 33.8	+0.1
	baz=343						
TX32	**Lajitas Array**	85.74	38	P	P	13 39 41.8	-0.5
TXAR	**Lajitas Array**	85.74	38	P	P	13 39 41.7	-0.6
	comp=Z,1.0nm,0.9s,baz=258,slow=6.3,SNR=8.3						
TXAR				LR	LR	14 22 26.0	
	comp=Z,44nm,21.2s,baz=0.0,slow=39						
KMSC	**Kings Mountain**	85.84	18	P	P	13 39 42.6	+0.1
	baz=348						
GOGA	**Godfrey**	87.15	20	P	P	13 39 49.6	+0.6
	baz=347						
KMBO	**Kilima Mbogo**	87.52	264	*i* P	P	13 39 51.4	+0.1
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MSVF	**Nonsavu**	88.60	127	LR	LR	14 15 30.1	
	comp=Z,34nm,21.3s,baz=22,slow=33						
TORD	**Torodi Ar. Bea**	93.82	302	P	P	13 40 18.9	-1.5
	comp=Z,2.0nm,0.9s,baz=8.0,slow=5.2,SNR=6.8						
TORD	**Torodi Ar. Bea**	93.82	302	P	P	13 40 18.9	-1.5
TORD				IAmb	IAmb	13 40 22.6	
	comp=Z,2.5nm,1.0s						
LPAZ	**La Paz**	138.31	13	PKP	PKPdf	13 46 30.3	+1.1
	comp=Z,0.9nm,0.6s,baz=63,slow=6.4,SNR=4.6						
NVL	**N'lazarevskaya**	148.49	217	*e*PKP2	PKPab	13 46 52.7	+1.1
NVL				pmax	pmax		
	comp=Z,11nm,0.8s						
CPUP	**Villa Florida**	148.84	357	PKPbc	PKPbc	13 46 49.6	-0.7
	comp=Z,5.3nm,0.6s,baz=14,slow=1.5,SNR=7.9						
CPUP	**Villa Florida**	148.84	357	PKIKP	PKPdf	13 46 45.9	-0.6
CPUP	**Villa Florida**	148.84	357		PKPdf	13 46 45.9	-0.6

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*NIED **04** 13:44:34.6, 31°.18N×129°.11E, h11^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.37; $M_{\theta\theta}$2.13; $M_{\phi\phi}$1.24; $M_{r\theta}$-0.29; $M_{\theta\phi}$5.51; $M_{\phi r}$5.90; Fault plane solution: $M_0$8.60000×10^{14} NP1: ϕ_s191.00000°, δ75.00000°, λ-129.00000°. NP2: ϕ_s83.00000°, δ42.00000°, λ-23.00000°.*

*JMA **04** 13:44:34.5±0.3, 31°.18N×129°.11E, h11^{km}±2^{km}, M3.7*

*IDC **04** 13:44:37.3±0.7, 31°.26N×128°.99E, h0^{km}, mb3.7/3, mb1 3.8/5, mb1mx3.5/41, mbtmp3.6/5, ML3.1/2, MS3.2/2, Ms1 3.2/2, ms1mx2.8/32, Error ellipse: s-maj=8.6km s-min=6.0km az=72.0*

ISC 04 13:44:38.0±1.0**, 31°.22N**±0°.05×**129°.51E**±0°.09**, h11^{km}, n13, σ0^{s}.78**/13**, mb3.5**/3**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	0.49	21	P	Pb	13 44 47.9	-0.7
JSU	**Suzuyama**	0.86	71	P	Pn	13 44 56.3	+0.3
JKC	**Kuchinoerabu**	0.96	142	P	Pg	13 44 56.4	-0.1
JKC				*e*S	Sn	13 45 11.6	+0.5
JYAK	**Yakushimahirau**	1.31	138	P	Pn	13 45 01.1	-1.1
JTN	**Tanegashima 3**	1.39	114	P	Pb	13 45 03.7	-0.2
JMTN	**Minamitane**	1.46	124	P	Pb	13 45 04.5	-0.6
JTZ	**Takazaki**	1.51	63	P	Pg	13 45 06.4	-0.6
JNU	**Nakatsue**	2.22	31	Pn	Pb	13 45 18.6	+0.4
	8.0nm,0.3s,baz=246,slow=6.8,SNR=23						
KSRS	**Korea Array**	6.35	349	Pn	Pn	13 46 10.3	-1.2
	0.3nm,0.3s,baz=171,slow=15,SNR=5.0						
KSRS				Lg	Lg	13 47 54.9	
	0.8nm,0.3s,baz=169,slow=30,SNR=5.9						
KSRS				LR	LR	13 48 38.6	
	comp=Z,75nm,21.2s,baz=1.0,slow=39						
SONM	**Songino Array**	24.21	320	LR	LR	14 00 19.9	
	comp=Z,123nm,18.2s,baz=338,slow=39						
WRA	**Warramunga Arr**	51.08	174	P	P	13 53 41.3	+0.7
	0.5nm,0.8s,baz=353,slow=8.0,SNR=2.0						
ASAR	**Alice Springs**	54.74	175	P	P	13 54 07.8	+0.2
	0.3nm,0.6s,baz=4.4,slow=16,SNR=2.0						
FINES	**FINESS Array B**	69.10	330	P	P	13 55 44.8	+1.1
	6.4nm,1.0s,baz=56,slow=7.1,SNR=5.5						

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*NIED **04** 13:46:08.4, 31°.18N×129°.18E, h10^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.43; $M_{\theta\theta}$0.67; $M_{\phi\phi}$0.77; $M_{r\theta}$-1.32; $M_{\theta\phi}$2.62; $M_{\phi r}$-3.33; Fault plane solution: $M_0$4.49000×10^{14} NP1: ϕ_s17.00000°, δ78.00000°, λ-117.00000°. NP2: ϕ_s264.00000°, δ29.00000°, λ-26.00000°.*

JMA 04 13:46:08.3±0.3**, 31°.18N×129°.18E, h10^{km}**±2^{km}**, M3.7, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	0.68	43	P	Pg	13 46 21.0	-0.4
JKC	**Kuchinoerabu**	1.13	129	P	Pb	13 46 29.4	-0.5
JKC				*e*S	Sb	13 46 44.6	0.0
JSU	**Suzuyama**	1.14	73	P	Pb	13 46 29.4	-0.7
JSU				S	Sb	13 46 44.4	-0.6
JYAK	**Yakushimahirau**	1.48	129	P	Pn	13 46 34.0	-1.0
JTN	**Tanegashima 3**	1.63	108	P	Pn	13 46 36.6	-0.5
JMTN	**Minamitane**	1.67	117	P	Pn	13 46 37.7	0.0
JTZ	**Takazaki**	1.78	66	P	Pn	13 46 39.4	+0.3

IDC 04 13:50:23.6±714.0**, 50°.77N×51°.17E, h0^{km}, Error ellipse: s-maj=353.8km s-min=98.8km az=90.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	4.39	92	*i*		14 16 00.0	
	baz=278,slow=309,SNR=4.7						
I46RU	**ZALESOVO INFRA**	20.68	68	*i*		15 57 40.0	
	baz=275,slow=317,SNR=1.6						
I34MN	**SONGINO INFRAS**	35.45	73	*i*		17 30 00.0	
	baz=296,slow=339,SNR=2.0						

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*NEIC **04** 13:51:52.7±0.9, 18°.3S±0°.2×177°.8W±0°.2, h588^{km}±8^{km}, mb4.2/15, Error ellipse: s-maj=30.9km s-min=17.9km az=150.0*

*IDC **04** 13:51:53.8±1.9, 18°.02S×178°.01W, h602^{km}±18^{km}, mb3.1/6, mb1 3.5/7, mb1mx3.2/24, mbtmp4.1/7, Error ellipse: s-maj=74.8km s-min=15.5km az=153.0*

ISC 04 13:51:51.9±0.7**, 18°.2S**±0°.2×**177°.8W**±0°.1**, h590^{km}, n26, σ0^{s}.89**/28**, mb4.1**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	4.01	276	P	P	13 53 17.9	+1.1
	3.8nm,0.3s,baz=130,slow=12,SNR=48						
MSVF	**Nonsavu**	4.01	276	P	P	13 53 16.9	+0.1
AFI	**Afiamalu**	7.17	54	P	P	13 53 41.4	-1.9
	3.4nm,0.3s,baz=276,slow=4.6,SNR=4.8						
OUZ	**Omahuta**	18.60	203	P	P	13 55 34.3	+1.0
OUZ				IAmb	IAmb	13 55 36.8	
	comp=Z,11nm,1.2s						
CTAO	**Charters Tower**	34.00	261	P	P	13 57 47.7	-0.5
TOO	**Toolangi**	37.46	231	P	P	13 58 16.4	-0.1
TOO				IAmb	IAmb	13 58 43.1	
	comp=Z,12nm,1.4s						
COEN	**Coen**	37.72	271	P	P	13 58 19.9	+1.0
STKA	**Stephens Creek**	39.02	242	P	P	13 58 29.0	-0.2
	comp=Z,3.4nm,0.7s,baz=87,slow=8.1,SNR=8.9						
STKA	**Stephens Creek**	39.02	242	P	P	13 58 29.6	+0.3
BBOO	**Buckleboo**	43.80	241	P	P	13 59 06.5	-0.3
BBOO				IAmb	IAmb	13 59 07.0	
	comp=Z,5.9nm,0.7s						
WB0	**Warramunga Arr**	45.15	260	P	P	13 59 17.1	-0.3
WB0				IAmb	IAmb	13 59 17.6	
	comp=Z,6.9nm,0.7s						
WB2	**Warramunga Arr**	45.16	260	P	P	13 59 17.2	-0.3
WB2				IAmb	IAmb	13 59 17.8	
	comp=Z,5.4nm,0.7s						
WRA	**Warramunga Arr**	45.18	260	P	P	13 59 17.3	-0.3
	comp=Z,4.1nm,0.6s,baz=97,slow=7.4,SNR=76						
WRA	**Warramunga Arr**	45.18	260	P	P	13 59 17.2	-0.4
AS31	**Alice Springs**	45.30	254	P	P	13 59 18.3	-0.2
AS31				IAmb	IAmb	13 59 19.5	
	comp=Z,2.4nm,0.6s						
ASAR	**Alice Springs**	45.30	254	P	P	13 59 18.4	-0.1
	comp=Z,6.2nm,0.5s,baz=94,slow=7.4,SNR=193						
ASAR				PcP	PcP	14 00 45.1	-0.4
	comp=Z,0.6nm,0.6s,baz=108,slow=3.6,SNR=5.1						
ASAR				S	S	14 05 15.6	-1.5
	comp=Z,0.5nm,0.7s,baz=93,slow=18,SNR=5.5						
ASAR	**Alice Springs**	45.30	254	P	P	13 59 17.8	-0.7
MTN	**Manton Dam**	49.40	269	P	P	13 59 48.2	-1.0
MTN				IAmb	IAmb	13 59 49.8	
	comp=Z,4.5nm,0.8s						
FORT	**Forrest**	50.43	245	P	P	13 59 56.0	-0.5
KNRA	**Kununurra**	51.06	264	P	P	14 00 00.7	-0.6
KNRA				IAmb	IAmb	14 00 01.9	
	comp=Z,4.6nm,0.8s						
SOEI	**Soe**	56.68	270	P	P	14 00 42.4	+1.4
SOEI				IAmb	IAmb	14 00 43.4	
	comp=Z,12nm,0.7s						
QSPA	**South Pole Qui**	71.85	180	P	P	14 02 15.6	-0.2
TXAR	**Lajitas Array**	85.64	57	P	P	14 03 31.3	+1.8
	comp=Z,1.2nm,0.7s,baz=216,slow=6.1,SNR=15						
TXAR	**Lajitas Array**	85.64	57	P	P	14 03 30.9	+1.3
ILAR	**Eielson Array**	86.04	13	P	P	14 03 30.2	-0.3
	comp=Z,0.2nm,0.7s,baz=215,slow=4.9,SNR=4.1						
PDAR	**Pinedale Array**	87.15	43	P	P	14 03 37.0	+0.4
	comp=Z,0.4nm,0.8s,baz=195,slow=2.8,SNR=3.0						

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*ISK **04** 13:56:42.2, 39°.09N×27°.94E, h13^{km}, ML3.1/6*

*DDA **04** 13:56:43.3, 39°.10N×27°.86E, h7^{km}±2^{km}, ML2.4*

ISC 04 13:56:42.9±1.0**, 39°.09N**±0°.03×**27°.92E**±0°.04**, h14^{km}**±10^{km}**, n9, σ0^{s}.46**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKS	**Akhisar**	0.23	202	PG	Pg	13 56 47.4	-0.5
AKS				SG	Sg	13 56 51.6	+0.4
STEP	**BALIKESIR_Sava**	0.33	331	*i* P	Pg	13 56 49.8	+0.2
STEP				*i* S	Sg	13 56 53.8	-0.4
STEP				IAML		13 56 54.0	
	comp=N,333nm,0.3s						
STEP				IAML		13 56 55.0	
	comp=E,378nm,0.3s						
GOMA	**Golmarmara-Man**	0.38	181	PG	Pg	13 56 50.2	-0.4
GOMA				SG	Sg	13 56 56.1	+0.3
ZEDA	**zmir-Bergama**	0.67	260	*i* P	Pg	13 56 55.6	-0.3
ZEDA				IAML		13 57 05.0	
	comp=N,128nm,0.5s						
ZEDA				*i* S	Sb	13 57 05.0	-0.4
ZEDA				IAML		13 57 06.0	
	comp=E,113nm,0.4s						
DST	**Dursunbey**	0.74	46	PG	Pg	13 56 57.0	-0.4
DST				SG	Sg	13 57 07.5	+0.3
KULA	**Kula-Manisa**	0.81	135	PG	Pb	13 56 59.4	+0.5
KULA				SG	Sg	13 57 09.6	+0.2
SHAP	**Saphane-Kutahy**	1.01	93	PG	Pg	13 57 01.7	-0.8
SHAP				SG	Sg	13 57 16.0	+0.3
ORLT	**Orhaneli**	1.22	38	PN	Pn	13 57 05.2	-0.3
ULDT	**Uludag**	1.41	41	*i* P	Pn	13 57 08.6	+0.3
ULDT				IAML		13 57 28.0	
	comp=E,85nm,0.5s						
ULDT				IAML		13 57 29.0	
	comp=N,52nm,0.4s						

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*TUL **04** 14:10:14.3±1.0, 36°.28N±0°.01×96°.65W±0°.02, h6^{km}±7^{km}, ML2.6, mb_Lg2.2/5(NEIC), Error ellipse: s-maj=2.6km s-min=1.8km az=82.0*

NEIC 04 14:10:14.3±0.8**, 36°.29N**±0°.01×**96°.65W**±0°.02**, h5^{km}**±2^{km}**, Error ellipse: s-maj=3.0km s-min=2.7km az=236.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK034	**N. Norfolk Rd.**	0.28	190	Pg	Pg	14 10 19.9	+0.2
OK034				Sg	Sg	14 10 23.6	+0.2
OK031	**S. Brethren Rd**	0.36	204	Pg	Pg	14 10 21.5	+0.1
OK031				Sg	Sg	14 10 26.3	+0.2
OK030	**Cody Creek RV**	0.37	197		Pg	14 10 21.6	+0.1
OK030				Sg	Sg	14 10 27.1	+0.7
T35A	**Sooner Cattle**	0.64	10	Pg	Pg	14 10 26.5	-0.1
T35A				Sg	Sg	14 10 35.4	+0.4
BLOK	**Blackwell**	0.66	317	Pg	Pg	14 10 26.8	-0.2
BLOK				Sg	Sb	14 10 36.9	-0.8
TUL1	**Leonard**	0.79	118		Pg	14 10 29.2	-0.3
TUL1				Sg	Sg	14 10 39.3	-0.5
OK029	**Liberty Lake**	0.81	233	Pg	Pg	14 10 29.8	-0.1
OK029				Sg	Sg	14 10 40.5	+0.1
OK025	**Westminster Rd**	0.90	219	Pg	Pb	14 10 32.0	-0.4
OK025				Sg	Sg	14 10 43.1	0.0
KAN13	**South Haven SW**	0.98	318		Pg	14 10 32.9	-0.3
KAN13				Sg	Sg	14 10 46.2	+0.2
BCOK	**Bluff Creek, N**	1.00	231	Pg	Pg	14 10 33.1	-0.3
BCOK				Sg	Sg	14 10 46.1	-0.2
CROK	**Carrier**	1.09	282	Pg	Pg	14 10 35.1	-0.2
CROK				Sg	Sb	14 10 50.8	+0.4
GC02	**Grant County #**	1.12	301	Pg	Pg	14 10 35.6	-0.3
GC02				Sg	Sb	14 10 50.9	-0.2
KAN09	**Caldwell North**	1.15	318		Pg	14 10 36.1	-0.3
KAN09				Sg	Sg	14 10 51.5	+0.2
KAN17	**Caldwell West**	1.17	311	Pg	Pg	14 10 36.5	-0.3
KAN17				Sg	Sg	14 10 51.9	-0.1
KAN01	**Argonia South**	1.24	315		Pg	14 10 37.4	-0.7
KAN01				Sg	Sg	14 10 53.2	-1.0
OK032	**Salt Plains WL**	1.36	293	Pn	Pn	14 10 39.4	-0.6
KAN06	**Argonia West S**	1.36	315	Pn	Pn	14 10 39.3	-0.8
KAN08	**Anthony NE Sta**	1.42	312	Pn	Pn	14 10 40.4	-0.3
KAN10	**Anthony SW Sta**	1.43	306	Pn	Pn	14 10 40.6	-0.4
KAN16	**Harper SW Stat**	1.47	310	Pn	Pn	14 10 41.6	+0.1
KAN12	**Harper NE Stat**	1.48	314	Pn	Pn	14 10 41.3	-0.3
U38A	**Gravette**	1.84	85	Pn	Pn	14 10 46.8	+0.2
U32A	**Winter Ranch,**	1.90	274	Pn	Pn	14 10 47.8	+0.4
X34A	**Smith Ranch, M**	1.94	210	Pn	Pn	14 10 48.2	+0.3
X37A	**Clayton**	1.99	148	Pn	Pn	14 10 48.5	-0.1
X37A				IAmb_Lg		14 11 16.5	
	comp=Z,12nm,0.8s						
HHAR	**Hobbs**	2.19	89		Pn	14 10 52.1	+0.7
LOOK	**Love County**	2.33	191		Pn	14 10 53.2	-0.1
LOOK				IAmb_Lg		14 11 30.0	
	comp=Z,12nm,0.7s						
W39A	**Magazine**	2.58	114		Pn	14 10 56.6	0.0
S39A	**Bolivar**	3.01	61		Pn	14 11 02.8	+0.1
MIAR	**Mount Ida**	3.05	124	Pn	Pn	14 11 01.7	-1.5
U40A	**Yellville**	3.07	88		Pn	14 11 03.3	-0.2
U40A				IAmb_Lg		14 11 58.8	
	comp=Z,7.3nm,0.8s						
X40A	**Basin Creek Fa**	3.60	119		Pn	14 11 12.0	+1.3
WHAR	**Wooly Hollow**	3.69	104		Pn	14 11 11.9	0.0
FCAR	**Ozark Folk Cen**	3.69	95		Pn	14 11 12.2	+0.2
R40A	**Maddies Statio**	4.03	59		Pn	14 11 16.4	-0.3
P38A	**Dawn**	4.15	36		Pn	14 11 18.7	+0.4
T42A	**Van Buren**	4.53	79		Pn	14 11 22.8	-0.8
CCM	**Cathedral Cave**	4.67	66	Pn	Pn	14 11 24.9	-0.6
P40A	**Paris**	4.87	47	Pn	Pn	14 11 30.1	+1.8

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*NEIC **04** 14:29:44.6±1.8, 24°.47N±0°.07×123°.15E±0°.08, h86^{km}±6^{km}, mb4.1/6, Error ellipse: s-maj=11.5km s-min=9.7km az=117.0*

*JMA **04** 14:29:44.8±0.1, 24°.57N×123°.13E, h88^{km}±2^{km}, M3.6*

*IDC **04** 14:29:46.2±6.7, 24°.75N×123°.28E, h117^{km}±70^{km}, mb3.5/7, mb1 3.6/9, mb1mx3.3/34, mbtmp3.9/9, Error ellipse: s-maj=56.7km s-min=14.7km az=63.0*

ISC 04 14:29:43.9±0.7**, 24°.51N**±0°.06×**123°.11E**±0°.03**, h92^{km}**±5^{km}**, n44, σ1^{s}.20**/66**, mb3.9**/11**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	0.10	239	P	Pn	14 29 57.5	+0.6
YOJ				S	Sn	14 30 06.5	0.0
YOJ	**Yonaguni jima**	0.10	239	Pn	Pn	14 29 57.6	+0.8
YOJ				Sn	Sn	14 30 06.2	-0.3
YOJ	**Yonaguni jima**	0.10	239	P	Pn	14 29 57.7	+0.8
JYNG	**Yonagunijimaku**	0.16	247	P	Pn	14 29 57.7	+0.7
JYNG				S	Sn	14 30 06.9	+0.2
IRIF	**Iriomote-Funau**	0.60	107	P	Pn	14 30 00.2	+0.5
IRIF				S	Sn	14 30 11.2	-0.2
HATJ	**Hateruma jima**	0.79	125	P	Pn	14 30 02.4	+1.0
HATJ				S	Sn	14 30 15.0	+0.5
JKRS	**Kuro-shima**	0.87	108	P	Pn	14 30 03.3	+1.0
JKRS				S	Sn	14 30 16.8	+0.7
JIJ	**Ishigaki jima**	0.96	99	P	Pn	14 30 03.8	+0.5
JIJ				S	Sn	14 30 17.3	-0.5
JISG	**Ishigakijimahi**	1.10	86	P	Pn	14 30 05.4	+0.5
JISG				S	Sn	14 30 20.4	-0.3
NACB	**Ninganchiao**	1.42	256	Pn	Pn	14 30 09.1	+0.3
NACB				Sn	Sn	14 30 25.9	-1.6
JTJ	**Tarama**	1.46	85	P	Pn	14 30 10.0	+0.8
JTJ				S	Sn	14 30 28.3	-0.1
TATO	**Taipei**	1.54	288	Pn	Pn	14 30 11.5	+1.2
TATO				Sn	Sn	14 30 31.0	+0.8
YHNB	**Yeheng**	1.58	276	Pn	Pn	14 30 12.6	+1.7
YHNB				Sn	Sn	14 30 32.0	+0.7
YHNB	**Yeheng**	1.58	276	P	Pn	14 30 12.3	+1.4
JIRB	**Irabujima**	1.91	80	P	Pn	14 30 15.5	+0.5
JIRB				S	Sn	14 30 38.3	-0.3
JIKM	**Ikemajima**	1.99	78	P	Pn	14 30 17.0	+0.9
JIKM				S	Sn	14 30 40.3	-0.3
YULB	**Yu-li**	2.00	236	Pn	Pn	14 30 16.4	+0.2
YULB				Sn	Sn	14 30 37.1	-3.7
JMJ2	**Miyako jima3**	2.04	83	P	Pn	14 30 17.6	+0.9
JMJ2				S	Sn	14 30 41.9	+0.3
SSLB	**Suanglung**	2.09	250	Pn	Pn	14 30 18.6	+1.1
SSLB				Sn	Sn	14 30 43.5	+0.4
SSLB	**Suanglung**	2.09	250	P	Pn	14 30 19.9	+2.4
JOGS	**Gusukube**	2.11	83	P	Pn	14 30 18.7	+1.1
JOGS				S	Sn	14 30 43.7	+0.3
TWG	**Pinlang**	2.51	228	Pn	Pn	14 30 22.8	-0.3
TWG				Sn	Sn	14 30 50.8	-2.2
TPUB	**Ta-pu**	2.57	242	Pn	Pn	14 30 25.4	+1.6
TPUB				Sn	Sn	14 30 56.0	+1.6

TPUB	Ta-pu	2.57	242	P	Pn	14 30 26.0	+2.3
KNMB	Chin-men Tao	4.30	270	Pn	Pn	14 30 47.3	+0.3
KNMB				Sn	Sn	14 31 33.8	-2.2
JOW	Kunigami	5.20	63	P	Pn	14 30 58.4	-1.0
	14nm,0.3s,baz=161,slow=13,SNR=32						
JOW				S	Sn	14 31 55.5	-2.6
	4.5nm,0.3s,baz=98,slow=26,SNR=5.1						
JOW	Kunigami	5.20	63	Pn	Pn	14 30 59.2	-0.2
KSRS	Korea Array	13.54	17	P	Pn	14 32 50.4	-1.8
	0.1nm,0.3s,baz=194,slow=11,SNR=2.2						
SONM	Songino Array	26.78	335	P	P	14 35 14.3	-1.1
	0.4nm,0.4s,baz=148,slow=8.7,SNR=3.7						
MKAR	Makanchi Array	39.33	315	P	P	14 37 03.6	-0.6
	0.4nm,0.7s,baz=92,slow=9.3,SNR=5.9						
KNRA	Kununurra	40.33	172	P	P	14 37 12.5	0.0
ZALV	Zalesovo Beam	40.94	326	P	P	14 37 15.5	-1.7
	0.3nm,0.4s,baz=74,slow=7.9,SNR=3.8						
WB0	Warramunga Arr	45.37	165	P	P	14 37 53.7	+0.5
WB0				IAmb	IAmb	14 38 05.3	
	comp=Z,3.3nm,1.2s						
WRA	Warramunga Arr	45.52	165	P	P	14 37 55.3	+0.8
	comp=Z,1.3nm,0.7s,baz=346,slow=8.6,SNR=11						
WRA	Warramunga Arr	45.52	165	P	P	14 37 55.2	+0.7
WB2	Warramunga Arr	45.53	165	P	P	14 37 55.2	+0.7
WB2				IAmb	IAmb	14 37 55.9	
	comp=Z,3.4nm,0.9s						
WR0	Warramunga Arr	45.59	165	P	P	14 37 55.9	+0.9
WR0				IAmb	IAmb	14 37 59.3	
	comp=Z,3.8nm,0.9s						
AS31	Alice Springs	49.03	167	P	P	14 38 22.4	+0.7
AS31				IAmb	IAmb	14 38 24.9	
	comp=Z,1.6nm,1.4s						
ASAR	Alice Springs	49.03	167	P	P	14 38 22.9	+1.2
	comp=Z,0.3nm,0.3s,baz=351,slow=7.0,SNR=16						
ABKAR	Akbulak array	54.47	314	P	P	14 39 02.3	+0.5
STKA	Stephens Creek	58.79	162	P	P	14 39 33.4	+0.8
	comp=Z,0.7nm,0.3s,baz=311,slow=4.5,SNR=3.3						
BMAR	Burnt Mountain	68.50	24	P	P	14 40 37.9	+1.7
BCAR	Beaver Creek A	70.71	29	P	P	14 40 51.0	+1.3
FINES	FINESS Array B	72.04	330	P	P	14 40 56.4	-1.3
	comp=Z,4.8nm,1.0s,baz=60,slow=8.5,SNR=3.5						

ATH ***04*** *14:36:22.4, 36°.53N×28°.91E, h33^{km}±17^{km}, ML2.8/3, Error ellipse: s-maj=18.1km s-min=1.2km az=179.0*
ISK ***04*** *14:36:23.4, 36°.44N×28°.94E, h17^{km}, ML2.9/10*
DDA ***04*** *14:36:23.1, 36°.44N×28°.94E, h26^{km}, ML2.8*
ISC 04 14:36:23.7±1.0**, 36°.45N**±0°.03×**28°.93E**±0°.02**, h25**^{km}±7^{km}**, n28, σ1^{s}.01**/50**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FETY	Fethiye	0.22	33	*i* P	Pb	14 36 29.3	-0.5
FETY				IAML		14 36 34.0	
	comp=N,778nm,0.2s						
FETY				*i* S	Sb	14 36 34.0	+0.1
FETY	Fethiye	0.22	33	PG	Pb	14 36 29.2	-0.5
DALY	Dalyan (Mula)	0.43	329	*i* P	Pb	14 36 32.6	-0.2
DALY				*i* S	Sb	14 36 39.5	+0.5
DALY				IAML		14 36 42.0	
	comp=N,562nm,0.3s						
DALY	Dalyan (Mula)	0.43	329	PG	Pb	14 36 32.7	-0.2
DALY				SG	Sb	14 36 39.6	+0.5
CAME	Cameli-Denizli	0.58	31	PG	Pb	14 36 34.7	-0.7
CAME				SG	Sn	14 36 44.1	-1.1
KSL	Kastellorizon	0.60	119	P	Pb	14 36 35.2	-0.5
KSL				S	Sn	14 36 44.9	-0.7
KSL				AML	AML	14 36 46.2	
	comp=E,2074µm,0.4s						
KSL				AML	AML	14 36 47.8	
	comp=N,583µm,0.3s						
TURN	Turunc	0.64	301	*i* P	Pn	14 36 36.2	-1.0
TURN				*i* S	Sn	14 36 46.0	-0.6
ARG	Arkhangelos	0.69	251	P	Pb	14 36 36.1	-1.1
ARG				S	Sb	14 36 46.0	-0.3
ARG				AML	AML	14 36 48.6	
	comp=N,848µm,0.3s						
ARG				AML	AML	14 36 49.2	
	comp=E,1224µm,0.3s						
ARG	Arkhangelos	0.69	251	PG	Pn	14 36 37.3	-0.6
ARG				SG	Sn	14 36 48.0	+0.2
CAEL	Denizli, Camel	0.74	25	*i* P	Pb	14 36 37.4	-0.7
CAEL				*i* S	Sn	14 36 49.1	-0.3
ELL	Elmali	0.84	69	PG	Pn	14 36 39.9	-0.2
ELL				SG	Sn	14 36 52.4	+0.7
GOLH	Golhisar	0.94	32	*i* P	Pb	14 36 41.1	-0.3
GOLH				*i* S	Sn	14 36 56.5	+2.4
GOLH				IAML		14 36 57.0	
	comp=N,374nm,0.3s						
MULA	Mugla, Merkez-	0.94	329	*i* P	Pb	14 36 41.5	-0.1
MULA				*i* S	Sn	14 36 54.0	-0.2
TAVA	DENIZLI_Tavas	1.02	359	*i* P	Pb	14 36 42.4	-0.3
TAVA				*i* S	Sn	14 36 56.7	+0.7
TAVA				IAML		14 36 58.0	
	comp=N,172nm,0.4s						
DAT	Datca	1.12	285	*i* P	Pb	14 36 44.9	+0.3
DAT				*i* S	Sb	14 37 01.0	+2.1
DAT				IAML		14 37 05.0	
	comp=N,230nm,0.2s						
DAT	Datca	1.12	285	PN	Pb	14 36 45.1	+0.5
DAT				SN	Sb	14 37 00.8	+1.9
AKUM	Antalya-Kumluc	1.15	96	*i* P	Pb	14 36 44.6	-0.2
AKUM				*i* S	Sb	14 37 01.0	+1.7
MLSB	Milas	1.25	313	PN	Pb	14 36 47.5	+0.7
BDRM	Kayabasi	1.34	298	*i* P	Pb	14 36 47.8	-0.5
BDRM				*i* S	Sb	14 37 06.6	+1.5
BDRM				IAML		14 37 08.0	
	comp=N,189nm,0.8s						
BODT	Bodrum	1.44	296	PN	Pb	14 36 49.5	-0.4
YKAV	Yalikavak-Bodr	1.49	297	PN	Pb	14 36 50.2	-0.5
BRDR	BURDUR-Merkez	1.54	36	*i* P	Pb	14 36 51.3	-0.4
BRDR				*i* S	Sb	14 37 11.9	+1.1
DDIM	Aydin, Didim	1.69	307	*i* P	Pb	14 36 53.3	-0.8
DDIM				*i* S	Sb	14 37 14.1	-0.8
DDIM				IAML		14 37 19.0	
	comp=N,154nm,0.9s						
AYDB	Zeytinkoy-Aydi	1.71	331	PN	Pb	14 36 52.9	-1.7
BASM	Basmaki-Afyon	1.72	31	PN	Pb	14 36 52.9	-1.8
GCAM	G?zelcaml?	1.85	313	*i* P	Pb	14 36 54.8	-2.0
GCAM				*i* S	Sb	14 37 18.0	-1.4
GCAM				IAML		14 37 20.0	
	comp=N,113nm,0.2s						
SMG	Samos	2.10	308	P	Pn	14 36 58.1	+0.8
SMG				S	Sn	14 37 23.8	+1.3
SMG				AML	AML	14 37 26.4	
	comp=N,474µm,0.3s						
SMG				AML	AML	14 37 26.4	
	comp=E,529µm,0.2s						
DGB	zmir	2.29	315	*i* P	Pn	14 37 00.1	+0.2
DGB				*i* S	Sn	14 37 27.2	0.0

ANF ***04*** *15:17:53.4±0.4, 36°.75N×98°.05W, h6^{km}, ML3.5/9, Error ellipse: s-maj=4.7km s-min=3.2km az=179.0*
TUL ***04*** *15:17:53.3±0.9, 36°.76N±0°.02×98°.06W±0°.02, h6^{km}±6^{km}, ML3.1, mb_Lg3.1/44(NEIC), Error ellipse: s-maj=3.5km s-min=1.5km az=133.0*
NEIC ***04*** *15:17:53.2±0.8, 36°.728N±0°.010×98°.04W±0°.02, h9^{km}±6^{km}, Error ellipse: s-maj=2.4km s-min=1.4km az=97.0*
ISC 04 15:17:53.2±1.1**, 36°.74N**±0°.02×**98°.04W**±0°.03**, h3**^{km}±10^{km}**, n55, σ0^{s}.59**/45**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.15	294	Pg	Pg	15 17 56.3	+0.2
OK032				Sg	Sg	15 17 58.7	+0.6
GC02	Grant County #	0.18	54	Pg	Pg	15 17 57.3	+0.4
KAN14	Manchester OK	0.22	17		Pg	15 17 57.7	+0.1
KAN14				Sg	Sg	15 18 01.2	+0.7
CROK	Carrier	0.24	168	Pg	Pg	15 17 58.5	+0.6
KAN17	Caldwell West	0.37	37	Pg	Pg	15 18 00.7	+0.2
KAN17				Sg	Sg	15 18 05.8	+0.5
KAN10	Anthony SW Sta	0.38	354	Pg	Pg	15 18 00.6	-0.1
KAN01	Argonia South	0.47	29	Pg	Pg	15 18 02.4	+0.1
KAN16	Harper SW Stat	0.48	358	Pg	Pg	15 18 02.6	+0.1
KAN08	Anthony NE Sta	0.49	7		Pg	15 18 02.6	+0.1
KAN09	Caldwell North	0.52	41	Pg	Pg	15 18 03.3	0.0
KAN06	Argonia West S	0.53	16		Pg	15 18 03.4	+0.1
KAN13	South Haven SW	0.53	59		Pg	15 18 03.5	+0.1
KAN12	Harper NE Stat	0.55	4	Pg	Pg	15 18 03.9	0.0
BLOK	Blackwell	0.67	88		Pg	15 18 06.1	+0.1
U32A	Winter Ranch,	0.85	245	Pg	Pg	15 18 09.2	-0.3
U32A	Winter Ranch,	0.85	245	P	Pg	15 18 09.2	-0.3
	baz=63						
U32A				S	Sg	15 18 21.0	+0.3
	baz=63						
OK029	Liberty Lake	1.06	153	Pg	Pg	15 18 13.2	-0.3
BCOK	Bluff Creek, N	1.14	162		Pg	15 18 14.5	-0.6
T35A	Sooner Cattle	1.24	82	Pn	Pg	15 18 16.4	-0.7
T35B	Sooner Cattle	1.24	82	P	Pg	15 18 16.4	-0.6
	baz=263						
T35B				S	Sg	15 18 32.7	-0.4
	baz=263						
OK031	S. Brethren Rd	1.25	129		Pn	15 18 16.8	-0.8
OK025	Westminster Rd	1.29	154		Pn	15 18 17.5	-0.7
OK034	N. Norfolk Rd.	1.30	124	Pn	Pn	15 18 17.5	-0.8
OK030	Cody Creek RV	1.30	128		Pn	15 18 17.7	-0.6
R32A	Long Quarter,	1.76	343	Pn	Pb	15 18 25.0	-1.1
R32A				IAmb_Lg		15 18 48.8	
	comp=Z,93nm,0.8s						
R32A	Long Quarter,	1.76	343	P	Pb	15 18 25.1	-1.1
	baz=162						
R32A				S	Sb	15 18 48.1	-0.5
	baz=162						
TUL1	Leonard	2.00	114		Pn	15 18 28.7	+0.8
TUL1				IAmb_Lg		15 18 56.9	
	comp=Z,100nm,0.8s						
TUL1	Leonard	2.00	114	P	Pn	15 18 29.0	+1.1
	baz=296						
TUL1				S	Sb	15 18 56.0	+0.5
	baz=296						
X34A	Smith Ranch, M	2.15	175	Pn	Pn	15 18 31.0	+1.2
X34A				IAmb_Lg		15 19 06.5	
	comp=Z,70nm,0.8s						
CBKS	Cedar Bluff	2.46	328	S	Sn	15 19 05.9	+1.0
	baz=146						
KSU1	Kansas State U	2.61	25	Pn	Pn	15 18 36.2	-0.1
KSU1				IAmb_Lg		15 19 18.7	
	comp=Z,65nm,0.8s						
KSU1	Kansas State U	2.61	25	P	Pn	15 18 36.2	-0.1
	baz=206						
U38A	Gravette	2.96	95	Pn	Pn	15 18 41.2	+0.1
U38A	Gravette	2.96	95	P	Pn	15 18 41.5	+0.4
	baz=277						
X37A	Clayton	3.06	134	S	Sn	15 19 20.9	+1.3
	baz=316						
AMTX	Amarillo	3.49	239	IAmb_Lg		15 19 50.9	
	comp=Z,34nm,0.7s						
S39A	Bolivar	3.89	75	Pn	Pn	15 18 54.0	+0.2
S39A	Bolivar	3.89	75	P	Pn	15 18 53.6	-0.3
	baz=258						
U40A	Yellville	4.20	94		Pn	15 18 58.3	+0.2
U40A				IAmb_Lg		15 20 06.0	
	comp=Z,40nm,0.9s						
KSCO	Kaye Shedlock'	4.27	303	IAmb_Lg		15 20 19.7	
	comp=Z,40nm,1.0s						
Z38A	Mt. Pleasant	4.29	143	IAmb_Lg		15 20 15.4	
	comp=Z,36nm,0.7s						
ABTX	Abilene, Hawle	4.32	198	IAmb_Lg		15 20 10.9	
	comp=Z,26nm,0.8s						
P38A	Dawn	4.57	50	IAmb_Lg		15 20 27.6	
	comp=Z,39nm,0.9s						
BGNE	Belgrade	4.66	359	IAmb_Lg		15 20 23.5	
	comp=Z,33nm,0.8s						
FCAR	Ozark Folk Cen	4.86	98	IAmb_Lg		15 20 29.0	
	comp=Z,25nm,0.9s						
WHAR	Wooly Hollow	4.89	106	IAmb_Lg		15 20 36.0	
	comp=Z,42nm,1.2s						
N38A	Joes South For	5.52	41	IAmb_Lg		15 21 00.6	
	comp=Z,31nm,0.7s						
435B	Jarrell	5.96	176	IAmb_Lg		15 21 09.2	
	comp=Z,21nm,0.8s						
JCT	Junction City	6.42	194	IAmb_Lg		15 21 23.5	
	comp=Z,30nm,1.0s						
ISCO	Idaho Springs	6.69	299	IAmb_Lg		15 21 34.1	
	comp=Z,20nm,1.1s						
S44A	Carbondale	7.08	80	IAmb_Lg		15 21 41.0	
	comp=Z,22nm,0.8s						
SIUC	Southern Illin	7.11	80	IAmb_Lg		15 21 42.7	
	comp=Z,20nm,0.7s						
O44A	Mansfield	8.25	63	IAmb_Lg		15 22 25.2	
	comp=Z,18nm,0.8s						
JFWS	Jewell Farm	8.60	42	IAmb_Lg		15 22 37.1	
	comp=Z,18nm,0.8s						
K22A	Casper	8.80	315	IAmb_Lg		15 22 54.0	
	comp=Z,16nm,0.9s						

ISK ***04*** *15:37:40.3, 39°.27N×40°.22E, h5^{km}, ML4.3/24*
NEIC ***04*** *15:37:40.8, 39°.26N×40°.22E, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.25; M$_{\theta\theta}$4.89; M$_{\phi\phi}$-3.65; M$_{r\theta}$0.96; M$_{\theta\phi}$-0.47; M$_{\phi r}$1.92; Fault plane solution: M$_0$4.92000×10^{15} NP1:φ$_s$232.03000°, δ75.75000°, λ-152.28000°. NP2:φ$_s$134.66000°, δ63.20000°, λ-16.00000°. Principal axes: T 5.0435, Plg8.0000°, Azm1.0000°; N -0.2558, Plg59.0000°, Azm257.0000°; P -4.7876, Plg30.0000°, Azm96.0000°;*
DDA ***04*** *15:37:41.3, 39°.26N×40°.21E, h10^{km}±3^{km}, MW4.1*
IDC ***04*** *15:37:42.3±0.6, 39°.36N×40°.17E, h0^{km}, mb3.9/15, mb1 4.0/22, mb1mx3.9/53, mbtmp3.9/22, ML3.4/6, MS3.5/17, Ms1 3.5/17, ms1mx3.3/52, Error ellipse: s-maj=13.5km s-min=8.1km az=161.0*
CFUSG ***04*** *15:37:42.9, 39°.26N×40°.22E, h5^{km}, mb3.6/1, MD3.4/1, Eastern Turkey Magtype MSH 2.8 from 1 stations*
NEIC ***04*** *15:37:44.5±2.9, 39°.26N±0°.06×40°.39E±0°.06, h18^{km}±7^{km}, Error ellipse: s-maj=9.2km s-min=6.0km az=193.0*
ISC 04 15:37:42.1±1.1**, 39°.26N**±0°.02×**40°.21E**±0°.01**, h3**^{km}±7^{km}**, n137, σ1^{s}.93**/174**, mb3.8**/19**, MS3.3**/9**, 13C-6D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YEDI	Yedisu-Bingol	0.31	56	PG	Pg	15 37 47.8	-0.4
YEDI				SG	Sg	15 37 52.6	+0.3
BNGB	Bingl	0.46	127	PG	Pg	15 37 50.0	-0.9
ERZN	Erzincan	0.50	311	PG	Pg	15 37 51.4	-0.3
ERZN				SG	Sb	15 37 59.5	-1.8
TNCL	Tunceli-Merkez	0.54	254	⇑*i*P	Pg	15 37 51.6	-0.9
TNCL				*i* S	Sb	15 38 00.5	-2.1
EUZM	Uzumlu	0.59	318	⇑*i*P	Pg	15 37 52.9	-0.7
EUZM				*i* S	Sb	15 38 02.8	-1.4
EUZM				IAML		15 38 08.0	
	comp=E,8µm,0.9s						
KOVA	Elazig, Kovanc	0.64	209	⇓*i*P	Pg	15 37 54.0	-0.3
KOVA				*i* S	Sb	15 38 03.3	-2.1
KARO	Karliova-Bingo	0.65	86	PG	Pg	15 37 53.9	-0.8
KARO				SG	Sb	15 38 03.9	-2.0
ECAT	Cat-ERZURUM	0.68	60	⇑*i*P	Pg	15 37 54.2	-1.0
ECAT				*i* S	Sb	15 38 04.6	-2.2
ECAT				IAML		15 38 06.0	
	comp=N,8µm,0.5s						
SLHN	Bingol, Solhan	0.70	116	⇑*i*P	Pg	15 37 54.8	-0.9
SLHN				*i* S	Sb	15 38 05.3	-2.0
SLHN				IAML		15 38 14.0	
	comp=E,20µm,0.8s						
VRTB	Varto-Mus	0.97	96	⇑*i*P	Pg	15 37 59.6	-1.2
VRTB				*i* S	Sb	15 38 13.7	-1.5
VRTB				IAML		15 38 19.0	
	comp=E,10µm,0.9s						
VRTB	Varto-Mus	0.97	96	PG	Pg	15 37 59.6	-1.2
VRTB				SG	Sn	15 38 14.3	-3.0
BAYB	BAYBURT	0.99	2	⇓*i*P	Pg	15 37 59.1	-2.1
BAYB				*i* S	Sb	15 38 14.7	-1.1
EJDE	Erzurum, Palan	1.02	56	⇑*i*P	Pg	15 37 60.0	-1.7
EJDE				*i* S	Sb	15 38 15.5	-1.2
ERZM	Erzurum	1.10	54	*i* P	Pg	15 38 02.2	-1.0
ERZM				*i* S	Sn	15 38 19.9	-0.7
BAYT	Aydıntepe-Bayb	1.13	357	PN	Pg	15 38 02.1	-1.7
BAYT				SN	Sn	15 38 19.8	-1.4
SVRC	Sivrice-ELAZID	1.13	219	PN	Pb	15 38 03.1	-1.4
KELT	Kelkit	1.15	321	⇓*i*P	Pb	15 38 03.3	-1.5
KELT				*i* S	Sn	15 38 21.7	0.0
KRIK	Erzurum-spir	1.21	27	*i* P	Pb	15 38 04.4	-1.4
KRIK				*i* S	Sn	15 38 23.2	0.0
KRIK				IAML		15 38 31.0	
	comp=E,3µm,1.2s						
ELZG	Elazig	1.22	232	⇑*i*P	Pb	15 38 04.1	-1.9
ELZG				*i* S	Sn	15 38 23.2	-0.3
ILIC	ilic-Erzincan	1.29	279	PN	Pn	15 38 05.2	-2.0
REFA	Refahiye_ERZN	1.29	300	⇑*i*P	Pn	15 38 04.9	-2.3
REFA				*i* S	Sn	15 38 23.7	-1.4
DYBB	Diyarbakir	1.31	182	PN	Pg	15 38 07.1	-0.1
KEMA	Kemaliye	1.33	271	⇑*i*P	Pn	15 38 05.7	-2.1
KEMA				*i* S	Sg	15 38 26.0	+1.1
SVAN	Silvan-Diyarba	1.35	145	⇓*i*P	Pg	15 38 07.1	-1.0
SVAN				*i* S	Sg	15 38 27.6	+2.0
SVAN	Silvan-Diyarba	1.35	145	PN	Pg	15 38 07.4	-0.7
EKAR	Karacoban	1.44	90	*i* P	Pg	15 38 09.4	-0.3
EKAR				*i* S	Sg	15 38 34.1	+5.7
KOPR	Koprukoy-ERZUR	1.46	60	PN	Pb	15 38 08.8	-1.3
ARPR	Arapgir-MALATY	1.47	264	PN	Pn	15 38 08.4	-1.3
HOMI	Horasan	1.52	59	*i* P	Pb	15 38 09.4	-1.8
HOMI				*i* S	Sg	15 38 34.5	+3.4
ALUC	Giresun/Alucra	1.55	315	⇑*i*P	Pb	15 38 10.0	-1.6
ALUC				*i* S	Sg	15 38 34.6	+2.7
GURO	Guroymak-BITLI	1.59	116	PN	Pb	15 38 10.3	-2.0
GURO	Guroymak-BITLI	1.59	116	Pn	Pn	15 38 10.2	-1.2
BTMN	Batman	1.60	148	⇓*i*P	Pg	15 38 11.6	-1.2
BTMN				*i* S	Sg	15 38 37.8	+4.2
MALT	Malatya	1.69	236	PN	Pb	15 38 11.9	-2.0
KTUT	Trabzon	1.75	349	PN	Pb	15 38 13.4	-1.6
HEKM	Malatya_Hekimh	1.79	258	⇑*i*P	Pb	15 38 14.1	-1.7
HEKM				*i* S	Sg	15 38 40.1	+0.4
MAZI	Mazidag	1.81	174	PN	Pb	15 38 14.0	-2.0
SUSE	Susehri	1.81	302	*i* P	Pg	15 38 15.8	-1.1
SUSE				*i* S	Sg	15 38 41.6	+1.3
MLAZ	Malazgirt-MUS	1.82	93	PN	Pb	15 38 14.0	-2.2
CHAY	Cayeli-Rize	1.86	12	PN	Pb	15 38 14.7	-2.1
EATA	Eleskirt	1.86	71	*i* P	Pb	15 38 15.7	-1.3
EATA				*i* S	Sg	15 38 44.8	+2.8
EATA				IAML		15 38 53.0	
	comp=E,1µm,0.9s						
CUZAR	Zara_SIVAS	1.98	289	*i* P	Pb	15 38 17.1	-1.9
CUZAR				*i* S	Sg	15 38 46.7	+0.8
ADCV	BITLIS_Adilcev	2.01	102	*i* P	Pb	15 38 17.0	-2.4
ADCV				*i* S	Sg	15 38 45.5	-1.3
DDEM	Demirkent	2.01	36	*i* P	Pb	15 38 16.9	-2.6
DDEM				*i* S	Sg	15 38 49.5	+2.8
AKCD	Akcadag	2.03	242	⇑*i*P	Pb	15 38 17.4	-2.4
AKCD				*i* S	Sg	15 38 48.8	+1.4
MIDY	Mardin/Midyat-	2.08	153	*i* P	Pb	15 38 17.9	-2.7
MIDY				*i* S	Sg	15 38 49.3	+0.5
MIDY				IAML		15 38 58.0	
	comp=N,2µm,0.6s						
DBAD	Bademkaya	2.09	33	*i* P	Pb	15 38 18.3	-2.4
DBAD				*i* S	Sg	15 38 48.7	-0.6
SENK	Senkaya-Erzuru	2.10	51	PN	Pn	15 38 18.0	-0.4
URFA	Urfa	2.12	211	PN	Pb	15 38 19.1	-2.2
CUKAN	kangal_SIVAS	2.13	272	⇑*i*P	Pb	15 38 19.1	-2.3
CUKAN				*i* S	Sg	15 38 50.9	+0.4
DARE	Darende-Malaty	2.24	253	PN	Pb	15 38 20.4	-2.9
PERV	Siirt/Pervari-	2.25	125	*i* P	Pb	15 38 21.9	-1.6
PERV				*i* S	Sg	15 38 58.2	+3.7
SANL	SANLIURFA_Merk	2.30	205	⇓*i*P	Pb	15 38 21.5	-2.8
SANL				*i* S	Sg	15 38 54.5	-1.5
HOPA	Hopa-Artvin	2.32	24	PN	Pn	15 38 20.9	-0.4
CUGUR	Gurin_SVAS	2.35	258	*i* P	Pb	15 38 22.9	-2.3
CUGUR				*i* S	Sg	15 38 58.9	+1.2
KOTA	Agri, Merkez-K	2.38	76	*i* P	Pb	15 38 23.0	-2.8
KOTA				*i* S	Sg	15 38 59.3	+0.8
BCA	Borcka	2.43	26	PN	Pn	15 38 22.6	-0.2
SIRN	Sırnak	2.47	135	*i* P	Pn	15 38 23.3	-0.1
SIRN				*i* S	Sg	15 39 07.2	+5.7
SIRT	Sirnak	2.48	134	PN	Pn	15 38 23.7	+0.1
SIRT	Sirnak	2.48	134		Pn	15 38 23.6	0.0
RSDY	Resadiye-TOKAT	2.49	298	PN	Pn	15 38 23.6	0.0
VANB	Van	2.57	104	PN	Pb	15 38 25.5	-3.4
ELBS	KAHRAMANMARAS_	2.58	250	*i* P	Pb	15 38 27.2	-1.9
ELBS				*i* S	Sg	15 39 06.6	+1.6
KARS	Kars	2.59	57	PN	Pn	15 38 24.9	-0.2
TVAN	Van	2.60	105	*i* P	Pb	15 38 27.2	-2.3
TVAN				*i* S	Sg	15 39 09.6	+3.9
CUAYA	Sivas-Altinyay	2.69	271	*i* P	Pn	15 38 27.2	+0.8
CUAYA				*i* S	Sg	15 39 09.2	+0.7
GAZ	Gaziantep	3.15	229	Pn	Pb	15 38 35.0	-3.9
BNN	Bunyan	3.42	264	Pn	Pn	15 38 38.1	+1.6
GNI	Garni	3.61	74	Pn	Pb	15 38 42.1	-4.6
	comp=N,1.0nm,0.3s,baz=205,slow=1.4,SNR=5.8						
GNI				Pg	Pg	15 38 47.7	-3.5
	comp=N,7.0nm,0.3s,baz=278,slow=0.8,SNR=29						
GNI				LR	LR	15 40 19.9	
	comp=N,559nm,18.3s,baz=282,slow=44						
GNI	Garni	3.61	74		Pn	15 38 36.5	-2.5
ONI	Oni	4.13	35		Pn	15 38 45.4	-0.8
KBZ	Khabaz	4.90	23	Pn	Pn	15 38 58.4	+1.8
	comp=N,0.6nm,0.3s,baz=90,slow=6.7,SNR=10						
KBZ				LR	LR	15 41 03.2	
	comp=N,384nm,19.5s,baz=204,slow=42						
KIV	Kislovodsk	5.04	21		Pn	15 38 58.5	-0.2
KVAR	Kislovodsk Arr	5.04	21	Pn	Pn	15 38 59.8	+1.0
	baz=216,slow=17,SNR=9.4						
BR131	Keskin Array S	5.10	277	P	Pn	15 39 00.7	+1.1
	SNR=11						
BR131	Keskin Array S	5.10	277	Pn	Pn	15 39 00.2	+0.5
BRTR	Keskin Array B	5.10	277	Pn	Pn	15 39 00.5	+0.8
	comp=N,1.6nm,0.3s,baz=103,slow=14,SNR=35						
BRTR				Lg	Lg	15 40 25.9	
	baz=45,slow=55,SNR=1.5						
BRTR	Keskin Array B	5.10	277	Pn	Pn	15 39 00.1	+0.4
ANTO	Ankara	5.76	278	Pn	Pn	15 39 10.8	+2.2
SUDU	Sudak	6.83	327	*e*P	Pn	15 39 26.0	+2.9
SUDU				Pm		15 39 36.8	
	comp=Z,19nm,0.6s						
SUDU				*e*S	Sn	15 40 45.0	+3.7
SUDU				Sm		15 40 52.7	
	comp=N,12nm,0.5s						
MMAI	Mount Meron Ar	7.35	213	Pn	Pn	15 39 33.9	+3.5
	comp=N,1.0nm,0.3s,baz=54,slow=20,SNR=6.9						
MMAI				Lg	Lg	15 41 33.5	
	comp=N,0.5nm,0.3s,baz=15,slow=30,SNR=2.1						
MMAI				LR	LR	15 42 41.9	
	comp=N,142nm,18.1s,baz=325,slow=40						
ASF	Jabal al Asfar	7.57	202	Pn	Pn	15 39 35.6	+2.1
	comp=N,0.6nm,0.3s,baz=194,slow=21,SNR=7.9						
ASF				Lg	Lg	15 41 31.9	
	comp=N,0.4nm,0.3s,baz=38,slow=17,SNR=1.7						
ELL	Elmali	8.51	256	Pn	Pn	15 39 49.1	+2.7
MLR	Muntele Rosu	12.24	305	LR	LR	15 45 34.6	
	comp=N,196nm,21.1s,baz=131,slow=39						
IDI	Anoyia	12.83	257	LR	LR	15 46 31.0	
	comp=N,190nm,21.6s,baz=68,slow=41						
AKASG	Malin Array Be	13.81	329	Pn	Pn	15 41 00.7	+2.0
	comp=N,0.7nm,0.3s,baz=136,slow=13,SNR=8.5						
AKASG				Sn	Sn	15 43 29.4	-3.1
	comp=N,0.1nm,0.3s,baz=136,slow=24,SNR=6.0						
BELG	Belogornoye	14.10	19	Pn	Pn	15 41 03.6	+1.0
	comp=N,0.4nm,0.3s,baz=160,slow=4.4,SNR=5.9						
BELG				LR	LR	15 46 53.8	
	comp=N,98nm,20.8s,baz=105,slow=39						
RAYN	Ar Rayn	16.32	162	Pn	Pn	15 41 30.1	-2.4
AKTO	Aktyubinsk	16.81	43	Pn	P	15 41 39.8	-0.9
	comp=N,0.4nm,0.3s,baz=238,slow=9.8,SNR=18						
AKTO				LR	LR	15 49 56.7	
	comp=N,162nm,18.3s,baz=222,slow=44						
ABKAR	Akbulak array	17.26	48		P	15 41 44.4	-1.3
MASF	Masafi	19.29	131	P	Pn	15 42 11.4	+2.2
NAZ	Nazwa, Dubai	19.30	133	P	Pn	15 42 11.7	+2.5
ASUD	Al Ashush, Dub	19.39	134	P	Pn	15 42 09.3	-1.1
ASUD				P	Pn	15 42 09.3	-1.1
MDH	Madha	19.42	131	P	Pn	15 42 12.6	+1.9
MDH				P	Pn	15 42 12.6	+1.9
VRAC	Vranov	19.59	309	LR	LR	15 49 47.6	
	comp=N,99nm,18.9s,baz=170,slow=37						
UOSS	Minazif	19.64	132	P	Pn	15 42 12.5	-0.8
UOSS	Minazif	19.64	132	P	P	15 42 08.9	-3.0
UOSS				IAmb	IAmb	15 42 17.2	
	comp=Z,21nm,0.9s						
HATD	Hatta, Dubai	19.69	132	P	Pn	15 42 15.1	+1.1
	SNR=6.3						
ASHO	Ashiyiah	19.76	133	P	Pn	15 42 15.6	+0.8
	SNR=10.0						
ALNE	Al Ain	20.08	134	P	Pn	15 42 18.9	+0.3
DPC	Dobruska-Polom	20.16	311	*e*P	Pn	15 42 25.8	+6.4
KIRV	Kirov	20.23	14	P	Pn	15 42 19.1	-0.8
	comp=Z,17nm,0.9s,baz=4.3,slow=5.5,SNR=6.6						
KIRV				LR	LR	15 50 04.4	
	comp=Z,130nm,20.7s,baz=193,slow=37						
SOHO	SOHO	20.45	133	P	Pn	15 42 23.4	+0.5
UMZA	Um Al Zommool	20.84	138	P	Pn	15 42 25.7	-1.8
ARU	Arti	21.02	29	P	P	15 42 26.5	-0.2
	comp=Z,2.2nm,0.7s,baz=217,slow=4.3,SNR=7.0						
ARQ	Araqi	21.07	134	P	P	15 42 27.6	0.0
ARQ				P	P	15 42 27.6	0.0
ZOU	Zoufplan	21.17	299	P	P	15 42 27.6	-1.1
ZOU				IAmb	IAmb	15 42 35.8	
	comp=Z,13nm,1.2s						
GERES	GERESS Array B	21.23	305	P	P	15 42 32.5	+3.3
	comp=Z,1.0nm,0.8s,baz=116,slow=12,SNR=5.8						

GERES				LR	LR	15 52 00.1	
	comp=Z,93nm,19.3s,baz=98,slow=41						
HOQ	Hoqain	21.33	132	P	P	15 42 30.4	+0.1
	SNR=9.2						
HOQ				P	P	15 42 30.4	+0.1
	SNR=9.2						
KHC	Kasperske Hory	21.39	306	eP	P	15 42 35.6	+4.7
KHC				ex	x	15 42 43.6	
KLMR	Klimovskoe	21.62	359	eP	P	15 42 35.7	+2.6
KLMR				AMP		15 42 43.5	
	comp=Z,49nm,1.3s						
BIDO	Bidbid	21.85	131	P	P	15 42 40.9	+4.9
	SNR=5.0						
BSY	Bisya	21.92	134	P	P	15 42 37.4	+0.6
BSY				P	P	15 42 37.4	+0.6
SMDO	Samad	22.16	132	P	P	15 42 41.8	+2.4
	SNR=20						
SMDO				P	P	15 42 41.8	+2.4
	SNR=20						
WSAR	Wadi Sarin	22.36	130	P	P	15 42 44.0	+2.5
	comp=Z,3.5nm,0.7s,baz=359,slow=8.1,SNR=5.7						
CLL	Collm	22.47	311	e(P)	P	15 42 43.0	+0.6
CLL				ePPP	PPP	15 43 11.0	
WBK	Wadi Bani Khal	23.05	131	P	P	15 42 55.8	+7.1
DAVOX	Davos/Dischmat	23.31	299	P	P	15 42 51.3	-0.1
	comp=Z,1.9nm,0.6s,baz=36,slow=14,SNR=3.7						
BTK	Batken	23.53	78	P	P	15 42 52.0	-1.5
FIA1	FINESS Array S	23.86	343	P	P	15 42 55.6	-0.9
FINES	FINESS Array B	23.86	343	P	P	15 42 56.2	-0.2
	comp=Z,6.9nm,0.6s,baz=142,slow=10,SNR=19						
FINES				LR	LR	15 52 04.7	
	comp=Z,87nm,18.4s,baz=61,slow=36						
FINES	FINESS Array B	23.86	343	P	P	15 42 54.9	-1.5
KEST	Kesra	24.68	272	P	P	15 43 05.7	+1.3
	comp=Z,8.3nm,0.9s,baz=307,slow=4.6,SNR=6.5						
BVAR	Borovoye Array	24.81	46	P	P	15 43 07.3	+2.0
	comp=Z,0.7nm,0.8s,baz=243,slow=16,SNR=3.1						
SENIN	Lac Senin/Sane	25.03	297	P	P	15 43 08.0	+0.4
SENIN				IAmb	IAmb	15 43 14.2	
	comp=Z,8.3nm,1.2s						
BNI	Bardonecchia	25.40	294	P	P	15 43 11.0	+0.1
BNI				IAmb	IAmb	15 43 21.1	
	comp=Z,16nm,1.4s						
NOA	NORSAR Array B	28.22	330	LR	LR	15 55 20.2	
	comp=Z,65nm,18.8s,baz=40,slow=38						
KURBB	Kurchatov Arra	29.09	54	P	P	15 43 45.4	+1.7
	comp=Z,0.4nm,0.4s,baz=269,slow=9.0,SNR=4.3						
MKAR	Makanchi Array	31.36	62	P	P	15 44 05.6	+1.6
	comp=Z,0.7nm,0.8s,baz=259,slow=9.8,SNR=3.9						
MKAR				LR	LR	15 58 44.3	
	comp=Z,105nm,18.9s,baz=298,slow=40						
ESDC	Sonseca Array	33.84	285	P	P	15 44 25.9	0.0
	comp=Z,0.9nm,0.9s,baz=74,slow=8.2,SNR=4.8						
ESDC				LR	LR	15 59 05.4	
	comp=Z,49nm,18.1s,baz=25,slow=38						
NRIK	Noril'sk	39.10	24	P	P	15 45 10.6	+0.3
	comp=Z,1.9nm,0.6s,baz=213,slow=8.3,SNR=4.9						
NRIK	Noril'sk	39.10	24	IAmb	IAmb	15 45 18.4	
	comp=Z,6.8nm,1.2s						
TORD	Torodi Ar. Bea	42.76	243	P	P	15 45 41.3	+0.2
	comp=Z,0.5nm,0.6s,baz=26,slow=6.4,SNR=3.2						
SONM	Songino Array	47.39	57	P	P	15 46 21.1	+3.4
	comp=Z,0.3nm,0.7s,baz=323,slow=2.2,SNR=2.8						
SONM				LR	LR	16 08 38.1	
	comp=Z,169nm,19.1s,baz=272,slow=39						
CMAR	Chiang Mai Arr	54.49	95	P	P	15 47 10.9	-0.4
	comp=Z,0.7nm,1.0s,baz=295,slow=6.7,SNR=4.3						
KSRS	Korea Array	66.02	60	P	P	15 48 29.8	-0.3
	comp=Z,2.4nm,1.0s,baz=296,slow=5.1,SNR=4.2						
KSRS				LR	LR	16 20 40.7	
	comp=Z,77nm,19.8s,baz=319,slow=39						
BOSA	Boshof	68.95	194	P	P	15 48 49.2	+0.6
	comp=Z,2.1nm,0.7s,baz=34,slow=4.1,SNR=3.9						
BOSA				LR	LR	16 21 51.0	
	comp=Z,28nm,18.1s,baz=9.5,slow=38						

*NOU **04** 15:58:54.7, 14.°74S×167.°48E, h120^{km}, mb4.6/38, Vanuatu Islands*

*NEIC **04** 15:58:55.0±2.1, 14.°9S±0.°1×167.°5E±0.°1, h119^{km}±6^{km}, mb4.5/17, Error ellipse: s-maj=20.7km s-min=15.8km az=99.0*

*IDC **04** 15:58:56.4±0.8, 14.°93S×167.°28E, h127^{km}±6^{km}, mb4.1/17, mb1 4.3/19, mb1mx4.2/26, mbtmp4.5/19, MS3.2/5, Ms1 3.2/5, ms1mx3.0/22, Error ellipse: s-maj=14.2km s-min=10.3km az=96.0*

ISC 04 15:58:56.2±0.4**, 14.°89S**±0.°05×**167.°37E**±0.°07**, h129**^{km}**, n114, σ1.^{s}03**/123**, mb4.5**/54**, 1C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.57	196	Pn	Pn	15 59 13.4	-2.3
SANVU	Saraoutou	0.57	196	P	Pn	15 59 14.8	-0.8
DVP	Devils Point	2.92	165	P	Pn	15 59 41.9	+0.1
RTV	Rentapao	3.06	161	P	Pn	15 59 43.1	-0.4
LIFNC	LIFOU	5.85	181	Pn	Pn	16 00 18.9	-1.8
LIFNC	LIFOU	5.85	181	P	Pn	16 00 19.4	-1.3
	163nm,0.7s						
KOUNC	Koumac, New Ca	6.35	207	P	Pn	16 00 28.0	+0.6
	358nm,1.1s						
YATNC	Mamie plateau,	7.14	184	P	Pn	16 00 37.2	-0.9
	117nm,0.7s						
DZM	Mont Dzumac	7.19	187	ePn	Pn	16 00 39.3	+0.4
	68nm,0.3s						
DZM				eSn	Sn	16 02 02.2	+3.0
	23nm,0.3s						
DZM	Mont Dzumac	7.19	187	P	Pn	16 00 39.2	+0.3
	13nm,0.3s,baz=34,slow=2.5,SNR=183						
DZM				S	Sn	16 01 56.4	-2.9
	baz=144,slow=19,SNR=0.8						
DZM				LR	LR	16 03 16.9	
	comp=Z,305nm,18.4s,baz=28,slow=36						
DZM	Mont Dzumac	7.19	187	P	Pn	16 00 39.4	+0.5
	147nm,1.3s						
NOUC	Port Laguerre	7.24	188	P	Pn	16 00 40.6	+1.2
	136nm,1.2s						
ONTNC	Ouen Toro	7.43	187		Pn	16 00 42.5	+0.6
ONTNC	Ouen Toro	7.43	187	P	Pn	16 00 43.1	+1.2
	186nm,0.9s						
OUENC	Ouen Island, N	7.50	184		Pn	16 00 43.2	+0.2
OUENC	Ouen Island, N	7.50	184	P	Pn	16 00 44.0	+1.1
	96nm,0.7s						
PINNC	Pines Island,	7.68	179		Pn	16 00 44.8	-0.6
PINNC	Pines Island,	7.68	179	P	Pn	16 00 45.8	+0.5
	149nm,1.2s						
HNR	Honiara	9.06	306	P	Pn	16 01 05.5	+1.5
	6.6nm,0.3s,baz=165,slow=11,SNR=3.4						
HNR				S	Sn	16 02 42.3	-2.1
	4.0nm,0.3s,baz=330,slow=20,SNR=1.2						
HNR				LR	LR	16 04 11.5	
	comp=Z,140nm,18.3s,baz=160,slow=35						
MSVF	Nonsavu	10.63	107	LR	LR	16 04 39.5	
	comp=Z,68nm,19.2s,baz=303,slow=32						
RK1H	Rockhampton Ha	18.03	240	P	Pn	16 02 59.5	+0.8
	19nm,1.1s						
EIDS	Eidsvold	18.49	233		Pn	16 03 04.5	+0.4
EIDS	Eidsvold	18.49	233	P	Pn	16 03 04.8	+0.7
	56nm,1.1s						
CTA	Charters Tower	20.79	253	P	P	16 03 28.4	+1.2
	7.8nm,0.7s,baz=80,slow=11,SNR=5.1						
CTAO	Charters Tower	20.79	253	P	P	16 03 28.0	+0.7
CTAO				IAmb	IAmb	16 03 30.0	
	comp=Z,10nm,0.8s						
CTAO	Charters Tower	20.79	253	P	P	16 03 28.9	+1.6
	comp=Z,17nm,0.8s						
RMQ	Roma	20.86	233	P	P	16 03 29.4	+1.4
	comp=Z,47nm,0.8s						
OUZ	Omahuta	21.00	166	P	P	16 03 31.0	+1.6
MTSU	Mount Surprise	22.33	259	P	P	16 03 43.9	+0.3
	comp=Z,8.8nm,0.9s						
QLP	Quilpie	24.52	238	P	P	16 04 04.5	+0.7
	comp=Z,34nm,1.0s						
URZ	Urewera	24.82	162	P	P	16 04 07.4	+1.1
	comp=Z,4.8nm,0.5s,baz=119,slow=22,SNR=9.8						
URZ	Urewera	24.82	162	P	P	16 04 07.6	+1.3
	comp=Z,103nm,2.6s						
BKZ	Black Stump Fm	25.48	163	P	P	16 04 12.0	-0.4
BKZ	Black Stump Fm	25.48	163	P	P	16 04 12.4	0.0
	comp=Z,79nm,0.4s						
CMSA	Cobar Meteorol	25.83	226	P	P	16 04 16.4	+0.8
	comp=Z,9.1nm,1.2s						
KHZ	Kahutara	27.94	170	P	P	16 04 34.0	-0.3
STKA	Stephens Creek	28.96	230	P	P	16 04 44.9	+1.3
	comp=Z,8.6nm,0.7s,baz=47,slow=7.5,SNR=20						
STKA				PcP	PcP	16 07 49.0	-0.3
	comp=Z,2.4nm,0.7s,baz=68,slow=2.8,SNR=5.1						
STKA				ScP	ScP	16 11 19.1	0.0
	comp=Z,0.5nm,0.4s,baz=180,slow=2.0,SNR=3.0						
STKA	Stephens Creek	28.96	230	P	P	16 04 43.9	+0.3
STKA	Stephens Creek	28.96	230	P	P	16 04 45.1	+1.5
	comp=Z,4.0nm,1.0s						
LCRK	Leigh Creek	30.91	235	P	P	16 05 01.5	+0.7
	comp=Z,9.3nm,1.7s						
SMPI	Sarmi	31.05	292	P	P	16 05 02.7	+0.5
	comp=Z,12nm,1.5s						
HTT	Hallett	31.69	229	P	P	16 05 09.7	+2.0
	comp=Z,6.5nm,0.9s						
WRAB	Tennant Creek	31.87	256	P	P	16 05 08.6	-0.8
	comp=Z,7.7nm,2.3s						
WRA	Warramunga Arr	31.88	256	P	P	16 05 08.1	-1.4
	comp=Z,0.7nm,0.5s,baz=85,slow=9.5,SNR=14						
WRA				PcP	PcP	16 07 56.9	-0.4
	comp=Z,1.6nm,0.8s,baz=89,slow=3.0,SNR=7.8						
WRA				ScP	ScP	16 11 29.7	+0.8
	comp=Z,1.0nm,0.8s,baz=85,slow=3.6,SNR=7.3						
WRA				LR	LR	16 18 27.2	
	comp=Z,44nm,18.1s,baz=180,slow=37						
WRA	Warramunga Arr	31.88	256	P	P	16 05 08.8	-0.7
OOD	Oodnadatta	32.08	241	P	P	16 05 11.6	+0.6
	comp=Z,6.5nm,0.8s						
AS31	Alice Springs	32.71	249	P	P	16 05 16.0	-0.7
ASAR	Alice Springs	32.71	249	P	P	16 05 15.9	-0.8
	comp=Z,4.0nm,0.7s,baz=79,slow=9.0,SNR=30						
ASAR				PcP	PcP	16 07 59.1	-0.4
	comp=Z,1.1nm,0.5s,baz=78,slow=2.4,SNR=9.2						
ASAR				S	S	16 10 21.6	-2.3
	comp=Z,1.2nm,1.1s,baz=76,slow=16,SNR=6.3						
ASAR				ScP	ScP	16 11 33.0	+1.4
	comp=Z,1.6nm,0.9s,baz=96,slow=3.4,SNR=8.8						
ASAR	Alice Springs	32.71	249	P	P	16 05 15.2	-1.5
BBOO	Buckleboo	33.56	232	P	P	16 05 23.5	-0.4
BBOO				IAmb	IAmb	16 05 29.3	
	comp=Z,7.1nm,0.8s						
BBOO	Buckleboo	33.56	232	P	P	16 05 24.7	+0.8
	comp=Z,12nm,1.4s						
MULG	Mulgathing	34.20	238	P	P	16 05 29.7	+0.2
	comp=Z,9.2nm,1.1s						
KNRA	Kununurra	37.22	264	P	P	16 05 54.7	-0.7
KNRA				IAmb	IAmb	16 05 55.8	
	comp=Z,8.9nm,1.1s						
KNRA	Kununurra	37.22	264	P	P	16 05 54.8	-0.7
	comp=Z,9.7nm,1.7s						
WRKA	Warakurna	37.97	248	P	P	16 06 01.5	-0.2
	comp=Z,9.9nm,1.1s						
SWI	Sorong	38.30	288	P	P	16 06 04.7	+0.2
	comp=Z,16nm,0.8s						
FORT	Forrest	39.30	239	P	P	16 06 12.6	0.0
FORT	Forrest	39.30	239	P	P	16 06 13.1	+0.4
	comp=Z,25nm,2.4s						
SANI	Sanana	42.77	283	P	P	16 06 41.4	+0.1
	comp=Z,13nm,1.0s						
EDFI	Ende, Flores	45.06	272	P	P	16 06 59.4	-0.4
	comp=Z,6.7nm,1.2s						
BKSI	Bulukumba	47.39	277	P	P	16 07 18.0	+0.2
	comp=Z,5.5nm,0.9s						
KAPI	Kappang	47.82	277	LR	LR	16 28 01.4	
	comp=Z,18nm,18.7s,baz=186,slow=36						
NWAO	Narrogin (SRO)	48.75	239	P	P	16 07 27.1	-1.0
PLAI	Plampang	48.83	271	P	P	16 07 28.6	-0.3
	comp=Z,21nm,1.4s						
MPSI	Mapaga	49.31	284	P	P	16 07 32.8	+0.3
	comp=Z,16nm,1.0s						
TWSI	Taliwang, Sumb	49.71	271	P	P	16 07 36.1	+0.5
	comp=Z,16nm,0.8s						
MJAR	Matsushiro Arr	58.09	332	P	P	16 08 36.0	-0.1
	comp=Z,1.2nm,0.5s,baz=178,slow=7.9,SNR=8.4						
MAT	Matsushiro	58.10	332	P	P	16 08 35.4	-0.8
VNDA	Vanda	62.70	181	P	P	16 09 06.9	+0.1
	comp=Z,3.2nm,0.5s,baz=7.5,slow=7.9,SNR=27						
VNDA	Vanda	62.70	181	P	P	16 09 06.9	+0.1
VNDA				IAmb	IAmb	16 09 08.8	
	comp=Z,4.1nm,0.8s						
KSRS	Korea Array	63.93	326	P	P	16 09 16.0	+0.5
	comp=Z,2.5nm,0.9s,baz=132,slow=6.2,SNR=6.1						
NJ2	Nanjing	65.86	316	eP	P	16 09 29.0	+0.9
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USRK	Ussuriysk Ar.	67.08	333	P	P	16 09 36.9	+1.3
	comp=Z,3.7nm,0.7s,baz=137,slow=6.1,SNR=7.0						
PETK	Petropavlovsk-	68.23	354	P	P	16 09 43.0	+0.4
	comp=Z,14nm,0.9s,baz=179,slow=7.3,SNR=9.0						
CN2	Changchun	69.84	329	eP	P	16 09 53.3	+0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN	Xi'an	73.87	313	P	P	16 10 17.4	+0.2
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN				pmax	pmax		
	comp=Z,150nm,5.2s						
CMAR	Chiang Mai Arr	75.11	294	P	P	16 10 25.8	+1.2
	comp=Z,3.4nm,0.9s,baz=126,slow=4.5,SNR=21						
CMAR				pP	pP	16 10 55.5	-0.9
	comp=Z,1.6nm,0.9s,baz=134,slow=5.2,SNR=2.3						
CMAR	Chiang Mai Arr	75.11	294	P	P	16 10 25.4	+0.8
QSPA	South Pole Qui	75.14	180	P	P	16 10 22.4	-1.7
QSPA				IAmb	IAmb	16 10 24.8	
	comp=Z,9.0nm,0.8s						
HHC	Hu-ho-hao-te	75.77	320	eP	P	16 10 29.9	+1.8
HHC				pmax	pmax		
	comp=Z,26nm,1.1s						
HHC				pmax	pmax		
	comp=Z,87nm,5.4s						
MAW	Mawson	81.77	202	P	P	16 11 00.5	+0.3
	comp=Z,4.5nm,0.8s,baz=97,slow=8.1,SNR=3.0						
ULN	Ulaanbaatar	82.33	324	P	P	16 11 03.7	0.0
SONM	Songino Array	82.69	324	P	P	16 11 05.9	+0.4
	comp=Z,3.0nm,0.7s,baz=150,slow=7.0,SNR=24						
BILL	Bilibino	82.71	360	P	P	16 11 05.4	+0.4
BILL				IAmb	IAmb	16 11 06.5	
	comp=Z,7.0nm,0.9s						
GTA	Gaotai	82.85	314	⇑P	P	16 11 07.1	+0.5
GTA				pP	pP	16 11 40.0	+1.2
GTA				sP	sP	16 11 53.9	+1.6
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
J20K	Nowinta River	84.15	16	P	P	16 11 12.9	+0.5
J20K				IAmb	IAmb	16 11 13.7	
	comp=Z,4.7nm,0.7s						
TRF	Thorofare Moun	84.66	18	P	P	16 11 14.0	-1.3
TRF				IAmb	IAmb	16 11 15.4	
	comp=Z,6.5nm,0.8s						
IL31		86.65	18	P	P	16 11 23.8	-1.0
IL31				IAmb	IAmb	16 11 24.9	
	comp=Z,5.1nm,0.9s						
ILAR	Eielson Array	86.65	18	P	P	16 11 23.6	-1.2
	comp=Z,3.5nm,0.7s,baz=240,slow=4.7,SNR=39						
ILAR				pP	pP	16 11 58.5	+1.4
	comp=Z,1.3nm,0.8s,baz=238,slow=4.8,SNR=3.2						
TAPN	Taplejung	87.84	299	eP	P	16 11 29.5	-2.3
	comp=Z,8.5nm,0.5s						
ODAN	Odare	87.97	298	eP	P	16 11 31.9	-0.4
	comp=Z,17nm,0.6s						
RAMN	Ramite	88.67	298	eP	P	16 11 35.4	-0.3
	comp=Z,9.0nm,0.4s						
GUN	Gumba	89.56	299	eP	P	16 11 38.0	-2.0
PKI	Pulchoki	89.86	298	eP	P	16 11 40.6	-0.7
	comp=Z,3.7nm,0.5s						
PKIN	Phulchoki	89.87	298	eP	P	16 11 40.4	-0.9
	comp=Z,6.5nm,0.5s						
GKN	Gorkha	90.64	299	eP	P	16 11 43.7	-1.0
	comp=Z,7.2nm,0.5s						
DANN	Dangsing	91.48	299	eP	P	16 11 47.1	-1.7
	comp=Z,7.9nm,0.6s						
WMQ	Urumqi	92.91	315	eP	P	16 11 55.9	+1.1
SNAA	Sanae	93.39	183	P	P	16 11 55.2	-1.4
VNA3	Neumayer Olymp	94.05	181	P	P	16 11 57.7	-1.8
VNA2	Neumayer--Watz	94.32	182	P	P	16 11 59.5	-1.3
TXAR	Lajitas Array	96.27	61	P	P	16 12 10.9	+0.4
	comp=Z,0.3nm,0.6s,baz=226,slow=6.2,SNR=4.4						
MKAR	Makanchi Array	97.39	316	P	Pdif	16 12 15.7	+0.5
	comp=Z,3.4nm,0.7s,baz=94,slow=5.9,SNR=22						
MKAR				pP	pP	16 12 47.7	-0.2
	comp=Z,1.4nm,0.8s,baz=56,slow=11,SNR=2.9						
MKAR	Makanchi Array	97.39	316	P	P	16 12 14.7	-0.4
ZALV	Zalesovo Beam	97.58	324	P	P	16 12 15.2	-0.5
	comp=Z,3.8nm,0.7s,baz=114,slow=4.5,SNR=16						
NRIK	Noril'sk	100.26	339	P	Pdif	16 12 27.2	-0.1
	comp=Z,1.6nm,0.5s,baz=116,slow=5.3,SNR=3.9						
KURBB	Kurchatov Arra	100.63	320	P	Pdif	16 12 29.5	+0.2
	comp=Z,0.1nm,0.3s,baz=98,slow=6.7,SNR=2.1						
ARCES	ARCESS Array B	120.43	345	PKP	PKPdf	16 17 31.2	-0.6
	comp=Z,1.7nm,0.5s,baz=28,slow=2.9,SNR=10						
FINES	FINESS Array B	125.91	338	PKP	PKPdf	16 17 42.4	-0.1
	comp=Z,7.8nm,1.0s,baz=96,slow=2.8,SNR=3.5						
NOA	NORSAR Array B	130.81	345	PKP	PKiKP	16 17 53.0	+0.2
	comp=Z,0.6nm,0.6s,baz=30,slow=2.8,SNR=1.2						
GERES	GERESS Array B	139.83	333	PKhKP	PKPpre	16 18 01.7	
	comp=Z,0.4nm,0.6s,baz=31,slow=2.3,SNR=4.5						
KEST	Kesra	151.40	321	PKPbc	PKiKP	16 18 35.7	-0.1
	comp=Z,2.8nm,0.7s,baz=161,slow=5.2,SNR=2.8						
ESDC	Sonseca Array	154.17	345	PKPab	PKPab	16 18 55.9	+0.5
	comp=Z,2.4nm,0.9s,baz=18,slow=3.6,SNR=9.3						
TORD	Torodi Ar. Bea	165.99	265	PKP	PKPdf	16 18 46.8	0.0
	comp=Z,0.6nm,0.6s,baz=89,slow=1.2,SNR=4.7						
TORD				PKPab	PKPab	16 19 47.4	-0.3
	comp=Z,1.6nm,0.9s,baz=84,slow=3.4,SNR=6.0						

*ISK **04** 16:00:14.6, 39.°26N×40.°21E, h5^{km}, ML4.1/26*

*CFUSG **04** 16:00:15.0, 39.°27N×40.°21E, h5^{km}, mb3.2/1, Eastern Turkey*

*DDA **04** 16:00:15.4, 39.°28N×40.°20E, h11^{km}±3^{km}, MW4.0*

*IDC **04** 16:00:17.6±1.0, 39.°33N×39.°99E, h0^{km}, mb3.7/4, mb1 3.8/11, mb1mx3.5/41, mbtmp3.7/11, ML3.4/6, MS3.2/13, Ms1 3.2/13, ms1mx3.0/55, Error ellipse: s-maj=17.5km s-min=10.9km az=151.0*

ISC 04 16:00:16.0±1.0**, 39.°28N**±0.°02×**40.°20E**±0.°01**, h6**^{km}±8^{km}**, n88, σ1.^{s}66**/114**, mb3.9**/4**, MS3.2**/6**, 15C-7D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YEDI	Yedisu-Bingol	0.31	59	PG	Pg	16 00 22.1	0.0
YEDI				SG	Sb	16 00 27.4	-2.1
BNGB	Bingl	0.47	127	PG	Pg	16 00 24.2	-0.8
BNGB				SG	Sb	16 00 32.1	-1.8
ERZN	Erzincan	0.48	310	PG	Pb	16 00 25.5	-1.5
ERZN				SG	Sb	16 00 33.5	-0.9
TNCL	Tunceli-Merkez	0.54	253	⇑iP	Pg	16 00 25.9	-0.4
TNCL				iS	Sg	16 00 33.8	+0.5
TNCL				IAML		16 00 36.0	
	comp=N,12µm,0.4s						
TNCL				IAML		16 00 38.0	
	comp=E,19µm,0.6s						
EUZM	Uzumlu	0.58	318	⇑iP	Pg	16 00 27.0	-0.2
EUZM				iS	Sb	16 00 35.8	-1.4
EUZM				IAML		16 00 39.0	
	comp=N,5µm,0.6s						
EUZM				IAML		16 00 41.0	
	comp=E,4µm,0.4s						
KOVA	Elazig, Kovanc	0.64	208	⇓iP	Pg	16 00 28.2	-0.1
KOVA				iS	Sb	16 00 37.6	-1.3
KOVA				IAML		16 00 41.0	
	comp=E,5µm,0.8s						
KOVA				IAML		16 00 44.0	
	comp=N,5µm,0.8s						
KARO	Karliova-Bingo	0.66	87	PG	Pg	16 00 28.2	-0.5
KARO				SG	Sb	16 00 38.7	-0.9
ECAT	Cat-ERZURUM	0.69	61	⇑iP	Pg	16 00 28.6	-0.5
ECAT				iS	Sb	16 00 38.8	-1.5
ECAT				IAML		16 00 43.0	
	comp=N,2µm,0.4s						
ECAT				IAML		16 00 45.0	
	comp=E,3µm,0.6s						
SLHN	Bingol, Solhan	0.72	116	⇑iP	Pg	16 00 29.0	-0.8
SLHN				iS	Sn	16 00 42.3	-1.8
SLHN				IAML		16 00 45.0	
	comp=E,10µm,0.8s						
SLHN				IAML		16 00 46.0	
	comp=N,8µm,0.6s						
BAYB	BAYBURT	0.98	3	⇓iP	Pg	16 00 33.3	-1.5
BAYB				iS	Sn	16 00 48.6	-2.3
BAYB				IAML		16 00 55.0	
	comp=N,2µm,0.6s						
BAYB				IAML		16 00 59.0	
	comp=E,923nm,0.5s						
VRTB	Varto-Mus	0.98	96	⇑iP	Pg	16 00 33.9	-0.9
VRTB				iS	Sn	16 00 51.6	+0.8
VRTB				IAML		16 00 53.0	
	comp=E,5µm,0.8s						
VRTB				IAML		16 01 11.0	
	comp=N,4µm,1.0s						
VRTB	Varto-Mus	0.98	96	PG	Pg	16 00 33.9	-0.9
VRTB				SG	Sn	16 00 49.1	-1.7
EJDE	Erzurum, Palan	1.02	56	⇑iP	Pg	16 00 34.4	-1.2
EJDE				iS	Sn	16 00 52.5	+0.4
EJDE				IAML		16 00 53.0	
	comp=E,9µm,0.8s						
EJDE				IAML		16 00 54.0	
	comp=N,7µm,0.6s						
ERZM	Erzurum	1.10	55	⇑iP	Pg	16 00 36.6	-0.4
ERZM				iS	Sn	16 00 54.6	+0.8
BAYT	Aydıntepe-Bayb	1.12	358	PN	Pg	16 00 36.9	-0.5
BAYT				SN	Sn	16 00 54.2	0.0
SVRC	Sivrice-ELAZID	1.14	218	PN	Pb	16 00 36.9	-1.2
SVRC				SN	Sn	16 00 54.1	-0.5
KELT	Kelkit	1.14	320	iP	Pn	16 00 37.4	-1.3
KELT				iS	Sn	16 00 55.2	+0.5
KELT				IAML		16 01 02.0	
	comp=N,2µm,1.2s						
KELT				IAML		16 01 03.0	
	comp=E,2µm,1.0s						
MUSM	Mu-Merkez	1.16	118	⇑iP	Pb	16 00 36.4	-2.1
MUSM				iS	Sn	16 00 54.2	-1.0
KRIK	Erzurum-spir	1.20	28	⇓iP	Pg	16 00 39.0	0.0
KRIK				iS	Sn	16 00 57.4	+1.1
KRIK				IAML		16 01 02.0	
	comp=N,433nm,1.1s						
KRIK				IAML		16 01 05.0	
	comp=E,1µm,1.1s						
ELZG	Elazig	1.23	231	iP	Pn	16 00 38.6	-1.3
ELZG				iS	Sn	16 00 56.0	-0.8
ELZG				IAML		16 01 01.0	
	comp=E,2µm,0.7s						
ELZG				IAML		16 01 03.0	
	comp=N,3µm,0.5s						
REFA	Refahiye_ERZN	1.27	300	⇑iP	Pn	16 00 39.2	-1.3
REFA				iS	Sg	16 00 58.2	+1.2
REFA				IAML		16 01 01.0	
	comp=E,859nm,0.5s						
REFA				IAML		16 01 02.0	
	comp=N,997nm,0.7s						
ILIC	ilic-Erzincan	1.28	278	PN	Pn	16 00 39.1	-1.4
DYBB	Diyarbakir	1.32	182	PN	Pg	16 00 41.1	-0.2
KEMA	Kemaliye	1.32	270	⇑iP	Pn	16 00 39.8	-1.4
KEMA				iS	Sg	16 01 00.6	+2.0
KEMA				IAML		16 01 03.0	
	comp=E,2µm,0.5s						
KEMA				IAML		16 01 05.0	
	comp=N,2µm,0.5s						
DIYA	Diyarbakir	1.35	183	⇓iP	Pg	16 00 41.9	+0.1
DIYA				iS	Sg	16 01 02.2	+2.8
DIYA				IAML		16 01 03.0	
	comp=E,1µm,0.7s						
DIYA				IAML		16 01 07.0	
	comp=N,1µm,0.9s						
SVAN	Silvan-Diyarba	1.37	145	⇓iP	Pg	16 00 41.5	-0.7
SVAN				iS	Sg	16 01 01.2	+1.3
SVAN				IAML		16 01 08.0	
	comp=E,1µm,1.3s						
SVAN				IAML		16 01 10.0	
	comp=N,1µm,0.8s						
SVAN	Silvan-Diyarba	1.37	145	PN	Pg	16 00 41.5	-0.7
SVAN				SN	Sg	16 01 01.4	+1.5
ARPR	Arapgir-MALATY	1.46	263	PN	Pb	16 00 42.6	-1.0
ARPR				SN	Sg	16 01 04.2	+1.3
KOPR	Koprukoy-ERZUR	1.46	60	PN	Pb	16 00 43.0	-0.7
KOPR				SN	Sg	16 01 04.2	+1.2
HOMI	Horasan	1.52	59	iP	Pb	16 00 44.1	-0.7
HOMI				iS	Sg	16 01 09.5	+4.5
HOMI				IAML		16 01 17.0	
	comp=N,2µm,0.8s						
HOMI				IAML		16 01 22.0	
	comp=E,2µm,0.7s						
ALUC	Giresun/Alucra	1.53	315	⇑iP	Pg	16 00 44.4	-0.9
ALUC				iS	Sg	16 01 08.5	+3.2
GURO	Guroymak-BITLI	1.60	116	PN	Pb	16 00 44.8	-1.3
BTMN	Batman	1.62	148	⇓iP	Pg	16 00 45.9	-1.1
BTMN				iS	Sg	16 01 08.8	+0.9
BTMN				IAML		16 01 16.0	
	comp=E,2µm,0.7s						
BTMN				IAML		16 01 17.0	
	comp=N,3µm,0.6s						
MALT	Malatya	1.69	236	PN	Pb	16 00 46.3	-1.2
MALT				SN	Sg	16 01 09.5	-0.6
KTUT	Trabzon	1.74	349	PN	Pb	16 00 47.7	-0.6
HEKM	Malatya_Hekimh	1.79	258	⇑iP	Pb	16 00 48.1	-1.1

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HEKM                             i S   Sg     16 01 15.2 +1.8
HEKM                               IAML       16 01 18.0
       comp=N,2µm,0.6s
HEKM                               IAML       16 01 25.0
       comp=E,2µm,0.5s
SUSE   Susehri            1.80 302⇑i P   Pg     16 00 50.2 -0.3
SUSE                             i S   Sg     16 01 16.0 +2.2
SUSE                               IAML       16 01 19.0
       comp=E,934nm,0.4s
SUSE                               IAML       16 01 28.0
       comp=N,1µm,1.5s
MAZI   Mazidag            1.82 174   PN    Pb     16 00 48.3 -1.5
MAZI                                 SN    Sb     16 01 12.6 -0.4
MLAZ   Malazgirt-MUS      1.83  93   PN    Pb     16 00 48.3 -1.7
EATA   Eleskirt           1.87  71 i P     Pb     16 00 50.2 -0.5
EATA                               IAML       16 01 27.0
       comp=E,532nm,0.6s
EATA                               IAML       16 01 30.0
       comp=N,746nm,0.9s
CUZAR  Zara_SIVAS         1.97 289⇑i P   Pb     16 00 51.3 -1.1
CUZAR                            i S   Sg     16 01 21.9 +2.5
DDEM   Demirkent          2.01  36 i P     Pb     16 00 51.5 -1.4
DDEM                             i S   Sg     16 01 24.2 +3.8
DDEM                               IAML       16 01 27.0
       comp=E,576nm,0.6s
DDEM                               IAML       16 01 35.0
       comp=N,863nm,0.6s
AKCD   Akcadag            2.03 242⇓i P   Pb     16 00 52.1 -1.3
AKCD                             i S   Sg     16 01 22.1 +0.9
AKCD                               IAML       16 01 25.0
       comp=E,976nm,0.5s
AKCD                               IAML       16 01 28.0
       comp=N,983nm,0.7s
SENK   Senkaya-Erzuru     2.09  51   PN    Pb     16 00 52.3 -2.2
CUKAN  kangal_SIVAS       2.12 272⇑i P   Pb     16 00 53.3 -1.7
CUKAN                            i S   Sg     16 01 25.2 +1.1
URFA   Urfa               2.13 211   PN    Pb     16 00 52.7 -2.3
DARE   Darende-Malaty     2.23 252   PN    Pb     16 00 54.3 -2.5
PERV   Siirt/Pervari-     2.27 125 i P     Pb     16 00 56.1 -1.3
PERV                               IAML       16 01 38.0
       comp=E,2µm,0.9s
PERV                               IAML       16 01 39.0
       comp=N,1µm,0.5s
SANL   SANLIURFA_Merk     2.31 205 i P     Pb     16 00 55.8 -2.2
SANL                               IAML       16 01 39.0
       comp=E,994nm,0.8s
CUGUR  Gurin_SVAS         2.35 257 eP      Pb     16 00 57.6 -1.1
CUGUR                            i S   Sg     16 01 31.5 +0.1
AKDM   Akdamar-Van        2.37 113   PN    Pn     16 00 56.2 +0.6
BCA    Borcka             2.42  26   PN    Pb     16 00 57.1 -2.9
RSDY   Resadiye-TOKAT     2.48 298   PN    Pb     16 00 58.2 -2.7
SIRT   Sirnak             2.50 134   PN    Pn     16 00 57.8 +0.6
VANB   Van                2.58 104   PN    Pn     16 00 59.4 +1.0
KARS   Kars               2.59  58   PN    Pn     16 00 59.6 +1.0
CLDR   Caldiran           2.89  91   PN    Pn     16 01 03.6 +0.8
ABS    Abastumani         3.18  38   P     Pb     16 01 10.5 -2.4
ABS                                  S     Sg     16 01 54.8 -3.2
AKH    Akhalkalaki        3.30  49   P     Pg     16 01 21.2 +2.1
GNI    Garni              3.61  75   Pn    Pb     16 01 18.6 -1.7
       comp=E,1.5nm,0.3s,baz=233,slow=20,SNR=5.2
CHVG   Ch'k'valeri        3.72  22   P     Pn     16 01 12.8 -1.2
TKB    Tkibuli            3.73  34   P     Pn     16 01 17.0 +2.8
TKB                                  S     Sg     16 02 16.0 +0.1
ONI    Oni                4.13  36   P     Pb     16 01 23.5 -5.6
ONI                                  S     Sg     16 02 23.4 -5.1
DGRG   David-gareji       4.51  60   P     Pb     16 01 29.5 -6.1
GUDG   Gudauri            4.55  44   P     Pn     16 01 28.8 +3.3
PNSH   Pansheti           4.74  43   P     Pn     16 01 22.6 -5.6
KBZ    Khabaz             4.89  24   Pn    Pn     16 01 34.0 +4.0
       comp=E,0.2nm,0.3s,baz=96,slow=19,SNR=2.2
KBZ                                  LR    LR     16 03 27.7
       comp=E,149nm,20.8s,baz=296,slow=39
BRTR   Keskin Array B     5.09 277   Pn    Pn     16 01 34.7 +1.7
       comp=E,2.5nm,0.3s,baz=103,slow=14,SNR=40
BRTR                                 LR    LR     16 03 50.2
       comp=E,193nm,20.4s,baz=96,slow=43
SUDU   Sudak              6.81 327 eP      Pn     16 02 02.4 +6.0
SUDU   Sudak              6.81 327   Pm           16 02 02.9
       comp=Z,8.0nm,0.5s
MMAI   Mount Meron Ar     7.35 213   Pn    Pn     16 02 07.0 +3.1
       comp=Z,1.7nm,0.3s,baz=54,slow=16,SNR=9.9
MMAI                                 Lg    Lg     16 04 10.8
       comp=Z,0.8nm,0.3s,baz=27,slow=29,SNR=1.8
MMAI                                 LR    LR     16 04 52.9
       comp=Z,101nm,20.9s,baz=295,slow=38
ASF    Jabal al Asfar     7.58 202   Pn    Pn     16 02 09.1 +2.0
       comp=Z,0.5nm,0.3s,baz=35,slow=9.8,SNR=8.5
ASF                                  Lg    Lg     16 04 16.6
       comp=Z,0.5nm,0.3s,baz=197,slow=19,SNR=3.1
EIL    Elat              10.51 206   LR    LR     16 06 43.9
       comp=Z,135nm,18.6s,baz=316,slow=37
MLR    Muntele Rosu      12.23 305   LR    LR     16 09 03.4
       comp=Z,154nm,18.2s,baz=112,slow=44
IDI    Anoyia            12.82 257   LR    LR     16 08 13.2
       comp=Z,63nm,20.9s,baz=101,slow=38
AKASG  Malin Array Be    13.79 329   Pn    Pn     16 03 32.1 +0.2
       comp=Z,0.3nm,0.3s,baz=135,slow=14,SNR=2.7
BELG   Belogornoye       14.09  19   LR    LR     16 09 39.2
       comp=Z,102nm,21.4s,baz=150,slow=40
AKTO   Aktyubinsk        16.81  43   Pn    P      16 04 14.5 +0.5
       comp=Z,0.3nm,0.3s,baz=234,slow=11,SNR=18
KIRV   Kirov             20.22  14   LR    LR     16 13 11.2
       comp=Z,105nm,19.1s,baz=21,slow=38
ARU    Arti              21.01  29   P     P      16 05 02.7 +2.6
       comp=Z,2.6nm,0.7s,baz=238,slow=8.4,SNR=6.2
GERES  GERESS Array B    21.21 305   P     P      16 05 03.3 +0.8
       comp=Z,0.6nm,0.6s,baz=112,slow=10,SNR=5.3
GERES                                LR    LR     16 14 33.7
       comp=Z,93nm,18.3s,baz=68,slow=41
KLMR   Klimovskoe        21.61 359 e       P      16 05 13.7 +7.3
KLMR                               AMP            16 05 15.0
       comp=Z,24nm,1.3s
WSAR   Wadi Sarin        22.38 130   LR    LR     16 15 06.9
       comp=Z,108nm,18.7s,baz=340,slow=40
FINES  FINESS Array B    23.85 343   P     P      16 05 30.7 +1.0
       comp=Z,3.8nm,0.7s,baz=150,slow=8.8,SNR=9.1
KEST   Kesra             24.67 271   P     P      16 05 38.1 +0.4
       comp=Z,4.3nm,0.8s,baz=306,slow=8.0,SNR=5.6
AAK    Ala-Archa         26.01  71   LR    LR     16 17 27.0
       comp=Z,63nm,18.1s,baz=311,slow=39
NOA    NORSAR Array B    28.21 330   LR    LR     16 18 44.1
       comp=Z,29nm,20.2s,baz=20,slow=39
KSRS   Korea Array       66.03  60   LR    LR     16 42 21.7
       comp=Z,34nm,19.2s,baz=350,slow=38
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*ISK **04** 16:13:17.6, 39°.26N×40°.21E, h5km, ML3.4/24*
*DDA **04** 16:13:18.3, 39°.27N×40°.22E, h7km±2km, MW3.5*
ISC 04 16:13:18.7±1.1**, 39°.28N**±0°.02×**40°.21E**±0°.02**, h6**km±9km**,**
n47, σ0ˢ.96/72**, 9C-5D, Turkey**

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Code   Station Name        Δ°   AZ°   Phase ID          Time      Res
                                      Op    ISC        h  m  s   ISC
YEDI   Yedisu-Bingol      0.31  58   PG    Pg     16 13 25.2 +0.4
YEDI                                 SG    Sb     16 13 30.5 -1.6
BNGB   Bingl              0.46 128   PG    Pg     16 13 27.3 -0.4
BNGB                                 SG    Sb     16 13 34.9 -1.7
ERZN   Erzincan           0.49 310   PG    Pg     16 13 28.4 +0.2
ERZN                                 SG    Sb     16 13 36.6 -0.7
TNCL   Tunceli-Merkez     0.54 253⇑i P   Pg     16 13 28.9 -0.4
TNCL                             i S   Sg     16 13 36.7 +0.4
TNCL                               IAML       16 13 37.0
       comp=N,4µm,0.6s
TNCL                               IAML       16 13 39.0
       comp=E,5µm,0.4s
EUZM   Uzumlu             0.58 318⇑i P   Pg     16 13 30.1 +0.1
EUZM                             i S   Sb     16 13 40.1  0.0
KOVA   Elazig, Kovanc     0.65 209⇓i P   Pg     16 13 31.2  0.0
KOVA                             i S   Sb     16 13 40.7 -1.1
KOVA                               IAML       16 13 42.0
       comp=E,2µm,0.3s
KOVA                               IAML       16 13 47.0
       comp=N,1µm,0.8s
KARO   Karliova-Bingo     0.65  87   PG    Pg     16 13 31.3  0.0
KARO                                 SG    Sb     16 13 41.7 -0.4
ECAT   Cat-ERZURUM        0.68  61⇑i P   Pg     16 13 31.8 -0.1
ECAT                             i S   Sb     16 13 42.0 -0.9
ECAT                               IAML       16 13 44.0
       comp=N,652nm,0.4s
ECAT                               IAML       16 13 49.0
       comp=E,766nm,0.5s
SLHN   Bingol, Solhan     0.71 116⇑i P   Pg     16 13 32.0 -0.4
SLHN                             i S   Sb     16 13 43.4 -0.3
SLHN                               IAML       16 13 48.0
       comp=E,2µm,0.4s
SLHN                               IAML       16 13 52.0
       comp=N,1µm,0.4s
HANI   Diyarbakir_Han     0.87 170⇓i P   Pg     16 13 35.1 -0.4
HANI                             i S   Sb     16 13 48.8 +0.5
HANI                               IAML       16 14 00.0
       comp=N,303nm,0.5s
VRTB   Varto-Mus          0.98  96⇑i P   Pg     16 13 36.6 -0.8
VRTB                             i S   Sn     16 13 54.5 +1.1
VRTB                               IAML       16 14 00.0
       comp=E,1µm,0.7s
VRTB                               IAML       16 14 05.0
       comp=N,867nm,0.8s
VRTB   Varto-Mus          0.98  96   PG    Pg     16 13 37.2 -0.3
VRTB                                 SG    Sn     16 13 52.0 -1.4
BAYB   BAYBURT            0.98   2 i P     Pg     16 13 36.5 -1.1
BAYB                             i S   Sg     16 13 49.7 -0.7
BAYB                               IAML       16 13 58.0
       comp=N,336nm,0.5s
BAYB                               IAML       16 14 09.0
       comp=E,191nm,0.7s
EJDE   Erzurum, Palan     1.01  56⇑i P   Pg     16 13 37.6 -0.7
EJDE                             i S   Sn     16 13 53.4 -1.2
ERZM   Erzurum            1.09  55 i P     Pb     16 13 39.9 -0.3
ERZM                             i S   Sn     16 13 57.4 +0.9
BAYT   Aydıntepe-Bayb     1.12 357   PN    Pg     16 13 40.1 -0.1
KELT   Kelkit             1.14 320⇑i P   Pg     16 13 40.1 -0.5
KELT                             i S   Sn     16 13 58.3 +0.8
KELT                               IAML       16 14 05.0
       comp=N,476nm,1.4s
KELT                               IAML       16 14 06.0
       comp=E,316nm,0.9s
SVRC   Sivrice-ELAZID     1.14 218   PN    Pg     16 13 40.2 -0.4
MUSM   Mu-Merkez          1.16 118⇑i P   Pg     16 13 39.5 -1.4
MUSM                             i S   Sn     16 13 56.6 -1.1
KRIK   Erzurum-spir       1.20  27⇓i P   Pn     16 13 42.2 -0.1
KRIK                             i S   Sn     16 14 01.0 +2.0
ELZG   Elazig             1.23 231 i P     Pg     16 13 41.5 -0.8
ELZG                             i S   Sg     16 13 58.2 -0.1
ELZG                               IAML       16 14 02.0
       comp=N,630nm,0.9s
ELZG                               IAML       16 14 04.0
       comp=E,598nm,0.6s
REFA   Refahiye_ERZN      1.28 300 i P     Pn     16 13 42.9 -0.5
REFA                             i S   Sn     16 14 01.9 +0.9
REFA                               IAML       16 14 05.0
       comp=N,163nm,0.6s
REFA                               IAML       16 14 07.0
       comp=E,207nm,1.0s
ILIC   ilic-Erzincan      1.28 278   PN    Pn     16 13 42.4 -1.0
DYBB   Diyarbakir         1.32 182   PN    Pg     16 13 44.2 +0.1
KEMA   Kemaliye           1.33 270⇑i P   Pn     16 13 43.0 -1.0
KEMA                             i S   Sn     16 14 01.9 -0.2
KEMA                               IAML       16 14 07.0
       comp=E,761nm,0.6s
KEMA                               IAML       16 14 08.0
       comp=N,643nm,0.5s
DIYA   Diyarbakir         1.35 183⇓i P   Pg     16 13 45.0 +0.3
DIYA                             i S   Sn     16 14 05.0 +2.4
DIYA                               IAML       16 14 06.0
       comp=N,208nm,0.2s
DIYA                               IAML       16 14 08.0
       comp=E,249nm,0.3s
SVAN   Silvan-Diyarba     1.36 145⇓i P   Pg     16 13 44.6 -0.3
SVAN                             i S   Sn     16 14 03.7 +0.9
SVAN   Silvan-Diyarba     1.36 145   PN    Pg     16 13 44.6 -0.3
KOPR   Koprukoy-ERZUR     1.46  60   PN    Pg     16 13 46.4 -0.3
ARPR   Arapgir-MALATY     1.47 263   PN    Pb     16 13 46.1 -0.4
HOMI   Horasan            1.52  59 i P     Pn     16 13 45.8 -0.9
HOMI                             i S   Sg     16 14 10.5 +2.9
ALUC   Giresun/Alucra     1.54 314 i P     Pb     16 13 47.8  0.0
ALUC                               IAML       16 14 15.0
       comp=N,336nm,0.9s
ALUC                               IAML       16 14 28.0
       comp=E,303nm,0.9s
GURO   Guroymak-BITLI     1.60 116   PN    Pb     16 13 47.9 -0.8
BTMN   Batman             1.61 149 i P     Pb     16 13 48.8 -0.2
BTMN                             i S   Sg     16 14 11.4 +0.8
MALT   Malatya            1.69 236   PN    Pb     16 13 49.5 -0.8
KTUT   Trabzon            1.74 349   PN    Pb     16 13 50.7 -0.4
HEKM   Malatya_Hekimh     1.79 258 i P     Pb     16 13 51.6 -0.5
HEKM                               IAML       16 14 21.0
       comp=N,512nm,0.6s
HEKM                               IAML       16 14 22.0
       comp=E,611nm,0.5s
MAZI   Mazidag            1.82 174   PN    Pb     16 13 51.3 -1.3
MLAZ   Malazgirt-MUS      1.82  93   PN    Pb     16 13 51.5 -1.1
SENK   Senkaya-Erzuru     2.09  51   PN    Pn     16 13 55.3 +0.8
URFA   Urfa               2.13 211   PN    Pn     16 13 55.9 +0.9
DARE   Darende-Malaty     2.24 253   PN    Pn     16 13 57.7 +1.2
AKDM   Akdamar-Van        2.36 113   PN    Pn     16 13 59.3 +1.1
BCA    Borcka             2.42  26   PN    Pn     16 14 00.2 +1.3
RSDY   Resadiye-TOKAT     2.48 298   PN    Pn     16 14 01.1 +1.3
SIRT   Sirnak             2.49 135   PN    Pn     16 14 01.1 +1.1
CLDR   Caldiran           2.88  91   PN    Pn     16 14 06.7 +1.2
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*INET **04** 16:29:24.4, 13°.00N×89°.23W, h15km, MW3.7*
*NEIC **04** 16:29:26.2±1.4, 13°.11N±0°.07×89°.13W±0°.03, h37km±73km, Md4.0(SNET), Error ellipse: s-maj=10.8km s-min=4.1km az=169.0*
ISC 04 16:29:24.8±1.4**, 13°.02N**±0°.06×**89°.25W**±0°.04**, h28**km±12km**,**
n55, σ0ˢ.55/78**, 2C-12D, El Salvador**

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Code   Station Name        Δ°   AZ°   Phase ID          Time      Res
                                      Op    ISC        h  m  s   ISC
LALI   Alcalda de L       0.47 351⇓eP    Pn     16 29 35.6 -0.1
LALI                               eS      Sn     16 29 43.1  0.0
LALI                                 IAML         16 29 43.3
       comp=Z,2µm,0.2s
LALI   Alcalda de L       0.47 351⇓eP    Pn     16 29 35.6 -0.1
LALI                               eS      Sn     16 29 43.1  0.0
LALI                                 IAML         16 29 43.3
       comp=Z,2µm,0.2s
LFRS   El Faro            0.62  17 eP      Pn     16 29 37.6 -0.4
LFRS   El Faro            0.62  17 eP      Pn     16 29 37.6 -0.4
SJTE   Alcalda de S       0.63  21⇓eP    Pn     16 29 37.6 -0.4
SJTE                               eS      Sn     16 29 47.3 +0.1
SJTE   Alcalda de S       0.63  21⇓eP    Pn     16 29 37.6 -0.4
SJTE                               eS      Sn     16 29 47.3 +0.1
JAYA   Jayaque - finc     0.66 343⇓eP    Pb     16 29 38.0  0.0
JAYA                               eS      Sb     16 29 47.9 +0.9
JAYA                                 IAML         16 29 48.7
       comp=Z,15µm,0.2s
JAYA   Jayaque - finc     0.66 343⇓eP    Pb     16 29 38.0  0.0
JAYA                               eS      Sb     16 29 47.9 +0.9
JAYA                                 IAML         16 29 48.7
       comp=Z,15µm,0.2s
SNET   Serv Nac Est T     0.66   1 eP      Pb     16 29 38.1 +0.2
SNET   Serv Nac Est T     0.66   1 eP      Pb     16 29 38.1 +0.2
SNET   Serv Nac Est T     0.66   1   Pn    Pb     16 29 38.0  0.0
OPAM   Oficina de Pla     0.69   4 eP      Pb     16 29 38.5 +0.1
OPAM                               eS      Sn     16 29 49.0 +0.4
OPAM                                 IAML         16 29 55.8
       comp=Z,4µm,0.4s
OPAM   Oficina de Pla     0.69   4 eP      Pb     16 29 38.5 +0.1
OPAM                               eS      Sn     16 29 49.0 +0.4
OPAM                                 IAML         16 29 55.8
       comp=Z,4µm,0.4s
COEG   Centro de Oper     0.69  31 eP      Pn     16 29 38.4 -0.4
COEG                               eS      Sn     16 29 48.6 -0.1
COEG                                 IAML         16 29 55.8
       comp=Z,3µm,0.3s
COEG   Centro de Oper     0.69  31 eP      Pn     16 29 38.4 -0.4
COEG                               eS      Sn     16 29 48.6 -0.1
COEG                                 IAML         16 29 55.8
       comp=Z,3µm,0.3s
BOQS   Boqueron           0.71 357⇓eP    Pb     16 29 39.0 +0.2
BOQS   Boqueron           0.71 357⇓eP    Pb     16 29 39.0 +0.2
ALJI   Alcalda de J       0.72  65 eP      Pn     16 29 39.0 -0.1
ALJI                               eS      Sn     16 29 50.0 +0.7
ALJI   Alcalda de J       0.72  65 eP      Pn     16 29 39.0 -0.1
ALJI                               eS      Sn     16 29 50.0 +0.7
LFU    La Fuente          0.73  10 eP      Pn     16 29 39.4  0.0
LFU    La Fuente          0.73  10 eP      Pn     16 29 39.4  0.0
LBRS   Las Brisas         0.74  15 eP      Pn     16 29 39.5  0.0
LBRS   Las Brisas         0.74  15 eP      Pn     16 29 39.5  0.0
PAVA   Las Pavas          0.75  23 eP      Pn     16 29 39.4 -0.3
PAVA                               eS      Sn     16 29 50.5 +0.4
PAVA                                 IAML         16 29 51.6
       comp=Z,2µm,0.2s
PAVA   Las Pavas          0.75  23 eP      Pn     16 29 39.4 -0.3
PAVA                               eS      Sn     16 29 50.5 +0.4
PAVA                                 IAML         16 29 51.6
       comp=Z,2µm,0.2s
CEDA   San Andres         0.79 349 eP      Pb     16 29 39.7 -0.4
CEDA                               eS      Sn     16 29 51.3 +0.3
CEDA                                 IAML         16 29 58.8
       comp=Z,4µm,0.3s
CEDA   San Andres         0.79 349 eP      Pb     16 29 39.7 -0.4
CEDA                               eS      Sn     16 29 51.3 +0.3
CEDA                                 IAML         16 29 58.8
       comp=Z,4µm,0.3s
SCLA   Alcaldia de Sa     0.84  37 eP      Pn     16 29 40.8 -0.1
SCLA                               eS      Sn     16 29 53.0 +0.6
SCLA   Alcaldia de Sa     0.84  37 eP      Pn     16 29 40.8 -0.1
SCLA                               eS      Sn     16 29 53.0 +0.6
CEVE   Cerro Verde        0.88 335 eP      Pb     16 29 41.1 -0.7
CEVE                                 IAML         16 30 06.0
       comp=Z,5µm,0.2s
CEVE   Cerro Verde        0.88 335 eP      Pb     16 29 41.1 -0.7
CEVE                                 IAML         16 30 06.0
       comp=Z,5µm,0.2s
SBLS   San Blas           0.89 336 eP      Pb     16 29 41.2 -0.7
SBLS   San Blas           0.89 336 eP      Pb     16 29 41.2 -0.7
SNJE   San Jose           0.91 337 eP      Pb     16 29 41.5 -0.8
SNJE   San Jose           0.91 337 eP      Pb     16 29 41.5 -0.8
TACO   Tacachico          0.95 354⇓eP    Pn     16 29 42.0 -0.3
TACO   Tacachico          0.95 354⇓eP    Pn     16 29 42.0 -0.3
RTR    El Retiro          0.95 336 eP      Pn     16 29 42.2 -0.3
RTR    El Retiro          0.95 336 eP      Pn     16 29 42.2 -0.3
PACA   Pacayal            1.00  63 eP      Pb     16 29 43.4 -0.3
PACA                               eS      Sn     16 29 57.5 +1.1
PACA                                 IAML         16 30 02.7
       comp=Z,2µm,0.3s
PACA   Pacayal            1.00  63 eP      Pb     16 29 43.4 -0.3
PACA                               eS      Sn     16 29 57.5 +1.1
PACA                                 IAML         16 30 02.7
       comp=Z,2µm,0.3s
SLOZ   Alcaldia de Sa     1.13 332 eP      Pn     16 29 44.5 -0.2
SLOZ                               eS      Sn     16 29 59.6 +0.2
LCND   La Caada           1.35  78⇑eP    Pn     16 29 48.0 +0.2
LCND                               eS      Sb     16 30 05.6 -0.8
LCND                                 IAML         16 30 08.0
       comp=Z,5µm,0.3s
LCND   La Caada           1.35  78⇑eP    Pn     16 29 48.0 +0.2
LCND                               eS      Sb     16 30 05.6 -0.8
LCND                                 IAML         16 30 08.0
       comp=Z,5µm,0.3s
MTO3   Montecristo        1.38 355⇓eP    Pn     16 29 48.2 -0.2
MTO3   Montecristo        1.38 355⇓eP    Pn     16 29 48.2 -0.2
MTO3   Montecristo        1.38 355   Pn    Pn     16 29 48.1 -0.2
ESQI   Esquipulas         1.53 357   Pn    Pn     16 29 50.6 +0.2
CRIN   San Cristobal      2.16  98   Pn    Pn     16 29 58.8 -0.2
TGUH   Tegucigalpa,Un     2.18  62   Pn    Pn     16 29 59.5 +0.2
MATN   Matagalpa          3.24  91   Pn    Pn     16 30 11.6 -2.2
BOAB   BOACO BROADBAN3.54  99   Pn    Pn     16 30 16.8 -1.1
CAO2   Cobano, Puntar     5.24 129   Pn    Pn     16 30 42.6 +1.3
RIMA   Rio Macho          6.19 121   Pn    Pn     16 30 54.9 +0.4
SRBA   San Rafael, Bu     6.89 123   Pn    Pn     16 31 04.0 -0.2
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*IDC **04** 16:31:04.1±1.4, 7°.33S×154°.82E, h0km, mb4.0/8, mb1 4.2/9, mb1mx3.8/33, mbtmp4.1/9, ML2.0/1, MS2.7/3, Ms1 2.7/3, ms1mx2.6/27, Error ellipse: s-maj=49.1km s-min=21.4km az=125.0*
ISC 04 16:31:09.7±1.3**, 7°.3S**±0°.2×**154°.7E**±0°.2**, h35**km**, n12,**
σ0ˢ.70/13**, mb4.0**/8**, Bougainville-Solomon Islands region**

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Code   Station Name        Δ°   AZ°   Phase ID          Time      Res
                                      Op    ISC        h  m  s   ISC
HNR    Honiara            5.56 112   LR    LR     16 34 37.5
       comp=Z,62nm,19.9s,baz=210,slow=39
PMG    Port Moresby       7.77 254   Pn    Pn     16 33 00.7 +0.4
       1.1nm,0.3s,baz=5.6,slow=15,SNR=4.0
PMG                                  Sn    Sn     16 34 26.6 -0.6
       0.6nm,0.3s,baz=67,slow=15,SNR=1.9
PMG                                  LR    LR     16 35 11.9
       comp=Z,38nm,18.9s,baz=60,slow=32
WRA    Warramunga Arr    23.41 236   P     P      16 36 15.0 -0.8
       3.5nm,0.7s,baz=59,slow=9.6,SNR=43
WRA                                  PcP   PcP    16 40 03.0 +1.3
       0.5nm,0.6s,baz=62,slow=2.5,SNR=6.6
WRA                                  LR    LR     16 43 45.3
       comp=Z,33nm,21.4s,baz=35,slow=32
ASAR   Alice Springs     25.76 229   P     P      16 36 37.1 -0.2
       1.5nm,0.9s,baz=58,slow=9.3,SNR=18
PETK   Petropavlovsk-    60.26   2   P     P      16 41 14.3 -0.1
       5.9nm,1.1s,baz=186,slow=12,SNR=2.1
CMAR   Chiang Mai Arr    60.70 296   P     P      16 41 18.8 +0.7
       0.8nm,0.8s,baz=125,slow=5.3,SNR=6.8
SONM   Songino Array     69.48 327   P     P      16 42 14.8 +0.1
       0.8nm,0.5s,baz=134,slow=4.1,SNR=6.4
MKAR   Makanchi Array    83.49 319   P     P      16 43 34.4 +0.4
       1.6nm,0.8s,baz=99,slow=6.9,SNR=9.3
ILAR   Eielson Array     83.78  22   P     P      16 43 34.4 -0.7
       0.8nm,0.8s,baz=233,slow=5.4,SNR=8.6
ZALV   Zalesovo Beam     84.31 326   P     P      16 43 37.1 -0.9
       1.3nm,0.5s,baz=113,slow=5.8,SNR=7.2
GERES  GERESS Array B   127.21 329   PKP   PKiKP  16 50 10.9 -0.3
       0.2nm,0.5s,baz=316,slow=4.1,SNR=1.7
TORD   Torodi Ar. Bea   152.86 284   PKPbc PKiKP  16 51 04.5 +0.1
       1.3nm,0.7s,baz=48,slow=2.0,SNR=7.7
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*IDC **04** 16:40:57.7±1.1, 41°.70N×29°.08W, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/48, mbtmp3.7/9, ML4.1/1, MS3.5/18, Ms1 3.5/18, ms1mx3.3/42, Error ellipse: s-maj=39.3km s-min=18.3km az=21.0*
ISC 04 16:40:59.1±1.1**, 41°.7N**±0°.2×**29°.1W**±0°.1**, h10**km**, n21,**
σ0ˢ.78/9**, mb3.7**/8**, MS3.5**/17**, Azores Islands region**

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Code   Station Name        Δ°   AZ°   Phase ID          Time      Res
                                      Op    ISC        h  m  s   ISC
ESDC   Sonseca Array     19.12  88   P     Pn     16 45 23.3 +0.1
       0.1nm,0.3s,baz=286,slow=9.2,SNR=2.6
ESDC                                 LR    LR     16 51 24.9
       comp=Z,190nm,19.6s,baz=280,slow=33
MDT    Midelt            21.34 107   P     P      16 45 46.1 -0.3
       0.7nm,0.3s,baz=288,slow=9.6,SNR=1.9
MDT                                  LR    LR     16 52 08.0
       comp=Z,109nm,20.9s,baz=318,slow=31
SCHQ   Schefferville     27.98 311   LR    LR     16 55 17.6
       comp=Z,124nm,21.8s,baz=61,slow=31
DAVOX  Davos/Dischmat    28.14  66   LR    LR     16 56 18.1
       comp=Z,137nm,18.5s,baz=303,slow=33
KEST   Kesra             30.37  89   LR    LR     16 58 54.7
       comp=Z,117nm,18.2s,baz=226,slow=35
GERES  GERESS Array B    30.59  62   LR    LR     16 58 20.4
       comp=Z,111nm,18.4s,baz=316,slow=34
NOA    NORSAR Array B    31.01  38   LR    LR     16 58 10.8
       comp=Z,24nm,20.9s,baz=25,slow=33
TORD   Torodi Ar. Bea    39.05 128   P     P      16 48 26.6 +0.3
       0.7nm,0.9s,baz=321,slow=7.4,SNR=3.2
TORD                                 LR    LR     17 03 31.4
       comp=Z,31nm,18.1s,baz=15,slow=35
AKASG  Malin Array Be    40.37  57   P     P      16 48 37.3 +0.5
       0.7nm,0.7s,baz=278,slow=9.2,SNR=2.9
AKASG                                LR    LR     17 03 29.7
       comp=Z,85nm,20.9s,baz=340,slow=34
DBIC   Dimbokro          40.99 142   LR    LR     17 04 42.5
       comp=Z,51nm,18.2s,baz=352,slow=35
ULM    Lac du Bonnet     45.77 305   LR    LR     17 07 11.7
       comp=Z,95nm,18.4s,baz=67,slow=34
BRTR   Keskin Array B    46.62  71   LR    LR     17 08 14.6
       comp=Z,40nm,20.1s,baz=330,slow=35
KBZ    Khabaz            51.34  62   LR    LR     17 12 02.5
       comp=Z,34nm,18.1s,baz=198,slow=36
INK    Inuvik            56.91 335   P     P      16 50 43.9  0.0
       1.3nm,0.8s,baz=101,slow=5.2,SNR=3.6
PDAR   Pinedale Array    57.35 300   P     P      16 50 47.1 -0.5
       1.0nm,0.8s,baz=64,slow=10,SNR=9.5
PDAR                                 LR    LR     17 13 36.7
       comp=Z,57nm,21.0s,baz=48,slow=34
TXAR   Lajitas Array     60.22 284   P     P      16 51 07.6  0.0
       1.0nm,0.8s,baz=66,slow=7.6,SNR=11
TXAR                                 LR    LR     17 15 55.5
       comp=Z,28nm,18.1s,baz=0.0,slow=35
ILAR   Eielson Array     63.31 335   P     P      16 51 29.1 +1.3
       0.5nm,0.8s,baz=41,slow=7.7,SNR=5.2
SIV    San Ignacio       64.59 214   LR    LR     17 17 36.3
       comp=Z,40nm,18.9s,baz=285,slow=34
LPAZ   La Paz            68.07 221   LR    LR     17 17 55.5
       comp=Z,63nm,21.6s,baz=48,slow=33
MKAR   Makanchi Array    72.88  42   P     P      16 52 27.0 -1.1
       0.5nm,0.7s,baz=333,slow=5.0,SNR=1.8
BOSA   Boshof            86.09 134   LR    LR     17 28 33.5
       comp=Z,28nm,21.6s,baz=350,slow=33
```

ISK ***04*** *16:50:42.6, 39°.30N×40°.23E, h2^{km}, ML2.5/7*
DDA ***04*** *16:50:43.0, 39°.29N×40°.09E, h24^{km}±24^{km}, ML2.0*
ISC 04 16:50:42.9±1.1**, 39°.29N**±0°.04×**40°.18E**±0°.03**, h11**^{km}±15^{km}**,**
n10, σ0^{s}.51/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YEDI	**Yedisu-Bingol**	**0.32**	**63**	PG	**Pg**	**16 50 49.3**	**-0.1**
YEDI				SG	**Sg**	**16 50 53.9**	**+0.1**
ERZN	**Erzincan**	**0.46**	**310**	PG	**Pb**	**16 50 52.6**	**-0.5**
ERZN				SG	**Sb**	**16 51 00.7**	**+0.7**
TNCL	**Tunceli-Merkez**	**0.52**	**250**	*i* P	**Pg**	**16 50 53.3**	**+0.1**
TNCL				*i* S	**Sb**	**16 51 01.4**	**-0.4**
TNCL				IAML		16 51 03.0	
	comp=E,212nm,0.3s						
TNCL				IAML		16 51 04.0	
	comp=N,153nm,0.3s						
EUZM	**Uzumlu**	**0.56**	**318**	*i* P	**Pb**	**16 50 54.1**	**-0.6**
EUZM				IAML		16 51 05.0	
	comp=E,54nm,0.2s						
EUZM				IAML		16 51 08.0	
	comp=N,37nm,0.2s						
KOVA	**Elazig, Kovanc**	**0.65**	**206**	*i* P	**Pb**	**16 50 56.1**	**-0.2**
KOVA				IAML		16 51 06.0	
	comp=E,211nm,0.3s						
KOVA				IAML		16 51 06.0	
	comp=N,121nm,0.2s						
KOVA				*i* S	**Sb**	**16 51 06.0**	**+0.6**
KARO	**Karliova-Bingo**	**0.68**	**88**	PG	**Pg**	**16 50 55.7**	**-0.4**
KARO				SG	**Sg**	**16 51 05.5**	**+0.5**
ARPR	**Arapgir-MALATY**	**1.44**	**263**	PN	**Pg**	**16 51 11.3**	**+0.6**
KOPR	**Koprukoy-ERZUR**	**1.47**	**61**	PN	**Pb**	**16 51 10.5**	**+0.1**
GURO	**Guroymak-BITLI**	**1.63**	**117**	PN	**Pb**	**16 51 12.8**	**-0.2**
MALT	**Malatya**	**1.68**	**235**	PN	**Pg**	**16 51 14.6**	**-0.6**

IDC ***04*** *17:02:47.1±1.7, 4°.76S×144°.27E, h90^{km}±15^{km}, mb4.1/15,*
mb1 4.2/19, mb1mx4.1/39, mbtmp4.4/19, MS3.3/6,
Ms1 3.3/6, ms1mx3.0/35, Error ellipse: s-maj=17.5km
s-min=9.5km az=58.0
NEIC ***04*** *17:02:48.7±1.6, 4°.83S±0°.06×144°.18E±0°.06, h106^{km}±5^{km},*
mb4.7/81, Error ellipse: s-maj=9.9km s-min=7.7km
az=221.0
DJA ***04*** *17:02:48.8±0.3, 5°S±4°×14°4E±°, h56^{km}±5^{km}, M4.5/17,*
mB5.1/7, mb4.8/17, MLv4.3/5, Mw(mB)4.5/7
ISC 04 17:02:47.8±0.4**, 4°.80S**±0°.05×**144°.20E**±0°.05**, h98**^{km}**, n164,**
σ1^{s}.26/161**, mb4.7**/62**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**4.16**	**303**	P	**Pn**	**17 03 48.0**	**-1.2**
	4.5nm,0.3s,baz=157,slow=9.9,SNR=24						
JAY				S	**Sn**	**17 04 38.4**	**+1.6**
	4.2nm,0.3s,baz=262,slow=5.5,SNR=3.6						
JAY	**Jayapura**	**4.16**	**303**	P	**Pn**	**17 03 49.0**	**-0.2**
MANU	**Manus Island**	**4.19**	**49**		**Pn**	**17 03 50.7**	**+1.1**
MMPI	**Merauke**	**5.25**	**226**	P	**Pn**	**17 04 03.3**	**-0.7**
	2.1nm267nm,1.2s						
PMG	**Port Moresby**	**5.44**	**147**	P	**Pn**	**17 04 06.3**	**-0.2**
	7.1nm,0.3s,baz=15,slow=4.3,SNR=19						
PMG				S	**Sn**	**17 05 07.5**	**-0.3**
	6.1nm,0.3s,baz=297,slow=22,SNR=9.1						
PMG				LR	LR	17 06 40.2	
	comp=Z,193nm,20.1s,baz=342,slow=43						
PMG	**Port Moresby**	**5.44**	**147**	Pn	**Pn**	**17 04 05.4**	**-1.2**
PMG				Sn	**Sn**	**17 05 06.8**	**-1.0**
PMG	**Port Moresby**	**5.44**	**147**	P	**Pn**	**17 04 07.4**	**+0.9**
PMG	**Port Moresby**	**5.44**	**147**	P	**Pn**	**17 04 07.4**	**+0.9**
SMPI	**Sarmi**	**6.15**	**297**	P	**Pn**	**17 04 14.6**	**-1.6**
	0.2nm28nm,0.6s						
RABL	**Rabaul**	**7.97**	**86**		**Pn**	**17 04 43.5**	**+2.5**
RABL	**Rabaul**	**7.97**	**86**	P	Pn	17 04 46.2	+5.2
SRPI	**Serui, Papua**	**8.46**	**290**	P	**Pn**	**17 04 47.2**	**-0.5**
COEN	**Coen**	**9.15**	**186**	Pn	**Pn**	**17 04 58.6**	**+1.5**
COEN				Sn	**Sn**	**17 06 38.4**	**0.0**
FAKI	**Fak Fak**	**12.07**	**278**	Pn	**Pn**	**17 05 36.4**	**-0.1**
SAUI	**Saumlaki**	**13.20**	**255**	Pn	**Pn**	**17 05 51.9**	**+0.3**
SIJI	**Sorong**	**13.49**	**286**	P	**Pn**	**17 05 54.3**	**-1.1**
	0.8nm,0.3s,baz=73,slow=10,SNR=9.1						
KDU	**Kakadu**	**13.98**	**235**	P	**Pn**	**17 06 01.6**	**-0.1**
DRS	**Darwin Rock St**	**15.17**	**239**	P	**Pn**	**17 06 17.8**	**+0.9**
	25nm,0.9s						
MTN	**Manton Dam**	**15.17**	**237**	Pn	**Pn**	**17 06 16.2**	**-0.8**
MTN				IAmb	IAmb	17 06 21.0	
	comp=Z,24nm,0.6s						
MTN	**Manton Dam**	**15.17**	**237**	P	**Pn**	**17 06 17.1**	**+0.1**
CTAO	**Charters Tower**	**15.33**	**173**		**P**	**17 06 22.5**	**+1.1**
QIS	**Mount Isa**	**16.29**	**196**	P	**P**	**17 06 31.6**	**-0.5**
HNR	**Honiara**	**16.29**	**107**	Pn	**Pn**	**17 06 30.0**	**-1.0**
HNR				IAmb	IAmb	17 06 46.8	
	comp=Z,57nm,0.8s						
LBMI	**Labuha**	**17.18**	**283**	P	**P**	**17 06 45.0**	**+3.0**
	comp=Z,1µmcomp=Z,14nm,0.4s						
WB0	**Warramunga Arr**	**17.68**	**212**	P	**P**	**17 06 47.5**	**0.0**
WB0				IAmb	IAmb	17 06 51.4	
	comp=Z,27nm,0.9s						
WR0	**Warramunga Arr**	**17.76**	**211**	P	**P**	**17 06 47.8**	**-0.5**
WR0				IAmb	IAmb	17 06 56.4	
	comp=Z,38nm,1.0s						
WRAB	**Tennant Creek**	**17.84**	**212**	P	**P**	**17 06 46.8**	**-2.4**
WRAB				IAmb	IAmb	17 06 50.4	
	comp=Z,33nm,0.8s						
WB2	**Warramunga Arr**	**17.84**	**212**		**P**	**17 06 48.5**	**-0.7**
WB2				IAmb	IAmb	17 06 50.6	
	comp=Z,30nm,0.8s						
WRA	**Warramunga Arr**	**17.85**	**212**	P	**P**	**17 06 49.5**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=34,slow=12,SNR=90						
WRA				LR	LR	17 13 55.1	
	comp=Z,79nm,19.8s,baz=30,slow=37						
WRA	**Warramunga Arr**	**17.85**	**212**	P	**P**	**17 06 48.1**	**-1.3**
SANI	**Sanana**	**18.38**	**278**	P	**Pn**	**17 06 56.8**	**+0.4**
	comp=Z,1µmcomp=Z,35nm,0.5s						
KNRA	**Kununurra**	**18.62**	**233**	P	**P**	**17 06 57.0**	**-0.8**
KNRA	**Kununurra**	**18.62**	**233**	P	**P**	**17 06 57.6**	**-0.2**
SOEI	**Soe**	**20.37**	**255**	P	Pn	17 07 20.0	+0.1
	comp=Z,1µmcomp=Z,157nm,0.9s						
SOEI	**Soe**	**20.37**	**255**	P	**P**	**17 07 18.1**	**+1.2**
SOEI	**Soe**	**20.37**	**255**	P	**P**	**17 07 18.3**	**+1.4**
BATI	**Baumata**	**21.05**	**254**	P	**P**	**17 07 25.9**	**+1.7**
	comp=Z,49nm,0.5s,baz=246,slow=0.6,SNR=16						
BATI	**Baumata**	**21.05**	**254**	P	**P**	**17 07 26.9**	**+2.7**
	comp=Z,51nm,0.8s						
AS31	**Alice Springs**	**21.22**	**207**	P	**P**	**17 07 25.9**	**0.0**
ASAR	**Alice Springs**	**21.22**	**207**	P	**P**	**17 07 25.9**	**0.0**
	comp=Z,7.7nm,0.7s,baz=37,slow=8.3,SNR=81						
ASAR				LR	LR	17 15 05.5	
	comp=Z,78nm,22.0s,baz=46,slow=35						
EIDS	**Eidsvold**	**21.49**	**163**	P	**P**	**17 07 29.3**	**+0.5**
MMRI	**Maumere**	**22.13**	**259**	P	**P**	**17 07 38.9**	**+3.2**
	comp=Z,52nm,0.5s						
FITZ	**Fitzroy Crossi**	**22.45**	**232**	P	**P**	**17 07 37.8**	**-1.1**
	comp=Z,20nm,0.8s,baz=210,slow=23,SNR=28						
EDFI	**Ende, Flores**	**22.69**	**259**	P	**P**	**17 07 42.4**	**+0.8**
	comp=Z,16nm,1.2s						
APSI	**Ampana**	**22.84**	**279**	P	**P**	**17 07 43.4**	**+0.4**
	comp=Z,304nmcomp=Z,9.5nm,0.5s						
APSI				pP	**pP**	**17 07 57.3**	**-5.2**
	comp=Z,304nmcomp=Z,9.5nm,0.5s						
BSSI	**Bau Bau, Buton**	**23.64**	**266**	P	**P**	**17 07 55.0**	**+4.6**
	comp=Z,19nm,1.0s						
BASI	**Baing, Sumba**	**24.02**	**256**	P	**P**	**17 07 56.9**	**+3.0**
	comp=Z,70nm,0.9s						
TOLI2	**Tolitoli**	**24.12**	**284**	P	**P**	**17 07 54.4**	**-0.4**
TOLI2				IAmb	IAmb	17 07 56.4	
	comp=Z,13nm,0.6s						
SANVU	**Saraoutou**	**24.96**	**117**	P	**P**	**17 08 03.0**	**+0.6**
SANVU				IAmb	IAmb	17 08 04.4	
	comp=Z,23nm,0.7s						
WBSI	**Waikabubak, Su**	**25.07**	**258**	P	**P**	**17 08 05.1**	**+1.6**
	comp=Z,80nm,0.9s						
PLAI	**Plampang**	**26.53**	**260**	P	**P**	**17 08 21.7**	**+5.1**
STKA	**Stephens Creek**	**27.04**	**185**	P	**P**	**17 08 21.5**	**+0.4**
	comp=Z,1.9nm,0.5s,baz=7.5,slow=13,SNR=3.1						
STKA				LR	LR	17 20 46.7	
	comp=Z,56nm,18.2s,baz=21,slow=40						
STKA	**Stephens Creek**	**27.04**	**185**	P	**P**	**17 08 20.2**	**-0.8**
DZM	**Mont Dzumac**	**27.55**	**131**	P	**P**	**17 08 24.9**	**-0.9**
OUENC	**Ouen Island, N**	**28.05**	**131**	P	**P**	**17 08 27.6**	**-2.5**
OUENC				IAmb	IAmb	17 08 44.9	
	comp=Z,36nm,1.3s						
BBOO	**Buckleboo**	**28.88**	**194**	P	**P**	**17 08 40.1**	**+2.7**
BBOO				IAmb	IAmb	17 09 13.2	
	comp=Z,34nm,1.6s						
PSA00	**Pilbara Seismi**	**28.90**	**233**	P	**P**	**17 08 36.1**	**-1.6**
PSA00	**Pilbara Seismi**	**28.90**	**233**	P	**P**	**17 08 37.3**	**-0.4**
PSA00				IAmb	IAmb	17 09 02.0	
	comp=Z,17nm,1.1s						
FORT	**Forrest**	**29.98**	**209**	P	**P**	**17 08 46.0**	**-1.1**
FORT				IAmb	IAmb	17 09 33.9	
	comp=Z,26nm,0.9s						
GIRL	**Giralia**	**33.96**	**236**	P	**P**	**17 09 23.0**	**+0.9**
JOW	**Kunigami**	**35.02**	**335**	LR	LR	17 22 06.9	
	comp=Z,56nm,20.8s,baz=64,slow=33						
YULB	**Yu-li**	**35.84**	**322**	P	**P**	**17 09 37.6**	**-0.8**
MORW	**Morawa**	**35.97**	**225**	P	**P**	**17 09 38.9**	**-0.4**
MORW				IAmb	IAmb	17 09 41.1	
	comp=Z,23nm,1.2s						
TPUB	**Ta-pu**	**36.19**	**321**	P	**P**	**17 09 40.2**	**-1.0**
SSLB	**Suanglung**	**36.35**	**322**	P	**P**	**17 09 41.8**	**-0.9**
YHNB	**Yeheng**	**36.76**	**324**	P	**P**	**17 09 46.8**	**+0.6**
OUZ	**Omahuta**	**40.66**	**142**	P	**P**	**17 10 20.0**	**+1.4**
OUZ				IAmb	IAmb	17 10 52.6	
	comp=Z,35nm,1.6s						
JWT	**Wachi**	**40.72**	**349**	P	**P**	**17 10 17.6**	**-1.4**
JHS	**Saijyo**	**40.94**	**346**	P	**P**	**17 10 20.0**	**-0.9**
MJAR	**Matsushiro Arr**	**41.51**	**353**	P	**P**	**17 10 25.9**	**+0.4**
MAJO	**Matsushiro**	**41.51**	**353**	P	**P**	**17 10 26.7**	**+1.2**
MJB9	**Matsu-Tunnel**	**41.51**	**353**	P	**P**	**17 10 26.5**	**+1.0**
NJ2	**Nanjing**	**43.87**	**328**	*e*P	**P**	**17 10 47.8**	**+3.2**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KSRS	**Korea Array**	**44.69**	**342**	P	**P**	**17 10 51.0**	**0.0**
	comp=Z,4.1nm,0.8s,baz=161,slow=9.9,SNR=7.9						
URZ	**Urewera**	**44.78**	**143**	P	**P**	**17 10 53.3**	**+1.5**
	comp=Z,7.3nm,1.1s,baz=127,slow=20,SNR=1.6						
URZ	**Urewera**	**44.78**	**143**	P	**P**	**17 10 52.2**	**+0.4**
BKZ	**Black Stump Fm**	**45.00**	**144**	P	**P**	**17 10 55.3**	**+1.7**
BKZ				IAmb	IAmb	17 11 33.4	
	comp=Z,22nm,1.3s						
TUWZ	**Tuamarina**	**45.13**	**148**		**P**	**17 10 54.4**	**-0.2**
BSWZ	**Blackbirch Sta**	**45.30**	**149**	P	**P**	**17 10 54.6**	**-1.3**
GSI	**Gunungsitoli**	**46.97**	**276**	P	**P**	**17 11 09.2**	**-0.2**
CM31	**Chiang Mai Arr**	**50.23**	**299**	P	**P**	**17 11 34.1**	**-0.3**
CM31				IAmb	IAmb	17 12 09.6	
	comp=Z,8.0nm,1.3s						
CMAR	**Chiang Mai Arr**	**50.23**	**299**	P	**P**	**17 11 35.9**	**+1.5**
	comp=Z,1.8nm,0.5s,baz=117,slow=6.1,SNR=29						
CMAR	**Chiang Mai Arr**	**50.23**	**299**	P	**P**	**17 11 34.7**	**+0.3**
XAN	**Xi'an**	**51.01**	**322**	P	P	17 11 53.7	+14
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**54.38**	**330**	*e*P	**P**	**17 12 08.2**	**+3.4**
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,5.9s						
KLR	**Kul'dur**	**54.89**	**350**	P	**P**	**17 12 08.0**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=202,slow=5.4,SNR=2.4						
LZH	**Lanzhou**	**55.50**	**320**	*e*P	**P**	**17 12 12.1**	**-1.0**
PETK	**Petropavlovsk-**	**58.81**	**9**	P	**P**	**17 12 35.5**	**-0.4**
	comp=Z,4.6nm,0.8s,baz=162,slow=6.5,SNR=6.2						
PETK	**Petropavlovsk-**	**58.81**	**9**	P	**P**	**17 12 35.4**	**-0.5**
SONM	**Songino Array**	**62.03**	**332**	P	**P**	**17 12 58.4**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=162,slow=7.6,SNR=5.8						
SONM	**Songino Array**	**62.03**	**332**	P	**P**	**17 12 58.0**	**0.0**
TAPN	**Taplejung**	**63.17**	**304**	*e*P	**P**	**17 13 05.8**	**-0.4**
ODAN	**Odare**	**63.26**	**303**	*e*P	**P**	**17 13 07.1**	**+0.4**
GUN	**Gumba**	**64.88**	**304**	*e*P	**P**	**17 13 18.0**	**+0.5**
	comp=Z,6.7nm,0.6s						
PKI	**Pulchoki**	**65.16**	**303**	*e*P	**P**	**17 13 19.2**	**-0.1**
PKIN	**Phulchoki**	**65.17**	**303**	*e*P	**P**	**17 13 19.0**	**-0.3**
KKN	**Kakani**	**65.34**	**303**	*e*P	**P**	**17 13 20.8**	**+0.5**
	comp=Z,9.3nm,0.7s						
DMN	**Daman**	**65.42**	**303**	*e*P	**P**	**17 13 21.5**	**+0.6**
GKN	**Gorkha**	**65.95**	**303**	*e*P	**P**	**17 13 24.6**	**+0.5**
KOLN	**Koldanda**	**66.73**	**303**	*e*P	**P**	**17 13 29.7**	**+0.5**
	comp=Z,15nm,0.9s						
DANN	**Dangsing**	**66.79**	**303**	*e*P	**P**	**17 13 29.9**	**+0.2**
PYUN	**Piuthan**	**67.35**	**303**	*e*P	**P**	**17 13 32.9**	**-0.2**
	comp=Z,6.4nm,0.6s						
WMQ	**Urumqi**	**70.08**	**320**	*e*P	**P**	**17 13 51.1**	**+1.5**
UNV	**Unalaska Valle**	**71.45**	**28**	P	**P**	**17 13 57.4**	**-0.1**
MK31	**Makanchi Array**	**74.81**	**321**	P	**P**	**17 14 17.4**	**-0.2**
MKAR	**Makanchi Array**	**74.81**	**321**	P	**P**	**17 14 17.8**	**+0.2**
	comp=Z,2.2nm,0.6s,baz=98,slow=8.5,SNR=17						
MKAR	**Makanchi Array**	**74.81**	**321**	P	**P**	**17 14 17.4**	**-0.2**
MAKZ	**Makanchi**	**75.01**	**321**	P	**P**	**17 14 18.4**	**-0.3**
KDJ	**Kajisay**	**76.47**	**315**	P	**P**	**17 14 26.0**	**-1.4**
ZAA0	**Zalesovo Array**	**76.53**	**328**	P	**P**	**17 14 26.3**	**-0.8**
ZALV	**Zalesovo Beam**	**76.53**	**328**	P	**P**	**17 14 26.4**	**-0.7**
	comp=Z,3.6nm,0.6s,baz=114,slow=5.4,SNR=19						
ZALV	**Zalesovo Beam**	**76.53**	**328**	P	**P**	**17 14 26.2**	**-0.9**
TIXI	**Tiksi**	**76.97**	**355**	P	**P**	**17 14 28.8**	**-0.5**
NIL	**Nilore**	**76.97**	**306**	P	**P**	**17 14 29.5**	**-0.7**
NIL				IAmb	IAmb	17 14 31.4	
	comp=Z,12nm,0.8s						
BOOM	**Boomskoye usch**	**77.46**	**315**	P	**P**	**17 14 32.4**	**-0.5**
KURK	**Kurchatov**	**78.59**	**324**	P	**P**	**17 14 38.5**	**-0.3**
OHAK	**Old Harbor**	**79.61**	**29**	P	**P**	**17 14 44.5**	**+0.4**
OHAK				IAmb	IAmb	17 14 50.7	
	comp=Z,26nm,1.4s						
Q19K	**Cape Douglas,**	**80.20**	**28**	P	**P**	**17 14 46.9**	**-0.4**
N19K	**Bonanza Creek**	**80.68**	**26**	P	**P**	**17 14 50.1**	**+0.1**
N19K				IAmb	IAmb	17 14 51.2	
	comp=Z,10nm,1.0s						
TTA	**Tatalina**	**81.06**	**24**	P	**P**	**17 14 52.6**	**+0.7**
TTA				IAmb	IAmb	17 15 29.0	
	comp=Z,15nm,1.8s						
CNPM	**China Poot**	**81.57**	**28**	P	**P**	**17 14 54.5**	**-0.1**
K20K	**Telida**	**82.04**	**24**	P	**P**	**17 14 57.0**	**0.0**
J20K	**Nowinta River**	**82.39**	**23**	P	**P**	**17 14 59.4**	**+0.6**
J20K				IAmb	IAmb	17 15 00.3	
	comp=Z,6.8nm,0.8s						
RC01	**Rabbit Creek A**	**82.89**	**27**	P	**P**	**17 15 01.0**	**-0.5**
RC01				IAmb	IAmb	17 15 01.7	
	comp=Z,10nm,0.9s						
NRIK	**Noril'sk**	**83.30**	**343**	P	**P**	**17 15 03.3**	**-0.1**
	comp=Z,3.1nm,0.5s,baz=111,slow=5.7,SNR=7.9						
NRIK	**Noril'sk**	**83.30**	**343**	P	**P**	**17 15 02.8**	**-0.5**
IMAR	**Indian Mountai**	**83.38**	**21**	P	**P**	**17 15 03.7**	**-0.2**
KTH	**Kantishna Hill**	**83.39**	**24**	P	**P**	**17 15 03.2**	**-0.8**
KTH				IAmb	IAmb	17 15 04.0	
	comp=Z,7.0nm,1.0s						
PWL	**Port Wells**	**83.43**	**27**	P	**P**	**17 15 03.8**	**-0.5**
KNK	**Knik Glacier**	**83.59**	**27**	P	**P**	**17 15 04.9**	**-0.1**
KNK				IAmb	IAmb	17 15 24.5	
	comp=Z,37nm,1.7s						
SML	**Sawmill**	**83.79**	**26**	P	**P**	**17 15 05.8**	**-0.3**
SML				IAmb	IAmb	17 15 06.6	
	comp=Z,10nm,0.8s						
MLY	**Manley**	**84.09**	**23**	P	**P**	**17 15 07.3**	**-0.3**
MLY				IAmb	IAmb	17 15 08.4	
	comp=Z,8.5nm,1.0s						
RND	**Reindeer**	**84.18**	**25**	P	**P**	**17 15 07.1**	**-1.0**
RND				IAmb	IAmb	17 15 07.9	
	comp=Z,14nm,0.7s						
BRVK	**Borovoye**	**84.24**	**324**	P	**P**	**17 15 08.9**	**+0.4**
BRVK				IAmb	IAmb	17 15 09.5	
	comp=Z,6.5nm,0.8s						
SCM	**Sheep Creek Mo**	**84.24**	**26**	P	**P**	**17 15 08.2**	**-0.3**
MCK	**McKinley**	**84.28**	**24**	P	**P**	**17 15 07.8**	**-0.7**
MCK				IAmb	IAmb	17 15 08.4	
	comp=Z,9.8nm,0.8s						
NEA2	**Nenana**	**84.56**	**23**	P	**P**	**17 15 09.2**	**-0.7**
NEA2				IAmb	IAmb	17 15 09.8	
	comp=Z,4.6nm,0.7s						
DIV	**Divide**	**84.70**	**27**	P	**P**	**17 15 10.5**	**-0.2**
DIV				IAmb	IAmb	17 15 12.0	
	comp=Z,8.1nm,0.8s						
M24K	**Tolsona, Glenn**	**84.85**	**26**	P	**P**	**17 15 11.4**	**-0.1**
WRH	**Wood River Hil**	**84.91**	**24**	P	**P**	**17 15 10.6**	**-1.0**
WRH				IAmb	IAmb	17 15 11.3	
	comp=Z,6.5nm,0.8s						
CCB	**Clear Creek Bu**	**85.08**	**24**	P	**P**	**17 15 11.2**	**-1.3**
CCB				IAmb	IAmb	17 15 12.0	
	comp=Z,9.2nm,0.8s						
QSPA	**South Pole Qui**	**85.16**	**180**	P	**P**	**17 15 13.3**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=272,slow=1.1,SNR=11						
QSPA	**South Pole Qui**	**85.16**	**180**	IAmb	IAmb	17 15 51.5	
	comp=Z,11nm,1.4s						
COLD	**Coldfoot**	**85.20**	**21**	P	**P**	**17 15 12.7**	**-0.4**
HDA	**Harding Lake**	**85.34**	**24**	P	**P**	**17 15 12.6**	**-1.2**
HDA				IAmb	IAmb	17 15 30.5	
	comp=Z,15nm,1.6s						
IL31		**85.50**	**24**	P	**P**	**17 15 12.7**	**-1.8**
IL31				IAmb	IAmb	17 15 13.7	
	comp=Z,7.7nm,0.8s						
ILAR	**Eielson Array**	**85.50**	**24**	P	**P**	**17 15 13.2**	**-1.4**
	comp=Z,5.6nm,0.7s,baz=253,slow=5.2,SNR=70						
ILAR	**Eielson Array**	**85.50**	**24**	P	**P**	**17 15 12.7**	**-1.9**
HRA	**Herat**	**86.06**	**305**	P	**P**	**17 15 16.8**	**-1.5**
MENT	**Mentasta**	**86.20**	**26**	P	**P**	**17 15 17.9**	**-0.2**
MENT				IAmb	IAmb	17 15 18.9	
	comp=Z,5.9nm,0.7s						
DOT	**Dot Lake**	**86.28**	**25**	P	**P**	**17 15 18.1**	**-0.3**
DOT				IAmb	IAmb	17 15 19.6	
	comp=Z,12nm,0.9s						
L26K	**Log Cabin Wild**	**86.39**	**26**	P	**P**	**17 15 18.6**	**-0.4**
L26K				IAmb	IAmb	17 15 19.9	
	comp=Z,4.9nm,0.6s						
BARN	**Barnard Glacie**	**86.57**	**28**	P	**P**	**17 15 20.0**	**-0.1**
BARN				IAmb	IAmb	17 15 21.4	
	comp=Z,13nm,0.8s						
M27K	**Edge Creek, AK**	**86.84**	**27**	P	**P**	**17 15 21.6**	**+0.2**
M27K				IAmb	IAmb	17 15 22.7	
	comp=Z,8.9nm,0.8s						
ABKAR	**Akbulak array**	**89.85**	**319**	P	**P**	**17 15 34.7**	**-1.1**
ARU	**Arti**	**91.55**	**326**	LR	LR	18 02 30.0	
	comp=Z,47nm,19.4s,baz=320,slow=39						
GERES	**GERESS Array B**	**119.34**	**325**	PKP	**PKiKP**	**17 21 26.1**	**0.0**
	comp=Z,0.9nm,0.7s,baz=31,slow=0.8,SNR=6.7						
PLCA	**Paso Flores**	**124.62**	**148**	PKP	**PKiKP**	**17 21 37.6**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=286,slow=4.0,SNR=4.0						
LPAZ	**La Paz**	**141.77**	**124**	PKhKP	PKPpre	17 22 04.1	
	comp=Z,1.2nm,0.5s,baz=79,slow=2.6,SNR=7.0						
TORD	**Torodi Ar. Bea**	**142.09**	**285**	PKhKP	PKPpre	17 22 04.3	
	comp=Z,0.4nm,0.5s,baz=70,slow=2.3,SNR=3.9						
KIC	**Kosan Boka**	**149.05**	**274**	*e*PKIKP	**PKiKP**	**17 22 26.6**	**-0.4**
	comp=Z,8.5nm,0.8s						
DBIC	**Dimbokro**	**149.16**	**275**	PKPbc	**PKiKP**	**17 22 27.0**	**-0.2**
	comp=Z,5.6nm,0.7s,baz=140,slow=1.9,SNR=8.4						
TIC	**Toumodi**	**149.32**	**275**	*e*PKIKP	**PKPbc**	**17 22 26.6**	**+0.1**
LIC	**Lamto**	**149.34**	**274**	*e*PKIKP	**PKPbc**	**17 22 26.9**	**+0.4**
	comp=Z,20nm,0.8s						

NEIC ***04*** *17:11:00.1±2.1, 6°.76N±0°.08×127°.24E±0°.07, h40^{km}±7^{km},*
mb4.6/33, Error ellipse: s-maj=12.7km s-min=8.9km
az=220.0
IDC ***04*** *17:11:02.8±2.6, 6°.60N×127°.15E, h63^{km}±25^{km}, mb3.6/9,*
mb1 3.9/12, mb1mx3.7/38, mbtmp4.0/12, ML4.1/3, MS3.2/12,
Ms1 3.3/12, ms1mx3.1/45, Error ellipse: s-maj=28.4km
s-min=11.1km az=61.0
DJA ***04*** *17:11:02.5±0.9, 7°N±6°×12°7E±°, h51^{km}±7^{km}, M4.5/15,*
mB4.8/7, mb4.6/15, MLv4.7/8, Mw(mB)4.1/7
MAN ***04*** *17:11:58.5, 6°.59N×127°.12E, h7^{km}, mb5.0, ML4.0, MS4.0*
ISC 04 17:11:02.9±0.4**, 6°.61N**±0°.05×**127°.13E**±0°.06**, h74**^{km}**, n92,**
σ1^{s}.61/89**, mb4.4**/25**, 2C-4D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.60**	**286**	P	**Pn**	**17 11 28.4**	**-1.0**
	295nm,0.3s,baz=65,slow=2.6,SNR=29						
DAV				S	**Sn**	**17 11 49.6**	**+0.2**
	588nm,0.3s,baz=90,slow=20,SNR=8.2						
DAV				LR	LR	17 12 16.1	
	comp=Z,2µm,19.2s,baz=106,slow=45						
DAV	**Davao City (W)**	**1.60**	**286**		**Pn**	**17 11 28.0**	**-1.4**
DMPH	**Davao City--Mi**	**1.67**	**286**	⇓*e*P	**Pn**	**17 11 28.6**	**-1.7**
DMPH				*e*S	**Sn**	**17 11 50.3**	**-0.8**
BIPH	**Bislig**	**1.73**	**334**	⇓*e*P	**Pn**	**17 11 32.0**	**+0.9**
BIPH				*e*S	**Sn**	**17 11 53.6**	**+1.1**
KCP	**Kidapawan**	**2.06**	**281**	⇓*i*P	**Pn**	**17 11 32.8**	**-2.7**
KCP				*i* S	**Sn**	**17 11 57.2**	**-3.1**
SGSI	**Sangihe**	**3.32**	**209**	P	**Pn**	**17 11 53.5**	**+1.0**
PAGZ	**Pagadian**	**3.91**	**288**	*e*P	**Pn**	**17 11 59.6**	**-1.0**
MSLP	**Maasin**	**4.16**	**327**	*e*P	**Pn**	**17 12 02.7**	**-1.2**
MSLP				*i* S	Sn	17 12 59.8	+8.6
TBP	**Tagbilaran**	**4.45**	**314**	*e*P	**Pn**	**17 12 08.2**	**+0.3**
TBP				*e*S	**Sn**	**17 12 57.9**	**-0.6**
SNPH	**Sibulan**	**4.71**	**305**	⇑*e*P	**Pn**	**17 12 12.5**	**+0.9**
SNPH				*e*S	**Sn**	**17 13 04.1**	**-0.9**
CNOP	**Candoni, Negro**	**5.47**	**306**	*e*P	**Pn**	**17 12 22.2**	**+0.3**
TNTI	**Ternate**	**5.81**	**178**	P	**Pn**	**17 12 28.9**	**+2.4**
	0.2nm806nm52nm,0.8s						
TNTI	**Ternate**	**5.81**	**178**		**Pn**	**17 12 24.4**	**-2.1**
RCP	**Roxas**	**6.55**	**319**	⇑*e*P	**Pn**	**17 12 39.2**	**+2.6**
JAP	**San Jose, Anti**	**6.56**	**309**	⇓*e*P	Pn	17 12 24.7	-12
KMSI	**Cibinong**	**6.77**	**208**	P	**Pn**	**17 12 41.6**	**+1.9**
	0.5nm1µm108nm,0.7s						
LBMI	**Labuha**	**7.21**	**177**	P	**Pn**	**17 12 45.1**	**-0.6**
	0.2nm37nm,0.9s						
GTOI	**Gorontalo**	**7.22**	**215**	P	**Pn**	**17 12 43.2**	**-2.6**
	0.1nm362nm39nm,0.7s						
MRSI	**Marisa**	**8.00**	**221**	P	**Pn**	**17 12 55.7**	**-0.7**
	699nm62nm,0.7s						
TOLI2	**Tolitoli**	**8.36**	**229**	Pn	**Pn**	**17 12 58.1**	**-3.3**
SIJI	**Sorong**	**8.50**	**151**	P	**Pn**	**17 13 02.1**	**-1.3**
	4.7nm,0.3s,baz=260,slow=24,SNR=20						
SIJI				S	**Sn**	**17 14 32.5**	**-5.3**
	3.0nm,0.3s,baz=178,slow=22,SNR=15						
SIJI				LR	LR	17 17 03.2	
	comp=Z,129nm,19.2s,baz=344,slow=42						
SANI	**Sanana**	**8.68**	**188**	P	**Pn**	**17 13 02.9**	**-2.9**
MYLDM	**Lahad Datu**	**8.70**	**261**		**Pn**	**17 13 05.7**	**-0.3**
APSI	**Ampana**	**9.26**	**216**	P	**Pn**	**17 13 16.3**	**+2.6**
	416nm39nm,0.7s						
FAKI	**Fak Fak**	**10.76**	**151**	Pn	**Pn**	**17 13 33.0**	**-1.2**
TTSI	**Tana Toraja**	**12.05**	**217**	P	**Pn**	**17 13 51.8**	**0.0**
	522nm45nm,1.3s						
KAPI	**Kappang**	**13.70**	**213**	P	**Pn**	**17 14 12.4**	**-1.5**
	0.3nm,0.3s,baz=344,slow=4.7,SNR=5.4						
KAPI				LR	LR	17 20 40.0	
	comp=Z,50nm,18.1s,baz=62,slow=42						
KAPI	**Kappang**	**13.70**	**213**		**Pn**	**17 14 12.2**	**-1.7**
MTKI	**Muara Teweh, K**	**14.33**	**239**	P	**Pn**	**17 14 24.8**	**+2.6**
SBUM	**Sibu**	**15.42**	**255**		**Pn**	**17 14 36.9**	**+0.7**
BBKI	**Banjar Baru**	**15.83**	**231**	P	P	17 14 59.6	+16
EDFI	**Ende, Flores**	**16.20**	**200**	P	**P**	**17 14 48.9**	**+0.9**
	4.5nm,0.7s						
JAY	**Jayapura**	**16.31**	**123**	LR	LR	17 20 51.0	
	comp=Z,71nm,21.1s,baz=310,slow=36						
SOEI	**Soe**	**16.51**	**190**	P	**P**	**17 14 52.8**	**+1.3**
SOEI				IAmb	IAmb	17 15 25.1	
	comp=Z,28nm,1.0s						
STKI	**Sintang**	**16.92**	**248**	P	**P**	**17 14 58.4**	**+2.5**
BATI	**Baumata**	**17.06**	**192**	P	**P**	**17 14 58.0**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=243,slow=2.3,SNR=2.8						
BATI	**Baumata**	**17.06**	**192**	P	**P**	**17 15 00.1**	**+2.6**
	comp=Z,16nm,0.8s						
KSM	**Kuching**	**17.53**	**254**	P	**Pn**	**17 15 02.1**	**-0.5**
TPUB	**Ta-pu**	**17.73**	**340**	P	**P**	**17 15 00.1**	**-4.7**
GUMO	**Guam**	**18.78**	**67**	LR	LR	17 22 23.9	
	comp=Z,52nm,19.0s,baz=88,slow=36						
MTN	**Manton Dam**	**19.74**	**168**	P	**P**	**17 15 24.6**	**-2.2**
JAGI	**Jajag, Banyuwa**	**19.80**	**221**	P	**P**	**17 15 28.1**	**+0.6**
JAGI				IAmb	IAmb	17 15 55.2	
	comp=Z,53nm,1.6s						
UGM	**Wanagama**	**21.96**	**229**	P	**P**	**17 15 53.9**	**+3.0**
KNRA	**Kununurra**	**22.21**	**176**	P	**P**	**17 15 54.4**	**+1.1**
KNRA				IAmb	IAmb	17 16 19.6	
	comp=Z,18nm,0.7s						
PPBI	**Pangkal Pinang**	**22.70**	**248**	P	**P**	**17 15 57.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**24.60**	**183**	P	**P**	**17 16 17.3**	**+1.0**
	comp=Z,4.3nm,0.9s,baz=6.3,slow=7.9,SNR=8.1						
BLSI	**Bandar Lampung**	**24.87**	**242**	P	P	17 16 08.5	-10
KLSI		**25.02**	**244**	P	**P**	**17 16 21.7**	**+1.5**
	comp=Z,8.4nm,2.3s						
JNU	**Nakatsue**	**26.61**	**7**	P	**P**	**17 16 32.5**	**-2.0**
WB0	**Warramunga Arr**	**27.17**	**165**	P	**P**	**17 16 39.2**	**-0.4**
WRA	**Warramunga Arr**	**27.33**	**165**	P	**P**	**17 16 41.7**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=344,slow=11,SNR=15						
WRA				LR	LR	17 30 12.6	
	comp=Z,35nm,19.1s,baz=295,slow=42						
WRA	**Warramunga Arr**	**27.33**	**165**	P	**P**	**17 16 41.2**	**+0.2**
WB2	**Warramunga Arr**	**27.33**	**165**	P	**P**	**17 16 41.1**	**+0.1**
WB2				IAmb	IAmb	17 17 11.1	
	comp=Z,8.7nm,1.1s						
WR0	**Warramunga Arr**	**27.40**	**165**	P	**P**	**17 16 42.1**	**+0.5**
PSI	**Prapat**	**28.36**	**264**	LR	LR	17 29 21.8	
	comp=Z,35nm,21.6s,baz=88,slow=39						
PSA00	**Pilbara Seismi**	**28.91**	**194**	P	**P**	**17 16 55.0**	**-0.1**
PSA00				IAmb	IAmb	17 17 17.3	
	comp=Z,36nm,1.6s						
CMAR	**Chiang Mai Arr**	**29.87**	**296**	LR	LR	17 29 09.7	
	comp=Z,90nm,19.5s,baz=176,slow=36						
GSI	**Gunungsitoli**	**29.94**	**261**	P	**P**	**17 17 04.7**	**+0.4**
GSI				IAmb	IAmb	17 17 18.0	
	comp=Z,19nm,1.1s						
AS31	**Alice Springs**	**30.81**	**168**	P	**P**	**17 17 12.4**	**+0.5**
ASAR	**Alice Springs**	**30.82**	**168**	P	**P**	**17 17 12.9**	**+1.0**

	comp=Z,0.4nm,0.4s,baz=345,slow=7.0,SNR=22						
ASAR				PcP	PcP	17 20 09.2	+1.5
	comp=Z,0.3nm,0.4s,baz=340,slow=2.0,SNR=5.2						
JMM	Marumori	33.50	20	P	P	17 17 35.0	-0.2
MORW	Morawa	37.05	196	P	P	17 18 06.4	+0.6
FORT	Forrest	37.19	179	P	P	17 18 08.3	+1.3
BBOO	Buckleboo	40.12	168	P	P	17 18 33.1	+1.6
BBOO				IAmb	IAmb	17 18 50.2	
	comp=Z,23nm,1.4s						
STKA	Stephens Creek	40.69	161	P	P	17 18 37.5	+1.2
	comp=Z,1.9nm,0.7s,baz=318,slow=11,SNR=4.5						
STKA				LR	LR	17 37 18.1	
	comp=Z,28nm,20.5s,baz=26,slow=39						
GTA	Gaotai	40.87	327	*e*P	P	17 18 39.0	+1.1
GTA				sP	sP	17 19 01.6	-0.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ARMA	Armidale	43.68	149	P	P	17 19 01.7	+1.0
ARMA				IAmb	IAmb	17 19 03.4	
	comp=Z,16nm,1.3s						
SONM	Songino Array	44.72	340	P	P	17 19 10.3	+1.5
	comp=Z,0.2nm,0.3s,baz=160,slow=11,SNR=2.7						
DZM	Mont Dzumac	47.92	128	LR	LR	17 41 10.4	
	comp=Z,42nm,18.8s,baz=202,slow=38						
PETK	Petropavlovsk-	52.63	23	P	P	17 20 12.2	+2.9
	comp=Z,4.7nm,1.1s,baz=203,slow=5.9,SNR=1.5						
PETK	Petropavlovsk-	52.63	23	P	P	17 20 08.7	-0.6
YAK	Yakutsk	55.33	1	LR	LR	17 50 13.1	
	comp=Z,34nm,18.0s,baz=268,slow=42						
MK31	Makanchi Array	55.45	324	P	P	17 20 30.2	+0.3
MK31				IAmb	IAmb	17 21 08.1	
	comp=Z,5.4nm,1.3s						
MKAR	Makanchi Array	55.45	324	P	P	17 20 30.7	+0.8
	comp=Z,1.2nm,0.4s,baz=115,slow=7.8,SNR=19						
MKAR	Makanchi Array	55.45	324	P	P	17 20 29.8	-0.1
MAKZ	Makanchi	55.64	324	P	P	17 20 31.2	-0.1
MAKZ				IAmb	IAmb	17 20 54.0	
	comp=Z,7.3nm,1.2s						
NIL	Nilore	56.52	306	P	P	17 20 36.8	-1.1
NIL				IAmb	IAmb	17 20 39.1	
	comp=Z,5.6nm,0.8s						
ZALV	Zalesovo Beam	58.23	332	P	P	17 20 49.3	-0.1
	comp=Z,0.6nm,0.3s,baz=120,slow=7.0,SNR=3.4						
KURK	Kurchatov	59.55	326	P	P	17 20 58.4	-0.3
KURK				IAmb	IAmb	17 20 59.8	
	comp=Z,6.6nm,1.1s						
SMY	Shemya	59.80	31	P	P	17 20 59.5	-0.8
BTK	Batken	60.24	313	P	P	17 21 03.5	-0.2
BTK				IAmb	IAmb	17 21 13.7	
	comp=Z,6.7nm,1.3s						
GAR	Garm	60.30	311	P	P	17 21 03.0	-1.2
KKAR	Karatay Array	61.43	316	P	P	17 21 11.2	-0.5
AFI	Afiamalu	63.96	109	LR	LR	17 46 50.1	
	comp=Z,28nm,19.0s,baz=67,slow=34						
BSWZ	Blackbirch Sta	64.29	143	P	P	17 21 31.1	+0.6
TIXI	Tiksi	64.97	1	P	P	17 21 34.5	0.0
TIXI				IAmb	IAmb	17 21 43.5	
	comp=Z,10nm,1.7s						
BRVK	Borovoye	65.22	326	P	P	17 21 34.8	-1.6
BRVK				IAmb	IAmb	17 21 37.5	
	comp=Z,5.9nm,1.1s						
ABKAR	Akbulak array	70.19	320	P	P	17 22 07.2	-0.7
ABKAR	Akbulak array	70.19	320	P	P	17 22 07.3	-0.5
ABKAR				IAmb	IAmb	17 22 30.8	
	comp=Z,5.3nm,1.5s						
ILAR	Eielson Array	82.35	26	P	P	17 23 17.1	+0.7
	comp=Z,0.6nm,0.9s,baz=246,slow=4.7,SNR=7.2						
NOA	NORSAR Array B	96.39	334	LR	LR	18 12 20.9	
	comp=Z,25nm,18.2s,baz=50,slow=38						
TORD	Torodi Ar. Bea	122.36	290	PKP	PKiKP	17 29 51.3	+0.5
	comp=Z,0.3nm,0.3s,baz=66,slow=5.4,SNR=2.6						

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*KRSC **04** 17:29:10.8±1.9, 50°.28N×157°.22E, h24^{km}±26^{km}, ML4.6*

*MOS **04** 17:29:10.2±0.7, 50°.06N×157°.04E, h47^{km}, mb4.9/2, Error ellipse: s-maj=19.6km s-min=4.4km az=79.2*

MOS Felt (III-IV) at Severo-Kuril'sk.

*NEIC **04** 17:29:13.1±1.2, 50°.2N±0°.1×156°.83E±0°.04, h58^{km}±10^{km}, mb4.7/13, Error ellipse: s-maj=14.9km s-min=3.9km az=182.0*

*IDC **04** 17:29:14.9±3.5, 50°.38N×156°.69E, h65^{km}±31^{km}, mb3.4/9, mb1 3.8/12, mb1mx3.5/48, mbtmp3.8/12, ML3.3/3, MS3.2/2, Ms1 3.2/2, ms1mx2.6/37, Error ellipse: s-maj=41.9km s-min=15.5km az=148.0*

ISC 04 17:29:11.5±0.8**, 50°.1N**±0°.1×**157°.01E**±0°.06**, h39**^{km}±4^{km}**, n98, σ1.^{s}41**/119**, mb4.0**/15**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.80	315	*e*PN	Pn	17 29 25.9	-0.3
SKR				*e*S	Sn	17 29 35.9	-1.0
SKR				pmax	pmax		
	comp=Z,753nm,0.2s						
SKR				smax	smax		
	comp=E,12µm,0.3s						
SKR				smax	smax		
	comp=N,10µm,0.3s						
SKR	Severo-Kuril's	0.80	315	*e*P	Pn	17 29 25.8	-0.4
SKR				*e*S	Sn	17 29 35.8	-1.1
PAU	Pauzhetka	1.35	355	PN	Pn	17 29 33.7	-0.1
PAU				S	Sn	17 29 49.3	-1.2
PAU	Pauzhetka	1.35	355	*e*P	Pn	17 29 33.7	-0.1
PAU				*e*S	Sn	17 29 49.3	-1.2
KDTR	Khodutka, Kamc	1.82	21	PN	Pn	17 29 39.5	-0.7
KDTR				S	Sn	17 29 59.5	-2.5
KDTR	Khodutka, Kamc	1.82	21	*e*P	Pn	17 29 39.5	-0.7
KDTR				*e*S	Sn	17 29 59.5	-2.5
MIPR	Malaya Ipel'ka	2.16	356	PN	Pn	17 29 46.0	+1.0
MIPR	Malaya Ipel'ka	2.16	356	*e*P	Pn	17 29 46.0	+1.0
ASAK	Asacha	2.33	14	PN	Pn	17 29 48.5	+1.1
ASAK	Asacha	2.33	14	*e*P	Pn	17 29 48.5	+1.1
MTVR	Mutnovka	2.48	17	PN	Pn	17 29 49.6	+0.2
MTVR				S	Sn	17 30 18.5	0.0
MTVR	Mutnovka	2.48	17	*e*P	Pn	17 29 49.6	+0.2
MTVR				*e*S	Sn	17 30 18.5	0.0
RUS	Russkaya	2.50	22	PN	Pn	17 29 49.1	-0.5
RUS				S	Sn	17 30 16.3	-2.5
RUS	Russkaya	2.50	22	*e*P	Pn	17 29 49.1	-0.5
RUS				*e*S	Sn	17 30 16.3	-2.5
APC	Apacha	2.81	2	PN	Pn	17 29 54.9	+1.1
APC	Apacha	2.81	2	*e*P	Pn	17 29 54.9	+1.1
PEA0B	Petropavlovsk-	3.02	8	PN	Pn	17 29 57.0	+0.2
PEA0B	Petropavlovsk-	3.02	8		Pn	17 29 57.0	+0.2
PETK	Petropavlovsk-	3.02	8	P	Pn	17 29 57.9	+1.1
	comp=N,8.6nm,0.3s,baz=179,slow=13,SNR=114						
PETK				S	Sn	17 30 36.4	+4.7
	comp=N,6.1nm,0.3s,baz=148,slow=17,SNR=5.8						
PETK	Petropavlovsk-	3.02	8		Pn	17 29 57.0	+0.2
PET	Petropavlovsk	3.08	19	*e*PN	Pn	17 29 58.7	+1.1
PET				*e*S	Sn	17 30 32.0	-1.1
PET				pmax	pmax		
	comp=Z,105nm,0.6s						
PET				smax	smax		
	comp=N,653nm,0.7s						
PET				smax	smax		
	comp=E,539nm,0.4s						
PET	Petropavlovsk	3.08	19	*e*P	Pn	17 29 58.0	+0.4
PET				S	Sn	17 30 32.0	-1.1
PET	Petropavlovsk	3.08	19		Pn	17 29 58.3	+0.7
DALK	Dalny	3.11	20	PN	Pn	17 29 58.2	+0.3
DALK				S	Sn	17 30 32.6	-1.2
DALK	Dalny	3.11	20	P	Pn	17 29 58.2	+0.3
DALK				S	Sn	17 30 32.6	-1.2
UGLR	Uglovaya	3.29	19	PN	Pn	17 30 02.6	+2.0
UGLR	Uglovaya	3.29	19	*e*P	Pn	17 30 02.6	+2.0
AVH	Avacha	3.33	18	PN	Pn	17 30 03.1	+2.1
AVH				S	Sn	17 30 39.7	+0.4
AVH	Avacha	3.33	18	*e*P	Pn	17 30 03.1	+2.1
AVH				S	Sn	17 30 39.7	+0.4
KOK	Koryaka	3.33	17	PN	Pn	17 30 03.2	+2.1
KOK				S	Sn	17 30 40.1	+0.6
KOK	Koryaka	3.33	17	*e*P	Pn	17 30 03.2	+2.1
KOK				S	Sn	17 30 40.1	+0.6
SMAR	Somma	3.34	19	PN	Pn	17 30 03.3	+2.0
SMAR	Somma	3.34	19	P	Pn	17 30 03.3	+2.0
KRER	Koryakskii	3.37	18	PN	Pn	17 30 02.8	+1.1
KRER				S	Sn	17 30 41.1	+0.7
KRER	Koryakskii	3.37	18	P	Pn	17 30 02.8	+1.1
KRER				S	Sn	17 30 41.1	+0.7
SDLR	Sedlovina	3.37	20	PN	Pn	17 30 02.0	+0.4
SDLR				S	Sn	17 30 38.7	-1.7
SDLR	Sedlovina	3.37	20	P	Pn	17 30 02.0	+0.4
SDLR				S	Sn	17 30 38.7	-1.7
NLC	Nalytchevo	3.38	25	PN	Pn	17 30 01.3	-0.4
NLC	Nalytchevo	3.38	25	P	Pn	17 30 01.3	-0.4
NLC				S	Sn	17 30 37.9	-2.6
SPN	Mys Shipunski	3.53	31	PN	Pn	17 30 04.2	+0.6
SPN	Mys Shipunski	3.53	31	P	Pn	17 30 04.2	+0.6
SPN				S	Sn	17 30 42.0	-2.0
GNL	Ganaly	3.63	9	PN	Pn	17 30 07.2	+2.1
GNL				S	Sn	17 30 49.9	+3.2
GNL	Ganaly	3.63	9	P	Pn	17 30 07.2	+2.1
GNL				S	Sn	17 30 49.9	+3.2
KII	Karymskiy	4.20	20	PN	Pn	17 30 15.2	+2.2
KII				S	Sn	17 31 03.3	+2.5
KII	Karymskiy	4.20	20	P	Pn	17 30 15.2	+2.2
KII				S	Sn	17 31 03.3	+2.5
TUMD	Tumrok D	5.49	21	P	Pn	17 30 32.1	+1.4
TUMD				S	Sn	17 31 34.3	+1.8
TUMR	Tumrok	5.51	19	PN	Pn	17 30 32.1	+1.1
ESO	Esso	5.90	9	PN	Pn	17 30 37.7	+1.4
ESO	Esso	5.90	9	P	Pn	17 30 37.7	+1.4
KMNR	Kamenistaya	5.97	18	PN	Pn	17 30 38.9	+1.6
KMNR	Kamenistaya	5.97	18	P	Pn	17 30 38.9	+1.6
YSS	Yuzh-Sakhalins	9.97	257	*e*PN	Pn	17 31 36.9	+4.9
JKA	Kamikawa-asahi	11.50	244		Pn	17 31 53.9	+1.0
ASAJ	Asahikawa	11.50	244	P	Pn	17 31 54.4	+1.5
	comp=E,0.6nm,0.3s,baz=61,slow=19,SNR=2.1						
ASAJ	Asahikawa	11.50	244	PN	Pn	17 31 53.9	+1.0
SEY	Seymchan	13.09	351	LR	LR	17 37 12.6	
	comp=E,102nm,18.6s,baz=355,slow=37						
KLR	Kul'dur	16.35	277	P	Pn	17 32 58.3	+0.3
	comp=E,0.1nm,0.3s,baz=79,slow=5.2,SNR=2.3						
BILL	Bilibino	18.55	11	P	P	17 33 22.9	-1.6
YAK	Yakutsk	19.18	319	P	P	17 33 30.1	-1.3
TNA	Tin City	23.78	36	P	P	17 34 20.3	+0.2
TNA				IAmb	IAmb	17 34 30.3	
	comp=Z,68nm,1.4s						
ANM	Nome	24.44	40	P	P	17 34 25.5	-0.6
ANM	Nome	24.44	40	P	P	17 34 25.5	-0.6
TTA	Tatalina	28.19	45	P	P	17 34 58.5	-1.5
TTA				pmax	pmax		
	comp=Z,17nm,1.6s						
TTA	Tatalina	28.19	45	P	P	17 34 58.5	-1.5
TTA				IAmb	IAmb	17 35 46.1	
	comp=Z,17nm,1.6s						
IMAR	Indian Mountai	29.52	39	P	P	17 35 10.9	-0.7
H21K	Melozitna Rive	29.86	40	P	P	17 35 14.6	-0.1
CNPM	China Poot	30.52	52	P	P	17 35 19.9	-0.7
COLD	Coldfoot	31.08	37	P	P	17 35 23.5	-2.0
COLD				IAmb	IAmb	17 36 26.4	
	comp=Z,23nm,2.0s						
RC01	Rabbit Creek A	31.13	49	P	P	17 35 24.8	-1.2
RC01				IAmb	IAmb	17 35 42.3	
	comp=Z,8.5nm,0.8s						
H11N2	WAKE ISLAND Hy	31.33	162	T	T	18 09 02.6	
	baz=348,slow=76,SNR=32						
H11N3	WAKE ISLAND Hy	31.34	162	T	T	18 09 04.4	
	baz=348,slow=76,SNR=73						
H11N1	WAKE ISLAND Hy	31.35	162	T	T	18 09 07.5	
	baz=348,slow=76,SNR=27						
ILAR	Eielson Array	32.30	42	P	P	17 35 35.5	-0.7
	comp=Z,0.5nm,0.8s,baz=268,slow=9.8,SNR=5.5						
ILAR	Eielson Array	32.30	42	P	P	17 35 35.7	-0.5
ILAR	Eielson Array	32.30	42	P	P	17 35 35.7	-0.5
H11S1	WAKE ISLAND Hy	32.48	163	T	T	18 10 30.8	
	baz=348,slow=76,SNR=76						
H11S3	WAKE ISLAND Hy	32.49	163	T	T	18 10 32.4	
	baz=348,slow=76,SNR=108						
H11S2	WAKE ISLAND Hy	32.50	163	T	T	18 10 28.5	
	baz=348,slow=76,SNR=87						
SONM	Songino Array	32.78	286	LR	LR	17 50 32.1	
	comp=Z,40nm,19.1s,baz=349,slow=39						
BMAR	Burnt Mountain	33.27	37	P	P	17 35 44.4	-0.3
L27K	Beaver Creek,	34.65	45		P	17 35 56.4	-0.3
L27K				IAmb	IAmb	17 36 57.7	
	comp=Z,16nm,1.6s						
BCAR	Beaver Creek A	34.66	45	P	P	17 35 56.5	-0.3
EGAK	Eagle	34.75	42	P	P	17 35 56.8	-0.7
EGAK				IAmb	IAmb	17 36 19.4	
	comp=Z,21nm,1.8s						
ISLE	Juniper Island	34.79	49	P	P	17 35 57.6	-0.4
INK	Inuvik	37.41	35	P	P	17 36 20.6	+0.4
	comp=Z,3.1nm,0.6s,baz=290,slow=4.8,SNR=9.0						
INK	Inuvik	37.41	35	P	P	17 36 19.8	-0.3
INK				pmax	pmax		
	comp=Z,18nm,1.9s						
INK	Inuvik	37.41	35	P	P	17 36 19.8	-0.3
INK				IAmb	IAmb	17 36 58.4	
	comp=Z,18nm,1.9s						
YKA	Yellowknife Ar	46.67	40	P	P	17 37 35.3	-0.4
	comp=Z,1.1nm,0.7s,baz=297,slow=7.0,SNR=3.4						
MKAR	Makanchi Array	47.73	296	P	P	17 37 41.8	-2.4
	comp=Z,0.2nm,0.6s,baz=56,slow=5.4,SNR=1.5						
CMAR	Chiang Mai Arr	55.66	257	P	P	17 38 44.0	+0.4
	comp=Z,1.0nm,0.7s,baz=35,slow=7.4,SNR=8.7						
CMAR	Chiang Mai Arr	55.66	257	P	P	17 38 43.3	-0.4
CMAR	Chiang Mai Arr	55.66	257	P	P	17 38 43.3	-0.4
NVAR	Mina Array Bea	58.64	66	P	P	17 39 06.4	+1.7
	comp=Z,0.3nm,0.5s,baz=294,slow=6.8,SNR=2.8						
PDAR	Pinedale Array	60.70	57	P	P	17 39 20.4	+1.4
	comp=Z,0.9nm,0.8s,baz=336,slow=3.3,SNR=5.0						
PDAR	Pinedale Array	60.70	57	P	P	17 39 19.1	+0.1
TXAR	Lajitas Array	73.63	64	P	P	17 40 41.9	+1.0
	comp=Z,1.2nm,0.7s,baz=301,slow=5.1,SNR=15						
TXAR	Lajitas Array	73.63	64	P	P	17 40 41.8	+0.9
ASAR	Alice Springs	76.27	202	P	P	17 40 56.9	+1.1
	comp=Z,0.3nm,0.9s,baz=26,slow=4.4,SNR=2.0						

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*TUL **04** 17:31:32.5±1.7, 36°.84N±0°.01×98°.28W±0°.02, h5^{km}±5^{km}, ML2.8, mb_Lg2.7/6(NEIC), Error ellipse: s-maj=2.3km s-min=1.7km az=113.0*

NEIC 04 17:31:32.9±1.2**, 36°.80N**±0°.02×**98°.25W**±0°.02**, h11**^{km}±5^{km}**, Error ellipse: s-maj=3.0km s-min=1.9km az=120.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.03	91	Pg	Pg	17 31 34.4	-0.4
OK032				Sg	Sg	17 31 35.7	-0.6
KAN14	Manchester OK	0.28	57		Pg	17 31 38.5	0.0
KAN14				Sg	Sg	17 31 42.5	+0.2
GC02	Grant County #	0.32	81	Pg	Pg	17 31 39.5	+0.2
GC02				Sg	Sg	17 31 44.4	+0.9
KAN10	Anthony SW Sta	0.34	21	Pg	Pg	17 31 39.4	-0.3
KAN10				Sg	Sg	17 31 44.0	-0.3
CROK	Carrier	0.37	144	Pg	Pg	17 31 40.6	+0.5
CROK				Sg	Sb	17 31 46.4	-0.9
KAN16	Harper SW Stat	0.45	20	Pg	Pg	17 31 41.3	-0.4
KAN16				Sg	Sg	17 31 47.3	-0.3
KAN17	Caldwell West	0.46	58	Pg	Pg	17 31 41.9	0.0
KAN17				Sg	Sg	17 31 48.2	+0.3
KAN08	Anthony NE Sta	0.48	28		Pg	17 31 42.0	-0.3
KAN08				Sg	Sg	17 31 48.4	-0.2
KAN01	Argonia South	0.53	48		Pg	17 31 43.0	-0.2
KAN01				Sg	Sg	17 31 49.9	-0.2
KAN12	Harper NE Stat	0.53	22	Pg	Pg	17 31 42.6	-0.7
KAN12				Sg	Sg	17 31 50.1	-0.2
KAN06	Argonia West S	0.54	35	Pg	Pg	17 31 43.3	-0.2
KAN06				Sg	Sg	17 31 50.6	-0.1
KAN09	Caldwell North	0.61	57	Pg	Pg	17 31 44.5	-0.1
KAN09				Sg	Sg	17 31 53.0	+0.3
KAN13	South Haven SW	0.65	71		Pg	17 31 45.5	0.0
KAN13				Sg	Sg	17 31 54.4	+0.3
U32A	Winter Ranch,	0.74	235		Pg	17 31 46.3	-0.8
U32A				Sg	Sg	17 31 55.5	-1.2
BLOK	Blackwell	0.83	93	Pg	Pg	17 31 48.9	0.0
BLOK				Sg	Sg	17 31 57.6	-2.2
OK029	Liberty Lake	1.19	147	Pg	Pb	17 31 55.5	0.0
OK029				Sg	Sn	17 32 12.0	+0.2
BCOK	Bluff Creek, N	1.26	155		Pn	17 31 56.3	-0.1
BCOK				Sg	Sn	17 32 13.5	+0.1
OK033	Mehan	1.30	125	Pn	Pn	17 31 56.7	-0.4
OK033					Sg	17 32 15.4	+0.6
T35A	Sooner Cattle	1.40	85		Pb	17 31 58.9	-0.1
T35A				Sn	Sb	17 32 16.9	0.0
OK031	S. Brethren Rd	1.42	126	Pn	Pb	17 31 59.7	+0.3
OK031				Sn	Sg	17 32 19.1	+0.5
OK025	Westminster Rd	1.43	149	Pn	Pn	17 31 58.9	+0.1
OK025				Sn	Sg	17 32 19.3	+0.6
OK025				IAmb_Lg		17 32 21.7	
	comp=Z,24nm,0.7s						
OK030	Cody Creek RV	1.47	126		Pb	17 32 00.2	-0.1
OK034	N. Norfolk Rd.	1.47	122	Pn	Pb	17 32 00.1	-0.1
R32A	Long Quarter,	1.66	347		Pb	17 32 02.7	-0.7
TUL1	Leonard	2.18	113		Pb	17 32 11.2	-1.1
X34A	Smith Ranch, M	2.23	171	Pn	Pn	17 32 10.8	+1.1
CBKS	Cedar Bluff	2.33	330	Pn	Pn	17 32 09.1	-2.1
CBKS				IAmb_Lg		17 32 50.3	
	comp=Z,20nm,0.7s						
KSU1	Kansas State U	2.63	29	Pn	Pn	17 32 13.8	-1.6
LOOK	Love County	2.94	162	Pn	Pn	17 32 21.1	+1.5
U38A	Gravette	3.13	96		Pn	17 32 22.6	+0.4
X37A	Clayton	3.22	132		Pn	17 32 22.3	-1.1
AMTX	Amarillo	3.38	236		Pn	17 32 25.4	-0.3
HHAR	Hobbs	3.51	97	Pn	Pn	17 32 28.8	+1.3
Z35A	Perchaven, San	3.56	166	Pn	Pn	17 32 30.1	+2.0
W39A	Magazine	3.96	113		Pn	17 32 35.2	+1.6
S39A	Bolivar	4.03	76		Pn	17 32 34.5	-0.1
U40A	Yellville	4.37	94		Pn	17 32 39.5	+0.3
MSTX	Muleshoe	4.65	234	Pn	Pn	17 32 41.4	-1.8
P38A	Dawn	4.66	51		Pn	17 32 41.5	-1.8
MGMO	Mountain Grove	4.80	84	Pn	Pn	17 32 45.1	-0.1
T25A	Trinidad	4.94	276	Pn	Pn	17 32 45.0	-2.3
X40A	Basin Creek Fa	4.98	116	Pn	Pn	17 32 47.0	-0.6
R40A	Maddies Statio	4.98	71	Pn	Pn	17 32 47.3	-0.3
WHAR	Wooly Hollow	5.06	106	Pn	Pn	17 32 48.0	-0.7
P40A	Paris	5.59	59	Pn	Pn	17 32 54.8	-1.2
P40A				IAmb_Lg		17 34 34.4	
	comp=Z,14nm,0.8s						
CCM	Cathedral Cave	5.71	75	Pn	Pn	17 32 58.0	+0.3
JCT	Junction City	6.44	192	IAmb_Lg		17 35 00.9	
	comp=Z,20nm,1.3s						
ISCO	Idaho Springs	6.52	300	Pn	Pn	17 33 07.1	-1.8

IDC 04 17:34:25.4±4.4**, 3°.09S**×**154°.25E, h0**^{km}**, mb3.4**/2**, mb1 3.7**/2**, mb1mx3.3**/37**, mbtmp3.4**/2**, Error ellipse: s-maj=216.8km s-min=47.9km az=118.0, North of Solomon Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.65	228	P	P	17 39 57.3	+0.2
	0.2nm,0.3s,baz=53,slow=9.4,SNR=12						
ASAR	Alice Springs	28.38	222	P	P	17 40 21.5	-0.2
	0.3nm,0.3s,baz=55,slow=9.2,SNR=26						
TORD	Torodi Ar. Bea	151.08	292	PKPbc	PKPbc	17 54 21.3	-0.3
	0.6nm,0.8s,baz=77,slow=2.3,SNR=3.1						

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*JMA **04** 17:45:24.1±0.2, 24°.78N×122°.02E, h111^{km}±3^{km}, M2.6*

*TAP **04** 17:45:25.0, 24°.89N×122°.02E, h106^{km}, ML3.7, D*

ISC 04 17:45:24.1±1.4**, 24°.90N**±0°.05×**122°.04E**±0°.03**, h113**^{km}±7^{km}**, n83, σ0.^{s}67**/111**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		0.11	241	*e*P	Pn	17 45 39.8	+0.2
	baz=237						
TWB1	Santiao Chiao	0.12	337	*e*P	Pn	17 45 39.9	+0.2
	baz=348						
NTC	Toucheng	0.20	257	*e*P	Pn	17 45 39.9	+0.1
	baz=259						
TIPB	Shuangxi	0.21	290	*e*P	Pn	17 45 40.1	+0.1
	baz=294						
TIPB				*e*S	Sn	17 45 50.8	-1.0
	baz=294						
NWF	Wu-fen Shan	0.29	306	*e*P	Pn	17 45 40.4	+0.1
	baz=309						
ILA	Ilan	0.29	243	*e*P	Pn	17 45 40.6	+0.4
	baz=242						
ILA				*e*S	Sn	17 45 52.3	0.0
	baz=242						
TWC	Suao	0.34	211	P	Pn	17 45 40.4	0.0
	baz=208						
TWC				*e*S	Sn	17 45 51.9	-0.6
	baz=208						
TWE	Neicheng	0.38	242	*e*P	Pn	17 45 41.2	+0.6
	baz=241						
NDS	Dongshan	0.40	228	*e*P	Pn	17 45 41.6	+0.9
	baz=227						
TWA	Mucha	0.42	281	*e*P	Pn	17 45 41.5	+0.6
	baz=282						
NHDH	Xindian Distri	0.47	278	*e*P	Pn	17 45 41.8	+0.7
	baz=279						
YM01	YM01	0.49	300	*e*P	Pn	17 45 41.9	+0.6
	baz=302						
ENTT	Nioudou	0.50	239	*e*P	Pn	17 45 42.0	+0.7
	baz=238						
NWLT	Wulai	0.50	256	*e*P	Pn	17 45 41.6	+0.2
	baz=256						
NWLT				*e*S	Sn	17 45 53.9	-0.3
	baz=256						
TAP	Taipei	0.50	286	*e*P	Pn	17 45 42.0	+0.7
	baz=287						
EWUT	Wuta	0.51	208	*e*P	Pn	17 45 41.6	+0.2
	baz=206						
EWUT				*e*S	Sn	17 45 55.1	+0.8
	baz=206						
ENA	Nanau	0.54	210	*e*P	Pn	17 45 42.0	+0.4
	baz=208						
ENA				*e*S	Sn	17 45 55.2	+0.5
	baz=208						
ANP	Anpu	0.55	301	*e*P	Pn	17 45 42.5	+0.8
	baz=303						
NDT	Datong Townshi	0.56	238	*e*P	Pn	17 45 42.3	+0.6
	baz=238						
NTST	Danshui	0.60	296	*e*P	Pn	17 45 42.8	+0.8
	baz=297						
TWS1	Kuangyinshan	0.60	290	*e*P	Pn	17 45 42.6	+0.7
	baz=291						
YHNB	Yeheng	0.64	249	*e*P	Pn	17 45 42.4	0.0
	baz=249						
YHNB				*e*S	Sn	17 45 55.7	-0.5
	baz=249						
NSK	Sanguang	0.66	250	*e*P	Pn	17 45 42.5	0.0
	baz=250						
NNS	Nan Shan	0.76	233	*e*P	Pn	17 45 43.8	+0.4
	baz=232						
NNS				*e*S	Sn	17 45 58.5	+0.6
	baz=232						
NNSB	Datong	0.76	232	*e*P	Pn	17 45 43.8	+0.3
	baz=231						
NCU	National Centr	0.78	275	*e*P	Pn	17 45 44.0	+0.6
	baz=275						
NACB	Ninganchiao	0.83	209	*e*P	Pn	17 45 43.4	-0.5
	baz=208						
NACB				*e*S	Sn	17 45 57.8	-1.0
	baz=208						
ETL	Fush Village	0.83	207	*e*P	Pn	17 45 43.4	-0.5
	baz=206						
ETLH	Xiulin Townshi	0.86	216	*e*P	Pn	17 45 44.2	-0.1
	baz=215						
TWD	Chiawan	0.91	206	*e*P	Pn	17 45 44.1	-0.6
	baz=205						
TWD				*e*S	Sn	17 45 59.0	-1.1
	baz=205						
JYNG	Yonagunijimaku	0.94	118	P	Pn	17 45 44.8	-0.1
JYNG				S	Sn	17 46 00.0	-0.6
SBCB	Hsinchu	0.96	264	*e*P	Pn	17 45 45.4	+0.3
	baz=264						
LIOB	Emei	0.96	255	*e*P	Pn	17 45 45.4	+0.2
	baz=255						
FUSS	Fushou	0.97	228	*e*P	Pn	17 45 46.3	+0.8
	baz=228						
HSN	Hsinchu	0.98	265	*e*P	Pn	17 45 45.0	-0.3
	baz=266						
NSTT	Nanjuang	0.98	254	*e*P	Pn	17 45 45.4	0.0
	baz=254						
NSTT				*e*S	Sn	17 46 00.9	-0.4
	baz=254						
YOJ	Yonaguni jima	0.99	116	P	Pn	17 45 45.4	0.0
YOJ				S	Sn	17 46 01.1	-0.4
HWA	Hwalien	1.00	203	*e*P	Pn	17 45 45.7	+0.1
	baz=202						
TWT	Tachien	1.01	231	*e*P	Pn	17 45 46.7	+0.8
	baz=230						
TDCB	Techi	1.03	231	*e*P	Pn	17 45 46.5	+0.5
	baz=231						
WHF	Hehuan Shan	1.03	223	*e*P	Pn	17 45 46.6	+0.2
	baz=222						
WHF				*e*S	Sn	17 46 03.0	0.0
	baz=222						
CHGB	Renai	1.15	223	*e*P	Pn	17 45 48.0	+0.6
	baz=223						
WHP	Taichung City	1.17	238	*e*P	Pn	17 45 48.0	+0.5
	baz=238						
NMLH	Miaoli	1.19	253	*e*P	Pn	17 45 47.7	+0.1

	baz=252						
ESL	Shilin	1.21	207	eP	Pn	17 45 46.7	-1.1
	baz=206						
OWD	Renai	1.23	220	eP	Pn	17 45 48.6	+0.4
	baz=219						
NSY	Sanyi	1.26	248	eP	Pn	17 45 48.7	+0.3
	baz=247						
TWQ1	Liyutan	1.28	245	eP	Pn	17 45 48.7	+0.1
	baz=244						
VWDT	VWDT	1.40	216	eP	Pn	17 45 50.4	+0.4
	baz=215						
VWDT				eS	Sn	17 46 10.0	+0.4
	baz=215						
TCU	Taichung	1.45	239	eP	Pn	17 45 50.6	+0.1
	baz=238						
SMLT	Sun Moon Lake	1.45	226	eP	Pn	17 45 51.0	+0.4
	baz=225						
SMLT				eS	Sn	17 46 11.3	+0.6
	baz=225						
TYC	Yuchr	1.46	228	eP	Pn	17 45 51.1	+0.4
	baz=227						
SSLB	Suanglung	1.48	222	eP	Pn	17 45 51.2	+0.2
	baz=221						
SSLB				eS	Sn	17 46 11.4	+0.1
	baz=221						
HGSD	Ruisui	1.51	202	eP	Pn	17 45 51.2	0.0
	baz=201						
EHY	Hungye	1.53	205	eP	Pn	17 45 50.5	-1.1
	baz=204						
WNT	Mingjian	1.60	231	eP	Pn	17 45 52.9	+0.5
	baz=230						
WJS	Zhushan	1.61	228	eP	Pn	17 45 52.8	+0.4
	baz=228						
WJS				eS	Sn	17 46 13.8	-0.1
	baz=228						
IRIF	Iriomote-Funau	1.64	110	P	Pn	17 45 52.5	-0.3
IRIF				eS	Sn	17 46 12.8	-1.8
EYUL	Yuli	1.68	203	eP	Pn	17 45 54.4	+1.1
	baz=202						
YUS	Yu-Shan	1.72	215	eP	Pn	17 45 55.0	+0.7
	baz=214						
YUS				eS	Sn	17 46 18.3	+1.1
	baz=214						
ALS	Alishan	1.78	219	eP	Pn	17 45 55.4	+0.5
	baz=218						
CHN5	Tsauling	1.79	224	eP	Pn	17 45 55.2	+0.4
	baz=223						
CHN5				eS	Sn	17 46 17.7	-0.4
	baz=223						
HATJ	Hateruma jima	1.82	117	eS	Sn	17 46 17.9	-0.5
WDLH	Douliu	1.82	229	eP	Pn	17 45 55.4	+0.3
	baz=228						
WDLH				eS	Sn	17 46 18.6	-0.1
	baz=228						
JKRS	Kuro-shima	1.91	110	P	Pn	17 45 56.5	+0.4
JKRS				eS	Sn	17 46 19.7	-0.9
WTK	Tuku	1.93	232	eP	Pn	17 45 56.3	0.0
	baz=231						
ELDTW	Lidau	1.94	209	eP	Pn	17 45 57.3	+0.7
	baz=208						
JIJ	Ishigaki jima	1.99	105	P	Pn	17 45 57.0	-0.1
JIJ				S	Sn	17 46 20.9	-1.4
CHN4	Tsaushan	2.03	221	eP	Pn	17 45 56.5	-1.1
	baz=220						
STYH	Taoyuan	2.07	214	eP	Pn	17 45 59.8	+1.7
	baz=213						
JISG	Ishigakijimahi	2.09	98	P	Pn	17 45 58.6	+0.2
JISG				S	Sn	17 46 23.9	-0.7
WTP	Ta-pu	2.10	219	eP	Pn	17 45 59.4	+0.8
	baz=218						
CHN1	Nanshi	2.19	219	eP	Pn	17 45 59.8	+0.1
	baz=218						
TWG	Pinlang	2.25	203	eP	Pn	17 46 00.1	-0.3
	baz=202						
JTJ	Tarama	2.44	96	P	Pn	17 46 03.3	+0.5
JTJ				S	Sn	17 46 32.2	-0.3
MASBT	Mashibuluo	2.62	210	eP	Pn	17 46 05.8	+0.6
	baz=209						
XPSS	Dashiqiu	2.62	321	eP	Pn	17 46 04.6	-0.6
	baz=320						
PHUB	P'eng-hu	2.64	239	eP	Pn	17 46 04.2	-1.3
	baz=238						
JIRB	Irabujima	2.85	91	P	Pn	17 46 09.6	+1.4
JIRB				S	Sn	17 46 42.7	+0.6
JIKM	Ikemajima	2.92	89	eS	Sn	17 46 45.1	+1.4
MHZQ	Yeshan	2.97	294	eP	Pn	17 46 09.1	-0.7
	baz=294						
JMJ2	Miyako jima3	2.99	92	P	Pn	17 46 11.4	+1.3
JMJ2				S	Sn	17 46 46.6	+1.0
JOGS	Gusukube	3.06	92	eS	Sn	17 46 46.0	-1.2

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*NEIC **04** 17:57:27.0±2.1, 31°.25S±0°.05×68°.4W±0°.1, h101km±2km, mb4.3/4, Md4.2(SJA), Error ellipse: s-maj=13.0km s-min=7.5km az=94.0*

*SJA **04** 17:57:26.4±0.7, 31°.21S×68°.32W, h105km±2km, ML4.0, MW4.0*

*IDC **04** 17:57:26.2±2.4, 31°.24S×68°.40W, h101km±21km, mb3.5/5, mb1 3.7/10, mb1mx3.6/28, mbtmp3.9/10, MS2.8/1, Ms1 2.8/1, ms1mx2.5/14, Error ellipse: s-maj=30.5km s-min=16.2km az=91.0*

*GUC **04** 17:57:27.6±0.6, 31°.16S×68°.69W, h159km±15km, ML4.2*

ISC 04 17:57:26.0±0.6, **31°.22S**±0°.03×**68°.33W**±0°.03, **h104**km±6km, **n109**, σ**2s.03**/152, **mb3.9**/6, **4C-1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.16	229	eP	Pn	17 57 41.8	+1.1
RTLL				eS	Sn	17 57 53.5	+1.8
ZON	Zonda	0.44	223	Pn	Pn	17 57 43.1	+1.2
ZON				Sn	Sn	17 57 53.5	-0.3
ZON	Zonda	0.44	223	eP	Pn	17 57 43.1	+1.2
ZON				eS	Sn	17 57 55.2	+1.3
ZON				IAML		17 57 55.6	
	comp=Z,8μm,0.4s						
RTCV	Cerro Valdivia	0.66	196	eP	Pn	17 57 44.9	+1.3
ACCO	Cerro Coronel	0.89	315	eP	Pn	17 57 47.5	+1.4
RTLS	Leoncito	1.01	235	eP	Pn	17 57 49.0	+1.9
RTLS				eS	Sn	17 58 05.8	+2.8
RTLS				IAML		17 58 07.2	
	comp=Z,3μm,0.8s						
ACDV	Cuesta del Vie	1.25	327	eP	Pn	17 57 51.3	+1.6
ACDV				eS	Sn	17 58 09.7	+2.1
ACDV				IAML		17 58 09.9	
	comp=Z,3μm,0.4s						
AUSP	Uspallata	1.34	222	eP	Pn	17 57 52.8	+1.9
AUSP				eS	Sn	17 58 12.7	+3.0
ASAL	Salagasta	1.43	197	eP	Pn	17 57 53.5	+1.8
AROD	Rodeo	1.44	317	eP	Pn	17 57 53.8	+1.7
ARCO	CERRO ARCO	1.69	197	eP	Pn	17 57 56.9	+1.8
ARCO				eS	Sn	17 58 19.0	+1.9
ARCO				IAML		17 58 20.6	
	comp=Z,3μm,0.3s						
APLL	PUNTA DE LOS L	1.76	62	eP	Pn	17 57 57.4	+1.7
AAGR	Agrelo	1.91	193	eP	Pn	17 57 59.5	+1.8
AAGR				eS	Sn	17 58 24.6	+2.8
ACLC	CERRO LA CRUZ	2.15	34	eP	Pn	17 58 02.2	+1.3
ACLC				eP	Pn	17 58 02.2	+1.3
ACLC				eS	Sn	17 58 29.8	+2.3
ACLC				IAML		17 58 32.1	
	comp=Z,752nm,0.7s						
AVIZ	Vizcacheras	2.25	184	eP	Pn	17 58 03.7	+1.7
AVIZ				eS	Sn	17 58 24.5	-5.2
GO04	Tololo Observa	2.37	296	⇑iP	Pn	17 58 05.0	+1.3
GO04				eS	Sn	17 58 33.7	+1.1
GO04	Tololo Observa	2.37	296	Pn	Pn	17 58 05.2	+1.4
GO04				Sn	Sn	17 58 33.8	+1.1
GO04	Tololo Observa	2.37	296	eP	Pn	17 58 05.4	+1.6
GO04				eS	Sn	17 58 35.4	+2.7
VA03	San Esteban	2.43	230	eP	Pn	17 58 06.7	+2.2
VA03				eS	Sn	17 58 37.0	+3.0
VA03				IAML		17 58 38.9	
	comp=E,931nm,0.4s						
VA03	San Esteban	2.43	230		Pn	17 58 06.3	+1.8
VA03				Sn	Sn	17 58 37.5	+3.5
VA03	San Esteban	2.43	230	eP	Pn	17 58 06.6	+2.2
VA03				IAML		17 58 39.3	
	comp=Z,563nm,0.3s						
VCA	Vinchina	2.48	3	⇑iP	Pn	17 58 07.0	+1.8
VCA				i S	Sn	17 58 36.8	+1.7
VCA	Vinchina	2.48	3	eP	Pn	17 58 07.0	+1.8
VCA				eP	Pn	17 58 07.2	+2.0
VCA				eS	Sn	17 58 39.8	+4.7
VCA				IAML		17 58 41.1	
	comp=Z,1μm,0.3s						
MRA	San Martin	2.52	119	eP	Pn	17 58 07.2	+1.6
MRA				eS	Sn	17 58 37.7	+1.6
MRA				IAML		17 58 37.9	
	comp=Z,433nm,0.5s						
PEL	Peldehue	2.77	226	eP	Pn	17 58 10.3	+1.5
PEL				i S	Sn	17 58 43.8	+2.0
PEL	Peldehue	2.77	226	Pn	Pn	17 58 10.2	+1.5
PEL				Sn	Sn	17 58 42.5	+0.8
PEL	Peldehue	2.77	226	eP	Pn	17 58 10.3	+1.5
PEL				eS	Sn	17 58 44.4	+2.7
CO05	La Serena	2.82	297	eP	Pn	17 58 10.0	+0.5
CO05				eS	Sn	17 58 42.1	-0.9
CO05	La Serena	2.82	297		Pn	17 58 10.1	+0.6
CO05				Sn	Sn	17 58 42.0	-0.9
VA06	Catapilco	2.85	241	eP	Pn	17 58 11.0	+1.1
VA06				eS	Sn	17 58 43.9	+0.2
VA06				IAML		17 58 49.1	
ROCH	El Roble	2.87	232	eP	Pn	17 58 11.8	+1.5
ROCH				eP	Pn	17 58 11.2	+0.9
ROCH				eS	Sn	17 58 45.7	+1.4
ROCH				IAML		17 58 49.5	
	comp=N,834nm,0.7s						
ROC1	El Roble	2.87	232	eP	Pn	17 58 11.3	+0.9
ROC1				eS	Sn	17 58 46.6	+2.0
CO06	Fray Jorge	2.89	280		Pn	17 58 10.1	-0.3
CO06				Sn	Sn	17 58 42.1	-2.5
MT05	Renca	2.97	223	eP	Pn	17 58 13.5	+2.0
MT05				eS	Sn	17 58 49.3	+2.7
MT05				IAML		17 58 54.8	
	comp=E,905nm,0.3s						
MT05	Renca	2.97	223	Pn	Pn	17 58 13.6	+2.0
MT05	Renca	2.97	223	eP	Pn	17 58 13.8	+2.2
MT05				IAML		17 58 52.3	
	comp=Z,280nm,0.3s						
LCO	Las Campanas	3.01	316	⇑iP	Pn	17 58 13.4	+1.2
LCO				eS	Sn	17 58 48.3	+0.4
LCO	Las Campanas	3.01	316	Pn	Pn	17 58 13.5	+1.2
LCO				Sn	Sn	17 58 49.0	+1.1
LCO	Las Campanas	3.01	316	eP	Pn	17 58 13.5	+1.2
LMEL	Las Melosas	3.06	211	eP	Pn	17 58 15.8	+3.0
LMEL				i S	Sn	17 58 53.1	+4.3
LMEL				IAML		17 58 59.3	
	comp=N,204nm,0.2s						
TCA	Tanti	3.20	93	eP	Pn	17 58 15.9	+1.3
TCA				eS	Sn	17 58 52.0	-0.1
TCA				IAML		17 59 09.8	
	comp=Z,290nm,0.5s						
TINO	Tinogasta	3.22	12	eP	Pn	17 58 18.8	+3.9
BO04	La Punta	3.36	214	eP	Pn	17 58 18.4	+1.7
BO04				i S	Sn	17 58 58.3	+2.4
BO04				IAML		17 59 01.2	
	comp=N,216nm,0.5s						
MT09	Talagante	3.40	221	⇓iP	Pn	17 58 17.9	+0.7
MT09				i S	Sn	17 58 58.5	+1.7
MT09				IAML		17 58 59.0	
	comp=E,526nm,0.2s						
MT09	Talagante	3.40	221		Pn	17 58 17.4	+0.1
CYA	Choya	3.54	39	eP	Pn	17 58 19.7	+0.6
CYA				eS	Sn	17 59 00.3	+0.2
CYA				IAML		17 59 00.7	
	comp=Z,142nm,0.3s						
RFA	San Rafael	3.54	182	eP	Pn	17 58 20.0	+0.9
RFA				eS	Sn	17 59 02.2	+2.0
RFA				IAML		17 59 29.6	
	comp=Z,240nm,0.6s						
MT01	Popeta	3.61	222		Pn	17 58 19.5	-0.5
VA05	Santo Domingo	3.69	228	eP	Pn	17 58 21.2	+0.2
VA05				i S	Sn	17 59 04.1	+0.5
VA05	Santo Domingo	3.69	228	Pn	Pn	17 58 21.2	+0.2
AC04	Llanos de Chal	3.84	321		Pn	17 58 23.4	+0.3
BO01	Tunca	3.92	216		Pn	17 58 24.0	-0.2
GO03	Copiap	3.98	335	⇑iP	Pn	17 58 25.9	+0.8
GO03				i S	Sn	17 59 10.5	-0.3
GO03	Copiap	3.98	335	Pn	Pn	17 58 26.1	+1.1
GO03	Copiap	3.98	335	eP	Pn	17 58 26.4	+1.4
GO03				eS	Sn	17 59 13.4	+2.6
BO02	Sierra Bellavi	4.11	209		Pn	17 58 28.0	+1.2
AC02	Maricunga	4.43	351		Pn	17 58 33.4	+2.0
AC02	Maricunga	4.43	351	eP	Pn	17 58 33.5	+2.0
AC02				eS	Sn	17 59 27.2	+5.0
AC02				IAML		17 59 28.8	
	comp=Z,86nm,1.0s						
EDS3	Malargue	4.62	191	eP	Pn	17 58 35.0	+1.2
EDS3				eS	Sn	17 59 39.4	+13
GO05	Huala	4.84	218	eP	Pn	17 58 34.9	-1.7
GO05	Huala	4.84	218	Pn	Pn	17 58 34.9	-1.7
AHML	Horco Molle	5.14	31	eP	Pn	17 58 42.2	+1.5
AHML				IAML		18 00 20.4	
	comp=Z,95nm,0.7s						
FSA	Cafayete	5.49	23	eP	Pn	17 58 46.6	+0.9
PB14	IPOC Station P	6.82	344	Pn	Pn	17 59 02.4	-1.4
PB10	IPOC Station P	7.93	345	Pn	Pn	17 59 16.1	-2.5
PB15	IPOC Station P	8.05	352		Pn	17 59 19.6	-0.8
LC01	Cunco	8.19	200	Pn	Pn	17 59 21.4	-0.6
PB06	IPOC Station P	8.55	352		Pn	17 59 25.6	-1.6
TRQA	Tornquist	8.59	144	Pn	Pn	17 59 26.9	-0.6
LVC	Limon Verde	8.59	356	P	Pn	17 59 26.8	-1.1
	comp=Z,6.0nm,0.3s,baz=154,slow=13,SNR=34						
LVC				S	Sn	18 00 59.9	-3.4
	comp=Z,1.1nm,0.3s,baz=16,slow=20,SNR=1.8						
LVC				LR	LR	18 03 07.8	
	comp=Z,61nm,19.8s,baz=211,slow=40						
LVC	Limon Verde	8.59	356	Pn	Pn	17 59 26.5	-1.4
PB04	IPOC Station P	9.00	349		Pn	17 59 29.9	-3.3
PB09	IPOC Station P	9.42	355		Pn	17 59 37.4	-1.7
PB07	IPOC Station P	9.56	351		Pn	17 59 37.2	-3.6
PLCA	Paso Flores	9.66	190	P	Pn	17 59 41.4	-0.7
	comp=Z,0.2nm,0.3s,baz=19,slow=12,SNR=3.5						
PLCA	Paso Flores	9.66	190	Pn	Pn	17 59 39.2	-2.8
PB01	IPOC Station P	10.19	354		Pn	17 59 45.6	-3.7
LL04	Puerto Octay	10.21	198	Pn	Pn	17 59 45.5	-4.0
ITQB	Itaqui	10.22	84	Pn	Pn	17 59 46.4	-3.3
PATCX	Punta Patache	10.49	351	Pn	Pn	17 59 48.9	-4.5
TA01	Diego Aracena	10.74	351	Pn	Pn	17 59 52.8	-3.9
CPUP	Villa Florida	10.81	66	P	Pn	18 00 00.1	+2.4
	comp=Z,0.2nm,0.3s,baz=194,slow=8.3,SNR=1.8						
PB08	IPOC Station P	11.06	356	Pn	Pn	17 59 58.0	-3.4
PB11	IPOC Station P	11.47	354	Pn	Pn	18 00 02.2	-4.6
PSGCX	Pisagua	11.69	352	Pn	Pn	18 00 03.9	-5.7
PLTB	Pedras Altas	12.58	96	Pn	Pn	18 00 18.4	-2.9
PB12	IPOC Station P	12.68	351	Pn	Pn	18 00 18.2	-4.6
PB16	IPOC Station P	12.88	355		Pn	18 00 23.5	-2.2
LPAZ	La Paz	14.87	1	P	Pn	18 00 52.1	+0.6
	comp=Z,0.5nm,0.3s,baz=187,slow=7.0,SNR=17						
LPAZ	La Paz	14.87	1	P	Pn	18 00 51.1	-0.4
SIV	San Ignacio	16.55	25	P	P	18 01 13.0	+0.3
	comp=Z,0.2nm,0.3s,baz=242,slow=13,SNR=4.5						
ETMB	Extrema	21.39	6	P	P	18 02 05.9	+0.5
ETMB				IAmb	IAmb	18 02 30.8	
	comp=Z,7.4nm,0.9s						
USHA	Ushuaia	23.60	180	P	P	18 02 27.5	+0.3
	comp=Z,7.1nm,0.6s,baz=352,slow=12,SNR=5.8						
VNA3	Neumayer Olymp	50.79	159	P	P	18 06 16.3	+1.1
VNA1	Neumayer--Stat	51.04	158	P	P	18 06 17.1	+0.1
VNA2	Neumayer--Watz	51.40	158	P	P	18 06 20.8	+1.1
	baz=284,slow=8.9						
SNAA	Sanae	53.01	159	P	P	18 06 32.7	+1.0
SNAA	Sanae	53.01	159	P	P	18 06 32.9	+1.2
	comp=Z,1.8nm,0.6s,baz=290,slow=9.2,SNR=19						
SNAA	Sanae	53.01	159	P	P	18 06 32.1	+0.4
SNAA				IAmb	IAmb	18 07 10.6	
	comp=Z,8.7nm,1.6s						
QSPA	South Pole Qui	59.01	180	P	P	18 07 15.6	+1.0
TXAR	Lajitas Array	68.97	327	P	P	18 08 22.7	+2.5
	comp=Z,0.1nm,0.4s,baz=134,slow=5.2,SNR=2.2						
TORD	Torodi Ar. Bea	80.30	68	P	P	18 09 26.2	+0.3
	comp=Z,1.1nm,0.6s,baz=276,slow=5.9,SNR=9.3						
TORD	Torodi Ar. Bea	80.30	68	IAmb	IAmb	18 09 27.5	
	comp=Z,1.1nm,0.8s						
PDAR	Pinedale Array	82.79	331	P	P	18 09 39.2	+0.5
	comp=Z,0.1nm,0.5s,baz=150,slow=3.8,SNR=1.6						
ASAR	Alice Springs	121.41	204	PKP	PKPdf	18 16 06.9	-0.8
	comp=Z,0.3nm,0.4s,baz=138,slow=1.6,SNR=9.5						
WRA	Warramunga Arr	124.67	206	PKP	PKPdf	18 16 13.8	-0.2
	comp=Z,1.0nm,0.4s,baz=164,slow=1.7,SNR=38						
ZALV	Zalesovo Beam	150.21	33	PKPbc	PKiKP	18 17 05.2	+0.2
	comp=Z,1.5nm,0.3s,baz=314,slow=3.6,SNR=10.0						
ZALV	Zalesovo Beam	150.21	33		PKiKP	18 17 04.8	-0.3
MKAR	Makanchi Array	152.59	47	PKPbc	PKPbc	18 17 09.6	-0.5
	comp=Z,1.1nm,0.8s,baz=254,slow=0.9,SNR=5.1						
MKAR				PKPab	PKPab	18 17 21.9	+1.0
	comp=Z,1.1nm,0.7s,baz=315,slow=2.3,SNR=6.0						

IDC 04 18:00:34.7±5.9, **34°.43S**×**107°.59W**, **h0**km, **mb3.9**/2, **mb1 4.3**/2, **mb1mx3.7**/27, **mbtmp3.9**/2, **MS3.4**/8, **Ms1 3.4**/8, **ms1mx3.2**/21, **Error ellipse: s-maj=485.9km s-min=40.0km az=94.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	7.43	348	LR	LR	18 04 25.9	
	comp=Z,114nm,18.1s,baz=322,slow=31						
H03S2	Juan Fernandez	23.71	97	T	T	18 32 17.0	
	baz=260,SNR=73						
H03S1	Juan Fernandez	23.72	97	T	T	18 32 19.9	
	baz=260,SNR=90						
H03S3	Juan Fernandez	23.72	97	T	T	18 32 16.8	
	baz=260,SNR=59						
H03N2	Juan Fernandez	23.77	96	T	T	18 32 12.2	
	baz=266,slow=73,SNR=11						
H03N3	Juan Fernandez	23.77	96	T	T	18 32 13.3	
	baz=266,slow=73,SNR=13						
H03N1	Juan Fernandez	23.79	96	T	T	18 32 16.0	
	baz=266,slow=73,SNR=10						
PLCA	Paso Flores	29.86	113	LR	LR	18 15 59.7	
	comp=Z,45nm,21.8s,baz=0.5,slow=31						
ATAH	Atahualpa	38.23	51	LR	LR	18 19 21.9	
	comp=Z,59nm,19.0s,baz=181,slow=30						
LPAZ	La Paz	39.67	73	LR	LR	18 21 10.8	
	comp=Z,39nm,21.2s,baz=255,slow=31						
PPT	Papeete	40.98	283	LR	LR	18 20 11.6	
	comp=Z,82nm,20.9s,baz=112,slow=29						
CPUP	Villa Florida	43.74	93	LR	LR	18 24 37.2	
	comp=Z,48nm,19.4s,baz=160,slow=33						
ROSC	El Rosal	50.10	45	LR	LR	18 27 20.9	
	comp=Z,54nm,18.7s,baz=229,slow=32						
VNDA	Vanda	56.80	195	P	P	18 10 19.8	-0.4
	2.3nm,1.1s,baz=104,slow=4.2,SNR=1.1						
NVAR	Mina Array Bea	73.17	351	P	P	18 12 07.5	+0.2
	0.9nm,0.9s,baz=185,slow=8.7,SNR=3.4						
SADO	Sadowa	82.95	20	LR	LR	18 45 12.4	
	comp=Z,42nm,20.6s,baz=24,slow=32						
SONM	Songino Array	151.36	308	PKPbc	PKPbc	18 20 28.9	-1.2
	1.1nm,1.0s,baz=101,slow=2.9,SNR=5.4						
CMAR	Chiang Mai Arr	151.53	243	PKPbc	PKiKP	18 20 31.9	+0.2
	1.0nm,0.8s,baz=201,slow=0.7,SNR=8.1						

WEL 04 18:12:36.1±0.5, **43°S**±4°×**17°7E**±°, **h33**km, **M3.1**/15, **ML3.6**/26, **MLv3.1**/15, **Error ellipse: s-maj=0.0km s-min=0.0km az=26.6, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLWZ	Palliser	1.99	309	P	Pn	18 13 08.0	+0.6
PLWZ				S	Sn	18 13 28.7	-2.5
PAWZ	Paruwai Farm	2.02	315	P	Pn	18 13 08.1	+0.3
PAWZ				S	Sn	18 13 30.5	-1.4
MSWZ	Moikau Station	2.09	312	P	Pn	18 13 09.3	+0.5
MSWZ				S	Sn	18 13 31.5	-2.2
MTW	Mount Morrison	2.15	320	P	Pn	18 13 09.9	+0.3
MTW				S	Sn	18 13 32.7	-2.4
BFZ	Birch Farm	2.29	339	P	Pn	18 13 13.2	+1.6
BFZ				S	Sn	18 13 39.9	+1.2
HOWZ	Holdsworth Sta	2.36	324	P	Pn	18 13 12.9	+0.4
HOWZ				S	Sn	18 13 38.5	-1.7
CAW	Cannon Point	2.41	315	P	Pn	18 13 13.7	+0.6
CAW				S	Sn	18 13 40.4	-1.0
PRWZ	Pori Road	2.49	336	P	Pn	18 13 15.3	+1.0
MRZ	Mangatainoka R	2.53	328	P	Pn	18 13 15.6	+0.8
MRZ				S	Sn	18 13 43.1	-1.4
OGWZ	Otaki Gorge	2.58	321	P	Pn	18 13 16.2	+0.8
OGWZ				S	Sn	18 13 43.0	-2.6
PRHZ	Porangahau	2.61	348	P	Pn	18 13 17.1	+1.1
KIW	Kapiti Island	2.67	317	P	Pn	18 13 18.0	+1.2
TCW	Tory Channel	2.79	305	P	Pn	18 13 20.1	+1.7
TCW				S	Sn	18 13 49.0	-1.8
PXZ	Pawanui	2.82	353	P	Pn	18 13 19.4	+0.6
TUWZ	Tuamarina	2.88	298	P	Pn	18 13 21.9	+2.4
TSZ	Takapari Road	2.95	339	P	Pn	18 13 21.9	+1.2
TSZ				S	Sn	18 13 55.0	+0.1
PNHZ	Pukenui	3.03	343	P	Pn	18 13 22.7	+1.0
PNHZ				S	Sn	18 13 58.0	+1.0
KAHZ	Kahuranaki	3.05	354	P	Pn	18 13 22.7	+0.6
KAHZ				S	Sn	18 14 00.1	+2.7
DUWZ	D'Urville Isla	3.25	307	P	Pn	18 13 27.0	+2.3
DUWZ				S	Sn	18 14 00.9	-1.4
KRHZ	Kereru	3.26	347	P	Pn	18 13 26.0	+1.1
KRHZ				S	Sn	18 14 03.1	+0.5
THZ	Tophouse	3.44	287	P	Pn	18 13 27.8	+0.3
THZ				S	Sn	18 14 04.6	-2.6
WAZ	Wanganui	3.54	329	P	Pn	18 13 31.7	+3.0
WAZ				S	Sn	18 14 11.3	+1.8
MOVZ	Moawhango	3.62	340	P	Pn	18 13 31.8	+1.9
MOVZ				S	Sn	18 14 11.8	+0.3
BKZ	Black Stump Fm	3.71	350	P	Pn	18 13 32.0	+0.9
BKZ				S	Sn	18 14 14.2	+0.4
WNVZ	Wahianoa	3.73	339	P	Pn	18 13 33.8	+2.2
WNVZ				S	Sn	18 14 15.7	+1.3
TUVZ	Tukino	3.78	340	P	Pn	18 13 34.1	+2.0
TUVZ				S	Sn	18 14 17.2	+1.8
NGZ	Ngauruhoe	3.88	340	P	Pn	18 13 35.6	+2.1
NGZ				S	Sn	18 14 19.9	+2.0
ETVZ	East Tongariro	3.89	341	P	Pn	18 13 35.5	+1.9
TMVZ	Te Maari	3.91	341	P	Pn	18 13 35.5	+1.6
NNVZ	North Ngauruho	3.91	340	P	Pn	18 13 36.0	+2.0
NTVZ	North Tongarir	3.93	341	P	Pn	18 13 36.0	+1.8
QRZ	Quartz Range	4.10	298	P	Pn	18 13 38.7	+2.3
QRZ				S	Sn	18 14 22.0	-1.3
RTZ	Ruatahuna	4.22	356	P	Pn	18 13 38.7	+0.6
CTZ	Chatham Island	4.52	104	P	Pn	18 13 40.3	-1.8
CTZ				S	Sn	18 14 26.2	-7.2
TMZ	Timaru	4.84	249	P	Pn	18 13 46.5	0.0
PKGZ	Pakihiroa	4.97	7	P	Pn	18 13 48.1	-0.3
PKGZ				S	Sn	18 14 42.7	-2.0
HAZ	Te Kaha	5.08	4	P	Pn	18 13 49.7	-0.2
HAZ				S	Sn	18 14 44.2	-3.2

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*MDD **04** 18:19:11.5±1.7, 37°.25N×14°.15W, h0km, mb4.4/5, Error ellipse: s-maj=15.2km s-min=13.7km az=42.0, PRXIMO*

*IGIL **04** 18:19:12.1, 37°.27N×14°.29W, h12km, ML2.4*

*INMG **04** 18:19:12.9±1.1, 37°.09N×14°.57W, h10km, ML2.5, Error ellipse: s-maj=6.0km s-min=5.3km az=79.0*

*CNRM **04** 18:19:19.8, 37°.06N×13°.34W, h214km*

ISC 04 18:19:10.0±3.5, **37°.28N**±0°.09×**14°.1W**±0°.2, **h10**km, **n68**, σ**1s.84**/122, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	4.18	65	ePn	Pn	18 20 16.2	+2.3
PMAFR				eSn	Sn	18 21 03.8	+1.0
PMAFR				A	A	18 21 11.9	
	21nm,0.5s						
PMAFR	Mafra	4.18	65	P	Pn	18 20 16.1	+2.2
	4.6nm,0.1s,SNR=7.9						
PMAFR				S	Sn	18 21 03.1	+0.3
	11nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	4.25	90	ePn	Pn	18 20 16.3	+1.5
PFVI				eSn	Sn	18 21 02.6	-1.8
PFVI				A	A	18 21 05.0	
	11nm,0.7s						
PFVI	Vila Bisbo	4.25	90	P	Pn	18 20 16.0	+1.3
	1.1nm,0.1s,SNR=7.9						
PFVI				S	Sn	18 21 02.4	-2.0
	8.0nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	4.25	90	P	Pn	18 20 16.3	+1.5
PFVI				S	Sn	18 21 03.4	-1.0
PTEO	Sao Teotonio	4.32	85	ePn	Pn	18 20 17.5	+1.7
PTEO				eSn	Sn	18 21 05.3	-0.9
PTEO				A	A	18 21 16.7	
	7.0nm,0.8s						
PTEO	Sao Teotonio	4.32	85	P	Pn	18 20 17.5	+1.7
PTEO				S	Sn	18 21 05.3	-0.9
	3.5nm,0.8s						
MORF	Marmelete	4.38	88	eP	Pn	18 20 18.1	+1.5
MORF				eS	Sn	18 21 06.3	-1.4
MORF				IAML		18 21 09.7	
	comp=N,4.5nm,0.2s						
MORF	Marmelete	4.38	88	ePn	Pn	18 20 18.1	+1.5
MORF				eSn	Sn	18 21 07.2	-0.6
MORF				A	A	18 21 13.4	
	comp=N,4.9nm,0.1s						

MORF	Marmelete	4.38	88	P	Pn	18 20 18.1	+1.5
MORF				S	Sn	18 21 06.3	-1.4
PNCL	Nicolau / Gran	4.53	78	*e*Pn	Pn	18 20 20.2	+1.6
PNCL				*e*Sn	Sn	18 21 10.8	-0.5
PNCL				A	A	18 21 16.1	
	comp=N,5.6nm,0.5s						
PNCL	Nicolau / Gran	4.53	78	P	Pn	18 20 20.2	+1.6
PNCL				S	Sn	18 21 10.8	-0.5
	comp=N,5.6nm,0.5s						
PMPST	Porto Santo, M	4.56	204	*e*Sn	Sn	18 20 52.1	-20
PMPS	Porto Santo	4.58	204	*e*Sn	Sn	18 20 54.6	-18
MESJ	Messejana	4.74	81	*e*P	Pn	18 20 23.1	+1.5
MESJ				*e*S	Sn	18 21 15.0	-1.6
MESJ				IAML		18 21 19.8	
	comp=N,7.9nm,0.2s						
MESJ	Messejana	4.74	81	*e*Pn	Pn	18 20 24.0	+2.5
MESJ				*e*Sn	Sn	18 21 16.3	-0.2
MESJ				A	A	18 21 23.4	
	comp=N,3.7nm,0.5s						
MESJ	Messejana	4.74	81	P	Pn	18 20 23.1	+1.5
MESJ				S	Sn	18 21 15.0	-1.6
PSBE	So Bento	4.75	60	*e*Pn	Pn	18 20 25.0	+3.2
PSBE				*e*Sn	Sn	18 21 18.9	+1.9
PSBE				A	A	18 21 25.5	
	comp=N,8.5nm,0.6s						
PCVE	Castro Verde	4.87	84	*e*Pn	Pn	18 20 24.6	+1.3
PCVE				*e*Sn	Sn	18 21 18.4	-1.4
PCVE				A	A	18 21 25.2	
	comp=N,3.2nm,0.4s						
PCVE	Castro Verde	4.87	84	P	Pn	18 20 24.6	+1.3
PCVE				S	Sn	18 21 18.4	-1.4
	comp=N,3.2nm,0.4s						
PBDV	Barranco-do-Ve	4.96	89	*e*Pn	Pn	18 20 26.7	+2.2
PBDV				*e*Sn	Sn	18 21 21.0	-0.9
PBDV				A	A	18 21 24.4	
	comp=N,2.8nm,0.7s						
PBDV	Barranco-do-Ve	4.96	89	P	Pn	18 20 26.7	+2.2
PBDV				S	Sn	18 21 21.0	-0.9
	comp=N,2.8nm,0.7s						
PMTG	Montargil	4.99	67	*e*Pn	Pn	18 20 26.5	+1.5
PMTG				*e*Sn	Sn	18 21 22.1	-0.7
PMTG				A	A	18 21 28.8	
	comp=N,2.3nm,0.3s						
PMTG	Montargil	4.99	67	P	Pn	18 20 26.5	+1.5
PMTG				S	Sn	18 21 22.1	-0.7
	comp=N,2.3nm,0.3s						
EVO	Evora	5.01	74	P	Pn	18 20 26.8	+1.6
EVO				S	Sn	18 21 21.4	-1.7
EVO	Evora	5.01	74	*e*Pn	Pn	18 20 26.9	+1.6
EVO				*e*Sn	Sn	18 21 22.8	-0.3
EVO				A	A	18 21 27.4	
	comp=N,8.2nm,0.2s						
EVO	Evora	5.01	74	P	Pn	18 20 26.8	+1.6
EVO				S	Sn	18 21 21.4	-1.7
PBEJ	Beja	5.04	80	*e*Sn	Sn	18 21 22.9	-1.0
PBEJ				A	A	18 21 26.6	
	comp=N,4.2nm,0.2s						
PBEJ	Beja	5.04	80	S	Sn	18 21 22.9	-1.0
	comp=N,2.1nm,0.2s						
PVAQ	Vaqueiros	5.12	87	*e*Pn	Pn	18 20 28.7	+1.9
PVAQ				*e*Sn	Sn	18 21 24.9	-1.1
PVAQ				A	A	18 21 30.6	
	comp=N,2.8nm,0.1s						
PVAQ	Vaqueiros	5.12	87	P	Pn	18 20 28.7	+1.9
PVAQ				S	Sn	18 21 24.9	-1.1
	comp=N,2.8nm,0.1s						
PVAQ	Vaqueiros	5.12	87	P	Pn	18 20 28.8	+2.0
PVAQ				S	Sn	18 21 22.8	-3.2
PCAS	Casmilo, Conde	5.21	56	*e*Pn	Pn	18 20 29.8	+1.8
PCAS				*e*Sn	Sn	18 21 28.9	+0.7
PCAS				A	A	18 21 30.5	
	comp=N,3.4nm,0.5s						
PCAS	Casmilo, Conde	5.21	56	P	Pn	18 20 29.8	+1.8
PCAS				S	Sn	18 21 28.9	+0.7
	comp=N,3.4nm,0.5s						
EGRO	El Granado	5.31	85	P	Pn	18 20 30.6	+1.2
	comp=N,0.6nm,0.1s,SNR=11						
EGRO				S	Sn	18 21 29.4	-1.1
	comp=N,2.1nm,0.1s,SNR=7.9						
PESTR	Estremoz	5.41	71	*e*Pn	Pn	18 20 33.1	+2.4
PESTR				*e*Sn	Sn	18 21 33.1	+0.1
PESTR				A	A	18 21 36.5	
	comp=N,3.4nm,0.5s						
PESTR	Estremoz	5.41	71	P	Pn	18 20 32.5	+1.8
PESTR				S	Sn	18 21 31.4	-1.7
PBAR	Barrancos	5.70	79	*e*Sn	Sn	18 21 40.8	+0.5
PBAR	Barrancos	5.70	79	S	Sn	18 21 40.8	+0.5
PMRV	Marv??o	5.72	66	*e*Pn	Pn	18 20 37.4	+2.3
PMRV				*e*Sn	Sn	18 21 39.9	-0.9
PMRV				A	A	18 21 43.4	
	comp=N,3.7nm,0.3s						
PMRV	Marv??o	5.72	66	P	Pn	18 20 37.4	+2.3
PMRV				S	Sn	18 21 39.9	-0.9
	comp=N,3.7nm,0.3s						
PCBR	Castelo Branco	5.81	62	*e*Pn	Pn	18 20 39.5	+3.2
PCBR				*e*Sn	Sn	18 21 44.0	+1.0
PCBR				A	A	18 21 46.2	
	comp=N,1.9nm,0.5s						
PCBR	Castelo Branco	5.81	62	P	Pn	18 20 39.5	+3.2
PCBR				S	Sn	18 21 44.0	+1.0
	comp=N,0.9nm,0.5s						
EBAD	Badajoz	5.82	73	P	Pn	18 20 38.3	+1.9
	comp=N,1.3nm,0.1s,SNR=13						
EBAD				S	Sn	18 21 40.7	-2.5
	comp=N,6.0nm,0.2s,SNR=7.5						
PVIS	Viseu	5.95	53	*e*Sn	Sn	18 21 45.9	-0.6
PVIS	Viseu	5.95	53	S	Sn	18 21 45.9	-0.6
EMIN	Mina Concepcio	5.96	83	P	Pn	18 20 39.7	+1.4
	comp=N,0.6nm,0.1s,SNR=6.7						
EMIN				S	Sn	18 21 43.8	-2.8
	comp=N,0.9nm,0.1s,SNR=7.9						
POLO	Lamas de Olo	6.39	48	*e*Pn	Pn	18 20 46.6	+2.2
POLO				*e*Sn	Sn	18 21 56.6	-0.9
POLO	Lamas de Olo	6.39	48	P	Pn	18 20 46.6	+2.2
POLO				S	Sn	18 21 56.6	-0.9
PCAB	Cabril	6.47	45	*e*Pn	Pn	18 20 47.8	+2.4
PCAB				*e*Sn	Sn	18 21 57.8	-1.5
PCAB	Cabril	6.47	45	P	Pn	18 20 47.8	+2.4
PCAB				S	Sn	18 21 57.8	-1.5
PGAV	Gavieira, Arco	6.51	42	*e*Pn	Pn	18 20 47.9	+1.9
PGAV				*e*Sn	Sn	18 21 58.8	-1.6
PGAV				A	A	18 22 06.2	
	comp=N,3.2nm,0.9s						
PGAV	Gavieira, Arco	6.51	42	P	Pn	18 20 47.9	+1.9
PGAV				S	Sn	18 21 58.8	-1.6
	comp=N,3.2nm,0.9s						
ELOB	Lobios	6.56	44	P	Pn	18 20 47.9	+1.3
	comp=N,0.6nm,0.1s,SNR=4.0						
ELOB				S	Sn	18 21 57.5	-4.0
	comp=N,0.8nm,0.2s,SNR=4.0						
MVO	Moncorvo	6.75	53	*e*Pn	Pn	18 20 50.2	+1.0
MVO				*e*Sn	Sn	18 22 04.1	-2.0
MVO				A	A	18 22 07.8	
	comp=N,1.5nm,0.2s						
MVO	Moncorvo	6.75	53	P	Pn	18 20 50.5	+1.3
	comp=N,0.7nm,0.1s,SNR=7.9						
MVO				S	Sn	18 22 03.7	-2.4
	comp=N,2.3nm,0.2s,SNR=7.9						
EPLA	Plasencia	6.89	64	P	Pn	18 20 52.9	+1.7
	comp=N,0.3nm,0.1s,SNR=7.9						
EPLA				S	Sn	18 22 08.5	-1.2
	comp=N,1.0nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	6.91	33	P	Pn	18 20 52.2	+0.9
	comp=N,0.1nm,0.1s,SNR=7.9						
EMAZ				S	Sn	18 22 05.4	-4.5
	comp=N,1.0nm,0.1s,SNR=7.9						
ECAB	El Cabril	6.96	81	P	Pn	18 20 53.9	+1.8
	comp=N,0.4nm,0.1s,SNR=13						
ECAB				S	Sn	18 22 07.7	-3.7
	comp=N,1.1nm,0.2s,SNR=7.9						
EAGO	Agolada(Pontev	7.21	38	P	Pn	18 20 56.2	+0.8
	comp=N,2.3nm,0.2s,SNR=4.0						
EAGO				S	Sn	18 22 13.6	-3.8
	comp=N,1.1nm,0.1s,SNR=7.9						
ECAL	Calabor	7.37	49	P	Pn	18 20 59.9	+2.1
	comp=N,3.7nm,0.3s,SNR=7.4						
ECAL				S	Sn	18 22 19.3	-2.2
	comp=N,0.8nm,0.2s,SNR=7.9						
EADA	Adamuz	7.63	80	P	Pn	18 21 02.6	+1.3
	comp=N,0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	18 22 24.7	-3.2
	SNR=7.9						
PAB	San Pablo	8.01	71	P	Pn	18 21 07.5	+0.9
	comp=N,0.4nm,0.1s,SNR=7.9						
PAB				S	Sn	18 22 33.8	-3.6
	SNR=7.9						
ESDC	Sonseca Array	8.33	70	P	Pn	18 21 12.2	+1.2
	comp=N,0.0nm,0.1s,baz=254,slow=13,SNR=9.0						
ESDC				S	Sn	18 22 43.2	-2.0
	comp=N,0.7nm,0.3s,baz=256,slow=22,SNR=7.9						
ELGU	Los Guajares,	8.42	90	S	Sn	18 22 47.6	+0.4
	comp=N,0.9nm,0.2s,SNR=7.9						
GUD	Guadarrama	8.47	64	S	Sn	18 22 46.1	-2.6
	comp=N,0.5nm,0.2s,SNR=7.9						
MD31	MD31	8.86	117	P	Pn	18 21 15.7	-2.6
MD31				S	Sn	18 22 47.9	-10
MDT	Midelt	9.00	117	P	Pn	18 21 18.1	-2.0
MDT				S	Sn	18 22 51.8	-10

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*IDC **04** 18:43:04.6±2.4, 25°.00S×70°.29W, h0^{km}, mb4.2/1, mb1 4.1/3, mb1mx3.7/32, mbtmp4.0/3, ML3.9/2, MS2.3/1, Ms1 2.4/1, ms1mx2.2/22, Error ellipse: s-maj=100.9km s-min=40.1km az=96.0*

*GUC **04** 18:43:09.4±0.5, 24°.74S×70°.45W, h39^{km}±2^{km}, ML3.9*

ISC 04 18:43:05.8±2.1**, 24°.79S**±0°.06×**70°.9W**±0°.1**, h18**^{km}±11^{km}**, n33,** σ1^{s}.**17**/26**, 8C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB14	IPOC Station P	0.47	69	*e*P	Pg	18 43 16.0	+0.5
PB14				*i* S	Sg	18 43 20.3	-1.6
PB14				IAML		18 43 21.5	
	comp=N,30μm,0.1s						
PB10	IPOC Station P	1.31	13	*e*P	Pb	18 43 30.5	+0.5
PB10				*i* S	Sn	18 43 46.8	+0.4
PB05	IPOC Station P	2.03	18	⇑*i*P	Pn	18 43 40.2	+0.9
PB05				*i* S	Sn	18 44 03.3	-1.0
PB05				IAML		18 44 11.2	
	comp=E,703nm,0.5s						
PB15	IPOC Station P	2.04	40	*e*P	Pn	18 43 40.5	+0.9
PB15				*i* S	Sn	18 44 03.7	-1.0
PB06	IPOC Station P	2.40	30	⇑*i*P	Pn	18 43 45.2	+0.8
PB06				*i* S	Sn	18 44 12.2	-1.4
PB06				IAML		18 44 24.5	
	comp=E,844nm,0.5s						
PB04	IPOC Station P	2.54	16	*e*P	Pn	18 43 46.9	+0.5
PB04				IAML		18 44 27.7	
	comp=N,971nm,0.3s						
AC02	Maricunga	2.58	142	⇑*i*P	Pn	18 43 49.8	+2.6
LVC	Limon Verde	2.83	40	⇑*i*P	Pn	18 43 51.8	+1.3
GO03	Copiap	2.85	168	*e*P	Pn	18 43 52.0	+1.4
GO03				IAML		18 44 40.7	
	comp=E,474nm,0.4s						
PB03	IPOC Station P	2.92	21	⇑*i*P	Pn	18 43 52.2	+0.5
PB03				IAML		18 44 44.0	
	comp=E,468nm,0.6s						
PB07	IPOC Station P	3.19	17	*e*P	Pn	18 43 55.8	+0.5
PB07				IAML		18 44 51.5	
	comp=E,558nm,0.5s						
PB09	IPOC Station P	3.34	27	⇑*i*P	Pn	18 43 58.8	+1.4
PB09				IAML		18 44 52.7	
	comp=N,384nm,0.6s						
PB02	IPOC Station P	3.58	15	⇑*i*P	Pn	18 44 00.9	+0.3
PB01	IPOC Station P	3.95	19	⇑*i*P	Pn	18 44 06.3	+0.6
PATCX	Punta Patache	4.01	10	⇓*i*P	Pn	18 44 06.4	-0.1
HMBC	Humberstone	4.59	12	*e*P	Pn	18 44 14.8	+0.3
LPAZ	La Paz	8.85	17	Pn	Pn	18 45 15.6	+2.1
	comp=N,0.8nm,0.3s,baz=174,slow=5.3,SNR=15						
LPAZ				LR	LR	18 49 43.0	
	comp=N,20nm,21.6s,baz=262,slow=45						
H03N1	Juan Fernandez	11.11	217	T	T	18 57 21.0	
	baz=44,slow=72,SNR=296						
H03N2	Juan Fernandez	11.12	217	T	T	18 57 21.9	
	baz=44,slow=72,SNR=330						
H03N3	Juan Fernandez	11.13	217	T	T	18 57 20.8	
	baz=44,slow=72,SNR=347						
H03S3	Juan Fernandez	11.40	216	T	T	18 57 47.0	
	baz=41						
H03S1	Juan Fernandez	11.41	216	T	T	18 57 38.4	
	baz=41,SNR=17						
H03S2	Juan Fernandez	11.42	216	T	T	18 57 41.0	
	baz=41,SNR=6.8						
PLCA	Paso Flores	15.90	179	Pn	Pn	18 46 47.6	-1.2
	comp=N,0.1nm,0.3s,baz=346,slow=12,SNR=3.1						
TORD	Torodi Ar. Bea	80.17	71	P	P	18 55 14.8	-0.7
	comp=N,1.0nm,0.5s,baz=255,slow=4.0,SNR=10						
H11S2	WAKE ISLAND Hy	126.42	275	T	T	21 21 38.7	
	baz=108,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	126.43	275	T	T	21 21 37.6	
	baz=108,slow=75,SNR=90						
H11S3	WAKE ISLAND Hy	126.44	275	T	T	21 21 41.0	
	baz=108,slow=75,SNR=68						
H11N3	WAKE ISLAND Hy	126.60	277	T	T	21 21 55.6	
	baz=107,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	126.61	277	T	T	21 21 56.9	
	baz=107,slow=75,SNR=18						
H11N2	WAKE ISLAND Hy	126.61	277	T	T	21 21 55.9	
	baz=107,slow=75,SNR=15						
ZALV	Zalesovo Beam	145.69	26	PKPbc	PKPbc	19 02 44.0	+0.7
	comp=N,2.9nm,0.9s,baz=328,slow=5.3,SNR=9.4						
MKAR	Makanchi Array	149.35	37	PKPbc	PKPbc	19 02 54.2	+0.6
	comp=N,0.7nm,0.6s,baz=312,slow=2.4,SNR=4.4						

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*IDC **04** 18:43:17.1±4.9, 19°.50N×146°.33E, h0^{km}, mb4.1/3, mb1 4.3/3, mb1mx3.1/49, mbtmp4.1/3, Error ellipse: s-maj=305.6km s-min=34.2km az=91.0*

*NEIC **04** 18:43:22.9±0.7, 19°.5N±0°.2×146°.4E±0°.6, h35^{km}±2^{km}, mb4.1/7, Error ellipse: s-maj=104.0km s-min=8.2km az=106.0*

ISC 04 18:43:20.6±5.0**, 19°.4N**±0°.3×**14°7E**±°**, h35**^{km}**, n9,** σ0^{s}.**28**/9**, mb4.1**/8**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNRA	Kununurra	39.35	209	P	P	18 50 46.4	-0.4
WB0	Warramunga Arr	40.95	199	P	P	18 51 00.3	+0.3
WB0				IAmb	IAmb	18 51 13.1	
	comp=Z,7.0nm,1.6s						
WR0	Warramunga Arr	41.09	198	P	P	18 51 01.0	-0.1
WR0				IAmb	IAmb	18 51 27.3	
	comp=Z,4.5nm,1.1s						
WRAB	Tennant Creek	41.12	199	P	P	18 51 01.5	+0.1
WRAB				IAmb	IAmb	18 51 02.0	
	comp=Z,9.0nm,1.6s						
WB2	Warramunga Arr	41.12	199	P	P	18 51 01.8	+0.4
WB2				IAmb	IAmb	18 51 20.1	
	comp=Z,9.5nm,1.6s						
WRA	Warramunga Arr	41.13	199	P	P	18 51 01.6	+0.1
	comp=Z,0.6nm,0.4s,baz=19,slow=8.3,SNR=30						
AS31	Alice Springs	44.77	198	P	P	18 51 30.8	-0.2
AS31				IAmb	IAmb	18 51 32.5	
	comp=Z,1.8nm,1.6s						
ASAR	Alice Springs	44.77	198	P	P	18 51 30.7	-0.3
	comp=Z,0.4nm,0.5s,baz=19,slow=7.9,SNR=15						
FINES	FINESS Array B	86.84	336	P	P	18 56 01.2	0.0
	comp=Z,11nm,1.2s,baz=46,slow=4.0,SNR=4.8						

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*IDC **04** 18:46:27.4±4.2, 10°.96N×88°.04W, h0^{km}, mb3.6/3, mb1 3.9/5, mb1mx3.6/40, mbtmp3.6/5, ML3.3/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/26, Error ellipse: s-maj=166.1km s-min=22.8km az=27.0*

*INET **04** 18:46:29.9, 11°.17N×88°.08W, h20^{km}, MW3.5*

ISC 04 18:46:32.2±3.9**, 11°.1N**±0°.9×**88°.0W**±0°.5**, h29**^{km}**, n6,** σ1^{s}.**43**/7**, mb3.7**/3**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	Las Juntas de	3.09	105	Pn	Pn	18 47 19.2	+0.2
JTS				Sn	Sn	18 47 54.8	-0.3
CMIG	Matias Romero	8.94	312	Pn	Pn	18 48 38.4	-1.0
	0.3nm,0.3s,baz=96,slow=18,SNR=2.0						
CMIG				LR	LR	18 51 41.1	
	comp=Z,45nm,18.6s,baz=27,slow=35						
TXAR	Lajitas Array	23.29	323	P	P	18 51 36.9	-0.8
	0.4nm,0.7s,baz=143,slow=9.1,SNR=5.9						
NVAR	Mina Array Bea	38.36	320	P	P	18 53 53.2	+2.2
	1.9nm,0.8s,baz=141,slow=7.1,SNR=11						
ILAR	Eielson Array	67.01	337	P	P	18 57 22.4	+0.2
	0.7nm,1.0s,baz=121,slow=6.4,SNR=4.7						
CMAR	Chiang Mai Arr	149.81	347	PKPbc	PKPbc	19 06 19.1	-1.3
	0.4nm,0.3s,baz=343,slow=2.8,SNR=4.9						

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*NEIC **04** 18:49:02.5±2.2, 20°.8S±0°.1×178°.5W±0°.1, h587^{km}±7^{km}, mb4.4/94, Error ellipse: s-maj=18.4km s-min=15.2km az=132.0*

*IDC **04** 18:49:04.7±1.2, 20°.92S×178°.72W, h614^{km}±13^{km}, mb3.6/16, mb1 3.8/17, mb1mx3.7/34, mbtmp4.6/17, Error ellipse: s-maj=17.8km s-min=10.2km az=155.0*

ISC 04 18:49:03.7±0.5**, 20°.82S**±0°.09×**178°.71W**±0°.08**, h600**^{km}**, n179,** σ1^{s}.**03**/184**, mb4.4**/66**, 13C-12D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.34	314	P	P	18 50 32.5	+0.8
	6.7nm,0.3s,baz=148,slow=12,SNR=35						
MSVF	Nonsavu	4.34	314		P	18 50 31.4	-0.3
AFI	Afiamalu	9.54	45	S	S	18 52 58.5	-10
	6.3nm,0.3s,baz=344,slow=19,SNR=9.4						
PINNC	Pines Island,	13.00	260	P	P	18 51 53.0	+0.6
DZM	Mont Dzumac	13.89	262	P	P	18 52 01.4	-0.2
URZ	Urewera	17.75	191	P	P	18 52 34.5	-2.3
	35nm,0.3s,baz=0.0,slow=13,SNR=3.5						
URZ	Urewera	17.75	191	IAmb	IAmb	18 52 40.3	
	comp=Z,274nm,0.7s						
ARMA	Armidale	28.33	244	P	P	18 54 11.3	+0.1
ARMA				IAmb	IAmb	18 54 26.9	
	comp=Z,12nm,1.2s						
CTA	Charters Tower	32.80	265	P	P	18 54 50.2	+0.8
	comp=Z,5.5nm,0.3s,baz=97,slow=9.8,SNR=3.7						
CTAO	Charters Tower	32.80	265	P	P	18 54 50.0	+0.6
CTAO				IAmb	IAmb	18 54 50.7	
	comp=Z,12nm,1.0s						
TOO	Toolangi	35.18	234	P	P	18 55 09.3	+0.3
TOO				IAmb	IAmb	18 55 26.4	
	comp=Z,9.4nm,1.2s						
COEN	Coen	36.95	274	P	P	18 55 24.7	+0.9
COEN				IAmb	IAmb	18 55 34.1	
	comp=Z,9.4nm,1.0s						
STKA	Stephens Creek	37.05	244	P	P	18 55 24.8	+0.3
	comp=Z,1.2nm,0.3s,baz=110,slow=12,SNR=4.1						
STKA	Stephens Creek	37.05	244	IAmb	IAmb	18 55 25.2	
	comp=Z,0.9nm,1.1s						
BBOO	Buckleboo	41.81	244	P	P	18 56 02.5	0.0
BBOO				IAmb	IAmb	18 56 03.1	
	comp=Z,10nm,0.9s						
WAKE	Wake Island	42.36	339	P	P	18 56 06.9	+0.1
WR0	Warramunga Arr	43.71	263	P	P	18 56 17.0	-0.5
WR0				IAmb	IAmb	18 56 18.7	
	comp=Z,18nm,1.4s						
AS31	Alice Springs	43.80	257	P	P	18 56 18.1	0.0
ASAR	Alice Springs	43.80	257	P	P	18 56 18.3	+0.2
	comp=Z,11nm,0.8s,baz=91,slow=7.3,SNR=185						
ASAR				S	S	19 02 05.3	-1.4
	comp=Z,1.8nm,0.9s,baz=97,slow=15,SNR=12						
ASAR	Alice Springs	43.80	257	P	P	18 56 18.0	-0.2
ASAR				PcP	PcP	18 57 50.4	-0.6
ASAR					PP	18 58 10.9	-1.4
WB0	Warramunga Arr	43.88	263	P	P	18 56 18.1	-0.7
WB0				IAmb	IAmb	18 56 18.9	
	comp=Z,10nm,0.8s						
WB2	Warramunga Arr	43.89	263	P	P	18 56 18.4	-0.5
WB2				IAmb	IAmb	18 56 19.4	
	comp=Z,15nm,0.9s						
WRAB	Tennant Creek	43.90	263	P	P	18 56 18.4	-0.5
WRAB				IAmb	IAmb	18 56 19.4	
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	43.90	263	P	P	18 56 18.5	-0.4
	comp=Z,3.3nm,0.3s,baz=97,slow=7.4,SNR=552						
WRA				S	S	19 02 06.0	-2.2
	comp=Z,1.3nm,0.9s,baz=98,slow=12,SNR=5.9						
WRA	Warramunga Arr	43.90	263	P	P	18 56 17.6	-1.3
MTN	Manton Dam	48.51	271	P	P	18 56 53.3	-0.4
MTN				IAmb	IAmb	18 56 54.4	
	comp=Z,12nm,0.7s						
FORT	Forrest	48.56	247	P	P	18 56 53.6	-0.3
FORT				IAmb	IAmb	18 57 20.6	
	comp=Z,16nm,1.0s						
KNRA	Kununurra	49.98	267	P	P	18 57 04.5	0.0
KNRA				IAmb	IAmb	18 57 04.9	
	comp=Z,9.4nm,0.8s						
FAKI	Fak Fak	50.93	284	P	P	18 57 11.7	+0.2
FAKI				IAmb	IAmb	18 57 12.4	
	comp=Z,12nm,1.0s						
SIJI	Sorong	52.68	286	P	P	18 57 24.3	+0.3
	comp=Z,24nm,0.7s,baz=87,slow=5.4,SNR=23						
SOEI	Soe	55.85	272	P	P	18 57 47.9	+1.7
PSA00	Pilbara Seismi	56.95	257	P	P	18 57 52.7	-0.9
PSA00	Pilbara Seismi	56.95	257	P	P	18 57 53.0	-0.6
PSA00				IAmb	IAmb	18 57 54.4	
	comp=Z,12nm,1.0s						
SBA	Scott Base	57.51	184	P	P	18 57 58.7	+2.3
VNDA	Vanda	57.53	185	P	P	18 57 56.9	+0.4
	comp=Z,2.9nm,0.8s,baz=15,slow=6.1,SNR=6.4						
VNDA	Vanda	57.53	185	P	P	18 57 57.1	+0.5
GIRL	Giralia	61.83	255	P	P	18 58 27.0	+1.0
TOLI2	Tolitoli	63.03	282	P	P	18 58 34.7	+0.9
TOLI2				IAmb	IAmb	18 58 38.1	
	comp=Z,8.2nm,0.8s						
JAGI	Jajag, Banyuwa	65.72	270	P	P	18 58 50.1	-0.7
JAGI				IAmb	IAmb	18 59 13.5	
	comp=Z,23nm,1.1s						
KKM	Kota Kinabalu	69.20	285	P	P	18 59 12.7	+0.6
QSPA	South Pole Qui	69.25	180	P	P	18 59 11.8	+0.3
UGM	Wanagama	69.30	269	P	P	18 59 12.8	+0.2
MJAR	Matsushiro Arr	70.08	324	P	P	18 59 16.9	+0.2
	comp=Z,2.1nm,0.7s,baz=115,slow=9.5,SNR=2.9						
MJAR	Matsushiro Arr	70.08	324	IAmb	IAmb	18 59 23.3	
	comp=Z,3.9nm,1.1s						
ADK	Adak	72.41	1	P	P	18 59 28.9	-1.0
TPUB	Ta-pu	73.60	303	P	P	18 59 36.5	-0.8
SSLB	Suanglung	73.60	304	P	P	18 59 36.4	-1.0
SSLB				IAmb	IAmb	18 59 41.2	
	comp=Z,16nm,1.0s						
UNV	Unalaska Valle	75.10	7	P	P	18 59 44.2	-0.8
AKUT	Akutan	75.47	8	P	P	18 59 45.0	-2.1
PEA0B	Petropavlovsk-	76.41	346	P	P	18 59 50.5	-1.8
PETK	Petropavlovsk-	76.41	346	P	P	18 59 52.4	+0.1
	comp=Z,5.0nm,1.0s,baz=164,slow=12,SNR=5.0						
KSRS	Korea Array	76.69	319	P	P	18 59 55.6	+1.4
	comp=Z,0.9nm,0.7s,baz=127,slow=5.7,SNR=2.3						
USRK	Ussuriysk Ar.	78.86	326	P	P	19 00 07.7	+2.0
	comp=Z,5.3nm,0.9s,baz=169,slow=3.6,SNR=5.0						
YBH	Yreka Blue Hor	80.95	39	P	P	19 00 17.1	+0.3
YBH				IAmb	IAmb	19 00 18.6	
	comp=Z,14nm,1.1s						
GSC	Goldstone, Bar	80.96	47	P	P	19 00 16.8	-0.2
GLA	Glamis	81.13	50	P	P	19 00 18.2	+0.4
BEKR	Beckworth	81.24	42	P	P	19 00 18.4	0.0
BEKR				IAmb	IAmb	19 00 19.8	
	comp=Z,17nm,1.6s						
PNTR	Pine Nut	81.26	43	P	P	19 00 18.2	-0.4
PNTR				IAmb	IAmb	19 00 20.0	
	comp=Z,8.2nm,0.8s						
YERR	Yerington	81.43	43	P	P	19 00 19.0	-0.5
LCH	Last Change Ra	81.47	45	P	P	19 00 19.4	-0.2
LHV	Little Huntoon	81.48	44	P	P	19 00 19.5	+0.1
LHV				IAmb	IAmb	19 00 21.7	
	comp=Z,18nm,1.6s						
NVAR	Mina Array Bea	81.71	44	P	P	19 00 21.3	+0.4
	comp=Z,2.9nm,0.7s,baz=224,slow=8.6,SNR=17						
NVAR	Mina Array Bea	81.71	44	P	P	19 00 20.4	-0.5
NV11	Mina Array Sit	81.81	44	P	P	19 00 21.3	0.0
CN2	Changchun	82.15	323	*e*P	P	19 00 23.4	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KVN	Kaiserville	82.19	43	P	P	19 00 23.5	+0.2
TPH	Tonopah	82.21	44	P	P	19 00 22.7	-0.8
P18K	Big Mountain,	82.21	12	P	P	19 00 21.8	-0.9
P18K				IAmb	IAmb	19 00 22.7	
	comp=Z,11nm,0.9s						
MOD	Modoc Plateau	82.48	40	P	P	19 00 24.2	-0.5
K05A	Summer Lake	82.63	39	P	P	19 00 26.0	+0.6
K05A				IAmb	IAmb	19 00 27.0	
	comp=Z,15nm,0.9s						
O18K	Koktuh Hills	82.65	12	P	P	19 00 24.4	-0.4
W13A	Hualapai Mount	82.87	48	P	P	19 00 26.4	-0.4
O19K	Port Alsworth	83.13	12	P	P	19 00 26.5	-0.7
CNPM	China Poot	83.16	14	P	P	19 00 27.0	-0.4
PINE	Pine Mountain	83.24	38	P	P	19 00 29.1	+0.7
PINE				IAmb	IAmb	19 00 30.2	
	comp=Z,12nm,0.8s						
PRN	Pahroc Range	83.29	46	P	P	19 00 28.9	+0.2
PRN				IAmb	IAmb	19 00 30.8	
	comp=Z,11nm,1.3s						
BRLK	Bradley Lake	83.46	14	P	P	19 00 28.3	-0.6
BRLK				IAmb	IAmb	19 00 29.3	
	comp=Z,12nm,0.9s						
N19K	Bonanza Creek	83.67	12	P	P	19 00 28.8	-1.2
N19K				IAmb	IAmb	19 00 51.0	

	comp=Z,12nm,1.4s						
TUC	Tucson	83.69	52		P	19 00 31.1	+0.3
X16A	Lo Mia Camp, P	84.25	50		P	19 00 33.9	+0.3
319A	Douglas	84.37	54	P	P	19 00 34.4	+0.2
319A				IAmb	IAmb	19 00 36.2	
	comp=Z,10nm,1.1s						
U15A	North Rim	84.67	48	P	P	19 00 35.7	0.0
U15A				IAmb	IAmb	19 00 37.2	
	comp=Z,5.6nm,0.7s						
M19K	Big River Lodg	84.70	11	P	P	19 00 34.4	-0.5
M19K				IAmb	IAmb	19 00 52.0	
	comp=Z,12nm,1.5s						
G08A	Pilot Rock	85.27	38		P	19 00 38.0	-0.3
ENH	Enshi	85.67	304	P	P	19 00 39.6	-0.8
ENH				IAmb	IAmb	19 00 42.3	
	comp=Z,8.8nm,0.8s						
GHO	Glory Hole Cre	85.69	14	P	P	19 00 39.2	-0.5
MFID	Camas Ranch	86.06	41	P	P	19 00 42.1	+0.2
MFID				IAmb	IAmb	19 00 43.2	
	comp=Z,12nm,1.2s						
D08A	Wollman Farm,	86.33	36		P	19 00 42.0	-1.1
D08A				IAmb	IAmb	19 00 44.4	
	comp=Z,9.1nm,0.9s						
F10A	Beach Ranch, E	86.66	38	P	P	19 00 43.9	-0.8
PLID	Pearl Lake	86.88	39		P	19 00 44.8	-1.2
TRF	Thorofare Moun	86.90	12	P	P	19 00 44.6	-1.0
HLID	Hailey	87.00	41		P	19 00 46.6	+0.1
C09A	Chrisman Ranch	87.12	36	P	P	19 00 46.8	0.0
C09A				IAmb	IAmb	19 00 47.3	
	comp=Z,9.0nm,1.0s						
RND	Reindeer	87.16	13	P	P	19 00 46.0	-0.6
SRU	San Rafael Swe	87.22	46	P	P	19 00 48.0	+0.3
MCK	McKinley	87.43	13	P	P	19 00 46.9	-1.0
MCK				IAmb	IAmb	19 00 49.2	
	comp=Z,9.3nm,0.9s						
MNTX	Cornudas Mount	87.47	55		P	19 00 48.7	-0.1
MNTX				IAmb	IAmb	19 00 50.7	
	comp=Z,6.2nm,1.2s						
TX31	Lajitas Ar. Si	87.78	58	P	P	19 00 50.5	+0.1
TX32	Lajitas Array	87.78	58	P	P	19 00 50.4	0.0
TX32				IAmb	IAmb	19 00 52.1	
	comp=Z,4.5nm,0.9s						
TXAR	Lajitas Array	87.78	58	P	P	19 00 51.0	+0.5
	comp=Z,2.9nm,0.9s,baz=220,slow=4.9,SNR=27						
XAN	Xi'an	87.80	308	P	P	19 00 51.5	+1.2
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VNA3	Neumayer Olymp	87.87	176	P	P	19 00 48.8	-1.2
ANMO	Albuquerque	88.12	52	P	P	19 00 51.8	-0.1
	comp=Z,2.3nm,0.9s,baz=185,slow=5.8,SNR=3.5						
ANMO	Albuquerque	88.12	52	P	P	19 00 51.9	-0.1
I21K	Tanana	88.14	11	P	P	19 00 50.5	-0.6
I21K				IAmb	IAmb	19 00 51.4	
	comp=Z,7.4nm,0.8s						
MLY	Manley	88.24	11	P	P	19 00 50.1	-1.5
MLY				IAmb	IAmb	19 00 50.7	
	comp=Z,3.2nm,0.8s						
WRH	Wood River Hil	88.26	13	P	P	19 00 50.0	-1.6
WRH				IAmb	IAmb	19 00 51.6	
	comp=Z,8.5nm,0.8s						
VNA2	Neumayer--Watz	88.30	177	P	P	19 00 53.0	+1.0
H21K	Melozitna Rive	88.44	10	P	P	19 00 51.3	-1.2
H21K				IAmb	IAmb	19 00 54.7	
	comp=Z,8.4nm,1.4s						
HDA	Harding Lake	88.44	13	P	P	19 00 51.3	-1.2
HDA				IAmb	IAmb	19 00 52.5	
	comp=Z,4.4nm,0.7s						
MCMT	McKenzie Canyo	88.62	41	P	P	19 00 54.1	0.0
AHID	Auburn Hatcher	88.66	43	P	P	19 00 54.3	0.0
MDM	Murphy Dome	88.66	12	P	P	19 00 52.0	-1.5
IL31		88.77	13	P	P	19 00 52.7	-1.3
IL31				IAmb	IAmb	19 00 54.5	
	comp=Z,3.6nm,0.9s						
ILAR	Eielson Array	88.77	13	P	P	19 00 53.0	-1.0
	comp=Z,2.9nm,0.9s,baz=226,slow=5.4,SNR=14						
HHC	Hu-ho-hao-te	89.11	315	*e*P	P	19 00 57.7	+1.4
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,5.7s						
REDW	Red Top Meadow	89.11	42	P	P	19 00 56.1	-0.3
REDW				IAmb	IAmb	19 00 57.8	
	comp=Z,7.0nm,1.1s						
LOHW	Long Hollow	89.39	42	P	P	19 00 57.5	-0.3
LOHW				IAmb	IAmb	19 00 58.7	
	comp=Z,3.3nm,0.8s						
CM31	Chiang Mai Arr	89.60	290	P	P	19 00 59.0	+0.1
CM31				IAmb	IAmb	19 01 02.2	
	comp=Z,9.3nm,1.1s						
CMAR	Chiang Mai Arr	89.60	290	P	P	19 01 00.8	+1.8
	comp=Z,3.4nm,0.9s,baz=124,slow=3.2,SNR=22						
CMAR	Chiang Mai Arr	89.60	290	P	P	19 00 58.7	-0.3
BW06	Boulder Array	89.65	43	P	P	19 00 58.1	-0.9
BW06				IAmb	IAmb	19 00 59.3	
	comp=Z,3.0nm,0.8s						
PD31	Pinedale Array	89.65	43	P	P	19 00 57.5	-1.4
PD31				IAmb	IAmb	19 00 59.4	
	comp=Z,2.6nm,0.8s						
PDAR	Pinedale Array	89.65	43	P	P	19 00 58.6	-0.3
	comp=Z,2.5nm,0.7s,baz=217,slow=3.5,SNR=26						
CHTO	Chiang Mai	89.73	290	P	P	19 00 59.3	-0.2
CHTO				IAmb	IAmb	19 01 01.8	
	comp=Z,4.7nm,0.8s						
LZH	Lanzhou	92.44	308	⇑P	P	19 01 12.7	+0.8
LZH				pP	pwP	19 03 25.2	+0.6
LZH				sP	sP	19 04 23.8	+3.8
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
ZALV	Zalesovo Beam	110.33	321	PKiKP	PKiKP	19 06 26.7	-1.5
	comp=Z,0.7nm,0.5s,baz=132,slow=2.2,SNR=4.1						
MKAR	Makanchi Array	110.94	313	PKiKP	PKiKP	19 06 28.1	-1.5
	comp=Z,0.3nm,0.3s,baz=136,slow=1.4,SNR=9.3						
ARCES	ARCESS Array B	129.11	349	PKP	PKPdf	19 07 02.8	-0.9
	comp=Z,2.0nm,0.6s,baz=348,slow=1.3,SNR=12						
FINES	FINESS Array B	135.89	343	PKhKP	PKPpre	19 07 04.0	
	comp=Z,0.7nm,0.3s,baz=64,slow=3.2,SNR=0.8						
FINES				PKP	PKPdf	19 07 17.4	+0.8
	comp=Z,11nm,1.1s,baz=94,slow=1.9,SNR=6.8						
FINES				SKP		19 09 53.3	
	comp=Z,4.7nm,1.0s,baz=72,slow=6.2,SNR=4.9						
NOA	NORSAR Array B	139.22	353	PKhKP	PKPpre	19 07 14.7	
	comp=Z,0.6nm,0.7s,baz=31,slow=0.4,SNR=3.2						
AKASG	Malin Array Be	142.97	330	PKP	PKPdf	19 07 26.8	-3.0
	comp=Z,7.0nm,0.5s,baz=43,slow=4.4,SNR=51						
AKASG	Malin Array Be	142.97	330	PKPdf	PKPdf	19 07 26.2	-3.7
AKBB	Malin Array Si	142.97	330	PKPdf	PKPdf	19 07 26.5	-3.3
SORM	Soroca	145.13	328	⇑P	PKPdf	19 07 33.1	-0.6
BR131	Keskin Array S	146.56	312		PKPdf	19 07 38.0	+1.5
BRTR	Keskin Array B	146.56	312	PKPbc	PKPdf	19 07 38.7	+2.1
	comp=Z,2.5nm,0.7s,baz=135,slow=4.6,SNR=13						
BURAR	Bucovina Array	147.01	330	⇓P	PKPdf	19 07 39.1	+2.1
TPGR	Topolog	147.20	323	⇓P	PKPbc	19 07 40.2	-0.4
VRI	Vrincioaia	147.47	326	⇓P	PKPbc	19 07 41.1	-0.2
HARR	Harsova	147.58	323	⇑P	PKPbc	19 07 41.5	0.0
CRVS	Cervenica-Dubn	147.67	335	*e*	PKPab	19 07 46.5	+0.4
CRVS	Cervenica-Dubn	147.67	335	*e*PKP	PKPbc	19 07 41.9	+0.3
TRPA	Tarpa	147.83	333	⇑P	PKPdf	19 07 41.2	+3.1
DOPR	Dopca	148.09	327	⇓P	PKPbc	19 07 43.0	+0.2
MLR	Muntele Rosu	148.13	326	⇓P	PKPdf	19 07 41.3	+2.4
MLR	Muntele Rosu	148.13	326		PKPbc	19 07 42.6	-0.5
CLL	Collm	148.22	346	*i* PKPbc	PKPbc	19 07 42.5	-0.4
	comp=Z,15nm,1.0s						
CLL				*i* PKPab	PKPab	19 07 47.7	-0.5
	comp=Z,4.0nm,0.7s						
CLL				*e*pPKPab	pPKPbc	19 10 01.0	+1.8
DPC	Dobruska-Polom	148.23	342	⇑*e*PKP	PKPbc	19 07 43.1	+0.1
DPC				*e*PKPAB	PKPab	19 07 49.1	+0.7
KRLC	Kraliky	148.33	341	⇑*e*PKP	PKPdf	19 07 41.3	+2.3
KRLC				*e*PKPAB	PKiKP	19 07 47.4	+3.0
DRGR		148.77	331	⇑P	PKPbc	19 07 44.0	-0.6
ARR	Arges	148.88	327	⇑P	PKPbc	19 07 45.6	+0.8
VYHS	Vyhne	149.00	337	*e*	PKPab	19 07 52.1	+0.5
VYHS	Vyhne	149.00	337	*e*PKP	PKPbc	19 07 44.9	0.0
PRU	Pruhonice	149.05	343	⇑*e*PKP	PKPbc	19 07 44.7	-0.3
SIRR	Siria	149.64	331	⇓P	PKPbc	19 07 45.9	-0.6
MODS	Modra-Piesok	149.65	339	*e*PKP	PKPbc	19 07 46.0	-0.5
GZR	Gura Zlata	149.78	329	⇓P	PKPbc	19 07 46.2	-0.7
MEM	Membach	150.04	354	*d*PKP	PKPbc	19 07 46.6	-0.7
BTNL	Ternell	150.05	354	*d*PKiKP	PKPbc	19 07 47.1	-0.3
KHC	Kasperske Hory	150.09	344	⇑*e*PKP	PKPbc	19 07 47.3	-0.2
KHC				*e*PKPAB	PKPab	19 07 56.6	+0.4
KHC	Kasperske Hory	150.09	344		PKPbc	19 07 46.5	-1.1
BZS	Buzias	150.16	331	⇓P	PKPbc	19 07 47.1	-0.7
CKRC	Cesky Krumlov	150.18	343	⇑*e*PKP	PKPbc	19 07 48.3	+0.6
GERES	GERESS Array B	150.32	343	PKPbc	PKPbc	19 07 47.9	-0.3
	comp=Z,3.4nm,0.8s,baz=42,slow=2.2,SNR=19						
HERR	Herculane	150.33	329	⇑P	PKPbc	19 07 47.6	-0.6
CONA	Conrad Observa	150.51	340	*e*P	PKPbc	19 07 48.4	-0.2
	comp=Z,14nm,1.5s						
WLF	Walferdange	150.96	353	*d*PKPbc	PKPbc	19 07 48.5	-0.9
WLF				*d*PKPab	PKPab	19 07 58.2	-1.5
MORH	Mrgy, Hungar	150.96	335	⇑P	PKPbc	19 07 48.5	-1.1
MOA	Molln	151.07	342	*e*P	PKPbc	19 07 49.0	-0.9
	comp=Z,4.9nm,1.3s						
SOKA	Soboth	151.88	340	*e*P	PKPbc	19 07 50.6	-1.1
	comp=Z,5.3nm,1.2s						
WATA	Walderalm	152.26	345	*e*P	PKPbc	19 07 52.0	-0.7
	comp=Z,7.2nm,1.1s						
WTTA	Wattenberg	152.31	345	*e*P	PKPbc	19 07 52.3	-0.5
	comp=Z,7.7nm,0.8s						
MYKA	Terra Mystica	152.35	341	*e*P	PKPbc	19 07 51.4	-1.4
	comp=Z,2.4nm,0.6s						
MOTA	Moosalm	152.37	346	*e*P	PKPbc	19 07 52.2	-0.7
	comp=Z,6.9nm,1.1s						
SQTA	Sankt Quirin	152.46	345	*e*P	PKPbc	19 07 52.6	-0.4
	comp=Z,3.8nm,0.7s						
ABTA	Abfaltersbach	152.57	343	*e*P	PKPbc	19 07 52.1	-1.2
	comp=Z,5.4nm,0.8s						
FETA	Feichten	152.76	346	*e*P	PKPbc	19 07 53.4	-0.3
	comp=Z,3.7nm,0.9s						
ESDC	Sonseca Array	160.67	12	PKPab	PKPab	19 08 41.3	-0.7
	comp=Z,2.3nm,1.2s,baz=357,slow=3.6,SNR=4.8						

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*WEL **04** 18:50:00, 40.°64S×174.°25E, h63^{km}, ML4.5, Mw4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15} Nm; M$_{rr}$-0.92; M$_{\theta\theta}$1.12; M$_{\phi\phi}$-0.19; M$_{r\theta}$1.49; M$_{\theta\phi}$0.94; M$_{\phi r}$1.81; Fault plane solution: M$_0$2.71000×10^{15} NP1: ϕ_s95.00000°, δ21.00000°, λ-36.00000°. NP2: ϕ_s220.00000°, δ78.00000°, λ-107.00000°. Principal axes: T 290.8400, Plg31.0000°, Azm324.0000°; N -39.1300, Plg17.0000°, Azm223.0000°; P -251.7100, Plg54.0000°, Azm109.0000°;*

*NEIC **04** 18:50:44.7±1.8, 40.°55S±0.°04×174.°26E±0.°06, h59^{km}±6^{km}, mb4.8/18 Error ellipse: s-maj=6.5km s-min=5.9km az=139.0*

*IDC **04** 18:50:45.7±0.9, 40.°44S×174.°18E, h76^{km}±6^{km}, mb4.0/9, mb1 4.2/10, mb1mx4.0/30, mbtmp4.3/10, MS3.2/6, Ms1 3.2/6, ms1mx3.0/19, Error ellipse: s-maj=20.2km s-min=10.7km az=151.0*

*WEL **04** 18:50:46.2±0.5, 41°S±4°×17°4E±°, h50^{km}±8^{km}, M4.5/24, ML4.8/24, MLv4.5/24, Error ellipse: s-maj=0.0km s-min=0.0km az=10.5*

ISC 04 18:50:45.5±0.6, **40.°64S**±0.°03×**174.°22E**±0.°03, **h74**^{km}±4^{km}, **n227**, σ1^s**40**/240, **mb4.6**/14, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.28	235	P	Pn	18 50 56.5	-0.6
DUWZ				S	Sn	18 51 05.0	-0.6
KIW	Kapiti Island	0.57	113	P	Pn	18 50 59.3	-0.1
KIW				S	Sn	18 51 09.5	-0.1
TCW	Tory Channel	0.57	176	P	Pn	18 50 59.7	+0.3
TCW				S	Sn	18 51 09.3	-0.3
OGWZ	Otaki Gorge	0.74	104	P	Pn	18 51 01.3	+0.1
WEL	Wellington	0.76	147	P	Pn	18 51 01.8	+0.3
CAW	Cannon Point	0.79	126	P	Pn	18 51 01.9	+0.1
CAW				S	Sn	18 51 13.9	+0.1
TUWZ	Tuamarina	0.81	195	P	Pn	18 51 02.1	+0.1
TUWZ				S	Sn	18 51 13.7	-0.6
TUWZ	Tuamarina	0.81	195		Pn	18 51 01.8	-0.2
TUWZ				Sn	Sn	18 51 13.9	-0.4
NNZ	Nelson	0.86	228	P	Pn	18 51 02.5	0.0
NNZ				S	Sn	18 51 15.9	+0.7
NNZ	Nelson	0.86	228		Pn	18 51 02.5	0.0
NNZ				Sn	Sn	18 51 15.3	+0.1
BHW	Baring Head	0.91	148	P	Pn	18 51 03.1	0.0
BHW	Baring Head	0.91	148		Pn	18 51 03.0	-0.2
OHWZ	Ohakea	0.94	63	P	Pn	18 51 04.3	+0.8
HOWZ	Holdsworth Sta	1.01	105	P	Pn	18 51 04.2	-0.2
MRZ	Mangatainoka R	1.03	91	P	Pn	18 51 04.4	-0.3
WAZ	Wanganui	1.06	34	P	Pn	18 51 05.4	+0.4
MSWZ	Moikau Station	1.10	135	P	Pn	18 51 05.2	-0.3
MSWZ	Moikau Station	1.10	135		Pn	18 51 05.2	-0.3
MTW	Mount Morrison	1.10	118	P	Pn	18 51 05.1	-0.4
BSWZ	Blackbirch Sta	1.10	194	P	Pn	18 51 06.4	+0.9
BSWZ	Blackbirch Sta	1.10	194		Pn	18 51 06.0	+0.4
BSWZ				Sn	Sn	18 51 21.2	+0.7
CMWZ	Cape Campbell	1.11	180	P	Pn	18 51 07.2	+1.6
CMWZ	Cape Campbell	1.11	180		Pn	18 51 06.4	+0.8
PAWZ	Paruwai Farm	1.17	129	P	Pn	18 51 06.1	-0.3
LREZ	Lake Rotokare	1.19	7	P	Pn	18 51 07.1	+0.5
POWZ	Post Office Ro	1.20	79	P	Pn	18 51 06.5	-0.3
PLWZ	Palliser	1.21	140	P	Pn	18 51 06.7	-0.3
PLWZ	Palliser	1.21	140		Pn	18 51 06.5	-0.4
NMEZ	Namu Road	1.25	348	P	Pn	18 51 07.2	-0.3
TIWZ	Tintock	1.27	97	P	Pn	18 51 07.3	-0.4
PREZ	Palmer Road	1.30	358	P	Pn	18 51 08.1	+0.1
QRZ	Quartz Range	1.30	261	P	Pn	18 51 07.4	-0.7
QRZ				S	Sn	18 51 23.0	-1.9
QRZ	Quartz Range	1.30	261		Pn	18 51 07.3	-0.7
QRZ				Sn	Sn	18 51 22.1	-2.9
PRWZ	Pori Road	1.33	87	P	Pn	18 51 08.2	-0.2
TRWZ	Traveller	1.34	125	P	Pn	18 51 08.3	-0.3
TMWZ	Te Maipa	1.35	111	P	Pn	18 51 08.1	-0.5
KHEZ	Kahui Hut	1.35	353	P	Pn	18 51 08.6	-0.2
NEZ	North Egmont	1.37	356	P	Pn	18 51 08.7	-0.4
NBEZ	Newall Road No	1.40	349	P	Pn	18 51 09.2	-0.1
TSZ	Takapari Road	1.45	67	P	Pn	18 51 09.5	-0.5
DREZ	Durham Road	1.45	359	P	Pn	18 51 10.0	0.0
PKE	Pukeiti	1.46	353	P	Pn	18 51 10.0	-0.2
THZ	Tophouse	1.50	221	P	Pn	18 51 11.3	+0.7
THZ	Tophouse	1.50	221		Pn	18 51 11.3	+0.7
DVHZ	Dannevirke	1.52	78	P	Pn	18 51 10.2	-0.7
CPWZ	Castlepoint	1.53	101	P	Pn	18 51 11.2	+0.2
BFZ	Birch Farm	1.54	92		Pn	18 51 10.1	-1.1
VRZ	Vera Road	1.57	15	P	Pn	18 51 11.7	+0.1
MTVZ	Mangateitei	1.58	38	P	Pn	18 51 12.1	+0.4
PKVZ	Pokaka	1.60	33	P	Pn	18 51 12.1	+0.1
PNHZ	Pukenui	1.68	65	P	Pn	18 51 12.3	-0.7
TRVZ	Turoa	1.68	38	P	Pn	18 51 13.4	+0.1
WNVZ	Wahianoa	1.69	39	P	Pn	18 51 13.2	0.0
MOVZ	Moawhango	1.70	44	P	Pn	18 51 13.1	-0.3
DRZ	Dome Shelter	1.71	37	P	Pn	18 51 14.1	+0.4
WHVZ	Whangaehu Hut	1.72	38	P	Pn	18 51 14.1	+0.4
FWVZ	Far West T-bar	1.72	37	P	Pn	18 51 13.8	0.0
ANWZ	Angora Road	1.73	85	P	Pn	18 51 13.2	-0.4
TUVZ	Tukino	1.76	39	P	Pn	18 51 14.5	+0.3
NGZ	Ngauruhoe	1.81	36	P	Pn	18 51 15.0	+0.1
SNVZ	South Ngauruho	1.82	37	P	Pn	18 51 15.4	+0.4
BHHZ	Black Hill Sta	1.82	51	P	Pn	18 51 14.4	-0.5
TWVZ	Taurewa	1.83	31	P	Pn	18 51 15.0	-0.1
KHZ	Kahutara	1.85	196	P	Pn	18 51 15.7	+0.6
KHZ	Kahutara	1.85	196		Pn	18 51 15.6	+0.4
OTVZ	Oturere	1.85	37	P	Pn	18 51 16.0	+0.6
NNVZ	North Ngauruho	1.85	36	P	Pn	18 51 15.5	0.0
WTVZ	West Tongariro	1.85	35	P	Pn	18 51 15.6	+0.2
PRHZ	Porangahau	1.88	79	P	Pn	18 51 15.2	-0.5
ETVZ	East Tongariro	1.89	38	P	Pn	18 51 16.0	+0.1
KRVZ	Karewarewa	1.89	36	P	Pn	18 51 16.2	+0.3
TMVZ	Te Maari	1.90	37	P	Pn	18 51 16.1	0.0
NTVZ	North Tongarir	1.90	36	P	Pn	18 51 16.2	+0.1
KRHZ	Kereru	1.93	59	P	Pn	18 51 15.4	-0.9
KATZ	Kakaramea	2.01	35	P	Pn	18 51 18.5	+0.9
KWHZ	Kaweka Forest	2.08	55	P	Pn	18 51 17.8	-0.6
RITZ	Rihia Road	2.09	38	P	Pn	18 51 18.7	+0.2
PXZ	Pawanui	2.11	74	P	Pn	18 51 17.4	-1.2
DSZ	Denniston Nort	2.13	238	P	Pn	18 51 19.1	0.0
RATZ	Rangitukua	2.14	34	P	Pn	18 51 20.3	+1.2
HIZ	Hauiti	2.18	13	P	Pn	18 51 19.4	-0.4
HIZ	Hauiti	2.18	13		Pn	18 51 19.2	-0.5
KAHZ	Kahuranaki	2.20	68	P	Pn	18 51 18.9	-1.2
MCHZ	McNeill Hill	2.24	59	P	Pn	18 51 19.7	-0.8
WATZ	Wairara	2.26	32	P	Pn	18 51 21.4	+0.6
BKZ	Black Stump Fm	2.29	51	P	Pn	18 51 20.0	-1.1
BKZ	Black Stump Fm	2.29	51		Pn	18 51 19.8	-1.4
WHTZ	Whakaora	2.38	35	P	Pn	18 51 26.2	+3.7
CKHZ	Cape Kidnapper	2.40	67	P	Pn	18 51 21.6	-1.1
MRHZ	Matea Rd	2.47	44	P	Pn	18 51 22.4	-1.3
KUTZ	Kaahu Road	2.48	30	P	Pn	18 51 24.8	+1.0
GVZ	Greta Valley S	2.49	201	P	Pn	18 51 23.6	-0.2
NMHZ	Naumai	2.52	53	P	Pn	18 51 23.2	-1.1
TLZ	Tolley Road	2.52	24	P	Pn	18 51 24.2	-0.1
ARHZ	Aropaoanui	2.54	58	P	Pn	18 51 23.1	-1.4
LTZ	Lake Taylor	2.59	214	P	Pn	18 51 25.1	-0.2
LTZ	Lake Taylor	2.59	214		Pn	18 51 25.0	-0.3
ALRZ	Allen Road	2.65	39	P	Pn	18 51 24.9	-1.1
MTHZ	Maungataniwha	2.70	49	P	Pn	18 51 25.0	-1.7
GRRZ	Galatos Road	2.71	33	P	Pn	18 51 30.1	+3.2
PRRZ	Plateau Road	2.72	39	P	Pn	18 51 28.7	+1.8
AMCZ	Amberley	2.79	204	P	Pn	18 51 27.2	-0.7
WHHZ	Waihua	2.79	57	P	Pn	18 51 26.3	-1.7
RAHZ	Arahi	2.80	53	P	Pn	18 51 26.3	-1.7
RRRZ	Republican Roa	2.90	38	P	Pn	18 51 32.5	+2.9
MUGZ	Murupara	2.92	43	P	Pn	18 51 27.9	-1.9
RTZ	Ruatahuna	2.94	47	P	Pn	18 51 27.7	-2.3
INZ	Inchbonnie	2.94	224	P	Pn	18 51 30.1	+0.2
NGRZ	Ngongotaha	2.96	32	P	Pn	18 51 32.9	+2.6
TARZ	Mount Tarawera	2.98	37	P	Pn	18 51 33.6	+3.0
OMRZ	Omania	3.03	34	P	Pn	18 51 32.4	+1.2
SNGZ	Shannon Statio	3.04	53	P	Pn	18 51 29.2	-2.1
KARZ	Kaharoa	3.05	32	P	Pn	18 51 35.9	+4.4
TOZ	Tahuroa Road	3.07	19	P	Pn	18 51 31.6	-0.2
KNZ	Kokohu	3.11	60	P	Pn	18 51 29.8	-2.5
OXZ	Oxford	3.14	211	P	Pn	18 51 31.2	-1.4
OXZ	Oxford	3.14	211		Pn	18 51 30.8	-1.8
EDRZ	Edgecumbe	3.20	38	P	Pn	18 51 37.3	+3.8
OKCZ	Okains Bay	3.20	195	P	Pn	18 51 32.3	-1.2
MHGZ	Mahia Peninsul	3.20	63	P	Pn	18 51 31.3	-2.2
MARZ	Manawahe	3.26	36	P	Pn	18 51 37.4	+3.0
URZ	Urewera	3.27	44	P	Pn	18 51 31.8	-2.6
	4.6nm,0.3s,baz=121,slow=24,SNR=19						
URZ				S	Sn	18 52 10.2	-1.9
	67nm,0.3s,baz=246,slow=8.2,SNR=5.9						
URZ	Urewera	3.27	44	P	Pn	18 51 31.8	-2.6
RAGZ	Rawiri	3.27	50	P	Pn	18 51 32.6	-1.9
MQZ	McQueen's Vall	3.28	200	P	Pn	18 51 32.6	-2.0
MQZ	McQueen's Vall	3.28	200	Pn	Pn	18 51 32.5	-2.0
PRGZ	Paritu Road	3.30	60	P	Pn	18 51 32.2	-2.7
TGRZ	Tauranga	3.31	29	P	Pn	18 51 34.7	-0.4
OPRZ	Ohinepanea	3.33	34	P	Pn	18 51 36.2	+0.9
RIGZ	Rimuhau	3.35	56	P	Pn	18 51 33.1	-2.5
AKCZ	Akaroa Harbour	3.37	196	P	Pn	18 51 34.3	-1.5
MWZ	Matawai	3.44	49	P	Pn	18 51 34.2	-2.7
RACZ	Rakaia	3.45	206	P	Pn	18 51 35.2	-1.7
MHCZ	Mount Hutt	3.50	214	P	Pn	18 51 36.2	-1.4
WVZ	Waitaha Valley	3.56	226	P	Pn	18 51 38.1	-0.2
TKGZ	Te Karaka	3.56	53	P	Pn	18 51 35.8	-2.6
AWAZ	Awhitu Peninsu	3.59	5	P	Pn	18 51 38.5	-0.3
MYRZ	Mayor Island	3.71	26	P	Pn	18 51 44.2	+3.8
WTAZ	Waiatarua	3.71	4	P	Pn	18 51 40.5	0.0
ETAZ	East Tamaki Re	3.72	9	P	Pn	18 51 40.5	-0.2
WACZ	Wakanui South	3.74	207	P	Pn	18 51 39.2	-1.7
CNGZ	Carnagh Statio	3.76	56	P	Pn	18 51 38.3	-2.8
EPAZ	Eden Park BICE	3.78	6	P	Pn	18 51 41.3	-0.2
RUGZ	Raukumara Rang	3.79	46	P	Pn	18 51 38.5	-3.1
HBAZ	Herne Bay Bore	3.81	6	P	Pn	18 51 41.6	-0.2
TWGZ	Tauwhareparae	3.81	51	P	Pn	18 51 39.7	-2.2
RPZ	Rata Peaks	3.87	216	P	Pn	18 51 41.3	-1.4
RPZ	Rata Peaks	3.87	216	Pn	Pn	18 51 41.0	-1.6
RVAZ	Riverhead Bore	3.88	4	P	Pn	18 51 42.4	-0.3
MBAZ	Motutapu North	3.90	8	P	Pn	18 51 42.7	-0.4
WIAZ	Waiheke Island	3.91	11	P	Pn	18 51 42.9	-0.3
GCSZ	Gaunt Creek Bo	3.95	226	P	Pn	18 51 43.3	-0.3
ARCZ	Arundel	4.00	213	P	Pn	18 51 43.3	-1.2
PUZ	Puketiti	4.04	52	P	Pn	18 51 41.8	-3.2
KUZ	Kuaotunu	4.06	17	P	Pn	18 51 44.5	-0.8
PKGZ	Pakihiroa	4.06	49	P	Pn	18 51 42.4	-2.9
ABAZ	Army Bay	4.06	7	P	Pn	18 51 45.0	-0.3
WMGZ	Waiomatatini S	4.30	50	P	Pn	18 51 45.3	-3.3
FOZ	Fox Glacier	4.37	227	P	Pn	18 51 48.3	-1.1
FOZ	Fox Glacier	4.37	227		Pn	18 51 47.9	-1.5
MXZ	Matakaoa Point	4.42	47	P	Pn	18 51 47.4	-2.7
MXZ	Matakaoa Point	4.42	47	Pn	Pn	18 51 47.5	-2.7
TMZ	Timaru	4.43	211	P	Pn	18 51 48.5	-1.7
GRZ	Great Barrier	4.49	13	P	Pn	18 51 50.5	-0.6
WCZ	Waipu Caves	4.70	1	P	Pn	18 51 53.3	-0.6
LBZ	Lake Benmore	4.79	217	P	Pn	18 51 52.6	-2.5
LBZ	Lake Benmore	4.79	217		Pn	18 51 53.3	-1.8
ODZ	Otahua Downs	5.13	210	P	Pn	18 51 57.7	-2.0
ODZ	Otahua Downs	5.13	210		Pn	18 51 57.7	-2.0
JCZ	Jackson Bay	5.29	228	P	Pn	18 52 00.6	-1.4
OUZ	Omahuta	5.44	355	P	Pn	18 52 03.5	-0.5
WKZ	Wanaka	5.67	221	P	Pn	18 52 05.5	-1.7
WKZ	Wanaka	5.67	221		Pn	18 52 04.5	-2.7
HHSZ	Highcliff Hill	5.87	206	P	Pn	18 52 08.2	-1.7
MSZ	Milford Sound	6.15	227	P	Pn	18 52 14.4	+0.8
TUZ	Tuapeka	6.28	211	P	Pn	18 52 14.5	-0.9
MLZ	Mavora Lakes	6.50	221	P	Pn	18 52 17.9	-0.7
MLZ	Mavora Lakes	6.50	221	Pn	Pn	18 52 16.3	-2.3
SYZ	Scrubby Hill	6.95	210	P	Pn	18 52 23.6	-1.0
WHZ	Wether Hill Ro	6.96	219	P	Pn	18 52 24.9	+0.1
WHZ	Wether Hill Ro	6.96	219	Pn	Pn	18 52 22.0	-2.8
DCZ	Deep Cove	7.07	225	P	Pn	18 52 28.8	+2.5
DCZ	Deep Cove	7.07	225	Pn	Pn	18 52 25.4	-0.9
CTZ	Chatham Island	7.47	117	P	Pn	18 52 30.2	-1.5
PINNC	Pines Island,	18.87	340	Pn	Pn	18 55 03.0	+1.9
PINNC				IAmb	IAmb	18 55 24.6	
	comp=Z,60nm,1.1s						
DZM	Mont Dzumac	19.65	338	P	P	18 55 08.5	+0.1
	comp=Z,0.2nm,0.3s,baz=162,slow=15,SNR=2.1						
DZM	Mont Dzumac	19.65	338	P	P	18 55 08.0	-0.5
MSVF	Nonsavu	23.07	9	P	P	18 55 43.7	-1.2
	comp=Z,5.5nm,0.4s,baz=268,slow=23,SNR=6.9						
MSVF	Nonsavu	23.07	9	P	P	18 55 43.4	-1.5
MSVF				IAmb	IAmb	18 55 53.9	
	comp=Z,55nm,1.6s						
STKA	Stephens Creek	27.60	278	LR	LR	19 06 04.4	
	comp=Z,53nm,18.0s,baz=60,slow=33						
RAR	Rarotonga	29.36	57	LR	LR	19 07 16.5	
	comp=Z,42nm,21.0s,baz=264,slow=34						
BBOO	Buckleboo	31.38	272	P	P	18 56 58.9	-0.4
BBOO				IAmb	IAmb	18 57 18.2	
	comp=Z,38nm,1.8s						
HNR	Honiara	33.57	334	LR	LR	19 10 51.3	
	comp=Z,20nm,18.4s,baz=207,slow=36						
VNDA	Vanda	37.35	184	P	P	18 57 53.0	+2.7
	comp=Z,2.8nm,0.9s,baz=12,slow=9.3,SNR=1.3						
VNDA				LR	LR	19 09 55.0	
	comp=Z,35nm,20.8s,baz=323,slow=31						
ASAR	Alice Springs	37.73	284	P	P	18 57 53.3	-0.8
	comp=Z,2.0nm,0.5s,baz=129,slow=7.9,SNR=17						
ASAR				pP	pP	18 58 11.7	-0.3
	comp=Z,1.7nm,0.4s,baz=128,slow=7.4,SNR=6.5						
ASAR				PcP	PcP	19 00 09.6	-0.3
	comp=Z,1.4nm,0.6s,baz=123,slow=3.9,SNR=8.3						
ASAR				LR	LR	19 13 51.8	
	comp=Z,29nm,18.3s,baz=113,slow=37						
COEN	Coen	37.96	306	P	P	18 57 56.6	+0.5
WR0	Warramunga Arr	39.55	289	P	P	18 58 08.6	-0.9
WB2	Warramunga Arr	39.70	289	P	P	18 58 10.1	-0.5
WRAB	Tennant Creek	39.71	289	P	P	18 58 10.2	-0.5
WRAB				IAmb	IAmb	18 58 10.6	
	comp=Z,8.4nm,0.5s						
WRA	Warramunga Arr	39.71	289	P	P	18 58 10.1	-0.7
	comp=Z,4.3nm,0.4s,baz=126,slow=8.2,SNR=36						
WRA				pP	pP	18 58 28.8	+0.1
	comp=Z,4.9nm,0.6s,baz=126,slow=8.1,SNR=10						
WRA				LR	LR	19 15 11.2	
	comp=Z,43nm,18.0s,baz=180,slow=37						
WRA	Warramunga Arr	39.71	289	P	P	18 58 10.2	-0.5
WB0	Warramunga Arr	39.78	289	P	P	18 58 10.7	-0.6
WB0				IAmb	IAmb	18 58 11.3	
	comp=Z,7.0nm,0.5s						
RABL	Rabaul	41.37	325	P	P	18 58 24.8	+0.4
KNRA	Kununurra	46.50	289	P	P	18 59 06.1	+0.6
KNRA				IAmb	IAmb	18 59 26.9	
	comp=Z,26nm,1.7s						
MTN	Manton Dam	46.74	294	P	P	18 59 07.1	-0.3
FITZ	Fitzroy Crossi	47.22	284	P	P	18 59 10.5	-0.6
	comp=Z,2.2nm,0.5s,baz=140,slow=7.5,SNR=11						
FITZ				pP	pP	18 59 29.1	-0.5
	comp=Z,2.6nm,0.6s,baz=167,slow=7.3,SNR=4.2						
QSPA	South Pole Qui	49.48	180	P	P	18 59 30.0	+1.9
QSPA				IAmb	IAmb	18 59 31.4	
	comp=Z,6.6nm,0.9s						
SOEI	Soe	53.71	291	P	P	19 00 00.7	+0.5
SIJI	Sorong	55.48	304	P	P	19 00 10.8	-2.1
	comp=Z,5.7nm,0.8s,baz=90,slow=8.1,SNR=4.3						
SNAA	Sanae	67.97	181	P	P	19 01 36.4	+0.3
SNAA	Sanae	67.97	181	P	P	19 01 36.0	-0.2
VNA3	Neumayer Olymp	68.39	179	P	P	19 01 39.5	+0.8
VNA2	Neumayer--Watz	68.74	179	P	P	19 01 41.5	+0.7
	baz=168,slow=4.9						
KKM	Kota Kinabalu	70.55	297	P	P	19 01 52.0	-0.8
PLCA	Paso Flores	79.91	136	P	P	19 02 48.5	+2.2

	comp=Z,1.0nm,0.6s,baz=180,slow=7.1,SNR=3.5						
PLCA	**Paso Flores**	79.91	136	IAmb	IAmb	19 02 54.7	
	comp=Z,26nm,1.8s						
KSRS	**Korea Array**	88.54	325	P	P	19 03 29.4	-0.1
	comp=Z,1.1nm,0.7s,baz=150,slow=5.5,SNR=4.4						
CMAR	**Chiang Mai Arr**	91.18	293	P	P	19 03 43.0	+0.5
	comp=Z,1.2nm,0.8s,baz=150,slow=3.7,SNR=8.4						
CMAR				pP	pP	19 04 01.7	-1.0
	comp=Z,0.8nm,0.5s,baz=150,slow=4.1,SNR=4.2						
LIC	**Lamto**	145.72	181	*e*P	PKPdf	19 10 15.6	-0.3
	comp=Z,20nm,0.9s						
KIC	**Kosan Boka**	145.85	182	*e*P	PKPdf	19 10 16.3	+0.2
	comp=Z,9.0nm,0.7s						
TIC	**Toumodi**	146.14	181	*e*P	PKPdf	19 10 14.6	-2.0
DBIC	**Dimbokro**	146.16	182	PKPbc	PKPdf	19 10 16.7	+0.1
	comp=Z,2.3nm,0.6s,baz=198,slow=5.0,SNR=5.6						
ARCES	**ARCESS Array B**	146.73	341	PKPbc	PKPdf	19 10 16.1	+0.2
	comp=Z,5.4nm,1.0s,baz=4.9,slow=4.3,SNR=6.3						
BRTR	**Keskin Array B**	150.04	281	PKPbc	PKPbc	19 10 25.5	-1.9
	comp=Z,1.2nm,0.7s,baz=129,slow=5.3,SNR=5.2						
FINES	**FINESS Array B**	151.59	328	PKPbc	PKPdf	19 10 27.4	+3.6
	comp=Z,3.8nm,0.9s,baz=166,slow=20,SNR=3.5						
TORD	**Torodi Ar. Bea**	151.84	196	PKPbc	PKPbc	19 10 31.1	-1.0
	comp=Z,0.6nm,0.5s,baz=168,slow=3.6,SNR=7.2						
AKASG	**Malin Array Be**	153.78	304	PKPab	PKPab	19 10 48.7	+0.1
	comp=Z,0.3nm,0.3s,baz=342,slow=31,SNR=3.3						

DDA ***04*** *19:05:28.5, 40°.40N×27°.11E, h10^{km}±1^{km}, ML2.2*
ATH ***04*** *19:05:29.6, 40°.44N×27°.00E, h55^{km}±11^{km}, ML2.6/6, Error ellipse: s-maj=11.9km s-min=2.1km az=271.0*
THE ***04*** *19:05:30.0, 40°.51N×27°.09E, h15^{km}, ML2.6/4, Error ellipse: s-maj=2.3km s-min=0.8km az=204.0*

ISC 04 19:05:28.5±1.3**, 40°.43N**±0°.04×**27°.14E**±0°.06**, h16^{km}**±10^{km}**, n19, σ0^{s}.40**/33**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KESN	**Edirne-Kesan**	0.53	319	*i* P	Pg	19 05 39.1	0.0
BALY	**Balya**	0.78	152	*i* P	Pg	19 05 43.4	-0.2
BALY				*i* S	Sg	19 05 54.1	+0.2
BALY				IAML		19 05 58.0	
	comp=N,82nm,0.3s						
BALY				IAML		19 05 59.0	
	comp=E,50nm,0.2s						
CAVK	**Edirne/Enez-Ca**	0.79	290	*i* P	Pb	19 05 43.7	0.0
CAVK				*i* S	Sb	19 05 54.4	+0.2
CAVK				IAML		19 06 01.0	
	comp=N,106nm,0.2s						
CAVK				IAML		19 06 01.0	
	comp=E,132nm,0.8s						
ENEZ	**Enez**	0.81	293	P	Pb	19 05 44.1	-0.1
ENEZ				S	Sg	19 05 55.4	+0.4
ECEA	**Canakkale, Ece**	0.83	243	*i* P	Pb	19 05 44.3	-0.2
ECEA				*i* S	Sg	19 05 55.8	+0.3
ECEA				IAML		19 06 00.0	
	comp=N,163nm,0.4s						
ECEA				IAML		19 06 03.0	
	comp=E,152nm,0.4s						
ALN	**Alexandroupoli**	0.96	300	P	Pb	19 05 46.5	-0.1
ALN				S	Sb	19 05 59.0	0.0
	comp=E,210nm,0.3s						
ALN	**Alexandroupoli**	0.96	300	P	Pb	19 05 46.3	-0.4
ALN				S	Sb	19 05 58.8	-0.2
ALN				AML	AML	19 06 02.3	
	comp=N,409µm,0.4s						
ALN				AML	AML	19 06 02.7	
	comp=E,419µm,0.3s						
SMTH	**Samothraki Isl**	1.23	273	P	Pn	19 05 51.0	0.0
SMTH				S	Sg	19 06 07.5	-0.7
	comp=E,240nm,0.4s						
SMTH	**Samothraki Isl**	1.23	273	P	Pn	19 05 51.0	0.0
SMTH				S	Sn	19 06 07.2	0.0
SMTH				AML	AML	19 06 08.6	
	comp=E,574µm,0.4s						
SMTH				AML	AML	19 06 09.3	
	comp=N,389µm,0.3s						
PRK	**Paraskevi**	1.35	210	P	Pg	19 05 54.6	0.0
PRK				S	Sg	19 06 12.9	+0.7
	comp=N,508nm,0.5s						
PRK	**Paraskevi**	1.35	210	P	Pg	19 05 54.5	0.0
PRK				S	Sg	19 06 12.1	-0.1
PRK				AML	AML	19 06 14.2	
	comp=E,988µm,0.5s						
PRK				AML	AML	19 06 16.3	
	comp=N,1006µm,0.6s						
RDO	**Rodhopi**	1.41	301	P	Pb	19 05 55.0	+0.5
RDO				S	Sb	19 06 12.9	+0.7
RDO				AML	AML	19 06 15.6	
	comp=N,311µm,0.3s						
RDO				AML	AML	19 06 16.4	
	comp=E,209µm,0.3s						
SIGR	**SIGRI**	1.56	220	P	Pb	19 05 57.2	+0.2
SIGR	**SIGRI**	1.56	220	P	Pb	19 05 56.4	-0.6
SIGR				S	Sb	19 06 17.1	+0.6
SIGR				AML	AML	19 06 19.8	
	comp=N,374µm,0.6s						
SIGR				AML	AML	19 06 20.8	
	comp=E,257µm,0.4s						
LIA	**Limnos Island**	1.59	251	P	Pb	19 05 57.0	-0.4
LIA				S	Sn	19 06 16.3	+0.2
	comp=E,102nm,0.4s						
LIA	**Limnos Island**	1.59	251	P	Pb	19 05 56.9	-0.5
LIA				S	Sb	19 06 16.6	-0.6
LIA				AML	AML	19 06 19.2	
	comp=N,215µm,0.3s						
LIA				AML	AML	19 06 23.9	
	comp=E,194µm,0.5s						
THAS	**Thassos island**	1.85	276	P	Pn	19 05 59.9	+0.4
EFSA	**Agios Efstrati**	1.88	243	P	Pb	19 06 02.6	+0.3
STIP	**Stip**	3.95	290	*i* Pn	Pn	19 06 27.8	-0.7

NNC 04 19:11:21.6±3.7**, 37°.33N**×**71°.12E, h0^{km}, mb3.8, mpv3.5, 2C-4D, Error ellipse: s-maj=31.2km s-min=24.5km az=155.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	**Karatay Array**	5.79	356	⇑P	Pn	19 12 49.3	+0.5
	2.1nm,0.5s,baz=174,slow=12						
KK02				⇓S	Sn	19 13 57.1	+1.2
	1.4nm,0.5s						
AAK	**Ala-Archa**	5.91	25	⇑P	Pn	19 12 51.1	+0.6
	2.6nm,0.4s						
AAK				⇓S	Sn	19 14 00.9	+2.0
	2.7nm,0.6s						
TKM2	**Tokmak 2**	6.56	30	⇓P	Pn	19 12 59.4	-0.1
	1.9nm,0.6s						
TKM2				⇓S	Sn	19 14 14.9	-0.2
	1.9nm,0.8s						
AB31	**Akbulak array**	14.42	329	P	Pn	19 14 44.5	-2.3
	0.8nm,0.7s,baz=0.0,slow=0.1,SNR=4.7						

GUC 04 19:17:06.9±0.7**, 23°.13S**×**68°.75W, h115^{km}**±4^{km}**, ML3.7, 6C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	0.53	344	*e*P	Pn	19 17 23.1	-1.9
LVC				*i* S	Sn	19 17 35.6	-2.9
PB15	**IPOC Station P**	0.67	263	⇑*i*P	Pn	19 17 25.4	-0.4
PB15				*i* S	Sn	19 17 39.4	-0.6
PB06	**IPOC Station P**	0.87	299	⇑*i*P	Pn	19 17 27.1	-0.3
PB06				*i* S	Sn	19 17 42.2	-0.6
PB06				IAML		19 17 44.0	
	comp=E,5µm,0.3s						
PB05	**IPOC Station P**	1.37	281	⇑*i*P	Pn	19 17 32.5	-0.1
PB05				*i* S	Sn	19 17 52.0	0.0
PB05				IAML		19 18 00.4	
	comp=N,1µm,0.4s						
PB09	**IPOC Station P**	1.40	341	⇓*i*P	Pn	19 17 33.3	+0.2
PB09				*i* S	Sn	19 17 53.1	+0.2
PB09				IAML		19 17 56.2	
	comp=N,792nm,0.4s						
PB03	**IPOC Station P**	1.42	319	⇓*i*P	Pn	19 17 33.1	-0.1
PB03				*i* S	Sn	19 17 52.9	-0.3
PB03				IAML		19 17 58.0	
	comp=N,963nm,0.5s						
PB04	**IPOC Station P**	1.51	301	*i* P	Pn	19 17 34.3	0.0
PB04				*i* S	Sn	19 17 55.0	-0.2
PB04				IAML		19 18 02.6	
	comp=N,1µm,0.2s						
PB10	**IPOC Station P**	1.70	257	⇑*i*P	Pn	19 17 37.1	+0.7
PB10				*i* S	Sn	19 17 58.3	-0.7
PB10				IAML		19 18 06.2	
	comp=N,948nm,0.6s						
PB07	**IPOC Station P**	1.75	323	*e*P	Pn	19 17 37.3	+0.1
PB07				*i* S	Sn	19 18 00.2	0.0
PB07				IAML		19 18 06.5	
	comp=E,792nm,0.4s						
PB02	**IPOC Station P**	2.09	329	⇓*i*P	Pn	19 17 41.5	+0.1
PB02				*i* S	Sn	19 18 08.0	+0.3
PB02				IAML		19 18 18.8	
	comp=E,894nm,0.3s						
PB14	**IPOC Station P**	2.13	225	⇑*i*P	Pn	19 17 42.7	+0.7
PB14				*i* S	Sn	19 18 09.4	+0.5
PB14				IAML		19 18 17.5	
	comp=N,842nm,0.7s						
PB01	**IPOC Station P**	2.18	342	*e*P	Pn	19 17 42.5	-0.1
PB01				*i* S	Sn	19 18 09.6	-0.2
PB01				IAML		19 18 14.4	
	comp=E,416nm,0.3s						
PATCX	**Punta Patache**	2.64	330	*e*P	Pn	19 17 47.7	-0.7
PATCX				*i* S	Sn	19 18 14.1	-6.2
PATCX				IAML		19 18 42.1	
	comp=N,375nm,0.5s						
TA01	**Diego Aracena**	2.87	332	IAML		19 18 56.6	
	comp=E,193nm,0.2s						
PB08	**IPOC Station P**	2.99	353	*e*P	Pn	19 17 53.5	+0.2
PB08				*i* S	Sn	19 18 20.9	-8.1
HMBC	**Humberstone**	3.02	339	*e*P	Pn	19 17 52.1	-1.4
PB11	**IPOC Station P**	3.45	346	*e*P	Pn	19 17 58.7	-0.5
AC02	**Maricunga**	3.71	185	⇑*i*P	Pn	19 18 03.9	+0.9
PSGC	**Pisagua**	3.74	340	*e*P	Pn	19 17 60.0	-3.0
PB16	**IPOC Station P**	4.82	351	*e*P	Pn	19 18 19.9	+1.9

BJI ***04*** *19:23:09.8±0.0, 28°.65N×51°.36E, h30^{km}, mB5.2/33, mb5.0/64, Ms4.8/38, Ms7 4.5/37*
MOS ***04*** *19:23:13.0±1.0, 28°.81N×51°.96E, h21^{km}, mb5.1/37, MS4.0/8, Error ellipse: s-maj=4.6km s-min=3.1km az=99.4*
TEH ***04*** *19:23:15.8, 28°.91N×52°.02E, h22^{km}, ML4.7*
DSN ***04*** *19:23:15.4±0.6, 28°.85N×52°.09E, h10^{km}, mb5.3/3, ML4.7/14, Error ellipse: s-maj=9.2km s-min=6.6km az=58.0*
NEIC ***04*** *19:23:16.3±1.9, 28°.98N±0°.07×51°.96E±0°.07, h25^{km}±4^{km}, mb5.0/159, Mwr4.7(TEH), Error ellipse: s-maj=9.8km s-min=8.2km az=167.0*
THR ***04*** *19:23:16.6±0.7, 29°.02N×52°.01E, h28^{km}±26^{km}, ML4.5*
IDC ***04*** *19:23:17.3±1.5, 28°.87N×52°.02E, h33^{km}±9^{km}, mb4.6/32, mb1 4.7/40, mb1mx4.6/44, mbtmp4.8/40, ML4.3/7, MS4.2/25, Ms1 4.2/25, ms1mx4.1/32, Error ellipse: s-maj=12.8km s-min=9.7km az=176.0*
OMAN ***04*** *19:23:20.9±0.1, 28°.71N×52°.18E, h57^{km}±10^{km}, mb5.8/17, ml4.9/14, Error ellipse: s-maj=2.9km s-min=1.8km az=352.0*

ISC 04 19:23:15.5±0.2**, 28°.91N**±0°.03×**51°.94E**±0°.03**, h23^{km}, n930, σ1^{s}.43**/997**, mb5.0**/229**, MS4.3**/34**, 37C-46D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHBU	**AHRAM**	0.56	266	*e*Pg	Pn	19 23 29.2	+1.1
KAZ1	**Kazerun**	0.76	340	*e*Pg	Pn	19 23 30.8	-0.1
KAZ1				*e*		19 23 58.0	
	comp=Z,1237µm,0.7s						
SHI	**Shiraz**	0.89	34	P	Pb	19 23 31.6	-0.8
SHI	**Shiraz**	0.89	34	*e*Pg	Pb	19 23 31.7	-0.7
SHI				*e*Sg	Sb	19 23 44.1	+0.2
SHI	**Shiraz**	0.89	34		Pb	19 23 31.6	-0.8
QIR1	**Qir**	1.06	114	*e*Pg	Pn	19 23 34.8	-0.3
QIR1				*e*Sg	Sn	19 23 49.5	+0.3
QIR1				*e*		19 23 59.9	
	comp=Z,73µm,0.6s						
GHIR	**Ghir-Karzin**	1.11	124	*e*Pg	Pb	19 23 37.5	+1.3
GHIR				*e*Sg	Sn	19 23 52.8	+2.3
GHIR				IAML		19 23 55.6	
	comp=N,19µm,0.5s						
GHIR				IAML		19 23 57.8	
	comp=E,22µm,0.4s						
GHIR	**Ghir-Karzin**	1.11	124	*e*Pg	Pb	19 23 37.5	+1.3
GHIR	**Ghir-Karzin**	1.11	124		Pb	19 23 37.4	+1.3
JHRM	**Jahrom**	1.50	105	*e*Pg	Pn	19 23 41.6	+0.5
JHRM				*e*Sg	Sb	19 24 01.9	+0.6
JHRM				*e*		19 24 11.1	
	comp=Z,81µm,0.6s						
JHRM	**Jahrom**	1.50	105		Pn	19 23 41.6	+0.5
LMD1	**Lamerd**	1.90	145	*e*Pn	Pb	19 23 48.1	-1.4
LMD1				*e*		19 24 27.7	
	comp=Z,39µm,0.6s						
KLNJ	**Kolanjah**	2.12	352	*e*Pn	Pn	19 23 51.5	+1.7
ABEH	**Behbahan**	2.23	319	*e*Pn	Pb	19 23 53.7	-1.5
LAR1	**LAR**	2.48	119	*e*Pn	Pn	19 23 55.8	+1.2
LAR1				*e*		19 24 45.3	
	comp=Z,585nm,0.7s						
IRAM	**Ramesheh**	2.92	7	*e*Pn	Pn	19 24 02.5	+1.8
IBRJ	**Brojen**	3.05	349	*e*Pn	Pn	19 24 03.9	+1.4
SHMA	**Al-Shehemyia**	3.16	196	P	Pn	19 24 06.7	+2.9
SAKB	**Bahrain**	3.17	203	P	Pn	19 24 07.1	+3.1
KHOR	**Al-Khor Airpor**	3.29	187	P	Pn	19 24 07.8	+2.1
ISAD	**Sadrabad**	3.35	26	*e*Pn	Pn	19 24 08.4	+1.6
IMEH	**Mehriz**	3.39	42	*e*Pn	Pn	19 24 09.7	+2.5
IGAR	**Gharneh**	3.49	1	*e*Pn	Pn	19 24 10.7	+2.2
SHK1	**Shahrekord**	3.53	345	*e*Pn	Pn	19 24 10.4	+1.3
QRN	**Al-Qurain**	3.53	268	*e*P	Pn	19 24 11.8	+2.8
AMIS	**Naft Sefid**	3.58	321	*e*Pn	Pn	19 24 12.1	+2.5
KBD	**Kabd**	3.73	275	*e*P	Pn	19 24 15.2	+3.6
AHWZ	**Ahwaz**	3.74	311	*e*Pn	Pn	19 24 14.6	+2.8
UMR	**Umm Al-Rimmam**	3.74	281	*e*P	Pn	19 24 15.2	+3.3
RDF	**Al-Radifah**	3.85	271	*e*P	Pn	19 24 16.1	+2.8
IPIR	**Pirpir**	3.87	347	*e*Pn	Pn	19 24 15.1	+1.2
ICHK	**Chekchek**	3.95	32	*e*Pn	Pn	19 24 16.8	+1.9
NASN	**Na'in**	3.95	11	*e*Pn	Pn	19 24 15.8	+0.8
NASN				IAML		19 25 31.2	
	comp=N,247nm,0.8s						
NASN				IAML		19 25 42.4	
	comp=E,235nm,0.7s						
NASN	**Na'in**	3.95	11	*e*Pn	Pn	19 24 15.8	+0.8
IZEF	**Zefreh**	3.99	5	*e*Pn	Pn	19 24 16.9	+1.4
GENO	**Geno**	4.03	111	*e*Pn	Pn	19 24 15.4	-0.6
YZKH	**Yazd**	4.16	33	*e*Pn	Pn	19 24 19.6	+2.0
YZKH				IAML		19 25 16.4	
	comp=E,188nm,0.5s						
YZKH				IAML		19 25 37.6	
	comp=N,199nm,0.6s						
YZKH	**Yazd**	4.16	33	*e*Pn	Pn	19 24 19.6	+2.0
TRNA	**Turayna**	4.21	189	P	Pn	19 24 20.3	+2.1
KHGB	**Koh Gabri**	4.21	69	*e*Pn	Pn	19 24 19.3	+0.7
KHGB				*e*		19 24 35.9	
	comp=Z,13µm,0.9s						
NGRK	**Negar Kerman**	4.25	79	*e*Pn	Pn	19 24 20.7	+1.5
NGRK				*e*		19 25 26.5	
	comp=Z,8µm,0.6s						
IBND	**Bandar-abas**	4.32	109	*e*Pn	Pn	19 24 20.5	+0.8
KRBR	**Kerman**	4.34	75	*e*Pn	Pn	19 24 22.1	+1.7
KRBR				IAML		19 25 43.1	
	comp=E,395nm,0.8s						
KRBR				IAML		19 25 46.0	
	comp=N,759nm,0.8s						
KRBR	**Kerman**	4.34	75	*e*Pn	Pn	19 24 22.1	+1.7
TVBK	**TV Kerman**	4.34	75	*e*Pn	Pn	19 24 22.1	+1.7
TVBK				*e*		19 24 41.5	
	comp=Z,18µm,0.5s						
RST	**Umm Al-Ruwaisa**	4.36	279	*e*P	Pn	19 24 23.6	+3.3
IKLH	**Kolahrood**	4.41	356	*e*Pn	Pn	19 24 23.2	+1.9
ANAR	**Anarak**	4.54	19	*e*Pn	Pn	19 24 24.7	+1.8
SHME	**Shamm**	4.70	126	*i* P	Pn	19 24 25.2	+0.2
	SNR=24						
SHME	**Shamm**	4.70	126	*e*Pn	Pn	19 24 24.1	-0.9
SHME	**Shamm**	4.70	126	P	Pn	19 24 25.2	+0.2
	SNR=24						
UMQ	**Umm Al-Quwin**	4.73	135	P	Pn	19 24 25.8	+0.4
SLWR	**Sila**	4.82	183	*e*Pn	Pn	19 24 28.6	+1.9
SLWR	**Sila**	4.82	183	P	Pn	19 24 28.5	+1.7
QAMS	**Qamsar**	4.83	355	*e*Pn	Pn	19 24 27.9	+0.8
BANOM	**Banah**	4.89	126	*i* P	Pn	19 24 27.7	+0.1
	SNR=158						
BANOM				S	Sn	19 25 21.1	-2.4
BANOM	**Banah**	4.89	126	*e*Pn	Pn	19 24 28.1	+0.5
BANOM	**Banah**	4.89	126	P	Pn	19 24 28.0	+0.3
	SNR=158						
CHMN	**Cheshme madani**	4.98	78	*e*Pn	Pn	19 24 30.5	+1.3
CHMN				*e*		19 24 52.2	
	comp=Z,4µm,1.1s						
GHWR	**Ruwais**	5.00	170	*e*Pn	Pn	19 24 30.6	+1.5
GHWR	**Ruwais**	5.00	170	P	Pn	19 24 30.5	+1.4
KRSH	**Karshahi**	5.05	2	*e*Pn	Pn	19 24 31.3	+1.3
KHMZ	**Khomeyn**	5.10	341	*e*Pn	Pn	19 24 32.8	+2.0
KHMZ	**Khomeyn**	5.10	341	*e*Pn	Pn	19 24 32.8	+2.0
AJN	**Ajban**	5.12	147	*i* P	Pn	19 24 31.8	+1.1
	SNR=32						
AJN	**Ajban**	5.12	147	*e*Pn	Pn	19 24 32.8	+2.1
AJN	**Ajban**	5.12	147	P	Pn	19 24 32.6	+1.9
	SNR=32						
AJN				S	Sn	19 25 27.7	-1.4
NAZ	**Nazwa, Dubai**	5.13	139	*i* P	Pn	19 24 31.6	+0.7
	SNR=42						
NAZ	**Nazwa, Dubai**	5.13	139	*e*Pn	Pn	19 24 32.1	+1.2
NAZ	**Nazwa, Dubai**	5.13	139	P	Pn	19 24 31.9	+1.0
	SNR=42						
NAZ				S	Sn	19 25 27.9	-1.5
MASF	**Masafi**	5.15	132	P	Pn	19 24 31.5	+0.2
	SNR=59						
MASF				S	Sn	19 25 29.2	-0.9
MSFE	**Esma-Masafi**	5.16	132	*i* P	Pn	19 24 31.7	+0.2
	SNR=59						
MSFE	**Esma-Masafi**	5.16	132	*e*Pn	Pn	19 24 31.8	+0.4
KHNJ	**Kahnooj**	5.17	99	*e*Pn	Pn	19 24 30.8	-0.7
ASUD	**Al Ashush, Dub**	5.23	144	*i* P	Pn	19 24 33.3	+0.9
	SNR=234						
ASUD	**Al Ashush, Dub**	5.23	144	*e*Pn	Pn	19 24 34.2	+1.8
ASUD	**Al Ashush, Dub**	5.23	144	P	Pn	19 24 33.5	+1.2
	SNR=234						
ASUD				S	Sn	19 25 32.1	+0.1
FAQ	**Al Faqa, Dubai**	5.28	141	*i* P	Pn	19 24 33.4	+0.4
	SNR=43						
FAQ	**Al Faqa, Dubai**	5.28	141	*e*Pn	Pn	19 24 33.5	+0.5
FAQ	**Al Faqa, Dubai**	5.28	141	P	Pn	19 24 33.4	+0.4
	SNR=43						
FAQ				S	Sn	19 25 30.1	-3.0
MDH	**Madha**	5.29	132	*i* P	Pn	19 24 33.1	-0.1
	SNR=20						
MDH	**Madha**	5.29	132	*e*Pn	Pn	19 24 33.1	-0.1
MDH	**Madha**	5.29	132	P	Pn	19 24 33.1	-0.1
	SNR=42						
MDH				S	Sn	19 25 30.4	-3.2
MZWR	**Madinat Zayed**	5.41	161	*e*Pn	Pn	19 24 36.5	+1.7
MZWR	**Madinat Zayed**	5.41	161	P	Pn	19 24 36.1	+1.2
MZWR				S	Sn	19 25 34.7	-1.8
ISFB	**Sefidab**	5.43	3	*e*Pn	Pn	19 24 36.3	+1.1
UOSS	**Minazif**	5.49	135	*i* P	Pn	19 24 35.6	-0.2
	SNR=18						
UOSS	**Minazif**	5.49	135	*e*Pn	Pn	19 24 36.0	+0.1
UOSS	**Minazif**	5.49	135	P	Pn	19 24 36.0	+0.1
UOSS				S	Sn	19 25 34.3	-3.9
UOSS	**Minazif**	5.49	135	Pn	Pn	19 24 35.4	-0.4
UOSS				Sn	Sn	19 25 33.6	-4.6
HATD	**Hatta, Dubai**	5.53	136	*i* P	Pn	19 24 36.9	+0.5
	SNR=29						
HATD	**Hatta, Dubai**	5.53	136	*e*Pn	Pn	19 24 36.9	+0.5
HATD	**Hatta, Dubai**	5.53	136	P	Pn	19 24 36.9	+0.5
	SNR=29						
HATD				S	Sn	19 25 36.9	-2.4
GHVR	**GHOM**	5.58	355	*e*Pn	Pn	19 24 38.8	+1.6
GHVR	**GHOM**	5.58	355	*e*Pn	Pn	19 24 38.8	+1.6
ASHO	**Ashiyiah**	5.59	138	*i* P	Pn	19 24 37.3	-0.1
	SNR=208						
ASHO	**Ashiyiah**	5.59	138	*e*Pn	Pn	19 24 37.5	+0.1
ASHO	**Ashiyiah**	5.59	138	P	Pn	19 24 37.4	+0.1
	SNR=208						
ASHO				S	Sn	19 25 38.1	-2.9
	SNR=8.0						
KBAM	**BAM**	5.71	86	*e*Pn	Pn	19 24 40.4	+1.4
KBAM				*e*		19 24 43.8	
	comp=Z,7µm,0.8s						
IKFM	**Kafar-mosalman**	5.78	324	*e*Pn	Pn	19 24 41.1	+1.2
TPRV	**Parvadeh(Tabas**	5.79	44	*e*Pn	Pn	19 24 41.3	+1.2
IDOB	**Doab**	5.83	327	*e*Pn	Pn	19 24 41.9	+1.1
ASAO	**Ashtian**	5.85	344	*e*Pn	Pn	19 24 42.6	+1.5
ASAO	**Ashtian**	5.85	344	*e*Pn	Pn	19 24 42.6	+1.5
ALNE	**Al Ain**	5.92	144	*i* P	Pn	19 24 42.3	+0.5
	SNR=33						
ALNE	**Al Ain**	5.92	144	*e*Pn	Pn	19 24 42.7	+0.9
ALNE	**Al Ain**	5.92	144	P	Pn	19 24 42.5	+0.7
	SNR=33						
ALNE				S	Sn	19 25 47.0	-2.0
IQOM	**Qom**	5.96	353	*e*Pn	Pn	19 24 43.1	+0.5
IVRN	**Varamin**	6.07	358	*e*Pn	Pn	19 24 45.2	+1.3
SOHO	**SOHO**	6.29	138	*i* P	Pn	19 24 46.6	-0.3
	SNR=86						
SOHO	**SOHO**	6.29	138	*e*Pn	Pn	19 24 46.8	-0.1
SOHO	**SOHO**	6.29	138	P	Pn	19 24 46.6	-0.3
SOHO				S	Sn	19 25 56.8	-1.2
HAGD	**Aghdareh**	6.36	339	*e*Pn	Pn	19 24 47.7	-0.3
TNSJ	**Nastanj**	6.43	37	*e*Pn	Pn	19 24 49.9	+1.0
TKDS	**Koohdasht(Taba**	6.46	42	*e*Pn	Pn	19 24 50.5	+1.2
ILAS	**Lasjerd**	6.51	7	*e*Pn	Pn	19 24 51.1	+0.9
IHSB	**Hasanabad**	6.54	355	*e*Pn	Pn	19 24 51.0	+0.7
IBZA	**Bozab**	6.54	329	*e*Pn	Pn	19 24 51.6	+1.0
IDMV	**Damavand**	6.65	1	*e*Pn	Pn	19 24 53.3	+1.2
IRAZ	**Razeghan**	6.70	346	*e*Pn	Pn	19 24 53.4	+0.7
DAMV	**Damavand**	6.70	0	*e*Pn	Pn	19 24 45.2	-7.6
DAMV	**Damavand**	6.70	0	*e*Pn	Pn	19 24 45.2	-7.6
IALM	**Almabolaq**	6.74	333	*e*Pn	Pn	19 24 54.3	+0.9
IFIR	**Firoozkooh**	6.75	6	*e*Pn	Pn	19 24 54.8	+1.4
IANJ	**Anjilo**	6.75	14	*e*Pn	Pn	19 24 54.9	+1.5
KCHF	**Cheshme Sefid,**	6.79	323	*e*Pn	Pn	19 24 55.5	+1.6
UMZA	**Um Al Zommool**	6.82	154	P	Pn	19 24 54.7	+0.5
UMZA				S	Sn	19 26 08.8	-2.3
ARQ	**Araqi**	6.91	142	P	Pn	19 24 55.6	+0.1
	SNR=157						
ARQ				S	Sn	19 26 11.9	-1.5
BSRN	**Basiran**	6.91	62	*e*Pn	Pn	19 24 56.5	+0.9
BSRN	**Basiran**	6.91	62	*e*Pn	Pn	19 24 56.5	+0.9
ISHM	**Shahmirzad**	6.97	9	*e*Pn	Pn	19 24 58.1	+1.6
CHTH	**Charan**	7.01	355	*e*Pn	Pn	19 24 58.0	+1.0
CHTH	**Charan**	7.01	355	*e*Pn	Pn	19 24 58.0	+1.0
IKOO	**Kooshah**	7.02	58	*e*Pn	Pn	19 24 58.2	+1.0
THKV	**Tehran--Karaj**	7.04	353	*e*Pn	Pn	19 24 41.3	-16
THKV	**Tehran--Karaj**	7.04	353	*e*Pn	Pn	19 24 41.3	-16
QABG	**Abgarm-Qazvin**	7.07	344	*e*Pn	Pn	19 24 58.5	+0.7
ITEG	**Tejag**	7.08	54	*e*Pn	Pn	19 24 58.6	+0.8
IGHG	**Ghaleghazi**	7.08	321	*e*Pn	Pn	19 25 00.1	+2.1
HOQ	**Hoqain**	7.17	136	P	Pn	19 24 58.0	-1.0
	SNR=40						
HOQ				S	Sn	19 26 15.7	-4.0
IPRN	**Peran**	7.32	3	*e*Pn	Pn	19 25 03.3	+2.2
ILIN	**Lien**	7.33	326	*e*Pn	Pn	19 25 01.6	+0.2
NHDN	**Nehbandan**	7.45	69	*e*Pn	Pn	19 25 03.6	+0.7
IDHR	**Dehrash**	7.46	322	*e*Pn	Pn	19 25 04.6	+1.5
AFRZ	**Afriz**	7.55	52	*e*Pn	Pn	19 25 05.1	+0.8
QALM	**Alamut, Qazvin**	7.58	352	*e*Pn	Pn	19 25 05.3	+0.5
IGZV	**Ghazvin**	7.60	349	*e*Pn	Pn	19 25 05.1	+0.1
BIDO	**Bidbid**	7.72	133	P	Pn	19 25 05.5	-1.1
	SNR=11						
BIDO				S	Sn	19 26 27.4	-6.0
IGLO	**Ghaloghah**	7.74	11	*e*Pn	Pn	19 25 09.9	+2.9
BSY	**Bisya**	7.75	141	P	Pn	19 25 06.8	-0.2
	SNR=46						
BSY				S	Sn	19 26 30.8	-3.4
	SNR=5.5						
ZHDN	**Zahedan**	7.78	84	*e*Pn	Pn	19 25 08.1	+0.7
IDAH	**Dahanechah**	7.81	59	*e*Pn	Pn	19 25 10.6	+2.5
SHRO	**Shahrood**	7.86	25	*e*Pn	Pn	19 25 09.6	+1.2
SHRO	**Shahrood**	7.86	25	*e*Pn	Pn	19 25 09.6	+1.2
RAYN	**Ar Rayn**	7.88	229	*i* P	Pn	19 25 09.3	+0.5
	SNR=181						
RAYN	**Ar Rayn**	7.88	229	P	Pn	19 25 09.0	+0.2
RAYN	**Ar Rayn**	7.88	229	Pn	Pn	19 25 09.0	+0.2
IMON	**Monand**	7.89	55	*e*Pn	Pn	19 25 10.7	+1.7
QSDN	**Sirdan**	7.92	344	*e*Pn	Pn	19 25 10.2	+0.7
SMDO	**Samad**	8.01	135	P	Pn	19 25 10.0	-0.6
	SNR=197						
SMDO				S	Sn	19 26 37.2	-3.4
	SNR=6.8						
ZNJK	**Zanjan**	8.21	341	*e*Pn	Pn	19 25 15.5	+2.1
ZNJK	**Zanjan**	8.21	341	*e*Pn	Pn	19 25 15.5	+2.1
WSAR	**Wadi Sarin**	8.25	132	Pn	Pn	19 25 12.8	-1.0
	comp=Z,8.4nm,0.3s,baz=335,slow=8.3,SNR=199						
WSAR				Sn	Sn	19 26 38.6	-7.8
	comp=Z,12nm,0.3s,baz=61,slow=19,SNR=2.1						
WSAR				LR	LR	19 29 08.3	
	comp=Z,664nm,19.6s,baz=324,slow=43						
WSAR	**Wadi Sarin**	8.25	132	P	Pn	19 25 12.8	-1.0
	SNR=152						
WSAR				S	Sn	19 26 42.9	-3.5
CHBR	**Chabahar**	8.29	111	*e*Pn	Pn	19 25 12.9	-1.4
CHBR	**Chabahar**	8.29	111	*e*Pn	Pn	19 25 12.9	-1.4

JMDO	Jabal Madar	8.56	138	P	Pn	19 25 17.1	-1.0
	SNR=22						
JMDO				S	Sn	19 26 48.8	-5.3
SHRT	Shahrakht	8.57	54	ePn	Pn	19 25 20.6	+2.4
SHRT	Shahrakht	8.57	54	ePn	Pn	19 25 20.6	+2.4
IMND	Minoodasht	8.82	18	ePn	Pn	19 25 22.8	+1.2
SBZV	Sabzevar	8.86	31	ePn	Pn	19 25 24.1	+1.8
WBK	Wadi Bani Khal	8.91	133	P	Pn	19 25 21.4	-1.6
	SNR=152						
NGCH	Negor - Chabah	8.93	111	ePn	Pn	19 25 21.8	-1.2
SRVN	Saravan	9.36	97	ePn	Pn	19 25 29.4	+0.3
MRVT	Maraveh tapeh	9.39	21	ePn	Pn	19 25 31.1	+1.6
MRVT	Maraveh tapeh	9.39	21	ePn	Pn	19 25 31.1	+1.6
MAHB	Mahabad	9.43	328	ePn	Pn	19 25 30.7	+0.7
IMOG	Moghan	9.52	39	ePn	Pn	19 25 32.8	+1.4
JLN	Jalan Bani Buh	9.53	133	P	Pn	19 25 29.3	-2.0
	SNR=40						
TBJM	Torbat-e-JAM	9.53	46	ePn	Pn	19 25 33.3	+1.8
IAKL	Akhelmad	9.58	35	ePn	Pn	19 25 33.2	+0.9
ISRB	Sarab	9.58	339	ePn	Pn	19 25 33.8	+1.6
ISFR	Sfrayin	9.58	30	ePn	Pn	19 25 34.2	+1.9
IPAY	Payeh	9.59	37	ePn	Pn	19 25 34.6	+2.3
IBST	Bostanabad	9.73	336	ePn	Pn	19 25 35.4	+1.1
BJRD	Bojnurd	9.89	26	ePn	Pn	19 25 38.0	+1.6
BJRD	Bojnurd	9.89	26	ePn	Pn	19 25 38.0	+1.6
IKRD	Kardeh	10.10	37	ePn	Pn	19 25 40.6	+1.2
IMYA	Miami	10.11	41	ePn	Pn	19 25 40.9	+1.4
IEMG	Emamgholi	10.18	32	ePn	Pn	19 25 42.3	+1.8
IHRS	Heris	10.23	338	ePn	Pn	19 25 41.9	+0.8
HRA	Herat	10.34	56	Pn	Pn	19 25 43.5	+0.8
GEYT	Alibeck	10.37	28	Pn	Pn	19 25 44.0	+1.2
	comp=Z,2.5nm,0.3s,baz=210,slow=17,SNR=32						
GEYT				LR	LR	19 30 52.9	
	comp=Z,716nm,18.9s,baz=210,slow=44						
GEYT	Alibeck	10.37	28		Pn	19 25 41.6	-1.2
GYA0B	ALIBECK ARRAY	10.37	28		Pn	19 25 42.0	-0.8
GRMI	Germi	10.43	342	ePn	Pn	19 25 45.9	+2.2
GRMI	Germi	10.43	342	ePn	Pn	19 25 45.9	+2.2
DOK	Doka	10.44	168	P	Pn	19 25 42.2	-1.6
	SNR=62						
ITBZ	Tabriz	10.48	334	ePn	Pn	19 25 46.0	+1.6
ISHB	Shabestar	10.73	332	ePn	Pn	19 25 48.5	+0.5
IMRD	Marand	11.06	334	ePn	Pn	19 25 53.4	+0.9
WHFO	Wadi Hawf	11.07	171	P	Pn	19 25 50.3	-2.2
	SNR=97						
SHAO	Shalim	11.35	162	i P	Pn	19 25 54.5	-1.8
	SNR=56						
SHAO	Shalim	11.35	162	P	Pn	19 25 54.6	-1.8
	SNR=56						
DMTO	DMTO	11.48	165	P	Pn	19 25 56.5	-1.6
	SNR=41						
RBK	Rabkut	11.54	169	P	Pn	19 25 57.1	-1.9
	SNR=37						
ABTO	Aybut	11.57	174	P	Pn	19 25 57.3	-2.1
	SNR=113						
SIRT	Sirnak	11.69	320	Pn	Pn	19 25 59.6	-1.4
GURO	Guroymak-BITLI	12.66	322	Pn	Pn	19 26 13.2	-1.0
GNI	Garni	12.68	334	Pn	Pn	19 26 17.2	+2.7
	comp=Z,0.5nm,0.3s,baz=134,slow=0.8,SNR=6.8						
GNI	Garni	12.68	334	c eP	Pn	19 26 15.9	+1.3
GNI				pmax	pmax		
	comp=Z,71nm,2.5s						
GNI	Garni	12.68	334		Pn	19 26 12.8	-1.7
ASF	Jabal al Asfar	13.37	288	Pn	Pn	19 26 23.7	-0.2
	comp=Z,2.5nm,0.3s,baz=99,slow=7.9,SNR=22						
ASF				Sn	Sn	19 28 40.5	-11
	comp=Z,4.5nm,0.3s,baz=96,slow=10,SNR=2.0						
KARS	Kars	13.76	330	P	Pn	19 26 28.2	-1.1
KARS	Kars	13.76	330	Pn	Pn	19 26 28.1	-1.1
KZRT	Kazreti	13.88	336	P	Pn	19 26 34.6	+3.7
GHAJ	Ghor Haditha	14.37	284		Pn	19 26 36.2	-1.3
MAK	Makhachkala	14.47	347	eP	Pn	19 26 38.0	-0.8
MAK				eS	Sn	19 29 18.1	-0.4
MAK				pmax	pmax		
	comp=Z,464nm,1.4s						
MAK				MLR	MLR		
	comp=Z,667nm,17.0s						
MMAI	Mount Meron Ar	14.76	290	Pn	Pn	19 26 43.0	0.0
	comp=Z,1.5nm,0.3s,baz=100,slow=18,SNR=16						
MMAI				Sn	Sn	19 29 18.9	-6.9
	comp=Z,2.5nm,0.3s,baz=108,slow=17,SNR=2.6						
GUDG	Gudauri	14.81	338	P	P	19 26 48.4	-1.0
GAZ	Gaziantep	14.83	308	Pn	Pn	19 26 41.8	-2.1
EIL	Elat	14.84	277	Pn	Pn	19 26 46.6	+2.6
	comp=Z,0.4nm,0.3s,baz=131,slow=6.6,SNR=5.7						
GROC	Groznyy	15.10	343	eP	Pn	19 26 43.5	-3.8
GROC				eS	Sn	19 29 30.8	-3.0
GROC				pmax	pmax		
	comp=Z,5.0nm,0.4s						
ONI	Oni	15.28	336	P	Pn	19 26 48.7	-1.1
ONI				pmax	pmax		
	comp=Z,63nm,1.2s						
ONI	Oni	15.28	336	P	Pn	19 26 48.7	-1.1
ZEI	Tsey	15.29	337	eP	P	19 26 52.6	-2.2
ZEI				pmax	pmax		
	comp=Z,34nm,0.9s						
KBL	Kabul	15.60	65	P	Pn	19 26 53.9	-0.2
KBL				pmax	pmax		
	comp=Z,70nm,1.2s						
KBL	Kabul	15.60	65	P	Pn	19 26 53.9	-0.2
MQOL	MQOL	15.80	242	i	P	19 27 00.3	0.0
	baz=266,slow=8.6						
NCK	Nalchik	16.02	338	i P	Pn	19 27 01.0	+1.6
NCK				pmax	pmax		
	comp=Z,37nm,0.9s						
NEY	Neytrino	16.12	335	i P	P	19 27 03.4	-0.5
NEY				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KBZ	Khabaz	16.47	336	Pn	P	19 27 07.1	-0.4
	comp=Z,0.5nm,0.3s,baz=148,slow=8.7,SNR=26						
KBZ				LR	LR	19 34 17.1	
	comp=Z,900nm,21.1s,baz=149,slow=40						
KBZ				ScP	ScP	19 35 27.5	-1.7
	comp=Z,0.0nm,0.3s,baz=255,slow=1.6,SNR=4.7						
KBZ	Khabaz	16.47	336	c eP	P	19 27 06.9	-0.6
KBZ				pmax	pmax		
	comp=Z,40nm,1.1s						
SHA1	Shidzhatmaz	16.56	336	⇑iP	P	19 27 07.8	-1.1
BNN	Bunyan	16.62	311		Pn	19 27 05.9	-1.2
BNN				IAmb	IAmb	19 27 31.6	
	comp=Z,126nm,1.1s						
PYA1	Pyatigorsk	16.70	337	⇑iP	P	19 27 09.2	-0.9
KIV	Kislovodsk	16.74	336	i P	P	19 27 11.3	+0.6
	SNR=18						
KIV	Kislovodsk	16.74	336	eP	P	19 27 10.6	-0.1
KIV				pmax	pmax		
	comp=Z,83nm,1.0s						
KIV				MLR	MLR		
	comp=Z,395nm,13.0s						
KIV	Kislovodsk	16.74	336		Pn	19 27 05.9	-2.7
SOCY	Socotra	16.75	173		Pn	19 27 04.2	-4.5
SOCY				IAmb	IAmb	19 27 06.1	
	comp=Z,141nm,1.7s						
CSS	Mathiatis	16.90	296		Pn	19 27 08.5	-2.0
CSS				IAmb	IAmb	19 27 32.3	
	comp=Z,70nm,0.9s						
CHGR	Chuyangaron	17.28	51		Pn	19 27 13.2	-2.1
THW	Thamme Wali	17.44	72	P	Pn	19 27 16.2	-1.1
GOF	Gofitskoye	17.60	339	⇓eP	P	19 27 20.2	+0.2
GOF				pmax	pmax		
	comp=Z,64nm,0.8s						
SOC	Sochi	17.62	329	eP	Pn	19 27 19.7	+0.2
SOC				e		19 30 35.7	
SOC				pmax	pmax		
	comp=Z,82nm,0.9s						
SOC				MLR	MLR		
	comp=Z,543nm,17.0s						
CEP	Cherat	17.74	69	P	P	19 27 21.7	-0.2
GAR	Garm	18.24	52	P	Pn	19 27 26.0	-1.3
GAR				IAmb	IAmb	19 27 36.8	
	comp=Z,86nm,1.0s						
BR131	Keskin Array S	18.54	310	P	Pn	19 27 31.1	+0.3
BR131				pmax	pmax		
	comp=Z,38nm,0.9s						
BR131	Keskin Array S	18.54	310	P	Pn	19 27 31.1	+0.3
BRTR	Keskin Array B	18.54	310	P	Pn	19 27 31.9	+1.1
	comp=Z,1.5nm,0.3s,baz=132,slow=13,SNR=64						
BRTR				ScP	ScP	19 35 33.0	-0.8
	comp=Z,0.1nm,0.3s,baz=135,slow=5.6,SNR=12						
BRTR				LR	LR	19 36 45.8	
	comp=Z,1µm,18.9s,baz=130,slow=43						
BRTR	Keskin Array B	18.54	310	P	Pn	19 27 32.0	+1.1
BRTR	Keskin Array B	18.54	310	P	Pn	19 27 30.9	0.0
TAS	Tashkent	18.80	44	P	P	19 27 33.6	+0.3
TAS				pmax	pmax		
	comp=Z,127nm,1.2s						
TAS	Tashkent	18.80	44	P	P	19 27 33.6	+0.3
TAS				IAmb	IAmb	19 27 43.5	
	comp=Z,127nm,1.2s						
NIL	Nilore	18.81	70	P	P	19 27 33.4	-0.2
NIL				pmax	pmax		
	comp=Z,48nm,0.8s						
NIL	Nilore	18.81	70	P	P	19 27 33.4	-0.2
CHCP	Chirah Chowk	18.82	70	P	P	19 27 33.4	-0.3
BTK	Batken	19.09	49	P	P	19 27 35.4	-1.2
BTK				pmax	pmax		
	comp=Z,120nm,1.9s						
BTK	Batken	19.09	49	P	P	19 27 35.4	-1.2
BTK				IAmb	IAmb	19 27 40.4	
	comp=Z,120nm,1.9s						
BR231	Keskin MP Arra	19.17	310	P	Pn	19 27 39.0	+0.5
ANTO	Ankara	19.17	310	P	Pn	19 27 38.6	+0.1
ANTO				pmax	pmax		
	comp=Z,35nm,0.7s						
ANTO	Ankara	19.17	310	P	Pn	19 27 38.6	+0.1
ATD	Arta Tunnel	19.26	208	P	Pn	19 27 40.5	+0.9
DRK	Karamyk	19.48	52	P	P	19 27 40.5	-0.7
BZK	Bozkurt	19.52	317	P	P	19 27 40.6	-0.6
ANN	Anapa	19.61	328	eP	Pn	19 27 48.8	+5.3
ANN				pmax	pmax		
	comp=Z,47nm,0.8s						
ANN				MLR	MLR		
	comp=Z,250nm,8.0s						
IUG	Iuzhnay	19.73	43	eP	P	19 27 44.0	+0.3
	baz=43						
IUG	Iuzhnay	19.73	43	eP	P	19 27 43.9	+0.3
ELL	Elmali	20.07	299	P	Pn	19 27 48.5	-0.7
ELL				pmax	pmax		
	comp=Z,147nm,0.8s						
ELL	Elmali	20.07	299	P	Pn	19 27 48.5	-0.7
MDUB	Mudurnu	20.54	310	P	P	19 27 52.1	-0.3
KKAR	Karatay Array	20.59	42	P	P	19 27 52.5	-0.3
KKAR	Karatay Array	20.59	42	P	P	19 27 52.5	-0.3
AB31	Akbulak array	21.22	15	eP	P	19 28 00.0	+0.4
ABKAR	Akbulak array	21.22	15	P	P	19 27 58.3	-1.3
ABKAR	Akbulak array	21.22	15	P	P	19 27 58.5	-1.1
ABKAR				IAmb	IAmb	19 28 01.7	
	comp=Z,32nm,0.8s						
SIM	Simferopol'	21.36	323	eP	P	19 28 03.6	+2.5
SIM				pmax	pmax		
	comp=Z,90nm,1.5s						
AKTO	Aktyubinsk	21.99	10	P	P	19 28 08.7	+0.9
	comp=Z,55nm,1.0s,baz=210,slow=12,SNR=42						
AML	Almayashu	22.01	47	P	P	19 28 09.1	+0.5
	SNR=28						
AML	Almayashu	22.01	47	i P	P	19 28 08.8	+0.3
	SNR=36						
NDI	New Delhi	22.15	84	eP	P	19 28 09.0	-0.7
EKS2	Erkin-Say	22.33	46	P	P	19 28 15.3	+3.6
	SNR=18						
KSH	Kashi	22.45	56	P	P	19 28 08.6	-4.5
KSH				S	S	19 32 07.0	-11
KSH				sS	pS	19 32 21.1	-5.8
KSH				ScP	ScP	19 35 42.2	-1.0
KSH				pmax	pmax		
	comp=Z,33nm,1.2s						
KSH				pmax	pmax		
	comp=Z,360nm,5.2s						
KSH				LR	LR		
	comp=Z,660nm,13.1s						
KSH				LR	LR		
	comp=Z,420nm,7.6s						
KSH				LR	LR		
	comp=Z,450nm,11.0s						
BALB	Balikesir	22.51	305	P	P	19 28 13.6	+0.1
BALB				IAmb	IAmb	19 28 43.7	
	comp=Z,38nm,0.8s						
UCH	Uchtor	22.59	48	P	P	19 28 15.7	+0.9
	SNR=22						
AAK	Ala-Archa	22.77	47	P	P	19 28 17.5	+1.1
	comp=Z,12nm,0.9s,baz=226,slow=9.7,SNR=34						
AAK				PcP	PcP	19 32 08.5	+0.8
	comp=Z,2.9nm,0.8s,baz=214,slow=7.3,SNR=3.0						
AAK	Ala-Archa	22.77	47	P	P	19 28 17.7	+1.2
	SNR=17						
AAK	Ala-Archa	22.77	47	i P	P	19 28 17.7	+1.2
	SNR=22						
AAK	Ala-Archa	22.77	47	P	P	19 28 15.3	-1.1
FRU1	Bishkek	22.95	47	P	P	19 28 17.8	-0.4
FRU1				pmax	pmax		
	comp=Z,49nm,1.3s						
FRU1	Bishkek	22.95	47	P	P	19 28 17.8	-0.4
FRU1				IAmb	IAmb	19 28 33.9	
	comp=Z,49nm,1.2s						
KBK	Karagaybulak	23.07	47	P	P	19 28 21.3	+1.7
	SNR=23						
USP	Ospenovka	23.09	46	P	P	19 28 22.0	+2.4
	SNR=34						
CHMS	Chumysh	23.12	46	P	P	19 28 20.3	+0.4
	SNR=12						
SGDS	Sogindy	23.27	45	eP	P	19 28 22.1	+0.6
	baz=45						
SANT	Santorini	23.46	295	P	P	19 28 22.8	-0.5
VRH	Novokhopyorsk	23.56	344	eP	P	19 28 24.2	+0.1
VRH				eS	S	19 32 34.7	-2.0
VRH				pmax	pmax		
	comp=Z,200nm,0.6s						
VRH				smax	smax		
	comp=N,100nm,0.8s						
BOOM	Boomskoye usch	23.64	49	P	P	19 28 23.6	-1.6
BOOM				pmax	pmax		
	comp=Z,26nm,0.8s						
BOOM	Boomskoye usch	23.64	49	P	P	19 28 23.6	-1.6
BOOM				IAmb	IAmb	19 28 35.0	
	comp=Z,26nm,0.8s						
BELG	Belogornoye	23.68	353	P	P	19 28 25.0	-0.2
	comp=Z,141nm,0.9s,baz=27,slow=1.2,SNR=23						
BELG	Belogornoye	23.68	353	i P	P	19 28 25.4	+0.2
BELG				pmax	pmax		
	comp=Z,34nm,1.1s						
ULHL	Ulahol	23.73	49	P	P	19 28 27.8	+1.7
	SNR=5.0						
IDI	Anoyia	23.74	292	P	P	19 28 28.0	+1.9
	comp=Z,30nm,0.7s,baz=96,slow=8.4,SNR=15						
BTLS	Baital	23.79	41	eP	P	19 28 26.9	+0.5
	comp=Z,15nm,0.8s,baz=41						
BTLS	Baital	23.79	41	eP	P	19 28 26.9	+0.5
BTLS				pmax	pmax		
	comp=Z,15nm,0.8s						
EFOR	EFORIE	23.97	315	⇑P	P	19 28 29.8	+1.6
VORD	Divnogorie	24.00	340	eP	P	19 28 27.7	-0.6
VORD				pmax	pmax		
	comp=Z,40nm,1.0s						
MFTR	Murfatlar	24.15	315	⇓P	P	19 28 31.9	+2.1
JURR	Jurilovca	24.19	317	⇓P	P	19 28 31.9	+1.7
VSR	Storozhevoye	24.26	340	eP	P	19 28 29.8	-0.9
VSR				eS	S	19 32 48.5	+0.5
VSR				pmax	pmax		
	comp=Z,50nm,0.8s						
VSR				smax	smax		
	comp=N,70nm,0.9s						
ALN	Alexandroupoli	24.28	306	P	P	19 28 31.4	+0.4
ALN				pmax	pmax		
	comp=Z,21nm,0.8s						
ALN	Alexandroupoli	24.28	306	P	P	19 28 31.4	+0.4
TIRR	Tirgusor	24.31	316	⇓P	P	19 28 32.3	+1.1
TIRR	Tirgusor	24.31	316	P	P	19 28 31.3	+0.1
TIRR				pmax	pmax		
	comp=Z,67nm,0.8s						
TIRR	Tirgusor	24.31	316	P	P	19 28 31.3	+0.1
KDJ	Kajisay	24.31	50	P	P	19 28 31.5	0.0
KDJ				pmax	pmax		
	comp=Z,25nm,0.9s						
KDJ	Kajisay	24.31	50	P	P	19 28 31.5	0.0
KDJ				IAmb	IAmb	19 28 35.5	
	comp=Z,25nm,0.8s						
TLCR		24.46	318	⇓P	P	19 28 34.7	+2.1
TPGR	Topolog	24.51	317	⇓P	P	19 28 34.2	+1.0
TNSS	Tian-Shan	24.55	48	eP	P	19 28 35.5	+1.5
	baz=48						
KUU	Kurty	24.56	46	eP	P	19 28 34.5	+0.9
	comp=Z,45nm,1.4s,baz=46						
KUU	Kurty	24.56	46	eP	P	19 28 34.5	+0.9
KUU				pmax	pmax		
	comp=Z,45nm,1.4s						
TARG	Taragay, Kyrgy	24.57	52	P	P	19 28 34.5	+0.3
TARG				IAmb	IAmb	19 29 12.5	
	comp=Z,38nm,1.2s						
AAA	Alma-Ata	24.61	48	eP	P	19 28 35.0	+0.9
	baz=48						
AAA	Alma-Ata	24.61	48	eP	P	19 28 34.9	+0.9
PURM	Purcari	24.65	322	⇓P	P	19 28 35.3	+1.1
VORR	Voronezh	24.65	341	eP	P	19 28 35.0	+0.7
VORR				pmax	pmax		
	comp=Z,300nm,1.4s						
MDOK	Medeo	24.67	48	eP	P	19 28 35.6	+0.8
	baz=48						
MDOK	Medeo	24.67	48	eP	P	19 28 35.5	+0.8
HARR	Harsova	24.72	316	⇓P	P	19 28 35.8	+0.8
CFR	Carcaliu	24.86	317	⇓P	P	19 28 37.2	+1.0
CHKK	Chushkaly	24.95	47	eP	P	19 28 37.1	-0.1
	baz=46						
AMRR	Amara	25.05	315	⇓P	P	19 28 40.4	+2.5
RAZG	Razgrad	25.06	313	⇓P	P	19 28 40.4	+2.3
TATR	Tatarca	25.14	318	⇑P	P	19 28 40.2	+1.5
VLDR	Vladesti	25.25	318	⇓P	P	19 28 41.4	+1.6
PRZ	Przheval'sk	25.28	51	P	P	19 28 39.7	-0.6
PRZ				pmax	pmax		
	comp=Z,29nm,0.9s						
PRZ	Przheval'sk	25.28	51	P	P	19 28 39.7	-0.6
PRZ				IAmb	IAmb	19 28 43.3	
	comp=Z,29nm,0.8s						
PGOR	Pogoanele	25.41	316	⇓P	P	19 28 44.3	+3.1
MILM	Milestii Mici	25.46	321	⇑P	P	19 28 42.4	+0.8
MILM	Milestii Mici	25.46	321	eP	P	19 28 42.0	+0.4
MILM				e		19 29 25.0	
MILM				pmax	pmax		
	comp=Z,160nm,1.2s						
MILM				pmax	pmax		
	comp=E,300nm,1.9s						
SATY	Saty	25.52	49	eP	P	19 28 43.1	+0.6
	baz=49						
SATY	Saty	25.52	49	eP	P	19 28 43.0	+0.6
LPSR	Galich'ya Gora	25.56	341	eP	P	19 28 43.0	+0.6
LPSR				eS	S	19 33 06.5	-2.3
LPSR				pmax	pmax		
	comp=Z,130nm,1.0s						
LPSR				smax	smax		
	comp=E,80nm,1.6s						
ARXS	Arharly	25.66	46	P	P	19 28 43.8	+0.2
SULR		25.75	315	⇓P	P	19 28 46.9	+2.6
BIR	Birlad	25.75	319	⇓P	P	19 28 46.6	+2.3
ISR	Istrita	25.79	316	⇑P	P	19 28 46.5	+1.7
ODBI	Odobesti	25.81	317	⇑P	P	19 28 47.8	+2.9
VASR	Vaslui	25.87	320	⇓P	P	19 28 47.5	+2.1
KPKS	Kokpek	25.88	49	eP	P	19 28 46.3	+0.6
	comp=E,28nm,0.8s,baz=49						
KPKS	Kokpek	25.88	49	eP	P	19 28 46.2	+0.6
KPKS				pmax	pmax		
	comp=Z,28nm,0.8s						
BISRR	Bisoca	25.91	317	⇑P	P	19 28 49.0	+3.2
UZB	Uzynbulak	25.97	50	eP	P	19 28 47.4	+0.8
	comp=Z,21nm,0.9s,baz=50						
UZB	Uzynbulak	25.97	50	eP	P	19 28 47.3	+0.8
UZB				pmax	pmax		
	comp=Z,21nm,0.9s						
SECR		26.04	315	⇓P	P	19 28 50.1	+3.2
VRI	Vrincioaia	26.06	317	⇓P	P	19 28 49.4	+2.2
NEHR	Nehoiu	26.09	316	⇓P	P	19 28 49.8	+2.4
PLOR	Plostina	26.10	317	⇑P	P	19 28 50.0	+2.5
COPA	Copaceanca	26.15	313	⇓P	P	19 28 49.9	+2.0
SHLS	Shalkode	26.27	50	eP	P	19 28 52.4	+3.2
	comp=Z,16nm,0.9s,baz=50						
SHLS	Shalkode	26.27	50	eP	P	19 28 52.4	+3.2
SHLS				pmax	pmax		
	comp=Z,16nm,0.9s						
BRZS	Berezniki	26.29	31	eP	P	19 28 50.2	+1.1
	baz=31						
BRZS	Berezniki	26.29	31	eP	P	19 28 50.2	+1.1
MLR	Muntele Rosu	26.34	316	⇑P	P	19 28 52.7	+2.9
MLR	Muntele Rosu	26.34	316	P	P	19 28 52.6	+2.9
	comp=Z,42nm,0.9s,baz=227,slow=2.1,SNR=39						
MLR	Muntele Rosu	26.34	316	P	P	19 28 49.7	-0.1
MLR				pmax	pmax		
	comp=Z,51nm,0.9s						
MLR	Muntele Rosu	26.34	316	P	P	19 28 49.7	-0.1
MLR				IAmb	IAmb	19 29 13.7	
	comp=Z,52nm,0.9s						
PDGK	Podgornoye	26.36	49	P	P	19 28 50.2	+0.2
COVR	Voineasa-Covas	26.36	317	⇓P	P	19 28 52.6	+2.7
ITM	Ithomi	26.39	296	P	P	19 28 50.9	+0.6
ITM				IAmb	IAmb	19 29 10.5	
	comp=Z,30nm,0.8s						
TDK	Taldyqorghan	26.39	45	eP	P	19 28 50.9	+0.7
	comp=Z,27nm,0.8s,baz=45						
TDK	Taldyqorghan	26.39	45	eP	P	19 28 50.9	+0.7
TDK				pmax	pmax		
	comp=Z,27nm,0.8s						
AGG	Agios Georgios	26.44	300	P	P	19 28 50.7	0.0
AGG				pmax	pmax		
	comp=Z,19nm,1.0s						
AGG	Agios Georgios	26.44	300	P	P	19 28 50.7	0.0
SORM	Soroca	26.45	323	⇑P	P	19 28 50.8	+0.2
TESR	Tescani	26.45	319	⇑P	P	19 28 52.1	+1.4
HUMR	Humele	26.48	313	⇑P	P	19 28 53.2	+2.2
OZUR		26.74	317	⇓P	P	19 28 54.9	+1.6
VTS	Vitosha	26.86	308	⇓P	P	19 28 56.4	+1.8
VTS	Vitosha	26.86	308	P	P	19 28 54.5	-0.1
VTS				pmax	pmax		
	comp=Z,12nm,1.0s						
VTS	Vitosha	26.86	308	P	P	19 28 54.5	-0.1
VOIR		26.86	315	⇓P	P	19 28 56.8	+2.3
VAY	Valandovo	26.89	305	i P	P	19 28 57.0	+2.3
DOPR	Dopca	26.92	316	⇓P	P	19 28 56.5	+1.6
HYB	Hyderabad	26.95	109	i P	P	19 28 59.0	+3.6
ARR	Arges	27.09	315	⇑P	P	19 28 57.8	+1.3
PYUN	Piuthan	27.27	84	eP	P	19 28 58.2	-0.2
	comp=Z,33nm,0.6s						
STIP	Stip	27.28	306	i P	P	19 28 58.9	+0.7
BOSS	Bosilegrad	27.34	308	eP	P	19 29 00.9	+2.2
ZAPS	Zavoj	27.51	309	eP	P	19 29 02.9	+2.6
FNA	Florina	27.60	304	P	P	19 29 01.3	+0.2
FNA	Florina	27.60	304	P	P	19 29 01.3	+0.2
MDB	Medias	27.61	316	⇓P	P	19 29 03.7	+2.6
PRVS	Prvonek	27.62	307	eP	P	19 29 03.2	+1.9
BRVK	Borovoye	27.66	24	i P	P	19 29 01.3	-0.1
BRVK				pmax	pmax		
	comp=Z,15nm,0.9s						
BRVK	Borovoye	27.66	24	P	P	19 29 01.1	-0.3
LOT	Lotru	27.66	314	⇓P	P	19 29 03.1	+1.4
BVAR	Borovoye Array	27.67	24	P	P	19 29 02.3	+0.8
	comp=Z,15nm,0.8s,baz=216,slow=18,SNR=39						
BVAR				PcP	PcP	19 32 18.5	+0.3
	comp=Z,4.0nm,0.8s,baz=223,slow=10,SNR=5.0						
AKASG	Malin Array Be	27.69	328	P	P	19 29 01.2	-0.5
	comp=Z,6.3nm,0.7s,baz=132,slow=8.0,SNR=30						
AKASG				ScP	ScP	19 35 55.7	-1.9
	comp=Z,2.4nm,0.8s,baz=108,slow=1.8,SNR=8.5						
AKASG	Malin Array Be	27.69	328	i P	P	19 29 01.9	+0.2
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKASG	Malin Array Be	27.69	328	P	P	19 29 00.8	-0.9
AKASG				ScP	ScP	19 35 55.8	-1.8
AKBB	Malin Array Si	27.69	328	P	P	19 29 01.0	-0.7
AKBB				pmax	pmax		
	comp=Z,16nm,0.8s						
AKBB	Malin Array Si	27.69	328	P	P	19 29 00.9	-0.7
AKBB				IAmb	IAmb	19 29 42.2	
	comp=Z,16nm,0.8s						
KOLN	Koldanda	27.85	85	eP	P	19 29 03.2	-0.5
	comp=Z,29nm,1.0s						
BURAR	Bucovina Array	27.87	319	⇑P	P	19 29 05.3	+1.8
BURAR	Bucovina Array	27.87	319	P	P	19 29 03.0	-0.5
DANN	Dangsing	27.90	83	eP	P	19 29 04.2	0.0
	comp=Z,106nm,0.8s						
BUR08	Bucovina Ar. S	27.90	319	P	P	19 29 03.6	-0.2
SKO	Skopje	27.90	306	i P	P	19 28 58.0	-5.7
ARU	Arti	27.91	8	P	P	19 29 05.5	+1.9
	comp=Z,0.5nm,0.3s,baz=184,slow=8.6,SNR=6.7						
ARU	Arti	27.91	8	d iP	P	19 29 05.0	+1.4
ARU						19 29 47.4	
ARU				S	S	19 33 47.4	+1.6
ARU				SS	SnSn	19 35 00.9	+0.7
ARU				pmax	pmax		
	comp=Z,15nm,1.5s						
ARU				MLR	MLR		
	comp=Z,606nm,15.0s						
ARU	Arti	27.91	8	P	P	19 29 03.0	-0.6
ARU				IAmb	IAmb	19 29 15.5	
	comp=Z,14nm,0.6s						
BARS	Barje	27.91	308	eP	P	19 29 05.4	+1.6
BARS	Barje	27.91	308	eP	P	19 29 06.5	+2.7
ZAGS	Zajecar	27.98	310	eP	P	19 29 05.4	+1.0

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ARCR  ARCALIA          28.10 318 ⇓P    P      19 29 06.0 +0.6
OHR   Ohrid            28.11 304 i P   P      19 29 07.2 +1.6
GZR   Gura Zlata       28.27 314 ⇑P    P      19 29 08.4 +1.4
BOVS  Bovan            28.27 309 eP    P      19 29 08.2 +1.2
HERR  Herculane        28.28 312 ⇓P    P      19 29 09.0 +1.9
CJR   Cluj-Napoca      28.36 317 ⇑P    P      19 29 09.2 +1.4
OBN   Obninsk          28.44 341  P    P      19 29 08.2  0.0
      comp=Z,3.0nm,0.4s,baz=158,slow=10,SNR=4.6
OBN   Obninsk          28.44 341ceP    P      19 29 09.0 +0.7
OBN                              i            19 29 56.0
OBN                              i SS  SS     19 35 15.1  -39
OBN                               pmax pmax
      comp=Z,10.0nm,0.4s
OBN                               MLR  MLR
      comp=Z,394nm,18.0s
OBN   Obninsk          28.44 341  P    P      19 29 07.3 -1.0
OBN                               IAmb IAmb   19 29 10.1
      comp=Z,22nm,0.8s
SELS  Selova           28.53 308 eP    P      19 29 09.7 +0.4
SVE   Sverdlovsk       28.58  10⇑eP    P      19 29 11.6 +2.0
SVE                               pmax pmax
      comp=Z,18nm,1.1s
MDVR  Moldovita        28.70 312 ⇓P    P      19 29 12.6 +1.7
MOS   Moscow           28.71 343 eP    P      19 29 09.8 -0.9
MOS                              e            19 29 58.4
MOS                              eS    S      19 33 57.3 -1.0
MOS                               pmax pmax
      comp=Z,35nm,0.6s
GKN   Gorkha           28.72  84 eP    P      19 29 10.4 -0.9
      comp=Z,12nm,0.4s
DRGR                   28.94 316 ⇓P    P      19 29 14.7 +1.7
DRGR                   28.94 316  P    P      19 29 14.7 +1.7
MESR  Meseseni         28.96 317 ⇑P    P      19 29 15.2 +2.1
GRUS  Gruza            29.03 309 eP    P      19 29 14.8 +1.0
BZS   Buzias           29.10 313 ⇓P    P      19 29 16.3 +1.9
DMN   Daman            29.20  84 eP    P      19 29 14.7 -1.0
KKN   Kakani           29.31  84 eP    P      19 29 15.9 -0.8
      comp=Z,20nm,0.6s
SJES  Sjenica          29.33 308 eP    P      19 29 17.7 +1.1
SIRR  Siria            29.35 314 ⇑P    P      19 29 19.3 +2.7
TRUS  Trudelj          29.36 310 eP    P      19 29 17.7 +1.0
MAKZ  Makanchi         29.44  44  P    P      19 29 17.1 -0.3
MAKZ                              pmax pmax
      comp=Z,23nm,0.9s
MAKZ  Makanchi         29.44  44  P    P      19 29 17.1 -0.3
MAKZ                              IAmb IAmb   19 29 19.6
      comp=Z,23nm,0.8s
PKIN  Phulchoki        29.45  84 eP    P      19 29 17.5 -0.5
      comp=Z,37nm,0.9s
PKI   Pulchoki         29.47  84 eP    P      19 29 17.6 -0.6
      comp=Z,47nm,0.9s
KURBB Kurchatov Arra   29.53  35  P    P      19 29 18.6 +0.6
      comp=Z,14nm,0.8s,baz=235,slow=9.1,SNR=133
KURBB Kurchatov Arra   29.53  35  P    P      19 29 18.1  0.0
DRME  Dracevica, Mon   29.57 305 eP    P      19 29 19.1 +0.6
PDG   Podgorica        29.58 306 eP    P      19 29 18.7  0.0
PDG   Podgorica        29.58 306  P    P      19 29 19.0 +0.4
DIVS  Divibare         29.60 309 eP    P      19 29 19.8 +0.9
DIVS  Divibare         29.60 309  P    P      19 29 19.1 +0.2
DIVS  Divibare         29.60 309 eP    P      19 29 19.8 +0.9
MK31  Makanchi Array   29.63  45  P    P      19 29 18.9 -0.2
MK31                              pmax pmax
      comp=Z,18nm,0.9s
MK31  Makanchi Array   29.63  45  P    P      19 29 18.9 -0.2
MK31                              IAmb IAmb   19 29 21.1
      comp=Z,18nm,0.8s
MKAR  Makanchi Array   29.63  45  P    P      19 29 20.1 +1.1
      comp=Z,17nm,0.8s,baz=232,slow=7.8,SNR=65
MKAR                              ScP  ScP    19 36 02.1 -1.7
      comp=Z,2.6nm,0.9s,baz=212,slow=1.1,SNR=7.3
MKAR                              LR   LR     19 43 05.8
      comp=Z,1µm,18.4s,baz=246,slow=40
MKAR  Makanchi Array   29.63  45  P    P      19 29 18.7 -0.4
MKAR                                          19 36 02.1
MKAR  Makanchi Array   29.63  45  P    P      19 29 18.7 -0.4
KURK  Kurchatov        29.63  35ceP    P      19 29 19.8 +0.8
KURK                              pmax pmax
      comp=Z,25nm,1.0s
KURK  Kurchatov        29.63  35  P    P      19 29 18.8 -0.1
KURK                              IAmb IAmb   19 29 21.3
      comp=Z,20nm,0.9s
TRPA  Tarpa            29.68 318 ⇑P    P      19 29 21.0 +1.6
KIRV  Kirov            29.72 357  P    P      19 29 21.1 +1.5
      comp=Z,73nm,0.7s,baz=225,slow=0.4,SNR=37
KIRV  Kirov            29.72 357ceP    P      19 29 20.8 +1.2
GUN   Gumba            29.82  84 eP    P      19 29 20.7 -0.6
      comp=Z,22nm,0.6s
LODK  Lodwar           29.85 215  P    P      19 29 22.6 +1.3
RUDO  Rudo             29.86 308 eP    P      19 29 21.4 +0.2
UPM   Unac-Piva        30.06 307 eP    P      19 29 23.3 +0.2
UZH   Uzhgorod         30.07 319 eP    P      19 29 24.1 +1.2
UZH                              e            19 29 28.5
FRGS  Fruska Gora      30.09 311 eP    P      19 29 24.8 +1.6
HCY   Herceg Novi      30.13 306 eP    P      19 29 23.8 +0.3
KOLS  Kolonicke sedl   30.24 320 eP    P      19 29 26.8 +2.4
KOLS                              pmax pmax
      comp=Z,55nm,1.3s
KOLS  Kolonicke sedl   30.24 320 eP    P      19 29 26.8 +2.4
SEM   Semipalatinsk    30.29  37 eP    P      19 29 25.3 +0.1
      comp=Z,9.4nm,0.7s,baz=37
SEM   Semipalatinsk    30.29  37 eP    P      19 29 25.2 +0.1
SEM                               pmax pmax
      comp=Z,9.0nm,0.7s
HAPS  Han Pijesak,BI   30.30 309 eP    P      19 29 26.4 +1.3
KWP   Kalwaria Pacla   30.36 321 eP    P      19 29 26.4 +0.9
KWP   Kalwaria Pacla   30.36 321  P    P      19 29 25.9 +0.4
KWP                               pmax pmax
      comp=Z,576nm,1.7s
KWP   Kalwaria Pacla   30.36 321  P    P      19 29 25.9 +0.4
RAMN  Ramite           30.63  85 eP    P      19 29 27.1 -1.3
      comp=Z,19nm,0.5s
CRVS  Cervenica-Dubn   30.69 319 eP    P      19 29 30.0 +1.6
CRVS                              pmax pmax
      comp=Z,32nm,1.2s
CRVS  Cervenica-Dubn   30.69 319 eP    P      19 29 30.0 +1.6
TIP   Timpagrande      30.73 299 ⇑P    P      19 29 30.9 +2.0
TIP   Timpagrande      30.73 299  P    P      19 29 30.0 +1.0
TIP                               IAmb IAmb   19 29 32.7
      comp=Z,20nm,1.2s
STON  Ston             30.81 306 eP    P      19 29 29.4 -0.1
MNK   Minsk            30.95 332 i P   P      19 29 30.6  0.0
MNK                              i            19 30 31.8
MNK                              i S   S      19 34 32.4 -1.2
MNK                              i SS  SnSn   19 36 15.9 +1.6
MNK                               pmax pmax
      comp=Z,13nm,0.8s
MNK                               MLR  MLR
      comp=E,49nm,17.0s
MNK                               MLR  MLR
      comp=Z,262nm,14.0s
MNK                               MLR  MLR
      comp=N,1µm,32.0s
MNK   Minsk            30.95 332 i P   P      19 29 30.6  0.0
MNK                              i P   P      19 29 30.6  0.0
MNK                              i P   P      19 29 30.6  0.0
      comp=Z,13nm,0.8s,baz=136
MNK                              i PP  PnPn   19 30 31.9 +0.3
MNK                              i S   S      19 34 32.4 -1.2
MNK                              i SS  SnSn   19 36 15.9 +1.6
MNK                              i LQ  LQ     19 39 39.2
MNK                              i LR  LR     19 42 00.4
MNK                              i LRM MLR    19 43 10.5
      comp=E,49nm,17.2s
MNK                              i LRM MLR    19 43 21.9
      comp=N,1µm,31.9s
MNK                              i LRM MLR    19 43 21.9
      comp=Z,262nm,14.1s
KECS  Kecovo           31.06 318 eP    P      19 29 33.8 +2.2
KECS                              pmax pmax
      comp=Z,13nm,0.7s
KECS  Kecovo           31.06 318 eP    P      19 29 33.8 +2.2
PSZ   Piszkesteto      31.15 316 eP    P      19 29 31.9 -0.7
PSZ   Piszkesteto      31.15 316  P    P      19 29 32.7 +0.1
PSZ                               pmax pmax
      comp=Z,25nm,1.4s
PSZ   Piszkesteto      31.15 316  P    P      19 29 32.7 +0.1
PSZ                               IAmb IAmb   19 29 35.2
      comp=Z,25nm,1.4s
MORH  Mrgy, Hungar     31.25 313 ⇑P    P      19 29 34.6 +1.3
MORH  Mrgy, Hungar     31.25 313 eP    P      19 29 34.4 +1.0
MORH  Mrgy, Hungar     31.25 313 eP    P      19 29 34.3 +1.0
ODAN  Odare            31.34  85 eP    P      19 29 34.0 -0.6
BUD   Budapest         31.50 315 eP    P      19 29 36.6 +1.0
TAPN  Taplejung        31.52  84 eP    P      19 29 35.5 -0.8
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      comp=Z,6.9nm,0.5s
KOVH  Kovagotottos     31.55 312 eP    P      19 29 36.6 +0.6
NIE   Niedzica         31.60 319 eP    P      19 29 37.4 +0.9
MGRS  Mrkonjic Grad    31.68 309 eP    P      19 29 38.5 +1.3
NACGM Naroch           31.68 332 i P   P      19 29 42.0 +5.0
CSKK  Cskako           31.93 315 eP    P      19 29 41.7 +2.4
SGRT  San Giovanni R   31.95 303  P    P      19 29 39.8 +0.1
LANS  Liptovska Anna   31.96 318 eP    P      19 29 41.6 +2.0
LANS                              pmax pmax
      comp=Z,20nm,0.8s
LANS  Liptovska Anna   31.96 318 eP    P      19 29 41.6 +2.0
VYHS  Vyhne            32.04 317 eP    P      19 29 41.8 +1.5
VYHS  Vyhne            32.04 317 eP    P      19 29 41.8 +1.5
SRO   Srobarova        32.08 315 eP    P      19 29 43.0 +2.4
SRO   Srobarova        32.08 315 eP    P      19 29 43.0 +2.4
WMQ   Urumqi           32.13  53 eP    P      19 29 41.8 +0.5
WMQ                               pP   pP     19 29 48.1 -0.3
WMQ                               sP   sP     19 29 57.8 +6.4
WMQ                               pmax pmax
      comp=Z,20nm,0.9s
WMQ                               pmax pmax
      comp=Z,280nm,3.9s
WMQ                               LR   LR
      comp=Z,450nm,14.3s
WMQ                               LR   LR
      comp=Z,800nm,16.1s
WMQ                               LR   LR
      comp=Z,530nm,20.3s
OJC   Ojcow            32.28 320 eP    P      19 29 42.8 +0.4
OJC   Ojcow            32.28 320  P    P      19 29 42.3 -0.1
OJC                               pmax pmax
      comp=Z,23nm,0.8s
OJC   Ojcow            32.28 320  P    P      19 29 42.3 -0.1
OJC                               IAmb IAmb   19 29 44.7
      comp=Z,23nm,0.8s
MPLH  Magyarpolny      32.31 314 eP    P      19 29 44.2 +1.5
ISAL  Salakas          32.42 333 eP    P      19 29 44.8 +1.3
EGYH  Egyhazaskeszo    32.53 314 eP    P      19 29 46.1 +1.5
SUW   Suwalki          32.66 328 eP    P      19 29 45.9 +0.2
SUW   Suwalki          32.66 328 eP    P      19 29 46.0 +0.4
SUW   Suwalki          32.66 328  P    P      19 29 45.4 -0.2
SUW                               pmax pmax
      comp=Z,53nm,0.9s
SUW   Suwalki          32.66 328  P    P      19 29 45.4 -0.2
PAOL  Paolisi          32.69 302  P    P      19 29 46.0 -0.1
KOGS  Kog              32.88 312 i P   P      19 29 49.4 +1.8
JAVC  Velka Javorina   32.90 317 eP    P      19 29 50.1 +2.2
SMOL  Smolenice        32.90 316 eP    P      19 29 49.2 +1.4
SMOL  Smolenice        32.90 316 eP    P      19 29 49.2 +1.4
MODS  Modra-Piesok     32.94 316 eP    P      19 29 48.9 +0.7
MODS                              pmax pmax
      comp=Z,19nm,1.3s
MODS  Modra-Piesok     32.94 316 eP    P      19 29 48.9 +0.7
ZST   Bratislava       32.97 315 eP    P      19 29 49.9 +1.4
ZST   Bratislava       32.97 315 eP    P      19 29 49.9 +1.4
PRGR  Permogore        33.00 354 eP    P      19 29 48.3 -0.2
PRGR                              pmax pmax
      comp=Z,19nm,0.6s
KMBO  Kilima Mbogo     33.01 208  P    P      19 29 52.1 +2.8
      comp=Z,3.0nm,0.7s,baz=17,slow=12,SNR=8.0
KMBO                              ScP  ScP    19 36 16.2 +0.3
      comp=Z,0.6nm,0.3s,baz=52,slow=11,SNR=3.9
KMBO                              LR   LR     19 44 28.3
      comp=Z,2µm,18.2s,baz=78,slow=38
KMBO  Kilima Mbogo     33.01 208  P    P      19 29 50.2 +0.9
KLMR  Klimovskoe       33.02 349 eP    P      19 29 48.0 -0.6
KLMR                              pmax pmax
      comp=Z,44nm,0.7s
KLMR  Klimovskoe       33.02 349 eP    P      19 29 48.1 -0.6
KLMR                              AMP         19 29 49.5
      comp=Z,44nm,0.7s
OKC   Ostrava-Krasne   33.04 319 eP    P      19 29 50.4 +1.4
OKC   Ostrava-Krasne   33.04 319 eP    P      19 29 50.4 +1.4
SOP   Sopron           33.12 314 eP    P      19 29 50.8 +1.1
CRES  Cresnjev         33.20 311 eP    P      19 29 51.0 +0.5
BOJS  Bojanci          33.24 310 i P   P      19 29 52.4 +1.6
PABE  Paberze          33.27 331 eP    P      19 29 51.9 +1.0
PABE  Paberze          33.27 331  P    P      19 29 51.1 +0.2
MORC  Moravsky Berou   33.36 318 ⇓P    P      19 29 52.8 +0.9
MORC  Moravsky Berou   33.36 318 eP    P      19 29 52.5 +0.6
MORC  Moravsky Berou   33.36 318  P    P      19 29 52.8 +0.9
MORC                              pmax pmax
      comp=Z,19nm,0.8s
MORC  Moravsky Berou   33.36 318  P    P      19 29 52.8 +0.9
MORC                              IAmb IAmb   19 29 54.1
      comp=Z,19nm,0.8s
ARSA  Arzberg          33.62 313 eP    P      19 29 55.4 +1.2
      comp=Z,9.5nm,0.8s
ARSA  Arzberg          33.62 313 eP    P      19 29 55.6 +1.5
      baz=108,slow=9.5
CONA  Conrad Observa   33.64 314 i P   P      19 29 55.7 +1.3
      comp=Z,16nm,1.0s,SNR=6.2
VRAC  Vranov           33.73 317 ⇓P    P      19 29 56.6 +1.6
VRAC  Vranov           33.73 317 eP    P      19 29 56.6 +1.6
KRUC  Moravsky         33.75 317 eP    P      19 29 56.5 +1.3
SOKA  Soboth           33.75 312 i P   P      19 29 56.9 +1.5
      comp=Z,7.3nm,0.8s,SNR=6.7
KIBK  Kibwezi          33.81 206  P    P      19 29 57.3 +1.2
KIBK                              IAmb IAmb   19 29 59.5
      comp=Z,10nm,0.8s
CEY   Cerknica         33.86 310 eP    P      19 29 57.4 +1.1
LJU   Ljubljana        33.89 311 i P   P      19 29 58.5 +2.0
LJU   Ljubljana        33.89 311 eP    P      19 29 58.4 +2.0
KRLC  Kraliky          33.94 318 eP    P      19 29 57.8 +0.9
KRLC  Kraliky          33.94 318 eP    P      19 29 57.8 +0.9
DGZ   Jazzator, Alta   33.98  42⇓iP    P      19 29 58.3 +0.9
OBKA  Obir             34.01 311 i P   P      19 29 59.5 +1.8
      comp=Z,10nm,0.9s,SNR=5.7
OBKA  Obir             34.01 311 eP    P      19 29 59.3 +1.7
      baz=108,slow=9.5
NRCA  Norcia           34.08 305  P    P      19 29 58.8 +0.5
NRCA                              IAmb IAmb   19 30 01.3
      comp=Z,20nm,0.7s
LSA   Lhasa            34.09  79  P    P      19 29 59.4 +0.4
LSA                               pmax pmax
      comp=Z,18nm,0.7s
LSA   Lhasa            34.09  79  P    P      19 29 58.4 -0.6
LSA                               pmax pmax
      comp=Z,6.0nm,0.8s
LSA   Lhasa            34.09  79  P    P      19 29 58.4 -0.6
DPC   Dobruska-Polom   34.32 319 eP    P      19 30 00.9 +0.7
DPC   Dobruska-Polom   34.32 319 eP    P      19 30 00.9 +0.7
OSTC  Ostas            34.47 319 eP    P      19 30 02.6 +1.1
KSP   Ksiaz            34.55 319 eP    P      19 30 03.1 +1.0
UPC   Upice            34.57 319 eP    P      19 30 03.3 +1.0
UPC   Upice            34.57 319 eP    P      19 30 03.3 +1.0
CHVC  Chvalec          34.58 319 eP    P      19 30 03.5 +1.1
MURB  Monte Urbino     34.59 305  P    P      19 30 02.8 +0.1
ZAA0  Zalesovo Array   34.60  34  P    P      19 30 01.2 -1.3
ZALV  Zalesovo Beam    34.60  34  P    P      19 30 02.6 +0.1
      comp=Z,11nm,0.4s,baz=243,slow=9.0,SNR=104
ZALV                              ScP  ScP    19 36 18.9 -1.6
      comp=Z,3.3nm,0.8s,baz=237,slow=4.9,SNR=7.3
ZALV                              LR   LR     19 45 44.0
      comp=Z,480nm,18.1s,baz=234,slow=39
ZALV  Zalesovo Beam    34.60  34  P    P      19 30 01.2 -1.3
ZALV                              ScP  ScP    19 36 18.4 -2.1
MOA   Molln            34.62 314 i P   P      19 30 03.8 +0.9
      comp=Z,16nm,0.7s,SNR=8.3
MOA   Molln            34.62 314 eP    P      19 30 03.6 +0.8
      baz=108,slow=9.5
PRED  Cave del Predi   34.64 311  P    P      19 30 01.3 -1.8
PRED                              IAmb IAmb   19 30 09.5
      comp=Z,11nm,0.8s
MYKA  Terra Mystica    34.65 311 eP    P      19 30 04.4 +1.3
      comp=Z,10.0nm,0.9s
KBA   Koelnbreinsper   34.97 312 eP    P      19 30 07.4 +1.4
      comp=Z,38nm,0.8s
ZOU   Zoufplan         35.06 311  P    P      19 30 05.3 -1.6
ZOU                               IAmb IAmb   19 30 09.3
      comp=Z,20nm,1.4s
STAL  STALIGIAL        35.16 310  P    P      19 30 06.5 -1.0
STAL                              IAmb IAmb   19 30 16.6
      comp=Z,16nm,0.8s
PRU   Pruhonice        35.22 317 eP    P      19 30 09.1 +1.2
PRU   Pruhonice        35.22 317 eP    P      19 30 09.1 +1.2
GEC2  GERESS Array S   35.31 315 eP    P      19 30 09.6 +0.7
      comp=Z,7.3nm,0.8s,baz=108,slow=9.5
GEC2  GERESS Array S   35.31 315  P    P      19 30 07.8 -1.1
GERES GERESS Array B   35.31 315  P    P      19 30 09.3 +0.4
      comp=Z,3.4nm,0.6s,baz=104,slow=8.3,SNR=23
GERES                             ScP  ScP    19 36 21.1 -2.3
      comp=Z,0.6nm,0.7s,baz=147,slow=5.7,SNR=3.8
GERES                             LR   LR     19 46 39.0
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      comp=Z,279nm,18.7s,baz=96,slow=40
GERES GERESS Array B   35.31 315  P    P      19 30 07.8 -1.1
CIMO  Cimolais         35.35 310  P    P      19 30 08.7 -0.4
PVCC  Panska Ves       35.42 318 eP    P      19 30 10.7 +1.1
PVCC  Panska Ves       35.42 318 eP    P      19 30 10.7 +1.1
PVCC                              smax smax
      comp=N,7.0nm,0.3s
ABTA  Abfaltersbach    35.42 311 eP    P      19 30 11.1 +1.2
      comp=N,13nm,0.7s,SNR=8.8
KHC   Kasperske Hory   35.49 315 eP    P      19 30 11.3 +1.0
KHC                              epP   pP     19 30 16.0 -1.5
KHC   Kasperske Hory   35.49 315 eP    P      19 30 11.3 +1.0
KHC                              e            19 30 16.0
KHC   Kasperske Hory   35.49 315  P    P      19 30 09.6 -0.7
KHC                               IAmb IAmb   19 30 12.4
      comp=Z,17nm,0.8s
RJOB  Jochberg         35.53 313 eP    P      19 30 11.4 +0.7
      comp=Z,21nm,0.7s,baz=108,slow=9.5
TEOL  Teolo            35.64 309  P    P      19 30 10.4 -1.2
TEOL                              IAmb IAmb   19 30 54.8
      comp=Z,16nm,0.8s
MBAR  Mbarara          35.67 218  P    P      19 30 11.9 -0.4
MBAR                              pmax pmax
      comp=Z,11nm,0.9s
MBAR  Mbarara          35.67 218  P    P      19 30 11.9 -0.4
MBAR                              IAmb IAmb   19 30 29.5
      comp=Z,11nm,0.8s
CASP  Castiglione de   35.70 304  P    P      19 30 12.9 +0.8
CASP                              IAmb IAmb   19 30 35.6
      comp=Z,13nm,1.0s
CTI   Castel Tesino    35.81 310  P    P      19 30 12.1 -1.2
CTI                               pmax pmax
      comp=Z,18nm,0.8s
CTI   Castel Tesino    35.81 310  P    P      19 30 12.1 -1.2
CTI                               IAmb IAmb   19 30 15.4
      comp=Z,18nm,0.8s
ZCCA  Zocca            35.90 307  P    P      19 30 14.3 +0.4
BRG   Berggiesshubel   35.92 318 eP    P      19 30 14.6 +0.7
      comp=Z,14nm,0.7s,baz=108,slow=9.5
BRG   Berggiesshubel   35.92 318 i P   P      19 30 14.6 +0.7
BRG                               Amp         19 30 16.7
      comp=Z,14nm,0.7s
WET   Wettzell         35.93 315 eP    P      19 30 14.4 +0.4
      comp=Z,11nm,1.2s,baz=108,slow=9.5
WTTA  Wattenberg       36.14 312 eP    P      19 30 16.6 +0.4
      comp=Z,43nm,0.7s,SNR=14
WTTA                             eS    S      19 35 52.9 -1.7
      comp=Z,19nm,1.1s
WTTA  Wattenberg       36.14 312 eP    P      19 30 16.7 +0.6
      baz=108,slow=9.5
WATA  Walderalm        36.20 312 i P   P      19 30 17.0 +0.4
      comp=Z,29nm,0.7s,SNR=14
WATA                             eS    S      19 35 54.8 -0.7
      comp=Z,13nm,1.5s
VLC   Villacollemand   36.28 306  P    P      19 30 17.0 -0.1
VLC                               IAmb IAmb   19 30 22.8
      comp=Z,16nm,0.7s
KEST  Kesra            36.41 292  P    P      19 30 20.9 +2.4
      comp=Z,11nm,0.7s,baz=300,slow=1.8,SNR=15
KEST                              ScP  ScP    19 36 26.2 -1.4
      comp=Z,5.6nm,0.9s,baz=318,slow=2.6,SNR=5.7
KEST  Kesra            36.41 292  P    P      19 30 17.7 -0.8
SQTA  Sankt Quirin     36.41 311 i P   P      19 30 18.7 +0.4
      comp=Z,36nm,0.5s,SNR=18
SQTA                             eS    S      19 35 56.4 -2.2
      comp=Z,19nm,1.2s
VSL   Villasalto       36.45 298  P    P      19 30 18.3 -0.3
VSL                               IAmb IAmb   19 30 22.4
      comp=Z,29nm,0.9s
SALO  Salr             36.48 309  P    P      19 30 16.4 -2.4
MOTA  Moosalm          36.51 312 i P   P      19 30 19.8 +0.5
      comp=Z,20nm,0.6s,SNR=12
MOTA                             eS    S      19 35 58.6 -1.6
      comp=Z,10nm,0.9s
ROTZ  Rotzenmuhle      36.55 316 eP    P      19 30 20.4 +1.0
      comp=Z,3.7nm,0.8s,baz=108,slow=9.5
NKC   Novy Kostel      36.56 317 eP    P      19 30 20.5 +1.0
NKC   Novy Kostel      36.56 317 eP    P      19 30 20.5 +1.0
WERN  Wernitzgruen     36.63 317 eP    P      19 30 21.3 +1.3
      comp=Z,12nm,1.1s,baz=108,slow=9.5
CLL   Collm            36.63 319  P    P      19 30 19.6 -0.4
CLL                               pmax pmax
      comp=Z,24nm,1.0s
CLL   Collm            36.63 319 i P   P      19 30 21.0 +1.0
      comp=Z,25nm,1.0s
CLL                              e(pP) pP     19 30 25.0 -2.2
CLL                              ePP   PP     19 31 45.0 +1.5
CLL                               LmV         19 49 00.0
      comp=Z,300nm,18.8s
CLL   Collm            36.63 319 eP    P      19 30 20.9 +1.0
      comp=Z,25nm,1.0s,baz=108,slow=9.5
CLL   Collm            36.63 319  P    P      19 30 19.6 -0.4
CLL                               IAmb IAmb   19 30 22.1
      comp=Z,24nm,1.0s
RUE   Ruedersdorf      36.66 321 eP    P      19 30 21.1 +0.9
      comp=Z,32nm,0.6s,baz=108,slow=9.5
FETA  Feichten         36.67 311 i P   P      19 30 21.6 +0.9
      comp=Z,36nm,0.8s,SNR=14
FETA                             eS    S      19 36 01.6 -1.2
      comp=Z,14nm,1.8s
WERD  Werda            36.73 317 eP    P      19 30 21.6 +0.7
      comp=Z,16nm,1.1s,baz=108,slow=9.5
RETA  Reutte           36.77 312 i P   P      19 30 21.8 +0.4
      comp=Z,18nm,0.8s,SNR=6.4
RETA                             eS    S      19 36 03.3 -0.8
      comp=Z,22nm,1.2s
FINES FINESS Array B   36.79 340  P    P      19 30 21.6 +0.4
      comp=Z,22nm,0.7s,baz=142,slow=10,SNR=76
FINES                             LR   LR     19 47 16.9
      comp=Z,509nm,18.6s,baz=122,slow=39
PLN   Plauen           36.83 317 eP    P      19 30 22.5 +0.8
      comp=Z,4.9nm,0.9s,baz=108,slow=9.5
GRA1  Grafenberg Arr   37.13 315  P    P      19 30 22.8 -1.5
GRA1                              IAmb IAmb   19 30 26.3
      comp=Z,27nm,0.9s
GRF   Grafenberg Arr   37.13 315  P    P      19 30 22.8 -1.5
GRF                               pmax pmax
      comp=Z,27nm,0.9s
GRF   Grafenberg Arr   37.13 315 eP    P      19 30 25.2 +0.9
      comp=Z,44nm,1.3s,baz=108,slow=9.5
GRFO  Grafenberg       37.13 315  P    P      19 30 22.3 -2.0
GRFO                              pmax pmax
      comp=Z,24nm,0.9s
GRFO  Grafenberg       37.13 315  P    P      19 30 22.3 -2.0
GRFO                              IAmb IAmb   19 30 26.3
      comp=Z,24nm,0.9s
MOX   Moxa             37.21 317 eP    P      19 30 26.3 +1.3
      comp=Z,24nm,1.5s,baz=108,slow=9.5
UBR   Ueberruh         37.25 312 eP    P      19 30 25.8 +0.3
      comp=Z,38nm,1.1s,baz=108,slow=9.5
DAVA  Damuels          37.30 311 i P   P      19 30 26.2 +0.2
      comp=Z,49nm,0.6s,SNR=23
DAVA                             eS    S      19 36 10.7 -1.6
      comp=Z,11nm,1.4s
NEUB  Neuenburg        37.31 318 eP    P      19 30 26.4 +0.6
      comp=Z,23nm,0.8s,baz=108,slow=9.5
FLTG  Flechtingen      38.03 319 eP    P      19 30 33.1 +1.2
      comp=Z,34nm,1.0s,baz=108,slow=9.5
UBBA  Unterbreizbach   38.23 317 eP    P      19 30 35.0 +1.5
      comp=Z,65nm,1.9s,baz=108,slow=9.5
ASSE  Asse, Remlinge   38.28 319 eP    P      19 30 35.2 +1.3
      comp=Z,9.3nm,0.8s,baz=108,slow=9.5
CLZ   Clausthal        38.36 318 eP    P      19 30 36.1 +1.4
      comp=Z,57nm,0.8s,baz=108,slow=9.5
GTTG  Gottingen        38.49 318 eP    P      19 30 37.3 +1.6
      comp=Z,49nm,1.4s,baz=108,slow=9.5
BFO   Black Forest     38.57 312  P    P      19 30 35.3 -1.2
BFO                               pmax pmax
      comp=Z,31nm,1.7s
BFO   Black Forest     38.57 312  P    P      19 30 35.3 -1.2
BFO                               IAmb IAmb   19 30 57.6
      comp=Z,31nm,1.7s
NRDL  Niedersach Rie   38.74 319 eP    P      19 30 39.8 +2.1
      comp=Z,56nm,0.9s,baz=108,slow=9.5
SENIN Lac Senin/Sane   38.83 309  P    P      19 30 37.4 -1.5
SENIN                             IAmb IAmb   19 30 40.8
      comp=Z,13nm,0.7s
BNI   Bardonecchia     39.04 307  P    P      19 30 39.6 -1.0
BNI                               pmax pmax
      comp=Z,25nm,0.7s
BNI   Bardonecchia     39.04 307  P    P      19 30 39.6 -1.0
BNI                               IAmb IAmb   19 30 43.4
      comp=Z,25nm,0.7s
RETH  Rethem/Aller,    39.25 319 eP    P      19 30 44.1 +2.1
      comp=Z,26nm,0.9s,baz=108,slow=9.5
ECH   Echery           39.31 312  P    P      19 30 41.7 -0.9
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ECH   Echery           39.31 312  P        P        19 30 41.7 -0.9
AHRW  Bad Neuenahr-A   39.93 315 eP        P        19 30 50.2 +2.5
      comp=Z,21nm,0.9s,baz=108,slow=9.5
IBBN  Ibbenburen       40.03 318 eP        P        19 30 50.6 +2.0
      comp=Z,37nm,0.7s,baz=108,slow=9.5
BUG   Bochum--Univer   40.06 317 eP        P        19 30 50.3 +1.5
      comp=Z,16nm,1.1s,baz=108,slow=9.5
APA   Apatity          40.26 349⇑iP        P        19 30 50.6 +0.3
WLF   Walferdange      40.28 314 dP        P        19 30 51.1 +0.4
      comp=Z,10nm,0.9s
WLF   Walferdange      40.28 314 eP        P        19 30 51.3 +0.5
      comp=Z,20nm,1.0s,baz=108,slow=9.5
LVZ   Lovozero         40.36 350ceP        P        19 30 51.6 +0.4
LVZ                               pmax     pmax
      comp=Z,69nm,1.7s
BTNL  Ternell          40.52 315 dpP       pP       19 31 02.2 +2.2
GTA   Gaotai           40.56  62 ⇑P        P        19 30 54.5 +1.1
GTA                               pP       pP       19 31 01.0 +0.3
GTA                               ScP      ScP      19 36 43.4 -0.1
GTA                               S        S        19 37 03.5 +1.9
GTA                               pmax     pmax
      comp=Z,64nm,0.8s
GTA                               pmax     pmax
      comp=Z,140nm,4.9s
GTA                               LR       LR
      comp=Z,250nm,17.5s
GTA                               LR       LR
      comp=Z,440nm,16.7s
GTA                               LR       LR
      comp=Z,380nm,18.2s
SSB   Saint Sauveur    40.57 307  P        P        19 30 51.8 -1.4
SSB                               pmax     pmax
      comp=Z,8.0nm,0.9s
SSB   Saint Sauveur    40.57 307  P        P        19 30 51.8 -1.4
RCHB  Rochefort        40.98 314 dP        P        19 30 56.9 +0.4
      comp=Z,7.1nm,0.9s
BCLA  Clavier          40.99 315 dP        P        19 30 57.5 +0.9
BGES  Gesves           41.12 315 dP        P        19 30 58.9 +1.2
DOU   Dourbes          41.36 314 dP        P        19 31 00.7 +1.1
OSL   Oslo             41.62 330 eP        P        19 31 01.8 +0.3
NC602 NORSAR Array S   41.67 331 eP        P        19 31 02.5 +0.5
NC405 NORSAR Array S   41.80 332  P        P        19 31 01.7 -1.3
HOMB  Homborsund       41.86 327 eP        P        19 31 03.8 +0.3
NB2   NORSAR Subarra   41.97 332  P        P        19 31 03.6 -0.9
      comp=Z,4.3nm,0.5s,baz=122,slow=8.6
NB2   NORSAR Subarra   41.97 332  P        P        19 31 03.6 -0.9
      baz=122,slow=8.6
NOA   NORSAR Array B   41.97 332  P        P        19 31 03.9 -0.6
      comp=Z,6.3nm,0.6s,baz=122,slow=8.3,SNR=24
NOA                               ScP      ScP      19 36 46.3 -2.1
      comp=Z,0.6nm,0.7s,baz=111,slow=3.9,SNR=3.4
NOA                               LR       LR       19 50 03.7
      comp=Z,342nm,20.9s,baz=125,slow=38
KONO  Kongsberg        41.98 329 eP        P        19 31 04.7 +0.2
MOY   Mondy            42.77  44 eP        P        19 31 12.8 +1.6
MOY                               pmax     pmax
      comp=Z,38nm,1.8s
SKAR  Skarslia         43.03 330 eP        P        19 31 13.7 +0.6
BLS5  Blasjo           43.31 328 eP        P        19 31 16.1 +0.7
DOMB  Dombas           43.37 332 eP        P        19 31 17.0 +1.2
ARA0  ARCESS Array S   43.42 347 eP        P        19 31 16.7 +0.6
ARCES ARCESS Array B   43.42 347  P        P        19 31 16.8 +0.7
      comp=Z,7.9nm,0.7s,baz=147,slow=7.1,SNR=15
ARCES                             LR       LR       19 51 31.7
      comp=Z,183nm,18.8s,baz=145,slow=39
ODD1  Odda             43.44 329 eP        P        19 31 16.8 +0.4
KTK1  Kautokeino       43.47 345 eP        P        19 31 17.2 +0.6
NSS   Namsos           43.60 336 eP        P        19 31 18.0 +0.4
MOR8  Moi Rana         43.77 339 eP        P        19 31 19.1 +0.1
CHTO  Chiang Mai       43.91  92  P        P        19 31 20.1 -0.6
CHTO                              pmax     pmax
      comp=Z,17nm,0.9s
CHTO  Chiang Mai       43.91  92  P        P        19 31 20.1 -0.6
CHTO                              IAmb     IAmb     19 31 22.4
      comp=Z,16nm,0.9s
LZH   Lanzhou          43.93  67 ⇓P        P        19 31 21.7 +0.8
LZH                               pP       pP       19 31 28.7 +0.5
LZH                               sP       sP       19 31 33.3 +2.1
LZH                               pmax     pmax
      comp=Z,46nm,1.3s
LZH                               LR       LR
      comp=Z,490nm,13.5s
LZH                               LR       LR
      comp=Z,500nm,14.1s
LZH                               LR       LR
      comp=Z,440nm,15.7s
ZAK   Zakamensk        43.94  46 eP        P        19 31 19.1 -1.6
ZAK                               pmax     pmax
      comp=Z,10.0nm,1.0s
CM31  Chiang Mai Arr   44.04  93  P        P        19 31 20.1 -1.7
CMAR  Chiang Mai Arr   44.04  93  P        P        19 31 21.4 -0.4
      comp=Z,3.9nm,0.7s,baz=287,slow=8.4,SNR=39
CMAR                              LR       LR       19 52 58.7
      comp=Z,115nm,18.3s,baz=317,slow=40
CMAR  Chiang Mai Arr   44.04  93  P        P        19 31 20.5 -1.3
HYA   Hoyanger         44.17 330 eP        P        19 31 22.9 +0.7
BER   Bergen           44.23 329 eP        P        19 31 23.6 +1.0
MOL   Molde            44.24 332 eP        P        19 31 23.2 +0.5
FAUS  Fauske           44.31 341 eP        P        19 31 24.1 +0.9
STOK  Stokkvaagen      44.33 339 eP        P        19 31 23.7 +0.4
ASK   Askoy            44.33 329 eP        P        19 31 24.2 +0.7
KONS  Konsvik          44.40 339 eP        P        19 31 24.3 +0.4
JETT  Jettan, Norway   44.53 345 eP        P        19 31 26.0 +0.9
CD2   Chengdu          44.63  74 eP        P        19 31 24.6 -1.8
CD2                               pmax     pmax
      comp=Z,10.0nm,0.5s
STEI  Steigen          44.69 341 eP        P        19 31 26.4 +0.1
HAMF  Hammerfest       44.69 347 eP        P        19 31 26.8 +0.5
FOO   Floro            44.86 330 eP        P        19 31 28.0 +0.3
TRO   Tromso           44.94 344 eP        P        19 31 28.6 +0.4
KMI   Kunming          45.14  82 ⇓P        P        19 31 31.0 +0.2
KMI                               pP       pP       19 31 37.3 -0.8
KMI                               sP       sP       19 31 42.9 +1.9
KMI                               pmax     pmax
      comp=Z,9.0nm,1.0s
LOF   Lofoten          45.30 341 eP        P        19 31 31.6 +0.5
NRIK  Noril'sk         45.37  17  P        P        19 31 33.3 +1.7
      comp=Z,16nm,0.9s,baz=219,slow=5.8,SNR=23
NRIK                              LR       LR       19 54 08.6
      comp=Z,763nm,18.3s,baz=237,slow=41
NRIK  Noril'sk         45.37  17ceP        P        19 31 32.9 +1.3
NRIK                              pmax     pmax
      comp=Z,15nm,0.9s
NRIK  Noril'sk         45.37  17  P        P        19 31 30.8 -0.9
NRIK                              IAmb     IAmb     19 31 34.4
      comp=Z,21nm,0.9s
FIGM  Figuig           45.56 288  P        P        19 31 36.0 +2.1
SONM  Songino Array    45.67  50  P        P        19 31 35.4 +0.8
      comp=Z,8.4nm,0.9s,baz=262,slow=9.7,SNR=46
SONM                              ScP      ScP      19 37 03.1 -0.9
      comp=Z,0.8nm,0.9s,baz=264,slow=3.0,SNR=3.6
SONM                              LR       LR       19 55 22.9
      comp=Z,95nm,19.5s,baz=254,slow=42
TDRA  Tendrara         46.04 289  P        P        19 31 42.1 +4.4
TAF   Taforalt         46.07 292  P        P        19 31 42.1 +4.3
ULN   Ulaanbaatar      46.12  50ceP        P        19 31 38.4 +0.3
ULN                               pmax     pmax
      comp=Z,13nm,0.9s
ULN   Ulaanbaatar      46.12  50  P        P        19 31 36.2 -1.9
ULN                               IAmb     IAmb     19 31 40.0
      comp=Z,15nm,0.9s
ESDC  Sonseca Array    46.75 299  P        P        19 31 44.4 +1.4
      comp=Z,0.9nm,0.5s,baz=72,slow=7.6,SNR=11
ESDC                              ScP      ScP      19 37 07.5 -1.0
      comp=Z,0.6nm,0.9s,baz=52,slow=4.2,SNR=4.4
ESDC                              LR       LR       19 55 38.5
      comp=Z,76nm,18.5s,baz=340,slow=42
ESDC  Sonseca Array    46.75 299  P        P        19 31 42.9 -0.2
GYA   Guiyang          48.16  79 ⇓P        P        19 31 56.0 +1.7
GYA                               pmax     pmax
      comp=Z,8.0nm,1.5s
MDT   Midelt           48.21 290  P        P        19 31 57.1 +2.5
BTO   Baotou           48.34  60 eP        P        19 31 55.3 -0.2
BTO                               S        S        19 38 54.9 +0.4
BTO                               LR       LR
      comp=Z,1µm,17.1s
BTO                               LR       LR
      comp=Z,2µm,19.2s
XAN   Xi'an            48.34  69  P        P        19 31 54.9 -0.6
XAN                               pP       sP       19 32 04.6 -1.2
XAN                               sP       pP       19 32 09.1 +6.2
XAN                               PP       PP       19 33 48.2 +0.2
XAN                               S        S        19 38 54.1 -0.5
XAN                               pmax     pmax
      comp=Z,23nm,1.0s
XAN                               pmax     pmax
      comp=Z,160nm,4.1s
XAN                               LR       LR
      comp=Z,390nm,15.8s
XAN                               LR       LR
      comp=Z,400nm,16.0s
XAN                               LR       LR
      comp=Z,490nm,16.5s
PBRG  Braganca         48.69 302 eP        P        19 31 59.3 +1.2
      comp=Z,30nm,1.7s
MVO   Moncorvo         48.96 301 eP        P        19 32 01.8 +1.6
      comp=Z,47nm,2.0s
TORD  Torodi Ar. Bea   49.09 262  P        P        19 32 02.3 +0.9
      comp=Z,13nm,0.6s,baz=57,slow=7.9,SNR=112
TORD                              ScP      ScP      19 37 18.8 +0.1
      comp=Z,2.0nm,1.0s,baz=40,slow=1.8,SNR=5.5
TORD                              LR       LR       19 54 55.9
      comp=Z,330nm,18.5s,baz=20,slow=39
TORD  Torodi Ar. Bea   49.09 262  P        P        19 32 01.9 +0.5
TORD                                       ScP      19 37 19.4 +0.8
PMRV  Marv??o          49.41 299 eP        P        19 32 04.6 +1.0
      comp=Z,18nm,1.7s
PCBR  Castelo Branco   49.43 299 eP        P        19 32 05.7 +2.0
      comp=Z,29nm,1.6s
TZRR  Tazzarine        49.44 287  P        P        19 32 07.0 +3.0
PVRL  Vila Real        49.46 301 eP        P        19 32 06.3 +2.3
      comp=Z,36nm,1.8s
HHC   Hu-ho-hao-te     49.48  59⇓iP        P        19 32 05.9 +1.6
HHC                               pmax     pmax
      comp=Z,26nm,1.2s
HHC                               pmax     pmax
      comp=Z,85nm,5.4s
POLO  Lamas de Olo     49.51 301 eP        P        19 32 06.4 +2.0
      comp=Z,19nm,1.6s
LSZ   Lusaka           49.56 211  P        P        19 32 06.6 +1.6
LSZ                               pmax     pmax
      comp=Z,7.0nm,0.9s
LSZ   Lusaka           49.56 211  P        P        19 32 06.6 +1.6
ENH   Enshi            49.59  73  P        P        19 32 03.8 -1.4
ENH                               IAmb     IAmb     19 32 28.8
      comp=Z,16nm,1.1s
ZGR   Zagora           49.64 286  P        P        19 32 08.0 +2.5
PVIS  Viseu            49.65 300 eP        P        19 32 07.7 +2.2
      comp=Z,46nm,1.5s
PGAV  Gavieira, Arco   49.81 302 eP        P        19 32 09.0 +2.3
      comp=Z,43nm,1.3s
PMTG  Montargil        50.10 298 eP        P        19 32 13.0 +4.2
      comp=Z,26nm,1.4s
TIY   Taiyuan          50.55  63 eP        P        19 32 13.8 +1.4
BOD   Bodaibo          51.24  37 eP        P        19 32 17.4 +0.3
BOD                               pmax     pmax
      comp=Z,35nm,1.0s
OUK   Oukaimeden       51.26 288  P        P        19 32 21.0 +2.9
KULM  Kulim            51.67 107  P        P        19 32 21.7 +0.8
SPA0  Spitsbergen Ar   51.86 351 eP        P        19 32 22.7 +1.2
TTIG  Tnine Tigouga,   51.90 288  P        P        19 32 26.0 +3.4
IPM   Ipoh             52.43 108  P        P        19 32 24.6 -2.0
IPM                               IAmb     IAmb     19 32 32.1
      comp=Z,15nm,0.8s
KBS   Kingsbay         53.01 351 eP        P        19 32 30.7 +0.7
BJT   Baijiatuau       53.08  60  P        P        19 32 30.4 -0.6
BJT                               pmax     pmax
      comp=Z,15nm,0.7s
BJT   Baijiatuau       53.08  60  P        P        19 32 30.4 -0.6
BJT                               IAmb     IAmb     19 32 32.7
      comp=Z,15nm,0.7s
BJI   Beijing          53.08  60  P        P        19 32 31.8 +0.8
BJI                               pP       pP       19 32 38.2 -0.3
BJI                               sP       sP       19 32 47.7 +6.3
BJI                               pmax     pmax
      comp=Z,24nm,0.7s
KOWA  Kowa             53.48 267  P        P        19 32 34.9 +0.5
KOWA                              IAmb     IAmb     19 32 48.4
      comp=Z,14nm,0.6s
KOWA  Kowa             53.48 267  P        P        19 32 35.7 +1.3
WHN   Wuhan            53.60  72  P        P        19 32 34.7 -0.3
TIA   Tai'an           54.52  64 ⇑P        P        19 32 41.9 +0.2
TIA                               pmax     pmax
      comp=Z,36nm,0.8s
HIA   Hailar           54.53  48  P        P        19 32 41.4 -0.2
HIA                               pmax     pmax
      comp=Z,10.0nm,1.0s
HIA   Hailar           54.53  48  P        P        19 32 41.4 -0.2
HIA                               IAmb     IAmb     19 32 43.2
      comp=Z,9.8nm,1.0s
PPI   Padang Panjang   54.72 114  P        P        19 32 45.1 +1.8
MYKOM Kota Tinggi      56.26 109  P        P        19 32 56.0 +1.6
NJ2   Nanjing          56.91  69 eP        P        19 32 58.2 -0.7
NJ2                               pmax     pmax
      comp=Z,15nm,0.7s
DBG   Daneborg         57.60 342 i P       P        19 33 04.6 +1.6
DAG   Danmarks Havn    57.65 345 i P       P        19 33 03.0 -0.4
DAG                               IAmb     IAmb     19 33 04.7
      comp=Z,8.3nm,0.6s
DBIC  Dimbokro         57.83 259  P        P        19 33 06.4 +0.8
      comp=Z,17nm,0.7s,baz=58,slow=6.6,SNR=36
DBIC                              LR       LR       19 59 40.6
      comp=Z,289nm,21.7s,baz=71,slow=38
DBIC  Dimbokro         57.83 259  P        P        19 33 06.3 +0.8
KIC   Kosan Boka       57.88 259 eP        P        19 33 06.6 +0.6
      comp=Z,20nm,0.7s
TIC   Toumodi          57.98 259 eP        P        19 33 07.5 +0.8
LIC   Lamto            58.20 259 eP        P        19 33 08.1 -0.1
      comp=Z,50nm,0.7s
TSUM  Tsumeb           58.21 219  P        P        19 33 06.8 -1.4
NOR   Nord             58.49 351 i P       P        19 33 09.3  0.0
NOR                               IAmb     IAmb     19 33 11.2
      comp=Z,12nm,1.0s
TIXI  Tiksi            58.74  21ceP        P        19 33 11.4 +0.3
TIXI  Tiksi            58.74  21  P        P        19 33 10.2 -0.9
TIXI                              IAmb     IAmb     19 33 12.7
      comp=Z,23nm,1.5s
ZEA   Zeya             58.74  42 eP        P        19 33 13.2 +1.8
ZEA                               pmax     pmax
      comp=Z,10.0nm,1.0s
CN2   Changchun        59.21  54 eP        P        19 33 15.2 +0.4
CN2                               pmax     pmax
      comp=Z,10.0nm,0.9s
CN2                               LR       LR
      comp=Z,300nm,19.0s
CN2                               LR       LR
      comp=Z,500nm,19.0s
CN2                               LR       LR
      comp=Z,500nm,22.0s
YAK   Yakutsk          59.21  32ceP        P        19 33 13.9 -0.6
YAK                               pmax     pmax
      comp=Z,35nm,0.7s
YAK   Yakutsk          59.21  32  P        P        19 33 13.3 -1.2
LBTB  Lobatse          59.29 208  P        P        19 33 15.6  0.0
LBTB                              pmax     pmax
      comp=Z,17nm,0.8s
LBTB  Lobatse          59.29 208  P        P        19 33 15.6  0.0
WIN   Windhoek         61.20 217  P        P        19 33 29.3 +0.4
WIN                               pmax     pmax
      comp=Z,9.0nm,1.0s
WIN   Windhoek         61.20 217  P        P        19 33 29.3 +0.4
WIN                               IAmb     IAmb     19 33 49.4
      comp=Z,8.8nm,1.0s
KSM   Kuching          61.84 105  P        P        19 33 34.0 +0.8
KSM   Kuching          61.84 105  P        P        19 33 32.3 -0.9
KSM                               IAmb     IAmb     19 33 39.7
      comp=Z,15nm,0.8s
KLR   Kul'dur          62.30  47ceP        P        19 33 35.2 -0.6
KLR                               pmax     pmax
      comp=Z,7.0nm,1.0s
KS19  Wonju Array Si   62.55  60  P        P        19 33 36.9 -0.7
KSRS  Korea Array      62.60  60  P        P        19 33 37.0 -1.0
      comp=Z,15nm,0.7s,baz=280,slow=6.7,SNR=51
KSRS                              LR       LR       20 03 53.9
      comp=Z,254nm,20.5s,baz=307,slow=39
KSRS  Korea Array      62.60  60  P        P        19 33 37.0 -1.0
BOSA  Boshof           62.63 206  P        P        19 33 39.0 +0.7
      comp=Z,8.6nm,0.7s,baz=34,slow=6.7,SNR=19
BOSA                              LR       LR       20 02 20.6
      comp=Z,269nm,19.5s,baz=24,slow=37
BOSA  Boshof           62.63 206  P        P        19 33 37.7 -0.6
BOSA                              pmax     pmax
      comp=Z,10.0nm,0.9s
BOSA  Boshof           62.63 206  P        P        19 33 37.6 -0.6
BOSA                              IAmb     IAmb     19 33 42.5
      comp=Z,10nm,0.8s
SUMG  Summit           62.82 340  P        P        19 33 39.5 +0.2
SUMG                              pmax     pmax
      comp=Z,12nm,0.8s
SUMG  Summit           62.82 340 i P       P        19 33 40.0 +0.6
SUMG  Summit           62.82 340  P        P        19 33 39.5 +0.2
SUMG                              IAmb     IAmb     19 33 43.4
      comp=Z,12nm,0.8s
SBUM  Sibu             62.96 103  P        P        19 33 41.0 +0.3
SBUM  Sibu             62.96 103  P        P        19 33 38.2 -2.4
STKI  Sintang          63.58 106  P        P        19 33 45.0 +0.2
      comp=Z,10nm,0.8s
USRK  Ussuriysk Ar.    63.70  52  P        P        19 33 44.3 -0.9
      comp=Z,4.7nm,0.7s,baz=266,slow=6.8,SNR=8.7
USRK                              LR       LR       20 04 39.4
      comp=Z,389nm,18.3s,baz=282,slow=39
NEEM  North Greenlan   64.78 346 i P       P        19 33 53.3 +1.2
NEEM                              IAmb     IAmb     19 33 54.4
      comp=Z,76nm,1.7s
SPMM  Sapulut          65.48  99  P        P        19 33 57.0 -0.3
BBKI  Banjar Baru      68.30 107  P        P        19 34 15.1 -0.1
      comp=Z,24nm,0.9s
TULEG Thule            68.75 348 i P       P        19 34 17.5 +0.5
TULEG                             IAmb     IAmb     19 34 20.3
      comp=Z,14nm,0.9s
TULEG Thule            68.75 348  P        P        19 34 16.2 -0.7
TULEG                             IAmb     IAmb     19 34 19.1
      comp=Z,19nm,1.0s
EUNU  Eureka           68.92 353  P        P        19 34 18.1  0.0
EUNU                              IAmb     IAmb     19 34 20.3
      comp=Z,14nm,0.9s
KBKI  Kotabaru         69.33 106  P        P        19 34 22.7 +1.2
      comp=Z,32nm,0.9s
YSS   Yuzh-Sakhalins   70.02  47 eP        P        19 34 24.3 -1.0
YSS                               pmax     pmax
      comp=Z,30nm,1.1s
YSS                               MLR      MLR
      comp=Z,2µm,14.0s
YSS                               MLR      MLR
      comp=E,1µm,15.0s
MPSI  Mapaga           70.62 101  P        P        19 34 30.6 +1.1
      comp=E,40nm,1.1s
MJAR  Matsushiro Arr   70.67  58  P        P        19 34 29.8 +0.2
      comp=E,3.7nm,1.0s,baz=76,slow=26,SNR=4.2
MJAR                              LR       LR       20 08 47.1
      comp=E,108nm,21.1s,baz=295,slow=39
TOLI2 Tolitoli         71.00 100  P        P        19 34 30.9 -0.9
TOLI2                             IAmb     IAmb     19 34 39.3
      comp=Z,24nm,1.3s
BILL  Bilibino         71.96  21 i P       P        19 34 36.8 +0.1
BILL                             i                  19 34 44.9
BILL                             i                  19 34 52.6
BILL                              pmax     pmax
      comp=Z,11nm,1.0s
BILL                              MLR      MLR
      comp=Z,185nm,14.0s
BILL  Bilibino         71.96  21  P        P        19 34 36.9 +0.1
BILL                              IAmb     IAmb     19 34 39.2
      comp=Z,13nm,1.0s
TTSI  Tana Toraja      72.28 104  P        P        19 34 41.1 +1.5
      comp=Z,7.9nm,1.2s
MRSI  Marisa           72.31  99  P        P        19 34 41.5 +1.7
      comp=Z,24nm,1.0s
KAPI  Kappang          73.26 106  P        P        19 34 43.6 -1.8
KAPI                              pmax     pmax
      comp=Z,16nm,1.3s
KAPI  Kappang          73.26 106  P        P        19 34 43.6 -1.8
KAPI                              IAmb     IAmb     19 34 53.5
      comp=Z,16nm,1.2s
BKSI  Bulukumba        73.73 106  P        P        19 34 49.1 +1.0
RES   Resolute Bay     74.42 351  P        P        19 34 51.2 +0.1
RES                               pmax     pmax
      comp=Z,22nm,1.6s
RES   Resolute Bay     74.42 351  P        P        19 34 51.2 +0.1
RES                               IAmb     IAmb     19 34 53.9
      comp=Z,22nm,1.6s
BSSI  Bau Bau, Buton   74.48 106  P        P        19 34 58.5 +6.0
PETK  Petropavlovsk-   76.11  37  LR       LR       20 11 48.4
      comp=Z,246nm,18.8s,baz=302,slow=38
SANI  Sanana           77.08 100  P        P        19 35 09.0 +1.6
LBMI  Labuha           77.69  98  P        P        19 35 17.2 +6.4
BATI  Baumata          79.28 108  P        P        19 35 21.9 +2.3
A36M  Sachs Harbour    79.36 359  P        P        19 35 19.1 +0.1
A36M  Sachs Harbour    79.36 359  P        P        19 35 19.7 +0.7
      baz=2.5
SOEI  Soe              79.55 107  P        P        19 35 28.6 +7.4
SOEI  Soe              79.55 107  P        P        19 35 19.4 -1.7
TOLK  Toolik Lake Re   81.45   8  P        P        19 35 29.7 -0.8
TOLK                              IAmb     IAmb     19 35 33.0
      comp=Z,17nm,1.0s
TOLK  Toolik Lake Re   81.45   8  P        P        19 35 31.0 +0.6
      baz=341
SCHQ  Schefferville    81.48 329  P        P        19 35 31.2 +0.4
      comp=Z,22nm,0.7s,baz=38,slow=6.0,SNR=24
SCHQ                              LR       LR       20 13 52.9
      comp=Z,72nm,19.3s,baz=57,slow=37
SCHQ  Schefferville    81.48 329  P        P        19 35 30.4 -0.4
COLD  Coldfoot         82.71   9  P        P        19 35 37.5 +0.5
COLD                              IAmb     IAmb     19 35 39.4
      comp=Z,9.6nm,1.0s
COLD  Coldfoot         82.71   9  P        P        19 35 37.6 +0.6
      baz=341
INK   Inuvik           83.00   2  P        P        19 35 38.5 +0.1
INK                               pmax     pmax
      comp=Z,6.0nm,0.8s
INK   Inuvik           83.00   2  P        P        19 35 38.5 +0.1
INK   Inuvik           83.00   2  P        P        19 35 39.0 +0.6
      baz=355
BMAR  Burnt Mountain   83.16   6  P        P        19 35 39.5 +0.2
IMAR  Indian Mountai   83.37  10  P        P        19 35 40.4 -0.1
H21K  Melozitna Rive   83.82  10  P        P        19 35 43.5 +0.8
H21K                              IAmb     IAmb     19 35 45.2
      comp=Z,16nm,1.1s
H21K  Melozitna Rive   83.82  10  P        P        19 35 43.6 +0.8
      baz=338
H24K  Noodor Dome      84.33   8  P        P        19 35 46.1 +0.7
H24K                              IAmb     IAmb     19 36 00.2
      comp=Z,8.2nm,1.1s
H24K  Noodor Dome      84.33   8  P        P        19 35 46.4 +1.0
      baz=343
I21K  Tanana           84.39  10  P        P        19 35 46.4 +0.8
I21K                              IAmb     IAmb     19 35 48.1
      comp=Z,16nm,1.1s
I21K  Tanana           84.39  10  P        P        19 35 46.4 +0.8
      baz=339
MLY   Manley           84.72   9  P        P        19 35 48.3 +1.0
MLY                               IAmb     IAmb     19 35 49.6
      comp=Z,9.4nm,0.9s
MLY   Manley           84.72   9  P        P        19 35 48.0 +0.6
      baz=340,SNR=8.8
EPYK  Eagle Plains     84.80   3  P        P        19 35 47.1 -0.6
EPYK  Eagle Plains     84.80   3  P        P        19 35 48.3 +0.5
      baz=352
I23K  Minto, Yukon-K   84.80   9  P        P        19 35 46.9 -0.8
I23K                              IAmb     IAmb     19 36 09.5
      comp=Z,16nm,1.3s
I23K  Minto, Yukon-K   84.80   9  P        P        19 35 48.8 +1.1
      baz=341
J20K  Nowinta River    84.98  11  P        P        19 35 49.4 +0.8
J20K                              IAmb     IAmb     19 35 51.0
      comp=Z,10nm,0.9s
J20K  Nowinta River    84.98  11  P        P        19 35 49.6 +1.0
      baz=337,SNR=8.1
POKR  Poker Plat Res   85.08   8  P        P        19 35 50.3 +1.1
POKR  Poker Plat Res   85.08   8  P        P        19 35 50.2 +1.1
      baz=343
MDM   Murphy Dome      85.13   8  P        P        19 35 49.9 +0.4
TCOL  CIGO, UAF Yank   85.26   8  P        P        19 35 50.5 +0.6
TCOL                              IAmb     IAmb     19 35 51.8
      comp=Z,9.5nm,0.7s
TCOL  CIGO, UAF Yank   85.26   8  P        P        19 35 50.6 +0.6
      baz=343
COLA  College          85.26   8  P        P        19 35 50.3 +0.4
      baz=343
NEA2  Nenana           85.37   9  P        P        19 35 50.5 -0.1
      baz=342
IL31                   85.48   8  P        P        19 35 49.9 -1.2
ILAR  Eielson Array    85.48   8  P        P        19 35 51.0 -0.1
      comp=Z,3.6nm,0.7s,baz=325,slow=4.0,SNR=34
ILAR                              PKKPbc   PKKPbc   19 53 54.5 -1.2
      comp=Z,0.3nm,0.6s,baz=187,slow=2.3,SNR=2.7
ILAR                              LR       LR       20 21 42.9
      comp=Z,92nm,18.4s,baz=316,slow=41
ILAR  Eielson Array    85.48   8  P        P        19 35 50.3 -0.8
ILAR  Eielson Array    85.48   8  P        P        19 35 50.3 -0.8
CHUM  Lake Minchumin   85.56  11  P        P        19 35 51.9 +0.4
      baz=339,SNR=12
BPAW  Bear Paw Mtn.    85.56  10  P        P        19 35 51.8 +0.2
BPAW  Bear Paw Mtn.    85.56  10  P        P        19 35 51.9 +0.3
      baz=340,SNR=5.5
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WRH	Wood River Hil	85.61	9	P	P	19 35 51.8	0.0
I29M	Ogilvie Camp,	85.70	4	P	P	19 35 52.2	0.0
	baz=351						
K20K	Telida	85.75	11	P	P	19 35 53.2	+0.7
TTA	Tatalina	85.80	12	P	P	19 35 53.0	+0.2
	baz=336						
J25K	Salcha River,	85.81	7	P	P	19 35 53.1	+0.2
	baz=345,SNR=11						
HDA	Harding Lake	85.82	8	P	P	19 35 52.4	-0.5
HDA				IAmb	IAmb	19 35 59.7	
	comp=Z,20nm,1.4s						
HDA	Harding Lake	85.82	8	P	P	19 35 52.6	-0.2
	baz=344						
CAST	Castle Rocks	86.03	11	P	P	19 35 54.4	+0.4
CAST	Castle Rocks	86.03	11	P	P	19 35 54.2	+0.3
	baz=339						
KTH	Kantishna Hill	86.09	10	P	P	19 35 53.8	-0.4
MCK	McKinley	86.21	9	P	P	19 35 54.4	-0.4
MCK				pmax	pmax		
	comp=Z,28nm,1.2s						
MCK	McKinley	86.21	9	P	P	19 35 54.4	-0.4
MCK	McKinley	86.21	9	P	P	19 35 54.8	0.0
	baz=342,SNR=8.9						
TRF	Thorofare Moun	86.28	10	P	P	19 35 55.0	-0.3
TRF	Thorofare Moun	86.28	10	P	P	19 35 55.1	-0.3
	baz=341						
KNRA	Kununurra	86.37	110	P	P	19 35 56.0	-0.3
PPLA	Purkeypile	86.50	11	P	P	19 35 56.3	-0.1
PPLA				IAmb	IAmb	19 36 07.8	
	comp=Z,11nm,0.8s						
PPLA	Purkeypile	86.50	11	P	P	19 35 56.4	0.0
	baz=339						
RND	Reindeer	86.53	9	P	P	19 35 55.6	-0.8
RND				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RND	Reindeer	86.53	9	P	P	19 35 55.6	-0.8
RND				IAmb	IAmb	19 35 58.4	
	comp=Z,10nm,1.0s						
SCRK	Sand Creek	86.58	7	P	P	19 35 56.8	+0.1
SCRK	Sand Creek	86.58	7	P	P	19 35 57.6	+0.8
	baz=346,SNR=16						
L20K	Farewell, AK	86.60	12	P	P	19 35 57.6	+0.8
	baz=338						
L19K	White Mountain	86.70	12	P	P	19 35 58.5	+1.2
L19K				IAmb	IAmb	19 36 00.6	
	comp=Z,10nm,0.9s						
RIDG	Independent Ri	86.72	7	P	P	19 35 57.7	+0.4
	baz=345						
DOT	Dot Lake	86.89	7	P	P	19 35 58.6	+0.4
DOT				IAmb	IAmb	19 36 01.4	
	comp=Z,17nm,1.2s						
DAWY	Dawson	86.91	5	P	P	19 35 58.7	+0.4
DAWY				IAmb	IAmb	19 36 01.0	
	comp=Z,16nm,1.1s						
DAWY	Dawson	86.91	5	P	P	19 35 58.6	+0.4
	baz=350,SNR=11						
M19K	Big River Lodg	87.04	12	P	P	19 35 59.5	+0.6
M19K				IAmb	IAmb	19 36 12.1	
	comp=Z,14nm,1.2s						
M19K	Big River Lodg	87.04	12	P	P	19 35 59.2	+0.3
	baz=337						
CUT	Chulitna	87.27	10	P	P	19 35 59.7	-0.2
	baz=341						
WAT6	Susitna Watana	87.47	9	P	P	19 36 01.5	+0.4
	baz=343						
BCAR	Beaver Creek A	87.69	6	P	P	19 36 01.8	-0.3
L27K	Beaver Creek,	87.69	6	P	P	19 36 02.9	+0.8
L27K				IAmb	IAmb	19 36 44.2	
	comp=Z,9.6nm,1.1s						
L27K	Beaver Creek,	87.69	6	P	P	19 36 02.4	+0.4
	baz=348						
M22K	Willow	87.91	10	P	P	19 36 03.4	+0.4
	baz=341						
GHO	Glory Hole Cre	88.08	10	P	P	19 36 02.7	-1.3
WRGLY	Wrigley	88.11	358	P	P	19 36 04.6	+0.7
	baz=4.0						
SML	Sawmill	88.13	9	P	P	19 36 04.3	+0.1
	baz=342						
PMR	Palmer	88.22	10	P	P	19 36 04.0	-0.5
PMR				pmax	pmax		
	comp=Z,19nm,1.3s						
PMR	Palmer	88.22	10	P	P	19 36 04.0	-0.5
PMR	Palmer	88.22	10	P	P	19 36 04.9	+0.5
	baz=342						
YKA	Yellowknife Ar	88.28	354	P	P	19 36 05.4	+0.7
	comp=Z,5.9nm,0.7s,baz=12,slow=5.5,SNR=19						
M27K	Edge Creek, AK	88.38	6	P	P	19 36 05.7	+0.2
	baz=348						
BVCY	Beaver Creek	88.42	6	P	P	19 36 05.6	+0.1
	baz=349						
RC01	Rabbit Creek A	88.60	10	P	P	19 36 06.2	-0.2
	baz=341						
KLU	Klutina	88.76	8	P	P	19 36 06.9	-0.3
	baz=344						
N25K	Chitina, Valde	88.82	8	P	P	19 36 07.2	-0.3
	baz=346						
PWL	Port Wells	89.04	10	P	P	19 36 08.7	+0.2
	baz=342						
M31M	Drury Creek, Y	89.07	3	P	P	19 36 09.2	+0.7
	baz=354						
YUK3	Moose Creek	89.08	6	P	P	19 36 08.5	-0.3
	baz=349						
FARO	Faro, Yukon	89.08	2	P	P	19 36 08.8	+0.1
	baz=355						
YUK4	Talbot Arm	89.66	5	P	P	19 36 11.0	-0.6
	baz=351						
CTG	Chitna Glacier	89.80	6	P	P	19 36 11.5	-0.6
	baz=348						
HYT	Haines Junctio	90.26	5	P	P	19 36 14.0	-0.3
	baz=352						
WHY	Whitehorse	90.58	3	P	P	19 36 15.4	-0.4
	baz=354						
Q23K	Middleton Isla	90.70	9	P	P	19 36 15.8	-0.3
	baz=344						
WRA	Warramunga Arr	93.10	111	P	P	19 36 27.3	-0.6
	comp=Z,1.2nm,0.9s,baz=316,slow=3.9,SNR=11						
WRA				PKKPbc	PKKPbc	19 53 37.6	+1.2
	comp=Z,0.3nm,0.7s,baz=116,slow=2.6,SNR=6.5						
WR0	Warramunga Arr	93.27	111	P	P	19 36 27.1	-1.6
WR0				IAmb	IAmb	19 36 30.0	
	comp=Z,10nm,1.4s						
ASAR	Alice Springs	94.57	114	P	P	19 36 33.5	-1.1
	comp=Z,1.7nm,0.8s,baz=303,slow=4.7,SNR=24						
ULM	Lac du Bonnet	96.18	340	LR	LR	20 21 29.1	
	comp=Z,94nm,18.0s,baz=308,slow=36						
G03D	McMinnville, O	106.11	356	P	PKiKP	19 41 37.2	-0.6
	baz=4.3						
H04D	Lebanon	106.76	356	P	PKiKP	19 41 37.9	-1.1
	baz=4.8						
I04A	Tendick Farm,	107.47	356	P	PKiKP	19 41 40.0	-0.4
	baz=5.2						
L02E	Cave Junction	109.17	356	P	PKiKP	19 41 42.3	-1.3
	baz=4.1						
PTGB	Pitanga	113.14	254	*e*P	Pdif	19 37 56.9	-0.7
TXAR	Lajitas Array	117.57	336	PKP	PKPdf	19 41 59.5	-0.7
	comp=Z,0.2nm,0.6s,baz=64,slow=4.1,SNR=2.3						

PRU 04 19:37:35.5±0.0,**51°.45N×16°.19E,h0^{km},Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHVC	Chvalec	0.87	186	*e*PG	Pg	19 37 51.4	-0.7
CHVC				*e*SG	Sg	19 38 03.2	-0.1
OSTC	Ostas	0.90	179	*e*PG	Pg	19 37 53.0	+0.4
OSTC				*e*SG	Sg	19 38 04.6	+0.4
UPC	Upice	0.95	187	*e*PG	Pg	19 37 53.4	-0.3
UPC				*e*SG	Sg	19 38 05.5	-0.5
DPC	Dobruska-Polom	1.10	176	*e*PG	Pg	19 37 55.5	-1.1
DPC				*e*SG	Sg	19 38 10.2	-0.7
PVCC	Panska Ves	1.38	229	*e*PG	Pg	19 38 00.3	-1.6
PVCC				*e*SG	Sg	19 38 19.6	-0.2
	comp=Z,7.3nm,0.3s						
KRLC	Kraliky	1.43	165	*e*PG	Pn	19 38 01.8	-0.9
KRLC				*e*SG	Sg	19 38 19.7	-1.6

IDC 04 20:01:35.0±4.6,**15°.99S×173°.45W,h0^{km},mb3.7**/3,**mb1 3.8**/4,**mb1mx3.6**/24,**mbtmp3.7**/4,**ML3.3**/1,**MS3.0**/1,**Ms1 3.0**/1,**ms1mx2.7**/29,**Error ellipse: s-maj=218.6km s-min=30.6km az=139.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.63	38	Pn	Pn	20 02 18.8	+0.1
	5.1nm,0.3s,baz=288,slow=3.2,SNR=2.8						
AFI				Sn	Sn	20 02 47.0	-4.4
	40nm,0.3s,baz=134,slow=14,SNR=12						
AFI				LR	LR	20 03 19.5	
	comp=Z,250nm,18.9s,baz=162,slow=40						
STKA	Stephens Creek	43.70	240	P	P	20 09 42.0	0.0
	1.2nm,0.7s,baz=90,slow=8.1,SNR=1.1						
WRA	Warramunga Arr	49.67	257	P	P	20 10 28.9	0.0
	0.2nm,0.5s,baz=92,slow=6.5,SNR=8.2						
ASAR	Alice Springs	49.89	252	P	P	20 10 30.4	-0.3
	1.2nm,0.6s,baz=88,slow=8.1,SNR=21						

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*IDC **04** 20:22:16.6±0.7,53°.90S×2°.37W,h0^{km},mb4.5/13, mb1 4.5/14,mb1mx4.3/26,mbtmp4.5/14,ML4.1/1,MS3.9/19, Ms1 3.9/19,ms1mx3.8/30,Error ellipse: s-maj=24.1km s-min=14.8km az=146.0*

*BJI **04** 20:22:17.0±0.0,54°.00S×2°.40W,h10^{km},mB6.1/1*

*GCMT **04** 20:22:18.1±0.4,54°.30S±0°.04×1°.81W±0°.06,h20^{km}±1^{km}, MW4.9/74,Moment Tensor Solution. s14,c16; s74,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.46±.22; $M_{\theta\theta}$1.23±.15; $M_{\phi\phi}$1.23±.14; $M_{r\theta}$-1.23±.31; $M_{\theta\phi}$-0.99±.09; $M_{\phi r}$-1.64±.27; Best double couple: $M_0$2.90400×10^{16} NP1:ϕ_s114.00000°,δ46.00000°,λ-130.00000°. NP2: ϕ_s344.00000°,δ57.00000°,λ-57.00000°. Principal axes: T 2.2500, Plg6.0000°, Azm51.0000°; N 1.3090, Plg27.0000°, Azm145.0000°; P -3.5580, Plg62.0000°, Azm310.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **04** 20:22:18.1±1.2,54°.0S±0°.1×2°.4W±0°.2,h14^{km}±4^{km}, mb5.0/52 Error ellipse: s-maj=19.4km s-min=15.5km az=137.0*

ISC 04 20:22:17.7±0.4,**53°.94S**±0°.07×**2°.33W**±0°.08,**h10^{km},n134,** σ**1^{s}.12**/118,**mb4.9**/34,**MS4.0**/18,**1C-1D,Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.98	187	P	P	20 26 18.6	+1.8
VNA2	Neumayer--Watz	17.20	186	P	Pn	20 26 17.7	+0.1
	baz=354,slow=14						
VNA3	Neumayer Olymp	17.67	188	P	Pn	20 26 23.3	-0.1
SNAA	Sanae	17.80	181	P	P	20 26 27.3	+1.3
SNAA	Sanae	17.80	181	P	P	20 26 27.3	+1.3
	0.6nm,0.3s,baz=2.2,slow=15,SNR=35						
SNAA				LR	LR	20 31 35.1	
	comp=Z,320nm,21.4s,baz=4.5,slow=31						
SNAA	Sanae	17.80	181	P	Pn	20 26 24.7	-0.5
SYO	Syowa Base	24.38	144	⇓*e*P	P	20 27 32.0	-3.5
SUR	Sutherland	27.15	47	P	P	20 28 02.1	+1.0
	11nm,0.9s,baz=204,slow=20,SNR=4.0						
SUR				LR	LR	20 36 16.0	
	comp=Z,524nm,20.0s,baz=214,slow=31						
SUR	Sutherland	27.15	47	P	P	20 27 59.5	-1.6
SUR				IAmb	IAmb	20 28 03.6	
	comp=Z,105nm,2.0s						
PMSA	Palmer Station	31.93	226	*e*P	P	20 28 47.0	+4.1
BOSA	Boshof	32.33	50	P	P	20 28 46.5	-0.5
	comp=Z,7.8nm,1.2s,baz=186,slow=8.6,SNR=4.0						
BOSA				LR	LR	20 39 44.9	
	comp=Z,205nm,18.1s,baz=200,slow=32						
BOSA	Boshof	32.33	50	P	P	20 28 45.6	-1.4
MAW	Mawson	32.86	140	LR	LR	20 40 41.9	
	comp=Z,174nm,19.2s,baz=226,slow=34						
WIN	Windhoek	34.60	33	P	P	20 29 06.5	-0.4
LBTB	Lobatse	35.60	47	P	P	20 29 15.5	+0.1
	comp=Z,5.9nm,1.0s,baz=220,slow=9.0,SNR=5.1						
LBTB	Lobatse	35.60	47	P	P	20 29 14.8	-0.5
QSPA	South Pole Qui	36.30	180	P	P	20 29 20.2	-0.9
TSUM	Tsumeb	37.91	32	P	P	20 29 36.2	+1.1
	comp=Z,4.5nm,0.8s,baz=188,slow=8.1,SNR=5.5						
TSUM	Tsumeb	37.91	32	P	P	20 29 35.8	+0.7
MATP	Matopo	40.89	47	P	P	20 29 59.2	-0.7
	comp=Z,5.0nm,1.0s,baz=204,slow=12,SNR=5.5						
MG05	Puerto Natales	40.89	243	P	P	20 29 56.9	-2.6
GO09	Cerro Castillo	41.02	244	P	P	20 29 58.8	-1.8
GO09				IAmb	IAmb	20 31 26.2	
	comp=Z,88nm,1.9s						
TER01	Tubaro-SC	42.33	288	*e*P	P	20 30 12.7	+1.1
PLTB	Pedras Altas	42.48	280	*e*P	P	20 30 13.7	+0.9
PLTB	Pedras Altas	42.48	280	P	P	20 30 11.2	-1.5
PLTB				IAmb	IAmb	20 30 14.7	
	comp=Z,63nm,1.7s						
TRQA	Tornquist	43.04	267	P	P	20 30 16.2	-1.1
TRQA				IAmb	IAmb	20 30 18.9	
	comp=Z,28nm,1.1s						
COYC	Coyhaique	44.13	251	P	P	20 30 24.7	-1.3
COYC				IAmb	IAmb	20 31 13.0	
	comp=Z,47nm,1.7s						
PARB	Paraibuna	44.50	296	*e*P	P	20 30 30.0	+0.8
LSZ	Lusaka	45.35	44	P	P	20 30 36.6	+0.5
	comp=Z,7.5nm,0.9s,baz=199,slow=9.0,SNR=16						
LL02	Futaleuf	45.47	254	P	P	20 30 35.5	-1.2
LL02				IAmb	IAmb	20 30 37.8	
	comp=Z,20nm,1.1s						
H10S2	ASCENSION HYDR	45.94	343	T	T	21 20 06.7	
	baz=50,slow=74,SNR=4.2						
H10S3	ASCENSION HYDR	45.95	343	T	T	21 20 04.6	
	baz=170,slow=74,SNR=7.2						
BSCB	Bom Sucesso	45.98	299	*e*P	P	20 30 41.2	+0.3
PLCA	Paso Flores	46.30	257	P	P	20 30 43.2	-0.1
	comp=Z,4.2nm,0.9s,baz=131,slow=7.2,SNR=8.2						
PLCA				LR	LR	20 46 52.0	
	comp=Z,107nm,21.2s,baz=130,slow=32						
PLCA	Paso Flores	46.30	257	P	P	20 30 42.6	-0.7
LL04	Puerto Octay	47.25	256	P	P	20 30 49.8	-0.9
GUA01	Guaratinga, BA	47.26	307	*e*P	P	20 30 50.8	-0.1
VNDA	Vanda	48.44	175	P	P	20 31 00.6	+1.2
	comp=Z,6.1nm,0.9s,baz=218,slow=6.4,SNR=8.4						
VNDA				LR	LR	20 51 02.9	
	comp=Z,207nm,19.1s,baz=188,slow=36						
VNDA	Vanda	48.44	175	P	P	20 31 00.6	+1.2
VNDA				IAmb	IAmb	20 31 01.7	
	comp=Z,8.7nm,0.9s						
CPUP	Villa Florida	48.69	282	P	P	20 31 02.1	+0.2
	comp=Z,7.4nm,0.9s,baz=146,slow=7.8,SNR=6.3						
CPUP				LR	LR	20 48 34.6	
	comp=Z,64nm,21.2s,baz=128,slow=32						
CPUP	Villa Florida	48.69	282	*e*P	P	20 31 02.5	+0.5
CPUP	Villa Florida	48.69	282	IAmb	IAmb	20 31 03.1	
	comp=Z,22nm,1.2s						
PCMB	Pacaembu	48.95	292	*e*P	P	20 31 05.1	+1.1
MC01	Montes Claros	49.15	303	*e*P	P	20 31 06.5	+0.9
GDU01	Guandu, BA	49.65	309	*e*P	P	20 31 09.6	+0.2
ITRB	Iturama	50.00	294	*e*P	P	20 31 13.5	+1.4
IPMB	Ipameri, GO	50.27	297	*e*P	P	20 31 14.7	+0.5
JANB	Januaria	50.74	303	*e*P	P	20 31 17.4	-0.4
GO05	Huala	50.97	262	P	P	20 31 18.2	-1.0
GO05				IAmb	IAmb	20 32 14.7	
	comp=Z,38nm,1.4s						
MT09	Talagante	51.28	264	P	P	20 31 20.6	-1.2
MT09				IAmb	IAmb	20 31 22.5	
	comp=Z,22nm,0.8s						
MT01	Popeta	51.37	264	P	P	20 31 21.8	-0.5
MT01				IAmb	IAmb	20 31 24.3	
	comp=Z,25nm,0.9s						
ZON	Zonda	51.51	268	P	P	20 31 22.9	-0.5
ZON				IAmb	IAmb	20 31 24.6	
	comp=Z,53nm,1.8s						
PEL	Peldehue	51.55	265	P	P	20 31 22.9	-0.7
PEL				IAmb	IAmb	20 31 26.4	
	comp=Z,24nm,0.8s						
VA05	Santo Domingo	51.73	264	P	P	20 31 24.6	-0.3
VA03	San Esteban	51.74	265	P	P	20 31 24.5	-0.6
VA03				IAmb	IAmb	20 31 41.6	
	comp=Z,22nm,1.0s						
BDFB	Brasilia	52.12	299	P	P	20 31 28.6	+0.5
	comp=Z,6.4nm,0.7s,baz=147,slow=6.4,SNR=8.2						
BDFB				LR	LR	20 49 33.6	
	comp=Z,132nm,19.5s,baz=144,slow=31						
BDFB	Brasilia	52.12	299	P	P	20 31 27.2	-0.9
BDFB				IAmb	IAmb	20 31 29.5	
	comp=Z,17nm,1.2s						
AQDB	Aquidauana	52.33	288	*e*P	P	20 31 29.8	+0.3
AQDB	Aquidauana	52.33	288	P	P	20 31 29.0	-0.5
NBPN	Ponto Novo - B	52.46	310	*e*P	P	20 31 31.0	+0.4
SDBA	SAO DESIDERIO	53.31	304	*e*P	P	20 31 36.9	+0.1
GO04	Tololo Observa	53.76	267	P	P	20 31 39.5	-0.8
ARAG	Araguaiana, MT	54.06	295	*e*P	P	20 31 42.8	+0.5
PP1B	Ponte de Pedra	54.18	291	*e*P	P	20 31 44.3	+1.1
CO05	La Serena	54.20	267	P	P	20 31 43.3	+0.1
AC02	Maricunga	55.23	271	P	P	20 31 50.6	-0.8
AC02				IAmb	IAmb	20 31 53.6	
	comp=Z,12nm,0.8s						
PEXB	Peixe	55.25	301	*e*P	P	20 31 51.2	+0.2
SALV	Santo Antonio	56.01	291	*e*P	P	20 31 57.7	+1.4
SNDB	Serra Nova Dou	56.90	298	*e*P	P	20 32 03.5	+0.7
NBPB	Pedra_Branca-C	56.92	314	*e*P	P	20 32 03.6	+0.8
SMTB	Santa Maria do	57.68	304	*e*P	P	20 32 08.1	-0.1
PB15	IPOC Station P	58.18	274	P	P	20 32 09.8	-2.2
PTLB	Pontes e Lacer	58.29	288	*e*P	P	20 32 12.4	-0.1
PTLB	Pontes e Lacer	58.29	288	P	P	20 32 11.7	-0.9
PTLB				IAmb	IAmb	20 32 13.4	
	comp=Z,14nm,1.1s						
LVC	Limon Verde	58.30	275	*e*P	P	20 32 13.8	+0.8
LVC	Limon Verde	58.30	275	P	P	20 32 11.4	-1.6
PB10	IPOC Station P	58.58	273	P	P	20 32 13.7	-0.9
PB09	IPOC Station P	59.12	275	P	P	20 32 17.4	-1.1
PB07	IPOC Station P	59.56	275	P	P	20 32 19.9	-1.6
MBAR	Mbarara	59.75	39	P	P	20 32 22.1	-0.7
PB01	IPOC Station P	59.85	275	P	P	20 32 22.7	-0.7
PB01				IAmb	IAmb	20 32 28.9	
	comp=Z,28nm,1.6s						
PDRB	Porto dos Gac	60.10	293	*e*P	P	20 32 26.1	+1.0
CLDB	Colider	60.21	295	*e*P	P	20 32 26.5	+0.7
PB08	IPOC Station P	60.35	276	P	P	20 32 25.0	-2.2
PB08				IAmb	IAmb	20 32 28.9	
	comp=Z,18nm,1.4s						
DBIC	Dimbokro	60.42	357	P	P	20 32 28.1	+1.0
	comp=Z,6.0nm,1.1s,baz=159,slow=8.6,SNR=2.7						
DBIC				LR	LR	20 52 29.4	
	comp=Z,52nm,18.8s,baz=177,slow=30						
DBIC	Dimbokro	60.42	357	IAmb	IAmb	20 32 33.6	
	comp=Z,7.2nm,1.1s						
VILB	Vilhena	60.91	289	*e*P	P	20 32 31.0	+0.3
VILB	Vilhena	60.91	289	P	P	20 32 28.5	-2.1
VILB				IAmb	IAmb	20 32 34.6	
	comp=Z,15nm,1.0s						
PB11	IPOC Station P	60.94	276	P	P	20 32 29.7	-1.3
PB11				IAmb	IAmb	20 32 32.1	
	comp=Z,21nm,1.1s						
KIBK	Kibwezi	61.14	48	P	P	20 32 33.1	+0.8
KMBO	Kilima Mbogo	61.88	46	LR	LR	20 57 28.1	
	comp=Z,223nm,19.6s,baz=132,slow=34						
PB16	IPOC Station P	61.97	277	P	P	20 32 38.0	-0.5
PB16				IAmb	IAmb	20 32 40.0	
	comp=Z,14nm,1.4s						
LPAZ	La Paz	62.77	280	P	P	20 32 44.3	+0.4
	comp=Z,11nm,1.1s,baz=121,slow=6.8,SNR=19						
LPAZ				LR	LR	20 58 59.1	
	comp=Z,34nm,20.4s,baz=80,slow=35						
LPAZ	La Paz	62.77	280	*e*P	P	20 32 44.2	+0.4
LPAZ	La Paz	62.77	280	P	P	20 32 43.3	-0.6
LPAZ				IAmb	IAmb	20 32 45.2	
	comp=Z,19nm,1.1s						
NPGB	Novo Progresso	63.18	297	*e*P	P	20 32 46.3	+0.4
LODK	Lodwar	65.22	42	P	P	20 33 00.9	+1.7
ITTB	Itaituba	65.64	299	*e*P	P	20 33 02.4	+0.4
SAML	Samuel	65.85	289	P	P	20 33 02.6	-0.7
ETMB	Extrema	66.85	286	*e*P	P	20 33 09.9	+0.2
ETMB	Extrema	66.85	286	P	P	20 33 08.9	-0.9
ETMB				IAmb	IAmb	20 33 10.4	
	comp=Z,12nm,1.3s						
TORD	Torodi Ar. Bea	66.91	4	P	P	20 33 10.6	+0.7
	comp=Z,1.1nm,0.8s,baz=189,slow=7.3,SNR=5.8						
TORD				LR	LR	20 55 56.1	
	comp=Z,98nm,21.5s,baz=125,slow=30						
TORD	Torodi Ar. Bea	66.91	4	P	P	20 33 10.0	+0.1
MALB	Monte Alegre	67.03	301	*e*P	P	20 33 12.0	+1.1
MCPB	Macapa, AP	67.22	304	*e*P	P	20 33 12.4	+0.3
MSEY	Mahe Island	67.72	66	P	P	20 33 14.5	-0.8
KOWA	Kowa	68.18	358	LR	LR	20 57 17.6	
	comp=Z,68nm,18.2s,baz=197,slow=31						
BOAV	Boa Vista	73.87	298	P	P	20 33 50.5	-2.1
BOAV				IAmb	IAmb	20 34 00.5	
	comp=Z,17nm,1.5s						
H01W2	Cape Leeuwin H	75.95	131	T	T	21 58 10.4	
	baz=212,slow=75,SNR=13						
H01W1	Cape Leeuwin H	75.96	131	T	T	21 58 13.0	
	baz=212,slow=75,SNR=11						
H01W3	Cape Leeuwin H	75.96	131	T	T	21 58 10.5	
	baz=212,slow=75,SNR=12						
OTAV	Otavalo	82.04	281	*e*P	P	20 34 39.6	+1.0
OTAV	Otavalo	82.04	281	P	P	20 34 38.2	-0.4
OTAV				IAmb	IAmb	20 34 55.5	
	comp=Z,13nm,1.4s						
BAUV	El Baul	83.36	295	P	P	20 34 42.2	-2.6
ROSC	El Rosal	83.42	287	LR	LR	21 10 17.1	
	comp=Z,146nm,19.2s,baz=130,slow=34						
SDV	Santo Domingo	84.71	293	*e*P	P	20 34 53.8	+1.8
EIL	Elat	89.30	32	LR	LR	21 14 41.5	
	comp=Z,134nm,18.9s,baz=282,slow=35						
PALK	Pallekele	91.73	80	LR	LR	21 09 16.9	
	comp=Z,34nm,19.7s,baz=313,slow=31						
ESDC	Sonseca Array	93.25	359	LR	LR	21 15 53.2	
	comp=Z,56nm,18.1s,baz=0.0,slow=34						
LEM	Lembang	96.03	110	LR	LR	21 08 58.9	
	comp=Z,48nm,21.5s,baz=188,slow=29						
BRTR	Keskin Array B	98.30	27	LR	LR	21 19 51.7	
	comp=Z,75nm,21.4s,baz=229,slow=35						
GYA	Guiyang	122.00	88	⇑PKP	PKiKP	20 41 13.1	+0.8
CD2	Chengdu	123.58	82	PKP	PKPdf	20 41 14.8	-0.1
WMQ	Urumqi	123.83	61	*e*PKP	PKiKP	20 41 15.8	+0.5
GTA	Gaotai	127.32	72	*e*PKP	PKiKP	20 41 23.0	+0.5
PDAR	Pinedale Array	132.42	288	PKP	PKPdf	20 41 30.9	-0.7
	comp=Z,0.8nm,0.8s,baz=98,slow=1.8,SNR=5.1						
NJ2	Nanjing	133.31	93	*e*PKP	PKiKP	20 41 34.4	-0.1
HHC	Hu-ho-hao-te	135.00	79	*e*PKP	PKPdf	20 41 34.4	-2.0
SONM	Songino Array	136.37	68	PKP	PKPdf	20 41 39.0	+0.3
	comp=Z,0.3nm,0.7s,baz=251,slow=4.4,SNR=2.4						
G08A	Pilot Rock	139.32	285		PKPdf	20 41 44.7	+0.5
YKA	Yellowknife Ar	144.92	312	PKP	PKPab	20 41 52.4	-0.4
	comp=Z,13nm,0.8s,baz=108,slow=3.8,SNR=26						
DLBC	Dease Lake	151.18	300	PKPbc	PKPbc	20 42 09.0	-0.9
	comp=Z,4.0nm,1.0s,baz=315,slow=2.9,SNR=3.2						
INK	Inuvik	153.31	321	PKPbc	PKiKP	20 42 14.3	0.0
	comp=Z,3.2nm,1.0s,baz=66,slow=2.4,SNR=5.5						
ILAR	Eielson Array	159.25	315	PKPab	PKPab	20 42 52.5	+0.4
	comp=Z,1.8nm,1.0s,baz=92,slow=2.7,SNR=9.9						

IDC 04 20:34:56.1±3.4,**4°.93S×151°.33E,h0^{km},mb3.6**/3,**mb1 3.9**/3,**mb1mx3.5**/34,**mbtmp3.7**/3,**MS3.9**/3,**Ms1 3.9**/3,**ms1mx2.9**/39,**Error ellipse: s-maj=116.0km s-min=46.4km az=120.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.08	223	LR	LR	20 38 54.3	
	comp=Z,45nm,18.4s,baz=292,slow=39						
WRA	Warramunga Arr	22.28	226	P	P	20 39 56.2	+1.0
	0.8nm,0.6s,baz=53,slow=10,SNR=12						
ASAR	Alice Springs	25.09	220	P	P	20 40 22.5	-0.2
	0.9nm,0.8s,baz=56,slow=9.5,SNR=11						
FITZ	Fitzroy Crossi	28.32	240	P	P	20 40 50.9	-0.9
	2.0nm,0.8s,baz=76,slow=7.7,SNR=9.6						
AAK	Ala-Archa	83.69	314	LR	LR	21 24 21.5	
	comp=Z,72nm,19.3s,baz=252,slow=35						
ARU	Arti	95.61	326	LR	LR	21 31 57.4	
	comp=Z,50nm,20.7s,baz=231,slow=36						
AKTO	Aktyubinsk	95.88	320	LR	LR	21 32 07.0	
	comp=Z,68nm,18.4s,baz=225,slow=36						
TORD	Torodi Ar. Bea	148.95	287	PKPbc	PKPbc	20 54 47.0	-0.2
	0.2nm,0.3s,baz=89,slow=1.9,SNR=3.9						

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*WEL **04** 21:05:00,43°.22S×170°.90E,h11^{km},ML4.2,Mw4.1, Moment Tensor Solution. s5 Moment tensor: Scale 10^{15} Nm; M_{rr}0.59; $M_{\theta\theta}$0.88; $M_{\phi\phi}$-1.47; $M_{r\theta}$-0.12; $M_{\theta\phi}$-0.61; $M_{\phi r}$-0.35; Fault plane solution: $M_0$1.36000×10^{15} NP1: ϕ_s328.00000°,δ80.00000°,λ-3.00000°. NP2:ϕ_s59.00000°, δ87.00000°,λ-170.00000°. Principal axes: T -168.2000, Plg5.0000°, Azm193.0000°; N 103.5100, Plg80.0000°, Azm75.0000°; P 64.6900, Plg9.0000°, Azm284.0000°;*

*WEL **04** 21:05:41.5±0.3,43°S±2°×17°1E±°,h5^{km},M4.1/17, ML4.3/17,MLv4.1/17 Error ellipse: s-maj=0.0km s-min=0.0km az=37.7*

*IDC **04** 21:05:41.8±1.4,43°.03S×170°.70E,h0^{km},mb3.5/2, mb1 3.8/3,mb1mx3.3/39,mbtmp3.6/3,ML3.3/1,MS3.2/2, Ms1 3.2/2,ms1mx2.8/22,Error ellipse: s-maj=54.6km s-min=34.7km az=178.0*

ISC 04 21:05:42.2±1.1,**43°.22S**±0°.03×**170°.86E**±0°.03,**h19^{km}**±3^{km},**n85,**σ**1^{s}.89**/85,**South Island**

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

WVZ	Waitaha Valley	0.17	328	P	Pg	21 05 45.9	-1.0
WVZ				S	Sg	21 05 48.6	-1.4
GCSZ	Gaunt Creek Bo	0.40	256	P	Pb	21 05 50.3	-0.5
GCSZ				S	Sb	21 05 55.7	-0.9
RPZ	Rata Peaks	0.51	164	P	Pb	21 05 51.8	-0.7
RPZ				S	Sb	21 05 58.7	-0.8
MHCZ	Mount Hutt	0.60	121	P	Pb	21 05 53.0	-1.0
MHCZ				S	Sb	21 06 00.8	-1.3
INZ	Inchbonnie	0.66	41	P	Pb	21 05 52.9	-2.0
INZ				S	Sb	21 06 01.5	-2.1
ARCZ	Arundel	0.76	163	P	Pb	21 05 56.4	-0.4
FOZ	Fox Glacier	0.82	248	P	Pn	21 05 58.0	-0.7
OXZ	Oxford	0.86	97	P	Pb	21 05 58.0	-0.6
WACZ	Wakanui South	1.01	136	P	Pn	21 06 01.2	-0.1
WACZ				S	Sb	21 06 16.2	+2.2
RACZ	Rakaia	1.06	119	P	Pn	21 06 01.9	0.0
LTZ	Lake Taylor	1.12	67	P	Pn	21 06 02.7	-0.3
TMZ	Timaru	1.17	175	P	Pn	21 06 03.9	+0.4
LBZ	Lake Benmore	1.26	203	P	Pn	21 06 05.2	+0.4
AMCZ	Amberley	1.31	89	P	Pn	21 06 05.9	+0.5
MQZ	McQueen's Vall	1.39	111	P	Pn	21 06 06.5	0.0
GVZ	Greta Valley S	1.61	82	P	Pn	21 06 09.9	+0.3
AKCZ	Akaroa Harbour	1.62	114	P	Pn	21 06 09.7	0.0
DSZ	Denniston Nort	1.63	26	P	Pn	21 06 09.9	0.0
OKCZ	Okains Bay	1.68	108	P	Pn	21 06 10.9	+0.4
JCZ	Jackson Bay	1.73	240	P	Pb	21 06 12.5	-0.9
ODZ	Otahua Downs	1.83	185	P	Pn	21 06 13.7	+1.1
WKZ	Wanaka	2.08	219	P	Pb	21 06 17.4	-2.0
THZ	Tophouse	2.10	47	P	Pn	21 06 17.6	+1.2
KHZ	Kahutara	2.13	69	P	Pn	21 06 17.1	+0.4
EAZ	Earnscleugh	2.30	209	P	Pn	21 06 19.5	+0.5
MSZ	Milford Sound	2.57	235	P	Pb	21 06 25.6	-1.9
HHSZ	Highcliff Hill	2.67	184	P	Pn	21 06 25.3	+1.2
BSWZ	Blackbirch Sta	2.69	57	P	Pn	21 06 25.9	+1.5
QRZ	Quartz Range	2.70	28	P	Pn	21 06 25.2	+0.7
NNZ	Nelson	2.74	44	P	Pn	21 06 26.6	+1.5
TUZ	Tuapeka	2.87	197	P	Pn	21 06 27.5	+0.7
CMWZ	Cape Campbell	2.88	60	P	Pn	21 06 31.4	+4.3
TUWZ	Tuamarina	2.90	53	P	Pn	21 06 28.8	+1.5
MLZ	Mavora Lakes	2.91	222	P	Pn	21 06 28.5	+1.0
TCW	Tory Channel	3.24	53	P	Pn	21 06 32.8	+0.9
DUWZ	D'Urville Isla	3.32	44	P	Pn	21 06 34.9	+1.7
WHZ	Wether Hill Ro	3.39	217	P	Pn	21 06 35.5	+1.6
DCZ	Deep Cove	3.48	229	P	Pn	21 06 38.0	+2.8
BHW	Baring Head	3.48	60	P	Pn	21 06 36.5	+1.2
SYZ	Scrubby Hill	3.53	200	P	Pn	21 06 36.2	+0.2
MSWZ	Moikau Station	3.72	62	P	Pn	21 06 39.7	+1.2
KIW	Kapiti Island	3.83	53	P	Pn	21 06 40.3	+0.2
OGWZ	Otaki Gorge	4.01	55	P	Pn	21 06 42.7	+0.2
MTW	Mount Morrison	4.02	61	P	Pn	21 06 41.8	-0.9
APZ	The Paps	4.14	208	P	Pn	21 06 44.6	+0.2
HOWZ	Holdsworth Sta	4.17	58	P	Pb	21 06 51.4	-3.6
MRZ	Mangatainoka R	4.35	56	P	Pn	21 06 47.3	0.0
NMEZ	Namu Road	4.43	32	P	Pn	21 06 50.8	+2.5
NBEZ	Newall Road No	4.55	31	P	Pn	21 06 52.0	+2.0
KHEZ	Kahui Hut	4.59	32	P	Pn	21 06 52.7	+2.1
PREZ	Palmer Road	4.60	34	P	Pn	21 06 53.0	+2.2
LREZ	Lake Rotokare	4.61	37	P	Pn	21 06 53.8	+3.0
NEZ	North Egmont	4.64	33	P	Pn	21 06 53.3	+2.0
WAZ	Wanganui	4.65	43	P	Pn	21 06 54.5	+3.2
PKE	Pukeiti	4.66	31	P	Pn	21 06 53.7	+2.1
DREZ	Durham Road	4.75	33	P	Pn	21 06 54.5	+1.7
TSZ	Takapari Road	4.96	52	P	Pn	21 06 57.4	+1.8
VRZ	Vera Road	5.04	37	P	Pn	21 06 58.3	+1.6
PKVZ	Pokaka	5.18	42	P	Pn	21 07 03.3	+4.6
PNHZ	Pukenui	5.19	52	P	Pn	21 06 59.9	+1.1
TRVZ	Turoa	5.28	44	P	Pn	21 07 03.1	+2.9
WNVZ	Wahianoa	5.28	44	P	Pn	21 07 02.4	+2.2
MOVZ	Moawhango	5.30	46	P	Pn	21 07 02.4	+2.0
FWVZ	Far West T-bar	5.31	43	P	Pn	21 07 06.1	+5.4
TUVZ	Tukino	5.35	44	P	Pn	21 07 05.2	+4.1
NGZ	Ngauruhoe	5.40	43	P	Pn	21 07 05.0	+3.2
BHHZ	Black Hill Sta	5.41	48	P	Pn	21 07 02.6	+0.8
NNVZ	North Ngauruho	5.44	43	P	Pn	21 07 06.8	+4.5
WTVZ	West Tongariro	5.44	43	P	Pn	21 07 09.0	+6.7
ETVZ	East Tongariro	5.48	43	P	Pn	21 07 06.5	+3.6
NTVZ	North Tongarir	5.49	43	P	Pn	21 07 08.0	+4.9
TMVZ	Te Maari	5.49	43	P	Pn	21 07 06.4	+3.3
HIZ	Hauiti	5.59	34	P	Pn	21 07 05.1	+0.8
KWHZ	Kaweka Forest	5.65	50	P	Pn	21 07 12.1	+7.0
TOZ	Tahuroa Road	6.53	34	P	Pn	21 07 17.6	+0.5
AWAZ	Awhitu Peninsu	6.80	26	P	Pn	21 07 22.8	+2.0
URZ	Urewera	6.86	46	Pn	Pn	21 07 22.3	+0.6
	0.6nm,0.3s,baz=302,slow=24,SNR=1.7						
URZ				Sn	Sn	21 08 35.2	-4.1
	1.9nm,0.3s,baz=298,slow=23,SNR=1.9						
STKA	Stephens Creek	25.69	286	LR	LR	21 19 14.3	
	comp=Z,44nm,18.1s,baz=212,slow=32						
VNDA	Vanda	34.60	183	LR	LR	21 24 36.7	
	comp=Z,53nm,20.2s,baz=320,slow=33						
ASAR	Alice Springs	36.10	291	P	P	21 12 43.5	+0.6
	0.2nm,0.4s,baz=131,slow=8.0,SNR=6.9						
WRA	Warramunga Arr	38.37	296	P	P	21 13 03.0	+0.8
	0.8nm,0.7s,baz=133,slow=7.7,SNR=7.0						
BRTR	Keskin Array B	148.01	279	PKPbc	PKiKP	21 25 27.9	0.0
	0.5nm,0.5s,baz=135,slow=3.1,SNR=2.4						
ARCES	ARCESS Array B	148.25	338	PKPbc	PKPbc	21 25 26.0	+0.4
	3.8nm,1.1s,baz=38,slow=1.6,SNR=1.2						
TORD	Torodi Ar. Bea	148.61	201	PKPbc	PKiKP	21 25 30.3	+0.6
	1.1nm,0.7s,baz=186,slow=1.7,SNR=7.4						
FINES	FINESS Array B	152.30	323	PKPbc	PKiKP	21 25 40.0	+4.1
	3.1nm,0.9s,baz=45,slow=2.6,SNR=3.7						

IDC 04 21:07:57.6±7.0, **17°.08S**×**172°.56W**, **h0**^{km}, **mb3.9**/4, **mb1 4.0**/4, **mb1mx3.7**/54, **mbtmp3.8**/4, **Error ellipse: s-maj=285.8km s-min=34.9km az=139.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	50.26	258	P	P	21 16 55.4	-0.8
	0.6nm,1.0s,baz=93,slow=7.0,SNR=4.8						
ASAR	Alice Springs	50.38	253	P	P	21 16 57.2	+0.2
	0.3nm,0.5s,baz=88,slow=8.2,SNR=6.8						
ILAR	Eielson Array	83.94	11	P	P	21 20 28.9	-0.2
	1.2nm,0.6s,baz=238,slow=5.0,SNR=24						
SONM	Songino Array	96.63	318	P	P	21 21 30.5	+0.7
	0.8nm,1.0s,baz=108,slow=4.7,SNR=3.7						

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*THE **04** 21:12:29.3, 38°.70N×20°.64E, h4^{km}±2^{km}, ML3.6/2, Error ellipse: s-maj=2.2km s-min=0.6km az=293.0*

*ATH **04** 21:12:29.1, 38°.72N×20°.62E, h9^{km}±1^{km}, ML3.6/7, Error ellipse: s-maj=2.3km s-min=0.8km az=292.0*

*IDC **04** 21:12:31.1±1.4, 39°.02N×20°.37E, h0^{km}, mb3.8/4, mb1 3.6/10, mb1mx3.4/73, mbtmp3.5/10, ML3.2/6, MS2.8/2, Ms1 2.8/2, ms1mx2.5/58, Error ellipse: s-maj=24.4km s-min=19.5km az=143.0*

ISC 04 21:12:29.2±0.7, **38°.72N**±0°.02×**20°.60E**±0°.03, **h9**^{km}±4^{km}, **n106**, σ**1^{s}.51**/128, **mb3.7**/4, **6C-7D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.04	213	P	Pg	21 12 30.5	-0.5
DRAG				S	Sg	21 12 31.7	-0.5
DRAG	Dragano-Lefkad	0.04	213	P	Pg	21 12 30.5	-0.5
DRAG				S	Sg	21 12 31.7	-0.5
LKD2	Lefkada island	0.09	31	P	Pg	21 12 31.1	-0.4
LKD2				S	Sg	21 12 32.8	-0.4
	154µm,0.2s						
LKD2	Lefkada island	0.09	31	P	Pg	21 12 31.2	-0.4
LKD2				S	Sg	21 12 32.9	-0.4
LKD2				AML	AML	21 12 33.3	
LKD2				AML	AML	21 12 33.5	
EVGI	Lefkada island	0.10	156	P	Pg	21 12 31.6	-0.2
EVGI	Lefkada island	0.10	156	P	Pg	21 12 31.6	-0.2
EVGI				S	Sg	21 12 33.8	+0.2
TSLK	Tsoukalades, L	0.12	21	P	Pg	21 12 32.0	0.0
TSLK				S	Sg	21 12 33.8	-0.1
TSLK	Tsoukalades, L	0.12	21	P	Pg	21 12 32.0	0.0
TSLK				S	Sg	21 12 33.7	-0.1
TSLK				AML	AML	21 12 34.8	
TSLK				AML	AML	21 12 36.9	
FSK	Fiskardo	0.26	187	P	Pg	21 12 34.6	+0.2
FSK	Fiskardo	0.26	187	P	Pg	21 12 34.6	+0.2
FSK				S	Sg	21 12 38.5	+0.6
FSK				AML	AML	21 12 39.7	
	comp=N,26949µm,0.2s						
FSK				AML	AML	21 12 40.1	
	comp=E,55960µm,0.2s						
KEF4	Livadi, Kephal	0.48	197	P	Pg	21 12 38.1	-0.4
KEF4				S	Sb	21 12 45.7	-1.2
KEF4	Livadi, Kephal	0.48	197	P	Pg	21 12 38.1	-0.4
KEF4				S	Sb	21 12 46.4	-0.5
LXRA	Lixouri, Kepha	0.53	194	P	Pb	21 12 39.4	-1.3
VLS	Valsamata	0.54	181	P	Pg	21 12 38.8	-0.9
VLS				S	Sb	21 12 47.5	-1.2
	comp=E,5µm,0.2s						
VLS	Valsamata	0.54	181	P	Pg	21 12 39.1	-0.5
VLS				S	Sb	21 12 47.5	-1.2
VLS				AML	AML	21 12 48.0	
	comp=E,7726µm,0.2s						
VLS				AML	AML	21 12 48.7	
	comp=N,7319µm,0.3s						
ARGA	Argostoli. Kep	0.55	190	P	Pb	21 12 40.2	-0.7
ARGA				S	Sb	21 12 48.1	-0.8
KEF3	Kipouria, Keph	0.55	201	P	Pg	21 12 38.8	-1.1
KEF3	Kipouria, Keph	0.55	201	P	Pg	21 12 38.8	-1.1
PSDA	Pessada-Kefalo	0.60	181	P	Pg	21 12 40.2	-0.6
PSDA				S	Sb	21 12 49.4	-1.0
PSDA	Pessada-Kefalo	0.60	181	P	Pg	21 12 40.2	-0.6
PSDA				S	Sb	21 12 49.4	-1.0
VTN	Vitineika	0.92	150	P	Pb	21 12 46.6	-0.7
VTN	Vitineika	0.92	150	P	Pb	21 12 46.6	-0.7
RLS	Riolos of Patr	0.95	134	P	Pg	21 12 46.4	-1.0
RLS	Riolos of Patr	0.95	134	P	Pg	21 12 46.3	-1.0
RLS				AML	AML	21 13 08.7	
	comp=N,4790µm,0.6s						
RLS				AML	AML	21 13 09.7	
	comp=E,6145µm,0.7s						
EVR	Evrytania	0.96	78	P	Pg	21 12 47.1	-0.7
EVR	Evrytania	0.96	78	P	Pg	21 12 47.1	-0.7
EVR				AML	AML	21 13 06.7	
	comp=E,1525µm,0.6s						
EVR				AML	AML	21 13 10.3	
	comp=N,2840µm,1.0s						
LTHK	Lithakia	1.02	169	P	Pg	21 12 47.1	-1.7
LTHK	Lithakia	1.02	169	P	Pg	21 12 47.4	-1.5
ANX	Ano Chora	1.04	96	P	Pg	21 12 48.2	-1.0
ANX	Ano Chora	1.04	96	P	Pg	21 12 48.2	-1.0
EFP	Efpalio	1.06	105	P	Pg	21 12 48.2	-1.4
EFP	Efpalio	1.06	105	P	Pg	21 12 48.2	-1.4
DRO	Drossia	1.16	131	P	Pg	21 12 50.1	-1.3
DRO	Drossia	1.16	131	P	Pg	21 12 50.1	-1.3
DRO				AML	AML	21 13 14.4	
	comp=E,5253µm,0.4s						
DRO				AML	AML	21 13 17.7	
	comp=N,5708µm,0.7s						
KEK	Kerkira	1.18	328	P	Pg	21 12 51.8	0.0
KEK	Kerkira	1.18	328	P	Pg	21 12 51.8	0.0
SERG	Sergoula	1.18	104	P	Pg	21 12 50.7	-1.2
SERG	Sergoula	1.18	104	P	Pg	21 12 50.7	-1.2
LAKA	Lakka	1.18	113	P	Pg	21 12 50.5	-1.4
LAKA	Lakka	1.18	113	P	Pg	21 12 50.5	-1.4
MAKR	Makrakomi, Fth	1.23	76	P	Pg	21 12 52.0	-0.8
MAKR	Makrakomi, Fth	1.23	76	P	Pg	21 12 52.0	-0.8
AGG	Agios Georgios	1.38	77	P	Pb	21 12 54.9	-0.4
AGG	Agios Georgios	1.38	77	P	Pb	21 12 54.9	-0.4
KLV	Kalavryta, Ach	1.39	118	P	Pn	21 12 53.5	-1.4
KLV	Kalavryta, Ach	1.39	118	P	Pn	21 12 53.5	-1.4
GUR	Goura	1.57	119	P	Pn	21 12 57.1	-0.3
GUR	Goura	1.57	119	P	Pn	21 12 57.1	-0.3
OHR	Ohrid	2.40	4	*i* Pn	Pb	21 13 12.4	-0.2
TIR	Tirane	2.69	348	⇓P	Pn	21 13 12.3	-0.4
TIR				⇓S	Sn	21 13 40.8	-4.6
VAY	Valandovo	3.01	30	*i* Pn	Pb	21 13 22.8	-0.2
VAY				*i* Sn	Sb	21 13 58.6	-1.2
STIP	Stip	3.21	22	*i* Pn	Pb	21 13 24.1	-2.3
SKO	Skopje	3.31	11	*i* Pn	Pn	21 13 24.6	+3.3
MATE	Matera	3.57	304	⇓P	Pn	21 13 24.7	-0.1
DRME	Dracevica, Mon	3.63	343	*e*Pn	Pn	21 13 25.8	+0.2
PDG	Podgorica	3.85	345	⇓P	Pn	21 13 28.5	-0.1
PDG				⇑S	Sn	21 14 10.1	-3.8
PDG	Podgorica	3.85	345	*e*Pn	Pn	21 13 28.4	-0.2
PRVS	Prvonek	3.95	16	*e*Pn	Pn	21 13 31.4	+1.4
BOSS	Bosilegrad	4.04	20	*e*Pn	Pn	21 13 33.3	+2.1
HCY	Herceg Novi	4.06	337	*e*Pn	Pn	21 13 30.1	-1.4
BARS	Barje	4.20	12	*e*Pn	Pn	21 13 34.4	+1.0
TREB	Trebinje	4.35	338	*e*Pn	Pn	21 13 34.4	-1.1
DBRK	Dubrovnik	4.37	335	*e*Pn	Pn	21 13 34.6	-1.1
DBRK				Sn	Sn	21 14 22.4	-4.4
VTS	Vitosha	4.38	26	⇑P	Pn	21 13 37.1	+1.1
SELS	Selova	4.52	5	*e*Pn	Pn	21 13 37.9	+0.1
UPM	Unac-Piva	4.66	345	*e*Pn	Pn	21 13 40.8	+0.8
STON	Ston	4.70	333	*e*Pn	Pn	21 13 38.9	-1.4
ZAPS	Zavoj	4.81	18	*e*Pn	Pn	21 13 46.0	+4.2
IDI	Anoyia	4.85	134	Pn	Pn	21 13 44.7	+2.3
	comp=N,0.4nm,0.3s,baz=305,slow=16,SNR=1.9						
IDI				Sn	Sn	21 14 38.3	-0.4
	comp=N,0.7nm,0.3s,baz=115,slow=7.5,SNR=1.9						
IDI				LR	LR	21 16 43.1	
	comp=N,56nm,20.4s,baz=289,slow=49						
VAE	Valguarnera	5.04	258	Pn	Pn	21 13 42.1	-2.8
	comp=N,0.7nm,0.3s,baz=357,slow=18,SNR=1.3						
VAE				Sn	Sn	21 14 41.0	-2.4
	comp=N,1.5nm,0.3s,baz=121,slow=20,SNR=1.5						
GRUS	Gruza	5.17	1	*e*Pn	Pn	21 13 46.9	+0.2
BBLS	Lazići	5.22	350	*e*Pn	Pn	21 13 47.2	-0.4
BBLS	Lazići	5.22	350	*e*Pn	Pn	21 13 48.3	+0.7
DIVS	Divibare	5.40	355	*e*Pn	Pn	21 13 48.7	-1.3
DIVS	Divibare	5.40	355	*e*Pn	Pn	21 13 49.7	-0.3
TRUS	Trudelj	5.50	359	*e*Pn	Pn	21 13 50.9	-0.5
HAPS	Han Pijesak,Bl	5.51	348	*e*Pn	Pn	21 13 51.3	-0.2
MGRS	Mrkonjic Grad	6.28	336	*e*Pn	Pn	21 14 02.5	+0.5
FRGS	Fruska Gora	6.46	355	⇑S	Sn	21 15 14.5	-3.9
BLY	Banja Luka	6.55	338	*e*Pn	Pn	21 14 06.9	+1.2
GZR	Gura Zlata	6.87	13	⇑S	Sn	21 15 26.6	-1.7
ARR	Arges	7.29	23	⇓P	Pn	21 14 17.0	+1.0
VOIR		7.49	25	⇑P	Pn	21 14 20.3	+1.7
MORH	Mrgy, Hungar	7.63	350	*e*Pn	Pn	21 14 20.7	+0.2
MLR	Muntele Rosu	7.85	29	⇑P	Pn	21 14 25.4	+1.7
MLR	Muntele Rosu	7.85	29	Pn	Pn	21 14 25.5	+1.9
	comp=N,0.1nm,0.3s,baz=212,slow=15,SNR=3.1						
RIY	Rijeka	8.02	327	*e*Pn	Pn	21 14 23.1	-2.8
CRES	Cresnjev	8.06	333	*e*Pn	Pn	21 14 24.7	-1.8
CEY	Cerknica	8.38	329	*e*Pn	Pn	21 14 29.8	-1.0
PLOR	Plostina	8.42	30	⇓P	Pn	21 14 33.5	+2.1
VRI	Vrincioaia	8.46	30	⇓P	Pn	21 14 32.8	+0.8
LJU	Ljubljana	8.59	330	*e*Pn	Pn	21 14 32.1	-1.6
SOKA	Soboth	8.95	335	*e*Pn	Pn	21 14 37.2	-1.5
	comp=N,1.5nm,0.5s						
OBKA	Obir	8.97	332	*e*Pn	Pn	21 14 39.9	+0.9
	comp=N,0.6nm,0.3s						
OBKA				*i* Sn	Sn	21 16 17.0	-3.2
	comp=N,2.1nm,0.3s						
KEST	Kesra	9.46	255	Pn	Pn	21 14 47.5	+1.8
	comp=N,0.1nm,0.3s,baz=66,slow=20,SNR=1.8						
KEST				LR	LR	21 19 46.7	
	comp=N,116nm,18.3s,baz=214,slow=46						
BRTR	Keskin Array B	10.17	80	Pn	Pn	21 15 01.8	+6.3
	comp=N,0.1nm,0.3s,baz=270,slow=12,SNR=2.6						
MOA	Molln	10.23	335	*e*Pn	Pn	21 14 55.8	-0.3
	comp=N,0.9nm,0.3s						
WTTA	Wattenberg	10.77	325	*e*Pn	Pn	21 15 05.6	+2.0
	comp=N,1.0nm,0.4s						
WTTA				*e*Sn	Sn	21 17 03.9	-0.4
	comp=N,3.4nm,0.7s						
MOTA	Moosalm	11.07	324	*e*Pn	Pn	21 15 07.3	-0.5
GERES	GERESS Array B	11.28	336	Pn	Pn	21 15 08.7	-1.9
	comp=N,0.0nm,0.3s,baz=160,slow=16,SNR=2.8						
MMAI	Mount Meron Ar	13.28	111	Pn	P	21 15 45.8	-2.1
	comp=N,0.3nm,0.3s,baz=294,slow=11,SNR=1.2						
ESDC	Sonseca Array	19.05	281	P	Pn	21 16 52.5	0.0
	comp=N,0.0nm,0.3s,baz=72,slow=10,SNR=3.1						
HFS	Hagfors	21.88	351	P	P	21 17 22.7	+0.6
	comp=N,2.2nm,0.8s,baz=163,slow=11,SNR=1.2						
FINES	FINESS Array B	23.01	7	P	P	21 17 35.9	+1.8
	comp=N,10.0nm,1.1s,baz=187,slow=9.8,SNR=4.2						
AKTO	Aktyubinsk	28.81	54	P	P	21 18 30.6	+3.2
	comp=N,0.9nm,0.6s,baz=222,slow=7.2,SNR=2.7						
TORD	Torodi Ar. Bea	30.49	218	P	P	21 18 46.8	+4.2
	comp=N,0.3nm,0.7s,baz=46,slow=8.8,SNR=1.9						

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*NNC **04** 21:19:22.3±0.9, 51°.43N×85°.38E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=12.1km s-min=4.1km az=101.0*

*SOME **04** 21:19:23.0, 51°.28N×85°.17E, h0^{km}*

ISC 04 21:19:18.8±1.1, **51°.36N**±0°.03×**85°.26E**±0°.03, **h13**^{km}±12^{km}, **n26**, σ**1^{s}.41**/44, **7C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UKR	Ust'-Kan	0.53	216	Pg	Pn	21 19 33.0	+0.8
UKR				Sg	Sn	21 19 40.9	-0.1
ARTR	Artybash	1.33	70	Pg	Pg	21 19 44.1	-0.3
ARTR				Sg	Sb	21 19 60.0	-0.8
CHBI	Chibit, Altay	1.77	126	Pg	Pg	21 19 53.5	+0.8
CHBI				Sg	Sg	21 20 17.3	+1.6
AKAR	Aktash	1.82	124	Pg	Pg	21 19 53.7	-0.1
AKAR				Sg	Sg	21 20 17.6	+0.1
ULGR	Ulagan, Altay	1.86	112	Pg	Pg	21 19 55.4	+0.9
ULGR				Sg	Sg	21 20 18.7	+0.1
ELT	Eltsovka	1.99	17	Pg	Pg	21 19 56.8	-0.3
ELT				Sg	Sg	21 20 23.4	+0.5
TASR	Tashtagol	2.14	48	Pg	Pg	21 19 58.4	-1.4
TASR				Sg	Sg	21 20 26.0	-1.5
DGZ	Jazzator, Alta	2.17	139	Pg	Pb	21 19 59.5	+1.5
DGZ				Sg	Sg	21 20 27.9	-0.5
CUR	Chagan-Uzun	2.33	122	Pg	Pg	21 20 03.4	-0.1
CUR				Sg	Sg	21 20 33.8	0.0
ZAA0	Zalesovo Array	2.60	354	⇑Pn	Pb	21 20 04.6	-0.8
	2.6nm,0.6s						
ZAA0				⇓Sn	Sb	21 20 37.1	-0.1
	3.0nm,0.3s						
ZAA0				⇑Lg	Lg	21 20 44.0	
	14nm,0.8s						
BJR1	Bachatsky 1, K	2.92	9	Pg	Pb	21 20 11.2	+0.5
BJR1				Sg	Sb	21 20 46.6	+0.3
BJR2	Bachatsky-2, K	2.97	10	Pg	Pb	21 20 11.2	-0.4
BJR2				Sg	Sb	21 20 47.7	-0.1
SALR	Pechorkino, Sa	3.07	5	Pg	Pb	21 20 11.5	-1.8
SALR				Sg	Sb	21 20 49.9	-0.8
POMOR	Pomortsevo, Ku	3.14	14	Pg	Pb	21 20 14.7	+0.2
POMOR				Sg	Sb	21 20 54.6	+1.8
SEM	Semipalatinsk	3.31	255	*e*P	Pg	21 20 24.1	+1.7
	6.7nm,0.2s						
SEM				*e*S	Sg	21 21 07.4	+2.1
	74nm,0.6s						
SEM	Semipalatinsk	3.31	255	Pg	Pg	21 20 24.1	+1.7
	6.7nm,0.2s						
SEM				Lg	Lg	21 21 07.4	
	74nm,0.6s						
ZSN	Zaisan	3.93	184	*e*P	Pg	21 20 34.9	+0.9
	16nm,0.6s						
ZSN				*e*S	Sg	21 21 26.4	+1.5
	48nm,0.5s						
ZSN	Zaisan	3.93	184	Pg	Pg	21 20 34.9	+0.9
	16nm,0.6s						
ZSN				Lg	Lg	21 21 26.3	
	48nm,0.5s						
KURK	Kurchatov	4.24	264	⇓Pn	Pb	21 20 30.1	-3.2
	1.7nm,0.5s						
KURK				⇑Lg	Lg	21 21 38.3	
	28nm,0.7s						
KURBB	Kurchatov Arra	4.32	263	⇑Pn	Pb	21 20 31.8	-2.7
	3.7nm,0.2s						
KURBB				⇓Lg	Lg	21 21 43.8	
	61nm,0.6s						
MK31	Makanchi Array	4.97	204	⇑Pn	Pb	21 20 40.6	-5.2
	1.2nm,0.6s,baz=264,slow=46,SNR=44						
MK31				⇑Pg	Pg	21 20 54.8	+0.8
	2.7nm,0.5s,baz=24,slow=15,SNR=7.0						
MK31				Lg	Lg	21 22 03.8	
	12nm,0.5s,baz=30,slow=31,SNR=7.8						
MAKZ	Makanchi	5.04	207	⇓Pn	Pn	21 20 41.3	+7.1
	5.1nm,0.8s						
MAKZ				⇓Pg	Pg	21 20 56.7	+1.4
	7.4nm,1.1s						
MAKZ				⇑Lg	Lg	21 22 03.3	
	13nm,0.5s						
KAPS	Kapalarasan	7.24	215	*e*P	Pg	21 21 34.8	-2.6
	1.4nm,0.5s						
KAPS				*e*S	Sg	21 23 08.7	-2.5
	6.5nm,1.0s						
KAPS	Kapalarasan	7.24	215	Pg	Pg	21 21 34.8	-2.6
	1.2nm,0.6s						
KAPS				Lg	Lg	21 23 12.3	
	13nm,0.8s						
DJR	Jarkent	7.94	210	*e*P	Pg	21 21 49.4	-1.4
	1.1nm,0.1s						
DJR				*e*S	Sg	21 23 34.1	+0.7
	4.7nm,0.8s						
DJR	Jarkent	7.94	210	Pg	Pg	21 21 49.4	-1.4
	1.1nm,0.1s						
DJR				Lg	Lg	21 23 34.1	
	4.7nm,0.8s						

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*IDC **04** 21:23:50.4±0.7, 28°.62N×141°.22E, h0^{km}, mb4.0/17, mb1 4.1/19, mb1mx3.8/64, mbtmp4.0/19, ML3.6/2, MS3.1/2, Ms1 3.2/2, ms1mx2.5/45, Error ellipse: s-maj=32.3km s-min=12.8km az=75.0*

*NEIC **04** 21:23:54.4±1.0, 28°.79N±0°.06×141°.96E±0°.07, h39^{km}±5^{km}, mb4.6/28, Error ellipse: s-maj=9.1km s-min=8.2km az=114.0*

ISC 04 21:23:53.7±0.6, **28°.80N**±0°.05×**141°.9E**±0°.1, **h35**^{km}, **n70**, σ**1^{s}.33**/66, **mb4.5**/28, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.71	171	Pn	Pn	21 24 21.6	+0.5
	105nm,0.3s,baz=300,slow=20,SNR=13						
JCJ				Sn	Sn	21 24 40.7	-1.1
	473nm,0.3s,baz=354,slow=23,SNR=14						
JCJ	Chichijima	1.71	171		Pn	21 24 21.4	+0.2
JHJ2	Mitsune	4.65	338	Pn	Pn	21 25 02.3	+0.8
JHJ	Hachijo jima 2	4.67	338	Pn	Pn	21 25 02.3	+0.6
	11nm,0.3s,baz=60,slow=16,SNR=8.5						
JHJ				Sn	Sn	21 25 51.6	-3.1
	39nm,0.3s,baz=284,slow=23,SNR=7.2						
INU	Inuyama	7.73	329	Pn	Pn	21 25 45.0	+1.3
JGF	Kuroka	7.79	332	Pn	Pn	21 25 46.1	+1.5
MJAR	Matsushiro Arr	8.32	339	Pn	Pn	21 25 52.1	+0.2
	0.5nm,0.3s,baz=158,slow=12,SNR=21						
MJAR				Sn	Sn	21 27 24.3	-0.3
	0.2nm,0.3s,baz=185,slow=21,SNR=4.5						
MJAR	Matsushiro Arr	8.32	339		Pn	21 25 52.8	+1.0
MAJO	Matsushiro	8.32	339		Pn	21 25 52.6	+0.8
MAT	Matsushiro	8.32	339	P	Pn	21 25 53.1	+1.2
MAT				*e*S	Sn	21 27 22.3	-2.3
JMN	Monobe	8.43	308	Pn	Pn	21 25 52.9	-0.5
JWT	Wachi	8.49	321	Pn	Pn	21 25 55.6	+1.5
JMM	Marumori	9.09	355		Pn	21 26 01.6	-0.8
MDJ	Mudanjiang	18.57	332	P	P	21 28 05.5	-2.2
NACB	Ninganchiao	18.73	260	P	P	21 28 08.0	-1.5
YHNB	Yeheng	18.77	262	P	P	21 28 11.7	+1.8
YHNB				IAmb	IAmb	21 28 30.2	
	comp=Z,54nm,1.2s						
YULB	Yu-li	19.24	259	P	Pn	21 28 17.8	+1.4
YULB				IAmb	IAmb	21 28 28.7	
	comp=Z,45nm,1.4s						
SSLB	Suanglung	19.41	260	P	P	21 28 18.9	+1.9
TPUB	Ta-pu	19.85	259	Pn	P	21 28 24.0	+2.3
KLR	Kul'dur	21.83	342	P	P	21 28 42.5	-0.4
	comp=Z,2.3nm,0.6s,baz=160,slow=9.4,SNR=8.0						
H11N2	WAKE ISLAND Hy	24.49	106	T	T	21 54 47.7	
	baz=296,slow=75,SNR=61						
H11N1	WAKE ISLAND Hy	24.49	106	T	T	21 54 47.1	
	baz=296,slow=75,SNR=45						
H11N3	WAKE ISLAND Hy	24.50	106	T	T	21 54 48.3	
	baz=296,slow=75,SNR=69						
H11S3	WAKE ISLAND Hy	24.88	109	T	T	21 55 16.6	
	baz=304						
H11S1	WAKE ISLAND Hy	24.89	109	T	T	21 55 15.9	
	baz=304						
H11S2	WAKE ISLAND Hy	24.90	109	T	T	21 55 24.2	
	baz=304						
SIJI	Sorong	31.20	201	P	P	21 30 09.4	-0.4
	comp=Z,4.4nm,0.4s,baz=3.4,slow=19,SNR=4.3						
FAKI	Fak Fak	32.86	198	P	P	21 30 22.0	-2.4
FAKI				IAmb	IAmb	21 30 25.6	
	comp=Z,7.5nm,0.9s						
KKM	Kota Kinabalu	33.19	232	P	P	21 30 28.4	+1.0
SONM	Songino Array	33.32	315	P	P	21 30 27.0	-1.3
	comp=Z,0.3nm,0.6s,baz=101,slow=7.5,SNR=2.1						
SONM	Songino Array	33.32	315	P	P	21 30 26.9	-1.3
TOLI2	Tolitoli	34.11	220	P	P	21 30 35.4	+0.1
TOLI2				IAmb	IAmb	21 30 44.7	
	comp=Z,7.1nm,0.9s						
CMAR	Chiang Mai Arr	40.47	265	LR	LR	21 47 29.3	
	comp=Z,12nm,18.9s,baz=50,slow=36						
HNR	Honiara	41.82	153	LR	LR	21 49 14.0	
	comp=Z,43nm,18.7s,baz=113,slow=36						
COEN	Coen	42.52	178	P	P	21 31 46.0	+0.1
COEN				IAmb	IAmb	21 32 02.5	
	comp=Z,13nm,1.2s						
MTN	Manton Dam	42.68	196	P	P	21 31 46.7	-0.5
MTN				IAmb	IAmb	21 31 47.8	

	comp=Z,9.2nm,0.6s						
KULM	Kulim	45.48	247	P	P	21 32 08.1	-1.7
KULM				IAmb	IAmb	21 32 21.9	
	comp=Z,9.9nm,1.3s						
KNRA	Kununurra	45.99	198	P	P	21 32 13.6	-0.1
ZALV	Zalesovo Beam	48.04	318	P	P	21 32 28.9	-0.4
	comp=Z,0.7nm,0.4s,baz=104,slow=7.4,SNR=5.1						
WB0	Warramunga Arr	48.82	189	P	P	21 32 35.2	-0.4
WR0	Warramunga Arr	48.99	189	P	P	21 32 36.8	-0.1
WR0				IAmb	IAmb	21 32 37.4	
	comp=Z,5.6nm,0.8s						
WRAB	Tennant Creek	48.99	189	P	P	21 32 36.8	-0.2
WRAB				IAmb	IAmb	21 32 37.6	
	comp=Z,6.6nm,0.9s						
WB2	Warramunga Arr	49.00	189	P	P	21 32 36.6	-0.4
WB2				IAmb	IAmb	21 32 37.6	
	comp=Z,6.5nm,0.9s						
WRA	Warramunga Arr	49.00	189	P	P	21 32 36.4	-0.7
	comp=Z,2.8nm,0.5s,baz=9.7,slow=8.3,SNR=100						
WRA				PcP	PcP	21 34 01.3	+0.6
	comp=Z,0.8nm,0.7s,baz=7.5,slow=4.0,SNR=2.4						
WRA	Warramunga Arr	49.00	189	P	P	21 32 36.2	-0.8
MKAR	Makanchi Array	49.20	308	P	P	21 32 37.6	-0.8
	comp=Z,0.2nm,0.6s,baz=91,slow=9.1,SNR=4.9						
KURK	Kurchatov	51.61	314	P	P	21 32 56.5	-0.1
ASAR	Alice Springs	52.72	189	P	P	21 33 04.0	-1.0
	comp=Z,0.6nm,0.7s,baz=8.0,slow=6.3,SNR=11						
ASAR	Alice Springs	52.72	189	P	P	21 33 04.5	-0.6
KDAK	Kodiak Island	53.18	38	P	P	21 33 08.4	+0.4
KDAK				IAmb	IAmb	21 33 26.6	
	comp=Z,11nm,1.2s						
RSO	Redoubt South	53.31	34	P	P	21 33 07.4	-1.8
PSA00	Pilbara Seismi	54.40	205	P	P	21 33 16.6	-0.7
PSA00				IAmb	IAmb	21 33 31.8	
	comp=Z,9.3nm,1.4s						
ILAR	Eielson Array	56.36	29	P	P	21 33 35.7	+4.7
	comp=Z,0.5nm,1.1s,baz=264,slow=7.2,SNR=1.3						
BVAR	Borovoye Array	56.62	317	P	P	21 33 33.7	+0.6
	comp=Z,0.7nm,0.4s,baz=167,slow=6.1,SNR=5.4						
KKAR	Karatay Array	57.88	305	P	P	21 33 42.2	0.0
BARN	Barnard Glacie	58.76	34	P	P	21 33 48.0	-0.2
BARN				IAmb	IAmb	21 34 05.4	
	comp=Z,7.3nm,1.3s						
TABL	Table Mountain	59.05	34	P	P	21 33 50.2	-0.1
FORT	Forrest	60.69	194	P	P	21 34 01.0	-0.4
BBOO	Buckleboo	61.52	186	P	P	21 34 06.9	-0.2
ARU	Arti	62.92	322	P	P	21 34 16.3	0.0
	comp=Z,0.6nm,0.4s,baz=101,slow=6.5,SNR=6.7						
ARU	Arti	62.92	322	P	P	21 34 16.6	+0.3
ARU				IAmb	IAmb	21 34 23.6	
	comp=Z,5.2nm,1.1s						
ABKAR	Akbulak array	63.72	314	P	P	21 34 22.1	+0.4
ABKAR	Akbulak array	63.72	314	P	P	21 34 22.1	+0.4
AKTO	Aktyubinsk	64.63	315	P	P	21 34 28.4	+0.7
	comp=Z,1.0nm,0.5s,baz=89,slow=11,SNR=4.3						
KIRV	Kirov	67.14	325	P	P	21 34 46.1	+2.5
	comp=Z,2.6nm,0.5s,baz=59,slow=5.7,SNR=2.3						
FINES	FINESS Array B	76.31	334	P	P	21 35 39.4	+0.7
	comp=Z,4.2nm,0.9s,baz=72,slow=4.5,SNR=7.6						
HFS	Hagfors	81.76	337	P	P	21 36 10.7	+2.1
	comp=Z,4.5nm,0.9s,baz=58,slow=3.6,SNR=6.0						
NOA	NORSAR Array B	81.94	338	P	P	21 36 11.6	+2.1
	comp=Z,0.8nm,0.8s,baz=31,slow=6.1,SNR=1.5						
BRTR	Keskin Array B	84.65	313	P	P	21 36 25.5	+1.3
	comp=Z,0.4nm,0.6s,baz=72,slow=4.7,SNR=2.6						
TXAR	Lajitas Array	94.80	53	P	P	21 37 18.7	+6.4
	comp=Z,0.2nm,0.8s,baz=286,slow=3.7,SNR=1.7						

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*AEIC **04** 22:00:03.9±1.0, 53°.53N±0°.08×165°.65W±0°.10, h64^{km}±9^{km}, Error ellipse: s-maj=13.3km s-min=5.0km az=148.0*

NEIC 04 22:00:03.8±1.0**, 53°.5N**±0°.2×**165°.6W**±0°.2**, h59**^{km}±29^{km}**, ML3.5**/7**, ML2.7**/30(AEIC)**, Error ellipse: s-maj=27.9km s-min=5.4km az=154.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNV	Unalaska Valle	0.67	306		Pn	22 00 17.0	-0.6
UNV	Unalaska Valle	0.67	306		Sn	22 00 28.2	+0.6
AKBBA	Akutan Broad B	0.68	343		Pn	22 00 17.5	-0.2
AKMO	Akutan Morgan	0.69	339		Pn	22 00 17.7	0.0
AKMO					Sn	22 00 28.8	+0.7
AKSA	Akutan Strait	0.69	355		Pn	22 00 17.3	-0.5
AKSA					Sn	22 00 28.2	+0.2
AKSA	Akutan Strait	0.69	355		Pn	22 00 17.4	-0.4
AKSA					Sn	22 00 27.8	-0.2
AKUT	Akutan	0.69	351		Pn	22 00 17.7	-0.1
AKUT				Sn	Sn	22 00 28.4	+0.3
AKUT				IAML		22 00 31.7	
	comp=N,314nm,0.4s						
AKRB	Akutan Reef Bi	0.73	337		Pn	22 00 18.6	+0.2
AKLV	Akutan Long Va	0.74	343		Pn	22 00 18.2	-0.3
AKLV					Sn	22 00 29.2	-0.1
MNAT	Makushin Natee	0.78	304		Pn	22 00 18.8	-0.1
MNAT					Sn	22 00 31.1	+1.0
AKGG	Akutan Green G	0.78	342		Pn	22 00 19.0	0.0
MTBL	Makushin Table	0.83	309		Pn	22 00 19.9	+0.3
MSW	Makushin Switc	0.85	304		Pn	22 00 20.0	+0.2
MAPS	Pakushin South	0.88	294		Pn	22 00 19.9	-0.3
WESP	Westdahl Peak	1.16	26		Pn	22 00 24.4	+0.4
WECS	Westdahl Cape	1.18	24		Pn	22 00 24.4	+0.2
WESE	West Dahl East	1.18	30		Pn	22 00 24.4	+0.2
WEBT	Westdahl Beart	1.24	23		Pn	22 00 25.1	+0.1
OKTU	Okmok Mt. Tuli	1.47	268		Pn	22 00 28.0	0.0
OKSO	Okmok South	1.54	267		Pn	22 00 28.4	-0.5
SSLS	Shishaldin Sou	1.57	36		Pn	22 00 29.8	+0.4
SSBA	Shishaldin	1.58	33		Pn	22 00 29.8	+0.3
SSLN	Shishaldin Nor	1.65	34		Pn	22 00 30.8	+0.3
ISNN	Isanotski Nort	1.75	37		Pn	22 00 32.0	+0.3
FALS	False Pass	1.90	41	Pn	Pn	22 00 34.1	+0.4
NIKH	Nikolski High	2.02	258		Pn	22 00 35.3	-0.2
SDPT	Sand Point	3.54	56	Pn	Pn	22 00 56.4	+0.2
SDPT				IAML		22 02 09.8	
	comp=N,106nm,3.5s						
CNBA	Chernabura Isl	3.79	66	Pn	Pn	22 00 59.6	+0.1
CNBA				IAML		22 02 53.9	
	comp=N,69nm,3.1s						
CNBA				IAML		22 03 11.3	
	comp=E,85nm,3.8s						
CHGN	Chignik	5.03	53	Pn	Pn	22 01 14.8	-1.7
CHGN				IAML		22 02 53.2	
	comp=E,45nm,3.0s						
ADK	Adak	6.93	261	Pn	Pn	22 01 42.9	+0.4
P18K	Big Mountain,	8.26	40	Pn	Pn	22 01 59.7	-1.1
O18K	Koktuh Hills	8.59	38	Pn	Pn	22 02 03.7	-1.5
Q19K	Cape Douglas,	8.62	46	Pn	Pn	22 02 05.8	+0.1

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*IDC **04** 22:03:48.7±7.4, 17°.85N×105°.46W, h0^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.7/34, mbtmp3.5/5, ML2.8/1, MS3.1/3, Ms1 3.1/3, ms1mx2.9/32, Error ellipse: s-maj=139.7km s-min=86.0km az=130.0*

*MEX **04** 22:03:55.5±0.9, 18°.79N×106°.39W, h16^{km}±437^{km}, MD3.8*

ISC 04 22:03:55.9±3.4**, 18°.7N**±0°.2×**105°.88W**±0°.09**, h0**^{km}±21^{km}**, n15, σ1^{s}18**/18**, mb3.7**/4**, MS3.1**/3**, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	Chamela	1.14	44	*i* P	Pb	22 04 17.1	-1.4
CJM				*i* S	Sn	22 04 34.9	-0.5
CDAR	Ciudad de Arme	1.79	81	*e*P	Pb	22 04 28.6	-0.9
CDAR				*i* S	Sg	22 04 54.4	+0.9
R15V		1.86	74	*i* P	Pb	22 04 30.2	-0.7
R15V				*i* S	Sg	22 04 56.7	+0.9
COIG	Colima	2.13	76	*e*P	Pb	22 04 34.2	-1.3
COIG				*e*S	Sg	22 05 03.8	-0.6
MNGA	Volcan de Coli	2.28	69	*e*P	Pb	22 04 36.3	-1.7
MNGA				*e*S	Sb	22 05 07.3	+0.4
EZ5V		2.30	69	*e*P	Pb	22 04 37.8	-0.6
EZ5V				*e*S	Sg	22 05 10.4	+0.6
JUBC	Volcan de Coli	2.34	69	*e*P	Pb	22 04 38.4	-0.7
JUBC				*e*S	Sb	22 05 09.9	+1.2
TXAR	Lajitas Array	10.80	10	Pn	Pn	22 06 37.2	+5.3
	0.0nm,0.3s,baz=182,slow=13,SNR=5.4						
JTS	Las Juntas de	21.89	109	LR	LR	22 15 39.9	
	comp=Z,38nm,18.8s,slow=34						
NVAR	Mina Array Bea	22.46	334	P	P	22 08 59.3	+2.4
	2.5nm,1.0s,baz=153,slow=11,SNR=8.6						
PDAR	Pinedale Array	24.22	353	P	P	22 09 14.7	+0.1
	0.3nm,0.8s,baz=175,slow=11,SNR=2.2						
YBH	Yreka Blue Hor	27.10	332	LR	LR	22 19 54.7	
	comp=Z,55nm,20.9s,baz=244,slow=34						
NNA	Nana	41.81	135	LR	LR	22 25 56.9	
	comp=Z,30nm,18.8s,baz=276,slow=32						
INK	Inuvik	52.58	347	P	P	22 13 10.7	-0.2
	1.1nm,0.9s,baz=169,slow=5.2,SNR=4.1						
ILAR	Eielson Array	53.55	340	P	P	22 13 17.5	-0.7
	0.9nm,1.0s,baz=156,slow=6.8,SNR=6.7						

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*TUL **04** 22:17:57.8±1.3, 36°.61N±0°.02×98°.05W±0°.05, h6^{km}±7^{km}, ML3.2, mb_Lg2.9/38(NEIC), Error ellipse: s-maj=6.0km s-min=2.5km az=84.0*

*NEIC **04** 22:17:58.1±1.2, 36°.60N±0°.01×98°.03W±0°.05, h2^{km}±7^{km}, Error ellipse: s-maj=6.0km s-min=2.1km az=89.0*

*ANF **04** 22:17:58.1±0.4, 36°.59N×98°.05W, h6^{km}, ML3.4/6, Error ellipse: s-maj=4.1km s-min=3.2km az=11.0*

ISC 04 22:17:58.5±0.9**, 36°.61N**±0°.02×**98°.04W**±0°.02**, h7**^{km}±8^{km}**, n62, σ1^{s}14**/71**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.12	157	Pg	Pg	22 18 00.8	-0.3
CROK				Sg	Sg	22 18 02.8	0.0
OK032	Salt Plains WL	0.23	325	Pg	Pg	22 18 02.7	-0.5
OK032				Sg	Sg	22 18 06.3	-0.1
GC02	Grant County #	0.28	31	Pg	Pg	22 18 03.8	-0.2
GC02				Sg	Sg	22 18 08.0	+0.2
KAN14	Manchester OK	0.35	10		Pg	22 18 04.9	-0.5
KAN14				Sg	Sg	22 18 10.0	0.0
KAN17	Caldwell West	0.48	27	Pg	Pg	22 18 07.4	-0.5
KAN17				Sg	Sg	22 18 14.3	+0.1
KAN10	Anthony SW Sta	0.51	355	Pg	Pg	22 18 07.9	-0.5
KAN10				Sg	Sg	22 18 15.1	0.0
KAN01	Argonia South	0.58	23	Pg	Pg	22 18 09.3	-0.5
KAN01				Sg	Sg	22 18 17.1	-0.3
KAN13	South Haven SW	0.60	48	Pg	Pg	22 18 09.6	-0.6
KAN13				Sg	Sg	22 18 17.9	-0.1
KAN16	Harper SW Stat	0.61	358	Pg	Pg	22 18 09.8	-0.6
KAN16				Sg	Sg	22 18 18.3	-0.1
KAN08	Anthony NE Sta	0.62	5		Pg	22 18 09.9	-0.5
KAN08				Sg	Sg	22 18 18.3	-0.2
KAN09	Caldwell North	0.62	33	Pg	Pg	22 18 10.1	-0.4
KAN09				Sg	Sg	22 18 18.7	0.0
KAN06	Argonia West S	0.65	13		Pg	22 18 10.4	-0.7
BLOK	Blackwell	0.68	77	Pg	Pg	22 18 11.1	-0.5
KAN12	Harper NE Stat	0.68	3	Pg	Pg	22 18 11.1	-0.6
U32A	Winter Ranch,	0.81	254		Pg	22 18 12.9	-1.1
U32A	Winter Ranch,	0.81	254	P	Pg	22 18 13.1	-0.9
	baz=73						
U32A				S	Sg	22 18 24.1	-0.4
	baz=73						
OK029	Liberty Lake	0.94	150	Pg	Pg	22 18 15.8	-0.8
BCOK	Bluff Creek, N	1.02	160	Pg	Pg	22 18 16.9	-1.2
BCOK				IAmb_Lg		22 18 30.1	
	comp=Z,63nm,1.0s						
OK031	S. Brethren Rd	1.17	124	Pg	Pg	22 18 20.2	-0.8
OK025	Westminster Rd	1.18	151		Pg	22 18 20.0	-1.1
OK030	Cody Creek RV	1.23	124		Pg	22 18 21.0	-1.1
OK034	N. Norfolk Rd.	1.23	119		Pg	22 18 20.9	-1.2
T35A	Sooner Cattle	1.27	76	Pn	Pg	22 18 21.7	-1.1
T35B	Sooner Cattle	1.27	76	P	Pg	22 18 21.7	-1.1
	baz=257						
T35B				S	Sg	22 18 38.8	-0.4
	baz=257						
OKCFA	Oklahoma City	1.29	158		Pg	22 18 21.6	-1.6
OKCFA	Oklahoma City	1.29	158	S	Sb	22 18 39.5	-0.3
	baz=338						
OKCSW	OKLAHOMA CITY	1.30	158		Pg	22 18 22.2	-1.3
R32A	Long Quarter,	1.88	344		Pn	22 18 32.0	+0.7
R32A	Long Quarter,	1.88	344	P	Pn	22 18 32.0	+0.7
	baz=164						
R32A				S	Sb	22 18 57.1	0.0
	baz=164						
TUL1	Leonard	1.95	110		Pn	22 18 32.3	+0.2
TUL1				IAmb_Lg		22 19 04.3	
	comp=Z,61nm,0.8s						
TUL1	Leonard	1.95	110	P	Pn	22 18 32.8	+0.7
	baz=292						
TUL1				S	Sb	22 18 59.2	+0.3
	baz=292						
X34A	Smith Ranch, M	2.01	175		Pn	22 18 33.6	+0.6
CBKS	Cedar Bluff	2.58	329	Pn	Pn	22 18 41.1	+0.4
CBKS	Cedar Bluff	2.58	329	S	Sn	22 19 13.6	+1.2
	baz=148						
LOOK	Love County	2.71	165		Pn	22 18 42.4	-0.1
KSU1	Kansas State U	2.73	24	Pg	Pg	22 18 49.2	-1.6
KSU1				IAmb_Lg		22 19 30.7	
	comp=Z,46nm,0.8s						
U38A	Gravette	2.95	92		Pn	22 18 46.2	+0.4
U38A				IAmb_Lg		22 19 33.2	
	comp=Z,26nm,0.7s						
X37A	Clayton	2.97	132	Pn	Pn	22 18 44.7	-1.4
X37A				IAmb_Lg		22 19 33.5	
	comp=Z,24nm,0.8s						
HHAR	Hobbs	3.32	94		Pn	22 18 50.4	-0.6
AMTX	Amarillo	3.43	241		Pb	22 18 59.9	+0.2
W39A	Magazine	3.73	111	Pg	Pb	22 19 05.4	+0.6
W39A				IAmb_Lg		22 20 06.0	
	comp=Z,28nm,0.7s						
S39A	Bolivar	3.92	73		Pn	22 18 59.0	-0.2
S39A				IAmb_Lg		22 20 06.8	
	comp=Z,32nm,0.7s						
S39A	Bolivar	3.92	73	P	Pn	22 18 58.5	-0.7
	baz=256						
MIAR	Mount Ida	4.18	118	IAmb_Lg		22 20 20.4	
	comp=Z,18nm,0.7s						
U40A	Yellville	4.19	92	Pn	Pn	22 19 02.2	-0.7
ABTX	Abilene, Hawle	4.19	199	Pg	Pb	22 19 12.7	0.0
KSCO	Kaye Shedlock'	4.35	305	IAmb_Lg		22 20 20.2	
	comp=Z,21nm,0.7s						
P38A	Dawn	4.66	48	Pn	Pn	22 19 09.2	-0.1
P38A				Pg	Pg	22 19 24.5	-3.3
P38A				IAmb_Lg		22 20 28.4	
	comp=Z,24nm,0.8s						
MGMO	Mountain Grove	4.66	82	IAmb_Lg		22 20 25.9	
	comp=Z,14nm,0.8s						
X40A	Basin Creek Fa	4.75	115	IAmb_Lg		22 20 29.9	
	comp=Z,24nm,0.7s						
BGNE	Belgrade	4.79	359	Pn	Pn	22 19 10.4	-0.8
R40A	Maddies Statio	4.89	68	Pn	Pn	22 19 11.7	-0.8
R40A				IAmb_Lg		22 20 41.1	
	comp=Z,19nm,0.9s						
WLAR	White Oak Lake	4.98	124	IAmb_Lg		22 20 44.7	
	comp=Z,30nm,1.1s						
T25A	Trinidad	5.13	278		Pb	22 19 32.6	+3.8
OGNE	Ogallala	5.33	325	Pn	Pn	22 19 19.1	+0.4
OGNE					Pg	22 19 36.9	-3.8
LCAR	Lake Charles	5.59	94	Pn	Pn	22 19 22.6	+0.5
T42A	Van Buren	5.59	84	Pn	Pn	22 19 22.4	+0.3
T42A				IAmb_Lg		22 21 11.0	
	comp=Z,10nm,0.7s						
CCM	Cathedral Cave	5.60	73	Pn	Pn	22 19 21.2	-1.1
CCM				Pg	Pb	22 19 40.5	+3.8
CCM				IAmb_Lg		22 21 03.5	
	comp=Z,17nm,0.8s						
N38A	Joes South For	5.62	41	IAmb_Lg		22 20 59.6	
	comp=Z,28nm,0.7s						
435B	Jarrell	5.83	176	IAmb_Lg		22 21 09.4	
	comp=Z,14nm,0.7s						
JFWS	Jewell Farm	8.69	41	IAmb_Lg		22 22 32.9	
	comp=Z,14nm,0.7s						
RWWY	Rawlins	8.74	308	IAmb_Lg		22 22 32.2	
	comp=Z,12nm,0.8s						

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*BJI **04** 22:24:50.3±0.0, 47°.72S×85°.13E, h10^{km}, mB6.9/75, mb6.2/78, Ms6.8/99, Ms7 6.5/94*

*IDC **04** 22:24:52.6±0.3, 47°.61S×85°.25E, h0^{km}, mb5.8/29, mb1 5.8/29, mb1mx5.7/32, mbtmp5.7/29, MS6.6/22, Ms1 6.6/22, ms1mx6.4/27, Error ellipse: s-maj=10.3km s-min=8.6km az=159.0*

*MOS **04** 22:24:53.8±1.2, 47°.51S×85°.25E, h15^{km}, mb6.5/35, MS6.6/49, Error ellipse: s-maj=11.5km s-min=6.3km az=92.5*

*NEIC **04** 22:25:00.1±2.9, 47°.62S±0°.07×85°.1E±0°.1, h35^{km}±1^{km}, mb6.5/216, Ms_20 6.9/254, Mwc7.1/34, Mww7.1, Error ellipse: s-maj=12.7km s-min=11.7km az=130.0*

*GCMT **04** 22:25:08.1±0.1, 47°.74S×85°.23E, h29^{km}, MW7.1/159, Moment Tensor Solution. s159,c404; s157,c760; Duration: 8^{s}6 Moment tensor: Scale 10^{19}Nm; M_{rr}-4.44±.02; $M_{\theta\theta}$-0.52±.02; $M_{\phi\phi}$4.96±.02; $M_{r\theta}$-1.30±.07; $M_{\theta\phi}$2.40±.01; $M_{\phi r}$1.04±.06; Best double couple: $M_0$5.51400×10^{19} NP1:ϕ_s42.00000°, δ47.00000°, λ-58.00000°. NP2:ϕ_s179.00000°, δ52.00000°, λ-120.00000°. Principal axes: T 5.8890, Plg3.0000°, Azm290.0000°; N -0.7490, Plg23.0000°, Azm199.0000°; P -5.1380, Plg67.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **04** 22:25:09, 47°.84S×85°.18E, h36^{km}, Moment Tensor Solution. Duration: 30^{s}0 Moment tensor: Scale 10^{19}Nm; M_{rr}-4.01; $M_{\theta\theta}$-1.28; $M_{\phi\phi}$5.29; $M_{r\theta}$-1.76; $M_{\theta\phi}$2.88; $M_{\phi r}$0.45; Fault plane solution: $M_0$5.87000×10^{19} NP1: ϕ_s172.00000°, δ52.00000°, λ-132.00000°. NP2: ϕ_s49.00000°, δ54.00000°, λ-48.00000°. Principal axes: T 6.3796, Plg1.0000°, Azm111.0000°; N -1.2045, Plg33.0000°, Azm202.0000°; P -5.1751, Plg57.0000°, Azm19.0000°;*

*NEIC **04** 22:25:16.7, 47°.77S×85°.09E, h29^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-5.11; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$5.26; $M_{r\theta}$-2.13; $M_{\theta\phi}$2.41; $M_{\phi r}$0.80; Fault plane solution: $M_0$6.15000×10^{19} NP1:ϕ_s178.57000°, δ49.76000°, λ-122.46000°. NP2:ϕ_s43.13000°, δ49.90000°, λ-57.61000°. Principal axes: T 6.1799, Plg0.0000°, Azm111.0000°; N -0.0522, Plg24.0000°, Azm201.0000°; P -6.1277, Plg66.0000°, Azm21.0000°;*

ISC 04 22:24:57.1±0.2**, 47°.68S**±0°.03×**85°.31E**±0°.03**, h26**^{km}±1^{km}**, h26**^{km}**:pP-P, n2271, σ1^{s}74**/2526**, mb6.5**/284**, MS6.8**/221**, 118C-221D, Fault plane solution: NP1:**ϕ_s35.21795°, δ69.10264°, λ-41.73405°. **NP2:**ϕ_s142.86820°, δ51.54598°, λ-152.90375°. **Principal axes:** T Plg10.8080°, Azm92.7245°**;** N Plg44.1992°, Azm193.4231°**;** P Plg43.7856°, Azm352.1812°**; Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAF	Port-aux-Franc	10.16	255	P	Pn	22 27 15.4	-5.7
PAF	Port-aux-Franc	10.16	255	⇑P	Pn	22 27 13.5	-7.6
PAF	Port-aux-Franc	10.16	255	Pn	Pn	22 27 15.3	-5.8
AIS	Amsterdam Isla	11.40	327	⇑P	Pn	22 27 41.8	+3.7
AIS	Amsterdam Isla	11.40	327	Pn	Pn	22 27 37.1	-0.9
CRZF	Crozet Islands	22.73	261	⇑P	P	22 29 55.8	-1.1
CRZF	Crozet Islands	22.73	261	P	P	22 29 55.5	-1.4
CRZF				IAmb	IAmb	22 30 06.8	
	comp=Z,5μm,1.9s						
CRZF				IAMs_20	IAMs_20	22 36 37.3	
	comp=Z,255μm,18.0s						
CASY	Casey	22.86	154	⇓P	P	22 29 59.0	+0.9
CASY	Casey	22.86	154	P	P	22 29 59.2	+1.1
CASY				IAmb	IAmb	22 30 12.0	
	comp=Z,2μm,1.1s						
CASY	Casey	22.86	154	IAMs_20	IAMs_20	22 36 33.9	
	comp=Z,487μm,18.0s						
MAW	Mawson	23.04	202	P	P	22 29 59.0	-0.8
	comp=Z,243nm,1.0s,baz=38,slow=14,SNR=63						
MAW				S	S	22 34 12.4	+3.6
	comp=Z,77nm,1.0s,baz=145,slow=14,SNR=3.0						
MAW				LR	LR	22 37 32.6	
	comp=Z,1186μm,19.5s,baz=31,slow=33						
MAW	Mawson	23.04	202	P	P	22 29 58.6	-1.3
	baz=23						
MAW	Mawson	23.04	202	⇑P	P	22 29 58.6	-1.3
MAW	Mawson	23.04	202	P	P	22 29 58.3	-1.6
H01W2	Cape Leeuwin H	24.98	70	P	P	22 30 21.5	+3.3
	baz=215,slow=14,SNR=6.7						
H01W2				T	T	22 56 28.1	
	baz=229,slow=75,SNR=138						
H01W3	Cape Leeuwin H	24.99	70	P	P	22 30 21.8	+3.5
	baz=215,slow=14,SNR=8.5						
H01W3				T	T	22 56 34.5	
	baz=229,slow=75,SNR=247						
H01W1	Cape Leeuwin H	25.00	70	P	P	22 30 21.5	+3.1
	baz=215,slow=14,SNR=11						
H01W1				T	T	22 56 27.2	
	baz=229,slow=75,SNR=179						
MUN	Mundaring	28.20	67	P	P	22 30 48.0	+0.5
	baz=28,SNR=26						
KLBR	Kellerberrin	29.43	69	P	P	22 30 58.5	0.0
	baz=30,SNR=18						
BLDU	Ballidu	29.45	66	P	P	22 30 58.7	0.0
	baz=30,SNR=37						
MORW	Morawa	30.14	63	P	P	22 31 05.6	+0.9
	baz=30,SNR=10						
MORW	Morawa	30.14	63	⇓P	P	22 31 05.2	+0.5
MORW	Morawa	30.14	63	P	P	22 31 04.5	-0.3
SYO	Syowa Base	30.95	210	⇓*i*X	P	22 31 10.0	-1.4
SYO	Syowa Base	30.95	210	⇑*i*X	P	22 31 21.4	+10
MEEK	Meekatharra	33.46	63	P	P	22 31 33.6	-0.4
	baz=34,SNR=44						
GIRL	Giralia	34.05	53	P	P	22 31 39.9	+0.9
	baz=34,SNR=6.6						
GIRL	Giralia	34.05	53	⇓P	P	22 31 40.0	+0.9
GIRL	Giralia	34.05	53	P	P	22 31 39.4	+0.4
GIRL				IAmb	IAmb	22 32 00.9	
	comp=Z,1μm,1.4s						
RER	Riviere de l'E	35.60	308	P	P	22 31 53.8	+1.2
	SNR=21						
RER	Riviere de l'E	35.60	308	⇓P	P	22 31 53.5	+1.0
RER	Riviere de l'E	35.60	308	P	P	22 31 51.9	-0.7
FORT	Forrest	36.64	78	P	P	22 32 01.8	+0.6
	baz=37,SNR=22						
FORT	Forrest	36.64	78	⇓P	P	22 32 02.0	+0.8
FORT	Forrest	36.64	78	P	P	22 32 01.8	+0.6
FORT				IAmb	IAmb	22 32 15.6	
	comp=Z,787nm,1.5s						
COCO	West Island	36.68	19	P	P	22 32 01.7	+0.1
COCO				pmax	pmax		
	comp=Z,2μm,1.5s						
COCO	West Island	36.68	19	P	P	22 32 01.7	+0.1
PSA00	Pilbara Seismi	38.04	59	P	P	22 32 12.9	-0.3
PSA00				IAmb	IAmb	22 32 28.5	
	comp=Z,1μm,1.6s						
PSA00	Pilbara Seismi	38.04	59	P	P	22 32 12.8	-0.4
PSA00				IAmb	IAmb	22 32 17.2	
	comp=Z,756nm,1.4s						
MBWA	Marble Bar	38.30	58	⇓P	P	22 32 15.2	-0.2
VOI	Vohitsoka	40.15	296	P	P	22 32 33.4	+2.3
	SNR=40						
VOI	Vohitsoka	40.15	296	⇑P	P	22 32 29.9	-1.1
VOI	Vohitsoka	40.15	296	P	P	22 32 29.2	-1.8
VOI	Vohitsoka	40.15	296	P	P	22 32 30.8	-0.3
NVL	N'lazarevskaya	40.61	209	⇓*i*P	P	22 32 40.4	+6.3
NVL				*i*		22 34 38.5	
NVL				*e*S	S	22 38 44.5	+2.8
NVL				*e*SS	SnSn	22 41 47.7	-0.4
NVL				*e*SSS	SSS	22 42 14.0	
NVL				pmax	pmax		
	comp=Z,1μm,1.2s						
WRKA	Warakurna	40.65	72	P	P	22 32 34.9	-0.2
	baz=41,SNR=157						
WRKA	Warakurna	40.65	72	⇓P	P	22 32 34.9	-0.2
SKRH	Sakahara	40.73	293	*i* P	P	22 32 37.0	+1.3
BBOO	Buckleboo	40.75	88	P	P	22 32 35.3	-0.4
	baz=41,SNR=74						
BBOO	Buckleboo	40.75	88	P	P	22 32 35.4	-0.3
XMIS	Christmas Isla	40.85	32	P	P	22 32 36.9	+0.2
XMIS				IAmb	IAmb	22 32 58.5	
	comp=Z,973nm,1.4s						
VNDA	Vanda	41.09	161	P	P	22 32 38.1	+0.1
VNDA				pmax	pmax		
	comp=Z,268nm,0.9s						
VNDA	Vanda	41.09	161	P	P	22 32 38.1	+0.1
H08S2	Diego Garcia H	41.37	341	P	P	22 32 40.4	-0.2
	baz=143,slow=3.2,SNR=99						
H08S2				T	T	23 17 12.7	
	baz=167,slow=76,SNR=286						
H08S1	Diego Carcia H	41.37	341	P	P	22 32 40.3	-0.3
	baz=143,slow=3.2,SNR=55						
H08S1				T	T	23 16 58.2	
	baz=167,slow=76,SNR=261						
H08S3	Diego Garcia H	41.38	341	P	P	22 32 40.4	-0.4
	baz=143,slow=3.2,SNR=88						
H08S3				T	T	23 16 55.8	
	baz=167,slow=76,SNR=106						
DGAR	Diego Garcia	41.60	341	*ce*P	P	22 32 41.6	-1.2
DGAR				pmax	pmax		
	comp=Z,2μm,1.5s						
DGAR				MLR	MLR		
	comp=Z,27μm,15.0s						
DGAR	Diego Garcia	41.60	341	P	P	22 32 42.3	-0.5
DGAR	Diego Garcia	41.60	341	⇑P	P	22 32 42.4	-0.5
DGAR	Diego Garcia	41.60	341	P	P	22 32 42.4	-0.5
DGAR				IAmb	IAmb	22 32 57.5	

	comp=Z,2µm,1.3s						
ABPO	Ambohimpanom	42.10	299	*i* P	P	22 32 53.8	+6.7
SBA	Scott Base	42.12	162	P	P	22 32 47.1	+0.7
SBA				pmax	pmax		
	comp=Z,455nm,1.1s						
SBA				MLR	MLR		
	comp=Z,356µm,19.0s						
SBA	Scott Base	42.12	162	P	P	22 32 47.1	+0.7
HTT	Hallett	42.31	90	P	P	22 32 48.3	-0.3
	baz=42,SNR=50						
HTT	Hallett	42.31	90	⇑P	P	22 32 48.5	-0.2
ARPS	Mount Arapiles	42.38	96	P	P	22 32 49.7	+0.6
	baz=42,SNR=35						
QSPA	South Pole Qui	42.47	180	P	P	22 32 49.3	-0.4
	comp=Z,461nm,0.9s,baz=305,slow=5.4,SNR=143						
TAU	Tasmania Unive	42.85	107	P	P	22 32 53.0	+0.2
TAU				pmax	pmax		
	comp=Z,1µm,1.5s						
TAU				MLR	MLR		
	comp=Z,224µm,20.0s						
TAU	Tasmania Unive	42.85	107	⇑P	P	22 32 53.5	+0.7
TAU	Tasmania Unive	42.85	107	P	P	22 32 53.0	+0.2
TAU				IAmb	IAmb	22 33 03.8	
	comp=Z,1µm,1.5s						
TAU	Tasmania Unive	42.85	107	IAMs_20	IAMs_20	22 46 20.6	
	comp=Z,224µm,20.0s						
MOO	Moorlands	42.99	107	P	P	22 32 54.9	+0.9
	baz=43,SNR=8.7						
CNJI	Cibinong	44.32	32	P	P	22 33 05.4	+0.6
	comp=Z,66µmcomp=Z,16µmcomp=Z,1µm,1.4s						
CMJI	Cimerak	44.37	34	P	P	22 33 06.7	+1.5
	comp=Z,39µmcomp=Z,11µmcomp=Z,595nm,1.4s						
TOO	Toolangi	44.39	100	P	P	22 33 05.9	+0.6
	baz=44,SNR=41						
TOO	Toolangi	44.39	100	P	P	22 33 05.8	+0.5
TOO				pmax	pmax		
	comp=Z,894nm,1.6s						
TOO	Toolangi	44.39	100	⇓P	P	22 33 06.2	+0.9
TOO	Toolangi	44.39	100	P	P	22 33 05.8	+0.5
TOO				IAmb	IAmb	22 33 17.2	
	comp=Z,894nm,1.6s						
CGJI	Cibinong	44.47	30	P	P	22 33 06.4	+0.3
	comp=Z,82µmcomp=Z,15µmcomp=Z,958nm,1.6s						
MCQ	Macquarie Isla	44.78	127	P	P	22 33 07.9	-0.1
	baz=45,SNR=4.9						
MCQ	Macquarie Isla	44.78	127	P	P	22 33 08.0	-0.1
MCQ				pmax	pmax		
	comp=Z,449nm,1.0s						
MCQ	Macquarie Isla	44.78	127	P	P	22 33 08.0	-0.1
DBJI	Dramaga	44.89	31	P	P	22 33 10.6	+1.2
	comp=Z,85µmcomp=Z,39µmcomp=Z,2µm,1.4s						
LEM	Lembang	44.94	32	P	P	22 33 11.6	+1.5
	comp=Z,1µm,1.1s,baz=183,slow=9.9,SNR=85						
STKA	Stephens Creek	45.05	91	P	P	22 33 10.2	-0.3
	comp=Z,176nm,1.1s,baz=224,slow=4.9,SNR=97						
STKA				PcP	PcP	22 34 50.8	-0.4
	comp=Z,59nm,0.9s,baz=250,slow=3.3,SNR=1.8						
STKA				S	S	22 39 52.4	+4.6
	comp=Z,2.2nm,0.7s,baz=24,slow=20,SNR=0.6						
STKA				LR	LR	22 48 17.7	
	comp=Z,148µm,21.1s,baz=221,slow=31						
STKA	Stephens Creek	45.05	91	P	P	22 33 10.3	-0.3
	baz=45,SNR=167						
STKA	Stephens Creek	45.05	91	P	P	22 33 10.3	-0.3
UGM	Wanagama	45.05	37	P	P	22 33 11.9	+1.1
	comp=Z,82µmcomp=Z,29µmcomp=Z,2µm,1.2s						
UGM	Wanagama	45.05	37	P	P	22 33 10.9	+0.2
SBV	Sambava	45.06	307	P	P	22 33 13.4	+2.7
	SNR=34						
SBV	Sambava	45.06	307	⇓P	P	22 33 10.8	0.0
SBV	Sambava	45.06	307	P	P	22 33 12.2	+1.4
SNAA	Sanae	45.07	207	P	P	22 33 10.0	-0.4
SNAA	Sanae	45.07	207	P	P	22 33 10.0	-0.4
	comp=Z,113nm,1.0s,baz=117,slow=8.7,SNR=90						
SNAA	Sanae	45.07	207	*ce*P	P	22 33 09.3	-1.1
SNAA				pmax	pmax		
	comp=Z,958nm,1.4s						
SNAA				MLR	MLR		
	comp=Z,146µm,16.0s						
SNAA	Sanae	45.07	207	⇓P	P	22 33 09.1	-1.3
SNAA	Sanae	45.07	207	P	P	22 33 09.1	-1.3
SNAA				IAmb	IAmb	22 33 22.8	
	comp=Z,1µm,1.4s						
SNAA				IAMs_20	IAMs_20	22 50 12.1	
	comp=Z,123µm,18.0s						
SBJI	Serang	45.08	30	P	P	22 33 12.5	+1.6
	comp=Z,36µmcomp=Z,21µmcomp=Z,1µm,1.6s						
KASI	Kota Agung	45.11	27	P	P	22 33 12.5	+1.4
	comp=Z,64µmcomp=Z,12µmcomp=Z,268nm,1.3s						
TNG	Tangerang	45.21	31	P	pP	22 33 13.4	-5.2
	comp=Z,22µmcomp=Z,1µm,1.5s						
TNG				P	P	22 33 12.9	+1.0
	comp=Z,83µmcomp=Z,33µmcomp=Z,2µm,1.5s						
ASAR	Alice Springs	45.25	76	P	P	22 33 11.8	-0.5
	comp=Z,165nm,0.9s,baz=223,slow=6.6,SNR=220						
ASAR				PcP	PcP	22 34 51.6	-0.4
	comp=Z,62nm,0.8s,baz=213,slow=2.7,SNR=3.0						
ASAR				S	S	22 39 55.0	+4.1
	comp=Z,1.9nm,0.8s,baz=228,slow=17,SNR=1.3						
ASAR				PKiKP	PKiKP	22 41 48.8	-1.2
	comp=Z,1.6nm,0.7s,baz=172,slow=1.0,SNR=1.9						
ASAR				LR	LR	22 49 11.9	
	comp=Z,66µm,21.8s,baz=226,slow=32						
ASAR				PKPPKP	P'P'df	23 04 27.4	-20
	comp=Z,2.8nm,1.1s,baz=76,slow=2.1,SNR=6.0						
ASAR				P4KPbc		23 11 01.1	
	comp=Z,1.5nm,0.8s,baz=220,slow=4.0,SNR=11						
ASAR	Alice Springs	45.25	76	P	P	22 33 11.5	-0.8
LWLI	Liwa	45.45	27	P	P	22 33 15.1	+1.1
	comp=Z,13µmcomp=Z,1µm,1.6s						
BLSI	Bandar Lampung	45.49	28	P	P	22 33 16.4	+2.2
	comp=Z,58µmcomp=Z,18µmcomp=Z,930nm,1.7s						
SMRI	Semarang	45.81	36	⇓P	P	22 33 18.1	+1.4
SMRI	Semarang	45.81	36	P	P	22 33 18.4	+1.7
	comp=Z,81µmcomp=Z,33µmcomp=Z,880nm,0.7s						
SMRI	Semarang	45.81	36	P	P	22 33 17.3	+0.6
SMRI				IAmb	IAmb	22 33 33.7	
	comp=Z,1µm,1.2s						
KLI	Kotabumi	45.84	28	P	P	22 33 18.7	+1.7
	comp=Z,71µmcomp=Z,33µmcomp=Z,2µm,1.6s						
KLSI		45.97	27	P	P	22 33 18.5	+0.5
	comp=Z,24µmcomp=Z,12µmcomp=Z,529nm,1.5s						
MDSI	Maura Dua	45.99	27	P	P	22 33 19.1	+1.0
	comp=Z,40µmcomp=Z,8µmcomp=Z,337nm,1.1s						
POGA	Pongola	46.10	276	*i* P	P	22 33 19.4	+0.4
JAGI	Jajag, Banyuwa	46.10	41	⇓P	P	22 33 18.3	-0.7
JAGI	Jajag, Banyuwa	46.10	41	P	P	22 33 19.2	+0.2
	comp=Z,77µmcomp=Z,17µmcomp=Z,1µm,1.4s						
JAGI	Jajag, Banyuwa	46.10	41	IAmb	IAmb	22 33 23.5	
	comp=Z,1µm,1.1s						
IGBI	Denpasar	46.24	43	P	P	22 33 20.7	+0.6
	comp=Z,39µmcomp=Z,12µmcomp=Z,1µm,1.3s						
KSI	Kapahiang	46.33	24	P	P	22 33 22.7	+1.9
	comp=Z,686nm,1.7s						
DNP	Denpasar	46.40	43	P	P	22 33 23.3	+2.0
	comp=Z,34µmcomp=Z,1µm,1.3s						
LHSI	Lahat	46.42	25	P	P	22 33 23.0	+1.5
	comp=Z,1µm,2.4s						
CNG	Changalane	46.47	278	*i* P	P	22 33 22.0	+0.1
CNG	Changalane	46.47	278	*i* P	P	22 33 22.0	+0.1
PPSI	Pulau Pagai	46.52	20	P	P	22 33 23.9	+1.7
	comp=Z,71µmcomp=Z,28µmcomp=Z,2µm,1.6s						
UWJI	Ujung Watu	46.58	36	P	P	22 33 24.2	+1.4
	comp=Z,17µmcomp=Z,1µm,1.1s						
VNA2	Neumayer--Watz	46.71	207	P	P	22 33 22.9	-0.3
	baz=104,slow=7.0						
MASI	Maura Aman, Be	46.72	24	P	P	22 33 24.8	+0.9
	comp=Z,69µmcomp=Z,46µmcomp=Z,2µm,1.3s						
SOE	Somerset East	46.89	266	*i* P	P	22 33 27.4	+2.2
SRBI	Singaraja	46.92	43	P	P	22 33 27.1	+1.7
	comp=Z,74µmcomp=Z,18µmcomp=Z,491nm,1.2s						
VNA1	Neumayer--Stat	47.08	207	P	P	22 33 25.9	-0.2
MILA	Mila	47.11	101	P	P	22 33 28.6	+1.8
	baz=47,SNR=20						
MILA	Mila	47.11	101	⇑P	P	22 33 28.1	+1.3
VNA3	Neumayer Olymp	47.27	206	P	P	22 33 28.2	+0.6
KMMI	Kalianget	47.28	40	P	P	22 33 29.1	+0.9
	comp=Z,76µmcomp=Z,27µmcomp=Z,934nm,1.9s						
PLAI	Plampang	47.48	46	P	P	22 33 29.9	+0.1
	comp=Z,89µmcomp=Z,22µmcomp=Z,1µm,1.2s						
KRJI	Kerinci	47.52	22	P	P	22 33 32.0	+1.8
	comp=Z,83µmcomp=Z,42µmcomp=Z,3µm,1.5s						
PMBI	Palembang	47.65	27	P	P	22 33 33.3	+2.2
	comp=Z,77µmcomp=Z,27µmcomp=Z,2µm,1.1s						
PMBI	Palembang	47.65	27	P	P	22 33 32.1	+1.0
SISI	Saibi	47.70	19	P	P	22 33 33.2	+1.8
	comp=Z,56µmcomp=Z,17µmcomp=Z,1µm,1.5s						
BASI	Baing, Sumba	47.70	50	P	P	22 33 31.6	+0.1
	comp=Z,50µmcomp=Z,10µmcomp=Z,422nm,1.1s						
BWJI	Bawean	47.80	38	P	P	22 33 34.7	+2.5
	comp=Z,46µmcomp=Z,21µmcomp=Z,2µm,1.3s						
KNRA	Kununurra	47.90	63	P	P	22 33 32.8	-0.2
	baz=48,SNR=77						
KNRA	Kununurra	47.90	63	IAmb	IAmb	22 33 45.2	
	comp=Z,1µm,1.8s						
CAN	Canberra	47.99	99	P	P	22 33 33.9	+0.2
CAN				pmax	pmax		
	comp=Z,660nm,1.2s						
CAN				MLR	MLR		
	comp=Z,165µm,21.0s						
CAN	Canberra	47.99	99	⇓P	P	22 33 34.6	+0.9
CAN	Canberra	47.99	99	P	P	22 33 33.9	+0.2
CAN				IAmb	IAmb	22 33 52.3	
	comp=Z,660nm,1.2s						
CAN				IAMs_20	IAMs_20	22 49 32.8	
	comp=Z,165µm,21.0s						
CMSA	Cobar Meteorol	48.02	93	P	P	22 33 34.0	+0.2
	baz=48,SNR=159						
WRA	Warramunga Arr	48.18	72	P	P	22 33 34.6	-0.7
	comp=Z,321nm,1.1s,baz=224,slow=6.8,SNR=232						
WRA				PcP	PcP	22 35 02.0	-0.4
	comp=Z,49nm,0.8s,baz=226,slow=3.0,SNR=5.6						
WRA				S	S	22 40 35.2	+2.3
	comp=Z,1.9nm,0.9s,baz=230,slow=13,SNR=1.3						
WRA				PKiKP	PKiKP	22 41 52.3	-0.7
	comp=Z,3.7nm,1.1s,baz=262,slow=1.4,SNR=1.6						
WRA				LR	LR	22 51 19.3	
	comp=Z,86µm,21.8s,baz=220,slow=33						
WRA				PKPPKP	P'P'df	23 04 29.9	-13
	comp=Z,2.6nm,1.1s,baz=90,slow=1.7,SNR=4.6						
WRA				P4KPbc		23 11 13.0	
	comp=Z,1.6nm,0.9s,baz=216,slow=2.7,SNR=7.0						
WRA	Warramunga Arr	48.18	72	P	P	22 33 34.4	-0.9
WB2	Warramunga Arr	48.19	72	IAmb	IAmb	22 33 49.8	
	comp=Z,807nm,1.2s						
WRAB	Tennant Creek	48.20	72	⇓*i*P	P	22 33 34.8	-0.6
WRAB				pmax	pmax		
	comp=Z,601nm,1.1s						
WRAB	Tennant Creek	48.20	72	⇓P	P	22 33 34.5	-0.9
WRAB	Tennant Creek	48.20	72	P	P	22 33 34.7	-0.7
WRAB				IAmb	IAmb	22 33 51.0	
	comp=Z,809nm,1.2s						
CNB	Canberra Magne	48.24	100	P	P	22 33 36.8	+1.2
	baz=48,SNR=42						
WR0	Warramunga Arr	48.30	73	IAmb	IAmb	22 33 50.5	
	comp=Z,541nm,1.1s						
WB0	Warramunga Arr	48.34	72	IAmb	IAmb	22 33 50.8	
	comp=Z,790nm,1.1s						
PDSI	Padang	48.41	20	P	P	22 33 39.0	+2.0
	comp=Z,45µmcomp=Z,11µmcomp=Z,193nm,2.3s						
JMBI	JAMBI	48.54	25	P	P	22 33 40.8	+2.8
	comp=Z,16µmcomp=Z,775nm,1.4s						
PPBI	Pangkal Pinang	48.80	28	P	P	22 33 40.2	+0.3
	comp=Z,68µmcomp=Z,17µmcomp=Z,499nm,1.5s						
MOPA	Mopani	48.87	280	*i* P	P	22 33 39.9	-0.6
MOPA	Mopani	48.87	280	*i* P	P	22 33 39.9	-0.6
KAAM	Kaadhehdhoo	49.17	344	P	P	22 33 43.6	+0.8
	SNR=13						
KAAM	Kaadhehdhoo	49.17	344	⇓P	P	22 33 43.1	+0.3
KAAM	Kaadhehdhoo	49.17	344	P	P	22 33 42.8	0.0
BATI	Baumata	49.35	54	P	P	22 33 45.9	+1.6
	comp=Z,49µmcomp=Z,18µmcomp=Z,802nm,1.2s						
LESE	Lesego, Limpop	49.36	278	*i* P	P	22 33 50.9	+6.6
EDFI	Ende, Flores	49.52	50	P	P	22 33 45.7	+0.1
	comp=Z,48µmcomp=Z,13µmcomp=Z,605nm,1.3s						
BOSA	Boshof	49.63	270	P	P	22 33 44.9	-1.5
	comp=Z,66nm,0.8s,baz=138,slow=7.5,SNR=52						
BOSA				S	S	22 40 56.7	+3.4
	comp=Z,4.4nm,1.0s,baz=301,slow=19,SNR=1.5						
BOSA				LR	LR	22 50 16.2	
	comp=Z,136µm,21.1s,baz=138,slow=31						
BOSA	Boshof	49.63	270	⇑P	P	22 33 44.2	-2.2
BOSA	Boshof	49.63	270	P	P	22 33 44.5	-2.0
BOSA	Boshof	49.63	270	*i* P	P	22 33 46.4	0.0
BKNI	Bangkinang	49.74	21	⇓P	P	22 33 48.1	+0.9
BKNI	Bangkinang	49.74	21	P	P	22 33 49.2	+2.0
	comp=Z,72µmcomp=Z,27µmcomp=Z,2µm,1.2s						
BKNI	Bangkinang	49.74	21	P	P	22 33 48.0	+0.9
MNSI	Mandailing Nat	49.86	19	P	P	22 33 49.6	+1.5
	comp=Z,75µmcomp=Z,21µmcomp=Z,652nm,1.4s						
MMRI	Maumere	49.90	51	⇓P	P	22 33 48.0	-0.4
MMRI	Maumere	49.90	51	P	P	22 33 50.0	+1.6
	comp=Z,86µmcomp=Z,26µmcomp=Z,544nm,1.6s						
MMRI	Maumere	49.90	51	IAmb	IAmb	22 34 23.5	
	comp=Z,795nm,1.2s						
DSRI	Dabo	49.91	26	P	P	22 33 49.0	+0.5
	comp=Z,40µmcomp=Z,11µmcomp=Z,298nm,1.1s						
MSEY	Mahe Island	49.92	320	*i* P	P	22 33 46.7	-1.9
	SNR=53						
MSEY	Mahe Island	49.92	320	P	P	22 33 48.1	-0.5
MSEY				pmax	pmax		
	comp=Z,1µm,1.3s						
MSEY				MLR	MLR		
	comp=Z,27µm,21.0s						
MSEY	Mahe Island	49.92	320	P	P	22 33 48.4	-0.2
MSEY	Mahe Island	49.92	320	⇓P	P	22 33 47.9	-0.7
MSEY	Mahe Island	49.92	320	P	P	22 33 48.1	-0.5
GSI	Gunungsitoli	49.95	16	⇑P	P	22 33 50.4	+1.7
GSI	Gunungsitoli	49.95	16	P	P	22 33 51.2	+2.5
	comp=Z,77µmcomp=Z,28µmcomp=Z,769nm,1.5s						
GSI	Gunungsitoli	49.95	16	P	P	22 33 50.1	+1.3
GSI				IAMs_20	IAMs_20	22 49 49.9	
	comp=Z,102µm,20.0s						
SOEI	Soe	50.05	54	⇓P	P	22 33 50.2	+0.4
SOEI	Soe	50.05	54	P	P	22 33 51.4	+1.7
	comp=Z,102µmcomp=Z,23µmcomp=Z,966nm,1.1s						
SOEI	Soe	50.05	54	P	P	22 33 50.0	+0.3
QLP	Quilpie	50.17	87	P	P	22 33 51.0	+0.6
	baz=50,SNR=115						
QLP	Quilpie	50.17	87	⇓P	P	22 33 50.4	-0.1
PBKI	Pangkalan Bun	50.26	35	P	P	22 33 51.8	+0.7
	comp=Z,18µmcomp=Z,2µm,1.0s						
SUR	Sutherland	50.28	263	P	P	22 33 50.4	-1.1
SUR	Sutherland	50.28	263	⇑P	P	22 33 50.9	-0.5
SUR	Sutherland	50.28	263	P	P	22 33 50.9	-0.5
SUR	Sutherland	50.28	263	IAMs_20	IAMs_20	22 51 17.5	
	comp=Z,117µm,19.0s						
SUR	Sutherland	50.28	263	*i* P	P	22 33 57.6	+6.2
RIV	Riverview	50.31	99	P	P	22 33 53.3	+2.0
	baz=50,SNR=6.0						
RIV	Riverview	50.31	99	⇑P	P	22 33 53.3	+2.0
SBSI	Sibolga	50.45	18	P	P	22 33 53.8	+1.3
	comp=Z,44µmcomp=Z,10µmcomp=Z,582nm,0.9s						
MSNA	Messina	50.59	280	*i* P	P	22 33 54.8	+1.1
MSNA	Messina	50.59	280	*i* P	P	22 33 54.8	+1.1
MGCD	Mangrove Creek	50.65	99	P	P	22 33 55.2	+1.3
	baz=51,SNR=25						
SNSI	Sinabang, Aceh	50.81	14	P	P	22 33 57.3	+2.1
	comp=Z,230µmcomp=Z,34µmcomp=Z,2µm,1.3s						
BBKI	Banjar Baru	50.87	39	P	P	22 33 57.1	+1.4
	comp=Z,41µmcomp=Z,14µmcomp=Z,296nm,1.2s						
BSSI	Bau Bau, Buton	51.13	47	P	P	22 33 57.9	+0.2
	comp=Z,48µmcomp=Z,9µmcomp=Z,262nm,2.3s						
QIS	Mount Isa	51.18	78	P	P	22 33 57.8	-0.2
	baz=51,SNR=38						
MTN	Manton Dam	51.53	63	P	P	22 34 00.1	-0.6
	baz=52,SNR=74						
MTN	Manton Dam	51.53	63	⇓P	P	22 34 00.1	-0.6
MTN	Manton Dam	51.53	63	IAmb	IAmb	22 34 15.5	
	comp=Z,832nm,1.2s						
KBKI	Kotabaru	51.59	41	P	P	22 34 00.9	-0.2
	comp=Z,2µmcomp=Z,5µmcomp=Z,295nm,0.9s						
BKSI	Bulukumba	51.66	46	P	P	22 34 01.6	0.0
	comp=Z,71µmcomp=Z,17µmcomp=Z,506nm,1.2s						
KAPI	Kappang	51.74	46	P	P	22 34 02.1	-0.2
KAPI				pmax	pmax		
	comp=Z,432nm,1.3s						
KAPI				MLR	MLR		
	comp=Z,38µm,18.0s						
KAPI	Kappang	51.74	46	P	P	22 34 03.8	+1.5
KAPI	Kappang	51.74	46	⇑P	P	22 34 00.7	-1.6
KAPI	Kappang	51.74	46	P	P	22 34 02.1	-0.2
LBTB	Lobatse	51.75	274	P	P	22 33 59.8	-2.6
LBTB				pmax	pmax		
	comp=Z,231nm,1.2s						
LBTB	Lobatse	51.75	274	*i* P	P	22 34 01.2	-1.2
LBTB	Lobatse	51.75	274	⇓P	P	22 33 59.6	-2.8
LBTB	Lobatse	51.75	274	*i* P	P	22 34 01.2	-1.2
LBTB	Lobatse	51.75	274	P	P	22 33 59.8	-2.6
LBTB	Lobatse	51.75	274	*i* P	P	22 34 06.7	+4.3
TPTI		51.79	15	P	P	22 34 03.7	+1.1
	comp=Z,17µmcomp=Z,5µmcomp=Z,263nm,1.3s						
MYKOM	Kota Tinggi	51.87	24	P	P	22 34 02.7	-0.4
MYKOM				IAmb	IAmb	22 34 24.5	
	comp=Z,565nm,1.2s						
ZOMB	Zomba	52.15	291	*i* P	P	22 34 04.4	-1.0
KCSI	Kotacane, Aceh	52.15	16	P	P	22 34 07.0	+1.7
	comp=Z,65µmcomp=Z,14µmcomp=Z,757nm,1.4s						
TSI	Tuntungan	52.28	17	P	P	22 34 07.7	+1.5
	comp=Z,79µmcomp=Z,36µmcomp=Z,1µm,1.3s						
BNSI	Bone	52.45	46	P	P	22 34 08.0	+0.5
	comp=Z,65µmcomp=Z,17µmcomp=Z,523nm,1.4s						
KDU	Kakadu	52.46	64	P	P	22 34 06.8	-0.9
	baz=53,SNR=58						
KDU	Kakadu	52.46	64	⇓P	P	22 34 06.6	-1.0
SPSI	Sidrap Palu	52.66	45	P	P	22 34 09.2	+0.1
	comp=Z,75µmcomp=Z,22µmcomp=Z,668nm,1.1s						
TETE	Tete	52.71	288	*i* P	P	22 34 11.2	+1.7
TETE	Tete	52.71	288	*i* P	P	22 34 11.2	+1.7
TETE	Tete	52.71	288	*i* P	P	22 34 08.9	-0.6
ARMA	Armidale	52.71	96	P	P	22 34 10.2	+0.7
	baz=53,SNR=72						
ARMA	Armidale	52.71	96	⇑P	P	22 34 09.8	+0.2
ARMA	Armidale	52.71	96	IAmb	IAmb	22 34 27.0	
	comp=Z,497nm,1.0s						
STKI	Sintang	52.73	34	P	P	22 34 10.8	+1.2
	comp=Z,40µmcomp=Z,16µmcomp=Z,516nm,1.1s						
MATP	Matopo	52.94	280	P	P	22 34 09.6	-1.7
	comp=Z,58nm,1.0s,baz=129,slow=14,SNR=50						
PYZ	Puysegur Point	53.09	121	P	P	22 34 12.1	+0.1
PYZ				IAmb	IAmb	22 34 26.4	
	comp=Z,716nm,0.9s						
PYZ				IAMs_20	IAMs_20	22 51 01.0	
	comp=Z,81µm,20.0s						
MTKI	Muara Teweh, K	53.16	38	P	P	22 34 13.7	+0.9
	comp=Z,44µmcomp=Z,13µmcomp=Z,739nm,1.4s						
RMQ	Roma	53.29	90	P	P	22 34 14.7	+1.0
	baz=53,SNR=10						
TTSI	Tana Toraja	53.49	45	P	P	22 34 16.0	+0.8
	comp=Z,66µmcomp=Z,17µmcomp=Z,605nm,1.2s						
JRMM	Jerantut	53.52	21	P	P	22 34 15.0	-0.4
KSM	Kuching	53.60	32	⇓P	P	22 34 15.8	-0.2
KSM	Kuching	53.60	32	P	P	22 34 17.0	+1.0
KSM	Kuching	53.60	32	IAmb	IAmb	22 34 24.9	
	comp=Z,785nm,1.3s						
LHMI	Lhok Sumawe	53.67	14	⇓P	P	22 34 17.5	+1.0
LHMI	Lhok Sumawe	53.67	14	P	P	22 34 17.6	+1.1
	comp=Z,80µmcomp=Z,35µmcomp=Z,1µm,1.7s						
LHMI	Lhok Sumawe	53.67	14	P	P	22 34 17.6	+1.1
LHMI				IAMs_20	IAMs_20	22 52 39.5	
	comp=Z,67µm,20.0s						
HALK	Hakmana	53.70	354	⇑P	P	22 34 16.1	-0.5
BKB	Balikpapan	53.73	40	⇓P	P	22 34 18.8	+1.8
BKB	Balikpapan	53.73	40	P	P	22 34 20.3	+3.4
	comp=Z,95µmcomp=Z,24µmcomp=Z,1µm,1.0s						
BKB	Balikpapan	53.73	40	P	P	22 34 18.6	+1.7
DCZ	Deep Cove	53.76	120	P	P	22 34 17.2	+0.4
DCZ				IAmb	IAmb	22 34 31.5	
	comp=Z,520nm,1.3s						
DCZ				IAMs_20	IAMs_20	22 52 03.6	
	comp=Z,73µm,20.0s						
WHZ	Wether Hill Ro	53.98	121	P	P	22 34 18.4	-0.1
WHZ				IAMs_20	IAMs_20	22 51 46.4	
	comp=Z,169µm,20.0s						
MLZ	Mavora Lakes	54.37	121	P	P	22 34 22.0	+0.6
MLZ				IAMs_20	IAMs_20	22 51 58.9	
	comp=Z,173µm,21.0s						
KULM	Kulim	54.45	19	⇓P	P	22 34 20.8	-1.4
KULM	Kulim	54.45	19	IAmb	IAmb	22 34 42.7	
	comp=Z,911nm,1.7s						
SMKI	Samarinda	54.59	40	P	P	22 34 24.0	+0.7
	comp=Z,71µmcomp=Z,28µmcomp=Z,1µm,1.5s						
KRI	Karoi	54.77	284	*i* P	P	22 34 22.2	-2.5
KRI	Karoi	54.77	284	*i* P	P	22 34 22.2	-2.5
PALK	Pallekele	54.87	354	P	P	22 34 24.5	-0.7
	comp=Z,116nm,1.0s,baz=282,slow=7.4,SNR=28						
PALK	Pallekele	54.87	354	P	P	22 34 24.9	-0.3
PALK				pmax	pmax		
	comp=Z,680nm,1.3s						
PALK				MLR	MLR		
	comp=Z,89µm,22.0s						
PALK	Pallekele	54.87	354	P	P	22 34 24.9	-0.3
PALK				IAmb	IAmb	22 34 51.4	
	comp=Z,680nm,1.3s						
PALK	Pallekele	54.87	354	IAMs_20	IAMs_20	22 52 03.7	
	comp=Z,89µm,22.0s						
SBUM	Sibu	55.20	33	⇓P	P	22 34 27.6	0.0
SBUM	Sibu	55.20	33	P	P	22 34 28.0	+0.4
SBUM	Sibu	55.20	33	IAmb	IAmb	22 34 36.6	
	comp=Z,513nm,1.4s						
WKZ	Wanaka	55.20	121	P	P	22 34 27.8	+0.3
WKZ				IAmb	IAmb	22 34 45.4	
	comp=Z,569nm,0.9s						
SAUI	Saumlaki	55.48	60	⇓P	P	22 34 31.0	+1.3
SAUI	Saumlaki	55.48	60	P	P	22 34 31.7	+2.0
	comp=Z,104µmcomp=Z,42µmcomp=Z,2µm,1.2s						
SAUI	Saumlaki	55.48	60	P	P	22 34 31.0	+1.3
EIDS	Eidsvold	55.60	91	P	P	22 34 30.7	+0.3
	baz=56,SNR=12						
EIDS	Eidsvold	55.60	91	⇓P	P	22 34 30.8	+0.3
EIDS	Eidsvold	55.60	91	P	P	22 34 30.2	-0.2
CTAO	Charters Tower	55.93	83	P	P	22 34 32.5	-0.4
CTAO				pmax	pmax		
	comp=Z,685nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,51µm,20.0s						
CTAO	Charters Tower	55.93	83	⇑P	P	22 34 32.6	-0.4
CTAO	Charters Tower	55.93	83	P	P	22 34 32.5	-0.4
CTAO				IAmb	IAmb	22 34 47.4	
	comp=Z,684nm,1.1s						
MTSU	Mount Surprise	56.02	79	P	P	22 34 33.8	+0.2
	baz=56,SNR=38						
ODZ	Otahua Downs	56.02	122	⇓P	P	22 34 34.2	+0.9
ODZ	Otahua Downs	56.02	122	P	P	22 34 33.3	+0.1
LBZ	Lake Benmore	56.14	121		P	22 34 33.3	-0.8
LBZ				IAmb	IAmb	22 34 47.0	
	comp=Z,533nm,1.1s						
APSI	Ampana	56.23	45	P	P	22 34 36.2	+1.2
	comp=Z,48µmcomp=Z,13µmcomp=Z,518nm,1.3s						
FOZ	Fox Glacier	56.42	120	P	P	22 34 35.3	-0.9
FOZ	Fox Glacier	56.42	120	P	P	22 34 36.0	-0.2
FOZ				IAMs_20	IAMs_20	22 53 22.2	
	comp=Z,124µm,20.0s						
TRD	Trivandrum	56.43	350	*e*P	P	22 34 35.6	-0.8
MPSI	Mapaga	56.50	43	P	P	22 34 37.3	+0.4
	comp=Z,78µmcomp=Z,14µmcomp=Z,411nm,1.8s						
LSZ	Lusaka	56.84	284	P	P	22 34 38.7	-0.9
	comp=Z,141nm,0.7s,baz=147,slow=7.1,SNR=127						
LSZ				PKPPKP	P'P'df	23 04 31.7	+0.1
	comp=Z,4.2nm,1.1s,baz=316,slow=3.3,SNR=5.7						
LSZ	Lusaka	56.84	284	P	P	22 34 38.5	-1.1
LSZ				MLR	MLR		
	comp=Z,63µm,21.0s						
LSZ	Lusaka	56.84	284	P	P	22 34 38.5	-1.1
LSZ	Lusaka	56.84	284	IAMs_20	IAMs_20	22 54 12.4	
	comp=Z,63µm,21.0s						
LSZ	Lusaka	56.84	284	*i* P	P	22 34 38.5	-1.1
LHI	Lord Howe Isla	56.98	102	P	P	22 34 41.6	+1.3
	baz=57,SNR=3.5						
LHI	Lord Howe Isla	56.98	102	⇑P	P	22 34 41.5	+1.3
LHI	Lord Howe Isla	56.98	102	P	P	22 34 40.5	+0.3
RPZ	Rata Peaks	57.04	120	P	P	22 34 40.7	+0.2
RPZ				IAmb	IAmb	22 34 57.9	
	comp=Z,401nm,1.2s						
AAI	Ambon	57.23	54	P	P	22 34 42.4	+0.2
	comp=Z,80µmcomp=Z,13µmcomp=Z,449nm,1.2s						
SANI	Sanana	57.43	51	⇓P	P	22 34 42.5	-1.1
SANI	Sanana	57.43	51	P	P	22 34 43.6	0.0
	comp=Z,70µmcomp=Z,18µmcomp=Z,622nm,1.2s						
SRIT	Nakonsritamara	57.45	17	P	P	22 34 43.0	-0.5
MRSI	Marisa	57.58	45	P	P	22 34 44.4	-0.2
	comp=Z,71µmcomp=Z,17µmcomp=Z,480nm,1.1s						
TOLI2	Tolitoli	57.59	43	P	P	22 34 43.4	-1.2
OXZ	Oxford	57.85	121	P	P	22 34 46.1	-0.1
OXZ				IAmb	IAmb	22 34 59.6	
	comp=Z,645nm,1.0s						
INZ	Inchbonnie	57.86	120	P	P	22 34 43.7	-2.6
MSAI	Masohi	57.92	54	P	P	22 34 55.7	+8.7
MQZ	McQueen's Vall	57.97	121	P	P	22 34 47.0	-0.1
MQZ				IAmb	IAmb	22 35 02.9	
	comp=Z,922nm,1.5s						
GTOI	Gorontalo	58.23	46	P	P	22 34 49.4	+0.2
	comp=Z,26µmcomp=Z,8µmcomp=Z,416nm,1.2s						
COEN	Coen	58.29	75	⇓P	P	22 34 49.5	-0.1
COEN	Coen	58.29	75	P	P	22 34 49.6	-0.1
COEN				IAmb	IAmb	22 35 05.0	
	comp=Z,502nm,1.4s						
LTZ	Lake Taylor	58.31	120	P	P	22 34 49.7	+0.1

LTZ				IAmb	IAmb	22 35 00.5	
	comp=Z,445nm,1.3s						
LTZ				IAMs_20	IAMs_20	22 54 13.2	
	comp=Z,129µm,22.0s						
KMSI	Cibinong	58.65	47	P	P	22 34 54.2	+2.1
	comp=Z,1µmcomp=Z,17µmcomp=Z,1µm,1.1s						
DSZ	Denniston Nort	58.67	119	P	P	22 34 50.5	-1.6
SPMM	Sapulut	58.92	37	P	P	22 34 53.0	-1.0
DODT	Dodoma, Tanzan	59.02	298	i P	P	22 34 54.9	0.0
WIN	Windhoek	59.13	270	P	P	22 34 54.6	-1.1
WIN				pmax	pmax		
	comp=Z,316nm,1.2s						
WIN	Windhoek	59.13	270	P	P	22 34 54.6	-1.1
WIN	Windhoek	59.13	270	i P	P	22 34 55.5	-0.1
KHZ	Kahutara	59.28	121	⇑P	P	22 34 56.9	+0.7
KHZ	Kahutara	59.28	121	P	P	22 34 56.2	+0.1
KHZ				IAmb	IAmb	22 35 05.0	
	comp=Z,500nm,1.3s						
THZ	Tophouse	59.31	120	IAmb	IAmb	22 35 08.8	
	comp=Z,287nm,1.0s						
THZ				IAMs_20	IAMs_20	22 55 06.6	
	comp=Z,149µm,20.0s						
LBMI	Labuha	59.42	51	P	P	22 34 58.9	+1.5
	comp=Z,48µmcomp=Z,23µmcomp=Z,1µm,1.9s						
QRZ	Quartz Range	59.67	119	P	P	22 34 57.6	-1.4
BSWZ	Blackbirch Sta	59.91	120	P	P	22 35 00.4	-0.1
NNZ	Nelson	59.93	119	P	P	22 35 00.4	-0.2
NNZ				IAMs_20	IAMs_20	22 55 06.0	
	comp=Z,147µm,21.0s						
KOND	Kondoa	60.02	299	i P	P	22 35 01.4	-0.5
KKM	Kota Kinabalu	60.03	36	⇑P	P	22 35 00.5	-1.3
KKM	Kota Kinabalu	60.03	36	P	P	22 35 01.7	-0.1
KKM				IAmb	IAmb	22 35 23.5	
	comp=Z,633nm,1.4s						
CMWZ	Cape Campbell	60.08	120	P	P	22 35 02.5	+0.7
FAKI	Fak Fak	60.13	57	⇑P	P	22 35 02.2	-0.2
FAKI	Fak Fak	60.13	57	P	P	22 35 03.0	+0.7
	comp=Z,88µmcomp=Z,22µmcomp=Z,917nm,1.1s						
FAKI	Fak Fak	60.13	57	P	P	22 35 02.1	-0.2
MYLDM	Lahad Datu	60.19	39	⇓P	P	22 35 03.5	+0.8
MYLDM	Lahad Datu	60.19	39	P	P	22 35 03.2	+0.5
MYLDM				IAmb	IAmb	22 35 48.8	
	comp=Z,839nm,1.3s						
TNTI	Ternate	60.54	50	⇓P	P	22 35 04.1	-1.0
TNTI	Ternate	60.54	50	P	P	22 35 05.2	+0.1
	comp=Z,41µmcomp=Z,9µmcomp=Z,441nm,2.0s						
TNTI	Ternate	60.54	50	P	P	22 35 04.4	-0.7
TNTI				IAmb	IAmb	22 35 21.7	
	comp=Z,1µm,1.5s						
SNZO	South Karori	60.65	120	P	P	22 35 05.0	-0.6
SNZO				IAmb	IAmb	22 35 24.9	
	comp=Z,627nm,1.2s						
SNZO	South Karori	60.65	120	IAMs_20	IAMs_20	22 57 29.0	
	comp=Z,129µm,18.0s						
BHW	Baring Head	60.68	120	P	P	22 35 05.5	-0.4
KIBK	Kibwezi	60.79	303	P	P	22 35 06.3	-0.6
	SNR=121						
KIBK	Kibwezi	60.79	303	P	P	22 35 05.7	-1.3
PLWZ	Palliser	60.80	121	P	P	22 35 06.4	-0.4
MSWZ	Moikau Station	60.90	121	P	P	22 35 07.0	-0.3
DGPR	DIGLIPUR	60.96	8	eP	P	22 35 06.4	-1.5
DGPR				IAmb	IAmb	22 35 28.8	
	comp=Z,3µm,1.3s						
TSUM	Tsumeb	61.12	273	PKPPKP		23 04 24.1	
	comp=Z,1.2nm,0.4s,baz=25,slow=3.5,SNR=4.6						
TSUM	Tsumeb	61.12	273	⇑P	P	22 35 07.8	-1.5
TSUM	Tsumeb	61.12	273	P	P	22 35 07.8	-1.5
TSUM	Tsumeb	61.12	273	IAMs_20	IAMs_20	22 56 53.5	
	comp=Z,97µm,21.0s						
TSUM	Tsumeb	61.12	273	i P	P	22 35 09.4	+0.1
SIJI	Sorong	61.26	55	LR	LR	23 01 16.5	
	comp=Z,7µm,19.1s,baz=207,slow=36						
SWI	Sorong	61.26	55	P	P	22 35 10.9	+0.9
	comp=Z,79µmcomp=Z,16µmcomp=Z,416nm,1.5s						
NEPA	Kaukuwa	61.53	275	i P	P	22 35 11.3	-0.8
BFZ	Birch Farm	61.95	120	P	P	22 35 14.7	+0.3
BFZ				IAmb	IAmb	22 35 27.0	
	comp=Z,379nm,0.9s						
BFZ				IAMs_20	IAMs_20	22 58 12.3	
	comp=Z,110µm,18.0s						
SGSI	Sangihe	62.10	47	P	P	22 35 16.6	+0.9
	comp=Z,436nm,1.1s						
TSZ	Takapari Road	62.18	120	P	P	22 35 15.4	-0.7
KMBO	Kilima Mbogo	62.23	303	P	P	22 35 16.4	-0.4
	comp=Z,38nm,1.0s,baz=133,slow=5.2,SNR=63						
KMBO				S	S	22 43 44.8	+3.5
	comp=Z,0.5nm,0.3s,baz=155,slow=16,SNR=1.1						
KMBO				LR	LR	22 56 21.6	
	comp=Z,37µm,21.1s,baz=118,slow=30						
KMBO				PKP2bc		23 04 27.6	
	comp=Z,1.3nm,0.5s,baz=38,slow=4.8,SNR=5.3						
KMBO	Kilima Mbogo	62.23	303	i P	P	22 35 16.9	0.0
	SNR=173						
KMBO	Kilima Mbogo	62.23	303	P	P	22 35 15.5	-1.4
KMBO				pmax	pmax		
	comp=Z,782nm,1.8s						
KMBO				MLR	MLR		
	comp=Z,37µm,21.0s						
KMBO	Kilima Mbogo	62.23	303	P	P	22 35 16.5	-0.4
KMBO	Kilima Mbogo	62.23	303	⇓P	P	22 35 16.2	-0.7
KMBO	Kilima Mbogo	62.23	303	P	P	22 35 15.5	-1.4
KMBO				IAmb	IAmb	22 35 29.2	
	comp=Z,782nm,1.8s						
KMBO	Kilima Mbogo	62.23	303	⇓iP	P	22 35 16.2	-0.7
PKVZ	Pokaka	62.31	119	P	P	22 35 15.4	-1.6
PNHZ	Pukenui	62.41	120	P	P	22 35 17.6	-0.1
TRVZ	Turoa	62.43	119	P	P	22 35 15.9	-2.0
WNVZ	Wahianoa	62.44	119	P	P	22 35 17.3	-0.7
FWVZ	Far West T-bar	62.46	119	P	P	22 35 17.1	-1.1
MOVZ	Moawhango	62.48	119	P	P	22 35 16.8	-1.3
TWVZ	Taurewa	62.51	119	P	P	22 35 17.9	-0.5
TUVZ	Tukino	62.51	119	P	P	22 35 17.8	-0.6
HIZ	Hauiti	62.52	118	P	P	22 35 17.3	-1.0
HIZ				IAMs_20	IAMs_20	22 57 06.8	
	comp=Z,141µm,20.0s						
NGZ	Ngauruhoe	62.54	119	P	P	22 35 17.7	-0.9
WTVZ	West Tongariro	62.57	119	P	P	22 35 17.5	-1.3
ETVZ	East Tongariro	62.63	119	P	P	22 35 17.4	-1.7
KRHZ	Kereru	62.69	120	P	P	22 35 19.5	0.0
PXZ	Pawanui	62.73	120	P	P	22 35 19.9	+0.3
DLV	T Lat	62.85	26	IAmb	IAmb	22 35 35.8	
	comp=Z,790nm,1.2s						
DLV				IAMs_20	IAMs_20	22 59 53.6	
	comp=Z,54µm,20.0s						
KAHZ	Kahuranaki	62.89	120	P	P	22 35 21.6	+0.8
BKZ	Black Stump Fm	63.07	119	P	P	22 35 22.2	+0.2
BKZ	Black Stump Fm	63.07	119	P	P	22 35 21.6	-0.4
BKZ				IAmb	IAmb	22 35 36.8	
	comp=Z,461nm,0.9s						
ARHZ	Aropaoanui	63.30	120	P	P	22 35 25.7	+2.2
MTHZ	Maungataniwha	63.48	119	P	P	22 35 24.3	-0.4
RAHZ	Arahi	63.58	119	P	P	22 35 25.1	-0.3
GOA	Goa	63.72	348	eP	P	22 35 25.6	-0.7
GOA				IAmb	IAmb	22 35 40.7	
	comp=Z,5µm,2.2s						
SNGZ	Shannon Statio	63.82	119	P	P	22 35 27.1	+0.1
OUZ	Omahuta	63.91	114	⇑P	P	22 35 28.2	+0.7
OUZ	Omahuta	63.91	114	P	P	22 35 27.4	-0.1
OUZ				IAMs_20	IAMs_20	22 56 48.6	
	comp=Z,73µm,22.0s						
MHGZ	Mahia Peninsul	63.91	120	P	P	22 35 28.9	+1.4
URZ	Urewera	64.03	119	P	P	22 35 26.3	-2.0
URZ	Urewera	64.03	119	⇓P	P	22 35 26.7	-1.6
URZ	Urewera	64.03	119	P	P	22 35 26.9	-1.4
URZ				IAmb	IAmb	22 35 40.1	
	comp=Z,311nm,1.0s						
PRGZ	Paritu Road	64.05	120	P	P	22 35 30.0	+1.5
PMG	Port Moresby	64.26	75	LR	LR	23 01 20.0	
	comp=Z,29µm,18.8s,baz=224,slow=34						
PMG				PKPPKP		23 04 19.3	
	comp=Z,6.0nm,0.3s,baz=336,slow=14,SNR=3.2						
PMG	Port Moresby	64.26	75	P	P	22 35 30.2	+0.2
PMG				pmax	pmax		
	comp=Z,2µm,1.2s						
PMG	Port Moresby	64.26	75	⇓P	P	22 35 30.3	+0.3
PMG	Port Moresby	64.26	75	P	P	22 35 30.2	+0.2
CNGZ	Carnagh Statio	64.53	120	P	P	22 35 31.7	+0.1
SMPI	Sarmi	64.65	63	P	P	22 35 33.9	+1.3
	comp=Z,43µmcomp=Z,44µmcomp=Z,180nm,1.3s						
KCP	Kidapawan	64.78	45	⇑eP	P	22 35 33.2	-0.2
DMPH	Davao City--Mi	65.04	45	⇑eP	P	22 35 42.7	+7.6
DAV	Davao City (W)	65.06	45	LR	LR	23 03 34.6	
	comp=Z,13µm,18.2s,baz=186,slow=36						
HYB	Hyderabad	65.08	353	i P	P	22 35 33.0	-2.3
	comp=Z,490nm,1.0s						
HYB				esP	pwP	22 35 51.0	+3.8
HYB				ePP	PP	22 38 04.0	+5.1
HYB				eS	S	22 44 16.0	-0.1
HYB				ePKPPKP	P'P'df	23 04 25.0	+13
HYB				eLR	LR		
	comp=Z,38nm,24.0s						
UBPT	Khong Chiam	65.22	21	⇑P	P	22 35 35.6	-0.5
UBPT	Khong Chiam	65.22	21	P	P	22 35 35.5	-0.6
UBPT				IAmb	IAmb	22 35 41.9	
	comp=Z,346nm,1.1s						
DCPH	Dipolog City	65.35	42	⇑eP	P	22 35 39.3	+2.2
PMSA	Palmer Station	65.36	194	⇑P	P	22 35 36.7	+0.2
PMSA	Palmer Station	65.36	194	eP	P	22 35 36.1	-0.4
PMSA	Palmer Station	65.36	194	P	P	22 35 36.7	+0.2
PMSA				IAmb	IAmb	22 35 53.2	
	comp=Z,521nm,0.9s						
JAY	Jayapura	65.45	65	S	S	22 44 25.2	+4.3
	comp=Z,8.8nm,1.0s,baz=31,slow=19,SNR=1.9						
JAY	Jayapura	65.45	65	P	P	22 35 38.3	+0.5
	comp=Z,38µmcomp=Z,6µmcomp=Z,186nm,1.4s						
KAD	Karad	65.46	348	eP	P	22 35 35.2	-2.5
KAD				⇓iP	P	22 35 37.0	-0.7
SOCY	Socotra	65.81	326	P	P	22 35 40.4	+0.3
	SNR=22						
SOCY	Socotra	65.81	326	⇓P	P	22 35 40.0	-0.1
SOCY	Socotra	65.81	326	P	P	22 35 40.1	0.0
SOCY				IAmb	IAmb	22 35 54.4	
	comp=Z,624nm,1.5s						
CNOP	Candoni, Negro	66.14	41	⇓iP	P	22 35 40.4	-1.8
NGLE	Hospital, Nege	66.33	309	⇓iP	P	22 35 43.4	-0.2
MBAR	Mbarara	66.46	297	PKPPKP		23 04 16.3	
	comp=Z,3.3nm,0.2s,baz=32,slow=2.9,SNR=7.1						
MBAR	Mbarara	66.46	297	P	P	22 35 43.4	-1.1
MBAR				pmax	pmax		
	comp=Z,661nm,1.8s						
MBAR				MLR	MLR		
	comp=Z,78µm,21.0s						
MBAR	Mbarara	66.46	297	P	P	22 35 44.6	0.0
MBAR	Mbarara	66.46	297	⇓P	P	22 35 44.5	0.0
MBAR	Mbarara	66.46	297	P	P	22 35 43.4	-1.1
MBAR				IAmb	IAmb	22 36 09.2	
	comp=Z,661nm,1.8s						
MBAR	Mbarara	66.46	297	IAMs_20	IAMs_20	23 00 23.9	
	comp=Z,78µm,21.0s						
MBAR	Mbarara	66.46	297	i P	P	22 35 45.0	+0.4
TBP	Tagbilaran	66.56	42	⇓iP	P	22 35 42.5	-2.3
POO	Poona	66.70	348	⇓iP	P	22 35 41.0	-4.7
	comp=Z,670nm,1.0s						
POO				eP	P	22 35 44.4	-1.2
POO				i S	S	22 44 34.0	-1.9
WADE	Clinic, Wadera	66.85	309	⇓iP	P	22 35 46.8	-0.3
CM31	Chiang Mai Arr	66.96	14	P	P	22 35 46.6	-0.6
	SNR=311						
CMAR	Chiang Mai Arr	66.96	14	P	P	22 35 47.1	-0.2
	comp=Z,212nm,1.1s,baz=211,slow=5.3,SNR=127						
CMAR				S	S	22 44 38.6	-0.3
	comp=Z,0.8nm,0.6s,baz=298,slow=1.9,SNR=1.0						
CMAR				LR	LR	23 00 36.8	
	comp=Z,19µm,21.3s,baz=233,slow=32						
CMAR				PKP2bc		23 04 15.3	
	comp=Z,1.0nm,0.9s,baz=348,slow=4.0,SNR=2.8						
CMAR				P4KPbc		23 12 27.9	
	comp=Z,0.1nm,0.3s,baz=212,slow=3.2,SNR=1.4						
CMAR	Chiang Mai Arr	66.96	14	P	P	22 35 45.9	-1.4
LODK	Lodwar	67.03	304	P	P	22 35 47.7	-0.3
	SNR=171						
HOPE	Hope Point	67.15	213	P	P	22 35 47.0	-1.1
HOPE				pmax	pmax		
	comp=Z,983nm,1.3s						
HOPE				MLR	MLR		
	comp=Z,138µm,22.0s						
HOPE	Hope Point	67.15	213	⇑P	P	22 35 48.1	-0.1
HOPE	Hope Point	67.15	213	P	P	22 35 47.0	-1.1
HOPE				IAmb	IAmb	22 35 50.7	
	comp=Z,983nm,1.3s						
HOPE	Hope Point	67.15	213	IAMs_20	IAMs_20	22 58 28.3	
	comp=Z,138µm,22.0s						
BOM	Bombay	67.22	347	eP	P	22 35 47.0	-1.9
GINR	Hospital, Gini	67.26	311	i P	P	22 35 47.6	-2.0
CHTO	Chiang Mai	67.31	14	P	P	22 35 48.3	-1.2
CHTO				pmax	pmax		
	comp=Z,492nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,19µm,21.0s						
CHTO	Chiang Mai	67.31	14	P	P	22 35 49.0	-0.5
CHTO	Chiang Mai	67.31	14	⇓P	P	22 35 48.2	-1.3
CHTO	Chiang Mai	67.31	14	P	P	22 35 48.3	-1.2
CHTO				IAmb	IAmb	22 36 04.1	
	comp=Z,492nm,1.2s						
MSLP	Maasin	67.41	43	⇓eP	P	22 35 48.5	-1.8
RCP	Roxas	67.72	40	⇑eP	P	22 35 51.2	-1.0
KOUNC	Koumac, New Ca	67.77	96	⇓P	P	22 35 52.8	+0.3
DILA	Dilla	67.93	308	eP	P	22 35 56.3	+2.5
DILA				eS	S	22 45 09.8	+19
ONTNC	Ouen Toro	68.00	99	IAmb	IAmb	22 36 08.0	
	comp=Z,470nm,1.0s						
DZM	Mont Dzumac	68.16	99	eP	P	22 35 55.8	+0.7
	comp=Z,889nm,1.1s						
DZM				eS	S	22 44 53.3	-0.4
	comp=Z,75µm,28.4s						
DZM				eSS	SS	22 49 17.3	+1.0
	comp=Z,108µm,28.2s						
DZM				eLR	LR	22 56 32.4	
	comp=Z,119µm,23.6s,baz=226						
DZM	Mont Dzumac	68.16	99	⇓P	P	22 35 55.6	+0.5
DZM	Mont Dzumac	68.16	99	P	P	22 35 55.0	-0.2
DZM				IAmb	IAmb	22 36 10.7	
	comp=Z,540nm,1.3s						
OUENC	Ouen Island, N	68.18	100	P	P	22 35 55.7	+0.5
OUENC				IAmb	IAmb	22 36 10.0	
	comp=Z,567nm,1.1s						
PINNC	Pines Island,	68.45	100	P	P	22 35 57.1	+0.2
PINNC				IAmb	IAmb	22 36 05.9	
	comp=Z,582nm,1.4s						
AKL	Akola	68.47	352	eP	P	22 35 54.4	-2.4
LUBP	Lubang	68.63	37	⇓iP	P	22 35 56.6	-1.2
PGP	Puerto Galera	68.71	37	⇓eP	P	22 35 56.6	-1.8
TGY	Tagaytay City	69.24	37	P	P	22 36 01.7	0.0
	baz=270,slow=3.6						
LQP	Lukban	69.50	38	eP	P	22 36 00.9	-2.6
BLSP	Bilaspur	69.55	357	eP	P	22 36 02.6	-0.8
LIFNC	LIFOU	69.59	99	P	P	22 36 04.4	+0.5
LIFNC				IAmb	IAmb	22 36 22.3	
	comp=Z,760nm,1.0s						
LIFNC				IAMs_20	IAMs_20	23 02 34.8	
	comp=Z,44µm,18.0s						
MARNC	Mare, Loyalty	69.62	100	⇑P	P	22 36 04.9	+0.8
FURI	Furi	69.81	310	⇓iP	P	22 36 06.3	+0.7
ANKE	Ethiopia-Afar	69.86	311	eP	P	22 36 07.9	+1.9
ANKE				eS	S	22 45 28.4	+14
AAE	Adis Abeba	69.87	310	eP	P	22 36 10.2	+4.2
AAE				eS	S	22 45 28.4	+14
QIZ	Qiongzhong	69.96	25	P	P	22 36 07.5	+1.5
QIZ				S	S	22 45 21.2	+6.6
QIZ				pmax	pmax		
	comp=Z,160nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,10µm,9.8s						
QIZ				LR	LR		
	comp=Z,19µm,22.6s						
QIZ				LR	LR		
	comp=Z,9µm,21.1s						
QIZ				LR	LR		
	comp=Z,22µm,17.8s						
ATD	Arta Tunnel	69.99	315	⇓P	P	22 36 06.3	-0.1
ATD	Arta Tunnel	69.99	315	P	P	22 36 06.2	-0.2
ATD				IAmb	IAmb	22 36 15.7	
	comp=Z,445nm,1.1s						
ATD	Arta Tunnel	69.99	315	i P	P	22 36 06.0	-0.4
JCNP	Jose Panganiba	70.14	39	⇓iP	P	22 36 06.1	-1.1
DMTO	DMTO	70.56	329	P	P	22 36 09.3	-0.5
	SNR=45						
SHAO	Shalim	70.62	330	i P	P	22 36 08.5	-1.6
	SNR=9.2						
SHAO	Shalim	70.62	330	P	P	22 36 09.0	-1.1
	SNR=43						
RBK	Rabkut	70.63	328	P	P	22 36 10.2	0.0
	SNR=66						
SLVN	Son La	70.70	18	IAmb	IAmb	22 36 26.1	
	comp=Z,884nm,1.3s						
SLVN				IAMs_20	IAMs_20	23 03 13.8	
	comp=Z,53µm,20.0s						
ABTO	Aybut	70.81	328	P	P	22 36 12.1	+0.7
	SNR=42						
GOREE	District Admin	70.84	307	⇓iP	P	22 36 11.5	-0.4
BHPL	Bhopal	70.95	352	eP	P	22 36 10.8	-1.2
BHPL				IAmb	IAmb	22 36 17.6	
	comp=Z,554nm,0.9s						
TEND	Ethiopian Broa	71.11	314	eP	P	22 36 10.2	-3.0
TEND				eS	SKiKP	22 45 44.7	-7.9
BOK	Bokaro	71.15	1	eP	P	22 36 12.4	-0.8
BOK				IAmb	IAmb	22 36 19.9	
	comp=Z,551nm,1.3s						
WHFO	Wadi Hawf	71.16	328	P	P	22 36 12.2	-1.2
WHFO				P	P	22 36 13.0	-0.5
	SNR=55						
DESE	Dese	71.21	312	eP	P	22 36 17.2	+3.1
DESE				eS	SKiKP	22 45 42.3	-11
RABL	Rabaul	71.43	75	⇑P	P	22 36 13.9	-1.4
KIRE	School, Kiremu	71.64	309	⇓iP	P	22 36 17.1	+0.4
DOK	Doka	71.68	329	P	P	22 36 15.0	-1.5
	SNR=90						
MERTO	Secondary Scho	71.70	311	i P	P	22 36 16.8	-0.3
HARO	School, Haroo	71.85	308	⇓iP	P	22 36 17.9	0.0
GIDAE	Health Center,	72.03	307	⇓iP	P	22 36 19.1	0.0
MEND	High School, M	72.43	307	i P	P	22 36 22.1	+0.7
CHGE	School, Chagni	72.67	309	⇓iP	P	22 36 22.8	0.0
BAHR	High School, B	72.73	310	i P	P	22 36 23.2	+0.1
HNR	Honiara	72.74	85	LR	LR	23 06 07.6	
	comp=Z,53µm,19.0s,baz=226,slow=34						
HNR	Honiara	72.74	85	P	P	22 36 22.6	-0.5
HNR				pmax	pmax		
	comp=Z,5µm,1.6s						
HNR				MLR	MLR		
	comp=Z,57µm,19.0s						
HNR	Honiara	72.74	85	⇓P	P	22 36 23.1	0.0
HNR	Honiara	72.74	85	P	P	22 36 22.6	-0.5
HNR	Honiara	72.74	85	IAMs_20	IAMs_20	23 05 56.6	
	comp=Z,57µm,19.0s						
DEBR	School, Debre	72.85	308	⇓iP	P	22 36 24.5	+0.5
JHNI	Jhansi	73.06	354	eP	P	22 36 21.0	-3.6
RAO	Raoul Island	73.22	115	IAMs_20	IAMs_20	23 02 27.0	
	comp=Z,42µm,20.0s						
SHERE	Police Station	73.28	308	⇓iP	P	22 36 26.3	+0.1
SHAW	Medical Clinic	73.31	310	i P	P	22 36 27.0	+0.4
JLN	Jalan Bani Buh	73.31	335	P	P	22 36 24.8	-1.3
	SNR=212						
SANVU	Saraoutou	73.32	95	⇓P	P	22 36 26.6	+0.2
SANVU	Saraoutou	73.32	95	P	P	22 36 26.8	+0.3
SANVU				IAMs_20	IAMs_20	23 03 20.8	
	comp=Z,61µm,21.0s						
SGCP	Mt. Cagua	73.42	36	eP	P	22 36 27.0	+0.1
SILA	Clinic, Silare	73.42	312	i P	P	22 36 27.8	+0.6
KOHI	KOHIMA	73.49	8	eP	P	22 36 26.1	-1.2
KOHI				IAmb	IAmb	22 36 35.4	
	comp=Z,2µm,1.1s						
GOND	University, Go	73.56	311	i P	P	22 36 29.0	+0.9
GUBA	Police Station	73.58	308	⇓iP	P	22 36 28.8	+0.7
MUKA	Police Camp, M	73.68	310	i P	P	22 36 28.5	-0.1
WBK	Wadi Bani Khal	73.87	335	P	P	22 36 28.6	-0.9
	SNR=180						
ABMD	Abulta/Almeha	73.89	309	i P	P	22 36 34.2	+4.4
JMDO	Jabal Madar	73.90	334	P	P	22 36 28.4	-1.2
	SNR=75						
MOKO	MOKOCHONG	74.12	9	eP	P	22 36 29.9	-1.1
MOKO				IAmb	IAmb	22 36 39.2	
	comp=Z,2µm,1.2s						
KMI	Kunming	74.15	16	⇓P	P	22 36 31.2	-0.1
KMI				pP	pP	22 36 37.4	-0.9
KMI				PP	PP	22 39 13.0	-4.4
KMI				S	S	22 46 06.1	+3.2
KMI				SKS	SKSac	22 46 29.3	-7.7
KMI				pmax	pmax		
	comp=Z,300nm,1.2s						
KMI				pmax	pmax		
	comp=Z,7µm,3.9s						
KMI				LR	LR		
	comp=Z,22µm,18.8s						
KMI				LR	LR		
	comp=Z,9µm,20.6s						
KMI				LR	LR		
	comp=Z,28µm,20.6s						
MELAE	School, Dubaba	74.17	310	i P	P	22 36 30.5	-0.9
ODAN	Odare	74.22	2	eP	P	22 36 30.3	-1.4
	comp=Z,2µm,1.1s						
RAMN	Ramite	74.29	1	eP	P	22 36 30.9	-1.2
	comp=Z,193nm,0.6s						
AJM	Ajmer	74.44	350	eP	P	22 36 30.4	-2.3
BSY	Bisya	74.53	333	P	P	22 36 31.8	-1.4
	SNR=182						
SMDO	Samad	74.57	334	P	P	22 36 32.5	-1.1
	SNR=233						
WSAR	Wadi Sarin	74.57	335	P	P	22 36 32.4	-1.1
	SNR=119						
GTK	Tadong	74.71	3	eP	P	22 36 33.5	-0.9
TAPN	Taplejung	74.72	2	eP	P	22 36 33.6	-1.0
	comp=Z,2µm,1.1s						
GZH	Guangzhou	74.82	27	P	P	22 36 39.2	+4.3
GZH				S	S	22 46 21.3	+11
GZH				LR	LR		
	comp=Z,20µm,20.0s						
GZH				LR	LR		
	comp=Z,18µm,20.2s						
ITAN	ITANAGAR	74.86	8	eP	P	22 36 29.9	-5.1
PKI	Pulchoki	74.90	0	eP	P	22 36 33.8	-1.9
	comp=Z,925nm,1.1s						
PKIN	Phulchoki	74.91	0	eP	P	22 36 33.9	-1.8
	comp=Z,968nm,1.1s						
DMN	Daman	74.94	360	eP	P	22 36 34.5	-1.4
	comp=Z,1µm,1.0s						
BIDO	Bidbid	74.98	334	P	P	22 36 35.0	-0.9
	SNR=176						
KOLN	Koldanda	75.12	358	eP	P	22 36 34.6	-2.2
	comp=Z,3µm,1.3s						
KKN	Kakani	75.12	360	eP	P	22 36 35.4	-1.5
	comp=Z,1µm,1.0s						
UMZA	Um Al Zommool	75.14	331	P	P	22 36 35.7	-1.0
MG01	Puerto William	75.24	196	P	P	22 36 36.5	-0.6
MG01				IAmb	IAmb	22 36 58.0	
	comp=Z,1µm,1.2s						
GUN	Gumba	75.24	1	eP	P	22 36 36.6	-1.1
	comp=Z,3µm,1.2s						
HOQ	Hoqain	75.28	334	P	P	22 36 36.7	-0.9
	SNR=262						
ARQ	Araqi	75.29	333	P	P	22 36 36.7	-1.0
	SNR=182						
GKN	Gorkha	75.34	359	eP	P	22 36 35.6	-2.4
	comp=Z,2µm,1.1s						
BBP	Basco	75.38	35	eP	P	22 36 34.0	-4.2
JASL	Jaisalmer	75.39	347	eP	P	22 36 37.4	-0.8
JASL				IAmb	IAmb	22 36 46.7	
	comp=Z,0.0nm,1.1s						
PYUN	Piuthan	75.46	358	eP	P	22 36 36.5	-2.3
	comp=Z,2µm,0.9s						
DANN	Dangsing	75.69	359	eP	P	22 36 38.0	-2.2
	comp=Z,4µm,1.6s						
KUDL	Kundal	75.89	352	eP	P	22 36 38.6	-2.3
SONA	Sohna	75.94	353	eP	P	22 36 38.6	-2.6
SOHO	SOHO	76.03	333	i P	P	22 36 39.4	-2.4
	SNR=92						
EFI	East Falkland	76.17	202	⇑iP	P	22 36 42.1	-0.3
EFI				pmax	pmax		
	comp=Z,566nm,1.1s						
EFI	East Falkland	76.17	202	⇑P	P	22 36 41.9	-0.5
EFI	East Falkland	76.17	202	P	P	22 36 41.5	-0.9
EFI	East Falkland	76.17	202	IAMs_20	IAMs_20	23 06 26.1	
	comp=Z,59µm,22.0s						
ALNE	Al Ain	76.20	332	i P	P	22 36 41.1	-1.8
	SNR=28						
ALNE	Al Ain	76.20	332	P	P	22 36 41.9	-1.0
	SNR=86						
GYA	Guiyang	76.26	20	⇑P	P	22 36 43.7	+0.4
GYA				PP	PP	22 39 31.9	-3.3
GYA				S	S	22 46 28.2	+2.1
GYA				pmax	pmax		
	comp=Z,370nm,1.2s						
GYA				pmax	pmax		
	comp=Z,12µm,8.3s						
GYA				LR	LR		
	comp=Z,44µm,18.5s						
GYA				LR	LR		
	comp=Z,16µm,19.1s						
GYA				LR	LR		
	comp=Z,66µm,18.8s						
NDI	New Delhi	76.36	353	eP	P	22 36 39.0	-4.6
NDI				eP	P	22 36 40.0	-3.6
MZWR	Madinat Zayed	76.53	331	P	P	22 36 44.2	-0.5
ASHO	Ashiyiah	76.69	333	i P	P	22 36 43.4	-2.3
	SNR=31						

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ASHO  Ashiyiah         76.69 333    P         P         22 36 45.1  -0.6
      SNR=38
HATD  Hatta, Dubai     76.81 333  i P         P         22 36 44.2  -2.0
      SNR=41
HATD  Hatta, Dubai     76.81 333    P         P         22 36 46.0  -0.3
      SNR=72
ASUD  Al Ashush, Dub   76.87 332  i P         P         22 36 44.2  -2.4
      SNR=73
ASUD  Al Ashush, Dub   76.87 332    P         P         22 36 46.0  -0.6
      SNR=67
UOSS  Minazif          76.89 333  i P         P         22 36 43.7  -3.1
      SNR=65
UOSS  Minazif          76.89 333    P         P         22 36 46.1  -0.6
UOSS  Minazif          76.89 333   ⇓P         P         22 36 43.9  -2.9
UOSS  Minazif          76.89 333    P         P         22 36 44.4  -2.3
FAQ   Al Faqa, Dubai   76.90 332  i P         P         22 36 44.7  -2.1
      SNR=21
FAQ   Al Faqa, Dubai   76.90 332    P         P         22 36 46.4  -0.4
      SNR=42
LGTI  Lohaghat         76.91 355   eP         P         22 37 02.9  +16
AJN   Ajban            76.92 332  i P         P         22 36 45.5  -1.4
      SNR=16
AJN   Ajban            76.92 332    P         P         22 36 45.9  -1.0
      SNR=46
GHWR  Ruwais           77.06 330    P         P         22 36 47.2  -0.5
NAZ   Nazwa, Dubai     77.10 333  i P         P         22 36 45.5  -2.4
      SNR=26
NAZ   Nazwa, Dubai     77.10 333    P         P         22 36 46.6  -1.3
      SNR=42
TWG   Pinlang          77.19  34    P         P         22 36 48.0  -0.4
TWG                                 IAmb      IAmb      22 37 12.4
      comp=Z,455nm,1.3s
MDH   Madha            77.20 333  i P         P         22 36 45.2  -3.2
      SNR=13
MDH   Madha            77.20 333    P         P         22 36 45.9  -2.6
      SNR=28
LSA   Lhasa            77.20   5    P         P         22 36 48.2  -0.8
LSA                                 pmax      pmax
      comp=Z,1µm,1.1s
LSA                                 LR        LR
      comp=Z,65µm,18.9s
LSA                                 LR        LR
      comp=Z,49µm,19.9s
LSA                                 LR        LR
      comp=Z,92µm,17.1s
LSA   Lhasa            77.20   5    P         P         22 36 47.7  -1.3
LSA   Lhasa            77.20   5    P         P         22 36 47.8  -1.2
LSA                                 pmax      pmax
      comp=Z,691nm,1.1s
LSA                                 MLR       MLR
      comp=Z,30µm,19.0s
LSA   Lhasa            77.20   5    P         P         22 36 47.8  -1.2
LSA                                 IAmb      IAmb      22 37 02.9
      comp=Z,691nm,1.1s
MSFE  Esma-Masafi      77.30 333  i P         P         22 36 46.6  -2.5
      SNR=15
MASF  Masafi           77.31 333    P         P         22 36 48.9  -0.2
      SNR=30
TPUB  Ta-pu            77.47  33    P         P         22 36 49.9  -0.1
TPUB                                IAmb      IAmb      22 37 13.2
      comp=Z,716nm,1.4s
GO10  Punta Arenas     77.54 194   ⇑P         P         22 36 51.3  +1.1
GO10  Punta Arenas     77.54 194    P         P         22 36 50.1  -0.2
SLWR  Sila             77.56 329    P         P         22 36 49.7  -0.8
MG02  Cerro Sombrero   77.58 196    P         P         22 36 50.4   0.0
UMQ   Umm Al-Quwin     77.61 333    P         P         22 36 50.5  -0.2
BANOM Banah            77.78 333  i P         P         22 36 48.1  -3.6
      SNR=83
BANOM Banah            77.78 333    P         P         22 36 50.8  -0.9
      SNR=78
YULB  Yu-li            77.80  34    IAmb      IAmb      22 37 13.7
      comp=Z,709nm,1.4s
MG04  Isla Riesco      77.92 194    P         P         22 36 52.0  -0.2
SHME  Shamm            77.95 333  i P         P         22 36 50.4  -2.3
      SNR=20
SHME  Shamm            77.95 333    P         P         22 36 50.8  -1.8
      SNR=26
SSLB  Suanglung        78.03  33    IAmb      IAmb      22 37 05.7
      comp=Z,576nm,1.3s
QZH   Quanzhou         78.25  31    P         P         22 36 53.1  -1.2
QZH                                 S         S         22 46 46.5  -0.9
QZH                                 pmax      pmax
      comp=Z,160nm,1.4s
QZH                                 pmax      pmax
      comp=Z,9µm,7.8s
QZH                                 LR        LR
      comp=Z,11µm,17.2s
QZH                                 LR        LR
      comp=Z,7µm,16.8s
QZH                                 LR        LR
      comp=Z,13µm,16.7s
TRNA  Turayna          78.34 329    P         P         22 36 54.6  -0.2
JAWL  J.Aulia          78.37 308  i P         P         22 36 54.8  -0.4
JAWL                              i                     22 36 59.2
      baz=356,slow=22
JAWL                              i S         S         22 46 55.5  +6.4
NACB  Ninganchiao      78.62  33    P         P         22 36 55.9  -0.5
SMLA  Simla            78.79 353   eP         P         22 36 54.7  -2.4
SMLA                                IAmb      IAmb      22 37 11.5
      comp=Z,2µm,1.5s
MSVF  Nonsavu          78.91 104 d iP         P         22 36 58.2  -0.2
MSVF                                pmax      pmax
      comp=Z,607nm,1.1s
MSVF                                MLR       MLR
      comp=Z,29µm,17.0s
MSVF  Nonsavu          78.91 104   ⇑P         P         22 36 58.0  -0.4
MSVF  Nonsavu          78.91 104    P         P         22 36 58.3  -0.1
MSVF                                IAmb      IAmb      22 37 11.8
      comp=Z,497nm,1.1s
MSVF  Nonsavu          78.91 104    IAMs_20   IAMs_20   23 07 59.2
      comp=Z,61µm,18.0s
SHEL  Horse Pasture    79.08 258    P         P         22 36 58.2  -1.1
SHEL                                pmax      pmax
      comp=Z,1µm,1.8s
SHEL                                MLR       MLR
      comp=Z,47µm,22.0s
SHEL  Horse Pasture    79.08 258   ⇓P         P         22 37 00.1  +0.8
SHEL  Horse Pasture    79.08 258    P         P         22 36 58.2  -1.1
SHEL                                IAmb      IAmb      22 37 12.8
      comp=Z,1µm,1.8s
SHEL  Horse Pasture    79.08 258    IAMs_20   IAMs_20   23 04 13.4
      comp=Z,47µm,22.0s
BHK   Bhakra           79.14 352   eP         P         22 36 57.5  -1.6
MG05  Puerto Natales   79.21 194    P         P         22 36 58.5  -0.9
MG05                                IAmb      IAmb      22 37 18.8
      comp=Z,589nm,1.1s
TATO  Taipei           79.31  33    P         P         22 36 59.2  -0.9
TATO                                IAmb      IAmb      22 37 28.4
      comp=Z,568nm,1.5s
RAYN  Ar Rayn          79.40 323  i P         P         22 36 59.4  -1.3
      SNR=97
RAYN  Ar Rayn          79.40 323    P         P         22 36 59.8  -1.0
RAYN                                pmax      pmax
      comp=Z,1µm,1.9s
RAYN                                MLR       MLR
      comp=Z,18µm,20.0s
RAYN  Ar Rayn          79.40 323    P         P         22 37 00.2  -0.6
RAYN  Ar Rayn          79.40 323   ⇑P         P         22 36 59.7  -1.0
RAYN  Ar Rayn          79.40 323    P         P         22 36 59.8  -1.0
RAYN                                IAmb      IAmb      22 37 21.0
      comp=Z,1µm,1.9s
YOJ   Yonaguni jima    79.42  35    P         P         22 37 00.5  -0.2
YOJ                                 pmax      pmax
      comp=Z,1µm,1.7s
YOJ   Yonaguni jima    79.42  35   ⇓P         P         22 37 00.1  -0.6
YOJ   Yonaguni jima    79.42  35    P         P         22 37 00.5  -0.2
YOJ                                 IAmb      IAmb      22 37 17.5
      comp=Z,1µm,1.7s
SHMA  Al-Shehemyia     79.46 329    P         P         22 37 00.8  -0.1
GO09  Cerro Castillo   79.58 194    P         P         22 37 00.6  -0.8
GO09                                IAmb      IAmb      22 37 20.8
      comp=Z,575nm,1.1s
SAKB  Bahrain          79.72 329    P         P         22 37 02.1  -0.2
CD2   Chengdu          79.97  16   ⇓P         P         22 37 03.0  -0.7
CD2                                 pP        PcP       22 37 11.2  +0.1
CD2                                 PP        PP        22 40 02.3  -3.8
CD2                                 S         S         22 47 01.8  -3.9
CD2                                 sS        sS        22 47 15.7  -1.7
CD2                                 pmax      pmax
      comp=Z,640nm,0.9s
CD2                                 pmax      pmax
      comp=Z,6µm,5.5s
CD2                                 LR        LR
      comp=Z,41µm,22.4s
CD2                                 LR        LR
      comp=Z,26µm,21.0s
CD2                                 LR        LR
      comp=Z,51µm,21.4s
DHRM  DHARAMSHALA      79.98 352   eP         P         22 37 01.7  -2.2
MQOL  MQOL             80.64 315  i P         P         22 37 07.3  -0.1
GUMO  Guam             80.75  58    S         S         22 47 19.4  +5.1
      comp=Z,78nm,0.9s,baz=170,slow=18,SNR=1.8
GUMO  Guam             80.75  58    P         P         22 37 07.5  -0.6
GUMO                                pmax      pmax
      comp=Z,2µm,1.5s
GUMO  Guam             80.75  58   ⇓P         P         22 37 06.8  -1.3
GUMO  Guam             80.75  58    P         P         22 37 07.5  -0.6
NIL   Nilore           81.69 350    P         P         22 37 10.6  -2.1
NIL   Nilore           81.69 350    P         P         22 37 10.6  -2.1
NIL                                 IAmb      IAmb      22 37 26.2
      comp=Z,872nm,1.3s
NIL   Nilore           81.69 350    IAMs_20   IAMs_20   23 08 55.8
      comp=Z,44µm,20.0s
WHN   Wuhan            82.13  25   ⇓P         P         22 37 14.2  -0.9
WHN                                 PP        PP        22 40 24.6  +0.7
WHN                                 S         S         22 47 35.4  +7.4
WHN                                 pmax      pmax
      comp=Z,5µm,2.6s
WHN                                 LR        LR
      comp=Z,52µm,17.0s
WHN                                 LR        LR
      comp=Z,38µm,19.6s
WHN                                 LR        LR
      comp=Z,103µm,20.2s
KBL   Kabul            83.14 347    P         P         22 37 19.5  -1.0
KBL                                 pmax      pmax
      comp=Z,2µm,1.1s
KBL   Kabul            83.14 347    P         P         22 37 20.1  -0.4
      SNR=646
KBL   Kabul            83.14 347    P         P         22 37 19.5  -1.0
QRN   Al-Qurain        83.18 328   eP         P         22 37 19.1  -1.5
RDF   Al-Radifah       83.48 327   eP         P         22 37 20.5  -1.7
JOW   Kunigami         83.63  38    S         S         22 47 47.8  +4.2
      comp=Z,14nm,0.9s,baz=125,slow=19,SNR=1.5
JOW   Kunigami         83.63  38   ⇓P         P         22 37 23.6  +0.7
JOW   Kunigami         83.63  38    P         P         22 37 23.5  +0.5
JOW                                 IAmb      IAmb      22 37 44.4
      comp=Z,678nm,1.5s
KBD   Kabd             83.65 328   eP         P         22 37 20.9  -2.1
EKNA  AfricaArray -    83.73 283  ⇓eP         P         22 37 23.4  -0.5
PATS  Pohnpei          83.74  73    P         P         22 37 24.9  +1.0
      baz=84,SNR=11
PATS  Pohnpei          83.74  73    P         P         22 37 23.6  -0.3
PATS                                IAMs_20   IAMs_20   23 11 41.3
      comp=Z,31µm,20.0s
UMR   Umm Al-Rimmam    83.99 328   eP         P         22 37 22.7  -2.0
JMZ   Minamidaito 2    84.00  41   ⇓P         P         22 37 25.6  +0.8
JMZ   Minamidaito 2    84.00  41    P         P         22 37 23.7  -1.1
XAN   Xi'an            84.06  20    P         P         22 37 23.9  -1.2
XAN                                 pP        PcP       22 37 28.4  -0.5
XAN                                 sP        pP        22 37 31.7  -0.5
XAN                                 PP        PP        22 40 41.7  +1.9
XAN                                 SKS       S         22 47 44.0  -3.7
XAN                                 S         SKKSac    22 47 51.0  -0.4
XAN                                 sS        sS        22 47 59.3  -0.1
XAN                                 pmax      pmax
      comp=Z,400nm,1.4s
XAN                                 pmax      pmax
      comp=Z,10µm,6.0s
XAN                                 LR        LR
      comp=Z,35µm,21.0s
XAN                                 LR        LR
      comp=Z,17µm,19.2s
XAN                                 LR        LR
      comp=Z,67µm,18.0s
RST   Umm Al-Ruwaisa   84.20 327   eP         P         22 37 23.9  -2.0
HRA   Herat            84.28 341    IAmb      IAmb      22 37 33.5
      comp=Z,554nm,1.1s
SSE   Sheshan          84.79  30    P         P         22 37 28.0  -0.7
SSE                                 PP        PP        22 40 49.4  +3.8
SSE                                 S         S         22 48 00.6  +5.8
SSE                                 pmax      pmax
      comp=Z,130nm,1.4s
SSE                                 pmax      pmax
      comp=Z,3µm,5.7s
SSE                                 LR        LR
      comp=Z,5µm,17.9s
SSE                                 LR        LR
      comp=Z,5µm,17.8s
SSE                                 LR        LR
      comp=Z,9µm,18.3s
NJ2   Nanjing          84.90  28   ⇓P         P         22 37 27.8  -1.5
NJ2                                 pP        PcP       22 37 32.1  -0.4
NJ2                                 sP        pP        22 37 35.8  -0.6
NJ2                                 PP        PP        22 40 42.9  -3.6
NJ2                                 S         S         22 48 01.7  +5.8
NJ2                                 pmax      pmax
      comp=Z,160nm,1.5s
NJ2                                 pmax      pmax
      comp=Z,6µm,4.8s
NJ2                                 LR        LR
      comp=Z,8µm,21.3s
NJ2                                 LR        LR
      comp=Z,9µm,21.3s
NJ2                                 LR        LR
      comp=Z,18µm,22.3s
LZH   Lanzhou          85.03  15   ⇓P         P         22 37 29.3  -0.8
LZH                                 pP        PcP       22 37 34.4  +1.1
LZH                                 sP        pP        22 37 36.7  -0.5
LZH                                 SKS       S         22 47 50.8  -6.6
LZH                                 S         SKKSac    22 48 02.0  +3.1
LZH                                 sS        ScS       22 48 07.1  -0.9
LZH                                 pmax      pmax
      comp=Z,650nm,1.3s
LZH                                 pmax      pmax
      comp=Z,12µm,8.0s
LZH                                 LR        LR
      comp=Z,32µm,16.5s
LZH                                 LR        LR
      comp=Z,22µm,16.7s
LZH                                 LR        LR
      comp=Z,26µm,19.3s
COYC  Coyhaique        85.03 196   ⇓P         P         22 37 29.7  -0.4
NIUE  Niue             85.60 113    P         P         22 37 34.0  +0.7
      baz=86,SNR=10.0
NIUE  Niue             85.60 113    P         P         22 37 32.3  -1.0
KSH   Kashi            87.22 353  ⇓iP         P         22 37 37.1  -3.6
KSH                                 pP        PcP       22 37 41.5  -1.3
KSH                                 PP        PP        22 41 05.8  +0.4
KSH                                 SKS       SKSac     22 48 02.2  -3.8
KSH                                 S         SKKSac    22 48 16.6  +1.5
KSH                                 sS        sS        22 48 29.7  -0.7
KSH                                 SS        SS        22 54 03.4  -0.5
KSH                                 pmax      pmax
      comp=Z,200nm,1.3s
KSH                                 pmax      pmax
      comp=Z,10µm,4.9s
KSH                                 LR        LR
      comp=Z,14µm,16.3s
KSH                                 LR        LR
      comp=Z,15µm,16.5s
KSH                                 LR        LR
      comp=Z,18µm,17.4s
LL02  Futaleuf         87.29 197    P         P         22 37 39.8  -1.5
LL02                                IAmb      IAmb      22 37 54.9
      comp=Z,552nm,1.3s
GTA   Gaotai           87.67  11   ⇓P         P         22 37 42.3  -0.6
GTA                                 pP        pP        22 37 47.3  -2.7
GTA                                 sP        sP        22 37 50.4  -2.2
GTA                                 S         S         22 48 22.3  -0.6
GTA                                 sS        pS        22 48 31.5  -0.5
GTA                                 pmax      pmax
      comp=Z,430nm,1.3s
GTA                                 pmax      pmax
      comp=Z,6µm,4.9s
GTA                                 LR        LR
      comp=Z,7µm,21.4s
GTA                                 LR        LR
      comp=Z,12µm,20.4s
GTA                                 LR        LR
      comp=Z,13µm,20.0s
GO07  Milladeo Hill,   87.70 195    P         P         22 37 42.7  -0.5
LL07  Hotel Espejo d   87.94 195    P         P         22 37 44.3   0.0
TIA   Tai'an           88.23  25   ⇓P         P         22 37 44.7  -0.8
TIA                                 S         S         22 48 31.9  +3.7
TIA                                 pmax      pmax
      comp=Z,430nm,1.5s
TIA                                 pmax      pmax
      comp=Z,6µm,4.7s
TIA                                 LR        LR
      comp=Z,16µm,21.3s
TIA                                 LR        LR
      comp=Z,10µm,18.6s
TIA                                 LR        LR
      comp=Z,20µm,21.8s
BTK   Batken           88.31 349    IAmb      IAmb      22 37 57.3
      comp=Z,410nm,1.4s
TIY   Taiyuan          88.40  21   ⇑P         P         22 37 45.3  -1.0
TIY                                 S         S         22 48 22.2  -7.6
TIY                                 pmax      pmax
      comp=Z,250nm,1.2s
TIY                                 pmax      pmax
      comp=Z,6µm,8.4s
TIY                                 LR        LR
      comp=Z,22µm,19.7s
TIY                                 LR        LR
      comp=Z,7µm,16.8s
TIY                                 LR        LR
      comp=Z,23µm,20.2s
GEYT  Alibeck          88.62 339    P         P         22 37 46.0  -1.4
      comp=Z,41nm,1.1s,baz=50,slow=2.5,SNR=31
GEYT                                S         SKSac     22 48 18.1  +3.7
      comp=Z,1.1nm,0.6s,baz=192,slow=13,SNR=1.3
GEYT                                PKKPbc    PKKPbc    22 55 27.9  -0.6
      comp=Z,5.4nm,0.8s,baz=298,slow=5.0,SNR=6.5
GEYT                                LR        LR        23 11 45.9
      comp=Z,14µm,21.7s,baz=180,slow=32
GEYT  Alibeck          88.62 339    P         P         22 37 45.5  -1.8
JSU   Suzuyama         88.64  37   ⇑P         P         22 37 46.4  -1.2
JSU   Suzuyama         88.64  37    IAmb      IAmb      22 38 01.0
      comp=Z,259nm,1.1s
EIL   Elat             89.31 318    PKKPbc    PKKPbc    22 55 27.1  +0.9
      comp=Z,3.4nm,0.8s,baz=357,slow=2.6,SNR=3.9
EIL   Elat             89.31 318   ⇓P         P         22 37 49.8  -0.9
LL05  Los Muermos      89.32 196    P         P         22 37 50.0  -0.9
TARA  Tarawa           89.38  87    IAMs_20   IAMs_20   23 13 53.6
      comp=Z,28µm,20.0s
PLCA  Paso Flores      89.39 198    P         P         22 37 50.6  -0.8
      comp=Z,36nm,0.9s,baz=165,slow=4.5,SNR=41
PLCA                                PP        PP        22 41 22.8  +1.3
      comp=Z,27nm,1.2s,baz=153,slow=5.9,SNR=2.2
PLCA                                S         SKSac     22 48 23.8  +3.9
      comp=Z,1.1nm,0.8s,baz=125,slow=12,SNR=1.7
PLCA                                PKKPbc    PKKPbc    22 55 24.6  -0.4
      comp=Z,4.8nm,1.0s,baz=305,slow=11,SNR=3.7
PLCA                                PKPPKP    P'P'df    23 03 31.9  -9.1
      comp=Z,3.2nm,1.1s,baz=359,slow=6.3,SNR=3.8
PLCA                                LR        LR        23 18 53.8
      comp=Z,189µm,18.6s,baz=177,slow=36
PLCA  Paso Flores      89.39 198   ⇓P         P         22 37 50.4  -0.9
PLCA  Paso Flores      89.39 198   eP         P         22 37 50.5  -0.9
PLCA  Paso Flores      89.39 198    P         P         22 37 50.7  -0.7
LL04  Puerto Octay     89.60 197    P         P         22 37 50.8  -1.4
KDJ   Kajisay          89.72 354    IAmb      IAmb      22 37 59.9
      comp=Z,334nm,1.2s
TAS   Tashkent         89.76 348    P         P         22 37 52.3  -0.3
TAS                                 pmax      pmax
      comp=Z,235nm,1.1s
TAS   Tashkent         89.76 348    P         P         22 37 52.3  -0.3
TAS                                 IAmb      IAmb      22 37 59.8
      comp=Z,235nm,1.1s
TRQA  Tornquist        89.79 205    P         P         22 37 51.7  -1.5
TRQA                                pmax      pmax
      comp=Z,894nm,1.4s
TRQA                                MLR       MLR
      comp=Z,54µm,22.0s
TRQA  Tornquist        89.79 205   eP         P         22 37 52.0  -1.2
TRQA  Tornquist        89.79 205    P         P         22 37 51.7  -1.5
TRQA                                IAMs_20   IAMs_20   23 12 35.5
      comp=Z,54µm,22.0s
ULHL  Ulahol           89.90 353    P         P         22 37 52.7  -0.8
      SNR=194
PRZ   Przheval'sk      89.99 355    IAmb      IAmb      22 38 08.6
      comp=Z,434nm,1.2s
AML   Almayashu        90.02 351    P         P         22 37 53.1  -1.2
      SNR=199
AML   Almayashu        90.02 351  i P         P         22 37 52.6  -1.7
      SNR=209
RAR   Rarotonga        90.02 122    IAMs_20   IAMs_20   23 11 11.7
      comp=Z,57µm,19.0s
UCH   Uchtor           90.04 352    P         P         22 37 53.0  -1.4
      SNR=153
JNU   Nakatsue         90.22  37    P         P         22 37 54.3  -0.7
      comp=Z,66nm,1.0s,baz=167,slow=2.1,SNR=7.7
JNU   Nakatsue         90.22  37    P         P         22 37 53.4  -1.5
JNU                                 IAmb      IAmb      22 38 08.3
      comp=Z,252nm,1.2s
KBK   Karagaybulak     90.42 352    P         P         22 37 55.1  -0.8
      SNR=128
GHAJ  Ghor Haditha     90.42 319    P         P         22 37 54.5  -1.4
AAK   Ala-Archa        90.44 352    P         P         22 37 55.3  -0.7
      comp=Z,48nm,0.8s,baz=181,slow=4.2,SNR=107
AAK   Ala-Archa        90.44 352    P         P         22 37 54.0  -1.9
      SNR=84
AAK   Ala-Archa        90.44 352  i P         P         22 37 53.6  -2.4
      SNR=128
AAK   Ala-Archa        90.44 352  i P         P         22 37 55.0  -0.9
AAK                                 pmax      pmax
      comp=Z,668nm,1.2s
AAK                                 MLR       MLR
      comp=Z,28µm,16.0s
AAK   Ala-Archa        90.44 352    P         P         22 37 55.5  -0.4
AAK   Ala-Archa        90.44 352   ⇓P         P         22 37 54.8  -1.1
AAK                                ⇓P         P         22 37 55.0  -0.9
AAK   Ala-Archa        90.44 352    P         P         22 37 54.9  -0.9
AAK                                 IAmb      IAmb      22 38 03.8
      comp=Z,243nm,1.2s
IUG   Iuzhnay          90.46 349  ⇓iP         P         22 37 54.4  -1.6
      baz=349
IUG   Iuzhnay          90.46 349 d iP         P         22 37 54.4  -1.6
EKS2  Erkin-Say        90.54 352    P         P         22 37 55.1  -1.2
      SNR=118
SATY  Saty             90.56 355  ⇓iP         P         22 37 55.4  -1.1
      comp=Z,266nm,1.3s,baz=355
SATY  Saty             90.56 355 d iP         P         22 37 55.3  -1.1
SATY                                pmax      pmax
      comp=Z,266nm,1.3s
ASF   Jabal al Asfar   90.59 321    PKKPbc    PKKPbc    22 55 23.5  +0.3
      comp=Z,4.9nm,0.8s,baz=84,slow=5.5,SNR=5.8
FRU1  Bishkek          90.60 352    P         P         22 37 55.7  -0.8
FRU1                                pmax      pmax
      comp=Z,774nm,1.7s
FRU1  Bishkek          90.60 352    P         P         22 37 55.7  -0.8
SHLS  Shalkode         90.60 356  ⇓iP         P         22 37 55.3  -1.3
      comp=Z,214nm,1.4s,baz=356
SHLS  Shalkode         90.60 356 d iP         P         22 37 55.3  -1.3
SHLS                                pmax      pmax
      comp=Z,214nm,1.4s
BTO   Baotou           90.61  19   eP         P         22 37 56.2  -0.4
BTO                                 pP        pP        22 38 00.6  -3.2
BTO                                 PP        PP        22 41 35.8  +3.4
BTO                                 S         S         22 48 51.4  +1.1
BTO                                 LR        LR
      comp=Z,92µm,20.0s
BTO                                 LR        LR
      comp=Z,45µm,19.8s
UZB   Uzynbulak        90.62 355  ⇓iP         P         22 37 55.4  -1.4
      comp=Z,180nm,1.3s,baz=355
UZB                                eS         SKSac     22 48 26.7  +0.6
      baz=355
UZB   Uzynbulak        90.62 355 d iP         P         22 37 55.3  -1.4
UZB                                eS         SKSac     22 48 26.7  +0.6
UZB                                 pmax      pmax
      comp=Z,179nm,1.3s
TKM2  Tokmak 2         90.63 353    P         P         22 37 55.5  -1.4
      SNR=30
TKM2  Tokmak 2         90.63 353  i P         P         22 37 53.5  -3.3
TKM2                                pmax      pmax
      comp=Z,112nm,1.1s
TNSS  Tian-Shan        90.64 354  i P         P         22 37 55.8  -1.4
      baz=354
ASCN  Ascension        90.65 258    P         P         22 37 57.9  +0.3
ASCN                                IAMs_20   IAMs_20   23 10 32.0
      comp=Z,47µm,20.0s
MDOK  Medeo            90.76 354  i P         P         22 37 55.9  -1.4
      baz=354
MDOK  Medeo            90.76 354  i P         P         22 37 55.9  -1.4
CHMS  Chumysh          90.78 352    P         P         22 37 56.0  -1.3
      SNR=95
AAA   Alma-Ata         90.81 354   eP         P         22 37 56.7  -0.9
      comp=Z,572nm,1.5s,baz=354
AAA                                eS         SKSac     22 48 28.2  +1.2
      baz=354
AAA   Alma-Ata         90.81 354   eP         P         22 37 56.6  -0.9
AAA                                eS         SKSac     22 48 28.2  +1.2
AAA                                 pmax      pmax
      comp=Z,572nm,1.5s
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LR03	Panguipulli	90.82	197	P	P	22 37 57.1	-0.8
JTU	Tsushima	90.87	35	P	P	22 37 57.5	-0.3
JTU				IAmb	IAmb	22 38 12.1	
	comp=Z,275nm,1.6s						
KPKS	Kokpek	90.95	355	⇓iP	P	22 37 56.8	-1.5
	comp=Z,178nm,1.7s,baz=355						
KPKS				eS	SKSac	22 48 28.2	+0.3
	baz=355						
KPKS	Kokpek	90.95	355	d iP	P	22 37 56.7	-1.5
KPKS				eS	SKSac	22 48 28.2	+0.3
KPKS				pmax	pmax		
	comp=Z,178nm,1.7s						
USP	Ospenovka	91.07	352	P	P	22 37 57.3	-1.4
	SNR=72						
WMQ	Urumqi	91.14	2	P	P	22 37 58.8	-0.2
WMQ				pP	pP	22 38 05.2	-1.0
WMQ				S	S	22 48 50.5	-4.5
WMQ				SS	SS	22 55 04.9	+4.2
WMQ				pmax	pmax		
	comp=Z,260nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,6µm,6.7s						
WMQ				LR	LR		
	comp=Z,12µm,20.5s						
WMQ				LR	LR		
	comp=Z,9µm,18.7s						
WMQ				LR	LR		
	comp=Z,8µm,20.5s						
HHC	Hu-ho-hao-te	91.18	20	⇓iP	P	22 37 57.9	-1.4
HHC				pP	PcP	22 38 02.4	+2.1
HHC				sP	pP	22 38 04.8	-1.7
HHC				PP	PP	22 41 39.0	+2.0
HHC				S	S	22 48 54.0	-1.6
HHC				sS	pS	22 49 02.1	-2.6
HHC				pmax	pmax		
	comp=Z,120nm,1.3s						
HHC				pmax	pmax		
	comp=Z,6µm,6.0s						
HHC				LR	LR		
	comp=Z,51µm,20.0s						
HHC				LR	LR		
	comp=Z,10µm,19.2s						
HHC				LR	LR		
	comp=Z,61µm,17.5s						
SGDS	Sogindy	91.24	352	⇓iP	P	22 37 58.1	-1.4
	baz=352						
SGDS				eS	SKSac	22 48 29.4	-0.1
	baz=352						
KKAR	Karatay Array	91.34	349	P	P	22 37 58.2	-1.7
KKAR	Karatay Array	91.34	349	P	P	22 37 58.2	-1.7
LPA	La Plata	91.43	209	d iP	P	22 37 54.4	-6.4
LPA				PP	PP	22 41 45.4	+7.7
LPA				SKS	SKSac	22 48 34.0	+2.5
LPA				PS	PS	22 50 08.6	-0.9
LPA				SS	SS	22 55 03.6	+0.9
LPA				SSS	SSS	22 58 48.3	
LC01	Cunco	91.44	198	IAmb	IAmb	22 38 13.7	
	comp=Z,422nm,1.5s						
CHKK	Chushkaly	91.45	354	eP	P	22 37 58.7	-1.7
	baz=354						
BJT	Baijiatuau	91.53	23	P	P	22 37 59.8	-1.0
BJT				pmax	pmax		
	comp=Z,163nm,1.3s						
BJT				MLR	MLR		
	comp=Z,46µm,20.0s						
BJT	Baijiatuau	91.53	23	P	P	22 37 59.8	-1.0
BJT	Baijiatuau	91.53	23	IAMs_20	IAMs_20	23 18 15.8	
	comp=Z,46µm,20.0s						
KUU	Kurty	91.53	354	⇓iP	P	22 37 59.3	-1.5
	comp=Z,338nm,1.3s,baz=354						
KUU	Kurty	91.53	354	d iP	P	22 37 59.2	-1.5
KUU				pmax	pmax		
	comp=Z,338nm,1.3s						
BJI	Beijing	91.55	23	P	P	22 37 59.6	-1.3
BJI				pP	PcP	22 38 03.9	+2.1
BJI				sP	pP	22 38 05.6	-2.4
BJI				PP	PP	22 41 36.0	-3.8
BJI	Beijing	91.55	23	S	S	22 48 58.7	0.0
BJI	Beijing	91.55	23	sS	sS	22 49 11.0	+0.4
BJI	Beijing	91.55	23	SS	SS	22 55 14.8	+8.3
BJI				pmax	pmax		
	comp=Z,96nm,1.4s						
BJI				pmax	pmax		
	comp=Z,7µm,5.7s						
BJI				LR	LR		
	comp=N,41µm,18.8s						
BJI				LR	LR		
	comp=E,9µm,18.8s						
BJI				LR	LR		
	comp=Z,60µm,19.4s						
KUKU	Kukurantumi	91.63	277	⇓iP	P	22 38 00.6	-1.4
TJN	Taejon	91.74	33	d iP	P	22 38 00.6	-1.3
ARXS	Arharly	91.75	355	P	P	22 38 00.1	-1.7
JMN	Monobe	91.99	39	⇑P	P	22 38 02.9	-0.3
JMN	Monobe	91.99	39	P	P	22 38 02.5	-0.7
DL2	Dalian	92.08	28	⇓iP	P	22 38 02.7	-0.7
DL2				SKS	SKSac	22 48 29.9	-4.3
DL2				S	ScS	22 49 05.7	-0.2
DL2				SS	SS	22 55 14.1	0.0
DL2				pmax	pmax		
	comp=Z,180nm,1.7s						
DL2				pmax	pmax		
	comp=Z,6µm,7.2s						
DL2				LR	LR		
	comp=Z,11µm,18.5s						
DL2				LR	LR		
	comp=Z,5µm,19.6s						
DL2				LR	LR		
	comp=Z,12µm,20.5s						
INCN	Inchon	92.46	32	P	P	22 38 03.9	-1.3
INCN				pmax	pmax		
	comp=Z,203nm,1.5s						
INCN	Inchon	92.46	32	P	P	22 38 03.9	-1.3
INCN				IAmb	IAmb	22 38 19.8	
	comp=Z,203nm,1.4s						
TDK	Taldyqorghan	92.50	355	eP	P	22 38 03.7	-1.6
	baz=355						
TDK				eS	SKSac	22 48 37.0	+0.5
	baz=355						
TDK	Taldyqorghan	92.50	355	eP	P	22 38 03.6	-1.6
TDK				eS	SKSac	22 48 36.9	+0.5
PLTB	Pedras Altas	92.73	214	eP	P	22 38 06.0	-1.0
PLTB	Pedras Altas	92.73	214	P	P	22 38 05.2	-1.8
PLTB				IAmb	IAmb	22 38 25.6	
	comp=Z,341nm,1.2s						
JHS	Saijyo	92.77	38	⇑P	P	22 38 06.0	-0.8
JHS	Saijyo	92.77	38	IAmb	IAmb	22 38 10.7	
	comp=Z,572nm,1.7s						
BTLS	Baital	92.87	352	⇓iP	P	22 38 05.5	-1.4
	comp=Z,130nm,1.5s,baz=352						
BTLS	Baital	92.87	352	d iP	P	22 38 05.5	-1.4
BTLS				pmax	pmax		
	comp=Z,130nm,1.5s						
KSRS	Korea Array	92.90	33	P	P	22 38 06.8	-0.4
	comp=Z,31nm,0.9s,baz=208,slow=4.0,SNR=40						
KSRS				PP	PP	22 41 48.9	-1.6
	comp=Z,25nm,1.2s,baz=208,slow=8.4,SNR=7.0						
KSRS				PKKPbc	PKKPdf	22 55 16.6	+0.3
	comp=Z,4.1nm,0.8s,baz=27,slow=2.9,SNR=6.8						
KSRS				LR	LR	23 18 27.1	
	comp=Z,6µm,20.1s,baz=210,slow=35						
KS19	Wonju Array Si	92.92	33	P	P	22 38 06.6	-0.7
SIRT	Sirnak	93.04	327	P	P	22 38 07.6	-0.4
TER01	Tubaro-SC	93.79	219	eP	P	22 38 11.4	-0.4
CNLB	Canela	93.82	217	eP	P	22 38 10.6	-1.5
JWT	Wachi	93.97	39	⇑P	P	22 38 13.0	+0.8
JWT	Wachi	93.97	39	P	P	22 38 11.5	-0.7
JWT				IAmb	IAmb	22 38 26.3	
	comp=Z,332nm,1.4s						
GURO	Guroymak-BITLI	94.12	327	P	P	22 38 12.9	-0.1
GURO				IAmb	IAmb	22 38 33.7	
	comp=Z,282nm,1.3s						
MK31	Makanchi Array	94.13	358	i P	P	22 38 09.7	-3.0
MK31				pmax	pmax		
	comp=Z,95nm,1.2s						
MKAR	Makanchi Array	94.13	358	P	P	22 38 11.2	-1.5
	comp=Z,28nm,0.8s,baz=158,slow=3.2,SNR=73						
MKAR				PP	PP	22 41 59.1	-1.0
	comp=Z,15nm,1.1s,baz=165,slow=6.0,SNR=1.9						
MKAR				S	SKSac	22 48 47.8	+2.5
	comp=Z,1.6nm,1.1s,baz=234,slow=6.2,SNR=0.7						
MKAR				PKKPbc	PKKPbc	22 55 13.0	-1.6
	comp=Z,0.9nm,0.7s,baz=14,slow=2.1,SNR=5.2						
MKAR				PKPPKP	P'P'df	23 03 26.5	+6.3
	comp=Z,1.6nm,1.0s,baz=316,slow=3.3,SNR=5.1						
MKAR				LR	LR	23 17 53.7	
	comp=Z,20µm,19.6s,baz=181,slow=34						
MKAR	Makanchi Array	94.13	358	i P	P	22 38 10.6	-2.1
MKAR				pmax	pmax		
	comp=Z,29nm,0.9s						
MKAR	Makanchi Array	94.13	358	P	P	22 38 10.5	-2.1
MAKZ	Makanchi	94.15	358	P	P	22 38 11.4	-1.4
MAKZ				pmax	pmax		
	comp=Z,110nm,1.1s						
MAKZ				MLR	MLR		
	comp=Z,19µm,21.0s						
MAKZ	Makanchi	94.15	358	⇓P	P	22 38 10.8	-1.9
MAKZ	Makanchi	94.15	358	P	P	22 38 11.4	-1.4
CSS	Mathiatis	94.51	320	⇓P	P	22 38 13.7	-1.1
CSS	Mathiatis	94.51	320	P	P	22 38 13.8	-0.9
GNI	Garni	94.59	330	P	P	22 38 14.9	-0.3
	comp=Z,68nm,1.2s,baz=227,slow=1.6,SNR=19						
GNI				PP	PP	22 42 03.0	-0.9
	comp=Z,25nm,1.1s,baz=324,slow=11,SNR=1.9						
GNI				PKKPbc	PKKPdf	22 55 13.5	-0.1
	comp=Z,6.6nm,0.9s,baz=283,slow=4.3,SNR=4.9						
GNI	Garni	94.59	330	P	P	22 38 14.9	-0.3
GNI	Garni	94.59	330	d iP	P	22 38 14.7	-0.5
GNI				pmax	pmax		
	comp=Z,475nm,2.1s						
GNI				MLR	MLR		
	comp=Z,7µm,17.0s						
GNI	Garni	94.59	330	P	P	22 38 15.5	+0.4
GNI	Garni	94.59	330	⇑P	P	22 38 14.5	-0.7
GNI	Garni	94.59	330	P	P	22 38 14.5	-0.7
KIC	Kosan Boka	94.69	274	eP	P	22 38 16.3	+0.2
	comp=Z,235nm,1.5s						
INU	Inuyama	94.72	40	IAmb	IAmb	22 38 20.8	
	comp=Z,204nm,1.4s						
ZSN	Zaisan	94.75	360	eP	P	22 38 14.4	-1.1
	comp=Z,255nm,2.6s,baz=360						
ZSN	Zaisan	94.75	360	eP	P	22 38 14.4	-1.1
ZSN				pmax	pmax		
	comp=Z,255nm,2.6s						
LIC	Lamto	94.78	274	eP	P	22 38 16.9	+0.4
	comp=Z,285nm,1.6s						
DBIC	Dimbokro	94.99	274	P	P	22 38 17.2	-0.3
	comp=Z,24nm,1.1s,baz=146,slow=4.5,SNR=13						
DBIC				PKKPbc	PKKPbc	22 55 11.8	+1.2
	comp=Z,4.8nm,0.7s,baz=315,slow=2.4,SNR=5.6						
DBIC				PKPPKP	P'P'df	23 03 25.9	+0.3
	comp=Z,3.2nm,1.0s,baz=284,slow=0.6,SNR=3.0						
DBIC				LR	LR	23 14 52.9	
	comp=Z,71µm,21.7s,baz=155,slow=32						
DBIC	Dimbokro	94.99	274	P	P	22 38 16.5	-1.0
DBIC				pmax	pmax		
	comp=Z,170nm,1.5s						
DBIC	Dimbokro	94.99	274	⇑P	P	22 38 17.8	+0.4
DBIC				⇑s	pP	22 38 25.6	+1.0
DBIC	Dimbokro	94.99	274	P	P	22 38 16.5	-1.0
JGF	Kuroka	95.08	40	⇓P	P	22 38 16.7	-0.7
TIC	Toumodi	95.09	274	eP	P	22 38 18.2	+0.3
BO02	Sierra Bellavi	95.15	200	IAmb	IAmb	22 38 31.1	
	comp=Z,254nm,1.4s						
GO05	Huala	95.19	199	P	P	22 38 17.5	-0.7
GO05				IAmb	IAmb	22 38 31.1	
	comp=Z,389nm,1.8s						
SNY	Shenyang	95.35	28	⇓P	P	22 38 15.8	-2.5
SNY				S	S	22 49 36.0	+3.9
SNY				pmax	pmax		
	comp=Z,75nm,2.9s						
SNY				LR	LR		
	comp=Z,13µm,19.2s						
SNY				LR	LR		
	comp=Z,10µm,18.6s						
SNY				LR	LR		
	comp=Z,24µm,18.4s						
TORD	Torodi Ar. Bea	95.36	284	P	P	22 38 18.3	-0.8
	comp=Z,29nm,1.0s,baz=118,slow=2.4,SNR=66						
TORD				PP	PP	22 42 08.1	-1.8
	comp=Z,18nm,1.0s,baz=127,slow=7.1,SNR=4.9						
TORD				PKKPbc	PKKPdf	22 55 10.0	-0.2
	comp=Z,2.8nm,0.9s,baz=317,slow=1.3,SNR=7.4						
TORD				PKPPKP		23 03 23.9	
	comp=Z,3.8nm,1.1s,baz=292,slow=5.4,SNR=3.6						
TORD				LR	LR	23 18 51.2	
	comp=Z,67µm,19.9s,baz=130,slow=34						
TORD	Torodi Ar. Bea	95.36	284	P	P	22 38 17.4	-1.7
KARS	Kars	95.59	329	P	P	22 38 19.6	-0.1
KARS				pmax	pmax		
	comp=Z,1µm,1.9s						
KARS	Kars	95.59	329	P	P	22 38 19.6	-0.1
BO01	Tunca	95.60	199	P	P	22 38 18.4	-1.6
ITQB	Itaqui	95.74	213	eP	P	22 38 19.6	-1.2
ITQB	Itaqui	95.74	213	P	P	22 38 19.5	-1.2
ITQB				IAmb	IAmb	22 38 46.0	
	comp=Z,251nm,1.1s						
CAM01	Campos-RJ	96.03	228	eP	P	22 38 23.2	+1.1
AKH	Akhalkalaki	96.14	330	⇑P	P	22 38 23.0	+0.8
AKH	Akhalkalaki	96.14	330	⇑P	PKKPbc	22 55 10.7	+1.7
MT01	Popeta	96.14	199	P	P	22 38 21.3	-1.2
MT09	Talagante	96.17	200	P	P	22 38 21.3	-1.5
MT09				IAmb	IAmb	22 38 35.4	
	comp=Z,400nm,1.4s						
ITAB	Concordia	96.18	217	eP	P	22 38 23.6	+0.8
DUB01	Friburgo-RJ	96.18	228	eP	P	22 38 22.9	0.0
MAJO	Matsushiro	96.24	40	i P	P	22 38 21.6	-1.0
MAJO				pmax	pmax		
	comp=Z,233nm,1.6s						
MAJO				MLR	MLR		
	comp=Z,8µm,19.0s						
MAJO	Matsushiro	96.24	40	⇓P	P	22 38 22.3	-0.3
MAJO	Matsushiro	96.24	40	P	P	22 38 21.7	-0.9
MAJO				IAmb	IAmb	22 38 29.8	
	comp=Z,402nm,1.6s						
MAT	Matsushiro	96.24	40	P	P	22 38 20.0	-2.6
MJAR	Matsushiro Arr	96.24	40	P	P	22 38 22.0	-0.6
	comp=Z,40nm,1.0s,baz=190,slow=5.2,SNR=29						
MJAR				PP	PP	22 42 17.1	+0.5
	comp=Z,47nm,1.3s,baz=190,slow=7.7,SNR=6.8						
MJAR				PKKPbc	PKKPbc	22 55 07.7	-0.7
	comp=Z,3.3nm,0.9s,baz=91,slow=4.9,SNR=3.2						
MJAR				LR	LR	23 22 54.4	
	comp=Z,4µm,18.4s,baz=210,slow=36						
MJAR	Matsushiro Arr	96.24	40	P	P	22 38 22.0	-0.6
MJAR	Matsushiro Arr	96.24	40	P	P	22 38 21.5	-1.1
MJB9	Matsu-Tunnel	96.24	40	P	P	22 38 21.9	-0.8
MAN01	Angra dos Reis	96.30	226	eP	P	22 38 23.2	-0.2
MT05	Renca	96.48	200	P	P	22 38 23.5	-0.6
TIJ01	Guaruva-PR	96.53	221	eP	P	22 38 22.9	-1.6
VAS01	Vassouras-RJ	96.54	227	eP	P	22 38 23.7	-0.8
ALF01	Guarapari-ES	96.57	230	eP	P	22 38 23.9	-0.7
PET01	Itanhaem-SP	96.64	223	eP	P	22 38 24.2	-0.7
KNTN	Kanton	96.66	101	IAMs_20	IAMs_20	23 14 21.1	
	comp=Z,37µm,21.0s						
PARB	Paraibuna	96.69	224	eP	P	22 38 23.9	-1.4
PEL	Peldehue	96.70	200	P	P	22 38 24.1	-1.0
PEL				pmax	pmax		
	comp=Z,178nm,1.4s						
PEL				MLR	MLR		
	comp=Z,82µm,22.0s						
PEL	Peldehue	96.70	200	P	P	22 38 24.1	-1.0
PEL				IAmb	IAmb	22 38 37.9	
	comp=Z,178nm,1.4s						
BNN	Bunyan	96.76	323	P	P	22 38 24.9	-0.1
BNN				IAmb	IAmb	22 38 50.1	
	comp=Z,279nm,1.4s						
JYT	Yasato	96.86	42	P	P	22 38 24.1	-1.2
JYT				IAmb	IAmb	22 38 39.5	
	comp=Z,265nm,1.3s						
SONM	Songino Array	96.89	14	P	P	22 38 24.4	-1.0
	comp=Z,26nm,1.1s,baz=200,slow=4.0,SNR=80						
SONM				PP	PP	22 42 21.7	+0.2
	comp=Z,20nm,1.1s,baz=191,slow=4.1,SNR=4.4						
SONM				PKKPbc	PKKPbc	22 55 06.2	-1.0
	comp=Z,7.3nm,1.0s,baz=352,slow=3.0,SNR=9.1						
SONM				PKPPKP		23 03 21.7	
	comp=Z,1.6nm,1.1s,baz=56,slow=3.3,SNR=5.0						
SONM				LR	LR	23 21 36.1	
	comp=Z,22µm,19.4s,baz=170,slow=35						
SONM	Songino Array	96.89	14	P	P	22 38 23.6	-1.8
SONM				pmax	pmax		
	comp=Z,132nm,1.4s						
SONM	Songino Array	96.89	14	P	P	22 38 23.6	-1.8
GROC	Groznyy	96.99	332	eP	P	22 38 28.1	+2.3
GROC				e		22 42 26.2	
GROC				eS	SKSac	22 49 05.6	+5.1
GROC				pmax	pmax		
	comp=Z,18nm,0.7s						
DGZ	Jazzator, Alta	97.02	1	i P	P	22 38 23.4	-2.6
DGZ				pmax	pmax		
	comp=Z,64nm,1.1s						
DGZ				MLR	MLR		
	comp=Z,15µm,17.0s						
ULN	Ulaanbaatar	97.03	15	d eP	P	22 38 23.7	-2.4
ULN	Ulaanbaatar	97.03	15	P	P	22 38 25.3	-0.8
ULN	Ulaanbaatar	97.03	15	⇑P	P	22 38 24.5	-1.5
ULN	Ulaanbaatar	97.03	15	P	P	22 38 24.6	-1.5
ULN				IAmb	IAmb	22 38 34.8	
	comp=Z,126nm,1.1s						
VA03	San Esteban	97.04	200	P	P	22 38 25.2	-1.5
VA01	Torpederas	97.04	199	P	P	22 38 25.8	-0.8
VA01				IAmb	IAmb	22 38 46.0	
	comp=Z,187nm,1.0s						
ONI	Oni	97.21	330	P	P	22 38 26.2	-0.7
ONI				pmax	pmax		
	comp=Z,86nm,1.1s						
ONI	Oni	97.21	330	P	P	22 38 26.2	-0.7
ZEI	Tsey	97.23	331	eP	P	22 38 25.1	-2.1
ZEI				pmax	pmax		
	comp=Z,22nm,1.4s						
RIB01	Linhares ES	97.47	231	eP	P	22 38 27.9	-0.9
ELL	Elmali	97.53	318	P	P	22 38 27.1	-1.5
ELL				pmax	pmax		
	comp=Z,277nm,1.4s						
ELL	Elmali	97.53	318	P	P	22 38 27.1	-1.5
ELL				IAmb	IAmb	22 39 03.9	
	comp=Z,277nm,1.4s						
VAO	Valinhos	97.61	223	eP	P	22 38 28.2	-1.2
CN2	Changchun	97.72	28	eP	P	22 38 28.1	-1.0
CN2				sP	pwP	22 38 39.7	-1.5
CN2				PP	PP	22 42 23.6	-4.3
CN2				SKS	SKSac	22 49 04.9	+0.6
CN2				S	S	22 49 50.5	-2.0
CN2				SS	SS	22 56 38.6	+4.2
CN2				pmax	pmax		
	comp=Z,40nm,1.6s						
CN2				pmax	pmax		
	comp=Z,3µm,9.0s						
CN2				LR	LR		
	comp=Z,10µm,17.0s						
CN2				LR	LR		
	comp=Z,10µm,17.0s						
CN2				LR	LR		
	comp=Z,8µm,21.0s						
ZON	Zonda	97.74	202	P	P	22 38 28.7	-1.2
ZON				pmax	pmax		
	comp=Z,316nm,1.4s						
ZON	Zonda	97.74	202	P	P	22 38 28.7	-1.2
ZON				IAmb	IAmb	22 38 42.9	
	comp=Z,316nm,1.4s						
CHVG	Ch'k'valeri	97.78	329	⇑P	Pdif	22 38 30.0	+0.5
CHVG	Ch'k'valeri	97.78	329	⇑P	Pdif	22 38 30.0	+0.5
SEM	Semipalatinsk	97.81	357	eP	P	22 38 28.7	-0.9
	comp=Z,78nm,1.9s,baz=357						
SEM	Semipalatinsk	97.81	357	eP	P	22 38 28.6	-0.9
SEM				pmax	pmax		
	comp=Z,78nm,1.9s						
BRZS	Berezniki	97.89	352	eP	P	22 38 27.9	-1.9
	comp=Z,59nm,1.7s,baz=352						
BRZS	Berezniki	97.89	352	eP	P	22 38 27.8	-1.9
BRZS				pmax	pmax		
	comp=Z,59nm,1.7s						
NCK	Nalchik	97.96	331	d iP	Pdif	22 38 30.4	+0.1
NCK				pmax	pmax		
	comp=Z,72nm,1.2s						
NCK				MLR	MLR		
	comp=Z,7µm,19.0s						
NEY	Neytrino	98.04	330	i P	P	22 38 29.7	-1.1
NEY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KURBB	Kurchatov Arra	98.10	356	P	P	22 38 29.5	-1.1
	comp=Z,10nm,0.8s,baz=191,slow=4.4,SNR=56						
KURBB				PP	PP	22 42 29.5	-1.1
	comp=Z,18nm,1.1s,baz=182,slow=7.1,SNR=4.8						
KURBB				PKKPbc	PKKPbc	22 55 03.0	-0.8
	comp=Z,4.9nm,0.9s,baz=352,slow=2.8,SNR=12						
KURBB				PKPPKP	P'P'df	23 03 19.3	+6.5
	comp=Z,0.8nm,0.8s,baz=337,slow=3.0,SNR=5.3						
KURK	Kurchatov	98.19	356	P	P	22 38 29.5	-1.5
KURK	Kurchatov	98.19	356	P	P	22 38 29.5	-1.5
BSCB	Bom Sucesso	98.28	226	eP	P	22 38 31.5	-0.9
RCLB	Rio Claro- Sao	98.38	223	eP	P	22 38 32.5	-0.3
PTGB	Pitanga	98.38	218	eP	P	22 38 31.9	-1.0
SJMB	Sao Joao De Ma	98.39	230	eP	P	22 38 31.9	-1.0
BR131	Keskin Array S	98.40	322	P	P	22 38 30.7	-1.8
BR131				pmax	pmax		
	comp=Z,60nm,1.2s						
BR131	Keskin Array S	98.40	322	P	P	22 38 30.6	-1.8
BRTR	Keskin Array B	98.40	322	P	P	22 38 31.5	-0.9
	comp=Z,6.1nm,1.0s,baz=157,slow=6.7,SNR=17						
BRTR				PP	PP	22 42 31.9	-1.5
	comp=Z,2.9nm,0.9s,baz=141,slow=7.1,SNR=1.8						
BRTR				PKKPbc	PKKPbc	22 55 01.6	-1.1
	comp=Z,5.8nm,0.9s,baz=315,slow=0.8,SNR=12						
BRTR				PKPPKP		23 03 17.8	
	comp=Z,0.3nm,0.3s,baz=29,slow=3.3,SNR=3.9						
BRTR	Keskin Array B	98.40	322	c eP	P	22 38 31.2	-1.2
BRTR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRTR	Keskin Array B	98.40	322	P	P	22 38 31.2	-1.2
KBZ	Khabaz	98.40	330	P	Pdif	22 38 32.2	+0.1
	comp=Z,16nm,0.8s,baz=260,slow=1.1,SNR=15						
KBZ				PP	PP	22 42 32.0	-1.0
	comp=Z,16nm,1.1s,baz=159,slow=6.2,SNR=2.6						
KBZ				PKKPbc	PKKPbc	22 55 04.2	+1.6
	comp=Z,3.7nm,1.0s,baz=308,slow=7.2,SNR=3.6						
KBZ				LR	LR	23 18 34.5	
	comp=Z,11µm,21.3s,baz=154,slow=33						
KBZ	Khabaz	98.40	330	c iP	P	22 38 31.6	-0.5
KBZ				pmax	pmax		
	comp=Z,23nm,0.8s						
FRTB	Fartura	98.50	221	eP	P	22 38 31.2	-2.2
PAE	Paea	98.52	128	eP	P	22 38 32.8	-0.7
	comp=Z,31nm,1.5s						
PPT2	Papeete2	98.58	128	eP	P	22 38 33.1	-0.8
	comp=Z,75nm,1.2s						
PPT2	Papeete2	98.58	128	ePP	PP	22 42 33.7	-0.3
	comp=Z,13µm,27.0s						
PPT2				eSKSac	SKSac	22 49 07.3	-3.1
	comp=Z,18µm,30.2s						
PPT2	Papeete2	98.58	128	ePS	PS	22 51 30.3	+1.6
	comp=Z,70µm,32.8s						
PPT2	Papeete2	98.58	128	eLR	LR	23 10 35.0	
	comp=Z,43µm,21.2s,baz=219						
PPTF	Pamatai, Papee	98.59	128	IAMs_20	IAMs_20	23 17 14.1	
	comp=Z,46µm,18.0s						
PPT	Papeete	98.60	128	P	Pdif	22 38 34.7	+0.8
	comp=Z,19nm,0.3s,baz=74,slow=12,SNR=4.0						
PPT				LR	LR	23 16 40.8	
	comp=Z,34µm,18.1s,baz=196,slow=32						
PYA1	Pyatigorsk	98.63	331	⇑iP	P	22 38 31.3	-1.9
KVAR	Kislovodsk Arr	98.67	330	P	P	22 38 32.9	-0.6
	comp=Z,6.1nm,0.8s,baz=90,slow=20,SNR=3.1						
KIV	Kislovodsk	98.67	330	⇑P	Pdif	22 38 33.6	+0.1
KIV	Kislovodsk	98.67	330	i P	P	22 38 32.8	-0.7
	SNR=12						
KIV	Kislovodsk	98.67	330	eP	P	22 38 32.6	-0.9
KIV				e		22 42 28.9	
KIV				ePPP	PPP	22 44 37.6	
KIV				e		22 49 10.7	
KIV				eSS	SS	22 56 49.2	+1.3
KIV				eSSS	SSS	23 00 33.7	
KIV				pmax	pmax		
	comp=Z,87nm,1.0s						
KIV				pmax	pmax		
	comp=Z,228nm,4.3s						
KIV	Kislovodsk	98.67	330	⇓P	P	22 38 33.0	-0.5
KIV				⇑P	Pdif	22 38 34.0	+0.5
KIV	Kislovodsk	98.67	330		P	22 38 32.6	-0.9
TIAR	Tiarei	98.73	128	eP	P	22 38 33.7	-0.8
ZAK	Zakamensk	98.91	12	eP	P	22 38 32.8	-1.6
ZAK				pmax	pmax		
	comp=Z,73nm,1.5s						
CPUP	Villa Florida	99.02	213	P	Pdif	22 38 35.1	-0.5
	comp=Z,13nm,1.0s,baz=165,slow=4.8,SNR=10						
CPUP				PKKPbc	PKKPbc	22 54 58.7	-0.8
	comp=Z,5.8nm,0.9s,baz=342,slow=1.3,SNR=4.9						
CPUP				LR	LR	23 20 26.3	
	comp=Z,36µm,18.9s,baz=167,slow=34						
CPUP	Villa Florida	99.02	213	P	Pdif	22 38 34.3	-1.3
CPUP				pmax	pmax		
	comp=Z,173nm,1.4s						
CPUP	Villa Florida	99.02	213	⇑P	Pdif	22 38 34.8	-0.8
CPUP	Villa Florida	99.02	213	eP	Pdif	22 38 34.5	-1.1

CPUP	Villa Florida	99.02	213		Pdif	22 38 34.3	-1.3
CPUP				IAmb	IAmb	22 38 48.7	
	comp=Z,173nm,1.4s						
ABKAR	Akbulak array	99.03	343	⇑P	Pdif	22 38 33.2	-1.6
ABKAR	Akbulak array	99.03	343		Pdif	22 38 32.8	-1.9
ABKAR	Akbulak array	99.03	343	IAmb	IAmb	22 38 41.9	
	comp=Z,228nm,1.9s						
MEH	Mehetia	99.15	129	eP	Pdif	22 38 35.3	-1.0
	comp=Z,37nm,1.4s						
SOC	Sochi	99.37	328	eP	Pdif	22 38 34.4	-2.1
SOC				e		22 42 36.2	
SOC				ePPP	PPP	22 44 43.9	
SOC				eS	SKSac	22 49 12.9	+0.3
SOC				eSS	SS	22 57 01.3	+3.8
SOC				pmax	pmax		
	comp=Z,57nm,1.3s						
SOC				MLR	MLR		
	comp=Z,5µm,19.0s						
GUA01	Guaratinga, BA	99.42	233	eP	Pdif	22 38 36.9	-0.7
GOF	Gofitskoye	99.53	331	⇑iP	Pdif	22 38 37.7	+0.5
GOF				pmax	pmax		
	comp=Z,216nm,1.4s						
MDJ	Mudanjiang	99.82	30	P	Pdif	22 38 40.8	+2.4
MDJ				pP	pP	22 38 43.3	-2.3
MDJ				sP	sP	22 38 45.6	-2.6
MDJ				pmax	pmax		
	comp=Z,29nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,2µm,7.1s						
MDJ				LR	LR		
	comp=Z,7µm,22.1s						
MDJ				LR	LR		
	comp=Z,12µm,18.1s						
MDJ				LR	LR		
	comp=Z,12µm,19.0s						
MOY	Mondy	99.88	10	eP	Pdif	22 38 38.0	-0.7
MOY				pmax	pmax		
	comp=Z,175nm,2.2s						
BB19B	Bebedouro	100.00	223	eP	Pdif	22 38 39.5	-0.6
DIAM	Diamantina, MG	100.01	229	eP	Pdif	22 38 39.2	-1.1
KOWA	Kowa	100.12	280	PKKPbc	PKKPbc	22 54 55.7	-0.9
	comp=Z,1.9nm,0.7s,baz=315,slow=8.6,SNR=2.6						
KOWA	Kowa	100.12	280	⇑P	Pdif	22 38 41.2	+0.7
KOWA	Kowa	100.12	280	Pdif	Pdif	22 38 41.2	+0.7
TLY	Talaya	100.22	11	P	Pdif	22 38 40.0	-0.1
	comp=Z,24nm,0.9s,baz=234,slow=9.4,SNR=6.6						
TLY	Talaya	100.22	11	eP	Pdif	22 38 35.3	-4.8
TLY				e		22 42 42.6	
TLY				ePS	PS	22 51 46.2	+0.1
TLY				eSS	SS	22 57 16.1	+6.9
TLY				pmax	pmax		
	comp=Z,101nm,0.9s						
TLY				MLR	MLR		
	comp=Z,41µm,18.0s						
TLY	Talaya	100.22	11	⇓P	Pdif	22 38 40.0	-0.1
TLY				⇓P	pPdif	22 38 44.4	-2.9
TLY	Talaya	100.22	11	Pdif	Pdif	22 38 40.5	+0.4
USRK	Ussuriysk Ar.	100.29	32	P	Pdif	22 38 40.5	0.0
	comp=Z,4.0nm,0.8s,baz=230,slow=4.7,SNR=7.4						
USRK				PP	PP	22 42 48.2	+0.7
	comp=Z,15nm,1.1s,baz=217,slow=6.0,SNR=4.6						
USRK				PKKPbc	PKKPbc	22 54 56.2	-1.0
	comp=Z,5.1nm,0.8s,baz=27,slow=3.5,SNR=7.1						
USRK	Ussuriysk Ar.	100.29	32	Pdif	Pdif	22 38 38.7	-1.9
TRCB	Terra Rica	100.31	219	eP	Pdif	22 38 40.5	-1.0
AKTO	Aktyubinsk	100.53	343	P	Pdif	22 38 40.2	-1.2
	comp=Z,19nm,0.8s,baz=199,slow=2.8,SNR=41						
NBIT	Itapeh - BA	100.58	234	eP	Pdif	22 38 43.3	+0.7
LCO	Las Campanas	100.67	201	⇑P	Pdif	22 38 43.0	-0.2
PCMB	Pacaembu	100.77	221	eP	Pdif	22 38 42.7	-0.8
IRK	Irkutsk	100.86	12	eP	Pdif	22 38 39.3	-3.6
IRK				pmax	pmax		
	comp=Z,189nm,3.7s						
HIA	Hailar	101.06	22	IAMs_20	IAMs_20	23 23 15.2	
	comp=Z,27µm,20.0s						
BVAR	Borovoye Array	101.13	351	P	Pdif	22 38 43.1	-1.0
	comp=Z,11nm,1.0s,baz=200,slow=11,SNR=28						
BVAR				PKKPbc	PKKPbc	22 54 53.4	-1.7
	comp=Z,4.5nm,0.9s,baz=280,slow=8.2,SNR=7.3						
BVAR				PKPPKP		23 03 13.4	
	comp=Z,1.4nm,1.0s,baz=221,slow=5.7,SNR=5.9						
BRVK	Borovoye	101.18	351	i P	Pdif	22 38 41.3	-3.0
BRVK				pmax	pmax		
	comp=Z,42nm,1.1s						
BRVK	Borovoye	101.18	351	P	Pdif	22 38 42.6	-1.7
BRVK	Borovoye	101.18	351	⇓P	Pdif	22 38 43.3	-1.0
BRVK				⇓P	pPdif	22 38 43.6	-7.8
BRVK	Borovoye	101.18	351	IAMs_20	IAMs_20	23 20 59.7	
	comp=Z,25µm,20.0s						
ANN	Anapa	101.25	327	eP	Pdif	22 38 44.5	-0.2
ANN				e		22 42 51.8	
ANN				e		22 49 20.2	
ANN				eSP	SP	22 52 01.9	+8.1
ANN				eSS	SS	22 57 33.7	+10
ANN				pmax	pmax		
	comp=Z,147nm,1.4s						
ANN				pmax	pmax		
	comp=N,82nm,1.8s						
ANN				pmax	pmax		
	comp=E,25nm,1.0s						
ANN				pmax	pmax		
	comp=E,773nm,5.9s						
ANN				pmax	pmax		
	comp=Z,3µm,7.2s						
ANN				pmax	pmax		
	comp=N,589nm,2.2s						
ZALV	Zalesovo Beam	101.26	360	P	Pdif	22 38 42.9	-1.7
	comp=N,9.7nm,0.8s,baz=197,slow=3.1,SNR=33						
ZALV				PP	PP	22 42 53.4	-1.1
	comp=N,21nm,1.1s,baz=194,slow=5.1,SNR=1.8						
ZALV				PKKPbc	PKKPbc	22 54 55.1	+0.4
	comp=N,1.5nm,0.7s,baz=31,slow=2.4,SNR=2.9						
ZALV				PKPPKP		23 03 10.2	
	comp=N,1.5nm,1.0s,baz=343,slow=3.0,SNR=3.8						
ZALV	Zalesovo Beam	101.26	360	i P	Pdif	22 38 42.2	-2.4
ZALV				pmax	pmax		
	comp=Z,15nm,1.1s						
ZALV	Zalesovo Beam	101.26	360	Pdif	Pdif	22 38 41.5	-3.0
MC01	Montes Claros	101.49	229	eP	Pdif	22 38 46.3	-0.5
VAH	Vaihoa	101.57	128	eP	Pdif	22 38 46.3	-0.7
	comp=Z,201nm,1.6s						
VAH	Vaihoa	101.57	128	eT	T	00 31 57.7	
	comp=Z,11nm,0.2s						
PMOR	Pomariorio Ree	101.62	128	eP	Pdif	22 38 46.7	-0.6
	comp=Z,229nm,1.6s						
GDU01	Guandu, BA	101.65	234	eP	Pdif	22 38 46.7	-0.8
GO03	Copiap	101.90	202	⇑P	Pdif	22 38 59.3	+11
CIT	Chita	102.22	17	eP	Pdif	22 38 48.5	-0.5
CIT				pmax	pmax		
	comp=Z,305nm,2.6s						
IPMB	Ipameri, GO	102.52	225	eP	Pdif	22 38 49.5	-1.9
SIM	Simferopol'	102.61	325	eP	Pdif	22 38 49.7	-1.2
SIM				pmax	pmax		
	comp=Z,24nm,1.5s						
ALN	Alexandroupoli	102.65	318	⇓P	Pdif	22 38 53.5	+2.4
NBLA	Lagarto - SE	102.87	238	eP	Pdif	22 38 50.8	-2.1
AGG	Agios Georgios	102.89	315	⇑P	Pdif	22 38 59.2	+6.9
NBAN	Anadia - AL	103.06	240	eP	Pdif	22 38 52.3	-1.4
JANB	Januaria	103.06	230	eP	Pdif	22 38 52.5	-1.3
AQDB	Aquidauana	103.66	217	eP	Pdif	22 38 55.1	-1.2
NBPN	Ponto Novo - B	104.34	236	eP	Pdif	22 38 59.0	-0.5
ASAJ	Asahikawa	104.38	39	PP	PKiKP	22 43 13.8	-1.2
	comp=Z,7.9nm,0.3s,baz=204,slow=12,SNR=4.6						
RPN	Rapa Nui	104.38	167	IAMs_20	IAMs_20	23 19 23.4	
	comp=Z,56µm,20.0s						
BDFB	Brasilia	104.43	226	Pdiff	Pdif	22 39 00.5	+0.5
	comp=Z,0.8nm,0.3s,baz=162,slow=5.3,SNR=1.6						
BDFB				PP	PKiKP	22 43 16.6	+0.5
	comp=Z,17nm,1.2s,baz=140,slow=8.1,SNR=1.9						
BDFB				PKKPbc	PKKPbc	22 54 44.2	+0.3
	comp=Z,4.4nm,0.8s,baz=321,slow=2.5,SNR=4.2						
TIRR	Tirgusor	104.50	322	⇓P	Pdif	22 38 58.6	-0.6
TIRR	Tirgusor	104.50	322	⇓P	Pdif	22 38 58.6	-0.6
KLR	Kul'dur	104.56	29	Pdiff	Pdif	22 38 58.4	-1.0
	comp=Z,6.0nm,1.1s,baz=216,slow=7.3,SNR=6.5						
KLR				PP	PP	22 43 17.5	-2.0
	comp=Z,33nm,1.2s,baz=214,slow=4.9,SNR=7.0						
VAY	Valandovo	104.58	316	i P	PKiKP	22 43 12.5	-2.9
KEK	Kerkira	104.66	313	⇑P	Pdif	22 39 07.8	+7.6
BELG	Belogornoye	104.77	337	Pdiff	Pdif	22 38 59.4	-0.7
	comp=Z,33nm,1.2s,baz=316,slow=5.0,SNR=6.5						
NBPV	Pedro Velho	105.07	242	eP	Pdif	22 39 02.1	-0.6
CFR	Carcaliu	105.19	322	⇑P	Pdif	22 39 03.0	+0.7
CFR	Carcaliu	105.19	322	⇑P	PKKPbc	22 54 43.0	+0.4
CFR	Carcaliu	105.19	322	⇑P	Pdif	22 39 03.0	+0.7
NBLV	Livramento - P	105.29	240	eP	Pdif	22 39 02.4	-1.3
VRH	Novokhopyorsk	105.37	333	eP	Pdif	22 39 03.5	+0.6
VRH				ePS	PS	22 52 41.4	+1.0
VRH				eSS	SS	22 58 26.8	+6.6
VRH				pmax	pmax		
	comp=Z,40nm,1.0s						
VRH				MLR	MLR		
	comp=Z,3µm,14.0s						
CEL	Celeste	105.52	310	IAMs_20	IAMs_20	23 32 19.0	
	comp=Z,23µm,20.0s						
SDBA	SAO DESIDERIO	105.60	231	eP	Pdif	22 39 03.3	-1.8
SKO	Skopje	105.62	316	i P	PKiKP	22 43 20.4	+3.1
TIP	Timpagrande	105.77	311	⇓P	Pdif	22 39 05.6	+0.5
TIP	Timpagrande	105.77	311	⇑P	Pdif	22 39 06.2	+1.0
PP1B	Ponte de Pedra	105.88	219	eP	Pdif	22 39 05.4	-0.8
PB15	IPOC Station P	105.88	204	IAMs_20	IAMs_20	23 25 42.6	
	comp=Z,63µm,22.0s						
TIR	Tirane	105.89	315	⇑P	Pdif	22 39 14.5	+9.0
VORD	Divnogorie	105.92	332	eP	Pdif	22 39 09.0	+3.6
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ARU	Arti	106.12	345	Pdiff	Pdif	22 39 06.0	-0.1
	baz=144,slow=3.3						
ARU				PKKPbc	PKKPbc	22 54 38.9	-1.2
	comp=Z,0.8nm,0.6s,baz=338,slow=5.4,SNR=4.1						
ARU	Arti	106.12	345c	iP	Pdif	22 39 05.2	-1.0
ARU				S	SKSac	22 49 45.0	+1.3
ARU				pmax	pmax		
	comp=Z,40nm,1.8s						
ARU				MLR	MLR		
	comp=Z,19µm,20.0s						
ARU	Arti	106.12	345		Pdif	22 39 04.8	-1.4
SVE	Sverdlovsk	106.16	346	eP	Pdif	22 39 05.4	-0.9
SVE				pmax	pmax		
	comp=Z,72nm,2.0s						
VSR	Storozhevoye	106.18	332	eP	Pdif	22 39 08.5	+2.0
VSR				e		22 43 27.7	
VSR				ePS	PS	22 52 48.1	-0.7
VSR				eSS	SS	22 58 38.2	+6.9
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VSR				MLR	MLR		
	comp=Z,6µm,19.0s						
LVC	Limon Verde	106.29	205	⇑P	Pdif	22 39 20.0	+12
LVC	Limon Verde	106.29	205	eP	Pdif	22 39 07.1	-1.4
MILM	Milestii Mici	106.33	323	⇑P	Pdif	22 39 10.2	+2.9
MILM	Milestii Mici	106.33	323	eP	Pdif	22 39 06.0	-1.3
MILM				e		22 43 36.0	
MILM				i PS	PS	22 52 54.0	+3.6
MILM				i SS	SS	22 58 37.0	+3.6
MILM				pmax	pmax		
	comp=Z,2µm,5.7s						
VRI	Vrincioaia	106.34	322	⇑P	Pdif	22 39 08.2	+0.8
VRI	Vrincioaia	106.34	322	⇑P	Pdif	22 39 08.2	+0.8
PLOR	Plostina	106.36	322	⇓P	Pdif	22 39 10.9	+3.4
PLOR	Plostina	106.36	322	⇓P	Pdif	22 39 10.9	+3.4
NBMA	Muriti-CE	106.36	239	eP	Pdif	22 39 08.4	0.0
MLR	Muntele Rosu	106.37	321	⇓P	Pdif	22 39 15.0	+7.3
MLR	Muntele Rosu	106.37	321	⇓P	PKKPbc	22 54 41.3	+2.1
MLR	Muntele Rosu	106.37	321	Pdiff	Pdif	22 39 07.6	-0.1
	comp=Z,0.9nm,0.4s,baz=239,slow=5.9,SNR=2.0						
MLR				PKKPbc	PKKPbc	22 54 38.1	-1.1
	comp=Z,1.6nm,0.6s,baz=294,slow=18,SNR=3.1						
MLR	Muntele Rosu	106.37	321	⇓P	Pdif	22 39 15.0	+7.3
KIS	Kishinev	106.39	323	eP	Pdif	22 39 07.0	-0.6
KIS	Kishinev	106.39	323	ePP	PP	22 43 37.0	+4.0
	comp=Z,470nm,3.9s						
KIS				eSKS	SKSac	22 49 42.0	-3.3
KIS	Kishinev	106.39	323	ePS	PS	22 52 52.0	+1.0
KIS				eLR	LR	23 40 25.0	
	comp=Z,3µm,19.0s						
KIS	Kishinev	106.39	323	eP	Pdif	22 39 07.0	-0.6
KIS				e		22 43 37.0	
KIS				e		22 49 42.0	
KIS				ePS	PS	22 52 52.0	+1.0
CLTB	Caltabellotta	106.42	308	⇓P	Pdif	22 39 19.2	+11
COVR	Voineasa-Covas	106.54	321	⇑P	Pdif	22 39 16.2	+7.8
VOIR		106.71	320	⇓P	Pdif	22 39 10.9	+1.7
VOIR		106.71	320	⇓P	Pdif	22 39 10.9	+1.7
YSS	Yuzh-Sakhalins	106.73	37	eP	Pdif	22 39 18.6	+10
YSS				ePS	PS	22 52 56.9	+2.3
YSS				pmax	pmax		
	comp=Z,1µm,6.8s						
YSS				MLR	MLR		
	comp=Z,6µm,18.0s						
ARR	Arges	106.83	320	⇓P	Pdif	22 39 16.1	+6.3
ARR	Arges	106.83	320	⇑P	PKKPab	22 54 50.3	+0.3
TESR	Tescani	106.88	322	⇑P	Pdif	22 39 12.7	+2.9
MATE	Matera	106.91	312	⇓P	Pdif	22 39 12.4	+2.3
ZEA	Zeya	107.12	25	eP	Pdif	22 39 19.0	+8.3
ZEA				e		22 43 41.4	
ZEA				e		22 49 56.1	
ZEA				e		22 52 56.5	
ZEA				pmax	pmax		
	comp=Z,400nm,6.4s						
ZEA				pmax	pmax		
	comp=N,2µm,5.5s						
ZEA				MLR	MLR		
	comp=N,3µm,18.0s						
PB09	IPOC Station P	107.15	205	IAMs_20	IAMs_20	23 31 24.4	
	comp=Z,48µm,18.0s						
KEST	Kesra	107.17	304	Pdiff	Pdif	22 39 11.5	0.0
	comp=Z,2.9nm,1.0s,baz=166,slow=10.0,SNR=2.7						
KEST				PP	PKiKP	22 43 26.9	+6.4
	comp=Z,9.1nm,1.0s,baz=168,slow=6.4,SNR=3.6						
KEST				PKKPbc	PKKPbc	22 54 35.3	-0.9
	comp=Z,8.5nm,1.2s,baz=303,slow=8.0,SNR=2.3						
KEST	Kesra	107.17	304	Pdif	Pdif	22 39 10.9	-0.6
LPSR	Galich'ya Gora	107.45	332	eP	Pdif	22 39 13.4	+1.3
LPSR				ePS	PS	22 52 58.5	-3.3
LPSR				eSS	SS	22 59 06.7	+18
LPSR				pmax	pmax		
	comp=Z,30nm,1.8s						
LPSR				MLR	MLR		
	comp=Z,4µm,18.0s						
SORM	Soroca	107.49	324	⇓P	Pdif	22 39 17.4	+5.0
SORM	Soroca	107.49	324	⇓P	Pdif	22 39 17.4	+5.0
GZR	Gura Zlata	107.67	319	⇑P	Pdif	22 39 13.3	-0.1
GZR	Gura Zlata	107.67	319	⇑P	Pdif	22 39 13.3	-0.1
MDVR	Moldovita	107.67	318	⇑P	Pdif	22 39 18.2	+4.8
BOD	Bodaibo	107.79	16	eP	Pdif	22 39 13.6	+0.1
BOD				pmax	pmax		
	comp=Z,50nm,2.0s						
BURAR	Bucovina Array	108.36	322	⇓P	PKKPbc	22 54 35.6	+2.6
BZS	Buzias	108.36	318	⇑P	Pdif	22 39 25.8	+9.4
BZS	Buzias	108.36	318	⇓P	PKKPab	22 54 43.0	-0.1
BZS	Buzias	108.36	318	⇑P	Pdif	22 39 25.8	+9.4
MBO	M'Bour	108.73	271	IAMs_20	IAMs_20	23 26 50.5	
	comp=Z,48µm,18.0s						
DRGR		108.78	320	⇓P	Pdif	22 39 27.5	+9.1
DRGR		108.78	320	⇓P	PKKPbc	22 54 32.9	+1.3
DRGR		108.78	320	⇓P	Pdif	22 39 27.5	+9.1
FRGS	Fruska Gora	108.83	317	⇑P	PKKPab	22 54 44.7	+3.5
AKASG	Malin Array Be	109.22	326	Pdiff	Pdif	22 39 20.1	0.0
	comp=Z,0.4nm,0.5s,baz=158,slow=3.7,SNR=2.2						
AKASG				PKiKP	PKiKP	22 43 23.4	-0.3
	comp=Z,3.8nm,0.8s,baz=95,slow=1.8,SNR=6.7						
AKASG				PKKPbc	PKKPbc	22 54 30.6	+0.5
	comp=Z,0.2nm,0.2s,baz=295,slow=3.4,SNR=4.1						
AKASG	Malin Array Be	109.22	326	P	Pdif	22 39 19.2	-0.9
AKASG	Malin Array Be	109.22	326	Pdif	Pdif	22 39 19.2	-0.9
XMAS	Kiritimati	109.59	109	IAMs_20	IAMs_20	23 26 28.2	
	comp=Z,40µm,18.0s						
AQU	L'Aquila	109.83	311	IAMs_20	IAMs_20	23 38 43.2	
	comp=Z,22µm,19.0s						
VSL	Villasalto	109.87	307	IAMs_20	IAMs_20	23 37 03.1	
	comp=Z,22µm,18.0s						
TRPA	Tarpa	109.89	321	⇓P	PKKPab	22 54 40.8	+4.5
KIRV	Kirov	109.95	341	PKKPbc	PKKPbc	22 54 27.6	-0.3
	comp=Z,12nm,0.7s,baz=0.0,slow=5.1,SNR=4.3						
OBN	Obninsk	110.33	333c	iPKIKP	PKiKP	22 43 25.7	+0.1
OBN				i		22 44 03.4	
OBN				i PS	PS	22 53 23.5	-7.1
OBN				pmax	pmax		
	comp=Z,34nm,1.3s						
OBN				MLR	MLR		
	comp=Z,8µm,21.0s						
UZH	Uzhgorod	110.38	321	i PKIKP	PKiKP	22 43 29.0	+3.1
UZH				e		22 44 04.1	
UZH				e		22 50 09.4	
UZH				ePS	PS	22 53 31.1	-0.2
PB16	IPOC Station P	110.51	206	IAMs_20	IAMs_20	23 29 19.3	
	comp=Z,50µm,19.0s						
MOS	Moscow	110.53	333	eP	Pdif	22 39 24.8	-0.9
MOS				i		22 43 22.2	
MOS				e		22 43 58.9	
MOS				e		22 49 59.4	
MOS				ePS	PS	22 53 33.9	+1.4
MOS				ePPS	PPS	22 54 33.4	
MOS				eSS	SS	22 59 31.5	+1.7
MOS				eSSS	SSS	23 03 37.3	
MOS				MLR	MLR		
	comp=N,6µm,19.0s						
MOS				MLR	MLR		
	comp=Z,6µm,19.0s						
LVV	L'vov	110.57	323	i PKIKP	PKiKP	22 43 26.0	-0.3
LVV				e		22 44 05.0	
LVV				ePS	PS	22 53 32.0	-1.1
LVV				eSS	SS	22 59 27.0	-3.6
LVV				MLR	MLR		
	comp=Z,3µm,20.0s						
KOLS	Kolonicke sedl	110.62	321	ePP	PP	22 44 06.0	+2.2
KOLS				e		22 53 37.5	
KOLS				eSS	SS	22 59 34.2	+2.8
TAOE	Nuku Hiva Isla	110.83	131	eLR	LR	23 16 21.3	
	comp=Z,31µm,23.1s,baz=213						
PSZ	Piszkesteto	110.88	319	⇓P	PKKPab	22 54 36.2	+4.1
CRVS	Cervenica-Dubn	110.94	321	ePKIKP	PKiKP	22 43 34.2	+7.1
CRVS				e		22 44 08.1	
CRVS				e		22 53 36.0	
CRVS				eSS	SS	22 59 32.3	-3.4
CRVS	Cervenica-Dubn	110.94	321	e	PKiKP	22 43 34.2	+7.1
CRVS				ePP	PP	22 44 08.1	+1.9
CRVS				e		22 53 36.0	
CRVS				eSS	SS	22 59 32.3	-3.4
KWP	Kalwaria Pacla	110.97	322	ePKiKP	PKiKP	22 43 28.2	+1.1
KWP				ePS	PS	22 53 39.6	+2.8
KWP				eSS	SS	22 59 31.1	-5.0
KECS	Kecovo	111.05	320	ePP	PP	22 44 08.6	+1.7
LJU	Ljubljana	111.97	315	ePdiff	Pdif	22 39 39.8	+7.3
LJU				ePKiKP	PP	22 44 13.1	-0.4
LJU				ePS	PS	22 53 49.3	+3.3
LJU				eSS	SS	22 59 51.6	+2.2
PDRB	Porto dos Gac	112.00	221	eP	Pdif	22 39 33.5	0.0
LPAZ	La Paz	112.02	208	Pdiff	Pdif	22 39 34.1	-0.2
	comp=Z,0.5nm,0.5s,baz=62,slow=12,SNR=4.1						
LPAZ				PKiKP	PKiKP	22 43 31.4	+0.5
	comp=Z,4.2nm,1.0s,baz=146,slow=3.8,SNR=2.3						
LPAZ				PP	PP	22 44 12.2	-1.5
	comp=Z,20nm,1.1s,baz=126,slow=7.1,SNR=4.9						
LPAZ				PKKPbc	PKKPbc	22 54 19.9	-1.0
	comp=Z,3.9nm,0.9s,baz=338,slow=5.4,SNR=4.0						
SOKA	Soboth	112.19	316	eP	PKiKP	22 43 30.3	+0.7
	comp=Z,20nm,1.3s						
SOKA				eP	PKKPab	22 54 28.6	+2.1
	comp=Z,21nm,1.3s						
CLDB	Colider	112.24	222	eP	Pdif	22 39 33.3	-1.2
VILB	Vilhena	112.26	217	eP	Pdif	22 39 33.8	-0.8
OBKA	Obir	112.29	315	eP	PKiKP	22 43 30.4	+0.6
	comp=Z,16nm,1.5s						
OBKA				eP	PP	22 44 21.6	+5.6
	comp=Z,78nm,2.4s						
OBKA				eP	PKKPab	22 54 29.5	+3.4
	comp=Z,9.2nm,1.1s						
ZST	Bratislava	112.34	318	ePP	PP	22 44 16.0	-0.2
ZST				eSS	SS	23 00 01.7	+7.4
JOHN	Johnston Islan	112.35	89	IAMs_20	IAMs_20	23 28 28.3	
	comp=Z,27µm,19.0s						
ARSA	Arzberg	112.37	316	eP	PKiKP	22 43 30.5	+0.6
	comp=Z,15nm,1.1s						
ARSA				eP	PP	22 44 21.4	+4.9
	comp=Z,36nm,1.1s						
ARSA				eP	PKKPab	22 54 29.5	+3.9
	comp=Z,12nm,1.4s						
MODS	Modra-Piesok	112.39	318	e	PKiKP	22 43 40.7	+11
MODS				ePP	PP	22 44 15.3	-1.3
MODS				e		22 53 43.6	
MODS				eSS	SS	22 59 47.5	-7.5
SMOL	Smolenice	112.42	318	ePP	PP	22 44 17.5	+0.7
JAVC	Velka Javorina	112.57	319	ePKIKP	PKiKP	22 43 31.3	+1.1
JAVC				ePP	PP	22 44 17.9	0.0
JAVC				ePKKP	PS	22 53 52.2	+0.6
JAVC				eSS	SS	22 59 51.3	-6.2
OJC	Ojcow	112.65	321	ePKiKP	PKiKP	22 43 30.2	0.0
OJC				ePP	PP	22 44 15.5	-2.9
OJC				ePS	PS	22 53 51.8	-0.4
OJC				eSS	SS	22 59 57.8	-0.5
CONA	Conrad Observa	112.71	317	i P	PKiKP	22 43 30.4	-0.2
	comp=Z,31nm,1.6s						
CONA				eP	PP	22 44 18.7	-0.2
	comp=Z,42nm,1.7s						
CONA				eP	PKKPbc	22 54 18.8	+0.2
	comp=Z,15nm,1.3s						
MNK	Minsk	112.75	328	i PKIKP	PKiKP	22 43 30.6	+0.4
MNK				i		22 44 24.9	
MNK				i		22 50 41.7	
MNK				i SS	SS	23 00 11.4	+12
MNK				pmax	pmax		
	comp=E,7.0nm,1.4s						
MNK				pmax	pmax		
	comp=Z,34nm,1.0s						
MNK				pmax	pmax		
	comp=N,39nm,1.1s						
MNK	Minsk	112.75	328	i PKP	PKiKP	22 43 30.7	+0.4
	comp=E,7.0nm,1.4s						
MNK				i PKP	PKiKP	22 43 30.7	+0.4
	comp=N,39nm,1.1s						
MNK				i PKP	PKiKP	22 43 30.7	+0.4
	comp=Z,34nm,0.9s,baz=321						
MNK				i PP	PP	22 44 25.0	+6.0
MNK				i PPP	PPP	22 46 25.8	
MNK				i PKS		22 47 06.2	
MNK				i SKP		22 47 13.5	
MNK				i SKS	SKSdf	22 50 41.7	+1.7
MNK				i PS	PS	22 54 00.3	+7.4
MNK				i SS	SS	23 00 11.4	+12
MNK				i SSS	SSS	23 04 24.8	
MNK				i LQ	LQ	23 24 28.9	
MNK				i LR	LR	23 28 56.3	
MNK				i LRM	MLR	23 34 27.1	
	comp=Z,11µm,17.1s						
MNK				i LRM	MLR	23 34 39.8	
	comp=N,7µm,21.1s						
MNK				i LRM	MLR	23 34 50.0	
	comp=E,2µm,22.5s						
MYKA	Terra Mystica	112.81	315	eP	PKiKP	22 43 31.0	+0.2
	comp=E,27nm,1.6s						
KBA	Koelnbreinsper	113.28	315	P	PKiKP	22 43 30.6	-1.1
	comp=E,18nm,1.3s						
KRUC	Moravsky	113.29	318	ePKIKP	PKiKP	22 43 31.6	+0.1
KRUC				ePP	PP	22 44 23.5	+0.5
KRUC				ePKKP	SP	22 53 54.8	0.0
KRUC				eSS	SS	22 59 57.5	-9.4
MORC	Moravsky Berou	113.30	319	⇓P	PKKPbc	22 54 17.5	+0.8
MORC	Moravsky Berou	113.30	319	ePKIKP	PKiKP	22 43 31.9	+0.3
MORC				ePP	PP	22 44 24.4	+1.3
MORC				ePKKP	PS	22 53 57.0	-1.2
MORC				eSS	SS	23 00 00.0	-7.1
MDT	Midelt	113.38	293	PKKPbc	PKKPbc	22 54 18.7	+2.8
	comp=E,1.4nm,0.8s,baz=287,slow=2.5,SNR=2.3						
VRAC	Vranov	113.38	318	⇓P	PKKPbc	22 54 18.5	+2.2
VRAC	Vranov	113.38	318	PKKPbc	PKKPbc	22 54 16.8	+0.4
	comp=E,3.5nm,1.1s,baz=292,slow=6.7,SNR=2.7						
VRAC	Vranov	113.38	318	ePKIKP	PKiKP	22 43 31.9	+0.2
VRAC				ePP	PP	22 44 24.9	+1.3
VRAC				ePKKP	SP	22 53 55.5	-0.1
VRAC				eSS	SS	22 59 56.3	-12
ABTA	Abfaltersbach	113.44	314	eP	PKiKP	22 43 31.8	-0.2
	comp=E,20nm,1.1s						
ABTA				eP	PKKPbc	22 54 17.6	+1.4
	comp=E,7.6nm,1.1s						
NACGM	Naroch	113.46	328	i PKP	PKiKP	22 43 31.2	-0.4
PRGR	Permogore	113.54	341	eP	Pdif	22 39 37.4	-1.6
PRGR				i		22 43 30.0	
PRGR				e		22 44 22.0	
PRGR				pmax	pmax		
	comp=Z,19nm,0.9s						
CHAS	Isla Isabel II	113.64	297	PP	PP	22 44 33.9	+8.2
CHAS	Isla Isabel II	113.64	297	PS	PS	22 54 13.1	+11
KRLC	Kraliky	113.86	319	ePKP	PKiKP	22 43 33.2	+0.6
KRLC				AMS	AMS	23 45 20.0	
	comp=Z,8µm,19.1s						
KRLC	Kraliky	113.86	319	ePKIKP	PKiKP	22 43 33.2	+0.6
KRLC				MLR	MLR		
	comp=Z,8µm,19.1s						
TREC	Trest	113.87	318	ePKP	PKiKP	22 43 33.3	+0.7
TREC				eSP	SP	22 54 06.9	+6.8

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TREC                                AMS       AMS       23 41 50.0
       comp=Z,15µm,20.0s
TREC   Trest            113.87 318 ePKIKP    PKiKP     22 43 33.3 +0.7
TREC                               eSP       SP        22 54 06.9 +6.8
TREC                                MLR      MLR
       comp=Z,15µm,20.0s
RJOB   Jochberg         114.01 315 ePKPdf    PKiKP     22 43 32.9 -0.1
       baz=138,slow=1.8
CKRC   Cesky Krumlov    114.07 317 ePKP      PKiKP     22 43 34.1 +1.1
CKRC                               ePP       PP        22 44 29.0 +0.5
CKRC                               eSP       SP        22 54 10.0 +8.0
CKRC                                AMS      AMS       23 45 00.0
       comp=Z,9µm,16.9s
SUW    Suwalki          114.12 325 ePKiKP    PKiKP     22 43 33.5 +0.6
SUW                                ePP       PP        22 44 26.6 -2.2
SUW                                ePS       PKKPab    22 54 16.9 -0.5
SUW                                eSS       SS        23 00 30.2  +13
SUW    Suwalki          114.12 325 eP        PKiKP     22 43 33.1 +0.3
IFR    Ifrane           114.17 294  PP       PP        22 44 35.6 +5.9
IFR    Ifrane           114.17 294  PS       PS        22 54 12.5 +5.6
ISAL   Salakas          114.21 328 eP        PKiKP     22 43 34.9 +1.9
WTTA   Wattenberg       114.23 314 eP        PKiKP     22 43 33.9 +0.3
       comp=Z,75nm,1.5s
DPC    Dobruska-Polom   114.26 319 ePKP      PKiKP     22 43 34.0 +0.6
DPC                                epPKP     PKPdf     22 43 39.6 +6.2
DPC                                eSP       SP        22 54 11.3 +7.7
DPC                                ePKKP     PKKPbc    22 54 15.1 +1.7
DPC                                 AMS      AMS       23 42 00.0
       comp=Z,10µm,17.8s
DPC    Dobruska-Polom   114.26 319 ePKIKP    PKiKP     22 43 34.0 +0.6
DPC                                e                   22 43 39.6
DPC                                eSP       SP        22 54 11.3 +7.7
DPC                                 MLR      MLR
       comp=Z,10µm,17.8s
WATA   Walderalm        114.31 314 eP        PKiKP     22 43 33.7  0.0
       comp=Z,62nm,1.7s
WATA                               eP        PKKPab    22 54 21.2 +3.8
       comp=Z,21nm,1.9s
KLMR   Klimovskoe       114.34 337 eP        Pdif      22 39 42.7 +0.2
KLMR                               i                   22 43 31.6
KLMR                               e                   22 44 31.8
KLMR                               ePS       PKKPbc    22 54 11.2 -2.0
KLMR                               eSS       SS        23 00 33.4  +13
KLMR                                pmax     pmax
       comp=Z,34nm,1.4s
KLMR                                MLR      MLR
       comp=Z,7µm,18.0s
KLMR   Klimovskoe       114.34 337 ePdif     Pdif      22 39 42.8 +0.2
KLMR                                AMP                22 40 01.7
       comp=Z,34nm,1.4s
KLMR                               ePKiKP    PKPdf     22 43 31.6 -1.5
KLMR                               ePP       PP        22 44 31.9 +1.8
KLMR                               eSKP                22 47 05.5
KLMR                               ePS       PKKPbc    22 54 11.3 -2.0
KLMR                               ePS       PKKPbc    22 54 11.3 -2.0
KLMR                               ePKKPbc   PKKPab    22 54 13.0 -3.0
KLMR                               eSS       SS        23 00 33.5  +13
KLMR                               eSS       SS        23 00 33.5  +13
KLMR                               eSSS      SSS       23 04 48.3
KLMR                               eSSS      SSS       23 04 48.3
KLMR                                LQ       LQ        23 25 13.7
KLMR                                LQ       LQ        23 25 13.7
KLMR                                LR       LR        23 27 34.7
KLMR                                AMP                23 29 54.6
       comp=Z,7µm,18.0s
GEC2   GERESS Array S   114.37 317 eSP       SP        22 54 06.2 +1.4
       baz=134,slow=8.7
GERES  GERESS Array B   114.37 317  PKP      PKPdf     22 43 32.0 -1.7
       comp=Z,6.5nm,0.9s,baz=132,slow=2.0,SNR=15
GERES                               PKKPbc   PKKPbc    22 54 13.0 -0.1
       comp=Z,0.8nm,0.8s,baz=270,slow=1.0,SNR=2.1
GERES                               PKPPKP             23 02 47.1
       comp=Z,0.2nm,0.4s,baz=350,slow=5.2,SNR=1.6
GERES  GERESS Array B   114.37 317  PKIKP    PKPdf     22 43 32.0 -1.7
GERES  GERESS Array B   114.37 317  PKKPab   PKKPab    22 54 19.7 +2.8
CART   Cartagena        114.41 299  PP       PP        22 44 39.0 +8.0
CART   Cartagena        114.41 299  PS       PS        22 54 16.4 +7.8
CART   Cartagena        114.41 299  IAMs_20  IAMs_20   23 35 15.1
       comp=Z,23µm,18.0s
SQTA   Sankt Quirin     114.41 314 i P       PKiKP     22 43 34.1 +0.3
       comp=Z,25nm,1.2s,SNR=7.2
SQTA                               eP        PKKPab    22 54 20.2 +3.3
       comp=Z,22nm,1.3s
OSTC   Ostas            114.45 319 ePKP      PKiKP     22 43 34.8 +1.1
OSTC                               eSP       SP        22 54 13.1 +7.7
OSTC                                AMS      AMS       23 42 10.0
       comp=Z,11µm,17.2s
FETA   Feichten         114.50 314 eP        PKiKP     22 43 34.4 +0.3
       comp=Z,63nm,1.7s
FETA                               eP        PKKPab    22 54 20.3 +3.7
       comp=Z,17nm,1.2s
UPC    Upice            114.51 319 ePKP      PKiKP     22 43 33.9 +0.1
UPC                                 AMS      AMS       23 42 00.0
       comp=Z,15µm,20.3s
UPC    Upice            114.51 319 ePKIKP    PKiKP     22 43 33.9 +0.1
UPC                                 MLR      MLR
       comp=Z,15µm,20.3s
MOTA   Moosalm          114.55 314 i P       PKiKP     22 43 34.2  0.0
       comp=Z,79nm,2.1s,SNR=4.7
MOTA                               eP        PKKPab    22 54 19.4 +3.1
       comp=Z,21nm,2.0s
CHVC   Chvalec          114.55 319 ePKP      PKPdf     22 43 33.6 -0.3
CHVC                               ePP       PP        22 44 32.7 +0.8
CHVC                                AMS      AMS       23 42 10.0
       comp=Z,14µm,18.7s
KSP    Ksiaz            114.63 319 ePKiKP    PKPdf     22 43 32.2 -1.8
KSP                                ePP       PP        22 44 33.9 +1.5
KSP                                ePS       PKKPab    22 54 14.9 -0.6
KSP                                eSS       SS        23 00 33.8 +9.3
KHC    Kasperske Hory   114.63 317 ePKP      PKiKP     22 43 34.4 +0.3
KHC                                ePP       PP        22 44 30.7 -1.8
KHC                                eSP       SP        22 54 13.0 +5.9
KHC                                 AMS      AMS       23 43 00.0
       comp=Z,18µm,20.0s
KHC    Kasperske Hory   114.63 317 ePKIKP    PKiKP     22 43 34.4 +0.3
KHC                                e                   22 44 30.7
KHC                                eSP       SP        22 54 13.0 +5.9
KHC                                 MLR      MLR
       comp=Z,18µm,20.0s
DAVOX  Davos/Dischmat   114.75 313  PKKPbc   PKKPbc    22 54 12.2 +0.5
       comp=Z,5.2nm,0.9s,baz=346,slow=8.3,SNR=4.7
PRU    Pruhonice        114.80 318 ePKP      PKPdf     22 43 34.2 -0.1
PRU                                ePP       PP        22 44 29.6 -4.0
PRU                                ePKKP     PKKPab    22 54 17.8 +3.0
PRU                                 AMS      AMS       23 42 40.0
       comp=Z,12µm,19.0s
PRU    Pruhonice        114.80 318 ePKIKP    PKPdf     22 43 34.2 -0.1
PRU                                e                   22 44 29.6
PRU                                 MLR      MLR
       comp=Z,12µm,19.0s
RETA   Reutte           114.81 314 i P       PKiKP     22 43 34.6  0.0
       comp=Z,24nm,1.4s,SNR=4.4
RETA                               eP        PP        22 44 36.1 +2.2
       comp=Z,52nm,1.6s
RETA                               eP        PKKPbc    22 54 11.3 -0.2
       comp=Z,4.5nm,1.0s
PABE   Paberze          114.95 327 eP        PKiKP     22 43 34.9 +0.5
WET    Wettzell         114.96 316 ePKPdf    PKPdf     22 43 34.7 -0.1
       baz=138,slow=1.8
WET                                eSP       SP        22 54 13.3 +3.2
       baz=134,slow=8.7
YAK    Yakutsk          114.98  21  PKP      PKiKP     22 43 34.3  0.0
       comp=Z,20nm,0.8s,baz=22,slow=0.2,SNR=8.3
YAK                                 PP       PP        22 44 34.7 +0.1
       comp=Z,5.7nm,0.3s,baz=154,slow=1.4,SNR=1.7
YAK                                 PKKPbc   PKKPbc    22 54 11.8 +0.7
       comp=Z,3.8nm,0.5s,baz=327,slow=0.8,SNR=1.6
YAK    Yakutsk          114.98  21 ePKIKP    PKPdf     22 43 33.3 -1.0
YAK                                e                   22 44 34.3
YAK                                ePPP      PPP       22 47 01.0
YAK                                e                   22 54 10.7
YAK                                 pmax     pmax
       comp=Z,49nm,1.0s
YAK                                 pmax     pmax
       comp=N,6.0nm,1.1s
YAK                                 pmax     pmax
       comp=E,7.0nm,1.1s
YAK                                 pmax     pmax
       comp=Z,785nm,2.6s
YAK                                 pmax     pmax
       comp=N,497nm,2.0s
YAK                                 pmax     pmax
       comp=E,464nm,2.2s
YAK                                 MLR      MLR
       comp=Z,22µm,16.0s
YAK                                 MLR      MLR
       comp=N,15µm,16.0s
YAK                                 MLR      MLR
       comp=E,12µm,16.0s
YAK    Yakutsk          114.98  21  PKiKP    PKiKP     22 43 34.5 +0.2
YAK                                 IAMs_20  IAMs_20   23 34 01.1
       comp=Z,24µm,18.0s
DAVA   Damuels          115.10 313 eP        PKPdf     22 43 34.8 -0.5
       comp=Z,57nm,1.8s
DAVA                               eP        PKKPbc    22 54 09.2 -1.3
       comp=Z,7.6nm,1.2s
PVCC   Panska Ves       115.17 318 ePKP      PKiKP     22 43 35.8 +0.8
PVCC                               ePP       PP        22 44 35.8 -0.4
PVCC                               ePKKP     PKKPab    22 54 19.8 +6.6
PVCC                                AMS      AMS       23 43 20.0
       comp=Z,14µm,19.1s
PVCC   Panska Ves       115.17 318 ePKIKP    PKiKP     22 43 35.8 +0.8
PVCC                               e                   22 44 35.8
PVCC                               eSP       SP        22 54 19.8 +7.9
PVCC                                MLR      MLR
       comp=Z,14µm,19.1s
BNI    Bardonecchia     115.19 310  IAMs_20  IAMs_20   23 40 01.9
       comp=Z,21µm,20.0s
SKR    Severo-Kuril's   115.30  42 i P       Pdif      22 39 43.7 -3.4
SKR                                e                   22 44 37.5
SKR                                ePS       PKKPab    22 54 20.7 +8.2
SKR                                eSS       SS        23 00 47.3  +14
BRG    Berggiesshubel   115.69 318 ePKPdf    PKPdf     22 43 35.7 -0.3
       baz=138,slow=1.8
BRG                                eSP       SP        22 54 20.2 +3.5
       baz=134,slow=8.7
BRG    Berggiesshubel   115.69 318 ⇓Pif                22 39 55.0
BRG    Berggiesshubel   115.69 318 ePKP      PKiKP     22 43 36.4 +0.4
BRG                                 Amp                22 43 42.9
       comp=Z,14nm,1.0s
BRG                                 PP       PP        22 44 33.3 -6.6
BRG                                 Amp                22 44 49.0
       comp=Z,51nm,1.5s
BRG    Berggiesshubel   115.69 318  SP       SP        22 54 25.0 +8.3
BRG    Berggiesshubel   115.69 318  SS       SS        23 00 37.0 -1.5
ROTZ   Rotzenmuhle      115.71 316 ePP       PP        22 44 40.8 +0.7
       baz=142,slow=6.7
SENIN  Lac Senin/Sane   115.76 311           PKPdf     22 43 36.4 -0.2
SENIN                               IAMs_20  IAMs_20   23 42 10.1
       comp=Z,19µm,19.0s
EMAL   Malaga-Limoner   115.90 297  PP       PP        22 44 49.9 +8.3
EMAL   Malaga-Limoner   115.90 297  PS       PS        22 54 30.0 +7.8
CEU    Ceuta            115.91 296  PP       PP        22 44 49.6 +8.0
CEU    Ceuta            115.91 296  PS       PS        22 54 26.5 +4.3
GKP    Gorka Klasztor   115.97 322 eP        PKPdf     22 43 28.1 -8.3
FBE    Freiberg         115.99 318 ePKPdf    PKiKP     22 43 37.0 +0.4
       baz=138,slow=1.8
WERN   Wernitzgruen     116.00 317 ePKPdf    PKiKP     22 43 36.9 +0.2
       baz=138,slow=1.8
WERN                               ePP       PP        22 44 41.6 -0.5
       baz=142,slow=6.7
GUNZ   Gunzen           116.07 317 ePP       PP        22 44 42.7 +0.1
       baz=142,slow=6.7
PUL    Pulkovo          116.09 333 i PKIKP   PKiKP     22 43 36.7 +0.2
PUL                                 MLR      MLR
       comp=Z,7µm,18.0s
GRF    Grafenberg Arr   116.12 316 ePKPdf    PKPdf     22 43 35.4 -1.5
       baz=138,slow=1.8
GRF                                eSP       SP        22 54 22.7 +2.0
       baz=134,slow=8.7
GRF                                eL        L         23 43 13.4
       comp=Z,14µm,20.1s
GRFO   Grafenberg       116.12 316  PKIKP    PKPdf     22 43 36.8 -0.1
GRFO                                MLR      MLR
       comp=Z,14µm,20.0s
GRFO   Grafenberg       116.12 316           PKPdf     22 43 36.8 -0.1
WERD   Werda            116.14 317 ePP       PP        22 44 44.5 +1.4
       baz=142,slow=6.7
VSU    Vasula           116.23 330 eP        PKiKP     22 43 37.7 +0.9
PLN    Plauen           116.24 317 ePKPdf    PKPdf     22 43 36.4 -0.7
       baz=138,slow=1.8
PLN                                ePP       PP        22 44 44.9 +1.2
       baz=142,slow=6.7
CLL    Collm            116.42 318 i PKIKP   PKPdf     22 43 36.3 -1.1
CLL                                e                   22 43 41.0
CLL                                e                   22 44 45.0
CLL                                 pmax     pmax
       comp=Z,26nm,1.1s
CLL                                 pmax     pmax
       comp=Z,55nm,1.8s
CLL    Collm            116.42 318 ePdif     Pdif      22 39 53.0 +0.9
CLL                                i PKiKP   PKPdf     22 43 36.3 -1.1
       comp=Z,26nm,1.1s
CLL                                e                   22 43 41.0
CLL                                i pPKiKP  sPKPdf    22 43 46.9 -0.4
       comp=Z,81nm,1.8s
CLL                                ePP       PP        22 44 45.0  0.0
CLL                                epPP                22 44 52.0
CLL                                ePPP      PPP       22 47 18.0
CLL                                ePPPP               22 49 08.0
CLL                                eSKSac    SKSac     22 50 30.0 +4.0
CLL                                eSKKSac   SKKSac    22 51 54.0  +11
CLL                                eSdif     Sdif      22 52 36.0 +7.6
CLL                                i PKKPab  PKKPab    22 54 11.3 +3.6
       comp=Z,55nm,1.8s
CLL                                i PKKPdf  PKKPdf    22 54 30.7 -1.7
CLL                                ePS       PKKPdf    22 54 30.0 -2.4
CLL                                ePS       PS        22 54 31.0 +4.4
CLL                                e                   22 56 11.0
CLL                                eSS       SS        23 00 26.0  -22
CLL                                eSSS      SSS       23 05 10.0
CLL                                e                   23 07 30.0
CLL                                eSSSS               23 08 36.0
CLL                                e                   23 12 24.0
CLL                                 Lmax               23 48 00.0
CLL    Collm            116.42 318 ePKPdf    PKPdf     22 43 37.4  0.0
       baz=138,slow=1.8
CLL                                eSP       SP        22 54 26.2 +2.9
       baz=134,slow=8.7
SSB    Saint Sauveur    116.46 309  IAMs_20  IAMs_20   23 41 54.4
       comp=Z,18µm,20.0s
STU    Stuttgart        116.46 314 eSP       SP        22 54 25.9 +2.1
       baz=134,slow=8.7
BFO    Black Forest     116.58 313  PKIKP    PKPdf     22 43 37.0 -0.9
BFO    Black Forest     116.58 313 ePKPdf    PKPdf     22 43 36.9 -0.9
       baz=138,slow=1.8
BFO                                eSP       SP        22 54 26.8 +1.9
       baz=134,slow=8.7
BFO    Black Forest     116.58 313  PKPdf    PKPdf     22 43 37.0 -0.9
MOX    Moxa             116.60 317 ePKPdf    PKPdf     22 43 37.7 -0.2
       baz=138,slow=1.8
MOX                                ePP       PP        22 44 48.7 +2.4
       baz=142,slow=6.7
MOX                                eSP       SP        22 54 28.1 +3.1
       baz=134,slow=8.7
MOX                                eL        L         23 43 42.6
       comp=Z,12µm,21.8s
NRIK   Noril'sk         116.72   1  Pdiff    Pdif      22 39 54.6 +1.6
       comp=Z,2.2nm,0.6s,baz=147,slow=6.4,SNR=2.3
NRIK                                PKP      PKPdf     22 43 37.0 -0.4
       comp=Z,10nm,0.8s,baz=195,slow=4.1,SNR=8.1
NRIK                                PP       PP        22 44 39.5 -7.2
       comp=Z,78nm,1.3s,baz=149,slow=7.6,SNR=3.8
NRIK                                PKKPbc   PKKPab    22 54 06.0 +0.7
       comp=Z,5.8nm,0.9s,baz=32,slow=3.2,SNR=5.3
NRIK   Noril'sk         116.72   1 i PKIKP   PKPdf     22 43 36.5 -0.9
NRIK                                MLR      MLR
       comp=Z,16µm,19.0s
SFS    San Fernando     116.79 295  PP       PP        22 44 56.4 +8.6
RUE    Ruedersdorf      116.89 319 eP        PKPdf     22 43 38.2 -0.1
RUE    Ruedersdorf      116.89 319 ePP       PP        22 44 51.5 +3.3
       baz=142,slow=6.7
NEUB   Neuenburg        116.91 317 ePKPdf    PKiKP     22 43 38.4  0.0
       baz=138,slow=1.8
NEUB                               ePP       PP        22 44 50.0 +1.6
       baz=142,slow=6.7
SAML   Samuel           117.08 215  PKIKP    PKPdf     22 43 39.4 -0.5
SAML   Samuel           117.08 215  PKPdf    PKPdf     22 43 39.4 -0.5
UBBA   Unterbreizbach   117.47 316 eSP       SP        22 54 35.4 +2.7
       baz=134,slow=8.7
UCM    Universidad Co   117.52 300  PP       PP        22 45 01.2 +8.3
UCM    Universidad Co   117.52 300  PS       PS        22 54 44.6 +7.6
ARNO   Arenosillo       117.52 296  PP       PP        22 45 00.1 +7.2
ESDC   Sonseca Array    117.53 300  PKP      PKPdf     22 43 39.3 -0.8
       comp=Z,15nm,1.1s,baz=83,slow=1.0,SNR=29
ESDC                                PP       PP        22 44 51.8 -1.3
       comp=Z,6.2nm,1.0s,baz=138,slow=6.7,SNR=2.0
ESDC                                PKKPbc   PKKPab    22 54 02.9 -1.0
       comp=Z,3.1nm,1.0s,baz=312,slow=4.7,SNR=6.2
ESDC   Sonseca Array    117.53 300  PKPdf    PKPdf     22 43 39.4 -0.6
PAB    San Pablo        117.67 299  PKIKP    PKPdf     22 43 40.2 -0.1
PAB                                 MLR      MLR
       comp=Z,24µm,19.0s
PAB    San Pablo        117.67 299  PKPdf    PKPdf     22 43 40.2 -0.1
PAB    San Pablo        117.67 299  IAMs_20  IAMs_20   23 37 12.5
       comp=Z,24µm,19.0s
PEA0B  Petropavlovsk-   117.70  40c iPKIKP   PKPdf     22 43 38.5 -1.3
PEA0B  Petropavlovsk-   117.70  40  PKPdf    PKPdf     22 43 39.8 -0.1
PETK   Petropavlovsk-   117.70  40  PKP      PKPdf     22 43 39.5 -0.4
       comp=Z,26nm,0.9s,baz=201,slow=5.7,SNR=14
FLTG   Flechtingen      117.92 318 ePKPdf    PKPdf     22 43 39.6 -0.7
       baz=138,slow=1.8
GTTG   Gottingen        117.97 317 ePKPdf    PKPdf     22 43 39.4 -0.9
       baz=138,slow=1.8
CLZ    Clausthal        117.98 317 ePKPdf    PKPdf     22 43 39.8 -0.6
       baz=138,slow=1.8
CLZ                                ePP       PP        22 44 55.3 -0.7
       baz=142,slow=6.7
CLZ                                eSP       SP        22 54 39.1 +1.5
       baz=134,slow=8.7
PET    Petropavlovsk    118.06  41 eP        Pdif      22 39 58.1 -1.2
PET                                e                   22 43 40.4
PET                                i                   22 43 46.6
PET                                e                   22 44 52.5
PET                                e                   22 50 42.9
PET                                ePS       PKKPdf    22 54 42.9  +14
PET                                ePPS      PPS       22 55 52.1
PET                                eSS       SS        23 01 02.9 -6.3
PET                                 pmax     pmax
       comp=Z,133nm,1.2s
PET                                 MLR      MLR
       comp=Z,12µm,19.0s
PVAQ   Vaqueiros        118.32 295 ePKPdf    PKPdf     22 43 41.4 -0.1
PVAQ   Vaqueiros        118.32 295 ePP       PP        22 45 06.5 +8.1
PVAQ                               eSKS                22 52 56.1
PVAQ                               i LQ      LQ        22 55 03.9
PVAQ                               eSS       SS        23 01 18.9 +5.8
PVAQ   Vaqueiros        118.32 295 eLR       LR        23 21 21.7
       comp=Z,23µm,24.0s
PBDV   Barranco-do-Ve   118.34 295 ePKPdf    PKiKP     22 43 43.2 +1.5
PBDV   Barranco-do-Ve   118.34 295 ePP       PP        22 45 09.4  +11
NNA    Nana             118.50 200c iPKIKP   PKiKP     22 43 44.1 +1.3
NNA                                 pmax     pmax
       comp=Z,65nm,1.7s
NNA    Nana             118.50 200  IAMs_20  IAMs_20   23 30 35.3
       comp=Z,40µm,20.0s
WLF    Walferdange      118.54 313 dPKP      PKiKP     22 43 42.5 +1.0
WLF                                dpPKP     pPKPdf    22 43 45.3 -3.6
WLF                                dsPKP               22 43 47.0
WLF    Walferdange      118.54 313  IAMs_20  IAMs_20   23 43 11.6
       comp=Z,21µm,20.0s
NRDL   Niedersach Rie   118.55 318 ePKPdf    PKPdf     22 43 40.5 -0.8
       baz=138,slow=1.8
NRDL                               eSP       SP        22 54 44.0 +1.6
       baz=134,slow=8.7
PCVE   Castro Verde     118.66 295 ePKPdf    PKiKP     22 43 43.4 +1.2
PCVE   Castro Verde     118.66 295 ePP       PP        22 45 10.9  +10
FIA1   FINESS Array S   118.71 332  PKPdf    PKiKP     22 43 41.9 +0.3
FINES  FINESS Array B   118.71 332  PKP      PKPdf     22 43 40.5 -1.0
       comp=Z,36nm,0.9s,baz=116,slow=3.2,SNR=23
FINES                               PKKPbc   PKKPbc    22 53 58.2 +0.4
       comp=Z,18nm,1.0s,baz=270,slow=4.2,SNR=5.6
FINES  FINESS Array B   118.71 332  PKIKP    PKiKP     22 43 41.8 +0.3
FINES  FINESS Array B   118.71 332  PKPdf    PKiKP     22 43 41.8 +0.3
PBEJ   Beja             118.81 296 ePKPdf    PKiKP     22 43 43.4 +0.9
PFVI   Vila Bisbo       118.82 295 ePP       PP        22 45 17.3  +15
MORF   Marmelete        118.83 295 ePKPdf    PKiKP     22 43 43.6 +1.0
MORF                               ePP       PP        22 45 01.3 -0.8
MORF                                IAMs_20  IAMs_20   23 22 44.0
       comp=Z,104µm,56.9s
MORF   Marmelete        118.83 295 ePKPdf    PKPdf     22 43 41.5 -1.1
MORF   Marmelete        118.83 295 ePP       PP        22 45 12.7  +11
MORF   Marmelete        118.83 295 ePKIKP    PKiKP     22 43 43.6 +1.0
MORF                               e                   22 45 01.3
MESJ   Messejana        118.90 295 ePKPdf    PKiKP     22 43 43.8 +1.1
MESJ                               ePP       PP        22 45 01.8 -0.7
MESJ                                IAMs_20  IAMs_20   23 22 18.8
       comp=Z,69µm,47.9s
MESJ   Messejana        118.90 295 ePKPdf    PKPdf     22 43 42.6  0.0
MESJ   Messejana        118.90 295 ePP       PP        22 45 13.1  +11
MESJ   Messejana        118.90 295 ePKIKP    PKiKP     22 43 43.8 +1.1
MESJ                               e                   22 45 01.8
PTEO   Sao Teotonio     119.02 295 ePKPdf    PKiKP     22 43 44.2 +1.3
RETH   Rethem/Aller,    119.05 318 ePP       PP        22 45 04.1 +1.0
       baz=142,slow=6.7
BHOU   Houvegnez        119.06 314 dPKPdf    PKPdf     22 43 42.4 -0.1
BTNL   Ternell          119.15 314 dPKP      PKiKP     22 43 42.9  0.0
BTNL                               dx        x         22 43 54.0
BUG    Bochum--Univer   119.17 315 ePKPdf    PKPdf     22 43 41.7 -0.9
       baz=138,slow=1.8
BUG                                eSP       SP        22 54 49.7 +1.6
       baz=134,slow=8.7
PESTR  Estremoz         119.17 297 ePKPdf    PKiKP     22 43 43.5 +0.3
PESTR  Estremoz         119.17 297 ePP       PP        22 45 15.2  +11
PESTR  Estremoz         119.17 297  PKPdf    PKPdf     22 43 42.9 -0.3
EVO    Evora            119.22 296  PP       PP        22 45 14.4  +10
EVO    Evora            119.22 296  PS       PS        22 55 07.0  +15
EVO    Evora            119.22 296 ePKPdf    PKiKP     22 43 43.5 +0.2
EVO    Evora            119.22 296 ePP       PP        22 45 12.5 +7.9
MEM    Membach          119.23 314 dPKP      PKiKP     22 43 43.0 +0.1
PNCL   Nicolau / Gran   119.26 296 ePKPdf    PKiKP     22 43 43.4  0.0
PNCL   Nicolau / Gran   119.26 296 ePP       PP        22 45 15.2  +10
RCHB   Rochefort        119.31 313 dPKP      PKPdf     22 43 42.5 -0.5
PMRV   Marv??o          119.41 297 ePKPdf    PKiKP     22 43 43.7  0.0
PMRV   Marv??o          119.41 297 ePP       PP        22 45 08.9 +2.9
PMRV   Marv??o          119.41 297 eSS       SS        23 01 51.0  +24
PMRV   Marv??o          119.41 297 eLR       LR        23 21 53.6
       comp=Z,16µm,22.0s
BSEG   Bad Segeberg     119.41 319 eSP       SP        22 54 50.8 +0.6
       baz=134,slow=8.7
CLF    Chambon-Foret    119.44 310  IAMs_20  IAMs_20   23 39 47.4
       comp=Z,32µm,22.0s
BCLA   Clavier          119.45 314 dPKPdf    PKiKP     22 43 43.3  0.0
MA2    Magadan          119.45  32c iPKIKP   PKPdf     22 43 42.2 -0.8
MA2                                 pmax     pmax
       comp=Z,137nm,1.7s
MA2                                 MLR      MLR
       comp=Z,9µm,19.0s
IBBN   Ibbenburen       119.50 316 ePKPdf    PKiKP     22 43 43.5 +0.1
       baz=138,slow=1.8
BEBN   Eben Emael       119.51 314 dx        x         22 43 54.9
BGES   Gesves           119.53 314 dPKP      PKiKP     22 43 44.4 +0.8
BGES                               dpPKP     pPKPdf    22 43 48.3 -2.5
BGES                               dsPKP               22 43 49.7
BGES                               dx        x         22 43 54.6
DOU    Dourbes          119.59 313 dPKPdf    PKiKP     22 43 44.0 +0.4
DOU                                dx        x         22 43 54.9
BMRD   Maredsous        119.64 313 dPKPdf    PKiKP     22 43 44.2 +0.5
BMRD                               dpPKP     pPKPdf    22 43 47.6 -3.4
BMRD                               dx        x         22 43 55.2
PMTG   Montargil        119.68 297 ePKPdf    PKiKP     22 43 44.6 +0.4
PMTG   Montargil        119.68 297 ePP       PP        22 45 18.7  +11
PCBR   Castelo Branco   119.72 298 ePKPdf    PKiKP     22 43 44.2  0.0
PCBR   Castelo Branco   119.72 298 ePP       PP        22 45 16.9 +8.8
LIS    Lisbon           120.02 296 ePP       PP        22 45 09.6 -0.6
LIS                                 IAMs_20  IAMs_20   23 23 41.5
       comp=Z,89µm,57.0s
MTE    Manteigas        120.11 298 ePKPdf    PKiKP     22 43 46.1 +1.0
MTE    Manteigas        120.11 298 ePP       PP        22 45 20.3 +9.4
MTE                                eSKS      SKSdf     22 51 07.4  +12
MTE                                i LQ      LQ        22 55 22.3
MTE                                eSS       SS        23 01 45.1 +8.8
MTE    Manteigas        120.11 298 eLR       LR        23 22 37.7
       comp=Z,31µm,22.0s
MTE    Manteigas        120.11 298  IAMs_20  IAMs_20   23 34 38.0
       comp=Z,37µm,21.0s
UCC    Uccle            120.15 314 dPKP      PKiKP     22 43 45.5 +0.8
UCC                                dx        x         22 43 56.2
UCC    Uccle            120.15 314  PKIKP    PKPdf     22 43 44.0 -0.6
UCC    Uccle            120.15 314           PKPdf     22 43 44.0 -0.6
PMAFR  Mafra            120.25 296 ePP       PP        22 45 20.3 +8.5
MVO    Moncorvo         120.28 299 ePKPdf    PKiKP     22 43 45.6 +0.2
MVO    Moncorvo         120.28 299 ePP       PP        22 45 22.1  +10
MVO                                eSKS      SKSdf     22 51 03.5 +8.2
MVO                                i LQ      LQ        22 55 08.1
MVO                                eSS       SS        23 01 51.8  +13
MVO    Moncorvo         120.28 299 eLR       LR        23 22 28.1
       comp=Z,17µm,22.0s
PSBE   So Bento         120.31 297 ePKPdf    PKiKP     22 43 52.1 +6.7
PSBE   So Bento         120.31 297 ePP       PP        22 45 19.2 +7.0
UPP    Uppsala          120.46 327 eP        PKPdf     22 43 44.3 -0.5
PCAS   Casmilo, Conde   120.46 297 ePKPdf    PKPdf     22 43 45.1 -0.5
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PCAS	**Casmilo, Conde**	**120.46**	**297**	*e*PP	PP	22 45 19.7	+6.5
COI	**Coimbra**	**120.51**	**297**	IAMs_20	IAMs_20	23 35 19.6	
	comp=Z,20μm,21.0s						
PBRG	**Braganca**	**120.51**	**300**	*e*PKPdf	**PKPdf**	**22 43 45.4**	**-0.3**
PBRG	**Braganca**	**120.51**	**300**	*e*PP	PP	22 45 23.2	+10
PVIS	**Viseu**	**120.51**	**298**	*e*PKPdf	**PKiKP**	**22 43 46.5**	**+0.7**
PVRL	**Vila Real**	**120.75**	**299**	*e*PKPdf	**PKiKP**	**22 43 47.4**	**+1.1**
POLO	**Lamas de Olo**	**120.86**	**299**	*e*PKPdf	**PKiKP**	**22 43 47.5**	**+0.9**
POLO	**Lamas de Olo**	**120.86**	**299**	*e*PP	PP	22 45 24.1	+8.1
PMPST	**Porto Santo, M**	**121.00**	**286**	*e*PP	PP	22 45 26.2	+9.3
FUL	**Funchal**	**121.08**	**286**	*e*PKPdf	PKiKP	22 44 18.6	+31
PMAR	**Madeira**	**121.15**	**286**	*e*PKPdf	**PKiKP**	**22 43 48.8**	**+1.3**
PMAR	**Madeira**	**121.15**	**286**	*e*PP	PP	22 45 26.5	+8.3
PCAB	**Cabril**	**121.21**	**299**	*e*PKPdf	**PKiKP**	**22 43 47.9**	**+0.8**
PCAB	**Cabril**	**121.21**	**299**	*e*PP	PP	22 45 25.0	+6.7
MACA	**Manacapuru-AM**	**121.26**	**221**	*e*P	**PKPdf**	**22 43 46.9**	**-1.1**
LVZ	**Lovozero**	**121.35**	**340***c*	*i*PKIKP	**PKPdf**	**22 43 45.7**	**-0.8**
LVZ				pmax	pmax		
	comp=Z,219nm,2.5s						
LVZ	**Lovozero**	**121.35**	**340**		**PKPdf**	**22 43 46.4**	**-0.1**
APA	**Apatity**	**121.38**	**339**⇓	*i*PKIKP	**PKPdf**	**22 43 45.0**	**-1.5**
APA				*i*		22 45 18.0	
APA				*i*		22 50 57.0	
APA				*i*		22 55 14.0	
APA				pmax	pmax		
	comp=Z,85nm,1.1s						
PMOZ	**Porto Moniz, M**	**121.39**	**286**	*e*PP	PP	22 45 28.9	+9.1
PMOZ				*i* LQ	LQ	22 55 27.8	
PMOZ				*e*SS	SS	23 02 04.2	+11
PMOZ	**Porto Moniz, M**	**121.39**	**286**	*e*LR	LR	23 22 12.2	
	comp=Z,49μm,20.0s						
CZSB	**Cruzeiro do Su**	**121.50**	**206**	*e*P	**PKPdf**	**22 43 47.9**	**-0.6**
PGAV	**Gavieira, Arco**	**121.51**	**299**	*e*PKPdf	**PKiKP**	**22 43 48.7**	**+0.9**
PGAV	**Gavieira, Arco**	**121.51**	**299**	*e*PP	PP	22 45 28.3	+7.9
PGAV				*i* LQ	LQ	22 55 19.9	
PGAV				*e*SS	SS	23 02 06.2	+12
PGAV	**Gavieira, Arco**	**121.51**	**299**	*e*LR	LR	23 23 10.6	
	comp=Z,20μm,20.0s						
SEY	**Seymchan**	**122.35**	**30**	PKP	**PKPdf**	**22 43 47.7**	**-0.7**
	comp=Z,25nm,1.0s,baz=232,slow=2.4,SNR=16						
SEY				PKKPbc	**PKKPab**	**22 53 42.8**	**+1.3**
	comp=Z,2.6nm,0.8s,baz=56,slow=5.8,SNR=1.9						
TIXI	**Tiksi**	**122.96**	**15**	PKP	**PKPdf**	**22 43 48.1**	**-1.3**
	comp=Z,21nm,0.8s,baz=32,slow=0.8,SNR=21						
TIXI				PP	**PP**	**22 45 30.2**	**+0.7**
	comp=Z,27nm,1.1s,baz=221,slow=4.3,SNR=3.1						
TIXI				PKKPbc	**PKKPbc**	**22 53 40.7**	**-1.2**
	comp=Z,6.0nm,0.9s,baz=20,slow=4.2,SNR=9.1						
TIXI	**Tiksi**	**122.96**	**15**	*i* PKIKP	**PKPdf**	**22 43 46.9**	**-2.5**
TIXI	**Tiksi**	**122.96**	**15**		PKPpre	22 43 47.2	
TIXI					**PP**	**22 45 31.0**	**+1.5**
TIXI				IAMs_20	IAMs_20	23 37 06.1	
	comp=Z,25μm,20.0s						
HOMB	**Homborsund**	**122.98**	**322**	*e*PKPdf	**PKiKP**	**22 43 50.2**	**+0.2**
HOMB				*e*PP	**PP**	**22 45 28.8**	**-1.1**
HOMB				*e*SP	SP	22 55 24.1	+2.3
HOMB				*e*SS	**SS**	**23 02 13.8**	**+1.7**
PTGA	**Pitinga**	**123.09**	**223**	PKKPbc	PKKPbc	22 53 39.6	-0.9
	comp=Z,2.5nm,0.4s,baz=22,slow=2.3,SNR=5.9						
OSL	**Oslo**	**123.13**	**325**	*e*PKPdf	**PKiKP**	**22 43 50.3**	**+0.1**
OSL				*e*PP	**PP**	**22 45 29.6**	**-1.3**
OSL				*e*SP	SP	22 55 25.0	+2.0
OSL				*e*SS	**SS**	**23 02 15.8**	**+1.9**
OSL				IVMs_BB	IVMs_BB	23 37 57.8	
	comp=Z,5μm,18.3s						
NC602	**NORSAR Array S**	**123.32**	**326**	*e*PP	PP	22 45 30.0	-2.1
NC602				*e*SS	SS	23 02 17.2	+0.8
NC602				IVMs_BB	IVMs_BB	23 40 55.3	
	comp=Z,5μm,13.4s						
KIP	**Kipapa**	**123.39**	**94**	IAMs_20	IAMs_20	23 38 24.7	
	comp=Z,21μm,18.0s						
KONO	**Kongsberg**	**123.39**	**324**	*e*Pdif	**Pdif**	**22 40 23.3**	**+0.4**
KONO				*e*PKPdf	**PKPdf**	**22 43 49.5**	**-1.0**
KONO				*e*PP	**PP**	**22 45 33.0**	**+0.3**
KONO				*e*SP	SP	22 55 27.9	+2.5
KONO				*e*SS	**SS**	**23 02 17.9**	**+0.5**
KONO				IVMs_BB	IVMs_BB	23 47 38.5	
	comp=Z,5μm,30.1s						
SNART	**Snartemo**	**123.56**	**322**	*e*PKPdf	**PKiKP**	**22 43 51.4**	**+0.2**
NB201	**NORSAR Array S**	**123.61**	**326**		**PKPdf**	**22 43 50.7**	**-0.3**
NB2	**NORSAR Subarra**	**123.63**	**326**	PKPdf	**PKPdf**	**22 43 49.6**	**-1.4**
	comp=Z,295nm,2.0s,baz=129,slow=2.0						
NB2	**NORSAR Subarra**	**123.63**	**326**	PKPdf	**PKPdf**	**22 43 49.6**	**-1.4**
	baz=129,slow=2.0						
NOA	**NORSAR Array B**	**123.63**	**326**	PKP	**PKPdf**	**22 43 50.0**	**-1.1**
	comp=Z,19nm,1.0s,baz=107,slow=2.4,SNR=14						
NOA				PP	**PP**	**22 45 29.8**	**-4.6**
	comp=Z,5.9nm,1.0s,baz=120,slow=8.1,SNR=3.4						
NOA	**NORSAR Array B**	**123.63**	**326**	PKIKP	**PKPdf**	**22 43 50.0**	**-1.1**
NC303	**NORSAR Array S**	**123.69**	**326**		**PKPdf**	**22 43 49.9**	**-1.2**
POHA	**Pohakuloa**	**123.90**	**98**	IAMs_20	IAMs_20	23 30 54.1	
	comp=Z,23μm,20.0s						
TBTG	**Tabatinga, AM**	**123.95**	**210**	*e*P	**PKPdf**	**22 43 51.8**	**-1.4**
TBTG	**Tabatinga, AM**	**123.95**	**210**	*e*P	**PKPdf**	**22 43 52.5**	**-0.6**
TBTG	**Tabatinga, AM**	**123.95**	**210**	PKPdf	**PKPdf**	**22 43 52.4**	**-0.8**
HPAH	**Hawaii Prepara**	**123.98**	**97**		**PKiKP**	**22 43 53.3**	**0.0**
STRD	**Stroud**	**124.00**	**312**	*e*P	**PKPdf**	**22 43 50.6**	**-1.3**
STRD				IAmb	IAmb	22 44 04.4	
	comp=Z,433nm,1.4s						
CWF	**Charnwood Fore**	**124.13**	**313**	*e*P	**PKPdf**	**22 43 51.6**	**-0.5**
CWF				IAmb	IAmb	22 43 54.0	
	comp=Z,18nm,0.8s						
DYA	**Yadsworthy**	**124.13**	**309**	*e*P	**PKPdf**	**22 43 51.7**	**-0.6**
DYA				IAmb	IAmb	22 43 59.6	
	comp=Z,25nm,0.8s						
BLS5	**Blasjo**	**124.53**	**322**	*e*PKPdf	**PKiKP**	**22 43 53.1**	**0.0**
SKAR	**Skarslia**	**124.54**	**324**	*e*Pdif	**Pdif**	**22 40 28.0**	**-0.1**
SKAR				*e*PKPdf	**PKPdf**	**22 43 52.9**	**+0.1**
SKAR				*e*PP	**PP**	**22 45 39.7**	**-0.8**
SKAR				*e*SP	SP	22 55 36.6	+1.0
SKAR				*e*SS	**SS**	**23 02 38.5**	**+6.6**
SKAR				IVMs_BB	IVMs_BB	23 43 53.4	
	comp=Z,5μm,5.1s						
MCH1	**Michaelchurch**	**124.55**	**311**	*e*P	**PKPdf**	**22 43 52.1**	**-0.9**
MCH1				IAmb	IAmb	22 44 00.0	
	comp=Z,130nm,1.0s						
KEV	**Kevo**	**124.58**	**339**	PKIKP	**PKiKP**	**22 43 52.7**	**-0.2**
KEV	**Kevo**	**124.58**	**339**	PKPdf	**PKiKP**	**22 43 52.7**	**-0.2**
LBWR	**Ladybower, Pea**	**124.72**	**313**	*e*P	**PKiKP**	**22 43 54.4**	**+0.7**
ODD1	**Odda**	**124.75**	**323**	*e*PKPdf	**PKPdf**	**22 43 53.2**	**0.0**
HLM1	**Long Mynd**	**124.79**	**312**	*e*P	**PKPdf**	**22 43 52.8**	**-0.7**
HLM1				IAmb	IAmb	22 43 55.2	
	comp=Z,153nm,1.3s						
ARA0	**ARCESS Array S**	**124.79**	**338**	*e*PKPdf	**PKPdf**	**22 43 52.0**	**-1.0**
ARCES	**ARCESS Array B**	**124.79**	**338**	PKP	**PKPdf**	**22 43 52.0**	**-1.0**
	comp=Z,38nm,0.9s,baz=107,slow=1.3,SNR=22						
ARCES				PP	**PP**	**22 45 40.3**	**-1.6**
	comp=Z,21nm,1.1s,baz=101,slow=3.8,SNR=3.2						
ARCES	**ARCESS Array B**	**124.79**	**338**	PKIKP	**PKPdf**	**22 43 52.9**	**-0.1**
ARCES	**ARCESS Array B**	**124.79**	**338**	PKPdf	**PKPdf**	**22 43 52.9**	**-0.1**
KTK1	**Kautokeino**	**125.01**	**337**	*i*	**Pdif**	**22 40 41.2**	**+11**
KTK1				*e*PKPdf	**PKPdf**	**22 43 53.2**	**-0.2**
KTK1				IVmB_BB		22 43 55.3	
	comp=Z,2μm,2.8s						
KTK1				*e*PP	**PP**	**22 45 44.5**	**+1.2**
KTK1				*e*PS	PS	22 55 43.3	+0.3
KTK1				*e*SS	SS	23 02 39.6	+2.2
KTK1				IVMs_BB	IVMs_BB	23 25 18.4	
	comp=Z,3μm,4.2s						
DOMB	**Dombas**	**125.06**	**326**	*e*PKPdf	**PKiKP**	**22 43 54.3**	**+0.2**
DOMB				*e*PP	**PP**	**22 45 43.3**	**-0.6**
DOMB				IVMs_BB	IVMs_BB	23 28 40.8	
	comp=Z,6μm,5.0s						
TBLU	**Trondheim**	**125.35**	**328**	*e*PKPdf	**PKPdf**	**22 43 54.1**	**-0.1**
TBLU				IVmB_BB		22 43 55.6	
	comp=Z,1μm,1.2s						
TBLU				*e*PP	**PP**	**22 45 45.4**	**-0.4**
TBLU				*e*PKSdf	PKSdf	22 47 31.1	+0.7
TBLU				*e*SS	SS	23 02 47.4	+5.5
TBLU				IVMs_BB	IVMs_BB	23 48 08.5	
	comp=Z,7μm,18.2s						
LLW	**Llanuwychllyn**	**125.37**	**312**	*e*P	**PKPdf**	**22 43 53.8**	**-0.7**
NSS	**Namsos**	**125.52**	**329**	*e*PKPdf	**PKiKP**	**22 43 54.7**	**-0.2**
NSS				*e*PP	**PP**	**22 45 45.8**	**-1.0**
NSS				*e*SS	SS	23 02 46.0	+2.1
BER	**Bergen**	**125.55**	**323**	*e*PKPdf	**PKiKP**	**22 43 55.2**	**+0.2**
BER				IVmB_BB		22 43 56.9	
	comp=Z,6μm,4.4s						
BER				*e*PP	**PP**	**22 45 47.4**	**+0.3**
BER				*e*SP	SP	22 55 44.6	+0.2
BER				*e*SS	**SS**	**23 02 46.0**	**+1.6**
BER				IVMs_BB	IVMs_BB	23 28 46.2	
	comp=Z,7μm,4.8s						
HYA	**Hoyanger**	**125.66**	**324**	*e*PKPdf	**PKiKP**	**22 43 55.5**	**+0.3**
ASK	**Askoy**	**125.66**	**323**	*e*PKPdf	**PKiKP**	**22 43 55.1**	**-0.1**
MOR8	**Moi Rana**	**125.71**	**332**	*e*PKPdf	**PKPdf**	**22 43 54.7**	**-0.1**
MOR8				IVmB_BB		22 43 56.2	
	comp=Z,2μm,1.7s						
MOR8				*e*PP	**PP**	**22 45 46.0**	**-2.1**
MOR8				*e*SP	SP	22 55 47.3	+1.8
MOR8				*e*SS	**SS**	**23 02 47.2**	**+0.9**
MOR8				IVMs_BB	IVMs_BB	23 27 10.2	
	comp=Z,3μm,28.2s						
AKN	**Aaknes**	**125.93**	**325**	*e*PKPdf	**PKiKP**	**22 43 56.5**	**+0.7**
AKN				*e*PP	**PP**	**22 45 48.1**	**-1.6**
AKN				*e*SS	SS	23 02 53.8	+4.6
AKN				IVMs_BB	IVMs_BB	23 45 30.7	
	comp=Z,6μm,4.5s						
MOL	**Molde**	**125.95**	**326**	*e*PKPdf	**PKiKP**	**22 43 55.7**	**0.0**
MOL				*e*PP	**PP**	**22 45 50.1**	**+0.4**
MOL				*e*SP	SP	22 55 46.3	-1.4
MOL				IVMs_BB	IVMs_BB	23 39 13.1	
	comp=Z,4μm,34.9s						
HAMF	**Hammerfest**	**126.01**	**339**	*e*PKPdf	**PKPdf**	**22 43 54.8**	**-0.5**
HAMF				IVmB_BB		22 43 58.0	
	comp=Z,4μm,2.7s						
HAMF				*e*PP	**PP**	**22 45 52.7**	**+2.8**
HAMF				*e*SP	SP	22 55 48.2	+0.3
HAMF				*e*SS	**SS**	**23 02 53.1**	**+3.3**
HAMF				IVMs_BB	IVMs_BB	23 36 54.1	
	comp=Z,4μm,21.9s						
BOAV	**Boa Vista**	**126.10**	**224**	*e*P	**PKPdf**	**22 43 57.2**	**-0.1**
BOAV	**Boa Vista**	**126.10**	**224**	PKPdf	**PKPdf**	**22 43 56.7**	**-0.6**
JETT	**Jettan, Norway**	**126.12**	**337**	*e*PKPdf	**PKPdf**	**22 43 55.0**	**-0.5**
JETT				*e*SS	SS	23 02 51.2	-0.1
SUE	**Sulen**	**126.17**	**324**	*e*PKPdf	**PKiKP**	**22 43 56.3**	**+0.1**
SUE				*e*SS	SS	23 02 51.5	-0.6
FAUS	**Fauske**	**126.19**	**333**	*e*Pdif	**Pdif**	**22 40 34.9**	**-0.2**
FAUS				*e*PKPdf	**PKPdf**	**22 43 54.7**	**-1.0**
FAUS				*e*PP	**PP**	**22 45 49.5**	**-1.8**
FAUS				*e*SKSac	**SKSac**	**22 50 58.5**	**+0.1**
FAUS				*e*SS	**SS**	**23 02 52.4**	**+0.2**
FAUS				IVMs_BB	IVMs_BB	23 25 15.1	
	comp=Z,4μm,17.5s						
STOK	**Stokkvaagen**	**126.26**	**332**	*e*PKPdf	**PKiKP**	**22 43 56.1**	**-0.1**
KONS	**Konsvik**	**126.33**	**332**	*e*PKPdf	**PKiKP**	**22 43 56.5**	**+0.1**
FOO	**Floro**	**126.36**	**324**	*e*PKPdf	**PKiKP**	**22 43 56.3**	**-0.2**
FOO				*e*PP	**PP**	**22 45 51.1**	**-1.4**
FOO				*e*SKSac	**SKSac**	**22 50 58.4**	**-0.7**
FOO				*e*SS	**SS**	**23 02 56.9**	**+2.4**
FOO				IVMs_BB	IVMs_BB	23 41 33.6	
	comp=Z,6μm,4.5s						
ESK	**Eskdalemuir**	**126.50**	**315**	*e*P	**PKPdf**	**22 43 56.7**	**0.0**
ESK	**Eskdalemuir**	**126.50**	**315**	PKIKP	**PKiKP**	**22 43 57.2**	**+0.1**
ESK				MLR	MLR		
	comp=Z,29μm,20.0s						
ESK	**Eskdalemuir**	**126.50**	**315**	PKPdf	**PKiKP**	**22 43 57.1**	**+0.1**
ESK	**Eskdalemuir**	**126.50**	**315**	IAMs_20	IAMs_20	23 45 02.2	
	comp=Z,29μm,20.0s						
STEI	**Steigen**	**126.55**	**334**	*e*PKPdf	**PKPdf**	**22 43 55.5**	**-0.8**
STEI				IVmB_BB		22 44 01.6	
	comp=Z,2μm,2.3s						
STEI				*e*PP	**PP**	**22 45 54.6**	**+1.0**
STEI				*e*SKSac	**SKSac**	**22 51 00.7**	**+1.3**
STEI				*e*SS	**SS**	**23 02 57.3**	**+0.7**
STEI				IVMs_BB	IVMs_BB	23 25 20.3	
	comp=Z,6μm,35.4s						
TRO	**Tromso**	**126.57**	**336**	*e*PKPdf	**PKPdf**	**22 43 56.4**	**+0.1**
TRO				*e*PP	**PP**	**22 45 53.1**	**-0.6**
TRO				*e*SP	SP	22 55 54.1	+1.4
TRO				*e*SS	**SS**	**23 02 59.8**	**+3.0**
TRO				IVMs_BB	IVMs_BB	23 30 21.2	
	comp=Z,3μm,4.9s						
NEWG	**New Galloway**	**126.89**	**314**	*e*P	**PKPdf**	**22 43 56.1**	**-1.3**
LOF	**Lofoten**	**127.18**	**333**	*e*PKPdf	**PKPdf**	**22 43 56.6**	**-0.9**
LOF				IVmB_BB		22 44 00.4	
	comp=Z,3μm,1.9s						
LOF				*e*PP	**PP**	**22 45 57.9**	**+0.2**
LOF				*e*SP	SP	22 56 00.5	+2.3
LOF				*e*SS	**SS**	**23 03 09.6**	**+5.1**
LOF				IVMsBB		23 34 21.9	
	comp=Z,4μm,4.5s						
INVG	**Invergeldie, C**	**127.50**	**316**	*e*P	PKiKP	22 44 07.7	+8.7
INVG				IAmb	IAmb	22 44 16.7	
	comp=Z,657nm,2.0s						
LAWE	**Loch Awe, Argy**	**128.06**	**315**	*e*P	**PKPdf**	**22 43 57.8**	**-1.7**
KPL	**Plockton**	**128.72**	**316**	*e*P	**PKPdf**	**22 43 59.3**	**-1.4**
PSMN	**Pico do Norte,**	**129.06**	**285**	*e*PKP	**PKPdf**	**22 44 01.6**	**-0.6**
PSMN	**Pico do Norte,**	**129.06**	**285**	*e*LR	LR	23 25 51.0	
	comp=Z,7μm,18.1s						
PSMA	**Santa Maria**	**129.10**	**285**	*e*PKP	**PKPdf**	**22 44 02.0**	**-0.2**
BJO1	**Bjornoya**	**129.57**	**341**	*e*PKPdf	**PKPdf**	**22 44 01.4**	**-0.6**
BJO1				*e*PP	**PP**	**22 46 15.5**	**+2.2**
BJO1				*e*SKPdf	**SKiKP**	**22 47 37.5**	**+0.8**
BJO1				*e*SKSac	**SKSac**	**22 51 07.5**	**-0.7**
BJO1				*e*SS	**SS**	**23 03 39.5**	**+5.6**
BJO1				IVMs_BB	IVMs_BB	23 31 30.7	
	comp=Z,5μm,4.0s						
BART	**Pico Bartolome**	**129.57**	**286**	*e*PKP	**PKPdf**	**22 44 03.2**	**0.0**
HOPEN	**Hopen**	**129.64**	**345**	*e*PKPdf	**PKiKP**	**22 44 02.8**	**-0.1**
HOPEN				*e*PP	**PP**	**22 46 12.0**	**-1.7**
HOPEN				*e*SS	SS	23 03 37.5	+2.8
HOPEN				IVMs_BB	IVMs_BB	23 28 11.1	
	comp=Z,5μm,3.9s						
CMLA	**Cha da Macela**	**129.80**	**285**	*e*PKP	**PKPdf**	**22 44 03.3**	**-0.2**
CMLA	**Cha da Macela**	**129.80**	**285**	*e*LR	LR	23 26 22.6	
	comp=Z,2μm,25.5s						
PSET	**Sete Cidades**	**129.96**	**285**	*e*LR	LR	23 26 03.1	
	comp=Z,5μm,20.4s						
BILL	**Bilibino**	**130.02**	**29**	*i* PKIKP	**PKPdf**	**22 44 01.5**	**-1.5**
BILL				*i*		22 44 11.5	
BILL				*i*		22 46 12.4	
BILL				pmax	pmax		
	comp=Z,65nm,1.3s						
BILL	**Bilibino**	**130.02**	**29**	PKPdf	**PKPdf**	**22 44 03.2**	**+0.2**
OTAV	**Otavalo**	**130.68**	**202**	PKIKP	**PKPdf**	**22 44 07.0**	**+0.4**
OTAV				MLR	MLR		
	comp=Z,36μm,22.0s						
OTAV	**Otavalo**	**130.68**	**202**	PKPdf	**PKPdf**	**22 44 07.0**	**+0.4**
OTAV	**Otavalo**	**130.68**	**202**	IAMs_20	IAMs_20	23 37 48.9	
	comp=Z,36μm,22.0s						
CUSE	**Cuicocha Este**	**130.73**	**202**	*e*P	**PKiKP**	**22 44 08.2**	**+0.6**
PAC1	**Pacto, Paraso**	**130.79**	**201**	*e*P	**PKiKP**	**22 44 07.1**	**-0.2**
TULM	**Tulcn-Chalpat**	**130.97**	**203**	*e*P	**PKPdf**	**22 44 07.0**	**-0.1**
MACC	**Macarena, Meta**	**131.18**	**208**	*e*P	**PKiKP**	**22 44 07.8**	**-0.1**
CPAS1	**Pasto**	**131.30**	**203**	*e*P	**PKiKP**	**22 44 15.1**	**+6.4**
GCUF	**Volcan Galeras**	**131.34**	**203**	*e*P	**PKiKP**	**22 44 08.6**	**-0.3**
PAGU	**Agualva, Azore**	**131.44**	**286**	*e*PKP	**PKPdf**	**22 44 05.8**	**-0.8**
PAGU	**Agualva, Azore**	**131.44**	**286**	*e*LR	LR	23 26 59.1	
	comp=Z,2μm,21.0s						
PAYG	**Puerto Ayora**	**131.69**	**186**	*e*P	**PKPdf**	**22 44 07.1**	**-0.9**
PAYG	**Puerto Ayora**	**131.69**	**186**	PKPdf	**PKiKP**	**22 44 09.4**	**+0.5**
HSPB	**Hornsund (broa**	**131.69**	**343**	*e*Pdif	**Pdif**	**22 40 58.8**	**-0.7**
HSPB				*e*PKPdf	**PKPdf**	**22 44 05.5**	**-0.5**
HSPB				*e*PP	**PP**	**22 46 27.3**	**+0.3**
HSPB				*e*SS	SS	23 04 03.6	+3.8
HSPB				IVMs_BB	IVMs_BB	23 31 47.3	
	comp=Z,4μm,4.3s						
PID	**Ribeirinha**	**131.87**	**285**	*e*PKP	**PKPdf**	**22 44 07.1**	**-0.4**
SOTA	**Rioblanco**	**132.00**	**205**	*e*P	**PKPdf**	**22 44 07.7**	**-1.5**
PICO	**Pico**	**132.10**	**285**	*e*PKP	**PKPdf**	**22 44 07.5**	**-0.5**
PICO	**Pico**	**132.10**	**285**	*e*LR	LR	23 26 20.2	
	comp=Z,5μm,20.4s						
PGRA	**Graciosa**	**132.10**	**285**	*e*PKP	**PKPdf**	**22 44 07.7**	**-0.2**
PGRA	**Graciosa**	**132.10**	**285**	*e*LR	LR	23 27 03.9	
	comp=Z,2μm,16.2s						
ROSA	**Rosais**	**132.10**	**285**	*e*PKP	**PKPdf**	**22 44 07.3**	**-0.6**
ROSA	**Rosais**	**132.10**	**285**	*e*LR	LR	23 26 42.1	
	comp=Z,5μm,22.8s						
PCAN	**Candelaria**	**132.12**	**284**	*e*PKP	**PKPdf**	**22 44 07.7**	**-0.2**
PCON	**Cinco Dias**	**132.13**	**205**	*e*P	**PKPdf**	**22 44 07.4**	**-2.0**
SPA0	**Spitsbergen Ar**	**132.16**	**345**	*e*PKPdf	**PKPdf**	**22 44 07.0**	**+0.1**
SPA0				*e*PP	**PP**	**22 46 31.2**	**+1.2**
SPA0				*e*SP	SP	22 56 41.9	+0.8
SPITS	**Spitsbergen Ar**	**132.16**	**345**	PKIKP	**PKiKP**	**22 44 08.5**	**+0.6**
CTUM2	**Tumaco**	**132.27**	**202**	*e*P	**PKiKP**	**22 44 14.1**	**+4.0**
TUMC	**Tumaco**	**132.27**	**202**	*e*P	**PKPdf**	**22 44 08.9**	**-0.1**
CALA	**Caldeira**	**132.33**	**284**	*e*PKP	**PKPdf**	**22 44 08.7**	**+0.3**
POPC	**Popayan, Colom**	**132.41**	**205**	*e*P	**PKPdf**	**22 44 07.8**	**-1.8**
VILC	**Villavicencio,**	**132.98**	**209**	*e*P	**PKPdf**	**22 44 08.9**	**-1.6**
ORTC	**Ortega, Tolima**	**133.29**	**207**	*e*P	**PKPdf**	**22 44 10.4**	**-0.6**
KBS	**Kingsbay**	**133.31**	**345**	*e*PKPdf	**PKPdf**	**22 44 09.1**	**+0.2**
KBS				IVmBBB		22 44 22.1	
	comp=Z,3μm,3.3s						
KBS				*e*PP	**PP**	**22 46 35.6**	**-1.7**
KBS				*e*SP	SP	22 56 51.0	+0.2
KBS				*e*SS	**SS**	**23 04 17.4**	**-2.0**
KBS				IVMs_BB	IVMs_BB	23 34 50.4	
	comp=Z,3μm,4.0s						
TRN	**Trinidad (W)**	**133.68**	**228**	*e*P	**PKPdf**	**22 44 07.5**	**-4.0**
YOTC	**Yotoco, Valle**	**133.69**	**206**	*e*P	**PKPdf**	**22 44 09.6**	**-2.3**
TOSP	**Speyside**	**133.79**	**230**	*e*P	PKPpre	22 44 07.5	
ROSC	**El Rosal**	**133.87**	**209**	PKP	**PKPdf**	**22 44 11.9**	**-0.6**
	comp=Z,22nm,0.7s,baz=104,slow=1.9,SNR=25						
CROSA	**EL ROSAL, CUND**	**133.88**	**209**	*e*P	**PKiKP**	**22 44 18.0**	**+4.2**
ANIL	**Santa Ana**	**133.88**	**207**	*e*P	**PKiKP**	**22 44 13.2**	**-0.6**
ELOV	**Elorza**	**134.12**	**216**	*e*P	**PKPdf**	**22 44 12.3**	**-0.2**
NIKH	**Nikolski High**	**134.31**	**54**	P	**PKPdf**	**22 44 08.8**	**-2.7**
	baz=245						
H07S1	**FLORES T-PHASE**	**134.40**	**284**	*e*PKP	**PKPdf**	**22 44 11.4**	**-0.8**
H07S1	**FLORES T-PHASE**	**134.40**	**284**	*e*LR	LR	23 27 06.4	
RUSC	**La Rusia**	**134.44**	**211**	*e*P	**PKPdf**	**22 44 12.6**	**-1.1**
TAMC	**Tame, Arauca**	**134.48**	**213**	*e*P	**PKPdf**	**22 44 12.8**	**-0.5**
SPBC	**San Pablo de B**	**134.55**	**209**	*e*P	**PKPdf**	**22 44 10.2**	**-3.2**
GUY2C	**Guyana, Caldas**	**134.56**	**208**	*e*P	**PKPdf**	**22 44 13.0**	**-0.9**
NORC	**Norcasia**	**134.73**	**208**	*e*P	**PKPdf**	**22 44 13.0**	**-0.7**
PCRV	**Puerto La Cruz**	**134.85**	**224**	PP	PP	22 46 45.7	-1.7
	comp=Z,18nm,1.0s,baz=38,slow=5.8,SNR=5.5						
GRGR	**Grenville**	**135.07**	**229**	*e*P	PKPpre	22 44 02.2	
SPIA	**Saint Paul Isl**	**135.24**	**49**	P	**PKPdf**	**22 44 10.8**	**-2.2**
	baz=248						
BAUV	**El Baul**	**135.28**	**219**	*e*P	**PKPdf**	**22 44 13.9**	**-0.7**
BAUV	**El Baul**	**135.28**	**219**	PKPdf	**PKPdf**	**22 44 13.9**	**-0.7**
JMIC	**Jan Mayen**	**135.33**	**332**	*e*PP	PP	22 46 51.4	+1.1
JMIC				*e*SS	SS	23 04 45.9	+1.8
CBOC	**Ciudad Bolivar**	**135.37**	**207**	*e*P	**PKPdf**	**22 44 14.8**	**-0.2**
PTBC	**PUERTO BERRIO,**	**135.51**	**209**⇑	*e*P	**PKPdf**	**22 44 15.6**	**+0.5**
HELC	**Santa Helena**	**135.53**	**208**	*e*P	**PKPdf**	**22 44 16.0**	**+0.4**
BRRC	**Barranca, Sant**	**135.79**	**211**	*e*P	**PKPdf**	**22 44 14.8**	**-0.8**
SVB	**Belmont**	**135.82**	**230**	*e*P	PKPpre	22 44 06.2	
SOCV	**Socops**	**135.83**	**215**	*e*P	**PKPdf**	**22 44 15.3**	**-0.4**
BIRV	**Birongo**	**135.86**	**222**	PKPpre	PKPpre	22 44 05.0	
BIRV				PKPdf	**PKPdf**	**22 44 14.7**	**-1.0**
UNV	**Unalaska Valle**	**135.95**	**54**		**PKiKP**	**22 44 15.9**	**-0.3**
UNV	**Unalaska Valle**	**135.95**	**54**	P	**PKPdf**	**22 44 12.5**	**-2.1**
	baz=248						
MCLT	**Moule a Chique**	**136.03**	**231**	*e*P	**PKPdf**	**22 44 14.2**	**-1.8**
SDV	**Santo Domingo**	**136.29**	**216**	*e*P	**PKPdf**	**22 44 14.0**	**-2.8**
DBBC	**Dabeiba**	**136.52**	**207**	*e*P	**PKPdf**	**22 44 17.8**	**+0.8**
ZARC	**Zaragoza, Cauc**	**136.53**	**209**	*e*P	PKPpre	22 44 12.8	
ZARC	**Zaragoza, Cauc**	**136.53**	**209**	PKPdf	**PKPdf**	**22 44 16.5**	**-0.5**
MPOM	**Morne Pois Mar**	**136.60**	**232**	*e*P	PKPpre	22 44 06.2	
OCAC	**Ocana**	**136.70**	**212**	*e*P	**PKPdf**	**22 44 17.8**	**+0.4**
GAMB	**Gambell**	**136.71**	**39**	P	**PKPdf**	**22 44 14.1**	**-1.5**
	baz=254						
BIM	**Bigot**	**136.77**	**232**	*e*P	PKPpre	22 44 07.2	
ILAM	**Ilet Lapin Mar**	**136.88**	**232**	*e*P	PKPpre	22 44 10.2	
FDF	**Fort de France**	**136.99**	**232**	IAMs_20	IAMs_20	23 36 21.2	
	comp=Z,31μm,22.0s						
UREC	**San Jos de Ur**	**137.00**	**208**	*e*P	**PKPdf**	**22 44 17.2**	**-0.6**
SVN	**Savane Anatole**	**137.09**	**232**	IAMs_20	IAMs_20	23 36 22.8	
	comp=Z,33μm,22.0s						
PTAC	**Punta Ardita,**	**137.12**	**205**⇑	*e*P	**PKPdf**	**22 44 18.6**	**+0.5**
SMLC	**San Martn de**	**137.49**	**211**	*e*P	**PKPdf**	**22 44 17.8**	**-0.9**
DSLB	**Salisbury**	**137.72**	**232**	*e*P	**PKPdf**	**22 44 16.4**	**-2.7**
FALS	**False Pass**	**138.00**	**54**	P	**PKPdf**	**22 44 17.2**	**-1.1**
	baz=250						
DABV	**Dabajuro**	**138.14**	**217**	*e*P	**PKPdf**	**22 44 18.6**	**-1.3**
TDBA	**Terre de Bas,**	**138.18**	**232**	*e*P	PKPpre	22 44 14.2	
CBE	**Ff, Capester**	**138.34**	**232**	*e*P	PKPpre	22 44 11.5	
ARGC	**Ariguani, Magd**	**138.53**	**211**	*e*P	**PKiKP**	**22 44 23.3**	**+0.6**
NOR	**Nord**	**138.57**	**347**	*e*P	PKPpre	22 44 08.4	
NOR				*i*		22 47 08.0	
TNA	**Tin City**	**138.71**	**37**	P	**PKPdf**	**22 44 18.5**	**-0.8**
	baz=259						
SJCC	**San Jacinto, C**	**138.89**	**210**⇑	*e*P	**PKPdf**	**22 44 22.3**	**+0.9**
SJCC	**San Jacinto, C**	**138.89**	**210**	PKPdf	**PKiKP**	**22 44 23.2**	**-0.4**
DAG	**Danmarks Havn**	**139.02**	**340**	*e*P	PKPpre	22 44 09.3	
DAG				*i*		22 47 14.0	
DAG				IVMs_BB	IVMs_BB	23 56 17.0	
	comp=Z,6μm,20.8s						
ANBD	**Bethesda, Anti**	**139.23**	**233**	*e*P	**PKPdf**	**22 44 19.1**	**-2.6**
DBG	**Daneborg**	**139.34**	**336**	*e*P	PKPpre	22 44 13.6	
URIC	**Uribia, Colomb**	**139.39**	**215**	*e*P	PKPpre	22 44 17.2	
URIC	**Uribia, Colomb**	**139.39**	**215**	PKPdf	**PKPdf**	**22 44 22.3**	**+0.1**
BCIP	**Isla Barro Col**	**139.60**	**203**	*e*P	**PKPdf**	**22 44 23.3**	**+0.8**
BCIP	**Isla Barro Col**	**139.60**	**203**	IAMs_20	IAMs_20	23 44 36.4	
	comp=Z,34μm,19.0s						
SMRC	**Santa Marta, M**	**139.74**	**212**	*e*P	**PKPdf**	**22 44 22.3**	**-0.5**
ANWB	**Willy Bob**	**139.75**	**233**	*e*P	**PKPdf**	**22 44 19.1**	**-3.6**
ANWB	**Willy Bob**	**139.75**	**233**	IAMs_20	IAMs_20	23 38 10.4	
	comp=Z,29μm,22.0s						
SDPT	**Sand Point**	**139.76**	**54**	PKPdf	**PKPdf**	**22 44 22.2**	**+0.7**
SDPT	**Sand Point**	**139.76**	**54**	P	**PKPdf**	**22 44 20.5**	**-1.0**
	baz=253						
RIOS	**Rincon, Osa**	**140.01**	**197**	PKPpre	PKPpre	22 44 17.4	
RIOS				PKPdf	**PKiKP**	**22 44 25.0**	**-0.8**
CNBA	**Chernabura Isl**	**140.09**	**55**	IAMs_20	IAMs_20	23 46 27.3	
	comp=Z,19μm,20.0s						
CHNA	**Chernabura Isl**	**140.09**	**55**	P	**PKPdf**	**22 44 21.7**	**-0.4**
	baz=253						
SEUS	**St. Eustatius**	**140.25**	**232**	*e*P	PKPpre	22 44 14.2	
SRBA	**San Rafael, Bu**	**140.50**	**198**	PKPdf	**PKPdf**	**22 44 25.3**	**+0.9**
SMRT	**St. Maarten**	**140.76**	**232**	*e*P	PKPpre	22 44 14.2	
SMRT	**St. Maarten**	**140.76**	**232**	IAMs_20	IAMs_20	23 41 21.1	
	comp=Z,27μm,21.0s						
RDOG	**Red Dog Mine**	**141.02**	**34**	IAMs_20	IAMs_20	23 53 15.4	
	comp=Z,18μm,19.0s						
RDOG	**Red Dog Mine**	**141.02**	**34**	P	**PKPdf**	**22 44 20.7**	**-2.8**
	baz=266						
CHGN	**Chignik**	**141.15**	**53**	PKPdf	**PKPdf**	**22 44 23.9**	**-0.1**
CHGN	**Chignik**	**141.15**	**53**	P	**PKPdf**	**22 44 22.7**	**-1.3**
	baz=255						
JACO	**JACO, Garabito**	**141.17**	**196**		**PKPdf**	**22 44 25.2**	**-0.2**
CDVI	**St. Croix**	**141.40**	**230**	*i* P	PKPpre	22 44 14.4	
JTS	**Las Juntas de**	**141.84**	**196**	PKP	**PKPdf**	**22 44 25.8**	**-0.9**
	comp=Z,41nm,0.9s						
JTS				PP	**PP**	**22 47 30.2**	**0.0**
JTS	**Las Juntas de**	**141.84**	**196**	*e*P	**PKPdf**	**22 44 25.6**	**-1.0**
JTS	**Las Juntas de**	**141.84**	**196**	IAMs_20	IAMs_20	23 48 05.7	
	comp=Z,30μm,18.0s						
COVE	**Coope Vega, Sa**	**142.15**	**197**		PKPpre	22 44 21.8	
COVE				PKPdf	**PKPdf**	**22 44 27.5**	**+0.4**
SJG	**San Juan**	**142.41**	**228**	*e*P	**PKPdf**	**22 44 22.9**	**-4.5**
SJG	**San Juan**	**142.41**	**228**		**PKPdf**	**22 44 25.1**	**-2.3**
SJG				pPKPdf	**pPKPdf**	**22 44 35.4**	**+0.6**
GCPR	**Guaynabo City**	**142.54**	**228**		**PKiKP**	**22 44 29.9**	**-0.8**
CHIR	**Chirikof Islan**	**142.54**	**54**	P	**PKPdf**	**22 44 23.6**	**-2.9**
	baz=256						
AOPR	**Arecibo Observ**	**142.91**	**228**	*e*P	PKPpre	22 44 17.0	
A21K	**Barrow**	**143.16**	**28**	IAMs_20	IAMs_20	23 50 20.4	
	comp=Z,14μm,21.0s						
A21K	**Barrow**	**143.16**	**28**	P	PKPab	22 44 23.4	+0.6
	baz=276						
GCSA	**Galena City Sc**	**143.24**	**39**	P	PKPab	22 44 23.7	+0.4
	baz=267						
P18K	**Big Mountain,**	**143.45**	**48**	P	PKPab	22 44 24.0	-0.4
	baz=261,SNR=19						
SII	**Sitkinak Islan**	**143.49**	**53**	IAMs_20	IAMs_20	23 56 29.0	
	comp=Z,15μm,19.0s						
SII	**Sitkinak Islan**	**143.49**	**53**	P	PKPab	22 44 24.4	-0.2
	baz=258,SNR=9.0						
TTA	**Tatalina**	**143.50**	**42**	PKIKP	PKPbc	22 44 25.0	-0.5
TTA						22 44 31.7	
TTA	**Tatalina**	**143.50**	**42**	PKPdf	**PKiKP**	**22 44 31.7**	**+0.2**
TTA					PKPab	22 44 25.0	+0.5
TTA	**Tatalina**	**143.50**	**42**	P	PKPab	22 44 24.9	+0.4
	baz=266,SNR=71						
SVW2	**Sparrevohn**	**143.51**	**46**	PKPdf	**PKiKP**	**22 44 32.9**	**+1.4**
SVW2					PKPab	22 44 25.2	+0.7
O18K	**Koktuh Hills**	**143.53**	**48**	IAMs_20	IAMs_20	23 48 48.5	
	comp=Z,14μm,20.0s						
ALE	**Alert**	**143.68**	**353**	IAMs_20	IAMs_20	00 02 28.1	
	comp=Z,16μm,19.0s						
L19K	**White Mountain**	**143.97**	**44**	PKPdf	PKPbc	22 44 27.0	+0.1
L19K	**White Mountain**	**143.97**	**44**	P	PKPab	22 44 26.5	+0.2
	baz=265,SNR=94						
N19K	**Bonanza Creek**	**144.01**	**46**	IAMs_20	IAMs_20	23 47 24.0	
	comp=Z,16μm,19.0s						
N19K	**Bonanza Creek**	**144.01**	**46**	P	**PKPab**	**22 44 26.6**	**0.0**
	baz=264						
O19K	**Port Alsworth**	**144.02**	**47**	IAMs_20	IAMs_20	23 47 29.4	
	comp=Z,14μm,21.0s						
O19K	**Port Alsworth**	**144.02**	**47**	P	**PKPab**	**22 44 25.7**	**-0.8**
	baz=263,SNR=34						
PRVC	**Isla de Provid**	**144.03**	**202**	*e*P	**PKPab**	**22 44 27.5**	**-0.3**
PRVC	**Isla de Provid**	**144.03**	**202**	PKPdf	PKPbc	22 44 29.0	+0.6
OHAK	**Old Harbor**	**144.10**	**52**	P	**PKPab**	**22 44 26.3**	**-0.5**

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      baz=260,SNR=23
M19K  Big River Lodg   144.16  44   P         PKPab     22 44 27.2 +0.2
      baz=265
Q19K  Cape Douglas,    144.19  49   P         PKPab     22 44 26.0 -1.3
      baz=262
J20K  Nowinta River    144.40  40   P         PKPab     22 44 27.9 +0.1
      baz=269,SNR=502
L20K  Farewell, AK     144.44  43   P         PKPab     22 44 28.1  0.0
      baz=267
P19K  Oil Pt           144.50  48   P         PKPab     22 44 26.9 -1.5
      baz=263
SDD   Santo Domingo    144.52 223             PKPab     22 44 28.9 -0.6
IMAR  Indian Mountai   144.56  37             PKPdf     22 44 29.4 -0.5
MATN  Matagalpa        144.59 195   IAMs_20   IAMs_20   23 44 09.7
      comp=Z,24µm,22.0s
SUMG  Summit           144.69 334 i P         PKPab     22 44 29.0 -0.2
SUMG                                IAmb      IAmb      22 44 31.2
      comp=Z,242nm,1.1s
SUMG  Summit           144.69 334   IAMs_20   IAMs_20   23 52 14.2
      comp=Z,31µm,22.0s
O20K  Slope Mountain   144.85  48   P         PKPab     22 44 27.9 -1.8
      baz=264,SNR=48
H21K  Melozitna Rive   144.96  38   P         PKPbc     22 44 29.5 -0.4
      baz=272
CHUM  Lake Minchumin   145.20  41   P         PKPab     22 44 30.7  0.0
      baz=270,SNR=714
PPLA  Purkeypile       145.24  43             PKPbc     22 44 30.9 -0.1
PPLA  Purkeypile       145.24  43   P         PKPbc     22 44 30.2 -0.8
      baz=269,SNR=472
CAST  Castle Rocks     145.30  42   P         PKPbc     22 44 29.2 -1.8
      baz=270,SNR=129
HOM   Homer            145.30  48   P         PKPbc     22 44 29.6 -1.5
      baz=264,SNR=40
I21K  Tanana           145.32  39   P         PKPab     22 44 31.2  0.0
      baz=272
ANGG  Ammassalik, Gr   145.41 322 i P         PKPdf     22 44 30.4 -0.8
ANGG  Ammassalik, Gr   145.41 322   IAMs_20   IAMs_20   23 49 17.0
      comp=Z,32µm,21.0s
JAKH  Jacmel           145.49 219             PKPbc     22 44 33.0 +0.1
SDDR  Presa de Saban   145.61 222 eP          PKPdf     22 44 32.3 -0.8
SDDR  Presa de Saban   145.61 222   pPKPdf    pPKPdf    22 44 43.9 +3.5
CAPN  Captain Cook N   145.64  46   IAMs_20   IAMs_20   23 53 58.0
      comp=Z,17µm,21.0s
CAPN  Captain Cook N   145.64  46   P         PKPdf     22 44 31.2 -0.6
      baz=266,SNR=42
BRLK  Bradley Lake     145.69  48   IAMs_20   IAMs_20   23 55 41.4
      comp=Z,13µm,19.0s
NEEM  North Greenlan   145.72 344 eP          PKPdf     22 44 31.9  0.0
SC01  Santiago de lo   145.74 223   pPKPdf    pPKPdf    22 44 45.6 +5.0
BRSE  Bradley Lake S   145.76  48   P         PKPdf     22 44 31.5 -0.6
      baz=265,SNR=200
BPAW  Bear Paw Mtn.    145.78  41   P         PKPdf     22 44 31.6 -0.4
      baz=272,SNR=104
ICESG Greenland Ices   145.80 328 i P         PKPdf     22 44 32.2 -0.1
ICESG                               IAmb      IAmb      22 44 34.5
      comp=Z,616nm,1.0s
SNET  Serv Nac Est T   145.80 189   pPKPdf    pPKPdf    22 44 46.9 +5.9
KTH   Kantishna Hill   145.82  42   IAMs_20   IAMs_20   00 00 28.3
      comp=Z,13µm,20.0s
MLY   Manley           145.86  39   P         PKPdf     22 44 31.7 -0.4
      baz=273,SNR=683
COLD  Coldfoot         145.89  35   P         PKPdf     22 44 32.3 +0.2
      baz=277,SNR=442
TGUH  Tegucigalpa,Un   145.91 193 eP          PKPdf     22 44 31.2 -2.7
TOLK  Toolik Lake Re   145.93  32             PKPdf     22 44 32.0 -0.2
TOLK                                IAMs_20   IAMs_20   23 56 60.0
      comp=Z,20µm,19.0s
TOLK  Toolik Lake Re   145.93  32   P         PKPbc     22 44 32.9  0.0
      baz=280,SNR=1000
TRF   Thorofare Moun   146.11  42   IAMs_20   IAMs_20   23 55 15.9
      comp=Z,17µm,20.0s
TRF   Thorofare Moun   146.11  42   P         PKPdf     22 44 32.4 -0.3
      baz=271
FIS   Fire Island      146.11  46   PKPdf     PKPdf     22 44 32.9 +0.3
CUT   Chulitna         146.12  44   P         PKPdf     22 44 32.2 -0.3
      baz=270,SNR=354
M22K  Willow           146.18  45   P         PKPdf     22 44 32.4 -0.2
      baz=269,SNR=51
O22K  Cooper Landing   146.32  47             PKPdf     22 44 32.5 -0.4
O22K                                PKPbc     PKPab     22 44 35.7 +0.6
O22K  Cooper Landing   146.32  47   P         PKPdf     22 44 32.6 -0.3
      baz=267,SNR=68
RC01  Rabbit Creek A   146.34  46             PKPdf     22 44 33.5 +0.5
RC01  Rabbit Creek A   146.34  46   P         PKPdf     22 44 33.0  0.0
      baz=268,SNR=275
I23K  Minto, Yukon-K   146.43  39   P         PKPbc     22 44 34.0 -0.4
      baz=275,SNR=331
SEW   Seward           146.44  48   P         PKPdf     22 44 33.1 -0.1
      baz=267
BWN   Browne           146.45  40   IAMs_20   IAMs_20   23 58 06.7
      comp=Z,14µm,19.0s
NEA2  Nenana           146.59  40   IAMs_20   IAMs_20   23 57 31.5
      comp=Z,13µm,20.0s
NEA2  Nenana           146.59  40   P         PKPdf     22 44 33.3  0.0
      baz=274,SNR=192
PMR   Palmer           146.65  45   P         PKPdf     22 44 33.5 +0.1
      baz=270,SNR=129
MCK   McKinley         146.70  41   IAMs_20   IAMs_20   23 48 57.6
      comp=Z,17µm,22.0s
MCK   McKinley         146.70  41   P         PKPdf     22 44 34.2 +0.6
      baz=273,SNR=264
RND   Reindeer         146.75  42   IAMs_20   IAMs_20   23 55 53.9
      comp=Z,16µm,20.0s
YHJ   Yallahs          146.76 213 i P         PKPbc     22 44 36.6 -0.2
RTAL  Retalhuleu       146.85 185             PKPbc     22 44 37.5 +0.4
CMJ   Castle Mountai   146.94 213 i P         PKPbc     22 44 36.9 -0.4
HOJ   Hope             146.96 213 i P         PKPbc     22 44 37.6 +0.3
KNK   Knik Glacier     146.97  45   P         PKPdf     22 44 34.5 +0.4
      baz=270,SNR=256
H24K  Noodor Dome      146.98  37   IAMs_20   IAMs_20   23 57 34.4
      comp=Z,17µm,20.0s
H24K  Noodor Dome      146.98  37   P         PKPdf     22 44 34.4 +0.4
      baz=277
GWJ   Greenwich        147.01 213 i P         PKPab     22 44 38.9 -0.2
PWL   Port Wells       147.02  46   P         PKPdf     22 44 34.5 +0.3
      baz=269,SNR=203
SML   Sawmill          147.03  45   P         PKPdf     22 44 34.4 +0.2
      baz=270,SNR=281
STH   Stony Hill       147.04 212 i P         PKPab     22 44 39.0 -0.1
TCOL  CIGO, UAF Yank   147.09  39   PKPdf     PKPdf     22 44 33.1 -1.0
TCOL                                          PKPbc     22 44 36.1 -0.2
TCOL  CIGO, UAF Yank   147.09  39   P         PKPdf     22 44 34.5 +0.4
      baz=276,SNR=6.9
COLA  College          147.09  39   PKP2      PKPbc     22 44 35.7 -0.6
COLA  College          147.09  39             PKPbc     22 44 35.7 -0.6
COLA  College          147.09  39   P         PKPdf     22 44 34.7 +0.6
      baz=276
MCJ   Malvern          147.22 211 i P         PKPbc     22 44 38.9 +0.7
APG   El Apazote       147.23 188   PKPbc     PKPbc     22 44 37.5 -0.9
      comp=Z,137nm,0.9s,baz=193,slow=5.1,SNR=9.9
POKR  Poker Plat Res   147.25  38   P         PKPdf     22 44 35.1 +0.7
      baz=276,SNR=39
WAT6  Susitna Watana   147.29  43   P         PKPdf     22 44 35.0 +0.3
      baz=272,SNR=562
CVJ   Coleyville       147.44 211 i P         PKPbc     22 44 39.1 +0.3
MTDJ  Mount Denham     147.44 211   PKPdf     PKPdf     22 44 35.6 -0.7
MTDJ                                          PKPab     22 44 40.1 -0.7
SCM   Sheep Creek Mo   147.51  45   PKP2      PKPbc     22 44 38.5 +0.8
SCM   Sheep Creek Mo   147.51  45   PKPbc     PKPbc     22 44 38.5 +0.8
SCM   Sheep Creek Mo   147.51  45   P         PKPdf     22 44 35.4 +0.4
      baz=271,SNR=96
ILAR  Eielson Array    147.51  39   PKPbc     PKPdf     22 44 36.0 +1.1
      comp=Z,56nm,0.8s,baz=286,slow=1.1,SNR=107
ILAR  Eielson Array    147.51  39   PKIKP     PKPdf     22 44 34.0 -0.9
ILAR                                                    22 44 37.6
ILAR  Eielson Array    147.51  39   PKPdf     PKPdf     22 44 34.0 -0.9
ILAR                                PKPbc     PKPbc     22 44 37.6 +0.1
HDA   Harding Lake     147.53  40   P         PKPdf     22 44 36.0 +1.1
      baz=276,SNR=113
GLI   Glacier Island   147.63  46   PKPbc     PKPbc     22 44 38.9 +1.0
GLI   Glacier Island   147.63  46   P         PKPdf     22 44 35.2 +0.1
      baz=270
GRTK  Grand Turk       147.73 224             PKPbc     22 44 39.2 -0.2
FID   Port Fidalgo     147.93  47   PKPdf     PKPdf     22 44 35.5 -0.1
FID                                 PKPbc     PKiKP     22 44 40.6  0.0
FID                                 IAMs_20   IAMs_20   00 05 16.1
      comp=Z,14µm,20.0s
Q23K  Middleton Isla   147.98  49             PKPbc     22 44 38.3 -0.5
Q23K  Middleton Isla   147.98  49   P         PKPdf     22 44 36.0 +0.3
      baz=268,SNR=7.1
MID   Middleton Isla   147.98  49   PKP2      PKiKP     22 44 40.3 -0.4
MID   Middleton Isla   147.98  49             PKiKP     22 44 40.3 -0.4
BMAR  Burnt Mountain   148.00  34   PKPdf     PKPdf     22 44 34.9 -0.8
BMAR                                PKPbc     PKiKP     22 44 40.1 -0.5
M24K  Tolsona, Glenn   148.04  44   PKPbc     PKiKP     22 44 40.8  0.0
M24K  Tolsona, Glenn   148.04  44   P         PKPdf     22 44 36.4 +0.5
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      baz=273,SNR=54
GTBY  Guantanamo Bay   148.08 217 eP          PKPbc     22 44 40.1 -0.2
GTBY  Guantanamo Bay   148.08 217   PKPbc     PKPbc     22 44 41.2 +0.9
KLU   Klutina          148.19  45   PKPbc     PKiKP     22 44 40.8 -0.4
KLU   Klutina          148.19  45   P         PKPdf     22 44 36.4 +0.2
      baz=272,SNR=72
DIV   Divide           148.27  46   PKPdf     PKPdf     22 44 34.0 -2.3
DIV                                           PKiKP     22 44 41.3  0.0
PAX   Paxson           148.31  42   PKP2      PKiKP     22 44 40.6 -0.8
PAX   Paxson           148.31  42             PKiKP     22 44 40.6 -0.8
PAX   Paxson           148.31  42   P         PKPdf     22 44 36.3  0.0
      baz=275,SNR=215
HARP  HAARP            148.50  43   P         PKPdf     22 44 36.8 +0.2
      baz=274,SNR=101
RIDG  Independent Ri   148.51  41             PKPbc     22 44 40.9 +0.6
RIDG                                IAMs_20   IAMs_20   23 56 02.4
      comp=Z,16µm,21.0s
RIDG  Independent Ri   148.51  41   P         PKPdf     22 44 36.6 -0.1
      baz=277,SNR=130
CCIG  Comitan          148.62 185             PKPdf     22 44 39.0 +0.7
DY2G  Dye2             148.78 325 eP          PKPdf     22 44 37.0 -0.2
DY2G                              i                     22 48 13.1
DY2G                                IVMs_BB   IVMs_BB   23 47 58.8
      comp=Z,7µm,5.6s
N25K  Chitina, Valde   148.81  45             PKPbc     22 44 41.6 +0.5
N25K  Chitina, Valde   148.81  45   P         PKPdf     22 44 36.7 -0.5
      baz=274,SNR=75
RAGM  Ragged Mountai   148.82  47   PKPbc     PKiKP     22 44 42.3 -0.2
RAGM                                IAMs_20   IAMs_20   00 06 19.3
      comp=Z,21µm,20.0s
BMRM  Bremner River    148.84  46             PKPbc     22 44 40.9 -0.3
BMRM                                IAMs_20   IAMs_20   23 57 50.7
      comp=Z,14µm,20.0s
BMRM  Bremner River    148.84  46   P         PKPdf     22 44 37.1 -0.1
      baz=272,SNR=119
SCRK  Sand Creek       148.86  40             PKPbc     22 44 41.8 +0.5
SCRK                                IAMs_20   IAMs_20   23 52 18.5
      comp=Z,16µm,21.0s
SCRK  Sand Creek       148.86  40   P         PKPdf     22 44 37.2  0.0
      baz=278,SNR=149
DOT   Dot Lake         148.87  41             PKiKP     22 44 41.9 -0.5
KAIM  Kayak Island     148.96  48   P         PKPdf     22 44 36.7 -0.7
      baz=271,SNR=18
J26L  Joseph Creek     148.97  39   P         PKPdf     22 44 37.4  0.0
      baz=279
HMT   Hamilton         149.03  47   IAMs_20   IAMs_20   00 05 28.8
      comp=Z,24µm,19.0s
MENT  Mentasta         149.11  42   PKPbc     PKiKP     22 44 43.8 +0.8
NRS   Narsarsuaq       149.15 314   PKIKP     PKPdf     22 44 39.2 +1.6
NRS                                 MLR       MLR
      comp=Z,31µm,22.0s
NRS   Narsarsuaq       149.15 314 eP          PKPbc     22 44 40.2 -1.6
NRS                                 IVMs_BB   IVMs_BB   00 17 56.3
      comp=Z,18µm,17.9s
NRS   Narsarsuaq       149.15 314             PKPdf     22 44 39.2 +1.6
NRS                                 IAMs_20   IAMs_20   23 48 39.0
      comp=Z,31µm,22.0s
TULEG Thule            149.22 348 eP          PKPdf     22 44 37.3 -0.1
TULEG Thule            149.22 348   IAMs_20   IAMs_20   23 58 33.1
      comp=Z,26µm,21.0s
L26K  Log Cabin Wild   149.27  42   PKPbc     PKiKP     22 44 43.4 +0.1
L26K  Log Cabin Wild   149.27  42   P         PKPdf     22 44 38.3 +0.5
      baz=277,SNR=143
SUCK  Suckling Hills   149.28  48   IAMs_20   IAMs_20   23 58 31.5
      comp=Z,20µm,19.0s
BERG  Berg Lake        149.31  47   PKPbc     PKiKP     22 44 43.5  0.0
BERG                                IAMs_20   IAMs_20   23 58 14.2
      comp=Z,19µm,20.0s
NUUG  Nuugaatsiaq      149.32 336 i P         PKPbc     22 44 40.9 -1.0
NUUG                                IAmb      IAmb      22 44 49.4
      comp=Z,736nm,1.2s
VRDI  Verde Repeater   149.39  46   PKPbc     PKiKP     22 44 43.9  0.0
UPNV  Upernavik        149.44 339 i P         PKPdf     22 44 39.5 +1.7
UPNV                              eP          PKPbc     22 44 40.5 -1.8
UPNV                                IVMs_BB   IVMs_BB   23 54 31.0
      comp=Z,10µm,18.4s
CMIG  Matias Romero    149.49 180   PKP       PKPdf     22 44 39.5  0.0
      comp=Z,49nm,1.0s,baz=333,slow=0.0,SNR=13
CMIG                                PKPbc     PKPbc     22 44 44.2 +0.2
      comp=Z,131nm,0.9s,baz=188,slow=2.7,SNR=34
M26K  Nabesna, AK      149.50  43             PKiKP     22 44 43.5 -0.3
M26K  Nabesna, AK      149.50  43   P         PKPdf     22 44 38.5 +0.2
      baz=276
BGLC  Bering Glacier   149.53  48   P         PKPdf     22 44 38.4 +0.2
      baz=272
CRQM  Cirque           149.57  47   IAMs_20   IAMs_20   23 59 39.6
      comp=Z,21µm,20.0s
MCARA McCarthy VSAT    149.58  45             PKPdf     22 44 38.9 +0.5
MCARA                                         PKiKP     22 44 44.1 +0.1
MCARA McCarthy VSAT    149.58  45   P         PKPdf     22 44 38.8 +0.5
      baz=275,SNR=48
LCCY  Blossom Villag   149.64 208   PKPdf     PKPdf     22 44 38.0 -1.7
LCCY                                PKPbc     PKiKP     22 44 45.4 +0.1
ILULI Ilulissat        149.69 331   PKP2      PKPbc     22 44 43.3 +0.4
ILULI                               MLR       MLR
      comp=Z,35µm,21.0s
ILULI Ilulissat        149.69 331 eP          PKPbc     22 44 41.5 -1.5
ILULI Ilulissat        149.69 331             PKPbc     22 44 43.3 +0.4
ILULI                               IAMs_20   IAMs_20   23 51 30.2
      comp=Z,35µm,21.0s
TGL   Tana Glacier     149.72  46   PKPbc     PKiKP     22 44 44.3 -0.1
TGL                                 IAMs_20   IAMs_20   23 59 50.0
      comp=Z,20µm,19.0s
WAX   Waxell Ridge     149.73  47   PKPbc     PKiKP     22 44 44.7 +0.4
WAX                                 IAMs_20   IAMs_20   00 07 35.2
      comp=Z,26µm,22.0s
SNH   Sunshine Point   149.75  48             PKiKP     22 44 44.5 +0.1
SNH                                 IAMs_20   IAMs_20   23 55 08.8
      comp=Z,19µm,19.0s
TLIG  Tlapa            149.79 173   PKPdf     PKPdf     22 44 41.3 +1.1
TLIG                                PKPab     pPKPdf    22 44 47.5  0.0
EGAK  Eagle            149.94  38   IAMs_20   IAMs_20   00 06 47.7
      comp=Z,16µm,22.0s
L27K  Beaver Creek,    149.95  42             PKiKP     22 44 45.1 +0.4
L27K  Beaver Creek,    149.95  42   P         PKPdf     22 44 39.4 +0.5
      baz=279,SNR=125
BCAR  Beaver Creek A   149.97  42   PKPdf     PKPdf     22 44 37.8 -1.2
BCAR                                          pPKPdf    22 44 45.7 -0.6
ISLE  Juniper Island   149.97  47             PKPdf     22 44 39.3 +0.2
ISLE                                          pPKPdf    22 44 45.6 -0.9
ISLE                                IAMs_20   IAMs_20   23 55 33.6
      comp=Z,18µm,19.0s
M27K  Edge Creek, AK   150.02  43   PKPbc     PKiKP     22 44 45.6 +0.6
M27K  Edge Creek, AK   150.02  43   P         PKPdf     22 44 39.0 -0.1
      baz=277
MESA  MESA             150.19  48   IAMs_20   IAMs_20   23 57 20.5
      comp=Z,22µm,19.0s
MESA  MESA             150.19  48   P         PKPdf     22 44 39.2 -0.4
      baz=274,SNR=14
BARN  Barnard Glacie   150.27  46             PKiKP     22 44 45.9 +0.3
BARN                                IAMs_20   IAMs_20   23 55 51.3
      comp=Z,18µm,20.0s
YAH   Yahtse           150.28  47   IAMs_20   IAMs_20   23 56 42.8
      comp=Z,19µm,19.0s
SFJD  Kangerlussuaq    150.31 327   PP        PP        22 48 19.7 -1.0
      comp=Z,25nm,0.9s,baz=23,slow=8.5,SNR=2.5
SFJD  Kangerlussuaq    150.31 327   PKIKP     PKPbc     22 44 44.8 +0.3
SFJD  Kangerlussuaq    150.31 327 eP          PKPbc     22 44 43.7 -0.8
SFJD                             ⇑e                     22 51 28.9
SFJD  Kangerlussuaq    150.31 327             PKPdf     22 44 39.7 +0.4
SFJD                                          PKPbc     22 44 44.8 +0.3
SFJD  Kangerlussuaq    150.31 327   IAMs_20   IAMs_20   23 52 20.4
      comp=Z,22µm,21.0s
CTG   Chitna Glacier   150.43  46   P         PKPdf     22 44 39.3 -0.5
      baz=276,SNR=26
CTGM  Chitina Glacie   150.43  46   PKPbc     PKiKP     22 44 46.7 +0.8
CTGM                                IAMs_20   IAMs_20   23 56 54.7
      comp=Z,20µm,20.0s
IVI   Ivigtut          150.47 315 eP          PKPbc     22 44 43.7 -1.4
IVI   Ivigtut          150.47 315   IAMs_20   IAMs_20   23 50 40.0
      comp=Z,25µm,20.0s
BVCY  Beaver Creek     150.49  43   P         PKPdf     22 44 39.5 -0.2
      baz=279,SNR=42
TABL  Table Mountain   150.57  47   IAMs_20   IAMs_20   00 08 10.5
      comp=Z,28µm,20.0s
LOGN  Logan Glacier    150.61  46   PKPbc     PKiKP     22 44 46.6 +0.3
LOGN                                IAMs_20   IAMs_20   00 02 48.4
      comp=Z,20µm,21.0s
YUK3  Moose Creek      150.76  44   P         PKPdf     22 44 40.2 -0.3
      baz=278,SNR=18
DAWY  Dawson           150.84  39   PKPbc     PKiKP     22 44 47.0 +0.4
DAWY  Dawson           150.84  39   P         PKPdf     22 44 39.7 -0.6
      baz=283,SNR=32
I29M  Ogilvie Camp,    150.97  37   P         PKPdf     22 44 39.6 -0.8
      baz=286,SNR=273
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PCA   Pinnacle         151.04  48   PKPbc     PKiKP     22 44 47.7 +0.6
PINM  Pinnacle         151.04  48   P         PKPdf     22 44 40.3 -0.5
      baz=275,SNR=19
J29M  Klondike Camp    151.25  38   P         PKPdf     22 44 40.9  0.0
      baz=285,SNR=25
EPYK  Eagle Plains     151.27  34   PKPbc     PKiKP     22 44 47.8 +0.4
EPYK                                IAMs_20   IAMs_20   00 04 39.6
      comp=Z,15µm,22.0s
EPYK  Eagle Plains     151.27  34   P         PKPdf     22 44 40.0 -0.8
      baz=290,SNR=68
BCPM  Bancas Point     151.36  48   IAMs_20   IAMs_20   00 08 40.5
      comp=Z,17µm,20.0s
PNL   Peninsula        151.51  48   P         PKPdf     22 44 41.3 -0.1
      baz=275,SNR=8.1
NUUK  Nuuk             151.56 321 eP          PKPbc     22 44 46.5 -1.0
NUUK                              i P         PKiKP     22 44 46.7 -1.2
NUUK                                IAmb      IAmb      22 44 49.2
      comp=Z,469nm,1.0s
INK   Inuvik           151.64  29   PKP       PKPdf     22 44 41.5 +0.2
      comp=Z,31nm,1.0s,baz=70,slow=1.7,SNR=21
INK                                 PKPbc     PKPbc     22 44 46.8 -0.8
      comp=Z,402nm,1.1s,baz=327,slow=2.8,SNR=88
INK                                 PP        PP        22 48 28.1 -0.1
      comp=Z,25nm,1.1s,baz=263,slow=2.7,SNR=2.8
INK   Inuvik           151.64  29   PKIKP     PKPdf     22 44 39.8 -1.5
INK                                                     22 44 47.5
INK   Inuvik           151.64  29   PKPdf     PKPdf     22 44 39.8 -1.5
INK                                 PKPbc     PKPbc     22 44 47.5 -0.1
INK   Inuvik           151.64  29   P         PKPdf     22 44 40.1 -1.2
      baz=297,SNR=18
YUK4  Talbot Arm       151.68  45   P         PKPdf     22 44 40.0 -1.8
      baz=279,SNR=18
A36M  Sachs Harbour    151.84  20   PKPdf     PKPdf     22 44 41.1 -0.4
A36M                                PKPbc     PKPbc     22 44 47.8 -0.2
A36M  Sachs Harbour    151.84  20   P         PKPdf     22 44 40.2 -1.3
      baz=314,SNR=31
YUK6  Outpost Mounta   151.88  46   P         PKPdf     22 44 41.6 -0.6
      baz=278,SNR=13
HYT   Haines Junctio   152.31  46   PKPbc     PKiKP     22 44 50.0 +0.3
HYT   Haines Junctio   152.31  46   P         PKPdf     22 44 42.3 -0.4
      baz=279,SNR=8.6
M30M  Minto, Yukon     152.31  42   P         PKPdf     22 44 41.8 -0.7
      baz=283,SNR=105
MAYO  Mayo, Yukon      152.46  40   P         PKPdf     22 44 41.8 -0.9
      baz=286
BBSR  BB Station       152.63 247             PKPbc     22 44 49.2 -1.8
BBSR                                PKPab     PKPab     22 45 01.2 -0.4
BBSR  BB Station       152.63 247   IAMs_20   IAMs_20   23 46 02.1
      comp=Z,25µm,21.0s
RES   Resolute Bay     152.90   0   PKP       PKPdf     22 44 42.0 -1.0
      comp=Z,24nm,0.9s,baz=292,slow=0.3,SNR=26
RES   Resolute Bay     152.90   0   PKIKP     PKiKP     22 44 51.6 +1.2
RES                                                     22 45 01.6
RES   Resolute Bay     152.90   0   PKPbc     PKiKP     22 44 51.6 +1.2
RES                                 PKPab     PKPab     22 45 01.6 +0.1
SLBS  Sierra La Lagu   153.14 148   PKPdf     PKPdf     22 44 46.0 +0.9
SLBS                                PKPbc     PKiKP     22 44 53.4 +0.8
SOR   Soroa            153.46 205             PKPab     22 45 06.1 +0.8
M31M  Drury Creek, Y   153.49  42   P         PKPdf     22 44 42.9 -1.3
      baz=285,SNR=13
SKAG  Skagway          153.59  48   PKPbc     PKiKP     22 44 54.5 +2.3
SKAG                                PKPab     PKPab     22 45 07.2 +2.3
SKAG  Skagway          153.59  48   P         PKPdf     22 44 43.4 -1.0
      baz=279
WHY   Whitehorse       153.61  46   PKPbc     PKiKP     22 44 54.3 +1.9
WHY                                 PKPab     PKPab     22 45 06.6 +1.5
WHY   Whitehorse       153.61  46   P         PKPdf     22 44 43.9 -0.7
      baz=282,SNR=7.3
SIT   Sitka            153.84  54   PKIKP     PKiKP     22 44 54.5 +1.7
SIT   Sitka            153.84  54   PKPdf     PKPdf     22 44 44.8  0.0
SIT                                 PKPbc     PKiKP     22 44 54.5 +1.7
SIT                                 PKPab     PKPab     22 45 05.8 -0.2
SIT   Sitka            153.84  54   P         PKPdf     22 44 44.2 -0.6
      baz=274
BESE  Bessie Mountai   153.95  50   PKPdf     PKPdf     22 44 44.8 -0.3
BESE                                PKPbc     sPKPdf    22 44 54.5 -0.4
BESE                                          PKPab     22 45 06.8 +0.2
FARO  Faro, Yukon      153.95  42   P         PKPdf     22 44 42.7 -2.2
      baz=286,SNR=33
JIS   Juneau Island    154.23  51   PKPbc     PKiKP     22 44 55.6 +2.0
JIS                                 IAMs_20   IAMs_20   00 09 00.8
      comp=Z,19µm,21.0s
ZAIG  Zacatecas        154.35 163   PKPbc     PKiKP     22 44 57.2 +1.8
ZAIG                                PKPab     PKPab     22 45 07.6 -1.8
P33M  Teslin, Yukon    154.70  46   P         PKPdf     22 44 44.8 -1.3
      baz=283,SNR=6.4
CRAG  Craig            155.14  57   P         PKPdf     22 44 45.2 -1.4
      baz=272
DRLN  Deer Lake        155.45 288             PKPdf     22 44 46.4 -1.0
DRLN                                          sPKPdf    22 44 57.0 -0.2
SRIG  Santa Rosalia    155.47 140   PKPab     PKPab     22 45 10.9 -2.8
WRAK  Wrangell Islan   155.52  55             PKPdf     22 44 47.3 +0.1
WRAK                                PKPab     PKPab     22 45 14.6 +1.3
WRAK  Wrangell Islan   155.52  55   P         PKPdf     22 44 45.8 -1.3
      baz=275
SNCC  San Nicolas Is   156.37 119   P         PKPdf     22 44 48.4 -0.7
      baz=225
TGTN  Hyland Airport   156.46  42   P         PKPdf     22 44 48.0 -0.4
      baz=291,SNR=19
DLBC  Dease Lake       156.47  50   PKP       PKPdf     22 44 47.7 -0.8
      comp=Z,8.4nm,1.1s,baz=297,slow=3.0,SNR=9.6
DLBC                                PKPab     PKPab     22 45 16.9 -0.5
      comp=Z,27nm,0.8s,baz=291,slow=0.8,SNR=3.9
DLBC  Dease Lake       156.47  50   PKPab     PKPab     22 45 19.7 +2.3
WTLY  Watson Lake, Y   156.67  45   P         PKPdf     22 44 47.8 -0.8
      baz=287
SCI2  San Clemente I   156.75 121   P         PKPdf     22 44 48.1 -1.5
      baz=224
SCZ2  Santa Cruz Isl   156.82 117   P         PKPdf     22 44 49.6 -0.1
      baz=226
SBC   Santa Barbara    157.08 116   P         PKPdf     22 44 50.1 +0.2
      baz=227
CIS   Catalina Islan   157.13 120   P         PKPdf     22 44 49.7 -0.4
      baz=224
GBN   Guysborough      157.17 277   PKPdf     PKPdf     22 44 49.5 -0.1
GBN                                 PKPab     PKPab     22 45 22.1 +1.5
PKM   Mcpherson Peak   157.32 115   P         PKPdf     22 44 50.1 -0.4
      baz=228
SFX   San Felipe       157.32 130   PKPab     PKPab     22 45 22.4 +0.8
MCCM  Marconi Confer   157.37 105   PKPdf     PKPdf     22 44 52.6 +2.4
FMP   Fort Macarthur   157.42 120   P         PKPdf     22 44 50.7 +0.3
      baz=225
SMMC  Simmler          157.49 114   P         PKPdf     22 44 51.0 +0.5
      baz=229,SNR=9.1
HSIG                   157.50 140   PKPdf     PKPdf     22 44 50.3 -0.4
HSIG                                PKPab     PKPab     22 45 22.7 +0.3
109C  Camp Elliot, M   157.51 123   PKPdif    PKPdf     22 45 02.4  +12
109C                                PKPab     PKPab     22 45 22.7 +0.2
109C  Camp Elliot, M   157.51 123   P         PKPdf     22 44 50.8 +0.2
      baz=222
TKX   Tecate           157.55 124   PKPdif    PKPdf     22 45 03.4  +13
TKX                                 PKPab     PKPab     22 45 23.1 +0.4
HPIG                   157.57 154   PKPdf     PKPdf     22 44 50.4 -0.8
HPIG                                          sPKPdf    22 45 03.5 +2.6
HPIG                                PKPab     PKPab     22 45 23.8 +0.7
BAR   Barrett          157.60 124             PKPdf     22 44 50.7  0.0
BAR                                 PKPab     PKPab     22 45 24.0 +1.1
WRGLY Wrigley          157.74  35   P         PKPdf     22 44 49.5 -0.3
      baz=301
DECC  Green Verdugo    157.78 119   P         PKPdf     22 44 50.5 -0.5
      baz=226
OSI   Osito Audit: C   157.79 117   P         PKPdf     22 44 51.3 +0.3
      baz=226
IKP   In-Ko-Pah, Jac   157.89 125   P         PKPdf     22 44 50.8 -0.4
      baz=221,SNR=9.4
DWPF  Disney Wildern   157.90 213   P         PKPdf     22 44 49.8 -1.4
      baz=155
MONP2 Monument Peak    157.90 124   P         PKPdf     22 44 51.5 +0.1
      baz=221,SNR=21
KMRM  Mail Ridge       157.91  99             PKPdf     22 45 04.3  +13
MURC  Murrieta         157.98 122   P         PKPdf     22 44 52.4 +1.2
      baz=223
ARVC  Arvin            158.07 116   P         PKPdf     22 44 51.7 +0.5
      baz=228
BBB   Bella Bella      158.14  66   PKP       PKPdf     22 44 50.6  0.0
      comp=Z,42nm,1.1s,baz=271,slow=2.4,SNR=1.7
BBB                                 PKPab     PKPab     22 45 24.7  0.0
      comp=Z,53nm,0.8s,baz=293,slow=7.6,SNR=5.1
BFSC  Mount Baldy Ra   158.16 120   P         PKPdf     22 44 51.2 -0.4
      baz=225
KHMM  Horse Mountain   158.20  97   PKPdf     PKPdf     22 44 51.1 -0.3
KHMM                                PKPab     PKPab     22 45 26.8 +1.2
SWSC  Sam W. Stewart   158.28 125   P         PKPdf     22 44 51.6 +0.1
      baz=221,SNR=9.3
KRMB  Red Mountain     158.38  96   PKPab     PKPab     22 45 28.3 +2.1
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VES	Vestal, Richgr	158.39	114	P	PKPdf	22 44 52.2	+0.7
	baz=229,SNR=18						
TPFO	Pinon Flats	158.41	123	P	PKPdf	22 44 52.0	+0.2
	baz=223,SNR=12						
PFO	Pinyon Flats O	158.41	123	PKP	PKPdf	22 44 51.6	-0.2
	comp=Z,15nm,1.1s,baz=197,slow=0.6,SNR=18						
PFO				PKPab	PKPab	22 45 26.8	+0.3
	comp=Z,78nm,1.2s,baz=227,slow=2.3,SNR=11						
PFO				PP	PP	22 49 08.3	+1.5
	comp=Z,3.8nm,0.8s,baz=234,slow=8.7,SNR=2.5						
PFO	Pinyon Flats O	158.41	123	PKPdf	PKPdf	22 44 52.1	+0.4
PFO				PKPab	PKPab	22 45 27.8	+1.3
PFO	Pinyon Flats O	158.41	123	P	PKPdf	22 44 52.2	+0.4
	baz=223,SNR=12						
EDW2	Edwards Air Fo	158.41	118	P	PKPdf	22 44 51.8	+0.1
	baz=226,SNR=23						
FRB	Frobisher Bay	158.44	328	PKP	PKPdf	22 44 49.0	-1.7
	comp=Z,14nm,0.9s,baz=78,slow=1.6,SNR=2.4						
FRB				PKPab	PKPab	22 45 25.3	-0.3
	comp=Z,53nm,1.0s,baz=43,slow=6.0,SNR=4.9						
FRB				PP	PP	22 49 05.3	-1.0
	comp=Z,13nm,1.0s,baz=51,slow=9.2,SNR=4.0						
O02D	Mt. Diablo Mer	158.50	100	P	PKPdf	22 44 51.7	+0.1
	baz=240,SNR=12						
VOG	Valley Oaks Go	158.52	113	P	PKPdf	22 44 51.8	+0.2
	baz=230						
BBRC	Big Bear Solar	158.61	121	P	PKPdf	22 44 52.0	-0.2
	baz=224						
ISA	Isabella, Lake	158.65	116	PKP2	PKPab	22 45 27.5	+0.1
ISA	Isabella, Lake	158.65	116	PKPab	PKPab	22 45 27.5	+0.1
ISA	Isabella, Lake	158.65	116	P	PKPdf	22 44 52.2	+0.2
	baz=228,SNR=33						
WDC	Whiskeytown Da	158.86	99	PKP2	PKPab	22 45 28.4	+0.2
WDC	Whiskeytown Da	158.86	99	PKPab	PKPab	22 45 28.4	+0.2
L02E	Cave Junction	158.86	94	P	PKPdf	22 44 52.4	+0.5
	baz=245						
GLA	Glamis	158.90	127	PKP2	PKPab	22 45 30.7	+2.2
GLA	Glamis	158.90	127	PKPab	PKPab	22 45 30.7	+2.2
GLA	Glamis	158.90	127	P	PKPdf	22 44 52.6	+0.3
	baz=220,SNR=9.1						
CMB	Columbia Colle	158.92	108	PKP2	PKPab	22 45 28.8	+0.3
CMB				MLR	MLR		
	comp=Z,41µm,19.0s						
CMB	Columbia Colle	158.92	108	PKPab	PKPab	22 45 28.8	+0.3
N02D	Trinity Center	158.94	98	P	PKPdf	22 44 52.2	0.0
	baz=242,SNR=24						
BELC	Belle Mtn. Jos	158.95	123	P	PKPdf	22 44 52.8	+0.3
	baz=223,SNR=28						
RRX	Edison Barstow	159.00	119	P	PKPdf	22 44 52.2	-0.2
	baz=226						
LRMC	Laurel Mtn Rad	159.01	117	P	PKPdf	22 44 53.1	+0.6
	baz=227,SNR=33						
BC3	Big Chuckawall	159.01	124	P	PKPdf	22 44 52.7	+0.2
	baz=222,SNR=19						
M02C	Callahan	159.03	97	P	PKPdf	22 44 52.4	+0.1
	baz=243,SNR=23						
ORV	Oroville	159.03	103	PKP2	PKPab	22 45 28.4	-0.5
ORV	Oroville	159.03	103	PKPab	PKPab	22 45 28.4	-0.5
K02D	Willamette Mer	159.04	93	P	PKPdf	22 44 52.4	+0.1
	baz=246						
J01E	Myrtle Point	159.05	92	P	PKPdf	22 44 51.5	-0.6
	baz=247						
214A	Organ Pipe Nat	159.09	132	P	PKPdf	22 44 52.8	+0.2
	baz=216,SNR=38						
O03E	Paynes Creek	159.21	101	P	PKPdf	22 44 52.4	-0.1
	baz=240,SNR=18						
113A	Mohawk Valley,	159.25	129		PKPdf	22 45 04.9	+12
113A				PKPab	PKPab	22 45 30.6	+0.6
YBH	Yreka Blue Hor	159.28	96	PKP	PKPdf	22 44 52.5	-0.1
	comp=Z,13nm,1.1s,baz=13,slow=1.6,SNR=8.9						
YBH				PKPab	PKPab	22 45 30.4	+0.3
	comp=Z,42nm,1.2s,baz=173,slow=3.5,SNR=5.5						
YBH				PP	PP	22 49 12.0	+0.1
	comp=Z,18nm,1.3s,baz=207,slow=4.5,SNR=3.8						
YBH	Yreka Blue Hor	159.28	96	PKPab	PKPab	22 45 31.1	+1.0
HEC	Hector,Ludlow	159.35	121	P	PKPdf	22 44 52.8	-0.1
	baz=225,SNR=19						
CWC	Cottonwood Cre	159.40	115	P	PKPdf	22 44 53.2	+0.2
	baz=230						
GSC	Goldstone, Bar	159.41	119	pPKPdf	pPKPdf	22 45 06.2	+5.9
GSC	Goldstone, Bar	159.41	119	P	PKPdf	22 44 52.9	0.0
	baz=226,SNR=29						
HUMO	Hull Mountain	159.48	94	IAMs_20	IAMs_20	00 05 24.5	
	comp=Z,27µm,20.0s						
LMN	Caledonia Moun	159.51	276	PKPab	PKPab	22 45 32.3	+1.5
MPMC	Manual Prospec	159.51	116	P	PKPdf	22 44 53.5	+0.3
	baz=228,SNR=26						
MDPB	Devils Postpil	159.52	110	PKPab	PKPab	22 45 32.2	+0.8
OZB	Mount Ozzard	159.54	75	PKPdf	PKPdf	22 44 53.4	+0.9
IRM	Iron Mountain	159.55	124	P	PKPdf	22 44 53.9	+0.9
	baz=222,SNR=19						
EMB	Emerald Bay	159.64	106		PKPdf	22 44 54.2	+1.0
EMB				PKPab	PKPab	22 45 32.1	+0.2
I03D	Drain, OR	159.64	91	P	PKPdf	22 44 53.7	+0.9
	baz=249						
RUBR	Rubicon Trail	159.65	106		PKPdf	22 44 53.7	+0.4
RUBR				PKPab	PKPab	22 45 32.4	+0.5
MLAC	Mammoth, Mammot	159.67	111	P	PKPdf	22 44 54.3	+1.0
	baz=233						
TIN	Tinemaha, Big	159.70	113	P	PKPdf	22 44 53.9	+0.7
	baz=231						
GMRC	Granite Mounta	159.71	122	P	PKPdf	22 44 54.6	+1.2
	baz=224,SNR=24						
CBB	Campbell River	159.75	72	PKPdf	PKPdf	22 44 53.9	+1.2
CBB				PKPab	PKPab	22 45 31.6	-0.1
L04D	Klamath Falls	159.76	95	P	PKPdf	22 44 53.7	+0.5
	baz=245,SNR=14						
QSM	Queen of Sheba	159.82	117	PKPab	PKPab	22 45 33.5	+1.1
MPK	Martis Peak	159.86	105	PKPdf	PKPdf	22 44 53.7	+0.2
MPK				PKPab	PKPab	22 45 33.4	+0.5
M04C	Macdoel	159.89	97	P	PKPdf	22 44 53.5	+0.2
	baz=244,SNR=17						
BEKR	Beckworth	159.95	103	PKPab	PKPab	22 45 33.1	-0.1
TUQ	Turquoise Moun	160.02	120	P	PKPdf	22 44 53.2	-0.4
	baz=226,SNR=23						
PNTR	Pine Nut	160.03	106	PKPdf	PKPdf	22 44 54.4	+0.8
PNTR				PKPab	PKPab	22 45 35.0	+1.4
GWY	Greenwater Val	160.09	117	PKPab	PKPab	22 45 35.3	+1.5
VCNR	Virginia City	160.11	106	PKPab	PKPab	22 45 35.5	+1.6
SHOC	Shoshone, Teco	160.13	118	P	PKPdf	22 44 53.6	0.0
	baz=227,SNR=11						
FURC	Furnace Creek,	160.16	116	P	PKPdf	22 44 53.5	0.0
	baz=228,SNR=20						
LCH	Last Change Ra	160.17	113	PKPab	PKPab	22 45 34.3	+0.1
G03D	McMinnville, O	160.20	87	P	PKPdf	22 44 54.4	+1.1
	baz=253						
YERR	Yerington	160.20	107	PKPab	PKPab	22 45 34.5	+0.2
PDMCI	Parker Dam,Lak	160.22	125	P	PKPdf	22 44 53.3	-0.4
	baz=221,SNR=8.6						
LHV	Little Huntoon	160.25	110	PKPab	PKPab	22 45 35.5	+1.3
NEE2	Needles Airpor	160.29	124	P	PKPdf	22 44 53.9	+0.1
	baz=223						
K04D	Chiloquin, OR	160.30	95	P	PKPdf	22 44 53.5	-0.2
	baz=246						
J04D	Umpqua Nationa	160.31	93	P	PKPdf	22 44 53.4	-0.4
	baz=248,SNR=9.4						
I04A	Tendick Farm,	160.31	91	P	PKPdf	22 44 52.5	-1.1
	baz=249,SNR=15						
833A	Chaparral WMA,	160.33	168	P	PKPdf	22 44 53.6	-0.4
	baz=189						
H04D	Lebanon	160.34	89	P	PKPdf	22 44 52.8	-0.8
	baz=251,SNR=9.4						
TUC	Tucson	160.37	136	PKIKP	PKPdf	22 44 54.2	+0.1
TUC	Tucson	160.37	136	PKPdf	PKPdf	22 44 54.2	+0.1
TUC	Tucson	160.37	136	P	PKPdf	22 44 54.1	+0.1
	baz=214						
TXAR	Lajitas Array	160.40	156	PKP	PKPdf	22 44 53.7	-0.5
	comp=Z,18nm,1.0s,baz=187,slow=2.4,SNR=67						
TXAR				PKPab	PKPab	22 45 35.5	+0.3
	comp=Z,13nm,0.9s,baz=199,slow=5.1,SNR=6.0						
TXAR				PP	PP	22 49 16.7	-0.3
	comp=Z,1.3nm,0.9s,baz=194,slow=3.3,SNR=0.9						
TXAR	Lajitas Array	160.40	156	PKIKP	PKPdf	22 44 53.2	-1.0
TXAR						22 49 16.7	
TXAR	Lajitas Array	160.40	156	PKPdf	PKPdf	22 44 53.2	-1.0
TX31	Lajitas Ar. Si	160.40	156	PKPab	PKPab	22 45 39.4	+4.2
CLRS	Cowichan Lake	160.41	76	PKPdf	PKPdf	22 44 55.3	+1.9
RYN	Ryan	160.46	109	PKPab	PKPab	22 45 35.6	+0.2
NVAR	Mina Array Bea	160.48	110	PKP	PKPdf	22 44 54.5	+0.3
	comp=Z,21nm,1.0s,baz=211,slow=1.4,SNR=60						
NVAR				PKPab	PKPab	22 45 35.4	-0.1
	comp=Z,62nm,1.1s,baz=242,slow=6.4,SNR=4.7						
NVAR				PP	PP	22 49 17.7	-0.7
	comp=Z,3.2nm,0.8s,baz=265,slow=3.3,SNR=2.3						
NVAR	Mina Array Bea	160.48	110		PKPdf	22 44 54.0	-0.2
NVAR				PKPab	PKPab	22 45 35.5	-0.1
PAHR	Pah Rah Range	160.50	105	PKPdf	PKPdf	22 44 54.0	-0.1
PAHR				PKPab	PKPab	22 45 36.1	+0.5
Y14A	Wickenburg	160.55	128	PKPab	PKPab	22 45 35.8	+0.1
NV11	Mina Array Sit	160.58	110	PKPab	PKPab	22 45 36.7	+0.8
F04D	Rainier, OR	160.61	84	P	PKPdf	22 44 53.3	-0.5
	baz=255						
BATG	Bathurst New B	160.69	279	PKPab	PKPab	22 45 35.2	-0.8
B04A	Port Angeles	160.71	78	PKPdf	PKPdf	22 44 53.7	-0.1
PGC	Sidney	160.83	76	PKPdf	PKPdf	22 44 54.2	+0.3
D03D	Eldon	160.89	80	P	PKPdf	22 44 53.7	-0.3
	baz=259						
J05D	Fort Rock, OR	160.91	93	P	PKPdf	22 44 54.0	-0.5
	baz=248,SNR=35						
K05A	Summer Lake	160.92	95	PKPdf	PKPdf	22 44 54.6	+0.1
K05A				PKPab	PKPab	22 45 37.5	+0.2
W13A	Hualapai Mount	160.94	124	PKPab	PKPab	22 45 38.1	+0.5
TPH	Tonopah	160.96	112	PKP2	PKPab	22 45 37.5	-0.1
TPH						23 44 55.1	
TPH	Tonopah	160.96	112		PKPdf	22 44 55.1	+0.4
TPH				PKPab	PKPab	22 45 37.5	-0.1
MOD	Modoc Plateau	160.97	98	PKPab	PKPab	22 45 38.5	+1.0
F04A	Amboy	160.97	85	PKPab	PKPab	22 45 37.7	+0.5
KVN	Kaiserville	160.97	108	PKIKP	PKPdf	22 44 54.8	+0.1
KVN						22 45 37.0	
KVN	Kaiserville	160.97	108	PKPdf	PKPdf	22 44 54.8	+0.1
KVN				PKPab	PKPab	22 45 37.0	-0.7
E04D	Cinebar	161.03	83	P	PKPdf	22 44 53.7	-0.5
	baz=256						
D04E	Lakebay	161.03	81	P	PKPdf	22 44 53.3	-0.8
	baz=258						
735A	Kenedy	161.05	172		PKPdf	22 44 55.8	+1.0
735A				PKPab	PKPab	22 45 38.7	+0.9
SHPR	Sheep Range	161.20	119	PKPab	PKPab	22 45 40.0	+1.4
I05D	Terrebonne, OR	161.22	90	P	PKPdf	22 44 54.2	-0.4
	baz=250,SNR=9.2						
SCHQ	Schefferville	161.25	303	PKP	PKPdf	22 44 52.4	-1.8
	comp=Z,14nm,1.0s,baz=104,slow=4.0,SNR=6.1						
SCHQ				PKPab	PKPab	22 45 37.6	-0.5
	comp=Z,33nm,1.1s,baz=101,slow=5.2,SNR=3.6						
SCHQ	Schefferville	161.25	303	PKPab	PKPab	22 45 38.5	+0.3
PINE	Pine Mountain	161.30	92	PKPdf	PKPdf	22 44 54.8	-0.1
PINE				PKPab	PKPab	22 45 39.6	+0.6
HOOD	Mount Hood Mea	161.32	87	PKPab	PKPab	22 45 39.6	+0.6
A04D	Lummi Island	161.33	76	P	PKPdf	22 44 53.6	-0.8
	baz=263						
YKA	Yellowknife Ar	161.41	30	PKP	PKPdf	22 44 52.5	-1.6
	comp=Z,18nm,0.9s,baz=312,slow=1.2,SNR=30						
YKA				PKPab	PKPab	22 45 37.6	-1.0
	comp=Z,36nm,0.9s,baz=312,slow=3.6,SNR=8.6						
YKA				PP	PP	22 49 22.6	+0.2
	comp=Z,22nm,1.1s,baz=324,slow=4.8,SNR=5.9						
YKA	Yellowknife Ar	161.41	30	PKPdf	PKPdf	22 44 51.2	-2.9
YKA				PKPab	PKPab	22 45 39.0	+0.4
G05D	Wamic, OR	161.52	88	P	PKPdf	22 44 53.8	-1.0
	baz=253						
D05A	Enumclaw	161.55	81		PKPdf	22 44 54.6	-0.1
D05A				PKPab	PKPab	22 45 40.1	+0.4
F05D	White Salmon	161.61	86	P	PKPdf	22 44 53.9	-0.9
	baz=255						
B05A	Bryant	161.67	78	P	PKPdf	22 44 53.8	-1.0
	baz=262,SNR=10						
TIGA	Tifton	161.69	212		PKPdf	22 44 55.5	+0.1
TIGA				PKPab	PKPab	22 45 40.8	+0.2
TIGA	Tifton	161.69	212	P	PKPdf	22 44 53.6	-1.8
	baz=155						
X16A	Lo Mia Camp, P	161.74	130	PKPab	PKPab	22 45 40.5	-0.6
NHSC	New Hope	161.77	222	P	PKPdf	22 44 53.8	-1.6
	baz=147						
M65A	Busby, Falmout	161.86	259	P	PKPdf	22 44 55.6	+0.4
	baz=118						
PRN	Pahroc Range	161.87	117	PKPab	PKPab	22 45 42.5	+0.9
121A	Cookes Peak, D	161.89	142	PKPab	PKPab	22 45 41.9	+0.2
121A	Cookes Peak, D	161.89	142	P	PKPdf	22 44 55.5	-0.3
	baz=209,SNR=23						
LLLB	Lillooet	162.01	71	PKPab	PKPab	22 45 42.3	+0.6
V61A	Roper	162.06	235		PKPdf	22 44 56.2	+0.6
MNTX	Cornudas Mount	162.07	149	PKPab	PKPab	22 45 42.6	+0.3
MNTX	Cornudas Mount	162.07	149	P	PKPdf	22 44 55.0	-0.8
	baz=204						
B06A	Marblemount	162.11	77		PKPdf	22 44 55.1	-0.1
B06A				PKPab	PKPab	22 45 42.4	+0.3
R11A	Troy Canyon, C	162.14	114	PKPab	PKPab	22 45 43.7	+0.9
R11A	Troy Canyon, C	162.14	114	P	PKPdf	22 44 55.9	0.0
	baz=232,SNR=62						
352A	Blakely	162.18	208	PKPab	PKPab	22 45 43.4	+0.7
Y58A	Scranton	162.19	225	PKPdf	PKPdf	22 44 56.3	+0.5
HKT	Hockley	162.27	177	PKIKP	PKPdf	22 44 56.4	+0.4
HKT						22 45 43.3	
HKT	Hockley	162.27	177	PKPdf	PKPdf	22 44 56.4	+0.4
HKT				PKPab	PKPab	22 45 43.3	+0.3
BMN	Battle Mountai	162.29	106	PKP2	PKPab	22 45 43.3	-0.1
BMN	Battle Mountai	162.29	106	PKPab	PKPab	22 45 43.3	-0.1
WVOR	Wild Horse Val	162.31	98	PKP2	PKPab	22 45 43.6	+0.2
WVOR	Wild Horse Val	162.31	98	PKPab	PKPab	22 45 43.6	+0.2
CNNC	Cliffs of the	162.35	231	P	PKPdf	22 44 54.9	-1.0
	baz=140						
F63A	Nahmakanta, Br	162.36	273		PKPdf	22 44 54.8	-0.8
PKME	Peaks-Kenny Pk	162.36	272	PKPab	PKPab	22 45 44.9	+1.6
I07A	Izee	162.37	93	PKPab	PKPab	22 45 44.8	+1.2
I07A				pPKPab	sPKPab	22 45 56.3	+3.0
JCT	Junction City	162.38	165	PKP2	PKPab	22 45 43.3	-0.4
JCT	Junction City	162.38	165	PKPab	PKPab	22 45 43.3	-0.4
JCT	Junction City	162.38	165	P	PKPdf	22 44 55.2	-1.0
	baz=191,SNR=21						
C06D	Leavenworth	162.41	79	P	PKPdf	22 44 53.9	-1.7
	baz=261						
LTY	Liberty	162.45	82	PKPab	PKPab	22 45 45.0	+1.2
LTY				pPKPab	sPKPab	22 45 56.3	+2.8
BRAL	Brewton	162.50	202	PKPab	PKPab	22 45 45.4	+1.3
BRAL				pPKPab	sPKPab	22 45 57.2	+3.4
BRAL	Brewton	162.50	202	P	PKPdf	22 44 55.0	-1.2
	baz=162						
154A	Montrose	162.57	214	pPKPdf	pPKPdf	22 45 07.4	+3.8
154A				pPKPab	sPKPab	22 45 56.5	+2.3
WUAZ	Wupatki	162.62	128	P	PKPdf	22 44 54.8	-1.6
	baz=220						
D62A	Allapoint, All	162.65	278	PKPdf	PKPdf	22 44 58.1	+2.2
D62A				pPKPab	sPKPab	22 45 56.7	+2.5
LCMT	Little Creek M	162.67	121	PKPab	PKPab	22 45 45.7	+0.7
LCMT				pPKPab	sPKPab	22 45 58.5	+3.8
J08A	Circle Bar Ran	162.80	96	PKPab	PKPab	22 45 46.2	+0.7
E07A	Sunnyside	162.85	84	PKPab	PKPab	22 45 46.1	+0.7
E07A				pPKPab	sPKPab	22 45 58.2	+3.0
E62A	Clayton Lake	162.87	276	PKPab	PKPab	22 45 46.7	+1.2
E62A				pPKPab	sPKPab	22 45 57.2	+2.0
HRV	Adam Dziewonsk	162.90	261	PKIKP	PKPdf	22 44 57.7	+1.5
HRV	Adam Dziewonsk	162.90	261		PKPdf	22 44 57.7	+1.5
HRV				PKPab	PKPab	22 45 46.6	+0.9
HRV				pPKPab	sPKPab	22 45 57.1	+1.7
HRV	Adam Dziewonsk	162.90	261	P	PKPdf	22 44 54.0	-2.3
	baz=115						
CCUT	Cedar City	162.97	120	PKPab	PKPab	22 45 47.9	+1.5
435B	Jarrell	162.98	171	PKPab	PKPab	22 45 47.6	+1.4
435B				pPKPab	sPKPab	22 45 59.2	+3.3
435B	Jarrell	162.98	171	P	PKPdf	22 44 55.5	-1.2
	baz=186						
F62A	Pittston Farm,	162.99	273	PKPab	PKPab	22 45 46.4	+0.3
F62A				pPKPab	sPKPab	22 45 59.0	+3.2
HAWA	Hanford	163.03	85	PKPab	PKPab	22 45 46.7	+0.5
HAWA				pPKPab	sPKPab	22 45 58.8	+2.8
250A	Grady	163.05	205	pPKPab	pPKPab	22 45 58.8	+5.1
T60A	Surry	163.11	238	PKPab	PKPab	22 45 47.5	+0.8
T60A				pPKPab	sPKPab	22 45 57.4	+0.9
G08A	Pilot Rock	163.13	89		PKPdf	22 44 56.1	-0.4
G08A				PKPab	PKPab	22 45 47.8	+0.9
U59A	Littleton	163.14	234	PKPab	PKPab	22 45 46.6	-0.3
U59A				pPKPab	sPKPab	22 45 57.8	+1.2
W18A	Petrified Fore	163.16	133		PKPdf	22 44 56.7	-0.3
W18A				PKPab	PKPab	22 45 47.2	0.0
W18A	Petrified Fore	163.16	133	P	PKPdf	22 44 56.2	-0.9
	baz=217,SNR=17						
SZCU	Shurtz Canyon	163.16	120	PKPab	PKPab	22 45 48.8	+1.5
BIRD	Birdtown, Kers	163.17	224	pPKPab	pPKPab	22 45 58.4	+4.2
152A	Waverly Hall	163.20	210	PKPab	PKPab	22 45 47.2	+0.1
152A				pPKPab	sPKPab	22 45 57.3	+0.4
I62A	Tamworth	163.29	265	PKPdf	PKPdf	22 44 59.0	+2.4
I62A				pPKPab	sPKPab	22 45 59.4	+2.2
SPR3	Spring Creek 3	163.31	114		PKPdf	22 44 57.1	-0.1
SPR3				PKPab	PKPab	22 45 48.2	+0.2
QUA2	Belchertown	163.32	259	PKPab	PKPab	22 45 48.5	+0.9
W57A	Gilead	163.36	227	PKPab	PKPab	22 45 53.9	+6.0
W57A				pPKPab	sPKPab	22 45 58.9	+1.3
E08A	Dider Farm, El	163.37	85	PKPab	PKPab	22 45 48.3	+0.6
H62A	Milan	163.41	268	PKPab	PKPab	22 45 49.8	+1.8
H62A				pPKPab	sPKPab	22 45 59.8	+2.1
GOGA	Godfrey	163.42	215		PKPdf	22 44 56.5	-0.5
GOGA				PKPab	PKPab	22 45 47.2	-0.9
GOGA				pPKPab	sPKPab	22 45 58.5	+0.7
GOGA	Godfrey	163.42	215	P	PKPdf	22 44 56.3	-0.7
	baz=152						
Q61A	Milford	163.42	245	P	PKPdf	22 44 54.6	-2.2
	baz=128						
V58A	Windy Hill, Pi	163.42	230		PKPdf	22 44 55.9	-1.0
V58A				PKPab	PKPab	22 45 48.7	+0.6
V58A				pPKPab	sPKPab	22 45 59.0	+1.2
WSPT	Westport, CT	163.44	255	PKPab	PKPab	22 45 48.4	+0.3
WSPT				pPKPab	sPKPab	22 45 59.2	+1.3
T59A	Double "B" Far	163.45	236	PKPab	PKPab	22 45 48.0	-0.2
T59A				pPKPab	sPKPab	22 45 58.3	+0.3
B08A	Colville Reser	163.51	78	PKPab	PKPab	22 45 48.3	-0.1
344A	Westbrook Farm	163.51	192	PKPab	PKPab	22 45 50.0	+1.5
344A				pPKPab	sPKPab	22 46 01.5	+3.3
D08A	Wollman Farm,	163.58	83	PKPab	PKPab	22 45 49.6	+1.0
Y22D	IRIS PASSCAL I	163.59	142	P	PKPdf	22 44 55.4	-2.0
	baz=210						
HODGE	Hodges	163.64	219	PKPab	PKPab	22 45 50.0	+0.9
HODGE				pPKPab	sPKPab	22 45 60.0	+1.1
LENM	Lemitar	163.64	141	PKPab	PKPab	22 45 50.1	+0.8
CPNY	Central Park	163.65	253		PKPdf	22 44 56.1	-0.9
PAL	Palisades	163.73	253	PKP2	PKPab	22 45 48.5	-0.9
PAL	Palisades	163.73	253	PKPab	PKPab	22 45 48.5	-0.9
PAL				pPKPab	sPKPab	22 46 00.4	+1.2
PAL	Palisades	163.73	253	P	PKPdf	22 44 55.4	-1.6
	baz=121						
ELK	Elko	163.74	108	PKP	PKPdf	22 44 57.0	-0.4
	comp=Z,19nm,1.0s,baz=241,slow=1.3,SNR=36						
ELK				PKPab	PKPab	22 45 49.2	-0.6
	comp=Z,40nm,1.1s,baz=255,slow=2.4,SNR=6.5						
ELK				PP	PP	22 49 35.5	-0.3
	comp=Z,3.4nm,1.1s,baz=248,slow=5.4,SNR=1.8						
ELK	Elko	163.74	108	PKPab	PKPab	22 45 49.9	+0.1
BNM	Barren Site	163.77	142	PKPab	PKPab	22 45 50.6	+0.6
LBNH	Lisbon	163.82	266	P	PKPdf	22 44 55.1	-2.0
	baz=110						
HNH	Hanover	163.87	264	PKPab	PKPab	22 45 50.6	+0.7
HNH				pPKPab	sPKPab	22 46 01.3	+1.6
J61A	Chester	163.91	263	PKPab	PKPab	22 45 50.4	+0.2
J61A				pPKPab	sPKPab	22 46 01.9	+2.0
PAULI	Pauline	163.94	222	PKPab	PKPab	22 45 51.5	+1.0
PAULI				pPKPab	sPKPab	22 46 02.2	+2.1
Z51A	Franklin	163.95	210	PKPab	PKPab	22 45 50.7	+0.3
Z51A				pPKPab	sPKPab	22 46 01.1	+0.9
BRNJ	Basking Ridge	163.99	251	PKPab	PKPab	22 45 50.5	-0.1
KMSC	Kings Mountain	163.99	223	P	PKPdf	22 44 56.0	-1.5
	baz=145						
TRNY	Table Rock, Ra	164.01	253	PKPab	PKPab	22 45 51.5	+0.8
TRNY				pPKPab	sPKPab	22 46 01.4	+1.1
Y52A	Lilburn	164.04	214	pPKPdf	pPKPdf	22 45 09.1	+4.1
Y52A				PKPab	PKPab	22 45 51.2	+0.3
Y52A				pPKPab	sPKPab	22 46 03.0	+2.4
NATX	Nacogdoches	164.10	180	pPKPab	pPKPab	22 46 03.4	+5.2
NATX	Nacogdoches	164.10	180	P	PKPdf	22 44 57.0	-0.7
	baz=179						
BMO	Blue Mountains	164.11	92	PKPab	PKPab	22 45 51.4	+0.2
BMO				pPKPab	sPKPab	22 46 03.8	+2.9
C09A	Chrisman Ranch	164.14	81	PKPab	PKPab	22 45 51.7	+0.6
JSRW	J. Sargeant Re	164.15	237	PKPab	PKPab	22 45 51.9	+0.6
JSRW				pPKPab	sPKPab	22 46 02.1	+1.1
P60A	Greenville	164.17	247	PKPab	PKPab	22 45 51.3	-0.1
P60A				pPKPab	sPKPab	22 46 02.0	+0.9
P60A	Greenville	164.17	247	P	PKPdf	22 44 55.4	-2.1
	baz=126						
WHTX	Lake Whitney,	164.19	171	PKPab	PKPab	22 45 52.5	+1.1
WHTX	Lake Whitney,	164.19	171	P	PKPdf	22 44 56.8	-1.0
	baz=186,SNR=11						
CBN	Corbin Frederi	164.21	239		PKPdf	22 44 56.6	-0.9
CBN				PKPab	PKPab	22 45 52.5	+0.9
CBN				pPKPab	sPKPab	22 46 01.8	+0.5
CBN	Corbin Frederi	164.21	239	P	PKPdf	22 44 56.9	-0.7
	baz=132						
ODNJ	Ogdensburg	164.22	253	PKPab	PKPab	22 45 51.8	+0.2
ODNJ				pPKPab	sPKPab	22 46 02.2	+0.9
WUPA	West Chester U	164.22	248	PKPab	PKPab	22 45 51.7	+0.1
WUPA				pPKPab	sPKPab	22 46 02.3	+1.0
VBMS	Vicksburg	164.23	193	PKPdf	PKPdf	22 44 58.6	+0.8
VBMS				pPKPab	sPKPab	22 46 04.3	+3.0
VBMS	Vicksburg	164.23	193	P	PKPdf	22 44 57.3	-0.5
	baz=169						
237A	Washetta, Mont	164.31	176	PKPab	PKPab	22 45 52.4	+0.4
237A				pPKPab	sPKPab	22 46 03.8	+2.1
R58B	Mineral	164.33	238	PKPab	PKPab	22 45 51.9	-0.2
R58B				pPKPab	sPKPab	22 46 02.2	+0.3
T57A	Hurt	164.40	232	PKPab	PKPab	22 45 52.1	-0.3
T57A				pPKPab	sPKPab	22 46 03.8	+1.6
VT1	Waterbury	164.41	266	PKPdf	PKPdf	22 44 58.9	+1.3
VT1				pPKPab	sPKPab	22 46 04.3	+2.2
LUPA	Lehigh Univers	164.45	250	PKPab	PKPab	22 45 52.3	-0.3
LUPA				pPKPab	sPKPab	22 46 02.2	-0.2
F10A	Beach Ranch, E	164.48	88	PKPab	PKPab	22 45 52.8	0.0
ABTX	Abilene, Hawle	164.50	164	PKPab	PKPab	22 45 53.3	+0.4
ABTX				pPKPab	sPKPab	22 46 04.8	+2.2
ABTX	Abilene, Hawle	164.50	164	P	PKPdf	22 44 56.9	-1.2
	baz=192,SNR=27						
U56A	King	164.50	228	PKPab	PKPab	22 45 53.1	+0.2
U56A				pPKPab	sPKPab	22 46 02.7	+0.1
V55A	Taylorsville	164.51	225	PKPab	PKPab	22 45 52.7	-0.3
V55A				pPKPab	sPKPab	22 46 02.7	0.0
ANMO	Albuquerque	164.53	141	PKP	PKPdf	22 44 57.7	-0.6
	comp=Z,23nm,1.1s,baz=157,slow=3.3,SNR=28						
ANMO				PKPab	PKPab	22 45 52.6	-0.7
	comp=Z,38nm,1.0s,baz=199,slow=4.5,SNR=9.6						
ANMO				PP	PP	22 49 38.2	-1.1
	comp=Z,6.2nm,1.1s,baz=145,slow=3.9,SNR=3.1						
ANMO	Albuquerque	164.53	141		PKPdf	22 44 57.9	-0.4
ANMO				PKPab	PKPab	22 45 53.5	+0.2
ANMO	Albuquerque	164.53	141	P	PKPdf	22 44 56.2	-2.0
	baz=211						
BG3	Lake Jocassee	164.58	219	PKPab	PKPab	22 45 54.1	+0.9
BG3				pPKPab	sPKPab	22 46 04.0	+1.1
MFID	Camas Ranch	164.60	98	PKPab	PKPab	22 45 54.8	+1.4
MFID				pPKPab	sPKPab	22 46 06.2	+3.1
ACCN	Adirondack Com	164.67	261	PKPab	PKPab	22 45 53.7	+0.2
SDMD	Soldier's Deli	164.67	244	PKPab	PKPab	22 45 54.0	+0.4
SDMD				pPKPab	sPKPab	22 46 04.3	+1.0
Z47A	Carrollton	164.69	201		PKPdf	22 44 58.2	0.0
Z47A				PKPab	PKPab	22 45 54.1	+0.5
Z47A				pPKPab	sPKPab	22 46 06.4	+3.0
MVL	Millersville	164.73	247	PKPab	PKPab	22 45 53.0	-0.8
S57A	Dark Hollow, R	164.80	235	PKPab	PKPab	22 45 54.2	+0.1
S57A				pPKPab	sPKPab	22 46 05.6	+1.7
143A	Socs Landing,	164.83	191	PKPab	PKPab	22 45 54.7	+0.5
143A				pPKPab	sPKPab	22 46 06.3	+2.3
N59A	State Game Lan	164.88	250	PKPab	PKPab	22 45 53.9	-0.7
N59A				pPKPab	sPKPab	22 46 05.7	+1.4
N59A	State Game Lan	164.88	250	P	PKPdf	22 44 57.2	-1.0
	baz=123						
NEW	Newport	164.97	79	PKP	PKPdf	22 44 57.3	-0.8
	comp=Z,28nm,1.2s,baz=229,slow=1.2,SNR=21						
NEW				PKPab	PKPab	22 45 54.4	-0.4
	comp=Z,18nm,0.8s,baz=254,slow=4.2,SNR=6.4						
NEW				PP	PP	22 49 41.1	-1.0
	comp=Z,30nm,1.3s,baz=323,slow=7.5,SNR=3.1						
NEW	Newport	164.97	79	PKPab	PKPab	22 45 54.9	+0.1
NEW	Newport	164.97	79	P	PKPdf	22 44 56.9	-1.1
	baz=264,SNR=20						
X51A	Calhoun	164.97	213	PKPab	PKPab	22 45 55.2	+0.3
X51A				pPKPab	sPKPab	22 46 06.3	+1.7
DUG	Dugway, Tooele	164.97	113	PKIKP	PKPdf	22 44 58.6	+0.2
DUG	Dugway, Tooele	164.97	113		PKPdf	22 44 58.6	+0.2
DUG				PKPab	PKPab	22 45 56.2	+1.1
DUG	Dugway, Tooele	164.97	113	P	PKPdf	22 44 57.9	-0.5
	baz=234,SNR=49						
MSTX	Muleshoe	165.01	153	P	PKPdf	22 44 57.4	-1.2
	baz=201						
L59A	Walton	165.06	256	PKPab	PKPab	22 45 55.3	0.0
L59A				pPKPab	sPKPab	22 46 06.1	+1.0
PLID	Pearl Lake	165.07	92		PKPab	22 45 56.8	+1.3
W52A	Murphy	165.07	216		PKPdf	22 44 57.8	-0.7
W52A				PKPab	PKPab	22 45 55.7	+0.3
W52A				pPKPab	sPKPab	22 46 06.8	+1.7
PAGS	Pennsylvania G	165.09	247	PKPab	PKPab	22 45 55.2	-0.2
PAGS				pPKPab	sPKPab	22 46 05.7	+0.6
FRNY	Flat Rock	165.14	267	pPKPab	pPKPab	22 46 06.2	+3.5
Q16A	Castle Valley	165.16	120	PKPab	PKPab	22 45 57.5	+1.4

BLA	Blacksburg	165.18	230	PKPab	PKPab	22 45 55.5	-0.4
BLA				pPKPab	sPKPab	22 46 07.3	+1.7
BLA	Blacksburg	165.18	230	P	PKPdf	22 44 56.7	-1.9
	baz=139						
FPAL	Fort Paine	165.21	211	PKPab	PKPab	22 45 56.5	+0.5
KSPA	Keystone Colle	165.22	252	PKPab	PKPab	22 45 57.4	+1.4
BGU	Big Grassy Mou	165.25	111	PKPab	PKPab	22 45 57.4	+1.0
J59A	Piesco	165.26	261	PKPab	PKPab	22 45 56.4	+0.2
J59A				pPKPab	sPKPab	22 46 07.3	+1.4
NCB	Newcomb	165.27	263	PKPab	PKPab	22 45 56.7	+0.5
NCB				pPKPab	sPKPab	22 46 07.7	+1.8
U54A	Nelsons Funny	165.34	225		PKPdf	22 44 57.6	-1.2
U54A				PKPab	PKPab	22 45 57.3	+0.6
U54A				pPKPab	sPKPab	22 46 07.4	+1.1
MNTQ	Montreal, Queb	165.36	269		PKPdf	22 44 58.1	-0.2
MNTQ				PKPab	PKPab	22 45 57.3	+0.8
TMUT	Trail Mountain	165.39	119	PKPab	PKPab	22 45 58.6	+1.4
MVCO	Mesa Verde	165.41	131	PKPab	PKPab	22 45 57.9	+0.7
MVCO	Mesa Verde	165.41	131	P	PKPdf	22 44 58.7	-0.4
	baz=219,SNR=48						
P57A	Homestead Farm	165.42	242	PKPab	PKPab	22 45 58.2	+1.3
P57A				pPKPab	sPKPab	22 46 08.4	+1.8
N58A	Sunbury	165.44	249	PKPab	PKPab	22 45 57.4	+0.4
N58A				pPKPab	sPKPab	22 46 07.7	+1.0
TKL	Tuckaleechee C	165.50	218	PKP	PKPdf	22 44 58.6	-0.3
	comp=Z,13nm,1.1s,baz=182,slow=2.0,SNR=7.2						
TKL				PKPab	PKPab	22 45 56.5	-0.7
	comp=Z,19nm,0.9s,baz=149,slow=8.6,SNR=4.3						
TKL				PP	PP	22 49 43.8	-0.3
	comp=Z,13nm,1.1s,baz=191,slow=5.2,SNR=1.9						
TKL	Tuckaleechee C	165.50	218	PKPab	PKPab	22 45 57.3	0.0
Z41A	Richland Creek	165.52	186	P	PKPdf	22 44 57.8	-1.1
	baz=174						
Z35A	Perchaven, San	165.53	171		PKPdf	22 44 58.4	-0.6
Z35A				PKPab	PKPab	22 45 58.5	+1.1
Z35A				pPKPab	sPKPab	22 46 10.2	+3.1
V52A	Sevierville	165.58	219	PKPab	PKPab	22 45 58.7	+1.1
V52A				pPKPab	sPKPab	22 46 09.4	+2.0
Z38A	Mt. Pleasant	165.59	179		PKPdf	22 44 58.8	-0.1
Z38A				PKPab	PKPab	22 45 58.7	+1.1
Z38A				pPKPab	sPKPab	22 46 10.8	+3.5
X48A	Hartselle	165.59	206	PKPab	PKPab	22 45 57.0	-0.7
X48A				pPKPab	sPKPab	22 46 09.5	+2.2
HLID	Hailey	165.60	99	PKPab	PKPab	22 45 57.7	-0.2
HLID	Hailey	165.60	99	P	PKPdf	22 44 59.0	+0.1
	baz=246,SNR=87						
CPCT	Cooper Cave	165.62	215	PKPab	PKPab	22 45 57.7	-0.1
CPCT				pPKPab	sPKPab	22 46 08.4	+0.9
Y45A	Yeager Farm, C	165.66	198	pPKPab	pPKPab	22 46 10.4	+5.3
SRU	San Rafael Swe	165.67	121	PKP2	PKPab	22 46 00.2	+2.0
SRU	San Rafael Swe	165.67	121	PKPab	PKPab	22 46 00.2	+2.0
BINY	Binghamton	165.68	254	PKPab	PKPab	22 45 58.5	+0.5
BINY	Binghamton	165.68	254	P	PKPdf	22 44 58.2	-0.6
	baz=119						
W50A	Signal Mountai	165.70	213	PKPab	PKPab	22 45 58.0	-0.2
W50A				pPKPab	sPKPab	22 46 10.3	+2.4
J58A	Remsen	165.74	260	PKPab	PKPab	22 45 58.7	+0.5
LONY	Lake Ozonia	165.74	265	pPKPab	pPKPab	22 46 09.9	+4.6
LONY	Lake Ozonia	165.74	265	P	PKPdf	22 45 00.4	+1.7
	baz=109						
P17A	Butcher Ranch,	165.78	119	PKPab	PKPab	22 46 00.0	+1.3
R55A	Marlinton	165.81	234	PKPab	PKPab	22 45 58.9	+0.2
SPUT	South Promonto	165.82	110		PKPdf	22 44 58.7	-0.5
SPUT				PKPab	PKPab	22 45 59.5	+0.6
V51A	Loudon	165.86	217	PKPab	PKPab	22 45 59.4	+0.6
V51A				pPKPab	sPKPab	22 46 09.6	+1.0
HVU	Hansel Valley	165.86	108	PKP2	PKPab	22 45 59.4	+0.4
HVU	Hansel Valley	165.86	108	PKPab	PKPab	22 45 59.4	+0.4
CTU	Camp Tracy	165.92	113	PKPdf	PKPdf	22 44 59.9	+0.6
SWET	Sewanee	165.94	211	PKPab	PKPab	22 45 59.5	+0.3
SWET				pPKPab	sPKPab	22 46 10.7	+1.8
M57A	Sunshine Farm,	165.97	250	PKPab	PKPab	22 46 00.3	+1.0
SSPA	Standing Stone	166.05	246	P	PKPdf	22 44 57.5	-1.6
	baz=126						
CCAR	Cane Creek	166.07	190	pPKPab	pPKPab	22 46 12.2	+5.4
S54A	Dingess, Beckl	166.09	230	PKPab	PKPab	22 45 60.0	+0.1
S54A				pPKPab	sPKPab	22 46 11.0	+1.3
TZTN	Tazewell	166.15	221	P	PKPdf	22 44 57.5	-1.8
	baz=146						
TRQ	Mont Tremblant	166.17	271	PKPab	PKPab	22 46 00.1	-0.1
TRQ				pPKPab	sPKPab	22 46 11.6	+1.7
AMTX	Amarillo	166.18	155		PKPdf	22 44 58.9	-0.6
AMTX				PKPab	PKPab	22 46 00.7	+0.4
AMTX	Amarillo	166.18	155	P	PKPdf	22 44 57.2	-2.4
	baz=200						
LOOK	Love County	166.19	171		PKPdf	22 44 58.9	-0.6
LOOK				PKPab	PKPab	22 46 01.1	+0.8
O56A	Blue Knob Stat	166.24	243	PKPab	PKPab	22 45 59.7	-0.9
O56A	Blue Knob Stat	166.24	243	P	PKPdf	22 44 57.2	-2.2
	baz=128						
K57A	Scipio Center	166.28	256	PKPdf	PKPdf	22 44 58.5	-0.7
K57A				pPKPab	sPKPab	22 46 10.8	+0.4
PLAL	Pickwick Lake	166.38	204	PKPab	PKPab	22 46 01.0	-0.1
PLAL				pPKPab	sPKPab	22 46 11.9	+1.1
BCYI	Bear Canyon	166.56	98	PKPab	PKPab	22 46 02.5	+0.3
MCWV	Mont Chateau	166.61	239	PKPab	PKPab	22 46 02.4	+0.2
MCWV				pPKPab	sPKPab	22 46 12.2	+0.3
MCWV	Mont Chateau	166.61	239	P	PKPdf	22 44 57.9	-1.7
	baz=131						
S22A	4UR Ranch, Cre	166.66	134	P	PKPdf	22 44 59.8	-0.3
	baz=218,SNR=63						
L56A	Greenwood	166.66	252	PKPab	PKPab	22 46 02.5	+0.1
L56A				pPKPab	sPKPab	22 46 12.7	+0.6
Q54A	Coxs Mills	166.70	234	PKPab	PKPab	22 46 03.0	+0.4
V48A	Smith Brothers	166.71	209	PKPdf	PKPdf	22 44 58.3	-1.5
V48A					PKPab	22 46 01.9	-0.6
V48A				pPKPab	sPKPab	22 46 11.3	-0.9
X34A	Smith Ranch, M	166.72	169		PKPdf	22 44 59.5	-0.4
X34A				PKPab	PKPab	22 46 03.5	+0.9
X34A				pPKPab	sPKPab	22 46 15.3	+3.0
X40A	Basin Creek Fa	166.74	187	P	PKPdf	22 44 58.6	-1.2
	baz=174,SNR=15						
JTMT	Jette	166.80	82	PKPab	PKPab	22 46 04.5	+1.4
R53A	Hurricane	166.82	229	PKPab	PKPab	22 46 03.8	+0.7
R53A				pPKPab	sPKPab	22 46 13.4	+0.6
W45A	Hickory Valley	166.83	200	pPKPab	pPKPab	22 46 13.5	+3.3
MIAR	Mount Ida	166.85	184	P	PKPdf	22 44 58.4	-1.5
	baz=176,SNR=25						
MSO	Missoula	166.89	87	PKPab	PKPab	22 46 05.5	+2.1
MSO	Missoula	166.89	87	P	PKPdf	22 44 58.3	-1.4
	baz=259,SNR=18						
EDM	Edmonton	166.89	58	PKP2	PKPab	22 46 03.4	+0.3
EDM	Edmonton	166.89	58	PKPab	PKPab	22 46 03.4	+0.3
X37A	Clayton	166.91	178	PKPab	PKPab	22 46 03.9	+0.5
X37A				pPKPab	sPKPab	22 46 15.7	+2.6
U49A	Red Boiling Sp	167.04	214	PKPab	PKPab	22 46 03.4	-0.6
U49A				pPKPab	sPKPab	22 46 15.6	+1.9
M55A	Ridgway	167.07	247	PKPab	PKPab	22 46 04.1	-0.1
M55A				pPKPab	sPKPab	22 46 14.0	+0.1
T50A	Nancy	167.11	218	PKPab	PKPab	22 46 04.4	+0.1
T50A				pPKPab	sPKPab	22 46 14.7	+0.7
MCMT	McKenzie Canyo	167.11	96	PKPab	PKPab	22 46 05.8	+1.2
MCMT				pPKPab	sPKPab	22 46 16.0	+1.6
WALA	Waterton Lakes	167.14	77	PKPab	PKPab	22 46 04.9	+0.4
RDMU	Red Mountain	167.17	118		PKPdf	22 45 00.1	-0.1
RDMU				PKPab	PKPab	22 46 03.8	-1.2
MMNY	Mt. Morris Dam	167.18	253	PKPab	PKPab	22 46 03.2	-1.4
MMNY				pPKPab	sPKPab	22 46 14.5	+0.1
T25A	Trinidad	167.26	142	P	PKPdf	22 45 00.1	-0.3
	baz=211,SNR=47						
O54A	Avella	167.26	239	PKPab	PKPab	22 46 05.1	+0.1
O54A				pPKPab	sPKPab	22 46 15.2	+0.5
SDCO	Great Sand Dun	167.29	137	P	PKPdf	22 45 00.4	-0.2
	baz=215,SNR=71						
W41B	Gary Mavity, V	167.37	189	P	PKPdf	22 44 59.2	-1.0
	baz=172,SNR=24						
WVT	Waverly	167.38	206	PKP2	PKPab	22 46 04.2	-1.3
WVT						23 44 58.5	
WVT	Waverly	167.38	206		PKPdf	22 44 58.5	-1.8
WVT				PKPab	PKPab	22 46 04.2	-1.3
WVT				pPKPab	sPKPab	22 46 17.0	+1.8
WVT	Waverly	167.38	206	P	PKPdf	22 44 58.5	-1.8
	baz=158						
AHID	Auburn Hatcher	167.43	107	PKPab	PKPab	22 46 08.1	+2.1
DLMT	Dillon	167.45	94	PKPab	PKPab	22 46 07.1	+1.2
Q52A	Bidwell	167.46	231	PKPab	PKPab	22 46 04.2	-1.6
WVNY	West Valley, N	167.47	251		PKPab	22 46 05.5	-0.4
WHAR	Wooly Hollow	167.49	189	PKPab	PKPab	22 46 05.8	-0.1
LPAR	Lepanto	167.50	197	pPKPab	pPKPab	22 46 18.7	+5.6
W39A	Magazine	167.51	183	PKPab	PKPab	22 46 06.0	-0.1
W39A				pPKPab	sPKPab	22 46 17.9	+2.2
W39A	Magazine	167.51	183	P	PKPdf	22 44 59.3	-1.0
	baz=176,SNR=24						
HBAR	Harrisburg	167.52	195	PKPdf	PKPdf	22 45 00.7	+0.3
HBAR					PKPab	22 46 06.3	+0.2
HBAR				pPKPab	sPKPab	22 46 18.0	+2.3
N54A	Moraine State	167.53	243	PKPab	PKPab	22 46 05.5	-0.6
N54A				pPKPab	sPKPab	22 46 16.6	+0.7
N54A	Moraine State	167.53	243	P	PKPdf	22 45 00.4	+0.1
	baz=127,SNR=10						
PLVO	Plevna	167.55	264	PKPab	PKPab	22 46 05.7	-0.5
PLVO				pPKPab	sPKPab	22 46 16.6	+0.7
OKCFA	Oklahoma City	167.57	169	PKPab	PKPab	22 46 06.0	-0.4
OKCFA				pPKPab	sPKPab	22 46 19.5	+3.4
HALT	Halls	167.59	201		PKPdf	22 45 00.3	-0.1
HALT				PKPab	PKPab	22 46 06.0	-0.4
M54A	Oil Creek Stat	167.65	246	PKPab	PKPab	22 46 07.7	+0.9
M54A				pPKPab	sPKPab	22 46 17.6	+1.2
M54A	Oil Creek Stat	167.65	246	P	PKPdf	22 44 59.2	-1.1
	baz=125,SNR=11						
O20A	White River Ci	167.66	123	pPKPdf	pPKPdf	22 45 12.5	+4.5
O20A	White River Ci	167.66	123	P	PKPdf	22 44 58.1	-2.5
	baz=228,SNR=27						
LRM	Limekiln Ridge	167.67	92	PKPab	PKPab	22 46 07.7	+0.6
LRM				pPKPab	sPKPab	22 46 18.1	+1.3
DELO	Deloro Mine	167.74	261		PKPab	22 46 06.9	-0.2
MEDO	Medina	167.74	254	PKPab	PKPab	22 46 06.2	-0.9
OK025	Westminster Rd	167.75	170		PKPdf	22 45 00.0	-0.5
OK025				PKPab	PKPab	22 46 07.5	+0.4
OK025				pPKPab	sPKPab	22 46 19.0	+2.2
O53A	New Philadelph	167.79	237		PKPab	22 46 06.6	-0.7
O53A				pPKPab	sPKPab	22 46 17.1	0.0
O53A	New Philadelph	167.79	237	P	PKPdf	22 44 58.4	-2.1
	baz=132						
BCOK	Bluff Creek, N	167.79	169		PKPdf	22 45 00.8	+0.2
BCOK				PKPab	PKPab	22 46 08.2	+0.9
GNAR	Gosnell	167.79	198		PKPdf	22 45 00.6	0.0
GNAR				PKPab	PKPab	22 46 06.7	-0.6
GNAR				pPKPab	sPKPab	22 46 18.0	+1.0
LNXT	Lenox	167.80	200		PKPdf	22 45 01.3	+0.8
LNXT					PKPab	22 46 07.2	-0.2
LNXT				pPKPab	sPKPab	22 46 19.0	+2.0
TPAW	Teton Pass	167.86	104		PKPdf	22 45 00.9	+0.2
TPAW				PKPab	PKPab	22 46 09.0	+1.0
REDW	Red Top Meadow	167.87	105	PKPab	PKPab	22 46 08.3	+0.3
P52A	Corning	167.87	233	PKPab	PKPab	22 46 07.1	-0.6
P52A				pPKPab	sPKPab	22 46 17.4	0.0
P52A	Corning	167.87	233	P	PKPdf	22 44 57.9	-2.6
	baz=135,SNR=11						
GLAT	Glass	167.91	201		PKPdf	22 45 00.6	0.0
GLAT				PKPab	PKPab	22 46 08.6	+0.8
GLAT				pPKPab	sPKPab	22 46 19.9	+2.4
N53A	Lisbon	167.93	240	PKPab	PKPab	22 46 07.6	-0.4
N53A				pPKPab	sPKPab	22 46 19.0	+1.3
R50A	Paris	167.94	223	pPKPab	pPKPab	22 46 16.8	+1.6
T47A	Sharon Grove	167.94	210	pPKPab	pPKPab	22 46 17.6	+2.5
OK029	Liberty Lake	167.95	169	PKPab	PKPab	22 46 08.0	0.0
SNOW	Snow King Moun	167.98	105		PKPdf	22 45 00.8	0.0
SNOW					PKPab	22 46 08.3	-0.2
O52A	Adamsville	168.05	235		PKPab	22 46 08.3	-0.2
O52A				pPKPab	sPKPab	22 46 18.7	+0.5
Q51A	Peebles	168.05	228	PKPab	PKPab	22 46 08.6	+0.1
Q51A				pPKPab	sPKPab	22 46 18.7	+0.5
QLMT	Earthquake Lak	168.06	98	PKPab	PKPab	22 46 09.2	+0.4
FCAR	Ozark Folk Cen	168.06	190	PKPab	PKPab	22 46 08.1	-0.4
FCAR				pPKPab	sPKPab	22 46 19.9	+1.7
LCAR	Lake Charles	168.10	194	PKPab	PKPab	22 46 08.0	-0.6
MOOW	Moose Ponds	168.11	103	PKPab	PKPab	22 46 08.1	-0.9
LOHW	Long Hollow	168.14	104	PKPab	PKPab	22 46 09.8	+0.6
LOHW				pPKPab	sPKPab	22 46 21.1	+2.2
HICK	Hickman	168.16	202		PKPdf	22 45 00.5	-0.3
BOZ	Bozeman (W)	168.16	94	P	PKPdf	22 44 58.8	-1.9
	baz=254						
OK031	S. Brethren Rd	168.17	171	PKPab	PKPab	22 46 09.2	+0.2
ERPA	Erie	168.19	247		PKPdf	22 44 59.7	-1.0
ERPA				PKPab	pPKPab	22 46 13.6	-2.7
ERPA	Erie	168.19	247	P	PKPdf	22 44 57.8	-2.8
	baz=123						
TUL1	Leonard	168.21	176	pPKPab	pPKPab	22 46 22.0	+5.8
TUL1	Leonard	168.21	176	P	PKPdf	22 44 59.5	-1.3
	baz=183						
M53A	WI Miller and	168.22	243	P	PKPdf	22 44 57.9	-2.8
	baz=126						
OK034	N. Norfolk Rd.	168.24	172	PKPab	PKPab	22 46 09.2	0.0
P51A	Williamsport	168.25	230	PKPab	PKPab	22 46 08.5	-0.9
P51A				pPKPab	sPKPab	22 46 19.5	+0.5
U32A	Winter Ranch,	168.26	163		PKPab	22 46 09.2	-0.2
FLWY	Flagg Ranch	168.27	102	PKPab	PKPab	22 46 09.9	+0.1
YMR	Madison River	168.32	99	PKPab	PKPab	22 46 11.6	+1.6
R49A	Shelbyville	168.32	220		PKPab	22 46 08.9	-0.8
R49A				pPKPab	sPKPab	22 46 20.0	+0.6
PARMO	Parma	168.40	200	PKPdf	PKPdf	22 45 01.1	+0.2
PARMO				PKPab	PKPab	22 46 09.0	-0.9
BW06	Boulder Array	168.42	110	P	PKPdf	22 45 00.5	-0.6
	baz=240,SNR=94						
PDAR	Pinedale Array	168.42	110	PKP	PKPdf	22 45 00.4	-0.7
	comp=Z,56nm,1.0s,baz=163,slow=1.5,SNR=98						
PDAR				PKPab	PKPab	22 46 10.1	-0.3
	comp=Z,9.8nm,0.7s,baz=219,slow=1.2,SNR=1.0						
PDAR				PP	PP	22 49 59.0	-1.0
	comp=Z,4.1nm,1.0s,baz=225,slow=4.0,SNR=5.6						
PDAR	Pinedale Array	168.42	110	PKPdf	PKPdf	22 45 00.0	-1.1
Q24A	Divide	168.43	135	P	PKPdf	22 45 01.1	-0.3
	baz=217,SNR=18						
YHH	Holmes Hill	168.44	99	PKPab	PKPab	22 46 12.5	+1.9
YHH				pPKPab	sPKPab	22 46 23.7	+3.5
H17A	Grant Village	168.48	101	PKPdf	PKPdf	22 45 02.1	+1.0
H17A				PKPab	PKPab	22 46 12.5	+1.8
H17A	Grant Village	168.48	101	P	PKPdf	22 45 01.4	+0.3
	baz=248,SNR=9.2						
YNR	Norris Junctio	168.53	99	PKPdf	PKPdf	22 45 02.1	+1.0
YNR				PKPab	PKPab	22 46 12.9	+2.1
CROK	Carrier	168.57	166	PKPab	PKPab	22 46 11.2	+0.5
CROK				pPKPab	sPKPab	22 46 23.0	+2.5
HHAR	Hobbs	168.59	183	PKPab	PKPab	22 46 12.0	+1.2
HHAR				pPKPab	sPKPab	22 46 22.4	+1.9
U40A	Yellville	168.60	188	P	PKPdf	22 44 59.8	-1.4
	baz=173,SNR=27						
YUF	Upper Falls	168.64	99	PKPab	PKPab	22 46 13.5	+2.1
PBMO	Poplar Bluff	168.66	198	PKPab	PKPab	22 46 10.4	-0.7
PBMO				pPKPab	sPKPab	22 46 22.6	+1.8
WCI	Wyandotte Cave	168.74	216	PKIKP	PKPdf	22 44 59.8	-1.3
WCI						22 46 12.2	
WCI	Wyandotte Cave	168.74	216		PKPdf	22 44 59.8	-1.3
WCI				PKPab	PKPab	22 46 12.2	+0.8
WCI				pPKPab	sPKPab	22 46 20.8	-0.4
WCI	Wyandotte Cave	168.74	216	P	PKPdf	22 44 59.5	-1.7
	baz=149						
ACSO	Alum Creek Sta	168.76	233	pPKPab	pPKPab	22 46 20.9	+2.2
ACSO	Alum Creek Sta	168.76	233	P	PKPdf	22 44 59.7	-1.4
	baz=135						
U38A	Gravette	168.76	181	PKPab	PKPab	22 46 11.9	+0.3
U38A				pPKPab	sPKPab	22 46 23.5	+2.2
SADO	Sadowa	168.84	261	PKP	PKPdf	22 44 59.1	-1.9
	comp=Z,41nm,1.4s,baz=90,slow=2.8,SNR=6.3						
SADO				PKPab	PKPab	22 46 11.1	-0.8
	comp=Z,19nm,1.0s,baz=81,slow=2.0,SNR=4.5						
SADO				PP	PP	22 50 00.8	-1.1
	comp=Z,19nm,1.1s,baz=112,slow=5.2,SNR=4.0						
SADO	Sadowa	168.84	261	PKPab	PKPab	22 46 11.6	-0.3
ISCO	Idaho Springs	168.85	131	PKP2	PKPab	22 46 12.9	+0.5
ISCO	Idaho Springs	168.85	131	PKPab	PKPab	22 46 12.8	+0.5
ISCO	Idaho Springs	168.85	131	P	PKPdf	22 45 01.0	-0.5
	baz=221,SNR=36						
YMP	Mirror Lake Pl	168.88	100		PKPdf	22 45 02.2	+0.8
YMP				PKPab	PKPab	22 46 13.2	+0.7
YMP				pPKPab	sPKPab	22 46 25.5	+3.3
N51A	Ashland	168.89	237	pPKPab	pPKPab	22 46 22.5	+3.2
FCC	Fort Churchill	168.89	358	PKP2	PKPab	22 46 12.7	+1.2
FCC	Fort Churchill	168.89	358	PKPab	PKPab	22 46 12.7	+1.2
BLOK	Blackwell	168.93	169	PKPab	PKPab	22 46 13.4	+1.1
BLOK				pPKPab	sPKPab	22 46 25.2	+3.2
KAN14	Manchester OK	169.01	166	PKPdf	PKPdf	22 45 00.9	-0.4
KAN14				PKPab	PKPab	22 46 12.6	0.0
P49A	Miami Univ. Ec	169.12	225	P	PKPdf	22 44 59.4	-1.9
	baz=141						
KAN17	Caldwell West	169.13	167	PKPdf	PKPdf	22 45 01.1	-0.3
KAN13	South Haven SW	169.14	168	pPKPab	pPKPab	22 46 25.8	+5.4
KAN10	Anthony SW Sta	169.15	165	PKPdf	PKPdf	22 45 00.8	-0.7
KAN10				pPKPab	sPKPab	22 46 26.7	+3.7
T35A	Sooner Cattle	169.16	172	PKPab	PKPab	22 46 14.0	+0.7
T35A				pPKPab	sPKPab	22 46 25.2	+2.2
KAN01	Argonia South	169.24	167	pPKPab	pPKPab	22 46 26.4	+5.6
SIUC	Southern Illin	169.26	204	PKPab	PKPab	22 46 13.4	-0.4
SIUC				pPKPab	sPKPab	22 46 24.2	+0.7
KAN08	Anthony NE Sta	169.28	166	pPKPab	pPKPab	22 46 27.1	+6.1
KAN06	Argonia West S	169.31	166	pPKPab	pPKPab	22 46 27.1	+5.9
MGMO	Mountain Grove	169.33	190	PKPab	PKPab	22 46 13.8	-0.3
MGMO				pPKPab	sPKPab	22 46 25.9	+2.1
KAN12	Harper NE Stat	169.34	166	pPKPab	pPKPab	22 46 26.4	+5.2
P48A	Milroy	169.39	223	pPKPab	pPKPab	22 46 24.5	+2.9
O49A	Covington	169.43	229		PKPab	22 46 14.2	-0.3
N23A	Red Feather La	169.46	126	P	PKPdf	22 45 01.3	-0.6
	baz=226,SNR=43						
KSCO	Kaye Shedlock’	169.59	143	P	PKPdf	22 45 00.9	-0.9
	baz=210						
M50A	Fremont	169.59	237		PKPab	22 46 14.7	-0.6
M50A				pPKPab	sPKPab	22 46 25.0	+0.1
RLMT	Red Lodge	169.61	99	P	PKPdf	22 45 01.7	-0.1
	baz=251,SNR=19						
BLO	Bloomington	169.63	218		PKPab	22 46 15.1	-0.4
BLO				pPKPab	sPKPab	22 46 26.3	+1.1
FVM	French Village	169.82	199	PKPab	PKPab	22 46 16.0	-0.2
FVM				pPKPab	sPKPab	22 46 27.6	+1.7
OLIL	Olney	169.85	211	PKPab	PKPab	22 46 14.9	-1.5
OLIL				pPKPab	sPKPab	22 46 27.8	+1.7
EGMT	Eagleton	169.86	82	PKPab	PKPab	22 46 16.8	+0.3
EGMT	Eagleton	169.86	82	P	PKPdf	22 45 00.3	-1.3
	baz=267,SNR=22						
N49A	Columbus Grove	169.89	232	PKPab	PKPab	22 46 15.9	-0.7
N49A				pPKPab	sPKPab	22 46 25.3	-1.0
CCM	Cathedral Cave	170.05	196	PKP2	PKPab	22 46 17.3	0.0
CCM						23 45 01.1	
CCM	Cathedral Cave	170.05	196		PKPdf	22 45 01.1	-0.9
CCM				PKPab	PKPab	22 46 17.3	0.0
CCM				pPKPab	sPKPab	22 46 28.6	+1.6
CCM	Cathedral Cave	170.05	196	P	PKPdf	22 45 00.7	-1.2
	baz=166						
K50A	Casco	170.18	244	PKPab	PKPab	22 46 16.6	-1.3
K50A				pPKPab	sPKPab	22 46 27.1	-0.5
K22A	Casper	170.25	117	P	PKPdf	22 45 00.5	-1.6
	baz=235,SNR=30						
R32A	Long Quarter,	170.29	161	PKPab	PKPab	22 46 18.8	+0.5
P46A	Rosedale	170.29	217	pPKPab	pPKPab	22 46 28.1	+2.6
Q44A	Meyer Farm, Va	170.30	207	PKPab	PKPab	22 46 17.6	-0.7
Q44A				pPKPab	sPKPab	22 46 27.2	-0.9
CBKS	Cedar Bluff	170.40	156	P	PKPdf	22 45 01.3	-0.9
	baz=200,SNR=14						
AAM	Ann Arbor	170.52	239	PKPab	PKPab	22 46 19.3	-0.1
AAM				pPKPab	sPKPab	22 46 29.7	+0.6
AAM	Ann Arbor	170.52	239	P	PKPdf	22 44 59.9	-2.1
	baz=128						
N47A	Urbana	170.63	227	pPKPab	pPKPab	22 46 28.4	+1.4
L48A	N Adams	170.73	236	pPKPab	pPKPab	22 46 29.8	+2.4
SFIN	Lafayette	170.88	220	PKPab	PKPab	22 46 20.2	-0.7
SFIN				pPKPab	sPKPab	22 46 30.2	-0.5
SFIN	Lafayette	170.88	220	P	PKPdf	22 45 01.2	-1.1
	baz=145						
I49A	Point Hope	170.91	250	PKPab	PKPab	22 46 20.2	-0.9
I49A				pPKPab	sPKPab	22 46 29.8	-1.0
P43A	Skaggs, Pawnee	171.14	207	PKPab	PKPab	22 46 21.4	-0.6
P43A				pPKPab	sPKPab	22 46 34.1	+2.4
KSU1	Kansas State U	171.31	170	P	PKPdf	22 45 01.4	-1.2
	baz=188,SNR=8.6						
OGNE	Ogallala	171.45	139	PKPab	PKPab	22 46 24.6	+1.0
OGNE	Ogallala	171.45	139	P	PKPdf	22 45 00.4	-2.3
	baz=215						
FFC	Flin Flon	171.60	30	PKP2	PKPab	22 46 23.3	-0.4
FFC						23 45 00.4	
FFC	Flin Flon	171.60	30		PKPdf	22 45 00.4	-1.8
FFC				PKPab	PKPab	22 46 23.3	-0.4
P40A	Paris	171.63	194	PKPab	PKPab	22 46 24.3	+0.1
P40A				pPKPab	sPKPab	22 46 36.1	+2.2
L46A	Eue Claire	171.78	229	PKPdf	PKPdf	22 45 02.5	-0.1
L46A				PKPab	PKPab	22 46 23.6	-1.4
L46A				pPKPab	sPKPab	22 46 33.9	-0.8
HDIL	Hopedale	171.89	210	PKPab	PKPab	22 46 24.9	-0.4
HDIL				pPKPab	sPKPab	22 46 36.6	+1.6
HDIL	Hopedale	171.89	210	P	PKPdf	22 45 01.5	-1.3
	baz=152						
LAO	LASA Array	172.08	93	P	PKPdf	22 45 01.8	-0.9
	baz=259,SNR=44						
HQIL	Hanson Quary C	172.37	222	PKPab	PKPab	22 46 25.9	-1.6
GLMI	Grayling	172.46	251	PKPab	PKPab	22 46 27.6	-0.4
GLMI	Grayling	172.46	251	P	PKPdf	22 45 01.5	-1.4
	baz=115						
N41A	Harden Midland	172.50	203	PKPab	PKPab	22 46 28.1	0.0
N41A				pPKPab	sPKPab	22 46 39.0	+1.2
RSSD	Black Hills	172.57	115	PKIKP	PKPdf	22 45 02.2	-1.1
RSSD						22 46 28.3	
RSSD	Black Hills	172.57	115		PKPdf	22 45 02.2	-1.1
RSSD				PKPab	PKPab	22 46 28.3	-0.5
RSSD	Black Hills	172.57	115	P	PKPdf	22 45 00.7	-2.6
	baz=238						
L44A	Lake County Fo	172.69	224	PKPab	PKPab	22 46 28.6	-0.4
L44A				pPKPab	sPKPab	22 46 38.7	+0.1
L44A	Lake County Fo	172.69	224	P	PKPdf	22 45 01.0	-2.1
	baz=140						
N33A	J Bar K, Exete	172.78	163	PKPab	PKPab	22 46 29.2	-0.1
N38A	Joes South For	173.03	189	PKPab	PKPab	22 46 30.0	-0.4
BGNE	Belgrade	173.26	157	PKPab	PKPab	22 46 32.2	+0.8
BGNE	Belgrade	173.26	157	P	PKPdf	22 45 01.4	-2.0
	baz=199						
L42A	Oliver, Polo	173.30	214	PKPab	PKPab	22 46 31.6	0.0
K43A	Burlington	173.30	224	pPKPab	pPKPab	22 46 41.5	+2.8
DGMT	Dagmar	173.58	79	P	PKPdf	22 45 00.8	-2.5
	baz=274						
L40A	Anamosa	173.87	205		PKPab	22 46 33.7	-0.4
SCIA	State Center	174.13	191	PKPab	PKPab	22 46 35.5	+0.2
SCIA	State Center	174.13	191	P	PKPdf	22 45 01.6	-2.1
	baz=169,SNR=7.7						
H43A	Windswept, Lux	174.22	239	PKPab	PKPab	22 46 34.9	-0.9
JFWS	Jewell Farm	174.30	215	P	PKPdf	22 45 01.3	-2.4
	baz=147,SNR=20						
I42A	Draeger Farm,	174.46	229	PKPab	PKPab	22 46 37.6	+0.8
F42A	Maple Grove Fa	175.10	249		PKPab	22 46 39.3	-0.4
I40A	Norwalk	175.26	218		PKPab	22 46 40.1	-0.2
SUSD	Miller	175.60	136	P	PKPdf	22 45 00.6	-3.4
	baz=220						
ECSD	EROS Data Cent	175.83	160	P	PKPdf	22 45 01.5	-2.6
	baz=196						
G40A	Rib Lake	176.07	234		PKPab	22 46 43.5	-0.4
MDND	Maddock	176.68	85	P	PKPdf	22 45 02.5	-1.6
	baz=272						
SPMN	Marine on St.	177.22	209		PKPab	22 46 49.0	0.0
SPMN	Marine on St.	177.22	209	P	PKPdf	22 45 02.4	-1.9
	baz=150,SNR=12						
ULM	Lac du Bonnet	177.31	17	PKP	PKPdf	22 45 02.6	-1.5
	comp=Z,51nm,1.3s,baz=346,slow=1.3,SNR=22						
ULM				PKPab	PKPab	22 46 48.2	-0.9
	comp=Z,44nm,1.1s,baz=1.5,slow=4.2,SNR=5.8						
ULM				PP	PP	22 50 41.7	-0.6
	comp=Z,24nm,1.1s,baz=36,slow=2.9,SNR=3.7						
ULM	Lac du Bonnet	177.31	17	PKPab	PKPab	22 46 47.8	-1.4
EYMN	Ely	177.83	278		PKPab	22 46 51.4	-0.4
EYMN	Ely	177.83	278	P	PKPdf	22 45 01.9	-2.4
	baz=84						
AGMN	Agassiz Nation	179.00	52	P	PKPdf	22 45 01.6	-2.8
	baz=315,SNR=16						

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*TUL **04** 22:38:05.6±0.7, 36°.72N±0°.02×98°.39W±0°.03, h7^{km}±2^{km}, ML2.5, mb_Lg2.4/3(NEIC) Error ellipse: s-maj=3.3km s-min=1.9km az=113.0*

NEIC 04 22:38:05.7±0.9**, 36°.72N**±0°.01×**98°.37W**±0°.03**, h5**^{km}±2^{km}**,**
Error ellipse: s-maj=3.7km s-min=3.0km az=290.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.15	56	Pg	Pg	22 38 09.2	+0.4
OK032				Sg	Sg	22 38 12.0	+1.1
CROK	Carrier	0.38	124		Pg	22 38 13.3	+0.3
CROK				Sg	Sg	22 38 18.8	+0.9
KAN14	Manchester OK	0.41	54	Pg	Pg	22 38 13.7	+0.1
KAN14				Sg	Sg	22 38 19.7	+0.8
GC02	Grant County #	0.43	72		Pg	22 38 14.3	+0.2
GC02				Sg	Sg	22 38 20.5	+0.8
KAN10	Anthony SW Sta	0.46	29	Pg	Pg	22 38 14.7	+0.1
KAN16	Harper SW Stat	0.56	26	Pg	Pg	22 38 15.9	-0.7
KAN08	Anthony NE Sta	0.60	32		Pg	22 38 17.1	-0.2
U32A	Winter Ranch,	0.61	237	Pg	Pg	22 38 17.1	-0.3
KAN01	Argonia South	0.66	48	Pg	Pg	22 38 18.3	0.0
KAN01				IAmb_Lg		22 38 26.1	
	comp=Z,10nm,0.8s						
KAN06	Argonia West S	0.67	38	Pg	Pg	22 38 18.5	-0.1
KAN13	South Haven SW	0.78	67	Pg	Pg	22 38 20.6	0.0

BLOK	**Blackwell**	**0.93**	**87**		Pg	22 38 23.2	-0.3
OK029	**Liberty Lake**	**1.18**	**141**	Pg	Pg	22 38 27.5	-0.8
BCOK	**Bluff Creek, N**	**1.23**	**150**		Pg	22 38 28.7	-0.4
OK025	**Westminster Rd**	**1.41**	**143**	Pn	Pn	22 38 32.2	+0.2
OK031	**S. Brethren Rd**	**1.45**	**121**	Pn	Pn	22 38 32.3	-0.3
OK030	**Cody Creek RV**	**1.50**	**121**	Pn	Pn	22 38 33.3	-0.1
T35A	**Sooner Cattle**	**1.50**	**82**	Pn	Pn	22 38 33.2	-0.2
OK034	**N. Norfolk Rd.**	**1.51**	**117**	Pn	Pn	22 38 33.2	-0.2
R32A	**Long Quarter,**	**1.72**	**351**		Pn	22 38 36.0	-0.4
X34A	**Smith Ranch, M**	**2.16**	**168**	Pn	Pn	22 38 42.6	+0.3
TUL1	**Leonard**	**2.23**	**110**	Pn	Pn	22 38 43.2	-0.1
OGNE	**Ogallala**	**5.10**	**327**	IAmb_Lg		22 40 51.5	
	comp=Z,8.7nm,0.7s						
SMCO	**Snowmass**	**7.23**	**292**	IAmb_Lg		22 41 56.9	
	comp=Z,12nm,1.2s						

IDC ***04*** *22:49:30.7±1.6, 37°.38N×138°.80E, h179^{km}±8^{km}, mb3.1/5, mb1 3.2/6, mb1mx2.7/75, mbtmp3.7/6, Error ellipse: s-maj=37.8km s-min=12.4km az=53.0*

JMA ***04*** *22:49:30.7±0.3, 37°.38N×139°.06E, h180^{km}±2^{km}, M2.7*

ISC 04 22:49:30.3±0.9**, 37°.40N**±0°.07×**138°.99E**±0°.09**, h200^{km}, n16, σ2^{s}.27**/21**, mb3.2**/5**, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFY	**Yanaizu**	**0.57**	**89**	P	**Pn**	**22 49 56.1**	**-1.6**
JKT	**Katashina**	**0.67**	**162**	P	**Pn**	**22 49 56.4**	**-1.9**
JAG	**Ashikaga**	**1.04**	**159**	P	**Pn**	**22 49 58.7**	**-1.7**
MAT	**Matsushiro**	**1.06**	**216**	P	**Pn**	**22 49 59.0**	**-1.5**
MAT				S	**Sn**	**22 50 20.5**	**-3.4**
MAT	**Matsushiro**	**1.06**	**216**	P	**Pn**	**22 49 59.0**	**-1.5**
MAT				*e*S	**Sn**	**22 50 20.7**	**-3.2**
MJAR	**Matsushiro Arr**	**1.06**	**216**	P	**Pn**	**22 49 58.3**	**-2.3**
	0.9nm,0.3s,baz=32,slow=7.3,SNR=29						
MJAR				S	**Sn**	**22 50 19.6**	**-4.3**
	0.3nm,0.3s,baz=27,slow=26,SNR=5.1						
JFT	**Otama**	**1.08**	**83**	P	**Pn**	**22 49 59.2**	**-1.4**
JFT				*e*S	**Sn**	**22 50 21.0**	**-3.0**
JRY	**Ryogami san**	**1.38**	**183**	P	**Pn**	**22 50 01.7**	**-1.3**
JYK	**Kaneyama**	**1.86**	**35**	P	**Pn**	**22 50 06.0**	**-1.3**
JYN	**Shimob**	**1.93**	**191**	P	**Pn**	**22 50 07.1**	**-1.1**
JHJ	**Hachijo jima 2**	**4.32**	**171**	P	**Pn**	**22 50 36.1**	**0.0**
	20nm,0.3s,baz=306,slow=14,SNR=2.2						
JHJ				S	**Sn**	**22 51 26.7**	**-1.1**
	10nm,0.3s,baz=233,slow=20,SNR=2.2						
SONM	**Songino Array**	**25.98**	**304**	P	**P**	**22 54 45.1**	**+0.6**
	1.3nm,0.6s,baz=105,slow=9.3,SNR=6.2						
MKAR	**Makanchi Array**	**42.28**	**301**	P	**P**	**22 57 05.5**	**+1.5**
	0.7nm,0.9s,baz=83,slow=9.0,SNR=1.2						
KURBB	**Kurchatov Arra**	**44.25**	**307**	P	**P**	**22 57 21.2**	**+1.6**
	1.3nm,0.6s,baz=85,slow=8.3,SNR=9.8						
WRA	**Warramunga Arr**	**57.20**	**185**	P	**P**	**22 58 59.0**	**+2.4**
	0.3nm,0.9s,baz=1.0,slow=7.5,SNR=4.9						
ASAR	**Alice Springs**	**60.93**	**185**	P	**P**	**22 59 24.6**	**+2.5**
	0.2nm,0.8s,baz=16,slow=7.6,SNR=1.6						

SOF ***04*** *23:04:15.5, 41°.29N×24°.48E, h10^{km}, MD3.1*

ATH ***04*** *23:04:16.2, 41°.31N×24°.46E, h13^{km}±1^{km}, ML3.0/10, Error ellipse: s-maj=1.9km s-min=0.7km az=197.0*

THE ***04*** *23:04:16.4, 41°.30N×24°.45E, h8^{km}±1^{km}, ML3.1/8, Error ellipse: s-maj=1.3km s-min=0.6km az=9.0*

ISK ***04*** *23:04:19.9, 41°.02N×24°.57E, h6^{km}, ML3.2/23*

ISC 04 23:04:15.9±1.2**, 41°.25N**±0°.02×**24°.46E**±0°.02**, h2^{km}**±10^{km}**, n97, σ1^{s}.10**/120**, 18C-13D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KVLA	**Kavala**	**0.32**	**190**	P	**Pb**	**23 04 23.6**	**-0.7**
KVLA				S	**Sb**	**23 04 28.9**	**-1.0**
KVLA				AML	AML	23 04 29.3	
	comp=E,2632μm,0.2s						
KVLA				AML	AML	23 04 30.4	
	comp=N,2018μm,0.2s						
NVR	**Nevrokopi**	**0.46**	**283**	P	**Pg**	**23 04 25.0**	**+0.2**
NVR				S	**Sg**	**23 04 31.2**	**+0.5**
	comp=N,2μm,0.2s						
NVR	**Nevrokopi**	**0.46**	**283**	P	**Pg**	**23 04 24.9**	**+0.2**
NVR				S	**Sg**	**23 04 31.2**	**+0.5**
NVR				AML	AML	23 04 32.3	
	comp=E,4875μm,0.2s						
NVR				AML	AML	23 04 32.6	
	comp=N,3679μm,0.5s						
RZN	**Rozhen**	**0.48**	**24**	*i* P	**Pg**	**23 04 25.0**	**-0.1**
MMB	**Musomiste**	**0.64**	**302**	*i* P	**Pg**	**23 04 27.7**	**-0.6**
SRS	**Serrai**	**0.67**	**259**	P	**Pg**	**23 04 29.0**	**+0.3**
SRS				S	**Sb**	**23 04 38.8**	**-1.1**
	comp=N,1μm,0.2s						
SRS	**Serrai**	**0.67**	**259**	P	**Pb**	**23 04 29.3**	**-0.9**
SRS				S	**Sb**	**23 04 39.0**	**-0.9**
SRS				AML	AML	23 04 39.6	
	comp=E,2479μm,0.3s						
SRS				AML	AML	23 04 39.6	
	comp=N,2990μm,0.2s						
THAS	**Thassos island**	**0.68**	**163**	P	**Pb**	**23 04 30.2**	**-0.1**
THAS				S	**Sb**	**23 04 40.4**	**+0.2**
	comp=N,3μm,0.4s						
THAS	**Thassos island**	**0.68**	**163**	P	**Pb**	**23 04 30.2**	**-0.1**
THAS				S	**Sb**	**23 04 40.3**	**+0.2**
THAS				AML	AML	23 04 43.5	
	comp=E,4927μm,0.4s						
THAS				AML	AML	23 04 43.9	
	comp=N,6341μm,0.4s						
RDO	**Rodhopi**	**0.82**	**97**	P	**Pg**	**23 04 31.9**	**+0.3**
RDO				S	**Sb**	**23 04 43.4**	**-1.0**
	comp=N,800nm,0.3s						
RDO	**Rodhopi**	**0.82**	**97**	P	**Pg**	**23 04 32.0**	**+0.3**
RDO				S	**Sb**	**23 04 43.2**	**-1.2**
RDO				AML	AML	23 04 46.5	
	comp=E,1504μm,0.2s						
RDO				AML	AML	23 04 47.1	
	comp=N,1687μm,0.5s						
KDZ	**Kurdzhali**	**0.82**	**61**	*i* P	**Pg**	**23 04 30.1**	**-1.6**
PLD	**Plovdiv**	**0.87**	**12**	*i* P	**Pg**	**23 04 32.6**	**-0.1**
SOH	**Sokhos**	**0.94**	**243**	P	**Pb**	**23 04 34.5**	**-0.4**
SOH				S	**Sb**	**23 04 48.1**	**+0.3**
	comp=N,2μm,0.4s						
SOH	**Sokhos**	**0.94**	**243**	P	**Pb**	**23 04 34.5**	**-0.4**
SOH				S	**Sb**	**23 04 47.7**	**-0.1**
SOH				AML	AML	23 04 50.7	
	comp=E,4832μm,0.3s						
SOH				AML	AML	23 04 51.2	
	comp=N,3504μm,0.3s						
OUR	**Ouranopolis**	**0.98**	**202**	P	**Pb**	**23 04 36.0**	**+0.3**
OUR	**Ouranopolis**	**0.98**	**202**	PG	**Pb**	**23 04 35.9**	**+0.3**
SMTH	**Samothraki Isl**	**1.13**	**133**	P	**Pn**	**23 04 38.3**	**-0.4**
SMTH				S	**Sn**	**23 04 54.4**	**-0.3**
	comp=N,215nm,0.5s						
SMTH	**Samothraki Isl**	**1.13**	**133**	P	**Pb**	**23 04 38.0**	**-0.1**
SMTH				S	**Sb**	**23 04 53.1**	**-0.1**
SMTH				AML	AML	23 04 58.4	
	comp=N,511μm,0.5s						
SMTH				AML	AML	23 04 59.7	
	comp=E,327μm,0.6s						
DIM	**Dimitrovgrad**	**1.14**	**45**	*i* P	**Pg**	**23 04 37.3**	**-0.4**
PLG	**Polygyros**	**1.17**	**222**	P	**Pn**	**23 04 39.0**	**-0.2**
PLG				S	**Sn**	**23 04 55.1**	**-0.6**
	comp=E,1μm,0.3s						
PLG	**Polygyros**	**1.17**	**222**	P	**Pn**	**23 04 38.9**	**-0.4**
PLG				AML	AML	23 04 57.0	
	comp=E,2087μm,0.3s						
PLG				AML	AML	23 04 58.7	
	comp=N,2077μm,0.3s						
KNT	**Kendrikon**	**1.18**	**266**	P	**Pb**	**23 04 38.8**	**-0.2**
KNT				S	**Sb**	**23 04 54.8**	**+0.1**
	comp=N,1μm,0.3s						
KNT	**Kendrikon**	**1.18**	**266**	P	**Pg**	**23 04 37.8**	**-0.7**
KNT				S	**Sb**	**23 04 54.1**	**-0.6**
KKB	**Krupnik**	**1.20**	**301**	*i* P	**Pg**	**23 04 38.1**	**-0.8**
ALN	**Alexandroupoli**	**1.25**	**106**	P	**Pb**	**23 04 40.0**	**-0.2**
ALN	**Alexandroupoli**	**1.25**	**106**	P	**Pg**	**23 04 39.5**	**-0.4**
ALN				S	**Sg**	**23 04 56.0**	**-0.1**
ALN				AML	AML	23 05 02.1	
	comp=E,746μm,0.8s						
ALN				AML	AML	23 05 03.7	
	comp=N,511μm,0.6s						
ALN	**Alexandroupoli**	**1.25**	**106**	PN	**Pn**	**23 04 42.2**	**+1.8**
ALN				SN	**Sn**	**23 04 58.1**	**+0.3**
THE	**Thessaloniki**	**1.29**	**242**	P	**Pn**	**23 04 40.8**	**-0.1**
PGB	**Panagyurishte**	**1.31**	**351**	*i* P	**Pg**	**23 04 39.3**	**-1.8**
ENEZ	**Enez**	**1.38**	**111**	PN	**Pb**	**23 04 43.5**	**+1.0**
VAY	**Valandovo**	**1.42**	**273**	*i* Pn	**Pg**	**23 04 43.2**	**0.0**
VAY				*i* Sn	**Sn**	**23 05 02.1**	**+0.1**
ENZZ	**Sultanice-Enez**	**1.43**	**116**	PN	**Pg**	**23 04 44.6**	**+1.3**
PAIG	**Paliouri**	**1.45**	**204**	P	**Pn**	**23 04 42.6**	**-0.5**
LIA	**Limnos Island**	**1.46**	**158**	P	**Pn**	**23 04 43.1**	**-0.2**
LIA	**Limnos Island**	**1.46**	**158**	P	**Pn**	**23 04 43.0**	**-0.2**
LIA				AML	AML	23 05 07.2	
	comp=N,801μm,0.7s						
LIA				AML	AML	23 05 09.4	
	comp=E,816μm,0.5s						
GADA	**Gvkgeada**	**1.52**	**134**	PN	**Pg**	**23 04 45.3**	**+0.2**
VTS	**Vitosha**	**1.64**	**327**	⇓P	**Pn**	**23 04 46.0**	**+0.1**
VTS				⇑S	**Sb**	**23 05 07.8**	**-0.4**
VTS	**Vitosha**	**1.64**	**327**	*i* P	**Pn**	**23 04 46.1**	**+0.2**
UKOP	**Uzunkopru-Edir**	**1.65**	**94**	PN	**Pg**	**23 04 48.4**	**+0.9**
ERIK	**Erikli-Kesan**	**1.66**	**110**	PN	**Pg**	**23 04 47.6**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.75**	**118**	PN	**Pg**	**23 04 48.9**	**-0.6**
STIP	**Stip**	**1.76**	**285**	*i* Pn	**Pn**	**23 04 45.1**	**-2.3**
STIP				*i* Sn	**Sn**	**23 05 07.3**	**-3.1**
BOSS	**Bosilegrad**	**1.93**	**311**	*e*Pn	**Pn**	**23 04 50.4**	**+0.7**
LPK	**Lapseki**	**1.96**	**116**	PN	**Pb**	**23 04 51.4**	**-0.8**
EZN	**Ezine**	**2.01**	**134**	PN	**Pb**	**23 04 52.1**	**-1.1**
RKY	**Sarkoy-Tekirda**	**2.14**	**104**	PN	**Pb**	**23 04 55.1**	**-0.2**
PRVS	**Prvonek**	**2.18**	**306**	*e*Pn	**Pn**	**23 04 53.4**	**+0.3**
MAR6	**Marsite Statio**	**2.20**	**104**	PN	**Pb**	**23 04 56.6**	**+0.3**
MAR3	**Marsite Statio**	**2.21**	**102**	PN	**Pb**	**23 04 56.5**	**0.0**
MAR2	**Marsite Statio**	**2.23**	**103**	PN	**Pb**	**23 04 56.7**	**-0.1**
SIGR	**SIGRI**	**2.30**	**152**	PN	**Pb**	**23 04 56.4**	**-1.7**
KRBG	**Karabiga-Canak**	**2.32**	**111**	PN	**Pb**	**23 04 57.7**	**-0.7**
ZAPS	**Zavoj**	**2.43**	**327**	*e*Pn	**Pn**	**23 04 58.2**	**+1.5**
MRMT	**Marmara Adasi**	**2.46**	**104**	PN	**Pb**	**23 04 59.8**	**-1.1**
CRLT	**Corlu**	**2.48**	**92**	PN	**Pb**	**23 05 00.8**	**-0.3**
BARS	**Barje**	**2.51**	**309**	*e*Pn	**Pn**	**23 04 57.6**	**-0.2**
BARS	**Barje**	**2.51**	**309**	*e*Pn	**Pg**	**23 05 08.6**	**+4.5**
BLKB	**Belogradchik**	**2.71**	**331**	⇑S	**Sn**	**23 05 35.4**	**+1.5**
EDC	**Edincik**	**2.74**	**108**	PN	**Pb**	**23 05 03.7**	**-1.9**
VLAD	**Vladila**	**2.75**	**359**	⇓P	**Pn**	**23 05 01.3**	**+0.4**
VLAD				⇑S	**Sn**	**23 05 36.8**	**+2.1**
RAZG	**Razgrad**	**2.77**	**33**	⇑P	**Pn**	**23 05 01.8**	**+0.5**
RAZG				⇓S	**Sb**	**23 05 37.9**	**-2.6**
SLVT	**Silivri**	**2.83**	**89**	PN	**Pb**	**23 05 06.1**	**-1.0**
DKL	**Dikili**	**2.88**	**138**	PN	**Pn**	**23 05 04.4**	**+1.7**
CTYL	**Yalikoy Yolu**	**2.89**	**84**	PN	**Pb**	**23 05 07.3**	**-0.9**
COPA	**Copaceanca**	**2.94**	**11**	⇑P	**Pn**	**23 05 03.8**	**+0.3**
ZAGS	**Zajecar**	**3.04**	**328**	*e*Pn	**Pn**	**23 05 04.3**	**-0.7**
CTKS	**Kestanelik-??a**	**3.05**	**89**	PN	**Pb**	**23 05 09.1**	**-1.8**
CHOS	**Chios island**	**3.12**	**156**	PN	**Pn**	**23 05 07.8**	**+1.7**
BOVS	**Bovan**	**3.13**	**320**	⇑P	**Pn**	**23 05 05.6**	**-0.6**
SELS	**Selova**	**3.16**	**310**	*e*Pn	**Pn**	**23 05 06.0**	**-0.7**
SGRR	**Singureni**	**3.17**	**20**	⇑P	**Pn**	**23 05 06.9**	**+0.1**
PUNG	**Punghina**	**3.23**	**340**	⇓S	**Sn**	**23 05 47.9**	**+1.4**
SRE	**Strehaia**	**3.53**	**345**	⇑P	**Pn**	**23 05 12.7**	**+0.9**
GRUS	**Gruza**	**3.82**	**315**	*e*Pn	**Pn**	**23 05 15.0**	**-0.7**
SJES	**Sjenica**	**3.89**	**303**	*e*Pn	**Pn**	**23 05 19.8**	**+3.1**
HERR	**Herculane**	**3.92**	**338**	⇓P	**Pn**	**23 05 17.1**	**0.0**
PDG	**Podgorica**	**4.06**	**289**	⇓P	**Pn**	**23 05 20.2**	**+1.2**
MDVR	**Moldovita**	**4.06**	**331**	⇑P	**Pn**	**23 05 18.4**	**-0.6**
ARR	**Arges**	**4.12**	**2**	⇓P	**Pn**	**23 05 19.7**	**-0.1**
VOIR		**4.21**	**6**	⇓P	**Pn**	**23 05 21.3**	**+0.3**
TRUS	**Trudelj**	**4.21**	**316**	*e*Pn	**Pn**	**23 05 24.1**	**+3.0**
GZR	**Gura Zlata**	**4.32**	**344**	⇑P	**Pn**	**23 05 21.9**	**-0.7**
TIRR	**Tirgusor**	**4.33**	**41**	⇓P	**Pn**	**23 05 23.8**	**+1.2**
DIVS	**Divibare**	**4.35**	**312**	*e*Pn	**Pn**	**23 05 22.3**	**-0.8**
MLR	**Muntele Rosu**	**4.37**	**14**	⇓P	**Pn**	**23 05 24.1**	**+0.7**
BISRR	**Bisoca**	**4.60**	**20**	⇑P	**Pn**	**23 05 27.4**	**+0.9**
TPGR	**Topolog**	**4.63**	**38**	⇓P	**Pn**	**23 05 27.7**	**+0.9**
CFR	**Carcaliu**	**4.76**	**33**	⇑P	**Pn**	**23 05 28.8**	**+0.3**
DOPR	**Dopca**	**4.76**	**8**	⇑P	**Pn**	**23 05 29.4**	**+0.7**
COVR	**Voineasa-Covas**	**4.76**	**15**	⇓P	**Pn**	**23 05 29.8**	**+1.1**
PLOR	**Plostina**	**4.87**	**18**	⇑P	**Pn**	**23 05 31.4**	**+1.3**
VRI	**Vrincioaia**	**4.90**	**19**	⇑P	**Pn**	**23 05 31.8**	**+1.3**
OZUR		**4.94**	**11**	⇑P	**Pn**	**23 05 32.0**	**+0.9**
VLDR	**Vladesti**	**5.29**	**29**	⇑P	**Pn**	**23 05 37.3**	**+1.4**
TESR	**Tescani**	**5.49**	**16**	⇓P	**Pn**	**23 05 38.7**	**0.0**
BURAR	**Bucovina Array**	**6.38**	**5**	⇑P	**Pn**	**23 05 52.4**	**+1.4**

IDC ***04*** *23:23:05.0±1.3, 8°.18S×125°.63E, h0^{km}, mb4.0/4, mb1 4.0/7, mb1mx3.6/35, mbtmp3.9/7, ML3.7/3, Error ellipse: s-maj=45.3km s-min=21.0km az=78.0*

DJA ***04*** *23:23:10.7±2.3, 8°S±6°×12°5E±2°1, h10^{km}, M4.0/7, mb4.2/4, MLv3.9/7*

ISC 04 23:23:09.4±0.9**, 8°.38S**±0°.07×**125°.57E**±0°.09**, h35^{km}, n15, σ1^{s}.75**/19**, mb4.0**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.88**	**223**	P	**Pn**	**23 23 40.9**	**+1.8**
BATI	**Baumata**	**2.61**	**226**	Pn	**Pn**	**23 23 51.4**	**+2.2**
	16nm,0.3s,baz=101,slow=2.6,SNR=9.5						
BATI				Sn	**Sn**	**23 24 19.9**	**+0.1**
	20nm,0.3s,baz=22,slow=23,SNR=5.9						
BATI	**Baumata**	**2.61**	**226**	P	**Pn**	**23 23 50.9**	**+1.7**
MMRI	**Maumere**	**3.30**	**265**	P	**Pn**	**23 23 57.5**	**-1.1**
EDFI	**Ende, Flores**	**3.85**	**264**	P	**Pn**	**23 24 04.8**	**-1.5**
BSSI	**Bau Bau, Buton**	**5.50**	**293**	P	**Pn**	**23 24 26.8**	**-2.1**
	0.1nm12nm,0.5s						
BKSI	**Bulukumba**	**6.20**	**299**	P	**Pn**	**23 24 36.3**	**-2.2**
	0.1nm6.4nm,1.1s						
BNSI	**Bone**	**6.71**	**306**	P	**Pn**	**23 24 46.9**	**+1.4**
FITZ	**Fitzroy Crossi**	**9.66**	**180**	Pn	**Pn**	**23 25 27.1**	**+1.1**
	baz=5.3,slow=0.1						
FITZ				Sn	**Sn**	**23 27 10.0**	**-3.4**
	1.3nm,0.3s,baz=177,slow=19,SNR=5.4						
WRA	**Warramunga Arr**	**14.29**	**144**	Pn	**Pn**	**23 26 30.6**	**+1.2**
	0.4nm,0.3s,baz=318,slow=13,SNR=21						
WRA				Sn	**Sn**	**23 29 04.4**	**-2.3**
	0.2nm,0.3s,baz=319,slow=25,SNR=3.1						
ASAR	**Alice Springs**	**17.17**	**153**	P	**P**	**23 27 09.7**	**+1.6**
	0.3nm,0.3s,baz=324,slow=11,SNR=9.3						
ASAR				S	**Sn**	**23 30 16.2**	**-0.6**
	0.2nm,0.3s,baz=327,slow=22,SNR=5.0						
CMAR	**Chiang Mai Arr**	**37.43**	**316**	P	**P**	**23 30 19.8**	**+0.2**
	0.7nm,0.4s,baz=134,slow=6.3,SNR=5.6						
SONM	**Songino Array**	**58.49**	**345**	P	**P**	**23 33 02.6**	**+0.4**
	1.0nm,0.9s,baz=160,slow=8.4,SNR=5.6						
MKAR	**Makanchi Array**	**67.06**	**329**	P	**P**	**23 33 59.3**	**+0.2**
	2.5nm,0.8s,baz=127,slow=7.4,SNR=11						
ZALV	**Zalesovo Beam**	**70.95**	**336**	P	**P**	**23 34 22.3**	**-0.8**
	0.7nm,0.4s,baz=132,slow=4.2,SNR=6.4						

IDC ***04*** *23:24:00.1±3.1, 32°.18S×178°.47W, h0^{km}, mb3.8/2, mb1 4.0/3, mb1mx3.5/31, mbtmp3.8/3, ML3.3/1, Error ellipse: s-maj=72.3km s-min=37.3km az=112.0*

NEIC ***04*** *23:24:01.0±1.8, 32°.38S±0°.08×178°.3W±0°.2, h11^{km}±9^{km}, mb4.4/11, Error ellipse: s-maj=27.1km s-min=5.7km az=113.0*

ISC 04 23:24:03.2±1.1**, 32°.34S**±0°.09×**178°.3W**±0°.2**, h33^{km}, n22, σ1^{s}.24**/24**, mb4.2**/8**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.09**	**6**	Pn	**Pn**	**23 24 50.3**	**+0.7**
MXZ	**Matakaoa Point**	**5.92**	**207**	Pn	**Pn**	**23 25 27.1**	**-1.4**
URZ	**Urewera**	**7.01**	**211**	Pn	**Pn**	**23 25 44.9**	**+1.4**
	0.6nm,0.3s,baz=307,slow=20,SNR=2.9						
URZ				Sn	**Sn**	**23 27 04.5**	**+2.5**
	2.3nm,0.3s,baz=118,slow=23,SNR=6.2						
URZ	**Urewera**	**7.01**	**211**		**Pn**	**23 25 42.7**	**-0.8**
URZ				Sn	**Sn**	**23 27 01.8**	**-0.2**
OUZ	**Omahuta**	**7.36**	**245**	Pn	**Pn**	**23 25 47.1**	**-1.1**
BKZ	**Black Stump Fm**	**8.03**	**210**	Pn	**Pn**	**23 25 56.8**	**-0.9**
KHZ	**Kahutara**	**11.98**	**211**	Pn	**Pn**	**23 26 50.1**	**-1.5**
NIUE	**Niue**	**15.19**	**32**	Pn	**Pn**	**23 27 36.0**	**+0.7**
ODZ	**Otahua Downs**	**15.34**	**211**	Pn	**Pn**	**23 27 33.9**	**-3.2**
ODZ				IAmb	IAmb	23 27 34.8	
	comp=Z,18nm,1.1s						
KNTN	**Kanton**	**30.04**	**13**	P	**P**	**23 30 08.7**	**-0.6**
CTAO	**Charters Tower**	**33.93**	**282**	P	**P**	**23 30 43.5**	**+0.1**
CTAO				IAmb	IAmb	23 30 47.3	
	comp=Z,7.3nm,1.1s						
BBOO	**Buckleboo**	**38.26**	**257**	P	**P**	**23 31 19.6**	**-0.7**
BBOO				IAmb	IAmb	23 31 35.7	
	comp=Z,8.1nm,1.1s						
ASAR	**Alice Springs**	**42.81**	**269**	P	**P**	**23 31 58.4**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=104,slow=7.5,SNR=4.2						
ASAR	**Alice Springs**	**42.81**	**269**	P	**P**	**23 31 59.1**	**+1.0**
WR0	**Warramunga Arr**	**43.79**	**274**	P	**P**	**23 32 07.1**	**+1.0**
WR0				IAmb	IAmb	23 32 21.0	
	comp=Z,1.9nm,0.8s						
WB2	**Warramunga Arr**	**43.96**	**274**	P	**P**	**23 32 08.4**	**+1.0**
WB2				IAmb	IAmb	23 32 23.4	
	comp=Z,2.1nm,0.9s						
WRA	**Warramunga Arr**	**43.97**	**274**	P	**P**	**23 32 08.0**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=114,slow=7.9,SNR=9.3						
WRA	**Warramunga Arr**	**43.97**	**274**	P	**P**	**23 32 07.5**	**0.0**
WB0	**Warramunga Arr**	**44.00**	**275**	P	**P**	**23 32 08.6**	**+0.8**
FORT	**Forrest**	**45.35**	**257**	P	**P**	**23 32 18.8**	**+0.4**
FORT				IAmb	IAmb	23 32 33.2	
	comp=Z,20nm,1.0s						
FAKI	**Fak Fak**	**54.81**	**292**	P	**P**	**23 33 31.1**	**+0.8**
FAKI				IAmb	IAmb	23 33 43.7	
	comp=Z,9.7nm,0.9s						
FINES	**FINESS Array B**	**146.87**	**339**	PKPbc	**PKPbc**	**23 43 42.0**	**+0.7**
	comp=Z,11nm,1.1s,baz=36,slow=2.6,SNR=5.0						

TUL ***04*** *23:25:24.6±1.6, 36°.62N±0°.01×98°.05W±0°.02, h6^{km}±3^{km}, ML2.9, mb_Lg2.1/1(NEIC), Error ellipse: s-maj=1.9km s-min=1.5km az=85.0*

NEIC 04 23:25:24.5±1.0**, 36°.59N**±0°.01×**98°.04W**±0°.02**, h12^{km}**±4^{km}**, Error ellipse: s-maj=2.7km s-min=1.4km az=117.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.09**	**153**		Pg	23 25 27.6	+0.3
CROK				Sg	Sg	23 25 29.6	+0.4
OK032	**Salt Plains WL**	**0.26**	**327**		Pg	23 25 29.5	-0.4
OK032				Sg	Sg	23 25 33.0	-0.4
GC02	**Grant County #**	**0.30**	**28**	Pg	Pg	23 25 30.5	-0.1
GC02				Sg	Sg	23 25 34.8	+0.1
KAN14	**Manchester OK**	**0.37**	**9**		Pg	23 25 31.8	-0.2
KAN10	**Anthony SW Sta**	**0.54**	**355**	Pg	Pg	23 25 34.5	-0.5
KAN01	**Argonia South**	**0.61**	**21**	Pg	Pg	23 25 36.0	-0.4
KAN13	**South Haven SW**	**0.62**	**46**	Pg	Pg	23 25 36.5	0.0
KAN16	**Harper SW Stat**	**0.64**	**358**	Pg	Pg	23 25 36.5	-0.4
KAN08	**Anthony NE Sta**	**0.64**	**5**	Pg	Pg	23 25 36.7	-0.3
KAN09	**Caldwell North**	**0.64**	**31**	Pg	Pg	23 25 36.8	-0.2
KAN06	**Argonia West S**	**0.67**	**12**	Pg	Pg	23 25 37.4	-0.2
BLOK	**Blackwell**	**0.68**	**75**	Pg	Pg	23 25 37.7	0.0
U32A	**Winter Ranch,**	**0.81**	**255**	Pg	Pg	23 25 39.8	-0.3
OK029	**Liberty Lake**	**0.92**	**149**		Pb	23 25 42.5	0.0
BCOK	**Bluff Creek, N**	**0.99**	**160**	Pg	Pg	23 25 43.6	-0.1
OK025	**Westminster Rd**	**1.15**	**150**		Pg	23 25 46.8	+0.1
OK031	**S. Brethren Rd**	**1.16**	**123**	Pg	Pg	23 25 46.8	+0.1
OK034	**N. Norfolk Rd.**	**1.22**	**118**		Pg	23 25 47.7	-0.1
OKCFA	**Oklahoma City**	**1.26**	**158**		Pn	23 25 47.6	-0.4
T35A	**Sooner Cattle**	**1.27**	**75**	Pn	Pb	23 25 48.3	0.0
R32A	**Long Quarter,**	**1.91**	**344**	Pn	Pb	23 25 58.3	-1.0
R32A					Pn	23 25 58.4	+1.5
TUL1	**Leonard**	**1.94**	**110**	Pn	Pb	23 25 59.0	-0.8
TUL1				IAmb_Lg		23 26 29.0	
	comp=Z,8.6nm,0.7s						
X34A	**Smith Ranch, M**	**1.99**	**175**	Pn	Pb	23 26 00.1	-0.6
LOOK	**Love County**	**2.68**	**165**	Pn	Pn	23 26 10.0	+2.5
Z35A	**Perchaven, San**	**3.31**	**169**	Pn	Pn	23 26 16.4	+0.1
Z35A				Pg	Pb	23 26 24.2	+1.0

PRE ***04*** *23:44:00.8±1.1, 30°.74S×19°.90E, h5^{km}, ML3.4*

ISC 04 23:44:00.7±1.9**, 30°.73S**±0°.04×**19°.95E**±0°.06**, h3^{km}**±16^{km}**, n26, σ1^{s}.88**/38**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CVNA	**Calvinia**	**0.77**	**192**	*e*P	**Pg**	**23 44 14.9**	**-0.6**
CVNA				*e*S	**Sg**	**23 44 25.3**	**-0.2**
CVNA				IAML		23 44 25.4	
	comp=Z,2μm,0.4s						
AUGR	**Augrabies**	**2.15**	**9**	*e*P	**Pn**	**23 44 38.0**	**+0.5**
AUGR				*e*S	**Sn**	**23 45 05.4**	**+0.6**
AUGR				IAML		23 45 13.4	
	comp=Z,307nm,0.3s						
KEIM	**Keimoes**	**2.20**	**24**	*e*P	**Pn**	**23 44 39.7**	**+1.4**
KEIM				*e*S	**Sn**	**23 45 06.2**	**+0.2**
KEIM				IAML		23 45 15.1	
	comp=Z,320nm,0.3s						
KOMG	**Komaggas**	**2.33**	**293**	*e*P	**Pn**	**23 44 40.6**	**+0.6**
KOMG				*e*S	**Sn**	**23 45 08.1**	**-1.1**
KOMG				IAML		23 45 10.9	
	comp=Z,265nm,0.4s						
GRAN	**Grantham**	**2.46**	**130**	*e*P	**Pn**	**23 44 43.6**	**+1.8**
GRAN				*e*S	**Sn**	**23 45 14.0**	**+1.5**
GRAN				IAML		23 45 22.1	
	comp=Z,491nm,0.2s						
PKA	**Prieska**	**2.65**	**67**	*e*P	**Pn**	**23 44 46.4**	**+2.0**
PKA				*e*S	**Sn**	**23 45 18.1**	**+1.0**
PKA				IAML		23 45 28.3	
	comp=Z,82nm,0.1s						
ARMS	**Ukamas**	**2.68**	**356**	*e*P	**Pn**	**23 44 45.7**	**+0.8**
ARMS				*e*S	**Sn**	**23 45 18.8**	**+0.9**
ARMS				IAML		23 45 29.9	
	comp=Z,492nm,0.3s						
ELIM	**Elim**	**3.86**	**183**	*e*P	**Pn**	**23 45 01.1**	**+0.1**
ELIM				*e*S	**Sn**	**23 45 45.5**	**-1.5**
ELIM				IAML		23 46 00.5	
	comp=Z,118nm,0.2s						
BOSA	**Boshof**	**5.07**	**67**	*i* P	**Pn**	**23 45 20.7**	**+2.9**
BOSA	**Boshof**	**5.07**	**67**	*i* P	**Pn**	**23 45 20.7**	**+2.9**
ROSN	**Rosenhof**	**5.14**	**132**	*e*P	**Pn**	**23 45 20.2**	**+1.7**
ROSN				*e*S	**Sn**	**23 46 17.4**	**-0.9**
ROSN				IAML		23 46 48.6	
	comp=Z,448nm,0.4s						
AUSN	**Aus**	**5.18**	**320**	*e*P	**Pn**	**23 45 20.0**	**+0.7**
AUSN				*e*S	**Sn**	**23 46 17.5**	**-2.3**
AUSN				IAML		23 46 47.5	
	comp=Z,40nm,0.5s						
SWZ	**Schweizer**	**5.89**	**54**	*e*P	**Pn**	**23 45 30.7**	**+1.6**
SWZ				*e*S	**Sn**	**23 46 35.1**	**-2.0**
SWZ				IAML		23 47 11.7	
	comp=Z,72nm,0.6s						
PRYS	**Parys**	**7.52**	**62**	*e*P	**Pn**	**23 45 52.5**	**+1.1**
PRYS				*e*S	**Sn**	**23 47 14.4**	**-2.9**
PRYS				IAML		23 47 21.3	
	comp=Z,13nm,0.7s						
LBTB	**Lobatse**	**7.57**	**43**	*i* P	**Pn**	**23 45 54.4**	**+2.3**
LBTB	**Lobatse**	**7.57**	**43**	*i* P	**Pn**	**23 45 54.4**	**+2.3**
CNG	**Changalane**	**11.63**	**71**	*i* P	**Pn**	**23 46 48.4**	**+0.8**
CNG	**Changalane**	**11.63**	**71**	*i* P	**Pn**	**23 46 48.4**	**+0.8**
MSNA	**Messina**	**12.28**	**50**	*i* P	**Pn**	**23 46 58.9**	**+2.4**
MSNA				*i* S	Sn	23 49 03.8	-10
MSNA	**Messina**	**12.28**	**50**	*i* P	**Pn**	**23 46 58.9**	**+2.4**
MSNA				*i* S	Sn	23 49 03.8	-10
MOPA	**Mopani**	**12.46**	**58**	*i* P	**Pn**	**23 46 59.5**	**+0.4**
MOPA				*i* S	Sn	23 49 07.8	-11
MOPA	**Mopani**	**12.46**	**58**	*i* P	**Pn**	**23 46 59.5**	**+0.4**
MOPA				*i* S	Sn	23 49 07.8	-11
BLWY	**Bulawayo**	**13.12**	**39**	*i* P	**Pn**	**23 47 11.5**	**+3.4**
BLWY	**Bulawayo**	**13.12**	**39**	*i* P	**Pn**	**23 47 11.5**	**+3.4**
KRI	**Karoi**	**16.40**	**35**	*i* P	**Pn**	**23 47 49.7**	**-2.5**
KRI	**Karoi**	**16.40**	**35**	*i* P	**Pn**	**23 47 49.7**	**-2.5**

IDC ***04*** *23:48:48.1±1.0, 46°.25N×153°.06E, h0^{km}, mb3.9/15, mb1 4.1/16, mb1mx3.9/35, mbtmp3.9/16, ML2.6/1, Error ellipse: s-maj=28.0km s-min=18.4km az=173.0*

NEIC ***04*** *23:48:52±1.4, 46°.3N±0°.1×153°.1E±0°.2, h23^{km}±6^{km}, mb4.3/16, Error ellipse: s-maj=19.5km s-min=13.2km az=148.0*

ISC 04 23:48:53.9±0.8**, 46°.3N**±0°.1×**153°.1E**±0°.1**, h40^{km}, n47, σ1^{s}.06**/41**, mb4.1**/23**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PEA0B	**Petropavlovsk-**	**7.46**	**22**	Pn	**Pn**	**23 50 39.6**	**-0.3**
PETK	**Petropavlovsk-**	**7.46**	**22**	Pn	**Pn**	**23 50 38.7**	**-1.2**
	0.5nm,0.3s,baz=186,slow=12,SNR=8.9						
H11N2	**WAKE ISLAND Hy**	**28.81**	**152**	T	T	00 24 43.4	
	baz=341						
H11N1	**WAKE ISLAND Hy**	**28.83**	**152**	T	T	00 24 43.4	
	baz=341,SNR=5.7						
H11N3	**WAKE ISLAND Hy**	**28.83**	**152**	T	T	00 24 45.2	
	baz=341						
H11S1	**WAKE ISLAND Hy**	**29.90**	**153**	T	T	00 26 07.1	
	baz=341						
H11S3	**WAKE ISLAND Hy**	**29.91**	**153**	T	T	00 26 06.6	
	baz=341,SNR=4.5						
H11S2	**WAKE ISLAND Hy**	**29.92**	**153**	T	T	00 26 11.0	
	baz=341						
SONM	**Songino Array**	**31.47**	**290**	P	**P**	**23 55 11.9**	**+0.3**
	0.2nm,0.6s,baz=99,slow=9.3,SNR=2.1						
SONM	**Songino Array**	**31.47**	**290**	P	**P**	**23 55 11.8**	**+0.2**
TLY	**Talaya**	**32.38**	**298**	P	**P**	**23 55 17.7**	**-1.7**

```
TTA   Tatalina          32.78  41  P      P       23 55 20.2 -2.7
TTA                                IAmb   IAmb    23 55 38.2
      comp=Z,5.8nm,1.5s
L19K  White Mountain    33.25  42  P      P       23 55 28.8 +1.9
M19K  Big River Lodg    33.45  43  P      P       23 55 26.3 -2.3
MLY   Manley            35.29  38  P      P       23 55 44.5 -0.1
MLY                                IAmb   IAmb    23 55 45.2
      comp=Z,3.4nm,1.3s
TRF   Thorofare Moun    35.41  40  P      P       23 55 45.0 -0.7
NEA2  Nenana            35.98  38  P      P       23 55 51.8 +1.4
NEA2                               IAmb   IAmb    23 56 01.9
      comp=Z,3.7nm,1.1s
RND   Reindeer          36.05  40  P      P       23 55 49.5 -1.6
RND                                IAmb   IAmb    23 55 50.7
      comp=Z,7.3nm,1.4s
SML   Sawmill           36.32  43  P      P       23 55 54.2 +0.8
SML                                IAmb   IAmb    23 56 10.3
      comp=Z,8.4nm,1.0s
WRH   Wood River Hil    36.40  39  P      P       23 55 54.2 +0.2
WRH                                IAmb   IAmb    23 56 10.3
      comp=Z,5.3nm,1.4s
ILAR  Eielson Array     36.92  38  P      P       23 55 58.5 +0.1
      comp=Z,1.0nm,1.1s,baz=257,slow=8.1,SNR=5.1
ILAR  Eielson Array     36.92  38  P      P       23 55 57.4 -1.0
BMAR  Burnt Mountain    37.91  34  P      P       23 56 07.4 +0.5
BMRM  Bremner River     38.17  44  P      P       23 56 09.4 +0.3
SCRK  Sand Creek        38.20  39  P      P       23 56 09.4 -0.1
SCRK                               IAmb   IAmb    23 56 12.5
      comp=Z,5.0nm,1.4s
L27K  Beaver Creek,     39.24  41  P      P       23 56 19.4 +1.4
BCAR  Beaver Creek A    39.26  41  P      P       23 56 19.7 +1.5
EGAK  Eagle             39.38  38  P      P       23 56 19.1 +0.1
INK   Inuvik            42.05  32  P      P       23 56 41.5 +0.4
      comp=Z,1.2nm,0.8s,baz=278,slow=4.6,SNR=5.5
A36M  Sachs Harbour     44.28  26  P      P       23 57 00.7 +1.8
MK31  Makanchi Array    47.14 298  P      P       23 57 21.8 -0.2
MK31                               IAmb   IAmb    23 57 39.4
      comp=Z,5.9nm,1.4s
MKAR  Makanchi Array    47.14 298  P      P       23 57 21.5 -0.4
      comp=Z,1.0nm,0.8s,baz=72,slow=7.2,SNR=5.9
KURK  Kurchatov         47.61 304  P      P       23 57 25.7 +0.2
KURBB Kurchatov Arra    47.70 304  P      P       23 57 25.7 -0.5
      comp=Z,1.7nm,0.8s,baz=67,slow=8.5,SNR=8.1
ARCES ARCESS Array B    58.29 341  P      P       23 58 44.3 +0.3
      comp=Z,8.1nm,1.1s,baz=40,slow=8.6,SNR=2.4
COEN  Coen              60.62 191  P      P       23 58 59.8 -0.8
HRY   Holter Researc    61.28  51  P      P       23 59 03.2 -1.8
NVAR  Mina Array Bea    62.67  62  P      P       23 59 15.3 +0.8
      comp=Z,0.8nm,0.7s,baz=300,slow=6.0,SNR=4.1
FINES FINESS Array B    64.45 335  P      P       23 59 25.8 +0.2
      comp=Z,5.6nm,1.0s,baz=60,slow=4.6,SNR=7.0
PDAR  Pinedale Array    65.04  54  P      P       23 59 30.3 +0.2
      comp=Z,0.7nm,0.8s,baz=240,slow=3.0,SNR=6.0
NOA   NORSAR Array B    68.66 341  P      P       23 59 52.9 +0.3
      comp=Z,0.9nm,0.8s,baz=30,slow=6.6,SNR=3.8
KBZ   Khabaz            71.17 314  P      P       00 00 09.3 +1.1
      comp=Z,1.1nm,0.7s,baz=76,slow=8.3,SNR=1.5
ASAR  Alice Springs     71.76 198  P      P       00 00 11.9  0.0
      comp=Z,0.5nm,0.9s,baz=7.8,slow=5.2,SNR=4.2
AKASG Malin Array Be    71.92 326  P      P       00 00 12.8 +0.2
      comp=Z,2.4nm,0.5s,baz=34,slow=6.2,SNR=11
TXAR  Lajitas Array     77.74  60  P      P       00 00 47.1 +0.4
      comp=Z,0.9nm,0.6s,baz=302,slow=4.3,SNR=15
KHC   Kasperske Hory    78.65 334  eP     P       00 00 50.5 -0.9
GERES GERESS Array B    78.87 334  P      P       00 00 53.3 +0.7
      comp=Z,0.1nm,0.3s,baz=14,slow=6.2,SNR=4.2
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*IDC **05** 00:07:24.4±4.8, 59°.84S×26°.22W, h45^{km}±44^{km}, mb4.1/10, mb1 4.3/11, mb1mx4.1/19, mbtmp4.4/11, ML4.9/1, Error ellipse: s-maj=26.4km s-min=18.8km az=34.0*
*NEIC **05** 00:07:32.0±2.1, 59°.85S±0°.10×26°.4W±0°.2, h109^{km}±6^{km}, mb4.7/43, Error ellipse: s-maj=18.0km s-min=12.0km az=59.0*
ISC 05 00:07:30.5±0.5**, 59°.84S**±0°.09×**26°.27W**±0°.09**, h100**^{km}**, n77,** σ**1^{s}33**/60**, mb4.6**/28**, 1C-1D, South Sandwich Islands region**

```
Code  Station Name       Δ°   AZ°   Phase ID        Time       Res
                                    Op     ISC      h  m  s    ISC
HOPE  Hope Point         7.87 311  Pn     Pn      00 09 21.8 -0.2
VNA1  Neumayer--Stat    13.13 153  P      Pn      00 10 26.4 -6.2
VNA3  Neumayer Olymp    13.27 156  P      Pn      00 10 27.8 -6.8
VNA3                               S      Sn      00 12 45.1  -15
VNA2  Neumayer--Watz    13.53 153  P      Pn      00 10 30.9 -6.9
      baz=312,slow=16
VNA2                               S      Sn      00 12 52.8  -14
SNAA  Sanae             15.11 151  P      Pn      00 10 53.2 -5.1
SNAA                               S      Sn      00 13 30.9  -14
SNAA  Sanae             15.11 151  P      Pn      00 10 53.1 -5.1
      5.4nm,0.3s,baz=328,slow=14,SNR=129
SNAA                               S      Sn      00 13 25.5  -19
      0.2nm,0.3s,baz=350,slow=16,SNR=4.5
SNAA  Sanae             15.11 151  Pn     Pn      00 10 52.8 -5.5
SNAA                               IAmb   IAmb    00 10 55.9
      comp=Z,17nm,0.5s
PMSA  Palmer Station    18.03 238  P      Pn      00 11 34.6 +0.6
      comp=Z,1.7nm,0.3s,baz=98,slow=8.1,SNR=9.1
PMSA  Palmer Station    18.03 238  P      P       00 11 34.2 +1.0
EFI   East Falkland     19.50 281  P      P       00 11 48.9 -0.5
EFI                                IAmb   IAmb    00 11 55.3
      comp=Z,37nm,0.9s
USHA  Ushuaia           22.99 264  P      P       00 12 25.9 -0.4
      comp=Z,11nm,0.8s,baz=119,slow=8.1,SNR=7.5
MG02  Cerro Sombrero    24.47 268  P      P       00 12 38.2 -1.5
MG04  Isla Riesco       25.61 266  P      P       00 12 49.3 -0.8
MG05  Puerto Natales    26.76 267  P      P       00 12 58.8 -1.6
MG05                               IAmb   IAmb    00 12 59.5
      comp=Z,16nm,1.0s
GO09  Cerro Castillo    26.92 268  P      P       00 12 59.9 -2.0
GO09                               IAmb   IAmb    00 13 12.2
      comp=Z,17nm,1.1s
SYO   Syowa Base        28.41 136⇓ epP    pP      00 13 40.0 +4.7
SYO   Syowa Base        28.41 136⇑ esP    sP      00 13 51.0 +4.9
QSPA  South Pole Qui    30.40 180  P      P       00 13 33.8 +1.1
QSPA                               IAmb   IAmb    00 13 34.3
      comp=Z,6.0nm,0.7s
TRQA  Tornquist         31.40 298  P      P       00 13 41.4 -0.4
TRQA                               IAmb   IAmb    00 13 44.3
      comp=Z,14nm,0.8s
PLCA  Paso Flores       33.30 285  P      P       00 13 57.1 -1.2
      comp=Z,2.7nm,0.7s,baz=145,slow=7.6,SNR=12
PLCA  Paso Flores       33.30 285  IAmb   IAmb    00 13 57.6
      comp=Z,3.6nm,0.8s
PLTB  Pedras Altas      33.46 315  P      P       00 14 00.6 +0.8
PLTB                               IAmb   IAmb    00 14 02.7
      comp=Z,11nm,0.6s
LC01  Cunco             35.37 286  P      P       00 14 14.5 -1.6
LC01                               IAmb   IAmb    00 14 18.1
      comp=Z,7.4nm,0.6s
ITQB  Itaqui            36.46 312  P      P       00 14 26.9 +1.5
BO02  Sierra Bellavi    38.13 291  P      P       00 14 39.4 -0.3
BO02                               IAmb   IAmb    00 14 40.9
      comp=Z,6.6nm,0.7s
GO05  Huala             38.50 289  P      P       00 14 41.4 -1.3
BO01  Tunca             38.60 291  P      P       00 14 43.0 -0.5
BO01                               IAmb   IAmb    00 14 43.8
      comp=Z,13nm,1.1s
MT09  Talagante         39.06 292  P      P       00 14 46.5 -1.0
MT01  Popeta            39.11 291  P      P       00 14 46.6 -1.1
MT01                               IAmb   IAmb    00 14 49.6
      comp=Z,13nm,0.7s
PEL   Peldehue          39.44 292  P      P       00 14 50.2 -0.4
VA05  Santo Domingo     39.45 291  P      P       00 14 50.2 -0.3
MT02  Curacav           39.56 292  P      P       00 14 50.7 -0.8
MT02                               IAmb   IAmb    00 14 59.0
      comp=Z,12nm,0.7s
VA03  San Esteban       39.69 293  P      P       00 14 52.6 -0.1
CPUP  Villa Florida     39.74 314  P      P       00 14 53.5 +0.5
      comp=Z,6.5nm,0.7s,baz=151,slow=4.1,SNR=8.8
CPUP  Villa Florida     39.74 314  IAmb   IAmb    00 14 55.1
      comp=Z,8.6nm,1.1s
ZON   Zonda             39.85 296  P      P       00 14 54.4 +0.4
ZON                                IAmb   IAmb    00 14 56.3
      comp=Z,8.6nm,0.6s
VNDA  Vanda             42.80 183  P      P       00 15 19.4 +2.0
AC02  Maricunga         44.09 299  P      P       00 15 30.0 +1.1
AC02                               IAmb   IAmb    00 15 33.1
      comp=Z,5.2nm,0.7s
PB14  IPOC Station P    46.57 299  P      P       00 15 48.9 +0.5
PB14                               IAmb   IAmb    00 15 58.7
      comp=Z,13nm,1.1s
BOSA  Boshof            46.57  71  P      P       00 15 46.6 -1.5
      comp=Z,3.2nm,1.0s,baz=95,slow=7.7,SNR=3.8
BOSA  Boshof            46.57  71  P      P       00 15 48.1 -0.1
BDFB  Brasilia          46.91 331  P      P       00 15 49.3 -1.6
      comp=Z,1.7nm,0.6s,baz=181,slow=8.4,SNR=3.1
BDFB  Brasilia          46.91 331  IAmb   IAmb    00 15 53.3
      comp=Z,4.3nm,1.1s
PB09  IPOC Station P    48.55 302  P      P       00 16 03.8 +0.3
PB09                               IAmb   IAmb    00 16 11.8
      comp=Z,11nm,0.7s
PB07  IPOC Station P    48.89 302  P      P       00 16 05.9 -0.2
PB07                               IAmb   IAmb    00 16 08.8
      comp=Z,8.4nm,0.7s
PB01  IPOC Station P    49.32 302  P      P       00 16 08.7 -0.6
PB01                               IAmb   IAmb    00 16 12.1
      comp=Z,10nm,0.8s
CASY  Casey             50.17 159  P      P       00 16 16.9 +1.7
PTLB  Pontes e Lacer    50.40 317  P      P       00 16 16.4 -1.0
PTLB                               IAmb   IAmb    00 16 19.3
      comp=Z,3.2nm,0.7s
PB11  IPOC Station P    50.53 303  P      P       00 16 19.0 +0.4
PSGCX Pisagua           50.87 303  P      P       00 16 20.2 -0.9
PSGCX                              IAmb   IAmb    00 16 30.3
      comp=Z,6.3nm,1.0s
H10S2 ASCENSION HYDR51.53  15  T      T       01 12 05.9
      baz=33,slow=74,SNR=3.2
H10S3 ASCENSION HYDR51.53  15  T      T       01 12 05.1
      baz=187,slow=74,SNR=8.4
PB16  IPOC Station P    51.74 304  P      P       00 16 27.6 -0.5
PB12  IPOC Station P    51.83 303  P      P       00 16 28.0 -0.2
PB12                               IAmb   IAmb    00 16 32.1
      comp=Z,10nm,1.1s
H10N1 ASCENSION HYDR52.65  15  T      T       01 13 27.6
      baz=177
H10N3 ASCENSION HYDR52.65  15  T      T       01 13 29.6
      baz=177,slow=74,SNR=6.6
H10N2 ASCENSION HYDR52.66  15  T      T       01 13 28.4
      baz=177,slow=74,SNR=2.6
LPAZ  La Paz            53.01 307  P      P       00 16 36.7 -0.9
      comp=Z,3.0nm,0.5s,baz=79,slow=6.4,SNR=12
LPAZ  La Paz            53.01 307  P      P       00 16 37.8 +0.2
LPAZ                               IAmb   IAmb    00 16 41.5
      comp=Z,3.3nm,0.6s
SAML  Samuel            57.84 316  P      P       00 17 10.6 -0.9
LSZ   Lusaka            59.38  66  P      P       00 17 23.3 +1.0
TORD  Torodi Ar. Bea    76.15  28  P      P       00 19 07.8 +0.6
      comp=Z,2.6nm,0.6s,baz=201,slow=6.1,SNR=34
TORD  Torodi Ar. Bea    76.15  28  P      P       00 19 08.0 +0.8
CVTR  Volcan Turrial    83.22 303         pP      00 20 14.2 +2.9
STKA  Stephens Creek    88.07 170  P      P       00 20 10.3 +0.9
      comp=Z,0.8nm,0.4s,baz=289,slow=2.7,SNR=4.3
ASAR  Alice Springs     95.22 162  P      P       00 20 42.9 +0.2
      comp=Z,1.1nm,0.7s,baz=180,slow=3.9,SNR=23
WRA   Warramunga Arr    98.94 162  P      Pdif    00 20 58.5 -1.0
      comp=Z,0.3nm,0.8s,baz=201,slow=4.7,SNR=1.6
CMAR  Chiang Mai Arr   123.23 112  PKP    PKPdf   00 26 16.1 +0.9
      comp=Z,0.5nm,0.4s,baz=240,slow=3.2,SNR=4.3
FINES FINESS Array B   127.50  29  PKP    PKPdf   00 26 21.6 -0.3
      comp=Z,4.5nm,0.9s,baz=225,slow=10,SNR=3.7
FINES FINESS Array B   127.50  29  PKPdf  PKPdf   00 26 22.5 +0.6
ARCES ARCESS Array B   134.28  23  PKP    PKPdf   00 26 35.4 +0.8
      comp=Z,10nm,1.2s,baz=237,slow=1.3,SNR=5.4
YKA   Yellowknife Ar   139.26 315  PKP    PKPdf   00 26 43.9 -0.1
      comp=Z,1.1nm,0.8s,baz=135,slow=2.2,SNR=5.1
ZALV  Zalesovo Beam    143.48  68  PKhKP  PKPpre  00 26 49.1
      comp=Z,0.9nm,0.4s,baz=233,slow=4.9,SNR=6.4
INK   Inuvik           148.98 316  PKPbc  PKPbc   00 27 04.4 -0.4
      comp=Z,1.6nm,0.6s,baz=58,slow=3.9,SNR=11
SONM  Songino Array    150.27  92  PKPbc  PKPbc   00 27 09.5 +0.6
      comp=Z,3.7nm,0.9s,baz=217,slow=3.1,SNR=20
SONM  Songino Array    150.27  92         PKPbc   00 27 10.0 +1.1
ILAR  Eielson Array    152.88 306  PKPbc  PKPbc   00 27 13.8 -0.3
      comp=Z,0.8nm,0.6s,baz=318,slow=0.8,SNR=11
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*RSNC **05** 00:13:56.0±1.0, 4°.39N×76°.33W, h125^{km}±4^{km}, ML3.1, Mw3.6, Fault plane solution: NP1:ϕ_s88.00000°, δ35.00000°, λ-67.00000°.*
*IDC **05** 00:13:57.3±3.2, 4°.49N×76°.25W, h158^{km}±27^{km}, mb3.3/2, mb1 3.6/2, mb1mx3.1/23, mbtmp3.7/2, Error ellipse: s-maj=65.9km s-min=28.6km az=24.0*
ISC 05 00:13:54.5±0.9**, 4°.39N**±0°.03×**76°.38W**±0°.04**, h133**^{km}±6^{km}**, n32,** σ**1^{s}09**/57**, 7C-3D, Colombia**

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Code  Station Name       Δ°   AZ°   Phase ID        Time       Res
                                    Op     ISC      h  m  s    ISC
YOTC  Yotoco, Valle      0.40 176  eP     Pn      00 14 13.7 +0.1
YOTC                               eS     Sn      00 14 27.5 -0.6
PLMC  San Jos del P      0.52  10⇓ iP     Pn      00 14 14.0 -0.2
PLMC                               eS     Sn      00 14 29.3 +0.2
ANIL  Santa Ana          0.97  84⇓ iP     Pn      00 14 17.5 -0.3
ANIL                               eS     Sn      00 14 34.5 -0.9
PIZC  Pizarro, Choco     1.14 300⇓ iP     Pn      00 14 20.6 +1.6
PIZC                               eS     Sn      00 14 38.7 +1.0
PIZC                               i              00 14 42.6
      comp=Z,474nm,0.2s
ORTC  Ortega, Tolima     1.22 113⇑ iP     Pn      00 14 20.0 +0.1
ORTC                               eS     Sn      00 14 38.6 -0.6
ORTC                               i              00 14 40.2
      comp=Z,412nm,0.2s
GUY2C Guyana, Caldas     1.31  50  eP     Pn      00 14 21.8 +0.5
GUY2C                              eS     Sn      00 14 41.4 -0.1
GUY2C                              i              00 14 43.1
      comp=Z,318nm,0.6s
CBOC  Ciudad Bolivar     1.51  14⇑ eP     Pn      00 14 23.6 +0.4
CBOC                               eS     Sn      00 14 43.9 -1.1
CBOC                               i              00 14 51.7
      comp=Z,167nm,0.7s
MARP  Paez Belalcaza     1.59 165⇑ eP     Pn      00 14 24.9 +0.8
MARP                               eS     Sn      00 14 46.5 -0.2
MARP                               i              00 14 48.4
      comp=Z,127nm,0.2s
PRAC  Prado              1.63 114⇑ iP     Pn      00 14 24.8 +0.5
PRAC                               eS     Sn      00 14 46.8 -0.3
PRAC                               i              00 14 49.7
      comp=Z,306nm,0.4s
POPC  Popayan, Colom     1.86 189  eP     Pn      00 14 27.3 +0.1
POPC                               eS     Sn      00 14 51.4 -0.9
POPC                               i              00 14 53.4
      comp=Z,77nm,0.3s
NORC  Norcasia           1.90  52  eP     Pn      00 14 28.0 +0.5
NORC                               eS     Sn      00 14 52.0 -0.8
NORC                               i              00 14 54.4
      comp=Z,63nm,0.4s
BETC  Betania            1.93 151  eP     Pn      00 14 28.4 +0.5
BETC                               eS     Sn      00 14 53.1 -0.4
BETC                               i              00 14 54.4
      comp=Z,213nm,0.4s
HELC  Santa Helena       1.98  25  eP     Pn      00 14 29.2 +0.3
HELC                               eS     Sn      00 14 55.3 +0.3
HELC                               i              00 14 58.7
      comp=Z,45nm,0.5s
PCON  Cinco Dias         2.04 181⇑ eP     Pn      00 14 31.0 +1.2
PCON                               eS     Sn      00 14 57.7 +1.0
PCON                               i              00 15 00.4
      comp=Z,113nm,0.5s
ROSC  El Rosal           2.10  77  P      Pn      00 14 32.2 +1.9
      comp=Z,31nm,0.3s,baz=196,slow=2.3,SNR=28
ROSC                               S      Sn      00 15 00.5 +3.0
      comp=Z,18nm,0.3s,baz=159,slow=15,SNR=6.1
ROSC  El Rosal           2.10  77  eP     Pn      00 14 31.7 +1.5
ROSC                               eS     Sn      00 14 59.8 +2.2
ROSC                               i              00 15 05.4
      comp=Z,58nm,0.8s
SOLC  Bahia Solano       2.10 331  eS     Sn      00 14 57.4 +0.4
SOTA  Rioblanco          2.25 186  eP     Pn      00 14 32.6 +0.4
SOTA                               eS     Sn      00 15 01.1  0.0
GARC  Garzon, Huila      2.35 158⇑ eP     Pn      00 14 33.4 +0.1
GARC                               eS     Sn      00 15 01.4 -1.6
GARC                               i              00 15 03.9
      comp=Z,151nm,0.3s
BBAC  Balboa, Cauca      2.50 200  eS     Sn      00 15 06.7 +0.3
SPBC  San Pablo de B     2.62  61  eP     Pn      00 14 37.5 +1.1
SPBC                               eS     Sn      00 15 07.4 -1.2
DBBC  Dabeiba            2.62   4  eP     Pn      00 14 37.5 +1.0
VILC  Villavicencio,     2.69  96  eP     Pn      00 14 38.8 +1.5
VILC                               eS     Sn      00 15 12.7 +2.4
PTBC  PUERTO BERRIO,     2.87  42  eP     Pn      00 14 40.2 +0.6
PTBC                               eS     Sn      00 15 12.5 -1.8
PTBC                               i              00 15 19.9
      comp=Z,23nm,0.4s
PTAC  Punta Ardita,      3.09 333  eP     Pn      00 14 43.2 +0.8
PTAC                               eS     Sn      00 15 18.1 -1.5
MACC  Macarena, Meta     3.36 131⇑ eP     Pn      00 14 45.9 -0.1
ZARC  Zaragoza, Cauc     3.44  26  eP     Pn      00 14 47.6 +0.6
ZARC                               eS     Sn      00 15 27.2 -0.3
ZARC                               i              00 15 27.8
      comp=Z,34nm,0.3s
UREC  San Jos de Ur      3.45  14  eP     Pn      00 14 47.6 +0.4
UREC                               eS     Sn      00 15 27.6 -0.2
RUSC  La Rusia           3.60  65  eP     Pn      00 14 50.7 +1.1
RUSC                               eS     Sn      00 15 29.6 -2.5
TXAR  Lajitas Array     35.83 317  P      P       00 20 42.0 +0.4
      comp=Z,0.6nm,0.6s,baz=141,slow=9.8,SNR=9.4
TORD  Torodi Ar. Bea    77.41  78  P      P       00 25 34.6 -1.0
      comp=Z,0.9nm,0.9s,baz=286,slow=7.1,SNR=1.5
ASAR  Alice Springs    145.07 234  PKPbc  PKPbc   00 33 16.4 -0.3
      comp=Z,0.2nm,0.5s,baz=130,slow=3.6,SNR=4.8
```

INET 05 00:15:42.3, 12°.16N×88°.01W, h15^{km}, MD3.4, ML4.5, Off coast of central America

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*IDC **05** 00:24:27.4±1.3, 17°.20S×65°.17W, h0^{km}, mb3.7/2, mb1 4.0/5, mb1mx3.8/26, mbtmp3.9/5, ML4.0/3, Error ellipse: s-maj=31.4km s-min=16.3km az=172.0*
*VAO **05** 00:24:33.1±0.4, 17°.18S×65°.17W, h91^{km}±5^{km}, mb4.0*
ISC 05 00:24:27.9±0.7**, 17°.21S**±0°.09×**65°.18W**±0°.06**, h10**^{km}**, n35,** σ**2^{s}01**/37**, Central Bolivia**

```
Code  Station Name       Δ°   AZ°   Phase ID        Time       Res
                                    Op     ISC      h  m  s    ISC
LPAZ  La Paz             2.98 287  Pn     Pn      00 25 18.3 +2.5
      17nm,0.3s,baz=109,slow=7.7,SNR=136
LPAZ                               Pg     Pb      00 25 21.4  0.0
      25nm,0.3s,baz=124,slow=11,SNR=99
LPAZ                               Lg     Lg      00 25 58.6
      98nm,0.3s,baz=33,slow=14,SNR=14
LPAZ  La Paz             2.98 287  eP     Pn      00 25 18.6 +2.8
SIV   San Ignacio        4.12  74  Pn     Pn      00 25 33.6 +2.6
      6.6nm,0.3s,baz=267,slow=9.9,SNR=31
SIV                                Sn     Sn      00 26 22.7 +3.5
      22nm,0.3s,baz=223,slow=7.5,SNR=3.9
SIV                                Lg     Lg      00 26 38.1
      61nm,0.3s,baz=335,slow=22,SNR=29
PTLB  Pontes e Lacer     6.05  74  eP     Pn      00 25 58.6 +1.0
VILB  Vilhena            6.40  49  eP     Pn      00 26 06.5 +4.2
ETMB  Extrema            7.42 352  eP     Pn      00 26 17.6 +1.4
SALV  Santo Antonio      9.19  83  eP     Pn      00 26 43.9 +3.3
PP1B  Ponte de Pedra     9.84  94  eP     Pn      00 26 51.7 +2.2
PDRB  Porto dos Gac      9.89  57  eP     Pn      00 26 52.2 +1.9
CLDB  Colider           11.06  57  eP     Pn      00 27 08.6 +2.3
CPUP  Villa Florida     11.64 143  eP     Pn      00 27 16.5 +2.4
CZSB  Cruzeiro do Su    11.95 321  eP     Pn      00 27 20.2 +1.8
ARAG  Araguaiana, MT    12.91  85  eP     Pn      00 27 32.9 +1.3
TRCB  Terra Rica        13.03 117  eP     Pn      00 27 34.9 +1.6
TBTG  Tabatinga, AM     13.75 340  eP     Pn      00 27 43.6 +0.5
PCMB  Pacaembu          13.84 111  eP     Pn      00 27 45.3 +1.1
NPGB  Novo Progresso    13.93  45  eP     Pn      00 27 46.1 +0.6
ITRB  Iturama           14.28 102  eP     Pn      00 27 50.9 +0.6
SNDB  Serra Nova Dou    14.40  71  eP     Pn      00 27 52.5 +0.4
MACA  Manacapuru-AM     14.64  18  eP     Pn      00 27 55.7 +0.5
ITTB  Itaituba          15.76  37  eP     Pn      00 28 08.7 -1.5
BB19B Bebedouro         16.19 106  eP     Pn      00 28 14.7 -1.0
IPMB  Ipameri, GO       16.19  95  eP     Pn      00 28 15.2 -0.6
CPSB  Cacapava Do Su    16.95 143  eP     Pn      00 28 24.4 -0.8
TIJ01 Guaruva-PR        17.09 121  eP     Pn      00 28 26.2 -1.0
PEXB  Peixe             17.09  75  eP     Pn      00 28 26.5 -0.7
PTGA  Pitinga           17.16  18  P      Pn      00 28 27.2 -0.8
      0.7nm,0.3s,baz=330,slow=23,SNR=4.7
PLTB  Pedras Altas      17.89 146  eP     Pn      00 28 35.4 -1.6
SMTB  Santa Maria do    19.02  66  eP     P       00 28 47.7 -2.5
PARB  Paraibuna         19.32 112  eP     P       00 28 50.7 -2.8
MCPB  Macapa, AP        21.14  39  eP     P       00 29 10.6 -2.7
OTAV  Otavalo           21.71 322  eP     P       00 29 16.6 -3.3
PLCA  Paso Flores       23.90 190  P      P       00 29 42.9 +0.9
      1.0nm,0.6s,baz=357,slow=7.4,SNR=3.8
TORD  Torodi Ar. Bea    72.58  70  P      P       00 35 56.4 +0.4
      1.1nm,0.8s,baz=263,slow=5.5,SNR=5.5
WRA   Warramunga Arr   138.40 208  PKP    PKPdf   00 43 55.9 +1.3
      0.4nm,1.0s,baz=142,slow=1.9,SNR=2.1
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*NEIC **05** 00:27:32.5±0.8, 18°.01N±0°.05×145°.7E±0°.2, h228^{km}±10^{km}, mb4.0/14, Error ellipse: s-maj=24.8km s-min=5.6km az=80.0*
*IDC **05** 00:27:32.1±7.3, 17°.98N×145°.75E, h232^{km}±71^{km}, mb3.5/16, mb1 3.7/16, mb1mx3.3/60, mbtmp4.1/16, Error ellipse: s-maj=20.9km s-min=13.0km az=84.0*
ISC 05 00:27:33.9±0.6**, 17°.94N**±0°.08×**145°.7E**±0°.1**, h250**^{km}**, n35,** σ**0^{s}78**/31**, mb3.8**/23**, Mariana Islands**

```
Code  Station Name       Δ°   AZ°   Phase ID        Time       Res
                                    Op     ISC      h  m  s    ISC
GUMO  Guam               4.40 190  S      S       00 29 34.6 -2.4
      8.9nm,0.3s,baz=5.9,slow=19,SNR=1.6
JMZ   Minamidaito 2     15.52 303  P      P       00 30 58.9 -0.6
YHNB  Yeheng            23.58 291  P      P       00 32 23.2 +0.7
KLR   Kul'dur           33.18 343  P      P       00 33 45.9 -1.1
      1.1nm,0.4s,baz=151,slow=10,SNR=5.2
MTN   Manton Dam        33.79 206  P      P       00 33 52.9 +0.3
MTN                                IAmb   IAmb    00 34 02.1
      comp=Z,5.8nm,1.1s
KNRA  Kununurra         37.33 208  P      P       00 34 23.2 +0.5
KNRA                               IAmb   IAmb    00 34 32.5
      comp=Z,12nm,1.1s
WB0   Warramunga Arr    39.08 197  P      P       00 34 37.6 +0.4
WB0                                IAmb   IAmb    00 34 51.3
      comp=Z,3.5nm,1.1s
WB2   Warramunga Arr    39.25 197  P      P       00 34 39.4 +0.7
WB2                                IAmb   IAmb    00 34 56.4
      comp=Z,3.6nm,1.1s
WRA   Warramunga Arr    39.26 197  P      P       00 34 38.5 -0.1
      comp=Z,0.5nm,0.4s,baz=16,slow=8.5,SNR=20
WRA                                PcP    PcP     00 36 42.0 -0.3
      comp=Z,0.2nm,0.3s,baz=14,slow=3.4,SNR=1.6
WRA   Warramunga Arr    39.26 197  IAmb   IAmb    00 34 39.6
      comp=Z,0.1nm,1.0s
SMY   Shemya            41.22  26  P      P       00 34 54.2 -0.1
ASAR  Alice Springs     42.92 196  P      P       00 35 08.4  0.0
      comp=Z,0.2nm,0.4s,baz=19,slow=6.6,SNR=5.4
SONM  Songino Array     43.72 322  P      P       00 35 14.9 +0.2
      comp=Z,0.9nm,0.6s,baz=132,slow=8.2,SNR=8.6
SONM  Songino Array     43.72 322  IAmb   IAmb    00 35 21.1
      comp=Z,0.5nm,1.0s
CMAR  Chiang Mai Arr    44.29 278  P      P       00 35 20.9 +1.5
      comp=Z,3.2nm,1.0s,baz=72,slow=7.8,SNR=6.4
DZM   Mont Dzumac       44.66 152  P      P       00 35 23.7 +1.4
DZM                                IAmb   IAmb    00 35 24.9
      comp=Z,10nm,1.1s
ZAA0  Zalesovo Array    58.60 323  P      P       00 37 04.9 +0.3
ZALV  Zalesovo Beam     58.60 323  P      P       00 37 04.7 +0.1
      comp=Z,0.8nm,0.5s,baz=103,slow=6.8,SNR=5.2
MK31  Makanchi Array    58.97 314  P      P       00 37 07.8 +0.5
MK31                               IAmb   IAmb    00 37 12.9
      comp=Z,2.8nm,1.1s
MKAR  Makanchi Array    58.97 314  P      P       00 37 07.7 +0.4
      comp=Z,0.6nm,0.5s,baz=93,slow=8.0,SNR=11
MAKZ  Makanchi          59.18 314  P      P       00 37 08.8 +0.1
MAKZ                               IAmb   IAmb    00 37 25.1
      comp=Z,5.7nm,1.1s
KURK  Kurchatov         61.81 318  P      P       00 37 26.1 -0.3
KURBB Kurchatov Arra    61.86 318  P      P       00 37 26.1 -0.6
      comp=Z,2.8nm,0.6s,baz=93,slow=7.4,SNR=33
NRIK  Noril'sk          62.31 340  P      P       00 37 29.7 +0.4
      comp=Z,1.4nm,0.6s,baz=133,slow=9.4,SNR=4.8
ILAR  Eielson Array     64.33  26  P      P       00 37 41.9 -0.9
      comp=Z,0.5nm,0.5s,baz=249,slow=6.1,SNR=10
BVAR  Borovoye Array    67.04 321  P      P       00 38 00.3 +0.2
      comp=Z,1.9nm,0.5s,baz=152,slow=6.7,SNR=19
INK   Inuvik            70.08  23  P      P       00 38 18.6 +0.1
      comp=Z,2.1nm,0.6s,baz=288,slow=6.6,SNR=11
INK   Inuvik            70.08  23  IAmb   IAmb    00 38 22.1
      comp=Z,2.2nm,1.1s
YKA   Yellowknife Ar    78.67  28  P      P       00 39 08.1 +0.1
      comp=Z,1.5nm,0.7s,baz=289,slow=4.7,SNR=5.1
ARCES ARCESS Array B    83.20 342  P      P       00 39 31.1 -0.7
      comp=Z,4.3nm,1.0s,baz=79,slow=9.3,SNR=1.4
NVAR  Mina Array Bea    83.63  52  P      P       00 39 35.4 +0.4
      comp=Z,1.2nm,0.7s,baz=266,slow=5.1,SNR=6.3
FINES FINESS Array B    87.56 335  P      P       00 39 52.1 -1.3
      comp=Z,4.1nm,1.0s,baz=86,slow=7.5,SNR=4.6
OKC   Ostrava-Krasne    98.17 329  AMS    AMS     00 40 30.0
      comp=Z,6µm,19.7s
DPC   Dobruska-Polom    98.72 330  AMS    AMS     00 40 40.0
      comp=Z,8µm,16.6s
LPAZ  La Paz           147.68  92  PKPbc  PKPbc   00 46 50.6  0.0
      comp=Z,0.6nm,0.6s,baz=348,slow=9.3,SNR=1.9
```

NNC 05 00:29:40.0±8.1,37°.84N×72°.09E,h0km,mb3.6,mpv3.2, 3C-2D,Error ellipse: s-maj=62.7km s-min=40.0km az=163.0,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.13	20	⇑S	Sn	00 32 00.3	+2.1
	4.4nm,0.7s						
KK07	Karatay Array	5.38	347	⇓P	Pn	00 31 02.8	+1.4
	1.4nm,0.4s,baz=158,slow=12						
KK07				⇑S	Sn	00 32 04.0	-0.1
	10.0nm,0.6s,baz=162,slow=22						
TKM2	Tokmak 2	5.73	27	⇑P	Pn	00 31 05.7	-0.9
	1.1nm,0.5s						
TKM2				⇓S	Sn	00 32 14.9	+1.7
	2.6nm,0.7s						
AB31	Akbulak array	14.39	326	P	Pn	00 33 01.3	-3.5
	0.5nm,0.5s,baz=136,slow=11,SNR=11						

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*NEIC **05** 00:37:32.2±1.5,58°.09N±0°.04×155°.41W±0°.08, h130km±6km,Error ellipse: s-maj=8.2km s-min=2.3km az=132.0*

*AEIC **05** 00:37:33±1.6,58°.06N±0°.04×155°.35W±0°.09,h124km±6km, ML3.3,ML3.5/66(NEIC),Error ellipse: s-maj=8.3km s-min=2.3km az=125.0*

*IDC **05** 00:37:33.6±7.9,58°.50N×155°.65W,h108km±73km,mb3.0/2, mb1 3.5/5,mb1mx2.9/61,mbtmp3.7/5,ML3.9/3,Error ellipse: s-maj=59.8km s-min=36.1km az=23.0*

ISC 05 00:37:31.9±0.8,**58°.13N**±0°.04×**155°.42W**±0°.05, **h125**km±8km,**n247,**σ1ˢ.07/252,**Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KABU	Katmai Buttres	0.16	27		Pn	00 37 49.0	-0.1
KABU					Sn	00 38 01.6	-0.6
KELA	Mount Kelaz	0.35	331		Pn	00 37 51.1	+1.4
PLK2	Peulik 2	0.61	233		Pn	00 37 52.8	+1.7
PLK3	Peulik 3	0.64	226		Pn	00 37 53.0	+1.7
PLK3					Sn	00 38 07.1	+1.1
PLK5	Peulik 5	0.79	261		Pn	00 37 54.0	+1.6
PLBL	Peulik Blue Cr	0.86	241		Pn	00 37 54.7	+1.6
Q19K	Cape Douglas,	1.23	48		Pn	00 37 57.2	+0.6
Q19K					Sn	00 38 15.9	+0.5
Q19K				IAML		00 38 19.2	
	comp=N,1µm,1.1s						
Q19K	Cape Douglas,	1.23	48	P	Pn	00 37 57.3	+0.6
	baz=226						
Q19K				S	Sn	00 38 16.4	+1.0
	baz=226						
P18K	Big Mountain,	1.27	4		Pn	00 37 56.9	-0.2
P18K	Big Mountain,	1.27	4	P	Pn	00 37 57.1	0.0
	baz=183						
OHAK	Old Harbor	1.46	128		Pn	00 37 59.5	+0.3
OHAK					Sn	00 38 19.3	-0.6
OHAK				IAML		00 38 19.9	
	comp=E,983nm,0.4s						
OHAK	Old Harbor	1.46	128	P	Pn	00 37 59.5	+0.3
	baz=308						
OHAK				S	Sn	00 38 19.6	-0.3
	baz=308						
KDAK	Kodiak Island	1.55	102		Pn	00 38 00.7	+0.5
KDAK					Sn	00 38 21.8	+0.1
KDAK	Kodiak Island	1.55	102	IAML		00 38 23.2	
	comp=E,488nm,0.6s						
AUW	Augustine West	1.60	38		Pn	00 38 02.1	+1.3
AGU	Augustine-Summ	1.61	39		Pn	00 38 02.0	+1.0
AUQ	Augustine Qik'	1.61	39		Pn	00 38 02.2	+1.3
AUL	Augustine Lava	1.62	39		Pn	00 38 02.1	+1.1
AU22	Augustine Moun	1.64	40		Pn	00 38 02.3	+1.1
AU22					Sn	00 38 24.9	+1.2
SII	Sitkinak Islan	1.71	157		Pn	00 38 02.0	-0.1
SII					Sn	00 38 24.2	-0.9
SII	Sitkinak Islan	1.71	157	P	Pn	00 38 02.1	-0.1
	baz=338						
SII				S	Sn	00 38 24.5	-0.6
	baz=338						
O18K	Koktuh Hills	1.73	3		Pn	00 38 02.5	+0.2
O18K	Koktuh Hills	1.73	3	P	Pn	00 38 02.5	+0.2
	baz=182						
ANNE	Aniakchak Nort	1.88	231		Pn	00 38 03.8	-0.4
P19K	Oil Pt	1.90	36		Pn	00 38 05.5	+1.1
P19K	Oil Pt	1.90	36	P	Pn	00 38 05.5	+1.1
	baz=215						
OPT	Oil Point	1.90	36		Pn	00 38 05.5	+1.2
OPT	Oil Point	1.90	36	P	Pn	00 38 05.5	+1.2
	baz=215						
ANNW	Aniakchak Nort	1.91	233		Pn	00 38 05.3	+0.8
AZAC	Aniakchak	1.96	232		Pn	00 38 05.7	+0.5
ANPB	Aniakchak Plen	2.04	231		Pn	00 38 06.0	-0.1
O19K	Port Alsworth	2.15	15		Pn	00 38 07.8	+0.5
O19K				IAML		00 38 54.9	
	comp=E,193nm,0.5s						
O19K	Port Alsworth	2.15	15	P	Pn	00 38 08.0	+0.6
	baz=194						
ILS	Iliamna Low So	2.20	32		Pn	00 38 09.0	+0.9
ILSW	Iliamna Southw	2.20	31		Pn	00 38 08.8	+0.7
IVE	Iliamna Volcan	2.26	32		Pn	00 38 09.8	+0.9
CHIR	Chirikof Islan	2.32	183		Pn	00 38 08.9	-0.7
CHIR	Chirikof Islan	2.32	183		Sn	00 38 36.4	-2.0
CHIR	Chirikof Islan	2.32	183	IAML		00 38 37.0	
	comp=N,633nm,0.7s						
CHIR				IAML		00 38 37.7	
	comp=E,431nm,0.8s						
CHIR	Chirikof Islan	2.32	183	P	Pn	00 38 09.0	-0.5
	baz=3.7						
CHIR				S	Sn	00 38 36.4	-2.0
	baz=3.7						
O20K	Slope Mountain	2.43	35		Pn	00 38 12.0	+1.0
O20K	Slope Mountain	2.43	35	P	Pn	00 38 12.0	+1.0
	baz=216						
CHGN	Chignik	2.45	223		Pn	00 38 11.0	-0.2
CHGN					Sn	00 38 39.0	-2.4
CHGN				IAML		00 38 41.1	
	comp=N,354nm,0.1s						
CHGN				IAML		00 38 41.6	
	comp=E,439nm,0.1s						
CHGN	Chignik	2.45	223	P	Pn	00 38 11.0	-0.2
	baz=42						
HOM	Homer	2.49	50		Pn	00 38 13.0	+1.4
HOM					Sn	00 38 40.4	-1.8
HOM				IAML		00 38 44.2	
	comp=N,391nm,0.7s						
HOM				IAML		00 38 44.3	
	comp=E,341nm,0.4s						
HOM	Homer	2.49	50	P	Pn	00 38 13.3	+1.7
	baz=232						
CNPM	China Poot	2.58	55		Pn	00 38 13.8	+0.9
CNPM				IAML		00 38 45.2	
	comp=N,172nm,0.6s						
CNPM				IAML		00 38 45.7	
	comp=E,132nm,0.4s						
RED	Redoubt Volcan	2.67	29		Pn	00 38 15.0	+1.0
RSO	Redoubt South	2.71	29	Pn	Pn	00 38 15.4	+0.7
RDWB	Redoubt West	2.71	28		Pn	00 38 15.4	+0.8
N19K	Bonanza Creek	2.73	10		Pn	00 38 15.6	+0.7
N19K	Bonanza Creek	2.73	10	P	Pn	00 38 15.7	+0.7
	baz=190						
NCT	North Crescent	2.75	27		Pn	00 38 15.9	+0.8
VNHG	Veniaminof 1	2.80	228		Pn	00 38 16.2	+0.5
VNSG	Veniaminof 6	2.84	226		Pn	00 38 16.3	+0.1
DFR	Drift River	2.84	28		Pn	00 38 17.4	+1.2
BRLK	Bradley Lake	2.86	53		Pn	00 38 16.8	+0.3
BRLK	Bradley Lake	2.86	53	IAML		00 38 49.9	
	comp=N,137nm,0.3s						
BRLK				IAML		00 38 53.5	
	comp=E,112nm,0.5s						
BRSE	Bradley Lake S	2.91	54		Pn	00 38 18.1	+0.9
BRSE	Bradley Lake S	2.91	54	P	Pn	00 38 18.1	+0.9
	baz=237						
SVW2	Sparrevohn	2.98	358		Pn	00 38 18.3	+0.3
CAPN	Captain Cook N	3.42	38		Pn	00 38 26.0	+2.3
CAPN	Captain Cook N	3.42	38	P	Pn	00 38 26.0	+2.3
	baz=220						
SPWE	Spurr West	3.47	23		Pn	00 38 26.1	+1.6
BGL	Barrier Glacie	3.50	25		Pn	00 38 26.7	+1.9
SPCN	Chakachatna No	3.51	26		Pn	00 38 26.4	+1.4
SLKM	Skilak Lake	3.57	46		Pn	00 38 26.8	+0.9
SEW	Seward	3.66	55		Pn	00 38 28.0	+1.1
SEW	Seward	3.66	55	P	Pn	00 38 28.0	+1.1
	baz=238						
O22K	Cooper Landing	3.75	49		Pn	00 38 29.1	+1.0
O22K	Cooper Landing	3.75	49	P	Pn	00 38 29.1	+1.0
	baz=232						
M19K	Big River Lodg	3.82	7		Pn	00 38 30.1	+1.0
M19K	Big River Lodg	3.82	7	P	Pn	00 38 30.0	+1.0
	baz=188						
SDPT	Sand Point	3.94	227		Pn	00 38 30.7	0.0
SDPT	Sand Point	3.94	227	IAML		00 39 58.1	
	comp=N,99nm,3.2s						
SDPT	Sand Point	3.94	227	P	Pn	00 38 30.7	0.0
	baz=44						
CNBA	Chernabura Isl	4.04	217	Pn	Pn	00 38 32.7	+0.7
CNBA				IAML		00 39 09.0	
	comp=E,73nm,3.5s						
CNBA				IAML		00 39 13.6	
	comp=N,80nm,4.7s						
L19K	White Mountain	4.08	4		Pn	00 38 33.6	+1.1
L19K	White Mountain	4.08	4	P	Pn	00 38 33.4	+0.9
	baz=184						
RC01	Rabbit Creek A	4.14	42		Pn	00 38 34.0	+0.8
RC01	Rabbit Creek A	4.14	42	IAML		00 39 22.2	
	comp=E,95nm,0.2s						
RC01				IAML		00 39 22.3	
	comp=N,55nm,0.4s						
RC01	Rabbit Creek A	4.14	42	P	Pn	00 38 34.0	+0.8
	baz=226						
L20K	Farewell, AK	4.43	9		Pn	00 38 38.7	+1.5
L20K	Farewell, AK	4.43	9	P	Pn	00 38 38.7	+1.5
	baz=190						
PWL	Port Wells	4.53	50		Pn	00 38 38.6	+0.1
PWL	Port Wells	4.53	50	IAML		00 39 29.7	
	comp=N,74nm,0.3s						
PWL				IAML		00 39 32.1	
	comp=E,72nm,0.7s						
PMR	Palmer	4.70	40	Pn	Pn	00 38 41.7	+1.0
PMR				IAML		00 39 32.3	
	comp=N,30nm,0.7s						
PMR				IAML		00 39 35.5	
	comp=E,32nm,0.4s						
TT01	Tatalina	4.80	357		Pn	00 38 42.9	+0.8
KNK	Knik Glacier	4.82	44	Pn	Pn	00 38 42.5	+0.2
KNK				IAML		00 39 36.5	
	comp=N,57nm,0.7s						
KNK				IAML		00 39 39.8	
	comp=E,45nm,0.7s						
KNK	Knik Glacier	4.82	44	P	Pn	00 38 42.4	0.0
	baz=229						
TTA	Tatalina	4.83	357		Pn	00 38 43.2	+0.7
TTA				IAML		00 39 49.5	
	comp=N,20nm,4.7s						
TTA	Tatalina	4.83	357	P	Pn	00 38 43.1	+0.7
	baz=176						
Q23K	Middleton Isla	4.89	71		Pn	00 38 44.0	+0.7
Q23K	Middleton Isla	4.89	71	P	Pn	00 38 44.0	+0.7
	baz=258						
GHO	Glory Hole Cre	4.90	39		Pn	00 38 43.5	0.0
GHO	Glory Hole Cre	4.90	39	IAML		00 39 39.6	
	comp=E,47nm,0.8s						
GHO				IAML		00 39 40.8	
	comp=N,42nm,0.6s						
MID	Middleton Isla	4.90	71		Pn	00 38 44.0	+0.5
PPLA	Purkeypile	5.04	17		Pn	00 38 47.5	+2.0
PPLA	Purkeypile	5.04	17	P	Pn	00 38 47.6	+2.2
	baz=199						
GLI	Glacier Island	5.05	53		Pn	00 38 45.9	+0.3
GLI				IAML		00 39 41.3	
	comp=N,43nm,0.8s						
GLI				IAML		00 39 47.2	
	comp=E,46nm,0.5s						
GLI	Glacier Island	5.05	53	P	Pn	00 38 45.7	+0.2
	baz=240						
SML	Sawmill	5.12	41		Pn	00 38 46.1	-0.4
SML	Sawmill	5.12	41	IAML		00 39 46.4	
	comp=E,29nm,1.5s						
SML				IAML		00 39 49.8	
	comp=N,29nm,0.7s						
SML	Sawmill	5.12	41	P	Pn	00 38 46.1	-0.4
	baz=226						
FID	Port Fidalgo	5.26	56		Pn	00 38 48.2	-0.1
K20K	Telida	5.29	7		Pn	00 38 49.6	+1.0
K20K	Telida	5.29	7	IAML		00 39 40.4	
	comp=E,18nm,3.8s						
K20K				IAML		00 40 00.9	
	comp=N,14nm,4.8s						
K20K	Telida	5.29	7	P	Pn	00 38 49.6	+1.0
	baz=187						
SCM	Sheep Creek Mo	5.50	44		Pn	00 38 51.7	+0.1
EYAK	Cordova Ski Ar	5.51	60		Pn	00 38 52.2	+0.7
EYAK	Cordova Ski Ar	5.51	60	P	Pn	00 38 52.2	+0.7
	baz=247						
CAST	Castle Rocks	5.55	16	Pn	Pn	00 38 54.1	+1.9
WAT7	Susitna Watana	5.72	32		Pn	00 38 54.2	-0.4
ISLZ	Isanotski Laza	5.73	237		Pn	00 38 55.1	+0.4
DIV	Divide	5.74	54		Pn	00 38 55.5	+0.7
WAT1	Susitna Watana	5.81	33		Pn	00 38 55.3	-0.4
WAT1	Susitna Watana	5.81	33	P	Pn	00 38 55.3	-0.4
	baz=218						
KLU	Klutina	5.86	51		Pn	00 38 57.1	+0.7
KLU	Klutina	5.86	51	P	Pn	00 38 57.1	+0.7
	baz=238						
KTH	Kantishna Hill	5.87	20		Pn	00 38 57.1	+0.6
WAT6	Susitna Watana	5.87	37		Pn	00 38 55.9	-0.7
WAT6	Susitna Watana	5.87	37	P	Pn	00 38 55.9	-0.7
	baz=223						
SSBA	Shishaldin	5.88	239		Pn	00 38 57.4	+0.6
TRF	Thorofare Moun	5.90	23		Pn	00 38 57.5	+0.5
TRF	Thorofare Moun	5.90	23	P	Pn	00 38 57.5	+0.5
	baz=207						
RAGM	Ragged Mountai	5.96	63		Pn	00 38 58.8	+1.1
KAIM	Kayak Island	5.96	68		Pn	00 38 58.4	+0.7
KAIM	Kayak Island	5.96	68	P	Pn	00 38 58.4	+0.7
	baz=256						
CHUM	Lake Minchumin	5.96	13		Pn	00 38 59.5	+1.8
CHUM	Lake Minchumin	5.96	13	P	Pn	00 38 59.5	+1.8
	baz=196						
GOAT	Goat Mountain	5.99	61		Pn	00 38 59.1	+1.0
J20K	Nowinta River	6.10	5		Pn	00 39 00.4	+0.8
J20K	Nowinta River	6.10	5	P	Pn	00 39 00.4	+0.8
	baz=186						
M24K	Tolsona, Glenn	6.10	45		Pn	00 39 00.7	+1.0
M24K	Tolsona, Glenn	6.10	45	P	Pn	00 39 00.7	+1.0
	baz=232						
HMT	Hamilton	6.14	64		Pn	00 39 01.2	+1.1
BMRM	Bremner River	6.19	58		Pn	00 39 01.6	+0.7
BMRM	Bremner River	6.19	58	P	Pn	00 39 01.5	+0.7
	baz=247						
RND	Reindeer	6.19	28		Pn	00 39 00.6	-0.2
NICHA	Nichawak Mount	6.25	65		Pn	00 39 02.8	+1.1
SUCK	Suckling Hills	6.30	67	Pn	Pn	00 39 03.7	+1.3
DHY	Denali Highway	6.34	35		Pn	00 39 02.5	-0.4
DHY	Denali Highway	6.34	35	P	Pn	00 39 02.6	-0.4
	baz=222						
BPAW	Bear Paw Mtn.	6.36	18		Pn	00 39 03.6	+0.5
BPAW	Bear Paw Mtn.	6.36	18	P	Pn	00 39 03.5	+0.4
	baz=201						
BERG	Berg Lake	6.42	64		Pn	00 39 04.8	+1.0
MCK	McKinley	6.44	27		Pn	00 39 04.5	+0.3
MCK	McKinley	6.44	27	P	Pn	00 39 04.5	+0.3
	baz=212						
N25K	Chitina, Valde	6.46	53		Pn	00 39 05.4	+0.8
N25K	Chitina, Valde	6.46	53	P	Pn	00 39 05.4	+0.8
	baz=241						
GRIN	Grindle Hills	6.58	66		Pn	00 39 07.0	+1.0
KHIT	Khitrov Hills	6.65	64		Pn	00 39 07.9	+0.8
HARP	HAARP	6.66	46		Pn	00 39 08.2	+1.1
HARP	HAARP	6.66	46	P	Pn	00 39 08.2	+1.1
	baz=234						
GCSA	Galena City Sc	6.68	355		Pn	00 39 08.4	+1.2
GCSA	Galena City Sc	6.68	355	P	Pn	00 39 08.5	+1.2
	baz=173						
BWN	Browne	6.71	23		Pn	00 39 08.0	+0.3
GLB	Gilahina Butte	6.73	56		Pn	00 39 08.9	+0.8
SNH	Sunshine Point	6.79	67	Pn	Pn	00 39 10.8	+1.9
CRQM	Cirque	6.79	62		Pn	00 39 09.9	+0.8
VRDI	Verde Repeater	6.80	58		Pn	00 39 09.9	+0.6
CRQE	Cirque	6.81	62	P	Pn	00 39 09.9	+0.6
	baz=252						
WAX	Waxell Ridge	6.84	65		Pn	00 39 10.8	+1.1
PAX	Paxson	6.89	41		Pn	00 39 11.5	+1.1
PAX	Paxson	6.89	41	P	Pn	00 39 10.4	+0.1
	baz=229						
TGL	Tana Glacier	6.94	62		Pn	00 39 12.1	+1.1
AKUT	Akutan	7.04	240	Pn	Pn	00 39 11.7	-0.5
MCARA	McCarthy VSAT	7.05	57		Pn	00 39 13.5	+1.1
MCARA	McCarthy VSAT	7.05	57	P	Pn	00 39 13.1	+0.7
	baz=247						
PS10	TAPS Pump St10	7.10	38		Pn	00 39 14.2	+1.1
AKLV	Akutan Long Va	7.10	240		Pn	00 39 13.8	+0.6
ISLE	Juniper Island	7.13	64		Pn	00 39 14.5	+0.9
AKBBA	Akutan Broad B	7.13	240		Pn	00 39 13.9	+0.4
NEA2	Nenana	7.16	22		Pn	00 39 13.3	-0.6
NEA2	Nenana	7.16	22	P	Pn	00 39 13.1	-0.8
	baz=208						
KIAG	Kiagna River	7.21	62		Pn	00 39 14.9	+0.3
BAGL	Bagley Icefiel	7.22	65		Pn	00 39 15.7	+1.1
MESA	MESA	7.22	68		Pn	00 39 15.9	+1.1
MESA	MESA	7.22	68	P	Pn	00 39 15.8	+0.9
	baz=259						
PTPK	Patty Peak	7.24	59		Pn	00 39 16.0	+0.9
BALM	Baldy	7.25	61		Pn	00 39 15.8	+0.7
I21K	Tanana	7.26	12		Pn	00 39 16.0	+0.9
I21K	Tanana	7.26	12	P	Pn	00 39 16.0	+0.9
	baz=194						
WRH	Wood River Hil	7.27	26		Pn	00 39 14.1	-1.2
MLY	Manley	7.27	16		Pn	00 39 15.6	+0.2
MLY	Manley	7.27	16	P	Pn	00 39 15.9	+0.5
	baz=200						
YAH	Yahtse	7.36	67		Pn	00 39 18.0	+1.3
CCB	Clear Creek Bu	7.48	26		Pn	00 39 17.1	-1.1
HDA	Harding Lake	7.50	29		Pn	00 39 17.5	-0.9
HDA	Harding Lake	7.50	29	P	Pn	00 39 17.5	-0.9
	baz=216						
M26K	Nabesna, AK	7.51	50		Pn	00 39 20.1	+1.4
M26K	Nabesna, AK	7.51	50	P	Pn	00 39 19.9	+1.3
	baz=240						
RKAV	Rock Avalanche	7.54	67		Pn	00 39 20.9	+1.8
BARN	Barnard Glacie	7.57	61		Pn	00 39 20.1	+0.6
I23K	Minto, Yukon-K	7.61	20		Pn	00 39 19.9	+0.1
I23K	Minto, Yukon-K	7.61	20	P	Pn	00 39 19.9	+0.1
	baz=205						
MNAT	Makushin Natee	7.61	241		Pn	00 39 19.5	-0.5
RIDG	Independent Ri	7.62	38		Pn	00 39 20.6	+0.6
RIDG	Independent Ri	7.62	38	P	Pn	00 39 20.6	+0.6
	baz=227						
MSW	Makushin Switc	7.64	241		Pn	00 39 19.8	-0.5
PS08	TAPS Pump Stn8	7.64	29		Pn	00 39 19.4	-0.9
H21K	Melozitna Rive	7.65	8		Pn	00 39 21.5	+1.0
H21K	Melozitna Rive	7.65	8	P	Pn	00 39 21.5	+1.0
	baz=190						
MDM	Murphy Dome	7.66	24		Pn	00 39 19.8	-0.8
TABL	Table Mountain	7.67	66		Pn	00 39 22.2	+1.3
MREP	Makushin Rep't	7.69	241		Pn	00 39 20.9	-0.2
CTG	Chitna Glacier	7.69	62	P	Pn	00 39 22.4	+1.2
	baz=254						
CTGM	Chitina Glacie	7.70	62		Pn	00 39 22.3	+1.0
IL31		7.81	28		Pn	00 39 21.5	-1.0
ILAR	Eielson Array	7.81	28	P	Pn	00 39 21.3	-1.3
	comp=N,2.8nm,0.3s,baz=213,slow=13,SNR=152						
ILAR				S	Sn	00 40 43.3	-6.0
	comp=N,1.7nm,0.3s,baz=218,slow=21,SNR=12						
LOGN	Logan Glacier	7.82	64		Pn	00 39 23.6	+0.8
IM03		7.92	5		Pn	00 39 24.7	+0.7
M27K	Edge Creek, AK	7.95	52		Pn	00 39 25.5	+0.8
M27K	Edge Creek, AK	7.95	52	P	Pn	00 39 25.5	+0.8
	baz=243						
POKR	Poker Plat Res	7.97	25		Pn	00 39 23.9	-0.8
POKR	Poker Plat Res	7.97	25	P	Pn	00 39 23.9	-0.8
	baz=212						
PCA	Pinnacle	8.04	69		Pn	00 39 27.0	+1.2
PINM	Pinnacle	8.05	69	P	Pn	00 39 27.1	+1.2
	baz=262						
SCRK	Sand Creek	8.06	39		Pn	00 39 25.7	-0.4
SCRK	Sand Creek	8.06	39	P	Pn	00 39 25.7	-0.4
	baz=228						
YUK2	White River	8.17	57		Pn	00 39 29.4	+1.8
PS06	TAPS Pump Stn6	8.20	17		Pn	00 39 28.4	+0.6
L27K	Beaver Creek,	8.31	48		Pn	00 39 30.0	+0.7
L27K	Beaver Creek,	8.31	48	P	Pn	00 39 30.0	+0.7
	baz=239						
BC03		8.32	48		Pn	00 39 29.9	+0.4
BCAR	Beaver Creek A	8.32	48	Pn	Pn	00 39 30.8	+1.2
BCPM	Bancas Point	8.34	71		Pn	00 39 30.5	+0.7
YUK3	Moose Creek	8.34	58		Pn	00 39 31.1	+1.1
YUK3	Moose Creek	8.34	58	P	Pn	00 39 31.1	+1.1
	baz=250						
PNL	Peninsula	8.44	73		Pn	00 39 31.8	+0.7
H24K	Noodor Dome	8.50	21		Pn	00 39 30.9	-1.1
H24K	Noodor Dome	8.50	21	P	Pn	00 39 30.8	-1.1
	baz=208						
YUK8	Steele Glacier	8.52	62		Pn	00 39 32.5	+0.1
J26L	Joseph Creek	8.55	37		Pn	00 39 32.3	-0.4
J26L	Joseph Creek	8.55	37	P	Pn	00 39 32.3	-0.4
	baz=227						
YUK7	Dusty Glacier	9.15	67		Pn	00 39 41.5	+0.7
HYT	Haines Junctio	9.50	66	Pn	Pn	00 39 46.9	+1.4
DAWY	Dawson	9.76	46		Pn	00 39 49.8	+1.0
DAWY	Dawson	9.76	46	P	Pn	00 39 49.8	+1.0
	baz=239						
SKAG	Skagway	10.50	74	Pn	Pn	00 39 58.8	0.0
BMAR	Burnt Mountain	10.55	23	Pn	Pn	00 39 57.6	-1.8
WHY	Whitehorse	10.76	68	Pn	Pn	00 40 03.6	+1.2
BESE	Bessie Mountai	10.81	79	Pn	Pn	00 40 06.1	+3.1
DLBC	Dease Lake	13.34	78	P	P	00 40 39.9	-1.3
	comp=N,0.3nm,0.3s,baz=255,slow=14,SNR=6.1						
INK	Inuvik	14.09	35	P	Pn	00 40 45.2	-0.3
	comp=N,0.2nm,0.3s,baz=222,slow=11,SNR=6.9						
YKA	Yellowknife Ar	20.41	60	P	P	00 42 01.4	+2.8
	comp=N,0.6nm,0.5s,baz=274,slow=10,SNR=4.3						
SONM	Songino Array	54.87	305	P	P	00 46 49.8	+0.8
	comp=N,0.5nm,0.7s,baz=62,slow=7.0,SNR=4.2						

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*IDC **05** 00:51:57.4±0.6,47°.87S×85°.33E,h0km,mb4.3/12, mb1 4.4/12,mb1mx4.1/28,mbtmp4.3/12,Error ellipse: s-maj=23.6km s-min=16.6km az=153.0*

*NEIC **05** 00:52:02.4±1.1,48°.0S±0°.1×85°.3E±0°.1,h35km±2km, mb4.6/19,Error ellipse: s-maj=24.7km s-min=16.5km az=350.0*

ISC 05 00:51:58.6±0.5,**48°.0S**±0°.1×**85°.34E**±0°.10,**h10**km,**n44,** σ**0ˢ.97**/44,**mb4.5**/21,**Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAF	Port-aux-Franc	10.11	256	Pn	Pn	00 54 17.2	-6.5
MAW	Mawson	22.79	202	P	P	00 57 03.2	+2.2
	13nm,1.0s,baz=33,slow=16,SNR=4.8						
MAW	Mawson	22.79	202	P	P	00 57 01.0	0.0
H01W2	Cape Leeuwin H	25.06	69	T	T	01 23 19.7	
	baz=229,slow=75,SNR=14						
H01W3	Cape Leeuwin H	25.07	69	T	T	01 23 22.2	
	baz=229,slow=75,SNR=12						
H01W1	Cape Leeuwin H	25.07	69	T	T	01 23 25.0	
	baz=229,slow=75,SNR=15						
VOI	Vohitsoka	40.29	296	P	P	00 59 35.8	-0.3
VOI				IAmb	IAmb	00 59 44.1	
	comp=Z,19nm,1.4s						
BBOO	Buckleboo	40.74	87	P	P	00 59 39.7	+0.1
BBOO				IAmb	IAmb	00 59 40.6	
	comp=Z,16nm,1.1s						
VNDA	Vanda	40.82	161	P	P	00 59 39.5	-0.2
VNDA				IAmb	IAmb	00 59 55.8	
	comp=Z,10.0nm,1.3s						
SBA	Scott Base	41.85	162	P	P	00 59 48.0	-0.2
QSPA	South Pole Qui	42.19	180	P	P	00 59 51.3	0.0
QSPA				IAmb	IAmb	00 59 57.9	
	comp=Z,10nm,1.1s						
FITZ	Fitzroy Crossi	44.26	62	P	P	01 00 09.0	+0.7
	comp=Z,3.3nm,0.8s,baz=257,slow=7.6,SNR=2.9						
SNAA	Sanae	44.83	207	P	P	01 00 13.0	+0.7
SNAA	Sanae	44.83	207	P	P	01 00 12.6	+0.3
	comp=Z,4.2nm,1.1s,baz=124,slow=16,SNR=6.1						
SNAA	Sanae	44.83	207	P	P	01 00 12.5	+0.1
SNAA				IAmb	IAmb	01 00 25.7	
	comp=Z,6.4nm,1.0s						
STKA	Stephens Creek	45.02	90	P	P	01 00 14.7	+0.3
	comp=Z,4.7nm,0.8s,baz=229,slow=8.0,SNR=10						
STKA				PcP	PcP	01 01 55.8	+0.6
	comp=Z,0.8nm,0.3s,baz=281,slow=10,SNR=4.2						
STKA	Stephens Creek	45.02	90	P	P	01 00 14.3	0.0
ASAR	Alice Springs	45.30	75	P	P	01 00 16.8	+0.2
	comp=Z,4.9nm,0.8s,baz=220,slow=7.1,SNR=50						
ASAR				PcP	PcP	01 01 55.8	-0.5
	comp=Z,1.7nm,0.8s,baz=216,slow=2.2,SNR=7.7						
AS31	Alice Springs	45.30	75	P	P	01 00 16.5	-0.1
VNA2	Neumayer--Watz	46.47	207	P	P	01 00 23.4	-1.8
	baz=104,slow=7.1						
VNA1	Neumayer--Stat	46.84	207	P	P	01 00 26.2	-1.9
VNA3	Neumayer Olymp	47.03	206	P	P	01 00 29.3	-0.3
KNRA	Kununurra	48.00	63	P	P	01 00 37.1	-0.7
WRA	Warramunga Arr	48.25	72	P	P	01 00 39.6	-0.1
	comp=Z,3.8nm,0.9s,baz=223,slow=7.6,SNR=24						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA				PcP	PcP	01 02 05.4	-1.3
	comp=Z,1.4nm,0.8s,baz=226,slow=3.3,SNR=7.6						
WB2	Warramunga Arr	48.26	72	P	P	01 00 39.3	-0.4
WB2				IAmb	IAmb	01 00 40.5	
	comp=Z,7.4nm,0.9s						
WRAB	Tennant Creek	48.26	72	P	P	01 00 39.0	-0.8
WRAB				IAmb	IAmb	01 00 40.6	
	comp=Z,8.1nm,1.1s						
WR0	Warramunga Arr	48.36	72	P	P	01 00 40.1	-0.5
WR0				IAmb	IAmb	01 00 41.1	
	comp=Z,5.0nm,1.0s						
WB0	Warramunga Arr	48.41	72	P	P	01 00 41.1	+0.1
WB0				IAmb	IAmb	01 00 41.5	
	comp=Z,5.8nm,0.8s						
BOSA	Boshof	49.65	270	P	P	01 00 50.2	-0.3
	comp=Z,2.5nm,0.8s,baz=98,slow=5.4,SNR=4.4						
BOSA	Boshof	49.65	270	P	P	01 00 48.1	-2.4
BOSA				IAmb	IAmb	01 00 52.4	
	comp=Z,5.6nm,1.0s						
MTN	Manton Dam	51.64	63	P	P	01 01 04.8	-0.7
MTN				IAmb	IAmb	01 01 08.8	
	comp=Z,20nm,1.2s						
LSZ	Lusaka	56.93	285	P	P	01 01 44.5	+0.3
KMBO	Kilima Mbogo	62.40	303	P	P	01 02 22.6	+0.6
	comp=Z,0.6nm,0.3s,baz=111,slow=7.7,SNR=8.0						
URZ	Urewera	63.88	119	P	P	01 02 29.2	-2.1
CMAR	Chiang Mai Arr	67.23	14	P	P	01 02 53.7	+0.7
	comp=Z,3.5nm,0.8s,baz=209,slow=5.8,SNR=14						
PLCA	Paso Flores	89.14	198	P	P	01 04 54.8	+0.6
	comp=Z,3.2nm,1.0s,baz=156,slow=6.3,SNR=4.4						
TORD	Torodi Ar. Bea	95.45	283	P	P	01 05 22.9	-0.6
	comp=Z,0.7nm,0.9s,baz=120,slow=8.2,SNR=1.3						
SONM	Songino Array	97.15	14	P	P	01 05 30.5	-0.2
	comp=Z,0.5nm,0.7s,baz=132,slow=2.2,SNR=3.7						
ILAR	Eielson Array	147.72	39	PKPbc	PKPdf	01 11 40.8	+1.5
	comp=Z,0.3nm,0.5s,baz=281,slow=4.0,SNR=4.3						
INK	Inuvik	151.88	30	PKPbc	PKPbc	01 11 51.8	-0.5
	comp=Z,4.8nm,0.8s,baz=314,slow=2.0,SNR=15						
RES	Resolute Bay	153.18	0	PKPbc	PKPbc	01 11 54.8	-0.2
	comp=Z,3.2nm,0.9s,baz=32,slow=3.9,SNR=8.6						
TXAR	Lajitas Array	160.14	156	PKP	PKPdf	01 11 58.9	+0.8
	comp=Z,0.1nm,0.4s,baz=72,slow=2.9,SNR=2.4						
TXAR				PKPab	PKPab	01 12 39.5	+1.4
	comp=Z,0.8nm,1.0s,baz=169,slow=7.1,SNR=4.2						
NVAR	Mina Array Bea	160.37	110	PKP	PKPdf	01 11 59.8	+1.6
	comp=Z,0.3nm,0.6s,baz=176,slow=3.1,SNR=4.4						
PDAR	Pinedale Array	168.31	111	PKP	PKPdf	01 12 06.2	+1.0
	comp=Z,3.6nm,1.0s,baz=126,slow=2.7,SNR=12						

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*NEIC **05** 00:55:41.2±1.6, 35°.85N±0°.09×135°.6E±0°.1, h359^{km}±8^{km}, mb4.1/15, Error ellipse: s-maj=13.8km s-min=11.2km az=142.0*

*IDC **05** 00:55:41.3±1.4, 35°.82N×135°.64E, h363^{km}±24^{km}, mb3.0/6, mb1 3.2/10, mb1mx2.8/46, mbtmp3.8/10, Error ellipse: s-maj=37.9km s-min=14.1km az=60.0*

*JMA **05** 00:55:41.4±0.1, 35°.83N×135°.50E, h353^{km}±1^{km}, M3.3*

ISC 05 00:55:40.7±0.6**, 35°.82N**±0°.07×**135°.54E**±0°.07**, h355**^{km}±6^{km}**, n61, σ1^{s}.00**/68**, mb3.8**/15**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKY	Yasaka	0.40	241	P	Pn	00 56 26.1	+0.8
JKY				*e*S	S	00 57 01.3	+0.2
JFM	Mihama	0.47	129	P	Pn	00 56 26.2	+0.7
JFM				*e*S	S	00 57 01.4	+0.1
JWT	Wachi	0.55	192	P	Pn	00 56 26.3	+0.6
JWT				*e*S	S	00 57 00.8	-0.9
JWT	Wachi	0.55	192	Pn	Pn	00 56 27.2	+1.5
JKG	Kaga	0.79	55	P	Pn	00 56 26.8	+0.7
JYTA	Yamagatataniai	1.00	103	P	Pn	00 56 27.7	+0.7
INU	Inuyama	1.30	111		Pn	00 56 28.8	+0.6
JGF	Kuroka	1.50	98		Pn	00 56 30.0	+0.6
JWY	Kouya	1.60	178	P	Pn	00 56 30.7	+0.6
JWY				*e*S	S	00 57 09.2	-0.5
JIE	Ise	1.72	146	P	Pn	00 56 31.7	+1.0
JIE				*e*S	S	00 57 10.4	-0.4
JTNC	Tanabenakahech	2.00	178	P	Pn	00 56 32.8	+0.2
JTNC				*e*S	S	00 57 13.0	-1.2
JHS	Saijyo	2.14	248	P	Pn	00 56 33.7	+0.2
JHS	Saijyo	2.14	248	Pn	Pn	00 56 33.9	+0.4
JAI	Aioi	2.21	204	P	Pn	00 56 34.6	+0.5
MAJO	Matsushiro	2.28	71		Pn	00 56 35.4	+0.9
MAT	Matsushiro	2.28	71	P	Pn	00 56 34.9	+0.5
MJAR	Matsushiro Arr	2.28	71	P	Pn	00 56 35.6	+1.2
	1.3nm,0.3s,baz=250,slow=4.6,SNR=30						
MJAR	Matsushiro Arr	2.28	71		Pn	00 56 35.5	+1.1
TTO1	TONANKAI O.B.S	2.42	155	P	Pn	00 56 36.8	+1.5
JYN	Shimob	2.47	97	P	Pn	00 56 36.6	+0.6
JMN	Monobe	2.50	214	P	Pn	00 56 36.9	+0.6
JMN	Monobe	2.50	214	Pn	Pn	00 56 37.1	+0.8
JRY	Ryogami san	2.74	85	P	Pn	00 56 38.8	+0.6
JHT	Toyohira	2.80	246	P	Pn	00 56 39.0	+0.3
JOD2	Odawara 2	2.95	100	P	Pn	00 56 41.2	+1.2
JTO	Tosashimizu	3.72	218	P	Pn	00 56 47.9	+0.6
JYT	Yasato	3.80	83	Pn	Pn	00 56 47.2	-0.7
JMM	Marumori	4.68	63		Pn	00 56 57.1	+0.1
USRK	Ussuriysk Ar.	8.80	343	P	P	00 57 45.6	-0.8
	baz=164,slow=12,SNR=8.5						
USRK	Ussuriysk Ar.	8.80	343	P	Pn	00 57 43.4	-0.8
USA0B	Ussuriysk Arra	8.80	343	Pn	Pn	00 57 42.6	-1.5
ASAJ	Asahikawa	9.89	31	P	Pn	00 57 56.5	-0.7
	3.0nm,0.3s,baz=246,slow=10,SNR=8.4						
ASAJ				S	S	00 59 40.1	-9.1
	0.7nm,0.3s,baz=305,slow=20,SNR=2.1						
JKA	Kamikawa-asahi	9.89	31		Pn	00 57 56.3	-0.9
JCJ	Chichijima	10.38	145		Pn	00 58 03.3	0.0
KLR	Kul'dur	13.68	349	P	P	00 58 40.7	+0.3
	0.3nm,0.3s,baz=195,slow=5.9,SNR=6.1						
PETK	Petropavlovsk-	23.27	35	P	P	01 00 17.4	-0.5
SONM	Songino Array	24.66	308	P	P	01 00 32.5	+2.0
	0.4nm,0.5s,baz=106,slow=9.1,SNR=3.8						
SONM	Songino Array	24.66	308	P	P	01 00 31.8	+1.2
UBPT	Khong Chiam	33.76	240	P	P	01 01 50.3	-0.2
CMAR	Chiang Mai Arr	36.61	252	P	P	01 02 14.4	-0.2
	0.7nm,0.6s,baz=58,slow=6.7,SNR=1.8						
ZALV	Zalesovo Beam	39.27	314	P	P	01 02 35.0	-1.2
	0.4nm,0.4s,baz=92,slow=10,SNR=2.4						
MK31	Makanchi Array	40.76	303	P	P	01 02 48.8	+0.5
MKAR	Makanchi Array	40.76	303	P	P	01 02 48.8	+0.5
	0.8nm,0.6s,baz=87,slow=11,SNR=10.0						
MKAR	Makanchi Array	40.76	303	P	P	01 02 48.7	+0.3
MAKZ	Makanchi	40.97	303	P	P	01 02 50.4	+0.3
MAKZ				IAmb	IAmb	01 03 12.1	
	comp=Z,8.9nm,1.3s						
KKAR	Karatay Array	49.60	299	P	P	01 03 57.8	+0.6
BMAR	Burnt Mountain	53.66	28	P	P	01 04 26.8	+0.3
ABKAR	Akbulak array	55.06	309	P	P	01 04 36.6	-0.2
SUCK	Suckling Hills	55.24	37	P	P	01 04 33.8	-4.1
WB0	Warramunga Arr	55.30	181	P	P	01 04 38.2	-0.5
WB0				IAmb	IAmb	01 04 42.1	
	comp=Z,14nm,1.7s						
WB2	Warramunga Arr	55.47	181	P	P	01 04 39.4	-0.5
WB2				IAmb	IAmb	01 04 39.7	
	comp=Z,2.4nm,0.7s						
WRA	Warramunga Arr	55.47	181	P	P	01 04 39.4	-0.5
	comp=Z,1.3nm,0.4s,baz=360,slow=7.6,SNR=64						
WRA				PcP	PcP	01 05 35.7	+0.6
	comp=Z,0.3nm,0.6s,baz=338,slow=2.0,SNR=1.5						
WRA	Warramunga Arr	55.47	181	P	P	01 04 39.2	-0.8
WR0	Warramunga Arr	55.49	181	P	P	01 04 39.5	-0.5
WR0				IAmb	IAmb	01 04 40.2	
	comp=Z,4.1nm,0.8s						
SNH	Sunshine Point	55.68	37	P	P	01 04 41.1	+0.1
CTGM	Chitina Glacie	56.22	36	P	P	01 04 44.0	-0.8
CTGM				IAmb	IAmb	01 04 46.1	
	comp=Z,16nm,1.0s						
LOGN	Logan Glacier	56.41	36	P	P	01 04 49.0	+2.8
LOGN				IAmb	IAmb	01 04 56.6	
	comp=Z,9.6nm,0.7s						
EPYK	Eagle Plains	56.90	29	P	P	01 04 50.8	+1.4
EPYK				IAmb	IAmb	01 05 02.5	
	comp=Z,12nm,1.6s						
INK	Inuvik	57.59	26	P	P	01 04 54.9	+0.9
INK				IAmb	IAmb	01 05 00.3	
	comp=Z,12nm,1.6s						
A36M	Sachs Harbour	59.12	21	P	P	01 05 05.5	+1.1
A36M				IAmb	IAmb	01 05 06.6	
	comp=Z,6.0nm,0.5s						
ASAR	Alice Springs	59.19	182	P	P	01 05 05.4	-0.2
	comp=Z,0.5nm,0.4s,baz=6.0,slow=5.4,SNR=9.9						

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*TUL **05** 01:14:18.9±1.5, 34°.80N±0°.04×97°.81W±0°.06, h11^{km}±7^{km}, ML3.1, mb_Lg3.1/56(NEIC), Error ellipse: s-maj=6.6km s-min=5.3km az=105.0*

*ANF **05** 01:14:19.3±0.7, 34°.82N×97°.81W, h3^{km}±4^{km}, ML3.7/13, Error ellipse: s-maj=3.5km s-min=2.9km az=102.0*

*NEIC **05** 01:14:19.6±1.2, 34°.83N±0°.03×97°.77W±0°.06, h6^{km}±7^{km}, Error ellipse: s-maj=6.9km s-min=4.1km az=94.0*

ISC 05 01:14:19.6±1.3**, 34°.83N**±0°.03×**97°.76W**±0°.04**, h8**^{km}±10^{km}**, n91, σ0^{s}.61**/84**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
X34A	Smith Ranch, M	0.24	194	Pg	Pg	01 14 24.8	+0.4
OKCSW	OKLAHOMA CITY	0.63	25	Pg	Pg	01 14 31.5	-0.3
OKCFA	Oklahoma City	0.64	24	Pg	Pg	01 14 31.4	-0.5
OKCFA	Oklahoma City	0.64	24	P	Pg	01 14 31.9	0.0
	baz=203,SNR=12						
OKCFA				S	Sg	01 14 41.1	+0.9
	baz=203						
OK025	Westminster Rd	0.82	25	Pg	Pg	01 14 35.2	-0.3
BCOK	Bluff Creek, N	0.83	9	Pg	Pg	01 14 35.3	-0.4
LOOK	Love County	0.97	150	Pg	Pg	01 14 37.5	-0.7
OK029	Liberty Lake	0.99	15	Pg	Pg	01 14 38.0	-0.8
OK031	S. Brethren Rd	1.35	34	Pn	Pn	01 14 43.9	-0.9
OK030	Cody Creek RV	1.35	36		Pn	01 14 44.6	-0.3
OK034	N. Norfolk Rd.	1.45	36		Pn	01 14 46.2	0.0
Z35A	Perchaven, San	1.56	164		Pn	01 14 47.2	-0.5
Z35A	Perchaven, San	1.56	164	P	Pn	01 14 47.0	-0.6
	baz=345,SNR=46						
Z35A				S	Sn	01 15 07.9	-0.1
	baz=345						
CROK	Carrier	1.68	354	Pn	Pn	01 14 49.4	0.0
U32A	Winter Ranch,	1.84	327	Pn	Pn	01 14 51.8	+0.2
U32A	Winter Ranch,	1.84	327	P	Pn	01 14 51.9	+0.3
	baz=147,SNR=14						
U32A				S	Sb	01 15 16.7	-0.3
	baz=147						
TUL1	Leonard	1.94	56		Pn	01 14 53.7	+0.8
TUL1				IAmb_Lg		01 15 26.4	
	comp=Z,124nm,0.8s						
TUL1	Leonard	1.94	56	P	Pn	01 14 53.6	+0.8
	baz=236,SNR=100						
TUL1				S	Sb	01 15 19.6	+0.1
	baz=236						
BLOK	Blackwell	1.98	13		Pn	01 14 53.7	+0.3
X37A	Clayton	1.98	96		Pn	01 14 55.1	+1.6
X37A				IAmb_Lg		01 15 26.9	
	comp=Z,56nm,0.7s						
X37A	Clayton	1.98	96	P	Pn	01 14 54.7	+1.1
	baz=278,SNR=63						
X37A				S	Sg	01 15 23.0	-0.4
	baz=278						
OK032	Salt Plains WL	2.00	350	Pn	Pn	01 14 54.3	+0.6
GC02	Grant County #	2.02	358	Pn	Pn	01 14 54.4	+0.4
KAN13	South Haven SW	2.19	6		Pn	01 14 56.6	+0.3
KAN13				IAmb_Lg		01 15 34.6	
	comp=Z,105nm,1.0s						
KAN17	Caldwell West	2.21	360	Pn	Pn	01 14 57.4	+0.7
KAN09	Caldwell North	2.30	3		Pn	01 14 58.4	+0.5
KAN10	Anthony SW Sta	2.30	353	Pn	Pn	01 14 58.6	+0.7
T35A	Sooner Cattle	2.31	26	Pn	Pn	01 14 58.0	-0.1
T35B	Sooner Cattle	2.31	26	P	Pn	01 14 58.7	+0.6
	baz=206,SNR=23						
T35B				S	Sn	01 15 28.3	+1.5
	baz=206						
KAN01	Argonia South	2.32	0	Pn	Pn	01 14 57.5	-0.7
KAN01					Lg	01 15 36.1	
KAN08	Anthony NE Sta	2.40	356	Pn	Pn	01 14 58.8	-0.4
KAN16	Harper SW Stat	2.40	354	Pn	Pn	01 14 59.4	+0.1
KAN06	Argonia West S	2.41	358	Pn	Pn	01 14 59.0	-0.4
KAN12	Harper NE Stat	2.47	356	Pn	Pn	01 15 00.3	+0.1
ABTX	Abilene, Hawle	2.70	216	Pn	Pn	01 15 04.0	+0.6
ABTX				IAmb_Lg		01 15 50.1	
	comp=Z,85nm,1.1s						
ABTX	Abilene, Hawle	2.70	216	P	Pn	01 15 03.9	+0.4
	baz=35						
Z38A	Mt. Pleasant	2.79	123	Pn	Pn	01 15 04.7	+0.1
Z38A				IAmb_Lg		01 15 53.3	
	comp=Z,38nm,0.9s						
WHTX	Lake Whitney,	2.84	175	Pn	Pn	01 15 05.3	-0.1
WHTX	Lake Whitney,	2.84	175	P	Pn	01 15 06.1	+0.7
	baz=355,SNR=17						
U38A	Gravette	3.18	59	Pn	Pn	01 15 09.6	-0.5
U38A	Gravette	3.18	59	P	Pn	01 15 10.5	+0.5
	baz=240,SNR=7.4						
AMTX	Amarillo	3.22	272	Pn	Pn	01 15 10.4	-0.3
237A	Washetta, Mont	3.26	149	Pn	Pn	01 15 11.5	+0.4
W39A	Magazine	3.29	83	Pn	Pn	01 15 12.1	+0.7
W39A	Magazine	3.29	83	P	Pn	01 15 12.1	+0.7
	baz=265,SNR=32						
HHAR	Hobbs	3.44	64	Pn	Pn	01 15 13.1	-0.5
HHAR				IAmb_Lg		01 16 17.2	
	comp=Z,66nm,1.0s						
MIAR	Mount Ida	3.46	94	Pn	Pn	01 15 14.1	+0.2
MIAR				IAmb_Lg		01 16 15.9	
	comp=Z,53nm,0.8s						
MIAR	Mount Ida	3.46	94	P	Pn	01 15 15.2	+1.4
	baz=276,SNR=42						
R32A	Long Quarter,	3.66	348	Pn	Pn	01 15 17.1	+0.4
R32A				IAmb_Lg		01 16 22.3	
	comp=Z,38nm,1.0s						
R32A	Long Quarter,	3.66	348	P	Pn	01 15 16.9	+0.3
	baz=168						
NATX	Nacogdoches	4.02	139	Pn	Pn	01 15 21.6	+0.1
WLAR	White Oak Lake	4.02	105	Pn	Pn	01 15 22.3	+0.8
WLAR					Lg	01 16 30.8	
435B	Jarrell	4.04	178	Pn	Pn	01 15 22.2	+0.4
435B				IAmb_Lg		01 16 32.8	
	comp=Z,36nm,0.8s						
X40A	Basin Creek Fa	4.08	93	Pn	Pn	01 15 22.3	0.0
X40A				IAmb_Lg		01 16 40.7	
	comp=Z,30nm,0.8s						
MSTX	Muleshoe	4.23	260	Pn	Pn	01 15 24.1	-0.4
MSTX	Muleshoe	4.23	260	P	Pn	01 15 24.8	+0.2
	baz=77						
CBKS	Cedar Bluff	4.28	339	Pn	Pn	01 15 25.1	0.0
CBKS					LR	01 16 35.6	
CBKS				IAmb_Lg		01 16 44.7	
	comp=Z,27nm,0.8s						
U40A	Yellville	4.28	68	Pn	Pn	01 15 23.6	-1.4
U40A				IAmb_Lg		01 16 35.9	
	comp=Z,61nm,0.8s						
KSU1	Kansas State U	4.36	12	Pn	Pn	01 15 25.4	-0.8
KSU1				IAmb_Lg		01 16 50.6	
	comp=Z,48nm,0.9s						
WHAR	Wooly Hollow	4.51	83	Pn	Pn	01 15 28.4	+0.1
S39A	Bolivar	4.58	50	Pn	Pn	01 15 29.5	+0.2
S39A				IAmb_Lg		01 16 58.9	
	comp=Z,41nm,0.8s						
S39A	Bolivar	4.58	50	P	Pn	01 15 29.6	+0.3
	baz=233,SNR=19						
JCT	Junction City	4.67	202	Pn	Pn	01 15 30.0	-0.5
FCAR	Ozark Folk Cen	4.73	75	Pn	Pn	01 15 32.4	+1.2
MGMO	Mountain Grove	5.02	61	Pn	Pn	01 15 34.9	-0.4
MGMO				IAmb_Lg		01 17 12.8	
	comp=Z,24nm,0.8s						
R40A	Maddies Statio	5.61	50	Pn	Pn	01 15 43.0	-0.3
R40A				IAmb_Lg		01 17 27.9	
	comp=Z,27nm,0.9s						
143A	Socs Landing,	5.71	110	IAmb_Lg		01 17 36.0	
	comp=Z,20nm,0.8s						
KSCO	Kaye Shedlock’	5.71	318	Pn	Pn	01 15 45.0	+0.2
KSCO				IAmb_Lg		01 17 33.8	
	comp=Z,17nm,0.7s						
T42A	Van Buren	5.84	66	IAmb_Lg		01 17 32.5	
	comp=Z,45nm,1.0s						
P38A	Dawn	5.85	34	IAmb_Lg		01 17 31.9	
	comp=Z,22nm,0.9s						
HBAR	Harrisburg	5.86	81	Pn	Pn	01 15 46.7	-0.1
T25A	Trinidad	5.86	295	Pn	Pn	01 15 46.9	-0.2
CCM	Cathedral Cave	6.16	57	Pn	Pn	01 15 50.8	-0.1
CCM					LR	01 17 32.4	
CCM				IAmb_Lg		01 17 38.6	
	comp=Z,38nm,0.8s						
N35A	Tabor	6.25	15	Pn	Pn	01 15 52.1	0.0
P40A	Paris	6.54	43	Pn	Pn	01 15 56.4	+0.2
FVM	French Village	6.70	60	Pn	Pn	01 15 58.2	-0.1
OGNE	Ogallala	6.97	332		Lg	01 18 10.0	
MNTX	Cornudas Mount	7.11	246	Pn	Pn	01 16 03.6	-0.4
SLM	Saint Louis	7.13	56	IAmb_Lg		01 18 22.4	
	comp=Z,25nm,0.9s						
ANMO	Albuquerque	7.15	273	Pn	Pn	01 16 05.5	+0.9
ANMO				IAmb_Lg		01 18 21.0	
	comp=Z,17nm,1.3s						
L34A	Svendsen Farm,	7.21	8		Lg	01 18 09.4	
BNM	Barren Site	7.35	267		Lg	01 18 11.0	
TX31	Lajitas Ar. Si	7.42	224	Pn	Pn	01 16 06.8	-1.6
TX32	Lajitas Array	7.42	224	Pn	Pn	01 16 07.6	-0.8
TXAR	Lajitas Array	7.42	224		Lg	01 18 13.7	
S44A	Carbondale	7.44	65	Pn	Pn	01 16 08.2	-0.3
S44A				IAmb_Lg		01 18 21.3	
	comp=Z,27nm,1.0s						
SIUC	Southern Illin	7.48	65	IAmb_Lg		01 18 20.4	
	comp=Z,24nm,0.8s						
ISCO	Idaho Springs	7.98	311		LR	01 18 29.8	
121A	Cookes Peak, D	8.66	257		Lg	01 18 58.1	
L40A	Anamosa	8.85	33	IAmb_Lg		01 19 20.5	
	comp=Z,23nm,1.0s						
L42A	Oliver, Polo	9.57	39	IAmb_Lg		01 19 34.9	
	comp=Z,22nm,0.8s						

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*IDC **05** 01:24:52.5±2.2, 17°.71S×175°.24W, h204^{km}±23^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.6/32, mbtmp4.4/7, Error ellipse: s-maj=34.3km s-min=15.4km az=131.0*

*NEIC **05** 01:24:53.1±0.9, 17°.7S±0°.1×175°.2W±0°.1, h209^{km}±9^{km}, mb4.2/8, Error ellipse: s-maj=19.4km s-min=15.6km az=150.0*

ISC 05 01:24:51.9±0.7**, 17°.6S**±0°.1×**175°.2W**±0°.1**, h200**^{km}**, n22, σ1^{s}.11**/24**, mb4.1**/10**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.97	43	P	Pn	01 26 07.7	+1.7
	17nm,0.3s,baz=182,slow=1.8,SNR=20						
AFI				S	Sn	01 27 01.3	-3.1
	35nm,0.3s,baz=40,slow=17,SNR=8.6						
NIUE	Niue	5.25	107	Pn	Pn	01 26 10.3	+0.9
URZ	Urewera	21.63	197	P	P	01 29 25.5	-0.8
	4.3nm,0.4s,baz=300,slow=24,SNR=8.6						
URZ	Urewera	21.63	197	P	P	01 29 25.8	-0.6
ARMA	Armidale	32.71	241	P	P	01 31 05.9	0.0
ARMA				IAmb	IAmb	01 31 20.9	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	41.42	242	P	P	01 32 19.1	+0.1
	comp=Z,4.6nm,0.6s,baz=87,slow=9.2,SNR=15						
STKA	Stephens Creek	41.42	242	P	P	01 32 18.3	-0.7
BBOO	Buckleboo	46.20	241	P	P	01 32 56.1	-0.8
BBOO				IAmb	IAmb	01 32 57.1	
	comp=Z,12nm,0.7s						
WB0	Warramunga Arr	47.62	259	P	P	01 33 08.0	-0.2
WB2	Warramunga Arr	47.65	259	P	P	01 33 07.6	-0.8
WB2				IAmb	IAmb	01 33 09.2	
	comp=Z,4.5nm,0.6s						
WRA	Warramunga Arr	47.66	259	P	P	01 33 07.8	-0.6
	comp=Z,2.5nm,0.4s,baz=97,slow=6.2,SNR=72						
AS31	Alice Springs	47.78	254	P	P	01 33 09.2	-0.2
AS31				IAmb	IAmb	01 33 10.2	
	comp=Z,6.7nm,0.8s						
ASAR	Alice Springs	47.78	254	P	P	01 33 09.2	-0.2
	comp=Z,26nm,0.7s,baz=91,slow=7.9,SNR=296						
ASAR				PcP	PcP	01 34 34.6	-0.6
	comp=Z,0.5nm,0.5s,baz=96,slow=5.7,SNR=1.9						
ASAR	Alice Springs	47.78	254	P	P	01 33 09.0	-0.4
KNRA	Kununurra	53.53	263	P	P	01 33 51.8	-0.6
FITZ	Fitzroy Crossi	56.06	260	P	P	01 34 10.7	+0.2
	comp=Z,1.5nm,0.6s,baz=114,slow=4.9,SNR=6.7						
ILAR	Eielson Array	84.95	12	P	P	01 37 04.1	0.0
	comp=Z,0.3nm,0.6s,baz=219,slow=6.0,SNR=7.9						
NOA	NORSAR Array B	136.38	355	PKP	PKPdf	01 43 48.8	-0.6
	comp=Z,1.1nm,1.0s,baz=355,slow=3.6,SNR=3.4						
CLL	Collm	145.75	351	*e*PKPbc	PKPdf	01 44 08.0	+1.6
BRTR	Keskin Array B	146.67	317	PKPbc	PKPdf	01 44 10.8	+2.3
	comp=Z,0.6nm,0.6s,baz=127,slow=3.6,SNR=4.3						
GERES	GERESS Array B	148.01	349	PKPbc	PKPbc	01 44 13.9	+0.1
	comp=Z,0.3nm,0.7s,baz=38,slow=5.0,SNR=4.2						
DAVOX	Davos/Dischmat	150.61	353	PKPbc	PKPbc	01 44 20.2	-0.2
	comp=Z,1.3nm,0.6s,baz=260,slow=5.0,SNR=5.5						

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*NEIC **05** 01:29:45.2±2.8, 23°.0S±0°.2×174°.64W±0°.07, h10^{km}±1^{km}, mb4.5/7, Error ellipse: s-maj=27.9km s-min=9.8km az=168.0*

*IDC **05** 01:29:47.0±1.5, 23°.17S×175°.14W, h0^{km}, mb4.2/12, mb1 4.4/12, mb1mx4.3/30, mbtmp4.2/12, MS3.9/1, Ms1 3.9/1, ms1mx3.5/35, Error ellipse: s-maj=73.8km s-min=19.9km az=155.0*

ISC 05 01:29:50.6±0.9**, 23°.3S**±0°.2×**175°.1W**±0°.1**, h29**^{km}**, n31, σ1^{s}.64**/28**, mb4.4**/16**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	6.36	50	Pn	Pn	01 31 11.3	-11
NIUE				Sn	Sn	01 32 11.8	-22
MSVF	Nonsavu	8.48	309	Pn	Pn	01 31 54.0	+2.3
	1.5nm,0.3s,baz=142,slow=13,SNR=7.1						
MSVF	Nonsavu	8.48	309		Pn	01 31 50.7	-1.0
RAR	Rarotonga	14.31	85	Pn	Pn	01 33 00.4	-11
DZM	Mont Dzumac	17.11	270	P	P	01 33 53.5	+4.1
	0.4nm,0.3s,baz=82,slow=18,SNR=6.0						
DZM				LR	LR	01 39 11.4	
	comp=Z,394nm,19.9s,baz=349,slow=33						
DZM	Mont Dzumac	17.11	270	Pn	Pn	01 33 45.5	-2.4
DZM				IAmb	IAmb	01 34 04.6	
	comp=Z,21nm,1.2s						
CTA	Charters Tower	36.02	267	P	P	01 36 49.2	-0.3
	comp=Z,7.4nm,0.7s,baz=96,slow=6.2,SNR=3.7						
PMG	Port Moresby	38.65	285	P	P	01 37 10.3	-1.6
PMG				IAmb	IAmb	01 37 12.7	
	comp=Z,12nm,0.8s						
STKA	Stephens Creek	39.15	248	P	P	01 37 15.9	0.0
	comp=Z,1.2nm,0.6s,baz=99,slow=9.3,SNR=4.4						
AS31	Alice Springs	46.60	259	P	P	01 38 16.4	0.0
AS31				IAmb	IAmb	01 38 19.0	
	comp=Z,1.7nm,0.6s						
ASAR	Alice Springs	46.60	259	P	P	01 38 16.9	+0.5
	comp=Z,5.6nm,0.9s,baz=99,slow=6.8,SNR=33						
ASAR				PcP	PcP	01 39 51.7	+1.4
	comp=Z,0.6nm,0.9s,baz=100,slow=3.4,SNR=1.8						
ASAR	Alice Springs	46.60	259	P	P	01 38 16.2	-0.3
WB2	Warramunga Arr	46.96	264	P	P	01 38 17.2	-2.1
WB0	Warramunga Arr	46.96	264	P	P	01 38 19.0	-0.3
WB0				IAmb	IAmb	01 38 21.7	
	comp=Z,5.7nm,0.8s						
WRAB	Tennant Creek	46.96	264	P	P	01 38 19.1	-0.2
WRAB				IAmb	IAmb	01 38 19.7	
	comp=Z,4.1nm,0.8s						
WRA	Warramunga Arr	46.97	264	P	P	01 38 19.0	-0.4
	comp=Z,3.3nm,0.8s,baz=100,slow=7.8,SNR=18						
FITZ	Fitzroy Crossi	55.40	264	P	P	01 39 23.1	+0.5
	comp=Z,2.5nm,0.7s,baz=120,slow=7.3,SNR=7.5						
SIJI	Sorong	56.59	285	P	P	01 39 30.7	-0.5
	comp=Z,5.1nm,0.5s,baz=147,slow=6.2,SNR=3.9						
KSAR	Wonju Array Be	80.78	317	P	P	01 41 55.4	-6.1
NVAR	Mina Array Bea	81.22	42	P	P	01 42 05.0	+0.9
	comp=Z,0.4nm,0.5s,baz=229,slow=8.2,SNR=3.1						
NVAR	Mina Array Bea	81.22	42	P	P	01 41 58.8	-5.3
USRK	Ussuriysk Ar.	82.79	325	P	P	01 42 12.9	+1.0
	comp=Z,3.9nm,0.8s,baz=111,slow=7.9,SNR=4.1						
USRK	Ussuriysk Ar.	82.79	325	P	P	01 42 08.3	-3.6
TXAR	Lajitas Array	86.29	56	P	P	01 42 31.8	+1.7
	comp=Z,0.3nm,0.7s,baz=231,slow=7.9,SNR=3.5						
TXAR	Lajitas Array	86.29	56	P	P	01 42 28.8	-1.3
PDAR	Pinedale Array	89.14	42	P	P	01 42 43.3	-0.4
	comp=Z,0.4nm,0.8s,baz=282,slow=1.7,SNR=2.6						
ILAR	Eielson Array	90.43	12	P	P	01 42 49.1	+0.2
	comp=Z,0.6nm,0.8s,baz=209,slow=6.9,SNR=3.0						
CMAR	Chiang Mai Arr	93.59	288	P	P	01 43 06.8	+2.2
	comp=Z,1.1nm,0.7s,baz=144,slow=3.4,SNR=6.5						
AKASG	Malin Array Be	146.74	332	PKPbc	PKPbc	01 49 29.4	-0.2
	comp=Z,1.0nm,0.5s,baz=43,slow=4.2,SNR=6.6						
AKASG	Malin Array Be	146.74	332		PKPdf	01 49 25.9	-2.0
BRTR	Keskin Array B	150.71	311	PKPbc	PKPbc	01 49 40.7	+0.3
	comp=Z,0.9nm,0.7s,baz=114,slow=4.5,SNR=5.4						

IDC 05 01:47:26.6±1.6**, 6°.89S**×**129°.35E, h0**^{km}**, mb3.9**/2**, mb1 4.1**/5**, mb1mx3.6**/31**, mbtmp4.0**/5**, ML4.2**/3**, Error ellipse: s-maj=75.4km s-min=23.6km az=71.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.52	239	Sn	Sn	01 50 19.6	+0.7
	9.6nm,0.3s,baz=306,slow=20,SNR=16						
FITZ	Fitzroy Crossi	11.72	198	Pn	Pn	01 50 14.5	-0.6
	0.5nm,0.3s,baz=35,slow=9.6,SNR=29						
FITZ				Sn	Sn	01 52 12.4	-14

	1.9nm,0.3s,baz=147,slow=20,SNR=9.5						
WRA	Warramunga Arr	13.85	160	Pn	Pn	01 50 43.3	-1.1
	1.8nm,0.3s,baz=344,slow=13,SNR=64						
WRA				Sn	Sn	01 53 04.0	-15
	2.1nm,0.3s,baz=326,slow=23,SNR=10						
ASAR	Alice Springs	17.25	166	P	Pn	01 51 28.9	-0.2
	0.9nm,0.3s,baz=343,slow=10.0,SNR=64						
ASAR				S	Sn	01 54 26.0	-16
	0.5nm,0.3s,baz=346,slow=26,SNR=6.3						
STKA	Stephens Creek	27.37	157	P	P	01 53 14.3	+0.7
	0.8nm,0.4s,baz=340,slow=8.8,SNR=4.0						
MKAR	Makanchi Array	67.78	327	P	P	01 58 26.2	0.0
	0.4nm,0.4s,baz=115,slow=8.3,SNR=12						

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*SJA **05** 02:09:59.8±0.7, 23°.52S×64°.77W, h24km±4km, ML4.8, MW4.9*

*MOS **05** 02:09:59.9±1.3, 23°.54S×64°.69W, h21km, mb5.3/22, Error ellipse: s-maj=12.4km s-min=7.8km az=110.5*

*NEIC **05** 02:10:00.7±2.0, 23°.51S±0°.06×64°.64W±0°.06, h12km±3km, mb5.3/171, Md4.5(SJA), Error ellipse: s-maj=8.8km s-min=8.2km az=134.0*

*VAO **05** 02:10:01.3±0.3, 23°.64S×64°.79W, h21km, mb4.7*

*IDC **05** 02:10:03.9±2.6, 23°.46S×64°.65W, h33km±19km, mb4.6/12, mb1 4.7/18, mb1mx4.5/27, mbtmp4.7/18, ML4.1/6, MS3.9/2, Ms1 3.9/2, ms1mx3.5/25, Error ellipse: s-maj=19.8km s-min=12.7km az=30.0*

ISC 05 02:10:00.3±1.1, **23°.51S**±0°.03×**64°.69W**±0°.04, **h12**km±7km, **n487**, σ**1s.32**/433, **mb5.3**/117, **22C-5D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
ASTB	Santa Barbara	0.49	154	eP	Pb	02 10 11.3	+0.4
ALOL	LOMAS DE OLMED	0.71	115	eP	Pb	02 10 15.0	+0.3
HJA	Humahuaca	0.73	294	eP	Pg	02 10 14.1	-0.4
HJA				IAML		02 10 32.6	
	comp=Z,22µm,0.8s						
AZAP	Zapla	0.79	206	eP	Pg	02 10 15.0	-0.7
AZAP				eP	Pb	02 10 15.3	-0.9
AZAP				eS	Sn	02 10 30.1	+0.8
AZAP				IAML		02 10 32.0	
	comp=Z,53µm,0.6s						
SLA	San Lorenzo	1.42	212	⇑iP	Pb	02 10 26.8	0.0
SLA				iS	Sg	02 10 45.8	-0.4
SLA	San Lorenzo	1.42	212	eP	Pn	02 10 25.9	-0.1
SLA				eS	Sg	02 10 47.7	+1.5
SLA				IAML		02 10 49.8	
	comp=Z,27µm,0.9s						
YJA	Yavi	1.53	330	eP	Pb	02 10 29.3	+0.5
YJA				eS	Sb	02 10 48.3	0.0
YJA				IAML		02 10 54.3	
	comp=Z,6µm,0.3s						
FSA	Cafayete	2.85	204	eP	Pn	02 10 46.6	+0.9
FSA				eS	Sb	02 11 25.6	-0.4
AHML	Horco Molle	3.32	190	⇑eP	Pn	02 10 52.1	+0.1
AHML				iS	Sn	02 11 31.9	+0.5
AHML	Horco Molle	3.32	190	eP	Pn	02 10 46.6	-5.4
AHML				eP	Pn	02 10 52.5	+0.5
AHML				eS	Sg	02 11 45.3	-1.5
AHML				IAML		02 11 49.0	
	comp=Z,3µm,0.5s						
LVC	Limon Verde	3.99	282	Pn	Pn	02 11 05.2	+3.6
	comp=Z,1.7nm,0.3s,baz=92,slow=12,SNR=33						
LVC				Pg	Pg	02 11 16.7	-0.1
	comp=Z,4.4nm,0.3s,baz=105,slow=16,SNR=12						
LVC				LR	LR	02 12 57.4	
	comp=Z,2µm,18.7s,baz=108,slow=43						
LVC	Limon Verde	3.99	282	eP	Pn	02 11 04.9	+3.3
LVC	Limon Verde	3.99	282		Pn	02 11 04.2	+2.6
PB15	IPOC Station P	4.41	273	⇑iP	Pn	02 11 11.1	+3.9
PB15	IPOC Station P	4.41	273		Pn	02 11 10.1	+2.9
PB09	IPOC Station P	4.54	291	⇑eP	Pn	02 11 12.9	+4.0
PB09	IPOC Station P	4.54	291		Pn	02 11 12.2	+3.3
PB06	IPOC Station P	4.57	279	⇑iP	Pn	02 11 12.9	+3.6
PB06	IPOC Station P	4.57	279		Pn	02 11 12.5	+3.2
PB03	IPOC Station P	4.90	286	⇑eP	Pn	02 11 16.9	+3.1
PB03	IPOC Station P	4.90	286	eP	Pn	02 11 17.0	+3.1
CYA	Choya	5.01	191	eP	Pn	02 11 17.3	+2.0
CYA				eS	Sb	02 12 31.6	+3.3
CYA				IAML		02 12 51.4	
	comp=Z,664nm,1.2s						
PB01	IPOC Station P	5.08	298	⇑iP	Pn	02 11 19.8	+3.5
PB01	IPOC Station P	5.08	298		Pn	02 11 17.9	+1.7
PB01	IPOC Station P	5.08	298	eP	Pn	02 11 15.1	-1.2
PB05	IPOC Station P	5.12	276	eP	Pn	02 11 19.3	+2.4
PB07	IPOC Station P	5.12	289	⇑iP	Pn	02 11 19.9	+3.0
PB07	IPOC Station P	5.12	289		Pn	02 11 19.0	+2.1
PB04	IPOC Station P	5.17	282	⇓iP	Pn	02 11 21.1	+3.5
PB04	IPOC Station P	5.17	282		Pn	02 11 19.8	+2.2
AC02	Maricunga	5.21	230	Pn	Pn	02 11 19.9	+1.5
PB02	IPOC Station P	5.29	293	eP	Pn	02 11 22.6	+3.4
PB02	IPOC Station P	5.29	293	eP	Pn	02 11 18.1	-1.1
PB08	IPOC Station P	5.33	308	⇓iP	Pn	02 11 24.2	+4.2
PB08	IPOC Station P	5.33	308		Pn	02 11 21.7	+1.7
PB14	IPOC Station P	5.34	257	eP	Pn	02 11 21.7	+1.6
PB14	IPOC Station P	5.34	257		Pn	02 11 21.0	+0.9
PB10	IPOC Station P	5.39	269	eP	Pn	02 11 23.2	+2.8
PB10	IPOC Station P	5.39	269		Pn	02 11 23.3	+2.8
TA01	Diego Aracena	5.88	299	⇓iP	Pn	02 11 29.8	+2.7
TA01	Diego Aracena	5.88	299		Pn	02 11 28.9	+1.7
TA01	Diego Aracena	5.88	299	eP	Pn	02 11 30.0	+2.8
PB11	IPOC Station P	5.94	308	⇑iP	Pn	02 11 31.1	+2.9
PB11	IPOC Station P	5.94	308	Pn	Pn	02 11 30.3	+2.1
TA02	Huaiquique	6.00	301		Pn	02 11 30.3	+1.5
VCA	Vinchina	6.09	211	eP	Pn	02 11 33.0	+2.7
PSGCX	Pisagua	6.38	307	Pn	Pn	02 11 35.6	+1.4
PSGCX	Pisagua	6.38	307	eP	Pn	02 11 31.6	-2.6
PSGCX				eP	Pn	02 11 36.0	+1.8
PSGCX				eP	Pn	02 11 37.0	+2.8
GO03	Copiap	6.45	230	Pn	Pn	02 11 36.2	+1.1
APLL	PUNTA DE LOS L	7.05	193	eP	Pn	02 11 43.0	-0.4
PB12	IPOC Station P	7.17	312	eP	Pn	02 11 44.1	-1.0
CPUP	Villa Florida	7.25	114	Pn	Pn	02 11 46.2	+0.3
	comp=Z,2.5nm,0.3s,baz=299,slow=12,SNR=44						
CPUP				Lg	Lg	02 13 55.2	
	comp=Z,28nm,0.3s,baz=14,slow=20,SNR=4.1						
CPUP				LR	LR	02 15 01.5	
	comp=Z,986nm,21.6s,baz=17,slow=41						
CPUP	Villa Florida	7.25	114	P	Pn	02 11 45.6	-0.3
CPUP	Villa Florida	7.25	114	eP	Pn	02 11 46.4	+0.4
CPUP	Villa Florida	7.25	114	Pn	Pn	02 11 45.6	-0.3
AC04	Llanos de Chal	7.41	230	Pn	Pn	02 11 48.6	+0.4
AVFE	Valle Fertil	7.54	199	eP	Pn	02 11 50.0	-0.1
LCO	Las Campanas	7.69	223	P	Pn	02 11 53.3	+0.9
LCO	Las Campanas	7.69	223	Pn	Pn	02 11 53.2	+0.9
LCO	Las Campanas	7.69	223	eP	Pn	02 11 53.0	+0.7
TCA	Tanti	7.80	179	eP	Pn	02 11 52.7	-1.0
TCA				eP	Pn	02 11 53.3	-0.4
TCA				eS	Sn	02 13 20.2	-1.7
LPAZ	La Paz	7.88	335	Pn	Pn	02 11 56.6	+1.4
	comp=Z,0.5nm,0.3s,baz=142,slow=9.0,SNR=18						
LPAZ				Sn	Sn	02 13 26.8	+2.1
	comp=Z,2.2nm,0.3s,baz=92,slow=11,SNR=1.4						
LPAZ	La Paz	7.88	335	P	Pn	02 11 55.4	+0.2
LPAZ						02 13 26.8	
LPAZ	La Paz	7.88	335	eP	Pn	02 11 56.2	+1.0
LPAZ	La Paz	7.88	335		Pn	02 11 55.4	+0.2
AROD	Rodeo	7.89	212	eP	Pn	02 11 57.0	+1.9
ACCO	Cerro Coronel	8.06	208	eP	Pn	02 11 59.0	+1.6
SIV	San Ignacio	8.21	25	Pn	Pn	02 12 00.5	+1.1
	comp=Z,9.9nm,0.3s,baz=207,slow=13,SNR=181						
SIV				Sn	Sn	02 13 28.9	-3.2
	comp=Z,19nm,0.3s,baz=202,slow=15,SNR=1.7						
SIV				Lg	Lg	02 14 20.5	
	comp=Z,20nm,0.3s,baz=282,slow=20,SNR=2.0						
GO04	Tololo Observa	8.59	218		Pn	02 12 05.2	+0.5
AQDB	Aquidauana	8.87	72	eP	Pn	02 12 09.2	+0.9
AQDB	Aquidauana	8.87	72	Pn	Pn	02 12 09.3	+1.1
RTLS	Leoncito	9.21	205	eP	Pn	02 12 15.0	+1.8
ITQB	Itaqui	9.47	132	eP	Pn	02 12 16.6	+0.1
ITQB	Itaqui	9.47	132		Pn	02 12 16.8	+0.3
PTLB	Pontes e Lacer	9.57	34	Pn	Pn	02 12 17.5	-0.4
AUSP	Uspallata	9.63	205	eP	Pn	02 12 19.7	+0.8
ASAL	Salagasta	9.76	201	eP	Pn	02 12 21.0	+0.4
VA03	San Esteban	10.57	208	Pn	Pn	02 12 32.5	+0.8
PP1B	Ponte de Pedra	10.90	59	eP	Pn	02 12 37.0	+0.8
TRCB	Terra Rica	11.11	89	eP	Pn	02 12 39.6	+0.5
TRCB	Terra Rica	11.11	89		Pn	02 12 39.1	0.0
VILB	Vilhena	11.33	23	eP	Pn	02 12 42.8	+0.7
VILB	Vilhena	11.33	23	Pn	Pn	02 12 42.1	+0.1
PTGB	Pitanga	11.59	99	eP	Pn	02 12 46.9	+1.3
MT09	Talagante	11.63	207		Pn	02 12 45.1	-1.1
ITAB	Concordia	11.94	111	eP	Pn	02 12 50.6	+0.2
CPSB	Cacapava Do Su	12.15	127	eP	Pn	02 12 52.1	-1.1
BO02	Sierra Bellavi	12.44	204		Pn	02 12 57.2	0.0
PCMB	Pacaembu	12.55	84	eP	Pn	02 12 59.7	+1.1
LPA	La Plata	12.79	154	deP	Pn	02 13 02.8	+0.9
LPA				PP	PgPg	02 14 04.9	-0.5
LPA				S	Sn	02 15 30.2	+5.9
LPA				SSS	SSS	02 16 35.0	
PLTB	Pedras Altas	12.80	132	eP	Pn	02 13 01.3	-0.8
PLTB	Pedras Altas	12.80	132	Pn	Pn	02 13 00.4	-1.7
CNLB	Canela	13.67	118	eP	Pn	02 13 14.4	+0.3
ETMB	Extrema	13.69	354	Pn	Pn	02 13 13.2	-1.1
FRTB	Fartura	13.88	92	eP	Pn	02 13 18.5	+1.5
ARAG	Araguaiana, MT	14.39	60	eP	Pn	02 13 24.6	+0.7
TIJ01	Guaruva-PR	14.40	100	eP	Pn	02 13 24.0	0.0
SAML	Samuel	14.55	6	P	Pn	02 13 23.2	-2.8
SAML	Samuel	14.55	6	Pn	Pn	02 13 23.2	-2.8
TRQA	Tornquist	14.69	172	P	Pn	02 13 25.5	-2.4
TRQA	Tornquist	14.69	172	Pn	Pn	02 13 25.5	-2.4
CLDB	Colider	15.16	35	eP	Pn	02 13 35.5	+1.2
RCLB	Rio Claro- Sao	15.84	89	eP	Pn	02 13 43.4	+0.2
PET01	Itanhaem-SP	15.94	96	eP	Pn	02 13 46.0	+1.5
VA04	Juan Fernndez	15.99	228		Pn	02 13 45.9	+0.9
NNA	Nana	16.27	313	Pn	P	02 13 51.5	-0.3
	comp=Z,1.9nm,0.3s,baz=158,slow=12,SNR=5.1						
NNA	Nana	16.27	313	P	Pn	02 13 49.4	+0.6
NNA				pmax	pmax		
	comp=Z,40nm,1.2s						
NNA	Nana	16.27	313		Pn	02 13 49.4	+0.6
VAO	Valinhos	16.30	92	eP	P	02 13 50.9	-1.2
IPMB	Ipameri, GO	16.36	73	eP	P	02 13 53.7	+0.9
LC01	Cunco	16.52	200	Pn	Pn	02 13 52.7	+1.0
SNDB	Serra Nova Dou	17.14	50	eP	P	02 14 03.4	+2.0
CZSB	Cruzeiro do Su	17.47	333	Pn	Pn	02 14 03.1	-0.8
BDFB	Brasilia	17.54	67	P	P	02 14 08.6	+2.7
	comp=Z,0.2nm,0.3s,baz=242,slow=16,SNR=5.0						
BDFB				Lg	Lg	02 19 14.6	
	comp=Z,0.4nm,0.3s,baz=109,slow=13,SNR=4.0						
BDFB	Brasilia	17.54	67	P	Pn	02 14 03.9	-0.9
BDFB				pmax	pmax		
	comp=Z,16nm,1.1s						
BDFB	Brasilia	17.54	67	P	Pn	02 14 03.9	-0.9
PLCA	Paso Flores	17.87	195	P	P	02 14 10.1	+0.7
	comp=Z,0.1nm,0.3s,baz=23,slow=13,SNR=3.2						
PLCA				Lg	Lg	02 19 28.6	
	comp=Z,0.1nm,0.3s,baz=38,slow=7.7,SNR=3.8						
PLCA	Paso Flores	17.87	195	P	Pn	02 14 07.1	-1.6
PLCA				pmax	pmax		
	comp=Z,17nm,1.3s						
PLCA	Paso Flores	17.87	195	eP	Pn	02 14 05.3	-3.4
PLCA	Paso Flores	17.87	195	Pn	Pn	02 14 07.1	-1.6
LL04	Puerto Octay	18.53	199	P	P	02 14 14.2	-2.3
NPGB	Novo Progresso	18.66	30	eP	Pn	02 14 19.2	+0.6
PEXB	Peixe	19.26	57	eP	Pn	02 14 26.9	+1.0
TBTG	Tabatinga, AM	19.86	344	eP	P	02 14 32.0	+0.7
TBTG	Tabatinga, AM	19.86	344	P	P	02 14 30.9	-0.4
DIAM	Diamantina, MG	20.30	79	eP	Pn	02 14 38.7	+0.5
LL02	Futaleuf	20.51	195		P	02 14 37.1	-1.0
MACA	Manacapuru-AM	20.59	11	eP	P	02 14 40.3	+1.1
MACA	Manacapuru-AM	20.59	11		P	02 14 39.4	+0.2
MACA				IAmb	IAmb	02 14 48.0	
	comp=Z,125nm,1.1s						
MC01	Montes Claros	20.61	75	eP	Pn	02 14 40.7	-1.1
DUB01	Friburgo-RJ	20.62	90	eP	Pn	02 14 41.8	-0.1
ITTB	Itaituba	20.90	26	eP	P	02 14 43.3	+0.7
GO07	Milladeo Hill,	20.92	199		P	02 14 41.5	-1.1
GO07				IAmb	IAmb	02 14 45.1	
	comp=Z,117nm,0.6s						
ATAH	Atahualpa	20.94	319	P	P	02 14 44.2	+0.7
	comp=Z,4.8nm,0.7s,baz=163,slow=15,SNR=5.7						
JANB	Januaria	20.97	70	eP	Pn	02 14 45.0	-1.0
SDBA	SAO DESIDERIO	21.79	63	eP	P	02 14 54.0	+1.7
SMTB	Santa Maria do	21.91	51	eP	P	02 14 55.5	+2.0
PRPB	Parauapebas	22.40	42	eP	P	02 14 59.9	+1.1
SJMB	Sao Joao De Ma	22.43	82	eP	P	02 14 59.7	+0.6
BSFB	Barra de Sao F	22.70	83	eP	P	02 15 02.8	+0.8
COYC	Coyhaique	22.82	193		P	02 15 01.9	-1.0
RIB01	Linhares ES	22.99	84	eP	P	02 15 05.1	+0.2
PTGA	Pitinga	23.10	12	P	P	02 15 05.6	-0.5
	comp=Z,17nm,0.8s,baz=205,slow=11,SNR=26						
NAN01	Guarapari, ES	23.64	81	eP	P	02 15 13.6	+2.1
MALB	Monte Alegre	23.78	27	eP	P	02 15 13.4	+0.6
GUA01	Guaratinga, BA	24.34	78	eP	P	02 15 19.2	+1.0
CMC01	Camacan, BA	25.05	76	eP	P	02 15 25.9	+1.3
NBIT	Itapeh - BA	25.29	75	eP	P	02 15 28.2	+1.5
GDU01	Guandu, BA	25.67	72	eP	P	02 15 31.2	+1.0
BOAV	Boa Vista	26.06	10	eP	P	02 15 33.4	-0.3
BOAV	Boa Vista	26.06	10	P	P	02 15 33.0	-0.7
MCPB	Macapa, AP	26.07	30	eP	P	02 15 34.9	+1.0
TMAB	Tom-Au,PA,Br	26.45	40	eP	P	02 15 39.3	+2.1
NBPN	Ponto Novo - B	26.51	66	eP	P	02 15 39.1	+1.3
OTAV	Otavalo	27.13	329	P	P	02 15 43.4	-0.5
OTAV				pmax	pmax		
	comp=Z,12nm,1.2s						
OTAV	Otavalo	27.13	329	eP	P	02 15 44.0	+0.2
OTAV	Otavalo	27.13	329	P	P	02 15 43.4	-0.5
NBLA	Lagarto - SE	28.48	69	eP	P	02 15 56.2	+0.7
EFI	East Falkland	28.58	171	iP	P	02 15 56.2	+0.2
EFI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NBPS	Pedro II - PI	29.40	53	eP	P	02 16 05.4	+1.7
NBMA	Muriti-CE	29.61	61	eP	P	02 16 06.8	+1.2
NBPB	Pedra_Branca-C	30.06	57	eP	P	02 16 11.0	+1.5
NBLV	Livramento - P	31.11	63	eP	P	02 16 20.1	+1.2
NBMO	Morrinhos-CE	31.16	54	eP	P	02 16 20.1	+0.9
NBPA	Parau_RN	31.88	61	eP	P	02 16 26.3	+0.8
ZARC	Zaragoza, Cauc	32.38	341	P	P	02 16 26.2	-3.6
SJCC	San Jacinto, C	34.75	342	P	P	02 16 47.8	-2.8
SJCC				IAmb	IAmb	02 16 49.4	
	comp=Z,37nm,1.1s						
RIOS	Rincon, Osa	36.93	328	P	P	02 17 08.6	-0.6
SRBA	San Rafael, Bu	37.31	329	P	P	02 17 11.4	-1.2
RIMA	Rio Macho	38.02	328	P	P	02 17 19.2	+0.5
JTS	Las Juntas de	39.01	327	⇓iP	P	02 17 28.4	+1.6
JTS				pmax	pmax		
	comp=Z,34nm,1.4s						
JTS	Las Juntas de	39.01	327	P	P	02 17 26.9	+0.1
BOAB	BOACO BROADBAN	41.21	328	P	P	02 17 45.5	+0.5
BOAB				IAmb	IAmb	02 17 52.5	
	comp=Z,90nm,1.3s						
TGUH	Tegucigalpa,Un	43.38	327	P	P	02 18 02.2	-0.7
PETF	Flores	47.11	326	IAmb	IAmb	02 18 33.4	
	comp=Z,32nm,0.8s						
CCIG	Comitan	47.79	323	IAmb	IAmb	02 18 38.9	
	comp=Z,26nm,1.0s						
VNA3	Neumayer Olymp	56.94	162	P	P	02 19 44.5	-0.4
VNA3	Neumayer Olymp	56.94	162	sP	sP	02 19 55.9	+4.7
VNA1	Neumayer--Stat	57.10	161	P	P	02 19 46.4	+0.4
VNA1	Neumayer--Stat	57.10	161	sP	sP	02 19 57.4	+5.1
VNA2	Neumayer--Watz	57.48	161	P	P	02 19 48.5	-0.3
	baz=286,slow=7.9						
VNA2	Neumayer--Watz	57.48	161	sP	sP	02 19 58.8	+3.8
154A	Montrose	58.51	342	P	P	02 19 55.4	-1.0
250A	Grady	58.91	339	P	P	02 19 58.5	-0.6
ZAIG	Zacatecas	58.93	319	P	P	02 19 59.7	-0.2
152A	Waverly Hall	59.05	340	IAmb	IAmb	02 19 59.7	
	comp=Z,23nm,1.2s						
SNAA	Sanae	59.12	161	P	P	02 19 59.7	-0.6
SNAA	Sanae	59.12	161	ceP	P	02 19 59.6	-0.6
SNAA				pmax	pmax		
	comp=Z,27nm,1.6s						
SNAA	Sanae	59.12	161	P	P	02 19 59.6	-0.6
SNAA				IAmb	IAmb	02 20 00.9	
	comp=Z,21nm,1.2s						
KMSC	Kings Mountain	60.43	344	P	P	02 20 08.7	-0.8
KMSC				IAmb	IAmb	02 20 10.1	
	comp=Z,41nm,1.3s						
KMSC	Kings Mountain	60.43	344	P	P	02 20 09.3	-0.3
	baz=162						
Z47A	Carrollton	60.64	338	IAmb	IAmb	02 20 11.3	
	comp=Z,26nm,1.1s						
BG3	Lake Jocassee	60.70	343	IAmb	IAmb	02 20 12.0	
	comp=Z,23nm,1.0s						
HKT	Hockley	61.00	329	⇑eP	P	02 20 13.5	0.0
HKT				pmax	pmax		
	comp=Z,25nm,1.6s						
HKT	Hockley	61.00	329	P	P	02 20 12.7	-0.8
FPAL	Fort Paine	61.06	340	IAmb	IAmb	02 20 13.6	
	comp=Z,26nm,1.0s						
V53A	Saluda	61.31	343	IAmb	IAmb	02 20 15.8	
	comp=Z,31nm,1.1s						
833A	Chaparral WMA,	61.44	325	P	P	02 20 16.6	0.0
	baz=144,SNR=16						
TKL	Tuckaleechee C	61.56	342	P	P	02 20 16.4	-0.8
TKL				pmax	pmax		
	comp=Z,31nm,1.0s						
TKL	Tuckaleechee C	61.56	342	P	P	02 20 16.4	-0.8
TKL				IAmb	IAmb	02 20 17.0	
	comp=Z,31nm,1.0s						
CPCT	Cooper Cave	61.58	342	IAmb	IAmb	02 20 17.4	
	comp=Z,22nm,1.0s						
W50A	Signal Mountai	61.58	341	IAmb	IAmb	02 20 17.4	
	comp=Z,33nm,1.1s						
V52A	Sevierville	61.68	343	IAmb	IAmb	02 20 18.0	
	comp=Z,31nm,1.1s						
U54A	Nelsons Funny	61.86	344	IAmb	IAmb	02 20 19.8	
	comp=Z,37nm,1.1s						
NATX	Nacogdoches	61.99	331	P	P	02 20 19.5	-0.7
NATX	Nacogdoches	61.99	331	P	P	02 20 20.8	+0.6
	baz=149						
PLAL	Pickwick Lake	62.26	338	P	P	02 20 19.5	-2.4
PLAL				IAmb	IAmb	02 20 21.5	
	comp=Z,30nm,1.0s						
V48A	Smith Brothers	62.54	340	IAmb	IAmb	02 20 23.6	
	comp=Z,31nm,1.1s						
CLTN	Cedars of Leba	62.71	340	IAmb	IAmb	02 20 24.8	
	comp=Z,39nm,1.2s						
WLAR	White Oak Lake	62.99	334	P	P	02 20 26.6	-0.2
T50A	Nancy	63.13	342	IAmb	IAmb	02 20 26.8	
	comp=Z,18nm,1.1s						
WVT	Waverly	63.22	339	P	P	02 20 26.7	-1.7
WVT				pmax	pmax		
	comp=Z,47nm,1.0s						
WVT	Waverly	63.22	339	P	P	02 20 26.7	-1.7
WVT	Waverly	63.22	339	P	P	02 20 26.9	-1.5
	baz=156						
JCT	Junction City	63.38	326	P	P	02 20 28.5	-1.1
JCT				pmax	pmax		
	comp=Z,17nm,1.0s						
JCT	Junction City	63.38	326	P	P	02 20 28.5	-1.1
JCT				IAmb	IAmb	02 20 30.1	
	comp=Z,17nm,0.9s						
JCT	Junction City	63.38	326	P	P	02 20 29.3	-0.3
	baz=144						
WHTX	Lake Whitney,	63.46	329	P	P	02 20 30.1	0.0
	baz=146						
NVL	N'lazarevskaya	63.57	159	eP	P	02 20 35.1	+4.8
NVL				pmax	pmax		
	comp=Z,25nm,0.9s						
T47A	Sharon Grove	63.78	340	IAmb	IAmb	02 20 31.5	
	comp=Z,33nm,1.0s						
HPIG		63.90	319	P	P	02 20 32.7	-0.6
MIAR	Mount Ida	63.92	334	IAmb	IAmb	02 20 33.4	
	comp=Z,47nm,1.5s						
MIAR	Mount Ida	63.92	334	P	P	02 20 32.5	-0.6
	baz=151,SNR=8.9						
W41B	Gary Mavity, V	63.95	335	P	P	02 20 32.3	-0.9
	baz=152						
R50A	Paris	64.17	343	IAmb	IAmb	02 20 34.5	
	comp=Z,25nm,1.1s						
FCAR	Ozark Folk Cen	64.53	336	IAmb	IAmb	02 20 36.8	
	comp=Z,29nm,1.3s						
TXAR	Lajitas Array	64.55	323	P	P	02 20 37.1	-0.3
	comp=Z,1.9nm,0.7s,baz=149,slow=8.5,SNR=19						
W39A	Magazine	64.57	334	IAmb	IAmb	02 20 38.1	
	comp=Z,20nm,1.2s						
W39A	Magazine	64.57	334	P	P	02 20 37.3	0.0
	baz=150,SNR=5.9						
WCI	Wyandotte Cave	64.68	341	P	P	02 20 36.4	-1.5
WCI				pmax	pmax		
	comp=Z,19nm,1.1s						
WCI	Wyandotte Cave	64.68	341	P	P	02 20 36.4	-1.5
WCI				IAmb	IAmb	02 20 37.1	
	comp=Z,19nm,1.1s						
WCI	Wyandotte Cave	64.68	341	P	P	02 20 36.1	-1.8
	baz=158						
X37A	Clayton	64.71	332	IAmb	IAmb	02 20 39.3	
	comp=Z,33nm,1.1s						
P52A	Corning	64.89	345	IAmb	IAmb	02 20 39.9	
	comp=Z,24nm,1.1s						
P52A	Corning	64.89	345	P	P	02 20 38.4	-0.9
	baz=162,SNR=6.0						
ABTX	Abilene, Hawle	65.03	328	IAmb	IAmb	02 20 40.9	
	comp=Z,22nm,1.1s						
ABTX	Abilene, Hawle	65.03	328	P	P	02 20 40.5	+0.1
	baz=145						
S44A	Carbondale	65.12	339	IAmb	IAmb	02 20 44.2	
	comp=Z,18nm,1.1s						
SIUC	Southern Illin	65.12	339	IAmb	IAmb	02 20 40.2	
	comp=Z,18nm,1.1s						
T42A	Van Buren	65.16	337	IAmb	IAmb	02 20 40.6	
	comp=Z,26nm,1.2s						
U40A	Yellville	65.22	335	P	P	02 20 40.7	-0.8
	baz=152,SNR=6.0						
LIC	Lamto	65.27	71	eP	P	02 20 42.4	+0.1
	comp=Z,28nm,0.8s						
P49A	Miami Univ. Ec	65.45	343	IAmb	IAmb	02 20 42.2	
	comp=Z,25nm,1.1s						
P49A	Miami Univ. Ec	65.45	343	P	P	02 20 41.5	-1.4
	baz=160						
TIC	Toumodi	65.48	70	eP	P	02 20 43.4	-0.3
HHAR	Hobbs	65.58	334	IAmb	IAmb	02 20 43.9	
	comp=Z,17nm,1.0s						
KIC	Kosan Boka	65.59	71	eP	P	02 20 44.5	+0.1
	comp=Z,48nm,0.7s						
BLO	Bloomington	65.61	341	IAmb	IAmb	02 20 43.4	
	comp=Z,25nm,0.9s						
DBIC	Dimbokro	65.64	71	P	P	02 20 45.1	+0.5
	comp=Z,28nm,0.9s,baz=233,slow=6.3,SNR=24						
DBIC	Dimbokro	65.64	71	P	P	02 20 44.2	-0.5
DBIC				pmax	pmax		
	comp=Z,41nm,1.1s						
DBIC	Dimbokro	65.64	71	P	P	02 20 44.1	-0.5
ACSO	Alum Creek Sta	65.66	345	IAmb	IAmb	02 20 44.1	
	comp=Z,27nm,1.1s						
ACSO	Alum Creek Sta	65.66	345	P	P	02 20 43.0	-1.2
	baz=162						
MGMO	Mountain Grove	65.70	336	IAmb	IAmb	02 20 44.8	
	comp=Z,34nm,1.1s						
N54A	Moraine State	65.70	347	P	P	02 20 43.8	-0.7
	baz=165						
FVM	French Village	65.78	338	IAmb	IAmb	02 20 44.9	
	comp=Z,25nm,1.1s						
X34A	Smith Ranch, M	65.81	330	IAmb	IAmb	02 20 46.1	
	comp=Z,44nm,1.3s						
M55A	Ridgway	65.95	348	IAmb	IAmb	02 20 46.8	
	comp=Z,30nm,1.1s						
O49A	Covington	65.96	344	P	P	02 20 45.0	-1.2
O49A				IAmb	IAmb	02 20 45.8	
	comp=Z,37nm,1.2s						
TUL1	Leonard	66.02	333	IAmb	IAmb	02 20 47.2	
	comp=Z,30nm,1.3s						
TUL1	Leonard	66.02	333	P	P	02 20 46.0	-0.7
	baz=149						
L59A	Walton	66.06	352	IAmb	IAmb	02 20 52.3	
	comp=Z,31nm,1.2s						
CCM	Cathedral Cave	66.13	337	P	P	02 20 46.3	-1.0
CCM				pmax	pmax		
	comp=Z,27nm,1.0s						
CCM	Cathedral Cave	66.13	337	P	P	02 20 46.3	-1.0
CCM				IAmb	IAmb	02 20 47.1	
	comp=Z,27nm,1.0s						
CCM	Cathedral Cave	66.13	337	P	P	02 20 46.3	-1.0
	baz=154						
Q44A	Meyer Farm, Va	66.14	339	IAmb	IAmb	02 20 46.2	
	comp=Z,22nm,1.1s						
M54A	Oil Creek Stat	66.16	348	P	P	02 20 47.0	-0.5
	baz=165						
BINY	Binghamton	66.21	351	IAmb	IAmb	02 20 48.6	
	comp=Z,28nm,1.0s						
BINY	Binghamton	66.21	351	P	P	02 20 47.8	0.0
	baz=169						
M53A	WI Miller and	66.30	347	P	P	02 20 47.8	-0.5
	baz=164						
L56A	Greenwood	66.39	350	IAmb	IAmb	02 20 49.6	
	comp=Z,38nm,1.1s						
TRY	Troy	66.43	353	IAmb	IAmb	02 20 50.4	
	comp=Z,31nm,1.3s						
OK031	S. Brethren Rd	66.50	332		P	02 20 49.7	-0.1
N49A	Columbus Grove	66.61	344	IAmb	IAmb	02 20 50.0	
	comp=Z,34nm,1.0s						
QSPA	South Pole Qui	66.70	180	P	P	02 20 50.3	-0.5
R40A	Maddies Statio	66.70	337	IAmb	IAmb	02 20 55.4	
	comp=Z,20nm,1.1s						
ERPA	Erie	66.81	348	P	P	02 20 51.0	-0.6
	baz=165						
WVNY	West Valley, N	66.83	349	IAmb	IAmb	02 20 52.4	
	comp=Z,28nm,0.8s						

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SFIN  Lafayette         66.90 342     IAmb     IAmb     02 20 51.1
      comp=Z,24nm,0.9s
SFIN  Lafayette         66.90 342     P        P        02 20 50.5 -1.7
      baz=158,SNR=5.4
P43A  Skaggs, Pawnee    66.97 339     IAmb     IAmb     02 20 51.8
      comp=Z,32nm,0.9s
T35A  Sooner Cattle     67.18 333     IAmb     IAmb     02 20 55.4
      comp=Z,26nm,1.1s
J59A  Piesco            67.25 352     IAmb     IAmb     02 20 55.1
      comp=Z,31nm,0.9s
MNTX  Cornudas Mount    67.30 323     P        P        02 20 54.3 -0.7
MNTX                                  IAmb     IAmb     02 20 55.6
      comp=Z,16nm,1.1s
MNTX  Cornudas Mount    67.30 323     P        P        02 20 54.3 -0.7
      baz=140,SNR=18
BLOK  Blackwell         67.34 332     IAmb     IAmb     02 20 56.0
      comp=Z,29nm,1.1s
L48A  N Adams           67.64 344     IAmb     IAmb     02 20 56.4
      comp=Z,42nm,1.2s
MSTX  Muleshoe          67.67 326     P        P        02 20 57.3 -0.1
      baz=142,SNR=20
P40A  Paris             67.72 337     IAmb     IAmb     02 20 57.8
      comp=Z,17nm,0.9s
HDIL  Hopedale          67.73 340     IAmb     IAmb     02 20 56.6
      comp=Z,24nm,0.9s
HDIL  Hopedale          67.73 340     P        P        02 20 56.1 -1.4
      baz=156
OK032 Salt Plains WL    67.81 331     IAmb     IAmb     02 20 58.8
      comp=Z,24nm,1.0s
KAN17 Caldwell West     67.82 332     IAmb     IAmb     02 20 58.9
      comp=Z,38nm,1.1s
KAN14 Manchester OK     67.83 332     IAmb     IAmb     02 20 59.5
      comp=Z,38nm,1.2s
AMTX  Amarillo          67.86 328     IAmb     IAmb     02 20 59.0
      comp=Z,32nm,1.1s
AMTX  Amarillo          67.86 328     P        P        02 20 58.3 -0.2
      baz=144
L46A  Eue Claire        68.19 343     P        P        02 20 59.0 -1.4
L46A                                  IAmb     IAmb     02 20 59.6
      comp=Z,29nm,0.9s
P38A  Dawn              68.34 336     IAmb     IAmb     02 21 01.3
      comp=Z,29nm,1.0s
N41A  Harden Midland    68.37 339     IAmb     IAmb     02 21 00.9
      comp=Z,32nm,1.0s
LONY  Lake Ozonia       68.40 352     P        P        02 21 01.5 -0.1
      baz=170
KSU1  Kansas State U    69.08 334     IAmb     IAmb     02 21 06.2
      comp=Z,37nm,1.1s
KSU1  Kansas State U    69.08 334     P        P        02 21 05.4 -0.5
      baz=149,SNR=5.9
121A  Cookes Peak, D    69.27 322     IAmb     IAmb     02 21 09.6
      comp=Z,27nm,1.1s
121A  Cookes Peak, D    69.27 322     P        P        02 21 08.5 +1.0
      baz=138,SNR=20
CBKS  Cedar Bluff       70.15 332     P        P        02 21 12.8 +0.2
      baz=146
JFWS  Jewell Farm       70.17 340     P        P        02 21 11.9 -0.7
      baz=155,SNR=8.9
KOWA  Kowa              70.31  64     P        P        02 21 14.1  0.0
ANMO  Albuquerque       70.35 324ce   P        P        02 21 14.9 +0.7
ANMO                                  pmax     pmax
      comp=Z,17nm,1.1s
ANMO  Albuquerque       70.35 324     P        P        02 21 14.3 +0.2
ANMO                                  IAmb     IAmb     02 21 15.9
      comp=Z,19nm,1.1s
ANMO  Albuquerque       70.35 324     P        P        02 21 14.8 +0.6
      baz=140
GLMI  Grayling          70.40 345     P        P        02 21 13.7 -0.3
      baz=161
TUC   Tucson            70.85 320     P        P        02 21 17.6 +0.5
TUC                                   pmax     pmax
      comp=Z,15nm,1.3s
TUC   Tucson            70.85 320     P        P        02 21 17.6 +0.5
TUC   Tucson            70.85 320     P        P        02 21 17.9 +0.8
      baz=136
T25A  Trinidad          70.99 327     P        P        02 21 18.8 +0.7
      baz=142,SNR=7.3
KSCO  Kaye Shedlock'    71.62 330     P        P        02 21 22.3 +0.6
      baz=144
BGNE  Belgrade          71.66 334     P        P        02 21 21.7  0.0
BGNE  Belgrade          71.66 334     P        P        02 21 21.5 -0.3
      baz=148,SNR=5.7
214A  Organ Pipe Nat    71.82 318     P        P        02 21 24.1 +1.2
      baz=134,SNR=5.0
SDCO  Great Sand Dun    72.00 327     P        P        02 21 25.1 +0.8
      baz=141,SNR=23
W18A  Petrified Fore    72.27 322     P        P        02 21 27.1 +1.4
      baz=137
S22A  4UR Ranch, Cre    72.67 326     P        P        02 21 28.9 +0.7
      baz=140,SNR=10
Q24A  Divide            72.78 328     P        P        02 21 29.4 +0.6
      baz=142,SNR=16
SPMN  Marine on St.     73.05 340     P        P        02 21 28.9 -0.9
      baz=153,SNR=8.3
ECSD  EROS Data Cent    73.05 336     P        P        02 21 29.2 -0.8
      baz=150,SNR=9.5
MVCO  Mesa Verde        73.14 325     P        P        02 21 31.0  0.0
MVCO                                  IAmb     IAmb     02 21 32.8
      comp=Z,48nm,1.2s
MVCO  Mesa Verde        73.14 325     P        P        02 21 32.0 +1.0
      baz=139,SNR=20
SYO   Syowa Base        73.24 159⇑ eP       P        02 21 29.0 -1.8
SYO   Syowa Base        73.24 159⇑ epP      P        02 21 30.6 -0.2
SYO   Syowa Base        73.24 159⇑ esP      P        02 21 34.1 +3.3
WUAZ  Wupatki           73.48 322     P        P        02 21 34.3 +1.4
      baz=136,SNR=9.7
ISCO  Idaho Springs     73.65 328     P        P        02 21 34.8 +0.8
      baz=141,SNR=18
WIN   Windhoek          74.18 108     P        P        02 21 38.4 +0.9
WIN                                   pmax     pmax
      comp=Z,11nm,1.3s
WIN   Windhoek          74.18 108     P        P        02 21 38.4 +0.9
SUR   Sutherland        74.19 119     P        P        02 21 36.6 -0.8
SUR                                   IAmb     IAmb     02 21 53.8
      comp=Z,32nm,1.4s
TORD  Torodi Ar. Bea    74.42  68     P        P        02 21 38.8 +0.1
      comp=Z,54nm,0.8s,baz=254,slow=5.2,SNR=272
TORD  Torodi Ar. Bea    74.42  68     P        P        02 21 37.8 -0.8
TORD                                  IAmb     IAmb     02 21 39.8
      comp=Z,38nm,0.8s
BC3   Big Chuckawall    74.60 318     P        P        02 21 40.9 +1.4
      baz=133
N23A  Red Feather La    74.66 329     P        P        02 21 40.9 +1.1
      baz=141,SNR=9.8
IRM   Iron Mountain     74.75 318     P        P        02 21 41.4 +1.2
      baz=133,SNR=7.0
EYMN  Ely               75.09 342     P        P        02 21 40.9 -0.9
      baz=155
BELC  Belle Mtn. Jos    75.17 318     P        P        02 21 44.3 +1.6
      baz=132
O20A  White River Ci    75.20 327     P        P        02 21 43.8 +0.9
      baz=139,SNR=20
GMRC  Granite Mounta    75.49 319     P        P        02 21 45.9 +1.3
      baz=133,SNR=12
TSUM  Tsumeb            75.74 105     P        P        02 21 45.8 -0.6
P17A  Butcher Ranch,    76.00 325     P        P        02 21 47.7 +0.3
P17A                                  IAmb     IAmb     02 21 49.4
      comp=Z,36nm,1.0s
TUQ   Turquoise Moun    76.09 319     P        P        02 21 48.9 +0.9
      baz=133
K22A  Casper            76.30 330     P        P        02 21 50.1 +1.0
      baz=141,SNR=7.4
RSSD  Black Hills       76.34 332     P        P        02 21 49.9 +0.6
RSSD                                  pmax     pmax
      comp=Z,16nm,1.1s
RSSD  Black Hills       76.34 332     P        P        02 21 49.9 +0.6
RSSD  Black Hills       76.34 332     P        P        02 21 49.8 +0.6
      baz=143
GSC   Goldstone, Bar    76.53 318     P        P        02 21 51.6 +1.1
      baz=132,SNR=6.6
AGMN  Agassiz Nation    76.75 339     P        P        02 21 50.7 -0.5
      baz=151,SNR=8.3
EDW2  Edwards Air Fo    76.99 317     P        P        02 21 53.9 +0.9
      baz=131
PSUT  Pine Spring       77.02 322     P        P        02 21 53.5 +0.3
LRMC  Laurel Mtn Rad    77.19 318     P        P        02 21 55.4 +1.2
      baz=131,SNR=5.3
FURC  Furnace Creek,    77.35 319     P        P        02 21 56.3 +1.5
      baz=132,SNR=5.6
MPMC  Manual Prospec    77.45 319     P        P        02 21 56.5 +0.7
      baz=132,SNR=5.6
DUG   Dugway, Tooele    77.62 324     P        P        02 21 57.8 +1.2
      baz=136,SNR=14
MDND  Maddock           77.65 337     P        P        02 21 57.0 +0.6
      baz=148,SNR=6.7
ISA   Isabella, Lake    77.80 318     P        P        02 21 58.3 +0.8
ISA                                   pmax     pmax
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      comp=Z,11nm,1.1s
ISA   Isabella, Lake    77.80 318     P        P        02 21 58.3 +0.8
ISA   Isabella, Lake    77.80 318     P        P        02 21 58.7 +1.1
      baz=131,SNR=5.8
BW06  Boulder Array     77.83 328     P        P        02 21 58.2 +0.4
      baz=139,SNR=13
PDAR  Pinedale Array    77.83 328     P        P        02 21 58.1 +0.4
      comp=Z,9.3nm,1.1s,baz=133,slow=7.7,SNR=33
PDAR  Pinedale Array    77.83 328     P        P        02 21 57.9 +0.1
R11A  Troy Canyon, C    77.87 321     P        P        02 21 59.3 +1.3
      baz=133,SNR=18
CWC   Cottonwood Cre    78.06 319     P        P        02 22 00.2 +1.1
      baz=131
PKM   Mcpherson Peak    78.13 316     P        P        02 22 00.4 +0.8
      baz=130
VES   Vestal, Richgr    78.29 318     P        P        02 22 01.2 +1.0
      baz=130
ULM   Lac du Bonnet     78.46 340     P        P        02 21 59.9 -0.9
      comp=Z,9.4nm,0.8s,baz=156,slow=5.5,SNR=9.2
ULM   Lac du Bonnet     78.46 340     P        P        02 22 00.3 -0.4
ULM                                   pmax     pmax
      comp=Z,37nm,1.4s
ULM   Lac du Bonnet     78.46 340     P        P        02 22 00.3 -0.4
ULM                                   IAmb     IAmb     02 22 00.9
      comp=Z,37nm,1.4s
TIN   Tinemaha, Big     78.56 319     P        P        02 22 03.3 +1.6
      baz=131
BOSA  Boshof            79.06 116     P        P        02 22 04.8 -0.1
      comp=Z,9.4nm,1.0s,baz=242,slow=5.2,SNR=9.5
BOSA                                  PKKP     PKKPdf   02 40 46.9 +2.2
      comp=Z,2.0nm,0.9s,baz=100,slow=5.2,SNR=3.7
BOSA  Boshof            79.06 116     P        P        02 22 03.9 -1.0
BOSA                                  pmax     pmax
      comp=Z,20nm,1.2s
BOSA  Boshof            79.06 116     P        P        02 22 03.9 -1.0
MLAC  Mammoth, Mammo    79.30 319     P        P        02 22 07.6 +1.6
      baz=131
LAO   LASA Array        79.32 332     P        P        02 22 06.1 +0.5
      baz=142
NV11  Mina Array Sit    79.42 320     P        P        02 22 06.7 +0.2
RLMT  Red Lodge         79.47 330     P        P        02 22 07.2 +0.5
      baz=139,SNR=11
NVAR  Mina Array Bea    79.50 320     P        P        02 22 07.8 +0.7
      comp=Z,6.6nm,1.1s,baz=146,slow=6.0,SNR=26
NVAR                                  PP       PP       02 25 09.8 +2.0
      comp=Z,0.9nm,0.9s,baz=139,slow=12,SNR=4.1
H17A  Grant Village     79.54 328     P        P        02 22 09.0 +1.8
      baz=138
KVN   Kaiserville       79.80 321     P        P        02 22 08.5 -0.1
KVN                                   pmax     pmax
      comp=Z,21nm,1.1s
KVN   Kaiserville       79.80 321     P        P        02 22 08.5 -0.1
DGMT  Dagmar            79.90 335     P        P        02 22 09.5 +0.8
      baz=144,SNR=7.3
LBTB  Lobatse           80.64 113     P        P        02 22 12.5 -1.0
LBTB                                  pmax     pmax
      comp=Z,25nm,1.4s
LBTB  Lobatse           80.64 113     P        P        02 22 12.5 -1.0
PBDV  Barranco-do-Ve    80.64  43    eP        P        02 22 13.7 +0.7
      comp=Z,56nm,1.5s
PCVE  Castro Verde      80.82  42    eP        P        02 22 14.8 +0.9
      comp=Z,17nm,1.9s
MESJ  Messejana         80.84  42    eP        P        02 22 14.9 +0.9
      comp=Z,42nm,1.9s
HLID  Hailey            80.85 326     P        P        02 22 15.6 +1.4
      baz=135,SNR=54
BOZ   Bozeman (W)       80.93 329     P        P        02 22 15.0 +0.5
      baz=137
PBEJ  Beja              81.17  42    eP        P        02 22 16.9 +1.1
      comp=Z,20nm,1.6s
DLMT  Dillon            81.23 328     P        P        02 22 16.5 +0.4
DLMT                                  IAmb     IAmb     02 22 18.0
      comp=Z,33nm,1.4s
PMTG  Montargil         81.61  41    eP        P        02 22 18.8 +0.7
      comp=Z,37nm,1.6s
PESTR Estremoz          81.87  41    eP        P        02 22 20.5 +1.0
      comp=Z,23nm,1.4s
EGMT  Eagleton          81.88 331     P        P        02 22 19.6 +0.2
      baz=139,SNR=10.0
PCAS  Casmilo, Conde    82.08  40    eP        P        02 22 21.1 +0.6
      comp=Z,46nm,1.6s
PCBR  Castelo Branco    82.55  41    eP        P        02 22 23.4 +0.4
      comp=Z,17nm,1.9s
O03E  Paynes Creek      82.78 320     P        P        02 22 23.9 -0.3
      baz=129
MTE   Manteigas         82.86  40    eP        P        02 22 25.0 +0.3
      comp=Z,24nm,1.5s
J08A  Circle Bar Ran    82.86 324     P        P        02 22 26.0 +1.3
J08A                                  IAmb     IAmb     02 22 27.3
      comp=Z,28nm,1.1s
MSO   Missoula          82.93 328     P        P        02 22 25.7 +0.7
      baz=136
PVRL  Vila Real         83.31  40    eP        P        02 22 27.7 +0.8
      comp=Z,33nm,1.7s
POLO  Lamas de Olo      83.33  39    eP        P        02 22 27.1  0.0
      comp=Z,16nm,1.8s
PGAV  Gavieira, Arco    83.43  39    eP        P        02 22 27.9 +0.3
      comp=Z,26nm,1.8s
MVO   Moncorvo          83.64  40    eP        P        02 22 29.7 +1.0
      comp=Z,26nm,1.7s
M04C  Macdoel           83.74 321     P        P        02 22 29.7 +0.5
      baz=129
PBRG  Braganca          84.21  40    eP        P        02 22 32.0 +0.4
      comp=Z,46nm,1.5s
PAB   San Pablo         84.28  42     P        P        02 22 31.4 -0.6
PAB                                   pmax     pmax
      comp=Z,26nm,1.4s
PAB   San Pablo         84.28  42     P        P        02 22 31.4 -0.6
PAB                                   IAmb     IAmb     02 22 34.1
      comp=Z,26nm,1.4s
J05D  Fort Rock, OR     84.34 322     P        P        02 22 33.1 +0.8
      baz=130
ESDC  Sonseca Array     84.59  43     P        P        02 22 34.2 +0.7
      comp=Z,9.7nm,1.1s,baz=242,slow=4.8,SNR=30
ESDC  Sonseca Array     84.59  43     P        P        02 22 33.5  0.0
I05D  Terrebonne, OR    85.08 323     P        P        02 22 36.7 +0.8
      baz=130
CART  Cartagena         85.28  46     P        P        02 22 36.7 -0.3
CART                                  IAmb     IAmb     02 22 37.9
      comp=Z,37nm,1.5s
K02D  Willamette Mer    85.37 321     P        P        02 22 38.6 +1.2
      baz=128
G05D  Wamic, OR         85.64 324     P        P        02 22 39.9 +1.3
      baz=130
B05A  Bryant            87.98 326     P        P        02 22 49.6 -0.3
      baz=129
KEST  Kesra             91.44  51     P        P        02 23 07.5 +1.0
      comp=Z,10.0nm,0.9s,baz=285,slow=1.9,SNR=13
KEST  Kesra             91.44  51     P        P        02 23 06.3 -0.2
KEST                                  IAmb     IAmb     02 23 08.6
      comp=Z,13nm,0.9s
VSL   Villasalto        93.22  48     P        P        02 23 14.4 -0.2
VSL                                   IAmb     IAmb     02 23 16.1
      comp=Z,10nm,1.0s
YKA   Yellowknife Ar    94.41 339     P        P        02 23 19.3 -0.1
      comp=Z,3.5nm,0.8s,baz=128,slow=4.9,SNR=12
CLL   Collm            100.71  39    ePP       PP       02 27 56.0  0.0
AKASG Malin Array Be   110.24  43c  iPKIKP    PKiKP    02 28 31.2 -0.6
AKASG                                 pmax     pmax
      comp=Z,1.0nm,0.4s
KIV   Kislovodsk       118.18  51    ePKIKP    PKPdf    02 28 45.1 -2.3
KIV                                   pmax     pmax
      comp=Z,9.0nm,1.0s
KBZ   Khabaz           118.31  52    i PKIKP   PKiKP    02 28 47.8 +0.3
BELG  Belogornoye      121.80  42    i PKIKP   PKPdf    02 28 53.7 -0.2
BILL  Bilibino         125.80 339⇑ iPKIKP    PKPdf    02 29 00.5 -0.6
BILL                                 e                  02 31 00.8
BILL                                 eSS       SS       02 47 47.7 -6.0
BILL                                  pmax     pmax
      comp=Z,4.0nm,1.0s
BILL                                  MLR      MLR
      comp=Z,207nm,19.0s
ARU   Arti             127.55  36    i PKIKP   PKiKP    02 29 05.3  0.0
ARU                                                     02 31 06.0
ARU                                                     02 36 15.1
ARU                                   SS       SS       02 48 12.6 -3.6
ASAR  Alice Springs    129.75 202     PKP      PKPdf    02 29 09.8 -0.4
      comp=Z,3.4nm,0.9s,baz=150,slow=2.3,SNR=28
ASAR  Alice Springs    129.75 202     PKIKP    PKPdf    02 29 08.7 -1.5
ASAR  Alice Springs    129.75 202              PKPdf    02 29 08.7 -1.5
AS31  Alice Springs    129.75 202              PKPdf    02 29 09.3 -0.9
ABKAR Akbulak array    129.90  45     PKPdf    PKPdf    02 29 09.8 +0.3
TIXI  Tiksi            131.21 354c  iPKIKP    PKPdf    02 29 11.0 -0.3
TIXI  Tiksi            131.21 354     PKPdf    PKiKP    02 29 12.1 -0.2
NRIK  Noril'sk         131.23  13     PKP      PKPdf    02 29 11.2 -0.2
      comp=Z,1.1nm,0.4s,baz=355,slow=4.8,SNR=3.6
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NRIK  Noril'sk         131.23  13c  iPKIKP    PKiKP    02 29 11.9 -0.5
WR0   Warramunga Arr   132.90 205     PKPdf    PKPdf    02 29 15.8 -0.4
WB2   Warramunga Arr   132.99 205     PKPdf    PKPdf    02 29 15.9 -0.4
WRA   Warramunga Arr   133.00 205     PKP      PKPdf    02 29 16.1 -0.2
      comp=Z,2.8nm,0.9s,baz=166,slow=1.6,SNR=20
WRAB  Tennant Creek    133.00 205c  iPKIKP    PKPdf    02 29 16.6 +0.2
WRAB                                  pmax     pmax
      comp=Z,19nm,2.5s
PSA00 Pilbara Seismi   134.97 186              PKPdf    02 29 18.3 -1.7
BRVK  Borovoye         135.06  37    i PKIKP   PKiKP    02 29 20.4 -0.2
BRVK  Borovoye         135.06  37     PKPdf    PKPdf    02 29 18.5 -0.6
BTK   Batken           139.18  55     PKIKP    PKPdf    02 29 26.9 -0.4
BTK   Batken           139.18  55     PKPdf    PKPdf    02 29 26.9 -0.4
YAK   Yakutsk          140.27 349    i PKIKP   PKPdf    02 29 29.0 +0.6
AAK   Ala-Archa        141.29  50    i PKIKP   PKPdf    02 29 30.6 -0.5
AAK                                  i                  02 29 34.0
AAK   Ala-Archa        141.29  50     PKPdf    PKPdf    02 29 29.9 -1.3
ZAA0  Zalesovo Array   141.95  29     PKPdf    PKPdf    02 29 30.7 -1.0
ZALV  Zalesovo Beam    141.95  29     PKP      PKPdf    02 29 31.1 -0.6
      comp=Z,8.8nm,0.8s,baz=292,slow=2.5,SNR=26
ZALV  Zalesovo Beam    141.95  29     PKIKP    PKPdf    02 29 30.1 -1.6
ZALV  Zalesovo Beam    141.95  29     PKPdf    PKPdf    02 29 30.1 -1.6
KSH   Kashi            143.18  55     PKP      PKPab    02 29 29.8 -0.4
KDJ   Kajisay          143.34  50     PKIKP    PKPbc    02 29 33.0 +1.1
KDJ   Kajisay          143.34  50     PKPdf    PKPbc    02 29 33.0 +1.1
PRZ   Przheval'sk      144.08  49     PKIKP    PKPbc    02 29 34.8 +0.7
PRZ   Przheval'sk      144.08  49     PKPdf    PKPbc    02 29 34.8 +0.7
MAKZ  Makanchi         144.59  41     PKIKP    PKPbc    02 29 35.8 +0.4
MAKZ  Makanchi         144.59  41     PKPdf    PKPbc    02 29 35.8 +0.5
MK31  Makanchi Array   144.79  40    i PKIKP   PKPab    02 29 35.2 -0.7
MK31                                 i                  02 29 41.2
MKAR  Makanchi Array   144.79  40     PKP      PKPbc    02 29 36.1 +0.1
      comp=Z,11nm,0.8s,baz=303,slow=4.0,SNR=49
MKAR  Makanchi Array   144.79  40     PKPdf    PKPbc    02 29 35.9 -0.1
HYB   Hyderabad        145.10  93    i PKP     PKPbc    02 29 37.5 -0.3
      comp=Z,110nm,1.0s
BOD   Bodaibo          145.71   1    ePKP2     PKPdf    02 29 36.9 -1.3
BOD                                   pmax     pmax
      comp=Z,65nm,1.2s
SOEI  Soe              145.80 196              PKPab    02 29 40.7 +0.1
DGZ   Jazzator, Alta   145.94  33    i PKP2    PKPab    02 29 40.5 +0.2
MMRI  Maumere          147.34 193     PKPbc    PKPbc    02 29 44.4 -0.2
YSS   Yuzh-Sakhalins   147.89 324c  iPKP2     PKPbc    02 29 46.0 +0.8
YSS                                   pmax     pmax
      comp=Z,94nm,2.5s
ZEA   Zeya             148.50 346    ePKP2     PKPbc    02 29 47.2 +0.7
ZEA                                   pmax     pmax
      comp=Z,10.0nm,1.0s
WMQ   Urumqi           149.59  42    ePKPbc    PKPdf    02 29 45.3 +0.1
WMQ                                   LR       LR
      comp=Z,160nm,29.1s
MOY   Mondy            149.80  18    ePKP2     PKiKP    02 29 51.0  0.0
MOY                                   pmax     pmax
      comp=Z,64nm,1.9s
KLR   Kul'dur          151.25 337c  iPKIKP    PKPbc    02 29 53.6 +0.2
ZAK   Zakamensk        151.58  16    ePKIKP    PKPdf    02 29 48.2 +0.1
ZAK                                   pmax     pmax
      comp=Z,15nm,1.2s
SONM  Songino Array    154.70  14     PKP      PKPdf    02 29 53.9 +1.2
      comp=Z,4.1nm,0.9s,baz=300,slow=1.6,SNR=17
MDJ   Mudanjiang       155.92 334     PKP      PKPdf    02 29 52.7 -1.6
GTA   Gaotai           159.41  36    ePKP      PKPdf    02 29 59.4 +0.4
GTA                                   pPKP     pPKPdf   02 30 04.5 +0.7
GTA                                   sPKP              02 30 08.3
GTA                                   PKPab    PKPab    02 30 37.0 +0.4
BTO   Baotou           162.38  13    ePKP      PKPdf    02 30 02.8 +0.7
KSRS  Korea Array      162.38 325     PKPab    PKPab    02 30 50.4 +0.9
      comp=Z,4.8nm,1.0s,baz=43,slow=4.8,SNR=6.0
HHC   Hu-ho-hao-te     162.42   9    ePKP      PKPdf    02 29 59.8 -2.4
CMAR  Chiang Mai Arr   163.91 105     PKPab    PKPab    02 30 56.8 -0.1
      comp=Z,4.6nm,0.8s,baz=255,slow=5.1,SNR=14
LZH   Lanzhou          164.01  36    ePKP      PKPdf    02 30 05.6 +1.7
LZH                                   pPKP     sPKPdf   02 30 11.3 +0.9
CD2   Chengdu          167.35  52     PKP      PKPdf    02 30 05.8 -0.8
NJ2   Nanjing          170.93 341    ePKP      PKPdf    02 30 07.7 -1.0
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TUL ***05*** *02:10:36.7±1.0, 36°87N±0°02×98°00W±0°03, h3^{km}±7^{km}, ML2.7, mb_Lg2.5/16(NEIC), Error ellipse: s-maj=4.0km s-min=2.1km az=77.0*

ANF ***05*** *02:10:36.9±0.5, 36°86N×98°00W, h5^{km}, ML3.2/6, Error ellipse: s-maj=4.9km s-min=3.6km az=36.0*

NEIC ***05*** *02:10:36.9±1.3, 36°83N±0°01×98°01W±0°06, h5^{km}±7^{km}, Error ellipse: s-maj=7.3km s-min=2.0km az=94.0*

ISC 05 02:10:36.8±1.2**, 36°84N**±0°02×**98°00W**±0°03**, h2**^{km}±11^{km}**, n50, σ0^{s}48**/51**, Oklahoma**

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Code  Station Name       Δ°   AZ°    Phase ID            Time      Res
                                     Op       ISC        h  m  s   ISC
GC02  Grant County #     0.11  84    Pg       Pg       02 10 39.3 +0.4
KAN14 Manchester OK      0.12  13             Pg       02 10 39.2 +0.1
OK032 Salt Plains WL     0.18 258             Pg       02 10 40.5 +0.3
KAN17 Caldwell West      0.28  42    Pg       Pg       02 10 42.2 +0.2
KAN10 Anthony SW Sta     0.29 344    Pg       Pg       02 10 42.4  0.0
CROK  Carrier            0.33 178             Pg       02 10 43.9 +0.8
KAN01 Argonia South      0.37  31    Pg       Pg       02 10 43.9  0.0
KAN08 Anthony NE Sta     0.39   3             Pg       02 10 44.1 -0.1
KAN16 Harper SW Stat     0.39 352    Pg       Pg       02 10 44.2  0.0
KAN06 Argonia West S     0.42  15             Pg       02 10 44.9  0.0
KAN09 Caldwell North     0.42  46    Pg       Pb       02 10 46.3 -0.7
KAN13 South Haven SW     0.45  67    Pg       Pg       02 10 45.6 +0.2
KAN12 Harper NE Stat     0.46 360    Pg       Pg       02 10 45.5 -0.1
BLOK  Blackwell          0.63  97    Pg       Pg       02 10 49.1 +0.2
U32A  Winter Ranch,      0.93 241    Pg       Pg       02 10 54.5 -0.1
U32A  Winter Ranch,      0.93 241    P        Pg       02 10 54.4 -0.2
      baz=61
OK029 Liberty Lake       1.13 157    Pn       Pg       02 10 58.2 -0.2
T35A  Sooner Cattle      1.19  86             Pg       02 10 59.2 -0.5
T35B  Sooner Cattle      1.19  86    P        Pg       02 10 59.2 -0.4
      baz=266
T35B                                 S        Sg       02 11 14.9 -0.2
      baz=266
BCOK  Bluff Creek, N     1.22 165    Pg       Pg       02 10 59.5 -0.7
OK031 S. Brethren Rd     1.29 133    Pn       Pn       02 11 00.9 -0.8
OK034 N. Norfolk Rd.     1.32 128    Pn       Pn       02 11 01.6 -0.7
OK030 Cody Creek RV      1.34 133             Pn       02 11 01.7 -0.7
OK025 Westminster Rd     1.36 157    Pn       Pn       02 11 02.6 -0.2
OKCFA Oklahoma City      1.49 163    Pn       Pb       02 11 04.6 -0.5
OKCFA Oklahoma City      1.49 163    S        Sg       02 11 24.9 +0.4
      baz=343
OKCSW OKLAHOMA CITY      1.50 162             Pb       02 11 05.2 -0.1
R32A  Long Quarter,      1.68 340             Pn       02 11 06.9 -0.2
R32A  Long Quarter,      1.68 340    P        Pn       02 11 07.1  0.0
      baz=160
R32A                                 S        Sn       02 11 29.2 -0.1
      baz=160
TUL1  Leonard            2.01 117             Pn       02 11 12.3 +0.7
TUL1  Leonard            2.01 117    P        Pn       02 11 12.6 +1.0
      baz=298
TUL1                                 S        Sb       02 11 39.8 +0.5
      baz=298
X34A  Smith Ranch, M     2.24 177             Pn       02 11 15.3 +0.5
CBKS  Cedar Bluff        2.41 326    Pn       Pn       02 11 17.3 +0.2
CBKS  Cedar Bluff        2.41 326    S        Sn       02 11 47.7 +0.6
      baz=145
KSU1  Kansas State U     2.51  25    Pn       Pn       02 11 19.0 +0.5
KSU1                                 IAmb_Lg           02 11 57.8
      comp=Z,19nm,0.8s
KSU1  Kansas State U     2.51  25    S        Sn       02 11 50.5 +0.8
      baz=206
LOOK  Love County        2.92 167    Pn       Pn       02 11 24.2  0.0
U38A  Gravette           2.93  97             Pn       02 11 24.1 -0.3
X37A  Clayton            3.10 136    Pn       Pn       02 11 27.3 +0.6
X37A                                 IAmb_Lg           02 12 22.2
      comp=Z,14nm,0.8s
HHAR  Hobbs              3.31  98             Pn       02 11 29.5 -0.1
AMTX  Amarillo           3.57 238    Pn       Pn       02 11 32.8 -0.4
AMTX                                 IAmb_Lg           02 12 39.6
      comp=Z,11nm,0.7s
W39A  Magazine           3.79 114    Pn       Pn       02 11 37.0 +0.9
S39A  Bolivar            3.82  76             Pn       02 11 36.8 +0.2
KSCO  Kaye Shedlock'     4.25 302    IAmb_Lg           02 12 52.3
      comp=Z,8.0nm,0.7s
MIAR  Mount Ida          4.26 121    Pn       Pn       02 11 41.7 -0.9
MIAR                                 IAmb_Lg           02 13 03.7
      comp=Z,8.7nm,0.7s
P38A  Dawn               4.48  50    Pn       Pn       02 11 45.6  0.0
R40A  Maddies Statio     4.78  71    Pn       Pn       02 11 49.8 +0.1
X40A  Basin Creek Fa     4.81 118    Pn       Pn       02 11 49.3 -0.9
X40A                                 IAmb_Lg           02 13 11.6
      comp=Z,9.2nm,0.7s
FCAR  Ozark Folk Cen     4.83 100    Pn       Pn       02 11 50.2 -0.2
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FCAR				IAmb_Lg		02 13 20.5	
	comp=Z,8.3nm,0.9s						
PBMO	Poplar Bluff	6.07	88	IAmb_Lg		02 13 49.7	
	comp=Z,5.4nm,0.7s						

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*BEO **05** 02:14:51.7±0.2, 43°.66N×21°.55E, h3^{km}±1^{km}, ML2.8/18*
*SOF **05** 02:14:51.3, 43°.56N×21°.58E, h5^{km}, MD3.0*
*KRSZO **05** 02:14:51.1±0.8, 43°.63N×21°.50E, h7^{km}±2^{km}, ML3.6/10, Error ellipse: s-maj=2.6km s-min=2.1km az=173.0*
*PDG **05** 02:14:51.6±0.4, 43°.63N×21°.52E, h13^{km}, ML2.8/11, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*RHSSO **05** 02:14:53.4±0.6, 43°.62N×21°.41E, h9^{km}±2^{km}, ML2.9/13*
ISC 05 02:14:51.1±1.1**, 43°.64N**±0°.02×**21°.51E**±0°.01**, h3**^{km}±9^{km}**, n128, σ0^{s}.99**/204**, 28C-28D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOVS	Bovan	0.14	92	⇓P	Pg	02 14 53.8	-0.1
BOVS				⇑S	Sg	02 14 55.7	-0.1
BOVS	Bovan	0.14	92	*e*Pg	Pg	02 14 53.8	-0.1
BOVS				*e*Sg	Sg	02 14 55.6	-0.1
SELS	Selova	0.51	214	*e*Pg	Pg	02 15 00.7	-0.2
SELS				*e*Sg	Sg	02 15 08.8	+1.3
ZAGS	Zajecar	0.55	72	*e*Pg	Pg	02 15 01.4	-0.3
ZAGS				*e*Sg	Sg	02 15 09.7	+0.9
GRUS	Gruza	0.63	293	*e*Pg	Pg	02 15 03.6	+0.4
GRUS				*e*Sg	Sg	02 15 12.0	+0.7
SVIS	Svilajnac	0.66	341	*e*Pg	Pg	02 15 03.9	+0.1
SVIS				*e*Sg	Sg	02 15 13.3	+1.0
KUBS	Kucevo	0.78	9	*e*Pg	Pg	02 15 05.0	-1.1
KUBS				*e*Sg	Sg	02 15 16.7	+0.5
BLKB	Belogradchik	0.84	91	⇓S	Sg	02 15 18.6	+0.3
BARS	Barje	0.85	165	*e*Pg	Pg	02 15 01.0	-6.5
BARS				*e*Sg	Sg	02 15 08.4	-10
ZAPS	Zavoj	0.90	114	*e*Pg	Pg	02 15 08.3	0.0
ZAPS				*e*Sg	Sg	02 15 19.6	-0.3
TRUS	Trudelj	0.99	306	*e*Pg	Pg	02 15 10.3	+0.2
TRUS				*e*Sg	Sg	02 15 23.6	+0.7
MDVR	Moldovita	1.15	7	⇓P	Pg	02 15 12.7	-0.4
MDVR				⇓S	Sg	02 15 28.4	+0.3
SJES	Sjenica	1.18	252	*e*Pg	Pg	02 15 13.7	-0.1
SJES				*e*Sg	Sn	02 15 30.9	-0.5
DIVS	Divibare	1.19	293	*e*Pg	Pg	02 15 13.6	-0.3
DIVS				*e*Sg	Sg	02 15 30.0	+0.6
DIVS	Divibare	1.19	293	*e*Pg	Pg	02 15 14.0	+0.1
DIVS				*e*Sg	Sb	02 15 30.5	+0.3
PRVS	Prvonek	1.21	160	*e*Pg	Pg	02 15 13.1	-1.1
PRVS				*e*Sg	Sb	02 15 30.0	-0.6
PUNG	Punghina	1.21	58	⇓P	Pb	02 15 14.1	-0.5
PUNG				⇑S	Sb	02 15 31.0	+0.4
DJES	Djerdap	1.25	35	⇑P	Pn	02 15 15.3	-0.3
DJES				⇓S	Sb	02 15 31.9	-0.1
RMGR	Halanga-Turnu	1.33	39	⇓P	Pn	02 15 16.7	+0.2
RMGR				⇑S	Sn	02 15 35.4	+0.7
BOSS	Bosilegrad	1.35	148	*e*Pg	Pn	02 15 15.9	-0.9
BOSS				*e*Sg	Sb	02 15 33.2	-1.4
BAIL	Bailesti	1.38	73	⇓P	Pg	02 15 18.1	+0.5
BAIL				⇓S	Sg	02 15 36.4	+1.0
HERR	Herculane	1.40	27	⇑P	Pn	02 15 17.2	-0.4
HERR				⇑S	Sn	02 15 36.5	0.0
IVA	Berane	1.41	238	⇑*i*Pg	Pn	02 15 17.5	-0.3
IVA				*i* Sg	Sb	02 15 36.2	-0.4
BBLS	Lazići	1.54	279	*e*Pg	Pn	02 15 19.5	-0.1
BBLS				*e*Sg	Sn	02 15 40.3	+0.1
BBLS	Lazići	1.54	279	*e*Pg	Pn	02 15 20.1	+0.5
BBLS				*e*Sg	Sb	02 15 40.5	+0.1
PVY	Plav	1.54	228	⇑*i*Pg	Pn	02 15 19.9	+0.2
PVY				*i* Sg	Sg	02 15 42.3	+1.6
RUDO	Rudo	1.56	270	*e*Pg	Pn	02 15 19.8	+0.1
RUDO				*e*Sg	Sn	02 15 40.5	+0.1
PLE	Pljevlja	1.58	259	⇑*i*Pn	Pn	02 15 20.2	+0.1
PLE				*i* Sn	Sg	02 15 43.0	+1.3
SRE	Strehaia	1.59	49	⇑P	Pn	02 15 20.7	+0.5
SRE				⇑S	Sg	02 15 43.8	+1.6
VTS	Vitosha	1.62	128	⇑P	Pn	02 15 20.7	-0.1
VTS				⇓S	Sb	02 15 42.3	-0.4
VTS	Vitosha	1.62	128	*i* P	Pn	02 15 20.7	-0.1
VTS	Vitosha	1.62	128	*e*Pg	Pn	02 15 20.6	-0.1
VTS				*e*Sn	Sg	02 15 43.7	+0.4
KOME	Kolasin	1.66	242	⇓*i*Pn	Pn	02 15 21.5	+0.3
KOME				*i* Sn	Sg	02 15 45.2	+0.8
SKO	Skopje	1.67	182	*i* Pn	Pg	02 15 23.2	+0.1
TEKS	Tekeris	1.69	303	*e*Pn	Pn	02 15 22.3	+0.6
TEKS				*e*Sn	Sn	02 15 43.6	-0.2
TEKS	Tekeris	1.69	303	*e*Pg	Pn	02 15 22.2	+0.6
TEKS				*e*Sg	Sb	02 15 45.7	+1.1
BANR	Banloc	1.76	351	⇑P	Pn	02 15 21.6	-0.9
BANR				⇓S	Sn	02 15 45.8	+0.4
HAPS	Han Pijesak,BI	1.91	284	*e*Pn	Pn	02 15 24.7	+0.1
HAPS				*e*Sn	Sn	02 15 48.5	-0.7
FRGS	Fruska Gora	1.95	322	⇑P	Pn	02 15 24.6	-0.5
FRGS				⇓S	Sb	02 15 52.1	+0.2
FRGS	Fruska Gora	1.95	322	*e*Pn	Pb	02 15 26.6	-0.6
FRGS				*e*Sn	Sn	02 15 50.4	+0.3
FRGS	Fruska Gora	1.95	322	*e*Pn	Pn	02 15 24.4	-0.7
UPM	Unac-Piva	1.95	258	*e*Pn	Pn	02 15 26.2	+0.9
UPM	Unac-Piva	1.95	258	⇓*i*Pn	Pn	02 15 25.6	+0.3
UPM				*i* Sn	Sb	02 15 52.1	-0.1
GZR	Gura Zlata	1.97	27	⇑P	Pn	02 15 26.2	+0.7
GZR				⇑S	Sb	02 15 51.9	-0.8
BLJ	Bijeljina	1.98	306	*e*Pn	Pb	02 15 27.2	-0.5
BLJ				*e*Sn	Sn	02 15 51.8	+1.0
BZS	Buzias	1.98	2	⇑P	Pn	02 15 24.1	-1.4
BZS				⇓S	Sb	02 15 52.8	0.0
BZS	Buzias	1.98	2	Pg	Pn	02 15 24.1	-1.4
	comp=Z,0.3nm,SNR=9.5						
BZS	Buzias	1.98	2	*e*Pn	Pn	02 15 24.3	-1.2
BZS				*e*Sn	Sn	02 15 49.9	-0.9
STIP	Stip	2.01	165	*i* Pn	Pn	02 15 25.2	-0.8
STIP				*i* Sn	Sb	02 15 53.2	-0.5
PDG	Podgorica	2.05	235	⇑P	Pn	02 15 26.6	+0.1
PDG	Podgorica	2.05	235	⇑*i*Pn	Pn	02 15 26.1	-0.4
PDG				*e*Sn	Sn	02 15 52.3	-0.3
TTG	Podgorica	2.05	235	⇓*i*Pn	Pn	02 15 26.7	+0.2
TTG				*i* Sn	Sb	02 15 54.3	-0.5
NKME	Niksic	2.06	246	⇓*i*Pn	Pn	02 15 26.8	0.0
NKME				*i* Sn	Sb	02 15 54.6	-0.8
KKB	Krupnik	2.12	146	*i* P	Pn	02 15 28.5	+1.0
VLAD	Vladila	2.12	79	⇓S	Sn	02 15 55.3	+0.9
CEME	Cevo	2.19	241	⇓*i*Pn	Pn	02 15 28.7	+0.2
CEME				*i* Sn	Sb	02 15 57.6	-1.4
PGB	Panagyurishte	2.23	118	*i* P	Pn	02 15 30.3	+1.3
DRME	Dracevica, Mon	2.24	230	*e*Pn	Pn	02 15 30.4	+1.2
DRME				*e*Sn	Sn	02 15 56.4	-1.0
DRME	Dracevica, Mon	2.24	230	⇑*i*Pn	Pn	02 15 29.8	+0.6
DRME				*i* Sn	Sb	02 15 59.3	-1.2
BUM	Brajici-Budva	2.34	236	⇑*i*Pn	Pn	02 15 31.0	+0.4
BUM				*i* Sn	Sn	02 16 01.3	+1.4
ULC	Ulcinj	2.37	226	⇑*i*Pn	Pn	02 15 31.7	+0.8
ULC				*i* Sn	Sn	02 16 01.7	+1.3
LOT	Lotru	2.42	41	⇑P	Pn	02 15 32.6	+0.9
VAY	Valandovo	2.45	161	*i* Pn	Pb	02 15 36.7	+1.0
VAY				*i* Sn	Sg	02 16 09.6	-0.1
VAY	Valandovo	2.45	161	*e*Pn	Pn	02 15 32.9	+0.9
DEV	Deva	2.45	23	⇓P	Pn	02 15 33.0	+1.0
DEV				⇓S	Sn	02 16 03.7	+1.2
TREB	Trebinje	2.49	249	*e*Pn	Pn	02 15 33.6	+1.0
TREB				*e*Sn	Sn	02 16 03.0	-0.5
TREB	Trebinje	2.49	249	*e*Pn	Pn	02 15 34.4	+1.8
TREB				*e*Sn	Sn	02 16 05.3	+1.8
HCY	Herceg Novi	2.51	243	*e*Pn	Pn	02 15 33.4	+0.5
HCY				*e*Sn	Sn	02 16 04.2	+0.2
HCY	Herceg Novi	2.51	243	⇓*i*Pn	Pn	02 15 33.2	+0.3
HCY				*i* Sn	Sn	02 16 05.6	+1.6
MMB	Musomiste	2.62	141	*i* P	Pn	02 15 35.3	+0.9
SIRR	Siria	2.63	2	⇓P	Pn	02 15 33.2	-1.2
DBRK	Dubrovnik	2.65	250	*e*Pn	Pn	02 15 36.3	+1.6
DBRK				Sn	Sb	02 16 09.6	-2.5
AMBH	Ambrzfalva	2.77	349	*e*S	Sn	02 16 10.0	-0.2
AMBH	Ambrzfalva	2.77	349	Sn	Sn	02 16 10.0	-0.2
ARR	Arges	2.82	51	⇑P	Pn	02 15 38.0	+0.8
ARR				⇓S	Sn	02 16 13.2	+1.4
STON	Ston	2.89	256	*e*Pn	Pn	02 15 39.1	+1.1
STON				*e*Sn	Sn	02 16 12.5	-0.7
STON	Ston	2.89	256	*e*Pn	Pn	02 15 39.9	+1.8
STON				Sn	Sn	02 16 14.6	+1.4
STON	Ston	2.89	256	*e*Pn	Pn	02 15 39.8	+1.8
VOIR		3.10	53	⇓P	Pn	02 15 41.8	+0.7
RICI	Ricice	3.19	269	*e*Pn	Pn	02 15 43.1	+1.0
RICI				Sn	Sn	02 16 22.4	+1.8
DRGR		3.26	15	⇓P	Pn	02 15 43.0	-0.3
MORH	Mrgy, Hungar	3.28	323	*e*PN	Pn	02 15 42.8	-0.6
MORH	Mrgy, Hungar	3.28	323	*e*Sn	Sn	02 16 23.4	+0.4
MORH	Mrgy, Hungar	3.28	323	Pn	Pn	02 15 42.8	-0.6
	comp=Z,0.2nm,SNR=0.8						
MGRS	Mrkonjic Grad	3.29	285	*e*Pn	Pn	02 15 43.8	+0.3
MGRS				*e*Sn	Sn	02 16 21.9	-1.2
MAKA	Makarska	3.29	265	*e*Pn	Pn	02 15 45.1	+1.6
MAKA				Sn	Sn	02 16 23.8	+0.6
BLY	Banja Luka	3.30	291	*e*Pn	Pn	02 15 44.3	+0.6
BLY				*e*Sn	Sn	02 16 22.4	-1.1
BLY	Banja Luka	3.30	291	Pg	Pn	02 15 44.5	+0.8
	comp=Z,0.1nm,SNR=1.8						
KOVH	Kovagotottos	3.44	316	*e*PN	Pn	02 15 45.0	-0.7
KOVH	Kovagotottos	3.44	316	Pn	Pn	02 15 45.0	-0.7
	comp=Z,0.1nm,SNR=6.4						
LSTV	Lastovo	3.49	257	*e*Pn	Pb	02 15 50.1	-3.4
LSTV				Sn	Sn	02 16 27.0	-1.1
DOPR	Dopca	3.61	49	⇑P	Pn	02 15 48.6	+0.7
MLR	Muntele Rosu	3.67	58	⇓P	Pn	02 15 49.7	+0.9
A266A	Gyulaj	3.69	323	Pn	Pn	02 15 47.8	-1.3
	comp=Z,0.2nm,SNR=2.8						
MOSL	Moslavina	3.93	302	*e*Pn	Pn	02 15 52.1	-0.3
A267A	Kaloz	3.94	328	Pn	Pn	02 15 51.1	-1.3
	comp=Z,0.1nm,SNR=1.7						
MORI	Morici	4.21	275	*e*Pn	Pn	02 15 57.5	+1.3
MORI				Sn	Sn	02 16 46.0	+0.2
BUD	Budapest	4.22	336	*e*PN	Pn	02 15 55.5	-0.8
BUD	Budapest	4.22	336	*e*S	Sn	02 16 47.1	+1.0
BUD	Budapest	4.22	336	Pn	Pn	02 15 55.5	-0.8
	comp=Z,0.1nm,SNR=1.3						
BUD				Sn	Sn	02 16 47.1	+1.0
UDBI	Udbina	4.24	284	*e*Pn	Pn	02 15 56.9	+0.3
UDBI				Sn	Sn	02 16 48.0	+1.4
ZIRJ	Zirje	4.26	272	*e*Pn	Pn	02 15 58.5	+1.7
ZIRJ				Sn	Sn	02 16 47.1	0.0
PLOR	Plostina	4.28	57	⇑P	Pn	02 15 58.2	+1.1
VRI	Vrincioaia	4.33	57	⇓P	Pn	02 15 57.9	0.0
KALN	Kalnik	4.37	306	*e*Pn	Pn	02 15 57.9	-0.5
PLIT	Plitvice	4.41	288	*e*Pn	Pn	02 15 59.5	+0.6
PLIT				Sn	Sn	02 16 49.9	-0.9
PSZ	Piszkesteto	4.42	346	⇑P	Pn	02 15 57.9	-1.3
PSZ	Piszkesteto	4.42	346	*e*PN	Pn	02 15 58.1	-1.1
PSZ	Piszkesteto	4.42	346	Pg	Pn	02 15 58.1	-1.1
MPLH	Magyarpolny	4.50	323	*e*PN	Pn	02 16 00.2	0.0
MPLH	Magyarpolny	4.50	323	Pn	Pn	02 16 00.2	0.0
	comp=Z,0.2nm,SNR=2.0						
PTJ	Puntijarka	4.55	302	*e*Pn	Pn	02 16 01.3	+0.4
KOGS	Kog	4.67	309	Pn	Pn	02 16 02.0	-0.4
	comp=Z,0.3nm,SNR=1.8						
DUGI	Dugi Otok	4.68	277	*e*Pn	Pn	02 16 05.0	+2.3
DUGI				Sn	Sn	02 16 58.9	+1.4
BURAR	Bucovina Array	4.75	32	⇑P	Pn	02 16 04.1	+0.4
EGYH	Egyhazaskeszo	4.78	324	*e*PN	Pn	02 16 04.9	+0.8
EGYH	Egyhazaskeszo	4.78	324	Pn	Pn	02 16 04.9	+0.8
	comp=Z,0.1nm,SNR=1.7						
CRES	Cresnjev	4.83	299	*e*Pn	Pn	02 16 04.6	-0.2
VYHS	Vyhne	5.20	340	*e*PN	Pn	02 16 09.8	0.0
VYHS				*e*SN	Sn	02 17 10.2	0.0
RIY	Rijeka	5.30	291	*e*Pn	Pn	02 16 11.8	+0.6
RIY				*e*Sn	Sn	02 17 10.4	-2.4
KOLL	Kolacno	5.39	337	*e*PN	Pn	02 16 11.7	-0.7
KOLL				*e*SN	Sn	02 17 13.8	-1.1
SOKA	Soboth	5.50	306	*i* Pn	Pn	02 16 13.6	-0.3
	comp=Z,0.8nm,0.2s,SNR=5.0						
SOKA				*i* Sn	Sn	02 17 18.1	+0.5
	comp=Z,0.3nm,0.1s						
ARSA	Arzberg	5.55	313	*e*Pn	Pn	02 16 14.4	-0.1
	comp=Z,1.0nm,0.2s						
OBKA	Obir	5.70	303	*e*Pn	Pn	02 16 17.4	+0.6
	comp=Z,0.4nm,0.2s						
OBKA				*e*Sn	Sn	02 17 20.0	-2.8
	comp=Z,1.7nm,0.4s						
CONA	Conrad Observa	5.83	319	*e*Pn	Pn	02 16 18.1	-0.4
	comp=Z,1.6nm,0.3s,SNR=4.6						
CONA				*e*Sn	Sn	02 17 29.5	+3.6
	comp=Z,1.2nm,0.5s						
MOA	Molln	6.59	312	Pn	Pn	02 16 29.9	+1.0
	comp=Z,0.1nm,0.1s						
SQTA	Sankt Quirin	8.08	300	*e*Pn	Pn	02 16 52.1	+2.6
	comp=Z,1.9nm,0.5s						
FETA	Feichten	8.31	298	Pn	Pn	02 16 55.7	+3.0
	comp=Z,0.4nm,0.3s						

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*TUL **05** 02:53:36.3±1.0, 36°.838N±0°.010×97°.80W±0°.01, h4^{km}±4^{km}, ML2.5, ML2.2/44(NEIC), Error ellipse: s-maj=1.4km s-min=1.4km az=112.0*
NEIC 05 02:53:36.5±0.5**, 36°.82N**±0°.01×**97°.792W**±0°.009**, h5**^{km}±4^{km}**, Error ellipse: s-maj=1.8km s-min=0.5km az=147.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.06	302	Pg	Pg	02 53 38.0	0.0
GC02				Sg	Sg	02 53 39.1	0.0
KAN14	Manchester OK	0.20	315		Pg	02 53 40.4	0.0
KAN14				Sg	Sg	02 53 43.0	+0.1
KAN14				IAML		02 53 43.2	
	comp=N,885nm,0.2s						
KAN17	Caldwell West	0.23	6	Pg	Pg	02 53 41.0	+0.1
KAN17				Sg	Sg	02 53 44.2	+0.2
KAN17				IAML		02 53 44.3	
	comp=N,386nm,0.2s						
KAN13	South Haven SW	0.32	52	Pg	Pg	02 53 42.8	+0.1
KAN13				Sg	Sg	02 53 47.2	+0.3
KAN13				IAML		02 53 47.5	
	comp=N,499nm,0.3s						
KAN13				IAML		02 53 47.5	
	comp=E,296nm,0.3s						
OK032	Salt Plains WL	0.34	268	Pg	Pg	02 53 43.1	+0.1
OK032				Sg	Sg	02 53 47.8	+0.4
OK032				IAML		02 53 48.3	
	comp=E,285nm,0.2s						
OK032				IAML		02 53 51.0	
	comp=E,314nm,0.2s						
KAN01	Argonia South	0.34	4	Pg	Pg	02 53 43.0	0.0
KAN01				IAML		02 53 49.9	
	comp=N,188nm,0.1s						
KAN09	Caldwell North	0.35	24		Pg	02 53 43.2	0.0
KAN09				Sg	Sg	02 53 48.0	+0.1
CROK	Carrier	0.35	206	Pg	Pg	02 53 43.6	+0.4
CROK				Sg	Sg	02 53 48.8	+1.0
KAN10	Anthony SW Sta	0.39	322	Pg	Pg	02 53 44.0	0.0
KAN10				Sg	Sg	02 53 49.2	0.0
KAN10				IAML		02 53 49.8	
	comp=E,230nm,0.1s						
KAN10				IAML		02 53 51.2	
	comp=N,212nm,0.1s						
KAN06	Argonia West S	0.43	353	Pg	Pg	02 53 44.8	-0.1
KAN06				Sg	Sg	02 53 50.9	+0.3
KAN08	Anthony NE Sta	0.43	341	Pg	Pg	02 53 44.8	-0.1
KAN08				Sg	Sg	02 53 50.8	+0.2
KAN08				IAML		02 53 54.2	
	comp=N,137nm,0.1s						
KAN16	Harper SW Stat	0.46	332	Pg	Pg	02 53 45.3	-0.1
KAN16				Sg	Sg	02 53 51.6	+0.2
BLOK	Blackwell	0.47	97	Pg	Pg	02 53 45.7	+0.2
BLOK				Sg	Sg	02 53 52.3	+0.8
BLOK				IAML		02 53 54.6	
	comp=N,176nm,0.2s						
BLOK				IAML		02 53 57.0	
	comp=E,168nm,0.2s						
T35A	Sooner Cattle	1.03	84	Pg	Pg	02 53 55.8	-0.5
T35A				IAML		02 54 15.5	
	comp=N,64nm,0.2s						
OK029	Liberty Lake	1.05	165	Pg	Pg	02 53 56.5	-0.2
OK029				IAML		02 54 15.8	
	comp=N,40nm,0.2s						
U32A	Winter Ranch,	1.07	246	Pg	Pg	02 53 56.5	-0.5
U32A				IAML		02 54 12.9	
	comp=N,57nm,0.1s						
U32A				IAML		02 54 18.0	
	comp=E,52nm,0.1s						
OK031	S. Brethren Rd	1.16	138	Pg	Pg	02 53 58.4	-0.2
BCOK	Bluff Creek, N	1.17	173	Pg	Pg	02 53 58.3	-0.6
BCOK				IAML		02 54 18.6	
	comp=N,40nm,0.3s						
BCOK				IAML		02 54 18.8	
	comp=E,45nm,0.2s						
OK034	N. Norfolk Rd.	1.19	132	Pg	Pg	02 53 58.9	-0.3
OK034				IAML		02 54 15.5	
	comp=E,80nm,0.2s						
OK034				IAML		02 54 15.8	
	comp=E,86nm,0.1s						
OK030	Cody Creek RV	1.20	137		Pg	02 53 59.1	-0.5
OK025	Westminster Rd	1.29	163	Pn	Pn	02 54 00.8	-0.3
OK025				IAML		02 54 21.4	
	comp=E,54nm,0.3s						
OKCFA	Oklahoma City	1.43	169	Pn	Pn	02 54 03.2	+0.2
OKCSW	OKLAHOMA CITY	1.44	168	Pn	Pn	02 54 03.3	+0.1
R32A	Long Quarter,	1.76	336		Pn	02 54 08.4	+0.7
TUL1	Leonard	1.85	119	Pn	Pn	02 54 09.0	+0.2
S39A	Bolivar	3.67	75	Pn	Pn	02 54 33.8	-0.1

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*IDC **05** 03:07:08.3±3.9, 53°.79N×163°.83W, h0^{km}, mb3.8/7, mb1 3.9/8, mb1mx3.4/58, mbtmp3.8/8, ML2.7/1, Error ellipse: s-maj=86.6km s-min=23.2km az=161.0*
*AEIC **05** 03:07:08±1.2, 53°.41N±0°.09×163°.6W±0°.1, h16^{km}±8^{km}, Error ellipse: s-maj=13.6km s-min=7.3km az=155.0*
*NEIC **05** 03:07:11.3±0.8, 53°.53N±0°.09×163°.7W±0°.1, h31^{km}±19^{km}, ML3.4/7, ML3.5(AEIC), Error ellipse: s-maj=15.0km s-min=6.9km az=155.0*
ISC 05 03:07:10.4±1.1**, 53°.5N**±0°.1×**163°.64W**±0°.07**, h29**^{km}**, n63, σ0^{s}.82**/53**, mb3.8**/6**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	1.13	331		Pn	03 07 30.6	+0.3
BRPK	Brown Peak	1.16	357		Pn	03 07 30.6	-0.1
WESP	Westdahl Peak	1.19	328		Pn	03 07 31.3	+0.1
ISLZ	Isanotski Laza	1.23	358		Pn	03 07 31.4	-0.4
WECS	Westdahl Cape	1.24	328		Pn	03 07 31.9	+0.1
SSLS	Shishaldin Sou	1.24	350		Pn	03 07 32.1	+0.2
WEBT	Westdahl Beart	1.28	330		Pn	03 07 32.9	+0.5
SSLW	Shishaldin Wes	1.31	348		Pn	03 07 33.0	+0.2
SSBA	Shishaldin	1.31	348		Pn	03 07 32.8	0.0
SSLN	Shishaldin Nor	1.34	351		Pn	03 07 33.8	+0.7
ISNN	Isanotski Nort	1.34	357		Pn	03 07 34.1	+0.9
FALS	False Pass	1.37	5		Pn	03 07 33.7	+0.2
AKSA	Akutan Strait	1.38	299		Pn	03 07 33.9	+0.2
AKUT	Akutan	1.42	298		Pn	03 07 34.5	+0.3
AKUT	Akutan	1.42	298	IAML		03 07 57.4	
	comp=E,538nm,0.6s						
AKUT				IAML		03 08 03.7	
	comp=N,444nm,0.7s						
WTUG	Tugumak	1.43	342		Pn	03 07 34.9	+0.6
AKBBA	Akutan Broad B	1.49	295		Pn	03 07 34.7	-0.6
AKLV	Akutan Long Va	1.53	297		Pn	03 07 36.1	+0.3
AKMO	Akutan Morgan	1.53	294		Pn	03 07 36.2	+0.4
AKGG	Akutan Green G	1.56	298		Pn	03 07 36.8	+0.6
AKRB	Akutan Reef Bi	1.57	295		Pn	03 07 36.1	-0.3
UNV	Unalaska Valle	1.74	283		Pn	03 07 38.7	0.0
DT1	Dutton Round H	1.80	26		Pn	03 07 40.1	+0.6
MNAT	Makushin Natee	1.85	283		Pn	03 07 40.3	+0.1
MTBL	Makushin Table	1.87	286		Pn	03 07 40.8	+0.4
MSW	Makushin Switc	1.92	284		Pn	03 07 41.4	+0.3
MGOD	Makushin Gods	1.95	280		Pn	03 07 41.9	+0.4
HAG	Hague Volcano	2.09	28		Pn	03 07 44.1	+0.6
PS4A	Pavlof South-4	2.13	29		Pn	03 07 44.6	+0.6
OKFG	Magazine Ridge	2.56	270		Pn	03 07 49.8	-0.1
SDPT	Sand Point	2.62	44		Pn	03 07 51.2	+0.4
SDPT	Sand Point	2.62	44	IAML		03 08 45.2	
	comp=N,262nm,1.0s						
OKTU	Okmok Mt. Tuli	2.63	269		Pn	03 07 51.7	+0.7
OKCE	Okmok Cone E	2.71	270		Pn	03 07 52.4	+0.5
CNBA	Chernabura Isl	2.73	59		Pn	03 07 51.7	-0.5
CNBA	Chernabura Isl	2.73	59	IAML		03 08 24.0	
	comp=E,106nm,0.6s						
OKSP	Okmok Steeple	2.80	267		Pn	03 07 53.6	+0.3
NIKH	Nikolski High	3.18	263		Pn	03 07 58.8	+0.3
VNHG	Veniaminof 1	3.76	42		Pn	03 08 07.9	+1.4
CHGN	Chignik	4.12	45		Pn	03 08 12.1	+0.7
CHGN	Chignik	4.12	45	IAML		03 09 27.5	
	comp=E,85nm,1.6s						
SPIA	Saint Paul Isl	5.28	317		Pn	03 08 29.1	+2.0
KOFP	Korovin Flat P	6.45	263		Pn	03 08 44.5	+1.1
ATKA	Atka Island	6.53	263		Pn	03 08 45.0	+0.7
KABU	Katmai Buttres	6.71	41		Pn	03 08 47.6	+0.7
Q19K	Cape Douglas,	7.79	42	Pn	Pn	03 09 02.5	+0.8
O18K	Koktuh Hills	7.88	33	Pn	Pn	03 09 03.6	+0.6
PWL	Port Wells	11.09	42	Pn	Pn	03 09 46.6	-0.2
SCM	Sheep Creek Mo	12.05	40	Pn	Pn	03 10 00.4	+0.3
ILAR	Eielson Array	14.14	30	Pn	Pn	03 10 26.0	-2.5
	comp=E,0.0nm,0.3s,baz=215,slow=14,SNR=2.7						
INK	Inuvik	20.52	32	P	P	03 11 44.0	-1.8
	comp=E,0.7nm,0.5s,baz=237,slow=9.3,SNR=2.5						
PETK	Petropavlovsk-	22.92	285	P	P	03 12 12.8	+1.0
	comp=E,2.1nm,0.6s,baz=82,slow=13,SNR=7.2						
YKA	Yellowknife Ar	26.86	51	P	P	03 12 50.6	+2.5
	comp=E,1.4nm,0.8s,baz=272,slow=6.8,SNR=2.9						
TIXI	Tiksi	33.59	328	P	P	03 13 46.9	-0.5
	comp=E,1.3nm,0.5s,baz=94,slow=12,SNR=5.3						
H11N2	WAKE ISLAND Hy	40.61	225	T	T	03 58 24.6	
	baz=26,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	40.62	225	T	T	03 58 35.0	
	baz=26,slow=76,SNR=17						
H11N1	WAKE ISLAND Hy	40.63	225	T	T	03 58 35.7	
	baz=26,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	41.78	225	T	T	03 59 52.2	
	baz=26,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	41.80	225	T	T	03 59 52.0	
	baz=26,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	41.80	225	T	T	03 59 52.4	
	baz=26,slow=76,SNR=15						
SONM	Songino Array	53.64	303	P	P	03 16 29.8	+0.8
	comp=E,0.5nm,0.5s,baz=37,slow=7.7,SNR=4.5						
FINES	FINESS Array B	65.15	355	P	P	03 17 47.5	-0.5
	comp=E,1.8nm,0.6s,baz=339,slow=11,SNR=5.2						
AKASG	Malin Array Be	75.61	352	P	P	03 18 51.6	-0.6
	comp=E,0.6nm,0.5s,baz=13,slow=6.0,SNR=2.8						

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*IDC **05** 03:21:24.2±13.0, 18°.93N×145°.63E, h259^{km}±136^{km}, mb3.3/8, mb1 3.5/8, mb1mx2.9/44, mbtmp3.9/8, Error ellipse: s-maj=55.6km s-min=17.3km az=99.0*
ISC 05 03:21:19.9±0.9**, 18°.9N**±0°.2×**145°.7E**±0°.3**, h214**^{km}**, n8, σ0^{s}.68**/8**, mb3.5**/8**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLR	Kul'dur	32.27	343	P	P	03 27 28.9	+0.6
	1.3nm,0.7s,baz=168,slow=14,SNR=2.6						
WRA	Warramunga Arr	40.19	197	P	P	03 28 35.5	-0.2
	0.7nm,0.4s,baz=17,slow=8.2,SNR=20						
FITZ	Fitzroy Crossi	41.73	209	P	P	03 28 48.3	+0.1
	1.1nm,0.7s,baz=358,slow=5.5,SNR=6.9						
ASAR	Alice Springs	43.86	196	P	P	03 29 05.2	0.0
	0.2nm,0.5s,baz=22,slow=12,SNR=7.6						
ILAR	Eielson Array	63.45	26	P	P	03 31 25.8	-0.9
	0.6nm,0.7s,baz=252,slow=6.1,SNR=7.5						
INK	Inuvik	69.17	23	P	P	03 32 02.7	-0.1
	0.8nm,0.7s,baz=249,slow=6.3,SNR=4.4						
NVAR	Mina Array Bea	83.00	52	P	P	03 33 22.4	+0.7
	0.7nm,0.5s,baz=272,slow=6.1,SNR=7.1						
FINES	FINESS Array B	86.69	335	P	P	03 33 38.5	-0.7
	4.4nm,0.9s,baz=90,slow=8.8,SNR=1.6						

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*IDC **05** 03:23:06.6±2.3, 28°.82N×95°.60E, h0^{km}, mb3.2/3, mb1 3.5/3, mb1mx2.9/52, mbtmp3.3/3, Error ellipse: s-maj=83.6km s-min=30.6km az=69.0*
ISC 05 03:23:12.5±1.3**, 29°.0N**±0°.2×**95°.7E**±0°.1**, h40**^{km}**, n11, σ1^{s}.41**/11**, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAPN	Taplejung	7.19	259	*e*P	Pn	03 24 56.7	+1.3
	8.9nm,0.2s						
RAMN	Ramite	8.25	258	*e*P	Pn	03 25 09.9	0.0
	25nm,0.2s						
GUN	Gumba	8.67	265	*e*P	Pn	03 25 17.0	+1.3
	11nm,0.2s						
PKI	Pulchoki	9.14	264	*e*P	Pn	03 25 22.8	+0.7
	58nm,0.5s						
PKIN	Phulchoki	9.14	264	*e*P	Pn	03 25 23.2	+1.0
	49nm,0.3s						
KKN	Kakani	9.21	265	*e*P	Pn	03 25 23.9	+0.9
	12nm,0.2s						
KOLN	Koldanda	10.68	267	*e*P	Pn	03 25 41.0	-2.1
PYUN	Piuthan	11.17	269	*e*P	Pn	03 25 47.6	-2.2
SONM	Songino Array	20.61	21	P	P	03 27 48.9	+0.6

	0.7nm,1.0s,baz=211,slow=11,SNR=4.1						
MKAR	Makanchi Array	20.65	333	P	P	03 27 48.8	+0.1
	0.3nm,0.3s,baz=136,slow=13,SNR=4.5						
WRA	Warramunga Arr	61.30	138	P	P	03 33 23.6	-0.5
	0.3nm,0.6s,baz=326,slow=7.2,SNR=4.8						

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*FUNV **05** 03:41:51.8, 11°.59N×71°.78W, h21^{km}, MW3.5*
*RSNC **05** 03:41:54.4±0.7, 11°.41N×71°.83W, h45^{km}±11^{km}, ML2.6, Mw2.9*
ISC 05 03:41:52.6±1.3, **11°.44N**±0°.04×**71°.77W**±0°.03, **h31**^{km}±13^{km}, **n25**, σ**1^{s}.65**/46, **1C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URIC	Uribia, Colomb	0.34	320	⇑eP	Pn	03 42 02.5	+1.1
URIC				eS	Sn	03 42 09.9	+2.7
URIC				i		03 42 10.7	
	comp=Z,399nm,0.3s						
DABV	Dabajuro	1.23	115	eP	Pb	03 42 15.3	+0.1
DABV				eS	Sb	03 42 31.4	+0.7
DABV	Dabajuro	1.23	115	eP	Pb	03 42 14.9	-0.3
DABV				eS	Sb	03 42 31.4	+0.7
MCQV	Machiques	1.57	209	eP	Pb	03 42 19.9	-1.2
MCQV				eS	Sb	03 42 41.0	+0.3
MONV	Montecano	1.83	74	⇓iP	Pn	03 42 21.2	-0.8
MONV				eS	Sn	03 42 43.8	-0.4
SIQV	Siquisique	2.08	112	eP	Pn	03 42 26.0	+0.6
SIQV				eS	Sn	03 42 50.4	+0.1
LL6C	La Loma 6 Bece	2.25	221	eP	Pn	03 42 27.9	+0.3
LL6C				eS	Sn	03 42 53.9	-0.5
CURV	Curarigua	2.27	128	eS	Sn	03 42 56.4	+1.3
EAV	Pico El Aguila	2.73	160	eP	Pn	03 42 37.5	+2.6
EAV				eS	Sn	03 43 09.4	+2.2
SDV	Santo Domingo	2.77	156	eP	Pn	03 42 35.7	+0.6
SDV				eS	Sn	03 43 07.9	+0.3
SDV				i		03 43 10.0	
	comp=Z,30nm,0.5s						
JACV	Jacura	2.91	97	eP	Pn	03 42 36.5	-0.3
JACV				eS	Sn	03 43 09.8	-0.9
SOCV	Socops	3.27	164	eP	Pn	03 42 41.9	+0.2
SOCV				eS	Sn	03 43 19.5	-0.1
SOCV	Socops	3.27	164	eP	Pn	03 42 41.7	0.0
SOCV				eS	Sn	03 43 20.9	+1.4
SMLC	San Martn de	3.47	221	eP	Pn	03 42 43.7	-0.8
SMLC				eS	Sn	03 43 23.3	-1.2
SMLC				i		03 43 28.6	
	comp=Z,15nm,0.2s						
OCAC	Ocana	3.53	206	eP	Pn	03 42 45.2	-0.2
OCAC				eS	Sn	03 43 25.9	-0.3
CAPV	Capacho	3.59	189	eP	Pn	03 42 47.3	+0.9
CAPV				eS	Sn	03 43 27.8	-0.1
MAPV	Macapo	3.63	116	eP	Pn	03 42 47.0	+0.3
MAPV				eS	Sn	03 43 27.5	-1.0
SJCC	San Jacinto, C	3.69	246	eP	Pn	03 42 47.7	+0.1
SJCC				eS	Sn	03 43 29.4	-0.6
SJCC				i		03 43 35.0	
	comp=Z,6.2nm,0.6s						
PAMC	Pamplona, Colo	4.18	193	eP	Pn	03 42 55.8	+1.1
PAMC				eS	Sn	03 43 42.6	-0.1
PAMC				i		03 44 00.6	
	comp=Z,7.3nm,0.5s						
BENV	Beln	4.36	109	eP	Pn	03 42 56.5	-0.3
BENV				eS	Sn	03 43 44.7	-1.8
BAUV	El Baul	4.43	124	eP	Pn	03 42 58.1	+0.4
BAUV				eS	Sn	03 43 46.8	-1.5
ELOV	Elorza	4.96	153	eP	Pn	03 43 04.4	-0.5
ELOV				eS	Sn	03 44 00.2	-1.0
ZARC	Zaragoza, Cauc	4.97	218	eS	Sn	03 43 59.6	-2.0
BIRV	Birongo	5.49	100	eS	Sn	03 44 09.7	-4.6
CACV	CAICARA DEL OR	6.44	126	eP	Pn	03 43 31.8	+6.5
CACV				eS	Sn	03 44 44.6	+6.8

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*IDC **05** 03:43:12.3±1.0, 36°.53N×33°.53W, h0^{km}, mb3.6/8, mb1 3.9/8, mb1mx3.6/43, mbtmp3.6/8, MS3.8/3, Ms1 3.8/3, ms1mx3.1/48, Error ellipse: s-maj=44.0km s-min=19.8km az=21.0*
ISC 05 03:43:13.9±0.9, **36°.5N**±0°.3×**33°.5W**±0°.2, **h10**^{km}, **n10**, σ**0^{s}.66**/8, **mb3.6**/8, **MS3.8**/3, **Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array	23.43	73	P	P	03 48 22.4	-0.8
	1.3nm,1.0s,baz=280,slow=10,SNR=7.4						
TORD	Torodi Ar. Bea	39.19	117	P	P	03 50 42.2	0.0
	0.7nm,0.9s,baz=315,slow=9.5,SNR=3.5						
DBIC	Dimbokro	39.60	132	P	P	03 50 45.7	+0.2
	2.5nm,0.7s,baz=321,slow=6.5,SNR=3.6						
ULM	Lac du Bonnet	46.04	308	LR	LR	04 08 57.3	
	comp=Z,111nm,20.3s,baz=161,slow=34						
BELG	Belogornoye	57.04	46	LR	LR	04 17 27.6	
	comp=Z,73nm,18.0s,baz=182,slow=36						
PDAR	Pinedale Array	57.05	302	P	P	03 52 59.4	-0.9
	0.4nm,0.9s,baz=76,slow=6.3,SNR=3.8						
TXAR	Lajitas Array	58.15	285	P	P	03 53 08.3	+0.2
	1.2nm,1.0s,baz=98,slow=7.7,SNR=5.5						
NVAR	Mina Array Bea	64.90	300	P	P	03 53 53.5	-0.2
	0.2nm,0.5s,baz=69,slow=4.9,SNR=3.5						
ILAR	Eielson Array	66.53	335	P	P	03 54 03.9	+0.4
	0.5nm,1.0s,baz=57,slow=7.0,SNR=2.9						
MKAR	Makanchi Array	79.09	39	P	P	03 55 19.1	+0.6
	0.6nm,0.7s,baz=310,slow=6.8,SNR=2.4						
MKAR				LR	LR	04 27 39.9	
	comp=Z,55nm,19.1s,baz=340,slow=34						

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*IDC **05** 03:50:48.5±2.2, 14°.81S×167°.42E, h113^{km}±17^{km}, mb4.1/12, mb1 4.2/13, mb1mx4.0/30, mbtmp4.5/13, Error ellipse: s-maj=20.7km s-min=16.8km az=78.0*
*NEIC **05** 03:50:49.3±2.1, 14°.9S±0°.1×167°.5E±0°.2, h120^{km}±5^{km}, mb4.6/16, Error ellipse: s-maj=22.6km s-min=14.6km az=82.0*
*NOU **05** 03:50:49.5, 14°.82S×167°.30E, h108^{km}, mb4.8/32, Vanuatu Islands*
ISC 05 03:50:50.2±0.5, **14°.87S**±0°.07×**167°.37E**±0°.07, **h129**^{km}, **n83**, σ**1^{s}.15**/85, **mb4.5**/18, **1C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.60	195	Pn	Pn	03 51 07.2	-2.6
SANVU	Saraoutou	0.60	195	P	Pn	03 51 07.5	-2.3
DVP	Devils Point	2.95	165	P	Pn	03 51 35.5	-0.6
LIFNC	LIFOU	5.88	181	Pn	Pn	03 52 12.0	-3.1
KOUNC	Koumac, New Ca	6.37	207	P	Pn	03 52 21.5	-0.2
MARNC	Mare, Loyalty	6.61	175	Pn	Pn	03 52 21.0	-3.9
YATNC	Mamie plateau,	7.17	184	P	Pn	03 52 30.9	-1.6
DZM	Mont Dzumac	7.22	187	P	Pn	03 52 32.7	-0.5
	5.9nm,0.3s,baz=1.2,slow=8.1,SNR=40						
DZM				S	Sn	03 53 55.0	+1.1
	5.1nm,0.3s,baz=155,slow=21,SNR=5.9						
DZM	Mont Dzumac	7.22	187	Pn	Pn	03 52 32.1	-1.1
DZM	Mont Dzumac	7.22	187	P	Pn	03 52 32.8	-0.5
NOUC	Port Laguerre	7.27	188	P	Pn	03 52 33.5	-0.3
ONTNC	Ouen Toro	7.45	187	Pn	Pn	03 52 35.5	-0.7
ONTNC	Ouen Toro	7.45	187	P	Pn	03 52 36.5	+0.2
OUENC	Ouen Island, N	7.53	184	Pn	Pn	03 52 36.8	-0.5
OUENC	Ouen Island, N	7.53	184	P	Pn	03 52 37.4	+0.1
PINNC	Pines Island,	7.71	179		Pn	03 52 39.2	-0.5
PINNC	Pines Island,	7.71	179	P	Pn	03 52 39.9	+0.2
HNR	Honiara	9.04	306	S	Sn	03 54 37.0	-1.0
	28nm,0.3s,baz=28,slow=20,SNR=7.0						
MSVF	Nonsavu	10.64	107	P	Pn	03 53 20.9	+1.6
DGTI	Dogotuki	12.00	98	P	Pn	03 53 38.1	+0.9
EIDS	Eidsvold	18.50	233	P	P	03 54 56.9	+0.4
EIDS				IAmb	IAmb	03 54 59.2	
	comp=Z,25nm,0.7s						
EIDS	Eidsvold	18.50	233	P	P	03 54 56.9	+0.4
PMG	Port Moresby	20.48	283	P	P	03 55 19.0	+0.9
	comp=Z,24nm,0.8s,baz=89,slow=6.3,SNR=8.3						
PMG	Port Moresby	20.48	283	P	P	03 55 16.6	-1.5
PMG				IAmb	IAmb	03 55 19.9	
	comp=Z,27nm,0.8s						
PMG	Port Moresby	20.48	283	P	P	03 55 18.6	+0.5
PMG	Port Moresby	20.48	283	P	P	03 55 18.5	+0.5
CTA	Charters Tower	20.79	253	P	P	03 55 22.6	+1.2
	comp=Z,20nm,0.8s,baz=76,slow=14,SNR=14						
CTA	Charters Tower	20.79	253	P	P	03 55 22.2	+0.8
CTAO	Charters Tower	20.79	253	P	P	03 55 21.6	+0.2
CTAO				IAmb	IAmb	03 55 23.2	
	comp=Z,28nm,0.8s						
CTAO	Charters Tower	20.79	253	P	P	03 55 21.9	+0.5
RMQ	Roma	20.87	233	P	P	03 55 23.6	+1.5
	comp=Z,26nm,0.9s						
OUZ	Omahuta	21.03	166	P	P	03 55 23.8	+0.2
MTSU	Mount Surprise	22.34	258	P	P	03 55 38.0	+0.3
QLP	Quilpie	24.53	238	P	P	03 55 58.8	+0.9
URZ	Urewera	24.84	162	P	P	03 56 00.6	+0.1
	comp=Z,23nm,0.7s,baz=122,slow=24,SNR=10						
URZ	Urewera	24.84	162	P	P	03 56 00.7	+0.1
URZ				IAmb	IAmb	03 56 04.4	
	comp=Z,25nm,0.8s						
BKZ	Black Stump Fm	25.50	163	P	P	03 56 07.0	+0.4
CMSA	Cobar Meteorol	25.85	226	P	P	03 56 10.9	+1.1
QIS	Mount Isa	27.03	254	P	P	03 56 21.2	+0.7
STKA	Stephens Creek	28.98	230	P	P	03 56 38.6	+0.9
	comp=Z,6.9nm,0.6s,baz=42,slow=7.5,SNR=21						
STKA				PcP	PcP	03 59 43.2	-0.2
	comp=Z,0.9nm,0.5s,baz=136,slow=11,SNR=3.1						
STKA				ScP	ScP	04 03 14.3	+1.2
	comp=Z,1.9nm,0.6s,baz=75,slow=5.0,SNR=5.0						
STKA	Stephens Creek	28.98	230	P	P	03 56 37.7	0.0
STKA	Stephens Creek	28.98	230	P	P	03 56 39.2	+1.5
WB0	Warramunga Arr	31.82	256	P	P	03 57 01.4	-1.6
WB0				IAmb	IAmb	03 57 02.2	
	comp=Z,17nm,1.3s						
WRA	Warramunga Arr	31.89	256	P	P	03 57 02.2	-1.4
	comp=Z,2.4nm,0.6s,baz=86,slow=9.2,SNR=28						
WRA				PcP	PcP	03 59 51.0	-0.3
	comp=Z,0.4nm,0.7s,baz=90,slow=3.6,SNR=2.4						
WRA				ScP	ScP	04 03 25.1	+2.2
	comp=Z,0.6nm,0.9s,baz=79,slow=3.1,SNR=3.0						
AS31	Alice Springs	32.71	249	P	P	03 57 09.6	-1.2
ASAR	Alice Springs	32.72	249	P	P	03 57 09.6	-1.2
	comp=Z,8.4nm,0.7s,baz=78,slow=9.0,SNR=142						
ASAR				ScP	ScP	04 03 27.9	+2.2
	comp=Z,0.7nm,0.7s,baz=95,slow=3.7,SNR=6.2						
ASAR	Alice Springs	32.72	249	P	P	03 57 09.4	-1.3
BBOO	Buckleboo	33.57	232	P	P	03 57 18.2	+0.2
BBOO				IAmb	IAmb	03 57 19.5	
	comp=Z,7.1nm,0.9s						
KNRA	Kununurra	37.22	264	P	P	03 57 48.6	-0.8
KNRA	Kununurra	37.22	264	P	P	03 57 49.1	-0.3
WRKA	Warakurna	37.98	248	P	P	03 57 55.5	-0.3
FORT	Forrest	39.31	239	P	P	03 58 06.1	-0.7
PSA00	Pilbara Seismi	45.49	254	P	P	03 58 56.2	-0.8
PSA00				IAmb	IAmb	03 58 57.9	
	comp=Z,6.3nm,1.0s						
KAPI	Kappang	47.82	277	P	P	03 59 14.7	-0.5
KAPI				IAmb	IAmb	03 59 16.6	
	comp=Z,9.0nm,0.8s						
KAPI	Kappang	47.82	277	P	P	03 59 16.0	+0.8
VNDA	Vanda	62.73	181	P	P	04 01 00.1	-0.9
VNDA				IAmb	IAmb	04 01 13.6	
	comp=Z,8.9nm,1.3s						
NJ2	Nanjing	65.84	316	eP	P	04 01 23.0	+1.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
XAN	Xi'an	73.85	313	P	P	04 02 12.4	+1.3
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,96nm,3.6s						
KMI	Kunming	74.46	302	⇑P	P	04 02 16.7	+1.7
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CMAR	Chiang Mai Arr	75.09	294	P	P	04 02 19.6	+1.0
	comp=Z,0.5nm,0.3s,baz=114,slow=4.2,SNR=5.1						
CMAR	Chiang Mai Arr	75.09	294	P	P	04 02 18.7	+0.2
QSPA	South Pole Qui	75.16	180	P	P	04 02 18.1	-0.2
HHC	Hu-ho-hao-te	75.75	320	eP	P	04 02 22.9	+0.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,97nm,6.6s						
LZH	Lanzhou	78.48	312	eP	P	04 02 39.3	+1.9
LZH				pP	pP	04 03 13.1	+3.7
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
MAW	Mawson	81.79	202	P	P	04 02 54.9	+0.5
	comp=Z,2.5nm,0.7s,baz=153,slow=4.5,SNR=1.6						
MAW	Mawson	81.79	202	IAmb	IAmb	04 03 01.4	
	comp=Z,1.7nm,1.2s						
SONM	Songino Array	82.66	324	P	P	04 02 59.8	+0.4
	comp=Z,1.0nm,0.8s,baz=150,slow=7.2,SNR=4.6						
ILAR	Eielson Array	86.63	18	P	P	04 03 17.7	-1.0
	comp=Z,1.1nm,0.8s,baz=235,slow=5.0,SNR=9.7						
WMQ	Urumqi	92.89	315	eP	P	04 03 49.3	+0.6
SNAA	Sanae	93.42	183	P	P	04 03 49.5	-1.2
VNA3	Neumayer Olymp	94.08	181	P	P	04 03 52.2	-1.5
VNA2	Neumayer--Watz	94.35	182	P	P	04 03 53.9	-0.9
	baz=189,slow=4.5						
MKAR	Makanchi Array	97.37	316	P	Pdif	04 04 09.3	+0.3
	comp=Z,0.9nm,0.7s,baz=98,slow=6.2,SNR=5.3						
MKAR	Makanchi Array	97.37	316	P	P	04 04 08.6	-0.4
ZALV	Zalesovo Beam	97.56	324	P	Pdif	04 04 10.5	+0.9
	comp=Z,1.1nm,0.7s,baz=116,slow=4.4,SNR=4.4						
ZALV	Zalesovo Beam	97.56	324	P	P	04 04 08.6	-1.0
NRIK	Noril'sk	100.23	339	P	Pdif	04 04 21.7	+0.5
	comp=Z,2.3nm,0.6s,baz=152,slow=5.4,SNR=4.8						
ARCES	ARCESS Array B	120.41	345	PKP	PKPdf	04 09 25.0	-0.7
	comp=Z,2.7nm,0.8s,baz=45,slow=1.9,SNR=7.0						
BOSA	Boshof	123.33	220	PKP	PKiKP	04 09 33.2	+0.1
	comp=Z,1.3nm,0.7s,baz=243,slow=3.7,SNR=3.4						
FINES	FINESS Array B	125.89	338	PKP	PKiKP	04 09 37.0	+0.1
	comp=Z,6.0nm,1.1s,baz=100,slow=1.7,SNR=1.9						
DAVOX	Davos/Dischmat	143.04	334	PKP	PKPbc	04 10 07.4	+1.1
	comp=Z,3.6nm,0.7s,baz=205,slow=2.5,SNR=9.0						
OSSC	Osservatorio P	144.90	329	PKPdf	PKPab	04 10 11.5	-0.1
BNI	Bardonecchia	145.76	335	PKPbc	PKiKP	04 10 16.5	-1.4

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*IDC **05** 03:52:17.7±2.8, 18°.99S×66°.70W, h208^{km}±35^{km}, mb3.0/2, mb1 3.2/3, mb1mx3.0/33, mbtmp3.6/3, Error ellipse: s-maj=64.2km s-min=24.4km az=101.0*
ISC 05 03:52:18.7±1.1, **18°.92S**±0°.06×**67°.6W**±0°.1, **h256**^{km}±12^{km}, **n16**, σ**1^{s}.58**/28, **3C-1D, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	1.93	231	eP	Pn	03 53 02.4	+1.0
PB08				eS	S	03 53 34.0	-1.3
PB11	IPOC Station P	2.15	247	⇓eP	Pn	03 53 04.1	+0.9
PB11				eS	S	03 53 37.5	-0.8
PSGC	Pisagua	2.51	254	eP	Pn	03 53 07.2	+0.6
PSGC				eS	S	03 53 43.5	-1.0
PB12	IPOC Station P	2.64	276	⇑eP	Pn	03 53 08.8	+0.9
PB12				i S	S	03 53 46.2	-0.6
LPAZ	La Paz	2.67	348	P	Pn	03 53 09.8	+0.9
	7.8nm,0.3s,baz=172,slow=6.7,SNR=200						
LPAZ				S	S	03 53 48.3	-0.2
	5.3nm,0.3s,baz=284,slow=20,SNR=9.8						
LPAZ	La Paz	2.67	348	⇑iP	Pn	03 53 09.8	+0.9
LPAZ				i S	S	03 53 47.1	-1.4
AP01	Chacalluta	2.69	281	eP	Pn	03 53 10.0	+1.7
AP01				eS	S	03 53 47.6	+0.1
TA02	Huaiquique	2.77	241	⇑eP	Pn	03 53 10.6	+1.5
TA02				eS	S	03 53 47.8	-1.3
PB01	IPOC Station P	2.78	220	eP	Pn	03 53 10.3	+1.0
PB01				i S	S	03 53 48.0	-1.5
TA01	Diego Aracena	2.96	236	eP	Pn	03 53 12.0	+0.9
TA01				eS	S	03 53 50.6	-2.1
PB02	IPOC Station P	3.24	222	eP	Pn	03 53 15.9	+1.7
PB02				eS	S	03 53 57.3	-1.1
PB09	IPOC Station P	3.27	209	eP	Pn	03 53 16.6	+2.0
PB09				eS	S	03 53 58.5	-0.5
PB07	IPOC Station P	3.54	218	eP	Pn	03 53 18.7	+1.0
PB07				eS	S	03 54 01.8	-2.8
PLCA	Paso Flores	21.89	186	P	P	03 56 54.3	+3.2
	1.2nm,0.8s,baz=349,slow=9.5,SNR=4.2						
TORD	Torodi Ar. Bea	75.30	70	P	P	04 03 34.1	-0.2
	0.3nm,0.5s,baz=256,slow=4.6,SNR=6.0						
SONM	Songino Array	150.74	8	PKPbc	PKPab	04 11 45.2	-3.4
	0.4nm,0.3s,baz=32,slow=1.4,SNR=4.0						

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*TUL **05** 03:58:32±1.2, 36°.148N±0°.004×97°.01W±0°.02, h6^{km}±7^{km}, ML2.8, mb_Lg2.3/16(NEIC), Error ellipse: s-maj=1.9km s-min=0.7km az=89.0*
NEIC 05 03:58:32.1±1.0, **36°.16N**±0°.01×**97°.02W**±0°.02, **h6**^{km}±7^{km}, **Error ellipse: s-maj=1.9km s-min=1.8km az=120.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK031	S. Brethren Rd	0.25	144	Pg	Pg	03 58 37.1	+0.1
OK031				Sg	Sg	03 58 40.7	+0.4
OK034	N. Norfolk Rd.	0.29	120	Pg	Pg	03 58 37.9	+0.2
OK034				Sg	Sg	03 58 41.8	+0.2
OK030	Cody Creek RV	0.30	140	Pg	Pg	03 58 38.0	+0.1
OK030				Sg	Sg	03 58 42.2	+0.3
OK029	Liberty Lake	0.50	225	Pg	Pg	03 58 41.8	0.0
OK029				Sg	Sg	03 58 48.7	+0.3
BLOK	Blackwell	0.62	345	Pg	Pg	03 58 44.4	+0.2
OK025	Westminster Rd	0.63	204	Pg	Pg	03 58 44.3	+0.1
OK025				Sg	Sg	03 58 52.9	+0.5
BCOK	Bluff Creek, N	0.69	224	Pg	Pg	03 58 44.6	-0.8
BCOK				Sg	Sg	03 58 54.6	+0.2
OKCFA	Oklahoma City	0.82	206	Pg	Pg	03 58 47.3	-0.6
OKCFA				Sg	Sg	03 58 58.2	-0.2
OKCSW	OKLAHOMA CITY	0.82	205		Pg	03 58 47.6	-0.3
CROK	Carrier	0.85	294	Pg	Pg	03 58 48.4	-0.2
T35A	Sooner Cattle	0.86	28	Pg	Pg	03 58 48.3	-0.4
T35A				Sg	Sg	03 59 00.2	+0.3
KAN13	South Haven SW	0.93	337	Pg	Pg	03 58 49.9	-0.2
KAN13				Sg	Sg	03 59 02.4	+0.2
GC02	Grant County #	0.97	316	Pg	Pg	03 58 50.6	-0.2
GC02				Sg	Sg	03 59 03.4	+0.1
TUL1	Leonard	1.02	103	Pg	Pg	03 58 50.7	-1.1
TUL1				Sg	Sg	03 59 04.8	-0.3
KAN17	Caldwell West	1.07	326	Pg	Pg	03 58 52.8	+0.1
KAN09	Caldwell North	1.09	334	Pg	Pg	03 58 52.6	-0.5
OK032	Salt Plains WL	1.16	304	Pg	Pg	03 58 53.9	-0.5
KAN01	Argonia South	1.16	329	Pg	Pg	03 58 53.9	-0.5
KAN06	Argonia West S	1.28	329	Pn	Pn	03 58 55.7	-1.0
KAN16	Harper SW Stat	1.36	322	Pn	Pn	03 58 57.7	-0.1
KAN12	Harper NE Stat	1.39	326	Pn	Pn	03 58 57.5	-0.6
U32A	Winter Ranch,	1.62	279		Pn	03 59 01.5	+0.1
X34A	Smith Ranch, M	1.69	203	Pn	Pn	03 59 02.9	+0.6
U38A	Gravette	2.15	82	Pn	Pn	03 59 09.3	+0.8
HHAR	Hobbs	2.49	86	Pn	Pn	03 59 14.9	+1.6
W39A	Magazine	2.80	109	IAmb_Lg		04 00 05.6	
	comp=Z,11nm,0.9s						
Z35A	Perchaven, San	2.82	184	Pn	Pn	03 59 17.1	-0.8
KSU1	Kansas State U	2.96	6	Pn	Pn	03 59 20.4	+0.7
MIAR	Mount Ida	3.24	119	Pn	Pn	03 59 24.1	+0.5
S39A	Bolivar	3.33	62	IAmb_Lg		04 00 25.4	
	comp=Z,7.1nm,0.8s						
Z38A	Mt. Pleasant	3.34	149	Pn	Pn	03 59 23.1	-1.8
Z38A				IAmb_Lg		04 00 20.9	
	comp=Z,9.0nm,0.9s						
U40A	Yellville	3.37	85	Pn	Pn	03 59 24.3	-1.2
U40A				IAmb_Lg		04 00 17.1	
	comp=Z,7.6nm,1.1s						
CBKS	Cedar Bluff	3.42	322	IAmb_Lg		04 00 19.7	
	comp=Z,12nm,0.9s						
X40A	Basin Creek Fa	3.81	115	Pn	Pn	03 59 30.6	-0.7
WHAR	Wooly Hollow	3.94	101	Pn	Pn	03 59 33.5	+0.3
MGMO	Mountain Grove	3.95	74	Pn	Pn	03 59 32.9	-0.4
MGMO				IAmb_Lg		04 00 41.9	
	comp=Z,8.0nm,0.8s						
FCAR	Ozark Folk Cen	3.98	92	Pn	Pn	03 59 34.6	+0.9
ABTX	Abilene, Hawle	4.14	212	IAmb_Lg		04 00 46.6	
	comp=Z,5.2nm,0.9s						
R40A	Maddies Statio	4.35	59	Pn	Pn	03 59 38.2	-0.6
P38A	Dawn	4.43	37	Pn	Pn	03 59 39.3	-0.6
LCAR	Lake Charles	4.75	89	IAmb_Lg		04 01 09.0	
	comp=Z,6.8nm,1.0s						
T42A	Van Buren	4.85	78	Pn	Pn	03 59 45.3	-0.4

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*IDC **05** 04:17:08.5±1.5, 6°.18N×125°.04E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.4/32, mbtmp3.5/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/29, Error ellipse: s-maj=38.8km s-min=11.9km az=111.0*
*MAN **05** 04:17:15.5, 6°.81N×126°.06E, h15^{km}, mb4.9, ML3.8, MS3.8*
ISC 05 04:17:16.9±1.3, **6°.63N**±0°.08×**125°.8E**±0°.1, **h100**^{km}, **n10**, σ**2^{s}.61**/13, **mb3.4**/3, **3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.49	335	Pg	Pn	04 17 29.3	-3.3
	718nm,0.3s,baz=92,slow=0.6,SNR=50						
DAV				Lg	Lg	04 17 41.7	
	237nm,0.3s,baz=84,slow=19,SNR=12						
DMPH	Davao City--Mi	0.53	328	⇓iP	Pn	04 17 29.8	-3.1
KCP	Kidapawan	0.79	299	⇓iP	Pn	04 17 33.5	-1.7
KCP				i S	Sn	04 17 48.9	-0.2
GSPH	General Santos	0.99	237	⇓iP	Pn	04 17 35.0	-2.3
GSPH				eS	Sn	04 17 51.8	-1.0
BUKP	Musuan	1.44	330	eP	Pn	04 17 39.7	-2.7
BUKP				eS	Sn	04 18 03.1	+1.3
PAGZ	Pagadian	2.68	297	eP	Pn	04 17 59.9	+1.5
PAGZ				eS	Sn	04 18 26.3	-4.0
BATI	Baumata	16.86	187	LR	LR	04 28 38.8	
	comp=Z,68nm,21.1s,baz=188,slow=42						
WRA	Warramunga Arr	27.71	162	P	P	04 22 56.7	+0.7
	0.4nm,0.7s,baz=342,slow=9.7,SNR=3.3						
ASAR	Alice Springs	31.13	166	P	P	04 23 27.1	+0.9
	0.4nm,0.5s,baz=341,slow=7.2,SNR=9.3						
MKAR	Makanchi Array	54.66	325	P	P	04 26 38.5	+3.0
	0.4nm,0.5s,baz=123,slow=6.8,SNR=3.0						

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*TAP **05** 04:40:39.3, 24°.73N×122°.18E, h6^{km}±1^{km}, ML2.9, C*
*JMA **05** 04:40:39.1±0.1, 24°.65N×122°.33E, h44^{km}*
ISC 05 04:40:38.4±0.9, **24°.72N**±0°.02×**122°.28E**±0°.02, **h15**^{km}±8^{km}, **n56**, σ**0^{s}.69**/106, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.34	291	eP	Pb	04 40 45.9	-0.3
	baz=296						
EGS				eS	Sg	04 40 50.7	+0.5
	baz=296						
TWB1	Santiao Chiao	0.39	317	P	Pg	04 40 46.6	+0.3
	baz=328						
TWB1				i S	Sg	04 40 51.5	-0.2
	baz=328						
TWC	Suao	0.41	254	P	Pg	04 40 46.7	0.0
	baz=247						
TWC				S	Sg	04 40 52.1	-0.2
	baz=247						
NTC	Toucheng	0.43	288	eP	Pb	04 40 47.6	-0.1
	baz=290						
NTC				eS	Sb	04 40 53.7	-0.3
	baz=290						
TIPB	Shuangxi	0.48	301	P	Pg	04 40 47.9	-0.1
	baz=306						
TIPB				eS	Sg	04 40 53.9	-0.7
	baz=306						
ILA	Ilan	0.49	275	eP	Pb	04 40 48.5	-0.1
	baz=274						
ILA				eS	Sb	04 40 55.5	-0.2
	baz=274						
NDS	Dongshan	0.52	260	eP	Pb	04 40 49.1	-0.2
	baz=256						
NDS				eS	Sg	04 40 56.0	+0.2
	baz=256						
EWUT	Wuta	0.54	239	eP	Pb	04 40 49.5	-0.1
	baz=232						
EWUT				eS	Sg	04 40 56.5	+0.3
	baz=232						
TWE	Neicheng	0.56	270	eP	Pg	04 40 49.6	+0.2
	baz=268						
TWE				eS	Sb	04 40 57.9	+0.1
	baz=268						
NWF	Wu-fen Shan	0.57	307	eP	Pn	04 40 51.2	-0.9
	baz=312						
ENA	Nanau	0.57	239	eP	Pb	04 40 50.7	+0.5
	baz=232						
ENA				eS	Sg	04 40 57.4	0.0
	baz=232						
ENTT	Nioudou	0.66	263	eP	Pg	04 40 51.4	+0.1
	baz=260						
ENTT				eS	Sb	04 41 00.6	0.0
	baz=260						
JYNG	Yonagunijimaku	0.66	114	P	Pg	04 40 51.2	-0.2
JYNG				S	Sg	04 41 00.0	-0.2
TWA	Mucha	0.68	292	eP	Pb	04 40 52.2	+0.1
	baz=294						
TWA				eS	Sb	04 41 01.4	0.0
	baz=294						
NDT	Datong Townshi	0.71	260	eP	Pg	04 40 52.4	+0.1
	baz=257						
NDT				eS	Sb	04 41 02.0	-0.1
	baz=257						
NWLT	Wulai	0.71	274	eP	Pb	04 40 52.6	+0.1
	baz=274						
NWLT				eS	Sb	04 41 02.0	-0.2

	baz=274						
YOJ	**Yonaguni jima** baz=109	**0.71**	**111**	*e*P	**Pn**	**04 40 55.6**	**+1.6**
YOJ	baz=109			*e*S	**Sn**	**04 41 07.4**	**+2.7**
YOJ	**Yonaguni jima**	**0.71**	**111**	P	**Pg**	**04 40 51.8**	**-0.5**
YOJ				S	**Sg**	**04 41 01.4**	**-0.4**
NHDH	**Xindian Distri** baz=290	**0.73**	**289**	*e*P	**Pb**	**04 40 53.2**	**+0.4**
NHDH	baz=290			*e*S	**Sb**	**04 41 03.3**	**+0.7**
YM01	**YM01** baz=306	**0.77**	**303**	*e*P	**Pn**	**04 40 54.2**	**-0.6**
YM01	baz=306			*e*S	**Sn**	**04 41 04.9**	**-1.3**
ETL	**Fush Village** baz=221	**0.82**	**227**	*e*S	**Sg**	**04 41 05.9**	**+0.6**
YHNB	**Yeheng** baz=265	**0.83**	**266**	*e*P	**Pb**	**04 40 54.3**	**-0.3**
YHNB	baz=265			*e*S	**Sb**	**04 41 04.8**	**-0.7**
TWY	**Chenhua** baz=315	**0.83**	**312**	*e*P	**Pg**	**04 40 54.9**	**+0.4**
TWY	baz=315			*e*S	**Sg**	**04 41 06.2**	**+0.7**
NACB	**Ninganchiao** baz=223	**0.83**	**229**	P	**Pb**	**04 40 54.4**	**-0.2**
NSK	**Sanguang** baz=265	**0.84**	**267**	*e*P	**Pg**	**04 40 55.1**	**+0.3**
NSK	baz=265			*e*S	**Sb**	**04 41 05.4**	**-0.6**
NNSB	**Datong** baz=247	**0.87**	**250**	P	**Pb**	**04 40 55.3**	**-0.1**
NNSB	baz=247			*e*S	**Sg**	**04 41 06.9**	**+0.1**
NNS	**Nan Shan** baz=248	**0.88**	**251**	*e*P	**Pg**	**04 40 55.9**	**+0.4**
NNS	baz=248			*e*S	**Sb**	**04 41 06.9**	**-0.1**
ETLH	**Xiulin Townshi** baz=230	**0.89**	**235**	*e*P	**Pn**	**04 40 56.6**	**+0.1**
ETLH	baz=230			*e*S	**Sn**	**04 41 08.4**	**-0.8**
TWD	**Chiawan** baz=219	**0.90**	**224**	*e*P	**Pn**	**04 40 56.2**	**-0.2**
TWD	baz=219			*e*S	**Sn**	**04 41 08.4**	**-0.7**
PCYT	**Pengchaiyu** baz=353	**0.92**	**348**	*e*P	**Pn**	**04 40 56.9**	**0.0**
PCYT	baz=353			*e*S	**Sn**	**04 41 11.1**	**+1.2**
NCU	**National Centr** baz=284	**1.02**	**284**	*e*P	**Pg**	**04 40 58.3**	**0.0**
NCU	baz=284			*e*S	**Sn**	**04 41 13.2**	**+0.9**
FUSS	**Fushou** baz=240	**1.06**	**244**	*e*P	**Pg**	**04 40 59.4**	**+0.4**
FUSS	baz=240			*e*S	**Sn**	**04 41 13.3**	**-0.2**
WHF	**Hehuan Shan** baz=234	**1.09**	**238**	*e*P	**Pg**	**04 40 59.8**	**+0.2**
WHF	baz=234			*e*S	**Sb**	**04 41 13.6**	**+0.1**
TWT	**Tachien** baz=242	**1.11**	**245**	*e*P	**Pg**	**04 41 00.4**	**+0.5**
TWT	baz=242			*e*S	**Sg**	**04 41 15.7**	**+1.2**
TDCB	**Techi** baz=242	**1.13**	**246**	*e*P	**Pg**	**04 41 00.5**	**+0.2**
TDCB	baz=242			*e*S	**Sg**	**04 41 15.9**	**+1.0**
LIOB	**Emei** baz=265	**1.16**	**266**	*e*P	**Pg**	**04 41 00.7**	**0.0**
LIOB	baz=265			*e*S	**Sg**	**04 41 16.1**	**+0.3**
NSTT	**Nanjuang** baz=264	**1.17**	**266**	*e*P	**Pg**	**04 41 00.9**	**-0.1**
NSTT	baz=264			*e*S	**Sg**	**04 41 17.1**	**+0.8**
ESL	**Shilin** baz=216	**1.19**	**221**	*e*P	**Pg**	**04 41 02.0**	**+0.6**
ESL	baz=216			*e*S	**Sg**	**04 41 18.7**	**+1.7**
CHGB	**Renai** baz=233	**1.21**	**237**	*e*P	**Pg**	**04 41 02.2**	**+0.4**
CHGB	baz=233			*e*S	**Sg**	**04 41 18.7**	**+1.2**
WHP	**Taichung City** baz=248	**1.30**	**250**	*e*P	**Pg**	**04 41 03.2**	**-0.2**
WHP	baz=248			*e*S	**Sg**	**04 41 20.4**	**+0.1**
IRIF	**Iriomote-Funau**	**1.37**	**106**	P	**Pn**	**04 41 01.1**	**-2.0**
WCS	**Beigang Elemen** baz=239	**1.42**	**242**	*e*P	**Pb**	**04 41 05.0**	**+0.5**
WCS	baz=239			*e*S	**Sg**	**04 41 23.8**	**-0.4**
VWDT	**VWDT** baz=224	**1.42**	**227**	P	**Pg**	**04 41 05.3**	**-0.5**
VWDT	baz=224			*e*S	**Sb**	**04 41 22.6**	**+0.1**
HGSD	**Ruisui** baz=209	**1.46**	**213**	*e*P	**Pg**	**04 41 06.0**	**-0.5**
HGSD	baz=209			*e*S	**Sg**	**04 41 25.6**	**+0.2**
SMLT	**Sun Moon Lake** baz=233	**1.51**	**237**	*e*P	**Pb**	**04 41 06.5**	**+0.2**
SMLT	baz=233			*e*S	**Sb**	**04 41 25.8**	**+0.5**
SSLB	**Suanglung** baz=229	**1.53**	**233**	*e*P	**Pb**	**04 41 06.8**	**+0.3**
SSLB	baz=229			*e*S	**Sb**	**04 41 26.7**	**+1.0**
TYC	**Yuchr** baz=235	**1.54**	**238**	*e*P	**Pb**	**04 41 06.7**	**+0.1**
TYC	baz=235			*e*S	**Sb**	**04 41 26.5**	**+0.7**
YULB	**Yu-li** baz=211	**1.60**	**214**	*e*P	**Pb**	**04 41 07.8**	**+0.1**
YULB	baz=211			*e*S	**Sb**	**04 41 28.8**	**+1.0**
JKRS	**Kuro-shima**	**1.65**	**107**	P	**Pn**	**04 41 05.3**	**-1.5**
JIJ	**Ishigaki jima**	**1.73**	**102**	P	**Pn**	**04 41 08.7**	**+0.7**
FULB	**Fuli** baz=208	**1.77**	**211**	*e*P	**Pb**	**04 41 10.6**	**0.0**
FULB	baz=208			*e*S	**Sb**	**04 41 33.3**	**+0.7**
ALS	**Alishan** baz=225	**1.81**	**228**	*e*P	**Pb**	**04 41 10.7**	**-0.7**
ALS	baz=225			*e*S	**Sb**	**04 41 34.0**	**-0.1**
CHN5	**Tsauling** baz=230	**1.85**	**233**	*e*P	**Pb**	**04 41 11.3**	**-0.6**
CHN5	baz=230			*e*S	**Sb**	**04 41 34.4**	**-0.5**
CHN4	**Tsaushan** baz=226	**2.06**	**229**	*e*P	**Pb**	**04 41 14.3**	**-1.3**
CHN4	baz=226			*e*S	**Sb**	**04 41 40.0**	**-1.0**
TPUB	**Ta-pu** baz=224	**2.07**	**227**	*e*P	**Pb**	**04 41 14.5**	**-1.3**
TPUB	baz=224			*e*S	**Sb**	**04 41 40.1**	**-1.2**
LDUT	**Ludao** baz=197	**2.17**	**200**	*e*P	**Pb**	**04 41 16.4**	**-1.0**
LDUT	baz=197			*e*S	**Sb**	**04 41 43.9**	**-0.3**

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*JMA **05** 04:40:50.0, 24°.65N×122°.31E, h0^{km}, M2.6*
*TAP **05** 04:40:51.5, 24°.76N×122°.17E, h2^{km}, ML2.9, C*
ISC 05 04:40:50.0±1.1**, 24°.76N**±0°.02×**122°.31E**±0°.02**, h2**^{km}±10^{km},
n59, σ0^{s}.58/112**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS	baz=292	**0.36**	**284**	*e*P	**Pg**	**04 40 56.6**	**-0.3**
EGS	baz=292			*e*S	**Sg**	**04 41 01.0**	**-0.6**
TWB1	**Santiao Chiao** baz=327	**0.39**	**310**	P	**Pg**	**04 40 58.4**	**+0.9**
TWB1	baz=327			S	**Sg**	**04 41 03.5**	**+0.9**
TWC	**Suao** baz=241	**0.45**	**251**	*e*P	**Pg**	**04 40 58.9**	**+0.2**
TWC	baz=241			S	**Sg**	**04 41 04.1**	**-0.3**
NTC	**Toucheng** baz=287	**0.45**	**283**	*e*P	**Pg**	**04 40 59.4**	**+0.7**
NTC	baz=287			*e*S	**Sg**	**04 41 05.4**	**+0.8**
TIPB	**Shuangxi** baz=304	**0.49**	**296**	*e*P	**Pg**	**04 40 60.0**	**+0.4**
TIPB	baz=304			*e*S	**Sg**	**04 41 06.0**	**+0.1**
NDS	**Dongshan** baz=253	**0.56**	**257**	*e*P	**Pb**	**04 41 01.7**	**-0.8**
NDS	baz=253			*e*S	**Sg**	**04 41 08.1**	**+0.1**
NWF	**Wu-fen Shan** baz=311	**0.58**	**303**	*e*P	**Pb**	**04 41 02.9**	**-0.1**
NWF	baz=311			*e*S	**Sb**	**04 41 10.4**	**-1.2**
EWUT	**Wuta** baz=228	**0.58**	**238**	*e*P	**Pb**	**04 41 02.7**	**-0.2**
EWUT	baz=228			*e*S	**Sb**	**04 41 10.9**	**-0.7**
TWE	**Neicheng** baz=264	**0.59**	**267**	*e*P	**Pb**	**04 41 02.2**	**-0.9**
TWE	baz=264			*e*S	**Sg**	**04 41 08.8**	**-0.2**
ENA	**Nanau** baz=229	**0.61**	**238**	*e*P	**Pb**	**04 41 03.5**	**0.0**
ENA	baz=229			*e*S	**Sb**	**04 41 11.9**	**-0.7**
JYNG	**Yonagunijimaku**	**0.65**	**118**	P	**Pg**	**04 41 02.1**	**-0.4**
JYNG				*e*S	**Sg**	**04 41 11.6**	**+0.7**
ENTT	**Nioudou** baz=257	**0.69**	**261**	*e*S	**Sb**	**04 41 13.5**	**-1.4**
YOJ	**Yonaguni jima** baz=110	**0.70**	**115**	*e*P	**Pn**	**04 41 08.2**	**+1.2**
YOJ	baz=110			*e*S	**Sn**	**04 41 20.5**	**+2.2**
YOJ	**Yonaguni jima**	**0.70**	**115**	P	**Pg**	**04 41 03.2**	**-0.2**
YOJ				*e*S	**Sg**	**04 41 12.8**	**+0.3**
TWA	**Mucha** baz=292	**0.70**	**289**	*e*P	**Pb**	**04 41 04.3**	**-0.7**
TWA	baz=292			*e*S	**Sb**	**04 41 14.1**	**-1.0**
NWLT	**Wulai** baz=271	**0.74**	**272**	*e*P	**Pb**	**04 41 05.1**	**-0.6**
NWLT	baz=271			*e*S	**Sb**	**04 41 15.3**	**-1.0**
NDT	**Datong Townshi** baz=255	**0.74**	**258**	*e*S	**Sg**	**04 41 13.8**	**-0.2**
NHDH	**Xindian Distri** baz=289	**0.75**	**286**	*e*P	**Pb**	**04 41 05.4**	**-0.3**
NHDH	baz=289			*e*S	**Sb**	**04 41 15.5**	**-0.9**
YM01	**YM01** baz=305	**0.78**	**300**	*e*P	**Pb**	**04 41 06.1**	**-0.3**
YM01	baz=305			*e*S	**Sb**	**04 41 17.0**	**-0.4**
TWY	**Chenhua** baz=315	**0.83**	**309**	*e*P	**Pb**	**04 41 07.0**	**-0.2**
TWY	baz=315			*e*S	**Sb**	**04 41 18.0**	**-0.8**
YHNB	**Yeheng** baz=262	**0.86**	**264**	*e*P	**Pb**	**04 41 07.3**	**-0.4**
YHNB	baz=262			*e*S	**Sb**	**04 41 18.7**	**-1.0**
ETL	**Fush Village** baz=219	**0.87**	**227**	*e*P	**Pb**	**04 41 08.2**	**+0.4**
ETL	baz=219			*e*S	**Sb**	**04 41 20.7**	**+0.8**
NSK	**Sanguang** baz=263	**0.87**	**265**	*e*P	**Pb**	**04 41 07.6**	**-0.4**
NSK	baz=263			*e*S	**Sb**	**04 41 19.1**	**-1.1**
NACB	**Ninganchiao** baz=221	**0.88**	**229**	*e*P	**Pg**	**04 41 06.6**	**-0.2**
NACB	baz=221			*e*S	**Sb**	**04 41 19.2**	**-0.9**
NACB	**Ninganchiao** baz=223	**0.88**	**229**	*e*S	**Pg**	**04 41 06.3**	**-0.5**
TWS1	**Kuangyinshan** baz=296	**0.88**	**293**	*e*P	**Pb**	**04 41 07.8**	**-0.3**
TWS1	baz=296			*e*S	**Sb**	**04 41 19.9**	**-0.5**
NTST	**Danshui** baz=301	**0.88**	**298**	*e*P	**Pb**	**04 41 08.1**	**0.0**
NTST	baz=301			*e*S	**Sb**	**04 41 19.9**	**-0.5**
NNSB	**Datong** baz=245	**0.91**	**249**	*e*P	**Pg**	**04 41 07.8**	**+0.3**
NNSB	baz=245			*e*S	**Sb**	**04 41 20.7**	**-0.5**
NNS	**Nan Shan** baz=245	**0.91**	**250**	*e*P	**Pb**	**04 41 08.4**	**-0.3**
NNS	baz=245			*e*S	**Sg**	**04 41 20.3**	**+0.9**
ETLH	**Xiulin Townshi** baz=228	**0.94**	**234**	*e*P	**Pb**	**04 41 09.0**	**-0.1**
ETLH	baz=228			*e*S	**Sb**	**04 41 22.1**	**+0.2**
TWD	**Chiawan** baz=217	**0.94**	**224**	*e*P	**Pb**	**04 41 09.4**	**+0.3**
TWD	baz=217			*e*S	**Sb**	**04 41 22.1**	**+0.1**
FUSS	**Fushou** baz=238	**1.10**	**243**	*e*P	**Pb**	**04 41 11.5**	**-0.4**
FUSS	baz=238			*e*S	**Sb**	**04 41 26.6**	**-0.2**
WHF	**Hehuan Shan** baz=233	**1.13**	**238**	*e*P	**Pg**	**04 41 11.6**	**-0.2**
WHF	baz=233			*e*S	**Sg**	**04 41 25.7**	**-0.8**
TWT	**Tachien** baz=241	**1.15**	**244**	*e*P	**Pb**	**04 41 12.9**	**+0.1**
TWT	baz=241			*e*S	**Sb**	**04 41 27.7**	**-0.5**
TDCB	**Techi** baz=241	**1.17**	**245**	*e*P	**Pb**	**04 41 12.8**	**-0.3**
TDCB	baz=241			*e*S	**Sb**	**04 41 29.2**	**+0.5**
LIOB	**Emei** baz=263	**1.19**	**265**	*e*P	**Pb**	**04 41 13.1**	**-0.2**
LIOB	baz=263			*e*S	**Sb**	**04 41 29.1**	**0.0**
NSTT	**Nanjuang** baz=263	**1.20**	**264**	*e*P	**Pg**	**04 41 13.0**	**0.0**
NSTT	baz=263			*e*S	**Sb**	**04 41 29.3**	**-0.3**
SBCB	**Hsinchu** baz=271	**1.21**	**272**	*e*P	**Pb**	**04 41 13.5**	**-0.1**
SBCB	baz=271			*e*S	**Sb**	**04 41 30.0**	**+0.2**
ESL	**Shilin** baz=215	**1.23**	**221**	*e*P	**Pn**	**04 41 14.8**	**+0.5**
ESL	baz=215			*e*S	**Sn**	**04 41 31.9**	**+0.2**
CHGB	**Renai** baz=232	**1.25**	**237**	*e*P	**Pg**	**04 41 14.1**	**+0.1**
CHGB	baz=232			*e*S	**Sb**	**04 41 30.6**	**-0.5**
OWD	**Renai** baz=228	**1.31**	**233**	*e*P	**Pn**	**04 41 15.6**	**+0.1**
OWD	baz=228			*e*S	**Sn**	**04 41 33.8**	**+0.1**
WHP	**Taichung City** baz=246	**1.33**	**249**	*e*P	**Pn**	**04 41 15.7**	**-0.1**
WHP	baz=246			*e*S	**Sg**	**04 41 32.8**	**-0.1**
IRIF	**Iriomote-Funau**	**1.36**	**108**	P	**Pn**	**04 41 15.0**	**-1.0**
IRIF				*e*S	**Sg**	**04 41 32.8**	**-0.8**
NMLH	**Miaoli** baz=260	**1.40**	**261**	*e*P	**Pb**	**04 41 16.9**	**0.0**
NMLH	baz=260			*e*S	**Sb**	**04 41 35.4**	**0.0**
WCS	**Beigang Elemen** baz=238	**1.46**	**242**	*e*P	**Pb**	**04 41 17.6**	**-0.2**
WCS	baz=238			*e*S	**Sn**	**04 41 37.2**	**+0.1**
VWDT	**VWDT** baz=223	**1.46**	**227**	*e*P	**Pg**	**04 41 18.1**	**-0.1**
VWDT	baz=223			*e*S	**Sn**	**04 41 37.5**	**+0.2**
HGSD	**Ruisui** baz=208	**1.50**	**213**	*e*P	**Pn**	**04 41 17.7**	**-0.3**
HGSD	baz=208			*e*S	**Sg**	**04 41 38.9**	**+0.7**
HATJ	**Hateruma jima**	**1.53**	**117**	*e*S	**Sn**	**04 41 38.2**	**-0.6**
EHY	**Hungye** baz=211	**1.54**	**216**	*e*P	**Pb**	**04 41 19.3**	**0.0**
EHY	baz=211			*e*S	**Sg**	**04 41 39.4**	**-0.1**
SMLT	**Sun Moon Lake** baz=232	**1.56**	**236**	*e*P	**Pb**	**04 41 19.4**	**-0.3**
SMLT	baz=232			*e*S	**Sb**	**04 41 39.7**	**-0.1**
SSLB	**Suanglung** baz=228	**1.57**	**232**	*e*P	**Pb**	**04 41 19.6**	**-0.3**
SSLB	baz=228			*e*S	**Sg**	**04 41 40.4**	**-0.2**
TYC	**Yuchr** baz=234	**1.58**	**238**	*e*P	**Pn**	**04 41 19.4**	**+0.3**
TYC	baz=234			*e*S	**Sn**	**04 41 39.9**	**-0.2**
JKRS	**Kuro-shima**	**1.63**	**108**	P	**Pn**	**04 41 19.9**	**+0.1**
YULB	**Yu-li** baz=210	**1.65**	**215**	*e*P	**Pb**	**04 41 21.1**	**0.0**
YULB	baz=210			*e*S	**Sg**	**04 41 42.6**	**-0.4**
JIJ	**Ishigaki jima**	**1.71**	**103**	P	**Pn**	**04 41 20.8**	**-0.1**
ALS	**Alishan** baz=224	**1.85**	**228**	*e*P	**Pn**	**04 41 23.7**	**+0.6**
ALS	baz=224			*e*S	**Sn**	**04 41 47.3**	**-0.1**
CHN4	**Tsaushan** baz=225	**2.10**	**229**	*e*P	**Pn**	**04 41 27.3**	**+1.0**
CHN4	baz=225			*e*S	**Sn**	**04 41 53.6**	**+0.5**
TPUB	**Ta-pu** baz=224	**2.12**	**227**	*e*P	**Pn**	**04 41 27.4**	**+0.9**
TPUB	baz=224			*e*S	**Sn**	**04 41 53.9**	**+0.5**
WTP	**Ta-pu** baz=223	**2.16**	**226**	*e*P	**Pn**	**04 41 28.0**	**+0.8**
WTP	baz=223			*e*S	**Sn**	**04 41 55.0**	**+0.4**

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*TAP **05** 04:58:57.0, 24°.12N×122°.86E, h18^{km}±1^{km}, ML2.8, D*
*JMA **05** 04:58:57.4±0.1, 24°.12N×122°.85E, h20^{km}±4^{km}, M2.7*
ISC 05 04:58:56.8±1.0**, 24°.08N**±0°.03×**122°.86E**±0°.02**, h16**^{km}±8^{km},
n58, σ0^{s}.75/107**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima** baz=16	**0.40**	**20**	*e*P	**Pg**	**04 59 04.8**	**-0.2**
YOJ	baz=16			S	**Sg**	**04 59 10.4**	**-0.2**
YOJ	**Yonaguni jima**	**0.40**	**20**	P	**Pg**	**04 59 05.1**	**+0.1**
YOJ				S	**Sg**	**04 59 10.4**	**-0.2**
IRIF	**Iriomote-Funau**	**0.83**	**72**	P	**Pb**	**04 59 12.8**	**-0.1**
IRIF				S	**Sg**	**04 59 24.8**	**+0.7**
HATJ	**Hateruma jima**	**0.87**	**91**	P	**Pb**	**04 59 13.7**	**+0.3**
HATJ				*e*S	**Sb**	**04 59 25.1**	**+0.3**
EWUT	**Wuta** baz=288	**1.05**	**290**	*e*P	**Pb**	**04 59 15.4**	**-1.1**
EWUT	baz=288			S	**Sg**	**04 59 31.5**	**+0.6**
TWC	**Suao** baz=297	**1.06**	**300**	*i* P	**Pb**	**04 59 16.5**	**-0.3**
TWC	baz=297			*i* S	**Sb**	**04 59 29.9**	**-0.5**
JKRS	**Kuro-shima**	**1.06**	**81**	P	**Pb**	**04 59 16.9**	**+0.1**
JKRS				*e*S	**Sg**	**04 59 31.9**	**+0.6**
ENA	**Nanau** baz=286	**1.08**	**289**	P	**Pb**	**04 59 16.7**	**-0.3**
ENA	baz=286			S	**Sb**	**04 59 30.8**	**0.0**
TWD	**Chiawan** baz=268	**1.15**	**270**	P	**Pn**	**04 59 17.7**	**-0.5**
TWD	baz=268			S	**Sn**	**04 59 34.1**	**+0.5**
NACB	**Ninganchiao** baz=255	**1.16**	**275**	P	**Pn**	**04 59 17.9**	**-0.4**
NACB	baz=255			S	**Sg**	**04 59 35.3**	**+1.0**
NDS	**Dongshan** baz=295	**1.18**	**298**	P	**Pb**	**04 59 19.0**	**+0.2**
NDS	baz=295			S	**Sn**	**04 59 33.6**	**-0.7**
JIJ	**Ishigaki jima**	**1.21**	**76**	P	**Pn**	**04 59 18.7**	**-0.3**
JIJ				S	**Sb**	**04 59 34.6**	**0.0**
NTC	**Toucheng** baz=324	**1.21**	**310**	*e*P	**Pb**	**04 59 19.6**	**+0.3**
NTC	baz=324			*e*S	**Sn**	**04 59 34.8**	**-0.3**
TWB1	**Santiao Chiao** baz=333	**1.22**	**320**	S	**Sg**	**04 59 35.1**	**-1.0**
TWE	**Neicheng** baz=312	**1.26**	**301**	*i* P	**Pb**	**04 59 20.6**	**+0.4**
TWE	baz=312			*i* S	**Sn**	**04 59 36.5**	**+0.2**
ETLH	**Xiulin Townshi** baz=274	**1.26**	**276**	P	**Pn**	**04 59 19.9**	**+0.1**
ETLH	baz=274			S	**Sg**	**04 59 39.1**	**+1.3**
TIPB	**Shuangxi** baz=327	**1.29**	**314**	*e*P	**Pn**	**04 59 18.9**	**-1.3**
TIPB	baz=327			S	**Sn**	**04 59 37.0**	**-0.2**
ENTT	**Nioudou** baz=293	**1.30**	**296**	P	**Pb**	**04 59 21.3**	**+0.4**
ENTT	baz=293			S	**Sb**	**04 59 37.9**	**+0.5**
NDT	**Datong Townshi** baz=291	**1.33**	**293**	P	**Pb**	**04 59 21.9**	**+0.5**
NDT	baz=291			S	**Sb**	**04 59 38.1**	**-0.1**
NNSB	**Datong** baz=283	**1.39**	**285**	P	**Pb**	**04 59 22.5**	**+0.1**
NNSB	baz=283			*e*S	**Sn**	**04 59 39.5**	**-0.2**
NWF	**Wu-fen Shan** baz=313	**1.39**	**315**	P	**Pb**	**04 59 21.9**	**-0.5**
NWF	baz=313			S	**Sg**	**04 59 40.6**	**-1.2**
NNS	**Nan Shan** baz=283	**1.40**	**285**	*i* P	**Pb**	**04 59 22.8**	**+0.2**
NNS	baz=283			*i* S	**Sb**	**04 59 40.9**	**+0.6**
NWLT	**Wulai** baz=313	**1.42**	**300**	*e*P	**Pb**	**04 59 23.1**	**+0.3**
NWLT	baz=313			*e*S	**Sb**	**04 59 40.1**	**-0.5**
JISG	**Ishigakijimahi**	**1.42**	**69**	S	**Sb**	**04 59 40.3**	**-0.3**
HGSD	**Ruisui** baz=245	**1.44**	**246**	*e*P	**Pn**	**04 59 21.2**	**-1.0**
HGSD	baz=245			*e*S	**Sn**	**04 59 40.0**	**-0.7**
WHF	**Hehuan Shan** baz=271	**1.46**	**273**	*i* P	**Pn**	**04 59 22.7**	**-0.1**
WHF	baz=271			*i* S	**Sb**	**04 59 43.0**	**+0.8**
TWA	**Mucha** baz=320	**1.47**	**308**	P	**Pg**	**04 59 25.1**	**0.0**
TWA	baz=320			S	**Sb**	**04 59 42.4**	**+0.3**
YHNB	**Yeheng** baz=292	**1.47**	**294**	P	**Pb**	**04 59 24.3**	**+0.5**
YHNB	baz=292			S	**Sg**	**04 59 44.0**	**-0.4**
FUSS	**Fushou** baz=275	**1.48**	**277**	P	**Pb**	**04 59 24.0**	**-0.1**
FUSS	baz=275			*e*S	**Sb**	**04 59 43.9**	**+1.1**
NSK	**Sanguang** baz=275	**1.49**	**294**	P	**Pb**	**04 59 24.2**	**0.0**
NSK	baz=275			S	**Sb**	**04 59 43.1**	**+0.3**
EHY	**Hungye** baz=247	**1.52**	**248**	P	**Pn**	**04 59 22.8**	**-0.5**
EHY	baz=247			S	**Sn**	**04 59 42.8**	**+0.1**
CHGB	**Renai** baz=268	**1.54**	**270**	P	**Pn**	**04 59 24.0**	**+0.3**
CHGB	baz=268			S	**Sb**	**04 59 44.5**	**+0.1**
TWT	**Tachien** baz=276	**1.55**	**277**	*e*P	**Pb**	**04 59 25.4**	**+0.2**
TDCB	**Techi** baz=276	**1.56**	**277**	P	**Pb**	**04 59 25.2**	**-0.2**
YM01	**YM01** baz=323	**1.58**	**312**	P	**Pn**	**04 59 24.4**	**+0.2**
YM01	baz=323			*e*S	**Sn**	**04 59 44.0**	**-0.3**
YULB	**Yu-li** baz=244	**1.59**	**245**	*e*P	**Pn**	**04 59 23.0**	**-1.3**
YULB	baz=244			*e*S	**Sn**	**04 59 43.9**	**-0.5**

EYUL	Yuli	1.59	243	*e*S	Sn	04 59 44.3	-0.1
	baz=242						
VWDT	VWDT	1.60	259	P	Pn	04 59 24.5	0.0
	baz=257						
VWDT				S	Sn	04 59 45.1	+0.3
	baz=257						
ANP	Anpu	1.64	312	*e*P	Pn	04 59 25.2	+0.2
	baz=310						
ANP				*e*S	Sb	04 59 46.6	-0.6
	baz=310						
FULB	Fuli	1.68	239	P	Pn	04 59 24.6	-0.9
	baz=226						
FULB				S	Sn	04 59 45.4	-1.4
	baz=226						
WHP	Taichung City	1.76	277	*e*P	Pb	04 59 28.5	-0.2
	baz=262						
WHP				*e*S	Sb	04 59 50.8	+0.3
	baz=262						
SSLB	Suanglung	1.77	261	P	Pn	04 59 27.2	+0.5
	baz=259						
SSLB				*e*S	Sn	04 59 49.0	+0.1
	baz=259						
LIOB	Emei	1.77	289	*e*P	Pb	04 59 29.0	+0.1
	baz=287						
LIOB				*e*S	Sb	04 59 50.7	-0.2
	baz=287						
WCS	Beigang Elemen	1.78	270	*e*P	Pb	04 59 28.1	-0.9
	baz=269						
NSTT	Nanjuang	1.78	288	P	Pn	04 59 27.8	+0.9
	baz=287						
NSTT				*e*S	Sb	04 59 50.4	-0.7
	baz=287						
SMLT	Sun Moon Lake	1.80	264	*e*P	Pn	04 59 28.1	+0.8
	baz=263						
SMLT				*e*S	Sn	04 59 49.6	-0.2
	baz=263						
EDH	Donghe	1.80	233	*e*P	Pn	04 59 26.0	-1.2
	baz=221						
EDH				S	Sn	04 59 47.6	-2.1
	baz=221						
TYC	Yuchr	1.84	265	P	Pn	04 59 29.0	+1.3
	baz=263						
TYC				*e*S	Sn	04 59 50.5	-0.1
	baz=263						
ALS	Alishan	1.96	254	P	Pn	04 59 30.3	+0.7
	baz=252						
ALS				S	Sn	04 59 55.2	+1.1
	baz=252						
WDJ	Dajia District	2.04	278	*e*S	Sn	04 59 56.2	+0.6
	baz=276						
CHN5	Tsauling	2.05	257	*e*P	Pn	04 59 32.3	+1.6
	baz=245						
CHN5				*e*S	Sb	04 59 58.2	-0.9
	baz=245						
WDLH	Douliu	2.16	260	*e*P	Pn	04 59 33.2	+1.1
	baz=259						
WDLH				*e*S	Sn	04 59 59.7	+1.2
	baz=259						
TPUB	Ta-pu	2.19	250	*e*P	Pn	04 59 34.2	+1.8
	baz=239						
TPUB				*e*S	Sb	05 00 02.4	-0.4
	baz=239						
CHN4	Tsaushan	2.20	251	*e*P	Pn	04 59 33.4	+0.7
	baz=250						
CHN4				*e*S	Sb	05 00 01.8	-1.4
	baz=250						
WTP	Ta-pu	2.22	248	P	Pb	04 59 35.6	-0.9
	baz=239						
WTP				*e*S	Sb	05 00 03.9	+0.1
	baz=239						
WTK	Tuku	2.29	261	*e*P	Pn	04 59 35.1	+1.2
	baz=259						
CHN1	Nanshi	2.32	248	*e*P	Pn	04 59 35.8	+1.5
	baz=247						
TWK	Hsinying	2.32	250	*e*P	Pn	04 59 35.3	+1.0
	baz=249						
TWK				*e*S	Sn	05 00 04.7	+2.1
	baz=249						

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*IDC **05** 05:11:31.2±1.4, 56°.28S×28°.15W, h0^{km}, mb4.1/4, mb1 4.1/4, mb1mx3.9/18, mbtmp4.1/4, Error ellipse: s-maj=59.7km s-min=30.7km az=3.0*

*NEIC **05** 05:11:47.2±1.3, 55°.9S±0°.1×28°.2W±0°.2, h112^{km}±7^{km}, mb4.4/12, Error ellipse: s-maj=17.5km s-min=15.1km az=183.0*

ISC 05 05:11:47.7±0.6**, 55°.8S**±0°.1×**28°.2W**±0°.1**, h121**^{km}**, n31, σ0^{s}.56**/28**, mb4.2**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.03	285	Pn	Pn	05 13 00.0	-0.8
VNA1	Neumayer--Stat	17.21	157	P	P	05 15 39.8	-0.1
VNA3	Neumayer Olymp	17.39	160	P	P	05 15 41.3	-0.6
VNA2	Neumayer--Watz	17.61	157	P	P	05 15 43.5	-0.8
	baz=315,slow=13						
SNAA	Sanae	19.17	156	P	P	05 16 00.8	-0.6
SNAA	Sanae	19.17	156	P	P	05 16 00.9	-0.6
SNAA				IAmb	IAmb	05 16 05.3	
	comp=Z,26nm,1.0s						
MG04	Isla Riesco	25.16	258	P	P	05 17 02.5	+1.1
TRQA	Tornquist	28.73	294	P	P	05 17 33.2	-0.2
TRQA				IAmb	IAmb	05 17 35.6	
	comp=Z,8.6nm,1.4s						
QSPA	South Pole Qui	34.42	180	P	P	05 18 23.5	+0.3
QSPA				IAmb	IAmb	05 18 24.0	
	comp=Z,7.5nm,0.6s						
LVC	Limon Verde	44.71	301	P	P	05 19 49.2	+0.2
LVC				IAmb	IAmb	05 19 55.4	
	comp=Z,7.5nm,1.3s						
PB07	IPOC Station P	45.93	301	P	P	05 19 58.9	+0.4
PB01	IPOC Station P	46.32	301	P	P	05 20 01.4	0.0
PB01				IAmb	IAmb	05 20 02.9	
	comp=Z,13nm,1.4s						
BOSA	Boshof	46.45	77	P	P	05 20 02.3	-0.2
	comp=Z,0.9nm,0.5s,baz=239,slow=5.9,SNR=1.9						
VNDA	Vanda	46.77	183	P	P	05 20 04.7	+0.6
VNDA				IAmb	IAmb	05 20 05.5	
	comp=Z,5.5nm,0.8s						
H10N1	ASCENSION HYDR	49.07	18	T	T	06 13 53.5	
	baz=199						
H10N3	ASCENSION HYDR	49.07	18	T	T	06 13 45.8	
	baz=199,slow=74						
H10N2	ASCENSION HYDR	49.09	18	T	T	06 13 57.0	
	baz=199,slow=74						
LPAZ	La Paz	49.80	306	P	P	05 20 29.6	+0.8
	comp=Z,0.9nm,0.4s,baz=91,slow=7.3,SNR=15						
LPAZ	La Paz	49.80	306	P	P	05 20 29.2	+0.5
DBIC	Dimbokro	65.20	26	P	P	05 22 16.2	+0.3
	comp=Z,1.0nm,0.4s,baz=174,slow=9.2,SNR=1.8						
TORD	Torodi Ar. Bea	73.14	30	P	P	05 23 05.4	+0.6
	comp=Z,1.2nm,0.5s,baz=201,slow=6.1,SNR=30						
FINES	FINESS Array B	124.45	28	PKP	PKPdf	05 30 30.2	-0.8
	comp=Z,5.3nm,1.0s,baz=251,slow=4.3,SNR=3.7						
ARCES	ARCESS Array B	130.94	22	PKP	PKPdf	05 30 42.5	-0.6
	comp=Z,5.5nm,1.0s,baz=203,slow=3.4,SNR=2.5						
YKA	Yellowknife Ar	135.64	318	PKP	PKPdf	05 30 51.6	-0.5
	comp=Z,0.4nm,0.4s,baz=130,slow=2.4,SNR=9.0						
INK	Inuvik	145.28	321	PKPbc	PKPdf	05 31 09.0	-0.3
	comp=Z,0.8nm,0.4s,baz=76,slow=1.5,SNR=12						
INK	Inuvik	145.28	321		PKPbc	05 31 09.6	+0.2
EPYK	Eagle Plains	145.88	317	PKPdf	PKPbc	05 31 11.1	-0.3
DAWY	Dawson	146.23	312	PKPdf	PKPdf	05 31 11.8	+0.6
BCAR	Beaver Creek A	146.93	310	PKPdf	PKPbc	05 31 14.3	-0.3
ILAR	Eielson Array	149.56	312	PKPbc	PKPbc	05 31 20.9	-0.4
	comp=Z,0.4nm,0.5s,baz=132,slow=2.9,SNR=13						
SONM	Songino Array	151.27	87	PKPbc	PKPbc	05 31 25.8	-0.3
	comp=Z,0.6nm,0.5s,baz=233,slow=3.1,SNR=7.0						

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*MOS **05** 05:42:05.5±1.4, 48°.03N×154°.00E, h72^{km}, mb4.5/1, Error ellipse: s-maj=19.2km s-min=9.6km az=56.9*

*SKHL **05** 05:42:06.1±0.7, 48°.00N×154°.20E, h76^{km}±2^{km}, mb4.5/5*

*IDC **05** 05:42:08.8±2.7, 48°.09N×153°.86E, h82^{km}±25^{km}, mb3.6/13, mb1 3.8/16, mb1mx3.6/54, mbtmp3.9/16, MS3.1/2, Ms1 3.1/2, ms1mx2.6/39, Error ellipse: s-maj=24.4km s-min=12.9km az=144.0*

ISC 05 05:42:06.4±0.7**, 48°.03N**±0°.10×**154°.08E**±0°.10**, h64**^{km}**, n43, σ1^{s}.35**/40**, mb3.9**/13**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.97	26	*e*PN	Pn	05 42 50.2	-0.8
SKR				*e*S	Sn	05 43 23.9	-1.6
SKR				pmax	pmax		
	comp=Z,313nm,0.7s						
SKR				smax	smax		
	comp=E,1μm,0.6s						
SKR				smax	smax		
	comp=N,1μm,0.5s						
SKR				MLR	MLR		
	comp=Z,6μm,16.0s						
SKR	Severo-Kuril's	2.97	26	*e*P	Pn	05 42 50.2	-0.8
SKR				AMB	AMB	05 42 54.0	
	comp=Z,50nm,0.4s						
SKR				*e*S	Sn	05 43 23.9	-1.6
SKR				A	A	05 43 31.3	
	comp=Z,200nm,0.3s						
SKR				A	A	05 43 31.3	
	comp=Z,150nm,0.3s						
SKR				AMS	AMS	05 44 40.0	
	comp=Z,6μm,16.0s						
PAU	Pauzhetka	3.87	26	*e*P	Pn	05 43 04.1	+0.8
PAU				AMB	AMB	05 43 05.4	
	comp=Z,40nm,0.3s						
PAU				*e*S	Sn	05 43 47.0	-0.5
PAU				A	A	05 43 51.1	
	comp=Z,340nm,0.6s						
PAU				A	A	05 43 51.1	
	comp=Z,230nm,0.6s						
KUR	Kuril'sk	5.11	239	*e*PN	Pn	05 43 21.9	+1.5
KUR				*e*S	Sn	05 44 18.8	+0.7
KUR				pmax	pmax		
	comp=Z,81nm,0.4s						
KUR				pmax	pmax		
	comp=E,17nm,0.1s						
KUR				pmax	pmax		
	comp=N,22nm,0.3s						
KUR				smax	smax		
	comp=E,44nm,0.4s						
KUR				smax	smax		
	comp=N,81nm,0.7s						
KUR	Kuril'sk	5.11	239	*e*P	Pn	05 43 21.9	+1.5
KUR				AMB	AMB	05 43 22.8	
	comp=N,80nm,0.7s						
KUR				*e*S	Sn	05 44 18.7	+0.7
KUR				A	A	05 44 31.9	
	comp=N,140nm,0.5s						
KUR				A	A	05 44 31.9	
	comp=N,80nm,0.5s						
PETK	Petropavlovsk-	5.58	23	P	Pn	05 43 27.9	+1.1
	comp=N,2.2nm,0.3s,baz=173,slow=11,SNR=42						
PETK				S	Sn	05 44 38.7	+9.3
	comp=N,0.5nm,0.3s,baz=259,slow=22,SNR=2.5						
PETK				LR	LR	05 45 34.1	
	comp=N,173nm,18.1s,baz=160,slow=37						
PET	Petropavlovsk	5.79	29	*e*PN	Pn	05 43 32.2	+2.7
PET				*e*S	Sn	05 44 34.1	-0.3
PET				smax	smax		
	comp=E,102nm,0.6s						
PET				MLR	MLR		
	comp=Z,200nm,20.0s						
PET	Petropavlovsk	5.79	29	*e*P	Pn	05 43 30.6	+1.1
PET				AMB	AMB	05 43 33.5	
	comp=Z,40nm,0.7s						
PET				*e*S	Sn	05 44 33.5	-0.9
PET				A	A	05 44 40.7	
	comp=Z,100nm,0.5s						
PET				AMS	AMS	05 45 34.2	
	comp=Z,200nm,20.0s						
NMR	Nemuro--Hokkai	7.48	235	*e*PN	Pn	05 43 50.0	-2.7
NMR	Nemuro--Hokkai	7.48	235	*e*S	Sn	05 45 14.2	-1.7
YSS	Yuzh-Sakhalins	7.75	266	*e*PN	Pn	05 43 58.3	+1.9
YSS				pmax	pmax		
	comp=Z,40nm,0.5s						
YSS	Yuzh-Sakhalins	7.75	266	*e*P	Pn	05 43 58.4	+2.0
YSS				AMB	AMB	05 43 59.2	
	comp=Z,30nm,0.6s						
JKA	Kamikawa-asahi	8.89	248	*e*P	Pn	05 44 14.0	+2.0
ASAJ	Asahikawa	8.89	248	P	Pn	05 44 14.0	+2.0
	comp=Z,1.1nm,0.3s,baz=88,slow=20,SNR=8.5						
KLR	Kul'dur	14.81	283	P	P	05 45 35.6	-0.8
	comp=Z,0.1nm,0.3s,baz=76,slow=12,SNR=5.3						
USRK	Ussuriysk Ar.	15.78	264	P	Pn	05 45 44.9	+0.4
	baz=60,slow=11,SNR=2.1						
KSRS	Korea Array	21.82	251	P	P	05 46 53.0	-0.2
	comp=Z,2.9nm,0.8s,baz=61,slow=9.6,SNR=6.8						
KSRS	Korea Array	21.82	251	P	P	05 46 53.0	-0.2
KSRS	Korea Array	21.82	251	*e*P	P	05 46 53.0	-0.2
H11N2	WAKE ISLAND Hy	30.08	155	T	T	06 20 09.3	
	baz=342,slow=76,SNR=82						
H11N1	WAKE ISLAND Hy	30.10	155	T	T	06 20 14.6	
	baz=342,slow=76,SNR=145						
H11N3	WAKE ISLAND Hy	30.10	155	T	T	06 20 21.3	
	baz=342,slow=76,SNR=76						
H11S1	WAKE ISLAND Hy	31.19	156	T	T	06 21 46.7	
	baz=343,slow=76,SNR=480						
H11S3	WAKE ISLAND Hy	31.20	156	T	T	06 21 48.9	
	baz=343,slow=76,SNR=391						
H11S2	WAKE ISLAND Hy	31.21	156	T	T	06 21 48.1	
	baz=343,slow=76,SNR=474						
ILAR	Eielson Array	35.14	40	P	P	05 48 53.9	+0.5
	comp=Z,0.9nm,1.0s,baz=261,slow=5.6,SNR=7.8						
INK	Inuvik	40.22	33	P	P	05 49 37.8	+1.7
	comp=Z,1.9nm,0.6s,baz=294,slow=6.3,SNR=16						
MKAR	Makanchi Array	46.95	297	P	P	05 50 30.4	-0.1
	comp=Z,1.0nm,0.7s,baz=72,slow=7.5,SNR=5.9						
CMAR	Chiang Mai Arr	53.31	256	P	P	05 51 19.2	+0.3
	comp=Z,1.0nm,0.5s,baz=32,slow=7.1,SNR=4.6						
NVAR	Mina Array Bea	61.27	64	P	P	05 52 16.3	+1.2
	comp=Z,0.7nm,0.6s,baz=294,slow=6.8,SNR=5.7						
FINES	FINESS Array B	63.16	335	P	P	05 52 26.4	-0.6
	comp=Z,0.9nm,0.6s,baz=35,slow=7.0,SNR=4.4						
PDAR	Pinedale Array	63.47	55	P	P	05 52 31.1	+1.4
	comp=Z,0.8nm,0.8s,baz=280,slow=0.9,SNR=6.8						
NOA	NORSAR Array B	67.23	341	LR	LR	06 23 44.2	
	comp=Z,13nm,20.7s,baz=270,slow=37						
WRA	Warramunga Arr	69.94	200	P	P	05 53 10.2	-0.5
	comp=Z,0.7nm,0.9s,baz=16,slow=6.5,SNR=4.2						
KBZ	Khabaz	70.44	314	P	P	05 53 12.0	-1.6
	comp=Z,0.9nm,0.3s,baz=299,slow=10,SNR=2.1						
KBZ	Khabaz	70.44	314	P	P	05 53 12.0	-1.6
KBZ	Khabaz	70.44	314	*e*P	P	05 53 12.0	-1.6
ASAR	Alice Springs	73.63	199	P	P	05 53 33.1	+0.3
	comp=Z,1.0nm,1.0s,baz=13,slow=5.8,SNR=7.1						
TXAR	Lajitas Array	76.30	61	P	P	05 53 49.7	+1.3
	comp=Z,1.0nm,0.6s,baz=302,slow=4.6,SNR=16						
GERES	GERESS Array B	77.59	334	P	P	05 53 54.6	-0.7
	comp=Z,0.5nm,0.6s,baz=40,slow=7.7,SNR=4.1						
H03N2	Juan Fernandez	138.09	90	T	T	08 34 47.0	
	baz=310,slow=77,SNR=18						
H03N1	Juan Fernandez	138.11	90	T	T	08 34 53.6	
	baz=310,slow=77,SNR=19						
H03N3	Juan Fernandez	138.11	90	T	T	08 34 50.7	
	baz=310,slow=77,SNR=19						

IDC 05 05:51:05.1±3.6**, 5°.97S**×**152°.29E, h0**^{km}**, mb3.4**/2**, mb1 3.8**/3**, mb1mx3.1**/41**, mbtmp3.7**/3**, ML2.4**/1**, Error ellipse: s-maj=154.6km s-min=48.7km az=128.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.12	236	Pn	Pn	05 52 37.9	+1.0
	5.6nm,0.3s,baz=88,slow=4.8,SNR=4.9						
PMG				Sn	Sn	05 53 41.0	-6.7
	5.0nm,0.3s,baz=167,slow=22,SNR=6.2						
WRA	Warramunga Arr	22.30	230	P	P	05 56 03.4	-0.9
	1.3nm,0.6s,baz=54,slow=9.7,SNR=16						
ASAR	Alice Springs	24.95	223	P	P	05 56 30.7	+0.3
	0.2nm,0.3s,baz=59,slow=9.1,SNR=10						
TORD	Torodi Ar. Bea	150.16	286	PKPbc	PKPbc	06 10 58.9	-0.2
	0.2nm,0.4s,baz=79,slow=1.8,SNR=1.9						

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*FUNV **05** 05:51:12.2, 8°.49N×71°.44W, h2^{km}, MW4.1*

*IDC **05** 05:51:17.9±2.6, 8°.65N×71°.40W, h52^{km}±24^{km}, mb3.2/3, mb1 3.5/5, mb1mx3.2/44, mbtmp3.6/5, ML2.9/2, Error ellipse: s-maj=28.9km s-min=15.0km az=145.0*

ISC 05 05:51:12.0±1.2**, 8°.52N**±0°.03×**71°.35W**±0°.02**, h3**^{km}±9^{km}**, n35, σ1^{s}.66**/58**, mb3.5**/3**, 3C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIGV	El Vigia	0.32	357⇑	*e*P	Pg	05 51 18.8	+0.5
VIGV				*e*S	Sg	05 51 24.0	+1.5
SOCV	Socops	0.54	115	*e*P	Pg	05 51 23.4	+1.0
SOCV				*e*S	Sb	05 51 31.4	-0.9
SOCV	Socops	0.54	115⇑	*e*P	Pg	05 51 23.3	+1.0
SOCV				*e*S	Sb	05 51 32.2	-0.1
SDV	Santo Domingo	0.80	62	*e*P	Pb	05 51 28.7	+0.1
SDV				*e*S	Sb	05 51 40.1	+0.3
SDV				*i*		05 51 42.0	
	comp=Z,476nm,0.3s						
CAPV	Capacho	1.16	236⇓	*e*P	Pb	05 51 32.3	-2.5
CAPV				*e*S	Sg	05 51 47.5	-1.6
TORV	Torococo	1.51	47	*e*P	Pn	05 51 40.3	+0.1
TORV				*e*S	Sg	05 52 00.6	-0.1
PAMC	Pamplona, Colo	1.78	229	*e*P	Pn	05 51 44.3	+0.2
PAMC				*e*S	Sn	05 52 08.5	+1.1
PAMC				*i*		05 52 10.8	
	comp=Z,460nm,0.4s						
MCQV	Machiques	1.92	323⇑	*e*P	Pn	05 51 45.8	+0.1
MCQV				*e*S	Sn	05 52 08.9	-1.4
OCAC	Ocana	1.97	262	*e*P	Pn	05 51 46.1	-0.3
OCAC				*e*S	Sn	05 52 11.8	0.0
OCAC				*i*		05 52 13.6	
	comp=Z,6μm,0.4s						
TAMC	Tame, Arauca	2.11	192	*e*P	Pn	05 51 49.2	+1.0
TAMC				*e*S	Sn	05 52 17.4	+2.3
TAMC				*i*		05 52 21.4	
	comp=Z,504nm,0.5s						
LL1C	La Loma 1 Cana	2.41	295	*e*P	Pn	05 51 53.3	+1.0
LL1C				*e*S	Sn	05 52 24.2	+1.9
LL1C				*i*		05 52 40.5	
	comp=Z,997nm,0.4s						
DABV	Dabajuro	2.49	16	*e*P	Pn	05 51 55.0	+1.5
DABV				*e*S	Sb	05 52 26.8	-1.7
DABV	Dabajuro	2.49	16	*e*P	Pn	05 51 54.4	+0.9
DABV				*e*S	Sn	05 52 24.7	+0.3
SIQV	Siquisique	2.61	35	*e*P	Pn	05 51 56.1	+1.0
BARC	Barichara	2.64	224	*e*P	Pn	05 51 56.7	+1.0
BARC				*e*S	Sb	05 52 34.2	+1.2
BARC				*i*		05 52 39.4	
	comp=Z,212nm,0.5s						
SMLC	San Martn de	2.71	276	*e*P	Pn	05 51 55.5	-1.0
SMLC				*e*S	Sn	05 52 33.0	+3.3
BRRC	Barranca, Sant	2.73	239	*e*P	Pn	05 51 57.3	+0.6
BRRC				*e*S	Sb	05 52 35.5	+0.1
BRRC				*i*		05 52 41.3	
	comp=Z,87nm,0.4s						
ARGC	Ariguani, Magd	3.16	295	*e*P	Pn	05 52 02.1	-0.5
BAUV	El Baul	3.29	82	*e*P	Pn	05 52 05.7	+1.2
BAUV				*e*S	Sn	05 52 43.1	-1.2
MONV	Montecano	3.68	22	*e*P	Pn	05 52 10.1	+0.3
BENV	Beln	3.97	68	*e*P	Pn	05 52 14.6	+0.8
MOTC	Monteria, Cord	4.28	274	*e*P	Pn	05 52 18.4	+0.4
MOTC				*e*S	Sn	05 53 08.9	+0.4
MOTC				*i*		05 53 29.9	
	comp=Z,36nm,0.6s						
NORC	Norcasia	4.56	230	*e*P	Pn	05 52 24.0	+2.0
NORC				*e*S	Sn	05 53 16.9	+1.2
NORC				*i*		05 53 34.1	
	comp=Z,19nm,0.4s						
ROSC	El Rosal	4.70	219	P	Pn	05 52 26.7	+2.5
	comp=Z,4.7nm,0.3s,baz=330,slow=2.8,SNR=11						
ROSC				S	Sn	05 53 22.7	+3.3
	comp=Z,5.0nm,0.3s,baz=18,slow=20,SNR=2.2						
HELC	Santa Helena	4.75	241	*e*P	Pn	05 52 24.9	0.0
HELC				*e*S	Sn	05 53 23.8	+3.2
CACV	CAICARA DEL OR	4.85	101	*e*P	Pb	05 52 33.7	-4.0
MERV	Las Mercedes	5.04	81	*e*P	Pn	05 52 28.4	-0.2
BIRV	Birongo	5.37	68	*e*P	Pn	05 52 33.4	+0.3
GUVC	San Jose del G	6.07	192	*e*P	Pn	05 52 42.1	-0.6
GUVC				*e*S	Sn	05 53 48.7	-4.0
PCRV	Puerto La Cruz	6.83	75	P	Pn	05 52 55.8	+2.7
	comp=Z,0.7nm,0.3s,baz=181,slow=3.4,SNR=2.2						
PCRV				S	Sn	05 54 13.9	+2.5
	comp=Z,1.5nm,0.3s,baz=302,slow=18,SNR=2.6						
LPAZ	La Paz	24.85	173	P	P	05 56 38.0	+1.4
	comp=Z,0.9nm,0.8s,baz=346,slow=8.3,SNR=1.9						
SIV	San Ignacio	26.39	157	P	P	05 56 52.3	+2.4
	comp=Z,0.3nm,0.4s,baz=327,slow=17,SNR=1.8						
PDAR	Pinedale Array	47.79	322	P	P	05 59 50.6	-0.4
	comp=Z,0.2nm,0.5s,baz=114,slow=11,SNR=3.2						
ASAR	Alice Springs	151.52	235	PKPbc	PKPbc	06 11 06.5	-2.1
	comp=Z,0.4nm,0.6s,baz=132,slow=3.1,SNR=5.1						
WRA	Warramunga Arr	152.68	243	PKPbc	PKPbc	06 11 09.0	-2.2
	comp=Z,0.4nm,0.5s,baz=110,slow=2.6,SNR=8.9						

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*BGR **05** 05:56:18.6±0.0, 49°.29N×153°.50E, h33^{km}, mb5.1*

*BJI **05** 05:56:24.8±0.0, 48°.71N×153°.62E, h162^{km}, mB5.1/13, mb4.4/24*

*MOS **05** 05:56:25.8±0.9, 48°.66N×153°.41E, h155^{km}, mb4.5/23, Error ellipse: s-maj=8.4km s-min=3.9km az=72.3*

*IDC **05** 05:56:27.9±0.7, 48°.70N×153°.34E, h158^{km}±6^{km}, mb3.9/31, mb1 4.1/36, mb1mx4.0/55, mbtmp4.4/36, Error ellipse: s-maj=12.5km s-min=8.5km az=154.0*

*SKHL **05** 05:56:27.1±0.6, 48°.70N×153°.30E, h144^{km}±5^{km}, mb5.3/6, mbv5.6/3, msh5.4/3, msha6.0/3*

*KRSC **05** 05:56:27.7±2.1, 48°.31N×154°.99E, h175^{km}±28^{km}, ML4.7*

*NEIC **05** 05:56:28.5±0.9, 48°.77N±0°.09×153°.3E±0°.2, h159^{km}±4^{km}, mb4.7/80, Error ellipse: s-maj=17.7km s-min=7.9km az=130.0*

ISC 05 05:56:27.1±0.5**, 48°.73N**±0°.05×**153°.42E**±0°.05**, h149**^{km}±4^{km}**, h149**^{km}**:pP-P, n471, σ1^{s}.13**/493**, mb4.6**/133**, 31C-26D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.63	41	*e*PN	Pn	05 57 10.0	+0.4
SKR				*e*S	Sn	05 57 42.1	-0.4
SKR				pmax	pmax		
	comp=Z,2μm,2.2s						
SKR				pmax	pmax		
	comp=Z,860nm,0.8s						
SKR				smax	smax		
	comp=E,1μm,0.6s						
SKR				smax	smax		
	comp=N,2μm,0.7s						
SKR				MLR	MLR		
	comp=Z,8μm,18.0s						
SKR	Severo-Kuril's	2.63	41	*e*P	Pn	05 57 10.4	+0.8
SKR				*e*S	Sn	05 57 43.4	+0.9
SKR	Severo-Kuril's	2.63	41	*e*P	Pn	05 57 10.3	+0.7
SKR				AMB	AMB	05 57 11.0	
	comp=Z,2μm,2.2s						
SKR				AMB	AMB	05 57 12.0	
	comp=Z,860nm,0.8s						
SKR				*e*S	Sn	05 57 42.3	-0.2
SKR				A	A	05 57 48.0	
	comp=Z,2μm,0.7s						
SKR				A	A	05 57 48.0	
	comp=Z,1μm,0.7s						
SKR				A	A	05 57 50.0	
	comp=Z,2μm,4.0s						
SKR				A	A	05 57 50.0	
	comp=Z,2μm,4.0s						
PAU	Pauzhetka	3.51	37	PN	Pn	05 57 21.4	+0.7
PAU				S	Sn	05 58 02.5	+0.1
PAU	Pauzhetka	3.51	37	*e*P	Pn	05 57 21.4	+0.7
PAU				*e*S	Sn	05 58 02.5	+0.1
PAU	Pauzhetka	3.51	37	*e*P	Pn	05 57 21.4	+0.7
PAU				AMB	AMB	05 57 22.1	
	comp=Z,180nm,0.3s						
PAU				AMB	AMB	05 57 26.0	
	comp=Z,2μm,5.0s						
PAU				*e*S	Sn	05 58 02.6	+0.1
PAU				A	A	05 58 04.1	
	comp=Z,730nm,0.6s						
PAU				A	A	05 58 04.1	
	comp=Z,1μm,0.6s						
PAU				A	A	05 58 08.0	
	comp=Z,3μm,4.0s						
PAU				A	A	05 58 08.0	
	comp=Z,2μm,4.0s						
KDTR	Khodutka, Kamc	4.30	42	PN	Pn	05 57 30.2	-0.8
KDTR	Khodutka, Kamc	4.30	42	*e*P	Pn	05 57 30.2	-0.8
ASAK	Asacha	4.64	36	PN	Pn	05 57 37.1	+1.4
ASAK	Asacha	4.64	36	*e*P	Pn	05 57 37.1	+1.4
APC	Apacha	4.83	28	PN	Pn	05 57 38.8	+0.8
APC	Apacha	4.83	28	*e*P	Pn	05 57 38.8	+0.8
MTVR	Mutnovka	4.83	37	PN	Pn	05 57 39.0	+0.8
MTVR				S	Sn	05 58 32.9	-0.8
MTVR	Mutnovka	4.83	37	*e*P	Pn	05 57 39.0	+0.8
MTVR				*e*S	Sn	05 58 32.9	-0.8
RUS	Russkaya	4.93	39	PN	Pn	05 57 38.7	-0.7
RUS				S	Sn	05 58 31.7	-4.1
RUS	Russkaya	4.93	39	*e*P	Pn	05 57 38.7	-0.7
RUS				*e*S	Sn	05 58 31.7	-4.1
PEA0B	Petropavlovsk-	5.16	30	*i* PN	Pn	05 57 43.4	+1.0

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PEA0B Petropavlovsk-     5.16  30  Pn    Pn    05 57 44.2 +1.9
PETK  Petropavlovsk-     5.16  30  P     Pn    05 57 43.5 +1.2
      comp=Z,1.7nm,0.3s,baz=203,slow=9.3,SNR=38
PETK  Petropavlovsk-     5.16  30  Pn    Pn    05 57 44.1 +1.7
KUR   Kuril'sk           5.16 229 ePN    Pn    05 57 45.0 +2.5
KUR                               eS     Sn    05 58 43.4 +2.0
KUR                                pmax  pmax
      comp=Z,52nm,0.4s
KUR                                pmax  pmax
      comp=N,33nm,0.2s
KUR                                pmax  pmax
      comp=E,33nm,0.2s
KUR                                smax  smax
      comp=N,97nm,0.3s
KUR                                smax  smax
      comp=E,45nm,0.3s
KUR   Kuril'sk           5.16 229 eP     Pn    05 57 42.0 -0.5
KUR                                AMB   AMB   05 57 43.5
      comp=E,3µm,4.0s
KUR                               eS     Sn    05 58 40.1 -1.3
KUR                                A     A     05 58 47.0
      comp=E,7µm,4.0s
KUR                                A     A     05 58 47.0
      comp=E,4µm,4.0s
PET   Petropavlovsk      5.43  36 ePN    Pn    05 57 45.7 -0.3
PET                               eS     Sn    05 58 47.4 -0.3
PET                                pmax  pmax
      comp=Z,43nm,0.9s
PET                                smax  smax
      comp=E,105nm,0.8s
PET                                smax  smax
      comp=N,124nm,0.9s
PET   Petropavlovsk      5.43  36 eP     Pn    05 57 46.2 +0.2
PET                               eS     Sn    05 58 45.4 -2.3
PET   Petropavlovsk      5.43  36 eP     Pn    05 57 47.3 +1.3
PET                                AMB   AMB   05 57 48.7
      comp=N,40nm,0.5s
PET                               eS     Sn    05 58 47.3 -0.4
PET                                A     A     05 58 50.6
      comp=N,120nm,0.9s
PET                                A     A     05 58 50.6
      comp=N,100nm,0.9s
PET   Petropavlovsk      5.43  36  Pn    Pn    05 57 46.7 +0.7
DALK  Dalny              5.47  36  PN    Pn    05 57 46.6  0.0
DALK                               S     Sn    05 58 46.9 -1.9
DALK  Dalny              5.47  36 eP     Pn    05 57 46.6  0.0
DALK                              eS     Sn    05 58 46.9 -1.9
KOK   Koryaka            5.63  34  PN    Pn    05 57 51.3 +2.5
KOK   Koryaka            5.63  34 eP     Pn    05 57 51.3 +2.5
KOK   Koryaka            5.63  34 eP     Pn    05 57 51.3 +2.5
UGLR  Uglovaya           5.64  35  PN    Pn    05 57 48.8 -0.1
UGLR  Uglovaya           5.64  35 eP     Pn    05 57 48.8 -0.1
AVH   Avacha             5.65  34  PN    Pn    05 57 51.5 +2.5
AVH   Avacha             5.65  34 eP     Pn    05 57 51.5 +2.5
SMAR  Somma              5.67  35  PN    Pn    05 57 51.4 +2.0
SMAR  Somma              5.67  35 eP     Pn    05 57 51.4 +2.0
KRER  Koryakskii         5.68  34  PN    Pn    05 57 51.9 +2.3
KRER  Koryakskii         5.68  34 eP     Pn    05 57 51.9 +2.3
SDLR  Sedlovina          5.71  35  PN    Pn    05 57 50.1 +0.2
SDLR  Sedlovina          5.71  35 eP     Pn    05 57 50.1 +0.2
GNL   Ganaly             5.73  28  PN    Pn    05 57 51.3 +1.2
GNL   Ganaly             5.73  28 eP     Pn    05 57 51.3 +1.2
SPN   Mys Shipunski      6.05  41  PN    Pn    05 57 52.6 -1.6
SPN   Mys Shipunski      6.05  41 eP     Pn    05 57 52.6 -1.6
SPN                               eS     Sn    05 58 55.0 -7.5
YUK   Yuzh-Kuril'sk      7.02 231 eP     Pn    05 58 06.4 -0.9
YUK                                AMB   AMB   05 58 08.2
      comp=N,90nm,0.3s
YUK                               eS     Sn    05 59 21.9 -4.0
YUK                                A     A     05 59 28.0
      comp=N,210nm,0.4s
YUK                                A     A     05 59 28.0
      comp=N,230nm,0.4s
GRPR  Tuman              7.10 231 ePN    Pn    05 58 07.3 -1.0
GRPR                              eS     Sn    05 59 26.4 -1.3
GRPR                               pmax  pmax
      comp=E,50nm,0.1s
GRPR                               pmax  pmax
      comp=Z,79nm,0.1s
GRPR  Tuman              7.10 231 eP     Pn    05 58 07.3 -1.0
GRPR                               AMB   AMB   05 58 10.0
      comp=Z,80nm,0.3s
GRPR                              eS     Sn    05 59 24.4 -3.3
TYV   Tymovskoe          7.29 291 eP     Pn    05 58 09.7 -1.1
TYV                                AMB   AMB   05 58 14.8
      comp=Z,90nm,0.9s
TYV                               eS     Sn    05 59 29.5 -2.6
RUSJ  Misakicho          7.29 234 ePN    Pn    05 58 10.7 -0.2
RUSJ                               S     Sn    05 59 33.8 +1.3
YSS   Yuzh-Sakhalins     7.39 260 i PN   Pn    05 58 12.8 +0.6
YSS   Yuzh-Sakhalins     7.39 260 eP     Pn    05 58 12.2  0.0
YSS                                AMB   AMB   05 58 15.0
      comp=Z,6.0nm,0.4s
NMR   Nemuro--Hokkai     7.57 228 ePN    Pn    05 58 10.7 -3.9
NMR   Nemuro--Hokkai     7.57 228 eP     Pn    05 58 11.0 -3.6
TUMR  Tumrok             7.76  30  PN    Pn    05 58 18.8 +1.6
TUMD  Tumrok D           7.79  31 eP     Pn    05 58 18.8 +1.4
AKK   Akkeshi            8.27 229 eP     Pn    05 58 21.2 -2.7
JKA   Kamikawa-asahi     8.78 242  Pn    Pn    05 58 32.8 +2.0
ASAJ  Asahikawa          8.78 242  P     Pn    05 58 31.9 +1.2
      comp=Z,1.6nm,0.3s,baz=76,slow=14,SNR=14
ERM   Erimo              9.85 231 i PN   Pn    05 58 42.9 -2.1
ERM   Erimo              9.85 231  Pn    Pn    05 58 43.7 -1.3
KLR   Kul'dur           14.23 280  P     P     05 59 48.2 +3.6
      comp=Z,0.3nm,0.3s,baz=80,slow=9.4,SNR=8.7
KLR   Kul'dur           14.23 280 i P    P     05 59 44.8 +0.2
KLR   Kul'dur           14.23 280 erx    rx    05 59 44.2
SEY   Seymchan          14.25 358  P     Pn    05 59 42.6 +0.8
      comp=Z,0.5nm,0.3s,baz=161,slow=23,SNR=3.4
MJAR  Matsushiro Arr    16.50 228  P     Pn    06 00 08.5 -1.3
      comp=Z,0.1nm,0.3s,baz=29,slow=16,SNR=5.2
MJAR  Matsushiro Arr    16.50 228  P     Pn    06 00 08.5 -1.3
MJAR                               pmax  pmax
      comp=Z,28nm,1.9s
MAJO  Matsushiro        16.50 228 i P    Pn    06 00 08.3 -1.5
MAT   Matsushiro        16.50 228  P     Pn    06 00 08.1 -1.7
MDJ   Mudanjiang        16.84 265  P     P     06 00 12.6 -0.8
MDJ                                pmax  pmax
      comp=Z,9.0nm,0.9s
MDJ                                pmax  pmax
      comp=Z,680nm,4.6s
YAK   Yakutsk           18.80 324  P     P     06 00 35.0 +0.3
      comp=Z,0.3nm,0.3s,baz=219,slow=1.0,SNR=6.6
YAK   Yakutsk           18.80 324 eP     Pn    06 00 37.1 +0.2
YAK                               eS     S     06 04 02.1 +1.7
YAK                                pmax  pmax
      comp=Z,26nm,1.0s
YAK                                pmax  pmax
      comp=N,6.0nm,1.4s
YAK                                pmax  pmax
      comp=E,12nm,1.5s
YAK                                smax  smax
      comp=E,597nm,5.8s
YAK                                smax  smax
      comp=N,356nm,4.8s
YAK   Yakutsk           18.80 324 eP     P     06 00 35.3 +0.6
BILL  Bilibino          20.42  14deP     P     06 00 52.1  0.0
BILL                              e*PP   pP    06 01 21.1 +3.0
BILL                              eS     S     06 04 28.4 -3.9
BILL                               pmax  pmax
      comp=Z,12nm,0.8s
BILL  Bilibino          20.42  14 eP     P     06 00 52.1  0.0
BILL  Bilibino          20.42  14        P     06 00 52.6 +0.5
KSRS  Korea Array       21.66 248  P     P     06 01 04.9 -0.6
      comp=Z,1.0nm,0.5s,baz=48,slow=12,SNR=2.3
TIXI  Tiksi             25.64 342  P     P     06 01 41.4 -0.8
      comp=Z,2.6nm,0.5s,baz=122,slow=11,SNR=4.7
TIXI  Tiksi             25.64 342ceP     P     06 01 41.4 -0.8
TIXI                               pmax  pmax
      comp=Z,4.0nm,1.1s
ANM   Nome              27.00  39  P     P     06 01 55.8 +1.2
ANM                                pmax  pmax
      comp=Z,58nm,1.7s
ANM   Nome              27.00  39  P     P     06 01 55.8 +1.2
BJI   Beijing           27.76 266  P     P     06 02 03.7 +2.1
BJI                                pmax  pmax
      comp=Z,6.0nm,0.6s
HHC   Hu-ho-hao-te      30.41 271 eP     P     06 02 25.4 +0.2
HHC                                pmax  pmax
      comp=Z,11nm,0.8s
HHC                                pmax  pmax
      comp=Z,89nm,6.6s
ULN   Ulaanbaatar       30.49 286ceP     P     06 02 25.8 -0.1
ULN                                pmax  pmax
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      comp=Z,4.0nm,0.7s
NJ2   Nanjing           30.82 250 eP     P     06 02 28.6 -0.1
NJ2                                pmax  pmax
      comp=Z,9.0nm,0.6s
TTA   Tatalina          30.82  44  P     P     06 02 29.2 +0.6
TTA                                pmax  pmax
      comp=Z,7.0nm,1.0s
TTA   Tatalina          30.82  44  P     P     06 02 29.1 +0.6
TTA   Tatalina          30.82  44  P     P     06 02 29.1 +0.6
      baz=267,SNR=5.2
H11N2 WAKE ISLAND Hy    30.90 155  T     T     06 34 30.2
      baz=342,slow=76,SNR=48
H11N1 WAKE ISLAND Hy    30.92 155  T     T     06 34 37.4
      baz=342,slow=76,SNR=68
SONM  Songino Array     30.92 286  P     P     06 02 29.2 -0.4
      comp=Z,1.6nm,0.9s,baz=59,slow=9.1,SNR=7.9
SONM                               PcP   PcP   06 05 21.9 -0.4
      comp=Z,0.7nm,0.7s,baz=129,slow=1.3,SNR=4.0
SONM  Songino Array     30.92 286  P     P     06 02 29.2 -0.4
SONM                               pmax  pmax
      comp=Z,9.0nm,1.8s
H11N3 WAKE ISLAND Hy    30.92 155  T     T     06 34 43.5
      baz=342,slow=76,SNR=39
O18K  Koktuh Hills      31.18  50  P     P     06 02 32.4 +0.8
      baz=273
P18K  Big Mountain,     31.19  51  P     P     06 02 32.2 +0.4
      baz=273
L19K  White Mountain    31.33  45  P     P     06 02 33.5 +0.6
L19K                               IAmb  IAmb  06 02 44.6
      comp=Z,20nm,1.8s
N19K  Bonanza Creek     31.51  48  P     P     06 02 35.4 +0.8
N19K                               IAmb  IAmb  06 02 36.2
      comp=Z,9.4nm,0.9s
N19K  Bonanza Creek     31.51  48  P     P     06 02 35.6 +1.0
      baz=272
M19K  Big River Lodg    31.54  46  P     P     06 02 35.6 +0.8
      baz=270
K20K  Telida            31.73  43  P     P     06 02 37.2 +0.8
      baz=268
J20K  Nowinta River     31.74  41  P     P     06 02 37.2 +0.8
      baz=266
L20K  Farewell, AK      31.79  45  P     P     06 02 36.0 -1.0
      baz=270
H11S1 WAKE ISLAND Hy    32.01 156  T     T     06 35 58.6
      baz=343,slow=76,SNR=144
H11S3 WAKE ISLAND Hy    32.02 156  T     T     06 36 08.4
      baz=343,slow=76,SNR=94
H11S2 WAKE ISLAND Hy    32.03 156  T     T     06 36 09.2
      baz=343,slow=76,SNR=110
IMAR  Indian Mountai    32.06  38  P     P     06 02 39.6 +0.4
A21K  Barrow            32.15  28  P     P     06 02 40.5 +0.6
      baz=252
H21K  Melozitna Rive    32.42  39  P     P     06 02 43.1 +0.7
      baz=265
PPLA  Purkeypile        32.57  44  P     P     06 02 44.9 +1.0
PPLA  Purkeypile        32.57  44  P     P     06 02 45.0 +1.1
      baz=270
CAST  Castle Rocks      32.62  43  P     P     06 02 44.9 +0.7
CAST  Castle Rocks      32.62  43  P     P     06 02 45.2 +1.0
      baz=270,SNR=5.3
SPU   Mount Spurr       32.68  47  P     P     06 02 46.0 +1.2
I21K  Tanana            32.73  40  P     P     06 02 46.0 +1.0
I21K  Tanana            32.73  40  P     P     06 02 45.6 +0.6
      baz=267
KTH   Kantishna Hill    33.14  43  P     P     06 02 48.7 -0.1
KTH                                IAmb  IAmb  06 02 51.3
      comp=Z,24nm,1.1s
CNPM  China Poot        33.22  50  P     P     06 02 49.0 -0.3
CNPM                               IAmb  IAmb  06 02 50.7
      comp=Z,15nm,0.7s
MLY   Manley            33.25  40  P     P     06 02 50.4 +0.8
      baz=268,SNR=5.4
BRLK  Bradley Lake      33.37  49  P     P     06 02 50.3 -0.4
BRLK                               IAmb  IAmb  06 02 50.7
      comp=Z,8.7nm,0.7s
TRF   Thorofare Moun    33.43  43  P     P     06 02 51.9 +0.5
TRF                                IAmb  IAmb  06 02 52.5
      comp=Z,12nm,1.0s
TRF   Thorofare Moun    33.43  43  P     P     06 02 51.8 +0.5
      baz=271
COLD  Coldfoot          33.59  36  P     P     06 02 53.0 +0.5
COLD                               IAmb  IAmb  06 02 54.0
      comp=Z,7.5nm,0.7s
COLD  Coldfoot          33.59  36  P     P     06 02 53.1 +0.5
      baz=266,SNR=8.6
BWN   Browne            33.79  41  P     P     06 02 56.1 +1.9
RC01  Rabbit Creek A    33.81  47  P     P     06 02 55.0 +0.5
RC01                               IAmb  IAmb  06 02 55.2
      comp=Z,8.4nm,0.8s
RC01  Rabbit Creek A    33.81  47  P     P     06 02 54.8 +0.3
      baz=275
I23K  Minto, Yukon-K    33.83  40  P     P     06 02 55.6 +1.0
I23K                               IAmb  IAmb  06 02 56.3
      comp=Z,37nm,1.8s
I23K  Minto, Yukon-K    33.83  40  P     P     06 02 55.4 +0.8
      baz=269,SNR=5.1
O22K  Cooper Landing    33.87  48  P     P     06 02 54.8 -0.1
O22K  Cooper Landing    33.87  48  P     P     06 02 54.6 -0.3
      baz=276
NEA2  Nenana            33.95  41  P     P     06 02 56.1 +0.4
NEA2                               IAmb  IAmb  06 02 57.9
      comp=Z,13nm,0.5s
NEA2  Nenana            33.95  41  P     P     06 02 56.2 +0.5
      baz=270,SNR=14
TOLK  Toolik Lake Re    33.97  33  P     P     06 02 56.4 +0.5
TOLK                               IAmb  IAmb  06 02 57.5
      comp=Z,30nm,1.6s
TOLK  Toolik Lake Re    33.97  33  P     P     06 02 56.6 +0.8
      baz=264,SNR=5.2
MCK   McKinley          34.03  42  P     P     06 02 56.5 +0.1
MCK                                pmax  pmax
      comp=Z,19nm,1.2s
MCK   McKinley          34.03  42  P     P     06 02 56.5 +0.1
MCK                                IAmb  IAmb  06 02 58.1
      comp=Z,19nm,1.2s
MCK   McKinley          34.03  42  P     P     06 02 56.8 +0.4
      baz=272,SNR=7.0
SEW   Seward            34.05  49  P     P     06 02 56.0 -0.5
      baz=277
PMR   Palmer            34.06  46  P     P     06 02 56.0 -0.6
      baz=275
WAT1  Susitna Watana    34.24  44  P     P     06 02 57.8 -0.4
      baz=274
WRH   Wood River Hil    34.38  41  P     P     06 02 59.9 +0.6
WRH                                IAmb  IAmb  06 03 00.3
      comp=Z,14nm,1.3s
KNK   Knik Glacier      34.39  46  P     P     06 02 59.7 +0.1
      baz=276,SNR=7.7
SML   Sawmill           34.42  46  P     P     06 03 00.1 +0.3
SML   Sawmill           34.42  46  P     P     06 03 00.2 +0.4
      baz=275,SNR=23
H24K  Noodor Dome       34.46  38  P     P     06 03 01.2 +1.2
      baz=270
TCOL  CIGO, UAF Yank    34.47  40  P     P     06 03 01.1 +1.0
      baz=271,SNR=7.1
COLA  College           34.48  40 i P    P     06 03 00.4 +0.3
COLA                               pmax  pmax
      comp=Z,18nm,0.5s
PWL   Port Wells        34.51  47  P     P     06 03 00.1 -0.5
PWL                                IAmb  IAmb  06 03 00.8
      comp=Z,9.4nm,0.6s
PWL   Port Wells        34.51  47  P     P     06 03 00.2 -0.4
      baz=277
WAT6  Susitna Watana    34.63  44  P     P     06 03 01.9 +0.1
      baz=275
POKR  Poker Plat Res    34.65  40  P     P     06 03 02.7 +1.1
      baz=271,SNR=5.5
HDA   Harding Lake      34.88  41  P     P     06 03 03.6  0.0
HDA   Harding Lake      34.88  41  P     P     06 03 03.5 -0.2
      baz=273,SNR=22
IL31                    34.89  40  P     P     06 03 03.9 +0.2
ILAR  Eielson Array     34.89  40  P     P     06 03 03.6 -0.1
      comp=Z,3.7nm,0.5s,baz=260,slow=5.2,SNR=131
ILAR  Eielson Array     34.89  40  P     P     06 03 04.0 +0.3
ILAR  Eielson Array     34.89  40  P     P     06 03 04.0 +0.3
SCM   Sheep Creek Mo    34.89  45  P     P     06 03 03.9 +0.1
      baz=276
M24K  Tolsona, Glenn    35.40  45  P     P     06 03 09.0 +0.8
M24K  Tolsona, Glenn    35.40  45  P     P     06 03 09.2 +1.0
      baz=277
KLU   Klutina           35.59  46  P     P     06 03 10.2 +0.4
      baz=278,SNR=6.3
PAX   Paxson            35.64  43  P     P     06 03 11.2 +1.0
      baz=276
DIV   Divide            35.72  47  P     P     06 03 11.6 +0.7
DIV                                IAmb  IAmb  06 03 11.7
      comp=Z,13nm,0.6s
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BMAR  Burnt Mountain    35.78  36  P     P     06 03 12.8 +1.4
HARP  HAARP             35.84  44  P     P     06 03 12.9 +1.0
      baz=277,SNR=8.1
RIDG  Independent Ri    35.84  42  P     P     06 03 11.9 -0.1
      baz=275,SNR=5.0
DOT   Dot Lake          36.20  42  P     P     06 03 14.6 -0.3
DOT                                IAmb  IAmb  06 03 15.5
      comp=Z,8.5nm,0.8s
SCRK  Sand Creek        36.20  42  P     P     06 03 14.8 -0.3
SCRK                               IAmb  IAmb  06 03 15.5
      comp=Z,22nm,1.4s
SCRK  Sand Creek        36.20  42  P     P     06 03 14.8 -0.3
      baz=276,SNR=12
N25K  Chitina, Valde    36.21  46  P     P     06 03 16.2 +1.1
N25K                               IAmb  IAmb  06 03 16.6
      comp=Z,9.6nm,0.6s
N25K  Chitina, Valde    36.21  46  P     P     06 03 15.9 +0.8
      baz=278,SNR=7.3
BMRM  Bremner River     36.30  47  P     P     06 03 16.4 +0.6
      baz=279,SNR=7.1
J26L  Joseph Creek      36.34  41  P     P     06 03 15.8 -0.4
      baz=275,SNR=6.5
KAIM  Kayak Island      36.57  48  P     P     06 03 19.1 +1.0
      baz=281
L26K  Log Cabin Wild    36.59  43  P     P     06 03 19.4 +1.1
L26K                               IAmb  IAmb  06 03 20.7
      comp=Z,7.6nm,0.7s
L26K  Log Cabin Wild    36.59  43  P     P     06 03 19.2 +0.9
      baz=278,SNR=7.6
VRDI  Verde Repeater    36.81  46  P     P     06 03 20.9 +0.5
M26K  Nabesna, AK       36.84  44  P     P     06 03 21.9 +1.5
M26K                               IAmb  IAmb  06 03 22.6
      comp=Z,18nm,0.8s
M26K  Nabesna, AK       36.84  44  P     P     06 03 21.7 +1.3
      baz=279
MCARA McCarthy VSAT     36.99  46  P     P     06 03 22.7 +1.1
      baz=280
CRQE  Cirque            37.07  47  P     P     06 03 23.1 +0.7
      baz=281
NRIK  Noril'sk          37.18 328  P     P     06 03 22.6 -0.5
      comp=Z,2.3nm,0.5s,baz=104,slow=12,SNR=4.0
NRIK  Noril'sk          37.18 328 i P    P     06 03 22.0 -1.1
NRIK                               pmax  pmax
      comp=Z,2.0nm,0.4s
NRIK  Noril'sk          37.18 328  IAmb  IAmb  06 03 26.2
      comp=Z,17nm,1.8s
L27K  Beaver Creek,     37.27  43  P     P     06 03 25.4 +1.4
      baz=279
M27K  Edge Creek, AK    37.36  44  P     P     06 03 26.5 +1.6
      baz=280
BARN  Barnard Glacie    37.70  46  P     P     06 03 29.0 +1.2
BARN                               IAmb  IAmb  06 03 29.8
      comp=Z,17nm,0.9s
CTG   Chitna Glacier    37.87  46  P     P     06 03 30.3 +1.1
      baz=282,SNR=6.9
CTGM  Chitina Glacie    37.87  46  P     P     06 03 30.3 +1.1
CTGM                               IAmb  IAmb  06 03 31.1
      comp=Z,18nm,0.8s
LZH   Lanzhou           38.07 270 ⇑P     P     06 03 29.3 -1.9
LZH                                pmax  pmax
      comp=Z,23nm,1.2s
YUK3  Moose Creek       38.12  45  P     P     06 03 32.3 +0.9
      baz=282,SNR=7.2
DAWY  Dawson            38.20  41  P     P     06 03 32.3 +0.5
DAWY  Dawson            38.20  41  P     P     06 03 32.4 +0.5
      baz=279
I29M  Ogilvie Camp,     38.46  39  P     P     06 03 35.0 +1.1
      baz=279,SNR=11
EPYK  Eagle Plains      38.95  37  P     P     06 03 39.0 +1.0
      baz=279,SNR=6.2
YUK4  Talbot Arm        39.06  45  P     P     06 03 40.5 +1.3
      baz=283
M30M  Minto, Yukon      39.63  43  P     P     06 03 45.6 +1.9
      baz=283
HYT   Haines Junctio    39.73  46  P     P     06 03 46.2 +1.6
      baz=285
INK   Inuvik            39.88  34  P     P     06 03 46.6 +1.0
      comp=Z,7.2nm,0.5s,baz=296,slow=6.8,SNR=66
INK   Inuvik            39.88  34  P     P     06 03 46.7 +1.1
      baz=279,SNR=10.0
N31M  Braeburn, Yuko    40.37  44  P     P     06 03 51.3 +1.6
      baz=285
M31M  Drury Creek, Y    40.81  43  P     P     06 03 55.1 +1.7
      baz=286,SNR=6.3
WHY   Whitehorse        41.01  45  P     P     06 03 56.9 +1.7
      baz=287
FARO  Faro, Yukon       41.27  43  P     P     06 03 57.8 +0.6
      baz=286,SNR=5.7
ZALV  Zalesovo Beam     41.64 304  P     P     06 03 60.0 -0.3
      comp=Z,1.0nm,0.4s,baz=50,slow=7.2,SNR=6.2
ZALV                               PcP   PcP   06 05 53.8 -0.3
      comp=Z,1.7nm,0.6s,baz=60,slow=3.5,SNR=8.9
ZALV  Zalesovo Beam     41.64 304 i P    P     06 04 00.0 -0.3
ZALV                               pmax  pmax
      comp=Z,1.0nm,0.4s
DGZ   Jazzator, Alta    41.85 297 i P    P     06 04 01.1 -1.1
DGZ                                pmax  pmax
      comp=Z,3.0nm,0.9s
A36M  Sachs Harbour     41.99  27  P     P     06 04 04.4 +1.5
A36M  Sachs Harbour     41.99  27  P     P     06 04 04.2 +1.4
      baz=282,SNR=35
P33M  Teslin, Yukon     42.12  46  P     P     06 04 05.6 +1.4
      baz=289,SNR=5.8
TGTN  Hyland Airport    43.78  43  P     P     06 04 18.8 +1.4
      baz=291,SNR=5.3
DLBC  Dease Lake        44.09  47  P     P     06 04 21.1 +1.2
      comp=Z,3.6nm,0.7s,baz=298,slow=11,SNR=7.2
DLBC  Dease Lake        44.09  47  IAmb  IAmb  06 06 02.8
      comp=Z,32nm,1.9s
WMQ   Urumqi            44.43 290 eP     P     06 04 24.4 +1.5
WMQ                                pmax  pmax
      comp=Z,8.0nm,0.9s
WMQ                                pmax  pmax
      comp=Z,250nm,4.7s
WMQ                                LR    LR
      comp=Z,140nm,28.3s
WMQ                                LR    LR
      comp=Z,150nm,29.0s
WMQ                                LR    LR
      comp=Z,40nm,28.9s
MK31  Makanchi Array    46.24 296  P     P     06 04 36.8 -0.2
MK31                               pmax  pmax
      comp=Z,7.0nm,1.1s
MK31  Makanchi Array    46.24 296  P     P     06 04 36.8 -0.2
MKAR  Makanchi Array    46.24 296  P     P     06 04 36.6 -0.4
      comp=Z,6.7nm,0.8s,baz=66,slow=8.4,SNR=24
MKAR                               PcP   PcP   06 06 10.0  0.0
      comp=Z,0.7nm,0.6s,baz=80,slow=4.4,SNR=2.1
EUNU  Eureka            47.15  12  P     P     06 04 44.2 +0.6
RES   Resolute Bay      48.90  19  P     P     06 04 57.9 +0.9
      comp=Z,10nm,0.8s,baz=328,slow=7.7,SNR=34
YKA   Yellowknife Ar    49.23  38  P     P     06 05 00.2 +0.5
      comp=Z,11nm,0.8s,baz=298,slow=6.9,SNR=19
BRVK  Borovoye          49.81 308ceP     P     06 05 03.7 -0.6
BRVK                               pmax  pmax
      comp=Z,5.0nm,0.6s
BRVK  Borovoye          49.81 308 eP     P     06 05 03.7 -0.6
BRVK  Borovoye          49.81 308  P     P     06 05 04.2 -0.2
BRVK                               IAmb  IAmb  06 05 05.2
      comp=Z,9.1nm,0.6s
TULEG Thule             52.14  12 i P    P     06 05 20.8 -0.5
TULEG                              IAmb  IAmb  06 05 21.5
      comp=Z,19nm,0.7s
TULEG Thule             52.14  12  P     P     06 05 20.9 -0.5
RABL  Rabaul            52.71 182  P     P     06 05 28.4 +2.1
CMAR  Chiang Mai Arr    53.05 255  P     P     06 05 30.0 +1.1
      comp=Z,1.0nm,0.4s,baz=32,slow=7.3,SNR=5.8
CMAR  Chiang Mai Arr    53.05 255 i P    P     06 05 31.3 +2.4
CMAR                               pmax  pmax
      comp=Z,1.0nm,0.3s
AAK   Ala-Archa         53.16 295ceP     P     06 05 28.8 -0.7
AAK                                pmax  pmax
      comp=Z,23nm,2.5s
NEEM  North Greenlan    53.17   7 i P    P     06 05 28.4 -0.9
NEEM                               IAmb  IAmb  06 05 29.7
      comp=Z,20nm,1.2s
ARU   Arti              53.70 317c iP    P     06 05 31.8 -1.3
ARU                                            06 07 32.5
ARU                                S     S     06 12 54.4 -0.7
ARU                                SS    SKiKP 06 16 32.6 +2.0
ARU                                pmax  pmax
      comp=Z,11nm,0.8s
ARU   Arti              53.70 317 eP     P     06 05 31.7 -1.3
ARU   Arti              53.70 317  P     P     06 05 32.3 -0.7
ARU                                IAmb  IAmb  06 05 33.5
      comp=Z,8.6nm,0.7s
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EDM   Edmonton          54.81  47   P      P       06 05 41.7 +0.5
EDM                                 pmax   pmax
      comp=Z,22nm,0.7s
EDM   Edmonton          54.81  47   P      P       06 05 41.7 +0.5
NEW   Newport           55.83  54   P      P       06 05 48.8 +0.3
      comp=Z,4.6nm,1.0s,baz=308,slow=6.2,SNR=6.9
NEW   Newport           55.83  54   P      P       06 05 48.8 +0.3
NEW                                 pmax   pmax
      comp=Z,4.0nm,0.8s
NEW   Newport           55.83  54   IAmb   IAmb    06 05 50.1
      comp=Z,3.8nm,0.8s
NEW   Newport           55.83  54   P      P       06 05 48.6  0.0
      baz=307
ARCES ARCESS Array B    56.05 340   P      P       06 05 48.8 -1.0
      comp=Z,7.4nm,1.1s,baz=23,slow=6.6,SNR=5.1
BTK   Batken            56.92 295   P      P       06 05 56.8 +0.4
BTK                                 pmax   pmax
      comp=Z,5.0nm,1.0s
BTK   Batken            56.92 295   P      P       06 05 56.8 +0.4
WALA  Waterton Lakes    57.03  52   P      P       06 05 57.5 +0.3
WALA                                IAmb   IAmb    06 05 58.3
      comp=Z,9.2nm,0.7s
ABKAR Akbulak array     57.33 309   P      P       06 05 58.5 -0.6
GAR   Garm              57.88 294   P      P       06 06 03.0 -0.2
GAR                                 IAmb   IAmb    06 06 04.3
      comp=Z,12nm,1.2s
PLID  Pearl Lake        58.39  56   P      P       06 06 07.4 +0.5
PLID                                IAmb   IAmb    06 06 08.2
      comp=Z,13nm,0.8s
MSO   Missoula          58.41  54   P      P       06 06 07.3 +0.5
      baz=309,SNR=7.2
SUMG  Summit            58.71   4   P      P       06 06 09.0 +0.2
SUMG                                pmax   pmax
      comp=Z,18nm,1.0s
SUMG  Summit            58.71   4 i P      P       06 06 08.0 -0.8
SUMG                                IAmb   IAmb    06 06 10.4
      comp=Z,27nm,1.1s
SUMG  Summit            58.71   4   P      P       06 06 09.0 +0.2
CHGR  Chuyangaron       58.80 294   P      P       06 06 09.0 -0.6
FFC   Flin Flon         59.10  41   P      P       06 06 11.9 +0.6
FFC                                 pmax   pmax
      comp=Z,49nm,1.8s
FFC   Flin Flon         59.10  41   P      P       06 06 11.9 +0.6
HRY   Holter Researc    59.60  53   P      P       06 06 16.1 +1.1
EGMT  Eagleton          59.83  50   P      P       06 06 17.0 +0.5
      baz=311
HLID  Hailey            60.24  57   P      P       06 06 20.3 +0.9
      baz=311
BOZ   Bozeman (W)       60.43  54   P      P       06 06 21.6 +0.9
      baz=311,SNR=15
NVAR  Mina Array Bea    61.35  63   P      P       06 06 27.4 +0.3
      comp=Z,1.4nm,0.5s,baz=294,slow=7.4,SNR=10
ELK   Elko              61.61  60   P      P       06 06 29.0 +0.1
      comp=Z,0.8nm,0.6s,baz=315,slow=6.4,SNR=5.0
ELK   Elko              61.61  60   P      P       06 06 29.0 +0.1
ELK                                 pmax   pmax
      comp=Z,12nm,1.8s
ELK   Elko              61.61  60   IAmb   IAmb    06 08 24.5
      comp=Z,12nm,1.8s
RLMT  Red Lodge         62.00  53   P      P       06 06 32.3 +1.0
      baz=312
ICESG Greenland Ices    62.10   5 i P      P       06 06 31.5 -0.3
ICESG                               IAmb   IAmb    06 06 33.0
      comp=Z,43nm,0.9s
DGMT  Dagmar            62.30  47   P      P       06 06 33.8 +0.7
      baz=313
FIA1  FINESS Array S    62.34 334   P      P       06 06 32.5 -0.5
FINES FINESS Array B    62.34 334   P      P       06 06 32.4 -0.7
      comp=Z,7.9nm,0.6s,baz=32,slow=7.3,SNR=33
FINES FINESS Array B    62.34 334   P      P       06 06 32.5 -0.5
FRB   Frobisher Bay     63.11  19   P      P       06 06 37.3 -0.8
      comp=Z,4.4nm,0.6s,baz=331,slow=9.0,SNR=11
DUG   Dugway, Tooele    63.36  59   P      P       06 06 41.1 +0.7
      baz=313
BW06  Boulder Array     63.43  55   P      P       06 06 41.5 +0.6
      baz=313,SNR=6.3
PDAR  Pinedale Array    63.43  55   P      P       06 06 41.1 +0.2
      comp=Z,4.4nm,0.8s,baz=309,slow=1.5,SNR=41
FURC  Furnace Creek,    63.51  64   P      P       06 06 41.7 +0.5
      baz=313
OBN   Obninsk           63.80 325⇑eP     P       06 06 42.3 -0.4
OBN                                e*PP   pwP     06 07 15.8 -4.5
OBN                                e               06 09 05.8
OBN                                 pmax   pmax
      comp=Z,15nm,1.9s
OBN   Obninsk           63.80 325 eP     P       06 06 42.7  0.0
TUQ   Turquoise Moun    64.77  65   P      P       06 06 49.5 -0.1
      baz=313
ULM   Lac du Bonnet     64.90  42   P      P       06 06 49.8 -0.2
      comp=Z,3.3nm,0.7s,baz=292,slow=12,SNR=3.6
RSSD  Black Hills       65.40  51   P      P       06 06 53.8 +0.2
RSSD                                pmax   pmax
      comp=Z,6.0nm,0.7s
RSSD  Black Hills       65.40  51   P      P       06 06 53.8 +0.2
RSSD                                IAmb   IAmb    06 06 54.1
      comp=Z,6.4nm,0.7s
RSSD  Black Hills       65.40  51   P      P       06 06 53.8 +0.2
      baz=315
NC204 NORSAR Array S    66.31 341   P      P       06 06 58.8 -0.1
NB2   NORSAR Subarra    66.42 341   P      P       06 06 59.1 -0.6
      comp=Z,6.9nm,0.8s,baz=29,slow=6.5
NOA   NORSAR Array B    66.42 341   P      P       06 06 59.6 -0.1
      comp=Z,3.9nm,0.6s,baz=26,slow=6.4,SNR=15
ISCO  Idaho Springs     67.62  55   P      P       06 07 08.5 +0.5
      baz=316,SNR=5.9
S22A  4UR Ranch, Cre    68.42  57   P      P       06 07 13.9 +1.0
      baz=316
EYMN  Ely               68.53  41   P      P       06 07 12.8 -0.3
      baz=320
SDCO  Great Sand Dun    69.15  56   P      P       06 07 17.9 +0.4
      baz=316
ECSD  EROS Data Cent    69.37  47   P      P       06 07 17.9 -0.4
      baz=319
NCK   Nalchik           69.48 313 i P      P       06 07 18.1 -0.9
NCK                                 pmax   pmax
      comp=Z,7.0nm,0.7s
KBZ   Khabaz            69.64 314   P      P       06 07 20.6 +0.7
      comp=Z,1.2nm,0.5s,baz=37,slow=18,SNR=1.6
AKASG Malin Array Be    70.02 326   P      P       06 07 21.1 -1.1
      comp=Z,3.3nm,0.5s,baz=33,slow=6.3,SNR=16
T25A  Trinidad          70.19  56   P      P       06 07 23.8 +0.1
      baz=317
WRA   Warramunga Arr    70.45 199   P      P       06 07 23.4 -1.7
      comp=Z,1.1nm,0.9s,baz=16,slow=6.8,SNR=6.6
WRA                                 pP     pwP     06 08 01.9 +0.9
      comp=Z,0.7nm,0.7s,baz=16,slow=6.3,SNR=3.3
ANMO  Albuquerque       70.63  59ceP     P       06 07 26.2 -0.2
ANMO                                pmax   pmax
      comp=Z,2.0nm,0.9s
ANMO  Albuquerque       70.63  59   P      P       06 07 26.7 +0.3
      baz=317
SCHQ  Schefferville     71.41  23   P      P       06 07 30.5  0.0
      comp=Z,6.7nm,0.7s,baz=340,slow=6.4,SNR=22
OJC   Ojcow             73.69 331 eP     P       06 07 42.5 -1.6
OJC   Ojcow             73.69 331   P      P       06 07 43.9 -0.1
OJC                                 pmax   pmax
      comp=Z,36nm,1.7s
OJC   Ojcow             73.69 331   P      P       06 07 43.9 -0.1
OJC                                 IAmb   IAmb    06 07 44.5
      comp=Z,36nm,1.7s
BUR08 Bucovina Ar. S    74.03 326   P      P       06 07 45.8 -0.5
BURAR Bucovina Array    74.05 326 ⇑P     P       06 07 46.2 -0.1
BURAR Bucovina Array    74.05 326 ⇑P     P       06 07 46.2 -0.1
BURAR Bucovina Array    74.05 326   P      P       06 07 46.0 -0.3
ASAR  Alice Springs     74.15 199   P      P       06 07 46.5 -0.5
      comp=Z,0.3nm,0.5s,baz=9.2,slow=5.3,SNR=7.0
ASAR                                pP     pwP     06 08 25.4 +2.2
      comp=Z,3.0nm,0.9s,baz=12,slow=5.8,SNR=15
KSP   Ksiaz             74.22 333 eP     P       06 07 47.4 +0.3
FLTG  Flechtingen       74.29 337 eP     P       06 07 47.4 -0.1
      comp=Z,14nm,0.9s,baz=24,slow=5.7
TESR  Tescani           74.44 325 ⇓P     P       06 07 48.2 -0.3
CHVC  Chvalec           74.52 333 eP     P       06 07 49.1 +0.2
TRPA  Tarpa             74.57 328 ⇓P     P       06 07 49.6 +0.4
DPC   Dobruska-Polom    74.65 333 eP     P       06 07 50.3 +0.6
DPC   Dobruska-Polom    74.65 333 eP     P       06 07 50.3 +0.6
TLCR                    74.70 323 ⇓P     P       06 07 50.1 +0.2
TLCR                    74.70 323 ⇓P     P       06 07 50.1 +0.2
LANS  Liptovska Anna    74.72 331 eP     P       06 07 51.2 +1.1
LANS                                pmax   pmax
      comp=Z,6.0nm,0.7s
LANS  Liptovska Anna    74.72 331 eP     P       06 07 51.1 +1.0
CLL   Collm             74.75 336 i P      P       06 07 49.9 -0.2
CLL                                 pmax   pmax
      comp=Z,24nm,0.8s
CLL   Collm             74.75 336 i P      P       06 07 49.9 -0.2
      comp=Z,24nm,0.8s
CLL   Collm             74.75 336 eP     P       06 07 49.9 -0.2
      comp=Z,24nm,0.8s,baz=24,slow=5.7
KRLC  Kraliky           74.75 333 eP     P       06 07 50.4 +0.1
KRLC  Kraliky           74.75 333 eP     P       06 07 50.4 +0.1
MORC  Moravsky Berou    74.78 332 ⇑P     P       06 07 50.7 +0.2
MORC  Moravsky Berou    74.78 332 eP     P       06 07 50.8 +0.3
MORC  Moravsky Berou    74.78 332 ⇑P     P       06 07 50.7 +0.2
BRG   Berggiesshubel    74.88 335 eP     P       06 07 51.0 +0.1
      comp=Z,9.1nm,1.0s,baz=24,slow=5.7
BRG   Berggiesshubel    74.88 335 eP     P       06 07 50.8 -0.1
BRG                                  Amp           06 07 52.4
      comp=Z,8.2nm,0.9s
BRG   Berggiesshubel    74.88 335   P      P       06 08 00.8  +10
BRG                                  Amp           06 08 02.8
      comp=Z,2.8nm,0.7s
CLZ   Clausthal         74.96 337 eP     P       06 07 51.2 -0.2
      comp=Z,14nm,0.8s,baz=24,slow=5.7
CFR   Carcaliu          74.97 323 ⇓P     P       06 07 51.1 -0.4
CFR   Carcaliu          74.97 323 ⇓P     P       06 07 51.1 -0.4
CEI   Carei             74.98 328 ⇑P     P       06 07 54.7 +3.2
CEI   Carei             74.98 328 ⇑P     P       06 07 54.7 +3.2
FBE   Freiberg          75.00 335 eP     P       06 07 51.8 +0.2
      comp=Z,15nm,0.8s,baz=24,slow=5.7
PVCC  Panska Ves        75.01 334 eP     P       06 07 51.9 +0.2
PVCC  Panska Ves        75.01 334 eP     P       06 07 51.9 +0.2
TPGR  Topolog           75.13 323 ⇑P     P       06 07 52.1 -0.4
NEUB  Neuenburg         75.17 336 eP     P       06 07 52.8 +0.3
      comp=Z,28nm,1.3s,baz=24,slow=5.7
PRA   Prague            75.45 334 eP     P       06 07 54.7 +0.5
PRA   Prague            75.45 334 eP     P       06 07 54.7 +0.5
HARR  Harsova           75.46 323 ⇑P     P       06 07 54.2 -0.1
HARR  Harsova           75.46 323 ⇑P     P       06 07 54.2 -0.1
TIRR  Tirgusor          75.46 323 ⇓P     P       06 07 55.5 +1.2
TIRR  Tirgusor          75.46 323 ⇓P     P       06 07 55.5 +1.2
VRAC  Vranov            75.49 332 ⇑P     P       06 07 55.2 +0.7
VRAC  Vranov            75.49 332 eP     P       06 07 55.0 +0.5
VRAC  Vranov            75.49 332 ⇑P     P       06 07 55.2 +0.7
PRU   Pruhonice         75.50 334 eP     P       06 07 54.7 +0.2
PRU   Pruhonice         75.50 334 eP     P       06 07 54.7 +0.2
VYHS  Vyhne             75.50 331 eP     P       06 07 54.8 +0.3
VYHS  Vyhne             75.50 331 eP     P       06 07 54.8 +0.3
JAVC  Velka Javorina    75.55 332 eP     P       06 07 56.2 +1.3
MLR   Muntele Rosu      75.56 325 ⇑P     P       06 07 55.9 +0.8
MLR   Muntele Rosu      75.56 325 ⇑P     P       06 07 55.9 +0.8
ISR   Istrita           75.64 324 ⇓P     P       06 07 56.4 +0.9
ISR   Istrita           75.64 324 ⇓P     P       06 07 56.4 +0.9
PLN   Plauen            75.72 336 eP     P       06 07 56.0 +0.2
      comp=Z,18nm,1.2s,baz=24,slow=5.7
MOX   Moxa              75.72 336 eP     P       06 07 56.0 +0.2
      comp=Z,12nm,0.8s,baz=24,slow=5.7
KRUC  Moravsky          75.77 332 eP     P       06 07 56.4 +0.4
GUNZ  Gunzen            75.78 335 eP     P       06 07 56.5 +0.4
      comp=Z,13nm,0.8s,baz=24,slow=5.7
WERN  Wernitzgruen      75.84 335 eP     P       06 07 56.9 +0.4
      comp=Z,18nm,0.7s,baz=24,slow=5.7
NKC   Novy Kostel       75.87 335 eP     P       06 07 56.9 +0.3
NKC   Novy Kostel       75.87 335 eP     P       06 07 56.9 +0.3
SMOL  Smolenice         75.93 332 eP     P       06 07 57.7 +0.7
SMOL  Smolenice         75.93 332 eP     P       06 07 57.7 +0.7
VOIR                    75.95 325 ⇑P     P       06 07 57.7 +0.5
VOIR                    75.95 325 ⇑P     P       06 07 57.7 +0.5
ICOR  Ion Corvin        75.99 323 ⇓P     P       06 07 57.9 +0.6
BUG   Bochum--Univer    76.10 339 eP     P       06 07 58.0 +0.2
      comp=Z,38nm,1.1s,baz=24,slow=5.7
MODS  Modra-Piesok      76.10 332 eP     P       06 07 58.3 +0.3
MODS  Modra-Piesok      76.10 332 eP     P       06 07 58.3 +0.3
ARR   Arges             76.16 326 ⇑P     P       06 08 00.2 +1.8
SRO   Srobarova         76.26 331 eP     P       06 07 59.9 +1.1
SRO   Srobarova         76.26 331 eP     P       06 07 59.9 +1.1
TX31  Lajitas Ar. Si    76.35  61   P      P       06 07 59.8  0.0
TX31                                IAmb   IAmb    06 08 00.9
      comp=Z,13nm,1.2s
TXAR  Lajitas Array     76.35  61   P      P       06 07 59.7 -0.1
      comp=Z,1.3nm,0.6s,baz=298,slow=4.8,SNR=34
TXAR                                pP     pP      06 08 38.8 +2.7
      comp=Z,0.3nm,0.7s,baz=309,slow=5.7,SNR=1.3
ROTZ  Rotzenmuhle       76.36 335 eP     P       06 08 00.0 +0.6
      comp=Z,3.0nm,0.9s,baz=24,slow=5.7
SIRR  Siria             76.48 328 ⇑P     P       06 08 00.3 +0.2
KHC   Kasperske Hory    76.55 334 eP     P       06 08 00.9 +0.4
KHC   Kasperske Hory    76.55 334 eP     P       06 08 00.9 +0.4
CKRC  Cesky Krumlov     76.61 334 eP     P       06 08 02.1 +1.3
GRA1  Grafenberg Arr    76.70 336   P      P       06 08 01.9 +0.6
GRF   Grafenberg Arr    76.70 336   P      P       06 08 01.9 +0.6
GRF                                 pmax   pmax
      comp=Z,29nm,0.6s
GRF   Grafenberg Arr    76.70 336 eP     P       06 08 02.1 +0.8
      comp=Z,29nm,0.6s,baz=24,slow=5.7
GRFO  Grafenberg        76.70 336   P      P       06 08 01.6 +0.3
GRFO                                pmax   pmax
      comp=Z,25nm,0.7s
GRFO  Grafenberg        76.70 336   P      P       06 08 01.6 +0.3
WET   Wettzell          76.73 335 eP     P       06 08 02.2 +0.7
      comp=Z,18nm,1.0s,baz=24,slow=5.7
GEC2  GERESS Array S    76.77 334 eP     P       06 08 01.8  0.0
      comp=Z,7.5nm,0.9s,baz=24,slow=5.7
GEC2  GERESS Array S    76.77 334   P      P       06 08 01.8  0.0
GERES GERESS Array B    76.77 334   P      P       06 08 01.8  0.0
      comp=Z,4.8nm,0.7s,baz=37,slow=5.6,SNR=36
GZR   Gura Zlata        76.83 327 ⇑P     P       06 08 02.1 -0.1
GZR   Gura Zlata        76.83 327 ⇑P     P       06 08 02.1 -0.1
U40A  Yellville         76.87  49   P      P       06 08 01.7 -0.8
      baz=322,SNR=7.8
TNS   Taunus Mts        76.93 338 eP     P       06 08 03.0 +0.3
      comp=Z,22nm,0.8s,baz=24,slow=5.7
CONA  Conrad Observa    76.94 332 eP     P       06 08 03.5 +0.7
      comp=Z,7.6nm,0.6s
AHRW  Bad Neuenahr-A    76.98 339 eP     P       06 08 03.2 +0.4
      comp=Z,23nm,1.1s,baz=24,slow=5.7
COPA  Copaceanca        76.98 324 ⇓P     P       06 08 02.4 -0.5
BZS   Buzias            77.05 328 ⇑P     P       06 08 03.2 -0.1
BZS   Buzias            77.05 328 ⇑P     P       06 08 03.2 -0.1
BRTR  Keskin Array B    77.09 317   P      P       06 08 04.0 +0.2
      comp=Z,4.0nm,0.8s,baz=62,slow=4.0,SNR=18
BTNL  Ternell           77.16 339 dP     P       06 08 03.5 -0.3
      comp=Z,19nm,0.8s
MEM   Membach           77.17 339 dP     P       06 08 04.0 +0.1
      comp=Z,27nm,0.8s
HERR  Herculane         77.40 327 ⇓P     P       06 08 04.6 -0.6
BHOU  Houvegnez         77.40 339 dP     P       06 08 05.5 +0.3
      comp=Z,14nm,0.7s
MOA   Molln             77.49 333 eP     P       06 08 06.2 +0.4
      comp=Z,8.1nm,1.0s
BCLA  Clavier           77.50 340 dP     P       06 08 05.2 -0.6
      comp=Z,16nm,0.6s
BGES  Gesves            77.59 340 dP     P       06 08 03.6 -2.6
FCAR  Ozark Folk Cen    77.60  49   P      P       06 08 05.6 -0.9
ARSA  Arzberg           77.65 332 eP     P       06 08 07.1 +0.4
      comp=Z,3.0nm,0.6s
SNF   Seneffe           77.65 340 dP     P       06 08 06.7 +0.2
      comp=Z,20nm,0.8s
BMRD  Maredsous         77.74 340 dP     P       06 08 07.0  0.0
      comp=Z,16nm,0.9s
RCHB  Rochefort         77.77 340 dP     P       06 08 07.3 +0.1
      comp=Z,9.7nm,0.8s
MIAR  Mount Ida         77.91  51   P      P       06 08 08.5 +0.2
MIAR                                pmax   pmax
      comp=Z,8.0nm,0.8s
MIAR  Mount Ida         77.91  51   P      P       06 08 08.5 +0.2
MIAR  Mount Ida         77.91  51   P      P       06 08 07.9 -0.4
      baz=322
DOU   Dourbes           77.97 340 dP     P       06 08 08.3  0.0
WLF   Walferdange       78.01 339 dP     P       06 08 09.3 +0.7
RJOB  Jochberg          78.03 334 eP     P       06 08 08.7 -0.1
      comp=Z,9.8nm,0.9s,baz=24,slow=5.7
KUBS  Kucevo            78.07 327 eP     P       06 08 07.5 -1.5
STU   Stuttgart         78.08 337 eP     P       06 08 09.0 +0.1
      baz=24,slow=5.7
FRGS  Fruska Gora       78.08 328 ⇑P     P       06 08 08.9 -0.2
FRGS  Fruska Gora       78.08 328 eP     P       06 08 08.7 -0.4
W41B  Gary Mavity, V    78.10  50   P      P       06 08 08.8 -0.5
      baz=322
SOKA  Soboth            78.31 332 i P      P       06 08 10.7 +0.3
      comp=Z,12nm,0.8s,SNR=8.9
KBA   Koelnbreinsper    78.46 333 i P      P       06 08 12.3 +0.9
      comp=Z,38nm,0.8s,SNR=18
OBKA  Obir              78.61 332 eP     P       06 08 11.8 -0.3
      comp=Z,5.2nm,0.6s
TRUS  Trudelj           78.69 328 eP     P       06 08 11.8 -0.6
ZAPS  Zavoj             78.70 326 eP     P       06 08 11.8 -0.7
BFO   Black Forest      78.71 337   P      P       06 08 12.5  0.0
BFO                                 pmax   pmax
      comp=Z,14nm,0.9s
BFO   Black Forest      78.71 337 eP     P       06 08 12.6  0.0
      comp=Z,18nm,1.1s,baz=24,slow=5.7
BFO   Black Forest      78.71 337   P      P       06 08 12.5  0.0
BFO                                 IAmb   IAmb    06 08 13.4
      comp=Z,14nm,0.9s
BOVS  Bovan             78.73 326   P      P       06 08 16.5 +3.9
BOVS  Bovan             78.73 326 eP     P       06 08 11.2 -1.4
WATA  Walderalm         78.74 335 i P      P       06 08 13.5 +0.7
      comp=Z,14nm,0.5s,SNR=9.3
MYKA  Terra Mystica     78.78 333 eP     P       06 08 12.7 -0.2
      comp=Z,5.2nm,0.7s
WTTA  Wattenberg        78.79 335 i P      P       06 08 13.9 +0.8
      comp=Z,32nm,0.6s,SNR=12
RETA  Reutte            78.83 335 i P      P       06 08 13.8 +0.5
      comp=Z,17nm,0.8s,SNR=5.3
UBR   Ueberruh          78.83 336 eP     P       06 08 13.5 +0.2
      comp=Z,74nm,1.9s,baz=24,slow=5.7
MOTA  Moosalm           78.87 335 i P      P       06 08 14.0 +0.5
      comp=Z,39nm,1.0s,SNR=10
GRUS  Gruza             78.87 327 eP     P       06 08 12.9 -0.5
DIVS  Divibare          78.94 328   P      P       06 08 13.3 -0.6
DIVS                                IAmb   IAmb    06 08 14.2
      comp=Z,12nm,0.7s
DIVS  Divibare          78.94 328 eP     P       06 08 12.5 -1.4
SQTA  Sankt Quirin      78.95 335 i P      P       06 08 14.7 +0.7
      comp=Z,33nm,1.1s,SNR=8.7
PRED  Cave del Predi    78.97 333   P      P       06 08 13.5 -0.5
PRED                                IAmb   IAmb    06 08 14.2
      comp=Z,13nm,0.7s
ABTA  Abfaltersbach     79.00 334 eP     P       06 08 14.7 +0.5
      comp=Z,8.4nm,0.7s
VTS   Vitosha           79.03 325 ⇓P     P       06 08 14.9 +0.4
VTS   Vitosha           79.03 325 ⇓P     P       06 08 14.9 +0.4
DAVA  Damuels           79.26 336 i P      P       06 08 16.0 +0.3
      comp=Z,21nm,0.8s,SNR=5.6
FETA  Feichten          79.27 335 eP     P       06 08 16.4 +0.6
      comp=Z,9.6nm,0.7s
SELS  Selova            79.30 327 eP     P       06 08 15.1 -0.7
BBLS  Lazi&#263;i       79.35 328 eP     P       06 08 16.1  0.0
STAL  STALIGIAL         79.39 333   P      P       06 08 15.7 -0.5
STAL                                IAmb   IAmb    06 08 15.9
      comp=Z,10nm,0.8s
BARS  Barje             79.40 326 eP     P       06 08 07.8 -8.5
BARS  Barje             79.40 326 eP     P       06 08 15.1 -1.2
BOSS  Bosilegrad        79.42 325 eP     P       06 08 16.3 -0.2
PRVS  Prvonek           79.57 326 eP     P       06 08 16.6 -0.7
SJES  Sjenica           79.68 327 eP     P       06 08 17.9  0.0
CTI   Castel Tesino     79.89 334   P      P       06 08 18.5 -0.5
CTI                                 pmax   pmax
      comp=Z,9.0nm,0.7s
CTI   Castel Tesino     79.89 334   P      P       06 08 18.5 -0.5
CTI                                 IAmb   IAmb    06 08 19.1
      comp=Z,8.6nm,0.7s
STIP  Stip              80.23 325 i P      P       06 08 19.8 -1.0
SKO   Skopje            80.27 326 i P      P       06 08 19.1 -1.9
VAY   Valandovo         80.40 325 i P      P       06 08 22.0 +0.3
PDG   Podgorica         80.66 327 ⇑P     P       06 08 22.6 -0.4
PDG   Podgorica         80.66 327   P      P       06 08 22.4 -0.6
OHR   Ohrid             81.25 326 i P      P       06 08 25.9 -0.4
FNA   Florina           81.32 325   P      P       06 08 26.4 -0.2
FNA   Florina           81.32 325   P      P       06 08 26.4 -0.2
NRCA  Norcia            82.36 332   P      P       06 08 32.2 +0.1
NRCA                                IAmb   IAmb    06 08 33.4
      comp=Z,18nm,0.8s
SSB   Saint Sauveur     82.50 338   P      P       06 08 33.0 +0.2
SSB                                 pmax   pmax
      comp=Z,14nm,0.7s
SSB   Saint Sauveur     82.50 338   P      P       06 08 33.0 +0.2
SSB                                 IAmb   IAmb    06 08 34.8
      comp=Z,14nm,0.7s
TIP   Timpagrande       84.42 328   P      P       06 08 42.7  0.0
TIP                                 IAmb   IAmb    06 08 44.6
      comp=Z,25nm,1.3s
ESDC  Sonseca Array     89.72 343   P      P       06 09 08.5 +0.3
      comp=Z,1.2nm,0.9s,baz=1.6,slow=4.4,SNR=7.1
KEST  Kesra             90.03 331   P      P       06 09 09.7 -0.1
      comp=Z,3.4nm,0.7s,baz=314,slow=8.4,SNR=5.3
PLCA  Paso Flores      148.13  92   PKPbc  PKPbc   06 15 53.7 -1.0
      comp=Z,1.2nm,0.6s,baz=263,slow=5.8,SNR=4.7
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*IDC **05** 05:56:51.2±1.1, 21°.41S×67°.76W, h150^{km}±15^{km}, mb3.7/2, mb1 3.6/4, mb1mx3.3/29, mbtmp3.8/4, Error ellipse: s-maj=40.2km s-min=19.0km az=119.0*

*GUC **05** 05:56:52.4±0.5, 21°.34S×68°.08W, h166^{km}±4^{km}, ML3.4*

ISC 05 05:56:51.5±1.0**, 21°.31S**±0°.05×**68°.0W**±0°.1**, h159**^{km}±10^{km}**, n17, σ0ˢ94**/30**, Chile-Bolivia border region**

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Code  Station Name       Δ°   AZ°    Phase ID         Time     Res
                                    Op     ISC      h  m  s   ISC
PB09  IPOC Station P     1.23 247 eP     Pn      05 57 20.0 +0.6
PB09                              i S    Sn      05 57 41.5 +0.8
PB09                                IAML         05 57 44.1
      comp=E,188nm,0.4s
PB01  IPOC Station P     1.39 281 eP     Pn      05 57 20.8 +0.1
PB01                              i S    Sn      05 57 43.3 +0.1
PB01                                IAML         05 57 45.1
      comp=E,746nm,0.2s
LVC   Limon Verde        1.53 212   P    Pn      05 57 22.4  0.0
      comp=E,24nm,0.3s,baz=26,slow=9.7,SNR=228
LVC                                 S    Sn      05 57 46.1 -0.2
      comp=E,11nm,0.3s,baz=213,slow=21,SNR=30
PB08  IPOC Station P     1.57 318 eP     Pn      05 57 23.9 +1.0
PB08                              i S    Sn      05 57 48.0 +1.0
PB08                                IAML         05 57 50.8
      comp=E,128nm,0.2s
PB02  IPOC Station P     1.75 269 eP     Pn      05 57 24.7 +0.2
PB02                              i S    Sn      05 57 49.1 -0.6
PB03  IPOC Station P     1.77 245 eP     Pn      05 57 24.9 +0.1
PB03                              i S    Sn      05 57 49.5 -0.8
PB03                                IAML         05 57 51.3
      comp=E,325nm,0.1s
PB07  IPOC Station P     1.78 256 eP     Pn      05 57 25.2 +0.3
PB07                              i S    Sn      05 57 49.9 -0.7
PB07                                IAML         05 57 51.2
      comp=E,757nm,0.3s
PB06  IPOC Station P     2.00 226 eP     Pn      05 57 27.5 +0.2
PB06                              i S    Sn      05 57 54.6 -0.3
PB06                                IAML         05 57 55.7
      comp=E,288nm,0.4s
TA01  Diego Aracena      2.15 290 eP     Pn      05 57 28.6 -0.3
TA01                              i S    Sn      05 57 56.7 -1.0
TA01                                IAML         05 57 59.4
      comp=N,328nm,0.3s
PB11  IPOC Station P     2.17 315 eP     Pn      05 57 29.4  0.0
PB11                              i S    Sn      05 57 58.4 -0.1
PB11                                IAML         05 57 59.6
      comp=N,226nm,0.5s
PB04  IPOC Station P     2.22 242 eP     Pn      05 57 29.8 -0.1
PB04                              i S    Sn      05 57 58.3 -1.2
PB04                                IAML         05 58 00.8
      comp=N,201nm,0.2s
PB05  IPOC Station P     2.54 232 eP     Pn      05 57 33.6  0.0
PB05                              i S    Sn      05 58 04.6 -1.6
PB05                                IAML         05 58 10.9
      comp=E,88nm,0.3s
LPAZ  La Paz             5.00 359   P    Pn      05 58 07.1 +1.4
      comp=E,1.3nm,0.3s,baz=179,slow=6.1,SNR=32
LPAZ                                S    Sn      05 59 01.7 -1.8
      baz=298,slow=19,SNR=1.2
SIV   San Ignacio        8.45  52   P    Pn      05 58 48.5 -2.5
      comp=E,0.3nm,0.3s,baz=225,slow=10.0,SNR=3.6
TORD  Torodi Ar. Bea    76.52  70   P    P       06 08 24.1 -0.5
      comp=E,0.5nm,0.4s,baz=249,slow=5.2,SNR=8.8
YKA   Yellowknife Ar    91.28 340   P    P       06 09 39.6 +1.2
      comp=E,0.8nm,0.7s,baz=132,slow=4.9,SNR=4.8
MKAR  Makanchi Array   144.99  36   PKP  PKPdf   06 16 10.3 +0.4
      comp=E,0.2nm,0.5s,baz=313,slow=4.3,SNR=1.7
```

NEIC 05 06:04:10.6±1.6**, 35°.06N**±0°.02×**111°.69W**±0°.05**, h5**^{km}±2^{km}**, ML2.3**/23**, Error ellipse: s-maj=6.8km s-min=3.2km az=269.0, Eastern Arizona**

```
Code  Station Name       Δ°   AZ°    Phase ID         Time     Res
                                    Op     ISC      h  m  s   ISC
WUAZ  Wupatki            0.53  29   Pg     Pg      06 04 19.5 -1.3
WUAZ                                Sg     Sg      06 04 26.5 -1.1
X16A  Lo Mia Camp, P     0.67 162   Pg     Pg      06 04 22.7 -0.8
X16A                                Sg     Sg      06 04 31.8 -0.4
U15A  North Rim          1.45 340   Pn     Pn      06 04 36.1 -1.8
U15A                                IAML           06 04 58.8
      comp=E,44nm,0.6s
U15A                                IAML           06 04 58.9
      comp=N,28nm,0.8s
```

X18A	Snowflake	1.52	110	Pn	Pn	06 04 38.1	-0.6
X18A				IAML		06 05 03.0	
	comp=N,33nm,0.7s						
W18A	Petrified Fore	1.60	87	Pn	Pn	06 04 39.8	0.0
W18A				IAML		06 05 02.6	
	comp=E,51nm,0.3s						
W13A	Hualapai Mount	1.80	272	Pn	Pn	06 04 42.7	+0.1
LCMT	Little Creek M	2.32	328	Pn	Pn	06 04 50.0	+0.3
LCMT				IAML		06 05 21.9	
	comp=E,25nm,0.5s						
LCMT				IAML		06 05 22.6	
	comp=N,13nm,0.7s						
PKCU	Pink Cliffs	2.44	348	Pn	Pn	06 04 52.6	+1.3
CCUT	Cedar City	2.83	332	Pn	Pn	06 04 55.9	-0.8
CCUT				IAML		06 05 37.0	
	comp=E,12nm,1.3s						
CCUT				IAML		06 05 40.1	
	comp=N,9.3nm,3.5s						
TUC	Tucson	2.84	164	Pn	Pn	06 04 56.1	-0.7
TUC				IAML		06 05 42.8	
	comp=N,6.6nm,3.5s						
MSU	Marysvale	3.47	354	Pn	Pn	06 05 06.0	+0.4
SRU	San Rafael Swe	4.15	13	Pn	Pn	06 05 16.6	+1.8
319A	Douglas	4.19	151	Pn	Pn	06 05 14.7	-0.6
TMUT	Trail Mountain	4.25	5	Pn	Pn	06 05 16.5	+0.2
ANMO	Albuquerque	4.29	90	Pn	Pn	06 05 16.6	-0.2
ANMO				IAML		06 07 18.1	
	comp=N,5.1nm,5.0s						
P18A	Preston Nutter	4.71	14	Pn	Pn	06 05 22.5	-0.1

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*IDC **05** 06:04:45.6±0.7, 8°.57N×71°.21W, h0^{km}, mb3.7/8, mb1 4.0/10, mb1mx3.8/33, mbtmp3.8/10, ML3.0/1, MS3.2/6, Ms1 3.3/6, ms1mx3.0/30, Error ellipse: s-maj=27.7km s-min=15.8km az=68.0*
*FUNV **05** 06:04:47.5, 8°.51N×71°.44W, h1^{km}, MW4.1*
*NEIC **05** 06:04:49.0±2.3, 8°.59N±0°.06×71°.37W±0°.04, h10^{km}±1^{km}, mb4.0/7, Mwr3.9(CAR), Error ellipse: s-maj=10.9km s-min=6.3km az=165.0*
*CAR **05** 06:04:48.1±2.3, 8°.51N±0°.06×71°.45W±0°.05, h5^{km}±4^{km}, Error ellipse: s-maj=9.3km s-min=5.7km az=160.0*
ISC 05 06:04:47.5±1.1, **8°.55N**±0°.02×**71°.38W**±0°.02, **h9**^{km}±7^{km}, **n73**, σ**1^s.38**/95, **mb3.9**/10, **MS3.2**/3, **5C-3D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIGV	El Vigia	0.29	3⇑	eP	Pg	06 04 54.0	+0.7
VIGV				eS	Sg	06 04 58.2	+1.0
SOCV	Socops	0.58	117	eP	Pg	06 04 58.6	-0.2
SOCV				eS	Sg	06 05 06.5	+0.1
SOCV	Socops	0.58	117⇑	eP	Pg	06 04 58.5	-0.2
SOCV				eS	Sg	06 05 06.8	+0.5
SDV	Santo Domingo	0.81	65⇓	iP	Pb	06 05 04.0	+0.1
SDV				eS	Sb	06 05 14.9	-0.2
SDV				i		06 05 18.4	
	comp=Z,2µm,0.4s						
SDV	Santo Domingo	0.81	65		Pb	06 05 04.0	+0.1
CAPV	Capacho	1.15	234⇓	iP	Pg	06 05 07.5	-2.1
CAPV				eS	Sg	06 05 22.5	-2.1
TORV	Torococo	1.52	48	eP	Pn	06 05 15.2	+0.2
PAMC	Pamplona, Colo	1.78	228	eP	Pn	06 05 19.5	+0.6
PAMC				eS	Sn	06 05 44.1	+2.2
PAMC				i		06 05 46.8	
	comp=Z,2µm,0.2s						
MCQV	Machiques	1.88	323⇑	iP	Pn	06 05 20.7	+0.8
MCQV				eS	Sn	06 05 43.8	+0.1
OCAC	Ocana	1.94	261	eP	Pn	06 05 21.2	+0.3
OCAC				eS	Sn	06 05 46.9	+1.3
OCAC				i		06 05 48.6	
	comp=Z,13µm,0.5s						
OCAC	Ocana	1.94	261		Pn	06 05 21.5	+0.6
TAMC	Tame, Arauca	2.14	191	eP	Pn	06 05 24.5	+1.0
TAMC				eS	Sn	06 05 53.3	+3.0
TAMC				i		06 05 56.4	
	comp=Z,2µm,0.6s						
LL6C	La Loma 6 Bece	2.21	302	eP	Pn	06 05 25.2	+0.8
LL6C				eS	Sn	06 05 53.6	+1.7
LL1C	La Loma 1 Cana	2.37	295	eS	Sb	06 06 00.1	+0.4
LL1C				i		06 06 16.1	
	comp=Z,4µm,0.5s						
DABV	Dabajuro	2.47	17	eP	Pn	06 05 30.4	+2.4
DABV				eS	Sb	06 06 02.3	-0.4
DABV	Dabajuro	2.47	17⇑	eP	Pn	06 05 30.1	+2.1
DABV				eS	Sn	06 05 59.1	+0.8
SIQV	Siquisique	2.60	36	eP	Pn	06 05 31.2	+1.4
SIQV				eS	Sn	06 06 02.1	+0.5
BARC	Barichara	2.64	223	eP	Pn	06 05 31.9	+1.3
BARC				eS	Sb	06 06 08.7	+0.8
BARC				i		06 06 14.0	
	comp=Z,676nm,0.4s						
SMLC	San Martn de	2.67	276	eP	Pn	06 05 30.6	-0.2
SMLC				eS	Sn	06 06 07.0	+3.6
SMLC				i		06 06 08.9	
	comp=Z,1µm,0.5s						
CVALL	Valledupar, Ce	2.69	317	eP	Pn	06 05 31.4	+0.3
CVALL				eS	Sn	06 06 03.6	-0.2
CVALL				i		06 06 08.0	
	comp=Z,543nm,0.4s						
BRRC	Barranca, Sant	2.72	238	eP	Pn	06 05 32.6	+1.1
BRRC				eS	Sb	06 06 12.3	+2.4
BRRC				i		06 06 19.8	
	comp=Z,273nm,0.5s						
RUSC	La Rusia	3.13	213	eP	Pn	06 05 38.2	+0.7
RUSC				eS	Sb	06 06 23.9	+1.6
RUSC				i		06 06 34.6	
	comp=Z,233nm,0.6s						
MAPV	Macapo	3.15	66	eP	Pn	06 05 38.9	+1.4
URIC	Uribia, Colomb	3.19	349	eP	Pn	06 05 37.8	-0.2
URIC				eS	Sn	06 06 14.1	-2.1
URIC	Uribia, Colomb	3.19	349		Pn	06 05 38.0	+0.1
BAUV	El Baul	3.32	83	eP	Pn	06 05 40.5	+0.8
BAUV				eS	Sn	06 06 19.7	+0.3
BAUV	El Baul	3.32	83		Pn	06 05 41.4	+1.7
ZARC	Zaragoza, Cauc	3.60	253	Pn	Pn	06 05 43.9	+0.2
PTBC	PUERTO BERRIO,	3.65	237⇓	iP	Pn	06 05 43.7	-0.6
PTBC				eS	Sb	06 06 36.8	+0.2
PTBC				i		06 06 44.0	
	comp=Z,183nm,0.7s						
MONV	Montecano	3.66	22⇑	iP	Pn	06 05 45.5	+1.1
SJCC	San Jacinto, C	3.98	290		Pn	06 05 50.3	+1.4
BENV	Beln	3.99	69	eP	Pn	06 05 50.0	+1.1
UREC	San Jos de Ur	4.19	259	eP	Pn	06 05 52.6	+0.9
UREC				eS	Sn	06 06 41.3	+0.5
MOTC	Monteria, Cord	4.24	273		Pn	06 05 53.7	+1.3
ROSC	El Rosal	4.70	219	Pn	Pn	06 06 01.4	+2.4
	comp=Z,14nm,0.3s,baz=248,slow=20,SNR=42						
ROSC				Sn	Sn	06 06 57.5	+3.5
	comp=Z,14nm,0.3s,baz=19,slow=20,SNR=3.9						
ROSC				LR	LR	06 08 05.2	
	comp=Z,217nm,18.7s,baz=183,slow=41						
ROSC	El Rosal	4.70	219		Pn	06 06 01.8	+2.8
CACV	CAICARA DEL OR	4.89	101	eP	Pb	06 06 09.3	-4.1
VILC	Villavicencio,	4.97	208	eP	Pn	06 06 02.9	+0.4
VILC				eS	Sn	06 06 57.7	-2.7
MERV	Las Mercedes	5.07	82	eP	Pn	06 06 03.8	0.0
BIRV	Birongo	5.39	69	eP	Pn	06 06 08.7	+0.5
BIRV	Birongo	5.39	69		Pn	06 06 10.6	+2.3
PCRV	Puerto La Cruz	6.85	76	Pn	Pn	06 06 30.8	+2.5
	comp=Z,4.3nm,0.3s,baz=262,slow=4.9,SNR=22						
PCRV				Sn	Sn	06 07 48.3	+1.9
	comp=Z,7.8nm,0.3s,baz=17,slow=17,SNR=9.0						
PLCV	Puerto La Cruz	6.89	76		Pn	06 06 30.8	+2.0
PLCV					Sn	06 07 48.3	+0.9
BCIP	Isla Barro Col	8.38	275	Pn	Pn	06 06 50.5	+1.2
MLPR	Magueyes Islan	10.27	24	Pn	Pn	06 07 14.3	-0.9
CRPR	Cabo Rojo, PR	10.28	23	Pn	Pn	06 07 14.6	-0.7
DR12	Loma Pena Alta	10.36	11		Pn	06 07 15.9	-0.6
SDDR	Presa de Saban	10.37	0		Pn	06 07 19.0	+2.4
OBIP	Obispado Ponce	10.52	26	Pn	Pn	06 07 17.4	-1.2
MTDJ	Mount Denham	11.33	329	Pn	Pn	06 07 29.7	-0.1
GTBY	Guantanamo Bay	11.87	343	Pn	Pn	06 07 37.9	+0.7
BOAV	Boa Vista	12.41	119	Pn	Pn	06 07 44.4	-0.2
PTGA	Pitinga	14.64	128	Pn	Pn	06 08 12.5	-2.5
	baz=337,slow=23,SNR=1.4						
PTGA				Lg	Lg	06 12 24.6	
	comp=Z,1.2nm,0.3s,baz=200,slow=20,SNR=4.2						
PTGA				LR	LR	06 14 08.5	
	comp=Z,97nm,20.7s,baz=314,slow=39						
MDP	Montagnes des	18.91	99	LR	LR	06 16 37.1	
	comp=Z,98nm,18.1s,baz=284,slow=38						
ETMB	Extrema	18.96	164	P	P	06 09 10.2	+1.0
ETMB				IAmb	IAmb	06 09 32.9	
	comp=Z,8.7nm,1.2s						
SAML	Samuel	19.20	155	P	P	06 09 12.0	0.0
CMIG	Matias Romero	24.42	293	LR	LR	06 20 59.6	
	comp=Z,42nm,20.9s,baz=70,slow=40						
LPAZ	La Paz	24.89	173	P	P	06 10 12.2	+0.7
	comp=Z,0.9nm,0.4s,baz=2.4,slow=4.9,SNR=8.3						
LPAZ				LR	LR	06 20 56.7	
	comp=Z,82nm,21.2s,baz=48,slow=39						
LPAZ	La Paz	24.89	173	P	P	06 10 13.1	+1.6
LPAZ				IAmb	IAmb	06 10 27.3	
	comp=Z,6.1nm,1.4s						
SIV	San Ignacio	26.43	157	P	P	06 10 24.9	-0.1
	comp=Z,0.7nm,0.6s,baz=326,slow=9.2,SNR=5.5						
PB16	IPOC Station P	26.78	176	P	P	06 10 29.4	+0.8
PB16				IAmb	IAmb	06 10 34.1	
	comp=Z,3.5nm,1.1s						
LVC	Limon Verde	31.06	176	LR	LR	06 24 41.6	
	comp=Z,48nm,19.4s,baz=316,slow=38						
TXAR	Lajitas Array	36.67	309	P	P	06 11 54.8	-0.2
	comp=Z,0.1nm,0.4s,baz=119,slow=7.3,SNR=1.8						
TXAR				PcP	PcP	06 14 18.9	+0.9
	comp=Z,0.3nm,0.7s,baz=120,slow=5.4,SNR=2.6						
PD31	Pinedale Array	47.74	322	P	P	06 13 25.6	+0.3
PDAR	Pinedale Array	47.74	322	P	P	06 13 25.9	+0.7
	comp=Z,0.5nm,0.4s,baz=128,slow=11,SNR=11						
BW06	Boulder Array	47.75	322	P	P	06 13 25.9	+0.6
BW06				IAmb	IAmb	06 13 50.6	
	comp=Z,2.4nm,1.1s						
PLCA	Paso Flores	49.04	179	P	P	06 13 33.6	-1.4
	comp=Z,3.1nm,0.8s,baz=352,slow=8.7,SNR=6.9						
YKA	Yellowknife Ar	62.26	339	P	P	06 15 09.4	-0.3
	comp=Z,0.6nm,0.5s,baz=124,slow=7.0,SNR=5.3						
TORD	Torodi Ar. Bea	71.71	79	P	P	06 16 09.3	-1.4
	comp=Z,0.2nm,0.5s,baz=286,slow=4.6,SNR=2.3						
TORD	Torodi Ar. Bea	71.71	79	IAmb	IAmb	06 16 23.9	
	comp=Z,2.1nm,1.4s						
ILAR	Eielson Array	76.14	335	P	P	06 16 36.3	+0.6
	comp=Z,0.3nm,0.6s,baz=110,slow=5.1,SNR=6.8						
ASAR	Alice Springs	151.51	235	PKPbc	PKPbc	06 24 41.5	-1.5
	comp=Z,1.0nm,0.6s,baz=118,slow=2.7,SNR=16						
WRA	Warramunga Arr	152.67	243	PKPbc	PKPbc	06 24 44.5	-1.2
	comp=Z,1.4nm,0.5s,baz=109,slow=2.7,SNR=32						

IDC 05 06:16:41.7±1.9, **34°.59S**×**108°.90W**, **h0**^{km}, **mb4.0**/2, **mb1 4.5**/2, **mb1mx3.9**/17, **mbtmp4.0**/2, **MS3.4**/2, **Ms1 3.5**/2, **ms1mx3.2**/18, **Error ellipse: s-maj=115.0km s-min=54.1km az=106.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03N2	Juan Fernandez	24.83	96	T	T	06 48 08.2	
	baz=266,slow=73,SNR=7.8						
H03N3	Juan Fernandez	24.83	96	T	T	06 48 10.5	
	baz=266,slow=73,SNR=7.1						
H03N1	Juan Fernandez	24.84	96	T	T	06 48 10.9	
	baz=266,slow=73,SNR=5.5						
PLCA	Paso Flores	30.79	113	LR	LR	06 32 57.0	
	comp=Z,58nm,18.0s,baz=242,slow=32						
LPAZ	La Paz	40.75	74	LR	LR	06 36 50.3	
	comp=Z,65nm,21.2s,baz=240,slow=30						
NVAR	Mina Array Bea	73.17	352	P	P	06 28 15.2	+0.9
	1.5nm,0.8s,baz=177,slow=7.8,SNR=6.9						
PDAR	Pinedale Array	76.98	360	P	P	06 28 35.8	-0.4
	1.5nm,1.1s,baz=188,slow=5.2,SNR=4.5						
AKASG	Malin Array Be	145.76	49	PKPbc	PKPdf	06 36 21.3	-0.5
	0.6nm,0.7s,baz=294,slow=3.0,SNR=2.1						
CMAR	Chiang Mai Arr	150.49	244	PKPbc	PKiKP	06 36 36.5	-0.1
	0.6nm,0.3s,baz=132,slow=1.3,SNR=5.9						
SONM	Songino Array	150.61	308	PKPbc	PKPbc	06 36 33.7	-1.7
	1.2nm,0.8s,baz=84,slow=1.0,SNR=7.3						

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*TAP **05** 06:26:06.5, 24°.73N×122°.30E, h16^{km}, ML3.2, C*
*JMA **05** 06:26:07.4±0.1, 24°.65N×122°.33E, h40^{km}±3^{km}, M2.3*
ISC 05 06:26:06.1±1.0, **24°.71N**±0°.03×**122°.35E**±0°.02, **h14**^{km}±9^{km}, **n61**, σ**0^s.63**/101, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.40	290	P	Pg	06 26 14.1	0.0
	baz=290						
EGS				eS	Sg	06 26 20.2	+0.6
	baz=290						
TWB1	Santiao Chiao	0.44	313	P	Pg	06 26 15.1	+0.1
	baz=316						
TWB1				eS	Sg	06 26 20.0	-0.9
	baz=316						
TWC	Suao	0.46	258	P	Pg	06 26 15.0	-0.3
	baz=260						
TWC				eS	Sg	06 26 20.8	-0.7
	baz=260						
NTC	Toucheng	0.49	288	eP	Pg	06 26 16.0	+0.2
	baz=287						
NTC				eS	Sb	06 26 23.1	-0.5
	baz=287						
TIPB	Shuangxi	0.54	299	eP	Pb	06 26 17.2	-0.2
	baz=293						
EWUT	Wuta	0.58	243	P	Pg	06 26 17.3	-0.2
	baz=247						
EWUT				eS	Sg	06 26 25.6	+0.4
	baz=247						
NDS	Dongshan	0.58	263	P	Pg	06 26 17.4	-0.1
	baz=260						
NDS				eS	Sg	06 26 24.8	-0.3
	baz=260						
JYNG	Yonagunijimaku	0.60	115	P	Pb	06 26 19.2	+0.8
JYNG				eS	Sb	06 26 28.0	+1.3
ENA	Nanau	0.62	243	P	Pg	06 26 18.0	-0.1
	baz=247						
ENA				eS	Sg	06 26 25.8	-0.6
	baz=247						
NWF	Wu-fen Shan	0.63	305	P	Pb	06 26 19.5	+0.5
	baz=316						
NWF				eS	Sb	06 26 27.7	0.0
	baz=316						
YOJ	Yonaguni jima	0.65	112	P	Pb	06 26 20.1	+0.9
	baz=111						
YOJ				S	Sn	06 26 30.0	-1.0
	baz=111						
YOJ	Yonaguni jima	0.65	112	P	Pb	06 26 20.1	+0.9
YOJ				S	Sb	06 26 29.5	+1.3
ENTT	Nioudou	0.71	265	eP	Pb	06 26 20.9	+0.6
	baz=263						
ENTT				eS	Sg	06 26 29.6	+0.2
	baz=263						
TWA	Mucha	0.74	292	eP	Pb	06 26 21.2	+0.3
	baz=292						
TWA				eS	Sb	06 26 31.0	+0.1
	baz=292						
NDT	Datong Townshi	0.77	262	eP	Pb	06 26 21.1	0.0
	baz=261						
NDT				eS	Sg	06 26 30.6	-0.5
	baz=261						
NWLT	Wulai	0.77	275	eP	Pg	06 26 21.1	0.0
	baz=281						
NWLT				eS	Sg	06 26 30.6	-0.7
	baz=281						
YM01	YM01	0.83	302	eP	Pb	06 26 22.6	+0.3
	baz=303						
YM01				eS	Sb	06 26 33.7	+0.3
	baz=303						
NACB	Ninganchiao	0.87	232	eP	Pg	06 26 22.5	-0.3
	baz=238						
NACB				eS	Sg	06 26 33.9	-0.3
	baz=238						
TWY	Chenhua	0.88	310	eP	Pn	06 26 24.1	0.0
	baz=312						
TWY				eS	Sb	06 26 35.5	+0.7
	baz=312						
YHNB	Yeheng	0.88	268	eP	Pb	06 26 23.3	+0.1
	baz=267						
YHNB				eS	Sg	06 26 34.7	-0.1
	baz=267						
NSK	Sanguang	0.90	268	eP	Pg	06 26 23.5	0.0
	baz=267						
NSK				eS	Sg	06 26 34.7	-0.6
	baz=267						
NNSB	Datong	0.92	253	eP	Pg	06 26 23.4	-0.5
	baz=251						
NNSB				eS	Sg	06 26 36.2	+0.2
	baz=251						
NNS	Nan Shan	0.93	254	eP	Pb	06 26 24.4	+0.4
	baz=251						
NNS				eS	Sg	06 26 35.7	-0.5
	baz=251						
TWD	Chiawan	0.93	228	eP	Pn	06 26 24.7	+0.1
	baz=231						
TWD				eS	Sb	06 26 36.6	+0.5
	baz=231						
ETLH	Xiulin Townshi	0.93	238	eP	Pg	06 26 24.0	-0.2
	baz=244						
ETLH				eS	Sg	06 26 35.9	-0.5
	baz=244						
FUSS	Fushou	1.10	246	eP	Pn	06 26 27.9	+0.6
	baz=244						
FUSS				eS	Sg	06 26 41.7	-0.2
	baz=244						
WHF	Hehuan Shan	1.13	241	eP	Pg	06 26 27.9	-0.1
	baz=249						
WHF				eS	Sg	06 26 42.1	-0.8
	baz=249						
TWT	Tachien	1.16	247	eP	Pn	06 26 29.1	+1.0
	baz=245						
TWT				eS	Sg	06 26 43.6	0.0
	baz=245						
TDCB	Techi	1.17	248	eP	Pn	06 26 28.8	+0.6
	baz=246						
TDCB				eS	Sb	06 26 43.9	+0.5
	baz=246						
LIOB	Emei	1.21	267	eP	Pg	06 26 30.0	+0.6
	baz=265						
ESL	Shilin	1.22	223	eP	Pb	06 26 29.4	+0.4
	baz=204						
NSTT	Nanjuang	1.23	267	eP	Pg	06 26 29.7	0.0
	baz=283						
CHGB	Renai	1.25	239	eP	Pg	06 26 30.2	0.0
	baz=246						
CHGB				eS	Sb	06 26 46.1	+0.5
	baz=246						
IRIF	Iriomote-Funau	1.31	106	P	Pn	06 26 29.5	-0.5
IRIF				eS	Sb	06 26 47.0	-0.2
WHP	Taichung City	1.34	252	eP	Pg	06 26 32.4	+0.4
	baz=251						
WHP				eS	Sb	06 26 48.8	+0.5
	baz=251						
NMLH	Miaoli	1.43	264	eP	Pg	06 26 33.6	+0.1
	baz=279						
VWDT	VWDT	1.45	230	eP	Pb	06 26 33.3	+0.4
	baz=212						
WCS	Beigang Elemen	1.46	244	eP	Pg	06 26 34.4	+0.2
	baz=241						
NSY	Sanyi	1.47	259	eS	Sg	06 26 55.1	+1.6
	baz=258						
HGSD	Ruisui	1.47	215	eP	Pb	06 26 33.8	+0.6
	baz=199						
TWQ1	Liyutan	1.48	256	eP	Pg	06 26 35.4	+0.9
	baz=255						
TWQ1				eS	Sg	06 26 55.0	+1.3
	baz=255						
HATJ	Hateruma jima	1.48	116	eS	Sn	06 26 50.8	-0.6
EHY	Hungye	1.52	218	eP	Pn	06 26 32.9	0.0
	baz=216						
SMLT	Sun Moon Lake	1.55	238	eP	Pg	06 26 36.0	0.0
	baz=244						
SMLT				eS	Sg	06 26 55.8	-0.4
	baz=244						
SSLB	Suanglung	1.56	235	eP	Pb	06 26 35.7	+0.8
	baz=237						
SSLB				eS	Sb	06 26 55.0	+0.5
	baz=237						
TYC	Yuchr	1.58	240	eP	Pb	06 26 35.5	+0.5
	baz=225						
JKRS	Kuro-shima	1.58	107	P	Pn	06 26 33.9	+0.2
JKRS				S	Sn	06 26 53.0	-1.0
YULB	Yu-li	1.62	216	eP	Pn	06 26 33.9	-0.4
	baz=214						
JIJ	Ishigaki jima	1.67	101	P	Pn	06 26 34.6	-0.3
JIJ				eS	Sn	06 26 54.7	-1.5
FULB	Fuli	1.78	213	eP	Pb	06 26 38.3	-0.2
	baz=197						
ALS	Alishan	1.84	230	eP	Pb	06 26 39.5	-0.2
	baz=211						
ALS				eS	Sb	06 27 04.6	+1.8
	baz=211						
CHN5	Tsauling	1.88	234	eP	Pb	06 26 41.1	+0.8
	baz=215						
CHN5				eS	Sg	06 27 06.3	-0.3
	baz=215						
WRL	Guolierlin Hig	1.97	246	eP	Pb	06 26 42.1	+0.4
	baz=244						
EDH	Donghe	1.97	209	eP	Pn	06 26 38.6	-0.5
	baz=193						
EDH				eS	Sn	06 27 03.2	-0.4
	baz=193						
CHN4	Tsaushan	2.10	230	eP	Pb	06 26 43.5	-0.4
	baz=213						
STYH	Taoyuan	2.10	224	eP	Pb	06 26 43.6	-0.4
	baz=207						
TPUB	Ta-pu	2.10	229	eP	Pb	06 26 43.3	-0.7
	baz=211						
TPUB				eS	Sb	06 27 11.2	+1.2
	baz=211						
WTP	Ta-pu	2.15	228	eP	Pb	06 26 43.9	-0.9
	baz=211						
TWK	Hsinying	2.22	230	eP	Pb	06 26 45.1	-1.0
	baz=213						
CHN1	Nanshi	2.25	228	eP	Pb	06 26 47.2	+0.7
	baz=213						
MASBT	Mashibuluo	2.61	217	eP	Pb	06 26 51.3	-1.4
	baz=205						

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*SOF **05** 06:34:48.5, 41°.97N×23°.28E, h2^{km}, MD2.6*
*SKO **05** 06:34:48.3, 41°.93N×23°.20E, h15^{km}*
*THE **05** 06:34:49.5, 41°.91N×23°.26E, h13^{km}, ML1.7/5, Error ellipse: s-maj=1.7km s-min=0.8km az=172.0*
*BEO **05** 06:34:50.8±0.6, 41°.96N×23°.13E, h0^{km}, ML1.9/7*
ISC 05 06:34:48.7±1.0, **41°.95N**±0°.02×**23°.20E**±0°.03, **h11**^{km}±8^{km}, **n23**, σ**1^s.21**/40, **Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.12	227	i P	Pg	06 34 51.9	+0.3
MMB	Musomiste	0.53	132	i P	Pg	06 34 59.5	+0.4
VTS	Vitosha	0.67	2	i P	Pg	06 35 01.3	-0.4
VTS	Vitosha	0.67	2	i Pg	Pg	06 35 01.4	-0.4
VTS				i Sg	Sg	06 35 09.7	-0.8
VTS	Vitosha	0.67	2	ePg	Pg	06 35 01.3	-0.4
VTS				eSg	Sg	06 35 10.3	-0.2
BOSS	Bosilegrad	0.76	316	ePg	Pb	06 35 05.3	+1.2
BOSS				eSg	Sg	06 35 13.2	-0.3
NVR	Nevrokopi	0.78	140	P	Pg	06 35 03.3	-0.4
NVR				S	Sg	06 35 13.5	-0.4
	72nm,0.1s						
VAY	Valandovo	0.78	217	i Pg	Pg	06 35 04.2	+0.3
VAY				i Sg	Sg	06 35 14.8	+0.8
VAY				eLg	Lg	06 35 15.2	
	comp=E,33nm,0.3s						
VAY	Valandovo	0.78	217	ePg	Pg	06 35 04.3	+0.5
VAY				eSg	Sg	06 35 14.5	+0.4
STIP	Stip	0.80	252	i Pg	Pg	06 35 00.0	-4.1
STIP				i Sg	Sg	06 35 08.3	-6.2
STIP				eLg	Lg	06 35 08.4	
	comp=N,24nm,0.2s						
KNT	Kendrikon	0.82	196	P	Pg	06 35 04.2	-0.3
KNT				S	Sg	06 35 16.5	+1.4
	comp=N,78nm,0.2s						
KNT	Kendrikon	0.82	196	i Pg	Pg	06 35 04.2	-0.3
KNT				i Sg	Sg	06 35 16.7	+1.5
SRS	Serrai	0.88	160	P	Pg	06 35 05.0	-0.7
SRS				S	Sg	06 35 17.5	+0.3
	comp=N,58nm,0.2s						
SRS	Serrai	0.88	160	i Pg	Pg	06 35 05.3	-0.4
SRS				i Sg	Sg	06 35 17.5	+0.3
PRVS	Prvonek	1.00	304	ePg	Pb	06 35 08.6	+0.4
PRVS				eSg	Sb	06 35 20.9	-0.5
SOH	Sokhos	1.13	174	P	Pb	06 35 09.9	-0.5
SOH				S	Sb	06 35 25.4	+0.3
	comp=N,50nm,0.4s						
SOH	Sokhos	1.13	174	i Pg	Pb	06 35 10.1	-0.2
GRG	Griva	1.16	211	P	Pn	06 35 10.6	-0.4
GRG				S	Sb	06 35 26.3	+0.5
	comp=N,28nm,0.3s						
GRG	Griva	1.16	211	i Pg	Pn	06 35 10.6	-0.4
GRG				i Sg	Sb	06 35 26.3	+0.5
RZN	Rozhen	1.16	102	i P	Pb	06 35 10.6	-0.4
BARS	Barje	1.34	311	ePg	Pn	06 35 14.2	+0.7
BARS				eSg	Sn	06 35 30.8	-0.6
ZAPS	Zavoj	1.39	343	ePg	Pb	06 35 15.4	+0.7
ZAPS				eSg	Sg	06 35 33.8	+0.4
SELS	Selova	1.99	310	ePn	Pb	06 35 25.7	+0.7
SELS				eSn	Sb	06 35 51.0	+1.1

IDC ***05*** *06:44:52.8±2.5, 21°.98N×144°.48E, h0^{km}, mb3.9/5, mb1 4.1/6, mb1mx3.5/46, mbtmp3.9/6, ML3.1/1, Error ellipse: s-maj=121.4km s-min=23.2km az=84.0*

ISC 05 06:45:01.8±2.6**, 22°.1N**±0°.2×**144°.3E**±0°.8**, h69**^{km}**, n6, σ2**^{s}**42**/6**, mb3.8**/5**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	15.35	341	Pn	Pn	06 48 31.2	-3.1
	0.1nm,0.3s,baz=151,slow=11,SNR=2.9						
WRA	Warramunga Arr	42.87	194	P	P	06 52 52.4	-1.0
	0.4nm,0.2s,baz=18,slow=8.0,SNR=25						
ASAR	Alice Springs	46.57	193	P	P	06 53 22.1	-0.7
	0.1nm,0.5s,baz=15,slow=8.1,SNR=2.0						
MKAR	Makanchi Array	55.19	312	P	P	06 54 29.0	+1.5
	0.4nm,0.5s,baz=92,slow=8.4,SNR=6.0						
ARCES	ARCESS Array B	78.89	342	P	P	06 56 59.1	+1.9
	8.5nm,1.0s,baz=67,slow=6.9,SNR=4.0						
FINES	FINESS Array B	83.28	335	P	P	06 57 21.4	+0.8
	2.4nm,0.8s,baz=57,slow=7.0,SNR=5.7						

IDC ***05*** *06:51:34.9±0.5, 4°.17S×106°.90E, h643^{km}±6^{km}, mb4.0/36, mb1 4.0/39, mb1mx3.9/50, mbtmp5.0/39, Error ellipse: s-maj=8.4km s-min=6.7km az=61.0*

DJA ***05*** *06:51:34.7±0.1, 4°S±2°×10°7E±°, h637^{km}±2^{km}, M4.4/60, mb4.7/60, mB5.0/28, MLv4.9/32, Mw(mB)4.3/28*

KLM ***05*** *06:51:35, 4°.20S×106°.89E, h648^{km}, mb5.0*

NEIC ***05*** *06:51:35.5±1.8, 4°.24S±0°.09×106°.87E±0°.10, h640^{km}±6^{km}, mb4.9/47, Error ellipse: s-maj=15.1km s-min=12.0km az=60.0*

ISC 05 06:51:34.7±0.5**, 4°.26S**±0°.05×**106°.84E**±0°.05**, h645**^{km}±4^{km}**, n348, σ1**^{s}**17**/355**, mb4.8**/81**, 17C-48D, Fault plane solution: NP1:**φ$_s$11.35696°**,** δ47.34845°**,** λ27.22000°. **NP2:**φ$_s$262.14319°**,** δ70.34119°**,** λ133.98891°. **Principal axes:** T Plg45.8053°, Azm216.9316°**;** N Plg40.8467°, Azm64.1520°**;** P Plg13.9579°, Azm321.7427°**; Fault plane solution: NP1:**φ$_s$134.17479°**,** δ79.52319°, λ-93.18053°. **NP2:**φ$_s$331.16748°**,** δ10.94378°, λ-73.29899°. **Principal axes:** T Plg34.4487°, Azm226.9017°**;** N Plg3.1275°, Azm134.7537°**;** P Plg55.3687°, Azm40.2162°**; Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNG	Tangerang	1.91	186	P	P	06 52 51.9	-0.9
TNG				P	P	06 52 53.4	+0.6
BLSI	Bandar Lampung	1.93	235	P	P	06 52 51.9	-1.0
BLSI				S	S	06 53 53.7	-2.8
SBJI	Serang	1.98	201	P	P	06 52 51.6	-1.5
KLI	Kotabumi	2.07	253	P	P	06 52 52.1	-1.3
KLSI		2.15	259	P	P	06 52 52.6	-1.1
KLSI				S	S	06 53 54.6	-3.4
PPBI	Pangkal Pinang	2.20	341	P	P	06 52 54.3	+0.3
DBJI	Dramaga	2.28	182	P	P	06 52 52.9	-1.4
PMBI	Palembang	2.46	303	P	P	06 52 55.9	+0.9
PMBI	Palembang	2.46	303	P	P	06 52 55.3	+0.3
PMBI	Palembang	2.46	303	P	P	06 52 56.0	+0.9
CGJI	Cibinong	2.60	206	P	P	06 52 54.2	-1.5
KASI	Kota Agung	2.65	242	P	P	06 52 54.5	-1.4
LEM	Lembang	2.66	163	P	P	06 52 55.2	-0.9
	23nm,0.3s,baz=190,slow=4.5,SNR=11						
LEM				S	S	06 54 03.5	+1.1
	38nm,0.3s,baz=107,slow=22,SNR=6.3						
LEM	Lembang	2.66	163	P	P	06 52 55.1	-1.1
MDSI	Maura Dua	2.67	265	P	P	06 52 54.5	-1.5
LWLI	Liwa	2.87	255	P	P	06 52 56.0	-1.1
CNJI	Cibinong	3.04	175	P	P	06 52 55.6	-2.3
LHSI	Lahat	3.34	277	P	P	06 52 58.6	-0.9
CMJI	Cimerak	3.84	156	P	P	06 52 59.9	-2.6
JMBI	JAMBI	4.13	309	P	P	06 53 06.0	+1.6
DSRI	Dabo	4.39	329	P	P	06 53 06.2	0.0
SMRI	Semarang	4.53	128	P	P	06 53 06.9	-0.2
SMRI	Semarang	4.53	128	P	P	06 53 06.6	-0.5
SMRI	Semarang	4.53	128	P	P	06 53 07.2	+0.1
UWJI	Ujung Watu	4.61	118	P	P	06 53 09.3	+1.6
MASI	Maura Aman, Be	4.73	283	P	P	06 53 07.8	-0.8
PBKI	Pangkalan Bun	5.06	72	P	P	06 53 11.6	+0.6
	3.3nm12μm1μm,0.8s						
UGM	Wanagama	5.15	135	P	P	06 53 10.4	-1.3
KRJI	Kerinci	5.79	292	P	P	06 53 17.0	+0.2
	2.7nm819nm,0.8s						
XMI	Christmas Isla	6.25	190	P	P	06 53 20.8	+0.4
XMIS	Christmas Isla	6.29	191	P	P	06 53 20.6	-0.2
XMIS	Christmas Isla	6.29	191	P	P	06 53 20.9	+0.2
STKI	Sintang	6.32	47	P	P	06 53 21.7	+0.7
	4.0nm11μm1μm,0.7s						
KSM	Kuching	6.67	31	P	P	06 53 24.0	0.0
KSM	Kuching	6.67	31	P	P	06 53 23.7	-0.3
KSM	Kuching	6.67	31	P	P	06 53 24.3	+0.3
MYKOM	Kota Tinggi	6.72	334	P	P	06 53 25.0	+0.6
MYKOM	Kota Tinggi	6.72	334	P	P	06 53 24.4	+0.1
PPSI	Pulau Pagai	6.98	282	P	P	06 53 26.0	-0.6
	1.9nm4μm286nm,0.9s						
PDSI	Padang	7.19	297	P	P	06 53 25.8	-2.7
	0.3nm4μm38nm,0.6s						
KMMI	Kalianget	7.61	112	P	P	06 53 30.9	-1.3
	0.3nm78nm,0.8s						
BBKI	Banjar Baru	8.02	85	P	P	06 53 35.9	0.0
	1.3nm418nm,0.7s						
JAGI	Jajag, Banyuwa	8.38	120	P	P	06 53 41.3	+2.1
JAGI	Jajag, Banyuwa	8.38	120	P	P	06 53 37.5	-1.7
JAGI	Jajag, Banyuwa	8.38	120	P	P	06 53 37.6	-1.6
SBUM	Sibu	8.56	39	P	P	06 53 42.0	+1.1
SBUM	Sibu	8.56	39	P	P	06 53 41.4	+0.5
MTKI	Muara Teweh, K	8.70	68	P	P	06 53 42.9	+0.7
	1.1nm362nm,0.8s						
SRBI	Singaraja	9.15	115	P	P	06 53 46.2	-0.2
	2μm203nm,0.7s						
JRMM	Jerantut	9.20	332	P	P	06 53 48.0	+1.1
KBKI	Kotabaru	9.35	84	P	P	06 53 49.2	+0.9
	10μm859nm,0.7s						
IPM	Ipoh	10.45	326	P	P	06 54 01.0	+2.1
IPM	Ipoh	10.45	326	P	P	06 53 59.2	+0.3
IPM	Ipoh	10.45	326	P	P	06 53 59.8	+0.9
BKB	Balikpapan	10.47	74	P	P	06 54 02.4	+3.3
	6μm474nm,1.0s						
BKB	Balikpapan	10.47	74	P	P	06 54 01.5	+2.4
BKB	Balikpapan	10.47	74	P	P	06 53 59.3	+0.2
RPSI	Rantau Prapat	10.51	311		S	06 55 58.1	+0.2
PSI	Prapat	10.58	311	S	S	06 55 58.1	-1.3
	0.6nm,0.3s,baz=87,slow=22,SNR=9.2						
TWSI	Taliwang, Sumb	10.92	115	P	P	06 54 01.5	-1.9
	22nm,0.8s						
SMKI	Samarinda	11.03	70	P	P	06 54 07.8	+3.3
	402nm,1.0s						
KULM	Kulim	11.33	327	P	P	06 54 07.3	0.0
PLAI	Plampang	11.77	113	P	P	06 54 09.4	-1.9
	928nm70nm,0.7s						
PLAI	Plampang	11.77	113	P	P	06 54 09.5	-1.9
KAPI	Kappang	12.89	94	P	P	06 54 22.2	+0.4
	9.6nm,0.3s,baz=283,slow=9.2,SNR=35						
KAPI				S	S	06 56 41.0	+2.7
	1.4nm,0.3s,baz=120,slow=20,SNR=5.9						
KAPI	Kappang	12.89	94	P	P	06 54 22.7	+0.9
SPSI	Sidrap Palu	12.90	89	P	P	06 54 22.5	+0.7
	40nm,0.7s						
TTSI	Tana Toraja	13.01	85	P	P	06 54 25.1	+2.2
	4μm42nm,0.6s						
SPMM	Sapulut	13.11	47	P	P	06 54 25.0	+1.1
BNSI	Bone	13.23	91	P	P	06 54 26.4	+1.5
	1μm156nm,0.8s						
BKSI	Bulukumba	13.28	95	P	P	06 54 26.1	+0.8
	864nm114nm,0.8s						
WBSI	Waikabubak, Su	13.55	114	P	P	06 54 25.0	-2.9
	1μm126nm,0.6s						
BSSI	Bau Bau, Buton	13.72	98	P	P	06 54 29.9	+0.4
	2μm215nm,0.7s						
MPSI	Mapaga	13.82	71	P	P	06 54 32.2	+1.8
	59nm,0.8s						
KKM	Kota Kinabalu	13.87	42	P	P	06 54 31.3	+0.3
KKM	Kota Kinabalu	13.87	42	P	P	06 54 31.6	+0.6
SRIT	Nakonsritamara	14.67	331	P	P	06 54 39.4	+1.2
TOLI2	Tolitoli	14.92	69	P	P	06 54 41.7	+1.2
TOLI2	Tolitoli	14.92	69	P	P	06 54 42.0	+1.5
MYLDM	Lahad Datu	14.95	51	P	P	06 54 42.6	+1.8
EDFI	Ende, Flores	15.41	108	P	P	06 54 43.7	-1.4
	10nm,0.7s						
MRSI	Marisa	15.80	73	P	P	06 54 49.7	+1.1
	49nm,0.6s						
DLV	T Lat	16.18	6	P	P	06 54 53.6	+1.4
DLV				IAmb	IAmb	06 54 54.8	
	comp=Z,125nm,1.3s						
DLV	T Lat	16.18	6	P	P	06 54 53.8	+1.5
GTOI	Gorontalo	16.87	74	P	P	06 54 56.6	-1.8
	comp=Z,15nm,0.8s						
BATI	Baumata	17.69	110	P	P	06 55 05.6	-0.3
	comp=Z,8.2nm,0.3s,baz=142,slow=4.0,SNR=6.0						
BATI				S	S	06 57 52.8	-4.2
	comp=Z,14nm,0.3s,baz=262,slow=22,SNR=8.8						
BATI	Baumata	17.69	110	P	P	06 55 05.1	-0.8
	comp=Z,744nmcomp=Z,36nm,0.7s						
UBPT	Khong Chiam	19.47	356	P	P	06 55 21.4	-0.4
UBPT				IAmb	IAmb	06 55 23.1	
	comp=Z,22nm,0.8s						
GIRL	Giralia	19.62	159	P	P	06 55 24.8	+1.6
FITZ	Fitzroy Crossi	22.96	128	P	P	06 55 53.2	+0.3
	comp=Z,3.2nm,0.5s,baz=258,slow=2.8,SNR=6.1						
CM31	Chiang Mai Arr	23.88	341	P	P	06 56 01.8	+0.7
CM31				IAmb	IAmb	06 56 03.1	
	comp=Z,44nm,0.9s						
CMAR	Chiang Mai Arr	23.88	341	P	P	06 56 02.2	+1.2
	comp=Z,38nm,0.8s,baz=176,slow=8.6,SNR=155						
CMAR				PcP	PcP	06 59 21.0	+0.9
	comp=Z,1.9nm,0.6s,baz=206,slow=2.8,SNR=5.4						
CMAR				ScP	ScP	07 01 59.7	+0.9
	comp=Z,2.8nm,0.6s,baz=190,slow=4.0,SNR=11						
CMAR	Chiang Mai Arr	23.88	341	P	P	06 56 01.8	+0.7
CHTO	Chiang Mai	24.22	341	P	P	06 56 04.7	+0.7
CHTO				IAmb	IAmb	06 56 05.8	
	comp=Z,36nm,0.7s						
CHTO	Chiang Mai	24.22	341	P	P	06 56 05.3	+1.3
KNRA	Kununurra	24.35	119	P	P	06 56 04.8	-0.5
SWI	Sorong	24.62	83	P	P	06 56 07.3	-0.4
	comp=Z,23nm,1.0s						
SIJI	Sorong	24.63	83	P	P	06 56 07.2	-0.6
	comp=Z,6.4nm,0.3s,baz=284,slow=6.2,SNR=7.4						
DRS	Darwin Rock St	25.13	110	P	P	06 56 12.3	+0.2
FAKI	Fak Fak	25.39	88	P	P	06 56 15.0	+0.5
	comp=Z,32nm,0.9s						
FAKI	Fak Fak	25.39	88	P	P	06 56 14.2	-0.3
FAKI				IAmb	IAmb	06 56 15.3	
	comp=Z,20nm,0.8s						
FAKI	Fak Fak	25.39	88	P	P	06 56 14.6	+0.1
SLVN	Son La	25.60	354	P	P	06 56 17.9	+1.7
SLVN				IAmb	IAmb	06 56 18.9	
	comp=Z,23nm,0.9s						
KDU	Kakadu	26.67	110	P	P	06 56 25.0	-0.6
MUN	Mundaring	28.94	163	P	P	06 56 46.5	+1.5
KLBR	Kellerberrin	29.05	161	P	P	06 56 47.1	+1.1
KMI	Kunming	29.48	352	⇑P	P	06 56 52.2	+2.2
KMI				pmax	pmax		
	comp=Z,52nm,1.1s						
TWG	Pinlang	30.30	27	P	P	06 56 57.8	+1.0
TWG				IAmb	IAmb	06 57 05.7	
	comp=Z,45nm,0.9s						
TPUB	Ta-pu	30.52	26	P	P	06 56 59.7	+1.0
GYA	Guiyang	30.54	360	⇑*i*P	P	06 57 00.7	+1.8
GYA				pmax	pmax		
	comp=Z,140nm,0.7s						
YULB	Yu-li	30.90	27	P	P	06 57 02.0	+0.1
YULB				IAmb	IAmb	06 57 05.0	
	comp=Z,42nm,1.2s						
WB0	Warramunga Arr	30.96	122	P	P	06 57 02.7	+0.2
WB0				IAmb	IAmb	06 57 03.4	
	comp=Z,16nm,0.6s						
WRA	Warramunga Arr	30.99	122	P	P	06 57 03.1	+0.3
	comp=Z,12nm,0.4s,baz=305,slow=8.5,SNR=222						
WRA				PcP	PcP	06 59 38.1	+0.3
	comp=Z,2.9nm,0.4s,baz=307,slow=2.0,SNR=7.5						
WRA				S	S	07 01 20.8	-3.8
	comp=Z,5.8nm,0.5s,baz=291,slow=16,SNR=13						
WRA				ScP	ScP	07 02 21.2	+0.3
	comp=Z,3.4nm,0.6s,baz=310,slow=2.7,SNR=7.4						
WRA	Warramunga Arr	30.99	122	P	P	06 57 03.0	+0.3
WRAB	Tennant Creek	31.00	122	P	P	06 57 03.0	+0.2
WRAB	Tennant Creek	31.00	122	P	P	06 57 03.5	+0.7
SSLB	Suanglung	31.09	26	P	P	06 57 04.2	+0.7
SSLB	Suanglung	31.09	26	P	P	06 57 04.6	+1.1
WR0	Warramunga Arr	31.17	122	P	P	06 57 04.3	+0.1
WR0				IAmb	IAmb	06 57 05.4	
	comp=Z,31nm,0.6s						
NACB	Ninganchiao	31.71	26	P	P	06 57 08.2	-0.5
YHNB	Yeheng	32.05	25	P	P	06 57 12.2	+0.5
AS31	Alice Springs	32.46	129	P	P	06 57 15.5	+0.3
ASAR	Alice Springs	32.46	129	P	P	06 57 15.8	+0.6
	comp=Z,7.8nm,0.6s,baz=303,slow=7.9,SNR=192						
ASAR				PcP	PcP	06 59 42.5	+0.7
	comp=Z,1.8nm,0.6s,baz=306,slow=2.2,SNR=6.5						
ASAR				S	S	07 01 44.4	-2.5
	comp=Z,9.5nm,0.8s,baz=298,slow=15,SNR=29						
ASAR				ScP	ScP	07 02 26.5	+0.5
	comp=Z,8.3nm,0.7s,baz=305,slow=3.3,SNR=19						
ASAR	Alice Springs	32.46	129	P	P	06 57 15.5	+0.3
YOJ	Yonaguni jima	32.60	28	P	P	06 57 17.2	+1.0
FORT	Forrest	33.10	145	P	P	06 57 21.8	+1.4
FORT	Forrest	33.10	145	P	P	06 57 21.7	+1.4
JAY	Jayapura	33.85	88	P	P	06 57 25.5	-1.3
	comp=Z,20nm,0.7s,baz=357,slow=23,SNR=12						
WHN	Wuhan	35.35	11	⇑P	P	06 57 40.3	+1.4
WHN				pmax	pmax		
	comp=Z,62nm,0.8s						
QIS	Mount Isa	35.74	120	P	P	06 57 42.9	+0.5
OOD	Oodnadatta	36.09	133	P	P	06 57 45.9	+0.9
ODAN	Odare	36.21	330	*e*P	P	06 57 46.6	+0.2
	comp=Z,111nm,0.5s						
ODAN	Odare	36.21	330	*e*P	ScP	07 02 39.6	-0.1
TAPN	Taplejung	36.46	331	*e*P	P	06 57 49.1	+0.7
	comp=Z,115nm,0.7s						
TAPN	Taplejung	36.46	331	*e*P	ScP	07 02 41.0	+0.3
	comp=Z,23nm,0.8s						
RAMN	Ramite	36.69	329	*e*P	P	06 57 50.7	+0.5
	comp=Z,29nm,0.4s						
RAMN	Ramite	36.69	329	*e*P	ScP	07 02 41.6	+0.1
	comp=Z,32nm,0.5s						
LSA	Lhasa	36.97	337	P	P	06 57 53.7	+0.9
JOW	Kunigami	37.22	33	P	P	06 57 54.4	+0.1
	comp=Z,28nm,0.5s,baz=207,slow=7.5,SNR=15						
JOW	Kunigami	37.22	33	P	P	06 57 54.8	+0.5
JOW				IAmb	IAmb	06 57 55.8	
	comp=Z,70nm,1.2s						
JOW	Kunigami	37.22	33	P	P	06 57 55.0	+0.7
PKI	Pulchoki	37.81	328	*e*P	P	06 57 59.4	0.0
PKI	Pulchoki	37.81	328	*e*P	ScP	07 02 45.5	-0.4
	comp=Z,13nm,0.6s						
PKIN	Phulchoki	37.82	328	*e*P	P	06 57 59.4	0.0
PKIN	Phulchoki	37.82	328	*e*P	ScP	07 02 45.4	-0.4
	comp=Z,16nm,0.6s						
GUN	Gumba	37.84	329	*e*P	P	06 58 00.2	+0.5
GUN	Gumba	37.84	329	*e*P	ScP	07 02 45.9	-0.1
	comp=Z,34nm,0.5s						
NJ2	Nanjing	37.88	17	⇓*i*P	P	06 58 00.1	+0.6
NJ2				pmax	pmax		
	comp=Z,49nm,0.6s						
DMN	Daman	38.00	328	*e*P	P	06 58 01.1	+0.2
DMN	Daman	38.00	328	*e*P	ScP	07 02 46.5	0.0
KKN	Kakani	38.05	328	*e*P	P	06 58 01.3	0.0
KKN	Kakani	38.05	328	*e*P	ScP	07 02 46.5	-0.2
	comp=Z,16nm,0.6s						
XAN	Xi'an	38.15	3	P	P	06 58 01.6	-0.1
XAN				pmax	pmax		
	comp=Z,150nm,0.7s						
XAN				pmax	pmax		
	comp=Z,250nm,4.8s						
GKN	Gorkha	38.56	328	*e*P	P	06 58 05.5	+0.2
GKN	Gorkha	38.56	328	*e*P	ScP	07 02 48.0	-0.6
	comp=Z,34nm,0.6s						
KOLN	Koldanda	38.95	326	*e*P	P	06 58 08.6	+0.2
KOLN	Koldanda	38.95	326	*e*P	ScP	07 02 49.5	-0.6
MTSU	Mount Surprise	39.15	114	P	P	06 58 10.7	+0.7
PYUN	Piuthan	39.54	326	*e*P	P	06 58 13.0	-0.1
PYUN	Piuthan	39.54	326	*e*P	ScP	07 02 51.7	-0.7
INKA	Innaminka	39.84	129	P	P	06 58 15.6	+0.3
LZH	Lanzhou	40.24	356	⇓P	P	06 58 19.8	+1.3
LZH				pmax	pmax		
	comp=Z,87nm,1.3s						
LZH				pmax	pmax		
	comp=Z,180nm,5.4s						
PMG	Port Moresby	40.33	99	P	P	06 58 19.8	+0.4
	comp=Z,17nm,0.5s,baz=282,slow=5.7,SNR=7.1						
TIA	Tai'an	41.40	13	⇓P	P	06 58 27.3	-0.1
TIA				pmax	pmax		
	comp=Z,43nm,0.5s						
CTA	Charters Tower	41.46	116	P	P	06 58 29.1	+0.9
	comp=Z,5.8nm,0.5s,baz=266,slow=11,SNR=5.7						
CTAO	Charters Tower	41.46	116	P	P	06 58 29.0	+0.8
GUMO	Guam	41.70	64	P	P	06 58 28.0	-2.1
	comp=Z,63nm,0.4s,baz=83,slow=0.1,SNR=7.3						
QLP	Quilpie	42.06	126	P	P	06 58 34.5	+1.7
	comp=Z,18nm,0.8s						
TIY	Taiyuan	42.09	7	⇓*i*P	P	06 58 33.4	+0.6
TIY				pmax	pmax		
	comp=Z,110nm,0.6s						
STKA	Stephens Creek	42.62	134	P	P	06 58 37.8	+0.9
	comp=Z,2.9nm,0.4s,baz=315,slow=8.3,SNR=11						
STKA				ScP	ScP	07 03 04.8	+0.4
	comp=Z,1.0nm,0.5s,baz=326,slow=8.9,SNR=3.1						
STKA				S	S	07 04 14.1	-1.4
	comp=Z,2.9nm,0.6s,baz=96,slow=17,SNR=6.9						
STKA	Stephens Creek	42.62	134	P	P	06 58 37.3	+0.3
STKA	Stephens Creek	42.62	134	P	P	06 58 37.9	+0.9
JNU	Nakatsue	43.60	30	P	P	06 58 43.7	-0.9
JNU	Nakatsue	43.60	30	P	P	06 58 43.6	-1.0
GTA	Gaotai	43.94	352	⇓P	P	06 58 48.4	+1.2
GTA				PcP	PcP	07 00 18.9	+0.7
GTA				pP	pP	07 00 38.7	+1.1
GTA				sP	sP	07 01 51.8	+2.3
GTA				ScS	ScS	07 07 32.2	-2.6
GTA				pmax	pmax		
	comp=Z,48nm,0.9s						
GTA				pmax	pmax		
	comp=Z,190nm,4.9s						
BTO	Baotou	44.75	3	*e*P	P	06 58 55.0	+1.7
BJT	Baijiatuau	44.89	10	P	P	06 58 54.7	+0.4
BJT				IAmb	IAmb	06 58 55.2	
	comp=Z,41nm,0.5s						
BJI	Beijing	44.91	10	P	P	06 58 54.9	+0.5
BJI				ScP	ScP	07 03 13.5	-0.1
BJI				pmax	pmax		
	comp=Z,65nm,0.7s						
HHC	Hu-ho-hao-te	45.10	5	*e*P	P	06 58 56.8	+0.8
HHC				pmax	pmax		
	comp=Z,33nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,5.7s						
CMSA	Cobar Meteorol	45.44	131	P	P	06 58 59.7	+1.0
KSRS	Korea Array	45.91	23	P	P	06 59 02.2	+0.3
	comp=Z,15nm,0.7s,baz=215,slow=8.3,SNR=41						
KSRS				PcP	PcP	07 00 25.3	+0.3
	comp=Z,3.4nm,0.7s,baz=206,slow=3.3,SNR=6.4						
KSRS				ScP	ScP	07 03 17.8	0.0
	comp=Z,5.8nm,0.8s,baz=214,slow=3.9,SNR=11						
JHS	Saijyo	46.21	30	P	P	06 59 04.2	-0.2
MAT	Matsushiro	50.06	33	P	P	06 59 30.4	-2.4
MJAR	Matsushiro Arr	50.06	33	P	P	06 59 31.2	-1.6
	comp=Z,17nm,0.6s,baz=202,slow=8.0,SNR=20						
MJAR				PcP	PcP	07 00 41.0	+0.7
	comp=Z,5.8nm,0.7s,baz=188,slow=4.5,SNR=5.4						
CN2	Changchun	50.70	17	*e*P	P	06 59 36.3	-0.9
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
WMQ	Urumqi	50.88	342	*e*P	P	06 59 39.1	+0.5
WMQ				pP	pP	07 01 37.5	+2.9
WMQ				pmax	pmax		
	comp=Z,47nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.5s						
SONM	Songino Array	51.88	360	P	P	06 59 46.7	+0.9
	comp=Z,37nm,0.6s,baz=176,slow=8.1,SNR=254						
SONM				PcP	PcP	07 00 47.0	0.0
	comp=Z,14nm,0.6s,baz=181,slow=4.1,SNR=13						
SONM				ScP	ScP	07 03 42.7	-0.7
	comp=Z,6.1nm,0.6s,baz=175,slow=3.7,SNR=18						
SONM	Songino Array	51.88	360	P	P	06 59 46.6	+0.9
SONM				IAmb	IAmb	06 59 47.5	
	comp=Z,43nm,0.9s						
ULN	Ulaanbaatar	51.91	0	P	P	06 59 46.8	+0.8
ULN				IAmb	IAmb	06 59 47.6	
	comp=Z,54nm,0.7s						
MDJ	Mudanjiang	52.76	20	P	P	06 59 52.1	+0.2
USA0B	Ussuriysk Arra	53.27	22	P	P	06 59 55.3	-0.2
USA0B				IAmb	IAmb	06 59 56.3	
	comp=Z,59nm,0.8s						
USRK	Ussuriysk Ar.	53.27	22	P	P	06 59 55.4	-0.1
	comp=Z,53nm,0.6s,baz=197,slow=5.4,SNR=82						
SHLS	Shalkode	53.30	335	*i* P	P	06 59 54.9	-1.0
	comp=Z,29nm,0.5s,baz=335						
SHLS				*e*S	S	07 06 38.5	-2.5
	baz=335						
UZB	Uzynbulak	53.47	335	*i* P	P	06 59 57.0	-0.1
	comp=Z,11nm,0.4s,baz=335						
SATY	Saty	53.66	334	*i* P	P	06 59 58.3	-0.2
	baz=334						
KPKS	Kokpek	53.88	335	*i* P	P	06 59 59.5	-0.4
	baz=335						
ULHL	Ulahol	53.99	332	P	P	07 00 01.0	+0.1
	SNR=8.0						
TNSS	Tian-Shan	54.29	333	*e*P	P	07 00 02.6	-0.6
	baz=333						
BOOM	Boomskoye usch	54.32	332	P	P	07 00 03.3	+0.2
MDOK	Medeo	54.34	333	*i* P	P	07 00 02.8	-0.4
	baz=333						
AAA	Alma-Ata	54.44	333	*e*P	P	07 00 03.5	-0.3
	comp=Z,20nm,0.5s,baz=333						
TKM2	Tokmak 2	54.82	332	P	P	07 00 06.5	-0.1
	SNR=80						
KBK	Karagaybulak	54.92	332	P	P	07 00 07.6	+0.3
	SNR=24						
ZSN	Zaisan	55.01	342	*i* P	P	07 00 07.9	+0.3
	comp=Z,21nm,0.8s,baz=342						
AAK	Ala-Archa	55.12	331	P	P	07 00 08.7	0.0
	comp=Z,5.4nm,0.7s,baz=140,slow=5.9,SNR=11						
AAK				PcP	PcP	07 01 00.6	+0.8
	comp=Z,3.3nm,0.6s,baz=146,slow=6.8,SNR=3.7						
BTK	Batken	55.13	327	P	P	07 00 08.5	-0.2
KUU	Kurty	55.24	333	*i* P	P	07 00 08.4	-0.9
	comp=Z,34nm,0.5s,baz=333						
TDK	Taldyqorghan	55.24	336	*i* P	P	07 00 08.7	-0.5
	comp=Z,21nm,0.3s,baz=336						
MK31	Makanchi Array	55.28	340	P	P	07 00 09.5	0.0
MK31				IAmb	IAmb	07 00 10.4	
	comp=Z,41nm,0.6s						
MKAR	Makanchi Array	55.28	340	P	P	07 00 09.7	+0.2
	comp=Z,60nm,0.5s,baz=152,slow=8.1,SNR=674						
MKAR	Makanchi Array	55.28	340	P	P	07 00 09.9	+0.4
EKS2	Erkin-Say	55.48	331	P	P	07 00 11.4	+0.3
	SNR=20						
USP	Ospenovka	55.60	332	P	P	07 00 11.5	-0.2
	SNR=14						
SGDS	Sogindy	55.68	332	*e*P	P	07 00 11.3	-1.0
	baz=332						
TLY	Talaya	55.80	358	P	P	07 00 14.1	+1.2
	comp=Z,7.6nm,0.5s,baz=194,slow=7.4,SNR=13						
IUG	Iuzhnay	57.02	328	*e*P	P	07 00 20.7	-0.9
	baz=328						
BTLS	Baital	57.16	333	*i* P	P	07 00 21.1	-1.3
	baz=333						
KLR	Kul'dur	57.51	19	P	P	07 00 24.0	-0.6
	comp=Z,30nm,0.5s,baz=213,slow=5.4,SNR=97						
ASAJ	Asahikawa	57.88	30	P	P	07 00 26.9	-0.3
	comp=Z,28nm,0.6s,baz=236,slow=9.6,SNR=22						
SEM	Semipalatinsk	59.08	340	*e*P	P	07 00 34.7	-0.7
	comp=Z,19nm,0.5s,baz=340						
YSS	Yuzh-Sakhalins	60.03	28	P	P	07 00 41.5	+0.1
VOI	Vohitsoka	60.67	247	P	P	07 00 46.8	+0.5
ZAA0	Zalesovo Array	60.86	345	P	P	07 00 45.9	-0.8
ZAA0				IAmb	IAmb	07 00 47.2	
	comp=Z,23nm,0.8s						
ZALV	Zalesovo Beam	60.86	345	P	P	07 00 46.1	-0.6
	comp=Z,15nm,0.3s,baz=116,slow=4.5,SNR=85						
ZALV				PcP	PcP	07 01 21.4	-0.8
	comp=Z,3.1nm,0.5s,baz=175,slow=4.2,SNR=1.5						
ZALV	Zalesovo Beam	60.86	345	P	P	07 00 46.3	-0.4
BRZS	Berezniki	61.56	336	*i* P	P	07 00 51.1	-0.2
	baz=336						
GEYT	Alibeck	61.64	318	P	P	07 00 52.1	-0.1
	comp=Z,4.1nm,0.4s,baz=126,slow=9.9,SNR=5.1						
BRVK	Borovoye	64.87	337	P	P	07 01 12.5	+0.2
BRVK				IAmb	IAmb	07 01 12.9	
	comp=Z,30nm,0.5s						
ABKAR	Akbulak array	67.00	329	P	P	07 01 25.7	+0.1
KIBK	Kibwezi	68.69	269	P	P	07 01 37.0	+0.4
KIBK				IAmb	IAmb	07 01 38.2	
	comp=Z,16nm,0.7s						
KMBO	Kilima Mbogo	69.56	270	P	P	07 01 43.0	+0.9
	comp=Z,8.0nm,0.8s,baz=66,slow=8.8,SNR=17						
MAW	Mawson	69.92	196	P	P	07 01 44.1	+1.4
	comp=Z,11nm,0.4s,baz=48,slow=5.7,SNR=37						
MAW	Mawson	69.92	196	P	P	07 01 43.8	+1.1
MSVF	Nonsavu	70.82	107	P	P	07 01 49.8	+0.7
	comp=Z,2.7nm,0.6s,baz=47,slow=23,SNR=1.5						
PETK	Petropavlovsk-	71.30	30	P	P	07 01 50.3	-0.8

	comp=Z,15nm,0.6s,baz=182,slow=2.1,SNR=49						
LODK	Lodwar	71.83	275	P	P	07 01 56.2	+1.1
ARU	Arti	72.10	334	P	P	07 01 55.8	+0.2
ARU				IAmb	IAmb	07 01 56.5	
	comp=Z,47nm,1.2s						
MA2	Magadan	72.42	22	P	P	07 01 57.6	+0.2
MA2				IAmb	IAmb	07 01 58.4	
	comp=Z,35nm,0.8s						
KBZ	Khabaz	74.53	317	P	P	07 02 08.4	-1.3
	comp=Z,3.8nm,0.9s,baz=190,slow=8.9,SNR=6.2						
NRIK	Noril'sk	74.63	353	P	P	07 02 09.3	-0.4
	comp=Z,16nm,0.5s,baz=139,slow=4.3,SNR=23						
MBAR	Mbarara	76.10	270	P	P	07 02 19.7	+0.5
	comp=Z,12nm,0.7s,baz=78,slow=8.5,SNR=14						
MSNA	Messina	76.20	248	*i* P	P	07 02 19.8	+0.4
MSNA	Messina	76.20	248	*i* P	P	07 02 19.8	+0.4
KRI	Karoi	76.56	254	*i* P	P	07 02 22.4	+0.8
KRI	Karoi	76.56	254	*i* P	P	07 02 22.4	+0.8
TIXI	Tiksi	77.13	7	P	P	07 02 22.6	-0.6
TIXI				IAmb	IAmb	07 02 23.1	
	comp=Z,35nm,0.6s						
BLWY	Bulawayo	77.50	250	*i* P	P	07 02 27.0	+0.4
BLWY	Bulawayo	77.50	250	*i* P	P	07 02 27.0	+0.4
LSZ	Lusaka	77.95	255	*i* P	P	07 02 29.1	0.0
LSZ	Lusaka	77.95	255	*i* P	P	07 02 29.1	0.0
LSZ	Lusaka	77.95	255	P	P	07 02 29.2	+0.2
LSZ				IAmb	IAmb	07 02 30.5	
	comp=Z,25nm,1.4s						
SYO	Syowa Base	78.00	200	⇑*e*P	P	07 02 28.4	+0.4
SYO	Syowa Base	78.00	200	⇑*e*PcP	PcP	07 02 35.4	+0.6
VNDA	Vanda	78.67	170	P	P	07 02 32.3	+0.8
BRTR	Keskin Array B	79.91	311	P	P	07 02 38.6	-0.3
	comp=Z,3.3nm,0.8s,baz=120,slow=7.2,SNR=14						
LBTB	Lobatse	80.28	245	P	P	07 02 41.2	+0.1
LBTB				IAmb	IAmb	07 02 42.3	
	comp=Z,14nm,0.8s						
BOSA	Boshof	80.59	242	P	P	07 02 42.9	+0.2
	comp=Z,15nm,0.5s,baz=60,slow=7.2,SNR=6.3						
KLMR	Klimovskoe	82.89	333	*e*P	P	07 02 50.4	-2.9
KLMR				AMP		07 02 53.7	
	comp=Z,8.0nm,0.7s						
AKASG	Malin Array Be	85.47	321	P	P	07 03 05.1	-1.1
	comp=Z,5.1nm,0.6s,baz=85,slow=4.5,SNR=27						
QSPA	South Pole Qui	85.71	180	P	P	07 03 07.7	+0.5
FINES	FINESS Array B	89.31	332	P	P	07 03 23.4	-0.4
	comp=Z,4.0nm,0.8s,baz=116,slow=8.7,SNR=13						
ARCES	ARCESS Array B	90.93	340	P	P	07 03 30.3	-1.0
	comp=Z,2.7nm,0.6s,baz=98,slow=7.5,SNR=13						
VNA2	Neumayer--Watz	93.72	197	P	P	07 03 45.4	+1.4
GERES	GERESS Array B	95.25	319	P	P	07 03 50.2	-1.3
	comp=Z,0.4nm,0.5s,baz=97,slow=7.0,SNR=3.7						
NOA	NORSAR Array B	96.44	331	P	P	07 03 55.7	-0.7
	comp=Z,1.1nm,0.7s,baz=94,slow=6.4,SNR=1.4						
CAST	Castle Rocks	98.75	27	Pdiff	P	07 04 07.3	+0.6
	baz=278						
TOLK	Toolik Lake Re	98.89	21	Pdiff	P	07 04 07.6	+0.3
	baz=281						
ILAR	Eielson Array	100.75	25	P	Pdif	07 04 13.2	-2.3
	comp=Z,0.2nm,0.6s,baz=286,slow=5.2,SNR=5.7						
ILAR				PP	PP	07 08 35.0	+1.2
	comp=Z,0.9nm,0.9s,baz=288,slow=6.0,SNR=6.8						
YKA	Yellowknife Ar	114.36	20	PKP	PKPdf	07 09 01.8	-0.7
	comp=Z,1.3nm,0.7s,baz=325,slow=2.5,SNR=14						
B05A	Bryant	119.52	35	P	PKiKP	07 09 13.7	+0.7
	baz=300						
L04D	Klamath Falls	122.28	42	P	PKiKP	07 09 19.0	+0.1
	baz=297						
J05D	Fort Rock, OR	122.48	40	P	PKiKP	07 09 19.6	+0.4
	baz=299						
N02D	Trinity Center	122.56	43	P	PKiKP	07 09 20.0	+0.7
	baz=296						
M04C	Macdoel	122.78	42	P	PKiKP	07 09 20.3	+0.5
	baz=297						
O03E	Paynes Creek	123.47	43	P	PKiKP	07 09 21.4	+0.2
	baz=296						
MSO	Missoula	124.90	33	P	PKiKP	07 09 23.7	-0.1
	baz=308						
EGMT	Eagleton	126.31	30	P	PKiKP	07 09 26.6	0.0
	baz=313						
HLID	Hailey	126.56	37	P	PKiKP	07 09 27.6	+0.2
	baz=305						
NVAR	Mina Array Bea	126.74	44	PKP	PKiKP	07 09 29.1	+1.1
	comp=Z,1.1nm,0.6s,baz=289,slow=2.8,SNR=5.1						
NVAR				SKPbc	SKiKP	07 11 44.9	-19
	comp=Z,1.5nm,0.7s,baz=261,slow=3.6,SNR=6.3						
BOZ	Bozeman (W)	126.92	33	P	PKiKP	07 09 28.4	+0.5
	baz=309						
MPMC	Manual Prospec	128.41	46	P	PKiKP	07 09 31.8	+0.4
	baz=297						
R11A	Troy Canyon, C	128.64	43	P	PKiKP	07 09 32.6	+0.9
	baz=301						
GSC	Goldstone, Bar	129.25	47	P	PKiKP	07 09 33.7	+0.8
	baz=297						
SCHQ	Schefferville	129.32	355	PKP	PKPdf	07 09 31.4	-0.1
	comp=Z,3.0nm,0.5s,baz=30,slow=2.4,SNR=11						
SCHQ				SKPbc	SKPab	07 11 52.6	-1.7
	comp=Z,4.8nm,0.6s,baz=353,slow=3.8,SNR=8.9						
DUG	Dugway, Tooele	129.46	39	P	PKiKP	07 09 34.0	+0.8
	baz=305						
BW06	Boulder Array	129.87	35	P	PKPdf	07 09 33.5	+0.3
	baz=310						
PDAR	Pinedale Array	129.87	35	PKP	PKiKP	07 09 33.9	-0.3
	comp=Z,1.3nm,0.5s,baz=230,slow=0.4,SNR=17						
PDAR				SKPbc	SKPbc	07 11 55.1	-2.0
	comp=Z,7.2nm,1.0s,baz=294,slow=0.9,SNR=25						
GMRC	Granite Mounta	130.32	47	P	PKiKP	07 09 36.2	+1.1
	baz=298						
ULM	Lac du Bonnet	130.33	19	PKP	PKPdf	07 09 33.6	+0.1
	comp=Z,3.1nm,0.5s,baz=325,slow=5.7,SNR=5.3						
ULM				SKPbc	SKPbc	07 11 57.2	-1.0
	comp=Z,20nm,0.6s,baz=343,slow=4.2,SNR=21						
RSSD	Black Hills	131.89	30	P	PKPdf	07 09 36.9	0.0
	baz=317						
O20A	White River Ci	132.31	37	P	PKiKP	07 09 38.9	-0.2
	baz=309						
PLCA	Paso Flores	135.16	183	SKPbc	SKPbc	07 12 15.0	+0.2
	comp=Z,7.2nm,0.8s,baz=219,slow=3.6,SNR=15						
SDCO	Great Sand Dun	135.47	37	P	PKiKP	07 09 44.9	-0.8
	baz=311						
ECSD	EROS Data Cent	135.56	24	P	PKPdf	07 09 43.6	+0.1
	baz=326						
T25A	Trinidad	136.53	37	P	PKiKP	07 09 48.5	+0.8
	baz=311						
ANMO	Albuquerque	136.62	41	P	PKiKP	07 09 47.3	-0.7
	baz=307						
BGNE	Belgrade	136.77	28	P	PKiKP	07 09 47.2	-0.6
	baz=322						
HDIL	Hopedale	141.05	20	P	PKPdf	07 09 48.7	-5.0
	baz=334						
ERPA	Erie	141.82	8	P	PKPdf	07 09 51.7	-3.3
	baz=349						
TXAR	Lajitas Array	141.84	46	PKP	PKPdf	07 09 53.2	-2.4
	comp=Z,7.8nm,0.6s,baz=271,slow=1.1,SNR=131						
TXAR				SKPbc	SKPbc	07 12 33.5	0.0
	comp=Z,3.6nm,0.8s,baz=240,slow=1.0,SNR=11						
SFIN	Lafayette	141.91	17	P	PKPdf	07 09 51.8	-3.4
	baz=337						
BINY	Binghamton	142.14	3	P	PKPdf	07 09 52.3	-3.2
	baz=356						
TUL1	Leonard	142.22	31	P	PKPdf	07 09 52.9	-2.9
	baz=321						
M53A	WI Miller and	142.38	9	P	PKPdf	07 09 52.7	-3.3
	baz=348						
ABTX	Abilene, Hawle	142.45	38	P	PKPdf	07 09 54.3	-2.1
	baz=313						
M54A	Oil Creek Stat	142.46	8	P	PKPdf	07 09 53.1	-3.1
	baz=349						
CCM	Cathedral Cave	142.53	24	P	PKPdf	07 09 53.6	-2.8
	baz=330						
N54A	Moraine State	142.95	9	P	PKPdf	07 09 54.4	-2.6
	baz=349						
VA03	San Esteban	143.09	184	PKPdf	PKPbc	07 09 56.6	+0.4
ACSO	Alum Creek Sta	143.11	13	P	PKPab	07 09 55.4	-0.1
	baz=344,SNR=11						
TRNY	Table Rock, Ra	143.27	1		PKPab	07 09 55.4	-0.7
U40A	Yellville	143.28	27		PKPab	07 09 56.1	-0.2
U40A	Yellville	143.28	27	P	PKPab	07 09 56.2	-0.1
	baz=326,SNR=135						
P49A	Miami Univ. Ec	143.36	15	P	PKPab	07 09 56.1	-0.4
	baz=341,SNR=34						
PAL	Palisades	143.41	1	P	PKPab	07 09 56.2	-0.3
	baz=359,SNR=9.3						
N59A	State Game Lan	143.43	3		PKPab	07 09 56.3	-0.4
N59A	State Game Lan	143.43	3	P	PKPab	07 09 56.7	0.0
	baz=356,SNR=24						
O53A	New Philadelph	143.44	10	P	PKPab	07 09 56.5	-0.3
	baz=347,SNR=12						
O52A	Adamsville	143.46	11		PKPab	07 09 56.3	-0.5
T42A	Van Buren	143.47	24		PKPab	07 09 56.9	-0.1
SSPA	Standing Stone	143.54	6	P	PKPab	07 09 56.7	-0.4
	baz=352						
JCT	Junction City	143.78	41	P	PKPdf	07 09 59.0	+0.2
	baz=311,SNR=89						
W39A	Magazine	143.78	29	P	PKPbc	07 09 57.6	-0.4
	baz=324,SNR=8.3						
O56A	Blue Knob Stat	143.83	7	P	PKPbc	07 09 57.9	-0.2
	baz=351,SNR=29						
P52A	Corning	143.86	12	P	PKPbc	07 09 57.5	-0.7
	baz=345,SNR=14						
WCI	Wyandotte Cave	144.13	18	P	PKPbc	07 09 58.9	-0.1
	baz=337						
WHTX	Lake Whitney,	144.22	37	P	PKPab	07 10 00.2	+0.2
	baz=316,SNR=10						
MCWV	Mont Chateau	144.25	9	P	PKPdf	07 09 59.2	-0.1
	baz=349,SNR=13						
MIAR	Mount Ida	144.41	30	P	PKPbc	07 10 00.2	+0.2
	baz=324,SNR=36						
W41B	Gary Mavity, V	144.53	27	P	PKPbc	07 10 00.2	-0.1
	baz=326						
P60A	Greenville	144.54	3	P	PKPdf	07 09 59.7	-0.1
	baz=356						
X40A	Basin Creek Fa	144.81	29	P	PKPbc	07 10 01.7	+0.5
	baz=325						
435B	Jarrell	144.99	38	P	PKPab	07 10 02.6	-0.4
	baz=314						
833A	Chaparral WMA,	145.44	43	P	PKPab	07 10 04.4	-0.4
	baz=309						
WVT	Waverly	145.53	21	P	PKPbc	07 10 03.3	+0.1
	baz=334						
Z41A	Richland Creek	145.82	30	P	PKPbc	07 10 04.7	+0.6
	baz=324						
CPUP	Villa Florida	145.94	206	PKPbc	PKPbc	07 10 05.3	+0.7
	comp=Z,10.0nm,0.5s,baz=146,slow=2.0,SNR=21						
CBN	Corbin Frederi	146.00	6	P	PKPbc	07 10 04.3	-0.1
	baz=353						
NATX	Nacogdoches	146.00	34	P	PKPbc	07 10 05.6	+0.9
	baz=319						
TZTN	Tazewell	146.48	15	P	PKPbc	07 10 05.6	-0.2
	baz=341						
VBMS	Vicksburg	147.78	28	P	PKPbc	07 10 10.0	+0.7
	baz=326						
BDFB	Brasilia	148.21	231	PKPbc	PKPbc	07 10 11.4	+0.5
	comp=Z,7.7nm,0.5s,baz=128,slow=3.5,SNR=21						
KMSC	Kings Mountain	148.35	13	P	PKPbc	07 10 10.2	-0.5
	baz=344						
CNNC	Cliffs of the	148.87	8	P	PKPbc	07 10 11.6	-0.3
	baz=351						
GOGA	Godfrey	149.45	17	P	PKPbc	07 10 13.0	-0.3
	baz=340						
BRAL	Brewton	150.21	24	P	PKiKP	07 10 16.1	+0.4
	baz=331						
TIGA	Tifton	151.24	19	P	PKiKP	07 10 17.8	0.0
	baz=338						
LPAZ	La Paz	158.98	194	PKPab	PKPab	07 11 03.8	+0.8
	comp=Z,1.5nm,0.7s,baz=146,slow=2.1,SNR=7.4						

KRNET ***05*** *07:27:59.3±0.1, 40°86N×69°30E, h8^{km}, mb2.9*

ISC 05 07:27:58.2±1.4**, 40°82N**±0°03×**69°13E**±0°08**, h17**^{km}±17^{km},
n7, σ**0ˢ64**/14**, 8C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	Tashkent	0.52	14	⇑*i*P	Pb	07 28 08.3	-0.6
	baz=60						
TAS				⇑*i*S	Sb	07 28 15.3	-0.8
	baz=60						
BTK	Batken	1.50	120	⇓*e*P	Pg	07 28 26.2	-0.9
	baz=24						
BTK				⇓*i*S	Sb	07 28 45.1	+0.6
	baz=24						
TRKS	Terek-Say	1.68	64	⇑*e*P	Pb	07 28 28.5	-0.2
	baz=66						
TRKS				⇑*e*S	Sb	07 28 49.9	+0.3
	baz=66						
GAR	Garm	2.04	153	⇓*e*P	Pg	07 28 36.9	-0.5
	baz=57						
GAR				⇓*e*S	Sg	07 29 03.9	0.0
	baz=57						
CHGR	Chuyangaron	2.16	179	⇓*i*P	Pg	07 28 39.8	0.0
	baz=83						
CHGR				⇓*i*S	Sg	07 29 08.5	+0.6
	baz=83						
DRK	Karamyk	2.45	122	⇑*i*P	Pb	07 28 42.1	+0.1
	baz=25						
DRK				⇑*i*S	Sb	07 29 12.4	+0.4
	baz=25						
KK08	Karatay Array	2.50	24	⇑P	Pg	07 28 46.8	+0.6
	2.1nm,0.6s,baz=201,slow=17						
KK08				⇑S	Sg	07 29 19.1	+0.6
	1.8nm,0.3s,baz=197,slow=29						

IDC 05 07:29:22.0±4.0**, 5°42S**×**152°22E, h0**^{km}**, mb3.3**/2**,**
mb1 3.7/2**, mb1mx3.3**/41**, mbtmp3.4**/2**, Error ellipse:**
s-maj=159.6km s-min=53.4km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.60	229	P	P	07 34 24.0	-0.5
	0.8nm,0.9s,baz=54,slow=10.0,SNR=4.6						
ASAR	Alice Springs	25.30	222	P	P	07 34 50.7	+0.1
	1.2nm,0.8s,baz=56,slow=9.0,SNR=13						
TORD	Torodi Ar. Bea	149.94	287	PKPbc	PKPbc	07 49 15.3	-0.2
	0.2nm,0.5s,baz=63,slow=4.2,SNR=1.9						

IDC ***05*** *07:34:37.1±2.7, 3°50S×151°62E, h406^{km}±31^{km}, mb3.5/11,*
mb1 3.7/13, mb1mx3.3/42, mbtmp4.3/13, Error ellipse:
s-maj=18.9km s-min=15.3km az=90.0

NEIC ***05*** *07:34:37.1±1.9, 3°4S±0°1×151°59E±0°09, h399^{km}±7^{km},*
mb4.3/24, Error ellipse: s-maj=18.8km s-min=8.8km
az=215.0

ISC 05 07:34:36.9±0.6**, 3°48S**±0°08×**151°5E**±0°1**, h400**^{km}**, n59,**
σ**1ˢ03**/60**, mb4.1**/21**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.00	135		Pn	07 35 27.8	-0.2
RABL	Rabaul	1.00	135	P	Pn	07 35 28.3	+0.2
PMG	Port Moresby	7.28	216	P	P	07 36 24.7	+0.4
	6.4nm,0.3s,baz=52,slow=5.2,SNR=7.6						
PMG				S	S	07 37 49.9	-1.1
	0.3nm,0.3s,baz=60,slow=20,SNR=1.3						
COEN	Coen	13.24	218	P	Pn	07 37 33.6	+1.0
COEN	Coen	13.24	218	P	Pn	07 37 33.6	+1.0
CTA	Charters Tower	17.27	197	P	P	07 38 14.1	+0.2
	1.6nm,0.3s,baz=196,slow=1.0,SNR=7.7						
CTAO	Charters Tower	17.27	197	P	P	07 38 15.9	+2.1
CTAO				IAmb	IAmb	07 38 19.7	
	comp=Z,9.7nm,0.7s						
CTAO	Charters Tower	17.27	197	P	P	07 38 15.8	+2.0
QIS	Mount Isa	20.53	213	P	P	07 38 48.1	+1.7
EIDS	Eidsvold	21.77	181	P	P	07 38 57.9	+0.4
EIDS				IAmb	IAmb	07 39 00.5	
	comp=Z,13nm,0.8s						
EIDS	Eidsvold	21.77	181	P	P	07 38 58.0	+0.4
WR0	Warramunga Arr	23.25	224	P	P	07 39 11.5	+0.4
WRAB	Tennant Creek	23.37	224	P	P	07 39 12.8	+0.7
WRA	Warramunga Arr	23.38	224	P	P	07 39 12.9	+0.6
	comp=Z,1.7nm,0.3s,baz=45,slow=9.5,SNR=60						
WRA				S	S	07 42 52.9	-2.6
	comp=Z,0.6nm,0.8s,baz=43,slow=17,SNR=3.7						
WRA	Warramunga Arr	23.38	224	P	P	07 39 11.8	-0.5
DZM	Mont Dzumac	23.52	143	P	P	07 39 12.9	-0.7
	comp=Z,6.0nm,0.4s,baz=279,slow=7.5,SNR=20						
DZM	Mont Dzumac	23.52	143	IAmb	IAmb	07 39 16.0	
	comp=Z,8.9nm,0.6s						
DZM	Mont Dzumac	23.52	143	P	P	07 39 13.5	0.0
QLP	Quilpie	23.99	196	P	P	07 39 19.1	+1.5
INKA	Innaminka	26.21	202	P	P	07 39 38.1	+0.8
AS31	Alice Springs	26.28	219	P	P	07 39 37.9	-0.2
ASAR	Alice Springs	26.28	219	P	P	07 39 38.4	+0.3
	comp=Z,3.5nm,0.5s,baz=49,slow=8.1,SNR=98						
ASAR				S	S	07 43 37.6	-3.5
	comp=Z,0.5nm,0.7s,baz=44,slow=14,SNR=4.8						
ARMA	Armidale	26.80	180	P	P	07 39 43.6	+0.9
ARMA				IAmb	IAmb	07 39 44.5	
	comp=Z,5.4nm,0.7s						
ARMA	Armidale	26.80	180	P	P	07 39 43.5	+0.9
CMSA	Cobar Meteorol	28.43	190	P	P	07 39 57.5	+0.5
OOD	Oodnadatta	28.48	210	P	P	07 39 57.7	+0.3
LCRK	Leigh Creek	29.60	204	P	P	07 40 07.5	+0.3
STKA	Stephens Creek	29.73	197	P	P	07 40 08.3	0.0
	comp=Z,4.7nm,0.3s,baz=36,slow=16,SNR=17						
STKA	Stephens Creek	29.73	197	P	P	07 40 10.1	+1.8
STKA	Stephens Creek	29.73	197	P	P	07 40 08.8	+0.4
WRKA	Warakurna	30.93	224	P	P	07 40 18.2	-0.7
MULG	Mulgathing	31.33	210	P	P	07 40 22.2	-0.1
CNB	Canberra Magne	31.74	183	P	P	07 40 26.5	+0.7
CAN	Canberra	31.77	184	P	P	07 40 26.7	+0.7
CAN	Canberra	31.77	184	P	P	07 40 26.4	+0.4
HTT	Hallett	32.02	200	P	P	07 40 28.4	+0.1
BBOO	Buckleboo	32.55	205	P	P	07 40 32.5	-0.3
BBOO				IAmb	IAmb	07 40 34.5	
	comp=Z,22nm,1.4s						
OUZ	Omahuta	37.66	150	P	P	07 41 17.1	+1.3
OUZ				IAmb	IAmb	07 41 36.7	
	comp=Z,12nm,1.2s						
URZ	Urewera	41.80	149	P	P	07 41 47.4	-2.0
	comp=Z,3.6nm,0.4s,baz=307,slow=20,SNR=1.7						
PEA0B	Petropavlovsk-	56.62	4	P	P	07 43 39.4	-0.5
PETK	Petropavlovsk-	56.62	4	P	P	07 43 39.8	-0.1
	comp=Z,5.4nm,0.8s,baz=170,slow=8.1,SNR=13						
SONM	Songino Array	64.50	328	P	P	07 44 33.9	+1.2
	comp=Z,0.6nm,0.5s,baz=145,slow=4.3,SNR=4.7						
SONM	Songino Array	64.50	328	IAmb	IAmb	07 44 41.3	
	comp=Z,1.7nm,1.2s						
VNDA	Vanda	74.19	178	P	P	07 45 30.7	+0.1
VNDA				IAmb	IAmb	07 45 55.4	
	comp=Z,9.4nm,1.4s						
OHAK	Old Harbor	75.00	28	P	P	07 45 35.0	-0.4
Q19K	Cape Douglas,	75.75	26	P	P	07 45 38.9	-0.9
P19K	Oil Pt	76.32	25	P	P	07 45 42.6	-0.3
L19K	White Mountain	77.05	23	P	P	07 45 47.3	+0.4
L19K				IAmb	IAmb	07 45 48.3	
	comp=Z,5.6nm,0.9s						
BRLK	Bradley Lake	77.39	26	P	P	07 45 49.1	+0.2
SEW	Seward	78.19	26	P	P	07 45 52.6	-0.5
SEW				IAmb	IAmb	07 46 21.1	
	comp=Z,11nm,1.2s						
MKAR	Makanchi Array	78.46	319	P	P	07 45 55.6	+0.7
	comp=Z,0.5nm,0.7s,baz=94,slow=8.4,SNR=4.5						
CAST	Castle Rocks	78.80	22	P	P	07 45 55.5	-0.9
CAST				IAmb	IAmb	07 45 56.4	
	comp=Z,7.5nm,1.2s						
PWL	Port Wells	79.03	26	P	P	07 45 57.2	-0.5
PWL				IAmb	IAmb	07 45 57.9	
	comp=Z,4.9nm,0.7s						
KTH	Kantishna Hill	79.31	23	P	P	07 45 58.1	-1.1
ZALV	Zalesovo Beam	79.32	326	P	P	07 45 58.9	-0.5
	comp=Z,1.2nm,0.5s,baz=108,slow=8.6,SNR=6.2						
IL31		81.45	22	P	P	07 46 09.0	-1.3
IL31				IAmb	IAmb	07 46 10.0	
	comp=Z,6.3nm,1.4s						
ILAR	Eielson Array	81.45	22	P	P	07 46 08.8	-1.5
	comp=Z,2.1nm,0.6s,baz=250,slow=5.1,SNR=44						
NVAR	Mina Array Bea	92.32	52	P	P	07 47 03.2	-0.4
	comp=Z,0.5nm,0.8s,baz=263,slow=7.7,SNR=1.8						
TORD	Torodi Ar. Bea	148.62	290	PKPbc	PKPbc	07 53 38.4	-0.2
	comp=Z,0.6nm,0.3s,baz=84,slow=2.3,SNR=14						

IDC 05 07:37:58.8±5.0**, 30°06S**×**177°89W, h0**^{km}**, mb3.3**/2**,**
mb1 3.5/2**, mb1mx3.5**/22**, mbtmp3.3**/2**, Error ellipse:**
s-maj=278.6km s-min=76.5km az=166.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.22	267	P	P	07 46 02.4	+0.4
	0.3nm,0.6s,baz=103,slow=7.6,SNR=2.0						
WRA	Warramunga Arr	44.18	272	P	P	07 46 09.1	-0.6
	0.1nm,0.3s,baz=113,slow=8.1,SNR=1.6						
FINES	FINESS Array B	144.85	340	PKP	PKPbc	07 57 36.4	+0.3
	3.8nm,1.1s,baz=33,slow=5.6,SNR=1.6						

JMA ***05*** *07:53:42.3±0.1, 22°73N×121°59E, h43^{km}, M3.4*

TAP ***05*** *07:53:43.4, 22°78N×121°61E, h19^{km}, ML3.8, C*

ISC 05 07:53:41.2±1.0**, 22°76N**±0°02×**121°71E**±0°02**, h18**^{km}±8^{km},
n93, σ**1ˢ13**/158**, 2C-14D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao	0.23	249	⇑*i*P	Pb	07 53 48.3	+1.5
	baz=232						
LDUT				*i* S	Sb	07 53 51.6	+1.1
	baz=232						
EDH	Donghe	0.43	300	⇓*i*P	Pb	07 53 50.7	+0.4
	baz=305						
EDH				*i* S	Sg	07 53 55.9	-0.1
	baz=305						
CHKT	Chengkung	0.46	317	⇓*i*P	Pb	07 53 51.3	+0.4
	baz=333						
CHKT				*i* S	Sg	07 53 56.6	-0.4
	baz=333						
TTN	Taitung	0.52	270	P	Pb	07 53 52.2	+0.5
	baz=267						
TTN				S	Sb	07 53 58.8	-0.1
	baz=267						
LONT	Longtian	0.55	286	P	Pb	07 53 52.3	0.0
	baz=287						
LONT				S	Sb	07 53 59.9	0.0
	baz=287						
ECS	Chishang	0.56	307	P	Pb	07 53 53.2	+0.7
	baz=312						
ECS				S	Sb	07 54 00.9	+0.6
	baz=312						
FULB	Fuli	0.58	319	P	Pb	07 53 53.0	+0.1
	baz=326						
FULB				S	Sg	07 54 00.0	-0.6
	baz=326						
TWGBT	Beinan	0.58	276	⇓*i*P	Pb	07 53 52.9	0.0
	baz=275						
TWGBT				S	Sb	07 54 00.6	-0.1
	baz=275						
TWG	Pinlang	0.59	276	⇓*i*P	Pb	07 53 52.9	-0.1
	baz=275						
TWG				*i* S	Sg	07 54 00.8	-0.1
	baz=275						
ECBN	Changbin	0.60	337	P	Pb	07 53 54.0	+0.7
	baz=345						
ECBN				S	Sg	07 54 01.4	0.0
	baz=345						
EYUL	Yuli	0.69	329	*e*P	Pb	07 53 55.3	+0.6
	baz=335						
EYUL				*e*S	Sb	07 54 04.3	+0.5
	baz=335						
TWF1	Yuli	0.70	328	P	Pb	07 53 55.3	+0.3
	baz=343						
ECL	Taimali	0.71	257	⇓*i*P	Pb	07 53 55.0	-0.1
	baz=254						
ECL				*i* S	Sg	07 54 03.2	-1.5
	baz=254						
LAY	Lan-yu	0.73	191	⇓*i*P	Pn	07 53 56.2	-0.5
	baz=184						
LAY				S	Sb	07 54 05.0	0.0
	baz=184						
YULB	Yu-li	0.74	329	⇓P	Pg	07 53 55.9	+0.2
	baz=345						
YULB				S	Sb	07 54 05.1	-0.2
	baz=345						
ELDTW	Lidau	0.77	304	⇓*i*P	Pb	07 53 55.7	-0.4
	baz=307						
ELDTW				S	Sb	07 54 03.7	-2.5
	baz=307						
HGSD	Ruisui	0.78	341	P	Pb	07 53 56.3	+0.1
	baz=346						
HGSD				*e*S	Sg	07 54 07.1	+0.3
	baz=346						
EHY	Hungye	0.83	335	*e*P	Pb	07 53 57.2	+0.1
	baz=348						
EHY				*e*S	Sb	07 54 07.3	-0.5
	baz=348						
TAW	Tawu	0.85	242	*e*P	Pg	07 53 57.3	-0.5
	baz=238						
TAW				*e*S	Sb	07 54 07.1	-1.3
	baz=238						
EAST	Anshuo	0.88	245	⇓*i*P	Pg	07 53 57.9	-0.4
	baz=241						
EAST				S	Sb	07 54 07.5	-1.8
	baz=241						
STYH	Taoyuan	0.95	296	P	Pb	07 53 58.9	-0.3
	baz=304						
STYH				*e*S	Sb	07 54 09.0	-2.5
	baz=304						
TSMG	Majia	0.98	267	P	Pb	07 53 59.2	-0.5
	baz=259						

TSMG				*e*S	Sb	07 54 09.9	-2.4
	baz=259						
SSD	Sandimen	0.99	270	P	Pb	07 53 59.2	-0.7
	baz=268						
SSD				S	Sb	07 54 09.9	-2.8
	baz=268						
SLIU	Shizi	1.00	238	P	Pb	07 53 59.6	-0.4
	baz=233						
MASBT	Mashibuluo	1.00	262	⇓*i*P	Pb	07 53 59.8	-0.3
	baz=253						
MASBT				S	Sb	07 54 08.5	-4.4
	baz=253						
YUS	Yu-Shan	1.01	317	P	Pb	07 54 00.4	-0.1
	baz=332						
SCZT	Fangliau	1.07	249	P	Pb	07 54 01.0	-0.3
	baz=253						
SCZT				*e*S	Sb	07 54 13.2	-1.8
	baz=253						
ESL	Shilin	1.08	347	*e*P	Pb	07 54 00.4	-1.0
ESL				*e*S	Sb	07 54 14.2	-1.1
SGST	Jiashian	1.08	288	P	Pb	07 54 01.3	-0.2
	baz=291						
SGST				*e*S	Sg	07 54 16.8	+0.2
	baz=291						
SSPT	Xinbi	1.09	256	*e*P	Pg	07 54 01.9	-0.4
	baz=247						
WTP	Ta-pu	1.12	296	⇓*i*P	Pb	07 54 02.4	+0.4
	baz=298						
WTP				S	Sg	07 54 18.8	+1.2
	baz=298						
ALS	Alishan	1.12	312	⇓*i*P	Pn	07 54 02.5	+0.2
	baz=315						
VWDT	VWDT	1.12	333	⇓P	Pn	07 54 02.2	+0.2
	baz=336						
SGLT	Jiouru	1.12	269	*e*P	Pg	07 54 05.0	+2.0
	baz=267						
TPUB	Ta-pu	1.13	299	P	Pb	07 54 02.5	+0.3
	baz=301						
TPUB				S	Sb	07 54 16.8	+0.2
	baz=301						
TSEB	Hengchuen, Pin	1.13	221	*e*P	Pg	07 54 05.3	+2.1
	baz=219						
TWKBT	Hengchun	1.16	226	*e*P	Pg	07 54 03.7	0.0
	baz=221						
CHN1	Nanshi	1.17	292	⇑*i*P	Pg	07 54 03.9	+0.1
	baz=301						
CHN1				S	Sg	07 54 20.1	+1.0
	baz=301						
CHN4	Tsaushan	1.18	300	⇓*i*P	Pn	07 54 02.1	-0.9
	baz=313						
CHN4				*e*S	Sb	07 54 17.4	-0.8
	baz=313						
TWM1	Shoushan	1.19	273	P	Pg	07 54 05.0	+0.8
	baz=273						
TWM1				S	Sg	07 54 22.5	+2.8
	baz=273						
SNST	Tainan City	1.21	293	P	Pg	07 54 04.2	-0.3
	baz=294						
SNST				S	Sg	07 54 20.2	-0.1
	baz=294						
TWK	Hsinying	1.23	295	P	Pb	07 54 04.4	+0.4
	baz=296						
TWK				S	Sg	07 54 21.0	-0.2
	baz=296						
SSLB	Suanglung	1.24	326	*e*P	Pn	07 54 03.9	+0.2
	baz=339						
CHN5	Tsauling	1.26	312	P	Pg	07 54 05.2	-0.4
	baz=314						
CHN5				S	Sg	07 54 21.8	-0.5
	baz=314						
CHN3	Shinhua	1.28	285	P	Pg	07 54 06.6	+0.7
	baz=285						
CHN3				S	Sg	07 54 25.2	+2.6
	baz=285						
TWD	Chiawan	1.32	356	*e*P	Pn	07 54 04.6	-0.2
	baz=10.0						
TWD				*e*S	Sn	07 54 20.1	-1.8
	baz=10.0						
SMLT	Sun Moon Lake	1.34	327	P	Pb	07 54 06.3	+0.3
	baz=339						
SMLT				*e*S	Sb	07 54 23.6	+0.7
	baz=339						
CHN2	Minshiung	1.37	305	*e*P	Pg	07 54 07.6	-0.1
	baz=306						
CHN2				*e*S	Sg	07 54 25.2	-0.4
	baz=306						
TYC	Yuchr	1.38	326	P	Pg	07 54 07.6	-0.3
	baz=338						
TYC				S	Sb	07 54 24.4	+0.5
	baz=338						
CHGB	Renai	1.39	339	*e*P	Pn	07 54 06.4	+0.5
	baz=355						
CHGB				*e*S	Sn	07 54 21.6	-2.3
	baz=355						
WJS	Zhushan	1.39	320	*e*P	Pg	07 54 08.0	-0.1
	baz=323						
WJS				*e*S	Sg	07 54 26.1	-0.1
	baz=323						
CHY	Chiayi	1.39	302	P	Pg	07 54 07.7	-0.4
	baz=304						
CHY				*e*S	Sg	07 54 25.5	-0.8
	baz=304						
ETL	Fush Village	1.40	357	*e*P	Pn	07 54 04.0	-1.9
NACB	Ninganchiao	1.42	356	*e*P	Pn	07 54 06.2	+0.1
	baz=10.0						
NACB				*e*S	Sn	07 54 21.9	-2.4
	baz=10.0						
WDLH	Douliu	1.42	311	*e*P	Pg	07 54 08.3	-0.3
	baz=313						
WDLH				*e*S	Sg	07 54 26.4	-0.7
	baz=313						
WHF	Hehuan Shan	1.44	344	P	Pn	07 54 07.0	+0.2
	baz=347						
WHF				*e*S	Sn	07 54 24.3	-1.2
	baz=347						
ICHU	Yijhu	1.45	295	*e*P	Pg	07 54 08.5	-0.6
	baz=296						
ICHU				*e*S	Sb	07 54 25.9	+0.2
	baz=296						
ETLH	Xiulin Townshi	1.46	352	*e*P	Pn	07 54 06.8	0.0
	baz=355						
WNT	Mingjian	1.46	320	*e*P	Pg	07 54 08.9	-0.5
	baz=323						
WNT				*e*S	Sb	07 54 27.3	+1.2
	baz=323						
WCS	Beigang Elemen	1.49	331	*e*P	Pb	07 54 08.6	+0.3
	baz=341						
WCS				*e*S	Sn	07 54 26.8	+0.8
	baz=341						
CHN8	Yiju	1.50	293	*e*P	Pb	07 54 08.8	+0.3
	baz=295						
CHN8				*e*S	Sb	07 54 28.0	+0.8
	baz=295						
FUSS	Fushou	1.54	344	*e*P	Pn	07 54 08.9	+0.8
	baz=359						
WHP	Taichung City	1.67	335	*e*P	Pg	07 54 12.6	-0.7
	baz=348						
WHP				*e*S	Sg	07 54 34.5	-0.6
	baz=348						
WRL	Guolierlin Hig	1.67	313	*e*P	Pb	07 54 11.3	-0.2
	baz=315						
WRL				*e*S	Sb	07 54 31.9	-0.3
	baz=315						
TCU	Taichung	1.68	326	*e*P	Pg	07 54 13.0	-0.6
	baz=329						
TCU				*e*S	Sb	07 54 33.8	+1.4
	baz=329						
WCHH	Zhanghua	1.69	322	*e*P	Pb	07 54 12.1	+0.3
	baz=324						
WCHH				*e*S	Sb	07 54 33.1	+0.4
	baz=324						
NNSB	Datong	1.69	350	*e*P	Pb	07 54 11.2	-0.7
	baz=5.0						
NNS	Nan Shan	1.70	350	*e*P	Pb	07 54 11.8	-0.4
	baz=5.0						
TWQ1	Liyutan	1.80	332	*e*P	Pb	07 54 14.2	+0.5
	baz=335						
TWQ1				*e*S	Sb	07 54 37.3	+1.4
	baz=335						
TWC	Suao	1.85	4	*e*P	Pb	07 54 13.7	-0.8
	baz=7.0						
WDJ	Dajia District	1.86	329	*e*P	Pb	07 54 15.3	+0.6
	baz=331						
WDJ				*e*S	Sb	07 54 38.6	+0.9
	baz=331						
NSY	Sanyi	1.87	333	P	Pb	07 54 15.6	+0.8
	baz=335						
NSY				S	Sb	07 54 39.4	+1.6
	baz=335						
NDS	Dongshan	1.87	0	*e*P	Pb	07 54 14.5	-0.3
	baz=14						
YHNB	Yeheng	1.93	351	*e*P	Pb	07 54 14.9	-1.1
	baz=5.0						
NSK	Sanguang	1.94	351	*e*P	Pn	07 54 14.9	+1.5
	baz=4.0						
NSK				*e*S	Sn	07 54 37.0	-0.3
	baz=4.0						
NMLH	Miaoli	1.96	335	*e*P	Pb	07 54 16.2	-0.2
	baz=337						
NMLH				*e*S	Sb	07 54 40.6	0.0
	baz=337						
LIOB	Emei	1.98	342	*e*P	Pb	07 54 16.5	-0.3
	baz=344						
NWLT	Wulai	2.02	355	*e*P	Pn	07 54 16.0	+1.6
	baz=357						
JYNG	Yonagunijimaku	2.04	34	*e*S	Sn	07 54 40.7	+1.1
YOJ	Yonaguni jima	2.08	35	*e*P	Pb	07 54 17.2	-1.2
	baz=37						
YOJ	Yonaguni jima	2.08	35	P	Pb	07 54 19.2	+0.8
YOJ				*e*S	Sb	07 54 46.0	+2.1
PHUB	P'eng-hu	2.10	291	*e*P	Pn	07 54 16.0	+0.4
	baz=292						
PHUB				*e*S	Sn	07 54 40.3	-1.0
	baz=292						
PNG	Penghu	2.14	293	*e*P	Pn	07 54 16.9	+0.9
	baz=292						
VCHM	Qimei	2.15	283	*e*P	Pn	07 54 17.1	+1.0
	baz=281						
TIPB	Shuangxi	2.21	3	*e*P	Pb	07 54 19.6	-1.0
	baz=353						
NWF	Wu-fen Shan	2.31	2	*e*P	Pb	07 54 21.1	-1.3
	baz=4.0						
HATJ	Hateruma jima	2.32	56	P	Pb	07 54 20.9	-1.7
HATJ				*e*S	Sn	07 54 48.3	+1.6
IRIF	Iriomote-Funau	2.43	49	P	Pb	07 54 22.8	-1.7
IRIF				*e*S	Sb	07 54 52.1	-2.0
JKRS	Kuro-shima	2.58	55	P	Pn	07 54 24.5	+2.4
JKRS				*e*S	Sn	07 54 55.4	+2.4
JIJ	Ishigaki jima	2.75	54	P	Pb	07 54 27.6	-2.3
JIJ				*e*S	Sb	07 55 01.0	-2.3
JISG	Ishigakijimahi	3.00	52	P	Pn	07 54 30.1	+2.2
JISG				*e*S	Sn	07 55 05.1	+1.6
PTMZ	Houxiangcun	3.28	314	*e*P	Pn	07 54 32.5	+0.7
	baz=314						
ZPLA	Ao Xicun	3.82	289	*e*P	Pn	07 54 40.1	+0.9
	baz=287						

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*IDC **05** 08:08:03.1±1.6, 57°.24S×26°.59W, h0km, mb4.3/5, mb1 4.3/5, mb1mx4.0/15, mbtmp4.3/5, Error ellipse: s-maj=55.7km s-min=32.4km az=11.0*

ISC 05 08:08:15.7±1.7**, 57°.2S**±0°.4×**26°.8W**±0°.2**, h100**km**, n9, σ0s.71**/9**, mb4.1**/5**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPUP	Villa Florida	37.70	312	P	P	08 15 20.5	-0.8
	1.5nm,0.5s,baz=162,slow=13,SNR=1.9						
BDFB	Brasilia	44.44	330	P	P	08 16 16.9	+0.2
	1.8nm,0.5s,baz=79,slow=5.2,SNR=3.0						
LPAZ	La Paz	51.19	306	P	P	08 17 10.2	+0.8
	3.2nm,0.4s,baz=86,slow=5.3,SNR=29						
DBIC	Dimbokro	66.11	24	P	P	08 18 51.9	-0.1
	1.3nm,0.6s,baz=180,slow=4.0,SNR=1.3						
TORD	Torodi Ar. Bea	73.94	29	P	P	08 19 40.1	+0.2
	1.6nm,0.5s,baz=200,slow=6.6,SNR=12						
FINES	FINESS Array B	125.29	28	PKP	PKiKP	08 27 03.0	-0.5
	5.9nm,1.0s,baz=248,slow=1.0,SNR=6.2						
YKA	Yellowknife Ar	137.13	317	PKP	PKiKP	08 27 26.4	-0.9
	0.9nm,0.8s,baz=137,slow=2.1,SNR=9.6						
SONM	Songino Array	150.59	88	PKPbc	PKiKP	08 27 56.0	+0.4
	0.5nm,0.6s,baz=204,slow=3.3,SNR=3.5						
ILAR	Eielson Array	151.00	310	PKPbc	PKiKP	08 27 56.3	+0.5
	2.1nm,0.9s,baz=75,slow=0.8,SNR=24						

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*FUNV **05** 08:13:16.4, 8°.50N×71°.43W, h1km, MW3.3*

ISC 05 08:13:16.2±1.1**, 8°.51N**±0°.03×**71°.42W**±0°.03**, h7**km±11km**, n21, σ1s.10**/33**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIGV	El Vigia	0.33	9	*e*P	Pg	08 13 22.0	-0.7
VIGV				*e*S	Sg	08 13 28.0	+0.9
SOCV	Socops	0.60	112	*e*P	Pg	08 13 27.2	-0.6
SOCV				*e*S	Sg	08 13 35.5	-0.2
SOCV	Socops	0.60	112	*e*P	Pg	08 13 27.8	0.0
SOCV				*e*S	Sg	08 13 35.7	0.0
SDV	Santo Domingo	0.86	64	*e*P	Pg	08 13 32.3	-0.5
SDV				*e*S	Sg	08 13 44.7	+0.8
CAPV	Capacho	1.10	234	*e*P	Pg	08 13 36.8	-0.5
CAPV				*e*S	Sg	08 13 51.6	0.0
PAMC	Pamplona, Colo	1.73	228	*e*P	Pn	08 13 48.1	+1.0
PAMC				*e*S	Sg	08 14 12.9	+1.1
PAMC				*i*		08 14 16.0	
	comp=Z,105nm,0.3s						
MCQV	Machiques	1.88	324	*e*P	Pn	08 13 49.6	+0.8
OCAC	Ocana	1.90	262	*e*P	Pn	08 13 49.8	+0.6
OCAC				*e*S	Sb	08 14 15.6	+0.3
OCAC				*i*		08 14 18.2	
	comp=Z,544nm,0.3s						
TAMC	Tame, Arauca	2.10	190	*e*P	Pn	08 13 53.4	+1.6
TAMC				*e*S	Sg	08 14 23.1	-0.6
ELOV	Elorza	2.44	128	*e*P	Pn	08 13 57.9	+1.5
DABV	Dabajuro	2.51	18	*e*P	Pn	08 13 59.2	+1.7
BARC	Barichara	2.59	223	*e*P	Pb	08 14 03.4	+0.2
BARC				*e*S	Sg	08 14 38.3	-1.3
BARC				*i*		08 14 43.3	
	comp=Z,43nm,0.4s						
SMLC	San Martn de	2.64	276	*e*P	Pn	08 13 60.0	+0.8
SMLC				*e*S	Sb	08 14 36.1	-0.3
SIQV	Siquisique	2.65	37	*e*P	Pn	08 13 59.6	+0.3
BRRC	Barranca, Sant	2.67	239	*e*P	Pn	08 14 01.8	+2.2
BRRC				*e*S	Sg	08 14 42.0	0.0
BRRC				*i*		08 14 49.9	
	comp=Z,14nm,0.4s						
RUSC	La Rusia	3.08	213	*e*P	Pn	08 14 07.0	+1.2
RUSC				*e*S	Sg	08 14 53.7	-1.8
BAUV	El Baul	3.36	82	*e*P	Pn	08 14 10.0	+0.8
BAUV				*e*S	Sn	08 14 47.1	-2.3
MONV	Montecano	3.70	22	*e*P	Pn	08 14 13.7	-0.1
BENV	Beln	4.04	69	*e*P	Pn	08 14 20.0	+1.6
CACV	CAICARA DEL OR	4.92	101	*e*P	Pn	08 14 37.2	+6.6
BIRV	Birongo	5.44	69	*e*P	Pn	08 14 38.4	+0.7

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*FUNV **05** 08:15:27.8, 8°.49N×71°.43W, h4km, MW3.4*

ISC 05 08:15:27.9±1.2**, 8°.52N**±0°.03×**71°.37W**±0°.03**, h4**km±10km**, n19, σ1s.14**/33**, 1C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIGV	El Vigia	0.32	0	⇑*i*P	Pg	08 15 34.5	+0.4
VIGV				*e*S	Sg	08 15 39.2	+1.0
SOCV	Socops	0.56	115	*e*P	Pg	08 15 39.1	+0.5
SOCV				*e*S	Sg	08 15 46.8	+1.0
SOCV	Socops	0.56	115	*e*P	Pg	08 15 39.1	+0.5
SOCV				*e*S	Sb	08 15 47.4	-1.2
SDV	Santo Domingo	0.81	63	*e*P	Pb	08 15 44.2	-0.5
SDV				*e*S	Sb	08 15 55.5	-0.5
CAPV	Capacho	1.14	235	*e*P	Pg	08 15 48.0	-1.8
CAPV				*e*S	Sg	08 16 02.7	-2.0
PAMC	Pamplona, Colo	1.77	228	*e*P	Pn	08 15 60.0	+0.2
PAMC				*e*S	Sb	08 16 24.7	+0.8
PAMC				*i*		08 16 27.0	
	comp=Z,163nm,0.2s						
MCQV	Machiques	1.91	323	*e*P	Pn	08 16 00.2	-1.0
OCAC	Ocana	1.95	262	*e*P	Pn	08 16 01.4	-0.6
OCAC				*e*S	Sn	08 16 27.6	+0.6
OCAC				*i*		08 16 29.3	
	comp=Z,549nm,0.3s						
TAMC	Tame, Arauca	2.12	192	*e*P	Pn	08 16 04.7	+0.5
TAMC				*e*S	Sb	08 16 34.3	+0.7
ELOV	Elorza	2.40	129	*e*P	Pn	08 16 08.6	+0.5
DABV	Dabajuro	2.49	17	*e*P	Pn	08 16 10.3	+1.1
DABV				*e*S	Sn	08 16 40.0	-0.2
SIQV	Siquisique	2.61	36	*e*P	Pn	08 16 11.2	+0.2
BARC	Barichara	2.63	223	*e*P	Pn	08 16 12.6	+1.2
BARC				*e*S	Sb	08 16 49.5	+1.0
BARC				*i*		08 16 51.5	
	comp=Z,78nm,0.1s						
SMLC	San Martn de	2.69	276	*e*P	Pn	08 16 11.3	-0.7
SMLC				*e*S	Sn	08 16 47.9	+2.8
BRRC	Barranca, Sant	2.72	239	*e*P	Pn	08 16 12.3	-0.1
BRRC				*e*S	Sb	08 16 51.6	+0.8
BRRC				*i*		08 16 59.9	
	comp=Z,23nm,0.5s						
RUSC	La Rusia	3.12	213	*e*P	Pn	08 16 18.9	+0.5
RUSC				*e*S	Sb	08 17 03.7	+0.9
BAUV	El Baul	3.31	82	*e*P	Pn	08 16 19.8	-0.8
BAUV				*e*S	Sn	08 16 57.7	-2.7
MONV	Montecano	3.68	22	*e*P	Pn	08 16 25.7	+0.1
BENV	Beln	3.98	69	*e*P	Pn	08 16 30.6	+0.7

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*IDC **05** 08:54:39.9±15.0, 53°.50N×163°.35W, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.0/38, mbtmp3.3/4, ML2.7/1, Error ellipse: s-maj=287.3km s-min=42.6km az=84.0*

*NEIC **05** 08:54:43.2±0.6, 53°.53N±0°.10×163°.60W±0°.10, h27km±10km, Error ellipse: s-maj=15.0km s-min=7.1km az=159.0*

*AEIC **05** 08:54:43±0.8, 53°.46N±0°.09×163°.52W±0°.09, h27km±9km, ML3.1, Error ellipse: s-maj=12.9km s-min=7.3km az=160.0*

ISC 05 08:54:42.7±1.1**, 53°.51N**±0°.09×**163°.57W**±0°.06**, h29**km**, n45, σ0s.64**/39**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	1.13	329		Pn	08 55 02.9	+0.3
BRPK	Brown Peak	1.14	355		Pn	08 55 02.8	+0.2
WESP	Westdahl Peak	1.19	326		Pn	08 55 03.5	+0.1
WESN	West Dahl Nort	1.21	331		Pn	08 55 04.1	+0.4
ISLZ	Isanotski Laza	1.22	356		Pn	08 55 04.0	+0.2
SSLS	Shishaldin Sou	1.23	348		Pn	08 55 04.4	+0.4
WECS	Westdahl Cape	1.24	326		Pn	08 55 04.3	+0.2
WEBT	Westdahl Beart	1.28	328		Pn	08 55 05.2	+0.5
SSLW	Shishaldin Wes	1.30	346		Pn	08 55 05.3	+0.3
SSBA	Shishaldin	1.30	346		Pn	08 55 05.3	+0.3
SSLN	Shishaldin Nor	1.32	349		Pn	08 55 06.3	+1.0
ISNN	Isanotski Nort	1.33	355		Pn	08 55 06.4	+1.2
FALS	False Pass	1.35	4		Pn	08 55 05.9	+0.4
AKSA	Akutan Strait	1.40	297		Pn	08 55 06.6	+0.3
AKUT	Akutan	1.44	296		Pn	08 55 07.4	+0.6
AKBBA	Akutan Broad B	1.52	294		Pn	08 55 07.9	+0.1
AKLV	Akutan Long Va	1.55	296		Pn	08 55 08.9	+0.5
AKMO	Akutan Morgan	1.56	293		Pn	08 55 09.1	+0.7
AKGG	Akutan Green G	1.59	297		Pn	08 55 09.4	+0.6
AKRB	Akutan Reef Bi	1.60	294		Pn	08 55 09.1	+0.1
DT1	Dutton Round H	1.77	25		Pn	08 55 11.3	0.0
UNV	Unalaska Valle	1.77	282		Pn	08 55 11.1	-0.2
MNAT	Makushin Natee	1.89	283		Pn	08 55 13.0	+0.1
MTBL	Makushin Table	1.90	285		Pn	08 55 13.8	+0.6
MSW	Makushin Switc	1.95	283		Pn	08 55 14.0	+0.2
MCIR	Makushin Cirqu	2.02	284		Pn	08 55 15.2	+0.5
MAPS	Pakushin South	2.02	280		Pn	08 55 15.4	+0.6
HAG	Hague Volcano	2.05	28		Pn	08 55 16.0	+0.7
PS4A	Pavlof South-4	2.09	28		Pn	08 55 16.7	+0.9
SDPT	Sand Point	2.58	43		Pn	08 55 23.0	+0.6
OKTU	Okmok Mt. Tuli	2.67	269		Pn	08 55 24.5	+0.7
CNBA	Chernabura Isl	2.68	59		Pn	08 55 23.4	-0.4
OKSO	Okmok South	2.75	269		Pn	08 55 25.1	+0.3
NIKH	Nikolski High	3.22	262		Pn	08 55 31.5	+0.3
VNHG	Veniaminof 1	3.72	41		Pn	08 55 39.4	+1.2
ILAR	Eielson Array	14.10	30	Pn	Pn	08 57 58.9	-1.3
	0.0nm,0.3s,baz=221,slow=13,SNR=1.7						
INK	Inuvik	20.48	32	P	P	08 59 16.6	-1.1
	0.6nm,0.5s,baz=226,slow=8.9,SNR=2.7						
YKA	Yellowknife Ar	26.82	51	P	P	09 00 21.1	+1.1
	0.6nm,0.7s,baz=269,slow=9.5,SNR=4.3						
H11N2	WAKE ISLAND Hy	40.65	225	T	T	09 45 59.2	
	baz=26,slow=76,SNR=7.7						
H11N3	WAKE ISLAND Hy	40.66	225	T	T	09 46 01.0	
	baz=26,slow=76,SNR=7.4						
H11N1	WAKE ISLAND Hy	40.67	225	T	T	09 46 01.8	
	baz=26,slow=76,SNR=7.1						
H11S1	WAKE ISLAND Hy	41.82	225	T	T	09 47 27.9	
	baz=26,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	41.84	225	T	T	09 47 29.0	
	baz=26,slow=76,SNR=8.6						
H11S3	WAKE ISLAND Hy	41.84	225	T	T	09 47 29.2	
	baz=26,slow=76,SNR=9.7						
TXAR	Lajitas Array	49.28	95	P	P	09 03 29.3	+0.5
	0.2nm,0.6s,baz=311,slow=5.6,SNR=4.8						

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*NNC **05** 09:11:58.6±0.7, 46°.59N×78°.62E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=6.5km s-min=3.8km az=132.0*

*SOME **05** 09:11:59.5, 46°.55N×78°.72E, h5km*

ISC 05 09:12:00.4±2.8**, 46°.65N**±0°.02×**78°.75E**±0°.03**, h9**km±20km**, n74, σ1s.49**/110**, 8C-2D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPS	Kapalarasan	1.43	162	*e*P	Pn	09 12 24.8	-1.8
	104nm,0.1s						
KAPS				*e*S	Sn	09 12 43.0	-2.6
	296nm,0.2s						
KAPS	Kapalarasan	1.43	162	P	Pn	09 12 24.8	-1.8
	104nm,0.1s						
KAPS				S	Sn	09 12 43.0	-2.6
	296nm,0.2s						
TDK	Taldyqorghan	1.67	188	*e*P	Pn	09 12 29.2	-0.6
	160nm,0.1s						
TDK				*e*S	Sn	09 12 50.2	-1.2
	548nm,0.2s						
TDK	Taldyqorghan	1.67	188	P	Pn	09 12 29.4	-0.5
	369nm,0.4s						
TDK				S	Sn	09 12 50.0	-1.4
	194nm,0.3s						
MAKZ	Makanchi	2.23	85	P	Pn	09 12 36.7	-0.8
MAKZ				S	Sn	09 13 05.9	+0.7
MAKZ	Makanchi	2.23	85	⇑Pn	Pn	09 12 37.7	+0.2
	14nm,0.2s						
MAKZ				⇑Sn	Sb	09 13 07.7	-0.8
	27nm,0.3s						
DJR	Jarkent	2.44	162	*e*P	Pn	09 12 42.1	+1.6
	29nm,0.1s						
DJR				*e*S	Sb	09 13 12.9	-1.7
	61nm,0.2s						
DJR	Jarkent	2.44	162	Pg	Pn	09 12 42.4	+2.0
	45nm,0.4s						
DJR				Lg	Lg	09 13 13.0	
	61nm,0.2s						
MK31	Makanchi Array	2.44	85	Pn	Pn	09 12 40.3	-0.2
	6.1nm,0.2s,baz=262,slow=14,SNR=485						
MK31				Sn	Sb	09 13 14.3	-0.4
	33nm,0.5s,baz=259,slow=27,SNR=13						
MKAR	Makanchi Array	2.44	85	P	Pn	09 12 40.0	-0.5
MKAR				S	Sb	09 13 13.4	-1.3
ARXS	Arharly	2.52	195	*e*P	Pn	09 12 43.9	+2.2
	32nm,0.1s						
ARXS				*e*S	Sb	09 13 15.4	-1.8
	377nm,0.4s						
ARXS	Arharly	2.52	195	Pg	Pn	09 12 43.9	+2.2
	32nm,0.1s						
ARXS				Lg	Lg	09 13 15.4	
	377nm,0.4s						
BLB	Baldybastay	2.56	184	Pg	Pb	09 12 45.2	-1.5
	277nm,0.1s						
BLB				Lg	Lg	09 13 17.1	
	140nm,0.3s						
KURS	Kuram	3.19	188	*e*P	Pb	09 12 57.0	-0.3
	26nm,0.3s						
KURS				*e*S	Sb	09 13 37.4	+1.1
	22nm,0.3s						
KURS	Kuram	3.19	188	Pg	Pb	09 12 57.0	-0.3
	26nm,0.3s						
KURS				Lg	Lg	09 13 37.4	
	22nm,0.3s						
KUU	Kurty	3.24	212	*e*P	Pb	09 12 56.1	-2.0
	7.9nm,0.2s						
KUU				*e*S	Sb	09 13 35.8	-1.9
	166nm,0.4s						
KUU	Kurty	3.24	212	Pg	Pb	09 12 56.1	-2.0
	7.9nm,0.2s						
KUU				Lg	Lg	09 13 35.8	
	166nm,0.4s						
KTBS	Karatobe	3.28	207	*e*P	Pb	09 12 57.1	-1.7
	12nm,0.2s						
KTBS				*e*S	Sb	09 13 38.5	-0.4
	143nm,0.4s						
KTBS	Karatobe	3.28	207	Pg	Pb	09 12 57.1	-1.7
	12nm,0.2s						
KTBS				Lg	Lg	09 13 38.5	
	143nm,0.4s						
PDGK	Podgornoye	3.37	171	Pg	Pb	09 13 00.1	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	9.0nm,0.2s						
PDGK				Lg	Lg	09 13 42.7	
	13nm,0.5s						
KTMS	**Ketmen**	3.40	160	eP	Pb	09 12 60.0	-1.0
	24nm,0.2s						
KTMS				eS	Sb	09 13 42.6	+0.1
	45nm,0.3s						
KTMS	**Ketmen**	3.40	160	Pg	Pb	09 12 60.0	-1.0
	24nm,0.2s						
KTMS				Lg	Lg	09 13 42.6	
	45nm,0.3s						
UZB	**Uzynbulak**	3.51	177	eP	Pb	09 13 02.8	0.0
	27nm,0.3s						
UZB				eS	Sb	09 13 47.5	+1.9
	17nm,0.2s						
UZB	**Uzynbulak**	3.51	177	Pg	Pb	09 13 02.8	0.0
	27nm,0.3s						
UZB				Lg	Lg	09 13 47.5	
	17nm,0.2s						
SHLS	**Shalkode**	3.53	171	eP	Pb	09 13 03.8	+0.6
	44nm,0.4s						
SHLS				eS	Sb	09 13 48.9	+2.7
	40nm,0.3s						
SHLS	**Shalkode**	3.53	171	Pg	Pb	09 13 03.7	+0.6
	44nm,0.4s						
SHLS				Lg	Lg	09 13 48.9	
	40nm,0.3s						
SATY	**Saty**	3.60	184	eP	Pb	09 13 04.6	+0.2
	10nm,0.2s						
SATY				eS	Sb	09 13 50.3	+2.1
	32nm,0.2s						
SATY	**Saty**	3.60	184	Pg	Pb	09 13 04.6	+0.2
	10nm,0.2s						
SATY				Lg	Lg	09 13 50.3	
	32nm,0.2s						
KOTS	**Kotyrbulak**	3.61	199	eP	Pb	09 13 03.8	-0.7
	5.5nm,0.1s						
KOTS				eS	Sb	09 13 49.3	+0.8
	115nm,0.5s						
KOTS	**Kotyrbulak**	3.61	199	Pg	Pb	09 13 03.8	-0.7
	5.5nm,0.1s						
KOTS				Lg	Lg	09 13 49.3	
	115nm,0.5s						
BTLS	**Baital**	3.66	246	eP	Pb	09 13 03.4	-1.8
	18nm,0.2s						
BTLS				eS	Sb	09 13 48.6	-1.1
	3.9nm,0.3s						
BTLS	**Baital**	3.66	246	Pg	Pb	09 13 03.4	-1.8
	18nm,0.2s						
BTLS				Lg	Lg	09 13 48.6	
	3.9nm,0.3s						
AAA	**Alma-Ata**	3.68	201	eP	Pb	09 13 05.1	-0.5
	50nm,0.2s						
AAA				eS	Sb	09 13 52.0	+1.5
	113nm,0.3s						
AAA	**Alma-Ata**	3.68	201	Pg	Pb	09 13 05.1	-0.5
	50nm,0.2s						
AAA				Lg	Lg	09 13 52.0	
	113nm,0.3s						
MDOK	**Medeo**	3.69	200	eP	Pb	09 13 05.5	-0.4
	7.6nm,0.3s						
MDOK				eS	Sb	09 13 52.0	+1.1
	41nm,0.3s						
MDOK	**Medeo**	3.69	200	Pg	Pb	09 13 05.8	-0.1
	4.9nm,0.4s						
MDOK				Lg	Lg	09 13 52.0	
	62nm,0.8s						
MDOK	**Medeo**	3.69	200	Pg	Pb	09 13 05.5	-0.4
	7.6nm,0.3s						
MDOK				Lg	Lg	09 13 52.0	
	41nm,0.3s						
TNSS	**Tian-Shan**	3.84	200	eP	Pb	09 13 07.4	-1.1
	9.8nm,0.4s						
TNSS				eS	Sb	09 13 56.0	+0.8
	19nm,0.2s						
TNSS	**Tian-Shan**	3.84	200	Pg	Pb	09 13 07.4	-1.1
	9.8nm,0.4s						
TNSS				Lg	Lg	09 13 56.0	
	19nm,0.2s						
SEM	**Semipalatinsk**	3.89	14	eP	Pb	09 13 09.4	+0.2
	5.4nm,0.1s						
SEM				eS	Sb	09 13 58.7	+2.2
	64nm,0.3s						
SEM	**Semipalatinsk**	3.89	14	Pg	Pb	09 13 09.4	+0.2
	5.4nm,0.1s						
SEM				Lg	Lg	09 13 58.7	
	64nm,0.3s						
MTBS	**Maitube**	3.89	206	eP	Pb	09 13 07.7	-1.5
	13nm,0.6s						
MTBS				eS	Sb	09 13 55.6	-0.7
	52nm,0.4s						
MTBS	**Maitube**	3.89	206	Pg	Pb	09 13 07.7	-1.5
	13nm,0.6s						
MTBS				Lg	Lg	09 13 55.6	
	52nm,0.4s						
IZV	**Izvestkoviy**	3.92	204	eP	Pb	09 13 09.3	-0.6
	9.4nm,0.5s						
IZV				eS	Sb	09 13 58.7	+1.2
	69nm,0.5s						
IZV	**Izvestkoviy**	3.92	204	Pg	Pb	09 13 09.3	-0.6
	9.4nm,0.5s						
IZV				Lg	Lg	09 13 58.7	
	69nm,0.5s						
KURBB	**Kurchatov Arra**	3.98	358	⇑Pg	Pb	09 13 08.1	-2.5
	3.2nm,0.2s						
KURBB				⇑Lg	Lg	09 14 00.4	
	60nm,0.5s						
DGS	**Degeres**	4.01	213	eP	Pb	09 13 10.2	-1.1
	21nm,0.4s						
DGS				eS	Sb	09 14 00.3	+0.4
	164nm,0.4s						
DGS	**Degeres**	4.01	213	Pg	Pb	09 13 10.2	-1.1
	21nm,0.4s						
DGS				Lg	Lg	09 14 00.3	
	164nm,0.4s						
KST	**Kastek**	4.12	210	eP	Pb	09 13 12.2	-0.9
	9.1nm,0.2s						
KST				eS	Sb	09 14 03.7	+0.7
	54nm,0.3s						
KST	**Kastek**	4.12	210	Pg	Pb	09 13 12.2	-0.9
	9.1nm,0.2s						
KST				Lg	Lg	09 14 03.7	
	54nm,0.3s						
ZSN	**Zaisan**	4.26	77	eP	Pb	09 13 14.9	-0.6
	5.8nm,0.2s						
ZSN				eS	Sb	09 14 08.9	+1.9
	9.0nm,0.5s						
ZSN	**Zaisan**	4.26	77	Pg	Pb	09 13 17.0	+1.5
	9.6nm,0.3s						
ZSN				Lg	Lg	09 14 12.9	
	15nm,0.5s						
TKM2	**Tokmak 2**	4.35	212	P	Pn	09 13 07.2	+0.3
TKM2				S	Sn	09 13 58.1	+0.2
TKM2	**Tokmak 2**	4.35	212	⇑Pg	Pb	09 13 17.8	+0.6
	3.3nm,0.5s						
TKM2				⇓Lg	Lg	09 14 11.6	
	70nm,0.8s						
USP	**Ospenovka**	4.53	223	P	Pn	09 13 08.9	-0.4
USP				S	Sn	09 13 59.9	-2.2
BOOM	**Boomskoye usch**	4.62	207	P	Pn	09 13 13.6	+3.0
OTUK	**Ortayu**	4.63	292	⇑Pn	Pn	09 13 16.5	+6.0
	2.1nm,0.4s						
OTUK				⇑Lg	Lg	09 14 19.1	
	11nm,0.3s						
KDJ	**Kajisay**	4.66	194	P	Pn	09 13 12.2	+1.1
KDJ				S	Sn	09 14 02.8	-2.6
ULHL	**Ulahol**	4.76	203	P	Pn	09 13 14.7	+2.3
ULHL				S	Sn	09 14 09.1	+1.3
AAK	**Ala-Archa**	5.03	219	S	Sn	09 14 12.5	-2.0
BRZS	**Berezniki**	5.24	312	eP	Pb	09 13 32.2	0.0
	2.6nm,0.1s						
BRZS				eS	Sb	09 14 37.9	+2.8
	20nm,0.5s						
BRZS	**Berezniki**	5.24	312	Pg	Pb	09 13 32.2	0.0
	2.6nm,0.1s						
BRZS				Lg	Lg	09 14 37.9	
	20nm,0.5s						
EKS2	**Erkin-Say**	5.34	223	P	Pb	09 13 29.5	-4.4
UCH	**Uchtor**	5.36	216	S	Sn	09 14 23.0	-0.1
MRKS	**Merke**	5.54	227	eP	Pb	09 13 39.2	+1.8
	4.0nm,0.3s						
MRKS				eS	Sb	09 14 49.7	+5.7
	27nm,0.5s						
MRKS	**Merke**	5.54	227	Pg	Pb	09 13 39.2	+1.8
	4.0nm,0.3s						
MRKS				Lg	Lg	09 14 49.7	
	27nm,0.5s						
UKR	**Ust'-Kan**	5.85	41	P	Pn	09 13 27.4	0.0
UKR				S	Sn	09 14 33.1	-1.4
DGZ	**Jazzator, Alta**	6.56	59	P	Pn	09 13 36.9	-0.2
DGZ				S	Sn	09 14 51.9	-0.2
KK07	**Karatay Array**	6.86	242	⇑Lg	Lg	09 15 30.8	
	7.7nm,0.6s						
CHBI	**Chibit, Altay**	6.88	55	P	Pn	09 13 43.2	+1.8
CHBI				S	Sn	09 15 02.7	+2.9
AKAR	**Aktash**	6.94	55	P	Pn	09 13 42.9	+0.5
AKAR				S	Sn	09 15 02.4	+0.9
CUR	**Chagan-Uzun**	7.26	58	P	Pn	09 13 46.7	-0.1
CUR				S	Sn	09 15 10.5	+1.1
ULGR	**Ulagan, Altay**	7.28	54	P	Pn	09 13 48.0	+1.0
ULGR				S	Sn	09 15 10.8	+1.0
BVB5	**Borovoye Array**	8.36	323	⇓Lg	Lg	09 16 14.8	
	9.3nm,0.7s						

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*FUNV **05** 10:04:12.4, 10°.98N×62°.24W, h99^{km}, MW3.4*

*TRN **05** 10:04:12.6, 10°.97N×62°.33W, h21^{km}, MD3.2*

ISC 05 10:04:10.4±1.6, **10°.95N**±0°.06×**62°.32W**±0°.05, **h114**^{km}±15^{km}, **n12,** σ**1^{s}49**/24, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	**Carupano**	0.94	253	eP	Pn	10 04 32.8	+1.4
CRUV				eS	Sn	10 04 47.1	-0.1
TRN	**Trinidad (W)**	0.95	108	eP	Pn	10 04 32.0	+0.5
TRN				eS	Sn	10 04 45.0	-2.4
GRFF	**Grenada Fort F**	1.23	27	eP	Pn	10 04 34.7	+0.2
GRFF				eS	Sn	10 04 51.2	-1.5
GRGR	**Grenville**	1.34	29	eP	Pn	10 04 36.1	+0.4
GRGR				eS	Sn	10 04 53.9	-1.0
GRHS	**Sauteurs**	1.43	28	eP	Pn	10 04 38.4	+1.8
GRHS				eS	Sn	10 04 56.3	-0.3
GCMP	**Grenada, Carri**	1.76	30	eP	Pn	10 04 41.4	+0.7
GCMP				eS	Sn	10 05 03.3	-0.4
TOSP	**Speyside**	1.78	79	eP	Pn	10 04 42.1	+1.2
TOSP				eS	Sn	10 05 04.0	-0.1
PCRV	**Puerto La Cruz**	2.41	252	eP	Pn	10 04 49.8	+1.0
PCRV				eS	Sn	10 05 18.1	-0.3
PRGV	**PARIAGUAN**	3.16	227	eP	Pn	10 05 00.9	+2.1
PRGV				eS	Sn	10 05 35.0	-1.0
BIRV	**Birongo**	3.91	263	eP	Pn	10 05 10.4	+1.7
BIRV				eS	Sn	10 05 53.4	-0.5
BENV	**Beln**	5.29	260	eP	Pn	10 05 27.5	+0.2
BENV				eS	Sn	10 06 24.8	-2.3
BAUV	**El Baul**	5.98	251	eP	Pn	10 05 37.5	+0.9
BAUV				eS	Sn	10 06 40.4	-3.5

IDC 05 10:14:50.0±2.1, **2°.91N**×**128°.11E, h0**^{km}**, mb3.4**/4, **mb1 3.5**/4, **mb1mx3.0**/45, **mbtmp3.4**/4, **Error ellipse: s-maj=139.8km s-min=27.0km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	23.52	165	P	P	10 20 02.2	+0.2
	0.3nm,0.3s,baz=345,slow=11,SNR=21						
ASAR	**Alice Springs**	27.01	168	P	P	10 20 33.8	-0.3
	0.1nm,0.3s,baz=351,slow=6.8,SNR=4.2						
STKA	**Stephens Creek**	36.90	161	P	P	10 22 00.4	-0.2
	0.6nm,0.4s,baz=350,slow=8.9,SNR=3.8						
MKAR	**Makanchi Array**	59.01	325	P	P	10 24 51.7	0.0
	0.3nm,0.6s,baz=107,slow=7.3,SNR=1.9						

NNC 05 10:17:48.9±2.4, **51°.51N**×**75°.33E, h0**^{km}**, mb3.6, mpv3.2, 6C, Error ellipse: s-maj=129.6km s-min=15.0km az=26.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	2.21	113	⇑Pg	Pb	10 18 29.5	-0.2
	8.0nm,0.4s						
KURBB				⇑Lg	Lg	10 18 58.1	
	64nm,0.7s						
BVA4	**Borovoye Array**	3.39	299	⇑Pg	Pg	10 18 52.4	-1.5
	6.8nm,0.8s						
BVA4				⇑Lg	Lg	10 19 32.4	
	17nm,0.7s						
MK31	**Makanchi Array**	6.56	133	⇑Sn	Sn	10 20 42.7	+0.5
	1.1nm,0.5s,baz=213,slow=38,SNR=3.8						
MK31				⇑Lg	Lg	10 21 17.3	
	3.0nm,0.5s,baz=319,slow=27,SNR=6.6						

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*IDC **05** 10:29:14.1±0.7, 22°.50S×70°.36W, h0^{km}, mb4.4/11, mb1 4.5/14, mb1mx4.4/26, mbtmp4.4/14, ML3.9/2, MS3.7/10, Ms1 3.7/10, ms1mx3.5/20, Error ellipse: s-maj=19.3km s-min=12.8km az=13.0*

*SJA **05** 10:29:16.5±0.9, 22°.52S×70°.50W, h32^{km}±2^{km}, ML4.7, MW4.6*

*GUC **05** 10:29:18.6±0.7, 22°.54S×70°.32W, h39^{km}±1^{km}, ML4.7, MW4.9*

*VAO **05** 10:29:18.4±0.3, 22°.54S×70°.30W, h27^{km}, mb4.7*

*NEIC **05** 10:29:18.8±1.5, 22°.57S±0°.03×70°.37W±0°.05, h27^{km}±4^{km}, mb4.8/40, Mwr4.6/48, ML4.7(GUC), Error ellipse: s-maj=7.1km s-min=4.8km az=93.0*

*NEIC **05** 10:29:19.4, 22°.55S×70°.30W, h40^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.29; $M_{\theta\theta}$0.28; $M_{\phi\phi}$-2.57; $M_{r\theta}$1.81; $M_{\theta\phi}$-1.81; $M_{\phi r}$-8.10; Fault plane solution: $M_0$8.84000×10^{15} NP1:ϕ_s170.38000°, δ82.84000°, λ75.43000°. NP2:ϕ_s54.76000°, δ16.20000°, λ153.47000°. Principal axes: T 9.0479, Plg50.0000°, Azm64.0000°; N -0.4356, Plg14.0000°, Azm172.0000°; P -8.6123, Plg36.0000°, Azm273.0000°;*

ISC 05 10:29:17.6±0.4, **22°.52S**±0°.02×**70°.39W**±0°.03, **h22**^{km}±3^{km}, **n219,** σ**1^{s}50**/247, **mb4.7**/29, **MS3.9**/7, **5C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB04	**IPOC Station P**	0.29	50	⇓iP	Pn	10 29 26.6	-0.2
PB04				i S	Sn	10 29 31.9	-0.6
PB04				IAML		10 29 32.2	
	comp=E,106μm,0.2s						
PB04	**IPOC Station P**	0.29	50		Pn	10 29 26.5	-0.2
PB04	**IPOC Station P**	0.29	50	eP	Pn	10 29 26.4	-0.3
PB04				eS	Pn	10 29 26.5	-0.2
PB04				eP	Pn	10 29 26.5	-0.2
PB04				IAML		10 29 34.8	
	comp=Z,68μm,0.4s						
PB05	**IPOC Station P**	0.37	152	⇑iP	Pn	10 29 27.3	-0.5
PB05				i S	Sn	10 29 33.1	-1.4
PB05				IAML		10 29 33.6	
	comp=E,201μm,0.3s						
PB05	**IPOC Station P**	0.37	152	eP	Pn	10 29 27.0	-0.8
PB05				IAML		10 29 37.0	
	comp=Z,39μm,0.8s						
PB03	**IPOC Station P**	0.76	52	⇓iP	Pn	10 29 32.9	-0.1
PB03				i S	Sb	10 29 42.9	+0.9
PB03	**IPOC Station P**	0.76	52	eP	Pb	10 29 27.2	-4.9
PB03				eP	Pn	10 29 32.7	-0.4
PB03				eP	Pn	10 29 33.0	-0.1
PB03				IAML		10 29 43.2	
	comp=Z,65μm,0.5s						
PB06	**IPOC Station P**	0.78	104	⇓iP	Pb	10 29 33.0	+0.5
PB06				i S	Sb	10 29 43.0	+0.3
PB06				IAML		10 29 43.9	
	comp=E,64μm,0.3s						
PB06	**IPOC Station P**	0.78	104		Pn	10 29 33.1	-0.3
PB06				Sg	Sb	10 29 42.9	+0.1
PB06	**IPOC Station P**	0.78	104	eP	Pb	10 29 27.2	-5.3
PB06				eP	Pn	10 29 32.7	-0.7
PB06				eP	Pb	10 29 33.0	+0.5
PB06				eS	Sn	10 29 47.0	+2.5
PB06				IAML		10 29 48.1	
	comp=Z,18μm,0.4s						
PB07	**IPOC Station P**	0.92	31	⇓iP	Pn	10 29 35.6	+0.1
PB07				i S	Sn	10 29 47.8	-0.3
PB07				IAML		10 29 50.8	
	comp=E,36μm,0.6s						
PB07	**IPOC Station P**	0.92	31	Pn	Pn	10 29 35.7	+0.3
PB07				Sg	Sn	10 29 47.7	-0.3
PB07	**IPOC Station P**	0.92	31	eP	Pn	10 29 35.5	+0.1
PB07				eS	Sn	10 29 48.1	+0.1
PB07				IAML		10 29 52.1	
	comp=Z,23μm,0.7s						
PB10	**IPOC Station P**	1.00	189	⇑iP	Pn	10 29 36.4	+0.1
PB10				i S	Sb	10 29 49.0	0.0
PB10	**IPOC Station P**	1.00	189		Pn	10 29 36.5	+0.1
PB10	**IPOC Station P**	1.00	189	eP	Pb	10 29 36.0	-0.2
PB10				IAML		10 29 52.5	
	comp=Z,13μm,0.5s						
PB15	**IPOC Station P**	1.09	129		Pn	10 29 37.7	-0.1
PB09	**IPOC Station P**	1.29	56	⇓iP	Pb	10 29 41.5	+0.3
PB09				i S	Sb	10 29 58.2	+0.9
PB09	**IPOC Station P**	1.29	56		Pb	10 29 41.6	+0.4
PB09	**IPOC Station P**	1.29	56	eP	Pn	10 29 35.7	-4.7
PB09				eP	Pb	10 29 41.5	+0.4
PB09				eS	Sb	10 30 00.5	+3.1
PB09				IAML		10 30 03.5	
	comp=Z,21μm,0.5s						
LVC	**Limon Verde**	1.37	94	Pn	Pb	10 29 42.5	-0.2
	comp=Z,2μm,0.3s,baz=268,slow=11,SNR=3700						
LVC				Lg	Lg	10 29 57.1	
	baz=329,slow=4.4						
LVC	**Limon Verde**	1.37	94	eP	Pn	10 29 41.6	-0.1
LVC				eS	Sn	10 29 59.3	-0.2
LVC	**Limon Verde**	1.37	94	Pn	Pb	10 29 42.7	-0.1
LVC	**Limon Verde**	1.37	94	eP	Pb	10 29 42.7	-0.1
LVC				eS	Sb	10 30 03.0	+3.0
LVC				IAML		10 30 04.7	
	comp=Z,8μm,0.3s						
PB01	**IPOC Station P**	1.69	30	⇓eP	Pb	10 29 47.2	-0.9
PB01				eS	Sb	10 30 08.8	-0.3
PB01				IAML		10 30 12.0	
	comp=E,13μm,0.5s						
PB01	**IPOC Station P**	1.69	30		Pb	10 29 47.3	-0.9
PB01	**IPOC Station P**	1.69	30	eP	Pn	10 29 47.0	+1.0
PB01				eS	Sn	10 30 05.7	-1.3
PB01				eS	Sb	10 30 10.3	+1.3
PB01				IAML		10 30 13.0	
	comp=Z,6μm,0.7s						
TA01	**Diego Aracena**	1.96	6	eP	Pn	10 29 50.0	+0.5
TA01				eS	Sn	10 30 13.3	0.0
TA01	**Diego Aracena**	1.96	6		Pn	10 29 50.1	+0.6
TA01	**Diego Aracena**	1.96	6	eP	Pn	10 29 50.0	+0.5
TA01				IAML		10 30 21.0	
	comp=Z,5μm,1.1s						
PB14	**IPOC Station P**	2.10	180	⇓iP	Pn	10 29 52.0	+0.3
PB14				i S	Sn	10 30 16.8	-0.5
PB14	**IPOC Station P**	2.10	180	Pn	Pn	10 29 52.0	+0.3
PB14	**IPOC Station P**	2.10	180	eP	Pn	10 29 52.0	+0.3
PB14				IAML		10 30 24.3	
	comp=Z,6μm,0.4s						
TA02	**Huaiquique**	2.25	6	eP	Pn	10 29 54.5	+0.9
TA02				eS	Sb	10 30 26.0	+1.0
TA02				IAML		10 30 32.9	
	comp=N,5μm,0.6s						
TA02	**Huaiquique**	2.25	6		Pn	10 29 54.2	+0.6
TA02	**Huaiquique**	2.25	6	eP	Pb	10 29 56.0	-1.6
TA02				eS	Sn	10 30 21.7	+1.0
TA02				IAML		10 30 36.9	
	comp=Z,3μm,0.7s						
PB08	**IPOC Station P**	2.63	26	⇑iP	Pn	10 30 01.3	+2.1
PB08				eS	Sn	10 30 33.1	+2.4
PB08				IAML		10 30 43.4	
	comp=N,4μm,0.5s						
PB08	**IPOC Station P**	2.63	26		Pn	10 30 01.3	+2.1
PB08	**IPOC Station P**	2.63	26	eP	Pn	10 30 01.0	+1.8
PB08				eS	Sn	10 30 32.2	+1.5
PB08				IAML		10 30 43.3	
	comp=Z,3μm,0.8s						
PB11	**IPOC Station P**	2.83	14	⇑iP	Pn	10 30 02.4	+0.7
PB11				eS	Sn	10 30 37.1	+1.9
PB11				IAML		10 30 53.5	
	comp=N,6μm,0.5s						
PB11	**IPOC Station P**	2.83	14	Pn	Pn	10 30 02.6	+0.9
PB11	**IPOC Station P**	2.83	14	eP	Pn	10 29 57.7	-4.0
PB11				eP	Pn	10 29 58.2	-3.5
PB11				eP	Pn	10 30 02.0	+0.3
PB11				eS	Sn	10 30 35.7	+0.5
PB11				IAML		10 30 53.2	
	comp=Z,3μm,0.6s						
PSGC	**Pisagua**	2.92	5	⇑iP	Pn	10 30 03.3	+0.5
PSGC				eS	Sn	10 30 40.3	+2.9
PSGCX	**Pisagua**	2.92	5		Pn	10 30 03.6	+0.7
PSGCX	**Pisagua**	2.92	5	eP	Pn	10 29 57.7	-5.1
PSGCX				eP	Pn	10 29 57.7	-5.1
PSGCX				eP	Pn	10 29 58.2	-4.6
PSGCX				eP	Pn	10 30 03.0	+0.1
PSGCX				IAML		10 30 52.5	
	comp=Z,2μm,1.0s						
PB12	**IPOC Station P**	3.89	1	eP	Pn	10 30 16.9	+0.7
PB12	**IPOC Station P**	3.89	1	Pn	Pn	10 30 17.3	+1.1
PB12	**IPOC Station P**	3.89	1	eP	Pn	10 30 16.6	+0.5
PB12				eS	Sn	10 30 58.2	-3.0
PB12				eS	Sb	10 31 07.2	-5.0
PB12				IAML		10 31 18.8	
	comp=Z,1μm,0.9s						
AP01	**Chacalluta**	4.13	1		Pn	10 30 21.0	+1.6
AP01	**Chacalluta**	4.13	1	eP	Pn	10 30 21.0	+1.6
AP01				IAML		10 31 29.5	
	comp=Z,1μm,1.8s						
PB16	**IPOC Station P**	4.25	11		Pn	10 30 23.2	+1.7
AC02	**Maricunga**	4.45	165	Pn	Pn	10 30 26.2	+2.1
AC02	**Maricunga**	4.45	165	eP	Pn	10 30 26.0	+1.8
AC02				eS	Sb	10 31 27.2	-1.4
AC02				IAML		10 31 45.8	
	comp=Z,1μm,1.0s						
HJA	**Humahuaca**	4.64	99	eP	Pn	10 30 32.0	+5.2
GO03	**Copiap**	5.05	178		Pn	10 30 32.1	-0.1
GO03	**Copiap**	5.05	178	eP	Pn	10 30 32.0	-0.1
GO03				eP	Pn	10 30 32.7	+0.6
GO03				eS	Sn	10 31 35.7	+5.8
AZAP	**Zapla**	5.18	110	eP	Pn	10 30 38.6	+4.6
AZAP				eS	Sb	10 31 50.4	+0.9
AC04	**Llanos de Chal**	5.69	186		Pn	10 30 37.8	-3.1
ALOL	**LOMAS DE OLMED**	6.04	104	eP	Pn	10 30 49.4	+3.8
AHML	**Horco Molle**	6.26	134	eP	Pn	10 30 49.7	+1.0
AHML				eS	Sn	10 32 05.7	+6.1
LCO	**Las Campanas**	6.47	182	Pn	Pn	10 30 51.3	-0.5
VCA	**Vinchina**	6.50	163	eP	Pn	10 30 54.0	+1.9
VCA				eS	Sb	10 32 21.7	-5.5
CO06	**Fray Jorge**	8.20	188		Pn	10 31 11.4	-3.9
CO03	**El Pedregal**	8.29	182		Pn	10 31 15.3	-1.3
VA03	**San Esteban**	10.20	181		Pn	10 31 42.7	-0.2
MT02	**Curacav**	10.72	183		Pn	10 31 48.1	-1.7
SIV	**San Ignacio**	10.93	55	Pn	Pn	10 31 52.7	-0.2
	comp=Z,22nm,0.3s,baz=241,slow=9.9,SNR=134						
SIV				Sn	Sn	10 33 49.6	-5.0
	baz=278,slow=18,SNR=1.1						
SIV				LR	LR	10 36 58.1	
	comp=Z,857nm,20.2s,baz=284,slow=43						
MT09	**Talagante**	11.22	183		Pn	10 31 56.4	-0.5
NNA	**Nana**	12.15	329	Sn	Sn	10 34 14.2	-10
	comp=Z,1.8nm,0.3s,baz=237,slow=13,SNR=1.7						
NNA				LR	LR	10 36 31.5	
	comp=Z,146nm,21.3s,baz=159,slow=36						
CPUP	**Villa Florida**	12.49	110	Pn	Pn	10 32 14.8	+0.8
	comp=Z,0.8nm,0.3s,baz=287,slow=12,SNR=22						
CPUP	**Villa Florida**	12.49	110	eP	Pn	10 32 14.4	+0.4
PTLB	**Pontes e Lacer**	12.75	58	eP	Pn	10 32 17.8	0.0
PTLB	**Pontes e Lacer**	12.75	58	Pn	Pn	10 32 18.4	+0.6
H03N1	**Juan Fernandez**	13.22	213	T	T	10 46 01.3	
	baz=38,slow=72,SNR=393						
H03N2	**Juan Fernandez**	13.23	213	T	T	10 46 00.4	
	baz=38,slow=72,SNR=294						
H03N3	**Juan Fernandez**	13.24	213	T	T	10 46 02.5	
	baz=38,slow=72,SNR=242						
ETMB	**Extrema**	13.25	18	eP	Pn	10 32 23.0	-1.6
ETMB	**Extrema**	13.25	18		Pn	10 32 23.8	-0.7
VILB	**Vilhena**	13.59	47	eP	Pn	10 32 29.5	+0.4
VILB	**Vilhena**	13.59	47		Pn	10 32 29.4	+0.2
AQDB	**Aquidauana**	13.82	84	eP	Pn	10 32 33.3	+1.0
AQDB	**Aquidauana**	13.82	84		Pn	10 32 32.3	0.0
ITQB	**Itaqui**	14.26	123	eP	Pn	10 32 37.8	-0.5
CZSB	**Cruzeiro do Su**	14.88	351	eP	Pn	10 32 48.2	+1.5
CZSB	**Cruzeiro do Su**	14.88	351		Pn	10 32 47.2	+0.5
SAML	**Samuel**	15.17	28		Pn	10 32 52.3	+1.7
SALV	**Santo Antonio**	15.36	67	eP	Pn	10 32 53.2	+0.1
PP1B	**Ponte de Pedra**	15.37	74	eP	Pn	10 32 52.8	-0.5
TRCB	**Terra Rica**	16.39	94	eP	Pn	10 33 06.6	+0.1
TRCB	**Terra Rica**	16.39	94	P	P	10 33 07.9	-1.2
TRCB				IAmb	IAmb	10 33 18.4	
	comp=Z,123nm,1.2s						
PTGB	**Pitanga**	16.94	101	eP	Pn	10 33 13.5	+0.1
PDRB	**Porto dos Gac**	16.96	52	eP	Pn	10 33 12.9	-0.8
CPSB	**Cacapava Do Su**	17.07	121	eP	Pn	10 33 13.2	-1.9
TRQA	**Tornquist**	17.09	157	eP	Pn	10 33 15.3	+0.2
TRQA	**Tornquist**	17.09	157	P	Pn	10 33 15.6	+0.5
ITAB	**Concordia**	17.22	110	eP	Pn	10 33 16.0	-0.8

ITAB	Concordia	17.22	110	Pn	Pn	10 33 16.3	-0.4
PLTB	Pedras Altas	17.53	125	eP	Pn	10 33 19.4	-1.3
PLTB	Pedras Altas	17.53	125	P	P	10 33 23.3	+1.6
PCMB	Pacaembu	17.76	91	eP	Pn	10 33 22.6	-1.0
CLDB	Colider	18.13	53	eP	Pn	10 33 27.4	-0.8
PLCA	Paso Flores	18.16	180	P	Pn	10 33 27.5	-0.9
	comp=Z,0.0nm,0.3s,baz=282,slow=8.5,SNR=3.0						
PLCA				LR	LR	10 40 44.5	
	comp=Z,204nm,19.5s,baz=352,slow=38						
PLCA	Paso Flores	18.16	180	eP	Pn	10 33 28.1	-0.3
PLCA	Paso Flores	18.16	180	P	Pn	10 33 27.7	-0.7
TBTG	Tabatinga, AM	18.23	2	eP	P	10 33 30.8	+1.3
LL04	Puerto Octay	18.41	185	P	P	10 33 30.9	-0.4
ARAG	Araguaiana, MT	18.81	72	eP	P	10 33 36.0	+0.1
CNLB	Canela	18.82	115	eP	P	10 33 34.5	-1.5
ITRB	Iturama	18.90	85	eP	P	10 33 36.0	-0.9
FRTB	Fartura	19.20	96	eP	P	10 33 38.8	-1.4
TIJ01	Guaruva-PR	19.75	102	eP	P	10 33 45.5	-0.7
TER01	Tubaro-SC	20.09	112	eP	P	10 33 49.0	-0.8
BB19B	Bebedouro	20.35	90	eP	P	10 33 50.8	-2.0
RCLB	Rio Claro- Sao	21.12	94	eP	P	10 34 00.6	-0.5
NPGB	Novo Progresso	21.13	46	eP	P	10 34 00.6	-0.6
PET01	Itanhaem-SP	21.28	99	eP	P	10 34 03.3	+0.6
IPMB	Ipameri, GO	21.29	82	eP	P	10 34 01.4	-1.5
MACA	Manacapuru-AM	21.43	27	eP	P	10 34 03.8	-0.5
MACA	Manacapuru-AM	21.43	27	P	P	10 34 03.9	-0.4
VAO	Valinhos	21.60	96	eP	P	10 34 05.0	-1.3
BDFB	Brasilia	22.21	76	P	P	10 34 12.5	-0.4
	comp=Z,7.3nm,0.4s,baz=229,slow=11,SNR=9.2						
BDFB				LR	LR	10 44 10.6	
	comp=Z,234nm,21.4s,baz=293,slow=40						
BDFB	Brasilia	22.21	76	P	P	10 34 13.3	+0.4
PARB	Paraibuna	22.82	97	eP	P	10 34 17.7	-1.6
ITTB	Itaituba	22.96	40	eP	P	10 34 19.4	-1.2
BSCB	Bom Sucesso	23.83	91	eP	P	10 34 28.4	-1.0
PTGA	Pitinga	23.92	27	P	P	10 34 28.9	-1.2
	comp=Z,23nm,0.9s,baz=216,slow=13,SNR=22						
PTGA				LR	LR	10 44 47.8	
	comp=Z,155nm,21.0s,baz=220,slow=39						
OTAV	Otavalo	23.95	340	eP	P	10 34 32.0	+1.1
VAS01	Vassouras-RJ	24.91	95	eP	P	10 34 38.4	-0.8
DIAM	Diamantina, MG	25.38	85	eP	P	10 34 43.0	-0.6
MC01	Montes Claros	25.55	82	eP	P	10 34 44.2	-1.0
PRPB	Parauapebas	25.66	54	eP	P	10 34 45.8	-0.3
JANB	Januaria	25.75	78	eP	P	10 34 45.8	-1.2
SMTB	Santa Maria do	25.76	62	eP	P	10 34 46.2	-0.8
MALB	Monte Alegre	25.84	40	eP	P	10 34 47.3	-0.3
DUB01	Friburgo-RJ	25.91	94	eP	P	10 34 49.8	+1.5
SDBA	SAO DESIDERIO	26.27	72	eP	P	10 34 50.5	-1.2
BOAV	Boa Vista	26.57	23	eP	P	10 34 54.5	+0.2
BOAV	Boa Vista	26.57	23	P	P	10 34 54.5	+0.2
ROSC	El Rosal	27.46	351	LR	LR	10 46 58.9	
	comp=Z,106nm,18.4s,baz=166,slow=39						
SJMB	Sao Joao De Ma	27.58	87	eP	P	10 35 03.4	+0.1
MCPB	Macapa, AP	28.35	41	eP	P	10 35 10.8	+0.6
GUA01	Guaratinga, BA	29.39	84	eP	P	10 35 18.4	-1.1
CMC01	Camacan, BA	30.01	82	eP	P	10 35 25.0	0.0
ZARC	Zaragoza, Cauc	30.15	351	P	P	10 35 25.5	-0.7
NBIT	Itapeh - BA	30.23	81	eP	P	10 35 26.5	-0.5
GDU01	Guandu, BA	30.52	79	eP	P	10 35 27.9	-1.6
NBPN	Ponto Novo - B	31.09	73	eP	P	10 35 33.3	-1.3
BAUV	El Baul	31.36	4	P	P	10 35 36.4	-0.4
BIRV	Birongo	33.04	7	P	P	10 35 50.5	-1.2
NBLA	Lagarto - SE	33.17	75	eP	P	10 35 51.3	-1.6
NBPS	Pedro II - PI	33.30	62	eP	P	10 35 53.2	-0.9
NBMA	Muriti-CE	33.96	69	eP	P	10 35 59.3	-0.5
NBPB	Pedra_Branca-C	34.20	65	eP	P	10 36 01.4	-0.4
NBMO	Morrinhos-CE	35.07	61	eP	P	10 36 07.8	-1.5
NBLV	Livramento - P	35.56	70	eP	P	10 36 13.5	-0.1
NBCL	Cascavel-CE	36.00	64	eP	P	10 36 16.1	-1.2
NBPA	Parau_RN	36.19	68	eP	P	10 36 17.7	-1.2
NBPV	Pedro Velho	37.43	70	eP	P	10 36 28.5	-1.0
PMSA	Palmer Station	42.45	176	P	P	10 37 11.0	+0.5
	comp=Z,5.4nm,0.7s,baz=309,slow=12,SNR=5.9						
PMSA	Palmer Station	42.45	176	eP	P	10 37 10.1	-0.4
PMSA	Palmer Station	42.45	176	P	P	10 37 10.3	-0.2
257A	Skidaway Islan	55.14	349	P	P	10 38 48.8	+0.5
H06E1	SOCORRO T-PHAS	57.05	313	T	T	11 40 38.7	
	SNR=46						
VNA3	Neumayer Olymp	59.56	161	P	P	10 39 19.4	+0.3
VNA2	Neumayer--Watz	60.15	160	P	P	10 39 22.9	-0.3
	baz=278,slow=7.9						
TXAR	Lajitas Array	60.70	327	P	P	10 39 27.8	+0.2
	comp=Z,0.5nm,0.7s,baz=151,slow=7.9,SNR=8.7						
T45A	Paducah	61.67	343	P	P	10 39 34.2	+0.3
SNAA	Sanae	61.77	161	P	P	10 39 34.4	+0.1
SNAA	Sanae	61.77	161	P	P	10 39 34.7	+0.5
SNAA				IAmb	IAmb	10 39 48.2	
	comp=Z,3.9nm,0.8s						
U40A	Yellville	62.29	340	P	P	10 39 38.1	0.0
U40A				IAmb	IAmb	10 39 48.2	
	comp=Z,6.5nm,0.8s						
S39A	Bolivar	63.66	340	P	P	10 39 47.6	+0.5
S39A				IAmb	IAmb	10 39 57.0	
	comp=Z,10nm,0.8s						
ANMO	Albuquerque	66.62	328	P	P	10 40 07.2	+0.5
QSPA	South Pole Qui	67.67	180	P	P	10 40 13.8	+0.9
QSPA				IAmb	IAmb	10 40 24.6	
	comp=Z,4.1nm,0.7s						
KSCO	Kaye Shedlock’	68.25	333	P	P	10 40 17.2	+0.4
SDCO	Great Sand Dun	68.44	331	P	P	10 40 19.5	+1.2
SDCO				IAmb	IAmb	10 40 30.3	
	comp=Z,7.1nm,1.2s						
MVCO	Mesa Verde	69.42	328	P	P	10 40 26.3	+2.0
MVCO				IAmb	IAmb	10 40 38.5	
	comp=Z,4.5nm,0.8s						
WUAZ	Wupatki	69.56	325	P	P	10 40 25.0	-0.1
WUAZ				IAmb	IAmb	10 40 40.5	
	comp=Z,5.1nm,0.9s						
K31A	O'Neill	69.91	338	P	P	10 40 28.5	+1.6
LIC	Lamto	69.99	74	eP	P	10 40 24.2	-3.8
	comp=Z,11nm,0.8s						
TIC	Toumodi	70.18	74	eP	P	10 40 27.9	-1.3
SMCO	Snowmass	70.28	331	P	P	10 40 30.4	+0.7
KIC	Kosan Boka	70.30	74	eP	P	10 40 28.5	-1.5
	comp=Z,15nm,0.7s						
DBIC	Dimbokro	70.34	74	P	P	10 40 29.3	-0.8
	comp=Z,5.7nm,0.5s,baz=232,slow=3.9,SNR=11						
DBIC				LR	LR	11 10 45.4	
	comp=Z,60nm,19.5s,baz=274,slow=35						
DBIC	Dimbokro	70.34	74	P	P	10 40 29.2	-1.0
DBIC				IAmb	IAmb	10 40 29.8	
	comp=Z,7.6nm,0.7s						
O20A	White River Ci	71.63	330	P	P	10 40 39.6	+1.9
O20A				IAmb	IAmb	10 40 49.9	
	comp=Z,7.1nm,0.8s						
LCMT	Little Creek M	71.68	325	P	P	10 40 40.5	+2.5
LCMT				IAmb	IAmb	10 42 45.9	
	comp=Z,12nm,1.8s						
MTPU	Mount Pierson	71.91	326	P	P	10 40 41.8	+2.2
MTPU				IAmb	IAmb	10 41 07.5	
	comp=Z,17nm,2.0s						
PDAR	Pinedale Array	74.32	331	P	P	10 40 54.0	+0.4
	comp=Z,0.2nm,0.6s,baz=142,slow=8.9,SNR=2.8						
PDAR	Pinedale Array	74.32	331	P	P	10 40 54.4	+0.8
KOWA	Kowa	74.68	67	P	P	10 40 55.0	-1.0
KOWA				IAmb	IAmb	10 40 55.6	
	comp=Z,4.6nm,0.6s						
NVAR	Mina Array Bea	75.46	323	P	P	10 41 01.0	+0.7
	comp=Z,0.3nm,0.5s,baz=142,slow=4.5,SNR=2.9						
ULM	Lac du Bonnet	75.89	343	P	P	10 41 03.9	+1.7
ULM				IAmb	IAmb	10 43 43.2	
	comp=Z,25nm,1.6s						
MCMT	McKenzie Canyo	77.42	331	P	P	10 41 13.8	+2.6
TORD	Torodi Ar. Bea	78.99	71	P	P	10 41 19.5	-0.8
	comp=Z,9.6nm,0.4s,baz=255,slow=5.1,SNR=114						
TORD	Torodi Ar. Bea	78.99	71	P	P	10 41 19.6	-0.8
TORD				IAmb	IAmb	10 41 20.2	
	comp=Z,14nm,1.1s						
PLID	Pearl Lake	79.08	329	P	P	10 41 21.9	+1.5
PLID				IAmb	IAmb	10 41 22.8	
	comp=Z,18nm,1.8s						
SUR	Sutherland	79.25	121	P	P	10 41 22.8	+1.0
SUR				IAmb	IAmb	10 41 33.1	
	comp=Z,33nm,1.4s						
WDC	Whiskeytown Da	79.32	322	P	P	10 41 21.6	0.0
WDC				IAmb	IAmb	10 41 22.9	
	comp=Z,36nm,1.8s						
TSUM	Tsumeb	81.06	107	P	P	10 41 30.4	-1.3
TSUM				IAmb	IAmb	10 41 33.4	
	comp=Z,11nm,1.1s						
MAW	Mawson	83.75	164	P	P	10 41 43.9	-0.7
	comp=Z,5.1nm,1.0s,baz=309,slow=17,SNR=3.6						
MAW				LR	LR	11 19 10.1	
	comp=Z,55nm,18.2s,baz=59,slow=36						
EDM	Edmonton	84.11	336	P	P	10 41 47.7	+1.1
BOSA	Boshof	84.18	118	P	P	10 41 47.3	-0.5
	comp=Z,3.8nm,0.8s,baz=262,slow=3.8,SNR=10						
BOSA				LR	LR	11 17 49.8	
	comp=Z,53nm,18.4s,baz=246,slow=35						
BOSA	Boshof	84.18	118	P	P	10 41 47.6	-0.2
BOSA				IAmb	IAmb	10 41 48.1	
	comp=Z,6.2nm,1.1s						
YKA	Yellowknife Ar	91.70	341	P	P	10 42 23.4	+0.6
	comp=Z,1.1nm,0.6s,baz=144,slow=4.9,SNR=6.3						
KEST	Kesra	95.01	53	LR	LR	11 26 42.4	
	comp=Z,46nm,18.2s,baz=282,slow=36						
H11S2	WAKE ISLAND Hy	126.64	277	T	T	13 07 56.2	
	baz=105,slow=75,SNR=381						
H11S1	WAKE ISLAND Hy	126.65	277	T	T	13 07 53.2	
	baz=105,slow=75,SNR=442						
H11S3	WAKE ISLAND Hy	126.66	277	T	T	13 07 57.6	
	baz=105,slow=75,SNR=338						
H11N3	WAKE ISLAND Hy	126.75	278	T	T	13 08 04.3	
	baz=104,slow=75,SNR=390						
H11N2	WAKE ISLAND Hy	126.77	278	T	T	13 08 01.4	
	baz=104,slow=75,SNR=481						
H11N1	WAKE ISLAND Hy	126.77	278	T	T	13 08 06.2	
	baz=104,slow=75,SNR=230						
ASAR	Alice Springs	128.37	209	PKP	PKPdf	10 48 23.2	-0.2
	comp=Z,0.7nm,0.9s,baz=126,slow=1.9,SNR=7.2						
WRA	Warramunga Arr	131.37	212	PKP	PKPdf	10 48 29.4	+0.3
	comp=Z,0.5nm,0.5s,baz=154,slow=1.8,SNR=15						
ZALV	Zalesovo Beam	143.45	25	PKP	PKPbc	10 48 47.5	+0.1
	comp=Z,2.4nm,0.8s,baz=283,slow=2.4,SNR=8.7						
KSH	Kashi	146.81	52	PKPbc	PKPbc	10 48 58.7	+0.3
MKAR	Makanchi Array	147.26	36	PKPbc	PKPbc	10 48 58.2	-1.1
	comp=Z,4.2nm,0.8s,baz=335,slow=3.2,SNR=15						
MKAR	Makanchi Array	147.26	36		PKPdf	10 48 57.0	0.0
SONM	Songino Array	154.61	5	PKPbc	PKiKP	10 49 17.2	+0.3
	comp=Z,0.7nm,0.8s,baz=331,slow=4.1,SNR=4.2						
LZH	Lanzhou	165.58	19	ePKP	PKPdf	10 49 21.3	+0.2

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*IDC **05** 10:32:38.5±3.8, 20°.68S×178°.16W, h557km±29km, mb3.0/7, mb1 3.3/9, mb1mx3.2/22, mbtmp3.9/9, Error ellipse: s-maj=90.6km s-min=18.9km az=151.0*

*NEIC **05** 10:32:41.3±2.1, 20°.4S±0°.1×177°.8W±0°.2, h521km±10km, mb4.2/22, Error ellipse: s-maj=24.7km s-min=16.6km az=137.0*

ISC 05 10:32:42.2±0.5**, 20°.0S**±0°.1×**178°.10W**±0°.10**, h550km, n63, σ2s.58**/55**, mb4.1**/18**, 6C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.28	301	P	P	10 34 05.9	-0.5
	3.5nm,0.3s,baz=142,slow=10,SNR=14						
MSVF	Nonsavu	4.28	301	P	P	10 34 06.4	0.0
NIUE	Niue	7.76	85	P	P	10 34 33.5	-4.1
AFI	Afiamalu	8.55	46	P	P	10 34 39.1	-6.5
	6.5nm,0.3s,baz=169,slow=3.1,SNR=9.1						
AFI				S	S	10 36 14.2	-12
	21nm,0.3s,baz=161,slow=19,SNR=14						
DZM	Mont Dzumac	14.59	259	P	P	10 35 40.9	-6.7
	0.2nm,0.3s,baz=70,slow=14,SNR=1.9						
OUZ	Omahuta	16.86	204	P	P	10 36 07.8	-1.6
WMGZ	Waiomatatini S	18.03	189	P	P	10 36 22.3	+2.1
PKGZ	Pakihiroa	18.15	190	P	P	10 36 24.1	+2.8
RUGZ	Raukumara Rang	18.29	191	P	P	10 36 26.7	+4.0
OPRZ	Ohinepanea	18.39	194	P	P	10 36 30.6	+7.0
URZ	Urewera	18.68	192	P	P	10 36 28.6	+2.5
MUGZ	Murupara	18.96	192	P	P	10 36 32.3	+3.7
SNGZ	Shannon Statio	19.14	191	P	P	10 36 19.9	-10
NTVZ	North Tongarir	19.79	194	P	P	10 36 43.6	+7.2
KRVZ	Karewarewa	19.80	195	P	P	10 36 44.3	+7.9
MCHZ	McNeill Hill	19.91	192	P	P	10 36 37.0	-0.3
FWVZ	Far West T-bar	19.97	195	P	P	10 36 49.1	+11
KRHZ	Kereru	20.16	192	P	P	10 36 49.8	+10
CTAO	Charters Tower	33.45	264	P	P	10 38 38.7	+2.4
CTAO				IAmb	IAmb	10 38 46.5	
	comp=Z,16nm,1.4s						
TOO	Toolangi	36.13	233	P	P	10 38 58.3	-0.1
BBOO	Buckleboo	42.70	243	P	P	10 39 52.1	+0.9
BBOO				IAmb	IAmb	10 40 10.3	
	comp=Z,13nm,1.3s						
ASAR	Alice Springs	44.55	256	P	P	10 40 00.1	-5.6
	comp=Z,0.3nm,0.5s,baz=105,slow=7.4,SNR=4.5						
ASAR				PcP	PcP	10 41 32.1	-4.9
	comp=Z,0.4nm,0.6s,baz=103,slow=4.2,SNR=2.3						
WB0	Warramunga Arr	44.56	262	P	P	10 40 07.5	+1.6
WRA	Warramunga Arr	44.59	262	P	P	10 40 00.4	-5.7
	comp=Z,0.1nm,0.3s,baz=97,slow=7.3,SNR=18						
WRA				PcP	PcP	10 41 32.2	-5.0
	comp=Z,0.5nm,0.9s,baz=95,slow=6.5,SNR=2.0						
HON	Honolulu	45.52	27	P	P	10 40 15.8	+2.8
QSPA	South Pole Qui	70.08	180	P	P	10 42 58.6	-0.6
PNTR	Pine Nut	80.26	42	P	P	10 43 59.1	+2.8
PNTR				IAmb	IAmb	10 43 59.9	
	comp=Z,7.9nm,0.9s						
NVAR	Mina Array Bea	80.71	43	P	P	10 43 56.5	-2.3
	comp=Z,0.8nm,0.8s,baz=219,slow=9.8,SNR=2.9						
KVN	Kaiserville	81.20	43	P	P	10 44 02.5	+1.3
P18K	Big Mountain,	81.28	12	P	P	10 44 03.3	+2.4
P18K				IAmb	IAmb	10 44 17.9	
	comp=Z,7.5nm,1.0s						
PRN	Pahroc Range	82.30	46	P	P	10 44 09.5	+2.7
TUC	Tucson	82.73	52	P	P	10 44 11.9	+2.9
TUC				IAmb	IAmb	10 44 12.8	
	comp=Z,6.4nm,1.1s						
WVOR	Wild Horse Val	82.80	40	P	P	10 44 12.1	+3.0
WVOR				IAmb	IAmb	10 44 12.6	
	comp=Z,12nm,1.3s						
U15A	North Rim	83.68	48	P	P	10 44 15.6	+1.7
U15A				IAmb	IAmb	10 44 17.4	
	comp=Z,4.4nm,0.8s						
F10A	Beach Ranch, E	85.65	38	P	P	10 44 24.1	+1.0
TX31	Lajitas Ar. Si	86.86	57	P	P	10 44 31.8	+2.6
TX31				IAmb	IAmb	10 44 32.8	
	comp=Z,3.0nm,0.9s						
TX32	Lajitas Array	86.86	57	P	P	10 44 31.9	+2.8
TXAR	Lajitas Array	86.86	57	P	P	10 44 26.6	-2.5
	comp=Z,0.8nm,0.8s,baz=242,slow=5.3,SNR=2.1						
TXAR	Lajitas Array	86.86	57	P	P	10 44 31.8	+2.7
WRH	Wood River Hil	87.32	13	P	P	10 44 32.1	+1.7
WRH				IAmb	IAmb	10 44 33.6	
	comp=Z,4.7nm,0.9s						
HDA	Harding Lake	87.50	13	P	P	10 44 33.2	+2.0
HDA				IAmb	IAmb	10 44 34.3	
	comp=Z,3.9nm,0.6s						
CCB	Clear Creek Bu	87.53	13	P	P	10 44 33.5	+2.2
BCAR	Beaver Creek A	87.56	16	P	P	10 44 34.8	+3.3
ILAR	Eielson Array	87.83	13	P	P	10 44 31.8	-0.9
	comp=Z,1.1nm,0.6s,baz=219,slow=5.9,SNR=17						
PDAR	Pinedale Array	88.65	43	P	P	10 44 36.4	-1.0
	comp=Z,0.9nm,0.6s,baz=213,slow=3.8,SNR=8.3						
PDAR	Pinedale Array	88.65	43	P	P	10 44 38.2	+0.8
DAWY	Dawson	88.99	16	P	P	10 44 41.1	+2.9
DAWY				IAmb	IAmb	10 44 41.9	
	comp=Z,2.7nm,0.8s						
EGAK	Eagle	89.13	15	P	P	10 44 42.0	+3.3
CMAR	Chiang Mai Arr	89.86	290	P	P	10 44 39.5	-3.7
	comp=Z,0.3nm,0.3s,baz=130,slow=2.8,SNR=1.6						
ZON	Zonda	95.17	126	P	P	10 45 08.3	+0.8
FINES	FINESS Array B	135.26	344	PKP	PKPdf	10 50 54.6	-4.5
	comp=Z,7.0nm,0.9s,baz=32,slow=8.2,SNR=3.8						
AKASG	Malin Array Be	142.52	331	PKP	PKPdf	10 51 07.1	-5.5
	comp=Z,2.0nm,0.6s,baz=45,slow=4.1,SNR=4.5						
AKASG	Malin Array Be	142.52	331		PKPdf	10 51 12.2	-0.4
BR131	Keskin Array S	146.43	313		PKPab	10 51 24.8	0.0
BRTR	Keskin Array B	146.43	313	PKPbc	PKPdf	10 51 18.9	-1.0
	comp=Z,0.4nm,0.5s,baz=94,slow=3.0,SNR=2.0						
OSTC	Ostas	147.45	343	⇑ePKP	PKPab	10 51 27.7	-0.7
CHVC	Chvalec	147.47	343	⇑ePKP	PKPab	10 51 27.5	-1.0
CLL	Collm	147.54	347	i PKPbc	PKPab	10 51 27.2	-1.5
	comp=Z,13nm,0.8s						
DPC	Dobruska-Polom	147.61	343	⇑ePKP	PKPab	10 51 28.1	-1.0
KRLC	Kraliky	147.73	342	⇑ePKP	PKPab	10 51 28.3	-1.3
KHC	Kasperske Hory	149.45	345	⇑ePKP	PKiKP	10 51 32.3	+2.0
CKRC	Cesky Krumlov	149.55	344	⇑ePKP	PKPab	10 51 33.7	-3.4
GERES	GERESS Array B	149.68	344	PKPbc	PKPdf	10 51 26.4	+1.6
	comp=Z,1.2nm,0.9s,baz=0.0,slow=4.3,SNR=2.1						

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*IDC **05** 10:53:33.5±1.1, 28°.21N×105°.06E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.3/52, mbtmp3.5/7, ML3.7/2, MS2.7/1, Ms1 2.9/1, ms1mx2.4/45, Error ellipse: s-maj=34.6km s-min=19.7km az=67.0*

ISC 05 10:53:38.5±1.0**, 28°.2N**±0°.1×**105°.1E**±0°.2**, h35km, n7, σ0s.36**/7**, mb3.5**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.23	211	Pn	Pn	10 56 16.8	+0.2
	0.2nm,0.3s,baz=18,slow=11,SNR=5.2						
CMAR				LR	LR	11 00 32.8	
	comp=Z,32nm,18.0s,baz=345,slow=37						
SONM	Songino Array	19.60	3	P	P	10 58 04.0	+0.2
	0.2nm,0.3s,baz=182,slow=10,SNR=4.8						
KSRS	Korea Array	21.25	59	P	P	10 58 21.9	+0.2
	0.5nm,0.4s,baz=235,slow=9.7,SNR=1.9						
MKAR	Makanchi Array	25.72	322	P	P	10 59 05.8	+0.2
	0.9nm,0.7s,baz=125,slow=11,SNR=5.2						
KURBB	Kurchatov Arra	30.05	325	P	P	10 59 43.8	-0.4
	0.3nm,0.5s,baz=130,slow=9.3,SNR=5.4						
WRA	Warramunga Arr	55.63	146	P	P	11 03 10.7	-0.4
	0.5nm,0.8s,baz=322,slow=6.2,SNR=12						
ASAR	Alice Springs	58.61	149	P	P	11 03 32.3	+0.1
	0.4nm,0.7s,baz=323,slow=7.3,SNR=7.0						

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*IDC **05** 11:33:32.5±0.9, 32°.53N×49°.60E, h0km, mb3.8/13, mb1 3.9/18, mb1mx3.7/51, mbtmp3.9/18, ML3.9/5, MS3.2/6, Ms1 3.2/6, ms1mx2.8/62, Error ellipse: s-maj=20.2km s-min=15.3km az=137.0*

*TEH **05** 11:33:33.5, 32°.61N×49°.66E, h8km, ML3.8*

*THR **05** 11:33:34.4±0.9, 32°.63N×49°.69E, h15km±9km, ML3.6*

*DSN **05** 11:33:41.6±2.9, 31°.90N×49°.79E, h15km, ML3.8/7, Error ellipse: s-maj=40.9km s-min=16.7km az=14.0*

*OMAN **05** 11:33:42.9±0.1, 32°.20N×49°.92E, h129km±1km, mb4.8/25, Error ellipse: s-maj=2.9km s-min=1.7km az=21.0*

ISC 05 11:33:34.9±0.5**, 32°.48N**±0°.04×**49°.65E**±0°.03**, h19km, n146, σ1s.94**/165**, mb4.0**/16**, MS3.3**/3**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMIS	Naft Sefid	0.86	201	ePg	Pn	11 33 53.2	+1.1
SHK1	Shahrekord	1.05	98	ePg	Pb	11 33 54.1	-0.6
SHK1				eSg	Sg	11 34 10.4	+1.1
SHK1				e		11 34 13.0	
	comp=Z,31µm,0.4s						
IPIR	Pirpir	1.07	78	ePg	Pb	11 33 53.4	-1.6
IPIR				eSg	Sb	11 34 09.0	+0.3
IPIR				e		11 34 11.1	
	comp=Z,42µm,0.3s						
KHMZ	Khomeyn	1.29	12	ePg	Pn	11 33 55.0	-3.1
KHMZ	Khomeyn	1.29	12	ePn	Pn	11 33 55.0	-3.1
BMDN	Meydan	1.38	330	ePg	Pn	11 33 58.5	-0.8
BMDN				e		11 34 22.9	
	comp=Z,12µm,0.4s						
AHWZ	Ahwaz	1.43	217	ePg	Pg	11 34 03.0	+0.6
IBRJ	Brojen	1.48	112	ePn	Pb	11 34 02.5	+0.6
IBRJ				e		11 34 29.9	
	comp=Z,10µm,0.8s						
IDOB	Doab	1.80	317	e		11 34 35.8	
	comp=Z,7µm,0.5s						
IDOB				ePn	Pn	11 34 05.5	+0.4
IKLH	Kolahrood	1.83	62	e		11 34 38.6	
	comp=Z,13µm,0.5s						
IKLH				ePn	Pn	11 34 05.5	0.0
IKFM	Kafar-mosalman	1.84	305	ePg	Pn	11 34 07.1	+1.6
QAMS	Qamsar	1.93	49	ePn	Pn	11 34 07.1	+0.1
ABEH	Behbahan	1.94	164	ePn	Pb	11 34 09.9	+0.2
DHL1	Dehloran	2.01	276	ePn	Pb	11 34 10.0	-0.8
IGAR	Gharneh	2.02	91	ePn	Pb	11 34 10.8	-0.4
ASAO	Ashtian	2.09	9	ePn	Pn	11 34 09.6	+0.4
ASAO				eSg	Sn	11 34 35.9	+1.1
ASAO				IAML		11 34 47.6	
	comp=N,379nm,0.5s						
ASAO				IAML		11 34 47.7	
	comp=E,511nm,0.8s						
ASAO	Ashtian	2.09	9	ePn	Pn	11 34 09.6	+0.4
IZEF	Zefreh	2.30	79	ePn	Pn	11 34 14.0	+2.0
IZEF				e		11 34 17.1	
	comp=Z,6µm,0.5s						
HAGD	Aghdareh	2.38	350	ePn	Pn	11 34 14.2	+1.1
HAGD				e		11 34 51.5	
	comp=Z,6µm,0.4s						
IRAM	Ramesheh	2.41	105	ePn	Pn	11 34 16.3	+2.8
IRAM				e		11 35 07.7	
	comp=Z,4µm,0.8s						
GHVR	GHOM	2.43	34	ePn	Pn	11 34 15.7	+2.1
GHVR				IAML		11 34 52.3	
	comp=E,347nm,0.6s						
GHVR				IAML		11 34 52.9	
	comp=N,172nm,0.5s						
GHVR	GHOM	2.43	34	ePn	Pn	11 34 15.7	+2.1
IBZA	Bozab	2.49	324	ePn	Pn	11 34 16.1	+1.5
IBZA				e		11 35 01.7	
	comp=Z,3µm,0.7s						
KRSH	Karshahi	2.56	54	ePn	Pn	11 34 17.3	+1.8
KRSH				e		11 35 07.8	
	comp=Z,5µm,0.6s						
IQOM	Qom	2.64	26	ePn	Pn	11 34 17.9	+1.2
IALM	Almabolaq	2.68	333	ePn	Pn	11 34 18.6	+1.3
NASN	Na'in	2.68	82	ePn	Pn	11 34 18.8	+1.4
NASN				IAML		11 35 06.5	
	comp=E,210nm,0.5s						
NASN				IAML		11 35 07.4	
	comp=N,144nm,0.4s						
NASN	Na'in	2.68	82	ePn	Pn	11 34 18.8	+1.4
KCHF	Cheshme Sefid,	2.83	310	ePn	Pn	11 34 20.9	+1.7
KCHF				e		11 35 12.1	
	comp=Z,3µm,0.8s						
ISFB	Sefidab	2.86	48	ePn	Pn	11 34 21.3	+1.7
IRAZ	Razeghan	2.93	4	ePn	Pn	11 34 22.0	+1.3
IVRN	Varamin	3.05	34	ePn	Pn	11 34 24.3	+2.1
IGHG	Ghaleghazi	3.17	306	ePn	Pn	11 34 25.7	+1.7
QABG	Abgarm-Qazvin	3.23	359	ePn	Pn	11 34 24.9	+0.2
QABG				e		11 35 24.4	
	comp=Z,2µm,0.7s						
SNGE	Sanandaj	3.24	324	ePn	Pn	11 34 25.6	+0.7
SNGE				IAML		11 35 28.3	
	comp=N,104nm,0.6s						
SNGE	Sanandaj	3.24	324	ePn	Pn	11 34 25.6	+0.7
IHSB	Hasanabad	3.25	24	ePn	Pn	11 34 26.1	+1.2
ILIN	Lien	3.31	318	ePn	Pn	11 34 27.3	+1.4
ILIN				e		11 35 35.0	
	comp=Z,2µm,1.0s						
IMHD	Mahdasht	3.31	14	ePn	Pn	11 34 26.9	+1.1
IMHD				e		11 34 33.2	
	comp=Z,4µm,0.6s						
UMR	Umm Al-Rimmam	3.35	210	eP	Pn	11 34 28.9	+2.6
ISAD	Sadrabad	3.47	98	ePn	Pn	11 34 31.0	+2.9
ISAD				e		11 35 40.5	
	comp=Z,2µm,0.7s						
ANAR	Anarak	3.51	77	ePn	Pn	11 34 30.5	+2.0
IDHR	Dehrash	3.51	310	ePn	Pn	11 34 29.7	+1.0
IDHR				e		11 35 16.0	
	comp=Z,2µm,0.4s						
TEH	Tehran	3.56	23	ePn	Pn	11 34 30.8	+1.6
THKV	Tehran--Karaj	3.58	16	ePn	Pn	11 34 14.4	-15
CHTH	Charan	3.63	19	ePn	Pn	11 34 31.8	+1.4
CHTH	Charan	3.63	19	ePn	Pn	11 34 31.8	+1.4
IDMV	Damavand	3.67	32	ePn	Pn	11 34 32.2	+1.3
DAMV	Damavand	3.69	31	ePn	Pn	11 34 24.5	-6.6
KBD	Kabd	3.69	208	eP	Pn	11 34 34.7	+3.7
RST	Umm Al-Ruwaisa	3.74	218	eP	Pn	11 34 34.5	+2.9
AHBU	AHRAM	3.87	158	ePn	Pn	11 34 37.2	+3.8
IGZV	Ghazvin	3.93	7	ePn	Pn	11 34 36.1	+1.7
ILAS	Lasjerd	4.00	43	ePn	Pn	11 34 36.9	+1.6
QRN	Al-Qurain	4.01	202	eP	Pn	11 34 38.7	+3.4
QALM	Alamut, Qazvin	4.03	12	ePn	Pn	11 34 37.1	+1.3
ICHK	Chekchek	4.03	92	ePn	Pn	11 34 38.3	+2.5
IFIR	Firoozkooh	4.08	38	ePn	Pn	11 34 37.9	+1.4
YZKH	Yazd	4.18	90	ePn	Pn	11 34 39.8	+2.0
YZKH				IAML		11 35 57.4	
	comp=E,61nm,0.7s						
YZKH				IAML		11 36 02.0	
	comp=N,39nm,0.6s						
ZNJK	Zanjan	4.26	349	ePn	Pn	11 34 39.2	+0.2
ZNJK	Zanjan	4.26	349	ePn	Pn	11 34 39.2	+0.2
IMEH	Mehriz	4.36	103	ePn	Pn	11 34 42.7	+2.4
IPRN	Peran	4.37	30	ePn	Pn	11 34 42.4	+2.1
ISHM	Shahmirzad	4.49	41	ePn	Pn	11 34 43.6	+1.4
GHIR	Ghir-Karzin	5.08	145	ePn	Pn	11 34 50.7	+0.6
GHIR				IAML		11 35 57.0	
	comp=N,59nm,0.4s						
GHIR				IAML		11 36 01.9	
	comp=E,41nm,0.4s						

IGLO	Ghaloghah	5.29	40	*e*Pn	Pn	11 34 54.8	+1.6
SHRO	Shahrood	6.33	55	*e*Pn	Pn	11 35 09.1	+1.8
TKDS	Koohdasht(Taba	6.38	78	*e*Pn	Pn	11 35 09.2	+1.3
GRMI	Germi	6.48	348	*e*Pn	Pn	11 35 09.5	+0.2
SAKB	Bahrain	6.52	173	P	Pn	11 35 12.6	+2.8
SAKB				S	Sn	11 36 26.0	+2.3
KRBR	Kerman	6.58	110	*e*Pn	Pn	11 35 12.8	+1.9
SHMA	Al-Shehemyia	6.70	170	P	Pn	11 35 15.1	+2.9
SHMA				S	Sn	11 36 29.1	+1.1
MRVT	Maraveh tapeh	7.39	44	*e*Pn	Pn	11 35 21.8	0.0
SBZV	Sabzevar	7.65	57	*e*Pn	Pn	11 35 27.1	+1.6
TRNA	Turayna	7.83	170	P	Pn	11 35 30.0	+2.2
TRNA				S	Sn	11 36 55.7	-0.3
AFRZ	Afriz	7.93	81	*e*Pn	Pn	11 35 31.2	+1.9
BSRN	Basiran	8.04	91	*e*Pn	Pn	11 35 32.9	+2.0
ISFR	Sfrayin	8.25	54	*e*Pn	Pn	11 35 36.4	+2.6
IMON	Monand	8.46	82	*e*Pn	Pn	11 35 39.3	+2.6
SHME	Shamm	8.55	137	P	Pn	11 35 37.3	-0.4
SHME	Shamm	8.55	137	P	Pn	11 35 37.4	-0.4
SHME				S	Sn	11 37 11.4	-2.3
BANOM	Banah	8.74	137	*i* P	Pn	11 35 39.6	-0.7
	SNR=20						
BANOM				S	Sn	11 37 14.3	-4.1
BANOM	Banah	8.74	137	P	Pn	11 35 39.9	-0.5
	SNR=20						
BANOM				S	Sn	11 37 14.2	-4.1
GEYT	Alibeck	8.81	50	Pn	Pn	11 35 43.1	+1.9
	comp=E,0.5nm,0.3s,baz=224,slow=18,SNR=2.0						
GEYT				LR	LR	11 39 37.2	
	comp=E,239nm,18.5s,baz=335,slow=41						
IEMG	Emamgholi	8.88	54	*e*Pn	Pn	11 35 44.4	+1.9
MASF	Masafi	9.09	140	P	Pn	11 35 45.0	-0.2
	SNR=5.4						
MASF				S	Sn	11 37 23.3	-3.7
MSFE	Esma-Masafi	9.10	140	*i* P	Pn	11 35 44.5	-0.7
	SNR=15						
AJN	Ajban	9.17	148	P	Pn	11 35 48.6	+2.4
IKRD	Kardeh	9.19	59	*e*Pn	Pn	11 35 48.6	+1.9
MDH	Madha	9.22	139	*i* P	Pn	11 35 46.1	-0.8
	SNR=9.5						
MDH	Madha	9.22	139	P	Pn	11 35 46.3	-0.6
	SNR=9.7						
MDH				S	Sn	11 37 26.3	-3.9
ASUD	Al Ashush, Dub	9.28	146	*i* P	Pn	11 35 49.4	+1.7
	SNR=9.8						
ASUD	Al Ashush, Dub	9.28	146	P	Pn	11 35 49.4	+1.7
	SNR=10						
ASUD				S	Sn	11 37 30.7	-0.8
FAQ	Al Faqa, Dubai	9.30	144	*i* P	Pn	11 35 49.4	+1.4
	SNR=6.8						
FAQ	Al Faqa, Dubai	9.30	144	P	Pn	11 35 49.5	+1.4
	SNR=6.8						
FAQ				S	Sn	11 37 29.7	-2.5
UOSS	Minazif	9.45	141	*i* P	Pn	11 35 49.1	-1.0
	SNR=7.3						
UOSS	Minazif	9.45	141	P	Pn	11 35 50.6	+0.6
UOSS				S	Sn	11 37 31.3	-4.5
HATD	Hatta, Dubai	9.51	142	P	Pn	11 35 51.9	+1.0
HATD	Hatta, Dubai	9.51	142	P	Pn	11 35 51.9	+1.0
HATD				S	Sn	11 37 33.8	-3.5
ASHO	Ashiyiah	9.59	142	*i* P	Pn	11 35 51.9	-0.1
	SNR=12						
ASHO	Ashiyiah	9.59	142	P	Pn	11 35 52.4	+0.4
	SNR=16						
ASHO				S	Sn	11 37 35.8	-3.5
RAYN	Ar Rayn	9.64	203	*i* P	Pn	11 35 51.1	-1.6
	SNR=25						
RAYN	Ar Rayn	9.64	203	P	Pn	11 35 52.5	-0.2
RAYN				S	Sn	11 37 39.8	-0.8
SOHO	SOHO	10.29	142	*i* P	Pn	11 35 59.6	-1.8
	SNR=11						
SOHO	SOHO	10.29	142	P	Pn	11 36 01.8	+0.3
SOHO				S	Sn	11 37 52.5	-3.8
ASF	Jabal al Asfar	10.79	272	Pn	Pn	11 36 08.2	-0.4
	comp=E,0.7nm,0.3s,baz=152,slow=18,SNR=2.5						
UMZA	Um Al Zommool	10.88	152	P	Pn	11 36 10.9	+1.3
UMZA				S	Sn	11 38 07.2	-3.7
ARQ	Araqi	10.94	145	P	Pn	11 36 11.1	+0.6
	SNR=6.8						
ARQ				S	Sn	11 38 09.2	-3.2
HOQ	Hoqain	11.14	141	P	Pn	11 36 13.6	+0.3
HOQ				S	Sn	11 38 13.9	-3.5
BIDO	Bidbid	11.64	138	P	Pn	11 36 19.8	-0.3
BSY	Bisya	11.78	144	P	Pn	11 36 22.7	+0.8
BSY				S	Sn	11 38 31.1	-1.7
SMDO	Samad	11.96	140	P	Pn	11 36 24.6	0.0
	SNR=6.9						
SMDO				S	Sn	11 38 33.4	-4.3
MMAI	Mount Meron Ar	12.01	276	LR	LR	11 41 58.0	
	comp=E,31nm,21.2s,baz=10.0,slow=42						
WSAR	Wadi Sarin	12.15	137	Pn	Pn	11 36 27.1	0.0
	comp=E,1.8nm,0.3s,baz=315,slow=14,SNR=12						
WSAR				Sn	Sn	11 38 35.1	-6.9
	comp=E,0.5nm,0.3s,baz=127,slow=8.5,SNR=3.0						
WSAR	Wadi Sarin	12.15	137	P	Pn	11 36 27.1	0.0
	SNR=8.5						
JMDO	Jabal Madar	12.55	141	P	Pn	11 36 32.6	+0.1
WBK	Wadi Bani Khal	12.84	138	P	Pn	11 36 36.0	-0.4
	SNR=7.6						
JLN	Jalan Bani Buh	13.45	137	P	Pn	11 36 45.2	+0.5
DQM	DQM	14.35	149	P	Pn	11 36 56.0	-1.2
DOK	Doka	14.38	163	P	Pn	11 36 56.2	-1.2
	SNR=7.8						
DOK				S	Sn	11 39 27.6	-8.8
WHFO	Wadi Hawf	14.96	165	P	Pn	11 37 04.4	-1.1
	SNR=23						
WHFO				S	Sn	11 39 44.3	-6.5
ABTO	Aybut	15.41	167	P	Pn	11 37 10.1	-1.4
DMTO	DMTO	15.46	161	P	Pn	11 37 10.6	-1.3
	SNR=12						
RBK	Rabkut	15.47	163	P	Pn	11 37 10.8	-1.4
AKTO	Aktyubinsk	18.98	17	P	P	11 37 53.6	-1.5
	comp=E,0.2nm,0.3s,baz=210,slow=5.3,SNR=3.6						
AKTO				LR	LR	11 47 30.0	
	comp=E,59nm,18.4s,baz=291,slow=44						
BELG	Belogornoye	19.96	356	P	P	11 38 04.6	-1.1
	comp=E,0.8nm,0.3s,baz=101,slow=1.8,SNR=5.6						
IDI	Anoyia	20.73	285	P	P	11 38 15.1	+0.7
	comp=E,6.8nm,0.3s,baz=106,slow=8.9,SNR=11						
AAK	Ala-Archa	22.08	56	LR	LR	11 48 22.6	
	comp=E,88nm,19.4s,baz=258,slow=40						
MLR	Muntele Rosu	22.45	312	P	P	11 38 33.6	+0.7
	comp=E,3.0nm,0.7s,baz=205,slow=2.0,SNR=4.6						
AKASG	Malin Array Be	23.64	326	P	P	11 38 45.5	+0.8
	comp=E,0.3nm,0.3s,baz=132,slow=9.2,SNR=2.4						
ARU	Arti	24.74	12	P	P	11 38 55.4	+0.5
	comp=E,0.4nm,0.3s,baz=220,slow=14,SNR=1.5						
BVAR	Borovoye Array	25.40	30	P	P	11 39 01.0	+0.1
	comp=E,3.4nm,0.9s,baz=221,slow=16,SNR=12						
KURBB	Kurchatov Arra	27.95	41	P	P	11 39 24.7	+0.8
	comp=E,0.1nm,0.3s,baz=244,slow=9.9,SNR=0.8						
MKAR	Makanchi Array	28.68	51	P	P	11 39 32.1	+1.5
	comp=E,0.5nm,0.6s,baz=238,slow=8.3,SNR=2.8						
KBA	Koelnbreinsper	31.17	309	*e*P	P	11 39 52.8	0.0
	comp=E,2.4nm,0.6s						
GERES	GERESS Array B	31.44	312	P	P	11 39 53.9	-1.1
	comp=E,0.4nm,0.4s,baz=114,slow=8.8,SNR=2.5						
ABTA	Abfaltersbach	31.64	308	*e*P	P	11 39 59.6	+2.8
	comp=E,1.5nm,0.5s						
SQTA	Sankt Quirin	32.62	308	*e*P	P	11 40 04.7	-0.7
	comp=E,3.2nm,0.6s						
FINES	FINESS Array B	32.77	339	P	P	11 40 05.3	-1.0
	comp=E,5.8nm,1.1s,baz=154,slow=10,SNR=1.1						
FETA	Feichten	32.90	308	*e*P	P	11 40 07.3	-0.6
	comp=E,1.8nm,0.5s						
ZALV	Zalesovo Beam	32.92	39	P	P	11 40 07.8	0.0
	comp=E,0.5nm,0.4s,baz=267,slow=8.2,SNR=2.7						
KMBO	Kilima Mbogo	35.42	202	P	P	11 40 31.2	+1.1
	comp=E,1.0nm,0.3s,baz=51,slow=6.5,SNR=1.5						
TLY	Talaya	43.32	47	LR	LR	12 00 06.9	
	comp=E,42nm,20.9s,baz=1.5,slow=37						
TORD	Torodi Ar. Bea	47.76	258	P	P	11 42 11.2	+0.1
	comp=E,1.2nm,0.7s,baz=49,slow=8.3,SNR=8.4						
BOSA	Boshof	65.03	204	P	P	11 44 14.7	+0.8
	comp=E,2.2nm,0.7s,baz=344,slow=7.4,SNR=2.3						
KAPI	Kappang	76.10	105	LR	LR	12 23 53.3	
	comp=E,26nm,18.1s,baz=100,slow=40						

IDC 05 11:39:48.3±10.0**, 22°.52S**×**177°.26W, h0^{km}, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.3**/34**, mbtmp3.6**/3**, Error ellipse: s-maj=341.8km s-min=97.6km az=140.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.77	259	P	P	11 48 04.2	+0.2
	0.2nm,0.4s,baz=92,slow=7.1,SNR=7.1						
WRA	Warramunga Arr	45.04	264	P	P	11 48 05.8	-0.4
	0.5nm,0.3s,baz=103,slow=8.5,SNR=31						
CMAR	Chiang Mai Arr	91.44	289	P	P	11 52 56.9	-0.1
	0.3nm,0.5s,baz=134,slow=3.3,SNR=4.5						

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*IDC **05** 11:41:50.7±1.3, 53°.62N×163°.84W, h0^{km}, mb3.8/14, mb1 3.9/15, mb1mx3.6/73, mbtmp3.8/15, ML3.2/1, Error ellipse: s-maj=31.4km s-min=18.1km az=5.0*

*NEIC **05** 11:41:52.3±1.6, 53°.38N±0°.08×163°.50W±0°.09, h15^{km}±12^{km}, ML3.5/10, ML3.4(AEIC), Error ellipse: s-maj=12.5km s-min=7.1km az=161.0*

*AEIC **05** 11:41:54±1.3, 53°.42N±0°.09×163°.53W±0°.09, h18^{km}±8^{km}, Error ellipse: s-maj=13.2km s-min=6.3km az=156.0*

ISC 05 11:41:54.4±0.8**, 53°.5N**±0°.1×**163°.64W**±0°.07**, h29^{km}, n81, σ1^{s}.01**/73**, mb3.8**/13**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	1.12	330		Pn	11 42 14.9	+0.7
BRPK	Brown Peak	1.14	357		Pn	11 42 14.5	0.0
WESP	Westdahl Peak	1.18	328		Pn	11 42 15.6	+0.6
WESN	West Dahl Nort	1.20	333		Pn	11 42 16.1	+0.9
ISLZ	Isanotski Laza	1.22	358		Pn	11 42 16.0	+0.4
WECS	Westdahl Cape	1.23	327		Pn	11 42 16.7	+1.0
WEBT	Westdahl Beart	1.27	329		Pn	11 42 17.2	+1.0
SSLW	Shishaldin Wes	1.30	348		Pn	11 42 17.5	+0.8
SSBA	Shishaldin	1.30	348		Pn	11 42 17.4	+0.7
SSLN	Shishaldin Nor	1.32	351		Pn	11 42 18.3	+1.3
ISNN	Isanotski Nort	1.33	357		Pn	11 42 18.5	+1.4
FALS	False Pass	1.36	5		Pn	11 42 17.7	+0.3
AKSA	Akutan Strait	1.37	298		Pn	11 42 18.2	+0.6
AKUT	Akutan	1.41	297		Pn	11 42 18.9	+0.8
AKUT	Akutan	1.41	297	IAML		11 42 42.3	
	comp=N,613nm,0.6s						
AKUT				IAML		11 42 48.8	
	comp=E,491nm,0.4s						
AKBBA	Akutan Broad B	1.48	294		Pn	11 42 20.0	+0.9
AKLV	Akutan Long Va	1.52	297		Pn	11 42 20.5	+0.8
AKMO	Akutan Morgan	1.52	294		Pn	11 42 20.4	+0.8
AKGG	Akutan Green G	1.56	297		Pn	11 42 21.3	+1.1
AKRB	Akutan Reef Bi	1.57	294		Pn	11 42 21.2	+0.9
UNV	Unalaska Valle	1.74	282		Pn	11 42 22.9	+0.3
DT1	Dutton Round H	1.79	26		Pn	11 42 23.3	0.0
MNAT	Makushin Natee	1.85	283		Pn	11 42 25.0	+0.8
MTBL	Makushin Table	1.86	286		Pn	11 42 25.2	+0.8
MSW	Makushin Switc	1.91	284		Pn	11 42 26.0	+0.9
MAPS	Pakushin South	1.99	280		Pn	11 42 27.3	+1.2
HAG	Hague Volcano	2.08	29		Pn	11 42 28.2	+0.8
PS4A	Pavlof South-4	2.12	29		Pn	11 42 28.6	+0.8
OKFG	Magazine Ridge	2.56	270		Pn	11 42 34.8	+1.0
SDPT	Sand Point	2.61	44		Pn	11 42 34.9	+0.3
SDPT	Sand Point	2.61	44	IAML		11 43 11.3	
	comp=E,301nm,0.5s						
SDPT				IAML		11 43 30.9	
	comp=N,209nm,1.3s						
OKTU	Okmok Mt. Tuli	2.63	269		Pn	11 42 36.1	+1.1
OKRE	Okmok R'deer P	2.70	272		Pn	11 42 36.8	+0.9
OKSO	Okmok South	2.71	269		Pn	11 42 37.0	+1.0
CNBA	Chernabura Isl	2.72	59		Pn	11 42 35.7	-0.4
NIKH	Nikolski High	3.18	262		Pn	11 42 43.4	+0.9
VNHG	Veniaminof 1	3.75	42		Pn	11 42 51.5	+1.1
CHGN	Chignik	4.12	45	Pn	Pn	11 42 55.6	+0.3
CHGN				IAML		11 44 11.6	
	comp=E,68nm,1.0s						
CHGN				IAML		11 44 13.7	
	comp=N,57nm,1.6s						
ANPB	Aniakchak Plen	4.51	41		Pn	11 43 01.5	+0.7
AZAC	Aniakchak	4.60	40		Pn	11 43 03.1	+1.1
ANNE	Aniakchak Nort	4.67	41		Pn	11 43 04.1	+1.1
CHIR	Chirikof Islan	5.20	60	Pn	Pn	11 43 09.8	-0.4
SII	Sitkinak Islan	6.24	57	Pn	Pn	11 43 23.0	-1.4
KOFP	Korovin Flat P	6.45	263		Pn	11 43 29.1	+1.7
ATKA	Atka Island	6.53	263		Pn	11 43 30.2	+1.9
OHAK	Old Harbor	6.97	54		Pn	11 43 32.9	-1.6
P18K	Big Mountain,	7.51	35	Pn	Pn	11 43 41.8	-0.2
KDAK	Kodiak Island	7.58	51		Pn	11 43 41.2	-1.5
Q19K	Cape Douglas,	7.78	42	Pn	Pn	11 43 45.7	+0.2
O18K	Koktuh Hills	7.87	33	Pn	Pn	11 43 48.4	+1.6
ADK	Adak	8.09	264		Pn	11 43 50.0	+0.1
SVW2	Sparrevohn	8.76	27	Pn	Pn	11 43 59.9	+0.8
N19K	Bonanza Creek	8.85	30	Pn	Pn	11 43 59.7	-0.5
CNPM	China Poot	9.12	44	Pn	Pn	11 44 04.1	+0.1
M19K	Big River Lodg	9.75	27	Pn	Pn	11 44 13.5	+0.9
L19K	White Mountain	9.87	25	Pn	Pn	11 44 14.9	+0.7
SEW	Seward	10.19	44	Pn	Pn	11 44 17.7	-0.8
PWL	Port Wells	11.08	42	Pn	Pn	11 44 29.9	-0.9
FID	Port Fidalgo	11.79	45	Pn	Pn	11 44 38.0	-2.4
EYAK	Cordova Ski Ar	12.00	47	Pn	Pn	11 44 42.0	-1.3
ILAR	Eielson Array	14.13	30	Pn	Pn	11 45 10.1	-2.2
	comp=N,0.1nm,0.3s,baz=217,slow=14,SNR=6.8						
INK	Inuvik	20.51	32	P	P	11 46 28.8	-1.0
	comp=N,1.2nm,0.7s,baz=246,slow=12,SNR=7.9						
PETK	Petropavlovsk-	22.92	285	P	P	11 46 54.7	-1.0
	comp=N,7.7nm,1.1s,baz=92,slow=12,SNR=1.7						
YKA	Yellowknife Ar	26.86	51	P	P	11 47 33.7	+1.6
	comp=N,0.6nm,0.5s,baz=269,slow=8.2,SNR=7.9						
TIXI	Tiksi	33.58	328	P	P	11 48 30.5	-0.8
	comp=N,0.5nm,0.4s,baz=90,slow=9.1,SNR=1.8						
NVAR	Mina Array Bea	34.29	97	P	P	11 48 39.7	+1.5
	comp=N,0.2nm,0.5s,baz=289,slow=6.6,SNR=2.2						
H11N2	WAKE ISLAND Hy	40.62	225	T	T	12 33 12.4	
	baz=26,slow=76,SNR=28						
H11N3	WAKE ISLAND Hy	40.62	225	T	T	12 33 20.3	
	baz=26,slow=76,SNR=33						
H11N1	WAKE ISLAND Hy	40.64	225	T	T	12 33 13.8	
	baz=26,slow=76,SNR=22						
H11S1	WAKE ISLAND Hy	41.79	225	T	T	12 34 42.3	
	baz=26,slow=76,SNR=33						
H11S2	WAKE ISLAND Hy	41.80	225	T	T	12 34 42.1	
	baz=26,slow=76,SNR=37						
H11S3	WAKE ISLAND Hy	41.81	225	T	T	12 34 41.3	
	baz=26,slow=76,SNR=28						
TXAR	Lajitas Array	49.32	94	P	P	11 50 42.2	+1.4
	comp=N,0.2nm,0.5s,baz=299,slow=5.7,SNR=9.3						
SONM	Songino Array	53.64	303	P	P	11 51 13.5	+0.5
	comp=N,0.2nm,0.5s,baz=36,slow=6.8,SNR=2.7						
ARCES	ARCESS Array B	57.09	356	P	P	11 51 36.9	-0.4
	comp=N,3.2nm,0.8s,baz=15,slow=8.5,SNR=1.3						
BVAR	Borovoye Array	64.71	327	P	P	11 52 29.2	-0.1
	comp=N,0.9nm,0.6s,baz=252,slow=2.3,SNR=5.9						
FINES	FINESS Array B	65.14	355	P	P	11 52 31.9	0.0
	comp=N,2.5nm,1.0s,baz=18,slow=5.8,SNR=1.5						
MKAR	Makanchi Array	65.46	316	P	P	11 52 33.2	-1.1
	comp=N,0.5nm,0.7s,baz=52,slow=5.7,SNR=2.4						
HFS	Hagfors	66.69	1	P	P	11 52 41.7	-0.2
	comp=N,3.8nm,0.9s,baz=349,slow=1.5,SNR=5.9						
AKTO	Aktyubinsk	70.66	333	P	P	11 53 07.0	+0.1
	comp=N,0.8nm,0.5s,baz=34,slow=7.3,SNR=3.7						
AKASG	Malin Array Be	75.60	352	P	P	11 53 35.7	-0.3
	comp=N,0.3nm,0.4s,baz=14,slow=5.4,SNR=2.6						

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*IDC **05** 11:47:09.7±1.7, 63°.78N×149°.59W, h0^{km}, mb3.5/3, mb1 3.8/5, mb1mx3.2/64, mbtmp3.5/5, ML3.2/2, Error ellipse: s-maj=16.9km s-min=16.1km az=95.0*

*NEIC **05** 11:47:10.2±2.0, 63°.71N±0°.01×149°.39W±0°.03, h3^{km}±8^{km}, Error ellipse: s-maj=2.1km s-min=1.9km az=172.0*

*AEIC **05** 11:47:10±2.2, 63°.71N±0°.02×149°.41W±0°.07, h6^{km}±6^{km}, ML3.4, ML3.6/154(NEIC), Error ellipse: s-maj=4.8km s-min=2.1km az=115.0*

ISC 05 11:47:10.3±1.0**, 63°.72N**±0°.02×**149°.39W**±0°.02**, h7^{km}**±8^{km}**, n236, σ1^{s}.06**/206**, mb3.4**/3**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCK	McKinley	0.20	86		Pg	11 47 14.1	-0.4
MCK					Sg	11 47 17.1	-0.2
MCK	McKinley	0.20	86	IAML		11 47 17.4	
	comp=N,5μm,0.3s						
MCK	McKinley	0.20	86	P	Pg	11 47 14.1	-0.4
	baz=264						
MCK				S	Sg	11 47 17.1	-0.2
	baz=264						
RND	Reindeer	0.40	142		Pg	11 47 17.3	-0.8
RND					Sg	11 47 22.4	-0.8
RND	Reindeer	0.40	142	IAML		11 47 22.9	
	comp=N,3μm,0.5s						
RND				IAML		11 47 22.9	
	comp=E,3μm,0.6s						
BWN	Browne	0.46	356		Pg	11 47 19.5	+0.3
BWN	Browne	0.46	356	IAML		11 47 26.1	
	comp=E,5μm,0.7s						
BWN				IAML		11 47 35.3	
	comp=N,4μm,0.7s						
TRF	Thorofare Moun	0.48	236		Pg	11 47 19.4	-0.3
TRF					Sg	11 47 26.2	+0.2
TRF	Thorofare Moun	0.48	236	IAML		11 47 26.7	
	comp=E,3μm,0.4s						
TRF				IAML		11 47 28.4	
	comp=N,2μm,0.6s						
TRF	Thorofare Moun	0.48	236	P	Pg	11 47 19.4	-0.3
	baz=56						
TRF				S	Sg	11 47 26.2	+0.2
	baz=56						
KTH	Kantishna Hill	0.70	257		Pg	11 47 23.3	-0.6
KTH					Sg	11 47 32.8	-0.2
KTH	Kantishna Hill	0.70	257	IAML		11 47 37.5	
	comp=E,3μm,0.3s						
BPAW	Bear Paw Mtn.	0.80	299		Pg	11 47 25.3	-0.4
BPAW	Bear Paw Mtn.	0.80	299	P	Pg	11 47 25.3	-0.4
	baz=119						
NEA2	Nenana	0.89	9		Sg	11 47 38.7	-0.2
NEA2	Nenana	0.89	9	Pg	Pg	11 47 27.1	-0.3
NEA2				IAML		11 47 41.3	
	comp=E,2μm,0.8s						
NEA2				IAML		11 47 41.6	
	comp=N,2μm,0.8s						
NEA2	Nenana	0.89	9	P	Pg	11 47 26.8	-0.6
	baz=190						
NEA2				S	Sg	11 47 38.7	-0.2
	baz=190						
WAT7	Susitna Watana	0.92	164		Pg	11 47 27.1	-0.9
WRH	Wood River Hil	0.95	37		Pg	11 47 27.8	-0.8
WRH					Sg	11 47 41.4	+0.6
WRH	Wood River Hil	0.95	37	IAML		11 47 43.2	
	comp=N,1μm,0.6s						
WAT1	Susitna Watana	0.97	157		Pg	11 47 27.8	-1.2
WAT1	Susitna Watana	0.97	157	P	Pg	11 47 27.7	-1.2
	baz=337						
CCB	Clear Creek Bu	1.16	36		Pg	11 47 31.5	-1.1
CCB	Clear Creek Bu	1.16	36	IAML		11 47 48.7	
	comp=E,1μm,0.5s						
CAST	Castle Rocks	1.24	257		Pg	11 47 32.9	-1.2
CAST	Castle Rocks	1.24	257	IAML		11 47 51.8	
	comp=E,1μm,0.5s						
CAST	Castle Rocks	1.24	257	P	Pg	11 47 32.9	-1.2
	baz=75						
HDA	Harding Lake	1.28	56		Pg	11 47 33.7	-1.2
HDA	Harding Lake	1.28	56	IAML		11 47 52.2	
	comp=N,918nm,0.4s						
HDA	Harding Lake	1.28	56	P	Pg	11 47 33.7	-1.2
	baz=238						
CHUM	Lake Minchumin	1.31	279		Pg	11 47 34.0	-1.4
CHUM	Lake Minchumin	1.31	279	P	Pg	11 47 34.0	-1.4
	baz=96						
TCOL	CIGO, UAF Yank	1.34	29		Pn	11 47 34.5	-0.9
TCOL	CIGO, UAF Yank	1.34	29	P	Pn	11 47 34.5	-0.9
	baz=211						
COLA	College	1.34	29		Pn	11 47 34.5	-0.9
MDM	Murphy Dome	1.34	22		Pn	11 47 34.6	-0.9
MDM	Murphy Dome	1.34	22	IAML		11 47 54.1	
	comp=E,1μm,0.3s						
MDM				IAML		11 47 54.3	
	comp=N,1μm,0.5s						
WAT6	Susitna Watana	1.37	146		Pg	11 47 34.6	-1.9
WAT6	Susitna Watana	1.37	146	P	Pg	11 47 34.6	-1.9
	baz=327						
CUT	Chulitna	1.38	197		Pn	11 47 35.4	-0.5
CUT	Chulitna	1.38	197	P	Pn	11 47 35.4	-0.5
	baz=16						
PS08	TAPS Pump Stn8	1.40	53		Pn	11 47 36.0	-0.3
I23K	Minto, Yukon-K	1.44	1		Pn	11 47 36.1	-0.7
I23K	Minto, Yukon-K	1.44	1	IAML		11 47 56.4	
	comp=N,1μm,0.7s						
I23K				IAML		11 47 57.7	
	comp=E,863nm,0.7s						
I23K	Minto, Yukon-K	1.44	1	P	Pn	11 47 36.1	-0.7
	baz=181						
MLY	Manley	1.44	337		Pn	11 47 36.1	-0.7
MLY	Manley	1.44	337	IAML		11 47 56.8	
	comp=N,1μm,0.4s						
MLY				IAML		11 47 56.9	
	comp=E,810nm,0.5s						
MLY	Manley	1.44	337	P	Pn	11 47 36.1	-0.7
	baz=156						
PPLA	Purkeypile	1.51	238		Pn	11 47 36.9	-1.0
PPLA	Purkeypile	1.51	238	P	Pn	11 47 36.9	-1.0
	baz=56						
IL31		1.52	45		Pn	11 47 36.8	-1.1
ILAR	Eielson Array	1.52	45	Pg	Pn	11 47 38.2	+0.3
	comp=E,24nm,0.3s,baz=230,slow=18,SNR=450						
ILAR				Lg	Lg	11 47 58.3	
	comp=E,80nm,0.3s,baz=231,slow=28,SNR=7.6						
ILAR	Eielson Array	1.52	45	Pn	Pn	11 47 37.7	-0.2
POKR	Poker Plat Res	1.64	30		Pn	11 47 39.5	-0.1
POKR	Poker Plat Res	1.64	30	IAML		11 48 02.2	
	comp=N,783nm,0.4s						
POKR				IAML		11 48 06.3	
	comp=E,514nm,0.5s						
POKR	Poker Plat Res	1.64	30	P	Pn	11 47 39.5	-0.1
	baz=212						
PS10	TAPS Pump St10	1.65	99		Pn	11 47 40.3	+0.6
I21K	Tanana	1.85	324		Pn	11 47 42.1	-0.3
I21K	Tanana	1.85	324	IAML		11 48 16.6	
	comp=N,433nm,0.7s						
I21K	Tanana	1.85	324	P	Pn	11 47 42.1	-0.3
	baz=142						
PAX	Paxson	1.92	111		Pn	11 47 44.0	+0.5
PAX	Paxson	1.92	111	P	Pn	11 47 44.0	+0.5
	baz=294						
GHO	Glory Hole Cre	1.97	173		Pn	11 47 43.5	-0.6
GHO	Glory Hole Cre	1.97	173	IAML		11 48 10.6	
	comp=N,452nm,0.6s						
GHO				IAML		11 48 20.4	
	comp=E,373nm,0.6s						
SML	Sawmill	1.98	165		Pn	11 47 43.4	-0.9
SML	Sawmill	1.98	165	IAML		11 48 12.8	
	comp=E,417nm,0.8s						
SML				IAML		11 48 15.6	
	comp=N,708nm,0.8s						
SML	Sawmill	1.98	165	P	Pn	11 47 43.4	-0.9
	baz=346						
M22K	Willow	2.00	190		Pn	11 47 44.0	-0.4
M22K	Willow	2.00	190	P	Pn	11 47 44.0	-0.4
	baz=9.2						
RIDG	Independent Ri	2.02	87		Pn	11 47 45.2	+0.4
RIDG	Independent Ri	2.02	87	P	Pn	11 47 45.2	+0.4
	baz=271						
SCM	Sheep Creek Mo	2.12	152		Pn	11 47 45.5	-0.7
SCM	Sheep Creek Mo	2.12	152	IAML		11 48 19.5	
	comp=N,472nm,1.0s						
SCM				IAML		11 48 20.7	
	comp=E,402nm,0.6s						
K20K	Telida	2.13	262		Pn	11 47 45.1	-1.2
K20K	Telida	2.13	262	IAML		11 48 17.1	
	comp=N,561nm,0.6s						
K20K				IAML		11 48 18.9	
	comp=E,479nm,0.7s						
K20K	Telida	2.13	262	P	Pn	11 47 45.1	-1.2
	baz=78						
PMR	Palmer	2.14	177		Pn	11 47 46.0	-0.4
PMR	Palmer	2.14	177	P	Pn	11 47 46.0	-0.4
	baz=357						
J20K	Nowinta River	2.15	284		Pn	11 47 46.0	-0.5
J20K	Nowinta River	2.15	284	IAML		11 48 19.8	
	comp=N,540nm,0.6s						
J20K				IAML		11 48 20.1	
	comp=E,583nm,0.4s						
J20K	Nowinta River	2.15	284	P	Pn	11 47 46.0	-0.5
	baz=101						
PS06	TAPS Pump Stn6	2.15	356		Pn	11 47 46.6	0.0
M24K	Tolsona, Glenn	2.19	136		Pn	11 47 47.6	+0.4
M24K	Tolsona, Glenn	2.19	136	IAML		11 48 28.5	
	comp=E,483nm,0.9s						
M24K	Tolsona, Glenn	2.19	136	P	Pn	11 47 47.6	+0.4
	baz=319						
H24K	Noodor Dome	2.22	16		Pn	11 47 47.1	-0.5
H24K	Noodor Dome	2.22	16	IAML		11 48 22.3	
	comp=E,284nm,0.5s						
H24K	Noodor Dome	2.22	16	P	Pn	11 47 47.1	-0.5
	baz=198						
HARP	HAARP	2.34	123		Pn	11 47 50.2	+1.0
HARP	HAARP	2.34	123	P	Pn	11 47 50.2	+1.0

	baz=306						
KNK	Knik Glacier	2.35	169		Pn	11 47 49.6	+0.2
KNK	Knik Glacier	2.35	169	IAML		11 48 25.6	
	comp=N,301nm,0.7s						
KNK	Knik Glacier	2.35	169	P	Pn	11 47 49.6	+0.2
	baz=350						
DOT	Dot Lake	2.38	89		Pn	11 47 49.6	-0.1
L20K	Farewell, AK	2.39	241		Pn	11 47 49.2	-0.7
L20K	Farewell, AK	2.39	241	P	Pn	11 47 49.2	-0.7
	baz=57						
SCRK	Sand Creek	2.41	81		Pn	11 47 50.4	+0.2
SCRK	Sand Creek	2.41	81	IAML		11 48 27.7	
	comp=N,273nm,0.7s						
SCRK				IAML		11 48 28.0	
	comp=E,221nm,0.7s						
SCRK	Sand Creek	2.41	81	P	Pn	11 47 50.4	+0.2
	baz=266						
PS11	TAPS Pump St11	2.44	131		Pn	11 47 51.7	+1.3
H21K	Melozitna Rive	2.44	325		Pn	11 47 50.2	-0.3
H21K	Melozitna Rive	2.44	325	IAML		11 48 27.3	
	comp=E,309nm,0.6s						
H21K				IAML		11 48 27.5	
	comp=N,279nm,0.5s						
H21K	Melozitna Rive	2.44	325	P	Pn	11 47 50.2	-0.3
	baz=142						
STLK	Strandline Lak	2.50	208		Pn	11 47 52.0	+0.6
FIS	Fire Island	2.61	189		Pn	11 47 53.6	+0.8
RC01	Rabbit Creek A	2.64	184		Pn	11 47 53.9	+0.6
RC01	Rabbit Creek A	2.64	184	IAML		11 48 31.8	
	comp=N,219nm,0.5s						
RC01				IAML		11 48 33.1	
	comp=E,354nm,0.5s						
RC01	Rabbit Creek A	2.64	184	P	Pn	11 47 53.9	+0.6
	baz=3.2						
J26L	Joseph Creek	2.68	70		Pn	11 47 54.6	+0.7
J26L	Joseph Creek	2.68	70	P	Pn	11 47 54.6	+0.7
	baz=255						
MENT	Mentasta	2.68	104		Pn	11 47 55.1	+1.2
MENT	Mentasta	2.68	104	IAML		11 48 45.8	
	comp=N,323nm,0.6s						
CGLM	Capps Glacier	2.71	208		Pn	11 47 54.9	+0.6
SPCG	Spurr Capps Gl	2.72	208		Pn	11 47 55.4	+0.8
KLU	Klutina	2.75	143		Pn	11 47 55.9	+1.0
KLU	Klutina	2.75	143	IAML		11 48 38.5	
	comp=E,230nm,0.6s						
KLU				IAML		11 48 41.0	
	comp=N,227nm,1.2s						
KLU	Klutina	2.75	143	P	Pn	11 47 55.9	+1.0
	baz=326						
L26K	Log Cabin Wild	2.81	102		Pn	11 47 56.4	+0.8
L26K	Log Cabin Wild	2.81	102	IAML		11 48 47.1	
	comp=E,291nm,0.5s						
L26K	Log Cabin Wild	2.81	102	P	Pn	11 47 56.4	+0.8
	baz=287						
SPCN	Chakachatna No	2.82	209		Pn	11 47 56.5	+0.7
SPU	Mount Spurr	2.83	207		Pn	11 47 56.5	+0.6
CKL	Chakachamna La	2.88	210		Pn	11 47 57.3	+0.7
PWL	Port Wells	2.91	170		Pn	11 47 58.4	+1.3
PWL	Port Wells	2.91	170	IAML		11 48 40.4	
	comp=N,246nm,0.8s						
PWL				IAML		11 48 42.8	
	comp=E,191nm,0.8s						
M19K	Big River Lodg	2.93	234		Pn	11 47 58.9	+1.6
M19K				IAML		11 48 47.2	
	comp=N,178nm,0.7s						
M19K				IAML		11 48 50.7	
	comp=E,169nm,0.9s						
L19K	White Mountain	2.93	241		Pn	11 47 58.3	+1.0
L19K				IAML		11 48 48.8	
	comp=E,167nm,0.7s						
IM03		2.94	323		Pn	11 47 56.9	-0.4
IMAR	Indian Mountai	2.94	323		Pn	11 47 57.1	-0.3
JPK	Jack Peak	2.97	153		Pn	11 47 58.7	+0.8
GLI	Glacier Island	3.04	158		Pn	11 47 59.8	+0.9
GLI	Glacier Island	3.04	158	IAML		11 48 40.6	
	comp=N,206nm,0.6s						
GLI				IAML		11 48 45.3	
	comp=E,180nm,0.5s						
GLI	Glacier Island	3.04	158	P	Pn	11 47 59.8	+0.9
	baz=340						
N25K	Chitina, Valde	3.06	132		Pn	11 48 00.7	+1.5
N25K	Chitina, Valde	3.06	132	P	Pn	11 48 00.7	+1.5
	baz=316						
CAPN	Captain Cook N	3.07	196	Pn	Pn	11 48 00.0	+0.8
TTA	Tatalina	3.09	258		Pn	11 47 58.4	-1.1
TTA	Tatalina	3.09	258	P	Pn	11 47 58.4	-1.1
	baz=72						
DIV	Divide	3.10	145		Pn	11 48 00.8	+1.1
TT01	Tatalina	3.10	258		Pn	11 47 58.0	-1.6
PS05	TAPS Pump Stn5	3.15	351		Pn	11 48 00.6	+0.3
M26K	Nabesna, AK	3.20	112		Pn	11 48 02.4	+1.3
M26K	Nabesna, AK	3.20	112	IAML		11 48 49.5	
	comp=E,113nm,0.4s						
M26K	Nabesna, AK	3.20	112	P	Pn	11 48 02.4	+1.3
	baz=297						
SLKM	Skilak Lake	3.25	187		Pn	11 48 03.2	+1.6
O22K	Cooper Landing	3.25	183		Pn	11 48 04.0	+2.3
O22K	Cooper Landing	3.25	183	P	Pn	11 48 04.0	+2.3
	baz=2.5						
FID	Port Fidalgo	3.28	154		Pn	11 48 03.6	+1.5
FID	Port Fidalgo	3.28	154	IAML		11 48 47.1	
	comp=N,147nm,0.5s						
FID				IAML		11 48 47.3	
	comp=E,154nm,0.5s						
GCSA	Galena City Sc	3.43	291		Pn	11 48 04.4	+0.4
GCSA	Galena City Sc	3.43	291	P	Pn	11 48 04.4	+0.4
	baz=104						
GLB	Gilahina Butte	3.45	129		Pn	11 48 05.9	+1.5
L27K	Beaver Creek,	3.47	98		Pn	11 48 04.2	-0.5
L27K	Beaver Creek,	3.47	98	IAML		11 49 01.1	
	comp=N,94nm,0.5s						
L27K	Beaver Creek,	3.47	98	P	Pn	11 48 04.2	-0.5
	baz=284						
BC03		3.49	97		Pn	11 48 04.8	-0.1
BCAR	Beaver Creek A	3.49	97	Pn	Pn	11 48 05.1	+0.2
DFR	Drift River	3.50	208		Pn	11 48 05.8	+0.6
BC05	Beaver Creek A	3.50	97		Pn	11 48 04.8	-0.3
COLD	Coldfoot	3.54	355		Pn	11 48 05.9	+0.2
COLD	Coldfoot	3.54	355	P	Pn	11 48 05.9	+0.2
	baz=174						
BMRM	Bremner River	3.55	139		Pn	11 48 06.7	+0.9
BMRM	Bremner River	3.55	139	IAML		11 49 02.0	
	comp=N,114nm,1.1s						
BMRM	Bremner River	3.55	139	P	Pn	11 48 06.7	+0.9
	baz=323						
NCT	North Crescent	3.58	209		Pn	11 48 06.9	+0.7
EYAK	Cordova Ski Ar	3.61	150		Pn	11 48 07.2	+0.6
EYAK	Cordova Ski Ar	3.61	150	P	Pn	11 48 07.2	+0.6
	baz=333						
SEW	Seward	3.63	180		Pn	11 48 08.0	+1.2
SEW	Seward	3.63	180	P	Pn	11 48 08.0	+1.2
	baz=0.3						
RSO	Redoubt South	3.63	207		Pn	11 48 08.5	+1.5
RED	Redoubt Volcan	3.67	207		Pn	11 48 08.1	+0.6
M27K	Edge Creek, AK	3.69	108	Pn	Pn	11 48 09.5	+1.7
M27K				IAML		11 49 08.6	
	comp=N,114nm,0.9s						
M27K				IAML		11 49 12.5	
	comp=E,125nm,0.9s						
M27K	Edge Creek, AK	3.69	108	P	Pn	11 48 09.1	+1.3
	baz=295						
VRDI	Verde Repeater	3.72	130		Pn	11 48 09.8	+1.5
EGAK	Eagle	3.75	70	Pn	Pn	11 48 08.5	0.0
EGAK				IAML		11 49 15.6	
	comp=E,147nm,0.7s						
N19K	Bonanza Creek	3.76	222		Pn	11 48 09.6	+0.8
N19K	Bonanza Creek	3.76	222	P	Pn	11 48 09.6	+0.8
	baz=37						
MCARA	McCarthy VSAT	3.77	126		Pn	11 48 09.9	+1.2
MCARA	McCarthy VSAT	3.77	126	IAML		11 49 14.8	
	comp=N,101nm,0.8s						
MCARA				IAML		11 49 25.7	
	comp=E,92nm,0.9s						
MCARA	McCarthy VSAT	3.77	126	P	Pn	11 48 10.0	+1.2
	baz=311						
SVW2	Sparrevohn	3.90	230		Pn	11 48 10.8	+0.2
SVW2				IAML		11 49 18.4	
	comp=N,82nm,1.0s						
SVW2				IAML		11 49 18.6	
	comp=E,86nm,0.9s						
RAGM	Ragged Mountai	4.01	144		Pn	11 48 14.3	+2.1
BRLK	Bradley Lake	4.03	191		Pn	11 48 12.8	+0.3
PTPK	Patty Peak	4.10	125		Pn	11 48 15.0	+1.4
ILS	Iliamna Low So	4.16	206		Pn	11 48 14.7	+0.5
HMT	Hamilton	4.17	142		Pn	11 48 14.3	0.0
CRQM	Cirque	4.17	133		Pn	11 48 15.7	+1.2
CRQM				IAML		11 49 27.0	
	comp=N,72nm,0.8s						
CRQM				IAML		11 49 38.0	
	comp=E,58nm,1.2s						
BM03	Burnt Mountain	4.21	26		Pn	11 48 14.7	-0.2
BMAR	Burnt Mountain	4.23	26	Pn	Pn	11 48 14.7	-0.4
O19K	Port Alsworth	4.23	216	Pn	Pn	11 48 14.0	-1.1
BALM	Baldy	4.24	126		Pn	11 48 15.2	-0.3
BM01	Burnt Mountain	4.26	26		Pn	11 48 15.3	-0.2
TGL	Tana Glacier	4.27	131		Pn	11 48 16.4	+0.6
TGL				IAML		11 49 26.1	
	comp=N,73nm,1.2s						
TGL				IAML		11 49 26.5	
	comp=E,55nm,1.2s						
BERG	Berg Lake	4.28	139		Pn	11 48 16.0	+0.2
CNPM	China Poot	4.30	193		Pn	11 48 17.7	+1.6
CNPM	China Poot	4.30	193	IAML		11 49 17.8	
	comp=E,56nm,0.6s						
KIAG	Kiagna River	4.32	127		Pn	11 48 16.9	+0.4
YUK2	White River	4.38	112		Pn	11 48 18.4	+1.0
DAWY	Dawson	4.43	81		Pn	11 48 18.0	0.0
DAWY	Dawson	4.43	81	IAML		11 49 32.4	
	comp=E,55nm,0.6s						
DAWY				IAML		11 49 33.8	
	comp=N,60nm,0.7s						
DAWY	Dawson	4.43	81	P	Pn	11 48 18.0	0.0
	baz=270						
P19K	Oil Pt	4.47	206	Pn	Pn	11 48 20.3	+1.8
P19K				IAML		11 49 32.6	
	comp=N,70nm,1.3s						
P19K				IAML		11 49 36.5	
	comp=E,71nm,0.8s						
BARN	Barnard Glacie	4.48	123		Pn	11 48 21.2	+2.5
WAX	Waxell Ridge	4.50	134		Pn	11 48 19.7	+0.9
SUCK	Suckling Hills	4.52	141	Pn	Pn	11 48 21.3	+2.2
SUCK				IAML		11 49 26.1	
	comp=N,78nm,1.0s						
SUCK				IAML		11 49 56.3	
	comp=E,72nm,2.1s						
YUK3	Moose Creek	4.55	111		Pn	11 48 21.8	+2.1
YUK3	Moose Creek	4.55	111	P	Pn	11 48 21.8	+2.1
	baz=299						
ISLE	Juniper Island	4.55	130		Pn	11 48 19.6	-0.1
ISLE				IAML		11 49 33.4	
	comp=N,77nm,1.5s						
ISLE				IAML		11 49 38.0	
	comp=E,48nm,1.1s						
CTG	Chitna Glacier	4.66	123	P	Pn	11 48 22.5	+1.4
	baz=310						
CTGM	Chitina Glacie	4.66	123		Pn	11 48 22.5	+1.3
SNH	Sunshine Point	4.71	136	Pn	Pn	11 48 23.7	+1.9
O18K	Koktuh Hills	4.76	218		Pn	11 48 23.1	+0.7
O18K	Koktuh Hills	4.76	218	IAML		11 49 44.7	
	comp=E,34nm,0.7s						
O18K				IAML		11 49 52.0	
	comp=N,48nm,1.1s						
O18K	Koktuh Hills	4.76	218	P	Pn	11 48 23.1	+0.7
	baz=33						
LOGN	Logan Glacier	4.88	123		Pn	11 48 27.2	+3.0
YAH	Yahtse	4.93	130		Pn	11 48 24.8	-0.1
YAH				IAML		11 49 48.3	
	comp=N,40nm,2.0s						
TOLK	Toolik Lake Re	4.95	359		Pn	11 48 26.4	+1.5
TOLK	Toolik Lake Re	4.95	359	P	Pn	11 48 26.4	+1.5
	baz=179						
YUK8	Steele Glacier	5.09	114		Pn	11 48 29.6	+2.4
P18K	Big Mountain,	5.16	215		Pn	11 48 28.9	+1.0
P18K				IAML		11 50 05.2	
	comp=E,29nm,4.3s						
P18K				IAML		11 50 22.5	
	comp=N,25nm,3.1s						
Q19K	Cape Douglas,	5.22	205	Pn	Pn	11 48 31.1	+2.3
PCA	Pinnacle	5.64	126	Pn	Pn	11 48 32.2	-2.3
EPYK	Eagle Plains	5.99	58		Pn	11 48 39.4	+0.2
KDAK	Kodiak Island	6.16	196	Pn	Pn	11 48 41.3	-0.2
HYT	Haines Junctio	6.26	112	Pn	Pn	11 48 44.4	+1.3
ANM	Nome	7.04	284	Pn	Pn	11 48 54.2	+0.6
INK	Inuvik	7.92	48	Pn	Pn	11 49 06.2	+0.6
	comp=N,0.4nm,0.3s,baz=239,slow=19,SNR=14						
INK				Sn	Sn	11 50 30.9	-4.5
	comp=N,0.3nm,0.3s,baz=201,slow=21,SNR=1.9						
INK				Lg	Lg	11 51 20.9	
	comp=N,0.1nm,0.3s,baz=227,slow=11,SNR=3.7						
SKAG	Skagway	7.94	116	Pn	Pn	11 49 07.7	+1.7
A21K	Barrow	8.12	343	Pn	Pn	11 49 07.4	-0.9
TNA	Tin City	8.16	291	Pn	Pn	11 49 09.2	+0.2
DLBC	Dease Lake	10.74	111	Lg	Lg	11 52 51.1	
	comp=N,0.1nm,0.3s,baz=252,slow=24,SNR=3.0						
A36M	Sachs Harbour	12.21	37	Pn	Pn	11 50 05.4	+1.1
YKA	Yellowknife Ar	15.67	79	Pn	Pn	11 50 51.7	+0.4
	comp=N,0.1nm,0.3s,baz=288,slow=10,SNR=5.9						
TIXI	Tiksi	29.59	321	P	P	11 53 14.7	-0.6
	comp=N,0.6nm,0.2s,baz=44,slow=7.0,SNR=4.1						
PDAR	Pinedale Array	30.96	114	P	P	11 53 29.3	+1.3
	comp=N,0.2nm,0.4s,baz=325,slow=5.5,SNR=2.4						
TXAR	Lajitas Array	44.94	118	P	P	11 55 26.7	+0.9
	comp=N,0.2nm,0.5s,baz=325,slow=7.7,SNR=2.1						

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*IDC **05** 12:11:52.1±0.9, 3°.31N×127°.19E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.7/37, mbtmp3.8/10, ML3.4/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/45, Error ellipse: s-maj=56.9km s-min=15.0km az=67.0*

*NEIC **05** 12:12:01.2±1.3, 3°.30N±0°.08×127°.3E±0°.1, h68km±14km, mb4.1/11, Error ellipse: s-maj=20.9km s-min=11.4km az=75.0*

ISC 05 12:11:58.3±0.7**, 3°.37N**±0°.08×**127°.4E**±0°.1**, h45km, n26, σ1s.36**/25**, mb4.0**/14**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.73	137	Pn	Pn	12 13 18.1	-2.9
	1.0nm,0.3s,baz=20,slow=8.9,SNR=2.0						
TOLI2	Tolitoli	6.96	251	Pn	Pn	12 13 38.8	+0.9
FAKI	Fak Fak	7.92	142	Pn	Pn	12 13 53.8	+2.8
MTN	Manton Dam	16.54	167	Pn	Pn	12 15 46.3	-0.9
MTN				IAmb	IAmb	12 16 11.5	
	comp=Z,15nm,1.4s						
KNRA	Kununurra	18.98	176	P	P	12 16 15.8	-0.3
KNRA				IAmb	IAmb	12 16 23.2	
	comp=Z,8.8nm,1.1s						
TPUB	Ta-pu	20.86	342	P	P	12 16 35.0	-1.6
FITZ	Fitzroy Crossi	21.40	185	P	P	12 16 41.1	-1.4
	comp=Z,0.8nm,0.5s,baz=24,slow=12,SNR=8.6						
WB0	Warramunga Arr	24.01	164	P	P	12 17 07.0	-2.0
WRAB	Tennant Creek	24.15	164	P	P	12 17 10.0	-0.4
WRAB				IAmb	IAmb	12 17 38.3	
	comp=Z,6.3nm,1.1s						
WRA	Warramunga Arr	24.16	164	P	P	12 17 10.5	0.0
	comp=Z,2.2nm,0.8s,baz=334,slow=11,SNR=40						
WRA	Warramunga Arr	24.16	164	P	P	12 17 09.6	-0.9
WB2	Warramunga Arr	24.16	164	P	P	12 17 10.5	0.0
WB2				IAmb	IAmb	12 17 39.8	
	comp=Z,7.3nm,1.3s						
WR0	Warramunga Arr	24.23	163	P	P	12 17 10.7	-0.5
WR0				IAmb	IAmb	12 17 19.8	
	comp=Z,6.3nm,1.2s						
ASAR	Alice Springs	27.62	167	P	P	12 17 41.8	0.0
	comp=Z,0.4nm,0.5s,baz=341,slow=7.4,SNR=15						
ASAR	Alice Springs	27.62	167	P	P	12 17 43.0	+1.3
JSU	Suzuyama	28.13	6	P	P	12 17 47.9	+1.6
CMAR	Chiang Mai Arr	31.61	300	P	P	12 18 15.2	-2.0
	comp=Z,0.6nm,0.3s,baz=104,slow=7.5,SNR=2.5						
KSRS	Korea Array	33.92	1	LR	LR	12 38 45.3	
	comp=Z,9.0nm,18.1s,baz=225,slow=48						
BBOO	Buckleboo	36.91	168	P	P	12 19 04.4	+1.4
BBOO				IAmb	IAmb	12 19 22.6	
	comp=Z,10nm,1.2s						
STKA	Stephens Creek	37.57	160	P	P	12 19 07.8	-0.7
	comp=Z,0.8nm,0.4s,baz=329,slow=10,SNR=3.1						
SONM	Songino Array	47.84	341	P	P	12 20 32.5	+0.8
	comp=Z,0.5nm,0.6s,baz=156,slow=7.8,SNR=2.8						
MK31	Makanchi Array	58.22	325	P	P	12 21 48.2	+0.1
MK31				IAmb	IAmb	12 21 53.3	
	comp=Z,2.9nm,1.1s						
MKAR	Makanchi Array	58.22	325	P	P	12 21 47.6	-0.4
	comp=Z,0.9nm,0.4s,baz=120,slow=7.6,SNR=12						
MKAR	Makanchi Array	58.22	325	P	P	12 21 47.4	-0.7
ZALV	Zalesovo Beam	61.20	333	P	P	12 22 07.6	-0.8
	comp=Z,0.4nm,0.3s,baz=110,slow=7.8,SNR=2.4						
NRIK	Noril'sk	70.93	346	P	P	12 23 11.6	+1.0
	comp=Z,1.6nm,0.5s,baz=119,slow=3.0,SNR=3.8						

IDC 05 12:21:08.6±3.6**, 17°.03N×120°.47E, h0km, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/41**, mbtmp3.4**/3**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.5**/23**, Error ellipse: s-maj=351.9km s-min=29.7km az=61.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	23.77	95	LR	LR	12 34 40.4	
	comp=Z,42nm,18.9s,baz=72,slow=34						
WRA	Warramunga Arr	39.18	159	P	P	12 28 38.9	+0.4
	0.3nm,0.9s,baz=340,slow=8.4,SNR=7.1						
ASAR	Alice Springs	42.52	162	P	P	12 29 05.1	-1.0
	0.4nm,0.6s,baz=335,slow=6.3,SNR=2.8						
MKAR	Makanchi Array	43.27	322	P	P	12 29 11.9	0.0
	0.2nm,0.4s,baz=134,slow=8.3,SNR=2.5						

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*IDC **05** 12:21:42.7±1.0, 6°.06N×33°.54W, h0km, mb4.0/12, mb1 4.2/12, mb1mx4.0/32, mbtmp3.9/12, MS3.9/19, Ms1 3.9/19, ms1mx3.7/36, Error ellipse: s-maj=35.3km s-min=20.1km az=174.0*

*NEIC **05** 12:21:44.9±1.7, 6°.1N±0°.1×33°.17W±0°.07, h11km±4km, mb4.8/24, Error ellipse: s-maj=20.4km s-min=8.5km az=159.0*

ISC 05 12:21:43.6±0.6**, 6°.0N**±0°.1×**33°.22W**±0°.08**, h10km, n61, σ1s.79**/47**, mb4.5**/25**, MS3.9**/18**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SACV	Santiago Islan	12.96	46	Pn	Pn	12 24 46.2	-1.9
MBO	M'Bour	18.02	61		P	12 25 54.4	-0.4
MBO				IAmb	IAmb	12 26 02.5	
	comp=Z,97nm,1.2s						
MDP	Montagnes des	19.35	268	LR	LR	12 31 55.4	
	comp=Z,182nm,20.9s,baz=110,slow=32						
H10N3	ASCENSION HYDR	23.20	126	T	T	12 51 27.6	
	baz=306,slow=75,SNR=107						
H10N2	ASCENSION HYDR	23.21	126	T	T	12 51 27.8	
	baz=306,slow=75,SNR=110						
H10N1	ASCENSION HYDR	23.22	126	T	T	12 51 35.5	
	baz=306,slow=75,SNR=140						
BDFB	Brasilia	26.05	214	LR	LR	12 36 45.5	
	comp=Z,508nm,18.6s,baz=2.3,slow=35						
BOAV	Boa Vista	27.46	264	P	P	12 27 32.1	+1.9
BOAV				IAmb	IAmb	12 27 34.9	
	comp=Z,14nm,1.4s						
PTGA	Pitinga	27.54	257	P	P	12 27 28.1	-2.7
	comp=Z,0.7nm,0.4s,baz=77,slow=16,SNR=1.4						
PTGA				LR	LR	12 37 59.2	
	comp=Z,183nm,18.4s,baz=92,slow=36						
LIC	Lamto	28.03	88	*e*P	P	12 27 31.2	-4.1
	comp=Z,24nm,1.2s						
TIC	Toumodi	28.03	87	*e*P	P	12 27 31.9	-3.4
DBIC	Dimbokro	28.19	87	P	P	12 27 33.7	-3.0
	comp=Z,1.8nm,0.4s,baz=258,slow=13,SNR=8.6						
DBIC				LR	LR	12 36 28.8	
	comp=Z,188nm,21.5s,baz=276,slow=31						
DBIC	Dimbokro	28.19	87	P	P	12 27 33.1	-3.6
KIC	Kosan Boka	28.31	88	*e*P	P	12 27 33.5	-4.3
	comp=Z,12nm,1.0s						
CELP	Cerrillos	34.68	293	P	P	12 28 31.9	-1.9
CELP				IAmb	IAmb	12 28 34.3	
	comp=Z,13nm,0.8s						
TORD	Torodi Ar. Bea	35.11	76	P	P	12 28 40.0	+2.5
	comp=Z,2.8nm,0.8s,baz=269,slow=9.5,SNR=16						
TORD				LR	LR	12 41 03.0	
	comp=Z,221nm,20.9s,baz=250,slow=33						
TORD	Torodi Ar. Bea	35.11	76	P	P	12 28 37.7	+0.2
CPUP	Villa Florida	39.77	215	LR	LR	12 45 29.4	
	comp=Z,410nm,18.5s,baz=42,slow=36						
ROSC	El Rosal	40.93	270	LR	LR	12 46 14.5	
	comp=Z,166nm,18.7s,baz=355,slow=36						
CZSB	Cruzeiro do Su	41.69	251	P	P	12 29 32.5	-0.5
CZSB				IAmb	IAmb	12 29 34.5	
	comp=Z,14nm,0.9s						
ESDC	Sonseca Array	42.61	34	P	P	12 29 42.1	+2.0
	comp=Z,1.2nm,1.0s,baz=238,slow=6.2,SNR=5.6						
ESDC				LR	LR	12 44 58.5	
	comp=Z,68nm,18.1s,baz=275,slow=33						
KEST	Kesra	48.96	47	LR	LR	12 51 16.9	
	comp=Z,172nm,19.1s,baz=258,slow=36						
P61A	Hammonton	50.16	318	P	P	12 30 37.6	-1.9
CAO2	Cobano, Puntar	51.49	278	P	P	12 30 50.6	+0.7
CAO2				IAmb	IAmb	12 30 52.2	
	comp=Z,36nm,1.5s						
BOAB	BOACO BROADBAN	52.09	281	P	P	12 30 54.8	+0.4
CPCT	Cooper Cave	55.40	309	P	P	12 31 19.2	+1.0
CPCT				IAmb	IAmb	12 31 26.2	
	comp=Z,14nm,1.2s						
PLCA	Paso Flores	57.78	213	LR	LR	12 56 30.1	
	comp=Z,369nm,19.8s,baz=50,slow=36						
GERES	GERESS Array B	58.19	35	P	P	12 31 40.5	+2.5
	comp=Z,0.7nm,0.7s,baz=257,slow=5.3,SNR=4.0						
GERES				LR	LR	12 53 41.3	
	comp=Z,112nm,19.6s,baz=276,slow=33						
NATX	Nacogdoches	62.64	303	P	P	12 32 09.2	+0.6
NC602	NORSAR Array S	64.03	23	P	P	12 32 17.4	+0.1
NOA	NORSAR Array B	64.10	22	LR	LR	12 58 20.9	
	comp=Z,102nm,18.7s,baz=230,slow=34						
BOSA	Boshof	65.95	125	P	P	12 32 33.5	+3.0
	comp=Z,3.6nm,0.8s,baz=293,slow=8.4,SNR=4.4						
BOSA				LR	LR	12 57 44.6	
	comp=Z,26nm,18.1s,baz=3.0,slow=33						
BOSA	Boshof	65.95	125	P	P	12 32 30.8	+0.3
BOSA				IAmb	IAmb	12 32 34.8	
	comp=Z,8.9nm,1.1s						
BGNE	Belgrade	67.31	312	P	P	12 32 39.1	+0.2
AKASG	Malin Array Be	68.09	37	P	P	12 32 44.9	+1.3
	comp=Z,0.5nm,0.3s,baz=251,slow=6.3,SNR=1.8						
AKASG	Malin Array Be	68.09	37	P	P	12 32 44.6	+1.0
BRTR	Keskin Array B	68.42	50	P	P	12 32 48.7	+2.6
	comp=Z,1.2nm,0.8s,baz=236,slow=6.8,SNR=5.4						
BRTR				LR	LR	13 04 20.2	
	comp=Z,68nm,18.1s,baz=297,slow=37						
BRTR	Keskin Array B	68.42	50	P	P	12 32 46.4	+0.3
TXAR	Lajitas Array	70.03	299	P	P	12 32 55.3	-0.9
	comp=Z,0.2nm,0.6s,baz=116,slow=4.1,SNR=2.9						
FINES	FINESS Array B	70.40	26	P	P	12 32 58.5	+0.8
	comp=Z,9.7nm,1.1s,baz=236,slow=9.7,SNR=3.1						
FINES				LR	LR	13 02 20.1	
	comp=Z,68nm,18.4s,baz=246,slow=35						
FINES	FINESS Array B	70.40	26	P	P	12 32 58.4	+0.7
KMBO	Kilima Mbogo	70.71	93	LR	LR	13 01 49.1	
	comp=Z,59nm,19.3s,baz=92,slow=34						
ANMO	Albuquerque	72.84	305	P	P	12 33 13.6	+0.4
DGMT	Dagmar	72.93	319	P	P	12 33 13.6	+0.4
SMCO	Snowmass	73.63	309	P	P	12 33 18.0	0.0
SMCO				IAmb	IAmb	12 33 26.4	
	comp=Z,5.9nm,1.2s						
ARCES	ARCESS Array B	73.78	18	LR	LR	13 03 15.1	
	comp=Z,59nm,18.0s,baz=265,slow=34						
LAO	LASA Array	73.99	317	P	P	12 33 20.0	+0.4
LAO				IAmb	IAmb	12 33 22.6	
	comp=Z,14nm,1.0s						
PD31	Pinedale Array	75.90	312	P	P	12 33 31.1	+0.1
PDAR	Pinedale Array	75.90	312	P	P	12 33 29.8	-1.2
	comp=Z,1.4nm,1.0s,baz=90,slow=8.9,SNR=5.9						
PDAR	Pinedale Array	75.90	312	P	P	12 33 30.4	-0.6
FLWY	Flagg Ranch	76.84	314	P	P	12 33 36.8	+0.6
FLWY				IAmb	IAmb	12 33 38.7	
	comp=Z,13nm,1.1s						
YHH	Holmes Hill	77.00	314	P	P	12 33 38.4	+1.1
YHH				IAmb	IAmb	12 33 40.0	
	comp=Z,4.4nm,1.2s						
HWUT	Hardware Ranch	77.31	311	P	P	12 33 38.6	-0.3
HWUT				IAmb	IAmb	12 33 40.9	
	comp=Z,4.5nm,0.9s						
HRY	Holter Researc	77.83	316	P	P	12 33 41.1	-0.5
SNAA	Sanae	80.07	171	P	P	12 33 54.1	+0.9
NEW	Newport	81.48	318	LR	LR	13 07 23.0	
	comp=Z,30nm,18.4s,baz=32,slow=34						
NVAR	Mina Array Bea	82.44	308	P	P	12 34 07.8	+0.9
	comp=Z,0.8nm,0.9s,baz=104,slow=6.3,SNR=5.0						
YBH	Yreka Blue Hor	85.65	311	LR	LR	13 08 34.5	
	comp=Z,37nm,18.8s,baz=33,slow=33						
GEYT	Alibeck	87.39	52	P	P	12 34 29.8	-1.7
ABKAR	Akbulak array	87.54	41	P	P	12 34 30.9	-1.0
ILAR	Eielson Array	94.41	337	P	P	12 35 03.1	-0.5
	comp=Z,0.4nm,1.0s,baz=54,slow=4.6,SNR=2.3						

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*IDC **05** 12:31:50.5±3.6, 9°.02N×71°.66W, h0km, mb1 3.8/1, mb1mx3.3/23, mbtmp4.1/1, ML2.4/1, Error ellipse:*

s-maj=389.3km s-min=29.9km az=120.0

*FUNV **05** 12:31:54.0, 8°.51N×71°.47W, h5^{km}, MW3.7*

ISC 05 12:31:52.4±1.3, **8°.61N**±0°.02×**71°.37W**±0°.02, **h5**^{km}±10^{km}, **n31**, σ**1^{s}.62**/56, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.60**	**123**	*e*P	**Pg**	**12 32 04.0**	**0.0**
SOCV				*e*S	**Sg**	**12 32 11.8**	**0.0**
SDV	**Santo Domingo**	**0.77**	**69**	*e*P	**Pn**	**12 32 09.2**	**-1.0**
SDV				*e*S	**Sn**	**12 32 20.6**	**-1.7**
CAPV	**Capacho**	**1.20**	**232**	*e*P	**Pb**	**12 32 13.1**	**-2.6**
CAPV				*e*S	**Sb**	**12 32 28.2**	**-3.5**
PAMC	**Pamplona, Colo**	**1.83**	**226**	*e*P	**Pb**	**12 32 25.4**	**-1.2**
PAMC				*e*S	**Sb**	**12 32 49.7**	**-0.4**
MCQV	**Machiques**	**1.84**	**321**	*e*P	**Pb**	**12 32 26.0**	**-0.6**
MCQV				*e*S	**Sg**	**12 32 49.9**	**-1.7**
OCAC	**Ocana**	**1.97**	**259**	*e*P	**Pb**	**12 32 27.3**	**-1.5**
OCAC				*e*S	**Sb**	**12 32 52.2**	**-1.6**
LL6C	**La Loma 6 Bece**	**2.19**	**301**	*e*P	**Pb**	**12 32 31.1**	**-1.5**
LL6C				*e*S	**Sb**	**12 32 59.7**	**-0.3**
TAMC	**Tame, Arauca**	**2.20**	**191**	*e*P	**Pb**	**12 32 33.1**	**+0.3**
TAMC				*e*S	**Sb**	**12 32 59.2**	**-1.2**
DABV	**Dabajuro**	**2.41**	**17**	*e*P	**Pb**	**12 32 36.2**	**-0.1**
DABV				*e*S	**Sb**	**12 33 06.8**	**+0.6**
DABV	**Dabajuro**	**2.41**	**17**	*e*P	**Pb**	**12 32 35.4**	**-0.9**
DABV				*e*S	**Sb**	**12 33 05.8**	**-0.5**
ELOV	**Elorza**	**2.46**	**130**	*e*P	**Pb**	**12 32 36.6**	**-0.5**
ELOV				*e*S	**Sb**	**12 33 06.3**	**-1.4**
ELOV	**Elorza**	**2.46**	**130**	*e*P	**Pb**	**12 32 34.6**	**-2.5**
ELOV				*e*S	**Sn**	**12 33 04.3**	**+0.7**
SIQV	**Siquisique**	**2.54**	**37**	*e*P	**Pb**	**12 32 37.3**	**-1.3**
SIQV				*e*S	**Sb**	**12 33 08.6**	**-1.6**
SMLC	**San Martn de**	**2.68**	**274**	*i* P	**Pn**	**12 32 36.1**	**-0.2**
SMLC				*e*S	**Sb**	**12 33 13.6**	**-0.6**
BARC	**Barichara**	**2.70**	**222**	*e*P	**Pb**	**12 32 40.8**	**-0.6**
BARC				*e*S	**Sb**	**12 33 14.0**	**-0.8**
BARC				*i*		12 33 20.9	
	comp=Z,112nm,0.4s						
BRRC	**Barranca, Sant**	**2.76**	**237**	*e*P	**Pn**	**12 32 38.5**	**+1.1**
BRRC				*e*S	**Sb**	**12 33 16.5**	**-0.1**
MAPV	**Macapo**	**3.12**	**67**	*e*P	**Pb**	**12 32 45.0**	**-3.4**
MAPV				*e*S	**Sn**	**12 33 22.2**	**+2.3**
URIC	**Uribia, Colomb**	**3.13**	**349**	*e*P	**Pn**	**12 32 44.5**	**+2.0**
URIC				*e*S	**Sn**	**12 33 21.1**	**+0.8**
RUSC	**La Rusia**	**3.19**	**212**	*e*P	**Pn**	**12 32 44.0**	**+0.2**
RUSC				*e*S	**Sb**	**12 33 29.3**	**-0.2**
BAUV	**El Baul**	**3.30**	**84**	*e*P	**Pn**	**12 32 47.0**	**+2.2**
BAUV				*e*S	**Sn**	**12 33 25.9**	**+1.4**
MONV	**Montecano**	**3.59**	**22**	*e*P	**Pn**	**12 32 51.3**	**+2.4**
MONV				*e*S	**Sn**	**12 33 33.2**	**+1.5**
ZARC	**Zaragoza, Cauc**	**3.63**	**252**	*e*P	**Pn**	**12 32 49.0**	**-0.4**
PTBC	**PUERTO BERRIO,**	**3.69**	**236**	*e*P	**Pn**	**12 32 49.3**	**-0.9**
BENV	**Beln**	**3.95**	**70**	*e*P	**Pn**	**12 32 55.6**	**+1.8**
BENV				*e*S	**Sn**	**12 33 42.4**	**+1.7**
SJCC	**San Jacinto, C**	**3.98**	**289**	*e*P	**Pn**	**12 32 56.9**	**+2.7**
SJCC				*e*S	**Sn**	**12 33 42.9**	**+1.6**
SPBC	**San Pablo de B**	**3.98**	**223**	*e*P	**Pn**	**12 32 54.7**	**+0.4**
SPBC				*e*S	**Sn**	**12 33 41.0**	**-0.4**
PTGC	**Puerto Gaitan,**	**4.45**	**190**	*e*P	**Pg**	**12 33 20.6**	**+2.8**
PTGC				*e*S	**Sb**	**12 34 08.3**	**+3.2**
ROSC	**El Rosal**	**4.76**	**218**	Pn	**Pn**	**12 33 07.9**	**+2.7**
	comp=Z,3.1nm,0.3s,baz=38,slow=19,SNR=5.0						
ROSC				Lg	Lg	12 34 25.5	
	comp=Z,3.4nm,0.3s,baz=208,slow=23,SNR=1.7						
ANIL	**Santa Ana**	**5.73**	**225**	*e*P	**Pn**	**12 33 19.1**	**+0.6**
ASAR	**Alice Springs**	**151.56**	**235**	PKPbc	**PKPbc**	**12 51 47.0**	**-1.7**
	comp=Z,0.3nm,0.8s,baz=131,slow=2.7,SNR=5.1						
WRA	**Warramunga Arr**	**152.71**	**243**	PKPbc	**PKPbc**	**12 51 50.1**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=109,slow=2.6,SNR=9.6						

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*IDC **05** 12:36:13.0±1.5, 20°.05S×168°.13E, h0^{km}, mb3.9/7, mb1 4.2/8, mb1mx4.0/21, mbtmp3.9/8, ML3.6/1, MS3.3/7, Ms1 3.3/7, ms1mx3.0/21, Error ellipse: s-maj=55.8km s-min=22.9km az=139.0*

*NOU **05** 12:36:13.2, 19°.98S×168°.08E, h6^{km}, MLv4.4/16, Vanuatu Islands*

ISC 05 12:36:16.6±0.8, **20°.02S**±0°.05×**168°.1E**±0°.1, **h27**^{km}, **n24**, σ**1^{s}.51**/24, **mb4.0**/7, **MS3.2**/5, **Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**1.12**	**228**	P	**Pn**	**12 36 33.8**	**-2.7**
MARNC	**Mare, Loyalty**	**1.46**	**183**	P	**Pn**	**12 36 38.9**	**-2.3**
RTV	**Rentapao**	**2.23**	**7**	P	**Pn**	**12 36 50.2**	**-1.7**
DVP	**Devils Point**	**2.28**	**2**	P	**Pn**	**12 36 50.9**	**-1.6**
YATNC	**Mamie plateau,**	**2.33**	**209**	P	**Pn**	**12 36 51.2**	**-2.0**
DZM	**Mont Dzumac**	**2.57**	**217**	*e*Pn	**Pn**	**12 36 55.2**	**-1.4**
	204nm,0.3s						
DZM				*e*Sn	**Sn**	**12 37 25.6**	**-1.5**
	183nm,0.2s						
DZM	**Mont Dzumac**	**2.57**	**217**	Pn	**Pn**	**12 36 55.5**	**-1.1**
	11nm,0.3s,baz=338,slow=4.2,SNR=335						
DZM				Sn	**Sn**	**12 37 25.6**	**-1.5**
	58nm,0.3s,baz=84,slow=18,SNR=11						
DZM				LR	LR	12 37 45.4	
	comp=Z,250nm,20.6s,baz=12,slow=36						
DZM	**Mont Dzumac**	**2.57**	**217**	P	**Pn**	**12 36 55.8**	**-0.8**
PINNC	**Pines Island,**	**2.66**	**194**	P	**Pn**	**12 36 56.8**	**-0.9**
OUENC	**Ouen Island, N**	**2.67**	**206**	P	**Pn**	**12 36 57.1**	**-0.7**
NOUC	**Port Laguerre**	**2.68**	**219**	P	**Pn**	**12 36 57.4**	**-0.6**
ONTNC	**Ouen Toro**	**2.76**	**214**	P	**Pn**	**12 36 58.7**	**-0.4**
KOUNC	**Koumac, New Ca**	**3.64**	**261**	P	**Pn**	**12 37 10.7**	**-0.5**
SANVU	**Saraoutou**	**4.63**	**349**	P	**Pn**	**12 37 22.2**	**-2.6**
MSVF	**Nonsavu**	**9.67**	**78**	LR	LR	12 41 42.5	
	comp=Z,218nm,19.2s,baz=234,slow=34						
AFI	**Afiamalu**	**20.16**	**76**	LR	LR	12 46 26.0	
	comp=Z,61nm,20.0s,baz=113,slow=30						
STKA	**Stephens Creek**	**26.54**	**238**	P	**P**	**12 41 53.5**	**+1.3**
	0.9nm,0.6s,baz=48,slow=9.6,SNR=5.7						
STKA				LR	LR	12 51 49.0	
	comp=Z,65nm,18.3s,baz=28,slow=35						
WRA	**Warramunga Arr**	**31.72**	**264**	P	**P**	**12 42 37.4**	**-1.0**
	0.3nm,0.4s,baz=88,slow=8.3,SNR=7.0						
WRA				LR	LR	12 54 06.9	
	comp=Z,51nm,20.0s,baz=335,slow=34						
ASAR	**Alice Springs**	**31.92**	**257**	P	**P**	**12 42 40.0**	**-0.3**
	1.8nm,0.6s,baz=84,slow=8.7,SNR=27						
ASAR				LR	LR	12 55 04.9	
	comp=Z,76nm,18.1s,baz=108,slow=36						
CMAR	**Chiang Mai Arr**	**77.87**	**295**	P	**P**	**12 48 14.6**	**+2.3**
	1.2nm,0.7s,baz=137,slow=4.3,SNR=10.0						
SONM	**Songino Array**	**87.21**	**324**	P	**P**	**12 49 01.1**	**+0.6**
	0.7nm,0.7s,baz=132,slow=4.1,SNR=3.9						
SONM				LR	LR	13 28 47.8	
	comp=Z,32nm,18.7s,baz=318,slow=36						
NVAR	**Mina Array Bea**	**90.11**	**49**	P	**P**	**12 49 15.4**	**+0.8**
	0.3nm,0.5s,baz=248,slow=8.1,SNR=4.0						
ILAR	**Eielson Array**	**91.29**	**18**	P	**P**	**12 49 19.3**	**+0.1**
	0.5nm,0.7s,baz=231,slow=4.7,SNR=7.3						
GERES	**GERESS Array B**	**144.66**	**330**	PKP	**PKPdf**	**12 55 51.1**	**+0.2**
	0.8nm,0.8s,baz=46,slow=3.9,SNR=5.8						

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*SOME **05** 13:23:43.5, 40°.08N×70°.78E, h0^{km}*

*KRNET **05** 13:23:44.9±0.1, 40°.00N×70°.62E, h20^{km}, mb3.5*

*ISU **05** 13:23:44, 40°.00N×70°.60E, h10^{km}*

*NNC **05** 13:23:46.5±2.0, 40°.12N×70°.79E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=15.2km s-min=7.9km az=14.0*

ISC 05 13:23:45.6±1.0, **39°.99N**±0°.03×**70°.63E**±0°.03, **h8**^{km}±7^{km}, **n33**, σ**1^{s}.58**/55, **23C-6D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**0.16**	**65**	*e*P	**Pg**	**13 23 49.0**	**-0.1**
BTK				*e*S	**Sg**	**13 23 52.0**	**+0.4**
BTK	**Batken**	**0.16**	**65**	⇑*i*P	**Pg**	**13 23 48.7**	**-0.4**
	baz=70						
BTK				⇑*i*S	**Sg**	**13 23 51.9**	**+0.4**
	baz=70						
FRG	**Fergana**	**0.97**	**66**	*e*P	**Pb**	**13 24 05.0**	**+0.3**
FRG				*e*S	**Sg**	**13 24 16.0**	**-0.8**
GAR	**Garm**	**1.02**	**194**	⇑*i*P	**Pg**	**13 24 04.3**	**-0.9**
	baz=93						
GAR				⇑*i*S	**Sg**	**13 24 17.8**	**-0.6**
	baz=93						
DRK	**Karamyk**	**1.04**	**119**	⇑*i*P	**Pg**	**13 24 04.6**	**-1.0**
	baz=19						
DRK				⇑*i*S	**Sg**	**13 24 18.7**	**-0.4**
	baz=19						
YBZ	**Yangibazar**	**1.53**	**329**	*e*P	**Pn**	**13 24 14.0**	**+0.7**
YBZ				*e*S	**Sb**	**13 24 35.0**	**+1.1**
TRKS	**Terek-Say**	**1.59**	**14**	⇑*i*P	**Pn**	**13 24 12.4**	**-1.8**
	baz=16						
TRKS				⇑*i*S	**Sn**	**13 24 33.2**	**-1.8**
	baz=16						
TAS	**Tashkent**	**1.68**	**323**	*e*P	**Pn**	**13 24 16.0**	**+0.7**
TAS				*e*S	**Sg**	**13 24 40.0**	**+0.5**
TAS	**Tashkent**	**1.68**	**323**	⇑*i*P	**Pn**	**13 24 15.2**	**-0.1**
	baz=23						
TAS				⇑*i*S	**Sn**	**13 24 37.5**	**+0.5**
	baz=23						
OHH	**Osh**	**1.74**	**71**	⇑*i*P	**Pn**	**13 24 16.4**	**+0.2**
	baz=72						
OHH				⇑*i*S	**Sb**	**13 24 39.2**	**-0.6**
	baz=72						
CHGR	**Chuyangaron**	**1.75**	**221**	⇑*i*P	**Pn**	**13 24 17.0**	**+0.6**
	baz=21						
CHGR				⇑*i*S	**Sb**	**13 24 40.0**	**-0.2**
	baz=21						
IUG	**Iuzhnay**	**2.20**	**348**	*e*P	**Pn**	**13 24 24.1**	**+1.5**
	1µm,0.3s						
IUG				*e*S	**Sb**	**13 24 54.1**	**+0.8**
	533nm,0.4s						
IUG	**Iuzhnay**	**2.20**	**348**	Pg	**Pn**	**13 24 24.1**	**+1.5**
	1µm,0.3s						
IUG				Lg	Lg	13 24 54.1	
	533nm,0.4s						
SFK	**Sufi-Kurgan**	**2.21**	**88**	⇑*e*P	**Pn**	**13 24 23.0**	**+0.2**
	baz=89						
SFK				⇑*e*S	**Sn**	**13 24 51.0**	**+0.6**
	baz=89						
CHM	**Chimkent**	**2.45**	**342**	*e*P	**Pb**	**13 24 29.9**	**-0.1**
	3.4nm,0.3s						
CHM				*e*S	**Sg**	**13 25 03.2**	**-1.3**
	228nm,0.4s						
SALK	**Salom-Alik**	**2.59**	**69**	⇑*e*P	**Pn**	**13 24 29.2**	**+1.1**
	baz=69						
SALK				⇑*e*S	**Sn**	**13 25 00.8**	**+0.9**
	baz=69						
MNAS	**Manas**	**2.87**	**29**	⇓*i*P	**Pn**	**13 24 32.3**	**+0.5**
	baz=29						
MNAS				⇓*i*S	**Sn**	**13 25 06.7**	**+0.1**
	baz=29						
DZA	**Taraz**	**2.95**	**10**	*e*P	**Pb**	**13 24 37.5**	**-0.9**
DZA				*e*S	**Sb**	**13 25 16.3**	**+1.7**
KK08	**Karatay Array**	**3.12**	**358**	⇑Pg	**Pb**	**13 24 41.3**	**0.0**
	2.9nm,0.2s,baz=165,slow=17						
KK08				⇓Lg	Lg	13 25 21.1	
	25nm,0.4s,baz=175,slow=30						
AML	**Almayashu**	**3.16**	**46**	P	**Pn**	**13 24 35.9**	**-0.1**
	SNR=28						
AML	**Almayashu**	**3.16**	**46**	⇓*i*P	**Pn**	**13 24 35.8**	**-0.1**
	baz=47						
AML				⇓*i*S	**Sn**	**13 25 13.7**	**-0.3**
	baz=47						
MRKS	**Merke**	**3.38**	**35**	*e*P	**Pb**	**13 24 45.0**	**-0.8**
	17nm,0.4s						
MRKS				*e*S	**Sb**	**13 25 29.4**	**+2.3**
	46nm,0.4s						
MRKS	**Merke**	**3.38**	**35**	Pg	**Pb**	**13 24 45.0**	**-0.8**
	17nm,0.4s						
MRKS				Lg	Lg	13 25 29.4	
	46nm,0.4s						
EKS2	**Erkin-Say**	**3.57**	**41**	P	**Pn**	**13 24 42.2**	**+0.7**
	SNR=16						
UCH	**Uchtor**	**3.69**	**51**	P	**Pn**	**13 24 42.8**	**-0.6**
	SNR=8.6						
AAK	**Ala-Archa**	**3.94**	**46**	P	**Pn**	**13 24 46.9**	**+0.5**
	SNR=8.3						
AAK	**Ala-Archa**	**3.94**	**46**	⇓Pn	**Pn**	**13 24 47.3**	**+0.8**
	1.6nm,0.3s						
AAK				⇑Lg	Lg	13 25 49.8	
	12nm,0.6s						
KBK	**Karagaybulak**	**4.21**	**49**	P	**Pn**	**13 24 51.1**	**+0.9**
	SNR=5.4						
TKM2	**Tokmak 2**	**4.75**	**50**	⇑Pn	**Pn**	**13 24 56.8**	**-0.8**
	3.3nm,0.5s						
TKM2				⇑Sn	**Sn**	**13 25 50.6**	**-2.3**
	2.7nm,0.5s						
TKM2				⇑Lg	Lg	13 26 12.0	
	5.4nm,0.6s						
KST	**Kastek**	**5.04**	**51**	*e*P	**Pb**	**13 25 14.7**	**+0.6**
	4.1nm,0.5s						
KST				*e*S	**Sb**	**13 26 20.4**	**+5.6**
	7.4nm,0.5s						
KST	**Kastek**	**5.04**	**51**	Pg	**Pb**	**13 25 14.7**	**+0.6**
	4.1nm,0.5s						
KST				Lg	Lg	13 26 20.3	
	7.4nm,0.5s						
KUU	**Kurty**	**5.78**	**46**	*e*P	**Pb**	**13 25 28.4**	**+1.8**
	1.5nm,0.4s						
KUU				*e*S	**Sg**	**13 26 44.2**	**-6.8**
	3.9nm,0.6s						
KUU	**Kurty**	**5.78**	**46**	Pg	**Pb**	**13 25 28.4**	**+1.8**
	1.5nm,0.4s						
KUU				Lg	Lg	13 26 44.2	
	3.9nm,0.6s						

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*JMA **05** 14:14:07.2±0.1, 43°.01N×145°.22E, h91^{km}±1^{km}, M2.5*

*SKHL **05** 14:14:07.4±0.2, 42°.90N×145°.30E, h86^{km}±3^{km}, mb4.0/4, msha5.2/4*

ISC 05 14:14:07.1±2.5, **43°.00N**±0°.09×**145°.23E**±0°.07, **h91**^{km}±14^{km}, **n14**, σ**0^{s}.39**/28, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKHN	**Kushirohamanak**	**0.10**	**328**	P	**Pn**	**14 14 20.3**	**+0.4**
JKHN				*e*S	**Sn**	**14 14 30.0**	**+0.5**
AKK	**Akkeshi**	**0.28**	**273**	*i* P	**Pn**	**14 14 20.7**	**+0.1**
AKK				AMB	AMB	14 14 20.9	
	40nm,0.2s						
AKK				*e*S	**Sn**	**14 14 30.6**	**0.0**
AKK				A	A	14 14 31.4	
	150nm,0.2s						
AKK				A	A	14 14 31.4	
	340nm,0.2s						
JAK	**Akkeshi**	**0.39**	**269**	P	**Pn**	**14 14 21.2**	**0.0**
JAK				*e*S	**Sn**	**14 14 31.9**	**+0.3**
NMR	**Nemuro--Hokkai**	**0.52**	**45**	*i* P	**Pn**	**14 14 21.9**	**-0.2**
NMR				AMB	AMB	14 14 22.4	
	50nm,0.3s						
NMR				*i* S	**Sn**	**14 14 32.9**	**-0.3**
NMR				A	A	14 14 33.4	
	420nm,0.2s						
NMR				A	A	14 14 33.4	
	260nm,0.2s						
NEM2	**Nemuro 2**	**0.52**	**46**	P	**Pn**	**14 14 22.1**	**0.0**
NEM2				*e*S	**Sn**	**14 14 32.8**	**-0.5**
JNK	**Nakash**	**0.69**	**328**	P	**Pn**	**14 14 23.2**	**-0.4**
JNK				*e*S	**Sn**	**14 14 35.4**	**-0.6**
JRA	**Rausu**	**0.94**	**355**	P	**Pn**	**14 14 26.4**	**+0.2**
JRA				*e*S	**Sn**	**14 14 40.9**	**+0.5**
JOB	**Onbets**	**1.03**	**265**	P	**Pn**	**14 14 27.4**	**+0.2**
JOB				*e*S	**Sn**	**14 14 42.3**	**0.0**
GRPR	**Tuman**	**1.07**	**22**	*e*P	**Pn**	**14 14 27.4**	**-0.2**
GRPR				AMB	AMB	14 14 28.0	
	20nm,0.2s						
GRPR				*e*S	**Sn**	**14 14 42.6**	**-0.4**
GRPR				A	A	14 14 44.0	
	180nm,0.2s						
GRPR				A	A	14 14 44.0	
	170nm,0.2s						
JAR	**Ashorobuto**	**1.11**	**286**	P	**Pn**	**14 14 28.2**	**+0.1**
JAR				*e*S	**Sn**	**14 14 43.4**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**1.13**	**24**	*i* P	**Pn**	**14 14 28.8**	**+0.5**
YUK				AMB	AMB	14 14 29.0	
	20nm,0.2s						
YUK				*i* S	**Sn**	**14 14 44.6**	**+0.3**
YUK				A	A	14 14 46.0	
	160nm,0.2s						
YUK				A	A	14 14 46.0	
	150nm,0.2s						
JTKR	**Abashiri--Toko**	**1.36**	**316**	P	**Pn**	**14 14 31.5**	**+0.3**
JTKR				*e*S	**Sn**	**14 14 49.4**	**0.0**
JCH	**Churui**	**1.43**	**255**	P	**Pn**	**14 14 32.2**	**+0.2**
JCH				*e*S	**Sn**	**14 14 49.9**	**-0.9**
JMP	**Maruseppu**	**1.69**	**307**	P	**Pn**	**14 14 35.6**	**+0.3**
JMP				*e*S	**Sn**	**14 14 56.6**	**-0.2**

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*IDC **05** 14:27:19.3±0.5, 56°.23N×163°.86E, h0^{km}, mb4.1/28, mb1 4.3/32, mb1mx4.3/48, mbtmp4.2/32, ML3.5/3, MS3.3/2, Ms1 3.3/2, ms1mx2.8/32, Error ellipse: s-maj=15.4km s-min=10.7km az=150.0*

*KRSC **05** 14:27:20.8±1.4, 56°.13N×164°.04E, h46^{km}±21^{km}, ML4.6*

*MOS **05** 14:27:22.7±1.0, 56°.20N×163°.96E, h42^{km}, mb4.5/24, MS3.2/4, Error ellipse: s-maj=6.9km s-min=4.5km az=64.4*

*NEIC **05** 14:27:24.8±1.9, 56°.2N±0°.1×163°.9E±0°.2, h53^{km}±7^{km}, mb4.3/44, Error ellipse: s-maj=20.2km s-min=12.9km az=148.0*

ISC 05 14:27:21.6±0.4, **56°.15N**±0°.05×**164°.03E**±0°.03, **h19**^{km}, **n232**, σ**1^{s}.33**/243, **mb4.4**/79, **MS3.2**/3, **8C-12D**, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.68**	**276**	PN	**Pb**	**14 27 33.4**	**-1.3**
KBTR	**Krutoberegovo**	**0.68**	**276**	*e*P	**Pb**	**14 27 33.4**	**-1.3**
KBG	**Krutoberegovo**	**0.75**	**279**	PN	**Pb**	**14 27 34.3**	**-1.6**
KBG				S	**Sb**	**14 27 45.4**	**-0.3**
KBG	**Krutoberegovo**	**0.75**	**279**	*e*P	**Pb**	**14 27 34.3**	**-1.6**
KBG				*e*S	**Sb**	**14 27 45.4**	**-0.3**
BKI	**Bering**	**1.45**	**130**	PN	**Pn**	**14 27 46.3**	**-0.4**
BKI				S	**Sn**	**14 28 04.7**	**-0.5**
BKI	**Bering**	**1.45**	**130**	*e*P	**Pn**	**14 27 46.3**	**-0.4**
BKI				*e*S	**Sn**	**14 28 04.7**	**-0.5**
SMKR	**Semkarok**	**1.49**	**288**	PN	**Pn**	**14 27 46.7**	**-0.6**
SMKR				S	**Sb**	**14 28 07.3**	**+0.2**
SMKR	**Semkarok**	**1.49**	**288**	*e*P	**Pn**	**14 27 46.7**	**-0.6**
SMKR				*e*S	**Sb**	**14 28 07.3**	**+0.2**
BDR	**Baidarnaya**	**1.62**	**286**	PN	**Pn**	**14 27 49.1**	**-0.1**
BDR	**Baidarnaya**	**1.62**	**286**	*e*P	**Pn**	**14 27 49.1**	**-0.1**
SRKR	**Sorokina**	**1.67**	**289**	PN	**Pn**	**14 27 49.6**	**-0.2**
SRKR	**Sorokina**	**1.67**	**289**	*e*P	**Pn**	**14 27 49.6**	**-0.2**
ZLN	**Zelenaya**	**1.81**	**267**	PN	**Pn**	**14 27 52.7**	**+0.9**
ZLN	**Zelenaya**	**1.81**	**267**	*e*P	**Pn**	**14 27 52.7**	**+0.9**
CIRR	**Tsirk**	**1.83**	**270**	PN	**Pn**	**14 27 53.1**	**+0.9**
CIRR	**Tsirk**	**1.83**	**270**	*e*P	**Pn**	**14 27 53.1**	**+0.9**
LGNR	**Loginova**	**1.87**	**269**	PN	**Pn**	**14 27 53.8**	**+1.0**
LGNR	**Loginova**	**1.87**	**269**	*e*P	**Pn**	**14 27 53.8**	**+1.0**
BZGR	**Bezymyannyi-Gr**	**1.88**	**265**	PN	**Pn**	**14 27 53.5**	**+0.8**
BZGR	**Bezymyannyi-Gr**	**1.88**	**265**	*e*P	**Pn**	**14 27 53.5**	**+0.8**
KLY	**Klyuchi**	**1.89**	**276**	PN	**Pn**	**14 27 51.5**	**-1.3**
KLY	**Klyuchi**	**1.89**	**276**	*e*P	**Pn**	**14 27 51.5**	**-1.3**
KRSR	**Krestovskiy**	**1.94**	**274**	PN	**Pn**	**14 27 53.7**	**+0.2**
KRSR	**Krestovskiy**	**1.94**	**274**	*e*P	**Pn**	**14 27 53.7**	**+0.2**
BZWR	**Bezymyannyi-We**	**1.99**	**266**	PN	**Pn**	**14 27 55.2**	**+0.9**
BZWR	**Bezymyannyi-We**	**1.99**	**266**	*e*P	**Pn**	**14 27 55.2**	**+0.9**
KIRR	**Kirishev**	**2.08**	**266**	PN	**Pn**	**14 27 56.5**	**+1.0**
KIRR	**Kirishev**	**2.08**	**266**	*e*P	**Pn**	**14 27 56.5**	**+1.0**
KPT	**Kopyto**	**2.14**	**267**	PN	**Pn**	**14 27 57.7**	**+1.4**
KPT	**Kopyto**	**2.14**	**267**	*e*P	**Pn**	**14 27 57.7**	**+1.4**
KMNR	**Kamenistaya**	**2.17**	**261**	PN	**Pn**	**14 27 58.0**	**+1.3**
KMNR	**Kamenistaya**	**2.17**	**261**	*e*P	**Pn**	**14 27 58.0**	**+1.3**
TUMD	**Tumrok D**	**2.26**	**247**	*e*P	**Pn**	**14 27 59.0**	**+1.1**
TUMR	**Tumrok**	**2.36**	**250**	PN	**Pn**	**14 27 59.0**	**-0.3**
ESO	**Esso**	**3.00**	**268**	PN	**Pn**	**14 28 08.2**	**+0.2**
ESO	**Esso**	**3.00**	**268**	*e*P	**Pn**	**14 28 08.2**	**+0.2**
OSSR	**Ossora**	**3.16**	**351**	PN	**Pn**	**14 28 08.7**	**-1.4**
OSSR	**Ossora**	**3.16**	**351**	*e*P	**Pn**	**14 28 08.7**	**-1.4**
KII	**Karymskiy**	**3.38**	**233**	PN	**Pn**	**14 28 14.2**	**+1.0**
KII	**Karymskiy**	**3.38**	**233**	*e*P	**Pn**	**14 28 14.2**	**+1.0**
PALN	**Palana**	**3.67**	**325**	PN	**Pn**	**14 28 20.0**	**+2.8**
PALN	**Palana**	**3.67**	**325**	*e*P	**Pn**	**14 28 20.0**	**+2.8**
SPN	**Mys Shipunski**	**3.84**	**219**	PN	**Pn**	**14 28 19.5**	**0.0**
SPN	**Mys Shipunski**	**3.84**	**219**	*e*P	**Pn**	**14 28 19.5**	**0.0**
SPN				*e*S	**Sn**	**14 29 01.9**	**-2.2**
NLC	**Nalytchevo**	**4.03**	**224**	PN	**Pn**	**14 28 24.1**	**+1.9**
NLC				S	**Sn**	**14 29 08.8**	**-0.1**
NLC	**Nalytchevo**	**4.03**	**224**	*e*P	**Pn**	**14 28 24.1**	**+1.9**
NLC				*e*S	**Sn**	**14 29 08.8**	**-0.1**
SDLR	**Sedlovina**	**4.14**	**228**	PN	**Pn**	**14 28 25.3**	**+1.5**
SDLR	**Sedlovina**	**4.14**	**228**	*e*P	**Pn**	**14 28 25.3**	**+1.5**
KRER	**Koryakskii**	**4.18**	**229**	PN	**Pn**	**14 28 26.6**	**+2.2**
KRER	**Koryakskii**	**4.18**	**229**	*e*P	**Pn**	**14 28 26.6**	**+2.2**
SMAR	**Somma**	**4.19**	**229**	PN	**Pn**	**14 28 26.1**	**+1.6**
SMAR	**Somma**	**4.19**	**229**	*e*P	**Pn**	**14 28 26.1**	**+1.6**
AVH	**Avacha**	**4.21**	**229**	PN	**Pn**	**14 28 28.3**	**+3.6**
AVH	**Avacha**	**4.21**	**229**	*e*P	**Pn**	**14 28 28.3**	**+3.6**
UGLR	**Uglovaya**	**4.22**	**228**	PN	**Pn**	**14 28 27.8**	**+3.0**
UGLR	**Uglovaya**	**4.22**	**228**	*e*P	**Pn**	**14 28 27.8**	**+3.0**
KOK	**Koryaka**	**4.24**	**230**	PN	**Pn**	**14 28 28.0**	**+2.9**
KOK	**Koryaka**	**4.24**	**230**	*e*P	**Pn**	**14 28 28.0**	**+2.9**
GNL	**Ganaly**	**4.28**	**238**	PN	**Pn**	**14 28 28.2**	**+2.4**
GNL	**Ganaly**	**4.28**	**238**	*e*P	**Pn**	**14 28 28.2**	**+2.4**
DALK	**Dalny**	**4.38**	**227**	PN	**Pn**	**14 28 27.8**	**+0.9**
DALK	**Dalny**	**4.38**	**227**	*e*P	**Pn**	**14 28 27.8**	**+0.9**
PET	**Petropavlovsk**	**4.42**	**227**	*e*PN	**Pn**	**14 28 28.8**	**+1.3**
PET				*e*S	**Sn**	**14 29 19.9**	**+1.5**
PET				pmax	pmax		
	comp=Z,91nm,0.8s						
PET				smax	smax		
	comp=E,174nm,0.5s						
PET				smax	smax		
	comp=N,189nm,0.6s						
PET				MLR	MLR		
	comp=Z,800nm,9.0s						
PET				MLR	MLR		
	comp=Z,1µm,8.0s						
PET	**Petropavlovsk**	**4.42**	**227**	*e*P	**Pn**	**14 28 29.5**	**+2.0**
PET				*e*S	**Sn**	**14 29 18.1**	**-0.3**
PET	**Petropavlovsk**	**4.42**	**227**		**Pn**	**14 28 27.8**	**+0.3**
PEA0B	**Petropavlovsk-**	**4.77**	**233**	⇑*e*PN	**Pn**	**14 28 34.8**	**+2.4**
PEA0B	**Petropavlovsk-**	**4.77**	**233**		**Pn**	**14 28 34.2**	**+1.8**
PETK	**Petropavlovsk-**	**4.77**	**233**	Pn	**Pn**	**14 28 34.1**	**+1.8**
	comp=Z,3.0nm,0.3s,baz=109,slow=3.2,SNR=63						
PETK				Sn	**Sn**	**14 29 30.0**	**+2.9**
	baz=72,slow=28,SNR=1.5						
PETK				LR	LR	14 30 49.5	
	comp=Z,307nm,19.5s,baz=42,slow=44						
PETK	**Petropavlovsk-**	**4.77**	**233**		**Pn**	**14 28 35.2**	**+2.8**
RUS	**Russkaya**	**4.93**	**223**	PN	**Pn**	**14 28 36.0**	**+1.6**
RUS	**Russkaya**	**4.93**	**223**	*e*P	**Pn**	**14 28 36.0**	**+1.6**
MTVR	**Mutnovka**	**5.02**	**225**	PN	**Pn**	**14 28 38.2**	**+2.3**
MTVR	**Mutnovka**	**5.02**	**225**	*e*P	**Pn**	**14 28 38.2**	**+2.3**
ASAK	**Asacha**	**5.21**	**226**	PN	**Pn**	**14 28 40.8**	**+2.4**
ASAK	**Asacha**	**5.21**	**226**	*e*P	**Pn**	**14 28 40.8**	**+2.4**
KDTR	**Khodutka, Kamc**	**5.58**	**221**	PN	**Pn**	**14 28 44.6**	**+1.1**
KDTR	**Khodutka, Kamc**	**5.58**	**221**	*e*P	**Pn**	**14 28 44.6**	**+1.1**
PAU	**Pauzhetka**	**6.34**	**225**	PN	**Pn**	**14 28 55.9**	**+2.0**
PAU	**Pauzhetka**	**6.34**	**225**	*e*P	**Pn**	**14 28 55.9**	**+2.0**
SKR	**Severo-Kuril’s**	**7.23**	**224**	⇑*e*PN	**Pn**	**14 29 07.7**	**+1.7**
SEY	**Seymchan**	**9.00**	**324**	Pn	**Pn**	**14 29 29.9**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=18,slow=23,SNR=2.1						
SEY				LR	LR	14 32 52.1	
	comp=Z,161nm,19.2s,baz=102,slow=38						
SEY	**Seymchan**	**9.00**	**324**	PN	**Pn**	**14 29 30.0**	**-0.4**
BILL	**Bilibino**	**11.98**	**4**	⇑*e*PN	**Pn**	**14 30 13.9**	**+2.8**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,64nm,8.0s						
KUR	**Kuril'sk**	**14.93**	**230**	⇓*e*P	**Pn**	**14 30 50.7**	**-0.6**
ASAJ	**Asahikawa**	**18.17**	**238**	P	**Pn**	**14 31 33.2**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=61,slow=4.6,SNR=9.1						
YAK	**Yakutsk**	**18.43**	**303**	P	**P**	**14 31 34.8**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=77,slow=3.9,SNR=11						
YAK	**Yakutsk**	**18.43**	**303**	*c i*P	**P**	**14 31 34.6**	**-0.9**
YAK				pmax	pmax		
	comp=Z,20nm,0.7s						
YAK	**Yakutsk**	**18.43**	**303**	P	**P**	**14 31 33.5**	**-1.9**
KLR	**Kul'dur**	**20.61**	**264**	P	**P**	**14 31 59.5**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=83,slow=12,SNR=4.8						
KLR	**Kul'dur**	**20.61**	**264**	⇓*e*P	**P**	**14 31 57.8**	**-1.5**
KLR				pmax	pmax		
	comp=Z,36nm,4.0s						
KLR				MLR	MLR		
	comp=Z,73nm,16.0s						
ZEA	**Zeya**	**21.10**	**279**	*e*P	**P**	**14 32 03.6**	**-1.0**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TIXI	**Tiksi**	**21.41**	**330**	P	**P**	**14 32 08.4**	**+0.6**
	comp=Z,11nm,0.7s,baz=117,slow=13,SNR=34						
TIXI	**Tiksi**	**21.41**	**330**	⇓*i*P	**P**	**14 32 08.9**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,16nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,67nm,14.0s						
TIXI	**Tiksi**	**21.41**	**330**	P	**P**	**14 32 07.5**	**-0.2**
TIXI				IAmb	IAmb	14 32 11.6	
	comp=Z,14nm,0.8s						
M19K	**Big River Lodg**	**21.85**	**58**	P	**P**	**14 32 14.0**	**+1.4**
J20K	**Nowinta River**	**21.93**	**51**	P	**P**	**14 32 15.4**	**+2.0**
IMAR	**Indian Mountai**	**22.22**	**47**	P	**P**	**14 32 17.1**	**+0.6**
H21K	**Melozitna Rive**	**22.58**	**48**	P	**P**	**14 32 19.7**	**-0.7**

KDAK	**Kodiak Island**	**23.41**	**68**	P	**P**	**14 32 28.1**	**-0.9**
KDAK				pmax	pmax		
	comp=Z,67nm,1.5s						
KDAK	**Kodiak Island**	**23.41**	**68**	P	**P**	**14 32 28.1**	**-0.9**
MLY	**Manley**	**23.41**	**49**	P	**P**	**14 32 28.7**	**-0.3**
TRF	**Thorofare Moun**	**23.65**	**53**	P	**P**	**14 32 30.8**	**-0.7**
TRF				IAmb	IAmb	14 32 42.9	
	comp=Z,9.2nm,0.9s						
CNPM	**China Poot**	**23.71**	**63**	P	**P**	**14 32 30.8**	**-1.0**
COLD	**Coldfoot**	**23.75**	**44**	P	**P**	**14 32 31.3**	**-0.9**
BRLK	**Bradley Lake**	**23.83**	**62**	P	**P**	**14 32 32.6**	**-0.5**
BRLK				IAmb	IAmb	14 32 44.8	
	comp=Z,11nm,1.0s						
I23K	**Minto, Yukon-K**	**24.00**	**49**	P	**P**	**14 32 34.3**	**-0.3**
I23K				IAmb	IAmb	14 32 41.1	
	comp=Z,14nm,1.4s						
TOLK	**Toolik Lake Re**	**24.15**	**40**	P	**P**	**14 32 35.5**	**-0.5**
TOLK				IAmb	IAmb	14 32 38.2	
	comp=Z,7.6nm,0.8s						
MCK	**McKinley**	**24.23**	**52**	P	**P**	**14 32 37.0**	**+0.2**
MCK				pmax	pmax		
	comp=Z,14nm,1.2s						
MCK	**McKinley**	**24.23**	**52**	P	**P**	**14 32 37.0**	**+0.2**
MCK				IAmb	IAmb	14 32 48.2	
	comp=Z,14nm,1.2s						
RND	**Reindeer**	**24.30**	**53**	P	**P**	**14 32 36.4**	**-1.0**
RND				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RND	**Reindeer**	**24.30**	**53**	P	**P**	**14 32 36.4**	**-1.0**
WRH	**Wood River Hil**	**24.56**	**51**	P	**P**	**14 32 40.4**	**+0.6**
WRH				IAmb	IAmb	14 32 41.8	
	comp=Z,16nm,1.1s						
COLA	**College**	**24.65**	**50**	⇓*i*P	**P**	**14 32 41.3**	**+0.8**
COLA				pmax	pmax		
	comp=Z,13nm,1.5s						
CCB	**Clear Creek Bu**	**24.68**	**50**	P	**P**	**14 32 40.2**	**-0.5**
CCB				IAmb	IAmb	14 32 43.4	
	comp=Z,7.7nm,1.0s						
SML	**Sawmill**	**24.72**	**57**	P	**P**	**14 32 40.4**	**-0.9**
SML				IAmb	IAmb	14 32 47.9	
	comp=Z,9.4nm,0.8s						
PWL	**Port Wells**	**24.87**	**59**	P	**P**	**14 32 41.1**	**-1.5**
HDA	**Harding Lake**	**25.06**	**51**	P	**P**	**14 32 43.3**	**-0.9**
IL31		**25.06**	**50**	P	**P**	**14 32 42.7**	**-1.5**
ILAR	**Eielson Array**	**25.06**	**50**	P	**P**	**14 32 44.6**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=248,slow=4.5,SNR=29						
ILAR	**Eielson Array**	**25.06**	**50**	P	**P**	**14 32 43.9**	**-0.4**
BMAR	**Burnt Mountain**	**25.93**	**44**	P	**P**	**14 32 51.2**	**-1.0**
MAJO	**Matsushiro**	**26.23**	**233**	⇓*e*P	**P**	**14 32 55.6**	**+0.5**
MAJO				pmax	pmax		
	comp=Z,152nm,4.1s						
MAJO	**Matsushiro**	**26.23**	**233**	P	**P**	**14 32 54.2**	**-0.9**
MAT	**Matsushiro**	**26.23**	**233**	P	**P**	**14 32 55.6**	**+0.5**
MJAR	**Matsushiro Arr**	**26.23**	**233**	P	**P**	**14 32 55.8**	**+0.7**
	comp=Z,6.1nm,0.8s,baz=45,slow=7.0,SNR=7.3						
SCRK	**Sand Creek**	**26.39**	**51**	P	**P**	**14 32 54.9**	**-1.6**
SCRK				IAmb	IAmb	14 32 56.9	
	comp=Z,5.8nm,0.8s						
BMRM	**Bremner River**	**26.64**	**58**	P	**P**	**14 32 58.6**	**0.0**
BMRM				IAmb	IAmb	14 33 00.7	
	comp=Z,9.4nm,1.0s						
GLB	**Gilahina Butte**	**26.91**	**57**	P	**P**	**14 33 00.2**	**-0.9**
MCARA	**McCarthy VSAT**	**27.29**	**57**	P	**P**	**14 33 02.8**	**-1.7**
MCARA				IAmb	IAmb	14 33 09.5	
	comp=Z,22nm,1.4s						
L27K	**Beaver Creek,**	**27.49**	**53**	P	**P**	**14 33 04.8**	**-1.5**
L27K				IAmb	IAmb	14 33 08.4	
	comp=Z,7.4nm,0.9s						
BCAR	**Beaver Creek A**	**27.51**	**53**	P	**P**	**14 33 05.5**	**-1.0**
M27K	**Edge Creek, AK**	**27.61**	**55**	P	**P**	**14 33 07.2**	**-0.2**
M27K				IAmb	IAmb	14 33 14.2	
	comp=Z,11nm,1.2s						
INK	**Inuvik**	**30.05**	**41**	P	**P**	**14 33 29.9**	**+1.1**
	comp=Z,3.3nm,0.5s,baz=289,slow=6.9,SNR=36						
INK				PcP	**PcP**	**14 36 30.6**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=323,slow=0.7,SNR=2.5						
INK	**Inuvik**	**30.05**	**41**	P	**P**	**14 33 29.8**	**+0.9**
INK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
INK	**Inuvik**	**30.05**	**41**	P	**P**	**14 33 29.8**	**+0.9**
INK				IAmb	IAmb	14 33 30.4	
	comp=Z,3.9nm,0.6s						
KSRS	**Korea Array**	**30.49**	**248**	P	**P**	**14 33 33.2**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=40,slow=8.2,SNR=1.8						
A36M	**Sachs Harbour**	**32.32**	**33**	P	**P**	**14 33 48.9**	**+0.1**
A36M				IAmb	IAmb	14 33 50.9	
	comp=Z,5.4nm,0.8s						
NRIK	**Noril'sk**	**34.79**	**323**	⇓*e*P	**P**	**14 34 12.0**	**+1.7**
NRIK				pmax	pmax		
	comp=Z,12nm,1.7s						
ULN	**Ulaanbaatar**	**35.11**	**281**	⇓*e*P	**P**	**14 34 14.1**	**+0.6**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
SONM	**Songino Array**	**35.48**	**281**	P	**P**	**14 34 16.1**	**-0.6**
	comp=Z,2.0nm,0.4s,baz=56,slow=7.4,SNR=15						
SONM				PcP	**PcP**	**14 36 46.3**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=59,slow=0.9,SNR=4.7						
SONM	**Songino Array**	**35.48**	**281**	P	**P**	**14 34 15.6**	**-1.1**
H11N2	**WAKE ISLAND Hy**	**36.42**	**175**	T	T	15 13 20.6	
	baz=357,slow=76,SNR=4354						
H11N3	**WAKE ISLAND Hy**	**36.44**	**175**	T	T	15 13 17.1	
	baz=357,slow=76,SNR=1584						
H11N1	**WAKE ISLAND Hy**	**36.44**	**175**	T	T	15 13 20.0	
	baz=357,slow=76,SNR=2066						
HHC	**Hu-ho-hao-te**	**37.00**	**268**	*e*P	**P**	**14 34 29.3**	**-0.4**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
H11S1	**WAKE ISLAND Hy**	**37.63**	**176**	T	T	15 14 51.7	
	baz=359,slow=76,SNR=37						
H11S3	**WAKE ISLAND Hy**	**37.64**	**176**	T	T	15 14 49.4	
	baz=359,slow=76,SNR=43						
H11S2	**WAKE ISLAND Hy**	**37.65**	**176**	T	T	15 14 51.8	
	baz=359,slow=76,SNR=33						
YKA	**Yellowknife Ar**	**39.38**	**46**	P	**P**	**14 34 50.2**	**+0.9**
	comp=Z,1.5nm,0.5s,baz=299,slow=8.0,SNR=11						
RES	**Resolute Bay**	**39.61**	**24**	P	**P**	**14 34 51.5**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=313,slow=13,SNR=2.9						
ZALV	**Zalesovo Beam**	**43.08**	**302**	P	**P**	**14 35 19.8**	**0.0**
	comp=Z,0.4nm,0.4s,baz=77,slow=7.3,SNR=1.5						
ZALV				PcP	**PcP**	**14 37 09.3**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=48,slow=2.1,SNR=3.7						
DGZ	**Jazzator, Alta**	**44.40**	**295**	⇓*i*P	**P**	**14 35 30.3**	**-0.4**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA	**Gaotai**	**44.55**	**276**	⇓P	**P**	**14 35 31.8**	**-0.2**
GTA				pP	sP	14 35 39.2	+0.7
GTA				sP	pwP	14 35 43.5	+2.6
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LZH	**Lanzhou**	**44.65**	**270**	*e*P	**P**	**14 35 33.6**	**+0.7**
LZH				sP	pwP	14 35 52.7	+11
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
EDM	**Edmonton**	**45.14**	**57**	P	**P**	**14 35 36.2**	**-0.2**
EDM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
EDM	**Edmonton**	**45.14**	**57**	P	**P**	**14 35 36.2**	**-0.2**
WMQ	**Urumqi**	**48.12**	**289**	*e*P	**P**	**14 36 00.1**	**+0.1**
WMQ				pP	sP	14 36 06.9	+0.4
WMQ				sP	pwP	14 36 21.0	+13
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,250nm,4.5s						
WMQ				LR	LR		
	comp=N,510nm,24.9s						
WMQ				LR	LR		
	comp=E,1μm,28.3s						
WMQ				LR	LR		
	comp=Z,23nm,29.0s						
JTMT	**Jette**	**48.23**	**64**	P	**P**	**14 36 01.4**	**+0.6**
MK31	**Makanchi Array**	**48.90**	**296**	P	**P**	**14 36 04.2**	**-1.6**
MK31				pmax	pmax		
	comp=Z,7.0nm,1.4s						
MK31	**Makanchi Array**	**48.90**	**296**	P	**P**	**14 36 04.2**	**-1.6**
MK31				IAmb	IAmb	14 36 24.7	
	comp=Z,7.3nm,1.4s						
MKAR	**Makanchi Array**	**48.90**	**296**	P	**P**	**14 36 04.2**	**-1.6**
	comp=Z,1.4nm,0.4s,baz=55,slow=6.3,SNR=51						
MKAR	**Makanchi Array**	**48.90**	**296**	*e*P	**P**	**14 36 04.4**	**-1.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**48.90**	**296**	P	**P**	**14 36 03.7**	**-2.1**
PLID	**Pearl Lake**	**49.16**	**67**	P	**P**	**14 36 08.1**	**0.0**
PLID				IAmb	IAmb	14 36 17.2	
	comp=Z,1.9nm,0.6s						
BRVK	**Borovoye**	**50.31**	**308**	⇓*e*P	**P**	**14 36 14.2**	**-2.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SUMG	**Summit**	**50.62**	**9**	*i* P	**P**	**14 36 20.1**	**+1.1**
SUMG				IAmb	IAmb	14 36 21.4	
	comp=Z,5.3nm,1.0s						
ARCES	**ARCESS Array B**	**51.07**	**343**	P	**P**	**14 36 21.2**	**-0.8**
	comp=Z,7.1nm,1.0s,baz=35,slow=4.6,SNR=4.1						
ARCES	**ARCESS Array B**	**51.07**	**343**	*e*P	**P**	**14 36 20.3**	**-1.7**
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PNTR	**Pine Nut**	**51.46**	**75**	P	**P**	**14 36 26.6**	**+1.0**
NVAR	**Mina Array Bea**	**52.64**	**75**	P	**P**	**14 36 36.1**	**+1.8**
	comp=Z,0.8nm,0.6s,baz=303,slow=6.9,SNR=4.0						
ARU	**Arti**	**52.69**	**318**	*c i*P	**P**	**14 36 34.5**	**+0.3**
ARU				S	**S**	**14 43 59.3**	**-1.2**
ARU				pmax	pmax		
	comp=Z,12nm,0.8s						
PDAR	**Pinedale Array**	**54.09**	**65**	P	**P**	**14 36 46.5**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=333,slow=2.4,SNR=12						
KIRV	**Kirov**	**54.28**	**324**	⇓*e*P	**P**	**14 36 46.5**	**+0.7**
BOOM	**Boomskoye usch**	**55.14**	**296**	P	**P**	**14 36 50.0**	**-2.6**
BOOM				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BOOM	**Boomskoye usch**	**55.14**	**296**	P	**P**	**14 36 50.0**	**-2.6**
BOOM				IAmb	IAmb	14 36 54.4	
	comp=Z,6.9nm,1.3s						
KLMR	**Klimovskoe**	**55.43**	**331**	*e*P	**P**	**14 36 53.6**	**-0.5**
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLMR	**Klimovskoe**	**55.43**	**331**	*e*P	**P**	**14 36 53.6**	**-0.5**
KLMR				AMP		14 36 54.7	
	comp=Z,10.0nm,0.8s						
AAK	**Ala-Archa**	**55.76**	**297**	⇑*i*P	**P**	**14 36 56.1**	**-0.9**
AAK				pmax	pmax		
	comp=Z,28nm,2.5s						
KKAR	**Karatay Array**	**57.38**	**300**	P	**P**	**14 37 05.4**	**-2.9**
KKAR	**Karatay Array**	**57.38**	**300**	P	**P**	**14 37 05.4**	**-2.9**
ABKAR	**Akbulak array**	**57.53**	**311**	P	**P**	**14 37 07.9**	**-1.4**
FINES	**FINESS Array B**	**58.19**	**338**	P	**P**	**14 37 13.7**	**0.0**
	comp=Z,3.7nm,0.6s,baz=29,slow=9.0,SNR=11						
FINES	**FINESS Array B**	**58.19**	**338**	P	**P**	**14 37 13.3**	**-0.4**
BELG	**Belogornoye**	**59.84**	**321**	⇑*e*P	**P**	**14 37 25.5**	**+0.3**
BELG				pmax	pmax		
	comp=Z,6.0nm,1.5s						
TAPN	**Taplejung**	**60.23**	**275**	*e*P	**P**	**14 37 27.6**	**-1.1**
	comp=Z,9.0nm,0.3s						
GAR	**Garm**	**60.58**	**297**	P	**P**	**14 37 28.4**	**-2.3**
GUN	**Gumba**	**60.82**	**277**	*e*P	**P**	**14 37 31.7**	**-1.0**
	comp=Z,35nm,0.6s						
CMAR	**Chiang Mai Arr**	**61.01**	**260**	P	**P**	**14 37 33.9**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=353,slow=6.4,SNR=4.4						
CMAR				PcP	**PcP**	**14 38 17.4**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=9.5,slow=3.4,SNR=7.8						
RAMN	**Ramite**	**61.16**	**276**	*e*P	**P**	**14 37 34.0**	**-0.9**
	comp=Z,38nm,0.4s						
NB2	**NORSAR Subarra**	**61.21**	**345**	P	**P**	**14 37 34.5**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=17,slow=6.9						
NOA	**NORSAR Array B**	**61.21**	**345**	P	**P**	**14 37 33.4**	**-1.1**
	comp=Z,3.6nm,0.8s,baz=17,slow=6.9,SNR=6.8						
NOA	**NORSAR Array B**	**61.21**	**345**	*e*P	**P**	**14 37 34.6**	**+0.1**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKN	**Kakani**	**61.24**	**278**	*e*P	**P**	**14 37 34.9**	**-0.5**
PKI	**Pulchoki**	**61.34**	**277**	*e*P	**P**	**14 37 35.1**	**-1.1**
	comp=Z,17nm,0.6s						
PKIN	**Phulchoki**	**61.34**	**277**	*e*P	**P**	**14 37 35.2**	**-1.0**
	comp=Z,18nm,0.6s						
DANN	**Dangsing**	**61.65**	**279**	*e*P	**P**	**14 37 37.7**	**-0.6**
	comp=Z,24nm,0.6s						
SCHQ	**Schefferville**	**61.87**	**31**	P	**P**	**14 37 38.6**	**-0.4**
	comp=Z,3.6nm,0.6s,baz=353,slow=7.1,SNR=6.2						
SCHQ	**Schefferville**	**61.87**	**31**	P	**P**	**14 37 37.6**	**-1.4**
KOLN	**Koldanda**	**62.19**	**279**	*e*P	**P**	**14 37 40.9**	**-0.9**
	comp=Z,16nm,0.5s						
PYUN	**Piuthan**	**62.27**	**280**	*e*P	**P**	**14 37 41.8**	**-0.5**
AKASG	**Malin Array Be**	**67.12**	**331**	P	**P**	**14 38 13.2**	**-0.2**
	comp=Z,2.2nm,0.4s,baz=27,slow=6.3,SNR=6.8						
AKBB	**Malin Array Si**	**67.12**	**331**	⇓*e*P	**P**	**14 38 12.4**	**-1.0**
AKBB				pmax	pmax		
	comp=Z,51nm,4.3s						
GEYT	**Alibeck**	**67.30**	**304**	P	**P**	**14 38 14.2**	**-0.6**
	comp=Z,3.8nm,0.7s,baz=252,slow=4.2,SNR=5.2						
TX31	**Lajitas Ar. Si**	**67.40**	**71**	P	**P**	**14 38 17.0**	**+1.3**
TXAR	**Lajitas Array**	**67.40**	**71**	P	**P**	**14 38 17.3**	**+1.7**
	comp=Z,1.5nm,0.6s,baz=294,slow=4.7,SNR=12						
KBZ	**Khabaz**	**68.83**	**318**	P	**P**	**14 38 25.1**	**+0.8**
	comp=Z,2.3nm,0.7s,baz=110,slow=2.5,SNR=6.5						
KBZ	**Khabaz**	**68.83**	**318**	⇑*e*P	**P**	**14 38 25.0**	**+0.8**
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LANS	**Liptovska Anna**	**70.99**	**336**	*e*P	**P**	**14 38 39.6**	**+2.1**
LANS	**Liptovska Anna**	**70.99**	**336**	*e*P	**P**	**14 38 39.6**	**+2.1**
GERES	**GERESS Array B**	**72.49**	**340**	P	**P**	**14 38 46.6**	**0.0**
	comp=Z,1.0nm,0.7s,baz=46,slow=5.8,SNR=8.1						
GERES	**GERESS Array B**	**72.49**	**340**	*e*P	**P**	**14 38 46.2**	**-0.4**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KBA	**Koelnbreinsper**	**74.25**	**340**	*e*P	**P**	**14 38 58.7**	**+1.6**
	comp=Z,2.5nm,0.6s						
SOKA	**Soboth**	**74.29**	**338**	*e*P	**P**	**14 38 58.2**	**+1.0**
	comp=Z,0.9nm,0.4s						
RETA	**Reutte**	**74.33**	**342**	*e*P	**P**	**14 38 58.4**	**+0.9**
	comp=Z,0.4nm,0.2s						
MOTA	**Moosalm**	**74.41**	**341**	*e*P	**P**	**14 38 59.2**	**+1.2**
	comp=Z,1.1nm,0.4s						
SQTA	**Sankt Quirin**	**74.51**	**341**	*e*P	**P**	**14 38 59.8**	**+1.3**
	comp=Z,1.6nm,0.4s						
OBKA	**Obir**	**74.55**	**339**	*e*P	**P**	**14 38 56.5**	**-2.3**
	comp=Z,5.8nm,0.8s						
ABTA	**Abfaltersbach**	**74.73**	**340**	*e*P	**P**	**14 39 00.7**	**+1.0**
	comp=Z,1.7nm,0.6s						
FETA	**Feichten**	**74.79**	**341**	*e*P	**P**	**14 39 01.6**	**+1.4**
	comp=Z,1.5nm,0.6s						
BRTR	**Keskin Array B**	**75.65**	**323**	P	**P**	**14 39 05.7**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=46,slow=1.8,SNR=4.3						
WB0	**Warramunga Arr**	**79.66**	**208**	P	**P**	**14 39 25.2**	**-2.2**
WB0				IAmb	IAmb	14 39 41.4	
	comp=Z,5.6nm,1.1s						
WB2	**Warramunga Arr**	**79.84**	**208**	P	**P**	**14 39 27.2**	**-1.2**
WB2				IAmb	IAmb	14 39 37.9	
	comp=Z,3.4nm,1.0s						
WRA	**Warramunga Arr**	**79.84**	**208**	P	**P**	**14 39 29.0**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=18,slow=5.7,SNR=8.8						
WRA	**Warramunga Arr**	**79.84**	**208**	*e*P	**P**	**14 39 27.7**	**-0.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**79.84**	**208**	P	**P**	**14 39 27.8**	**-0.6**
ASAR	**Alice Springs**	**83.51**	**208**	P	**P**	**14 39 49.3**	**+1.5**
	comp=Z,1.8nm,0.9s,baz=14,slow=5.1,SNR=17						
ASAR	**Alice Springs**	**83.51**	**208**	P	**P**	**14 39 47.8**	**0.0**
ESDC	**Sonseca Array**	**84.00**	**351**	P	**P**	**14 39 50.8**	**+0.4**
	comp=Z,0.9nm,0.9s,baz=9.4,slow=7.4,SNR=4.4						
STKA	**Stephens Creek**	**89.74**	**199**	P	**P**	**14 40 17.8**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=81,slow=9.1,SNR=3.1						
STKA	**Stephens Creek**	**89.74**	**199**	P	**P**	**14 40 16.9**	**-1.1**
STKA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
STKA	**Stephens Creek**	**89.74**	**199**	P	**P**	**14 40 16.9**	**-1.1**
STKA				IAmb	IAmb	14 40 28.3	
	comp=Z,2.0nm,1.4s						
QSPA	**South Pole Qui**	**145.90**	**180**	PKPdf	**PKPbc**	**14 46 58.2**	**0.0**

IDC ***05*** *14:54:55.7±1.3, 31°.17S×71°.50W, h0^{km}, mb3.9/4, mb1 3.9/8, mb1mx3.8/23, mbtmp3.8/8, ML3.7/3, MS2.8/1, Ms1 2.9/1, ms1mx2.4/20, Error ellipse: s-maj=37.3km s-min=25.9km az=152.0*

SJA ***05*** *14:55:00.6±1.7, 30°.66S×71°.70W, h28^{km}±11^{km}, ML4.0, MW4.0*

GUC ***05*** *14:55:02.7±0.7, 30°.73S×71°.32W, h44^{km}±2^{km}, ML4.1*

NEIC ***05*** *14:55:04.2±1.5, 30°.69S±0°.06×71°.6W±0°.1, h52^{km}±6^{km}, mb4.0/1, ML4.0(GUC), Error ellipse: s-maj=17.6km s-min=7.7km az=98.0*

ISC 05 14:55:04.4±0.8**, 30°.70S**±0°.02×**71°.45W**±0°.04**, h49**^{km}±7^{km}**, n86,** σ**1^{s}61**/109**, mb4.0**/5**, 2C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.16**	**280**	⇓*i*P	**Pn**	**14 55 11.7**	**-0.7**
CO06				*i* S	**Sn**	**14 55 18.1**	**0.0**
CO06				IAML		14 55 19.6	
	comp=E,13μm,0.2s						
CO06	**Fray Jorge**	**0.16**	**280**		**Pn**	**14 55 12.1**	**-0.3**
GO04	**Tololo Observa**	**0.77**	**47**	*e*P	**Pn**	**14 55 18.6**	**-0.7**
GO04				*i* S	**Sn**	**14 55 29.7**	**-0.3**
GO04				IAML		14 55 31.3	
	comp=E,9μm,0.1s						
GO04	**Tololo Observa**	**0.77**	**47**		**Pn**	**14 55 18.6**	**-0.7**
GO04	**Tololo Observa**	**0.77**	**47**	*e*P	**Pn**	**14 55 14.9**	**-4.4**
GO04				*e*P	**Pn**	**14 55 18.6**	**-0.7**
GO04				*e*S	**Sn**	**14 55 29.8**	**-0.3**
CO05	**La Serena**	**0.80**	**13**	*e*P	**Pn**	**14 55 18.9**	**-0.6**
CO05				*i* S	**Sn**	**14 55 30.8**	**+0.4**
CO05	**La Serena**	**0.80**	**13**		**Pn**	**14 55 19.3**	**-0.1**
AROD	**Rodeo**	**1.79**	**73**	*e*P	Pn	14 55 35.4	+2.2
AROD				*e*S	**Sn**	**14 55 58.2**	**+3.3**
LCO	**Las Campanas**	**1.81**	**21**	*e*P	**Pn**	**14 55 33.7**	**+0.4**
LCO				*i* S	**Sn**	**14 55 56.0**	**+0.9**
LCO	**Las Campanas**	**1.81**	**21**	Pn	**Pn**	**14 55 33.7**	**+0.4**
LCO	**Las Campanas**	**1.81**	**21**	*e*P	**Pn**	**14 55 33.0**	**-0.3**
VA06	**Catapilco**	**1.86**	**176**	*e*P	**Pn**	**14 55 33.0**	**-0.7**
VA06				*i* S	**Sn**	**14 55 57.1**	**+1.0**
VA06				IAML		14 56 11.6	
	comp=E,2μm,0.4s						
ACCO	**Cerro Coronel**	**2.06**	**87**	*e*P	**Pn**	**14 55 33.9**	**-3.0**
ACCO				*e*P	Pn	14 55 39.0	+2.2
ACCO				*e*P	Pn	14 55 39.6	+2.8
ACCO				*e*S	Sn	14 56 08.6	+7.1
ACDV	**Cuesta del Vie**	**2.08**	**76**	*e*P	Pn	14 55 40.5	+3.5
ACDV				*e*P	Pn	14 55 41.0	+4.0
ACDV				*e*S	**Sn**	**14 56 02.4**	**+0.5**
ACDV				IAML		14 56 09.5	
	comp=Z,482nm,0.6s						
RTLS	**Leoncito**	**2.15**	**121**	*e*P	Pn	14 55 40.0	+2.0
RTLS				IAML		14 56 19.5	
	comp=Z,583nm,0.5s						
VA03	**San Esteban**	**2.19**	**160**	*e*P	**Pn**	**14 55 38.4**	**-0.1**
VA03				*i* S	**Sn**	**14 56 05.6**	**+1.1**
VA03				IAML		14 56 13.1	
	comp=E,3μm,0.4s						
VA03	**San Esteban**	**2.19**	**160**		**Pn**	**14 55 39.2**	**+0.7**
VA03	**San Esteban**	**2.19**	**160**	*e*P	**Pn**	**14 55 39.0**	**+0.5**
VA03				IAML		14 56 14.7	
	comp=Z,1μm,0.6s						
ROCH	**El Roble**	**2.29**	**171**	*e*P	**Pn**	**14 55 37.4**	**-2.6**
ROCH				*e*P	**Pn**	**14 55 37.1**	**-2.8**
ROCH				*i* S	**Sn**	**14 56 08.9**	**+1.8**
ROCH				IAML		14 56 14.0	
	comp=N,2μm,0.7s						
ROCH				IAML		14 56 21.8	
	comp=N,1μm,0.3s						
ROC1	**El Roble**	**2.30**	**171**	*e*P	**Pn**	**14 55 38.0**	**-2.0**
VA01	**Torpederas**	**2.32**	**184**	⇑*i*P	**Pn**	**14 55 40.0**	**-0.1**
VA01				*e*S	**Sn**	**14 56 09.6**	**+2.2**
VA01				IAML		14 56 21.0	
	comp=E,678nm,0.1s						
VA01	**Torpederas**	**2.32**	**184**	Pn	**Pn**	**14 55 39.9**	**-0.2**
VA01	**Torpederas**	**2.32**	**184**	*e*P	**Pn**	**14 55 40.0**	**-0.1**
AUSP	**Uspallata**	**2.33**	**131**	*e*P	Pn	14 55 42.9	+2.4
AUSP				*e*S	Sn	14 56 14.9	+6.8
AC04	**Llanos de Chal**	**2.51**	**8**	⇑*i*P	**Pn**	**14 55 43.3**	**+0.6**
AC04				*i* S	**Sn**	**14 56 15.0**	**+2.9**
AC04				IAML		14 56 26.5	
	comp=E,360nm,0.3s						
AC04	**Llanos de Chal**	**2.51**	**8**	Pn	**Pn**	**14 55 43.3**	**+0.6**
PEL	**Peldehue**	**2.52**	**165**	*e*P	**Pn**	**14 55 44.0**	**+1.1**
PEL				*i* S	**Sn**	**14 56 14.5**	**+2.1**
PEL				IAML		14 56 21.2	
	comp=E,1μm,0.4s						
PEL	**Peldehue**	**2.52**	**165**	Pn	**Pn**	**14 55 44.0**	**+1.1**
PEL	**Peldehue**	**2.52**	**165**	*e*P	**Pn**	**14 55 44.0**	**+1.1**
PEL				*e*S	**Sn**	**14 56 12.4**	**-0.1**
ZON	**Zonda**	**2.52**	**110**	Pn	Pn	14 55 45.4	+2.5
ZON	**Zonda**	**2.52**	**110**	*e*P	Pn	14 55 45.0	+2.1
ZON				*e*S	**Sn**	**14 56 13.4**	**+0.8**
ZON				IAML		14 56 22.1	
	comp=Z,357nm,0.5s						
MT02	**Curacav**	**2.56**	**174**	*e*P	**Pn**	**14 55 43.9**	**+0.4**
MT02				*i* S	**Sn**	**14 56 15.2**	**+1.7**
MT02				IAML		14 56 20.7	
	comp=E,754nm,0.1s						
MT02	**Curacav**	**2.56**	**174**		**Pn**	**14 55 44.4**	**+0.9**
MT02	**Curacav**	**2.56**	**174**	*e*P	**Pn**	**14 55 41.0**	**-2.5**
MT02				*e*P	**Pn**	**14 55 41.5**	**-1.9**
MT02				*e*S	**Sn**	**14 56 17.8**	**+4.3**
MT02				IAML		14 56 20.5	
	comp=Z,537nm,0.5s						
RTCV	**Cerro Valdivia**	**2.75**	**116**	*e*P	Pn	14 55 49.0	+3.0
RTCV				*e*S	Sn	14 56 26.0	+7.9
MT05	**Renca**	**2.75**	**167**	*e*P	**Pn**	**14 55 47.4**	**+1.3**
MT05				*i* S	**Sn**	**14 56 19.2**	**+1.1**
MT05				IAML		14 56 34.6	
	comp=E,2μm,0.5s						
MT05	**Renca**	**2.75**	**167**		**Pn**	**14 55 47.7**	**+1.6**
MT05	**Renca**	**2.75**	**167**	*e*P	**Pn**	**14 55 47.8**	**+1.6**
MT05				IAML		14 56 34.7	
	comp=Z,521nm,0.3s						
FCH	**Farellones**	**2.80**	**160**	*e*P	**Pn**	**14 55 48.0**	**+1.0**
FCH				*i* S	**Sn**	**14 56 23.1**	**+3.4**
FCH				IAML		14 56 28.5	
	comp=E,925nm,0.2s						
ASAL	**Salagasta**	**2.92**	**131**	*e*P	Pn	14 55 51.0	+2.6
ASAL				*e*S	**Sn**	**14 56 23.9**	**+1.5**
VA05	**Santo Domingo**	**2.95**	**183**	*e*P	**Pn**	**14 55 49.0**	**+0.2**
VA05				*e*S	**Sn**	**14 56 28.2**	**+5.3**
VA05				IAML		14 56 43.3	
	comp=N,701nm,0.3s						
ARCO	**CERRO ARCO**	**3.03**	**135**	*e*P	Pn	14 55 53.0	+3.1
ARCO				*e*S	Sn	14 56 33.9	+8.8
ARCO				IAML		14 56 41.1	
	comp=Z,469nm,0.5s						
MT09	**Talagante**	**3.09**	**173**	*e*P	**Pn**	**14 55 51.7**	**+0.8**
MT09				*i* S	**Sn**	**14 56 28.0**	**+1.4**
MT09				IAML		14 56 36.2	
	comp=E,766nm,0.4s						
MT09	**Talagante**	**3.09**	**173**		**Pn**	**14 55 51.6**	**+0.8**
MT01	**Popeta**	**3.16**	**177**	*e*P	**Pn**	**14 55 52.0**	**+0.5**
MT01				*i* S	**Sn**	**14 56 28.9**	**+0.8**
MT01				IAML		14 56 42.2	
	comp=E,503nm,0.7s						
MT01	**Popeta**	**3.16**	**177**		**Pn**	**14 55 52.1**	**+0.5**
MT01	**Popeta**	**3.16**	**177**	*e*P	**Pn**	**14 55 52.0**	**+0.5**
MT01				*e*S	**Sn**	**14 56 24.9**	**-3.2**
MT01				IAML		14 56 39.0	
	comp=Z,335nm,0.9s						
AAGR	**Agrelo**	**3.26**	**137**	*e*P	Pn	14 55 56.0	+2.9
AAGR				*e*S	Sn	14 56 46.6	+16
GO03	**Copiap**	**3.27**	**19**	*e*P	**Pn**	**14 55 54.3**	**+1.0**
GO03				*i* S	**Sn**	**14 56 33.5**	**+2.5**
GO03				IAML		14 56 45.8	
	comp=E,330nm,0.4s						
GO03	**Copiap**	**3.27**	**19**	Pn	**Pn**	**14 55 54.3**	**+1.0**
GO03	**Copiap**	**3.27**	**19**	*e*P	**Pn**	**14 55 54.5**	**+1.2**
GO03				*e*S	**Sn**	**14 56 32.9**	**+1.8**
LMEL	**Las Melosas**	**3.31**	**162**	*e*P	**Pn**	**14 55 55.4**	**+1.5**
LMEL				*i* S	**Sn**	**14 56 33.5**	**+1.4**
LMEL				IAML		14 56 43.8	
	comp=N,805nm,0.5s						
BO04	**La Punta**	**3.35**	**168**	*e*P	**Pn**	**14 55 54.4**	**0.0**
BO04				*i* S	**Sn**	**14 56 33.8**	**+0.9**
BO04				IAML		14 56 43.7	
	comp=E,452nm,0.5s						
VCA	**Vinchina**	**3.44**	**56**	*e*P	**Pn**	**14 55 54.4**	**-1.2**
VCA				*e*P	**Pn**	**14 55 54.9**	**-0.7**
VCA				*e*P	Pn	14 55 59.0	+3.4
VCA				*e*S	Sn	14 56 43.4	+8.2
VCA				IAML		14 56 49.8	
	comp=Z,400nm,0.7s						
BO01	**Tunca**	**3.69**	**175**	*e*P	**Pn**	**14 55 58.9**	**0.0**
BO01				*i* S	**Sn**	**14 56 41.0**	**-0.2**
BO01	**Tunca**	**3.69**	**175**		**Pn**	**14 56 00.7**	**+1.8**
BO01	**Tunca**	**3.69**	**175**	*e*P	**Pn**	**14 55 59.6**	**+0.7**
BO01				IAML		14 57 03.4	
	comp=Z,144nm,0.4s						
ACLC	**CERRO LA CRUZ**	**4.10**	**73**	*e*P	Pn	14 56 06.6	+1.8
ACLC				*e*S	**Sn**	**14 56 54.4**	**+2.8**
ACLC				IAML		14 57 00.7	
	comp=Z,182nm,0.9s						
BO02	**Sierra Bellavi**	**4.12**	**172**	*e*P	**Pn**	**14 56 06.0**	**+1.2**
BO02				*i* S	**Sn**	**14 56 52.7**	**+0.9**
BO02	**Sierra Bellavi**	**4.12**	**172**	*e*P	Pn	14 55 52.9	-12

BO02				*e*S	**Sn**	**14 56 53.4**	**+1.6**
BO02				IAML		14 57 15.4	
	comp=Z,209nm,0.2s						
ACHE	**Chepes**	**4.14**	**98**	*e*P	Pn	14 56 07.5	+2.2
ACHE				*e*S	**Sn**	**14 56 54.9**	**+2.4**
GO05	**Huala**	**4.32**	**185**	*e*P	**Pn**	**14 56 06.3**	**-1.2**
GO05	**Huala**	**4.32**	**185**	Pn	**Pn**	**14 56 06.3**	**-1.2**
GO05	**Huala**	**4.32**	**185**	*e*P	**Pn**	**14 56 06.9**	**-0.6**
GO05				*e*S	Sn	14 57 11.4	+15
AC02	**Maricunga**	**4.36**	**28**	*e*P	**Pn**	**14 56 10.1**	**+1.5**
AC02				*i* S	**Sn**	**14 57 01.1**	**+2.8**
AC02	**Maricunga**	**4.36**	**28**	Pn	**Pn**	**14 56 10.1**	**+1.5**
AC02	**Maricunga**	**4.36**	**28**	*e*P	**Pn**	**14 56 10.0**	**+1.5**
AC02				IAML		14 57 29.3	
	comp=Z,92nm,0.8s						
MRA	**San Martin**	**5.19**	**111**	*e*P	**Pn**	**14 56 20.0**	**+0.5**
MRA				*e*S	**Sn**	**14 57 19.9**	**+1.8**
MRA				IAML		14 57 30.0	
	comp=Z,171nm,0.6s						
CYA	**Choya**	**5.41**	**67**	*e*P	**Pn**	**14 56 24.0**	**+1.4**
CYA				*e*S	**Sn**	**14 57 25.3**	**+1.7**
CYA				IAML		14 57 51.9	
	comp=Z,55nm,0.7s						
AHML	**Horco Molle**	**6.64**	**56**	*e*P	**Pn**	**14 56 41.0**	**+1.6**
H03N1	**Juan Fernandez**	**6.89**	**245**	T	T	15 03 39.8	
	baz=73,slow=72,SNR=1785						
H03N2	**Juan Fernandez**	**6.91**	**245**	T	T	15 03 36.9	
	baz=73,slow=72,SNR=1353						
H03N3	**Juan Fernandez**	**6.91**	**245**	T	T	15 03 31.8	
	baz=73,slow=72,SNR=1632						
LC01	**Cunco**	**8.19**	**182**	Pn	**Pn**	**14 56 59.8**	**-0.7**
LVC	**Limon Verde**	**8.37**	**16**	Pn	Pn	14 57 07.0	+3.5
	baz=199,slow=13,SNR=0.9						
LVC				Sn	Sn	14 58 47.2	+10
	comp=Z,0.5nm,0.3s,baz=338,slow=16,SNR=1.5						
TRQA	**Tornquist**	**10.72**	**136**	Pn	**Pn**	**14 57 36.0**	**+0.7**
CPUP	**Villa Florida**	**13.16**	**74**	Pn	**Pn**	**14 58 08.1**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=245,slow=18,SNR=1.4						
CPUP				LR	LR	15 03 36.4	
	comp=Z,49nm,21.6s,baz=238,slow=39						
LPAZ	**La Paz**	**14.67**	**13**	Pn	**Pn**	**14 58 30.6**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=180,slow=8.1,SNR=2.0						
SIV	**San Ignacio**	**17.45**	**35**	P	**P**	**14 59 04.8**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=214,slow=8.6,SNR=2.3						
BDFB	**Brasilia**	**26.17**	**60**	P	**P**	**15 00 33.2**	**-1.3**
	comp=Z,1.9nm,0.4s,baz=214,slow=11,SNR=3.2						
TXAR	**Lajitas Array**	**67.12**	**330**	P	**P**	**15 05 53.6**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=153,slow=6.1,SNR=1.7						
PPT	**Papeete**	**71.25**	**260**	P	**P**	**15 06 16.5**	**-2.3**
	comp=Z,9.5nm,0.6s,baz=162,slow=9.6,SNR=1.1						
DBIC	**Dimbokro**	**73.67**	**72**	P	**P**	**15 06 32.8**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=210,slow=5.9,SNR=4.5						
TORD	**Torodi Ar. Bea**	**82.62**	**70**	P	**P**	**15 07 22.8**	**0.0**
	comp=Z,0.4nm,0.5s,baz=271,slow=5.2,SNR=5.7						
TORD	**Torodi Ar. Bea**	**82.62**	**70**	P	**P**	**15 07 21.7**	**-1.1**
TORD				IAmb	IAmb	15 07 35.7	
	comp=Z,2.3nm,1.4s						
ZALV	**Zalesovo Beam**	**151.15**	**30**	PKPbc	**PKiKP**	**15 14 51.3**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=294,slow=4.4,SNR=5.9						

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*IDC **05** 15:29:03.9±0.6, 1°.44N×126°.15E, h0^{km}, mb4.2/19, mb1 4.3/21, mb1mx4.1/36, mbtmp4.2/21, ML3.6/2, MS3.0/5, Ms1 3.0/5, ms1mx2.7/37, Error ellipse: s-maj=24.0km s-min=12.4km az=74.0*

*NEIC **05** 15:29:09.1±2.5, 1°.4N±0°.1×126°.45E±0°.09, h35^{km}±3^{km}, mb4.3/15, Error ellipse: s-maj=18.7km s-min=8.5km az=212.0*

*DJA **05** 15:29:11.2±0.2, 1°N±2°×12°6E±°, h41^{km}±7^{km}, M4.2/14, mb4.3/12, mB4.9/5, MLv4.1/14, Mw(mB)4.2/5*

ISC 05 15:29:10.6±0.4**, 1°.46N**±0°.05×**126°.44E**±0°.06**, h47**^{km}**, n83,** σ**1ˢ74**/82**, mb4.2**/28**, MS2.7**/3**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.15**	**126**	P	**Pn**	**15 29 30.4**	**0.0**
TNTI				S	**Sn**	**15 29 47.5**	**+2.5**
TNTI	**Ternate**	**1.15**	**126**	Pn	**Pn**	**15 29 27.8**	**-2.6**
TNTI	**Ternate**	**1.15**	**126**	P	**Pn**	**15 29 30.2**	**-0.2**
LBMI	**Labuha**	**2.34**	**153**	P	**Pn**	**15 29 46.6**	**0.0**
SGSI	**Sangihe**	**2.39**	**338**	P	**Pn**	**15 29 47.3**	**-0.1**
SGSI				S	**Sn**	**15 30 15.6**	**+0.1**
KMSI	**Cibinong**	**2.61**	**250**	P	**Pn**	**15 29 50.2**	**-0.1**
SANI	**Sanana**	**3.51**	**187**	P	**Pn**	**15 30 03.0**	**+0.3**
SANI	**Sanana**	**3.51**	**187**	P	**Pn**	**15 30 03.4**	**+0.7**
GTOI	**Gorontalo**	**3.52**	**257**	P	**Pn**	**15 30 03.9**	**+1.1**
MRSI	**Marisa**	**4.60**	**258**	P	**Pn**	**15 30 19.2**	**+1.5**
APSI	**Ampana**	**5.33**	**244**	P	**Pn**	**15 30 29.9**	**+2.2**
	0.4nm732nm55nm,0.5s						
SWI	**Sorong**	**5.34**	**116**	P	**Pn**	**15 30 28.5**	**+0.6**
	0.1nm13nm,0.8s						
SIJI	**Sorong**	**5.35**	**116**	LR	LR	15 32 58.8	
	comp=Z,94nm,20.9s,baz=257,slow=42						
MSAI	**Masohi**	**5.38**	**152**	P	Pn	15 30 22.5	-5.9
AAI	**Ambon**	**5.40**	**161**	P	Pn	15 30 33.8	+5.1
TOLI2	**Tolitoli**	**5.66**	**267**	Pn	**Pn**	**15 30 29.9**	**-2.4**
KCP	**Kidapawan**	**5.68**	**346**	⇑*e*P	**Pn**	**15 30 33.5**	**+1.0**
MPSI	**Mapaga**	**6.63**	**260**	P	**Pn**	**15 30 48.3**	**+2.7**
	0.1nm17nm,0.7s						
TTSI	**Tana Toraja**	**7.99**	**236**	P	**Pn**	**15 31 04.3**	**+0.2**
	0.1nm2µm25nm,0.6s						
SPSI	**Sidrap Palu**	**8.57**	**231**	P	**Pn**	**15 31 13.0**	**+0.9**
	22nm,0.4s						
BNSI	**Bone**	**8.59**	**227**	P	**Pn**	**15 31 13.3**	**+0.8**
	16nm,0.6s						
MYLDM	**Lahad Datu**	**8.74**	**295**		**Pn**	**15 31 15.0**	**+0.4**
BKSI	**Bulukumba**	**9.23**	**223**	P	**Pn**	**15 31 23.1**	**+2.0**
	560nm10nm,0.5s						
KAPI	**Kappang**	**9.27**	**226**	Pn	Pn	15 31 15.1	-6.6
	0.2nm,0.3s,baz=113,slow=23,SNR=1.0						
BSSI	**Bau Bau, Buton**	**9.60**	**218**	P	**Pn**	**15 31 28.1**	**+1.8**
	877nm11nm,0.6s						
SAUI	**Saumlaki**	**10.56**	**153**	P	**Pn**	**15 31 39.5**	**+0.1**
KKM	**Kota Kinabalu**	**11.17**	**294**	Pn	**Pn**	**15 31 47.6**	**-0.3**
KKM	**Kota Kinabalu**	**11.17**	**294**	P	**Pn**	**15 31 50.6**	**+2.7**
EDFI	**Ende, Flores**	**11.19**	**205**	P	**Pn**	**15 31 49.7**	**+1.6**
	2.0nm,1.1s						
SOEI	**Soe**	**11.35**	**191**	P	Pn	15 32 07.3	+17
PLAI	**Plampang**	**13.37**	**220**	P	**P**	**15 32 28.8**	**+2.6**
PLAI	**Plampang**	**13.37**	**220**	P	**Pn**	**15 32 19.5**	**+1.6**
TWSI	**Taliwang, Sumb**	**13.90**	**223**	P	**P**	**15 32 33.9**	**+1.8**
DRS	**Darwin Rock St**	**14.49**	**162**	P	**Pn**	**15 32 33.3**	**+0.3**
JAY	**Jayapura**	**14.80**	**105**	LR	LR	15 37 46.4	
	comp=Z,51nm,20.2s,baz=200,slow=35						
JAGI	**Jajag, Banyuwa**	**15.72**	**231**	P	**Pn**	**15 32 49.9**	**+0.8**
KNRA	**Kununurra**	**17.18**	**172**	Pn	**Pn**	**15 33 04.5**	**-2.9**
KNRA				IAmb	IAmb	15 33 08.9	
	comp=Z,21nm,0.9s						
KNRA	**Kununurra**	**17.18**	**172**	P	**Pn**	**15 33 07.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**19.45**	**182**	P	**P**	**15 33 32.5**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=24,slow=9.6,SNR=11						
LEM	**Lembang**	**20.50**	**246**	LR	LR	15 42 44.4	
	comp=Z,35nm,20.2s,baz=188,slow=40						
TPUB	**Ta-pu**	**22.43**	**346**	P	**P**	**15 34 07.2**	**+1.6**
WB0	**Warramunga Arr**	**22.49**	**160**	P	**P**	**15 34 05.2**	**-1.1**
WB0				IAmb	IAmb	15 34 11.9	
	comp=Z,13nm,0.7s						
WRAB	**Tennant Creek**	**22.63**	**160**	P	**P**	**15 34 03.0**	**-4.8**
WRA	**Warramunga Arr**	**22.64**	**160**	P	**P**	**15 34 06.3**	**-1.5**
	comp=Z,11nm,0.6s,baz=341,slow=11,SNR=68						
WRA				PcP	**PcP**	**15 37 59.6**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=323,slow=2.3,SNR=1.8						
WRA				S	**S**	**15 38 11.7**	**-0.9**
	comp=Z,0.9nm,1.0s,baz=341,slow=21,SNR=4.1						
WRA	**Warramunga Arr**	**22.64**	**160**	P	**P**	**15 34 05.2**	**-2.6**
WB2	**Warramunga Arr**	**22.64**	**160**	P	**P**	**15 34 05.0**	**-2.9**
WR0	**Warramunga Arr**	**22.72**	**160**	P	**P**	**15 34 06.2**	**-2.5**
WR0				IAmb	IAmb	15 34 10.7	
	comp=Z,6.7nm,0.7s						
PSA00	**Pilbara Seismi**	**23.78**	**195**	P	**P**	**15 34 17.6**	**-1.5**
PSA00				IAmb	IAmb	15 34 19.5	
	comp=Z,8.3nm,0.8s						
QIS	**Mount Isa**	**25.40**	**150**	P	**P**	**15 34 34.3**	**+0.4**
AS31	**Alice Springs**	**26.01**	**164**	P	**P**	**15 34 35.0**	**-4.3**
ASAR	**Alice Springs**	**26.01**	**164**	P	**P**	**15 34 40.8**	**+1.4**
	comp=Z,2.7nm,0.6s,baz=349,slow=14,SNR=15						
ASAR				PcP	**PcP**	**15 38 06.7**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=352,slow=2.4,SNR=8.2						
ASAR	**Alice Springs**	**26.01**	**164**	P	**P**	**15 34 35.7**	**-3.7**
ASAR					**PcP**	**15 38 07.2**	**+0.3**
WRKA	**Warakurna**	**26.40**	**176**	P	**P**	**15 34 43.9**	**+1.0**
PSI	**Prapat**	**27.52**	**273**	P	**P**	**15 34 51.0**	**-2.3**
	comp=Z,1.1nm,0.6s,baz=135,slow=17,SNR=2.0						
CMAR	**Chiang Mai Arr**	**31.82**	**304**	P	**P**	**15 35 27.6**	**-3.6**
	comp=Z,0.5nm,0.3s,baz=112,slow=7.0,SNR=2.1						
CMAR				LR	LR	15 50 05.8	
	comp=Z,15nm,18.2s,baz=70,slow=40						
BBOO	**Buckleboo**	**35.27**	**166**	P	**P**	**15 35 59.6**	**-1.4**
KSRS	**Korea Array**	**35.85**	**2**	P	**P**	**15 36 06.8**	**+1.0**
	comp=Z,1.1nm,0.8s,baz=181,slow=9.4,SNR=4.3						
STKA	**Stephens Creek**	**36.13**	**158**	P	**P**	**15 36 08.8**	**+0.4**
	comp=Z,5.0nm,0.8s,baz=330,slow=8.8,SNR=12						
STKA	**Stephens Creek**	**36.13**	**158**	P	**P**	**15 36 08.9**	**+0.5**
STKA				IAmb	IAmb	15 36 10.5	
	comp=Z,1.2nm,0.8s						
XAN	**Xi'an**	**36.32**	**335**	P	P	15 35 59.7	-10
XAN				pP	pP	15 36 10.6	-11
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MJAR	**Matsushiro Arr**	**36.57**	**16**	P	**P**	**15 36 11.5**	**-0.6**
	comp=Z,1.9nm,0.9s,baz=176,slow=9.0,SNR=2.9						
ARMA	**Armidale**	**39.76**	**145**	P	**P**	**15 36 36.9**	**-2.3**
ARMA				IAmb	IAmb	15 36 42.8	
	comp=Z,3.8nm,0.8s						
HHC	**Hu-ho-hao-te**	**41.46**	**343**	*e*P	**P**	**15 36 57.1**	**+4.1**
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,250nm,5.7s						
USRK	**Ussuriysk Ar.**	**42.85**	**6**	P	**P**	**15 37 05.9**	**+1.8**
	comp=Z,1.3nm,0.6s,baz=187,slow=11,SNR=2.8						
DZM	**Mont Dzumac**	**45.51**	**123**	P	**P**	**15 37 27.1**	**+1.2**
	comp=Z,4.9nm,0.8s,baz=262,slow=9.9,SNR=3.6						
SONM	**Songino Array**	**49.35**	**342**	P	**P**	**15 37 54.7**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=163,slow=10,SNR=6.8						
SONM				LR	LR	15 59 30.2	
	comp=Z,44nm,18.9s,baz=65,slow=37						
SONM	**Songino Array**	**49.35**	**342**	P	**P**	**15 37 56.5**	**+1.1**
WMQ	**Urumqi**	**54.42**	**326**	*e*P	**P**	**15 38 36.1**	**+2.9**
PETK	**Petropavlovsk-**	**57.63**	**22**	P	**P**	**15 38 56.6**	**+0.7**
	comp=Z,6.9nm,1.0s,baz=208,slow=9.2,SNR=4.7						
MK31	**Makanchi Array**	**59.26**	**326**	P	**P**	**15 39 06.3**	**-1.1**
MK31				IAmb	IAmb	15 39 30.5	
	comp=Z,4.6nm,1.1s						
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**15 39 05.9**	**-1.5**
	comp=Z,2.3nm,0.7s,baz=122,slow=8.0,SNR=13						
MKAR				PcP	**PcP**	**15 39 54.5**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=116,slow=2.8,SNR=2.4						
ZALV	**Zalesovo Beam**	**62.48**	**334**	P	**P**	**15 39 28.0**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=130,slow=6.0,SNR=6.1						
NRIK	**Noril'sk**	**72.56**	**346**	P	**P**	**15 40 32.4**	**0.0**
	comp=Z,4.3nm,0.6s,baz=122,slow=6.0,SNR=10						
ABKAR	**Akbulak array**	**73.72**	**321**	P	**P**	**15 40 39.3**	**-0.4**
ABKAR				IAmb	IAmb	15 40 42.5	
	comp=Z,4.2nm,1.2s						
KBZ	**Khabaz**	**84.32**	**314**	P	**P**	**15 41 37.2**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=138,slow=7.7,SNR=3.6						
IMAR	**Indian Mountai**	**84.53**	**24**	P	**P**	**15 41 38.7**	**+0.3**
ILAR	**Eielson Array**	**87.27**	**25**	P	**P**	**15 41 51.2**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=236,slow=5.4,SNR=6.0						
BMAR	**Burnt Mountain**	**88.27**	**23**	P	**P**	**15 41 56.7**	**-0.1**
L27K	**Beaver Creek,**	**89.50**	**27**	P	**P**	**15 42 01.1**	**-1.5**
L27K				IAmb	IAmb	15 42 30.3	
	comp=Z,2.4nm,1.4s						
BCAR	**Beaver Creek A**	**89.52**	**27**	P	**P**	**15 42 03.6**	**+0.8**
ARCES	**ARCESS Array B**	**92.47**	**340**	P	**P**	**15 42 14.5**	**-1.8**
	comp=Z,2.7nm,0.9s,baz=354,slow=2.4,SNR=4.0						
AKASG	**Malin Array Be**	**93.46**	**321**	P	**P**	**15 42 20.3**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=84,slow=4.8,SNR=1.9						
FINES	**FINESS Array B**	**93.68**	**332**	P	**P**	**15 42 23.2**	**+1.2**
	comp=Z,4.4nm,1.0s,baz=24,slow=4.7,SNR=1.3						

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*AUST **05** 15:48:33.8±0.7, 21°.29S×120°.86E, h10^{km}, Error ellipse: s-maj=11.6km s-min=6.2km az=169.0*

*IDC **05** 15:48:43.5±6.2, 21°.31S×121°.77E, h0^{km}, mb3.3/1, mb1 3.8/4, mb1mx3.4/44, mbtmp3.6/4, ML3.4/3, Error ellipse: s-maj=68.3km s-min=39.8km az=100.0*

ISC 05 15:48:32.8±0.8**, 21°.13S**±0°.08×**120°.77E**±0°.07**, h10**^{km}**, n25,** σ**1ˢ92**/28**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**5.50**	**57**	Pn	**Pn**	**15 49 57.6**	**+2.8**
	0.6nm,0.3s,baz=228,slow=8.3,SNR=8.0						
FITZ				Sn	**Sn**	**15 50 55.4**	**-2.7**
	3.0nm,0.3s,baz=274,slow=19,SNR=7.8						
FITZ				Lg	Lg	15 51 21.7	
	3.0nm,0.3s,baz=295,slow=19,SNR=4.5						
FITZ	**Fitzroy Crossi**	**5.50**	**57**	P	**Pn**	**15 49 57.8**	**+3.0**
	baz=5.5,SNR=5.7						
MEEK	**Meekatharra**	**5.82**	**199**	P	**Pn**	**15 50 00.6**	**+1.3**
	baz=5.7,SNR=14						
GIRL	**Giralia**	**6.25**	**255**	P	**Pn**	**15 50 07.9**	**+2.8**
	baz=6.3						
GIRL				S	**Sn**	**15 51 15.1**	**-1.7**
	baz=6.3						
WRKA	**Warakurna**	**7.94**	**121**	P	**Pn**	**15 50 30.7**	**+2.3**
	baz=7.8,SNR=12						
MORW	**Morawa**	**8.98**	**208**	P	**Pn**	**15 50 41.0**	**-1.7**
	baz=8.9						
KNRA	**Kununurra**	**9.33**	**56**	P	**Pn**	**15 50 49.5**	**+2.1**
	baz=9.4,SNR=6.0						
KNRA				S	**Sn**	**15 52 29.6**	**-2.9**
	baz=9.4						
BLDU	**Ballidu**	**10.12**	**200**	P	**Pn**	**15 50 57.0**	**-1.3**
	baz=10.0						
KLBR	**Kellerberrin**	**10.76**	**194**	P	**Pn**	**15 51 06.4**	**-0.7**
	baz=11,SNR=8.1						
MUN	**Mundaring**	**11.54**	**200**	P	**Pn**	**15 51 16.4**	**-1.3**
	baz=12						
FORT	**Forrest**	**11.62**	**147**	P	**Pn**	**15 51 18.3**	**-0.6**
	baz=12						
AUMAZ	**Mazenod Senior**	**11.63**	**200**	P	**Pn**	**15 51 19.9**	**+1.0**
	baz=12						
ASPA	**Alice Springs**	**12.41**	**104**	P	**Pn**	**15 51 30.2**	**+0.6**
	baz=12						
ASAR	**Alice Springs**	**12.41**	**104**	Pn	**Pn**	**15 51 29.8**	**+0.1**
	0.6nm,0.3s,baz=285,slow=12,SNR=20						
ASAR				Sn	Sn	15 53 38.9	-9.2
	0.4nm,0.3s,baz=273,slow=23,SNR=1.8						
ASAR				Lg	Lg	15 54 56.7	
	baz=285,slow=24,SNR=1.5						
WRA	**Warramunga Arr**	**12.77**	**87**	Pn	**Pn**	**15 51 33.1**	**-1.5**
	0.3nm,0.3s,baz=262,slow=14,SNR=1.5						
WRA				Sn	Sn	15 53 46.8	-10
	0.3nm,0.3s,baz=262,slow=23,SNR=1.9						
WRA				Lg	Lg	15 55 09.6	
	baz=261,slow=25,SNR=1.2						
WB2	**Warramunga Arr**	**12.78**	**87**	P	**Pn**	**15 51 33.7**	**-1.0**
	baz=13						
MTN	**Manton Dam**	**12.89**	**52**	P	**Pn**	**15 51 36.7**	**+0.5**
	baz=13,SNR=9.2						
KDU	**Kakadu**	**13.99**	**55**	P	**Pn**	**15 51 52.0**	**+0.7**
	baz=14						
JAGI	**Jajag, Banyuwa**	**14.12**	**332**	P	**Pn**	**15 51 53.0**	**0.0**
	baz=14						
MULG	**Mulgathing**	**15.04**	**130**	P	**Pn**	**15 52 03.5**	**-1.9**
	baz=15						
OOD	**Oodnadatta**	**15.11**	**119**	P	**Pn**	**15 52 04.1**	**-2.3**
	baz=15						
BBOO	**Buckleboo**	**17.89**	**134**	P	**Pn**	**15 52 39.3**	**-2.6**
	baz=18						
INKA	**Innaminka**	**19.33**	**114**	P	**Pn**	**15 53 00.5**	**+1.1**
	baz=19						
HTT	**Hallett**	**20.22**	**131**	P	**P**	**15 53 09.6**	**+1.5**
	baz=20						
STKA	**Stephens Creek**	**21.45**	**124**	P	**P**	**15 53 23.9**	**+2.5**
	0.8nm,0.5s,baz=305,slow=12,SNR=3.2						
STKA				S	S	15 57 09.8	-10
	1.2nm,0.6s,baz=272,slow=15,SNR=2.0						

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*IDC **05** 15:59:35.4±0.8, 28°.21N×57°.10E, h0^{km}, mb3.8/20, mb1 4.0/24, mb1mx3.8/51, mbtmp3.9/24, ML3.8/4, MS3.0/3, Ms1 3.0/3, ms1mx2.7/37, Error ellipse: s-maj=17.7km s-min=14.6km az=19.0*

*THR **05** 15:59:38.4±0.6, 28°.22N×57°.26E, h15^{km}, ML3.6*

*TEH **05** 15:59:38.6, 28°.31N×57°.26E, h11^{km}, ML4.0*

*OMAN **05** 15:59:41.4±0.2, 28°.07N×57°.22E, h10^{km}, mb5.3/5, ml3.7/15, Error ellipse: s-maj=3.9km s-min=1.6km az=239.0*

ISC 05 15:59:37.5±0.5**, 28°.26N**±0°.03×**57°.24E**±0°.04**, h10**^{km}**, n136,** σ**2ˢ02**/148**, mb4.0**/30**, 1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHNJ	**Kahnooj**	**0.52**	**127**	*e*Pg	**Pb**	**15 59 49.6**	**+0.9**
IBND	**Bandar-abas**	**1.01**	**218**	*e*Pg	**Pn**	**15 59 59.7**	**+1.9**
IBND				*e*		16 00 00.9	
	comp=Z,57µm,0.3s						
IBND				*e*Sg	**Sn**	**16 00 15.6**	**+3.5**
GENO	**Geno**	**1.27**	**228**	*e*		16 00 23.4	
	comp=Z,19µm,0.3s						
GENO				*e*Pg	**Pg**	**16 00 04.0**	**+2.0**
KBAM	**BAM**	**1.38**	**50**	*e*Pg	**Pb**	**16 00 03.6**	**+0.1**
NGRK	**Negar Kerman**	**1.45**	**342**	*e*		16 00 28.7	
	comp=Z,30µm,0.3s						
NGRK				*e*Pg	**Pb**	**16 00 05.4**	**+0.5**
CHMN	**Cheshme madani**	**1.62**	**9**	*e*		16 00 30.6	
	comp=Z,13µm,0.4s						
CHMN				*e*Pg	**Pb**	**16 00 08.0**	**+0.3**
KRBR	**Kerman**	**1.77**	**346**	*e*Pn	**Pb**	**16 00 10.9**	**+0.6**
KRBR				IAML		16 00 38.2	
	comp=N,784nm,0.5s						
KRBR				IAML		16 00 38.4	
	comp=E,1µm,0.5s						
KRBR	**Kerman**	**1.77**	**346**	*e*Pn	**Pb**	**16 00 10.9**	**+0.6**
TVBK	**TV Kerman**	**1.77**	**346**	*e*Pn	**Pb**	**16 00 10.7**	**+0.4**
TVBK				*e*		16 00 15.9	
	comp=Z,43µm,0.2s						
KHGB	**Koh Gabri**	**2.21**	**343**	*e*Pn	**Pb**	**16 00 17.2**	**-0.6**
KHGB				*e*		16 00 53.5	
	comp=Z,5µm,0.8s						
SHME	**Shamm**	**2.41**	**204**	*e*Pn	**Pn**	**16 00 18.5**	**+1.5**
	SNR=28						
SHME	**Shamm**	**2.41**	**204**	*e*Pn	**Pn**	**16 00 18.7**	**+1.8**
SHME	**Shamm**	**2.41**	**204**	P	**Pn**	**16 00 18.8**	**+1.8**
	SNR=9.9						
SHME				S	**Sn**	**16 00 50.6**	**+4.1**
BANOM	**Banah**	**2.47**	**200**	*e*Pn	**Pn**	**16 00 19.3**	**+1.4**
	SNR=33						
BANOM	**Banah**	**2.47**	**200**	*e*Pn	**Pn**	**16 00 19.6**	**+1.7**
BANOM	**Banah**	**2.47**	**200**	P	**Pn**	**16 00 19.7**	**+1.8**
	SNR=33						
BANOM				S	**Sn**	**16 00 50.8**	**+2.7**
LAR1	**LAR**	**2.60**	**258**	*e*Pn	**Pb**	**16 00 23.6**	**-0.7**
JSK1	**Jask**	**2.65**	**170**	*e*Pn	**Pn**	**16 00 23.5**	**+3.2**
MASF	**Masafi**	**3.03**	**199**	P	**Pn**	**16 00 29.2**	**+3.6**
MASF				S	**Sn**	**16 00 59.8**	**-2.3**
MSFE	**Esma-Masafi**	**3.04**	**199**	Pn	**Pn**	**16 00 27.6**	**+1.9**
MSFE	**Esma-Masafi**	**3.04**	**199**	*e*Pn	**Pn**	**16 00 27.0**	**+1.2**
MDH	**Madha**	**3.06**	**196**	Pn	**Pn**	**16 00 25.8**	**-0.2**
MDH	**Madha**	**3.06**	**196**	*e*Pn	**Pn**	**16 00 27.0**	**+1.0**
MDH	**Madha**	**3.06**	**196**	P	**Pn**	**16 00 27.0**	**+1.0**
MDH				S	**Sn**	**16 01 03.6**	**+0.8**
ZHDN	**Zahedan**	**3.33**	**69**	*e*Pn	**Pn**	**16 00 33.3**	**+3.4**
UOSS	**Minazif**	**3.43**	**196**	Pn	**Pn**	**16 00 31.5**	**+0.4**
UOSS	**Minazif**	**3.43**	**196**	*e*Pn	**Pn**	**16 00 32.2**	**+1.2**
UOSS	**Minazif**	**3.43**	**196**	P	**Pn**	**16 00 33.9**	**+2.8**
NAZ	**Nazwa, Dubai**	**3.55**	**204**	Pn	**Pn**	**16 00 35.9**	**+3.2**
NAZ	**Nazwa, Dubai**	**3.55**	**204**	*e*Pn	**Pn**	**16 00 35.4**	**+2.7**
NAZ	**Nazwa, Dubai**	**3.55**	**204**	P	**Pn**	**16 00 35.9**	**+3.2**
HATD	**Hatta, Dubai**	**3.56**	**196**	Pn	**Pn**	**16 00 33.8**	**+1.0**
HATD	**Hatta, Dubai**	**3.56**	**196**	P	**Pn**	**16 00 36.5**	**+3.7**
ASHO	**Ashiyiah**	**3.71**	**197**	Pn	**Pn**	**16 00 36.6**	**+1.6**
ASHO	**Ashiyiah**	**3.71**	**197**	*e*Pn	**Pn**	**16 00 36.6**	**+1.6**
ASHO	**Ashiyiah**	**3.71**	**197**	P	**Pn**	**16 00 37.5**	**+2.5**
	SNR=9.2						
GHIR	**Ghir-Karzin**	**3.75**	**271**	*e*Pn	**Pn**	**16 00 38.1**	**+2.5**
GHIR				IAML		16 01 27.0	
	comp=N,95nm,0.4s						
GHIR				IAML		16 01 30.2	
	comp=E,51nm,0.2s						
GHIR	**Ghir-Karzin**	**3.75**	**271**	*e*Pn	**Pn**	**16 00 38.1**	**+2.5**
FAQ	**Al Faqa, Dubai**	**3.80**	**203**	*e*Pn	**Pn**	**16 00 38.7**	**+2.6**
FAQ	**Al Faqa, Dubai**	**3.80**	**203**	P	**Pn**	**16 00 37.7**	**+1.6**
FAQ				S	**Sn**	**16 01 22.3**	**+1.5**
IMEH	**Mehriz**	**3.87**	**324**	*e*Pn	**Pn**	**16 00 40.3**	**+3.0**
CHBR	**Chabahar**	**3.93**	**132**	*e*Pn	**Pn**	**16 00 39.7**	**+1.8**
CHBR				IAML		16 01 27.5	
	comp=N,43nm,0.3s						
CHBR	**Chabahar**	**3.93**	**132**	*e*Pn	**Pn**	**16 00 39.7**	**+1.8**
NHDN	**Nehbandan**	**3.97**	**37**	*e*Pn	**Pn**	**16 00 41.5**	**+2.9**
ASUD	**Al Ashush, Dub**	**4.00**	**206**	*i* Pn	**Pn**	**16 00 42.0**	**+3.0**
	SNR=18						
ASUD	**Al Ashush, Dub**	**4.00**	**206**	*e*Pn	**Pn**	**16 00 41.6**	**+2.7**
ASUD	**Al Ashush, Dub**	**4.00**	**206**	P	**Pn**	**16 00 41.9**	**+3.0**
	SNR=18						
ASUD				S	**Sn**	**16 01 28.9**	**+3.0**
BSRN	**Basiran**	**4.04**	**23**	*e*Pn	**Pn**	**16 00 42.3**	**+2.7**
BSRN				IAML		16 01 51.8	
	comp=N,28nm,0.6s						
BSRN	**Basiran**	**4.04**	**23**	*e*Pn	**Pn**	**16 00 42.3**	**+2.7**
SOHO	**SOHO**	**4.16**	**189**	*i* Pn	**Pn**	**16 00 41.0**	**0.0**
	SNR=17						
AJN	**Ajban**	**4.20**	**209**	*e*Pn	**Pn**	**16 00 43.8**	**+2.2**
AJN	**Ajban**	**4.20**	**209**	P	**Pn**	**16 00 43.2**	**+1.6**
AJN				S	**Sn**	**16 01 31.2**	**+0.5**
ALNE	**Al Ain**	**4.39**	**198**	*e*Pn	**Pn**	**16 00 45.3**	**+1.0**
IKOO	**Kooshah**	**4.42**	**20**	*e*Pn	**Pn**	**16 00 47.8**	**+2.8**
NGCH	**Negor - Chabah**	**4.52**	**129**	*e*Pn	**Pn**	**16 00 48.5**	**+2.4**
SRVN	**Saravan**	**4.65**	**99**	*e*Pn	Pn	16 00 53.1	+5.2
HOQ	**Hoqain**	**4.66**	**179**	P	**Pn**	**16 00 48.7**	**+0.7**
	SNR=31						
HOQ				S	**Sn**	**16 01 42.7**	**+0.6**
ICHK	**Chekchek**	**4.67**	**329**	*e*Pn	**Pn**	**16 00 50.9**	**+2.6**
YZKH	**Yazd**	**4.71**	**332**	*e*Pn	**Pn**	**16 00 52.4**	**+3.6**
YZKH	**Yazd**	**4.71**	**332**	*e*Pn	**Pn**	**16 00 52.4**	**+3.6**
TPRV	**Parvadeh(Tabas**	**4.78**	**354**	*e*Pn	**Pn**	**16 00 52.3**	**+2.6**
BIDO	**Bidbid**	**4.78**	**170**	P	**Pn**	**16 00 50.3**	**+0.6**
	SNR=9.0						
BIDO				S	**Sn**	**16 01 43.5**	**-1.7**
ITEG	**Tejag**	**4.80**	**15**	*e*Pn	**Pn**	**16 00 53.2**	**+3.1**
ARQ	**Araqi**	**4.94**	**188**	P	**Pn**	**16 00 54.9**	**+3.0**
	SNR=8.9						
ARQ				S	**Sn**	**16 01 49.1**	**0.0**
WSAR	**Wadi Sarin**	**5.15**	**166**	Pn	**Pn**	**16 00 55.6**	**+0.9**
	comp=N,15nm,0.3s,baz=8.5,slow=9.1,SNR=152						
WSAR				Sn	**Sn**	**16 01 52.9**	**-1.4**
	comp=N,5.5nm,0.3s,baz=80,slow=18,SNR=6.8						
WSAR				LR	LR	16 03 04.9	
	comp=N,43nm,19.5s,baz=18,slow=41						
WSAR	**Wadi Sarin**	**5.15**	**166**	P	**Pn**	**16 00 56.3**	**+1.6**
	SNR=245						
WSAR				S	**Sn**	**16 01 52.7**	**-1.6**
SMDO	**Samad**	**5.23**	**172**	P	**Pn**	**16 00 57.4**	**+1.6**
	SNR=16						
SMDO				S	**Sn**	**16 01 56.9**	**+0.6**
TKDS	**Koohdasht(Taba**	**5.34**	**359**	*e*Pn	**Pn**	**16 01 00.5**	**+3.1**
IMON	**Monand**	**5.34**	**22**	*e*Pn	**Pn**	**16 01 00.6**	**+3.0**
IMON				*e*		16 01 04.7	
	comp=Z,865nm,0.3s						
AFRZ	**Afriz**	**5.37**	**16**	*e*Pn	**Pn**	**16 01 01.1**	**+3.2**
IRAM	**Ramesheh**	**5.50**	**311**	*e*Pn	**Pn**	**16 01 02.7**	**+3.0**
ANAR	**Anarak**	**5.77**	**329**	*e*Pn	**Pn**	**16 01 06.2**	**+2.9**
WBK	**Wadi Bani Khal**	**5.84**	**164**	P	**Pn**	**16 01 05.2**	**+1.1**
	SNR=12						
JMDO	**Jabal Madar**	**5.91**	**172**	P	**Pn**	**16 01 07.4**	**+2.2**
	SNR=11						
SHRT	**Shahrakht**	**5.98**	**25**	*e*Pn	Pn	16 01 12.7	+6.5
SHMA	**Al-Shehemyia**	**6.08**	**248**	P	**Pn**	**16 01 10.1**	**+2.6**
SHMA				S	**Sn**	**16 02 17.3**	**0.0**
IGAR	**Gharneh**	**6.10**	**314**	*e*Pn	**Pn**	**16 01 11.0**	**+3.0**
IZEF	**Zefreh**	**6.27**	**319**	*e*Pn	**Pn**	**16 01 12.9**	**+2.6**
IBRJ	**Brojen**	**6.33**	**307**	*e*Pn	**Pn**	**16 01 14.2**	**+3.0**
JLN	**Jalan Bani Buh**	**6.39**	**162**	P	**Pn**	**16 01 12.9**	**+1.1**
	SNR=14						
SHK1	**Shahrekord**	**6.83**	**308**	*e*Pn	**Pn**	**16 01 20.8**	**+2.8**
IPIR	**Pirpir**	**7.03**	**310**	*e*Pn	**Pn**	**16 01 23.8**	**+3.0**
KRSH	**Karshahi**	**7.18**	**324**	*e*Pn	**Pn**	**16 01 26.3**	**+3.6**
QAMS	**Qamsar**	**7.41**	**319**	*e*Pn	**Pn**	**16 01 28.8**	**+2.8**
ISFB	**Sefidab**	**7.43**	**326**	*e*Pn	**Pn**	**16 01 29.1**	**+3.0**
TBJM	**Torbat-e-JAM**	**7.47**	**20**	*e*Pn	**Pn**	**16 01 29.7**	**+3.0**
AMIS	**Naft Sefid**	**7.69**	**298**	*e*Pn	**Pn**	**16 01 32.2**	**+2.6**
QRN	**Al-Qurain**	**8.22**	**276**	⇓*e*P	**Pn**	**16 01 37.7**	**+0.9**
UMR	**Umm Al-Rimmam**	**8.45**	**281**	*e*P	**Pn**	**16 01 40.1**	**+0.2**
RDF	**Al-Radifah**	**8.54**	**277**	*e*P	**Pn**	**16 01 42.0**	**+0.7**
RST	**Umm Al-Ruwaisa**	**9.06**	**280**	*e*P	**Pn**	**16 01 49.7**	**+1.2**
GEYT	**Alibeck**	**9.67**	**4**	LR	LR	16 06 19.8	
	comp=Z,83nm,19.2s,baz=225,slow=42						
SHAO	**Shalim**	**10.29**	**189**	*i* Pn	**Pn**	**16 02 04.3**	**-1.1**
	SNR=13						
SHAO	**Shalim**	**10.29**	**189**	P	**Pn**	**16 02 04.5**	**-0.9**
	SNR=13						
DMTO	**DMTO**	**10.70**	**192**	P	**Pn**	**16 02 09.5**	**-1.4**
	SNR=9.9						
WHFO	**Wadi Hawf**	**10.77**	**198**	P	**Pn**	**16 02 11.0**	**-1.0**
	SNR=20						
ABTO	**Aybut**	**11.44**	**199**	P	**Pn**	**16 02 19.8**	**-1.3**
	SNR=10						
RAYN	**Ar Rayn**	**11.57**	**249**	*i* Pn	**Pn**	**16 02 19.9**	**-2.9**

	SNR=6.8						
ASF	Jabal al Asfar	18.00	288	P	Pn	16 03 46.5	-1.5
	comp=Z,0.4nm,0.3s,baz=93,slow=6.4,SNR=1.6						
KBZ	Khabaz	19.27	327	P	P	16 04 01.5	-0.7
	comp=Z,0.1nm,0.3s,baz=166,slow=12,SNR=1.4						
KVAR	Kislovodsk Arr	19.54	327	P	P	16 04 03.1	-2.1
	baz=312,slow=15,SNR=1.9						
AAK	Ala-Archa	20.03	40	P	Pn	16 04 12.6	+0.1
	comp=Z,1.6nm,0.6s,baz=242,slow=6.9,SNR=8.2						
AKTO	Aktyubinsk	22.16	1	P	P	16 04 34.7	+1.3
	comp=Z,4.1nm,0.5s,baz=182,slow=11,SNR=11						
BRTR	Keskin Array B	22.60	307	P	P	16 04 38.6	+0.2
	comp=Z,2.7nm,0.9s,baz=123,slow=11,SNR=14						
PYUN	Piuthan	22.69	84	*e*P	P	16 04 42.4	+2.8
	comp=Z,2.3nm,0.3s						
DANN	Dangsing	23.34	83	*e*P	P	16 04 48.7	+2.3
	comp=Z,5.9nm,0.2s						
KKN	Kakani	24.74	84	*e*P	P	16 05 01.0	+1.5
	comp=Z,2.4nm,0.2s						
PKIN	Phulchoki	24.87	85	*e*P	P	16 05 02.1	+1.3
	comp=Z,5.5nm,0.4s						
PKI	Pulchoki	24.88	85	*e*P	P	16 05 01.6	+0.6
	comp=Z,5.5nm,0.5s						
GUN	Gumba	25.25	84	*e*P	P	16 05 06.3	+2.0
	comp=Z,4.3nm,0.3s						
BVAR	Borovoye Array	26.59	18	P	P	16 05 16.4	+0.6
	comp=Z,1.1nm,0.6s,baz=210,slow=17,SNR=8.5						
MKAR	Makanchi Array	26.97	40	P	P	16 05 19.8	+0.5
	comp=Z,0.8nm,0.6s,baz=220,slow=8.6,SNR=14						
MKAR				LR	LR	16 18 25.8	
	comp=Z,76nm,18.1s,baz=357,slow=42						
KURBB	Kurchatov Arra	27.55	30	P	P	16 05 25.5	+1.1
	comp=Z,0.4nm,0.2s,baz=229,slow=8.3,SNR=4.6						
AKASG	Malin Array Be	30.83	324	P	P	16 05 51.5	-2.0
	comp=Z,0.7nm,0.4s,baz=129,slow=8.4,SNR=5.5						
ZALV	Zalesovo Beam	32.64	30	P	P	16 06 09.5	+0.1
	comp=Z,2.2nm,0.5s,baz=238,slow=9.7,SNR=12						
KRLC	Kraliky	37.56	317	*e*P	P	16 06 51.6	-0.4
CHVC	Chvalec	38.18	317	*e*P	P	16 06 56.8	-0.3
CKRC	Cesky Krumlov	38.71	314	*e*P	P	16 07 02.9	+1.3
GERES	GERESS Array B	39.10	314	P	P	16 07 03.5	-1.5
	comp=Z,0.6nm,0.6s,baz=116,slow=9.1,SNR=6.3						
FINES	FINESS Array B	39.13	337	P	P	16 07 03.7	-1.1
	comp=Z,3.4nm,0.9s,baz=130,slow=7.7,SNR=9.7						
KHC	Kasperske Hory	39.26	314	*e*P	P	16 07 05.4	-0.8
WTTA	Wattenberg	40.08	311	*e*P	P	16 07 12.1	-1.1
	comp=Z,2.2nm,0.5s						
WATA	Walderalm	40.13	311	*e*P	P	16 07 12.7	-0.9
	comp=Z,2.2nm,0.5s						
SQTA	Sankt Quirin	40.35	311	*e*P	P	16 07 14.4	-1.1
	comp=Z,2.1nm,0.4s						
FETA	Feichten	40.63	310	*e*P	P	16 07 16.9	-0.9
	comp=Z,1.6nm,0.4s						
DAVOX	Davos/Dischmat	41.17	310	P	P	16 07 21.2	-1.1
	comp=Z,2.3nm,0.5s,baz=138,slow=7.8,SNR=6.2						
DAVA	Damuels	41.25	311	*e*P	P	16 07 21.8	-1.2
	comp=Z,2.8nm,0.6s						
SONM	Songino Array	42.55	49	P	P	16 07 33.9	+0.4
	comp=Z,0.5nm,0.5s,baz=261,slow=10,SNR=3.4						
HFS	Hagfors	43.30	330	P	P	16 07 38.6	-0.7
	comp=Z,1.5nm,0.6s,baz=105,slow=11,SNR=1.6						
ARCES	ARCESS Array B	45.19	345	P	P	16 07 53.6	-0.7
	comp=Z,3.4nm,0.8s,baz=134,slow=6.4,SNR=5.9						
ESDC	Sonseca Array	51.14	300	P	P	16 08 39.2	-1.6
	comp=Z,0.2nm,0.5s,baz=88,slow=9.0,SNR=2.0						
TORD	Torodi Ar. Bea	53.66	266	P	P	16 08 58.2	-1.5
	comp=Z,1.0nm,0.4s,baz=61,slow=7.6,SNR=10						
KSRS	Korea Array	58.84	61	P	P	16 09 34.8	-1.6
	comp=Z,0.5nm,0.5s,baz=280,slow=7.6,SNR=1.8						
ILAR	Eielson Array	85.38	10	P	P	16 12 13.4	-1.4
	comp=Z,0.2nm,0.6s,baz=318,slow=5.0,SNR=1.4						
WRA	Warramunga Arr	88.53	113	P	P	16 12 30.7	-0.1
	comp=Z,0.2nm,0.5s,baz=318,slow=4.0,SNR=6.6						
ASAR	Alice Springs	90.08	117	P	P	16 12 38.4	+0.4
	comp=Z,0.2nm,0.6s,baz=305,slow=5.2,SNR=7.2						

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*IDC **05** 16:01:28.4±2.5, 17°.98S×178°.60W, h564^{km}±20^{km}, mb3.0/4, mb1 3.1/6, mb1mx2.9/23, mbtmp3.9/6, Error ellipse: s-maj=40.4km s-min=35.5km az=78.0*

ISC 05 16:01:26.5±2.3**, 17°.9S**±0°.3×**178°.3W**±0°.3**, h550**^{km}**, n7, σ1ˢ.36**/7**, mb3.6**/3**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.44	273	P	P	16 02 45.6	+1.1
	1.7nm,0.3s,baz=125,slow=11,SNR=14						
DZM	Mont Dzumac	14.88	251	P	P	16 04 35.8	+0.9
	0.2nm,0.3s,baz=66,slow=20,SNR=1.9						
URZ	Urewera	20.63	190	P	P	16 05 28.3	+0.2
	11nm,1.0s,baz=313,slow=19,SNR=2.1						
STKA	Stephens Creek	38.67	241	P	P	16 08 03.3	-0.2
	0.8nm,0.5s,baz=76,slow=8.3,SNR=3.1						
WRA	Warramunga Arr	44.69	260	P	P	16 08 49.1	-2.0
	0.3nm,0.6s,baz=97,slow=6.8,SNR=9.8						
ASAR	Alice Springs	44.84	254	P	P	16 08 51.2	-1.1
	2.7nm,0.6s,baz=90,slow=7.9,SNR=105						
GERES	GERESS Array B	147.66	345	PKPbc	PKPbc	16 20 09.6	+0.1
	0.2nm,0.3s,baz=23,slow=3.7,SNR=1.9						

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*IDC **05** 16:22:53.3±1.2, 1°.79N×127°.33E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.6/35, mbtmp3.8/7, ML3.7/1, Error ellipse: s-maj=110.8km s-min=16.7km az=71.0*

*DJA **05** 16:23:07.9±1.0, 2°N±3°×12°7E±°, h23^{km}±12^{km}, M3.6/8, MLv3.6/8*

ISC 05 16:23:05.6±0.9**, 1°.80N**±0°.09×**127°.3E**±0°.1**, h100**^{km}**, n11, σ2ˢ.30**/13**, mb3.8**/6**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.03	174	P	Pn	16 23 26.8	+0.4
TNTI				S	Sn	16 23 47.2	+5.2
LBMI	Labuha	2.44	174	P	Pn	16 23 45.7	+1.7
SGSI	Sangihe	2.55	317	P	Pn	16 23 46.7	+1.3
SGSI				S	Sn	16 24 17.8	+1.8
GTOI	Gorontalo	4.41	255	P	Pn	16 24 10.3	-0.1
FITZ	Fitzroy Crossi	19.84	185	P	P	16 27 26.3	-2.4
	0.2nm,0.3s,baz=11,slow=11,SNR=11						
WRA	Warramunga Arr	22.70	163	P	P	16 27 57.1	-2.0
	3.6nm,0.4s,baz=342,slow=11,SNR=70						
ASAR	Alice Springs	26.13	166	P	P	16 28 28.6	-2.0
	0.6nm,0.3s,baz=342,slow=7.8,SNR=40						
STKA	Stephens Creek	36.15	159	P	P	16 29 56.6	-1.8
	2.4nm,0.3s,baz=337,slow=8.8,SNR=11						
SONM	Songino Array	49.28	342	P	P	16 31 44.7	+0.3
	0.2nm,0.5s,baz=166,slow=7.1,SNR=1.4						
MKAR	Makanchi Array	59.43	326	P	P	16 32 57.6	-0.3
	0.8nm,0.5s,baz=118,slow=7.6,SNR=11						
ZALV	Zalesovo Beam	62.54	333	P	P	16 33 19.8	+1.0
	0.2nm,0.4s,baz=130,slow=4.5,SNR=1.9						

IDC 05 16:28:33.1±2.1**, 2°.71N**×**126°.40E, h0**^{km}**, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.1**/37**, mbtmp3.4**/4**, MS3.4**/1**, Ms1 3.3**/1**, ms1mx2.3**/20**, Error ellipse: s-maj=120.3km s-min=26.6km az=69.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.69	182	P	Pn	16 33 16.1	-1.1
	0.9nm,0.7s,baz=21,slow=9.6,SNR=6.3						
WRA	Warramunga Arr	23.82	161	P	P	16 33 47.7	-0.4
	0.8nm,0.4s,baz=338,slow=10,SNR=10						
ASAR	Alice Springs	27.22	165	P	P	16 34 18.7	-0.2
	0.2nm,0.6s,baz=345,slow=11,SNR=7.9						
STKA	Stephens Creek	37.30	158	LR	LR	16 54 18.0	
	comp=Z,48nm,18.7s,baz=227,slow=41						
MKAR	Makanchi Array	58.20	326	P	P	16 38 28.9	-0.2
	0.2nm,0.5s,baz=126,slow=6.5,SNR=2.0						

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*NEIC **05** 17:14:55.0±1.8, 26°.65S±0°.05×177°.3W±0°.1, h97^{km}±4^{km}, mb4.9/55, Error ellipse: s-maj=13.6km s-min=7.4km az=84.0*

*IDC **05** 17:15:00.2±1.5, 26°.78S×177°.52W, h136^{km}±14^{km}, mb4.0/18, mb1 4.1/21, mb1mx4.1/38, mbtmp4.4/21, MS3.7/1, Ms1 3.7/1, ms1mx2.8/25, Error ellipse: s-maj=16.6km s-min=14.7km az=0.0*

ISC 05 17:14:55.6±0.4**, 26°.57S**±0°.06×**177°.40W**±0°.07**, h100**^{km}**, n136, σ1ˢ.27**/122**, mb4.7**/47**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.71	190	P	Pn	17 15 38.9	+1.4
	268nm,0.3s,baz=284,slow=22,SNR=5.3						
RAO				S	Sn	17 16 12.5	+2.8
	484nm,0.3s,baz=97,slow=23,SNR=7.5						
RAO	Raoul Island	2.71	190		Pn	17 15 37.1	-0.4
MSVF	Nonsavu	9.75	333	P	Pn	17 17 18.9	+5.8
	2.1nm,0.3s,baz=146,slow=11,SNR=36						
MSVF	Nonsavu	9.75	333		Pn	17 17 19.2	+6.1
NIUE	Niue	10.15	44		Pn	17 17 16.3	-2.1
OUZ	Omahuta	11.58	220	Pn	Pn	17 17 37.3	-0.4
URZ	Urewera	12.54	200	P	Pn	17 17 38.8	-12
	0.2nm,0.3s,baz=308,slow=20,SNR=1.8						
URZ				S	Sn	17 19 56.8	-11
	1.8nm,0.3s,baz=120,slow=20,SNR=2.6						
URZ	Urewera	12.54	200	Pn	Pn	17 17 49.2	-1.2
AFI	Afiamalu	13.65	24	P	Pn	17 17 59.3	-5.9
	7.8nm,0.3s,baz=259,slow=10,SNR=8.5						
AFI				S	Sn	17 20 19.8	-16
	4.6nm,0.3s,baz=41,slow=20,SNR=2.5						
MARNC	Mare, Loyalty	14.24	288	P	P	17 18 17.3	+0.3
PINNC	Pines Island,	14.34	283	P	P	17 18 20.7	+2.7
OUENC	Ouen Island, N	14.93	283	P	P	17 18 25.4	+0.7
BFZ	Birch Farm	15.03	199		Pn	17 18 23.0	+0.3
LIFNC	LIFOU	15.20	289	P	P	17 18 28.1	+0.4
LIFNC				IAmb	IAmb	17 18 38.9	
	comp=Z,79nm,1.0s						
ONTNC	Ouen Toro	15.30	283	P	P	17 18 31.1	+2.3
DZM	Mont Dzumac	15.39	283	*e*P	P	17 18 40.3	+10
	comp=Z,5.1nm,0.3s						
DZM	Mont Dzumac	15.39	283	P	P	17 18 34.5	+4.6
	comp=Z,0.5nm,0.3s,baz=82,slow=16,SNR=2.6						
DZM	Mont Dzumac	15.39	283	P	P	17 18 34.3	+4.4
DZM				IAmb	IAmb	17 18 41.9	
	comp=Z,66nm,0.8s						
RAR	Rarotonga	16.97	75	P	P	17 18 50.0	+2.7
	comp=Z,1.4nm,0.3s,baz=254,slow=15,SNR=1.9						
RAR				S	Sn	17 21 41.5	-14
	comp=Z,1.4nm,0.3s,baz=71,slow=17,SNR=1.5						
RAR	Rarotonga	16.97	75	IAmb	IAmb	17 19 24.3	
	comp=Z,136nm,1.5s						
SANVU	Saraoutou	18.12	305	P	Pn	17 19 02.4	+1.5
SANVU				IAmb	IAmb	17 19 07.7	
	comp=Z,33nm,0.9s						
KNTN	Kanton	24.28	14	P	P	17 20 02.7	-1.0
PAE	Paea	27.20	77	*e*T	T	17 47 56.7	
	comp=Z,4.2nm,0.4s						
PPT2	Papeete2	27.24	77	*e*T	T	17 47 59.9	
	comp=Z,2.9nm,0.3s						
HNR	Honiara	27.39	304	P	P	17 20 32.6	+0.7
	comp=Z,48nm,0.7s,baz=76,slow=1.7,SNR=9.1						
HNR	Honiara	27.39	304	P	P	17 20 31.9	0.0
HNR				IAmb	IAmb	17 20 33.8	
	comp=Z,52nm,0.8s						
EIDS	Eidsvold	28.33	265	P	P	17 20 40.6	+0.4
TOO	Toolangi	33.11	241	P	P	17 21 22.9	+0.7
TOO				IAmb	IAmb	17 21 40.4	
	comp=Z,50nm,1.8s						
CTA	Charters Tower	33.91	273	P	P	17 21 30.2	+0.9
	comp=Z,2.5nm,0.3s,baz=97,slow=7.6,SNR=1.7						
CTAO	Charters Tower	33.91	273	P	P	17 21 27.6	-1.7
STKA	Stephens Creek	36.02	252	P	P	17 21 47.5	+0.2
	comp=Z,0.6nm,0.7s,baz=90,slow=14,SNR=1.0						
PMG	Port Moresby	37.61	290	P	P	17 22 01.9	+1.0
	comp=Z,9.5nm,0.7s,baz=122,slow=4.7,SNR=6.8						
PMG				LR	LR	17 34 31.1	
	comp=Z,119nm,20.2s,baz=74,slow=31						
PMG	Port Moresby	37.61	290	P	P	17 22 00.6	-0.3
PMG				IAmb	IAmb	17 22 03.9	
	comp=Z,12nm,0.8s						
COEN	Coen	38.90	281	P	P	17 22 12.0	+0.2
COEN				IAmb	IAmb	17 22 33.7	
	comp=Z,20nm,1.4s						
TAOE	Nuku Hiva Isla	39.42	70	*e*T	T	18 03 12.0	
	comp=Z,29nm,0.2s						
BBOO	Buckleboo	40.66	250	P	P	17 22 24.2	-1.9
BBOO				IAmb	IAmb	17 23 01.9	
	comp=Z,17nm,1.3s						
AS31	Alice Springs	43.98	263	P	P	17 22 52.5	-0.8
ASAR	Alice Springs	43.98	263	P	P	17 22 52.9	-0.4
	comp=Z,1.7nm,0.7s,baz=95,slow=7.1,SNR=48						
ASAR				PcP	PcP	17 24 37.2	-0.2
	comp=Z,0.6nm,0.5s,baz=105,slow=3.3,SNR=1.6						
ASAR	Alice Springs	43.98	263	P	P	17 22 52.0	-1.2
WR0	Warramunga Arr	44.44	268	P	P	17 22 56.3	-0.6
WB2	Warramunga Arr	44.61	268	P	P	17 22 57.7	-0.6
WB2				IAmb	IAmb	17 23 30.1	
	comp=Z,23nm,1.7s						
WRA	Warramunga Arr	44.62	268	P	P	17 22 57.6	-0.8
	comp=Z,2.3nm,0.6s,baz=107,slow=7.3,SNR=52						
WRA				PcP	PcP	17 24 39.6	0.0
	comp=Z,0.8nm,0.8s,baz=109,slow=2.9,SNR=2.1						
WRA	Warramunga Arr	44.62	268	P	P	17 22 57.6	-0.8
WB0	Warramunga Arr	44.63	268	P	P	17 22 57.9	-0.6
FORT	Forrest	47.65	252	P	P	17 23 20.4	-1.6
FORT				IAmb	IAmb	17 23 56.9	
	comp=Z,49nm,1.2s						
MTN	Manton Dam	50.03	275	P	P	17 23 40.1	-0.3
MTN				IAmb	IAmb	17 23 50.9	
	comp=Z,7.4nm,1.1s						
KNRA	Kununurra	51.06	271	P	P	17 23 48.1	0.0
KNRA				IAmb	IAmb	17 23 52.0	
	comp=Z,12nm,0.7s						
VNDA	Vanda	51.95	186	P	P	17 23 53.4	-0.5
VNDA				IAmb	IAmb	17 23 57.9	
	comp=Z,11nm,1.6s						
FITZ	Fitzroy Crossi	53.00	267	P	P	17 24 01.5	-1.0
	comp=Z,1.9nm,0.6s,baz=127,slow=10,SNR=4.5						
FAKI	Fak Fak	53.62	287	P	P	17 24 08.3	+1.3
FAKI				IAmb	IAmb	17 24 12.1	
	comp=Z,10.0nm,1.0s						
SIJI	Sorong	55.52	289	P	P	17 24 20.2	-0.6
	comp=Z,6.9nm,0.5s,baz=113,slow=1.7,SNR=7.8						
SOEI	Soe	57.43	275	P	P	17 24 34.8	+0.3
SOEI				IAmb	IAmb	17 24 52.0	
	comp=Z,18nm,1.0s						
MORW	Morawa	58.20	251	P	P	17 24 37.7	-2.0
MORW				IAmb	IAmb	17 24 43.4	
	comp=Z,26nm,1.4s						
QSPA	South Pole Qui	63.53	180	P	P	17 25 15.3	+0.1
TOLI2	Tolitoli	65.53	284	P	P	17 25 28.1	-0.8
TOLI2				IAmb	IAmb	17 25 29.2	
	comp=Z,8.5nm,0.8s						
JAGI	Jajag, Banyuwa	67.01	272	P	P	17 25 37.5	-0.9
JAGI				IAmb	IAmb	17 26 02.3	
	comp=Z,28nm,1.3s						
UGM	Wanagama	70.50	271	P	P	17 26 00.1	0.0
LEM	Lembang	73.56	271	P	P	17 26 18.0	-0.5
	comp=Z,9.0nm,0.4s,baz=88,slow=8.4,SNR=4.5						
SBUM	Sibu	73.65	281	P	P	17 26 19.0	+0.2
KSM	Kuching	74.88	279	P	P	17 26 25.6	-0.4
KSM				IAmb	IAmb	17 26 26.8	
	comp=Z,13nm,0.8s						
MJAR	Matsushiro Arr	75.43	324	P	P	17 26 30.3	+1.8
	comp=Z,4.6nm,0.8s,baz=169,slow=3.9,SNR=8.8						
MJAR	Matsushiro Arr	75.43	324	P	P	17 26 27.9	-0.6
MAJO	Matsushiro	75.43	324	P	P	17 26 28.9	+0.3
MAJO				IAmb	IAmb	17 26 34.8	
	comp=Z,61nm,1.8s						
MAT	Matsushiro	75.43	324	P	P	17 26 29.4	+0.8
JWT	Wachi	76.00	322	P	P	17 26 31.6	-0.2
MAW	Mawson	76.07	200	P	P	17 26 31.4	-0.4
JSU	Suzuyama	76.23	316	P	P	17 26 34.0	+0.7
JHS	Saijyo	77.08	320	P	P	17 26 39.4	+1.4
TPUB	Ta-pu	77.76	304	P	P	17 26 41.6	-0.4
SSLB	Suanglung	77.81	304	P	P	17 26 41.5	-0.8
YHNB	Yeheng	78.02	305	P	P	17 26 43.5	0.0
KIWB	Kanaga Island	78.08	0	P	P	17 26 42.0	-1.1
ADK	Adak	78.11	0	P	P	17 26 43.3	+0.1
JKA	Kamikawa-asahi	79.31	332	P	P	17 26 51.3	+1.3
UNV	Unalaska Valle	80.63	7	P	P	17 26 55.9	-1.0
MYKOM	Kota Tinggi	80.75	277	P	P	17 26 58.0	-0.5
MYKOM				IAmb	IAmb	17 26 59.6	
	comp=Z,12nm,0.9s						
YSS	Yuzh-Sakhalins	81.55	334	P	P	17 27 02.8	+0.8
YSS				IAmb	IAmb	17 27 07.8	
	comp=Z,81nm,1.8s						
KSRS	Korea Array	81.80	319	P	P	17 27 05.0	+1.6
	comp=Z,5.6nm,0.6s,baz=130,slow=6.0,SNR=38						
KSAR	Wonju Array Be	81.81	319	P	P	17 27 03.7	+0.2
KS19	Wonju Array Si	81.86	319	P	P	17 27 05.0	+1.2
KS19				IAmb	IAmb	17 27 41.3	
	comp=Z,44nm,1.4s						
SNAA	Sanae	81.95	178	P	P	17 27 03.5	-0.5
SNAA	Sanae	81.95	178	P	P	17 27 03.6	-0.5
VNA3	Neumayer Olymp	82.08	176	P	P	17 27 03.9	-0.6
H03S2	Juan Fernandez	82.14	124	T	T	18 57 51.4	
	baz=242						
H03S1	Juan Fernandez	82.15	124	T	T	18 58 09.2	
	baz=242						
H03S3	Juan Fernandez	82.16	124	T	T	18 58 00.4	
	baz=242						
PEA0B	Petropavlovsk-	82.25	345	P	P	17 27 05.7	+0.2
PETK	Petropavlovsk-	82.25	345	P	P	17 27 06.2	+0.7
	comp=Z,6.5nm,0.7s,baz=102,slow=8.5,SNR=7.2						
PETK	Petropavlovsk-	82.25	345	P	P	17 27 05.5	0.0
H03N2	Juan Fernandez	82.31	123	T	T	18 57 56.4	
	baz=241						
H03N3	Juan Fernandez	82.31	123	T	T	18 57 53.5	
	baz=241						
H03N1	Juan Fernandez	82.33	123	T	T	18 57 60.0	
	baz=241						
VNA2	Neumayer--Watz	82.52	177	P	P	17 27 06.8	-0.1
	baz=192,slow=4.0						
VNA1	Neumayer--Stat	82.75	176	P	P	17 27 07.3	-0.7
NJ2	Nanjing	84.18	310	*e*P	P	17 27 18.3	+2.4
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
USA0B	Ussuriysk Arra	84.28	326	P	P	17 27 15.2	-0.9
USA0B				IAmb	IAmb	17 27 19.2	
	comp=Z,48nm,1.8s						
USRK	Ussuriysk Ar.	84.28	326	P	P	17 27 18.0	+1.9
	comp=Z,5.2nm,0.6s,baz=129,slow=4.5,SNR=6.6						
USRK	Ussuriysk Ar.	84.28	326	P	P	17 27 14.8	-1.3
IPM	Ipoh	84.48	278		P	17 27 16.0	-1.9
IPM				IAmb	IAmb	17 27 18.8	
	comp=Z,9.1nm,1.0s						
NVAR	Mina Array Bea	85.07	43	P	P	17 27 22.4	+1.9
	comp=Z,0.9nm,0.6s,baz=219,slow=8.6,SNR=4.7						
KULM	Kulim	85.18	278	P	P	17 27 20.6	-0.8
KULM				IAmb	IAmb	17 27 51.6	
	comp=Z,12nm,1.3s						
MDJ	Mudanjiang	85.79	325	P	P	17 27 26.1	+2.5
MDJ				pmax	pmax		
	comp=Z,11nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,240nm,4.5s						
GSI	Gunungsitoli	86.13	273	P	P	17 27 24.4	-1.7
CN2	Changchun	87.43	322	*e*P	P	17 27 33.9	+2.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KLR	Kul'dur	88.01	329	P	P	17 27 35.7	+1.4
	comp=Z,3.4nm,0.7s,baz=199,slow=0.9,SNR=11						
TXAR	Lajitas Array	89.87	57	P	P	17 27 46.0	+2.3
	comp=Z,0.4nm,1.0s,baz=218,slow=5.5,SNR=2.6						
ENH	Enshi	89.89	304	P	P	17 27 43.2	-0.4
ENH				IAmb	IAmb	17 27 46.1	
	comp=Z,32nm,1.4s						
XAN	Xi'an	92.23	307	P	P	17 27 56.4	+2.0
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,100nm,4.0s						
CMAR	Chiang Mai Arr	92.64	289	P	P	17 27 58.2	+1.6
	comp=Z,1.0nm,0.7s,baz=143,slow=3.2,SNR=8.7						
CMAR	Chiang Mai Arr	92.64	289	P	P	17 27 57.4	+0.8
CHTO	Chiang Mai	92.80	290	P	P	17 27 55.4	-2.0
CHTO				IAmb	IAmb	17 28 00.6	
	comp=Z,5.8nm,1.0s						
PDAR	Pinedale Array	92.99	43	P	P	17 27 59.0	+1.0
	comp=Z,0.5nm,0.6s,baz=241,slow=2.7,SNR=5.1						
HHC	Hu-ho-hao-te	93.96	314	*e*P	P	17 28 03.4	+1.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,6.6s						
ILAR	Eielson Array	94.09	13	P	P	17 28 02.1	-0.1
	comp=Z,0.5nm,0.8s,baz=211,slow=5.3,SNR=5.2						
CD2	Chengdu	94.50	302	*e*P	P	17 28 04.5	-0.5
ZALV	Zalesovo Beam	115.50	320	PKP	PKPdf	17 33 24.3	-1.1
	comp=Z,0.5nm,0.6s,baz=195,slow=2.2,SNR=2.8						
MKAR	Makanchi Array	115.68	311	PKP	PKPdf	17 33 24.8	-1.3
	comp=Z,0.6nm,0.7s,baz=107,slow=1.5,SNR=4.4						
KURK	Kurchatov	118.75	315		PKPdf	17 33 30.7	-1.0
KURBB	Kurchatov Arra	118.79	315	PKP	PKPdf	17 33 30.7	-1.1
	comp=Z,0.6nm,0.5s,baz=90,slow=1.8,SNR=2.2						
BVAR	Borovoye Array	123.99	318	PKP	PKPdf	17 33 41.4	-0.4
	comp=Z,0.7nm,0.5s,baz=220,slow=3.8,SNR=4.5						
ARU	Arti	130.42	323	PKP	PKiKP	17 33 54.6	-0.3
	comp=Z,0.7nm,0.4s,baz=118,slow=3.0,SNR=5.2						
ARCES	ARCESS Array B	134.96	349	PKP	PKiKP	17 34 02.7	-1.0
	comp=Z,2.7nm,0.9s,baz=29,slow=2.1,SNR=9.8						
FINES	FINESS Array B	141.71	342	PKhKP	PKPpre	17 34 08.3	
	comp=Z,2.5nm,0.7s,baz=85,slow=3.7,SNR=11						
FINES				PKP	PKPdf	17 34 14.9	+0.2
	comp=Z,2.5nm,0.8s,baz=82,slow=2.9,SNR=5.2						
NB2	NORSAR Subarra	145.04	353	PKP	PKPdf	17 34 20.5	-0.2
	comp=Z,40nm,1.2s,baz=14,slow=2.8						
NB2	NORSAR Subarra	145.04	353	PKP	PKPdf	17 34 20.5	-0.2
	baz=14,slow=2.8						
NOA	NORSAR Array B	145.04	353	PKPbc	PKPdf	17 34 20.2	-0.5
	comp=Z,6.5nm,0.8s,baz=17,slow=2.6,SNR=12						
HFS	Hagfors	145.59	350	PKPbc	PKPab	17 34 22.1	-0.2
	comp=Z,5.0nm,0.6s,baz=48,slow=2.3,SNR=16						
AKASG	Malin Array Be	148.48	327	PKPbc	PKPbc	17 34 30.2	-0.2
	comp=Z,1.6nm,0.4s,baz=44,slow=3.8,SNR=19						
BRTR	Keskin Array B	151.05	305	PKPbc	PKPbc	17 34 37.0	-0.2
	comp=Z,1.1nm,0.6s,baz=138,slow=4.4,SNR=7.5						
BRTR				PKPab	PKPab	17 34 45.3	+0.1
	comp=Z,3.5nm,0.7s,baz=115,slow=3.3,SNR=4.3						
DPC	Dobruska-Polom	154.02	340	*e*pPKP	pPKPdf	17 35 03.7	+1.6
KRLC	Kraliky	154.12	339	*e*pPKP	pPKPdf	17 35 03.7	+1.4
PRU	Pruhonice	154.87	342	*e*pPKP	pPKPdf	17 35 07.8	+4.6
KHC	Kasperske Hory	155.92	342	*e*PKPAB	PKPab	17 35 06.4	+1.2
KHC				*e*x	x	17 35 11.8	
GERES	GERESS Array B	156.14	342	PKPab	PKPab	17 35 06.9	+0.6
	comp=Z,0.6nm,0.7s,baz=2.7,slow=4.2,SNR=4.6						
DAVOX	Davos/Dischmat	159.02	346	PKPab	PKPab	17 35 19.1	+0.2
	comp=Z,2.4nm,0.8s,baz=24,slow=10,SNR=5.3						
TORD	Torodi Ar. Bea	166.62	176	PKPab	PKPab	17 35 50.9	-1.8
	comp=Z,0.8nm,0.7s,baz=192,slow=3.9,SNR=4.1						

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*IDC **05** 17:20:49.4±0.7, 16°.88S×175°.00E, h0^{km}, mb4.2/14, mb1 4.4/16, mb1mx4.3/40, mbtmp4.3/16, ML4.9/1, MS3.8/16, Ms1 3.8/16, ms1mx3.7/29, Error ellipse: s-maj=23.9km s-min=15.0km az=157.0*

*NEIC **05** 17:20:54.0±2.0, 16°.80S±0°.10×175°.23E±0°.05, h30^{km}±3^{km}, mb4.7/20, Error ellipse: s-maj=14.4km s-min=6.2km az=194.0*

ISC 05 17:20:54.8±0.5**, 16°.83S**±0°.08×**175°.06E**±0°.06**, h35**^{km}**, n70, σ1ˢ.42**/58**, mb4.5**/22**, MS3.9**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.99	108	Pn	Pn	17 21 38.0	-1.8
	6.2nm,0.3s,baz=263,slow=18,SNR=32						
MSVF				Sn	Sn	17 22 18.2	+3.7
	baz=198,slow=20,SNR=2.4						
MSVF				LR	LR	17 22 39.6	
	comp=Z,905nm,19.7s,baz=272,slow=36						
MSVF	Nonsavu	2.99	108		Pn	17 21 36.9	-2.9
SANVU	Saraoutou	7.68	279	Pn	Pn	17 22 45.2	+1.1
PINNC	Pines Island,	9.19	230		Pn	17 23 06.6	+1.7
OUENC	Ouen Island, N	9.53	233		Pn	17 23 11.5	+1.9
DZM	Mont Dzumac	9.65	236	*e*Pn	Pn	17 23 13.8	+2.4
	92nm,1.4s						
DZM				*e*LR	LR	17 25 36.7	
	comp=Z,2µm,25.6s						
DZM	Mont Dzumac	9.65	236	Pn	Pn	17 23 10.5	-0.9
	0.1nm,0.3s,baz=96,slow=20,SNR=7.2						
DZM				Sn	Sn	17 24 58.0	-0.7
	0.1nm,0.3s,baz=225,slow=20,SNR=0.9						
DZM	Mont Dzumac	9.65	236		Pn	17 23 13.3	+1.9
ONTNC	Ouen Toro	9.77	235		Pn	17 23 13.6	+0.7
AFI	Afiamalu	13.02	79	LR	LR	17 27 51.9	
	comp=Z,521nm,21.6s,baz=237,slow=32						
RAO	Raoul Island	13.94	154	LR	LR	17 28 26.2	
	comp=Z,734nm,19.6s,baz=350,slow=33						
URZ	Urewera	21.42	176	P	P	17 25 39.1	-0.6
	6.6nm,0.9s,baz=307,slow=20,SNR=1.6						
URZ				LR	LR	17 31 59.5	
	comp=Z,254nm,19.1s,baz=31,slow=31						
URZ	Urewera	21.42	176	IAmb	IAmb	17 25 55.8	
	comp=Z,47nm,1.2s						
BFZ	Birch Farm	23.79	178	P	P	17 26 03.2	-1.0
EIDS	Eidsvold	23.90	245	P	P	17 26 06.6	+1.2
EIDS				IAmb	IAmb	17 26 21.6	
	comp=Z,36nm,1.6s						
NNZ	Nelson	24.34	183	P	P	17 26 11.2	+1.9
PLWZ	Palliser	24.65	180	P	P	17 26 10.9	-1.3
ARMA	Armidale	25.30	233	P	P	17 26 18.7	+0.4
ARMA				IAmb	IAmb	17 26 53.1	

	comp=Z,16nm,1.4s						
PPT2	Papeete2	33.76	97	*e*LR	LR	17 36 39.8	
	comp=Z,179nm,23.2s						
PPT	Papeete	33.76	97	LR	LR	17 37 57.4	
	comp=Z,107nm,21.9s,baz=254,slow=30						
STKA	Stephens Creek	33.80	237	P	P	17 27 32.5	-1.2
	comp=Z,3.3nm,0.8s,baz=67,slow=7.5,SNR=7.0						
STKA				LR	LR	17 40 04.0	
	comp=Z,217nm,20.5s,baz=28,slow=34						
STKA	Stephens Creek	33.80	237	IAmb	IAmb	17 27 35.1	
	comp=Z,1.3nm,1.1s						
WB0	Warramunga Arr	38.66	259	P	P	17 28 13.0	-2.3
WRAB	Tennant Creek	38.69	259		S	17 34 12.7	+2.3
WRA	Warramunga Arr	38.70	259	P	P	17 28 13.8	-2.0
	comp=Z,1.3nm,0.8s,baz=90,slow=8.5,SNR=10.0						
WRA				LR	LR	17 41 54.5	
	comp=Z,109nm,21.0s,baz=85,slow=33						
AS31	Alice Springs	39.10	253	P	P	17 28 18.0	-1.1
ASAR	Alice Springs	39.11	253	P	P	17 28 17.1	-2.0
	comp=Z,6.2nm,0.8s,baz=80,slow=9.2,SNR=42						
ASAR				PcP	PcP	17 30 29.5	+1.0
	comp=Z,0.9nm,0.9s,baz=104,slow=3.6,SNR=5.6						
ASAR				LR	LR	17 43 22.7	
	comp=Z,138nm,20.1s,baz=94,slow=35						
TAOE	Nuku Hiva Isla	44.30	85	*e*LR	LR	17 41 32.5	
	comp=Z,265nm,25.6s						
FITZ	Fitzroy Crossi	47.05	261	P	P	17 29 22.1	-1.2
	comp=Z,3.7nm,1.1s,baz=99,slow=2.6,SNR=4.7						
KAPI	Kappang	55.39	276	P	P	17 30 26.6	+0.6
	comp=Z,2.2nm,0.3s,baz=164,slow=6.0,SNR=5.2						
KAPI	Kappang	55.39	276	P	P	17 30 22.5	-3.5
KAPI				IAmb	IAmb	17 30 28.6	
	comp=Z,7.4nm,0.8s						
PETK	Petropavlovsk-	71.25	349	P	P	17 32 10.8	+0.7
	comp=Z,7.2nm,0.9s,baz=159,slow=9.9,SNR=4.5						
PETK	Petropavlovsk-	71.25	349	P	P	17 32 10.1	-0.1
QSPA	South Pole Qui	73.21	180	P	P	17 32 22.0	-0.1
QSPA				IAmb	IAmb	17 32 25.2	
	comp=Z,19nm,1.4s						
SEY	Seymchan	81.47	350	P	P	17 33 08.7	+0.8
	comp=Z,5.7nm,0.9s,baz=111,slow=5.5,SNR=6.2						
YBH	Yreka Blue Hor	81.77	42	LR	LR	18 03 46.3	
	comp=Z,44nm,18.5s,baz=300,slow=32						
PFO	Pinyon Flats O	82.26	52	LR	LR	18 01 11.8	
	comp=Z,62nm,19.1s,baz=238,slow=29						
L19K	White Mountain	82.27	14	P	P	17 33 13.0	+0.8
L19K				IAmb	IAmb	17 33 14.5	
	comp=Z,10nm,0.9s						
CMAR	Chiang Mai Arr	82.67	292	P	P	17 33 16.2	+0.9
	comp=Z,3.4nm,1.0s,baz=117,slow=3.4,SNR=16						
CMAR	Chiang Mai Arr	82.67	292	P	P	17 33 17.0	+1.7
NVAR	Mina Array Bea	83.10	47	P	P	17 33 17.9	+0.6
	comp=Z,0.7nm,0.3s,baz=213,slow=6.5,SNR=6.5						
CAST	Castle Rocks	83.98	14	IAmb	IAmb	17 33 21.8	
	comp=Z,8.6nm,1.0s						
RND	Reindeer	84.76	15	P	P	17 33 24.6	-0.5
SPR3	Spring Creek 3	86.14	47	P	P	17 33 30.6	-2.2
SPR3				IAmb	IAmb	17 33 37.3	
	comp=Z,3.3nm,0.9s						
ELK	Elko	86.25	46	LR	LR	18 08 04.8	
	comp=Z,77nm,18.6s,baz=263,slow=33						
IL31		86.38	15	P	P	17 33 31.7	-1.2
IL31				IAmb	IAmb	17 33 37.9	
	comp=Z,3.7nm,0.9s						
ILAR	Eielson Array	86.38	15	P	P	17 33 31.9	-1.1
	comp=Z,2.1nm,0.7s,baz=231,slow=5.1,SNR=26						
Q16A	Castle Valley	88.35	49	P	P	17 33 42.2	-1.2
NEW	Newport	88.42	38	LR	LR	18 03 08.6	
	comp=Z,50nm,20.9s,baz=272,slow=29						
SONM	Songino Array	88.74	321	P	P	17 33 45.4	+0.5
	comp=Z,0.8nm,0.9s,baz=115,slow=6.5,SNR=5.0						
SONM				LR	LR	18 12 57.7	
	comp=Z,45nm,18.7s,baz=166,slow=35						
SONM	Songino Array	88.74	321	IAmb	IAmb	17 33 50.5	
	comp=Z,5.7nm,1.5s						
REDW	Red Top Meadow	90.31	45	P	P	17 33 51.7	-0.8
ANMO	Albuquerque	90.40	54	P	P	17 33 52.0	-1.0
ANMO				IAmb	IAmb	17 33 56.8	
	comp=Z,10.0nm,1.6s						
TXAR	Lajitas Array	90.77	60	P	P	17 33 55.9	+1.1
	comp=Z,0.6nm,0.8s,baz=234,slow=4.3,SNR=6.3						
TXAR				LR	LR	18 05 59.4	
	comp=Z,59nm,20.8s,baz=0.0,slow=30						
TXAR	Lajitas Array	90.77	60	P	P	17 33 54.5	-0.2
PDAR	Pinedale Array	90.96	45	P	P	17 33 56.1	+0.6
	comp=Z,0.2nm,0.4s,baz=243,slow=4.0,SNR=2.3						
PLCA	Paso Flores	96.51	136	LR	LR	18 08 37.9	
	comp=Z,27nm,20.6s,baz=253,slow=30						
APG	El Apazote	98.41	77	LR	LR	18 08 43.5	
	comp=Z,55nm,18.9s,baz=71,slow=29						
GERES	GERESS Array B	144.64	339	PKP	PKPab	17 40 25.9	-0.5
	comp=Z,0.4nm,0.5s,baz=22,slow=3.6,SNR=5.2						
MOA	Molln	145.28	337	*e*P	PKPdf	17 40 29.0	+0.1
	comp=Z,9.5nm,1.4s						
ARSA	Arzberg	145.28	335	*e*P	PKPdf	17 40 30.1	+1.2
	comp=Z,10nm,1.8s						
SOKA	Soboth	145.94	335	*e*P	PKPab	17 40 31.5	+0.2
	comp=Z,6.7nm,1.1s						
OBKA	Obir	146.27	335	*e*P	PKPbc	17 40 32.0	+0.1
	comp=Z,5.6nm,1.4s						
WATA	Walderalm	146.67	339	*e*P	PKPab	17 40 34.5	+0.3
	comp=Z,11nm,1.5s						
WTTA	Wattenberg	146.71	339	*e*P	PKPab	17 40 34.7	+0.3
	comp=Z,7.2nm,1.2s						
RETA	Reutte	146.80	340	*e*P	PKPbc	17 40 33.6	+0.2
	comp=Z,8.5nm,1.5s						
MOTA	Moosalm	146.82	340	*e*P	PKPab	17 40 34.6	-0.2
	comp=Z,13nm,1.3s						
ABTA	Abfaltersbach	146.85	338	*i* P	PKPab	17 40 34.2	-0.7
	comp=Z,7.4nm,1.4s						
SQTA	Sankt Quirin	146.89	340	*e*P	PKiKP	17 40 36.0	-0.3
	comp=Z,8.2nm,1.3s						
FETA	Feichten	147.22	340	*e*P	PKPbc	17 40 35.4	+0.7
	comp=Z,6.8nm,1.2s						

INET 05 17:40:12.1, 12°.20N×87°.45W, h27^{km}, ML3.7, Near coast of Nicaragua

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IDC 05 17:46:39.0±3.8, **5°.88S×148°.59E, h312^{km}**±34^{km}**, mb2.7**/2, **mb1 2.9**/4, **mb1mx2.7**/34, **mbtmp3.3**/4, **Error ellipse: s-maj=89.3km s-min=30.2km az=142.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.78	202	P	Pn	17 47 43.5	-0.1
	0.7nm,0.3s,baz=24,slow=10.0,SNR=1.8						
WRA	Warramunga Arr	19.68	223	P	P	17 50 46.2	+0.2
	0.3nm,0.3s,baz=49,slow=10,SNR=19						
ASAR	Alice Springs	22.64	217	P	P	17 51 13.6	-0.4
	0.1nm,0.3s,baz=48,slow=8.1,SNR=12						
FITZ	Fitzroy Crossi	25.48	240	P	P	17 51 40.0	+0.3
	1.2nm,0.9s,baz=64,slow=8.0,SNR=2.0						
NVAR	Mina Array Bea	96.05	52	P	P	17 59 31.7	-0.2
	0.2nm,0.3s,baz=250,slow=7.6,SNR=1.8						

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*ATH **05** 17:50:00.2, 40°.63N×19°.96E, h10^{km}±2^{km}, ML2.8/7, Error ellipse: s-maj=3.1km s-min=1.3km az=133.0*

*TIR **05** 17:50:00.5, 40°.51N×20°.06E, h1^{km}, Md2.9, Ml2.9*

*THE **05** 17:50:01.9, 40°.53N×20°.05E, h0^{km}±2^{km}, ML2.7/7, Error ellipse: s-maj=2.2km s-min=0.6km az=325.0*

ISC 05 17:50:01.5±1.0, **40°.53N**±0°.02×**20°.01E**±0°.02, **h10^{km}**±8^{km}**, n75, σ1^{s}.25**/115, **13C-1D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.23	180	P	Pg	17 50 06.1	-0.2
	baz=190						
TPE				S	Sg	17 50 09.8	+0.3
	baz=190						
VLO	Vlora	0.40	261	P	Pb	17 50 10.4	-0.2
VLO				S	Sb	17 50 16.9	+0.1
	3μm,0.3s						
VLO	Vlora	0.40	261	P	Pb	17 50 10.1	-0.5
	baz=266						
VLO				S	Sb	17 50 16.8	+0.1
	baz=266						
VLO				AMP			
	comp=N,14nm,0.4s,baz=266						
LSK	Leskovik	0.59	130	P	Pb	17 50 12.8	-1.2
LSK	Leskovik	0.59	130	P	Pg	17 50 11.8	-1.1
	baz=130						
LSK				S	Sb	17 50 20.5	-1.9
	baz=130						
LSK				AMP			
	comp=N,3.3nm,0.5s,baz=130						
KBN	Korca	0.60	81	P	Pg	17 50 12.3	-0.8
KBN				S	Sb	17 50 21.6	-1.1
	comp=N,765nm,0.5s						
KBN	Korca	0.60	81	P	Pb	17 50 12.4	-1.7
	baz=77						
KBN				S	Sb	17 50 21.4	-1.3
	baz=77						
KBN				AMP			
	comp=E,2.1nm,0.4s,baz=77						
SRN	Sarande	0.65	181	P	Pb	17 50 14.0	-0.9
SRN				S	Sb	17 50 24.5	+0.5
	comp=E,752nm,0.3s						
SRN	Sarande	0.65	181	P	Pg	17 50 13.6	-0.5
	baz=185						
SRN				S	Sb	17 50 23.5	-0.5
	baz=185						
SRN				AMP			
	comp=N,4.0nm,0.4s,baz=185						
KASA	Kassiopi	0.79	184	P	Pb	17 50 17.0	-0.2
KASA				S	Sb	17 50 29.4	+1.5
KASA				AML	AML	17 50 30.5	
	comp=N,1258μm,0.4s						
KASA				AML	AML	17 50 33.8	
	comp=E,1597μm,0.3s						
NEST	Nestorio	0.80	98	P	Pb	17 50 16.1	-1.5
NEST				S	Sb	17 50 28.4	-0.1
	comp=E,262nm,0.5s						
NEST	Nestorio	0.80	98	P	Pb	17 50 16.3	-1.3
NEST				S	Sb	17 50 28.5	-0.1
NEST				AML	AML	17 50 31.4	
	comp=E,736μm,0.4s						
NEST				AML	AML	17 50 33.1	
	comp=N,523μm,0.4s						
TIR	Tirane	0.82	352	⇓P	Pb	17 50 17.7	-0.2
TIR				⇑S	Sb	17 50 28.8	-0.3
TIR	Tirane	0.82	352	P	Pb	17 50 17.7	-0.2
TIR	Tirane	0.82	352	P	Pb	17 50 17.8	-0.2
	baz=350						
TIR				S	Sn	17 50 31.1	-0.4
	baz=350						
TIR				AMP			
	comp=E,1.1nm,0.4s,baz=350						
KEK	Kerkira	0.83	191	P	Pb	17 50 17.4	-0.6
KEK	Kerkira	0.83	191	P	Pg	17 50 16.9	-0.6
KEK				S	Sb	17 50 30.0	+0.7
KEK				AML	AML	17 50 31.9	
	comp=N,1053μm,0.5s						
KEK				AML	AML	17 50 35.0	
	comp=E,935μm,0.4s						
OHR	Ohrid	0.83	46	*i* Pg	Pb	17 50 16.9	-1.3
OHR				*i* Sg	Sn	17 50 31.3	-0.5
PENT	Pentalofos	0.93	111	P	Pb	17 50 19.2	-0.5
PENT				S	Sb	17 50 32.3	+0.2
IGT	Igoumenitsa	1.03	166	P	Pb	17 50 20.9	-0.4
IGT				S	Sn	17 50 36.4	0.0
	comp=E,582nm,0.4s						
IGT	Igoumenitsa	1.03	166	P	Pb	17 50 21.0	-0.4
IGT				S	Sn	17 50 36.6	+0.1
IGT				AML	AML	17 50 40.9	
	comp=E,1107μm,0.4s						
IGT				AML	AML	17 50 41.5	
	comp=N,1227μm,0.4s						
IGT	Igoumenitsa	1.03	166	P	Pb	17 50 20.9	-0.4
	baz=168						
IGT				S	Sb	17 50 35.8	+0.9
	baz=168						
FNA	Florina	1.07	76	P	Pg	17 50 20.8	-1.2
FNA				S	Sn	17 50 37.0	-0.7
	comp=N,400nm,0.4s						
FNA	Florina	1.07	76	P	Pg	17 50 20.9	-1.2
FNA				AML	AML	17 50 40.7	
	comp=E,742μm,0.3s						
FNA				AML	AML	17 50 43.8	
	comp=N,843μm,0.5s						
FNA	Florina	1.07	76	P	Pb	17 50 21.7	-0.4
	baz=74						
FNA				S	Sn	17 50 36.9	-0.7
	baz=74						
JAN	Janina	1.08	143	P	Pb	17 50 21.7	-0.7
JAN				S	Sn	17 50 38.0	+0.1
	comp=N,568nm,0.4s						
JAN	Janina	1.08	143	P	Pb	17 50 21.7	-0.7
JAN				AML	AML	17 50 44.3	
	comp=N,1031μm,0.3s						
JAN				AML	AML	17 50 44.4	
	comp=E,1275μm,0.4s						
KPRO	Kipourio	1.19	119	P	Pb	17 50 23.2	-0.9
KPRO	Kipourio	1.19	119	P	Pb	17 50 23.3	-0.8
KPRO				AML	AML	17 50 46.7	
	comp=E,514μm,0.7s						
KPRO				AML	AML	17 50 49.8	
	comp=N,555μm,0.4s						
PHP	Peshkopia	1.20	16	P	Pn	17 50 24.5	+0.1
PHP	Peshkopia	1.20	16	P	Pn	17 50 24.6	+0.1
	baz=13						
PHP				S	Sn	17 50 42.9	+2.1
	baz=13						
PHP				AMP			
	comp=N,1.0nm,1.3s,baz=13						
TSLK	Tsoukalades, L	1.77	163	P	Pb	17 50 33.3	-0.8
TSLK	Tsoukalades, L	1.77	163	P	Pb	17 50 33.6	-0.5
SKO	Skopje	1.80	36	*i* Pn	Pg	17 50 34.3	-1.7
SKO				*i* Sn	Sg	17 51 01.3	+1.9
LKD2	Lefkada island	1.81	164	P	Pn	17 50 32.8	0.0
LKD2	Lefkada island	1.81	164	P	Pg	17 50 35.2	-1.0
THL	Klokotos Trika	1.82	121	P	Pb	17 50 33.3	-1.5
GRG	Griva	1.87	76	P	Pb	17 50 34.4	-1.3
PDG	Podgorica	1.98	344	⇑P	Pn	17 50 36.3	+1.2
PDG				⇑S	Sn	17 51 01.2	+1.3
STIP	Stip	2.02	54	*i* Pn	Pg	17 50 39.8	-0.3
STIP				*i* Sn	Sg	17 51 10.2	+3.9
VAY	Valandovo	2.10	67	*i* Pn	Pg	17 50 39.9	-1.7
VAY				*i* Sn	Sg	17 51 11.0	+2.2
KNT	Kendrikon	2.28	73	P	Pb	17 50 41.0	-1.8
AGG	Agios Georgios	2.34	129	P	Pn	17 50 40.6	+0.6
ANX	Ano Chora	2.43	142	P	Pn	17 50 42.6	+1.2
PSDA	Pessada-Kefalo	2.45	169	P	Pn	17 50 41.6	0.0
PRVS	Prvonek	2.51	37	*e*Pn	Pb	17 50 45.0	-1.7
MATE	Matera	2.52	274	⇑P	Pn	17 50 42.5	0.0
MATE				⇑S	Sn	17 51 12.3	-0.9
DBRK	Dubrovnik	2.55	327	*e*Pn	Pn	17 50 42.1	-0.8
DBRK				Sn	Sn	17 51 14.7	+0.5
BARS	Barje	2.66	30	*e*Pn	Pb	17 50 46.8	-2.3
BOSS	Bosilegrad	2.70	43	*e*Pn	Pn	17 50 46.9	+1.9
SJES	Sjenica	2.73	359	*e*Pn	Pb	17 50 48.0	-2.5
SELS	Selova	2.81	17	*e*Pn	Pn	17 50 48.1	+1.5
TIP	Timpagrande	2.84	243	⇑P	Pn	17 50 47.3	+0.3
STON	Ston	2.91	324	*e*Pn	Pn	17 50 47.5	-0.3
STON				Sn	Sn	17 51 22.7	-0.1
IVAS	Ivanjica	3.05	2	*e*Pn	Pn	17 50 50.6	+0.8
VTS	Vitosha	3.20	48	⇑P	Pn	17 50 54.2	+2.3
VTS				⇑S	Sn	17 51 32.5	+2.3
LSTV	Lastovo	3.23	315	*e*Pn	Pn	17 50 52.0	-0.3
LSTV				Sn	Sn	17 51 28.3	-2.6
BBLS	Lazići	3.36	353	*e*Pn	Pb	17 51 00.4	-0.8
ZAPS	Zavoj	3.37	35	*e*Pn	Pb	17 50 58.7	-2.6
GRUS	Gruza	3.40	9	*e*Pn	Pn	17 50 57.2	+2.6
MAKA	Makarska	3.54	322	*e*Pn	Pn	17 50 56.6	+0.1
MAKA				Sn	Sn	17 51 37.8	-0.7
DIVS	Divibare	3.57	360	*e*Pn	Pn	17 50 59.4	+2.4
RICI	Ricice	3.66	325	*e*Pn	Pn	17 50 58.9	+0.7
RICI				Sn	Sn	17 51 41.3	0.0
BLKB	Belogradchik	3.67	32	⇑S	Sn	17 51 44.3	+2.5
ZAGS	Zajecar	3.67	26	*e*Pn	Pn	17 51 00.2	+1.9
MDVR	Moldovita	4.43	16	⇑P	Pn	17 51 09.7	+0.9
ZIRJ	Zirje	4.50	315	*e*Pn	Pn	17 51 09.0	-0.8
ZIRJ				Sn	Sn	17 52 01.1	-1.0
MORI	Morici	4.62	318	*e*Pn	Pn	17 51 12.1	+0.8
MORI				Sn	Sn	17 52 02.4	-2.6
DUGI	Dugi Otok	5.05	315	*e*Pn	Pn	17 51 17.6	+0.4
DUGI				Sn	Sn	17 52 15.0	-0.5
UDBI	Udbina	5.08	323	*e*Pn	Pn	17 51 19.0	+1.3
BZS	Buzias	5.22	13	⇑P	Pn	17 51 20.5	+1.0
BZS				⇑S	Sn	17 52 20.8	+1.0
GZR	Gura Zlata	5.27	22	⇑P	Pn	17 51 21.2	+0.9
SOKA	Soboth	7.13	331	*e*Pn	Pn	17 51 46.6	+0.8
	comp=N,1.1nm,0.4s						
OBKA	Obir	7.17	328	*i* Pn	Pn	17 51 47.4	+0.9
	comp=N,0.8nm,0.2s						
OBKA				*i* Sn	Sn	17 53 07.3	-0.7
	comp=N,2.0nm,0.4s						
MOTA	Moosalm	9.36	320	*e*Pn	Pn	17 52 17.2	+0.6
	comp=N,1.4nm,0.5s						
MOTA				*i* Sn	Sn	17 54 04.0	+2.1
	comp=N,1.6nm,0.6s						

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*IDC **05** 18:23:07.3±0.9, 3°.84S×133°.87E, h0^{km}, mb3.8/6, mb1 4.2/11, mb1mx3.9/45, mbtmp4.1/11, ML3.1/3, MS3.3/9, Ms1 3.3/9, ms1mx3.1/31, Error ellipse: s-maj=29.9km s-min=19.1km az=50.0*

*NEIC **05** 18:23:09.2±1.8, 3°.91S±0°.08×134°.2E±0°.1, h31^{km}±6^{km}, mb4.3/13, Error ellipse: s-maj=17.0km s-min=10.4km az=67.0*

*DJA **05** 18:23:11.0±0.3, 4°S±2°×13°4E±°, h10^{km}, M4.6/12, mB5.1/5, mb4.7/12, MLv4.6/9, Mw(mB)4.5/5*

ISC 05 18:23:10.5±0.5, **4°.03S**±0°.05×**133°.97E**±0°.05**, h35^{km}, n76, σ2^{s}.76**/76**, mb4.1**/9**, MS3.3**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.04	303	P	Pn	18 23 43.6	+1.2
FAKI	Fak Fak	2.04	303	Pn	Pn	18 23 42.8	+0.4
FAKI	Fak Fak	2.04	303	P	Pn	18 23 43.1	+0.7
SRPI	Serui, Papua	3.12	47	P	Pn	18 24 01.3	+4.0
SIJI	Sorong	4.14	319	Pn	Pn	18 24 10.9	-0.4
	8.7nm,0.3s,baz=117,slow=22,SNR=62						
SIJI				Sn	Sn	18 24 54.4	-4.1
	13nm,0.3s,baz=172,slow=9.8,SNR=5.4						
SIJI				Lg	Lg	18 25 13.8	
	9.6nm,0.3s,baz=311,slow=20,SNR=1.2						
SIJI				LR	LR	18 26 17.6	
	comp=Z,240nm,18.5s,baz=224,slow=48						
SWI	Sorong	4.15	319	P	Pn	18 24 12.6	+1.2
SWI				S	Sn	18 24 58.1	-0.6
SAUI	Saumlaki	4.74	214	P	Pn	18 24 23.9	+4.4
SAUI				S	Sn	18 25 18.9	+5.6
SAUI	Saumlaki	4.74	214	Pn	Pn	18 24 20.9	+1.4
MSAI	Masohi	5.08	278	P	Pn	18 24 25.9	+1.8
AAI	Ambon	5.77	273	P	Pn	18 24 36.9	+3.2
	0.4nm2μm115nm,0.6s						
JAY	Jayapura	6.89	78	Pn	Pn	18 24 51.3	+2.1
	0.5nm,0.3s,baz=212,slow=9.5,SNR=2.8						
JAY				Sn	Sn	18 26 08.9	+2.4
	baz=132,slow=16,SNR=0.8						
JAY				LR	LR	18 28 17.6	
	comp=Z,200nm,20.3s,baz=224,slow=45						
LBMI	Labuha	7.29	297	P	Pn	18 24 46.4	-8.2
SANI	Sanana	8.21	284	P	Pn	18 25 07.3	+0.1
	28nm,0.7s						
SANI	Sanana	8.21	284	P	Pn	18 25 06.6	-0.6
KDU	Kakadu	8.73	190	P	Pn	18 25 16.7	+2.4
DRS	Darwin Rock St	8.88	200	P	Pn	18 25 18.4	+2.0
MTN	Manton Dam	9.19	198	Pn	Pn	18 25 22.0	+1.2
MTN	Manton Dam	9.19	198	P	Pn	18 25 22.6	+1.9
SOEI	Soe	11.18	239	P	Pn	18 25 50.4	+2.3
	38nm,0.8s						
SOEI	Soe	11.18	239	Pn	Pn	18 25 48.5	+0.4
SOEI	Soe	11.18	239	P	Pn	18 25 49.1	+1.0
BATI	Baumata	11.92	238	Pn	Pn	18 25 59.0	+0.8
	11nm,0.3s,baz=67,slow=5.4,SNR=15						
BATI				Sn	Sn	18 28 08.4	-1.6
	1.1nm,0.3s,baz=194,slow=19,SNR=2.3						
BATI	Baumata	11.92	238	P	Pn	18 26 00.0	+1.9
	29nm,0.7s						
MMRI	Maumere	12.52	248	P	P	18 26 13.2	-4.3
KNRA	Kununurra	12.65	204	Pn	Pn	18 26 07.6	-0.5
KNRA	Kununurra	12.65	204	P	Pn	18 26 08.8	+0.7
APSI	Ampana	12.69	284	P	Pn	18 26 09.6	+1.0
	18nm,0.6s						
EDFI	Ende, Flores	13.07	248	P	Pn	18 26 15.9	+2.0
	25nm,0.9s						
COEN	Coen	13.41	138	Pn	Pn	18 26 16.1	-2.4
BSSI	Bau Bau, Buton	13.59	261	P	Pn	18 26 23.9	+3.0
	8.6nm,0.7s						
DAV	Davao City (W)	13.85	323		Pn	18 26 18.5	-5.9
PMG	Port Moresby	14.14	113	Pn	P	18 26 31.2	-4.4
	0.6nm,0.3s,baz=289,slow=17,SNR=1.7						
PMG				LR	LR	18 32 32.9	
	comp=Z,175nm,21.8s,baz=328,slow=40						
WB0	Warramunga Arr	15.65	179		Pn	18 26 47.0	-1.6
WB2	Warramunga Arr	15.82	179	Pn	Pn	18 26 48.6	-2.1
WB2				IAmb	IAmb	18 27 04.4	
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	15.82	179	Pn	Pn	18 26 49.1	-1.7
	comp=Z,0.8nm,0.3s,baz=6.4,slow=13,SNR=38						
WRA				Sn	Sn	18 29 37.9	-7.2
	comp=Z,0.7nm,0.3s,baz=360,slow=23,SNR=12						
WRA				LR	LR	18 33 22.6	
	comp=Z,61nm,21.0s,baz=20,slow=38						
WRA	Warramunga Arr	15.82	179		Pn	18 26 47.6	-3.1
WR0	Warramunga Arr	15.84	178	P	Pn	18 26 49.0	-2.1
WR0				IAmb	IAmb	18 27 04.1	
	comp=Z,18nm,0.8s						
FITZ	Fitzroy Crossi	16.18	210	Pn	Pn	18 26 52.0	-3.4
	comp=Z,5.1nm,0.3s,baz=31,slow=11,SNR=82						
FITZ				Sn	Sn	18 29 43.0	-11
	baz=173,slow=15						
PLAI	Plampang	16.78	253	P	Pn	18 27 03.0	+0.1
MTSU	Mount Surprise	17.29	145	P	P	18 27 12.2	+1.6
AS31	Alice Springs	19.52	180		P	18 27 31.8	-3.3
AS31				IAmb	IAmb	18 27 44.0	
	comp=Z,7.1nm,0.6s						
ASAR	Alice Springs	19.52	180	P	Pn	18 27 38.6	+2.1
	comp=Z,1.1nm,0.3s,baz=9.9,slow=10,SNR=101						
ASAR				S	S	18 31 04.8	-9.0
	comp=Z,0.3nm,0.3s,baz=2.3,slow=27,SNR=10						
ASAR				LR	LR	18 35 34.9	
	comp=Z,78nm,18.7s,baz=4.5,slow=38						
ASAR	Alice Springs	19.52	180	P	Pn	18 27 35.6	-0.9
CTA	Charters Tower	19.95	144	P	Pn	18 27 43.1	+1.5
	comp=Z,3.5nm,0.4s,baz=320,slow=11,SNR=8.1						
CTAO	Charters Tower	19.95	144		P	18 27 38.6	-1.2
CTAO				IAmb	IAmb	18 27 51.4	
	comp=Z,15nm,1.1s						
CTAO	Charters Tower	19.95	144	P	Pn	18 27 43.3	+1.7
KMMI	Kalianget	20.13	261	P	Pn	18 27 45.8	+2.1
JAGI	Jajag, Banyuwa	20.18	256	P	P	18 27 42.7	+0.4
JAGI				IAmb	IAmb	18 28 16.4	
	comp=Z,21nm,1.3s						
KKM	Kota Kinabalu	20.36	299	P	P	18 27 41.4	-2.9
WRKA	Warakurna	21.59	194	P	P	18 28 00.4	+3.0
MBWA	Marble Bar	21.94	218	P	P	18 28 04.6	+3.4
PSA00	Pilbara Seismi	22.18	217	P	P	18 28 05.3	+1.5
PSA00	Pilbara Seismi	22.18	217	P	P	18 28 05.8	+2.0
PSA00				IAmb	IAmb	18 28 08.2	
	comp=Z,11nm,0.9s						
PSA00	Pilbara Seismi	22.18	217	P	P	18 28 07.1	+3.3
	comp=Z,34nm,1.0s						
SBUM	Sibu	22.67	286	P	P	18 28 08.4	-0.6
OOD	Oodnadatta	23.69	176	P	P	18 28 23.5	+4.4
KSM	Kuching	24.27	283	P	P	18 28 24.8	+0.1
KSM				IAmb	IAmb	18 28 32.4	
	comp=Z,8.0nm,1.0s						
INKA	Innaminka	24.45	165	P	P	18 28 31.5	+5.3
QLP	Quilpie	24.48	157	P	P	18 28 29.8	+3.3
MULG	Mulgathing	26.11	180	P	P	18 28 44.4	+3.2
LEM	Lembang	26.38	263	LR	LR	18 40 42.4	
	comp=Z,107nm,19.8s,baz=66,slow=40						
LCRK	Leigh Creek	26.58	172	P	P	18 28 50.2	+4.7
BBOO	Buckleboo	28.70	176	P	P	18 29 02.0	-2.5
BLDU	Ballidu	31.06	210	P	P	18 29 27.8	+2.5
MJAR	Matsushiro Arr	40.56	5	LR	LR	18 44 32.0	
	comp=Z,54nm,20.4s,baz=340,slow=32						
CMAR	Chiang Mai Arr	41.11	304	P	P	18 30 52.4	+0.9
	comp=Z,0.6nm,0.7s,baz=125,slow=5.6,SNR=3.7						
CMAR				LR	LR	18 49 19.9	
	comp=Z,26nm,20.4s,baz=201,slow=38						
KSRS	Korea Array	41.65	353	LR	LR	18 46 18.5	
	comp=Z,36nm,19.5s,baz=182,slow=34						
HHC	Hu-ho-hao-te	49.15	338	*e*P	P	18 31 55.9	+0.8
HHC				pmax	pmax		
	comp=Z,20nm,0.7s						
HHC				pmax	pmax		
	comp=Z,190nm,6.6s						
GTA	Gaotai	53.46	327	*e*P	P	18 32 31.2	+3.7
GTA				pP	pP	18 32 36.5	-1.5
GTA				sP	sP	18 32 40.7	-1.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WMQ	Urumqi	63.20	324	*e*P	P	18 33 36.4	+1.1
MKAR	Makanchi Array	68.02	324	P	P	18 34 06.7	+0.3
	comp=Z,1.3nm,0.7s,baz=106,slow=8.1,SNR=5.0						
MKAR	Makanchi Array	68.02	324	P	P	18 34 05.1	-1.3
ZALV	Zalesovo Beam	70.77	332	P	P	18 34 23.3	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,0.4nm,0.5s,baz=129,slow=3.9,SNR=3.1						
KURBB	Kurchatov Arra	72.14	327	P	P	18 34 31.8	+0.3
	comp=Z,0.4nm,0.6s,baz=125,slow=5.0,SNR=2.9						
ILAR	Eielson Array	89.00	25	P	P	18 36 03.3	+1.8
	comp=Z,0.5nm,1.0s,baz=284,slow=4.5,SNR=2.6						
LPAZ	La Paz	150.25	133	PKPbc	PKPab	18 43 03.2	-2.7
	comp=Z,0.8nm,0.8s,baz=255,slow=12,SNR=3.7						

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*GCG **05** 18:27:06.6±1.0, 13.°59N×92.°22W, h41km±999km, MD4.0*
*SNET **05** 18:27:10.8±1.1, 13.°81N×91.°89W, h68km±16km, ML3.7*
*UCR **05** 18:27:11.0±1.2, 13.°81N×91.°88W, h68km±17km, ML3.5*
ISC 05 18:27:11.2±3.3, **13.°9N**±0.°1×**91.°8W**±0.°1, **h10**km±14km, **n30**, σ**0.s65**/38, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.67	5	eP	Pb	18 27 26.0	+0.9
RTAL				eS	Sn	18 27 38.0	+0.6
STG3	Santiaguito 3,	0.87	11	eP	Pb	18 27 28.6	0.0
FUG	Fuego 3	1.06	56	i P	Pn	18 27 32.8	+0.5
PCG	Pacaya	1.23	64	eP	Pn	18 27 35.3	+0.6
HUEH	Huehuetenango	1.48	9	eP	Pn	18 27 37.2	-1.0
HUEH				eS	Sg	18 27 58.0	-0.8
NBG	Las Nubes	1.54	62	eP	Pg	18 27 41.3	+0.4
SLOZ	Alcaldia de Sa	1.92	85	eS	Sb	18 28 09.7	-0.7
RTR	El Retiro	2.04	88	eP	Pn	18 27 46.0	+0.2
RTR	El Retiro	2.04	88	eP	Pn	18 27 46.0	+0.2
CEVE	Cerro Verde	2.06	90	eP	Pn	18 27 46.0	-0.2
CEVE				eS	Sb	18 28 13.8	-1.0
CEVE				IAML		18 28 20.0	
	comp=Z,1μm,0.5s						
CEVE	Cerro Verde	2.06	90	eP	Pn	18 27 46.0	-0.2
CEVE				eS	Sb	18 28 13.8	-1.0
CEVE				IAML		18 28 20.0	
	comp=Z,1μm,0.5s						
SBLS	San Blas	2.06	90	eP	Pn	18 27 45.7	-0.5
SBLS	San Blas	2.06	90	eP	Pn	18 27 45.7	-0.5
SNJE	San Jose	2.08	89	eP	Pn	18 27 45.6	-0.8
SNJE	San Jose	2.08	89	eP	Pn	18 27 45.6	-0.8
JAYA	Jayaque - finc	2.24	95	eP	Pn	18 27 48.2	-0.3
JAYA				eS	Sn	18 28 15.9	-0.5
JAYA				IAML		18 28 20.1	
	comp=Z,664nm,0.5s						
JAYA	Jayaque - finc	2.24	95	eP	Pn	18 27 48.2	-0.3
JAYA				eS	Sn	18 28 15.9	-0.5
JAYA				IAML		18 28 20.1	
	comp=Z,664nm,0.5s						
TACO	Tacachico	2.33	87	eS	Sn	18 28 19.2	+0.8
TACO	Tacachico	2.33	87	eS	Sn	18 28 19.2	+0.8
PMON	Piamonte	2.37	93	eP	Pn	18 27 49.6	-0.6
PMON				eS	Sn	18 28 20.0	+0.5
PMON	Piamonte	2.37	93	eP	Pn	18 27 49.6	-0.6
PMON				eS	Sn	18 28 20.0	+0.5
MTO3	Montecristo	2.38	76	eP	Pn	18 27 50.8	+0.3
MTO3	Montecristo	2.38	76	eP	Pn	18 27 50.8	+0.3
BOQS	Boqueron	2.40	92	eP	Pn	18 27 51.5	+0.7
BOQS	Boqueron	2.40	92	eP	Pn	18 27 51.5	+0.7
ESQI	Esquipulas	2.44	73	eP	Pn	18 27 50.6	-0.7
SJTE	Alcalda de S	2.67	95	eP	Pn	18 27 53.9	-0.5
SJTE	Alcalda de S	2.67	95	eP	Pn	18 27 53.9	-0.5
SCLA	Alcaldia de Sa	2.94	93	eP	Pn	18 27 58.8	+0.8
SCLA				IAML		18 28 44.7	
	comp=Z,37nm,0.7s						
SCLA	Alcaldia de Sa	2.94	93	eP	Pn	18 27 58.8	+0.8
SCLA				IAML		18 28 44.7	
	comp=Z,37nm,0.7s						

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*IDC **05** 18:28:09.6±1.2, 28.°85N×51.°98E, h0km, mb3.8/16, mb1 3.9/18, mb1mx3.8/45, mbtmp3.8/18, ML3.5/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/54, Error ellipse: s-maj=25.3km s-min=16.8km az=11.0*
*THR **05** 18:28:13.7±0.5, 29.°05N×52.°04E, h14km±16km, ML3.6*
*TEH **05** 18:28:13.4, 28.°88N×52.°01E, h20km, ML3.8*
*NEIC **05** 18:28:15.2±2.9, 28.°93N±0.°04×51.°99E±0.°07, h38km±9km, mb4.1/21, mb_Lg3.8(TEH), Error ellipse: s-maj=9.0km s-min=5.8km az=77.0*
*DSN **05** 18:28:17.2±1.7, 28.°57N×52.°09E, h20km, ML3.5/12, Error ellipse: s-maj=23.0km s-min=7.4km az=2.0*
*OMAN **05** 18:28:18.7±0.1, 28.°56N×52.°21E, h20km, mb5.1/10, ml3.8/11, ms2.3/1, Error ellipse: s-maj=1.5km s-min=0.8km az=2.0*
ISC 05 18:28:13.0±0.5, **28.°90N**±0.°04×**52.°01E**±0.°04, **h23**km, **n189**, σ**1.s87**/217, **mb4.1**/30, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHBU	AHRAM	0.62	267	ePg	Pn	18 28 26.6	+0.2
KAZ1	Kazerun	0.79	336	ePg	Pb	18 28 28.8	+0.6
KAZ1				e		18 28 45.6	
	comp=Z,91μm,0.2s						
SHI	Shiraz	0.86	31	ePg	Pb	18 28 29.8	+0.3
SHI				e		18 28 33.2	
	comp=Z,41μm,0.2s						
SHI	Shiraz	0.86	31		Pb	18 28 29.8	+0.3
QIR1	Qir	1.00	114	ePg	Pn	18 28 32.8	+1.1
QIR1				e		18 28 52.4	
	comp=Z,45μm,0.5s						
GHIR	Ghir-Karzin	1.05	125	ePg	Pb	18 28 34.7	+2.1
GHIR				eSg	Sn	18 28 50.1	+3.5
GHIR				IAML		18 28 53.2	
	comp=N,2μm,0.6s						
GHIR				IAML		18 28 55.3	
	comp=E,2μm,0.4s						
GHIR	Ghir-Karzin	1.05	125	ePg	Pb	18 28 34.7	+2.1
GHIR	Ghir-Karzin	1.05	125		Pb	18 28 34.7	+2.1
JHRM	Jahrom	1.43	105	ePg	Pb	18 28 40.3	+1.2
JHRM				e		18 29 07.3	
	comp=Z,31μm,0.6s						
JHRM	Jahrom	1.43	105		Pb	18 28 40.2	+1.2
LMD1	Lamerd	1.86	146	ePg	Pb	18 28 47.9	+1.6
LMD1				e		18 29 28.1	
	comp=Z,16μm,0.5s						
LMD1	Lamerd	1.86	146		Pb	18 28 47.8	+1.5
LAR1	LAR	2.42	120	ePn	Pn	18 28 53.6	+2.4
IRAM	Ramesheh	2.92	6	ePn	Pn	18 29 00.5	+2.2
IRAM	Ramesheh	2.92	6	Pn	Pn	18 29 00.4	+2.2
IBRJ	Brojen	3.07	348	ePn	Pn	18 29 01.9	+1.6
IBRJ	Brojen	3.07	348	Pn	Pn	18 29 01.8	+1.5
SHMA	Al-Shehemyia	3.17	197	P	Pn	18 29 03.3	+1.9
SAKB	Bahrain	3.19	205	P	Pn	18 29 04.4	+2.8
SAKB				S	Sn	18 29 42.0	+3.1
ISAD	Sadrabad	3.34	25	ePn	Pn	18 29 06.3	+2.2
IMEH	Mehriz	3.36	42	e		18 29 09.3	
	comp=Z,2μm,0.4s						
IMEH				ePn	Pn	18 29 07.2	+2.9
IGAR	Gharneh	3.50	0	ePn	Pn	18 29 08.1	+1.9
SHK1	Shahrekord	3.56	345	ePn	Pn	18 29 08.3	+1.3
AMIS	Naft Sefid	3.63	320	ePn	Pn	18 29 09.8	+2.0
KBD	Kabd	3.79	275	eP	Pn	18 29 13.0	+3.1
UMR	Umm Al-Rimmam	3.81	281	eP	Pn	18 29 12.7	+2.5
IPIR	Pirpir	3.90	346	ePn	Pn	18 29 13.2	+1.5
RDF	Al-Radifah	3.91	272	eP	Pn	18 29 14.0	+2.4
ICHK	Chekchek	3.93	31	ePn	Pn	18 29 14.5	+2.4
NASN	Na'in	3.95	10	ePn	Pn	18 29 13.8	+1.4
NASN	Na'in	3.95	10	ePn	Pn	18 29 13.9	+1.4
GENO	Geno	3.97	111	ePn	Pn	18 29 15.7	+3.1
GENO				e		18 30 08.2	
	comp=Z,755nm,0.4s						
IZEF	Zefreh	4.00	4	ePn	Pn	18 29 14.9	+1.8
YZKH	Yazd	4.13	32	ePn	Pn	18 29 16.9	+2.1
YZKH	Yazd	4.13	32	ePn	Pn	18 29 16.9	+2.1
KHGB	Koh Gabri	4.16	68	ePn	Pn	18 29 17.3	+2.0
KHGB				e		18 30 09.3	
	comp=Z,924nm,0.3s						
NGRK	Negar Kerman	4.19	79	ePn	Pn	18 29 17.7	+1.8
NGRK				e		18 30 10.5	
	comp=Z,808nm,0.3s						
TRNA	Turayna	4.20	190	P	Pn	18 29 17.9	+2.2
TRNA				S	Sn	18 30 07.1	+3.0
KRBR	Kerman	4.29	74	ePn	Pn	18 29 19.9	+2.8
KRBR				IAML		18 30 12.8	
	comp=N,33nm,0.4s						
KRBR				IAML		18 30 13.1	
	comp=E,35nm,0.6s						
KRBR	Kerman	4.29	74	ePn	Pn	18 29 19.9	+2.8
TVBK	TV Kerman	4.29	74	ePn	Pn	18 29 19.5	+2.4
TVBK				e		18 29 38.1	
	comp=Z,1μm,0.4s						
RST	Umm Al-Ruwaisa	4.42	279	eP	Pn	18 29 21.2	+2.6
IKLH	Kolahrood	4.42	355	ePn	Pn	18 29 20.4	+1.5
ANAR	Anarak	4.53	19	ePn	Pn	18 29 22.4	+2.1
SHME	Shamm	4.64	127	P	Pn	18 29 22.7	+1.1
SHME	Shamm	4.64	127	ePn	Pn	18 29 23.3	+1.6
SHME	Shamm	4.64	127	P	Pn	18 29 23.4	+1.7
SHME				S	Sn	18 30 16.2	+1.3
SLWR	Sila	4.81	183	ePn	Pn	18 29 26.2	+2.1
SLWR	Sila	4.81	183	P	Pn	18 29 26.1	+2.0
SLWR				S	Sn	18 30 19.5	+0.4
BANOM	Banah	4.83	127	i P	Pn	18 29 25.4	+1.2
	SNR=32						
BANOM				S	Sn	18 30 18.2	-1.4
BANOM	Banah	4.83	127	ePn	Pn	18 29 25.5	+1.2
BANOM	Banah	4.83	127	P	Pn	18 29 25.5	+1.2
	SNR=32						
BANOM				S	Sn	18 30 19.1	-0.5
QAMS	Qamsar	4.85	354	ePn	Pn	18 29 27.0	+2.2
CHMN	Cheshme madani	4.92	77	ePn	Pn	18 29 28.0	+2.1
KRSH	Karshahi	5.06	1	ePn	Pn	18 29 29.0	+1.4
NAZ	Nazwa, Dubai	5.08	139	P	Pn	18 29 29.2	+1.5
NAZ	Nazwa, Dubai	5.08	139	ePn	Pn	18 29 29.4	+1.7
NAZ	Nazwa, Dubai	5.08	139	P	Pn	18 29 29.5	+1.8
NAZ				S	Sn	18 30 24.9	-0.7
MASF	Masafi	5.10	133	P	Pn	18 29 29.6	+1.5
	SNR=6.4						
MASF				S	Sn	18 30 24.7	-1.6
KHNJ	Kahnooj	5.11	99	ePn	Pn	18 29 31.0	+2.9
MSFE	Esma-Masafi	5.11	133	i P	Pn	18 29 29.1	+1.0
	SNR=6.1						
MSFE				eS	Sn	18 30 23.5	-3.0
	SNR=5.4						
MSFE	Esma-Masafi	5.11	133	ePn	Pn	18 29 29.2	+1.0
KHMZ	Khomeyn	5.14	341	ePn	Pn	18 29 31.0	+2.3
KHMZ	Khomeyn	5.14	341	ePn	Pn	18 29 31.0	+2.3
ASUD	Al Ashush, Dub	5.19	144	i P	Pn	18 29 31.2	+2.0
	SNR=28						
ASUD	Al Ashush, Dub	5.19	144	ePn	Pn	18 29 31.3	+2.1
ASUD	Al Ashush, Dub	5.19	144	P	Pn	18 29 31.2	+2.0
	SNR=28						
ASUD				S	Sn	18 30 28.4	+0.1
FAQ	Al Faqa, Dubai	5.23	141	i P	Pn	18 29 30.9	+1.1
	SNR=5.6						
FAQ	Al Faqa, Dubai	5.23	141	P	Pn	18 29 32.0	+2.2
	SNR=5.6						
FAQ				S	Sn	18 30 26.8	-2.6
MDH	Madha	5.24	132	i P	Pn	18 29 30.3	+0.3
	SNR=6.5						
MDH	Madha	5.24	132	ePn	Pn	18 29 30.7	+0.8
MDH	Madha	5.24	132	P	Pn	18 29 31.1	+1.1
	SNR=6.6						
MDH				S	Sn	18 30 27.5	-2.1
MZWR	Madinat Zayed	5.38	161	P	Pn	18 29 33.0	+1.1
MZWR				S	Sn	18 30 31.9	-1.3
UOSS	Minazif	5.43	135	i P	Pn	18 29 33.3	+0.7
	SNR=7.6						
UOSS	Minazif	5.43	135	ePn	Pn	18 29 33.7	+1.1
UOSS	Minazif	5.43	135	P	Pn	18 29 33.9	+1.3
UOSS				S	Sn	18 30 32.1	-2.3
UOSS	Minazif	5.43	135	Pn	Pn	18 29 33.6	+1.0
UOSS				Sn	Sn	18 30 31.6	-2.9
ISFB	Sefidab	5.44	2	ePn	Pn	18 29 34.3	+1.5
HATD	Hatta, Dubai	5.48	137	P	Pn	18 29 34.3	+1.1
HATD	Hatta, Dubai	5.48	137	ePn	Pn	18 29 34.8	+1.6
HATD	Hatta, Dubai	5.48	137	P	Pn	18 29 34.8	+1.6
HATD				S	Sn	18 30 33.6	-1.9
BMDN	Meydan	5.48	331	ePn	Pn	18 29 34.4	+1.0
ASHO	Ashiyiah	5.54	138	i P	Pn	18 29 33.9	-0.2
	SNR=22						
ASHO	Ashiyiah	5.54	138	ePn	Pn	18 29 35.5	+1.4
ASHO	Ashiyiah	5.54	138	P	Pn	18 29 36.0	+1.8
	SNR=22						
ASHO				S	Sn	18 30 35.0	-2.1
GHVR	GHOM	5.60	354	ePn	Pn	18 29 37.1	+2.2
GHVR	GHOM	5.60	354	ePn	Pn	18 29 37.1	+2.2
KBAM	BAM	5.65	86	ePn	Pn	18 29 38.2	+2.5
KBAM				e		18 29 40.5	
	comp=Z,568nm,0.6s						
TPRV	Parvadeh(Tabas	5.75	43	ePn	Pn	18 29 39.7	+2.6
IKFM	Kafar-mosalman	5.83	323	ePn	Pn	18 29 41.1	+3.1
ALNE	Al Ain	5.87	144	P	Pn	18 29 39.7	+1.0
ALNE	Al Ain	5.87	144	ePn	Pn	18 29 40.5	+1.9
ALNE	Al Ain	5.87	144	P	Pn	18 29 40.5	+1.9
ALNE				S	Sn	18 30 45.1	-0.2
IQOM	Qom	5.98	353	ePn	Pn	18 29 41.2	+0.9
HSAM	Samen	6.04	332	ePn	Pn	18 29 42.3	+1.1
IVRN	Varamin	6.09	358	ePn	Pn	18 29 42.9	+1.3
SOHO	SOHO	6.24	138	i P	Pn	18 29 43.3	-0.4
	SNR=12						
SOHO	SOHO	6.24	138	P	Pn	18 29 44.2	+0.5
SOHO				S	Sn	18 30 51.9	-2.4
HAGD	Aghdareh	6.39	338	ePn	Pn	18 29 47.4	+1.5
TNSJ	Nastanj	6.40	37	ePn	Pn	18 29 47.6	+1.6
TKDS	Koohdasht(Taba	6.43	42	ePn	Pn	18 29 48.7	+2.4
DAMV	Damavand	6.71	360	ePn	Pn	18 29 43.6	-6.8
IFIR	Firoozkooh	6.76	5	ePn	Pn	18 29 53.5	+2.5
UMZA	Um Al Zommool	6.78	155	ePn	Pn	18 29 51.7	+0.6
UMZA	Um Al Zommool	6.78	155	P	Pn	18 29 52.5	+1.4
UMZA				S	Sn	18 31 04.1	-3.5
IALM	Almabolaq	6.78	332	ePn	Pn	18 29 52.5	+1.1
ARQ	Araqi	6.86	143	P	Pn	18 29 54.0	+1.7
	SNR=15						
ARQ				S	Sn	18 31 06.1	-3.7
BSRN	Basiran	6.87	62	ePn	Pn	18 29 53.6	+1.2
BSRN	Basiran	6.87	62	ePn	Pn	18 29 53.6	+1.2
IKOO	Kooshah	6.98	58	ePn	Pn	18 29 56.4	+2.4
QABG	Abgarm-Qazvin	7.09	344	ePn	Pn	18 29 57.7	+2.1
HOQ	Hoqain	7.12	137	P	Pn	18 29 56.6	+0.9
HOQ				S	Sn	18 31 12.1	-3.9
SNGE	Sanandaj	7.33	329	ePn	Pn	18 30 00.3	+1.4
SNGE	Sanandaj	7.33	329	ePn	Pn	18 30 00.3	+1.4
IDHR	Dehrash	7.50	322	ePn	Pn	18 30 02.1	+0.9
BSY	Bisya	7.71	141	P	Pn	18 30 04.4	+0.6
BSY				S	Sn	18 31 25.9	-4.6
ZHDN	Zahedan	7.72	84	ePn	Pn	18 30 06.3	+2.2
SHRO	Shahrood	7.84	25	ePn	Pn	18 30 07.3	+1.6
SHRO	Shahrood	7.84	25	ePn	Pn	18 30 07.3	+1.6
RAYN	Ar Rayn	7.92	229	i P	Pn	18 30 07.1	+0.3
	SNR=68						
RAYN	Ar Rayn	7.92	229	P	Pn	18 30 07.2	+0.3
RAYN	Ar Rayn	7.92	229		Pn	18 30 06.9	+0.1
RAYN				Sn	Sn	18 31 31.0	-4.7
SMDO	Samad	7.96	136	P	Pn	18 30 07.9	+0.5
	SNR=5.3						
SMDO				P	Pn	18 30 07.9	+0.5
	SNR=5.3						
SMDO				S	Sn	18 31 34.0	-2.8
	SNR=7.9						
SMDO				S	Sn	18 31 34.0	-2.8
	SNR=7.9						
WSAR	Wadi Sarin	8.20	132	Pn	Pn	18 30 10.5	-0.1
	comp=Z,0.4nm,0.3s,baz=316,slow=7.4,SNR=22						
WSAR				Sn	Sn	18 31 37.3	-5.2
	comp=Z,1.0nm,0.3s,baz=151,slow=19,SNR=2.4						
WSAR	Wadi Sarin	8.20	132	P	Pn	18 30 10.7	+0.1
	SNR=18						
WSAR				S	Sn	18 31 39.9	-2.6
JMDO	Jabal Madar	8.51	138	P	Pn	18 30 15.8	+0.9
JMDO				S	Sn	18 31 44.0	-6.3
SHRT	Shahrakht	8.52	54	ePn	Pn	18 30 17.7	+2.6
SHRT	Shahrakht	8.52	54	ePn	Pn	18 30 17.7	+2.6
SBZV	Sabzevar	8.84	31	ePn	Pn	18 30 22.1	+2.6
WBK	Wadi Bani Khal	8.86	133	P	Pn	18 30 19.2	-0.6
	SNR=6.9						
WBK				S	Sn	18 31 53.9	-5.0
NGCH	Negor - Chabah	8.86	111	ePn	Pn	18 30 20.9	+1.2
SRVN	Saravan	9.29	97	ePn	Pn	18 30 28.1	+2.4
MRVT	Maraveh tapeh	9.38	20	ePn	Pn	18 30 28.7	+1.9
MRVT	Maraveh tapeh	9.38	20	ePn	Pn	18 30 28.7	+1.9
WHFO	Wadi Hawf	11.05	171	P	Pn	18 30 47.9	-1.8
	SNR=19						
SHAO	Shalim	11.32	162	i P	Pn	18 30 53.2	-0.2
	SNR=9.4						
SHAO	Shalim	11.32	162	P	Pn	18 30 52.0	-1.4
	SNR=9.7						
DMTO	DMTO	11.45	166	P	Pn	18 30 54.0	-1.2
	SNR=8.1						
ABTO	Aybut	11.55	174	P	Pn	18 30 54.7	-1.9
	SNR=14						
ASF	Jabal al Asfar	13.43	288	Pn	Pn	18 31 14.5	-7.7
	comp=Z,0.2nm,0.3s,baz=270,slow=3.0,SNR=1.7						
ASF				Sn	Sn	18 33 38.0	-13
	comp=Z,0.3nm,0.3s,baz=139,slow=20,SNR=1.4						
GAR	Garm	18.20	52	P	P	18 32 25.0	+0.6
BR131	Keskin Array S	18.59	310	P	P	18 32 26.2	-2.5
BR131				IAmb	IAmb	18 32 51.3	
	comp=Z,10nm,1.6s						
BRTR	Keskin Array B	18.59	310	P	P	18 32 29.0	+0.4
	comp=Z,0.2nm,0.3s,baz=129,slow=12,SNR=8.0						
BRTR	Keskin Array B	18.59	310	P	P	18 32 26.6	-2.0
ABKAR	Akbulak array	21.22	14	P	P	18 32 55.2	-1.9
ABKAR	Akbulak array	21.22	14	P	P	18 32 56.1	-0.9
AKTO	Aktyubinsk	21.99	10	P	P	18 33 06.0	+0.8
	comp=Z,1.4nm,0.4s,baz=202,slow=12,SNR=6.1						
AAK	Ala-Archa	22.74	47	P	P	18 33 13.6	0.0
	comp=Z,0.4nm,0.3s,baz=208,slow=15,SNR=2.0						
BOOM	Boomskoye usch	23.60	49	P	P	18 33 22.0	-0.3
BOOM				IAmb	IAmb	18 33 22.3	
	comp=Z,16nm,1.6s						
BELG	Belogornoye	23.70	353	P	P	18 33 23.8	+0.9
	comp=Z,9.4nm,0.7s,baz=226,slow=2.2,SNR=5.2						
ALN	Alexandroupoli	24.33	306	P	P	18 33 27.7	-1.3
ALN				IAmb	IAmb	18 33 28.4	
	comp=Z,4.6nm,1.0s						
MLR	Muntele Rosu	26.39	316	P	P	18 33 48.4	+0.7
	comp=Z,1.7nm,0.6s,baz=290,slow=12,SNR=5.3						
MLR	Muntele Rosu	26.39	316	P	P	18 33 47.2	-0.5
MLR				IAmb	IAmb	18 34 11.1	
	comp=Z,7.0nm,1.2s						
ITM	Ithomi	26.45	296	P	P	18 33 46.6	-1.7
BVAR	Borovoye Array	27.66	24	P	P	18 33 59.9	+1.0
	comp=Z,0.4nm,0.4s,baz=203,slow=14,SNR=3.6						
BURAR	Bucovina Array	27.92	319	P	P	18 34 01.9	+0.5
BURAR				IAmb	IAmb	18 34 14.4	
	comp=Z,3.1nm,1.5s						
BUR08	Bucovina Ar. S	27.95	319	P	P	18 34 02.8	+1.2
BUR08				IAmb	IAmb	18 34 28.5	
	comp=Z,9.3nm,1.6s						
KURBB	Kurchatov Arra	29.50	35	P	P	18 34 16.4	+1.1
	comp=Z,0.4nm,0.5s,baz=236,slow=9.1,SNR=7.2						
MKAR	Makanchi Array	29.59	45	LR	LR	18 47 48.7	
	comp=Z,66nm,21.2s,baz=324,slow=40						
NRCA	Norcia	34.14	305	P	P	18 34 55.0	-1.2
PALK	Pallekele	34.56	123	P	P	18 34 59.9	-0.3
ZAA0	Zalesovo Array	34.58	34		P	18 34 58.6	-1.2
ZAA0				IAmb	IAmb	18 35 01.2	
	comp=Z,2.1nm,0.8s						
ZALV	Zalesovo Beam	34.58	34	P	P	18 35 00.2	+0.4
	comp=Z,1.2nm,0.4s,baz=235,slow=11,SNR=6.4						
ZALV	Zalesovo Beam	34.58	34	P	P	18 34 59.5	-0.3
GERES	GERESS Array B	35.37	315	P	P	18 35 06.5	-0.3
	comp=Z,0.4nm,0.6s,baz=96,slow=6.0,SNR=4.1						
GERES	GERESS Array B	35.37	315	P	P	18 35 04.9	-1.9
KHC	Kasperske Hory	35.54	315	eP	P	18 35 07.5	-0.7
KHC	Kasperske Hory	35.54	315	P	P	18 35 07.8	-0.5
KHC				IAmb	IAmb	18 35 36.2	
	comp=Z,3.6nm,1.4s						
WTTA	Wattenberg	36.20	312	eP	P	18 35 14.4	+0.3
	comp=Z,1.5nm,0.5s						
WATA	Walderalm	36.25	312	eP	P	18 35 14.8	+0.3
	comp=Z,1.6nm,0.4s						
SQTA	Sankt Quirin	36.46	311	eP	P	18 35 16.4	+0.1
	comp=Z,2.5nm,0.4s						
KEST	Kesra	36.47	292	LR	LR	18 54 48.6	
	comp=Z,61nm,18.6s,baz=185,slow=44						
MOTA	Moosalm	36.57	312	eP	P	18 35 17.4	+0.2
	comp=Z,1.2nm,0.4s						
FETA	Feichten	36.73	311	eP	P	18 35 19.0	+0.4
	comp=Z,0.8nm,0.6s						
FIA1	FINESS Array S	36.82	339	P	P	18 35 18.1	-0.8
FINES	FINESS Array B	36.82	339	P	P	18 35 19.1	+0.2
	comp=Z,2.2nm,0.6s,baz=138,slow=11,SNR=12						
RETA	Reutte	36.83	312	eP	P	18 35 19.6	+0.3
	comp=Z,0.6nm,0.3s						
MSSA	Maissana	36.98	306	P	P	18 35 21.2	+0.6
DAVA	Damuels	37.36	311	eP	P	18 35 24.1	+0.2
	comp=Z,2.0nm,0.4s						
SENIN	Lac Senin/Sane	38.89	309	P	P	18 35 37.1	+0.2
BNI	Bardonecchia	39.10	307	P	P	18 35 39.1	+0.6
BNI				IAmb	IAmb	18 35 44.5	
	comp=Z,14nm,1.4s						
NOA	NORSAR Array B	42.01	332	P	P	18 36 01.5	-0.7
	comp=Z,0.9nm,0.8s,baz=122,slow=8.9,SNR=1.4						
ARCES	ARCESS Array B	43.45	347	P	P	18 36 14.2	+0.4
	comp=Z,2.8nm,0.9s,baz=150,slow=7.3,SNR=2.0						
CMAR	Chiang Mai Arr	43.98	93	P	P	18 36 18.9	+0.2
	comp=Z,0.3nm,0.6s,baz=285,slow=9.6,SNR=2.8						
SONM	Songino Array	45.63	50	P	P	18 36 32.7	+1.0
	comp=Z,0.4nm,0.6s,baz=232,slow=12,SNR=3.2						
TORD	Torodi Ar. Bea	49.15	262	P	P	18 36 59.4	+0.1
	comp=Z,0.9nm,0.5s,baz=56,slow=8.4,SNR=8.6						
TORD	Torodi Ar. Bea	49.15	262	P	P	18 36 58.5	-0.7
TORD				IAmb	IAmb	18 37 30.9	
	comp=Z,3.5nm,1.4s						
KSRS	Korea Array	62.55	60	P	P	18 38 34.9	-0.2
	comp=Z,1.7nm,0.6s,baz=280,slow=6.7,SNR=10						
ILAR	Eielson Array	85.48	8	P	P	18 40 48.7	+0.1
	comp=Z,0.3nm,0.6s,baz=322,slow=4.5,SNR=2.3						

IDC 05 18:37:50.8±4.0, **3.°92S**×**152.°28E**, **h0**km, **mb3.0**/2, **mb1 3.3**/2, **mb1mx3.1**/19, **mbtmp3.0**/2, **MS3.5**/2, **Ms1 3.5**/2, **ms1mx2.8**/10, **Error ellipse: s-maj=170.5km s-min=52.9km az=118.0**, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.66	226	P	P	18 43 05.1	+1.0
	0.2nm,0.4s,baz=52,slow=9.7,SNR=6.1						
ASAR	Alice Springs	26.46	220	P	P	18 43 29.4	-0.5
	0.1nm,0.8s,baz=52,slow=9.2,SNR=4.0						
BATI	Baumata	29.06	256	LR	LR	18 57 57.9	
	comp=Z,96nm,18.1s,baz=48,slow=42						
KAPI	Kappang	32.44	267	LR	LR	18 59 45.4	
	comp=Z,62nm,18.4s,baz=105,slow=40						
TORD	Torodi Ar. Bea	149.53	289	PKPbc	PKPbc	18 57 42.4	-0.9
	0.4nm,0.8s,baz=55,slow=1.6,SNR=2.5						

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*IDC **05** 18:47:25.3±1.4, 3.°82S×134.°14E, h0km, mb3.8/4, mb1 4.2/7, mb1mx3.7/26, mbtmp4.1/7, ML4.2/3, MS3.2/7, Ms1 3.2/7, ms1mx2.9/35, Error ellipse: s-maj=43.2km s-min=23.0km az=70.0*
*NEIC **05** 18:47:29.9±3.0, 4.°04S±0.°07×133.°90E±0.°07, h31km±8km, mb4.0/8, Error ellipse: s-maj=12.2km s-min=7.7km az=45.0*
*DJA **05** 18:47:31.5±2.9, 4˚S±4˚×13˚4E±˚, h28km±30km, M4.4/9, mB5.2/1, mb4.5/9, MLv4.4/6, Mw(mB)4.6/1*
ISC 05 18:47:30.6±0.6, **4.°20S**±0.°05×**133.°84E**±0.°06, **h35**km, **n45**, σ**2.s52**/42, **mb3.8**/5, **MS3.3**/5, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.03	309	P	Pn	18 48 02.5	+0.2
FAKI	Fak Fak	2.03	309		Pn	18 48 01.5	-0.8
SRPI	Serui, Papua	3.33	46	P	Pn	18 48 21.4	+1.2
SIJI	Sorong	4.18	322	Pn	Pn	18 48 29.6	-2.3
	4.2nm,0.3s,baz=235,slow=22,SNR=96						
SIJI				Sn	Sn	18 49 14.7	-5.0
	9.4nm,0.3s,baz=313,slow=18,SNR=5.4						
SIJI				Lg	Lg	18 49 38.8	
	baz=143,slow=20,SNR=1.0						
SWI	Sorong	4.19	322	P	Pn	18 48 42.4	+10
SAUI	Saumlaki	4.53	214	P	Pn	18 48 48.9	+12
SAUI	Saumlaki	4.53	214		Pn	18 48 38.8	+2.2
MSAI	Masohi	4.97	280	P	Pn	18 48 55.4	+13
SMPI	Sarmi	5.34	66	P	Pn	18 48 48.3	+0.5
AAI	Ambon	5.65	275	P	Pn	18 48 54.0	+1.9
	0.2nm46nm,0.5s						
LBMI	Labuha	7.25	299	P	Pn	18 49 14.4	+0.3
	0.1nm19nm,1.0s						
SANI	Sanana	8.12	285	P	Pn	18 49 26.6	+0.6
	15nm,0.9s						
MTN	Manton Dam	9.00	197	Pn	Pn	18 49 40.7	+2.7
SOEI	Soe	10.98	239	P	Pn	18 50 20.1	+15
SOEI	Soe	10.98	239	Pn	Pn	18 50 07.7	+2.3
BATI	Baumata	11.72	239	Pn	Pn	18 50 19.4	+3.9
	3.4nm,0.3s,baz=164,slow=4.8,SNR=8.1						
BATI				Sn	Sn	18 52 27.9	+2.7
	1.0nm,0.3s,baz=107,slow=19,SNR=1.9						
BATI	Baumata	11.72	239	P	Pn	18 50 18.8	+3.3
	18nm,0.8s						
KNRA	Kununurra	12.45	203	Pn	Pn	18 50 26.4	+1.0
EDFI	Ende, Flores	12.88	249	P	Pn	18 50 34.7	+3.3
	17nm,1.3s						
COEN	Coen	13.38	137	Pn	Pn	18 50 36.6	-1.4
PMG	Port Moresby	14.20	112	Pn	Pn	18 50 48.3	-1.0
WB0	Warramunga Arr	15.49	178		Pn	18 51 05.9	-0.6
WB0				IAmb	IAmb	18 51 23.8	

	comp=Z,7.8nm,0.8s						
WRA	**Warramunga Arr**	**15.66**	**178**	Pn	**Pn**	**18 51 08.7**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=356,slow=13,SNR=37						
WRA				Sn	**Sn**	**18 53 56.0**	**-5.3**
	comp=Z,0.3nm,0.3s,baz=359,slow=23,SNR=5.9						
WRA				LR	LR	18 57 07.4	
	comp=Z,28nm,20.7s,baz=355,slow=36						
WRA	**Warramunga Arr**	**15.66**	**178**	Pn	**Pn**	**18 51 06.8**	**-1.9**
WB2	**Warramunga Arr**	**15.66**	**178**	Pn	**Pn**	**18 51 07.8**	**-0.9**
WR0	**Warramunga Arr**	**15.68**	**178**		**Pn**	**18 51 06.4**	**-2.7**
WR0				IAmb	IAmb	18 51 26.0	
	comp=Z,12nm,0.8s						
FITZ	**Fitzroy Crossi**	**15.98**	**210**	Pn	**Pn**	**18 51 13.3**	**+0.5**
	comp=Z,1.7nm,0.3s,baz=26,slow=10,SNR=59						
FITZ				Sn	**Sn**	**18 54 03.1**	**-5.8**
	comp=Z,0.8nm,0.3s,baz=187,slow=13,SNR=8.4						
AS31	**Alice Springs**	**19.36**	**180**	P	**P**	**18 51 54.0**	**+0.7**
AS31				IAmb	IAmb	18 52 06.8	
	comp=Z,4.6nm,0.7s						
ASAR	**Alice Springs**	**19.36**	**180**	P	**Pn**	**18 51 57.3**	**+2.7**
	comp=Z,0.8nm,0.3s,baz=9.2,slow=11,SNR=100						
ASAR				S	**S**	**18 55 24.3**	**-6.2**
	comp=Z,0.1nm,0.3s,baz=1.7,slow=26,SNR=6.7						
ASAR				LR	LR	19 00 42.9	
	comp=Z,63nm,20.3s,baz=1.5,slow=40						
ASAR	**Alice Springs**	**19.36**	**180**	P	**P**	**18 51 53.7**	**+0.4**
CTAO	**Charters Tower**	**19.90**	**144**	P	**P**	**18 51 60.0**	**+0.7**
CTAO				IAmb	IAmb	18 52 09.5	
	comp=Z,12nm,1.1s						
MBWA	**Marble Bar**	**21.73**	**218**	P	**P**	**18 52 18.5**	**-0.5**
PSA00	**Pilbara Seismi**	**21.97**	**217**	P	**P**	**18 52 24.3**	**+2.7**
HNR	**Honiara**	**26.43**	**103**	LR	LR	19 04 37.3	
	comp=Z,76nm,19.4s,baz=50,slow=39						
STKA	**Stephens Creek**	**28.48**	**166**	P	**P**	**18 53 24.9**	**+2.3**
	comp=Z,1.7nm,0.8s,baz=80,slow=3.2,SNR=2.8						
STKA				LR	LR	19 06 28.0	
	comp=Z,73nm,20.5s,baz=357,slow=40						
STKA	**Stephens Creek**	**28.48**	**166**	P	**P**	**18 53 23.6**	**+1.0**
MJAR	**Matsushiro Arr**	**40.73**	**5**	LR	LR	19 09 12.2	
	comp=Z,57nm,20.4s,baz=250,slow=32						
CMAR	**Chiang Mai Arr**	**41.09**	**304**	P	**P**	**18 55 11.5**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=126,slow=6.7,SNR=2.8						
KSRS	**Korea Array**	**41.80**	**353**	LR	LR	19 11 36.3	
	comp=Z,15nm,19.7s,baz=214,slow=35						
MSVF	**Nonsavu**	**45.31**	**111**	LR	LR	19 14 30.4	
	comp=Z,75nm,18.3s,baz=324,slow=36						
HHC	**Hu-ho-hao-te**	**49.25**	**338**	*e*P	**P**	**18 56 17.5**	**+1.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,7.6s						
WMQ	**Urumqi**	**63.25**	**324**	*e*P	**P**	**18 57 57.1**	**+1.3**
MKAR	**Makanchi Array**	**68.08**	**325**	P	**P**	**18 58 26.3**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=110,slow=8.5,SNR=3.3						
ABKAR	**Akbulak array**	**82.74**	**321**	P	**P**	**18 59 50.1**	**-0.8**
ILAR	**Eielson Array**	**89.21**	**25**	P	**P**	**19 00 20.3**	**-2.2**
	comp=Z,0.4nm,0.9s,baz=270,slow=4.5,SNR=2.4						

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*IDC **05** 19:06:42.5±1.1,44°.10N×105°.70W,h0^{km},mb1 3.6/5, mb1mx3.4/46,mbtmp3.3/5,ML3.0/4,Error ellipse: s-maj=25.8km s-min=8.9km az=148.0*

*NEIC **05** 19:06:42.1±1.0,43°.79N±0°.05×105°.25W±0°.04,h0^{km}±1^{km}, ML3.2/52,Error ellipse: s-maj=9.4km s-min=5.3km az=167.0*

ISC 05 19:06:41.6±1.0,**43°.80N**±0°.06×**105°.27W**±0°.07,**h0^{km},n43,** σ**0^{s}.73**/43,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.95**	**70**		**Pg**	**19 07 00.1**	**+0.4**
K22A	**Casper**	**1.47**	**219**	Pn	**Pn**	**19 07 07.9**	**-1.6**
K22A				IAML		19 07 31.9	
	comp=N,410nm,0.3s						
K22A				IAML		19 07 37.1	
	comp=E,405nm,0.4s						
RWWY	**Rawlins**	**2.55**	**215**	Pn	**Pn**	**19 07 25.1**	**+0.6**
RWWY				IAML		19 08 02.1	
	comp=E,186nm,0.7s						
LAO	**LASA Array**	**2.96**	**347**	Pn	**Pn**	**19 07 30.1**	**+0.2**
RLMT	**Red Lodge**	**3.15**	**296**		**Pn**	**19 07 32.7**	**+0.1**
RLMT				IAML		19 08 29.6	
	comp=E,62nm,0.9s						
RLMT				IAML		19 08 35.7	
	comp=E,48nm,0.7s						
BW06	**Boulder Array**	**3.30**	**253**		**Pn**	**19 07 34.9**	**+0.2**
BW06				IAML		19 08 29.8	
	comp=E,40nm,0.9s						
BW06				IAML		19 08 32.3	
	comp=E,44nm,0.8s						
PD31	**Pinedale Array**	**3.30**	**253**	Pn	**Pn**	**19 07 34.5**	**-0.2**
PDAR	**Pinedale Array**	**3.30**	**253**	Pn	**Pn**	**19 07 36.1**	**+1.4**
	comp=E,9.4nm,0.3s,baz=71,slow=18,SNR=31						
PDAR				Lg	Lg	19 08 20.1	
	comp=E,11nm,0.3s,baz=68,slow=33,SNR=18						
PDAR	**Pinedale Array**	**3.30**	**253**	Pn	**Pn**	**19 07 34.9**	**+0.2**
YMP	**Mirror Lake Pl**	**3.63**	**287**		**Pn**	**19 07 39.0**	**-0.4**
GCMT	**Greycliff**	**3.71**	**304**	Pn	**Pn**	**19 07 40.8**	**+0.6**
OGNE	**Ogallala**	**3.73**	**139**		**Pn**	**19 07 41.4**	**+1.0**
H17A	**Grant Village**	**3.87**	**281**		**Pn**	**19 07 43.2**	**+0.7**
H17A				IAML		19 08 46.4	
	comp=E,22nm,1.7s						
LOHW	**Long Hollow**	**3.87**	**269**	Pn	**Pn**	**19 07 43.0**	**+0.4**
LOHW				IAML		19 08 48.4	
	comp=E,27nm,0.9s						
FLWY	**Flagg Ranch**	**3.93**	**276**		**Pn**	**19 07 43.6**	**+0.2**
FLWY				IAML		19 08 57.1	
	comp=E,43nm,1.6s						
MOOW	**Moose Ponds**	**3.97**	**271**	Pn	**Pn**	**19 07 44.0**	**+0.1**
ISCO	**Idaho Springs**	**4.01**	**184**	Pn	**Pn**	**19 07 45.1**	**+0.6**
REDW	**Red Top Meadow**	**4.08**	**266**		**Pn**	**19 07 46.2**	**+0.7**
REDW				IAML		19 08 57.7	
	comp=E,47nm,0.8s						
YHH	**Holmes Hill**	**4.13**	**286**		**Pn**	**19 07 47.0**	**+0.9**
YHH				IAML		19 09 03.5	
	comp=N,17nm,1.6s						
TPAW	**Teton Pass**	**4.14**	**268**		**Pn**	**19 07 46.6**	**+0.3**
TPAW				IAML		19 09 04.2	
	comp=N,28nm,0.9s						
TPAW				IAML		19 09 15.2	
	comp=N,42nm,0.9s						
FXWY	**Fox Creek**	**4.18**	**270**		**Pn**	**19 07 47.7**	**+0.9**
YMR	**Madison River**	**4.18**	**284**		**Pn**	**19 07 47.7**	**+0.8**
YMR				IAML		19 09 12.6	
	comp=N,33nm,1.0s						
YMR				IAML		19 09 23.4	
	comp=E,42nm,0.9s						
O20A	**White River Ci**	**4.28**	**212**	Pn	**Pn**	**19 07 48.2**	**0.0**
AHID	**Auburn Hatcher**	**4.38**	**258**		**Pn**	**19 07 50.0**	**+0.4**
AHID				IAML		19 09 15.5	
	comp=E,27nm,0.8s						
QLMT	**Earthquake Lak**	**4.54**	**285**		**Pn**	**19 07 52.1**	**+0.4**
RDMU	**Red Mountain**	**4.54**	**226**		**Pn**	**19 07 52.7**	**+1.0**
RDMU				IAML		19 09 06.8	
	comp=N,26nm,0.9s						
RDMU				IAML		19 09 08.4	
	comp=E,35nm,0.9s						
DGMT	**Dagmar**	**4.73**	**9**		**Pn**	**19 07 55.5**	**+1.4**
BOZ	**Bozeman (W)**	**4.88**	**294**	Pn	**Pn**	**19 07 57.3**	**+0.9**
BOZ				IAML		19 09 13.3	
	comp=E,14nm,2.1s						
BOZ				IAML		19 09 19.1	
	comp=E,20nm,0.8s						
HWUT	**Hardware Ranch**	**5.13**	**247**		**Pn**	**19 08 00.6**	**+0.7**
HWUT				IAML		19 09 32.2	
	comp=E,20nm,2.0s						
KSCO	**Kaye Shedlock’**	**5.18**	**157**	Pn	**Pn**	**19 08 00.8**	**+0.3**
HRY	**Holter Researc**	**5.47**	**304**	Pn	**Pn**	**19 08 05.1**	**+0.7**
P18A	**Preston Nutter**	**5.59**	**223**		**Pn**	**19 08 06.4**	**+0.1**
MDND	**Maddock**	**5.66**	**42**	Pn	**Pn**	**19 08 07.8**	**+0.9**
SRU	**San Rafael Swe**	**6.13**	**222**		**Pn**	**19 08 13.0**	**-0.5**
ECSD	**EROS Data Cent**	**6.27**	**88**	Pn	**Pn**	**19 08 15.6**	**+0.3**
DUG	**Dugway, Tooele**	**6.67**	**240**	Pn	**Pn**	**19 08 19.9**	**-1.1**
T25A	**Trinidad**	**6.69**	**174**	Pn	**Pn**	**19 08 21.4**	**+0.2**
F33A	**5 Mile Ranch,**	**6.70**	**69**		**Pn**	**19 08 20.7**	**-0.5**
WALA	**Waterton Lakes**	**7.95**	**314**		**Pn**	**19 08 38.0**	**-0.5**
ELK	**Elko**	**8.00**	**251**	Pn	**Pn**	**19 08 40.1**	**+0.8**
	comp=E,0.2nm,0.3s,baz=63,slow=4.5,SNR=3.1						
ELK				Lg	Lg	19 10 51.3	
	comp=E,0.1nm,0.3s,baz=192,slow=19,SNR=1.7						
ULM	**Lac du Bonnet**	**9.09**	**42**	Pn	**Pn**	**19 08 52.9**	**-1.1**
	comp=E,1.1nm,0.3s,baz=231,slow=13,SNR=5.8						
ULM				Lg	Lg	19 11 23.2	
	comp=E,1.0nm,0.3s,baz=124,slow=18,SNR=5.0						
NVAR	**Mina Array Bea**	**11.20**	**246**	Pn	**Pn**	**19 09 23.9**	**+0.8**
	comp=E,0.2nm,0.3s,baz=56,slow=14,SNR=1.8						
TXAR	**Lajitas Array**	**14.50**	**174**	Pn	**P**	**19 10 14.8**	**-0.2**
	comp=E,0.1nm,0.3s,baz=353,slow=13,SNR=2.4						

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*DJA **05** 19:10:52.8±0.1,1°S±2°×12°2E±°,h10^{km},M4.6/11,mB5.1/7, mb4.7/11,MLv4.7/8,Mw(mB)4.4/7*

*NEIC **05** 19:10:53.2±1.8,0°.79S±0°.05×122°.39E±0°.05,h10^{km}±1^{km}, mb4.5/33,Error ellipse: s-maj=10.7km s-min=5.1km az=225.0*

*IDC **05** 19:10:54.6±3.1,0°.60S×122°.47E,h39^{km}±30^{km},mb3.9/10, mb1 4.1/14,mb1mx3.8/44,mbtmp4.2/14,ML3.9/4,MS3.5/11, Ms1 3.5/11,ms1mx3.3/38,Error ellipse: s-maj=21.6km s-min=14.1km az=51.0*

ISC 05 19:10:52.1±0.4,**0°.78S**±0°.04×**122°.42E**±0°.05,**h10^{km},n125,** σ**1^{s}.42**/119,**mb4.5**/43,**MS3.4**/7,**3D,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APSI	**Ampana**	**0.78**	**261**	P	**Pg**	**19 11 05.7**	**-1.5**
MRSI	**Marisa**	**1.34**	**339**	P	**Pn**	**19 11 14.5**	**-2.4**
GTOI	**Gorontalo**	**1.53**	**23**	P	**Pn**	**19 11 18.3**	**-1.1**
KMSI	**Cibinong**	**2.06**	**49**	P	**Pn**	**19 11 26.9**	**+0.1**
TOLI2	**Tolitoli**	**2.50**	**319**		**Pn**	**19 11 31.9**	**-0.8**
TOLI2				Sn	**Sn**	**19 12 04.7**	**+1.4**
MPSI	**Mapaga**	**2.76**	**294**	P	**Pn**	**19 11 35.8**	**-0.6**
TTSI	**Tana Toraja**	**3.44**	**229**	P	**Pn**	**19 11 47.4**	**+1.7**
SANI	**Sanana**	**3.78**	**109**	P	**Pn**	**19 11 50.8**	**+0.3**
SPSI	**Sidrap Palu**	**4.12**	**220**	P	**Pn**	**19 11 55.2**	**+0.1**
BNSI	**Bone**	**4.27**	**213**	P	**Pn**	**19 11 57.9**	**+0.7**
KAPI	**Kappang**	**4.98**	**212**	Pn	**Pn**	**19 12 07.9**	**+1.1**
	16nm,0.3s,baz=43,slow=6.8,SNR=140						
KAPI				Sn	**Sn**	**19 13 03.3**	**-1.3**
	4.2nm,0.3s,baz=228,slow=22,SNR=7.0						
KAPI				LR	LR	19 14 26.3	
	comp=Z,898nm,19.8s,baz=68,slow=41						
KAPI	**Kappang**	**4.98**	**212**	Pn	**Pn**	**19 12 07.7**	**+0.8**
KAPI				Sn	**Sn**	**19 13 03.6**	**-0.9**
BKSI	**Bulukumba**	**5.06**	**207**	P	**Pn**	**19 12 08.3**	**+0.3**
LBMI	**Labuha**	**5.08**	**88**	P	**Pn**	**19 12 09.7**	**+1.3**
TNTI	**Ternate**	**5.18**	**73**	P	**Pn**	**19 12 12.6**	**+2.9**
	0.7nm1µm164nm,0.9s						
TNTI	**Ternate**	**5.18**	**73**	Pn	**Pn**	**19 12 12.2**	**+2.5**
BKB	**Balikpapan**	**5.54**	**265**	P	**Pn**	**19 12 15.9**	**+1.2**
BKB	**Balikpapan**	**5.54**	**265**	Pn	**Pn**	**19 12 15.7**	**+1.0**
BSSI	**Bau Bau, Buton**	**5.66**	**200**	P	**Pn**	**19 12 16.3**	**0.0**
AAI	**Ambon**	**6.45**	**117**	P	**Pn**	**19 12 29.9**	**+2.7**
	0.7nm2µm143nm,0.7s						
KBKI	**Kotabaru**	**6.73**	**248**	P	**Pn**	**19 12 30.8**	**-0.2**
MYLDM	**Lahad Datu**	**7.10**	**327**	Pn	**Pn**	**19 12 37.6**	**+1.5**
MTKI	**Muara Teweh, K**	**7.53**	**269**	P	Pb	19 12 52.5	-10
MMRI	**Maumere**	**7.80**	**181**	P	**Pn**	**19 12 46.7**	**+1.0**
MMRI	**Maumere**	**7.80**	**181**	Pn	**Pn**	**19 12 47.0**	**+1.3**
EDFI	**Ende, Flores**	**7.95**	**185**	P	**Pn**	**19 12 48.4**	**+0.6**
BBKI	**Banjar Baru**	**8.03**	**251**	P	**Pn**	**19 12 49.9**	**+1.1**
KCP	**Kidapawan**	**8.19**	**19**	⇓*e*P	**Pn**	**19 12 51.0**	**-0.1**
DAV	**Davao City (W)**	**8.41**	**22**	LR	LR	19 16 10.7	
	comp=Z,546nm,21.1s,baz=158,slow=38						
DAV	**Davao City (W)**	**8.41**	**22**	Pn	**Pn**	**19 12 55.1**	**+1.0**
PAGZ	**Pagadian**	**8.63**	**6**	*e*P	**Pn**	**19 12 58.0**	**+0.9**
SWI	**Sorong**	**8.84**	**91**	P	**Pn**	**19 13 01.5**	**+1.5**
SIJI	**Sorong**	**8.85**	**91**	Pn	**Pn**	**19 13 00.5**	**+0.4**
	3.8nm,0.3s,baz=247,slow=9.4,SNR=27						
SIJI				Sn	**Sn**	**19 14 38.0**	**-1.9**
	0.5nm,0.3s,baz=330,slow=20,SNR=1.1						
BUKP	**Musuan**	**9.00**	**17**	*e*P	**Pn**	**19 13 02.1**	**-0.1**
SOEI	**Soe**	**9.10**	**168**	P	Pn	19 13 11.7	+8.0
SOEI	**Soe**	**9.10**	**168**	Pn	**Pn**	**19 13 05.3**	**+1.6**
KKM	**Kota Kinabalu**	**9.19**	**318**	Pn	**Pn**	**19 13 06.1**	**+1.3**
BATI	**Baumata**	**9.44**	**173**	Pn	**Pn**	**19 13 11.6**	**+3.3**
	1.5nm,0.3s,baz=355,slow=1.1,SNR=5.6						
BATI				LR	LR	19 17 12.7	
	comp=Z,336nm,18.1s,baz=350,slow=39						
BATI	**Baumata**	**9.44**	**173**	P	Pn	19 13 25.8	+18
BASI	**Baing, Sumba**	**9.55**	**191**	P	Pn	19 13 24.2	+14
FAKI	**Fak Fak**	**10.05**	**102**	P	**Pn**	**19 13 16.0**	**-0.6**
	763nm78nm,1.0s						
FAKI	**Fak Fak**	**10.05**	**102**	Pn	**Pn**	**19 13 16.1**	**-0.6**
SBUM	**Sibu**	**10.69**	**288**	Pn	**Pn**	**19 13 26.7**	**+1.3**
JAGI	**Jajag, Banyuwa**	**11.23**	**227**	Pn	**Pn**	**19 13 33.2**	**+0.5**
SAUI	**Saumlaki**	**11.38**	**129**	Pn	**Pn**	**19 13 37.1**	**+2.3**
KSM	**Kuching**	**12.32**	**280**	Pn	**Pn**	**19 13 48.4**	**+0.8**
SRPI	**Serui, Papua**	**13.86**	**95**	P	P	19 14 25.8	+8.7
MTN	**Manton Dam**	**14.77**	**145**	Pn	**Pn**	**19 14 23.5**	**+2.3**
LEM	**Lembang**	**15.94**	**248**	LR	LR	19 21 31.7	
	comp=Z,308nm,18.0s,baz=60,slow=40						
KNRA	**Kununurra**	**16.07**	**157**	Pn	**Pn**	**19 14 39.3**	**+1.0**
SMPI	**Sarmi**	**16.33**	**94**	P	**Pn**	**19 14 40.8**	**-0.8**
	20nm,1.1s						
PPBI	**Pangkal Pinang**	**16.34**	**265**	P	**P**	**19 14 43.9**	**-0.8**
	4µm18nm,0.6s						
FITZ	**Fitzroy Crossi**	**17.50**	**170**	P	**P**	**19 14 57.4**	**-0.1**
	0.0nm,0.3s,baz=346,slow=17,SNR=2.9						
FITZ				LR	LR	19 23 59.1	
	comp=Z,86nm,18.9s,baz=352,slow=44						
MDSI	**Maura Dua**	**18.59**	**258**	P	**Pn**	**19 15 11.1**	**+1.3**
	597nm14nm,1.4s						
MASI	**Maura Aman, Be**	**20.30**	**263**	P	**P**	**19 15 28.8**	**+0.4**
	81nm,1.3s						
PSA00	**Pilbara Seismi**	**20.82**	**187**	P	**P**	**19 15 33.5**	**-0.4**
PSA00				IAmb	IAmb	19 15 38.7	
	comp=Z,19nm,1.0s						
PSA00	**Pilbara Seismi**	**20.82**	**187**	P	**P**	**19 15 33.8**	**0.0**
PSA00				IAmb	IAmb	19 15 38.7	
	comp=Z,5.6nm,1.1s						
IPM	**Ipoh**	**22.01**	**284**	P	**P**	**19 15 46.7**	**-0.1**
IPM				IAmb	IAmb	19 15 55.5	
	comp=Z,28nm,1.5s						
WB0	**Warramunga Arr**	**22.21**	**149**	P	**P**	**19 15 49.7**	**+0.8**
WB0				IAmb	IAmb	19 16 16.6	
	comp=Z,15nm,1.0s						
WRA	**Warramunga Arr**	**22.33**	**149**	P	**P**	**19 15 51.0**	**+0.8**
	comp=Z,4.8nm,1.0s,baz=325,slow=7.9,SNR=19						
WRA	**Warramunga Arr**	**22.33**	**149**	P	**P**	**19 15 50.5**	**+0.4**
WB2	**Warramunga Arr**	**22.34**	**149**	P	**P**	**19 15 51.3**	**+1.0**
WB2				IAmb	IAmb	19 16 17.2	
	comp=Z,11nm,1.1s						
WR0	**Warramunga Arr**	**22.45**	**149**	P	**P**	**19 15 51.9**	**+0.4**
WR0				IAmb	IAmb	19 16 11.0	
	comp=Z,14nm,1.0s						
KULM	**Kulim**	**22.57**	**286**	P	**P**	**19 15 52.1**	**-0.6**
KULM				IAmb	IAmb	19 16 03.5	
	comp=Z,25nm,1.4s						
MNSI	**Mandailing Nat**	**22.89**	**274**	P	**P**	**19 15 56.9**	**+0.7**
UBPT	**Khong Chiam**	**23.14**	**314**	P	**P**	**19 15 59.3**	**+0.5**
UBPT				IAmb	IAmb	19 16 26.5	
	comp=Z,20nm,1.3s						
RPSI	**Rantau Prapat**	**23.74**	**278**	P	**P**	**19 16 04.2**	**-0.6**
PSI	**Prapat**	**23.76**	**279**	P	**P**	**19 16 04.2**	**-0.9**
	comp=Z,11nm,0.7s,baz=116,slow=4.2,SNR=16						
PSI				LR	LR	19 26 01.8	
	comp=Z,135nm,20.7s,baz=104,slow=38						
TPUB	**Ta-pu**	**24.00**	**356**	P	**P**	**19 16 07.2**	**+0.1**
YULB	**Yu-li**	**24.06**	**357**	P	**P**	**19 16 07.6**	**0.0**
YULB				IAmb	IAmb	19 16 23.9	
	comp=Z,45nm,1.3s						
SSLB	**Suanglung**	**24.47**	**357**	P	**P**	**19 16 12.1**	**+0.6**
GSI	**Gunungsitoli**	**24.93**	**275**	P	**P**	**19 16 15.8**	**0.0**
	comp=Z,38nm,1.0s						
GSI	**Gunungsitoli**	**24.93**	**275**	P	**P**	**19 16 14.8**	**-1.0**
MANU	**Manus Island**	**24.97**	**93**	P	**P**	**19 16 16.4**	**+0.3**
MANU				IAmb	IAmb	19 16 29.2	
	comp=Z,16nm,1.1s						
YHNB	**Yeheng**	**25.32**	**358**	P	**P**	**19 16 19.9**	**+0.7**
AS31	**Alice Springs**	**25.33**	**155**	P	**P**	**19 16 19.5**	**+0.2**
ASAR	**Alice Springs**	**25.33**	**155**	P	**P**	**19 16 19.9**	**+0.6**
	comp=Z,2.5nm,0.6s,baz=334,slow=8.9,SNR=59						
ASAR				PcP	**PcP**	**19 19 51.3**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=348,slow=1.9,SNR=7.2						
ASAR				LR	LR	19 27 17.3	
	comp=Z,65nm,18.6s,baz=334,slow=39						
PMG	**Port Moresby**	**26.07**	**110**	P	**P**	**19 16 24.1**	**-1.9**
	comp=Z,22nm,0.8s,baz=313,slow=6.6,SNR=7.3						
PMG	**Port Moresby**	**26.07**	**110**	P	**P**	**19 16 26.2**	**+0.1**
CMAR	**Chiang Mai Arr**	**29.97**	**311**	P	**P**	**19 16 58.5**	**-2.5**
	comp=Z,0.8nm,0.7s,baz=140,slow=7.3,SNR=7.4						
CMAR				LR	LR	19 31 04.5	
	comp=Z,61nm,18.2s,baz=169,slow=40						
CMAR	**Chiang Mai Arr**	**29.97**	**311**	P	**P**	**19 17 01.2**	**+0.2**
CHTO	**Chiang Mai**	**30.19**	**311**	P	**P**	**19 17 01.8**	**-1.0**
CHTO				IAmb	IAmb	19 17 26.0	
	comp=Z,6.6nm,1.1s						
KMI	**Kunming**	**32.04**	**325**	⇓P	P	19 17 27.4	+8.1
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NJ2	**Nanjing**	**32.83**	**354**	*e*P	**P**	**19 17 27.5**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ENH	**Enshi**	**33.25**	**339**	P	**P**	**19 17 29.5**	**-0.2**
BBOO	**Buckleboo**	**34.35**	**159**	P	**P**	**19 17 38.8**	**-0.4**
STKA	**Stephens Creek**	**35.84**	**151**	P	**P**	**19 17 50.7**	**-1.4**
	comp=Z,1.4nm,0.7s,baz=332,slow=9.1,SNR=4.5						
STKA	**Stephens Creek**	**35.84**	**151**	P	**P**	**19 17 52.0**	**-0.1**
XAN	**Xi'an**	**36.89**	**341**	P	**P**	**19 18 04.2**	**+3.2**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KSRS	**Korea Array**	**38.39**	**7**	LR	LR	19 32 58.7	
	comp=Z,23nm,21.3s,baz=190,slow=35						
SHL	**Shillong**	**39.46**	**314**	P	**P**	**19 18 22.6**	**-0.5**
MAT	**Matsushiro**	**39.93**	**20**	P	**P**	**19 18 25.6**	**-1.0**
MJAR	**Matsushiro Arr**	**39.93**	**20**	P	**P**	**19 18 22.5**	**-4.1**
	comp=Z,5.6nm,0.9s,baz=192,slow=7.6,SNR=4.1						
ARMA	**Armidale**	**40.47**	**139**	P	**P**	**19 18 32.6**	**+1.3**
ARMA				IAmb	IAmb	19 18 50.8	
	comp=Z,9.7nm,1.4s						
LZH	**Lanzhou**	**40.56**	**337**	*e*P	**P**	**19 18 36.5**	**+4.5**
LZH				sP	sP	19 18 45.3	+9.2
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
JMM	**Marumori**	**42.04**	**22**	P	**P**	**19 18 44.9**	**+1.0**
CAN	**Canberra**	**42.35**	**147**	P	**P**	**19 18 47.3**	**+0.8**
CAN				IAmb	IAmb	19 19 00.1	
	comp=Z,19nm,1.3s						
LSA	**Lhasa**	**42.53**	**318**	P	**P**	**19 18 49.0**	**+0.4**
LSA				IAmb	IAmb	19 18 56.6	
	comp=Z,5.4nm,0.6s						
HHC	**Hu-ho-hao-te**	**42.60**	**348**	*e*P	**P**	**19 18 51.9**	**+3.3**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,6.6s						
ODAN	**Odare**	**43.50**	**312**	*e*P	**P**	**19 18 57.5**	**+1.2**
	comp=Z,7.1nm,0.6s						
TAPN	**Taplejung**	**43.54**	**313**	*e*P	**P**	**19 18 56.5**	**-0.1**
	comp=Z,9.5nm,0.8s						
RAMN	**Ramite**	**44.14**	**311**	*e*P	**P**	**19 19 02.8**	**+1.4**
	comp=Z,13nm,0.5s						
GTA	**Gaotai**	**45.05**	**335**	⇓P	**P**	**19 19 08.9**	**+0.6**
GTA				pP	sP	19 19 13.4	+0.9
GTA				sP	pP	19 19 16.2	+4.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GUN	**Gumba**	**45.20**	**312**	*e*P	**P**	**19 19 09.8**	**-0.2**
	comp=Z,13nm,0.6s						
PKIN	**Phulchoki**	**45.38**	**311**	*e*P	**P**	**19 19 12.0**	**+0.7**
	comp=Z,5.7nm,0.7s						
USRK	**Ussuriysk Ar.**	**45.59**	**10**	LR	LR	19 36 41.6	
	comp=Z,51nm,21.3s,baz=176,slow=34						
GKN	**Gorkha**	**46.18**	**311**	*e*P	**P**	**19 19 17.0**	**-0.5**
	comp=Z,9.8nm,0.7s						
KOLN	**Koldanda**	**46.84**	**310**	*e*P	**P**	**19 19 22.4**	**-0.4**
	comp=Z,13nm,0.6s						
DANN	**Dangsing**	**47.02**	**311**	*e*P	**P**	**19 19 23.2**	**-1.1**
	comp=Z,10nm,0.5s						
PYUN	**Piuthan**	**47.47**	**310**	*e*P	**P**	**19 19 27.5**	**-0.2**
	comp=Z,6.4nm,0.5s						
ULN	**Ulaanbaatar**	**50.27**	**347**	P	**P**	**19 19 49.5**	**+0.8**
SONM	**Songino Array**	**50.40**	**346**	P	**P**	**19 19 48.0**	**-1.7**
	comp=Z,2.1nm,0.9s,baz=161,slow=10,SNR=13						
SONM	**Songino Array**	**50.40**	**346**	P	**P**	**19 19 49.2**	**-0.5**
WMQ	**Urumqi**	**54.16**	**329**	*e*P	**P**	**19 20 21.0**	**+3.3**
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,430nm,5.7s						
WMQ				LR	LR		
	comp=N,340nm,29.0s						
WMQ				LR	LR		
	comp=E,700nm,29.1s						
WMQ				LR	LR		
	comp=Z,38nm,24.9s						
MK31	**Makanchi Array**	**58.98**	**329**	P	**P**	**19 20 50.5**	**-1.4**
MK31				IAmb	IAmb	19 20 53.7	
	comp=Z,12nm,1.4s						
MKAR	**Makanchi Array**	**58.98**	**329**	P	**P**	**19 20 49.8**	**-2.1**
	comp=Z,0.6nm,0.5s,baz=123,slow=8.5,SNR=12						
CHGR	**Chuyangaron**	**62.62**	**315**	P	**P**	**19 21 15.4**	**-1.6**
CHGR				IAmb	IAmb	19 21 22.9	
	comp=Z,4.9nm,0.7s						
ZALV	**Zalesovo Beam**	**62.79**	**336**	P	**P**	**19 21 14.0**	**-3.6**
	comp=Z,0.8nm,0.6s,baz=116,slow=3.4,SNR=4.3						
ABKAR	**Akbulak array**	**72.99**	**323**	P	**P**	**19 22 23.3**	**+1.3**
VNDA	**Vanda**	**79.56**	**172**	P	**P**	**19 22 59.0**	**+0.2**
VNDA				IAmb	IAmb	19 23 18.1	
	comp=Z,5.2nm,1.2s						
IMAR	**Indian Mountai**	**88.19**	**24**	P	**P**	**19 23 42.9**	**-0.2**
QSPA	**South Pole Qui**	**89.15**	**180**	P	**P**	**19 23 47.9**	**+0.1**
QSPA				IAmb	IAmb	19 24 13.7	
	comp=Z,6.8nm,1.4s						
BOSA	**Boshof**	**95.92**	**241**	LR	LR	20 02 02.1	
	comp=Z,41nm,20.0s,baz=20,slow=32						
TORD	**Torodi Ar. Bea**	**120.05**	**285**	PKP	**PKPdf**	**19 29 41.6**	**-2.5**
	comp=Z,0.5nm,0.7s,baz=70,slow=1.8,SNR=3.9						
TORD	**Torodi Ar. Bea**	**120.05**	**285**		**PKPdf**	**19 29 42.1**	**-2.1**

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*IDC **05** 19:15:41.7±3.2,18°.76S×177°.97W,h584^{km}±28^{km},mb2.8/5, mb1 3.1/6,mb1mx2.9/27,mbtmp3.8/6,Error ellipse: s-maj=121.4km s-min=27.7km az=155.0*

ISC 05 19:15:38.0±1.5,**19°.6S**±0°.4×**177°.5W**±0°.2,**h550^{km},n6,** σ**1^{s}.36**/7,**mb3.4**/5,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.58**	**293**	P	**P**	**19 17 05.5**	**+1.0**
	3.4nm,0.3s,baz=123,slow=12,SNR=18						
STKA	**Stephens Creek**	**38.61**	**243**	P	**P**	**19 22 16.1**	**+1.6**
	0.8nm,0.5s,baz=101,slow=10,SNR=2.9						
ASAR	**Alice Springs**	**45.18**	**256**	P	**P**	**19 23 06.3**	**-0.1**
	1.3nm,0.4s,baz=92,slow=7.9,SNR=38						
ASAR				PcP	**PcP**	**19 24 34.3**	**-0.7**
	0.3nm,0.8s,baz=107,slow=3.1,SNR=1.9						
WRA	**Warramunga Arr**	**45.19**	**261**	P	**P**	**19 23 05.1**	**-1.4**
	0.7nm,0.6s,baz=97,slow=7.2,SNR=23						
FITZ	**Fitzroy Crossi**	**53.61**	**262**	P	**P**	**19 24 07.2**	**-1.3**
	0.9nm,0.9s,baz=90,slow=6.1,SNR=1.6						
TXAR	**Lajitas Array**	**86.17**	**57**	P	**P**	**19 27 21.8**	**+0.2**
	0.3nm,0.7s,baz=202,slow=6.8,SNR=3.7						

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*IDC **05** 19:58:32.1±3.6,36°.24N×71°.27E,h80^{km}±30^{km},mb3.5/8, mb1 3.6/14,mb1mx3.3/56,mbtmp3.9/14,Error ellipse: s-maj=29.7km s-min=22.2km az=174.0*

*NNC **05** 19:58:38.7±2.1,36°.71N×71°.17E,h111^{km}±38^{km},mb3.7, mpv4.4,Error ellipse: s-maj=17.4km s-min=16.1km az=141.0*

ISC 05 19:58:33.2±0.7,**36°.32N**±0°.07×**71°.27E**±0°.06,**h100^{km},n40,** σ**1^{s}.57**/45,**mb3.5**/7,**3C-1D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.10**	**17**	P	**Pn**	**20 00 02.3**	**+1.1**
	SNR=160						
UCH	**Uchtor**	**6.41**	**22**	P	**Pn**	**20 00 06.1**	**+0.6**
	SNR=43						
EKS2	**Erkin-Say**	**6.62**	**16**	P	**Pn**	**20 00 09.2**	**+1.2**
	SNR=28						
AAK	**Ala-Archa**	**6.78**	**21**	P	**Pn**	**20 00 11.5**	**+1.3**
	8.1nm,0.3s,baz=83,slow=3.3,SNR=135						
AAK				S	**Sn**	**20 01 23.7**	**-2.4**
	2.7nm,0.3s,baz=353,slow=22,SNR=12						
AAK	**Ala-Archa**	**6.78**	**21**	P	**Pn**	**20 00 11.6**	**+1.3**
	SNR=45						
AAK	**Ala-Archa**	**6.78**	**21**	P	**Pn**	**20 00 11.5**	**+1.3**
	16nm,0.5s						
AAK				⇓S	**Sn**	**20 01 24.4**	**-1.6**
	28nm,0.8s						
KK08	**Karatay Array**	**6.81**	**355**	P	**Pn**	**20 00 10.8**	**+0.4**
	12nm,0.3s						
KK08				⇑S	**Sn**	**20 01 22.8**	**-3.6**
	10nm,0.4s						
KBK	**Karagaybulak**	**6.94**	**23**	P	**Pn**	**20 00 13.6**	**+1.3**
	SNR=14						
ULHL	**Ulahol**	**7.06**	**32**	P	**Pn**	**20 00 15.9**	**+1.9**
	SNR=6.1						
CHMS	**Chumysh**	**7.19**	**21**	P	**Pn**	**20 00 16.4**	**+0.7**

	SNR=23						
USP	Ospenovka	7.37	19	P	Pn	20 00 18.3	+0.2
	SNR=47						
TKM2	Tokmak 2	7.39	25	P	Pn	20 00 19.5	+1.0
	SNR=24						
TKM2	Tokmak 2	7.39	25	⇑P	Pn	20 00 19.4	+0.8
	13nm,0.6s						
TKM2				S	Sn	20 01 39.2	-1.6
	11nm,0.9s						
GEYT	Alibeck	10.63	283	P	Pn	20 01 01.2	-1.3
	0.4nm,0.3s,baz=101,slow=14,SNR=5.5						
GEYT				S	Sn	20 02 55.8	-3.7
	1.7nm,0.3s,baz=226,slow=8.0,SNR=9.2						
PYUN	Piuthan	12.86	126	*e*P	Pn	20 01 30.6	-1.8
	15nm,0.4s						
DANN	Dangsing	13.20	123	*e*P	Pn	20 01 35.2	-1.9
	12nm,0.2s						
MKAR	Makanchi Array	13.31	35	P	Pn	20 01 38.0	-0.1
	0.1nm,0.3s,baz=228,slow=17,SNR=1.5						
KOLN	Koldanda	13.48	126	*e*P	Pn	20 01 39.3	-1.3
GKN	Gorkha	14.02	122	*e*P	Pn	20 01 45.9	-1.6
	14nm,0.5s						
KKN	Kakani	14.59	122	*e*P	Pn	20 01 53.5	-1.5
	19nm,0.5s						
PKIN	Phulchoki	14.81	122	*e*P	Pn	20 01 56.1	-1.7
	20nm,0.5s						
PKI	Pulchoki	14.82	122	*e*P	Pn	20 01 56.1	-1.9
	21nm,0.5s						
GUN	Gumba	14.93	120	*e*P	Pn	20 01 58.3	-1.2
	16nm,0.4s						
KURBB	Kurchatov Arra	15.23	18	P	P	20 02 05.0	-0.2
	0.2nm,0.3s,baz=206,slow=10,SNR=25						
AB31	Akbulak array	15.35	331	⇑P	Pn	20 02 03.1	-1.1
	1.2nm,0.4s,baz=140,slow=13,SNR=51						
RAMN	Ramite	16.03	121	*e*P	Pn	20 02 11.4	-1.7
	20nm,0.4s						
TAPN	Taplejung	16.57	118	*e*P	P	20 02 18.7	-1.9
	32nm,0.5s						
ODAN	Odare	16.64	120	*e*P	Pn	20 02 19.2	-1.4
	8.0nm,0.4s						
BVAR	Borovoye Array	16.72	358	P	Pn	20 02 20.4	-0.7
	0.7nm,0.3s,baz=184,slow=16,SNR=8.1						
AKTO	Aktyubinsk	17.05	330	P	P	20 02 25.5	+0.1
	1.2nm,0.3s,baz=119,slow=11,SNR=16						
AKTO				S	Sn	20 05 22.3	-12
	0.1nm,0.3s,baz=150,slow=18,SNR=2.2						
AKTO	Aktyubinsk	17.05	330	P	P	20 02 26.4	+1.0
	2.1nm,0.4s						
ZALV	Zalesovo Beam	19.99	24	P	P	20 02 57.5	0.0
	5.1nm,0.3s,baz=213,slow=10,SNR=31						
AKASG	Malin Array Be	33.23	309	P	P	20 05 02.5	+2.0
	0.4nm,0.5s,baz=80,slow=7.1,SNR=2.3						
FINES	FINESS Array B	37.76	326	P	P	20 05 40.5	+1.5
	4.9nm,0.9s,baz=129,slow=11,SNR=7.5						
ARCES	ARCESS Array B	41.40	338	P	P	20 06 10.8	+1.5
	0.7nm,0.4s,baz=113,slow=9.1,SNR=7.7						
NB2	NORSAR Subarra	44.66	323	P	P	20 06 37.2	+1.6
	comp=Z,0.7nm,0.5s,baz=95,slow=7.9						
NOA	NORSAR Array B	44.66	323	P	P	20 06 36.5	+0.9
	comp=Z,0.7nm,0.5s,baz=96,slow=7.8,SNR=4.5						
TORD	Torodi Ar. Bea	65.94	269	P	P	20 09 09.8	+0.9
	comp=Z,0.2nm,0.3s,baz=51,slow=6.0,SNR=5.2						
YKA	Yellowknife Ar	81.42	3	P	P	20 10 40.6	+2.0
	comp=Z,0.2nm,0.4s,baz=348,slow=5.5,SNR=1.1						
WRA	Warramunga Arr	81.71	122	P	P	20 10 41.8	+1.0
	comp=Z,0.1nm,0.4s,baz=325,slow=4.9,SNR=5.0						

IDC 05 20:04:56.3±41.0,**23°.47S**×**176°.49W**,**h368**^{km}±129^{km}, **mb3.5**/4,**mb1 3.7**/4,**mb1mx3.2**/33,**mbtmp4.3**/4,**Error ellipse: s-maj=539.2km s-min=97.0km az=79.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	34.70	268	P	P	20 11 13.3	+0.2
	4.8nm,0.3s,baz=84,slow=9.3,SNR=6.5						
STKA	Stephens Creek	37.87	248	P	P	20 11 39.1	-0.4
	2.0nm,0.6s,baz=93,slow=9.5,SNR=11						
ASAR	Alice Springs	45.28	259	P	P	20 12 39.0	-0.1
	0.9nm,0.5s,baz=96,slow=7.4,SNR=21						
WRA	Warramunga Arr	45.65	265	P	P	20 12 41.7	-0.3
	2.5nm,0.5s,baz=101,slow=8.3,SNR=78						
WRA				ScP	ScP	20 17 29.8	-0.5
	0.6nm,1.0s,baz=108,slow=3.9,SNR=4.8						

IDC ***05*** *20:19:55.5±0.8, 18°.93N×80°.64W, h0^{km}, mb4.2/16, mb1 4.4/18, mb1mx4.2/36, mbtmp4.2/18, ML4.2/2, MS3.4/11, Ms1 3.4/11, ms1mx3.2/40, Error ellipse: s-maj=24.8km s-min=16.1km az=42.0*

NEIC ***05*** *20:19:57.7±2.2, 19°.02N±0°.05×80°.55W±0°.06, h8^{km}±4^{km}, mb4.4/64, Error ellipse: s-maj=8.2km s-min=6.1km az=122.0*

SSNC ***05*** *20:19:59.6±1.2, 19°.13N×80°.40W, h8^{km}±17^{km}, MD3.9, ML4.6, MW3.8*

JSN ***05*** *20:20:00.2±1.1, 18°.92N×80°.27W, h0^{km}±105^{km}, MD4.8*

ISC 05 20:19:57.7±0.4,**19°.04N**±0°.04×**80°.49W**±0°.04,**h10**^{km},**n207**, σ**1^{s}35**/207,**mb4.4**/41,**MS3.5**/9,**Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCCY	Blossom Villag	0.73	32	Pg	Pb	20 20 13.2	+0.6
LCCY				Sg	Sg	20 20 23.6	+2.0
MCJ	Malvern	2.88	112	*i* P	Pn	20 20 43.4	-0.4
MCJ				*i* S	Sn	20 21 15.1	-3.5
CVJ	Coleyville	2.92	106	*i* P	Pn	20 20 43.6	-0.7
MTDJ	Mount Denham	2.92	106	*e*P	Pn	20 20 43.6	-0.7
MTDJ				*e*S	Sn	20 21 15.4	-4.1
MTDJ	Mount Denham	2.92	106	*e*P	Pn	20 20 43.6	-0.7
MTDJ	Mount Denham	2.92	106	Pn	Pn	20 20 43.5	-0.7
MTDJ				Sn	Sn	20 21 15.6	-3.9
MGV	Manicaragua	3.09	9	*e*P	Pn	20 20 45.3	-1.3
MGV				*e*S	Sn	20 21 18.5	-5.2
MGV				IAML		20 21 22.5	
	comp=E,1µm,0.4s						
MGV				IAML		20 21 23.6	
	comp=N,1µm,0.3s						
CCCC	Cccc	3.34	50	*e*P	Pb	20 20 54.5	-2.7
CCCC				*e*S	Sn	20 21 34.6	+4.7
CCCC				IAML		20 21 41.6	
	comp=N,298nm,0.6s						
CCCC				IAML		20 21 42.1	
	comp=E,353nm,0.5s						
LMGC	Las Mercedes	3.44	72	*e*P	Pn	20 20 51.2	-0.2
LMGC				*e*S	Sn	20 21 29.3	-3.0
LMGC				IAML		20 21 39.9	
	comp=N,1µm,0.3s						
LMGC				IAML		20 21 40.5	
	comp=E,1µm,0.2s						
STH	Stony Hill	3.62	105	*i* P	Pn	20 20 53.4	-0.5
STH				*i* S	Sn	20 21 34.3	-2.4
GWJ	Greenwich	3.69	104	*i* P	Pn	20 20 54.5	-0.5
GWJ				*i* S	Sn	20 21 34.7	-4.0
HOJ	Hope	3.69	106	*i* P	Pn	20 20 55.0	0.0
CMJ	Castle Mountai	4.01	102	*i* P	Pn	20 20 58.3	-0.9
SOR	Soroa	4.41	328	*e*P	Pn	20 21 03.8	-1.0
SOR				*e*S	Sn	20 21 52.7	-3.7
SOR				IAML		20 21 57.3	
	comp=N,437nm,0.4s						
SOR				IAML		20 21 57.6	
	comp=E,598nm,0.3s						
SOR	Soroa	4.41	328	Pn	Pn	20 21 04.1	-0.8
GTBY	Guantanamo Bay	5.15	79	*e*P	Pn	20 21 12.8	-2.2
GTBY				*e*S	Sn	20 22 06.2	-8.3
GTBY	Guantanamo Bay	5.15	79	*e*P	Pn	20 21 16.5	+1.5
GTBY	Guantanamo Bay	5.15	79	Pn	Pn	20 21 14.3	-0.6
PRVC	Isla de Provid	5.69	189	Pn	Pn	20 21 21.9	-0.5
MASC	Masc	6.01	78	*e*P	Pn	20 21 26.2	-0.5
MASC				*e*S	Sn	20 22 32.7	-2.9
061Z	Ochoppi	6.81	357	Pn	Pn	20 21 37.8	+0.1
LGNH	Logne	7.49	93		Pn	20 21 46.7	-0.3
JAKH	Jacmel	7.60	95	Pn	Pn	20 21 49.2	+0.6
060A	Indiantown	7.96	1	Pn	Pn	20 21 53.3	-0.2
MATN	Matagalpa	8.01	222		Pn	20 21 54.0	-0.3
TGUH	Tegucigalpa,Un	8.17	234	Pn	Pn	20 21 56.7	+0.1
BOAB	BOACO BROADBAN	8.23	218	Pn	Pn	20 21 57.0	-0.3
ACON	Acoyapa	8.35	213		Pn	20 21 59.3	+0.4
SDDR	Presa de Saban	8.71	89	*e*P	Pn	20 22 04.3	+0.5
SDDR	Presa de Saban	8.71	89		Pn	20 22 04.0	+0.2
DWPF	Disney Wildern	9.07	355		Pn	20 22 07.6	-1.2
COVE	Coope Vega, Sa	9.09	205		Pn	20 22 09.0	-0.1
GRTK	Grand Turk	9.12	73	Pn	Pn	20 22 09.2	-0.3
PETF	Flores	9.17	258	Pn	Pn	20 22 09.2	-0.9
SC01	Santiago de lo	9.23	86	Pn	Pn	20 22 10.3	-0.7
HZTE	Horizontes, Gu	9.63	212	Pn	Pn	20 22 17.2	+0.7
JTS	Las Juntas de	9.71	207	*e*P	Pn	20 22 18.0	+0.4
JTS	Las Juntas de	9.71	207	Pn	Pn	20 22 17.4	-0.2
RIMA	Rio Macho	9.78	200		Pn	20 22 18.7	0.0
BCIP	Isla Barro Col	9.83	176	*e*P	Pn	20 22 17.2	-2.1
BCIP	Isla Barro Col	9.83	176	Pn	Pn	20 22 17.1	-2.1
SMRC	Santa Marta, M	9.89	141	*e*P	Pn	20 22 18.1	-1.9
PEZE	Perez Zeledon,	10.08	198		Pn	20 22 23.0	+0.2
DUNO	Dulce Nombre,	10.14	209		Pn	20 22 24.3	+0.9
SRBA	San Rafael, Bu	10.14	196	Pn	Pn	20 22 23.5	0.0
JACO	JACO, Garabito	10.16	204		Pn	20 22 24.1	+0.4
SJCC	San Jacinto, C	10.44	150	*e*P	Pn	20 22 27.3	-0.3
SJCC	San Jacinto, C	10.44	150	Pn	Pn	20 22 27.4	-0.2
CRJC	Cerrejon, Guaj	10.84	136	*e*P	Pn	20 22 32.6	-0.5
URIC	Uribia, Colomb	10.97	130	*e*P	Pn	20 22 33.6	-1.2
URIC	Uribia, Colomb	10.97	130		Pn	20 22 34.2	-0.6
LL6C	La Loma 6 Bece	11.59	142	*e*P	Pn	20 22 42.4	-0.9
553A	Crawfordville	11.66	343	Pn	Pn	20 22 42.4	-1.9
456A	Hilliard	11.72	353	Pn	Pn	20 22 43.4	-1.6
SMLC	San Martn de	11.93	148	*e*P	Pn	20 22 47.6	-0.3
UREC	San Jos de Ur	12.21	156	*e*P	Pn	20 22 50.3	-1.5
DBBC	Dabeiba	12.65	160	*e*P	Pn	20 22 59.7	+1.7
TIGA	Tifton	12.66	348		Pn	20 22 56.5	-1.4
ZARC	Zaragoza, Cauc	12.71	154	*e*P	Pn	20 22 59.5	+0.7
ZARC	Zaragoza, Cauc	12.71	154	Pn	Pn	20 22 58.7	-0.1
CRPR	Cabo Rojo, PR	12.73	92	Pn	Pn	20 22 57.7	-1.3
MLPR	Magueyes Islan	12.80	93	Pn	Pn	20 22 58.5	-1.4
352A	Blakely	13.02	343		Pn	20 23 00.4	-2.4
OBIP	Obispado Ponce	13.21	92	Pn	Pn	20 23 04.5	-0.9
CELP	Cerrillos	13.23	92	Pn	Pn	20 23 04.9	-0.9
PTBC	PUERTO BERRIO,	13.74	154	*e*P	Pn	20 23 13.9	+1.2
CMIG	Matias Romero	13.82	264	Pn	Pn	20 23 11.7	-2.2
	comp=E,0.7nm,0.3s,baz=58,slow=13,SNR=2.6						
CMIG				Sn	Sn	20 25 34.8	-13
	comp=E,0.3nm,0.3s,baz=93,slow=23,SNR=2.3						
CMIG				LR	LR	20 28 36.0	
	comp=E,146nm,18.6s,baz=84,slow=38						
250A	Grady	13.90	339		Pn	20 23 12.7	-2.1
SDV	Santo Domingo	13.90	135	*e*P	Pn	20 23 13.9	-1.1
152A	Waverly Hall	14.10	345		Pn	20 23 14.0	-3.5
SOCV	Socops	14.20	138	*e*P	Pn	20 23 17.4	-1.7
NORC	Norcasia	14.47	157	*e*P	Pn	20 23 22.6	-0.2
GUY2C	Guyana, Caldas	14.61	159	*e*P	Pn	20 23 26.2	+1.0
RUSC	La Rusia	14.93	150	*e*P	Pn	20 23 31.4	+2.0
Y52A	Lilburn	15.11	349	IAmb	IAmb	20 23 30.3	
	comp=Z,16nm,0.8s						
ROSC	El Rosal	15.34	156	LR	LR	20 29 31.9	
	comp=Z,151nm,18.5s,baz=64,slow=38						
Y49A	Blount Mountai	15.68	341	IAmb	IAmb	20 23 55.4	
	comp=Z,13nm,0.7s						
ORTC	Ortega, Tolima	15.89	161	*e*P	Pn	20 23 42.4	+0.8
BG3	Lake Jocassee	16.04	353	IAmb	IAmb	20 24 01.3	
	comp=Z,35nm,1.4s						
FPAL	Fort Paine	16.10	345		Pn	20 23 43.3	-0.9
BIRV	Birongo	16.16	120		Pn	20 23 43.4	-1.8
BIRV				IAmb	IAmb	20 23 51.4	
	comp=Z,19nm,0.8s						
W50A	Signal Mountai	16.66	346		Pn	20 23 49.2	-2.2
V53A	Saluda	16.69	353	Pn	Pn	20 23 49.5	-2.4
V53A				IAmb	IAmb	20 24 15.4	
	comp=Z,33nm,1.4s						
CPCT	Cooper Cave	16.73	348	Pn	Pn	20 23 50.5	-1.8
TKL	Tuckaleechee C	16.81	351	Pn	Pn	20 23 51.5	-1.8
	comp=Z,1.6nm,0.3s,baz=179,slow=15,SNR=18						
TKL				Sn	Sn	20 26 43.4	-17
	comp=Z,0.4nm,0.3s,baz=81,slow=1.6,SNR=3.1						
TKL				LR	LR	20 30 00.5	
	comp=Z,103nm,20.3s,baz=188,slow=36						
TKL	Tuckaleechee C	16.81	351	IAmb	IAmb	20 23 52.3	
	comp=Z,32nm,1.3s						
Y45A	Yeager Farm, C	16.83	333	IAmb	IAmb	20 24 06.0	
	comp=Z,18nm,0.6s						
V51A	Loudon	17.05	349	Pn	Pn	20 23 54.8	-1.4
HKT	Hockley	17.67	311		Pn	20 24 03.4	-0.6
PCRV	Puerto La Cruz	17.68	118	P	P	20 24 09.0	+3.8
	comp=Z,1.8nm,0.3s,baz=321,slow=6.5,SNR=8.4						
WVT	Waverly	18.21	341	P	Pn	20 24 09.9	-0.8
T50A	Nancy	18.32	349	P	Pn	20 24 11.2	-0.8
S57A	Dark Hollow, R	18.70	4	P	P	20 24 14.9	-1.4
OTAV	Otavalo	18.79	174	*e*P	P	20 24 17.7	-0.2
OTAV	Otavalo	18.79	174		Pn	20 24 18.2	-0.2
R58B	Mineral	19.00	6	P	P	20 24 19.0	-0.5
R58B				IAmb	IAmb	20 24 21.8	
	comp=Z,21nm,1.1s						
R53A	Hurricane	19.27	357	P	P	20 24 22.5	0.0
R53A				IAmb	IAmb	20 24 29.4	
	comp=Z,25nm,1.2s						
MIAR	Mount Ida	19.34	326		P	20 24 23.6	+0.4
WCI	Wyandotte Cave	19.78	346	P	P	20 24 27.5	-0.6
WCI				IAmb	IAmb	20 24 31.8	
	comp=Z,14nm,0.8s						
Q51A	Peebles	20.07	354		P	20 24 30.0	-1.3
Q51A				IAmb	IAmb	20 24 37.7	
	comp=Z,12nm,0.7s						
U40A	Yellville	20.40	330	IAmb	IAmb	20 24 50.8	
	comp=Z,14nm,1.1s						
FVM	French Village	20.77	337	P	P	20 24 38.4	-0.5
FVM				IAmb	IAmb	20 24 50.7	
	comp=Z,7.6nm,0.6s						
MGMO	Mountain Grove	20.79	333	P	P	20 24 39.8	+0.7
MGMO				IAmb	IAmb	20 24 50.4	
	comp=Z,9.7nm,0.6s						
HHAR	Hobbs	20.86	328	P	P	20 24 39.4	-0.6
HHAR				IAmb	IAmb	20 24 47.2	
	comp=Z,19nm,1.3s						
CCM	Cathedral Cave	21.14	336	P	P	20 24 42.8	-0.1
CCM				IAmb	IAmb	20 25 05.1	
	comp=Z,8.4nm,0.7s						
U38A	Gravette	21.21	328	P	P	20 24 44.5	+0.8
O56A	Blue Knob Stat	21.22	4	P	P	20 24 43.1	-0.7
O56A				IAmb	IAmb	20 24 46.6	
	comp=Z,13nm,1.1s						
R40A	Maddies Statio	21.75	334	P	P	20 24 48.7	-0.8
R40A				IAmb	IAmb	20 24 50.0	
	comp=Z,15nm,0.8s						
P38A	Dawn	23.40	334	P	P	20 25 05.8	-1.0
P38A				IAmb	IAmb	20 25 21.7	
	comp=Z,12nm,0.8s						
TXAR	Lajitas Array	23.45	300	P	P	20 25 07.2	-0.4
	comp=Z,3.0nm,0.8s,baz=116,slow=7.6,SNR=17						
TXAR	Lajitas Array	23.45	300	P	P	20 25 06.9	-0.7
TX31	Lajitas Ar. Si	23.45	300	P	P	20 25 07.2	-0.3
TX31				IAmb	IAmb	20 25 13.2	
	comp=Z,9.5nm,0.8s						
TBTG	Tabatinga, AM	25.32	155	*e*P	P	20 25 25.6	+0.8
BOAV	Boa Vista	25.60	128	*e*P	P	20 25 27.6	+0.1
BOAV	Boa Vista	25.60	128	P	P	20 25 27.6	+0.1
SADO	Sadowa	25.68	2	P	P	20 25 28.1	+0.3
	comp=Z,8.7nm,1.1s,baz=232,slow=4.4,SNR=4.0						
SADO				LR	LR	20 35 11.9	
	comp=Z,77nm,19.2s,baz=162,slow=36						
SADO	Sadowa	25.68	2	P	P	20 25 27.6	-0.2
SADO				IAmb	IAmb	20 25 45.1	
	comp=Z,10nm,1.0s						
MNTX	Cornudas Mount	25.71	304	P	P	20 25 28.5	+0.2
CZSB	Cruzeiro do Su	27.68	163	*e*P	P	20 25 46.6	+0.4
PTGA	Pitinga	28.14	132	P	P	20 25 50.3	0.0
	comp=Z,7.8nm,0.9s,baz=336,slow=12,SNR=9.4						
PTGA				LR	LR	20 37 25.2	
	comp=Z,91nm,21.2s,baz=302,slow=37						
MACA	Manacapuru-AM	29.43	136	*e*P	P	20 26 02.2	+0.4
ETMB	Extrema	31.94	153	*e*P	P	20 26 24.2	+0.3
SAML	Samuel	32.63	147	P	P	20 26 29.4	-0.5
MALB	Monte Alegre	33.10	126	*e*P	P	20 26 35.0	+0.9
ULM	Lac du Bonnet	33.47	342	LR	LR	20 40 33.6	
	comp=Z,114nm,18.2s,baz=160,slow=37						
ITTB	Itaituba	33.69	131	*e*P	P	20 26 40.1	+0.8
MCPB	Macapa, AP	33.92	121	*e*P	P	20 26 41.7	+0.4
PDAR	Pinedale Array	34.08	320	P	P	20 26 46.0	+3.3
	comp=Z,0.4nm,0.7s,baz=114,slow=9.0,SNR=4.2						
PSUT	Pine Spring	34.84	311	P	P	20 26 49.6	+0.3
PSUT				IAmb	IAmb	20 27 06.6	
	comp=Z,6.0nm,0.8s						
NPGB	Novo Progresso	35.85	134	*e*P	P	20 26 57.9	0.0
LPAZ	La Paz	37.15	160	LR	LR	20 43 39.7	
	comp=Z,37nm,18.3s,baz=285,slow=38						
LPAZ	La Paz	37.15	160	*e*P	P	20 27 09.7	0.0
SCHQ	Schefferville	37.22	13	P	P	20 27 10.3	+1.1
	comp=Z,3.8nm,0.8s,baz=186,slow=7.5,SNR=4.1						
SCHQ				LR	LR	20 43 05.5	
	comp=Z,64nm,18.1s,baz=38,slow=37						
SCHQ	Schefferville	37.22	13	P	P	20 27 09.6	+0.4
SCHQ				IAmb	IAmb	20 27 37.7	
	comp=Z,13nm,1.1s						
NVAR	Mina Array Bea	38.03	309	P	P	20 27 21.0	+4.5
	comp=Z,0.8nm,0.6s,baz=118,slow=9.3,SNR=5.0						
TMAB	Tom-Au,PA,Br	38.30	120	*e*P	P	20 27 19.7	+0.9
CLDB	Colider	38.42	139	*e*P	P	20 27 19.4	-0.4
PDRB	Porto dos Gac	38.42	141	*e*P	P	20 27 19.8	0.0
PRPB	Parauapebas	39.26	127	*e*P	P	20 27 26.7	-0.1
PSGCX	Pisagua	39.72	165	P	P	20 27 30.0	-0.7
PSGCX				IAmb	IAmb	20 27 31.8	
	comp=Z,9.1nm,1.0s						
PB11	IPOC Station P	40.00	164	P	P	20 27 32.8	-0.3
PTLB	Pontes e Lacer	40.20	147	*e*P	P	20 27 34.3	-0.3
PB01	IPOC Station P	41.27	164	P	P	20 27 43.2	-0.2
PB01				IAmb	IAmb	20 27 45.2	
	comp=Z,7.2nm,0.8s						
ROSB	Rosrio	41.88	117	*e*P	P	20 27 48.8	+0.3
YBH	Yreka Blue Hor	42.32	312	LR	LR	20 46 36.4	
	comp=Z,59nm,18.9s,baz=92,slow=38						
SALV	Santo Antonio	42.44	143	*e*P	P	20 27 53.5	+0.5
SMTB	Santa Maria do	42.67	128	*e*P	P	20 27 55.6	+0.6
LVC	Limon Verde	42.91	164	*e*P	P	20 27 57.4	+0.2
ARAG	Araguaiana, MT	44.59	139	*e*P	P	20 28 11.0	+0.6
NBPS	Pedro II - PI	44.94	117	*e*P	P	20 28 13.8	+0.5
SDBA	SAO DESIDERIO	46.97	129	*e*P	P	20 28 29.7	+0.3
BDFB	Brasilia	47.00	135	P	P	20 28 29.8	+0.2
	comp=Z,3.6nm,0.8s,baz=309,slow=8.8,SNR=4.9						
BDFB	Brasilia	47.00	135	P	P	20 28 29.5	-0.1
JANB	Januaria	49.16	131	*e*P	P	20 28 45.8	-0.5
NBPA	Parau_RN	49.32	116	*e*P	P	20 28 48.2	+0.7
YKA	Yellowknife Ar	49.40	340	P	P	20 28 46.4	-1.0
	comp=Z,0.5nm,0.6s,baz=130,slow=8.1,SNR=2.1						
YKA				LR	LR	20 49 28.4	
	comp=Z,37nm,19.9s,baz=0.0,slow=36						
NBLV	Livramento - P	50.31	117	*e*P	P	20 28 55.7	+0.6
CPUP	Villa Florida	50.40	153	LR	LR	20 51 24.5	
	comp=Z,50nm,18.6s,baz=352,slow=38						
MC01	Montes Claros	50.53	132	*e*P	P	20 28 57.3	+0.6
BB19B	Bebedouro	50.68	140	*e*P	P	20 28 58.4	+0.7
BSFB	Barra de Sao F	54.13	132	*e*P	P	20 29 23.0	-0.3
MAN01	Angra dos Reis	54.84	138	*e*P	P	20 29 29.3	+0.8
SUMG	Summit	58.61	14	P	P	20 29 55.6	+0.6
A36M	Sachs Harbour	58.86	345	P	P	20 29 55.1	-1.2
INK	Inuvik	59.17	340	P	P	20 29 58.2	-0.2
	comp=Z,0.4nm,0.3s,baz=139,slow=8.6,SNR=1.4						
IL31		62.92	334	P	P	20 30 23.8	-0.1
IL31				IAmb	IAmb	20 30 30.0	
	comp=Z,6.9nm,1.4s						
ILAR	Eielson Array	62.92	334	P	P	20 30 23.8	-0.2
	comp=Z,0.9nm,0.6s,baz=117,slow=4.2,SNR=24						
ILAR	Eielson Array	62.92	334	P	P	20 30 23.6	-0.4
RND	Reindeer	63.48	332	P	P	20 30 28.6	+0.8
IMAR	Indian Mountai	65.96	335	P	P	20 30 43.3	-0.6
ESDC	Sonseca Array	67.90	54	P	P	20 30 57.9	+1.2
	comp=Z,1.1nm,0.7s,baz=284,slow=6.1,SNR=19						
ESDC	Sonseca Array	67.90	54	P	P	20 30 58.0	+1.2
ESBB	Sonseca Array	67.90	54	P	P	20 30 57.7	+1.0
ESBB				IAmb	IAmb	20 30 58.3	
	comp=Z,7.3nm,1.5s						
KOWA	Kowa	72.84	80	P	P	20 31 28.2	+0.8
TIC	Toumodi	74.16	88	*e*PKP2	P	20 31 34.8	-0.3
LIC	Lamto	74.28	89	*e*PKP2	P	20 31 35.7	-0.1
	comp=Z,23nm,0.6s						
DBIC	Dimbokro	74.30	88	P	P	20 31 36.1	+0.2
	comp=Z,3.2nm,0.5s,baz=300,slow=5.1,SNR=7.6						
DBIC	Dimbokro	74.30	88	P	P	20 31 36.0	0.0
NOA	NORSAR Array B	74.36	30	P	P	20 31 36.2	+0.7
	comp=Z,1.4nm,0.7s,baz=284,slow=5.6,SNR=3.4						
NOA				LR	LR	21 04 40.8	
	comp=Z,339nm,18.0s,baz=290,slow=36						
KIC	Kosan Boka	74.51	89	*e*PKP2	P	20 31 36.4	-0.8
	comp=Z,19nm,0.8s						
FETA	Feichten	77.13	45	*e*P	P	20 31 53.2	+1.3
	comp=Z,2.4nm,0.8s						
MOTA	Moosalm	77.30	44	*e*P	P	20 31 53.6	+0.8
	comp=Z,1.2nm,0.6s						
ARCES	ARCESS Array B	77.77	20	P	P	20 31 54.2	-0.5
	comp=Z,1.5nm,0.6s,baz=282,slow=4.5,SNR=8.3						
ARCES	ARCESS Array B	77.77	20	P	P	20 31 54.5	-0.3
ZCCA	Zocca	77.97	47	P	P	20 31 57.5	+1.1
ABTA	Abfaltersbach	78.39	45	*e*P	P	20 31 59.7	+0.9
	comp=Z,1.3nm,0.6s						
CIMO	Cimolais	78.45	45	P	P	20 31 59.2	+0.1
CIMO				IAmb	IAmb	20 31 59.9	
	comp=Z,3.0nm,0.7s						
TORD	Torodi Ar. Bea	78.55	80	P	P	20 31 59.9	-0.2
	comp=Z,3.4nm,0.8s,baz=291,slow=5.0,SNR=21						
TORD	Torodi Ar. Bea	78.55	80	P	P	20 31 59.7	-0.3
TORD				IAmb	IAmb	20 32 00.8	
	comp=Z,3.7nm,0.9s						
GERES	GERESS Array B	78.59	42	P	P	20 32 00.2	+0.3
	comp=Z,1.2nm,0.8s,baz=249,slow=5.2,SNR=8.6						
STAL	STALIGIAL	78.65	45	P	P	20 32 00.6	+0.5
STAL				IAmb	IAmb	20 32 00.7	
	comp=Z,4.5nm,1.0s						
KBA	Koelnbreinsper	78.85	44	*e*P	P	20 32 02.8	+1.4
	comp=Z,1.0nm,0.4s						
PRED	Cave del Predi	79.17	45	P	P	20 32 03.7	+0.7
PRED				IAmb	IAmb	20 32 04.4	
	comp=Z,4.1nm,0.7s						
MOA	Molln	79.23	43	*e*P	P	20 32 03.7	+0.5
	comp=Z,1.6nm,0.6s						
MURB	Monte Urbino	79.33	48	P	P	20 32 03.5	-0.5
OBKA	Obir	79.80	44	*e*P	P	20 32 06.9	+0.4
	comp=Z,1.0nm,0.6s						
SOKA	Soboth	80.07	44	*e*P	P	20 32 08.3	+0.3
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	81.10	28	P	P	20 32 13.5	+0.5
	comp=Z,3.9nm,0.6s,baz=285,slow=2.3,SNR=18						
FIA1	FINESS Array S	81.10	28	P	P	20 32 13.4	+0.4
DIVS	Divibare	84.21	45	P	P	20 32 31.0	+1.2
DIVS				IAmb	IAmb	20 32 32.6	
	comp=Z,4.9nm,1.1s						
BURAR	Bucovina Array	86.25	41	P	P	20 32 40.8	+0.9
VTS	Vitosha	86.96	46	P	P	20 32 44.1	+0.6
ALN	Alexandroupoli	89.58	47	P	P	20 32 56.1	+0.3
BRTR	Keskin Array B	95.27	45	P	P	20 33 22.4	0.0
	comp=Z,0.6nm,0.8s,baz=276,slow=4.1,SNR=3.7						
CMAR	Chiang Mai Arr	142.73	1	PKP	PKPdf	20 39 33.3	+1.1
	comp=Z,0.4nm,0.4s,baz=334,slow=3.1,SNR=2.6						
WRA	Warramunga Arr	147.19	263	PKPbc	PKPdf	20 39 38.1	-1.8
	comp=Z,0.6nm,0.6s,baz=87,slow=3.6,SNR=3.1						
ASAR	Alice Springs	147.69	256	PKPbc	PKPdf	20 39 41.8	+1.1
	comp=Z,0.4nm,0.5s,baz=90,slow=3.4,SNR=2.9						

IDC ***05*** *20:32:09.3±3.2, 6°.34S×147°.99E, h32^{km}±21^{km}, mb3.9/13, mb1 4.0/16, mb1mx3.8/38, mbtmp4.1/16, ML4.0/2, MS3.2/11, Ms1 3.2/11, ms1mx3.1/30, Error ellipse: s-maj=27.9km s-min=14.3km az=102.0*

NEIC ***05*** *20:32:10.3±1.2, 6°.34S±0°.08×147°.9E±0°.1, h35^{km}±6^{km}, mb4.4/19, Error ellipse: s-maj=20.4km s-min=11.8km az=88.0*

DJA ***05*** *20:32:14.8±0.4, 6°S±3°×14°8E±°, h68^{km}±7^{km}, M4.4/12, mB4.8/2, mb4.2/12, MLv4.5/4, Mw(mB)4.1/2*

ISC 05 20:32:11.8±0.6,**6°.41S**±0°.06×**147°.84E**±0°.10,**h51**^{km},**n60**, σ**1^{s}32**/63,**mb4.2**/22,**MS3.1**/9,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.06	193	Pn	Pn	20 32 58.7	+1.1
	19nm,0.3s,baz=36,slow=4.5,SNR=16						
PMG				Sn	Sn	20 33 34.3	+1.3
	26nm,0.3s,baz=59,slow=22,SNR=8.1						
PMG	Port Moresby	3.06	193		Pn	20 32 56.4	-1.2
PMG				Sn	Sn	20 33 33.7	+0.8
JAY	Jayapura	8.09	298	Pn	Pn	20 34 09.1	+2.3
	1.7nm,0.3s,baz=81,slow=3.9,SNR=7.4						
JAY	Jayapura	8.09	298	P	Pn	20 34 07.5	+0.7
	0.1nm7.9nm,0.9s						
COEN	Coen	8.79	211	Pn	Pn	20 34 16.5	+0.2
SMPI	Sarmi	10.10	295	P	Pn	20 34 35.0	+0.7
	12nm,1.1s						
CTAO	Charters Tower	13.69	186	Pn	Pn	20 35 20.5	-2.7
FAKI	Fak Fak	15.92	282		P	20 35 53.8	-1.5
FAKI				IAmb	IAmb	20 36 20.0	
	comp=Z,14nm,0.9s						
SAUI	Saumlaki	16.48	264	Pn	Pn	20 35 58.8	-0.8
SIJI	Sorong	17.42	288	P	P	20 36 13.5	+1.4
	comp=Z,0.4nm,0.3s,baz=72,slow=19,SNR=2.6						
SIJI				LR	LR	20 43 51.4	
	comp=Z,120nm,21.0s,baz=82,slow=40						
MTN	Manton Dam	17.66	248		Pn	20 36 14.1	-0.2
WB0	Warramunga Arr	18.63	223	P	P	20 36 25.4	0.0
WRA	Warramunga Arr	18.79	223	P	P	20 36 26.7	-0.4

	comp=Z,0.6nm,0.3s,baz=51,slow=11,SNR=14						
WRA				LR	LR	20 43 47.8	
	comp=Z,39nm,21.6s,baz=150,slow=37						
WRA				ScP	ScP	20 44 26.0	+1.4
	comp=Z,0.0nm,0.3s,baz=24,slow=1.9,SNR=2.0						
WRA	Warramunga Arr	18.79	223	P	P	20 36 25.9	-1.2
EIDS	Eidsvold	19.11	171	P	Pn	20 36 32.1	+0.3
EIDS				IAmb	IAmb	20 37 00.2	
	comp=Z,19nm,1.3s						
AAI	Ambon	19.75	277	P	Pn	20 36 42.1	+2.6
GUMO	Guam	20.08	352	LR	LR	20 43 57.6	
	comp=Z,28nm,21.5s,baz=133,slow=35						
KNRA	Kununurra	20.85	242	P	P	20 36 48.7	-0.8
KNRA				IAmb	IAmb	20 37 08.6	
	comp=Z,6.5nm,0.6s						
AS31	Alice Springs	21.77	217	P	P	20 36 59.3	-0.1
AS31				IAmb	IAmb	20 37 05.9	
	comp=Z,4.4nm,0.3s						
ASAR	Alice Springs	21.77	217	P	P	20 36 59.5	+0.1
	comp=Z,4.7nm,0.6s,baz=53,slow=8.9,SNR=79						
ASAR				S	S	20 40 53.4	-4.2
	comp=Z,0.5nm,0.9s,baz=31,slow=24,SNR=3.0						
ASAR				PcP	PcP	20 41 01.8	+3.3
	comp=Z,1.0nm,0.8s,baz=46,slow=2.7,SNR=2.5						
ASAR				ScP	ScP	20 44 34.6	+3.0
	comp=Z,0.2nm,0.7s,baz=15,slow=4.0,SNR=2.3						
ASAR				LR	LR	20 45 30.3	
	comp=Z,73nm,18.8s,baz=60,slow=36						
ASAR	Alice Springs	21.77	217	P	P	20 36 59.0	-0.4
SANI	Sanana	22.21	280	P	P	20 37 04.0	-0.2
	comp=Z,15nm,0.9s						
SOEI	Soe	23.57	260	P	P	20 37 18.1	0.0
SOEI				IAmb	IAmb	20 37 41.3	
	comp=Z,17nm,1.1s						
ARMA	Armidale	24.15	172	P	P	20 37 23.5	+0.2
ARMA				IAmb	IAmb	20 37 41.2	
	comp=Z,9.9nm,1.2s						
BATI	Baumata	24.21	259	P	P	20 37 25.1	+1.2
	comp=Z,18nm,0.8s,baz=143,slow=5.1,SNR=6.0						
BATI	Baumata	24.21	259	P	P	20 37 24.1	+0.2
	comp=Z,11nm,1.0s						
FITZ	Fitzroy Crossi	24.57	240	P	P	20 37 27.1	0.0
	comp=Z,5.1nm,0.6s,baz=61,slow=8.4,SNR=34						
MMRI	Maumere	25.47	263	P	P	20 37 34.3	-1.1
	comp=Z,19nm,1.1s						
MMRI	Maumere	25.47	263	P	P	20 37 34.6	-0.8
MMRI				IAmb	IAmb	20 37 51.1	
	comp=Z,12nm,0.6s						
GTOI	Gorontalo	25.75	285	P	P	20 37 39.3	+1.4
	comp=Z,9.2nm,0.7s						
DAV	Davao City (W)	25.93	301	LR	LR	20 48 46.0	
	comp=Z,36nm,18.2s,baz=76,slow=38						
STKA	Stephens Creek	26.00	192	P	P	20 37 40.3	+0.3
	comp=Z,2.6nm,0.6s,baz=348,slow=8.8,SNR=8.4						
STKA				LR	LR	20 47 39.9	
	comp=Z,51nm,19.6s,baz=25,slow=36						
STKA	Stephens Creek	26.00	192	P	P	20 37 39.9	-0.1
EDFI	Ende, Flores	26.02	263	P	P	20 37 38.8	-1.7
KAPI	Kappang	27.98	271	P	P	20 37 58.6	+0.7
	comp=Z,1.1nm,0.4s,baz=63,slow=9.0,SNR=1.5						
MJAR	Matsushiro Arr	43.66	349	P	P	20 40 10.9	-0.7
	comp=Z,1.6nm,0.8s,baz=167,slow=7.4,SNR=2.6						
MJAR				LR	LR	20 58 17.5	
	comp=Z,20nm,18.2s,baz=140,slow=36						
KSRS	Korea Array	47.43	338	P	P	20 40 40.7	-0.6
	comp=Z,0.8nm,0.6s,baz=160,slow=8.0,SNR=4.5						
KSRS				LR	LR	20 59 14.5	
	comp=Z,34nm,18.8s,baz=332,slow=34						
KULM	Kulim	48.51	283	P	P	20 40 49.9	-0.2
KULM				IAmb	IAmb	20 40 50.7	
	comp=Z,6.9nm,0.9s						
GSI	Gunungsitoli	50.75	277	P	P	20 41 06.4	-0.8
CMAR	Chiang Mai Arr	54.17	298	P	P	20 41 34.1	+1.7
	comp=Z,0.5nm,0.5s,baz=128,slow=5.9,SNR=5.9						
CMAR				LR	LR	21 07 05.0	
	comp=Z,22nm,18.4s,baz=8.0,slow=39						
PEA0B	Petropavlovsk-	59.88	7	P	P	20 42 12.5	+0.3
PETK	Petropavlovsk-	59.88	7	P	P	20 42 12.2	0.0
	comp=Z,3.5nm,0.8s,baz=148,slow=6.0,SNR=6.0						
PETK				LR	LR	21 02 14.1	
	comp=Z,26nm,21.1s,baz=79,slow=30						
PETK	Petropavlovsk-	59.88	7	P	P	20 42 11.6	-0.6
SONM	Songino Array	65.16	331	P	P	20 42 47.7	0.0
	comp=Z,1.4nm,1.0s,baz=141,slow=4.5,SNR=6.1						
SONM	Songino Array	65.16	331	P	P	20 42 47.0	-0.6
SONM				IAmb	IAmb	20 42 48.3	
	comp=Z,4.0nm,1.4s						
SEY	Seymchan	69.23	2	LR	LR	21 08 04.9	
	comp=Z,36nm,20.7s,baz=96,slow=31						
VNDA	Vanda	71.46	177	P	P	20 43 27.8	+1.3
VNDA				IAmb	IAmb	20 43 51.4	
	comp=Z,3.6nm,1.1s						
MK31	Makanchi Array	78.34	320	P	P	20 44 05.5	-1.3
MKAR	Makanchi Array	78.34	320	P	P	20 44 05.5	-1.2
	comp=Z,1.1nm,0.8s,baz=102,slow=8.0,SNR=5.9						
MKAR	Makanchi Array	78.34	320	P	P	20 44 05.4	-1.4
ZALV	Zalesovo Beam	79.80	328	P	P	20 44 12.5	-2.0
	comp=Z,1.4nm,0.7s,baz=111,slow=5.5,SNR=6.3						
QSPA	South Pole Qui	83.56	180	P	P	20 44 34.9	+0.5
QSPA				IAmb	IAmb	20 44 37.6	
	comp=Z,7.2nm,1.4s						
ILAR	Eielson Array	85.53	23	P	P	20 44 42.3	-1.8
	comp=Z,0.5nm,0.6s,baz=263,slow=4.9,SNR=4.9						
TORD	Torodi Ar. Bea	146.00	284	PKPbc	PKPbc	20 51 46.9	-0.1
	comp=Z,4.2nm,0.7s,baz=68,slow=3.8,SNR=23						
TORD	Torodi Ar. Bea	146.00	284		PKPbc	20 51 46.3	-0.6
KIC	Kosan Boka	152.75	271	*e*PKIKP	PKPbc	20 52 03.7	-0.4
	comp=Z,9.7nm,0.9s						
DBIC	Dimbokro	152.87	272	PKPbc	PKPbc	20 52 03.9	-0.5
	comp=Z,1.5nm,0.6s,baz=52,slow=6.3,SNR=4.4						
LIC	Lamto	153.03	271	*e*PKIKP	PKPbc	20 52 03.3	-1.4
	comp=Z,34nm,1.4s						
TIC	Toumodi	153.03	272	*e*PKIKP	PKPbc	20 52 04.0	-0.8
BDFB	Brasilia	153.05	145	PKPbc	PKiKP	20 52 05.1	+0.1
	comp=Z,1.5nm,0.5s,baz=260,slow=6.2,SNR=4.0						

IDC 05 20:41:00.8±8.6**, 5°.83S**×**150°.34E, h107**km±58km**, mb3.1**/2**,**
mb1 3.3/3**, mb1mx2.6**/36**, mbtmp3.5**/3**, Error ellipse:**
s-maj=125.5km s-min=58.4km az=119.0, New Britain
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.76	221	P	Pn	20 42 11.4	+1.0
	1.5nm,0.3s,baz=45,slow=8.6,SNR=1.8						
PMG				S	Sn	20 43 03.8	-0.6
	1.4nm,0.3s,baz=220,slow=18,SNR=1.6						
WRA	Warramunga Arr	20.95	226	P	P	20 45 36.2	+0.8
	0.9nm,0.6s,baz=53,slow=10,SNR=10.0						
ASAR	Alice Springs	23.77	220	P	P	20 46 04.3	+0.6
	0.9nm,0.5s,baz=54,slow=9.2,SNR=21						
TORD	Torodi Ar. Bea	148.26	286	PKPbc	PKPbc	21 00 33.9	-1.6
	0.2nm,0.5s,baz=55,slow=3.2,SNR=4.5						

NEIC ***05*** *20:41:28.0±1.3, 53°.55N±0°.07×161°.20W±0°.10, h10km±2km,*
ML3.1/8, ML3.5(AEIC), Error ellipse: s-maj=13.0km
s-min=8.6km az=150.0
AEIC ***05*** *20:41:32±1.4, 53°.56N±0°.07×161°.25W±0°.10, h6km±7km,*
Error ellipse: s-maj=11.5km s-min=7.3km az=151.0
IDC ***05*** *20:41:34.9±1.2, 54°.06N×161°.26W, h47km±9km, mb3.3/4,*
mb1 3.5/6, mb1mx3.0/50, mbtmp3.4/6, ML3.2/2, Error
ellipse: s-maj=42.5km s-min=17.8km az=11.0
ISC 05 20:41:30.9±0.8**, 53°.66N**±0°.09×**161°.29W**±0°.06**, h24**km**, n82,**
σ**1s.03**/82**, mb3.6**/4**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	1.54	40		Pn	20 41 55.8	-1.0
CNBA				Sn	Sn	20 42 15.1	-0.9
DT1	Dutton Round H	1.56	339		Pn	20 41 56.9	-0.3
HAG	Hague Volcano	1.70	348		Pn	20 41 59.8	+0.7
PS4A	Pavlof South-4	1.73	349		Pn	20 42 00.1	+0.7
FALS	False Pass	1.73	315		Pn	20 41 58.8	-0.7
PVV	Pavlof Volcano	1.75	351		Pn	20 41 59.9	+0.2
BRPK	Brown Peak	1.75	305		Pn	20 41 59.2	-0.6
SDPT	Sand Point	1.76	15		Pn	20 41 59.5	-0.4
SDPT				Sn	Sn	20 42 21.8	+0.2
SDPT				IAML		20 42 27.0	
	comp=N,126nm,0.6s						
SDPT				IAML		20 42 29.4	
	comp=E,112nm,0.3s						
ISLZ	Isanotski Laza	1.78	308		Pn	20 41 59.7	-0.5
ISNN	Isanotski Nort	1.88	310		Pn	20 42 01.6	+0.1
SSLS	Shishaldin Sou	1.91	305		Pn	20 42 02.1	0.0
SSLN	Shishaldin Nor	1.97	307		Pn	20 42 03.0	+0.2
SSBA	Shishaldin	2.01	305		Pn	20 42 03.0	-0.3
WESE	West Dahl East	2.11	294		Pn	20 42 04.1	-0.7
WTUG	Tugumak	2.17	305		Pn	20 42 05.9	+0.3
WECS	Westdahl Cape	2.23	295		Pn	20 42 06.1	-0.3
AKSA	Akutan Strait	2.65	282		Pn	20 42 11.7	-0.5
AKBBA	Akutan Broad B	2.78	281		Pn	20 42 13.5	-0.5
AKLV	Akutan Long Va	2.81	282		Pn	20 42 14.3	0.0
AKMO	Akutan Morgan	2.83	281		Pn	20 42 14.6	0.0
AKRB	Akutan Reef Bi	2.87	281		Pn	20 42 15.1	-0.1
UNV	Unalaska Valle	3.10	276		Pn	20 42 16.9	-1.4
CHGN	Chignik	3.13	31	Pn	Pn	20 42 18.9	+0.3
CHGN				IAML		20 42 50.8	
	comp=N,64nm,0.1s						
CHGN				IAML		20 43 00.7	
	comp=E,70nm,0.5s						
MNAT	Makushin Natee	3.21	276		Pn	20 42 19.1	-0.7
MTBL	Makushin Table	3.21	278		Pn	20 42 19.7	-0.2
MREP	Makushin Rep't	3.24	275		Pn	20 42 19.7	-0.7
MSW	Makushin Switc	3.27	277		Pn	20 42 20.4	-0.2
MGOD	Makushin Gods	3.32	275		Pn	20 42 20.7	-0.6
MAPS	Pakushin South	3.36	275		Pn	20 42 21.3	-0.6
CHIR	Chirikof Islan	3.94	54		Pn	20 42 28.3	-1.5
OKTU	Okmok Mt. Tuli	4.04	269		Pn	20 42 30.6	-0.7
OKSP	Okmok Steeple	4.20	267		Pn	20 42 32.4	-1.2
NIKH	Nikolski High	4.59	264		Pn	20 42 37.5	-1.2
OHAK	Old Harbor	5.79	49		Pn	20 42 54.2	-0.9
KDAK	Kodiak Island	6.42	46		Pn	20 43 02.9	-1.1
P18K	Big Mountain,	6.65	28		Pn	20 43 07.5	+0.4
Q19K	Cape Douglas,	6.78	36		Pn	20 43 09.4	+0.5
O18K	Koktuh Hills	7.05	26	Pn	Pn	20 43 13.2	+0.7
ATKA	Atka Island	7.94	265		Pn	20 43 24.2	-0.5
N19K	Bonanza Creek	8.06	24	Pn	Pn	20 43 27.7	+1.2
SVW2	Sparrevohn	8.07	20	Pn	Pn	20 43 27.5	+0.9
CNPM	China Poot	8.08	39	Pn	Pn	20 43 27.9	+1.2
RSO	Redoubt South	8.25	31	Pn	Pn	20 43 30.5	+1.4
BRLK	Bradley Lake	8.37	39	Pn	Pn	20 43 29.9	-0.8
M19K	Big River Lodg	9.05	21	Pn	Pn	20 43 39.8	-0.1
L19K	White Mountain	9.20	19	Pn	Pn	20 43 42.2	+0.1
ADK	Adak	9.50	265	Pn	Pn	20 43 45.1	-1.0
TTA	Tatalina	9.70	14	Pn	Pn	20 43 49.0	+0.1
RC01	Rabbit Creek A	9.71	35	Pn	Pn	20 43 48.0	-0.9
KNK	Knik Glacier	10.38	36	Pn	Pn	20 43 57.3	-0.8
GHO	Glory Hole Cre	10.47	34	Pn	Pn	20 43 58.2	-1.1
SML	Sawmill	10.69	35	Pn	Pn	20 44 01.7	-0.7
FID	Port Fidalgo	10.71	43	Pn	Pn	20 44 00.9	-1.7
EYAK	Cordova Ski Ar	10.89	44	Pn	Pn	20 44 04.5	-0.6
SCM	Sheep Creek Mo	11.06	37	Pn	Pn	20 44 06.2	-1.3
J20K	Nowinta River	11.17	16	Pn	Pn	20 44 08.8	0.0
TRF	Thorofare Moun	11.36	26	Pn	Pn	20 44 10.9	-0.8
KLU	Klutina	11.36	40	Pn	Pn	20 44 11.1	-0.5
M24K	Tolsona, Glenn	11.65	37	Pn	Pn	20 44 14.9	-0.7
N25K	Chitina, Valde	11.95	42	Pn	Pn	20 44 19.4	-0.2
I21K	Tanana	12.47	18	Pn	Pn	20 44 27.1	+0.4
H21K	Melozitna Rive	12.76	16	Pn	Pn	20 44 31.0	+0.4
TABL	Table Mountain	12.86	50	Pn	Pn	20 44 32.1	-0.1
IMAR	Indian Mountai	12.92	14	Pn	Pn	20 44 33.4	+0.6
CTGM	Chitina Glacie	12.99	48	Pn	Pn	20 44 33.5	-0.5
IL31		13.32	28	Pn	Pn	20 44 35.0	-3.2
ILAR	Eielson Array	13.32	28	P	Pn	20 44 34.0	-4.2
	comp=E,0.1nm,0.3s,baz=219,slow=14,SNR=2.6						
ILAR	Eielson Array	13.32	28	Pn	Pn	20 44 35.7	-2.6
L27K	Beaver Creek,	13.84	39	Pn	Pn	20 44 44.1	-1.3
BCAR	Beaver Creek A	13.85	39	Pn	Pn	20 44 44.7	-0.9
COLD	Coldfoot	14.63	17	Pn	Pn	20 44 54.6	-1.6
INK	Inuvik	19.65	31	P	P	20 45 55.9	-1.6
	comp=E,0.1nm,0.3s,baz=217,slow=11,SNR=1.7						
PETK	Petropavlovsk-	24.23	285	P	P	20 46 46.1	+0.5
	comp=E,1.0nm,0.6s,baz=96,slow=11,SNR=0.6						
PETK				pP	pwP	20 46 57.8	+0.8
	comp=E,1.8nm,0.5s,baz=81,slow=13,SNR=2.0						
PDAR	Pinedale Array	35.40	86	P	P	20 48 25.5	+0.5
	comp=E,0.3nm,0.5s,baz=307,slow=3.3,SNR=2.9						
PDAR				pP	pwP	20 48 39.1	+1.1
	comp=E,0.2nm,0.5s,baz=281,slow=5.3,SNR=2.5						
H11N2	WAKE ISLAND Hy	41.74	228	T	T	21 34 18.4	
	baz=26						
H11N3	WAKE ISLAND Hy	41.75	228	T	T	21 34 14.8	
	baz=26						
H11N1	WAKE ISLAND Hy	41.76	228	T	T	21 34 16.0	
	baz=26						
H11S1	WAKE ISLAND Hy	42.91	228	T	T	21 35 58.5	
	baz=21						
H11S2	WAKE ISLAND Hy	42.92	228	T	T	21 36 12.1	
	baz=21						
H11S3	WAKE ISLAND Hy	42.92	228	T	T	21 36 13.3	
	baz=21						
TXAR	Lajitas Array	47.94	97	P	P	20 50 08.6	+1.2
	comp=E,0.5nm,0.8s,baz=302,slow=5.4,SNR=4.9						
TXAR				pP	pwP	20 50 21.3	+0.9
	comp=E,0.6nm,0.9s,baz=316,slow=5.2,SNR=4.1						
MKAR	Makanchi Array	66.30	318	P	P	20 52 16.8	-0.2
	comp=E,0.4nm,0.7s,baz=38,slow=2.6,SNR=1.4						
MKAR				pP	pwP	20 52 29.9	+0.9
	comp=E,0.7nm,0.9s,baz=24,slow=11,SNR=1.6						

THE ***05*** *20:53:43.5, 40°.83N×29°.84E, h0km±3km, ML3.6/5, Error*
ellipse: s-maj=7.2km s-min=1.3km az=80.0
ISK ***05*** *20:53:51.7, 40°.44N×29°.07E, h13km, ML3.7/24*
DDA ***05*** *20:53:51.8, 40°.44N×29°.08E, h8km±2km, MW3.6*
CFUSG ***05*** *20:53:52.1, 40°.45N×29°.00E, h5km, mb3.3/2, MD3.2/2,*
Western Turkey Magtype MSH 3.0 from 2 stations
IASPEI ***05*** *20:53:52.1±0.8, 40°.45N±0°.02×29°.08E±0°.02, h14km±6km,*
Error ellipse: s-maj=3.3km s-min=3.1km az=60.2, GT5
selection from ISC bulletin GT5 identified by Bondr and
McLaughlin (2009) selection criteria Bondr and
McLaughlin, A new ground truth data set for seismic
studies, <i>Seism. Res. Let.</i>, 80, 465-472,
2009
SOF ***05*** *20:53:53.7, 40°.73N×28°.83E, h2km, MD3.5*
ISC 05 20:53:52.2±0.8**, 40°.45N**±0°.02×**29°.08E**±0°.02**, h13**km±5km**,**
n104, σ**1s.00**/131**, 14C-13D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEMT	Gemlik	0.09	101	PG	Pg	20 53 55.0	-0.1
GEMT				SG	Sg	20 53 56.5	-0.6
TRML	Termal-Yalova	0.17	25	PG	Pg	20 53 56.6	+0.3
TRML				SG	Sg	20 53 59.4	+0.3
IGD	Bursa	0.21	153	*i* P	Pg	20 53 56.8	-0.1
IGD				*i* S	Sg	20 53 59.4	-0.5
IGD				IAML		20 54 00.0	
	comp=E,12μm,0.4s						
IGD				IAML		20 54 00.0	
	comp=N,10μm,0.3s						
ULDT	Uludag	0.31	172	*i* P	Pg	20 53 58.8	+0.1
ULDT				*i* S	Sg	20 54 02.9	-0.2
ULDT				IAML		20 54 03.0	
	comp=E,9μm,0.3s						
ULDT				IAML		20 54 03.0	
	comp=N,4μm,0.3s						
ORLT	Orhaneli	0.43	199	PG	Pg	20 54 00.4	-0.4
ORLT				SG	Sg	20 54 06.9	+0.4
HRT	Hereke	0.58	50	PG	Pb	20 54 04.9	+0.6
KCTX	Karacabey (Bur	0.58	252	PG	Pb	20 54 04.9	+0.6
KCTX				SG	Sb	20 54 12.2	-0.3
AVCI	Avcilar-stanb	0.61	334	PG	Pb	20 54 04.1	-0.6
KAVV	Kandilli-Istan	0.61	359	PG	Pb	20 54 04.9	+0.1
CAVI	Cavuskoy	0.64	113	PG	Pb	20 54 04.8	-0.4
BILE	Bilecik/Merkez	0.68	115	*i* P	Pg	20 54 05.2	-0.2
BILE				IAML		20 54 14.0	
	comp=N,1μm,0.2s						
BILE				*i* S	Sg	20 54 14.4	+0.1
BILE				IAML		20 54 15.0	
	comp=E,1μm,0.2s						
BGKT	Bogazkoy	0.76	342	PG	Pg	20 54 06.9	-0.2
KLYT	Kilyos	0.80	358	PG	Pb	20 54 07.8	-0.2
SILT	Sile	0.82	31	PG	Pg	20 54 08.0	-0.1
CTKS	Kestanelik-??a	0.90	331	PG	Pg	20 54 09.1	-0.5
AUBOZ	BOZOYUK	0.91	126	*i* P	Pb	20 54 10.2	+0.2
AUBOZ				*i* S	Sg	20 54 20.6	-1.1
AUBOZ				IAML		20 54 25.0	
	comp=N,2μm,0.3s						
AUBOZ				IAML		20 54 25.0	
	comp=E,5μm,0.4s						
AUBOZ	BOZOYUK	0.91	126	PG	Pb	20 54 10.3	+0.4
DST	Dursunbey	0.92	203	PG	Pg	20 54 09.5	-0.5
EDC	Edincik	0.93	264	PG	Pg	20 54 09.4	-0.9
GPA	Golpazari	0.95	99	PG	Pb	20 54 10.6	-0.1
SAUV	Serdivan-Sakar	0.99	73	PG	Pg	20 54 10.7	-0.7
SLVT	Silivri	1.02	320	PG	Pb	20 54 11.8	0.0
TVSB	Tavsanli	1.04	163	PG	Pg	20 54 12.1	-0.3
KAYN	Sakarya, Kayna	1.09	61	*i* P	Pg	20 54 12.2	-1.0
KAYN				*i* S	Sg	20 54 26.1	-1.3
KAYN				IAML		20 54 30.0	
	comp=N,1μm,0.3s						
KAYN				IAML		20 54 30.0	
	comp=E,1μm,0.4s						
GULT	Gulveren	1.10	91	PN	Pb	20 54 13.2	+0.1
ANDZ	Kutahya, Merke	1.13	146	*i* P	Pb	20 54 13.3	-0.5
ANDZ				*i* S	Sg	20 54 28.4	-0.5
ANDZ				IAML		20 54 31.0	
	comp=N,2μm,0.2s						
ANDZ				IAML		20 54 31.0	
	comp=E,1μm,0.4s						
GONE	Gonen-Balikesi	1.14	250	PN	Pb	20 54 13.6	-0.2
MRMT	Marmara Adasi	1.14	278	PN	Pn	20 54 13.9	-0.1
CTYL	Yalikoy Yolu	1.18	330	PN	Pb	20 54 14.1	-0.5
BORA	Eskisehir	1.20	118	PN	Pb	20 54 14.6	-0.3
CRLT	Corlu	1.22	304	PN	Pn	20 54 14.9	-0.2
BALB	Balikesir	1.23	229	PN	Pn	20 54 14.9	-0.2
SRCK	Saricakaya, Es	1.25	109	PN	Pn	20 54 15.5	0.0
DEMI	Demirci	1.44	191	*i* P	Pn	20 54 18.0	0.0
SART	Tekirdag	1.47	280	*i* P	Pn	20 54 18.7	+0.3
SART				*i* S	Sn	20 54 37.6	0.0
SART				IAML		20 54 41.0	
	comp=E,317nm,0.6s						
SART				IAML		20 54 42.0	
	comp=N,362nm,0.4s						
STEP	BALIKESIR_Sava	1.50	225	*i* P	Pn	20 54 18.5	-0.4
AUKIR	Kırka- Seyitga	1.62	136	*i* P	Pn	20 54 20.3	-0.3
AUKIR				*i* S	Sn	20 54 41.2	-0.2
AUKIR				IAML		20 54 48.0	
	comp=N,1μm,0.4s						
AUKIR				IAML		20 54 48.0	
	comp=E,923nm,0.4s						
SGAZ	Eskisehir, Sey	1.64	124	*i* P	Pn	20 54 21.1	+0.2
SGAZ				*i* S	Sg	20 54 44.8	-0.1
SGAZ				IAML		20 54 46.0	
	comp=E,428nm,0.4s						
SGAZ				IAML		20 54 47.0	
	comp=N,495nm,0.4s						
USAK	Uak-Merkez	1.74	182	*i* P	Pg	20 54 24.8	-0.8
USAK				*i* S	Sb	20 54 45.6	-0.2
USAK				IAML		20 54 48.0	
	comp=N,648nm,0.6s						
USAK				IAML		20 54 48.0	
	comp=E,775nm,0.7s						
USAK				IAML		20 54 49.0	
	comp=Z,583nm,0.6s						
BUHA	Balikesir, Bur	1.81	239	*i* P	Pn	20 54 22.9	-0.2
AKHS	Akhisar	1.85	212	*i* P	Pn	20 54 23.2	-0.5
YIGI	Dzce	1.87	73	*i* P	Pn	20 54 24.6	+0.6
YIGI				*i* S	Sn	20 54 48.5	+1.0
YIGI				IAML		20 54 55.0	
	comp=N,274nm,0.5s						
YIGI				IAML		20 54 55.0	
	comp=E,263nm,0.7s						
AFYO	Afyonkarahisar	1.91	150	*i* P	Pg	20 54 29.1	+0.1
AFYO				*i* S	Sg	20 54 54.4	+0.7
KULA	Kula-Manisa	1.96	190	P	Pn	20 54 24.6	-0.7
KDZE	Karadeniz Ereo	1.99	64	⇑P	Pn	20 54 26.3	+0.7
KDZE				⇑S	Sb	20 54 54.1	+1.1
KIRK	Kırklareli	2.00	312	*i* P	Pn	20 54 25.4	-0.3
KIBS	BOLU	2.12	90	*i* P	Pn	20 54 28.0	+0.5
ZEDA	zmir-Bergama	2.14	227	*i* P	Pn	20 54 27.5	-0.2
CAVK	Edirne/Enez-Ca	2.23	277	*i* P	Pb	20 54 33.2	+0.8
ENEZ	Enez	2.25	278	P	Pn	20 54 28.6	-0.5
ENEZ				S	Sg	20 55 03.1	-1.3
	comp=E,585nm,0.4s						
EDRB	Edirne	2.25	309	P	Pn	20 54 25.2	-3.9
EDRB				S	Sn	20 54 57.8	+1.1
ECEA	Canakkale, Ece	2.26	261	*i* P	Pb	20 54 32.8	-0.1
ECEA				*i* S	Sg	20 55 05.2	+0.3
ECEA				IAML		20 55 06.0	
	comp=E,1μm,0.4s						
ECEA				IAML		20 55 07.0	
	comp=N,938nm,0.6s						
KZIL	AFYON_Kizioren	2.34	159	*i* P	Pn	20 54 30.9	+0.4
ALN	Alexandroupoli	2.35	282	P	Pn	20 54 29.7	-0.8
ALN				S	Sg	20 55 05.5	-2.2
	comp=N,172nm,0.5s						
GOKA	anakkale-Gk	2.44	265	*i* P	Pn	20 54 32.1	+0.3
GADA	Gvkgeada	2.44	265	P	Pn	20 54 31.9	+0.1
GADA				S	Sg	20 55 10.0	-0.8
	comp=N,380nm,0.7s						
KOCA	Canakkale, Ayv	2.45	248	*i* P	Pn	20 54 32.1	+0.2
PRK	Paraskevi	2.47	242	P	Pn	20 54 33.4	+1.2
PRK				S	Sg	20 55 13.2	+1.5
	comp=N,992nm,0.7s						
BLCB	Balcova	2.60	218	P	Pn	20 54 35.3	+1.3
SMTH	Samothraki Isl	2.71	272	P	Pn	20 54 34.8	-0.7
JMB	Yambol	2.75	318	*i* P	Pn	20 54 36.6	+0.5
SIGR	SIGRI	2.77	244	P	Pn	20 54 36.2	-0.2
RDO	Rodhopi	2.78	286	P	Pn	20 54 35.3	-1.1
ROIA	ROIAK	2.93	335	*e*P	Pn	20 54 39.0	+0.5
ZEYE	Izmir, Urla-Ze	2.98	223	*i* P	Pb	20 54 44.3	-0.8
KALB	Balgarevo	2.99	351	⇑P	Pn	20 54 40.4	+1.0
KALB				⇑S	Sn	20 55 15.7	+0.6
PRD	Provadia	3.02	336	*i* P	Pn	20 54 38.7	-1.0
LIA	Limnos Island	3.04	261	P	Pn	20 54 40.5	+0.5
LIA				S	Sb	20 55 25.8	+2.7
	comp=N,228nm,0.4s						
PSN	Preselentsi	3.30	349	*i* P	Pn	20 54 43.4	-0.1
PELI	Kastamonı-Ara	3.32	74	*i* P	Pb	20 54 47.8	-3.2
RZN	Rozhen	3.52	292	*e*P	Pn	20 54 47.8	+1.0
SZH	Strazhica	3.66	321	*e*P	Pn	20 54 48.3	-0.3
ICOR	Ion Corvin	3.78	346	⇓P	Pn	20 54 50.7	+0.4
OUR	Ouranopolis	3.89	270	P	Pn	20 54 51.8	0.0
BZK	Bozkurt	4.01	66	⇓P	Pn	20 54 54.6	+1.2
TIRR	Tirgusor	4.03	353	⇑P	Pn	20 54 53.9	+0.2
HARR	Harsova	4.32	349	⇑P	Pn	20 54 58.9	+1.3
TPGR	Topolog	4.43	354	⇓P	Pn	20 54 59.1	-0.1
TLCR		4.74	358	⇓P	Pn	20 55 04.2	+0.9
CFR	Carcaliu	4.77	352	⇑P	Pn	20 55 04.5	+0.7
VTS	Vitosha	4.89	298	⇑P	Pn	20 55 06.6	+1.0
VAY	Valandovo	5.01	282	*i* Pn	Pn	20 55 07.5	+0.4
HUMR	Humele	5.08	325	⇑P	Pn	20 55 07.4	-0.6
SEV	Sevastopol'	5.31	38	*e*P	Pn	20 55 11.2	0.0
SEV				Pm		20 55 16.0	
	comp=Z,19nm,0.4s						
SEV				*e*S	Sn	20 56 11.6	-0.7
SEV				Sm		20 56 19.0	
	comp=N,9.0nm,0.3s						
SEV				Sm		20 56 19.0	
	comp=E,16nm,0.5s						
STIP	Stip	5.36	286	*i* Pn	Pn	20 55 10.2	-1.6
BISRR	Bisoca	5.38	342	⇑P	Pn	20 55 13.6	+1.4
MLR	Muntele Rosu	5.54	337	⇓P	Pn	20 55 15.1	+0.7
ZAPS	Zavoj	5.58	302	*e*Pn	Pn	20 55 18.9	+4.0
VRI	Vrincioaia	5.68	343	⇓P	Pn	20 55 17.0	+0.7
PLOR	Plostina	5.68	343	⇓P	Pn	20 55 17.9	+1.5
COVR	Voineasa-Covas	5.79	340	⇓P	Pn	20 55 17.6	-0.2
VOIR		5.79	331	⇑P	Pn	20 55 18.5	+0.6
ARR	Arges	5.90	328	⇑P	Pn	20 55 17.2	-2.2
ZAGS	Zajecar	6.10	306	*e*Pn	Pn	20 55 24.8	+2.8
OZUR		6.13	338	⇑P	Pn	20 55 23.6	+1.1
DOPR	Dopca	6.14	335	⇑P	Pn	20 55 23.9	+1.3
SUDU	Sudak	6.22	43	*e*P	Pn	20 55 24.4	+0.7
SUDU				Pm		20 55 32.1	
	comp=Z,26nm,0.4s						
SUDU				*e*S	Sn	20 56 35.1	+0.4
SUDU				Sm		20 56 43.0	
	comp=N,33nm,0.5s						
SUDU				Sm		20 56 43.0	
	comp=E,12nm,0.4s						
TESR	Tescani	6.31	345	⇓P	Pn	20 55 25.2	+0.3
FEO	Feodosiya	6.51	43	*e*P	Pn	20 55 29.5	+1.8
FEO				Pm		20 55 44.3	
	comp=Z,17nm,0.3s						
SELS	Selova	6.55	298	*e*Pn	Pn	20 55 30.7	+2.3
HERR	Herculane	6.61	314	⇓P	Pn	20 55 29.3	+0.2
MDVR	Moldovita	6.94	311	⇓P	Pn	20 55 33.1	-0.6
BZS	Buzias	7.52	316	⇓P	Pn	20 55 40.8	-0.7
SORM	Soroca	7.70	356	⇓P	Pn	20 55 43.8	-0.2

RHSSO ***05*** *20:54:42.2±0.3, 44°.13N×16°.79E, h5km±2km, ML2.5/13*
ISC 05 20:54:41.7±1.1**, 44°.13N**±0°.02×**16°.78E**±0°.02**, h4**km±9km**,**
n47, σ**0s.81**/84**, 1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGRS	Mrkonjic Grad	0.36	37	ePg	Pg	20 54 49.1	+0.3
MGRS				eSg	Sg	20 54 54.5	+1.0
RICI	Ricice	0.68	158	ePg	Pg	20 54 54.0	-0.9
RICI				Sg	Sg	20 55 04.1	+0.4
BLY	Banja Luka	0.69	25	⇓iPg	Pg	20 54 54.5	-0.4
BLY				eSg	Sg	20 55 04.4	+0.6
MORI	Morici	0.82	252	ePg	Pg	20 54 56.7	-0.7
MORI				Sg	Sb	20 55 09.6	-0.2
UDBI	Udbina	0.83	299	ePg	Pg	20 54 57.2	-0.4
UDBI				Sg	Sg	20 55 08.8	+0.4
PRIJ	Prijedor	0.85	357	ePg	Pg	20 54 57.0	-1.0
PRIJ				eSg	Sg	20 55 09.6	+0.6
MAKA	Makarska	0.86	168	ePg	Pg	20 54 57.0	-1.2
MAKA				Sg	Sg	20 55 10.1	+0.8
ZIRJ	Zirje	0.95	240	ePg	Pg	20 54 59.2	-0.7
ZIRJ				Sg	Sg	20 55 12.6	+0.4
PLIT	Plitvice	1.12	313	ePg	Pg	20 55 01.9	-1.2
PLIT				Sg	Sg	20 55 17.0	-0.6
DOB	Doboj	1.12	57	eSg	Sg	20 55 17.5	-0.3
DUGI	Dugi Otok	1.25	264	ePg	Pg	20 55 04.6	-1.0
DUGI				Sg	Sn	20 55 23.4	+0.1
LSTV	Lastovo	1.36	176	ePg	Pn	20 55 07.5	0.0
LSTV				Sg	Sn	20 55 26.6	+0.6
STON	Ston	1.42	152	ePg	Pn	20 55 07.1	-1.3
STON				eSg	Sb	20 55 26.9	-0.4
STON	Ston	1.42	152	ePn	Pn	20 55 07.5	-0.8
STON				Sn	Sg	20 55 29.2	+1.7
MOSL	Moslavina	1.48	359	ePg	Pn	20 55 08.5	-0.7
MOSL				Sg	Sn	20 55 28.0	-1.1
OZLJ	Ozalj	1.75	328	ePn	Pn	20 55 13.2	+0.3
OZLJ				Sn	Sn	20 55 35.8	+0.1
DBRK	Dubrovnik	1.77	145	ePn	Pb	20 55 14.4	-0.3
DBRK				Sn	Sg	20 55 38.3	-0.2
UPM	Unac-Piva	1.80	120	ePn	Pn	20 55 13.7	0.0
UPM				eSn	Sn	20 55 37.0	-0.1
TREB	Trebinje	1.82	140	ePn	Pn	20 55 14.4	+0.6
TREB				eSn	Sn	20 55 37.3	0.0
PTJ	Puntijarka	1.87	342	ePn	Pn	20 55 14.3	-0.3
PTJ				Sn	Sb	20 55 40.1	-0.2
BBLS	Lazići	1.91	97	ePn	Pn	20 55 15.6	+0.4
BBLS				eSn	Sn	20 55 40.0	+0.2
BBLS	Lazići	1.91	97	ePn	Pb	20 55 16.8	-0.5
CRES	Cresnjev	1.94	332	ePn	Pn	20 55 15.4	-0.1
CRES				eSn	Sn	20 55 40.6	+0.3
RUDO	Rudo	1.94	104	ePn	Pn	20 55 15.2	-0.3
RUDO				eSn	Sn	20 55 40.4	0.0
KALN	Kalnik	2.02	354	ePn	Pn	20 55 15.8	-0.8
KALN				Sn	Sn	20 55 41.8	-0.5
RIY	Rijeka	2.03	307	ePn	Pn	20 55 17.2	+0.5
RIY				eSn	Sn	20 55 42.8	+0.4
RIY	Rijeka	2.03	307	ePn	Pn	20 55 17.1	+0.4
RIY				Sn	Sb	20 55 44.8	+0.1
SMRN	Sveta Marina	2.08	297	ePn	Pn	20 55 18.9	+1.4
SMRN				Sn	Sb	20 55 46.3	0.0
HCY	Herceg Novi	2.10	143	ePn	Pn	20 55 18.1	+0.5
HCY				eSn	Sn	20 55 44.4	+0.2
DIVS	Divibare	2.31	90	ePn	Pn	20 55 20.3	-0.5
DIVS				eSn	Sn	20 55 49.4	-0.3
DIVS	Divibare	2.31	90	ePn	Pn	20 55 20.2	-0.5
CEY	Cerknica	2.32	315	ePn	Pn	20 55 21.9	+1.1
CEY				eSn	Sn	20 55 49.7	0.0
FRGS	Fruska Gora	2.40	64	ePn	Pn	20 55 21.9	+0.1
FRGS				eSn	Sn	20 55 51.5	-0.1
FRGS	Fruska Gora	2.40	64	ePn	Pb	20 55 26.4	+0.9
MORH	Mrgy, Hungar	2.47	32	ePn	Pn	20 55 22.8	+0.1
SJES	Sjenica	2.47	109	ePn	Pn	20 55 24.5	+1.6
PDG	Podgorica	2.48	132	ePn	Pn	20 55 24.0	+1.1
PDG				eSn	Sn	20 55 54.2	+0.6
LJU	Ljubljana	2.49	321	eSn	Sn	20 55 54.0	0.0
IVAS	Ivanjica	2.50	102	ePn	Pn	20 55 23.5	+0.2
TRUS	Trudelj	2.61	87	ePn	Pb	20 55 29.2	+0.1
DRME	Dracevica, Mon	2.62	137	ePn	Pn	20 55 25.2	+0.4
DRME				eSn	Sn	20 55 57.2	+0.1
SOKA	Soboth	2.83	335	ePn	Pn	20 55 28.3	+0.5
	0.4nm,0.2s						
SOKA				eSn	Sn	20 56 01.3	-1.1
	1.4nm,0.4s						
GRUS	Gruza	2.85	93	ePn	Pn	20 55 27.5	-0.5
OBKA	Obir	2.85	327	ePn	Pn	20 55 28.8	+0.6
	0.4nm,0.2s						
OBKA				eSn	Sb	20 56 10.1	+1.5
	23nm,0.7s						
ARSA	Arzberg	3.24	345	i Pn	Pn	20 55 33.9	+0.5
	1.6nm,0.2s						
ARSA				i Sn	Sn	20 56 10.0	-2.5
	5.0nm,0.7s						
CONA	Conrad Observa	3.85	351	i Pn	Pn	20 55 42.1	+0.3
	1.2nm,0.2s						
CONA				i Sn	Sn	20 56 25.4	-2.2
	2.0nm,0.3s						
MOA	Molln	4.11	336	i Pn	Pn	20 55 47.0	+1.6
	0.3nm,0.1s						
MOA				i Sn	Sn	20 56 35.8	+1.8
	1.1nm,0.2s						

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*SOME **05** 21:00:58.2, 41.°72N×65.°48E, h0^{km}*

ISU 05 21:00:58, 40.°50N×65.°10E, h5^{km}, 2C-1D, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUXR	Bukhara	0.95	218	eP	Pg	21 01 16.0	-0.3
BUXR				eS	Sg	21 01 28.0	-0.7
GZLY	Gazly	1.32	254	eP	Pn	21 01 23.0	0.0
GZLY				eS	Sn	21 01 41.0	0.0
SAM	Samarkand	1.67	119	eP	Pg	21 01 30.0	0.0
SAM				eS	Sn	21 01 48.0	-1.8
DZI	Dzhizak	2.11	99	eP	Pn	21 01 35.0	+1.0
DZI				eS	Sn	21 02 02.0	+1.3
PKMR	Pachkamar	2.19	153	eP	Pn	21 01 36.0	+0.8
PKMR				eS	Sn	21 02 03.0	+0.3
CHM	Chimkent	3.84	60	eP	Pn	21 01 57.9	+0.1
	33nm,0.2s						
CHM				eS	Sn	21 02 40.9	-2.4
	76nm,0.2s						
BRLS	Borolday	4.35	53	eP	Pn	21 02 00.9	-3.9
BRLS				eS	Sn	21 02 45.9	-10
KK08	Karatay Array	4.79	55	⇓Pn	Pn	21 02 09.4	-1.5
	2.2nm,0.5s,baz=231,slow=14						
KK08				⇑Sn	Sn	21 03 01.3	-5.5
	3.1nm,0.6s,baz=227,slow=25						
KK08				⇑Lg	Lg	21 03 25.2	
	13nm,0.7s,baz=237,slow=29						
MRKS	Merke	6.49	67	eP	Pb	21 02 48.1	-3.3
	0.8nm,0.4s						
MRKS				eS	Sb	21 04 06.7	-2.6
	3.9nm,0.4s						

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*TEH **05** 21:06:35.4, 28.°09N×62.°11E, h17^{km}, ML3.3*

*IDC **05** 21:06:38.0±14.0, 29.°65N×61.°81E, h0^{km}, mb3.4/3, mb1 3.4/3, mb1mx2.8/45, mbtmp3.4/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/28, Error ellipse: s-maj=568.6km s-min=32.5km az=146.0*

*OMAN **05** 21:06:41.6±0.2, 27.°36N×61.°80E, h7^{km}±10^{km}, mb5.0/11, ml3.7/6, Error ellipse: s-maj=20.6km s-min=2.4km az=229.0*

*DSN **05** 21:06:47.1±2.4, 27.°21N×61.°48E, h10^{km}, ML3.5/9, Error ellipse: s-maj=61.5km s-min=22.4km az=152.0*

ISC 05 21:06:33.8±0.8**, 28.°01N**±0.°05×**62.°16E**±0.°07**, h10^{km}, n54,** σ**$2^{s}.49$**/60**, mb3.4**/3**, Southwestern Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRVN	Saravan	0.65	161	ePg	Pg	21 06 49.8	+3.5
SRVN				eSg	Sb	21 07 00.4	+4.0
ZHDN	Zahedan	1.82	320	ePg	Pb	21 07 07.6	+0.3
KBAM	BAM	3.45	290	ePn	Pn	21 07 28.7	+1.0
KBAM				e		21 07 57.7	
	comp=Z,382nm,0.5s						
NHDN	Nehbandan	3.83	332	ePn	Pn	21 07 34.6	+1.6
NHDN				e		21 08 07.0	
	comp=Z,628nm,0.4s						
JSK1	Jask	4.58	240	ePn	Pn	21 07 46.2	+3.0
NGRK	Negar Kerman	5.03	290	ePn	Pn	21 07 52.1	+2.4
NGRK				e		21 07 54.7	
	comp=N,296nm,0.2s						
IKOO	Kooshah	5.17	329	ePn	Pn	21 07 52.6	+1.0
GENO	Geno	5.34	265	ePn	Pn	21 07 57.1	+3.3
IMON	Monand	5.59	338	ePn	Pn	21 07 58.5	+1.2
IMON				e		21 08 03.5	
	comp=Z,123nm,0.2s						
BANOM	Banah	5.63	250	i P	Pn	21 07 58.2	+0.6
	SNR=23						
BANOM	Banah	5.63	250	ePn	Pn	21 07 59.1	+1.5
BANOM	Banah	5.63	250	P	Pn	21 07 58.8	+1.2
	SNR=23						
BANOM				S	Sn	21 08 59.1	-3.3
ITEG	Tejag	5.69	330	ePn	Pn	21 07 59.8	+1.2
SHME	Shamm	5.71	251	i P	Pn	21 08 00.6	+1.9
	SNR=6.2						
SHME	Shamm	5.71	251	ePn	Pn	21 08 00.7	+1.9
SHME	Shamm	5.71	251	P	Pn	21 08 00.8	+2.1
	SNR=6.2						
SHME				S	Sn	21 09 03.3	-1.1
WSAR	Wadi Sarin	5.72	215	P	Pn	21 07 56.9	-2.0
WSAR				S	Sn	21 08 56.1	-8.6
BIDO	Bidbid	5.76	220	P	Pn	21 07 57.9	-1.6
BIDO				S	Sn	21 08 58.2	-7.5
MDH	Madha	5.90	244	i P	Pn	21 08 01.3	-0.1
	SNR=12						
MDH	Madha	5.90	244	ePn	Pn	21 08 01.4	+0.1
MDH	Madha	5.90	244	P	Pn	21 08 01.5	+0.2
	SNR=12						
MDH				S	Sn	21 09 02.4	-6.6
MASF	Masafi	5.98	245	P	Pn	21 08 04.2	+1.7
MASF				S	Sn	21 09 04.8	-6.2
	SNR=6.9						
WBK	Wadi Bani Khal	6.11	209	P	Pn	21 08 01.5	-2.7
WBK				S	Sn	21 09 05.5	-8.7
UOSS	Minazif	6.15	242	i P	Pn	21 08 03.9	-0.8
	SNR=7.1						
UOSS	Minazif	6.15	242	ePn	Pn	21 08 04.3	-0.5
UOSS	Minazif	6.15	242	P	Pn	21 08 04.0	-0.8
UOSS				S	Sn	21 09 07.3	-7.8
SMDO	Samad	6.17	218	P	Pn	21 08 05.0	-0.2
	SNR=10						
SMDO				S	Sn	21 09 08.2	-7.7
HOQ	Hoqain	6.21	226	P	Pn	21 08 04.2	-1.4
	SNR=30						
HOQ				S	Sn	21 09 07.6	-9.1
HATD	Hatta, Dubai	6.27	241	P	Pn	21 08 05.7	-0.7
HATD				S	Sn	21 09 10.1	-8.0
HATD	Hatta, Dubai	6.27	241	ePn	Pn	21 08 06.3	-0.1
HATD	Hatta, Dubai	6.27	241	P	Pn	21 08 06.3	-0.1
HATD				S	Sn	21 09 10.3	-7.8
JLN	Jalan Bani Buh	6.35	204	P	Pn	21 08 04.2	-3.3
	SNR=31						
JLN				S	Sn	21 09 11.5	-8.5
SOHO	SOHO	6.36	234	i P	Pn	21 08 07.0	-0.7
	SNR=9.7						
SOHO	SOHO	6.36	234	ePn	Pn	21 08 06.4	-1.3
SOHO	SOHO	6.36	234	P	Pn	21 08 06.8	-0.9
SOHO				S	Sn	21 09 12.2	-8.3
ASHO	Ashiyiah	6.40	240	i P	Pn	21 08 08.4	+0.2
	SNR=21						
ASHO	Ashiyiah	6.40	240	P	Pn	21 08 08.5	+0.2
	SNR=21						
ASHO				S	Sn	21 09 12.4	-8.9
NAZ	Nazwa, Dubai	6.55	244	P	Pn	21 08 13.2	+2.9
NAZ	Nazwa, Dubai	6.55	244	ePn	Pn	21 08 12.8	+2.5
JMDO	Jabal Madar	6.71	214	P	Pn	21 08 11.7	-0.8
JMDO				S	Sn	21 09 23.7	-5.4
FAQ	Al Faqa, Dubai	6.73	243	P	Pn	21 08 14.9	+2.2
FAQ	Al Faqa, Dubai	6.73	243	ePn	Pn	21 08 15.5	+2.8
FAQ	Al Faqa, Dubai	6.73	243	P	Pn	21 08 14.8	+2.1
	SNR=7.1						
FAQ				S	Sn	21 09 26.3	-3.1
ARQ	Araqi	6.89	229	P	Pn	21 08 17.0	+2.0
	SNR=70						
ARQ				S	Sn	21 09 31.2	-2.4
ALNE	Al Ain	6.98	237	ePn	Pn	21 08 18.2	+2.0
ALNE	Al Ain	6.98	237	P	Pn	21 08 18.1	+2.0
	SNR=7.2						
ALNE				S	Sn	21 09 32.0	-3.7
ASUD	Al Ashush, Dub	7.00	243	P	Pn	21 08 19.1	+2.7
ASUD	Al Ashush, Dub	7.00	243	P	Pn	21 08 17.4	+1.0
	SNR=29						
ASUD				S	Sn	21 09 33.8	-2.2
UMZA	Um Al Zommool	8.24	232	ePn	Pn	21 08 33.9	+0.5
THW	Thamme Wali	9.55	58	P	Pn	21 08 48.2	-3.2
MKAR	Makanchi Array	24.52	35	P	P	21 11 48.7	-4.8
	comp=Z,0.4nm,0.6s,baz=219,slow=9.1,SNR=6.1						
PALK	Pallekele	27.09	136	LR	LR	21 26 14.9	
	comp=Z,50nm,18.2s,baz=85,slow=41						
ZALV	Zalesovo Beam	30.78	26	P	P	21 12 43.0	-6.3
	comp=Z,0.3nm,0.3s,baz=226,slow=7.7,SNR=2.1						
TORD	Torodi Ar. Bea	57.98	268	P	P	21 16 31.1	+4.0
	comp=Z,0.2nm,0.5s,baz=63,slow=7.3,SNR=2.2						

MAN 05 21:17:15.6, 6.°80N×126.°64E, h63^{km}, mb4.6, ML3.5, MS3.3, 3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	1.40	349	⇓iP	Pn	21 17 37.9	-1.1
BIPH				i S	Sn	21 17 54.4	-2.2
KCP	Kidapawan	1.55	278	⇓eP	Pn	21 17 41.4	+0.3
GSPH	General Santos	1.82	247	⇓eP	Pn	21 17 44.5	-0.4

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*IDC **05** 21:17:54.5±6.9, 24.°87N×123.°18E, h87^{km}±73^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.2/40, mbtmp3.8/6, ML3.7/1, Error ellipse: s-maj=78.4km s-min=16.6km az=59.0*

*NEIC **05** 21:17:57.5±1.7, 25.°04N±0.°07×123.°49E±0.°08, h124^{km}±7^{km}, mb4.2/12, Error ellipse: s-maj=10.6km s-min=10.0km az=161.0*

*JMA **05** 21:17:58.1±0.2, 24.°97N×123.°40E, h120^{km}±4^{km}, M3.8*

ISC 05 21:17:57.5±0.7**, 25.°02N**±0.°07×**123.°44E**±0.°03**, h125^{km}**±6^{km}**, n49,** σ**$0^{s}.99$**/65**, mb4.0**/11**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.68	215	P	Pn	21 18 17.3	+0.1
YOJ				S	Sn	21 18 31.3	-0.8
YOJ	Yonaguni jima	0.68	215	Pn	Pn	21 18 17.2	0.0
YOJ				Sn	Sn	21 18 31.5	-0.6
YOJ	Yonaguni jima	0.68	215	P	Pn	21 18 17.6	+0.4
JYNG	Yonagunijimaku	0.72	218	P	Pn	21 18 17.0	-0.5
JYNG				S	Sn	21 18 32.2	-0.5
IRIF	Iriomote-Funau	0.73	158	P	Pn	21 18 17.5	-0.1
IRIF				S	Sn	21 18 32.5	-0.3
JISG	Ishigakijimahi	0.90	118	P	Pn	21 18 19.3	+0.2
JIJ	Ishigaki jima	0.92	135	P	Pn	21 18 19.3	+0.1
JIJ				S	Sn	21 18 34.6	-1.0
JKRS	Kuro-shima	0.94	146	P	Pn	21 18 19.8	+0.4
JKRS				S	Sn	21 18 35.7	-0.2
HATJ	Hateruma jima	1.01	161	P	Pn	21 18 20.3	+0.2
HATJ				S	Sn	21 18 36.5	-0.7
JTJ	Tarama	1.21	108	P	Pn	21 18 22.8	+0.7
JTJ				S	Sn	21 18 41.3	+0.6
JIRB	Irabujima	1.59	96	P	Pn	21 18 27.1	+0.8
JIRB				S	Sn	21 18 48.4	+0.2
JIKM	Ikemajima	1.65	93	P	Pn	21 18 28.0	+1.1
JIKM				S	Sn	21 18 50.2	+0.8
JMJ2	Miyako jima3	1.74	99	P	Pn	21 18 29.2	+1.1
JMJ2				S	Sn	21 18 52.3	+0.9
TATO	Taipei	1.77	269	Pn	Pn	21 18 29.1	+0.8
TATO				Sn	Sn	21 18 52.6	+0.7
JOGS	Gusukube	1.81	98	P	Pn	21 18 30.3	+1.4
JOGS				S	Sn	21 18 53.8	+1.0
NACB	Ninganchiao	1.88	244	Pn	Pn	21 18 28.8	-0.9
YHNB	Yeheng	1.90	260	Pn	Pn	21 18 31.0	+0.9
YHNB	Yeheng	1.90	260	P	Pn	21 18 31.1	+0.9
YULB	Yu-li	2.54	231	Pn	Pn	21 18 36.9	-1.1
SSLB	Suanglung	2.57	242	Pn	Pn	21 18 37.9	-0.6
SSLB	Suanglung	2.57	242	P	Pn	21 18 38.3	-0.2
TWG	Pinlang	3.08	225		Pn	21 18 44.1	-0.9
TPUB	Ta-pu	3.08	237	Pn	Pn	21 18 46.0	+0.9
TPUB	Ta-pu	3.08	237	P	Pn	21 18 46.0	+0.9
JOW	Kunigami	4.72	66	P	Pn	21 19 06.5	-0.2
	5.9nm,0.3s,baz=210,slow=20,SNR=21						
JOW				S	Sn	21 19 56.7	-3.8
	5.6nm,0.3s,baz=154,slow=20,SNR=2.2						
JOW	Kunigami	4.72	66		Pn	21 19 05.8	-0.9
JOW	Kunigami	4.72	66	P	Pn	21 19 06.5	-0.2
JMZ	Minamidaito 2	7.08	82	Pn	Pn	21 19 36.1	-2.5
KSRS	Korea Array	12.97	16	P	P	21 21 02.7	-0.1
	0.1nm,0.3s,baz=206,slow=11,SNR=4.4						
SONM	Songino Array	26.46	334	P	P	21 23 25.5	+2.6
	0.4nm,0.9s,baz=145,slow=10,SNR=1.9						
MTN	Manton Dam	38.37	168	P	P	21 25 05.7	-1.0
MTN				IAmb	IAmb	21 25 26.0	
	comp=Z,5.9nm,1.2s						
MK31	Makanchi Array	39.20	314	P	P	21 25 12.2	-1.1
MK31				IAmb	IAmb	21 25 12.4	
	comp=Z,11nm,1.4s						
MKAR	Makanchi Array	39.20	314	P	P	21 25 12.4	-0.9
	comp=Z,0.4nm,0.3s,baz=100,slow=9.5,SNR=15						
MKAR	Makanchi Array	39.20	314	P	P	21 25 11.9	-1.4
ZALV	Zalesovo Beam	40.69	326	P	P	21 25 26.9	+1.5
	comp=Z,0.5nm,0.4s,baz=118,slow=9.2,SNR=2.4						
KNRA	Kununurra	40.78	172	P	P	21 25 26.2	-0.3
KNRA				IAmb	IAmb	21 25 35.2	
	comp=Z,10nm,1.5s						
COEN	Coen	43.26	151	P	P	21 25 47.5	+0.7
WB0	Warramunga Arr	45.77	166	P	P	21 26 06.8	+0.1
WB0				IAmb	IAmb	21 26 07.7	
	comp=Z,6.4nm,1.1s						
WRA	Warramunga Arr	45.93	166	P	P	21 26 08.1	+0.2
	comp=Z,2.0nm,0.4s,baz=348,slow=8.9,SNR=42						
WRA				PcP	PcP	21 27 43.2	+0.4
	comp=Z,0.3nm,0.5s,baz=318,slow=1.2,SNR=1.9						
WRA	Warramunga Arr	45.93	166	P	P	21 26 06.8	-1.1
GAR	Garm	46.54	301	P	P	21 26 12.8	+0.1
GAR				IAmb	IAmb	21 26 21.9	
	comp=Z,2.1nm,0.7s						
AS31	Alice Springs	49.45	167	P	P	21 26 35.6	+0.6
ASAR	Alice Springs	49.45	167	P	P	21 26 36.0	+0.9
	comp=Z,0.7nm,0.5s,baz=353,slow=6.8,SNR=22						
ASAR				PcP	PcP	21 27 55.3	-0.1
	comp=Z,0.4nm,0.4s,baz=347,slow=3.8,SNR=7.5						
ASAR	Alice Springs	49.45	167	P	P	21 26 35.0	-0.1
CTAO	Charters Tower	50.03	152	P	P	21 26 39.3	-0.1
ABKAR	Akbulak array	54.34	314	P	P	21 27 10.2	-0.8
ABKAR	Akbulak array	54.34	314	P	P	21 27 10.1	-0.8
ABKAR				IAmb	IAmb	21 27 32.1	
	comp=Z,0.6nm,0.8s						
BBOO	Buckleboo	58.75	168	P	P	21 27 42.3	0.0
STKA	Stephens Creek	59.18	162	P	P	21 27 44.8	-0.5
STKA				IAmb	IAmb	21 27 47.4	
	comp=Z,1.4nm,1.5s						

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*NEIC **05** 21:44:36.1±0.9, 36.°21N±0.°01×97.°43W±0.°02, h5^{km}±7^{km}, Error ellipse: s-maj=2.9km s-min=1.7km az=63.0*

*TUL **05** 21:44:36±1.1, 36.°20N±0.°01×97.°43W±0.°02, h6^{km}±7^{km}, ML3.4, mb_Lg3.4/85(NEIC), Error ellipse: s-maj=2.8km s-min=1.7km az=60.0*

*ANF **05** 21:44:36.1±0.3, 36.°22N×97.°42W, h6^{km}, ML4.0/18, Error ellipse: s-maj=3.3km s-min=2.8km az=117.0*

ISC 05 21:44:36.1±1.0**, 36.°20N**±0.°02×**97.°43W**±0.°02**, h7^{km}**±10^{km}**, n116,** σ**$0^{s}.58$**/115**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.41	183		Pg	21 44 44.1	0.0
OK029				Sg	Sg	21 44 49.9	+0.5
CROK	Carrier	0.54	304		Pg	21 44 46.6	+0.1
CROK				Sg	Sg	21 44 54.1	+0.6
OK031	S. Brethren Rd	0.54	117		Pg	21 44 46.6	0.0
OK031				Sg	Sg	21 44 53.9	+0.3
BCOK	Bluff Creek, N	0.56	195		Pg	21 44 47.0	0.0
BCOK				IAmb_Lg		21 44 54.6	
	comp=Z,412nm,0.9s						
BCOK				Sg	Sg	21 44 54.8	+0.4
BLOK	Blackwell	0.58	17		Pg	21 44 47.4	0.0
OK005	Luther M Schoo	0.58	160	Pg	Pg	21 44 47.3	0.0
OK030	Cody Creek RV	0.59	117		Pg	21 44 47.5	-0.1
OK030				Sg	Sg	21 44 55.6	+0.3
OK034	N. Norfolk Rd.	0.61	108		Pg	21 44 47.9	0.0
OK034				Sg	Sg	21 44 56.3	+0.3
OK009	Oakdale Elemen	0.62	179	Pg	Pg	21 44 48.1	0.0
OK025	Westminster Rd	0.63	173		Pg	21 44 48.2	0.0
OK025				Sg	Sg	21 44 56.9	+0.6
OK001	Jones High Sch	0.65	170	Pg	Pg	21 44 48.6	-0.1
GC02	Grant County #	0.73	332		Pg	21 44 50.1	-0.1
OKCFA	Oklahoma City	0.79	181		Pg	21 44 51.0	-0.3
OKCFA				IAmb_Lg		21 45 00.4	
	comp=Z,310nm,0.9s						
OKCFA	Oklahoma City	0.79	181	P	Pg	21 44 51.0	-0.3
	baz=1.1						
OKCSW	OKLAHOMA CITY	0.80	180		Pg	21 44 51.2	-0.2
KAN13	South Haven SW	0.81	357		Pg	21 44 51.6	-0.1
KAN14	Manchester OK	0.86	331		Pg	21 44 52.5	-0.2
OK032	Salt Plains WL	0.87	314		Pg	21 44 52.5	-0.3
OK032				Sg	Sg	21 45 04.4	+0.4
KAN17	Caldwell West	0.88	342		Pg	21 44 52.8	-0.3
KAN09	Caldwell North	0.94	351	Pg	Pg	21 44 53.9	-0.3
KAN01	Argonia South	0.98	345		Pg	21 44 54.7	-0.3
T35A	Sooner Cattle	1.03	46	Pg	Pg	21 44 55.4	-0.4
T35B	Sooner Cattle	1.03	46	P	Pg	21 44 55.4	-0.5
	baz=226,SNR=179						
T35B				S	Sg	21 45 08.8	-0.4
	baz=226						
KAN10	Anthony SW Sta	1.06	330		Pg	21 44 56.1	-0.4
KAN06	Argonia West S	1.10	342		Pg	21 44 56.8	-0.4
KAN08	Anthony NE Sta	1.11	337		Pg	21 44 56.9	-0.5
KAN16	Harper SW Stat	1.14	334		Pg	21 44 57.5	-0.5
KAN12	Harper NE Stat	1.18	338	Pn	Pg	21 44 58.2	-0.6
U32A	Winter Ranch,	1.28	278	Pn	Pn	21 44 59.6	-0.9
U32A	Winter Ranch,	1.28	278	P	Pn	21 44 59.6	-0.9
	baz=97						
TUL1	Leonard	1.36	102	Pn	Pn	21 45 00.6	-1.0
TUL1	Leonard	1.36	102	P	Pn	21 45 00.5	-1.1
	baz=283						
TUL1				S	Sb	21 45 19.3	-0.2
	baz=283						
X34A	Smith Ranch, M	1.63	192		Pb	21 45 06.1	-0.5
X34A				IAmb_Lg		21 45 29.0	
	comp=Z,155nm,0.8s						
LOOK	Love County	2.22	175	Pn	Pn	21 45 13.7	+0.4
LOOK				IAmb_Lg		21 45 48.5	
	comp=Z,104nm,0.9s						
X37A	Clayton	2.33	133	Pn	Pn	21 45 15.7	+0.8
X37A				IAmb_Lg		21 45 55.9	
	comp=Z,209nm,1.0s						
X37A	Clayton	2.33	133	P	Pn	21 45 15.8	+0.8
	baz=314,SNR=44						
R32A	Long Quarter,	2.44	336	Pn	Pn	21 45 16.3	-0.1
R32A	Long Quarter,	2.44	336	P	Pn	21 45 16.9	+0.4
	baz=155						
R32A				S	Sn	21 45 47.6	+1.1
	baz=155						
U38A	Gravette	2.47	84		Pn	21 45 17.0	+0.2
U38A	Gravette	2.47	84	P	Pn	21 45 17.4	+0.5
	baz=266,SNR=75						
HHAR	Hobbs	2.82	87		Pn	21 45 21.9	+0.2
Z35A	Perchaven, San	2.87	177	Pn	Pn	21 45 22.3	0.0
Z35A	Perchaven, San	2.87	177	P	Pn	21 45 23.3	+0.9
	baz=357,SNR=19						
KSU1	Kansas State U	2.96	12		Pn	21 45 24.0	+0.4
W39A	Magazine	3.13	108	Pn	Pn	21 45 26.0	0.0
W39A	Magazine	3.13	108	P	Pn	21 45 26.3	+0.4
	baz=290,SNR=38						
CBKS	Cedar Bluff	3.19	326		Pn	21 45 26.9	+0.2
MIAR	Mount Ida	3.56	117		Pn	21 45 32.1	+0.3
MIAR				IAmb_Lg		21 46 38.0	
	comp=Z,66nm,0.8s						
MIAR	Mount Ida	3.56	117	P	Pn	21 45 32.3	+0.5
	baz=299,SNR=43						
Z38A	Mt. Pleasant	3.56	145	Pn	Pn	21 45 31.9	+0.1
Z38A				IAmb_Lg		21 46 37.3	
	comp=Z,102nm,0.9s						
Z38A	Mt. Pleasant	3.56	145	P	Pn	21 45 32.7	+0.9
	baz=326						
S39A	Bolivar	3.61	65	Pn	Pn	21 45 33.1	+0.6
S39A				IAmb_Lg		21 46 35.1	
	comp=Z,125nm,1.0s						
S39A	Bolivar	3.61	65	P	Pn	21 45 33.3	+0.8
	baz=247,SNR=32						
S39A				S	Sn	21 46 16.3	+0.9
	baz=247						
U40A	Yellville	3.70	86	Pn	Pn	21 45 33.4	-0.4
U40A	Yellville	3.70	86	P	Pn	21 45 33.4	-0.4
	baz=269,SNR=61						
U40A				P	Pn	21 45 33.4	-0.4
	baz=269,SNR=61						
AMTX	Amarillo	3.71	250		Pn	21 45 33.9	-0.1
AMTX				IAmb_Lg		21 46 40.7	
	comp=Z,114nm,0.7s						
ABTX	Abilene, Hawle	4.01	208	Pn	Pn	21 45 37.8	-0.2

X40A	Basin Creek Fa	4.13	113	Pn	Pn	21 45 40.4	+0.7
X40A				IAmb_Lg		21 46 57.5	
	comp=Z,73nm,0.7s						
X40A	Basin Creek Fa	4.13	113	P	Pn	21 45 40.5	+0.9
	baz=296,SNR=16						
X40A				P	Pn	21 45 40.5	+0.9
	baz=296,SNR=16						
WHTX	Lake Whitney,	4.20	180	Pn	Pn	21 45 41.3	+0.7
WHTX	Lake Whitney,	4.20	180	P	Pn	21 45 41.0	+0.4
	baz=0.3,SNR=18						
MGMO	Mountain Grove	4.26	76		Pn	21 45 41.6	+0.2
MGMO				IAmb_Lg		21 46 51.2	
	comp=Z,64nm,0.8s						
WHAR	Wooly Hollow	4.28	101	Pn	Pn	21 45 42.0	+0.2
FCAR	Ozark Folk Cen	4.31	93	Pn	Pn	21 45 40.7	-1.4
W41B	Gary Mavity, V	4.34	102	P	Pn	21 45 42.7	+0.2
	baz=285,SNR=19						
WLAR	White Oak Lake	4.35	124	Pn	Pn	21 45 41.8	-0.8
WLAR				IAmb_Lg		21 47 02.1	
	comp=Z,53nm,0.8s						
237A	Washetta, Mont	4.40	162	Pn	Pn	21 45 42.9	-0.5
237A				IAmb_Lg		21 47 07.1	
	comp=Z,48nm,1.1s						
237A	Washetta, Mont	4.40	162	P	Pn	21 45 43.2	-0.2
	baz=343						
N33A	J Bar K, Exete	4.53	360	Pn	Pn	21 45 44.2	-0.9
N33A				IAmb_Lg		21 47 05.3	
	comp=Z,52nm,0.8s						
P38A	Dawn	4.60	41	Pn	Pn	21 45 47.2	+1.1
P38A				IAmb_Lg		21 47 04.7	
	comp=Z,75nm,0.8s						
R40A	Maddies Statio	4.62	62	Pn	Pn	21 45 46.6	+0.3
R40A	Maddies Statio	4.62	62	P	Pn	21 45 46.6	+0.3
	baz=245,SNR=26						
N35A	Tabor	4.86	16	Pn	Pn	21 45 49.9	+0.3
N35A	Tabor	4.86	16	P	Pn	21 45 49.9	+0.3
	baz=197,SNR=5.8						
KSCO	Kaye Shedlock'	4.99	306	IAmb_Lg		21 47 28.5	
	comp=Z,64nm,0.8s						
NATX	Nacogdoches	5.00	152	Pn	Pn	21 45 52.2	+0.7
LCAR	Lake Charles	5.08	90	Pn	Pn	21 45 51.8	-0.9
CCAR	Cane Creek	5.17	115	Pn	Pn	21 45 54.3	+0.4
BGNE	Belgrade	5.23	354	Pn	Pn	21 45 54.3	-0.4
BGNE				IAmb_Lg		21 47 34.8	
	comp=Z,53nm,0.8s						
CCM	Cathedral Cave	5.28	68		Pn	21 45 55.8	+0.3
CCM				IAmb_Lg		21 47 23.5	
	comp=Z,69nm,0.8s						
P40A	Paris	5.40	50		Pn	21 45 57.8	+0.7
435B	Jarrell	5.41	181	Pn	Pn	21 45 57.0	-0.2
N38A	Joes South For	5.64	34	Pn	Pn	21 46 00.6	+0.1
PBMO	Poplar Bluff	5.67	82	Pn	Pn	21 46 02.3	+1.5
PBMO				IAmb_Lg		21 47 40.8	
	comp=Z,53nm,0.7s						
T25A	Trinidad	5.69	282		Pn	21 46 01.4	+0.2
T25A				IAmb_Lg		21 47 41.5	
	comp=Z,45nm,0.8s						
L34A	Svendsen Farm,	5.81	8	Pn	Pn	21 46 02.1	-0.7
L34A				IAmb_Lg		21 47 52.3	
	comp=Z,78nm,0.7s						
FVM	French Village	5.88	70		Pn	21 46 03.3	-0.3
FVM				IAmb_Lg		21 47 47.2	
	comp=Z,76nm,0.9s						
OGNE	Ogallala	5.95	324		Pn	21 46 04.6	-0.1
OGNE				IAmb_Lg		21 47 53.3	
	comp=Z,70nm,0.8s						
GNAR	Gosnell	6.01	90	IAmb_Lg		21 47 59.6	
	comp=Z,79nm,0.7s						
JCT	Junction City	6.04	200		Pn	21 46 05.8	-0.2
JCT				IAmb_Lg		21 47 59.3	
	comp=Z,50nm,0.8s						
143A	Socs Landing,	6.08	123	Pn	Pn	21 46 07.5	+1.0
143A				IAmb_Lg		21 47 53.5	
	comp=Z,38nm,0.7s						
PEBM	Pemiscott Bayo	6.12	89	IAmb_Lg		21 47 56.4	
	comp=Z,80nm,0.8s						
LNXT	Lenox	6.43	89	IAmb_Lg		21 48 15.4	
	comp=Z,69nm,0.7s						
K31A	O'Neill	6.49	351	Pn	Pn	21 46 11.5	-0.6
K31A				IAmb_Lg		21 48 14.2	
	comp=Z,68nm,0.8s						
SCIA	State Center	6.57	29		Pn	21 46 12.5	-0.7
SCIA				IAmb_Lg		21 48 17.9	
	comp=Z,67nm,0.8s						
SDCO	Great Sand Dun	6.64	286		Pn	21 46 15.4	+1.0
S44A	Carbondale	6.71	75	Pn	Pn	21 46 14.5	-0.7
S44A				IAmb_Lg		21 48 08.4	
	comp=Z,62nm,0.7s						
SIUC	Southern Illin	6.75	75	IAmb_Lg		21 48 08.8	
	comp=Z,66nm,0.9s						
W45A	Hickory Valley	6.79	96	IAmb_Lg		21 48 31.0	
	comp=Z,38nm,0.8s						
N41A	Harden Midland	6.84	47	Pn	Pn	21 46 17.9	+1.0
Y45A	Yeager Farm, C	6.88	108	IAmb_Lg		21 48 33.7	
	comp=Z,30nm,0.8s						
UTMT	University of	6.92	86	IAmb_Lg		21 48 35.1	
	comp=Z,59nm,0.7s						
P43A	Skaggs, Pawnee	7.13	59	Pn	Pn	21 46 20.6	-0.3
Q44A	Meyer Farm, Va	7.21	66	Pn	Pn	21 46 22.3	+0.4
ISCO	Idaho Springs	7.39	302		Pn	21 46 24.4	-0.3
ECSD	EROS Data Cent	7.55	5	Pn	Pn	21 46 25.1	-1.5
L40A	Anamosa	7.58	38	Pn	Pn	21 46 26.4	-0.6
L40A				IAmb_Lg		21 48 43.9	
	comp=Z,41nm,0.9s						
HDIL	Hopedale	7.73	53	Pn	Pn	21 46 28.9	-0.1
MNTX	Cornudas Mount	7.99	238	Pn	Pn	21 46 31.8	-0.9
Y22D	IRIS PASSCAL I	8.06	257	IAmb_Lg		21 49 07.6	
	comp=Z,38nm,0.9s						
SUSD	Miller	8.31	352	IAmb_Lg		21 49 10.6	
	comp=Z,22nm,0.8s						
L42A	Oliver, Polo	8.36	44	IAmb_Lg		21 49 10.1	
	comp=Z,47nm,0.8s						
JFWS	Jewell Farm	8.70	37	IAmb_Lg		21 49 15.7	
	comp=Z,41nm,0.7s						
M44A	Midewin, Midew	8.97	52	IAmb_Lg		21 49 21.4	
	comp=Z,39nm,0.7s						
I40A	Norwalk	9.28	32	IAmb_Lg		21 49 39.9	
	comp=Z,21nm,0.7s						
K22A	Casper	9.53	315	IAmb_Lg		21 49 45.8	
	comp=Z,18nm,0.8s						

IDC 05 21:47:08.8±3.6**,5°.15S**×**151°.50E,h0**^{km}**,mb3.4**/3**, mb1 3.7**/3**,mb1mx3.4**/32**,mbtmp3.5**/3**,MS3.4**/1**,Ms1 3.4**/1**, ms1mx2.6**/24**,Error ellipse: s-maj=125.8km s-min=50.1km az=120.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.04	225	Sn	Sn	21 49 50.4	+1.2
	2.2nm,0.3s,baz=179,slow=4.4,SNR=2.0						
WRA	Warramunga Arr	22.25	227	P	P	21 52 07.7	+0.2
	0.7nm,0.5s,baz=52,slow=10.0,SNR=10						
ASAR	Alice Springs	25.03	221	P	P	21 52 34.9	+0.1
	0.6nm,0.7s,baz=55,slow=8.5,SNR=11						
FITZ	Fitzroy Crossi	28.36	241	P	P	21 53 04.5	-0.4
	0.4nm,0.4s,baz=73,slow=11,SNR=1.5						
KSRS	Korea Array	47.74	335	LR	LR	22 15 24.7	
	comp=Z,42nm,18.1s,baz=344,slow=36						
TORD	Torodi Ar. Bea	149.18	287	PKPbc	PKPbc	22 06 59.8	-0.5
	0.2nm,0.4s,baz=106,slow=2.9,SNR=4.5						

IDC 05 21:52:27.9±1.0**,22°.41N**×**106°.58E,h0**^{km}**,mb3.5**/6**, mb1 3.6**/7**,mb1mx3.3**/45**,mbtmp3.4**/7**,ML3.3**/1**,MS3.7**/1**, Ms1 3.7**/1**,ms1mx2.6**/37**,Error ellipse: s-maj=28.4km s-min=19.9km az=67.0,Vietnam**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.17	243	Pn	Pn	21 54 26.9	-0.9
	0.1nm,0.3s,baz=57,slow=11,SNR=4.8						
CMAR				Lg	Lg	21 56 49.3	
	baz=63,slow=30,SNR=1.6						
JOW	Kunigami	20.20	73	LR	LR	22 04 56.9	
	comp=Z,236nm,21.0s,baz=178,slow=37						
SONM	Songino Array	25.37	360	P	P	21 57 57.4	+0.6
	0.5nm,0.6s,baz=177,slow=9.0,SNR=5.0						
MKAR	Makanchi Array	31.25	327	P	P	21 58 49.7	+0.5
	0.3nm,0.7s,baz=131,slow=9.3,SNR=1.8						
ZALV	Zalesovo Beam	35.53	338	P	P	21 59 25.9	-0.6
	0.7nm,0.5s,baz=138,slow=10,SNR=5.2						
WRA	Warramunga Arr	50.07	145	P	P	22 01 24.6	-0.2
	0.3nm,0.5s,baz=334,slow=8.6,SNR=8.6						
ASAR	Alice Springs	52.95	148	P	P	22 01 46.4	0.0
	0.3nm,0.6s,baz=322,slow=6.8,SNR=6.0						
GERES	GERESS Array B	75.29	317	P	P	22 04 12.7	-0.4
	0.1nm,0.3s,baz=81,slow=6.2,SNR=1.9						

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*UPA **05** 22:37:32.0±1.7, 7°.50N×80°.67W, h7^{km}±6^{km}, MW3.8*

ISC 05 22:37:32.3±0.9**,7°.49N**±0°.03×**80°.67W**±0°.02**,h14**^{km}±7^{km}**, n43,**σ**1**^{s}**18**/70**,7C-5D,Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOSI3	Tonosi	0.24	110	⇑iP	Pg	22 37 37.5	+0.1
TOSI3				eS	Sg	22 37 41.5	+0.5
CACAO	El Cacao, Vera	0.24	233	⇓iP	Pg	22 37 37.1	-0.4
CACAO				eS	Sg	22 37 40.5	-0.5
MARI3	Mariato, Verag	0.36	296	⇑iP	Pg	22 37 39.8	+0.2
MARI3				eS	Sb	22 37 45.8	-0.2
PESE3	Pese, Herrera	0.42	7	⇑iP	Pg	22 37 41.1	+0.4
PESE3				eS	Sb	22 37 47.5	-0.3
AZU	Azuero	0.49	52	⇓iP	Pg	22 37 42.0	0.0
AZU				eS	Sg	22 37 49.1	+0.4
CHIT3	Chitre	0.53	28	⇓iP	Pg	22 37 42.8	+0.1
CHIT3				eS	Sg	22 37 49.8	+0.1
PCRI3	Pocri, Los San	0.57	73	⇓iP	Pg	22 37 43.3	-0.2
PCRI3				eS	Sg	22 37 51.5	+0.4
GMAL	Guarumal, Vera	0.62	296	⇓iP	Pb	22 37 44.8	-0.2
GMAL				eS	Sb	22 37 54.0	+0.3
STIA3	Santiago, Vera	0.68	333	⇑iP	Pg	22 37 45.4	-0.1
STIA3				eS	Sg	22 37 54.6	+0.1
RSUS3	Rio de Jesus,	0.69	315	⇑iP	Pg	22 37 45.5	-0.3
SFRA3	San Francisco,	0.81	338	i P	Pg	22 37 47.6	-0.5
SFRA3				eS	Sg	22 37 57.3	-1.5
MESA3	La Mesa, Verag	0.83	322	⇑iP	Pg	22 37 47.8	-0.6
MESA3				eS	Sg	22 37 59.5	+0.2
CALO3	Calobre, Verag	0.84	348	⇑iP	Pg	22 37 48.3	-0.4
CALO3				eS	Sb	22 38 00.4	+0.4
PNME	Penonome	1.04	19	eP	Pb	22 37 51.8	-0.5
VTON	El Valle, Cocl	1.24	26	eP	Pn	22 37 55.0	-0.4
VTON				eS	Sb	22 38 11.9	+0.3
CHOR3	La Chorrera	1.66	32	eP	Pb	22 38 02.0	-0.7
CHOR3				eS	Sn	22 38 22.9	+0.6
TABO3	Taboga, Panama	1.70	40	eP	Pn	22 38 01.4	-0.3
TABO3				eS	Sn	22 38 22.1	-1.2
CORZ	Corozal	1.83	36	eS	Sb	22 38 28.1	-0.4
BCIP	Isla Barro Col	1.86	26	eP	Pb	22 38 05.1	-1.0
BCIP				eS	Sb	22 38 30.0	+0.8
BCIP	Isla Barro Col	1.86	26	eP	Pb	22 38 05.5	-0.7
BCIP				eS	Sb	22 38 29.4	+0.1
CHIR3	Chiriqui UPA,	1.88	299	eP	Pn	22 38 05.3	+1.2
CHIR3				eS	Sb	22 38 30.0	+0.2
GAMB1	Gamboa	1.88	30	eP	Pn	22 38 05.3	+1.3
GAMB1				eS	Sn	22 38 28.8	+1.3
DVD	David	2.00	298	eP	Pn	22 38 06.5	+0.8
DVD				eS	Sb	22 38 33.5	+0.2
BCO2	Palmira	2.21	304	eP	Pn	22 38 09.2	+0.3
BCO2				eS	Sb	22 38 38.2	-1.4
CHPO	Chepo, Panama	2.27	43	eS	Sb	22 38 41.5	+0.4
PTPM	Petroterminale	2.30	288	eS	Sg	22 38 46.4	0.0
BC3P	Paso Ancho	2.33	305	eP	Pn	22 38 11.3	+0.8
BC3P				eS	Sb	22 38 42.8	-0.3
BRU2	Volcan	2.39	303	eP	Pn	22 38 11.9	+0.7
BRU2				eS	Sb	22 38 45.3	+0.7
CDITO	Canoas	2.44	296	eP	Pn	22 38 13.6	+1.9
CDITO				eS	Sb	22 38 45.4	-0.5
PTAC	Punta Ardita,	2.86	97	eP	Pn	22 38 15.6	-2.0
PTAC				eS	Sn	22 38 47.1	-4.7
PTAC	Punta Ardita,	2.86	97	eP	Pn	22 38 16.1	-1.5
DBBC	Dabeiba	4.45	96	eP	Pn	22 38 40.2	+0.7
DBBC				eS	Sn	22 39 32.5	+1.3
PLMC	San Jos del P	5.06	120	eP	Pn	22 38 46.3	-1.6
UREC	San Jos de Ur	5.10	87	eP	Pn	22 38 50.2	+1.8
YOTC	Yotoco, Valle	5.53	129	eP	Pn	22 38 52.8	-1.7
GUY2C	Guyana, Caldas	5.73	113	eP	Pn	22 38 59.1	+1.6
ZARC	Zaragoza, Cauc	5.76	90	eP	Pn	22 38 58.2	+0.6
PTBC	PUERTO BERRIO,	6.24	98	eP	Pn	22 39 07.3	+3.2
ORTC	Ortega, Tolima	6.46	123	eP	Pn	22 39 08.9	+1.7
ORTC				eS	Sn	22 40 21.1	+0.2
MARP	Paez Belalcaza	6.58	134	eP	Pn	22 39 11.0	+2.0
PCON	Cinco Dias	6.66	140	eP	Pn	22 39 13.2	+2.7
SOTA	Rioblanco	6.68	143	eP	Pn	22 39 11.4	+0.8
PRAC	Prado	6.87	123	eP	Pn	22 39 14.4	+1.7

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*MAN **05** 22:45:39.4, 17°.25N×120°.12E, h15^{km}, mb5.2, ML4.1, MS4.2*

*NEIC **05** 22:45:41.4±1.1, 17°.22N±0°.07×120°.2E±0°.1, h59^{km}±7^{km}, mb4.5/43, Error ellipse: s-maj=17.8km s-min=9.5km az=81.0*

*IDC **05** 22:45:45.7±1.8, 17°.14N×120°.19E, h107^{km}±18^{km}, mb3.8/20, mb1 3.9/21, mb1mx3.8/43, mbtmp4.2/21, MS3.4/7, Ms1 3.4/7, ms1mx3.1/55, Error ellipse: s-maj=23.1km s-min=11.2km az=70.0*

ISC 05 22:45:38.0±0.4**,17°.10N**±0°.03×**120°.15E**±0°.06**,h34**^{km}**,n98,** σ**1**^{s}**44**/98**,mb4.5**/44**,MS3.2**/6**,4C,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.88	20	⇑iP	Pn	22 45 52.8	-1.2
SIPP				eS	Sb	22 46 07.3	+1.0
SGCP	Mt. Cagua	2.14	58	eP	Pb	22 46 15.7	-0.5
SGCP				eS	Sb	22 46 43.4	+1.0
TGY	Tagaytay City	3.07	166	P	Pb	22 46 31.6	-0.5
	122nm,0.3s,baz=284,slow=1.8,SNR=11						
TGY				S	Sb	22 47 11.7	+2.5
	216nm,0.3s,baz=87,slow=13,SNR=4.2						
TGY	Tagaytay City	3.07	166	⇑eP	Pb	22 46 32.0	0.0
TGY				i S	Sb	22 47 12.0	+2.8
LQP	Lukban	3.26	155	⇑eP	Pb	22 46 33.6	-1.7
LUBP	Lubang	3.34	178	eP	Pb	22 46 33.4	-3.2
LUBP				eS	Sb	22 47 14.8	-2.1
PGP	Puerto Galera	3.66	168	⇑iP	Pb	22 46 39.0	-3.0
PGP				i S	Sn	22 47 15.8	+1.5
JCNP	Jose Panganiba	3.72	138	eP	Pb	22 46 39.5	-3.6
JCNP				eS	Sb	22 47 24.9	-2.8
TPUB	Ta-pu	6.19	4	Pn	Pn	22 47 08.2	+1.1
YULB	Yu-li	6.36	10	Pn	Pn	22 47 10.5	+1.1
YHNB	Yeheng	7.62	8	Pn	Pn	22 47 27.6	+0.8
DAV	Davao City (W)	11.29	151	LR	LR	22 54 18.2	
	comp=Z,375nm,18.1s,baz=356,slow=45						
TOLI2	Tolitoli	15.90	178		P	22 49 24.3	+1.6
SBUM	Sibu	16.51	209	P	P	22 49 31.4	+2.0
SANI	Sanana	19.88	163	P	P	22 50 05.7	-0.8
CM31	Chiang Mai Arr	20.24	277	P	Pn	22 50 12.9	+0.4
CM31				IAmb	IAmb	22 50 16.5	
	comp=Z,24nm,1.4s						
CMAR	Chiang Mai Arr	20.24	277	P	Pn	22 50 12.1	-0.5
	comp=Z,7.2nm,0.9s,baz=85,slow=8.3,SNR=25						
CMAR				LR	LR	22 57 50.0	
	comp=Z,109nm,19.4s,baz=144,slow=36						
CMAR	Chiang Mai Arr	20.24	277		Pn	22 50 12.4	-0.2
SIJI	Sorong	20.95	147	P	Pn	22 50 19.8	-1.1
	comp=Z,2.1nm,0.3s,baz=165,slow=23,SNR=2.0						
BBKI	Banjar Baru	21.09	195	P	P	22 50 25.3	+5.6
	comp=Z,17nm,0.5s						
JHS	Saijyo	21.26	31	P	P	22 50 20.7	-0.7
JHS				IAmb	IAmb	22 50 43.8	
	comp=Z,48nm,1.4s						
KSRS	Korea Array	21.41	17	P	P	22 50 23.3	+0.4
	comp=Z,5.6nm,0.8s,baz=201,slow=12,SNR=17						
KSRS				LR	LR	22 59 28.1	
	comp=Z,67nm,19.4s,baz=205,slow=39						
JWT	Wachi	22.65	34	P	P	22 50 36.6	+0.3
JWT				IAmb	IAmb	22 50 41.5	
	comp=Z,50nm,1.4s						
JCJ	Chichijima	22.68	60	LR	LR	23 00 30.2	
	comp=Z,23nm,18.5s,baz=104,slow=39						
BJT	Baijiatuau	23.10	352	P	P	22 50 40.9	0.0
RGRI	Rengat	24.67	227	P	P	22 51 06.1	+10
PSI	Prapat	25.22	238	P	P	22 51 02.8	+1.7
	comp=Z,3.7nm,0.6s,baz=0.2,slow=9.6,SNR=2.4						
PSI				LR	LR	23 00 23.3	
	comp=Z,63nm,18.9s,baz=38,slow=35						
EDFI	Ende, Flores	25.73	176	P	P	22 51 11.1	+5.5
	comp=Z,5.2nm,0.5s						
PLAI	Plampang	25.86	185	P	P	22 51 10.2	+3.5
	comp=Z,23nm,1.0s						
BATI	Baumata	27.35	172	P	P	22 51 22.2	+2.1
	comp=Z,11nm,0.7s,baz=130,slow=7.9,SNR=1.7						
SHL	Shillong	27.60	293	P	P	22 51 21.7	-0.9
SHL				IAmb	IAmb	22 51 23.6	
	comp=Z,7.0nm,0.9s						
LSA	Lhasa	29.33	301	P	P	22 51 38.1	-0.2
LSA				IAmb	IAmb	22 51 40.4	
	comp=Z,8.9nm,1.2s						
TAPN	Taplejung	31.63	295	eP	P	22 51 56.8	-1.6
	comp=Z,8.1nm,0.6s						
ODAN	Odare	31.81	294	eP	P	22 51 59.6	-0.3
	comp=Z,13nm,0.5s						
ULN	Ulaanbaatar	32.52	344	P	P	22 52 06.4	+0.6
RAMN	Ramite	32.52	293	eP	P	22 52 06.6	+0.4
	comp=Z,14nm,0.5s						
SONM	Songino Array	32.67	343	P	P	22 52 07.5	+0.3
	comp=Z,1.4nm,0.8s,baz=160,slow=9.5,SNR=13						
SONM	Songino Array	32.67	343	P	P	22 52 07.4	+0.3
KLR	Kul'dur	33.41	14	LR	LR	23 06 03.0	
	comp=Z,82nm,18.8s,baz=200,slow=36						
KNRA	Kununurra	33.66	165	P	P	22 52 16.0	+0.2
KNRA				IAmb	IAmb	22 52 17.4	
	comp=Z,11nm,1.3s						
GKN	Gorkha	34.43	295	eP	P	22 52 21.7	-1.0
	comp=Z,22nm,0.8s						
DANN	Dangsing	35.25	295	eP	P	22 52 29.1	-0.9
	comp=Z,15nm,0.6s						
KOLN	Koldanda	35.29	294	eP	P	22 52 29.8	-0.4
FITZ	Fitzroy Crossi	35.39	171	P	P	22 52 30.0	-0.8
	comp=Z,1.8nm,1.0s,baz=217,slow=8.9,SNR=3.6						
PYUN	Piuthan	35.88	294	eP	P	22 52 34.5	-0.7
	comp=Z,27nm,0.8s						
WB0	Warramunga Arr	39.22	158	P	P	22 53 02.6	-0.6
WB0				IAmb	IAmb	22 53 05.2	
	comp=Z,6.9nm,1.4s						
WRA	Warramunga Arr	39.36	159	P	P	22 53 03.9	-0.5
	comp=Z,0.5nm,0.5s,baz=340,slow=9.1,SNR=7.0						
AS31	Alice Springs	42.68	161	P	P	22 53 32.8	+1.0
ASAR	Alice Springs	42.69	161	P	P	22 53 31.9	+0.1
	comp=Z,0.7nm,0.4s,baz=337,slow=6.9,SNR=10						
ASAR	Alice Springs	42.69	161	P	P	22 53 32.4	+0.6
MK31	Makanchi Array	43.02	322	P	P	22 53 34.8	+0.4
MK31				IAmb	IAmb	22 54 01.6	
	comp=Z,10.0nm,1.4s						
MKAR	Makanchi Array	43.02	322	P	P	22 53 34.6	+0.3
	comp=Z,1.4nm,0.7s,baz=128,slow=8.7,SNR=7.7						
MKAR				PcP	PcP	22 55 24.1	-0.1
	comp=Z,2.6nm,0.8s,baz=94,slow=4.9,SNR=6.9						
MKAR	Makanchi Array	43.02	322	P	P	22 53 34.3	0.0
MAKZ	Makanchi	43.21	322	P	P	22 53 35.4	-0.5
MAKZ				IAmb	IAmb	22 53 57.6	
	comp=Z,17nm,1.5s						
NIL	Nilore	45.07	301	P	P	22 53 50.5	-0.5
YAK	Yakutsk	45.39	6	LR	LR	23 13 27.9	
	comp=Z,75nm,18.1s,baz=275,slow=37						
ZALV	Zalesovo Beam	45.82	332	P	P	22 53 55.8	-0.7
	comp=Z,2.1nm,0.8s,baz=107,slow=7.9,SNR=8.8						
ZALV				PcP	PcP	22 55 32.1	-1.5
	comp=Z,0.4nm,0.4s,baz=90,slow=4.7,SNR=2.6						
ZALV	Zalesovo Beam	45.82	332	P	P	22 53 56.0	-0.5
BTK	Batken	48.27	309	P	P	22 54 15.9	-0.1
BTK				IAmb	IAmb	22 54 17.4	
	comp=Z,7.8nm,1.4s						
GAR	Garm	48.41	307	P	P	22 54 16.9	-0.3
KBL	Kabul	48.65	301	P	P	22 54 18.6	-0.6
KBL				IAmb	IAmb	22 54 20.1	
	comp=Z,3.5nm,0.9s						
CHGR	Chuyangaron	49.22	307	P	P	22 54 23.2	-0.2
KKAR	Karatay Array	49.26	313	P	P	22 54 23.4	-0.2
BBOO	Buckleboo	51.91	163	P	P	22 54 43.0	-0.5
BRVK	Borovoye	52.77	325	P	P	22 54 49.7	0.0
BRVK				IAmb	IAmb	22 54 50.7	
	comp=Z,3.1nm,0.8s						
STKA	Stephens Creek	52.86	157	P	P	22 54 53.0	+2.5
TIXI	Tiksi	54.79	3	P	P	22 55 03.2	-0.9
TIXI				IAmb	IAmb	22 55 03.6	
	comp=Z,4.0nm,1.1s						
NRIK	Noril'sk	56.01	347	P	P	22 55 12.9	0.0
	comp=Z,4.9nm,0.7s,baz=137,slow=7.8,SNR=9.5						
NRIK	Noril'sk	56.01	347	P	P	22 55 12.4	-0.5
NRIK				IAmb	IAmb	22 55 13.6	
	comp=Z,6.4nm,0.8s						
GEYT	Alibeck	57.75	304	P	P	22 55 26.7	+0.8
	comp=Z,4.6nm,0.8s,baz=80,slow=11,SNR=5.9						
GEYT	Alibeck	57.75	304	P	P	22 55 26.1	+0.1
GEYT				IAmb	IAmb	22 55 27.6	
	comp=Z,8.0nm,1.1s						
GYA0B	ALIBECK ARRAY	57.75	304	P	P	22 55 26.2	+0.3
ABKAR	Akbulak array	57.85	318	P	P	22 55 25.8	-0.5
ABKAR				IAmb	IAmb	22 55 27.0	
	comp=Z,6.0nm,1.1s						
ABKAR	Akbulak array	57.85	318	P	P	22 55 26.2	-0.2
LIFNC	LIFOU	59.59	127	P	P	22 55 39.3	+0.5
ARU	Arti	60.28	326	P	P	22 55 42.1	-0.9
KBZ	Khabaz	69.25	311	P	P	22 56 41.4	-0.3
	comp=Z,3.9nm,0.9s,baz=119,slow=0.9,SNR=7.3						
KIV	Kislovodsk	69.39	311	P	P	22 56 42.1	-0.6
KIV				IAmb	IAmb	22 56 43.6	
	comp=Z,7.7nm,0.8s						
RAYN	Ar Rayn	69.61	289	P	P	22 56 44.7	+0.3
RAYN				IAmb	IAmb	22 56 45.0	
	comp=Z,4.2nm,0.8s						
ARCES	ARCESS Array B	75.74	339	P	P	22 57 19.1	-0.8
	comp=Z,7.2nm,0.9s,baz=46,slow=5.2,SNR=5.1						
ARCES	ARCESS Array B	75.74	339	P	P	22 57 19.5	-0.4
ARCES				IAmb	IAmb	22 57 20.4	
	comp=Z,13nm,1.1s						
SPB2	Spitsbergen Ar	76.17	348	P	P	22 57 22.1	-0.2
BRTR	Keskin Array B	76.65	308	P	P	22 57 24.9	-0.9
	comp=Z,0.4nm,0.8s,baz=142,slow=6.3,SNR=4.0						
FINES	FINESS Array B	77.08	331	P	P	22 57 26.9	-0.7
	comp=Z,8.7nm,1.0s,baz=64,slow=8.0,SNR=10						
FINES	FINESS Array B	77.08	331	P	P	22 57 27.2	-0.4
AKASG	Malin Array Be	77.54	319	P	P	22 57 29.2	-1.3
	comp=Z,0.2nm,0.3s,baz=62,slow=5.2,SNR=5.9						
AKASG	Malin Array Be	77.54	319	P	P	22 57 29.3	-1.1
BURAR	Bucovina Array	80.82	317	P	P	22 57 48.2	-0.4
BUR08	Bucovina Ar. S	80.82	317	P	P	22 57 48.2	-0.4
BUR08				IAmb	IAmb	22 58 00.2	
	comp=Z,7.9nm,1.3s						
A36M	Sachs Harbour	81.16	17	P	P	22 57 49.8	+0.1
NB2	NORSAR Subarra	84.02	332	P	P	22 58 03.8	-1.1
	comp=Z,5.2nm,0.8s,baz=66,slow=4.6						
NB2	NORSAR Subarra	84.02	332	P	P	22 58 03.8	-1.1
	baz=66,slow=4.6						
NOA	NORSAR Array B	84.02	332	P	P	22 58 03.9	-1.1
	comp=Z,1.6nm,0.6s,baz=65,slow=4.7,SNR=9.2						
NC204	NORSAR Array S	84.12	333	P	P	22 58 04.6	-0.8
GERES	GERESS Array B	87.68	321	P	P	22 58 22.7	-0.7
	comp=Z,0.5nm,0.7s,baz=90,slow=4.0,SNR=5.1						
CIMO	Cimolais	89.49	319	P	P	22 58 30.7	-1.2
CIMO				IAmb	IAmb	22 58 58.2	
	comp=Z,4.5nm,1.4s						
TXAR	Lajitas Array	117.40	43	PKP	PKPdf	23 04 20.7	-0.1
	comp=Z,0.1nm,0.4s,baz=258,slow=1.7,SNR=5.0						
TXAR	Lajitas Array	117.40	43		PKiKP	23 04 20.9	+0.1

KRSC 05 22:57:31.7±1.4**,54°.97N**×**165°.49E,h27**^{km}±11^{km}**,ML4.0, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.37	50	eP	Pb	22 57 40.2	+0.3
BKI				eS	Sb	22 57 44.7	-0.7
KBTR	Krutoberegovo	1.96	310	eP	Pn	22 58 04.7	+1.5
KBTR				eS	Sn	22 58 28.3	+1.4
KBG	Krutoberegovo	2.04	310	eS	Sb	22 58 30.9	-2.0
BDR	Baidarnaya	2.90	305	eP	Pb	22 58 20.6	-2.2
TUMD	Tumrok D	2.93	277	eP	Pb	22 58 21.0	-2.3
KMNR	Kamenistaya	3.10	287	eP	Pb	22 58 23.7	-2.4
KII	Karymskiy	3.64	258	eP	Pb	22 58 31.5	-3.9
SPN	Mys Shipunski	3.73	242	eP	Pn	22 58 31.6	+4.2
SPN				eS	Sn	22 59 12.5	+2.1
SDLR	Sedlovina	4.24	249	eP	Pn	22 58 39.5	+4.9
SMAR	Somma	4.29	249	eP	Pn	22 58 40.5	+5.1
KRER	Koryakskii	4.30	250	eP	Pn	22 58 40.9	+5.4
KRER				eS	Sn	22 59 28.5	+3.7
UGLR	Uglovaya	4.30	249	eP	Pn	22 58 40.8	+5.4
AVH	Avacha	4.32	250	eP	Pb	22 58 41.5	-5.4
AVH				eS	Sn	22 59 29.4	+4.2
KOK	Koryaka	4.36	250	eP	Pn	22 58 41.5	+5.2
PET	Petropavlovsk	4.48	247	eS	Sn	22 59 31.3	+2.4
MTVR	Mutnovka	5.00	243	eP	Pn	22 58 49.9	+4.8
MTVR				eS	Sn	22 59 44.3	+2.3
ASAK	Asacha	5.20	243	eP	Pn	22 58 53.4	+5.6
ASAK				eS	Sn	22 59 50.2	+3.3

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*SOME **05** 22:59:28.9, 43°.63N×85°.25E, h19^{km}, MS4.0*

*IDC **05** 22:59:32.6±0.4, 43°.83N×85°.24E, h0^{km}, mb4.7/41, mb1 4.7/48, mb1mx4.6/64, mbtmp4.6/48, ML4.2/7, MS4.0/28, Ms1 4.1/28, ms1mx3.9/56, Error ellipse: s-maj=9.3km s-min=7.5km az=39.0*

*MOS **05** 22:59:32.9±1.0, 43°.87N×85°.21E, h12^{km}, mb5.2/24, MS4.3/7, Error ellipse: s-maj=5.3km s-min=3.7km az=38.3*

*NEIC **05** 22:59:34.7±1.5, 43°.87N±0°.06×85°.21E±0°.09, h10^{km}±1^{km}, mb4.9/154, Error ellipse: s-maj=11.4km s-min=10.8km az=81.0*

*BJI **05** 22:59:35.4±0.0, 43°.82N×85°.17E, h6^{km}, mB5.0/31, mb4.5/50, ML5.0/11, Ms4.5/35, Ms7 4.1/35*

*NNC **05** 22:59:36.4±2.1, 43°.87N×84°.98E, h0^{km}, mb5.4, mpv5.2, Error ellipse: s-maj=17.9km s-min=8.6km az=127.0*

*BGR **05** 22:59:38.4±0.0, 44°.61N×85°.69E, h33^{km}, mb5.1*

ISC 05 22:59:34.7±0.6, **43°.90N**±0°.03×**85°.13E**±0°.02, **h14**^{km}±3^{km}, **n717, σ1^{s}.58**/767, **mb5.0**/200, **MS4.0**/29, **55C-25D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**1.85**	**91**	Pg	**Pg**	**23 00 10.2**	**-0.1**
WMQ				Sg	**Sb**	**23 00 32.6**	**+1.1**
WMQ				smax	smax		
	comp=N,8µm,0.7s						
WMQ				smax	smax		
	comp=E,11µm,0.5s						
KTMS	**Ketmen**	**3.50**	**264**	*e*P	**Pb**	**23 00 35.0**	**-1.5**
	75nm,0.4s						
KTMS				*e*S	**Sb**	**23 01 22.5**	**+3.6**
	1µm,0.7s						
KTMS	**Ketmen**	**3.50**	**264**	Pg	**Pb**	**23 00 38.0**	**+1.5**
	210nm,0.6s						
KTMS				Lg	Lg	23 01 23.2	
	1µm,0.7s						
MK31	**Makanchi Array**	**3.52**	**326**	*d i*P	**Pn**	**23 00 32.0**	**+3.0**
MK31	**Makanchi Array**	**3.52**	**326**	⇓Pn	**Pn**	**23 00 32.2**	**+3.1**
	18nm,0.3s,baz=140,slow=14						
MK31				⇑Pg	**Pg**	**23 00 41.6**	**-0.6**
	737nm,0.5s,baz=134,slow=22,SNR=173						
MK31				⇑Lg	Lg	23 01 28.1	
	846nm,0.4s,baz=145,slow=31,SNR=9.2						
MK31	**Makanchi Array**	**3.52**	**326**		**Pn**	**23 00 31.8**	**+2.8**
MK31	**Makanchi Array**	**3.52**	**326**	Pn	**Pg**	**23 00 41.1**	**-1.0**
MKAR	**Makanchi Array**	**3.52**	**326**	Pn	**Pn**	**23 00 32.2**	**+3.2**
	33nm,0.3s,baz=146,slow=14,SNR=924						
MKAR				Pg	**Pg**	**23 00 41.0**	**-1.1**
	387nm,0.3s,baz=138,slow=17,SNR=136						
MKAR				Lg	Lg	23 01 27.5	
	1µm,0.3s,baz=141,slow=30,SNR=16						
MKAR				LR	LR	23 02 10.9	
	comp=Z,3µm,18.7s,baz=108,slow=44						
MKAR	**Makanchi Array**	**3.52**	**326**	*i* P	**Pn**	**23 00 32.2**	**+3.2**
MKAR				pmax	pmax		
	comp=Z,48nm,0.3s						
MKAR	**Makanchi Array**	**3.52**	**326**		**Pn**	**23 00 31.6**	**+2.6**
MKAR	**Makanchi Array**	**3.52**	**326**	Pn	**Pg**	**23 00 41.0**	**-1.1**
ZSN	**Zaisan**	**3.56**	**357**	*e*P	**Pb**	**23 00 37.7**	**+0.2**
	comp=Z,103nm,0.3s						
ZSN				*e*S	**Sg**	**23 01 27.7**	**-1.2**
	comp=Z,3µm,0.7s						
ZSN	**Zaisan**	**3.56**	**357**	*e*Pg	**Pb**	**23 00 39.1**	**+1.6**
	baz=358						
ZSN	**Zaisan**	**3.56**	**357**	*e*P	**Pb**	**23 00 39.0**	**+1.6**
ZSN	**Zaisan**	**3.56**	**357**	Pg	**Pg**	**23 00 40.7**	**-2.1**
	comp=Z,394nm,0.4s						
ZSN				Lg	Lg	23 01 27.7	
	comp=Z,3µm,0.7s						
MAKZ	**Makanchi**	**3.66**	**324**	P	**Pn**	**23 00 33.6**	**+2.6**
MAKZ	**Makanchi**	**3.66**	**324**	⇓Pg	**Pg**	**23 00 44.1**	**-0.8**
	comp=Z,817nm,0.6s						
MAKZ				⇑Lg	Lg	23 01 31.9	
	comp=Z,695nm,0.5s						
MAKZ	**Makanchi**	**3.66**	**324**		**Pn**	**23 00 33.6**	**+2.6**
MAKZ	**Makanchi**	**3.66**	**324**	Pn	**Pg**	**23 00 43.9**	**-1.0**
DJR	**Jarkent**	**3.87**	**278**	*e*P	**Pb**	**23 00 41.3**	**-1.5**
	comp=Z,44nm,0.4s						
DJR				*e*S	**Sb**	**23 01 33.9**	**+4.4**
	comp=Z,2µm,0.6s						
PDGK	**Podgornoye**	**4.14**	**264**	P	**Pn**	**23 00 40.2**	**+2.6**
PDGK	**Podgornoye**	**4.14**	**264**	Pg	**Pb**	**23 00 50.3**	**+3.0**
	comp=Z,175nm,0.5s						
PDGK				Lg	Lg	23 01 43.3	
	comp=Z,698nm,0.6s						
PDGK	**Podgornoye**	**4.14**	**264**	⇓Pn	**Pn**	**23 00 40.2**	**+2.6**
	comp=Z,198nm,0.7s						
PDGK				⇑Pg	**Pg**	**23 00 52.0**	**-2.0**
	comp=Z,294nm,0.6s						
PDGK				⇑Lg	Lg	23 01 42.4	
	comp=Z,666nm,0.5s						
SHLS	**Shalkode**	**4.19**	**262**	*e*P	**Pn**	**23 00 40.8**	**+2.4**
	comp=Z,57nm,0.5s						
SHLS				*e*S	**Sn**	**23 01 32.7**	**+5.6**
	comp=Z,1µm,0.6s						
SHLS	**Shalkode**	**4.19**	**262**	*e*P	**Pn**	**23 00 38.0**	**-0.3**
SHLS	**Shalkode**	**4.19**	**262**	Pg	**Pb**	**23 00 45.2**	**-3.1**
	comp=Z,2µm,0.7s						
SHLS				Lg	Lg	23 01 35.0	
	comp=Z,1µm,0.6s						
UZB	**Uzynbulak**	**4.51**	**263**	*e*P	**Pb**	**23 00 52.7**	**-1.0**
	comp=Z,40nm,0.6s						
UZB				*e*S	**Sg**	**23 01 54.5**	**-4.8**
	comp=Z,900nm,0.7s						
UZB	**Uzynbulak**	**4.51**	**263**	*e*Pg	**Pb**	**23 00 56.1**	**+2.4**
	baz=262						
UZB	**Uzynbulak**	**4.51**	**263**	*e*P	**Pn**	**23 00 46.0**	**+3.3**
UZB	**Uzynbulak**	**4.51**	**263**	Pg	**Pb**	**23 00 56.6**	**+2.9**
	comp=Z,264nm,0.6s						
UZB				Lg	Lg	23 01 54.5	
	comp=Z,900nm,0.7s						
BLB	**Baldybastay**	**4.80**	**275**	Pg	**Pg**	**23 01 02.9**	**-3.8**
	comp=Z,498nm,0.4s						
BLB				Lg	Lg	23 02 05.4	
TDK	**Taldyqorghan**	**4.94**	**285**	*e*P	**Pb**	**23 01 01.7**	**+0.7**
	comp=Z,588nm,0.7s						
TDK				*e*S	**Sg**	**23 02 09.0**	**-4.3**
	comp=Z,2µm,0.6s						
TDK	**Taldyqorghan**	**4.94**	**285**	*e*Pg	**Pb**	**23 01 03.9**	**+2.9**
	baz=285						
TDK	**Taldyqorghan**	**4.94**	**285**	Pg	**Pb**	**23 01 04.4**	**+3.4**
	comp=Z,588nm,0.7s						
TDK				Lg	Lg	23 02 08.0	
	comp=Z,2µm,0.6s						
SATY	**Saty**	**4.97**	**263**	*e*P	**Pb**	**23 00 60.0**	**-1.5**
	comp=Z,79nm,0.5s						
SATY				*e*S	**Sb**	**23 02 06.3**	**+5.2**
	comp=Z,720nm,0.5s						
SATY	**Saty**	**4.97**	**263**	*e*Pg	**Pb**	**23 01 03.6**	**+2.1**
	comp=Z,51nm,0.7s,baz=262						
SATY	**Saty**	**4.97**	**263**	Pg	**Pb**	**23 01 03.9**	**+2.4**
	comp=Z,142nm,0.6s						
SATY				Lg	Lg	23 02 06.3	
	comp=Z,720nm,0.5s						
KURS	**Kuram**	**5.07**	**268**	*e*P	**Pb**	**23 01 04.7**	**+1.5**
	comp=Z,109nm,0.8s						
KURS				*e*S	**Sg**	**23 02 13.8**	**-3.5**
	comp=Z,776nm,0.9s						
PRZ	**Przheval'sk**	**5.12**	**256**	P	**Pn**	**23 00 54.1**	**+2.9**
PRZ	**Przheval'sk**	**5.12**	**256**		**Pn**	**23 00 54.1**	**+2.9**
ARXS	**Arharly**	**5.28**	**276**	P	**Pn**	**23 00 55.5**	**+2.3**
ARXS	**Arharly**	**5.28**	**276**	Pg	**Pg**	**23 01 13.0**	**-2.7**
	comp=Z,163nm,0.6s						
ARXS				Lg	Lg	23 02 21.4	
	comp=Z,1µm,0.5s						
TARG	**Taragay, Kyrgy**	**5.81**	**251**		**Pn**	**23 01 02.8**	**+2.0**
MDOK	**Medeo**	**5.92**	**266**	*e*P	**Pb**	**23 01 17.9**	**+0.1**
	comp=Z,131nm,0.5s						
MDOK				*e*S	**Sb**	**23 02 36.2**	**+7.6**
	comp=Z,470nm,0.7s						
KNDC	**Almaty**	**5.97**	**266**	P	**Pn**	**23 01 05.6**	**+2.8**
KNDC	**Almaty**	**5.97**	**266**	⇑Pn	**Pn**	**23 01 05.6**	**+2.8**
	comp=Z,235nm,0.8s						
KNDC				⇓Lg	Lg	23 02 46.8	
	comp=Z,2µm,0.9s						
AAA	**Alma-Ata**	**6.01**	**266**	*e*P	**Pb**	**23 01 19.6**	**+0.3**
	comp=Z,146nm,0.4s						
AAA				*e*S	**Sg**	**23 02 40.5**	**-7.1**
	comp=Z,698nm,0.6s						
AAA	**Alma-Ata**	**6.01**	**266**	*e*Pg	**Pb**	**23 01 23.3**	**+4.0**
	baz=266						
DGZ	**Jazzator, Alta**	**6.01**	**14**	*d i*P	**Pn**	**23 01 07.7**	**+4.3**
TNSS	**Tian-Shan**	**6.02**	**265**	*e*P	**Pb**	**23 01 21.2**	**+1.7**
	comp=Z,89nm,0.5s						
TNSS				*e*S	**Sg**	**23 02 43.2**	**-4.7**
	comp=Z,182nm,0.9s						
KDJ	**Kajisay**	**6.09**	**256**	P	**Pn**	**23 01 06.9**	**+2.4**
KDJ	**Kajisay**	**6.09**	**256**		**Pn**	**23 01 06.9**	**+2.4**
KUU	**Kurty**	**6.35**	**273**	*e*P	**Pb**	**23 01 29.4**	**+4.4**
	comp=Z,91nm,0.5s						
KUU				*e*S	**Sg**	**23 02 56.5**	**-2.1**
	comp=Z,1µm,0.5s						
ULHL	**Ulahol**	**6.72**	**259**	P	**Pn**	**23 01 16.6**	**+3.5**
	SNR=9.7						
BOOM	**Boomskoye usch**	**6.87**	**261**	P	**Pn**	**23 01 17.3**	**+2.2**
BOOM	**Boomskoye usch**	**6.87**	**261**		**Pn**	**23 01 17.3**	**+2.2**
TKM2	**Tokmak 2**	**7.01**	**265**	P	**Pn**	**23 01 19.9**	**+2.7**
	SNR=50						
TKM2	**Tokmak 2**	**7.01**	**265**	⇑Lg	Lg	23 03 20.7	
	comp=Z,529nm,0.9s						
SEM	**Semipalatinsk**	**7.31**	**335**	*e*Pn	**Pn**	**23 01 21.5**	**+0.2**
	comp=Z,4.4nm,0.5s,baz=335						
SEM	**Semipalatinsk**	**7.31**	**335**	*e*P	**Pn**	**23 01 21.4**	**+0.2**
SEM				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KBK	**Karagaybulak**	**7.54**	**264**	P	**Pn**	**23 01 27.4**	**+3.1**
	SNR=43						
CHMS	**Chumysh**	**7.61**	**267**	P	**Pn**	**23 01 27.9**	**+2.7**
	SNR=7.4						
SGDS	**Sogindy**	**7.63**	**270**	*e*Pn	**Pn**	**23 01 25.1**	**-0.4**
	baz=270						
FRU1	**Bishkek**	**7.73**	**266**	P	**Pn**	**23 01 29.4**	**+2.5**
FRU1	**Bishkek**	**7.73**	**266**		**Pn**	**23 01 29.4**	**+2.5**
USP	**Ospenovka**	**7.75**	**269**	P	**Pn**	**23 01 29.5**	**+2.5**
	SNR=20						
AAK	**Ala-Archa**	**7.87**	**264**	Pn	**Pn**	**23 01 31.3**	**+2.5**
	comp=Z,4.7nm,0.3s,baz=110,slow=8.0,SNR=67						
AAK				Pg	**Pb**	**23 01 54.7**	**+3.8**
	comp=Z,5.6nm,0.3s,baz=117,slow=23,SNR=9.0						
AAK				Lg	Lg	23 03 43.3	
	comp=Z,7.4nm,0.3s,baz=228,slow=13,SNR=2.3						
AAK				LR	LR	23 04 59.7	
	comp=Z,471nm,21.6s,baz=84,slow=41						
AAK	**Ala-Archa**	**7.87**	**264**	P	**Pn**	**23 01 31.4**	**+2.6**
	SNR=20						
AAK	**Ala-Archa**	**7.87**	**264**	*i* P	**Pn**	**23 01 31.4**	**+2.6**
	SNR=23						
AAK	**Ala-Archa**	**7.87**	**264**	*c i*P	**Pn**	**23 01 31.2**	**+2.3**
AAK				pmax	pmax		
	comp=Z,110nm,1.3s						
AAK	**Ala-Archa**	**7.87**	**264**	⇑Pn	**Pn**	**23 01 30.5**	**+1.7**
	comp=Z,34nm,0.8s						
AAK				⇓Pg	**Pg**	**23 02 03.2**	**-2.0**
	comp=Z,74nm,0.8s						
AAK				⇑Lg	Lg	23 03 46.6	
	comp=Z,484nm,1.1s						
AAK	**Ala-Archa**	**7.87**	**264**	Pn	**Pn**	**23 01 31.1**	**+2.3**
UCH	**Uchtor**	**7.95**	**262**	P	**Pn**	**23 01 32.8**	**+2.5**
	SNR=60						
BTLS	**Baital**	**8.01**	**282**	*e*Pn	**Pn**	**23 01 30.1**	**-0.6**
	comp=Z,9.8nm,0.7s,baz=282						
BTLS	**Baital**	**8.01**	**282**	*e*P	**Pn**	**23 01 30.9**	**+0.2**
BTLS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KURBB	**Kurchatov Arra**	**8.09**	**329**	Pn	**Pn**	**23 01 33.3**	**+1.7**
	comp=Z,3.8nm,0.3s,baz=138,slow=12,SNR=432						
KURBB				Sn	**Sn**	**23 03 00.7**	**-2.1**
	comp=Z,8.6nm,0.3s,baz=131,slow=26,SNR=7.0						
KURBB				Lg	Lg	23 03 50.2	
	comp=Z,15nm,0.3s,baz=134,slow=31,SNR=9.9						
KURBB	**Kurchatov Arra**	**8.09**	**329**	⇑Lg	Lg	23 03 56.8	
	comp=Z,2µm,0.7s						
KURK	**Kurchatov**	**8.13**	**329**	P	**Pn**	**23 01 33.3**	**+1.1**
KURK	**Kurchatov**	**8.13**	**329**		**Pn**	**23 01 33.3**	**+1.1**
EKS2	**Erkin-Say**	**8.38**	**265**	P	**Pn**	**23 01 38.4**	**+2.6**
	SNR=14						
AML	**Almayashu**	**8.57**	**262**	P	**Pn**	**23 01 41.4**	**+2.8**
	SNR=10						
AML	**Almayashu**	**8.57**	**262**	*i* P	**Pn**	**23 01 41.7**	**+3.1**
	SNR=10						
ZAA0	**Zalesovo Array**	**10.06**	**359**	Pn	**Pn**	**23 01 58.7**	**0.0**
ZALV	**Zalesovo Beam**	**10.06**	**359**	Pn	**Pn**	**23 01 59.2**	**+0.5**
	comp=Z,9.4nm,0.3s,baz=182,slow=13,SNR=156						
ZALV				Sn	**Sn**	**23 03 46.9**	**-4.4**
	comp=Z,36nm,0.3s,baz=180,slow=24,SNR=14						
ZALV				Lg	Lg	23 04 53.5	
	baz=171,slow=28,SNR=2.1						
ZALV				LR	LR	23 06 21.1	
	comp=Z,726nm,20.6s,baz=170,slow=40						
ZALV	**Zalesovo Beam**	**10.06**	**359**	*i* P	**Pn**	**23 01 59.2**	**+0.5**
ZALV				pmax	pmax		
	comp=Z,21nm,0.3s						
ZALV	**Zalesovo Beam**	**10.06**	**359**	Pn	**Pn**	**23 01 59.0**	**+0.3**
BRZS	**Berezniki**	**10.46**	**310**	*e*Pn	**Pn**	**23 02 04.4**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=310						
BRZS	**Berezniki**	**10.46**	**310**	*e*P	**Pn**	**23 02 04.4**	**+0.2**
BRZS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KKAR	**Karatay Array**	**10.65**	**271**	P	**Pn**	**23 02 09.0**	**+2.1**
KKAR	**Karatay Array**	**10.65**	**271**	Pn	**Pn**	**23 02 09.0**	**+2.1**
KK08	**Karatay Array**	**10.67**	**271**	Pn	**Pn**	**23 02 02.9**	**-4.3**
KK08				Lg	Lg	23 05 13.2	
DRK	**Karamyk**	**10.90**	**251**		**Pn**	**23 02 12.6**	**+2.0**
BRLS	**Borolday**	**11.15**	**271**	*e*Pn	**Pn**	**23 02 15.7**	**+1.9**
	comp=Z,6.5nm,1.2s,baz=270						
BRLS	**Borolday**	**11.15**	**271**	*e*P	**Pn**	**23 02 15.6**	**+1.9**
BRLS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BTK	**Batken**	**11.32**	**255**	P	**Pn**	**23 02 16.3**	**+0.2**
BTK	**Batken**	**11.32**	**255**		**Pn**	**23 02 16.3**	**+0.2**
GTA	**Gaotai**	**11.86**	**107**	*e*P	**Pn**	**23 02 24.3**	**+0.8**
GTA				pP		23 02 28.0	
GTA				sP		23 02 31.1	
GTA				S	**Sn**	**23 04 36.1**	**+0.4**
GTA				sS		23 04 43.9	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,110nm,4.9s						
GTA				LR	LR		
	comp=Z,620nm,11.6s						
GTA				LR	LR		
	comp=Z,540nm,11.6s						
GTA				LR	LR		
	comp=Z,480nm,12.7s						
TAS	**Tashkent**	**11.95**	**263**	P	**Pn**	**23 02 26.2**	**+1.5**
TAS	**Tashkent**	**11.95**	**263**	Pn	**Pn**	**23 02 26.1**	**+1.5**
GAR	**Garm**	**12.14**	**251**		**Pn**	**23 02 28.3**	**+1.0**
CHGR	**Chuyangaron**	**13.10**	**252**		**Pn**	**23 02 40.6**	**+0.1**
BVAR	**Borovoye Array**	**13.36**	**318**	Pn	**Pn**	**23 02 44.5**	**+0.7**
	comp=Z,4.8nm,0.3s,baz=153,slow=13,SNR=55						
BVAR				Sn	**Sn**	**23 05 07.4**	**-4.5**
	comp=Z,4.2nm,0.3s,baz=347,slow=32,SNR=2.9						
BVAR				Lg	Lg	23 06 42.3	
	comp=Z,5.7nm,0.3s,baz=150,slow=27,SNR=6.2						
BRVK	**Borovoye**	**13.43**	**318**	*ce*P	**Pn**	**23 02 45.6**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,11nm,0.6s						
BRVK	**Borovoye**	**13.43**	**318**	Pn	**Pn**	**23 02 44.7**	**0.0**
CHCP	**Chirah Chowk**	**13.78**	**226**	P	**Pn**	**23 02 49.5**	**-0.1**
NIL	**Nilore**	**13.79**	**226**	P	**Pn**	**23 02 48.8**	**-1.0**
NIL	**Nilore**	**13.79**	**226**		**Pn**	**23 02 48.8**	**-1.0**
CEP	**Cherat**	**14.38**	**230**	P	**Pn**	**23 02 56.9**	**-1.1**
CEP				S	**Sn**	**23 05 40.0**	**+2.7**
TLY	**Talaya**	**14.65**	**51**	Lg	Lg	23 07 15.4	
	comp=Z,0.0nm,0.3s,baz=299,slow=24,SNR=3.1						
TLY				LR	LR	23 09 20.3	
	comp=Z,477nm,18.8s,baz=238,slow=40						
TLY	**Talaya**	**14.65**	**51**	*e*P	Pn	23 02 56.5	-4.9
TLY				pmax	pmax		
	comp=Z,18nm,0.8s						
TLY				MLR	MLR		
	comp=Z,895nm,10.0s						
LSA	**Lhasa**	**14.96**	**159**	P	**Pn**	**23 03 08.3**	**+2.1**
LSA				pmax	pmax		
	comp=Z,42nm,1.1s						
LSA	**Lhasa**	**14.96**	**159**	P	**Pn**	**23 03 07.4**	**+1.2**
LSA	**Lhasa**	**14.96**	**159**		**Pn**	**23 03 07.4**	**+1.2**
THW	**Thamme Wali**	**15.25**	**228**	P	**Pn**	**23 03 07.6**	**-2.0**
SONM	**Songino Array**	**15.32**	**68**	Pn	**Pn**	**23 03 09.9**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=258,slow=13,SNR=24						
SONM				Lg	Lg	23 07 36.5	
	comp=Z,0.3nm,0.3s,baz=131,slow=28,SNR=2.2						
SONM				LR	LR	23 09 40.0	
	comp=Z,902nm,19.3s,baz=249,slow=40						
SONM	**Songino Array**	**15.32**	**68**	P	**Pn**	**23 03 11.7**	**+1.2**
SONM				pmax	pmax		
	comp=Z,23nm,0.9s						
SONM	**Songino Array**	**15.32**	**68**		**Pn**	**23 03 11.7**	**+1.2**
DANN	**Dangsing**	**15.55**	**185**	*e*P	**Pn**	**23 03 11.7**	**-2.2**
	comp=Z,30nm,0.7s						
KBL	**Kabul**	**15.56**	**239**	P	**Pn**	**23 03 12.3**	**-1.5**
KBL				pmax	pmax		
	comp=Z,64nm,0.9s						
KBL	**Kabul**	**15.56**	**239**	Pn	**Pn**	**23 03 12.3**	**-1.5**
KBL				IAmb	IAmb	23 03 20.0	
	comp=Z,64nm,0.8s						
ULN	**Ulaanbaatar**	**15.76**	**68**	P	**Pn**	**23 03 16.3**	**0.0**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ULN	**Ulaanbaatar**	**15.76**	**68**		**Pn**	**23 03 16.3**	**0.0**
PYUN	**Piuthan**	**15.86**	**187**	*e*P	**Pn**	**23 03 15.1**	**-2.6**
	comp=Z,152nm,0.9s						
GKN	**Gorkha**	**15.87**	**182**	*e*P	**Pn**	**23 03 16.4**	**-1.4**
	comp=Z,16nm,0.3s						
KKN	**Kakani**	**16.07**	**180**	*e*P	**Pn**	**23 03 19.4**	**-1.1**
	comp=Z,34nm,0.5s						
KOLN	**Koldanda**	**16.14**	**185**	*e*P	**Pn**	**23 03 18.9**	**-2.5**
PKIN	**Phulchoki**	**16.29**	**179**	*e*P	**Pn**	**23 03 22.3**	**-1.0**
	comp=Z,52nm,0.6s						
LZH	**Lanzhou**	**16.30**	**112**	*e*P	**Pn**	**23 03 24.4**	**+1.1**
LZH				sP	sP	23 03 33.0	-0.2
LZH				pmax	pmax		
	comp=Z,27nm,1.0s						
LZH				LR	LR		
	comp=Z,740nm,10.0s						
LZH				LR	LR		
	comp=Z,790nm,10.1s						
LZH				LR	LR		
	comp=Z,790nm,11.6s						
TAPN	**Taplejung**	**16.64**	**172**	*e*P	**Pn**	**23 03 27.8**	**0.0**
	comp=Z,82nm,0.8s						
RAMN	**Ramite**	**16.95**	**176**	*e*P	**Pn**	**23 03 31.1**	**-0.6**
	comp=Z,46nm,0.5s						
ODAN	**Odare**	**17.10**	**173**	*e*P	**Pn**	**23 03 33.1**	**-0.4**
	comp=Z,56nm,0.7s						
AB31	**Akbulak array**	**18.09**	**296**	P	**Pn**	**23 03 44.8**	**-0.6**
AB31	**Akbulak array**	**18.09**	**296**	P	**Pn**	**23 03 44.8**	**-0.6**
	comp=Z,11nm,0.6s,baz=98,slow=12,SNR=72						
ABKAR	**Akbulak array**	**18.09**	**296**		**Pn**	**23 03 44.7**	**-0.8**
ABKAR	**Akbulak array**	**18.09**	**296**		**Pn**	**23 03 44.6**	**-0.8**
ABKAR				IAmb	IAmb	23 03 49.6	
	comp=Z,14nm,0.8s						
BTO	**Baotou**	**18.70**	**92**	*e*P	**P**	**23 03 51.4**	**-1.2**
BTO				S	**Sn**	**23 07 17.6**	**-4.3**
BTO				LR	LR		
	comp=N,2µm,12.2s						
BTO				LR	LR		
	comp=E,1µm,11.0s						
SHL	**Shillong**	**19.10**	**161**	P	**P**	**23 03 55.8**	**-1.4**
SHL				pmax	pmax		
	comp=Z,24nm,0.8s						
SHL	**Shillong**	**19.10**	**161**	P	**P**	**23 03 55.8**	**-1.4**
AKTO	**Aktyubinsk**	**19.49**	**299**	P	**Pn**	**23 04 02.8**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=88,slow=12,SNR=14						
AKTO				S	**Sn**	**23 07 33.8**	**-7.1**
	comp=Z,0.8nm,0.3s,baz=249,slow=11,SNR=5.8						
AKTO				Lg	Lg	23 09 48.1	
	comp=Z,0.3nm,0.3s,baz=72,slow=24,SNR=3.0						
AKTO				LR	LR	23 12 07.5	
	comp=Z,570nm,20.4s,baz=111,slow=38						
CD2	**Chengdu**	**19.61**	**125**	P	**Pn**	**23 04 05.0**	**+0.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**19.73**	**90**	*e*P	**Pn**	**23 04 05.7**	**+0.2**
HHC				sP	sP	23 04 11.8	+0.7
HHC				S	**S**	**23 07 44.1**	**-2.0**
HHC				SS	**SnSn**	**23 08 06.9**	**+5.8**
HHC				pmax	pmax		
	comp=Z,29nm,0.8s						
HHC				pmax	pmax		
	comp=Z,230nm,5.7s						
HHC				LR	LR		
	comp=Z,270nm,11.4s						
HHC				LR	LR		
	comp=Z,410nm,10.4s						
HHC				LR	LR		
	comp=Z,430nm,18.0s						
HRA	**Herat**	**20.08**	**250**	P	**P**	**23 04 07.9**	**-0.1**
SVE	**Sverdlovsk**	**20.15**	**319**	⇓*e*P	Pn	23 04 09.6	-0.5
SVE				*e*S	**S**	**23 07 54.0**	**+0.1**
SVE				pmax	pmax		
	comp=Z,75nm,0.8s						
XAN	**Xi'an**	**20.89**	**110**	P	**P**	**23 04 16.6**	**+0.1**
XAN				S	**S**	**23 08 08.6**	**-0.5**
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN				LR	LR		
	comp=Z,380nm,12.5s						
XAN				LR	LR		
	comp=Z,360nm,14.6s						
XAN				LR	LR		
	comp=Z,490nm,13.9s						
ARU	**Arti**	**20.98**	**316**	P	**P**	**23 04 18.5**	**+1.2**
	comp=Z,24nm,0.6s,baz=116,slow=6.2,SNR=48						
ARU				S	**S**	**23 08 11.4**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=202,slow=23,SNR=1.2						
ARU				Lg	Lg	23 10 32.1	
	comp=Z,6.7nm,0.8s,baz=53,slow=17,SNR=3.1						
ARU				LR	LR	23 12 53.1	
	comp=Z,573nm,21.8s,baz=120,slow=38						
ARU	**Arti**	**20.98**	**316**	*c i*P	**P**	**23 04 18.6**	**+1.3**
ARU						23 04 35.3	
ARU				S	**S**	**23 08 13.3**	**+2.9**
ARU				SS	**SnSn**	**23 08 32.3**	**+1.1**
ARU				pmax	pmax		
	comp=Z,83nm,0.7s						
ARU				MLR	MLR		
	comp=Z,618nm,13.0s						
ARU	**Arti**	**20.98**	**316**	P	**P**	**23 04 17.7**	**+0.4**
ARU				IAmb	IAmb	23 04 22.5	
	comp=Z,80nm,0.7s						
GEYT	**Alibeck**	**21.22**	**263**	P	**P**	**23 04 20.9**	**+0.9**
	comp=Z,65nm,0.7s,baz=79,slow=11,SNR=32						
GEYT				LR	LR	23 12 31.7	
	comp=Z,166nm,19.1s,baz=15,slow=37						
GEYT	**Alibeck**	**21.22**	**263**	P	**P**	**23 04 20.7**	**+0.7**
GEYT				IAmb	IAmb	23 04 25.7	
	comp=Z,65nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**21.22**	**263**	P	**P**	**23 04 20.6**	**+0.6**
GYA0B				IAmb	IAmb	23 04 25.7	
	comp=Z,90nm,0.8s						
TIY	**Taiyuan**	**21.51**	**97**	*e*P	**P**	**23 04 24.7**	**+1.4**
TIY				pmax	pmax		
	comp=Z,15nm,0.4s						
BOD	**Bodaibo**	**22.71**	**42**	*e*P	**P**	**23 04 36.2**	**+0.4**
BOD				pmax	pmax		
	comp=Z,31nm,1.4s						
BJI	**Beijing**	**23.33**	**89**	P	P	23 04 49.8	+7.5
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KMI	**Kunming**	**23.60**	**137**	⇑P	**P**	**23 04 46.9**	**+1.5**
KMI				pP	pP	23 04 50.1	-0.2
KMI				pmax	pmax		
	comp=Z,15nm,0.9s						
KMI				LR	LR		
	comp=Z,310nm,10.2s						
KMI				LR	LR		
	comp=Z,470nm,15.7s						
KMI				LR	LR		
	comp=Z,350nm,16.9s						
ENH	**Enshi**	**23.61**	**117**	P	**P**	**23 04 45.4**	**+0.2**
HIA	**Hailar**	**24.24**	**65**	P	**P**	**23 04 51.7**	**+0.6**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HIA	**Hailar**	**24.24**	**65**	P	**P**	**23 04 51.7**	**+0.6**
GYA	**Guiyang**	**24.63**	**128**	⇓P	**P**	**23 04 55.4**	**+0.5**
GYA				pmax	pmax		
	comp=Z,17nm,1.0s						
NRIK	**Noril'sk**	**25.54**	**2**	P	**P**	**23 05 03.7**	**+1.1**
	comp=Z,30nm,0.6s,baz=176,slow=6.3,SNR=56						
NRIK				LR	LR	23 16 08.5	
	comp=Z,415nm,18.5s,baz=188,slow=39						
NRIK	**Noril'sk**	**25.54**	**2**	*c i*P	**P**	**23 05 03.5**	**+1.0**
NRIK				pmax	pmax		
	comp=Z,23nm,0.6s						
NRIK	**Noril'sk**	**25.54**	**2**	P	**P**	**23 05 03.2**	**+0.6**
BELG	**Belogornoye**	**26.18**	**302**	P	**P**	**23 05 10.2**	**+1.7**
	comp=Z,40nm,0.8s,baz=97,slow=3.6,SNR=12						
BELG				LR	LR	23 16 07.9	
	comp=Z,332nm,19.4s,baz=124,slow=38						
BELG	**Belogornoye**	**26.18**	**302**	*de*P	**P**	**23 05 09.0**	**+0.5**
BELG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KIRV	**Kirov**	**26.36**	**316**	P	**P**	**23 05 10.9**	**+0.9**
	comp=Z,38nm,0.8s,baz=103,slow=2.8,SNR=13						
KIRV				LR	LR	23 16 00.6	
	comp=Z,514nm,18.1s,baz=116,slow=37						
KIRV	**Kirov**	**26.36**	**316**	*ce*P	**P**	**23 05 11.1**	**+1.0**

WHN	Wuhan	26.66	110	⇓P	P	23 05 13.9	+0.9
MAK	Makhachkala	27.19	281	*e*P	P	23 05 12.6	-5.1
MAK				*e*S	S	23 09 48.2	-7.8
MAK				pmax	pmax		
	comp=Z,109nm,1.2s						
SLVN	Son La	27.38	139	P	P	23 05 19.0	-0.7
CHTO	Chiang Mai	27.57	151	P	P	23 05 20.8	-0.5
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CHTO	Chiang Mai	27.57	151	P	P	23 05 20.8	-0.5
LKRN	Lenkeran, Azer	27.64	272	P	P	23 05 22.5	+0.6
CM31	Chiang Mai Arr	27.90	151	P	P	23 05 24.5	+0.3
CMAR	Chiang Mai Arr	27.90	151	P	P	23 05 25.2	+0.9
	comp=Z,5.3nm,0.8s,baz=331,slow=9.0,SNR=28						
CMAR				PcP	PcP	23 08 39.5	-0.3
	comp=Z,0.8nm,0.3s,baz=304,slow=3.2,SNR=4.4						
CMAR	Chiang Mai Arr	27.90	151	P	P	23 05 24.6	+0.4
SEKA	Sheki	27.91	278	P	P	23 05 25.2	+0.9
MNGR	Mingechevir, A	28.13	277	P	P	23 05 27.9	+1.7
GROC	Groznyy	28.34	282	*e*P	P	23 05 28.1	+0.1
GROC				*e*		23 06 17.0	
GROC				*e*		23 08 40.0	
GROC				pmax	pmax		
	comp=Z,22nm,0.5s						
DDFL	Dedoflistskaro	28.61	279	P	P	23 05 34.4	+3.8
GANJ	Ganja	28.72	277	P	P	23 05 32.3	+0.8
NJ2	Nanjing	28.90	103	*e*P	P	23 05 33.4	+0.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PRGR	Permogore	29.14	321	*e*P	P	23 05 36.1	+1.2
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BANOM	Banah	29.46	242	P	P	23 05 38.5	+0.4
BANOM	Banah	29.46	242	P	P	23 05 38.7	+0.6
SHME	Shamm	29.47	242	P	P	23 05 38.8	+0.6
SHME	Shamm	29.47	242	P	P	23 05 39.4	+1.2
NCK	Nalchik	29.81	284	⇓*i*P	P	23 05 42.2	+1.1
NCK				pmax	pmax		
	comp=Z,24nm,0.6s						
GOF	Gofitskoye	29.81	287	⇑*e*P	P	23 05 42.5	+1.4
GOF				pmax	pmax		
	comp=Z,30nm,0.9s						
VRH	Novokhopyorsk	29.84	300	*e*P	P	23 05 39.9	-1.3
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NAX	Nakhchivan	29.84	275	P	P	23 05 43.4	+1.9
WSAR	Wadi Sarin	29.99	235	P	P	23 05 44.8	+2.0
	comp=Z,12nm,0.6s,baz=114,slow=2.9,SNR=26						
WSAR				PcP	PcP	23 08 44.8	-0.2
	comp=Z,4.2nm,0.7s,baz=180,slow=2.0,SNR=3.8						
WSAR	Wadi Sarin	29.99	235	P	P	23 05 45.0	+2.2
GNI	Garni	30.03	277	P	P	23 05 45.6	+2.4
	comp=Z,41nm,0.9s,baz=352,slow=1.5,SNR=21						
GNI				LR	LR	23 18 19.5	
	comp=Z,132nm,19.4s,baz=18,slow=37						
GNI	Garni	30.03	277	P	P	23 05 45.6	+2.4
GNI	Garni	30.03	277*c*	*i*P	P	23 05 45.3	+2.1
GNI				pmax	pmax		
	comp=Z,71nm,1.3s						
GNI	Garni	30.03	277	P	P	23 05 45.8	+2.6
GNI	Garni	30.03	277	P	P	23 05 44.8	+1.5
ONI	Oni	30.16	282	P	P	23 05 45.8	+1.5
ONI				pmax	pmax		
	comp=Z,55nm,0.6s						
ONI	Oni	30.16	282	P	P	23 05 45.8	+1.5
UOSS	Minazif	30.21	241	P	P	23 05 45.7	+0.9
UOSS	Minazif	30.21	241	P	P	23 05 45.9	+1.1
UOSS				P	P	23 05 45.9	+1.1
KBZ	Khabaz	30.24	285	P	P	23 05 45.8	+1.0
	comp=Z,13nm,0.7s,baz=119,slow=4.5,SNR=65						
KBZ				LR	LR	23 20 11.9	
	comp=Z,331nm,18.3s,baz=64,slow=41						
KBZ	Khabaz	30.24	285*d*	*i*P	P	23 05 45.8	+1.0
KBZ				pmax	pmax		
	comp=Z,15nm,0.7s						
WBK	Wadi Bani Khal	30.27	234	P	P	23 05 47.5	+2.2
WBK				P	P	23 05 47.5	+2.2
KVAR	Kislovodsk Arr	30.32	285	P	P	23 05 47.2	+1.5
	comp=Z,2.1nm,0.6s,baz=266,slow=22,SNR=2.6						
KIV	Kislovodsk	30.33	285	*i* P	P	23 05 47.5	+1.7
	SNR=7.3						
KIV	Kislovodsk	30.33	285	*e*P	P	23 05 47.0	+1.3
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
KIV				MLR	MLR		
	comp=Z,202nm,15.0s						
KIV	Kislovodsk	30.33	285	P	P	23 05 47.5	+1.7
KIV	Kislovodsk	30.33	285	P	P	23 05 47.0	+1.3
KIV				IAmb	IAmb	23 05 48.7	
	comp=Z,9.6nm,0.7s						
HATD	Hatta, Dubai	30.34	241	P	P	23 05 47.1	+1.1
JLN	Jalan Bani Buh	30.37	233	P	P	23 05 48.1	+1.9
JLN				P	P	23 05 48.1	+1.9
SMDO	Samad	30.47	236	P	P	23 05 49.3	+2.1
SMDO				P	P	23 05 49.3	+2.1
NEY	Neytrino	30.49	284	⇑*i*P	P	23 05 50.2	+2.9
NEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ASHO	Ashiyiah	30.49	241	*i* P	P	23 05 48.5	+1.2
	SNR=7.6						
ASHO	Ashiyiah	30.49	241	P	P	23 05 49.2	+1.8
HOQ	Hoqain	30.52	237	P	P	23 05 47.8	+0.3
HOQ				P	P	23 05 47.8	+0.3
SOHO	SOHO	30.59	239	P	P	23 05 49.3	+1.1
SOHO				P	P	23 05 49.3	+1.1
JMDO	Jabal Madar	30.96	235	P	P	23 05 53.3	+1.9
JMDO				P	P	23 05 53.3	+1.9
KARS	Kars	31.05	279	P	P	23 05 54.1	+1.8
KARS				pmax	pmax		
	comp=Z,99nm,0.9s						
KARS	Kars	31.05	279	P	P	23 05 54.1	+1.8
ALNE	Al Ain	31.14	240	P	P	23 05 55.0	+2.0
ALNE				P	P	23 05 55.0	+2.0
ARQ	Araqi	31.19	238	P	P	23 05 56.0	+2.6
ARQ				P	P	23 05 56.0	+2.6
VSR	Storozhevoye	31.44	300	*e*P	P	23 05 54.7	-0.6
VSR				pmax	pmax		
	comp=Z,30nm,1.5s						
LPSR	Galich'ya Gora	31.49	303	*e*P	P	23 05 54.2	-1.6
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
YAK	Yakutsk	31.55	39	P	P	23 05 57.1	+1.0
	comp=Z,4.2nm,0.5s,baz=179,slow=1.5,SNR=4.3						
YAK	Yakutsk	31.55	39	*e*P	P	23 05 57.1	+1.0
YAK				*e**PP	sP	23 06 06.1	+3.2
YAK				*e*		23 06 59.5	
YAK				*e*PPP	PPP	23 07 17.4	
YAK				*e*		23 08 51.6	
YAK				*e*S	S	23 11 02.2	-1.7
YAK				*e*		23 16 26.8	
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.7s						
YAK				pmax	pmax		
	comp=E,13nm,1.7s						
YAK				pmax	pmax		
	comp=Z,181nm,4.3s						
YAK				pmax	pmax		
	comp=N,206nm,3.7s						
YAK				pmax	pmax		
	comp=E,237nm,4.0s						
YAK				smax	smax		
	comp=E,157nm,3.1s						
YAK				smax	smax		
	comp=N,181nm,2.8s						
YAK	Yakutsk	31.55	39	P	P	23 05 56.7	+0.6
YAK				IAmb	IAmb	23 05 57.7	
	comp=Z,12nm,0.9s						
MDJ	Mudanjiang	31.55	73	P	P	23 05 56.8	+0.3
MDJ				pmax	pmax		
	comp=Z,11nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,200nm,7.6s						
KLMR	Klimovskoe	31.78	318	*e*P	P	23 05 56.7	-1.6
KLMR				*e*		23 08 47.9	
KLMR				pmax	pmax		
	comp=Z,34nm,0.7s						
KLMR	Klimovskoe	31.78	318	*e*P	P	23 05 56.7	-1.6
KLMR				AMP		23 06 00.3	
	comp=Z,34nm,0.7s						
KLMR				*e*PcP	PcP	23 08 47.9	-1.2
KLR	Kul'dur	32.08	64	P	P	23 06 01.9	+0.9
	comp=Z,7.5nm,1.0s,baz=281,slow=9.0,SNR=11						
KLR				PcP	PcP	23 08 50.1	-0.1
	comp=Z,2.8nm,0.7s,baz=307,slow=5.8,SNR=3.9						
KLR	Kul'dur	32.08	64	⇓*i*P	P	23 06 02.2	+1.1
MOS	Moscow	32.22	309	*e*P	P	23 06 01.3	-0.9
MOS				*e*		23 16 36.9	
MOS				pmax	pmax		
	comp=Z,74nm,0.9s						
UMZA	Um Al Zommool	32.49	239	P	P	23 06 06.4	+1.6
UMZA				P	P	23 06 06.4	+1.6
SOC	Sochi	32.50	286	*e*P	P	23 06 04.7	0.0
SOC				*e*		23 07 10.2	
SOC				*e*S	S	23 11 20.8	+1.6
SOC				pmax	pmax		
	comp=Z,30nm,0.5s						
SOC				MLR	MLR		
	comp=Z,185nm,18.0s						
GURO	Guroymak-BITLI	32.57	276	P	P	23 06 07.8	+2.1
GURO				IAmb	IAmb	23 06 09.1	
	comp=Z,18nm,1.0s						
KSRS	Korea Array	32.80	86	P	P	23 06 07.5	+0.1
	comp=Z,0.5nm,0.3s,baz=140,slow=33,SNR=5.6						
KSRS				LR	LR	23 19 41.6	
	comp=Z,138nm,19.5s,baz=304,slow=37						
OBN	Obninsk	32.82	307	LR	LR	23 19 55.9	
	comp=Z,129nm,18.0s,baz=86,slow=37						
OBN	Obninsk	32.82	307*c*	*i*P	P	23 06 07.5	+0.1
OBN				*e*		23 07 19.6	
OBN				*e*S	S	23 11 16.5	-7.4
OBN				pmax	pmax		
	comp=Z,73nm,1.7s						
OBN				MLR	MLR		
	comp=Z,411nm,16.0s						
OBN	Obninsk	32.82	307	P	P	23 06 07.8	+0.4
UMR	Umm Al-Rimmam	32.93	257	*e*P	P	23 06 08.9	+0.3
KBD	Kabd	33.17	256	*e*P	P	23 06 11.7	+1.0
QRN	Al-Qurain	33.27	256	*e*P	P	23 06 12.4	+0.7
USRK	Ussuriysk Ar.	33.32	73	LR	LR	23 21 01.5	
	comp=Z,302nm,18.5s,baz=264,slow=39						
UBPT	Khong Chiam	33.37	142	P	P	23 06 11.2	-1.4
UBPT				IAmb	IAmb	23 06 12.8	
	comp=Z,54nm,1.7s						
RST	Umm Al-Ruwaisa	33.47	257	*e*P	P	23 06 13.4	0.0
SLWR	Sila	33.73	245	P	P	23 06 15.3	-0.4
ANN	Anapa	33.74	289	*e*P	P	23 06 13.5	-2.0
ANN				*e**PP	pP	23 06 16.5	-3.9
ANN				*e*PPP	PPP	23 07 37.5	
ANN				*e*S	S	23 11 36.6	-1.8
ANN				pmax	pmax		
	comp=Z,95nm,1.0s						
ANN				MLR	MLR		
	comp=Z,452nm,7.0s						
TIXI	Tiksi	34.83	23	P	P	23 06 25.3	+0.5
	comp=Z,2.8nm,0.3s,baz=179,slow=3.6,SNR=8.2						
TIXI	Tiksi	34.83	23	⇑*e*P	P	23 06 25.0	+0.3
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TIXI	Tiksi	34.83	23	P	P	23 06 25.0	+0.3
YHNB	Yeheng	35.19	111		P	23 06 28.1	-0.3
LVZ	Lovozero	35.55	330	P	P	23 06 31.4	+0.4
LVZ				pmax	pmax		
	comp=Z,199nm,2.0s						
LVZ	Lovozero	35.55	330	P	P	23 06 31.4	+0.4
SHAO	Shalim	35.79	233	P	P	23 06 34.1	+0.6
SHAO	Shalim	35.79	233	P	P	23 06 35.0	+1.4
	SNR=7.0						
SHAO				P	P	23 06 35.0	+1.4
	SNR=7.0						
APA	Apatity	35.91	329	⇓*i*P	P	23 06 29.2	-4.9
APA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,2µm,13.0s						
SIM	Simferopol'	35.96	290*c*	*i*P	P	23 06 34.6	-0.2
SIM				pmax	pmax		
	comp=Z,76nm,0.9s						
SNOP	Sinop	36.14	285	P	P	23 06 36.8	+0.5
DOK	Doka	36.21	236	P	P	23 06 37.6	+0.5
DMTO	DMTO	36.43	234	P	P	23 06 39.5	+0.5
GAZ	Gaziantep	36.61	276	P	P	23 06 41.7	+1.2
PALK	Pallekele	36.69	187	P	P	23 06 42.0	+0.8
	comp=Z,6.5nm,0.6s,baz=117,slow=4.8,SNR=5.9						
PALK				LR	LR	23 23 45.4	
	comp=Z,167nm,19.0s,baz=89,slow=40						
PALK	Pallekele	36.69	187	P	P	23 06 41.7	+0.5
PALK				pmax	pmax		
	comp=Z,49nm,1.7s						
PALK	Pallekele	36.69	187	P	P	23 06 41.7	+0.5
PALK				IAmb	IAmb	23 06 42.5	
	comp=Z,48nm,1.7s						
BNN	Bunyan	36.88	280	P	P	23 06 44.4	+1.5
WHFO	Wadi Hawf	36.97	235	P	P	23 06 44.0	+0.4
	SNR=33						
WHFO				P	P	23 06 44.0	+0.4
	SNR=33						
RBK	Rabkut	37.03	235	P	P	23 06 44.5	+0.3
RBK				P	P	23 06 44.5	+0.3
DLV	T Lat	37.67	141	P	P	23 06 48.9	-0.8
ABTO	Aybut	37.69	235	P	P	23 06 49.9	+0.1
AKASG	Malin Array Be	37.73	301	P	P	23 06 49.9	+0.2
	comp=Z,5.3nm,0.6s,baz=66,slow=9.0,SNR=16						
AKASG	Malin Array Be	37.73	301	P	P	23 06 50.2	+0.5
AKBB	Malin Array Si	37.73	301	⇑*i*P	P	23 06 49.7	0.0
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKBB	Malin Array Si	37.73	301	P	P	23 06 50.0	+0.3
AKBB				IAmb	IAmb	23 06 51.6	
	comp=Z,36nm,1.6s						
MNK	Minsk	37.88	307	*i* P	P	23 06 52.5	+1.6
MNK				*i*		23 08 18.8	
MNK				*i* PPP	PPP	23 08 36.5	
MNK				*i*		23 09 08.2	
MNK				*i* S	S	23 12 45.0	+3.4
MNK				*i* SS	SS	23 15 25.4	-2.2
MNK				pmax	pmax		
	comp=N,22nm,1.6s						
MNK				pmax	pmax		
	comp=Z,22nm,0.8s						
MNK				pmax	pmax		
	comp=E,5.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,331nm,9.0s						
MNK				MLR	MLR		
	comp=N,127nm,8.0s						
MNK				MLR	MLR		
	comp=E,42nm,10.0s						
MNK	Minsk	37.88	307	*i* P	P	23 06 52.6	+1.7
	comp=E,5.0nm,0.8s						
MNK				*i* P	P	23 06 52.6	+1.7
	comp=N,22nm,1.6s						
MNK				*i* P	P	23 06 52.6	+1.7
	comp=Z,22nm,0.8s,baz=82						
MNK				*i* PP	PnPn	23 08 18.8	+0.3
MNK				*i* PPP	PPP	23 08 36.5	
MNK				*i* PcP	PcP	23 09 08.2	+1.3
MNK				*i* S	S	23 12 45.1	+3.5
MNK				*i* SS	SS	23 15 25.5	-2.2
MNK				*i* SSS	SSS	23 15 41.8	
MNK				*i* LQ	LQ	23 18 40.9	
MNK				*i* LR	LR	23 22 19.6	
MNK				*i* LRM	MLR	23 24 24.4	
	comp=Z,331nm,9.4s						
MNK				*i* LRM	MLR	23 24 27.0	
	comp=N,127nm,8.2s						
MNK				*i* LRM	MLR	23 24 28.3	
	comp=E,42nm,9.9s						
BR131	Keskin Array S	38.10	282	P	P	23 06 54.3	+1.1
BR131				pmax	pmax		
	comp=Z,23nm,0.8s						
BR131	Keskin Array S	38.10	282	P	P	23 06 54.6	+1.4
BR131	Keskin Array S	38.10	282	P	P	23 06 54.3	+1.1
BR131				IAmb	IAmb	23 06 56.1	
	comp=Z,23nm,0.8s						
BRTR	Keskin Array B	38.10	282	P	P	23 06 54.4	+1.2
	comp=Z,9.8nm,0.6s,baz=73,slow=6.7,SNR=66						
BRTR				LR	LR	23 23 46.3	
	comp=Z,164nm,19.4s,baz=32,slow=38						
BRTR	Keskin Array B	38.10	282	P	P	23 06 54.3	+1.1
VSU	Vasula	38.10	313	⇓*e*P	P	23 06 53.6	+0.9
VSU				pmax	pmax		
	comp=Z,156nm,1.0s						
RAYN	Ar Rayn	38.26	251	*i* P	P	23 06 54.6	+0.1
	SNR=25						
RAYN	Ar Rayn	38.26	251	P	P	23 06 54.8	+0.2
RAYN				pmax	pmax		
	comp=Z,18nm,0.7s						
RAYN	Ar Rayn	38.26	251	P	P	23 06 54.6	+0.1
RAYN	Ar Rayn	38.26	251	P	P	23 06 54.8	+0.2
RAYN				IAmb	IAmb	23 06 55.7	
	comp=Z,18nm,0.7s						
FIA1	FINESS Array S	38.32	318	P	P	23 06 55.3	+0.8
FIA1				IAmb	IAmb	23 07 03.4	
	comp=Z,82nm,1.6s						
FINES	FINESS Array B	38.32	318	P	P	23 06 54.8	+0.2
	comp=Z,2.5nm,0.4s,baz=54,slow=7.3,SNR=19						
FINES				PcP	PcP	23 09 07.4	-0.7
	comp=Z,3.5nm,0.6s,baz=76,slow=8.0,SNR=2.0						
FINES				LR	LR	23 23 39.5	
	comp=Z,443nm,18.2s,baz=110,slow=38						
FINES	FINESS Array B	38.32	318	*i* P	P	23 06 56.5	+1.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	FINESS Array B	38.32	318	P	P	23 06 55.3	+0.7
PURM	Purcari	38.35	294	⇑P	P	23 06 55.5	+0.5
NACGM	Naroch	38.45	308	*i* P	P	23 06 56.3	+0.6
ANTO	Ankara	38.64	283	P	P	23 06 59.0	+1.4
ANTO				pmax	pmax		
	comp=Z,19nm,0.8s						
ANTO	Ankara	38.64	283	P	P	23 06 59.0	+1.4
ANTO				IAmb	IAmb	23 07 00.1	
	comp=Z,19nm,0.8s						
BR231	Keskin MP Arra	38.66	283	P	P	23 06 58.9	+1.0
BR231				IAmb	IAmb	23 07 00.4	
	comp=Z,21nm,0.8s						
KEV	Kevo	38.68	332	P	P	23 06 59.0	+1.5
KEV				pmax	pmax		
	comp=Z,22nm,1.2s						
KEV	Kevo	38.68	332	P	P	23 06 59.0	+1.5
KEV				IAmb	IAmb	23 07 00.4	
	comp=Z,22nm,1.2s						
SORM	Soroca	38.89	297	⇑P	P	23 06 59.6	0.0
MILM	Milestii Mici	38.93	295	⇓P	P	23 07 00.4	+0.5
ARCES	ARCESS Array B	39.16	331	P	P	23 07 02.6	+1.0
	comp=Z,3.3nm,0.6s,baz=85,slow=7.9,SNR=22						
ARCES	ARCESS Array B	39.16	331	P	P	23 07 10.3	+8.7
ARCES				pmax	pmax		
	comp=Z,47nm,1.4s						
ARCES	ARCESS Array B	39.16	331	P	P	23 07 02.3	+0.8
ARCES	ARCESS Array B	39.16	331	IAmb	IAmb	23 07 14.0	
	comp=Z,47nm,1.4s						
ARCES	ARCESS Array B	39.16	331	P	P	23 07 10.3	+8.7
ASF	Jabal al Asfar	39.24	269	P	P	23 07 04.6	+1.8
	comp=Z,16nm,0.8s,baz=66,slow=8.1,SNR=18						
TLCR		39.46	292	⇑P	P	23 07 04.9	+0.6
MDUB	Mudurnu	39.52	284	P	P	23 07 05.5	+0.4
VASR	Vaslui	39.69	295	⇑P	P	23 07 07.0	+0.7
VLDR	Vladesti	39.74	293	⇑P	P	23 07 07.2	+0.5
TPGR	Topolog	39.84	292	⇓P	P	23 07 08.4	+0.9
CFR	Carcaliu	39.92	292	⇑P	P	23 07 08.8	+0.7
PABE	Paberze	39.95	309	P	P	23 07 09.3	+1.1
PABE				IAmb	IAmb	23 07 10.3	
	comp=Z,35nm,0.8s						
TIRR	Tirgusor	39.97	291	⇓P	P	23 07 09.4	+0.8
TIRR	Tirgusor	39.97	291	P	P	23 07 09.3	+0.7
TIRR				pmax	pmax		
	comp=Z,15nm,0.8s						
TIRR	Tirgusor	39.97	291	P	P	23 07 09.3	+0.7
TUDR		40.09	293	⇑P	P	23 07 10.5	+0.9
HARR	Harsova	40.22	292	⇑P	P	23 07 10.8	+0.1
CSS	Mathiatis	40.42	275	P	P	23 07 13.4	+0.9
CSS				IAmb	IAmb	23 07 16.8	
	comp=Z,18nm,0.8s						
TESR	Tescani	40.48	295	⇑P	P	23 07 13.5	+0.7
PRAR	RASCA	40.49	296	⇑P	P	23 07 13.9	+1.0
ICOR	Ion Corvin	40.50	291	⇓P	P	23 07 13.2	+0.2
VRI	Vrincioaia	40.63	294	⇑P	P	23 07 13.8	-0.3
GHAJ	Ghor Haditha	40.66	269	P	P	23 07 14.9	+0.5
GHAJ				IAmb	IAmb	23 07 17.5	
	comp=Z,46nm,1.5s						
SUW	Suwalki	40.68	307	*e*P	P	23 07 15.3	+1.0
SUW	Suwalki	40.68	307	P	P	23 07 14.6	+0.3
SUW				pmax	pmax		
	comp=Z,67nm,1.2s						
SUW	Suwalki	40.68	307	P	P	23 07 14.6	+0.3
PLOR	Plostina	40.69	294	⇑P	P	23 07 15.3	+0.7
BISRR	Bisoca	40.75	293	⇑P	P	23 07 16.0	+0.9
KULM	Kulim	40.81	156	P	P	23 07 15.2	-0.5
KULM				IAmb	IAmb	23 07 17.4	
	comp=Z,20nm,1.1s						
COVR	Voineasa-Covas	40.98	294	⇑P	P	23 07 17.8	+0.8
BURAR	Bucovina Array	41.06	297	⇑P	P	23 07 18.6	+0.9
BURAR	Bucovina Array	41.06	297	P	P	23 07 18.4	+0.7
BUR08	Bucovina Ar. S	41.07	297	P	P	23 07 18.7	+1.0
ISP	Isparta	41.11	281	P	P	23 07 19.0	+0.7
ISP				pmax	pmax		
	comp=Z,39nm,1.1s						
ISP	Isparta	41.11	281	P	P	23 07 18.9	+0.7
ISP				IAmb	IAmb	23 07 20.2	
	comp=Z,39nm,1.1s						
LVV	L'vov	41.17	301	*e*P	P	23 07 19.0	+0.5
OZUR		41.18	295	⇑P	P	23 07 18.6	0.0
MLR	Muntele Rosu	41.27	294	⇑P	P	23 07 20.2	+0.7
MLR	Muntele Rosu	41.27	294	LR	LR	23 26 16.2	
	comp=Z,412nm,20.7s,baz=60,slow=39						
MLR	Muntele Rosu	41.27	294	P	P	23 07 20.6	+1.1
MLR				pmax	pmax		
	comp=Z,63nm,1.9s						
MLR	Muntele Rosu	41.27	294	P	P	23 07 20.6	+1.1
MLR				IAmb	IAmb	23 07 22.3	
	comp=Z,63nm,1.9s						
SOCY	Socotra	41.42	230	P	P	23 07 18.9	-2.0
SOCY				IAmb	IAmb	23 07 26.9	
	comp=Z,80nm,1.6s						
DOPR	Dopca	41.48	295	⇑P	P	23 07 22.2	+1.1
RAZG	Razgrad	41.57	291	⇑P	P	23 07 23.2	+1.3
IPM	Ipoh	41.69	156	P	P	23 07 22.2	-0.8
IPM				IAmb	IAmb	23 07 24.9	
	comp=Z,26nm,1.4s						
VOIR		41.88	294	⇑P	P	23 07 25.1	+0.7
EIL	Elat	42.00	268	P	P	23 07 26.7	+1.3
	comp=Z,3.2nm,0.6s,baz=71,slow=7.3,SNR=4.9						
ELL	Elmali	42.03	280	P	P	23 07 27.0	+1.2
ELL				pmax	pmax		
	comp=Z,124nm,1.1s						
ELL	Elmali	42.03	280	P	P	23 07 27.0	+1.2
KWP	Kalwaria Pacla	42.05	301	*e*P	P	23 07 27.3	+1.6
KWP	Kalwaria Pacla	42.05	301	P	P	23 07 26.9	+1.2
KWP				pmax	pmax		
	comp=Z,534nm,1.1s						
KWP	Kalwaria Pacla	42.05	301	P	P	23 07 26.9	+1.2
SEY	Seymchan	42.07	39	P	P	23 07 26.2	+0.6
	comp=Z,3.2nm,0.9s,baz=276,slow=12,SNR=2.4						
ARR	Arges	42.18	294	⇑P	P	23 07 28.1	+1.2
BALB	Balikesir	42.18	285	P	P	23 07 27.3	+0.5
HUMR	Humele	42.25	293	⇑P	P	23 07 27.3	-0.1
BEL	Belsk	42.60	304	*e*P	P	23 07 29.1	-1.0
TRPA	Tarpa	42.62	299	⇓P	P	23 07 31.5	+1.2
TRPA	Tarpa	42.62	299	*e*P	P	23 07 30.6	+0.3
PSI	Prapat	42.71	159	P	P	23 07 30.5	-1.0
	comp=Z,2.3nm,0.6s,baz=318,slow=11,SNR=9.9						
LOT	Lotru	42.72	294	⇑P	P	23 07 32.4	+1.0
ALN	Alexandroupoli	42.93	287	P	P	23 07 34.0	+1.0
ALN				pmax	pmax		
	comp=Z,11nm,1.2s						
ALN	Alexandroupoli	42.93	287	P	P	23 07 34.0	+1.0
DRGR		42.95	297	⇑P	P	23 07 34.0	+0.9
DRGR		42.95	297	P	P	23 07 34.3	+1.2
CRVS	Cervenica-Dubn	43.05	300	*e*P	P	23 07 34.3	+0.5
CRVS	Cervenica-Dubn	43.05	300	*e*P	P	23 07 34.3	+0.5
SPITS	Spitsbergen Ar	43.10	344	LR	LR	23 30 26.1	
	comp=Z,255nm,18.4s,baz=190,slow=43						
GZR	Gura Zlata	43.40	295	⇑P	P	23 07 37.1	+0.4
NIE	Niedzica	43.61	301	*e*P	P	23 07 40.9	+2.5
OJC	Ojcow	43.67	302	P	P	23 07 39.8	+1.0
OJC				pmax	pmax		
	comp=Z,42nm,1.2s						
OJC	Ojcow	43.67	302	P	P	23 07 39.8	+1.0
OJC				IAmb	IAmb	23 07 40.9	
	comp=Z,42nm,1.2s						
SIRR	Siria	43.81	296	⇑P	P	23 07 41.4	+1.4
HERR	Herculane	43.82	294	⇑P	P	23 07 40.4	+0.3
GSI	Gunungsitoli	43.83	162	P	P	23 07 40.7	+0.3
BZS	Buzias	44.07	295	⇑P	P	23 07 43.0	+0.9
VTS	Vitosha	44.15	291	⇓P	P	23 07 44.1	+1.2
VTS	Vitosha	44.15	291	P	P	23 07 43.9	+1.0
VTS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
VTS	Vitosha	44.15	291	P	P	23 07 43.9	+1.0
LANS	Liptovska Anna	44.21	301	*e*P	P	23 07 45.0	+1.8

LANS	Liptovska Anna	44.21	301	*e*P	P	23 07 45.0	+1.8
GKP	Gorka Klasztor	44.29	307	*e*P	P	23 07 45.4	+1.7
MDVR	Moldovita	44.32	294	⇓P	P	23 07 45.0	+0.9
ZAGS	Zajecar	44.35	293	*e*P	P	23 07 44.7	+0.4
PSZ	Piszkesteto	44.36	299	*e*P	P	23 07 44.8	+0.3
PSZ	Piszkesteto	44.36	299	P	P	23 07 46.1	+1.6
PSZ				pmax	pmax		
	comp=Z,28nm,1.7s						
PSZ	Piszkesteto	44.36	299	P	P	23 07 46.1	+1.6
PSZ				IAmb	IAmb	23 07 51.3	
	comp=Z,28nm,1.7s						
HFS	Hagfors	44.49	317	LR	LR	23 27 02.9	
	comp=Z,534nm,19.5s,baz=8.0,slow=37						
BOSS	Bosilegrad	44.71	291	*e*P	P	23 07 48.2	+0.9
BOVS	Bovan	44.77	293	⇑P	P	23 07 48.4	+0.7
VYHS	Vyhne	44.83	300	*e*P	P	23 07 49.6	+1.5
VYHS	Vyhne	44.83	300	*e*P	P	23 07 49.6	+1.5
PRVS	Prvonek	44.98	291	*e*P	P	23 07 50.8	+1.4
PRVS	Prvonek	44.98	291	*e*P	P	23 07 50.9	+1.5
BARS	Barje	45.03	292	*e*P	P	23 07 44.5	-5.3
BARS	Barje	45.03	292	*e*P	P	23 07 50.5	+0.7
VAY	Valandovo	45.14	289	*i* P	P	23 07 51.7	+1.1
MORC	Moravsky Berou	45.19	302	⇑P	P	23 07 52.3	+1.2
MORC	Moravsky Berou	45.19	302	*e*P	P	23 07 52.5	+1.5
MORC	Moravsky Berou	45.19	302	P	P	23 07 52.2	+1.2
MORC				pmax	pmax		
	comp=Z,14nm,1.2s						
MORC	Moravsky Berou	45.19	302	P	P	23 07 52.2	+1.2
MORC				IAmb	IAmb	23 07 53.3	
	comp=Z,14nm,1.2s						
NC405	NORSAR Array S	45.23	319	P	P	23 07 50.9	-0.3
STIP	Stip	45.24	290	*i* P	P	23 07 51.1	-0.4
GRUS	Gruza	45.33	294	*e*P	P	23 07 53.4	+1.3
SELS	Selova	45.33	292	*e*P	P	23 07 52.8	+0.6
SRO	Srobarova	45.40	300	*e*P	P	23 07 54.7	+2.1
SRO				pmax	pmax		
	comp=Z,16nm,0.9s						
SRO	Srobarova	45.40	300	*e*P	P	23 07 54.7	+2.1
FRGS	Fruska Gora	45.43	296	⇑P	P	23 07 53.5	+0.6
JAVC	Velka Javorina	45.43	301	*e*P	P	23 07 55.4	+2.5
NB2	NORSAR Subarra	45.49	319	P	P	23 07 53.5	+0.3
	comp=Z,3.7nm,0.7s,baz=76,slow=7.9						
NOA	NORSAR Array B	45.49	319	P	P	23 07 53.5	+0.3
	comp=Z,9.1nm,0.8s,baz=77,slow=7.8,SNR=18						
NOA				LR	LR	23 27 34.5	
	comp=Z,229nm,21.9s,baz=60,slow=37						
KRLC	Kraliky	45.55	303	*e*P	P	23 07 55.3	+1.4
KRLC				*e*x	x	23 08 02.8	
KRLC	Kraliky	45.55	303	*e*P	P	23 07 55.3	+1.4
KRLC				*e*		23 08 02.8	
KSP	Ksiaz	45.59	304	*e*P	P	23 07 55.4	+1.3
CSKK	Cskako	45.59	299	*e*P	P	23 07 54.9	+0.7
SKO	Skopje	45.63	291	*i* P	P	23 07 56.7	+2.2
BKNI	Bangkinang	45.64	157	P	P	23 07 54.9	0.0
SMOL	Smolenice	45.70	301	*e*P	P	23 07 57.3	+2.3
SMOL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SMOL	Smolenice	45.70	301	*e*P	P	23 07 57.3	+2.3
DIVS	Divibare	45.72	294	P	P	23 07 56.0	+0.6
DIVS				IAmb	IAmb	23 07 57.1	
	comp=Z,16nm,0.8s						
DIVS	Divibare	45.72	294	*e*P	P	23 07 55.9	+0.6
DPC	Dobruska-Polom	45.74	303	*e*P	P	23 07 57.1	+1.8
DPC				*e*x	x	23 08 06.1	
DPC	Dobruska-Polom	45.74	303	*e*P	P	23 07 57.1	+1.8
DPC				*e*		23 08 06.1	
CHVC	Chvalec	45.82	304	*e*P	P	23 07 57.7	+1.8
CHVC				*e*x	x	23 08 06.7	
IVAS	Ivanjica	45.83	293	*e*P	P	23 07 56.5	+0.3
MODS	Modra-Piesok	45.84	301	*e*P	P	23 07 57.4	+1.2
MODS	Modra-Piesok	45.84	301	*e*P	P	23 07 57.4	+1.2
UPC	Upice	45.87	304	*e*P	P	23 07 57.8	+1.5
UPC	Upice	45.87	304	*e*P	P	23 07 57.8	+1.5
VRAC	Vranov	45.93	302	*e*P	P	23 07 58.1	+1.3
SJES	Sjenica	46.08	293	*e*P	P	23 07 59.0	+0.8
MPLH	Magyarpolny	46.12	299	*e*P	P	23 07 58.9	+0.6
KRUC	Moravsky	46.14	302	*e*P	P	23 07 59.5	+1.0
EGYH	Egyhazaskeszo	46.16	299	*e*P	P	23 08 00.3	+1.7
KOVH	Kovagotottos	46.17	297	*e*P	P	23 07 58.4	-0.3
FNA	Florina	46.19	289	P	P	23 07 58.7	-0.3
FNA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FNA	Florina	46.19	289	P	P	23 07 58.7	-0.3
FNA				IAmb	IAmb	23 08 00.5	
	comp=Z,7.2nm,0.8s						
BBLS	Lazići	46.21	294	*e*P	P	23 08 00.1	+1.0
AGG	Agios Georgios	46.32	287	P	P	23 08 00.1	0.0
AGG				pmax	pmax		
	comp=Z,20nm,1.0s						
AGG	Agios Georgios	46.32	287	P	P	23 08 00.1	0.0
AGG				IAmb	IAmb	23 08 01.1	
	comp=Z,20nm,1.0s						
RUE	Ruedersdorf	46.53	307	*e*P	P	23 08 02.1	+0.7
	comp=Z,28nm,1.0s,baz=66,slow=7.7						
SOP	Sopron	46.55	300	*e*P	P	23 08 02.8	+1.1
SOP	Sopron	46.55	300	P	P	23 08 03.4	+1.7
KONO	Kongsberg	46.61	317	P	P	23 08 02.7	+0.7
KONO				pmax	pmax		
	comp=Z,189nm,2.0s						
KONO	Kongsberg	46.61	317	P	P	23 08 02.6	+0.7
KBN	Korca	46.66	289	P	P	23 08 02.5	-0.3
KBN				pmax	pmax		
	comp=Z,17nm,1.4s						
KBN	Korca	46.66	289	P	P	23 08 02.5	-0.3
KBN				IAmb	IAmb	23 08 02.9	
	comp=Z,17nm,1.4s						
PDSI	Padang	46.67	159	P	P	23 08 02.1	-0.9
PVCC	Panska Ves	46.73	304	*e*P	P	23 08 04.3	+1.2
PVCC	Panska Ves	46.73	304	*e*P	P	23 08 04.3	+1.2
CONA	Conrad Observa	46.89	300	*i* P	P	23 08 05.8	+1.3
	comp=Z,18nm,1.2s,SNR=8.5						
PDG	Podgorica	46.91	292	⇑P	P	23 08 04.9	+0.4
PDG	Podgorica	46.91	292	P	P	23 08 04.8	+0.3
PDG				IAmb	IAmb	23 08 07.4	
	comp=Z,12nm,0.7s						
SKR	Severo-Kuril's	46.92	55	*e*P	P	23 07 53.1	-11
SKR				*e*S	S	23 14 49.6	-5.3
SKR				pmax	pmax		
	comp=Z,69nm,1.4s						
SKR				MLR	MLR		
	comp=Z,1µm,23.0s						
PRU	Pruhonice	46.94	304	*e*P	P	23 08 06.1	+1.4
PRU				*e*x	x	23 08 14.2	
PRU	Pruhonice	46.94	304	*e*P	P	23 08 06.1	+1.4
PRU				*e*		23 08 14.2	
BRG	Berggiesshubel	46.98	305	*e*P	P	23 08 05.9	+0.9
	comp=Z,28nm,1.7s,baz=66,slow=7.7						
BRG	Berggiesshubel	46.98	305	*i* P	P	23 08 06.5	+1.4
BRG				Amp		23 08 08.0	
	comp=Z,4.8nm,0.4s						
PETK	Petropavlovsk-	47.01	52	P	P	23 08 04.6	-0.7
	comp=Z,4.2nm,0.9s,baz=286,slow=10,SNR=2.7						
PETK				LR	LR	23 29 00.6	
	comp=Z,188nm,19.4s,baz=285,slow=38						
ARSA	Arzberg	47.36	300	*e*P	P	23 08 08.9	+0.8
	comp=Z,6.6nm,0.9s						
CLL	Collm	47.38	306	*i* P	P	23 08 08.6	+0.5
CLL				*e*		23 08 12.0	
CLL				*i*		23 08 17.5	
CLL				pmax	pmax		
	comp=Z,25nm,1.0s						
CLL	Collm	47.38	306	*i* P	P	23 08 08.6	+0.5
	comp=Z,25nm,1.0s						
CLL				*e*pP	pP	23 08 12.0	-1.1
CLL				*i*		23 08 24.2	
CLL	Collm	47.38	306	*e*P	P	23 08 08.7	+0.6
	comp=Z,25nm,1.0s,baz=66,slow=7.7						
CLL	Collm	47.38	306	P	P	23 08 09.3	+1.1
CLL				IAmb	IAmb	23 08 09.9	
	comp=Z,18nm,0.8s						
ITM	Ithomi	47.47	285	P	P	23 08 07.9	-1.1
ITM				IAmb	IAmb	23 08 09.4	
	comp=Z,15nm,0.8s						
DSRI	Dabo	47.48	153	P	P	23 08 09.9	+0.7
	comp=Z,677nmcomp=Z,8.3nm,0.4s						
CKRC	Cesky Krumlov	47.51	302	*e*P	P	23 08 11.8	+2.6
CKRC				*e*x	x	23 08 20.9	
SBUM	Sibu	47.75	142	P	P	23 08 11.9	+0.6
SBUM				IAmb	IAmb	23 08 13.6	
	comp=Z,6.5nm,0.9s						
GOLS	Golise	47.79	298	*i* P	P	23 08 12.3	+0.9
KSM	Kuching	47.80	145	P	P	23 08 11.9	+0.2
KSM				IAmb	IAmb	23 08 13.5	
	comp=Z,7.5nm,0.9s						
KHC	Kasperske Hory	47.84	303	*e*P	P	23 08 13.0	+1.2
KHC				*e*x	x	23 08 20.6	
KHC	Kasperske Hory	47.84	303	⇓*i*P	P	23 08 13.3	+1.5
KHC				pmax	pmax		
	comp=Z,14nm,1.0s						
KHC	Kasperske Hory	47.84	303	P	P	23 08 12.7	+0.9
GCIS	Gornji Cirnik	47.84	298	*i* P	P	23 08 12.7	+0.9
GEC2	GERESS Array S	47.87	302	P	P	23 08 13.2	+1.1
GEC2				IAmb	IAmb	23 08 14.4	
	comp=Z,11nm,1.2s						
GERES	GERESS Array B	47.87	302	P	P	23 08 13.4	+1.3
	comp=Z,2.7nm,0.9s,baz=67,slow=7.5,SNR=16						
GERES	GERESS Array B	47.87	302	P	P	23 08 12.7	+0.5
SOKA	Soboth	47.89	299	*i* P	P	23 08 13.0	+0.7
	comp=Z,17nm,1.4s,SNR=7.3						
TANN	Tannenbergstha	48.02	305	*e*P	P	23 08 14.3	+1.1
	comp=Z,8.2nm,0.9s,baz=66,slow=7.7						
GUNZ	Gunzen	48.12	305	*e*P	P	23 08 14.9	+1.0
	comp=Z,14nm,1.0s,baz=66,slow=7.7						
NEUB	Neuenburg	48.14	306	*e*P	P	23 08 14.7	+0.8
	comp=Z,34nm,1.1s,baz=66,slow=7.7						
PDKS	Podkum	48.17	298	*i* P	P	23 08 15.2	+0.8
WET	Wettzell	48.26	303	*e*P	P	23 08 16.2	+1.1
	comp=Z,10nm,1.1s,baz=66,slow=7.7						
OBKA	Obir	48.27	299	*i* P	P	23 08 15.8	+0.6
	comp=Z,10nm,0.8s,SNR=5.3						
ROTZ	Rotzenmuhle	48.42	304	*e*P	P	23 08 17.3	+1.0
	comp=Z,10.0nm,1.8s,baz=66,slow=7.7						
MOX	Moxa	48.44	305	*e*P	P	23 08 17.3	+0.9
	comp=Z,16nm,1.2s,baz=66,slow=7.7						
MYLDM	Lahad Datu	48.45	133	P	P	23 08 18.5	+1.7
MYLDM				IAmb	IAmb	23 08 19.8	
	comp=Z,25nm,1.5s						
LJU	Ljubljana	48.47	299	*i* P	P	23 08 17.4	+0.8
NOR	Nord	48.57	349	*i* P	P	23 08 18.2	+1.2
NOR				IAmb	IAmb	23 08 19.2	
	comp=Z,3.0nm,0.7s						
NOR				*i*		23 08 27.2	
MYKA	Terra Mystica	48.79	300	*e*P	P	23 08 19.8	+0.6
	comp=Z,4.8nm,0.9s						
KBA	Koelnbreinsper	48.79	300	*e*P	P	23 08 20.3	+1.0
	comp=Z,13nm,1.4s						
PRED	Cave del Predi	48.91	299	P	P	23 08 20.5	+0.3
GRA1	Grafenberg Arr	49.04	304	P	P	23 08 22.2	+1.2
GRF	Grafenberg Arr	49.04	304	P	P	23 08 22.2	+1.2
GRF				pmax	pmax		
	comp=Z,30nm,1.1s						
GRF	Grafenberg Arr	49.04	304	*e*P	P	23 08 22.5	+1.5
	comp=Z,37nm,1.2s,baz=66,slow=7.7						
GRFO	Grafenberg	49.04	304	P	P	23 08 22.2	+1.2
GRFO				pmax	pmax		
	comp=Z,31nm,1.1s						
GRFO	Grafenberg	49.04	304	P	P	23 08 22.2	+1.2
GTTG	Gottingen	49.06	307	*e*P	P	23 08 22.6	+1.5
	comp=Z,41nm,1.0s,baz=66,slow=7.7						
STAL	STALIGIAL	49.53	300	P	P	23 08 24.8	0.0
SGRT	San Giovanni R	49.55	293	P	P	23 08 25.4	+0.3
SGRT				IAmb	IAmb	23 08 26.9	
	comp=Z,8.3nm,0.8s						
WTTA	Wattenberg	49.77	301	*i* P	P	23 08 28.1	+1.2
	comp=Z,31nm,0.8s,SNR=9.2						
WATA	Walderalm	49.78	301	*i* P	P	23 08 27.6	+0.7
	comp=Z,38nm,1.7s,SNR=8.5						
SQTA	Sankt Quirin	50.06	301	*i* P	P	23 08 29.9	+1.0
	comp=Z,28nm,0.9s,SNR=13						
MOTA	Moosalm	50.07	302	*i* P	P	23 08 29.8	+0.7
	comp=Z,26nm,1.0s,SNR=5.6						
TIP	Timpagrande	50.07	290	P	P	23 08 29.8	+0.8
TIP				IAmb	IAmb	23 08 30.9	
	comp=Z,40nm,1.4s						
RETA	Reutte	50.22	302	*e*P	P	23 08 31.1	+1.0
	comp=Z,9.2nm,0.9s						
FETA	Feichten	50.44	301	*i* P	P	23 08 32.7	+0.8
	comp=Z,18nm,0.9s,SNR=6.3						
UBR	Ueberruh	50.54	302	*e*P	P	23 08 33.3	+0.8
	comp=Z,31nm,1.1s,baz=66,slow=7.7						
STU	Stuttgart	50.63	304	*e*P	P	23 08 34.2	+1.1
	comp=Z,50nm,1.3s,baz=66,slow=7.7						
BUG	Bochum--Univer	50.65	308	*e*P	P	23 08 33.5	+0.3
	comp=Z,16nm,1.0s,baz=66,slow=7.7						
DAG	Danmarks Havn	50.75	343	*i* P	P	23 08 34.0	+0.4
DAG				IAmb	IAmb	23 08 34.7	
	comp=Z,2.9nm,0.6s						
DAG				*i*		23 08 43.2	
NRCA	Norcia	50.79	295	P	P	23 08 35.2	+0.8
NRCA				IAmb	IAmb	23 08 36.4	
	comp=Z,15nm,0.9s						
AQU	L'Aquila	50.82	295	P	P	23 08 35.4	+0.7
AQU				pmax	pmax		
	comp=Z,16nm,0.9s						
AQU	L'Aquila	50.82	295	P	P	23 08 35.4	+0.7
AQU				IAmb	IAmb	23 08 42.9	
	comp=Z,16nm,0.9s						
DAVA	Damuels	50.85	302	*e*P	P	23 08 35.7	+0.8
	comp=Z,14nm,1.3s						
BFO	Black Forest	51.34	304	P	P	23 08 38.5	+0.1
BFO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BFO	Black Forest	51.34	304	P	P	23 08 38.5	+0.1
OSSC	Osservatorio P	51.68	297	P	P	23 08 41.9	+0.8
OSSC				IAmb	IAmb	23 08 42.6	
	comp=Z,13nm,0.9s						
VLC	Villacollemand	51.93	298	P	P	23 08 43.9	+0.9
MSSA	Maissana	52.41	299	P	P	23 08 46.9	+0.3
MSSA				IAmb	IAmb	23 08 48.3	
	comp=Z,18nm,0.9s						
RAFF	Raffo Rosso	52.68	289	P	P	23 08 49.7	+1.1
CORL	Corleone	53.06	290	P	P	23 08 51.3	-0.1
CORL				IAmb	IAmb	23 08 56.6	
	comp=Z,9.5nm,0.9s						
LPG	La Plagne	53.59	301	P	P	23 08 56.3	+0.8
LPL	La Plagne	53.59	301	P	P	23 08 56.2	+0.8
BNI	Bardonecchia	53.85	301	P	P	23 08 57.7	+0.5
BNI				pmax	pmax		
	comp=Z,61nm,1.6s						
BNI	Bardonecchia	53.85	301	P	P	23 08 57.7	+0.5
ESK	Eskdalemuir	54.62	316	P	P	23 09 03.3	+0.8
ESK				pmax	pmax		
	comp=Z,119nm,1.6s						
ESK	Eskdalemuir	54.62	316	P	P	23 09 03.3	+0.8
GTOI	Gorontalo	54.68	131	P	P	23 09 02.1	-1.3
	comp=Z,8.8nm,0.9s						
SSF	Saint Saulge	54.81	304	P	P	23 09 03.5	-0.6
SSB	Saint Sauveur	55.06	302	P	P	23 09 05.5	-0.4
SSB				pmax	pmax		
	comp=Z,24nm,1.7s						
SSB	Saint Sauveur	55.06	302	P	P	23 09 05.5	-0.4
SSB				IAmb	IAmb	23 09 07.7	
	comp=Z,24nm,1.7s						
NEEM	North Greenlan	55.94	349	*i* P	P	23 09 13.3	+1.2
NEEM				IAmb	IAmb	23 09 14.2	
	comp=Z,10nm,0.7s						
NEEM				*i*		23 09 22.9	
EUNU	Eureka	56.21	358	P	P	23 09 14.3	+0.5
KEST	Kesra	56.90	290	P	P	23 09 19.6	+0.4
	comp=Z,5.9nm,0.7s,baz=307,slow=2.3,SNR=15						
KEST	Kesra	56.90	290	P	P	23 09 19.7	+0.5
KEST				IAmb	IAmb	23 09 21.0	
	comp=Z,6.7nm,0.8s						
SPSI	Sidrap Palu	56.91	137	P	P	23 09 19.3	-0.1
	comp=Z,21nm,1.0s						
TNTI	Ternate	57.01	127	P	P	23 09 20.2	+0.1
A21K	Barrow	57.05	20	P	P	23 09 20.1	+0.4
	baz=311						
BKSI	Bulukumba	58.26	138	P	P	23 09 28.7	-0.2
	comp=Z,14nm,1.4s						
SANI	Sanana	58.54	130	P	P	23 09 30.1	-0.8
	comp=Z,7.9nm,0.4s						
ANM	Nome	58.73	28	P	P	23 09 33.0	+1.4
ANM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ANM	Nome	58.73	28	P	P	23 09 33.0	+1.4
ANM				IAmb	IAmb	23 09 34.3	
	comp=Z,8.8nm,0.9s						
LODK	Lodwar	59.53	242	P	P	23 09 38.0	+0.1
TOLK	Toolik Lake Re	60.67	20	P	P	23 09 45.7	+0.8
TOLK				IAmb	IAmb	23 09 46.1	
	comp=Z,7.5nm,0.8s						
TOLK	Toolik Lake Re	60.67	20	P	P	23 09 45.5	+0.6
	baz=317						
IMAR	Indian Mountai	61.48	24	P	P	23 09 51.1	+0.7
COLD	Coldfoot	61.55	21	P	P	23 09 51.7	+0.9
COLD				IAmb	IAmb	23 09 52.8	
	comp=Z,11nm,1.0s						
COLD	Coldfoot	61.55	21	P	P	23 09 52.1	+1.3
	baz=317						
RES	Resolute Bay	61.71	0	P	P	23 09 51.9	+0.1
RES				pmax	pmax		
	comp=Z,3.0nm,1.3s						
RES	Resolute Bay	61.71	0	P	P	23 09 51.9	+0.1
KMBO	Kilima Mbogo	61.88	237	P	P	23 09 53.9	-0.2
	comp=Z,0.7nm,0.3s,baz=28,slow=11,SNR=4.7						
KMBO				LR	LR	23 38 32.3	
	comp=Z,94nm,20.7s,baz=259,slow=38						
KMBO	Kilima Mbogo	61.88	237	*i* P	P	23 09 53.2	-0.9
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMBO	Kilima Mbogo	61.88	237	P	P	23 09 54.4	+0.3
H21K	Melozitna Rive	61.98	23	P	P	23 09 54.5	+0.7
H21K				IAmb	IAmb	23 09 55.6	
	comp=Z,9.2nm,1.0s						
H21K	Melozitna Rive	61.98	23	P	P	23 09 54.4	+0.7
	baz=316						
MMRI	Maumere	62.16	138	P	P	23 09 52.1	-3.5
A36M	Sachs Harbour	62.44	10	P	P	23 09 57.2	+0.4
A36M				IAmb	IAmb	23 09 58.3	
	comp=Z,13nm,0.9s						
A36M	Sachs Harbour	62.44	10	P	P	23 09 57.6	+0.8
	baz=336						
I21K	Tanana	62.57	24	P	P	23 09 58.1	+0.4
I21K				IAmb	IAmb	23 09 59.8	
	comp=Z,6.0nm,0.9s						
I21K	Tanana	62.57	24	P	P	23 09 58.9	+1.2
	baz=317						
J20K	Nowinta River	62.65	25	P	P	23 09 59.7	+1.4
J20K				IAmb	IAmb	23 10 00.7	
	comp=Z,9.0nm,0.8s						
J20K	Nowinta River	62.65	25	P	P	23 09 59.3	+1.0
	baz=316						
CART	Cartagena	62.72	297	P	P	23 09 59.2	+0.1
BMAR	Burnt Mountain	62.81	19	P	P	23 10 00.7	+1.3
TTA	Tatalina	62.95	27	P	P	23 10 00.5	+0.1
	baz=315						
MLY	Manley	63.03	23	P	P	23 10 01.4	+0.5
MLY				IAmb	IAmb	23 10 02.4	
	comp=Z,23nm,1.7s						
MLY	Manley	63.03	23	P	P	23 10 01.7	+0.8
	baz=318						
H24K	Noodor Dome	63.21	22	P	P	23 10 03.0	+0.9
H24K	Noodor Dome	63.21	22	P	P	23 10 03.2	+1.2
	baz=320						
K20K	Telida	63.26	26	P	P	23 10 03.8	+1.4
	baz=316						
ESBB	Sonseca Array	63.37	300	P	P	23 10 04.0	+0.4
ESBB				IAmb	IAmb	23 10 05.0	
	comp=Z,7.6nm,0.9s						
ESDC	Sonseca Array	63.37	300	P	P	23 10 04.0	+0.4
	comp=Z,4.7nm,0.7s,baz=50,slow=6.5,SNR=44						
ESDC	Sonseca Array	63.37	300	P	P	23 10 04.0	+0.4
ESDC				IAmb	IAmb	23 10 05.0	
	comp=Z,8.5nm,1.1s						
CHUM	Lake Minchumin	63.42	25	P	P	23 10 04.2	+0.8
	baz=317						
BPAW	Bear Paw Mtn.	63.66	24	P	P	23 10 05.2	+0.2
	baz=318						
PAB	San Pablo	63.69	300	P	P	23 10 06.1	+0.4
PAB				pmax	pmax		
	comp=Z,12nm,1.2s						
PAB	San Pablo	63.69	300	P	P	23 10 06.1	+0.4
PAB				IAmb	IAmb	23 10 07.3	
	comp=Z,12nm,1.1s						
MDM	Murphy Dome	63.79	22	P	P	23 10 06.6	+0.7
MDM				IAmb	IAmb	23 10 15.7	
	comp=Z,8.2nm,1.4s						
CAST	Castle Rocks	63.83	25	P	P	23 10 07.2	+1.1
CAST				IAmb	IAmb	23 10 08.7	
	comp=Z,8.3nm,1.0s						
CAST	Castle Rocks	63.83	25	P	P	23 10 07.7	+1.6
	baz=317						
NEA2	Nenana	63.84	23	P	P	23 10 06.9	+0.7
NEA2	Nenana	63.84	23	P	P	23 10 06.4	+0.2
	baz=319						
L19K	White Mountain	63.86	27	P	P	23 10 07.9	+1.5
	baz=316						
POKR	Poker Plat Res	63.89	22	P	P	23 10 08.1	+1.6
	baz=320						
COLA	College	63.96	22	⇓*e*P	P	23 10 07.6	+0.7
COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
L20K	Farewell, AK	63.96	26	P	P	23 10 08.2	+1.1
	baz=316						
SOEI	Soe	64.12	136	P	P	23 10 07.6	-1.1
PPLA	Purkeypile	64.19	25	P	P	23 10 09.8	+1.1
PPLA	Purkeypile	64.19	25	P	P	23 10 09.5	+0.8
	baz=317						
IL31		64.30	22	P	P	23 10 09.1	0.0
ILAR	Eielson Array	64.30	22	P	P	23 10 09.2	0.0
	comp=Z,3.4nm,0.8s,baz=314,slow=5.5,SNR=40						
ILAR				LR	LR	23 42 03.6	
	comp=Z,165nm,20.2s,baz=293,slow=40						
ILAR	Eielson Array	64.30	22	P	P	23 10 09.0	-0.2
ILAR	Eielson Array	64.30	22	P	P	23 10 09.0	-0.2
TRF	Thorofare Moun	64.35	24	P	P	23 10 10.3	+0.6
	baz=319						
MVO	Moncorvo	64.38	303	*e*P	P	23 10 11.1	+0.9
	comp=Z,45nm,1.7s						
INK	Inuvik	64.43	15	P	P	23 10 10.6	+0.6
	comp=Z,7.2nm,0.8s,baz=345,slow=8.4,SNR=23						
INK	Inuvik	64.43	15	P	P	23 10 10.8	+0.8
INK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
INK	Inuvik	64.43	15	P	P	23 10 10.8	+0.8
INK				IAmb	IAmb	23 10 11.8	
	comp=Z,8.9nm,0.9s						
INK	Inuvik	64.43	15	P	P	23 10 10.7	+0.8
	baz=330						
MTE	Manteigas	65.15	303	*e*P	P	23 10 16.8	+1.6
	comp=Z,87nm,1.6s						
J26L	Joseph Creek	65.40	21	P	P	23 10 16.8	+0.3
	baz=323						
O18K	Koktuh Hills	65.42	29	P	P	23 10 17.1	+0.5
	baz=316						
EPYK	Eagle Plains	65.46	17	P	P	23 10 17.2	+0.4
EPYK				IAmb	IAmb	23 10 18.5	
	comp=Z,15nm,1.2s						
EPYK	Eagle Plains	65.46	17	P	P	23 10 17.2	+0.4
	baz=328						
O19K	Port Alsworth	65.48	28	P	P	23 10 18.3	+1.4
	baz=317						
MBAR	Mbarara	65.57	243	P	P	23 10 18.0	-0.3
MBAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MBAR	Mbarara	65.57	243	P	P	23 10 18.0	-0.3
MBAR				IAmb	IAmb	23 10 18.8	
	comp=Z,6.2nm,0.8s						
PMRV	Marv??o	65.64	302	*e*P	P	23 10 17.7	-0.7
	comp=Z,47nm,1.6s						
RIDG	Independent Ri	65.67	22	P	P	23 10 18.1	0.0
	baz=322						
JBK	JBK	65.67	295	P	P	23 10 20.0	+1.1
SCRK	Sand Creek	65.71	21	P	P	23 10 18.7	+0.2
SCRK	Sand Creek	65.71	21	P	P	23 10 18.0	-0.5
	baz=323						
WAT6	Susitna Watana	65.77	24	P	P	23 10 18.4	-0.6
	baz=321						
EGAK	Eagle	65.78	20	P	P	23 10 19.3	+0.5
PCAS	Casmilo, Conde	65.94	303	*e*P	P	23 10 21.5	+1.3
	comp=Z,38nm,1.4s						
LIJA	Lijar	65.94	299	P	P	23 10 20.0	-0.4
I29M	Ogilvie Camp,	65.97	18	P	P	23 10 19.7	-0.4
	baz=327						
PESTR	Estremoz	66.11	301	*e*P	P	23 10 22.2	+0.9
	comp=Z,18nm,2.0s						
PESTR	Estremoz	66.11	301	P	P	23 10 22.3	+0.9
PESTR				IAmb	IAmb	23 10 22.9	
	comp=Z,8.9nm,1.1s						
PAX	Paxson	66.11	23	P	P	23 10 21.0	-0.1
	baz=322						
FIGM	Figuig	66.15	292	P	P	23 10 22.2	+0.3
SML	Sawmill	66.19	25	P	P	23 10 21.5	-0.1
	baz=321						
RC01	Rabbit Creek A	66.31	26	P	P	23 10 21.7	-0.6
	baz=320						
PMTG	Montargil	66.38	302	*e*P	P	23 10 23.0	0.0
	comp=Z,46nm,1.5s						
SAUI	Saumlaki	66.39	129	P	P	23 10 23.2	-0.1
KNK	Knik Glacier	66.46	25	P	P	23 10 23.0	-0.2
	baz=321						
SCM	Sheep Creek Mo	66.47	24	P	P	23 10 23.7	+0.3
SCM				pmax	pmax		

	comp=Z,17nm,0.6s						
SCM	Sheep Creek Mo	66.47	24	P	P	23 10 23.7	+0.3
SCM	Sheep Creek Mo	66.47	24	P	P	23 10 23.7	+0.3
	baz=321						
EVO	Evora	66.58	301	*e*P	P	23 10 25.2	+0.9
	comp=Z,27nm,1.8s						
M24K	Tolsona, Glenn	66.59	24	P	P	23 10 24.5	+0.3
	baz=322						
HARP	HAARP	66.65	23	P	P	23 10 24.8	+0.4
	baz=323						
DAWY	Dawson	66.80	20	P	P	23 10 25.8	+0.3
DAWY	Dawson	66.80	20	P	P	23 10 25.0	-0.4
	baz=326						
PWL	Port Wells	66.93	25	P	P	23 10 26.4	+0.2
	baz=321						
BRSE	Bradley Lake S	67.02	27	P	P	23 10 26.8	0.0
	baz=319						
L27K	Beaver Creek,	67.02	21	P	P	23 10 27.2	+0.4
	baz=325						
BCAR	Beaver Creek A	67.03	21	P	P	23 10 28.1	+1.2
PVAQ	Vaqueiros	67.09	300	*e*P	P	23 10 27.0	-0.6
	comp=Z,51nm,1.6s						
MESJ	Messejana	67.13	301	*e*P	P	23 10 29.1	+1.2
MESJ				IAmb	IAmb	23 10 30.0	
	comp=Z,16nm,1.1s						
MESJ	Messejana	67.13	301	*e*P	P	23 10 28.9	+1.0
	comp=Z,27nm,1.2s						
MESJ	Messejana	67.13	301	*e*P	P	23 10 29.1	+1.2
PNCL	Nicolau / Gran	67.15	301	*e*P	P	23 10 29.3	+1.3
	comp=Z,26nm,1.6s						
KLU	Klutina	67.15	24	P	P	23 10 28.4	+0.7
	baz=322						
M26K	Nabesna, AK	67.25	22	P	P	23 10 29.2	+0.9
	baz=324						
PBDV	Barranco-do-Ve	67.32	300	*e*P	P	23 10 30.8	+1.7
	comp=Z,31nm,1.6s						
N25K	Chitina, Valde	67.45	23	P	P	23 10 30.8	+1.2
N25K				IAmb	IAmb	23 10 31.7	
	comp=Z,12nm,1.1s						
N25K	Chitina, Valde	67.45	23	P	P	23 10 30.1	+0.5
	baz=323						
M27K	Edge Creek, AK	67.58	22	P	P	23 10 31.4	+0.8
	baz=325						
MDT	Midelt	67.95	295	P	P	23 10 34.7	+1.5
MCARA	McCarthy VSAT	68.07	23	P	P	23 10 34.6	+1.2
	baz=324						
CRQE	Cirque	68.57	23	P	P	23 10 37.3	+0.6
	baz=325						
GOLM	Goulmima	68.87	294	P	P	23 10 41.0	+1.9
MESA	MESA	69.36	23	P	P	23 10 42.5	+0.7
	baz=326						
M31M	Drury Creek, Y	69.58	19	P	P	23 10 43.2	+0.4
	baz=331						
TZRR	Tazzarine	69.86	294	P	P	23 10 46.0	+0.8
HYT	Haines Junctio	70.02	21	P	P	23 10 46.5	+0.8
HYT				IAmb	IAmb	23 10 47.6	
	comp=Z,11nm,0.9s						
MTN	Manton Dam	70.30	132	P	P	23 10 46.4	-1.4
ZGR	Zagora	70.32	293	P	P	23 10 49.0	+0.9
OUK	Oukaimeden	71.10	295	P	P	23 10 54.0	+0.9
KNRA	Kununurra	71.43	135	P	P	23 10 54.5	-0.1
TTIG	Tnine Tigouga,	71.91	295	P	P	23 10 59.0	+1.3
PSA00	Pilbara Seismi	72.51	146	P	P	23 11 00.5	-0.6
PSA00				IAmb	IAmb	23 11 01.1	
	comp=Z,9.8nm,0.9s						
PSA00	Pilbara Seismi	72.51	146	P	P	23 11 00.4	-0.6
PSA00				IAmb	IAmb	23 11 01.2	
	comp=Z,7.1nm,1.0s						
YKA	Yellowknife Ar	72.78	9	P	P	23 11 02.2	+0.1
	comp=Z,8.6nm,0.9s,baz=340,slow=5.9,SNR=19						
VOI	Vohitsoka	74.32	217	P	P	23 11 11.6	-0.2
VOI	Vohitsoka	74.32	217	P	P	23 11 11.8	0.0
TORD	Torodi Ar. Bea	76.31	275	P	P	23 11 22.8	-0.6
	comp=Z,14nm,0.6s,baz=41,slow=5.2,SNR=148						
TORD	Torodi Ar. Bea	76.31	275	P	P	23 11 22.7	-0.6
TORD				IAmb	IAmb	23 11 23.7	
	comp=Z,6.6nm,0.8s						
WB0	Warramunga Arr	77.76	133	P	P	23 11 30.5	-0.8
WB0				IAmb	IAmb	23 11 31.7	
	comp=Z,13nm,0.8s						
WRA	Warramunga Arr	77.88	133	P	P	23 11 31.4	-0.5
	comp=Z,14nm,0.9s,baz=333,slow=5.1,SNR=89						
WRA	Warramunga Arr	77.88	133	P	P	23 11 31.4	-0.5
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WRA	Warramunga Arr	77.88	133	P	P	23 11 31.4	-0.5
MORW	Morawa	77.94	153	P	P	23 11 32.0	-0.1
COEN	Coen	78.12	123	P	P	23 11 33.0	-0.4
COEN				IAmb	IAmb	23 11 33.2	
	comp=Z,7.9nm,0.9s						
LSZ	Lusaka	78.48	236	P	P	23 11 35.3	-0.2
LSZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LSZ	Lusaka	78.48	236	P	P	23 11 35.3	-0.2
LSZ				IAmb	IAmb	23 11 36.4	
	comp=Z,7.0nm,0.8s						
SCHQ	Schefferville	78.79	344	P	P	23 11 36.4	-0.4
	comp=Z,5.3nm,0.7s,baz=17,slow=5.8,SNR=9.4						
SCHQ				LR	LR	23 50 24.5	
	comp=Z,126nm,18.3s,baz=58,slow=39						
SCHQ	Schefferville	78.79	344	P	P	23 11 36.3	-0.4
SCHQ				IAmb	IAmb	23 11 39.2	
	comp=Z,18nm,1.2s						
KOWA	Kowa	79.50	280	P	P	23 11 41.3	+0.2
KOWA				IAmb	IAmb	23 11 42.2	
	comp=Z,30nm,1.1s						
KOWA	Kowa	79.50	280	P	P	23 11 41.3	+0.2
AS31	Alice Springs	80.73	136	P	P	23 11 47.0	-0.5
ASAR	Alice Springs	80.73	136	P	P	23 11 47.0	-0.5
	comp=Z,4.2nm,0.7s,baz=332,slow=5.4,SNR=62						
FFC	Flin Flon	81.56	4	P	P	23 11 51.3	-0.3
FFC				pmax	pmax		
	comp=Z,16nm,1.4s						
FFC	Flin Flon	81.56	4	P	P	23 11 51.3	-0.3
FFC				IAmb	IAmb	23 11 52.2	
	comp=Z,16nm,1.4s						
EDM	Edmonton	81.96	11	P	P	23 11 53.9	+0.1
EDM				pmax	pmax		
	comp=Z,24nm,1.1s						
EDM	Edmonton	81.96	11	P	P	23 11 53.9	+0.1
EDM				IAmb	IAmb	23 11 54.8	
	comp=Z,24nm,1.1s						
FORT	Forrest	84.05	144	P	P	23 12 04.2	-0.5
DBIC	Dimbokro	85.42	275	P	P	23 12 11.4	-0.6
	comp=Z,10nm,0.7s,baz=39,slow=5.9,SNR=24						
DBIC	Dimbokro	85.42	275	P	P	23 12 11.5	-0.6
KIC	Kosan Boka	85.55	274	*e*PKP1	P	23 12 11.6	-1.1
	comp=Z,26nm,0.7s						
TIC	Toumodi	85.56	275	*e*PKP1	P	23 12 11.2	-1.6
LIC	Lamto	85.85	275	*e*PKP1	P	23 12 12.3	-1.9
	comp=Z,42nm,0.8s						
NEW	Newport	86.16	15	P	P	23 12 15.4	+0.1
NEW				pmax	pmax		
	comp=Z,6.0nm,1.4s						
NEW	Newport	86.16	15	P	P	23 12 15.4	+0.1
JTMT	Jette	87.15	13	P	P	23 12 20.2	0.0
JTMT				IAmb	IAmb	23 12 22.2	
	comp=Z,9.7nm,1.2s						
F64A	Sherman	87.58	342	P	P	23 12 22.2	0.0
LBTB	Lobatse	87.59	232	P	P	23 12 22.4	-0.1
LBTB				pmax	pmax		
	comp=Z,17nm,1.0s						
LBTB	Lobatse	87.59	232	P	P	23 12 22.4	-0.1
PLID	Pearl Lake	89.43	15	P	P	23 12 30.7	-0.5
GCMT	Greycliff	89.73	10	P	P	23 12 32.5	0.0
BOSA	Boshof	90.58	230	P	P	23 12 36.0	-0.5
	comp=Z,2.0nm,0.8s,baz=27,slow=4.5,SNR=2.4						
BOSA	Boshof	90.58	230	P	P	23 12 36.0	-0.5
STKA	Stephens Creek	91.34	135	P	P	23 12 38.4	-1.4
	comp=Z,1.1nm,0.6s,baz=323,slow=6.9,SNR=4.9						
PDAR	Pinedale Array	92.72	11	P	P	23 12 46.1	-0.5
	comp=Z,0.4nm,0.5s,baz=38,slow=3.0,SNR=6.2						
HWUT	Hardware Ranch	93.56	12	P	P	23 12 51.3	+0.8
HWUT				IAmb	IAmb	23 12 52.0	
	comp=Z,11nm,1.3s						
NVAR	Mina Array Bea	95.35	18	P	P	23 12 59.9	+1.1
	comp=Z,0.9nm,0.6s,baz=325,slow=3.9,SNR=5.3						
NVAR				LR	LR	00 00 46.1	
	comp=Z,123nm,18.2s,baz=270,slow=38						
NVAR	Mina Array Bea	95.35	18	P	P	23 12 59.1	+0.3
SAML	Samuel	135.61	312	PKIKP	PKPdf	23 18 54.5	-0.4
SAML	Samuel	135.61	312	PKPdf	PKPdf	23 18 54.5	-0.4
LPAZ	La Paz	144.35	312	PKP	PKPab	23 19 08.9	-0.5
	comp=Z,4.7nm,1.0s,baz=353,slow=3.4,SNR=10.0						
LPAZ	La Paz	144.35	312	PKIKP	PKPab	23 19 08.7	-0.7
LPAZ	La Paz	144.35	312	PKPdf	PKPab	23 19 08.7	-0.7
CPUP	Villa Florida	145.01	288	PKPbc	PKPbc	23 19 10.0	-0.9
	comp=Z,12nm,0.8s,baz=18,slow=2.5,SNR=13						
CPUP	Villa Florida	145.01	288		PKPbc	23 19 10.2	-0.6
ITQB	Itaqui	146.56	282	PKPdf	PKPdf	23 19 14.6	+0.5
PB16	IPOC Station P	146.78	312		PKPdf	23 19 16.1	+0.7

NEIC ***05*** *22:59:43.9±1.1, 43°.86N±0°.07×85°.3E±0°.1, h10^{km}±1^{km}, mb5.0/78, Error ellipse: s-maj=13.1km s-min=11.7km az=94.0*

ISC 05 22:59:47.1±0.4, **43°.88N**±0°.06×**85°.33E**±0°.06, **h35**^{km}, **n97**, σ**1^{s}.01**/97, **mb5.0**/38, **Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOOM	Boomskoye usch	7.00	262	Pn	Pn	23 01 27.0	-0.2
FRU1	Bishkek	7.87	266	Pn	Pn	23 01 38.8	-0.2
AAK	Ala-Archa	8.00	265	Pn	Pn	23 01 40.5	-0.5
KSH	Kashi	8.24	241	P	Pn	23 01 41.3	-2.9
KSH	Kashi	8.24	241	S	Sn	23 03 20.3	+4.2
ZAA0	Zalesovo Array	10.08	358	Pn	Pn	23 02 07.4	-1.8
ZALV	Zalesovo Beam	10.08	358	Pn	Pn	23 02 07.6	-1.6
CHGR	Chuyangaron	13.23	252	Pn	Pn	23 02 50.7	-1.7
BRVK	Borovoye	13.54	318	Pn	Pn	23 02 54.6	-1.9
NIL	Nilore	13.88	227	Pn	Pn	23 02 57.9	-3.3
LSA	Lhasa	14.89	160	Pn	Pn	23 03 14.8	-0.7
SONM	Songino Array	15.19	68	Pn	Pn	23 03 18.2	-0.8
SONM				IAmb	IAmb	23 03 31.8	
	comp=Z,46nm,1.0s						
NRIK	Noril'sk	25.55	2	P	P	23 05 11.1	-1.0
NRIK				IAmb	IAmb	23 05 22.8	
	comp=Z,45nm,1.1s						
HYB	Hyderabad	26.99	194	*i* P	P	23 05 26.0	+0.4
GNI	Garni	30.17	277	P	P	23 05 54.2	+0.3
ONI	Oni	30.30	282	P	P	23 05 55.0	+0.1
OBN	Obninsk	32.94	307	P	P	23 06 17.8	-0.1
OBN				IAmb	IAmb	23 06 19.0	
	comp=Z,26nm,1.0s						
UBPT	Khong Chiam	33.27	143	P	P	23 06 20.9	-0.2
UBPT				IAmb	IAmb	23 06 37.1	
	comp=Z,37nm,1.5s						
LVZ	Lovozero	35.63	330	P	P	23 06 41.0	-0.1
SNOP	Sinop	36.28	285	P	P	23 06 47.2	+0.3
GAZ	Gaziantep	36.76	276	P	P	23 06 50.9	-0.2
GAZ				IAmb	IAmb	23 06 52.0	
	comp=Z,22nm,0.7s						
BNN	Bunyan	37.02	280	P	P	23 06 53.5	0.0
BNN				IAmb	IAmb	23 07 01.4	
	comp=Z,29nm,0.8s						
AKBB	Malin Array Si	37.86	301	P	P	23 07 00.1	-0.2
BRTR	Keskin Array B	38.24	282	P	P	23 07 03.6	-0.1
FINES	FINESS Array B	38.43	318	P	P	23 07 04.5	-0.4
KEV	Kevo	38.77	332	P	P	23 07 07.7	+0.1
KEV				IAmb	IAmb	23 07 11.6	
	comp=Z,222nm,2.0s						
PABE	Paberze	40.07	309	P	P	23 07 17.9	-0.7
PABE				IAmb	IAmb	23 07 19.6	
	comp=Z,37nm,0.6s						
CSS	Mathiatis	40.56	276	P	P	23 07 23.1	+0.1
CSS				IAmb	IAmb	23 07 29.5	
	comp=Z,20nm,0.8s						
KULM	Kulim	40.73	156	P	P	23 07 23.9	-0.6
KULM				IAmb	IAmb	23 07 29.0	
	comp=Z,7.8nm,0.9s						
SUW	Suwalki	40.80	307	P	P	23 07 24.9	+0.2
SUW				IAmb	IAmb	23 07 31.9	
	comp=Z,43nm,1.1s						
BURAR	Bucovina Array	41.20	297	P	P	23 07 28.6	+0.4
ISP	Isparta	41.25	281	P	P	23 07 29.2	+0.4
ISP				IAmb	IAmb	23 07 30.5	
	comp=Z,21nm,0.6s						
ELL	Elmali	42.17	280	P	P	23 07 37.0	+0.7
KWP	Kalwaria Pacla	42.18	301	P	P	23 07 36.9	+0.8
GSI	Gunungsitoli	43.77	162	P	P	23 07 50.0	+0.7
GSI				IAmb	IAmb	23 07 52.4	
	comp=Z,28nm,0.8s						
OJC	Ojcow	43.80	302	P	P	23 07 49.2	+0.1
OJC				IAmb	IAmb	23 07 55.8	
	comp=Z,27nm,1.1s						
VTS	Vitosha	44.29	291	P	P	23 07 53.2	-0.2
PSZ	Piszkesteto	44.49	299	P	P	23 07 54.8	0.0
PSZ				IAmb	IAmb	23 08 03.4	
	comp=Z,5.4nm,0.9s						
MORC	Moravsky Berou	45.32	302	P	P	23 08 01.4	+0.1
MORC				IAmb	IAmb	23 08 07.2	
	comp=Z,17nm,1.5s						
NC405	NORSAR Array S	45.34	319	P	P	23 08 00.7	-0.6
NC303	NORSAR Array S	45.48	319	P	P	23 08 02.8	+0.4
DIVS	Divibare	45.86	294	P	P	23 08 06.3	+0.5
DIVS				IAmb	IAmb	23 08 09.6	
	comp=Z,7.7nm,0.6s						
BRG	Berggiesshubel	47.11	305	P	P	23 08 17.4	+2.1
BRG				Amp		23 08 20.5	
	comp=Z,4.5nm,1.0s						
CLL	Collm	47.51	306	P	P	23 08 18.5	+0.1
CLL				IAmb	IAmb	23 08 25.6	
	comp=Z,12nm,0.6s						
KHC	Kasperske Hory	47.97	303	P	P	23 08 22.2	+0.1
GEC2	GERESS Array S	48.00	302	P	P	23 08 22.6	+0.2
GEC2				IAmb	IAmb	23 08 30.8	
	comp=Z,4.2nm,0.8s						
GERES	GERESS Array B	48.00	302	P	P	23 08 23.0	+0.6
PRED	Cave del Predi	49.05	300	P	P	23 08 30.4	-0.1
GRA1	Grafenberg Arr	49.17	304	P	P	23 08 32.2	+0.9
GRFO	Grafenberg	49.17	304	P	P	23 08 32.2	+0.9
BFO	Black Forest	51.46	304	P	P	23 08 48.7	0.0
BFO				IAmb	IAmb	23 08 57.9	
	comp=Z,57nm,1.9s						
OSSC	Osservatorio P	51.81	297	P	P	23 08 52.4	+1.0
RAFF	Raffo Rosso	52.82	289	P	P	23 08 59.5	+0.6
RAFF				IAmb	IAmb	23 09 25.9	
	comp=Z,20nm,1.0s						
BNI	Bardonecchia	53.98	301	P	P	23 09 08.0	+0.5
BNI				IAmb	IAmb	23 09 14.1	
	comp=Z,24nm,1.2s						
ESK	Eskdalemuir	54.74	316	P	P	23 09 12.7	0.0
ESK				IAmb	IAmb	23 09 23.6	
	comp=Z,184nm,1.9s						
SSB	Saint Sauveur	55.19	302	P	P	23 09 16.1	0.0
SSB				IAmb	IAmb	23 09 25.9	
	comp=Z,38nm,1.7s						
EUNU	Eureka	56.24	358	P	P	23 09 24.1	+1.0
EUNU				IAmb	IAmb	23 09 29.8	
	comp=Z,11nm,1.1s						
ANM	Nome	58.68	28	P	P	23 09 41.4	+0.8
ANM				IAmb	IAmb	23 10 06.4	
	comp=Z,26nm,1.4s						
TOLK	Toolik Lake Re	60.64	20	P	P	23 09 54.7	+0.8
TOLK				IAmb	IAmb	23 10 15.2	
	comp=Z,10nm,1.1s						
IMAR	Indian Mountai	61.44	24	P	P	23 10 00.6	+1.2
COLD	Coldfoot	61.52	21	P	P	23 10 00.8	+0.9
COLD				IAmb	IAmb	23 10 01.6	
	comp=Z,12nm,1.0s						
RES	Resolute Bay	61.73	0	P	P	23 10 02.1	+1.0
H21K	Melozitna Rive	61.95	24	P	P	23 10 03.6	+0.8
H21K				IAmb	IAmb	23 10 08.4	
	comp=Z,28nm,1.9s						
A36M	Sachs Harbour	62.44	10	P	P	23 10 06.5	+0.5
A36M				IAmb	IAmb	23 10 07.9	
	comp=Z,14nm,0.8s						
J20K	Nowinta River	62.61	25	P	P	23 10 08.8	+1.6
J20K				IAmb	IAmb	23 10 09.7	
	comp=Z,10nm,1.0s						
BMAR	Burnt Mountain	62.78	19	P	P	23 10 10.0	+1.6
MLY	Manley	63.00	23	P	P	23 10 11.0	+1.1
H24K	Noodor Dome	63.18	22	P	P	23 10 12.3	+1.2
H24K				IAmb	IAmb	23 10 34.1	
	comp=Z,21nm,1.8s						
ESDC	Sonseca Array	63.50	300	P	P	23 10 13.5	-0.1
CAST	Castle Rocks	63.79	25	P	P	23 10 16.3	+1.2
CAST				IAmb	IAmb	23 10 32.2	
	comp=Z,12nm,1.1s						
PPLA	Purkeypile	64.14	25	P	P	23 10 18.6	+1.0
PPLA				IAmb	IAmb	23 10 20.9	
	comp=Z,13nm,0.7s						
ILAR	Eielson Array	64.27	22	P	P	23 10 18.8	+0.6
EPYK	Eagle Plains	65.44	17	P	P	23 10 26.6	+0.8
EPYK				IAmb	IAmb	23 10 47.4	
	comp=Z,20nm,1.4s						
SCM	Sheep Creek Mo	66.43	24	P	P	23 10 33.6	+1.2
DAWY	Dawson	66.77	20	P	P	23 10 34.9	+0.5
DAWY				IAmb	IAmb	23 10 42.8	
	comp=Z,26nm,1.9s						
BCAR	Beaver Creek A	67.00	21	P	P	23 10 37.2	+1.3
N25K	Chitina, Valde	67.41	23	P	P	23 10 40.2	+1.7
N25K				IAmb	IAmb	23 10 56.2	
	comp=Z,13nm,1.1s						
KNRA	Kununurra	71.32	136	P	P	23 11 03.4	+0.3
KNRA				IAmb	IAmb	23 11 16.3	
	comp=Z,9.8nm,0.7s						
PSA00	Pilbara Seismi	72.42	146	P	P	23 11 09.9	+0.3
PSA00				IAmb	IAmb	23 11 31.0	
	comp=Z,81nm,1.9s						
PSA00	Pilbara Seismi	72.42	146	P	P	23 11 10.4	+0.8
VOI	Vohitsoka	74.39	217	P	P	23 11 21.4	+0.1
VOI				IAmb	IAmb	23 11 22.1	
	comp=Z,12nm,0.9s						
TORD	Torodi Ar. Bea	76.45	275	P	P	23 11 33.0	-0.4
WB0	Warramunga Arr	77.64	133	P	P	23 11 40.5	+0.7
WB0				IAmb	IAmb	23 11 44.1	
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	77.76	133	P	P	23 11 41.2	+0.7
MORW	Morawa	77.86	153	P	P	23 11 41.6	+0.8
MORW				IAmb	IAmb	23 11 47.6	
	comp=Z,81nm,1.8s						
COEN	Coen	77.99	123	P	P	23 11 41.5	-0.4
COEN				IAmb	IAmb	23 12 07.6	
	comp=Z,15nm,1.3s						
LSZ	Lusaka	78.59	236	P	P	23 11 44.4	-0.9
LSZ				IAmb	IAmb	23 11 46.8	
	comp=Z,2.9nm,0.8s						
SCHQ	Schefferville	78.85	344	P	P	23 11 46.6	+0.5
SCHQ				IAmb	IAmb	23 11 47.2	
	comp=Z,17nm,1.1s						
KOWA	Kowa	79.64	280	P	P	23 11 50.8	-0.2
KOWA				IAmb	IAmb	23 11 52.2	
	comp=Z,10nm,0.8s						
AS31	Alice Springs	80.62	136	P	P	23 11 56.1	0.0
AS31				IAmb	IAmb	23 12 01.1	
	comp=Z,1.5nm,0.6s						
EDM	Edmonton	81.95	11	P	P	23 12 03.1	+0.2
DBIC	Dimbokro	85.56	275	P	P	23 12 21.2	-0.7
DBIC				IAmb	IAmb	23 12 34.2	
	comp=Z,14nm,1.4s						
NEW	Newport	86.14	15	P	P	23 12 25.0	+0.7
NEW				IAmb	IAmb	23 12 25.8	
	comp=Z,7.6nm,1.0s						
JTMT	Jette	87.14	13	P	P	23 12 30.6	+1.3
JTMT				IAmb	IAmb	23 12 30.9	
	comp=Z,12nm,0.9s						
LBTB	Lobatse	87.69	232	P	P	23 12 32.4	+0.3
LBTB				IAmb	IAmb	23 12 41.5	
	comp=Z,8.4nm,1.0s						
PLID	Pearl Lake	89.41	15	P	P	23 12 41.1	+0.9
PLID				IAmb	IAmb	23 12 41.3	
	comp=Z,9.6nm,0.9s						
GCMT	Greycliff	89.73	10	P	P	23 12 42.0	+0.3

IDC ***05*** *23:13:30.7±0.8, 18°.40N×71°.16E, h0^{km}, mb3.8/12, mb1 4.0/13, mb1mx3.6/77, mbtmp3.8/13, ML3.4/1, MS3.7/3, Ms1 3.7/3, ms1mx3.1/46, Error ellipse: s-maj=20.3km s-min=19.6km az=27.0*

NEIC ***05*** *23:13:32.2±2.5, 18°.4N±0°.1×71°.2E±0°.1, h10^{km}±1^{km}, mb4.3/19, Error ellipse: s-maj=20.5km s-min=14.8km az=47.0*

NDI ***05*** *23:13:34.0±3.3, 18°.62N×71°.49E, h10^{km}±18^{km}, ML4.3, mb4.3(NEIC)*

ISC 05 23:13:31.1±0.6, **18°.33N**±0°.05×**71°.55E**±0°.05, **h10**^{km}, **n57**, σ**2^{s}.25**/64, **mb4.0**/16, **MS3.9**/3, **1C**, **Arabian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOM	Bombay	1.32	65	*e*P	Pg	23 13 58.0	+1.4
BOM				*e*S	Sg	23 14 15.2	+1.5
BOM				IAmb	IAmb	23 14 16.7	
	comp=N,47μm,0.3s						
BOM				IAmb	IAmb	23 14 18.0	
	comp=E,52μm,0.2s						
POO	Poona	2.19	85	*e*P	Pg	23 14 12.0	-1.2
POO				*e*S	Sg	23 14 40.4	-1.2
POO				IAML		23 14 52.1	
	comp=E,968nm,0.3s						
KAD	Karad	2.71	112	*e*P	Pb	23 14 20.0	+0.3
KAD				⇑*i*PN	Pg	23 14 20.2	-2.9
KAD				*i* SN	Sb	23 14 53.8	+0.7
KAD				*e*S	Sg	23 14 54.3	-3.9
KAD				IAML		23 14 55.5	
	comp=E,10μm,0.3s						
GOA	Goa	3.57	142	*e*P	Pb	23 14 32.8	-1.5
GOA				*e*S	Sb	23 15 16.6	-1.2
GOA				IAML		23 15 19.0	
	comp=N,2μm,0.2s						
GOA				IAML		23 15 20.2	
	comp=E,2μm,0.3s						
LATR	Latur	4.76	88	*e*P	Pn	23 14 45.6	+2.7
LATR				*e*S	Sn	23 15 36.7	-1.5
AKL	Akola	5.67	65	*e*P	Pn	23 15 00.1	+4.6
AKL				IAmb	IAmb	23 16 25.0	
	comp=N,26600μm,0.6s						
HYB	Hyderabad	6.73	97	*i* P	Pn	23 15 13.0	+2.9
HYB				*e*S	Sn	23 16 25.0	-1.9
HYB	Hyderabad	6.73	97	*e*P	Pn	23 15 12.7	+2.6
HYB				*e*S	Sn	23 16 25.4	-1.5
BHPL	Bhopal	7.35	47	*e*P	Pn	23 15 19.3	+0.7
BHPL				*e*S	Sn	23 16 35.8	-6.3
BHPL				IAML		23 16 39.1	
	comp=N,52nm,0.5s						
BLSP	Bilaspur	10.63	67	*e*S	Sn	23 17 56.4	-6.3
WSAR	Wadi Sarin	13.03	294	Pn	Pn	23 16 30.3	-6.1
	comp=N,0.2nm,0.3s,baz=279,slow=22,SNR=1.6						
WSAR				Sn	Sn	23 18 44.7	-17
	comp=N,0.1nm,0.3s,baz=231,slow=8.3,SNR=1.5						
SMLA	Simla	13.72	21	*e*P	Pn	23 16 42.3	-3.4
SMLA				*e*S	Sn	23 19 02.3	-16
PALK	Pallekele	14.15	140	Pn	Pn	23 16 53.9	+2.1
	comp=N,0.5nm,0.3s,baz=80,slow=12,SNR=5.5						
PALK				Sn	Sn	23 19 26.5	-2.6
	comp=N,1.2nm,0.3s,baz=356,slow=23,SNR=6.5						
PALK	Pallekele	14.15	140		Pn	23 16 54.7	+2.9
PALK				Sn	Sn	23 19 27.6	-1.5
PYUN	Piuthan	14.31	45	*e*P	Pn	23 16 53.2	-0.9
	comp=N,42nm,0.8s						
THW	Thamme Wali	14.40	1	P	Pn	23 16 52.5	-2.6
DHRM	DHARAMSHALA	14.51	16	*e*P	Pn	23 16 55.9	-0.8
KOLN	Koldanda	14.52	48	*e*P	Pn	23 16 56.2	-0.8
	comp=N,26nm,0.5s						
DANN	Dangsing	14.99	46	*e*P	Pn	23 17 03.4	0.0
	comp=N,21nm,0.7s						
NIL	Nilore	15.33	5		Pn	23 17 04.2	-3.4
NIL				IAmb	IAmb	23 17 28.6	
	comp=Z,15nm,0.9s						
GKN	Gorkha	15.40	49	*e*P	Pn	23 17 07.8	-0.9
	comp=Z,16nm,0.6s						
PKIN	Phulchoki	15.71	52	*e*P	Pn	23 17 11.1	-1.8
	comp=Z,16nm,0.6s						
KBL	Kabul	16.30	353		Pn	23 17 17.0	-3.3
RAMN	Ramite	16.32	56	*e*P	Pn	23 17 19.2	-1.4
	comp=Z,6.0nm,0.4s						
ODAN	Odare	16.90	57	*e*P	Pn	23 17 27.6	-0.4
	comp=Z,20nm,0.9s						
TAPN	Taplejung	17.38	56	*e*P	Pn	23 17 33.1	-1.0
	comp=Z,6.3nm,0.5s						
HRA	Herat	18.01	334	Pn	Pn	23 17 38.6	-3.3
SHL	Shillong	20.17	66	P	Pn	23 18 10.4	+2.4
SHL				IAmb	IAmb	23 18 32.3	
	comp=Z,6.5nm,0.4s						
CHGR	Chuyangaron	20.36	355	P	P	23 18 06.8	-1.0
CHGR				IAmb	IAmb	23 18 32.7	
	comp=Z,17nm,1.1s						
GAR	Garm	20.62	357	P	P	23 18 10.1	-0.7
GAR				IAmb	IAmb	23 18 20.4	
	comp=Z,20nm,1.1s						
LSA	Lhasa	21.15	54	P	P	23 18 18.5	+1.6
LSA				IAmb	IAmb	23 18 27.6	
	comp=Z,13nm,0.8s						
BTK	Batken	21.66	358	P	P	23 18 22.5	+0.6
AAK	Ala-Archa	24.36	5	P	P	23 18 51.4	+2.0
	comp=Z,3.6nm,0.9s,baz=206,slow=10,SNR=6.2						
AAK				LR	LR	23 28 41.2	
	comp=Z,110nm,18.9s,baz=300,slow=37						
AAK	Ala-Archa	24.36	5	P	P	23 18 49.7	+0.2
AAK				IAmb	IAmb	23 18 52.3	
	comp=Z,7.2nm,1.1s						
CMAR	Chiang Mai Arr	25.99	85	P	P	23 19 09.1	+4.8

	comp=Z,1.4nm,0.5s,baz=276,slow=9.8,SNR=11						
MK31	Makanchi Array	29.73	15	P	P	23 19 38.7	+1.2
MK31				IAmb	IAmb	23 19 59.1	
	comp=Z,7.3nm,1.4s						
MKAR	Makanchi Array	29.73	15	P	P	23 19 37.7	+0.2
	comp=Z,1.1nm,0.9s,baz=204,slow=11,SNR=4.5						
MKAR	Makanchi Array	29.73	15	P	P	23 19 38.2	+0.7
ABKAR	Akbulak array	32.24	346	P	P	23 19 59.4	-0.2
KURBB	Kurchatov Arra	32.69	8	P	P	23 20 03.7	+0.2
	comp=Z,0.7nm,0.8s,baz=207,slow=8.4,SNR=6.2						
KURK	Kurchatov	32.80	8	P	P	23 20 03.7	-0.7
ZAA0	Zalesovo Array	37.00	13	P	P	23 20 41.6	+1.0
ZAA0				IAmb	IAmb	23 20 47.9	
	comp=Z,3.2nm,0.9s						
ZALV	Zalesovo Beam	37.00	13	P	P	23 20 41.8	+1.1
	comp=Z,1.8nm,0.6s,baz=196,slow=10.0,SNR=8.4						
ZALV	Zalesovo Beam	37.00	13	P	P	23 20 41.0	+0.3
SONM	Songino Array	40.87	36	P	P	23 21 16.5	+3.2
	comp=Z,1.9nm,0.8s,baz=242,slow=7.2,SNR=10.0						
SONM	Songino Array	40.87	36	P	P	23 21 16.4	+3.0
AKASG	Malin Array Be	46.54	324	P	P	23 21 57.5	-1.3
	comp=Z,0.2nm,0.2s,baz=119,slow=6.0,SNR=2.2						
BURAR	Bucovina Array	47.63	319	P	P	23 22 05.9	-1.6
BURAR				IAmb	IAmb	23 22 15.3	
	comp=Z,2.0nm,1.1s						
GERES	GERESS Array B	55.34	317	P	P	23 23 04.0	-1.3
	comp=Z,0.2nm,0.4s,baz=108,slow=9.4,SNR=1.5						
YAK	Yakutsk	59.19	28	LR	LR	23 50 06.0	
	comp=Z,84nm,19.9s,baz=262,slow=37						
TIXI	Tiksi	62.68	17	LR	LR	23 52 20.8	
	comp=Z,67nm,18.2s,baz=291,slow=37						
BOSA	Boshof	64.65	225	P	P	23 24 09.2	-0.2
	comp=Z,2.7nm,0.8s,baz=58,slow=5.7,SNR=4.8						
BOSA	Boshof	64.65	225	P	P	23 24 09.4	0.0
TORD	Torodi Ar. Bea	67.09	277	P	P	23 24 25.0	-0.3
	comp=Z,0.6nm,0.7s,baz=74,slow=5.9,SNR=5.7						
TORD	Torodi Ar. Bea	67.09	277	P	P	23 24 23.9	-1.5
TORD				IAmb	IAmb	23 24 48.9	
	comp=Z,2.3nm,1.4s						
WRA	Warramunga Arr	72.39	119	P	P	23 25 01.6	+3.7
	comp=Z,2.6nm,1.1s,baz=302,slow=5.2,SNR=4.8						
ASAR	Alice Springs	73.78	122	P	P	23 25 08.3	+2.2
	comp=Z,1.4nm,0.9s,baz=291,slow=5.8,SNR=4.8						

*IDC **05** 23:14:13.9±0.7, 1°.73S×145°.22E, h0^{km}, mb4.3/17, mb1 4.5/21, mb1mx4.2/53, mbtmp4.4/21, ML4.2/3, MS3.7/14, Ms1 3.7/14, ms1mx3.5/32, Error ellipse: s-maj=20.5km s-min=13.0km az=98.0*

*NEIC **05** 23:14:16.6±1.4, 1°.67S±0°.04×145°.13E±0°.07, h10^{km}±1^{km}, mb4.8/46, Error ellipse: s-maj=12.6km s-min=4.6km az=295.0*

*GCMT **05** 23:14:19.6±0.4, 1°.62S±0°.02×144°.95E±0°.02, h15^{km}±2^{km}, MW4.8/72, Moment Tensor Solution. s18,c23; s72,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.98±.14; M$_{\theta\theta}$-0.91±.07; M$_{\phi\phi}$1.89±.12; M$_{r\theta}$-1.19±.26; M$_{\theta\phi}$-0.38±.07; M$_{\phi r}$0.78±.20; Best double couple: M$_0$2.20000×10^{16} NP1:ϕ_s28.00000°, δ43.00000°, λ-26.00000°. NP2: ϕ_s138.00000°, δ72.00000°, λ-129.00000°. Principal axes: T 2.2410, Plg18.0000°, Azm256.0000°; N -0.0830, Plg37.0000°, Azm152.0000°; P -2.1600, Plg47.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **05** 23:14:37.0±0.9, 3°S±7°×14°4E±°, h10^{km}, M4.5/20, mb4.8/20, mB5.1/10, MLv4.3/2, Mw(mB)4.5/10, MwMwp5.0/1, Mwp5.3/1*

ISC 05 23:14:16.3±0.4, **1°.68S**±0°.05×**145°.15E**±0°.06, **h10^{km}, n140,** σ**1^{s}.86**/127, **mb4.7**/50, **MS3.6**/10, **1C-1D, Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	2.25	99	Pn	Pn	23 14 52.9	-0.7
JAY	Jayapura	4.51	259	Pn	Pn	23 15 22.9	-2.0
	26nm,0.3s,baz=105,slow=4.7,SNR=111						
JAY				Sn	Sn	23 16 13.8	-3.7
	9.6nm,0.3s,baz=26,slow=23,SNR=1.1						
JAY				LR	LR	23 17 02.0	
	comp=Z,2μm,20.8s,baz=140,slow=37						
JAY	Jayapura	4.51	259	P	Pn	23 15 22.2	-2.7
SMPI	Sarmi	6.44	267	P	Pn	23 15 50.7	-0.6
	0.8nm2μm296nm,0.8s						
RABL	Rabaul	7.44	110	Pn	Pn	23 16 06.7	+1.6
PMG	Port Moresby	7.93	165	Pn	Pn	23 16 08.8	-3.0
	2.5nm,0.3s,baz=125,slow=11,SNR=1.9						
PMG	Port Moresby	7.93	165	Pn	Pn	23 16 11.7	-0.1
COEN	Coen	12.35	189	P	Pn	23 17 16.8	+4.4
	baz=13						
COEN	Coen	12.35	189	Pn	Pn	23 17 14.8	+2.4
FAKI	Fak Fak	12.95	264	P	Pn	23 17 20.8	+0.3
	1μm78nm,1.4s						
FAKI	Fak Fak	12.95	264	Pn	Pn	23 17 20.1	-0.4
SIJI	Sorong	13.90	273	Pn	Pn	23 17 33.0	-0.5
	1.1nm,0.3s,baz=65,slow=9.6,SNR=32						
SIJI				LR	LR	23 23 00.7	
	comp=Z,429nm,21.0s,baz=90,slow=38						
SWI	Sorong	13.91	273	P	Pn	23 17 32.8	-0.9
SAUI	Saumlaki	15.14	245	P	P	23 18 00.8	+5.1
SAUI	Saumlaki	15.14	245	Pn	Pn	23 17 50.0	-0.5
GUMO	Guam	15.18	359	LR	LR	23 23 53.7	
	comp=Z,242nm,18.2s,baz=175,slow=38						
MTSU	Mount Surprise	16.37	183	P	P	23 18 11.8	+2.5
	baz=17,SNR=5.8						
HNR	Honiara	16.61	118	LR	LR	23 24 23.2	
	comp=Z,315nm,19.2s,baz=284,slow=37						
KDU	Kakadu	16.65	228	P	Pn	23 18 06.9	-3.0
	baz=17,SNR=14						
AAI	Ambon	17.05	263	P	P	23 18 23.0	+6.2
LBMI	Labuha	17.67	273	P	P	23 18 34.8	+11
MTN	Manton Dam	17.77	231		Pn	23 18 22.2	-1.8
TNTI	Ternate	17.94	278		Pn	23 18 26.2	0.0
TNTI				IAmb	IAmb	23 18 53.9	
	comp=Z,67nm,1.4s						
CTA	Charters Tower	18.32	177	P	Pn	23 18 30.7	-0.2
	comp=Z,0.2nm,0.3s,baz=323,slow=7.7,SNR=2.3						
CTAO	Charters Tower	18.32	177		P	23 18 32.1	+1.2
SANI	Sanana	19.15	269	P	Pn	23 18 44.3	+3.4
	comp=Z,852nmcomp=Z,16nm,1.1s						
QIS	Mount Isa	19.52	196	P	P	23 18 44.5	+0.4
	baz=20,SNR=5.5						
WB0	Warramunga Arr	20.83	210	P	P	23 18 56.9	-1.4
WR0	Warramunga Arr	20.92	209	P	P	23 18 58.4	-0.9
WB2	Warramunga Arr	21.00	209	P	P	23 18 59.4	-0.7
	baz=21						
WRA	Warramunga Arr	21.00	209	P	P	23 18 59.5	-0.6
	comp=Z,24nm,0.7s,baz=33,slow=10,SNR=166						
WRA				S	S	23 22 52.2	-2.1
	comp=Z,2.5nm,1.1s,baz=22,slow=19,SNR=2.9						
WRA	Warramunga Arr	21.00	209	P	P	23 18 58.8	-1.4
KMSI	Cibinong	21.28	276	P	P	23 19 08.9	+5.7
	comp=Z,214nm,1.0s						
KNRA	Kununurra	21.32	228	P	P	23 19 01.8	-1.8
	baz=22,SNR=18						
KNRA	Kununurra	21.32	228	P	P	23 19 01.8	-1.8
DAV	Davao City (W)	21.38	294	LR	LR	23 26 35.9	
	comp=Z,113nm,20.6s,baz=130,slow=35						
GTOI	Gorontalo	22.25	276	P	P	23 19 16.6	+2.9
SOEI	Soe	22.25	248	P	P	23 19 15.7	+1.9
	comp=Z,1μmcomp=Z,129nm,0.8s						
SOEI	Soe	22.25	248	P	P	23 19 13.2	-0.6
BATI	Baumata	22.97	248	P	P	23 19 21.8	+0.5
	comp=Z,25nm,0.8s,baz=64,slow=2.5,SNR=10						
BATI	Baumata	22.97	248	P	P	23 19 23.3	+2.0
	comp=Z,34nm,0.6s						
MRSI	Marisa	23.30	275	P	P	23 19 32.0	+7.3
	comp=Z,21nm,0.7s						
APSI	Ampana	23.50	272	P	P	23 19 33.9	+7.2
	comp=Z,852nmcomp=Z,61nm,1.4s						
MMRI	Maumere	23.82	252	P	P	23 19 29.8	-0.1
MMRI				IAmb	IAmb	23 19 55.4	
	comp=Z,51nm,1.3s						
EIDS	Eidsvold	24.23	167	P	P	23 19 37.3	+3.7
	baz=25,SNR=7.6						
EIDS	Eidsvold	24.23	167	P	P	23 19 34.1	+0.5
AS31	Alice Springs	24.42	206	P	P	23 19 34.7	-0.6
ASAR	Alice Springs	24.42	206	P	P	23 19 35.0	-0.4
	comp=Z,6.5nm,0.7s,baz=34,slow=8.2,SNR=60						
ASAR				LR	LR	23 29 25.5	
	comp=Z,246nm,18.5s,baz=36,slow=37						
ASAR	Alice Springs	24.42	206	P	P	23 19 34.8	-0.6
ASPA	Alice Springs	24.42	206	P	P	23 19 35.5	+0.1
	baz=25						
TOLI2	Tolitoli	24.52	276	P	P	23 19 34.7	-1.6
TOLI2				IAmb	IAmb	23 19 59.0	
	comp=Z,27nm,1.1s						
QLP	Quilpie	24.77	182	P	P	23 19 40.6	+2.2
	baz=25,SNR=4.8						
RMQ	Roma	24.90	172	P	P	23 19 42.1	+2.4
	baz=26,SNR=36						
BSSI	Bau Bau, Buton	24.99	259	P	P	23 19 44.4	+3.9
	comp=Z,454nmcomp=Z,51nm,1.1s						
FITZ	Fitzroy Crossi	25.15	228	P	P	23 19 40.0	-2.0
	comp=Z,12nm,1.0s,baz=58,slow=9.4,SNR=19						
FITZ	Fitzroy Crossi	25.15	228	P	P	23 19 40.3	-1.6
	baz=25,SNR=18						
KAPI	Kappang	25.56	262	P	P	23 19 45.1	-0.6
	comp=Z,1.8nm,0.4s,baz=179,slow=19,SNR=1.3						
KAPI				LR	LR	23 31 21.2	
	comp=Z,78nm,19.5s,baz=48,slow=40						
KAPI	Kappang	25.56	262	P	P	23 19 45.9	+0.1
MYLDM	Lahad Datu	27.48	285	P	P	23 20 02.4	-0.6
MYLDM				IAmb	IAmb	23 20 24.2	
	comp=Z,25nm,1.1s						
WRKA	Warakurna	28.35	214	P	P	23 20 11.3	+0.5
	baz=29,SNR=5.4						
DZM	Mont Dzumac	28.98	136	P	P	23 20 14.4	-2.1
	comp=Z,1.5nm,0.7s,baz=140,slow=24,SNR=1.4						
DZM	Mont Dzumac	28.98	136	P	P	23 20 16.6	+0.1
DZM				IAmb	IAmb	23 20 28.2	
	comp=Z,15nm,1.3s						
H11S3	WAKE ISLAND Hy	29.18	46	T	T	23 50 47.1	
	baz=229,slow=75,SNR=340						
H11S2	WAKE ISLAND Hy	29.18	46	T	T	23 50 47.7	
	baz=229,slow=75,SNR=124						
H11S1	WAKE ISLAND Hy	29.19	46	T	T	23 50 49.1	
	baz=229,slow=75,SNR=192						
ARMA	Armidale	29.23	168	P	P	23 20 19.3	+0.7
ARMA				IAmb	IAmb	23 20 27.2	
	comp=Z,13nm,1.2s						
CMSA	Cobar Meteorol	29.70	179	P	P	23 20 25.4	+2.8
	baz=30,SNR=7.8						
H11N1	WAKE ISLAND Hy	30.13	44	T	T	23 51 56.8	
	baz=227,slow=76,SNR=413						
H11N2	WAKE ISLAND Hy	30.14	44	T	T	23 51 58.8	
	baz=227,slow=76,SNR=456						
H11N3	WAKE ISLAND Hy	30.14	44	T	T	23 51 58.8	
	baz=227,slow=76,SNR=282						
STKA	Stephens Creek	30.22	186	P	P	23 20 25.9	-1.3
	comp=Z,3.6nm,0.9s,baz=82,slow=1.1,SNR=3.7						
STKA				LR	LR	23 32 11.3	
	comp=Z,121nm,18.8s,baz=360,slow=36						
STKA	Stephens Creek	30.22	186	P	P	23 20 27.3	0.0
	baz=31,SNR=4.2						
STKA	Stephens Creek	30.22	186	P	P	23 20 27.2	0.0
HTT	Hallett	32.12	190	P	P	23 20 46.4	+2.4
	baz=33,SNR=5.7						
BBOO	Buckleboo	32.12	194	P	P	23 20 46.3	+2.3
	baz=33,SNR=7.0						
BBOO	Buckleboo	32.12	194	P	P	23 20 42.8	-1.2
BBOO				IAmb	IAmb	23 20 49.5	
	comp=Z,8.7nm,0.7s						
FORT	Forrest	33.16	208	P	P	23 20 57.8	+4.7
	baz=34,SNR=6.8						
FORT	Forrest	33.16	208	P	P	23 20 52.0	-1.2
MJAR	Matsushiro Arr	38.57	351	P	P	23 21 37.8	-1.7
	comp=Z,2.6nm,0.9s,baz=184,slow=8.8,SNR=4.9						
MJAR				LR	LR	23 36 32.5	
	comp=Z,34nm,21.1s,baz=320,slow=35						
MJAR	Matsushiro Arr	38.57	351	P	P	23 21 37.4	-2.0
MAT	Matsushiro	38.58	351	P	P	23 21 37.7	-1.8
TNG	Tangerang	38.66	262	P	P	23 21 48.1	+7.6
MORW	Morawa	38.86	223	P	P	23 21 40.5	-1.5
MORW				IAmb	IAmb	23 21 58.2	
	comp=Z,28nm,1.2s						
NJ2	Nanjing	41.79	326	*e*P	P	23 22 06.7	+0.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KSRS	Korea Array	42.09	339	P	P	23 22 07.3	-1.2
	comp=Z,3.5nm,1.0s,baz=166,slow=9.2,SNR=9.0						
KSRS				LR	LR	23 36 14.5	
	comp=Z,135nm,20.6s,baz=162,slow=31						
KSAR	Wonju Array Be	42.09	339	P	P	23 22 08.2	-0.4
USRK	Ussuriysk Ar.	47.17	347	P	P	23 22 49.4	+0.3
	comp=Z,3.1nm,0.6s,baz=153,slow=8.3,SNR=6.5						
USRK	Ussuriysk Ar.	47.17	347	P	P	23 22 49.0	0.0
TUWZ	Tuamarina	47.32	150	P	P	23 22 50.1	-0.1
KMI	Kunming	48.95	306	⇑P	P	23 23 09.5	+6.1
KMI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN	Xi'an	49.21	320	P	P	23 23 04.6	-0.5
XAN				sP	sP	23 23 11.8	+2.7
XAN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,170nm,5.7s						
CM31	Chiang Mai Arr	49.65	296	P	P	23 23 08.2	-0.4
CM31				IAmb	IAmb	23 23 18.2	
	comp=Z,13nm,1.1s						
CMAR	Chiang Mai Arr	49.65	296	P	P	23 23 10.2	+1.6
	comp=Z,1.3nm,0.4s,baz=112,slow=5.3,SNR=11						
CMAR				LR	LR	23 44 56.4	
	comp=Z,47nm,18.2s,baz=28,slow=37						
CMAR	Chiang Mai Arr	49.65	296	P	P	23 23 08.7	+0.1
HHC	Hu-ho-hao-te	52.21	328	*e*P	P	23 23 29.9	+2.2
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				AMB	AMB		
	comp=Z,190nm,6.6s						
BTO	Baotou	52.88	327	*e*P	P	23 23 33.7	+1.1
LZH	Lanzhou	53.76	318	*e*P	P	23 23 42.6	+3.3
LZH				sP	sP	23 23 48.7	+5.3
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
PETK	Petropavlovsk-	55.60	9	P	P	23 23 53.1	+1.0
	comp=Z,2.5nm,0.7s,baz=111,slow=6.5,SNR=4.2						
PETK				LR	LR	23 43 28.2	
	comp=Z,54nm,21.4s,baz=191,slow=32						
PETK	Petropavlovsk-	55.60	9	P	P	23 23 53.0	+0.8
GTA	Gaotai	58.27	320	*e*P	P	23 24 12.8	+1.3
GTA				pP	sP	23 24 17.5	+1.9
GTA				sP	pP	23 24 20.0	+5.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	Songino Array	59.76	331	LR	LR	23 49 44.3	
	comp=Z,77nm,20.4s,baz=317,slow=36						
WMQ	Urumqi	68.34	319	*e*P	P	23 25 17.8	-0.3
WMQ				pP	sP	23 25 23.7	+1.4
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.7s						
MKAR	Makanchi Array	73.01	320	P	P	23 25 46.0	-0.5
	comp=Z,1.8nm,0.8s,baz=95,slow=7.5,SNR=5.0						
MAKZ	Makanchi	73.22	320	P	P	23 25 47.1	-0.6
TIXI	Tiksi	73.96	355		P	23 25 51.8	+0.3
ZALV	Zalesovo Beam	74.40	328	P	P	23 25 53.4	-1.0
	comp=Z,1.4nm,0.7s,baz=110,slow=6.9,SNR=4.0						
NIL	Nilore	75.93	305	P	P	23 26 03.4	-0.4
VNDA	Vanda	76.31	176	P	P	23 26 05.3	+0.3
VNDA				IAmb	IAmb	23 26 11.0	
	comp=Z,6.8nm,1.1s						
N19K	Bonanza Creek	77.48	26	P	P	23 26 10.5	-1.5
N19K				IAmb	IAmb	23 26 28.2	
	comp=Z,12nm,1.2s						
TTA	Tatalina	77.84	24	P	P	23 26 13.6	-0.4
TTA				IAmb	IAmb	23 26 24.9	
	comp=Z,7.0nm,1.2s						
L19K	White Mountain	77.95	25	P	P	23 26 14.9	+0.4
L19K				IAmb	IAmb	23 26 27.0	
	comp=Z,15nm,1.4s						
J20K	Nowinta River	79.17	23	P	P	23 26 21.6	+0.4
J20K				IAmb	IAmb	23 26 40.1	
	comp=Z,10nm,1.4s						
TRF	Thorofare Moun	80.39	24	P	P	23 26 28.3	+0.3
NRIK	Noril'sk	80.63	342	P	P	23 26 28.4	-0.6
	comp=Z,5.4nm,0.9s,baz=96,slow=6.5,SNR=6.3						
NRIK	Noril'sk	80.63	342	P	P	23 26 28.6	-0.3
NRIK				IAmb	IAmb	23 26 37.2	
	comp=Z,9.2nm,0.8s						
MLY	Manley	80.86	23	P	P	23 26 30.8	+0.4
RND	Reindeer	80.97	25	P	P	23 26 30.6	-0.4
RND				IAmb	IAmb	23 26 41.2	
	comp=Z,8.8nm,0.9s						
WRH	Wood River Hil	81.69	24	P	P	23 26 34.8	+0.1
WRH				IAmb	IAmb	23 26 49.3	
	comp=Z,14nm,1.5s						
CCB	Clear Creek Bu	81.86	24	P	P	23 26 35.6	-0.1
CCB				IAmb	IAmb	23 26 43.0	
	comp=Z,4.9nm,0.9s						
BVAR	Borovoye Array	82.21	324	P	P	23 26 37.5	-0.2
	comp=Z,1.6nm,0.8s,baz=130,slow=7.8,SNR=5.6						
IL31		82.28	24	P	P	23 26 37.1	-0.6
IL31				IAmb	IAmb	23 26 44.6	
	comp=Z,5.8nm,0.9s						
ILAR	Eielson Array	82.28	24	P	P	23 26 36.6	-1.2
	comp=Z,2.2nm,0.9s,baz=259,slow=4.8,SNR=13						
ILAR	Eielson Array	82.28	24	P	P	23 26 37.2	-0.6
BRVK	Borovoye	82.28	324	P	P	23 26 37.6	-0.4
RIDG	Independent Ri	82.77	25	P	P	23 26 40.6	+0.2
DOT	Dot Lake	83.07	25	P	P	23 26 41.7	-0.3
DOT				IAmb	IAmb	23 26 50.2	
	comp=Z,7.5nm,1.0s						
M27K	Edge Creek, AK	83.64	27	P	P	23 26 45.6	+0.5
M27K				IAmb	IAmb	23 26 54.3	
	comp=Z,6.7nm,0.8s						
L27K	Beaver Creek,	83.86	26	P	P	23 26 46.8	+0.7
L27K				IAmb	IAmb	23 27 10.1	
	comp=Z,11nm,1.4s						
BCAR	Beaver Creek A	83.88	26	P	P	23 26 46.5	+0.3
BMAR	Burnt Mountain	84.07	21	P	P	23 26 47.7	+0.6
DAWY	Dawson	85.17	25	P	P	23 26 52.8	+0.1
MAW	Mawson	85.50	202	LR	LR	00 03 03.3	
	comp=Z,63nm,18.7s,baz=58,slow=34						
ABKAR	Akbulak array	88.12	319	P	P	23 27 06.5	-0.9
ABKAR				IAmb	IAmb	23 27 16.4	
	comp=Z,3.0nm,0.9s						
ABKAR	Akbulak array	88.12	319	P	P	23 27 06.2	-1.2
QSPA	South Pole Qui	88.26	180	P	P	23 27 07.5	-0.4
QSPA				IAmb	IAmb	23 27 13.3	
	comp=Z,3.4nm,0.8s						
BCLA	Clavier	120.74	331	*d*Pdif	Pdif	23 29 32.6	-1.5
TORD	Torodi Ar. Bea	142.08	289	PKP	PKPdf	23 33 49.5	-0.4
	comp=Z,0.5nm,0.7s,baz=81,slow=2.2,SNR=4.1						
LPAZ	La Paz	142.60	120	PKP	PKPdf	23 33 51.2	-0.3
	comp=Z,1.3nm,0.6s,baz=60,slow=7.8,SNR=4.8						
CPUP	Villa Florida	144.69	144	PKP	PKPab	23 33 53.0	+0.1
	comp=Z,3.4nm,1.0s,baz=327,slow=16,SNR=2.2						
DBIC	Dimbokro	149.69	280	PKPbc	PKPbc	23 34 06.2	-1.4
	comp=Z,2.5nm,0.7s,baz=170,slow=8.3,SNR=2.7						

*IDC **05** 23:14:54.6±0.9, 5°.31S×103°.46E, h0^{km}, mb4.2/17, mb1 4.2/18, mb1mx3.9/66, mbtmp4.2/18, ML3.2/1, MS2.1/1, Ms1 2.1/1, ms1mx2.0/37, Error ellipse: s-maj=36.9km s-min=14.2km az=50.0*

*NEIC **05** 23:15:02.3±1.2, 5°.30S±0°.10×103°.5E±0°.1, h53^{km}±7^{km}, mb4.6/29, Error ellipse: s-maj=17.1km s-min=10.9km az=46.0*

*DJA **05** 23:15:03.7±0.7, 5°S±3°×10°4E±°, h23^{km}±7^{km}, M4.2/16, MLv4.2/16*

ISC 05 23:15:00.6±0.5, **5°.49S**±0°.06×**103°.42E**±0°.06, **h47^{km}, n83,** σ**1^{s}.21**/81, **mb4.5**/30, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	Liwa	0.79	53	P	Pn	23 15 16.3	+0.7
KASI	Kota Agung	1.07	92	P	Pn	23 15 20.1	+0.9
KASI				S	Sn	23 15 31.9	-1.1
MDSI	Maura Dua	1.25	37	P	Pn	23 15 22.8	+1.1
MDSI				S	Sn	23 15 37.5	+0.1
KLSI		1.53	59	P	Pn	23 15 26.5	+1.0
KLSI				S	Sn	23 15 44.1	-0.1
KLI	Kotabumi	1.56	66	P	Pn	23 15 27.1	+1.2
LHSI	Lahat	1.66	4	P	Pn	23 15 30.3	+3.1
BLSI	Bandar Lampung	1.82	86	P	Pn	23 15 30.6	+1.1
KSI	Kapahiang	2.01	336	P	Pn	23 15 35.9	+3.8
CGJI	Cibinong	2.52	116	P	Pn	23 15 41.0	+2.0
MASI	Maura Aman, Be	2.62	333	P	Pn	23 15 44.8	+4.4
PMBI	Palembang	2.88	28	P	Pn	23 15 55.5	+11
PMBI	Palembang	2.88	28	Pn	Pn	23 15 42.5	-1.6
DBJI	Dramaga	3.48	108	P	Pn	23 15 53.9	+1.7
KRJI	Kerinci	3.90	330	P	Pn	23 16 03.7	+5.5
CNJI	Cibinong	4.11	116	P	Pn	23 16 03.5	+2.7
PPBI	Pangkal Pinang	4.28	39	P	Pn	23 16 04.1	+0.9
PPSI	Pulau Pagai	4.35	308	P	Pn	23 16 09.9	+5.7
LEM	Lembang	4.38	108	Pn	Pn	23 16 02.4	-2.4
	1.1nm,0.3s,baz=205,slow=23,SNR=1.2						
LEM				Sn	Sn	23 16 51.8	-2.8
	5.6nm,0.3s,baz=124,slow=23,SNR=1.3						
LEM				LR	LR	23 17 24.2	
	comp=Z,22nm,20.2s,baz=282,slow=34						
LEM	Lembang	4.38	108	P	Pn	23 16 07.0	+2.3
DSRI	Dabo	5.11	13	P	Pn	23 16 16.9	+2.2
PDSI	Padang	5.42	327	P	Pn	23 16 24.0	+5.0
XMIS	Christmas Isla	5.43	156	Pn	Pn	23 16 16.7	-2.3
XMIS				Sn	Sn	23 17 13.6	-6.6
UGM	Wanagama	7.45	109	Pn	Pn	23 16 48.3	+1.5
GSI	Gunungsitoli	8.93	319	Pn	Pn	23 17 05.9	-1.1
JAGI	Jajag, Banyuwa	11.05	106		Pn	23 17 36.6	+0.4
TOLI2	Tolitoli	18.54	70		P	23 19 13.2	-0.3
MMRI	Maumere	18.93	101	P	P	23 19 18.0	+0.2
MMRI				IAmb	IAmb	23 19 19.7	
	comp=Z,16nm,0.6s						
UBPT	Khong Chiam	20.74	6	P	P	23 19 36.1	-1.3
SOEI	Soe	21.09	103	P	P	23 19 40.7	-0.7
CMAR	Chiang Mai Arr	24.20	350	P	P	23 20 11.8	-1.2
	comp=Z,1.8nm,0.5s,baz=180,slow=9.6,SNR=15						
CMAR	Chiang Mai Arr	24.20	350	P	P	23 20 11.6	-1.3
CHTO	Chiang Mai	24.55	350	P	P	23 20 15.3	-0.8
FITZ	Fitzroy Crossi	25.06	122	PcP	PcP	23 23 56.6	+1.9
	comp=Z,4.6nm,0.8s,baz=315,slow=4.3,SNR=3.9						
KNRA	Kununurra	26.85	114	P	P	23 20 37.0	0.0
KNRA				IAmb	IAmb	23 20 59.8	
	comp=Z,15nm,1.1s						
H01W3	Cape Leeuwin H	30.88	163	T	T	23 53 52.9	
	baz=340,slow=74						
H01W2	Cape Leeuwin H	30.89	163	T	T	23 53 56.7	
	baz=340,slow=74						
H01W1	Cape Leeuwin H	30.89	163	T	T	23 53 57.4	
	baz=340						
WB0	Warramunga Arr	33.30	118	P	P	23 21 35.0	+0.9
WB0				IAmb	IAmb	23 21 38.3	
	comp=Z,17nm,1.4s						
WRA	Warramunga Arr	33.32	118	P	P	23 21 34.4	+0.1
	comp=Z,1.4nm,0.3s,baz=309,slow=8.7,SNR=8.6						
WRA				PcP	PcP	23 24 16.3	+0.7
	comp=Z,0.3nm,0.3s,baz=314,slow=2.3,SNR=1.6						
ASAR	Alice Springs	34.46	125	P	P	23 21 45.2	+1.1
	comp=Z,1.5nm,0.6s,baz=294,slow=7.6,SNR=4.7						
ASAR				PcP	PcP	23 24 20.1	+1.2
	comp=Z,0.6nm,0.4s,baz=301,slow=2.6,SNR=4.2						
COEN	Coen	40.02	105	P	P	23 22 31.2	-0.2
COEN				IAmb	IAmb	23 22 34.7	
	comp=Z,7.7nm,1.0s						
CTAO	Charters Tower	44.06	113	P	P	23 23 04.8	+0.5
CTAO				IAmb	IAmb	23 23 25.6	
	comp=Z,15nm,1.4s						
STKA	Stephens Creek	44.30	131	P	P	23 23 07.7	+1.6
	comp=Z,3.0nm,0.5s,baz=312,slow=7.8,SNR=6.0						
STKA	Stephens Creek	44.30	131	P	P	23 23 06.7	+0.7
NIL	Nilore	48.28	326	P	P	23 23 37.2	-0.1
NIL				IAmb	IAmb	23 23 38.9	
	comp=Z,5.9nm,0.7s						
KSRS	Korea Array	48.45	26	P	P	23 23 38.0	-0.4
	comp=Z,0.4nm,0.5s,baz=227,slow=7.8,SNR=1.8						
JMN	Monobe	48.50	34	P	P	23 23 38.9	-0.1
JHS	Saijyo	49.03	33	P	P	23 23 42.3	-0.7
SONM	Songino Array	53.16	3	P	P	23 24 13.8	-0.1
	comp=Z,2.4nm,0.6s,baz=180,slow=8.9,SNR=23						
SONM				PcP	PcP	23 25 21.8	+0.3
	comp=Z,0.5nm,0.3s,baz=192,slow=3.7,SNR=7.8						
SONM	Songino Array	53.16	3	P	P	23 24 12.8	-1.1
ULN	Ulaanbaatar	53.23	3	P	P	23 24 13.1	-1.3
ULN				IAmb	IAmb	23 24 40.0	
	comp=Z,5.6nm,1.1s						
GAR	Garm	53.83	328	P	P	23 24 18.7	-0.3
GAR				IAmb	IAmb	23 24 40.8	
	comp=Z,4.3nm,1.0s						
BTK	Batken	54.36	329	P	P	23 24 22.7	-0.1
BTK				IAmb	IAmb	23 24 34.2	
	comp=Z,9.1nm,1.4s						
MK31	Makanchi Array	55.33	342	P	P	23 24 29.0	-0.6
MKAR	Makanchi Array	55.33	342	P	P	23 24 28.9	-0.7
	comp=Z,0.9nm,0.5s,baz=150,slow=10,SNR=26						
MKAR	Makanchi Array	55.33	342	P	P	23 24 28.7	-0.9
USA0B	Ussuriysk Arra	55.75	25	P	P	23 24 31.9	-0.7
USRK	Ussuriysk Ar.	55.75	25	P	P	23 24 32.1	-0.5
	comp=Z,2.4nm,0.5s,baz=209,slow=3.7,SNR=6.1						
USRK	Ussuriysk Ar.	55.75	25	P	P	23 24 31.8	-0.8
KURBB	Kurchatov Arra	59.88	342	P	P	23 25 00.3	-1.1
	baz=157,slow=6.8						

KURK	Kurchatov	59.93	342	P	P	23 25 00.3	-1.4
GEYT	Alibeck	60.30	320	P	P	23 25 05.4	+0.8
	comp=Z,1.3nm,0.4s,baz=159,slow=4.5,SNR=5.3						
ZAA0	Zalesovo Array	61.25	348	P	P	23 25 09.7	-1.0
ZAA0				IAmb	IAmb	23 25 11.3	
	comp=Z,4.5nm,0.6s						
ZALV	Zalesovo Beam	61.25	348	P	P	23 25 09.8	-1.0
	comp=Z,4.5nm,0.4s,baz=160,slow=5.8,SNR=24						
ZALV	Zalesovo Beam	61.25	348	P	P	23 25 09.9	-0.8
BVAR	Borovoye Array	64.64	339	P	P	23 25 32.3	-1.0
	comp=Z,2.1nm,0.5s,baz=184,slow=13,SNR=16						
BRVK	Borovoye	64.70	339	P	P	23 25 32.8	-0.9
BRVK				IAmb	IAmb	23 25 34.1	
	comp=Z,1.9nm,0.4s						
ABKAR	Akbulak array	66.33	331	P	P	23 25 44.1	-0.2
ABKAR				IAmb	IAmb	23 25 45.0	
	comp=Z,4.1nm,0.6s						
ABKAR	Akbulak array	66.33	331	P	P	23 25 44.0	-0.3
AKTO	Aktyubinsk	68.05	331	P	P	23 25 54.9	-0.2
	comp=Z,0.6nm,0.3s,baz=63,slow=3.5,SNR=3.9						
ARU	Arti	71.76	336	P	P	23 26 17.6	-0.2
	comp=Z,0.5nm,0.4s,baz=114,slow=4.5,SNR=4.1						
ARU	Arti	71.76	336	P	P	23 26 17.8	0.0
ARU				IAmb	IAmb	23 26 39.9	
	comp=Z,6.4nm,1.3s						
BKZ	Black Stump Fm	73.43	129	P	P	23 26 26.9	-1.4
PETK	Petropavlovsk-	74.07	31	P	P	23 26 30.7	-0.9
	comp=Z,0.9nm,0.6s,baz=236,slow=6.6,SNR=1.1						
BRTR	Keskin Array B	78.18	312	P	P	23 26 56.1	+0.6
	comp=Z,0.4nm,0.7s,baz=131,slow=4.5,SNR=4.2						
BRTR	Keskin Array B	78.18	312	P	P	23 26 54.3	-1.2
TIXI	Tiksi	78.78	8	P	P	23 26 56.5	-1.4
TIXI				IAmb	IAmb	23 26 57.6	
	comp=Z,4.8nm,0.9s						
QSPA	South Pole Qui	84.49	180	P	P	23 27 30.8	+2.4
BURAR	Bucovina Array	86.12	318	P	P	23 27 37.9	+1.1
BUR08	Bucovina Ar. S	86.14	318	P	P	23 27 37.9	+1.0
BUR08				IAmb	IAmb	23 27 42.5	
	comp=Z,5.4nm,1.3s						
FINES	FINESS Array B	88.77	332	P	P	23 27 49.6	+0.5
	comp=Z,1.3nm,0.5s,baz=86,slow=5.7,SNR=1.3						
ARCES	ARCESS Array B	90.90	340	P	P	23 27 59.4	+0.5
	comp=Z,2.5nm,0.9s,baz=116,slow=6.3,SNR=1.4						
TXAR	Lajitas Array	145.11	44	PKP	PKPdf	23 34 33.7	-0.1
	comp=Z,0.4nm,0.4s,baz=253,slow=0.8,SNR=9.2						

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*ATH **05** 23:24:11.8, 36°31N×28°10E, h72^{km}±3^{km}, ML2.4/1, Error ellipse: s-maj=3.5km s-min=2.2km az=151.0*
*ISK **05** 23:24:13.9, 36°11N×28°15E, h26^{km}, ML2.4/12*
*DDA **05** 23:24:15.0, 36°40N×28°15E, h6^{km}±4^{km}, ML1.9*
*THE **05** 23:24:16.4, 36°25N×28°21E, h55^{km}±1^{km}, ML2.0/2, Error ellipse: s-maj=2.0km s-min=0.5km az=201.0*
*NIC **05** 23:24:16.4±0.0, 35°93N×28°33E, h30^{km}±1^{km}, Ml3.2/2*
ISC 05 23:24:15.2±1.3, **36°21N**±0°04×**28°18E**±0°03, **h61**^{km}±7^{km}, **n43**, σ**0^{s}86**/67, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	Arkhangelos	0.04	276	P	Pn	23 24 24.5	+0.3
ARG				S	Sn	23 24 30.9	+0.1
	382nm,0.2s						
ARG	Arkhangelos	0.04	276	P	Pn	23 24 24.0	-0.2
ARG				S	Sn	23 24 31.1	+0.3
ARG				AML	AML	23 24 32.1	
	comp=N,630μm,0.2s						
ARG				AML	AML	23 24 32.2	
	comp=E,882μm,0.1s						
ARG	Arkhangelos	0.04	276	P	Pn	23 24 24.2	-0.1
ARG				S	Sn	23 24 31.0	+0.3
TURN	Turunc	0.56	6	*i* P	Pn	23 24 28.6	+0.6
TURN				*i* S	Sn	23 24 38.0	+0.8
TURN	Turunc	0.56	6	PG	Pn	23 24 27.9	0.0
TURN				SG	Sn	23 24 38.0	+0.8
DAT	Datca	0.71	317	P	Pn	23 24 29.9	+0.2
DAT				S	Sn	23 24 40.0	-0.3
DAT	Datca	0.71	317	*i* P	Pn	23 24 28.8	-0.9
DAT				*i* S	Sn	23 24 38.8	-1.6
DAT				IAML		23 24 41.0	
	comp=E,68nm,0.2s						
DAT				IAML		23 24 42.0	
	comp=N,71nm,0.3s						
DAT	Datca	0.71	317	PG	Pn	23 24 29.4	-0.3
DAT				SG	Sn	23 24 40.7	+0.4
DALY	Dalyan (Mula)	0.72	32	*i* P	Pn	23 24 30.0	+0.3
DALY				*i* S	Sn	23 24 40.3	0.0
DALY	Dalyan (Mula)	0.72	32	PG	Pn	23 24 30.2	+0.5
DALY				SG	Sn	23 24 41.5	+1.2
FETY	Fethiye	0.84	60	P	Pn	23 24 31.4	+0.1
FETY				S	Sn	23 24 42.7	-0.5
FETY	Fethiye	0.84	60	*i* P	Pn	23 24 31.1	-0.2
FETY				*i* S	Sn	23 24 41.8	-1.4
FETY				IAML		23 24 44.0	
	comp=N,59nm,0.3s						
FETY				IAML		23 24 44.0	
	comp=E,57nm,0.6s						
FETY	Fethiye	0.84	60	PG	Pn	23 24 31.1	-0.2
BDRM	Kayabasi	1.04	326	*i* P	Pn	23 24 31.6	-2.1
BDRM				*i* S	Sn	23 24 44.2	-3.3
MULA	Mugla, Merkez-	1.05	6	*i* P	Pn	23 24 34.8	+0.7
BODT	Bodrum	1.10	321	P	Pn	23 24 34.7	+0.1
BODT				S	Sn	23 24 49.0	0.0
BODT	Bodrum	1.10	321	PN	Pn	23 24 34.6	0.0
MLSB	Milas	1.13	344	PN	Pn	23 24 35.8	+0.8
KSL	Kastellorizon	1.14	93	P	Pn	23 24 35.3	+0.2
KSL				S	Sn	23 24 49.8	-0.1
	comp=E,40nm,0.7s						
KSL	Kastellorizon	1.14	93	P	Pn	23 24 35.3	+0.2
KSL	Kastellorizon	1.14	93	P	Pn	23 24 35.4	+0.2
KSL				S	Sn	23 24 49.0	-0.9
AKAS	Kas	1.16	89	*i* P	Pn	23 24 35.0	-0.5
AKAS				*i* S	Sn	23 24 49.4	-1.1
AKAS	Kas	1.16	89	PN	Pn	23 24 35.5	+0.1
AKAS				SN	Sn	23 24 50.7	+0.2
CAME	Cameli-Denizli	1.16	51	PN	Pn	23 24 36.2	+0.6
CAEL	Denizli, Camel	1.29	45	*i* P	Pn	23 24 37.3	0.0
CAEL				*i* S	Sn	23 24 54.9	+1.1
CAEL				IAML		23 25 02.0	
	comp=E,32nm,0.8s						
CAEL				IAML		23 25 09.0	
	comp=N,32nm,0.6s						
TAVA	DENIZLI_Tavas	1.38	25	*i* P	Pn	23 24 38.7	+0.2
TAVA				*i* S	Sn	23 24 55.7	-0.2
AYDN	Tasoluk	1.47	351	*i* P	Pn	23 24 39.4	-0.1
AYDN				*i* S	Sn	23 24 57.6	-0.2
AYDN				IAML		23 24 59.0	
	comp=E,18nm,0.5s						
ELL	Elmali	1.50	69	PN	Pn	23 24 40.6	+0.6
GOLH	Golhisar	1.51	47	*i* P	Pn	23 24 40.9	+0.7
GOLH				*i* S	Sn	23 25 00.1	+1.2
GOLH				IAML		23 25 03.0	
	comp=E,13nm,0.5s						
GOLH				IAML		23 25 05.0	
	comp=N,12nm,0.4s						
GCAM	G?zelcaml?	1.67	333	PN	Pn	23 24 43.4	+1.3
AYDB	Zeytinkoy-Aydi	1.75	353	PN	Pn	23 24 44.1	+0.7
AKUM	Antalya-Kumluc	1.75	86	*i* P	Pn	23 24 43.3	0.0
SMG	Samos	1.84	325	P	Pn	23 24 43.6	-0.9
SMG				S	Sn	23 25 06.1	-0.7
KORT	Korkueli	1.92	65	PN	Pn	23 24 46.9	+1.2
ZKR	Zakros	1.94	236	P	Pn	23 24 47.1	+1.3
ZKR	Zakros	1.94	236	PN	Pn	23 24 44.9	-0.9
ZKR	Zakros	1.94	236	P	Pn	23 24 47.1	+1.3
ZKR				S	Sn	23 25 10.3	+1.3
NPS	Neapolis	2.29	246	P	Pn	23 24 51.3	+0.6
APE	Apeiranthos	2.29	293	P	Pn	23 24 51.3	+0.6
AKMS	Akamas	3.59	108	P	Pn	23 25 07.3	-1.1
AKMS				AML	AML	23 25 48.1	
	comp=N,0.3nm,0.9s						
AKMS				AML	AML	23 25 50.7	
	comp=N,0.1nm,0.5s						
ALFC	Alefka	3.75	105	P	Pn	23 25 09.9	-0.7
ALFC				AML	AML	23 25 51.8	
	comp=N,0.1nm,0.3s						
ALFC				AML	AML	23 25 52.5	
	comp=N,0.1nm,0.3s						
NATA	Nata	3.86	110	P	Pn	23 25 11.5	-0.6
ASGA	Asgata	4.38	107	P	Pn	23 25 18.8	-0.4

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*IDC **05** 23:39:20.6±4.7, 48°17N×153°64E, h72^{km}±43^{km}, mb3.4/6, mb1 3.6/7, mb1mx3.2/35, mbtmp3.6/7, ML2.4/1, Error ellipse: s-maj=48.9km s-min=24.7km az=117.0*
*KRSC **05** 23:39:22.0±1.9, 48°03N×155°75E, h39^{km}±30^{km}, ML4.3*
ISC 05 23:39:19.9±1.1, **48°0N**±0°2×**154°2E**±0°3, **h64**^{km}, **n23**, σ**2^{s}80**/18, **mb3.4**/6, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.97	25	*e*P	Pn	23 40 05.1	+0.6
SKR				*e*S	Sn	23 40 35.6	-3.3
PAU	Pauzhetka	3.86	25	*e*P	Pn	23 40 18.1	+1.3
PAU				*e*S	Sn	23 40 59.7	-1.2
KDTR	Khodutka, Kamc	4.57	32	*e*S	Sn	23 41 14.2	-3.8
ASAK	Asacha	4.99	27	*e*P	Pn	23 40 32.1	-0.2
MTVR	Mutnovka	5.17	28	*e*P	Pn	23 40 34.4	-0.3
MTVR				*e*S	Sn	23 41 30.0	-3.0
PETK	Petropavlovsk-	5.58	22	P	Pn	23 40 40.6	+0.3
	0.6nm,0.3s,baz=181,slow=12,SNR=8.7						
PETK				S	Sn	23 41 50.9	+8.0
	baz=263,slow=36,SNR=1.2						
KOK	Koryaka	6.00	26	*e*P	Pn	23 40 48.0	+1.9
SMAR	Somma	6.03	27	*e*P	Pn	23 40 48.4	+1.8
H11N2	WAKE ISLAND Hy	30.03	156	T	T	00 17 51.0	
	baz=343,slow=76,SNR=28						
H11N1	WAKE ISLAND Hy	30.05	156	T	T	00 17 51.1	
	baz=343,slow=76,SNR=57						
H11N3	WAKE ISLAND Hy	30.05	156	T	T	00 17 50.5	
	baz=343,slow=76,SNR=22						
H11S1	WAKE ISLAND Hy	31.14	157	T	T	00 19 13.0	
	baz=343,slow=76,SNR=182						
H11S3	WAKE ISLAND Hy	31.15	157	T	T	00 19 03.9	
	baz=343,slow=76,SNR=178						
H11S2	WAKE ISLAND Hy	31.16	157	T	T	00 19 03.9	
	baz=343,slow=76,SNR=164						
ILAR	Eielson Array	35.12	40	P	P	23 46 08.1	+1.4
	0.1nm,0.6s,baz=264,slow=8.8,SNR=4.2						
INK	Inuvik	40.20	33	P	P	23 46 49.8	+0.3
	0.9nm,0.8s,baz=288,slow=6.9,SNR=3.5						
FINES	FINESS Array B	63.21	335	P	P	23 49 38.5	-2.4
	3.5nm,1.0s,baz=32,slow=9.0,SNR=4.1						
WRA	Warramunga Arr	69.94	200	P	P	23 50 23.8	-0.4
	0.3nm,0.6s,baz=17,slow=5.8,SNR=4.6						
ASAR	Alice Springs	73.63	199	P	P	23 50 47.1	+0.8
	0.2nm,0.4s,baz=11,slow=6.1,SNR=2.2						
TXAR	Lajitas Array	76.25	61	P	P	23 51 02.2	+0.5
	0.3nm,0.6s,baz=297,slow=3.3,SNR=4.4						
H03N2	Juan Fernandez	138.03	90	T	T	02 32 01.5	
	baz=310,slow=77,SNR=13						
H03N1	Juan Fernandez	138.04	90	T	T	02 32 02.8	
	baz=310,slow=77,SNR=15						
H03N3	Juan Fernandez	138.04	90	T	T	02 32 02.3	
	baz=310,slow=77,SNR=13						

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*TUL **05** 23:50:29.8±1.1, 36°83N±0°01×98°28W±0°03, h4^{km}±7^{km}, ML2.9, mb_Lg2.7/31(NEIC), Error ellipse: s-maj=3.6km s-min=1.2km az=107.0*
*NEIC **05** 23:50:30.2±1.0, 36°82N±0°02×98°28W±0°04, h7^{km}±6^{km}, Error ellipse: s-maj=5.3km s-min=1.4km az=112.0*
*ANF **05** 23:50:30.3±0.7, 36°82N×98°27W, h7^{km}±5^{km}, ML3.4/10, Error ellipse: s-maj=4.5km s-min=2.4km az=53.0*
ISC 05 23:50:30.3±1.0, **36°82N**±0°02×**98°27W**±0°03, **h6**^{km}±7^{km}, **n68**, σ**0^{s}49**/78, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.05	107	Pg	Pg	23 50 31.6	-0.2
OK032				Sg	Sg	23 50 33.0	+0.1
KAN14	Manchester OK	0.28	61		Pg	23 50 35.7	-0.1
KAN14				Sg	Sg	23 50 40.1	+0.5
GC02	Grant County #	0.33	84	Pg	Pg	23 50 36.8	-0.1
GC02				Sg	Sg	23 50 41.7	+0.5
KAN10	Anthony SW Sta	0.34	25	Pg	Pg	23 50 36.5	-0.4
CROK	Carrier	0.39	143	Pg	Pg	23 50 37.9	0.0
CROK				Sg	Sg	23 50 43.6	+0.6
KAN16	Harper SW Stat	0.44	22	Pg	Pg	23 50 38.5	-0.4
KAN17	Caldwell West	0.47	61	Pg	Pg	23 50 39.0	-0.3
KAN17				Sg	Sg	23 50 45.6	+0.2
KAN08	Anthony NE Sta	0.47	31		Pg	23 50 39.1	-0.3
KAN12	Harper NE Stat	0.53	25	Pg	Pg	23 50 40.0	-0.4
KAN01	Argonia South	0.53	51	Pg	Pg	23 50 40.3	-0.3
KAN01				Sg	Sg	23 50 47.9	+0.4
KAN06	Argonia West S	0.54	38		Pg	23 50 40.4	-0.4
KAN09	Caldwell North	0.61	59	Pg	Pg	23 50 41.7	-0.4
KAN09					Sg	23 50 50.3	+0.2
KAN13	South Haven SW	0.67	73	Pg	Pg	23 50 42.6	-0.5
KAN13				Sg	Sg	23 50 51.8	0.0
U32A	Winter Ranch,	0.73	233		Pg	23 50 43.7	-0.7
U32A				Sg	Sg	23 50 53.7	-0.2
U32A	Winter Ranch,	0.73	233	P	Pg	23 50 43.6	-0.7
	baz=53,SNR=37						
BLOK	Blackwell	0.85	94		Pg	23 50 46.1	-0.5
OK029	Liberty Lake	1.22	147		Pg	23 50 52.8	-0.8
OK029				Sg	Sg	23 51 09.4	0.0
BCOK	Bluff Creek, N	1.28	155		Pn	23 50 53.5	-1.2
BCOK					Sg	23 51 11.3	-0.1
T35A	Sooner Cattle	1.42	86		Pn	23 50 56.1	-0.5
T35B	Sooner Cattle	1.42	86	P	Pn	23 50 56.1	-0.5
	baz=266,SNR=52						
T35B				S	Sb	23 51 15.2	-0.2
	baz=266						
OK031	S. Brethren Rd	1.44	126		Pn	23 50 56.6	-0.4
OK025	Westminster Rd	1.45	148		Pn	23 50 56.7	-0.3
OK025				IAmb_Lg		23 51 19.2	
	comp=Z,64nm,0.7s						
OK034	N. Norfolk Rd.	1.49	122		Pn	23 50 57.3	-0.4
OK030	Cody Creek RV	1.50	126		Pn	23 50 57.5	-0.2
OKCFA	Oklahoma City	1.55	154		Pn	23 50 57.8	-0.7
OKCFA	Oklahoma City	1.55	154	P	Pn	23 50 58.3	-0.1
	baz=335						
OKCFA				S	Sb	23 51 19.5	+0.2
	baz=335						
OKCSW	OKLAHOMA CITY	1.56	154		Pn	23 50 58.6	-0.1
R32A	Long Quarter,	1.64	348		Pn	23 50 59.7	0.0
R32A	Long Quarter,	1.64	348	P	Pn	23 50 59.7	0.0
	baz=168,SNR=28						
R32A				S	Sb	23 51 21.7	-0.2
	baz=168						
FNO	Franklin	1.71	155		Pn	23 51 00.8	+0.1
TUL1	Leonard	2.20	114		Pn	23 51 07.6	+0.2
TUL1				IAmb_Lg		23 51 42.1	
	comp=Z,46nm,0.9s						
X34A	Smith Ranch, M	2.24	171		Pn	23 51 08.7	+0.7
CBKS	Cedar Bluff	2.31	330		Pn	23 51 08.9	0.0
CBKS	Cedar Bluff	2.31	330	P	Pn	23 51 09.6	+0.7
	baz=150,SNR=11						
CBKS				S	Sn	23 51 38.6	+1.0
	baz=150						
KSU1	Kansas State U	2.63	29		Pn	23 51 13.8	+0.4
KSU1				IAmb_Lg		23 51 58.5	
	comp=Z,32nm,0.8s						
LOOK	Love County	2.96	162		Pn	23 51 18.3	+0.4
U38A	Gravette	3.15	96		Pn	23 51 20.0	-0.4
U38A				IAmb_Lg		23 52 17.3	
	comp=Z,25nm,0.8s						
X37A	Clayton	3.24	132	Pn	Pn	23 51 21.5	-0.3
X37A				IAmb_Lg		23 52 18.0	
	comp=Z,18nm,0.7s						
X37A	Clayton	3.24	132	P	Pn	23 51 22.0	+0.3
	baz=314,SNR=11						
AMTX	Amarillo	3.38	236		Pn	23 51 24.3	+0.7
AMTX				IAmb_Lg		23 52 21.6	
	comp=Z,23nm,0.9s						
HHAR	Hobbs	3.53	97		Pn	23 51 25.7	0.0
HHAR				IAmb_Lg		23 52 30.0	
	comp=Z,17nm,1.0s						
Z35A	Perchaven, San	3.58	166	Pn	Pn	23 51 26.9	+0.6
N33A	J Bar K, Exete	3.97	9	Pn	Pn	23 51 30.2	-1.5
W39A	Magazine	3.98	113		Pn	23 51 32.5	+0.6
W39A	Magazine	3.98	113	P	Pn	23 51 32.1	+0.3
	baz=295,SNR=15						
S39A	Bolivar	4.04	76	Pn	Pn	23 51 32.5	-0.2
S39A				IAmb_Lg		23 52 43.0	
	comp=Z,12nm,0.9s						
S39A	Bolivar	4.04	76	P	Pn	23 51 32.9	+0.1
	baz=259						
ABTX	Abilene, Hawle	4.33	195	Pn	Pn	23 51 36.3	-0.4
U40A	Yellville	4.38	94		Pn	23 51 36.9	-0.6
U40A	Yellville	4.38	94	P	Pn	23 51 37.4	-0.1
	baz=278						
U40A				P	Pn	23 51 37.4	-0.1
	baz=278						
MIAR	Mount Ida	4.45	119	Pn	Pn	23 51 38.6	+0.3
MIAR				IAmb_Lg		23 52 51.4	
	comp=Z,19nm,1.1s						
MIAR	Mount Ida	4.45	119	P	Pn	23 51 38.9	+0.7
	baz=302,SNR=9.9						
Z38A	Mt. Pleasant	4.46	142	IAmb_Lg		23 53 03.9	
	comp=Z,14nm,0.8s						
BGNE	Belgrade	4.58	1	Pn	Pn	23 51 40.0	-0.2
BGNE				IAmb_Lg		23 53 03.1	
	comp=Z,20nm,0.7s						
BGNE	Belgrade	4.58	1	P	Pn	23 51 40.0	-0.2
	baz=181,SNR=11						
MSTX	Muleshoe	4.65	234		Pn	23 51 41.4	+0.2
P38A	Dawn	4.67	52		Pn	23 51 41.1	-0.1
MGMO	Mountain Grove	4.82	84		Pn	23 51 43.1	-0.3
MGMO				IAmb_Lg		23 53 06.3	
	comp=Z,9.5nm,0.8s						
T25A	Trinidad	4.92	276	IAmb_Lg		23 53 12.0	
	comp=Z,18nm,0.7s						
R40A	Maddies Statio	4.99	71	Pn	Pn	23 51 46.1	+0.3
X40A	Basin Creek Fa	5.00	116		Pn	23 51 46.5	+0.6
237A	Washetta, Mont	5.22	156		Pn	23 51 47.9	-1.0
L34A	Svendsen Farm,	5.35	15	Pn	Pn	23 51 49.7	-0.9
N38A	Joes South For	5.59	43	Pn	Pn	23 51 53.3	-0.6
CCM	Cathedral Cave	5.73	75	IAmb_Lg		23 53 33.7	
	comp=Z,9.6nm,0.8s						
435B	Jarrell	6.05	174	IAmb_Lg		23 53 48.6	
	comp=Z,12nm,0.8s						
PBMO	Poplar Bluff	6.29	88	IAmb_Lg		23 53 52.6	
	comp=Z,13nm,0.8s						
N41A	Harden Midland	6.97	54	IAmb_Lg		23 54 16.9	
	comp=Z,13nm,0.8s						

IDC 05 23:51:17.4±7.3, **49°33S**×**114°66E**, **h0**^{km}, **mb3.7**/3, **mb1 4.0**/3, **mb1mx3.8**/21, **mbtmp3.7**/3, **MS3.2**/1, **Ms1 3.2**/1, **ms1mx2.7**/18, **Error ellipse: s-maj=177.2km s-min=62.8km az=167.0**, **Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	Cape Leeuwin H	14.43	358	T	T	00 10 24.1	
	baz=175,slow=73,SNR=22						
H01W1	Cape Leeuwin H	14.43	358	T	T	00 10 24.8	
	baz=175,slow=73,SNR=22						
H01W3	Cape Leeuwin H	14.44	358	T	T	00 10 24.3	
	baz=175,slow=73,SNR=23						
ASAR	Alice Springs	29.75	38	P	P	23 57 25.4	-0.1
	0.2nm,0.6s,baz=208,slow=8.2,SNR=5.6						
ASAR				LR	LR	00 08 18.0	
	comp=Z,45nm,19.2s,baz=129,slow=34						
WRA	Warramunga Arr	33.29	35	P	P	23 57 56.7	0.0
	0.6nm,0.5s,baz=202,slow=10,SNR=6.5						
CMAR	Chiang Mai Arr	68.91	344	P	P	00 02 24.0	+0.1
	0.4nm,0.3s,baz=198,slow=5.4,SNR=1.8						
INK	Inuvik	142.42	34	PKP	PKPdf	00 10 49.9	-0.7
	0.8nm,1.0s,baz=252,slow=3.2,SNR=2.8						

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*JMA **06** 00:04:10.9±0.3, 23°91N×122°44E, h15^{km}±4^{km}, M2.5*
*TAP **06** 00:04:12.1, 23°98N×122°43E, h27^{km}, ML3.0, C*
ISC 06 00:04:11.5±1.3, **23°93N**±0°03×**122°43E**±0°02, **h19**^{km}±3^{km}, **n81**, σ**0^{s}59**/109, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.70	42	*e*S	Sb	00 04 34.0	-0.3
EHP	Heping Village	0.73	301	*e*P	Pb	00 04 25.0	-0.6
	baz=298						
YOJ	Yonaguni jima	0.75	45	*e*P	Pg	00 04 26.2	-0.1
	baz=47						
YOJ	Yonaguni jima	0.75	45	*e*S	Sb	00 04 34.7	-1.0
TWD	Chiawan	0.78	281	*e*P	Pb	00 04 25.7	-0.7
	baz=277						
TWD				*e*S	Sb	00 04 36.7	+0.2
	baz=277						
EWUT	Wuta	0.78	311	*e*P	Pb	00 04 26.1	-0.4
	baz=308						
EWUT				*e*S	Sg	00 04 37.3	0.0
	baz=308						
ENA	Nanau	0.80	308	*e*P	Pb	00 04 26.4	-0.4
	baz=313						
ENA				*e*S	Sb	00 04 37.5	+0.4
	baz=313						
NACB	Ninganchiao	0.80	288	*i* P	Pb	00 04 26.4	-0.3
	baz=271						
NACB				*e*S	Sg	00 04 37.8	0.0
	baz=271						
ETM	Tongmen	0.86	272	*e*P	Pb	00 04 27.2	-0.5
	baz=260						
ETM				*e*S	Sg	00 04 39.5	-0.1
	baz=260						
TWC	Suao	0.86	322	*e*P	Pb	00 04 27.0	-0.8
	baz=320						
ESL	Shilin	0.92	263	*i* P	Pb	00 04 28.3	-0.5
	baz=259						
ESL				*i* S	Sb	00 04 40.6	0.0
	baz=259						
NDS	Dongshan	0.95	317	*e*P	Pb	00 04 29.1	-0.3
	baz=315						
NDS				*e*S	Sg	00 04 42.5	-0.2
	baz=315						
HGSD	Ruisui	1.02	245	*e*P	Pb	00 04 30.4	-0.1
	baz=242						
TWE	Neicheng	1.05	319	*e*P	Pb	00 04 30.6	-0.4
	baz=317						
NTC	Toucheng	1.07	329	*i* P	Pb	00 04 31.3	0.0
	baz=327						
NDT	Datong Townshi	1.07	309	*i* P	Pb	00 04 31.2	-0.1
	baz=306						
NDT				*e*S	Sn	00 04 46.1	+0.3
	baz=306						
NNSB	Datong	1.07	298	*i* P	Pb	00 04 31.2	-0.3
	baz=284						
WHF	Hehuan Shan	1.08	281	*e*P	Pb	00 04 31.1	-0.8
	baz=266						
NNS	Nan Shan	1.09	298	*i* P	Pb	00 04 31.5	-0.3
	baz=283						
NNS				*e*S	Sn	00 04 46.3	-0.1
	baz=283						
EHY	Hungye	1.10	247	*i* P	Pn	00 04 31.3	-0.5
	baz=245						
EHY				*e*S	Sb	00 04 45.6	-0.2
	baz=245						
FUSS	Fushou	1.13	286	*e*P	Pn	00 04 32.0	-0.4
	baz=283						
FUSS				S	Sb	00 04 47.1	+0.2
	baz=283						
CHGB	Renai	1.15	277	*e*P	Pn	00 04 32.3	-0.5
	baz=263						
YULB	Yu-li	1.17	243	*e*P	Pn	00 04 32.3	-0.5
	baz=240						
TIPB	Shuangxi	1.17	332	*e*P	Pb	00 04 33.0	-0.1
	baz=331						
TIPB				*e*S	Sn	00 04 48.4	+0.1
	baz=331						
EYUL	Yuli	1.17	240	*e*P	Pn	00 04 33.0	+0.2
	baz=238						
TWF1	Yuli	1.19	241	*i* P	Pn	00 04 32.7	-0.3
	baz=239						
TWT	Tachien	1.19	286	*e*P	Pb	00 04 33.6	+0.1
	baz=272						
NWLT	Wulai	1.19	315	*i* P	Pn	00 04 33.3	+0.1
	baz=313						
VWDT	VWDT	1.19	262	*e*P	Pn	00 04 32.9	-0.2
	baz=259						
VWDT				*e*S	Sb	00 04 48.4	-0.1
	baz=259						
TDCB	Techi	1.20	286	*e*P	Pn	00 04 33.2	-0.2
	baz=272						
YHNB	Yeheng	1.21	308	*e*P	Pn	00 04 33.3	-0.1
	baz=305						
NSK	Sanguang	1.23	307	*i* P	Pn	00 04 33.6	0.0
	baz=292						
NSK				*e*S	Sn	00 04 49.9	+0.2
	baz=292						
IRIF	Iriomote-Funau	1.25	71	*e*S	Sn	00 04 50.7	+0.4
HATJ	Hateruma jima	1.27	84	*e*S	Sb	00 04 51.1	+0.5
FULB	Fuli	1.27	235	*e*P	Pn	00 04 34.5	+0.3
	baz=233						
NWF	Wu-fen Shan	1.28	333	*e*P	Pn	00 04 34.2	-0.2
	baz=331						
NWF				*e*S	Sb	00 04 51.6	+0.6
	baz=331						
WFSB	Wu-fen Shan	1.28	333	*e*P	Pn	00 04 34.2	-0.1
	baz=331						
CHKT	Chengkung	1.28	230	*e*P	Pn	00 04 34.5	+0.2
	baz=228						
TWA	Mucha	1.30	324	*e*P	Pb	00 04 35.2	0.0

	baz=339						
NHDH	Xindian Distri	1.31	321	eP	Pn	00 04 35.1	+0.3
	baz=334						
TATO	Taipei	1.35	321	eP	Pb	00 04 35.7	-0.4
	baz=319						
SSLB	Suanglung	1.36	264	eP	Pn	00 04 35.6	+0.2
	baz=262						
WCS	Beigang Elemen	1.39	275	eP	Pn	00 04 36.3	+0.4
	baz=273						
WHP	Taichung City	1.40	285	eP	Pb	00 04 37.2	+0.2
	baz=271						
SMLT	Sun Moon Lake	1.40	268	eP	Pn	00 04 36.1	0.0
	baz=265						
SMLT				eS	Sn	00 04 54.4	+0.3
	baz=265						
EDH	Donghe	1.41	227	eP	Pn	00 04 36.0	0.0
	baz=226						
TYC	Yuchr	1.44	269	eP	Pn	00 04 36.6	+0.1
	baz=266						
TYC				eS	Sn	00 04 55.0	+0.1
	baz=266						
YM01	YM01	1.44	327	eP	Pn	00 04 36.9	+0.4
	baz=326						
LIOB	Emei	1.47	299	eP	Pb	00 04 37.9	-0.3
	baz=297						
NSTT	Nanjuang	1.48	298	eP	Pn	00 04 37.7	+0.7
	baz=296						
JKRS	Kuro-shima	1.48	78	P	Pn	00 04 37.5	+0.5
JKRS				S	Sb	00 04 57.2	+0.5
ELDTW	Lidau	1.49	241	eP	Pn	00 04 37.1	-0.3
	baz=238						
ALS	Alishan	1.54	255	eP	Pn	00 04 37.9	-0.4
	baz=252						
ALS				eS	Sn	00 04 58.0	+0.1
	baz=252						
WJS	Zhushan	1.56	266	eP	Pn	00 04 38.8	+0.6
	baz=264						
WJS				eS	Sb	00 04 59.9	+0.8
	baz=264						
WNT	Mingjian	1.60	268	eP	Pb	00 04 39.9	-0.5
	baz=266						
JIJ	Ishigaki jima	1.62	74	S	Sn	00 04 58.8	-0.7
CHN5	Tsauling	1.64	259	eP	Pb	00 04 40.5	-0.6
	baz=246						
CHN5				eS	Sb	00 05 01.2	-0.2
	baz=246						
TWGBT	Beinan	1.66	228	eP	Pn	00 04 40.0	+0.4
	baz=240						
TWGBT				eS	Sn	00 04 59.2	-1.2
	baz=240						
TWG	Pinlang	1.67	229	eP	Pn	00 04 40.1	+0.5
	baz=240						
TWG				eS	Sn	00 04 59.4	-1.1
	baz=240						
STYH	Taoyuan	1.69	244	eP	Pn	00 04 40.7	+0.7
	baz=233						
STYH				eS	Sn	00 05 01.8	+0.6
	baz=233						
STYT	Tauyuan	1.71	244	eP	Pn	00 04 40.6	+0.2
	baz=233						
STYT				eS	Sn	00 05 02.3	+0.5
	baz=233						
WDLH	Douliu	1.75	262	eP	Pn	00 04 41.5	+0.8
	baz=260						
TPUB	Ta-pu	1.77	249	eP	Pn	00 04 42.1	+1.1
	baz=237						
WTP	Ta-pu	1.80	248	eP	Pb	00 04 43.0	-0.8
	baz=235						
JISG	Ishigakijimahi	1.84	69	P	Pn	00 04 42.3	+0.3
WRL	Guolierlin Hig	1.88	269	eP	Pb	00 04 44.1	-1.0
	baz=281						
WRL				eS	Sb	00 05 07.9	-0.3
	baz=281						
WTK	Tuku	1.88	263	eP	Pn	00 04 44.0	+1.3
	baz=261						
SLGT	Liugui	1.88	241	eP	Pn	00 04 43.8	+1.2
	baz=230						
SGST	Jiashian	1.89	244	eP	Pn	00 04 43.8	+1.0
	baz=232						
CHN1	Nanshi	1.90	247	eP	Pb	00 04 44.8	-0.7
	baz=245						
ECL	Taimali	1.90	226	eP	Pn	00 04 43.7	+0.9
	baz=235						
TWK	Hsinying	1.90	250	eP	Pn	00 04 44.3	+1.4
	baz=248						
SSD	Sandimen	2.03	235	eP	Pn	00 04 45.5	+0.9
	baz=226						
TSMG	Majia	2.04	234	eP	Pn	00 04 46.0	+1.1
	baz=225						
LAY	Lan-yu	2.05	203	eP	Pn	00 04 45.2	+0.2
	baz=202						
MASBT	Mashibuluo	2.11	232	eP	Pn	00 04 47.2	+1.5
	baz=223						
EAST	Anshuo	2.12	224	eP	Pn	00 04 47.4	+1.5
	baz=222						
SLIU	Shizi	2.27	222	eP	Pn	00 04 48.5	+0.5
	baz=229						
SCZT	Fangliau	2.28	227	eP	Pn	00 04 49.5	+1.4
	baz=218						
PHUB	P'eng-hu	2.65	262	eP	Pn	00 04 53.8	+0.6
	baz=259						
PHUB				eS	Sn	00 05 25.2	+0.4
	baz=259						
PNG	Penghu	2.66	263	eP	Pn	00 04 53.6	+0.3
	baz=260						
PNG				eS	Sn	00 05 25.5	+0.5
	baz=260						

KRSC 06 00:09:19.6±1.0,53°.13N×160°.87E,h78^{km}±13^{km},ML3.9,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.51	267	i P	Pn	00 09 34.8	+1.6
SPN				eS	Sn	00 09 44.0	+0.7
NLC	Nalytchevo	0.92	273	eP	Pn	00 09 39.3	+1.8
NLC				eS	Sn	00 09 51.7	+0.9
SDLR	Sedlovina	1.20	278	eP	Pn	00 09 42.9	+1.8
UGLR	Uglovaya	1.23	274	eP	Pn	00 09 43.7	+2.2
UGLR				eS	Sn	00 09 59.3	+1.4
KII	Karymskiy	1.24	318	eP	Pn	00 09 42.9	+1.4
KII				eS	Sn	00 09 58.7	+0.7
SMAR	Somma	1.25	277	eP	Pn	00 09 43.7	+1.9
DALK	Dalny	1.28	266	eP	Pn	00 09 43.5	+1.6
DALK				eS	Sn	00 09 59.5	+0.8
KRER	Koryakskii	1.29	279	eP	Pn	00 09 44.3	+2.1
KRER				eS	Sn	00 10 00.8	+1.6
AVH	Avacha	1.29	277	eP	Pn	00 09 44.3	+2.2
AVH				eS	Sn	00 10 01.0	+1.9
PET	Petropavlovsk	1.34	266	eP	Pn	00 09 44.7	+2.0
PET				eS	Sn	00 10 01.0	+0.9
KOK	Koryaka	1.35	278	eP	Pn	00 09 44.9	+2.0
KOK				eS	Sn	00 10 01.9	+1.3
RUS	Russkaya	1.59	245	eP	Pn	00 09 48.2	+2.3
RUS				eS	Sn	00 10 07.2	+1.3
MTVR	Mutnovka	1.75	249	eP	Pn	00 09 50.6	+2.4
MTVR				eS	Sn	00 10 11.7	+1.7
GNL	Ganaly	1.84	289	eP	Pn	00 09 52.6	+3.3
GNL				eS	Sn	00 10 14.9	+2.9
ASAK	Asacha	1.95	249	eP	Pn	00 09 53.7	+2.9
ASAK				eS	Sn	00 10 17.2	+2.6
TUMD	Tumrok D	2.09	353	eP	Pn	00 09 54.3	+1.7
TUMD				eS	Sn	00 10 18.3	+0.4
KDTR	Khodutka, Kamc	2.16	233	eP	Pn	00 09 55.8	+2.3
KDTR				eS	Sn	00 10 20.1	+0.7
APC	Apacha	2.25	266	eP	Pn	00 09 57.3	+2.6
APC				eS	Sn	00 10 23.8	+2.2
MIPR	Malaya Ipel'ka	2.64	253	eP	Pn	00 10 02.6	+2.6
KMNR	Kamenistaya	2.66	352	eP	Pn	00 10 03.5	+3.3
PAU	Pauzhetka	3.00	238	eP	Pn	00 10 07.7	+2.9
KBTR	Krutoberegovo	3.28	19	eP	Pn	00 10 11.4	+2.8
BKI	Bering	3.65	53	eP	Pn	00 10 16.4	+2.9
BKI				eS	Sn	00 10 55.4	0.0
SKR	Severo-Kuril's	3.83	232	eS	Sn	00 11 01.3	+1.5

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*ATH **06** 00:41:08.6,36°.04N×27°.01E,h44^{km}±18^{km},ML2.6/4,Error ellipse: s-maj=19.1km s-min=1.5km az=126.0*
*THE **06** 00:41:11.2,36°.03N×27°.06E,h27^{km}±6^{km},ML2.5/4,Error ellipse: s-maj=6.2km s-min=0.6km az=328.0*
*NIC **06** 00:41:11.2±0.0,35°.59N×27°.45E,h30^{km}±1^{km},Ml3.6/2*
*DDA **06** 00:41:13.6,36°.34N×27°.31E,h41^{km}±2^{km},ML2.3*
ISC 06 00:41:08.1±1.1,**35°.98N**±0°.03×**27°.18E**±0°.03,**h29**^{km}±13^{km}, **n56,**σ1^{s}.**58**/80,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOSK	Kos Island	0.78	348	P	Pn	00 41 25.0	+1.8
ARG	Arkhangelos	0.80	73	P	Pn	00 41 26.5	+3.0
ARG				S	Sn	00 41 38.4	+4.0
	450nm,0.2s						
ARG	Arkhangelos	0.80	73	P	Pn	00 41 26.5	+3.0
ARG				S	Sn	00 41 38.2	+3.8
ARG				AML	AML	00 41 39.1	
	comp=N,676µm,0.2s						
ARG				AML	AML	00 41 39.4	
	comp=E,1142µm,0.2s						
ARG	Arkhangelos	0.80	73	P	Pn	00 41 26.4	+3.0
ARG				S	Sn	00 41 38.5	+4.1
DAT	Datca	0.81	23	P	Pn	00 41 25.7	+2.0
DAT				S	Sn	00 41 37.3	+2.4
DAT	Datca	0.81	23	i P	Pn	00 41 24.7	+0.9
DAT				i S	Sn	00 41 36.2	+1.3
BDRM	Kayabasi	1.10	11	i P	Pn	00 41 28.1	+0.5
BDRM				i S	Sn	00 41 39.0	-2.9
TURN	Turunc	1.17	47	i P	Pb	00 41 29.8	+0.2
TURN				i S	Sn	00 41 43.1	-0.3
TURN				IAML		00 41 45.0	
	comp=N,85nm,0.5s						
ZKR	Zakros	1.17	222	P	Pb	00 41 30.6	+0.9
ZKR				S	Sb	00 41 45.4	+0.9
	comp=N,170nm,0.3s						
ZKR	Zakros	1.17	222	P	Pb	00 41 30.5	+0.7
ZKR				S	Sb	00 41 44.5	0.0
ZKR				AML	AML	00 41 47.0	
	comp=E,500µm,0.3s						
ZKR				AML	AML	00 41 51.9	
	comp=N,198µm,0.3s						
ZKR	Zakros	1.17	222	P	Pb	00 41 30.5	+0.7
ZKR				S	Sb	00 41 45.5	+1.0
STIA	Sitia Lasithi	1.18	229	P	Pb	00 41 30.3	+0.4
STIA				S	Sb	00 41 45.5	+0.7
THR8	Santorini-Mono	1.44	288	P	Pn	00 41 32.6	+0.3
THR8	Santorini-Mono	1.44	288	P	Pn	00 41 32.5	+0.3
SANT	Santorini	1.45	286	P	Pn	00 41 32.8	+0.3
DALY	Dalyan (Mula)	1.45	55	i P	Pb	00 41 35.3	+0.8
DALY				i S	Sb	00 41 52.7	+0.3
DALY				IAML		00 41 56.0	
	comp=N,72nm,0.6s						
NPS	Neapolis	1.47	241	P	Pn	00 41 33.6	+0.9
NPS				S	Sn	00 41 51.3	+0.4
	comp=N,292nm,0.2s						
NPS	Neapolis	1.47	241	P	Pn	00 41 33.6	+0.9
NPS				S	Sn	00 41 50.6	-0.4
NPS				AML	AML	00 41 53.0	
	comp=E,574µm,0.2s						
NPS				AML	AML	00 41 53.1	
	comp=N,694µm,0.5s						
THR2	Thira island,	1.49	289	P	Pn	00 41 33.4	+0.5
THR2	Thira island,	1.49	289	P	Pn	00 41 33.4	+0.5
THR6	Thira Island,	1.49	285	P	Pn	00 41 33.5	+0.6
THR6	Thira Island,	1.49	285	P	Pn	00 41 33.6	+0.6
THT2	Imerovigli	1.49	288	P	Pn	00 41 32.8	-0.2
THR3	Thira Island,	1.50	287	P	Pn	00 41 33.6	+0.5
THR3	Thira Island,	1.50	287	P	Pn	00 41 33.7	+0.5
THR5	Thira Island,	1.54	287	P	Pn	00 41 34.2	+0.5
THR5	Thira Island,	1.54	287	P	Pn	00 41 34.4	+0.6
MULA	Mugla, Merkez-	1.57	35	i P	Pb	00 41 36.8	+0.3
MULA				i S	Sn	00 41 54.5	+1.0
MULA				IAML		00 41 55.0	
	comp=E,40nm,0.4s						
FETY	Fethiye	1.67	67	P	Pb	00 41 37.7	-0.5
FETY	Fethiye	1.67	67	i P	Pb	00 41 37.6	-0.5
FETY				i S	Sb	00 41 57.3	-1.5
FETY				IAML		00 42 02.0	
	comp=E,24nm,0.4s						
FETY				IAML		00 42 05.0	
	comp=N,40nm,0.9s						
GCAM	G?zelcaml?	1.71	1	i P	Pn	00 41 36.4	+0.3
APE	Apeiranthos	1.71	310	P	Pn	00 41 36.4	+0.2
SMG	Samos	1.74	351	P	Pn	00 41 37.1	+0.6
AYDN	Tasoluk	1.77	18	i P	Pn	00 41 38.3	+1.5
AYDN				i S	Sn	00 41 57.8	-0.6
KSTL	Kastelli Herak	1.85	249	P	Pn	00 41 36.8	-1.1
KSTL				S	Sn	00 41 56.3	-4.0
	comp=N,58nm,0.4s						
KSL	Kastellorizon	1.95	84	P	Pb	00 41 41.2	-1.8
KSL				S	Sb	00 42 03.9	-3.0
AKAS	Kas	1.98	82	i P	Pn	00 41 40.9	+1.1
IDI	Anoyia	1.99	250	P	Pn	00 41 40.3	+0.4
IDI	Anoyia	1.99	250	P	Pn	00 41 40.4	+0.4
IDI				AML	AML	00 42 05.3	
	comp=N,143µm,0.3s						
IDI				AML	AML	00 42 08.7	
	comp=E,149µm,0.2s						
TAVA	DENIZLI_Tavas	2.03	43	i P	Pn	00 41 42.3	+1.8
CAEL	Denizli, Camel	2.06	56	i P	Pb	00 41 45.0	0.0
CAEL				i S	Sb	00 42 09.8	-0.4
CAEL				IAML		00 42 17.0	
	comp=N,111nm,0.7s						
CAEL				IAML		00 42 22.0	
	comp=E,96nm,0.7s						
SIVA	Sivas	2.16	244	P	Pn	00 41 44.0	+1.8
SIVA	Sivas	2.16	244	P	Pn	00 41 43.9	+1.7
GOLH	Golhisar	2.29	56	i P	Pn	00 41 45.1	+1.1
GOLH				i S	Sn	00 42 11.1	-0.2
GOLH				IAML		00 42 20.0	
	comp=E,34nm,0.6s						
GOLH				IAML		00 42 21.0	
	comp=N,34nm,0.5s						
ELL	Elmali	2.33	70	P	Pb	00 41 47.2	-2.3
ELL				S	Sb	00 42 15.0	-2.9
VAM	Vamos	2.50	258	P	Pn	00 41 47.2	+0.4
AKUM	Antalya-Kumluc	2.58	82	i P	Pn	00 41 48.5	+0.5
AKUM				i S	Sn	00 42 14.7	-3.7
KORT	Korkueli	2.75	67	i P	Pb	00 41 54.9	-1.7
KORT				i S	Sn	00 42 22.7	0.0
KORT				IAML		00 42 30.0	
	comp=N,16nm,0.5s						
PASA	Karahalli, USA	2.99	37	i P	Pn	00 41 55.1	+1.3
USAK	Uak-Merkez	3.09	28	i P	Pn	00 41 56.3	+1.3
AKMS	Akamas	4.31	101	P	Pn	00 42 11.7	-0.2
AKMS				AML	AML	00 42 57.7	
	comp=N,0.2nm,0.8s						
AKMS				AML	AML	00 42 58.9	
	comp=N,0.2nm,1.1s						
ALFC	Alefka	4.49	99	P	Pn	00 42 14.1	-0.2
ALFC				AML	AML	00 43 02.3	
	comp=N,0.2nm,0.6s						
ALFC				AML	AML	00 43 04.7	
	comp=N,0.2nm,0.7s						
NATA	Nata	4.56	104	P	Pn	00 42 14.8	-0.5
ASGA	Asgata	5.10	102	P	Pn	00 42 22.2	-0.4
CSS	Mathiatis	5.12	100	P	Pn	00 42 22.8	-0.1
MVOU	Mavrovouni	5.35	99	P	Pn	00 42 26.2	+0.1

IDC 06 00:51:46.5±3.3,**5°.19S**×**151°.71E,h0**^{km},**mb3.9**/3,
mb1 4.1/3,**mb1mx3.5**/45,**mbtmp3.9**/3,**MS2.1**/1,**Ms1 2.1**/1,
ms1mx2.0/36,**Error ellipse: s-maj=114.7km**
s-min=45.7km az=121.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.16	227	Sn	Sn	00 54 29.1	-0.8
	1.9nm,0.3s,baz=135,slow=22,SNR=1.9						
PMG				LR	LR	00 55 00.3	
	comp=Z,15nm,18.8s,baz=90,slow=32						
WRA	Warramunga Arr	22.38	228	P	P	00 56 46.8	+0.3
	1.8nm,0.6s,baz=52,slow=9.9,SNR=24						
ASAR	Alice Springs	25.14	221	P	P	00 57 13.7	+0.2
	2.4nm,0.8s,baz=58,slow=8.6,SNR=37						
FITZ	Fitzroy Crossi	28.52	241	P	P	00 57 43.4	-0.6
	1.3nm,0.6s,baz=59,slow=8.0,SNR=8.4						
TORD	Torodi Ar. Bea	149.38	287	PKPbc	PKPbc	01 11 38.1	-0.4
	1.1nm,0.6s,baz=68,slow=3.1,SNR=8.8						

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*TUL **06** 01:01:41.9±1.3,36°.47N±0°.02×98°.76W±0°.04,h6^{km}±5^{km}, ML4.5,mb4.1/21(NEIC),mb_Lg4.5/106(NEIC), Mwr4.0/59(NEIC),Error ellipse: s-maj=4.8km s-min=2.8km az=97.0*
*IDC **06** 01:01:41.9±0.7,36°.56N×98°.82W,h0^{km},mb4.1/6, mb1 4.3/15,mb1mx3.9/60,mbtmp4.1/15,ML4.2/8,MS3.4/7, Ms1 3.4/7,ms1mx3.1/46,Error ellipse: s-maj=11.6km s-min=9.9km az=157.0*
*NEIC **06** 01:01:41.9,36°.47N×98°.76W,h6^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.36; $M_{\theta\theta}$1.13; $M_{\phi\phi}$-0.77; $M_{r\theta}$-0.26; $M_{\theta\phi}$0.38; $M_{\phi r}$-0.22; Fault plane solution: $M_0$1.12000×10^{15} NP1:ϕ_s303.97000°, δ69.56000°,λ-5.65000°. NP2:ϕ_s35.95000°,δ84.70000°, λ-159.47000°. Principal axes: T 1.2616, Plg10.0000°, Azm168.0000°; N -0.3624, Plg69.0000°, Azm50.0000°; P -0.8992, Plg18.0000°, Azm262.0000°;*
*ANF **06** 01:01:41.8±0.2,36°.50N×98°.72W,h3^{km},ML5.3/25 Error ellipse: s-maj=2.8km s-min=2.4km az=141.0*
*NEIC **06** 01:01:42.9±1.2,36°.47N±0°.02×98°.74W±0°.03,h3^{km}±6^{km}, Error ellipse: s-maj=4.2km s-min=1.9km az=71.0*
ISC 06 01:01:41.0±1.1,**36°.51N**±0°.02×**98°.67W**±0°.02,**h1**^{km}±8^{km},
n369,σ1^{s}.**47**/407,**mb4.2**/7,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.29	244	Pg	Pg	01 01 46.7	+0.1
U32A				Sg	Sg	01 01 50.1	-0.3
U32A	Winter Ranch,	0.29	244	P	Pg	01 01 46.7	+0.1
	baz=73,SNR=1000						
U32A				S	Sg	01 01 50.1	-0.3
	baz=73						
OK032	Salt Plains WL	0.47	52	Pg	Pg	01 01 52.7	+2.6
OK032				Sg	Sb	01 02 00.6	+0.8
CROK	Carrier	0.56	90	Pg	Pg	01 01 54.1	+2.5
CROK				Sg	Sb	01 02 02.9	+0.8
KAN14	Manchester OK	0.72	52		Pb	01 01 57.4	+0.9
KAN14				Sg	Sb	01 02 08.3	+1.4
GC02	Grant County #	0.74	62	Pg	Pg	01 01 57.1	+2.0
GC02				Sg	Sb	01 02 08.8	+1.5
KAN10	Anthony SW Sta	0.77	37	Pg	Pb	01 01 58.1	+0.9
KAN16	Harper SW Stat	0.87	34		Pb	01 01 59.8	+1.0
KAN17	Caldwell West	0.90	54	Pg	Pg	01 02 00.6	+2.3
KAN17				Sg	Sb	01 02 13.6	+1.5
KAN08	Anthony NE Sta	0.91	38		Pg	01 02 00.6	+2.2
KAN08				Sg	Sb	01 02 13.9	+1.6
KAN12	Harper NE Stat	0.95	34	Pg	Pb	01 02 01.4	+1.0
KAN01	Argonia South	0.98	48	Pg	Pb	01 02 01.9	+1.2
KAN06	Argonia West S	0.99	41		Pb	01 02 02.3	+1.4
KAN09	Caldwell North	1.05	53	Pg	Pg	01 02 03.3	+2.1
KAN13	South Haven SW	1.08	62		Pg	01 02 03.6	+1.9
BLOK	Blackwell	1.20	77	Pg	Pg	01 02 05.6	+1.6
BCOK	Bluff Creek, N	1.21	134	Pg	Pg	01 02 04.9	+0.7
OK029	Liberty Lake	1.22	125	Pg	Pg	01 02 05.1	+0.9
OK009	Oakdale Elemen	1.37	132		Pn	01 02 07.7	+0.4
OK025	Westminster Rd	1.42	130		Pn	01 02 08.7	+0.6
OK001	Jones High Sch	1.47	130		Pn	01 02 09.5	+0.9
OK005	Luther M Schoo	1.47	125		Pn	01 02 09.7	+1.0
OKCFA	Oklahoma City	1.47	137		Pn	01 02 08.7	0.0
OKCSW	OKLAHOMA CITY	1.49	137		Pn	01 02 09.4	+0.5
OK031	S. Brethren Rd	1.58	110	Pn	Pn	01 02 11.4	+1.2
FNO	Franklin	1.62	140	Pn	Pn	01 02 11.7	+1.0
OK030	Cody Creek RV	1.63	110		Pn	01 02 12.2	+1.3
OK034	N. Norfolk Rd.	1.66	107	Pn	Pn	01 02 12.8	+1.5
T35A	Sooner Cattle	1.78	76	Pn	Pn	01 02 14.9	+1.9
T35A				IAmb_Lg		01 02 43.7	
	comp=Z,1µm,0.9s						
T35B	Sooner Cattle	1.78	76	P	Pn	01 02 14.8	+1.8
	baz=256,SNR=654						
T35B				S	Sb	01 02 39.9	+2.5
	baz=256						
R32A	Long Quarter,	1.91	359		Pn	01 02 16.6	+1.8
R32A	Long Quarter,	1.91	359	P	Pn	01 02 16.6	+1.8
	baz=180,SNR=634						
R32A				S	Sg	01 02 43.0	+0.6
	baz=180						
X34A	Smith Ranch, M	2.02	160		Pn	01 02 17.6	+1.4
X34A				IAmb_Lg		01 02 46.2	
	comp=Z,2µm,0.9s						
TUL1	Leonard	2.41	104	Pn	Pn	01 02 23.2	+1.7
TUL1				IAmb_Lg		01 03 00.5	
	comp=Z,2µm,0.8s						
TUL1	Leonard	2.41	104	P	Pn	01 02 22.9	+1.4
	baz=284,SNR=129						
TUL1				S	Sn	01 02 54.0	+2.3
	baz=284						
TUL1	Leonard	2.41	104	P	Pn	01 02 23.0	+1.4
	baz=284,SNR=180						
TUL1				Sn	Sn	01 02 54.6	+2.9
	baz=284						
TUL1				Sb	Sb	01 02 57.3	+2.0
	baz=284						
CBKS	Cedar Bluff	2.45	340	Pn	Pn	01 02 23.6	+1.4
CBKS	Cedar Bluff	2.45	340	P	Pn	01 02 23.6	+1.4
	baz=160,SNR=75						
CBKS				S	Sb	01 02 56.1	-0.6
	baz=160						
CBKS	Cedar Bluff	2.45	340	P	Pn	01 02 23.5	+1.3
	baz=160,SNR=230						
CBKS				S	Sb	01 02 56.5	-0.2
	baz=160						
LOOK	Love County	2.79	154	Pn	Pn	01 02 27.6	+0.8
LOOK				IAmb_Lg		01 03 12.2	
	comp=Z,1µm,0.8s						
AMTX	Amarillo	2.94	237	Pn	Pn	01 02 29.3	+0.4
AMTX	Amarillo	2.94	237	P	Pn	01 02 29.6	+0.7
	baz=56,SNR=168						
AMTX	Amarillo	2.94	237	Pn	Pn	01 02 29.7	+0.7
	baz=56						
AMTX				Pb	Pb	01 02 34.2	0.0
	baz=56						
AMTX				Sb	Sb	01 03 11.2	+0.6
	baz=56						
KSU1	Kansas State U	3.06	32	Pn	Pn	01 02 32.5	+2.0
KSU1				IAmb_Lg		01 03 28.2	
	comp=Z,2µm,1.2s						
KSU1	Kansas State U	3.06	32	P	Pn	01 02 32.9	+2.3
	baz=212,SNR=94						
KSU1				S	Sn	01 03 11.5	+3.7
	baz=212						
KSU1	Kansas State U	3.06	32	P	Pn	01 02 32.8	+2.3
	baz=212,SNR=71						
X37A	Clayton	3.30	124	Pn	Pn	01 02 33.7	-0.2
X37A	Clayton	3.30	124	P	Pn	01 02 35.0	+1.1
	baz=306,SNR=43						
X37A				S	Sn	01 03 15.3	+1.4
	baz=306						
Z35A	Perchaven, San	3.38	159		Pn	01 02 35.3	+0.4
Z35A	Perchaven, San	3.38	159	P	Pn	01 02 35.8	+0.9
	baz=340,SNR=54						
Z35A				S	Sn	01 03 16.8	+1.1
	baz=340						
U38A	Gravette	3.46	90	Pn	Pn	01 02 37.3	+1.3
U38A				IAmb_Lg		01 03 39.4	
	comp=Z,828nm,0.8s						
U38A	Gravette	3.46	90	P	Pn	01 02 37.9	+1.9
	baz=272,SNR=49						
HHAR	Hobbs	3.83	92		Pn	01 02 42.5	+1.4
HHAR				IAmb_Lg		01 03 49.8	
	comp=Z,973nm,1.1s						
HHAR	Hobbs	3.83	92	S	Sn	01 03 29.1	+2.3
	baz=274						
ABTX	Abilene, Hawle	3.96	192	Pn	Pn	01 02 42.8	-0.1
ABTX	Abilene, Hawle	3.96	192	P	Pn	01 02 42.8	-0.1
	baz=11,SNR=37						
ABTX				S	Sn	01 03 31.0	+1.0
	baz=11						
ABTX	Abilene, Hawle	3.96	192	Pn	Pn	01 02 42.9	-0.1
	baz=11,SNR=40						
ABTX				Pb	Pb	01 02 50.7	-0.9
	baz=11						
KSCO	Kaye Shedlock'	4.01	310		Pn	01 02 44.1	+0.4
KSCO				IAmb_Lg		01 03 58.0	
	comp=Z,1µm,0.7s						
KSCO	Kaye Shedlock'	4.01	310	P	Pn	01 02 44.7	+1.0
	baz=128,SNR=35						
KSCO				Sn	Sn	01 03 31.1	-0.3
	baz=128						
KSCO				Sb	Sg	01 03 46.1	-3.6
	baz=128						
W39A	Magazine	4.18	107		Pn	01 02 46.7	+0.7
W39A				IAmb_Lg		01 04 03.6	
	comp=Z,1µm,0.9s						
W39A	Magazine	4.18	107	P	Pn	01 02 47.1	+1.2
	baz=289,SNR=58						
W39A				S	Sn	01 03 36.6	+1.2
	baz=289						
W39A	Magazine	4.18	107	P	Pn	01 02 47.1	+1.2
	baz=289,SNR=16						
W39A				Sb	Sg	01 03 53.2	-2.1
	baz=289						
MSTX	Muleshoe	4.20	234		Pn	01 02 45.8	-0.5
MSTX				IAmb_Lg		01 03 56.6	

	comp=Z,1µm,0.9s						
MSTX	Muleshoe	4.20	234	P	Pn	01 02 46.3	0.0
	baz=52,SNR=24						
MSTX	Muleshoe	4.20	234	Pn	Pn	01 02 46.3	0.0
	baz=52,SNR=22						
MSTX				Pb	Pb	01 02 54.8	-1.1
	baz=52						
MSTX				Sb	Sb	01 03 50.0	+2.8
	baz=52						
N33B	J Bar K, Exete	4.33	12	P	Pn	01 02 48.5	+0.5
	baz=193,SNR=70						
N33A	J Bar K, Exete	4.33	12	Pn	Pn	01 02 48.5	+0.5
N33A				IAmb_Lg		01 04 07.8	
	comp=Z,849nm,0.8s						
S39A	Bolivar	4.44	73		Pn	01 02 50.8	+1.4
S39A				IAmb_Lg		01 04 03.0	
	comp=Z,930nm,0.8s						
S39A	Bolivar	4.44	73	P	Pn	01 02 50.8	+1.4
	baz=256,SNR=96						
Z38A	Mt. Pleasant	4.44	136	Pn	Pn	01 02 50.2	+0.7
Z38A				IAmb_Lg		01 04 05.4	
	comp=Z,584nm,0.8s						
Z38A	Mt. Pleasant	4.44	136	P	Pn	01 02 50.0	+0.6
	baz=317,SNR=9.2						
MIAR	Mount Ida	4.59	114	Pn	Pn	01 02 52.9	+1.3
MIAR	Mount Ida	4.59	114	P	Pn	01 02 52.9	+1.3
	baz=296,SNR=99						
MIAR	Mount Ida	4.59	114	P	Pn	01 02 53.0	+1.3
	baz=296,SNR=19						
MIAR				S	Sn	01 03 46.3	+0.6
	baz=296						
WHTX	Lake Whitney,	4.62	167		Pn	01 02 52.0	0.0
WHTX	Lake Whitney,	4.62	167	P	Pn	01 02 52.2	+0.3
	baz=347,SNR=24						
WHTX				S	Sn	01 03 47.0	+0.8
	baz=347						
WHTX	Lake Whitney,	4.62	167	Pn	Pn	01 02 52.2	+0.3
	baz=347,SNR=8.2						
WHTX				Pb	Pb	01 03 03.0	+0.2
	baz=347						
WHTX				Sb	Sb	01 04 04.7	+5.7
	baz=347						
T25A	Trinidad	4.65	279	Pn	Pn	01 02 52.6	+0.1
T25A				IAmb_Lg		01 04 06.3	
	comp=Z,1µm,0.8s						
T25A	Trinidad	4.65	279	P	Pn	01 02 52.7	+0.1
	baz=97,SNR=48						
T25A				Sb	Sb	01 04 04.3	+4.3
	baz=97						
U40A	Yellville	4.70	90		Pn	01 02 53.7	+0.6
U40A				IAmb_Lg		01 04 12.7	
	comp=Z,874nm,0.8s						
U40A	Yellville	4.70	90	P	Pn	01 02 54.0	+1.0
	baz=273,SNR=104						
U40A				P	Pn	01 02 54.0	+1.0
	baz=273,SNR=104						
U40A	Yellville	4.70	90	P	Pn	01 02 54.8	+1.8
	baz=273,SNR=31						
BGNE	Belgrade	4.91	5	Pn	Pn	01 02 56.7	+0.7
BGNE				IAmb_Lg		01 04 30.0	
	comp=Z,776nm,0.7s						
BGNE	Belgrade	4.91	5	P	Pn	01 02 56.9	+0.9
	baz=185,SNR=55						
BGNE	Belgrade	4.91	5	P	Pn	01 02 56.9	+0.9
	baz=185,SNR=16						
N35A	Tabor	4.95	28		Pn	01 02 57.9	+1.3
N35A	Tabor	4.95	28	P	Pn	01 02 57.9	+1.3
	baz=209,SNR=18						
237A	Washetta, Mont	5.08	151		Pn	01 02 58.1	-0.2
237A				IAmb_Lg		01 04 32.6	
	comp=Z,847nm,0.9s						
237A	Washetta, Mont	5.08	151	P	Pn	01 02 57.8	-0.5
	baz=333,SNR=14						
P38A	Dawn	5.11	51	Pn	Pn	01 03 00.9	+2.2
P38A	Dawn	5.11	51	P	Pn	01 03 00.4	+1.7
	baz=234,SNR=60						
OGNE	Ogallala	5.15	330	Pn	Pn	01 03 00.5	+1.2
OGNE				IAmb_Lg		01 04 37.4	
	comp=Z,959nm,0.7s						
OGNE	Ogallala	5.15	330	P	Pn	01 03 00.9	+1.6
	baz=149,SNR=18						
OGNE	Ogallala	5.15	330	P	Pn	01 03 01.2	+1.8
	baz=149,SNR=23						
OGNE				Sb	Sg	01 04 22.2	-4.1
	baz=149						
X40A	Basin Creek Fa	5.17	111		Pn	01 03 00.7	+1.0
X40A				IAmb_Lg		01 04 32.4	
	comp=Z,750nm,0.8s						
X40A	Basin Creek Fa	5.17	111	P	Pn	01 03 00.6	+1.0
	baz=294,SNR=32						
X40A				P	Pn	01 03 00.6	+1.0
	baz=294,SNR=32						
X40A	Basin Creek Fa	5.17	111	P	Pn	01 03 00.8	+1.3
	baz=294,SNR=25						
MGMO	Mountain Grove	5.18	81		Pn	01 03 00.7	+1.0
MGMO				IAmb_Lg		01 04 33.0	
	comp=Z,543nm,0.7s						
WHAR	Wooly Hollow	5.32	101		Pn	01 03 03.2	+1.6
WHAR				IAmb_Lg		01 04 40.0	
	comp=Z,758nm,0.8s						
FCAR	Ozark Folk Cen	5.33	95		Pn	01 03 02.6	+0.8
FCAR				IAmb_Lg		01 04 33.3	
	comp=Z,517nm,0.8s						
WLAR	White Oak Lake	5.36	120		Pn	01 03 03.2	+1.1
WLAR				IAmb_Lg		01 04 46.7	
	comp=Z,809nm,0.8s						
W41B	Gary Mavity, V	5.39	102	P	Pn	01 03 03.5	+1.0
	baz=286,SNR=54						
W41B	Gary Mavity, V	5.39	102	P	Pn	01 03 04.1	+1.6
	baz=286,SNR=13						
W41B				S	Sn	01 04 03.8	-1.4
	baz=286						
R40A	Maddies Statio	5.40	69		Pn	01 03 03.8	+1.2
R40A	Maddies Statio	5.40	69	P	Pn	01 03 03.9	+1.2
	baz=252,SNR=70						
SDCO	Great Sand Dun	5.59	285		Pn	01 03 06.6	+0.9
SDCO				IAmb_Lg		01 04 48.9	
	comp=Z,477nm,0.9s						
SDCO	Great Sand Dun	5.59	285	P	Pn	01 03 06.8	+1.1
	baz=101,SNR=47						
SDCO	Great Sand Dun	5.59	285	P	Pn	01 03 06.4	+0.8
	baz=101,SNR=79						
SDCO				Sb	Sb	01 04 33.0	+5.7
	baz=101						
Q24A	Divide	5.69	297	P	Pn	01 03 07.0	0.0
	baz=114,SNR=7.2						
Q24A				Sb	Sb	01 04 36.1	+6.0
	baz=114						
L34A	Svendsen Farm,	5.73	17		Pn	01 03 07.2	-0.1
L34A	Svendsen Farm,	5.73	17	P	Pn	01 03 07.2	-0.1
	baz=199,SNR=26						
435B	Jarrell	5.78	171	Pn	Pn	01 03 07.4	-0.5
435B				IAmb_Lg		01 04 58.9	
	comp=Z,590nm,0.9s						
435B	Jarrell	5.78	171	P	Pn	01 03 07.7	-0.3
	baz=351,SNR=12						
435B	Jarrell	5.78	171	P	Pn	01 03 07.7	-0.3
	baz=351						
NATX	Nacogdoches	5.79	144		Pn	01 03 07.2	-0.8
NATX	Nacogdoches	5.79	144	S	Sn	01 04 14.0	-1.1
	baz=326						
Z41A	Richland Creek	5.81	122	P	Pn	01 03 09.7	+1.4
	baz=305						
N38A	Joes South For	6.03	43		Pn	01 03 12.5	+1.1
N38A	Joes South For	6.03	43	P	Pn	01 03 12.5	+1.1
	baz=226,SNR=26						
P40A	Paris	6.04	58		Pn	01 03 13.1	+1.7
P40A				IAmb_Lg		01 04 56.3	
	comp=Z,686nm,0.9s						
JCT	Junction City	6.09	189	Pn	Pn	01 03 11.0	-1.2
JCT				IAmb_Lg		01 05 04.3	
	comp=Z,811nm,0.8s						
JCT	Junction City	6.09	189	P	Pn	01 03 11.7	-0.5
	baz=8.5,SNR=15						
LCAR	Lake Charles	6.09	92		Pn	01 03 13.1	+0.9
LCAR				IAmb_Lg		01 05 03.9	
	comp=Z,400nm,0.7s						
K31A	O'Neill	6.11	359	Pn	Pn	01 03 13.6	+1.2
K31A				IAmb_Lg		01 05 01.1	
	comp=Z,799nm,0.8s						
K31A	O'Neill	6.11	359	P	Pn	01 03 14.0	+1.6
	baz=180,SNR=20						
CCM	Cathedral Cave	6.12	73	Pn	Pn	01 03 13.8	+1.2
CCM				IAmb_Lg		01 05 01.4	
	comp=Z,657nm,0.9s						
CCM	Cathedral Cave	6.12	73	P	Pn	01 03 14.2	+1.6
	baz=257,SNR=18						
CCM	Cathedral Cave	6.12	73	P	Pn	01 03 14.1	+1.5
	baz=257						
CCAR	Cane Creek	6.21	113	Pn	Pn	01 03 14.5	+0.6
CCAR				IAmb_Lg		01 05 08.2	
	comp=Z,688nm,0.8s						
ISCO	Idaho Springs	6.38	303	Pn	Pn	01 03 17.1	+0.6
ISCO				IAmb_Lg		01 05 04.1	
	comp=Z,545nm,1.0s						
ISCO	Idaho Springs	6.38	303	P	Pn	01 03 17.0	+0.6
	baz=119,SNR=29						
ISCO	Idaho Springs	6.38	303	P	Pn	01 03 17.0	+0.6
	baz=119,SNR=17						
ANMO	Albuquerque	6.52	258	Pn	Pn	01 03 19.0	+0.6
	comp=Z,1.8nm,0.3s,baz=85,slow=14,SNR=40						
ANMO				Pg	Pb	01 03 39.9	+4.6
	comp=Z,7.4nm,0.3s,baz=76,slow=17,SNR=19						
ANMO				Lg	Lg	01 05 02.4	
	comp=Z,24nm,0.3s,baz=11,slow=10,SNR=6.9						
ANMO				LR	LR	01 06 04.5	
	comp=Z,299nm,21.6s,baz=44,slow=41						
ANMO	Albuquerque	6.52	258	Pn	Pn	01 03 18.7	+0.4
ANMO	Albuquerque	6.52	258	P	Pn	01 03 18.9	+0.6
	baz=74,SNR=22						
ANMO	Albuquerque	6.52	258	P	Pn	01 03 18.9	+0.6
	baz=74						
ANMO				Sb	Sb	01 04 59.7	+5.8
	baz=74						
S22A	4UR Ranch, Cre	6.63	283	P	Pn	01 03 21.1	+1.1
	baz=99,SNR=8.7						
PBMO	Poplar Bluff	6.63	85		Pn	01 03 20.4	+0.7
PBMO				IAmb_Lg		01 05 15.3	
	comp=Z,647nm,0.8s						
FVM	French Village	6.74	75		Pn	01 03 23.2	+2.1
FVM				IAmb_Lg		01 05 17.8	
	comp=Z,410nm,0.8s						
LPAR	Lepanto	6.84	95	Pn	Pn	01 03 23.4	+0.9
SCIA	State Center	6.86	37		Pn	01 03 24.7	+2.0
SCIA				IAmb_Lg		01 05 35.1	
	comp=Z,637nm,0.7s						
SCIA	State Center	6.86	37	P	Pn	01 03 25.1	+2.5
	baz=220						
BNM	Barren Site	6.91	252	Pn	Pn	01 03 23.7	0.0
HKT	Hockley	6.96	159	Pn	Pn	01 03 23.1	-1.0
GNAR	Gosnell	7.02	92	Pn	Pn	01 03 25.3	+0.4
SLM	Saint Louis	7.03	70		Pn	01 03 26.0	+0.9
SLM				IAmb_Lg		01 05 26.8	
	comp=Z,527nm,0.7s						
143A	Socs Landing,	7.09	120	IAmb_Lg		01 05 38.4	
	comp=Z,505nm,0.8s						
N23A	Red Feather La	7.17	310	P	Pn	01 03 28.8	+1.5
	baz=126,SNR=18						
N23A				Sb	Sg	01 05 23.7	-7.7
	baz=126						
PARMO	Parma	7.18	86	Pn	Pn	01 03 28.1	+1.0
PVMO	Portageville	7.23	88	IAmb_Lg		01 05 43.2	
	comp=Z,622nm,0.8s						
MNTX	Cornudas Mount	7.34	231	Pn	Pn	01 03 28.5	-0.9
MNTX	Cornudas Mount	7.34	231	P	Pn	01 03 29.0	-0.4
	baz=48,SNR=38						
MNTX	Cornudas Mount	7.34	231	P	Pn	01 03 29.0	-0.4
	baz=48,SNR=28						
ECSD	EROS Data Cent	7.39	12		Pn	01 03 29.4	-0.5
ECSD	EROS Data Cent	7.39	12	P	Pn	01 03 29.4	-0.5
	baz=193,SNR=55						
ECSD	EROS Data Cent	7.39	12	P	Pn	01 03 29.4	-0.5
	baz=193,SNR=22						
ECSD				S	Sn	01 04 52.6	-1.9
	baz=193						
N41A	Harden Midland	7.42	53		Pn	01 03 31.7	+1.3
LNXT	Lenox	7.42	90	Pn	Pn	01 03 31.2	+0.7
HALT	Halls	7.57	92	Pn	Pn	01 03 32.9	+0.4
HALT				IAmb_Lg		01 05 44.8	
	comp=Z,631nm,0.8s						
GLAT	Glass	7.57	89	Pn	Pn	01 03 33.2	+0.7
HICK	Hickman	7.61	87	Pn	Pn	01 03 34.2	+1.2
S44A	Carbondale	7.62	78		Pn	01 03 34.8	+1.6
S44A				IAmb_Lg		01 06 01.3	
	comp=Z,414nm,0.8s						
S44A	Carbondale	7.62	78	P	Pn	01 03 34.3	+1.2
	baz=264,SNR=14						
K38A	Parkersburg	7.64	35		Pn	01 03 34.7	+1.3
K38A				IAmb_Lg		01 05 57.9	
	comp=Z,563nm,0.7s						
SIUC	Southern Illin	7.65	78		Pn	01 03 34.4	+0.8
SIUC				IAmb_Lg		01 05 56.0	
	comp=Z,402nm,0.8s						
735A	Kenedy	7.67	174	IAmb_Lg		01 06 04.5	
	comp=Z,300nm,0.8s						
W45A	Hickory Valley	7.82	97		Pn	01 03 37.3	+1.4
W45A	Hickory Valley	7.82	97	P	Pn	01 03 37.3	+1.4
	baz=282,SNR=11						
P43A	Skaggs, Pawnee	7.87	64	Pn	Pn	01 03 38.1	+1.5
P43A	Skaggs, Pawnee	7.87	64	P	Pn	01 03 37.7	+1.2
	baz=249,SNR=17						
MVCO	Mesa Verde	7.91	278	IAmb_Lg		01 06 08.0	
	comp=Z,309nm,1.2s						
MVCO	Mesa Verde	7.91	278	P	Pn	01 03 39.4	+2.0
	baz=92,SNR=6.5						
MVCO				Sb	Sg	01 05 45.7	-9.2
	baz=92						
UTMT	University of	7.91	88	Pn	Pn	01 03 38.6	+1.5
Y45A	Yeager Farm, C	7.93	107	Pn	Pn	01 03 38.2	+0.9
Y45A				IAmb_Lg		01 06 15.8	
	comp=Z,369nm,0.8s						
SUSD	Miller	7.93	359		Pn	01 03 37.8	+0.4
SUSD				IAmb_Lg		01 06 14.6	
	comp=Z,302nm,0.9s						
SUSD	Miller	7.93	359	P	Pn	01 03 38.2	+0.7
	baz=178						
VBMS	Vicksburg	7.99	120	IAmb_Lg		01 06 14.0	
	comp=Z,387nm,1.2s						
L40A	Anamosa	8.01	44		Pn	01 03 39.6	+1.1
Q44A	Meyer Farm, Va	8.02	70		Pn	01 03 39.5	+0.9
Q44A	Meyer Farm, Va	8.02	70	P	Pn	01 03 39.6	+0.9
	baz=255,SNR=10						
T45A	Paducah	8.07	83	Pn	Pn	01 03 40.3	+1.0
833A	Chaparral WMA,	8.18	184	P	Pn	01 03 42.0	+1.0
	baz=4.0						
TX31	Lajitas Ar. Si	8.29	212	Pn	Pn	01 03 41.3	-1.2
TX31	Lajitas Ar. Si	8.29	212	P	Pn	01 03 41.8	-0.8
	baz=29,SNR=71						
TXAR	Lajitas Array	8.29	212	Pn	Pn	01 03 41.8	-0.7
	comp=Z,3.4nm,0.3s,baz=31,slow=10,SNR=172						
TXAR				Pg	Pb	01 04 11.1	+5.6
	comp=Z,8.1nm,0.3s,baz=27,slow=14,SNR=6.8						
TXAR				Lg	Lg	01 05 58.9	
	comp=Z,26nm,0.3s,baz=32,slow=29,SNR=10.0						
TXAR				LR	LR	01 06 35.5	
	comp=Z,114nm,21.2s,baz=0.0,slow=36						
TXAR	Lajitas Array	8.29	212		Pn	01 03 41.6	-0.9
TX32	Lajitas Array	8.29	212		Pn	01 03 41.4	-1.1
HDIL	Hopedale	8.39	58		Pn	01 03 44.8	+1.1
HDIL	Hopedale	8.39	58	P	Pn	01 03 44.6	+0.9
	baz=244,SNR=9.4						
HDIL	Hopedale	8.39	58	P	Pn	01 03 45.1	+1.4
	baz=244,SNR=42						
121A	Cookes Peak, D	8.50	245	Pn	Pn	01 03 45.2	-0.3
121A	Cookes Peak, D	8.50	245	P	Pn	01 03 44.8	-0.6
	baz=60,SNR=5.9						
I37A	Lemond, Waseca	8.51	27	IAmb_Lg		01 06 26.0	
	comp=Z,465nm,1.0s						
K22A	Casper	8.62	318		Pn	01 03 48.0	+0.9
K22A				IAmb_Lg		01 06 29.0	
	comp=Z,402nm,0.8s						
K22A	Casper	8.62	318	P	Pn	01 03 47.8	+0.7
	baz=133,SNR=6.0						
RSSD	Black Hills	8.63	333	Pn	Pn	01 03 47.8	+0.5
RSSD				IAmb_Lg		01 06 37.5	
	comp=Z,269nm,0.8s						
RSSD	Black Hills	8.63	333	P	Pn	01 03 48.7	+1.4
	baz=150						
OLIL	Olney	8.68	72		Pn	01 03 49.6	+1.9
PLAL	Pickwick Lake	8.75	97	Pn	Pn	01 03 50.0	+1.3
WVT	Waverly	8.76	89	Pn	Pn	01 03 50.0	+1.2
WVT	Waverly	8.76	89	P	Pn	01 03 50.0	+1.2
	baz=275						
O44A	Mansfield	8.81	63		Pn	01 03 51.0	+1.6
O44A	Mansfield	8.81	63	P	Pn	01 03 50.4	+1.0
	baz=248,SNR=5.2						
146A	Union	8.82	113		Pn	01 03 50.8	+1.1
L42A	Oliver, Polo	8.88	49		Pn	01 03 51.6	+1.1
L42A				IAmb_Lg		01 06 33.7	
	comp=Z,413nm,0.9s						
JFWS	Jewell Farm	9.11	43		Pn	01 03 54.2	+0.6
JFWS				IAmb_Lg		01 06 39.8	
	comp=Z,380nm,0.8s						
JFWS	Jewell Farm	9.11	43	P	Pn	01 03 53.8	+0.2
	baz=228,SNR=40						
JFWS	Jewell Farm	9.11	43	P	Pn	01 03 54.8	+1.1
	baz=228,SNR=9.8						
T47A	Sharon Grove	9.30	84		Pn	01 03 57.2	+1.0
RDMU	Red Mountain	9.45	299		Pn	01 03 60.0	+1.5
F33A	5 Mile Ranch,	9.49	10	Pn	Pn	01 03 58.9	+0.1
F33A				IAmb_Lg		01 06 45.6	
	comp=Z,382nm,1.2s						
F33A	5 Mile Ranch,	9.49	10	P	Pn	01 03 58.6	-0.2
	baz=192,SNR=6.6						
P46A	Rosedale	9.56	68		Pn	01 04 00.2	+0.5
I40A	Norwalk	9.61	37		Pn	01 04 00.6	+0.2
I40A				IAmb_Lg		01 06 53.2	
	comp=Z,427nm,1.3s						
I40A	Norwalk	9.61	37	P	Pn	01 04 00.4	0.0
	baz=222,SNR=10						
M44A	Midewin, Midew	9.61	56		Pn	01 04 00.9	+0.5
V48A	Smith Brothers	9.62	91	Pn	Pn	01 04 01.6	+1.0
SPMN	Marine on St.	9.77	25		Pn	01 04 02.3	-0.4
SPMN	Marine on St.	9.77	25	P	Pn	01 04 02.0	-0.6
	baz=209,SNR=12						
SFIN	Lafayette	9.87	63		Pn	01 04 04.7	+0.8
SFIN	Lafayette	9.87	63	P	Pn	01 04 04.9	+0.9
	baz=250,SNR=7.1						
SFIN	Lafayette	9.87	63	P	Pn	01 04 05.7	+1.8
	baz=250,SNR=10						
BLO	Bloomington	9.97	71		Pn	01 04 06.1	+0.7
CLTN	Cedars of Leba	9.97	89		Pn	01 04 06.2	+0.8
P17A	Butcher Ranch,	9.97	291		Pn	01 04 06.2	+0.6
WCI	Wyandotte Cave	10.00	76		Pn	01 04 07.3	+1.4
WCI	Wyandotte Cave	10.00	76	P	Pn	01 04 07.7	+1.8
	baz=264						
L44A	Lake County Fo	10.07	53		Pn	01 04 07.3	+0.6
L44A	Lake County Fo	10.07	53	P	Pn	01 04 08.1	+1.3
	baz=239						
L44A				S	Sn	01 05 55.9	-4.5
	baz=239						
K43A	Burlington	10.09	49		Pn	01 04 07.6	+0.6
F36A	Milaca	10.12	21	P	Pn	01 04 06.0	-1.4
	baz=204,SNR=7.2						
E28A	Huff	10.17	352		Pn	01 04 07.7	-0.5
E28A	Huff	10.17	352	P	Pn	01 04 07.4	-0.7
	baz=171,SNR=10						
WUAZ	Wupatki	10.34	268		Pn	01 04 10.1	-0.5
WUAZ	Wupatki	10.34	268	P	Pn	01 04 12.7	+2.1
	baz=81,SNR=11						
U49A	Red Boiling Sp	10.38	86		Pn	01 04 11.8	+0.8
SWET	Sewanee	10.42	93	Pn	Pn	01 04 12.8	+1.2
BW06	Boulder Array	10.46	310		Pn	01 04 12.9	+0.6
BW06	Boulder Array	10.46	310	P	Pn	01 04 14.1	+1.8
	baz=124,SNR=6.6						
PD31	Pinedale Array	10.46	310		Pn	01 04 12.4	+0.1
PDAR	Pinedale Array	10.46	310	Pn	Pn	01 04 11.6	-0.8
	comp=Z,0.7nm,0.3s,baz=98,slow=14,SNR=19						
PDAR				Pg		01 04 51.0	
	comp=Z,1.8nm,0.3s,baz=108,slow=14,SNR=4.7						
PDAR				Lg	Lg	01 07 06.7	
	comp=Z,5.1nm,0.3s,baz=127,slow=30,SNR=12						
PDAR				LR	LR	01 08 00.6	
	comp=Z,177nm,19.7s,baz=106,slow=37						
I42A	Draeger Farm,	10.49	42	Pn	Pn	01 04 13.0	+0.5
I42A	Draeger Farm,	10.49	42	P	Pn	01 04 12.5	0.0
	baz=228,SNR=36						
X16A	Lo Mia Camp, P	10.62	262	Pn	Pn	01 04 14.0	-0.6
G40A	Rib Lake	10.84	34		Pn	01 04 17.6	+0.3
P48A	Milroy	10.86	70		Pn	01 04 17.4	-0.2
MTPU	Mount Pierson	10.88	282	Pn	Pn	01 04 17.7	-0.5
R49A	Shelbyville	10.89	77		Pn	01 04 18.6	+0.6
MSU	Marysvale	10.91	285	Pn	Pn	01 04 18.2	-0.3
W50A	Signal Mountai	10.92	93	Pn	Pn	01 04 18.9	+0.4
MVU	Marysvale	10.94	285	Pn	Pn	01 04 19.1	+0.2
PKCU	Pink Cliffs	10.95	279		Pn	01 04 19.5	+0.3
U15A	North Rim	10.97	274	Pn	Pn	01 04 19.4	0.0
N47A	Urbana	11.04	63		Pn	01 04 19.7	-0.3
CTU	Camp Tracy	11.05	296	Pn	Pn	01 04 20.3	-0.1
L46A	Eue Claire	11.05	56		Pn	01 04 21.2	+1.0
NLU	North Lily Min	11.09	292	Pn	Pn	01 04 19.4	-1.5
T50A	Nancy	11.11	83		Pn	01 04 21.9	+0.8
250A	Grady	11.21	110	Pn	Pn	01 04 22.6	+0.2
E38A	The Farm, Brul	11.40	26	Pn	Pn	01 04 24.5	-0.5
P49A	Miami Univ. Ec	11.42	70		Pn	01 04 25.3	+0.1
P49A	Miami Univ. Ec	11.42	70	P	Pn	01 04 26.0	+0.8
	baz=259,SNR=5.4						
AHID	Auburn Hatcher	11.43	307		Pn	01 04 25.4	-0.2
H43A	Windswept, Lux	11.49	43	Pn	Pn	01 04 25.6	-0.5
CPCT	Cooper Cave	11.52	91		Pn	01 04 27.8	+1.2
R50A	Paris	11.55	77		Pn	01 04 28.1	+1.1
LOHW	Long Hollow	11.56	311		Pn	01 04 26.7	-0.7
SNOW	Snow King Moun	11.57	311	Pn	Pn	01 04 27.6	+0.1
V51A	Loudon	11.60	89		Pn	01 04 29.0	+1.3
V51A	Loudon	11.60	89	P	Pn	01 04 28.6	+0.9
	baz=277,SNR=10						
LAO	LASA Array	11.63	333		Pn	01 04 27.6	-0.6
LAO	LASA Array	11.63	333	P	Pn	01 04 27.9	-0.3
	baz=149,SNR=14						
TPAW	Teton Pass	11.71	310		Pn	01 04 29.2	-0.2
MOOW	Moose Ponds	11.72	312		Pn	01 04 30.7	+1.1
ECR	Eagle Creek	11.75	308	Pn	Pn	01 04 30.2	+0.3
SPUT	South Promonto	11.75	298	Pn	Pn	01 04 30.4	+0.5
RLMT	Red Lodge	11.76	320	Pn	Pn	01 04 30.0	0.0
FXWY	Fox Creek	11.84	311		Pn	01 04 30.7	-0.4
O49A	Covington	11.84	68		Pn	01 04 30.6	-0.4
FLWY	Flagg Ranch	11.89	313	Pn	Pn	01 04 30.7	-1.2
COWI	Conover	11.96	34		Pn	01 04 32.1	-0.5
AGMN	Agassiz Nation	11.96	9	Pn	Pn	01 04 30.7	-1.9
AGMN	Agassiz Nation	11.96	9	P	Pn	01 04 30.0	-2.6
	baz=191						
AGMN				S	Sn	01 06 38.0	-8.7
	baz=191						
TKL	Tuckaleechee C	12.09	90	Pn	Pn	01 04 35.2	+0.8
	comp=Z,2.0nm,0.3s,baz=233,slow=8.2,SNR=27						
TKL				Lg	Lg	01 07 58.7	
	comp=Z,3.5nm,0.3s,baz=359,slow=15,SNR=8.0						
TKL	Tuckaleechee C	12.09	90		Pn	01 04 34.3	-0.1
S51A	Beattyville	12.10	80		Pn	01 04 33.8	-0.8
S51A	Beattyville	12.10	80	P	Pn	01 04 35.0	+0.4
	baz=269,SNR=13						
S51A				P	Pn	01 04 35.0	+0.4
	baz=269,SNR=13						
HVU	Hansel Valley	12.14	300	Pn	Pn	01 04 34.8	-0.5
N49A	Columbus Grove	12.14	64	Pn	Pn	01 04 34.9	-0.2
N49A	Columbus Grove	12.14	64	P	Pn	01 04 34.0	-1.2
	baz=253,SNR=5.9						
N49A				P	Pn	01 04 34.0	-1.2
	baz=253,SNR=5.9						
TZTN	Tazewell	12.17	85		Pn	01 04 36.3	+0.8
TZTN	Tazewell	12.17	85	P	Pn	01 04 38.0	+2.4
	baz=274						
F42A	Maple Grove Fa	12.18	37		Pn	01 04 34.8	-0.7
V52A	Sevierville	12.21	89	Pn	Pn	01 04 36.6	+0.6
PSUT	Pine Spring	12.22	284	Pn	Pn	01 04 36.7	+0.2
L48A	N Adams	12.30	59		Pn	01 04 36.9	-0.4
L48A	N Adams	12.30	59	P	Pn	01 04 36.8	-0.4
	baz=248,SNR=10						
L48A				P	Pn	01 04 36.8	-0.4
	baz=248,SNR=10						
Q51A	Peebles	12.39	74	Pn	Pn	01 04 38.6	+0.1
J47A	Sunmer	12.58	53		Pn	01 04 41.5	+0.5
EYMN	Ely	12.60	23	Pn	Pn	01 04 38.3	-3.1
EYMN	Ely	12.60	23	P	Pn	01 04 39.4	-1.9
	baz=207						
EYMN				S	Sn	01 06 55.2	-7.1
	baz=207						
DGMT	Dagmar	12.62	343	Pn	Pn	01 04 40.6	-1.1
DGMT	Dagmar	12.62	343	P	Pn	01 04 41.1	-0.7
	baz=159,SNR=10.0						
P51A	Williamsport	12.67	72		Pn	01 04 42.7	+0.4
V53A	Saluda	12.86	89	Pn	Pn	01 04 44.5	-0.5
ACSO	Alum Creek Sta	12.86	68		Pn	01 04 43.6	-1.3
D41A	Chassel	12.95	32	Pn	Pn	01 04 45.0	-1.2
AAM	Ann Arbor	12.97	59		Pn	01 04 45.9	-0.4
G45A	Suttons Bay	13.02	45	Pn	Pn	01 04 46.2	-0.9
E43A	Lone Tree Farm	13.17	38	Pn	Pn	01 04 47.5	-1.7
Q52A	Bidwell	13.22	74		Pn	01 04 49.6	-0.2
P52A	Corning	13.40	72		Pn	01 04 51.8	-0.6
P52A	Corning	13.40	72	P	Pn	01 04 51.8	-0.6
	baz=262,SNR=9.7						
R53A	Hurricane	13.42	77		Pn	01 04 52.2	-0.3
N51A	Ashland	13.46	66		Pn	01 04 52.6	-0.5
U54A	Nelsons Funny	13.56	85		Pn	01 04 54.4	-0.2
MCMT	McKenzie Canyo	13.58	312	Pn	Pn	01 04 53.4	-1.6
O52A	Adamsville	13.70	70	Pn	Pn	01 04 56.4	0.0

ULM	**Lac du Bonnet**	**13.88**	**8**	Pn	Pn	01 04 54.8	-4.1
	comp=Z,0.8nm,0.3s,baz=176,slow=13,SNR=4.7						
ULM				LR	LR	01 09 23.0	
	comp=Z,156nm,20.6s,baz=174,slow=33						
ULM	**Lac du Bonnet**	**13.88**	**8**		**Pn**	**01 04 57.1**	**-1.8**
S54A	**Dingess, Beckl**	**13.91**	**79**		**Pn**	**01 04 58.4**	**-0.9**
P53A	**Whipple**	**13.95**	**72**		**Pn**	**01 04 59.0**	**-0.8**
V55A	**Taylorsville**	**14.12**	**87**	Pn	**Pn**	**01 05 02.3**	**+0.1**
O53A	**New Philadelph**	**14.20**	**69**		**Pn**	**01 05 03.0**	**-0.2**
O53A	**New Philadelph**	**14.20**	**69**	P	**Pn**	**01 05 02.4**	**-0.8**
	baz=260						
Q54A	**Coxs Mills**	**14.33**	**75**		**Pn**	**01 05 04.0**	**-1.1**
M52A	**Chesterland**	**14.36**	**64**		**Pn**	**01 05 04.4**	**-1.1**
BLA	**Blacksburg**	**14.63**	**82**	P	**Pn**	**01 05 10.0**	**+0.8**
	baz=273						
O54A	**Avella**	**14.82**	**70**		**Pn**	**01 05 12.4**	**+0.8**
M53A	**WI Miller and**	**14.84**	**65**		**Pn**	**01 05 11.7**	**-0.2**
M53A	**WI Miller and**	**14.84**	**65**	P	**Pn**	**01 05 10.7**	**-1.2**
	baz=256						
PFO	**Pinyon Flats O**	**14.85**	**264**	LR	LR	01 10 21.5	
	comp=Z,188nm,19.5s,baz=6.5,slow=35						
R55A	**Marlinton**	**14.86**	**78**		**Pn**	**01 05 11.3**	**-1.0**
N54A	**Moraine State**	**15.24**	**67**		**Pn**	**01 05 15.7**	**-1.6**
N54A	**Moraine State**	**15.24**	**67**	P	**Pn**	**01 05 15.4**	**-1.9**
	baz=259						
KVN	**Kaiserville**	**15.57**	**285**	Pn	**Pn**	**01 05 19.9**	**-2.0**
T57A	**Hurt**	**15.58**	**82**		**Pn**	**01 05 21.3**	**-0.5**
M54A	**Oil Creek Stat**	**15.59**	**66**		**Pn**	**01 05 22.1**	**+0.2**
M54A	**Oil Creek Stat**	**15.59**	**66**	P	**Pn**	**01 05 21.1**	**-0.8**
	baz=257						
NVAR	**Mina Array Bea**	**15.71**	**283**	Pn	**Pn**	**01 05 23.4**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=110,slow=9.0,SNR=5.1						
NVAR				LR	LR	01 11 07.7	
	comp=Z,109nm,20.5s,baz=256,slow=37						
S57A	**Dark Hollow, R**	**15.78**	**80**	Pn	**Pn**	**01 05 22.7**	**-1.8**
S57A				IAmb	IAmb	01 05 25.4	
	comp=Z,8.7nm,0.7s						
RYN	**Ryan**	**15.88**	**284**	Pn	**Pn**	**01 05 23.8**	**-2.1**
M55A	**Ridgway**	**16.24**	**66**	Pn	**Pn**	**01 05 29.5**	**-0.9**
M55A				IAmb	IAmb	01 05 45.9	
	comp=Z,34nm,1.4s						
WVNY	**West Valley, N**	**16.57**	**63**	Pn	**Pn**	**01 05 31.5**	**-3.0**
WVNY				IAmb	IAmb	01 05 53.9	
	comp=Z,19nm,0.9s						
SSPA	**Standing Stone**	**16.76**	**69**	P	**Pn**	**01 05 36.1**	**-0.9**
	baz=262						
SADO	**Sadowa**	**16.94**	**55**	P	**Pn**	**01 05 39.5**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=268,slow=14,SNR=1.6						
NEW	**Newport**	**17.94**	**317**	P	**P**	**01 05 52.5**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=147,slow=5.3,SNR=3.6						
C09A	**Chrisman Ranch**	**18.34**	**314**	Pn	**Pn**	**01 05 52.5**	**-4.2**
PLVO	**Plevna**	**18.40**	**56**	P	**P**	**01 05 55.3**	**-2.2**
PLVO				IAmb	IAmb	01 06 07.9	
	comp=Z,26nm,1.5s						
BINY	**Binghamton**	**18.42**	**65**	P	**P**	**01 05 56.6**	**-1.1**
	baz=259						
KSPA	**Keystone Colle**	**18.48**	**67**	P	**P**	**01 05 57.4**	**-0.9**
LUPA	**Lehigh Univers**	**18.66**	**70**	P	**P**	**01 05 59.6**	**-0.7**
LUPA				IAmb	IAmb	01 06 04.3	
	comp=Z,18nm,1.1s						
J57A	**Williamstown**	**18.67**	**61**	P	**P**	**01 05 58.4**	**-1.9**
J57A				IAmb	IAmb	01 06 05.2	
	comp=Z,9.7nm,0.6s						
J58A	**Remsen**	**19.16**	**62**	P	**P**	**01 06 05.4**	**-0.4**
J58A				IAmb	IAmb	01 06 08.8	
	comp=Z,8.3nm,0.8s						
ODNJ	**Ogdensburg**	**19.29**	**69**	P	**P**	**01 06 07.3**	**+0.1**
ODNJ				IAmb	IAmb	01 06 08.2	
	comp=Z,19nm,1.3s						
YBH	**Yreka Blue Hor**	**19.34**	**293**	P	**Pn**	**01 06 08.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=72,slow=6.6,SNR=8.9						
YBH	**Yreka Blue Hor**	**19.34**	**293**	P	**P**	**01 06 07.7**	**-0.2**
J59A	**Piesco**	**19.74**	**62**	P	**P**	**01 06 12.3**	**+0.1**
J59A				IAmb	IAmb	01 06 25.8	
	comp=Z,8.1nm,1.1s						
KSCT	**Kent School, K**	**20.20**	**67**	P	**P**	**01 06 17.0**	**-0.1**
FRNY	**Flat Rock**	**20.70**	**59**	P	**P**	**01 06 23.9**	**+1.3**
FRNY				IAmb	IAmb	01 06 26.0	
	comp=Z,12nm,1.1s						
YKA	**Yellowknife Ar**	**27.83**	**344**	P	**P**	**01 07 32.2**	**+0.6**
	comp=Z,1.8nm,0.9s,baz=150,slow=8.5,SNR=3.5						
SCHQ	**Schefferville**	**28.46**	**40**	P	**P**	**01 07 39.2**	**+1.9**
	comp=Z,4.3nm,1.0s,baz=258,slow=9.0,SNR=4.2						
INK	**Inuvik**	**37.28**	**339**	P	**P**	**01 08 55.7**	**+1.6**
	comp=Z,1.6nm,1.0s,baz=144,slow=5.3,SNR=4.2						
INK	**Inuvik**	**37.28**	**339**	IAmb	IAmb	01 08 57.3	
	comp=Z,3.3nm,1.2s						
ILAR	**Eielson Array**	**40.07**	**330**	P	**P**	**01 09 17.7**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=107,slow=7.0,SNR=12						
ARCES	**ARCESS Array B**	**66.71**	**18**	P	**P**	**01 12 33.1**	**-0.2**
	comp=Z,3.0nm,0.9s,baz=313,slow=6.0,SNR=4.9						
FINES	**FINESS Array B**	**72.61**	**24**	P	**P**	**01 13 12.2**	**+2.5**
	comp=Z,7.5nm,1.0s,baz=341,slow=0.8,SNR=6.7						
MSVF	**Nonsavu**	**95.13**	**252**	LR	LR	01 47 39.7	
	comp=Z,66nm,20.6s,baz=167,slow=29						
HHC	**Hu-ho-hao-te**	**98.17**	**337**	*e*P	**P**	**01 15 20.4**	**+0.5**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,5.7s						

IDC 06 01:11:05.0±6.9**,3°.22S**×**142°.37E,h110**^{km}±48^{km}**,mb2.8**/2**, mb1 2.9**/3**,mb1mx2.8**/42**,mbtmp3.2**/3**,Error ellipse: s-maj=86.9km s-min=27.1km az=78.0,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.80**	**293**	P	Pn	01 11 35.8	+0.2
	1.3nm,0.3s,baz=40,slow=21,SNR=9.0						
JAY				S	Sn	01 11 59.0	+0.1
	0.4nm,0.3s,baz=328,slow=18,SNR=1.1						
WRA	**Warramunga Arr**	**18.38**	**205**	P	P	01 15 11.7	+0.2
	0.1nm,0.3s,baz=36,slow=9.5,SNR=6.3						
ASAR	**Alice Springs**	**21.91**	**201**	P	P	01 15 49.4	-0.2
	0.2nm,0.6s,baz=33,slow=10,SNR=2.4						
MKAR	**Makanchi Array**	**72.44**	**321**	P	P	01 22 19.6	0.0
	0.6nm,0.7s,baz=123,slow=5.3,SNR=2.6						

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*TUL **06** 01:11:47.3±0.7,36°.47N±0°.02×98°.74W±0°.02,h2^{km}±7^{km}, ML2.5,ML2.4/26(NEIC),Error ellipse: s-maj=3.7km s-min=1.9km az=154.0*

NEIC 06 01:11:47.3±0.6**,36°.49N**±0°.03×**98°.77W**±0°.02**,h12**^{km}±6^{km}**, Error ellipse: s-maj=4.6km s-min=2.2km az=154.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.22**	**240**		Pg	01 11 51.8	-0.2
U32A				Sg	Sg	01 11 55.1	0.0
U32A				IAML		01 11 55.5	
	comp=N,716nm,0.2s						
OK032	**Salt Plains WL**	**0.55**	**55**	Pg	Pg	01 11 58.0	+0.1
OK032				Sg	Sg	01 12 05.9	+0.7
OK032				IAML		01 12 06.0	
	comp=N,231nm,0.2s						
OK032				IAML		01 12 08.3	
	comp=N,239nm,0.2s						
CROK	**Carrier**	**0.63**	**88**	Pg	Pg	01 11 59.3	-0.3
CROK				Sg	Sg	01 12 08.0	+0.1
CROK				IAML		01 12 12.6	
	comp=N,244nm,0.3s						
CROK				IAML		01 12 14.6	
	comp=E,216nm,0.2s						
KAN14	**Manchester OK**	**0.80**	**54**	Pg	Pg	01 12 02.8	+0.1
KAN14				IAML		01 12 16.5	
	comp=N,135nm,0.5s						
KAN14				IAML		01 12 20.4	
	comp=E,136nm,0.1s						
GC02	**Grant County #**	**0.81**	**63**		Pg	01 12 02.9	-0.2
KAN10	**Anthony SW Sta**	**0.83**	**40**	Pg	Pg	01 12 03.4	0.0
KAN10				IAML		01 12 18.8	
	comp=E,171nm,0.1s						
KAN10				IAML		01 12 18.8	
	comp=N,157nm,0.1s						
KAN16	**Harper SW Stat**	**0.93**	**37**	Pg	Pg	01 12 05.1	-0.1
KAN16				IAML		01 12 20.9	
	comp=E,79nm,0.6s						
KAN08	**Anthony NE Sta**	**0.97**	**41**	Pg	Pg	01 12 05.9	-0.2
KAN08				IAML		01 12 25.6	
	comp=N,83nm,0.1s						
KAN01	**Argonia South**	**1.04**	**50**	Pg	Pb	01 12 07.2	-0.2
KAN01				IAML		01 12 21.9	
	comp=N,80nm,0.1s						
KAN01				IAML		01 12 22.5	
	comp=E,79nm,0.1s						
KAN09	**Caldwell North**	**1.12**	**55**	Pg	Pb	01 12 08.5	-0.3
KAN13	**South Haven SW**	**1.16**	**63**	Pg	Pb	01 12 08.9	-0.4
OK029	**Liberty Lake**	**1.27**	**123**	Pg	Pn	01 12 10.3	-0.6
OK025	**Westminster Rd**	**1.47**	**128**	Pn	Pn	01 12 13.8	+0.1
R32A	**Long Quarter,**	**1.93**	**1**		Pb	01 12 22.0	-0.5
X34A	**Smith Ranch, M**	**2.03**	**158**	Pn	Pb	01 12 23.2	-1.0
TUL1	**Leonard**	**2.48**	**103**	Pn	Pn	01 12 27.9	+0.4

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*IDC **06** 01:12:20.6±0.7,17°.51N×119°.86E,h0^{km},mb4.0/12, mb1 4.2/13,mb1mx3.9/52,mbtmp4.0/13,ML4.4/1,MS3.4/10, Ms1 3.4/10,ms1mx3.2/44,Error ellipse: s-maj=30.9km s-min=13.9km az=75.0*

*MAN **06** 01:12:22.0,17°.59N×119°.63E,h1^{km},mb5.0,ML4.0,MS4.0*

*NEIC **06** 01:12:25.2±1.8,17°.56N±0°.10×119°.8E±0°.1,h29^{km}±4^{km}, mb4.2/13,Error ellipse: s-maj=17.8km s-min=13.9km az=88.0*

ISC 06 01:12:25.8±0.5**,17°.64N**±0°.04×**119°.71E**±0°.06**,h32**^{km}**,n48,** σ**1**^{s}**.31**/45**,mb4.2**/15**,MS3.2**/9**,1C-5D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**0.77**	**68**	⇓*i*P	**Pn**	**01 12 39.0**	**-1.4**
SIPP				*i* S	Sb	01 13 04.5	+14
SAMP	**Sagada Mountai**	**1.27**	**116**	⇓*i*P	**Pn**	**01 12 47.0**	**-0.3**
SAMP				*e*S	**Sb**	**01 13 06.2**	**+1.1**
APYP	**Conner**	**1.48**	**81**	⇓*e*P	**Pn**	**01 12 50.6**	**+0.4**
SMPP	**San Manuel, Pa**	**1.75**	**148**	⇓*e*P	**Pn**	**01 12 53.6**	**-0.3**
SMPP				*e*S	**Sn**	**01 13 16.1**	**+1.0**
SGCP	**Mt. Cagua**	**2.31**	**74**	*e*P	**Pn**	**01 13 02.4**	**+0.8**
SGCP				*e*S	**Sn**	**01 13 28.8**	**-0.1**
MACP	**Maragondon, Ca**	**3.49**	**164**	⇓*e*P	**Pn**	**01 13 18.1**	**+0.2**
BBP	**Basco**	**3.51**	**37**	*e*P	**Pn**	**01 13 19.2**	**+1.0**
BBP				*e*S	**Sn**	**01 13 57.2**	**-1.5**
LUBP	**Lubang**	**3.91**	**172**	*e*P	Pn	01 13 28.2	+4.5
LQP	**Lukban**	**3.92**	**153**	⇑*e*P	**Pn**	**01 13 25.2**	**+1.2**
JCNP	**Jose Panganiba**	**4.40**	**139**	*e*P	**Pn**	**01 13 32.0**	**+1.7**
JCNP				*e*S	**Sn**	**01 14 23.5**	**+3.0**
TPUB	**Ta-pu**	**5.70**	**9**	Pn	**Pn**	**01 13 47.7**	**-0.6**
SSLB	**Suanglung**	**6.23**	**11**	Pn	**Pn**	**01 13 56.2**	**+0.6**
NACB	**Ninganchiao**	**6.74**	**15**	Pn	**Pn**	**01 14 03.3**	**+0.8**
YHNB	**Yeheng**	**7.17**	**12**	Pn	**Pn**	**01 14 08.8**	**+0.2**
SLVN	**Son La**	**15.35**	**286**	Pn	**Pn**	**01 16 00.2**	**0.0**
SLVN				IAmb	IAmb	01 16 03.4	
	comp=Z,12nm,1.2s						
TOLI2	**Tolitoli**	**16.45**	**176**		**P**	**01 16 16.4**	**-0.5**
TOLI2				IAmb	IAmb	01 16 18.5	
	comp=Z,11nm,0.9s						
CMAR	**Chiang Mai Arr**	**19.76**	**276**	P	**P**	**01 16 54.0**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=91,slow=9.3,SNR=8.6						
CMAR				LR	LR	01 23 39.1	
	comp=Z,65nm,21.4s,baz=147,slow=34						
KSAR	**Wonju Array Be**	**21.00**	**18**	P	**P**	**01 17 06.2**	**-0.4**
KSRS	**Korea Array**	**21.02**	**18**	P	**P**	**01 17 06.1**	**-0.7**
	comp=Z,3.3nm,0.8s,baz=199,slow=12,SNR=8.0						
KSRS				LR	LR	01 27 03.3	
	comp=Z,80nm,18.8s,baz=325,slow=42						
KS19	**Wonju Array Si**	**21.05**	**18**	P	**P**	**01 17 06.5**	**-0.6**
KS19				IAmb	IAmb	01 17 23.7	
	comp=Z,15nm,1.1s						
KAPI	**Kappang**	**22.50**	**180**	LR	LR	01 26 38.6	
	comp=Z,78nm,18.1s,baz=19,slow=38						
JCJ	**Chichijima**	**22.79**	**62**	LR	LR	01 23 40.5	
	comp=Z,101nm,21.1s,baz=42,slow=30						
PSI	**Prapat**	**25.16**	**236**	LR	LR	01 26 50.9	
	comp=Z,73nm,19.7s,baz=58,slow=34						
SHL	**Shillong**	**27.01**	**292**	P	**P**	**01 18 05.9**	**+0.6**
SHL				IAmb	IAmb	01 18 15.2	
	comp=Z,8.0nm,1.0s						
BATI	**Baumata**	**27.94**	**172**	LR	LR	01 30 27.6	
	comp=Z,88nm,18.6s,baz=60,slow=39						
USRK	**Ussuriysk Ar.**	**28.43**	**19**	LR	LR	01 29 56.1	
	comp=Z,88nm,18.3s,baz=334,slow=37						
HIA	**Hailar**	**31.55**	**0**	P	**P**	**01 18 43.6**	**-1.6**
SONM	**Songino Array**	**32.03**	**343**	P	**P**	**01 18 50.3**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=160,slow=8.9,SNR=2.9						
KLR	**Kul'dur**	**32.99**	**15**	P	**P**	**01 18 59.1**	**+1.4**
	comp=Z,1.1nm,0.6s,baz=230,slow=8.1,SNR=4.4						
FITZ	**Fitzroy Crossi**	**35.99**	**170**	P	**P**	**01 19 21.8**	**-2.1**
	comp=Z,2.4nm,0.7s,baz=16,slow=6.0,SNR=9.9						
WRA	**Warramunga Arr**	**40.01**	**158**	P	**P**	**01 19 55.0**	**-2.8**
	comp=Z,3.0nm,0.8s,baz=339,slow=9.2,SNR=20						
WRA				LR	LR	01 39 29.8	
	comp=Z,28nm,19.1s,baz=290,slow=41						
WB2	**Warramunga Arr**	**40.02**	**158**	P	**P**	**01 19 55.0**	**-3.0**
WB2				IAmb	IAmb	01 20 08.4	
	comp=Z,11nm,1.4s						
MK31	**Makanchi Array**	**42.34**	**322**	P	**P**	**01 20 17.6**	**+0.8**
MKAR	**Makanchi Array**	**42.34**	**322**	P	**P**	**01 20 18.2**	**+1.4**
	comp=Z,1.5nm,0.9s,baz=134,slow=5.2,SNR=6.5						
AS31	**Alice Springs**	**43.33**	**161**	P	**P**	**01 20 22.4**	**-2.6**
ASAR	**Alice Springs**	**43.33**	**161**	P	**P**	**01 20 23.7**	**-1.3**
	comp=Z,3.2nm,0.6s,baz=339,slow=6.6,SNR=50						
ASAR	**Alice Springs**	**43.33**	**161**	P	**P**	**01 20 22.9**	**-2.1**
NIL	**Nilore**	**44.43**	**300**	P	**P**	**01 20 33.4**	**-0.5**
ZALV	**Zalesovo Beam**	**45.15**	**332**	P	**P**	**01 20 40.8**	**+1.5**
	comp=Z,0.3nm,0.4s,baz=103,slow=4.7,SNR=4.3						
GAR	**Garm**	**47.75**	**307**	P	**P**	**01 21 00.4**	**+0.3**
HNR	**Honiara**	**48.00**	**121**	LR	LR	01 37 57.8	
	comp=Z,60nm,20.1s,baz=322,slow=32						
KKAR	**Karatay Array**	**48.59**	**312**	P	**P**	**01 21 07.4**	**+1.0**
STKA	**Stephens Creek**	**53.52**	**157**	P	**P**	**01 21 42.4**	**-1.0**
	comp=Z,5.1nm,0.8s,baz=329,slow=8.5,SNR=10						
STKA	**Stephens Creek**	**53.52**	**157**	P	**P**	**01 21 42.7**	**-0.7**
STKA				IAmb	IAmb	01 21 43.8	
	comp=Z,1.6nm,1.0s						
ILAR	**Eielson Array**	**75.65**	**26**	P	**P**	**01 24 07.2**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=275,slow=5.8,SNR=4.6						
BRTR	**Keskin Array B**	**75.99**	**308**	LR	LR	02 00 02.9	
	comp=Z,71nm,18.3s,baz=327,slow=38						
FINES	**FINESS Array B**	**76.40**	**330**	P	**P**	**01 24 12.0**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=57,slow=5.1,SNR=4.0						
YKA	**Yellowknife Ar**	**89.52**	**22**	P	**P**	**01 25 19.5**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=317,slow=4.4,SNR=5.5						

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*IDC **06** 01:12:39.0±6.6,25°.51S×179°.47E,h542^{km}±64^{km},mb3.0/4, mb1 3.2/5,mb1mx3.0/36,mbtmp4.0/5,Error ellipse: s-maj=110.0km s-min=35.9km az=155.0*

ISC 06 01:12:39.4±1.6**,25°.5S**±0°.5×**179°.5E**±0°.2**,h550**^{km}**,n8,** σ**0**^{s}**.37**/6**,mb3.5**/4**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**12.40**	**283**	P	**P**	**01 15 22.5**	**+0.2**
	baz=86,slow=18						
STKA	**Stephens Creek**	**33.70**	**250**	P	**P**	**01 18 35.5**	**+0.1**
	0.5nm,0.3s,baz=108,slow=17,SNR=3.8						
ASAR	**Alice Springs**	**41.32**	**263**	P	**P**	**01 19 37.8**	**+0.1**
	1.0nm,0.4s,baz=94,slow=7.3,SNR=38						
WRA	**Warramunga Arr**	**41.84**	**268**	P	**P**	**01 19 41.4**	**-0.5**
	1.0nm,0.6s,baz=102,slow=7.9,SNR=9.1						
TXAR	**Lajitas Array**	**91.68**	**58**	P	**P**	**01 24 48.8**	**+0.1**
	0.4nm,0.8s,baz=226,slow=6.8,SNR=4.5						
NB2	**NORSAR Subarra**	**143.57**	**350**	PKP	PKPbc	01 31 10.0	-0.1
	comp=Z,1.1nm,0.7s,baz=17,slow=3.3						
NOA	**NORSAR Array B**	**143.57**	**350**	PKP	PKPbc	01 31 09.9	-0.1
	comp=Z,1.2nm,0.6s,baz=22,slow=3.8,SNR=4.4						
BRTR	**Keskin Array B**	**148.12**	**305**	PKPbc	**PKiKP**	**01 31 24.8**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=90,slow=2.5,SNR=2.0						

NOU 06 01:18:31.8,14°.79S×**167°.23E,h97**^{km}**,MLv4.4**/10**, Vanuatu Islands,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.65**	**182**	P	Pn	01 18 49.5	+0.9
DVP	**Devils Point**	**3.06**	**163**	P	Pn	01 19 17.3	-1.0
KOUNC	**Koumac, New Ca**	**6.38**	**206**	P	Pn	01 20 02.7	-0.6
YATNC	**Mamie plateau,**	**7.24**	**182**	P	Pn	01 20 14.6	-0.3
DZM	**Mont Dzumac**	**7.28**	**186**	P	Pn	01 20 15.8	+0.2
OUENC	**Ouen Island, N**	**7.60**	**183**	P	Pn	01 20 20.3	+0.5

IDC 06 01:27:16.7±3.9**,5°.78S**×**151°.18E,h0**^{km}**,mb3.3**/3**, mb1 3.6**/3**,mb1mx3.3**/31**,mbtmp3.4**/3**,Error ellipse: s-maj=135.2km s-min=52.7km az=121.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.60**	**228**	P	P	01 32 09.0	+0.6
	0.4nm,0.7s,baz=53,slow=10,SNR=5.6						
ASAR	**Alice Springs**	**24.35**	**221**	P	P	01 32 36.0	-0.6
	0.7nm,0.8s,baz=55,slow=9.3,SNR=7.8						
FITZ	**Fitzroy Crossi**	**27.78**	**242**	P	P	01 33 08.0	+0.3
	0.5nm,0.5s,baz=63,slow=6.8,SNR=1.7						
TORD	**Torodi Ar. Bea**	**149.05**	**286**	PKPbc	PKPbc	01 47 07.4	-0.6
	0.3nm,0.6s,baz=59,slow=3.1,SNR=3.6						

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*IDC **06** 01:36:51.1±1.6,18°.75N×67°.45W,h0^{km},mb4.0/5, mb1 4.2/6,mb1mx3.7/34,mbtmp4.1/6,ML3.2/1,MS3.4/2, Ms1 3.4/2,ms1mx3.0/30,Error ellipse: s-maj=40.9km s-min=32.8km az=25.0*

*NEIC **06** 01:36:53.6±1.9,18°.70N±0°.02×67°.37W±0°.03,h18^{km}±5^{km}, Error ellipse: s-maj=4.8km s-min=2.8km az=55.0*

*RSPR **06** 01:36:53.4,18°.76N×67°.43W,h7^{km}±2^{km},MD3.7/14*

*OSPL **06** 01:36:53.6±0.4,18°.83N×67°.00W,h28^{km}±2^{km},ML3.6*

ISC 06 01:36:54.8±0.7**,18°.73N**±0°.05×**67°.34W**±0°.04**,h27**^{km}**,n73,** σ**1**^{s}**.12**/76**,mb3.9**/5**,14C-4D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.34**	**140**	⇑*e*P	**Pb**	**01 37 01.4**	**-1.1**
AGPR	**Aguadilla, PR**	**0.34**	**140**		**Pb**	**01 37 01.4**	**-1.1**
AGPR	**Aguadilla, PR**	**0.34**	**140**	IAML		01 37 09.5	
	comp=N,14µm,0.2s						
AGPR				IAML		01 37 11.1	
	comp=E,6µm,0.2s						
AGPR	**Aguadilla, PR**	**0.34**	**140**	*i* P	**Pb**	**01 37 01.3**	**-1.2**
AGPR				*e*S	**Sb**	**01 37 07.1**	**-0.7**
AGPR				IAML		01 37 09.0	
	comp=Z,5µm,0.6s						
IDE	**Isla Desecheo**	**0.36**	**201**	⇓*e*P	**Pb**	**01 37 01.1**	**-1.8**
PRSN	**Puerto Rico Se**	**0.54**	**160**		**Pb**	**01 37 04.6**	**-1.1**
LSP	**Las Mesas**	**0.60**	**156**	⇑*e*P	**Pb**	**01 37 05.7**	**-1.1**
LSP	**Las Mesas**	**0.60**	**156**	*e*S	**Sb**	**01 37 15.3**	**+0.4**
AOPR	**Arecibo Observ**	**0.67**	**124**	⇓*e*P	**Pb**	**01 37 06.9**	**-1.1**
AOPR	**Arecibo Observ**	**0.67**	**124**	*e*S	**Sb**	**01 37 16.9**	**-0.1**
AOPR	**Arecibo Observ**	**0.67**	**124**		**Pb**	**01 37 06.9**	**-1.1**
AOPR					**Sb**	**01 37 16.9**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.75**	**163**	⇑*e*P	**Pb**	**01 37 07.8**	**-1.5**
CRPR	**Cabo Rojo, PR**	**0.75**	**163**	*e*S	**Sb**	**01 37 19.1**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.75**	**163**		**Pb**	**01 37 07.8**	**-1.5**
CRPR					**Sb**	**01 37 19.1**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.75**	**163**	IAML		01 37 19.3	
	comp=N,5µm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.75**	**163**	*i* P	**Pb**	**01 37 07.9**	**-1.4**
CRPR				*e*S	**Sb**	**01 37 18.6**	**-0.5**
CRPR				IAML		01 37 19.2	
	comp=Z,5µm,0.4s						
MLPR	**Magueyes Islan**	**0.81**	**160**	⇓*e*P	**Pb**	**01 37 08.7**	**-1.5**
MLPR	**Magueyes Islan**	**0.81**	**160**	*e*S	**Sb**	**01 37 20.3**	**-0.4**
MLPR	**Magueyes Islan**	**0.81**	**160**		**Pb**	**01 37 08.7**	**-1.5**
MLPR					**Sb**	**01 37 20.3**	**-0.4**
EMPR	**Esperanza - Ma**	**0.81**	**108**	⇑*e*P	**Pb**	**01 37 09.1**	**-1.1**
EMPR	**Esperanza - Ma**	**0.81**	**108**	*e*S	**Sb**	**01 37 21.5**	**+0.7**
EMPR	**Esperanza - Ma**	**0.81**	**108**		**Pb**	**01 37 09.1**	**-1.1**
EMPR					**Sb**	**01 37 21.5**	**+0.7**
EMPR	**Esperanza - Ma**	**0.81**	**108**	IAML		01 37 24.0	
	comp=E,3µm,0.5s						
GBPR	**Guanica, Bosqu**	**0.87**	**150**	⇑*e*P	**Pn**	**01 37 10.0**	**-1.2**
GBPR	**Guanica, Bosqu**	**0.87**	**150**	*e*S	**Sn**	**01 37 23.0**	**0.0**
CELP	**Cerrillos**	**0.97**	**132**	⇑*e*P	**Pn**	**01 37 11.6**	**-1.0**
CELP	**Cerrillos**	**0.97**	**132**	*e*S	**Sb**	**01 37 25.5**	**0.0**
CELP	**Cerrillos**	**0.97**	**132**		**Pn**	**01 37 11.6**	**-1.0**
CELP					**Sb**	**01 37 25.5**	**0.0**
CELP	**Cerrillos**	**0.97**	**132**	IAML		01 37 26.8	
	comp=E,2µm,0.3s						
CELP				IAML		01 37 27.0	
	comp=N,3µm,0.3s						
OBIP	**Obispado Ponce**	**0.97**	**134**	⇑*e*P	**Pn**	**01 37 11.5**	**-1.2**
OBIP	**Obispado Ponce**	**0.97**	**134**	*e*S	**Sb**	**01 37 25.4**	**-0.1**
OBIP	**Obispado Ponce**	**0.97**	**134**		**Pn**	**01 37 11.5**	**-1.2**
OBIP					**Sb**	**01 37 25.4**	**-0.1**
OBIP	**Obispado Ponce**	**0.97**	**134**	IAML		01 37 27.3	
	comp=N,2µm,0.4s						
GCPR	**Guaynabo City**	**1.26**	**109**	⇑*e*P	**Pn**	**01 37 15.2**	**-1.4**
GCPR	**Guaynabo City**	**1.26**	**109**	*e*S	**Sn**	**01 37 32.7**	**-0.1**
GCPR	**Guaynabo City**	**1.26**	**109**		**Pn**	**01 37 15.2**	**-1.4**
GCPR					**Sn**	**01 37 32.7**	**-0.1**
SJG	**San Juan**	**1.29**	**118**		**Pn**	**01 37 16.1**	**-0.9**
SJG				IAML		01 37 35.4	
	comp=N,2µm,0.2s						
SJG				IAML		01 37 35.5	
	comp=N,2µm,0.2s						
IGPR	**InterUniversit**	**1.40**	**123**	⇑*e*P	**Pn**	**01 37 17.9**	**-0.6**
IGPR	**InterUniversit**	**1.40**	**123**	*e*S	**Sn**	**01 37 36.2**	**+0.2**
PDPR	**Patillas Dam,**	**1.44**	**119**	⇑*e*P	**Pn**	**01 37 18.1**	**-0.9**
PDPR	**Patillas Dam,**	**1.44**	**119**	*e*S	**Sn**	**01 37 37.5**	**+0.4**
PDPR	**Patillas Dam,**	**1.44**	**119**		**Pn**	**01 37 18.1**	**-0.9**
PDPR					**Sn**	**01 37 37.5**	**+0.4**
CBYP	**Canovanas**	**1.48**	**108**	⇑*e*P	**Pn**	**01 37 18.3**	**-1.4**
CBYP	**Canovanas**	**1.48**	**108**		**Pn**	**01 37 18.3**	**-1.4**
CBYP	**Canovanas**	**1.48**	**108**	IAML		01 37 45.9	
	comp=E,2µm,0.2s						
CUPR	**Culebra, Puert**	**2.00**	**102**	⇑*e*P	**Pn**	**01 37 24.9**	**-1.9**
CUPR	**Culebra, Puert**	**2.00**	**102**		**Pn**	**01 37 24.9**	**-1.9**
STVI	**Saint Thomas**	**2.29**	**99**	⇑*e*P	**Pn**	**01 37 29.4**	**-1.4**
STVI	**Saint Thomas**	**2.29**	**99**	*e*S	**Sn**	**01 37 57.3**	**-0.9**
STVI	**Saint Thomas**	**2.29**	**99**		**Pn**	**01 37 29.4**	**-1.4**
STVI					**Sn**	**01 37 57.3**	**-0.9**
TBVI	**Tortola**	**2.60**	**96**	⇑*e*P	**Pn**	**01 37 35.9**	**+0.8**
TBVI	**Tortola**	**2.60**	**96**	*e*S	**Sn**	**01 38 05.1**	**-0.7**
CDVI	**St. Croix**	**2.63**	**111**	⇓*e*P	**Pn**	**01 37 35.9**	**+0.5**
CDVI	**St. Croix**	**2.63**	**111**	*e*S	**Sb**	**01 38 14.1**	**+1.0**
CDVI	**St. Croix**	**2.63**	**111**		**Pn**	**01 37 35.9**	**+0.5**
CDVI					**Sb**	**01 38 14.1**	**+1.0**
SC01	**Santiago de lo**	**3.28**	**283**	Pn	**Pn**	**01 37 44.0**	**-0.4**
SC01				IAML		01 38 40.1	
	comp=N,328nm,0.8s						
SC01				IAML		01 38 40.3	
	comp=E,316nm,0.6s						
SC01	**Santiago de lo**	**3.28**	**283**	*i* P	**Pn**	**01 37 46.1**	**+1.7**
SC01				IAML		01 38 46.8	
	comp=Z,148nm,0.5s						
LOBA2	**Hotel Casa Bon**	**3.62**	**260**	IAML		01 38 33.6	
	comp=Z,71nm,16.2s						
SDDR	**Presa de Saban**	**3.75**	**274**		**Pn**	**01 37 49.4**	**-1.5**
SDDR				IAML		01 38 50.0	
	comp=Z,174nm,0.7s						
SDDR				IAML		01 38 54.5	
	comp=Z,119nm,0.8s						
SDDR	**Presa de Saban**	**3.75**	**274**	*i* P	**Pn**	**01 37 52.5**	**+1.6**
SDDR				IAML		01 38 55.8	
	comp=Z,76nm,1.2s						
LONE2	**Loma La Sidra**	**3.92**	**268**	*i* P	**Pn**	**01 37 54.9**	**+1.5**
LONE2				IAML		01 38 54.0	
	comp=Z,54nm,0.6s						
GRTK	**Grand Turk**	**4.51**	**308**	Pn	**Pn**	**01 37 57.8**	**-3.5**
GRTK				IAML		01 39 32.3	
	comp=Z,106nm,3.4s						
GRTK				IAML		01 40 01.6	
	comp=Z,82nm,2.9s						
BIRV	**Birongo**	**8.27**	**173**	Pn	**Pn**	**01 38 54.1**	**+1.1**
PCRV	**Puerto La Cruz**	**8.90**	**163**	Pn	**Pn**	**01 39 02.9**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=341,slow=6.8,SNR=2.2						
PLCV	**Puerto La Cruz**	**8.92**	**162**		**Pn**	**01 39 02.9**	**+1.0**
BAUV	**El Baul**	**9.75**	**184**	Pn	**Pn**	**01 39 13.7**	**+0.3**
MDP	**Montagnes des**	**19.73**	**132**	LR	LR	01 49 12.5	
	comp=Z,53nm,20.8s,baz=278,slow=37						
TXAR	**Lajitas Array**	**34.69**	**295**	P	**P**	**01 43 41.7**	**-0.9**
	comp=Z,0.5nm,1.0s,baz=113,slow=9.1,SNR=1.8						
NEW	**Newport**	**49.73**	**318**	LR	LR	02 06 22.0	
	comp=Z,83nm,19.1s,baz=1.5,slow=36						
ESDC	**Sonseca Array**	**57.95**	**54**	P	**P**	**01 46 46.3**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=265,slow=7.6,SNR=10						
TORD	**Torodi Ar. Bea**	**66.27**	**84**	P	**P**	**01 47 41.4**	**+0.3**
	comp=Z,1.0nm,1.0s,baz=276,slow=6.5,SNR=3.3						
ARCES	**ARCESS Array B**	**73.61**	**21**	P	**P**	**01 48 26.2**	**+0.9**
	comp=Z,4.8nm,1.0s,baz=261,slow=9.0,SNR=4.0						
FINES	**FINESS Array B**	**75.36**	**30**	P	**P**	**01 48 36.6**	**+1.1**
	comp=Z,12nm,1.2s,baz=255,slow=5.1,SNR=3.3						

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*DJA **06** 01:53:09.8±1.4,9°S±3°×11°0E±°,h21^{km}±13^{km},M4.4/8, mb4.6/1,MLv4.2/8*

*IDC **06** 01:53:12.5±2.3,8°.41S×110°.64E,h81^{km}±23^{km},mb3.4/6, mb1 3.5/8,mb1mx3.0/39,mbtmp3.7/8,MS2.7/2,Ms1 2.7/2, ms1mx2.4/30,Error ellipse: s-maj=43.5km s-min=14.3km*

az=35.0

ISC 06 01:53:10.2±0.8**,8°.86S**±0°.08×**110°.38E**±0°.07**,h51^{km},n18,**
σ1^s.68/21**,mb3.9**/6**,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	Wanagama	0.95	8	P	Pn	01 53 27.4	0.0
UGM				S	Sn	01 53 39.7	-0.4
SMRI	Semarang	1.80	2	P	Pn	01 53 40.7	+1.8
SMRI				S	Sn	01 54 01.6	+0.9
NGJI	Ngawi	1.83	36	P	Pn	01 53 42.2	+2.9
CMJI	Cimerak	2.19	299	P	Pn	01 53 44.6	+0.3
GMJI	Gumukmas	3.08	79	P	Pn	01 53 57.4	+1.0
BLJI	Banyuglugur	3.37	71	P	Pn	01 54 00.9	+0.6
LEM	Lembang	3.41	306	P	Pn	01 54 03.0	+2.0
	12nm,0.3s,baz=115,slow=12,SNR=7.2						
LEM				S	Sn	01 54 43.1	+2.8
	12nm,0.3s,baz=185,slow=16,SNR=4.3						
LEM				LR	LR	01 55 20.4	
	comp=Z,68nm,21.1s,baz=60,slow=38						
CNJI	Cibinong	3.57	295	P	Pn	01 54 03.6	+0.4
JAGI	Jajag, Banyuwa	3.75	84	P	Pn	01 54 06.7	+1.1
SRBI	Singaraja	4.84	81	P	Pn	01 54 23.4	+2.8
PLAI	Plampang	7.31	90	P	Pn	01 54 55.0	+0.6
FITZ	Fitzroy Crossi	17.43	123	P	Pn	01 57 09.7	-0.2
	0.1nm,0.3s,baz=315,slow=12,SNR=1.7						
WRA	Warramunga Arr	25.64	118	P	P	01 58 35.0	-0.4
	0.4nm,0.6s,baz=292,slow=11,SNR=5.2						
ASAR	Alice Springs	26.89	126	P	P	01 58 46.9	+0.2
	0.5nm,0.9s,baz=307,slow=10,SNR=5.3						
STKA	Stephens Creek	36.92	133	P	P	02 00 14.8	+0.5
	2.3nm,0.8s,baz=303,slow=17,SNR=3.4						
STKA				LR	LR	02 15 58.8	
	comp=Z,20nm,19.4s,baz=25,slow=37						
MKAR	Makanchi Array	60.81	338	P	P	02 03 13.6	-3.5
	0.3nm,0.4s,baz=149,slow=7.3,SNR=10						
BOSA	Boshof	81.56	242	P	P	02 05 24.0	+0.8
	2.1nm,1.0s,baz=112,slow=11,SNR=4.0						
BRTR	Keskin Array B	85.57	311	P	P	02 05 42.2	-1.2
	0.7nm,0.8s,baz=96,slow=9.0,SNR=5.6						

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*KRNET **06** 02:32:43.5±0.1, 42°.25N×79°.63E, h20^{km}, mb3.7*
*SOME **06** 02:32:43.2, 42°.27N×79°.55E, h5^{km}*
*NNC **06** 02:32:44.7±1.1, 42°.33N×79°.63E, h0^{km}, mb4.1, mpv3.9,*
Error ellipse: s-maj=7.3km s-min=3.8km az=137.0
ISC 06 02:32:44.0±1.3**,42°.27N**±0°.05×**79°.63E**±0°.04**,h10^{km},n79,**
σ1^s.56/127**,25C-24D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.89	352	⇓eP	Pb	02 33 01.5	-0.2
	219nm,0.1s						
SHLS				eS	Sn	02 33 14.8	-1.0
	368nm,0.3s						
SHLS	Shalkode	0.89	352	eP	Pb	02 33 01.5	-0.2
	baz=14						
SHLS				eS	Sb	02 33 13.8	+0.1
	baz=14						
SHLS	Shalkode	0.89	352	P	Pb	02 33 01.5	-0.2
	219nm,0.1s						
SHLS				S	Sn	02 33 14.8	-1.0
	368nm,0.3s						
SHLS	Shalkode	0.89	352	⇓eP	Pb	02 33 01.5	-0.2
	baz=12						
SHLS				⇓eS	Sn	02 33 14.8	-1.0
	baz=12						
PRZ	Przheval'sk	0.94	283	⇓iP	Pg	02 33 01.2	-0.9
	baz=86						
PRZ				⇓iS	Sb	02 33 14.4	-0.6
	baz=86						
UZB	Uzynbulak	0.98	333	eP	Pg	02 33 02.3	-0.6
	24nm,0.1s						
UZB				eS	Sb	02 33 16.1	-0.3
	187nm,0.3s						
UZB	Uzynbulak	0.98	333	eP	Pg	02 33 02.3	-0.6
	baz=336						
UZB				eS	Sg	02 33 15.1	-0.7
	baz=336						
UZB	Uzynbulak	0.98	333	P	Pg	02 33 02.3	-0.6
	24nm,0.2s						
UZB				S	Sb	02 33 16.1	-0.3
	187nm,0.3s						
UZB	Uzynbulak	0.98	333	eP	Pg	02 33 02.3	-0.6
	baz=34						
UZB				eS	Sb	02 33 16.1	-0.3
	baz=34						
PDGK	Podgornoye	1.06	354	P	Pg	02 33 03.7	-0.7
	20nm,0.2s						
PDGK				S	Sb	02 33 18.4	-0.2
	140nm,0.3s						
PDGK	Podgornoye	1.06	354	⇑P	Pg	02 33 03.5	-0.9
	11nm,0.3s						
PDGK				⇑S	Sg	02 33 18.0	-0.3
	125nm,0.4s						
SATY	Saty	1.20	311	eP	Pb	02 33 05.9	-1.0
	baz=314						
SATY				eS	Sb	02 33 21.4	-1.1
	baz=314						
KTMS	Ketmen	1.29	24	eP	Pn	02 33 07.7	-0.5
	28nm,0.3s						
KTMS				eS	Sg	02 33 25.3	-0.2
	86nm,0.2s						
KTMS	Ketmen	1.29	24	P	Pn	02 33 07.7	-0.5
	28nm,0.3s						
KTMS				S	Sg	02 33 25.3	-0.2
	86nm,0.2s						
KTMS	Ketmen	1.29	24	eP	Pn	02 33 07.7	-0.5
	baz=24						
KTMS				eS	Sg	02 33 25.3	-0.2
	baz=24						
ANVS	Anan'yevo	1.54	290	⇑iP	Pg	02 33 12.5	-1.0
	baz=91						
ANVS				⇑iS	Sg	02 33 33.9	+0.4
	baz=91						
KDJ	Kajisay	1.83	266	⇓iP	Pb	02 33 16.5	-1.1
	baz=67						
KDJ				⇓iS	Sb	02 33 40.5	-0.1
	baz=67						
BLB	Baldybastay	2.01	336	Pg	Pb	02 33 20.9	+0.1
	84nm,0.3s						
BLB				Lg	Lg	02 33 47.8	
	1µm,0.3s						
DJR	Jarkent	2.06	3	eP	Pb	02 33 21.6	0.0
	62nm,0.2s						
DJR				eS	Sg	02 33 49.5	-0.8
	747nm,0.3s						
DJR	Jarkent	2.06	3	Pg	Pb	02 33 21.6	0.0
	62nm,0.2s						
DJR				Lg	Lg	02 33 49.5	
	747nm,0.3s						
KOTS	Kotyrbulak	2.09	298	eP	Pb	02 33 21.9	-0.2
	56nm,0.4s						
KOTS				eS	Sg	02 33 50.0	-1.2
	129nm,0.3s						
KOTS	Kotyrbulak	2.09	298	Pg	Pb	02 33 21.9	-0.2
	56nm,0.4s						
KOTS				Lg	Lg	02 33 50.0	
	129nm,0.3s						
MDOK	Medeo	2.10	296	⇓eP	Pb	02 33 21.9	-0.4
	69nm,0.2s						
MDOK				eS	Sg	02 33 49.8	-1.8
	63nm,0.3s						
MDOK	Medeo	2.10	296	ePg	Pb	02 33 21.8	-0.6
	baz=297						
MDOK				eSn	Sn	02 33 45.8	+0.1
	baz=297						
MDOK	Medeo	2.10	296	⇓Pn	Pb	02 33 21.7	-0.6
	76nm,0.5s						
MDOK				⇓Sn	Sg	02 33 50.4	-1.1
	67nm,0.6s						
MDOK	Medeo	2.10	296	Pg	Pb	02 33 21.9	-0.4
	69nm,0.2s						
MDOK				Lg	Lg	02 33 49.8	
	63nm,0.6s						
TNSS	Tian-Shan	2.12	292	eP	Pb	02 33 22.2	-0.6
	60nm,0.1s						
TNSS				eS	Sg	02 33 50.5	-1.8
	40nm,0.1s						
TNSS	Tian-Shan	2.12	292	ePg	Pb	02 33 22.0	-0.8
	baz=293						
TNSS				eLg	Lg	02 33 48.6	
	baz=293						
TNSS	Tian-Shan	2.12	292	Pg	Pb	02 33 22.2	-0.6
	60nm,0.2s						
TNSS				Lg	Lg	02 33 50.5	
	38nm,0.4s						
KNDC	Almaty	2.18	297	⇓Pn	Pb	02 33 23.4	-0.1
	93nm,0.8s						
KNDC				⇑Sn	Sg	02 33 54.0	0.0
	239nm,0.9s						
AAA	Alma-Ata	2.21	296	eP	Pb	02 33 24.3	+0.2
	103nm,0.1s						
AAA				eS	Sg	02 33 53.6	-1.4
	76nm,0.2s						
AAA	Alma-Ata	2.21	296	ePg	Pb	02 33 23.2	-0.9
	baz=297						
AAA				eSn	Sn	02 33 47.9	-0.3
	baz=297						
AAA	Alma-Ata	2.21	296	Pg	Pb	02 33 24.3	+0.2
	103nm,0.3s						
AAA				Lg	Lg	02 33 53.6	
	76nm,0.2s						
ARXS	Arharly	2.35	326	eP	Pb	02 33 26.1	-0.3
	82nm,0.2s						
ARXS				eS	Sb	02 33 56.7	+1.2
	312nm,0.3s						
ARXS	Arharly	2.35	326	Pg	Pb	02 33 26.1	-0.3
	82nm,0.2s						
ARXS				Lg	Lg	02 33 56.7	
	312nm,0.3s						
MTBS	Maitube	2.51	291	eP	Pb	02 33 28.6	-0.6
	23nm,0.3s						
MTBS				eS	Sb	02 34 01.5	+1.3
	74nm,0.2s						
MTBS	Maitube	2.51	291	Pg	Pb	02 33 28.6	-0.6
	23nm,0.3s						
MTBS				Lg	Lg	02 34 01.5	
	71nm,0.6s						
ULHL	Ulahol	2.52	271	⇓iP	Pb	02 33 27.4	-2.0
	baz=71						
ULHL				⇓iS	Sb	02 33 59.3	-1.2
	baz=71						
KTBS	Karatobe	2.60	305	eP	Pb	02 33 31.0	+0.3
	46nm,0.2s						
KTBS				eS	Sg	02 34 05.2	-2.3
	283nm,0.2s						
KTBS	Karatobe	2.60	305	Pg	Pb	02 33 31.0	+0.3
	46nm,0.2s						
KTBS				Lg	Lg	02 34 05.2	
	283nm,0.2s						
BOOM	Boomskoye usch	2.74	276	⇓iP	Pb	02 33 30.6	-2.6
	baz=76						
BOOM				⇓iS	Sb	02 34 04.7	-2.3
	baz=76						
KST	Kastek	2.81	287	eP	Pb	02 33 33.8	-0.7
	41nm,0.1s						
KST				eS	Sb	02 34 10.4	+1.5
	110nm,0.4s						
KST	Kastek	2.81	287	Pg	Pb	02 33 33.8	-0.7
	41nm,0.4s						
KST				Lg	Lg	02 34 10.5	
	110nm,0.4s						
TDK	Taldyqorghan	2.87	342	eP	Pb	02 33 35.8	+0.5
	18nm,0.4s						
TDK				eS	Sg	02 34 13.4	-2.8
	130nm,0.4s						
TDK	Taldyqorghan	2.87	342	Pg	Pb	02 33 35.8	+0.5
	18nm,0.4s						
TDK				Lg	Lg	02 34 13.4	
	130nm,0.4s						
KUU	Kurty	2.91	305	eP	Pb	02 33 35.4	-0.5
	6.2nm,0.1s						
KUU				eS	Sb	02 34 13.1	+1.5
	113nm,0.4s						
KUU	Kurty	2.91	305	ePg	Pb	02 33 35.7	-0.2
	baz=306						
KUU				eLg	Lg	02 34 11.9	
	baz=306						
KUU	Kurty	2.91	305	Pg	Pb	02 33 35.4	-0.5
	6.2nm,0.2s						
KUU				Lg	Lg	02 34 13.0	
	113nm,0.4s						
DGS	Degeres	3.00	290	eP	Pb	02 33 37.2	-0.4
	26nm,0.4s						
DGS				eS	Sb	02 34 15.8	+1.4
	38nm,0.5s						
DGS	Degeres	3.00	290	Pg	Pb	02 33 37.2	-0.4
	26nm,0.4s						
DGS				Lg	Lg	02 34 15.8	
	38nm,0.5s						
KAPS	Kapalarasan	3.02	356	eP	Pb	02 33 38.4	+0.6
	5.4nm,0.1s						
KAPS				eS	Sg	02 34 18.0	-2.9
	104nm,0.1s						
KAPS	Kapalarasan	3.02	356	Pg	Pb	02 33 38.4	+0.6
	5.4nm,0.3s						
KAPS				Lg	Lg	02 34 18.0	
	104nm,0.4s						
TKM2	Tokmak 2	3.05	284	P	Pb	02 33 36.8	-1.7
	SNR=8.8						
TKM2	Tokmak 2	3.05	284	⇑Pn	Pb	02 33 35.9	-2.6
	5.4nm,0.4s						
TKM2				⇑Lg	Lg	02 34 21.3	
	33nm,0.3s						
TKM2	Tokmak 2	3.05	284	⇑iP	Pb	02 33 35.2	-3.3
	baz=84						
TKM2				⇑iS	Sb	02 34 12.5	-3.3
	baz=84						
KRBS	Karabastau	3.23	297	eP	Pb	02 33 40.6	-0.9
	20nm,0.1s						
KRBS				eS	Sb	02 34 22.3	+1.3
	31nm,0.1s						
KRBS	Karabastau	3.23	297	Pg	Pb	02 33 40.6	-0.9
	19nm,0.3s						
KRBS				Lg	Lg	02 34 22.3	
	31nm,0.3s						
KBK	Karagaybulak	3.49	278	P	Pb	02 33 42.3	-3.6
	SNR=8.8						
KBK	Karagaybulak	3.49	278	⇑iP	Pn	02 33 41.1	+2.7
	baz=78						
KBK				⇑iS	Sn	02 34 22.5	+2.6
	baz=78						
CHMS	Chumysh	3.67	283	P	Pg	02 33 53.7	-0.6
	SNR=6.9						
CHMS	Chumysh	3.67	283	⇑iP	Pn	02 33 43.6	+2.7
	baz=83						
CHMS				⇑iS	Sn	02 34 27.2	+2.9
	baz=83						
FRU1	Bishkek	3.73	280	⇓iP	Pn	02 33 44.6	+2.8
	baz=81						
FRU1				⇓iS	Sn	02 34 28.7	+2.9
	baz=81						
UCH	Uchtor	3.80	271	⇑iP	Pn	02 33 45.0	+2.0
	baz=71						
UCH				⇑iS	Sn	02 34 30.2	+2.2
	baz=71						
AAK	Ala-Archa	3.82	277	P	Pg	02 33 56.6	-0.6
	SNR=12						
AAK	Ala-Archa	3.82	277	⇑Pg	Pg	02 33 55.2	-1.9
	9.2nm,0.5s						
AAK				⇓Lg	Lg	02 34 47.0	
	16nm,0.5s						
AAK	Ala-Archa	3.82	277	⇑iP	Pn	02 33 45.6	+2.6
	baz=78						
AAK				⇑iS	Sn	02 34 30.6	+2.6
	baz=78						
SGDS	Sogindy	3.86	289	ePg	Pb	02 33 51.4	-0.8
	baz=290						
SGDS				eSn	Sn	02 34 27.5	-1.4
	baz=290						
SGDS				eLg	Lg	02 34 40.2	
	baz=290						
USP	Ospenovka	3.91	286	P	Pg	02 33 56.2	-2.6
	SNR=6.0						
USP	Ospenovka	3.91	286	⇓iP	Pn	02 33 46.8	+2.7
	baz=87						
USP				⇓iS	Sn	02 34 33.1	+3.1
	baz=87						
EKS2	Erkin-Say	4.35	277	P	Pg	02 34 06.3	-1.0
	SNR=8.4						
EKS2	Erkin-Say	4.35	277	⇓eP	Pn	02 33 52.9	+2.7
	baz=77						
EKS2				⇓iS	Sn	02 34 43.3	+2.3
	baz=77						
AML	Almayashu	4.41	270	⇓eP	Pn	02 33 53.9	+2.5
	baz=70						
AML				⇓iS	Sn	02 34 44.7	+1.7
	baz=70						
MRKS	Merke	4.76	278	eP	Pb	02 34 09.8	+2.3
	5.2nm,0.1s						
MRKS				eS	Sg	02 35 11.8	-5.0
	11nm,0.2s						
MRKS	Merke	4.76	278	Pg	Pb	02 34 09.8	+2.3
	4.7nm,0.3s						
MRKS				Lg	Lg	02 35 11.8	
	10nm,0.4s						
MAKZ	Makanchi	4.83	19	⇑Pn	Pn	02 33 58.8	+2.0
	0.6nm,0.2s						
MAKZ				⇑Lg	Lg	02 35 16.5	
	4.1nm,0.7s						
MK31	Makanchi Array	4.90	22	⇑Pn	Pn	02 33 59.5	+1.7
	0.6nm,0.3s,baz=203,slow=13,SNR=188						
MK31				⇑Lg	Lg	02 35 14.7	
	1.9nm,0.4s,baz=199,slow=29,SNR=5.1						
BTLS	Baital	4.91	306	ePg	Pb	02 34 10.4	+0.4
	baz=307						
MNAS	Manas	5.28	275	⇑iP	Pn	02 34 05.5	+2.4
	baz=75						
MNAS				⇑iS	Sn	02 35 05.3	+1.2
	baz=75						
KURBB	Kurchatov Arra	8.39	355	⇑Lg	Lg	02 37 06.7	
	15nm,0.7s						

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*EAF **06** 02:37:18.6±2.7, 21°.62S×32°.74E, h10^{km}, MD3.6*
BUL 06 02:37:17.8±1.1**,21°.72S×32°.75E,h10^{km},MD3.7,**
Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	2.18	215	i P	Pb	02 37 57.4	-0.1
MOPA				i Sg	Sg	02 38 30.4	+2.4
MOPA	Mopani	2.18	215	i P	Pb	02 37 57.4	-0.1
MOPA				i Sg	Sg	02 38 30.4	+2.4
MSNA	Messina	2.60	256	i P	Pn	02 38 00.0	0.0
MSNA				i Sg	Sb	02 38 38.8	+2.1
MSNA	Messina	2.60	256	i P	Pn	02 38 00.0	0.0
MSNA				i Sg	Sb	02 38 38.8	+2.1
CNG	Changalane	4.58	186	i P	Pn	02 38 26.3	-0.9
CNG	Changalane	4.58	186	i P	Pn	02 38 26.3	-0.9
KRI	Karoi	5.69	328	i P	Pn	02 38 32.4	-10
KRI				i S	Sn	02 39 26.9	-21
KRI	Karoi	5.69	328	i P	Pn	02 38 32.4	-10
KRI				i S	Sn	02 39 26.9	-21

IDC 06 02:37:48.9±2.0**,3°.39S×148°.26E,h0^{km},mb3.5**/3**,**
mb1 3.9/3**,mb1mx3.5**/24**,mbtmp3.6**/3**,MS3.0**/1**,Ms1 3.0**/1**,**
ms1mx2.5/31**,Error ellipse: s-maj=179.6km**
s-min=31.5km az=121.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.33	218	P	P	02 42 36.8	-1.0
	1.5nm,1.0s,baz=45,slow=10,SNR=9.3						
WRA				LR	LR	02 51 16.8	
	comp=Z,39nm,19.7s,baz=290,slow=38						
ASAR	Alice Springs	24.47	213	P	P	02 43 10.5	+0.6
	2.2nm,1.0s,baz=38,slow=7.3,SNR=18						
ILAR	Eielson Array	82.61	23	P	P	02 50 13.7	0.0
	0.4nm,0.8s,baz=246,slow=6.8,SNR=2.5						

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*IDC **06** 02:49:38.6±5.2, 9°.38S×124°.59E, h0^{km}, mb4.4/1,*
mb1 3.6/4, mb1mx2.9/46, mbtmp3.4/4, ML2.8/2, Error
ellipse: s-maj=67.9km s-min=25.8km az=176.0
ISC 06 02:49:42.2±2.5**,9°.4S**±0°.2×**124°.61E**±0°.09**,h25^{km},n5,**
σ1^s.71/9**,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	1.24	229	Pn	Pn	02 50 02.3	-1.6
	6.1nm,0.3s,baz=63,slow=4.5,SNR=3.0						
BATI				Sn	Sb	02 50 23.1	+2.6
	2.7nm,0.3s,baz=148,slow=23,SNR=1.6						
FITZ	Fitzroy Crossi	8.72	174	Pn	Pn	02 51 46.0	-0.8
	baz=17,slow=11						
FITZ				Sn	Sn	02 53 21.9	-2.4
	baz=108,slow=16						
WRA	Warramunga Arr	14.09	139	Pn	Pn	02 53 00.8	+0.5
	0.0nm,0.3s,baz=323,slow=14,SNR=1.6						
WRA				Sn	Sn	02 55 36.4	+0.5
	0.1nm,0.3s,baz=312,slow=22,SNR=6.6						
ASAR	Alice Springs	16.75	149	Pn	Pn	02 53 36.0	+0.6
	0.1nm,0.3s,baz=333,slow=15,SNR=6.3						
ASAR				Sn	Sn	02 56 41.7	+0.9
	0.0nm,0.3s,baz=309,slow=20,SNR=2.1						
STKA	Stephens Creek	27.37	147	P	P	02 55 25.9	+0.4
	1.6nm,0.3s,baz=331,slow=13,SNR=3.6						

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*IDC **06** 02:52:29.9±0.6, 16°.40N×92°.90W, h220^{km}±6^{km}, mb3.6/11,*
mb1 3.9/14, mb1mx3.5/50, mbtmp4.2/14, Error ellipse:
s-maj=24.5km s-min=6.9km az=30.0
*MEX **06** 02:52:30.7±1.8, 16°.44N×93°.02W, h245^{km}±14^{km}, MD4.6*
*NEIC **06** 02:52:31.7±2.7, 16°.48N±0°.06×92°.93W±0°.06, h230^{km}±5^{km},*
mb4.4/77, Md4.6/62(MEX), Error ellipse: s-maj=9.9km
s-min=8.2km az=212.0
ISC 06 02:52:31.0±0.6**,16°.48N**±0°.04×**93°.00W**±0°.04**,h232^{km}**±5^{km}**,**
n203,σ1^s.90/243**,mb4.3**/30**,1D,Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		0.32	339		Pn	02 53 01.5	+0.1
TGIG					S	02 53 24.6	-0.8
TGIG		0.32	339	eP	Pn	02 53 01.5	+0.1
TGIG				eS	S	02 53 24.6	-0.8
PCIG		0.79	195		Pn	02 53 02.1	-0.9
PCIG					S	02 53 26.8	-1.2
PCIG		0.79	195	i P	Pn	02 53 02.1	-0.9
PCIG				eS	S	02 53 26.8	-1.2
CCIG	Comitan	0.85	103		Pn	02 53 02.9	-0.5
CCIG	Comitan	0.85	103		S	02 53 28.2	-0.5
CCIG	Comitan	0.85	103	eP	Pn	02 53 03.2	-0.2
CCIG				eS	S	02 53 28.2	-0.5
PAVE	Pavencul	1.50	148	eP	Pn	02 53 07.3	-0.5
PAVE				eS	S	02 53 36.1	-0.6
PATR	El Naranjo	1.54	151	eP	Pn	02 53 06.8	-1.4
PATR				eS	S	02 53 36.5	-0.8
THIG		1.71	155		Pn	02 53 08.8	-0.6
THIG					S	02 53 38.2	-1.1
THIG		1.71	155	eP	Pn	02 53 08.6	-0.8
THIG				eP	Pn	02 53 08.8	-0.6
THIG				eS	S	02 53 38.2	-1.1
HUEH	Huehuetenango	1.84	128	Pn	Pn	02 53 09.5	-1.3
CMIG	Matias Romero	1.91	289	P	Pn	02 53 11.2	+0.1
	16nm,0.3s,baz=146,slow=5.9,SNR=342						
CMIG				S	S	02 53 41.2	-1.2
	46nm,0.3s,baz=91,slow=8.1,SNR=27						
CMIG	Matias Romero	1.91	289		Pn	02 53 10.9	-0.2
CMIG					S	02 53 40.7	-1.7
CMIG	Matias Romero	1.91	289	i P	Pn	02 53 10.9	-0.2
CMIG				eS	S	02 53 40.7	-1.7
RTAL	Retalhuleu	2.31	147		Pn	02 53 14.3	-0.8
APG	El Apazote	2.85	121	P	Pn	02 53 19.4	-1.6
	127nm,0.3s,baz=320,slow=9.0,SNR=655						
APG				S	S	02 53 56.2	-3.8
	13nm,0.3s,baz=56,slow=23,SNR=15						
NEUV	Arroyo Zacate	2.95	295	⇓eP	Pn	02 53 21.6	-0.1
NEUV				eS	S	02 53 56.6	-5.1
SCIG	Sabancuy	3.02	35		Pn	02 53 20.8	-1.8
SCIG					S	02 54 01.5	-1.7
SCIG	Sabancuy	3.02	35	eP	Pn	02 53 20.8	-1.8
SCIG				eS	S	02 54 01.5	-1.7
PETF	Flores	3.04	81	Pn	Pn	02 53 20.3	-2.4
HUIG	Huatulco	3.07	257		Pn	02 53 21.9	-1.2
HUIG					S	02 54 02.3	-1.8
HUIG	Huatulco	3.07	257	eP	Pn	02 53 21.9	-1.2
HUIG				eS	S	02 54 02.3	-1.8
OXLC	Oaxaca	3.59	280	eS	S	02 54 13.7	-1.7
OXBJ	Oaxaca	3.62	280		S	02 54 15.3	-0.4
OXBJ	Oaxaca	3.62	280	eS	S	02 54 15.3	-0.4
VHO	Vista Hermosa	3.62	280	eP	Pn	02 53 31.0	+1.2
VHO				eS	S	02 54 15.3	-0.7
ESQI	Esquipulas	4.01	118	Pn	Pn	02 53 32.8	-1.5
PEIG	Puerto Escondi	4.01	264	eP	Pn	02 53 33.8	-0.4
PEIG				eS	S	02 54 22.2	-1.8
MTO3	Montecristo	4.07	120	Pn	Pn	02 53 33.4	-1.8
TOIG	Toxpalan	4.20	293	eP	Pn	02 53 37.6	+1.1
TOIG				eS	S	02 54 27.4	-1.0
YOIG	Yosondua	4.37	276	eP	Pn	02 53 40.4	+1.6
YOIG				eS	S	02 54 27.4	-4.9
OZST	Orizaba	4.57	302	eS	S	02 54 33.8	-2.6
SNET	Serv Nac Est T	4.58	127	Pn	Pn	02 53 39.3	-1.8
TPIG	Tehuac#an	4.59	296		Pn	02 53 42.5	+1.1
TPIG					S	02 54 34.6	-2.3
TPIG	Tehuac#an	4.59	296	eP	Pn	02 53 42.5	+1.1
TPIG				eS	S	02 54 34.6	-2.3
JAUV	Jalcomulco	4.62	309	eP	Pn	02 53 41.9	+0.3

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JAUV                                 eS    S        02 54 32.1  -5.4
HLIG   Huajuapan de L    4.79 287    eP    Pn       02 53 45.2  +1.4
HLIG                                 eP    Pn       02 53 45.5  +1.7
HLIG                                 eS    S        02 54 38.8  -2.6
HLIG                                 eS    S        02 54 39.1  -2.3
PNIG   Pinotepa          4.92 270          Pn       02 53 45.9  +0.7
PNIG                                       S        02 54 42.9  -1.2
PNIG   Pinotepa          4.92 270    eP    Pn       02 53 45.9  +0.7
PNIG                                 eS    S        02 54 42.9  -1.2
FTIG   Fresnillo de T    5.11 287    eP    Pn       02 53 49.5  +1.8
FTIG                                 eP    Pn       02 53 49.7  +2.0
FTIG                                 eS    S        02 54 42.8  -5.7
FTIG                                 eS    S        02 54 45.2  -3.3
TLIG   Tlapa             5.43 282          Pn       02 53 53.4  +1.7
TLIG   Tlapa             5.43 282          S        02 54 53.4  -2.5
TLIG   Tlapa             5.43 282    eP    Pn       02 53 53.8  +2.1
TLIG                                 eS    S        02 54 53.4  -2.5
MGIG   Malinaltepec      5.45 279    eP    Pn       02 53 53.8  +1.8
MGIG                                 eS    S        02 54 53.7  -2.6
CRIG   Cruz Grande       5.88 273          Pn       02 53 58.4  +1.1
CRIG                                       S        02 55 02.7  -3.3
CRIG   Cruz Grande       5.88 273    eP    Pn       02 53 58.4  +1.1
CRIG                                 eS    S        02 55 02.7  -3.3
TGUH   Tegucigalpa,Un    6.03 113     Pn   Pn       02 53 57.8  -1.5
YAIG   Yautepec          6.25 293          Pn       02 54 05.0  +2.9
YAIG                                       S        02 55 13.2  -1.5
YAIG   Yautepec          6.25 293    eP    Pn       02 54 05.0  +2.9
YAIG                                 eS    S        02 55 13.2  -1.5
DAIG   Los Arroyos       6.39 276          Pn       02 54 05.5  +1.7
DAIG                                       S        02 55 09.1  -8.7
DAIG   Los Arroyos       6.39 276    eP    Pn       02 54 05.5  +1.7
DAIG                                 eS    S        02 55 09.1  -8.7
MEIG   Mezcala           6.49 284          Pn       02 54 07.8  +2.7
MEIG                                       S        02 55 14.1  -6.0
MEIG   Mezcala           6.49 284    eP    Pn       02 54 07.8  +2.7
MEIG                                 eS    S        02 55 14.1  -6.0
PLIG   Platanillo        6.49 288          Pn       02 54 07.9  +2.8
PLIG                                       S        02 55 20.5  +0.3
PLIG   Platanillo        6.49 288    eP    Pn       02 54 07.9  +2.8
PLIG                                 eS    S        02 55 20.5  +0.3
BOAB   BOACO BROADBAN8.15 118              Pn       02 54 24.6  -1.7
MOIG   Morelia           8.41 293     Pn   Pn       02 54 33.1  +3.4
ZAIG   Zacatecas        10.97 306          P        02 55 06.2  -1.4
RIMA   Rio Macho        11.12 126          Pn       02 55 03.6  -0.6
342A   Flagon Creek P   14.85   2          Pn       02 55 49.6  -0.4
435B   Jarrell          14.85 344          P        02 55 50.9  +0.8
JCT    Junction City    15.27 337    P     Pn       02 55 56.6  +1.5
JCT                                  IAmb  IAmb     02 56 01.6
       comp=Z,13nm,1.2s
JCT    Junction City    15.27 337    P     Pn       02 55 57.6  +2.5
       baz=154
237A   Washetta, Mont   15.67 351    P     Pn       02 56 01.1  +1.3
HPIG                    15.70 314    P     Pn       02 56 02.4  +1.9
VBMS   Vicksburg        15.84   8    P     Pn       02 56 02.4  +0.6
TXAR   Lajitas Array    16.12 324    P     Pn       02 56 07.4  +2.0
       comp=Z,0.5nm,0.3s,baz=150,slow=10,SNR=80
TX31   Lajitas Ar. Si   16.12 324          Pn       02 56 07.3  +1.9
TX32   Lajitas Array    16.12 324    P     Pn       02 56 07.3  +1.9
TX32                                 IAmb  IAmb     02 56 09.7
       comp=Z,17nm,1.0s
143A   Socs Landing,    16.22   5    P     Pn       02 56 06.0  -0.5
143A                                 IAmb  IAmb     02 56 26.8
       comp=Z,12nm,0.6s
ABTX   Abilene, Hawle   17.17 341    P     Pn       02 56 17.4  -0.2
ABTX                                 IAmb  IAmb     02 56 20.9
       comp=Z,18nm,0.8s
ABTX   Abilene, Hawle   17.17 341    P     Pn       02 56 18.3  +0.7
       baz=157
Z47A   Carrollton       17.24  14    P     P        02 56 15.4  -1.0
Z47A                                 IAmb  IAmb     02 56 31.1
       comp=Z,24nm,1.0s
MIAR   Mount Ida        18.00 358    P     P        02 56 25.1  +0.4
MIAR                                 IAmb  IAmb     02 56 31.1
       comp=Z,12nm,1.1s
MIAR   Mount Ida        18.00 358    P     P        02 56 25.4  +0.7
       baz=178
X43A   Marvell          18.07   6    P     P        02 56 23.7  -1.7
       baz=186
X34A   Smith Ranch, M   18.56 347          Pn       02 56 33.2  -0.8
X34A                                 IAmb  IAmb     02 56 39.5
       comp=Z,25nm,1.3s
MNTX   Cornudas Mount   18.88 326    P     Pn       02 56 36.5  -1.3
MNTX   Cornudas Mount   18.88 326    P     Pn       02 56 36.5  -1.3
       baz=140,SNR=35
Y52A   Lilburn          19.09  23    P     P        02 56 38.1  +1.7
Y52A                                 IAmb  IAmb     02 56 55.6
       comp=Z,12nm,0.8s
FNO    Franklin         19.11 349          P        02 56 37.9  +1.2
OKCFA  Oklahoma City    19.28 349    P     P        02 56 39.7  +1.3
MSTX   Muleshoe         19.51 335    P     P        02 56 41.9  +0.8
MSTX                                 IAmb  IAmb     02 56 45.9
       comp=Z,12nm,0.9s
MSTX   Muleshoe         19.51 335    P     P        02 56 42.2  +1.1
       baz=150
TUL1   Leonard          19.52 353    P     P        02 56 41.4  +0.4
TUL1                                 IAmb  IAmb     02 56 44.4
       comp=Z,9.0nm,0.9s
TUL1   Leonard          19.52 353    P     P        02 56 42.8  +1.8
       baz=171
LCAR   Lake Charles     19.59   4    P     P        02 56 41.3  -0.4
LCAR                                 IAmb  IAmb     02 57 05.6
       comp=Z,10.0nm,0.7s
OK030  Cody Creek RV    19.67 351    P     P        02 56 42.5   0.0
OK031  S. Brethren Rd   19.70 351          P        02 56 43.0   0.0
OK031                                IAmb  IAmb     02 56 45.4
       comp=Z,16nm,0.7s
OK034  N. Norfolk Rd.   19.74 351          P        02 56 42.9  -0.4
HHAR   Hobbs            19.75 358    P     P        02 56 43.8  +0.3
HHAR                                 IAmb  IAmb     02 56 45.9
       comp=Z,5.8nm,0.5s
U40A   Yellville        19.80   0    P     P        02 56 45.0  +0.9
       baz=180
AMTX   Amarillo         19.91 339    P     P        02 56 46.1  +0.8
AMTX   Amarillo         19.91 339    P     P        02 56 46.2  +0.8
       baz=154
U38A   Gravette         19.92 357    P     P        02 56 46.7  +1.4
U38A                                 IAmb  IAmb     02 56 47.6
       comp=Z,7.6nm,0.7s
WVT    Waverly          20.11  12    P     P        02 56 46.9  -0.5
       baz=194
CROK   Carrier          20.44 348          P        02 56 50.9  +0.1
OK032  Salt Plains WL   20.77 348          P        02 56 54.5  +0.1
TKL    Tuckaleechee C   20.80  22    P     P        02 56 55.2  +0.5
       comp=Z,7.7nm,1.1s,baz=288,slow=7.2,SNR=4.1
TKL    Tuckaleechee C   20.80  22    IAmb  IAmb     02 57 06.0
       comp=Z,24nm,1.4s
121A   Cookes Peak, D   20.86 323    P     P        02 56 57.3  +1.8
121A                                 IAmb  IAmb     02 57 01.2
       comp=Z,13nm,1.1s
121A   Cookes Peak, D   20.86 323    P     P        02 56 58.4  +2.9
       baz=136,SNR=6.5
S39A   Bolivar          21.14 359    P     P        02 56 57.1  -1.0
BNM    Barren Site      21.44 328    P     P        02 57 03.1  +1.6
CCM    Cathedral Cave   21.55   4    P     P        02 57 01.4  -0.8
       baz=184
R40A   Maddies Statio   21.74   2    P     P        02 57 02.8  -1.2
ANMO   Albuquerque      21.99 329    P     P        02 57 08.7  +2.1
       comp=Z,5.2nm,0.6s,baz=143,slow=11,SNR=22
ANMO   Albuquerque      21.99 329    P     P        02 57 07.0  +0.4
ANMO                                 IAmb  IAmb     02 57 09.7
       comp=Z,11nm,1.2s
ANMO   Albuquerque      21.99 329    P     P        02 57 08.7  +2.1
       baz=143
R32A   Long Quarter,    22.43 348    P     P        02 57 10.1  -0.4
R32A                                 IAmb  IAmb     02 57 12.4
       comp=Z,17nm,1.1s
TUC    Tucson           22.55 318    P     P        02 57 13.3  +1.7
TUC    Tucson           22.55 318    P     P        02 57 14.4  +2.8
       baz=130
KSU1   Kansas State U   22.76 353    P     P        02 57 13.0  -0.4
KSU1   Kansas State U   22.76 353    P     P        02 57 13.5  +0.1
       baz=170
T25A   Trinidad         22.93 336    P     P        02 57 16.6  +1.4
T25A                                 IAmb  IAmb     02 57 19.4
       comp=Z,17nm,0.8s
T25A   Trinidad         22.93 336    P     P        02 57 17.3  +2.1
       baz=150,SNR=13
CBKS   Cedar Bluff      23.03 346    P     P        02 57 16.2  +0.3
       baz=163
P38A   Dawn             23.07 359    P     P        02 57 14.9  -1.2
P38A                                 IAmb  IAmb     02 57 17.9
       comp=Z,11nm,0.6s
X18A   Snowflake        23.54 323    P     P        02 57 22.8  +2.1
X18A                                 IAmb  IAmb     02 57 25.5
       comp=Z,11nm,1.2s
W18A   Petrified Fore   23.85 324    P     P        02 57 27.8  +4.3
       baz=137,SNR=5.5
SDCO   Great Sand Dun   23.89 335    P     P        02 57 25.3  +1.3
SDCO   Great Sand Dun   23.89 335    P     P        02 57 26.0  +2.1
       baz=149
N38A   Joes South For   24.23 360    P     P        02 57 26.8  +0.1
X16A   Lo Mia Camp, P   24.35 321    P     P        02 57 29.9  +1.8
S22A   4UR Ranch, Cre   24.45 333    P     P        02 57 31.3  +2.3
       baz=146,SNR=8.7
MVCO   Mesa Verde       24.79 329    P     P        02 57 33.5  +1.4
MVCO                                 IAmb  IAmb     02 57 35.9
       comp=Z,10nm,0.8s
MVCO   Mesa Verde       24.79 329    P     P        02 57 34.7  +2.6
       baz=142,SNR=10
WUAZ   Wupatki          25.07 323    P     P        02 57 36.6  +2.1
WUAZ   Wupatki          25.07 323    P     P        02 57 37.7  +3.2
       baz=134
GLA    Glamis           25.71 314    P     P        02 57 43.2  +3.0
       baz=124
PDMCI  Parker Dam,Lak   25.98 317    P     P        02 57 44.9  +2.4
       baz=128
W13A   Hualapai Mount   26.32 319    P     P        02 57 47.3  +1.5
BC3    Big Chuckawall   26.48 314    P     P        02 57 50.4  +3.2
       baz=124,SNR=7.3
BELC   Belle Mtn. Jos   27.05 314    P     P        02 57 55.4  +3.1
       baz=124
PFO    Pinyon Flats O   27.15 313    P     P        02 57 55.0  +1.9
       comp=Z,2.3nm,0.7s,baz=134,slow=5.6,SNR=6.0
PFO    Pinyon Flats O   27.15 313    P     P        02 57 56.3  +3.1
       baz=123
GMRC   Granite Mounta   27.27 316    P     P        02 57 57.3  +3.1
       baz=126
MTPU   Mount Pierson    27.32 326    P     P        02 57 56.8  +1.9
MTPU                                 IAmb  IAmb     02 57 59.1
       comp=Z,6.1nm,1.0s
SZCU   Shurtz Canyon    27.50 324    P     P        02 57 58.4  +2.1
CCUT   Cedar City       27.63 323    P     P        02 58 00.3  +2.8
MURC   Murrieta         27.66 313    P     P        02 58 00.9  +3.3
       baz=122
MVU    Marysvale        27.67 326    P     P        02 58 00.4  +2.6
MVU                                  IAmb  IAmb     02 58 01.7
       comp=Z,13nm,1.0s
TUQ    Turquoise Moun   27.83 317    P     P        02 58 02.5  +3.3
       baz=127
QSM    Queen of Sheba   28.77 317    P     P        02 58 08.8  +1.5
QSM                                  IAmb  IAmb     02 58 11.2
       comp=Z,7.4nm,1.2s
SPR3   Spring Creek 3   29.18 324    P     P        02 58 13.0  +1.7
MPMC   Manual Prospec   29.23 317    P     P        02 58 14.5  +2.9
       baz=125
R11A   Troy Canyon, C   29.46 322    P     P        02 58 16.0  +2.4
R11A   Troy Canyon, C   29.46 322    P     P        02 58 16.8  +3.2
       baz=131
PDAR   Pinedale Array   29.78 335    P     P        02 58 16.7  +0.2
       comp=Z,0.6nm,0.7s,baz=129,slow=9.5,SNR=5.4
CWC    Cottonwood Cre   29.84 317    P     P        02 58 20.0  +3.1
       baz=125
VES    Vestal, Richgr   30.18 315    P     P        02 58 23.5  +3.8
       baz=123,SNR=5.3
PKM    Mcpherson Peak   30.18 312    P     P        02 58 23.4  +3.4
       baz=120
E28A   Huff             30.69 350    P     P        02 58 23.4  -0.7
E28A                                 IAmb  IAmb     02 58 26.2
       comp=Z,8.4nm,0.7s
REDW   Red Top Meadow   30.81 334    P     P        02 58 26.7  +1.2
REDW                                 IAmb  IAmb     02 58 28.1
       comp=Z,12nm,0.9s
SNOW   Snow King Moun   30.85 334    P     P        02 58 26.0  +0.1
ELK    Elko             30.91 326    P     P        02 58 28.7  +2.3
       comp=Z,1.5nm,0.7s,baz=96,slow=7.2,SNR=6.8
ELK    Elko             30.91 326    P     P        02 58 28.4  +2.0
LOHW   Long Hollow      30.91 335    P     P        02 58 27.6  +1.2
TPAW   Teton Pass       30.95 334    P     P        02 58 27.9  +1.2
TPAW                                 IAmb  IAmb     02 58 33.3
       comp=Z,6.0nm,0.9s
NV11   Mina Array Sit   31.07 320    P     P        02 58 30.1  +2.4
NV11                                 IAmb  IAmb     02 58 32.2
       comp=Z,7.9nm,0.9s
MOOW   Moose Ponds      31.08 335    P     P        02 58 28.5  +0.7
FXWY   Fox Creek        31.11 334    P     P        02 58 28.5  +0.4
NVAR   Mina Array Bea   31.16 320    P     P        02 58 31.4  +2.8
       comp=Z,8.3nm,0.7s,baz=134,slow=9.2,SNR=48
NVAR   Mina Array Bea   31.16 320    P     P        02 58 30.9  +2.3
LHV    Little Huntoon   31.18 319    P     P        02 58 30.3  +1.9
LHV                                  IAmb  IAmb     02 58 33.0
       comp=Z,7.5nm,0.8s
BMN    Battle Mountai   31.79 324    P     P        02 58 35.4  +1.4
BMN                                  IAmb  IAmb     02 58 38.0
       comp=Z,6.2nm,0.8s
YMR    Madison River    31.93 335    P     P        02 58 36.2  +1.0
MCMT   McKenzie Canyo   32.84 334    P     P        02 58 44.3  +1.2
BEKR   Beckworth        33.30 320    P     P        02 58 46.4  -0.7
J08A   Circle Bar Ran   34.45 326    P     P        02 58 57.1  +0.2
HOOD   Mount Hood Mea   37.46 326    P     P        02 59 23.6  +1.2
EDM    Edmonton         39.99 341    P     P        02 59 41.5  -1.7
SIV    San Ignacio      45.09 134    P     P        03 00 22.1  -2.4
       comp=Z,1.5nm,0.6s,baz=300,slow=10,SNR=8.5
YKA    Yellowknife Ar   48.41 347    P     P        03 00 49.4  -0.1
       comp=Z,3.7nm,0.6s,baz=131,slow=8.4,SNR=6.8
FRB    Frobisher Bay    50.14  14    P     P        03 01 01.1  -1.5
       comp=Z,1.9nm,0.4s,baz=207,slow=11,SNR=9.5
INK    Inuvik           57.81 343    P     P        03 01 58.0  +0.3
       comp=Z,1.8nm,0.7s,baz=135,slow=5.9,SNR=7.0
INK    Inuvik           57.81 343    IAmb  IAmb     03 01 59.3
       comp=Z,6.0nm,1.2s
INK    Inuvik           57.81 343    P     P        03 01 58.4  +0.6
       baz=132
PAX    Paxson           58.82 335    P     P        03 02 06.3  +1.3
       baz=117
RIDG   Independent Ri   58.93 336    P     P        03 02 07.2  +1.4
       baz=118
WAT6   Susitna Watana   59.59 334    P     P        03 02 12.6  +2.2
       baz=114
PMR    Palmer           59.79 333    P     P        03 02 13.3  +1.8
PMR                                  IAmb  IAmb     03 02 13.6
       comp=Z,7.4nm,1.0s
PMR    Palmer           59.79 333    P     P        03 02 13.0  +1.5
       baz=113
HDA    Harding Lake     60.06 336    P     P        03 02 14.4  +1.0
       baz=116
IL31                    60.20 336    P     P        03 02 15.5  +1.3
ILAR   Eielson Array    60.20 336    P     P        03 02 15.1  +0.8
       comp=Z,2.5nm,0.9s,baz=125,slow=5.6,SNR=24
RND    Reindeer         60.39 335    P     P        03 02 17.2  +1.5
RND                                  IAmb  IAmb     03 02 18.0
       comp=Z,9.5nm,0.8s
MCK    McKinley         60.56 335    P     P        03 02 18.0  +1.2
       baz=114
TRF    Thorofare Moun   61.00 334    P     P        03 02 21.0  +1.1
       baz=112
H24K   Noodor Dome      61.05 337    P     P        03 02 21.3  +1.3
H24K                                 IAmb  IAmb     03 02 21.8
       comp=Z,6.2nm,0.8s
H24K   Noodor Dome      61.05 337    P     P        03 02 21.4  +1.3
       baz=116
I23K   Minto, Yukon-K   61.31 336    P     P        03 02 23.1  +1.3
I23K                                 IAmb  IAmb     03 02 23.7
       comp=Z,7.7nm,0.8s
I23K   Minto, Yukon-K   61.31 336    P     P        03 02 22.9  +1.2
       baz=114,SNR=5.3
MLY    Manley           61.80 336    P     P        03 02 26.2  +1.1
MLY                                  IAmb  IAmb     03 02 26.8
       comp=Z,6.1nm,0.7s
MLY    Manley           61.80 336    P     P        03 02 25.8  +0.8
       baz=113,SNR=6.3
N19K   Bonanza Creek    61.95 331    P     P        03 02 27.2  +1.0
       baz=107
L20K   Farewell, AK     62.19 333    P     P        03 02 28.3  +0.6
       baz=108
K20K   Telida           62.56 334    P     P        03 02 30.9  +0.8
K20K                                 IAmb  IAmb     03 02 31.5
       comp=Z,16nm,1.3s
K20K   Telida           62.56 334    P     P        03 02 30.6  +0.5
       baz=109
H21K   Melozitna Rive   62.84 336    P     P        03 02 32.2  +0.3
       baz=111
TOLK   Toolik Lake Re   62.88 340    P     P        03 02 33.4  +1.3
       baz=116
WRA    Warramunga Arr  135.01 258    PKP   PKPdf    03 11 23.9  +0.6
       comp=Z,0.4nm,0.8s,baz=358,slow=0.9,SNR=5.2
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*IDC **06** 02:55:08.1±1.0, 34°.38N×136°.48E, h360^{km}±11^{km}, mb3.0/8, mb1 3.2/15, mb1mx2.8/69, mbtmp3.9/15, Error ellipse: s-maj=17.9km s-min=13.0km az=72.0*

*JMA **06** 02:55:08.8±0.1, 34°.48N×136°.37E, h359^{km}±1^{km}, M3.3*

ISC 06 02:55:08.1±0.8**, 34°.40N**±0°.07×**136°.41E**±0°.06**, h361**^{km}±6^{km}**, n35, σ0^{s}.78**/47**, mb3.0**/8**, Western Honshu**

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Code   Station Name         Δ°   AZ°   Phase ID         Time       Res
                                       Op    ISC        h  m  s    ISC
JKN2   Miekihoku           0.20 216    P     Pn       02 55 53.9  +0.7
JKN2                                   S     S        02 56 28.6  -0.8
JIE    Ise                 0.24  92    P     Pn       02 55 54.0  +0.8
JIE                                    S     S        02 56 29.0  -0.3
TSUJ   Tsu 2               0.31   1    P     Pn       02 55 54.1  +0.9
TSUJ                                   S     S        02 56 29.2  -0.2
JWY    Kouya               0.70 255    P     Pn       02 55 54.9  +0.7
JWY                                    S     S        02 56 30.4  -0.7
JTNC   Tanabenakahech      0.89 229    P     Pn       02 55 55.3  +0.6
JTNC                                   S     S        02 56 31.7  -0.3
TK02   Tokai 2             1.20 112    P     Pn       02 55 57.0  +1.4
JWT    Wachi               1.21 317    P     Pn       02 55 56.3  +0.5
JWT                                    S     S        02 56 33.3  -0.9
JYTA   Yamagatataniai      1.22  12    P     Pn       02 55 56.5  +0.7
JYTA                                   S     S        02 56 33.4  -0.9
JAI    Aioi                1.74 250    P     Pn       02 55 59.2  +0.4
JKG    Kaga                1.87 358    P     Pn       02 55 59.9  +0.4
JKG                                    S     S        02 56 40.1  -0.7
JFNN   Fujinakano          2.03  66    P     Pn       02 56 00.9  +0.3
JYN    Shimob              2.06  57    P     Pn       02 56 01.2  +0.3
JMN    Monobe              2.21 253    P     Pn       02 56 02.7  +0.7
JOD2   Odawara 2           2.36  68    P     Pn       02 56 03.4  +0.4
MAT    Matsushiro          2.59  34    P     Pn       02 56 04.9  +0.2
MAT                                    S     S        02 56 49.7  -0.7
MAT    Matsushiro          2.59  34    P     Pn       02 56 05.0  +0.2
MAT                                    S     S        02 56 49.8  -0.7
MJAR   Matsushiro Arr      2.59  34    P     Pn       02 56 04.2  -0.5
       2.0nm,0.3s,baz=202,slow=8.5,SNR=121
MJAR                                   S     S        02 56 53.0  +2.6
       0.1nm,0.3s,baz=145,slow=14,SNR=4.6
JRY    Ryogami san         2.60  51    P     Pn       02 56 05.4  +0.5
JHS    Saijyo              2.78 283    P     Pn       02 56 07.0  +0.6
JHJ    Hachijo jima 2      3.08 114    P     Pn       02 56 09.0  -0.1
       16nm,0.3s,baz=77,slow=23,SNR=1.6
JOI    OKI                 3.20 307    P     Pn       02 56 10.2  +0.2
JTO    Tosashimizu         3.38 244    P     Pn       02 56 12.3  +0.5
JTO                                    S     S        02 57 02.5  -0.6
JNU    Nakatsue            4.78 256    P     Pn       02 56 26.8  +0.8
       13nm,0.3s,baz=65,slow=0.1,SNR=26
KSRS   Korea Array         7.53 296    P     P        02 56 58.0   0.0
       1.4nm,0.3s,baz=108,slow=12,SNR=44
USRK   Ussuriysk Ar.      10.37 342    P     Pn       02 57 29.9  -0.3
       baz=151,slow=10,SNR=16
ASAJ   Asahikawa          10.82  24    P     Pn       02 57 34.9  -0.7
       0.6nm,0.3s,baz=228,slow=11,SNR=6.1
KLR    Kul'dur            15.21 348    P     P        02 58 23.6  -0.8
       0.7nm,0.3s,baz=165,slow=9.7,SNR=13
SONM   Songino Array      26.11 310    P     P        03 00 11.5  +1.0
       0.3nm,0.4s,baz=121,slow=9.0,SNR=3.9
ZALV   Zalesovo Beam      40.78 315    P     P        03 02 16.8  +1.5
       0.4nm,0.4s,baz=94,slow=9.4,SNR=2.4
MKAR   Makanchi Array     42.13 304    P     P        03 02 26.6  +0.3
       0.5nm,0.5s,baz=84,slow=10,SNR=10
KURBB  Kurchatov Arra     44.48 310    P     P        03 02 43.8  -1.0
       0.2nm,0.3s,baz=115,slow=4.2,SNR=2.4
ILAR   Eielson Array      53.87  31    P     P        03 03 55.2  +0.3
       0.4nm,0.6s,baz=260,slow=5.6,SNR=6.4
WRA    Warramunga Arr     54.08 182    P     P        03 03 56.4  -0.5
       0.4nm,0.3s,baz=0.1,slow=7.6,SNR=21
ASAR   Alice Springs      57.80 183    P     P        03 04 22.8  -0.2
       0.1nm,0.3s,baz=3.6,slow=4.6,SNR=2.5
FINES  FINESS Array B     69.20 331    P     P        03 05 35.9  -0.4
       5.8nm,1.0s,baz=63,slow=6.4,SNR=2.3
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*TUL **06** 03:04:36.7±1.9, 36°.47N±0°.03×98°.75W±0°.05, h4^{km}±8^{km}, ML3.1, mb_Lg2.8/36(NEIC), Error ellipse: s-maj=6.2km s-min=3.8km az=86.0*

*ANF **06** 03:04:37.7±0.3, 36°.40N×98°.79W, h10^{km}±3^{km}, ML3.5/4, Error ellipse: s-maj=4.4km s-min=1.6km az=55.0*

*NEIC **06** 03:04:38.5±1.8, 36°.48N±0°.04×98°.62W±0°.05, h11^{km}±7^{km}, Error ellipse: s-maj=6.6km s-min=4.8km az=144.0*

ISC 06 03:04:37.2±0.8**, 36°.46N**±0°.03×**98°.70W**±0°.03**, h10**^{km}**, n65, σ1^{s}.12**/66**, Oklahoma**

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Code   Station Name         Δ°   AZ°   Phase ID         Time       Res
                                       Op      ISC      h  m  s    ISC
U32A   Winter Ranch,       0.26 253    Pg      Pg     03 04 41.3  -1.1
U32A   Winter Ranch,       0.26 253    P       Pg     03 04 41.3  -1.1
       baz=85
U32A                                   S       Sg     03 04 44.6  -1.3
       baz=85
OK032  Salt Plains WL      0.53  48    Pg      Pg     03 04 47.2  -0.2
CROK   Carrier             0.58  85    Pg      Pg     03 04 48.5   0.0
KAN14  Manchester OK       0.78  50            Pg     03 04 52.1   0.0
GC02   Grant County #      0.78  59    Pg      Pg     03 04 52.1  -0.2
KAN10  Anthony SW Sta      0.82  36    Pg      Pg     03 04 52.7  -0.4
KAN16  Harper SW Stat      0.92  33    Pg      Pg     03 04 54.5  -0.4
KAN17  Caldwell West       0.95  52    Pg      Pg     03 04 55.1  -0.4
KAN08  Anthony NE Sta      0.97  37    Pg      Pg     03 04 55.4  -0.4
KAN12  Harper NE Stat      1.01  34    Pg      Pg     03 04 56.0  -0.7
KAN01  Argonia South       1.03  47    Pg      Pg     03 04 56.8  -0.1
KAN06  Argonia West S      1.04  40    Pg      Pg     03 04 56.2  -0.9
KAN09  Caldwell North      1.10  52    Pg      Pb     03 04 58.1  -0.3
KAN13  South Haven SW      1.13  60            Pb     03 04 58.5  -0.3
BCOK   Bluff Creek, N      1.19 132            Pb     03 04 59.3  -0.5
OK029  Liberty Lake        1.20 123    Pg      Pb     03 04 59.8  -0.2
BLOK   Blackwell           1.23  75            Pn     03 05 00.2  -0.3
OK025  Westminster Rd      1.41 128            Pn     03 05 03.2  +0.3
OKCFA  Oklahoma City       1.45 135    Pn      Pn     03 05 03.6  +0.1
OKCFA  Oklahoma City       1.45 135    P       Pn     03 05 04.0  +0.5
       baz=312
OKCFA                                  S       Sg     03 05 24.2  +0.4
       baz=312
OKCSW  OKLAHOMA CITY       1.46 135            Pn     03 05 04.2  +0.5
OK031  S. Brethren Rd      1.58 108            Pb     03 05 06.4  -0.1
FNO    Franklin            1.59 138            Pb     03 05 06.7  -0.1
OK030  Cody Creek RV       1.64 108            Pb     03 05 07.2  -0.3
OK034  N. Norfolk Rd.      1.67 105            Pn     03 05 07.3  +0.8
T35A   Sooner Cattle       1.82  75            Pn     03 05 09.4  +0.9
T35A                                   IAmb_Lg        03 05 38.3
       comp=Z,41nm,0.7s
T35B   Sooner Cattle       1.82  75    P       Pb     03 05 10.2  -0.3
       baz=255
T35B                                   S       Sg     03 05 35.3  -0.3
       baz=255
R32A   Long Quarter,       1.96 360            Pn     03 05 11.9  +1.4
R32A   Long Quarter,       1.96 360    P       Pn     03 05 11.8  +1.2
       baz=182
R32A                                   S       Sb     03 05 38.2  +0.5
       baz=182
X34A   Smith Ranch, M      1.98 159            Pb     03 05 12.6  -0.8
X34A                                   IAmb_Lg        03 05 41.5
       comp=Z,70nm,0.7s
TUL1   Leonard             2.41 102            Pb     03 05 19.3  -1.4
TUL1                                   IAmb_Lg        03 05 55.5
       comp=Z,36nm,0.9s
CBKS   Cedar Bluff         2.50 341    Pn      Pn     03 05 20.0  +2.1
CBKS                                   IAmb_Lg        03 05 56.0
       comp=Z,32nm,0.8s
CBKS   Cedar Bluff         2.50 341    S       Sb     03 05 51.0  -2.0
       baz=162
LOOK   Love County         2.75 153            Pn     03 05 22.8  +1.4
LOOK                                   IAmb_Lg        03 06 06.4
       comp=Z,33nm,0.8s
AMTX   Amarillo            2.89 238    Pn      Pn     03 05 25.4  +2.0
AMTX                                   IAmb_Lg        03 06 12.6
       comp=Z,46nm,0.8s
KSU1   Kansas State U      3.12  31            Pn     03 05 26.6  +0.2
KSU1                                           LR     03 06 14.9
X37A   Clayton             3.29 123    Pn      Pn     03 05 28.9  +0.2
X37A                                   IAmb_Lg        03 06 27.1
       comp=Z,42nm,0.7s
U38A   Gravette            3.48  89            Pn     03 05 32.3  +0.9
HHAR   Hobbs               3.84  91    Pn      Pn     03 05 37.6  +1.2
ABTX   Abilene, Hawle      3.90 192    Pn      Pn     03 05 39.5  +2.3
ABTX                                           LR     03 06 41.0
KSCO   Kaye Shedlock’      4.03 311    Pn      Pn     03 05 41.0  +1.9
KSCO                                   IAmb_Lg        03 06 49.6
       comp=Z,19nm,0.8s
MSTX   Muleshoe            4.16 235    Pn      Pn     03 05 43.3  +2.5
MSTX                                   IAmb_Lg        03 06 50.2
       comp=Z,26nm,0.9s
W39A   Magazine            4.19 106    Pn      Pn     03 05 42.4  +1.3
W39A                                   IAmb_Lg        03 06 58.1
       comp=Z,24nm,0.8s
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Z38A	Mt. Pleasant	4.41	135	IAmb_Lg		03 06 59.2	
	comp=Z,17nm,0.7s						
S39A	Bolivar	4.47	72	Pn	Pn	03 05 45.2	+0.1
MIAR	Mount Ida	4.59	113	Pn	Pn	03 05 48.9	+2.2
T25A	Trinidad	4.63	280	Pn	Pn	03 05 48.0	+0.6
T25A				IAmb_Lg		03 07 07.0	
	comp=Z,18nm,0.7s						
U40A	Yellville	4.72	89		Pn	03 05 48.5	+0.1
U40A				IAmb_Lg		03 07 04.7	
	comp=Z,18nm,0.7s						
N35A	Tabor	5.01	28	Pn	Pn	03 05 52.9	+0.5
P38A	Dawn	5.16	51	Pn	Pn	03 05 55.0	+0.5
X40A	Basin Creek Fa	5.17	111	Pn	Pn	03 05 57.1	+2.4
X40A					LR	03 07 18.9	
X40A				IAmb_Lg		03 07 26.2	
	comp=Z,14nm,0.7s						
OGNE	Ogallala	5.19	331	Pn	Pn	03 05 56.9	+1.9
MGMO	Mountain Grove	5.21	80	Pn	Pn	03 05 54.7	-0.4
WHAR	Wooly Hollow	5.33	101	Pn	Pn	03 05 58.7	+1.8
WHAR					LR	03 07 23.7	
WHAR				IAmb_Lg		03 07 30.5	
	comp=Z,21nm,0.9s						
FCAR	Ozark Folk Cen	5.35	94	Pn	Pn	03 05 58.6	+1.5
R40A	Maddies Statio	5.44	68	Pn	Pn	03 05 58.9	+0.6
SDCO	Great Sand Dun	5.59	285		Pn	03 06 02.1	+1.5
435B	Jarrell	5.73	170		Lg	03 07 43.6	
435B				IAmb_Lg		03 07 47.9	
	comp=Z,15nm,0.8s						
L34A	Svendsen Farm,	5.79	17	Pn	Pn	03 06 03.9	+0.7
L34A					LR	03 07 42.2	
JCT	Junction City	6.03	189	Pn	Pn	03 06 08.0	+1.5
P40A	Paris	6.08	58	Pn	Pn	03 06 08.1	+0.9
P40A				IAmb_Lg		03 07 53.3	
	comp=Z,20nm,0.9s						
LCAR	Lake Charles	6.11	91	Pn	Pn	03 06 08.8	+1.4
CCM	Cathedral Cave	6.16	73	Pn	Pn	03 06 09.0	+0.8
K22A	Casper	8.65	318	IAmb_Lg		03 09 23.5	
	comp=Z,7.4nm,0.8s						

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*IDC **06** 03:14:22.3±0.8, 0°.18N×23°.14W, h0^{km}, mb4.0/10, mb1 4.2/11, mb1mx3.9/66, mbtmp4.0/11, ML3.5/1, Error ellipse: s-maj=34.5km s-min=17.9km az=154.0*

*NEIC **06** 03:14:24.9±1.9, 0°.2N±0°.1×23°.11W±0°.06, h10^{km}±1^{km}, mb4.1/6, Error ellipse: s-maj=22.2km s-min=9.1km az=164.0*

ISC 06 03:14:24.0±0.6, **0°.3N**±0°.1×**23°.13W**±0°.09, **h10^{km}, n30,** σ**0^{s}.76**/23, **mb4.0**/10, **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	11.78	133	T	T	03 29 42.5	
	baz=311,slow=73,SNR=107						
H10N2	ASCENSION HYDR	11.78	133	T	T	03 29 29.4	
	baz=311,slow=73,SNR=114						
H10N1	ASCENSION HYDR	11.80	133	T	T	03 29 34.0	
	baz=311,slow=73,SNR=118						
ASCN	Ascension	11.95	133	Pn	Pn	03 17 13.1	-1.4
H10S3	ASCENSION HYDR	12.45	138	T	T	03 30 16.3	
	baz=316,slow=74,SNR=32						
H10S2	ASCENSION HYDR	12.46	138	T	T	03 30 17.5	
	baz=264,slow=74,SNR=16						
SACV	Santiago Islan	14.62	358	Pn	Pn	03 17 49.4	-1.7
LIC	Lamto	19.01	71	*e*P	Pn	03 18 47.3	+0.4
	29nm,1.5s						
TIC	Toumodi	19.15	70	*e*P	P	03 18 48.2	+0.5
DBIC	Dimbokro	19.31	70	P	Pn	03 18 50.5	0.0
	0.2nm,0.3s,baz=254,slow=14,SNR=6.3						
DBIC	Dimbokro	19.31	70	P	Pn	03 18 50.4	0.0
DBIC				IAmb	IAmb	03 18 52.4	
	comp=Z,8.2nm,1.0s						
KIC	Kosan Boka	19.33	71	*e*P	P	03 18 49.9	+0.3
	comp=Z,7.9nm,0.8s						
KOWA	Kowa	23.61	52	P	P	03 19 35.7	+0.3
	comp=Z,3.8nm,0.6s,baz=232,slow=8.3,SNR=13						
KOWA	Kowa	23.61	52	P	P	03 19 35.6	+0.3
KOWA				IAmb	IAmb	03 19 36.6	
	comp=Z,5.7nm,0.8s						
TORD	Torodi Ar. Bea	27.73	62	P	P	03 20 13.4	+0.4
	comp=Z,2.4nm,0.6s,baz=240,slow=10,SNR=31						
TORD	Torodi Ar. Bea	27.73	62	P	P	03 20 13.5	+0.5
TORD				IAmb	IAmb	03 20 13.9	
	comp=Z,2.5nm,0.6s						
SIV	San Ignacio	40.78	245	P	P	03 22 06.2	+0.4
	comp=Z,0.8nm,0.8s,baz=98,slow=12,SNR=4.0						
ESDC	Sonseca Array	42.96	22	P	P	03 22 23.4	+0.1
	comp=Z,1.6nm,1.0s,baz=210,slow=8.7,SNR=7.5						
ESDC	Sonseca Array	42.96	22	IAmb	IAmb	03 22 26.5	
	comp=Z,4.6nm,1.4s						
LPAZ	La Paz	47.33	247	P	P	03 22 58.1	-1.0
	comp=Z,1.2nm,0.8s,baz=130,slow=17,SNR=2.3						
PB06	IPOC Station P	50.61	240	P	P	03 23 23.8	+0.1
AKASG	Malin Array Be	66.93	33	P	P	03 25 17.1	+0.5
	comp=Z,0.1nm,0.3s,baz=238,slow=6.7,SNR=4.5						
TXAR	Lajitas Array	81.62	299	P	P	03 26 43.9	+1.0
	comp=Z,0.6nm,0.9s,baz=111,slow=6.9,SNR=4.8						
RES	Resolute Bay	84.98	345	P	P	03 27 00.1	+1.0
	comp=Z,2.0nm,0.8s,baz=89,slow=2.0,SNR=5.8						
RES	Resolute Bay	84.98	345	IAmb	IAmb	03 27 08.0	
	comp=Z,0.6nm,0.7s						
ABKAR	Akbulak array	85.27	41	P	P	03 27 01.4	+0.3
PDAR	Pinedale Array	87.19	313	P	P	03 27 09.9	-1.1
	comp=Z,0.5nm,0.7s,baz=104,slow=6.3,SNR=6.5						
YKA	Yellowknife Ar	90.45	332	P	P	03 27 25.8	+0.1
	comp=Z,1.3nm,0.8s,baz=93,slow=4.7,SNR=8.1						
ASAR	Alice Springs	147.78	138	PKPbc	PKPdf	03 34 08.2	+1.0
	comp=Z,1.1nm,0.7s,baz=215,slow=2.4,SNR=16						
WRA	Warramunga Arr	150.52	133	PKPbc	PKPbc	03 34 17.0	0.0
	comp=Z,0.8nm,0.7s,baz=239,slow=2.3,SNR=6.3						

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*JMA **06** 03:19:57.2±0.2, 31°.26N×128°.70E, h11^{km}±2^{km}, M4.2*

*NIED **06** 03:19:57.2, 31°.26N×128°.70E, h11^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.46; M$_{\theta\theta}$-0.18; M$_{\phi\phi}$0.64; M$_{r\theta}$-0.18; M$_{\theta\phi}$1.42; M$_{\phi r}$1.14; Fault plane solution: M$_0$1.91000×10^{15} NP1: ϕ_s177.00000°, δ81.00000°, λ-140.00000°. NP2: ϕ_s79.00000°, δ50.00000°, λ-12.00000°.*

*IDC **06** 03:19:58.5±1.0, 31°.32N×128°.66E, h0^{km}, mb3.7/6, mb1 3.8/11, mb1mx3.6/68, mbtmp3.7/11, ML3.2/5, MS3.3/6, Ms1 3.3/6, ms1mx3.0/51 Error ellipse: s-maj=20.2km s-min=13.6km az=113.0*

ISC 06 03:19:59.1±0.8, **31°.29N**±0°.05×**128°.82E**±0°.05, **h10^{km}, n25,** σ**1^{s}.13**/27, **mb3.6**/6, **MS3.3**/3, **3D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.86	63	⇓P	Pg	03 20 15.0	-0.7
JSJ				*e*S	Sg	03 20 27.3	+0.5
JFU	Fukue jima 2	1.36	357	P	Pn	03 20 22.8	-1.5
JSU	Suzuyama	1.41	81	P	Pn	03 20 24.9	0.0
JSU				*e*S	Sn	03 20 44.4	+0.8
JKC	Kuchinoerabu	1.44	125	P	Pn	03 20 24.8	-0.4
JKC				*e*S	Sb	03 20 44.4	0.0
JNN	Nakanoshima	1.70	148	P	Pn	03 20 27.4	-1.5
JYAK	Yakushimahirau	1.79	125	P	Pn	03 20 28.6	-1.5
JTN	Tanegashima 3	1.96	108	P	Pn	03 20 31.8	-0.6
JMTN	Minamitane	2.00	116	P	Pn	03 20 31.8	-1.1
JMTN				*e*S	Sn	03 20 57.4	-0.6
JTZ	Takazaki	2.03	72	⇓P	Pn	03 20 33.4	0.0
JIU3	Izumi3	2.11	53	⇓P	Pn	03 20 34.5	0.0
JNU	Nakatsue	2.53	43	Pn	Pb	03 20 42.3	-2.3
	3.0nm,0.3s,baz=258,slow=1.6,SNR=9.1						
JNU				Pg	Pg	03 20 46.0	-1.5
	47nm,0.3s,baz=268,slow=8.8,SNR=33						
JNU				Lg	Lg	03 21 20.9	
	21nm,0.3s,baz=7.6,slow=12,SNR=1.6						
KSRS	Korea Array	6.20	353	Pn	Pn	03 21 30.1	-0.5
	0.5nm,0.3s,baz=175,slow=15,SNR=17						
KSRS				Sn	Sn	03 22 41.6	+0.1
	1.2nm,0.3s,baz=174,slow=25,SNR=5.4						
KSRS				Lg	Lg	03 23 13.6	
	1.7nm,0.3s,baz=180,slow=27,SNR=9.0						
MJAR	Matsushiro Arr	9.39	54	Pn	Pn	03 22 16.4	+1.8
	0.0nm,0.3s,baz=238,slow=13,SNR=1.6						
MJAR				LR	LR	03 26 09.0	
	comp=Z,148nm,19.3s,baz=35,slow=39						
JHJ	Hachijo jima 2	9.47	76	LR	LR	03 25 12.3	
	comp=Z,78nm,19.3s,baz=84,slow=33						
ASAJ	Asahikawa	16.79	36	Pn	P	03 23 57.5	+1.1
	0.6nm,0.3s,baz=204,slow=12,SNR=5.0						
ASAJ				LR	LR	03 29 51.8	
	comp=Z,118nm,18.6s,baz=144,slow=35						
KLR	Kul'dur	18.06	6	P	P	03 24 12.4	+1.9
	0.1nm,0.3s,baz=302,slow=23,SNR=1.8						
SONM	Songino Array	23.79	320	P	P	03 25 11.9	-0.1
	1.1nm,0.9s,baz=133,slow=8.2,SNR=6.5						
TLY	Talaya	27.53	325	LR	LR	03 38 11.0	
	comp=Z,104nm,18.7s,baz=114,slow=40						
CMAR	Chiang Mai Arr	29.86	252	LR	LR	03 38 00.7	
	comp=Z,29nm,20.9s,baz=345,slow=36						
PETK	Petropavlovsk-	30.20	35	LR	LR	03 37 54.3	
	comp=Z,70nm,19.6s,baz=346,slow=36						
MKAR	Makanchi Array	38.73	307	P	P	03 27 23.2	-0.2
	0.7nm,0.9s,baz=108,slow=9.3,SNR=3.7						
WRA	Warramunga Arr	51.21	173	P	P	03 29 03.2	+0.3
	0.6nm,0.8s,baz=354,slow=8.1,SNR=6.0						
ASAR	Alice Springs	54.86	174	P	P	03 29 31.8	+2.0
	0.5nm,0.6s,baz=3.9,slow=14,SNR=9.1						
ILAR	Eielson Array	59.77	30	P	P	03 30 04.4	+0.4
	0.3nm,0.7s,baz=279,slow=8.7,SNR=4.7						
FINES	FINESS Array B	68.75	330	P	P	03 31 03.1	+0.2
	5.7nm,1.1s,baz=75,slow=5.9,SNR=1.5						

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*BGR **06** 03:21:41.0±0.9, 42°.22N×15°.25E, h10^{km}, ML4.5, Error ellipse: s-maj=21.1km s-min=12.2km az=45.0*

*IDC **06** 03:21:41.4±0.8, 42°.53N×15°.33E, h0^{km}, mb3.9/10, mb1 3.9/18, mb1mx3.7/63, mbtmp3.8/18, ML3.3/8, MS3.5/1, Ms1 3.5/1, ms1mx2.8/54, Error ellipse: s-maj=17.1km s-min=14.2km az=58.0*

*LDG **06** 03:21:41.9±0.2, 42°.45N×14°.90E, h10^{km}, Ml4.0/20, Error ellipse: s-maj=5.2km s-min=3.7km az=24.0*

*ROM **06** 03:21:41.8±0.1, 42°.409N±0°.007×15°.257E±0°.009, h14^{km}±1^{km}, ML3.9/122, Error ellipse: s-maj=0.7km s-min=0.6km az=213.0*

*PDG **06** 03:21:42.0±0.6, 42°.33N×15°.08E, h19^{km}±1^{km}, MD4.1/5, ML4.1/13, Error ellipse: s-maj=1.2km s-min=1.4km az=0.0*

*NEIC **06** 03:21:43.4±1.4, 42°.39N±0°.05×15°.15E±0°.06, h18^{km}±6^{km}, mb4.1/5, ML4.1(VIE), ML4.0(ROM), Error ellipse: s-maj=7.7km s-min=6.8km az=198.0*

*PRU **06** 03:21:45.1±0.0, 42°.64N×15°.21E, h0^{km}, M4.1*

ISC 06 03:21:41.5±1.0, **42°.42N**±0°.02×**15°.24E**±0°.02, **h9^{km}**±7^{km}, **n439,** σ**1^{s}.60**/496, **mb4.0**/11, **22C-31D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TREM	Isole Tremiti	0.35	145	P	Pg	03 21 49.2	+0.8
FRES	Fresagrandinar	0.61	224	P	Pg	03 21 52.2	-1.1
FRES				AML	AML		
	comp=N,1980µm,0.6s						
FRES				AML	AML		
	comp=E,3960µm,0.7s						
CAFR	Castel Frentan	0.69	255	P	Pg	03 21 54.9	+0.1
CAFR				AML	AML		
	comp=E,7315µm,0.6s						
CAFR				AML	AML		
	comp=N,8040µm,0.6s						
SGRT	San Giovanni R	0.76	150	P	Pg	03 21 56.4	+0.3
SGRT				AML	AML		
	comp=E,11150µm,1.5s						
SGRT				AML	AML		
	comp=N,11065µm,0.4s						
SGRT	San Giovanni R	0.76	150		Pn	03 21 58.0	-0.5
CIGN	Sant'Elia a Pi	0.80	198	P	Pg	03 21 56.8	-0.1
CIGN				S	Sb	03 22 08.9	+0.5
CIGN				AML	AML		
	comp=E,3635µm,1.6s						
CIGN				AML	AML		
	comp=N,4520µm,0.8s						
TRIV	Trivento	0.83	219	P	Pg	03 21 56.4	-1.0
TRIV				S	Sb	03 22 09.8	+0.5
TRIV				AML	AML		
	comp=E,3560µm,0.6s						
TRIV				AML	AML		
	comp=E,3950µm,1.0s						
TRIV				AML	AML		
	comp=N,4160µm,1.0s						
TRIV				AML	AML		
	comp=N,4005µm,1.0s						
MSAG	Monte S. Angel	0.86	144	P	Pg	03 21 58.3	+0.3
MSAG				AML	AML		
	comp=N,23700µm,1.3s						
MSAG				AML	AML		
	comp=E,18600µm,1.1s						
MSAG				AML	AML		
	comp=N,23900µm,1.3s						
MSAG				AML	AML		
	comp=N,23750µm,1.3s						
MSAG				AML	AML		
	comp=E,17600µm,1.1s						
LPEL	Lama dei Pelig	0.87	245	P	Pg	03 21 57.2	-1.0
LPEL				AML	AML		
	comp=E,12050µm,0.3s						
LPEL				AML	AML		
	comp=N,9565µm,0.8s						
GATE	Gambatesa	0.93	195	P	Pb	03 21 59.7	-0.1
GATE				S	Sb	03 22 11.8	-0.6
GATE				AML	AML		
	comp=N,4380µm,1.5s						
GATE				AML	AML		
	comp=N,4400µm,1.5s						
GATE				AML	AML		
	comp=E,3685µm,1.6s						
GATE				AML	AML		
	comp=E,5545µm,0.6s						
BSSO	Busso	0.99	209	P	Pb	03 21 59.8	-1.1
BSSO				S	Sn	03 22 15.1	-0.8
BSSO				AML	AML		
	comp=E,3735µm,1.6s						
BSSO				AML	AML		
	comp=N,4650µm,0.7s						
BSSO				AML	AML		
	comp=E,1510µm,1.6s						
BSSO				AML	AML		
	comp=N,1850µm,0.6s						
VCEL	Villa Celiera	1.04	269	P	Pb	03 22 00.9	-0.8
VCEL				S	Sn	03 22 16.4	-0.7
VCEL				AML	AML		
	comp=N,9430µm,0.4s						
VCEL				AML	AML		
	comp=E,13000µm,0.7s						
VCEL				AML	AML		
	comp=N,9440µm,0.4s						
MOCO	Biccari - m.te	1.05	183	P	Pb	03 22 01.7	-0.1
MOCO				AML	AML		
	comp=E,3860µm,0.8s						
MOCO				AML	AML		
	comp=N,1740µm,1.0s						
MOCO				AML	AML		
	comp=E,3860µm,0.8s						
MOCO				AML	AML		
	comp=E,3855µm,0.8s						
MOCO				AML	AML		
	comp=N,1865µm,1.0s						
TRTR	Tortoreto Alta	1.06	292	P	Pn	03 22 02.4	-0.1
TRTR				AML	AML		
	comp=E,32550µm,1.3s						
TRTR				AML	AML		
	comp=N,18850µm,0.7s						
MIDA	Miranda	1.07	224	P	Pb	03 22 00.0	-2.2
MIDA				S	Sg	03 22 16.3	+0.5
MIDA				AML	AML		
	comp=E,4125µm,1.6s						
MIDA				AML	AML		
	comp=E,4190µm,1.6s						
MIDA				AML	AML		
	comp=N,3255µm,0.6s						
MIDA				AML	AML		
	comp=N,3375µm,0.6s						
MIDA				AML	AML		
	comp=E,4130µm,1.6s						
RNI2	Rionero Sannit	1.08	229	P	Pb	03 22 00.0	-2.4
RNI2				AML	AML		
	comp=N,4485µm,0.7s						
RNI2				AML	AML		
	comp=E,3880µm,1.0s						
RNI2				AML	AML		
	comp=E,3810µm,1.0s						
RNI2				AML	AML		
	comp=N,4490µm,0.7s						
RNI2				AML	AML		
	comp=N,4515µm,0.7s						
SACR	S. Croce Del S	1.09	202	P	Pb	03 22 01.4	-1.2
SACR				S	Sn	03 22 18.4	+0.1
SACR				AML	AML		
	comp=N,3725µm,0.6s						
SACR				AML	AML		
	comp=E,2235µm,1.2s						
T0110	Collepietro	1.10	261	P	Pb	03 22 01.7	-1.1
T0110				AML	AML		
	comp=E,10400µm,0.5s						
T0110				AML	AML		
	comp=N,8640µm,0.9s						
GUMA	Gualdo di Mace	1.16	304	⇓P	Pg	03 22 09.6	+5.8
GUMA				AML	AML		
	comp=N,7410µm,1.6s						
GUMA				AML	AML		
	comp=E,8760µm,0.7s						
GUMA				AML	AML		
	comp=N,8145µm,1.6s						
GUMA				AML	AML		
	comp=E,8650µm,0.7s						
PTRJ	Pietraroja	1.18	207	AML	AML		
	comp=E,5060µm,0.6s						
PTRJ				AML	AML		
	comp=E,5065µm,0.6s						
PTRJ				AML	AML		
	comp=E,5810µm,0.6s						
PTRJ				AML	AML		
	comp=N,3470µm,0.9s						
PTRJ				AML	AML		
	comp=N,3755µm,0.9s						
SGG	Gregorio Mates	1.21	212	AML	AML		
	comp=N,8.0nm,0.4s						
SGG				AML	AML		
	comp=E,2380µm,0.5s						
SGG				AML	AML		
	comp=E,7.5nm,0.5s						
SGG				AML	AML		
	comp=N,2695µm,0.4s						
BIOG	Biogem	1.22	184	P	Pg	03 22 05.5	+0.7
CERA	Filignano	1.22	229	P	Pn	03 22 03.3	-1.6
CERA				AML	AML		
	comp=E,4310µm,0.9s						
CERA				AML	AML		
	comp=N,3365µm,0.7s						
CERA				AML	AML		
	comp=N,3480µm,0.7s						
CERA				AML	AML		
	comp=E,4375µm,0.9s						
CERA				AML	AML		
	comp=N,3370µm,0.7s						
CERA				AML	AML		
	comp=E,4315µm,0.9s						
TERO	Teramo	1.23	280	P	Pn	03 22 03.8	-1.1
TERO				S	Sg	03 22 22.1	+1.0
PSB1	Pescosannita	1.23	195	P	Pn	03 22 04.6	-0.3
FAGN	Fagnano	1.24	264	P	Pn	03 22 03.6	-1.4
FAGN				S	Sg	03 22 22.6	+1.3
FAGN				AML	AML		
	comp=E,16050µm,0.5s						
FAGN				AML	AML		
	comp=N,17700µm,0.5s						
GIGS	Gran Sasso	1.24	272	AML	AML		
	comp=N,1550µm,0.6s						
GIGS				AML	AML		
	comp=E,1975µm,0.9s						
VAGA	Valle Agricola	1.25	217	AML	AML		
	comp=N,3535µm,1.4s						
VAGA				AML	AML		
	comp=N,3430µm,1.4s						
VAGA				AML	AML		
	comp=E,2715µm,1.0s						
VAGA				AML	AML		
	comp=E,2640µm,1.0s						
VAGA				AML	AML		
	comp=N,3435µm,1.4s						
OFFI	Offida	1.26	295	⇓P	Pb	03 22 05.8	+0.4
OFFI				AML	AML		
	comp=E,15800µm,0.7s						
OFFI				AML	AML		
	comp=N,16000µm,0.7s						
LSTV	Lastovo	1.27	73	*e*Pn	Pg	03 22 06.6	+0.8
ZIRJ	Zirje	1.27	13	*e*Pg	Pb	03 22 05.6	0.0
ZIRJ				Sg	Sg	03 22 23.8	+1.3
SGTA	Sant Agata di	1.28	176	P	Pb	03 22 05.5	-0.3
MRB1	Monte Rocchett	1.30	189	P	Pb	03 22 05.8	-0.3
MRB1				AML	AML		
	comp=E,4260µm,0.8s						
MRB1				AML	AML		
	comp=E,4165µm,0.8s						
MRB1				AML	AML		
	comp=N,4805µm,0.7s						
MRB1				AML	AML		
	comp=N,4820µm,0.7s						
VITU	Vitulano (BN)	1.31	201	AML	AML		
	comp=N,4010µm,0.5s						
VITU				AML	AML		
	comp=E,3730µm,1.4s						
VVLD	Villa Vallelon	1.32	246	P	Pn	03 22 04.4	-1.8
VVLD				S	Sn	03 22 24.1	+0.1
VVLD				AML	AML		
	comp=N,1545µm,0.7s						
VVLD				AML	AML		
	comp=E,1780µm,0.6s						
CAPA	Cerignola FG	1.33	161	P	Pn	03 22 05.7	-0.5
POFI	Posta Fibreno	1.33	239	P	Pn	03 22 05.0	-1.3
CADA	Capodarco di F	1.34	306	P	Pb	03 22 07.1	+0.4
CAMP	Campotosto	1.36	276	P	Pn	03 22 05.5	-1.3
CAMP				S	Sg	03 22 25.7	+0.4
CAMP				AML	AML		
	comp=E,4235µm,0.9s						
CAMP				AML	AML		
	comp=N,3930µm,1.0s						
AQU	L'Aquila	1.36	268	*e*Pn	Pn	03 22 05.7	-1.1
AQU	L'Aquila	1.36	268	P	Pn	03 22 06.7	-0.1
AQU				AML	AML		
	comp=E,5040µm,1.1s						
AQU				AML	AML		
	comp=E,4890µm,1.2s						
AQU				AML	AML		
	comp=N,4645µm,1.5s						
AQU				AML	AML		
	comp=E,5045µm,1.1s						
AQU				AML	AML		
	comp=N,4755µm,1.5s						
AQU	L'Aquila	1.36	268	Pn	Pn	03 22 05.4	-1.4
CAFE	Carife	1.39	180	P	Pn	03 22 06.7	-0.4
CAFE				AML	AML		
	comp=N,1925µm,1.3s						
CAFE				AML	AML		
	comp=N,1860µm,1.3s						
CAFE				AML	AML		
	comp=E,2370µm,0.6s						
CAFE				AML	AML		
	comp=E,2360µm,0.6s						
CAFE				AML	AML		
	comp=N,1920µm,1.3s						
CAFE				AML	AML		
	comp=N,1855µm,1.3s						
PTQR	Pietraquaria	1.42	255	P	Pn	03 22 07.4	-0.2
PTQR				AML	AML		
	comp=E,1445µm,0.8s						
PTQR				AML	AML		
	comp=N,1765µm,0.5s						
SMA1	SAN MARTINO	1.43	279	P	Pn	03 22 07.0	-0.7
SMA1				S	Sg	03 22 28.0	+0.7
SMA1				AML	AML		
	comp=E,5075µm,0.6s						
SMA1				AML	AML		
	comp=N,5370µm,1.0s						
PIGN	Pignataro Magg	1.45	214	AML	AML		
	comp=N,1240µm,0.5s						
PIGN				AML	AML		
	comp=E,1040µm,1.2s						
PIGN				AML	AML		
	comp=N,1160µm,0.5s						
PIGN				AML	AML		
	comp=E,1005µm,1.2s						
PIGN				AML	AML		
	comp=E,1038µm,1.2s						
PIGN				AML	AML		
	comp=N,1160µm,0.5s						
RSF3	Rocca San Feli	1.45	182	P	Pn	03 22 07.4	-0.6
CIMA	Civitanova Mar	1.46	308	P	Pb	03 22 09.2	+0.4
PAOL	Paolisi	1.47	200	AML	AML		
	comp=E,1281µm,0.7s						
PAOL				AML	AML		
	comp=E,1364µm,0.7s						
PAOL				AML	AML		
	comp=N,1365µm,0.6s						
PAOL				AML	AML		

	comp=E,1359µm,0.7s						
PAOL				AML	AML		
	comp=N,1480µm,0.7s						
PAOL				AML	AML		
	comp=E,1280µm,0.7s						
PAOL	**Paolisi**	**1.47**	**200**		**Pn**	**03 22 08.4**	**+0.2**
VULT	**Monte Vulture**	**1.48**	**169**	P	**Pn**	**03 22 08.5**	**0.0**
VULT				AML	AML		
	comp=E,3735µm,0.5s						
VULT				AML	AML		
	comp=E,3860µm,0.5s						
VULT				AML	AML		
	comp=N,4015µm,0.4s						
VULT				AML	AML		
	comp=N,3945µm,0.4s						
SNAL	**S. Angelo Dei**	**1.49**	**181**	⇓P	**Pn**	**03 22 08.0**	**-0.5**
SNAL				AML	AML		
	comp=E,2090µm,0.7s						
SNAL				AML	AML		
	comp=N,2810µm,0.9s						
SNAL				AML	AML		
	comp=N,2750µm,0.9s						
SNAL				AML	AML		
	comp=E,1955µm,1.0s						
MORI	**Morici**	**1.49**	**13**	*e*Pn	**Pb**	**03 22 09.4**	**+0.1**
MORI				Sn	**Sg**	**03 22 30.5**	**+1.1**
MNTP	**Montappone**	**1.49**	**300**	P	**Pb**	**03 22 09.3**	**0.0**
RM33	**Pellescritta (**	**1.50**	**274**	P	**Pn**	**03 22 08.2**	**-0.6**
RM33				S	**Sb**	**03 22 29.6**	**+0.7**
RM33				AML	AML		
	comp=E,2825µm,1.0s						
RM33				AML	AML		
	comp=N,5365µm,0.8s						
RM33				AML	AML		
	comp=E,2830µm,1.0s						
LIO3	**Lioni**	**1.52**	**182**	P	**Pn**	**03 22 08.4**	**-0.5**
MRVN	**Minervino Murg**	**1.53**	**152**	P	**Pn**	**03 22 08.8**	**-0.2**
MRVN				AML	AML		
	comp=N,1240µm,0.9s						
MRVN				AML	AML		
	comp=E,1685µm,1.2s						
PP3	**Marolino**	**1.54**	**309**	⇓P	**Pb**	**03 22 09.8**	**-0.3**
PP3				AML	AML		
	comp=E,11625µm,0.9s						
PP3				AML	AML		
	comp=E,11980µm,0.9s						
PP3				AML	AML		
	comp=N,7530µm,1.5s						
PP3				AML	AML		
	comp=N,7100µm,0.5s						
RDM3	**Ruvo Del Monte**	**1.55**	**172**	P	**Pn**	**03 22 09.4**	**0.0**
GUAR	**Guarcino**	**1.56**	**247**	P	**Pn**	**03 22 09.7**	**+0.2**
GUAR				AML	AML		
	comp=E,1380µm,1.3s						
GUAR				AML	AML		
	comp=N,2190µm,0.8s						
PALZ	**Palazzo San Ge**	**1.56**	**160**	P	**Pn**	**03 22 09.1**	**-0.4**
PALZ				AML	AML		
	comp=E,4135µm,1.2s						
PALZ				AML	AML		
	comp=N,4595µm,1.6s						
MAKA	**Makarska**	**1.57**	**56**	*e*Pn	**Pb**	**03 22 10.9**	**+0.2**
MAKA				Sn	**Sg**	**03 22 33.5**	**+1.4**
DUGI	**Dugi Otok**	**1.58**	**355**	*e*Pn	**Pb**	**03 22 10.4**	**-0.5**
DUGI				Sn	**Sb**	**03 22 31.9**	**+0.9**
FIAM	**Fiamignano**	**1.58**	**265**	P	**Pb**	**03 22 10.4**	**-0.5**
FIAM				AML	AML		
	comp=N,3070µm,0.8s						
FIAM				AML	AML		
	comp=E,3200µm,0.8s						
NRCA	**Norcia**	**1.62**	**286**	P	**Pn**	**03 22 10.7**	**+0.3**
NRCA				AML	AML		
	comp=E,3760µm,1.4s						
NRCA				AML	AML		
	comp=N,3665µm,0.7s						
NRCA				AML	AML		
	comp=E,3910µm,1.4s						
NRCA				AML	AML		
	comp=N,3740µm,0.7s						
NRCA	**Norcia**	**1.62**	**286**		**Pn**	**03 22 10.1**	**-0.2**
MODR	**Mondragone**	**1.63**	**219**	AML	AML		
	comp=E,1150µm,1.6s						
MODR				AML	AML		
	comp=N,1420µm,0.8s						
LNSS	**Leonessa**	**1.64**	**277**	⇓P	**Pn**	**03 22 10.8**	**+0.2**
LNSS				AML	AML		
	comp=N,3420µm,0.6s						
LNSS				AML	AML		
	comp=E,6575µm,0.6s						
CSP1	**Cessapalombo**	**1.65**	**295**	P	**Pn**	**03 22 10.8**	**+0.1**
CSP1				AML	AML		
	comp=E,2980µm,0.8s						
CSP1				AML	AML		
	comp=N,3355µm,0.7s						
AOI	**Ancona**	**1.65**	**314**	P	**Pn**	**03 22 10.7**	**-0.1**
MRLC	**Muro Lucano**	**1.67**	**174**	P	**Pn**	**03 22 10.5**	**-0.4**
MRLC				AML	AML		
	comp=N,1190µm,1.4s						
MRLC				AML	AML		
	comp=E,1505µm,0.6s						
MRLC				AML	AML		
	comp=N,1097µm,1.4s						
MRLC				AML	AML		
	comp=E,1535µm,0.6s						
FDMO	**Fiordimonte**	**1.71**	**292**	⇓P	**Pn**	**03 22 11.8**	**+0.3**
FDMO				AML	AML		
	comp=N,1995µm,0.3s						
FDMO				AML	AML		
	comp=E,3075µm,0.6s						
ACER	**Acerenza**	**1.71**	**162**	P	**Pn**	**03 22 11.4**	**-0.1**
ACER				AML	AML		
	comp=E,2705µm,0.9s						
ACER				AML	AML		
	comp=E,2610µm,0.8s						
ACER				AML	AML		
	comp=N,2820µm,0.9s						
ACER				AML	AML		
	comp=N,2710µm,0.9s						
GIUL	**Giuliano Di Ro**	**1.71**	**241**	P	**Pn**	**03 22 10.7**	**-0.8**
GIUL				AML	AML		
	comp=N,1270µm,0.9s						
GIUL				AML	AML		
	comp=E,908µm,0.8s						
CERT	**Cerreto**	**1.74**	**255**	P	**Pn**	**03 22 12.3**	**+0.4**
CERT				AML	AML		
	comp=N,1385µm,0.7s						
CERT				AML	AML		
	comp=E,1855µm,1.5s						
RICI	**Ricice**	**1.76**	**51**	*e*Pn	**Pb**	**03 22 13.6**	**-0.3**
RICI				Sn	**Sb**	**03 22 36.8**	**+0.7**
CING	**Cingoli**	**1.79**	**303**	⇓P	**Pn**	**03 22 12.6**	**0.0**
CING				AML	AML		
	comp=N,2160µm,0.8s						
CING				AML	AML		
	comp=E,3760µm,0.6s						
AMUR	**Altamura**	**1.82**	**145**	P	**Pn**	**03 22 12.9**	**-0.1**
AMUR				AML	AML		
	comp=E,2200µm,1.5s						
AMUR				AML	AML		
	comp=N,1125µm,0.7s						
EL6	**Elcito**	**1.82**	**301**	P	**Pn**	**03 22 13.2**	**+0.1**
EL6				AML	AML		
	comp=N,7295µm,0.7s						
EL6				AML	AML		
	comp=E,3750µm,0.8s						
CESI	**CESI - Serrava**	**1.82**	**290**	P	**Pb**	**03 22 14.2**	**-0.8**
CESI				AML	AML		
	comp=N,1255µm,1.6s						
CESI				AML	AML		
	comp=E,1715µm,0.7s						
ARRO	**Arrone**	**1.84**	**276**	P	**Pb**	**03 22 14.5**	**-0.7**
ARRO				AML	AML		
	comp=N,1238µm,0.7s						
ARRO				AML	AML		
	comp=E,1173µm,0.9s						
STON	**Ston**	**1.87**	**75**	*e*Pn	**Pb**	**03 22 15.0**	**-0.8**
STON	**Ston**	**1.87**	**75**	*e*Pn	**Pb**	**03 22 14.8**	**-1.0**
STON	**Ston**	**1.87**	**75**	⇓P	**Pn**	**03 22 13.9**	**+0.3**
STON				AML	AML		
	comp=N,2190µm,0.9s						
STON				AML	AML		
	comp=E,1335µm,1.0s						
SNTG	**Esanatoglia**	**1.89**	**297**	P	**Pn**	**03 22 14.1**	**+0.1**
SNTG				AML	AML		
	comp=E,1525µm,1.6s						
SNTG				AML	AML		
	comp=N,2240µm,0.9s						
MTCE	**Montecelio**	**1.90**	**259**	P	**Pn**	**03 22 14.4**	**+0.3**
MTCE				AML	AML		
	comp=E,1168µm,1.6s						
MTCE				AML	AML		
	comp=N,1220µm,1.4s						
CDRU	**Civita di Ruta**	**1.92**	**179**	P	**Pn**	**03 22 14.4**	**-0.1**
CDRU				AML	AML		
	comp=N,468µm,0.9s						
CDRU				AML	AML		
	comp=E,579µm,1.4s						
LATB	**Latina**	**1.93**	**242**	P	**Pn**	**03 22 13.6**	**-0.9**
LATB				AML	AML		
	comp=N,254µm,1.2s						
LATB				AML	AML		
	comp=E,355µm,1.1s						
VIVA	**Pratoni del Vi**	**1.96**	**251**	P	**Pn**	**03 22 14.9**	**0.0**
VIVA				AML	AML		
	comp=E,2100µm,0.6s						
VIVA				AML	AML		
	comp=N,2485µm,0.5s						
CESX	**Cesi**	**1.98**	**277**	P	**Pn**	**03 22 15.6**	**+0.4**
CESX				AML	AML		
	comp=E,1685µm,0.8s						
CESX				AML	AML		
	comp=N,1250µm,0.5s						
RMP	**Rome, Mte Porz**	**1.98**	**253**	P	**Pn**	**03 22 15.4**	**+0.1**
RMP				AML	AML		
	comp=N,1650µm,1.0s						
RMP				AML	AML		
	comp=E,1580µm,1.4s						
RDP	**Rocca di Papa**	**1.99**	**252**	P	**Pn**	**03 22 15.8**	**+0.4**
RDP				AML	AML		
	comp=E,1605µm,0.9s						
RDP				AML	AML		
	comp=N,1945µm,1.0s						
ASSB	**Assisi San Ben**	**2.00**	**289**	P	**Pb**	**03 22 17.2**	**-0.9**
ASSB				AML	AML		
	comp=E,1860µm,0.8s						
ASSB				AML	AML		
	comp=N,2390µm,0.7s						
ARVD	**Arcevia**	**2.01**	**303**	⇓P	**Pn**	**03 22 15.7**	**+0.1**
ARVD				AML	AML		
	comp=N,2245µm,0.7s						
ARVD				AML	AML		
	comp=E,1580µm,1.4s						
MOMA	**Monte Martano**	**2.01**	**282**	P	**Pb**	**03 22 17.1**	**-1.2**
MOMA				AML	AML		
	comp=N,2030µm,0.6s						
MOMA				AML	AML		
	comp=N,2030µm,0.6s						
MOMA				AML	AML		
	comp=E,1555µm,0.5s						
MOMA				AML	AML		
	comp=E,1545µm,0.4s						
MIGL	**Miglionico**	**2.02**	**153**	P	**Pn**	**03 22 15.8**	**+0.1**
MIGL				AML	AML		
	comp=E,5525µm,1.5s						
MIGL				AML	AML		
	comp=N,5550µm,0.9s						
FOSV	**Fossato di Vic**	**2.02**	**297**	P	**Pn**	**03 22 16.1**	**+0.2**
FOSV				AML	AML		
	comp=N,2190µm,1.3s						
FOSV				AML	AML		
	comp=E,1860µm,0.8s						
LAV9	**Lanuvio**	**2.03**	**250**	P	**Pn**	**03 22 16.2**	**+0.3**
LAV9				AML	AML		
	comp=E,15480µm,1.6s						
LAV9				AML	AML		
	comp=N,1930µm,1.0s						
LAV9				AML	AML		
	comp=N,1965µm,0.6s						
LAV9				AML	AML		
	comp=E,2495µm,1.5s						
SRES	**S.Oreste - Sor**	**2.03**	**266**	P	**Pn**	**03 22 16.8**	**+0.8**
SRES				AML	AML		
	comp=N,738µm,1.3s						
SRES				AML	AML		
	comp=E,1125µm,1.0s						
ATCC	**AVT- Casa Cast**	**2.06**	**293**	P	**Pn**	**03 22 17.1**	**+0.8**
ATCC				AML	AML		
	comp=N,2770µm,1.4s						
ATCC				AML	AML		
	comp=E,4360µm,0.9s						
SSFR	**Montelago di S**	**2.08**	**300**	P	**Pn**	**03 22 16.8**	**+0.2**
SSFR				AML	AML		
	comp=E,1435µm,0.3s						
SSFR				AML	AML		
	comp=N,1405µm,0.3s						
SSFR				AML	AML		
	comp=N,1755µm,0.3s						
SSFR				AML	AML		
	comp=E,1480µm,0.4s						
MATE	**Matera**	**2.08**	**148**	P	**Pn**	**03 22 16.7**	**+0.2**
MATE				AML	AML		
	comp=N,2055µm,0.6s						
MATE				AML	AML		
	comp=E,1460µm,0.9s						
CMPR	**Campora**	**2.10**	**179**	P	**Pn**	**03 22 16.7**	**-0.1**
CMPR				AML	AML		
	comp=E,645µm,0.6s						
CMPR				AML	AML		
	comp=N,431µm,1.1s						
NOCI	**Noci**	**2.12**	**139**	P	**Pn**	**03 22 17.1**	**0.0**
NOCI				AML	AML		
	comp=E,1050µm,0.6s						
NOCI				AML	AML		
	comp=N,1625µm,1.3s						
UDBI	**Udbina**	**2.15**	**10**	*i* Pn	**Pb**	**03 22 20.2**	**-0.4**
UDBI				Sn	**Sb**	**03 22 48.4**	**+1.1**
FRON	**Frontone**	**2.15**	**302**	⇓P	**Pn**	**03 22 17.8**	**+0.3**
FRON				AML	AML		
	comp=N,3270µm,0.8s						
FRON				AML	AML		
	comp=E,1635µm,1.3s						
DBRK	**Dubrovnik**	**2.16**	**82**	*e*Pn	**Pb**	**03 22 19.4**	**-1.4**
LTRZ	**Laterza**	**2.16**	**146**	P	**Pn**	**03 22 17.8**	**+0.1**
LTRZ				AML	AML		
	comp=E,1615µm,0.6s						
LTRZ				AML	AML		
	comp=N,1590µm,0.7s						
MURB	**Monte Urbino**	**2.17**	**294**		**Pn**	**03 22 18.7**	**+0.8**
MTSN	**Montesano sull**	**2.18**	**170**	P	**Pn**	**03 22 17.6**	**-0.4**
MTSN				AML	AML		
	comp=E,668µm,0.8s						
MTSN				AML	AML		
	comp=N,659µm,1.4s						
ATFO	**Monte Foce - G**	**2.18**	**297**	P	**Pn**	**03 22 18.6**	**+0.6**
ATFO				AML	AML		
	comp=N,1740µm,1.1s						
ATFO				AML	AML		
	comp=E,2140µm,0.9s						
MPAG	**Monte Paganucc**	**2.19**	**305**	⇓P	**Pn**	**03 22 18.3**	**+0.2**
MPAG				AML	AML		
	comp=E,1355µm,1.2s						
MPAG				AML	AML		
	comp=N,1705µm,1.2s						
FSSB	**Fossombrone**	**2.21**	**306**	⇓P	**Pn**	**03 22 18.7**	**+0.3**
FSSB				AML	AML		
	comp=N,2560µm,0.5s						
FSSB				AML	AML		
	comp=E,1975µm,0.6s						
ATTE	**AVT- Monte Tez**	**2.27**	**291**	P	**Pn**	**03 22 20.4**	**+1.2**
ATTE				AML	AML		
	comp=E,1390µm,1.2s						
ATTE				AML	AML		
	comp=N,1275µm,1.4s						
SIRI	**Monte Sirino -**	**2.28**	**168**	P	**Pn**	**03 22 19.6**	**+0.2**
SIRI				AML	AML		
	comp=N,635µm,1.5s						
SIRI				AML	AML		
	comp=E,530µm,1.4s						
PIEI	**Pieia**	**2.28**	**300**	P	**Pn**	**03 22 19.6**	**+0.3**
PIEI				AML	AML		
	comp=N,996µm,1.2s						
PIEI				AML	AML		
	comp=E,943µm,1.3s						
MGR	**Morigerati**	**2.29**	**174**	P	**Pn**	**03 22 20.3**	**+0.9**
MGR				AML	AML		
	comp=N,510µm,0.8s						
MGR				AML	AML		
	comp=E,440µm,1.1s						
NARO	**Abbazia di Nar**	**2.29**	**302**	P	**Pn**	**03 22 19.7**	**+0.3**
NARO				AML	AML		
	comp=N,942µm,0.7s						
NARO				AML	AML		
	comp=E,1070µm,1.3s						
TREB	**Trebinje**	**2.32**	**81**	*e*Pn	**Pn**	**03 22 21.2**	**+1.4**
PESA	**Pesaro**	**2.33**	**312**	P	**Pn**	**03 22 20.1**	**+0.2**
PESA				AML	AML		
	comp=E,2460µm,0.7s						
PESA				AML	AML		
	comp=N,2045µm,1.5s						
ATPI	**Pietralunga -**	**2.33**	**297**	P	**Pn**	**03 22 20.7**	**+0.7**
ATPI				AML	AML		
	comp=N,1605µm,1.6s						
ATPI				AML	AML		
	comp=E,2290µm,0.8s						
BULG	**Bulgheria - Ca**	**2.34**	**177**	P	**Pn**	**03 22 20.2**	**+0.1**
BULG				AML	AML		
	comp=N,752µm,0.9s						
BULG				AML	AML		
	comp=E,486µm,0.6s						
BULG				AML	AML		
	comp=E,483µm,0.6s						
BULG				AML	AML		
	comp=N,776µm,0.9s						
MGAB	**Montegabbione**	**2.36**	**283**	P	**Pn**	**03 22 21.8**	**+1.4**
MGAB				AML	AML		
	comp=E,1420µm,0.9s						
MGAB				AML	AML		
	comp=N,1400µm,0.7s						
MGAB				AML	AML		
	comp=N,1210µm,1.6s						
MGAB				AML	AML		
	comp=E,1300µm,1.0s						
APEC	**Apecchio**	**2.37**	**300**	P	**Pn**	**03 22 21.2**	**+0.7**
APEC				AML	AML		
	comp=N,1745µm,1.5s						
APEC				AML	AML		
	comp=E,1231µm,0.7s						
PE3	**Peglio**	**2.38**	**303**	P	**Pn**	**03 22 21.4**	**+0.6**
PE3				AML	AML		
	comp=N,2910µm,1.3s						
PE3				AML	AML		
	comp=E,2600µm,0.6s						
HCY	**Herceg Novi**	**2.41**	**88**	*e*Pn	**Pn**	**03 22 22.1**	**+1.0**
HCY	**Herceg Novi**	**2.41**	**88**	⇓*i*Pn	**Pb**	**03 22 23.2**	**-1.8**
HCY				*i* Sn	**Sb**	**03 22 54.9**	**+0.1**
MGRS	**Mrkonjic Grad**	**2.41**	**33**	*e*Pn	**Pb**	**03 22 24.2**	**-0.8**
BADI	**Badiali**	**2.46**	**297**	P	**Pn**	**03 22 23.3**	**+1.5**
BADI				AML	AML		
	comp=E,1265µm,0.9s						
BADI				AML	AML		
	comp=N,1455µm,1.4s						
CUC	**Castrocucco**	**2.46**	**170**	P	**Pn**	**03 22 22.7**	**+0.9**
CUC				AML	AML		
	comp=E,488µm,1.0s						
CUC				AML	AML		
	comp=E,394µm,1.0s						
CUC				AML	AML		
	comp=N,476µm,1.5s						
CUC				AML	AML		
	comp=N,564µm,1.5s						
PLIT	**Plitvice**	**2.48**	**6**	*e*Pn	**Pb**	**03 22 24.8**	**-1.5**
BRY	**Bratogost**	**2.48**	**78**	*e*Pn	**Pb**	**03 22 24.6**	**-1.7**
SACS	**San Casciano d**	**2.50**	**281**	P	**Pn**	**03 22 23.2**	**+0.8**
SACS				AML	AML		
	comp=E,1110µm,1.1s						
SACS				AML	AML		
	comp=N,1210µm,1.3s						
SACS				AML	AML		
	comp=E,1120µm,1.1s						
SACS				AML	AML		
	comp=N,1210µm,1.3s						
PARC	**Parchiule**	**2.52**	**300**	P	**Pn**	**03 22 23.6**	**+0.9**
PARC				AML	AML		
	comp=E,1410µm,1.2s						
PARC				AML	AML		
	comp=N,1140µm,0.8s						
CPGN	**Carpegna, Ital**	**2.55**	**304**	P	**Pn**	**03 22 24.3**	**+1.2**
CPGN				AML	AML		
	comp=N,1470µm,1.2s						
CPGN				AML	AML		
	comp=E,2320µm,1.0s						
SSP9	**Sansepolcro**	**2.56**	**298**	⇑P	**Pn**	**03 22 25.0**	**+1.8**
SSP9				AML	AML		
	comp=N,1802µm,1.2s						
SSP9				AML	AML		
	comp=E,2360µm,1.5s						
CAFI	**Castiglion Fio**	**2.58**	**292**	P	**Pn**	**03 22 24.5**	**+1.1**
CAFI				AML	AML		
	comp=E,550µm,1.4s						
CAFI				AML	AML		
	comp=N,812µm,1.1s						
SALB	**San Lorenzo Be**	**2.67**	**161**	P	**Pn**	**03 22 25.0**	**+0.2**
SALB				AML	AML		
	comp=N,415µm,0.6s						
SALB				AML	AML		
	comp=N,438µm,0.6s						
SALB				AML	AML		
	comp=E,382µm,0.7s						
SALB				AML	AML		
	comp=E,382µm,0.6s						
MESG	**Mesagne**	**2.68**	**132**	P	**Pn**	**03 22 25.1**	**+0.4**
CRE	**Caprese Michel**	**2.70**	**298**	P	**Pn**	**03 22 25.9**	**+0.7**
CRE				AML	AML		
	comp=N,617µm,1.5s						
CRE				AML	AML		
	comp=E,686µm,1.4s						
BUM	**Brajici-Budva**	**2.71**	**91**	⇑*i*Pn	**Pn**	**03 22 27.3**	**+2.0**
BUM				*i* Sn	**Sb**	**03 23 02.7**	**-0.8**
CEME	**Cevo**	**2.72**	**86**	⇓*i*Pn	**Pn**	**03 22 27.3**	**+1.9**
CEME				*i* Sn	**Sb**	**03 23 03.1**	**-0.8**
BLY	**Banja Luka**	**2.73**	**30**	*e*Pn	**Pb**	**03 22 27.9**	**-2.5**
BLY	**Banja Luka**	**2.73**	**30**	P	**Pn**	**03 22 26.6**	**+1.1**
SMRN	**Sveta Marina**	**2.74**	**344**	*e*Pn	**Pn**	**03 22 26.1**	**+0.6**
NKME	**Niksic**	**2.76**	**81**	⇓*i*Pn	**Pb**	**03 22 28.5**	**-2.6**
NKME				*e*Sn	**Sb**	**03 23 04.2**	**-0.8**
PRIJ	**Prijedor**	**2.77**	**22**	*e*Pn	**Pb**	**03 22 28.9**	**-2.3**
NKY	**Niksic**	**2.80**	**81**	⇓*i*Pn	**Pb**	**03 22 29.1**	**-2.6**
NKY				*i* Sn	**Sb**	**03 23 05.0**	**-1.1**
UPM	**Unac-Piva**	**2.81**	**72**	*e*Pn	**Pb**	**03 22 29.9**	**-2.0**
UPM	**Unac-Piva**	**2.81**	**72**	⇓*i*Pn	**Pb**	**03 22 29.3**	**-2.6**
UPM				*i* Sn	**Sb**	**03 23 05.5**	**-1.0**
TDS	**Terranova Siba**	**2.88**	**163**	P	**Pn**	**03 22 28.9**	**+1.4**
TDS				AML	AML		
	comp=E,400µm,1.5s						
TDS				AML	AML		
	comp=N,302µm,1.4s						
ASQU	**Asqua**	**2.88**	**300**	P	**Pn**	**03 22 29.0**	**+1.3**
ASQU				AML	AML		
	comp=N,656µm,0.7s						
ASQU				AML	AML		
	comp=E,690µm,1.2s						
SFI	**Santa Sofia**	**2.90**	**302**	P	**Pn**	**03 22 29.3**	**+1.5**
SFI				AML	AML		
	comp=N,612µm,1.2s						
SFI				AML	AML		
	comp=E,652µm,0.8s						
DRME	**Dracevica, Mon**	**2.93**	**93**	*e*Pn	**Pn**	**03 22 30.4**	**+2.1**
DRME	**Dracevica, Mon**	**2.93**	**93**	⇑*i*Pn	**Pn**	**03 22 30.6**	**+2.3**
DRME				*i* Sn	**Sb**	**03 23 07.6**	**-2.3**
RIY	**Rijeka**	**2.96**	**350**	*e*Pn	**Pn**	**03 22 29.7**	**+1.0**
RIY	**Rijeka**	**2.96**	**350**	*e*Pn	**Pn**	**03 22 29.7**	**+1.0**
PDG	**Podgorica**	**2.97**	**88**	*e*Pn	**Pn**	**03 22 30.4**	**+1.6**
PDG	**Podgorica**	**2.97**	**88**	P	**Pn**	**03 22 30.3**	**+1.6**
PDG	**Podgorica**	**2.97**	**88**		**Pn**	**03 22 30.9**	**+2.1**
TTG	**Podgorica**	**2.97**	**88**	⇑*i*Pn	**Pn**	**03 22 30.9**	**+2.1**
TTG				*i* Sn	**Sb**	**03 23 08.9**	**-2.1**
ULC	**Ulcinj**	**3.01**	**97**	⇓*i*Pn	**Pn**	**03 22 31.5**	**+2.2**
ULC				*i* Sn	**Sb**	**03 23 09.4**	**-2.7**
MAON	**Monte Argentar**	**3.04**	**272**	P	**Pn**	**03 22 29.7**	**-0.1**
MAON				AML	AML		
	comp=N,153µm,1.5s						
MAON				AML	AML		
	comp=E,402µm,1.0s						
LMD	**Lutirano**	**3.07**	**304**	P	**Pn**	**03 22 31.2**	**+1.0**
LMD				AML	AML		
	comp=N,487µm,1.1s						
LMD				AML	AML		
	comp=E,472µm,1.1s						
RUFI	**Rufina**	**3.08**	**299**	P	**Pn**	**03 22 31.1**	**+0.8**
BOJS	**Bojanci**	**3.09**	**0**	⇓P	**Pn**	**03 22 32.5**	**+2.1**
BOJS				AML	AML		
	comp=E,3765µm,1.2s						
BOJS				AML	AML		
	comp=N,2425µm,1.5s						
DOB	**Doboj**	**3.11**	**41**	*e*Pn	**Pb**	**03 22 38.0**	**+1.0**
OSSC	**Osservatorio P**	**3.13**	**292**		**Pn**	**03 22 31.0**	**0.0**
CELI	**Celico**	**3.16**	**162**	P	**Pn**	**03 22 33.3**	**+1.8**
CELI				AML	AML		

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          comp=E,642µm,1.3s
CELI                                  AML      AML
          comp=N,582µm,1.3s
PIPA  Pietrapaola        3.16 157   P        Pn     03 22 32.8 +1.4
PLE   Pljevlja           3.18  72⇑i Pn       Pn     03 22 34.7 +2.9
PLE                                i Sn      Sb     03 23 14.2 -3.0
KOME  Kolasin            3.18  81⇑i Pn       Pn     03 22 34.6 +2.8
KOME                               i Sn      Sb     03 23 14.3 -2.9
OZLJ  Ozalj              3.20   3  ePn       Pn     03 22 34.6 +2.6
CASP  Castiglione de     3.25 278            Pn     03 22 32.6 -0.1
RUDO  Rudo               3.26  67  ePn       Pn     03 22 34.9 +2.2
SEI   Scarperia          3.28 301   P        Pn     03 22 35.0 +2.0
SEI                                 AML      AML
          comp=E,564µm,0.6s
SEI                                 AML      AML
          comp=N,967µm,0.5s
BBLS  Lazi&#263;i        3.37  63  ePn       Pg     03 22 45.2 -0.9
BBLS  Lazi&#263;i        3.37  63  ePn       Pb     03 22 37.9 -3.6
CEY   Cerknica           3.38 350  ePn       Pn     03 22 35.2 +0.8
MOSL  Moslavina          3.38  18  ePn       Pn     03 22 37.3 +2.9
LADO  San Nicola del     3.39 157   P        Pn     03 22 36.5 +1.8
MPPT  Montemurlo         3.41 298   P        Pn     03 22 35.6 +0.8
MPPT                                AML      AML
          comp=E,458µm,1.1s
MPPT                                AML      AML
          comp=N,360µm,1.1s
CRES  Cresnjev           3.41   3  ePn       Pn     03 22 36.5 +1.6
TIP   Timpagrande        3.43 160 ⇓P         Pn     03 22 37.1 +1.9
TIP   Timpagrande        3.43 160   P        Pn     03 22 36.5 +1.3
TIP   Timpagrande        3.43 160            Pn     03 22 35.4 +0.2
ZAG   Zagreb             3.45   9  ePn       Pn     03 22 37.3 +1.9
ZAG   Zagreb             3.45   9  ePn       Pn     03 22 37.7 +2.2
IVA   Berane             3.46  81⇑i Pn       Pn     03 22 38.2 +2.6
IVA                                i Sn      Sb     03 23 20.9 -4.3
FNVD  Fontana Vidola     3.48 302   P        Pn     03 22 37.0 +1.1
FNVD                                AML      AML
          comp=E,538µm,1.0s
FNVD                                AML      AML
          comp=N,594µm,1.0s
PVY   Plav               3.49  85⇑i Pn       Pn     03 22 38.2 +2.1
PVY                                i Sn      Sb     03 23 21.8 -4.3
MTCR  Monte La Croce     3.50 299   P        Pn     03 22 36.6 +0.5
PTJ   Puntijarka         3.53   8  ePn       Pn     03 22 38.4 +1.8
SERS  Sersale            3.55 161   P        Pn     03 22 39.2 +2.3
SJES  Sjenica            3.58  75  ePn       Pb     03 22 42.0 -3.0
TIR   Tirane             3.61 106 ⇓P         Pn     03 22 40.3 +2.6
TIR   Tirane             3.61 106   P        Pn     03 22 39.7 +2.1
TIR   Tirane             3.61 106            Pn     03 22 40.2 +2.6
ZCCA  Zocca              3.66 303   P        Pn     03 22 40.4 +2.0
ZCCA                                AML      AML
          comp=E,406µm,1.2s
ZCCA                                AML      AML
          comp=N,394µm,1.6s
ZCCA  Zocca              3.66 303            Pn     03 22 39.1 +0.8
LJU   Ljubljana          3.67 352  ePn       Pn     03 22 39.3 +1.0
LJU   Ljubljana          3.67 352 ⇑P         Pn     03 22 39.7 +1.3
LJU                                 AML      AML
          comp=N,6365µm,1.5s
LJU                                 AML      AML
          comp=E,4205µm,1.0s
PII   Pisa               3.69 292 ⇓P         Pn     03 22 39.5 +0.8
PII                                 S        Sn     03 23 21.0 -1.4
PII                                 AML      AML
          comp=N,411µm,0.4s
PII                                 AML      AML
          comp=E,309µm,1.0s
VLO   Vlora              3.74 120   P        Pn     03 22 41.5 +2.1
VLO   Vlora              3.74 120   Pn       Pn     03 22 41.1 +1.7
SABO  M.te Sabotino      3.75 342   P        Pn     03 22 39.7 +0.1
BLJ   Bijeljina          3.76  50  ePn       Pb     03 22 43.7 -4.3
BDI   Bagni Di Lucca     3.77 297   P        Pn     03 22 40.3 +0.4
BDI                                 AML      AML
          comp=N,240µm,1.2s
BDI                                 AML      AML
          comp=E,357µm,1.0s
BDI                                 AML      AML
          comp=E,358µm,1.0s
BDI                                 AML      AML
          comp=N,248µm,1.0s
TEKS  Tekeris            3.78  54  ePn       Pb     03 22 48.5 +0.1
IVAS  Ivanjica           3.78  70  ePn       Pn     03 22 42.0 +2.0
MAIM  Mastiano           3.79 295   P        Pn     03 22 40.8 +0.8
KALN  Kalnik             3.82  13  ePn       Pn     03 22 42.0 +1.5
DIVS  Divibare           3.86  63  ePn       Pb     03 22 48.0 -1.7
DIVS  Divibare           3.86  63 ⇑P         Pb     03 22 45.5 -4.3
DIVS  Divibare           3.86  63  ePn       Pn     03 22 43.1 +2.1
TEOL  Teolo              3.92 320   P        Pn     03 22 41.1 -0.7
TEOL  Teolo              3.92 320            Pn     03 22 40.7 -1.1
PHP   Peshkopia          3.94  99   P        Pn     03 22 44.9 +2.7
SARO  Sassorosso         3.95 298   P        Pn     03 22 42.6 +0.3
VLC   Villacollemand     3.95 298            Pn     03 22 42.4 +0.1
KOGS  Kog                4.10  10 ⇑P         Pn     03 22 46.1 +1.8
KOGS                                AML      AML
          comp=E,3330µm,1.0s
KOGS                                AML      AML
          comp=N,3565µm,1.4s
EQUI  Equi               4.11 297   P        Pn     03 22 44.8 +0.4
OBKA  Obir               4.12 353   Pn       Pn     03 22 45.9 +1.2
          comp=N,4.3nm,0.1s,SNR=45
OBKA                               eSn       Sn     03 23 36.5 +3.4
          comp=N,97nm,0.7s
OBKA  Obir               4.12 353  ePn       Pn     03 22 45.9 +1.2
OBKA  Obir               4.12 353            Pn     03 22 46.0 +1.2
OBKA                                         Sn     03 23 36.5 +3.4
TRUS  Trudelj            4.18  63  ePn       Pn     03 22 48.7 +3.3
PRED  Cave del Predi     4.20 344            Pn     03 22 47.8 +2.0
KOVH  Kovagotottos       4.21  28  eP        Pg     03 22 59.2 -2.9
PTCC  Patocco-Chiusa     4.21 342   P        Pn     03 22 46.4 +0.5
VARN  Col Varnada, M     4.23 329   P        Pn     03 22 45.6 -0.6
VARN                                AML      AML
          comp=N,909µm,0.5s
VARN                                AML      AML
          comp=E,1855µm,0.6s
STAL  STALIGIAL          4.25 336   P        Pn     03 22 46.0 -0.4
STAL                                AML      AML
          comp=E,699µm,0.6s
STAL                                AML      AML
          comp=N,574µm,0.3s
STAL                                AML      AML
          comp=N,696µm,0.3s
STAL                                AML      AML
          comp=E,777µm,0.5s
STAL  STALIGIAL          4.25 336            Pn     03 22 46.2 -0.2
CGRP  Cima Grappa        4.26 326   P        Pn     03 22 45.8 -0.9
CGRP                                AML      AML
          comp=E,658µm,0.9s
CGRP                                AML      AML
          comp=N,640µm,0.9s
SOKA  Soboth             4.27 358   Pn       Pn     03 22 47.6 +1.0
          comp=N,4.9nm,0.2s,SNR=22
SOKA                               eSn       Sn     03 23 35.3 -1.3
          comp=N,14nm,0.4s
SOKA  Soboth             4.27 358            Pn     03 22 47.6 +1.0
SOKA                                         Sn     03 23 35.3 -1.3
GRUS  Gruza              4.27  68  ePn       Pn     03 22 50.4 +3.8
PRMA  PARMA              4.28 305            Pn     03 22 47.7 +0.9
FRGS  Fruska Gora        4.30  49  ePn       Pb     03 22 54.7 -2.5
FRGS  Fruska Gora        4.30  49  ePn       Pb     03 22 55.5 -1.7
ACOM  Acomizza, Ital     4.31 344   P        Pn     03 22 48.6 +1.2
OHR   Ohrid              4.36 106  i Pn      Pn     03 22 51.3 +3.4
MYKA  Terra Mystica      4.37 345  ePn       Pn     03 22 50.2 +2.2
          comp=N,1.7nm,0.2s
MYKA                               eSn       Sn     03 23 39.2 +0.1
          comp=N,35nm,0.4s
MYKA  Terra Mystica      4.37 345            Pn     03 22 50.2 +2.2
MYKA                                         Sn     03 23 39.2 +0.1
KEK   Kerkira            4.38 127   P        Pn     03 22 49.3 +1.2
KEK   Kerkira            4.38 127 ⇓P         Pn     03 22 49.6 +1.5
KEK                                 AML      AML
          comp=E,89µm,0.7s
KEK                                 AML      AML
          comp=N,72µm,1.6s
CIMO  Cimolais           4.38 334   P        Pn     03 22 47.8 -0.5
CIMO  Cimolais           4.38 334   Pn       Pn     03 22 47.0 -1.2
SRN   Sarande            4.39 124   P        Pn     03 22 49.6 +1.3
SELS  Selova             4.40  77  ePn       Pn     03 22 50.2 +1.8
ROVR  Rover Verones      4.41 318   P        Pn     03 22 47.8 -0.9
ROVR                                AML      AML
          comp=E,188µm,0.9s
ROVR                                AML      AML
          comp=N,264µm,0.5s
ZOU   Zoufplan           4.45 339   P        Pn     03 22 49.5 +0.3
CTI   Castel Tesino      4.46 326   P        Pn     03 22 48.8 -0.5
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CTI                                 AML      AML
          comp=E,1465µm,0.6s
CTI                                 AML      AML
          comp=N,1755µm,0.6s
AGOR  Agordo             4.50 330   P        Pn     03 22 49.3 -0.4
MORH  Mrgy, Hungar       4.51  32  ePn       Pn     03 22 50.5 +0.5
DOSS  Dosso del Somm     4.53 321   P        Pn     03 22 49.7 -0.7
MSSA  Maissana           4.59 296   P        Pn     03 22 51.5 +0.4
PGF   Pioggiola          4.62 274  eP        Pn     03 22 51.1 -0.5
PGF                                eSn       Sn     03 23 33.8  -12
          comp=N,9.8nm,0.5s
SALO  Salr               4.67 315   P        Pn     03 22 51.8 -0.4
SALO                                AML      AML
          comp=N,614µm,0.5s
SALO                                AML      AML
          comp=E,936µm,1.0s
SALO                                AML      AML
          comp=E,902µm,1.0s
SALO                                AML      AML
          comp=N,624µm,0.5s
SALO  Salr               4.67 315            Pn     03 22 51.3 -0.9
MAGA  Magasa             4.72 317   P        Pn     03 22 52.0 -1.1
ABTA  Abfaltersbach      4.75 337   Pn       Pn     03 22 53.4 +0.1
          comp=N,3.1nm,0.2s,SNR=11
ABTA                               eSn       Sn     03 23 46.9 -1.6
          comp=N,76nm,0.6s
ABTA  Abfaltersbach      4.75 337            Pn     03 22 53.4 +0.1
ABTA                                         Sn     03 23 46.9 -1.6
GAGG  Gaggia             4.79 321   P        Pn     03 22 53.7 -0.2
GAGG                                AML      AML
          comp=E,768µm,0.8s
GAGG                                AML      AML
          comp=N,484µm,1.4s
NEST  Nestorio           4.80 113   P        Pn     03 22 56.8 +2.7
IGT   Igoumenitsa        4.81 125   P        Pn     03 22 55.5 +1.4
BOB   Bobbio (Coli)      4.82 301   P        Pn     03 22 55.5 +1.2
BOB                                 AML      AML
          comp=E,424µm,1.1s
BOB                                 AML      AML
          comp=N,361µm,0.5s
ARSA  Arzberg            4.84   2   Pn       Pn     03 22 55.7 +1.2
          comp=N,2.2nm,0.2s,SNR=16
ARSA                               eSn       Sn     03 23 47.6 -3.0
ARSA  Arzberg            4.84   2  ePn       Pn     03 22 55.3 +0.8
ARSA  Arzberg            4.84   2            Pn     03 22 55.7 +1.2
ARSA                                         Sn     03 23 47.6 -3.0
KBA   Koelnbreinsper     4.86 344  ePn       Pn     03 22 55.5 +0.6
          comp=N,0.4nm,0.1s
KBA                                eSn       Sn     03 23 52.6 +1.4
          comp=N,38nm,0.6s
KBA   Koelnbreinsper     4.86 344  ePn       Pn     03 22 56.1 +1.3
KBA   Koelnbreinsper     4.86 344            Pn     03 22 55.5 +0.6
KBA                                          Sn     03 23 52.6 +1.4
BARS  Barje              4.87  83  ePn       Pn     03 22 56.7 +1.8
BARS  Barje              4.87  83  ePn       Pb     03 23 01.6 -5.3
TIH   Tihany             4.87  22  ePN       Pn     03 22 56.3 +1.4
FNA   Florina            4.88 107   P        Pn     03 22 57.2 +2.1
BOVS  Bovan              4.89  73 ⇑P         Pg     03 23 15.6 +0.4
BOVS                              ⇑S         Sg     03 24 21.9 +3.4
APPI  Appiano            4.98 326   P        Pn     03 22 56.3 -0.2
APPI                                AML      AML
          comp=E,886µm,1.2s
APPI                                AML      AML
          comp=N,1710µm,1.2s
ZONE  Zone               4.98 314   P        Pn     03 22 55.2 -1.3
MPLH  Magyarpolny        5.03  18  ePN       Pn     03 22 57.6 +0.6
MPLH  Magyarpolny        5.03  18  eP        Pn     03 22 58.7 +1.7
MPLH  Magyarpolny        5.03  18  eSN       Sb     03 24 04.0 -6.2
PRVS  Prvonek            5.06  87  ePn       Pn     03 23 00.5 +3.0
JAN   Janina             5.06 121   P        Pn     03 22 59.7 +2.2
RISI  Rein               5.06 335   P        Pn     03 22 58.2 +0.5
RISI                                AML      AML
          comp=N,1140µm,1.1s
RISI                                AML      AML
          comp=E,1038µm,0.5s
ABSI  Aberstueckl        5.14 328   P        Pn     03 22 58.9 +0.1
EGYH  Egyhazaskeszo      5.22  16  ePN       Pn     03 23 01.3 +1.6
EGYH                               eSN       Sb     03 24 11.8 -3.8
STIP  Stip               5.22  96  i Pn      Pn     03 23 04.2 +4.5
KPRO  Kipourio           5.23 116   P        Pn     03 23 02.5 +2.6
MDVR  Moldovita          5.26  61 ⇓P         Pn     03 23 04.2 +3.8
ROSI  Rosskopf           5.28 330   P        Pn     03 23 00.9 +0.3
ZAGS  Zajecar            5.30  72  ePn       Pb     03 23 11.6 -2.7
VSL   Villasalto         5.31 239   P        Pn     03 23 01.8 +0.8
SOP   Sopron             5.35  10  eP        Pn     03 23 02.5 +1.0
SOP   Sopron             5.35  10  eSN       Sn     03 24 02.5 -0.7
SOP   Sopron             5.35  10  ePN       Pn     03 23 02.6 +1.1
BOSS  Bosilegrad         5.36  87  ePn       Pn     03 23 04.3 +2.7
CSKK  Cskako             5.39  22  ePN       Pn     03 23 03.4 +1.4
CSKK  Cskako             5.39  22  ePN       Pn     03 23 03.6 +1.5
CSKK                               eSN       Sn     03 24 02.9 -1.3
CSKK  Cskako             5.39  22  eSN       Sn     03 24 03.1 -1.1
TSLK  Tsoukalades, L     5.46 129   P        Pn     03 23 04.4 +1.4
MOA   Molln              5.48 353  i Pn      Pn     03 23 04.6 +1.4
          comp=E,1.5nm,0.1s,SNR=32
MOA                                eSn       Sn     03 24 06.5 +0.1
          comp=E,12nm,0.4s
MOA   Molln              5.48 353  ePn       Pn     03 23 04.4 +1.1
MOA   Molln              5.48 353            Pn     03 23 04.6 +1.4
MOA                                          Sn     03 24 06.5 +0.1
WTTA  Wattenberg         5.48 333  i Pn      Pn     03 23 04.7 +1.2
          comp=E,4.2nm,0.2s,SNR=18
WTTA                               eSn       Sn     03 24 08.5 +1.7
          comp=E,128nm,0.5s
WTTA  Wattenberg         5.48 333  ePn       Pn     03 23 04.2 +0.7
WTTA                               eSn       Sn     03 24 07.2 +0.4
WTTA  Wattenberg         5.48 333 ⇓P         Pn     03 23 04.3 +0.8
WTTA  Wattenberg         5.48 333            Pn     03 23 04.7 +1.2
WTTA                                         Sn     03 24 08.5 +1.7
LKD2  Lefkada island     5.49 130   P        Pn     03 23 04.6 +1.2
CONA  Conrad Observa     5.53   4  i Pn      Pn     03 23 05.6 +1.6
          comp=E,6.1nm,0.5s,SNR=5.8
CONA                               eSn       Sn     03 24 09.2 +1.4
          comp=E,21nm,0.5s
CONA  Conrad Observa     5.53   4            Pn     03 23 05.6 +1.6
CONA                                         Sn     03 24 09.2 +1.4
GRG   Griva              5.55 103   P        Pn     03 23 05.8 +1.5
WATA  Walderalm          5.57 333  i Pn      Pn     03 23 05.8 +1.2
          comp=E,2.7nm,0.2s,SNR=29
WATA                               eSn       Sn     03 24 09.4 +0.6
          comp=E,81nm,0.6s
WATA  Walderalm          5.57 333            Pn     03 23 05.8 +1.2
WATA                                         Sn     03 24 09.4 +0.6
VAY   Valandovo          5.58  99  i Pn      Pn     03 23 06.4 +1.8
SQTA  Sankt Quirin       5.60 331  i Pn      Pn     03 23 06.0 +1.0
          comp=E,6.8nm,0.4s,SNR=15
SQTA                               eSn       Sn     03 24 08.0 -1.5
          comp=E,84nm,0.5s
SQTA  Sankt Quirin       5.60 331            Pn     03 23 06.0 +1.0
SQTA                                         Sn     03 24 08.0 -1.5
BZS   Buzias             5.60  53 ⇑P         Pb     03 23 15.5 -3.9
FETA  Feichten           5.62 327  i Pn      Pn     03 23 05.5 +0.2
          comp=E,1.8nm,0.4s,SNR=15
FETA                               eSn       Sn     03 24 10.4 +0.4
          comp=E,90nm,0.5s
FETA  Feichten           5.62 327            Pn     03 23 05.5 +0.2
FETA                                         Sn     03 24 10.4 +0.4
FSK   Fiskardo           5.66 132   P        Pn     03 22 55.7  -10
MUGIO Muggio             5.67 310 ⇑P         Pn     03 23 05.2 -0.7
KEF4  Livadi, Kephal     5.74 135   P        Pn     03 22 58.0 -8.8
MOTA  Moosalm            5.74 331  i Pn      Pn     03 23 07.8 +0.8
          comp=E,1.9nm,0.5s,SNR=12
MOTA                               eSn       Sn     03 24 14.7 +1.7
          comp=E,85nm,0.5s
MOTA  Moosalm            5.74 331            Pn     03 23 07.8 +0.8
MOTA                                         Sn     03 24 14.7 +1.7
HERR  Herculane          5.76  62 ⇓P         Pn     03 23 11.3 +4.2
VARE  Varese             5.80 309 ⇓P         Pn     03 23 07.3 -0.5
DAVOX Davos/Dischmat     5.80 321   Pn       Pn     03 23 09.4 +1.5
          comp=E,2.4nm,0.3s,baz=160,slow=18,SNR=28
SRO   Srobarova          5.82  21  ePN       Pn     03 23 10.2 +2.3
SBF   Sospel             5.89 287  eP        Pn     03 23 09.3 +0.3
SBF                                eSn       Sn     03 24 04.1  -13
          comp=E,2.6nm,0.3s
VTS   Vitosha            5.91  85            Pn     03 23 11.7 +2.3
PSDA  Pessada-Kefalo     5.93 135   P        Pn     03 23 11.3 +1.9
MONC  Moncucco Torin     5.93 299 ⇓P         Pn     03 23 11.7 +2.2
RETA  Reutte             5.99 329  i Pn      Pn     03 23 11.4 +1.1
          comp=E,1.9nm,0.3s,SNR=8.1
RETA                               eSn       Sn     03 24 19.6 +0.7
          comp=E,12nm,0.2s
RETA  Reutte             5.99 329            Pn     03 23 11.4 +1.1
RETA                                         Sn     03 24 19.6 +0.7
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SIRR  Siria              6.00  48 ⇓P         Pg     03 23 40.5 +4.2
EVR   Evrytania          6.09 123   P        Pn     03 23 14.3 +2.5
OBER  Oberstdorf         6.10 327  ePn       Pn     03 23 13.4 +1.5
OBER                               eSn       Sn     03 24 19.8 -2.1
MODS  Modra-Piesok       6.13  13  ePN       Pn     03 23 16.0 +3.8
DAVA  Damuels            6.18 324  i Pn      Pn     03 23 14.2 +1.2
          comp=E,5.3nm,0.5s,SNR=13
DAVA                               eSn       Sn     03 24 22.8 -1.2
          comp=E,76nm,0.6s
DAVA  Damuels            6.18 324  ePn       Pn     03 23 14.4 +1.3
DAVA  Damuels            6.18 324            Pn     03 23 14.2 +1.2
DAVA                                         Sn     03 24 22.8 -1.2
GZR   Gura Zlata         6.20  59 ⇑P         Pn     03 23 16.7 +3.5
SMOL  Smolenice          6.29  13  ePN       Pn     03 23 18.1 +3.7
ANX   Ano Chora          6.36 125   P        Pn     03 23 18.0 +2.5
LTHK  Lithakia           6.36 136   P        Pn     03 23 15.5 +0.1
SRS   Serrai             6.38  99   P        Pn     03 23 17.3 +1.7
UBR   Ueberruh           6.40 327  ePn       Pn     03 23 16.4 +0.5
FRF   La Foret Royal     6.41 283  eP        Pn     03 23 16.7 +0.7
PSZ   Piszkesteto        6.41  29   Pn       Pn     03 23 16.8 +0.7
CKRC  Cesky Krumlov      6.44 354  ePN       Pn     03 23 17.3 +0.8
EFP   Efpalio            6.46 126   P        Pn     03 23 18.9 +2.2
LMR   La Mourre          6.48 281  eP        Pn     03 23 16.6 -0.4
GEC2  GERESS Array S     6.52 351  ePn       Pn     03 23 18.0 +0.3
GEC2                               eSn       Sn     03 24 29.4 -2.7
GERES GERESS Array B     6.52 351   Pn       Pn     03 23 17.9 +0.3
          comp=E,1.0nm,0.3s,baz=168,slow=13,SNR=42
NVR   Nevrokopi          6.52  96   P        Pn     03 23 20.0 +2.4
KOLL  Kolacno            6.55  19  ePN       Pn     03 23 19.5 +1.5
SERG  Sergoula           6.56 125   P        Pn     03 23 19.9 +1.8
MBDF  Montbardon         6.57 293  eP        Pn     03 23 17.2 -1.2
VYHS  Vyhne              6.58  21  ePN       Pn     03 23 21.5 +3.1
DRO   Drossia            6.66 130   P        Pn     03 23 21.5 +2.0
KRUC  Moravsky           6.70   7  ePN       Pn     03 23 22.8 +2.8
BNI   Bardonecchia       6.74 296            Pn     03 23 20.5 -0.2
KHC   Kasperske Hory     6.82 351  ePN       Pn     03 23 21.6 -0.1
KHC                                ex        x      03 23 30.6
KHC                                eSN       Sn     03 24 29.0  -10
KHC                                ex        x      03 24 34.3
KHC                                ex        x      03 25 00.0
KHC   Kasperske Hory     6.82 351            Pn     03 23 21.4 -0.2
KLV   Kalavryta, Ach     6.85 127   P        Pn     03 23 23.8 +1.6
LPG   La Plagne          6.86 300  eP        Pn     03 23 21.2 -1.3
LPL   La Plagne          6.88 300  eP        Pn     03 23 21.2 -1.5
TREC  Trest              6.88   1  ePN       Pn     03 23 23.8 +1.2
DRGR                     6.89  48 ⇓P         Pn     03 23 27.7 +5.0
WET   Wettzell           6.93 347  ePn       Pn     03 23 22.9 -0.3
VRAC  Vranov             6.96   7   Pn       Pn     03 23 24.2 +0.6
          comp=E,0.2nm,0.3s,baz=195,slow=17,SNR=2.0
VRAC  Vranov             6.96   7  ePN       Pn     03 23 26.6 +3.0
NORI  Noerdlinger Ri     7.09 334  eSn       Sn     03 24 43.0 -3.0
ORIF  Oris-en-Rattie     7.24 293  eP        Pn     03 23 27.0 -0.5
ORIF  Oris-en-Rattie     7.24 293  ePn       Pn     03 23 29.5 +2.0
SMRF  Simiane la Rot     7.24 286  eP        Pn     03 23 28.2 +0.8
ITM   Ithomi             7.33 133   Pn       Pn     03 23 29.5 +0.7
LANS  Liptovska Anna     7.35  22  ePN       Pn     03 23 33.5 +4.5
ARR   Arges              7.40  63 ⇓P         Pn     03 23 37.5 +7.8
ARR                               ⇑S         Sn     03 24 42.5  -11
PRU   Pruhonice          7.59 357  ePN       Pn     03 23 32.0 -0.2
BFO   Black Forest       7.66 323  ePn       Pn     03 23 32.1 -1.1
BFO                                eSn       Sn     03 24 54.8 -5.2
BFO   Black Forest       7.66 323   Pn       Pn     03 23 33.9 +0.7
CABF  La Chapelle        7.77 306  eP        Pn     03 23 33.4 -1.4
CABF                               eSn       Sn     03 24 50.6  -12
          comp=E,15nm,0.4s
HINF  Hinteralfeld       8.02 315  eP        Pn     03 23 36.5 -1.7
HINF                               eSn       Sn     03 24 55.6  -13
          comp=E,34nm,0.3s
VIVF  Saint-Julien-l     8.05 291  eP        Pn     03 23 37.7 -0.8
VIVF                               eSn       Sn     03 24 56.6  -13
          comp=E,3.0nm,0.3s
KEST  Kesra              8.10 216   Pn       Pn     03 23 42.7 +3.4
          comp=E,1.0nm,0.3s,baz=326,slow=5.2,SNR=20
KEST  Kesra              8.10 216            Pn     03 23 39.3  0.0
ECH   Echery             8.13 318   Pn       Pn     03 23 40.5 +0.9
CDF   Champ du Feu       8.21 320  eP        Pn     03 23 39.3 -1.4
CDF                                eSn       Sn     03 25 01.1  -12
          comp=E,8.5nm,0.3s
ALN   Alexandroupoli     8.23  97   Pn       Pn     03 23 42.8 +1.8
MLR   Muntele Rosu       8.31  65 ⇑P         Pn     03 23 48.6 +6.3
MLR                               ⇑S         Sn     03 24 57.0  -19
MLR   Muntele Rosu       8.31  65   Pn       Pn     03 23 44.1 +1.9
HAU   Haudompre          8.40 315  eP        Pn     03 23 41.4 -2.0
HAU                                eSn       Sn     03 25 04.8  -14
          comp=E,126nm,0.4s
LASF  Ste Croix          8.48 285  eP        Pn     03 23 44.2 -0.2
LASF                               eSn       Sn     03 25 06.1  -14
          comp=E,5.9nm,0.5s
BRG   Berggiesshubel     8.51 354  eP        Pn     03 23 44.9 +0.1
BRG                                 Amp             03 23 53.7
          comp=Z,3.5nm,0.7s
BRG                                 r               03 24 32.0
BRG                                 r               03 24 59.5
BRG                                 r               03 25 18.6
BRG                                 r               03 26 18.8
BRG                                 Amp             03 28 03.5
          comp=Z,44nm,1.2s
BURAR Bucovina Array     8.77  50 ⇑P         Pn     03 23 53.4 +4.9
BISRR Bisoca             8.84  65 ⇑P         Pn     03 23 57.8 +8.4
BISRR                             ⇑S         Sn     03 25 08.0  -21
CLL   Collm              9.03 351  eSn       Sn     03 25 24.0  -10
CLL                                eSg              03 26 39.0
PAGF  Fort de Pagny      9.07 316  eP        Pn     03 23 51.5 -1.1
PAGF                               eSn       Sn     03 25 20.6  -14
          comp=Z,12nm,0.3s
TNS   Taunus Mts         9.11 331  eSn       Sn     03 25 29.4 -6.4
SMF   Signal de Mont     9.17 301  eP        Pn     03 23 52.2 -1.8
SMF                                eSn       Sn     03 25 24.3  -13
          comp=Z,30nm,0.4s
SFTF  Sexfontaines       9.23 312  eP        Pn     03 23 53.6 -1.1
          baz=133
SFTF                               eSn       Sn     03 25 24.6  -14
          comp=Z,14nm,0.5s
MEZF  Maizieres J'vi     9.39 314  eP        Pn     03 23 55.2 -1.7
          baz=134
MEZF                               eSn       Sn     03 25 29.0  -14
          comp=Z,5.5nm,0.4s
SAVF  Savonnieres en     9.42 315  eP        Pn     03 23 55.6 -1.7
          baz=135
SAVF                               eSn       Sn     03 25 29.1  -14
          comp=Z,9.6nm,0.5s
LOR   Lormes             9.43 305  eP        Pn     03 23 55.9 -1.5
          baz=126
LOR                                eSn       Sn     03 25 30.1  -13
          comp=Z,30nm,0.4s
AVF   Avril sur Loir     9.54 301  eP        Pn     03 23 56.9 -2.1
AVF                                eSn       Sn     03 25 31.8  -14
          comp=Z,6.5nm,0.3s
SSF   Saint Saulge       9.55 303  eP        Pn     03 23 57.5 -1.7
SSF                                eSn       Sn     03 25 33.2  -13
          comp=Z,14nm,0.4s
MTLF  Montolieu          9.61 280  eP        Pn     03 24 00.0 +0.1
MTLF                               eSn       Sn     03 25 33.3  -15
          comp=Z,5.0nm,0.5s
BGF   Bois d'Agland      9.78 299  eP        Pn     03 24 00.7 -1.5
BGF                                eSn       Sn     03 25 37.4  -15
          comp=Z,23nm,0.4s
CAF   Calviac            9.87 289  eP        Pn     03 24 03.1 -0.5
TCF   Toulx Ste Croi    10.10 297  eP        Pn     03 24 05.9 -0.8
TCF                                eSn       Sn     03 25 45.7  -14
          comp=Z,4.6nm,0.3s
HYF   Humbligny         10.18 303  eP        Pn     03 24 06.5 -1.2
HYF                                eSn       Sn     03 25 48.3  -14
IDI   Anoyia            10.35 130   Pn       Pn     03 24 10.8 +0.7
          comp=Z,0.3nm,0.3s,baz=310,slow=8.2,SNR=6.3
IDI                                 LR       LR     03 29 12.9
          comp=Z,293nm,20.5s,baz=316,slow=44
MFF   Saint Martin d    11.76 296  eP        Pn     03 24 28.4 -0.9
GRR   Gorron            12.79 303  eP        Pn     03 24 41.7 -1.6
BR131 Keskin Array S    14.14  95            Pn     03 25 02.9 +0.9
BRTR  Keskin Array B    14.14  95   Pn       Pn     03 25 03.4 +1.4
          comp=Z,0.1nm,0.3s,baz=231,slow=5.9,SNR=15
BRTR  Keskin Array B    14.14  95   Pn       Pn     03 25 03.6 +1.7
MNK   Minsk             14.69  30  i P       Pn     03 25 07.3 -2.0
          comp=E,5.0nm,1.2s
MNK                                i P       Pn     03 25 07.3 -2.0
          comp=N,24nm,1.1s
MNK                                i P       Pn     03 25 07.3 -2.0
          comp=Z,19nm,1.2s,baz=42
MNK                                i PP      P      03 25 15.2 -0.3
MNK                                i PPP     PPP    03 25 22.9
MNK                                i S       Sn     03 27 52.0  0.0
MNK                                i SS      SnSn   03 28 05.9 +1.5
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MNK				*i* SSS	SSS	03 28 18.5	
MNK				*i* LR	LR	03 30 07.4	
MNK				*i* LRM	MLR	03 31 13.6	
	comp=E,126nm,19.0s						
MNK				*i* LRM	MLR	03 31 25.6	
	comp=N,1µm,24.4s						
MNK				*i* LRM	MLR	03 31 35.4	
	comp=Z,389nm,18.4s						
ESDC	**Sonseca Array**	14.75	266	Pn	P	03 25 14.2	-2.2
	comp=Z,0.0nm,0.3s,baz=64,slow=13,SNR=4.8						
NOA	**NORSAR Array B**	18.81	354	P	Pn	03 26 01.8	+0.2
	comp=Z,0.0nm,0.3s,baz=177,slow=7.2,SNR=3.5						
FINES	**FINESS Array B**	20.14	15	P	P	03 26 16.1	+0.5
	comp=Z,0.2nm,0.3s,baz=204,slow=7.6,SNR=6.0						
GURO	**Guroymak-BITLI**	20.71	92	P	P	03 26 22.4	+0.3
GNI	**Garni**	22.24	86	P	P	03 26 38.9	+0.3
GNI				IAmb	IAmb	03 26 45.5	
	comp=Z,7.0nm,1.1s						
KLMR	**Klimovskoe**	23.59	30	P	P	03 26 48.9	-3.3
KLMR				AMP		03 26 56.1	
	comp=Z,32nm,1.5s						
KLMR				*e*PP	PnPn	03 27 16.0	-2.9
ARU	**Arti**	30.90	48	P	P	03 27 58.4	+0.3
DBIC	**Dimbokro**	39.80	212	P	P	03 29 16.4	+1.5
	comp=Z,2.3nm,1.0s,baz=12,slow=11,SNR=1.9						
ZAA0	**Zalesovo Array**	45.99	50	P	P	03 30 04.2	-0.6
ZAA0				IAmb	IAmb	03 30 06.4	
	comp=Z,2.1nm,0.8s						
ZALV	**Zalesovo Beam**	45.99	50	P	P	03 30 05.8	+1.0
	comp=Z,1.5nm,0.9s,baz=270,slow=8.9,SNR=4.9						
MKAR	**Makanchi Array**	46.63	60	P	P	03 30 10.0	0.0
	comp=Z,0.6nm,0.8s,baz=262,slow=8.2,SNR=4.0						
MKAR	**Makanchi Array**	46.63	60	P	P	03 30 10.3	+0.3
SONM	**Songino Array**	60.88	50	P	P	03 31 55.0	+0.6
	comp=Z,1.2nm,0.9s,baz=270,slow=5.9,SNR=6.1						
SONM	**Songino Array**	60.88	50	P	P	03 31 55.8	+1.4
SONM				IAmb	IAmb	03 31 57.3	
	comp=Z,2.9nm,1.4s						
INK	**Inuvik**	67.14	348	P	P	03 32 35.7	+0.7
	comp=Z,1.2nm,1.0s,baz=6.7,slow=6.3,SNR=3.1						
YKA	**Yellowknife Ar**	67.98	337	P	P	03 32 41.5	+1.0
	comp=Z,1.1nm,0.8s,baz=37,slow=5.9,SNR=6.1						
ULM	**Lac du Bonnet**	69.88	320	P	P	03 32 51.8	-0.7
	comp=Z,3.9nm,0.8s,baz=80,slow=2.4,SNR=3.9						
ILAR	**Eielson Array**	72.23	352	P	P	03 33 08.6	+2.1
	comp=Z,0.5nm,0.7s,baz=354,slow=6.5,SNR=7.1						
TXAR	**Lajitas Array**	89.14	310	P	P	03 34 39.4	+1.7
	comp=Z,0.6nm,0.9s,baz=77,slow=5.5,SNR=4.9						

ROM 06 03:21:54.5±0.1, 46°.043N±0°.004×10°.573E±0°.006, h7^{km}, ML1.6/8, 4C-1D, Error ellipse: s-maj=0.5km s-min=0.4km az=283.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MABI	**Malga Bissina**	0.04	287	P	Pg	03 21 56.5	+0.2
MABI				S	Sg	03 21 57.2	-0.3
RONC	**Roncone**	0.07	151	P	Pg	03 21 57.2	+0.6
RONC				S	Sg	03 21 58.4	+0.4
BAG8	**Bagolino**	0.23	199	P	Pg	03 22 00.3	+1.1
BAG8				S	Sg	03 22 03.2	+1.0
MAGA	**Magasa**	0.27	172	⇓P	Pg	03 22 00.8	+0.9
MAGA				S	Sg	03 22 05.0	+1.5
MAGA				AML	AML		
	comp=E,121µm,0.2s						
MAGA				AML	AML		
	comp=N,102µm,1.0s						
MAGA				AML	AML		
	comp=N,213µm,1.6s						
MAGA				AML	AML		
	comp=E,314µm,0.4s						
GAGG	**Gaggia**	0.27	81	⇑*e*Pg	Pg	03 22 00.6	+0.6
GAGG				*e*Sg	Sg	03 22 04.8	+1.2
GAGG	**Gaggia**	0.27	81	P	Pg	03 22 00.6	+0.7
GAGG				S	Sg	03 22 04.7	+1.1
GAGG				AML	AML		
	comp=N,120µm,1.5s						
GAGG				AML	AML		
	comp=E,138µm,1.4s						
GARGN	**Gargnano BS**	0.36	170	⇑*e*Pg	Pg	03 22 02.1	+0.6
GARGN				*e*Sg	Sg	03 22 07.5	+1.3
CARE	**Lago del Cares**	0.39	12	⇑*e*Pg	Pg	03 22 02.8	+0.6
VOBA	**Vobarno**	0.40	187	P	Pb	03 22 03.5	-0.5
VOBA				S	Sb	03 22 08.9	-1.3
ZONE	**Zone**	0.42	229	P	Pg	03 22 02.9	+0.1
ZONE				AML	AML		
	comp=E,74µm,1.6s						
ZONE				AML	AML		
	comp=N,72µm,1.0s						
ZONE				AML	AML		
	comp=E,91µm,0.4s						
ZONE				AML	AML		
	comp=N,96µm,0.6s						
SALO	**Salr**	0.43	185	P	Pb	03 22 04.0	-0.3
SALO				S	Sb	03 22 10.4	-0.5
SALO				AML	AML		
	comp=E,173µm,1.5s						
SALO				AML	AML		
	comp=N,176µm,1.4s						
BRMO	**Bormio**	0.46	342	P	Pg	03 22 04.0	+0.7
BRMO				AML	AML		
	comp=E,94µm,0.6s						
BRMO				AML	AML		
	comp=N,36µm,0.6s						
DOSS	**Dosso del Somm**	0.46	110	*e*Pg	Pg	03 22 04.1	+0.7
DOSS	**Dosso del Somm**	0.46	110	P	Pb	03 22 04.7	-0.3
DOSS				S	Sb	03 22 11.7	-0.3
OZOL	**Ozolo**	0.49	42	*e*Pg	Pg	03 22 04.7	+0.7
ROVR	**Rover Verones**	0.53	138	P	Pb	03 22 05.6	-0.5
ROVR				S	Sb	03 22 13.0	-1.0
PANI	**Panarotta**	0.53	89	*e*Pg	Pb	03 22 05.6	-0.7
BERNI	**Berninapass**	0.53	314	P	Pg	03 22 05.5	+0.7
BERNI				S	Sg	03 22 12.6	+0.7
MOSI	**Grossmontoni**	0.57	358	P	Pb	03 22 06.5	-0.5
APPI	**Appiano**	0.63	46	⇑P	Pg	03 22 07.2	+0.5
APPI				S	Sb	03 22 16.2	-0.7
APPI				AML	AML		
	comp=E,114µm,1.6s						
APPI				AML	AML		
	comp=N,121µm,1.0s						
MDI	**Monti di Nese**	0.66	246	P	Pb	03 22 08.1	-0.2
MDI				S	Sb	03 22 17.3	-0.4
DAVOX	**Davos/Dischmat**	0.88	327	P	Pg	03 22 11.7	+0.3
RISI	**Rein**	1.38	48	P	Pb	03 22 20.7	0.0
RISI				AML	AML		
	comp=E,246µm,0.6s						
RISI				AML	AML		
	comp=N,230µm,0.5s						

LDG ***06*** *03:22:45.7±0.4, 42°.70N×15°.25E, h7^{km}, Ml4.1/29, Error ellipse: s-maj=11.0km s-min=4.7km az=61.0*

IDC ***06*** *03:22:48.2±0.7, 42°.57N×15°.25E, h0^{km}, mb4.1/19, mb1 4.2/30, mb1mx4.0/67, mbtmp4.0/30, ML3.4/11, MS3.6/7, Ms1 3.6/7, ms1mx3.2/53, Error ellipse: s-maj=13.4km s-min=12.6km az=171.0*

ROM ***06*** *03:22:49.2±0.1, 42°.408N±0°.010×15°.20E±0°.01, h10^{km}, ML3.9/31, Mw4.2, Mw4.2, Error ellipse: s-maj=1.4km s-min=0.7km az=229.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.15; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$-2.13; $M_{r\theta}$-0.25; $M_{\theta\phi}$-0.57; $M_{\phi r}$-0.56; Fault plane solution: $M_0$2.29441×10^{15} NP1:ϕ_s11.00000°, δ37.00000°, λ86.00000°. NP2:ϕ_s197.00000°, δ53.00000°, λ93.00000°.*

NEIC ***06*** *03:22:49.2±1.6, 42°.54N±0°.03×15°.10E±0°.06, h6^{km}±4^{km}, mb4.5/24, ML4.0(ROM) Error ellipse: s-maj=7.0km s-min=1.9km az=62.0*

MED_RC ***06*** *03:22:49.0±0.2, 42°.43N×15°.21E, h10^{km}, MW4.3/21, Moment Tensor Solution.Mantle waves: s21,c34; Duration: 1$\overset{s}{.}$0 Moment tensor: Scale 10^{15}Nm; M_{rr}4.02±.23; $M_{\theta\theta}$-0.64±.27; $M_{\phi\phi}$-3.38±.17; $M_{r\theta}$-0.62±1.19; $M_{\theta\phi}$-1.71±.19; $M_{\phi r}$1.03±1.00; Best double couple: $M_0$4.28000×10^{15} NP1:ϕ_s219.00000°, δ42.00000°, λ110.00000°. NP2:ϕ_s12.00000°, δ51.00000°, λ73.00000°. Principal axes: T 4.3100, Plg76.0000°, Azm223.0000°; N -0.0600, Plg13.0000°, Azm23.0000°; P -4.2600, Plg5.0000°, Azm115.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

ISC 06 03:22:49.0±1.1, 42°.42N±0°.02×15°.19E±0°.02, h9^{km}±7^{km}, n230, σ1$\overset{s}{.}$27/235, mb4.4/23, 4C-9D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TREM	**Isole Tremiti**	0.38	142	P	Pg	03 22 55.4	-1.1
TREM				S	Sb	03 23 02.7	-1.3
FRES	**Fresagrandinar**	0.59	221	P	Pg	03 22 59.5	-1.1
CAFR	**Castel Frentan**	0.66	253	P	Pg	03 23 00.9	-0.8
SGRT	**San Giovanni R**	0.78	148	P	Pg	03 23 03.8	-0.3
SGRT				S	Sb	03 23 15.9	+0.3
SGRT				AML	AML		
	comp=E,33300µm,0.6s						
SGRT				AML	AML		
	comp=N,20750µm,0.3s						
SGRT	**San Giovanni R**	0.78	148	Pg	Pb	03 23 04.9	0.0
SGRT				Sg	Sn	03 23 18.5	+0.2
CIGN	**Sant'Elia a Pi**	0.80	196	P	Pg	03 23 04.5	+0.1
CIGN				AML	AML		
	comp=E,5520µm,1.0s						
CIGN				AML	AML		
	comp=E,5515µm,1.0s						
CIGN				AML	AML		
	comp=N,7110µm,1.6s						
TRIV	**Trivento**	0.81	216	P	Pg	03 23 04.5	-0.1
LPEL	**Lama dei Pelig**	0.84	244	P	Pg	03 23 03.5	-1.7
MSAG	**Monte S. Angel**	0.89	143	P	Pb	03 23 06.3	-0.3
MSAG				AML	AML		
	comp=E,59650µm,0.9s						
MSAG				AML	AML		
	comp=N,54600µm,0.7s						
MSAG				AML	AML		
	comp=E,60700µm,0.9s						
MSAG				AML	AML		
	comp=E,59700µm,0.9s						
MSAG				AML	AML		
	comp=N,55650µm,0.7s						
GATE	**Gambatesa**	0.93	193	P	Pn	03 23 08.0	-0.4
GATE				AML	AML		
	comp=E,6760µm,0.5s						
GATE				AML	AML		
	comp=N,6650µm,0.8s						
GATE				AML	AML		
	comp=N,6700µm,0.8s						
GATE				AML	AML		
	comp=E,6765µm,0.5s						
GATE				AML	AML		
	comp=N,6655µm,0.8s						
GATE				AML	AML		
	comp=E,4035µm,0.6s						
BSSO	**Busso**	0.98	207	P	Pg	03 23 07.7	-0.2
BSSO				S	Sb	03 23 21.3	-0.2
BSSO				AML	AML		
	comp=N,7800µm,1.1s						
BSSO				AML	AML		
	comp=N,3165µm,1.1s						
BSSO				AML	AML		
	comp=E,8610µm,1.1s						
BSSO				AML	AML		
	comp=N,7805µm,1.1s						
BSSO				AML	AML		
	comp=E,3520µm,1.1s						
VCEL	**Villa Celiera**	1.00	269	P	Pg	03 23 08.5	+0.2
TRTR	**Tortoreto Alta**	1.02	293	P	Pn	03 23 09.8	+0.2
TRTR				AML	AML		
	comp=N,32400µm,1.0s						
TRTR				AML	AML		
	comp=E,48050µm,1.2s						
MIDA	**Miranda**	1.05	222	P	Pg	03 23 07.8	-1.4
MOCO	**Biccari - m.te**	1.05	181	P	Pg	03 23 08.4	-0.8
MOCO				AML	AML		
	comp=N,3010µm,1.0s						
MOCO				AML	AML		
	comp=N,3115µm,1.0s						
MOCO				AML	AML		
	comp=E,4295µm,0.8s						
MOCO				AML	AML		
	comp=E,4185µm,0.8s						
RNI2	**Rionero Sannit**	1.06	227	P	Pg	03 23 08.4	-1.0
T0110	**Collepietro**	1.07	260	P	Pb	03 23 09.9	+0.1
T0110				AML	AML		
	comp=E,11850µm,0.7s						
T0110				AML	AML		
	comp=N,11685µm,1.0s						
SACR	**S. Croce Del S**	1.09	200	P	Pg	03 23 09.3	-0.6
SACR				S	Sn	03 23 25.0	-0.8
SACR				AML	AML		
	comp=N,3525µm,1.0s						
SACR				AML	AML		
	comp=E,4200µm,1.1s						
PTRJ	**Pietraroja**	1.17	205	P	Pb	03 23 11.2	-0.3
TERO	**Teramo**	1.19	280	P	Pb	03 23 10.3	-1.6
TERO				S	Sb	03 23 27.1	-0.3
TERO				AML	AML		
	comp=E,6790µm,1.6s						
TERO				AML	AML		
	comp=N,6460µm,0.6s						
TERO				AML	AML		
	comp=E,6785µm,1.6s						
TERO				AML	AML		
	comp=E,2765µm,1.3s						
TERO				AML	AML		
	comp=N,2640µm,0.6s						
SGG	**Gregorio Mates**	1.20	211	P	Pn	03 23 12.0	-0.2
SGG				AML	AML		
	comp=E,3920µm,0.6s						
SGG				AML	AML		
	comp=N,3590µm,0.7s						
SGG				AML	AML		
	comp=N,11nm,0.7s						
SGG				AML	AML		
	comp=E,12nm,0.7s						
CERA	**Filignano**	1.20	227	P	Pg	03 23 12.4	+0.3
GIGS	**Gran Sasso**	1.20	272	P	Pb	03 23 11.1	-1.0
GIGS				AML	AML		
	comp=E,3220µm,0.8s						
GIGS				AML	AML		
	comp=N,2445µm,0.8s						
FAGN	**Fagnano**	1.20	263	P	Pn	03 23 12.2	+0.1
OFFI	**Offida**	1.22	295	P	Pg	03 23 13.2	+0.6
PSB1	**Pescosannita**	1.23	194	P	Pn	03 23 12.3	-0.2
PSB1				AML	AML		
	comp=N,3340µm,0.9s						
PSB1				AML	AML		
	comp=E,3450µm,0.9s						
PSB1				AML	AML		
	comp=N,3345µm,0.9s						
PSB1				AML	AML		
	comp=E,3395µm,0.9s						
PSB1				AML	AML		
	comp=N,3280µm,1.6s						
PSB1				AML	AML		
	comp=E,3455µm,0.9s						
VAGA	**Valle Agricola**	1.23	216	P	Pn	03 23 11.8	-0.8
ZIRJ	**Zirje**	1.27	15	*e*Pg	Pn	03 23 11.5	-1.6
ZIRJ				Sg	Sb	03 23 30.3	+0.6
VVLD	**Villa Vallelon**	1.29	245	P	Pn	03 23 10.6	-2.8
VVLD				AML	AML		
	comp=N,3480µm,0.9s						
VVLD				AML	AML		
	comp=E,3140µm,0.9s						
LSTV	**Lastovo**	1.30	74	*i* Pg	Pg	03 23 14.5	+0.5
LSTV				Sg	Sg	03 23 32.3	+1.4
CADA	**Capodarco di F**	1.31	307	P	Pb	03 23 14.0	+0.2
VITU	**Vitulano (BN)**	1.31	199	P	Pn	03 23 12.9	-0.7
VITU				AML	AML		
	comp=E,2752µm,1.4s						
VITU				AML	AML		
	comp=N,4345µm,0.8s						
VITU				AML	AML		
	comp=N,4450µm,0.8s						
VITU				AML	AML		
	comp=E,2754µm,1.4s						
VITU				AML	AML		
	comp=E,4400µm,0.8s						
POFI	**Posta Fibreno**	1.31	238	P	Pn	03 23 12.3	-1.3
CAMP	**Campotosto**	1.32	275	P	Pn	03 23 13.6	-0.3
CAMP				S	Sg	03 23 32.9	+1.2
AQU	**L'Aquila**	1.33	268	P	Pn	03 23 13.5	-0.4
AQU				AML	AML		
	comp=E,9675µm,1.2s						
AQU				AML	AML		
	comp=N,10950µm,0.9s						
AQU				AML	AML		
	comp=E,9840µm,1.2s						
AQU				AML	AML		
	comp=E,9700µm,1.2s						
AQU				AML	AML		
	comp=N,10395µm,0.9s						
AQU				AML	AML		
	comp=N,10900µm,0.9s						
AQU	**L'Aquila**	1.33	268	Pn	Pn	03 23 12.5	-1.4
CAPA	**Cerignola FG**	1.35	160	P	Pn	03 23 13.2	-0.8
SMA1	**SAN MARTINO**	1.39	279	P	Pn	03 23 14.8	0.0
SMA1				AML	AML		
	comp=E,8545µm,0.9s						
SMA1				AML	AML		
	comp=E,8565µm,0.9s						
SMA1				AML	AML		
	comp=N,7450µm,1.0s						
PTQR	**Pietraquaria**	1.39	254	P	Pn	03 23 14.9	+0.1
PTQR				AML	AML		
	comp=E,2565µm,0.7s						
PTQR				AML	AML		
	comp=N,2460µm,0.8s						
CAFE	**Carife**	1.39	179	P	Pn	03 23 14.0	-0.8
CIMA	**Civitanova Mar**	1.43	309	P	Pb	03 23 15.9	+0.1
PIGN	**Pignataro Magg**	1.44	212	P	Pn	03 23 15.0	-0.4
PIGN				AML	AML		
	comp=E,2000µm,1.4s						
PIGN				AML	AML		
	comp=N,2030µm,0.8s						
PIGN				AML	AML		
	comp=N,2055µm,1.4s						
PIGN				AML	AML		
	comp=E,1810µm,1.4s						
MNTP	**Montappone**	1.46	300	P	Pn	03 23 15.9	+0.3
RM33	**Pellescritta (**	1.47	274	P	Pn	03 23 15.8	0.0
RM33				AML	AML		
	comp=E,4895µm,1.1s						
RM33				AML	AML		
	comp=N,5645µm,1.1s						
RM33				AML	AML		
	comp=E,5155µm,1.1s						
RM33				AML	AML		
	comp=N,5575µm,1.1s						
RM33				AML	AML		
	comp=N,5640µm,1.1s						
RM33				AML	AML		
	comp=N,5570µm,1.1s						
RM33				AML	AML		
	comp=E,4895µm,1.1s						
PAOL	**Paolisi**	1.47	199	P	Pn	03 23 15.4	-0.3
PAOL				AML	AML		
	comp=E,2170µm,1.6s						
PAOL				AML	AML		
	comp=N,2410µm,1.2s						
PAOL				AML	AML		
	comp=N,2355µm,1.2s						
PAOL				AML	AML		
	comp=N,2350µm,1.2s						
PAOL				AML	AML		
	comp=N,2415µm,1.2s						
PAOL				AML	AML		
	comp=E,2265µm,1.6s						
PAOL				AML	AML		
	comp=E,2165µm,1.6s						
PAOL	**Paolisi**	1.47	199	Pn	Pb	03 23 16.3	-0.2
MORI	**Morici**	1.49	14	*e*Pg	Pn	03 23 16.1	0.0
MORI				Sg	Sn	03 23 36.0	+0.4
SNAL	**S. Angelo Dei**	1.50	180	P	Pn	03 23 15.1	-1.1
VULT	**Monte Vulture**	1.50	168	P	Pn	03 23 15.9	-0.4
LIK	**San Giovanni I**	1.53	234	P	Pn	03 23 16.6	0.0
MRVN	**Minervino Murg**	1.55	151	P	Pn	03 23 17.2	+0.2
NRCA	**Norcia**	1.59	286	P	Pn	03 23 17.9	+0.4
NRCA				AML	AML		
	comp=N,5235µm,1.2s						
NRCA				AML	AML		
	comp=E,6005µm,0.7s						
NRCA				AML	AML		
	comp=N,5155µm,1.2s						
NRCA				AML	AML		
	comp=E,5995µm,0.7s						
NRCA	**Norcia**	1.59	286	Pn	Pn	03 23 16.6	-0.8
MAKA	**Makarska**	1.60	57	*e*Pn	Pn	03 23 17.9	+0.4
MAKA				Sn	Sg	03 23 40.1	-0.2
LNSS	**Leonessa**	1.60	277	P	Pn	03 23 18.3	+0.6
LNSS				AML	AML		
	comp=E,7085µm,0.8s						
LNSS				AML	AML		
	comp=N,4460µm,0.8s						
CSP1	**Cessapalombo**	1.61	295	P	Pn	03 23 18.5	+0.7
AOI	**Ancona**	1.62	315	P	Pn	03 23 17.9	0.0
MCRV	**Calabrutti - M**	1.64	181	P	Pn	03 23 17.8	-0.4
FDMO	**Fiordimonte**	1.67	292	P	Pn	03 23 19.1	+0.5
FDMO				AML	AML		
	comp=N,3750µm,0.8s						
FDMO				AML	AML		
	comp=E,5105µm,1.1s						
MRLC	**Muro Lucano**	1.68	172	P	Pb	03 23 19.2	-0.9
GIUL	**Giuliano Di Ro**	1.68	240	P	Pn	03 23 18.1	-0.6
GIUL				AML	AML		
	comp=E,1430µm,1.2s						
GIUL				AML	AML		
	comp=N,2490µm,1.0s						
CERT	**Cerreto**	1.71	255	P	Pn	03 23 18.9	-0.2
CERT				AML	AML		
	comp=E,3020µm,1.2s						
CERT				AML	AML		
	comp=N,2195µm,1.2s						
ACER	**Acerenza**	1.73	161	P	Pb	03 23 20.1	-1.0
CING	**Cingoli**	1.75	304	P	Pn	03 23 19.7	0.0
RICI	**Ricice**	1.78	52	*e*Pn	Pn	03 23 20.5	+0.4
RICI				Sn	Sn	03 23 43.0	+0.1
CESI	**CESI - Serrava**	1.78	290	P	Pb	03 23 22.1	+0.1
AMUR	**Altamura**	1.85	145	P	Pn	03 23 20.2	-0.8
SNTG	**Esanatoglia**	1.85	297	P	Pn	03 23 21.2	+0.1
LATB	**Latina**	1.91	242	P	Pn	03 23 20.4	-1.3
LATB				AML	AML		
	comp=E,717µm,1.3s						
LATB				AML	AML		
	comp=N,516µm,1.3s						
CDRU	**Civita di Ruta**	1.93	177	P	Pn	03 23 23.1	+0.9
ASSB	**Assisi San Ben**	1.97	289	P	Pb	03 23 24.4	-0.7
ARVD	**Arcevia**	1.97	304	P	Pn	03 23 22.4	-0.3
FOSV	**Fossato di Vic**	1.99	297	P	Pn	03 23 23.2	+0.3
LAV9	**Lanuvio**	2.00	249	P	Pn	03 23 22.9	-0.2
LAV9				AML	AML		
	comp=E,3895µm,1.3s						
LAV9				AML	AML		
	comp=N,3010µm,1.1s						
SSFR	**Montelago di S**	2.04	301	P	Pn	03 23 23.8	+0.2
MIGL	**Miglionico**	2.04	152	P	Pn	03 23 23.9	+0.2
ATSC	**Scheggia e Pas**	2.10	299	P	Pn	03 23 24.5	+0.1
MATE	**Matera**	2.10	147	P	Pb	03 23 26.0	-1.3
CMPR	**Campora**	2.10	178	P	Pn	03 23 24.4	-0.1
ATFO	**Monte Foce - G**	2.15	297	P	Pn	03 23 25.4	+0.3
ATFO				AML	AML		
	comp=E,3725µm,1.0s						
ATFO				AML	AML		
	comp=N,3385µm,1.0s						
NOCI	**Noci**	2.15	139	P	Pn	03 23 24.4	-0.7
LTRZ	**Laterza**	2.19	146	P	Pn	03 23 25.8	+0.2
MTSN	**Montesano sull**	2.19	169	P	Pb	03 23 27.9	-1.1
BLY	**Banja Luka**	2.74	31	P	Pn	03 23 35.6	+2.4
PDG	**Podgorica**	3.01	88	P	Pn	03 23 37.8	+1.0
MAON	**Monte Argentar**	3.01	271	P	Pn	03 23 36.5	-0.4
MAON				AML	AML		
	comp=E,402µm,1.0s						
MAON				AML	AML		
	comp=N,368µm,1.6s						
OSSC	**Osservatorio P**	3.10	292	Pn	Pn	03 23 36.1	-2.1
CASP	**Castiglione de**	3.22	278	Pn	Pn	03 23 39.6	-0.1
MPPT	**Montemurlo**	3.37	298	P	Pn	03 23 42.2	+0.2
MPPT				AML	AML		
	comp=E,600µm,1.0s						
MPPT				AML	AML		
	comp=N,636µm,1.3s						
TIP	**Timpagrande**	3.45	159	Pn	Pn	03 23 45.3	+2.2
ZCCA	**Zocca**	3.63	304	Pn	Pn	03 23 44.8	-0.7
TIR	**Tirane**	3.65	106	P	Pn	03 23 47.1	+1.4
TIR	**Tirane**	3.65	106	Pn	Pn	03 23 49.1	+3.4
PII	**Pisa**	3.66	292	⇓P	Pn	03 23 46.8	+1.0
SABO	**M.te Sabotino**	3.74	343	P	Pn	03 23 47.7	+0.8
VLO	**Vlora**	3.78	120	P	Pn	03 23 48.3	+0.8
DIVS	**Divibare**	3.88	63	Pn	Pn	03 23 49.2	+0.1
TEOL	**Teolo**	3.89	320	P	Pn	03 23 49.6	+0.6
VLC	**Villacollemand**	3.92	298	Pn	Pn	03 23 48.1	-1.3
KOGS	**Kog**	4.09	10	⇓P	Pn	03 23 53.9	+2.0
KOGS				AML	AML		
	comp=E,8910µm,1.1s						
KOGS				AML	AML		
	comp=N,5610µm,1.1s						

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STAL  STALIGIAL          4.23 336  P     Pn    03 23 53.8  0.0
SRN   Sarande            4.43 123  P     Pn    03 23 57.5 +1.1
FVI   Forni Avoltri      4.52 338  P     Pn    03 23 57.8 +0.1
PGF   Pioggiola          4.58 274  eP    Pn    03 23 58.8 +0.2
PGF                                eSn   Sn    03 24 42.2  -10
      comp=N,28nm,0.7s
FNA   Florina            4.92 107  Pn    Pn    03 24 05.4 +2.2
APPI  Appiano            4.95 326  P     Pn    03 24 05.2 +1.5
CLTB  Caltabellotta      5.07 198        Pn    03 24 09.0 +3.7
ABSI  Aberstueckl        5.12 329  P     Pn    03 24 06.0 -0.1
DAVOX Davos/Dischmat     5.78 321  Pn    Pn    03 24 14.8 -0.3
      comp=N,6.1nm,0.3s,baz=256,slow=22,SNR=5.7
DAVOX                              LR    LR    03 27 02.5
      comp=N,661nm,21.9s,baz=154,slow=45
SRO   Srobarova          5.82  21  ePN   Pn    03 24 16.4 +0.8
SBF   Sospel             5.86 287  eP    Pn    03 24 15.5 -0.6
SBF                                eSn   Sn    03 25 11.5  -12
      comp=N,16nm,0.3s
ZST   Bratislava         5.93  12  ePN   Pn    03 24 17.7 +0.7
ZST                                eSN   Sn    03 25 22.6 -2.4
VTS   Vitosha            5.95  85  ⇑P    Pn    03 24 19.7 +2.2
VTS   Vitosha            5.95  85  Pn    Pn    03 24 18.1 +0.7
MODS  Modra-Piesok       6.13  13  ePN   Pn    03 24 19.7 -0.1
SMOL  Smolenice          6.29  14  ePN   Pn    03 24 23.1 +1.1
FRF   La Foret Royal     6.37 283  eP    Pn    03 24 24.3 +1.2
FRF                                eSn   Sn    03 25 24.1  -12
      comp=N,43nm,0.7s
AGG   Agios Georgios     6.40 120  Pn    Pn    03 24 25.1 +1.6
LMR   La Mourre          6.45 281  eP    Pn    03 24 24.2 +0.1
LMR                                eSn   Sn    03 25 25.9  -12
      comp=N,2.2nm,0.3s
GEC2  GERESS Array S     6.51 351  Pn    Pn    03 24 24.6 -0.5
GERES GERESS Array B     6.51 351  Pn    Pn    03 24 23.7 -1.4
      comp=N,2.8nm,0.3s,baz=180,slow=14,SNR=7.9
GERES                              Sn    Sn    03 25 36.7 -2.7
      comp=N,10nm,0.3s,baz=162,slow=24,SNR=9.8
GERES                              LR    LR    03 27 24.0
      comp=N,374nm,21.7s,baz=176,slow=43
MBDF  Montbardon         6.54 293  eP    Pn    03 24 24.4 -1.1
MBDF                               eSn   Sn    03 25 27.4  -13
      comp=N,53nm,0.7s
KOLL  Kolacno            6.55  19  ePN   Pn    03 24 26.0 +0.4
VYHS  Vyhne              6.59  22  ePN   Pn    03 24 27.6 +1.5
VYHS                               eSN   Sn    03 25 39.4 -1.9
KRUC  Moravsky           6.69   7  ePN   Pn    03 24 28.5 +1.0
BNI   Bardonecchia       6.70 296  Pn    Pn    03 24 28.3 +0.5
LPG   La Plagne          6.82 300  eP    Pn    03 24 28.0 -1.6
LPG                                eSn   Sn    03 25 34.2  -13
      comp=N,124nm,0.7s
LPL   La Plagne          6.84 300  eP    Pn    03 24 28.8 -1.0
LPL                                eSn   Sn    03 25 34.4  -13
      comp=N,91nm,0.6s
SENIN Lac Senin/Sane     6.89 308  Pn    Pn    03 24 30.0 -0.5
VLAD  Vladila            6.91  74  ⇓P    Pg    03 24 59.5 -1.9
VRAC  Vranov             6.96   8  ⇓P    Pn    03 24 33.1 +1.9
VRAC  Vranov             6.96   8  Pn    Pn    03 24 29.9 -1.2
      comp=N,0.6nm,0.3s,baz=196,slow=18,SNR=1.4
VRAC                               LR    LR    03 27 40.5
      comp=N,338nm,19.7s,baz=344,slow=43
VRAC  Vranov             6.96   8  ePN   Pn    03 24 32.2 +1.1
ORIF  Oris-en-Rattie     7.20 293  eP    Pn    03 24 34.1 -0.5
ORIF                               eSn   Sn    03 25 43.1  -13
      comp=N,67nm,0.8s
SMRF  Simiane la Rot     7.20 286  eP    Pn    03 24 33.6 -0.9
SMRF                               eSn   Sn    03 25 43.7  -13
      comp=N,10nm,0.8s
LANS  Liptovska Anna     7.36  22  ePN   Pn    03 24 39.2 +2.5
ITM   Ithomi             7.37 133  Pn    Pn    03 24 40.3 +3.5
MORC  Moravsky Berou     7.53  12  ⇓P    Pn    03 24 41.1 +2.0
VOIR                     7.73  64  ⇑P    Pn    03 24 45.9 +4.2
CABF  La Chapelle        7.74 306  eP    Pn    03 24 40.5 -1.4
CABF                               eSn   Sn    03 25 55.1  -15
      comp=N,125nm,1.0s
GRFO  Grafenberg         7.78 341  Pn    Pn    03 24 40.8 -1.5
CRVS  Cervenica-Dubn     7.82  32  ePN   Pn    03 24 45.5 +2.5
HINF  Hinteralfeld       7.99 315  eP    Pn    03 24 43.5 -1.8
HINF                               eSn   Sn    03 26 00.6  -15
      comp=N,66nm,0.5s
VIVF  Saint-Julien-l     8.01 291  eP    Pn    03 24 44.4 -1.2
VIVF                               eSn   Sn    03 26 02.6  -14
      comp=N,1.6nm,0.2s
SGRR  Singureni          8.06  73  ⇓P    Pn    03 24 47.3 +1.0
KEST  Kesra              8.08 216  Pn    Pn    03 24 50.1 +3.5
      comp=N,1.6nm,0.3s,baz=306,slow=3.4,SNR=9.3
KEST  Kesra              8.08 216  Pn    Pn    03 24 48.5 +1.9
CDF   Champ du Feu       8.18 320  eP    Pn    03 24 47.0 -0.9
CDF                                eSn   Sn    03 26 04.8  -16
      comp=N,56nm,0.8s
ALN   Alexandroupoli     8.27  97  Pn    Pn    03 24 51.1 +2.0
SECR                     8.30  68  ⇑P    Pn    03 24 52.2 +2.7
MLR   Muntele Rosu       8.34  65  LR    LR    03 28 29.6
      comp=N,538nm,18.8s,baz=269,slow=41
MLR   Muntele Rosu       8.34  65        Pn    03 24 51.2 +1.0
HAU   Haudompre          8.37 315  eP    Pn    03 24 48.5 -2.1
HAU                                eSn   Sn    03 26 09.8  -15
      comp=N,146nm,0.5s
LASF  Ste Croix          8.44 285  eP    Pn    03 24 52.1 +0.6
LASF                               eSn   Sn    03 26 13.2  -14
      comp=N,4.9nm,0.6s
BURAR Bucovina Array     8.79  50  Pn    Pn    03 24 57.7 +1.3
PLOR  Plostina           8.92  64  ⇑P    Pn    03 25 01.1 +3.0
VRI   Vrincioaia         8.98  64  ⇓P    Pn    03 25 00.8 +1.9
CLL   Collm              9.01 351  eSg         03 27 47.0
PAGF  Fort de Pagny      9.04 316  eP    Pn    03 24 57.7 -2.0
PAGF                               eSn   Sn    03 26 25.8  -16
      comp=N,56nm,0.6s
SMF   Signal de Mont     9.14 301  eP    Pn    03 24 59.3 -1.8
SMF                                eSn   Sn    03 26 28.8  -15
      comp=N,59nm,0.6s
SFTF  Sexfontaines       9.19 312  eP    Pn    03 25 01.3 -0.5
      baz=131
SFTF                               eSn   Sn    03 26 29.6  -16
      comp=N,24nm,0.5s
MEZF  Maizieres J'vi     9.36 314  eP    Pn    03 25 02.0 -2.1
MEZF                               eSn   Sn    03 26 33.4  -16
      comp=N,30nm,0.6s
SAVF  Savonnieres en     9.39 315  eP    Pn    03 25 02.4 -2.1
      baz=133
SAVF                               eSn   Sn    03 26 34.1  -16
      comp=N,19nm,0.5s
LOR   Lormes             9.39 305  eP    Pn    03 25 02.7 -1.9
      baz=123
LOR                                eSn   Sn    03 26 34.8  -15
      comp=N,53nm,0.6s
AVF   Avril sur Loir     9.51 301  eP    Pn    03 25 04.3 -1.8
AVF                                eSn   Sn    03 26 37.5  -15
      comp=N,32nm,0.8s
SSF   Saint Saulge       9.52 303  eP    Pn    03 25 04.5 -1.8
SSF                                eSn   Sn    03 26 37.8  -16
      comp=N,33nm,0.7s
MTLF  Montolieu          9.57 280  eP    Pn    03 25 06.6 -0.4
MTLF                               eSn   Sn    03 26 40.8  -14
      comp=N,1.2nm,0.3s
TLBR  Topalu             9.58  73  ⇓P    Pn    03 25 12.3 +5.2
BGF   Bois d'Agland      9.74 299  eP    Pn    03 25 07.1 -2.2
BGF                                eSn   Sn    03 26 43.4  -15
      comp=N,37nm,0.6s
CAF   Calviac            9.84 289  eP    Pn    03 25 09.7 -1.0
TCF   Toulx Ste Croi    10.07 297  eP    Pn    03 25 12.3 -1.5
TCF                                eSn   Sn    03 26 51.3  -16
      comp=N,22nm,0.8s
HYF   Humbligny         10.14 303  eP    Pn    03 25 14.9 +0.1
HYF                                eSn   Sn    03 26 52.6  -16
RJF   Les Rejaudoux     10.29 291  eP    Pn    03 25 15.3 -1.5
MILM  Milestii Mici     10.69  60  ⇓P    Pn    03 25 24.1 +1.8
MFF   Saint Martin d    11.72 296  eP    Pn    03 25 34.6 -1.8
SJPF  Ste Jean          12.09 279  eP    Pn    03 25 39.7 -1.8
MDUB  Mudurnu           12.17  94  Pn    Pn    03 25 44.1 +1.4
LDF   La Druitiere      12.38 305  eP    Pn    03 25 44.1 -1.3
AKASG Malin Array Be    12.70  45  Pn    Pn    03 25 50.0 +0.2
      comp=N,0.3nm,0.3s,baz=240,slow=13,SNR=2.5
GRR   Gorron            12.75 303  eP    Pn    03 25 48.4 -2.0
BR131 Keskin Array S    14.17  95  Pn    Pn    03 26 11.8 +1.8
BRTR  Keskin Array B    14.17  95  Pn    Pn    03 26 09.8 -0.3
      comp=N,0.0nm,0.3s,baz=289,slow=13,SNR=1.8
BRTR                               LR    LR    03 31 19.1
      comp=N,235nm,19.3s,baz=296,slow=36
BRTR  Keskin Array B    14.17  95  Pn    Pn    03 26 11.1 +1.0
ESDC  Sonseca Array     14.71 266  Pn    Pn    03 26 19.8 +2.4
      comp=N,0.0nm,0.3s,baz=73,slow=11,SNR=1.5
ESDC                               LR    LR    03 31 58.2
      comp=N,283nm,18.6s,baz=355,slow=37
BNN   Bunyan            16.07  96  Pn    Pn    03 26 36.2 +0.8
BNN                                IAmb  IAmb  03 26 44.2
      comp=Z,38nm,1.3s
HFS   Hagfors           17.76 358  P     Pn    03 26 55.3 -1.0
      comp=Z,0.1nm,0.3s,baz=162,slow=10.0,SNR=1.6
MDT   Midelt            18.35 245  P     P     03 27 04.7 +0.7
      comp=Z,0.0nm,0.3s,baz=69,slow=3.4,SNR=4.0
NOA   NORSAR Array B    18.80 354  P     P     03 27 07.0 -1.6
      comp=Z,0.0nm,0.3s,baz=171,slow=11,SNR=4.6
OBN   Obninsk           18.87  40  LR    LR    03 36 08.8
      comp=Z,128nm,18.6s,baz=340,slow=43
GHAJ  Ghor Haditha      19.67 118  P     Pn    03 27 20.0 +0.3
FINES FINESS Array B    20.14  15  P     P     03 27 22.3 -1.0
      comp=Z,0.3nm,0.3s,baz=189,slow=9.4,SNR=8.1
FIA1  FINESS Array S    20.14  15  P     P     03 27 20.3 -3.0
FIA1                               IAmb  IAmb  03 27 22.9
      comp=Z,43nm,1.2s
KBZ   Khabaz            20.25  77  P     P     03 27 25.1 +0.7
      comp=Z,3.3nm,0.9s,baz=248,slow=3.9,SNR=3.5
GURO  Guroymak-BITLI    20.74  92  P     P     03 27 31.0 +0.9
ONI   Oni               20.80  80  P     P     03 27 31.4 +0.8
KARS  Kars              20.92  85  P     P     03 27 32.3 +0.3
GNI   Garni             22.27  86  P     P     03 27 47.0 +0.5
      comp=Z,5.5nm,0.7s,baz=171,slow=6.9,SNR=5.9
GNI   Garni             22.27  86  P     P     03 27 48.8 +2.2
GNI                                IAmb  IAmb  03 27 50.8
      comp=Z,27nm,1.3s
BELG  Belogornoye       23.92  54  P     P     03 28 02.5 -0.6
      comp=Z,14nm,0.8s,baz=44,slow=8.1,SNR=4.7
ARU   Arti              30.92  48  P     P     03 29 04.5 -1.4
      comp=Z,2.7nm,0.8s,baz=224,slow=4.5,SNR=6.7
ARU   Arti              30.92  48  IAmb  IAmb  03 29 08.1
      comp=Z,9.7nm,0.9s
TORD  Torodi Ar. Bea    31.43 206  P     P     03 29 12.4 +1.6
      comp=Z,0.3nm,0.5s,baz=8.6,slow=8.0,SNR=3.6
TORD  Torodi Ar. Bea    31.43 206  IAmb  IAmb  03 29 12.8
      comp=Z,2.2nm,1.3s
GYA0B ALIBECK ARRAY     32.84  83  P     P     03 29 23.2 +0.2
GYA0B                              IAmb  IAmb  03 29 38.3
      comp=Z,5.1nm,0.7s
BRVK  Borovoye          37.66  54  P     P     03 30 04.5 +0.2
BRVK                               IAmb  IAmb  03 30 07.6
      comp=Z,4.8nm,0.8s
KKAR  Karatay Array     39.98  70  P     P     03 30 24.5 +0.6
CHGR  Chuyangaron       40.61  77  P     P     03 30 29.1 -0.1
ZAA0  Zalesovo Array    46.01  50  P     P     03 31 12.4 -0.1
ZAA0                               IAmb  IAmb  03 31 15.5
      comp=Z,3.5nm,0.8s
ZALV  Zalesovo Beam     46.01  50  P     P     03 31 12.3 -0.2
      comp=Z,3.0nm,0.8s,baz=287,slow=8.3,SNR=9.1
MK31  Makanchi Array    46.66  60  P     P     03 31 17.3 -0.5
MKAR  Makanchi Array    46.66  60  P     P     03 31 17.6 -0.1
      comp=Z,1.2nm,0.6s,baz=286,slow=7.1,SNR=7.4
KIBK  Kibwezi           49.12 149  P     P     03 31 39.5 +2.4
KIBK                               IAmb  IAmb  03 31 42.3
      comp=Z,3.3nm,0.8s
FRB   Frobisher Bay     50.36 325  P     P     03 31 45.7 -0.3
      comp=Z,3.7nm,0.8s,baz=65,slow=10,SNR=6.2
SCHQ  Schefferville     52.58 314  P     P     03 32 02.2 -0.6
      comp=Z,4.2nm,0.8s,baz=58,slow=9.8,SNR=2.4
SONM  Songino Array     60.91  50  P     P     03 33 02.1  0.0
      comp=Z,2.4nm,1.0s,baz=296,slow=8.2,SNR=8.6
SONM  Songino Array     60.91  50  IAmb  IAmb  03 33 05.8
      comp=Z,6.4nm,1.2s
A36M  Sachs Harbour     62.54 347  P     P     03 33 12.8 +0.2
SHL   Shillong          63.74  79  P     P     03 33 19.9 -1.7
INK   Inuvik            67.13 348  P     P     03 33 42.0 -0.6
      comp=Z,1.9nm,0.9s,baz=30,slow=4.1,SNR=7.4
INK   Inuvik            67.13 348  IAmb  IAmb  03 33 46.3
      comp=Z,6.9nm,1.4s
YKA   Yellowknife Ar    67.96 337  P     P     03 33 48.2 +0.3
      comp=Z,1.7nm,0.7s,baz=36,slow=5.3,SNR=7.9
ULM   Lac du Bonnet     69.85 320  P     P     03 34 00.1 +0.2
      comp=Z,7.5nm,0.7s,baz=39,slow=6.1,SNR=9.0
BOSA  Boshof            71.29 171  P     P     03 34 09.0 +0.1
      comp=Z,4.9nm,1.2s,baz=12,slow=6.4,SNR=4.0
BOSA  Boshof            71.29 171  IAmb  IAmb  03 34 26.6
      comp=Z,4.5nm,1.1s
ILAR  Eielson Array     72.22 352  P     P     03 34 14.2 +0.1
      comp=Z,1.0nm,0.7s,baz=360,slow=6.7,SNR=13
HDA   Harding Lake      72.58 352  IAmb  IAmb  03 34 17.4
      comp=Z,4.2nm,0.8s
KLR   Kul'dur           73.11  38  P     P     03 34 18.4 -1.1
      comp=Z,1.7nm,0.7s,baz=345,slow=2.8,SNR=4.2
KSRS  Korea Array       79.67  48  P     P     03 34 56.4 -0.6
      comp=Z,1.2nm,0.7s,baz=322,slow=4.3,SNR=4.4
PDAR  Pinedale Array    81.72 322  P     P     03 35 08.3 +0.1
      comp=Z,0.4nm,0.6s,baz=64,slow=6.8,SNR=4.8
TXAR  Lajitas Array     89.11 310  P     P     03 35 46.5 +1.3
      comp=Z,0.8nm,0.8s,baz=53,slow=3.4,SNR=7.4
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*ROM **06** 03:29:46.8±0.2, 42°.41N±0°.01×15°.19E±0°.02, h10km, ML2.9/13, Error ellipse: s-maj=1.8km s-min=1.1km az=42.0*

ISC 06 03:29:46.6±1.0**, 42°.41N**±0°.03×**15°.17E**±0°.03**, h10km, n41, σ0s.72**/41**, Adriatic Sea**

```
Code  Station Name       Δ°   AZ°     Phase ID          Time      Res
                                    Op     ISC        h  m  s    ISC
FRES  Fresagrandinar     0.57 221  P     Pg    03 29 57.9 +0.3
FRES                               AML   AML
      comp=E,247µm,1.4s
FRES                               AML   AML
      comp=N,168µm,0.4s
FRES                               AML   AML
      comp=E,364µm,0.8s
FRES                               AML   AML
      comp=N,219µm,0.5s
CAFR  Castel Frentan     0.64 254  P     Pg    03 29 59.3 +0.4
CIGN  Sant'Elia a Pi     0.78 195  P     Pb    03 30 02.3 +0.2
CIGN                               AML   AML
      comp=E,294µm,0.5s
CIGN                               AML   AML
      comp=N,294µm,0.6s
CIGN                               AML   AML
      comp=N,370µm,0.8s
CIGN                               AML   AML
      comp=E,339µm,0.6s
SGRT  San Giovanni R     0.78 147  P     Pg    03 30 01.7 +0.2
SGRT                               AML   AML
      comp=E,1184µm,0.4s
SGRT                               AML   AML
      comp=N,829µm,0.8s
SGRT                               AML   AML
      comp=E,2420µm,0.5s
SGRT                               AML   AML
      comp=N,1515µm,1.4s
TRIV  Trivento           0.79 216  P     Pb    03 30 02.6 +0.2
LPEL  Lama dei Pelig     0.82 244  P     Pg    03 30 01.9 -0.4
MSAG  Monte S. Angel     0.88 141  P     Pg    03 30 03.7 +0.1
MSAG                               AML   AML
      comp=E,2705µm,0.4s
MSAG                               AML   AML
      comp=E,3045µm,0.4s
MSAG                               AML   AML
      comp=N,6895µm,0.7s
MSAG                               AML   AML
      comp=N,6805µm,0.7s
GATE  Gambatesa          0.91 192  P     Pb    03 30 04.5 +0.1
BSSO  Busso              0.96 207  P     Pg    03 30 05.1 +0.1
TRTR  Tortoreto Alta     1.01 294  P     Pn    03 30 08.0 +1.2
TRTR                               AML   AML
      comp=E,1925µm,1.0s
TRTR                               AML   AML
      comp=N,1595µm,0.8s
MIDA  Miranda            1.02 222  P     Pg    03 30 05.5 -0.7
MIDA                               AML   AML
      comp=E,378µm,0.2s
MIDA                               AML   AML
      comp=N,297µm,1.6s
RNI2  Rionero Sannit     1.03 228  P     Pg    03 30 05.7 -0.8
T0110 Collepietro        1.05 261  P     Pn    03 30 07.6 +0.2
T0110                              AML   AML
      comp=N,718µm,0.9s
T0110                              AML   AML
      comp=E,574µm,1.2s
TERO  Teramo             1.18 281  P     Pb    03 30 08.7 -0.4
TERO                               AML   AML
      comp=E,208µm,0.6s
TERO                               AML   AML
      comp=N,136µm,0.6s
POFI  Posta Fibreno      1.28 238  P     Pn    03 30 09.2 -1.5
ZIRJ  Zirje              1.30  15  i Pn  Pn    03 30 09.8 -1.0
LSTV  Lastovo            1.32  73  ePg   Pn    03 30 11.5 +0.5
RM33  Pellescritta (     1.45 275  P     Pb    03 30 13.5 -0.2
VULT  Monte Vulture      1.48 167  P     Pb    03 30 14.4 +0.1
MORI  Morici             1.51  15  ePn   Pn    03 30 13.9 +0.2
LNSS  Leonessa           1.59 278  P     Pb    03 30 16.2 +0.1
DUGI  Dugi Otok          1.59 357  ePn   Pn    03 30 15.4 +0.6
CSP1  Cessapalombo       1.60 296  P     Pn    03 30 15.6 +0.5
MAKA  Makarska           1.62  56  ePn   Pn    03 30 14.7 -0.5
FDMO  Fiordimonte        1.66 293  P     Pb    03 30 16.6 -0.7
FDMO                               AML   AML
      comp=N,188µm,0.7s
FDMO                               AML   AML
      comp=E,207µm,1.6s
RICI  Ricice             1.81  52  ePn   Pn    03 30 17.6 -0.1
AMUR  Altamura           1.84 144  P     Pn    03 30 17.6 -0.7
AMUR                               AML   AML
      comp=N,229µm,0.8s
AMUR                               AML   AML
      comp=E,248µm,0.4s
SNTG  Esanatoglia        1.85 298  P     Pn    03 30 19.0 +0.7
STON  Ston               1.92  75  P     Pn    03 30 19.8 +0.5
STON                               AML   AML
      comp=N,146µm,0.9s
STON                               AML   AML
      comp=E,75µm,0.6s
ARVD  Arcevia            1.97 305  P     Pn    03 30 20.4 +0.4
SSFR  Montelago di S     2.04 301  P     Pn    03 30 21.6 +0.7
SSFR                               AML   AML
      comp=E,150µm,0.3s
SSFR                               AML   AML
      comp=N,143µm,0.2s
NOCI  Noci               2.15 138  P     Pn    03 30 22.8 +0.3
UDBI  Udbina             2.17  11  ePn   Pb    03 30 24.8 -1.1
FSSB  Fossombrone        2.18 307  P     Pn    03 30 23.3 +0.5
DBRK  Dubrovnik          2.21  82  ePn   Pn    03 30 24.2 +0.8
PE3   Peglio             2.35 304  P     Pn    03 30 26.1 +0.8
PE3                                AML   AML
      comp=N,238µm,0.5s
PE3                                AML   AML
      comp=E,256µm,0.5s
PLIT  Plitvice           2.50   7  ePn   Pn    03 30 28.7 +1.4
SMRN  Sveta Marina       2.73 345  ePn   Pn    03 30 29.6 -0.9
RIY   Rijeka             2.96 351  ePn   Pn    03 30 34.8 +1.2
OZLJ  Ozalj              3.22   4  ePn   Pn    03 30 38.7 +1.6
MOSL  Moslavina          3.41  19  ePn   Pn    03 30 39.6 -0.2
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*ROM **06** 03:32:51.7±0.1, 42°.393N±0°.007×15°.252E±0°.009, h14km±1km, ML3.7/102, Error ellipse: s-maj=0.8km s-min=0.6km az=57.0*

*IDC **06** 03:32:52.0±1.2, 42°.61N×15°.24E, h0km, mb3.6/6, mb1 3.8/11, mb1mx3.6/54, mbtmp3.6/11, ML3.3/5, MS3.3/1, Ms1 3.3/1, ms1mx2.7/54, Error ellipse: s-maj=23.9km s-min=15.0km az=61.0*

*PDG **06** 03:32:52.6±0.5, 42°.37N×15°.18E, h22km±1km, ML3.6/13, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*

*LDG **06** 03:32:53.3±0.1, 42°.35N×15°.13E, h10km, Ml3.8/26, Error ellipse: s-maj=3.5km s-min=2.1km az=44.0*

*PRU **06** 03:32:53.3±0.0, 42°.48N×15°.09E, h0km*

ISC 06 03:32:51.9±0.7**, 42°.41N**±0°.02×**15°.11E**±0°.02**, h14km**±4km**, n294, σ2s.04**/342**, mb3.7**/6**, 18C-17D, Adriatic Sea**

```
Code  Station Name       Δ°   AZ°     Phase ID          Time      Res
                                    Op     ISC        h  m  s    ISC
TREM  Isole Tremiti      0.42 134  P     Pg    03 32 58.5 -1.8
TREM                               S     Sg    03 33 03.6 -2.4
FRES  Fresagrandinar     0.55 217  P     Pg    03 33 01.7 -1.0
FRES                               AML   AML
      comp=N,1510µm,0.8s
FRES                               AML   AML
      comp=N,1625µm,1.3s
FRES                               AML   AML
      comp=E,3425µm,1.5s
CAFR  Castel Frentan     0.59 252  P     Pg    03 33 04.2 +0.6
CAFR                               AML   AML
      comp=N,5990µm,0.7s
CAFR                               AML   AML
      comp=E,6460µm,0.5s
TRIV  Trivento           0.77 213  P     Pg    03 33 07.3 +0.5
TRIV                               AML   AML
      comp=N,3165µm,1.2s
TRIV                               AML   AML
      comp=E,3660µm,0.6s
TRIV                               AML   AML
      comp=N,2995µm,1.2s
TRIV                               AML   AML
      comp=E,3645µm,0.6s
CIGN  Sant'Elia a Pi     0.77 191  P     Pg    03 33 06.5 -0.5
CIGN                               S     Sb    03 33 18.4 +0.9
CIGN                               AML   AML
      comp=E,2605µm,0.7s
CIGN                               AML   AML
      comp=N,3450µm,0.8s
LPEL  Lama dei Pelig     0.78 242  P     Pg    03 33 06.7 -0.4
LPEL                               S     Sb    03 33 20.0 +2.4
LPEL                               AML   AML
      comp=N,7725µm,0.8s
LPEL                               AML   AML
      comp=N,7730µm,0.8s
LPEL                               AML   AML
      comp=E,12550µm,0.3s
SGRT  San Giovanni R     0.81 144  P     Pg    03 33 06.0 -1.7
SGRT                               S     Sg    03 33 17.1 -1.3
SGRT                               AML   AML
      comp=N,6155µm,0.5s
SGRT                               AML   AML
      comp=E,7780µm,0.5s
GATE  Gambatesa          0.91 189  P     Pg    03 33 09.7 +0.1
GATE                               AML   AML
      comp=E,3795µm,0.4s
GATE                               AML   AML
      comp=N,3770µm,0.6s
GATE                               AML   AML
      comp=N,3735µm,0.6s
GATE                               AML   AML
      comp=N,3765µm,0.6s
GATE                               AML   AML
      comp=E,1860µm,0.8s
GATE                               AML   AML
      comp=N,3730µm,0.6s
MSAG  Monte S. Angel     0.92 139  P     Pg    03 33 08.2 -1.6
MSAG                               AML   AML
      comp=E,19000µm,0.8s
MSAG                               AML   AML
      comp=N,24550µm,0.9s
MSAG                               AML   AML
      comp=N,23950µm,0.9s
MSAG                               AML   AML
      comp=E,19350µm,0.8s
MSAG                               AML   AML
      comp=E,18950µm,0.8s
MSAG                               AML   AML
      comp=N,24000µm,0.9s
VCEL  Villa Celiera      0.94 269  P     Pg    03 33 10.6 +0.5
VCEL                               S     Sn    03 33 26.4 +2.4
BSSO  Busso              0.95 204  P     Pg    03 33 09.8 -0.4
BSSO                               AML   AML
      comp=E,3010µm,0.6s
BSSO                               AML   AML
      comp=N,1345µm,0.6s
BSSO                               AML   AML
      comp=E,1235µm,0.6s
BSSO                               AML   AML
      comp=N,3240µm,0.6s
TRTR  Tortoreto Alta     0.96 295  P     Pb    03 33 12.5 +2.1
TRTR                               AML   AML
      comp=E,22700µm,1.3s
TRTR                               AML   AML
      comp=N,13050µm,0.8s
MIDA  Miranda            1.00 220  P     Pg    03 33 10.0 -1.2
MIDA                               S     Sb    03 33 25.9 +1.9
MIDA                               AML   AML
      comp=E,3295µm,0.4s
MIDA                               AML   AML
      comp=N,2100µm,0.5s
MIDA                               AML   AML
      comp=E,3310µm,0.4s
MIDA                               AML   AML
      comp=N,2085µm,0.7s
T0110 Collepietro        1.00 260  P     Pg    03 33 12.0 +0.7
T0110                              S     Sn    03 33 27.9 +2.4
T0110                              AML   AML
      comp=E,8605µm,0.4s
T0110                              AML   AML
      comp=N,6360µm,0.7s
RNI2  Rionero Sannit     1.00 225  P     Pg    03 33 10.3 -1.1
RNI2                               S     Sn    03 33 27.0 +1.4
RNI2                               AML   AML
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	comp=N,2400µm,1.6s				
RNI2			AML	AML	
	comp=N,2395µm,1.6s				
RNI2			AML	AML	
	comp=E,3435µm,1.0s				
RNI2			AML	AML	
	comp=N,2450µm,1.6s				
RNI2			AML	AML	
	comp=E,3405µm,1.0s				
MOCO	**Biccari - m.te**	**1.04 178**	P	**Pg**	**03 33 10.5 -1.6**
MOCO			AML	AML	
	comp=N,1362µm,0.7s				
MOCO			AML	AML	
	comp=E,2230µm,0.6s				
MOCO			AML	AML	
	comp=N,1390µm,0.7s				
MOCO			AML	AML	
	comp=N,1364µm,0.7s				
MOCO			AML	AML	
	comp=E,2225µm,0.6s				
MOCO			AML	AML	
	comp=E,2195µm,0.6s				
SACR	**S. Croce Del S**	**1.06 197**	P	**Pg**	**03 33 11.0 -1.3**
SACR			S	**Sb**	**03 33 26.9 +1.1**
SACR			AML	AML	
	comp=N,2345µm,1.0s				
SACR			AML	AML	
	comp=E,1440µm,0.6s				
TERO	**Teramo**	**1.13 281**	P	**Pb**	**03 33 13.6 +0.3**
TERO			S	**Sn**	**03 33 32.1 +3.4**
PTRJ	**Pietraroja**	**1.13 203**	P	**Pb**	**03 33 13.2 -0.1**
FAGN	**Fagnano**	**1.14 263**	P	**Pb**	**03 33 14.9 +1.5**
FAGN			S	**Sn**	**03 33 31.6 +2.8**
FAGN			AML	AML	
	comp=E,13700µm,0.5s				
FAGN			AML	AML	
	comp=N,13400µm,0.5s				
GIGS	**Gran Sasso**	**1.14 272**	S	**Sn**	**03 33 33.0 +4.1**
CERA	**Filignano**	**1.15 225**	P	**Pb**	**03 33 13.1 -0.5**
CERA			AML	AML	
	comp=N,2585µm,0.7s				
CERA			AML	AML	
	comp=E,2720µm,0.9s				
CERA			AML	AML	
	comp=N,2690µm,0.7s				
CERA			AML	AML	
	comp=E,2775µm,0.9s				
SGG	**Gregorio Mates**	**1.16 208**	P	**Pb**	**03 33 13.4 -0.4**
SGG			AML	AML	
	comp=E,8.0nm,0.6s				
SGG			AML	AML	
	comp=N,6.0nm,0.5s				
SGG			AML	AML	
	comp=E,2595µm,0.6s				
SGG			AML	AML	
	comp=N,2000µm,0.5s				
OFFI	**Offida**	**1.17 297**	⇓P	**Pn**	**03 33 15.4 +1.5**
OFFI			AML	AML	
	comp=N,15900µm,0.6s				
OFFI			AML	AML	
	comp=E,14750µm,0.7s				
VAGA	**Valle Agricola**	**1.19 213**	P	**Pb**	**03 33 13.3 -1.0**
VAGA			AML	AML	
	comp=E,2000µm,1.2s				
VAGA			AML	AML	
	comp=N,2860µm,0.5s				
VAGA			AML	AML	
	comp=E,2065µm,1.1s				
VAGA			AML	AML	
	comp=N,2865µm,0.5s				
VAGA			AML	AML	
	comp=E,1995µm,1.2s				
VAGA			AML	AML	
	comp=N,2950µm,0.5s				
PSB1	**Pescosannita**	**1.21 191**	P	**Pb**	**03 33 14.1 -0.5**
BIOG	**Biogem**	**1.21 179**	P	**Pn**	**03 33 15.4 +1.0**
VVLD	**Villa Vallelon**	**1.23 244**	P	**Pn**	**03 33 13.5 -1.2**
VVLD			AML	AML	
	comp=E,1445µm,0.6s				
VVLD			AML	AML	
	comp=N,1254µm,0.7s				
POFI	**Posta Fibreno**	**1.25 237**	P	**Pn**	**03 33 14.4 -0.6**
POFI			AML	AML	
	comp=E,1158µm,1.2s				
POFI			AML	AML	
	comp=N,1535µm,0.8s				
POFI			AML	AML	
	comp=E,1157µm,1.2s				
POFI			AML	AML	
	comp=N,1540µm,0.8s				
CADA	**Capodarco di F**	**1.26 309**	P	**Pn**	**03 33 16.9 +1.9**
CAMP	**Campotosto**	**1.26 276**	P	**Pn**	**03 33 15.3 +0.1**
CAMP			AML	AML	
	comp=E,3505µm,0.8s				
CAMP			AML	AML	
	comp=N,2830µm,1.1s				
AQU	**L'Aquila**	**1.26 268**	*e*Pn	**Pn**	**03 33 15.9 +0.7**
AQU	**L'Aquila**	**1.26 268**	P	**Pn**	**03 33 16.1 +0.9**
AQU			AML	AML	
	comp=E,4535µm,1.4s				
AQU			AML	AML	
	comp=N,3175µm,1.2s				
AQU			AML	AML	
	comp=N,3290µm,1.0s				
AQU			AML	AML	
	comp=E,4365µm,1.4s				
VITU	**Vitulano (BN)**	**1.28 196**	P	**Pn**	**03 33 14.7 -0.7**
VITU			AML	AML	
	comp=N,2860µm,0.4s				
VITU			AML	AML	
	comp=E,2785µm,0.5s				
MRB1	**Monte Rocchett**	**1.29 184**	P	**Pn**	**03 33 15.6 0.0**
MRB1			AML	AML	
	comp=N,2505µm,1.5s				
MRB1			AML	AML	
	comp=N,2675µm,1.5s				
MRB1			AML	AML	
	comp=N,2505µm,1.5s				
MRB1			AML	AML	
	comp=E,2760µm,0.9s				
MRB1			AML	AML	
	comp=E,2750µm,0.9s				
SGTA	**Sant Agata di**	**1.29 171**	P	**Pn**	**03 33 15.4 -0.2**
ZIRJ	**Zirje**	**1.30 17**	*e*Pn	**Pn**	**03 33 15.4 -0.2**
PTQR	**Pietraquaria**	**1.33 253**	P	**Pn**	**03 33 17.0 +0.9**
PTQR			AML	AML	
	comp=N,1615µm,0.6s				
PTQR			AML	AML	
	comp=E,1115µm,0.7s				
SMA1	**SAN MARTINO**	**1.33 280**	P	**Pn**	**03 33 16.9 +0.8**
SMA1			AML	AML	
	comp=N,3790µm,1.0s				
SMA1			AML	AML	
	comp=E,4435µm,0.7s				
CAPA	**Cerignola FG**	**1.36 157**	P	**Pn**	**03 33 14.4 -2.1**
CAPA			AML	AML	
	comp=E,4955µm,1.4s				
CAPA			AML	AML	
	comp=N,3605µm,1.3s				
LSTV	**Lastovo**	**1.37 74**	*e*Pn	**Pb**	**03 33 17.5 +0.3**
CIMA	**Civitanova Mar**	**1.38 311**	P	**Pb**	**03 33 19.1 +1.6**
CAFE	**Carife**	**1.39 176**	P	**Pn**	**03 33 16.6 -0.3**
CAFE			AML	AML	
	comp=E,2170µm,0.9s				
CAFE			AML	AML	
	comp=N,1160µm,1.6s				
CAFE			AML	AML	
	comp=N,1167µm,1.6s				
CAFE			AML	AML	
	comp=E,2165µm,0.9s				
CAFE			AML	AML	
	comp=N,1160µm,1.6s				
CAFE			AML	AML	
	comp=E,2210µm,0.9s				
PIGN	**Pignataro Magg**	**1.40 210**	P	**Pn**	**03 33 17.3 +0.3**
PIGN			AML	AML	
	comp=E,724µm,1.6s				
PIGN			AML	AML	
	comp=E,720µm,1.6s				
PIGN			AML	AML	
	comp=E,725µm,1.6s				
PIGN			AML	AML	
	comp=E,720µm,1.6s				
PIGN			AML	AML	
	comp=N,782µm,1.3s				
PIGN			AML	AML	
	comp=N,875µm,1.2s				
RM33	**Pellescritta (**	**1.40 275**	P	**Pn**	**03 33 17.9 +0.8**
RM33			AML	AML	
	comp=N,3275µm,0.9s				
RM33			AML	AML	
	comp=E,3120µm,0.8s				
RM33			AML	AML	
	comp=E,2940µm,0.8s				
RM33			AML	AML	
	comp=N,3405µm,0.9s				
MNTP	**Montappone**	**1.41 302**	P	**Pn**	**03 33 19.3 +2.2**
PAOL	**Paolisi**	**1.44 196**	P	**Pn**	**03 33 18.0 +0.4**
PAOL			AML	AML	
	comp=E,882µm,0.6s				
PAOL			AML	AML	
	comp=N,1034µm,0.6s				
PAOL			AML	AML	
	comp=E,948µm,0.9s				
PAOL			AML	AML	
	comp=N,831µm,0.5s				
PAOL			AML	AML	
	comp=N,832µm,0.5s				
PAOL			AML	AML	
	comp=N,1034µm,0.6s				
PAOL			AML	AML	
	comp=E,949µm,0.9s				
PAOL			AML	AML	
	comp=E,884µm,0.6s				
PP3	**Marolino**	**1.46 312**	P	**Pn**	**03 33 19.8 +2.0**
PP3			AML	AML	
	comp=E,7740µm,0.9s				
PP3			AML	AML	
	comp=N,4715µm,1.4s				
PP3			AML	AML	
	comp=E,7905µm,0.9s				
PP3			AML	AML	
	comp=N,4780µm,1.5s				
PP3			AML	AML	
	comp=E,7910µm,0.9s				
PP3			AML	AML	
	comp=N,4720µm,1.4s				
PP3			AML	AML	
	comp=E,7740µm,0.9s				
PP3			AML	AML	
	comp=N,4785µm,1.5s				
LIK	**San Giovanni I**	**1.47 232**	P	**Pn**	**03 33 18.7 +0.8**
LIK	**San Giovanni I**	**1.47 232**	AML	AML	
	comp=E,1962µm,0.7s				
LIK			AML	AML	
	comp=N,1880µm,0.7s				
FIAM	**Fiamignano**	**1.48 265**	P	**Pn**	**03 33 20.2 +2.0**
FIAM			AML	AML	
	comp=N,1870µm,0.7s				
FIAM			AML	AML	
	comp=E,2350µm,0.7s				
SNAL	**S. Angelo Dei**	**1.49 177**	P	**Pn**	**03 33 17.7 -0.6**
SNAL			AML	AML	
	comp=E,1570µm,1.1s				
SNAL			AML	AML	
	comp=N,2000µm,1.0s				
SNAL			AML	AML	
	comp=N,1910µm,1.0s				
SNAL			AML	AML	
	comp=E,1580µm,1.1s				
VULT	**Monte Vulture**	**1.51 165**	P	**Pn**	**03 33 18.2 -0.4**
VULT			AML	AML	
	comp=E,2015µm,0.8s				
VULT			AML	AML	
	comp=E,2075µm,0.8s				
VULT			AML	AML	
	comp=N,3720µm,0.5s				
VULT			AML	AML	
	comp=E,2020µm,0.8s				
VULT			AML	AML	
	comp=N,3560µm,0.5s				
LIO3	**Lioni**	**1.52 178**	P	**Pn**	**03 33 18.2 -0.5**
LIO3			S	**Sn**	**03 33 39.3 +1.1**
MORI	**Morici**	**1.52 17**	*e*Pn	**Pn**	**03 33 19.1 +0.5**
NRCA	**Norcia**	**1.53 287**	P	**Pn**	**03 33 20.8 +2.0**
NRCA			AML	AML	
	comp=E,2135µm,1.4s				
NRCA			AML	AML	
	comp=N,2425µm,0.7s				
NRCA			AML	AML	
	comp=E,2145µm,1.4s				
NRCA			AML	AML	
	comp=N,2330µm,0.6s				
LNSS	**Leonessa**	**1.54 278**	⇓P	**Pn**	**03 33 20.8 +1.8**
LNSS			AML	AML	
	comp=N,2985µm,0.9s				
LNSS			AML	AML	
	comp=E,4980µm,0.6s				
CSP1	**Cessapalombo**	**1.56 296**	P	**Pn**	**03 33 20.9 +1.6**
CSP1			AML	AML	
	comp=E,1950µm,0.8s				
CSP1			AML	AML	
	comp=N,2240µm,0.7s				
MODR	**Mondragone**	**1.56 216**	P	**Pn**	**03 33 20.2 +0.9**
MODR			AML	AML	
	comp=E,914µm,1.6s				
MODR			AML	AML	
	comp=N,1087µm,0.7s				
RDM3	**Ruvo Del Monte**	**1.57 168**	P	**Pn**	**03 33 19.7 +0.3**
DUGI	**Dugi Otok**	**1.58 359**	*e*Pn	**Pn**	**03 33 20.5 +1.0**
MRVN	**Minervino Murg**	**1.58 149**	P	**Pn**	**03 33 18.4 -1.1**
AOI	**Ancona**	**1.58 316**	P	**Pn**	**03 33 20.7 +1.1**
PALZ	**Palazzo San Ge**	**1.60 156**	P	**Pn**	**03 33 19.2 -0.6**
FDMO	**Fiordimonte**	**1.61 293**	P	**Pn**	**03 33 21.6 +1.6**
FDMO			AML	AML	
	comp=E,2255µm,0.6s				
FDMO			AML	AML	
	comp=N,1795µm,0.6s				
GIUL	**Giuliano Di Ro**	**1.62 239**	P	**Pn**	**03 33 20.4 +0.3**
GIUL			AML	AML	
	comp=N,1215µm,1.0s				
GIUL			AML	AML	
	comp=E,581µm,0.7s				
MCRV	**Calabrutti - M**	**1.63 178**	P	**Pn**	**03 33 19.9 -0.3**
MCRV			AML	AML	
	comp=E,894µm,0.4s				
MCRV			AML	AML	
	comp=N,1042µm,0.3s				
CERT	**Cerreto**	**1.65 254**	P	**Pn**	**03 33 22.1 +1.6**
CERT			AML	AML	
	comp=N,991µm,0.7s				
CERT			AML	AML	
	comp=E,1194µm,1.2s				
MAKA	**Makarska**	**1.66 58**	*e*Pn	**Pn**	**03 33 21.0 +0.4**
MRLC	**Muro Lucano**	**1.68 170**	P	**Pn**	**03 33 20.4 -0.5**
MRLC			AML	AML	
	comp=E,880µm,0.8s				
MRLC			AML	AML	
	comp=N,918µm,1.4s				
MRLC			AML	AML	
	comp=E,908µm,0.8s				
MRLC			AML	AML	
	comp=N,876µm,1.4s				
CING	**Cingoli**	**1.70 305**	P	**Pn**	**03 33 22.4 +1.2**
CING			AML	AML	
	comp=E,2285µm,0.6s				
CING			AML	AML	
	comp=N,1660µm,0.6s				
CESI	**CESI - Serrava**	**1.73 291**	P	**Pn**	**03 33 23.7 +2.1**
CESI			AML	AML	
	comp=N,1095µm,1.6s				
CESI			AML	AML	
	comp=E,1195µm,0.6s				
EL6	**Elcito**	**1.73 303**	P	**Pn**	**03 33 23.2 +1.6**
ACER	**Acerenza**	**1.74 159**	P	**Pn**	**03 33 21.2 -0.6**
ACER			AML	AML	
	comp=N,2080µm,0.7s				
ACER			AML	AML	
	comp=E,1900µm,0.9s				
ACER			AML	AML	
	comp=N,2130µm,0.7s				
ACER			AML	AML	
	comp=E,1915µm,0.9s				
SNTG	**Esanatoglia**	**1.80 299**	P	**Pn**	**03 33 24.2 +1.6**
SNTG			AML	AML	
	comp=E,930µm,0.7s				
SNTG			AML	AML	
	comp=N,1640µm,0.9s				
RICI	**Ricice**	**1.84 53**	*e*Pn	**Pn**	**03 33 23.4 +0.3**
VIVA	**Pratoni del Vi**	**1.86 250**	AML	AML	
	comp=N,2020µm,0.7s				
VIVA			AML	AML	
	comp=E,1765µm,0.6s				
AMUR	**Altamura**	**1.88 143**	P	**Pn**	**03 33 22.7 -0.9**
AMUR			AML	AML	
	comp=E,1730µm,0.8s				
AMUR			AML	AML	
	comp=N,979µm,0.9s				
CESX	**Cesi**	**1.88 277**	P	**Pn**	**03 33 25.3 +1.7**
CESX			AML	AML	
	comp=E,1223µm,0.9s				
CESX			AML	AML	
	comp=N,978µm,0.8s				
ASSB	**Assisi San Ben**	**1.91 290**	P	**Pn**	**03 33 26.5 +2.5**
ASSB			AML	AML	
	comp=E,1130µm,1.1s				
ASSB			AML	AML	
	comp=N,1350µm,0.6s				
MOMA	**Monte Martano**	**1.91 283**	P	**Pn**	**03 33 27.1 +3.0**
MOMA			AML	AML	
	comp=N,1620µm,0.6s				
MOMA			AML	AML	
	comp=N,1795µm,0.7s				
MOMA			AML	AML	
	comp=E,1072µm,1.2s				
MOMA			AML	AML	
	comp=E,1077µm,0.6s				
ARVD	**Arcevia**	**1.92 305**	P	**Pn**	**03 33 25.7 +1.4**
ARVD			AML	AML	
	comp=E,1145µm,1.0s				
ARVD			AML	AML	
	comp=N,1435µm,0.7s				
CDRU	**Civita di Ruta**	**1.93 175**	P	**Pn**	**03 33 24.6 +0.2**
CDRU			AML	AML	
	comp=N,317µm,0.9s				
CDRU			AML	AML	
	comp=E,430µm,0.6s				
SRES	**S.Oreste - Sor**	**1.93 266**	P	**Pn**	**03 33 26.4 +2.1**
SRES			AML	AML	
	comp=N,646µm,0.8s				
SRES			AML	AML	
	comp=E,558µm,1.2s				
FOSV	**Fossato di Vic**	**1.94 298**	P	**Pn**	**03 33 26.2 +1.8**
FOSV			AML	AML	
	comp=E,1250µm,0.8s				
FOSV			AML	AML	
	comp=N,1865µm,0.7s				
LAV9	**Lanuvio**	**1.94 249**	P	**Pn**	**03 33 26.1 +1.7**
LAV9			AML	AML	
	comp=E,1495µm,0.9s				
LAV9			AML	AML	
	comp=N,1650µm,1.2s				
STON	**Ston**	**1.97 76**	*e*Pn	**Pn**	**03 33 25.1 +0.3**
STON	**Ston**	**1.97 76**	*e*Pn	**Pn**	**03 33 24.7 -0.1**
STON	**Ston**	**1.97 76**	⇑P	**Pn**	**03 33 25.6 +0.8**
STON			AML	AML	
	comp=N,915µm,0.8s				
STON			AML	AML	
	comp=E,526µm,1.0s				
ATCC	**AVT- Casa Cast**	**1.97 294**	P	**Pn**	**03 33 27.4 +2.5**
ATCC			AML	AML	
	comp=N,2445µm,1.0s				
ATCC			AML	AML	
	comp=E,3040µm,1.0s				
SSFR	**Montelago di S**	**1.99 302**	P	**Pn**	**03 33 27.0 +1.8**
SSFR			AML	AML	
	comp=E,956µm,0.9s				
SSFR			AML	AML	
	comp=E,910µm,0.9s				
SSFR			AML	AML	
	comp=N,1165µm,1.1s				
SSFR			AML	AML	
	comp=N,1080µm,1.1s				
FRON	**Frontone**	**2.07 303**	P	**Pn**	**03 33 27.8 +1.6**
FRON			AML	AML	
	comp=E,1415µm,0.7s				
FRON			AML	AML	
	comp=N,2330µm,0.8s				
MIGL	**Miglionico**	**2.07 151**	P	**Pn**	**03 33 25.6 -0.6**
MIGL			AML	AML	
	comp=E,3670µm,1.3s				
MIGL			AML	AML	
	comp=N,4405µm,1.0s				
ATFO	**Monte Foce - G**	**2.09 298**	P	**Pn**	**03 33 28.5 +1.9**
ATFO			AML	AML	
	comp=E,1540µm,0.7s				
ATFO			AML	AML	
	comp=N,1330µm,0.9s				
CMPR	**Campora**	**2.10 176**	P	**Pn**	**03 33 26.8 +0.1**
CMPR			AML	AML	
	comp=E,472µm,1.4s				
CMPR			AML	AML	
	comp=N,343µm,0.8s				
MPAG	**Monte Paganucc**	**2.11 306**	P	**Pn**	**03 33 28.3 +1.5**
MPAG			AML	AML	
	comp=N,1164µm,1.2s				
MPAG			AML	AML	
	comp=E,851µm,1.0s				
FSSB	**Fossombrone**	**2.13 308**	P	**Pn**	**03 33 28.6 +1.5**
FSSB			AML	AML	
	comp=E,1255µm,0.5s				
FSSB			AML	AML	
	comp=N,1505µm,0.8s				
MATE	**Matera**	**2.13 145**	⇑P	**Pn**	**03 33 26.6 -0.5**
UDBI	**Udbina**	**2.17 13**	*i* Pn	**Pn**	**03 33 30.1 +2.5**
NOCI	**Noci**	**2.19 137**	P	**Pn**	**03 33 27.0 -0.9**
NOCI			AML	AML	
	comp=E,769µm,0.6s				
NOCI			AML	AML	
	comp=N,1180µm,1.6s				
PIEI	**Pieia**	**2.19 302**	P	**Pn**	**03 33 29.6 +1.6**
PIEI			AML	AML	
	comp=E,702µm,1.1s				
PIEI			AML	AML	
	comp=N,652µm,1.1s				
MTSN	**Montesano sull**	**2.20 167**	P	**Pn**	**03 33 28.0 -0.1**
MTSN			AML	AML	
	comp=E,414µm,1.1s				
MTSN			AML	AML	
	comp=N,397µm,1.1s				
NARO	**Abbazia di Nar**	**2.21 304**	P	**Pn**	**03 33 29.7 +1.6**
NARO			AML	AML	
	comp=E,839µm,1.5s				
NARO			AML	AML	
	comp=N,686µm,1.0s				
LTRZ	**Laterza**	**2.22 144**	P	**Pn**	**03 33 27.4 -0.9**
LTRZ			AML	AML	
	comp=E,1076µm,0.6s				
LTRZ			AML	AML	
	comp=N,916µm,0.9s				
ATPI	**Pietralunga -**	**2.24 298**	P	**Pn**	**03 33 30.9 +2.3**
PESA	**Pesaro**	**2.25 313**	P	**Pn**	**03 33 30.2 +1.5**
PESA			AML	AML	
	comp=E,630µm,0.5s				
PESA			AML	AML	
	comp=N,730µm,0.7s				
DBRK	**Dubrovnik**	**2.26 82**	*e*Pn	**Pn**	**03 33 28.5 -0.4**
MGAB	**Montegabbione**	**2.26 284**	P	**Pn**	**03 33 31.4 +2.5**
MGAB			AML	AML	
	comp=E,1258µm,1.1s				
MGAB			AML	AML	
	comp=E,868µm,1.0s				
MGAB			AML	AML	
	comp=N,1194µm,0.6s				
CRAC	**Craco**	**2.28 154**	P	**Pn**	**03 33 28.7 -0.4**
CRAC			AML	AML	
	comp=N,2020µm,1.3s				
CRAC			AML	AML	
	comp=E,2110µm,1.0s				
APEC	**Apecchio**	**2.28 301**	P	**Pn**	**03 33 31.3 +2.2**
APEC			AML	AML	
	comp=N,1010µm,0.9s				
APEC			AML	AML	
	comp=E,1095µm,0.8s				
PE3	**Peglio**	**2.30 305**	P	**Pn**	**03 33 31.5 +2.1**
PE3			AML	AML	
	comp=E,1765µm,0.5s				
PE3			AML	AML	
	comp=N,2095µm,0.7s				
SIRI	**Monte Sirino -**	**2.30 165**	P	**Pn**	**03 33 30.1 +0.6**
SIRI			AML	AML	
	comp=E,454µm,1.5s				
SIRI			AML	AML	
	comp=N,426µm,0.9s				
BULG	**Bulgheria - Ca**	**2.34 175**	P	**Pn**	**03 33 30.1 +0.1**
BULG			AML	AML	
	comp=N,622µm,1.1s				
BULG			AML	AML	
	comp=E,353µm,1.6s				
BULG			AML	AML	

	comp=E,339µm,1.6s						
BULG				AML	AML		
	comp=N,621µm,0.8s						
TREB	Trebinje	2.42	82	ePn	Pn	03 33 31.0	0.0
PARC	Parchiule	2.44	301	P	Pn	03 33 33.7	+2.3
PARC				AML	AML		
	comp=N,880µm,0.7s						
PARC				AML	AML		
	comp=E,945µm,1.3s						
CPGN	Carpegna, Ital	2.47	305	P	Pn	03 33 34.1	+2.3
CPGN				AML	AML		
	comp=N,1183µm,0.9s						
CPGN				AML	AML		
	comp=E,1536µm,0.8s						
CPGN				AML	AML		
	comp=N,1175µm,0.7s						
CPGN				AML	AML		
	comp=E,1585µm,0.9s						
MGRS	Mrkonjic Grad	2.47	35	ePn	Pn	03 33 34.4	+2.7
CAFI	Castiglion Fio	2.48	293	P	Pn	03 33 34.2	+2.3
CAFI				AML	AML		
	comp=E,404µm,1.0s						
CAFI				AML	AML		
	comp=N,666µm,1.1s						
HCY	Herceg Novi	2.51	88	ePn	Pn	03 33 32.6	+0.3
HCY	Herceg Novi	2.51	88	⇓iPn	Pn	03 33 32.7	+0.4
HCY				iSn	Sn	03 34 03.7	+1.1
BRY	Bratogost	2.58	78	ePn	Pb	03 33 38.8	+0.8
CRE	Caprese Michel	2.61	299	P	Pn	03 33 35.8	+2.0
CRE				AML	AML		
	comp=N,392µm,1.0s						
CRE				AML	AML		
	comp=E,482µm,0.8s						
SALB	San Lorenzo Be	2.70	159	P	Pn	03 33 35.0	0.0
SALB				AML	AML		
	comp=E,238µm,1.0s						
SALB				AML	AML		
	comp=N,254µm,1.0s						
MESG	Mesagne	2.75	131	P	Pn	03 33 35.0	-0.6
BLY	Banja Luka	2.78	32	ePn	Pn	03 33 37.9	+1.9
BLY	Banja Luka	2.78	32	P	Pn	03 33 38.0	+1.9
ASQU	Asqua	2.79	301	P	Pn	03 33 38.7	+2.5
ASQU				AML	AML		
	comp=N,546µm,0.8s						
ASQU				AML	AML		
	comp=E,376µm,0.7s						
BUM	Brajici-Budva	2.81	91	⇑iPn	Pn	03 33 37.0	+0.5
BUM				eSn	Sn	03 34 10.7	+0.6
PRIJ	Prijedor	2.82	24	ePn	Pb	03 33 40.4	-1.6
CEME	Cevo	2.82	86	⇓iPn	Pn	03 33 37.0	+0.4
CEME				iSn	Sn	03 34 11.2	+0.7
NKME	Niksic	2.86	82	⇑iPn	Pn	03 33 37.8	+0.6
NKME				iSn	Sn	03 34 12.5	+1.1
NKY	Niksic	2.90	81	⇓iPn	Pn	03 33 38.9	+1.2
NKY				iSn	Sn	03 34 13.1	+0.7
UPM	Unac-Piva	2.91	73	ePn	Pn	03 33 40.1	+2.2
UPM	Unac-Piva	2.91	73	⇑iPn	Pn	03 33 38.4	+0.5
UPM				iSn	Sn	03 34 13.7	+1.0
MAON	Monte Argentar	2.94	272	P	Pn	03 33 39.5	+1.3
MAON				AML	AML		
	comp=E,260µm,0.6s						
MAON				AML	AML		
	comp=N,99µm,1.3s						
RIY	Rijeka	2.95	351	ePn	Pn	03 33 40.5	+2.3
LMD	Lutirano	2.99	305	P	Pn	03 33 41.2	+2.3
LMD				AML	AML		
	comp=N,315µm,1.5s						
LMD				AML	AML		
	comp=E,327µm,0.9s						
DRME	Dracevica, Mon	3.03	93	ePn	Pn	03 33 39.4	-0.1
DRME	Dracevica, Mon	3.03	93	⇑iPn	Pn	03 33 40.2	+0.7
DRME				iSn	Sn	03 34 15.9	+0.3
PDG	Podgorica	3.07	88	⇑P	Pn	03 33 40.8	+0.8
PDG	Podgorica	3.07	88	ePn	Pn	03 33 40.3	+0.3
PDG	Podgorica	3.07	88	P	Pn	03 33 40.8	+0.8
TTG	Podgorica	3.07	88	⇓iPn	Pn	03 33 40.7	+0.8
TTG				iSn	Sn	03 34 16.8	+0.3
BOJS	Bojanci	3.09	2	⇑P	Pn	03 33 43.4	+3.2
BOJS				AML	AML		
	comp=N,886µm,0.9s						
BOJS				AML	AML		
	comp=E,1455µm,1.2s						
ULC	Ulcinj	3.11	97	⇓iPn	Pn	03 33 41.0	+0.5
ULC				iSn	Sn	03 34 18.0	+0.6
DOB	Doboj	3.18	42	ePn	Pg	03 33 52.6	-0.3
SEI	Scarperia	3.19	302	P	Pn	03 33 45.0	+3.3
SEI				AML	AML		
	comp=N,448µm,0.8s						
SEI				AML	AML		
	comp=E,376µm,0.9s						
PIPA	Pietrapaola	3.20	156	P	Pn	03 33 42.9	+1.1
PLE	Pljevlja	3.28	72	⇑iPn	Pn	03 33 43.8	+0.8
PLE				iSn	Sn	03 34 22.5	+0.7
KOME	Kolasin	3.28	81	⇓iPn	Pn	03 33 43.4	+0.4
KOME				iSn	Sn	03 34 22.0	+0.2
CRMI	Carmignano	3.33	296	P	Pn	03 33 45.7	+2.2
CRMI				AML	AML		
	comp=E,140µm,1.2s						
CRMI				AML	AML		
	comp=N,176µm,1.6s						
RUDO	Rudo	3.35	68	ePn	Pn	03 33 44.6	+0.8
CEY	Cerknica	3.36	352	ePn	Pn	03 33 46.1	+2.1
CRES	Cresnjev	3.42	4	ePn	Pn	03 33 46.5	+1.7
LADO	San Nicola del	3.43	155	P	Pn	03 33 46.2	+1.2
BBLS	Lazići	3.46	64	ePn	Pg	03 33 55.8	-2.5
BBLS	Lazići	3.46	64	ePn	Pb	03 33 51.6	-1.5
TIP	Timpagrande	3.47	158	⇓P	Pb	03 33 51.9	-1.2
ZAG	Zagreb	3.47	10	ePn	Pn	03 33 45.2	-0.3
IVA	Berane	3.56	81	⇓iPn	Pn	03 33 47.5	+0.7
IVA				iSn	Sn	03 34 29.2	+0.5
PVY	Plav	3.59	85	⇓iPn	Pn	03 33 49.0	+1.7
PVY				iSn	Sn	03 34 29.8	+0.3
PII	Pisa	3.60	293	P	Pn	03 33 50.1	+2.8
PII				AML	AML		
	comp=N,321µm,0.5s						
PII				AML	AML		
	comp=E,196µm,1.4s						
LJU	Ljubljana	3.65	354	ePn	Pn	03 33 49.7	+1.7
LJU	Ljubljana	3.65	354	P	Pn	03 33 50.3	+2.3
LJU				AML	AML		
	comp=E,2560µm,0.9s						
LJU				AML	AML		
	comp=N,2060µm,0.8s						
SJES	Sjenica	3.68	75	ePn	Pn	03 33 52.6	+4.2
TIR	Tirane	3.71	105	⇓P	Pn	03 33 48.5	-0.3
TIR	Tirane	3.71	105	P	Pn	03 33 49.0	+0.2
SABO	M.te Sabotino	3.73	344	P	Pn	03 33 50.2	+1.2
TEOL	Teolo	3.85	321	P	Pn	03 33 50.9	+0.2
TEKS	Tekeris	3.86	55	ePn	Pb	03 34 00.2	+0.4
IVAS	Ivanjica	3.88	71	ePn	Pn	03 33 51.7	+0.5
DIVS	Divibare	3.95	63	ePn	Pn	03 33 54.0	+1.9
DIVS	Divibare	3.95	63	ePn	Pb	03 33 57.6	-3.7
OBKA	Obir	4.12	355	Pn	Pn	03 33 55.7	+1.3
	comp=N,1.9nm,0.1s,SNR=15						
OBKA				eSn	Sn	03 34 46.0	+3.6
	comp=N,58nm,0.6s						
VARN	Col Varnada, M	4.18	330	P	Pn	03 33 55.5	+0.2
VARN				AML	AML		
	comp=N,490µm,0.5s						
VARN				AML	AML		
	comp=E,1115µm,0.6s						
PTCC	Patocco-Chiusa	4.18	343	P	Pn	03 33 56.3	+1.0
CGRP	Cima Grappa	4.20	327	P	Pn	03 33 55.8	+0.1
CGRP				AML	AML		
	comp=E,316µm,0.5s						
CGRP				AML	AML		
	comp=N,347µm,0.5s						
STAL	STALIGIAL	4.21	337	P	Pn	03 33 55.8	+0.1
KOVH	Kovagotottos	4.26	29	ePN	Pn	03 33 56.3	+0.1
KOVH	Kovagotottos	4.26	29	eP	Pg	03 34 12.1	-1.3
KOVH	Kovagotottos	4.26	29	eSN	Sn	03 34 45.1	-0.7
SOKA	Soboth	4.26	359	Pn	Pn	03 33 57.6	+1.1
	comp=N,2.1nm,0.4s,SNR=9.5						
SOKA				eSn	Sn	03 34 48.5	+2.5
	comp=N,14nm,0.8s						
TRUS	Trudelj	4.27	63	ePn	Pn	03 34 00.9	+4.4
ACOM	Acomizza, Ital	4.29	345	P	Pn	03 33 58.5	+1.6
ACOM				AML	AML		
	comp=E,336µm,0.7s						
ACOM				AML	AML		
	comp=N,305µm,0.9s						
CIMO	Cimolais	4.34	335	P	Pn	03 33 57.5	0.0
CIMO				AML	AML		
	comp=E,97µm,1.5s						
CIMO				AML	AML		
	comp=N,108µm,0.5s						
MYKA	Terra Mystica	4.34	347	ePn	Pn	03 34 01.6	+4.0
	comp=N,3.4nm,0.5s						
MYKA				eSn	Sb	03 35 00.3	0.0
	comp=N,11nm,0.5s						
ROVR	Rover Verones	4.35	319	P	Pn	03 33 57.9	+0.2
GRUS	Gruza	4.36	68	ePn	Pb	03 34 06.4	-1.9
FRGS	Fruska Gora	4.37	50	⇑P	Pn	03 34 01.5	+3.6
FRGS	Fruska Gora	4.37	50	ePn	Pn	03 34 03.5	+5.6
CTI	Castel Tesino	4.40	327	P	Pn	03 33 58.8	+0.4
CTI				AML	AML		
	comp=E,648µm,0.6s						
CTI				AML	AML		
	comp=N,649µm,0.6s						
OHR	Ohrid	4.45	105	iPn	Pn	03 34 00.4	+1.4
DOSS	Dosso del Somm	4.47	322	P	Pn	03 33 59.7	+0.4
DOSS				AML	AML		
	comp=E,338µm,0.6s						
DOSS				AML	AML		
	comp=N,316µm,0.5s						
DOSS				AML	AML		
	comp=N,322µm,0.5s						
DOSS				AML	AML		
	comp=E,350µm,0.6s						
SRN	Sarande	4.48	123	P	Pn	03 33 59.3	-0.1
SELS	Selova	4.50	78	ePn	Pn	03 34 01.3	+1.7
PGF	Pioggiola	4.52	274	ePn	Pn	03 33 59.7	-0.3
PGF				eSn	Sn	03 34 50.4	-1.9
	comp=E,6.8nm,0.5s						
MORH	Mrgy, Hungar	4.57	33	ePn	Pn	03 34 03.2	+2.6
MAGA	Magasa	4.66	318	P	Pn	03 34 01.9	0.0
ABTA	Abfaltersbach	4.71	338	ePn	Pn	03 34 04.1	+1.5
	comp=E,0.6nm,0.2s						
ABTA				eSn	Sn	03 34 56.9	-0.2
	comp=E,34nm,0.6s						
BOB	Bobbio (Coli)	4.74	302	P	Pn	03 34 05.6	+2.7
BOB				AML	AML		
	comp=N,238µm,1.0s						
BOB				AML	AML		
	comp=E,296µm,1.3s						
KBA	Koelnbreinsper	4.83	346	ePn	Pn	03 34 08.9	+4.6
	comp=E,2.3nm,0.4s						
KBA				eSn	Sn	03 35 01.0	+0.9
	comp=E,7.1nm,0.4s						
ARSA	Arzberg	4.85	3	Pn	Pn	03 34 05.4	+1.0
	comp=E,2.5nm,0.5s,SNR=5.4						
ARSA				eSn	Sn	03 35 02.2	+2.0
	comp=E,3.2nm,0.4s						
MABI	Malga Bissina	4.91	319	P	Pn	03 34 06.0	+0.5
MABI				AML	AML		
	comp=E,100µm,0.5s						
MABI				AML	AML		
	comp=N,220µm,0.4s						
BARS	Barje	4.97	83	ePn	Pn	03 34 07.4	+1.3
BOVS	Bovan	4.99	74	⇓P	Pb	03 34 13.2	-5.8
RISI	Rein	5.02	336	P	Pn	03 34 08.3	+1.3
MPLH	Magyarpolny	5.06	19	ePN	Pn	03 34 08.0	+0.7
ABSI	Aberstueckl	5.09	329	P	Pn	03 34 08.8	+0.9
PRVS	Prvonek	5.16	87	ePn	Pn	03 34 10.1	+1.4
EGYH	Egyhazaskeszo	5.25	17	ePN	Pn	03 34 10.8	+0.9
STIP	Stip	5.32	95	iPn	Pn	03 34 14.0	+3.1
MDVR	Moldovita	5.35	62	⇓P	Pb	03 34 19.3	-5.8
SOP	Sopron	5.37	11	ePN	Pn	03 34 02.6	-8.9
SOP	Sopron	5.37	11	eP	Pb	03 34 20.7	-4.8
ZAGS	Zajecar	5.40	73	ePn	Pn	03 34 11.2	-0.8
WTTA	Wattenberg	5.44	334	ePn	Pn	03 34 14.8	+2.1
	comp=N,1.3nm,0.3s						
WTTA				eSn	Sn	03 35 18.9	+3.7
	comp=N,17nm,0.4s						
BOSS	Bosilegrad	5.46	87	ePn	Pn	03 34 14.3	+1.5
MOA	Molln	5.47	354	Pn	Pn	03 34 14.9	+2.0
	comp=N,1.0nm,0.2s,SNR=9.4						
MOA				eSn	Sn	03 35 16.9	+1.2
	comp=N,31nm,0.6s						
WATA	Walderalm	5.52	334	Pn	Pn	03 34 15.9	+2.1
	comp=N,4.3nm,0.3s,SNR=10						
WATA				eSn	Sn	03 35 19.4	+2.2
	comp=N,55nm,0.7s						
CONA	Conrad Observa	5.54	5	Pn	Pn	03 34 15.5	+1.5
	comp=N,3.2nm,0.5s,SNR=8.4						
CONA				eSn	Sn	03 35 18.2	+0.7
	comp=N,9.1nm,0.6s						
SQTA	Sankt Quirin	5.55	331	iPn	Pn	03 34 16.1	+1.9
	comp=N,1.5nm,0.3s,SNR=5.4						
SQTA				eSn	Sn	03 35 18.9	+1.2
	comp=N,21nm,0.4s						
FETA	Feichten	5.56	327	ePn	Pn	03 34 15.9	+1.5
	comp=N,1.9nm,0.4s						
FETA				eSn	Sn	03 35 20.0	+1.9
	comp=N,20nm,0.4s						
ZAPS	Zavoj	5.60	79	ePn	Pn	03 34 17.8	+3.0
VAY	Valandovo	5.68	99	iPn	Pn	03 34 14.1	-1.7
BZS	Buzias	5.68	53	⇑P	Pb	03 34 25.3	-5.5
MOTA	Moosalm	5.69	331	ePn	Pn	03 34 18.0	+1.9
	comp=N,0.5nm,0.1s						
MOTA				eSn	Sn	03 35 26.0	+4.7
	comp=N,77nm,0.9s						
DAVOX	Davos/Dischmat	5.74	321	Pn	Pn	03 34 18.6	+1.7
	comp=N,1.1nm,0.3s,baz=169,slow=17,SNR=8.1						
SBF	Sospel	5.80	287	ePn	Pn	03 34 17.4	-0.1
SBF	Sospel	5.80	287	eP	Pn	03 34 22.2	+4.7
SBF				eSn	Sn	03 35 21.9	-1.9
	comp=N,33nm,0.6s						
HERR	Herculane	5.85	63	⇑P	Pn	03 34 19.4	+1.2
SRO	Srobarova	5.86	22	ePN	Pn	03 34 20.1	+1.9
SRO				eSN	Sn	03 35 28.1	+3.0
RETA	Reutte	5.94	330	ePn	Pn	03 34 21.2	+1.8
	comp=N,2.1nm,0.5s						
RETA				eSn	Sn	03 35 29.3	+2.1
	comp=N,13nm,0.5s						
ZST	Bratislava	5.95	13	ePN	Pn	03 34 23.6	+4.1
VTS	Vitosha	6.01	85	⇑P	Pn	03 34 22.2	+1.6
SIRR	Siria	6.08	48	⇑P	Pn	03 34 27.4	+6.1
DAVA	Damuels	6.13	324	ePn	Pn	03 34 24.7	+2.6
	comp=N,2.3nm,0.4s						
DAVA				eSn	Sn	03 35 32.4	+0.5
	comp=N,48nm,0.5s						
MODS	Modra-Piesok	6.15	14	ePN	Pn	03 34 25.7	+3.4
MODS				eSN	Sn	03 35 31.1	-1.4
GZR	Gura Zlata	6.29	59	⇓P	Pn	03 34 29.5	+5.2
FRF	La Foret Royal	6.31	283	ePn	Pn	03 34 24.2	-0.3
FRF	La Foret Royal	6.31	283	eP	Pn	03 34 28.6	+4.1
FRF				eSn	Sn	03 35 33.4	-2.9
	comp=N,6.6nm,0.4s						
SMOL	Smolenice	6.32	14	ePN	Pn	03 34 26.9	+2.4
LMR	La Mourre	6.38	281	ePn	Pn	03 34 25.2	-0.3
LMR	La Mourre	6.38	281	eP	Pn	03 34 30.0	+4.5
LMR				eSn	Sn	03 35 35.2	-2.9
	comp=N,1.8nm,0.4s						
CKRC	Cesky Krumlov	6.43	355	ePN	Pn	03 34 27.7	+1.5
CKRC				eSN	Sn	03 35 38.4	-0.9
MBDF	Montbardon	6.48	294	ePn	Pn	03 34 27.9	+0.9
MBDF	Montbardon	6.48	294	eP	Pn	03 34 31.5	+4.5
MBDF				eSn	Sn	03 35 38.1	-2.6
	comp=N,13nm,0.5s						
GERES	GERESS Array B	6.51	352	Pn	Pn	03 34 28.1	+0.8
	comp=N,1.1nm,0.3s,baz=173,slow=14,SNR=16						
GERES				Sn	Sn	03 35 39.9	-1.4
	comp=N,3.1nm,0.3s,baz=162,slow=23,SNR=14						
DEV	Deva	6.59	56	⇑P	Pn	03 34 33.7	+5.3
VYHS	Vyhne	6.62	22	ePN	Pn	03 34 32.5	+3.7
VYHS				eSN	Sn	03 35 42.9	-1.1
LPG	La Plagne	6.77	300	ePn	Pn	03 34 31.0	-0.1
LPG	La Plagne	6.77	300	eP	Pn	03 34 35.8	+4.7
LPG				eSn	Sn	03 35 46.0	-2.1
	comp=N,26nm,0.5s						
LPL	La Plagne	6.79	300	ePn	Pn	03 34 31.7	+0.4
LPL	La Plagne	6.79	300	eP	Pn	03 34 36.3	+5.0
LPL				eSn	Sn	03 35 45.0	-3.5
	comp=N,36nm,0.4s						
KHC	Kasperske Hory	6.80	352	ePN	Pn	03 34 31.9	+0.6
KHC				ex	x	03 34 41.0	
KHC				eSN	Sn	03 35 47.6	-0.9
KHC				ex	x	03 36 04.5	
DRGR		6.97	49	⇓P	Pn	03 34 36.8	+3.1
SMRF	Simiane la Rot	7.14	286	eP	Pn	03 34 40.2	+4.3
SMRF				eSn	Sn	03 35 53.6	-3.2
	comp=N,3.6nm,0.5s						
ORIF	Oris-en-Rattie	7.14	294	ePn	Pn	03 34 35.9	-0.1
ORIF	Oris-en-Rattie	7.14	294	eP	Pn	03 34 40.8	+4.8
ORIF				eSn	Sn	03 35 53.9	-3.0
	comp=N,12nm,0.5s						
ARR	Arges	7.49	64	⇑P	Pn	03 34 45.2	+4.5
PRU	Pruhonice	7.59	357	eSN	Sn	03 36 04.3	-3.4
CABF	La Chapelle	7.69	306	ePn	Pn	03 34 43.8	+0.3
CABF				eSn	Sn	03 36 02.1	-8.3
	comp=N,17nm,0.5s						
TRPA	Tarpa	7.75	40	⇓P	Pn	03 34 45.5	+1.2
VOIR		7.79	64	⇑P	Pn	03 34 49.5	+4.6
HINF	Hinteralfeld	7.95	316	ePn	Pn	03 34 47.4	+0.4
HINF	Hinteralfeld	7.95	316	eP	Pn	03 34 53.0	+6.0
HINF				eSn	Sn	03 36 13.5	-3.2
	comp=N,40nm,0.5s						
VIVF	Saint-Julien-l	7.95	291	ePn	Pn	03 34 48.0	+1.0
VIVF				eSn	Sn	03 36 12.6	-4.2
	comp=N,2.0nm,0.2s						
KEST	Kesra	8.03	216	Pn	Pn	03 34 52.4	+4.1
	comp=N,0.7nm,0.3s,baz=339,slow=1.6,SNR=13						
CDF	Champ du Feu	8.14	320	ePn	Pn	03 34 50.6	+0.9
CDF	Champ du Feu	8.14	320	eP	Pn	03 34 55.7	+6.0
CDF				eSn	Sn	03 36 16.1	-5.4
	comp=N,7.4nm,0.4s						
HAU	Haudompre	8.33	315	ePn	Pn	03 34 51.9	-0.4
HAU	Haudompre	8.33	315	eP	Pn	03 34 58.8	+6.5
HAU				eSn	Sn	03 36 22.9	-3.2
	comp=N,89nm,0.5s						
LASF	Ste Croix	8.38	285	eP	Pn	03 34 57.4	+4.5
LASF				eSn	Sn	03 36 24.3	-2.9
	comp=N,9.2nm,0.8s						
MLR	Muntele Rosu	8.40	65	⇑P	Pn	03 34 50.0	-3.3
PAGF	Fort de Pagny	9.00	316	ePn	Pn	03 35 00.4	-1.0
PAGF				eSn	Sn	03 36 38.2	-4.3
	comp=N,30nm,0.6s						
SMF	Signal de Mont	9.09	302	ePn	Pn	03 35 02.3	-0.3
SMF	Signal de Mont	9.09	302	eP	Pn	03 35 08.3	+5.7
SMF				eSn	Sn	03 36 40.8	-3.8
	comp=N,22nm,0.4s						
SFTF	Sexfontaines	9.15	313	eP	Pn	03 35 09.0	+5.5
SFTF				eSn	Sn	03 36 41.0	-5.2
	comp=N,4.4nm,0.3s						
MEZF	Maizieres J’vi	9.32	314	eP	Pn	03 35 12.6	+6.8
MEZF				eSn	Sn	03 36 44.5	-5.8
	comp=N,3.2nm,0.3s						
LOR	Lormes	9.35	305	ePn	Pn	03 35 06.0	-0.1
LOR	Lormes	9.35	305	eP	Pn	03 35 12.4	+6.3
LOR				eSn	Sn	03 36 45.8	-5.2
	comp=N,24nm,0.4s						
SAVF	Savonnieres en	9.35	315	eP	Pn	03 35 12.3	+6.1
SAVF				eSn	Sn	03 36 45.5	-5.6
	comp=N,4.5nm,0.5s						
AVF	Avril sur Loir	9.46	302	ePn	Pn	03 35 06.9	-0.7
AVF				eSn	Sn	03 36 49.1	-4.5
	comp=N,7.6nm,0.5s						
SSF	Saint Saulge	9.47	303	ePn	Pn	03 35 07.3	-0.5
SSF				eSn	Sn	03 36 48.4	-5.6
	comp=N,7.3nm,0.4s						
BGF	Bois d'Agland	9.69	299	ePn	Pn	03 35 10.4	-0.4
BGF				eSn	Sn	03 36 54.7	-4.7
	comp=N,14nm,0.4s						
TCF	Toulx Ste Croi	10.02	297	ePn	Pn	03 35 13.9	-1.4
TCF				eSn	Sn	03 37 01.3	-6.1
	comp=N,11nm,0.6s						
BRTR	Keskin Array B	14.24	95	Pn	Pn	03 36 14.9	+1.7
	comp=N,0.0nm,0.3s,baz=309,slow=10,SNR=2.0						
MMAI	Mount Meron Ar	18.56	114	LR	LR	03 46 35.8	
	comp=N,84nm,18.3s,baz=350,slow=44						
FINES	FINESS Array B	20.17	15	P	P	03 37 25.7	+0.1
	comp=N,0.1nm,0.3s,baz=215,slow=9.5,SNR=2.2						
ZALV	Zalesovo Beam	46.07	50	P	P	03 41 15.9	+1.0
	comp=N,0.5nm,0.4s,baz=286,slow=7.3,SNR=2.1						
MKAR	Makanchi Array	46.72	60	P	P	03 41 20.8	+0.5
	comp=N,0.5nm,0.7s,baz=288,slow=5.9,SNR=2.5						
SONM	Songino Array	60.96	50	P	P	03 43 06.0	+1.4
	comp=N,0.8nm,1.0s,baz=246,slow=6.1,SNR=3.0						
YKA	Yellowknife Ar	67.94	337	P	P	03 43 51.2	+1.4
	comp=N,0.7nm,0.8s,baz=37,slow=5.4,SNR=3.4						
ILAR	Eielson Array	72.22	352	P	P	03 44 17.1	+1.1
	comp=N,0.3nm,0.7s,baz=355,slow=6.3,SNR=5.0						
TXAR	Lajitas Array	89.07	310	P	P	03 45 49.4	+2.6
	comp=N,0.3nm,0.8s,baz=23,slow=6.8,SNR=3.5						

ISK **06** *03:39:06.5, 38°.86N×43°.52E, h5^{km}, ML3.8/11*
DDA **06** *03:39:07.7, 38°.88N×43°.53E, h14^{km}, MW3.8*
NSSP **06** *03:39:07.9, 38°.92N×43°.25E, h5^{km}, Ms3.6*
TEH **06** *03:39:07.8, 38°.89N×43°.54E, h8^{km}, ML3.5*
THR **06** *03:39:07.1±0.5, 39°.02N×43°.42E, h14^{km}±8^{km}, ML3.0*
ISC 06 03:39:07.9±0.8**, 38°.87N**±0°.02×**43°.53E**±0°.02**, h13**^{km}±6^{km}**,**
n96, σ**1^{s}.50**/120**, 1C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.12	16	iP	Pg	03 39 10.7	-0.7
VMUR				iS	Sg	03 39 13.7	0.0
VMUR				IAML		03 39 14.0	
	comp=E,53µm,0.4s						
VMUR				IAML		03 39 14.0	
	comp=N,29µm,0.2s						
VMUR	Van-Muradiye	0.12	16	ePg	Pg	03 39 10.6	-0.7
ERCV	ERCIS-VAN	0.21	314	PG	Pg	03 39 12.3	-0.4
ERCV	ERCIS-VAN	0.21	314	ePg	Pg	03 39 12.2	-0.4
VANB	Van	0.30	202	PG	Pb	03 39 14.8	-0.4
VANB	Van	0.30	202	ePg	Pb	03 39 15.5	+0.3
CLDR	Caldiran	0.40	48	iP	Pg	03 39 15.6	-0.5
CLDR	Caldiran	0.40	48	PG	Pg	03 39 15.6	-0.5
CLDR				SG	Sb	03 39 23.2	-0.1
CLDR	Caldiran	0.40	48	ePg	Pg	03 39 15.6	-0.5
OZAP	Van, Ozalp-Mer	0.42	120	iP	Pg	03 39 16.5	+0.2
OZAP				iS	Sn	03 39 25.5	-2.2
OZAP				IAML		03 39 26.0	
	comp=N,4µm,1.0s						
OZAP				IAML		03 39 26.0	
	comp=E,6µm,0.7s						
ADCV	BITLIS_Adilcev	0.63	264	iP	Pg	03 39 20.3	0.0
ADCV				iS	Sb	03 39 29.8	-0.1
ADCV				IAML		03 39 31.0	
	comp=N,2µm,0.3s						
ADCV				IAML		03 39 31.0	
	comp=E,2µm,0.7s						
ADCV	BITLIS_Adilcev	0.63	264	ePg	Pg	03 39 20.2	0.0
DYDN	Diyadin	0.68	10	iP	Pg	03 39 20.8	-0.5
DYDN				iS	Sb	03 39 30.8	-0.4
DYDN				IAML		03 39 38.0	
	comp=N,1µm,0.8s						
DYDN				IAML		03 39 42.0	
	comp=E,1µm,0.7s						
DYDN	Diyadin	0.68	10	ePg	Pg	03 39 20.7	-0.5
MLAZ	Malazgirt-MUS	0.81	290	PG	Pg	03 39 23.1	-0.5
MLAZ				SG	Sb	03 39 35.4	+0.5
MLAZ	Malazgirt-MUS	0.81	290	ePg	Pg	03 39 23.1	-0.5
AGRB	Hanur-Agry	0.82	329	PG	Pg	03 39 22.9	-0.8
AGRB				SG	Sn	03 39 36.1	-1.4
AGRB	Hanur-Agry	0.82	329	ePg	Pg	03 39 23.0	-0.8
KOTA	Agri, Merkez-K	0.96	345	iP	Pb	03 39 25.7	-0.9
MAKU	Maku	1.02	61	ePg	Pb	03 39 26.5	-1.1
MAKU				eSg	Sg	03 39 41.1	+0.2
MAKU				IAML		03 39 46.0	
	comp=N,373nm,0.4s						
IGDI	IGDIR	1.08	23	iP	Pb	03 39 28.1	-0.5
IGDI	IGDIR	1.08	23	ePg	Pb	03 39 28.0	-0.5
EKAR	Karacoban	1.20	289	iP	Pg	03 39 31.2	+0.1
PERV	Siirt/Pervari-	1.21	220	iP	Pg	03 39 32.2	+1.0
GURO	Guroymak-BITLI	1.22	255	PN	Pn	03 39 30.0	-0.8
GURO	Guroymak-BITLI	1.22	255	ePn	Pb	03 39 30.6	-0.3
TASB	TASBURUN-IGDIR	1.24	26	PN	Pb	03 39 31.1	-0.1
VNNZ	Vanand	1.25	10	iP	Pg	03 39 31.9	-0.1
EATA	Eleskirt	1.27	321	iP	Pn	03 39 31.5	-0.2
EATA				iS	Sg	03 39 50.4	+1.4
EATA				IAML		03 40 04.0	
	comp=N,426nm,0.5s						
HAKT	HAKKARI	1.32	174	iP	Pn	03 39 31.9	-0.4
HAKT				iS	Sg	03 39 51.5	+0.9
HAKT				IAML		03 39 55.0	
	comp=E,772nm,1.4s						
HAKT				IAML		03 39 58.0	
	comp=N,663nm,0.5s						
HYR	Heyderabad	1.33	50	ePg	Pb	03 39 32.8	0.0
METS	Metsamor	1.34	18	iP	Pg	03 39 33.4	-0.3
METS				iS	Sg	03 39 51.6	+0.4
YOVA	Hakkari_Yksek	1.42	155	iP	Pb	03 39 33.9	-0.5
YOVA				iS	Sg	03 39 54.4	+0.8
YOVA				IAML		03 40 01.0	
	comp=E,448nm,1.0s						
YOVA				IAML		03 40 05.0	
	comp=N,282nm,0.8s						
YOVA	Hakkari_Yksek	1.42	155	ePg	Pb	03 39 33.8	-0.5
NRKZ	NAREK	1.43	38	iP	Pg	03 39 35.6	+0.3
DIGO	Kars	1.54	356	iP	Pg	03 39 37.7	+0.1

NAX	Nakhchivan	1.56	78	*e*Pn	Pb	03 39 37.0	+0.3
GNI	Garni	1.58	36	*i* P	Pb	03 39 37.1	-0.1
GNI				*i* S	Sg	03 40 00.6	+1.8
GNI	Garni	1.58	36	PN	Pb	03 39 37.1	-0.1
SIRT	Sirnak	1.62	212	PN	Pb	03 39 37.3	-0.4
CUKT	Cukurca	1.62	178	*i* P	Pb	03 39 37.6	-0.3
CUKT	Cukurca	1.62	178	PN	Pb	03 39 37.3	-0.5
CUKT	Cukurca	1.62	178	*e*Pn	Pb	03 39 37.5	-0.3
SIRN	Sırnak	1.63	213	*i* P	Pg	03 39 38.7	-0.5
KAPZ	Kaputan	1.71	32	*i* P	Pb	03 39 39.3	0.0
KAPZ				*i* S	Sg	03 40 02.4	-0.4
IMRD	Marand	1.71	95	*e*Pn	Pb	03 39 38.4	-0.9
IMRD				*e*		03 39 45.0	
	comp=Z,9µm,0.6s						
KOPR	Koprukoy-ERZUR	1.71	311	PN	Pb	03 39 38.9	-0.5
ISHB	Shabestar	1.74	109	*e*Pn	Pb	03 39 38.7	-1.2
ISHB				*e*		03 39 47.0	
	comp=Z,5µm,0.4s						
KARS	Kars	1.79	349	PN	Pb	03 39 40.2	-0.4
SENK	Senkaya-Erzuru	1.92	332	PN	Pn	03 39 41.3	+0.8
SLHN	Bingol, Solhan	1.96	273	*i* P	Pb	03 39 43.4	-0.1
SVAN	Silvan-Diyarba	1.97	249	*i* P	Pb	03 39 43.8	+0.2
SVAN				*i* S	Sg	03 40 10.1	-1.0
SVAN				IAML		03 40 12.0	
	comp=N,172nm,0.8s						
SVAN				IAML		03 40 19.0	
	comp=E,174nm,1.3s						
ERZM	Erzurum	1.97	302	*i* P	Pg	03 39 44.7	-1.0
EJDE	Erzurum, Palan	1.97	300	*i* P	Pb	03 39 44.1	+0.1
KARO	Karliova-Bingo	1.98	283	PN	Pb	03 39 42.4	-1.5
BTMN	Batman	2.03	242	*i* P	Pb	03 39 44.9	+0.2
BTMN				*i* S	Sg	03 40 12.2	-0.9
BTMN				IAML		03 40 14.0	
	comp=N,585nm,1.9s						
BTMN				IAML		03 40 22.0	
	comp=E,834nm,0.8s						
ECAT	Cat-ERZURUM	2.12	291	*i* P	Pb	03 39 46.6	+0.3
STE	Stepanavan	2.22	17	⇑*i*P	Pb	03 39 47.0	-1.0
MIDY	Mardin/Midyat-	2.23	230	*i* P	Pb	03 39 48.0	-0.1
MIDY				*i* S	Sb	03 40 17.0	+1.3
MIDY				IAML		03 40 25.0	
	comp=N,216nm,0.7s						
MIDY				IAML		03 40 25.0	
	comp=E,270nm,1.8s						
GRS	Goris	2.27	73	⇓*i*P	Pb	03 39 49.0	+0.2
GRS				⇓*i*S	Sg	03 40 22.0	+1.2
IAZR	Azarshahr	2.27	121	*e*Pn	Pb	03 39 48.0	-0.9
IAZR				*e*		03 40 31.5	
	comp=Z,5µm,0.8s						
BGD	Bogdanovka	2.39	1	P	Pg	03 39 53.8	0.0
BGD				S	Sg	03 40 30.8	+6.1
DDEM	Demirkent	2.44	326	*i* P	Pb	03 39 52.7	+1.0
KRIK	Erzurum-spir	2.49	307	*i* P	Pg	03 39 54.8	-0.8
DMNI	Dmanisi	2.50	11	P	Pg	03 39 55.0	-0.9
DAGI	Agillar	2.53	331	*i* P	Pb	03 39 53.8	+0.6
AKH	Akhalkalaki	2.53	359	P	Pg	03 39 56.1	-0.4
AKH				S	Sg	03 40 34.7	+5.4
DBAD	Bademkaya	2.56	327	*i* P	Pg	03 39 55.2	-1.8
EPOS	Posof	2.70	347	*i* P	Pg	03 39 58.9	-0.7
TRLG	Trialeti	2.70	9	P	Pb	03 39 57.5	+1.4
TRLG				S	Sg	03 40 33.5	-1.2
MAHB	Mahabad	2.72	140	*e*Pn	Pb	03 39 54.7	-1.8
BRNG	Burnasheti	2.76	5	P	Pg	03 39 59.2	-1.6
IHRS	Heris	2.81	100	*e*Pn	Pn	03 39 55.1	+2.3
IHRS				*e*		03 40 06.6	
	comp=Z,3µm,0.6s						
BAYB	BAYBURT	2.88	300	*i* P	Pb	03 40 00.9	+1.5
IBST	Bostanabad	2.89	113	*e*Pn	Pb	03 39 56.5	-3.0
KOVA	Elazig, Kovanc	2.91	268	*i* P	Pb	03 39 59.1	-0.6
ABS	Abastumani	2.93	349	P	Pg	03 40 02.5	-1.5
DGRG	David-gareji	2.94	28	P	Pg	03 40 02.5	-1.6
BTNK	Botanikuri	2.97	19	P	Pb	03 40 02.3	+1.6
BTNK				S	Sg	03 40 44.3	+1.0
TNCL	Tunceli-Merkez	3.12	276	*i* P	Pg	03 40 05.8	-1.8
DDFL	Dedoflistskaro	3.25	37	P	Pg	03 40 09.9	-0.2
DDFL	Dedoflistskaro	3.25	37	*i* P	Pg	03 40 08.3	-1.8
GRMI	Germi	3.41	90	*e*Pn	Pn	03 40 03.3	+2.4
GRMI				*e*Sg	Sg	03 40 55.8	-1.5
GRMI				IAML		03 41 00.7	
	comp=E,23nm,0.5s						
ISRB	Sarab	3.42	107	*e*		03 40 28.6	
	comp=Z,661nm,0.5s						
ISRB				*e*Pn	Pn	03 40 04.0	+2.9
TKB	Tkibuli	3.50	353	P	Pg	03 40 12.4	-2.5
TKB				S	Sg	03 41 12.1	+12
LGD	Lagodekhi	3.61	34	P	Pg	03 40 14.8	-2.3
GUDG	Gudauri	3.66	11	P	Pg	03 40 17.5	-0.5
ONI	Oni	3.71	359	P	Pg	03 40 21.5	+2.4
PNSH	Pansheti	3.85	12	P	Pb	03 40 11.9	-3.9
PNSH				S	Sg	03 41 07.0	-4.5
MTEO	Meteo	3.88	11	P	Pb	03 40 14.9	-1.6
KEMA	Kemaliye	3.94	277	*i* P	Pg	03 40 21.2	-2.2
CHVG	Ch'k'valeri	3.99	345	P	Pg	03 40 26.8	+2.4
IDHR	Dehrash	4.75	150	*e*Pn	Pn	03 40 22.3	+2.8
SNGE	Sanandaj	4.86	140	*e*Pn	Pn	03 40 24.4	+3.5
IGHG	Ghaleghazi	5.15	151	*e*Pn	Pn	03 40 27.8	+2.8
IGHG				*e*		03 40 54.1	
	comp=Z,758nm,0.8s						
QABG	Abgarm-Qazvin	5.77	121	*e*Pn	Pn	03 40 34.0	+0.6

MOS ***06*** *03:44:53.5±0.0, 42°.10N×45°.21E, h10^{km}, MPVA3.9*
NORS ***06*** *03:44:53.2±0.0, 42°.07N×45°.16E, h10^{km}, MPVA4.0*
ISK ***06*** *03:44:54.1, 42°.51N×45°.13E, h57^{km}±2^{km}, ML2.9/5*
DDA ***06*** *03:44:55.6, 42°.17N×44°.94E, h19^{km}±1^{km}, ML2.6*
TIF ***06*** *03:44:55.3, 42°.02N×45°.02E, h21^{km}±1^{km}*
AZER ***06*** *03:44:56.9±0.2, 41°.93N×45°.27E, h12^{km}, ml3.1/26, Error ellipse: s-maj=2.7km s-min=2.4km az=351.0*
DRS ***06*** *03:44:57.7±0.0, 42°.14N×45°.27E, h16^{km}*
ISC 06 03:44:54.4±1.1**, 42°.09N**±0°.01×**45°.16E**±0°.01**, h2**^{km}±9^{km}**, n99,** σ**1^{s}35**/187**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTNK	Botanikuri	0.49	213	P	Pb	03 45 06.5	+0.7
BTNK				S	Sb	03 45 14.6	+1.1
BTNK	Botanikuri	0.49	213	*i* P	Pb	03 45 06.0	+0.2
BTNK				*i* S	Sb	03 45 14.1	+0.6
BTNK				IAML		03 45 17.0	
	comp=E,1µm,0.1s						
GUDG	Gudauri	0.63	307	P	Pb	03 45 08.0	-0.3
GUDG				S	Sb	03 45 16.6	-1.1
DGRG	David-gareji	0.66	166	P	Pn	03 45 10.5	-0.4
DGRG				S	Sn	03 45 20.9	-1.0
PNSH	Pansheti	0.68	324	P	Pg	03 44 59.5	-7.9
PNSH				S	Sg	03 45 08.4	-7.7
MTEO	Meteo	0.75	322	P	Pg	03 45 09.1	+0.3
MTEO				S	Sg	03 45 19.2	+0.7
LGD	Lagodekhi	0.85	107	P	Pn	03 45 12.3	-1.1
LGD				S	Sn	03 45 24.3	-2.2
TRLG	Trialeti	0.96	235	P	Pb	03 45 14.2	+0.2
TRLG				S	Sn	03 45 28.2	-1.4
DDFL	Dedoflistskaro	0.97	132	P	Pn	03 45 17.7	+2.5
DDFL				S	Sn	03 45 34.9	+5.4
DDFL	Dedoflistskaro	0.97	132	*i* P	Pn	03 45 17.5	+2.3
DDFL				*i* S	Sn	03 45 33.8	+4.4
DDFL				IAML		03 45 41.0	
	comp=E,203nm,0.6s						
DDFL				IAML		03 45 50.0	
	comp=N,158nm,0.4s						
LACR	Lac	0.97	319	*e*Pg	Pg	03 45 13.1	0.0
LACR				*e*Sg	Sg	03 45 26.4	+0.7
BTLR	Botlikh	0.97	54	*i* Pg	Pg	03 45 13.2	+0.1
BTLR				*e*Sg	Sg	03 45 25.8	0.0
KMGR	Komgaron	0.99	347	*e*Pg	Pg	03 45 13.5	+0.1
KMGR				*e*Sg	Sb	03 45 27.7	-0.2
VLKR	Vladikavkaz	1.02	340	*i* Pg	Pn	03 45 15.0	-0.9
VLKR				*e*Pg	Pb	03 45 15.3	+0.4
VLKR				*e*Sg	Sn	03 45 30.5	-0.2
VLKR				*e*Sg	Sn	03 45 30.6	-0.2
QZX	Qazax, Azerbai	1.05	171	P	Pn	03 45 15.7	-0.5
	SNR=13						
QZX				S	Sn	03 45 30.8	-0.6
DMNI	Dmanisi	1.05	224	P	Pb	03 45 15.2	-0.2
DMNI				S	Sn	03 45 30.3	-1.4
BRNG	Burnasheti	1.10	245	P	Pn	03 45 16.4	-0.6
BRNG				S	Sn	03 45 32.4	-0.5
DVE	Vedeno	1.12	39	*e*Pg	Pb	03 45 15.6	-1.0
DVE				*e*Sg	Sg	03 45 30.5	0.0
ZEI	Tsey	1.16	307	*e*Pg	Pb	03 45 16.5	-0.9
ZEI				*e*Sg	Sn	03 45 33.3	-1.3
ZKTA	Zakatala	1.18	112	P	Pg	03 45 18.1	+1.0
	SNR=13						
ZKTA				S	Sn	03 45 35.0	+0.2
GROC	Groznyy	1.21	23	*i* Pg	Pg	03 45 18.5	+0.9
GROC				*e*Sg	Sn	03 45 35.7	+0.4
XNZR	Khunzakh	1.23	68	*e*Pg	Pn	03 45 17.8	-1.1
XNZR				*e*Sg	Sg	03 45 34.5	+0.5
ARNR	Ardon	1.26	330	*e*Pg	Pg	03 45 19.5	+0.8
ARNR				*e*Sg	Sn	03 45 37.7	+0.9
KORR	Kora	1.28	321	*e*Pg	Pg	03 45 19.6	+0.7
KORR				*e*Sg	Sn	03 45 37.9	+0.7
BTKR	Batakoyurt	1.36	341	*i* Pg	Pg	03 45 21.5	+1.1
BTKR				*e*Sg	Sg	03 45 42.0	+4.0
ONI	Oni	1.36	292	P	Pb	03 45 20.3	-0.4
ONI				S	Sg	03 45 38.8	+0.7
ONI	Oni	1.36	292	*e*Pg	Pb	03 45 20.3	-0.4
ONI				*e*Sg	Sg	03 45 39.2	+1.1
UNCR	Uncukul	1.36	62	*i* Pg	Pb	03 45 20.4	-0.3
UNCR				*e*Sg	Sg	03 45 38.9	+0.7
GNBR	Gunib	1.37	77	*i* Pg	Pb	03 45 20.6	-0.3
GNBR				*e*Sg	Sg	03 45 39.4	+0.9
DIGR	Digorskoe uzhe	1.42	305	*e*Pg	Pn	03 45 21.1	-0.4
DIGR				*e*Sg	Sg	03 45 41.1	+1.1
AKH	Akhalkalaki	1.42	242	P	Pb	03 45 21.5	-0.2
AKH				S	Sg	03 45 40.7	+0.6
AKH	Akhalkalaki	1.42	242	PN	Pb	03 45 21.6	-0.2
BGD	Bogdanovka	1.43	235	P	Pb	03 45 22.1	+0.1
BGD				S	Sg	03 45 41.9	+1.5
GDB	GEDABAY	1.44	162	P	Pb	03 45 21.7	-0.4
	SNR=72						
GDB				S	Sg	03 45 41.7	+0.9
KMKR	Kumukh	1.44	88	*e*Pg	Pb	03 45 22.0	-0.2
KMKR				*e*Sg	Sg	03 45 42.0	+1.1
ARKR	Arakani	1.45	69	*i* Pg	Pb	03 45 21.6	-0.6
ARKR				*e*Sg	Sg	03 45 41.2	+0.1
DLMR	Dylym	1.46	48	*e*Pg	Pb	03 45 21.9	-0.5
DLMR				*e*Sg	Sg	03 45 41.3	-0.1
KRNR	Karanay	1.49	60	*e*Pg	Pb	03 45 22.4	-0.5
KRNR				*e*Sg	Sg	03 45 42.2	0.0
STDR	Stavd-Durt	1.51	328	*e*Pg	Pg	03 45 23.8	+0.4
STDR				*e*Sg	Sg	03 45 45.8	+2.8
LSNR	Lesken	1.54	321	*e*Pg	Pg	03 45 23.8	-0.1
LSNR				*e*Sg	Sg	03 45 45.4	+1.5
DBC	Dubki	1.54	53	*e*Pg	Pb	03 45 23.4	-0.4
DBC				*e*Sg	Sg	03 45 44.2	+0.1
BUJR	Buynaksk	1.62	62	*e*Pg	Pb	03 45 24.8	-0.3
BUJR				*e*Sg	Sg	03 45 46.5	+0.1
TKB	Tkibuli	1.63	280	P	Pb	03 45 24.8	-0.4
TKB				S	Sg	03 45 46.5	-0.2
TRKR	Terskaya	1.66	349	*e*Pg	Pb	03 45 25.7	0.0
TRKR				*e*Sg	Sg	03 45 49.4	+1.6
GANJ	Ganja	1.69	148	P	Pb	03 45 26.0	-0.3
	SNR=6.1						
GANJ				S	Sg	03 45 48.8	+0.1
SEKA	Sheki	1.77	119	P	Pb	03 45 27.2	-0.4
	SNR=60						
SEKA				S	Sg	03 45 51.5	+0.3
PRTR	Priterechnaya	1.78	339	*e*Pg	Pb	03 45 27.7	-0.1
PRTR				*e*Sg	Sg	03 45 53.0	+1.4
ABS	Abastumani	1.78	260	P	Pb	03 45 27.1	-0.8
ABS				S	Sg	03 45 51.5	-0.2
NCK	Nalchik	1.81	321	*e*Pg	Pn	03 45 26.6	-0.2
NCK				*e*Pg	Pg	03 45 29.2	0.0
NCK				*e*Sg	Sb	03 45 51.7	+0.1
NCK				*e*Sg	Sg	03 45 53.9	+1.2
URKR	Urkarakh	1.84	87	*e*Pg	Pb	03 45 28.0	-0.9
URKR				*e*Sg	Sb	03 45 52.8	+0.3
SGKR	Sergokala	1.89	78	*e*Pg	Pb	03 45 29.7	0.0
SGKR				*e*Sg	Sg	03 45 55.5	+0.3
EPOS	Posof	1.91	253	*i* P	Pb	03 45 29.6	-0.5
EPOS				*i* S	Sg	03 45 56.5	+0.7
EPOS				IAML		03 45 57.0	
	comp=N,103nm,0.4s						
EPOS				IAML		03 45 57.0	
	comp=E,39nm,0.3s						
MAK	Makhachkala	1.94	63	*e*Pg	Pb	03 45 30.4	-0.1
MAK				*e*Sg	Sb	03 45 53.8	-1.3
MNGR	Mingechevir, A	1.96	132	P	Pb	03 45 30.6	-0.2
MNGR				S	Sb	03 45 56.2	+0.5
GNI	Garni	1.97	189	PN	Pg	03 45 31.9	-0.2
GNI				SN	Sg	03 45 59.5	+1.9
GNI	Garni	1.97	189	*i* Pg	Pg	03 45 31.8	-0.3
GNI				*e*Sg	Sg	03 45 59.5	+1.9
AKT	Akhty	2.02	107	*e*Pg	Pb	03 45 31.2	-0.7
AKT				*e*Sg	Sg	03 45 59.0	-0.3
NEY	Neytrino	2.14	304	*e*Pg	Pb	03 45 34.5	+0.6
NEY				*e*Sg	Sg	03 46 02.8	-0.3
KARS	Kars	2.14	228	PN	Pb	03 45 32.7	-1.4
KARS				SN	Sb	03 46 00.9	-0.3
KBTC	Kuba-Taba	2.15	324	*e*Pg	Pb	03 45 32.3	-1.8
KBTC				*e*Sg	Sb	03 46 00.2	-1.1
DIGO	Kars	2.15	219	*i* P	Pb	03 45 33.4	-0.8
DIGO				*i* S	Sb	03 46 00.8	-0.7
DIGO				IAML		03 46 10.0	
	comp=E,116nm,0.4s						
TASB	TASBURUN-IGDIR	2.22	199	PN	Pb	03 45 35.3	0.0
QBL	Gabala	2.31	119	P	Pb	03 45 35.6	-1.3
	SNR=8.3						
QBL				S	Sb	03 46 04.9	-1.2
KBZ	Khabaz	2.33	315	*e*Pn	Pb	03 45 37.2	+0.1
KBZ				*e*Sn	Sb	03 46 06.4	0.0
CHVG	Ch'k'valeri	2.36	286	P	Pb	03 45 36.7	-1.0
CHVG				S	Sg	03 46 08.7	-1.6
IGDI	IGDIR	2.37	201	*i* P	Pg	03 45 39.1	-0.7
IGDI				*i* S	Sb	03 46 08.8	+1.3
BRDA	Brd	2.38	139	S	Sb	03 46 06.4	-1.4
HYR	Heyderabad	2.38	186	S	Sb	03 46 07.7	-0.3
QSAR	Qusar	2.39	103	P	Pb	03 45 37.6	-0.6
QSAR				S	Sb	03 46 06.2	-2.0
XNQ	Khinaliq	2.42	111	P	Pb	03 45 38.0	-0.8
	SNR=12						
XNQ				S	Sb	03 46 07.5	-1.6
SHA1	Shidzhatmaz	2.47	313	*e*Pn	Pb	03 45 38.2	-1.4
SHA1				*e*Sn	Sb	03 46 10.3	-0.3
AGDM	Agdam	2.47	143	P	Pb	03 45 38.9	-0.7
	SNR=4.6						
AGDM				S	Sb	03 46 10.4	-0.1
PYA1	Pyatigorsk	2.48	323	*e*Pn	Pn	03 45 35.1	-0.8
PYA1				*e*Sn	Sn	03 46 06.1	-0.8
BEYR	Belyy Ugol+	2.57	319	*e*Pn	Pn	03 45 37.5	+0.3
BEYR				*e*Sn	Sn	03 46 09.7	+0.5
KIV0	Kislovodsk Arr	2.59	317	*e*Pn	Pb	03 45 40.7	-1.0
KIV0				*e*Sn	Sb	03 46 15.4	+1.3
KIV	Kislovodsk	2.60	317	*e*Pn	Pb	03 45 41.2	-0.7
KIV				*e*Sn	Sb	03 46 15.5	+1.3
QUBA	Quba, Azerbaij	2.60	105	P	Pb	03 45 40.7	-1.2
QUBA				S	Sb	03 46 12.7	-1.6
SENK	Senkaya-Erzuru	2.61	235	PN	Pn	03 45 38.7	+0.8
IML	Ismayilli	2.62	119	P	Pn	03 45 38.5	+0.7
IML				S	Sb	03 46 13.7	-1.1
ZRD	Zardab	2.63	133	S	Sn	03 46 10.9	+0.5
DAGI	Agillar	2.64	248	*i* P	Pn	03 45 39.2	+1.0
SBZ	Shahbuz	2.71	174	P	Pb	03 45 43.2	-0.5
	SNR=14						
SBZ				S	Sg	03 46 20.9	-0.5
KOTA	Agri, Merkez-K	2.73	214	*i* P	Pn	03 45 40.9	+1.4
DBAD	Bademkaya	2.81	249	*i* P	Pn	03 45 41.7	+1.1
DDEM	Demirkent	2.83	246	*i* P	Pn	03 45 41.9	+1.1
PQL	Pirkuli	2.89	116	P	Pb	03 45 44.5	-2.3
	SNR=4.0						
PQL				S	Sn	03 46 18.8	+1.7
NAX	Nakhchivan	2.93	175	P	Pb	03 45 47.8	+0.4
	SNR=6.8						
NAX				S	Sg	03 46 27.0	-1.4
SIZA	Siyzn	2.98	109	P	Pb	03 45 45.3	-3.1
BLQ	Beylaqan	2.99	142	S	Sn	03 46 18.8	-0.5
AGRB	Hanur-Agry	3.00	214	PN	Pb	03 45 45.7	-3.1
ATGJ	Altiaghaj	3.10	112	P	Pn	03 45 46.7	+2.3
QRD	Qoradiz	3.10	147	S	Sb	03 46 25.6	-3.0
ALER	Alexandrovskoy	3.13	329	*e*Pn	Pn	03 45 45.6	+0.8
ALER				*e*Sn	Sn	03 46 23.3	+0.4
ORD	Ordubad	3.23	168	S	Sg	03 46 35.9	-2.1
GBS	Qobustan	3.25	117	P	Pb	03 45 49.7	-3.2
	SNR=3.4						
GOF	Gofitskoye	3.34	333	*e*Pn	Pn	03 45 47.1	-0.6
GOF				*e*Sn	Sn	03 46 28.7	+0.8
GLBA	Clilabad	3.76	138	S	Sn	03 46 39.4	+1.1
YRD	Yardimli	3.95	142	P	Pn	03 45 58.6	+2.4
YRD				S	Sn	03 46 42.8	-0.5
MNK	Minsk	16.86	323	*i* P	P	03 48 52.2	-1.4
	comp=E,6.0nm,1.2s						
MNK				*i* P	P	03 48 52.2	-1.4
	comp=N,16nm,0.8s						
MNK				*i* P	P	03 48 52.2	-1.4
	comp=Z,9.0nm,1.0s,baz=132						
MNK				*i* PP	PnPn	03 49 01.7	+0.9
MNK				*i* PPP	PPP	03 49 09.4	
MNK				*i* S	Sn	03 52 00.1	+1.0
MNK				*i* SS	SnSn	03 52 14.6	+2.5
MNK				*i* SSS	SSS	03 52 27.4	
MNK				*i* LR	LR	03 55 07.7	
MNK				*i* LRM	MLR	03 56 13.5	
	comp=E,218nm,12.7s						
MNK				*i* LRM	MLR	03 56 25.3	
	comp=Z,364nm,12.7s						
MNK				*i* LRM	MLR	03 56 27.1	
	comp=N,275nm,11.3s						

ROM ***06*** *03:56:20.9±0.2, 42°.30N±0°.01×15°.07E±0°.01, h10^{km}, ML2.8/4, Error ellipse: s-maj=1.7km s-min=0.7km az=30.0*
ISC 06 03:56:19.0±0.9**, 42°.37N**±0°.04×**15°.13E**±0°.04**, h10**^{km}**, n42,** σ**1^{s}46**/40**, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAFR	Castel Frentan	0.60	257	P	Pb	03 56 32.2	+0.6
CIGN	Sant'Elia a Pi	0.73	193	P	Pb	03 56 34.0	0.0
TRIV	Trivento	0.74	216	P	Pg	03 56 33.3	0.0
SGRT	San Giovanni R	0.77	143	P	Pb	03 56 35.4	+0.9
SGRT				S	Sb	03 56 45.8	+0.8
SGRT				AML	AML		
	comp=E,872µm,0.5s						
SGRT				AML	AML		
	comp=N,586µm,0.5s						
LPEL	Lama dei Pelig	0.77	246	P	Pb	03 56 35.2	+0.6
MSAG	Monte S. Angel	0.88	138	P	Pb	03 56 36.6	+0.2
MSAG				S	Sb	03 56 48.8	+0.6
MSAG				AML	AML		
	comp=N,1770µm,0.7s						
MSAG				AML	AML		
	comp=N,1815µm,0.8s						
MSAG				AML	AML		
	comp=E,1075µm,0.9s						
MSAG				AML	AML		
	comp=E,984µm,1.0s						
BSSO	Busso	0.92	206	P	Pg	03 56 36.5	-0.2
VCEL	Villa Celiera	0.96	272	P	Pb	03 56 37.9	+0.1
MIDA	Miranda	0.98	222	P	Pg	03 56 36.8	-1.1
RNI2	Rionero Sannit	0.99	228	P	Pb	03 56 38.4	+0.1
MOCO	Biccari - m.te	1.00	179	P	Pb	03 56 38.5	0.0
TRTR	Tortoreto Alta	1.00	296	P	Pn	03 56 39.6	+0.5
T0110	Collepietro	1.01	262	P	Pn	03 56 39.6	+0.2
SACR	S. Croce Del S	1.02	198	P	Pg	03 56 38.2	-0.5
PTRJ	Pietraroja	1.10	204	P	Pb	03 56 40.1	-0.1
SGG	Gregorio Mates	1.13	210	P	Pg	03 56 40.2	-0.6
CERA	Filignano	1.13	227	P	Pn	03 56 41.2	+0.2
FAGN	Fagnano	1.15	265	P	Pb	03 56 40.9	-0.2
FAGN				S	Sb	03 56 56.3	+0.2
FAGN				AML	AML		
	comp=E,640µm,0.6s						
FAGN				AML	AML		
	comp=N,454µm,0.6s						
TERO	Teramo	1.16	283	P	Pn	03 56 41.5	+0.1
TERO				AML	AML		
	comp=E,132µm,0.6s						
TERO				AML	AML		
	comp=N,76µm,0.4s						
VAGA	Valle Agricola	1.17	215	P	Pb	03 56 41.1	-0.2
OFFI	Offida	1.21	298	AML	AML		
	comp=N,675µm,0.5s						
OFFI				AML	AML		
	comp=E,686µm,0.7s						
VITU	Vitulano (BN)	1.24	198	P	Pn	03 56 42.3	-0.2
MRB1	Monte Rocchett	1.25	185	P	Pg	03 56 43.3	+0.3
CAFE	Carife	1.34	177	P	Pn	03 56 44.2	+0.2
SMA1	SAN MARTINO	1.35	282	AML	AML		
	comp=N,109µm,0.7s						
SMA1				AML	AML		
	comp=E,216µm,0.5s						
PIGN	Pignataro Magg	1.37	212	P	Pn	03 56 43.9	-0.3
PAOL	Paolisi	1.40	198	P	Pn	03 56 44.9	+0.2
RM33	Pellescritta (	1.43	276	AML	AML		
	comp=E,134µm,0.8s						
RM33				AML	AML		
	comp=N,139µm,0.6s						
LNSS	Leonessa	1.56	279	AML	AML		
	comp=E,174µm,1.3s						
LNSS				AML	AML		
	comp=N,109µm,0.8s						
FDMO	Fiordimonte	1.65	295	AML	AML		
	comp=E,103µm,0.5s						
FDMO				AML	AML		
	comp=N,73µm,0.5s						
CESX	Cesi	1.90	278	AML	AML		
	comp=N,43µm,0.7s						
CESX				AML	AML		
	comp=E,68µm,0.6s						
ARVD	Arcevia	1.96	306	AML	AML		
	comp=N,60µm,1.0s						
ARVD				AML	AML		
	comp=E,41µm,1.0s						
SSFR	Montelago di S	2.03	303	AML	AML		
	comp=N,62µm,1.4s						
SSFR				AML	AML		
	comp=E,61µm,0.3s						
TRIF	Trifonti	3.20	285	S	Sn	03 57 51.0	+3.3
OBKA	Obir	4.16	354	*e*Pn	Pn	03 57 20.3	-2.3
	comp=E,0.4nm,0.2s						
OBKA				*e*Sn	Sn	03 58 08.6	-2.7
	comp=E,1.6nm,0.5s						
SOKA	Soboth	4.31	359	*e*Pn	Pn	03 57 13.5	-11
	comp=E,0.6nm,0.4s						
SOKA				*e*Sn	Sn	03 57 55.7	-19
	comp=E,0.4nm,0.3s						
MSSA	Maissana	4.53	297	P	Pb	03 57 39.8	+1.0
MSSA				S	Sn	03 58 15.0	-5.6
ABTA	Abfaltersbach	4.76	338	*e*Pn	Pn	03 57 19.1	-12
	comp=E,1.4nm,0.6s						
ABTA				*e*Sn	Sn	03 58 23.7	-2.4
	comp=E,1.9nm,0.5s						
WTTA	Wattenberg	5.49	334	*e*Pn	Pn	03 57 43.5	+2.5
	comp=E,0.3nm,0.2s						
WTTA				*e*Sn	Sn	03 58 44.9	+0.6
	comp=E,4.4nm,0.4s						
WATA	Walderalm	5.57	334	*e*Pn	Pn	03 57 44.4	+2.3
	comp=E,0.4nm,0.2s						
WATA				*e*Sn	Sn	03 58 45.7	-0.5
	comp=E,1.8nm,0.5s						
SQTA	Sankt Quirin	5.59	331	*e*Pn	Pn	03 57 32.7	-10
	comp=E,0.4nm,0.3s						
SQTA				*e*Sn	Sn	03 58 46.9	+0.1
	comp=E,2.5nm,0.3s						
FETA	Feichten	5.61	328	*e*Pn	Pn	03 57 36.4	-6.3
	comp=E,0.6nm,0.5s						
FETA				*e*Sn	Sn	03 58 47.7	+0.5
	comp=E,2.1nm,0.4s						

IDC ***06*** *03:57:36.3±4.3, 35°.64N×69°.94E, h75^{km}±29^{km}, mb3.7/15, mb1 3.9/21, mb1mx3.6/55, mbtmp4.1/21, MS4.3/1, Ms1 4.3/1, ms1mx3.0/50, Error ellipse: s-maj=42.4km s-min=17.4km az=156.0*
NEIC ***06*** *03:57:41.0±2.8, 35°.99N±0°.03×69°.72E±0°.07, h97^{km}±8^{km}, mb4.1/11, Error ellipse: s-maj=8.8km s-min=2.5km az=63.0*
NNC ***06*** *03:57:42.9±1.8, 36°.38N×69°.45E, h89^{km}±21^{km}, mb4.1, mpv4.4, Error ellipse: s-maj=19.7km s-min=8.2km az=163.0*
ISC 06 03:57:39.4±0.6**, 35°.94N**±0°.06×**69°.75E**±0°.05**, h100**^{km}**, n77,** σ**2^{s}40**/80**, mb3.8**/14**, 1C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	1.51	203	Pn	Pn	03 58 08.3	+2.3
CHGR	Chuyangaron	2.75	350		Pn	03 58 22.4	+0.5
GAR	Garm	3.09	8	Pn	Pn	03 58 26.9	+0.5
NIL	Nilore	3.67	127	Pn	Pn	03 58 35.3	+1.1
DRK	Karamyk	3.89	24		Pn	03 58 38.3	+1.0
BTK	Batken	4.20	11	Pn	Pn	03 58 43.0	+1.7
DHRM	DHARAMSHALA	6.56	122	*e*P	Pn	03 59 12.8	-0.7
DHRM				*e*S	Sn	04 00 25.6	-1.4
DHRM				IAML		04 00 26.9	
	comp=E,227nm,0.3s						
DHRM				IAML		04 00 28.0	

	comp=N,242nm,0.2s						
AML	Almayashu	6.90	25	P	Pn	03 59 18.8	+0.6
	SNR=59						
KKAR	Karatay Array	7.18	4	Pn	Pn	03 59 21.3	-0.3
UCH	Uchtor	7.29	29	P	Pn	03 59 25.0	+1.5
	SNR=8.3						
EKS2	Erkin-Say	7.40	24	P	Pn	03 59 26.5	+1.8
	SNR=26						
AAK	Ala-Archa	7.63	27	P	Pn	03 59 28.7	+0.8
	comp=N,5.2nm,0.3s,baz=192,slow=5.5,SNR=41						
AAK				S	Sn	04 00 51.1	-1.7
	comp=N,3.1nm,0.3s,baz=356,slow=18,SNR=10						
AAK				LR	LR	04 02 16.0	
	comp=N,118nm,20.6s,baz=313,slow=36						
AAK	Ala-Archa	7.63	27	P	Pn	03 59 28.8	+0.8
	SNR=20						
AAK	Ala-Archa	7.63	27	P	Pn	03 59 28.7	+0.8
	comp=N,6.6nm,0.3s						
AAK				S	Sn	04 00 50.8	-2.0
	comp=N,34nm,0.7s						
AAK	Ala-Archa	7.63	27	Pn	Pn	03 59 27.8	-0.1
KBK	Karagaybulak	7.82	29	P	Pn	03 59 31.8	+1.3
	SNR=16						
SMLA	Simla	7.83	126	eP	Pn	03 59 29.8	-0.7
SMLA				eS	Sn	04 00 52.3	-5.2
SMLA				IAML		04 00 56.2	
	comp=N,106nm,0.5s						
SMLA				IAML		04 00 57.0	
	comp=E,96nm,0.3s						
FRU1	Bishkek	7.83	27		Pn	03 59 31.3	+0.7
CHMS	Chumysh	8.04	27	P	Pn	03 59 34.5	+1.1
	SNR=37						
USP	Ospenovka	8.18	25	P	Pn	03 59 37.0	+1.7
	SNR=28						
TKM2	Tokmak 2	8.31	31	P	Pn	03 59 37.7	+0.6
	SNR=16						
TKM2	Tokmak 2	8.31	31	⇑P	Pn	03 59 37.5	+0.4
	comp=E,16nm,0.6s						
TKM2				S	Sn	04 01 08.2	-1.2
	comp=E,16nm,0.6s						
TARG	Taragay, Kyrgy	8.54	45		Pn	03 59 42.5	+2.1
MDOK	Medeo	9.15	36	P	Pn	03 59 49.1	+0.6
	comp=E,6.9nm,0.5s						
GEYT	Alibeck	9.53	285	P	Pn	03 59 52.0	-1.6
	comp=E,1.8nm,0.3s,baz=119,slow=12,SNR=11						
GEYT				S	Sn	04 01 35.0	-3.7
	comp=E,1.0nm,0.3s,baz=193,slow=33,SNR=2.1						
GEYT	Alibeck	9.53	285		Pn	03 59 53.2	-0.4
GYA0B	ALIBECK ARRAY	9.53	285	⇓P	Pn	03 59 52.6	-1.0
GYA0B				S	Sn	04 01 34.7	-4.0
GYA0B	ALIBECK ARRAY	9.53	285	Pn	Pn	03 59 52.9	-0.7
NDI	New Delhi	9.60	137	eP	Pn	03 59 52.0	-2.6
NDI				eS	Sn	04 01 35.0	-5.7
PDGK	Podgornoye	10.52	43	P	Pn	04 00 06.7	-0.5
	comp=E,2.8nm,0.6s						
JHNI	Jhansi	12.88	142	eP	Pn	04 00 35.1	-3.6
JHNI				eS	Sn	04 02 49.9	-10
MAKZ	Makanchi	14.20	36	P	Pn	04 00 55.9	+0.2
	comp=E,9.6nm,0.6s						
MAKZ	Makanchi	14.20	36	Pn	Pn	04 00 57.1	+1.4
BHPL	Bhopal	14.30	150	eP	Pn	04 00 53.6	-3.6
BHPL				IAmb	IAmb	04 00 54.9	
	comp=Z,13nm,0.5s						
BHPL				eS	Sn	04 03 24.4	-10
MK31	Makanchi Array	14.34	37	P	Pn	04 00 58.3	+0.8
	comp=Z,5.4nm,0.7s,baz=227,slow=16,SNR=35						
MK31	Makanchi Array	14.34	37	Pn	Pn	04 00 57.6	+0.1
MKAR	Makanchi Array	14.34	37	P	Pn	04 00 57.4	-0.2
	comp=Z,0.2nm,0.3s,baz=228,slow=16,SNR=12						
AB31	Akbulak array	15.12	335	P	Pn	04 01 06.0	-1.5
	comp=Z,8.0nm,0.3s,baz=154,slow=12,SNR=591						
AB31				S	Sn	04 03 44.2	-10
	comp=Z,1.3nm,0.4s,baz=154,slow=22,SNR=5.6						
ABKAR	Akbulak array	15.12	335	Pn	Pn	04 01 06.0	-1.4
KKN	Kakani	15.48	117	eP	Pn	04 01 10.9	-1.5
	comp=Z,7.6nm,0.2s						
PKIN	Phulchoki	15.69	118	eP	Pn	04 01 14.1	-0.9
	comp=Z,6.4nm,0.2s						
PKI	Pulchoki	15.70	118	eP	Pn	04 01 13.8	-1.4
	comp=Z,2.8nm,0.2s						
GUN	Gumba	15.85	116	eP	Pn	04 01 15.5	-1.6
	comp=Z,25nm,0.5s						
KURBB	Kurchatov Arra	15.99	21	P	Pn	04 01 18.2	-0.1
	comp=Z,0.2nm,0.3s,baz=210,slow=10,SNR=25						
KURBB	Kurchatov Arra	15.99	21	P	Pn	04 01 17.1	-1.1
	comp=Z,6.8nm,0.7s						
KURK	Kurchatov	16.10	21	P	Pn	04 01 18.2	-1.4
AKTO	Aktyubinsk	16.79	333	P	P	04 01 30.8	+2.0
	comp=Z,2.0nm,0.3s,baz=157,slow=14,SNR=28						
AKTO	Aktyubinsk	16.79	333	P	Pn	04 01 28.4	+0.2
	comp=Z,9.1nm,0.8s						
AKTO				⇓S	Sn	04 04 24.9	-10
	comp=Z,4.4nm,0.8s						
BVAR	Borovoye Array	17.09	1	P	Pn	04 01 32.9	+1.1
	comp=Z,1.8nm,0.3s,baz=200,slow=17,SNR=23						
BRVK	Borovoye	17.12	1	P	Pn	04 01 33.2	+1.0
	comp=Z,3.9nm,0.5s						
BRVK	Borovoye	17.12	1		Pn	04 01 31.8	-0.4
BRVK				IAmb	IAmb	04 01 35.6	
	comp=Z,6.1nm,0.6s						
GNI	Garni	20.12	290	P	P	04 02 07.5	+2.1
GNI				IAmb	IAmb	04 02 32.1	
	comp=Z,7.8nm,0.8s						
ZAA0	Zalesovo Array	20.85	26	P	P	04 02 14.1	+1.2
	comp=Z,2.0nm,0.6s						
ZAA0	Zalesovo Array	20.85	26	P	P	04 02 14.7	+1.8
ZAA0				IAmb	IAmb	04 02 15.9	
	comp=Z,14nm,0.6s						
ZALV	Zalesovo Beam	20.85	26	P	P	04 02 14.9	+2.0
	comp=Z,20nm,0.6s,baz=220,slow=11,SNR=66						
ZALV	Zalesovo Beam	20.85	26	P	P	04 02 14.7	+1.8
ARU	Arti	21.86	343	P	P	04 02 27.5	+3.9
	comp=Z,1.4nm,0.5s,baz=118,slow=7.9,SNR=7.5						
ARU	Arti	21.86	343	P	P	04 02 25.7	+2.1
ARU				IAmb	IAmb	04 02 33.4	
	comp=Z,17nm,1.5s						
KBZ	Khabaz	21.97	299	P	P	04 02 28.2	+3.2
	comp=Z,1.6nm,0.6s,baz=58,slow=4.5,SNR=4.9						
GURO	Guroymak-BITLI	22.19	285	P	P	04 02 25.6	-2.0
BELG	Belogornoye	22.71	323	P	P	04 02 34.4	+1.8
	comp=Z,5.8nm,0.4s,baz=335,slow=1.8,SNR=9.2						
KIRV	Kirov	26.32	336	P	P	04 03 07.1	+1.7
	comp=Z,7.2nm,0.5s,baz=151,slow=3.3,SNR=4.6						
BRTR	Keskin Array B	28.65	289	P	P	04 03 29.5	+2.8
	comp=Z,0.7nm,0.7s,baz=106,slow=8.6,SNR=6.1						
AKASG	Malin Array Be	32.52	310	P	P	04 04 02.7	+2.3
	comp=Z,0.6nm,0.5s,baz=80,slow=7.1,SNR=3.2						
AKASG	Malin Array Be	32.52	310	P	P	04 03 59.7	-0.7
FINES	FINESS Array B	37.39	327	P	P	04 04 44.1	+1.9
	comp=Z,7.5nm,1.1s,baz=108,slow=6.2,SNR=4.9						
ARCES	ARCESS Array B	41.28	338	P	P	04 05 16.6	+2.2
	comp=Z,2.4nm,0.5s,baz=113,slow=8.3,SNR=24						
NOA	NORSAR Array B	44.23	323	P	P	04 05 39.5	+1.2
	comp=Z,0.9nm,0.5s,baz=98,slow=7.8,SNR=3.6						
JOW	Kunigami	50.13	83	LR	LR	04 29 05.9	
	comp=Z,303nm,18.5s,baz=102,slow=38						
ESDC	Sonseca Array	56.83	298	P	P	04 07 15.2	+1.8
	comp=Z,0.3nm,0.7s,baz=58,slow=7.4,SNR=5.1						
ESDC	Sonseca Array	56.83	298	IAmb	IAmb	04 07 31.1	
	comp=Z,2.2nm,1.5s						
TORD	Torodi Ar. Bea	64.69	268	P	P	04 08 07.5	+0.5
	comp=Z,0.9nm,0.8s,baz=42,slow=6.3,SNR=6.5						
TORD	Torodi Ar. Bea	64.69	268	IAmb	IAmb	04 08 09.2	
	comp=Z,2.8nm,1.4s						
INK	Inuvik	74.61	9	P	P	04 09 08.5	+1.4
	comp=Z,1.3nm,0.5s,baz=333,slow=6.5,SNR=14						
INK	Inuvik	74.61	9	IAmb	IAmb	04 09 09.3	
	comp=Z,1.7nm,0.7s						
ILAR	Eielson Array	75.59	15	P	P	04 09 13.5	+0.7
	comp=Z,0.6nm,1.0s,baz=300,slow=5.2,SNR=5.4						
YKA	Yellowknife Ar	81.84	2	P	P	04 09 48.8	+1.7
	comp=Z,0.6nm,0.7s,baz=351,slow=5.3,SNR=4.7						

IDC ***06*** *04:03:05.7±0.5, 7°.20S×155°.11E, h0^{km}, mb4.9/17, mb1 5.0/22, mb1mx4.9/31, mbtmp4.9/22, ML3.6/5, MS4.1/17, Ms1 4.1/17, ms1mx3.9/36, Error ellipse: s-maj=16.0km s-min=14.3km az=91.0*

NEIC ***06*** *04:03:08.2±2.0, 7°.24S±0°.08×155°.04E±0°.07, h11^{km}±3^{km}, mb5.3/185, Error ellipse: s-maj=11.7km s-min=9.3km az=214.0*

MOS ***06*** *04:03:09.9±1.0, 7°.18S×154°.96E, h38^{km}, mb5.3/34, Error ellipse: s-maj=8.9km s-min=7.5km az=108.8*

BJI ***06*** *04:03:10.2±0.0, 6°.94S×155°.51E, h46^{km}, mB5.4/30, mb5.0/56, Ms4.9/13, Ms7 4.6/14*

GCMT ***06*** *04:03:11.2±0.2, 7°.45S±0°.01×155°.19E±0°.02, h15^{km}, MW5.0/107, Moment Tensor Solution. s62,c80; s107,c153; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.96±.15; $M_{\theta\theta}$-2.41±.10; $M_{\phi\phi}$-1.54±.11; $M_{r\theta}$1.96±.21; $M_{\theta\phi}$1.98±.07; $M_{\phi r}$-1.22±.23; Best double couple: $M_0$4.60200×10^{16} NP1:ϕ_s312.00000°, δ30.00000°, λ96.00000°. NP2:ϕ_s125.00000°, δ60.00000°, λ86.00000°. Principal axes: T 4.5880, Plg75.0000°, Azm26.0000°; N 0.0370, Plg3.0000°, Azm127.0000°; P -4.6160, Plg15.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***06*** *04:03:14.8±0.4, 7°S±3°×15°5E±°, h35^{km}±3^{km}, M5.0/53, mb5.1/53, mB5.4/23, MLv5.5/3, Mw(mB)4.9/23, MwMwp4.8/5, Mwp5.1/5*

ISC 06 04:03:11.6±0.2, **7°.22S**±0°.04×**155°.16E**±0°.04, **h41**^{km}**, n571,** σ**1^{s}49**/508, **mb5.2**/170, **MS4.2**/20, **10C-10D,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	4.24	315	Pn	Pn	04 04 14.3	+0.6
HNR	Honiara	5.22	115	Pn	Pn	04 04 27.1	-0.1
	8.6nm,0.3s,baz=156,slow=5.3,SNR=1.8						
HNR				LR	LR	04 06 25.5	
	comp=Z,2μm,20.8s,baz=265,slow=38						
HNR	Honiara	5.22	115	P	Pn	04 04 31.1	+3.9
HNR	Honiara	5.22	115	Pn	Pn	04 04 31.1	+3.9
HNR	Honiara	5.22	115	P	Pn	04 04 39.7	+12
PMG	Port Moresby	8.21	254	Pn	Pn	04 05 07.4	-0.8
	4.4nm,0.3s,baz=59,slow=8.9,SNR=20						
PMG				Sn	Sn	04 06 45.1	+5.4
	4.3nm,0.3s,baz=319,slow=13,SNR=6.3						
PMG	Port Moresby	8.21	254	P	Pn	04 05 07.2	-1.0
PMG	Port Moresby	8.21	254	Pn	Pn	04 05 07.2	-1.0
PMG	Port Moresby	8.21	254	P	Pn	04 05 06.0	-2.2
PMG	Port Moresby	8.21	254	P	Pn	04 05 06.1	-2.2
MANU	Manus Island	9.31	303		Pn	04 05 22.9	-0.5
COEN	Coen	13.54	239	P	Pn	04 06 20.2	-1.1
	baz=14						
COEN	Coen	13.54	239	Pn	Pn	04 06 18.3	-2.9
COEN	Coen	13.54	239	P	Pn	04 06 19.1	-2.2
PATS	Pohnpei	14.32	13	P	Pn	04 06 32.3	+0.5
	baz=14						
SANVU	Saraoutou	14.36	126	Pn	Pn	04 06 32.6	+0.3
SANVU	Saraoutou	14.36	126	P	P	04 06 42.8	+4.3
MTSU	Mount Surprise	15.14	223	P	Pn	04 06 42.6	-0.2
	baz=15,SNR=7.6						
MTSU	Mount Surprise	15.14	223	P	Pn	04 06 42.5	-0.2
JAY	Jayapura	15.14	287	Pn	Pn	04 06 42.1	-0.7
	0.3nm,0.3s,baz=298,slow=2.4,SNR=5.2						
JAY				LR	LR	04 13 35.7	
	comp=Z,1μm,18.3s,baz=118,slow=42						
CTA	Charters Tower	15.43	213	Pn	Pn	04 06 45.6	-0.9
	0.3nm,0.3s,baz=41,slow=8.3,SNR=3.2						
CTAO	Charters Tower	15.43	213	P	Pn	04 06 44.5	-2.0
CTAO				pmax	pmax		
	comp=Z,29nm,1.0s						
CTAO	Charters Tower	15.43	213	Pn	Pn	04 06 44.5	-2.0
CTAO	Charters Tower	15.43	213	P	Pn	04 06 46.5	0.0
KOUNC	Koumac, New Ca	15.93	147	P	P	04 07 01.2	+5.2
RK1H	Rockhampton Ha	16.68	195	P	P	04 07 05.5	+1.1
	comp=Z,31nm,1.1s						
SMPI	Sarmi	17.20	287	P	Pn	04 07 08.8	-0.1
	comp=Z,34nm,0.8s						
NOUC	Port Laguerre	18.29	145	P	Pn	04 07 31.3	+9.0
DZM	Mont Dzumac	18.34	145	eP	Pn	04 07 23.7	+0.6
	comp=Z,77nm,1.1s						
DZM				eS	Sn	04 10 42.9	-4.2
	comp=Z,462nm,22.9s						
DZM				eLR	LR	04 11 46.3	
	comp=Z,547nm,21.3s						
DZM	Mont Dzumac	18.34	145	P	Pn	04 07 23.1	0.0
	comp=Z,0.3nm,0.3s,baz=159,slow=24,SNR=5.1						
DZM	Mont Dzumac	18.34	145	P	P	04 07 22.5	-0.3
DZM	Mont Dzumac	18.34	145	P	Pn	04 07 30.8	+7.7
EIDS	Eidsvold	18.46	192	P	Pn	04 07 24.1	-0.3
	baz=18,SNR=3.8						
EIDS	Eidsvold	18.46	192		P	04 07 22.4	-1.6
EIDS	Eidsvold	18.46	192	P	Pn	04 07 26.6	+2.2
	comp=Z,26nm,1.3s						
ONTNC	Ouen Toro	18.53	145	P	P	04 07 23.5	-1.3
YATNC	Mamie plateau,	18.59	144	P	Pn	04 07 32.6	+6.6
OUENC	Ouen Island, N	18.84	145	P	P	04 07 28.1	-0.1
OUENC	Ouen Island, N	18.84	145	P	Pn	04 07 37.4	+8.4
QIS	Mount Isa	20.06	227	P	P	04 07 41.3	-0.3
	baz=20,SNR=25						
QIS	Mount Isa	20.06	227	P	P	04 07 41.7	+0.1
RMQ	Roma	20.10	197	P	P	04 07 42.6	+0.7
	baz=20,SNR=16						
RMQ	Roma	20.10	197	P	Pn	04 07 44.8	+0.8
KWAJ	Kwajalein Atol	20.19	38	P	Pn	04 07 45.3	+0.2
KWAJ				pmax	pmax		
	comp=Z,1μm,1.5s						
KWAJ	Kwajalein Atol	20.19	38	P	Pn	04 07 45.3	+0.2
QLP	Quilpie	21.88	207	P	P	04 08 01.0	-0.1
	baz=22,SNR=6.6						
QLP	Quilpie	21.88	207	P	P	04 08 02.8	+1.7
KDU	Kakadu	22.98	255	P	P	04 08 11.6	-1.3
	baz=23,SNR=16						
KDU	Kakadu	22.98	255	P	P	04 08 11.6	-1.3
	comp=Z,118nm,1.4s						
FAKI	Fak Fak	23.21	279	P	P	04 08 16.4	+1.1
	comp=Z,1μmcomp=Z,1μmcomp=Z,43nm,0.8s						
FAKI	Fak Fak	23.21	279	P	P	04 08 13.4	-1.8
FAKI	Fak Fak	23.21	279	P	P	04 08 15.7	+0.4
ARMA	Armidale	23.31	188	P	P	04 08 16.0	-0.2
	baz=23,SNR=12						
ARMA	Armidale	23.31	188	P	P	04 08 14.6	-1.5
ARMA				IAmb	IAmb	04 08 27.6	
	comp=Z,72nm,1.2s						
ARMA	Armidale	23.31	188	P	P	04 08 19.6	+3.4
SAUI	Saumlaki	23.66	267	P	P	04 08 19.0	-0.5
SAUI				IAmb	IAmb	04 08 41.0	
	comp=Z,139nm,0.9s						
WR0	Warramunga Arr	23.66	236	P	P	04 08 18.2	-1.4
WR0				IAmb	IAmb	04 08 20.4	
	comp=Z,94nm,0.9s						
WRAB	Tennant Creek	23.81	236	P	P	04 08 19.8	-1.1
WRAB				pmax	pmax		
	comp=Z,98nm,1.1s						
WRAB	Tennant Creek	23.81	236	P	P	04 08 19.8	-1.1
WRAB				IAmb	IAmb	04 08 21.7	
	comp=Z,98nm,1.1s						
WB2	Warramunga Arr	23.81	236	P	P	04 08 19.9	-1.0
	baz=24						
WB2	Warramunga Arr	23.81	236	P	P	04 08 19.8	-1.2
WB2				IAmb	IAmb	04 08 21.8	
	comp=Z,103nm,1.1s						
WRA	Warramunga Arr	23.82	236	P	P	04 08 19.8	-1.3
	comp=Z,55nm,0.9s,baz=62,slow=9.5,SNR=134						
WRA				S	S	04 12 41.0	+6.8
	comp=Z,3.7nm,1.2s,baz=63,slow=14,SNR=5.9						
WRA				ScP	ScP	04 15 44.6	+5.5
	comp=Z,4.2nm,1.0s,baz=56,slow=2.3,SNR=10						
WRA				LR	LR	04 17 14.4	
	comp=Z,824nm,19.9s,baz=40,slow=36						
WRA	Warramunga Arr	23.82	236	i P	P	04 08 19.7	-1.3
WRA				pmax	pmax		
	comp=Z,56nm,0.9s						
MTN	Manton Dam	24.30	255	P	P	04 08 25.6	+0.1
	baz=24,SNR=5.6						
MTN	Manton Dam	24.30	255	P	P	04 08 24.4	-1.1
MTN				IAmb	IAmb	04 08 26.4	
	comp=Z,136nm,1.2s						
MTN	Manton Dam	24.30	255	P	P	04 08 25.5	+0.1
	comp=Z,112nm,1.3s						
DRS	Darwin Rock St	24.45	256	P	P	04 08 27.1	+0.3
	comp=Z,46nm,0.8s						
INKA	Innaminka	24.55	212	P	P	04 08 27.6	0.0
	comp=Z,425nm,1.1s						
MSVF	Nonsavu	24.64	117	P	P	04 08 28.3	-0.3
	comp=Z,52nm,1.2s,baz=196,slow=3.4,SNR=6.1						
MSVF	Nonsavu	24.64	117	⇑eP	P	04 08 31.0	+2.4
MSVF	Nonsavu	24.64	117	P	P	04 08 29.2	+0.6
MSVF				IAmb	IAmb	04 08 44.6	
	comp=Z,114nm,1.2s						
BNDI	Bandanaira	25.26	275	P	P	04 08 34.3	+0.1
DGTI	Dogotuki	25.67	113	P	P	04 08 48.4	+10
CMSA	Cobar Meteorol	25.76	199	P	P	04 08 38.2	-0.3
	baz=26,SNR=52						
CMSA	Cobar Meteorol	25.76	199	P	P	04 08 40.2	+1.7
MGCD	Mangrove Creek	26.13	188	P	P	04 08 43.3	+1.4
	baz=26,SNR=6.2						
MGCD	Mangrove Creek	26.13	188	P	P	04 08 44.7	+2.8
	comp=Z,55nm,1.1s						
AS31	Alice Springs	26.14	229	P	P	04 08 40.7	-1.5
ASAR	Alice Springs	26.14	229	P	P	04 08 41.0	-1.2
	comp=Z,18nm,0.9s,baz=61,slow=8.9,SNR=113						
ASAR				ScP	ScP	04 15 51.1	+5.6
	comp=Z,5.4nm,1.0s,baz=51,slow=3.4,SNR=18						
ASAR				LR	LR	04 18 44.3	
	comp=Z,603nm,19.0s,baz=42,slow=36						
ASAR	Alice Springs	26.14	229	P	P	04 08 40.1	-2.1
ASAR	Alice Springs	26.14	229	P	P	04 08 40.1	-2.1
ASPA	Alice Springs	26.15	229	P	P	04 08 41.0	-1.2
	baz=26						
KNRA	Kununurra	27.17	250	P	P	04 08 50.9	-0.6
	baz=27,SNR=11						
KNRA	Kununurra	27.17	250	P	P	04 08 50.2	-1.3
KNRA				IAmb	IAmb	04 08 56.6	
	comp=Z,43nm,1.0s						
KNRA	Kununurra	27.17	250	P	P	04 08 51.6	+0.1
OOD	Oodnadatta	27.54	220	P	P	04 08 55.5	+0.8
STKA	Stephens Creek	27.60	206	P	P	04 08 53.8	-1.4
	comp=Z,22nm,1.0s,baz=15,slow=9.8,SNR=18						
STKA				LR	LR	04 19 34.0	
	comp=Z,1μm,20.2s,baz=22,slow=36						
STKA	Stephens Creek	27.60	206	P	P	04 08 54.0	-1.1
	baz=28,SNR=26						
STKA	Stephens Creek	27.60	206	P	P	04 08 54.0	-1.1
STKA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
STKA	Stephens Creek	27.60	206	P	P	04 08 54.0	-1.1
LKBA	Tubou, Lakemba	27.60	116	P	P	04 09 05.6	+10
LCRK	Leigh Creek	28.04	212	P	P	04 09 01.5	+2.4
CAN	Canberra	28.53	191	P	P	04 09 02.0	-1.4
CAN				pmax	pmax		
	comp=Z,42nm,1.4s						
CAN	Canberra	28.53	191	P	P	04 09 02.0	-1.4
SANI	Sanana	29.52	279	P	P	04 09 13.7	+1.3
	comp=Z,25nm,0.9s						
HTT	Hallett	30.11	208	P	P	04 09 16.9	-0.6
	baz=30,SNR=5.6						
HTT	Hallett	30.11	208	P	P	04 09 18.3	+0.8
	comp=Z,23nm,1.2s						
MULG	Mulgathing	30.30	218	P	P	04 09 21.7	+2.5
	comp=Z,24nm,1.5s						
SOEI	Soe	30.65	263	P	P	04 09 21.6	-1.0
SOEI				IAmb	IAmb	04 09 42.6	
	comp=Z,28nm,1.0s						
FITZ	Fitzroy Crossi	30.71	247	LR	LR	04 21 08.9	
	comp=Z,344nm,20.4s,baz=52,slow=35						
FITZ	Fitzroy Crossi	30.71	247	P	P	04 09 21.9	-1.0
	baz=31						
WRKA	Warakurna	31.19	232	P	P	04 09 25.5	-1.6
	baz=31,SNR=24						
WRKA	Warakurna	31.19	232	P	P	04 09 27.2	+0.1
BATI	Baumata	31.26	262	LR	LR	04 23 14.1	
	comp=Z,632nm,20.4s,baz=113,slow=39						
ARPS	Mount Arapiles	31.82	201	P	P	04 09 32.7	+0.3
	baz=32,SNR=6.3						
ARPS	Mount Arapiles	31.82	201	P	P	04 09 34.9	+2.4
DAV	Davao City (W)	32.74	295	LR	LR	04 23 12.4	
	comp=Z,117nm,18.2s,baz=154,slow=37						
EDFI	Ende, Flores	33.17	265	P	P	04 09 43.7	-1.0
	comp=Z,328nmcomp=Z,23nm,1.0s						
BSSI	Bau Bau, Buton	34.44	270	P	P	04 09 55.1	-0.6
	comp=Z,31nm,0.9s						
FORT	Forrest	34.53	224	P	P	04 09 56.0	-0.2
	baz=35						
FORT	Forrest	34.53	224	P	P	04 09 55.3	-1.0
FORT				IAmb	IAmb	04 09 56.6	
	comp=Z,50nm,1.0s						
FORT	Forrest	34.53	224	P	P	04 09 57.3	+1.0
BKSI	Bulukumba	34.87	271	P	P	04 09 58.4	-1.0
	comp=Z,824nmcomp=Z,19nm,0.9s						
BNSI	Bone	34.98	273	P	P	04 10 01.9	+1.6
	comp=Z,782nmcomp=Z,55nm,1.0s						
KAPI	Kappang	35.27	272	LR	LR	04 25 21.6	
	comp=Z,58nm,19.9s,baz=134,slow=38						
KAPI	Kappang	35.27	272	P	P	04 10 02.5	-0.3
KAPI				pmax	pmax		
	comp=Z,35nm,1.0s						
KAPI	Kappang	35.27	272	P	P	04 10 02.5	-0.3
KAPI				IAmb	IAmb	04 10 06.1	
	comp=Z,35nm,1.0s						
KAPI	Kappang	35.27	272	P	P	04 10 03.7	+0.9
TOLI2	Tolitoli	35.28	282	P	P	04 10 02.3	-0.6
TOLI2	Tolitoli	35.28	282	P	P	04 10 04.0	+1.1
SPSI	Sidrap Palu	35.36	273	P	P	04 10 03.8	+0.2
	comp=Z,19nm,1.0s						
TTSI	Tana Toraja	35.43	275	P	P	04 10 05.0	+0.8
	comp=Z,4μmcomp=Z,13nm,0.5s						
WBSI	Waikabubak, Su	35.45	264	P	P	04 10 02.9	-1.5
	comp=Z,48nm,0.9s						
MPSI	Mapaga	35.96	281	P	P	04 10 07.9	-0.8
	comp=Z,31nm,0.8s						
MBWA	Marble Bar	36.92	244	P	P	04 10 16.4	-0.5
PSA00	Pilbara Seismi	36.94	244	P	P	04 10 15.1	-1.9
PSA00				IAmb	IAmb	04 10 17.2	
	comp=Z,55nm,1.1s						
PSA00	Pilbara Seismi	36.94	244	P	P	04 10 17.3	+0.3
PLAI	Plampang	37.04	265	P	P	04 10 18.8	+0.8
	comp=Z,634nmcomp=Z,44nm,0.7s						
PLAI	Plampang	37.04	265	P	P	04 10 18.0	0.0
MYLDM	Lahad Datu	38.60	288	P	P	04 10 28.9	-2.3
MEEK	Meekatharra	39.72	237	P	P	04 10 39.6	-0.8
	baz=40,SNR=8.4						
MEEK	Meekatharra	39.72	237	P	P	04 10 40.6	+0.2
	comp=Z,38nm,1.7s						
BBKI	Banjar Baru	40.30	273	P	P	04 10 45.4	+0.1
	comp=Z,4μmcomp=Z,40nm,1.0s						
SPMM	Sapulut	40.39	286	P	P	04 10 49.0	+2.9
JAGI	Jajag, Banyuwa	40.63	265	P	P	04 10 47.9	-0.1
	comp=Z,40nm,0.4s						
JAGI	Jajag, Banyuwa	40.63	265	P	P	04 10 45.1	-2.9
JAGI				IAmb	IAmb	04 10 48.6	
	comp=Z,42nm,0.8s						
JAGI	Jajag, Banyuwa	40.63	265	P	P	04 10 48.2	+0.2
KLBR	Kellerberrin	42.46	230	P	P	04 11 01.7	-1.2
	baz=42,SNR=11						
KLBR	Kellerberrin	42.46	230	P	P	04 11 02.8	-0.1
MORW	Morawa	42.76	234	P	P	04 11 04.5	-0.8
	baz=43,SNR=4.3						
MORW	Morawa	42.76	234	P	P	04 11 03.4	-1.9
MORW	Morawa	42.76	234	P	P	04 11 06.1	+0.8
PBKI	Pangkalan Bun	43.54	274	P	P	04 11 13.1	+1.3
	comp=Z,194nm,1.1s						
PBKI				pP	pP	04 11 20.7	-1.0
	comp=Z,194nm,1.1s						
MUN	Mundaring	43.81	231	P	P	04 11 13.4	-0.3
	baz=44						
SBUM	Sibu	43.91	281	P	P	04 11 15.3	+0.5
STKI	Sintang	44.16	278	P	P	04 11 18.1	+1.3
	comp=Z,30nm,0.7s						
SMRI	Semarang	44.36	267	P	P	04 11 18.1	-0.3
SMRI				IAmb	IAmb	04 11 39.4	
	comp=Z,48nm,1.0s						
YULB	Yu-li	44.96	314	P	P	04 11 23.1	+0.2
NACB	Ninganchiao	45.23	315	P	P	04 11 25.3	+0.2
SSLB	Suanglung	45.45	314	P	P	04 11 25.1	-1.8
SSLB				IAmb	IAmb	04 11 30.6	
	comp=Z,72nm,1.3s						
SSLB	Suanglung	45.45	314	P	P	04 11 31.6	+4.7
KSM	Kuching	45.57	279	P	P	04 11 29.0	+1.0
KSM	Kuching	45.57	279	P	P	04 11 26.2	-1.8
KSM				IAmb	IAmb	04 11 31.4	
	comp=Z,35nm,1.0s						
KSM	Kuching	45.57	279	P	P	04 11 29.2	+1.2
MJAR	Matsushiro Arr	46.35	341	PcP	PcP	04 13 08.3	-0.1
	comp=Z,2.7nm,0.8s,baz=169,slow=4.0,SNR=4.9						
MJAR				LR	LR	04 28 16.7	
	comp=Z,67nm,21.4s,baz=190,slow=33						
DLV	T Lat	50.16	292	P	P	04 12 06.1	+2.3
KASI	Kota Agung	50.36	269	P	P	04 12 19.4	+14
TJN	Taejon	50.61	331	⇑eP	P	04 12 06.5	0.0
TJN	Taejon	50.61	331	P	P	04 12 11.4	+4.9
MDSI	Maura Dua	50.77	270	P	P	04 12 07.8	-0.4
	comp=Z,421nmcomp=Z,14nm,0.9s						
DSRI	Dabo	50.87	275	P	P	04 12 11.0	+2.0
	comp=Z,28nm,1.0s						
KSRS	Korea Array	51.22	332	P	P	04 12 10.4	-0.6
	comp=Z,9.4nm,1.2s,baz=149,slow=7.9,SNR=12						
KSRS				LR	LR	04 30 58.9	
	comp=Z,178nm,20.0s,baz=56,slow=33						
KSAR	Wonju Array Be	51.22	332	P	P	04 12 10.0	-1.1
KSAR	Wonju Array Be	51.22	332	P	P	04 12 10.0	-1.1
MYKOM	Kota Tinggi	51.97	278	P	P	04 12 18.0	+0.8

MYKOM	**Kota Tinggi**	51.97	278	P	P	04 12 15.9	-1.3
MYKOM				IAmb	IAmb	04 12 20.4	
	comp=Z,26nm,0.9s						
NJ2	**Nanjing**	52.19	320	*e*P	P	04 12 20.8	+2.3
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
WHN	**Wuhan**	54.22	316	⇑P	P	04 12 34.0	+0.6
VLA	**Vladivostok**	54.39	339	⇑*e*P	P	04 12 32.9	-1.5
VLA				pmax	pmax		
	comp=Z,37nm,1.0s						
PPT	**Papeete**	54.78	106	LR	LR	04 31 48.7	
	comp=Z,111nm,20.3s,baz=303,slow=31						
PPT2	**Papeete2**	54.78	106	*e*LR	LR	04 28 33.0	
	comp=Z,360nm,29.2s						
PDSI	**Padang**	54.88	274	P	P	04 12 39.7	+1.1
TIAR	**Tiarei**	55.00	106	*e*P	P	04 12 40.4	+1.0
	comp=Z,0.2nm,0.8s						
IPM	**Ipoh**	55.26	281	P	P	04 12 44.0	+2.7
IPM	**Ipoh**	55.26	281	IAmb	IAmb	04 12 44.2	
	comp=Z,28nm,1.1s						
IPM	**Ipoh**	55.26	281	P	P	04 12 43.1	+1.8
USRK	**Ussuriysk Ar.**	55.30	340	P	P	04 12 40.8	-0.2
	comp=Z,6.5nm,1.0s,baz=137,slow=6.7,SNR=6.3						
KULM	**Kulim**	55.79	281	IAmb	IAmb	04 12 48.0	
	comp=Z,36nm,1.3s						
MNSI	**Mandailing Nat**	56.01	276	P	P	04 12 43.9	-2.8
	comp=Z,1µmcomp=Z,57nm,0.9s						
TIA	**Tai'an**	56.05	323	*e*P	P	04 12 45.2	-1.3
TIA				pmax	pmax		
	comp=Z,14nm,1.0s						
SISI	**Saibi**	56.18	273	P	P	04 12 49.8	+1.9
	comp=Z,17nm,0.8s						
PMOR	**Pomariorio Ree**	56.28	103	*e*P	P	04 12 49.6	+1.0
	comp=Z,154nm,1.2s						
VAH	**Vaihoa**	56.55	103	*e*P	P	04 12 51.2	+0.7
	comp=Z,75nm,1.3s						
CN2	**Changchun**	57.47	335	*e*P	P	04 12 55.6	-0.8
CN2				*e*PP	PP	04 15 05.6	+1.2
CN2				*e*S	S	04 20 49.8	-1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ENH	**Enshi**	57.51	313	P	P	04 12 56.4	-0.6
ENH				IAmb	IAmb	04 12 58.2	
	comp=Z,55nm,1.0s						
GYA	**Guiyang**	57.72	307	⇓P	P	04 12 59.8	+1.1
GYA				pP	pwP	04 13 17.0	+2.2
GYA				pmax	pmax		
	comp=Z,23nm,1.0s						
GYA				pmax	pmax		
	comp=Z,300nm,5.2s						
GSI	**Gunungsitoli**	58.07	276	P	P	04 13 01.2	-0.1
	comp=Z,63nm,1.4s						
GSI	**Gunungsitoli**	58.07	276	P	P	04 12 59.1	-2.2
GSI	**Gunungsitoli**	58.07	276	P	P	04 13 02.1	+0.8
BJT	**Baijiatuau**	59.19	326	P	P	04 13 08.6	0.0
BJT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BJT	**Baijiatuau**	59.19	326	P	P	04 13 08.6	0.0
KLR	**Kul'dur**	59.83	342	LR	LR	04 42 18.2	
	comp=Z,80nm,18.5s,baz=116,slow=39						
KLR	**Kul'dur**	59.83	342	⇑*e*P	P	04 13 12.2	-0.6
KLR				pmax	pmax		
	comp=Z,21nm,1.4s						
XAN	**Xi'an**	59.98	316	P	P	04 13 14.4	+0.2
XAN				pP	sP	04 13 27.4	-1.6
XAN				pmax	pmax		
	comp=Z,33nm,0.8s						
PET	**Petropavlovsk**	60.09	2	*e*P	P	04 13 15.1	+0.7
PET				*e**PP	pwP	04 13 29.1	-0.9
PET				*e*S	S	04 21 26.7	+2.2
PET				pmax	pmax		
	comp=Z,38nm,0.8s						
PEA0B	**Petropavlovsk-**	60.14	2	P	P	04 13 14.7	-0.1
PEA0B				pmax	pmax		
	comp=Z,79nm,1.1s						
PEA0B	**Petropavlovsk-**	60.14	2	P	P	04 13 14.7	-0.1
PETK	**Petropavlovsk-**	60.14	2	P	P	04 13 15.2	+0.4
	comp=Z,38nm,0.9s,baz=181,slow=10,SNR=27						
PETK	**Petropavlovsk-**	60.14	2	P	P	04 13 14.4	-0.4
PETK	**Petropavlovsk-**	60.14	2	P	P	04 13 14.4	-0.4
KMI	**Kunming**	60.28	304	⇓P	P	04 13 18.3	+1.7
KMI				pP	pwP	04 13 33.5	+0.8
KMI				PP	PP	04 15 36.6	+6.6
KMI				S	S	04 21 23.9	-4.6
KMI				pmax	pmax		
	comp=Z,24nm,1.4s						
KMI				LR	LR		
	comp=Z,230nm,10.8s						
KMI				LR	LR		
	comp=Z,250nm,16.6s						
CMAR	**Chiang Mai Arr**	61.03	296	P	P	04 13 22.9	+1.4
	comp=Z,12nm,0.7s,baz=112,slow=4.9,SNR=37						
CMAR				PKPPKP	P'P'df	04 42 47.6	+8.3
	comp=Z,1.2nm,0.4s,baz=282,slow=4.5,SNR=11						
CMAR	**Chiang Mai Arr**	61.03	296	*i* P	P	04 13 23.0	+1.4
CMAR				pmax	pmax		
	comp=Z,13nm,0.8s						
CMAR	**Chiang Mai Arr**	61.03	296	P	P	04 13 21.4	-0.2
CHTO	**Chiang Mai**	61.15	296	P	P	04 13 21.9	-0.5
CHTO				pmax	pmax		
	comp=Z,30nm,1.1s						
CHTO	**Chiang Mai**	61.15	296	P	P	04 13 21.9	-0.5
CHTO				IAmb	IAmb	04 13 44.1	
	comp=Z,30nm,1.1s						
CHTO	**Chiang Mai**	61.15	296	P	P	04 13 24.7	+2.3
CD2	**Chengdu**	62.09	311	*e*P	P	04 13 29.0	+0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	62.37	324	*e*P	P	04 13 34.4	+4.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,5.7s						
TAOE	**Nuku Hiva Isla**	64.01	96	*e*LR	LR	04 32 50.1	
	comp=Z,156nm,22.0s						
HIA	**Hailar**	64.20	335	P	P	04 13 40.8	-1.3
HIA				pmax	pmax		
	comp=Z,11nm,0.7s						
HIA	**Hailar**	64.20	335	P	P	04 13 40.8	-1.3
HIA				IAmb	IAmb	04 13 42.8	
	comp=Z,11nm,0.7s						
LZH	**Lanzhou**	64.59	316	⇓P	P	04 13 46.7	+1.5
LZH				pP	pwP	04 14 02.5	+0.8
LZH				pmax	pmax		
	comp=Z,50nm,1.2s						
LZH				pmax	pmax		
	comp=Z,220nm,4.9s						
ZEA	**Zeya**	65.14	342	*e*P	P	04 13 48.7	+0.5
ZEA				*e*		04 14 03.4	
ZEA				pmax	pmax		
	comp=N,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CASY	**Casey**	66.43	198	P	P	04 13 56.5	+0.2
CASY				IAmb	IAmb	04 14 07.5	
	comp=Z,17nm,1.1s						
MA2	**Magadan**	66.68	358	*de*P	P	04 13 57.7	-0.2
MA2				pmax	pmax		
	comp=Z,68nm,2.5s						
MA2	**Magadan**	66.68	358	P	P	04 13 57.9	0.0
NIKH	**Nikolski High**	67.29	23	P	P	04 14 02.0	0.0
	baz=219						
UNV	**Unalaska Valle**	68.87	23	P	P	04 14 11.9	+0.1
	baz=221						
GTA	**Gaotai**	69.02	317	⇑P	P	04 14 14.4	+1.1
GTA				pP	sP	04 14 26.7	-1.5
GTA				sP	pwP	04 14 31.7	+1.8
GTA				pmax	pmax		
	comp=Z,26nm,1.2s						
GTA				pmax	pmax		
	comp=Z,260nm,4.7s						
GTA				LR	LR		
	comp=Z,300nm,17.4s						
GTA				LR	LR		
	comp=Z,250nm,17.1s						
ULN	**Ulaanbaatar**	69.28	328	*c* *i*P	P	04 14 15.1	+0.3
ULN				pmax	pmax		
	comp=Z,25nm,1.7s						
ULN	**Ulaanbaatar**	69.28	328	P	P	04 14 14.1	-0.6
SHL	**Shillong**	69.55	301	P	P	04 14 16.5	-0.4
SHL				pmax	pmax		
	comp=Z,26nm,0.8s						
SHL	**Shillong**	69.55	301	P	P	04 14 16.5	-0.4
SHL				IAmb	IAmb	04 14 18.6	
	comp=Z,26nm,0.8s						
SONM	**Songino Array**	69.61	327	P	P	04 14 17.0	+0.2
	comp=Z,8.1nm,0.8s,baz=136,slow=7.6,SNR=52						
SONM	**Songino Array**	69.61	327	P	P	04 14 16.7	-0.1
SONM				pmax	pmax		
	comp=Z,12nm,1.0s						
SONM	**Songino Array**	69.61	327	P	P	04 14 16.7	-0.1
VNDA	**Vanda**	70.35	178	P	P	04 14 21.0	+0.3
VNDA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VNDA	**Vanda**	70.35	178	P	P	04 14 21.0	+0.3
LSA	**Lhasa**	71.53	304	P	P	04 14 29.3	0.0
LSA				pmax	pmax		
	comp=Z,22nm,1.1s						
LSA	**Lhasa**	71.53	304	P	P	04 14 29.3	0.0
LSA				IAmb	IAmb	04 14 31.6	
	comp=Z,22nm,1.1s						
YAK	**Yakutsk**	71.81	348	*e*P	P	04 14 29.3	-0.3
YAK				*e**PP	pP	04 14 39.1	-1.5
YAK				*e*		04 14 48.1	
YAK				*e*		04 17 04.1	
YAK				*e*PPP	PPP	04 18 53.7	
YAK				*e*S	S	04 23 48.3	+1.4
YAK				*e*		04 24 31.1	
YAK				*e*SS	SS	04 28 28.0	+4.1
YAK				*e*SSS	SSS	04 31 39.4	
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,399nm,4.4s						
YAK				pmax	pmax		
	comp=N,128nm,3.0s						
YAK				pmax	pmax		
	comp=E,347nm,4.1s						
YAK				smax	smax		
	comp=N,107nm,2.6s						
YAK				smax	smax		
	comp=E,44nm,2.4s						
YAK	**Yakutsk**	71.81	348	P	P	04 14 30.4	+0.8
YAK				IAmb	IAmb	04 14 31.0	
	comp=Z,34nm,1.0s						
ZAK	**Zakamensk**	72.77	328	*e*P	P	04 14 35.4	-0.4
ZAK				*e*		04 14 48.4	
ZAK				pmax	pmax		
	comp=Z,19nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,14nm,1.2s						
TAPN	**Taplejung**	73.66	301	*e*P	P	04 14 42.0	+0.2
	comp=Z,36nm,0.7s						
ODAN	**Odare**	73.79	301	*e*P	P	04 14 42.9	+0.4
	comp=Z,90nm,0.7s						
RAMN	**Ramite**	74.49	300	*e*P	P	04 14 47.4	+0.8
	comp=Z,19nm,0.5s						
GUN	**Gumba**	75.37	301	*e*P	P	04 14 52.0	+0.2
	comp=Z,58nm,0.7s						
BILL	**Bilibino**	75.50	4	*d* *i*P	P	04 14 51.4	+0.2
BILL				*i*		04 14 58.1	
BILL				pmax	pmax		
	comp=Z,54nm,1.3s						
BILL				MLR	MLR		
	comp=Z,173nm,16.0s						
BILL	**Bilibino**	75.50	4	P	P	04 14 51.7	+0.5
BILL				IAmb	IAmb	04 14 52.8	
	comp=Z,33nm,0.9s						
PKI	**Pulchoki**	75.68	301	*e*P	P	04 14 53.3	-0.2
PKIN	**Phulchoki**	75.69	301	*e*P	P	04 14 53.3	-0.2
KKN	**Kakani**	75.85	301	*e*P	P	04 14 54.9	+0.5
	comp=Z,38nm,0.7s						
DMN	**Daman**	75.95	301	*e*P	P	04 14 55.4	+0.4
	comp=Z,59nm,0.7s						
GKN	**Gorkha**	76.46	301	*e*P	P	04 14 57.9	+0.2
KOLN	**Koldanda**	77.28	300	*e*P	P	04 15 02.0	-0.4
DANN	**Dangsing**	77.29	301	*e*P	P	04 15 01.9	-0.7
	comp=Z,107nm,1.2s						
ANM	**Nome**	77.40	16	P	P	04 15 03.3	+1.2
	baz=220,SNR=6.8						
PYUN	**Piuthan**	77.89	301	*e*P	P	04 15 05.2	-0.6
	comp=Z,64nm,1.1s						
P19K	**Oil Pt**	78.16	24	P	P	04 15 06.4	0.0
	baz=233						
N19K	**Bonanza Creek**	78.38	23	P	P	04 15 07.8	+0.1
	baz=231						
M19K	**Big River Lodg**	79.10	22	P	P	04 15 12.7	+1.2
	baz=231						
WMQ	**Urumqi**	79.10	317	*e*P	P	04 15 12.3	+0.3
WMQ				pP	pwP	04 15 30.1	+1.3
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.5s						
L19K	**White Mountain**	79.11	21	P	P	04 15 11.9	+0.3
L19K	**White Mountain**	79.11	21	P	P	04 15 12.5	+0.9
	baz=231,SNR=35						
TTA	**Tatalina**	79.18	21	IAmb	IAmb	04 15 13.7	
	comp=Z,37nm,1.0s						
TTA	**Tatalina**	79.18	21	P	P	04 15 12.7	+0.7
	baz=230,SNR=20						
BRLK	**Bradley Lake**	79.18	25	IAmb	IAmb	04 15 13.0	
	comp=Z,27nm,0.9s						
BRSE	**Bradley Lake S**	79.23	25	P	P	04 15 12.4	+0.2
	baz=235						
HYB	**Hyderabad**	79.50	289	*i* P	P	04 15 14.0	-0.7
L20K	**Farewell, AK**	79.65	22	P	P	04 15 15.4	+0.9
	baz=232						
SEW	**Seward**	79.97	25	P	P	04 15 16.5	+0.3
	baz=236,SNR=5.3						
GCSA	**Galena City Sc**	80.09	19	P	P	04 15 17.6	+0.9
	baz=228						
K20K	**Telida**	80.13	21	IAmb	IAmb	04 15 19.1	
	comp=Z,38nm,0.9s						
K20K	**Telida**	80.13	21	P	P	04 15 18.0	+0.9
	baz=231,SNR=17						
RC01	**Rabbit Creek A**	80.41	24	P	P	04 15 18.8	+0.2
	baz=236,SNR=9.9						
PPLA	**Purkeypile**	80.52	22	P	P	04 15 19.4	+0.1
	baz=233						
TIXI	**Tiksi**	80.60	352	⇓*i*P	P	04 15 18.9	-0.5
TIXI				pmax	pmax		
	comp=Z,16nm,1.7s						
TIXI	**Tiksi**	80.60	352	P	P	04 15 19.2	-0.3
J20K	**Nowinta River**	80.62	20	P	P	04 15 20.6	+0.9
	baz=231,SNR=26						
M22K	**Willow**	80.63	23	P	P	04 15 19.5	-0.3
	baz=235,SNR=10						
RDOG	**Red Dog Mine**	80.69	15	P	P	04 15 28.3	+8.3
	baz=222,SNR=55						
PWL	**Port Wells**	80.85	24	P	P	04 15 21.3	+0.3
	baz=237,SNR=17						
CAST	**Castle Rocks**	80.88	21	P	P	04 15 21.0	-0.1
	baz=233,SNR=20						
PMR	**Palmer**	80.93	24	P	P	04 15 21.3	-0.1
PMR				pmax	pmax		
	comp=Z,29nm,0.8s						
PMR	**Palmer**	80.93	24	P	P	04 15 21.3	-0.1
PMR				IAmb	IAmb	04 15 21.9	
	comp=Z,29nm,0.8s						
PMR	**Palmer**	80.93	24	P	P	04 15 21.5	+0.1
	baz=236,SNR=11						
CUT	**Chulitna**	80.95	23	P	P	04 15 21.3	-0.2
	baz=235,SNR=7.2						
CHUM	**Lake Minchumin**	81.08	21	P	P	04 15 22.6	+0.5
	baz=233,SNR=37						
KNK	**Knik Glacier**	81.10	24	IAmb	IAmb	04 15 24.5	
	comp=Z,33nm,1.1s						
KNK	**Knik Glacier**	81.10	24	P	P	04 15 22.8	+0.5
	baz=237,SNR=6.2						
GHO	**Glory Hole Cre**	81.11	23	IAmb	IAmb	04 15 23.6	
	comp=Z,37nm,0.8s						
SML	**Sawmill**	81.37	24	P	P	04 15 24.1	+0.3
	baz=237,SNR=16						
GLI	**Glacier Island**	81.37	25	IAmb	IAmb	04 15 24.9	
	comp=Z,37nm,0.8s						
GLI	**Glacier Island**	81.37	25	P	P	04 15 24.0	+0.3
	baz=238						
KTH	**Kantishna Hill**	81.38	21	IAmb	IAmb	04 15 24.1	
	comp=Z,39nm,0.9s						
DGZ	**Jazzator, Alta**	81.42	323	⇑*i*P	P	04 15 24.1	-0.4
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TRF	**Thorofare Moun**	81.55	22	IAmb	IAmb	04 15 26.8	
	comp=Z,38nm,0.8s						
TRF	**Thorofare Moun**	81.55	22	P	P	04 15 24.2	-0.7
	baz=235						
FID	**Port Fidalgo**	81.56	25	IAmb	IAmb	04 15 25.8	
	comp=Z,23nm,0.8s						
BPAW	**Bear Paw Mtn.**	81.67	21	P	P	04 15 25.0	-0.3
BPAW				IAmb	IAmb	04 15 25.8	
	comp=Z,20nm,1.1s						
BPAW	**Bear Paw Mtn.**	81.67	21	P	P	04 15 24.9	-0.5
	baz=234						
EYAK	**Cordova Ski Ar**	81.76	25	P	P	04 15 26.3	+0.5
	baz=239						
SCM	**Sheep Creek Mo**	81.78	24	P	P	04 15 26.3	+0.3
	baz=238,SNR=7.8						
I21K	**Tanana**	81.97	20	P	P	04 15 27.7	+0.9
	baz=233,SNR=26						
H21K	**Melozitna Rive**	81.99	19	IAmb	IAmb	04 15 28.8	
	comp=Z,30nm,0.8s						
H21K	**Melozitna Rive**	81.99	19	P	P	04 15 27.6	+0.7
	baz=232,SNR=19						
WAT6	**Susitna Watana**	82.03	23	P	P	04 15 27.3	0.0
	baz=237						
DIV	**Divide**	82.05	25	IAmb	IAmb	04 15 28.4	
	comp=Z,19nm,0.8s						
KLU	**Klutina**	82.18	25	IAmb	IAmb	04 15 30.5	
	comp=Z,40nm,0.9s						
KLU	**Klutina**	82.18	25	P	P	04 15 28.9	+0.8
	baz=239,SNR=14						
MCK	**McKinley**	82.21	22	P	P	04 15 27.7	-0.4
	baz=236,SNR=70						
BWN	**Browne**	82.26	21	P	P	04 15 28.5	+0.1
MLY	**Manley**	82.31	20	IAmb	IAmb	04 15 29.8	
	comp=Z,32nm,0.9s						
MLY	**Manley**	82.31	20	P	P	04 15 28.8	+0.1
	baz=234,SNR=22						
M24K	**Tolsona, Glenn**	82.39	24	P	P	04 15 30.0	+0.8
	baz=239,SNR=12						
BMRM	**Bremner River**	82.46	25	IAmb	IAmb	04 15 31.9	
	comp=Z,41nm,1.1s						
BMRM	**Bremner River**	82.46	25	P	P	04 15 30.0	+0.4
	baz=240						
NEA2	**Nenana**	82.64	21	IAmb	IAmb	04 15 30.8	
	comp=Z,35nm,0.8s						
NEA2	**Nenana**	82.64	21	P	P	04 15 29.7	-0.6
	baz=236,SNR=35						
QSPA	**South Pole Qui**	82.75	180	P	P	04 15 32.1	+0.9
QSPA				IAmb	IAmb	04 15 42.0	
	comp=Z,22nm,1.0s						
N25K	**Chitina, Valde**	82.78	25	IAmb	IAmb	04 15 33.8	
	comp=Z,27nm,0.9s						
N25K	**Chitina, Valde**	82.78	25	P	P	04 15 31.7	+0.5
	baz=240,SNR=9.7						
I23K	**Minto, Yukon-K**	82.86	21	P	P	04 15 31.3	-0.1
	baz=236,SNR=12						
WRH	**Wood River Hil**	82.93	21	IAmb	IAmb	04 15 32.3	
	comp=Z,42nm,1.1s						
HARP	**HAARP**	82.95	24	P	P	04 15 32.4	+0.4
	baz=240,SNR=5.5						
NDI	**New Delhi**	82.97	300	*e*P	P	04 15 33.0	+0.2
WAX	**Waxell Ridge**	82.97	26	P	P	04 15 32.8	+0.6
WAX				IAmb	IAmb	04 15 34.1	
	comp=Z,39nm,1.1s						
CRQM	**Cirque**	82.99	26	IAmb	IAmb	04 15 34.5	
	comp=Z,32nm,0.9s						
CRQE	**Cirque**	83.00	26	P	P	04 15 32.8	+0.4
	baz=242						
VRDI	**Verde Repeater**	83.08	25	IAmb	IAmb	04 15 33.9	
	comp=Z,21nm,0.9s						
PAX	**Paxson**	83.12	23	IAmb	IAmb	04 15 34.1	
	comp=Z,20nm,1.2s						
PAX	**Paxson**	83.12	23	P	P	04 15 32.9	-0.1
	baz=239,SNR=6.7						
TGL	**Tana Glacier**	83.12	26	IAmb	IAmb	04 15 34.6	
	comp=Z,24nm,1.0s						
CCB	**Clear Creek Bu**	83.13	21	IAmb	IAmb	04 15 33.1	
	comp=Z,33nm,1.0s						
MDM	**Murphy Dome**	83.15	21	IAmb	IAmb	04 15 33.4	
	comp=Z,40nm,1.1s						
TCOL	**CIGO, UAF Yank**	83.23	21	P	P	04 15 32.8	-0.5
	baz=237,SNR=16						
COLA	**College**	83.23	21	*c* *i*P	P	04 15 32.6	-0.8
COLA				pmax	pmax		
	comp=Z,82nm,1.0s						
COLA	**College**	83.23	21	P	P	04 15 32.7	-0.6
MESA	**MESA**	83.24	27	P	P	04 15 34.7	+0.9
	baz=243						
ISLE	**Juniper Island**	83.26	26	IAmb	IAmb	04 15 35.2	
	comp=Z,34nm,0.9s						
HDA	**Harding Lake**	83.31	22	IAmb	IAmb	04 15 35.2	
	comp=Z,36nm,1.1s						
HDA	**Harding Lake**	83.31	22	P	P	04 15 33.3	-0.5
	baz=238,SNR=16						
MCARA	**McCarthy VSAT**	83.33	25	P	P	04 15 34.3	+0.3
MCARA	**McCarthy VSAT**	83.33	25	P	P	04 15 34.8	+0.8
	baz=242,SNR=8.8						
YAH	**Yahtse**	83.41	26	IAmb	IAmb	04 15 36.4	
	comp=Z,17nm,0.8s						
POKR	**Poker Plat Res**	83.52	21	IAmb	IAmb	04 15 35.0	
	comp=Z,24nm,1.0s						
POKR	**Poker Plat Res**	83.52	21	P	P	04 15 34.2	-0.7
	baz=237,SNR=15						
IL31		83.53	21	P	P	04 15 33.8	-1.0
ILAR	**Eielson Array**	83.53	21	P	P	04 15 33.8	-1.1
	comp=Z,26nm,0.9s,baz=257,slow=4.8,SNR=152						
MK31	**Makanchi Array**	83.68	319	*c* *i*P	P	04 15 36.0	-0.2
MK31	**Makanchi Array**	83.68	319	IAmb	IAmb	04 15 37.3	
	comp=Z,12nm,0.9s						
MKAR	**Makanchi Array**	83.68	319	P	P	04 15 36.1	0.0
	comp=Z,9.9nm,0.8s,baz=104,slow=5.4,SNR=63						
RIDG	**Independent Ri**	83.75	23	P	P	04 15 36.3	+0.1
	baz=240,SNR=20						
H24K	**Noodor Dome**	83.75	20	IAmb	IAmb	04 15 37.7	
	comp=Z,12nm,0.8s						
H24K	**Noodor Dome**	83.75	20	P	P	04 15 35.8	-0.3
	baz=237,SNR=12						
COLD	**Coldfoot**	83.77	19	IAmb	IAmb	04 15 37.6	
	comp=Z,17nm,0.8s						
COLD	**Coldfoot**	83.77	19	P	P	04 15 36.9	+0.8
	baz=235,SNR=19						
MENT	**Mentasta**	83.80	24	IAmb	IAmb	04 15 38.0	
	comp=Z,44nm,1.4s						
M26K	**Nabesna, AK**	83.83	24	P	P	04 15 37.5	+0.9
M26K				IAmb	IAmb	04 15 38.4	
	comp=Z,15nm,0.8s						
M26K	**Nabesna, AK**	83.83	24	P	P	04 15 37.2	+0.6
	baz=242						
CTG	**Chitna Glacier**	83.86	26	P	P	04 15 37.6	+0.7
	baz=243,SNR=16						
MAKZ	**Makanchi**	83.89	319	P	P	04 15 36.6	-0.6
MAKZ				pmax	pmax		
	comp=Z,21nm,1.0s						
MAKZ	**Makanchi**	83.89	319	P	P	04 15 36.6	-0.6
MAKZ				IAmb	IAmb	04 15 38.4	
	comp=Z,21nm,1.0s						
PINM	**Pinnacle**	83.96	27	P	P	04 15 37.9	+0.5
	baz=244,SNR=5.5						
L26K	**Log Cabin Wild**	83.99	24	IAmb	IAmb	04 15 39.0	
	comp=Z,44nm,1.4s						
L26K	**Log Cabin Wild**	83.99	24	P	P	04 15 38.1	+0.8
	baz=241,SNR=10						
PNL	**Peninsula**	84.17	28	P	P	04 15 39.0	+0.7
	baz=245						
SCRK	**Sand Creek**	84.20	23	IAmb	IAmb	04 15 40.0	
	comp=Z,40nm,1.1s						
SCRK	**Sand Creek**	84.20	23	P	P	04 15 38.8	+0.2
	baz=241,SNR=26						
MAW	**Mawson**	84.25	203	P	P	04 15 38.9	+0.3
	comp=Z,10nm,0.9s,baz=92,slow=6.9,SNR=11						
MAW				LR	LR	04 51 37.9	
	comp=Z,96nm,18.2s,baz=62,slow=35						
MAW	**Mawson**	84.25	203	P	P	04 15 36.0	-2.6
	baz=84,SNR=5.9						
MAW	**Mawson**	84.25	203	P	P	04 15 39.8	+1.2
MAW				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MAW	**Mawson**	84.25	203	P	P	04 15 39.8	+1.2
M27K	**Edge Creek, AK**	84.27	25	P	P	04 15 40.1	+1.1
	baz=243,SNR=42						
ZAA0	**Zalesovo Array**	84.46	326	P	P	04 15 38.7	-1.2
ZALV	**Zalesovo Beam**	84.46	326	P	P	04 15 38.6	-1.3
	comp=Z,3.0nm,0.6s,baz=110,slow=5.7,SNR=12						
ZALV	**Zalesovo Beam**	84.46	326	*i* P	P	04 15 38.5	-1.4
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
A21K	**Barrow**	84.57	14	P	P	04 15 40.6	+0.6
	baz=228						
YUK3	**Moose Creek**	84.60	26	P	P	04 15 41.5	+0.8
	baz=244,SNR=7.8						
L27K	**Beaver Creek,**	84.62	24	IAmb	IAmb	04 15 42.6	
	comp=Z,36nm,1.2s						

L27K	Beaver Creek,	84.62	24	P	P	04 15 41.2	+0.6
	baz=243						
J26L	Joseph Creek	84.62	22	P	P	04 15 41.2	+0.6
	baz=241						
BVCY	Beaver Creek	84.72	25	P	P	04 15 42.3	+1.2
	baz=244,SNR=9.6						
TOLK	Toolik Lake Re	84.79	18	P	P	04 15 42.0	+0.8
TOLK	Toolik Lake Re	84.79	18	P	P	04 15 42.1	+0.8
	baz=235						
YUK6	Outpost Mounta	85.17	27	P	P	04 15 44.5	+0.9
	baz=246,SNR=6.1						
YUK4	Talbot Arm	85.21	26	P	P	04 15 45.4	+1.6
	baz=246,SNR=15						
HYT	Haines Junctio	85.50	27	IAmb	IAmb	04 15 47.4	
	comp=Z,35nm,0.9s						
HYT	Haines Junctio	85.50	27	P	P	04 15 46.4	+1.3
	baz=247,SNR=15						
EGAK	Eagle	85.66	23	P	P	04 15 46.4	+0.7
	baz=243						
DAWY	Dawson	86.04	24	IAmb	IAmb	04 15 50.0	
	comp=Z,49nm,1.4s						
DAWY	Dawson	86.04	24	P	P	04 15 48.8	+1.1
	baz=245,SNR=20						
KSH	Kashi	86.28	310	P	P	04 15 51.5	+2.0
KSH				pP	sP	04 16 04.3	-0.4
KSH				sP	pwP	04 16 10.2	+3.8
KSH				pmax	pmax		
	comp=Z,32nm,1.1s						
M30M	Minto, Yukon	86.50	25	P	P	04 15 50.7	+0.8
	baz=247,SNR=10						
N31M	Braeburn, Yuko	86.53	27	P	P	04 15 51.4	+1.3
	baz=248,SNR=9.5						
WHY	Whitehorse	86.63	28	P	P	04 15 51.3	+0.5
	baz=249						
J29M	Klondike Camp	86.67	23	P	P	04 15 52.6	+1.9
	baz=246,SNR=11						
I29M	Ogilvie Camp,	87.01	23	P	P	04 15 53.1	+0.7
	baz=246,SNR=38						
NIL	Nilore	87.27	304	P	P	04 15 53.2	-1.1
NIL				pmax	pmax		
	comp=Z,17nm,0.9s						
NIL	Nilore	87.27	304	P	P	04 15 53.2	-1.1
NIL				IAmb	IAmb	04 15 55.1	
	comp=Z,17nm,0.8s						
MAYO	Mayo, Yukon	87.27	25	P	P	04 15 55.2	+1.5
	baz=248						
M31M	Drury Creek, Y	87.40	26	P	P	04 15 54.8	+0.5
	baz=249,SNR=5.9						
FARO	Faro, Yukon	87.87	26	P	P	04 15 56.9	+0.3
	baz=250						
EPYK	Eagle Plains	88.01	22	P	P	04 15 58.2	+1.0
	baz=247,SNR=62						
AAK	Ala-Archa	88.03	313	⇓*i*P	P	04 15 58.5	+0.6
AAK				pmax	pmax		
	comp=Z,71nm,2.6s						
AAK	Ala-Archa	88.03	313	P	P	04 15 58.0	+0.1
DLBC	Dease Lake	88.25	31	IAmb	IAmb	04 16 00.7	
	comp=Z,30nm,1.2s						
NRIK	Noril'sk	89.00	341	P	P	04 16 00.4	-1.3
	comp=Z,3.1nm,0.6s,baz=124,slow=1.5,SNR=3.7						
NRIK	Noril'sk	89.00	341	⇓*i*P	P	04 16 00.8	-0.9
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.5s						
NRIK	Noril'sk	89.00	341	P	P	04 16 01.9	+0.1
DRK	Karamyk	89.44	310	IAmb	IAmb	04 16 32.2	
	comp=Z,13nm,0.8s						
PAGB	Antelope Grade	89.80	54	P	P	04 16 07.2	+0.9
PAGB				IAmb	IAmb	04 16 21.9	
	comp=Z,26nm,1.3s						
INK	Inuvik	89.87	21	P	P	04 16 06.1	+0.3
	baz=250						
TGTN	Hyland Airport	89.95	28	P	P	04 16 07.5	+1.1
	baz=255						
BTK	Batken	90.28	310	P	P	04 16 08.4	-0.1
BTK				pmax	pmax		
	comp=Z,20nm,1.1s						
BTK	Batken	90.28	310	P	P	04 16 08.4	-0.1
BTK				IAmb	IAmb	04 16 09.6	
	comp=Z,20nm,1.1s						
GAR	Garm	90.50	309	IAmb	IAmb	04 16 19.9	
	comp=Z,22nm,1.2s						
PNTR	Pine Nut	90.83	51	P	P	04 16 12.4	+1.2
KBL	Kabul	90.86	305	P	P	04 16 10.0	-1.5
KBL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KBL	Kabul	90.86	305	P	P	04 16 10.0	-1.5
KBL				IAmb	IAmb	04 16 13.6	
	comp=Z,8.9nm,0.8s						
KKAR	Karatay Array	90.99	313	P	P	04 16 11.4	-0.2
KKAR	Karatay Array	90.99	313	P	P	04 16 11.4	-0.2
MWC	Mount Wilson	91.36	56	IAmb	IAmb	04 16 15.9	
	comp=Z,25nm,1.1s						
EDW2	Edwards Air Fo	91.50	55	P	P	04 16 15.7	+1.4
	baz=262						
RYN	Ryan	91.59	51	IAmb	IAmb	04 16 17.1	
	comp=Z,14nm,1.3s						
TIN	Tinemaha, Big	91.61	53	P	P	04 16 16.8	+2.0
	baz=262						
CWC	Cottonwood Cre	91.64	54	P	P	04 16 16.3	+1.3
	baz=262						
BFSC	Mount Baldy Ra	91.69	56	P	P	04 16 16.1	+0.9
	baz=262						
NVAR	Mina Array Bea	91.73	52	P	P	04 16 16.8	+1.4
	comp=Z,6.0nm,0.9s,baz=250,slow=6.6,SNR=24						
NVAR				LR	LR	04 52 34.3	
	comp=Z,132nm,19.1s,baz=273,slow=32						
LRMC	Laurel Mtn Rad	91.84	55	P	P	04 16 17.2	+1.3
	baz=262,SNR=6.1						
NV11	Mina Array Sit	91.85	52	IAmb	IAmb	04 16 18.8	
	comp=Z,15nm,1.1s						
KVN	Kaiserville	91.98	51	IAmb	IAmb	04 16 20.0	
	comp=Z,7.0nm,0.8s						
MPMC	Manual Prospec	92.07	54	P	P	04 16 18.3	+1.3
	baz=263,SNR=5.4						
SYO	Syowa Base	92.16	199	⇓*e*PcP	PcP	04 16 18.6	+1.3
PNT	Penticton	92.32	41	P	P	04 16 12.4	-5.2
PNT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRGLY	Wrigley	92.53	27	P	P	04 16 19.0	+0.8
	baz=259						
FURC	Furnace Creek,	92.62	54	P	P	04 16 20.5	+1.2
	baz=263,SNR=6.5						
BRVK	Borovoye	92.64	323	⇓*e*P	P	04 16 17.8	-1.2
BRVK				pmax	pmax		
	comp=Z,15nm,2.5s						
BRVK	Borovoye	92.64	323	P	P	04 16 18.2	-0.8
BMN	Battle Mountai	92.82	50	IAmb	IAmb	04 16 21.7	
	comp=Z,9.6nm,1.1s						
SHOC	Shoshone, Teco	93.03	54	P	P	04 16 21.6	+0.4
	baz=263						
BELC	Belle Mtn. Jos	93.03	56	P	P	04 16 22.6	+1.2
	baz=263						
TUQ	Turquoise Moun	93.26	55	P	P	04 16 23.4	+1.0
	baz=264						
GMRC	Granite Mounta	93.40	56	P	P	04 16 24.0	+0.9
	baz=264						
A36M	Sachs Harbour	93.61	18	P	P	04 16 23.4	+0.4
	baz=258						
IRM	Iron Mountain	93.75	56	P	P	04 16 26.1	+1.5
	baz=264,SNR=7.5						
R11A	Troy Canyon, C	93.84	52	IAmb	IAmb	04 16 27.4	
	comp=Z,12nm,1.4s						
R11A	Troy Canyon, C	93.84	52	P	P	04 16 26.2	+1.0
	baz=264,SNR=8.5						
SHPR	Sheep Range	93.99	54	P	P	04 16 26.8	+1.0
PRN	Pahroc Range	94.17	53	IAmb	IAmb	04 16 29.1	
	comp=Z,18nm,1.3s						
ELK	Elko	94.36	50	P	P	04 16 27.7	+0.2
ELK				pmax	pmax		
	comp=Z,15nm,1.5s						
ELK	Elko	94.36	50	P	P	04 16 27.7	+0.2
ELK				IAmb	IAmb	04 16 29.4	
	comp=Z,15nm,1.5s						
SPR3	Spring Creek 3	94.89	51	IAmb	IAmb	04 16 32.3	
	comp=Z,17nm,1.2s						
KNB	Kanab	95.91	54	IAmb	IAmb	04 16 37.2	
	comp=Z,12nm,1.3s						
TCRU	Three Creeks R	96.32	52	IAmb	IAmb	04 16 55.1	
	comp=Z,4.8nm,0.5s						
HRA	Herat	96.43	304	P	P	04 16 35.8	-1.3
HRA				IAmb	IAmb	04 16 37.3	
	comp=Z,7.1nm,1.0s						
YKA	Yellowknife Ar	96.46	28	P	P	04 16 36.4	+0.1
	comp=Z,9.1nm,0.8s,baz=266,slow=4.7,SNR=43						
YKA				LR	LR	04 55 16.2	
	comp=Z,79nm,20.2s,baz=0.0,slow=32						
MTPU	Mount Pierson	96.49	53	IAmb	IAmb	04 16 39.8	
	comp=Z,7.7nm,1.3s						
RDMU	Red Mountain	98.65	50	IAmb	IAmb	04 16 48.5	
	comp=Z,8.7nm,1.1s						
PDAR	Pinedale Array	98.73	48	P	P	04 16 46.9	-0.4
	comp=Z,1.1nm,0.7s,baz=251,slow=2.5,SNR=7.7						
PDAR				LR	LR	05 01 15.8	
	comp=Z,147nm,18.0s,baz=340,slow=35						
PDAR	Pinedale Array	98.73	48	P	P	04 16 47.0	-0.3
ABKAR	Akbulak array	98.83	319	P	P	04 16 45.4	-1.9
VNA2	Neumayer--Watz	101.14	186	Pdiff	Pdif	04 16 57.0	-0.2
KIV	Kislovodsk	111.12	314	*e*PKIKP	PKiKP	04 21 38.6	-2.5
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
OBN	Obninsk	112.03	327	*i* PKIKP	PKiKP	04 21 39.1	-3.2
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PLCA	Paso Flores	116.44	143	PKP	PKiKP	04 21 52.3	+0.9
	comp=Z,1.8nm,0.9s,baz=231,slow=3.1,SNR=4.3						
PLCA				PKKPbc	PKKPbc	04 32 20.8	-0.1
	comp=Z,1.4nm,0.7s,baz=112,slow=1.4,SNR=6.4						
AKASG	Malin Array Be	117.82	324	PKP	PKPdf	04 21 53.0	-0.7
	comp=Z,0.8nm,0.6s,baz=61,slow=2.1,SNR=4.6						
BRTR	Keskin Array B	118.66	311	PKP	PKPdf	04 21 54.7	-1.1
	comp=Z,1.1nm,1.0s,baz=149,slow=2.6,SNR=5.0						
OSTC	Ostas	124.99	329	*e*PKP	PKiKP	04 22 11.8	+4.0
CLL	Collm	126.09	332	*e*PKPdf	PKiKP	04 22 10.0	+0.1
CLL				*e*		04 22 30.0	
OTAV	Otavalo	126.10	95	PKIKP	PKPdf	04 22 09.8	-1.4
OTAV	Otavalo	126.10	95	PKPdf	PKPdf	04 22 09.8	-1.4
DIVS	Divibare	126.41	321	PKPdf	PKPdf	04 22 08.8	-1.6
CKRC	Cesky Krumlov	127.03	328	*e*PKP	PKiKP	04 22 13.6	+1.7
FNA	Florina	127.05	317	PKIKP	PKPdf	04 22 11.1	-0.7
FNA	Florina	127.05	317	PKPdf	PKPdf	04 22 11.1	-0.7
KHC	Kasperske Hory	127.21	329	*e*PKP	PKPdf	04 22 11.9	+0.1
KHC	Kasperske Hory	127.21	329	*e*PKIKP	PKPdf	04 22 11.9	+0.1
GERES	GERESS Array B	127.33	329	PKP	PKiKP	04 22 12.4	-0.2
	comp=Z,1.4nm,0.7s,baz=64,slow=3.1,SNR=11						
GERES	GERESS Array B	127.33	329	PKIKP	PKPdf	04 22 12.2	+0.1
GERES	GERESS Array B	127.33	329	PKPdf	PKPdf	04 22 12.2	+0.1
PB11	IPOC Station P	128.38	122	PKPdf	PKPdf	04 22 14.1	-0.9
WATA	Walderalm	129.39	329	*e*P	PKPdf	04 22 16.4	+0.3
	comp=Z,7.4nm,1.5s						
WTTA	Wattenberg	129.41	328	*e*P	PKPdf	04 22 16.5	+0.3
	comp=Z,6.7nm,1.2s						
CIMO	Cimolais	129.59	327	PKPdf	PKPdf	04 22 14.6	-1.8
MOTA	Moosalm	129.63	329	*e*P	PKPdf	04 22 16.6	0.0
	comp=Z,7.5nm,1.2s						
SQTA	Sankt Quirin	129.66	329	*e*P	PKiKP	04 22 17.6	+0.3
	comp=Z,3.7nm,1.0s						
CZSB	Cruzeiro do Su	130.01	106	*e*P	PKPdf	04 22 17.4	-0.7
CZSB	Cruzeiro do Su	130.01	106	PKPdf	PKPdf	04 22 17.8	-0.3
FETA	Feichten	130.03	329	*e*P	PKPdf	04 22 17.2	-0.2
	comp=Z,8.3nm,1.3s						
ZARC	Zaragoza, Cauc	130.42	86	PKPdf	PKPdf	04 22 17.5	-1.3
TSUM	Tsumeb	130.64	237	PKPdf	PKPdf	04 22 18.6	-0.6
LPAZ	La Paz	131.21	119	PKP	PKiKP	04 22 21.8	-0.2
	comp=Z,8.8nm,1.0s,baz=349,slow=1.7,SNR=14						
LPAZ				SKPbc	SKiKP	04 25 49.0	-5.9
	comp=Z,1.9nm,0.7s,baz=227,slow=5.0,SNR=7.1						
LPAZ	La Paz	131.21	119	PKIKP	PKPdf	04 22 21.1	+0.1
LPAZ	La Paz	131.21	119	*e*P	PKPdf	04 22 21.0	+0.1
LPAZ	La Paz	131.21	119	PKPdf	PKPdf	04 22 21.1	+0.1
MURB	Monte Urbino	131.40	324	PKPdf	PKPdf	04 22 20.4	+0.4
ITQB	Itaqui	132.26	142	*e*P	PKiKP	04 22 23.7	+0.7
TBTG	Tabatinga, AM	133.62	103	PKPdf	PKPdf	04 22 24.3	-0.6
SDV	Santo Domingo	134.65	85	*e*P	PKPdf	04 22 22.3	-4.7
ETMB	Extrema	135.45	112	*e*P	PKPdf	04 22 27.7	-0.6
ETMB	Extrema	135.45	112	PKPdf	PKPdf	04 22 26.9	-1.4
SAML	Samuel	138.55	112	PKIKP	PKPdf	04 22 33.7	-0.3
SAML	Samuel	138.55	112	PKPdf	PKPdf	04 22 33.7	-0.3
PTLB	Pontes e Lacer	139.23	124	PKPdf	PKPdf	04 22 35.5	+0.3
VILB	Vilhena	139.55	120	*e*P	PKiKP	04 22 37.1	-1.2
ESDC	Sonseca Array	142.65	333	PKhKP	PKPpre	04 22 36.6	
	comp=Z,0.8nm,0.8s,baz=16,slow=2.5,SNR=6.0						
MACA	Manacapuru-AM	142.77	105	*e*P	PKPdf	04 22 38.5	-3.2
MACA	Manacapuru-AM	142.77	105	PKPdf	PKPdf	04 22 38.4	-3.2
PVIS	Viseu	143.38	338	*e*PKPdf	PKPbc	04 22 39.7	+0.5
MTE	Manteigas	143.52	338	*e*PKPdf	PKPdf	04 22 42.0	-0.4
PCBR	Castelo Branco	143.98	337	*e*PKPdf	PKPbc	04 22 41.9	+1.0
BOAV	Boa Vista	144.14	96	*e*P	PKPab	04 22 40.7	-1.1
BOAV	Boa Vista	144.14	96	PKPdf	PKPbc	04 22 42.2	-0.1
PCAS	Casmilo, Conde	144.18	338	*e*PKPdf	PKPab	04 22 39.3	-1.8
PMRV	Marv??o	144.30	337	*e*PKPdf	PKPbc	04 22 42.5	+0.5
CLDB	Colider	144.33	120	*e*P	PKPbc	04 22 42.9	+0.2
MAN01	Angra dos Reis	144.72	148	*e*P	PKPdf	04 22 44.7	-0.2
PSBE	So Bento	144.76	338	*e*PKPdf	PKPdf	04 22 44.4	-0.1
PESTR	Estremoz	144.86	336	*e*PKPdf	PKPdf	04 22 44.3	-0.4
PESTR	Estremoz	144.86	336	PKPdf	PKPab	04 22 43.5	-0.2
ARAG	Araguaiana, MT	144.89	131	*e*P	PKPdf	04 22 45.1	-0.2
PMTG	Montargil	144.94	337	*e*PKPdf	PKPbc	04 22 44.2	+0.2
EVO	Evora	145.32	336	*e*PKPdf	PKPdf	04 22 46.0	+0.6
PMAFR	Mafra	145.43	338	*e*PKPdf	PKPab	04 22 46.5	+0.7
VAS01	Vassouras-RJ	145.47	149	*e*P	PKPbc	04 22 46.0	-0.2
LIJA	Lijar	145.55	332	P	PKPdf	04 22 46.0	0.0
PBEJ	Beja	145.69	336	*e*PKPdf	PKPab	04 22 47.5	+0.7
BSCB	Bom Sucesso	145.80	145	*e*P	PKPdf	04 22 46.9	0.0
PNCL	Nicolau / Gran	145.88	337	*e*PKPdf	PKPab	04 22 48.1	+0.6
IPMB	Ipameri, GO	145.94	138	*e*P	PKPdf	04 22 46.9	-0.3
MESJ	Messejana	146.00	336	*e*PKPdf	PKPab	04 22 48.6	+0.7
PCVE	Castro Verde	146.10	336	*e*PKPdf	PKPab	04 22 48.7	+0.4
PVAQ	Vaqueiros	146.16	335	*e*PKPdf	PKPab	04 22 49.4	+0.8
DUB01	Friburgo-RJ	146.18	150	*e*P	PKPdf	04 22 47.5	0.0
NPGB	Novo Progresso	146.42	114	*e*P	PKPdf	04 22 46.7	-1.4
PTEO	Sao Teotonio	146.45	336	*e*PKPdf	PKPab	04 22 50.0	+0.4
CAM01	Campos-RJ	146.75	151	*e*P	PKPdf	04 22 48.5	+0.1
ITTB	Itaituba	147.09	110	*e*P	PKPdf	04 22 47.3	-1.9
SNDB	Serra Nova Dou	147.51	126	*e*P	PKPdf	04 22 49.4	-0.4
BDFB	Brasilia	147.71	135	PKPbc	PKPbc	04 22 53.6	+0.6
	comp=Z,13nm,0.8s,baz=343,slow=0.9,SNR=20						
BDFB	Brasilia	147.71	135	PKP2	PKPbc	04 22 51.6	-1.4
BDFB	Brasilia	147.71	135		PKPbc	04 22 51.6	-1.4
LCRM	LCR	147.82	328	P	PKiKP	04 22 54.0	-0.8
ALF01	Guarapari-ES	148.23	151	*e*P	PKPdf	04 22 49.8	-1.0
MDT	Midelt	148.35	326	P	PKiKP	04 22 55.4	-0.5
DIAM	Diamantina, MG	148.56	144	*e*P	PKPdf	04 22 49.9	-1.7
ZHG	ZHG	148.94	330	P	PKiKP	04 22 58.0	+0.9
MALB	Monte Alegre	149.29	106	*e*P	PKPdf	04 22 50.0	-2.7
GOLM	Goulmima	149.38	325	P	PKiKP	04 22 59.0	+0.9
RIB01	Linhares ES	149.50	150	*e*P	PKPdf	04 22 52.0	-0.9
SJMB	Sao Joao De Ma	149.61	148	*e*P	PKPdf	04 22 51.8	-1.3
MC01	Montes Claros	149.63	142	*e*P	PKPdf	04 22 52.2	-1.1
BSFB	Barra de Sao F	149.68	149	*e*P	PKPdf	04 22 52.5	-0.7
JANB	Januaria	150.63	139	*e*P	PKPdf	04 22 53.3	-1.6
NAN01	Guarapari, ES	150.88	149	*e*P	PKPdf	04 22 53.3	-1.8
ZGR	Zagora	150.94	324	P	PKiKP	04 23 02.0	+0.6
OUZM	OUZ	150.99	327	P	PKiKP	04 23 02.0	+0.5
OUK	Oukaimeden	151.34	329	P	PKiKP	04 23 03.2	+0.7
PRPB	Parauapebas	151.75	118	*e*P	PKPdf	04 22 54.2	-2.4
MCPB	Macapa, AP	151.83	104	*e*P	PKPdf	04 22 53.2	-3.5
GUA01	Guaratinga, BA	152.09	148	*e*P	PKPdf	04 22 55.0	-2.0
SDBA	SAO DESIDERIO	152.10	134	*e*P	PKPdf	04 22 55.6	-1.6
TTIG	Tnine Tigouga,	152.16	329	P	PKiKP	04 23 04.1	+0.2
SMTB	Santa Maria do	152.26	125	*e*P	PKPdf	04 22 55.3	-2.1
TORD	Torodi Ar. Bea	153.24	285	PKP	PKPdf	04 22 58.8	+0.1
	comp=Z,2.0nm,0.9s,baz=17,slow=1.0,SNR=11						
TORD				PKPbc	PKPbc	04 23 05.8	-0.4
	comp=Z,11nm,0.9s,baz=70,slow=1.7,SNR=23						
TORD	Torodi Ar. Bea	153.24	285		PKPdf	04 22 58.5	-0.2
CMC01	Camacan, BA	153.26	147	*e*P	PKPdf	04 22 56.9	-1.8
NBIT	Itapeh - BA	153.66	147	*e*P	PKPdf	04 22 56.8	-2.5
NBPN	Ponto Novo - B	156.42	139	*e*P	PKPdf	04 23 02.0	-1.2
NBLA	Lagarto - SE	157.78	144	*e*P	PKPdf	04 23 04.1	-0.7
ROSB	Rosrio	158.29	117	*e*P	PKPdf	04 23 02.7	-2.9
NBAN	Anadia - AL	159.72	146	*e*P	PKPdf	04 23 04.9	-2.3
NBPS	Pedro II - PI	159.81	124	*e*P	PKPdf	04 23 03.8	-3.6
KIC	Kosan Boka	160.02	269	*e*PKP1	PKPab	04 23 48.7	+1.3
	comp=Z,15nm,0.9s						
LIC	Lamto	160.30	268	*e*PKP1	PKPab	04 23 48.1	-0.4
	comp=Z,20nm,1.2s						
TIC	Toumodi	160.31	270	*e*PKP1	PKPab	04 23 48.9	+0.3
NBPB	Pedra_Branca-C	160.58	130	*e*P	PKPdf	04 23 05.5	-2.7
NBLV	Livramento - P	161.16	140	*e*P	PKPdf	04 23 04.1	-4.7
NBCL	Cascavel-CE	162.41	130	*e*P	PKPdf	04 23 05.2	-4.8

SOME ***06*** *04:25:02.3, 46°.87N×84°.30E, h5*^{km}

NNC ***06*** *04:25:03.1±1.7, 46°.86N×84°.48E, h0*^{km}*, mb3.4, mpv3.2, Error ellipse: s-maj=12.9km s-min=5.5km az=129.0*

ISC 06 04:25:03.3±1.6, **46°.98N**±0°.07×**84°.50E**±0°.07, **h0**^{km}±14^{km}, **n21**, σ**1**^{s}**.47**/37, **4C-4D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	0.53	28	*e*P	Pb	04 25 14.2	-1.3
	72nm,0.1s						
ZSN				*e*S	Sb	04 25 22.9	-0.8
	338nm,0.1s						
ZSN	Zaisan	0.53	28	P	Pb	04 25 14.2	-1.3
	72nm,0.1s						
ZSN				S	Sb	04 25 22.9	-0.8
	338nm,0.1s						
MK31	Makanchi Array	1.53	264	⇓P	Pn	04 25 30.8	-1.0
	6.6nm,0.5s,baz=89,slow=17,SNR=301						
MK31				⇑S	Sn	04 25 51.1	-1.3
	11nm,0.2s,baz=96,slow=26,SNR=17						
MKAR	Makanchi Array	1.53	264	Pg	Pn	04 25 31.1	-0.7
MKAR				Sg	Sn	04 25 51.2	-1.2
MAKZ	Makanchi	1.74	265	Pg	Pn	04 25 34.6	-0.1
MAKZ				Sg	Sn	04 25 57.6	-0.1
MAKZ	Makanchi	1.74	265	⇑P	Pn	04 25 34.3	-0.4
	3.1nm,0.3s						
MAKZ				⇓S	Sn	04 25 57.7	+0.1
	18nm,0.3s						
DGZ	Jazzator, Alta	3.35	35	Pn	Pn	04 25 57.9	+0.9
DGZ				Pg	Pg	04 26 09.3	+1.8
DGZ				Sg	Sg	04 26 51.2	+0.2
AKAR	Aktash	3.93	31	Pn	Pn	04 26 06.0	+1.0
AKAR				Sg	Sg	04 27 09.3	-0.3
KAPS	Kapalarasan	3.96	247	*e*P	Pb	04 26 11.9	-2.0
	0.9nm,0.2s						
KAPS				*e*S	Sb	04 27 02.0	-0.4
	6.9nm,0.1s						
KAPS	Kapalarasan	3.96	247	Pg	Pb	04 26 11.9	-2.0
	0.9nm,0.2s						
KAPS				Lg	Lg	04 27 02.0	
	6.9nm,0.1s						
UKR	Ust'-Kan	3.96	2	Pn	Pn	04 26 04.9	-0.5
UKR				Sg	Sg	04 27 09.9	-0.7
CUR	Chagan-Uzun	4.04	38	Pn	Pn	04 26 07.2	+0.8
CUR				Sg	Sg	04 27 14.4	+1.5
DJR	Jarkent	4.23	233	*e*P	Pb	04 26 17.1	-1.5
	1.5nm,0.3s						
DJR				*e*S	Sb	04 27 11.2	+0.9
	5.3nm,0.1s						
DJR	Jarkent	4.23	233	Pg	Pb	04 26 17.1	-1.5
	1.5nm,0.3s						
DJR				Lg	Lg	04 27 11.2	
	3.9nm,0.3s						
ULGR	Ulagan, Altay	4.30	31	Pn	Pn	04 26 12.0	+2.0
ULGR				Pg	Pg	04 26 24.6	-1.2
ULGR				Sg	Sg	04 27 20.9	-0.6
PDGK	Podgornoye	5.09	226	Pg	Pb	04 26 32.2	-1.0
	0.7nm,0.2s						
PDGK				Lg	Lg	04 27 36.5	
	4.0nm,0.8s						
PDGK	Podgornoye	5.09	226	⇑Pn	Pn	04 26 21.1	+0.3
	1.9nm,0.5s						
PDGK				⇓Lg	Lg	04 27 40.7	
	10nm,0.8s						
BLB	Baldybastay	5.12	238	Pg	Pb	04 26 32.7	-1.1
	2.8nm,0.3s						
BLB				Lg	Lg	04 27 37.2	
	3.8nm,0.4s						
KURBB	Kurchatov Arra	5.37	315	⇓Pn	Pn	04 26 28.4	+3.9
	1.3nm,0.5s						
KURBB				⇑Lg	Lg	04 27 56.6	
	32nm,0.6s						
ARXS	Arharly	5.44	242	*e*P	Pb	04 26 39.1	-0.1
	0.9nm,0.1s						
ARXS				*e*S	Sb	04 27 49.0	+4.0
	5.2nm,0.1s						
ARXS	Arharly	5.44	242	Pg	Pb	04 26 39.1	-0.1
	0.8nm,0.5s						
ARXS				Lg	Lg	04 27 49.0	
	5.3nm,0.8s						

IDC ***06*** *04:35:00.5±1.0, 39°.22N×106°.37E, h0*^{km}*, mb3.7/7, mb1 3.8/10, mb1mx3.6/47, mbtmp3.7/10, ML3.4/3, Error ellipse: s-maj=36.1km s-min=16.2km az=53.0*

ISC 06 04:35:05.4±0.9, **39°.3N**±0°.1×**106°.4E**±0°.1, **h35**^{km}**, n10**, σ**1**^{s}**.10**/10, **mb3.9**/6, **Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	8.55	360	Pn	Pn	04 37 06.8	+0.1
	0.3nm,0.3s,baz=184,slow=15,SNR=7.9						
SONM				Lg	Lg	04 39 39.7	
	0.4nm,0.3s,baz=183,slow=30,SNR=5.2						
KSRS	Korea Array	16.95	89	Pn	P	04 39 01.1	-0.2
	0.2nm,0.3s,baz=275,slow=12,SNR=1.9						
MKAR	Makanchi Array	19.13	301	P	P	04 39 23.2	-2.2
	0.1nm,0.3s,baz=96,slow=11,SNR=5.8						
ZALV	Zalesovo Beam	20.75	322	P	P	04 39 42.9	0.0
	1.9nm,0.6s,baz=125,slow=10,SNR=6.2						
CMAR	Chiang Mai Arr	21.75	200	P	P	04 39 54.1	+0.3
	1.0nm,0.3s,baz=4.7,slow=9.4,SNR=4.3						
KURBB	Kurchatov Arra	22.63	309	P	P	04 40 02.2	-0.9
	2.9nm,0.6s,baz=108,slow=12,SNR=14						
BVAR	Borovoye Array	28.16	311	P	P	04 40 55.0	+0.8
	1.5nm,0.5s,baz=139,slow=9.8,SNR=9.3						
BRTR	Keskin Array B	54.66	295	P	P	04 44 31.8	+0.9
	0.6nm,0.8s,baz=97,slow=10,SNR=4.1						
WRA	Warramunga Arr	64.44	151	P	P	04 45 37.1	-1.1
	0.7nm,0.8s,baz=344,slow=6.9,SNR=5.1						
ASAR	Alice Springs	67.69	153	P	P	04 45 59.5	+0.5
	1.1nm,0.6s,baz=336,slow=6.5,SNR=16						

JMA ***06*** *04:42:49.6, 24°.11N×121°.89E, h23*^{km}*±1*^{km}*, M3.7*

NIED ***06*** *04:42:49.6, 24°.11N×121°.89E, h23*^{km}*, MW4.2, Moment Tensor Solution. s2 Moment tensor: Scale* 10^{15}*Nm;* M_{rr}*0.88;* $M_{\theta\theta}$*0.12;* $M_{\phi\phi}$*-0.99;* $M_{r\theta}$*0.57;* $M_{\theta\phi}$*0.58;* $M_{\phi r}$*1.57; Fault plane solution:* M_0*2.00000×*10^{15} *NP1:*ϕ_s*11.00000°, δ77.00000°, λ113.00000°. NP2:*ϕ_s*129.00000°, δ27.00000°, λ31.00000°.*

NEIC ***06*** *04:42:49±1.6, 24°.10N±0°.04×121°.96E±0°.05, h18*^{km}*±2*^{km}*, mb4.3/13, ML4.3(TAP), ML4.0(BJI) Error ellipse: s-maj=6.6km s-min=4.7km az=125.0*

TAP ***06*** *04:42:49.9, 24°.18N×121°.90E, h24*^{km}*, ML4.5, C*

IDC ***06*** *04:42:50.8±4.2, 24°.11N×121°.99E, h38*^{km}*±37*^{km}*, mb3.8/13, mb1 3.9/15, mb1mx3.7/42, mbtmp4.0/15, ML3.7/2, MS3.4/3, Ms1 3.4/3, ms1mx2.9/70, Error ellipse: s-maj=21.9km s-min=20.7km az=45.0*

BJI ***06*** *04:42:50.2±0.0, 24°.15N×121°.97E, h43*^{km}*, mb4.2/19, ML3.9/6*

ASIES ***06*** *04:42:51.4, 24°.18N×121°.88E, h20*^{km}*, MW4.0*

ISC 06 04:42:50.1±0.8, **24°.15N**±0°.02×**121°.92E**±0°.02, **h25**^{km}±5^{km}, **n179**, σ**1**^{s}**.04**/269, **mb4.1**/22, **6C-18D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.23	314	P	Pb	04 42 55.9	-0.2
	baz=313						
EHP				*e*S	Sb	04 43 00.8	+0.6
	baz=313						
ETL	Fush Village	0.27	272	⇓*i*P	Pb	04 42 56.5	-0.2
	baz=265						
ETL				S	Sb	04 43 01.7	+0.5
	baz=265						
NACB	Ninganchiao	0.30	275	⇓*i*P	Pb	04 42 56.8	-0.2
	baz=264						
NACB				S	Sb	04 43 02.1	+0.3
	baz=264						
NACB	Ninganchiao	0.30	275		Pb	04 42 56.6	-0.4
TWD	Chiawan	0.30	257	⇓*i*P	Pb	04 42 57.0	-0.1
	baz=250						
TWD				S	Sb	04 43 02.7	+0.8
	baz=250						
ENA	Nanau	0.32	329	⇓*i*P	Pb	04 42 57.1	-0.3
	baz=336						
ENA				S	Sb	04 43 02.5	+0.1
	baz=336						
EWUT	Wuta	0.32	336	⇓*i*P	Pb	04 42 57.3	-0.1
	baz=343						
EWUT				*i* S	Sb	04 43 02.5	+0.1
	baz=343						
HWA	Hwalien	0.34	239	P	Pb	04 42 58.2	+0.6
	baz=230						
HWA				*e*S	Sn	04 43 05.7	+0.3
	baz=230						
ETLH	Xiulin Townshi	0.41	278	⇓*i*P	Pb	04 42 58.5	-0.3
	baz=272						
ETLH				*e*S	Sb	04 43 04.8	+0.1
	baz=272						

TWC	Suao baz=359	0.46	352	P	Pb	04 42 59.4	-0.2
TWC	baz=359			S	Sn	04 43 07.1	-1.5
NDS	Dongshan baz=341	0.52	339	⇑*i*P	Pb	04 43 00.6	0.0
NDS	baz=341			*e*S	Sb	04 43 07.5	-0.2
ESL	Shilin baz=230	0.56	233	⇓*i*P	Pb	04 43 00.9	-0.4
ESL	baz=230			*e*S	Sn	04 43 10.0	-0.9
NNSB	Datong baz=289	0.56	300	⇓*i*P	Pb	04 43 01.1	-0.4
NNSB	baz=289			S	Sb	04 43 08.9	-0.3
NNS	Nan Shan baz=290	0.58	300	⇓*i*P	Pb	04 43 01.3	-0.4
NNS	baz=290			S	Sn	04 43 09.8	-1.9
NDT	Datong Townshi baz=314	0.58	321	P	Pb	04 43 01.5	-0.2
NDT	baz=314			*e*S	Sn	04 43 09.8	-1.8
ENTT	Nioudou baz=319	0.59	327	P	Pb	04 43 01.4	-0.3
ENTT	baz=319			S	Sn	04 43 10.4	-1.3
WHF	Hehuan Shan baz=265	0.60	270	⇓*i*P	Pb	04 43 01.9	-0.3
WHF	baz=265			S	Sb	04 43 10.2	-0.2
TWE	Neicheng baz=340	0.61	338	⇑*i*P	Pn	04 43 02.1	-1.1
TWE	baz=340			S	Sn	04 43 11.2	-1.1
FUSS	Fushou baz=276	0.63	279	⇓*i*P	Pb	04 43 02.5	-0.1
FUSS	baz=276			S	Sb	04 43 10.8	-0.2
ILA	Ilan baz=348	0.63	346	*i* P	Pn	04 43 02.8	-0.7
ILA	baz=348			S	Sn	04 43 12.8	0.0
EGFH	Guangfu baz=230	0.66	223	P	Pb	04 43 03.0	0.0
EGFH	baz=230			*e*S	Sn	04 43 13.1	-0.4
CHGB	Renai baz=250	0.69	263	⇓*i*P	Pb	04 43 03.4	-0.2
CHGB	baz=250			*e*S	Sb	04 43 12.7	0.0
TWT	Tachien baz=274	0.69	279	⇓*i*P	Pn	04 43 03.6	-0.8
TWT	baz=274			*e*S	Sn	04 43 13.0	-1.4
EGS	baz=2.0	0.69	1	*e*P	Pn	04 43 04.4	0.0
EGS	baz=2.0			*e*S	Sn	04 43 15.2	+0.9
TDCB	Techi baz=275	0.70	279	⇓P	Pb	04 43 03.6	-0.2
TDCB	baz=275			*e*S	Sb	04 43 13.0	-0.1
NTC	Toucheng baz=355	0.71	353	⇑P	Pn	04 43 04.0	-0.5
NTC	baz=355			S	Sn	04 43 13.9	-0.7
OWD	Renai baz=249	0.71	254	*i* P	Pb	04 43 03.7	-0.1
OWD	baz=249			*e*S	Sn	04 43 13.6	-1.2
YHNB	Yeheng baz=307	0.72	316	*i* P	Pb	04 43 03.6	-0.4
YHNB	baz=307			*e*S	Sn	04 43 13.3	-1.7
YHNB	Yeheng	0.72	316	Pg	Pb	04 43 03.6	-0.4
NWLT	Wulai baz=320	0.73	329	*e*P	Pn	04 43 04.2	-0.7
NWLT	baz=320			*e*S	Sn	04 43 13.8	-1.6
NSK	Sanguang baz=306	0.73	316	*i* P	Pb	04 43 03.8	-0.4
NSK	baz=306			*e*S	Sb	04 43 13.4	-0.5
HGSD	Ruisui baz=211	0.80	215	P	Pn	04 43 05.9	+0.2
HGSD	baz=211			*e*S	Sn	04 43 18.2	+1.4
VWDT	VWDT baz=238	0.81	241	P	Pb	04 43 05.3	-0.3
TIPB	Shuangxi baz=3.0	0.82	354	⇑*i*P	Pn	04 43 06.0	-0.2
TIPB	baz=3.0			S	Sn	04 43 17.7	+0.1
EHY	Hungye baz=216	0.84	221	*e*P	Pb	04 43 05.2	-0.9
TWB1	Santiao Chiao baz=7.0	0.86	4	P	Pn	04 43 06.6	0.0
TWB1	baz=7.0			*e*S	Sn	04 43 19.1	+0.7
TWA	Mucha baz=332	0.88	340	*e*P	Pn	04 43 06.7	-0.2
TWA	baz=332			*e*S	Sn	04 43 18.0	-1.0
NHDH	Xindian Distri baz=322	0.89	336	*e*P	Pn	04 43 07.0	0.0
NHDH	baz=322			*e*S	Sn	04 43 17.9	-1.1
WHP	Taichung City baz=274	0.90	278	*e*P	Pn	04 43 07.3	0.0
WHP	baz=274			*e*S	Sn	04 43 19.4	-0.1
TATO	Taipei	0.91	334		Pn	04 43 06.8	-0.5
NWF	Wu-fen Shan baz=347	0.93	352	⇑*i*P	Pn	04 43 08.0	+0.4
NWF	baz=347			*e*S	Sn	04 43 21.3	+1.1
WCS	Beigang Elemen baz=253	0.93	265	*e*P	Pb	04 43 06.9	-0.5
WCS	baz=253			*e*S	Sn	04 43 19.8	-0.2
YULB	Yu-li baz=225	0.95	217	*e*P	Pn	04 43 06.9	-0.9
YULB	baz=225			*e*S	Sb	04 43 19.6	-0.4
YULB	Yu-li	0.95	217	Pg	Pn	04 43 06.8	-1.1
SSLB	Suanglung baz=243	0.95	248	⇓*i*P	Pb	04 43 07.4	-0.6
SSLB	baz=243			S	Sb	04 43 19.7	-0.5
SSLB	Suanglung	0.95	248		Pb	04 43 06.9	-1.1
LIOB	Emei baz=289	0.96	301	*e*P	Pn	04 43 08.4	+0.3
LIOB	baz=289			*e*S	Sn	04 43 20.8	-0.1
TAP	Taipei baz=322	0.96	337	*e*P	Pn	04 43 08.3	+0.2
TAP	baz=322			*e*S	Sn	04 43 21.2	+0.3
NSTT	Nanjuang baz=288	0.97	300	*e*P	Pn	04 43 08.3	+0.2
NSTT	baz=288			*e*S	Sn	04 43 20.6	-0.5
EYUL	Yuli baz=225	0.97	215	*e*P	Pn	04 43 08.1	-0.1
EYUL	baz=225			*e*S	Sn	04 43 22.3	+1.2
SMLT	Sun Moon Lake baz=241	0.97	254	⇓*i*P	Pb	04 43 07.8	-0.4
SMLT	baz=241			*e*S	Sn	04 43 21.8	+0.5
JYNG	Yonagunijimaku	0.98	72	P	Pn	04 43 08.2	-0.1
JYNG				*e*S	Sn	04 43 21.7	+0.3
TYC	Yuchr baz=245	1.00	256	*e*P	Pn	04 43 08.1	-0.4
TYC	baz=245			*e*S	Sn	04 43 21.9	0.0
YM01	YM01 baz=329	1.04	342	*e*P	Pb	04 43 09.4	-0.1
YM01	baz=329			*e*S	Sn	04 43 24.2	+1.2
YOJ	Yonaguni jima baz=75	1.04	72	*e*P	Pn	04 43 09.0	-0.1
YOJ	baz=75			*e*S	Sn	04 43 24.2	+1.3
YOJ	Yonaguni jima	1.04	72	P	Pn	04 43 09.0	-0.1
YOJ				*e*S	Sn	04 43 23.0	+0.1
YOJ	Yonaguni jima	1.04	72		Pn	04 43 08.8	-0.3
TWS1	Kuangyinshan baz=335	1.05	334	*e*P	Pb	04 43 10.0	+0.4
TWS1	baz=335			*e*S	Sn	04 43 25.1	+2.0
NCU	National Centr baz=320	1.05	321	*e*P	Pb	04 43 09.4	-0.2
NCU	baz=320			*e*S	Sn	04 43 25.1	+1.9
NCUH	Zhongli baz=319	1.05	321	*e*P	Pb	04 43 09.5	-0.2
NCUH	baz=319			*e*S	Sn	04 43 25.8	+2.6
SBCB	Hsinchu baz=304	1.07	307	P	Pb	04 43 10.2	+0.4
SBCB	baz=304			*e*S	Sn	04 43 24.7	+1.2
TWQ1	Liyutan baz=276	1.07	281	P	Pb	04 43 10.8	+1.0
TWQ1	baz=276			*e*S	Sn	04 43 25.2	+1.7
HSN	Hsinchu baz=308	1.08	307	P	Pb	04 43 10.2	0.0
HSN	baz=308			*e*S	Sn	04 43 24.6	+0.6
NSY	Sanyi baz=279	1.09	284	P	Pb	04 43 11.2	+1.0
NSY	baz=279			*e*S	Sn	04 43 25.7	+1.6
ANP	Anpu baz=342	1.09	341	*e*P	Pn	04 43 08.1	-1.9
NTST	Danshui baz=338	1.10	337	*e*P	Pb	04 43 09.5	-0.9
NTST	baz=338			*e*S	Sn	04 43 25.8	+1.6
NMLH	Miaoli baz=286	1.10	291	*e*P	Pb	04 43 11.2	+0.7
NMLH	baz=286			*e*S	Sn	04 43 25.6	+1.3
YUS	Yu-Shan baz=228	1.10	234	*e*P	Pn	04 43 10.2	-0.2
YUS	baz=228			*e*S	Sn	04 43 25.3	+0.2
FULB	Fuli baz=195	1.11	211	*e*P	Pn	04 43 10.0	0.0
TCU	Taichung baz=265	1.14	270	*e*P	Pb	04 43 12.0	+1.0
TCU	baz=265			S	Sb	04 43 28.0	+2.6
WJS	Zhushan baz=246	1.14	254	*e*P	Pb	04 43 11.5	+0.4
WJS	baz=246			*e*S	Sb	04 43 27.2	+1.8
TWY	Chenhua baz=347	1.16	345	*e*P	Pb	04 43 11.5	0.0
TWY	baz=347			*e*S	Sb	04 43 28.7	+2.7
CHKT	Chengkung baz=191	1.16	206	*e*P	Pn	04 43 10.0	-0.7
WNT	Mingjian baz=236	1.16	257	P	Pb	04 43 11.9	+0.4
WNT	baz=236			S	Sb	04 43 28.4	+2.2
WDJ	Dajia District baz=275	1.19	280	*e*P	Pb	04 43 12.0	+0.2
WDJ	baz=275			*e*S	Sb	04 43 28.8	+2.0
ALS	Alishan baz=221	1.20	238	*e*P	Pb	04 43 12.0	-0.4
ALS	baz=221			*e*S	Sb	04 43 28.9	+1.3
WCHH	Zhanghua baz=261	1.25	267	*e*P	Pb	04 43 13.3	+0.4
WCHH	baz=261			*e*S	Sb	04 43 30.3	+1.7
CHN5	Tsauling baz=240	1.26	244	*e*P	Pb	04 43 13.7	+0.4
ELDTW	Lidau baz=206	1.27	221	*e*P	Pn	04 43 11.9	-0.4
EDH	Donghe baz=191	1.30	206	*e*P	Pn	04 43 12.7	0.0
EDH	baz=191			*e*S	Sn	04 43 28.0	-1.3
WDLH	Douliu baz=245	1.35	250	*e*P	Pb	04 43 15.5	+0.9
WDLH	baz=245			*e*S	Sb	04 43 33.7	+2.3
STYH	Taoyuan baz=214	1.43	227	P	Pn	04 43 15.0	+0.5
STYH	baz=214			*e*S	Sb	04 43 34.2	+0.3
WRL	Guolierlin Hig baz=255	1.43	260	*e*P	Pb	04 43 15.7	-0.4
WRL	baz=255			*e*S	Sb	04 43 35.7	+1.8
LONT	Longtian baz=207	1.43	211	*e*P	Pn	04 43 13.6	-1.0
CHN4	Tsaushan baz=221	1.45	237	P	Pn	04 43 14.9	+0.2
CHN4	baz=221			*e*S	Sb	04 43 35.1	+0.6
TPUB	Ta-pu baz=219	1.45	235	P	Pb	04 43 16.3	-0.2
TPUB	baz=219			S	Sb	04 43 35.5	+0.9
TPUB	Ta-pu	1.45	235		Pn	04 43 15.2	+0.4
CHN2	Minshiung baz=241	1.46	245	*e*P	Pb	04 43 17.3	+0.7
WTK	Tuku baz=247	1.48	252	*e*P	Pb	04 43 16.6	-0.2
WTK	baz=247			*e*S	Sb	04 43 36.6	+1.4
PCYT	Pengchaiyu baz=7.0	1.48	5	*e*P	Pb	04 43 16.0	-0.9
WTP	Ta-pu baz=228	1.50	233	P	Pb	04 43 17.3	0.0
WTP	baz=228			*e*S	Sb	04 43 38.0	+2.1
CHY	Chiayi baz=239	1.52	245	P	Pb	04 43 17.5	0.0
CHY	baz=239			*e*S	Sb	04 43 39.1	+2.8
WTCT	Ta-ch'eng baz=254	1.53	260	*e*P	Pb	04 43 17.4	-0.3
WTCT	baz=254			*e*S	Sb	04 43 38.0	+1.4
LDUT	Ludao baz=185	1.53	196	*e*P	Pn	04 43 14.5	-1.3
LDUT	baz=185			*e*S	Sn	04 43 32.4	-2.4
TWGBT	Beinan baz=206	1.53	210	*e*P	Pn	04 43 14.7	-1.2
TWG	Pinlang baz=206	1.54	211	*e*P	Pn	04 43 15.2	-0.7
TWG	baz=206			*e*S	Sn	04 43 34.3	-0.8
TWG	Pinlang	1.54	211		Pn	04 43 14.9	-1.0
TWK	Hsinying baz=218	1.58	236	P	Pb	04 43 18.2	-0.4
TWK	baz=218			S	Sb	04 43 40.3	+2.1
CHN1	Nanshi baz=228	1.60	233	P	Pb	04 43 18.5	-0.4
CHN1	baz=228			*e*S	Sb	04 43 40.7	+2.0
SNST	Tainan City baz=229	1.60	235	*e*P	Pb	04 43 19.2	+0.2
SNST	baz=229			*e*S	Sb	04 43 40.9	+2.1
SGST	Jiashian baz=224	1.62	229	*e*P	Pn	04 43 17.9	+0.8
SGST	baz=224			*e*S	Sb	04 43 40.0	+0.6
WSF	Szhu baz=247	1.64	252	P	Pb	04 43 18.9	-0.6
WSF	baz=247			*e*S	Sb	04 43 41.2	+1.5
SLGT	Liugui baz=212	1.64	226	*e*P	Pb	04 43 19.4	-0.3
IRIF	Iriomote-Funau	1.66	83	P	Pn	04 43 17.6	0.0
IRIF				*e*S	Sn	04 43 39.3	+1.1
ICHU	Yijhu baz=237	1.70	243	*e*P	Pb	04 43 19.5	-1.1
ICHU	baz=237			*e*S	Sb	04 43 42.9	+1.4
HATJ	Hateruma jima	1.73	93	P	Pn	04 43 19.0	+0.5
HATJ				*e*S	Sn	04 43 40.1	+0.4
CHN8	Yiju baz=238	1.76	243	*e*P	Pb	04 43 20.2	-1.4
CHN8	baz=238			*e*S	Sb	04 43 44.4	+1.1
ECL	Taimali baz=206	1.78	210	*e*P	Pn	04 43 18.2	-1.1
SSD	Sandimen baz=215	1.83	221	*e*P	Pb	04 43 22.2	-0.6
TSMG	Majia baz=199	1.85	219	*e*P	Pb	04 43 22.1	-1.2
TSMG	baz=199			*e*S	Sb	04 43 47.4	+1.4
TWM1	Shoushan baz=222	1.91	226	*e*P	Pn	04 43 22.2	+1.2
JKRS	Kuro-shima	1.91	87	P	Pn	04 43 21.9	+0.9
JKRS				*e*S	Sn	04 43 44.3	0.0
MASBT	Mashibuluo baz=204	1.94	218	*e*P	Pn	04 43 21.8	+0.4
EAST	Anshuo baz=195	2.02	209	*e*P	Pn	04 43 22.6	0.0
TAW	Tawu baz=204	2.02	208	*e*P	Pb	04 43 24.4	-1.7
JIJ	Ishigaki jima	2.04	84	P	Pn	04 43 22.9	+0.1
JIJ				*e*S	Sn	04 43 47.2	-0.3
SSPT	Xinbi baz=200	2.07	217	*e*P	Pb	04 43 25.8	-1.2
LAY	Lan-yu baz=187	2.13	189	*e*P	Pn	04 43 23.4	-0.7
SCZT	Fangliau baz=199	2.14	214	*e*P	Pb	04 43 26.5	-1.6
SLIU	Shizi baz=195	2.18	208	*e*P	Pn	04 43 26.2	+1.3
JISG	Ishigakijimahi	2.22	78	P	Pn	04 43 25.1	-0.3
JISG				*e*S	Sn	04 43 51.2	-0.8
PHUB	P'eng-hu baz=249	2.24	254	*e*P	Pn	04 43 26.0	+0.4
PNG	Penghu baz=250	2.24	255	*e*P	Pn	04 43 25.8	+0.1
WLCH	Liuqiu baz=213	2.28	219	*e*P	Pb	04 43 31.2	+0.6
TWK1	Hengchun baz=192	2.42	205	*e*P	Pn	04 43 29.9	+1.8
TWKBT	Hengchun baz=192	2.42	205	*e*P	Pn	04 43 28.3	+0.1
VCHM	Qimei baz=230	2.47	248	*e*P	Pn	04 43 29.1	+0.3
JTJ	Tarama	2.58	79	P	Pn	04 43 31.0	+0.7
JTJ				S	Sn	04 44 02.6	+1.7
MATB	Ma-tsu baz=317	2.68	318	*e*P	Pn	04 43 30.4	-1.2
PTMZ	Houxiangcun baz=285	2.70	290	*e*P	Pn	04 43 31.7	-0.2
LYJJ	Jianjiangzhen baz=320	3.09	321	*e*P	Pn	04 43 35.8	-1.5
QZH	Quanzhou	3.13	285	P	Pn	04 43 37.4	-0.5
QZH				S	Sn	04 44 09.7	-4.8
QZH	comp=N,280nm,0.8s			smax	smax		
QZH	comp=E,190nm,0.5s			smax	smax		
XPSS	Dashiqiu baz=329	3.18	331	*e*P	Pn	04 43 37.6	-0.9
KNM	Kinmen baz=270	3.19	275	*e*P	Pn	04 43 40.0	+1.3
KNMB	Chin-men Tao baz=271	3.24	276	*e*P	Pn	04 43 38.6	-0.8
KNMB	Chin-men Tao	3.24	276		Pn	04 43 39.1	-0.2
MHZQ	Yeshan baz=306	3.26	307	*e*P	Pn	04 43 38.7	-0.9
AXDP	Jialang baz=277	3.67	283	*e*P	Pn	04 43 44.9	-0.4
ZPLA	Ao Xicun baz=261	3.82	268	*e*P	Pn	04 43 47.0	-0.3
JOW	Kunigami 5.3nm,0.3s,baz=184,slow=13,SNR=8.3	6.33	64	Pn	Pn	04 44 21.1	-0.8
WHN	Wuhan	9.26	315	⇑P	Pn	04 45 14.3	+12
INCN	Inchon	13.89	16	Pn	Pn	04 46 04.4	-1.0
KSAR	Wonju Array Be	14.20	20	Pn	Pn	04 46 08.3	-1.3
KSRS	Korea Array 0.2nm,0.3s,baz=207,slow=14,SNR=2.5	14.22	20	Pn	Pn	04 46 10.8	+1.0
KSRS	comp=Z,87nm,20.4s,baz=18,slow=42			LR	LR	04 52 45.1	
XAN	Xi'an	15.03	314	P	P	04 46 27.7	+1.6
XAN				pP	Pn	04 46 32.2	+11
XAN	comp=Z,12nm,0.9s			pmax	pmax		
DCPH	Dipolog City	15.54	175	⇓*e*P	P	04 46 39.3	+7.5
LZH	Lanzhou	19.61	312	*e*P	Pn	04 47 20.1	+1.8
LZH				pP	pwP	04 47 24.9	+1.6
LZH				sP	sP	04 47 28.7	+2.3
LZH	comp=Z,13nm,1.2s			pmax	pmax		
CM31	Chiang Mai Arr	22.13	260	P	P	04 47 43.8	-0.3
CM31	comp=Z,8.9nm,1.1s			IAmb	IAmb	04 47 48.7	
CMAR	Chiang Mai Arr comp=Z,2.0nm,0.7s,baz=60,slow=7.6,SNR=8.0	22.13	260	P	P	04 47 44.3	+0.3
CMAR	comp=Z,58nm,18.6s,baz=134,slow=40			LR	LR	04 57 45.7	
GTA	Gaotai	24.09	314	⇓P	P	04 48 04.5	+0.7
GTA				pP	sP	04 48 16.4	+2.6
GTA				sP	pP	04 48 19.6	+8.8
GTA	comp=Z,6.0nm,1.5s			pmax	pmax		
KLR	Kul'dur comp=Z,1.0nm,0.5s,baz=196,slow=9.1,SNR=5.3	26.20	15	P	P	04 48 21.9	-0.8
ULN	Ulaanbaatar	26.45	337	P	P	04 48 24.4	-0.8
ULN	comp=Z,5.5nm,0.9s			IAmb	IAmb	04 48 26.9	
SONM	Songino Array comp=Z,2.9nm,0.7s,baz=150,slow=8.4,SNR=12	26.66	336	P	P	04 48 26.2	-0.9
SHL	Shillong	27.27	279	P	P	04 48 33.3	+0.5
SHL	comp=Z,6.1nm,1.0s			IAmb	IAmb	04 48 37.1	
WMQ	Urumqi	34.16	314	*e*P	P	04 49 36.6	+3.2
MKAR	Makanchi Array comp=Z,4.6nm,0.6s,baz=105,slow=10,SNR=9.2	38.83	316	P	P	04 50 12.7	-0.4
MKAR	Makanchi Array	38.83	316	P	P	04 50 12.9	-0.2
MAKZ	Makanchi	39.04	316	P	P	04 50 14.6	-0.2
MAKZ	comp=Z,5.9nm,0.6s			IAmb	IAmb	04 50 16.1	
ZAA0	Zalesovo Array	40.64	327	P	P	04 50 28.0	0.0
ZAA0	comp=Z,4.0nm,0.8s			IAmb	IAmb	04 50 29.1	
ZALV	Zalesovo Beam comp=Z,3.9nm,0.7s,baz=118,slow=7.1,SNR=11	40.64	327	P	P	04 50 27.7	-0.3
ZALV	Zalesovo Beam	40.64	327	P	P	04 50 27.2	-0.8
KSH	Kashi	41.48	303	P	P	04 50 38.8	+3.5
KSH	comp=Z,6.0nm,1.0s			pmax	pmax		
KURK	Kurchatov	42.55	320	P	P	04 50 42.3	-1.4
KURBB	Kurchatov Arra comp=Z,0.8nm,0.4s,baz=106,slow=6.8,SNR=4.9	42.57	320	P	P	04 50 42.3	-1.6
SEY	Seymchan comp=Z,87nm,18.3s,baz=36,slow=40	43.78	20	LR	LR	05 12 06.6	
WRA	Warramunga Arr comp=Z,0.7nm,0.7s,baz=345,slow=8.6,SNR=8.1	45.47	164	P	P	04 51 05.5	-1.8
GAR	Garm	45.81	302	P	P	04 51 10.7	+0.6
KKAR	Karatay Array	46.03	307	P	P	04 51 12.7	+1.0
KBL	Kabul	46.78	295	P	P	04 51 18.1	+0.1
BVAR	Borovoye Array comp=Z,2.3nm,0.5s,baz=130,slow=8.1,SNR=9.1	48.13	321	P	P	04 51 27.1	-0.8
AS31	Alice Springs	48.93	165	P	P	04 51 32.7	-1.7
ABKAR	Akbulak array	53.95	314	P	P	04 52 11.5	-0.2
ABKAR	comp=Z,3.0nm,0.6s			IAmb	IAmb	04 52 13.0	
ARU	Arti	55.54	323	P	P	04 52 23.1	0.0
ARU	comp=Z,3.8nm,0.7s			IAmb	IAmb	04 52 24.3	
ILAR	Eielson Array comp=Z,0.2nm,0.5s,baz=286,slow=6.3,SNR=6.4	68.94	27	P	P	04 53 52.1	-0.6
BCAR	Beaver Creek A	71.54	29	P	P	04 54 09.7	+0.8
FINES	FINESS Array B comp=Z,7.6nm,1.1s,baz=66,slow=4.7,SNR=4.7	71.81	330	P	P	04 54 09.6	-0.7
BRTR	Keskin Array B comp=Z,1.0nm,0.9s,baz=102,slow=6.1,SNR=5.5	73.73	307	P	P	04 54 22.9	+0.5
YKA	Yellowknife Ar comp=Z,1.0nm,0.6s,baz=313,slow=4.8,SNR=11	82.74	23	P	P	04 55 10.6	-1.0
GERES	GERESS Array B comp=Z,0.7nm,0.9s,baz=44,slow=7.8,SNR=4.0	83.30	321	P	P	04 55 14.1	-0.8

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*NNC **06** 04:48:03.6±0.5, 46°.33N×80°.28E, h0^{km}, mb3.2, mpv3.1,*
Error ellipse: s-maj=8.0km s-min=2.1km az=141.0
*SOME **06** 04:48:05.3, 46°.22N×80°.05E, h0^{km}*
ISC 06 04:48:00.9±1.1**, 46°.41N**±0°.04×**80°.14E**±0°.04**, h18**^{km}±7^{km},

n40, σ1^{s}.22/62, 7C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPS	Kapalarasan	1.25	206	*e*P	Pg	04 48 26.9	+1.9
	10nm,0.2s						
KAPS				*e*S	Sg	04 48 42.8	+1.3
	25nm,0.0s						
KAPS	Kapalarasan	1.25	206	P	Pg	04 48 26.9	+1.9
	10nm,0.2s						
KAPS				S	Sg	04 48 42.8	+1.3
	30nm,0.2s						
MAKZ	Makanchi	1.33	72	Pg	Pg	04 48 28.1	+1.6
MAKZ				Sg	Sg	04 48 45.9	+2.1
MAKZ	Makanchi	1.33	72	⇑P	Pg	04 48 27.7	+1.2
	1.1nm,0.2s						
MAKZ				⇓S	Sg	04 48 44.6	+0.8
	6.2nm,0.3s						
MK31	Makanchi Array	1.53	75	⇓P	Pg	04 48 31.1	+0.8
	1.5nm,0.3s,baz=247,slow=12,SNR=110						
MK31				⇑S	Sg	04 48 50.2	-0.1
	3.1nm,0.3s,baz=252,slow=24,SNR=11						
MKAR	Makanchi Array	1.53	75	Pg	Pg	04 48 31.3	+0.9
MKAR				Sg	Sg	04 48 50.8	+0.6
TDK	Taldyqorghan	1.86	221	*e*P	Pg	04 48 38.2	+1.6
	15nm,0.1s						
TDK				*e*S	Sg	04 49 02.0	+1.2
	85nm,0.1s						
TDK	Taldyqorghan	1.86	221	P	Pg	04 48 38.2	+1.6
	13nm,0.1s						
TDK				S	Sg	04 49 02.0	+1.2
	85nm,0.5s						
DJR	Jarkent	2.09	187	*e*P	Pg	04 48 41.5	+0.5
	7.5nm,0.1s						
DJR				*e*S	Sg	04 49 07.7	-0.5
	68nm,0.4s						
DJR	Jarkent	2.09	187	Pg	Pg	04 48 41.5	+0.5
DJR				Lg	Lg	04 49 07.7	
	68nm,0.4s						
BLB	Baldybastay	2.59	208	Pg	Pg	04 48 50.9	+0.2
	11nm,0.3s						
BLB				Lg	Lg	04 49 23.5	
	36nm,0.3s						
ARXS	Arharly	2.74	217	*e*P	Pg	04 48 53.5	+0.2
	2.8nm,0.0s						
ARXS				*e*S	Sg	04 49 28.4	-0.5
	36nm,0.3s						
ARXS	Arharly	2.74	217	Pg	Pg	04 48 53.5	+0.2
	3.2nm,0.2s						
ARXS				Lg	Lg	04 49 28.4	
	36nm,0.3s						
PDGK	Podgornoye	3.12	189	Pg	Pg	04 48 59.4	-1.2
	2.9nm,0.5s						
PDGK				Lg	Lg	04 49 38.4	
	3.1nm,0.3s						
PDGK	Podgornoye	3.12	189	⇓Pn	Pb	04 48 55.8	0.0
	11nm,1.1s						
PDGK				⇑Lg	Lg	04 49 41.8	
	9.1nm,0.7s						
SHLS	Shalkode	3.29	189	*e*P	Pg	04 49 03.0	-0.8
	2.5nm,0.4s						
SHLS				*e*S	Sg	04 49 44.7	-1.8
	16nm,0.1s						
SHLS	Shalkode	3.29	189	Pg	Pg	04 49 03.1	-0.8
	2.5nm,0.4s						
SHLS				Lg	Lg	04 49 44.7	
	16nm,0.4s						
UZB	Uzynbulak	3.36	194	*e*P	Pg	04 49 04.3	-1.0
	3.8nm,0.1s						
UZB				*e*S	Sg	04 49 46.5	-2.2
	7.8nm,0.2s						
UZB	Uzynbulak	3.36	194	Pg	Pg	04 49 04.3	-1.0
	3.8nm,0.2s						
UZB				Lg	Lg	04 49 46.5	
	7.8nm,0.6s						
ZSN	Zaisan	3.40	70	*e*P	Pg	04 49 05.5	-0.5
	2.1nm,0.1s						
ZSN				*e*S	Sg	04 49 48.8	-1.2
	3.9nm,0.1s						
ZSN	Zaisan	3.40	70	Pg	Pg	04 49 05.5	-0.5
	2.2nm,0.4s						
ZSN				Lg	Lg	04 49 48.8	
	3.9nm,0.5s						
SATY	Saty	3.57	201	*e*P	Pg	04 49 08.7	-0.6
	1.0nm,0.1s						
SATY				*e*S	Sg	04 49 54.3	-1.3
	11nm,0.3s						
SATY	Saty	3.57	201	Pg	Pg	04 49 08.7	-0.6
	1.1nm,0.3s						
SATY				Lg	Lg	04 49 54.3	
	11nm,0.3s						
KTBS	Karatobe	3.65	224	*e*P	Pg	04 49 10.2	-0.5
	1.0nm,0.4s						
KTBS				*e*S	Sg	04 49 56.7	-1.2
	21nm,0.2s						
KTBS	Karatobe	3.65	224	Pg	Pg	04 49 10.2	-0.5
	1.0nm,0.4s						
KTBS				Lg	Lg	04 49 56.7	
	20nm,0.3s						
KUU	Kurty	3.68	228	*e*P	Pg	04 49 10.6	-0.9
	1.4nm,0.1s						
KUU				*e*S	Sg	04 49 57.8	-1.3
	40nm,0.4s						
KUU	Kurty	3.68	228	Pg	Pg	04 49 10.5	-0.9
	1.4nm,0.3s						
KUU				Lg	Lg	04 49 57.8	
	40nm,0.4s						
KOTS	Kotyrbulak	3.84	215	*e*P	Pg	04 49 14.0	-0.3
	1.2nm,0.3s						
KOTS				*e*S	Sg	04 50 03.5	-0.6
	10nm,0.1s						
KOTS	Kotyrbulak	3.84	215	Pg	Pg	04 49 14.0	-0.3
	1.2nm,0.3s						
KOTS				Lg	Lg	04 50 03.5	
	10nm,0.3s						
TNSS	Tian-Shan	4.07	215	*e*P	Pg	04 49 17.5	-1.3
	1.3nm,0.1s						
TNSS				*e*S	Sg	04 50 09.4	-2.2
	2.6nm,0.3s						
TNSS	Tian-Shan	4.07	215	Pg	Pg	04 49 17.5	-1.3
	1.0nm,0.3s						
TNSS				Lg	Lg	04 50 09.4	
	2.6nm,0.3s						
KRBS	Karabastau	4.17	231	*e*P	Pg	04 49 19.3	-1.4
	1.3nm,0.2s						
KRBS				*e*S	Sg	04 50 12.6	-2.1
	12nm,0.2s						
KRBS	Karabastau	4.17	231	Pg	Pg	04 49 19.3	-1.4
	1.3nm,0.4s						
KRBS				Lg	Lg	04 50 12.6	
	12nm,0.2s						
KURBB	Kurchatov Arra	4.35	346	⇑Pg	Pg	04 49 23.1	-1.0
	0.7nm,0.3s						
KURBB				⇓Lg	Lg	04 50 19.7	
	8.6nm,0.5s						
TKM2	Tokmak 2	4.76	225	⇑Pg	Pg	04 49 29.6	-2.4
TKM2				⇑Lg	Lg	04 50 39.3	
	6.6nm,0.8s						
UKR	Ust'-Kan	5.47	32	Pg	Pg	04 49 52.0	+6.5
UKR				Sg	Sg	04 50 57.1	+0.7
AAK	Ala-Archa	5.52	229	⇑Pg	Pg	04 49 47.6	+1.0
	1.4nm,0.7s						
AAK				⇓Lg	Lg	04 51 03.5	
	3.9nm,0.8s						
DGZ	Jazzator, Alta	5.89	53	Pn	Pn	04 49 28.7	+1.4
DGZ				Pg	Pg	04 49 52.5	-1.2
DGZ				Sg	Sg	04 51 09.1	-0.8
AKAR	Aktash	6.33	49	Pg	Pg	04 50 00.3	-1.8
AKAR				Sg	Sg	04 51 23.0	-1.0
CUR	Chagan-Uzun	6.61	53	Sg	Sg	04 51 32.2	-0.6

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*TUL **06** 04:52:51.9±1.5, 35°.85N±0°.02×96°.65W±0°.04, h5^{km}±7^{km}, ML2.9, mb_Lg2.7/28(NEIC), Error ellipse: s-maj=4.8km s-min=2.9km az=118.0*

*NEIC **06** 04:52:52.7±1.4, 35°.88N±0°.02×96°.68W±0°.04, h8^{km}±7^{km}, Error ellipse: s-maj=5.2km s-min=2.9km az=117.0*

*ANF **06** 04:52:52.2±0.2, 35°.89N×96°.70W, h5^{km}, ML2.9/6, Error ellipse: s-maj=2.1km s-min=1.8km az=115.0*

ISC 06 04:52:52.6±1.0, **35°.88N**±0°.03×**96°.69W**±0°.03, **h11**^{km}±8^{km}, **n55, σ0^{s}.58**/49, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK030	Cody Creek RV	0.09	300		Pg	04 52 55.0	-0.2
OK034	N. Norfolk Rd.	0.13	352	Pg	Pg	04 52 55.6	-0.2
OK031	S. Brethren Rd	0.14	300	Pg	Pg	04 52 56.0	+0.1
OK025	Westminster Rd	0.61	240	Pg	Pg	04 53 03.8	-0.6
OK029	Liberty Lake	0.63	262	Pg	Pg	04 53 04.1	-0.7
OKCSW	OKLAHOMA CITY	0.77	232		Pg	04 53 07.2	-0.4
OKCFA	Oklahoma City	0.78	233	Pg	Pg	04 53 07.2	-0.4
OKCFA	Oklahoma City	0.78	233	S	Sg	04 53 18.0	+0.2
	baz=54						
BCOK	Bluff Creek, N	0.78	253	Pg	Pg	04 53 07.8	+0.1
FNO	Franklin	0.85	223		Pg	04 53 09.3	+0.3
BLOK	Blackwell	0.97	334		Pg	04 53 11.0	-0.3
T35A	Sooner Cattle	1.04	8		Pg	04 53 11.9	-0.7
T35B	Sooner Cattle	1.04	8	P	Pg	04 53 12.0	-0.7
	baz=187						
T35B				S	Sg	04 53 26.3	+0.1
	baz=187						
CROK	Carrier	1.22	301	Pg	Pb	04 53 15.3	-0.3
KAN13	South Haven SW	1.29	331	Pn	Pn	04 53 16.5	-0.1
GC02	Grant County #	1.35	316		Pn	04 53 17.3	0.0
KAN17	Caldwell West	1.45	324		Pb	04 53 19.8	+0.2
KAN09	Caldwell North	1.46	329	Pn	Pn	04 53 19.3	+0.4
KAN01	Argonia South	1.53	326		Pb	04 53 21.1	+0.1
OK032	Salt Plains WL	1.53	307		Pn	04 53 20.8	+0.9
X34A	Smith Ranch, M	1.58	216		Pn	04 53 20.5	-0.1
KAN06	Argonia West S	1.65	326		Pb	04 53 23.1	0.0
KAN10	Anthony SW Sta	1.68	318		Pn	04 53 23.2	+1.3
X37A	Clayton	1.69	140	Pn	Pn	04 53 22.2	+0.2
X37A	Clayton	1.69	140	P	Pn	04 53 22.0	0.0
	baz=321						
X37A				S	Sb	04 53 45.1	+0.3
	baz=321						
KAN08	Anthony NE Sta	1.69	323	Pn	Pn	04 53 23.3	+1.3
KAN12	Harper NE Stat	1.76	324	Pn	Pn	04 53 23.8	+0.7
LOOK	Love County	1.93	192		Pn	04 53 25.9	+0.5
LOOK				IAmb_Lg		04 53 56.1	
	comp=Z,30nm,0.9s						
U32A	Winter Ranch,	1.93	285		Pb	04 53 27.3	-0.6
U32A	Winter Ranch,	1.93	285	Sb	Sg	04 53 54.4	-0.4
	baz=104						
U38A	Gravette	1.95	73		Pn	04 53 26.4	+0.7
U38A	Gravette	1.95	73	P	Pn	04 53 26.3	+0.7
	baz=254						
U38A				S	Sb	04 53 52.4	0.0
	baz=254						
HHAR	Hobbs	2.26	79		Pn	04 53 31.0	+1.0
W39A	Magazine	2.47	105		Pn	04 53 33.6	+0.8
W39A	Magazine	2.47	105	P	Pn	04 53 33.1	+0.3
	baz=287						
MIAR	Mount Ida	2.88	117		Pn	04 53 38.6	+0.2
MIAR	Mount Ida	2.88	117	P	Pn	04 53 38.9	+0.6
	baz=299						
Z38A	Mt. Pleasant	2.97	151	IAmb_Lg		04 54 32.5	
	comp=Z,22nm,0.8s						
U40A	Yellville	3.14	80	Pn	Pn	04 53 42.5	+0.5
KSU1	Kansas State U	3.21	1	Pn	Pn	04 53 43.5	+0.6
KSU1					Lg	04 54 38.4	
KSU1				IAmb_Lg		04 54 41.3	
	comp=Z,14nm,0.8s						
S39A	Bolivar	3.25	55	Pn	Pn	04 53 43.7	+0.2
S39A				IAmb_Lg		04 54 33.8	
	comp=Z,12nm,0.7s						
X40A	Basin Creek Fa	3.45	113	Pn	Pn	04 53 46.0	-0.3
FCAR	Ozark Folk Cen	3.71	89	Pn	Pn	04 53 50.3	+0.5
MGMO	Mountain Grove	3.78	69	Pn	Pn	04 53 51.6	+0.8
CBKS	Cedar Bluff	3.80	321	Pn	Pn	04 53 51.8	+0.7
CBKS				IAmb_Lg		04 55 01.5	
	comp=Z,15nm,0.9s						
AMTX	Amarillo	4.20	258	IAmb_Lg		04 55 13.5	
	comp=Z,14nm,0.9s						
LCAR	Lake Charles	4.50	86	IAmb_Lg		04 55 17.9	
	comp=Z,15nm,1.0s						
P38A	Dawn	4.50	33	Pn	Pn	04 53 59.6	-1.0
P38A					LR	04 55 14.6	
P38A				IAmb_Lg		04 55 14.7	
	comp=Z,22nm,1.2s						
T42A	Van Buren	4.66	74	IAmb_Lg		04 55 18.0	
	comp=Z,13nm,0.7s						
CCM	Cathedral Cave	4.87	62	IAmb_Lg		04 55 24.1	
	comp=Z,19nm,0.8s						
N35A	Tabor	5.04	9	Pn	Pn	04 54 08.2	+0.2
PBMO	Poplar Bluff	5.13	78	IAmb_Lg		04 55 40.0	
	comp=Z,22nm,0.8s						
BGNE	Belgrade	5.63	349	IAmb_Lg		04 56 06.3	
	comp=Z,19nm,0.9s						
SLM	Saint Louis	5.83	60	IAmb_Lg		04 55 55.4	
	comp=Z,22nm,0.7s						
L34A	Svendsen Farm,	6.08	2	IAmb_Lg		04 56 14.4	
	comp=Z,16nm,0.9s						

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*TUL **06** 04:56:15.4±0.9, 35°.85N±0°.02×96°.65W±0°.03, h5^{km}±7^{km}, ML2.7, mb_Lg2.2/5(NEIC), Error ellipse: s-maj=3.6km s-min=1.8km az=117.0*

NEIC 06 04:56:15.7±1.1, **35°.87N**±0°.01×**96°.65W**±0°.04, **h8**^{km}±6^{km}, **Error ellipse: s-maj=4.6km s-min=0.8km az=115.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK030	Cody Creek RV	0.12	300		Pg	04 56 18.4	0.0
OK034	N. Norfolk Rd.	0.15	342	Pg	Pg	04 56 19.1	+0.2
OK034				Sg	Sg	04 56 21.2	+0.1
OK031	S. Brethren Rd	0.17	300	Pg	Pg	04 56 19.1	-0.1
OK031				Sg	Sg	04 56 22.1	+0.3
OK025	Westminster Rd	0.62	243	Pg	Pg	04 56 27.4	-0.3
OK025				Sg	Sg	04 56 36.4	+0.5
OK029	Liberty Lake	0.65	264	Pg	Pg	04 56 28.1	-0.2
OK029				Sg	Sg	04 56 36.8	0.0
OKCSW	OKLAHOMA CITY	0.79	234	Pg	Pg	04 56 29.9	-0.9
OKCFA	Oklahoma City	0.79	236	Pg	Pg	04 56 29.7	-1.2
FNO	Franklin	0.86	225	Pg	Pg	04 56 31.8	-0.4
FNO				IAmb_Lg		04 56 42.1	
	comp=Z,20nm,0.9s						
FNO				Sg	Sg	04 56 43.5	+0.1
BLOK	Blackwell	1.00	333	Pg	Pg	04 56 34.0	-1.0
T35A	Sooner Cattle	1.05	6	Pg	Pg	04 56 35.2	-0.7
T35A				Sg	Sg	04 56 49.6	-0.1
CROK	Carrier	1.25	301	Pg	Pn	04 56 38.5	-1.0
KAN13	South Haven SW	1.32	330	Pn	Pn	04 56 39.8	-0.7
GC02	Grant County #	1.38	316	Pn	Pn	04 56 41.1	-0.2
KAN17	Caldwell West	1.48	323	Pn	Pn	04 56 42.7	+0.1
KAN09	Caldwell North	1.49	329	Pn	Pn	04 56 42.3	-0.4
KAN01	Argonia South	1.56	326	Pn	Pn	04 56 44.1	+0.4
OK032	Salt Plains WL	1.57	307	Pn	Pn	04 56 44.2	+0.3
X34A	Smith Ranch, M	1.59	218	Pn	Pn	04 56 44.1	0.0
X37A	Clayton	1.65	140	Pn	Pn	04 56 44.7	-0.3
KAN06	Argonia West S	1.69	325	Pn	Pn	04 56 46.1	+0.6
KAN10	Anthony SW Sta	1.71	318	Pn	Pn	04 56 46.1	+0.3
KAN08	Anthony NE Sta	1.72	322	Pn	Pn	04 56 46.1	+0.1
KAN16	Harper SW Stat	1.77	320	Pn	Pb	04 56 47.5	-0.9
LOOK	Love County	1.92	193	Pn	Pn	04 56 49.1	+0.5
U38A	Gravette	1.92	72	Pn	Pn	04 56 49.5	+0.7
U32A	Winter Ranch,	1.97	286	IAmb_Lg		04 57 22.1	
	comp=Z,10.0nm,0.8s						
HHAR	Hobbs	2.24	79	Pn	Pn	04 56 53.8	+0.7
W39A	Magazine	2.44	105	Pn	Pn	04 56 55.6	-0.2
MIAR	Mount Ida	2.84	117	Pn	Pn	04 57 02.5	+1.1
R32A	Long Quarter,	3.04	328	Pn	Pn	04 57 03.9	-0.2
U40A	Yellville	3.12	80	Pn	Pn	04 57 04.8	-0.4
S39A	Bolivar	3.24	55	Pn	Pn	04 57 07.0	+0.3
X40A	Basin Creek Fa	3.42	113	Pn	Pn	04 57 08.8	-0.5
FCAR	Ozark Folk Cen	3.68	88	Pn	Pn	04 57 12.5	-0.4
MGMO	Mountain Grove	3.76	69	Pn	Pn	04 57 13.9	-0.1
MGMO				IAmb_Lg		04 58 17.9	
	comp=Z,11nm,0.8s						
LCAR	Lake Charles	4.47	86	Pn	Pn	04 57 23.6	-0.1
P38A	Dawn	4.49	32	Pn	Pn	04 57 24.4	+0.4

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*IDC **06** 05:03:14.5±9.3, 36°.26N×70°.48E, h198^{km}±89^{km}, mb3.1/6, mb1 3.2/10, mb1mx2.9/62, mbtmp3.7/10, Error ellipse: s-maj=53.4km s-min=24.3km az=16.0*

*NNC **06** 05:03:16.8±11.0, 36°.79N×70°.06E, h121^{km}±263^{km}, mb3.6, mpv4.5, Error ellipse: s-maj=88.7km s-min=85.3km az=99.0*

ISC 06 05:03:16.0±0.8, **36°.56N**±0°.06×**70°.48E**±0°.10, **h204**^{km}, **n26, σ1^{s}.59**/31, **mb3.1**/5, **5C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.97	156	P	Pn	05 04 05.8	+0.1
CEP				S	S	05 04 43.0	-0.9
CHCP	Chirah Chowk	3.69	141	P	Pn	05 04 14.8	+0.6
THW	Thamme Wali	3.90	164	P	Pn	05 04 16.4	-0.4
AML	Almayashu	6.10	23	P	Pn	05 04 45.6	+0.7
	SNR=69						
UCH	Uchtor	6.47	28	P	Pn	05 04 50.5	+0.8
	SNR=34						
EKS2	Erkin-Say	6.61	22	P	Pn	05 04 52.1	+0.9
	SNR=37						
AAK	Ala-Archa	6.82	26	P	Pn	05 04 55.0	+1.0
	SNR=26						
AAK	Ala-Archa	6.82	26	⇑P	Pn	05 04 54.7	+0.7
	6.5nm,0.3s						
AAK				⇓S	S	05 06 10.7	-0.9
	40nm,0.5s						
KBK	Karagaybulak	7.00	28	P	Pn	05 04 57.5	+1.2
	SNR=15						
ULHL	Ulahol	7.22	36	P	Pn	05 05 00.1	+0.8
	SNR=5.2						
CHMS	Chumysh	7.22	26	P	Pn	05 05 00.1	+1.0
	SNR=9.4						
USP	Ospenovka	7.38	24	P	Pn	05 05 02.0	+0.9
	SNR=23						
TKM2	Tokmak 2	7.48	30	P	Pn	05 05 03.4	+0.8
	SNR=34						
TKM2	Tokmak 2	7.48	30	⇓P	Pn	05 05 02.9	+0.4
	22nm,0.5s						
TKM2				⇑S	S	05 06 24.1	-3.2
	13nm,0.8s						
MKAR	Makanchi Array	13.49	37	P	Pn	05 06 20.9	+1.5
	0.5nm,0.3s,baz=210,slow=11,SNR=28						
AB31	Akbulak array	14.83	332	⇑P	Pn	05 06 35.4	-0.5
	1.4nm,0.8s,baz=143,slow=12,SNR=15						
AB31				⇓S	S	05 09 15.1	-5.1
	1.2nm,0.7s,baz=152,slow=26,SNR=3.5						
KURBB	Kurchatov Arra	15.21	20	P	Pn	05 06 40.8	+0.4
	0.1nm,0.3s,baz=206,slow=10,SNR=8.6						
BVAR	Borovoye Array	16.47	360	P	Pn	05 06 56.7	+1.2
	0.5nm,0.3s,baz=201,slow=16,SNR=7.8						
AKTO	Aktyubinsk	16.52	331	P	Pn	05 06 57.1	+0.9
	0.2nm,0.3s,baz=141,slow=12,SNR=5.7						
AKTO	Aktyubinsk	16.52	331	⇑P	Pn	05 06 56.7	+0.5
	2.3nm,0.8s						
AKTO				⇑S	S	05 09 59.0	+1.4
	2.0nm,1.1s						
ZALV	Zalesovo Beam	20.04	25	P	P	05 07 35.2	+1.9
	3.0nm,0.4s,baz=220,slow=11,SNR=18						
ARU	Arti	21.44	342	P	P	05 07 50.6	+2.6
	0.5nm,0.2s,baz=160,slow=21,SNR=3.4						
BRTR	Keskin Array B	29.02	288	P	P	05 08 57.1	0.0
	0.2nm,0.5s,baz=71,slow=11,SNR=1.3						
FINES	FINESS Array B	37.20	326	P	P	05 10 09.1	+1.8
	3.9nm,0.9s,baz=128,slow=9.0,SNR=1.7						
NOA	NORSAR Array B	44.08	323	P	P	05 11 02.6	-1.0
	0.3nm,0.5s,baz=98,slow=4.5,SNR=1.4						
WRA	Warramunga Arr	82.38	122	P	P	05 15 13.7	-1.6
	0.1nm,0.4s,baz=321,slow=4.4,SNR=1.5						

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*IDC **06** 05:06:17.7±5.8, 24°.83N×122°.48E, h114^{km}±58^{km}, mb3.5/6, mb1 3.6/8, mb1mx3.1/62, mbtmp3.8/8, Error ellipse: s-maj=49.1km s-min=16.5km az=65.0*

*TAP **06** 05:06:17.4, 24°.76N×122°.39E, h108^{km}, ML4.3, C*

*JMA **06** 05:06:17.3±0.2, 24°.71N×122°.35E, h106^{km}±2^{km}, M3.6*

ISC 06 05:06:17.2±0.7, **24°.75N**±0°.03×**122°.38E**±0°.02, **h110**^{km}±4^{km}, **n145, σ0^{s}.95**/250, **mb3.7**/6, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		0.42	283	*e*P	Pn	05 06 34.8	+1.3
	baz=275						
TWB1	Santiao Chiao	0.44	306	*i* P	Pn	05 06 34.0	+0.4
	baz=296						
TWB1				*e*S	Sn	05 06 45.5	-0.5
	baz=296						
TWC	Suao	0.51	254	P	Pn	05 06 33.9	-0.2
	baz=250						
TWC				S	Sn	05 06 45.9	-0.8
	baz=250						
NTC	Toucheng	0.52	282	P	Pn	05 06 34.0	-0.1
	baz=277						
NTC				*e*S	Sn	05 06 46.3	-0.6
	baz=277						
TIPB	Shuangxi	0.55	294	*i* P	Pn	05 06 34.7	+0.3
	baz=289						
TIPB				*e*S	Sn	05 06 46.3	-1.1
	baz=289						
ILA	Ilan	0.58	272	*i* P	Pn	05 06 35.0	+0.4
	baz=265						
ILA				*i* S	Sn	05 06 47.9	+0.2
	baz=265						
JYNG	Yonagunijimaku	0.59	120	P	Pn	05 06 34.8	+0.1
JYNG				S	Sn	05 06 47.0	-0.8
NDS	Dongshan	0.62	259	P	Pn	05 06 35.2	+0.3
	baz=258						
NDS				*i* S	Sn	05 06 48.0	-0.2
	baz=258						
EWUT	Wuta	0.63	241	P	Pn	05 06 35.5	+0.5
	baz=241						
EWUT				*e*S	Sn	05 06 48.3	0.0
	baz=241						
NWF	Wu-fen Shan	0.64	300	P	Pn	05 06 35.4	+0.3
	baz=290						
NWF				*e*S	Sn	05 06 48.6	0.0
	baz=290						
WFSB	Wu-fen Shan	0.64	300	P	Pn	05 06 35.5	+0.5
	baz=291						
WFSB				*e*S	Sn	05 06 48.7	+0.3
	baz=291						
YOJ	Yonaguni jima	0.64	116	P	Pn	05 06 35.2	+0.2
	baz=124						
YOJ				*e*S	Sn	05 06 47.9	-0.6
	baz=124						
YOJ	Yonaguni jima	0.64	116	P	Pn	05 06 35.1	+0.1
YOJ				S	Sn	05 06 47.6	-0.8
TWE	Neicheng	0.65	268	P	Pn	05 06 35.5	+0.3
	baz=270						
TWE				S	Sn	05 06 48.4	-0.2
	baz=270						
ENA	Nanau	0.67	242	*i* P	Pn	05 06 35.7	+0.5
	baz=241						
ENA				S	Sn	05 06 48.8	-0.1
	baz=241						
TNOU	National Taiwa	0.68	306	*e*P	Pn	05 06 36.0	+0.6
	baz=296						
TNOU				*e*S	Sn	05 06 49.0	-0.1
	baz=296						
EHP	Heping Village	0.73	233	P	Pn	05 06 36.3	+0.5
	baz=226						
EHP				*i* S	Sn	05 06 50.2	+0.4
	baz=226						
ENTT	Nioudou	0.75	262	*i* P	Pn	05 06 36.7	+0.7
	baz=262						
ENTT				S	Sn	05 06 51.2	+1.0
	baz=262						
TWA	Mucha	0.76	288	*e*P	Pn	05 06 36.1	0.0
	baz=286						
TWA				*e*S	Sn	05 06 49.6	-0.7
	baz=286						
NHY	Taipei	0.80	292	*e*P	Pn	05 06 36.6	+0.3
	baz=282						
NHY				*e*S	Sn	05 06 50.8	0.0
	baz=282						
NWLT	Wulai	0.80	272	P	Pn	05 06 36.6	+0.1
	baz=276						
NWLT				*e*S	Sn	05 06 51.3	+0.3
	baz=276						
NDT	Datong Townshi	0.81	260	P	Pn	05 06 37.5	+1.0
	baz=260						
NDT				S	Sn	05 06 52.2	+1.2
	baz=260						
NHDH	Xindian Distri	0.81	285	*e*P	Pn	05 06 36.6	+0.1
	baz=284						
NHDH				*e*S	Sn	05 06 50.4	-0.7
	baz=284						
YM01	YM01	0.84	298	*i* P	Pn	05 06 37.1	+0.2
	baz=289						
YM01				S	Sn	05 06 51.4	-0.2
	baz=289						
YM08	YM08	0.84	301	*e*P	Pn	05 06 37.1	+0.3
	baz=292						
YM08				*e*S	Sn	05 06 51.0	-0.7
	baz=292						
TATO	Taipei	0.84	286	*e*P	Pn	05 06 37.0	+0.2
	baz=284						
TATO				*e*S	Sn	05 06 50.6	-1.1
	baz=284						
TAP	Taipei	0.85	290	S	Sn	05 06 51.0	-0.7
	baz=289						
TWY	Chenhua	0.88	307	*e*P	Pn	05 06 37.4	+0.2
	baz=298						

TWY	baz=298			*e*S	Sn	05 06 52.6	+0.3
BACT	**New Taipei Cit** baz=281	0.89	286	*e*P	Pn	05 06 37.6	+0.3
ANP	**Anpu** baz=291	0.90	299	*e*P	Pn	05 06 37.8	+0.3
ANP	baz=291			*e*S	Sn	05 06 52.4	-0.3
ETL	**Fush Village** baz=225	0.91	230	P	Pn	05 06 37.3	-0.2
ETL	baz=225			*i* S	Sn	05 06 52.8	0.0
NACB	**Ninganchiao** baz=227	0.92	232	P	Pn	05 06 37.4	-0.2
NACB	baz=227			*i* S	Sn	05 06 52.4	-0.5
YHNB	**Yeheng** baz=270	0.92	265	P	Pn	05 06 38.2	+0.6
YHNB	baz=270			S	Sn	05 06 53.3	+0.2
NSK	**Sanguang** baz=271	0.94	266	P	Pn	05 06 38.2	+0.4
NSK	baz=271			*e*S	Sn	05 06 53.1	-0.2
NTST	**Danshui** baz=289	0.94	296	*e*P	Pn	05 06 38.4	+0.6
NTST	baz=289			*e*S	Sn	05 06 53.5	+0.2
TWS1	**Kuangyinshan** baz=285	0.94	292	P	Pn	05 06 38.2	+0.4
TWS1	baz=285			*e*S	Sn	05 06 53.0	-0.3
NNSB	**Datong** baz=246	0.97	251	*i* P	Pn	05 06 38.5	+0.4
NNSB	baz=246			*i* S	Sn	05 06 54.2	+0.2
NNS	**Nan Shan** baz=246	0.97	252	*i* P	Pn	05 06 38.9	+0.6
NNS	baz=246			*e*S	Sn	05 06 54.0	0.0
TWD	**Chiawan** baz=226	0.98	227	P	Pn	05 06 38.2	0.0
TWD	baz=226			*e*S	Sn	05 06 53.6	-0.3
ETLH	**Xiulin Townshi** baz=236	0.98	237	P	Pn	05 06 38.3	0.0
ETLH	baz=236			S	Sn	05 06 53.6	-0.7
NTY	**Taoyuan** baz=286	1.02	284	*e*S	Sn	05 06 55.3	+0.6
HWA	**Hwalien** baz=215	1.05	223	*e*P	Pn	05 06 39.0	+0.1
HWA	baz=215			*e*S	Sn	05 06 55.7	+0.5
NCU	**National Centr** baz=286	1.11	282	*e*P	Pn	05 06 40.0	+0.5
NCU	baz=286			*e*S	Sn	05 06 57.5	+1.1
NCUH	**Zhongli** baz=286	1.11	282	*e*P	Pn	05 06 40.0	+0.5
NCUH	baz=286			S	Sn	05 06 57.1	+0.7
ETM	**Tongmen** baz=234	1.13	226	P	Pn	05 06 39.5	-0.2
ETM	baz=234			*e*S	Sn	05 06 55.7	-1.1
TEYL	**Yanliau Villag** baz=211	1.13	219	P	Pn	05 06 39.9	+0.1
TEYL	baz=211			S	Sn	05 06 56.8	-0.1
FUSS	**Fushou** baz=239	1.15	245	P	Pn	05 06 40.9	+0.6
FUSS	baz=239			*e*S	Sn	05 06 57.1	-0.6
NJD	**Zhudong** baz=268	1.18	270	*e*S	Sn	05 06 58.9	+1.1
WHF	**Hehuan Shan** baz=234	1.18	240	P	Pn	05 06 41.2	+0.4
WHF	baz=234			*e*S	Sn	05 06 58.2	-0.4
TWT	**Tachien** baz=240	1.21	246	*e*P	Pn	05 06 41.9	+1.1
TWT	baz=240			*e*S	Sn	05 06 59.2	+0.6
TDCB	**Techi** baz=240	1.22	246	P	Pn	05 06 41.9	+1.0
TDCB	baz=240			S	Sn	05 06 59.0	+0.1
HSN1	**Hsinchu** baz=270	1.24	272	*e*P	Pn	05 06 41.6	+0.6
HSN1	baz=270			*e*S	Sn	05 06 59.8	+0.8
LIOB	**Emei** baz=264	1.25	266	*e*P	Pn	05 06 41.6	+0.5
LIOB	baz=264			*e*S	Sn	05 06 59.4	+0.2
NSTT	**Nanjuang** baz=264	1.26	265	*e*P	Pn	05 06 41.8	+0.6
NSTT	baz=264			*e*S	Sn	05 06 59.5	0.0
SBCB	**Hsinchu** baz=271	1.27	272	*e*P	Pn	05 06 42.3	+1.0
SBCB	baz=271			*e*S	Sn	05 07 00.5	+0.9
ESL	**Shilin** baz=230	1.27	223	*e*P	Pn	05 06 40.7	-0.7
ESL	baz=230			*e*S	Sn	05 06 57.8	-1.9
HSN	**Hsinchu** baz=264	1.29	273	*e*S	Sn	05 06 59.9	0.0
TEGC	**Jichi Village** baz=209	1.29	217	*e*P	Pn	05 06 41.8	+0.2
TEGC	baz=209			*e*S	Sn	05 07 00.1	+0.1
IRIF	**Iriomote-Funau**	1.29	108	P	Pn	05 06 41.7	+0.1
IRIF				*e*S	Sn	05 06 59.8	-0.2
CHGB	**Renai** baz=231	1.30	238	P	Pn	05 06 42.6	+0.8
CHGB	baz=231			*e*S	Sn	05 07 00.3	-0.2
OWD	**Renai** baz=230	1.36	235	*e*P	Pn	05 06 42.8	+0.3
OWD	baz=230			*e*S	Sn	05 07 01.1	-0.5
NJN	**Zhunan** baz=266	1.38	268	*e*P	Pn	05 06 43.9	+1.4
NJN	baz=266			*e*S	Sn	05 07 02.3	+0.5
EGFH	**Guangfu** baz=228	1.39	219	*e*P	Pn	05 06 42.2	-0.5
EGFH	baz=228			*e*S	Sn	05 06 59.9	-2.1
WHP	**Taichung City** baz=258	1.39	251	*e*P	Pn	05 06 44.1	+1.3
WHP	baz=258			*e*S	Sn	05 07 03.0	+0.8
NMLH	**Miaoli** baz=261	1.47	262	*e*P	Pn	05 06 44.0	+0.4
NMLH	baz=261			*e*S	Sn	05 07 04.2	+0.6
HATJ	**Hateruma jima**	1.47	118	P	Pn	05 06 43.7	+0.1
HATJ				S	Sn	05 07 04.6	+1.0
VWDT	**VWDT** baz=224	1.51	229	*e*P	Pn	05 06 44.6	+0.6
VWDT	baz=224			*e*S	Sn	05 07 05.1	+0.7
WCS	**Beigang Elemen** baz=238	1.51	243	*e*P	Pn	05 06 44.8	+0.7
WCS	baz=238			*e*S	Sn	05 07 04.4	-0.1
NSY	**Sanyi** baz=257	1.51	258	*e*P	Pn	05 06 45.4	+1.2
NSY	baz=257			*e*S	Sn	05 07 05.6	+0.9
TWQ1	**Liyutan** baz=254	1.52	255	*e*P	Pn	05 06 45.5	+1.2
TWQ1	baz=254			*e*S	Sn	05 07 05.1	+0.3
HGSD	**Ruisui** baz=209	1.53	215	*e*P	Pn	05 06 44.1	-0.3
HGSD	baz=209			*e*S	Sn	05 07 05.7	+0.7
JKRS	**Kuro-shima**	1.56	109	P	Pn	05 06 45.4	+0.6
JKRS				S	Sn	05 07 05.9	+0.2
EHY	**Hungye** baz=225	1.57	218	*e*P	Pn	05 06 44.3	-0.6
EHY	baz=225			*e*S	Sn	05 07 03.6	-2.3
SMLT	**Sun Moon Lake** baz=233	1.60	238	*e*P	Pn	05 06 47.0	+1.6
SMLT	baz=233			*e*S	Sn	05 07 08.5	+1.7
SSLB	**Suanglung** baz=230	1.62	234	*e*P	Pn	05 06 46.3	+0.8
SSLB	baz=230			*e*S	Sn	05 07 08.6	+1.6
TYC	**Yuchr** baz=235	1.63	239	*e*P	Pn	05 06 47.3	+1.7
TYC	baz=235			*e*S	Sn	05 07 08.1	+1.0
WDJ	**Dajia District** baz=255	1.64	256	*e*P	Pn	05 06 46.6	+1.0
WDJ	baz=255			*e*S	Sn	05 07 07.5	+0.2
JIJ	**Ishigaki jima**	1.65	103	P	Pn	05 06 45.9	+0.1
JIJ				S	Sn	05 07 07.1	-0.4
TCU	**Taichung** baz=248	1.67	249	*e*S	Sn	05 07 08.8	+0.9
YULB	**Yu-li** baz=223	1.68	217	*e*P	Pn	05 06 45.3	-0.8
YULB	baz=223			*e*S	Sn	05 07 07.0	-1.2
EYUL	**Yuli** baz=222	1.70	215	*e*P	Pn	05 06 46.5	+0.1
EYUL	baz=222			*e*S	Sn	05 07 10.0	+1.2
JISG	**Ishigakijimahi**	1.76	95	P	Pn	05 06 47.6	+0.5
WJS	**Zhushan** baz=247	1.77	239	*e*P	Pn	05 06 48.5	+1.1
WJS	baz=247			*e*S	Sn	05 07 12.5	+2.3
WNT	**Mingjian** baz=240	1.78	241	*e*P	Pn	05 06 48.8	+1.4
WNT	baz=240			*e*S	Sn	05 07 11.3	+0.9
WCHH	**Zhanghua** baz=248	1.79	249	*e*P	Pn	05 06 48.1	+0.6
WCHH	baz=248			*e*S	Sn	05 07 10.9	+0.2
YUS	**Yu-Shan** baz=219	1.81	227	*e*P	Pn	05 06 49.0	+0.7
YUS	baz=219			*e*S	Sn	05 07 11.9	-0.1
FULB	**Fuli** baz=221	1.84	213	*e*P	Pn	05 06 48.1	-0.1
FULB	baz=221			*e*S	Sn	05 07 11.3	-0.5
CHKT	**Chengkung** baz=204	1.89	210	*e*P	Pn	05 06 48.1	-0.7
CHKT	baz=204			*e*S	Sn	05 07 10.8	-2.1
ALS	**Alishan** baz=223	1.90	230	*e*P	Pn	05 06 50.4	+1.2
ALS	baz=223			*e*S	Sn	05 07 16.0	+2.5
CHN5	**Tsauling** baz=243	1.94	234	*e*P	Pn	05 06 50.8	+1.4
CHN5	baz=243			*e*S	Sn	05 07 15.7	+1.7
WDLH	**Douliu** baz=237	1.99	238	*e*P	Pn	05 06 51.3	+1.3
WDLH	baz=237			*e*S	Sn	05 07 16.8	+1.7
ELDTW	**Lidau** baz=215	1.99	219	*e*P	Pn	05 06 49.8	-0.4
WRL	**Guolierlin Hig** baz=252	2.02	246	*e*P	Pn	05 06 50.6	+0.2
WRL	baz=252			*e*S	Sn	05 07 15.2	-0.5
EDH	**Donghe** baz=205	2.03	209	*e*P	Pn	05 06 50.2	-0.3
EDH	baz=205			*e*S	Sn	05 07 14.4	-1.6
WTK	**Tuku** baz=239	2.11	240	*e*P	Pn	05 06 52.4	+0.9
WTK	baz=239			*e*S	Sn	05 07 18.2	+0.4
JTJ	**Tarama**	2.11	92	P	Pn	05 06 52.5	+0.9
WTCT	**Ta-ch'eng** baz=245	2.11	246	*e*S	Sn	05 07 17.7	-0.2
CHN4	**Tsaushan** baz=239	2.15	230	*e*P	Pn	05 06 51.6	-0.5
CHN4	baz=239			*e*S	Sn	05 07 18.8	0.0
STYH	**Taoyuan** baz=216	2.15	223	*e*P	Pn	05 06 53.6	+1.5
STYH	baz=216			*e*S	Sn	05 07 19.9	+1.1
TPUB	**Ta-pu** baz=238	2.16	228	*e*P	Pn	05 06 53.3	+1.1
TPUB	baz=238			*e*S	Sn	05 07 21.8	+2.8
LONT	**Longtian** baz=212	2.16	212	*e*P	Pn	05 06 52.1	-0.2
LONT	baz=212			*e*S	Sn	05 07 18.0	-1.2
CHY	**Chiayi** baz=243	2.18	236	*e*P	Pn	05 06 53.0	+0.5
CHY	baz=243			*e*S	Sn	05 07 20.5	+1.0
WTP	**Ta-pu** baz=238	2.20	228	*e*P	Pn	05 06 54.1	+1.3
LDUT	**Ludao** baz=202	2.23	202	*e*S	Sn	05 07 19.2	-1.4
TWGBT	**Beinan** baz=211	2.26	212	*e*P	Pn	05 06 53.0	-0.6
TWGBT	baz=211			*e*S	Sn	05 07 19.9	-1.6
WSF	**Szhu** baz=240	2.26	241	*e*S	Sn	05 07 21.8	+0.4
TWG	**Pinlang** baz=211	2.27	212	*e*P	Pn	05 06 53.2	-0.4
TWK	**Hsinying** baz=238	2.28	230	*e*P	Pn	05 06 54.8	+1.0
TWK	baz=238			*e*S	Sn	05 07 23.4	+1.6
CHN1	**Nanshi** baz=227	2.30	228	*e*P	Pn	05 06 55.1	+1.0
CHN1	baz=227			*e*S	Sn	05 07 23.4	+1.0
SGST	**Jiashian** baz=224	2.34	225	*e*P	Pn	05 06 54.7	+0.1
SGST	baz=224			*e*S	Sn	05 07 23.8	+0.7
SLGT	**Liugui** baz=230	2.36	223	*e*P	Pn	05 06 56.5	+1.6
SLGT	baz=230			*e*S	Sn	05 07 25.0	+1.2
ICHU	**Yijhu** baz=234	2.37	235	*e*P	Pn	05 06 53.9	-1.0
ICHU	baz=234			*e*S	Sn	05 07 23.2	-0.6
CHN8	**Yiju** baz=234	2.43	235	*e*S	Sn	05 07 26.0	+0.8
JIRB	**Irabujima**	2.54	88	*e*S	Sn	05 07 28.5	+0.8
SSD	**Sandimen** baz=218	2.56	219	*e*P	Pn	05 06 59.4	+2.0
TSMG	**Majia** baz=217	2.58	218	*e*P	Pn	05 06 58.8	+1.1
JIKM	**Ikemajima**	2.61	86	P	Pn	05 06 59.2	+1.2
MATB	**Ma-tsu** baz=301	2.61	303	*e*P	Pn	05 06 57.9	-0.1
TWM1	**Shoushan** baz=223	2.63	224	*e*S	Sn	05 07 32.5	+2.6
MASBT	**Mashibuluo** baz=216	2.67	217	*e*P	Pn	05 07 00.2	+1.4
JMJ2	**Miyako jima3**	2.68	90	P	Pn	05 07 00.1	+1.2
JMJ2				*e*S	Sn	05 07 32.2	+1.2
EAST	**Anshuo** baz=206	2.74	211	*e*P	Pn	05 06 58.2	-1.7
SSPT	**Xinbi** baz=215	2.80	217	*e*P	Pn	05 07 03.7	+3.1
LAY	**Lan-yu** baz=194	2.80	196	*e*P	Pn	05 07 00.1	-0.5
PNG	**Penghu** baz=245	2.84	246	*e*P	Pn	05 06 59.0	-2.0
PNG	baz=245			*e*S	Sn	05 07 32.3	-2.5
PHUB	**P'eng-hu** baz=244	2.85	245	*e*P	Pn	05 07 00.8	-0.4
PHUB	baz=244			*e*S	Sn	05 07 32.8	-2.2
SCZT	**Fangliau** baz=213	2.87	215	*e*P	Pn	05 07 03.1	+1.7
SLIU	**Shizi** baz=206	2.91	210	*e*P	Pn	05 07 01.5	-0.6
XPSS	**Dashiqiu** baz=317	2.94	318	*e*P	Pn	05 07 02.2	-0.2
LYJJ	**Jianjiangzhen** baz=307	2.97	308	*e*P	Pn	05 07 02.5	-0.3
PTMZ	**Houxiangcun** baz=275	2.98	276	*e*P	Pn	05 07 02.8	-0.1
PTMZ	baz=275			*e*S	Sn	05 07 36.1	-2.0
VCHM	**Qimei** baz=232	3.11	241	*e*P	Pn	05 07 04.9	+0.3
VCHM	baz=232			*e*S	Sn	05 07 39.1	-2.1
MHZQ	**Yeshan** baz=294	3.32	295	*e*P	Pn	05 07 06.4	-1.0
KNM	**Kinmen** baz=259	3.61	266	*e*P	Pn	05 07 12.5	+1.2
KNMB	**Chin-men Tao** baz=257	3.65	266	*e*P	Pn	05 07 11.5	-0.3
KNMB	baz=257			*e*S	Sn	05 07 51.4	-2.7
AXDP	**Jialang** baz=274	4.01	273	*e*P	Pn	05 07 16.8	+0.1
ZPLA	**Ao Xicun** baz=261	4.30	260	*e*P	Pn	05 07 20.8	+0.1
JOW	**Kunigami** 7.0nm,0.3s,baz=172,slow=27,SNR=37	5.70	67	P	Pn	05 07 39.0	-0.5
JOW	3.1nm,0.3s,baz=126,slow=25,SNR=1.2			S	Sn	05 08 41.4	-2.3
KSRS	**Korea Array** 0.1nm,0.3s,baz=200,slow=9.1,SNR=1.6	13.52	19	P	Pn	05 09 24.6	+0.2
SONM	**Songino Array** 0.8nm,0.6s,baz=167,slow=13,SNR=3.8	26.29	335	P	P	05 11 41.4	-1.1
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=106,slow=11,SNR=1.6	38.70	315	P	P	05 13 30.2	-0.2
WRA	**Warramunga Arr** 1.2nm,0.7s,baz=348,slow=8.5,SNR=13	45.92	164	P	P	05 14 29.3	+0.2
WRA	0.3nm,0.5s,baz=347,slow=3.0,SNR=5.3			PcP	PcP	05 16 04.1	-0.2
ASAR	**Alice Springs** 0.5nm,0.6s,baz=338,slow=7.4,SNR=7.6	49.41	166	P	P	05 14 56.5	+0.5
ARCES	**ARCESS Array B** 1.7nm,0.7s,baz=83,slow=7.4,SNR=1.7	69.42	338	P	P	05 17 13.4	+0.4
FINES	**FINESS Array B** 3.9nm,0.9s,baz=43,slow=2.5,SNR=1.8	71.51	330	P	P	05 17 25.9	+0.1

NIED ***06*** *05:08:51.5, 31°.31N×128°.74E, h7^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.92; $M_{\theta\theta}$-2.21; $M_{\phi\phi}$3.13; $M_{r\theta}$-1.67; $M_{\theta\phi}$2.59; $M_{\phi r}$-1.42; Fault plane solution: $M_0$4.28000×10^{14} NP1:ϕ_s64.00000°, δ87.00000°, λ-31.00000°. NP2:ϕ_s156.00000°, δ59.00000°, λ-176.00000°.*

JMA ***06*** *05:08:51.4±0.3, 31°.31N×128°.74E, h7^{km}±3^{km}, M3.5*

IDC ***06*** *05:08:52.0±0.8, 31°.38N×128°.22E, h0^{km}, mb3.2/2, mb1 3.4/4, mb1mx2.9/61, mbtmp3.2/4, ML3.2/2, Error ellipse: s-maj=8.4km s-min=4.6km az=73.0*

ISC 06 05:08:52.7±1.2**, 31°.34N**±0°.05×**128°.86E**±0°.07**, h10**^{km}**, n13,** σ1^s.**47**/17**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	0.81	65	P	Pb	05 09 08.6	-0.3
JSJ				*e*S	Sb	05 09 20.5	+0.6
JFU	**Fukue jima 2**	1.31	356	P	Pg	05 09 16.5	-1.5
JSU	**Suzuyama**	1.38	83	P	Pb	05 09 18.6	0.0
JSU				*e*S	Sg	05 09 38.1	+1.0
JKC	**Kuchinoerabu**	1.45	127	P	Pb	05 09 19.3	-0.4
JKC				*e*S	Sg	05 09 39.9	+0.6
JYAK	**Yakushimahirau**	1.80	127	P	Pn	05 09 22.0	-1.8
JTN	**Tanegashima 3**	1.95	110	P	Pn	05 09 25.4	-0.5
JTZ	**Takazaki**	1.98	73	P	Pb	05 09 27.2	-1.7
JMTN	**Minamitane**	1.99	118	P	Pn	05 09 25.7	-0.8
JIU3	**Izumi3**	2.05	54	P	Pb	05 09 28.9	-1.2
JNU	**Nakatsue** 8.3nm,0.3s,baz=350,slow=0.7,SNR=24	2.47	43	Pn	Pg	05 09 38.7	-1.4
JNU	8.2nm,0.3s,baz=130,slow=12,SNR=6.2			Sn	Sg	05 10 14.9	+2.8
KSRS	**Korea Array** 0.2nm,0.3s,baz=176,slow=14,SNR=2.3	6.15	353	Pn	Pn	05 10 23.4	-0.2
KSRS	0.5nm,0.3s,baz=184,slow=30,SNR=8.2			Lg	Lg	05 12 04.2	
WRA	**Warramunga Arr** 0.3nm,0.7s,baz=358,slow=8.5,SNR=1.9	51.26	173	P	P	05 17 59.3	+2.4
ASAR	**Alice Springs** 0.2nm,0.6s,baz=3.5,slow=14,SNR=4.3	54.91	174	P	P	05 18 24.8	+1.1

NEIC ***06*** *05:16:08.4±1.6, 5°.14N±0°.08×94°.69E±0°.10, h49^{km}±8^{km}, mb4.6/28, Error ellipse: s-maj=14.7km s-min=11.1km az=62.0*

IDC ***06*** *05:16:09.1±3.6, 5°.27N×94°.72E, h60^{km}±33^{km}, mb3.9/16, mb1 4.0/17, mb1mx3.7/61, mbtmp4.2/17, ML3.6/1, MS3.1/4, Ms1 3.2/4, ms1mx2.9/52, Error ellipse: s-maj=30.6km s-min=15.4km az=53.0*

ISC 06 05:16:06.8±0.5**, 5°.17N**±0°.07×**94°.62E**±0°.08**, h43**^{km}**, n69,** σ1^s.**15**/68**, mb4.5**/31**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	2.32	88		Pn	05 16 43.8	+1.2
GSI	**Gunungsitoli**	4.84	142	Pn	Pn	05 17 18.3	+1.0
GSI				Sn	Sn	05 18 10.3	-1.9
PSI	**Prapat** 2.6nm,0.3s,baz=328,slow=8.7,SNR=12	4.90	119	P	Pn	05 17 19.4	+1.3
PSI	2.4nm,0.3s,baz=236,slow=16,SNR=4.6			S	Sn	05 18 18.0	+4.3
PSI	comp=Z,112nm,18.2s,baz=259,slow=43			LR	LR	05 19 39.2	
RPSI	**Rantau Prapat**	4.95	120		Pn	05 17 19.4	+0.7
SRIT	**Nakonsritamara**	6.01	55		Pn	05 17 34.6	+1.3
KULM	**Kulim**	6.01	89		Pn	05 17 33.9	+0.6
IPM	**Ipoh**	6.42	96	Pn	Pn	05 17 39.5	+0.4
CMAR	**Chiang Mai Arr** 0.8nm,0.3s,baz=203,slow=15,SNR=15	13.87	17	P	P	05 19 25.4	-2.8
CMAR	comp=Z,64nm,18.4s,baz=330,slow=36			LR	LR	05 24 19.3	
PALK	**Pallekele** 1.1nm,0.3s,baz=272,slow=18,SNR=8.0	13.99	279	S	Sn	05 21 49.1	-7.5
PALK	comp=Z,77nm,18.3s,baz=131,slow=35			LR	LR	05 24 25.8	
XMIS	**Christmas Isla**	19.04	145	P	P	05 20 24.2	-1.4
UGM	**Wanagama**	20.51	129	P	P	05 20 40.6	-1.0
LSA	**Lhasa**	24.62	353	P	P	05 21 24.1	+0.3
H08S2	**Diego Garcia H** baz=61,slow=75,SNR=128	25.48	240	T	T	05 48 43.9	
H08S3	**Diego Garcia H** baz=61,slow=75,SNR=109	25.48	240	T	T	05 48 44.5	
H08S1	**Diego Carcia H** baz=61,slow=75,SNR=76	25.49	240	T	T	05 48 45.2	
YULB	**Yu-li**	31.46	52	P	P	05 22 22.6	-2.0
GTA	**Gaotai**	34.41	7	*e*P	P	05 22 49.9	-0.4
GTA				pP	pP	05 23 04.0	+2.7
GTA				sP	sP	05 23 12.2	+6.1
GTA	comp=Z,3.0nm,1.3s			pmax	pmax		
NJ2	**Nanjing**	35.07	37	*e*P	P	05 22 56.6	+0.7
NJ2	comp=Z,14nm,0.5s			pmax	pmax		
KBL	**Kabul**	37.61	324	P	P	05 23 16.9	-0.9
KBL	comp=Z,3.9nm,0.9s			IAmb	IAmb	05 23 28.2	
FAKI	**Fak Fak**	38.44	101	P	P	05 23 24.0	-0.9
FAKI	comp=Z,20nm,1.1s			IAmb	IAmb	05 23 44.3	
HHC	**Hu-ho-hao-te**	38.64	21	*e*P	P	05 23 28.5	+2.2
HHC	comp=Z,11nm,0.7s			pmax	pmax		
HHC	comp=Z,240nm,6.6s			pmax	pmax		
WMQ	**Urumqi**	38.98	352	*e*P	P	05 23 31.8	+2.8
BJT	**Baijiatuau**	39.76	26	P	P	05 23 34.7	-0.8
BJT	comp=Z,5.1nm,0.5s			IAmb	IAmb	05 23 38.5	
DRK	**Karamyk**	39.90	332	P	P	05 23 38.1	+1.1
KDJ	**Kajisay**	39.95	340	P	P	05 23 38.8	+1.5
MTN	**Manton Dam**	40.45	117	P	P	05 23 40.4	-1.2
MTN	comp=Z,4.3nm,0.6s			IAmb	IAmb	05 23 42.1	
BOOM	**Boomskoye usch**	40.70	339	P	P	05 23 44.7	+1.2
BOOM	comp=Z,29nm,1.4s			IAmb	IAmb	05 24 03.8	
MK31	**Makanchi Array**	42.81	348	P	P	05 24 00.5	0.0
MKAR	**Makanchi Array** comp=Z,1.5nm,0.4s,baz=165,slow=7.5,SNR=22	42.81	348	P	P	05 24 00.7	+0.2

MKAR				PcP	**PcP**	**05 25 51.6**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=203,slow=4.9,SNR=2.3						
MKAR	**Makanchi Array**	**42.81**	**348**	P	**P**	**05 24 00.4**	**-0.2**
MAKZ	**Makanchi**	**42.90**	**347**	P	**P**	**05 24 01.0**	**-0.1**
KKAR	**Karatay Array**	**43.38**	**334**	P	**P**	**05 24 05.3**	**+0.1**
JTU	**Tsushima**	**43.46**	**43**	P	**P**	**05 24 04.6**	**-1.2**
SONM	**Songino Array**	**43.69**	**11**	P	**P**	**05 24 07.0**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=189,slow=8.7,SNR=12						
SONM				PcP	**PcP**	**05 25 54.5**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=190,slow=3.6,SNR=7.8						
SONM	**Songino Array**	**43.69**	**11**	P	**P**	**05 24 06.7**	**-1.0**
KSRS	**Korea Array**	**44.23**	**39**	P	**P**	**05 24 11.4**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=224,slow=9.5,SNR=3.4						
JMN	**Monobe**	**46.20**	**47**	P	**P**	**05 24 28.3**	**+0.5**
JMN				IAmb	IAmb	05 24 55.6	
	comp=Z,17nm,1.2s						
JHS	**Saijyo**	**46.29**	**45**	P	**P**	**05 24 29.4**	**+1.0**
WB0	**Warramunga Arr**	**46.31**	**124**	P	**P**	**05 24 28.6**	**-0.2**
WB0				IAmb	IAmb	05 24 30.2	
	comp=Z,3.3nm,0.7s						
WRA	**Warramunga Arr**	**46.34**	**124**	P	**P**	**05 24 28.9**	**-0.2**
	comp=Z,3.1nm,0.7s,baz=303,slow=9.4,SNR=36						
WRA				LR	LR	05 45 18.0	
	comp=Z,36nm,18.1s,baz=140,slow=38						
WRA	**Warramunga Arr**	**46.34**	**124**	P	**P**	**05 24 28.6**	**-0.5**
WB2	**Warramunga Arr**	**46.35**	**124**	P	**P**	**05 24 29.1**	**-0.1**
WB2				IAmb	IAmb	05 24 29.9	
	comp=Z,4.8nm,0.7s						
WR0	**Warramunga Arr**	**46.52**	**124**	P	**P**	**05 24 30.1**	**-0.3**
WR0				IAmb	IAmb	05 24 31.7	
	comp=Z,8.9nm,1.4s						
KURBB	**Kurchatov Arra**	**47.27**	**346**	P	**P**	**05 24 36.7**	**+0.9**
	comp=Z,4.2nm,0.6s,baz=167,slow=7.0,SNR=63						
KURK	**Kurchatov**	**47.33**	**346**	P	**P**	**05 24 36.7**	**+0.4**
AS31	**Alice Springs**	**47.85**	**128**	P	**P**	**05 24 41.1**	**+0.3**
ASAR	**Alice Springs**	**47.85**	**128**	P	**P**	**05 24 40.9**	**+0.1**
	comp=Z,1.5nm,0.4s,baz=297,slow=8.0,SNR=21						
ASAR	**Alice Springs**	**47.85**	**128**	P	**P**	**05 24 41.1**	**+0.3**
ZAA0	**Zalesovo Array**	**49.28**	**352**	P	**P**	**05 24 51.7**	**+0.5**
ZAA0				IAmb	IAmb	05 24 52.1	
	comp=Z,6.7nm,0.5s						
ZALV	**Zalesovo Beam**	**49.28**	**352**	P	**P**	**05 24 50.9**	**-0.3**
	comp=Z,5.9nm,0.4s,baz=187,slow=7.5,SNR=32						
ZALV	**Zalesovo Beam**	**49.28**	**352**	P	**P**	**05 24 51.9**	**+0.6**
BRVK	**Borovoye**	**51.75**	**342**	P	**P**	**05 25 10.4**	**+0.5**
BRVK				IAmb	IAmb	05 25 11.6	
	comp=Z,2.4nm,0.7s						
ABKAR	**Akbulak array**	**52.82**	**332**	P	**P**	**05 25 18.9**	**+0.9**
BRTR	**Keskin Array B**	**64.56**	**312**	P	**P**	**05 26 40.3**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=138,slow=6.3,SNR=3.8						
TIXI	**Tiksi**	**69.78**	**11**	P	**P**	**05 27 10.7**	**-1.6**
	comp=Z,3.3nm,0.4s,baz=237,slow=3.2,SNR=6.7						
TIXI	**Tiksi**	**69.78**	**11**	P	**P**	**05 27 11.3**	**-1.0**
TIXI				IAmb	IAmb	05 27 11.4	
	comp=Z,4.0nm,0.4s						
IDI	**Anoyia**	**70.50**	**306**	P	**P**	**05 27 17.9**	**+0.4**
	comp=Z,2.7nm,0.5s,baz=100,slow=9.8,SNR=6.4						
AKASG	**Malin Array Be**	**70.56**	**322**	P	**P**	**05 27 15.9**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=90,slow=5.6,SNR=2.4						
BURAR	**Bucovina Array**	**72.36**	**318**	P	**P**	**05 27 29.6**	**+1.1**
ITM	**Ithomi**	**73.11**	**307**	P	**P**	**05 27 33.5**	**+0.4**
ITM				IAmb	IAmb	05 27 34.2	
	comp=Z,8.0nm,0.9s						
FINES	**FINESS Array B**	**75.31**	**332**	P	**P**	**05 27 45.3**	**0.0**
	comp=Z,3.3nm,0.9s,baz=92,slow=5.7,SNR=7.1						
ARCES	**ARCESS Array B**	**77.95**	**340**	P	**P**	**05 28 00.3**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=93,slow=4.9,SNR=11						
ARCES	**ARCESS Array B**	**77.95**	**340**	P	**P**	**05 28 00.8**	**+0.7**
ARCES				IAmb	IAmb	05 28 18.1	
	comp=Z,14nm,1.4s						
GERES	**GERESS Array B**	**80.15**	**319**	P	**P**	**05 28 13.8**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=94,slow=4.4,SNR=11						
DAVOX	**Davos/Dischmat**	**82.66**	**316**	P	**P**	**05 28 27.2**	**+1.0**
	comp=Z,3.2nm,0.5s,baz=148,slow=5.9,SNR=17						
KEST	**Kesra**	**83.17**	**305**	P	**P**	**05 28 30.0**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=113,slow=4.0,SNR=4.6						
PDAR	**Pinedale Array**	**127.49**	**22**	PKP	**PKPdf**	**05 35 07.8**	**0.0**
	comp=Z,0.3nm,0.5s,baz=116,slow=4.1,SNR=3.8						
PDAR	**Pinedale Array**	**127.49**	**22**		**PKPdf**	**05 35 08.0**	**+0.2**
TXAR	**Lajitas Array**	**141.46**	**26**	PKhKP	PKPpre	05 35 31.0	
	comp=Z,0.1nm,0.4s,baz=60,slow=2.2,SNR=1.9						

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*NEIC **06** 05:28:11.7±1.3, 42.°65N±0.°05×15.°22E±0.°05, h26^{km}±6^{km}, mb4.4/11, ML3.9(ROM), Error ellipse: s-maj=7.3km s-min=5.5km az=158.0*

*IDC **06** 05:28:12.9±0.6, 42.°45N×15.°10E, h0^{km}, mb3.9/16, mb1 4.0/27, mb1mx3.8/66, mbtmp3.8/27, ML3.3/11, MS3.7/17, Ms1 3.7/17, ms1mx3.4/62, Error ellipse: s-maj=13.4km s-min=12.0km az=106.0*

*BGR **06** 05:28:12.4±0.9, 42.°20N×15.°38E, h10^{km}, ML4.4, Error ellipse: s-maj=26.7km s-min=14.5km az=43.0*

*PDG **06** 05:28:14.7±0.6, 42.°40N×15.°17E, h18^{km}, MD4.0/1, ML4.0/13, Error ellipse: s-maj=0.5km s-min=0.5km az=0.0*

*LDG **06** 05:28:14.6±0.1, 42.°43N×15.°19E, h10^{km}, Ml3.9/34, Error ellipse: s-maj=2.7km s-min=2.1km az=38.0*

*MED_RC **06** 05:28:15.0±0.2, 42.°34N×15.°08E, h10^{km}, MW4.4/23, Moment Tensor Solution.Mantle waves: s23,c31; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}3.93±.20; $M_{\theta\theta}$-1.05±.24; $M_{\phi\phi}$-2.89±.16; $M_{r\theta}$1.46±1.04; $M_{\theta\phi}$-1.85±.17; $M_{\phi r}$-1.83±.79; Best double couple: $M_0$4.56000×10^{15} NP1:ϕ_s53.00000°, δ44.00000°, λ125.00000°. NP2:ϕ_s188.00000°, δ56.00000°, λ61.00000°. Principal axes: T 4.9900, Plg65.0000°, Azm43.0000°; N -0.8800, Plg24.0000°, Azm206.0000°; P -4.1300, Plg6.0000°, Azm298.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*PRU **06** 05:28:15.3±0.0, 42.°55N×14.°83E, h0^{km}, M4.4*

*ROM **06** 05:28:15.0±0.1, 42.°349N±0.°007×15.°143E±0.°010, h19^{km}±1^{km}, ML3.9/7, Error ellipse: s-maj=0.9km s-min=0.6km az=220.0*

*THE **06** 05:28:17.7, 42.°22N×15.°48E, h8^{km}±20^{km}, ML3.9/6, Error ellipse: s-maj=27.2km s-min=1.5km az=292.0*

ISC 06 05:28:15.7±1.0, **42.°33N**±0.°02×**15.°07E**±0.°02, **h32**^{km}±8^{km}, **n506**, σ**2^{s}21**/545, **mb4.0**/17, **MS3.9**/10, **42C-28D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TREM	**Isole Tremiti**	**0.39**	**123**	P	**Pb**	**05 28 23.5**	**-1.1**
TREM				AML	AML		
	comp=E,1640µm,1.1s						
TREM				AML	AML		
	comp=N,37700µm,0.5s						
TREM				AML	AML		
	comp=E,1635µm,1.1s						
TREM				AML	AML		
	comp=N,37650µm,0.5s						
FRES	**Fresagrandinar**	**0.47**	**220**	P	**Pb**	**05 28 24.2**	**-1.6**
FRES				AML	AML		
	comp=N,2565µm,1.2s						
FRES				AML	AML		
	comp=E,4155µm,0.5s						
FRES				AML	AML		
	comp=N,2865µm,1.0s						
CAFR	**Castel Frentan**	**0.55**	**259**	P	**Pb**	**05 28 26.3**	**-0.8**
CAFR				AML	AML		
	comp=E,8865µm,0.4s						
CAFR				AML	AML		
	comp=N,9215µm,0.6s						
TRIV	**Trivento**	**0.69**	**215**	P	**Pb**	**05 28 29.0**	**-0.4**
TRIV				S	**Sb**	**05 28 38.4**	**-0.2**
TRIV				AML	AML		
	comp=E,6270µm,0.6s						
TRIV				AML	AML		
	comp=N,4680µm,1.1s						
TRIV				AML	AML		
	comp=N,5500µm,1.1s						
TRIV				AML	AML		
	comp=E,6265µm,0.6s						
TRIV				AML	AML		
	comp=N,5505µm,1.1s						
TRIV				AML	AML		
	comp=N,5315µm,0.6s						
TRIV				AML	AML		
	comp=E,6510µm,0.5s						
CIGN	**Sant'Elia a Pi**	**0.69**	**191**	P	**Pb**	**05 28 29.1**	**-0.2**
CIGN				AML	AML		
	comp=N,5040µm,0.6s						
CIGN				AML	AML		
	comp=E,4780µm,0.5s						
LPEL	**Lama dei Pelig**	**0.72**	**247**	P	**Pn**	**05 28 29.4**	**-0.3**
LPEL				AML	AML		
	comp=E,11850µm,0.4s						
LPEL				AML	AML		
	comp=N,9385µm,0.5s						
SGRT	**San Giovanni R**	**0.76**	**139**	P	**Pn**	**05 28 28.8**	**-1.5**
SGRT				S	**Sn**	**05 28 40.8**	**0.0**
SGRT				AML	AML		
	comp=E,48350µm,0.6s						
SGRT				AML	AML		
	comp=N,22900µm,0.6s						
SGRT	**San Giovanni R**	**0.76**	**139**		**Pn**	**05 28 28.7**	**-1.6**
GATE	**Gambatesa**	**0.83**	**189**	P	**Pb**	**05 28 32.0**	**+0.3**
GATE				AML	AML		
	comp=E,7940µm,0.5s						
GATE				AML	AML		
	comp=N,5405µm,0.4s						
GATE				AML	AML		
	comp=E,3515µm,0.7s						
GATE				AML	AML		
	comp=E,7945µm,0.5s						
GATE				AML	AML		
	comp=N,5405µm,0.4s						
GATE				AML	AML		
	comp=N,5615µm,0.4s						
BSSO	**Busso**	**0.86**	**205**	P	**Pb**	**05 28 32.2**	**-0.1**
BSSO				AML	AML		
	comp=E,2335µm,0.4s						
BSSO				AML	AML		
	comp=E,5720µm,0.4s						
BSSO				AML	AML		
	comp=E,2330µm,0.4s						
BSSO				AML	AML		
	comp=E,5725µm,0.4s						
BSSO				AML	AML		
	comp=N,3890µm,0.7s						
BSSO				AML	AML		
	comp=N,1600µm,0.4s						
MSAG	**Monte S. Angel**	**0.88**	**135**	P	**Pn**	**05 28 31.3**	**-0.6**
MSAG				AML	AML		
	comp=N,55450µm,0.7s						
MSAG				AML	AML		
	comp=E,43000µm,0.7s						
MSAG				AML	AML		
	comp=N,55250µm,0.7s						
MSAG				AML	AML		
	comp=N,55500µm,0.7s						
MSAG				AML	AML		
	comp=E,46600µm,0.7s						
VCEL	**Villa Celiera**	**0.92**	**274**	P	**Pn**	**05 28 32.7**	**+0.3**
VCEL				AML	AML		
	comp=E,12800µm,0.6s						
VCEL				AML	AML		
	comp=N,10350µm,0.7s						
VCEL				AML	AML		
	comp=E,12750µm,0.6s						
MIDA	**Miranda**	**0.92**	**222**	P	**Pn**	**05 28 32.0**	**-0.5**
MIDA				AML	AML		
	comp=E,4160µm,0.3s						
MIDA				AML	AML		
	comp=N,3745µm,0.4s						
MIDA				AML	AML		
	comp=N,3960µm,0.5s						
MIDA				AML	AML		
	comp=E,4145µm,0.3s						
MIDA				AML	AML		
	comp=N,3750µm,0.4s						
RNI2	**Rionero Sannit**	**0.93**	**228**	P	**Pn**	**05 28 33.0**	**+0.3**
RNI2				AML	AML		
	comp=E,4295µm,1.0s						
RNI2				AML	AML		
	comp=N,4100µm,0.3s						
RNI2				AML	AML		
	comp=E,4355µm,1.0s						
RNI2				AML	AML		
	comp=N,4000µm,0.3s						
MOCO	**Biccari - m.te**	**0.96**	**176**	P	**Pb**	**05 28 34.1**	**+0.1**
T0110	**Collepietro**	**0.97**	**264**	P	**Pb**	**05 28 33.7**	**-0.3**
T0110				AML	AML		
	comp=N,11975µm,0.4s						
T0110				AML	AML		
	comp=E,9685µm,1.0s						
SACR	**S. Croce Del S**	**0.97**	**197**	P	**Pn**	**05 28 33.4**	**+0.1**
SACR				AML	AML		
	comp=N,3355µm,0.5s						
SACR				AML	AML		
	comp=E,2915µm,0.7s						
TRTR	**Tortoreto Alta**	**0.98**	**299**	P	**Pb**	**05 28 34.9**	**+0.7**
TRTR				AML	AML		
	comp=N,27300µm,0.5s						
TRTR				AML	AML		
	comp=E,39300µm,1.1s						
PTRJ	**Pietraroja**	**1.05**	**203**	P	**Pn**	**05 28 34.8**	**+0.5**
PTRJ				AML	AML		
	comp=E,4450µm,1.4s						
PTRJ				AML	AML		
	comp=N,3480µm,0.6s						
PTRJ				AML	AML		
	comp=E,3905µm,1.4s						
PTRJ				AML	AML		
	comp=N,3170µm,0.6s						
CERA	**Filignano**	**1.08**	**227**	AML	AML		
	comp=E,3980µm,0.7s						
CERA				AML	AML		
	comp=E,3925µm,0.6s						
CERA				AML	AML		
	comp=N,3130µm,0.9s						
CERA				AML	AML		
	comp=N,3135µm,0.9s						
CERA				AML	AML		
	comp=N,3255µm,0.9s						
CERA				AML	AML		
	comp=E,3930µm,0.6s						
SGG	**Gregorio Mates**	**1.08**	**209**	P	**Pb**	**05 28 35.9**	**0.0**
SGG				AML	AML		
	comp=E,10nm,0.6s						
SGG				AML	AML		
	comp=N,14nm,0.5s						
SGG				AML	AML		
	comp=E,3425µm,0.6s						
SGG				AML	AML		
	comp=N,4635µm,0.5s						
FAGN	**Fagnano**	**1.11**	**267**	P	**Pb**	**05 28 36.3**	**0.0**
FAGN				AML	AML		
	comp=E,18550µm,0.6s						
FAGN				AML	AML		
	comp=N,17900µm,0.5s						
VAGA	**Valle Agricola**	**1.11**	**215**	P	**Pb**	**05 28 36.2**	**-0.2**
VAGA				AML	AML		
	comp=N,4085µm,0.4s						
VAGA				AML	AML		
	comp=E,2865µm,1.0s						
VAGA				AML	AML		
	comp=E,2965µm,1.0s						
VAGA				AML	AML		
	comp=N,3965µm,0.4s						
GUMA	**Gualdo di Mace**	**1.11**	**311**	P	Pb	05 28 41.9	+5.4
GIGS	**Gran Sasso**	**1.12**	**277**	P	**Pb**	**05 28 36.8**	**+0.2**
GIGS				AML	AML		
	comp=E,3035µm,0.9s						
GIGS				AML	AML		
	comp=N,2100µm,0.8s						
TERO	**Teramo**	**1.13**	**285**	P	**Pn**	**05 28 35.6**	**+0.3**
TERO				AML	AML		
	comp=N,4610µm,0.5s						
TERO				AML	AML		
	comp=N,4605µm,0.5s						
TERO				AML	AML		
	comp=E,3090µm,0.9s						
TERO				AML	AML		
	comp=N,1875µm,0.5s						
TERO				AML	AML		
	comp=E,7640µm,0.9s						
VVLD	**Villa Vallelon**	**1.18**	**247**	P	**Pn**	**05 28 36.1**	**+0.1**
VVLD				AML	AML		
	comp=N,1945µm,0.9s						
VVLD				AML	AML		
	comp=E,1305µm,1.1s						
OFFI	**Offida**	**1.19**	**301**	P	**Pb**	**05 28 38.2**	**+0.5**
OFFI				AML	AML		
	comp=E,20300µm,0.7s						
OFFI				AML	AML		
	comp=N,30750µm,0.8s						
VITU	**Vitulano (BN)**	**1.20**	**196**	P	**Pb**	**05 28 37.8**	**-0.1**
VITU				AML	AML		
	comp=E,4330µm,0.3s						
VITU				AML	AML		
	comp=N,5060µm,0.5s						
MRB1	**Monte Rocchett**	**1.21**	**184**	P	**Pb**	**05 28 37.7**	**-0.3**
MRB1				AML	AML		
	comp=E,4780µm,0.6s						
MRB1				AML	AML		
	comp=N,3895µm,1.1s						
MRB1				AML	AML		
	comp=E,4825µm,0.6s						
MRB1				AML	AML		
	comp=N,3945µm,1.1s						
MRB1				AML	AML		
	comp=N,3895µm,1.1s						
MRB1				AML	AML		
	comp=E,4775µm,0.6s						
AQU	**L'Aquila**	**1.24**	**272**	*e*Pn	**Pn**	**05 28 37.5**	**+0.6**
AQU	**L'Aquila**	**1.24**	**272**	P	**Pb**	**05 28 38.3**	**-0.3**
AQU				AML	AML		
	comp=E,6755µm,1.0s						
AQU				AML	AML		
	comp=N,6180µm,0.8s						
AQU				AML	AML		
	comp=N,6495µm,0.8s						
AQU				AML	AML		
	comp=E,6370µm,1.0s						
AQU	**L'Aquila**	**1.24**	**272**		**Pn**	**05 28 35.7**	**-1.1**
CAMP	**Campotosto**	**1.25**	**280**	P	**Pb**	**05 28 38.1**	**-0.7**
CAMP				AML	AML		
	comp=E,6040µm,0.7s						
CAMP				AML	AML		
	comp=N,5575µm,0.7s						
PTQR	**Pietraquaria**	**1.28**	**257**	P	**Pb**	**05 28 39.9**	**+0.5**
PTQR				AML	AML		
	comp=N,2415µm,0.8s						
PTQR				AML	AML		
	comp=E,1660µm,1.0s						
CADA	**Capodarco di F**	**1.29**	**312**	P	**Pb**	**05 28 39.4**	**-0.1**
CAPA	**Cerignola FG**	**1.30**	**154**	P	**Pn**	**05 28 37.8**	**+0.2**
CAPA				AML	AML		
	comp=N,7300µm,1.1s						
CAPA				AML	AML		
	comp=E,11000µm,1.1s						
CAFE	**Carife**	**1.31**	**175**	P	**Pb**	**05 28 39.0**	**-0.8**
CAFE				AML	AML		
	comp=E,2935µm,1.6s						
CAFE				AML	AML		
	comp=E,2905µm,1.6s						
CAFE				AML	AML		
	comp=N,2875µm,1.1s						
CAFE				AML	AML		
	comp=N,2845µm,1.1s						
PIGN	**Pignataro Magg**	**1.31**	**211**	P	**Pb**	**05 28 39.8**	**-0.1**
PIGN				AML	AML		
	comp=N,1498µm,0.6s						
PIGN				AML	AML		
	comp=E,1315µm,0.6s						
PIGN				AML	AML		
	comp=N,1495µm,0.6s						
PIGN				AML	AML		
	comp=N,1412µm,0.6s						
PIGN				AML	AML		
	comp=E,1395µm,0.6s						
SMA1	**SAN MARTINO**	**1.32**	**284**	P	**Pn**	**05 28 38.9**	**+0.9**
SMA1				AML	AML		
	comp=E,7420µm,0.9s						
SMA1				AML	AML		
	comp=N,5030µm,0.8s						
PAOL	**Paolisi**	**1.35**	**196**	P	**Pb**	**05 28 40.1**	**-0.4**
PAOL				AML	AML		
	comp=N,1695µm,0.5s						
PAOL				AML	AML		
	comp=E,1480µm,0.5s						
PAOL				AML	AML		
	comp=N,1725µm,0.5s						
PAOL				AML	AML		
	comp=E,1555µm,0.5s						
PAOL	**Paolisi**	**1.35**	**196**		**Pb**	**05 28 39.9**	**-0.7**
ZIRJ	**Zirje**	**1.39**	**17**	*e*Pg	**Pn**	**05 28 37.9**	**-0.9**
ZIRJ				Sg	**Sn**	**05 28 56.1**	**+0.1**
AQT1	**Arquata del Tr**	**1.39**	**289**	P	**Pb**	**05 28 40.6**	**-0.5**
RM33	**Pellescritta (**	**1.39**	**278**	P	**Pn**	**05 28 39.8**	**+0.8**
RM33				AML	AML		
	comp=N,5460µm,1.0s						
RM33				AML	AML		
	comp=N,5360µm,1.0s						
RM33				AML	AML		
	comp=E,4070µm,0.9s						
RM33				AML	AML		
	comp=E,4180µm,0.9s						
LIK	**San Giovanni I**	**1.40**	**234**	P	**Pb**	**05 28 41.2**	**-0.1**
LIK	**San Giovanni I**	**1.40**	**234**	AML	AML		
	comp=E,2585µm,0.6s						
LIK				AML	AML		
	comp=N,4055µm,0.6s						
SNAL	**S. Angelo Dei**	**1.41**	**176**	P	**Pn**	**05 28 40.2**	**+1.0**
SNAL				AML	AML		
	comp=E,2525µm,0.8s						
SNAL				AML	AML		
	comp=N,3230µm,0.7s						
SNAL				AML	AML		
	comp=E,2520µm,0.8s						
SNAL				AML	AML		
	comp=N,3255µm,0.7s						
SNAL				AML	AML		
	comp=E,2605µm,0.8s						
SNAL				AML	AML		
	comp=N,3225µm,0.7s						
LSTV	**Lastovo**	**1.41**	**71**	*e*Pn	**Pn**	**05 28 39.7**	**+0.5**
GUAR	**Guarcino**	**1.42**	**248**	P	**Pb**	**05 28 42.4**	**+0.8**
GUAR				AML	AML		
	comp=N,2485µm,0.6s						
GUAR				AML	AML		
	comp=E,1375µm,1.4s						
CIMA	**Civitanova Mar**	**1.42**	**314**	P	**Pb**	**05 28 41.3**	**-0.3**
VULT	**Monte Vulture**	**1.44**	**163**	P	**Pb**	**05 28 40.8**	**-1.1**
VULT				AML	AML		
	comp=N,6750µm,0.9s						
VULT				AML	AML		
	comp=E,6015µm,0.5s						
VULT				AML	AML		
	comp=N,6905µm,0.9s						
VULT				AML	AML		
	comp=E,6110µm,0.4s						
FIAM	**Fiamignano**	**1.45**	**268**	⇑P	**Pb**	**05 28 42.6**	**+0.3**
FIAM				AML	AML		
	comp=N,2990µm,0.9s						
FIAM				AML	AML		
	comp=E,3440µm,0.6s						
MODR	**Mondragone**	**1.48**	**217**	P	**Pb**	**05 28 41.8**	**-0.9**
MODR				AML	AML		
	comp=E,1455µm,0.6s						
MODR				AML	AML		
	comp=N,1425µm,1.2s						
PP3	**Marolino**	**1.50**	**315**	P	**Pb**	**05 28 42.0**	**-1.0**
PP3				AML	AML		
	comp=E,9300µm,0.6s						
PP3				AML	AML		
	comp=N,10950µm,1.0s						
PP3				AML	AML		
	comp=E,9480µm,0.6s						
PP3				AML	AML		
	comp=N,10785µm,1.0s						
MRVN	**Minervino Murg**	**1.52**	**146**	P	**Pn**	**05 28 41.2**	**+0.5**
MRVN				AML	AML		
	comp=E,2510µm,0.8s						
MRVN				AML	AML		
	comp=N,1920µm,1.3s						
LNSS	**Leonessa**	**1.53**	**281**	⇓P	**Pb**	**05 28 42.9**	**-0.6**
LNSS				AML	AML		
	comp=N,3930µm,1.1s						
LNSS				AML	AML		
	comp=E,8345µm,0.7s						
NRCA	**Norcia**	**1.53**	**290**	P	**Pb**	**05 28 42.7**	**-0.9**
NRCA				AML	AML		
	comp=E,4025µm,0.8s						
NRCA				AML	AML		
	comp=E,3900µm,0.8s						
NRCA				AML	AML		
	comp=N,4150µm,0.7s						
NRCA				AML	AML		
	comp=N,4260µm,0.7s						
NRCA	**Norcia**	**1.53**	**290**	Pn	**Pn**	**05 28 38.4**	**-2.5**
PALZ	**Palazzo San Ge**	**1.54**	**154**	P	**Pn**	**05 28 41.0**	**+0.1**
PALZ				AML	AML		
	comp=N,5725µm,1.4s						
PALZ				AML	AML		
	comp=E,5885µm,0.6s						
MCRV	**Calabrutti - M**	**1.55**	**177**	P	**Pb**	**05 28 42.5**	**-1.4**

MCRV				AML	AML		
	comp=E,2230µm,0.5s						
MCRV				AML	AML		
	comp=N,2040µm,0.5s						
GIUL	**Giuliano Di Ro**	**1.56**	**241**	P	**Pb**	**05 28 42.9**	**-1.1**
GIUL				AML	AML		
	comp=E,920µm,1.3s						
GIUL				AML	AML		
	comp=N,1655µm,1.3s						
CSP1	**Cessapalombo**	**1.57**	**299**	P	**Pn**	**05 28 43.0**	**+1.5**
CSP1				AML	AML		
	comp=N,5510µm,0.8s						
CSP1				AML	AML		
	comp=E,3845µm,0.8s						
CERT	**Cerreto**	**1.60**	**257**	P	**Pb**	**05 28 44.4**	**-0.3**
CERT				AML	AML		
	comp=E,1775µm,0.7s						
CERT				AML	AML		
	comp=N,1450µm,0.9s						
MORI	**Morici**	**1.60**	**17**	*i* Pn	**Pn**	**05 28 41.6**	**-0.1**
MORI				Sn	**Sn**	**05 29 02.1**	**+0.8**
MRLC	**Muro Lucano**	**1.60**	**169**	P	**Pn**	**05 28 43.2**	**+1.3**
MRLC				AML	AML		
	comp=E,2370µm,1.4s						
MRLC				AML	AML		
	comp=E,2250µm,1.4s						
MRLC				AML	AML		
	comp=N,2080µm,0.5s						
MRLC				AML	AML		
	comp=N,2345µm,0.5s						
FDMO	**Fiordimonte**	**1.62**	**296**	P	**Pb**	**05 28 43.9**	**-1.2**
FDMO				AML	AML		
	comp=E,3310µm,1.0s						
FDMO				AML	AML		
	comp=N,2645µm,0.4s						
AOI	**Ancona**	**1.63**	**319**	P	**Pn**	**05 28 42.8**	**+0.7**
AOI				AML	AML		
	comp=E,3485µm,0.6s						
AOI				AML	AML		
	comp=N,2540µm,0.6s						
DUGI	**Dugi Otok**	**1.66**	**360**	*e*Pn	**Pn**	**05 28 42.8**	**+0.2**
DUGI				Sn	**Sn**	**05 29 02.8**	**0.0**
ACER	**Acerenza**	**1.68**	**157**	P	**Pn**	**05 28 43.9**	**+1.0**
ACER				AML	AML		
	comp=N,3650µm,0.5s						
ACER				AML	AML		
	comp=E,4725µm,0.7s						
ACER				AML	AML		
	comp=E,4560µm,0.7s						
ACER				AML	AML		
	comp=N,3765µm,0.5s						
PCRO	**Pietralacroce**	**1.71**	**319**	P	**Pn**	**05 28 44.1**	**+0.9**
MAKA	**Makarska**	**1.72**	**56**	*e*Pn	**Pn**	**05 28 43.0**	**-0.4**
MAKA				Sn	**Sn**	**05 29 04.5**	**+0.2**
ARRO	**Arrone**	**1.73**	**279**	P	**Pb**	**05 28 46.9**	**+0.1**
ARRO				AML	AML		
	comp=E,1850µm,0.9s						
ARRO				AML	AML		
	comp=N,1405µm,0.9s						
CING	**Cingoli**	**1.73**	**308**	P	**Pn**	**05 28 45.1**	**+1.5**
CING				AML	AML		
	comp=E,3765µm,0.7s						
CING				AML	AML		
	comp=N,3295µm,0.5s						
CESI	**CESI - Serrava**	**1.74**	**294**	P	**Pb**	**05 28 46.4**	**-0.6**
CESI				AML	AML		
	comp=N,1915µm,0.8s						
CESI				AML	AML		
	comp=E,2125µm,1.1s						
EL6	**Elcito**	**1.76**	**305**	P	**Pn**	**05 28 45.2**	**+1.2**
EL6				AML	AML		
	comp=N,10750µm,0.7s						
EL6				AML	AML		
	comp=E,4895µm,0.9s						
MTCE	**Montecelio**	**1.76**	**261**	P	**Pb**	**05 28 46.9**	**-0.5**
MTCE				AML	AML		
	comp=N,1355µm,1.1s						
MTCE				AML	AML		
	comp=E,1267µm,1.2s						
PZUN	**Potenza**	**1.77**	**162**	P	**Pb**	**05 28 46.7**	**-0.8**
PZUN				AML	AML		
	comp=E,2260µm,1.3s						
PZUN				AML	AML		
	comp=N,2335µm,1.6s						
PZUN				AML	AML		
	comp=E,2565µm,1.6s						
PZUN				AML	AML		
	comp=N,2380µm,1.6s						
LATB	**Latina**	**1.79**	**243**	P	**Pn**	**05 28 45.4**	**+1.2**
LATB				AML	AML		
	comp=N,258µm,1.0s						
LATB				AML	AML		
	comp=E,354µm,1.2s						
VIVA	**Pratoni del Vi**	**1.81**	**252**	AML	AML		
	comp=N,3085µm,0.5s						
VIVA				AML	AML		
	comp=E,2415µm,0.4s						
SNTG	**Esanatoglia**	**1.82**	**301**	P	**Pn**	**05 28 46.5**	**+1.6**
SNTG				AML	AML		
	comp=E,1830µm,1.0s						
SNTG				AML	AML		
	comp=N,3250µm,1.0s						
AMUR	**Altamura**	**1.83**	**141**	P	**Pn**	**05 28 45.0**	**+0.1**
AMUR				AML	AML		
	comp=E,3610µm,0.9s						
AMUR				AML	AML		
	comp=N,3140µm,1.4s						
RMP	**Rome, Mte Porz**	**1.84**	**254**	P	**Pb**	**05 28 48.0**	**-0.7**
RMP				AML	AML		
	comp=N,1370µm,0.7s						
RMP				AML	AML		
	comp=E,1505µm,0.6s						
CDRU	**Civita di Ruta**	**1.85**	**175**	P	**Pn**	**05 28 46.7**	**+1.4**
CDRU				AML	AML		
	comp=E,914µm,1.3s						
CDRU				AML	AML		
	comp=N,590µm,0.6s						
CESX	**Cesi**	**1.87**	**279**	P	**Pb**	**05 28 47.5**	**-1.7**
CESX				AML	AML		
	comp=N,1790µm,0.7s						
CESX				AML	AML		
	comp=E,2320µm,0.8s						
LAV9	**Lanuvio**	**1.89**	**251**	AML	AML		
	comp=N,2440µm,0.6s						
LAV9				AML	AML		
	comp=E,2940µm,0.8s						
SRES	**S.Oreste - Sor**	**1.91**	**268**	P	**Pb**	**05 28 48.8**	**-1.0**
SRES				AML	AML		
	comp=N,1093µm,0.9s						
SRES				AML	AML		
	comp=E,908µm,0.9s						
RICI	**Ricice**	**1.91**	**52**	*e*Pn	**Pn**	**05 28 46.0**	**0.0**
RICI				Sn	**Sn**	**05 29 10.1**	**+1.2**
MOMA	**Monte Martano**	**1.91**	**285**	P	**Pb**	**05 28 49.6**	**-0.3**
MOMA				AML	AML		
	comp=N,2610µm,0.6s						
MOMA				AML	AML		
	comp=E,1753µm,1.1s						
MOMA				AML	AML		
	comp=N,2430µm,0.6s						
MOMA				AML	AML		
	comp=E,1674µm,1.0s						
ASSB	**Assisi San Ben**	**1.92**	**293**	P	**Pb**	**05 28 48.8**	**-1.2**
ASSB				AML	AML		
	comp=N,2670µm,0.7s						
ASSB				AML	AML		
	comp=E,1825µm,0.4s						
ARVD	**Arcevia**	**1.95**	**307**	P	**Pn**	**05 28 47.9**	**+1.3**
ARVD				AML	AML		
	comp=N,1880µm,0.6s						
ARVD				AML	AML		
	comp=E,1755µm,0.8s						
FOSV	**Fossato di Vic**	**1.96**	**300**	⇑P	**Pn**	**05 28 48.6**	**+2.0**
FOSV				AML	AML		
	comp=E,3055µm,0.5s						
FOSV				AML	AML		
	comp=N,2905µm,0.7s						
VENT	**Ventotene**	**1.97**	**219**	P	**Pn**	**05 28 48.5**	**+1.6**
ATCC	**AVT- Casa Cast**	**1.98**	**296**	P	**Pb**	**05 28 49.5**	**-1.7**
ATCC				AML	AML		
	comp=N,3545µm,0.7s						
ATCC				AML	AML		
	comp=E,4260µm,0.8s						
MIGL	**Miglionico**	**2.01**	**149**	P	**Pn**	**05 28 47.9**	**+0.5**
MIGL				AML	AML		
	comp=E,7300µm,1.1s						
MIGL				AML	AML		
	comp=N,10255µm,1.6s						
STON	**Ston**	**2.01**	**74**	*e*Pn	**Pb**	**05 28 49.9**	**-1.7**
STON	**Ston**	**2.01**	**74**	*e*Pn	**Pn**	**05 28 47.4**	**0.0**
STON	**Ston**	**2.01**	**74**	⇓P	**Pn**	**05 28 47.4**	**0.0**
STON				AML	AML		
	comp=N,3795µm,0.7s						
STON				AML	AML		
	comp=E,2280µm,0.8s						
SSFR	**Montelago di S**	**2.01**	**304**	P	**Pn**	**05 28 49.1**	**+1.6**
SSFR				AML	AML		
	comp=E,2405µm,0.8s						
SSFR				AML	AML		
	comp=N,2060µm,0.3s						
SSFR				AML	AML		
	comp=E,2405µm,0.8s						
SSFR				AML	AML		
	comp=N,2395µm,0.3s						
CMPR	**Campora**	**2.02**	**175**	P	**Pn**	**05 28 49.4**	**+1.8**
CMPR				AML	AML		
	comp=N,890µm,1.1s						
CMPR				AML	AML		
	comp=E,964µm,1.3s						
MCEL	**Monticello**	**2.08**	**164**	P	**Pn**	**05 28 49.5**	**+1.1**
MCEL				AML	AML		
	comp=E,974µm,1.4s						
MCEL				AML	AML		
	comp=N,976µm,0.6s						
MCEL				AML	AML		
	comp=E,968µm,1.4s						
MCEL				AML	AML		
	comp=N,990µm,0.6s						
MATE	**Matera**	**2.08**	**143**	⇑P	**Pn**	**05 28 49.1**	**+0.8**
MATE				⇑S	**Sn**	**05 29 15.0**	**+1.9**
MATE	**Matera**	**2.08**	**143**	P	**Pn**	**05 28 49.0**	**+0.6**
FRON	**Frontone**	**2.09**	**305**	P	**Pn**	**05 28 49.9**	**+1.3**
FRON				AML	AML		
	comp=E,1425µm,0.5s						
FRON				AML	AML		
	comp=N,2990µm,0.7s						
MURB	**Monte Urbino**	**2.09**	**297**		**Pn**	**05 28 46.0**	**-2.7**
ATFO	**Monte Foce - G**	**2.11**	**300**	P	**Pn**	**05 28 50.8**	**+1.9**
ATFO				AML	AML		
	comp=E,3100µm,0.9s						
ATFO				AML	AML		
	comp=N,2250µm,0.8s						
MTSN	**Montesano sull**	**2.13**	**166**	P	**Pn**	**05 28 50.1**	**+1.0**
MTSN				AML	AML		
	comp=N,642µm,0.5s						
MTSN				AML	AML		
	comp=E,810µm,0.6s						
MPAG	**Monte Paganucc**	**2.14**	**308**	P	**Pn**	**05 28 50.4**	**+1.2**
MPAG				AML	AML		
	comp=N,2395µm,0.9s						
MPAG				AML	AML		
	comp=N,2150µm,1.1s						
MPAG				AML	AML		
	comp=E,1560µm,1.4s						
MPAG				AML	AML		
	comp=E,1500µm,1.4s						
NOCI	**Noci**	**2.15**	**135**	P	**Pn**	**05 28 49.5**	**+0.2**
NOCI				AML	AML		
	comp=E,2065µm,1.0s						
NOCI				AML	AML		
	comp=N,2765µm,0.7s						
FSSB	**Fossombrone**	**2.17**	**310**	P	**Pn**	**05 28 50.8**	**+1.2**
FSSB				AML	AML		
	comp=E,3075µm,0.4s						
FSSB				AML	AML		
	comp=N,3000µm,0.5s						
LTRZ	**Laterza**	**2.17**	**142**	P	**Pn**	**05 28 50.0**	**+0.4**
LTRZ				AML	AML		
	comp=N,2235µm,1.1s						
LTRZ				AML	AML		
	comp=E,2230µm,1.3s						
ATTE	**AVT- Monte Tez**	**2.18**	**294**	P	**Pb**	**05 28 52.5**	**-2.1**
ATTE				AML	AML		
	comp=E,1525µm,0.8s						
ATTE				AML	AML		
	comp=N,1172µm,1.5s						
PIEI	**Pieia**	**2.22**	**304**	P	**Pn**	**05 28 51.7**	**+1.4**
PIEI				AML	AML		
	comp=N,989µm,0.9s						
PIEI				AML	AML		
	comp=E,874µm,1.6s						
MGR	**Morigerati**	**2.22**	**170**	P	**Pn**	**05 28 52.3**	**+2.0**
MGR				AML	AML		
	comp=N,545µm,1.3s						
MGR				AML	AML		
	comp=E,720µm,0.5s						
MGR				AML	AML		
	comp=N,1244µm,1.6s						
MGR				AML	AML		
	comp=E,831µm,0.5s						
SIRI	**Monte Sirino -**	**2.23**	**164**	P	**Pn**	**05 28 51.6**	**+1.1**
SIRI				AML	AML		
	comp=N,774µm,1.2s						
SIRI				AML	AML		
	comp=E,1140µm,0.4s						
NARO	**Abbazia di Nar**	**2.23**	**306**	P	**Pn**	**05 28 51.9**	**+1.4**
NARO				AML	AML		
	comp=E,1190µm,1.1s						
NARO				AML	AML		
	comp=N,1475µm,0.8s						
UDBI	**Udbina**	**2.25**	**13**	*e*Pn	**Pn**	**05 28 52.5**	**+1.8**
UDBI				Sn	**Sn**	**05 29 19.3**	**+1.8**
ATPI	**Pietralunga -**	**2.26**	**301**	P	**Pn**	**05 28 53.0**	**+2.1**
ATPI				AML	AML		
	comp=E,2620µm,0.8s						
ATPI				AML	AML		
	comp=N,2205µm,0.8s						
SCHR	**S. Chirico Rap**	**2.26**	**160**	AML	AML		
	comp=N,656µm,1.4s						
SCHR				AML	AML		
	comp=E,748µm,0.7s						
MGAB	**Montegabbione**	**2.26**	**286**	P	**Pb**	**05 28 53.7**	**-2.2**
MGAB				AML	AML		
	comp=N,1425µm,0.8s						
MGAB				AML	AML		
	comp=N,1486µm,1.1s						
MGAB				AML	AML		
	comp=E,1264µm,0.6s						
MGAB				AML	AML		
	comp=E,3078µm,1.6s						
BULG	**Bulgheria - Ca**	**2.26**	**174**	P	**Pn**	**05 28 52.1**	**+1.2**
BULG				AML	AML		
	comp=N,1120µm,1.3s						
BULG				AML	AML		
	comp=E,850µm,0.8s						
BULG				AML	AML		
	comp=E,880µm,0.8s						
BULG				AML	AML		
	comp=N,1100µm,1.3s						
PESA	**Pesaro**	**2.29**	**315**	P	**Pn**	**05 28 52.0**	**+0.7**
PESA				AML	AML		
	comp=N,2180µm,0.8s						
PESA				AML	AML		
	comp=E,2690µm,0.8s						
DBRK	**Dubrovnik**	**2.30**	**81**	*e*Pn	**Pn**	**05 28 51.5**	**+0.1**
APEC	**Apecchio**	**2.30**	**303**	P	**Pn**	**05 28 53.4**	**+2.0**
APEC				AML	AML		
	comp=E,2050µm,0.7s						
APEC				AML	AML		
	comp=N,1770µm,0.6s						
PE3	**Peglio**	**2.33**	**307**	P	**Pn**	**05 28 53.7**	**+1.8**
PE3				AML	AML		
	comp=E,3615µm,0.6s						
PE3				AML	AML		
	comp=N,3835µm,0.5s						
BADI	**Badiali**	**2.39**	**300**	P	**Pn**	**05 28 55.3**	**+2.7**
BADI				AML	AML		
	comp=E,1310µm,0.8s						
BADI				AML	AML		
	comp=N,1790µm,0.8s						
SACS	**San Casciano d**	**2.39**	**284**	P	**Pn**	**05 28 55.2**	**+2.4**
SACS				AML	AML		
	comp=E,1375µm,1.0s						
SACS				AML	AML		
	comp=N,1184µm,1.0s						
SACS				AML	AML		
	comp=N,1190µm,1.0s						
SACS				AML	AML		
	comp=E,1308µm,1.0s						
CUC	**Castrocucco**	**2.40**	**166**	P	**Pn**	**05 28 54.8**	**+2.0**
CUC				AML	AML		
	comp=N,584µm,0.8s						
CUC				AML	AML		
	comp=N,714µm,0.8s						
CUC				AML	AML		
	comp=E,676µm,0.6s						
CUC				AML	AML		
	comp=E,822µm,0.6s						
TREB	**Trebinje**	**2.45**	**80**	*e*Pn	**Pn**	**05 28 53.7**	**+0.2**
PARC	**Parchiule**	**2.46**	**303**	P	**Pn**	**05 28 55.5**	**+1.9**
PARC				AML	AML		
	comp=N,1105µm,0.8s						
PARC				AML	AML		
	comp=E,1540µm,0.8s						
CAFI	**Castiglion Fio**	**2.49**	**295**	P	**Pn**	**05 28 56.1**	**+2.1**
CAFI				AML	AML		
	comp=N,1145µm,1.1s						
CAFI				AML	AML		
	comp=N,1150µm,1.1s						
CAFI				AML	AML		
	comp=E,658µm,0.9s						
CAFI				AML	AML		
	comp=E,664µm,0.9s						
CPGN	**Carpegna, Ital**	**2.50**	**307**	P	**Pn**	**05 28 56.4**	**+2.2**
CPGN				AML	AML		
	comp=N,1610µm,0.7s						
CPGN				AML	AML		
	comp=E,2095µm,0.9s						
CPGN				AML	AML		
	comp=E,1900µm,0.9s						
CPGN				AML	AML		
	comp=N,1932µm,0.8s						
HCY	**Herceg Novi**	**2.54**	**86**	*e*Pn	**Pn**	**05 28 54.8**	**+0.2**
HCY	**Herceg Novi**	**2.54**	**86**	⇓*i*Pn	**Pn**	**05 28 55.0**	**+0.4**
HCY				*i* Sn	**Sn**	**05 29 26.4**	**+2.0**
MGRS	**Mrkonjic Grad**	**2.55**	**34**	*e*Pn	**Pn**	**05 28 56.3**	**+1.5**
MCIV	**Monte Civitell**	**2.55**	**281**	AML	AML		
	comp=E,511µm,1.1s						
MCIV				AML	AML		
	comp=N,451µm,1.1s						
PLIT	**Plitvice**	**2.58**	**9**	*e*Pn	**Pn**	**05 28 56.7**	**+1.5**
BRY	**Bratogost**	**2.62**	**76**	*e*Pn	**Pn**	**05 28 58.0**	**+2.1**
BRY	**Bratogost**	**2.62**	**76**	⇑*i*Pn	**Pn**	**05 28 56.8**	**+0.9**
BRY				*i* Sn	**Sn**	**05 29 28.3**	**+1.6**
CRE	**Caprese Michel**	**2.63**	**300**	P	**Pn**	**05 28 57.9**	**+1.9**
CRE				AML	AML		
	comp=E,628µm,1.6s						
CRE				AML	AML		
	comp=N,728µm,1.6s						
SALB	**San Lorenzo Be**	**2.63**	**158**	P	**Pn**	**05 28 57.7**	**+1.6**
SALB				AML	AML		
	comp=E,566µm,1.5s						
SALB				AML	AML		
	comp=E,564µm,1.5s						
SALB				AML	AML		
	comp=N,463µm,1.5s						
SALB				AML	AML		
	comp=N,490µm,1.5s						
MESG	**Mesagne**	**2.72**	**129**	P	**Pn**	**05 28 57.2**	**+0.1**
SMRN	**Sveta Marina**	**2.78**	**346**	*e*Pn	**Pn**	**05 28 58.0**	**0.0**
ASQU	**Asqua**	**2.82**	**302**	P	**Pn**	**05 29 00.8**	**+2.3**
ASQU				AML	AML		
	comp=N,689µm,0.8s						
ASQU				AML	AML		
	comp=E,655µm,1.3s						
BUM	**Brajici-Budva**	**2.83**	**89**	⇓*i*Pn	**Pn**	**05 28 59.6**	**+0.8**
BUM				*i* Sn	**Sn**	**05 29 33.5**	**+1.7**
SFI	**Santa Sofia**	**2.84**	**305**	P	**Pn**	**05 29 01.6**	**+2.8**
SFI				AML	AML		
	comp=E,774µm,0.9s						
SFI				AML	AML		
	comp=N,561µm,0.8s						
SFI				AML	AML		
	comp=N,676µm,0.9s						
SFI				AML	AML		
	comp=E,694µm,1.0s						
CEME	**Cevo**	**2.85**	**84**	⇑*i*Pn	**Pn**	**05 28 59.3**	**+0.3**
CEME				*i* Sn	**Sn**	**05 29 34.7**	**+2.4**
BLY	**Banja Luka**	**2.86**	**32**	*e*Pn	**Pn**	**05 28 59.9**	**+0.8**
BLY	**Banja Luka**	**2.86**	**32**	P	**Pn**	**05 29 00.1**	**+1.0**
BLY				AML	AML		
	comp=N,3040µm,1.0s						
BLY				AML	AML		
	comp=E,3050µm,0.7s						
BLY				AML	AML		
	comp=E,3095µm,0.7s						
BLY				AML	AML		
	comp=N,2945µm,1.0s						
CET2	**Cetraro**	**2.88**	**166**	P	**Pn**	**05 29 01.1**	**+1.8**
CET2				AML	AML		
	comp=E,766µm,1.2s						
CET2				AML	AML		
	comp=N,680µm,0.7s						
NKME	**Niksic**	**2.90**	**80**	⇑*i*Pn	**Pn**	**05 29 00.3**	**+0.6**
NKME				*i* Sn	**Sn**	**05 29 35.0**	**+1.6**
PRIJ	**Prijedor**	**2.90**	**24**	*e*Pn	**Pn**	**05 29 00.6**	**+1.0**
MAON	**Monte Argentar**	**2.92**	**273**	⇑P	**Pn**	**05 29 02.9**	**+3.0**
MAON				AML	AML		
	comp=N,162µm,1.4s						
MAON				AML	AML		
	comp=E,304µm,0.6s						
NKY	**Niksic**	**2.93**	**79**	⇓*i*Pn	**Pn**	**05 29 02.2**	**+2.0**
NKY				*i* Sn	**Sn**	**05 29 35.7**	**+1.3**
UPM	**Unac-Piva**	**2.95**	**72**	*e*Pn	**Pn**	**05 29 02.0**	**+1.5**
UPM	**Unac-Piva**	**2.95**	**72**	⇑*i*Pn	**Pn**	**05 29 01.1**	**+0.6**
UPM				*i* Sn	**Sn**	**05 29 36.2**	**+1.3**
RUFI	**Rufina**	**3.01**	**301**	P	**Pn**	**05 29 03.2**	**+2.0**
LMD	**Lutirano**	**3.02**	**306**	P	**Pn**	**05 29 03.4**	**+2.1**
LMD				AML	AML		
	comp=N,490µm,0.8s						
LMD				AML	AML		
	comp=E,545µm,1.6s						
RIY	**Rijeka**	**3.02**	**352**	*e*Pn	**Pn**	**05 29 02.2**	**+0.9**
RIY	**Rijeka**	**3.02**	**352**	*e*Pn	**Pn**	**05 29 02.3**	**+0.9**
RIY				Sn	**Sn**	**05 29 36.8**	**+0.4**
OSSC	**Osservatorio P**	**3.05**	**294**	⇑P	**Pb**	**05 29 06.8**	**-2.5**
OSSC				AML	AML		
	comp=E,386µm,0.9s						
OSSC				AML	AML		
	comp=N,366µm,1.1s						
OSSC	**Osservatorio P**	**3.05**	**294**		**Pn**	**05 28 58.7**	**-3.0**
DRME	**Dracevica, Mon**	**3.05**	**91**	*e*Pn	**Pn**	**05 29 03.5**	**+1.7**
DRME	**Dracevica, Mon**	**3.05**	**91**	⇑*i*Pn	**Pn**	**05 29 02.6**	**+0.8**
DRME				*i* Sn	**Sn**	**05 29 39.1**	**+1.9**
PDG	**Podgorica**	**3.10**	**87**	⇓P	**Pn**	**05 29 03.5**	**+1.1**
PDG				⇓S	**Sn**	**05 29 40.5**	**+2.2**
PDG	**Podgorica**	**3.10**	**87**	*e*Pn	**Pn**	**05 29 02.3**	**0.0**
PDG	**Podgorica**	**3.10**	**87**	P	**Pn**	**05 29 03.7**	**+1.3**
PDG	**Podgorica**	**3.10**	**87**		**Pn**	**05 28 59.2**	**-3.1**
TTG	**Podgorica**	**3.10**	**87**	⇑*i*Pn	**Pn**	**05 29 03.0**	**+0.7**
TTG				*i* Sn	**Sn**	**05 29 40.2**	**+1.9**
CELI	**Celico**	**3.12**	**159**	P	**Pn**	**05 29 05.7**	**+2.9**
CELI				AML	AML		
	comp=E,698µm,1.1s						
CELI				AML	AML		
	comp=N,632µm,1.3s						
ULC	**Ulcinj**	**3.12**	**95**	⇓*i*Pn	**Pn**	**05 29 03.4**	**+0.7**
ULC				*i* Sn	**Sn**	**05 29 40.5**	**+1.6**
PIPA	**Pietrapaola**	**3.13**	**155**	AML	AML		
	comp=N,394µm,1.2s						
PIPA				AML	AML		
	comp=E,314µm,1.1s						
PIPA				AML	AML		
	comp=N,330µm,1.3s						
PIPA				AML	AML		
	comp=E,398µm,1.1s						
CASP	**Castiglione de**	**3.14**	**280**	⇓P	**Pn**	**05 29 05.5**	**+2.5**
CASP				AML	AML		
	comp=E,133µm,0.9s						
CASP				AML	AML		
	comp=N,117µm,1.6s						
CASP	**Castiglione de**	**3.14**	**280**	Pn	**Pn**	**05 28 58.8**	**-4.2**
TRIF	**Trifonti**	**3.17**	**286**	⇓P	**Pb**	**05 29 07.8**	**-3.6**
TRIF				AML	AML		
	comp=N,230µm,1.0s						
TRIF				AML	AML		
	comp=E,296µm,0.8s						
BOJS	**Bojanci**	**3.17**	**2**	*e*Pn	**Pn**	**05 29 04.0**	**+0.7**
BOJS				*e*Sn	**Sn**	**05 29 43.3**	**+3.2**
BOJS				IAML		05 29 59.0	
	comp=Z,587nm,0.9s						
BOJS	**Bojanci**	**3.17**	**2**	⇑P	**Pn**	**05 29 04.8**	**+1.4**
BOJS				AML	AML		
	comp=E,4130µm,1.1s						
BOJS				AML	AML		
	comp=N,3265µm,0.6s						
SPS2	**Spezzano della**	**3.18**	**162**	P	**Pn**	**05 29 07.0**	**+3.4**

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SPS2                                AML    AML
      comp=E,125µm,0.9s
SPS2                                AML    AML
      comp=N,129µm,0.6s
SEI   Scarperia          3.22 304   P      Pn     05 29 07.0 +2.9
SEI                                 AML    AML
      comp=E,828µm,0.6s
SEI                                 AML    AML
      comp=N,1018µm,0.9s
DOB   Doboj              3.26  41  ePn     Pn     05 29 07.6 +3.1
OZLJ  Ozalj              3.29   5  ePn     Pn     05 29 07.0 +1.9
KOME  Kolasin            3.32  80  ePn     Pn     05 29 05.8 +0.3
KOME                               eSn     Sn     05 29 45.5 +1.6
PLE   Pljevlja           3.33  71 ⇑iPn     Pn     05 29 06.4 +0.8
PLE                                i Sn    Sn     05 29 45.3 +1.2
MPPT  Montemurlo         3.34 300   P      Pn     05 29 08.7 +3.0
MPPT                                AML    AML
      comp=E,394µm,0.8s
MPPT                                AML    AML
      comp=N,340µm,1.6s
CRMI  Carmignano         3.34 297  ⇓P      Pn     05 29 08.3 +2.5
CRMI                                AML    AML
      comp=N,302µm,1.6s
CRMI                                AML    AML
      comp=E,265µm,1.2s
TIP   Timpagrande        3.40 157  ⇑P      Pn     05 29 07.5 +0.9
TIP                                ⇑S      Sn     05 29 49.4 +3.6
TIP   Timpagrande        3.40 157  ⇓P      Pn     05 29 09.0 +2.5
TIP                                 AML    AML
      comp=N,166µm,1.1s
TIP                                 AML    AML
      comp=E,220µm,1.1s
TIP                                 AML    AML
      comp=N,198µm,1.0s
TIP                                 AML    AML
      comp=E,181µm,1.4s
TIP   Timpagrande        3.40 157          Pn     05 29 06.6  0.0
RUDO  Rudo               3.40  66  ePn     Pn     05 29 07.5 +0.9
SCTE  Santa Cesarea      3.41 130   P      Pn     05 29 07.5 +0.8
SCTE                                AML    AML
      comp=N,1130µm,1.2s
SCTE                                AML    AML
      comp=E,1120µm,1.3s
SCTE  Santa Cesarea      3.41 130          Pn     05 29 04.0 -2.7
MTCR  Monte La Croce     3.43 301  ⇑P      Pn     05 29 09.7 +2.7
CEY   Cerknica           3.44 352  ePn     Pn     05 29 10.3 +3.2
MOSL  Moslavina          3.50  20  ePn     Pn     05 29 08.9 +1.1
CRES  Cresnjev           3.50   4  ePn     Pn     05 29 09.8 +1.9
BBLS  Lazi&#263;i        3.52  63  ePn     Pn     05 29 09.1 +0.8
BBLS  Lazi&#263;i        3.52  63  ePn     Pn     05 29 09.5 +1.2
ZAG   Zagreb             3.56  10  ePn     Pn     05 29 08.9 +0.3
ZAG   Zagreb             3.56  10  ePn     Pn     05 29 10.2 +1.6
IVA   Berane             3.60  80 ⇑iPn     Pn     05 29 10.1 +0.8
IVA                                i Sn    Sn     05 29 51.6 +0.9
ZCCA  Zocca              3.61 305          Pn     05 29 13.1 +3.7
PII   Pisa               3.61 294  ⇑P      Pn     05 29 11.8 +2.4
PII                                 AML    AML
      comp=E,314µm,0.8s
PII                                 AML    AML
      comp=N,527µm,0.8s
PVY   Plav               3.62  84 ⇑iPn     Pn     05 29 10.4 +0.7
PVY                                i Sn    Sn     05 29 52.3 +0.9
PTJ   Puntijarka         3.63  10  ePn     Pn     05 29 10.5 +0.7
BDI   Bagni Di Lucca     3.70 299  ⇓P      Pn     05 29 13.1 +2.4
BDI                                 AML    AML
      comp=N,330µm,0.8s
BDI                                 AML    AML
      comp=E,372µm,0.6s
MAIM  Mastiano           3.71 297   P      Pn     05 29 13.0 +2.3
TIR   Tirane             3.71 104  ⇓P      Pn     05 29 11.4 +0.6
TIR   Tirane             3.71 104   P      Pn     05 29 12.1 +1.3
TIR   Tirane             3.71 104          Pn     05 29 06.1 -4.7
LJU   Ljubljana          3.73 354  ePn     Pn     05 29 11.5 +0.4
LJU   Ljubljana          3.73 354  ⇓P      Pn     05 29 11.8 +0.7
LJU                                 AML    AML
      comp=N,7210µm,0.7s
LJU                                 AML    AML
      comp=E,6440µm,1.0s
CARD  Cardoso            3.76 298   P      Pn     05 29 13.7 +2.2
SABO  M.te Sabotino      3.80 344   P      Pn     05 29 12.3 +0.3
SABO                                AML    AML
      comp=N,1485µm,0.8s
SABO                                AML    AML
      comp=E,980µm,0.6s
VLO   Vlora              3.81 118          Pn     05 29 09.8 -2.3
VLC   Villacollemand     3.88 300  ⇑P      Pn     05 29 15.6 +2.4
VLC                                 AML    AML
      comp=E,184µm,1.0s
VLC                                 AML    AML
      comp=N,185µm,0.9s
VLC                                 AML    AML
      comp=N,184µm,0.9s
VLC                                 AML    AML
      comp=E,158µm,1.3s
VLC   Villacollemand     3.88 300   Pn     Pn     05 29 08.6 -4.5
SARO  Sassorosso         3.88 300   P      Pn     05 29 14.9 +1.6
SARO  Sassorosso         3.88 300  ⇓P      Pn     05 29 15.1 +1.9
SARO                                AML    AML
      comp=E,116µm,0.8s
SARO                                AML    AML
      comp=N,154µm,0.6s
TEOL  Teolo              3.90 322   P      Pn     05 29 13.2 -0.2
TEOL                                AML    AML
      comp=E,1690µm,0.7s
TEOL                                AML    AML
      comp=N,1420µm,0.6s
TEOL  Teolo              3.90 322          Pn     05 29 07.1 -6.3
KALN  Kalnik             3.93  14  ePn     Pn     05 29 13.9 +0.1
TEKS  Tekeris            3.93  54  ePn     Pb     05 29 20.2 -4.1
TEKS  Tekeris            3.93  54  ePn     Pb     05 29 20.6 -3.7
IVAS  Ivanjica           3.93  70  ePn     Pn     05 29 14.3 +0.5
DIVS  Divibare           4.00  62  ⇑P      Pn     05 29 16.4 +1.5
DIVS                               ⇓P      Pb     05 29 26.5 +0.9
DIVS  Divibare           4.00  62  ePn     Pn     05 29 15.2 +0.3
MSRU  Castanea           4.08 175  ⇑P      Pn     05 29 18.2 +2.3
MSRU                                AML    AML
      comp=E,198µm,1.2s
MSRU                                AML    AML
      comp=N,174µm,1.1s
CEL   Celeste            4.12 171   Pn     Pn     05 29 16.7 +0.3
MPRI  Monte Prat         4.19 340   P      Pn     05 29 17.4 +0.1
MPRI                                AML    AML
      comp=N,976µm,1.6s
MPRI                                AML    AML
      comp=E,598µm,0.8s
PLMA  Palmaria, Port     4.19 296  ⇓P      Pn     05 29 20.2 +2.9
PLMA                                AML    AML
      comp=E,148µm,1.1s
PLMA                                AML    AML
      comp=N,170µm,0.8s
OBKA  Obir               4.19 355  i Pn    Pn     05 29 18.4 +0.9
      comp=N,12nm,0.2s,SNR=17
OBKA                               eSn     Sn     05 30 08.8 +3.4
      comp=N,94nm,0.6s
OBKA  Obir               4.19 355  ePn     Pn     05 29 17.8 +0.4
KOGS  Kog                4.20  11  ⇑P      Pn     05 29 17.3 -0.2
KOGS                                S      Sn     05 30 07.0 +1.6
PRMA  PARMA              4.23 307          Pn     05 29 13.3 -4.6
VARN  Col Varnada, M     4.24 331   P      Pn     05 29 17.6 -0.5
VARN                                AML    AML
      comp=N,1285µm,0.4s
VARN                                AML    AML
      comp=E,2595µm,0.5s
PRED  Cave del Predi     4.25 346          Pn     05 29 10.4 -7.8
CGRP  Cima Grappa        4.26 328   P      Pn     05 29 17.9 -0.5
STAL  STALIGIAL          4.28 337   P      Pn     05 29 17.8 -0.8
STAL                                AML    AML
      comp=N,802µm,0.3s
STAL                                AML    AML
      comp=E,974µm,0.4s
STAL                                AML    AML
      comp=E,789µm,1.4s
STAL                                AML    AML
      comp=N,830µm,0.5s
STAL  STALIGIAL          4.28 337          Pn     05 29 09.8 -8.8
TRUS  Trudelj            4.33  62  ePn     Pn     05 29 20.0 +0.7
KOVH  Kovagotottos       4.34  29  ePN     Pn     05 29 19.2 -0.2
KOVH  Kovagotottos       4.34  29  eP      Pn     05 29 19.2 -0.2
KOVH  Kovagotottos       4.34  29  eSN     Sn     05 30 06.8 -2.0
SOKA  Soboth             4.35 360  i Pn    Pn     05 29 19.8 +0.2
      comp=N,3.2nm,0.2s,SNR=11
SOKA                               eSn     Sn     05 30 10.5 +1.3
      comp=N,1.0nm,0.2s
ACOM  Acomizza, Ital     4.36 346   P      Pn     05 29 20.3 +0.4
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CIMO  Cimolais           4.40 335   P      Pn     05 29 19.7 -0.6
CIMO                                AML    AML
      comp=N,301µm,0.4s
CIMO                                AML    AML
      comp=E,222µm,0.4s
CIMO  Cimolais           4.40 335          Pn     05 29 13.6 -6.7
CLUD  Cludinico          4.41 340   P      Pn     05 29 20.1 -0.3
GRUS  Gruza              4.41  67  ePn     Pn     05 29 20.9 +0.5
MYKA  Terra Mystica      4.42 347  ePn     Pn     05 29 21.8 +1.2
      comp=E,1.5nm,0.2s
MYKA                               eSn     Sn     05 30 12.4 +1.5
      comp=E,49nm,0.6s
KEK   Kerkira            4.43 125   P      Pn     05 29 20.9 +0.2
KEK   Kerkira            4.43 125  ⇓P      Pn     05 29 22.4 +1.7
KEK                                 AML    AML
      comp=N,67µm,0.4s
KEK                                 AML    AML
      comp=E,57µm,1.3s
FRGS  Fruska Gora        4.44  49   P      Pn     05 29 20.3 -0.6
FRGS  Fruska Gora        4.44  49  ePn     Pn     05 29 25.5 +4.6
FRGS  Fruska Gora        4.44  49  ePn     Pn     05 29 19.9 -1.0
OHR   Ohrid              4.46 104  i Pn    Pn     05 29 22.6 +1.5
SRN   Sarande            4.46 122   P      Pn     05 29 22.4 +1.4
SRN                                 AML    AML
      comp=E,162µm,0.4s
SRN                                 AML    AML
      comp=N,148µm,0.6s
CTI   Castel Tesino      4.46 328   P      Pn     05 29 20.8 -0.3
CTI                                 AML    AML
      comp=N,1490µm,0.5s
CTI                                 AML    AML
      comp=E,1195µm,0.3s
CTI   Castel Tesino      4.46 328          Pn     05 29 14.8 -6.3
ZOU   Zoufplan           4.48 341   AML    AML
      comp=E,470µm,1.0s
ZOU                                 AML    AML
      comp=N,602µm,1.2s
ZOU   Zoufplan           4.48 341          Pn     05 29 13.4 -8.1
PGF   Pioggiola          4.50 275  eP      Pn     05 29 24.5 +2.8
PGF                                eSn     Sn     05 30 11.2 -1.8
      comp=N,25nm,0.7s
AGOR  Agordo             4.51 332   P      Pn     05 29 21.0 -0.8
MSSA  Maissana           4.51 298  ⇓P      Pn     05 29 24.8 +2.9
MSSA                                AML    AML
      comp=N,254µm,0.9s
MSSA                                AML    AML
      comp=E,219µm,0.7s
MSSA  Maissana           4.51 298          Pn     05 29 17.1 -4.8
DOSS  Dosso del Somm     4.52 323   P      Pn     05 29 22.1 +0.1
DOSS                                AML    AML
      comp=E,734µm,0.4s
DOSS                                AML    AML
      comp=N,542µm,0.3s
DOSS                                AML    AML
      comp=N,751µm,0.4s
DOSS                                AML    AML
      comp=E,565µm,0.3s
SELS  Selova             4.54  77  ePn     Pn     05 29 23.2 +1.0
DGI   Dorgali Grotta     4.58 246  ⇓P      Pn     05 29 25.7 +2.9
KBN   Korca              4.62 110          Pn     05 29 17.3 -6.0
CORL  Corleone           4.63 198          Pn     05 29 24.8 +1.2
SALO  Salr               4.64 317  ⇑P      Pn     05 29 24.3 +0.7
SALO                                AML    AML
      comp=N,636µm,0.7s
SALO                                AML    AML
      comp=E,609µm,0.4s
SALO  Salr               4.64 317          Pn     05 29 17.8 -5.8
MORH  Mrgy, Hungar       4.65  32  ePN     Pn     05 29 25.9 +2.2
MORH  Mrgy, Hungar       4.65  32  eP      Pn     05 29 27.3 +3.6
MORH  Mrgy, Hungar       4.65  32  eSN     Sn     05 30 13.1 -3.4
MAGA  Magasa             4.70 319  ⇓P      Pn     05 29 24.3 -0.2
MAGA                                AML    AML
      comp=N,1550µm,0.3s
MAGA                                AML    AML
      comp=E,1765µm,0.4s
SKO   Skopje             4.75  92  i Pn    Pn     05 29 27.1 +2.1
BOB   Bobbio (Coli)      4.76 303   P      Pn     05 29 27.9 +2.7
BOB                                 AML    AML
      comp=E,399µm,1.0s
BOB                                 AML    AML
      comp=N,404µm,1.0s
BOB                                 AML    AML
      comp=E,404µm,0.5s
BOB                                 AML    AML
      comp=N,432µm,1.0s
GAGG  Gaggia             4.78 323   P      Pn     05 29 26.0 +0.5
GAGG                                AML    AML
      comp=E,716µm,1.3s
GAGG                                AML    AML
      comp=N,449µm,0.9s
ABTA  Abfaltersbach      4.78 338  i Pn    Pn     05 29 26.1 +0.6
      comp=N,0.2nm,0.1s,SNR=9.0
ABTA                               eSn     Sn     05 30 20.5 +0.6
      comp=N,59nm,0.6s
CTL8  Castelleone        4.84 309  ⇑P      Pn     05 29 29.5 +3.3
NEST  Nestorio           4.89 111   P      Pn     05 29 27.5 +0.5
KBA   Koelnbreinsper     4.90 346  ePn     Pn     05 29 28.6 +1.3
      comp=N,4.1nm,0.2s
KBA                                eSn     Sn     05 30 24.8 +1.8
      comp=N,47nm,0.7s
KBA   Koelnbreinsper     4.90 346  ePn     Pn     05 29 28.4 +1.1
KOSI  Kohlern            4.91 329   AML    AML
      comp=N,572µm,0.5s
KOSI                                AML    AML
      comp=E,1095µm,0.4s
ARSA  Arzberg            4.93   4  ePn     Pn     05 29 27.6  0.0
      comp=E,4.0nm,0.3s
ARSA                               eSn     Sn     05 30 25.7 +2.3
      comp=E,16nm,0.4s
ARSA  Arzberg            4.93   4  ePn     Pn     05 29 27.5  0.0
ZONE  Zone               4.95 316   P      Pn     05 29 27.9  0.0
CLTB  Caltabellotta      4.96 197   Pn     Pn     05 29 29.1 +1.1
MABI  Malga Bissina      4.96 320  ⇑P      Pn     05 29 28.3 +0.2
FNA   Florina            4.97 106   P      Pn     05 29 28.9 +0.7
FNA                                 S      Sn     05 30 24.2 -0.4
      comp=E,230nm,0.5s
FNA   Florina            4.97 106   Pn     Pn     05 29 24.7 -3.5
APPI  Appiano            4.98 328  ⇓P      Pn     05 29 28.7 +0.4
TIH   Tihany             4.99  23  ePN     Pn     05 29 29.0 +0.7
TIH   Tihany             4.99  23  eP      Pn     05 29 35.2 +6.8
BARS  Barje              5.00  82  ePn     Pn     05 29 29.3 +0.8
BARS  Barje              5.00  82  ePn     Pn     05 29 33.7 +5.2
RISI  Rein               5.09 336   P      Pn     05 29 30.3 +0.5
JAN   Janina             5.12 120   P      Pn     05 29 31.3 +1.1
JAN                                 S      Sn     05 30 27.8 -0.5
      comp=E,175nm,0.5s
RAFF  Raffo Rosso        5.13 186   Pn     Pn     05 29 29.0 -1.4
MPLH  Magyarpolny        5.15  19  ePN     Pn     05 29 30.3 -0.2
MPLH  Magyarpolny        5.15  19  eP      Pn     05 29 32.7 +2.2
ABSI  Aberstueckl        5.15 330   P      Pn     05 29 30.9 +0.2
VSL   Villasalto         5.16 239          Pn     05 29 30.4 -0.3
MDI   Monti di Nese      5.18 314  ⇑P      Pn     05 29 31.8 +0.8
PRVS  Prvonek            5.19  86  ePn     Pn     05 29 32.6 +1.5
PCP   Piancastagn        5.24 297  ⇓P      Pn     05 29 34.1 +2.3
ROSI  Rosskopf           5.29 332   P      Pn     05 29 33.0 +0.4
QLNO  Quiliano           5.30 294  ⇑P      Pn     05 29 35.0 +2.4
KPRO  Kipourio           5.31 114   P      Pn     05 29 33.1 +0.3
EGYH  Egyhazaskeszo      5.33  17  ePN     Pn     05 29 34.6 +1.6
EGYH  Egyhazaskeszo      5.33  17  eP      Pn     05 29 37.9 +4.9
STIP  Stip               5.34  94  i Pn    Pn     05 29 36.0 +2.9
MOSI  Grossmontoni       5.37 324  ⇑P      Pn     05 29 36.4 +2.7
MDVR  Moldovita          5.41  61  ⇑P      Pn     05 29 34.3 +0.2
MDVR                               ⇑S      Sn     05 30 37.4 +2.0
KZN   Kozani             5.43 110   P      Pn     05 29 35.9 +1.4
KZN                                 S      Sn     05 30 36.2 +0.2
      comp=E,140nm,0.6s
ZAGS  Zajecar            5.45  72  ePn     Pn     05 29 36.2 +1.6
SOP   Sopron             5.45  11  ePN     Pn     05 29 34.9 +0.2
SOP   Sopron             5.45  11  eP      Pn     05 29 35.5 +0.8
SOP   Sopron             5.45  11  eSN     Sn     05 30 35.2 -1.1
BOSS  Bosilegrad         5.49  86  ePn     Pn     05 29 36.2 +1.0
WTTA  Wattenberg         5.50 335  i Pn    Pn     05 29 37.3 +1.7
      comp=E,4.9nm,0.2s,SNR=6.0
WTTA                               eSn     Sn     05 30 40.8 +3.0
      comp=E,103nm,0.4s
WTTA  Wattenberg         5.50 335  ePn     Pn     05 29 37.2 +1.7
WTTA  Wattenberg         5.50 335   P      Pn     05 29 36.6 +1.0
CSKK  Cskako             5.52  23  ePN     Pn     05 29 39.6 +4.1
CSKK                               eSN     Sn     05 30 35.3 -2.5
LKD2  Lefkada island     5.53 128   P      Pn     05 29 36.7 +0.9
LKD2                                S      Sn     05 30 37.8 -0.5
      comp=E,185nm,0.5s
MOA   Molln              5.55 354  i Pn    Pn     05 29 36.9 +0.9
      comp=E,7.0nm,0.2s,SNR=11
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MOA                                eSn     Sn     05 30 40.0 +1.3
      comp=E,31nm,0.6s
MOA   Molln              5.55 354  ePn     Pn     05 29 36.8 +0.8
WATA  Walderalm          5.59 335  i Pn    Pn     05 29 37.9 +1.2
      comp=E,4.7nm,0.2s,SNR=16
WATA                               eSn     Sn     05 30 41.8 +2.0
      comp=E,71nm,0.4s
SQTA  Sankt Quirin       5.61 332  ePn     Pn     05 29 37.9 +0.9
      comp=E,3.1nm,0.3s
SQTA                               eSn     Sn     05 30 41.2 +1.0
      comp=E,83nm,0.4s
FETA  Feichten           5.62 328  ePn     Pn     05 29 37.9 +0.7
      comp=E,1.3nm,0.3s
FETA                               eSn     Sn     05 30 42.9 +2.3
      comp=E,44nm,0.4s
CONA  Conrad Observa     5.62   5  ePn     Pn     05 29 37.9 +0.7
      comp=E,5.5nm,0.5s
CONA                               eSn     Sn     05 30 31.5 -9.1
      comp=E,30nm,0.7s
ZAPS  Zavoj              5.64  78  ePn     Pn     05 29 40.2 +2.9
GRG   Griva              5.66 102   P      Pn     05 29 38.2 +0.6
VAY   Valandovo          5.69  98  i Pn    Pn     05 29 38.8 +0.9
BZS   Buzias             5.75  53   P      Pn     05 29 39.9 +1.1
MOTA  Moosalm            5.75 332  ePn     Pn     05 29 40.0 +1.1
      comp=E,1.5nm,0.2s
MOTA                               eSn     Sn     05 30 49.0 +5.1
      comp=E,100nm,0.4s
VARE  Varese             5.75 310  ⇑P      Pn     05 29 39.4 +0.5
DAVOX Davos/Dischmat     5.79 322   Pn     Pn     05 29 40.4 +0.9
      comp=E,2.6nm,0.3s,baz=148,slow=8.8,SNR=31
DAVOX                               Sn     Sn     05 30 46.8 +1.9
      comp=E,7.1nm,0.3s,baz=243,slow=21,SNR=4.8
DAVOX                               LR     LR     05 32 18.2
      comp=E,604nm,21.9s,baz=136,slow=43
SBF   Sospel             5.80 288  eP      Pn     05 29 42.6 +3.1
SBF                                eSn     Sn     05 30 42.1 -2.8
      comp=E,30nm,0.5s
ZUGS  Zugspitze, Sch     5.86 332  eSn     Sn     05 30 49.1 +2.4
MONC  Moncucco Torin     5.86 300  ⇓P      Pn     05 29 42.6 +2.3
HERR  Herculane          5.91  62   P      Pn     05 29 41.7 +0.7
HERR                               ⇑S      Sn     05 30 49.1 +1.6
VLS   Valsamata          5.92 133   P      Pn     05 29 42.0 +0.9
THL   Klokotos Trika     5.94 115   P      Pn     05 29 41.6 +0.2
SRO   Srobarova          5.94  22  ePN     Pn     05 29 42.8 +1.4
SRO                                eSN     Sn     05 30 48.8 +0.5
KNT   Kendrikon          5.97  99   P      Pn     05 29 42.8 +1.0
RETA  Reutte             5.99 331  ePn     Pn     05 29 43.5 +1.3
      comp=E,2.1nm,0.2s
RETA                               eSn     Sn     05 30 52.4 +2.7
      comp=E,33nm,0.6s
ZST   Bratislava         6.04  13  eSN     Sn     05 30 49.2 -1.4
VTS   Vitosha            6.04  85  ⇑P      Pn     05 29 43.6 +0.7
VTS                                ⇓S      Sn     05 30 52.2 +1.1
VTS   Vitosha            6.04  85  ⇓P      Pn     05 29 43.7 +0.7
VTS   Vitosha            6.04  85   Pn     Pn     05 29 38.1 -4.8
OBER  Oberstdorf         6.11 328  ePn     Pn     05 29 45.6 +1.8
SIRR  Siria              6.15  48  ⇑P      Pn     05 29 44.5 +0.3
EVR   Evrytania          6.16 121   P      Pn     05 29 45.9 +1.4
DAVA  Damuels            6.18 325  ePn     Pn     05 29 47.3 +2.5
      comp=E,4.2nm,0.2s
DAVA                               eSn     Sn     05 30 55.7 +1.3
      comp=E,81nm,0.5s
DAVA  Damuels            6.18 325  ePn     Pn     05 29 47.3 +2.5
DAVA                               eSn     Sn     05 30 55.7 +1.3
PLONS Plons/SG           6.22 321  ⇓P      Pn     05 29 48.3 +3.0
MODS  Modra-Piesok       6.24  14  ePN     Pn     05 29 45.0 -0.5
MODS                               eSN     Sn     05 30 52.8 -2.8
FRF   La Foret Royal     6.31 284  eP      Pn     05 29 49.7 +3.3
FRF                                eSn     Sn     05 30 54.1 -3.2
      comp=E,15nm,0.5s
GZR   Gura Zlata         6.35  59   P      Pn     05 29 48.1 +0.9
SRE   Strehaia           6.36  66  ⇑P      Pn     05 29 48.1 +1.0
LMR   La Mourre          6.38 282  eP      Pn     05 29 50.2 +2.8
LMR                                eSn     Sn     05 30 56.1 -2.9
      comp=E,3.4nm,0.3s
SMOL  Smolenice          6.40  14  ePN     Pn     05 29 48.9 +1.2
UBR   Ueberruh           6.40 328  ePn     Pn     05 29 48.7 +0.9
AGG   Agios Georgios     6.43 119   P      Pn     05 29 49.9 +1.7
AGG                                 S      Sn     05 31 00.6 +0.2
      comp=E,80nm,0.9s
AGG   Agios Georgios     6.43 119          Pn     05 29 45.5 -2.7
SRS   Serrai             6.49  98   P      Pn     05 29 49.6 +0.7
MBDF  Montbardon         6.49 294  ePn     Pn     05 29 49.6 +0.5
MBDF                               eSn     Sn     05 30 58.5 -3.6
      comp=E,31nm,0.6s
RLS   Riolos of Patr     6.49 129   P      Pn     05 29 50.1 +1.1
CKRC  Cesky Krumlov      6.51 356  ePN     Pn     05 29 50.3 +1.1
CKRC                               eSN     Sn     05 31 00.2 -2.2
PSZ   Piszkesteto        6.54  30  ⇑P      Pn     05 29 50.7 +1.0
PSZ   Piszkesteto        6.54  30          Pn     05 29 41.4 -8.3
GEC2  GERESS Array S     6.58 352  ePn     Pn     05 29 49.8 -0.6
GEC2  GERESS Array S     6.58 352          Pn     05 29 43.0 -7.3
GERES GERESS Array B     6.58 352   Pn     Pn     05 29 49.9 -0.4
      comp=E,2.0nm,0.3s,baz=170,slow=14,SNR=66
GERES                               Sn     Sn     05 31 02.9 -1.4
      comp=E,6.8nm,0.3s,baz=163,slow=24,SNR=12
GERES GERESS Array B     6.58 352   Pn     Pn     05 29 44.0 -6.3
NVR   Nevrokopi          6.64  96   P      Pn     05 29 52.0 +1.0
NVR                                 S      Sn     05 31 06.1 +0.6
      comp=E,40nm,1.3s
BNI   Bardonecchia       6.67 297   Pn     Pn     05 29 46.1 -5.4
KOLL  Kolacno            6.67  19  ePN     Pn     05 29 52.0 +0.6
VYHS  Vyhne              6.71  22  ePN     Pn     05 29 54.1 +2.2
VYHS                               eSN     Sn     05 31 05.6 -1.5
LPG   La Plagne          6.79 301  ePn     Pn     05 29 52.9 -0.5
LPG                                eSn     Sn     05 31 05.6 -4.1
      comp=E,50nm,0.6s
KRUC  Moravsky           6.79   7  ePN     Pn     05 29 54.2 +1.1
KRUC                               eSN     Sn     05 31 06.6 -2.7
LPL   La Plagne          6.81 301  ePn     Pn     05 29 53.1 -0.5
LPL                                eSn     Sn     05 31 05.5 -4.6
      comp=E,49nm,0.5s
SENIN Lac Senin/Sane     6.88 309   Pn     Pn     05 29 49.8 -4.7
KHC   Kasperske Hory     6.88 352  ePN     Pn     05 29 54.2 -0.1
KHC                                ex      x      05 30 08.0
KHC                                ex      x      05 31 08.0
KHC   Kasperske Hory     6.88 352          Pn     05 29 46.5 -7.8
KLV   Kalavryta, Ach     6.91 126   P      Pn     05 29 56.7 +2.0
WET   Wettzell           6.98 348  ePn     Pn     05 29 54.9 -0.8
DRGR                     7.04  48   P      Pn     05 29 57.1 +0.5
VRAC  Vranov             7.06   8  ⇑P      Pn     05 29 57.6 +0.8
VRAC  Vranov             7.06   8   Pn     Pn     05 29 57.5 +0.8
      comp=E,0.4nm,0.3s,baz=192,slow=16,SNR=2.8
VRAC                                LR     LR     05 32 20.0
      comp=E,161nm,20.3s,baz=338,slow=36
VRAC  Vranov             7.06   8  ePN     Pn     05 29 57.3 +0.6
VRAC                               eSN     Sn     05 31 15.2 -0.6
NORI  Noerdlinger Ri     7.11 335  eSn     Sn     05 31 15.3 -1.8
SMRF  Simiane la Rot     7.14 287  eP      Pn     05 30 01.7 +3.8
SMRF                               eSn     Sn     05 31 13.9 -4.0
      comp=E,3.4nm,0.4s
ORIF  Oris-en-Rattie     7.15 294  ePn     Pn     05 29 58.1 -0.1
ORIF                               eSn     Sn     05 31 14.4 -3.9
      comp=E,25nm,0.5s
ITM   Ithomi             7.37 132   Pn     Pn     05 29 59.5 -1.5
LANS  Liptovska Anna     7.48  23  ePN     Pn     05 30 03.9 +1.4
MORC  Moravsky Berou     7.64  12  ⇑P      Pn     05 30 06.0 +1.2
MORC  Moravsky Berou     7.64  12   Pn     Pn     05 29 56.6 -8.1
STU   Stuttgart          7.65 329   Pn     Pn     05 29 57.8 -7.0
BFO   Black Forest       7.65 324  ePn     Pn     05 30 04.8 -0.1
BFO                                eSn     Sn     05 31 27.4 -2.9
BFO   Black Forest       7.65 324   Pn     Pn     05 29 58.6 -6.3
PRU   Pruhonice          7.67 357  ePN     Pn     05 30 05.2 +0.1
PRU                                eSN     Sn     05 31 26.2 -4.5
CABF  La Chapelle        7.72 307  ePn     Pn     05 30 05.7 -0.2
CABF  La Chapelle        7.72 307  eP      Pn     05 30 10.9 +5.0
CABF                               eSn     Sn     05 31 27.6 -4.6
      comp=E,12nm,0.3s
GRFO  Grafenberg         7.83 341   Pn     Pn     05 29 59.5 -7.9
GRA1  Grafenberg Arr     7.83 341   Pn     Pn     05 29 59.0 -8.4
KRLC  Kraliky            7.83   8  ePN     Pn     05 30 09.4 +2.0
KRLC                               eSN     Sn     05 31 32.8 -2.2
VOIR                     7.85  63  ⇑P      Pn     05 30 08.7 +1.1
KEST  Kesra              7.95 216   Pn     Pn     05 30 13.1 +4.0
      comp=E,2.0nm,0.3s,baz=323,slow=4.4,SNR=24
KEST  Kesra              7.95 216   Pn     Pn     05 30 10.6 +1.4
VIVF  Saint-Julien-l     7.96 292  ePn     Pn     05 30 09.1 -0.1
VIVF                               eSn     Sn     05 31 33.5 -4.6
      comp=E,3.2nm,0.3s
HINF  Hinteralfeld       7.99 316  ePn     Pn     05 30 08.8 -0.8
HINF  Hinteralfeld       7.99 316  eP      Pn     05 30 14.6 +5.0
HINF                               eSn     Sn     05 31 33.6 -5.2
      comp=E,32nm,0.3s
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VLY	Voula,Athens	8.04	121	P	Pn	05 30 11.6	+1.3
ECH	Echery	8.11	319		Pn	05 30 04.8	-6.4
SSB	Saint Sauveur	8.17	295	Pn	Pn	05 30 07.8	-4.2
CDF	Champ du Feu	8.19	321	*e*Pn	Pn	05 30 12.3	0.0
CDF	Champ du Feu	8.19	321	*e*P	Pn	05 30 16.9	+4.6
CDF				*e*Sn	Sn	05 31 37.7	-6.0
	comp=E,49nm,0.7s						
HAU	Haudompre	8.37	316	*e*Pn	Pn	05 30 14.2	-0.6
HAU	Haudompre	8.37	316	*e*P	Pn	05 30 19.8	+5.0
HAU				*e*Sn	Sn	05 31 41.8	-6.4
	comp=E,120nm,0.4s						
LASF	Ste Croix	8.38	286	*e*P	Pn	05 30 19.2	+4.3
LASF				*e*Sn	Sn	05 31 43.7	-4.6
	comp=E,1.2nm,0.4s						
MLR	Muntele Rosu	8.46	64	⇑P	Pn	05 30 16.1	0.0
MLR	Muntele Rosu	8.46	64	Pn	Pn	05 30 18.5	+2.4
	comp=E,0.2nm,0.3s,baz=266,slow=21,SNR=2.7						
MLR				LR	LR	05 34 04.3	
	comp=E,823nm,20.2s,baz=274,slow=42						
BRG	Berggiesshubel	8.58	355	*e*P	Pn	05 30 17.6	0.0
BRG				Amp		05 30 18.8	
	comp=Z,3.5nm,0.6s						
BRG				r		05 31 37.0	
BRG				r		05 31 57.6	
BRG				r		05 32 07.8	
BRG				r		05 32 45.5	
BRG				Amp		05 33 19.2	
	comp=Z,26nm,1.1s						
MOX	Moxa	8.65	345	*e*Pn	Pn	05 30 18.0	-0.5
MOX				*e*Sn	Sn	05 31 51.4	-3.5
PAGF	Fort de Pagny	9.05	317	*e*Pn	Pn	05 30 23.1	-0.9
	baz=136						
PAGF	Fort de Pagny	9.05	317	*e*P	Pn	05 30 28.6	+4.6
PAGF				*e*Sn	Sn	05 31 58.7	-5.9
	comp=Z,55nm,0.6s						
CLL	Collm	9.09	352	*e*Pn	Pn	05 30 25.0	+0.4
CLL				*e*	Sn	05 32 04.0	-1.7
CLL				*e*Sb		05 32 33.7	
SMF	Signal de Mont	9.11	302	*e*Pn	Pn	05 30 24.0	-0.9
SMF	Signal de Mont	9.11	302	*e*P	Pn	05 30 29.3	+4.4
SMF				*e*Sn	Sn	05 32 00.7	-5.6
	comp=Z,40nm,0.7s						
TNS	Taunus Mts	9.12	332	*e*Pn	Pn	05 30 24.6	-0.5
TNS				*e*Sn	Sn	05 32 02.3	-4.4
SFTF	Sexfontaines	9.19	313	*e*Pn	Pn	05 30 25.0	-1.0
	baz=133						
SFTF	Sexfontaines	9.19	313	*e*P	Pn	05 30 31.0	+5.0
SFTF				*e*Sn	Sn	05 32 01.3	-6.9
	comp=Z,5.2nm,0.2s						
MEZF	Maizieres J'vi	9.36	315	*e*Pn	Pn	05 30 27.0	-1.3
MEZF	Maizieres J'vi	9.36	315	*e*P	Pn	05 30 33.4	+5.1
MEZF				*e*Sn	Sn	05 32 06.2	-6.2
	comp=Z,5.6nm,0.3s						
LOR	Lormes	9.37	306	*e*Pn	Pn	05 30 27.7	-0.8
	baz=126						
LOR	Lormes	9.37	306	*e*P	Pn	05 30 33.2	+4.7
LOR				*e*Sn	Sn	05 32 06.8	-5.9
	comp=Z,74nm,0.7s						
SAVF	Savonnieres en	9.39	315	*e*Pn	Pn	05 30 27.9	-0.8
	baz=136						
SAVF				*e*Sn	Sn	05 32 07.0	-6.2
	comp=Z,18nm,0.6s						
AVF	Avril sur Loir	9.48	302	*e*Pn	Pn	05 30 28.8	-1.1
AVF	Avril sur Loir	9.48	302	*e*P	Pn	05 30 34.9	+5.0
AVF				*e*Sn	Sn	05 32 09.4	-5.8
	comp=Z,6.4nm,0.4s						
SSF	Saint Saulge	9.50	304	*e*Pn	Pn	05 30 29.0	-1.1
SSF				*e*Sn	Sn	05 32 08.9	-6.8
	comp=Z,26nm,0.6s						
MTLF	Montolieu	9.50	280	*e*P	Pn	05 30 35.4	+5.2
WLF	Walferdange	9.60	323	Pn	Pn	05 30 24.5	-7.1
BGF	Bois d'Agland	9.71	300	*e*Pn	Pn	05 30 32.4	-0.7
BGF				*e*Sn	Sn	05 32 15.0	-6.0
	comp=Z,14nm,0.4s						
CAF	Calviac	9.78	290	*e*P	Pn	05 30 38.6	+4.5
TCF	Toulx Ste Croi	10.03	298	*e*Pn	Pn	05 30 36.9	-0.6
TCF				*e*Sn	Sn	05 32 22.8	-6.1
	comp=Z,5.5nm,0.3s						
BALB	Balikesir	10.05	101	Pn	Pn	05 30 33.0	-4.8
HYF	Humbligny	10.12	303	*e*Pn	Pn	05 30 38.7	0.0
HYF				*e*Sn	Sn	05 32 24.6	-6.4
	comp=Z,29nm,0.3s						
RJF	Les Rejaudoux	10.24	291	*e*P	Pn	05 30 45.1	+4.8
RJF				*e*Sn	Sn	05 32 28.0	-6.0
	comp=Z,2.2nm,0.4s						
IDI	Anoyia	10.39	129	Pn	Pn	05 30 42.5	0.0
	comp=Z,0.6nm,0.3s,baz=67,slow=6.8,SNR=3.4						
IDI				Sn	Sn	05 32 32.4	-5.5
	comp=Z,2.2nm,0.3s,baz=115,slow=24,SNR=8.8						
IDI				LR	LR	05 35 44.9	
	comp=Z,188nm,18.4s,baz=315,slow=43						
LFF	La Frestale	10.71	289	*e*Pn	Pn	05 30 46.2	-0.6
BAIF	Baives	10.78	319	*e*P	Pn	05 30 50.1	+2.4
BAIF				*e*Sn	Sn	05 32 40.1	-7.1
	comp=Z,3.0nm,0.4s						
MFF	Saint Martin d	11.68	297	*e*Pn	Pn	05 30 59.0	-1.0
MDUB	Mudurnu	12.25	93	Pn	Pn	05 31 01.6	-6.3
LDF	La Druitiere	12.36	306	*e*Pn	Pn	05 31 08.2	-1.1
LDF				*e*Sn	Sn	05 33 18.2	-7.6
	comp=Z,2.1nm,0.5s						
FLN	La Foliniere	12.65	306	*e*Sn	Sn	05 33 25.0	-7.8
	comp=Z,1.7nm,0.3s						
GRR	Gorron	12.73	304	*e*Pn	Pn	05 31 14.5	+0.2
GRR				*e*Sn	Sn	05 33 27.0	-7.8
	comp=Z,4.8nm,0.5s						
ROSF	Rostrenen	14.22	301	*e*Pn	Pn	05 31 34.1	-0.6
BRTR	Keskin Array B	14.26	94	Pn	Pn	05 31 36.4	+1.0
	comp=Z,0.0nm,0.3s,baz=268,slow=18,SNR=2.3						
BRTR				LR	LR	05 37 43.0	
	comp=Z,297nm,21.5s,baz=306,slow=40						
ESDC	Sonseca Array	14.62	266	Pn	Pn	05 31 42.8	+2.5
	comp=Z,0.0nm,0.3s,baz=80,slow=8.7,SNR=1.4						
ESDC				LR	LR	05 36 51.9	
	comp=Z,182nm,20.2s,baz=35,slow=35						
HFS	Hagfors	17.85	358	P	Pn	05 32 21.6	+0.3
	comp=Z,0.1nm,0.3s,baz=184,slow=19,SNR=1.3						
MDT	Midelt	18.23	245	P	P	05 32 29.3	+3.0
	comp=Z,0.1nm,0.3s,baz=8.4,slow=1.9,SNR=4.1						
NOA	NORSAR Array B	18.88	354	P	P	05 32 32.7	-0.4
	comp=Z,0.0nm,0.3s,baz=170,slow=9.9,SNR=1.9						
NOA				LR	LR	05 39 18.2	
	comp=Z,129nm,20.5s,baz=355,slow=36						
NC405	NORSAR Array S	18.92	355	P	P	05 32 26.6	-6.9
FINES	FINESS Array B	20.25	15	P	P	05 32 48.2	+0.2
	comp=Z,5.5nm,0.8s,baz=201,slow=10,SNR=7.7						
FINES	FINESS Array B	20.25	15	P	P	05 32 41.3	-6.7
KBZ	Khabaz	20.36	77	LR	LR	05 43 52.8	
	comp=Z,148nm,19.4s,baz=300,slow=46						
EIL	Elat	20.39	122	LR	LR	05 42 30.9	
	comp=Z,72nm,19.7s,baz=289,slow=42						
KLMR	Klimovskoe	23.72	30	*e*P	P	05 33 28.4	+3.9
KLMR				AMP		05 33 45.6	
	comp=Z,15nm,1.0s						
BELG	Belogornoye	24.05	54	P	P	05 33 29.5	+1.9
	comp=Z,6.9nm,0.6s,baz=318,slow=4.2,SNR=5.3						
PMOZ	Porto Moniz, M	27.14	260	P	P	05 33 53.0	-3.1
TORD	Torodi Ar. Bea	31.31	206	P	P	05 34 35.7	+2.7
	comp=Z,0.6nm,0.8s,baz=16,slow=8.6,SNR=4.2						
ROSA	Rosais	32.86	278	P	P	05 34 41.9	-4.6
SCO	Scoresbysund	33.81	339	P	P	05 34 47.9	-6.5
DBIC	Dimbokro	39.66	212	P	P	05 35 46.3	+1.6
	comp=Z,1.9nm,0.6s,baz=27,slow=9.0,SNR=2.3						
DBIC	Dimbokro	39.66	212	P	P	05 35 43.9	-0.8
DBIC				IAmb	IAmb	05 35 59.7	
	comp=Z,13nm,1.5s						
KKAR	Karatay Array	40.10	69	P	P	05 35 43.3	-4.9
WSAR	Wadi Sarin	40.75	104	LR	LR	05 56 18.5	
	comp=Z,84nm,20.9s,baz=342,slow=41						
SFJD	Kangerlussuaq	42.53	328	P	P	05 36 02.6	-5.1
KURBB	Kurchatov Arra	43.26	56	P	P	05 36 16.0	+2.1
	comp=Z,0.4nm,0.5s,baz=289,slow=10.0,SNR=2.8						
MBAR	Mbarara	45.02	158	LR	LR	05 58 01.7	
	comp=Z,84nm,18.5s,baz=288,slow=40						
ZALV	Zalesovo Beam	46.14	50	P	P	05 36 38.0	+1.3
	comp=Z,0.7nm,0.4s,baz=295,slow=8.4,SNR=3.9						
MKAR	Makanchi Array	46.78	60	P	P	05 36 43.1	+1.1
	comp=Z,0.7nm,0.5s,baz=282,slow=7.7,SNR=8.0						
MKAR	Makanchi Array	46.78	60	P	P	05 36 35.7	-6.3
KMBO	Kilima Mbogo	47.67	149	P	P	05 36 47.6	-1.8
KMBO				IAmb	IAmb	05 36 57.9	
	comp=Z,3.7nm,1.3s						
HNH	Hanover	60.87	304	P	P	05 38 20.7	-4.3
SONM	Songino Array	61.03	50	P	P	05 38 27.1	+0.9
	comp=Z,0.7nm,0.8s,baz=305,slow=10,SNR=4.5						
SONM	Songino Array	61.03	50	P	P	05 38 19.7	-6.5
LONY	Lake Ozonia	61.78	306	P	P	05 38 26.7	-4.4
TRNY	Table Rock, Ra	63.47	302	P	P	05 38 38.8	-3.6
INK	Inuvik	67.20	348	P	P	05 39 08.2	+2.2
	comp=Z,0.7nm,0.8s,baz=82,slow=4.0,SNR=2.3						
LBTB	Lobatse	67.71	170	P	P	05 39 07.6	-2.2
LBTB				IAmb	IAmb	05 39 12.1	
	comp=Z,4.5nm,1.2s						
YKA	Yellowknife Ar	68.01	337	P	P	05 39 12.8	+1.5
	comp=Z,1.6nm,0.8s,baz=41,slow=5.8,SNR=9.1						
YKA	Yellowknife Ar	68.01	337	P	P	05 39 05.7	-5.6
ULM	Lac du Bonnet	69.86	320	P	P	05 39 23.7	+0.7
	comp=Z,4.9nm,0.7s,baz=69,slow=5.6,SNR=5.9						
BOSA	Boshof	71.22	171	P	P	05 39 33.8	+2.3
	comp=Z,1.1nm,0.7s,baz=272,slow=1.1,SNR=3.5						
ILAR	Eielson Array	72.30	352	P	P	05 39 38.2	+0.7
	comp=Z,0.6nm,0.8s,baz=6.4,slow=6.2,SNR=9.3						
KSRS	Korea Array	79.80	48	P	P	05 40 21.8	+1.1
	comp=Z,0.7nm,0.7s,baz=308,slow=4.2,SNR=2.5						
PDAR	Pinedale Array	81.74	322	P	P	05 40 34.0	+2.7
	comp=Z,0.3nm,0.7s,baz=58,slow=8.6,SNR=2.1						
PDAR				LR	LR	06 17 58.7	
	comp=Z,77nm,18.4s,baz=16,slow=37						
MJAR	Matsushiro Arr	85.91	43	LR	LR	06 25 11.4	
	comp=Z,74nm,18.2s,baz=325,slow=40						
ROSC	El Rosal	86.33	273	LR	LR	06 13 39.4	
	comp=Z,76nm,21.7s,baz=42,slow=32						
TXAR	Lajitas Array	89.10	310	P	P	05 41 11.5	+3.4
	comp=Z,0.9nm,0.9s,baz=78,slow=6.0,SNR=6.8						
TXAR				LR	LR	06 22 20.7	
	comp=Z,61nm,19.6s,baz=0.0,slow=36						
NVAR	Mina Array Bea	89.12	325	LR	LR	06 21 52.4	
	comp=Z,57nm,19.0s,baz=87,slow=36						
LPAZ	La Paz	95.90	253	LR	LR	06 21 40.4	
	comp=Z,31nm,19.4s,baz=64,slow=33						

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*ROM **06** 05:30:40.1±0.1, 42°.398N±0°.009×15°.23E±0°.01, h18^{km}±1^{km}, ML3.4/30, Error ellipse: s-maj=0.9km s-min=0.7km az=215.0*

*LDG **06** 05:30:41.9±0.3, 42°.39N×15°.18E, h22^{km}, Ml3.5/20, Error ellipse: s-maj=8.6km s-min=3.4km az=49.0*

ISC 06 05:30:42.0±4.1, **42°.39N**±0°.03×**15°.09E**±0°.03, **h36**^{km}±6^{km}, **n86**, σ**2^{s}.70**/107, **1C, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TREM	Isole Tremiti	0.41	130	P	Pn	05 30 47.8	-3.4
FRES	Fresagrandinar	0.52	217	P	Pn	05 30 50.5	-2.4
FRES				AML	AML		
	comp=N,1400μm,0.6s						
FRES				AML	AML		
	comp=E,1785μm,0.6s						
CAFR	Castel Frentan	0.57	254	P	Pn	05 30 52.8	-1.0
CAFR				S	Sn	05 31 02.7	+0.7
TRIV	Trivento	0.74	213	P	Pn	05 30 55.4	-0.6
TRIV				AML	AML		
	comp=N,2250μm,0.5s						
TRIV				AML	AML		
	comp=E,2335μm,0.9s						
TRIV				AML	AML		
	comp=N,2355μm,0.7s						
TRIV				AML	AML		
	comp=E,2270μm,0.5s						
TRIV				AML	AML		
	comp=N,2360μm,0.7s						
TRIV				AML	AML		
	comp=N,2255μm,0.5s						
CIGN	Sant'Elia a Pi	0.75	191	P	Pn	05 30 54.8	-1.3
LPEL	Lama dei Pelig	0.76	243	P	Pn	05 30 55.6	-0.6
LPEL				AML	AML		
	comp=N,3785μm,0.3s						
LPEL				AML	AML		
	comp=E,6085μm,0.3s						
SGRT	San Giovanni R	0.80	142	P	Pn	05 30 54.8	-2.1
SGRT				S	Sn	05 31 06.3	-1.3
SGRT				AML	AML		
	comp=E,4840μm,1.2s						
SGRT				AML	AML		
	comp=N,3725μm,1.3s						
GATE	Gambatesa	0.88	189	P	Pn	05 30 57.5	-0.4
GATE				AML	AML		
	comp=E,1275μm,0.8s						
GATE				AML	AML		
	comp=N,2385μm,0.4s						
GATE				AML	AML		
	comp=E,2990μm,0.4s						
GATE				AML	AML		
	comp=N,2350μm,0.5s						
GATE				AML	AML		
	comp=N,2380μm,0.4s						
GATE				AML	AML		
	comp=E,2995μm,0.5s						
GATE				AML	AML		
	comp=N,2345μm,0.5s						
MSAG	Monte S. Angel	0.91	138	P	Pn	05 30 56.3	-2.1
MSAG				AML	AML		
	comp=N,9855μm,0.6s						
MSAG				AML	AML		
	comp=E,8170μm,0.9s						
MSAG				AML	AML		
	comp=N,10000μm,0.6s						
MSAG				AML	AML		
	comp=E,8615μm,0.9s						
MSAG				AML	AML		
	comp=N,9850μm,0.6s						
BSSO	Busso	0.92	204	P	Pn	05 30 58.6	+0.1
BSSO				S	Sn	05 31 12.5	+1.9
BSSO				AML	AML		
	comp=N,736μm,0.5s						
BSSO				AML	AML		
	comp=N,1850μm,0.9s						
BSSO				AML	AML		
	comp=E,1730μm,1.2s						
BSSO				AML	AML		
	comp=N,1845μm,0.9s						
BSSO				AML	AML		
	comp=E,692μm,1.3s						
BSSO				AML	AML		
	comp=N,736μm,0.5s						
VCEL	Villa Celiera	0.93	271	P	Pn	05 30 58.4	-0.2
TRTR	Tortoreto Alta	0.96	296	P	Pn	05 30 59.3	+0.3
TRTR				AML	AML		
	comp=E,10045μm,1.1s						
TRTR				AML	AML		
	comp=N,8015μm,0.5s						
TRTR				AML	AML		
	comp=N,8010μm,0.5s						
TRTR				AML	AML		
	comp=E,10050μm,1.1s						
MIDA	Miranda	0.97	220	P	Pn	05 30 58.5	-0.8
MIDA				S	Sn	05 31 12.7	+0.9
MIDA				AML	AML		
	comp=N,1810μm,1.4s						
MIDA				AML	AML		
	comp=E,1795μm,1.6s						
MIDA				AML	AML		
	comp=N,1830μm,1.3s						
MIDA				AML	AML		
	comp=E,1770μm,1.6s						
RNI2	Rionero Sannit	0.98	226	P	Pn	05 30 59.3	0.0
T0110	Collepietro	0.98	261	P	Pn	05 31 00.5	+1.1
T0110				S	Sn	05 31 16.0	+3.9
T0110				AML	AML		
	comp=E,3180μm,0.4s						
T0110				AML	AML		
	comp=E,3185μm,0.4s						
T0110				AML	AML		
	comp=N,2845μm,0.5s						
MOCO	Biccari - m.te	1.02	177	P	Pn	05 30 59.4	-0.5
SACR	S. Croce Del S	1.03	196	P	Pn	05 30 59.7	-0.3
PTRJ	Pietraroja	1.10	202	P	Pn	05 31 01.8	+0.7
CERA	Filignano	1.12	226	P	Pn	05 31 02.2	+0.9
FAGN	Fagnano	1.12	264	P	Pn	05 31 02.4	+1.1
FAGN				S	Sn	05 31 19.1	+3.6
FAGN				AML	AML		
	comp=E,6925μm,0.6s						
FAGN				AML	AML		
	comp=N,4760μm,0.4s						
TERO	Teramo	1.12	283	P	Pn	05 31 01.8	+0.6
TERO				S	Sn	05 31 19.5	+4.0
TERO				AML	AML		
	comp=N,524μm,0.5s						
TERO				AML	AML		
	comp=E,630μm,1.0s						
GIGS	Gran Sasso	1.13	274	P	Pn	05 31 02.3	+0.9
GIGS				AML	AML		
	comp=E,598μm,0.7s						
GIGS				AML	AML		
	comp=N,518μm,0.7s						
SGG	Gregorio Mates	1.13	208	P	Pn	05 31 01.4	0.0
VAGA	Valle Agricola	1.16	214	P	Pn	05 31 02.8	+1.0
VAGA				AML	AML		
	comp=E,1250μm,1.0s						
VAGA				AML	AML		
	comp=N,2235μm,0.8s						
VAGA				AML	AML		
	comp=E,1285μm,1.0s						
VAGA				AML	AML		
	comp=N,2170μm,0.8s						
OFFI	Offida	1.17	298	P	Pn	05 31 03.1	+1.2
PSB1	Pescosannita	1.18	190	P	Pn	05 31 02.2	+0.1
POFI	Posta Fibreno	1.23	237	P	Pn	05 31 04.2	+1.6
AQU	L'Aquila	1.25	269	P	Pn	05 31 04.4	+1.4
CAMP	Campotosto	1.25	277	P	Pn	05 31 04.4	+1.3
VITU	Vitulano (BN)	1.25	196	P	Pn	05 31 04.2	+1.2
VITU				AML	AML		
	comp=N,1580μm,0.5s						
VITU				AML	AML		
	comp=E,1695μm,0.5s						
MRB1	Monte Rocchett	1.26	184	P	Pn	05 31 03.5	+0.3
PTQR	Pietraquaria	1.31	254	P	Pn	05 31 05.9	+2.1
PTQR				AML	AML		
	comp=E,598μm,0.8s						
PTQR				AML	AML		
	comp=N,754μm,0.7s						
SMA1	SAN MARTINO	1.32	281	P	Pn	05 31 05.2	+1.2
SMA1				AML	AML		
	comp=E,1800μm,0.5s						
SMA1				AML	AML		
	comp=N,1425μm,1.0s						
SMA1				AML	AML		
	comp=E,1795μm,0.5s						
ZIRJ	Zirje	1.33	18	*e*Pg	Pn	05 31 04.4	+0.4
ZIRJ				Sg	Sn	05 31 22.4	+1.9
CAFE	Carife	1.36	175	P	Pn	05 31 04.6	0.0
PIGN	Pignataro Magg	1.37	210	P	Pn	05 31 05.9	+1.3
PIGN				AML	AML		
	comp=E,626μm,0.7s						
PIGN				AML	AML		
	comp=E,647μm,0.8s						
PIGN				AML	AML		
	comp=N,647μm,0.9s						
PIGN				AML	AML		
	comp=N,608μm,0.9s						
LSTV	Lastovo	1.39	73	*e*Pn	Pn	05 31 05.5	+0.7
RM33	Pellescritta (	1.39	276	P	Pn	05 31 07.2	+2.2
RM33				S	Sn	05 31 27.1	+4.9
RM33				AML	AML		
	comp=E,1300μm,1.1s						
RM33				AML	AML		
	comp=N,1595μm,0.8s						
RM33				AML	AML		
	comp=N,1600μm,0.8s						
RM33				AML	AML		
	comp=N,1600μm,0.8s						
RM33				AML	AML		
	comp=E,1220μm,1.1s						
RM33				AML	AML		
	comp=E,1295μm,1.2s						
LIK	San Giovanni I	1.44	233	P	Pn	05 31 07.7	+2.1
LIK				AML	AML		
	comp=E,972μm,0.7s						
LIK				AML	AML		
	comp=N,964μm,0.7s						
LIK				AML	AML		
	comp=E,970μm,0.7s						
LIK				AML	AML		
	comp=N,966μm,0.7s						
SNAL	S. Angelo Dei	1.46	176	P	Pn	05 31 06.3	+0.4
PP3	Marolino	1.47	313	P	Pn	05 31 07.5	+1.5
VULT	Monte Vulture	1.48	164	P	Pn	05 31 06.3	0.0
VULT				AML	AML		
	comp=E,1127μm,0.4s						
VULT				AML	AML		
	comp=N,1440μm,1.1s						
VULT				AML	AML		
	comp=E,1125μm,0.4s						
VULT				AML	AML		
	comp=N,1445μm,1.1s						
VULT				AML	AML		
	comp=E,1158μm,0.4s						
VULT				AML	AML		
	comp=N,1470μm,1.1s						
NRCA	Norcia	1.52	288	P	Pn	05 31 09.1	+2.3
NRCA				AML	AML		
	comp=E,914μm,1.5s						
NRCA				AML	AML		
	comp=N,1145μm,0.8s						
LNSS	Leonessa	1.53	279	P	Pn	05 31 09.2	+2.3
LNSS				AML	AML		
	comp=E,1560μm,0.5s						
LNSS				AML	AML		
	comp=N,1042μm,0.6s						
MORI	Morici	1.54	17	*e*Pg	Pn	05 31 07.3	+0.3
MORI				Sg	Sn	05 31 27.0	+1.2
MRVN	Minervino Murg	1.56	148	P	Pn	05 31 06.9	-0.4
PALZ	Palazzo San Ge	1.58	155	P	Pn	05 31 07.5	0.0
AOI	Ancona	1.59	317	P	Pn	05 31 09.0	+1.3
DUGI	Dugi Otok	1.60	359	*e*Pn	Pn	05 31 08.9	+1.1
DUGI				Sn	Sn	05 31 30.1	+2.8
FDMO	Fiordimonte	1.61	294	P	Pn	05 31 10.0	+2.1
FDMO				AML	AML		
	comp=N,746μm,0.7s						
FDMO				AML	AML		
	comp=E,897μm,0.7s						
MAKA	Makarska	1.68	57	*e*Pn	Pn	05 31 10.5	+1.6
CESI	CESI - Serrava	1.73	292	P	Pn	05 31 11.9	+2.3
CESI				AML	AML		
	comp=E,495μm,0.5s						
CESI				AML	AML		
	comp=N,466μm,0.6s						
EL6	Elcito	1.74	303	P	Pn	05 31 10.9	+1.1
RICI	Ricice	1.86	53	*e*Pn	Pn	05 31 11.4	0.0
RICI				Sn	Sn	05 31 35.5	+1.8
AMUR	Altamura	1.86	142	P	Pn	05 31 11.1	-0.3
AMUR				AML	AML		
	comp=E,816μm,0.9s						
AMUR				AML	AML		
	comp=N,556μm,0.7s						
SRES	S.Oreste - Sor	1.92	266	AML	AML		
	comp=E,248μm,1.6s						
SRES				AML	AML		
	comp=N,330μm,1.3s						
ARVD	Arcevia	1.93	306	P	Pn	05 31 13.4	+1.1
STON	Ston	1.99	75	*e*Pn	Pn	05 31 14.7	+1.6
SSFR	Montelago di S	1.99	303	P	Pn	05 31 14.8	+1.5
SSFR				AML	AML		
	comp=E,380μm,0.8s						
SSFR				AML	AML		
	comp=N,349μm,1.2s						
ATFO	Monte Foce - G	2.09	299	P	Pn	05 31 16.4	+1.8
ATFO				AML	AML		
	comp=E,538μm,0.7s						
ATFO				AML	AML		
	comp=N,442μm,0.7s						
FSSB	Fossombrone	2.14	308	P	Pn	05 31 16.5	+1.3
FSSB				AML	AML		
	comp=E,576μm,0.5s						
FSSB				AML	AML		
	comp=N,755μm,0.5s						
NOCI	Noci	2.18	137	P	Pn	05 31 15.2	-0.6
NOCI				AML	AML		
	comp=N,564μm,1.2s						
NOCI				AML	AML		
	comp=E,528μm,1.2s						
UDBI	Udbina	2.19	13	*e*Pn	Pn	05 31 18.3	+2.2
UDBI				Sn	Sn	05 31 45.3	+3.3
LTRZ	Laterza	2.21	143	⇑P	Pn	05 31 22.3	+6.1
DBRK	Dubrovnik	2.28	82	*e*Pn	Pn	05 31 19.2	+2.2
BADI	Badiali	2.37	299	P	Pn	05 31 20.4	+2.0
BLY	Banja Luka	2.81	32	P	Pn	05 31 24.1	-0.3
PDG	Podgorica	3.08	88	P	Pn	05 31 26.1	-2.1
PGF	Pioggiola	4.51	274	*e*P	Pn	05 31 50.2	+2.4
PGF				*e*Sn	Sn	05 32 37.5	-1.5
	comp=E,2.8nm,0.5s						
SBF	Sospel	5.79	287	*e*P	Pn	05 32 09.0	+3.6
SBF				*e*Sn	Sn	05 33 07.8	-2.8
	comp=E,10.0nm,0.5s						
FRF	La Foret Royal	6.30	284	*e*P	Pn	05 32 16.5	+4.1
FRF				*e*Sn	Sn	05 33 20.0	-3.1
	comp=E,2.6nm,0.6s						

LMR	La Mourre	6.38	281	*e*P	Pn	05 32 18.1	+4.7
LMR				*e*Sn	Sn	05 33 21.7	-3.2
	comp=E,0.6nm,0.4s						
MBDF	Montbardon	6.48	294	*e*P	Pn	05 32 19.1	+4.1
MBDF				*e*Sn	Sn	05 33 24.2	-3.5
	comp=E,9.5nm,0.6s						
LPG	La Plagne	6.77	300	*e*P	Pn	05 32 23.4	+4.3
LPG				*e*Sn	Sn	05 33 30.6	-4.5
	comp=E,30nm,0.8s						
LPL	La Plagne	6.79	300	*e*P	Pn	05 32 22.8	+3.5
LPL				*e*Sn	Sn	05 33 31.0	-4.5
	comp=E,16nm,0.4s						
SMRF	Simiane la Rot	7.13	286	*e*P	Pn	05 32 27.8	+4.0
SMRF				*e*Sn	Sn	05 33 40.0	-3.6
	comp=E,2.4nm,0.6s						
ORIF	Oris-en-Rattie	7.14	294	*e*P	Pn	05 32 27.1	+3.1
ORIF				*e*Sn	Sn	05 33 39.9	-4.0
	comp=E,6.5nm,0.5s						
CABF	La Chapelle	7.70	306	*e*Sn	Sn	05 33 52.4	-5.1
	comp=E,9.8nm,0.6s						
HINF	Hinteralfeld	7.96	316	*e*Pn	Pn	05 32 35.0	-0.2
HINF				*e*Sn	Sn	05 33 57.9	-6.0
	comp=E,21nm,0.5s						
HAU	Haudompre	8.34	315	*e*Sn	Sn	05 34 07.0	-6.3
	comp=E,53nm,0.5s						
CLL	Collm	9.04	352	*e*Sg	Pn	05 32 52.0	+2.2
SMF	Signal de Mont	9.09	302	*e*Sn	Sn	05 34 25.6	-6.1
	comp=E,7.7nm,0.4s						
LOR	Lormes	9.35	305	*e*Pn	Pn	05 32 54.4	+0.2
	baz=125						
LOR				*e*Sn	Sn	05 34 31.7	-6.3
	comp=E,14nm,0.6s						
AVF	Avril sur Loir	9.46	302	*e*Sn	Sn	05 34 34.1	-6.5
	comp=E,1.4nm,0.3s						
SSF	Saint Saulge	9.47	303	*e*Sn	Sn	05 34 34.6	-6.4
	comp=E,4.5nm,0.4s						
BGF	Bois d'Agland	9.69	300	*e*Sn	Sn	05 34 39.9	-6.5
	comp=E,6.3nm,0.5s						

IDC 06 05:32:20.9±4.8**, 26°.03N×141°.48E, h0^{km}, mb3.4**/2**, mb1 3.9**/3**, mb1mx3.3**/42**, mbtmp3.6**/3**, ML3.4**/1**, Error ellipse: s-maj=315.6km s-min=34.9km az=84.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	1.24	31	Sn	Sn	05 33 10.1	+7.2
	13nm,0.3s,baz=283,slow=23,SNR=2.5						
MJAR	Matsushiro Arr	10.85	346	Pn	Pn	05 34 57.3	-0.1
	0.3nm,0.3s,baz=159,slow=14,SNR=7.8						
MAT	Matsushiro	10.85	346	P	Pn	05 34 56.6	-0.9
WRA	Warramunga Arr	46.22	189	P	P	05 40 48.0	+0.1
	0.8nm,0.6s,baz=8.9,slow=8.0,SNR=9.4						
ASAR	Alice Springs	49.94	189	P	P	05 41 16.2	-0.5
	0.2nm,0.9s,baz=1.8,slow=5.7,SNR=1.9						

*ROM **06** 05:34:24.9±0.3, 42°.42N±0°.02×15°.22E±0°.02, h10^{km}, ML2.7/7, Error ellipse: s-maj=2.5km s-min=1.0km az=33.0*

ISC 06 05:34:23.4±1.2**, 42°.40N**±0°.03×**15°.27E**±0°.03**, h8**^{km}±11^{km}**, n32,** σ**1§14**/41**, 2C-1D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAFR	Castel Frentan	0.71	256	P	Pb	05 34 38.9	+1.0
CAFR				AML	AML		
	comp=E,333µm,0.5s						
CAFR				AML	AML		
	comp=N,500µm,0.3s						
SGRT	San Giovanni R	0.73	151	P	Pn	05 34 39.6	-0.5
SGRT				S	Sn	05 34 50.8	-0.7
SGRT				AML	AML		
	comp=N,630µm,0.4s						
SGRT				AML	AML		
	comp=E,961µm,0.6s						
CIGN	Sant'Elia a Pi	0.79	200	P	Pn	05 34 41.0	+0.1
TRIV	Trivento	0.83	221	P	Pb	05 34 40.7	+0.7
TRIV				AML	AML		
	comp=E,128µm,1.2s						
TRIV				AML	AML		
	comp=N,146µm,0.5s						
MSAG	Monte S. Angel	0.83	145	P	Pn	05 34 41.3	-0.2
MSAG				S	Sn	05 34 54.1	+0.1
MSAG				AML	AML		
	comp=E,733µm,1.0s						
MSAG				AML	AML		
	comp=N,938µm,1.2s						
MSAG				AML	AML		
	comp=E,770µm,1.0s						
MSAG				AML	AML		
	comp=N,937µm,1.2s						
MSAG				AML	AML		
	comp=E,769µm,1.0s						
MSAG				AML	AML		
	comp=N,955µm,1.2s						
MSAG				AML	AML		
	comp=E,732µm,1.0s						
LPEL	Lama dei Pelig	0.88	247	P	Pb	05 34 41.5	+0.5
LPEL				S	Sb	05 34 53.5	+0.6
LPEL				AML	AML		
	comp=E,576µm,0.3s						
LPEL				AML	AML		
	comp=N,492µm,0.2s						
GATE	Gambatesa	0.93	197	P	Pb	05 34 42.5	+0.8
BSSO	Busso	0.99	211	P	Pg	05 34 42.6	+0.2
MOCO	Biccari - m.te	1.03	185	P	Pb	05 34 44.0	+0.5
VCEL	Villa Celiera	1.06	270	P	Pg	05 34 44.5	+0.7
VCEL				AML	AML		
	comp=E,434µm,0.6s						
VCEL				AML	AML		
	comp=N,513µm,0.7s						
TRTR	Tortoreto Alta	1.08	293	P	Pg	05 34 44.5	+0.3
RNI2	Rionero Sannit	1.09	231	P	Pg	05 34 44.3	+0.1
SACR	S. Croce Del S	1.09	203	P	Pg	05 34 44.4	+0.2
T0110	Collepietro	1.12	262	P	Pg	05 34 44.8	-0.2
T0110				AML	AML		
	comp=E,402µm,0.4s						
T0110				AML	AML		
	comp=N,350µm,0.5s						
VAGA	Valle Agricola	1.25	219	P	Pn	05 34 47.0	-0.2
LSTV	Lastovo	1.25	72	*e*Pg	Pg	05 34 47.7	+0.2
LSTV				Sg	Sn	05 35 04.4	+0.3
TERO	Teramo	1.25	281	P	Pn	05 34 46.5	-0.7
TERO				AML	AML		
	comp=N,74µm,0.3s						
TERO				AML	AML		
	comp=E,51µm,0.4s						
FAGN	Fagnano	1.26	265	P	Pn	05 34 46.8	-0.5
ZIRJ	Zirje	1.28	12	*e*Pg	Pn	05 34 45.7	-1.9
ZIRJ				Sg	Sb	05 35 02.9	-1.6
MORI	Morici	1.50	12	*e*Pg	Pn	05 34 50.1	-0.5
MORI				Sg	Sn	05 35 09.9	-0.5
MAKA	Makarska	1.56	55	*e*Pn	Pn	05 34 51.2	-0.2
MAKA				Sn	Sg	05 35 12.8	-0.8
DUGI	Dugi Otok	1.60	354	*e*Pn	Pn	05 34 50.5	-1.5
FDMO	Fiordimonte	1.73	292	AML	AML		
	comp=E,98µm,0.3s						
FDMO				AML	AML		
	comp=N,77µm,1.2s						
RICI	Ricice	1.75	51	*e*Pn	Pn	05 34 54.2	+0.2
RICI				Sn	Sb	05 35 17.5	-0.4
STON	Ston	1.85	74	*e*Pn	Pn	05 34 55.3	-0.1
STON				Sn	Sg	05 35 21.3	-1.6
DBRK	Dubrovnik	2.14	82	Sn	Sb	05 35 29.1	0.0
UDBI	Udbina	2.16	9	*e*Pn	Pn	05 35 00.3	+0.6
UDBI				Sn	Sn	05 35 27.4	+0.7
SEI	Scarperia	3.31	301	⇑P	Pn	05 35 12.9	-2.6
VLO	Vlora	3.71	120	P	Pn	05 35 23.5	+2.5
SBPO	S.Benedetto Po	4.12	312	⇓P	Pn	05 35 29.0	+2.4
CAPR	Capriolo	5.03	312	⇑P	Pg	05 36 01.4	+1.7
CLTA	Licata	5.33	191	P	Pn	05 35 40.4	-2.8

*ROM **06** 05:35:52.8±0.2, 42°.44N±0°.01×15°.26E±0°.01, h10^{km}, ML2.7/13, Error ellipse: s-maj=1.6km s-min=0.9km az=34.0*

*LDG **06** 05:35:52.6±0.2, 42°.49N×15°.26E, h29^{km}, Ml3.0/18, Error ellipse: s-maj=5.9km s-min=2.5km az=57.0*

ISC 06 05:35:52.2±1.2**, 42°.48N**±0°.03×**15°.19E**±0°.02**, h13**^{km}±10^{km}**, n79,** σ**1§49**/76**, 2D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRES	Fresagrandinar	0.64	218	AML	AML		
	comp=E,344µm,1.3s						
FRES				AML	AML		
	comp=N,210µm,0.9s						
CAFR	Castel Frentan	0.67	248	P	Pb	05 36 06.8	+1.0
SGRT	San Giovanni R	0.83	150	P	Pb	05 36 08.2	-0.4
CIGN	Sant'Elia a Pi	0.85	195	P	Pg	05 36 08.2	-0.4
CIGN				AML	AML		
	comp=N,328µm,0.5s						
CIGN				AML	AML		
	comp=N,327µm,0.5s						
CIGN				AML	AML		
	comp=E,253µm,1.1s						
TRIV	Trivento	0.86	214	P	Pb	05 36 09.7	+0.7
TRIV				AML	AML		
	comp=E,361µm,0.6s						
TRIV				AML	AML		
	comp=N,370µm,0.6s						
TRIV				AML	AML		
	comp=E,364µm,0.9s						
TRIV				AML	AML		
	comp=N,380µm,0.6s						
TRIV				AML	AML		
	comp=N,380µm,0.6s						
TRIV				AML	AML		
	comp=E,368µm,1.0s						
LPEL	Lama dei Pelig	0.86	240	P	Pg	05 36 09.8	+0.9
LPEL				AML	AML		
	comp=E,1110µm,0.3s						
LPEL				AML	AML		
	comp=N,835µm,0.3s						
MSAG	Monte S. Angel	0.93	145	P	Pg	05 36 09.2	-1.0
TRTR	Tortoreto Alta	1.00	290	P	Pg	05 36 12.4	+0.9
TRTR				AML	AML		
	comp=N,2325µm,0.4s						
TRTR				AML	AML		
	comp=E,3700µm,0.5s						
VCEL	Villa Celiera	1.00	266	P	Pg	05 36 12.6	+1.0
VCEL				AML	AML		
	comp=E,1122µm,0.6s						
VCEL				AML	AML		
	comp=N,1570µm,0.6s						
VCEL				AML	AML		
	comp=N,1565µm,0.6s						
VCEL				AML	AML		
	comp=E,1118µm,0.6s						
BSSO	Busso	1.03	206	P	Pg	05 36 11.7	-0.4
BSSO				S	Sg	05 36 25.5	-0.1
BSSO				AML	AML		
	comp=E,337µm,0.4s						
BSSO				AML	AML		
	comp=N,177µm,0.5s						
BSSO				AML	AML		
	comp=N,462µm,0.6s						
BSSO				AML	AML		
	comp=N,176µm,0.5s						
BSSO				AML	AML		
	comp=E,140µm,0.4s						
BSSO				AML	AML		
	comp=E,338µm,0.4s						
T0110	Collepietro	1.08	257	P	Pb	05 36 13.2	+0.5
T0110				AML	AML		
	comp=E,946µm,0.4s						
T0110				AML	AML		
	comp=N,903µm,0.6s						
T0110				AML	AML		
	comp=N,904µm,0.6s						
T0110				AML	AML		
	comp=E,946µm,0.4s						
MIDA	Miranda	1.09	220	P	Pg	05 36 12.5	-0.7
MIDA				S	Sg	05 36 27.9	+0.5
MIDA				AML	AML		
	comp=N,367µm,0.8s						
MIDA				AML	AML		
	comp=E,424µm,0.7s						
MIDA				AML	AML		
	comp=E,428µm,0.7s						
MIDA				AML	AML		
	comp=N,367µm,0.8s						
MIDA				AML	AML		
	comp=N,396µm,1.4s						
MIDA				AML	AML		
	comp=E,424µm,0.7s						
MOCO	Biccari - m.te	1.11	181	P	Pg	05 36 12.2	-1.4
TERO	Teramo	1.18	278	P	Pn	05 36 14.7	+0.2
TERO				AML	AML		
	comp=E,172µm,1.4s						
TERO				AML	AML		
	comp=N,165µm,1.2s						
FAGN	Fagnano	1.21	260	AML	AML		
	comp=E,1142µm,0.4s						
FAGN				AML	AML		
	comp=E,1144µm,0.4s						
FAGN				AML	AML		
	comp=N,1350µm,0.5s						
FAGN				AML	AML		
	comp=E,1142µm,0.4s						
FAGN				AML	AML		
	comp=N,1345µm,0.5s						
ZIRJ	Zirje	1.22	16	*e*Pg	Pn	05 36 14.6	-0.4
ZIRJ				Sg	Sb	05 36 32.1	+1.3
CERA	Filignano	1.24	225	⇓P	Pn	05 36 16.2	+0.9
CERA				AML	AML		
	comp=E,321µm,0.9s						
CERA				AML	AML		
	comp=N,282µm,0.7s						
CERA				AML	AML		
	comp=N,294µm,1.4s						
CERA				AML	AML		
	comp=E,332µm,1.0s						
LSTV	Lastovo	1.29	76	*e*Pg	Pg	05 36 16.8	-0.2
LSTV				Sg	Sn	05 36 34.9	+2.0
SMA1	SAN MARTINO	1.38	277	AML	AML		
	comp=E,424µm,0.8s						
SMA1				AML	AML		
	comp=N,379µm,0.5s						
PTQR	Pietraquaria	1.41	252	P	Pn	05 36 18.5	+1.0
PTQR				AML	AML		
	comp=N,120µm,0.5s						
PTQR				AML	AML		
	comp=E,120µm,1.2s						
MORI	Morici	1.44	15	*i* Pg	Pn	05 36 18.4	+0.4
MORI				Sg	Sn	05 36 38.5	+1.8
CAFE	Carife	1.45	179	P	Pn	05 36 17.7	-0.5
RM33	Pellescritta (	1.46	272	AML	AML		
	comp=N,264µm,1.0s						
RM33				AML	AML		
	comp=E,262µm,1.1s						
DUGI	Dugi Otok	1.52	356	*e*Pn	Pn	05 36 19.6	+0.6
DUGI				Sn	Sn	05 36 40.4	+1.8
FIAM	Fiamignano	1.55	263	AML	AML		
	comp=E,202µm,0.7s						
FIAM				AML	AML		
	comp=N,228µm,0.8s						
FIAM				AML	AML		
	comp=N,227µm,0.8s						
SNAL	S. Angelo Dei	1.55	180	P	Pn	05 36 19.9	+0.3
SNAL				AML	AML		
	comp=E,162µm,1.1s						
SNAL				AML	AML		
	comp=N,170µm,0.7s						
VULT	Monte Vulture	1.56	168	P	Pn	05 36 20.0	+0.3
MAKA	Makarska	1.57	58	*e*Pn	Pn	05 36 20.4	+0.7
LNSS	Leonessa	1.59	275	AML	AML		
	comp=N,298µm,0.6s						
LNSS				AML	AML		
	comp=E,421µm,0.5s						
LNSS				AML	AML		
	comp=E,420µm,0.5s						
MRVN	Minervino Murg	1.60	152	P	Pn	05 36 19.8	-0.4
PALZ	Palazzo San Ge	1.64	159	P	Pb	05 36 21.6	-0.7
FDMO	Fiordimonte	1.65	290	AML	AML		
	comp=E,214µm,0.3s						
FDMO				AML	AML		
	comp=E,215µm,0.3s						
FDMO				AML	AML		
	comp=N,236µm,0.7s						
CING	Cingoli	1.72	302	AML	AML		
	comp=N,248µm,0.7s						
CING				AML	AML		
	comp=N,248µm,0.7s						
CING				AML	AML		
	comp=E,228µm,0.5s						
RICI	Ricice	1.75	54	*e*Pn	Pn	05 36 22.8	+0.6
ACER	Acerenza	1.78	161	AML	AML		
	comp=E,268µm,0.8s						
ACER				AML	AML		
	comp=E,272µm,0.7s						
ACER				AML	AML		
	comp=N,219µm,0.9s						
ACER				AML	AML		
	comp=N,174µm,1.0s						
STON	Ston	1.89	77	*e*Pn	Pb	05 36 26.4	-0.1
ARVD	Arcevia	1.94	302	AML	AML		
	comp=E,100µm,0.9s						
ARVD				AML	AML		
	comp=N,99µm,0.7s						
ARVD				AML	AML		
	comp=E,100µm,0.9s						
ARVD				AML	AML		
	comp=N,100µm,0.7s						
ATCC	AVT- Casa Cast	2.00	291	AML	AML		
	comp=E,229µm,0.9s						
ATCC				AML	AML		
	comp=E,228µm,0.9s						
ATCC				AML	AML		
	comp=N,219µm,1.4s						
SSFR	Montelago di S	2.01	299	AML	AML		
	comp=E,219µm,0.8s						
SSFR				AML	AML		
	comp=N,166µm,0.8s						
FRON	Frontone	2.09	301	AML	AML		
	comp=N,178µm,0.9s						
FRON				AML	AML		
	comp=E,135µm,0.4s						
UDBI	Udbina	2.09	11	*e*Pn	Pn	05 36 29.1	+2.1
FSSB	Fossombrone	2.14	305	AML	AML		
	comp=N,245µm,0.4s						
FSSB				AML	AML		
	comp=E,223µm,0.4s						
DBRK	Dubrovnik	2.19	84	*e*Pn	Pb	05 36 32.7	+1.1
MGAB	Montegabbione	2.31	282	P	Pn	05 36 32.5	+2.5
MGAB				AML	AML		
	comp=N,82µm,1.6s						
MGAB				AML	AML		
	comp=E,109µm,0.8s						
PLIT	Plitvice	2.42	7	*e*Pn	Pn	05 36 33.5	+2.1
PLIT				Sn	Sn	05 37 02.7	+1.7
SMRN	Sveta Marina	2.67	344	Sn	Sn	05 37 08.2	+1.2
BOJS	Bojanci	3.02	1	⇓P	Pb	05 36 44.5	-1.4
BOJS				AML	AML		
	comp=N,116µm,1.4s						
BOJS				AML	AML		
	comp=E,226µm,1.5s						
OBKA	Obir	4.06	354	*e*Pn	Pn	05 36 53.2	-0.8
	comp=E,1.8nm,0.4s						
OBKA				*e*Sn	Sn	05 37 39.2	-2.2
	comp=E,10nm,0.8s						
SOKA	Soboth	4.20	359	*e*Pn	Pn	05 36 55.0	-1.0
	comp=E,1.2nm,0.4s						
SOKA				*e*Sn	Sn	05 37 43.7	-1.2
	comp=E,0.6nm,0.4s						
MYKA	Terra Mystica	4.30	346	*e*Pn	Pn	05 36 56.6	-0.7
	comp=E,3.1nm,0.5s						
MYKA				*e*Sn	Sn	05 37 46.1	-1.2
	comp=E,2.1nm,0.4s						
PGF	Pioggiola	4.58	273	*e*P	Pn	05 37 02.2	+1.0
PGF				*e*Sn	Sn	05 37 48.7	-5.6
	comp=E,0.8nm,0.4s						
ABTA	Abfaltersbach	4.68	337	*e*Pn	Pn	05 37 01.6	-0.9
	comp=E,0.1nm,0.1s						
ABTA				*e*Sn	Sn	05 37 55.9	-0.8
	comp=E,3.7nm,0.6s						
ARSA	Arzberg	4.78	3	*e*Pn	Pn	05 37 01.9	-2.0
	comp=E,0.7nm,0.3s						
ARSA				*e*Sn	Sn	05 38 00.3	+1.2
CAPR	Capriolo	4.93	312	P	Pg	05 37 25.2	-1.4
EUCT	Pavia	5.16	304	P	Pb	05 37 20.1	-2.1
MOA	Molln	5.41	353	*e*Pn	Pn	05 37 13.2	+0.7
	comp=E,1.0nm,0.3s						
MOA				*e*Sn	Sn	05 38 14.4	-0.3
	comp=E,3.0nm,0.5s						
WTTA	Wattenberg	5.41	333	*e*Pn	Pn	05 37 13.8	+1.1
	comp=E,0.9nm,0.3s						
WTTA				*e*Sn	Sn	05 38 14.6	-0.3
	comp=E,4.8nm,0.4s						
WATA	Walderalm	5.49	333	*e*Pn	Pn	05 37 15.3	+1.5
	comp=E,0.8nm,0.2s						
WATA				*e*Sn	Sn	05 38 16.0	-0.8
	comp=E,5.6nm,0.8s						
SQTA	Sankt Quirin	5.52	331	*e*Pn	Pn	05 37 16.3	+2.2
	comp=E,1.9nm,0.3s						
SQTA				*e*Sn	Sn	05 38 18.9	+1.4
	comp=E,1.7nm,0.3s						
FETA	Feichten	5.54	327	*e*Sn	Sn	05 38 16.4	-1.7
	comp=E,3.9nm,0.5s						
MOTA	Moosalm	5.67	331	*e*Pn	Pn	05 37 18.2	+2.1
	comp=E,0.7nm,0.3s						
MOTA				*e*Sn	Sn	05 38 20.5	-0.6
	comp=E,5.0nm,0.4s						
SBF	Sospel	5.84	286	*e*P	Pn	05 37 18.1	-0.4
SBF				*e*Sn	Sn	05 38 18.5	-6.8
	comp=E,2.4nm,0.4s						
FRF	La Foret Royal	6.36	283	*e*P	Pn	05 37 27.0	+1.5
LMR	La Mourre	6.43	281	*e*P	Pn	05 37 28.4	+1.8
MBDF	Montbardon	6.51	293	*e*P	Pn	05 37 29.2	+1.4
MBDF				*e*Sn	Sn	05 38 34.6	-7.4
	comp=E,2.0nm,0.5s						
KHC	Kasperske Hory	6.75	351	*e*PN	Pn	05 37 28.4	-2.5
KHC				*e*x	x	05 37 36.0	
KHC				*e*SN	Sn	05 38 46.5	-1.1
LPG	La Plagne	6.79	299	*e*P	Pn	05 37 33.6	+1.8
LPG				*e*Sn	Sn	05 38 41.4	-7.7
	comp=E,4.7nm,0.4s						
LPL	La Plagne	6.81	299	*e*P	Pn	05 37 33.7	+1.7
LPL				*e*Sn	Sn	05 38 41.8	-7.7
	comp=E,5.2nm,0.5s						
ORIF	Oris-en-Rattie	7.17	293	*e*P	Pn	05 37 38.8	+1.9
ORIF				*e*Sn	Sn	05 38 50.5	-7.7
	comp=E,1.5nm,0.4s						
SMRF	Simiane la Rot	7.18	285	*e*P	Pn	05 37 39.2	+2.3
SMRF				*e*Sn	Sn	05 38 50.6	-7.7
	comp=E,0.3nm,0.3s						
CABF	La Chapelle	7.70	306	*e*Pn	Pn	05 37 41.0	-3.1
CABF				*e*Sn	Sn	05 39 02.7	-8.5
	comp=E,6.6nm,0.9s						
HINF	Hinteralfeld	7.95	315	*e*Pn	Pn	05 37 44.2	-3.2
HINF				*e*Sn	Sn	05 39 08.3	-8.9
	comp=E,4.4nm,0.4s						
HAU	Haudompre	8.33	315	*e*Pn	Pn	05 37 49.6	-3.0
HAU				*e*Sn	Sn	05 39 17.4	-9.2
	comp=E,14nm,0.4s						
SMF	Signal de Mont	9.11	301	*e*Pn	Pn	05 38 00.2	-3.1
SMF				*e*Sn	Sn	05 39 36.3	-9.3
	comp=E,0.8nm,0.3s						
MEZF	Maizieres J'vi	9.32	314	*e*Sn	Sn	05 39 41.2	-10
	comp=E,1.8nm,0.3s						
LOR	Lormes	9.36	305	*e*Pn	Pn	05 38 03.4	-3.3
LOR				*e*Sn	Sn	05 39 42.2	-10
	comp=E,4.8nm,0.6s						
AVF	Avril sur Loir	9.47	301	*e*Pn	Pn	05 38 05.3	-3.0
AVF				*e*Sn	Sn	05 39 45.0	-10
	comp=E,1.4nm,0.6s						
SSF	Saint Saulge	9.49	303	*e*Pn	Pn	05 38 05.9	-2.6
SSF				*e*Sn	Sn	05 39 45.4	-10
	comp=E,0.5nm,0.3s						
BGF	Bois d'Agland	9.71	299	*e*Pn	Pn	05 38 08.4	-3.2

*IDC **06** 05:49:55.1±3.4, 40°.84N×77°.81E, h0^{km}, mb3.1/1, mb1 3.3/5, mb1mx2.9/71, mbtmp3.3/5, ML2.6/3, Error ellipse: s-maj=33.8km s-min=33.0km az=165.0*

*SOME **06** 05:49:57.5, 40°.75N×78°.70E, h15^{km}*

*KRNET **06** 05:50:00.6±0.1, 40°.88N×78°.62E, h16^{km}, mb3.6*

*NNC **06** 05:50:02.2±1.8, 40°.91N×78°.53E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=12.9km s-min=8.7km az=163.0*

ISC 06 05:50:03.6±1.5**, 40°.96N**±0°.07×**78°.64E**±0°.04**, h10**^{km}**, n70,** σ**1§69**/101**, 25C-17D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	1.00	321	⇑*i*P	Pg	05 50 20.9	-1.9
	baz=24						
TARG				⇑*i*S	Sg	05 50 35.8	0.0
	baz=24						
PRZ	Przheval'sk	1.54	353	⇑*i*P	Pb	05 50 31.5	-0.8
	baz=54						
PRZ				⇑*i*S	Sg	05 50 53.7	+0.6
	baz=54						
KDJ	Kajisay	1.61	317	⇓*i*P	Pn	05 50 31.5	-0.7
	baz=20						
KDJ				⇓*i*S	Sb	05 50 54.3	+0.4
	baz=20						

ANVS	Anan'yevo baz=40	1.97	339	⇑*i*P	Pb	05 50 38.7	-0.9
ANVS	baz=40			⇑*i*S	Sg	05 51 06.3	-0.5
SATY	Saty 87nm,0.6s	2.11	355	*e*P	Pb	05 50 41.3	-0.7
SATY	96nm,0.4s			*e*S	Sg	05 51 12.8	+1.4
SATY	Saty 87nm,0.6s	2.11	355	Pg	Pb	05 50 41.3	-0.7
SATY	96nm,0.4s			Lg	Lg	05 51 12.8	
UZB	Uzynbulak 15nm,0.3s	2.21	7	*e*P	Pb	05 50 42.3	-1.4
UZB	109nm,0.6s			*e*S	Sg	05 51 14.4	-0.2
UZB	Uzynbulak 15nm,0.3s	2.21	7	Pg	Pb	05 50 42.3	-1.4
UZB	109nm,0.6s			Lg	Lg	05 51 14.4	
ULHL	Ulahol SNR=96	2.21	306	P	Pb	05 50 42.7	-1.1
ULHL	Ulahol baz=8.0	2.21	306	⇑*i*P	Pn	05 50 41.4	+0.8
ULHL	baz=8.0			⇑*i*S	Sb	05 51 11.0	-0.4
SHLS	Shalkode 88nm,0.3s	2.28	15	*e*P	Pb	05 50 44.9	-0.1
SHLS	188nm,0.6s			*e*S	Sg	05 51 19.0	+2.0
SHLS	Shalkode 88nm,0.3s	2.28	15	Pg	Pb	05 50 44.9	-0.1
SHLS	188nm,0.6s			Lg	Lg	05 51 19.0	
TNSS	Tian-Shan 28nm,0.3s	2.43	329	*e*P	Pb	05 50 45.9	-1.8
TNSS	43nm,0.6s			*e*S	Sg	05 51 20.8	-1.0
TNSS	Tian-Shan 28nm,0.3s	2.43	329	Pg	Pb	05 50 45.9	-1.8
TNSS	43nm,0.6s			Lg	Lg	05 51 20.8	
PDGK	Podgornoye 9.0nm,0.3s	2.45	15	Pg	Pb	05 50 45.5	-2.4
PDGK	54nm,0.6s			Lg	Lg	05 51 19.8	
PDGK	Podgornoye 15nm,0.5s	2.45	15	⇑Pn	Pb	05 50 45.3	-2.6
PDGK	112nm,0.7s			⇓Sn	Sg	05 51 20.3	-2.1
MDOK	Medeo 84nm,0.5s	2.50	332	*e*P	Pb	05 50 46.9	-1.9
MDOK	144nm,0.7s			*e*S	Sg	05 51 22.5	-1.6
MDOK	Medeo 45nm,0.4s	2.50	332	Pg	Pb	05 50 47.6	-1.1
MDOK	146nm,0.6s			Lg	Lg	05 51 23.9	
MDOK	Medeo 84nm,0.5s	2.50	332	Pg	Pb	05 50 46.9	-1.9
MDOK	144nm,0.7s			Lg	Lg	05 51 22.5	
BOOM	Boomskoye usch baz=10.0	2.54	308	⇓*e*P	Pn	05 50 46.0	+1.0
BOOM	baz=10.0			⇓*i*S	Sb	05 51 18.7	-1.9
KOTS	Kotyrbulak 53nm,0.5s	2.54	334	*e*P	Pb	05 50 48.2	-1.3
KOTS	128nm,0.3s			*e*S	Sg	05 51 24.7	-0.7
KOTS	Kotyrbulak 53nm,0.5s	2.54	334	Pg	Pb	05 50 48.2	-1.3
KOTS	128nm,0.3s			Lg	Lg	05 51 24.7	
KNDC	Almaty 74nm,0.6s	2.58	332	⇓Pg	Pb	05 50 48.8	-1.2
KNDC	330nm,0.7s			⇓Lg	Lg	05 51 26.0	
AAA	Alma-Ata 92nm,0.2s	2.59	331	*e*P	Pb	05 50 48.9	-1.3
AAA	135nm,0.4s			*e*S	Sg	05 51 25.6	-1.3
AAA	Alma-Ata 92nm,0.2s	2.59	331	Pg	Pb	05 50 48.9	-1.3
AAA	135nm,0.4s			Lg	Lg	05 51 25.6	
KST	Kastek 11nm,0.3s	2.89	317	*e*P	Pb	05 50 53.4	-1.8
KST	47nm,0.6s			*e*S	Sb	05 51 33.5	+2.9
KST	Kastek 11nm,0.3s	2.89	317	Pg	Pb	05 50 53.4	-1.8
KST	47nm,0.6s			Lg	Lg	05 51 33.5	
TKM2	Tokmak 2 SNR=16	3.00	312	P	Pb	05 50 54.2	-3.1
TKM2	Tokmak 2 7.0nm,0.3s	3.00	312	⇓Pn	Pn	05 50 53.5	+2.1
TKM2	42nm,0.6s			⇑Lg	Lg	05 51 38.1	
TKM2	Tokmak 2 baz=13	3.00	312	⇑*e*P	Pn	05 50 52.5	+1.1
TKM2	baz=13			⇑*i*S	Sn	05 51 30.0	+2.4
KTBS	Karatobe 23nm,0.5s	3.11	333	*e*P	Pb	05 50 57.5	-1.6
KTBS	87nm,0.3s			*e*S	Sg	05 51 40.8	-2.7
KTBS	Karatobe 23nm,0.5s	3.11	333	Pg	Pb	05 50 57.5	-1.6
KTBS	87nm,0.3s			Lg	Lg	05 51 40.8	
DGS	Degeres 24nm,0.4s	3.13	318	*e*P	Pb	05 50 57.8	-1.5
DGS	69nm,0.3s			*e*S	Sg	05 51 41.4	-2.6
DGS	Degeres 24nm,0.4s	3.13	318	Pg	Pb	05 50 57.8	-1.5
DGS	69nm,0.3s			Lg	Lg	05 51 41.4	
BLB	Baldybastay 45nm,0.4s	3.14	358	Pg	Pb	05 50 58.4	-1.2
BLB	87nm,0.4s			Lg	Lg	05 51 42.1	
KBK	Karagaybulak SNR=7.2	3.24	303	P	Pn	05 50 57.6	+2.9
KBK	Karagaybulak baz=4.0	3.24	303	⇑*e*P	Pn	05 50 55.5	+0.8
KBK	baz=4.0			⇑*i*S	Sn	05 51 35.4	+2.0
ARXS	Arharly 22nm,0.5s	3.31	350	*e*P	Pb	05 51 01.5	-0.9
ARXS	74nm,0.7s			*e*S	Sg	05 51 47.6	-2.3
ARXS	Arharly 22nm,0.5s	3.31	350	Pg	Pb	05 51 01.5	-0.9
ARXS	74nm,0.7s			Lg	Lg	05 51 47.6	
UCH	Uchtor SNR=9.2	3.35	294	P	Pn	05 50 57.5	+1.1
UCH	Uchtor baz=95	3.35	294	⇑*e*P	Pn	05 50 56.8	+0.4
UCH	baz=95			⇑*i*S	Sn	05 51 37.8	+1.4
KUU	Kurty 8.0nm,0.5s	3.39	331	*e*P	Pb	05 51 01.7	-2.1
KUU	59nm,0.5s			*e*S	Sb	05 51 48.1	+3.0
KUU	Kurty 8.0nm,0.5s	3.39	331	Pg	Pb	05 51 01.7	-2.1
KUU	59nm,0.5s			Lg	Lg	05 51 48.1	
DJR	Jarkent 2.3nm,0.6s	3.48	14	*e*P	Pb	05 51 04.0	-1.3
DJR	42nm,0.2s			*e*S	Sg	05 51 51.8	-3.5
DJR	Jarkent 2.3nm,0.6s	3.48	14	Pg	Pb	05 51 04.1	-1.3
DJR	42nm,0.2s			Lg	Lg	05 51 51.8	
KRBS	Karabastau 4.5nm,0.2s	3.51	322	*e*P	Pb	05 51 04.2	-1.6
KRBS	22nm,0.5s			*e*S	Sb	05 51 52.4	+3.8
KRBS	Karabastau 4.5nm,0.2s	3.51	322	Pg	Pb	05 51 04.2	-1.6
KRBS	22nm,0.5s			Lg	Lg	05 51 52.4	
AAK	Ala-Archa SNR=9.8	3.53	300	P	Pb	05 51 07.0	+0.8
AAK	Ala-Archa 1.5nm,0.6s	3.53	300	⇓Pn	Pn	05 51 00.7	+2.2
AAK	9.0nm,0.5s			⇑Pg	Pb	05 51 06.2	0.0
AAK	30nm,1.0s			⇑Lg	Lg	05 51 52.2	
AAK	Ala-Archa baz=1.0	3.53	300	⇓*e*P	Pn	05 50 59.5	+0.9
AAK	baz=1.0			⇓*i*S	Sn	05 51 42.0	+1.6
CHMS	Chumysh baz=8.0	3.55	306	⇑*i*P	Pn	05 50 59.8	+1.1
CHMS	baz=8.0			⇑*i*S	Sn	05 51 42.7	+2.0
USP	Ospenovka baz=9.0	3.85	308	⇓*e*P	Pn	05 51 04.1	+1.2
USP	baz=9.0			⇓*i*S	Sn	05 51 50.1	+1.9
AML	Almayashu SNR=7.3	3.89	289	P	Pb	05 51 13.1	+0.5
AML	Almayashu baz=90	3.89	289	⇓*e*P	Pn	05 51 04.5	+0.7
AML	baz=90			⇓*i*S	Sn	05 51 51.1	+1.3
EKS2	Erkin-Say SNR=9.3	4.01	297	P	Pb	05 51 14.8	+0.4
EKS2	Erkin-Say baz=98	4.01	297	⇓*i*P	Pn	05 51 06.0	+0.8
EKS2	baz=98			⇓*i*S	Sn	05 51 53.9	+1.5
KAPS	Kapalarasan 2.8nm,0.4s	4.36	7	*e*P	Pb	05 51 22.0	+1.7
KAPS	13nm,0.5s			*e*S	Sg	05 52 22.3	-1.2
KAPS	Kapalarasan 2.8nm,0.4s	4.36	7	Pg	Pb	05 51 22.0	+1.7
KAPS	13nm,0.5s			Lg	Lg	05 52 22.3	
MRKS	Merke 5.0nm,0.4s	4.42	296	*e*P	Pb	05 51 21.2	-0.2
MRKS	5.6nm,0.4s			*e*S	Sg	05 52 21.5	-4.0
MRKS	Merke 5.0nm,0.4s	4.42	296	Pg	Pb	05 51 21.2	-0.2
MRKS	5.6nm,0.4s			Lg	Lg	05 52 21.5	
BTLS	Baital 2.3nm,0.3s	5.29	322	*e*P	Pb	05 51 38.5	+2.4
BTLS	4.3nm,0.5s			*e*S	Sg	05 52 50.9	-2.5
BTLS	Baital 2.3nm,0.3s	5.29	322	Pg	Pb	05 51 38.5	+2.4
BTLS	4.3nm,0.5s			Lg	Lg	05 52 50.9	
MAKZ	Makanchi 0.9nm,0.7s	6.33	21	⇑Pn	Pn	05 51 37.5	+0.6
MAKZ	1.2nm,0.6s			⇑Lg	Lg	05 53 25.6	
MK31	Makanchi Array 0.1nm,0.3s,baz=208,slow=14,SNR=13	6.40	23	⇑Pn	Pn	05 51 36.7	-1.3
MK31	4.2nm,0.6s,baz=214,slow=25			⇑Lg	Lg	05 53 27.8	
MKAR	Makanchi Array 0.2nm,0.3s,baz=208,slow=15,SNR=12	6.40	23	Pn	Pn	05 51 38.1	+0.2
MKAR	0.2nm,0.3s,baz=205,slow=27,SNR=3.6			Sn	Sn	05 52 52.8	+1.7
MKAR	0.3nm,0.3s,baz=219,slow=25,SNR=2.5			Lg	Lg	05 53 29.1	
KURBB	Kurchatov Arra 0.0nm,0.3s,baz=184,slow=12,SNR=4.2	9.67	360	Pn	Pn	05 52 14.2	-8.5
KURBB	0.1nm,0.3s,baz=179,slow=26,SNR=6.3			Lg	Lg	05 55 09.6	
KURBB	Kurchatov Arra 11nm,0.8s	9.67	360	⇑Lg	Lg	05 55 11.6	
BVAR	Borovoye Array 0.1nm,0.3s,baz=204,slow=16,SNR=2.0	13.31	338	Pn	Pn	05 53 01.4	-11
ZALV	Zalesovo Beam baz=208,slow=12,SNR=1.7	13.65	16	Pn	Pn	05 53 15.8	-1.2
SONM	Songino Array 0.6nm,0.7s,baz=255,slow=8.8,SNR=5.2	20.92	61	P	P	05 54 45.8	-0.5

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*IDC **06** 05:54:43.2±1.6, 3°.26S×130°.40E, h0^{km}, mb3.7/2, mb1 3.9/5, mb1mx3.6/39, mbtmp3.7/5, ML3.4/3, Error ellipse: s-maj=57.5km s-min=23.4km az=89.0*

ISC 06 05:54:44.4±1.1, **3°.24S**±0°.10×**130°.5E**±0°.3, **h10^{km}, n5,** σ**0^{s}.97**/6, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong 4.1nm,0.3s,baz=186,slow=23,SNR=10	2.47	18	Pn	Pn	05 55 25.1	+0.4
SIJI	5.0nm,0.3s,baz=169,slow=23,SNR=2.5			Sn	Sn	05 55 54.0	-1.0
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=278,slow=18,SNR=1.4	15.52	198	Pn	Pn	05 58 22.4	-1.1
WRA	Warramunga Arr 0.2nm,0.3s,baz=347,slow=11,SNR=8.7	17.02	168	P	Pn	05 58 42.6	-0.1
ASAR	Alice Springs 3.4nm,0.6s,baz=351,slow=10,SNR=37	20.57	171	P	P	05 59 23.9	+0.4
MKAR	Makanchi Array 0.3nm,0.8s,baz=126,slow=9.1,SNR=2.5	65.40	326	P	P	06 05 27.8	+0.5

IDC 06 06:09:48.5±20.0, **17°.53S**×**179°.33W, h546^{km}**±43^{km}, **mb3.0**/4, **mb1 3.1**/5, **mb1mx2.9**/40, **mbtmp3.9**/5, **Error ellipse: s-maj=407.8km s-min=110.7km az=88.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu 2.2nm,0.3s,baz=129,slow=15,SNR=12	2.50	265	P	P	06 11 00.5	0.0
STKA	Stephens Creek 2.5nm,0.8s,baz=84,slow=9.2,SNR=3.8	38.04	240	P	P	06 16 20.9	+0.3
WRA	Warramunga Arr 0.3nm,0.5s,baz=96,slow=7.1,SNR=7.3	43.84	259	P	P	06 17 06.1	-0.7
ASAR	Alice Springs 4.4nm,0.5s,baz=88,slow=8.1,SNR=84	44.05	254	P	P	06 17 08.1	-0.3
FITZ	Fitzroy Crossi 0.5nm,0.5s,baz=127,slow=5.1	52.22	260	P	P	06 18 09.6	+0.2

IDC 06 06:16:30.9±3.1, **4°.48S**×**152°.73E, h0^{km}, mb3.8**/4, **mb1 4.0**/4, **mb1mx3.3**/46, **mbtmp3.8**/4, **Error ellipse: s-maj=102.9km s-min=32.0km az=113.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 2.6nm,0.5s,baz=52,slow=9.9,SNR=44	23.61	228	P	P	06 21 44.3	+0.5
ASAR	Alice Springs 0.3nm,0.6s,baz=54,slow=8.9,SNR=6.0	26.34	222	P	P	06 22 08.8	-0.1
H11S3	WAKE ISLAND Hy baz=208	26.65	31	T	T	06 49 57.7	
H11S2	WAKE ISLAND Hy baz=208	26.66	31	T	T	06 49 55.8	
H11S1	WAKE ISLAND Hy baz=208	26.67	31	T	T	06 49 56.7	
FITZ	Fitzroy Crossi 2.4nm,0.6s,baz=47,slow=10,SNR=12	29.75	241	P	P	06 22 39.6	+0.2
MKAR	Makanchi Array 0.2nm,0.4s,baz=102,slow=6.9,SNR=5.6	80.04	319	P	P	06 28 43.2	+0.6
TORD	Torodi Ar. Bea 0.6nm,0.4s,baz=63,slow=2.4,SNR=8.1	150.14	289	PKPbc	PKPbc	06 36 23.4	-1.5

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*IDC **06** 06:25:42.8±1.9, 5°.51N×124°.15E, h504^{km}±21^{km}, mb3.3/13, mb1 3.4/14, mb1mx3.1/45, mbtmp4.2/14, Error ellipse: s-maj=41.0km s-min=10.7km az=65.0*

*DJA **06** 06:25:43.9±1.0, 5°N±11°×12°4E±°, h451^{km}±7^{km}, M4.2/7, mb4.1/6, mB4.8/5, MLv4.4/7, Mw(mB)4.0/5*

ISC 06 06:25:41.8±0.6, **5°.44N**±0°.07×**124°.2E**±0°.1, **h500^{km}, n25,** σ**1^{s}.62**/29, **mb3.8**/13, **3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.67	67	⇓*i*P	P	06 26 43.8	-1.6
KCP	Kidapawan	1.81	30	⇓*e*P	P	06 26 45.8	-0.3
KCP				*i* S	S	06 27 37.4	-0.9
DAV	Davao City (W) 58nm,0.3s,baz=313,slow=23,SNR=9.6	2.14	41	S	S	06 27 40.4	-0.8
SGSI	Sangihe	2.21	142	P	P	06 26 45.2	-2.9
MATI	Mati	2.56	54	⇓*e*P	P	06 26 49.0	-1.0
GTOI	Gorontalo	4.91	194	P	P	06 27 06.7	-1.4
GTOI				S	S	06 28 13.8	-4.5
MPSI	Mapaga 0.1nm3μm26nm,1.0s	6.62	220	P	P	06 27 24.0	-0.3
SANI	Sanana 0.4nm1μm19nm,0.5s	7.66	166	P	P	06 27 34.0	-0.8
TTSI	Tana Toraja	9.48	207	P	P	06 27 54.2	+0.4
SPSI	Sidrap Palu 17nm,0.5s	10.32	205	P	P	06 28 04.6	+1.9
KAPI	Kappang 0.8nm,0.3s,baz=47,slow=6.3,SNR=7.2	11.28	203	P	P	06 28 15.0	+2.1
BKSI	Bulukumba	11.43	201	P	P	06 28 17.5	+3.1
WRA	Warramunga Arr 0.3nm,0.3s,baz=331,slow=11,SNR=5.9	27.13	159	P	P	06 30 44.7	+0.4
WRA	0.4nm,0.6s,baz=339,slow=3.2,SNR=5.1			ScP	ScP	06 36 42.6	+0.7
CMAR	Chiang Mai Arr 2.4nm,0.5s,baz=122,slow=7.5,SNR=10	27.81	300	P	P	06 30 50.8	+0.4
ASAR	Alice Springs 0.8nm,0.3s,baz=339,slow=7.5,SNR=18	30.45	162	P	P	06 31 14.8	+1.5
ASAR	0.4nm,0.5s,baz=348,slow=3.3,SNR=6.5			ScP	ScP	06 36 53.6	+1.1
STKA	Stephens Creek 1.1nm,0.4s,baz=340,slow=4.7,SNR=4.8	40.66	157	P	P	06 32 39.7	+1.6
SONM	Songino Array 1.7nm,0.7s,baz=164,slow=9.9,SNR=6.5	44.90	343	P	P	06 33 12.0	+0.7
MKAR	Makanchi Array 2.6nm,0.5s,baz=123,slow=7.6,SNR=28	54.71	326	P	P	06 34 24.2	+0.8
ZALV	Zalesovo Beam 0.6nm,0.4s,baz=98,slow=7.9,SNR=4.7	57.93	334	P	P	06 34 44.7	-0.8
KURBB	Kurchatov Arra 5.0nm,0.6s,baz=128,slow=6.3,SNR=42	58.94	328	P	P	06 34 52.7	+0.3
NRIK	Noril'sk 2.6nm,0.5s,baz=130,slow=4.0,SNR=4.1	68.18	347	P	P	06 35 52.1	+0.8
BRTR	Keskin Array B 1.4nm,0.8s,baz=92,slow=4.3,SNR=7.4	86.97	309	P	P	06 37 33.0	-0.9
ARCES	ARCESS Array B 4.0nm,1.0s,baz=80,slow=6.5,SNR=2.1	87.97	340	P	P	06 37 37.0	-0.8
AKASG	Malin Array Be 0.2nm,0.4s,baz=67,slow=4.3,SNR=3.1	88.96	321	P	P	06 37 41.5	-1.3
FINES	FINESS Array B 6.8nm,1.1s,baz=92,slow=4.2,SNR=3.6	89.13	332	P	P	06 37 42.4	-0.8

HEL 06 06:49:13.4±0.3, **67°.18N**×**20°.94E, h0^{km}, ML1.2, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERTU	Ertsjaerv	0.80	141	PG	Pg	06 49 27.4	-1.2
PAJU	Pajala baz=284	0.86	99	PB	Pg	06 49 29.2	-0.7
KLF	Kolari baz=276	1.18	86	PB	Pg	06 49 34.6	-1.4
HEF	Hetta comp=Z,1.3nm,0.2s	1.61	39	MSG		06 50 01.6	
HEF				SN	Sg	06 50 05.3	+0.2
TOF	Tornio baz=296	1.74	128	PG	Pn	06 49 44.5	-0.3
TOF	comp=Z,1.3nm,0.2s			MSG		06 50 05.5	
TOF				SN	Sg	06 50 09.1	-0.2
KIF	Kilpisjarvi	1.84	358	PG	Pb	06 49 47.0	-0.8
KIF	comp=Z,1.1nm,0.2s			MSG		06 50 09.4	
KIF				SG	Sn	06 50 10.5	+0.5
ARA0	ARCESS Array S baz=212	2.91	33	PB	Pn	06 50 01.6	+0.7

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*HEL **06** 06:50:19.9±0.5, 67°.88N×33°.69E, h0^{km}, ML2.2, Explosion*

*NAO **06** 06:50:19.8±1.1, 67°.65N×33°.70E, ML2.8*

*KOLA **06** 06:50:20.1, 67°.68N×33°.70E, h0^{km}, ML2.3, Error ellipse: s-maj=5.0km s-min=1.8km az=130.0, Khibiny, mines Kirovsk, Yukspor*

ISC 06 06:50:19.4±1.2, **67°.70N**±0°.03×**33°.67E**±0°.05, **h0^{km}, n34,** σ**1^{s}.31**/66, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	Apatity	0.17	217	P	Pg	06 50 22.8	+0.1
APA				S	Sg	06 50 25.2	+0.4
APA0	Apatity Array baz=80,slow=16	0.28	249	Pg	Pg	06 50 25.3	+0.6
APA0	baz=79,slow=37			Lg	Lg	06 50 29.3	
APA0	baz=71,slow=56			Rg	Rg	06 50 30.6	
APA0	Apatity Array baz=80,slow=16	0.28	249	Pg	Pg	06 50 25.3	+0.6
APA0	baz=79,slow=37			Sg	Sg	06 50 29.3	+1.0
APA0	baz=71,slow=56			Rg	Rg	06 50 30.6	
APA0	Apatity Array	0.28	249	P	Pg	06 50 25.1	+0.3
APA0				S	Sg	06 50 29.1	+0.8
VRF	Varrio baz=84	1.55	273	PG	Pn	06 50 47.9	-0.4
VRF	comp=Z,22nm,0.2s			MSG		06 51 06.6	
VRF				SN	Sg	06 51 08.3	-0.8
TERR	Teriberka	1.59	19	P	Pn	06 50 49.1	+0.2
TERR				S	Sn	06 51 09.5	-0.6
KU6	Riekki	2.25	223	PN	Pn	06 50 59.2	+1.3
KU6				SN	Sb	06 51 29.4	+0.1
KU6	comp=Z,6.6nm,0.2s			MSG		06 51 30.6	
MSF	Maaselka baz=44	2.57	228	PN	Pn	06 51 04.0	+1.8
MSF				SB	Sb	06 51 39.8	+1.4
SGF	Sodankyl baz=79	2.75	268	PN	Pn	06 51 05.6	+0.8
SGF				SB	Sb	06 51 41.2	-2.5
RNF	Rovaniemi baz=66	3.18	253	PN	Pn	06 51 11.1	+0.5
RNF				SN	Sn	06 51 50.2	+1.0
KEV	Kevo	3.19	313	Pn	Pn	06 51 12.0	+1.3
KEV				Pg	Pb	06 51 18.6	+1.8
KEV				Sn	Sn	06 51 50.0	+0.7
KEV				Lg	Lg	06 51 59.2	
KEV	Kevo	3.19	313	Pn	Pn	06 51 12.0	+1.3
KEV				Pg	Pb	06 51 18.6	+1.8
KEV				Sg	Sg	06 51 59.2	-2.4
KEV	Kevo	3.19	313	PB	Pn	06 51 11.9	+1.3
KEV	comp=Z,11nm,0.2s			MSG		06 51 50.1	
KEV				SB	Sn	06 51 50.5	+1.2
ARA0	ARCESS Array S baz=123,slow=16	3.51	305	Pn	Pn	06 51 15.9	+0.7
ARA0	baz=113,slow=16			Pg	Pb	06 51 24.0	+1.6
ARA0	baz=126,slow=28			Sn	Sn	06 51 56.9	-0.5
ARA0	baz=116,slow=37			Lg	Lg	06 52 07.0	
ARA0	ARCESS Array S baz=123,slow=16	3.51	305	Pn	Pn	06 51 15.9	+0.7
ARA0	baz=113,slow=16			Pg	Pb	06 51 24.0	+1.6
ARA0	baz=126,slow=28			Sn	Sn	06 51 56.9	-0.5
ARA0	ARCESS Array S	3.51	305	PN	Pn	06 51 15.9	+0.7
ARA0				SB	Sn	06 51 57.7	+0.4
ARCES	ARCESS Array B	3.51	305	P	Pn	06 51 15.8	+0.6
ARCES				S	Sn	06 51 57.0	-0.4
KLF	Kolari	3.77	267	PN	Pn	06 51 18.9	+0.2
KLF				SG	Sb	06 52 15.8	+3.0
HEF	Hetta	3.82	285	Pn	Pn	06 51 19.9	+0.4
HEF				Sn	Sn	06 52 03.6	-1.5
HEF				Lg	Lg	06 52 16.2	
HEF	Hetta	3.82	285	Pn	Pn	06 51 19.9	+0.4
HEF				Sn	Sn	06 52 03.6	-1.5
HEF	Hetta	3.82	285	PN	Pn	06 51 19.9	+0.4
HEF				SN	Sn	06 52 04.8	-0.3
TOF	Tornio	4.03	250	PG	Pb	06 51 31.5	+0.3
TOF				SN	Sn	06 52 09.1	-1.0
KTK1	Kautokeino	4.08	294	*e*P	Pn	06 51 23.0	0.0
KTK1				*e*S	Sn	06 52 09.0	-2.4
KTK1	comp=Z,5.2nm,0.6s			IAML		06 52 26.6	
OUL	Oulu	4.08	234	PB	Pb	06 51 28.8	-3.3
OUL				SG	Sg	06 52 30.8	+0.3
PAJU	Pajala	4.14	265	PN	Pn	06 51 24.2	+0.4
PAJU				SN	Sn	06 52 12.8	0.0
LANU	Lannavaara	4.43	280	PN	Pn	06 51 27.2	-0.6

	baz=87						
HAMF	**Hammerfest**	**4.62**	**314**	*e*P	**Pn**	**06 51 30.1**	**-0.4**
HAMF				*e*S	**Sn**	**06 52 22.1**	**-2.6**
HAMF				IAML		06 52 46.3	
	comp=Z,7.1nm,0.4s						
ERTU	**Ertsjaerv**	**4.63**	**261**	PN	**Pn**	**06 51 31.6**	**+1.1**
ERTU				SN	**Sn**	**06 52 24.6**	**-0.2**
KIF	**Kilpisjarvi**	**4.94**	**291**	Pn	**Pn**	**06 51 34.5**	**-0.2**
KIF				Sn	**Sn**	**06 52 30.3**	**-2.2**
KIF	**Kilpisjarvi**	**4.94**	**291**	Pn	**Pn**	**06 51 34.5**	**-0.2**
KIF				Sn	**Sn**	**06 52 30.3**	**-2.2**
FIA0	**FINESS Array S**	**7.08**	**211**	Pn	**Pn**	**06 52 03.1**	**-1.0**
	baz=18,slow=16						
FIA0				Lg	Lg	06 53 57.6	
	baz=32,slow=37						
FIA0	**FINESS Array S**	**7.08**	**211**	Pn	**Pn**	**06 52 03.1**	**-1.0**
	baz=18,slow=16						
FIA0				Sg	Sb	06 53 57.6	+10
	baz=32,slow=37						
SPA0	**Spitsbergen Ar**	**11.59**	**342**	Pn	**Pn**	**06 53 03.7**	**-2.2**
	baz=148,slow=12						
SPA0	**Spitsbergen Ar**	**11.59**	**342**	Pn	**Pn**	**06 53 03.7**	**-2.2**
	baz=148,slow=12						

IDC 06 07:26:58.6±2.3,**6°.90S**×**129°.31E**,**h0**^{km},**mb3.5**/1, **mb1 3.5**/3,**mb1mx3.2**/34,**mbtmp3.3**/3,**ML3.4**/2,**Error ellipse: s-maj=113.9km s-min=33.3km az=68.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.85**	**160**	Pn	Pn	07 30 15.4	-1.0
	0.2nm,0.3s,baz=338,slow=12,SNR=12						
WRA				Sn	Sn	07 32 35.5	-16
	0.2nm,0.3s,baz=331,slow=23,SNR=4.1						
ASAR	**Alice Springs**	**17.25**	**166**	P	P	07 31 01.9	-0.8
	0.1nm,0.3s,baz=346,slow=9.5,SNR=11						
ASAR				S	Sn	07 34 00.3	-13
	0.1nm,0.3s,baz=350,slow=26,SNR=2.6						
MKAR	**Makanchi Array**	**67.77**	**327**	P	P	07 37 58.2	0.0
	0.2nm,0.4s,baz=142,slow=7.3,SNR=2.2						

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*IDC **06** 07:37:33.7±2.8, 13°.35S×167°.05E, h198^{km}±25^{km}, mb3.5/9, mb1 3.6/10, mb1mx3.3/35, mbtmp4.0/10, Error ellipse: s-maj=29.1km s-min=20.6km az=126.0*

ISC 06 07:37:33.9±1.0,**13°.33S**±0°.09×**167°.1E**±0°.2,**h200**^{km},**n13**, σ**0ˢ.76**/17,**mb3.7**/9,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.71**	**184**	P	**Pn**	**07 39 37.5**	**+1.0**
	0.4nm,0.3s,baz=36,slow=6.4,SNR=10.0						
DZM				S	**Sn**	**07 41 13.9**	**-0.6**
	baz=127,slow=20						
CTA	**Charters Tower**	**21.02**	**249**	P	**P**	**07 42 02.7**	**+0.4**
	1.8nm,0.3s,baz=90,slow=7.1,SNR=1.7						
STKA	**Stephens Creek**	**29.77**	**227**	P	**P**	**07 43 21.8**	**-0.1**
	0.6nm,0.4s,baz=52,slow=9.0,SNR=7.3						
WRA	**Warramunga Arr**	**32.00**	**254**	P	**P**	**07 43 40.7**	**-1.0**
	0.4nm,0.6s,baz=84,slow=9.1,SNR=2.3						
WRA				PcP	**PcP**	**07 46 26.6**	**-0.1**
	0.5nm,0.6s,baz=83,slow=3.4,SNR=3.8						
ASAR	**Alice Springs**	**33.01**	**247**	P	**P**	**07 43 49.1**	**-1.3**
	0.6nm,0.5s,baz=75,slow=9.9,SNR=15						
ASAR				PcP	**PcP**	**07 46 29.0**	**-0.5**
	0.7nm,0.5s,baz=71,slow=2.3,SNR=13						
ASAR				ScP	**ScP**	**07 49 55.5**	**+0.7**
	0.6nm,0.9s,baz=79,slow=3.2,SNR=5.2						
CMAR	**Chiang Mai Arr**	**74.21**	**294**	P	**P**	**07 48 50.5**	**+1.3**
	1.1nm,0.3s,baz=121,slow=4.3,SNR=4.3						
SONM	**Songino Array**	**81.26**	**324**	P	**P**	**07 49 28.4**	**+0.7**
	0.3nm,0.3s,baz=125,slow=4.2,SNR=6.2						
ILAR	**Eielson Array**	**85.26**	**18**	P	**P**	**07 49 47.0**	**-0.6**
	0.3nm,0.5s,baz=251,slow=5.0,SNR=9.4						
MKAR	**Makanchi Array**	**96.06**	**317**	P	**P**	**07 50 38.8**	**+0.2**
	0.9nm,0.6s,baz=86,slow=6.1,SNR=9.6						
ZALV	**Zalesovo Beam**	**96.15**	**324**	P	**P**	**07 50 38.6**	**-0.2**
	0.5nm,0.5s,baz=132,slow=2.1,SNR=2.0						
ARCES	**ARCESS Array B**	**118.86**	**346**	PKP	**PKPdf**	**07 55 57.2**	**-0.6**
	2.1nm,0.8s,baz=68,slow=2.0,SNR=17						
FINES	**FINESS Array B**	**124.36**	**339**	PKP	**PKPdf**	**07 56 08.4**	**-0.2**
	2.6nm,0.8s,baz=107,slow=4.8,SNR=4.4						
KEST	**Kesra**	**150.00**	**322**	PKPbc	**PKiKP**	**07 57 01.5**	**-0.5**
	2.6nm,0.5s,baz=52,slow=12,SNR=3.6						

IDC 06 08:01:27.9±2.3,**7°.09S**×**155°.08E**,**h0**^{km},**mb3.7**/4, **mb1 3.9**/4,**mb1mx3.6**/37,**mbtmp3.7**/4,**MS2.9**/2,**Ms1 2.9**/2, **ms1mx2.5**/32,**Error ellipse: s-maj=128.3km s-min=26.2km az=135.0**,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.35**	**116**	LR	LR	08 04 24.7	
	comp=Z,41nm,20.3s,baz=250,slow=33						
WRA	**Warramunga Arr**	**23.83**	**236**	P	P	08 06 42.9	-0.1
	1.4nm,1.0s,baz=61,slow=9.8,SNR=5.5						
ASAR	**Alice Springs**	**26.17**	**229**	P	P	08 07 04.2	-0.1
	0.4nm,0.7s,baz=60,slow=9.3,SNR=5.8						
FITZ	**Fitzroy Crossi**	**30.69**	**246**	P	P	08 07 45.0	+0.3
	2.0nm,1.0s,baz=90,slow=9.9						
JOW	**Kunigami**	**42.57**	**323**	LR	LR	08 24 50.1	
	comp=Z,52nm,20.5s,baz=320,slow=33						
ILAR	**Eielson Array**	**83.43**	**21**	P	P	08 13 56.9	-0.1
	1.0nm,1.1s,baz=252,slow=5.0,SNR=12						

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*IDC **06** 08:06:17.0±1.4, 3°.55S×130°.71E, h0^{km}, mb3.8/3, mb1 3.9/6, mb1mx3.7/35, mbtmp3.7/6, ML3.6/3, Error ellipse: s-maj=66.6km s-min=21.1km az=83.0*

*DJA **06** 08:06:21.2±2.0, 4°S±5°×13°1E±°, h25^{km}±20^{km}, M3.8/7, MLv3.8/7*

ISC 06 08:06:18.5±1.0,**3°.35S**±0°.07×**130°.95E**±0°.07,**h30**^{km},**n9**, σ**2ˢ.31**/10,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.36**	**72**	P	**Pb**	**08 06 41.8**	**-1.6**
FAKI				S	**Sn**	**08 06 57.5**	**-1.1**
SIJI	**Sorong**	**2.49**	**7**	Pn	**Pb**	**08 07 01.8**	**-0.8**
	2.7nm,0.3s,baz=96,slow=23,SNR=28						
SIJI				Sn	**Sb**	**08 07 32.0**	**-0.8**
	7.4nm,0.3s,baz=185,slow=8.6,SNR=9.8						
SWI	**Sorong**	**2.49**	**7**	P	**Pb**	**08 07 01.8**	**-0.8**
LBMI	**Labuha**	**4.38**	**308**	P	**Pb**	**08 07 32.5**	**-2.3**
FITZ	**Fitzroy Crossi**	**15.55**	**199**	Pn	**Pn**	**08 09 53.1**	**-2.6**
	0.5nm,0.3s,baz=41,slow=8.7,SNR=12						
WRA	**Warramunga Arr**	**16.82**	**169**	Pn	**Pn**	**08 10 10.1**	**-1.8**
	0.2nm,0.3s,baz=353,slow=13,SNR=14						
WRA				Sn	Sn	08 13 04.4	-14
	0.4nm,0.3s,baz=356,slow=23,SNR=7.2						
ASAR	**Alice Springs**	**20.39**	**172**	P	Pn	08 10 55.0	-0.3
	2.6nm,0.6s,baz=356,slow=9.4,SNR=41						
STKA	**Stephens Creek**	**30.09**	**162**	P	**P**	**08 12 27.6**	**+2.2**
	0.8nm,0.6s,baz=330,slow=14,SNR=2.9						
MKAR	**Makanchi Array**	**65.75**	**326**	P	**P**	**08 17 04.0**	**+3.4**
	0.6nm,0.7s,baz=120,slow=7.2,SNR=4.7						

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*INET **06** 08:26:23.1, 13°.16N×87°.82W, h183^{km}, MW3.4*

*SNET **06** 08:26:23.4±0.6, 13°.14N×87°.85W, h179^{km}±3^{km}, ML3.9*

*UCR **06** 08:26:23.7±1.6, 13°.05N×87°.86W, h175^{km}±7^{km}, ML3.8, mb4.4(NEIC)*

*IDC **06** 08:26:24.2±5.0, 13°.32N×87°.75W, h187^{km}±28^{km}, mb3.3/5, mb1 3.5/7, mb1mx3.2/34, mbtmp3.8/7, Error ellipse: s-maj=60.1km s-min=37.4km az=167.0*

*NEIC **06** 08:26:24.3±1.7, 13°.23N±0°.07×87°.75W±0°.08, h180^{km}±7^{km}, mb4.4/54, Error ellipse: s-maj=13.0km s-min=8.2km az=47.0*

ISC 06 08:26:23.1±0.6,**13°.22N**±0°.07×**87°.81W**±0°.05,**h180**^{km}±5^{km}, **n130**,σ**1ˢ.12**/142,**mb4.3**/30,**23C-3D**,**Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.06**	**340**	*e*P	**Pn**	**08 26 47.3**	**+0.3**
CNCH	**Conchagua**	**0.06**	**340**	*e*P	**Pn**	**08 26 47.3**	**+0.3**
LCND	**La Caada**	**0.12**	**320**	⇑*i*P	**Pn**	**08 26 47.3**	**+0.4**
LCND				IAML		08 26 48.2	
	comp=Z,742nm,0.5s						
LCND				*e*S	**Sn**	**08 27 05.9**	**+0.7**
LCND	**La Caada**	**0.12**	**320**	⇑*i*P	**Pn**	**08 26 47.3**	**+0.4**
LCND				IAML		08 26 48.2	
	comp=Z,742nm,0.5s						
LCND				*e*S	**Sn**	**08 27 05.9**	**+0.7**
PACA	**Pacayal**	**0.56**	**297**	*e*P	**Pn**	**08 26 49.4**	**+1.1**
PACA	**Pacayal**	**0.56**	**297**	*e*P	**Pn**	**08 26 49.4**	**+1.1**
ALJI	**Alcalda de J**	**0.75**	**278**	⇑*i*P	**Pn**	**08 26 49.6**	**+0.5**
ALJI				IAML		08 26 50.8	
	comp=Z,2µm,0.5s						
ALJI	**Alcalda de J**	**0.75**	**278**	⇑*i*P	**Pn**	**08 26 49.6**	**+0.5**
ALJI				IAML		08 26 50.8	
	comp=Z,2µm,0.5s						
COEB	**Comit de Eme**	**0.75**	**292**	⇑*e*P	**Pn**	**08 26 49.8**	**+0.5**
COEB				IAML		08 26 51.5	
	comp=Z,883nm,0.5s						
COEB				*e*S	**Sn**	**08 27 10.5**	**+1.0**
COEB	**Comit de Eme**	**0.75**	**292**	⇑*e*P	**Pn**	**08 26 49.8**	**+0.5**
COEB				IAML		08 26 51.5	
	comp=Z,883nm,0.5s						
COEB				*e*S	**Sn**	**08 27 10.5**	**+1.0**
PQSS	**Presa 15 de Se**	**0.83**	**299**	⇓*i*P	**Pn**	**08 26 50.5**	**+0.8**
CRIN	**San Cristobal**	**0.91**	**125**		**Pn**	**08 26 51.1**	**+0.9**
TGUH	**Tegucigalpa,Un**	**0.98**	**32**	⇓*i*P	**Pn**	**08 26 51.8**	**+1.0**
TGUH	**Tegucigalpa,Un**	**0.98**	**32**	⇓*i*P	**Pn**	**08 26 51.8**	**+1.0**
TGUH	**Tegucigalpa,Un**	**0.98**	**32**		**Pn**	**08 26 51.9**	**+1.0**
SCLA	**Alcaldia de Sa**	**1.01**	**298**	⇑*i*P	**Pn**	**08 26 52.0**	**+1.0**
SCLA	**Alcaldia de Sa**	**1.01**	**298**	⇑*i*P	**Pn**	**08 26 52.0**	**+1.0**
PAVA	**Las Pavas**	**1.20**	**294**	⇑*i*P	**Pn**	**08 26 53.4**	**+0.8**
PAVA	**Las Pavas**	**1.20**	**294**	⇑*i*P	**Pn**	**08 26 53.4**	**+0.8**
LBRS	**Las Brisas**	**1.30**	**293**	*e*P	**Pn**	**08 26 54.5**	**+1.1**
LBRS	**Las Brisas**	**1.30**	**293**	*e*P	**Pn**	**08 26 54.5**	**+1.1**
OPAM	**Oficina de Pla**	**1.43**	**290**	⇑*i*P	**Pn**	**08 26 55.4**	**+0.9**
OPAM				IAML		08 26 56.3	
	comp=Z,553nm,0.6s						
OPAM	**Oficina de Pla**	**1.43**	**290**	⇑*i*P	**Pn**	**08 26 55.4**	**+0.9**
OPAM				IAML		08 26 56.3	
	comp=Z,553nm,0.6s						
SNET	**Serv Nac Est T**	**1.46**	**289**	*i* P	**Pn**	**08 26 55.5**	**+0.7**
SNET				IAML		08 26 56.3	
	comp=Z,759nm,0.3s						
SNET				*e*S	**Sn**	**08 27 20.7**	**+1.5**
SNET	**Serv Nac Est T**	**1.46**	**289**	*i* P	**Pn**	**08 26 55.5**	**+0.7**
SNET				IAML		08 26 56.3	
	comp=Z,759nm,0.3s						
SNET				*e*S	**Sn**	**08 27 20.7**	**+1.5**
SNET	**Serv Nac Est T**	**1.46**	**289**		**Pn**	**08 26 55.3**	**+0.6**
LALI	**Alcalda de L**	**1.49**	**280**	⇑*i*P	**Pn**	**08 26 55.3**	**+0.3**
LALI				*e*S	**Sn**	**08 27 20.4**	**+0.8**
LALI	**Alcalda de L**	**1.49**	**280**	⇑*i*P	**Pn**	**08 26 55.3**	**+0.3**
LALI				*e*S	**Sn**	**08 27 20.4**	**+0.8**
CEDA	**San Andres**	**1.65**	**291**	⇑*i*P	**Pn**	**08 26 57.2**	**+0.6**
CEDA	**San Andres**	**1.65**	**291**	⇑*i*P	**Pn**	**08 26 57.2**	**+0.6**
JAYA	**Jayaque - finc**	**1.65**	**285**	⇑*e*P	**Pn**	**08 26 57.1**	**+0.5**
JAYA				IAML		08 27 29.5	
	comp=Z,2µm,0.2s						
JAYA	**Jayaque - finc**	**1.65**	**285**	⇑*e*P	**Pn**	**08 26 57.1**	**+0.5**
JAYA				IAML		08 27 29.5	
	comp=Z,2µm,0.2s						
TACO	**Tacachico**	**1.68**	**297**	⇑*i*P	**Pn**	**08 26 57.7**	**+0.9**
TACO	**Tacachico**	**1.68**	**297**	⇑*i*P	**Pn**	**08 26 57.7**	**+0.9**
MATN	**Matagalpa**	**1.86**	**99**		**Pn**	**08 26 58.4**	**-0.4**
SBLS	**San Blas**	**1.87**	**289**	*e*P	**Pn**	**08 26 60.0**	**+1.0**
SBLS	**San Blas**	**1.87**	**289**	*e*P	**Pn**	**08 26 60.0**	**+1.0**
RTR	**El Retiro**	**1.91**	**291**	*e*P	**Pn**	**08 27 00.5**	**+1.1**
RTR	**El Retiro**	**1.91**	**291**	*e*P	**Pn**	**08 27 00.5**	**+1.1**
MTO3	**Montecristo**	**1.91**	**308**	⇑*i*P	**Pn**	**08 27 00.8**	**+1.4**
MTO3	**Montecristo**	**1.91**	**308**	⇑*i*P	**Pn**	**08 27 00.8**	**+1.4**
MTO3	**Montecristo**	**1.91**	**308**		**Pn**	**08 27 00.9**	**+1.4**
ESQI	**Esquipulas**	**2.00**	**312**		**Pn**	**08 27 02.1**	**+1.9**
SLOZ	**Alcaldia de Sa**	**2.08**	**293**	⇑*i*P	**Pn**	**08 27 02.0**	**+1.0**
BOAB	**BOACO BROADBAN**	**2.23**	**110**		**Pn**	**08 27 02.8**	**+0.1**
ACON	**Acoyapa**	**2.86**	**115**	Pn	**Pn**	**08 27 10.7**	**+0.6**
APG	**El Apazote**	**3.12**	**305**	P	**Pn**	**08 27 15.3**	**+1.8**
	comp=Z,9.6nm,0.3s,baz=122,slow=9.5,SNR=25						
APG				S	**Sn**	**08 27 54.7**	**+1.9**
	comp=Z,2.5nm,0.3s,baz=226,slow=21,SNR=3.9						
HZTE	**Horizontes, Gu**	**3.30**	**139**	*e*P	**Pn**	**08 27 16.9**	**+1.4**
HZTE				*e*S	**Sn**	**08 27 55.5**	**-0.9**
HZTE	**Horizontes, Gu**	**3.30**	**139**	Pn	**Pn**	**08 27 16.7**	**+1.2**
ESPN	**Las Esperanzas**	**3.58**	**106**	Pn	**Pn**	**08 27 20.1**	**+1.3**
SAJU	**San Juanillo,**	**3.75**	**146**	*e*P	**Pn**	**08 27 21.7**	**+0.6**
SAJU				*e*S	**Sn**	**08 28 03.9**	**-2.6**
DUNO	**Dulce Nombre,**	**3.86**	**144**		**Pn**	**08 27 22.8**	**+0.3**
INDI	**Punta indio, G**	**4.03**	**146**	*e*P	**Pn**	**08 27 25.2**	**+0.6**
JTS	**Las Juntas de**	**4.04**	**136**	*e*P	**Pn**	**08 27 25.4**	**+0.6**
JTS	**Las Juntas de**	**4.04**	**136**		**Pn**	**08 27 25.4**	**+0.6**
CAO2	**Cobano, Puntar**	**4.40**	**143**	Pn	**Pn**	**08 27 30.1**	**+0.7**
LAFE	**Finca La Fe, P**	**4.43**	**140**	*e*P	**Pn**	**08 27 30.2**	**+0.5**
JACO	**JACO, Garabito**	**4.70**	**139**	*e*P	**Pn**	**08 27 33.7**	**+0.6**
JACO	**JACO, Garabito**	**4.70**	**139**		**Pn**	**08 27 34.2**	**+1.0**
LCR2	**La Lucha 2**	**5.09**	**132**	*e*P	**Pn**	**08 27 39.6**	**+1.1**
RIMA	**Rio Macho**	**5.17**	**131**	*e*P	**Pn**	**08 27 40.8**	**+1.3**
RIMA	**Rio Macho**	**5.17**	**131**		**Pn**	**08 27 40.8**	**+1.3**
CCIG	**Comitan**	**5.17**	**307**	Pn	**Pn**	**08 27 41.0**	**+1.5**
PEZE	**Perez Zeledon,**	**5.57**	**133**		**Pn**	**08 27 46.0**	**+1.4**
SRBA	**San Rafael, Bu**	**5.90**	**132**	*e*P	**Pn**	**08 27 50.6**	**+1.6**
SRBA	**San Rafael, Bu**	**5.90**	**132**		**Pn**	**08 27 49.4**	**+0.4**
CMIG	**Matias Romero**	**7.84**	**300**	P	**Pn**	**08 28 15.2**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=147,slow=11,SNR=9.3						
CMIG				S	**Sn**	**08 29 35.1**	**-7.3**
	comp=Z,1.1nm,0.3s,baz=67,slow=24,SNR=7.3						
OCAC	**Ocana**	**15.07**	**108**		**Pn**	**08 29 46.9**	**-0.4**
SDDR	**Presa de Saban**	**16.88**	**68**	P	**P**	**08 30 07.1**	**-1.0**
SDDR				IAmb	IAmb	08 30 35.2	
	comp=Z,35nm,1.5s						
SDV	**Santo Domingo**	**17.40**	**103**	P	**P**	**08 30 13.6**	**-0.5**
SDV				IAmb	IAmb	08 30 16.5	
	comp=Z,13nm,0.8s						
TXAR	**Lajitas Array**	**21.76**	**320**	P	**P**	**08 31 01.1**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=145,slow=9.0,SNR=9.5						
TXAR	**Lajitas Array**	**21.76**	**320**	P	**P**	**08 31 01.0**	**+0.3**
TX31	**Lajitas Ar. Si**	**21.76**	**320**	P	**P**	**08 31 01.1**	**+0.4**
MIAR	**Mount Ida**	**21.87**	**347**	P	**P**	**08 31 01.8**	**+0.2**
MIAR				IAmb	IAmb	08 31 26.7	
	comp=Z,15nm,1.5s						
SWET	**Sewanee**	**21.97**	**4**	P	**P**	**08 31 02.5**	**-0.2**
SWET				IAmb	IAmb	08 31 31.3	
	comp=Z,19nm,1.4s						
W50A	**Signal Mountai**	**22.00**	**5**	P	**P**	**08 31 04.3**	**+1.3**
W50A				IAmb	IAmb	08 31 19.5	
	comp=Z,10nm,1.2s						
BG3	**Lake Jocassee**	**22.12**	**11**	P	**P**	**08 31 05.5**	**+1.4**
BG3				IAmb	IAmb	08 31 05.9	
	comp=Z,6.9nm,0.6s						
PAULI	**Pauline**	**22.18**	**13**	P	**P**	**08 31 05.9**	**+1.2**
PAULI				IAmb	IAmb	08 31 33.5	
	comp=Z,26nm,1.3s						
CPCT	**Cooper Cave**	**22.33**	**7**	P	**P**	**08 31 06.9**	**+0.8**
CPCT				IAmb	IAmb	08 31 23.3	
	comp=Z,16nm,1.3s						
WHAR	**Wooly Hollow**	**22.34**	**350**	P	**P**	**08 31 07.3**	**+1.1**
BIRD	**Birdtown, Kers**	**22.35**	**16**	P	**P**	**08 31 07.1**	**+0.9**
KMSC	**Kings Mountain**	**22.60**	**14**	P	**P**	**08 31 09.8**	**+1.3**
KMSC				IAmb	IAmb	08 31 15.3	
	comp=Z,24nm,1.4s						
TKL	**Tuckaleechee C**	**22.64**	**9**	P	**P**	**08 31 09.4**	**+0.5**
	comp=Z,9.0nm,1.0s,baz=191,slow=14,SNR=4.1						
TKL	**Tuckaleechee C**	**22.64**	**9**	P	**P**	**08 31 10.0**	**+1.1**
TKL				IAmb	IAmb	08 31 11.3	
	comp=Z,13nm,1.1s						
V53A	**Saluda**	**22.80**	**11**	P	**P**	**08 31 11.6**	**+1.2**
CLTN	**Cedars of Leba**	**22.81**	**3**	P	**P**	**08 31 10.3**	**-0.2**
FCAR	**Ozark Folk Cen**	**22.91**	**351**	P	**P**	**08 31 11.5**	**+0.2**
LCAR	**Lake Charles**	**22.95**	**353**	P	**P**	**08 31 11.2**	**-0.5**
W57A	**Gilead**	**22.95**	**17**	P	**P**	**08 31 12.2**	**+0.5**
W57A				IAmb	IAmb	08 31 13.2	
	comp=Z,15nm,0.9s						
V55A	**Taylorsville**	**23.31**	**14**	P	**P**	**08 31 16.0**	**+1.1**
V55A				IAmb	IAmb	08 31 32.5	
	comp=Z,27nm,1.5s						
TZTN	**Tazewell**	**23.54**	**9**	P	**P**	**08 31 17.6**	**+0.6**
TZTN				IAmb	IAmb	08 31 35.7	
	comp=Z,20nm,1.4s						
PBMO	**Poplar Bluff**	**23.58**	**355**	P	**P**	**08 31 17.3**	**-0.1**
PBMO				IAmb	IAmb	08 31 19.2	
	comp=Z,9.2nm,1.4s						
FNO	**Franklin**	**23.59**	**340**	P	**P**	**08 31 18.0**	**+0.4**
HHAR	**Hobbs**	**23.62**	**348**	P	**P**	**08 31 18.6**	**+0.8**
T47A	**Sharon Grove**	**23.68**	**1**	P	**P**	**08 31 18.7**	**+0.4**
T47A				IAmb	IAmb	08 31 19.3	
	comp=Z,6.0nm,0.8s						
OKCFA	**Oklahoma City**	**23.75**	**340**	P	**P**	**08 31 20.3**	**+1.3**
OKCFA				IAmb	IAmb	08 31 43.4	
	comp=Z,11nm,1.1s						
V58A	**Windy Hill, Pi**	**23.80**	**18**	P	**P**	**08 31 20.1**	**+0.7**
V58A				IAmb	IAmb	08 31 21.1	
	comp=Z,12nm,0.8s						
U54A	**Nelsons Funny**	**23.82**	**12**	P	**P**	**08 31 20.7**	**+1.0**
T42A	**Van Buren**	**23.89**	**354**	P	**P**	**08 31 19.8**	**-0.5**
S39A	**Bolivar**	**24.86**	**350**	P	**P**	**08 31 29.0**	**-0.1**
T57A	**Hurt**	**24.89**	**16**	P	**P**	**08 31 29.8**	**+0.5**
T57A				IAmb	IAmb	08 31 31.6	
	comp=Z,6.7nm,0.9s						
CCM	**Cathedral Cave**	**24.92**	**354**	P	**P**	**08 31 29.8**	**+0.2**
R40A	**Maddies Statio**	**25.28**	**352**	P	**P**	**08 31 32.4**	**-0.5**
R55A	**Marlinton**	**25.88**	**14**	P	**P**	**08 31 39.3**	**+1.0**
P53A	**Whipple**	**26.77**	**11**	P	**P**	**08 31 47.1**	**+0.8**
P52A	**Corning**	**26.78**	**10**	P	**P**	**08 31 46.5**	**+0.2**
P57A	**Homestead Farm**	**27.56**	**17**	P	**P**	**08 31 54.3**	**+1.1**
P57A				IAmb	IAmb	08 31 57.6	
	comp=Z,17nm,1.4s						
O54A	**Avella**	**27.64**	**12**	P	**P**	**08 31 54.4**	**+0.4**
SDMD	**Soldier's Deli**	**27.83**	**18**	P	**P**	**08 31 56.3**	**+0.6**
SDMD				IAmb	IAmb	08 31 56.3	
	comp=Z,8.4nm,1.4s						
N54A	**Moraine State**	**28.47**	**12**	P	**P**	**08 32 01.5**	**+0.1**
M54A	**Oil Creek Stat**	**29.07**	**13**	P	**P**	**08 32 06.7**	**+0.1**
M54A				IAmb	IAmb	08 32 27.5	
	comp=Z,13nm,1.2s						
N59A	**State Game Lan**	**29.54**	**19**	P	**P**	**08 32 11.5**	**+0.7**
N59A				IAmb	IAmb	08 32 12.7	
	comp=Z,9.2nm,1.1s						
BRNJ	**Basking Ridge**	**29.72**	**21**	P	**P**	**08 32 13.5**	**+1.2**
ODNJ	**Ogdensburg**	**30.07**	**20**	P	**P**	**08 32 15.9**	**+0.5**
ODNJ				IAmb	IAmb	08 32 28.5	
	comp=Z,11nm,1.5s						
KSPA	**Keystone Colle**	**30.12**	**18**	P	**P**	**08 32 16.8**	**+0.9**
KSPA				IAmb	IAmb	08 32 20.6	
	comp=Z,10nm,1.2s						
WVNY	**West Valley, N**	**30.16**	**14**	P	**P**	**08 32 16.6**	**+0.4**
ECSD	**EROS Data Cent**	**31.34**	**348**	P	**P**	**08 32 25.6**	**-1.0**
ECSD				IAmb	IAmb	08 32 36.4	
	comp=Z,7.6nm,1.4s						
ETMB	**Extrema**	**31.36**	**136**	P	**P**	**08 32 25.6**	**-1.4**
SPMN	**Marine on St.**	**32.18**	**353**	P	**P**	**08 32 33.0**	**-0.9**
SPMN				IAmb	IAmb	08 32 33.1	
	comp=Z,7.8nm,1.1s						
REDW	**Red Top Meadow**	**36.00**	**331**	P	**P**	**08 33 08.4**	**+1.3**
REDW				IAmb	IAmb	08 33 08.7	
	comp=Z,4.4nm,0.6s						
TPAW	**Teton Pass**	**36.14**	**331**	P	**P**	**08 33 09.6**	**+1.3**
TPAW				IAmb	IAmb	08 33 13.8	
	comp=Z,9.2nm,1.4s						
NVAR	**Mina Array Bea**	**36.90**	**318**	P	**P**	**08 33 15.1**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=134,slow=7.7,SNR=2.0						
SCHQ	**Schefferville**	**44.65**	**17**	P	**P**	**08 34 16.4**	**-1.2**
	comp=Z,3.4nm,0.5s,baz=219,slow=6.5,SNR=5.4						
SCHQ	**Schefferville**	**44.65**	**17**	P	**P**	**08 34 16.6**	**-1.1**
WISH	**Wishkah**	**45.22**	**326**	P	**P**	**08 34 21.8**	**-0.5**
C03A	**Quillayute Air**	**46.15**	**326**	P	**P**	**08 34 29.7**	**+0.2**
YKA	**Yellowknife Ar**	**52.78**	**345**	P	**P**	**08 35 18.8**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=144,slow=6.5,SNR=6.7						
BMAR	**Burnt Mountain**	**65.44**	**339**	P	**P**	**08 36 46.5**	**+0.1**
WRA	**Warramunga Arr**	**139.14**	**255**	PKP	**PKPdf**	**08 45 29.3**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=89,slow=2.2,SNR=16						
ASAR	**Alice Springs**	**139.22**	**249**	PKP	**PKPdf**	**08 45 29.4**	**0.0**
	comp=Z,1.0nm,0.7s,baz=90,slow=1.9,SNR=16						

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*IDC **06** 08:53:21.2±0.5, 59°.13S×25°.78W, h0^{km}, mb4.5/11, mb1 4.6/12, mb1mx4.2/27, mbtmp4.5/12, ML4.6/1, MS3.4/11, Ms1 3.4/11, ms1mx3.3/27, Error ellipse: s-maj=24.6km s-min=16.8km az=59.0*

*NEIC **06** 08:53:28.4±1.9, 59°.1S±0°.1×25°.8W±0°.2, h50^{km}±6^{km}, mb4.8/48, Error ellipse: s-maj=22.1km s-min=1.9km az=221.0*

ISC 06 08:53:27.9±0.4,**59°.24S**±0°.07×**25°.69W**±0°.09,**h50**^{km},**n101**, σ**1ˢ.45**/94,**mb4.8**/32,**MS3.5**/10,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.74**	**305**		**Pn**	**08 55 16.4**	**-1.3**
VNA1	**Neumayer--Stat**	**13.54**	**155**	P	**Pn**	**08 56 37.6**	**+0.7**
VNA3	**Neumayer Olymp**	**13.71**	**158**	P	**Pn**	**08 56 39.8**	**+0.5**
VNA3				S	**Sn**	**08 59 04.5**	**-5.3**
VNA2	**Neumayer--Watz**	**13.94**	**155**	P	**Pn**	**08 56 42.4**	**+0.1**
	baz=312,slow=14						
VNA2				S	**Sn**	**08 59 10.2**	**-5.0**
SNAA	**Sanae**	**15.51**	**153**	P	**Pn**	**08 57 03.6**	**+0.7**
SNAA				S	**Sn**	**08 59 46.8**	**-6.6**
SNAA	**Sanae**	**15.51**	**153**	Pn	**Pn**	**08 57 03.4**	**+0.5**
	2.4nm,0.3s,baz=300,slow=13,SNR=66						
SNAA				Sn	Sn	08 59 43.5	-10
	0.5nm,0.3s,baz=308,slow=19,SNR=3.1						
SNAA				LR	LR	09 01 54.3	
	comp=Z,134nm,20.6s,baz=5.0,slow=33						
SNAA	**Sanae**	**15.51**	**153**	Pn	**Pn**	**08 57 03.7**	**+0.7**
PMSA	**Palmer Station**	**18.60**	**236**	P	**Pn**	**08 57 43.4**	**+2.1**
	0.3nm,0.3s,baz=80,slow=8.2,SNR=1.4						
PMSA				LR	LR	09 03 46.0	
	comp=Z,129nm,18.4s,baz=106,slow=34						
PMSA	**Palmer Station**	**18.60**	**236**	P	**P**	**08 57 40.0**	**-0.6**
PMSA				IAmb	IAmb	08 58 04.4	
	comp=Z,108nm,1.5s						
EFI	**East Falkland**	**19.70**	**278**	P	**P**	**08 57 51.9**	**-0.8**
EFI				IAmb	IAmb	08 57 58.4	
	comp=Z,38nm,0.8s						
MG02	**Cerro Sombrero**	**24.81**	**266**	P	**P**	**08 58 44.0**	**-0.8**
MG04	**Isla Riesco**	**25.97**	**264**	P	**P**	**08 58 55.2**	**-0.1**
MG05	**Puerto Natales**	**27.10**	**265**	P	**P**	**08 59 04.5**	**-1.0**
GO09	**Cerro Castillo**	**27.25**	**266**	P	**P**	**08 59 05.4**	**-1.5**
GO09				IAmb	IAmb	08 59 13.4	
	comp=Z,37nm,1.2s						
QSPA	**South Pole Qui**	**31.00**	**180**	P	**P**	**08 59 42.2**	**+2.0**
	comp=Z,7.3nm,0.6s,baz=211,slow=1.9,SNR=63						
QSPA				PcP	**PcP**	**09 02 35.9**	**+1.0**
	comp=Z,2.6nm,0.7s,baz=176,slow=2.3,SNR=3.7						
QSPA	**South Pole Qui**	**31.00**	**180**	P	**P**	**08 59 42.5**	**+2.3**
TRQA	**Tornquist**	**31.39**	**296**	P	**P**	**08 59 44.2**	**+0.4**
TRQA				IAmb	IAmb	08 59 46.3	
	comp=Z,12nm,0.8s						
LL02	**Futaleuf**	**32.29**	**279**	P	**P**	**08 59 53.1**	**+1.5**
PLTB	**Pedras Altas**	**33.26**	**313**	P	**P**	**08 59 59.3**	**-0.9**
PLTB				IAmb	IAmb	09 00 11.8	
	comp=Z,22nm,1.4s						
PLCA	**Paso Flores**	**33.45**	**283**	P	**P**	**09 00 01.6**	**-0.2**
	comp=Z,6.2nm,0.7s,baz=148,slow=8.5,SNR=19						
PLCA				LR	LR	09 12 07.4	
	comp=Z,52nm,19.3s,baz=174,slow=34						
PLCA	**Paso Flores**	**33.45**	**283**	P	**P**	**09 00 01.9**	**+0.1**
PLCA				IAmb	IAmb	09 00 03.9	
	comp=Z,6.5nm,0.7s						
LL04	**Puerto Octay**	**34.24**	**281**	P	**P**	**09 00 08.5**	**-0.1**
LL04				IAmb	IAmb	09 00 09.6	
	comp=Z,7.0nm,0.7s						
LC01	**Cunco**	**35.50**	**284**	P	**P**	**09 00 18.9**	**-0.6**
LC01				IAmb	IAmb	09 00 23.6	
	comp=Z,12nm,0.7s						
MAW	**Mawson**	**37.13**	**141**	LR	LR	09 14 43.7	
	comp=Z,62nm,18.1s,baz=235,slow=34						
MAW	**Mawson**	**37.13**	**141**	P	**P**	**09 00 32.2**	**-0.8**
BO02	**Sierra Bellavi**	**38.20**	**289**	P	**P**	**09 00 41.4**	**-1.1**
BO02				IAmb	IAmb	09 00 46.2	
	comp=Z,8.8nm,0.5s						
GO05	**Huala**	**38.58**	**288**	P	**P**	**09 00 45.4**	**-0.3**
GO05				IAmb	IAmb	09 00 48.7	
	comp=Z,11nm,0.8s						
BO01	**Tunca**	**38.67**	**290**	P	**P**	**09 00 46.3**	**-0.1**
BO01				IAmb	IAmb	09 00 47.9	
	comp=Z,12nm,0.9s						
MT09	**Talagante**	**39.12**	**290**	P	**P**	**09 00 48.7**	**-1.6**
MT09				IAmb	IAmb	09 00 52.3	
	comp=Z,16nm,0.8s						
MT01	**Popeta**	**39.18**	**290**	P	**P**	**09 00 50.0**	**-0.7**
MT01				IAmb	IAmb	09 00 51.9	
	comp=Z,16nm,0.9s						
PEL	**Peldehue**	**39.49**	**291**	P	**P**	**09 00 54.0**	**+0.6**
VA05	**Santo Domingo**	**39.52**	**290**	P	**P**	**09 00 53.6**	**+0.2**
CPUP	**Villa Florida**	**39.55**	**312**	LR	LR	09 18 06.0	
	comp=Z,30nm,18.1s,baz=196,slow=38						
CPUP	**Villa Florida**	**39.55**	**312**	P	**P**	**09 00 53.0**	**-0.8**
CPUP				IAmb	IAmb	09 00 59.1	
	comp=Z,15nm,1.4s						
MT02	**Curacav**	**39.62**	**291**	P	**P**	**09 00 54.3**	**0.0**
VA03	**San Esteban**	**39.74**	**292**	P	**P**	**09 00 55.5**	**+0.1**
VA03				IAmb	IAmb	09 00 58.5	
	comp=Z,25nm,1.1s						

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ZON   Zonda              39.87 295  P       P        09 00 56.0 -0.4
ZON                                 IAmb    IAmb     09 01 00.0
      comp=Z,8.9nm,0.8s
CO03  El Pedregal        41.40 293  P       P        09 01 09.4 +0.2
CO06  Fray Jorge         41.98 292  P       P        09 01 13.4 -0.4
SBA   Scott Base         42.94 184  P       P        09 01 24.9 +3.9
SBA                                 IAmb    IAmb     09 01 25.6
      comp=Z,35nm,1.4s
VNDA  Vanda              43.41 182  P       P        09 01 28.0 +3.2
AC04  Llanos de Chal     43.79 295  P       P        09 01 28.8 +0.4
AC02  Maricunga          44.06 298  P       P        09 01 31.9 +0.7
BOSA  Boshof             46.10  71  LR      LR       09 18 33.5
      comp=Z,84nm,18.2s,baz=186,slow=33
BDFB  Brasilia           46.54 330  P       P        09 01 49.8 -0.6
      comp=Z,2.5nm,0.5s,baz=132,slow=8.8,SNR=5.6
BDFB  Brasilia           46.54 330  P       P        09 01 51.0 +0.6
PB14  IPOC Station P     46.54 298  P       P        09 01 49.7 -0.9
PB14                                IAmb    IAmb     09 01 52.6
      comp=Z,7.8nm,0.7s
LVC   Limon Verde        47.62 301  P       P        09 01 58.9 -0.2
      comp=Z,3.2nm,0.6s,baz=146,slow=7.8,SNR=4.2
LVC                                 LR      LR       09 20 53.0
      comp=Z,28nm,21.8s,baz=187,slow=35
LVC   Limon Verde        47.62 301  P       P        09 01 58.3 -0.8
LVC                                 IAmb    IAmb     09 02 04.1
      comp=Z,12nm,1.2s
PB04  IPOC Station P     48.42 300  P       P        09 02 04.6 -0.5
PB07  IPOC Station P     48.83 301  P       P        09 02 07.5 -0.7
PB07                                IAmb    IAmb     09 02 35.3
      comp=Z,16nm,1.2s
PB01  IPOC Station P     49.25 301  P       P        09 02 10.5 -0.9
PB01                                IAmb    IAmb     09 02 13.6
      comp=Z,5.5nm,0.8s
SIV   San Ignacio        50.37 314  P       P        09 02 18.2 -1.6
      comp=Z,1.0nm,0.5s,baz=150,slow=8.1,SNR=7.0
PB11  IPOC Station P     50.45 302  P       P        09 02 20.3 -0.3
PB11                                IAmb    IAmb     09 02 35.3
      comp=Z,11nm,1.2s
PSGCX Pisagua            50.80 302  P       P        09 02 24.7 +1.5
PSGCX                               IAmb    IAmb     09 02 24.8
      comp=Z,13nm,1.1s
H10S2 ASCENSION HYDR50.87   14  T       T        09 57 08.7
      baz=187,slow=74,SNR=2.2
H10S3 ASCENSION HYDR50.87   14  T       T        09 57 31.4
      baz=33,slow=74,SNR=4.5
H10N1 ASCENSION HYDR51.99   14  T       T        09 58 20.1
      baz=189
H10N3 ASCENSION HYDR51.99   14  T       T        09 58 23.2
      baz=189,slow=74
H10N2 ASCENSION HYDR52.00   14  T       T        09 58 23.2
      baz=189,slow=74
LPAZ  La Paz             52.89 306  P       P        09 02 38.6 -0.7
      comp=Z,2.0nm,0.5s,baz=99,slow=7.2,SNR=13
LPAZ  La Paz             52.89 306  P       P        09 02 38.8 -0.5
SAML  Samuel             57.63 315  P       P        09 03 10.8 -1.8
ETMB  Extrema            57.97 311  P       P        09 03 13.4 -1.7
NNA   Nana               60.50 299  LR      LR       09 28 11.0
      comp=Z,39nm,20.3s,baz=167,slow=35
RPN   Rapa Nui           63.91 260  LR      LR       09 25 42.7
      comp=Z,1µm,21.7s,baz=98,slow=30
PTGA  Pitinga            64.18 321  LR      LR       09 30 13.5
      comp=Z,25nm,20.2s,baz=134,slow=34
ATAH  Atahualpa          65.49 300  LR      LR       09 29 41.6
      comp=Z,46nm,21.1s,baz=157,slow=33
BOAV  Boa Vista          67.30 322  P       P        09 04 15.0 -2.3
LIC   Lamto              67.31  22  eP      P        09 04 17.4 +0.1
      comp=Z,39nm,1.1s
KIC   Kosan Boka         67.50  23  eP      P        09 04 18.7 +0.2
      comp=Z,14nm,0.8s
MDP   Montagnes des      67.63 331  LR      LR       09 32 23.9
      comp=Z,43nm,18.8s,baz=234,slow=35
TIC   Toumodi            67.72  22  eP      P        09 04 19.3 -0.6
DBIC  Dimbokro           67.78  22  P       P        09 04 20.4 +0.2
      comp=Z,5.1nm,0.6s,baz=180,slow=7.3,SNR=9.1
TORD  Torodi Ar. Bea     75.48  28  P       P        09 05 07.4 +0.9
      comp=Z,12nm,0.4s,baz=197,slow=6.2,SNR=96
TORD  Torodi Ar. Bea     75.48  28  P       P        09 05 07.8 +1.3
BBOO  Buckleboo          87.04 165  P       P        09 06 08.3 +0.6
BBOO                                IAmb    IAmb     09 06 25.1
      comp=Z,8.6nm,1.2s
FORT  Forrest            87.70 158  P       P        09 06 12.2 +1.3
STKA  Stephens Creek     88.61 169  P       P        09 06 16.3 +1.2
      comp=Z,1.8nm,0.6s,baz=131,slow=5.7,SNR=6.8
STKA  Stephens Creek     88.61 169  P       P        09 06 16.4 +1.2
ASAR  Alice Springs      95.70 161  P       P        09 06 48.6 +0.5
      comp=Z,1.7nm,0.6s,baz=182,slow=4.2,SNR=40
ASAR                                PKKPbc  PKKPbc   09 23 35.8 +0.7
      comp=Z,0.7nm,0.5s,baz=16,slow=2.4,SNR=4.3
ASAR  Alice Springs      95.70 161  P       P        09 06 49.0 +0.8
WRA   Warramunga Arr     99.42 161  P       Pdif     09 07 04.8 -0.1
      comp=Z,0.3nm,0.7s,baz=192,slow=4.0,SNR=2.2
SCHQ  Schefferville     118.41 334  PKP     PKPdf    09 12 08.1 -0.2
      comp=Z,4.2nm,0.6s,baz=57,slow=1.1,SNR=6.9
SCHQ  Schefferville     118.41 334          PKPdf    09 12 07.9 -0.5
PDAR  Pinedale Array    122.68 300  PKP     PKPdf    09 12 16.5 -0.8
      comp=Z,0.2nm,0.5s,baz=135,slow=5.3,SNR=4.9
CMAR  Chiang Mai Arr    123.17 111  PKP     PKiKP    09 12 19.6 +0.7
      comp=Z,0.8nm,0.3s,baz=230,slow=3.9,SNR=5.7
CMAR  Chiang Mai Arr    123.17 111          PKiKP    09 12 19.4 +0.5
NVAR  Mina Array Bea    123.33 290  PKP     PKiKP    09 12 19.5 +0.6
      comp=Z,0.3nm,0.5s,baz=62,slow=2.5,SNR=3.8
FINES FINESS Array B    126.83  28  PKP     PKPdf    09 12 24.4 +0.2
      comp=Z,5.7nm,0.9s,baz=198,slow=0.6,SNR=8.9
ARCES ARCESS Array B    133.61  22  PKP     PKPdf    09 12 37.1 +0.1
      comp=Z,1.5nm,0.5s,baz=217,slow=2.9,SNR=23
ARCES ARCESS Array B    133.61  22          PKPdf    09 12 36.9  0.0
CD2   Chengdu           135.98 107  PKP     PKPdf    09 12 43.5 +0.8
MKAR  Makanchi Array    137.08  74  PKP     PKPdf    09 12 44.7 +0.6
      comp=Z,0.9nm,0.9s,baz=219,slow=3.7,SNR=4.3
YKA   Yellowknife Ar    139.05 315  PKP     PKPdf    09 12 47.3 +0.1
      comp=Z,3.8nm,0.7s,baz=130,slow=2.3,SNR=42
ZALV  Zalesovo Beam     142.97  67  PKhKP   PKPpre   09 12 50.3
      comp=Z,0.9nm,0.5s,baz=242,slow=3.1,SNR=3.5
ZALV                                PKP     PKPdf    09 12 54.5  0.0
      comp=Z,0.9nm,0.5s,baz=300,slow=2.8,SNR=2.5
SONM  Songino Array     149.99  91  PKPbc   PKPbc    09 13 12.3 +0.6
      comp=Z,2.4nm,0.4s,baz=214,slow=3.6,SNR=29
NRIK  Noril'sk          150.92  42  PKPbc   PKiKP    09 13 13.6 -0.1
      comp=Z,1.0nm,0.4s,baz=9.3,slow=3.9,SNR=4.3
KSRS  Korea Array       152.35 130  PKPbc   PKiKP    09 13 18.3 +0.7
      comp=Z,0.8nm,0.7s,baz=173,slow=1.2,SNR=2.9
ILAR  Eielson Array     152.77 307  PKPbc   PKPbc    09 13 17.1 -0.3
      comp=Z,1.2nm,0.6s,baz=316,slow=1.7,SNR=23
ILAR  Eielson Array     152.77 307  PKPdf   PKPdf    09 13 08.8 -1.5
ILAR                                        PKPbc    09 13 17.2 -0.3
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*ROM **06** 08:54:35.0±0.1, 42°.443N±0°.007×15°.31E±0°.01, h10^{km}, ML2.7/32, Error ellipse: s-maj=1.0km s-min=0.6km az=234.0*

*LDG **06** 08:54:35.4±0.3, 42°.40N×15°.33E, h17^{km}, Ml2.9/16, Error ellipse: s-maj=8.2km s-min=3.7km az=59.0*

ISC 06 08:54:36.8±1.0**, 42°.34N**±0°.03×**15°.17E**±0°.02**, h31**^{km}±12^{km}**, n82, σ1^s.95**/105**, 1C, Adriatic Sea**

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Code  Station Name        Δ°   AZ°   Phase ID            Time      Res
                                     Op      ISC       h  m  s     ISC
CIGN  Sant'Elia a Pi     0.71 196   P       Pn       08 54 50.9 +0.2
CIGN                                AML     AML
      comp=N,394µm,0.8s
CIGN                                AML     AML
      comp=N,395µm,0.8s
CIGN                                AML     AML
      comp=E,385µm,0.5s
SGRT  San Giovanni R     0.72 143   P       Pb       08 54 49.7 -1.2
SGRT                                AML     AML
      comp=E,1865µm,0.4s
SGRT                                AML     AML
      comp=E,1870µm,0.4s
SGRT                                AML     AML
      comp=N,1165µm,0.6s
TRIV  Trivento           0.73 219   P       Pn       08 54 51.3 +0.3
TRIV                                AML     AML
      comp=E,358µm,0.3s
TRIV                                AML     AML
      comp=N,365µm,0.8s
TRIV                                AML     AML
      comp=E,338µm,0.7s
TRIV                                AML     AML
      comp=E,338µm,0.7s
TRIV                                AML     AML
      comp=N,374µm,0.8s
MSAG  Monte S. Angel     0.83 138   P       Pb       08 54 51.7 -1.1
MSAG                                AML     AML
      comp=E,1540µm,0.7s
MSAG                                AML     AML
      comp=E,1455µm,0.7s
MSAG                                AML     AML
      comp=N,2555µm,0.8s
MSAG                                AML     AML
      comp=N,2635µm,0.7s
BSSO  Busso              0.90 209   P       Pb       08 54 54.3 +0.4
BSSO                                AML     AML
      comp=N,196µm,1.0s
BSSO                                AML     AML
      comp=E,154µm,1.2s
MIDA  Miranda            0.97 225   P       Pb       08 54 55.5 +0.4
MIDA                                S       Sn       08 55 11.1 +3.9
MIDA                                AML     AML
      comp=E,390µm,1.0s
MIDA                                AML     AML
      comp=N,301µm,0.5s
VCEL  Villa Celiera      0.99 274   P       Pb       08 54 55.5 +0.1
VCEL                                AML     AML
      comp=N,606µm,0.7s
VCEL                                AML     AML
      comp=E,622µm,0.6s
RNI2  Rionero Sannit     0.99 230   AML     AML
      comp=E,392µm,0.6s
RNI2                                AML     AML
      comp=N,244µm,1.6s
T0110 Collepietro        1.04 264   P       Pb       08 54 56.2  0.0
T0110                               AML     AML
      comp=N,593µm,0.4s
T0110                               AML     AML
      comp=E,972µm,0.4s
CERA  Filignano          1.13 230   P       Pb       08 54 58.0 +0.2
CERA                                AML     AML
      comp=E,319µm,1.0s
CERA                                AML     AML
      comp=N,220µm,0.6s
CERA                                AML     AML
      comp=N,219µm,0.6s
VAGA  Valle Agricola     1.16 218   P       Pb       08 54 58.4 +0.2
VAGA                                AML     AML
      comp=E,252µm,1.1s
VAGA                                AML     AML
      comp=N,455µm,0.8s
FAGN  Fagnano            1.18 267   P       Pb       08 54 58.8 +0.2
FAGN                                S       Sb       08 55 16.5 +3.0
FAGN                                AML     AML
      comp=E,1445µm,0.5s
FAGN                                AML     AML
      comp=N,866µm,0.4s
TERO  Teramo             1.19 284   P       Pn       08 54 58.1 +0.8
TERO                                AML     AML
      comp=N,141µm,0.5s
TERO                                AML     AML
      comp=E,174µm,0.4s
VITU  Vitulano (BN)      1.22 200   P       Pb       08 55 00.3 +1.0
VITU                                AML     AML
      comp=N,347µm,0.7s
VITU                                AML     AML
      comp=E,338µm,0.3s
VITU                                AML     AML
      comp=N,346µm,0.7s
VVLD  Villa Vallelon     1.24 249   AML     AML
      comp=N,129µm,0.7s
VVLD                                AML     AML
      comp=E,128µm,0.5s
VVLD                                AML     AML
      comp=N,129µm,0.7s
VVLD                                AML     AML
      comp=E,128µm,0.5s
CAPA  Cerignola FG       1.27 157   AML     AML
      comp=N,366µm,1.3s
CAPA                                AML     AML
      comp=E,446µm,1.0s
CAFE  Carife             1.31 178   P       Pb       08 55 01.0 +0.2
CAFE                                AML     AML
      comp=E,170µm,0.4s
CAFE                                AML     AML
      comp=N,144µm,0.3s
LSTV  Lastovo            1.34  71   ePg     Pb       08 54 59.9 -1.4
LSTV                                Sg      Sb       08 55 18.2 +0.1
PIGN  Pignataro Magg     1.35 213   P       Pb       08 55 01.9 +0.4
PIGN                                AML     AML
      comp=E,85µm,0.7s
PIGN                                AML     AML
      comp=N,96µm,1.0s
PIGN                                AML     AML
      comp=E,85µm,0.7s
ZIRJ  Zirje              1.36  15   ePg     Pn       08 54 58.8 -0.8
ZIRJ                                Sg      Sb       08 55 17.8 -0.9
PAOL  Paolisi            1.38 199   P       Pb       08 55 02.3 +0.3
PAOL                                AML     AML
      comp=E,121µm,0.5s
PAOL                                AML     AML
      comp=N,127µm,0.5s
PAOL                                AML     AML
      comp=E,121µm,0.5s
PAOL                                AML     AML
      comp=N,128µm,0.5s
SNAL  S. Angelo Dei      1.41 179   P       Pb       08 55 01.9 -0.6
SNAL                                S       Sb       08 55 22.6 +2.5
SNAL                                AML     AML
      comp=E,148µm,1.0s
SNAL                                AML     AML
      comp=N,157µm,0.9s
RM33  Pellescritta (     1.46 277   P       Pb       08 55 03.0 -0.3
RM33                                AML     AML
      comp=E,198µm,1.1s
RM33                                AML     AML
      comp=E,199µm,1.1s
RM33                                AML     AML
      comp=N,243µm,0.7s
FIAM  Fiamignano         1.52 268   P       Pb       08 55 04.4  0.0
FIAM                                AML     AML
      comp=E,189µm,1.2s
FIAM                                AML     AML
      comp=N,147µm,0.7s
PP3   Marolino           1.55 313   AML     AML
      comp=E,438µm,0.5s
PP3                                 AML     AML
      comp=N,376µm,0.7s
MORI  Morici             1.58  14   ePn     Pn       08 55 02.8 +0.2
MORI                                Sn      Sn       08 55 23.5 +1.6
LNSS  Leonessa           1.60 280   P       Pb       08 55 04.8 -0.9
LNSS                                AML     AML
      comp=N,204µm,0.5s
LNSS                                AML     AML
      comp=E,260µm,0.7s
LNSS                                AML     AML
      comp=N,204µm,0.5s
NRCA  Norcia             1.60 289   P       Pb       08 55 04.7 -1.0
NRCA                                AML     AML
      comp=E,184µm,0.5s
NRCA                                AML     AML
      comp=N,246µm,0.6s
CSP1  Cessapalombo       1.63 298   P       Pn       08 55 04.8 +1.3
DUGI  Dugi Otok          1.66 357   ePn     Pn       08 55 03.8 +0.1
DUGI                                Sn      Sn       08 55 25.7 +1.8
MAKA  Makarska           1.66  54   ePn     Pn       08 55 04.2 +0.5
MAKA                                Sn      Sb       08 55 26.3 -0.9
FDMO  Fiordimonte        1.69 295   AML     AML
      comp=N,160µm,0.3s
FDMO                                AML     AML
      comp=E,172µm,0.3s
FDMO                                AML     AML
      comp=E,172µm,0.3s
AMUR  Altamura           1.79 143   P       Pb       08 55 06.5 -2.3
AMUR                                AML     AML
      comp=N,136µm,0.7s
AMUR                                AML     AML
      comp=E,176µm,1.3s
CESI  CESI - Serrava     1.80 293   AML     AML
      comp=E,100µm,0.4s
CESI                                AML     AML
      comp=N,97µm,0.4s
RICI  Ricice             1.85  51   ePn     Pn       08 55 07.0 +0.6
RICI                                Sn      Sb       08 55 30.6 -2.0
CESX  Cesi               1.94 279   P       Pb       08 55 10.1 -1.3
CESX                                AML     AML
      comp=N,99µm,1.1s
CESX                                AML     AML
      comp=E,102µm,1.6s
STON  Ston               1.94  73   ePn     Pn       08 55 08.4 +0.9
STON                                Sn      Sb       08 55 33.9 -1.4
STON  Ston               1.94  73   AML     AML
      comp=N,136µm,0.4s
STON                                AML     AML
      comp=E,73µm,0.7s
ARVD  Arcevia            2.01 306   P       Pn       08 55 09.5 +1.0
ARVD                                AML     AML
      comp=N,55µm,1.3s
ARVD                                AML     AML
      comp=E,66µm,0.6s
SSFR  Montelago di S     2.07 303   P       Pn       08 55 10.7 +1.3
SSFR                                AML     AML
      comp=E,138µm,0.2s
SSFR                                AML     AML
      comp=N,112µm,0.2s
ATFO  Monte Foce - G     2.17 299   P       Pn       08 55 12.4 +1.6
ATFO                                AML     AML
      comp=N,97µm,1.0s
ATFO                                AML     AML
      comp=E,119µm,0.6s
MPAG  Monte Paganucc     2.19 307   P       Pn       08 55 12.1 +1.0
MPAG                                AML     AML
      comp=E,68µm,1.5s
MPAG                                AML     AML
      comp=N,84µm,0.9s
DBRK  Dubrovnik          2.23  80   ePn     Pn       08 55 12.4 +0.9
UDBI  Udbina             2.23  11   ePn     Pn       08 55 13.5 +1.9
UDBI                                Sn      Sb       08 55 41.2 -2.5
PIEI  Pieia              2.28 303   AML     AML
      comp=E,52µm,0.9s
PIEI                                AML     AML
      comp=N,61µm,1.1s
PLIT  Plitvice           2.56   7   ePn     Pn       08 55 17.8 +1.6
PLIT                                Sn      Sn       08 55 49.2 +2.9
SMRN  Sveta Marina       2.80 345   Sn      Sn       08 55 52.8 +0.9
BRSN  Barisano           2.98 312   S       Sb       08 56 15.0  +10
BOJS  Bojanci            3.17   1   ⇑P      Pb       08 55 35.9 +3.6
OZLJ  Ozalj              3.29   4   ePn     Pn       08 55 26.1 +0.1
OZLJ                                Sn      Sn       08 56 05.2 +1.2
MOSL  Moslavina          3.47  19   ePn     Pn       08 55 29.8 +1.2
LLI   Lipari             3.89 183   S       Sn       08 56 19.0  0.0
OBKA  Obir               4.20 354   ePn     Pn       08 55 39.4 +0.8
      comp=N,1.3nm,0.2s
OBKA                                eSn     Sn       08 56 28.0 +1.3
      comp=N,2.4nm,0.3s
SOKA  Soboth             4.34 359   ePn     Pn       08 55 41.1 +0.5
      comp=N,0.7nm,0.2s
SOKA                                eSn     Sn       08 56 30.7 +0.5
      comp=N,0.7nm,0.3s
MYKA  Terra Mystica      4.43 346   ePn     Pn       08 55 42.6 +0.8
      comp=N,0.6nm,0.2s
MYKA                                eSn     Sn       08 56 35.5 +3.2
      comp=N,0.9nm,0.3s
PGF   Pioggiola          4.57 275   eP      Pn       08 55 46.5 +2.7
PGF                                 eSn     Sn       08 56 34.3 -1.6
      comp=N,0.6nm,0.3s
ABTA  Abfaltersbach      4.80 338   ePn     Pn       08 55 47.3 +0.3
      comp=N,0.1nm,0.1s
ARSA  Arzberg            4.92   3   ePn     Pn       08 55 48.9 +0.4
      comp=N,0.3nm,0.2s
ARSA                                eSn     Sn       08 56 44.5 +0.2
      comp=N,0.5nm,0.3s
ZONE  Zone               5.00 315   P       Pn       08 55 51.8 +2.2
ZONE                                P       Pb       08 56 03.0 -0.5
EUCT  Pavia              5.23 305   P       Pn       08 55 54.7 +2.0
WTTA  Wattenberg         5.53 334   ePn     Pn       08 55 58.7 +1.7
      comp=N,0.2nm,0.1s
WTTA                                eSn     Sn       08 57 02.0 +2.3
      comp=N,1.3nm,0.3s
MOA   Molln              5.55 354   ePn     Pn       08 55 57.6 +0.4
      comp=N,0.5nm,0.2s
MOA                                 eSn     Sn       08 57 00.8 +0.9
      comp=N,1.0nm,0.3s
CONA  Conrad Observa     5.61   5   ePn     Pn       08 55 57.1 -1.0
      comp=N,0.2nm,0.2s
CONA                                eSn     Sn       08 57 01.2 -0.4
      comp=N,0.4nm,0.3s
WATA  Walderalm          5.61 334   ePn     Pn       08 55 59.0 +0.8
      comp=N,0.8nm,0.2s
WATA                                eSn     Sn       08 57 01.3 -0.3
      comp=N,3.2nm,0.5s
SQTA  Sankt Quirin       5.64 331   ePn     Pn       08 55 59.0 +0.5
      comp=N,0.8nm,0.2s
SQTA                                eSn     Sn       08 57 05.5 +3.3
      comp=N,3.7nm,0.3s
FETA  Feichten           5.65 327   ePn     Pn       08 55 59.0 +0.3
      comp=N,0.8nm,0.6s
FETA                                eSn     Sn       08 57 04.2 +1.6
      comp=N,3.6nm,0.7s
MOTA  Moosalm            5.78 331   ePn     Pn       08 56 00.3 -0.2
      comp=N,0.8nm,0.4s
MOTA                                eSn     Sn       08 57 08.5 +2.8
      comp=N,1.2nm,0.3s
SBF   Sospel             5.87 288   eP      Pn       08 56 05.1 +3.6
SBF                                 eSn     Sn       08 57 04.4 -3.3
      comp=N,1.5nm,0.3s
LMR   La Mourre          6.45 282   eP      Pn       08 56 13.1 +3.7
LMR                                 eSn     Sn       08 57 18.5 -3.4
      comp=N,0.2nm,0.3s
MBDF  Montbardon         6.56 294   ePn     Pn       08 56 11.0 -0.1
MBDF                                eSn     Sn       08 57 20.5 -4.3
      comp=N,1.4nm,0.4s
VYHS  Vyhne              6.68  21   ePN     Pn       08 56 16.4 +3.8
LPG   La Plagne          6.85 300   ePn     Pn       08 56 14.2 -1.1
LPG                                 eSn     Sn       08 57 27.5 -4.8
      comp=N,3.3nm,0.3s
LPL   La Plagne          6.87 300   ePn     Pn       08 56 14.4 -1.1
LPL                                 eSn     Sn       08 57 27.8 -4.9
      comp=N,5.2nm,0.5s
ORIF  Oris-en-Rattie     7.22 294   ePn     Pn       08 56 19.3 -0.8
ORIF                                eSn     Sn       08 57 36.2 -4.8
      comp=N,0.8nm,0.3s
CABF  La Chapelle        7.77 306   ePn     Pn       08 56 26.1 -1.7
CABF                                eSn     Sn       08 57 49.2 -5.5
      comp=N,1.1nm,0.4s
VIVF  Saint-Julien-l     8.03 292   ePg     Pb       08 57 04.2 +9.2
HINF  Hinteralfeld       8.04 316   ePn     Pn       08 56 28.9 -2.4
HINF                                eSn     Sn       08 57 54.2 -6.9
      comp=N,2.9nm,0.3s
CDF   Champ du Feu       8.23 320   eP      Pn       08 56 35.1 +1.1
CDF                                 eSn     Sn       08 57 58.3 -7.6
      comp=N,1.1nm,0.4s
HAU   Haudompre          8.42 315   ePn     Pn       08 56 33.7 -2.9
HAU                                 eSn     Sn       08 58 03.3 -7.2
      comp=N,13nm,0.4s
SMF   Signal de Mont     9.17 302   ePn     Pn       08 56 44.8 -2.0
SMF                                 eSn     Sn       08 58 22.5 -6.4
      comp=N,0.5nm,0.2s
LOR   Lormes             9.43 305   ePn     Pn       08 56 49.4 -1.0
      baz=125
LOR                                 eSn     Sn       08 58 29.3 -5.9
      comp=N,1.4nm,0.3s
AVF   Avril sur Loir     9.54 302   ePn     Pn       08 56 50.8 -1.0
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*NOU **06** 09:12:47.2, 30°.55S×174°.77W, h0^{km}, mb4.9/24, Kermadec Islands Region*

*IDC **06** 09:12:56.5±0.5, 30°.05S×176°.30W, h0^{km}, mb4.5/16, mb1 4.7/18, mb1mx4.6/34, mbtmp4.5/18, ML6.2/1, MS3.7/16, Ms1 3.7/16, ms1mx3.6/26, Error ellipse: s-maj=18.5km s-min=15.1km az=25.0*

*GCMT **06** 09:13:00.7±0.4, 29°.92S±0°.04×176°.04W±0°.03, h18^{km}±1^{km}, MW4.8/73, Moment Tensor Solution. s22,c26; s73,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.55±.18; $M_{\theta\theta}$0.78±.12; $M_{\phi\phi}$1.78±.11; $M_{r\theta}$0.24±.38; $M_{\theta\phi}$0.51±.07; $M_{\phi r}$0.22±.26; Best double couple: $M_0$2.29400×10^{16} NP1:ϕ_s20.00000°, δ41.00000°, λ-94.00000°. NP2: ϕ_s205.00000°, δ49.00000°, λ-87.00000°. Principal axes: T 2.0130, Plg4.0000°, Azm293.0000°; N 0.5670, Plg2.0000°, Azm23.0000°; P -2.5750, Plg86.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **06** 09:13:01.7±2.4, 30°.06S±0°.09×176°.3W±0°.1, h27^{km}±4^{km}, mb4.7/33 Error ellipse: s-maj=14.9km s-min=12.7km az=60.0*

ISC 06 09:13:01.8±0.3**, 30°.42S**±0°.02×**176°.39W**±0°.04**, h35**^{km}**, n244, σ2^s.03**/256**, mb4.8**/37**, MS3.8**/16**, 10C-4D, Kermadec Islands region**

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Code  Station Name        Δ°   AZ°   Phase ID            Time      Res
                                     Op      ISC       h  m  s     ISC
GLKZ  Green Lake         1.76 311   P       Pn       09 13 26.5 -3.2
GLKZ                                S       Sn       09 13 48.0 -2.9
RAO   Raoul Island       1.76 311   Pn      Pn       09 13 27.5 -2.3
      730nm,0.3s,baz=310,slow=18,SNR=49
RAO                                 Sn      Sn       09 13 47.6 -3.5
      5µm,0.3s,baz=90,slow=20,SNR=12
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RAO	Raoul Island	1.76	311	Pn	Pn	09 13 27.7	-2.1
RIZ	Raoul Island	1.77	311	P	Pn	09 13 26.5	-3.5
RIZ				S	Sn	09 13 50.7	-0.7
MXZ	Matakaoa Point	8.37	210	P	Pn	09 15 00.4	-0.2
MXZ				S	Sn	09 16 36.9	+3.1
WMGZ	Waiomatatini S	8.54	209	P	Pn	09 15 02.2	-0.7
WMGZ				S	Sn	09 16 42.3	+4.3
PKGZ	Pakihiroa	8.74	210	P	Pn	09 15 04.9	-0.9
PKGZ				S	Sn	09 16 46.8	+3.7
HAZ	Te Kaha	8.77	212	P	Pn	09 15 05.8	-0.2
HAZ				S	Sn	09 16 47.7	+4.2
PUZ	Puketiti	8.82	209	P	Pn	09 15 04.9	-1.9
PUZ				S	Sn	09 16 46.8	+1.8
KUZ	Kuaotunu	9.11	224	P	Pn	09 15 13.8	+3.1
CNGZ	Carnagh Statio	9.19	208	P	Pn	09 15 08.8	-3.1
CNGZ				S	Sn	09 16 55.1	+1.1
MWZ	Matawai	9.35	211	P	Pn	09 15 12.9	-1.2
MWZ				S	Sn	09 17 00.2	+2.1
URZ	Urewera	9.48	213	Pn	Pn	09 15 14.4	-1.4
	2.5nm,0.3s,baz=121,slow=24,SNR=32						
URZ				Sn	Sn	09 17 03.0	+1.9
	18nm,0.3s,baz=224,slow=20,SNR=9.6						
URZ	Urewera	9.48	213	P	Pn	09 15 12.8	-3.0
URZ				S	Sn	09 17 00.1	-1.1
URZ	Urewera	9.48	213	P	Pn	09 15 14.8	-1.0
OUZ	Omahuta	9.69	238	Pn	Pn	09 15 23.8	+5.2
OUZ	Omahuta	9.69	238	P	Pn	09 15 23.7	+5.1
PRGZ	Paritu Road	9.70	207	P	Pn	09 15 16.8	-2.0
PRGZ				S	Sn	09 17 08.6	+2.0
MUGZ	Murupara	9.82	213	P	Pn	09 15 18.1	-2.4
MUGZ				S	Sn	09 17 10.7	+1.3
RTZ	Ruatahuna	9.83	212	P	Pn	09 15 18.2	-2.5
RTZ				S	Sn	09 17 12.6	+2.8
MHGZ	Mahia Peninsul	9.89	207	P	Pn	09 15 19.3	-2.1
RAHZ	Arahi	10.03	211	P	Pn	09 15 22.2	-1.1
RAHZ				S	Sn	09 17 16.7	+2.0
MTHZ	Maungataniwha	10.09	212	P	Pn	09 15 23.3	-0.8
MTHZ				S	Sn	09 17 17.7	+1.7
MRHZ	Matea Rd	10.27	213	P	Pn	09 15 24.8	-1.8
NMHZ	Naumai	10.30	211	P	Pn	09 15 26.7	-0.5
NMHZ				S	Sn	09 17 23.8	+2.4
ARHZ	Aropaoanui	10.36	210	P	Pn	09 15 25.6	-2.2
ARHZ				S	Sn	09 17 25.4	+2.8
BKZ	Black Stump Fm	10.50	212	P	Pn	09 15 27.2	-2.6
BKZ				S	Sn	09 17 27.9	+1.7
MCHZ	McNeill Hill	10.64	210	P	Pn	09 15 29.3	-2.3
KWHZ	Kaweka Forest	10.74	211	P	Pn	09 15 31.9	-1.2
HIZ	Hauiti	10.83	219	P	Pn	09 15 35.3	+1.1
TMVZ	Te Maari	10.83	215	P	Pn	09 15 32.5	-1.9
NTVZ	North Tongarir	10.83	215	P	Pn	09 15 33.0	-1.5
ETVZ	East Tongariro	10.85	215	P	Pn	09 15 33.0	-1.6
KAHZ	Kahuranaki	10.85	209	P	Pn	09 15 31.1	-3.6
NGZ	Ngauruhoe	10.93	215	P	Pn	09 15 32.4	-3.4
NGZ				S	Sn	09 17 38.5	+1.6
FWVZ	Far West T-bar	11.02	215	P	Pn	09 15 37.9	+0.9
FWVZ				S	Sn	09 17 37.7	-1.4
WAZ	Wanganui	11.68	215	P	Pn	09 15 45.3	-0.6
WAZ				S	Sn	09 17 53.1	-1.9
NEZ	North Egmont	11.78	219	P	Pn	09 15 51.2	+3.8
POWZ	Post Office Ro	11.82	211	P	Pn	09 15 46.7	-1.1
POWZ				S	Sn	09 17 57.2	-1.2
MRZ	Mangatainoka R	12.12	210	P	Pn	09 15 48.7	-3.3
MRZ				S	Sn	09 18 01.9	-3.9
HOWZ	Holdsworth Sta	12.35	210	P	Pn	09 15 50.4	-4.7
HOWZ				S	Sn	09 18 08.0	-3.3
TMWZ	Te Maipa	12.36	208	P	Pn	09 15 51.3	-3.9
TMWZ				S	Sn	09 18 07.2	-4.5
OGWZ	Otaki Gorge	12.43	211	P	Pn	09 15 52.2	-4.0
OGWZ				S	Sn	09 18 09.0	-4.4
MTW	Mount Morrison	12.56	209	P	Pn	09 15 53.5	-4.5
MTW				S	Sn	09 18 12.0	-4.6
KIW	Kapiti Island	12.58	212	P	Pn	09 15 53.6	-4.7
CAW	Cannon Point	12.71	211	P	Pn	09 15 56.2	-3.8
DUWZ	D'Urville Isla	13.00	215	P	Pn	09 16 00.8	-3.2
TCW	Tory Channel	13.15	213	P	Pn	09 16 01.0	-5.0
TUWZ	Tuamarina	13.48	213	P	Pn	09 16 05.2	-5.3
NNZ	Nelson	13.59	215	P	Pn	09 16 07.3	-4.6
MSVF	Nonsavu	13.61	337	Pn	Pn	09 16 06.8	-5.6
	4.6nm,0.3s,baz=153,slow=12,SNR=10						
MSVF				LR	LR	09 20 15.4	
	comp=Z,580nm,20.7s,baz=163,slow=33						
MSVF	Nonsavu	13.61	337		Pn	09 16 09.0	-3.4
QRZ	Quartz Range	13.73	218	P	Pn	09 16 12.6	-1.4
QRZ	Quartz Range	13.73	218	P	Pn	09 16 13.0	-1.0
BSWZ	Blackbirch Sta	13.73	212	P	Pn	09 16 09.8	-4.1
THZ	Tophouse	14.23	214	P	Pn	09 16 16.8	-4.0
KHZ	Kahutara	14.44	211	P	Pn	09 16 19.4	-4.2
DSZ	Denniston Nort	14.77	217	P	Pn	09 16 26.2	-2.0
GVZ	Greta Valley S	15.11	211	P	Pn	09 16 28.0	-4.5
LTZ	Lake Taylor	15.31	213	P	Pn	09 16 30.7	-4.6
AMCZ	Amberley	15.44	211	P	Pn	09 16 36.3	-0.6
INZ	Inchbonnie	15.67	215	P	Pn	09 16 36.0	-3.9
OKCZ	Okains Bay	15.70	209	P	Pn	09 16 35.4	-4.9
OXZ	Oxford	15.84	212	P	Pn	09 16 38.1	-4.0
MQZ	McQueen's Vall	15.86	210	P	Pn	09 16 37.4	-4.9
MQZ				S	Sn	09 19 27.2	-10
RPZ	Rata Peaks	16.60	213	P	Pn	09 16 49.6	-2.1
AFI	Afiamalu	16.98	16	Pn	Pn	09 16 52.2	-4.4
	2.4nm,0.3s,baz=122,slow=9.5,SNR=3.6						
AFI				Sn	Sn	09 19 36.7	-28
	1.8nm,0.3s,baz=253,slow=23,SNR=1.3						
AFI				LR	LR	09 23 20.5	
	comp=Z,101nm,21.2s,baz=156,slow=38						
OUENC	Ouen Island, N	16.99	294		P	09 17 00.4	+2.1
OUENC	Ouen Island, N	16.99	294	P	P	09 17 03.7	+5.4
DZM	Mont Dzumac	17.48	294	eP	P	09 17 04.4	+0.5
	83nm,0.9s						
DZM				eLR	LR	09 21 08.6	
	comp=Z,959nm,29.1s						
DZM	Mont Dzumac	17.48	294	P	P	09 17 05.2	+1.3
	0.9nm,0.3s,baz=247,slow=22,SNR=14						
DZM				LR	LR	09 22 25.4	
	comp=Z,297nm,18.6s,baz=147,slow=33						
DZM	Mont Dzumac	17.48	294	P	P	09 17 05.6	+1.7
DZM				IAmb	IAmb	09 17 10.3	
	comp=Z,37nm,0.9s						
DZM	Mont Dzumac	17.48	294	P	P	09 17 07.0	+3.1
RAR	Rarotonga	17.53	62	P	Pn	09 16 54.9	-8.6
	comp=Z,1.0nm,0.3s,baz=158,slow=8.7,SNR=2.3						
RAR				S	Sn	09 19 51.2	-27
	comp=Z,1.3nm,0.3s,baz=283,slow=21,SNR=3.7						
NOUC	Port Laguerre	17.58	294	P	P	09 17 08.9	+4.1
ODZ	Otahua Downs	17.80	211	P	Pn	09 17 04.3	-2.4
RTV	Rentapao	18.68	309	P	Pn	09 17 19.8	+2.2
KOUNC	Koumac, New Ca	19.99	295	P	Pn	09 17 36.2	+2.9
LHI	Lord Howe Isla	21.07	261	P	P	09 17 47.5	+4.5
PAE	Paea	27.50	69	eT	T	09 46 21.8	
	comp=Z,3.5nm,0.3s						
ARMA	Armidale	27.53	262	P	P	09 18 48.2	+2.8
ARMA				IAmb	IAmb	09 19 10.1	
	comp=Z,18nm,1.5s						
PPT2	Papeete2	27.55	69	eLR	LR	09 25 02.0	
	comp=Z,340nm,29.2s						
PPT2	Papeete2	27.55	69	eT	T	09 46 25.9	
	comp=Z,4.5nm,0.4s						
PPT	Papeete	27.56	68	LR	LR	09 27 56.4	
	comp=Z,120nm,20.0s,baz=270,slow=33						
EIDS	Eidsvold	29.12	272	P	P	09 19 01.4	+2.0
RK1H	Rockhampton Ha	30.27	275	P	P	09 19 12.3	+2.7
HNR	Honiara	30.38	308	LR	LR	09 30 00.5	
	comp=Z,71nm,20.1s,baz=133,slow=34						
VAH	Vaihoa	30.40	67	eT	T	09 49 58.3	
	comp=Z,5.5nm,0.2s						
RMQ	Roma	30.82	269	P	P	09 19 17.8	+3.3
TOO	Toolangi	32.23	247	P	P	09 19 29.1	+2.3
TOO				IAmb	IAmb	09 19 30.3	
	comp=Z,15nm,1.2s						
QLP	Quilpie	34.69	266	P	P	09 19 49.6	+1.2
	comp=Z,20nm,1.2s						
CTAO	Charters Tower	35.17	278	P	P	09 19 53.6	+1.0
CTAO				IAmb	IAmb	09 19 54.9	
	comp=Z,12nm,0.8s						
CTAO	Charters Tower	35.17	278	P	P	09 19 54.1	+1.5
STKA	Stephens Creek	35.82	257	P	P	09 19 59.2	+1.2
	comp=Z,4.5nm,0.9s,baz=87,slow=9.8,SNR=9.9						
STKA				LR	LR	09 34 30.9	
	comp=Z,99nm,18.2s,baz=59,slow=36						
STKA	Stephens Creek	35.82	257	P	P	09 19 59.7	+1.6
INKA	Innaminka	37.39	263	P	P	09 20 13.9	+2.5
	comp=Z,24nm,0.9s						
MTSU	Mount Surprise	37.66	280	P	P	09 20 15.7	+1.8
HTT	Hallett	37.83	254	P	P	09 20 17.1	+2.0
LCRK	Leigh Creek	38.93	258	P	P	09 20 26.0	+1.6
TAOE	Nuku Hiva Isla	40.05	65	eLR	LR	09 31 05.0	
	comp=Z,156nm,27.0s						
BBOO	Buckleboo	40.30	254	P	P	09 20 36.6	+0.8
BBOO				IAmb	IAmb	09 20 37.0	
	comp=Z,10nm,1.1s						
COEN	Coen	40.62	285	P	P	09 20 38.9	+0.4
OOD	Oodnadatta	41.71	261	P	P	09 20 49.0	+1.6
AS31	Alice Springs	44.49	266	P	P	09 21 10.0	0.0
ASAR	Alice Springs	44.49	266	P	P	09 21 09.8	-0.2
	comp=Z,5.0nm,0.7s,baz=106,slow=8.0,SNR=92						
ASAR				PcP	PP	09 22 53.7	-0.5
	comp=Z,2.4nm,0.8s,baz=118,slow=4.1,SNR=6.5						
ASAR				LR	LR	09 38 04.2	
	comp=Z,138nm,22.0s,baz=130,slow=34						
WR0	Warramunga Arr	45.30	271	P	P	09 21 15.4	-1.1
WR0				IAmb	IAmb	09 21 18.9	
	comp=Z,9.8nm,1.1s						
WB2	Warramunga Arr	45.48	271	P	P	09 21 16.8	-1.0
WB2				IAmb	IAmb	09 21 20.1	
	comp=Z,15nm,1.1s						
WRAB	Tennant Creek	45.48	271	P	P	09 21 16.8	-1.1
WRAB				IAmb	IAmb	09 21 20.1	
	comp=Z,14nm,1.0s						
WRA	Warramunga Arr	45.48	271	P	P	09 21 16.8	-1.1
	comp=Z,7.9nm,0.7s,baz=111,slow=7.3,SNR=63						
WRA				PcP	PcP	09 22 57.0	+0.4
	comp=Z,4.1nm,0.9s,baz=107,slow=3.6,SNR=6.3						
WRA	Warramunga Arr	45.48	271	P	P	09 21 16.8	-1.1
WB0	Warramunga Arr	45.51	272	P	P	09 21 17.0	-1.1
WB0				IAmb	IAmb	09 21 20.4	
	comp=Z,13nm,0.9s						
FORT	Forrest	47.38	255	P	P	09 21 32.7	0.0
VNDA	Vanda	48.22	186	P	P	09 21 41.0	+2.5
VNDA				IAmb	IAmb	09 21 51.3	
	comp=Z,8.9nm,1.4s						
MTN	Manton Dam	51.36	278	P	P	09 22 03.0	-0.2
MTN	Manton Dam	51.36	278	P	P	09 22 04.7	+1.5
DRS	Darwin Rock St	51.76	278	P	P	09 22 06.9	+0.8
KNRA	Kununurra	52.09	273	P	P	09 22 08.3	-0.3
KNRA				IAmb	IAmb	09 22 11.5	
	comp=Z,10nm,0.7s						
KNRA	Kununurra	52.09	273	P	P	09 22 08.7	+0.1
QSPA	South Pole Qui	59.69	180	P	P	09 23 06.2	+3.7
	comp=Z,7.7nm,0.9s,baz=33,slow=2.2,SNR=14						
QSPA	South Pole Qui	59.69	180	P	P	09 23 06.3	+3.7
MAW	Mawson	72.77	200	LR	LR	09 58 33.6	
	comp=Z,37nm,19.1s,baz=62,slow=37						
MAW	Mawson	72.77	200	P	P	09 24 30.0	+3.9
LEM	Lembang	74.50	271	LR	LR	09 59 56.6	
	comp=Z,33nm,18.2s,baz=172,slow=38						
SBUM	Sibu	75.28	282	P	P	09 24 41.2	-0.5
SNAA	Sanae	78.09	178	P	P	09 24 59.1	+2.4
SNAA	Sanae	78.09	178	P	P	09 24 59.2	+2.5
SNAA				IAmb	IAmb	09 25 00.0	
	comp=Z,9.3nm,1.1s						
VNA3	Neumayer Olymp	78.19	176	P	P	09 24 59.4	+2.2
VNA3	Neumayer Olymp	78.19	176	pP	pP	09 25 10.7	+5.0
VNA2	Neumayer--Watz	78.64	176	P	P	09 25 01.9	+2.3
	baz=181,slow=4.3						
VNA2	Neumayer--Watz	78.64	176	pP	pP	09 25 13.6	+5.4
VNA1	Neumayer--Stat	78.86	176	P	P	09 25 02.9	+2.1
VNA1	Neumayer--Stat	78.86	176	pP	pP	09 25 14.0	+4.7
MJAR	Matsushiro Arr	79.06	324	P	P	09 25 00.5	-1.8
	comp=Z,3.1nm,0.8s,baz=157,slow=5.0,SNR=7.4						
MAT	Matsushiro	79.06	324	P	P	09 25 00.8	-1.6
H03S2	Juan Fernandez	79.29	123	T	T	10 51 52.6	
	baz=240,SNR=4.0						
H03S1	Juan Fernandez	79.30	123	T	T	10 51 54.2	
	baz=240,SNR=3.1						
H03S3	Juan Fernandez	79.31	123	T	T	10 51 51.5	
	baz=240,SNR=4.7						
JHS	Saijyo	80.59	320	P	P	09 25 09.4	-1.3
PLCA	Paso Flores	81.47	132	P	P	09 25 16.8	+1.1
	comp=Z,2.3nm,0.8s,baz=217,slow=3.8,SNR=5.8						
PLCA				LR	LR	09 52 12.1	
	comp=Z,60nm,21.4s,baz=220,slow=29						
LC01	Cunco	81.60	130	P	P	09 25 17.2	+0.9
LC01				IAmb	IAmb	09 25 29.4	
	comp=Z,8.5nm,0.8s						
KSRS	Korea Array	85.27	319	P	P	09 25 35.0	+0.2
	comp=Z,2.3nm,0.8s,baz=141,slow=5.7,SNR=8.0						
KSAR	Wonju Array Be	85.28	319	P	P	09 25 34.9	0.0
ISA	Isabella, Lake	85.34	44	P	P	09 25 34.5	-0.9
ISA				IAmb	IAmb	09 25 36.5	
	comp=Z,10.0nm,1.4s						
GSC	Goldstone, Bar	86.11	45	P	P	09 25 37.4	-1.8
GSC				IAmb	IAmb	09 25 40.3	
	comp=Z,7.8nm,1.3s						
PEA0B	Petropavlovsk-	86.19	345	P	P	09 25 38.3	-0.7
PETK	Petropavlovsk-	86.19	345	P	P	09 25 37.7	-1.3
	comp=Z,7.7nm,0.8s,baz=114,slow=10,SNR=7.5						
PETK				LR	LR	09 58 55.8	
	comp=Z,68nm,19.9s,baz=111,slow=32						
PETK	Petropavlovsk-	86.19	345	P	P	09 25 38.2	-0.8
QSM	Queen of Sheba	86.51	44	P	P	09 25 39.7	-1.4
QSM				IAmb	IAmb	09 25 41.0	
	comp=Z,5.5nm,1.0s						
PSI	Prapat	86.82	275	P	P	09 25 42.6	-0.7
	comp=Z,5.6nm,0.6s,baz=221,slow=10.0,SNR=3.9						
PSI				LR	LR	10 08 44.2	
	comp=Z,39nm,18.9s,baz=73,slow=39						
GSI	Gunungsitoli	87.23	273	P	P	09 25 45.2	+0.2
NJ2	Nanjing	87.32	310	eP	P	09 25 46.6	+1.6
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
NVAR	Mina Array Bea	87.32	42	P	P	09 25 43.8	-1.4
	comp=Z,2.9nm,0.8s,baz=220,slow=8.3,SNR=17						
NV11	Mina Array Sit	87.41	42	P	P	09 25 44.1	-1.4
NV11				IAmb	IAmb	09 25 44.7	
	comp=Z,7.3nm,1.2s						
HUMO	Hull Mountain	87.70	36	P	P	09 25 45.9	-0.8
USRK	Ussuriysk Ar.	87.95	326	P	P	09 25 47.8	+0.1
	comp=Z,5.2nm,0.8s,baz=139,slow=4.1,SNR=8.6						
USRK	Ussuriysk Ar.	87.95	326	P	P	09 25 48.5	+0.7
CN2	Changchun	91.00	322	eP	P	09 26 00.4	-1.7
CN2				pmax	pmax		
	comp=Z,20nm,1.3s						
TXAR	Lajitas Array	91.24	57	P	P	09 26 01.6	-2.0
	comp=Z,1.1nm,0.9s,baz=209,slow=7.2,SNR=6.1						
TXAR				LR	LR	10 00 55.3	
	comp=Z,43nm,19.1s,baz=0.0,slow=32						
CMAR	Chiang Mai Arr	94.72	289	P	P	09 26 21.8	+1.9
	comp=Z,0.5nm,0.4s,baz=157,slow=3.5,SNR=6.3						
PDAR	Pinedale Array	95.20	43	P	P	09 26 20.0	-1.8
	comp=Z,0.5nm,0.8s,baz=180,slow=4.4,SNR=4.3						
PDAR				LR	LR	10 03 38.4	
	comp=Z,90nm,18.7s,baz=317,slow=32						
LPAZ	La Paz	96.87	113	P	P	09 26 31.0	+0.4
	comp=Z,0.9nm,0.7s,baz=288,slow=1.3,SNR=4.9						
LPAZ				LR	LR	10 02 05.0	
	comp=Z,30nm,19.5s,baz=239,slow=30						
HHC	Hu-ho-hao-te	97.25	313	eP	Pdif	09 26 31.9	+0.8
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,96nm,5.7s						
ILAR	Eielson Array	97.64	12	P	P	09 26 30.1	-2.0
	comp=Z,0.7nm,0.7s,baz=224,slow=5.2,SNR=9.2						
CPUP	Villa Florida	98.88	127	LR	LR	10 04 44.5	
	comp=Z,44nm,18.8s,baz=219,slow=31						
YKA	Yellowknife Ar	104.87	25	PKiKP	PKiKP	09 31 17.7	-1.5
	comp=Z,0.3nm,0.7s,baz=248,slow=1.4,SNR=4.0						
WMQ	Urumqi	114.33	308	eP	PKiKP	09 31 38.3	+0.6
WMQ				pmax	pmax		
	comp=Z,120nm,4.3s						
MKAR	Makanchi Array	118.85	310	PKP	PKPdf	09 31 45.7	-0.5
	comp=Z,0.6nm,0.5s,baz=132,slow=0.9,SNR=7.9						
MKAR				PKKPbc	PKKPbc	09 42 01.9	0.0
	comp=Z,0.7nm,0.9s,baz=257,slow=4.9,SNR=3.9						
MKAR	Makanchi Array	118.85	310		PKPdf	09 31 45.5	-0.7
ZALV	Zalesovo Beam	118.97	318	PKP	PKPdf	09 31 45.2	-0.9
	comp=Z,1.2nm,0.8s,baz=163,slow=1.5,SNR=4.8						
ZALV	Zalesovo Beam	118.97	318		PKPdf	09 31 45.0	-1.2
NRIK	Noril'sk	120.22	336	PKP	PKPdf	09 31 47.2	-0.9
	comp=Z,1.4nm,0.3s,baz=62,slow=3.0,SNR=5.8						
ARCES	ARCESS Array B	138.90	348	PKhKP	PKPpre	09 32 14.1	
	comp=Z,4.1nm,0.8s,baz=70,slow=4.0,SNR=5.1						
ARCES				PKP	PKPdf	09 32 23.1	-0.4
	comp=Z,5.5nm,0.7s,baz=46,slow=3.5,SNR=7.8						
FAUS	Fauske	142.35	353	ePKPdf	PKPdf	09 32 29.3	-0.5
KONS	Konsvik	143.43	354	ePKPdf	PKPdf	09 32 30.9	-0.8
NSS	Namsos	145.47	354	ePKPdf	PKPdf	09 32 34.4	-0.9
FINES	FINESS Array B	145.63	341	PKPbc	PKPdf	09 32 35.0	-0.7
	comp=Z,59nm,0.8s,baz=66,slow=2.9,SNR=129						
FINES	FINESS Array B	145.63	341		PKPdf	09 32 34.8	-0.8
AKH	Akhalkalaki	146.16	300	⇓P	PKPab	09 32 39.6	+0.4
KBZ	Khabaz	146.27	304	PKPbc	PKPab	09 32 38.7	-0.6
	comp=Z,4.2nm,0.8s,baz=88,slow=4.2,SNR=7.9						
VSU	Vasula	147.79	337	eP	PKPbc	09 32 41.5	-0.8
AKN	Aaknes	148.16	357	ePKPbc	PKPbc	09 32 42.0	-1.2
DOMB	Dombas	148.17	355	ePKPbc	PKPbc	09 32 41.8	-1.4
AAL	Aland	148.28	344	eP	PKPbc	09 32 41.7	-1.7
NB2	NORSAR Subarra	148.96	353	PKP	PKPbc	09 32 43.6	-1.7
	comp=Z,11nm,0.8s,baz=10,slow=3.2						
NOA	NORSAR Array B	148.96	353	PKPbc	PKPbc	09 32 44.2	-1.1
	comp=Z,16nm,0.8s,baz=14,slow=4.4,SNR=26						
UPP	Uppsala	149.08	346	eP	PKPbc	09 32 44.4	-1.2
NAO01	NORSAR Array S	149.19	353	ePKPbc	PKPbc	09 32 44.4	-1.5
NC602	NORSAR Array S	149.22	352	ePKPbc	PKPbc	09 32 44.8	-1.2
SKAR	Skarslia	149.57	355	ePKPbc	PKPbc	09 32 46.1	-0.8
MNK	Minsk	150.29	331	i PKP	PKiKP	09 32 49.2	-0.3
	comp=E,3.0nm,0.9s						
MNK				i PKP	PKiKP	09 32 49.2	-0.3
	comp=N,25nm,0.8s						
MNK				i PKP	PKiKP	09 32 49.2	-0.3
	comp=Z,49nm,1.0s,baz=223						
MNK				i PP	PP	09 36 29.6	+5.6
MNK				i PPP	PPP	09 39 51.3	
MNK				i SKS	SKSdf	09 40 02.5	+14
MNK				i SKKS	SKKSdf	09 49 04.2	+22
MNK				i SS	SS	09 55 45.6	+6.2
MNK				i SSS	SSS	10 01 26.3	
MNK				i LR	LR	10 35 54.9	
MNK				i LRM	MLR	10 39 57.3	
	comp=Z,171nm,9.4s						
MNK				i LRM	MLR	10 40 15.4	
	comp=E,131nm,19.6s						
MNK				i LRM	MLR	10 40 16.0	
	comp=N,434nm,16.6s						
NACGM	Naroch	150.45	333	i PKP	PKPbc	09 32 48.6	-0.5
KONO	Kongsberg	150.49	354	ePKPbc	PKPbc	09 32 48.0	-1.1
PABE	Paberze	151.05	336	eP	PKPbc	09 32 50.5	0.0
AKASG	Malin Array Be	152.15	324	PKP	PKPdf	09 32 47.1	+0.6
	comp=N,0.3nm,0.4s,baz=51,slow=1.6,SNR=4.7						
AKASG				PKPbc	PKPbc	09 32 52.7	-0.5
	comp=N,8.2nm,0.6s,baz=47,slow=2.8,SNR=34						
AKASG	Malin Array Be	152.15	324		PKPdf	09 32 45.9	-0.6
AKASG				PKPbc	PKiKP	09 32 53.1	-0.3
AKASG				PKPab	PKPab	09 33 03.0	+0.1
SUW	Suwalki	152.51	335	eP	PKiKP	09 32 54.3	+0.2
BRTR	Keskin Array B	153.83	299	PKPbc	PKiKP	09 32 57.5	0.0
	comp=N,1.0nm,0.9s,baz=236,slow=1.3,SNR=5.0						
BRTR				PKPab	PKPab	09 33 10.1	-0.6
	comp=N,1.4nm,1.0s,baz=163,slow=5.2,SNR=5.0						
BRTR	Keskin Array B	153.83	299	PKPdf	PKPdf	09 32 47.9	-1.6
BRTR					PKPbc	09 32 56.7	-0.8
BRTR				PKPab	PKPab	09 33 11.2	+0.6
ANTO	Ankara	154.43	300	⇑P	PKPab	09 33 25.1	+12
DBIC	Dimbokro	155.07	160	PKPab	PKPab	09 33 17.1	+1.0
	comp=N,7.1nm,1.1s,baz=184,slow=8.6,SNR=4.0						
TPGR	Topolog	155.76	313	⇑P	PKPab	09 33 18.5	+0.1
BUR01	Bucovina Ar. S	156.11	322	⇑P	PKPab	09 33 20.1	+0.1
DOPR	Dopca	157.00	319	⇑P	PKPab	09 33 24.3	+0.5
CRVS	Cervenica-Dubn	157.09	329	ePKP	PKPab	09 33 23.5	-0.5
TRPA	Tarpa	157.13	326	⇑P	PKPab	09 33 23.9	-0.3
OSTC	Ostas	157.78	338	ePKPAB	PKPab	09 33 27.5	+0.6
ARR	Arges	157.78	318	⇓P	PKPab	09 33 28.1	+0.9
CHVC	Chvalec	157.80	339	ePKPAB	PKPab	09 33 26.2	-0.8
DPC	Dobruska-Polom	157.92	338	ePKPAB	PKPab	09 33 27.5	-0.1
DRGR		157.95	323	⇑P	PKPab	09 33 27.0	-0.9
MORC	Moravsky Berou	157.99	335	ePKP	PKPab	09 33 27.5	-0.4
CLL	Collm	157.99	344	i PKPab	PKPab	09 33 26.5	-1.3
	comp=Z,11nm,1.0s						
KRLC	Kraliky	158.00	337	ePKPAB	PKPab	09 33 27.6	-0.4
PSZ	Piszkesteto	158.52	329	⇑P	PKPab	09 33 29.7	-0.6
JAVC	Velka Javorina	158.70	334	ePKP	PKPab	09 33 32.0	+1.0
VRAC	Vranov	158.72	336	⇓P	PKPab	09 33 30.4	-0.6
VRAC	Vranov	158.72	336	ePKP	PKPab	09 33 30.8	-0.2
PRU	Pruhonice	158.79	340	ePKPAB	PKPab	09 33 31.0	-0.3
KRUC	Moravsky	159.00	336	ePKP	PKPab	09 33 31.6	-0.6
MODS	Modra-Piesok	159.25	334	ePKP	PKPab	09 33 32.6	-0.8
BZS	Buzias	159.30	322	⇓P	PKPab	09 33 33.3	-0.4
MDVR	Moldovita	159.78	320	⇑P	PKPab	09 33 35.0	-0.9
KHC	Kasperske Hory	159.84	341	ePKPAB	PKPab	09 33 35.4	-0.5
CKRC	Cesky Krumlov	159.90	339	ePKPAB	PKPab	09 33 36.9	+0.7
GERES	GERESS Array B	160.06	340	PKPab	PKPab	09 33 35.4	-1.5
	comp=Z,1.2nm,0.6s,baz=51,slow=5.3,SNR=8.3						
GERES	GERESS Array B	160.06	340	PKPdf	PKPdf	09 32 55.2	-1.9
GERES					PKPab	09 33 35.7	-1.3
VTS	Vitosha	160.13	313	⇑P	PKPab	09 33 38.3	+0.7
CONA	Conrad Observa	160.15	335	eP	PKPab	09 33 36.8	-0.6
	comp=Z,8.1nm,0.9s						
MOA	Molln	160.76	338	eP	PKPab	09 33 39.1	-0.8
	comp=Z,9.1nm,1.5s						
ARSA	Arzberg	160.84	335	eP	PKPab	09 33 39.6	-0.8
	comp=Z,4.1nm,1.1s						
SOKA	Soboth	161.50	335	eP	PKPab	09 33 42.1	-1.2
	comp=Z,10.0nm,1.0s						
OBKA	Obir	161.82	335	i P	PKPab	09 33 43.6	-1.2
	comp=Z,3.7nm,0.8s,SNR=4.9						
WATA	Walderalm	162.02	342	i P	PKPab	09 33 45.0	-0.6
	comp=Z,13nm,1.1s,SNR=4.2						
MYKA	Terra Mystica	162.04	337	eP	PKPab	09 33 44.1	-1.5
	comp=Z,5.5nm,0.8s						
WTTA	Wattenberg	162.07	342	i P	PKPab	09 33 45.4	-0.5
	comp=Z,7.2nm,0.8s,SNR=5.7						
MOTA	Moosalm	162.14	343	eP	PKPab	09 33 44.9	-1.2
	comp=Z,8.1nm,1.1s						
SQTA	Sankt Quirin	162.22	343	eP	PKPab	09 33 46.0	-0.5
	comp=Z,4.2nm,1.1s						
ABTA	Abfaltersbach	162.29	340	i P	PKPab	09 33 45.8	-1.0
	comp=Z,9.8nm,1.3s,SNR=5.1						
FETA	Feichten	162.53	344	eP	PKPab	09 33 47.2	-0.6
	comp=Z,4.5nm,1.1s						
TORD	Torodi Ar. Bea	162.72	174	PKP	PKPdf	09 33 00.6	-0.1
	comp=Z,2.0nm,1.1s,baz=320,slow=2.1,SNR=7.6						
TORD				PKPab	PKPab	09 33 50.7	+1.5
	comp=Z,5.4nm,1.0s,baz=188,slow=3.6,SNR=15						
TORD	Torodi Ar. Bea	162.72	174		PKPdf	09 33 01.4	+0.6
TORD				PKPab	PKPab	09 33 50.3	+1.1
TIP	Timpagrande	166.12	313	⇑P	PKPdf	09 33 09.2	+6.0
ESDC	Sonseca Array	168.88	32	PKP	PKPdf	09 33 05.4	+0.3
	comp=Z,0.3nm,0.5s,baz=315,slow=0.5,SNR=5.5						
ESDC				PKPab	PKPab	09 34 13.5	-2.5
	comp=Z,1.2nm,1.1s,baz=325,slow=3.8,SNR=3.5						
ESDC	Sonseca Array	168.88	32	PKPdf	PKPdf	09 33 04.4	-0.7
ESDC					PKPab	09 34 14.0	-2.0

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*NEIC **06** 09:18:04.2±1.0, 24°.4S±0°.4×178°.8W±0°.5, h545km±43km, mb4.1/11, Error ellipse: s-maj=71.5km s-min=45.4km az=48.0*

*IDC **06** 09:18:14.4±6.6, 23°.78S×179°.55E, h540km±48km, mb3.1/3, mb1 3.3/4, mb1mx3.0/25, mbtmp4.1/4, Error ellipse: s-maj=126.6km s-min=29.4km az=141.0*

ISC 06 09:18:12.5±2.1, **23°.9S**±0°.2×**179°.9E**±0°.3, **h550km, n20, σ0ˢ.81**/22, **mb4.1**/9, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.38	344	P	P	09 19 54.4	-0.5
	2.1nm,0.3s,baz=216,slow=19,SNR=2.4						
MSVF	Nonsavu	6.38	344	P	P	09 19 54.6	-0.3
CTAO	Charters Tower	31.42	270	P	P	09 23 50.8	+1.5
STKA	Stephens Creek	34.67	248	P	P	09 24 16.5	-0.1
	0.8nm,0.4s,baz=82,slow=8.7,SNR=4.9						
STKA	Stephens Creek	34.67	248	P	P	09 24 16.4	-0.2
STKA				IAmb	IAmb	09 24 19.8	
	comp=Z,1.9nm,1.4s						
BBOO	Buckleboo	39.39	247	P	P	09 24 54.0	-1.3
BBOO				IAmb	IAmb	09 25 04.2	
	comp=Z,14nm,1.3s						
AS31	Alice Springs	41.98	261	P	P	09 25 15.3	-0.8
ASAR	Alice Springs	41.98	261	P	P	09 25 15.7	-0.3
	comp=Z,1.0nm,0.5s,baz=95,slow=7.4,SNR=11						
ASAR				PcP	PcP	09 27 00.1	+1.7
	comp=Z,0.3nm,0.8s,baz=96,slow=5.4,SNR=1.8						
ASAR	Alice Springs	41.98	261	P	P	09 25 16.1	+0.1
WR0	Warramunga Arr	42.16	266	P	P	09 25 17.4	-0.1
WR0				IAmb	IAmb	09 25 19.3	
	comp=Z,2.8nm,0.9s						
WB2	Warramunga Arr	42.34	266	P	P	09 25 19.0	+0.2
WB2				IAmb	IAmb	09 25 19.1	
	comp=Z,3.4nm,0.4s						
WRAB	Tennant Creek	42.34	266	P	P	09 25 18.6	-0.3
WRAB				IAmb	IAmb	09 25 19.2	
	comp=Z,6.0nm,1.1s						
WB0	Warramunga Arr	42.34	266	P	P	09 25 18.9	-0.1
WB0				IAmb	IAmb	09 25 19.4	

	comp=Z,3.9nm,0.6s						
WRA	**Warramunga Arr**	**42.35**	**266**	P	**P**	**09 25 18.7**	**-0.3**
	comp=Z,2.4nm,0.4s,baz=98,slow=8.3,SNR=34						
WRA				PcP	**pwP**	**09 27 00.8**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=107,slow=3.5,SNR=2.2						
WRA	**Warramunga Arr**	**42.35**	**266**	P	**P**	**09 25 18.7**	**-0.3**
FORT	**Forrest**	**46.26**	**250**	P	**P**	**09 25 47.0**	**-1.9**
KNRA	**Kununurra**	**48.63**	**270**	P	**P**	**09 26 07.2**	**+0.3**
KNRA				IAmb	IAmb	09 26 14.8	
	comp=Z,15nm,1.3s						
FINES	**FINESS Array B**	**138.43**	**341**	PKP	**PKiKP**	**09 36 37.6**	**+0.2**
	comp=Z,7.1nm,1.2s,baz=92,slow=4.3,SNR=1.4						
AKASG	**Malin Array Be**	**144.94**	**327**	PKP	**PKPab**	**09 36 48.7**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=46,slow=4.1,SNR=5.5						
BRTR	**Keskin Array B**	**147.53**	**307**	PKPbc	**PKiKP**	**09 36 56.6**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=183,slow=2.6,SNR=3.7						

*IDC **06** 09:20:42.3±1.2, 20.°58S×66.°65W, h230^{km}±17^{km}, mb3.2/3, mb1 3.3/6, mb1mx3.1/26, mbtmp3.7/6, Error ellipse: s-maj=29.6km s-min=13.5km az=100.0*

ISC 06 09:20:42.8±1.0**, 20.°66S**±0.°05×**67.°04W**±0.°08**, h250**^{km}**, n21,** σ**1.^{s}44**/38**, 1C, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**2.05**	**284**	eP	**Pn**	**09 21 26.5**	**+0.3**
PB08				eS	**S**	**09 22 00.2**	**-0.1**
PB08				IAML		09 22 04.0	
	comp=E,136nm,0.2s						
PB01	**IPOC Station P**	**2.32**	**260**	eP	**Pn**	**09 21 28.4**	**0.0**
PB01				eS	**S**	**09 22 03.3**	**-1.0**
PB09	**IPOC Station P**	**2.34**	**241**	eP	**Pn**	**09 21 29.0**	**+0.3**
PB09				eS	**S**	**09 22 04.6**	**-0.4**
PB09				IAML		09 22 08.3	
	comp=E,74nm,0.4s						
LVC	**Limon Verde**	**2.61**	**222**	P	**Pn**	**09 21 31.4**	**-0.1**
	comp=E,2.0nm,0.3s,baz=42,slow=10,SNR=23						
LVC				S	**S**	**09 22 08.2**	**-1.8**
	comp=E,4.5nm,0.3s,baz=183,slow=20,SNR=22						
LVC	**Limon Verde**	**2.61**	**222**	⇑eP	**Pn**	**09 21 31.8**	**+0.3**
LVC				i S	**S**	**09 22 08.6**	**-1.4**
LVC				eS	**S**	**09 22 08.6**	**-1.4**
PB11	**IPOC Station P**	**2.62**	**290**	eP	**Pn**	**09 21 31.5**	**+0.1**
PB11				eS	**S**	**09 22 08.6**	**-1.3**
PB11				IAML		09 22 12.1	
	comp=N,511nm,0.2s						
PB07	**IPOC Station P**	**2.86**	**248**	eP	**Pn**	**09 21 34.2**	**+0.2**
PB07				eS	**S**	**09 22 12.5**	**-1.9**
PB03	**IPOC Station P**	**2.88**	**241**	eP	**Pn**	**09 21 34.7**	**+0.5**
PB03				eS	**S**	**09 22 13.3**	**-1.5**
TA02	**Huaiquique**	**2.92**	**277**	eP	**Pn**	**09 21 34.8**	**+0.3**
TA02				eS	**S**	**09 22 14.1**	**-1.2**
TA01	**Diego Aracena**	**2.94**	**271**	eP	**Pn**	**09 21 34.7**	**0.0**
TA01				i S	**S**	**09 22 13.9**	**-1.8**
PSGC	**Pisagua**	**3.08**	**290**	eP	**Pn**	**09 21 36.2**	**-0.2**
PSGC				eS	**S**	**09 22 16.9**	**-1.8**
PB06	**IPOC Station P**	**3.11**	**229**	eP	**Pn**	**09 21 37.3**	**+0.6**
PB06				eS	**S**	**09 22 17.9**	**-1.4**
PB16	**IPOC Station P**	**3.28**	**314**	eP	**Pn**	**09 21 40.6**	**+1.6**
PB16				eS	**S**	**09 22 24.5**	**+1.0**
PB04	**IPOC Station P**	**3.34**	**240**	eP	**Pn**	**09 21 39.2**	**-0.1**
PB04				eS	**S**	**09 22 21.8**	**-2.1**
PB05	**IPOC Station P**	**3.66**	**233**	eP	**Pn**	**09 21 42.7**	**-0.1**
PB05				eS	S	09 22 27.5	-2.8
PB12	**IPOC Station P**	**3.71**	**303**	eP	**Pn**	**09 21 42.9**	**-0.5**
PB12				eS	**S**	**09 22 30.0**	**-1.4**
LPAZ	**La Paz**	**4.47**	**346**	P	**Pn**	**09 21 53.5**	**+0.6**
	comp=N,0.6nm,0.3s,baz=140,slow=4.7,SNR=17						
LPAZ				S	**S**	**09 22 47.1**	**-1.4**
	comp=N,0.3nm,0.3s,baz=270,slow=19,SNR=9.5						
SIV	**San Ignacio**	**7.33**	**52**	P	**Pn**	**09 22 23.4**	**-4.3**
	comp=N,1.5nm,0.3s,baz=236,slow=11,SNR=25						
PLCA	**Paso Flores**	**20.23**	**188**	P	**P**	**09 25 02.2**	**+2.9**
	comp=N,2.2nm,0.6s,baz=1.7,slow=9.8,SNR=9.4						
TORD	**Torodi Ar. Bea**	**75.43**	**70**	P	**P**	**09 31 58.5**	**-1.3**
	comp=N,0.6nm,0.5s,baz=251,slow=5.4,SNR=6.2						
YKA	**Yellowknife Ar**	**90.99**	**340**	P	**P**	**09 33 20.2**	**+2.1**
	comp=N,0.2nm,0.5s,baz=131,slow=4.5,SNR=4.5						

*NOU **06** 09:33:30.0, 18.°08S×169.°01E, h221^{km}, MLv4.1/13, Vanuatu Islands*

ISC 06 09:33:33.0±1.7**, 18.°13S**±0.°07×**168.°3E**±0.°2**, h200**^{km}**, n11,** σ**1.^{s}79**/11**, mb3.8**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**0.37**	**26**	P	**Pn**	**09 34 00.9**	**+1.1**
DVP	**Devils Point**	**0.40**	**351**	P	**Pn**	**09 34 01.6**	**+1.7**
LIFNC	**LIFOU**	**2.81**	**200**	P	**Pn**	**09 34 22.2**	**+1.8**
SANVU	**Saraoutou**	**2.85**	**339**	P	**Pn**	**09 34 22.3**	**+1.3**
MARNC	**Mare, Loyalty**	**3.34**	**184**	P	**Pn**	**09 34 26.6**	**-0.2**
YATNC	**Mamie plateau,**	**4.12**	**198**	P	**Pn**	**09 34 37.2**	**+0.9**
DZM	**Mont Dzumac**	**4.28**	**203**	P	**Pn**	**09 34 41.3**	**+2.9**
OUENC	**Ouen Island, N**	**4.47**	**197**	P	**Pn**	**09 34 42.2**	**+1.5**
STKA	**Stephens Creek**	**27.68**	**235**	P	**P**	**09 39 02.0**	**-0.6**
	1.1nm,0.5s,baz=63,slow=9.5,SNR=5.0						
WRA	**Warramunga Arr**	**32.08**	**261**	P	**P**	**09 39 39.7**	**-1.8**
	0.4nm,0.3s,baz=88,slow=7.8,SNR=18						
ASAR	**Alice Springs**	**32.51**	**254**	P	**P**	**09 39 44.0**	**-1.2**
	2.6nm,0.4s,baz=84,slow=8.6,SNR=91						

*JMA **06** 09:56:53.9±0.2, 24.°48N×122.°91E, h102^{km}±2^{km}, M2.5*

*TAP **06** 09:56:54.7, 24.°46N×122.°89E, h93^{km}, ML3.0, C*

ISC 06 09:56:55.0±1.4**, 24.°47N**±0.°05×**122.°91E**±0.°03**, h92**^{km}±8^{km}**, n61,** σ**0.^{s}81**/119**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.04**	**122**	P	**Pn**	**09 57 08.3**	**+0.4**
JYNG				S	**Sn**	**09 57 18.5**	**+1.0**
YOJ	**Yonaguni jima**	**0.09**	**96**	eP	**Pn**	**09 57 08.9**	**+0.9**
	baz=86						
YOJ				i S	**Sn**	**09 57 17.3**	**-0.3**
	baz=86						
YOJ	**Yonaguni jima**	**0.09**	**96**	P	**Pn**	**09 57 08.2**	**+0.2**
YOJ				eS	**Sn**	**09 57 18.4**	**+0.8**
IRIF	**Iriomote-Funau**	**0.76**	**100**	P	**Pn**	**09 57 12.2**	**-0.1**
IRIF				S	**Sn**	**09 57 25.4**	**+0.2**
HATJ	**Hateruma jima**	**0.92**	**117**	eS	**Sn**	**09 57 29.0**	**+0.9**
TWC	**Suao**	**0.97**	**278**	i P	**Pn**	**09 57 14.3**	**-0.2**
	baz=278						
TWC				i S	**Sn**	**09 57 28.8**	**-0.5**
	baz=278						
EWUT	**Wuta**	**1.03**	**269**	P	**Pn**	**09 57 14.8**	**-0.4**
	baz=268						
EWUT				eS	**Sn**	**09 57 30.9**	**+0.5**
	baz=268						
JKRS	**Kuro-shima**	**1.03**	**103**	P	**Pn**	**09 57 15.5**	**+0.3**
JKRS				S	**Sn**	**09 57 30.9**	**+0.5**
NTC	**Toucheng**	**1.05**	**291**	i P	**Pn**	**09 57 15.3**	**-0.1**
	baz=291						
NTC				S	**Sn**	**09 57 30.3**	**-0.5**
	baz=291						
ENA	**Nanau**	**1.06**	**268**	P	**Pn**	**09 57 15.7**	**+0.1**
	baz=267						
ENA				i S	**Sn**	**09 57 30.7**	**-0.4**
	baz=267						
NDS	**Dongshan**	**1.10**	**279**	P	**Pn**	**09 57 16.4**	**+0.4**
	baz=279						
NDS				S	**Sn**	**09 57 30.9**	**-0.9**
	baz=279						
TIPB	**Shuangxi**	**1.10**	**297**	P	**Pn**	**09 57 15.7**	**-0.4**
	baz=297						
TIPB				i S	**Sn**	**09 57 31.7**	**-0.2**
	baz=297						
JIJ	**Ishigaki jima**	**1.13**	**95**	P	**Pn**	**09 57 15.9**	**-0.5**
JIJ				S	**Sn**	**09 57 31.4**	**-1.0**
TWE	**Neicheng**	**1.16**	**283**	i P	**Pn**	**09 57 16.5**	**-0.2**
	baz=282						
TWE				S	**Sn**	**09 57 32.6**	**-0.3**
	baz=282						
WFSB	**Wu-fen Shan**	**1.19**	**300**	i P	**Pn**	**09 57 17.0**	**0.0**
	baz=301						
ENTT	**Nioudou**	**1.23**	**278**	P	**Pn**	**09 57 17.9**	**+0.3**
	baz=278						
ENTT				eS	**Sn**	**09 57 35.2**	**+0.6**
	baz=278						
NACB	**Ninganchiao**	**1.23**	**256**	P	**Pn**	**09 57 17.0**	**-0.6**
	baz=256						
NACB				eS	**Sn**	**09 57 32.7**	**-1.9**
	baz=256						
TWD	**Chiawan**	**1.26**	**252**	P	**Pn**	**09 57 17.4**	**-0.5**
	baz=252						
TWD				S	**Sn**	**09 57 34.8**	**-0.4**
	baz=252						
NDT	**Datong Townshi**	**1.28**	**276**	i P	**Pn**	**09 57 18.5**	**+0.3**
	baz=276						
NDT				S	**Sn**	**09 57 35.5**	**-0.1**
	baz=276						
JISG	**Ishigakijimahi**	**1.28**	**85**	P	**Pn**	**09 57 17.5**	**-0.7**
JISG				eS	**Sn**	**09 57 34.4**	**-1.2**
NWLT	**Wulai**	**1.31**	**284**	P	**Pn**	**09 57 19.1**	**+0.5**
	baz=283						
NWLT				S	**Sn**	**09 57 35.6**	**-0.8**
	baz=283						
ETLH	**Xiulin Townshi**	**1.33**	**259**	P	**Pn**	**09 57 18.2**	**-0.6**
	baz=258						
ETLH				S	**Sn**	**09 57 35.7**	**-1.1**
	baz=258						
ETM	**Tongmen**	**1.39**	**249**	P	**Pn**	**09 57 18.9**	**-0.5**
	baz=248						
ETM				S	**Sn**	**09 57 37.3**	**-0.7**
	baz=248						
NNSB	**Datong**	**1.39**	**269**	P	**Pn**	**09 57 19.2**	**-0.4**
	baz=268						
NNSB				S	**Sn**	**09 57 37.5**	**-0.7**
	baz=268						
NNS	**Nan Shan**	**1.40**	**269**	i P	**Pn**	**09 57 19.5**	**-0.2**
	baz=268						
NNS				i S	**Sn**	**09 57 37.7**	**-0.8**
	baz=268						
YHNB	**Yeheng**	**1.41**	**278**	i P	**Pn**	**09 57 19.8**	**0.0**
	baz=278						
YHNB				S	**Sn**	**09 57 37.8**	**-0.8**
	baz=278						
NSK	**Sanguang**	**1.43**	**279**	i P	**Pn**	**09 57 20.0**	**0.0**
	baz=278						
NSK				S	**Sn**	**09 57 38.3**	**-0.7**
	baz=278						
ESL	**Shilin**	**1.50**	**244**	i P	**Pn**	**09 57 20.4**	**-0.5**
	baz=243						
ESL				S	**Sn**	**09 57 40.0**	**-0.5**
	baz=243						
FUSS	**Fushou**	**1.53**	**262**	P	**Pn**	**09 57 21.7**	**+0.1**
	baz=261						
FUSS				S	**Sn**	**09 57 40.8**	**-0.8**
	baz=261						
WHF	**Hehuan Shan**	**1.53**	**258**	P	**Pn**	**09 57 21.5**	**-0.2**
	baz=257						
WHF				S	**Sn**	**09 57 40.9**	**-1.0**
	baz=257						
TDCB	**Techi**	**1.61**	**263**	P	**Pn**	**09 57 22.4**	**0.0**
	baz=262						
TDCB				S	**Sn**	**09 57 42.6**	**-0.6**
	baz=262						
CHGB	**Renai**	**1.64**	**256**	P	**Pn**	**09 57 22.9**	**+0.1**
	baz=255						
CHGB				S	**Sn**	**09 57 42.9**	**-1.0**
	baz=255						
JTJ	**Tarama**	**1.64**	**84**	P	**Pn**	**09 57 22.4**	**-0.2**
JTJ				eS	**Sn**	**09 57 43.1**	**-0.5**
OWD	**Renai**	**1.66**	**252**	i P	**Pn**	**09 57 23.1**	**0.0**
	baz=252						
OWD				S	**Sn**	**09 57 43.9**	**-0.5**
	baz=252						
HGSD	**Ruisui**	**1.67**	**235**	P	**Pn**	**09 57 22.6**	**-0.5**
	baz=234						
HGSD				S	**Sn**	**09 57 43.7**	**-0.6**
	baz=234						
LIOB	**Emei**	**1.73**	**276**	i P	**Pn**	**09 57 23.8**	**0.0**
	baz=276						
LIOB				S	**Sn**	**09 57 45.5**	**-0.3**
	baz=276						
EHY	**Hungye**	**1.74**	**237**	P	**Pn**	**09 57 23.3**	**-0.6**
	baz=236						
EHY				eS	**Sn**	**09 57 42.8**	**-3.2**
	baz=236						
NSTT	**Nanjuang**	**1.74**	**276**	P	**Pn**	**09 57 23.8**	**-0.2**
	baz=275						
NSTT				S	**Sn**	**09 57 45.3**	**-0.7**
	baz=275						
VWDT	**VWDT**	**1.77**	**246**	P	**Pn**	**09 57 24.5**	**+0.2**
	baz=246						
VWDT				S	**Sn**	**09 57 46.2**	**-0.2**
	baz=246						
WHP	**Taichung City**	**1.80**	**264**	P	**Pn**	**09 57 25.6**	**+0.8**
	baz=264						
WHP				eS	**Sn**	**09 57 47.9**	**+0.5**
	baz=264						
YULB	**Yu-li**	**1.82**	**234**	P	**Pn**	**09 57 24.6**	**-0.5**
	baz=233						
YULB				S	**Sn**	**09 57 47.4**	**-0.5**
	baz=233						
EYUL	**Yuli**	**1.83**	**233**	P	**Pn**	**09 57 25.3**	**+0.1**
	baz=232						
EYUL				eS	**Sn**	**09 57 48.7**	**+0.5**
	baz=232						
TWF1	**Yuli**	**1.85**	**233**	P	**Pn**	**09 57 24.9**	**-0.4**
	baz=232						
TWF1				S	**Sn**	**09 57 47.6**	**-0.8**
	baz=232						
WCS	**Beigang Elemen**	**1.87**	**258**	eP	**Pn**	**09 57 27.1**	**+1.5**
	baz=257						
WCS				eS	**Sn**	**09 57 49.9**	**+1.0**
	baz=257						
SSLB	**Suanglung**	**1.91**	**250**	P	**Pn**	**09 57 26.4**	**+0.2**
	baz=249						
SSLB				i S	**Sn**	**09 57 49.4**	**-0.5**
	baz=249						
SMLT	**Sun Moon Lake**	**1.93**	**253**	i P	**Pn**	**09 57 27.3**	**+0.9**
	baz=252						
SMLT				S	**Sn**	**09 57 50.2**	**-0.2**
	baz=252						
NMLH	**Miaoli**	**1.93**	**272**	S	**Sn**	**09 57 49.8**	**-0.5**
	baz=272						
FULB	**Fuli**	**1.95**	**230**	i P	**Pn**	**09 57 26.3**	**-0.3**
	baz=229						
FULB				i S	**Sn**	**09 57 50.2**	**-0.5**
	baz=229						
TYC	**Yuchr**	**1.96**	**254**	P	**Pn**	**09 57 27.4**	**+0.7**
	baz=253						
TYC				eS	**Sn**	**09 57 52.1**	**+1.2**
	baz=253						
WJS	**Zhushan**	**2.09**	**252**	eP	**Pn**	**09 57 29.9**	**+1.4**
	baz=252						
WJS				eS	**Sn**	**09 57 56.0**	**+1.8**
	baz=252						
EDH	**Donghe**	**2.10**	**225**	eP	**Pn**	**09 57 27.7**	**-0.9**
	baz=224						
EDH				eS	**Sn**	**09 57 52.6**	**-1.6**
	baz=224						
ALS	**Alishan**	**2.15**	**244**	eP	**Pn**	**09 57 30.2**	**+0.7**
	baz=243						
ALS				eS	**Sn**	**09 57 56.2**	**+0.4**
	baz=243						
ELDTW	**Lidau**	**2.15**	**234**	P	**Pn**	**09 57 29.0**	**-0.4**
	baz=233						
ELDTW				i S	**Sn**	**09 57 54.9**	**-0.8**
	baz=233						
JMJ	**Miyako jima 2**	**2.20**	**81**	P	**Pn**	**09 57 30.4**	**+0.5**
	baz=80						
JMJ				S	**Sn**	**09 57 56.6**	**0.0**
	baz=80						
CHN5	**Tsauling**	**2.22**	**247**	eP	**Pn**	**09 57 32.0**	**+1.8**
	baz=246						
CHN5				eS	**Sn**	**09 57 59.4**	**+2.2**
	baz=246						
STYH	**Taoyuan**	**2.34**	**237**	eP	**Pn**	**09 57 32.8**	**+1.0**
	baz=236						
STYH				eS	**Sn**	**09 58 00.8**	**+0.8**
	baz=236						
TWGBT	**Beinan**	**2.35**	**226**	P	**Pn**	**09 57 32.1**	**+0.2**
	baz=225						
TWGBT				S	**Sn**	**09 57 60.0**	**-0.2**
	baz=225						
TPUB	**Ta-pu**	**2.39**	**241**	eP	**Pn**	**09 57 34.3**	**+1.9**
	baz=240						
TPUB				eS	**Sn**	**09 58 02.1**	**+0.9**
	baz=240						
CHN4	**Tsaushan**	**2.40**	**243**	P	**Pn**	**09 57 32.8**	**+0.3**
	baz=242						
CHN4				eS	**Sn**	**09 58 02.4**	**+1.1**
	baz=242						
MASBT	**Mashibuluo**	**2.79**	**229**	P	**Pn**	**09 57 38.7**	**+0.9**
	baz=228						
MASBT				eS	**Sn**	**09 58 11.7**	**+1.0**
	baz=228						
SLIU	**Shizi**	**2.97**	**221**	P	**Pn**	**09 57 40.5**	**+0.3**
	baz=220						
SLIU				eS	**Sn**	**09 58 13.5**	**-1.4**
	baz=220						

*ROM **06** 10:08:45.9±0.1, 42.°427N±0.°008×15.°23E±0.°01, h10^{km}, ML3.0/32, Error ellipse: s-maj=1.1km s-min=0.6km az=43.0*

*VIE **06** 10:08:48.1±0.4, 42.°49N×15.°18E, h12^{km}, mb2.9/6, ml2.7/8, ms4.0/2, Error ellipse: s-maj=4.1km s-min=3.0km az=102.0 155 km SW of Split*

*LDG **06** 10:08:49.1±0.2, 42.°24N×14.°98E, h20^{km}, Ml3.1/15, Error ellipse: s-maj=6.1km s-min=4.0km az=28.0*

*PRU **06** 10:08:58.6±0.0, 43.°32N×14.°93E, h0^{km}*

ISC 06 10:08:46.3±1.1**, 42.°40N**±0.°02×**15.°08E**±0.°02**, h12**^{km}±9^{km}**, n137,** σ**2.^{s}02**/170**, 1D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRES	**Fresagrandinar**	**0.53**	**215**	P	**Pg**	**10 08 56.7**	**+0.1**
CAFR	**Castel Frentan**	**0.57**	**252**	P	**Pb**	**10 08 59.4**	**+1.3**
CAFR				S	**Sn**	**10 09 08.9**	**-0.5**
TRIV	**Trivento**	**0.75**	**212**	P	**Pb**	**10 09 01.4**	**+0.2**
TRIV				AML	AML		
	comp=E,730µm,0.7s						
TRIV				AML	AML		
	comp=N,734µm,1.0s						
TRIV				AML	AML		
	comp=E,773µm,0.7s						
TRIV				AML	AML		
	comp=N,766µm,1.0s						
TRIV				AML	AML		
	comp=E,772µm,0.7s						
LPEL	**Lama dei Pelig**	**0.75**	**242**	P	**Pg**	**10 09 00.9**	**0.0**
LPEL				S	**Sn**	**10 09 14.2**	**+0.1**
LPEL				AML	AML		
	comp=E,2225µm,0.8s						
LPEL				AML	AML		
	comp=N,1525µm,0.9s						
CIGN	**Sant'Elia a Pi**	**0.76**	**190**	P	**Pg**	**10 09 01.1**	**+0.2**
CIGN				S	**Sb**	**10 09 13.7**	**+2.0**
SGRT	**San Giovanni R**	**0.82**	**142**	P	**Pg**	**10 09 00.5**	**-1.6**
SGRT				S	**Sg**	**10 09 12.4**	**-0.4**
SGRT				AML	AML		
	comp=E,2365µm,0.7s						
SGRT				AML	AML		
	comp=N,2145µm,1.2s						
GATE	**Gambatesa**	**0.90**	**188**	P	**Pb**	**10 09 04.2**	**+0.4**
VCEL	**Villa Celiera**	**0.92**	**270**	P	**Pn**	**10 09 05.3**	**+0.3**
VCEL				AML	AML		
	comp=E,1380µm,0.6s						
VCEL				AML	AML		
	comp=N,1050µm,0.6s						
VCEL				AML	AML		
	comp=N,1046µm,0.6s						
VCEL				AML	AML		
	comp=N,1046µm,0.6s						
MSAG	**Monte S. Angel**	**0.93**	**138**	P	**Pg**	**10 09 02.3**	**-1.9**
MSAG				S	**Sg**	**10 09 15.7**	**-0.6**
MSAG				AML	AML		
	comp=N,5315µm,0.3s						
MSAG				AML	AML		
	comp=N,5175µm,0.3s						
MSAG				AML	AML		
	comp=E,3435µm,1.0s						
MSAG				AML	AML		
	comp=E,3200µm,1.0s						
BSSO	**Busso**	**0.93**	**203**	P	**Pg**	**10 09 04.5**	**+0.3**
BSSO				AML	AML		
	comp=E,780µm,1.2s						
BSSO				AML	AML		
	comp=N,806µm,0.8s						
BSSO				AML	AML		
	comp=E,313µm,0.9s						
BSSO				AML	AML		
	comp=E,780µm,1.2s						
BSSO				AML	AML		
	comp=N,807µm,0.8s						
BSSO				AML	AML		
	comp=N,324µm,0.9s						
TRTR	**Tortoreto Alta**	**0.95**	**296**	P	**Pn**	**10 09 05.5**	**+0.2**
MIDA	**Miranda**	**0.98**	**219**	P	**Pg**	**10 09 04.3**	**-0.9**
MIDA				S	**Sn**	**10 09 20.9**	**+1.3**
MIDA				AML	AML		
	comp=E,864µm,0.7s						
MIDA				AML	AML		
	comp=N,592µm,1.5s						
MIDA				AML	AML		
	comp=N,592µm,1.5s						
MIDA				AML	AML		
	comp=E,864µm,0.7s						
T0110	**Collepietro**	**0.98**	**260**	P	**Pn**	**10 09 06.4**	**+0.6**
T0110				AML	AML		
	comp=N,1190µm,0.4s						
T0110				AML	AML		
	comp=E,1595µm,0.4s						
T0110				AML	AML		
	comp=E,1590µm,0.4s						
T0110				AML	AML		
	comp=N,1195µm,0.4s						
RNI2	**Rionero Sannit**	**0.98**	**225**	P	**Pg**	**10 09 04.8**	**-0.4**
MOCO	**Biccari - m.te**	**1.03**	**177**	P	**Pg**	**10 09 05.8**	**-0.4**
MOCO				AML	AML		
	comp=E,430µm,0.5s						
MOCO				AML	AML		
	comp=N,252µm,0.5s						
SACR	**S. Croce Del S**	**1.04**	**196**	P	**Pg**	**10 09 06.2**	**-0.2**
TERO	**Teramo**	**1.11**	**282**	P	**Pn**	**10 09 08.2**	**+0.6**
FAGN	**Fagnano**	**1.12**	**263**	P	**Pn**	**10 09 08.3**	**+0.6**
FAGN				AML	AML		
	comp=E,3000µm,0.6s						
FAGN				AML	AML		
	comp=N,1700µm,0.4s						
PTRJ	**Pietraroja**	**1.12**	**202**	P	**Pb**	**10 09 08.2**	**+0.7**
CERA	**Filignano**	**1.13**	**225**	P	**Pn**	**10 09 08.4**	**+0.6**
SGG	**Gregorio Mates**	**1.14**	**207**	P	**Pg**	**10 09 08.2**	**-0.1**
OFFI	**Offida**	**1.16**	**298**	P	**Pb**	**10 09 08.4**	**+0.3**
VAGA	**Valle Agricola**	**1.17**	**213**	P	**Pg**	**10 09 08.7**	**-0.1**
VAGA				AML	AML		
	comp=E,558µm,0.9s						
VAGA				AML	AML		
	comp=E,558µm,0.9s						
VAGA				AML	AML		
	comp=N,935µm,1.0s						
PSB1	**Pescosannita**	**1.20**	**190**	P	**Pg**	**10 09 08.1**	**-1.2**
PSB1				AML	AML		
	comp=N,266µm,1.1s						
PSB1				AML	AML		
	comp=E,320µm,0.9s						
VVLD	**Villa Vallelon**	**1.21**	**244**	P	**Pn**	**10 09 10.1**	**+1.1**
VVLD				AML	AML		
	comp=N,252µm,0.8s						
VVLD				AML	AML		
	comp=E,240µm,0.6s						
VVLD				AML	AML		
	comp=E,240µm,0.6s						
POFI	**Posta Fibreno**	**1.23**	**236**	P	**Pg**	**10 09 08.9**	**-0.9**
CAMP	**Campotosto**	**1.24**	**277**	P	**Pn**	**10 09 10.7**	**+1.2**
CAMP				S	**Sn**	**10 09 29.3**	**+3.1**
CAMP				AML	AML		
	comp=N,494µm,0.5s						
CAMP				AML	AML		
	comp=N,494µm,0.5s						
CAMP				AML	AML		
	comp=E,418µm,1.6s						
AQU	**L'Aquila**	**1.24**	**268**	ePn	**Pn**	**10 09 11.3**	**+1.8**
AQU	**L'Aquila**	**1.24**	**268**	P	**Pn**	**10 09 10.2**	**+0.8**
VITU	**Vitulano (BN)**	**1.26**	**195**	P	**Pg**	**10 09 10.5**	**0.0**
VITU				AML	AML		
	comp=N,642µm,0.4s						
VITU				AML	AML		
	comp=E,604µm,0.4s						
PTQR	**Pietraquaria**	**1.30**	**254**	P	**Pn**	**10 09 11.7**	**+1.4**
SMA1	**SAN MARTINO**	**1.31**	**281**	P	**Pn**	**10 09 12.0**	**+1.6**
SMA1				AML	AML		
	comp=E,641µm,0.8s						
SMA1				AML	AML		
	comp=N,588µm,0.7s						
SMA1				AML	AML		
	comp=E,640µm,0.8s						
SMA1				AML	AML		
	comp=N,590µm,0.7s						
ZIRJ	**Zirje**	**1.32**	**18**	i Pg	**Pn**	**10 09 09.5**	**-0.9**
ZIRJ				Sg	**Sg**	**10 09 28.7**	**0.0**
CAPA	**Cerignola FG**	**1.36**	**156**	P	**Pn**	**10 09 10.4**	**-0.6**
PIGN	**Pignataro Magg**	**1.38**	**209**	P	**Pn**	**10 09 12.3**	**+1.0**
PIGN				AML	AML		

	comp=E,242µm,0.6s						
PIGN				AML	AML		
	comp=N,245µm,1.0s						
PIGN				AML	AML		
	comp=N,246µm,1.0s						
CAFE	Carife	1.38	175	P	Pn	10 09 11.1	-0.2
CAFE				AML	AML		
	comp=N,223µm,0.4s						
CAFE				AML	AML		
	comp=E,338µm,0.8s						
RM33	Pellescritta (	1.38	275	P	Pb	10 09 13.2	+1.2
RM33				AML	AML		
	comp=E,406µm,1.1s						
RM33				AML	AML		
	comp=N,520µm,0.8s						
RM33				AML	AML		
	comp=N,520µm,0.8s						
RM33				AML	AML		
	comp=E,406µm,1.1s						
LSTV	Lastovo	1.39	74	ePg	Pn	10 09 10.9	-0.5
LSTV				Sg	Sb	10 09 28.8	-1.0
MNTP	Montappone	1.39	302	P	Pg	10 09 13.4	+0.4
PAOL	Paolisi	1.42	196	P	Pn	10 09 12.5	+0.6
RSF3	Rocca San Feli	1.44	177	P	Pn	10 09 12.0	-0.2
PP3	Marolino	1.45	313	P	Pg	10 09 13.9	-0.3
FIAM	Fiamignano	1.46	265	P	Pg	10 09 14.2	-0.1
FIAM				AML	AML		
	comp=N,319µm,0.6s						
FIAM				AML	AML		
	comp=E,403µm,1.2s						
SNAL	S. Angelo Dei	1.48	176	P	Pn	10 09 12.8	+0.1
SNAL				AML	AML		
	comp=N,356µm,0.8s						
SNAL				AML	AML		
	comp=E,263µm,0.7s						
SNAL				AML	AML		
	comp=E,264µm,0.7s						
VULT	Monte Vulture	1.50	164	AML	AML		
	comp=E,528µm,0.5s						
VULT				AML	AML		
	comp=N,766µm,1.0s						
LIO3	Lioni	1.51	177	P	Pn	10 09 13.1	0.0
NRCA	Norcia	1.51	287	P	Pg	10 09 14.7	-0.6
NRCA				AML	AML		
	comp=N,380µm,0.6s						
NRCA				AML	AML		
	comp=E,293µm,0.7s						
LNSS	Leonessa	1.52	278	P	Pg	10 09 15.3	-0.2
LNSS				AML	AML		
	comp=E,469µm,0.5s						
LNSS				AML	AML		
	comp=N,424µm,0.6s						
LNSS				AML	AML		
	comp=N,424µm,0.6s						
MORI	Morici	1.53	17	ePn	Pn	10 09 13.7	+0.3
MORI				Sn	Sn	10 09 34.8	+1.6
RDM3	Ruvo Del Monte	1.56	167	P	Pn	10 09 14.4	+0.5
AOI	Ancona	1.58	317	P	Pb	10 09 15.1	-0.2
MRVN	Minervino Murg	1.58	148	P	Pn	10 09 13.4	-0.7
DUGI	Dugi Otok	1.59	359	ePn	Pn	10 09 14.5	+0.4
DUGI				Sn	Sg	10 09 37.3	-0.1
FDMO	Fiordimonte	1.60	294	P	Pg	10 09 16.1	-0.9
FDMO				AML	AML		
	comp=E,322µm,0.6s						
FDMO				AML	AML		
	comp=N,293µm,0.8s						
PALZ	Palazzo San Ge	1.60	155	P	Pn	10 09 14.1	-0.2
CERT	Cerreto	1.62	254	P	Pb	10 09 16.3	+0.2
CERT				AML	AML		
	comp=N,162µm,0.4s						
CERT				AML	AML		
	comp=E,210µm,0.5s						
MAKA	Makarska	1.68	58	ePn	Pn	10 09 14.8	-0.6
MAKA				Sn	Sn	10 09 37.0	+0.2
EL6	Elcito	1.72	303	P	Pb	10 09 17.4	-0.4
ACER	Acerenza	1.74	158	P	Pn	10 09 16.9	+0.6
RICI	Ricice	1.86	53	ePn	Pn	10 09 17.9	0.0
RICI				Sn	Sn	10 09 41.8	+0.4
AMUR	Altamura	1.88	142	P	Pn	10 09 17.4	-0.9
MOMA	Monte Martano	1.89	283	P	Pb	10 09 20.6	-0.2
MOMA				AML	AML		
	comp=N,262µm,0.5s						
MOMA				AML	AML		
	comp=E,178µm,0.4s						
ARVD	Arcevia	1.91	306	P	Pn	10 09 19.9	+1.2
ARVD				AML	AML		
	comp=N,97µm,0.7s						
ARVD				AML	AML		
	comp=E,118µm,0.7s						
SSFR	Montelago di S	1.98	302	P	Pn	10 09 21.2	+1.6
SSFR				AML	AML		
	comp=E,212µm,0.8s						
SSFR				AML	AML		
	comp=N,151µm,0.2s						
STON	Ston	1.99	76	ePn	Pn	10 09 19.7	0.0
STON	Ston	1.99	76	ePn	Pn	10 09 19.6	0.0
STON				Sn	Sn	10 09 45.0	+0.5
STON	Ston	1.99	76	P	Pb	10 09 22.6	+0.2
STON				AML	AML		
	comp=E,130µm,0.4s						
STON				AML	AML		
	comp=N,214µm,0.6s						
PIEI	Pieia	2.18	302	P	Pn	10 09 23.9	+1.5
UDBI	Udbina	2.18	13	ePn	Pn	10 09 24.1	+1.7
UDBI				Sn	Sb	10 09 52.5	-0.2
NOCI	Noci	2.20	137	P	Pn	10 09 21.4	-1.1
NOCI				AML	AML		
	comp=E,216µm,1.4s						
NOCI				AML	AML		
	comp=N,304µm,1.0s						
DBRK	Dubrovnik	2.28	82	ePn	Pn	10 09 23.7	-0.1
BADI	Badiali	2.35	299	P	Pn	10 09 26.3	+1.6
BADI				AML	AML		
	comp=E,104µm,1.2s						
BADI				AML	AML		
	comp=N,146µm,1.0s						
PARC	Parchiule	2.42	302	P	Pn	10 09 26.5	+0.8
PARC				AML	AML		
	comp=N,107µm,0.7s						
PARC				AML	AML		
	comp=E,97µm,0.5s						
TREB	Trebinje	2.44	82	ePn	Pn	10 09 25.4	-0.4
MGRS	Mrkonjic Grad	2.49	35	ePn	Pn	10 09 28.9	+2.3
PLIT	Plitvice	2.51	9	ePn	Pn	10 09 27.2	+0.4
PLIT				Sn	Sn	10 09 59.8	+2.5
SMRN	Sveta Marina	2.72	346	ePn	Pn	10 09 29.5	-0.1
SMRN				Sn	Sn	10 10 04.0	+1.6
BLY	Banja Luka	2.80	32	ePn	Pn	10 09 32.6	+1.8
BRSN	Barisano	2.88	312	⇓P	Pb	10 09 38.7	+1.1
UPM	Unac-Piva	2.93	73	ePn	Pb	10 09 37.0	-1.5
DRME	Dracevica, Mon	3.06	93	ePn	Pn	10 09 34.6	+0.3
PDG	Podgorica	3.09	88	ePn	Pn	10 09 30.9	-3.9
PIPA	Pietrapaola	3.20	155	S	Sb	10 10 23.0	+1.1
OZLJ	Ozalj	3.22	5	ePn	Pn	10 09 38.5	+1.9
SPS2	Spezzano della	3.25	162	P	Pb	10 09 44.5	+0.6
CEY	Cerknica	3.37	352	ePn	Pn	10 09 38.8	+0.1
RUDO	Rudo	3.37	67	ePn	Pn	10 09 40.5	+1.8
MOSL	Moslavina	3.43	20	ePn	Pn	10 09 40.7	+1.2
CRES	Cresnjev	3.43	4	ePn	Pn	10 09 41.8	+2.3
BBLS	Lazići	3.49	64	ePn	Pb	10 09 49.5	+1.6
BBLS	Lazići	3.49	64	ePn	Pb	10 09 49.6	+1.6
PTJ	Puntijarka	3.56	10	Sn	Sn	10 10 24.6	+1.2
IST3	Stromboli F	3.60	178	S	Sn	10 10 27.0	+2.7
LJU	Ljubljana	3.66	354	ePn	Pn	10 09 43.7	+1.0
SJES	Sjenica	3.70	75	ePn	Pb	10 09 51.5	-0.1
IVAS	Ivanjica	3.90	71	ePn	Pn	10 09 46.8	+0.8
DIVS	Divibare	3.97	63	ePn	Pb	10 09 57.0	+0.8
DIVS	Divibare	3.97	63	ePn	Pb	10 09 57.7	+1.5
OBKA	Obir	4.12	355	ePn	Pn	10 09 50.2	+1.1
	comp=E,1.0nm,0.1s						
OBKA				eSn	Sn	10 10 37.6	+0.3
	comp=E,5.3nm,0.4s						
GMB	Gambarie	4.27	172	S	Sn	10 10 44.0	+3.1
TRUS	Trudelj	4.29	63	ePn	Pb	10 10 00.4	-1.2
MYKA	Terra Mystica	4.35	347	ePn	Pn	10 09 53.2	+1.0
	comp=E,0.7nm,0.2s						
MYKA				eSn	Sn	10 10 44.1	+1.3
	comp=E,1.6nm,0.3s						
GRUS	Gruza	4.38	68	ePn	Pb	10 10 01.1	-2.1
PGF	Pioggiola	4.50	274	eP	Pn	10 09 57.8	+3.5
PGF				eSn	Sn	10 10 44.3	-2.2
	comp=E,1.7nm,0.5s						
SELS	Selova	4.52	78	ePn	Pn	10 09 56.4	+1.9
ABTA	Abfaltersbach	4.71	338	ePn	Pn	10 09 58.6	+1.4
ABTA				eSn	Sn	10 10 53.6	+1.8
	comp=E,0.5nm,0.2s						
ARSA	Arzberg	4.86	4	ePn	Pn	10 10 00.6	+1.5
	comp=E,0.5nm,0.3s						
ARSA				eSn	Sn	10 10 55.5	+0.3
	comp=E,2.0nm,0.6s						
CAPR	Capriolo	4.92	313	P	Pb	10 10 13.3	+1.0
BARS	Barje	4.99	83	ePn	Pn	10 10 01.8	+0.9
WTTA	Wattenberg	5.44	334	ePn	Pn	10 10 09.4	+2.1
	comp=E,0.8nm,0.3s						
WTTA				eSn	Sn	10 11 12.9	+3.0
	comp=E,6.5nm,0.4s						
MOA	Molln	5.48	354	ePn	Pn	10 10 08.5	+0.9
	comp=E,0.6nm,0.2s						
MOA				eSn	Sn	10 11 11.8	+1.3
	comp=E,2.1nm,0.5s						
WATA	Walderalm	5.52	334	ePn	Pn	10 10 10.5	+2.1
	comp=E,1.3nm,0.3s						
WATA				eSn	Sn	10 11 13.7	+1.8
	comp=E,4.3nm,0.6s						
SQTA	Sankt Quirin	5.55	332	ePn	Pn	10 10 11.0	+2.3
	comp=E,0.9nm,0.3s						
SQTA				eSn	Sn	10 11 14.1	+1.7
	comp=E,3.0nm,0.3s						
CONA	Conrad Observa	5.55	5	ePn	Pn	10 10 09.5	+0.8
	comp=E,0.5nm,0.3s						
CONA				eSn	Sn	10 11 12.3	-0.2
	comp=E,0.7nm,0.3s						
FETA	Feichten	5.56	328	ePn	Pn	10 10 10.9	+2.0
	comp=E,0.4nm,0.3s						
FETA				eSn	Sn	10 11 15.3	+2.5
	comp=E,1.9nm,0.5s						
MOTA	Moosalm	5.69	332	ePn	Pn	10 10 11.2	+0.5
	comp=E,0.1nm,0.1s						
MOTA				eSn	Sn	10 11 17.6	+1.6
	comp=E,2.0nm,0.5s						
SBF	Sospel	5.78	287	eP	Pn	10 10 15.9	+4.1
SBF				eSn	Sn	10 11 14.6	-3.4
	comp=E,5.4nm,0.5s						
VLS	Valsamata	5.96	133	P	Pn	10 10 20.8	+6.5
LMR	La Mourre	6.37	281	eP	Pn	10 10 22.7	+2.9
MBDF	Montbardon	6.46	294	ePn	Pn	10 10 21.1	-0.2
MBDF	Montbardon	6.46	294	eP	Pn	10 10 26.2	+4.9
MBDF				eSn	Sn	10 11 30.8	-4.2
	comp=E,3.3nm,0.6s						
VYHS	Vyhne	6.64	22	ePN	Pn	10 10 25.6	+2.0
KHC	Kasperske Hory	6.81	352	ePN	Pn	10 10 26.3	+0.4
SMRF	Simiane la Rot	7.12	286	ePn	Pn	10 10 29.5	-0.7
SMRF	Simiane la Rot	7.12	286	eP	Pn	10 10 34.5	+4.3
ORIF	Oris-en-Rattie	7.13	294	ePn	Pn	10 10 30.1	-0.3
ORIF	Oris-en-Rattie	7.13	294	eP	Pn	10 10 35.8	+5.4
ORIF				eSn	Sn	10 11 46.6	-4.7
	comp=E,2.1nm,0.4s						
CABF	La Chapelle	7.68	306	ePn	Pn	10 10 37.8	-0.1
CABF				eSn	Sn	10 11 59.2	-5.6
	comp=E,1.8nm,0.4s						
HINF	Hinteralfeld	7.94	316	eP	Pn	10 10 45.3	+3.8
HINF				eSn	Sn	10 12 05.0	-6.2
	comp=E,11nm,0.5s						
HAU	Haudompre	8.32	315	ePn	Pn	10 10 47.5	+0.8
HAU	Haudompre	8.32	315	eP	Pn	10 10 52.9	+6.2
HAU				eSn	Sn	10 12 14.0	-6.6
	comp=E,18nm,0.4s						
SMF	Signal de Mont	9.08	302	ePn	Pn	10 10 56.0	-1.0
SMF	Signal de Mont	9.08	302	eP	Pn	10 11 02.5	+5.5
SMF				eSn	Sn	10 12 32.8	-6.2
	comp=E,0.9nm,0.3s						
SFTF	Sexfontaines	9.14	313	eP	Pn	10 11 02.1	+4.2
	baz=131						
SFTF				eSn	Sn	10 12 33.9	-6.8
	comp=E,6.1nm,0.6s						
LOR	Lormes	9.33	305	ePn	Pn	10 10 59.9	-0.6
	baz=124						
LOR				eSn	Sn	10 12 39.0	-6.4
	comp=E,4.1nm,0.5s						
SSF	Saint Saulge	9.46	303	ePn	Pn	10 11 01.1	-1.1
SSF				eSn	Sn	10 12 41.7	-6.7
	comp=E,0.8nm,0.3s						
BGF	Bois d'Agland	9.68	300	ePn	Pn	10 11 04.1	-1.1
BGF				eSn	Sn	10 12 47.2	-6.6
	comp=E,2.4nm,0.4s						

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*IDC **06** 10:19:08.8±0.6, 29°.01N×142°.38E, h0^{km}, mb4.0/26, mb1 4.1/30, mb1mx3.9/57, mbtmp4.0/30, ML3.3/4, MS3.4/6, Ms1 3.5/6, ms1mx3.1/43, Error ellipse: s-maj=18.1km s-min=11.5km az=83.0*

*JMA **06** 10:19:08.9±0.1, 29°.09N×142°.63E, h24^{km}, M4.2*

*NIED **06** 10:19:09.0, 29°.09N×142°.63E, h24^{km}, MW4.2, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}1.29; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-1.28; $M_{r\theta}$-0.36; $M_{\theta\phi}$0.31; $M_{\phi r}$1.94; Fault plane solution: $M_0$2.38000×10^{15} NP1: ϕ_s349.00000°, δ73.00000°, λ91.00000°. NP2: ϕ_s165.00000°, δ17.00000°, λ86.00000°.*

*NEIC **06** 10:19:12.9±1.0, 28°.97N±0°.06×142°.3E±0°.2, h22^{km}±5^{km}, mb4.6/22 Error ellipse: s-maj=19.8km s-min=8.8km az=86.0*

ISC 06 10:19:13.0±0.5**, 29°.03N**±0°.04×**142°.31E**±0°.09**, h27^{km}, n84, σ1^{s}03**/90**, mb4.2**/37**, MS3.4**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.93	183	P	Pn	10 19 42.6	-1.5
CBIJ				eS	Sn	10 20 07.2	-0.3
JCJ	Chichijima	1.93	183	Pn	Pn	10 19 43.1	-1.0
	16nm,0.3s,baz=15,slow=20,SNR=7.0						
JCJ				Sn	Sn	10 20 06.7	-0.9
	76nm,0.3s,baz=303,slow=22,SNR=13						
JCJ	Chichijima	1.93	183	Pn	Pn	10 19 43.4	-0.7
JHH2	Haha-jima-NKT2	2.39	183	P	Pn	10 19 49.2	-1.2
JHH2				eS	Sn	10 20 18.9	0.0
JHJ	Hachijo jima 2	4.61	333	Pn	Pn	10 20 20.6	-0.4
	3.8nm,0.3s,baz=287,slow=19,SNR=1.6						
JHJ				Sn	Sn	10 21 13.8	+0.1
	9.5nm,0.3s,baz=253,slow=19,SNR=1.5						
JOD2	Odawara 2	6.79	337	P	Pn	10 20 50.8	0.0
JHU	Hanno	7.26	340	P	Pn	10 20 56.2	-1.2
JHU				eS	Sn	10 22 17.1	-1.8
JRY	Ryogami san	7.53	338	P	Pn	10 21 00.9	-0.2
JGF	Kuroka	7.77	329	Pn	Pn	10 21 05.9	+1.5
MJAR	Matsushiro Arr	8.24	336	Pn	Pn	10 21 10.6	-0.2
	0.3nm,0.3s,baz=159,slow=10,SNR=11						
MJAR				Sn	Sn	10 22 43.0	-0.1
	0.0nm,0.3s,baz=165,slow=20,SNR=2.6						
MJAR	Matsushiro Arr	8.24	336	Pn	Pn	10 21 11.5	+0.7
MAJO	Matsushiro	8.24	336	Pn	Pn	10 21 11.8	+1.0
MAT	Matsushiro	8.24	336	P	Pn	10 21 10.5	-0.3
MAT				S	Sn	10 22 39.7	-3.4
JMM	Marumori	8.90	352		Pn	10 21 16.9	-2.9
JOW	Kunigami	12.60	263	LR	LR	10 26 09.0	
	comp=Z,105nm,21.4s,baz=91,slow=33						
KSRS	Korea Array	14.66	309	Pn	P	10 22 42.4	-2.1
	0.2nm,0.3s,baz=116,slow=12,SNR=12						
KSRS				LR	LR	10 28 02.8	
	comp=Z,91nm,18.4s,baz=152,slow=36						
ASAJ	Asahikawa	15.06	1	Pn	Pn	10 22 43.1	-0.8
	0.4nm,0.3s,baz=164,slow=19,SNR=1.5						
USA0B	Ussuriysk Arra	17.23	334		P	10 23 14.5	+1.5
USRK	Ussuriysk Ar.	17.23	334	P	Pn	10 23 12.0	+0.3
	baz=164,slow=9.1,SNR=7.5						
USRK	Ussuriysk Ar.	17.23	334	P	P	10 23 14.1	+1.1
YULB	Yu-li	19.66	258		Pn	10 23 41.5	+0.1
YULB				IAmb	IAmb	10 24 08.1	
	comp=Z,71nm,1.4s						
NJ2	Nanjing	20.41	284	eP	P	10 23 44.5	-3.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KLR	Kul'dur	21.73	341	P	P	10 24 02.7	+0.7
	comp=Z,2.7nm,0.7s,baz=132,slow=8.1,SNR=7.2						
H11N2	WAKE ISLAND Hy	24.20	107	T	T	10 49 39.7	
	baz=296,slow=74,SNR=3.5						
H11N1	WAKE ISLAND Hy	24.20	107	T	T	10 50 03.5	
	baz=296						
H11N3	WAKE ISLAND Hy	24.21	107	T	T	10 49 39.1	
	baz=296,slow=74,SNR=3.3						
HHC	Hu-ho-hao-te	27.68	303	eP	P	10 24 59.4	+0.5
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,300nm,6.6s						
JAY	Jayapura	31.41	183	LR	LR	10 36 43.4	
	comp=Z,79nm,21.3s,baz=232,slow=34						
FAKI	Fak Fak	33.20	199	P	P	10 25 40.1	-7.6
FAKI				IAmb	IAmb	10 25 56.0	
	comp=Z,8.8nm,0.7s						
SONM	Songino Array	33.42	314	P	P	10 25 50.0	+0.5
	comp=Z,2.4nm,0.8s,baz=103,slow=8.0,SNR=18						
SONM				LR	LR	10 38 39.7	
	comp=Z,69nm,18.4s,baz=43,slow=35						
SONM	Songino Array	33.42	314	P	P	10 25 51.0	+1.5
SEY	Seymchan	34.54	8	P	P	10 25 58.5	-0.3
	comp=Z,1.6nm,0.7s,baz=188,slow=10,SNR=5.1						
TLY	Talaya	36.53	319	LR	LR	10 40 27.1	
	comp=Z,66nm,19.2s,baz=42,slow=35						
CMAR	Chiang Mai Arr	40.87	265	P	P	10 26 53.3	+0.4
	comp=Z,0.4nm,0.3s,baz=50,slow=7.4,SNR=6.0						
TIXI	Tiksi	43.30	354	P	P	10 27 11.6	-0.5
	comp=Z,1.0nm,0.3s,baz=107,slow=9.1,SNR=4.3						
WMQ	Urumqi	45.55	304	eP	P	10 27 32.5	+1.9
ZALV	Zalesovo Beam	48.11	318	P	P	10 27 50.5	+0.2
	comp=Z,1.3nm,0.5s,baz=102,slow=6.1,SNR=5.5						
ZALV	Zalesovo Beam	48.11	318	P	P	10 27 50.2	-0.1
WB0	Warramunga Arr	49.11	190	P	P	10 27 57.6	-0.7
WB0				IAmb	IAmb	10 28 05.6	
	comp=Z,5.0nm,0.7s						
WR0	Warramunga Arr	49.28	190	P	P	10 27 59.0	-0.6
WR0				IAmb	IAmb	10 27 59.5	
	comp=Z,3.7nm,0.8s						
WRAB	Tennant Creek	49.28	190	P	P	10 27 58.9	-0.7
WRAB				IAmb	IAmb	10 27 59.9	
	comp=Z,4.8nm,0.8s						
WB2	Warramunga Arr	49.29	190	P	P	10 27 59.0	-0.7
WB2				IAmb	IAmb	10 28 26.1	
	comp=Z,7.2nm,1.1s						
WRA	Warramunga Arr	49.29	190	P	P	10 27 58.9	-0.8
	comp=Z,4.5nm,0.8s,baz=12,slow=8.3,SNR=35						
WRA	Warramunga Arr	49.29	190	P	P	10 27 58.2	-1.5
MK31	Makanchi Array	49.34	308	P	P	10 28 00.0	+0.1
MK31				IAmb	IAmb	10 28 00.9	
	comp=Z,1.9nm,0.7s						
MKAR	Makanchi Array	49.34	308	P	P	10 28 00.2	+0.3
	comp=Z,2.1nm,0.6s,baz=92,slow=9.8,SNR=20						
MKAR				PcP	PcP	10 29 22.9	+0.6
	comp=Z,0.3nm,0.6s,baz=152,slow=3.5,SNR=1.5						
MKAR	Makanchi Array	49.34	308	P	P	10 28 00.4	+0.5
NRIK	Noril'sk	50.89	338	P	P	10 28 11.5	+0.2
	comp=Z,0.7nm,0.3s,baz=110,slow=10,SNR=3.9						
KURBB	Kurchatov Arra	51.78	313	P	P	10 28 18.6	+0.4
	comp=Z,6.8nm,0.6s,baz=90,slow=7.6,SNR=89						
AS31	Alice Springs	53.01	190	P	P	10 28 27.2	-0.5
ASAR	Alice Springs	53.02	190	P	P	10 28 26.5	-1.1
	comp=Z,0.3nm,0.6s,baz=0.2,slow=4.8,SNR=12						
ASAR	Alice Springs	53.02	190	P	P	10 28 25.9	-1.7
IMAR	Indian Mountai	53.28	27	P	P	10 28 28.0	-1.1
BOOM	Boomskoye usch	54.23	303	P	P	10 28 36.5	-0.1
ILAR	Eielson Array	55.97	29	P	P	10 28 47.9	-0.7
	comp=Z,0.7nm,0.9s,baz=263,slow=6.1,SNR=4.7						
BVAR	Borovoye Array	56.70	317	P	P	10 28 54.6	+0.6
	comp=Z,3.6nm,0.7s,baz=163,slow=6.2,SNR=26						
BRVK	Borovoye	56.76	317	P	P	10 28 55.3	+0.8
BRVK				IAmb	IAmb	10 28 56.1	
	comp=Z,3.5nm,0.7s						
BMAR	Burnt Mountain	57.07	26	P	P	10 28 57.2	+0.8
KKAR	Karatay Array	58.05	305	P	P	10 29 04.4	+0.6
CHGR	Chuyangaron	60.06	300	P	P	10 29 18.0	+0.2
STKA	Stephens Creek	60.58	181	P	P	10 29 22.6	+1.5
	comp=Z,1.2nm,0.7s,baz=315,slow=13,SNR=1.8						
FORT	Forrest	61.01	194	P	P	10 29 24.0	-0.1
INK	Inuvik	61.23	25	P	P	10 29 24.9	-0.2
	comp=Z,1.3nm,0.8s,baz=309,slow=5.2,SNR=9.4						
INK	Inuvik	61.23	25	P	P	10 29 25.9	+0.7
INK				IAmb	IAmb	10 29 35.8	
	comp=Z,3.1nm,1.2s						
ARU	Arti	62.97	322	P	P	10 29 37.0	0.0
	comp=Z,0.6nm,0.4s,baz=336,slow=16,SNR=5.3						
ABKAR	Akbulak array	63.83	314	P	P	10 29 43.3	+0.4
ABKAR	Akbulak array	63.83	314	P	P	10 29 43.4	+0.5
ABKAR				IAmb	IAmb	10 29 44.2	
	comp=Z,4.3nm,0.6s						
AKTO	Aktyubinsk	64.73	315	P	P	10 29 48.7	0.0
	comp=Z,2.6nm,0.7s,baz=80,slow=11,SNR=4.9						
EUNU	Eureka	67.97	8	P	P	10 30 09.2	+0.1
YKA	Yellowknife Ar	70.39	29	P	P	10 30 23.4	-0.9
	comp=Z,0.7nm,0.5s,baz=295,slow=6.4,SNR=9.1						
YKA	Yellowknife Ar	70.39	29	P	P	10 30 24.0	-0.3
FINES	FINESS Array B	76.26	334	P	P	10 30 59.6	+0.7
	comp=Z,2.1nm,0.8s,baz=21,slow=12,SNR=1.5						
KBZ	Khabaz	76.77	313	P	P	10 31 03.4	+1.3
	comp=Z,2.3nm,0.8s,baz=349,slow=5.4,SNR=4.7						
KVN	Kaiserville	79.09	51	P	P	10 31 23.6	+8.3
KVN				IAmb	IAmb	10 31 31.0	
	comp=Z,4.8nm,0.8s						
NVAR	Mina Array Bea	79.24	52	P	P	10 31 17.7	+1.4
	comp=Z,0.4nm,0.6s,baz=299,slow=6.1,SNR=2.6						
NVAR				LR	LR	11 01 53.9	
	comp=Z,70nm,20.6s,baz=278,slow=32						
MNK	Minsk	79.57	327	i P	P	10 31 17.4	0.0
	comp=E,8.0nm,1.1s						
MNK				i P	P	10 31 17.4	0.0
	comp=N,26nm,1.0s						
MNK				i P	P	10 31 17.4	0.0
	comp=Z,30nm,0.8s,baz=234						
MNK				i PcP	PcP	10 31 25.1	-0.2
MNK				i PP	PP	10 34 17.5	-0.1
MNK				i PPP	PPP	10 36 06.1	
MNK				i S	S	10 41 17.3	-0.1
MNK				i SS	SS	10 46 26.8	+2.2
MNK				i SSS	SSS	10 49 58.1	
MNK				i LR	LR	11 06 25.2	
MNK				i LRM	MLR	11 09 06.6	
	comp=N,1µm,23.1s						
MNK				i LRM	MLR	11 09 06.6	
	comp=Z,333nm,17.4s						
MNK				i LRM	MLR	11 09 29.7	
	comp=E,141nm,21.7s						
AKASG	Malin Array Be	81.12	324	P	P	10 31 25.4	-0.5
	comp=E,0.6nm,0.6s,baz=51,slow=4.8,SNR=4.6						
NOA	NORSAR Array B	81.86	338	P	P	10 31 30.0	+0.4
	comp=E,0.9nm,0.8s,baz=40,slow=6.2,SNR=1.2						
PDAR	Pinedale Array	82.77	45	P	P	10 31 34.8	-0.2
	comp=E,0.2nm,0.6s,baz=318,slow=4.9,SNR=2.0						
RAYN	Ar Rayn	84.47	294	P	P	10 31 44.2	+0.4
BRTR	Keskin Array B	84.77	313	P	P	10 31 46.0	+0.8
	comp=E,1.0nm,0.7s,baz=93,slow=4.2,SNR=7.1						
TXAR	Lajitas Array	94.36	53	P	P	10 32 31.2	+0.5
	comp=E,0.1nm,0.6s,baz=329,slow=3.4,SNR=1.7						
TORD	Torodi Ar. Bea	123.38	312	PKP	PKPdf	10 38 08.2	-0.2
	comp=E,0.5nm,0.6s,baz=16,slow=2.6,SNR=3.5						
LPAZ	La Paz	149.28	72	PKPbc	PKPbc	10 39 00.6	-0.1
	comp=E,1.3nm,0.8s,baz=312,slow=4.3,SNR=2.8						

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*IDC **06** 10:23:45.9±0.5, 0°.17S×125°.07E, h0^{km}, mb4.5/27, mb1 4.5/29, mb1mx4.3/46, mbtmp4.4/29, ML3.3/2, MS3.5/8, Ms1 3.5/8, ms1mx3.1/38, Error ellipse: s-maj=19.9km s-min=12.4km az=70.0*

*DJA **06** 10:23:49.7±0.4, 0°S±2°×12°5E±°, h10^{km}±3^{km}, M4.5/19, mb4.7/16, mB4.9/7, MLv4.7/19, Mw(mB)4.2/7*

*NEIC **06** 10:23:54.0±2.1, 0°.14S±0°.08×125°.21E±0°.06, h49^{km}±8^{km}, mb4.6/27, Error ellipse: s-maj=11.2km s-min=9.1km az=185.0*

ISC 06 10:23:53.4±0.4**, 0°.19S**±0°.05×**125°.18E**±0°.05**, h53^{km}, n117, σ1^{s}28**/120**, mb4.6**/50**, MS3.4**/5**, 1C-1D, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.42	302	P	Pn	10 24 15.9	-1.0
SANI	Sanana	2.02	157	P	Pn	10 24 21.9	-3.1
LBMI	Labuha	2.36	101	P	Pn	10 24 28.7	-1.0
LBMI				S	Sn	10 24 56.2	-1.3
TNTI	Ternate	2.38	66	P	Pn	10 24 29.7	-0.3
TNTI	Ternate	2.38	66	Pn	Pn	10 24 29.1	-0.8
MRSI	Marisa	3.31	282	P	Pn	10 24 41.0	-1.7
APSI	Ampana	3.61	259	P	Pn	10 24 48.0	+1.2
TOLI2	Tolitoli	4.59	286		Pn	10 25 00.1	-0.2
AAI	Ambon	4.60	139	P	Pn	10 25 09.4	+9.0
MSAI	Masohi	4.88	130	P	Pn	10 25 04.2	-0.1
MPSI	Mapaga	5.31	276	P	Pn	10 25 09.4	-0.8
	0.9nm2µm102nm,0.7s						
TTSI	Tana Toraja	6.07	242	P	Pn	10 25 21.1	+0.6
	0.6nm2µm107nm,0.6s						
SWI	Sorong	6.11	96	P	Pn	10 25 20.3	-0.9
	1.2nm11nm,0.8s						
SIJI	Sorong	6.12	96	Pn	Pn	10 25 19.4	-1.9
	0.7nm,0.3s,baz=298,slow=11,SNR=8.1						
SIJI				Sn	Sn	10 26 32.0	+2.0
	0.5nm,0.3s,baz=348,slow=20,SNR=1.4						

DDMP	Don Marcelino,	6.27	5	⇓*i*P	Pn	10 25 24.6	+1.2
BNSI	Bone	6.58	230	P	Pn	10 25 28.5	+1.0
	0.4nm76nm,0.7s						
SPSI	Sidrap Palu	6.58	235	P	Pn	10 25 29.2	+1.6
	0.6nm1µm120nm,0.7s						
BKSI	Bulukumba	7.18	225	P	Pn	10 25 37.9	+2.1
	0.2nm28nm,0.7s						
DAV	Davao City (W)	7.22	3	LR	LR	10 28 39.1	
	comp=Z,441nm,20.1s,baz=187,slow=41						
KAPI	Kappang	7.24	228	Pn	Pn	10 25 37.6	+1.0
	3.2nm,0.3s,baz=63,slow=7.1,SNR=6.7						
KAPI				Sn	Sn	10 26 55.4	-2.1
	3.4nm,0.3s,baz=150,slow=20,SNR=2.0						
KAPI				LR	LR	10 29 11.9	
	comp=Z,275nm,19.9s,baz=75,slow=46						
KAPI	Kappang	7.24	228	Pn	Pn	10 25 38.2	+1.6
BSSI	Bau Bau, Buton	7.54	218	P	Pn	10 25 41.7	+0.9
	0.1nm329nm19nm,0.5s						
FAKI	Fak Fak	7.56	111		Pn	10 25 38.8	-2.3
SMKI	Samarinda	7.98	268	P	Pn	10 25 57.1	+10
MYLDM	Lahad Datu	8.54	309		Pn	10 25 55.4	+0.9
EDFI	Ende, Flores	9.19	202	P	Pn	10 26 15.6	+12
SOEI	Soe	9.55	185	P	Pn	10 26 08.0	-0.4
	30nm,1.0s						
SOEI	Soe	9.55	185		Pn	10 26 10.7	+2.3
BATI	Baumata	10.07	189	Pn	Pn	10 26 14.7	-0.7
	1.0nm,0.3s,baz=80,slow=6.1,SNR=1.3						
BATI				LR	LR	10 31 01.1	
	comp=Z,218nm,20.2s,baz=353,slow=43						
BBKI	Banjar Baru	10.84	252	P	Pn	10 26 41.4	+15
MTN	Manton Dam	13.89	155	P	Pn	10 27 07.4	-0.2
MTN	Manton Dam	13.89	155		Pn	10 27 07.4	-0.2
MTN	Manton Dam	13.89	155	IAmb	IAmb	10 27 10.4	
	comp=Z,8.7nm,1.1s						
KNRA	Kununurra	15.79	167	Pn	Pn	10 27 31.9	-0.5
KNRA				IAmb	IAmb	10 27 32.4	
	comp=Z,27nm,0.8s						
KNRA	Kununurra	15.79	167		Pn	10 27 31.9	-0.5
FITZ	Fitzroy Crossi	17.80	179	P	Pn	10 27 56.0	-1.5
	comp=Z,0.1nm,0.3s,baz=342,slow=8.2,SNR=2.8						
LEM	Lembang	18.72	249	LR	LR	10 36 13.4	
	comp=Z,189nm,18.6s,baz=12,slow=40						
WB0	Warramunga Arr	21.45	156	P	P	10 28 36.7	-0.7
WB0				IAmb	IAmb	10 28 52.0	
	comp=Z,27nm,1.4s						
WRAB	Tennant Creek	21.58	156	P	P	10 28 40.5	+1.7
WRA	Warramunga Arr	21.58	156	P	P	10 28 37.1	-1.7
	comp=Z,6.9nm,0.7s,baz=338,slow=11,SNR=10						
WRA	Warramunga Arr	21.58	156	P	P	10 28 41.3	+2.5
WB2	Warramunga Arr	21.59	156	P	P	10 28 40.3	+1.4
WR0	Warramunga Arr	21.68	156	P	P	10 28 39.4	-0.5
COEN	Coen	22.46	128	P	P	10 28 49.4	+1.1
COEN				IAmb	IAmb	10 28 53.9	
	comp=Z,13nm,0.9s						
GUMO	Guam	23.83	54	LR	LR	10 36 56.1	
	comp=Z,69nm,19.1s,baz=92,slow=33						
AS31	Alice Springs	24.82	161	P	P	10 29 11.4	+0.5
ASAR	Alice Springs	24.83	161	P	P	10 29 10.4	-0.5
	comp=Z,5.2nm,1.0s,baz=344,slow=11,SNR=25						
ASAR				PcP	PcP	10 32 46.4	+0.1
	comp=Z,0.5nm,0.6s,baz=355,slow=2.0,SNR=4.6						
ASAR	Alice Springs	24.83	161	P	P	10 29 10.7	-0.1
YHNB	Yeheng	24.98	352	P	P	10 29 10.9	-1.4
PSI	Prapat	26.42	277	LR	LR	10 39 28.0	
	comp=Z,111nm,19.9s,baz=100,slow=36						
CMAR	Chiang Mai Arr	31.75	307	P	P	10 30 12.3	-0.4
	comp=Z,1.3nm,0.4s,baz=133,slow=7.2,SNR=8.2						
CMAR				PcP	PcP	10 33 04.3	+0.9
	comp=Z,1.1nm,0.4s,baz=151,slow=1.7,SNR=6.3						
CMAR	Chiang Mai Arr	31.75	307	P	P	10 30 11.6	-1.1
NJ2	Nanjing	32.62	350	*e*P	P	10 30 21.6	+1.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
STKA	Stephens Creek	35.13	155	P	P	10 30 42.2	+0.2
	comp=Z,4.4nm,0.7s,baz=331,slow=10.0,SNR=8.3						
STKA	Stephens Creek	35.13	155	P	P	10 30 42.4	+0.4
JWT	Wachi	36.56	14	P	P	10 30 53.5	-0.6
XAN	Xi'an	37.31	337	P	P	10 31 00.8	+0.2
XAN				pP	pP	10 31 11.9	-1.5
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
KSRS	Korea Array	37.54	4	P	P	10 31 01.9	-0.5
	comp=Z,2.8nm,0.9s,baz=182,slow=10.0,SNR=13						
KSRS				PcP	PcP	10 33 20.4	+0.8
	comp=Z,0.6nm,0.5s,baz=176,slow=2.9,SNR=4.5						
KSRS				LR	LR	10 46 09.9	
	comp=Z,51nm,21.0s,baz=328,slow=36						
MJAR	Matsushiro Arr	38.49	17	P	P	10 31 09.8	-0.7
	comp=Z,3.5nm,0.7s,baz=178,slow=9.4,SNR=10						
MAT	Matsushiro	38.49	17	P	P	10 31 09.8	-0.7
ARMA	Armidale	39.19	142	P	P	10 31 17.4	+0.9
ARMA				IAmb	IAmb	10 31 43.1	
	comp=Z,15nm,1.5s						
JMM	Marumori	40.51	19	P	P	10 31 28.4	+1.2
JMM				IAmb	IAmb	10 31 29.3	
	comp=Z,18nm,0.7s						
HHC	Hu-ho-hao-te	42.68	345	*e*P	P	10 31 48.0	+2.9
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,5.7s						
USA0B	Ussuriysk Arra	44.61	7	P	P	10 32 00.9	+0.5
USA0B				IAmb	IAmb	10 32 04.1	
	comp=Z,19nm,1.1s						
USRK	Ussuriysk Ar.	44.61	7	P	P	10 32 00.2	-0.2
	comp=Z,5.7nm,0.7s,baz=184,slow=8.5,SNR=13						
USRK	Ussuriysk Ar.	44.61	7	P	P	10 32 00.5	+0.1
GTA	Gaotai	45.74	332	⇑P	P	10 32 11.0	+1.3
GTA				pP	pP	10 32 19.1	-3.8
GTA				sP	pwP	10 32 23.5	-3.0
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
RAMN	Ramite	45.87	309	*e*P	P	10 32 11.5	+0.4
	comp=Z,13nm,0.6s						
ASAJ	Asahikawa	46.77	17	P	P	10 32 18.2	+0.7
	comp=Z,22nm,1.2s,baz=248,slow=5.4,SNR=6.0						
GUN	Gumba	46.90	310	*e*P	P	10 32 18.8	-0.4
	comp=Z,19nm,0.6s						
PKI	Pulchoki	47.10	309	*e*P	P	10 32 20.2	-0.6
	comp=Z,4.0nm,0.4s						
KOLN	Koldanda	48.60	308	*e*P	P	10 32 31.2	-1.1
	comp=Z,35nm,0.7s						
DANN	Dangsing	48.75	309	*e*P	P	10 32 32.1	-1.4
	comp=Z,44nm,0.6s						
PYUN	Piuthan	49.23	308	*e*P	P	10 32 36.1	-1.0
	comp=Z,38nm,0.7s						
KLR	Kul'dur	49.55	6	P	P	10 32 38.6	-0.2
	comp=Z,4.3nm,0.7s,baz=211,slow=6.6,SNR=13						
SONM	Songino Array	50.55	344	P	P	10 32 45.8	-0.8
	comp=Z,3.6nm,0.7s,baz=157,slow=8.7,SNR=15						
SONM				LR	LR	10 54 53.6	
	comp=Z,62nm,20.1s,baz=252,slow=37						
SONM	Songino Array	50.55	344	P	P	10 32 47.0	+0.3
SONM				IAmb	IAmb	10 32 49.5	
	comp=Z,3.7nm,0.8s						
WMQ	Urumqi	55.10	328	*e*P	P	10 33 23.0	+2.7
PEA0B	Petropavlovsk-	59.62	22	P	P	10 33 53.0	+1.2
PETK	Petropavlovsk-	59.62	22	P	P	10 33 52.2	+0.4
	comp=Z,7.8nm,0.8s,baz=191,slow=5.7,SNR=11						
PETK	Petropavlovsk-	59.62	22	P	P	10 33 53.0	+1.1
KSH	Kashi	59.78	317	P	P	10 33 55.6	+2.2
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MK31	Makanchi Array	59.94	327	P	P	10 33 53.7	-0.5
MK31				IAmb	IAmb	10 33 55.9	
	comp=Z,5.0nm,0.8s						
MKAR	Makanchi Array	59.94	327	P	P	10 33 53.3	-0.9
	comp=Z,5.3nm,0.5s,baz=121,slow=7.7,SNR=42						
MKAR	Makanchi Array	59.94	327	P	P	10 33 53.5	-0.7
KDJ	Kajisay	60.30	320	P	P	10 33 57.7	+0.8
YAK	Yakutsk	62.15	2	P	P	10 34 08.4	-0.4
	comp=Z,5.4nm,0.4s,baz=270,slow=0.7,SNR=5.3						
AAK	Ala-Archa	62.27	320	P	P	10 34 12.0	+1.7
AAK				IAmb	IAmb	10 34 12.2	
	comp=Z,4.5nm,0.9s						
MA2	Magadan	62.86	14	P	P	10 34 14.2	+0.6
ZALV	Zalesovo Beam	63.40	335	P	P	10 34 15.9	-1.4
	comp=Z,1.4nm,0.6s,baz=132,slow=6.2,SNR=6.3						
KURBB	Kurchatov Arra	64.23	329	P	P	10 34 21.6	-1.2
	comp=Z,5.6nm,0.7s,baz=130,slow=5.9,SNR=35						
KKAR	Karatay Array	65.08	319	P	P	10 34 29.3	+0.7
BVAR	Borovoye Array	69.78	328	P	P	10 34 57.3	-0.8
	comp=Z,3.0nm,0.7s,baz=179,slow=10,SNR=13						
BRVK	Borovoye	69.85	328	P	P	10 34 58.5	0.0
BRVK				IAmb	IAmb	10 35 00.1	
	comp=Z,4.4nm,0.8s						
TIXI	Tiksi	71.76	1	P	P	10 35 08.8	-0.9
	comp=Z,3.1nm,0.3s,baz=187,slow=4.4,SNR=10						
TIXI	Tiksi	71.76	1	P	P	10 35 09.3	-0.4
TIXI				IAmb	IAmb	10 35 15.7	
	comp=Z,5.3nm,1.1s						
NRIK	Noril'sk	73.86	347	P	P	10 35 22.3	+0.1
	comp=Z,12nm,0.7s,baz=127,slow=5.9,SNR=22						
NRIK	Noril'sk	73.86	347	P	P	10 35 22.3	+0.1
NRIK				IAmb	IAmb	10 35 23.5	
	comp=Z,13nm,0.7s						
ABKAR	Akbulak array	74.22	322	P	P	10 35 23.8	-0.9
ABKAR	Akbulak array	74.22	322	P	P	10 35 24.3	-0.4
ABKAR				IAmb	IAmb	10 35 26.8	
	comp=Z,3.5nm,0.7s						
AKTO	Aktyubinsk	75.78	323	P	P	10 35 33.2	-0.4
	comp=Z,8.7nm,0.8s,baz=115,slow=6.9,SNR=25						
ARU	Arti	77.42	329	P	P	10 35 42.1	-0.7
	comp=Z,1.8nm,0.7s,baz=90,slow=3.0,SNR=9.0						
BELG	Belogornoye	82.56	323	P	P	10 36 10.3	-0.3
	comp=Z,13nm,0.7s,baz=101,slow=3.4,SNR=8.7						
KBZ	Khabaz	84.55	314	P	P	10 36 21.1	+0.2
	comp=Z,2.1nm,0.8s,baz=76,slow=4.6,SNR=3.8						
GURO	Guroymak-BITLI	84.75	309	P	P	10 36 23.3	+0.9
TTA	Tatalina	85.07	27	P	P	10 36 24.5	+1.2
TTA				IAmb	IAmb	10 36 25.8	
	comp=Z,2.5nm,0.7s						
IMAR	Indian Mountai	86.53	24	P	P	10 36 31.0	+0.6
KMBO	Kilima Mbogo	87.93	269	P	P	10 36 39.0	+0.4
	comp=Z,3.1nm,1.0s,baz=40,slow=6.1,SNR=4.5						
ILAR	Eielson Array	89.28	25	P	P	10 36 42.7	-0.9
	comp=Z,0.5nm,0.7s,baz=240,slow=5.0,SNR=8.9						
QSPA	South Pole Qui	89.75	180	P	P	10 36 46.9	+1.1
QSPA				IAmb	IAmb	10 37 06.6	
	comp=Z,3.7nm,1.2s						
BMAR	Burnt Mountain	90.26	23		P	10 36 49.7	+1.6
BRTR	Keskin Array B	91.31	310	P	P	10 36 52.6	-1.1
	comp=Z,0.8nm,0.7s,baz=118,slow=4.3,SNR=4.2						
ARCES	ARCESS Array B	93.56	340	P	P	10 37 03.2	-0.2
	comp=Z,5.8nm,1.1s,baz=90,slow=4.9,SNR=4.3						
AKASG	Malin Array Be	93.93	321	P	P	10 37 04.5	-1.0
	comp=Z,0.4nm,0.5s,baz=70,slow=4.5,SNR=4.4						
MNK	Minsk	94.40	325	*i* P	P	10 37 05.4	-2.1
	comp=E,2.0nm,0.7s						
MNK				*i* P	P	10 37 05.4	-2.1
	comp=N,11nm,1.0s						
MNK				*i* P	P	10 37 05.4	-2.1
	comp=Z,10.0nm,0.9s,baz=85						
MNK				*i* PP	PP	10 40 51.7	-3.5
MNK				*i* PPP	PPP	10 42 52.5	
MNK				*i* S	SKSac	10 47 40.1	+1.9
MNK				*i* PS	PS	10 49 32.9	-4.5
MNK				*i* SS	SS	10 54 38.3	+0.3
MNK				*i* SSS	SSS	10 58 19.6	
MNK				*i* LR	LR	11 17 53.6	
MNK				*i* LRM	MLR	11 20 20.3	
	comp=Z,271nm,18.1s						
MNK				*i* LRM	MLR	11 20 37.8	
	comp=N,276nm,16.6s						
MNK				*i* LRM	MLR	11 21 04.6	
	comp=E,88nm,18.1s						
TORD	Torodi Ar. Bea	122.56	285	PKP	PKPdf	10 42 44.1	0.0
	comp=E,0.8nm,0.7s,baz=48,slow=2.4,SNR=5.2						
TXAR	Lajitas Array	125.18	54	PKP	PKiKP	10 42 50.4	+1.1
	comp=E,0.2nm,0.7s,baz=318,slow=1.2,SNR=1.6						

BEO **06** *10:44:12.8±1.1, 39.°07N×21.°20E, h58^{km}±8^{km}, ML3.9/18*
MOS **06** *10:44:13.8±0.9, 39.°61N×21.°24E, h9^{km}, mb4.5/12, Error ellipse: s-maj=7.2km s-min=4.5km az=83.7*
IDC **06** *10:44:14.0±0.5, 39.°59N×21.°28E, h0^{km}, mb4.0/21, mb1 4.1/32, mb1mx4.0/51, mbtmp4.0/32, ML3.6/10, MS3.4/8, Ms1 3.4/8, ms1mx3.1/60, Error ellipse: s-maj=11.1km s-min=9.2km az=122.0*
ATH **06** *10:44:14.5, 39.°61N×21.°21E, h10^{km}±2^{km}, ML3.8/18, Error ellipse: s-maj=2.1km s-min=0.8km az=317.0*
THE **06** *10:44:14.4, 39.°62N×21.°21E, h0^{km}±1^{km}, ML4.0/10, Error ellipse: s-maj=1.5km s-min=0.4km az=299.0*
PDG **06** *10:44:14.5±0.6, 39.°59N×21.°23E, h10^{km}, ML3.8/12, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
NEIC **06** *10:44:15.2±1.7, 39.°64N±0.°03×21.°20E±0.°04, h3^{km}±5^{km}, mb4.5/12, ML3.8(ATH), Error ellipse: s-maj=5.2km s-min=3.0km az=46.0*
SOF **06** *10:44:18.6, 39.°84N×21.°64E, h9^{km}, MD4.0*
ISC 06 10:44:15.1±0.7, **39.°61N**±0.°02×**21.°23E**±0.°02, **h7**^{km}±4^{km}, **n340**, **σ1.^{s}27**/408, **mb4.1**/32, **MS3.5**/3, **34C-12D**, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	Janina	0.29	280	P	Pg	10 44 19.7	-1.2
JAN				S	Sg	10 44 24.2	-0.6
	43µm,0.7s						
JAN	Janina	0.29	280	P	Pg	10 44 19.9	-1.0
JAN				S	Sg	10 44 23.7	-1.1
JAN				AML	AML	10 44 30.0	
	comp=N,91000µm,0.7s						
JAN				AML	AML	10 44 30.8	
	comp=E,91948µm,0.9s						
KPRO	Kipourio	0.36	17	P	Pg	10 44 22.0	-0.2
KPRO				S	Sg	10 44 26.4	-0.6
	comp=E,30µm,0.6s						
KPRO	Kipourio	0.36	17	P	Pg	10 44 21.9	-0.2
KPRO				S	Sg	10 44 27.0	0.0
KPRO				AML	AML	10 44 32.4	
	comp=E,61391µm,0.5s						
KPRO				AML	AML	10 44 35.2	
	comp=N,55533µm,0.6s						
PENT	Pentalofos	0.59	353	P	Pg	10 44 25.6	-0.9
PENT	Pentalofos	0.59	353	P	Pg	10 44 25.9	-0.6
PENT				S	Sg	10 44 34.1	-0.1
PENT				AML	AML	10 44 40.8	
	comp=N,9749µm,0.6s						
PENT				AML	AML	10 44 46.2	
	comp=E,8553µm,0.8s						
THL	Klokotos Trika	0.61	94	P	Pg	10 44 26.0	-0.8
THL				S	Sb	10 44 36.1	-0.8
	comp=E,11µm,0.6s						
THL	Klokotos Trika	0.61	94	P	Pg	10 44 26.4	-0.5
THL				S	Sb	10 44 35.1	-1.8
THL				AML	AML	10 44 40.6	
	comp=N,24689µm,0.7s						
THL				AML	AML	10 44 42.6	
	comp=E,18656µm,0.4s						
LSK	Leskovik	0.73	318	P	Pg	10 44 28.1	-1.0
KZN	Kozani	0.81	31	P	Pg	10 44 29.5	-1.2
KZN	Kozani	0.81	31	P	Pg	10 44 29.6	-1.1
KZN				S	Sb	10 44 41.3	-1.6
KZN				AML	AML	10 44 48.1	
	comp=E,11393µm,0.4s						
KZN				AML	AML	10 44 50.2	
	comp=N,6539µm,0.6s						
NEST	Nestorio	0.82	350	P	Pg	10 44 30.2	-0.6
NEST	Nestorio	0.82	350	P	Pg	10 44 30.3	-0.6
NEST				AML	AML	10 44 51.6	
	comp=E,9960µm,0.6s						
NEST				AML	AML	10 44 55.5	
	comp=N,7272µm,0.4s						
EVR	Evrytania	0.82	147	P	Pg	10 44 29.6	-1.3
EVR	Evrytania	0.82	147	P	Pg	10 44 30.0	-0.9
EVR				S	Sg	10 44 41.2	-0.4
EVR				AML	AML	10 44 53.8	
	comp=E,14608µm,0.5s						
EVR				AML	AML	10 44 54.5	
	comp=N,16164µm,0.5s						
TSLK	Tsoukalades, L	0.90	210	P	Pg	10 44 30.9	-1.4
TSLK	Tsoukalades, L	0.90	210	P	Pg	10 44 31.2	-1.1
TSLK				AML	AML	10 44 49.1	
	comp=N,14071µm,0.3s						
TSLK				AML	AML	10 44 51.6	
	comp=E,16788µm,0.6s						
LRSO	Larissa Observ	0.90	86	P	Pg	10 44 31.6	-0.8
LRSO	Larissa Observ	0.90	86	P	Pg	10 44 31.5	-0.8
LKD2	Lefkada island	0.93	209	P	Pg	10 44 31.3	-1.6
LKD2	Lefkada island	0.93	209	P	Pg	10 44 32.0	-0.9
LKD2				AML	AML	10 44 50.6	
	comp=N,17689µm,0.5s						
LKD2				AML	AML	10 44 51.4	
	comp=E,13600µm,0.4s						
SRN	Sarande	0.98	286	P	Pg	10 44 33.4	-0.6
AGG	Agios Georgios	1.04	124	P	Pg	10 44 33.9	-1.0
AGG				S	Sn	10 44 50.3	-0.6
	comp=E,10µm,0.5s						
AGG	Agios Georgios	1.04	124	P	Pg	10 44 34.2	-0.8
AGG				AML	AML	10 44 53.0	
	comp=N,16177µm,0.4s						
AGG				AML	AML	10 44 53.2	
	comp=E,23068µm,0.6s						
AGG	Agios Georgios	1.04	124	P	Pg	10 44 34.2	-0.8
AGG						10 44 49.9	
AGG	Agios Georgios	1.04	124	Pg	Pg	10 44 34.2	-0.8
AGG				Sg	Sb	10 44 49.9	+0.6
KTI	Kastanea	1.04	41	P	Pg	10 44 34.0	-1.1
DRAG	Dragano-Lefkad	1.05	209	P	Pg	10 44 33.8	-1.5
DRAG				S	Sg	10 44 49.7	+0.8
	comp=E,24µm,0.5s						
KBN	Korca	1.07	342		Pg	10 44 35.1	-0.5
KBN				Sg	Sg	10 44 46.2	-3.3
EVGI	Lefkada island	1.08	204	P	Pg	10 44 34.1	-1.7
EVGI				S	Sb	10 44 51.5	+1.0
	comp=E,14µm,0.8s						
EVGI	Lefkada island	1.08	204	P	Pg	10 44 34.2	-1.7
KEK	Kerkira	1.11	276	P	Pg	10 44 34.8	-1.5
KEK	Kerkira	1.11	276	P	Pg	10 44 35.1	-1.2
KEK				AML	AML	10 44 57.4	
	comp=N,10365µm,0.4s						
KEK				AML	AML	10 44 58.2	
	comp=E,12164µm,0.5s						
ANX	Ano Chora	1.15	152	P	Pg	10 44 35.9	-1.2
FNA	Florina	1.18	5	P	Pg	10 44 36.4	-1.3
FNA	Florina	1.18	5	P	Pg	10 44 36.5	-1.3
FNA				S	Sb	10 44 52.6	-0.8
FNA				AML	AML	10 44 58.9	
	comp=N,8918µm,0.9s						
FNA				AML	AML	10 44 59.5	
	comp=E,6949µm,0.5s						
FNA	Florina	1.18	5	P	Pg	10 44 36.6	-1.1
FNA						10 44 53.6	
FNA	Florina	1.18	5	Pg	Pg	10 44 36.6	-1.1
FNA				Sg	Sn	10 44 53.6	-0.9
FSK	Fiskardo	1.26	205	P	Pg	10 44 37.6	-1.6
FSK				S	Sb	10 44 56.9	+1.4
	comp=E,7µm,0.6s						
EFP	Efpalio	1.29	156	P	Pg	10 44 38.6	-1.2
SERG	Sergoula	1.36	151	P	Pn	10 44 39.7	-0.8
UPR	University Cam	1.39	162	P	Pn	10 44 40.8	-0.1
KEF4	Livadi, Kephal	1.49	205	P	Pn	10 44 41.5	-0.7
VLS	Valsamata	1.51	199	P	Pn	10 44 41.8	-0.8
VLS				AML	AML	10 45 13.9	
	comp=N,5690µm,0.5s						
VLS				AML	AML	10 45 14.9	
	comp=E,7061µm,0.7s						
OHR	Ohrid	1.54	348	*i* Pn	Pb	10 44 43.5	-0.4
OHR	Ohrid	1.54	348	*e*Pn	Pg	10 44 44.3	-0.3
OHR				*e*Sn	Sg	10 45 05.9	+1.4
XOR	Xorichti	1.54	98	P	Pn	10 44 42.0	-1.0
XOR				S	Sg	10 45 05.1	+0.6
	comp=E,4µm,0.5s						
XOR	Xorichti	1.54	98	P	Pn	10 44 43.0	-0.1
XOR				AML	AML	10 45 10.5	
	comp=E,7246µm,0.5s						
XOR				AML	AML	10 45 11.0	
	comp=N,12053µm,0.5s						
RLS	Riolos of Patr	1.56	173	P	Pn	10 44 43.2	-0.1
RLS	Riolos of Patr	1.56	173	P	Pn	10 44 43.1	-0.1
KEF3	Kipouria, Keph	1.56	206	P	Pn	10 44 42.5	-0.8
PSDA	Pessada-Kefalo	1.57	199	P	Pn	10 44 42.5	-0.9
PSDA	Pessada-Kefalo	1.57	199	P	Pn	10 44 42.7	-0.8
NEO	Neokhori	1.57	100	P	Pn	10 44 43.0	-0.5
NEO	Neokhori	1.57	100	P	Pn	10 44 43.4	-0.1
NEO				AML	AML	10 45 11.2	
	comp=N,10036µm,0.7s						
NEO				AML	AML	10 45 15.0	
	comp=E,5227µm,0.5s						
VLO	Vlora	1.58	303	P	Pg	10 44 45.8	+0.3
VLO	Vlora	1.58	303		Pg	10 44 45.8	+0.3
GRG	Griva	1.62	33	P	Pn	10 44 43.5	-0.6
GRG				S	Sg	10 45 05.7	-1.4
	comp=E,2µm,0.7s						
GRG	Griva	1.62	33	P	Pn	10 44 43.5	-0.6
GRG				S	Sg	10 45 05.7	-1.4
LKR	Lokris	1.68	124	P	Pn	10 44 44.8	-0.1
LKR				AML	AML	10 45 14.8	
	comp=N,2187µm,0.5s						
LKR				AML	AML	10 45 19.2	
	comp=E,2540µm,0.4s						
THE	Thessaloniki	1.68	52	P	Pn	10 44 43.8	-1.1
THE	Thessaloniki	1.68	52	P	Pn	10 44 44.6	-0.3
DRO	Drossia	1.69	167	P	Pn	10 44 44.5	-0.7
KLV	Kalavryta, Ach	1.72	155	P	Pn	10 44 45.2	-0.3
KLV	Kalavryta, Ach	1.72	155	P	Pn	10 44 45.6	0.0
KLV				AML	AML	10 45 23.5	
	comp=N,2655µm,0.8s						
KLV				AML	AML	10 45 23.7	
	comp=E,4072µm,1.0s						
PLG	Polygyros	1.87	65	P	Pn	10 44 46.4	-1.2
PLG	Polygyros	1.87	65	P	Pn	10 44 46.9	-0.6
PLG				AML	AML	10 45 22.9	
	comp=E,2502µm,0.8s						
PLG				AML	AML	10 45 23.6	
	comp=N,1837µm,0.9s						
PAIG	Paliouri	1.92	80	P	Pn	10 44 47.0	-1.2
LTHK	Lithakia	1.92	189	P	Pn	10 44 49.1	+0.9
VAY	Valandovo	2.00	30	*i* Pn	Pn	10 44 49.1	-0.2
VAY	Valandovo	2.00	30	*e*Pn	Pn	10 44 49.7	+0.4
VAY				*e*Sn	Sb	10 45 16.7	-0.1
KNT	Kendrikon	2.01	39	P	Pn	10 44 48.7	-0.8
KNT	Kendrikon	2.01	39	P	Pn	10 44 49.6	+0.1
TIR	Tirane	2.03	330	⇑P	Pb	10 44 52.6	+0.3
TIR				⇓S	Sb	10 45 17.4	-0.3
TIR	Tirane	2.03	330	P	Pb	10 44 52.2	-0.1
TIR	Tirane	2.03	330	Pn	Pb	10 44 52.1	-0.1
SOH	Sokhos	2.03	53	P	Pn	10 44 49.7	-0.1
SOH	Sokhos	2.03	53	P	Pn	10 44 49.7	-0.1
SOH	Sokhos	2.03	53	P	Pn	10 44 49.7	-0.1
LTK	Loutraki	2.08	139	P	Pn	10 44 51.0	+0.5
PHP	Peshkopia	2.16	344	P	Pn	10 44 51.5	-0.1
SCTE	Santa Cesarea	2.17	283		Pn	10 44 51.8	+0.1
STIP	Stip	2.21	19	*i* Pn	Pb	10 44 54.0	-1.4
OUR	Ouranopolis	2.24	70	P	Pn	10 44 52.1	-0.5
SRS	Serrai	2.35	49	P	Pn	10 44 53.8	-0.4
SRS	Serrai	2.35	49	P	Pn	10 44 53.8	-0.4
SKO	Skopje	2.37	4	P	Pn	10 44 55.8	+1.4
SKO	Skopje	2.37	4	*i* Pn	Pn	10 44 55.6	+1.2
SKO	Skopje	2.37	4	*e*Pn	Pb	10 44 56.4	-1.7
SKO				*e*Sn	Sg	10 45 31.1	0.0
KYMI	Kymi, Euboea I	2.44	113	P	Pn	10 44 54.8	-0.5
ITM	Ithomi	2.48	167	P	Pn	10 44 57.4	+1.4
ITM	Ithomi	2.48	167	Pn	Pn	10 44 58.2	+2.2
ATH	Athens Observa	2.54	129	P	Pn	10 44 57.4	+0.7
ATH				S	Sn	10 45 29.7	+1.8
	comp=N,1µm,0.7s						
DION	Dionisos Attik	2.61	125	P	Pn	10 44 57.8	+0.1
NVR	Nevrokopi	2.66	48	P	Pn	10 44 57.8	-0.6
KKB	Krupnik	2.66	31	*i* P	Pn	10 44 58.4	-0.1
KRND	KRANIDI	2.69	145	P	Pn	10 44 59.5	+0.8
PYL	PYLOS	2.74	171	P	Pn	10 45 01.0	+1.5
MMB	Musomiste	2.75	43	*i* P	Pn	10 44 59.0	-0.6
ULC	Ulcinj	2.79	328	⇑*i*Pn	Pn	10 45 01.0	+0.7
ULC				*i* Sn	Sn	10 45 36.4	+2.1
THAS	Thassos island	2.86	68	P	Pn	10 45 00.1	-1.0
PRVS	Prvonek	2.97	12	*e*Pn	Pn	10 45 03.4	+0.7
DRME	Dracevica, Mon	3.01	330	*e*Pn	Pn	10 45 05.0	+1.8
DRME	Dracevica, Mon	3.01	330	⇓*i*Pn	Pn	10 45 04.6	+1.4
DRME				*i* Sn	Sn	10 45 41.6	+2.1
BOSS	Bosilegrad	3.04	18	*e*Pn	Pn	10 45 04.5	+0.9
LIA	Limnos Island	3.06	83	P	Pn	10 45 03.0	-0.9
PVY	Plav	3.13	343	⇓*i*Pn	Pn	10 45 07.0	+1.9
PVY				*i* Sn	Sn	10 45 44.7	+1.9
VLI	Veliai	3.18	154	P	Pn	10 45 07.5	+1.9
PDG	Podgorica	3.19	333	⇑P	Pn	10 45 07.4	+1.7
PDG	Podgorica	3.19	333	*e*Pn	Pn	10 45 07.3	+1.6
PDG	Podgorica	3.19	333	Pn	Pn	10 45 07.3	+1.6
PDG	Podgorica	3.19	333	*e*Pn	Pn	10 45 06.7	+1.0
TTG	Podgorica	3.19	333	⇓*i*Pn	Pn	10 45 06.6	+0.9
TTG				*i* Sn	Sn	10 45 46.0	+2.0
BUM	Brajici-Budva	3.22	327	⇑*i*Pn	Pn	10 45 06.8	+0.6
BUM				*i* Sn	Sn	10 45 46.8	+2.0
BARS	Barje	3.24	8	*e*Pn	Pn	10 45 07.5	+1.1
BARS				*e*Sn	Sn	10 45 46.4	+1.2
VTS	Vitosha	3.37	26	⇑P	Pn	10 45 08.5	+0.2
VTS				⇑S	Sn	10 45 50.2	+1.6
VTS	Vitosha	3.37	26	P	Pn	10 45 08.5	+0.2
VTS	Vitosha	3.37	26	*i* P	Pn	10 45 08.4	+0.1
VTS	Vitosha	3.37	26	Pn	Pn	10 45 08.5	+0.2
VTS	Vitosha	3.37	26	*e*Pn	Pn	10 45 08.3	0.0
VTS	Vitosha	3.37	26	*e*Pn	Pn	10 45 08.5	+0.2

VTS				eSn	Sn	10 45 48.7	+0.1
RZN	Rozhen	3.37	51	i P	Pn	10 45 08.2	-0.2
IVA	Berane	3.41	343	⇓iPn	Pn	10 45 09.9	+1.0
IVA				i Sn	Sn	10 45 51.3	+1.7
CEME	Cevo	3.42	330	⇓iPn	Pn	10 45 09.8	+0.9
CEME				i Sn	Sn	10 45 51.3	+1.6
KOME	Kolasin	3.49	339	⇓iPn	Pn	10 45 10.5	+0.6
KOME				i Sn	Sn	10 45 53.6	+2.1
TIP	Timpagrande	3.49	264	⇑P	Pn	10 45 09.6	-0.3
TIP	Timpagrande	3.49	264	Pn	Pn	10 45 09.8	0.0
HCY	Herceg Novi	3.51	325	ePn	Pn	10 45 10.5	+0.4
HCY	Herceg Novi	3.51	325	⇑iPn	Pn	10 45 10.6	+0.4
HCY				i Sn	Sn	10 45 54.2	+2.3
NKME	Niksic	3.59	332	⇓iPn	Pn	10 45 11.8	+0.5
NKME				i Sn	Sn	10 45 55.7	+1.7
SELS	Selova	3.61	359	ePn	Pn	10 45 12.9	+1.4
NKY	Niksic	3.62	333	⇓iPn	Pn	10 45 12.1	+0.4
NKY				i Sn	Sn	10 45 56.3	+1.6
MATE	Matera	3.62	288	⇑P	Pn	10 45 11.7	+0.1
RDO	Rodhopi	3.63	64	P	Pn	10 45 11.3	-0.5
SJES	Sjenica	3.77	346	ePn	Pn	10 45 15.6	+1.8
KDZ	Kurdzhali	3.79	56	i P	Pn	10 45 12.5	-1.4
TREB	Trebinje	3.79	326	ePn	Pn	10 45 14.1	+0.1
TREB	Trebinje	3.79	326	ePn	Pn	10 45 14.3	+0.3
ZAPS	Zavoj	3.81	16	ePn	Pn	10 45 16.2	+1.9
DBRK	Dubrovnik	3.84	324	ePn	Pn	10 45 14.8	+0.1
BRY	Bratogost	3.87	329	ePn	Pn	10 45 18.8	+3.7
ALN	Alexandroupoli	3.91	69	P	Pn	10 45 14.9	-0.6
UPM	Unac-Piva	4.00	335	ePn	Pn	10 45 18.9	+2.0
UPM	Unac-Piva	4.00	335	⇑iPn	Pn	10 45 17.6	+0.7
UPM				i Sn	Sn	10 46 05.4	+1.3
BOVS	Bovan	4.04	5	⇑P	Pn	10 45 17.7	+0.3
BOVS				⇑S	Sn	10 46 07.6	+2.6
BOVS	Bovan	4.04	5	ePn	Pn	10 45 17.7	+0.3
IVAS	Ivanjica	4.05	349	ePn	Pn	10 45 18.4	+0.9
BLKB	Belogradchik	4.16	15	⇑S	Sn	10 46 09.3	+1.4
STON	Ston	4.21	322	ePn	Pn	10 45 18.7	-1.0
STON	Ston	4.21	322	ePn	Pn	10 45 19.7	0.0
STON	Ston	4.21	322	ePn	Pn	10 45 19.5	-0.2
STON				eSn	Sn	10 46 06.5	-2.6
APE	Apeiranthos	4.23	125	⇑P	Pn	10 45 20.9	+0.9
RUDO	Rudo	4.24	341	ePn	Pn	10 45 21.4	+1.2
ZAGS	Zajecar	4.27	10	ePn	Pn	10 45 21.1	+0.6
ZAGS				eSn	Sn	10 46 10.8	+0.2
GRUS	Gruza	4.29	355	ePn	Pn	10 45 22.5	+1.6
CEL	Celeste	4.37	254		Pn	10 45 21.4	-0.5
BBLS	Lazići	4.47	343	ePn	Pn	10 45 25.0	+1.7
BBLS	Lazići	4.47	343	ePn	Pn	10 45 25.4	+2.1
LSTV	Lastovo	4.55	315	ePn	Pn	10 45 24.0	-0.3
DIVS	Divibare	4.58	349	ePn	Pn	10 45 25.8	+0.9
DIVS	Divibare	4.58	349	Pn	Pn	10 45 25.7	+0.9
DIVS	Divibare	4.58	349	ePn	Pn	10 45 26.2	+1.3
DIVS				eSn	Sn	10 46 18.3	-0.1
SANT	Santorini	4.65	133		Pn	10 45 28.7	+2.9
TRUS	Trudelj	4.65	353	ePn	Pn	10 45 26.6	+0.8
SGRT	San Giovanni R	4.69	299	Pn	Pn	10 45 26.2	-0.2
KUBS	Kucevo	4.81	4	ePn	Pn	10 45 28.4	+0.4
MAKA	Makarska	4.85	321	ePn	Pn	10 45 28.4	-0.1
RICI	Ricice	4.95	323	ePn	Pn	10 45 29.8	-0.1
TEKS	Tekeris	5.10	346	ePn	Pn	10 45 30.5	-1.4
TEKS	Tekeris	5.10	346	ePn	Pn	10 45 32.7	+0.8
BALB	Balikesir	5.14	88	Pn	Pn	10 45 31.9	-0.5
MDVR	Moldovita	5.18	4	⇓P	Pn	10 45 33.7	+0.6
IDI	Anoyia	5.20	145	Pn	Pn	10 45 33.8	+0.3
	comp=N,2.8nm,0.3s,baz=292,slow=16,SNR=14						
IDI				Sn	Sn	10 46 33.5	-0.3
	comp=N,4.1nm,0.3s,baz=108,slow=20,SNR=2.3						
PAOL	Paolisi	5.29	288		Pn	10 45 34.0	-0.5
HERR	Herculane	5.34	9	⇓P	Pn	10 45 36.0	+0.8
FRGS	Fruska Gora	5.64	350	⇑P	Pn	10 45 40.4	+0.9
FRGS	Fruska Gora	5.64	350	ePn	Pn	10 45 40.2	+0.8
FRGS	Fruska Gora	5.64	350	ePn	Pn	10 45 40.3	+0.9
HUMR	Humele	5.65	28	⇑P	Pn	10 45 40.6	+1.1
MGRS	Mrkonjic Grad	5.71	329	ePn	Pn	10 45 39.5	-0.9
VAE	Valguarnera	5.75	250	Pn	Pn	10 45 43.4	+2.4
	baz=224,slow=10,SNR=3.1						
VAE				Sn	Sn	10 46 49.8	+2.6
	comp=N,1.9nm,0.3s,baz=55,slow=19,SNR=3.7						
ZIRJ	Zirje	5.82	316	ePn	Pn	10 45 40.3	-1.5
ZIRJ				Sn	Sn	10 46 42.8	-5.9
RAFF	Raffo Rosso	5.89	248	Pn	Pn	10 45 41.7	-1.1
GZR	Gura Zlata	5.89	11	⇑P	Pn	10 45 43.6	+0.7
MORI	Morici	5.93	318	ePn	Pn	10 45 43.5	+0.2
BLY	Banja Luka	5.95	331	ePn	Pn	10 45 40.6	-3.0
BZS	Buzias	6.01	3	⇑P	Pn	10 45 45.4	+1.0
BZS	Buzias	6.01	3	P	Pn	10 45 45.5	+1.0
BZS				S	Sn	10 46 49.6	-4.0
ARR	Arges	6.28	23	⇑P	Pn	10 45 49.4	+1.2
DUGI	Dugi Otok	6.36	316	ePn	Pn	10 45 49.6	+0.3
DUGI				Sn	Sn	10 47 00.4	-1.7
UDBI	Udbina	6.38	322	ePn	Pn	10 45 50.9	+1.3
UDBI				Sn	Sn	10 47 00.8	-1.9
VOIR		6.47	25	⇑P	Pn	10 45 52.1	+1.2
AQU	L'Aquila	6.53	297	P	Pn	10 45 51.4	-0.2
AQU	L'Aquila	6.53	297	ePn	Pn	10 45 50.3	-1.3
AQU	L'Aquila	6.53	297	Pn	Pn	10 45 51.4	-0.2
SIRR	Siria	6.66	3	⇑P	Pn	10 45 55.0	+1.5
PLIT	Plitvice	6.71	324	ePn	Pn	10 45 54.7	+0.7
PLIT				Sn	Sn	10 47 07.0	-3.8
ISR	Istrita	6.77	34	⇓P	Pn	10 45 56.9	+2.0
MLR	Muntele Rosu	6.83	29	⇑P	Pn	10 45 57.7	+1.8
MLR	Muntele Rosu	6.83	29	Pn	Pn	10 45 57.3	+1.5
	comp=N,1.4nm,0.3s,baz=229,slow=13,SNR=20						
MLR				Sn	Sn	10 47 14.4	+0.5
	comp=N,0.2nm,0.3s,baz=188,slow=19,SNR=0.8						
MLR				LR	LR	10 49 29.2	
	comp=N,422nm,18.9s,baz=220,slow=46						
MLR	Muntele Rosu	6.83	29	Pn	Pn	10 45 57.5	+1.6
MOSL	Moslavina	6.85	333	ePn	Pn	10 45 56.7	+0.7
MORH	Mrgy, Hungar	6.87	345	⇑P	Pn	10 45 57.4	+1.1
MORH	Mrgy, Hungar	6.87	345	ePN	Pn	10 45 56.7	+0.5
MORH	Mrgy, Hungar	6.87	345	ePn	Pn	10 45 56.4	+0.2
KOVH	Kovagotottos	6.87	341	ePN	Pn	10 45 56.7	+0.4
KOVH				eSN	Sn	10 47 13.7	-1.1
NRCA	Norcia	6.91	300		Pn	10 45 57.3	+0.4
NEHR	Nehoiu	6.92	31	⇑P	Pn	10 45 58.5	+1.6
DOPR	Dopca	7.05	24	⇑P	Pn	10 45 59.9	+1.1
TIRR	Tirgusor	7.22	45	⇑P	Pn	10 46 01.2	+0.3
DRGR		7.26	8	⇑P	Pn	10 46 03.0	+1.3
OZUR		7.30	26	⇑P	Pn	10 46 03.2	+1.1
OZLJ	Ozalj	7.35	327	ePn	Pn	10 46 02.5	-0.3
PLOR	Plostina	7.41	31	⇑P	Pn	10 46 05.6	+2.0
VRI	Vrincioaia	7.45	31	⇑P	Pn	10 46 06.0	+1.8
TPGR	Topolog	7.48	43	⇑P	Pn	10 46 05.1	+0.4
MURB	Monte Urbino	7.49	302		Pn	10 46 05.2	+0.4
CRES	Cresnjev	7.53	328	ePn	Pn	10 46 04.8	-0.5
SMRN	Sveta Marina	7.54	318	ePn	Pn	10 46 05.0	-0.4
CFR	Carcaliu	7.56	40	⇑P	Pn	10 46 06.9	+1.3
RIY	Rijeka	7.58	321	ePn	Pn	10 46 03.2	-2.8
CEY	Cerknica	7.91	323	ePn	Pn	10 46 10.4	-0.2
MPLH	Magyarpolny	8.02	342	ePN	Pn	10 46 14.8	+2.8
MPLH	Magyarpolny	8.02	342	eP	Pn	10 46 17.0	+5.0
LJU	Ljubljana	8.10	325	ePn	Pn	10 46 12.0	-1.1
PSZ	Piszkesteto	8.36	354	⇑P	Pn	10 46 18.3	+1.5
PSZ	Piszkesteto	8.36	354	ePN	Pn	10 46 18.4	+1.5
PSZ	Piszkesteto	8.36	354	eP	Pn	10 46 19.2	+2.4
PSZ	Piszkesteto	8.36	354	eSN	Sn	10 47 49.1	-2.5
PSZ	Piszkesteto	8.36	354	Pn	Pn	10 46 18.3	+1.5
OBKA	Obir	8.45	327	ePn	Pn	10 46 19.2	+1.2
	comp=N,1.5nm,0.4s						
OBKA				eSn	Sn	10 47 52.9	-0.9
	comp=N,8.4nm,0.7s						
BURAR	Bucovina Array	8.51	19	⇑P	Pn	10 46 21.0	+2.2
BURAR	Bucovina Array	8.51	19	Pn	Pn	10 46 19.4	+0.6
BUR08	Bucovina Ar. S	8.53	18	Pn	Pn	10 46 19.7	+0.6
ARSA	Arzberg	8.69	333	ePn	Pn	10 46 21.9	+0.6
	comp=N,1.9nm,0.4s						
PRED	Cave del Predi	8.84	323		Pn	10 46 23.4	+0.1
MYKA	Terra Mystica	8.94	324	ePn	Pn	10 46 23.9	-0.8
	comp=N,1.6nm,0.5s						
MYKA				eSn	Sn	10 48 02.9	-2.8
	comp=N,2.8nm,0.5s						
VYHS	Vyhne	9.05	350	eP	Pn	10 46 32.2	+6.1
VYHS				e		10 48 11.6	
VYHS	Vyhne	9.05	350	ePN	Pn	10 46 32.2	+6.1
VYHS				eSN	Sn	10 48 11.5	+3.2
TEOL	Teolo	9.10	312	Pn	Pn	10 46 26.1	-0.8
STAL	STALIGIAL	9.12	320		Pn	10 46 25.9	-1.2
CONA	Conrad Observa	9.18	337	ePn	Pn	10 46 27.9	0.0
	comp=N,0.1nm,0.2s						
CONA				eSn	Sn	10 48 14.2	+2.7
	comp=N,0.7nm,0.5s						
ZOU	Zoufplan	9.20	322		Pn	10 46 28.1	-0.2
CIMO	Cimolais	9.29	319	Pn	Pn	10 46 28.4	-1.1
KBA	Koelnbreinsper	9.42	325	P	Pn	10 46 32.5	+1.2
CTI	Castel Tesino	9.53	316	P	Pn	10 46 32.3	-0.6
CTI	Castel Tesino	9.53	316	Pn	Pn	10 46 32.3	-0.6
ABTA	Abfaltersbach	9.56	321	ePn	Pn	10 46 32.8	-0.4
	comp=N,1.4nm,0.3s,SNR=6.3						
ABTA				eSn	Sn	10 48 18.3	-2.6
	comp=N,4.9nm,0.5s						
BR131	Keskin Array S	9.57	85	P	Pn	10 46 35.3	+1.8
BR131	Keskin Array S	9.57	85	Pn	Pn	10 46 35.3	+1.8
BRTR	Keskin Array B	9.57	85	Pn	Pn	10 46 35.3	+1.8
	comp=N,0.2nm,0.3s,baz=258,slow=11,SNR=5.0						
BRTR				LR	LR	10 50 40.7	
	comp=N,181nm,19.8s,baz=278,slow=41						
BRTR	Keskin Array B	9.57	85	P	Pn	10 46 34.9	+1.4
BRTR	Keskin Array B	9.57	85		Pn	10 46 34.9	+1.4
MOA	Molln	9.65	331	i Pn	Pn	10 46 35.3	+0.9
	comp=N,1.4nm,0.4s,SNR=4.4						
MOA				eSn	Sn	10 48 25.1	+2.0
	comp=N,0.7nm,0.4s						
SALO	Salr	9.91	311	Pn	Pn	10 46 38.4	+0.4
KEST	Kesra	10.18	251	Pn	Pn	10 46 43.6	+1.9
	comp=N,0.3nm,0.3s,baz=217,slow=9.0,SNR=6.1						
KEST				LR	LR	10 50 42.1	
	comp=N,107nm,20.5s,baz=123,slow=38						
KEST	Kesra	10.18	251	Pn	Pn	10 46 44.1	+2.3
VRAC	Vranov	10.25	343	Pn	Pn	10 46 44.5	+2.0
	comp=N,0.1nm,0.3s,baz=156,slow=11,SNR=3.7						
VRAC				LR	LR	10 51 51.1	
	comp=N,265nm,19.3s,baz=292,slow=44						
WTTA	Wattenberg	10.35	321	ePn	Pn	10 46 44.3	+0.2
	comp=N,4.2nm,0.4s						
WTTA				eSn	Sn	10 48 38.4	-2.0
	comp=N,6.6nm,0.6s						
WATA	Walderalm	10.43	321	Pn	Pn	10 46 45.2	0.0
	comp=N,2.4nm,0.3s,SNR=5.0						
WATA				eSn	Sn	10 48 39.4	-2.9
	comp=N,2.3nm,0.4s						
SQTA	Sankt Quirin	10.53	320	ePn	Pn	10 46 47.1	+0.6
	comp=N,1.9nm,0.2s						
SQTA				eSn	Sn	10 48 40.9	-3.9
	comp=N,1.3nm,0.3s						
FETA	Feichten	10.64	318	ePn	Pn	10 46 48.8	+0.7
	comp=N,1.2nm,0.5s						
FETA				eSn	Sn	10 48 44.2	-3.4
	comp=N,2.0nm,0.6s						
MOTA	Moosalm	10.67	320	i Pn	Pn	10 46 48.6	+0.2
	comp=N,6.0nm,0.5s,SNR=11						
MOTA				eSn	Sn	10 48 45.2	-3.0
GERES	GERESS Array B	10.69	332	Pn	Pn	10 46 49.7	+1.0
	comp=N,0.2nm,0.3s,baz=146,slow=13,SNR=2.3						
GERES				Sn	Sn	10 48 48.7	0.0
	comp=N,0.2nm,0.3s,baz=149,slow=29,SNR=1.7						
DAVOX	Davos/Dischmat	10.95	315	Pn	Pn	10 46 53.5	+1.1
	comp=N,0.8nm,0.3s,baz=290,slow=23,SNR=9.8						
DAVOX				Sn	Sn	10 48 52.3	-2.9
	comp=N,0.3nm,0.3s,baz=352,slow=18,SNR=3.2						
KHC	Kasperske Hory	10.98	333	ePN	Pn	10 46 53.5	+1.0
KHC	Kasperske Hory	10.98	333	i P	Pn	10 46 54.2	+1.7
SENIN	Lac Senin/Sane	12.22	308	Pn	Pn	10 47 10.6	+0.9
AKASG	Malin Array Be	12.44	24	Pn	Pn	10 47 12.1	-0.4
	comp=N,0.1nm,0.3s,baz=216,slow=12,SNR=1.9						
AKBB	Malin Array Si	12.44	24	i P	Pn	10 47 11.7	-0.7
CLL	Collm	13.04	337	ePP	P	10 47 31.0	-0.2
MNK	Minsk	15.56	15	i P	Pn	10 47 55.4	+0.6
MNK				i S	Sn	10 50 49.2	+1.8
MNK				pmax	pmax		
	comp=Z,14nm,0.9s						
MNK				pmax	pmax		
	comp=N,24nm,1.0s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,333nm,15.0s						
MNK				MLR	MLR		
	comp=Z,151nm,16.0s						
MNK				MLR	MLR		
	comp=E,72nm,17.0s						
MNK	Minsk	15.56	15	i P	Pn	10 47 55.5	+0.7
	comp=E,4.0nm,1.0s						
MNK				i P	Pn	10 47 55.5	+0.7
	comp=N,24nm,1.0s						
MNK				i P	Pn	10 47 55.5	+0.7
	comp=Z,14nm,0.9s,baz=19						
MNK				i PP	sP	10 48 03.8	+1.3
MNK				i PPP	PPP	10 48 11.5	
MNK				i S	Sn	10 50 49.2	+1.8
MNK				i SS	S	10 51 03.1	0.0
MNK				i SSS	SSS	10 51 15.7	
MNK				i LQ	LQ	10 52 30.4	
MNK				i LR	LR	10 53 41.5	
MNK				i LRM	MLR	10 54 41.2	
	comp=N,333nm,15.2s						
MNK				i LRM	MLR	10 55 03.0	
	comp=Z,151nm,15.9s						
MNK				i LRM	MLR	10 55 08.0	
	comp=E,72nm,17.4s						
KIV	Kislovodsk	16.57	68	eP	Pn	10 48 08.2	+0.2
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBZ	Khabaz	16.70	69	Pn	Pn	10 48 10.4	+0.9
	comp=Z,0.1nm,0.3s,baz=270,slow=17,SNR=1.9						
KBZ	Khabaz	16.70	69	i P	Pn	10 48 08.5	-0.9
NCK	Nalchik	17.18	70	i P	P	10 48 17.4	+0.2
NCK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
OBN	Obninsk	18.60	28	eP	Pn	10 48 34.2	+1.2
OBN				pmax	pmax		
	comp=Z,71nm,3.0s						
ESDC	Sonseca Array	19.39	278	P	P	10 48 42.3	+0.7
	comp=Z,0.1nm,0.3s,baz=69,slow=9.3,SNR=14						
ESDC				LR	LR	10 55 30.0	
	comp=Z,84nm,18.2s,baz=355,slow=35						
HFS	Hagfors	21.09	349	P	P	10 48 59.2	-0.7
	comp=Z,4.5nm,0.7s,baz=165,slow=12,SNR=8.1						
MDT	Midelt	21.88	260	P	P	10 49 09.7	+1.0
	comp=Z,2.2nm,0.9s,baz=91,slow=4.4,SNR=7.1						
NC602	NORSAR Array S	22.00	347	P	P	10 49 08.8	-0.7
FINES	FINESS Array B	22.07	6	P	P	10 49 09.4	-0.9
	comp=Z,4.5nm,0.7s,baz=182,slow=10,SNR=8.1						
BELG	Belogornoye	22.21	46	P	P	10 49 14.8	+2.9
	comp=Z,19nm,1.0s,baz=298,slow=4.2,SNR=6.4						
BELG	Belogornoye	22.21	46	i P	P	10 49 12.4	+0.5
BELG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NOA	NORSAR Array B	22.34	347	P	P	10 49 13.1	-0.2
	comp=Z,5.7nm,0.8s,baz=161,slow=11,SNR=9.1						
NOA				LR	LR	11 00 15.8	
	comp=Z,81nm,21.6s,baz=340,slow=43						
EKA	Eskdalemuir Ar	22.61	322	P	P	10 49 15.3	-0.9
	comp=Z,3.0nm,0.8s,baz=117,slow=8.8,SNR=6.6						
KLMR	Klimovskoe	24.11	22	eP	P	10 49 28.7	-2.4
KLMR				pmax	pmax		
	comp=Z,30nm,1.5s						
KLMR	Klimovskoe	24.11	22	eP	P	10 49 28.8	-2.4
KLMR				AMP		10 49 45.2	
	comp=Z,30nm,1.5s						
AKTO	Aktyubinsk	27.89	55	P	P	10 50 05.2	-0.3
	comp=Z,0.9nm,0.6s,baz=266,slow=13,SNR=3.7						
AKTO				LR	LR	11 03 30.1	
	comp=Z,108nm,18.4s,baz=342,slow=42						
ARU	Arti	29.63	43	LR	LR	11 03 14.3	
	comp=Z,153nm,20.8s,baz=306,slow=38						
ARCES	ARCESS Array B	30.08	3	P	P	10 50 23.7	-1.0
	comp=Z,2.6nm,0.8s,baz=189,slow=10.0,SNR=4.0						
TORD	Torodi Ar. Bea	31.49	219	P	P	10 50 37.1	-0.5
	comp=Z,1.6nm,0.6s,baz=34,slow=10,SNR=14						
BRVK	Borovoye	35.72	51	i P	P	10 51 13.5	-0.7
BRVK				pmax	pmax		
	comp=Z,23nm,5.0s						
KKAR	Karatay Array	36.73	68	P	P	10 51 23.2	+0.2
KKAR	Karatay Array	36.73	68	P	P	10 51 23.1	+0.2
GAR	Garm	37.61	75	P	P	10 51 30.6	0.0
GAR				IAmb	IAmb	10 51 32.3	
	comp=Z,29nm,1.3s						
DBIC	Dimbokro	40.32	222	P	P	10 51 53.0	-0.3
	comp=Z,1.6nm,0.5s,baz=29,slow=9.9,SNR=3.8						
DBIC	Dimbokro	40.32	222	P	P	10 51 52.7	-0.5
DBIC				pmax	pmax		
	comp=Z,10.0nm,1.4s						
DBIC	Dimbokro	40.32	222	P	P	10 51 52.7	-0.5
DBIC				IAmb	IAmb	10 52 05.0	
	comp=Z,10nm,1.4s						
NIL	Nilore	41.69	81	P	P	10 52 04.8	+0.2
NIL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NIL	Nilore	41.69	81	P	P	10 52 04.8	+0.2
NIL				IAmb	IAmb	10 52 13.6	
	comp=Z,6.9nm,0.8s						
MK31	Makanchi Array	44.09	60	P	P	10 52 24.1	+0.2
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	Makanchi Array	44.09	60	P	P	10 52 24.1	+0.2
MKAR	Makanchi Array	44.09	60	P	P	10 52 23.2	-0.6
	comp=Z,1.2nm,0.5s,baz=283,slow=7.8,SNR=11						
MKAR	Makanchi Array	44.09	60	i P	P	10 52 23.5	-0.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	44.09	60	P	P	10 52 23.4	-0.4
ZAA0	Zalesovo Array	44.33	49	P	P	10 52 24.7	-0.9
ZAA0				IAmb	IAmb	10 52 30.5	
	comp=Z,3.1nm,0.7s						
ZALV	Zalesovo Beam	44.33	49	P	P	10 52 25.0	-0.6
	comp=Z,2.0nm,0.5s,baz=282,slow=9.7,SNR=10						
ZALV	Zalesovo Beam	44.33	49	i P	P	10 52 25.0	-0.6
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZALV	Zalesovo Beam	44.33	49	P	P	10 52 24.5	-1.1
DGZ	Jazzator, Alta	46.74	55	i P	P	10 52 43.2	-1.7
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TIXI	Tiksi	58.12	21	i P	P	10 54 10.3	+1.5
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.8s						
SONM	Songino Array	59.13	51	P	P	10 54 16.5	+0.1
	comp=Z,1.7nm,0.9s,baz=288,slow=9.6,SNR=8.5						
ULN	Ulaanbaatar	59.51	51	i P	P	10 54 18.6	-0.5
ULN				pmax	pmax		
	comp=Z,9.0nm,3.0s						
HIA	Hailar	66.12	45	i P	P	10 55 03.8	+0.9
HIA				pmax	pmax		
	comp=Z,21nm,3.1s						
A36M	Sachs Harbour	66.23	349	P	P	10 55 03.9	+0.7
A36M				IAmb	IAmb	10 55 07.9	
	comp=Z,4.7nm,0.9s						
BOSA	Boshof	67.97	176	P	P	10 55 15.1	+0.3
	comp=Z,2.8nm,0.9s,baz=319,slow=8.6,SNR=4.9						
BOSA	Boshof	67.97	176	P	P	10 55 14.8	-0.1
BOSA				pmax	pmax		
	comp=Z,12nm,1.4s						
BOSA	Boshof	67.97	176	P	P	10 55 14.8	-0.1
CMAR	Chiang Mai Arr	69.16	83	P	P	10 55 22.9	+0.4
	comp=Z,0.6nm,0.5s,baz=307,slow=7.5,SNR=2.1						
INK	Inuvik	70.75	350	P	P	10 55 31.3	-0.1
INK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
INK	Inuvik	70.75	350	P	P	10 55 31.3	-0.1
SUR	Sutherland	71.63	180	P	P	10 55 37.6	+0.3
YKA	Yellowknife Ar	72.24	340	P	P	10 55 40.1	-0.4
	comp=Z,1.3nm,0.8s,baz=32,slow=5.2,SNR=9.7						
BMAR	Burnt Mountain	72.74	354	P	P	10 55 44.2	+0.6
IMAR	Indian Mountai	74.67	358	P	P	10 55 56.0	+1.1
ULM	Lac du Bonnet	74.88	324	P	P	10 55 56.4	+0.1
	comp=Z,2.9nm,0.6s,baz=58,slow=6.8,SNR=4.3						
DAWY	Dawson	75.53	351	P	P	10 56 00.3	+0.4
DAWY				IAmb	IAmb	10 56 08.2	
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	75.54	355	P	P	10 56 00.2	+0.4
	comp=Z,0.7nm,0.8s,baz=348,slow=3.6,SNR=9.4						
ILAR	Eielson Array	75.54	355	P	P	10 56 00.7	+0.8
ILAR	Eielson Array	75.54	355	P	P	10 56 00.7	+0.8
BCAR	Beaver Creek A	76.77	352	P	P	10 56 08.0	+1.0
KSRS	Korea Array	78.00	51	P	P	10 56 13.2	-1.0
	comp=Z,0.5nm,0.6s,baz=308,slow=4.5,SNR=2.4						
ECSD	EROS Data Cent	79.87	319		P	10 56 24.6	+0.2
BDFB	Brasilia	84.63	245	P	P	10 56 50.5	+0.7
	comp=Z,2.4nm,0.7s,baz=190,slow=3.7,SNR=4.0						
PDAR	Pinedale Array	86.68	326	P	P	10 56 59.8	-0.1
	comp=Z,0.3nm,0.7s,baz=45,slow=2.9,SNR=4.1						
TXAR	Lajitas Array	94.38	314	P	P	10 57 36.1	+0.2
	comp=Z,0.6nm,0.7s,baz=48,slow=5.6,SNR=6.7						
WRA	Warramunga Arr	120.04	92	PKP	PKPdf	11 03 06.3	-0.5
	comp=Z,0.6nm,0.8s,baz=306,slow=1.9,SNR=3.2						
ASAR	Alice Springs	121.77	96	PKP	PKPdf	11 03 08.8	-1.4
	comp=Z,0.5nm,0.7s,baz=330,slow=1.3,SNR=6.7						

IDC 06 10:55:36.5±5.6**,19°.31S**×**177°.12W,h0**^{km}**,mb3.6**/3**,**
mb1 3.9/3**,mb1mx3.5**/24**,mbtmp3.6**/3**,MS3.2**/1**,Ms1 3.2**/1**,**
ms1mx2.5/28**,Error ellipse: s-maj=291.8km**
s-min=40.5km az=149.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.60	261	P	P	11 03 58.8	-0.1
	0.2nm,0.3s,baz=96,slow=7.6,SNR=20						
ASAR	Alice Springs	45.61	255	P	P	11 03 58.8	-0.2
	0.6nm,0.6s,baz=93,slow=8.1,SNR=12						
ASAR				LR	LR	11 20 57.0	
	comp=Z,29nm,20.3s,baz=2.0,slow=33						
YKA	Yellowknife Ar	95.09	24	P	P	11 09 01.0	-0.1
	0.2nm,0.7s,baz=227,slow=4.1,SNR=4.1						

KOLA ***06*** *11:02:05.4,68°.73N×17°.95E,h0*^{km}*,ML2.0,Norway,*
Troms
HEL ***06*** *11:02:06.8,67°.77N×20°.17E,h0*^{km}*,ML1.9,Explosion*
ISC 06 11:02:07.2±0.8**,67°.81N**±0°.02×**20°.26E**±0°.03**,h0**^{km}**,n25,**
σ**1**^{s}**.21**/42**,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	Laukkuluspa	0.25	274	i P	Pg	11 02 12.0	-0.1
RATU				i S	Sg	11 02 15.3	0.0
KOVU	Salmi	0.42	355	i P	Pg	11 02 15.1	-0.2
KOVU				i S	Sg	11 02 20.4	-0.2
NIKU	Nikkaluokta	0.47	278	i P	Pg	11 02 15.9	-0.3
LANU	Lannavaara	0.70	69	eP	Pg	11 02 20.8	+0.2
LANU				eS	Sg	11 02 30.3	+0.8
DUNU	Dundret	0.70	170	i P	Pg	11 02 20.6	0.0
DUNU				i S	Sb	11 02 30.8	-1.6
MASU	Masugnsbyn	0.75	117	i P	Pb	11 02 22.0	-1.2
MASU				i S	Sb	11 02 32.6	-1.4
KIF	Kilpisjarvi	1.22	9	eP	Pb	11 02 30.8	-0.3
KIF	Kilpisjarvi	1.22	9	ePB	Pg	11 02 30.4	-0.2
	baz=187						
KIF				MSG		11 02 46.2	
	comp=Z,13nm,0.2s						
KIF				eSB	Sb	11 02 47.1	-0.2
PAJU	Pajala	1.35	124	ePG	Pg	11 02 32.4	-0.7
PAJU				eSB	Sb	11 02 50.7	-0.6
HEF	Hetta	1.41	63	eP	Pn	11 02 33.1	-1.1
HEF	Hetta	1.41	63	ePG	Pn	11 02 33.5	-0.6
HEF				MSG		11 02 50.6	
	comp=Z,6.1nm,0.2s						
HEF				eSN	Sn	11 02 54.6	+1.2
ERTU	Ertsjaerv	1.47	148	ePG	Pn	11 02 34.4	-0.5
ERTU				eSN	Sn	11 02 54.8	+0.1
KLF	Kolari	1.54	110	ePG	Pb	11 02 35.8	-0.7
KLF				eSB	Sn	11 02 56.5	0.0
HARU	Harads	1.68	170	eP	Pb	11 02 38.0	-0.8
KALU	Kalix	2.31	146	ePB	Pb	11 02 47.9	-1.8
KALU				eSB	Sb	11 03 18.1	-0.5
TOF	Tornio	2.36	135	ePB	Pb	11 02 48.9	-1.6
TOF				MSG		11 03 16.5	
	comp=Z,6.4nm,0.2s						
TOF				eSB	Sb	11 03 19.8	-0.4
SGF	Sodankyl	2.43	96	eP	Pn	11 02 49.2	+1.1
	baz=280						
SGF				eSG	Sb	11 03 22.6	+0.5
RNF	Rovaniemi	2.54	116	ePB	Pb	11 02 51.9	-1.8
RNF				eSB	Sb	11 03 25.4	0.0
ARA0	ARCESS Array S	2.59	45	eP	Pn	11 02 51.1	+0.8
ARA0				eSB	Sb	11 03 25.6	-1.1
ARCES	ARCESS Array B	2.59	45	P	Pn	11 02 51.9	+1.6
ARCES				S	Sb	11 03 24.5	-2.2
KEV	Kevo	3.14	48	eP	Pn	11 02 59.4	+1.5
KEV				MSG		11 03 40.6	
	comp=Z,3.9nm,0.2s						
KEV				eSB	Sb	11 03 41.4	-1.1
BURU	Burvik	3.27	172	eP	Pn	11 03 01.5	+1.9
OUF	Merijarvi	3.91	150	eP	Pn	11 03 11.9	+3.6
MSF	Maaselka	3.95	115	eP	Pn	11 03 10.8	+1.8
	baz=298						
KU6	Riekki	4.19	111	ePG	Pb	11 03 23.0	+1.3

IDC ***06*** *11:09:02.2*±*2.6,9°.02S*×*124°.47E,h76*^{km}±*27*^{km}*,mb3.9/8,* *mb1 4.1/12, mb1mx3.6/33, mbtmp4.3/12, MS2.8/2, Ms1 2.8/2, ms1mx2.6/25, Error ellipse: s-maj=35.6km s-min=19.3km az=60.0*

*NEIC **06** 11:09:04.6±2.7, 9.°19S±0.°07×124.°27E±0.°09, h102^{km}±6^{km}, mb4.3/14, Error ellipse: s-maj=13.4km s-min=9.6km az=60.0*

*DJA **06** 11:09:04.6±0.2, 9°S±3°×12°4E±°, h77^{km}±5^{km}, M4.5/12, mb4.5/12, mB5.1/6, MLv4.5/12, Mw(mB)4.4/6*

ISC 06 11:09:04.5±0.4**, 9.°19S**±0.°05×**124.°32E**±0.°07**, h100**^{km}**, n78,** σ**1**^{s}**.91**/78**, mb4.2**/14**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.57	185	P	Pn	11 09 21.1	+0.1
SOEI				S	Sn	11 09 34.6	+1.3
SOEI	Soe	0.57	185	Pn	Pn	11 09 20.7	-0.2
MMRI	Maumere	2.13	285	P	Pn	11 09 36.6	-2.1
MMRI	Maumere	2.13	285	Pn	Pn	11 09 37.0	-1.8
MMRI	Maumere	2.13	285	P	Pn	11 09 36.9	-1.8
BASI	Baing, Sumba	3.83	254	P	Pn	11 10 01.0	-0.4
BSSI	Bau Bau, Buton	4.85	308	P	Pn	11 10 14.0	-1.2
WBSI	Waikabubak, Su	4.88	264	P	Pn	11 10 15.4	-0.3
BKSI	Bulukumba	5.66	312	P	Pn	11 10 24.5	-1.7
	0.1nm30nm,0.6s						
KAPI	Kappang	6.14	312	P	Pn	11 10 32.0	-0.7
	1.2nm,0.3s,baz=156,slow=7.0,SNR=14						
KAPI				LR	LR	11 12 54.8	
	comp=Z,107nm,20.6s,baz=156,slow=38						
KAPI	Kappang	6.14	312	Pn	Pn	11 10 32.2	-0.5
KAPI	Kappang	6.14	312	P	Pn	11 10 32.5	-0.2
BNSI	Bone	6.33	318	P	Pn	11 10 35.0	-0.3
	0.5nm1µm160nm,0.8s						
PLAI	Plampang	6.47	273	P	Pn	11 10 36.6	-0.6
	0.4nm701nm53nm,0.6s						
PLAI	Plampang	6.47	273	P	Pn	11 10 36.9	-0.3
SPSI	Sidrap Palu	6.88	319	P	Pn	11 10 42.2	-0.6
	0.1nm21nm,1.0s						
DRS	Darwin Rock St	7.22	117	P	Pn	11 10 47.4	-0.1
SANI	Sanana	7.28	13	P	Pn	11 10 48.0	-0.3
	0.2nm53nm,0.7s						
SANI	Sanana	7.28	13	P	Pn	11 10 48.2	-0.1
TWSI	Taliwang, Sumb	7.36	273	P	Pn	11 10 48.2	-1.1
	0.2nm21nm,0.7s						
TTSI	Tana Toraja	7.56	323	P	Pn	11 10 53.0	+0.9
	0.2nm4µm26nm,0.8s						
MTN	Manton Dam	7.61	119	Pn	Pn	11 10 52.2	-0.6
MTN	Manton Dam	7.61	119	P	Pn	11 10 52.8	0.0
KNRA	Kununurra	7.78	147	Pn	Pn	11 10 54.6	-0.4
KNRA	Kununurra	7.78	147	P	Pn	11 10 54.6	-0.4
APSI	Ampana	8.64	342	P	Pn	11 11 06.9	+0.1
	0.1nm36nm,1.0s						
KDU	Kakadu	8.73	114	P	Pn	11 11 07.3	-0.7
FITZ	Fitzroy Crossi	8.95	172	P	Pn	11 11 10.0	-1.0
	7.6nm,0.3s,baz=0.5,slow=11,SNR=45						
FITZ				S	Sn	11 12 45.5	-4.5
	baz=60,slow=0.0						
FAKI	Fak Fak	10.05	52	Pn	Pn	11 11 25.2	-0.7
FAKI	Fak Fak	10.05	52	P	Pn	11 11 26.4	+0.5
MPSI	Mapaga	10.44	335	P	Pn	11 11 31.6	+0.4
	22nm,0.8s						
TOLI2	Tolitoli	10.82	341	Pn	Pn	11 11 38.1	+1.6
TOLI2	Tolitoli	10.82	341	P	Pn	11 11 37.3	+0.9
PSA00	Pilbara Seismi	13.04	199		Pn	11 12 06.2	+0.2
WRA	Warramunga Arr	14.43	139	P	Pn	11 12 22.0	-2.1
	4.1nm,0.3s,baz=312,slow=14,SNR=207						
WRA				S	Sn	11 14 53.6	-10
	1.9nm,0.3s,baz=296,slow=22,SNR=7.7						
WRKA	Warakurna	16.21	167	P	Pn	11 12 47.0	+0.5
SBUM	Sibu	16.70	313	P	P	11 12 53.4	+0.2
AS31	Alice Springs	17.07	149	P	Pn	11 12 56.8	-0.3
ASAR	Alice Springs	17.07	149	P	Pn	11 12 56.8	-0.3
	1.2nm,0.3s,baz=321,slow=11,SNR=115						
ASAR				S	Sn	11 15 57.6	-9.3
	0.6nm,0.3s,baz=313,slow=22,SNR=5.9						
ASAR	Alice Springs	17.07	149	P	Pn	11 12 56.6	-0.5
DBJI	Dramaga	17.60	277	P	Pn	11 13 15.9	+12
MEEK	Meekatharra	18.18	197	P	Pn	11 13 12.0	+1.5
QIS	Mount Isa	18.58	129	P	Pn	11 13 17.3	+2.0
COEN	Coen	19.07	106	P	Pn	11 13 21.7	+0.6
COEN				IAmb	IAmb	11 13 26.0	
	comp=Z,18nm,0.8s						
OOD	Oodnadatta	21.39	151	P	P	11 13 46.8	+2.6
FORT	Forrest	21.77	171	P	P	11 13 50.7	+2.6
FORT	Forrest	21.77	171	P	P	11 13 50.8	+2.6
BLDU	Ballidu	22.47	197	P	P	11 13 57.5	+1.9
MULG	Mulgathing	22.88	158	P	P	11 14 03.2	+3.5
INKA	Innaminka	24.10	142	P	P	11 14 14.4	+3.5
BBOO	Buckleboo	25.89	157	P	P	11 14 30.4	+3.2
BBOO				IAmb	IAmb	11 14 33.4	
	comp=Z,10nm,1.1s						
BBOO	Buckleboo	25.89	157	P	P	11 14 30.6	+3.4
HTT	Hallett	27.63	153	P	P	11 14 46.3	+3.5
STKA	Stephens Creek	27.69	147	P	P	11 14 46.8	+3.4
	comp=Z,0.6nm,0.5s,baz=340,slow=15,SNR=1.7						
PSI	Prapat	27.97	294	LR	LR	11 27 48.6	
	comp=Z,18nm,18.9s,baz=16,slow=40						
CMAR	Chiang Mai Arr	37.17	318	P	P	11 16 06.8	+0.8
	comp=Z,1.2nm,0.4s,baz=148,slow=7.2,SNR=8.2						
JHS	Saijyo	44.73	10	P	P	11 17 07.9	+0.1
MJAR	Matsushiro Arr	47.32	15	P	P	11 17 26.5	-1.8
	comp=Z,1.3nm,0.7s,baz=184,slow=8.9,SNR=3.5						
USRK	Ussuriysk Ar.	53.59	7	P	P	11 18 14.9	-0.3
	comp=Z,2.1nm,0.6s,baz=194,slow=6.4,SNR=4.5						
USRK	Ussuriysk Ar.	53.59	7	P	P	11 18 14.6	-0.6
SONM	Songino Array	58.95	346	P	P	11 18 52.1	-1.4
	comp=Z,1.2nm,0.6s,baz=160,slow=8.8,SNR=10						
SONM	Songino Array	58.95	346	P	P	11 18 53.8	+0.3
SONM				IAmb	IAmb	11 19 13.1	
	comp=Z,1.2nm,1.0s						
MK31	Makanchi Array	67.13	330	P	P	11 19 46.9	-0.6
MK31				IAmb	IAmb	11 19 48.0	
	comp=Z,6.8nm,1.4s						
MKAR	Makanchi Array	67.13	330	P	P	11 19 46.5	-1.0
	comp=Z,2.0nm,0.6s,baz=130,slow=7.5,SNR=21						
MKAR	Makanchi Array	67.13	330	P	P	11 19 46.7	-0.8
BOOM	Boomskoye usch	67.77	323	P	P	11 19 51.3	-0.5
PETK	Petropavlovsk-	68.25	21	P	P	11 19 54.5	+0.2
	comp=Z,1.3nm,0.6s,baz=205,slow=3.0,SNR=4.8						
PETK	Petropavlovsk-	68.25	21	P	P	11 19 55.1	+0.7
AAK	Ala-Archa	68.72	323	P	P	11 19 56.8	-0.9
AAK				IAmb	IAmb	11 19 58.7	
	comp=Z,2.0nm,0.6s						
MAW	Mawson	70.89	201	P	P	11 20 04.5	-5.9
VNDA	Vanda	71.03	172	P	P	11 20 12.1	+1.0
VNDA				IAmb	IAmb	11 20 26.7	
	comp=Z,5.4nm,1.4s						
ZALV	Zalesovo Beam	71.19	337	P	P	11 20 10.2	-2.2
	comp=Z,1.7nm,0.6s,baz=135,slow=4.2,SNR=6.4						
ZALV	Zalesovo Beam	71.19	337	P	P	11 20 10.6	-1.8
SEY	Seymchan	75.08	13	P	P	11 20 34.6	-0.5
	comp=Z,2.7nm,0.6s,baz=221,slow=1.7,SNR=5.3						
ABKAR	Akbulak array	80.80	323	P	P	11 21 05.7	-1.3
QSPA	South Pole Qui	80.81	180	P	P	11 21 09.5	+2.5
QSPA				IAmb	IAmb	11 21 17.4	
	comp=Z,9.2nm,1.5s						
TORD	Torodi Ar. Bea	123.67	280	PKP	PKiKP	11 27 53.0	+1.3
	comp=Z,1.5nm,0.7s,baz=78,slow=1.7,SNR=11						
CPUP	Villa Florida	144.66	177	PKP	PKiKP	11 28 32.5	-1.5
	comp=Z,3.2nm,0.9s,baz=141,slow=3.7,SNR=3.5						

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*IDC **06** 11:13:27.2±0.7, 41.°91N×119.°60W, h0^{km}, mb3.5/3, mb1 3.8/8, mb1mx3.4/37, mbtmp3.4/8, ML3.5/4, MS3.1/5, Ms1 3.1/5, ms1mx2.9/32, Error ellipse: s-maj=11.3km s-min=5.7km az=9.0*

*REN **06** 11:13:27.9±3.8, 41.°86N±0.°04×119.°63W±0.°06, h10^{km}±6^{km}, ML4.1/6, mb4.3/8(NEIC), ML3.7/105(NEIC), Mwr3.9/41(NEIC), Error ellipse: s-maj=6.7km s-min=4.9km az=110.0*

*NEIC **06** 11:13:27.9, 41.°86N×119.°63W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-8.53; M$_{\theta\theta}$0.16; M$_{\phi\phi}$8.37; M$_{r\theta}$-1.79; M$_{\theta\phi}$3.37; M$_{\phi r}$3.11; Fault plane solution: M$_0$9.78000×10^{14} NP1:ϕ_s182.96000°, δ54.72000°, λ-111.04000°. NP2:ϕ_s36.63000°, δ40.37000°, λ-63.09000°. Principal axes: T 9.8759, Plg7.0000°, Azm288.0000°; N -0.1994, Plg17.0000°, Azm195.0000°; P -9.6765, Plg71.0000°, Azm41.0000°;*

*ANF **06** 11:13:29.3±0.5, 41.°83N×119.°69W, h10^{km}, ML4.0/19 Error ellipse: s-maj=4.6km s-min=4.0km az=85.0*

*NEIC **06** 11:13:30.0±1.5, 42.°03N±0.°04×119.°65W±0.°05, h11^{km}±5^{km}, Error ellipse: s-maj=6.6km s-min=5.0km az=157.0*

ISC 06 11:13:28.1±1.2**, 41.°89N**±0.°02×**119.°62W**±0.°02**, h1**^{km}±9^{km}**, n136,** σ**1**^{s}**.56**/154**, mb4.0**/6**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.51	272		Pg	11 13 39.1	+1.2
MOD				IAML		11 13 49.3	
	comp=N,7µm,0.4s						
MOD	Modoc Plateau	0.51	272		Sg	11 13 45.6	+1.0
WVOR	Wild Horse Val	0.91	53		Pg	11 13 46.1	+0.6
WVOR	Wild Horse Val	0.91	53		Sb	11 13 59.1	-0.3
K05A	Summer Lake	1.27	312	Pn	Pn	11 13 52.0	-1.0
M04C	Macdoel	1.66	267	P	Pn	11 13 57.0	-1.5
	baz=87,SNR=86						
M04C				Sb	Sg	11 14 21.8	+0.2
	baz=87						
J08A	Circle Bar Ran	1.69	29	Pn	Pn	11 13 57.8	-1.1
K04D	Chiloquin, OR	1.75	296	Pn	Pn	11 13 58.7	-1.0
	baz=115,SNR=120						
K04D				Pb	Pb	11 14 00.1	-0.9
	baz=115						
K04D				Sb	Sg	11 14 24.8	+0.5
	baz=115						
J05D	Fort Rock, OR	1.84	320	P	Pb	11 14 01.9	-0.6
	baz=140,SNR=291						
J05D				Sb	Sg	11 14 28.0	+0.8
	baz=140						
L04D	Klamath Falls	2.03	280	P	Pn	11 14 01.9	-1.6
	baz=99,SNR=209						
L04D				Sb	Sb	11 14 32.4	+0.8
	baz=99						
PINE	Pine Mountain	2.14	333		Pn	11 14 05.6	+0.5
PINE				IAML		11 14 39.1	
	comp=E,533nm,0.8s						
PINE				IAML		11 14 46.1	
	comp=N,624nm,0.7s						
PAHR	Pah Rah Range	2.19	175		Pn	11 14 07.0	+1.4
I07A	Izee	2.19	2		Pn	11 14 05.1	-0.7
I07A				IAML		11 14 48.7	
	comp=E,362nm,1.4s						
LOY	Loyalton	2.28	192		Pb	11 14 09.6	-0.4
J04D	Umpqua Nationa	2.29	307	Pb	Pb	11 14 09.8	-0.4
	baz=126,SNR=23						
PEAR	Peavine Mounta	2.29	187		Pb	11 14 11.1	+0.7
O03E	Paynes Creek	2.29	227	Pn	Pn	11 14 06.0	-1.0
	baz=46,SNR=51						
O03E				Pb	Pb	11 14 08.9	-1.4
	baz=46						
O03E				Pg	Pg	11 14 11.1	-0.9
	baz=46						
O03E				Sb	Sb	11 14 39.9	+0.7
	baz=46						
BABR	Babbit Peak	2.31	189		Pb	11 14 11.9	+1.2
YBH	Yreka Blue Hor	2.32	267	Pn	Pn	11 14 06.2	-1.2
	comp=E,14nm,0.3s,baz=57,slow=12,SNR=176						
YBH				Lg	Lg	11 14 40.5	
	comp=E,48nm,0.3s,baz=152,slow=5.7,SNR=11						
YBH	Yreka Blue Hor	2.32	267	Pn	Pn	11 14 06.5	-0.9
BMN	Battle Mountai	2.32	128	Pn	Pn	11 14 09.7	+2.2
BMN				IAML		11 14 42.8	
	comp=E,406nm,0.6s						
BMN				IAML		11 14 45.1	
	comp=N,442nm,0.5s						
KBF	Kyburz Flat	2.42	191		Pb	11 14 12.6	+0.1
M02C	Callahan	2.48	260	Pn	Pn	11 14 07.4	-2.2
	baz=78,SNR=33						
M02C				Pb	Pb	11 14 12.8	-0.6
	baz=78						
M02C				Sb	Sb	11 14 45.7	+1.3
	baz=78						
N02D	Trinity Center	2.50	250	Pn	Pn	11 14 07.7	-2.1
	baz=68,SNR=26						
N02D				Pb	Pb	11 14 11.9	-1.8
	baz=68						
N02D				Sb	Sb	11 14 45.8	+0.8
	baz=68						
WDC	Whiskeytown Da	2.56	240	Pn	Pn	11 14 12.2	+1.5
WDC				IAML		11 14 47.2	
	comp=N,375nm,1.1s						
HUMO	Hull Mountain	2.58	287	Pn	Pn	11 14 10.1	-0.9
HUMO				IAML		11 14 50.0	
	comp=E,226nm,0.4s						
HUMO				IAML		11 14 50.1	
	comp=N,282nm,0.5s						
DONR	Donner Summit	2.59	192		Pb	11 14 15.1	-0.3
VCNR	Virginia City	2.59	181		Pb	11 14 14.2	-1.2
VCNR				IAML		11 14 55.0	
	comp=N,355nm,0.8s						
MPK	Martis Peak	2.61	187		Pn	11 14 13.2	+1.6
MPK				IAML		11 14 59.0	
	comp=E,342nm,1.5s						
MPK				IAML		11 15 06.2	
	comp=N,293nm,0.8s						
ORV	Oroville	2.73	212		Pn	11 14 14.2	+1.2
I05D	Terrebonne, OR	2.76	333	Pb	Pb	11 14 18.2	+0.1
	baz=153,SNR=31						
I05D				Sb	Sg	11 14 55.8	-0.8
	baz=153						
PNTR	Pine Nut	2.79	180		Pn	11 14 16.0	+1.9
PNTR				IAML		11 15 04.1	
	comp=N,342nm,1.0s						
PNTR				IAML		11 15 14.0	
	comp=E,338nm,1.4s						
I04A	Tendick Farm,	2.80	314	Pb	Pb	11 14 18.9	0.0
	baz=133,SNR=6.6						
YERR	Yerington	2.91	174		Pn	11 14 17.8	+2.1
YERR				IAML		11 15 04.8	
	comp=N,316nm,0.7s						
YERR				IAML		11 15 06.2	
	comp=E,272nm,0.9s						
EMB	Emerald Bay	2.93	187		Pn	11 14 17.9	+1.9
EMB				IAML		11 15 13.0	
	comp=E,179nm,1.8s						
O02D	Mt. Diablo Mer	2.95	236	Pn	Pn	11 14 15.0	-1.1
	baz=54,SNR=18						
O02D				Pb	Pb	11 14 20.1	-1.3
	baz=54						
O02D				Sb	Sb	11 14 58.8	+0.9
	baz=54						
DBO	Dodson Butte	2.95	296		Pn	11 14 16.1	0.0
DBO				IAML		11 15 03.1	
	comp=N,182nm,1.0s						
DBO				IAML		11 15 13.0	
	comp=E,175nm,2.0s						
L02E	Cave Junction	2.98	277	Pn	Pn	11 14 16.2	-0.3
	baz=94,SNR=66						
KVN	Kaiserville	3.06	157	Pn	Pn	11 14 19.8	+2.0
KVN				IAML		11 15 08.9	
	comp=E,161nm,0.9s						
K02D	Willamette Mer	3.11	286	P	Pn	11 14 18.1	-0.3
	baz=104,SNR=297						
K02D				Sb	Sg	11 15 05.4	-2.5
	baz=104						
MFID	Camas Ranch	3.19	60	Pn	Pn	11 14 19.1	-0.3
KRMB	Red Mountain	3.23	265		Pn	11 14 20.0	0.0
KRMB				IAML		11 15 36.4	
	comp=E,134nm,3.8s						
KRMB				IAML		11 16 04.6	
	comp=N,140nm,4.8s						
KHMM	Horse Mountain	3.26	253		Pn	11 14 22.5	+2.1
KHMM				IAML		11 15 16.7	
	comp=E,159nm,1.4s						
I03D	Drain, OR	3.29	305	P	Pb	11 14 23.9	-3.3
	baz=123,SNR=34						
RYN	Ryan	3.36	165		Pn	11 14 23.9	+2.1
RYN				IAML		11 15 20.7	
	comp=E,188nm,1.2s						
RYN				IAML		11 15 24.8	
	comp=N,175nm,1.0s						
BUCK	Buck Mountain	3.38	314		Pn	11 14 21.5	-0.5
BUCK				IAML		11 15 32.8	
	comp=E,138nm,3.9s						
BUCK				IAML		11 15 48.2	
	comp=N,125nm,2.6s						
BMO	Blue Mountains	3.41	29	Pn	Pn	11 14 21.6	-0.9
BMO				IAML		11 15 29.1	
	comp=N,114nm,1.1s						
J01E	Myrtle Point	3.43	293	Pn	Pn	11 14 24.4	+1.7
	baz=111						
J01E				Pb	Pb	11 14 31.4	+1.8
	baz=111						
G08A	Pilot Rock	3.44	8		Pn	11 14 21.3	-1.6
H04D	Lebanon	3.48	320	Pb	Pb	11 14 31.2	+0.7
	baz=139						
ELK	Elko	3.49	108	Pn	Pn	11 14 23.6	-0.1
	comp=N,3.0nm,0.3s,baz=298,slow=16,SNR=30						
ELK				Pg	Pb	11 14 28.7	-2.0
	comp=N,17nm,0.3s,baz=300,slow=16,SNR=102						
ELK				Lg	Lg	11 15 15.6	
	comp=N,63nm,0.3s,baz=66,slow=13,SNR=7.4						
ELK				LR	LR	11 16 06.3	
	comp=N,334nm,18.2s,baz=258,slow=46						
ELK	Elko	3.49	108	IAML		11 15 21.9	
	comp=N,138nm,0.5s						
ELK				IAML		11 15 21.9	
	comp=N,105nm,0.6s						
JCC	Jacoby Creek,	3.49	254		Pn	11 14 25.0	+1.6
JCC				IAML		11 15 30.4	
	comp=N,178nm,2.2s						
KMRM	Mail Ridge	3.51	243		Pn	11 14 26.8	+2.9
G05D	Wamic, OR	3.57	340	Pb	Pb	11 14 33.0	+0.9
	baz=160						
G05D				Sb	Sg	11 15 21.2	-1.6
	baz=160						
NVAR	Mina Array Bea	3.60	163	Pn	Pn	11 14 26.5	+1.4
	comp=N,1.5nm,0.3s,baz=341,slow=13,SNR=23						
NVAR				Lg	Lg	11 15 21.3	
	comp=N,19nm,0.3s,baz=347,slow=31,SNR=5.7						
NVAR				LR	LR	11 15 55.3	
	comp=N,126nm,20.6s,baz=275,slow=41						
NVAR	Mina Array Bea	3.60	163		Pn	11 14 27.6	+2.4
NV11	Mina Array Sit	3.63	162		Pn	11 14 28.1	+2.6
NV11				IAML		11 15 28.1	
	comp=E,93nm,1.9s						
NV11				IAML		11 15 36.6	
	comp=N,89nm,1.1s						
KCPM	Cahto Peak	3.73	235		Pn	11 14 28.3	+1.5
KCPM				IAML		11 15 13.4	
	comp=N,117nm,3.8s						
KCPM				IAML		11 15 36.4	
	comp=E,136nm,1.9s						
LHV	Little Huntoon	3.73	166	Pn	Pn	11 14 29.9	+3.1
LHV				IAML		11 15 48.0	
	comp=N,130nm,1.3s						
HOOD	Mount Hood Mea	3.74	337		Pn	11 14 27.3	+0.3
HOOD				IAML		11 15 36.7	
	comp=N,132nm,1.9s						
HOOD				IAML		11 15 51.1	
	comp=E,98nm,1.4s						
I02E	Swisshome, OR	3.81	307	Pb	Pb	11 14 38.4	+2.3
	baz=125						
CMB	Columbia Colle	3.89	189		Pn	11 14 32.8	+3.8
F07A	Phinny Hill Vi	4.01	357		Pn	11 14 30.0	-0.6
F07A				IAML		11 15 48.1	
	comp=E,75nm,1.2s						
PLID	Pearl Lake	4.14	38		Pn	11 14 32.3	-0.3
PLID				IAML		11 15 54.0	
	comp=E,70nm,1.1s						
HLID	Hailey	4.18	65		Pn	11 14 33.5	+0.4
HLID	Hailey	4.18	65	Pn	Pn	11 14 33.0	-0.2
	baz=248						
HLID				Pb	Pb	11 14 42.8	+0.3
	baz=248						
HLID				Sb	Sb	11 15 36.1	+2.5
	baz=248						
TPH	Tonopah	4.23	153		Pn	11 14 36.3	+2.5
MDPB	Devils Postpil	4.27	174		Pn	11 14 34.4	0.0
F10A	Beach Ranch, E	4.43	22		Pn	11 14 35.6	-0.9
F10A				IAML		11 15 55.3	
	comp=N,53nm,1.6s						
F10A				IAML		11 16 00.8	
	comp=E,55nm,1.9s						
HAWA	Hanford	4.50	1		Pn	11 14 37.2	-0.2
F04A	Amboy	4.52	334		Pn	11 14 38.1	+0.5
F04A				IAML		11 16 19.4	
	comp=N,68nm,4.0s						
E08A	Dider Farm, El	4.62	5		Pn	11 14 37.3	-1.7
E08A				IAML		11 16 10.3	
	comp=E,39nm,2.2s						
E07A	Sunnyside	4.67	358		Pn	11 14 38.0	-1.7
E07A				IAML		11 16 15.4	
	comp=E,56nm,0.9s						
DSP	Deep Springs	4.69	164		Pn	11 14 42.6	+2.7
R11A	Troy Canyon, C	4.69	138		Pn	11 14 42.2	+2.1
R11A				IAML		11 15 59.9	
	comp=E,64nm,1.8s						
R11A				IAML		11 16 00.1	
	comp=N,52nm,0.6s						
R11A	Troy Canyon, C	4.69	138	P	Pn	11 14 42.3	+2.1
	baz=320						
R11A				Sb	Sg	11 15 55.0	-3.8
	baz=320						
LCH	Last Change Ra	4.89	161		Pn	11 14 45.6	+2.7
LCH				IAML		11 16 09.6	
	comp=E,37nm,1.4s						
SPR3	Spring Creek 3	4.96	124		Pn	11 14 46.9	+3.0
BGU	Big Grassy Mou	5.05	99		Pn	11 14 46.4	+1.4
BGU				IAML		11 16 24.1	
	comp=N,50nm,2.7s						
HVU	Hansel Valley	5.11	89	Pn	Pn	11 14 47.2	+1.3
BCYI	Bear Canyon	5.15	60		Pn	11 14 46.9	+0.4
SPUT	South Promonto	5.41	94		Pn	11 14 51.2	+1.3
DUG	Dugway, Tooele	5.42	106		Pn	11 14 51.4	+1.3
DUG	Dugway, Tooele	5.42	106	P	Pn	11 14 51.9	+1.9
	baz=290						
PSUT	Pine Spring	5.54	125		Pn	11 14 53.4	+1.6
MCMT	McKenzie Canyo	5.74	57		Pn	11 14 55.6	+1.0
FURC	Furnace Creek,	5.82	158	Sg	Sg	11 16 32.0	-3.0
	baz=339						
C09A	Chrisman Ranch	5.99	9		Pn	11 14 58.3	+0.5
HWUT	Hardware Ranch	6.03	90		Pn	11 14 59.4	+0.9
NLU	North Lily Min	6.03	106	Pn	Pn	11 15 00.9	+2.3
CTU	Camp Tracy	6.04	99		Pn	11 15 00.2	+1.5
DLMT	Dillon	6.17	53		Pn	11 15 01.3	+1.0
ISA	Isabella, Lake	6.28	171		Pn	11 15 04.6	+2.7
JLU	Jordanelle	6.29	99		Pn	11 15 03.5	+1.4
MPU	Maple Canyon	6.33	105		Pn	11 15 04.0	+1.4
AHID	Auburn Hatcher	6.37	79		Pn	11 15 03.2	-0.1
TCRU	Three Creeks R	6.39	118		Pn	11 15 04.2	+0.7
MSO	Missoula	6.40	38		Pn	11 15 02.2	-1.3
MSO	Missoula	6.40	38	P	Pn	11 15 05.5	+2.0
	baz=221						
CCUT	Cedar City	6.48	130		Pn	11 15 06.9	+2.1
LRM	Limekiln Ridge	6.50	50		Pn	11 15 05.5	+0.4
SHOC	Shoshone, Teco	6.52	155	Sg	Sg	11 16 57.9	+0.4
	baz=337						
MVU	Marysvale	6.60	118		Pn	11 15 06.9	+0.5
SZCU	Shurtz Canyon	6.61	128		Pn	11 15 08.2	+1.7
NEW	Newport	6.62	15	Lg	Lg	11 16 55.2	
	comp=N,0.2nm,0.3s,baz=103,slow=16,SNR=3.9						
MSU	Marysvale	6.62	118		Pn	11 15 08.9	+2.3
MOOW	Moose Ponds	6.78	71		Pn	11 15 07.2	-1.7
MTPU	Mount Pierson	6.88	121		Pn	11 15 11.8	+1.4
YMR	Madison River	6.90	63		Pn	11 15 10.4	-0.1
TMUT	Trail Mountain	6.90	109		Pn	11 15 12.7	+2.1
JTMT	Jette	6.98	31	Pn	Pn	11 15 10.7	-0.8
TUQ	Turquoise Moun	7.06	155	Sg	Sg	11 17 14.3	-0.5
	baz=337						
Q16A	Castle Valley	7.09	112		Pn	11 15 15.4	+2.3
YNR	Norris Junctio	7.11	64		Pn	11 15 12.1	-1.3
YMP	Mirror Lake Pl	7.46	64		Pn	11 15 18.8	+0.4
PDAR	Pinedale Array	7.51	80	Pn	Pn	11 15 21.9	+3.1
	comp=N,0.1nm,0.3s,baz=260,slow=12,SNR=12						
PDAR				LR	LR	11 17 58.8	
	comp=N,71nm,20.4s,baz=274,slow=36						
U15A	North Rim	7.88	131		Pn	11 15 25.7	+1.7
GCMT	Greycliff	8.18	58	Pn	Pn	11 15 27.8	-0.2
RWWY	Rawlins	9.27	87		Pn	11 15 43.5	+0.5
ANMO	Albuquerque	12.42	120	LR	LR	11 21 49.4	
	comp=N,132nm,19.6s,baz=302,slow=40						
SUSD	Miller	15.29	73		Pn	11 17 04.4	-0.6
SUSD				IAmb	IAmb	11 17 11.7	
	comp=Z,22nm,0.9s						
ECSD	EROS Data Cent	16.97	76	P	Pn	11 17 25.8	-0.8
TXAR	Lajitas Array	17.99	129	P	P	11 17 40.7	+0.6
	baz=328,slow=13,SNR=5.1						
S39A	Bolivar	20.60	93	P	P	11 18 08.9	+0.3
YKA	Yellowknife Ar	20.85	7	P	P	11 18 11.5	+0.5
	comp=Z,1.4nm,1.1s,baz=195,slow=12,SNR=3.6						
P40A	Paris	21.00	87	P	P	11 18 13.2	+0.4
P40A				IAmb	IAmb	11 18 17.2	
	comp=Z,13nm,0.7s						
I40A	Norwalk	21.30	75	P	P	11 18 16.2	+0.2
I40A				IAmb	IAmb	11 18 17.7	
	comp=Z,19nm,0.9s						
CCM	Cathedral Cave	22.03	91	P	P	11 18 23.3	-0.6
CCM				IAmb	IAmb	11 18 31.1	
	comp=Z,4.5nm,0.8s						
WCI	Wyandotte Cave	25.67	87	P	P	11 18 59.4	0.0
INK	Inuvik	27.51	349	P	P	11 19 19.6	+4.0
	comp=Z,1.0nm,0.9s,baz=100,slow=8.0,SNR=4.4						
ILAR	Eielson Array	27.70	335	P	P	11 19 18.1	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.2nm,0.5s,baz=155,slow=8.8,SNR=2.0						
ASAJ	Asahikawa	67.13	309	LR	LR	11 51 52.4	
	comp=Z,38nm,20.1s,baz=122,slow=34						
NOA	NORSAR Array B	69.91	23	P	P	11 24 40.4	+0.1
	comp=Z,0.9nm,0.8s,baz=346,slow=3.7,SNR=2.3						
HHC	Hu-ho-hao-te	85.51	324	*e*P	P	11 26 04.1	-3.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,87nm,7.6s						
WMQ	Urumqi	91.22	341	*e*P	P	11 26 34.5	-0.4

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*IDC **06** 11:34:29.2±1.9, 9°.33S×123°.64E, h0km, mb3.7/2, mb1 4.1/4, mb1mx3.7/29, mbtmp3.9/4, ML4.3/2, Error ellipse: s-maj=150.0km s-min=29.3km az=58.0*

*DJA **06** 11:34:40.6±0.4, 9°S±4°×12°4E±°, h76km±6km, M4.2/12, mb4.3/7, mB4.9/5, MLv4.2/12, Mw(mB)4.2/5*

ISC 06 11:34:40.1±0.9**, 9°.26S**±0°.08×**124°.3E**±0°.1**, h100km, n14, σ2ˢ.42**/16**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.49	185	P	Pn	11 34 57.9	+1.9
SOEI				S	Sn	11 35 10.9	+3.1
MMRI	Maumere	2.14	287	P	Pn	11 35 13.2	-1.3
BASI	Baing, Sumba	3.80	255	P	Pn	11 35 37.3	+0.7
WBSI	Waikabubak, Su	4.87	265	P	Pn	11 35 50.5	-0.6
BSSI	Bau Bau, Buton	4.89	309	P	Pn	11 35 51.1	-0.3
BKSI	Bulukumba	5.71	313	P	Pn	11 36 00.5	-2.0
	0.0nm11nm,0.7s						
BNSI	Bone	6.38	319	P	Pn	11 36 13.5	+1.9
	0.1nm42nm,0.9s						
PLAI	Plampang	6.47	273	P	Pn	11 36 12.8	0.0
	0.2nm1µm48nm,0.5s						
SANI	Sanana	7.36	13	P	Pn	11 36 24.9	0.0
	0.1nm11nm,0.6s						
TWSI	Taliwang, Sumb	7.36	273	P	Pn	11 36 25.1	+0.2
	0.1nm358nm11nm,0.8s						
WRA	Warramunga Arr	14.38	139	Pn	Pn	11 37 58.4	-0.6
	1.8nm,0.3s,baz=312,slow=14,SNR=82						
WRA				Sn	Sn	11 40 28.1	-9.4
	1.2nm,0.3s,baz=310,slow=24,SNR=6.0						
ASAR	Alice Springs	17.01	149	P	P	11 38 33.3	+1.1
	0.5nm,0.3s,baz=321,slow=11,SNR=41						
ASAR				S	Sn	11 41 33.9	-7.1
	0.3nm,0.3s,baz=313,slow=22,SNR=7.9						
SONM	Songino Array	59.03	346	P	P	11 44 30.5	+0.9
	0.3nm,0.4s,baz=163,slow=8.5,SNR=3.4						
MKAR	Makanchi Array	67.19	330	P	P	11 45 23.4	0.0
	0.7nm,0.6s,baz=133,slow=6.9,SNR=18						

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*ANF **06** 11:53:43.8±0.2, 35°.88N×97°.41W, h4km, ML2.9/4, Error ellipse: s-maj=2.3km s-min=1.5km az=105.0*

*IASPEI **06** 11:53:44.3±0.9, 35°.85N±0°.02×97°.40W±0°.03, h7km±7km, Error ellipse: s-maj=3.9km s-min=3.0km az=95.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*TUL **06** 11:53:44.2±1.1, 35°.84N±0°.01×97°.39W±0°.02, h4km±7km, ML2.8, mb_Lg2.5/13(NEIC), Error ellipse: s-maj=2.0km s-min=1.6km az=116.0*

*NEIC **06** 11:53:44.4±0.8, 35°.852N±0°.004×97°.40W±0°.02, h6km±5km, Error ellipse: s-maj=2.2km s-min=0.7km az=80.0*

ISC 06 11:53:44.4±0.9**, 35°.85N**±0°.02×**97°.40W**±0°.02**, h7km**±7km**, n58, σ0ˢ.47**/78**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.07	219	Pg	Pg	11 53 46.2	-0.1
OK029				Sg	Sg	11 53 47.7	+0.1
BCOK	Bluff Creek, N	0.26	221	Pg	Pg	11 53 49.6	0.0
BCOK				Sg	Sg	11 53 53.5	+0.5
OK005	Luther M Schoo	0.26	140	Pg	Pg	11 53 49.5	-0.1
OK005				Sg	Sg	11 53 53.4	+0.4
OK025	Westminster Rd	0.28	170	Pg	Pg	11 53 49.8	-0.1
OK025				Sg	Sg	11 53 53.6	0.0
OKCFA	Oklahoma City	0.44	186	Pg	Pg	11 53 52.8	-0.1
OKCFA				Sg	Sg	11 53 58.0	-0.7
OKCFA	Oklahoma City	0.44	186	P	Pg	11 53 52.8	-0.1
	baz=7.0						
OKCFA				S	Sg	11 53 59.0	+0.3
	baz=7.0						
OKCSW	OKLAHOMA CITY	0.45	184		Pg	11 53 53.0	-0.1
OKCSW				Sg	Sg	11 53 58.8	-0.2
OK031	S. Brethren Rd	0.47	78	Pg	Pg	11 53 53.5	0.0
OK031				Sg	Sg	11 53 59.5	-0.1
OK030	Cody Creek RV	0.51	81		Pg	11 53 54.1	0.0
OK030				Sg	Sg	11 54 01.1	+0.3
OK034	N. Norfolk Rd.	0.58	74	Pg	Pg	11 53 55.5	-0.1
OK034				Sg	Sg	11 54 03.1	0.0
FNO	Franklin	0.59	180	Pg	Pg	11 53 55.6	-0.3
FNO				Sg	Sg	11 54 03.9	+0.3
CROK	Carrier	0.80	324	Pg	Pg	11 54 00.1	+0.3
CROK				Sg	Sg	11 54 11.1	+0.7
BLOK	Blackwell	0.92	9	Pg	Pg	11 54 01.9	-0.2
BLOK				Sg	Sb	11 54 15.1	0.0
GC02	Grant County #	1.06	340		Pg	11 54 04.5	-0.3
GC02				Sg	Sg	11 54 18.8	+0.2
OK032	Salt Plains WL	1.15	326		Pg	11 54 06.1	-0.4
OK032				Sg	Sb	11 54 21.8	-0.1
KAN13	South Haven SW	1.16	357		Pg	11 54 06.3	-0.4
KAN13				Sg	Sb	11 54 22.5	+0.5
KAN14	Manchester OK	1.19	338		Pg	11 54 06.8	-0.5
KAN14				Sg	Sb	11 54 23.2	+0.2
KAN17	Caldwell West	1.22	346		Pg	11 54 07.5	-0.5
KAN17				Sg	Sn	11 54 24.9	+0.1
T35A	Sooner Cattle	1.28	34		Pn	11 54 08.1	-0.6
T35A				Sg	Sg	11 54 25.6	0.0
T35B	Sooner Cattle	1.28	34	P	Pn	11 54 08.0	-0.7
	baz=214						
T35B				S	Sg	11 54 25.4	-0.2
	baz=214						
KAN09	Caldwell North	1.29	352		Pn	11 54 08.7	-0.3
X34A	Smith Ranch, M	1.30	196	Pg	Pn	11 54 08.7	-0.3
X34A				Sg	Sn	11 54 26.9	+0.3
KAN01	Argonia South	1.33	347		Pn	11 54 09.5	+0.1
KAN10	Anthony SW Sta	1.39	336	Pn	Pn	11 54 10.3	0.0
U32A	Winter Ranch,	1.40	292	Pn	Pn	11 54 10.1	-0.3
U32A	Winter Ranch,	1.40	292	S	Sn	11 54 29.5	+0.4
	baz=112						
KAN06	Argonia West S	1.44	345		Pn	11 54 11.2	+0.3
KAN08	Anthony NE Sta	1.45	342		Pn	11 54 11.3	+0.3
KAN16	Harper SW Stat	1.47	339	Pn	Pn	11 54 11.2	-0.2
KAN12	Harper NE Stat	1.52	342		Pb	11 54 12.7	-0.2
LOOK	Love County	1.87	174		Pn	11 54 17.3	+0.5
X37A	Clayton	2.08	127		Pn	11 54 19.9	+0.1
X37A				IAmb_Lg		11 54 52.5	
	comp=Z,28nm,0.8s						
U38A	Gravette	2.51	76		Pn	11 54 25.8	+0.2
Z35A	Perchaven, San	2.52	177	Pn	Pn	11 54 25.9	+0.1
Z35A	Perchaven, San	2.52	177	P	Pn	11 54 26.1	+0.3
	baz=358						
R32A	Long Quarter,	2.77	338		Pn	11 54 30.4	+1.1
HHAR	Hobbs	2.83	80		Pn	11 54 30.5	+0.4
W39A	Magazine	3.02	101		Pn	11 54 33.0	+0.3
W39A	Magazine	3.02	101	P	Pn	11 54 33.1	+0.5
	baz=283						
Z38A	Mt. Pleasant	3.27	142	Pn	Pn	11 54 35.9	-0.1
KSU1	Kansas State U	3.30	11		Pn	11 54 37.4	+0.9
MIAR	Mount Ida	3.39	112		Pn	11 54 38.7	+1.0
CBKS	Cedar Bluff	3.49	328		Pn	11 54 39.5	+0.2
CBKS				IAmb_Lg		11 55 37.5	
	comp=Z,17nm,0.8s						
AMTX	Amarillo	3.63	256		Pn	11 54 40.4	-0.8
AMTX				IAmb_Lg		11 55 39.3	
	comp=Z,10nm,1.0s						
U40A	Yellville	3.71	81		Pn	11 54 42.2	0.0
ABTX	Abilene, Hawle	3.72	211	Pn	Pn	11 54 41.6	-0.7
S39A	Bolivar	3.75	60		Pn	11 54 43.0	+0.3
S39A				IAmb_Lg		11 55 47.0	
	comp=Z,12nm,0.7s						
X40A	Basin Creek Fa	3.98	109		Pn	11 54 44.9	-1.0
FCAR	Ozark Folk Cen	4.28	88		Pn	11 54 49.1	-0.9
MGMO	Mountain Grove	4.33	71	Pn	Pn	11 54 52.2	+1.5
MGMO				IAmb_Lg		11 56 06.9	
	comp=Z,8.3nm,0.8s						
R40A	Maddies Statio	4.77	58		Pn	11 54 57.2	+0.5
P38A	Dawn	4.85	38	Pn	Pn	11 54 57.8	-0.1
P38A				IAmb_Lg		11 56 26.0	
	comp=Z,8.9nm,0.8s						
LCAR	Lake Charles	5.07	86	Pn	Pn	11 55 00.8	0.0
CCM	Cathedral Cave	5.40	64	Pn	Pn	11 55 04.5	-0.8
PBMO	Poplar Bluff	5.70	79	IAmb_Lg		11 56 50.0	
	comp=Z,8.3nm,0.9s						
SDCO	Great Sand Dun	6.77	289	Pn	Pn	11 55 23.4	-1.1
SIUC	Southern Illin	6.82	72	Pn	Pn	11 55 24.7	-0.2
ISCO	Idaho Springs	7.60	304	Pn	Pn	11 55 35.2	-0.6

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*IDC **06** 11:58:41.3±2.6, 6°.67S×129°.66E, h127km±29km, mb3.6/2, mb1 3.4/6, mb1mx3.1/27, mbtmp3.8/6, Error ellipse: s-maj=43.5km s-min=17.1km az=85.0*

*NEIC **06** 11:58:43.5±2.2, 6°.51S±0°.08×129°.9E±0°.1, h152km±7km, mb4.1/6, Error ellipse: s-maj=15.2km s-min=11.0km az=95.0*

ISC 06 11:58:42.2±0.7**, 6°.53S**±0°.06×**129°.99E**±0°.08**, h146km, n28, σ2ˢ.02**/30**, mb3.9**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.94	138	Pn	Pn	11 59 19.4	+2.9
FAKI	Fak Fak	4.24	32		Pn	11 59 46.6	+1.0
FAKI	Fak Fak	4.24	32	P	Pn	11 59 46.9	+1.4
SIJI	Sorong	5.77	13	P	Pn	12 00 07.6	+1.7
	1.6nm,0.3s,baz=204,slow=22,SNR=10						
SIJI				S	Sn	12 01 07.1	-4.1
	3.5nm,0.3s,baz=188,slow=22,SNR=9.1						
DRS	Darwin Rock St	5.93	171	P	Pn	12 00 09.3	+1.3
MTN	Manton Dam	6.37	170	Pn	Pn	12 00 15.6	+1.7
SOEI	Soe	6.51	240	Pn	Pn	12 00 13.0	-2.9
KDU	Kakadu	6.59	158	P	Pn	12 00 17.9	+1.1
KNRA	Kununurra	9.17	187	Pn	Pn	12 00 51.5	+0.3
KNRA	Kununurra	9.17	187	P	Pn	12 00 51.2	-0.1
FITZ	Fitzroy Crossi	12.26	200	P	Pn	12 01 30.4	-1.6
	0.1nm,0.3s,baz=30,slow=10,SNR=2.1						
FITZ				S	Sn	12 03 39.1	-8.3
	baz=262,slow=0.6						
PLAI	Plampang	12.32	259	P	Pn	12 01 34.3	+1.5
WB0	Warramunga Arr	13.84	162	Pn	Pn	12 01 50.2	-2.1
WRA	Warramunga Arr	13.98	163	P	Pn	12 01 51.8	-2.4
	0.5nm,0.3s,baz=340,slow=13,SNR=17						
WRA				S	Sn	12 04 14.6	-15
	0.2nm,0.3s,baz=339,slow=22,SNR=6.0						
WB2	Warramunga Arr	13.99	163	Pn	Pn	12 01 52.5	-1.7
COEN	Coen	14.92	121	Pn	P	12 02 08.0	+0.1
COEN				IAmb	IAmb	12 02 10.3	
	comp=Z,8.4nm,0.9s						
COEN	Coen	14.92	121	P	P	12 02 08.0	+0.1
QIS	Mount Isa	16.77	147	P	Pn	12 02 29.7	+1.0
AS31	Alice Springs	17.45	168	P	Pn	12 02 37.2	+0.4
AS31				IAmb	IAmb	12 03 03.4	
	comp=Z,1.9nm,0.2s						
ASAR	Alice Springs	17.45	168	P	Pn	12 02 37.3	+0.5
	comp=Z,0.3nm,0.3s,baz=356,slow=9.9,SNR=11						
ASAR				S	S	12 05 44.2	-5.9
	comp=Z,0.2nm,0.3s,baz=356,slow=26,SNR=5.9						
ASAR	Alice Springs	17.45	168	P	P	12 02 36.6	+0.8
PSA00	Pilbara Seismi	17.88	212	P	P	12 02 41.8	+1.2
PSA00				IAmb	IAmb	12 02 42.1	
	comp=Z,13nm,1.1s						
XMIS	Christmas Isla	24.38	259	P	P	12 03 49.9	+2.7
STKA	Stephens Creek	27.45	158	P	P	12 04 15.0	+0.4
	comp=Z,2.0nm,1.0s,baz=332,slow=8.8,SNR=3.7						
STKA	Stephens Creek	27.45	158	P	P	12 04 13.8	-0.7
MK31	Makanchi Array	67.83	327	P	P	12 09 24.5	-0.1
MK31				IAmb	IAmb	12 09 48.6	
	comp=Z,3.8nm,1.4s						
MKAR	Makanchi Array	67.83	327	P	P	12 09 25.2	+0.6
	comp=Z,1.0nm,0.5s,baz=122,slow=7.4,SNR=20						
MKAR	Makanchi Array	67.83	327	P	P	12 09 24.9	+0.3

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*UPP **06** 12:18:22.6±0.9, 59°.84N×10°.69E, h0km, ML2.6, Suspected explosion*

*BER **06** 12:18:22.8±1.4, 59°.85N×10°.61E, h0km, ML1.2, Explosion*

ISC 06 12:18:21.0±0.8**, 59°.86N**±0°.03×**10°.53E**±0°.04**, h0km, n13, σ0ˢ.67**/23**, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OSL	Oslo	0.12	51	*e*P	Pg	12 18 24.3	+1.0
OSL				*e*S	Sg	12 18 26.0	+1.0
OSL				IAML		12 18 29.6	
	comp=Z,220nm,0.4s						
KONO	Kongsberg	0.52	246	*e*P	Pb	12 18 32.9	-0.1
KONO				*e*S	Sb	12 18 40.2	-0.7
STRU	Stroemstad	0.89	158	P	Pg	12 18 38.6	+0.5
STRU				S	Sg	12 18 50.1	+0.5
STRU	Stroemstad	0.89	158	*e*P	Pg	12 18 38.6	+0.5
STRU				*e*S	Sg	12 18 49.5	-0.2
NAO01	NORSAR Array S	1.00	10	*e*P	Pb	12 18 41.0	-0.2
NAO01				*e*S	Sb	12 18 54.6	-0.4
NAO01				IAML		12 18 56.8	
	comp=Z,4.5nm,0.6s						
NC602	NORSAR Array S	1.01	29	*e*P	Pg	12 18 40.5	+0.1
NC602				*e*S	Sb	12 18 55.0	-0.2
NC602				IAML		12 18 58.2	
	comp=Z,2.7nm,0.5s						
FINU	Finntorp	1.09	114	P	Pg	12 18 41.6	-0.3
FINU				S	Sg	12 18 55.5	-0.5
NBO00	NORSAR Array S	1.18	6	*e*P	Pg	12 18 43.0	-0.6
NBO00				*e*S	Sg	12 18 59.0	+0.1
NBO00				IAML		12 19 01.9	
	comp=Z,4.5nm,0.3s						
SKAR	Skarslia	1.38	308	*e*P	Pb	12 18 47.8	+0.1
SKAR				*e*S	Sn	12 19 06.8	+0.2
SKAR				IAML		12 19 12.0	
	comp=Z,7.0nm,0.3s						
UDD	Uddeholm	1.56	80	P	Pn	12 18 50.0	0.0
VANU	Vaenersborg	1.59	149	P	Pn	12 18 50.5	+0.2
NASU	Vaermlandsnaes	1.65	123	P	Pn	12 18 51.4	+0.2
DOMB	Dombas	2.30	343	*e*P	Pn	12 19 01.5	+1.2
DOMB				*e*S	Sn	12 19 27.5	-1.8
DOMB				IAML		12 19 41.0	
	comp=Z,3.4nm,0.5s						

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*IDC **06** 12:21:25.2±2.1, 6°.64S×129°.95E, h147km±21km, mb3.7/3, mb1 3.7/8, mb1mx3.3/37, mbtmp4.1/8, MS2.9/1, Ms1 2.9/1, ms1mx2.4/27, Error ellipse: s-maj=22.5km s-min=13.8km az=77.0*

*NEIC **06** 12:21:26.5±2.2, 6°.54S±0°.08×129°.95E±0°.09, h154km±11km, mb4.1/8, Error ellipse: s-maj=13.4km s-min=11.0km az=133.0*

ISC 06 12:21:24.8±0.6**, 6°.58S**±0°.05×**129°.94E**±0°.07**, h146km, n47, σ1ˢ.88**/51**, mb4.0**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.94	136		Pn	12 22 01.7	+2.7
SAUI	Saumlaki	1.94	136	P	Pn	12 22 00.9	+1.9
FAKI	Fak Fak	4.30	32		Pn	12 22 29.3	+0.3
FAKI	Fak Fak	4.30	32	P	Pn	12 22 29.2	+0.3
SIJI	Sorong	5.82	13	P	Pn	12 22 50.1	+1.0
	1.9nm,0.3s,baz=232,slow=23,SNR=23						
SIJI				S	Sn	12 23 49.9	-5.1
	6.0nm,0.3s,baz=64,slow=22,SNR=13						
DRS	Darwin Rock St	5.89	171	P	Pn	12 22 51.6	+1.6
MTN	Manton Dam	6.34	169		Pn	12 22 57.7	+1.7
MTN	Manton Dam	6.34	169	P	Pn	12 22 57.7	+1.7
SOEI	Soe	6.44	240	Pn	Pn	12 23 01.3	+3.8
KDU	Kakadu	6.56	158	P	Pn	12 23 00.1	+1.1
BATI	Baumata	7.18	239	P	Pn	12 23 08.1	+0.8
	6.9nm,0.3s,baz=60,slow=1.4,SNR=5.2						
BATI				S	Sn	12 24 28.1	+0.4
	5.1nm,0.3s,baz=0.0,slow=20,SNR=3.7						
KNRA	Kununurra	9.12	187		Pn	12 23 33.8	+0.7
KNRA	Kununurra	9.12	187	P	Pn	12 23 33.6	+0.5
FITZ	Fitzroy Crossi	12.20	200	P	Pn	12 24 13.0	-0.7
	0.6nm,0.3s,baz=20,slow=13,SNR=6.4						
FITZ				S	Sn	12 26 20.5	-8.1
	0.6nm,0.3s,baz=49,slow=20,SNR=2.5						
PLAI	Plampang	12.26	259	P	Pn	12 24 15.1	+0.5
WB0	Warramunga Arr	13.81	162		Pn	12 24 33.8	-0.7
WRA	Warramunga Arr	13.96	163	P	Pn	12 24 34.7	-1.6
	1.3nm,0.3s,baz=342,slow=8.9,SNR=28						
WRA				S	Sn	12 26 58.2	-13
	1.0nm,0.3s,baz=339,slow=22,SNR=7.7						
WRA	Warramunga Arr	13.96	163		Pn	12 24 35.5	-0.9
WB2	Warramunga Arr	13.96	163		Pn	12 24 35.5	-0.9
WR0	Warramunga Arr	14.03	162		Pn	12 24 37.6	+0.3
COEN	Coen	14.94	120	P	P	12 24 51.0	+0.3
COEN	Coen	14.94	120	P	P	12 24 50.7	0.0
QIS	Mount Isa	16.76	147	P	Pn	12 25 12.0	+0.9
AS31	Alice Springs	17.41	168	P	Pn	12 25 19.8	+0.9
AS31				IAmb	IAmb	12 25 38.9	
	comp=Z,2.4nm,0.3s						
ASAR	Alice Springs	17.41	168	P	Pn	12 25 19.6	+0.7
	comp=Z,0.6nm,0.3s,baz=340,slow=8.9,SNR=23						
ASAR				S	S	12 28 28.3	-3.7
	comp=Z,0.8nm,0.3s,baz=356,slow=27,SNR=7.6						
ASAR				LR	LR	12 33 30.0	
	comp=Z,33nm,18.2s,baz=126,slow=42						
ASAR	Alice Springs	17.41	168	P	Pn	12 25 20.5	+1.6
PSA00	Pilbara Seismi	17.82	212	P	Pn	12 25 23.8	0.0
PSA00	Pilbara Seismi	17.82	212	P	Pn	12 25 23.6	-0.2
PSA00				IAmb	IAmb	12 25 25.6	
	comp=Z,4.2nm,1.1s						
PSA00	Pilbara Seismi	17.82	212	P	Pn	12 25 23.7	0.0
MANU	Manus Island	17.95	76	P	Pn	12 25 26.3	+1.0
MANU				IAmb	IAmb	12 25 28.1	
	comp=Z,6.0nm,0.8s						
CTAO	Charters Tower	20.76	132	P	P	12 25 55.2	+0.8
OOD	Oodnadatta	21.80	166	P	P	12 26 05.9	+0.7
INKA	Innaminka	23.41	155	P	P	12 26 22.1	+1.4
MULG	Mulgathing	23.90	171	P	P	12 26 26.2	+1.1
QLP	Quilpie	24.11	147	P	P	12 26 28.1	+1.0
FORT	Forrest	24.14	184	P	P	12 26 28.2	+0.9
LCRK	Leigh Creek	24.99	163	P	P	12 26 36.3	+1.3
BBOO	Buckleboo	26.72	168	P	P	12 26 51.9	+1.3
BBOO				IAmb	IAmb	12 27 04.1	
	comp=Z,11nm,1.2s						
BBOO	Buckleboo	26.72	168	P	P	12 26 51.4	+0.9
STKA	Stephens Creek	27.43	158	P	P	12 26 57.6	+0.8
	comp=Z,0.7nm,0.3s,baz=338,slow=9.6,SNR=7.5						
STKA	Stephens Creek	27.43	158	P	P	12 26 57.4	+0.5
STKA	Stephens Creek	27.43	158	P	P	12 26 57.7	+0.8
ARPS	Mount Arapiles	31.96	162	P	P	12 27 38.6	+1.7
CMAR	Chiang Mai Arr	39.42	310	P	P	12 28 41.0	+0.3
	comp=Z,1.2nm,0.7s,baz=134,slow=6.8,SNR=6.2						
MK31	Makanchi Array	67.84	327	P	P	12 32 07.9	+0.6
MK31				IAmb	IAmb	12 32 08.5	
	comp=Z,2.1nm,0.8s						
MKAR	Makanchi Array	67.84	327	P	P	12 32 08.0	+0.8
	comp=Z,2.0nm,0.5s,baz=119,slow=8.1,SNR=42						
MKAR	Makanchi Array	67.84	327	P	P	12 32 07.4	+0.2

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*SJA **06** 12:27:54.9±1.0, 23°.20S×67°.58W, h150km, ML4.7, MW4.3*

*NEIC **06** 12:27:56.0±2.7, 23°.15S±0°.05×67°.56W±0°.09, h148km±4km, mb4.6/22, ML4.9(GUC), Error ellipse: s-maj=12.1km s-min=6.1km az=105.0*

*IDC **06** 12:27:56.1±1.2, 23°.09S×67°.43W, h145km±11km, mb4.2/10, mb1 4.2/17, mb1mx4.0/29, mbtmp4.6/17, Error ellipse: s-maj=15.8km s-min=12.8km az=95.0*

*GUC **06** 12:27:57.0±0.6, 23°.14S×67°.83W, h177km±5km, ML4.9*

*VAO **06** 12:27:58.2±0.4, 23°.17S×67°.38W, h175km, mb4.5*

ISC 06 12:27:55.2±0.6**, 23°.21S**±0°.04×**67°.64W**±0°.04**, h154km**±6km**, n194, σ1ˢ.70**/250**, mb4.5**/19**, 7C-6D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.31	297	P	Pn	12 28 25.0	+1.5
	152nm,0.3s,baz=116,slow=6.9,SNR=1245						
LVC				S	Sn	12 28 45.8	+0.6
	255nm,0.3s,baz=357,slow=21,SNR=13						
LVC	Limon Verde	1.31	297	⇑*i*P	Pn	12 28 25.0	+1.5
LVC				*i* S	Sn	12 28 46.5	+1.3
LVC	Limon Verde	1.31	297		Pn	12 28 25.1	+1.5
LVC	Limon Verde	1.31	297	*e*P	Pn	12 28 24.9	+1.5
LVC				*e*S	Sn	12 28 46.5	+1.3
PB15	IPOC Station P	1.68	270	⇑*i*P	Pn	12 28 28.8	+1.6
PB15				*i* S	Sn	12 28 53.2	+1.5
PB15	IPOC Station P	1.68	270		Pn	12 28 28.8	+1.6
PB15	IPOC Station P	1.68	270	*e*P	Pn	12 28 28.7	+1.6
PB15				*e*S	Sn	12 28 53.7	+2.0
PB15				IAML		12 28 59.6	
	comp=Z,10µm,0.3s						
PB06	IPOC Station P	1.85	285	⇑*i*P	Pn	12 28 30.5	+1.5
PB06				*i* S	Sn	12 28 56.0	+1.1
PB06				IAML		12 28 57.4	
	comp=E,6µm,0.4s						
PB06	IPOC Station P	1.85	285	*e*P	Pn	12 28 30.5	+1.5
PB06				*e*S	Sn	12 28 56.6	+1.8
PB06				IAML		12 28 59.6	
	comp=Z,5µm,0.8s						
PB09	IPOC Station P	2.04	313	⇓*i*P	Pn	12 28 32.9	+1.8
PB09				*i* S	Sn	12 28 59.9	+1.1
PB09				IAML		12 29 02.7	
	comp=N,4µm,0.4s						
PB09	IPOC Station P	2.04	313	*e*P	Pn	12 28 32.9	+1.8
PB09				*e*S	Sn	12 29 01.5	+2.7
PB09				IAML		12 29 05.0	
	comp=Z,3µm,0.4s						
HJA	Humahuaca	2.06	91	*e*P	Pn	12 28 32.9	+1.3
YJA	Yavi	2.22	63	*e*P	Pn	12 28 34.8	+1.2
YJA				*e*S	Sn	12 29 03.9	+0.9
PB03	IPOC Station P	2.26	300	*e*P	Pn	12 28 34.9	+1.1
PB03				*i* S	Sn	12 29 03.4	-0.1
PB03				IAML		12 29 04.9	
	comp=N,8µm,0.4s						
PB03	IPOC Station P	2.26	300	*e*P	Pn	12 28 29.3	-4.5
PB03				*e*P	Pn	12 28 35.0	+1.2
PB03				*e*S	Sn	12 29 04.2	+0.7
PB03				*e*S	Sn	12 29 04.6	+1.0
PB03				IAML		12 29 05.5	
	comp=Z,6µm,0.3s						
PB05	IPOC Station P	2.38	278	⇑*i*P	Pn	12 28 36.0	+0.8
PB05				*i* S	Sn	12 29 05.7	-0.3
PB05	IPOC Station P	2.38	278	*e*P	Pn	12 28 36.2	+1.0
PB05				*e*S	Sn	12 29 07.1	+1.1
PB05				IAML		12 29 08.9	
	comp=Z,1µm,0.7s						
PB04	IPOC Station P	2.47	290	⇑*i*P	Pn	12 28 37.3	+1.0
PB04				*i* S	Sn	12 29 07.7	-0.3
PB04				IAML		12 29 09.9	
	comp=N,5µm,0.6s						
PB04	IPOC Station P	2.47	290	*e*P	Pn	12 28 37.0	+0.7
PB04				*e*S	Sn	12 29 09.3	+1.3
PB04				IAML		12 29 10.4	
	comp=Z,4µm,0.6s						
SLA	San Lorenzo	2.47	128	*e*P	Pn	12 28 38.6	+2.3
SLA				*e*S	Sn	12 29 07.8	-0.2
PB07	IPOC Station P	2.54	305	⇓*i*P	Pn	12 28 38.3	+1.1
PB07				IAML		12 29 11.7	
	comp=N,6µm,0.3s						
PB07	IPOC Station P	2.54	305	*e*P	Pn	12 28 38.0	+0.8
PB07				*e*S	Sn	12 29 10.2	+0.7
PB07				IAML		12 29 16.9	
	comp=Z,4µm,0.4s						
AZAP	Zapla	2.57	114	*e*P	Pn	12 28 38.0	+0.4
AZAP				*e*P	Pn	12 28 38.0	+0.4
PB10	IPOC Station P	2.69	263	⇑*i*P	Pn	12 28 39.7	+0.9
PB10				*i* S	Sn	12 29 12.1	-0.5
PB10	IPOC Station P	2.69	263	*e*P	Pn	12 28 39.8	+0.9
PB10				*e*S	Sn	12 29 14.8	+2.3
PB01	IPOC Station P	2.75	321	⇓*i*P	Pn	12 28 40.6	+1.0
PB01				*i* S	Sn	12 29 13.8	-0.2
PB01				IAML		12 29 16.7	
	comp=E,4µm,0.3s						
PB01	IPOC Station P	2.75	321	*e*P	Pn	12 28 40.0	+0.3
PB01				*e*S	Sn	12 29 14.2	+0.2
PB01				IAML		12 29 15.9	
	comp=Z,2µm,0.2s						
PB02	IPOC Station P	2.81	312	*e*P	Pn	12 28 36.8	-3.6
PB02				*e*P	Pn	12 28 41.0	+0.6
PB02				*e*S	Sn	12 29 15.3	0.0
PB02				IAML		12 29 20.9	
	comp=Z,5µm,0.3s						
PB14	IPOC Station P	2.90	240	⇑*i*P	Pn	12 28 42.4	+0.7
PB14				*i* S	Sn	12 29 17.0	-0.6
PB14	IPOC Station P	2.90	240	*e*P	Pn	12 28 36.8	-4.8
PB14				*e*P	Pn	12 28 42.9	+1.3
PB14				*e*S	Sn	12 29 11.8	-5.8
PB14				*e*S	Sn	12 29 17.7	+0.1
PB14				IAML		12 29 19.7	
	comp=Z,899nm,0.5s						
ASTB	Santa Barbara	3.02	105	*e*P	Pn	12 28 43.4	+0.3
ASTB				*e*S	Sn	12 29 18.7	-1.5
FSA	Cafayete	3.27	153	*e*P	Pn	12 28 48.0	+1.8

PB08	IPOC Station P	3.36	335	⇓iP	Pn	12 28 49.4	+1.7
PB08				i S	Sn	12 29 28.9	+0.7
PB08	IPOC Station P	3.36	335	eP	Pn	12 28 49.0	+1.4
PB08				eS	Sn	12 29 29.1	+0.8
PB08				IAML		12 29 31.1	
	comp=Z,700nm,0.6s						
ALOL	LOMAS DE OLMED	3.42	101	eP	Pn	12 28 48.0	0.0
TA01	Diego Aracena	3.53	318	⇓iP	Pn	12 28 49.0	-0.4
TA01	Diego Aracena	3.53	318		Pn	12 28 50.5	+1.1
TA01	Diego Aracena	3.53	318	eP	Pn	12 28 49.0	-0.4
TA01				eS	Sn	12 29 28.3	-3.2
TA01				IAML		12 29 37.9	
	comp=Z,1μm,0.5s						
TA02	Huaiquique	3.73	321	eP	Pn	12 28 54.0	+2.0
TA02				eS	Sn	12 29 35.6	-0.5
TA02				IAML		12 29 38.3	
	comp=Z,860nm,0.5s						
AC02	Maricunga	3.86	200	Pn	Pn	12 28 55.8	+1.6
AC02	Maricunga	3.86	200	eP	Pn	12 28 55.0	+0.9
AC02				eS	Sn	12 29 36.8	-3.1
AC02				IAML		12 29 43.3	
	comp=Z,437nm,0.9s						
PB11	IPOC Station P	3.91	331	⇓iP	Pn	12 28 54.3	-0.2
PB11				i S	Sn	12 29 38.9	-1.7
PB11	IPOC Station P	3.91	331	eP	Pn	12 28 54.6	+0.1
PB11				eS	Sn	12 29 39.0	-1.5
PB11				IAML		12 29 48.4	
	comp=Z,779nm,0.8s						
PSGCX	Pisagua	4.27	327	Pn	Pn	12 28 58.5	-0.7
PSGCX	Pisagua	4.27	327	eP	Pn	12 28 57.9	-1.2
PSGCX				eP	Pn	12 28 57.9	-1.2
PSGCX				IAML		12 29 47.9	
	comp=Z,573nm,0.3s						
PB16	IPOC Station P	5.15	340		Pn	12 29 11.4	+0.2
PB12	IPOC Station P	5.21	331	eP	Pn	12 29 09.5	-2.1
PB12				i S	Sn	12 30 05.6	-5.6
PB12	IPOC Station P	5.21	331	eP	Pn	12 29 09.6	-2.0
PB12				eS	Sn	12 30 07.6	-3.7
PB12				IAML		12 30 21.8	
	comp=Z,239nm,0.4s						
CYA	Choya	5.47	163	eP	Pn	12 29 16.0	+1.1
ACLC	CERRO LA CRUZ	6.23	174	eP	Pn	12 29 25.4	+0.4
LPAZ	La Paz	6.90	356	P	Pn	12 29 36.0	+1.5
	comp=Z,41nm,0.3s,baz=162,slow=6.9,SNR=474						
LPAZ	La Paz	6.90	356	eP	Pn	12 29 35.7	+1.2
LPAZ	La Paz	6.90	356		Pn	12 29 35.7	+1.2
APLL	PUNTA DE LOS L	7.23	172	eP	Pn	12 29 38.0	-0.3
APLL				eP	Pn	12 29 38.0	-0.3
CO05	La Serena	7.42	205		Pn	12 29 38.6	-2.2
AVFE	Valle Fertil	7.43	179	eP	Pn	12 29 41.0	+0.1
AVFE				eS	Sn	12 31 11.8	+7.7
GO04	Tololo Observa	7.49	201	Pn	Pn	12 29 40.1	-1.8
GO04	Tololo Observa	7.49	201	eP	Pn	12 29 39.5	-2.5
GO04				eS	Sn	12 31 02.2	-3.7
ACHE	Chepes	7.97	174	eP	Pn	12 29 48.0	-0.3
ACHE				eS	Sn	12 31 16.6	-0.7
CO06	Fray Jorge	8.25	205		Pn	12 29 49.0	-2.8
ZON	Zonda	8.36	186	eP	Pn	12 29 53.6	+0.3
ZON				eP	P	12 29 54.0	+0.6
ZON				eP	P	12 29 54.0	+0.6
ZON				eS	Sn	12 31 22.7	-3.7
TCA	Tanti	8.54	162	eP	Pn	12 29 55.0	-0.8
TCA				eP	Pn	12 29 55.0	-0.8
TCA				eS	Sn	12 31 28.2	-2.7
RTCV	Cerro Valdivia	8.66	185	eP	Pn	12 29 56.8	-0.5
RTCV				eP	Pn	12 29 56.8	-0.5
RTCV				eS	Sn	12 31 29.3	-4.4
RTLS	Leoncito	8.69	189	eP	Pn	12 29 57.0	-0.9
RTLS				eS	Sn	12 31 31.3	-3.3
RTLS				eS	Sn	12 31 31.3	-3.3
AUSP	Uspallata	9.12	189	eP	Pn	12 30 02.7	-0.9
AUSP				eS	Sn	12 31 41.0	-4.0
MRA	San Martin	9.34	170	eP	Pn	12 30 04.2	-2.1
MRA				eS	Sn	12 31 44.8	-5.2
ASAL	Salagasta	9.41	186	eP	Pn	12 30 06.8	-0.5
ASAL				eS	Sn	12 31 51.6	-0.1
SIV	San Ignacio	9.48	42	P	Pn	12 30 05.7	-2.6
	comp=Z,24nm,0.3s,baz=214,slow=11,SNR=98						
SIV				S	Sn	12 31 38.3	-15
	comp=Z,4.1nm,0.3s,baz=221,slow=15,SNR=4.5						
VA03	San Esteban	9.86	194		Pn	12 30 11.7	-1.7
CPUP	Villa Florida	9.88	110	P	Pn	12 30 12.1	-1.4
	comp=Z,0.2nm,0.3s,baz=298,slow=13,SNR=8.0						
CPUP	Villa Florida	9.88	110	eP	Pn	12 30 12.3	-1.1
CPUP	Villa Florida	9.88	110	Pn	Pn	12 30 13.4	-0.1
ROC1	El Roble	10.18	196	eP	Pn	12 30 15.2	-2.4
MT02	Curacav	10.48	196		Pn	12 30 18.0	-3.4
MT09	Talagante	10.93	195		Pn	12 30 24.9	-2.6
PTLB	Pontes e Lacer	11.13	48	Pn	Pn	12 30 28.7	-1.4
AQDB	Aquidauana	11.42	79	eP	Pn	12 30 32.6	-1.2
AQDB	Aquidauana	11.42	79	Pn	Pn	12 30 34.0	+0.2
BO01	Tunca	11.55	194		Pn	12 30 33.9	-1.5
ITQB	Itaqui	11.78	125	eP	Pn	12 30 37.5	-1.0
VILB	Vilhena	12.41	36	Pn	Pn	12 30 45.2	-1.5
PP1B	Ponte de Pedra	13.20	67	eP	Pn	12 30 55.5	-1.3
ETMB	Extrema	13.38	6	Pn	Pn	12 30 57.7	-1.6
SALV	Santo Antonio	13.40	59	eP	Pn	12 30 58.5	-0.9
NNA	Nana	14.18	320	P	P	12 31 11.5	-0.7
	comp=Z,0.8nm,0.3s,baz=200,slow=15,SNR=3.1						
PTGB	Pitanga	14.32	99	eP	Pn	12 31 11.6	+0.5
CPSB	Cacapava Do Su	14.56	123	eP	Pn	12 31 13.3	-0.7
SAML	Samuel	14.81	17		Pn	12 31 15.7	-1.4
PLTB	Pedras Altas	15.09	127	eP	Pn	12 31 19.8	-0.7
PCMB	Pacaembu	15.23	87	eP	Pn	12 31 22.1	-0.3
PDRB	Porto dos Gac	15.52	44	eP	Pn	12 31 26.4	+0.3
TRQA	Tornquist	15.58	163		Pn	12 31 24.8	-1.8
LC01	Cunco	16.05	192	P	P	12 31 33.9	+1.2
CZSB	Cruzeiro do Su	16.14	342	eP	P	12 31 35.3	+1.5
CZSB	Cruzeiro do Su	16.14	342		Pn	12 31 31.8	-1.7
CNLB	Canela	16.24	116	eP	Pn	12 31 32.8	-1.9
ITRB	Iturama	16.46	81	eP	P	12 31 37.2	-0.2
FRTB	Fartura	16.62	94	eP	P	12 31 38.7	-0.4
CLDB	Colider	16.68	45	eP	P	12 31 39.3	-0.4
ARAG	Araguaiana, MT	16.68	66	eP	P	12 31 39.7	-0.1
TIJ01	Guaruva-PR	17.13	101	eP	P	12 31 44.3	-0.4
TER01	Tubaro-SC	17.48	112	eP	P	12 31 46.0	-2.5
PLCA	Paso Flores	17.65	187	P	Pn	12 31 52.0	+0.5
	comp=Z,0.6nm,0.3s,baz=10,slow=14,SNR=20						
PLCA	Paso Flores	17.65	187	eP	Pn	12 31 52.7	+1.1
PLCA	Paso Flores	17.65	187	P	Pn	12 31 51.1	-0.4
BB19B	Bebedouro	17.84	87	eP	P	12 31 51.5	-1.0
LL04	Puerto Octay	18.10	192	P	P	12 31 55.7	+0.5
LL04				IAmb	IAmb	12 31 59.7	
	comp=Z,21nm,0.7s						
RCLB	Rio Claro- Sao	18.56	92	eP	P	12 31 59.8	-0.6
PET01	Itanhaem-SP	18.68	97	eP	P	12 32 00.3	-1.3
IPMB	Ipameri, GO	18.91	78	eP	P	12 32 03.5	-0.8
VAO	Valinhos	19.02	93	eP	P	12 32 04.7	-0.8
ATAH	Atahualpa	19.03	325	P	P	12 32 05.9	-0.1
	comp=Z,0.3nm,0.3s,baz=31,slow=12,SNR=2.1						
TBTG	Tabatinga, AM	19.03	353	eP	P	12 32 07.2	+1.6
TBTG	Tabatinga, AM	19.03	353	P	P	12 32 06.1	+0.6
SNDB	Serra Nova Dou	19.15	57	eP	P	12 32 06.0	-0.8
NPGB	Novo Progresso	19.94	38	eP	P	12 32 14.5	-0.9
BDFB	Brasilia	19.97	71	P	P	12 32 15.7	-0.1
	comp=Z,4.2nm,0.3s,baz=252,slow=11,SNR=65						
BDFB	Brasilia	19.97	71	P	P	12 32 15.2	-0.6
PARB	Paraibuna	20.23	95	eP	P	12 32 17.8	-0.7
MACA	Manacapuru-AM	21.03	20	eP	P	12 32 26.1	-0.9
BSCB	Bom Sucesso	21.30	88	eP	P	12 32 28.6	-1.3
PEXB	Peixe	21.45	62	eP	P	12 32 30.3	-1.3
MAN01	Angra dos Reis	21.79	94	eP	P	12 32 35.1	0.0
ITTB	Itaituba	21.98	33	eP	P	12 32 36.0	-1.1
VAS01	Vassouras-RJ	22.34	92	eP	P	12 32 40.6	+0.1
DIAM	Diamantina, MG	22.93	82	eP	P	12 32 44.3	-2.0
DUB01	Friburgo-RJ	23.34	92	eP	P	12 32 49.9	+0.1
JANB	Januaria	23.46	74	eP	P	12 32 49.3	-1.7
PTGA	Pitinga	23.55	20	P	P	12 32 51.3	-0.4
	comp=Z,3.7nm,0.5s,baz=207,slow=13,SNR=11						
SMTB	Santa Maria do	23.93	57	eP	P	12 32 55.6	+0.4
CAM01	Campos-RJ	24.04	92	eP	P	12 32 55.8	-0.3
PRPB	Parauapebas	24.12	48	eP	P	12 32 55.8	-1.2
SDBA	SAO DESIDERIO	24.13	67	eP	P	12 32 55.6	-1.5
MALB	Monte Alegre	24.88	33	eP	P	12 33 03.1	-0.7
ALF01	Guarapari-ES	25.09	89	eP	P	12 33 04.8	-1.0
SJMB	Sao Joao De Ma	25.10	85	eP	P	12 33 05.3	-0.5
BSFB	Barra de Sao F	25.37	85	eP	P	12 33 07.4	-0.8
OTAV	Otavalo	25.56	334	eP	P	12 33 13.6	+3.1
RIB01	Linhares ES	25.67	86	eP	P	12 33 10.4	-0.6
BOAV	Boa Vista	26.38	16	eP	P	12 33 18.6	+1.3
BOAV	Boa Vista	26.38	16	P	P	12 33 18.2	+0.9
GUA01	Guaratinga, BA	26.96	81	eP	P	12 33 21.7	-0.9
MCPB	Macapa, AP	27.30	36	eP	P	12 33 25.2	-0.4
CMC01	Camacan, BA	27.63	79	eP	P	12 33 26.9	-1.6
NBIT	Itapeh - BA	27.86	78	eP	P	12 33 28.7	-1.9
GDU01	Guandu, BA	28.20	75	eP	P	12 33 31.3	-2.3
NBPN	Ponto Novo - B	28.91	69	eP	P	12 33 38.2	-1.7
ROSB	Rosrio	30.43	52	eP	P	12 33 51.7	-1.6
NBLA	Lagarto - SE	30.94	72	eP	P	12 33 56.7	-1.1
NBPS	Pedro II - PI	31.46	57	eP	P	12 34 02.4	-0.1
MDP	Montagnes des	31.72	29	P	P	12 34 04.1	-0.5
	comp=Z,7.9nm,0.6s,baz=205,slow=12,SNR=10						
NBMA	Muriti-CE	31.90	65	eP	P	12 34 05.0	-1.2
BAUV	El Baul	31.95	359	P	P	12 34 03.4	-3.2
BAUV				IAmb	IAmb	12 34 07.3	
	comp=Z,13nm,0.7s						
NBPB	Pedra_Branca-C	32.25	61	eP	P	12 34 08.1	-1.2
NBAN	Anadia - AL	32.87	71	eP	P	12 34 13.2	-1.5
NBLV	Livramento - P	33.45	67	eP	P	12 34 18.0	-1.8
NBPA	Parau_RN	34.15	64	eP	P	12 34 24.8	-1.0
NBRF	Rio Formoso -	34.33	70	eP	P	12 34 25.2	-2.2
NBPV	Pedro Velho	35.32	67	eP	P	12 34 34.9	-1.0
061Z	Ochoppi	50.44	344	P	P	12 36 38.7	+1.6
SNAA	Sanae	60.29	161	P	P	12 37 48.8	+1.7
SNAA	Sanae	60.29	161	P	P	12 37 48.7	+1.5
	comp=Z,1.8nm,0.6s,baz=253,slow=8.5,SNR=12						
SNAA	Sanae	60.29	161	P	P	12 37 48.9	+1.7
SNAA				IAmb	IAmb	12 38 15.0	
	comp=Z,5.4nm,1.2s						
TKL	Tuckaleechee C	60.50	345	P	P	12 37 49.9	+1.0
TKL				IAmb	IAmb	12 37 58.5	
	comp=Z,8.0nm,1.1s						
S39A	Bolivar	65.21	338	P	P	12 38 21.1	+1.1
S39A				IAmb	IAmb	12 38 22.7	
	comp=Z,7.2nm,1.4s						
QSPA	South Pole Qui	67.00	180	P	P	12 38 34.1	+2.8
	comp=Z,1.5nm,0.6s,baz=317,slow=1.2,SNR=16						
QSPA	South Pole Qui	67.00	180	P	P	12 38 33.6	+2.4
LIC	Lamto	67.76	73	eP	P	12 38 36.2	-0.5
	comp=Z,8.6nm,0.6s						
TIC	Toumodi	67.96	72	eP	P	12 38 38.1	+0.1
KIC	Kosan Boka	68.07	73	eP	P	12 38 38.2	-0.5
	comp=Z,9.7nm,0.5s						
DBIC	Dimbokro	68.12	72	P	P	12 38 38.8	-0.1
	comp=Z,3.9nm,0.6s,baz=248,slow=5.3,SNR=10						
DBIC	Dimbokro	68.12	72	P	P	12 38 38.2	-0.8
DBIC				IAmb	IAmb	12 38 40.4	
	comp=Z,5.8nm,0.8s						
I42A	Draeger Farm,	69.56	344	P	P	12 38 47.8	+0.6
I42A				IAmb	IAmb	12 38 49.0	
	comp=Z,9.8nm,0.9s						
KOWA	Kowa	72.64	65	P	P	12 39 06.9	+0.5
KOWA				IAmb	IAmb	12 39 07.9	
	comp=Z,16nm,0.7s						
PDAR	Pinedale Array	76.17	330	P	P	12 39 29.0	+2.5
	comp=Z,0.2nm,0.5s,baz=134,slow=3.9,SNR=2.0						
SUR	Sutherland	76.72	120	P	P	12 39 32.3	+2.4
	comp=Z,5.0nm,0.8s,baz=226,slow=6.8,SNR=12						
SUR	Sutherland	76.72	120	P	P	12 39 31.9	+2.0
SUR				IAmb	IAmb	12 39 48.3	
	comp=Z,35nm,1.5s						
TORD	Torodi Ar. Bea	76.84	69	P	P	12 39 31.0	+0.5
	comp=Z,19nm,0.6s,baz=256,slow=5.4,SNR=128						
TORD	Torodi Ar. Bea	76.84	69	P	P	12 39 30.9	+0.3
TORD				IAmb	IAmb	12 39 32.0	
	comp=Z,19nm,0.8s						
BOZ	Bozeman (W)	79.29	330	P	P	12 39 40.0	-3.6
BOZ				IAmb	IAmb	12 39 40.9	
	comp=Z,6.5nm,0.8s						
BOSA	Boshof	81.62	117	P	P	12 39 58.1	+1.6
	comp=Z,3.0nm,0.5s,baz=259,slow=3.2,SNR=12						
BOSA	Boshof	81.62	117	P	P	12 39 57.5	+0.9
LBTB	Lobatse	83.25	114	P	P	12 40 06.5	+1.5
	comp=Z,3.8nm,0.7s,baz=241,slow=3.7,SNR=7.6						
LBTB	Lobatse	83.25	114	P	P	12 40 06.3	+1.3
LBTB				IAmb	IAmb	12 40 07.5	
	comp=Z,6.0nm,0.8s						
YKA	Yellowknife Ar	93.18	340	P	P	12 40 53.8	+2.4
	comp=Z,0.7nm,0.6s,baz=135,slow=4.4,SNR=12						
ASAR	Alice Springs	128.92	206	PKP	PKiKP	12 46 46.9	+0.9
	comp=Z,0.4nm,0.7s,baz=125,slow=1.7,SNR=6.5						
ASAR	Alice Springs	128.92	206		PKiKP	12 46 46.3	+0.3
WRA	Warramunga Arr	132.05	208	PKP	PKiKP	12 46 52.8	+0.5
	comp=Z,0.3nm,0.5s,baz=162,slow=1.6,SNR=8.3						
WRA	Warramunga Arr	132.05	208		PKiKP	12 46 52.4	0.0
ZALV	Zalesovo Beam	142.96	27	PKhKP	PKPpre	12 47 07.8	
	comp=Z,0.8nm,0.4s,baz=314,slow=3.6,SNR=4.6						
ZALV	Zalesovo Beam	142.96	27		PKPdf	12 47 09.5	-0.7
KSH	Kashi	145.21	54	PKPbc	PKPab	12 47 16.1	+1.1
KSH				pPKP	pPKPdf	12 47 58.8	+1.7
MKAR	Makanchi Array	146.28	38	PKPbc	PKPab	12 47 18.6	-0.1
	comp=Z,1.5nm,0.7s,baz=310,slow=3.4,SNR=12						
MKAR	Makanchi Array	146.28	38		PKPab	12 47 19.4	+0.7

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*DJA **06** 13:41:36.8±0.5, 6°N±4°×12°6E±°, h160km±5km, M4.3/10, mb4.1/7, mB4.7/3, MLv4.4/10, Mw(mB)3.9/3*
*NEIC **06** 13:41:38.4±2.4, 6°.20N±0°.08×126°.3E±0°.1, h145km±1km, mb4.4/23, Error ellipse: s-maj=19.0km s-min=10.0km az=71.0*
*IDC **06** 13:41:38.5±0.8, 6°.18N×126°.20E, h151km±6km, mb3.6/10, mb1 3.7/13, mb1mx3.5/37, mbtmp4.1/13, MS3.1/1, Ms1 3.1/1, ms1mx2.6/22, Error ellipse: s-maj=33.4km s-min=10.4km az=76.0*
*MAN **06** 13:41:39.1, 6°.27N×126°.17E, h132km, mb4.9, ML3.9, MS3.9*
ISC 06 13:41:37.5±0.6**, 6°.11N**±0°.04×**126°.16E**±0°.07**, h142**km±6km**, n68,** σ1^{s}46/81**, mb4.0**/16**, 3C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.45	270	⇓eP	Pn	13 41 58.4	+0.8
DDMP				i S	Sn	13 42 10.7	-2.1
MATI	Mati	0.84	6	⇓eP	Pn	13 42 00.6	+0.5
MATI				eS	Sn	13 42 17.1	-0.3
DAV	Davao City (W)	1.12	329	P	Pn	13 42 04.0	+1.4
	99nm,0.3s,baz=117,slow=0.9,SNR=14						
DAV				S	Sn	13 42 23.9	+2.3
	194nm,0.3s,baz=304,slow=22,SNR=31						
DAV				LR	LR	13 42 34.8	
	comp=Z,106nm,18.0s,baz=184,slow=52						
DAV	Davao City (W)	1.12	329		Pn	13 42 03.6	+1.1
DAV				Sn	Sn	13 42 22.5	+0.8
GSPH	General Santos	1.21	269	⇑eP	Pn	13 42 03.6	+0.1
GSPH				eS	Sn	13 42 20.3	-3.0
KCP	Kidapawan	1.39	310	⇑eP	Pn	13 42 06.0	+0.7
KCP				i S	Sn	13 42 26.3	-0.3
BIPH	Bislig	2.07	5	⇑iP	Pn	13 42 17.9	+4.9
BIPH				i S	Sn	13 42 43.3	+3.1
SGSI	Sangihe	2.49	195	P	Pn	13 42 19.4	+1.3
SGSI				S	Sn	13 42 52.1	+2.8
PAGZ	Pagadian	3.26	302	eP	Pn	13 42 28.6	+0.8
PAGZ				eS	Sn	13 42 29.3	-37
GLSP	General Luna,	3.65	359	⇓iP	Pn	13 42 33.5	+0.6
GLSP				eS	Sn	13 43 18.9	+2.9
MSLP	Maasin	4.20	342	eP	Pn	13 42 40.1	-0.1
MSLP				eS	Sn	13 43 25.0	-4.0
CNOP	Candoni, Negro	5.08	317	eP	Pn	13 42 51.9	+0.1
TNTI	Ternate	5.44	167	P	Pn	13 42 55.8	-0.8
	0.3nm946nm28nm,0.4s						
TNTI	Ternate	5.44	167		Pn	13 42 56.8	+0.2
TNTI	Ternate	5.44	167	P	Pn	13 42 57.2	+0.6
GTOI	Gorontalo	6.28	210	P	Pn	13 43 08.3	+0.4
	0.1nm220nm21nm,0.6s						
LBMI	Labuha	6.83	169	P	Pn	13 43 15.7	+0.4
	0.2nm14nm,0.7s						
TOLI2	Tolitoli	7.31	227	Pn	Pn	13 43 23.0	+1.3
TOLI2	Tolitoli	7.31	227	P	Pn	13 43 22.9	+1.2
MYLDM	Lahad Datu	7.68	263		Pn	13 43 29.5	+2.9
SANI	Sanana	8.11	181	P	Pn	13 43 30.1	-2.3
	3μm21nm,0.5s						
SANI	Sanana	8.11	181	P	Pn	13 43 30.7	-1.7
SWI	Sorong	8.59	144	P	Pn	13 43 38.3	-0.6
	14nm,0.6s						
SIJI	Sorong	8.60	144	P	Pn	13 43 39.1	+0.1
	1.8nm,0.3s,baz=326,slow=19,SNR=8.8						
SIJI				S	Sn	13 45 10.8	-3.8
	0.4nm,0.3s,baz=156,slow=20,SNR=2.1						
KAPI	Kappang	12.77	210	P	Pn	13 44 36.5	+2.4
	1.1nm,0.3s,baz=110,slow=19,SNR=3.6						
KAPI	Kappang	12.77	210	Pn	Pn	13 44 37.1	+3.0
SBUM	Sibu	14.37	256	P	P	13 44 57.9	+0.5
SOEI	Soe	15.87	187		P	13 45 15.1	+1.0
SOEI				IAmb	IAmb	13 45 36.3	
	comp=Z,14nm,0.9s						
BATI	Baumata	16.40	189	P	P	13 45 22.2	+2.4
	comp=Z,3.3nm,0.3s,baz=16,slow=3.0,SNR=3.7						
KSM	Kuching	16.47	254	P	P	13 45 23.4	+2.7
KSM				IAmb	IAmb	13 45 47.9	
	comp=Z,29nm,1.2s						
PLAI	Plampang	17.03	209	P	P	13 45 26.0	-0.8
TWG	Pinlang	17.33	344	P	P	13 45 29.2	-0.8
TWG				IAmb	IAmb	13 45 31.2	
	comp=Z,38nm,1.0s						
TPUB	Ta-pu	17.91	343	P	P	13 45 35.6	-0.8
TPUB				IAmb	IAmb	13 45 37.3	
	comp=Z,44nm,1.2s						
SSLB	Suanglung	18.28	345	P	P	13 45 40.1	-0.4
SSLB				IAmb	IAmb	13 45 40.3	
	comp=Z,59nm,1.5s						
JAGI	Jajag, Banyuwa	18.79	220	P	Pn	13 45 47.6	-0.7
JAGI				IAmb	IAmb	13 45 54.4	
	comp=Z,30nm,1.5s						
YHNB	Yeheng	19.02	347	P	P	13 45 48.5	-0.1
MTN	Manton Dam	19.46	165	P	Pn	13 45 55.3	-0.7
MTN	Manton Dam	19.46	165	P	Pn	13 45 55.7	-0.4
KDU	Kakadu	19.70	161	P	P	13 45 57.4	+1.5
KNRA	Kununurra	21.80	173	P	P	13 46 19.5	+1.1
KNRA				IAmb	IAmb	13 46 26.8	
	comp=Z,6.8nm,0.5s						
FITZ	Fitzroy Crossi	24.06	181	P	P	13 46 40.8	+1.0
	comp=Z,1.5nm,0.4s,baz=6.9,slow=9.7,SNR=14						
WB0	Warramunga Arr	26.96	163	P	P	13 47 06.3	+0.3
WB0				IAmb	IAmb	13 47 19.2	
	comp=Z,6.3nm,1.5s						
WRA	Warramunga Arr	27.11	163	P	P	13 47 07.9	+0.6
	comp=Z,0.3nm,0.4s,baz=344,slow=9.5,SNR=6.7						
WRA	Warramunga Arr	27.11	163	P	P	13 47 06.3	-1.0
WB2	Warramunga Arr	27.11	163	P	P	13 47 06.0	-1.3
WB2				IAmb	IAmb	13 47 14.9	
	comp=Z,5.7nm,1.4s						
AS31	Alice Springs	30.54	166	P	P	13 47 38.4	+0.7
ASAR	Alice Springs	30.54	166	P	P	13 47 38.4	+0.7
	comp=Z,0.7nm,0.4s,baz=342,slow=7.1,SNR=36						
ASAR				PcP	PcP	13 50 33.6	+0.3
	comp=Z,0.3nm,0.4s,baz=347,slow=2.4,SNR=4.2						
KSRS	Korea Array	31.24	3	P	P	13 47 44.4	+0.8
	comp=Z,0.9nm,0.5s,baz=186,slow=9.5,SNR=5.5						
KSRS				LR	LR	14 01 28.4	
	comp=Z,34nm,18.7s,baz=356,slow=38						
FORT	Forrest	36.72	177	P	P	13 48 32.4	+1.3
SONM	Songino Array	44.88	341	P	P	13 49 37.8	-0.1
	comp=Z,0.2nm,0.4s,baz=161,slow=9.2,SNR=2.1						
SONM				PcP	PcP	13 51 17.4	+0.4
	comp=Z,0.7nm,0.7s,baz=208,slow=1.1,SNR=3.6						
MK31	Makanchi Array	55.30	325	P	P	13 50 55.4	-0.9
MKAR	Makanchi Array	55.30	325	P	P	13 50 55.4	-0.9
	comp=Z,0.6nm,0.4s,baz=117,slow=7.5,SNR=28						
MKAR				PcP	PcP	13 51 54.9	-0.4
	comp=Z,0.4nm,0.5s,baz=182,slow=3.6,SNR=5.4						
GAR	Garm	59.92	312	P	P	13 51 27.8	-1.1
KKAR	Karatay Array	61.12	316	P	P	13 51 36.5	-0.4
BRVK	Borovoye	65.11	327	P	P	13 52 02.0	-0.9
BRVK				IAmb	IAmb	13 52 03.5	
	comp=Z,2.1nm,0.8s						
TIXI	Tiksi	65.49	1	P	P	13 52 05.0	0.0
NRIK	Noril'sk	68.00	346	P	P	13 52 21.1	+0.1
	comp=Z,2.6nm,0.5s,baz=133,slow=5.2,SNR=4.7						
NRIK	Noril'sk	68.00	346	P	P	13 52 21.6	+0.6
NRIK				IAmb	IAmb	13 52 21.7	
	comp=Z,3.1nm,0.6s						
GEYT	Alibeck	68.98	308	P	P	13 52 29.1	+1.3
UOSS	Minazif	69.29	294	P	P	13 52 30.8	+0.9
UOSS				IAmb	IAmb	13 52 47.5	
	comp=Z,8.2nm,1.2s						
ABKAR	Akbulak array	69.97	320	P	P	13 52 32.2	-1.3
ARU	Arti	72.64	327	P	P	13 52 48.3	-1.1
ARU				IAmb	IAmb	13 53 05.5	
	comp=Z,9.5nm,1.5s						
SII	Sitkinak Islan	79.23	34	P	P	13 53 24.9	-1.9
ILAR	Eielson Array	83.21	26	P	P	13 53 47.1	-0.6
	comp=Z,1.0nm,0.8s,baz=244,slow=5.1,SNR=14						
ILAR	Eielson Array	83.21	26	P	P	13 53 46.6	-1.1
ARCES	ARCESS Array B	88.04	340	P	P	13 54 10.7	-0.7
	comp=Z,1.9nm,0.7s,baz=64,slow=5.5,SNR=8.9						
ARCES	ARCESS Array B	88.04	340	P	P	13 54 10.2	-1.2
FINES	FINESS Array B	89.48	332	P	P	13 54 17.2	-1.1
	comp=Z,5.1nm,0.9s,baz=142,slow=7.0,SNR=4.7						

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*IDC **06** 13:49:42.8±1.2, 9°.82S×71°.11W, h650km±21km, mb3.1/7, mb1 3.5/12, mb1mx3.2/28, mbtmp4.2/12, Error ellipse: s-maj=31.5km s-min=17.8km az=65.0*
*NEIC **06** 13:49:42.5±1.6, 9°.8S±0°.1×71°.2W±0°.1, h638km±9km, mb4.2/145, Error ellipse: s-maj=20.1km s-min=14.6km az=65.0*
ISC 06 13:49:42.6±0.5**, 9°.88S**±0°.07×**71°.2W**±0°.1**, h650**km**, n195,** σ0^{s}91/197**, mb4.2**/75**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	2.59	325	P	P	13 51 03.5	-0.5
CZSB				S	S	13 52 07.4	-2.7
ETMB	Extrema	4.94	90	P	P	13 51 18.2	-0.1
TBTG	Tabatinga, AM	5.80	13	P	P	13 51 25.3	+0.3
NNA	Nana	5.90	249	P	P	13 51 26.5	+0.8
	1.9nm,0.3s,baz=19,slow=6.0,SNR=3.6						
NNA	Nana	5.90	249	P	P	13 51 25.8	+0.1
LPAZ	La Paz	7.05	155	P	P	13 51 36.0	+0.1
	2.7nm,0.3s,baz=335,slow=6.8,SNR=70						
LPAZ				S	S	13 53 08.1	-0.4
	baz=207,slow=24,SNR=1.1						
LPAZ	La Paz	7.05	155	eP	P	13 51 34.0	-1.9
LPAZ	La Paz	7.05	155	P	P	13 51 35.8	-0.1
SAML	Samuel	7.99	84	P	P	13 51 43.2	-0.4
PB16	IPOC Station P	8.57	169	P	P	13 51 48.3	-1.2
PB12	IPOC Station P	8.73	174	P	P	13 51 48.6	-1.8
PSGCX	Pisagua	9.72	174	P	P	13 51 58.4	-1.4
PB11	IPOC Station P	9.94	171	P	P	13 52 00.9	-1.1
PB08	IPOC Station P	10.40	169	P	P	13 52 06.0	-0.6
TA01	Diego Aracena	10.67	175	P	P	13 52 08.0	-0.8
PB01	IPOC Station P	11.22	172	P	P	13 52 13.6	-0.6
SIV	San Ignacio	11.61	123	P	P	13 52 17.8	+0.1
	2.6nm,0.3s,baz=289,slow=9.3,SNR=32						
PB07	IPOC Station P	11.85	174	P	P	13 52 19.7	-0.4
PB09	IPOC Station P	12.00	171	P	P	13 52 21.6	+0.2
MACA	Manacapuru-AM	12.41	58	P	P	13 52 25.1	-0.1
PB04	IPOC Station P	12.43	175	P	P	13 52 25.6	+0.3
LVC	Limon Verde	12.85	170	P	P	13 52 30.7	+1.3
	1.5nm,0.3s,baz=55,slow=7.3,SNR=6.2						
LVC	Limon Verde	12.85	170	P	P	13 52 30.2	+0.7
PB06	IPOC Station P	12.85	173	P	P	13 52 29.3	+0.1
POPC	Popayan, Colom	13.48	336	eP	P	13 52 37.3	+2.0
PB10	IPOC Station P	13.57	177	P	P	13 52 35.7	0.0
PRAC	Prado	13.99	345	eP	P	13 52 40.1	+0.4
ORTC	Ortega, Tolima	14.27	344	eP	P	13 52 43.0	+0.7
PTGA	Pitinga	14.42	52	P	P	13 52 44.7	+1.0
	3.5nm,0.3s,baz=234,slow=12,SNR=46						
YOTC	Yotoco, Valle	14.69	339	eP	P	13 52 42.0	-4.2
PLMC	San Jos del P	15.53	341	eP	P	13 52 53.5	-0.3
GUY2C	Guyana, Caldas	15.56	344	eP	P	13 52 53.5	-1.1
NORC	Norcasia	15.77	347	eP	P	13 52 56.4	+0.4
RUSC	La Rusia	15.78	353	eP	P	13 52 58.3	+1.7
BOAV	Boa Vista	16.20	42	P	P	13 53 00.5	+0.6
BOAV				IAmb	IAmb	13 53 02.9	
	comp=Z,9.5nm,0.7s						
CBOC	Ciudad Bolivar	16.35	343	eP	P	13 53 03.1	+1.6
HELC	Santa Helena	16.53	345	eP	P	13 53 04.1	+0.7
PTBC	PUERTO BERRIO,	16.63	349	eP	P	13 53 02.2	-1.7
PAMC	Pamplona, Colo	17.17	355	eP	P	13 53 09.8	+0.6
ZARC	Zaragoza, Cauc	17.63	348	eP	P	13 53 12.7	-0.3
ZARC	Zaragoza, Cauc	17.63	348	P	P	13 53 12.8	-0.2
SMLC	San Martn de	18.77	351	eP	P	13 53 21.4	-1.9
SJCC	San Jacinto, C	20.04	349	P	P	13 53 35.0	+0.2
SJCC				IAmb	IAmb	13 53 38.8	
	comp=Z,14nm,1.0s						
CRPR	Cabo Rojo, PR	28.00	8	P	P	13 54 44.2	-0.5
CELP	Cerrillos	28.15	9	P	P	13 54 45.4	-0.6
LC01	Cunco	28.90	181	P	P	13 54 52.7	+0.5
LC01				IAmb	IAmb	13 55 13.1	
	comp=Z,5.5nm,1.1s						
PLCA	Paso Flores	30.73	179	P	P	13 55 08.8	+0.9
	comp=Z,1.5nm,0.5s,baz=343,slow=6.5,SNR=7.5						
PLCA	Paso Flores	30.73	179	P	P	13 55 08.6	+0.7
PLCA				IAmb	IAmb	13 55 13.0	
	comp=Z,5.0nm,1.1s						
Y58A	Scranton	44.28	350	P	P	13 56 57.4	+0.2

GOGA	Godfrey	44.60	345	P	P	13 57 00.1	+0.4
X58A	Rowland	44.86	350	P	P	13 57 01.4	-0.2
JSC	Jenkinsville	44.94	348	P	P	13 57 02.1	-0.1
HODGE	Hodges	45.10	347	P	P	13 57 03.8	+0.3
HODGE				IAmb	IAmb	13 57 22.1	
	comp=Z,11nm,1.2s						
BIRD	Birdtown, Kers	45.14	349	P	P	13 57 04.2	+0.5
W57A	Gilead	45.55	350	P	P	13 57 06.2	-0.6
Z47A	Carrollton	45.75	340	P	P	13 57 07.7	-0.6
Y49A	Blount Mountai	45.83	342	P	P	13 57 08.4	-0.6
V58A	Windy Hill, Pi	46.03	351	P	P	13 57 10.2	-0.3
V55A	Taylorsville	46.45	349	P	P	13 57 13.7	0.0
143A	Socs Landing,	46.52	336	P	P	13 57 14.1	-0.1
143A				IAmb	IAmb	13 57 26.6	
	comp=Z,11nm,1.0s						
X48A	Hartselle	46.57	342	P	P	13 57 13.9	-0.6
X48A				IAmb	IAmb	13 57 14.7	
	comp=Z,4.4nm,0.7s						
W50A	Signal Mountai	46.77	344	P	P	13 57 15.6	-0.5
W50A				IAmb	IAmb	13 57 16.1	
	comp=Z,17nm,1.2s						
TKL	Tuckaleechee C	46.82	346	P	P	13 57 15.8	-0.6
V52A	Sevierville	46.95	346	P	P	13 57 16.8	-0.6
V52A				IAmb	IAmb	13 57 19.8	
	comp=Z,12nm,1.2s						
SWET	Sewanee	46.96	343	P	P	13 57 17.0	-0.5
SWET				IAmb	IAmb	13 57 37.5	
	comp=Z,18nm,1.4s						
T59A	Double "B" Far	46.98	353	P	P	13 57 17.5	-0.1
T59A				IAmb	IAmb	13 57 46.0	
	comp=Z,20nm,1.4s						
U54A	Nelsons Funny	47.22	348	P	P	13 57 19.8	+0.4
TZTN	Tazewell	47.61	347	P	P	13 57 21.6	-0.7
435B	Jarrell	47.70	329	P	P	13 57 22.6	-0.4
435B				IAmb	IAmb	13 57 33.5	
	comp=Z,7.2nm,0.5s						
V48A	Smith Brothers	47.70	343	P	P	13 57 22.5	-0.5
V48A				IAmb	IAmb	13 57 22.7	
	comp=Z,4.8nm,0.8s						
S57A	Dark Hollow, R	47.94	352	P	P	13 57 25.3	+0.6
U49A	Red Boiling Sp	48.14	344	P	P	13 57 25.4	-0.8
U49A				IAmb	IAmb	13 57 42.4	
	comp=Z,7.3nm,1.2s						
S54A	Dingess, Beckl	48.36	349	P	P	13 57 27.8	0.0
WVT	Waverly	48.37	342	P	P	13 57 27.2	-0.7
WVT				IAmb	IAmb	13 57 27.5	
	comp=Z,9.9nm,1.1s						
T50A	Nancy	48.37	345	P	P	13 57 27.1	-0.8
T50A				IAmb	IAmb	13 57 54.9	
	comp=Z,11nm,1.3s						
T47A	Sharon Grove	48.95	343	P	P	13 57 30.3	-1.8
T47A				IAmb	IAmb	13 57 32.1	
	comp=Z,7.9nm,0.7s						
R53A	Hurricane	48.99	349	P	P	13 57 32.3	-0.1
R53A				IAmb	IAmb	13 57 57.4	
	comp=Z,9.7nm,1.0s						
MIAR	Mount Ida	49.00	335	P	P	13 57 32.1	-0.5
MIAR				IAmb	IAmb	13 57 35.7	
	comp=Z,8.2nm,1.3s						
WHAR	Wooly Hollow	49.14	337	P	P	13 57 33.0	-0.5
WHAR				IAmb	IAmb	13 57 37.4	
	comp=Z,12nm,1.4s						
HICK	Hickman	49.18	341	P	P	13 57 33.1	-0.7
Q56A	Snyder Ridge,	49.23	352	P	P	13 57 34.7	+0.5
Q56A				IAmb	IAmb	13 57 53.4	
	comp=Z,11nm,1.1s						
LCAR	Lake Charles	49.41	339	P	P	13 57 34.6	-0.9
LCAR				IAmb	IAmb	13 57 37.3	
	comp=Z,13nm,1.5s						
Q54A	Coxs Mills	49.43	350	P	P	13 57 35.6	0.0
Q54A				IAmb	IAmb	13 57 48.8	
	comp=Z,15nm,1.5s						
Z35A	Perchaven, San	49.60	331	P	P	13 57 37.7	+0.7
Z35A				IAmb	IAmb	13 57 38.8	
	comp=Z,11nm,1.1s						
FCAR	Ozark Folk Cen	49.61	338	P	P	13 57 36.4	-0.6
FCAR				IAmb	IAmb	13 57 36.7	
	comp=Z,5.6nm,0.5s						
W39A	Magazine	49.65	336	P	P	13 57 37.7	+0.4
W39A				IAmb	IAmb	13 57 38.7	
	comp=Z,20nm,1.4s						
WUPA	West Chester U	49.73	356	P	P	13 57 37.5	-0.2
PBMO	Poplar Bluff	49.80	340	P	P	13 57 37.6	-0.7
PBMO				IAmb	IAmb	13 57 39.1	
	comp=Z,22nm,1.4s						
MVL	Millersville	49.85	355	P	P	13 57 38.7	+0.1
MVL				IAmb	IAmb	13 57 55.2	
	comp=Z,15nm,1.4s						
WCI	Wyandotte Cave	49.89	344	P	P	13 57 37.5	-1.4
WCI				IAmb	IAmb	13 57 43.5	
	comp=Z,7.7nm,1.0s						
TX31	Lajitas Ar. Si	49.98	322	P	P	13 57 40.4	+0.5
TX31				IAmb	IAmb	13 57 46.3	
	comp=Z,8.1nm,1.4s						
TXAR	Lajitas Array	49.98	322	P	P	13 57 40.5	+0.6
	comp=Z,0.6nm,0.7s,baz=123,slow=14,SNR=5.0						
P53A	Whipple	50.01	350	P	P	13 57 39.8	-0.1
P53A				IAmb	IAmb	13 57 40.8	
	comp=Z,9.7nm,0.7s						
ABTX	Abilene, Hawle	50.22	328	P	P	13 57 42.0	+0.5
ABTX				IAmb	IAmb	13 57 42.5	
	comp=Z,5.6nm,0.5s						
S44A	Carbondale	50.25	341	P	P	13 57 41.2	-0.3
SIUC	Southern Illin	50.25	341	P	P	13 57 41.1	-0.5
P52A	Corning	50.29	349	P	P	13 57 41.1	-0.7
P52A				IAmb	IAmb	13 58 05.5	
	comp=Z,24nm,1.5s						
U40A	Yellville	50.30	337	P	P	13 57 41.0	-1.0
U40A				IAmb	IAmb	13 57 42.5	
	comp=Z,5.4nm,0.6s						
HHAR	Hobbs	50.66	336	P	P	13 57 44.1	-0.5
HHAR				IAmb	IAmb	13 57 45.3	
	comp=Z,11nm,1.4s						
O53A	New Philadelph	50.73	350	P	P	13 57 44.9	0.0
O53A				IAmb	IAmb	13 57 48.1	
	comp=Z,17nm,1.4s						
P49A	Miami Univ. Ec	50.73	347	P	P	13 57 43.8	-1.2
P49A				IAmb	IAmb	13 57 44.5	
	comp=Z,11nm,1.0s						
MGMO	Mountain Grove	50.78	338	P	P	13 57 45.0	-0.5
MGMO				IAmb	IAmb	13 57 45.8	
	comp=Z,5.8nm,0.7s						
P48A	Milroy	50.83	346	P	P	13 57 44.1	-1.6
P48A				IAmb	IAmb	13 57 51.0	
	comp=Z,14nm,1.4s						
BLO	Bloomington	50.83	345	P	P	13 57 44.9	-0.9
BLO				IAmb	IAmb	13 57 45.5	
	comp=Z,9.4nm,0.8s						
FVM	French Village	50.89	340	P	P	13 57 45.7	-0.5
CCM	Cathedral Cave	51.23	340	P	P	13 57 48.3	-0.3
FNO	Franklin	51.26	332	P	P	13 57 49.4	+0.5
FNO				IAmb	IAmb	13 57 49.7	
	comp=Z,11nm,0.6s						
Q44A	Meyer Farm, Va	51.28	342	P	P	13 57 47.9	-1.1
Q44A				IAmb	IAmb	13 57 48.5	
	comp=Z,8.7nm,0.7s						
KSPA	Keystone Colle	51.35	356	P	P	13 57 49.3	-0.1
KSPA				IAmb	IAmb	13 57 50.5	
	comp=Z,25nm,1.4s						
OK034	N. Norfolk Rd.	51.58	334	P	P	13 57 51.7	+0.5
OK034				IAmb	IAmb	13 57 52.0	
	comp=Z,9.3nm,0.6s						
OK031	S. Brethren Rd	51.59	333	P	P	13 57 50.7	-0.6
OK031				IAmb	IAmb	13 57 52.0	
	comp=Z,11nm,0.8s						
S39A	Bolivar	51.65	338	P	P	13 57 51.0	-0.6
S39A				IAmb	IAmb	13 57 51.7	
	comp=Z,5.6nm,0.7s						
M54A	Oil Creek Stat	51.72	352	P	P	13 57 52.2	+0.1
M54A				IAmb	IAmb	13 58 02.3	
	comp=Z,11nm,1.4s						
OK029	Liberty Lake	51.73	333	P	P	13 57 52.6	+0.4
R40A	Maddies Statio	51.80	339	P	P	13 57 51.8	-0.9
M53A	WI Miller and	51.80	351	P	P	13 57 52.5	-0.1
QUA2	Belchertown	51.91	359	P	P	13 57 53.4	0.0
QUA2				IAmb	IAmb	13 58 02.5	
	comp=Z,13nm,1.2s						
N49A	Columbus Grove	51.94	348	P	P	13 57 52.6	-1.0
N49A				IAmb	IAmb	13 57 53.3	
	comp=Z,9.1nm,0.6s						
BINY	Binghamton	52.01	356	P	P	13 57 54.0	-0.1
BINY				IAmb	IAmb	13 58 12.1	
	comp=Z,9.0nm,1.2s						
P43A	Skaggs, Pawnee	52.12	342	P	P	13 57 53.8	-1.1
P43A				IAmb	IAmb	13 57 54.5	
	comp=Z,11nm,0.8s						
SFIN	Lafayette	52.12	345	P	P	13 57 53.3	-1.6
SFIN				IAmb	IAmb	13 58 06.8	
	comp=Z,22nm,1.4s						
N47A	Urbana	52.24	346	P	P	13 57 54.4	-1.4
N47A				IAmb	IAmb	13 57 54.9	
	comp=Z,8.4nm,0.6s						
MNTX	Cornudas Mount	52.71	323	P	P	13 57 59.8	+0.5
HDIL	Hopedale	52.89	343	P	P	13 57 59.0	-1.3
MSTX	Muleshoe	52.91	327	P	P	13 58 01.2	+0.4
J59A	Piesco	53.17	357	P	P	13 58 02.6	+0.3
J59A				IAmb	IAmb	13 58 28.7	
	comp=Z,17nm,1.4s						
SRIG	Santa Rosalia	54.29	314	P	P	13 58 08.6	-1.9
J47A	Sunmer	54.30	348	P	P	13 58 09.1	-1.0
L42A	Oliver, Polo	54.34	343	P	P	13 58 09.3	-1.2
L42A				IAmb	IAmb	13 58 11.3	
	comp=Z,14nm,1.2s						
DELO	Deloro Mine	54.45	354	P	P	13 58 10.6	-0.6
DELO				IAmb	IAmb	13 58 33.8	
	comp=Z,14nm,1.2s						
319A	Douglas	54.88	320	P	P	13 58 15.5	+0.9
319A				IAmb	IAmb	13 58 28.6	
	comp=Z,5.6nm,0.7s						
PKME	Peaks-Kenny Pk	54.91	2	P	P	13 58 14.6	+0.2
PKME				IAmb	IAmb	13 58 16.5	
	comp=Z,23nm,1.4s						
G65A	Princeton	54.92	3	P	P	13 58 14.7	+0.2
JFWS	Jewell Farm	55.34	343	P	P	13 58 16.5	-1.0
JFWS				IAmb	IAmb	13 58 17.3	
	comp=Z,9.4nm,0.7s						
I42A	Draeger Farm,	55.88	345	P	P	13 58 20.6	-0.5
E62A	Clayton Lake	56.26	1	P	P	13 58 24.0	+0.3
E62A				IAmb	IAmb	13 58 29.4	
	comp=Z,19nm,1.5s						
I40A	Norwalk	56.34	343	P	P	13 58 23.7	-0.6
I40A				IAmb	IAmb	13 58 41.6	
	comp=Z,9.3nm,1.1s						
L34A	Svendsen Farm,	56.52	338	P	P	13 58 25.5	0.0
D62A	Allapoint, All	56.74	2	P	P	13 58 27.1	+0.3
D62A				IAmb	IAmb	13 58 54.6	
	comp=Z,13nm,1.2s						
E46A	Sault Ste Mari	57.20	349	P	P	13 58 29.1	-0.9
SDCO	Great Sand Dun	57.21	328	P	P	13 58 30.8	+0.2
214A	Organ Pipe Nat	57.54	318	P	P	13 58 33.9	+1.2
ECSD	EROS Data Cent	58.14	339	P	P	13 58 36.0	-0.5
SPMN	Marine on St.	58.20	342	P	P	13 58 36.2	-0.5
SPMN				IAmb	IAmb	13 58 36.6	
	comp=Z,13nm,1.3s						
MVCO	Mesa Verde	58.44	325	P	P	13 58 40.2	+1.3
Y14A	Wickenburg	58.92	320	P	P	13 58 43.1	+1.2
F36A	Milaca	58.99	342	P	P	13 58 41.6	-0.5
F33A	5 Mile Ranch,	59.86	340	P	P	13 58 47.4	-0.5
F33A				IAmb	IAmb	13 58 47.9	
	comp=Z,6.1nm,0.4s						
DRLN	Deer Lake	60.11	10	P	P	13 58 49.1	-0.2
EYMN	Ely	60.31	344	P	P	13 58 50.0	-0.8
KNB	Kanab	60.82	323	P	P	13 58 56.0	+1.5
SRU	San Rafael Swe	60.91	326	P	P	13 58 55.9	+0.8
LCMT	Little Creek M	61.07	322	P	P	13 58 57.2	+1.1
P18A	Preston Nutter	61.12	326	P	P	13 58 57.8	+1.2
P17A	Butcher Ranch,	61.29	326	P	P	13 58 58.4	+1.0
B35A	Bob, Littlefor	61.31	343	P	P	13 58 56.4	-0.8
B35A				IAmb	IAmb	13 58 57.0	
	comp=Z,6.0nm,0.8s						
TMUT	Trail Mountain	61.42	325	P	P	13 58 58.8	+0.2
RDMU	Red Mountain	61.43	327	P	P	13 58 59.2	+0.8
RSSD	Black Hills	61.43	334	P	P	13 58 59.5	+1.1
SHPR	Sheep Range	61.92	321	P	P	13 59 03.2	+1.5
E28A	Huff	62.07	337	P	P	13 59 03.1	+0.9
GWY	Greenwater Val	62.67	320	P	P	13 59 07.9	+1.5
MDND	Maddock	62.74	339	P	P	13 59 06.5	0.0
DUG	Dugway, Tooele	62.94	325	P	P	13 59 08.9	+0.9
BW06	Boulder Array	63.01	329	P	P	13 59 08.8	+0.2
PD31	Pinedale Array	63.01	329	P	P	13 59 08.9	+0.4
PDAR	Pinedale Array	63.01	329	P	P	13 59 09.0	+0.4
	comp=Z,0.7nm,0.4s,baz=121,slow=9.6,SNR=15						
PDAR	Pinedale Array	63.01	329	P	P	13 59 09.0	+0.4
SPR3	Spring Creek 3	63.02	323	P	P	13 59 09.8	+1.0
ULM	Lac du Bonnet	63.63	343	P	P	13 59 11.4	-0.6
	comp=Z,5.4nm,0.3s,baz=149,slow=4.9,SNR=16						
ULM	Lac du Bonnet	63.63	343	P	P	13 59 11.4	-0.6
LCH	Last Change Ra	63.93	320	P	P	13 59 15.9	+1.5
HVU	Hansel Valley	64.00	326	P	P	13 59 15.1	+0.3
REDW	Red Top Meadow	64.09	329	P	P	13 59 15.6	+0.1
LOHW	Long Hollow	64.15	329	P	P	13 59 16.7	+0.9
RLMT	Red Lodge	64.59	331	P	P	13 59 19.3	+0.8
ELK	Elko	64.69	324	P	P	13 59 19.4	+0.2
NV11	Mina Array Sit	64.98	321	P	P	13 59 22.1	+1.1
DGMT	Dagmar	64.98	336	P	P	13 59 21.0	+0.3
DGMT				IAmb	IAmb	13 59 22.3	
	comp=Z,10nm,1.1s						
NVAR	Mina Array Bea	65.07	321	P	P	13 59 23.1	+1.5
	comp=Z,0.6nm,0.7s,baz=146,slow=5.7,SNR=4.9						
NVAR	Mina Array Bea	65.07	321	P	P	13 59 22.3	+0.7
KVN	Kaiserville	65.32	321	P	P	13 59 23.9	+0.8
BCYI	Bear Canyon	66.08	328	P	P	13 59 29.5	+1.8
MFID	Camas Ranch	66.77	326	P	P	13 59 32.8	+1.0
MFID				IAmb	IAmb	13 59 34.4	
	comp=Z,5.7nm,0.9s						
PLID	Pearl Lake	67.96	327	P	P	13 59 40.0	+0.8
DBIC	Dimbokro	68.12	79	P	P	13 59 40.4	-0.1
DBIC				IAmb	IAmb	13 59 44.2	
	comp=Z,10nm,1.4s						
WDC	Whiskeytown Da	68.98	320	P	P	13 59 44.4	-0.8
WDC				IAmb	IAmb	13 59 45.4	
	comp=Z,7.5nm,1.1s						
YBH	Yreka Blue Hor	69.74	321	P	P	13 59 49.4	-0.4
HUMO	Hull Mountain	70.39	322	P	P	13 59 53.9	+0.4
HUMO				IAmb	IAmb	13 59 55.4	
	comp=Z,9.9nm,1.2s						
BUCK	Buck Mountain	71.32	323	P	P	13 59 59.4	+0.5
LTY	Liberty	71.85	327	P	P	14 00 03.0	+1.2
LTY				IAmb	IAmb	14 00 27.1	
	comp=Z,10nm,1.4s						
YKA	Yellowknife Ar	79.54	341	P	P	14 00 43.8	+0.1
	comp=Z,1.6nm,0.5s,baz=135,slow=5.4,SNR=31						
ILAR	Eielson Array	92.83	335	P	P	14 01 49.5	+2.1
	comp=Z,0.3nm,0.9s,baz=74,slow=6.7,SNR=2.0						
SONM	Songino Array	142.12	3	PKP	PKPdf	14 08 00.1	-2.7
	comp=Z,0.3nm,0.3s,baz=350,slow=1.8,SNR=3.0						
KSRS	Korea Array	147.56	331	PKPbc	PKPbc	14 08 16.1	+0.2
	comp=Z,1.7nm,0.7s,baz=18,slow=2.0,SNR=7.4						

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*RHSSO **06** 13:53:24.9±0.2, 43˚.29N×17˚.95E, h8km±2km, ML2.8/12*
*BEO **06** 13:53:24.6±0.3, 43˚.30N×17˚.85E, h13km±3km, ML2.6/8*
ISC 06 13:53:23.4±1.1, **43˚.27N**±0˚.02×**17˚.93E**±0˚.02, **h5**km±10km, **n71**, σ1s.**26**/130, **16C-11D**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.43	203	ePg	Pb	13 53 32.6	-0.8
STON				eSg	Sb	13 53 40.3	+0.1
STON	Ston	0.43	203	i Pg	Pb	13 53 32.0	-1.4
STON				Sg	Sb	13 53 40.6	+0.5
STON	Ston	0.43	203	ePg	Pb	13 53 32.0	-1.4
STON				eSg	Sb	13 53 40.8	+0.6
BRY	Bratogost	0.57	129	ePg	Pb	13 53 35.1	-0.9
BRY				eSg	Sb	13 53 45.2	+0.6
DBRK	Dubrovnik	0.62	165	i Pg	Pb	13 53 36.8	+0.1
DBRK				Sg	Sb	13 53 46.5	+0.9
RICI	Ricice	0.63	292	ePg	Pb	13 53 36.5	-0.3
RICI				Sg	Sb	13 53 46.6	+0.7
TREB	Trebinje	0.63	151	⇑iPg	Pb	13 53 36.4	-0.4
TREB				eSg	Sb	13 53 46.6	+0.6
TREB	Trebinje	0.63	151	ePg	Pb	13 53 36.5	-0.4
TREB				eSg	Sn	13 53 48.2	-1.2
MAKA	Makarska	0.67	272	ePg	Pb	13 53 37.2	-0.2
MAKA				Sg	Sb	13 53 48.0	+0.9
UPM	Unac-Piva	0.71	95	⇑iPg	Pg	13 53 37.4	+0.3
UPM				eSg	Sb	13 53 48.5	-0.2
LSTV	Lastovo	0.91	237	ePg	Pb	13 53 41.4	-0.3
LSTV				Sg	Sn	13 53 54.9	-1.4
HCY	Herceg Novi	0.92	153	⇑iPg	Pb	13 53 41.4	-0.4
HCY				eSg	Sn	13 53 55.5	-1.0
RUDO	Rudo	1.11	71	⇑iPg	Pg	13 53 44.0	-0.6
RUDO				eSg	Sg	13 53 59.4	+0.5
BBLS	Lazići	1.23	60	ePg	Pg	13 53 46.4	-0.5
BBLS				eSg	Sg	13 54 03.1	+0.2
BBLS	Lazići	1.23	60	ePg	Pg	13 53 47.1	+0.2
BBLS				eSg	Sn	13 54 05.1	+0.7
PDG	Podgorica	1.28	130	⇑S	Sn	13 54 10.2	+4.7
PDG	Podgorica	1.28	130	ePg	Pn	13 53 47.8	-0.2
PDG				eSg	Sn	13 54 06.6	+1.1
PDG	Podgorica	1.28	130	ePg	Pn	13 53 48.9	+0.9
PDG				eSg	Sn	13 54 08.1	+2.6
MGRS	Mrkonjic Grad	1.30	332	ePg	Pn	13 53 48.1	-0.3
MGRS				eSg	Sg	13 54 05.4	+0.1
DRME	Dracevica, Mon	1.42	139	ePg	Pg	13 53 50.7	+0.1
DRME				eSg	Sn	13 54 11.1	+2.1
SJES	Sjenica	1.49	89	ePg	Pg	13 53 52.3	+0.3
BLY	Banja Luka	1.58	340	⇑iPn	Pb	13 53 53.6	+0.5
BLY				eSg	Sg	13 54 14.9	+0.8
BLY	Banja Luka	1.58	340	ePg	Pb	13 53 53.6	+0.5
BLY				eSg	Sb	13 54 14.3	+0.9
IVAS	Ivanjica	1.65	78	ePg	Pb	13 53 54.1	-0.2
IVAS				eSg	Sg	13 54 18.3	+2.0
ZIRJ	Zirje	1.71	284	ePn	Pb	13 53 54.9	-0.4
ZIRJ				Sn	Sg	13 54 18.9	+0.6
DIVS	Divibare	1.71	60	ePn	Pn	13 53 54.2	+0.2
DIVS				eSn	Sn	13 54 16.8	+0.5
DIVS	Divibare	1.71	60	ePn	Pn	13 53 53.8	-0.2
DIVS				eSg	Sg	13 54 19.6	+1.2
MORI	Morici	1.73	291	ePn	Pg	13 53 56.1	-0.3
MORI				Sn	Sg	13 54 18.9	+0.1
TEKS	Tekeris	1.73	41	ePn	Pn	13 53 54.6	+0.5
TEKS				eSn	Sn	13 54 16.7	+0.1
TEKS	Tekeris	1.73	41	ePn	Pb	13 53 55.6	0.0
TRUS	Trudelj	2.03	61	ePn	Pn	13 53 58.4	+0.1
GRUS	Gruza	2.12	72	ePn	Pn	13 53 59.9	+0.4
GRUS				eSg	Sg	13 54 33.6	+2.2
DUGI	Dugi Otok	2.21	290	ePn	Pb	13 54 02.7	-1.2
DUGI				Sn	Sb	13 54 30.6	-0.9
PLIT	Plitvice	2.32	315	ePn	Pb	13 54 05.2	-0.5
PLIT				Sn	Sb	13 54 34.0	-0.7
FRGS	Fruska Gora	2.33	35	⇑P	Pn	13 54 02.4	0.0
FRGS				⇓S	Sn	13 54 31.0	-0.4
FRGS	Fruska Gora	2.33	35	ePn	Pn	13 54 02.7	+0.3
FRGS				eSn	Sn	13 54 31.4	0.0
FRGS	Fruska Gora	2.33	35	ePn	Pn	13 54 02.4	0.0
FRGS				eSg	Sg	13 54 38.5	+0.4
SELS	Selova	2.33	90	ePn	Pn	13 54 03.7	+1.3
NVLJ	Novalja	2.56	301	ePn	Pn	13 54 06.8	+1.2
NVLJ				Sn	Sn	13 54 39.4	+2.2
MATE	Matera	2.77	200	⇑P	Pg	13 54 14.9	-1.5
MATE				⇑S	Sg	13 54 50.5	-1.8
BOVS	Bovan	2.77	81	⇑P	Pn	13 54 09.7	+1.2
BOVS				⇓S	Sn	13 54 42.6	+0.2
BARS	Barje	2.88	98	ePn	Pn	13 54 11.7	+1.7
OZLJ	Ozalj	2.94	324	ePn	Pn	13 54 12.7	+1.9
MORH	Mrgy, Hungar	2.99	10	⇓P	Pn	13 54 12.0	+0.4
MORH				⇑S	Sn	13 54 47.0	-0.8
MORH	Mrgy, Hungar	2.99	10	ePn	Pn	13 54 11.9	+0.4
KALN	Kalnik	3.05	340	ePn	Pn	13 54 14.2	+1.8
CRES	Cresnjev	3.11	326	ePn	Pn	13 54 14.8	+1.6
CRES				eSn	Sn	13 54 50.9	+0.1
MDVR	Moldovita	3.12	60	⇑P	Pn	13 54 13.5	+0.2
MDVR				⇓S	Sn	13 54 49.5	-1.5
PRVS	Prvonek	3.14	103	ePn	Pn	13 54 15.2	+1.6
RIY	Rijeka	3.22	311	ePn	Pn	13 54 15.9	+1.3
SMRN	Sveta Marina	3.24	304	ePn	Pn	13 54 16.3	+1.3
SMRN				Sn	Sn	13 54 55.1	+1.1
STIP	Stip	3.52	115	i Pn	Pb	13 54 22.7	-3.4
STIP				i Sn	Sb	13 55 06.7	-2.4
CEY	Cerknica	3.52	316	ePn	Pn	13 54 20.0	+1.2
CEY				eSn	Sn	13 55 00.4	-0.5
BZS	Buzias	3.54	47	⇓P	Pn	13 54 19.9	+0.9
BZS				⇑S	Sn	13 54 59.1	-2.1
HERR	Herculane	3.61	62	⇓P	Pn	13 54 19.9	-0.2
HERR				⇓S	Sn	13 55 01.6	-1.5
VTS	Vitosha	3.95	98	⇓S	Sn	13 55 14.3	+2.7
SIRR	Siria	4.01	40	⇑P	Pn	13 54 26.6	+1.1
SIRR				⇓S	Sn	13 55 09.7	-3.1
OBKA	Obir	4.04	325	ePn	Pn	13 54 26.1	+0.1
	0.5nm,0.2s						
OBKA				eSn	Sn	13 55 13.3	-0.4
	2.3nm,0.4s						
GZR	Gura Zlata	4.08	57	⇑P	Pn	13 54 26.9	+0.5
GZR				⇑S	Sn	13 55 12.6	-2.0
ARSA	Arzberg	4.33	338	ePn	Pn	13 54 30.2	+0.2
	1.2nm,0.4s						
ARSA				eSn	Sn	13 55 18.7	-2.2
	2.0nm,0.6s						
MYKA	Terra Mystica	4.54	319	ePn	Pb	13 54 42.8	-0.7
	0.1nm,0.1s						
MYKA				eSn	Sn	13 55 24.7	-1.3
	1.3nm,0.2s						
CONA	Conrad Observa	4.88	343	ePn	Pn	13 54 35.7	-1.9
	0.2nm,0.2s						
CONA				eSn	Sn	13 55 31.8	-2.8
	1.2nm,0.4s						
DRGR		4.89	42	⇓P	Pn	13 54 38.3	+0.6
DRGR				⇓S	Sn	13 55 32.4	-2.2
KBA	Koelnbreinsper	5.00	321	ePn	Pn	13 54 39.6	+0.3
	0.1nm,0.1s						
KBA				eSn	Sn	13 55 38.1	+0.4
	0.5nm,0.2s						
ABTA	Abfaltersbach	5.18	314	ePn	Pn	13 54 42.7	+1.0
	0.1nm,0.1s						
ABTA				eSn	Sn	13 55 44.7	+2.7
	0.9nm,0.3s						
MOA	Molln	5.26	332	ePn	Pn	13 54 42.7	0.0
	0.1nm,0.1s						
MOA				eSn	Sn	13 55 43.2	-0.4
	2.5nm,0.5s						
WTTA	Wattenberg	5.98	314	ePn	Pn	13 54 53.0	+0.3
	0.5nm,0.1s						
WTTA				eSn	Sn	13 56 02.6	+1.0
	1.3nm,0.4s						
WATA	Walderalm	6.05	314	i Pn	Pn	13 54 53.1	-0.6
	0.7nm,0.1s						
WATA				eSn	Sn	13 56 04.2	+0.7
	2.6nm,0.4s						
SQTA	Sankt Quirin	6.18	312	ePn	Pn	13 54 55.8	+0.4
	0.5nm,0.1s						
SQTA				eSn	Sn	13 56 07.6	+1.1
	1.0nm,0.3s						
MOTA	Moosalm	6.31	313	ePn	Pn	13 54 57.2	0.0
	0.6nm,0.3s						
MOTA				eSn	Sn	13 56 10.3	+0.5
	1.7nm,0.4s						
FETA	Feichten	6.33	309	ePn	Pn	13 54 59.0	+1.5
	1.3nm,0.6s						
FETA				eSn	Sn	13 56 12.3	+2.1
	0.8nm,0.6s						

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*IDC **06** 14:04:49.5±1.3, 24˚.73N×122˚.22E, h0km, mb3.4/3, mb1 3.6/5, mb1mx3.3/36, mbtmp3.5/5, ML3.4/2, Error ellipse: s-maj=37.8km s-min=24.2km az=71.0*
*JMA **06** 14:05:04.8±0.2, 24˚.91N×123˚.02E, h152km±3km, M3.4*
ISC 06 14:05:03.0±1.0, **25˚.3N**±0˚.1×**122˚.98E**±0˚.07, **h143**km±10km, **n17**, σ1s.**33**/30, **mb3.1**/3, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.79	178	P	Pn	14 05 26.4	+1.0
YOJ				S	Sn	14 05 42.5	+0.1
JYNG	Yonagunijimaku	0.80	182	P	Pn	14 05 26.6	+1.1
JYNG				S	Sn	14 05 42.6	+0.1
IRIF	Iriomote-Funau	1.14	143	P	Pn	14 05 28.7	+0.3
IRIF				S	Sn	14 05 46.4	-1.3
JISG	Ishigakijimahi	1.38	119	P	Pn	14 05 31.5	+0.8
JISG				S	Sn	14 05 51.3	-0.6
JKRS	Kuro-shima	1.38	137	P	Pn	14 05 31.4	+0.6
JKRS				S	Sn	14 05 50.5	-1.4
JIJ	Ishigaki jima	1.38	130	P	Pn	14 05 31.1	+0.3
JIJ				S	Sn	14 05 49.7	-2.2
HATJ	Hateruma jima	1.41	148	P	Pn	14 05 31.3	+0.2
HATJ				S	Sn	14 05 50.4	-2.1
JTJ	Tarama	1.68	111	P	Pn	14 05 35.2	+1.2
JTJ				S	Sn	14 05 57.6	0.0
JIRB	Irabujima	2.03	102	P	Pn	14 05 39.7	+1.6
JIRB				S	Sn	14 06 04.8	-0.2
JIKM	Ikemajima	2.08	99	P	Pn	14 05 40.4	+1.8
JIKM				eS	Sn	14 06 06.5	+0.5
JMJ2	Miyako jima3	2.19	103	P	Pn	14 05 41.9	+1.9
JMJ2				S	Sn	14 06 08.9	+0.6
JOGS	Gusukube	2.26	102	P	Pn	14 05 42.7	+1.9
JOGS				S	Sn	14 06 09.9	+0.2
JOW	Kunigami	5.01	71	Pn	Pn	14 06 17.2	+0.7

	3.0nm,0.3s,baz=137,slow=24,SNR=8.1						
JOW				Sn	Sn	14 07 10.7	-3.1
	1.3nm,0.3s,baz=119,slow=19,SNR=1.5						
KSRS	Korea Array	12.87	18	Pn	P	14 08 04.5	-1.5
	0.1nm,0.3s,baz=197,slow=12,SNR=3.6						
MKAR	Makanchi Array	38.73	314	P	P	14 12 14.0	+0.8
	0.2nm,0.6s,baz=111,slow=7.3,SNR=3.4						
WRA	Warramunga Arr	46.27	165	P	P	14 13 13.7	-0.6
	0.9nm,0.4s,baz=348,slow=8.9,SNR=14						
ASAR	Alice Springs	49.77	167	P	P	14 13 42.1	+0.9
	0.1nm,0.4s,baz=352,slow=7.8,SNR=8.5						

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*IDC **06** 14:10:34.5±2.2, 23°.63S×67°.72W, h128^{km}±19^{km}, mb3.5/3, mb1 3.6/5, mb1mx3.4/31, mbtmp4.0/5, Error ellipse: s-maj=33.3km s-min=21.0km az=157.0*

*GUC **06** 14:10:35.3±0.8, 23°.54S×68°.16W, h155^{km}±6^{km}, ML3.7*

ISC 06 14:10:34.3±1.0**, 23°.67S**±0°.05×**67°.93W**±0°.10**, h139**^{km}±10^{km}**, n27, σ1^{s}.74**/41**, mb4.0**/4**, 13C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.39	319	P	Pn	14 11 03.1	+0.8
	33nm,0.3s,baz=135,slow=10,SNR=332						
LVC				S	Sn	14 11 24.0	+0.4
	120nm,0.3s,baz=315,slow=20,SNR=24						
LVC	Limon Verde	1.39	319	*e*P	Pn	14 11 02.7	+0.4
LVC				*i* S	Sn	14 11 23.7	+0.1
PB15	IPOC Station P	1.49	288	⇑*i*P	Pn	14 11 03.8	+0.6
PB15				*i* S	Sn	14 11 25.6	+0.4
PB06	IPOC Station P	1.79	302	⇑*i*P	Pn	14 11 07.1	+0.6
PB06				*i* S	Sn	14 11 31.3	+0.2
PB06				IAML		14 11 33.4	
	comp=E,771nm,0.1s						
PB09	IPOC Station P	2.22	327	⇑*i*P	Pn	14 11 12.6	+0.9
PB09				*i* S	Sn	14 11 40.1	-0.3
PB05	IPOC Station P	2.24	291	⇑*i*P	Pn	14 11 11.8	-0.1
PB05				*i* S	Sn	14 11 39.6	-1.1
PB05				IAML		14 11 43.3	
	comp=N,216nm,0.3s						
PB03	IPOC Station P	2.33	313	⇓*i*P	Pn	14 11 13.3	+0.2
PB03				*i* S	Sn	14 11 41.9	-0.8
PB03				IAML		14 11 45.1	
	comp=N,436nm,0.4s						
PB10	IPOC Station P	2.41	273	⇑*i*P	Pn	14 11 13.9	+0.1
PB10				*i* S	Sn	14 11 42.8	-1.5
PB10				IAML		14 11 54.1	
	comp=E,214nm,0.6s						
PB04	IPOC Station P	2.44	303	⇑*i*P	Pn	14 11 14.4	+0.1
PB04				*i* S	Sn	14 11 44.0	-1.1
PB04				IAML		14 11 48.7	
	comp=N,543nm,0.4s						
PB14	IPOC Station P	2.45	247	⇑*i*P	Pn	14 11 14.2	-0.4
PB14				*i* S	Sn	14 11 43.8	-1.8
PB07	IPOC Station P	2.65	317	⇑*i*P	Pn	14 11 17.3	+0.3
PB07				*i* S	Sn	14 11 48.4	-1.4
PB07				IAML		14 11 51.8	
	comp=N,307nm,0.4s						
PB02	IPOC Station P	2.96	322	⇑*i*P	Pn	14 11 20.9	-0.1
PB02				*i* S	Sn	14 11 55.8	-1.1
PB02				IAML		14 12 03.8	
	comp=N,288nm,0.2s						
PB01	IPOC Station P	2.98	331	⇑*i*P	Pn	14 11 21.2	0.0
PB01				*i* S	Sn	14 11 55.4	-2.0
PB01				IAML		14 12 02.9	
	comp=E,116nm,0.1s						
AC02	Maricunga	3.33	199	⇑*i*P	Pn	14 11 26.6	+0.5
AC02				*i* S	Sn	14 12 08.7	+2.7
AC02				IAML		14 12 10.4	
	comp=E,88nm,0.2s						
PB08	IPOC Station P	3.69	342	⇑*i*P	Pn	14 11 31.5	+0.9
PB08				*e*S	Sn	14 12 08.2	-6.0
AC04	Llanos de Chal	5.33	211	⇑*i*P	Pn	14 11 48.2	-3.7
AC04				*i* S	Sn	14 12 46.9	-5.6
LPAZ	La Paz	7.35	358	P	Pn	14 12 20.5	+0.8
	comp=E,0.3nm,0.3s,baz=358,slow=2.3,SNR=6.6						
LPAZ				S	Sn	14 13 41.8	-0.3
	comp=E,0.1nm,0.3s,baz=218,slow=19,SNR=1.5						
SIV	San Ignacio	10.00	41	P	Pn	14 12 51.3	-3.3
	comp=E,3.1nm,0.3s,baz=217,slow=11,SNR=39						
BDFB	Brasilia	20.37	71	P	P	14 14 59.8	-0.5
	comp=E,4.7nm,0.6s,baz=245,slow=11,SNR=7.9						
PCRV	Puerto La Cruz	33.79	6	P	P	14 17 08.6	+5.4
	comp=E,3.9nm,0.7s,baz=90,slow=1.0,SNR=2.0						
APG	El Apazote	44.30	328	P	P	14 18 37.3	+6.5
	comp=E,5.4nm,0.6s,baz=197,slow=11,SNR=3.9						
TORD	Torodi Ar. Bea	77.25	69	P	P	14 22 14.0	+0.4
	comp=E,0.5nm,0.6s,baz=263,slow=5.5,SNR=3.1						
YKA	Yellowknife Ar	93.53	340	P	P	14 23 35.5	+1.7
	comp=E,0.3nm,0.6s,baz=138,slow=4.7,SNR=5.4						
ASAR	Alice Springs	128.39	206	PKP	PKiKP	14 29 26.4	+0.5
	comp=E,0.4nm,0.7s,baz=135,slow=1.7,SNR=7.6						
WRA	Warramunga Arr	131.52	208	PKP	PKiKP	14 29 32.4	+0.2
	comp=E,0.3nm,0.5s,baz=157,slow=1.7,SNR=7.5						
ZALV	Zalesovo Beam	143.50	27	PKP	PKPdf	14 29 53.6	+1.5
	comp=E,0.4nm,0.3s,baz=298,slow=3.1,SNR=2.7						
MKAR	Makanchi Array	146.81	39	PKPbc	PKPbc	14 30 00.5	+0.4
	comp=E,0.6nm,0.7s,baz=292,slow=3.5,SNR=5.5						

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*TUL **06** 14:15:20.5±0.7, 35°.85N±0°.01×96°.65W±0°.01, h5^{km}±4^{km}, ML2.7, mb_Lg2.3/8(NEIC), Error ellipse: s-maj=1.9km s-min=1.1km az=192.0*

NEIC 06 14:15:20.5±0.7**, 35°.86N**±0°.01×**96°.65W**±0°.02**, h11**^{km}±3^{km}**, Error ellipse: s-maj=2.2km s-min=1.6km az=120.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK030	Cody Creek RV	0.13	302		Pg	14 15 23.5	-0.1
OK030				Sg	Sg	14 15 25.1	-0.8
OK034	N. Norfolk Rd.	0.16	341	Pg	Pg	14 15 24.2	+0.1
OK034				Sg	Sg	14 15 26.5	-0.1
OK031	S. Brethren Rd	0.18	301	Pg	Pg	14 15 24.5	0.0
OK031				Sg	Sg	14 15 27.1	-0.1
OK025	Westminster Rd	0.62	244	Pg	Pg	14 15 32.5	-0.2
TUL1	Leonard	0.70	86		Pg	14 15 33.8	-0.3
TUL1				Sg	Sg	14 15 42.8	-0.4
FNO	Franklin	0.86	226	Pg	Pg	14 15 36.5	-0.5
BLOK	Blackwell	1.01	333	Pg	Pg	14 15 39.7	-0.3
BLOK				Sg	Sg	14 15 52.8	-0.2
T35A	Sooner Cattle	1.06	6	Pg	Pb	14 15 40.4	-0.5
T35A				Sg	Sg	14 15 54.4	-0.3
CROK	Carrier	1.25	301	Pg	Pn	14 15 44.0	0.0
KAN13	South Haven SW	1.33	330	Pn	Pb	14 15 45.3	-0.2
KAN13				Sg	Sg	14 16 03.1	-0.2
GC02	Grant County #	1.39	316	Pn	Pn	14 15 45.9	0.0
KAN14	Manchester OK	1.52	316	Pn	Pn	14 15 48.0	+0.3
KAN01	Argonia South	1.57	326	IAmb_Lg		14 16 11.0	
	comp=Z,14nm,0.7s						
X34A	Smith Ranch, M	1.59	218	Pn	Pn	14 15 49.0	+0.5
LOOK	Love County	1.91	193	Pn	Pn	14 15 53.2	+0.1
U38A	Gravette	1.92	72	Pn	Pn	14 15 53.6	+0.4
HHAR	Hobbs	2.24	78	Pn	Pn	14 15 57.8	+0.3
MIAR	Mount Ida	2.84	117	Pn	Pn	14 16 05.6	-0.2
U40A	Yellville	3.12	80	Pn	Pn	14 16 09.6	0.0
S39A	Bolivar	3.24	55	IAmb_Lg		14 17 09.5	
	comp=Z,8.5nm,1.0s						
X40A	Basin Creek Fa	3.41	113	Pn	Pn	14 16 14.2	+0.5
R40A	Maddies Statio	4.26	54	IAmb_Lg		14 17 39.1	
	comp=Z,6.1nm,0.9s						
PBMO	Poplar Bluff	5.11	78	IAmb_Lg		14 18 12.5	
	comp=Z,8.8nm,0.9s						

IDC 06 14:21:44.1±47.0**, 26°.29S**×**67°.76E, h0**^{km}**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.2**/40**, mbtmp3.4**/3**, Error ellipse: s-maj=1144.0km s-min=57.8km az=73.0, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	19.08	14	T	T	14 44 22.2	
	baz=188						
H08S2	Diego Garcia H	19.09	15	T	T	14 44 21.4	
	baz=188,slow=74,SNR=8.1						
H08S3	Diego Garcia H	19.10	14	T	T	14 44 15.4	
	baz=188,slow=74,SNR=6.6						
CMAR	Chiang Mai Arr	53.82	38	P	P	14 31 08.8	-0.1
	0.2nm,0.4s,baz=232,slow=4.4,SNR=4.0						
ASAR	Alice Springs	59.42	103	P	P	14 31 48.4	-0.7
	0.3nm,0.7s,baz=250,slow=6.4,SNR=8.1						
WRA	Warramunga Arr	60.99	99	P	P	14 32 00.7	+0.9
	0.6nm,1.0s,baz=255,slow=8.7,SNR=2.8						

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*NEIC **06** 14:26:56.5±1.8, 28°.2S±0°.1×178°.1W±0°.1, h175^{km}±7^{km}, mb4.3/23, Error ellipse: s-maj=18.3km s-min=14.0km az=158.0*

*IDC **06** 14:26:56.3±1.3, 28°.20S×178°.15W, h172^{km}±17^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.6/19, mbtmp4.1/6, Error ellipse: s-maj=46.0km s-min=25.8km az=158.0*

ISC 06 14:26:57.0±0.7**, 28°.7S**±0°.1×**177°.8W**±0°.1**, h200**^{km}**, n43, σ1^{s}.55**/43**, mb4.0**/17**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.57	187	P	Pn	14 27 24.4	0.0
	604nm,0.3s,baz=86,slow=8.5,SNR=29						
RAO				S	Sn	14 27 44.8	-1.0
	471nm,0.3s,baz=245,slow=24,SNR=5.9						
RAO	Raoul Island	0.57	187		Pn	14 27 24.1	-0.3
URZ	Urewera	10.44	202	Pn	Pn	14 29 20.5	-1.3
BKZ	Black Stump Fm	11.46	203	Pn	Pn	14 29 32.1	-2.9
TUWZ	Tuamarina	14.38	206	Pn	Pn	14 30 08.3	-3.2
DZM	Mont Dzumac	15.65	291	P	Pn	14 30 28.3	+1.1
	0.1nm,0.3s,baz=128,slow=17,SNR=3.1						
DZM	Mont Dzumac	15.65	291	P	Pn	14 30 27.7	+0.5
DZM				IAmb	IAmb	14 30 35.0	
	comp=Z,8.7nm,0.7s						
RAR	Rarotonga	17.98	70	P	P	14 30 52.3	-0.3
SANVU	Saraoutou	19.09	310	P	P	14 31 01.1	-3.6
SANVU				IAmb	IAmb	14 31 18.2	
	comp=Z,22nm,1.1s						
CAN	Canberra	28.80	248	P	P	14 32 39.3	+2.9
CAN				IAmb	IAmb	14 32 59.0	
	comp=Z,16nm,1.3s						
TOO	Toolangi	31.80	244	P	P	14 33 05.3	+2.5
TOO				IAmb	IAmb	14 33 20.7	
	comp=Z,5.9nm,0.9s						
CTAO	Charters Tower	33.70	277	P	P	14 33 19.1	-0.3
CTAO				IAmb	IAmb	14 33 37.3	
	comp=Z,9.7nm,1.1s						
STKA	Stephens Creek	35.03	255	P	P	14 33 32.2	+1.4
	comp=Z,1.2nm,0.3s,baz=88,slow=7.3,SNR=5.5						
STKA	Stephens Creek	35.03	255	IAmb	IAmb	14 33 35.3	
	comp=Z,0.5nm,0.7s						
AS31	Alice Springs	43.37	265	P	P	14 34 39.5	-0.4
ASAR	Alice Springs	43.37	265	P	P	14 34 39.6	-0.2
	comp=Z,0.7nm,0.5s,baz=97,slow=6.4,SNR=33						
ASAR				PcP	PP	14 36 25.3	+0.4
	comp=Z,0.3nm,0.3s,baz=107,slow=4.2,SNR=6.0						
ASAR				ScP	ScP	14 39 59.6	+2.5
	comp=Z,0.3nm,0.8s,baz=107,slow=5.0,SNR=2.3						
WR0	Warramunga Arr	44.02	270	P	P	14 34 44.2	-0.8
WR0				IAmb	IAmb	14 34 46.5	
	comp=Z,3.6nm,0.6s						
WB2	Warramunga Arr	44.19	270	P	P	14 34 45.5	-0.9
WB2				IAmb	IAmb	14 34 47.0	
	comp=Z,4.0nm,0.7s						
WRA	Warramunga Arr	44.20	270	P	P	14 34 45.9	-0.6
	comp=Z,2.8nm,0.5s,baz=110,slow=6.4,SNR=60						
WRA				PcP	PcP	14 36 28.6	+0.9
	comp=Z,1.4nm,0.9s,baz=118,slow=3.4,SNR=5.9						
WRA	Warramunga Arr	44.20	270	P	P	14 34 45.6	-0.9
WB0	Warramunga Arr	44.21	271	P	P	14 34 45.1	-1.5
WB0				IAmb	IAmb	14 34 47.5	
	comp=Z,4.1nm,0.6s						
FORT	Forrest	46.64	254	P	P	14 35 04.9	-0.6
FORT				IAmb	IAmb	14 35 05.7	
	comp=Z,15nm,0.8s						
VNDA	Vanda	49.81	186	P	P	14 35 34.8	+5.8
VNDA				IAmb	IAmb	14 35 53.8	
	comp=Z,8.3nm,1.4s						
MTN	Manton Dam	49.88	277	P	P	14 35 29.2	-1.2
KNRA	Kununurra	50.74	273	P	P	14 35 37.5	+0.7
KNRA				IAmb	IAmb	14 35 38.7	
	comp=Z,4.4nm,0.9s						
CASY	Casey	56.72	207	P	P	14 36 21.6	+2.1
SOEI	Soe	57.27	277	P	P	14 36 21.3	-2.9
QSPA	South Pole Qui	61.42	180	P	P	14 36 56.9	+4.9
QSPA				IAmb	IAmb	14 36 59.3	
	comp=Z,2.0nm,0.7s						
KSM	Kuching	74.85	280	P	P	14 38 16.3	+0.3
MJAR	Matsushiro Arr	76.91	325	P	P	14 38 24.9	-2.3
	comp=Z,1.2nm,0.5s,baz=165,slow=6.1,SNR=5.0						
MAJO	Matsushiro	76.92	325	P	P	14 38 26.7	-0.5
MAJO				IAmb	IAmb	14 38 26.8	
	comp=Z,3.9nm,0.9s						
JSU	Suzuyama	77.48	317	P	P	14 38 30.1	-0.3
KSRS	Korea Array	83.13	319	P	P	14 39 00.7	+0.3
	comp=Z,0.7nm,0.9s,baz=119,slow=10,SNR=4.2						
CMAR	Chiang Mai Arr	92.97	289	P	P	14 39 50.1	+2.2
	comp=Z,0.3nm,0.3s,baz=124,slow=3.9,SNR=1.2						
ARCES	ARCESS Array B	136.94	348	PKP	PKiKP	14 45 57.0	+0.1
	comp=Z,4.2nm,1.1s,baz=46,slow=3.5,SNR=5.0						
ARCES	ARCESS Array B	136.94	348		PKiKP	14 45 56.0	-0.8
FINES	FINESS Array B	143.58	341	PKhKP	PKPpre	14 46 05.8	
	comp=Z,2.9nm,0.9s,baz=198,slow=1.2,SNR=5.5						
NB2	NORSAR Subarra	147.07	352	PKP	PKPbc	14 46 16.0	+0.3
	comp=Z,0.7nm,0.5s,baz=17,slow=2.9						
NOA	NORSAR Array B	147.07	352	PKPbc	PKPbc	14 46 16.3	+0.7
	comp=Z,1.9nm,0.8s,baz=16,slow=4.6,SNR=3.6						
AKASG	Malin Array Be	150.00	325	PKPbc	PKiKP	14 46 23.7	-0.5
	comp=Z,1.1nm,0.5s,baz=43,slow=3.2,SNR=8.2						
AKASG	Malin Array Be	150.00	325		PKPbc	14 46 22.9	-0.4
BRTR	Keskin Array B	151.86	301	PKPbc	PKiKP	14 46 30.6	+1.9
	comp=Z,1.0nm,0.6s,baz=126,slow=4.6,SNR=6.2						
BRTR	Keskin Array B	151.86	301		PKiKP	14 46 28.9	+0.3

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*IDC **06** 14:52:09.2±1.8, 23°.83S×179°.06E, h544^{km}±18^{km}, mb3.8/8, mb1 3.8/12, mb1mx3.6/23, mbtmp4.6/12, Error ellipse: s-maj=25.2km s-min=14.9km az=132.0*

*NEIC **06** 14:52:10.1±1.9, 23°.8S±0°.1×179°.1E±0°.1, h557^{km}±8^{km}, mb4.6/44, Error ellipse: s-maj=17.4km s-min=15.6km az=101.0*

*NOU **06** 14:52:10.8, 23°.58S×179°.11E, h581^{km}, mb4.4/48, South of Fiji Islands*

ISC 06 14:52:09.4±0.5**, 23°.85S**±0°.06×**178°.99E**±0°.07**, h548**^{km}**, n129, σ1^{s}.36**/132**, mb4.5**/29**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	6.05	153	P	P	14 53 52.3	+4.0
	73nm,0.3s,baz=105,slow=19,SNR=4.4						
RAO				S	S	14 54 56.1	-13
	273nm,0.3s,baz=90,slow=23,SNR=6.0						
RAO	Raoul Island	6.05	153	P	P	14 53 50.1	+1.9
MSVF	Nonsavu	6.15	352	P	P	14 53 49.4	0.0
	6.0nm,0.3s,baz=208,slow=9.6,SNR=43						
MSVF	Nonsavu	6.15	352	P	P	14 53 49.3	-0.2
MSVF	Nonsavu	6.15	352	P	P	14 53 49.8	+0.3
DGTI	Dogotuki	7.54	6	P	P	14 54 03.9	+1.2
MARNC	Mare, Loyalty	10.39	281	P	P	14 54 32.2	+1.0
MARNC	Mare, Loyalty	10.39	281	P	P	14 54 33.7	+2.4
PINNC	Pines Island,	10.68	274	P	P	14 54 36.5	+2.2
PINNC	Pines Island,	10.68	274	P	P	14 54 36.8	+2.5
OUENC	Ouen Island, N	11.27	275	P	P	14 54 42.5	+2.2
OUENC	Ouen Island, N	11.27	275	P	P	14 54 42.8	+2.5
YATNC	Mamie plateau,	11.29	277	P	P	14 54 43.5	+2.9
NIUE	Niue	11.36	67	P	P	14 54 40.7	-0.7
ONTNC	Ouen Toro	11.64	275	P	P	14 54 44.8	+0.6
DZM	Mont Dzumac	11.69	276	P	P	14 54 47.1	+2.2
	0.7nm,0.3s,baz=220,slow=22,SNR=14						
DZM	Mont Dzumac	11.69	276	P	P	14 54 46.8	+2.0
DZM	Mont Dzumac	11.69	276	P	P	14 54 47.5	+2.7
NOUC	Port Laguerre	11.81	276	P	P	14 54 47.9	+1.9
AFI	Afiamalu	13.19	43	P	P	14 54 57.9	-2.5
	2.1nm,0.3s,baz=43,slow=19,SNR=2.0						
MXZ	Matakaoa Point	13.68	182	P	P	14 55 05.9	+0.8
SANVU	Saraoutou	13.89	305	P	P	14 55 05.1	-2.4
URZ	Urewera	14.45	186	P	P	14 55 11.4	-1.6
	3.4nm,0.3s,baz=301,slow=23,SNR=16						
URZ				S	S	14 57 39.5	-4.9
	1.4nm,0.3s,baz=128,slow=20,SNR=4.4						
URZ	Urewera	14.45	186	P	P	14 55 11.0	-2.0
QRZ	Quartz Range	17.77	196	P	P	14 55 46.5	+1.4
NNZ	Nelson	17.94	194	P	P	14 55 47.0	+0.4
TUWZ	Tuamarina	18.03	192	P	P	14 55 47.0	-0.3
THZ	Tophouse	18.57	194	P	P	14 55 53.4	+1.0
THZ				IAmb	IAmb	14 56 07.4	
	comp=Z,40nm,1.4s						
LTZ	Lake Taylor	19.68	195	P	P	14 56 02.2	-0.3
WKZ	Wanaka	22.45	199	P	P	14 56 27.1	-0.3
WHZ	Wether Hill Ro	23.74	199	P	P	14 56 39.6	+0.8
ARMA	Armidale	25.17	249	P	P	14 56 53.7	+1.8
ARMA				IAmb	IAmb	14 56 54.8	
	comp=Z,16nm,1.1s						
ARMA	Armidale	25.17	249	P	P	14 56 54.0	+2.1
EIDS	Eidsvold	25.40	261	P	P	14 56 54.0	+0.1
EIDS				IAmb	IAmb	14 56 56.2	
	comp=Z,6.0nm,0.6s						
EIDS	Eidsvold	25.40	261	P	P	14 56 55.2	+1.4
MGCD	Mangrove Creek	26.14	243	P	P	14 57 02.8	+2.6
CNB	Canberra Magne	28.08	239	P	P	14 57 19.5	+2.2
CAN	Canberra	28.36	239	P	P	14 57 21.4	+1.6
CAN	Canberra	28.36	239	P	P	14 57 21.8	+2.0
CMSA	Cobar Meteorol	30.37	248	P	P	14 57 38.5	+1.4
CTA	Charters Tower	30.55	271	P	P	14 57 39.8	+0.9
	comp=Z,26nm,0.3s,baz=94,slow=10,SNR=46						
CTA	Charters Tower	30.55	271	P	P	14 57 40.0	+1.2
CTAO	Charters Tower	30.55	271	P	P	14 57 39.7	+0.9
CTAO	Charters Tower	30.55	271	P	P	14 57 39.9	+1.2
GLAD	Gladstone	31.02	229	P	P	14 57 44.3	+1.8
QLP	Quilpie	31.50	258	P	P	14 57 47.9	+1.0
TOO	Toolangi	31.70	237	P	P	14 57 49.6	+1.2
TOO				IAmb	IAmb	14 57 50.8	
	comp=Z,20nm,0.8s						
TOO	Toolangi	31.70	237	P	P	14 57 50.1	+1.6
TAU	Tasmania Unive	32.29	226	P	P	14 57 54.7	+1.4
TAU				IAmb	IAmb	14 57 55.6	
	comp=Z,14nm,0.7s						
TAU	Tasmania Unive	32.29	226	P	P	14 57 55.1	+1.7
MTSU	Mount Surprise	32.81	273	P	P	14 57 59.2	+1.1
BRAT	Ballarat	32.89	237	P	P	14 58 00.7	+2.2
PMG	Port Moresby	33.60	290	P	P	14 58 04.8	0.0
PMG				IAmb	IAmb	14 58 26.5	
	comp=Z,28nm,1.2s						
STKA	Stephens Creek	33.88	248	P	P	14 58 08.1	+1.2
	comp=Z,16nm,0.6s,baz=94,slow=10,SNR=64						
STKA	Stephens Creek	33.88	248	P	P	14 58 07.5	+0.6
STKA	Stephens Creek	33.88	248	P	P	14 58 08.3	+1.4
ARPS	Mount Arapiles	34.34	239	P	P	14 58 12.0	+1.2
COEN	Coen	35.19	280	P	P	14 58 18.8	+0.7
COEN				IAmb	IAmb	14 58 24.9	
	comp=Z,18nm,1.4s						
COEN	Coen	35.19	280	P	P	14 58 19.0	+0.9
HTT	Hallett	36.25	246	P	P	14 58 27.1	+0.4
QIS	Mount Isa	36.53	267	P	P	14 58 29.4	+0.3
TWOA	Tennyson Woods	36.69	243	P	P	14 58 30.9	+0.7
LCRK	Leigh Creek	36.72	251	P	P	14 58 31.1	+0.6
BBOO	Buckleboo	38.61	247	P	P	14 58 45.8	-0.1
BBOO				IAmb	IAmb	14 58 46.5	
	comp=Z,15nm,0.7s						
BBOO	Buckleboo	38.61	247	P	P	14 58 46.1	+0.2
OOD	Oodnadatta	39.03	255	P	P	14 58 50.9	+1.6
MULG	Mulgathing	40.31	251	P	P	14 58 59.9	+0.2
AS31	Alice Springs	41.12	261	P	P	14 59 06.1	-0.2
AS31				IAmb	IAmb	14 59 07.7	
	comp=Z,11nm,1.4s						
ASAR	Alice Springs	41.12	261	P	P	14 59 06.5	+0.2
	comp=Z,14nm,0.8s,baz=94,slow=7.4,SNR=210						
ASAR				S	S	15 04 38.4	-1.9
	comp=Z,1.1nm,0.7s,baz=98,slow=16,SNR=8.3						
ASAR	Alice Springs	41.12	261	P	P	14 59 06.2	-0.1
WB2	Warramunga Arr	41.47	266	P	P	14 59 08.4	-0.6
WB2				IAmb	IAmb	14 59 09.5	
	comp=Z,20nm,0.9s						
WB0	Warramunga Arr	41.47	267	P	P	14 59 08.4	-0.6
WB0				IAmb	IAmb	14 59 09.4	
	comp=Z,16nm,0.8s						
WRAB	Tennant Creek	41.47	266	P	P	14 59 08.5	-0.5
WRAB				IAmb	IAmb	14 59 09.5	
	comp=Z,18nm,0.9s						
WRA	Warramunga Arr	41.48	266	P	P	14 59 08.7	-0.5
	comp=Z,4.7nm,0.3s,baz=90,slow=5.9,SNR=238						
WRA				S	S	15 04 41.1	-4.3
	comp=Z,0.9nm,0.7s,baz=99,slow=13,SNR=5.3						
WRA	Warramunga Arr	41.48	266	P	P	14 59 08.6	-0.5
JAY	Jayapura	42.64	294	P	P	14 59 18.1	-0.2
	baz=180,slow=12						
KDU	Kakadu	45.36	276	P	P	14 59 38.7	-0.5
FORT	Forrest	45.46	250	P	P	14 59 39.5	-0.4
FORT	Forrest	45.46	250	P	P	14 59 39.6	-0.2
WRKA	Warakurna	45.94	258	P	P	14 59 43.5	-0.1
MTN	Manton Dam	46.52	275	P	P	14 59 47.2	-0.9
MTN	Manton Dam	46.52	275	P	P	14 59 47.4	-0.7
DRS	Darwin Rock St	46.88	275	P	P	14 59 50.3	-0.5
KNRA	Kununurra	47.76	270	P	P	14 59 57.1	-0.2
KNRA				IAmb	IAmb	14 59 57.8	
	comp=Z,12nm,0.4s						
KNRA	Kununurra	47.76	270	P	P	14 59 57.5	+0.1
FAKI	Fak Fak	49.68	287	P	P	15 00 11.0	-0.6
FAKI	Fak Fak	49.68	287	P	P	15 00 10.9	-0.8
KLBR	Kellerberrin	54.15	247	P	P	15 00 43.9	+0.3
MEEK	Meekatharra	54.23	254	P	P	15 00 43.9	-0.4
PSA00	Pilbara Seismi	54.26	260	P	P	15 00 42.9	-1.6
PSA00	Pilbara Seismi	54.26	260	P	P	15 00 43.6	-0.8
PSA00				IAmb	IAmb	15 00 48.4	
	comp=Z,26nm,1.5s						
PSA00	Pilbara Seismi	54.26	260	P	P	15 00 44.1	-0.4
	comp=Z,10nm,1.2s						
SBA	Scott Base	54.37	183	P	P	15 00 43.8	-0.6
SBA				IAmb	IAmb	15 00 46.1	
	comp=Z,24nm,1.1s						
NWAO	Narrogin (SRO)	54.41	246	P	P	15 00 44.9	-0.5
MBWA	Marble Bar	54.47	260	P	P	15 00 45.5	-0.4
BLDU	Ballidu	55.18	248	P	P	15 00 50.5	-0.3
MUN	Mundaring	55.40	247	P	P	15 00 52.5	+0.2
MORW	Morawa	56.02	250	P	P	15 00 56.3	-0.4
MORW				IAmb	IAmb	15 00 57.7	
	comp=Z,29nm,1.1s						
MMRI	Maumere	56.19	276	P	P	15 00 57.0	-1.0
GIRL	Giralia	59.02	257	P	P	15 01 18.0	+0.8
CASY	Casey	59.75	206	P	P	15 01 19.8	-1.4
CASY				IAmb	IAmb	15 01 22.7	
	comp=Z,16nm,1.1s						
PLAI	Plampang	60.19	273	P	P	15 01 24.7	-0.3
TOLI2	Tolitoli	61.67	285	P	P	15 01 33.8	-0.9
JAGI	Jajag, Banyuwa	63.64	272	P	P	15 01 46.2	-1.3
JAGI				IAmb	IAmb	15 02 15.1	
	comp=Z,28nm,1.3s						
QSPA	South Pole Qui	66.23	180	P	P	15 02 04.4	+1.4
UGM	Wanagama	67.17	271	P	P	15 02 09.0	-0.7
MJAR	Matsushiro Arr	71.33	326	P	P	15 02 34.0	-0.1
	comp=Z,3.8nm,0.7s,baz=162,slow=5.1,SNR=8.6						
MJAR	Matsushiro Arr	71.33	326	P	P	15 02 33.8	-0.3
MAJO	Matsushiro	71.34	326	P	P	15 02 33.1	-1.0
MAT	Matsushiro	71.34	326	P	P	15 02 33.4	-0.6
JMN	Monobe	71.56	322	P	P	15 02 35.7	+0.3
JMN				IAmb	IAmb	15 02 58.3	
	comp=Z,25nm,1.2s						
JWT	Wachi	71.86	324	P	P	15 02 36.9	-0.2
JWT				IAmb	IAmb	15 02 42.0	
	comp=Z,41nm,1.5s						
JSU	Suzuyama	72.01	318	P	P	15 02 37.7	-0.4
JHS	Saijyo	72.91	322	P	P	15 02 43.2	0.0
JHS				IAmb	IAmb	15 02 47.6	
	comp=Z,18nm,1.2s						
KSRS	Korea Array	77.61	321	P	P	15 03 10.2	+0.9
	comp=Z,1.2nm,0.7s,baz=137,slow=4.6,SNR=6.5						
KSAR	Wonju Array Be	77.63	321	P	P	15 03 09.7	+0.3
PEA0B	Petropavlovsk-	78.84	347	P	P	15 03 15.7	+0.2
PEA0B				IAmb	IAmb	15 03 37.6	
	comp=Z,25nm,1.1s						
PETK	Petropavlovsk-	78.84	347	P	P	15 03 15.4	-0.1
	comp=Z,4.9nm,0.8s,baz=126,slow=7.8,SNR=13						
PETK	Petropavlovsk-	78.84	347	P	P	15 03 16.1	+0.6
VNA3	Neumayer Olymp	84.97	177	P	P	15 03 46.6	0.0
VNA2	Neumayer--Watz	85.38	178	P	P	15 03 47.8	-0.8
ILAR	Eielson Array	92.20	14	P	P	15 04 21.4	+1.2
	comp=Z,0.3nm,0.6s,baz=228,slow=5.7,SNR=8.9						
ARCES	ARCESS Array B	131.65	348	PKP	PKPdf	15 10 19.4	0.0
	comp=Z,2.0nm,0.8s,baz=349,slow=2.5,SNR=5.3						
AKASG	Malin Array Be	144.42	327	PKP	PKPbc	15 10 42.5	-0.6
	comp=Z,1.6nm,0.4s,baz=46,slow=4.2,SNR=19						
AKASG	Malin Array Be	144.42	327	PKPdf	PKPbc	15 10 42.4	-0.8
BRTR	Keskin Array B	146.81	307	PKPbc	PKPbc	15 10 50.3	-0.3
	comp=Z,1.3nm,0.6s,baz=134,slow=5.3,SNR=4.1						
CLL	Collm	150.53	342	*e*PKPdf	PKPdf	15 10 55.0	+1.9
CLL				*i* PKPbc	PKiKP	15 10 59.5	-0.1
	comp=Z,6.0nm,0.7s						
CLL				*e*PKPab	PKPab	15 11 08.0	-0.3
TORD	Torodi Ar. Bea	169.05	194	PKPab	PKPab	15 12 30.2	+0.5
	comp=Z,1.8nm,0.8s,baz=169,slow=3.6,SNR=8.1						
TORD	Torodi Ar. Bea	169.05	194		PKPab	15 12 29.6	-0.2

NOU 06 15:10:30.5, 12°.43S×166°.93E, h117^{km}, MLv4.9/13, Santa Cruz Islands, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	3.01	175	P	Pn	15 11 16.7	-0.2
DVP	Devils Point	5.40	167	P	Pn	15 11 48.5	-0.3
KOUNC	Koumac, New Ca	8.46	197	P	Pn	15 12 30.1	-0.2
MARNC	Mare, Loyalty	9.06	173	P	Pn	15 12 38.3	0.0
	0.4nm,1.3s						
YATNC	Mamie plateau,	9.58	180	P	Pn	15 12 45.2	-0.1
DZM	Mont Dzumac	9.60	183	P	Pn	15 12 46.0	+0.3
NOUC	Port Laguerre	9.64	183	P	Pn	15 12 45.9	-0.2
OUENC	Ouen Island, N	9.93	180	P	Pn	15 12 50.5	+0.4
PINNC	Pines Island,	10.14	177	P	Pn	15 12 52.7	-0.2

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*IDC **06** 15:14:05.9±2.9, 6°.24S×130°.07E, h107^{km}±39^{km}, mb3.1/1, mb1 3.0/5, mb1mx2.7/23, mbtmp3.3/5, Error ellipse: s-maj=74.3km s-min=21.9km az=89.0*

ISC 06 15:14:03.7±0.9**, 6°.33S**±0°.06×**130°.8E**±0°.3**, h100^{km}, n5, σ3^{s}.14**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.44	4	P	Pn	15 15 25.0	+2.5
	1.3nm,0.3s,baz=244,slow=22,SNR=20						
SIJI				S	Sn	15 16 20.7	-3.1
	2.6nm,0.3s,baz=125,slow=23,SNR=18						
FITZ	Fitzroy Crossi	12.75	203	P	Pn	15 17 01.3	-0.1
	0.1nm,0.3s,baz=25,slow=9.8,SNR=20						
WRA	Warramunga Arr	13.95	166	P	P	15 17 22.1	+0.2
	0.1nm,0.3s,baz=342,slow=11,SNR=1.9						
WRA				S	Sn	15 19 47.1	-3.7
	0.3nm,0.3s,baz=344,slow=19,SNR=7.5						
ASAR	Alice Springs	17.49	171	P	Pn	15 18 05.2	+3.9
	0.0nm,0.3s,baz=343,slow=10.0,SNR=8.2						
ASAR				S	Sn	15 21 14.9	-1.2
	0.1nm,0.3s,baz=356,slow=28,SNR=2.7						
MKAR	Makanchi Array	68.13	326	P	P	15 24 51.4	-1.6
	0.3nm,0.6s,baz=120,slow=7.6,SNR=5.2						

IDC 06 15:38:09.9±3.3**, 5°.52S**×**152°.17E, h0^{km}, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.4**/46**, mbtmp3.8**/4**, ML1.7**/1**, Error ellipse: s-maj=136.4km s-min=42.9km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.29	232	Pn	Pn	15 39 44.9	+0.8
	1.1nm,0.3s,baz=35,slow=15,SNR=2.6						
PMG				Sn	Sn	15 40 49.7	-7.1
	1.0nm,0.3s,baz=135,slow=19,SNR=2.4						
WRA	Warramunga Arr	22.50	229	P	P	15 43 11.5	+0.1
	0.9nm,0.8s,baz=51,slow=9.5,SNR=6.2						
ASAR	Alice Springs	25.20	222	P	P	15 43 37.0	-0.5
	1.2nm,0.8s,baz=53,slow=10,SNR=12						
FITZ	Fitzroy Crossi	28.77	242	P	P	15 44 09.7	0.0
	1.6nm,0.5s,baz=70,slow=9.0,SNR=11						
TORD	Torodi Ar. Bea	149.93	287	PKPbc	PKPbc	15 58 03.2	-0.2
	0.5nm,0.7s,baz=59,slow=2.8,SNR=3.4						

IDC 06 15:40:45.0±1.7**, 12°.20N**×**144°.69E, h0^{km}, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.2**/49**, mbtmp3.5**/3**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.4**/37**, Error ellipse: s-maj=78.3km s-min=17.3km az=97.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.39	7	Pn	Pb	15 41 12.5	+0.7
	41nm,0.3s,baz=207,slow=3.3,SNR=14						
GUMO				Sn	Sn	15 41 30.5	-0.2
	60nm,0.3s,baz=342,slow=20,SNR=4.0						
JCJ	Chichijima	15.00	351	LR	LR	15 48 48.8	
	comp=Z,48nm,18.3s,baz=22,slow=32						
WRA	Warramunga Arr	33.53	198	P	P	15 47 26.7	+0.1
	0.7nm,0.7s,baz=24,slow=9.8,SNR=7.1						
ASAR	Alice Springs	37.18	196	P	P	15 47 58.0	-0.1
	0.5nm,0.6s,baz=16,slow=9.9,SNR=11						
MKAR	Makanchi Array	62.36	317	P	P	15 51 09.1	-0.5
	0.2nm,0.5s,baz=91,slow=10.0,SNR=3.8						

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*IDC **06** 16:06:32.1±5.4, 36°.96N×71°.53E, h86^{km}±32^{km}, mb3.6/4, mb1 3.6/10, mb1mx3.2/48, mbtmp3.8/10, MS3.9/2, Ms1 3.9/2, ms1mx2.8/55, Error ellipse: s-maj=69.7km s-min=27.8km az=144.0*

*SOME **06** 16:06:34.0, 38°.42N×71°.87E, h5^{km}*

*NEIC **06** 16:06:36.6±1.5, 37°.31N±0°.06×71°.51E±0°.07, h110^{km}±4^{km}, mb4.5/11, Error ellipse: s-maj=8.8km s-min=7.4km az=137.0*

*NNC **06** 16:06:42.3±7.5, 37°.92N×70°.96E, h39^{km}±443^{km}, mb4.1, mpv3.6, Error ellipse: s-maj=159.8km s-min=29.6km az=148.0*

ISC 06 16:06:34.6±0.5**, 37°.24N**±0°.05×**71°.50E**±0°.05**, h100^{km}, n69, σ2^{s}.45**/74**, mb4.4**/10**, 4C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	1.99	332		Pn	16 07 09.5	+2.3
DRK	Karamyk	2.25	6		Pn	16 07 13.2	+2.5
CHGR	Chuyangaron	2.33	308		Pn	16 07 13.2	+1.7
BTK	Batken	2.87	349		Pn	16 07 21.5	+2.9
KBL	Kabul	3.35	217	Pn	Pn	16 07 28.5	+3.3
NIL	Nilore	3.86	158	Pn	Pn	16 07 34.4	+2.5
KSH	Kashi	4.19	56	Pn	Pn	16 07 33.6	-2.7
KSH				Sn	Sn	16 08 16.0	-8.2
KSH				pmax	pmax		
	comp=Z,29nm,0.6s						
KSH				smax	smax		
	comp=N,370nm,0.7s						
KSH				smax	smax		
	comp=E,130nm,0.7s						
TAS	Tashkent	4.42	338	Pn	Pn	16 07 41.1	+1.6
AML	Almayashu	5.17	18	P	Pn	16 07 51.3	+1.4
	SNR=175						
CHM	Chimkent	5.28	345	*e*P	Pn	16 07 53.9	+2.9
	comp=E,5.7nm,1.2s						
CHM				*e*S	Sn	16 08 51.2	+0.6
	comp=E,96nm,0.3s						
UCH	Uchtor	5.50	24	P	Pn	16 07 56.1	+1.7
	SNR=13						
DZA	Taraz	5.65	359	*e*P	Pn	16 07 58.2	+2.2
	comp=E,128nm,0.2s						
DZA				*e*S	Sn	16 08 58.5	-1.0
	comp=E,124nm,0.3s						
MRKS	Merke	5.66	13	*e*P	Pn	16 07 58.0	+1.8
	comp=E,9.0nm,0.3s						
MRKS				*e*S	Sn	16 08 58.4	-1.5
	comp=E,36nm,0.4s						
EKS2	Erkin-Say	5.69	17	P	Pn	16 07 58.7	+2.0
	SNR=23						
AAK	Ala-Archa	5.86	22	P	Pn	16 08 01.0	+1.9
	comp=E,2.0nm,0.3s,baz=186,slow=6.4,SNR=30						
AAK				S	Sn	16 09 04.2	-0.8
	comp=E,2.4nm,0.3s,baz=351,slow=23,SNR=22						
AAK	Ala-Archa	5.86	22	P	Pn	16 08 01.0	+1.9
	SNR=8.4						
AAK	Ala-Archa	5.86	22	P	Pn	16 08 00.9	+1.8
	comp=E,3.0nm,0.5s						
AAK				S	Sn	16 09 03.1	-1.9
	comp=E,6.6nm,0.3s						
AAK	Ala-Archa	5.86	22	Pn	Pn	16 08 00.3	+1.3
KKAR	Karatay Array	5.91	353	Pn	Pn	16 08 00.6	+1.1
BOOM	Boomskoye usch	6.26	32	Pn	Pn	16 08 05.4	+1.0
CHMS	Chumysh	6.27	22	P	Pn	16 08 06.1	+1.6
	SNR=7.3						
DHRM	DHARAMSHALA	6.35	140	*e*P	Pn	16 08 05.8	0.0
DHRM				*e*S	Sn	16 09 11.9	-5.2
DHRM				IAML		16 09 14.8	
	comp=N,168nm,0.4s						
DHRM				IAML		16 09 15.1	
	comp=E,164nm,0.3s						
USP	Ospenovka	6.44	20	P	Pn	16 08 07.9	+1.0
	SNR=9.6						
TKM2	Tokmak 2	6.49	28	⇓P	Pn	16 08 09.1	+1.5
	comp=E,7.9nm,0.9s						
TKM2				⇑S	Sn	16 09 19.1	-1.1
	comp=E,4.5nm,0.9s						
KST	Kastek	6.73	29	*e*P	Pn	16 08 14.8	+4.0
	comp=E,1.7nm,0.2s						
KST				*e*S	Sn	16 09 27.4	+1.4
	comp=E,3.7nm,0.2s						
DGS	Degeres	6.83	27	*e*P	Pn	16 08 19.6	+7.5
	comp=E,1.9nm,0.4s						
DGS				*e*S	Sn	16 09 35.0	+6.7
	comp=E,4.2nm,0.7s						
SMLA	Simla	7.69	141	*e*P	Pn	16 08 23.8	0.0
SMLA				*e*S	Sn	16 09 41.2	-8.1
SMLA				IAML		16 09 46.5	
	comp=N,63nm,0.4s						
SMLA				IAML		16 09 47.6	
	comp=E,95nm,0.5s						
GEYT	Alibeck	10.65	278	P	Pn	16 09 02.6	-1.4
	comp=E,0.6nm,0.3s,baz=123,slow=16,SNR=2.1						
GEYT				S	Sn	16 10 56.4	-4.8
	comp=E,3.3nm,0.3s,baz=169,slow=33,SNR=9.7						
GEYT	Alibeck	10.65	278	Pn	Pn	16 09 04.3	+0.3
GYA0B	ALIBECK ARRAY	10.65	278	⇑P	Pn	16 09 07.7	+3.7
GYA0B				⇓S	Sn	16 10 58.0	-3.2
GYA0B	ALIBECK ARRAY	10.65	278	Pn	Pn	16 09 04.6	+0.6
PYUN	Piuthan	13.28	130	*e*P	Pn	16 09 34.8	-4.5
	comp=E,6.9nm,0.3s						
DANN	Dangsing	13.59	127	*e*P	Pn	16 09 39.5	-3.9
	comp=E,8.7nm,0.3s						
KOLN	Koldanda	13.89	129	*e*P	Pn	16 09 42.5	-4.8
	comp=E,9.9nm,0.4s						
KURBB	Kurchatov Arra	14.29	18	P	Pn	16 09 54.8	+2.7
	comp=E,0.0nm,0.3s,baz=206,slow=10,SNR=4.6						
GKN	Gorkha	14.39	126	*e*P	Pn	16 09 49.7	-3.9
	comp=E,21nm,0.6s						
KURK	Kurchatov	14.40	18	P	Pn	16 09 54.8	+1.3
AB31	Akbulak array	14.65	329	⇓P	Pn	16 09 55.0	-1.6
	comp=E,0.7nm,0.3s,baz=150,slow=12,SNR=69						
AB31				⇑S	Sn	16 12 28.3	-10
	comp=E,4.1nm,0.6s,baz=151,slow=21,SNR=12						
ABKAR	Akbulak array	14.65	329	Pn	Pn	16 09 55.2	-1.4
BHPL	Bhopal	14.86	158	*e*P	Pn	16 10 03.3	+3.8
BHPL				IAmb	IAmb	16 10 03.8	
	comp=Z,8.1nm,0.6s						
BHPL				*e*S	Sn	16 12 32.9	-11
PKIN	Phulchoki	15.17	125	*e*P	Pn	16 09 59.9	-3.8
	comp=Z,9.8nm,0.4s						
PKI	Pulchoki	15.18	125	*e*P	Pn	16 10 00.6	-3.3
	comp=Z,3.1nm,0.3s						
BVAR	Borovoye Array	15.80	358	P	Pn	16 10 11.0	-0.2
	comp=Z,0.2nm,0.3s,baz=198,slow=18,SNR=1.8						
AKTO	Aktyubinsk	16.35	328	P	Pn	16 10 17.7	-0.3
	comp=Z,0.8nm,0.3s,baz=140,slow=11,SNR=11						
AKTO	Aktyubinsk	16.35	328	⇓P	Pn	16 10 18.5	+0.5
	comp=Z,3.4nm,0.6s						
AKTO				⇑S	Sn	16 13 10.5	-8.6
	comp=Z,4.3nm,0.8s						
RAMN	Ramite	16.38	124	*e*P	Pn	16 10 14.8	-4.0
	comp=Z,9.3nm,0.4s						
TAPN	Taplejung	16.86	121	*e*P	Pn	16 10 21.4	-3.3
	comp=Z,11nm,0.5s						
ODAN	Odare	16.96	123	*e*P	Pn	16 10 22.5	-3.4
ZALV	Zalesovo Beam	19.08	25	P	P	16 10 48.9	0.0
	comp=Z,0.2nm,0.3s,baz=205,slow=9.9,SNR=2.9						
ZALV	Zalesovo Beam	19.08	25	P	P	16 10 49.9	+1.0
PALK	Pallekele	30.98	162	LR	LR	16 24 13.6	
	comp=Z,406nm,20.1s,baz=242,slow=35						
BURAR	Bucovina Array	35.23	302	P	P	16 13 21.2	+2.0
FINES	FINESS Array B	37.10	325	P	P	16 13 36.3	+1.4
	comp=Z,4.7nm,1.0s,baz=103,slow=10,SNR=1.7						
KEV	Kevo	40.27	338	P	P	16 14 02.3	+1.1
KEV				IAmb	IAmb	16 14 27.7	
	comp=Z,27nm,1.2s						
ARCES	ARCESS Array B	40.62	337	P	P	16 14 05.5	+1.4
	comp=Z,4.7nm,1.1s,baz=114,slow=9.4,SNR=9.6						
ARCES	ARCESS Array B	40.62	337	P	P	16 14 05.2	+1.0
ARCES				IAmb	IAmb	16 14 11.3	
	comp=Z,3.9nm,0.9s						
DLV	T Lat	41.60	118	P	P	16 14 14.3	+1.2
DLV				IAmb	IAmb	16 14 23.9	
	comp=Z,84nm,1.5s						
NB201	NORSAR Array S	44.00	323	P	P	16 14 32.4	+0.7
NB2	NORSAR Subarra	44.04	323	P	P	16 14 32.6	+0.6
	comp=Z,0.5nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.04	323	P	P	16 14 33.0	+1.1
	comp=Z,1.7nm,0.9s,baz=95,slow=7.8,SNR=3.5						
NC204	NORSAR Array S	44.27	323	P	P	16 14 34.8	+0.9
TORD	Torodi Ar. Bea	66.14	269	P	P	16 17 10.4	-1.1
	comp=Z,0.3nm,0.5s,baz=37,slow=4.8,SNR=2.4						
TOLK	Toolik Lake Re	70.11	15	P	P	16 17 35.7	+0.1
TOLK				IAmb	IAmb	16 17 59.1	
	comp=Z,5.1nm,1.4s						
IMAR	Indian Mountai	71.35	18	P	P	16 17 42.7	-0.4
INK	Inuvik	73.11	9	P	P	16 17 54.0	+0.5
PPLA	Purkeypile	74.26	19	P	P	16 18 00.2	-0.3
PPLA				IAmb	IAmb	16 18 17.6	
	comp=Z,12nm,1.3s						
MCK	McKinley	74.38	17	P	P	16 18 01.4	+0.4
MCK				IAmb	IAmb	16 18 30.1	
	comp=Z,8.5nm,1.4s						
DBIC	Dimbokro	75.14	267	LR	LR	16 58 27.3	
	comp=Z,43nm,18.8s,baz=18,slow=42						
KNRA	Kununurra	75.29	123	P	P	16 18 07.2	+0.4
KNRA				IAmb	IAmb	16 18 29.7	
	comp=Z,9.6nm,1.4s						

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*MOS **06** 16:24:37.5±1.0, 42°.38N×15°.14E, h12^{km}, mb4.4/10, Error ellipse: s-maj=6.9km s-min=3.7km az=93.9*

*IDC **06** 16:24:37.7±0.7, 42°.37N×15°.11E, h0^{km}, mb4.0/17, mb1 4.1/27, mb1mx3.9/57, mbtmp4.0/27, ML3.7/10, MS3.8/27, Ms1 3.8/27, ms1mx3.6/56, Error ellipse: s-maj=13.5km s-min=11.6km az=38.0*

*LDG **06** 16:24:38.2±0.1, 42°.37N×15°.13E, h10^{km}, Ml4.4/36, Error ellipse: s-maj=2.9km s-min=1.6km az=21.0*

*ROM **06** 16:24:38.7±0.1, 42°.401N±0°.003×15°.239E±0°.004, h12^{km}, ML4.3/126, Mw4.4, Error ellipse: s-maj=0.3km s-min=0.1km az=209.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$4.87; M$_{\theta\theta}$-0.98; M$_{\phi\phi}$-3.89; M$_{r\theta}$-0.46; M$_{\theta\phi}$-1.69; M$_{\phi r}$-0.71; Fault plane solution: M$_0$4.84139×10^{15} NP1:φ$_s$23.00000°, δ40.00000°, λ88.00000°. NP2:φ$_s$206.00000°, δ50.00000°, λ92.00000°.*

*PRU **06** 16:24:38.6±0.0, 42°.44N×15°.00E, h0^{km}, M4.7*

*PDG **06** 16:24:38.8±0.6, 42°.37N×15°.18E, h13^{km}, MD4.5/1, ML4.5/11, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

*NEIC **06** 16:24:38.7±1.2, 42°.36N±0°.04×15°.21E±0°.06, h4^{km}±2^{km}, mb4.7/61, Mwr4.4/45, ML4.4(VIE), Mwr4.6(ROM), Mwr4.5(GFZ), Error ellipse: s-maj=7.1km s-min=5.1km az=50.0*

*NEIC **06** 16:24:39.1, 42°.34N×15°.22E, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$5.15; M$_{\theta\theta}$-2.22; M$_{\phi\phi}$-2.93; M$_{r\theta}$-0.27; M$_{\theta\phi}$-1.09; M$_{\phi r}$-3.55; Fault plane solution: M$_0$5.82000×10^{15} NP1:φ$_s$197.76000°, δ64.14000°, λ80.05000°. NP2:φ$_s$39.65000°, δ27.59000°, λ109.61000°. Principal axes: T 6.4901, Plg69.0000°, Azm88.0000°; N -1.7324, Plg9.0000°, Azm202.0000°; P -4.7577, Plg19.0000°, Azm295.0000°;*

*MED_RC **06** 16:24:40.0±0.2, 42°.36N×15°.10E, h10^{km}, MW4.6/26, Moment Tensor Solution.Mantle waves: s26,c49; Duration: 1^{s}.0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.76±.03; M$_{\theta\theta}$-0.16±.03; M$_{\phi\phi}$-0.60±.02; M$_{r\theta}$0.33±.12; M$_{\theta\phi}$-0.34±.02; M$_{\phi r}$-0.41±.11; Best double couple: M$_0$0.92000×10^{16} NP1:φ$_s$50.00000°, δ42.00000°, λ129.00000°. NP2:φ$_s$183.00000°, δ59.00000°, λ60.00000°. Principal axes: T 1.0200, Plg63.0000°, Azm42.0000°; N -0.2000, Plg25.0000°, Azm199.0000°; P -0.8200, Plg9.0000°, Azm293.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

ISC 06 16:24:39.9±0.9**, 42°.34N**±0°.02×**15°.14E**±0°.02**, h16^{km}**±5^{km}**, n616, σ1^{s}.89**/714**, mb4.6**/51**, MS3.8**/15**, 34C-34D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TREM	Isole Tremiti	0.35	128	P	Pg	16 24 45.7	-1.5
TREM				S	Sg	16 24 51.4	-0.7
TREM				AML	AML		
	comp=E,1280μm,0.7s						
TREM				AML	AML		
	comp=N,27850μm,0.6s						
TREM				AML	AML		
	comp=E,1275μm,0.7s						
TREM				AML	AML		
	comp=N,27800μm,0.6s						
FRES	Fresagrandinar	0.51	224	P	Pg	16 24 49.1	-1.0
FRES				S	Sb	16 24 58.4	+0.8
FRES				AML	AML		
	comp=E,17500μm,0.8s						
FRES				AML	AML		
	comp=N,10845μm,0.8s						
CAFR	Castel Frentan	0.60	259	P	Pg	16 24 51.5	-0.3
CAFR				S	Sb	16 25 00.9	+0.7
CAFR				AML	AML		
	comp=E,33850μm,0.6s						
CAFR				AML	AML		
	comp=N,45650μm,0.5s						
CAFR				AML	AML		
	comp=E,34050μm,0.8s						
CIGN	Sant’Elia a Pi	0.71	194	P	Pb	16 24 54.2	+0.3
CIGN				AML	AML		
	comp=N,18850μm,0.6s						
CIGN				AML	AML		
	comp=E,13500μm,0.9s						
TRIV	Trivento	0.72	218	P	Pg	16 24 53.7	-0.4
TRIV				S	Sb	16 25 05.6	+1.7
TRIV				AML	AML		
	comp=E,28200μm,0.8s						
TRIV				AML	AML		
	comp=E,28550μm,0.8s						
TRIV				AML	AML		
	comp=N,18600μm,0.7s						
TRIV				AML	AML		
	comp=N,20350μm,0.7s						
TRIV				AML	AML		
	comp=E,28500μm,0.8s						
SGRT	San Giovanni R	0.74	142	P	Pg	16 24 52.7	-1.7
SGRT				AML	AML		
	comp=N,25850μm,1.4s						
SGRT				AML	AML		
	comp=E,43600μm,0.6s						
SGRT	San Giovanni R	0.74	142	Pg	Pg	16 24 52.2	-2.2
SGRT				Sg	Sg	16 25 02.1	-2.0
LPEL	Lama dei Pelig	0.77	248	P	Pg	16 24 54.0	-1.0
LPEL				S	Sn	16 25 07.9	+0.4
LPEL				AML	AML		
	comp=E,42400μm,0.3s						
LPEL				AML	AML		
	comp=N,27850μm,0.9s						
GATE	Gambatesa	0.85	192	P	Pb	16 24 56.9	+0.7
GATE				S	Sn	16 25 09.6	+0.3
GATE				AML	AML		
	comp=E,19050μm,1.6s						
GATE				AML	AML		
	comp=N,20300μm,0.7s						
GATE				AML	AML		
	comp=E,10910μm,0.7s						
GATE				AML	AML		
	comp=E,19050μm,1.6s						
GATE				AML	AML		
	comp=N,20300μm,0.7s						
GATE				AML	AML		
	comp=N,20750μm,0.7s						
MSAG	Monte S. Angel	0.85	137	P	Pg	16 24 54.8	-1.6
MSAG				AML	AML		
	comp=N,58350μm,0.5s						
MSAG				AML	AML		
	comp=E,63100μm,0.9s						
MSAG				AML	AML		
	comp=N,57700μm,0.5s						
MSAG				AML	AML		
	comp=E,61150μm,0.9s						
BSSO	Busso	0.89	207	P	Pg	16 24 57.4	+0.1
BSSO				AML	AML		
	comp=E,8575μm,0.9s						
BSSO				AML	AML		
	comp=N,8165μm,0.6s						
BSSO				AML	AML		
	comp=E,19100μm,0.9s						
BSSO				AML	AML		
	comp=N,22250μm,0.6s						
MIDA	Miranda	0.96	224	P	Pb	16 24 56.8	-1.5
MIDA				S	Sn	16 25 13.5	+1.3
MIDA				AML	AML		
	comp=E,19500μm,0.4s						
MIDA				AML	AML		
	comp=N,19100μm,0.6s						
MIDA				AML	AML		
	comp=E,19850μm,0.4s						
MIDA				AML	AML		
	comp=N,19550μm,0.6s						
MIDA				AML	AML		
	comp=N,19050μm,0.6s						
VCEL	Villa Celiera	0.96	274	P	Pg	16 24 57.2	-1.5
VCEL				AML	AML		
	comp=N,31350μm,0.7s						
VCEL				AML	AML		
	comp=E,48900μm,0.7s						
VCEL				AML	AML		
	comp=N,31400μm,0.7s						
MOCO	Biccari - m.te	0.97	179	P	Pb	16 24 58.0	-0.4
MOCO				AML	AML		
	comp=E,11350μm,0.7s						
MOCO				AML	AML		
	comp=E,11300μm,0.7s						
MOCO				AML	AML		
	comp=N,6990μm,0.7s						
MOCO				AML	AML		
	comp=E,11400μm,0.7s						
MOCO				AML	AML		
	comp=N,7180μm,0.7s						
RNI2	Rionero Sannit	0.97	229	P	Pb	16 24 57.7	-0.8
RNI2				AML	AML		
	comp=N,14600μm,1.1s						
RNI2				AML	AML		
	comp=N,14650μm,1.1s						
RNI2				AML	AML		
	comp=E,26750μm,0.7s						
RNI2				AML	AML		
	comp=N,14850μm,1.1s						
RNI2				AML	AML		
	comp=E,27050μm,0.7s						
SACR	S. Croce Del S	1.00	199	P	Pb	16 24 58.7	-0.2
SACR				AML	AML		
	comp=N,15050μm,0.9s						
SACR				AML	AML		
	comp=E,9430μm,1.0s						
T0110	Collepietro	1.02	264	P	Pb	16 24 59.0	-0.2
T0110				S	Sn	16 25 14.8	+1.2
T0110				AML	AML		
	comp=E,32350μm,1.1s						
T0110				AML	AML		
	comp=N,31200μm,1.3s						
TRTR	Tortoreto Alta	1.02	298	P	Pn	16 24 59.6	+0.1
TRTR				AML	AML		
	comp=E,91200μm,0.7s						
TRTR				AML	AML		
	comp=N,74350μm,0.8s						
TRTR				AML	AML		
	comp=E,91250μm,0.7s						
PTRJ	Pietraroja	1.08	205	P	Pb	16 25 00.5	+0.2
SGG	Gregorio Mates	1.11	211	P	Pb	16 25 00.2	-0.6
CERA	Filignano	1.12	229	P	Pb	16 25 00.8	-0.1
CERA				AML	AML		
	comp=E,18850μm,0.7s						
CERA				AML	AML		
	comp=E,18900μm,0.7s						
CERA				AML	AML		
	comp=E,19300μm,0.6s						
CERA				AML	AML		
	comp=N,21600μm,0.6s						
CERA				AML	AML		
	comp=N,20950μm,0.6s						
BIOG	Biogem	1.14	180	P	Pb	16 25 01.5	+0.2
GUMA	Gualdo di Mace	1.14	309	P	Pg	16 25 06.9	+4.9
GUMA				AML	AML		
	comp=N,24400μm,1.1s						
GUMA				AML	AML		
	comp=N,29950μm,1.1s						
GUMA				AML	AML		
	comp=E,26050μm,0.5s						
GUMA				AML	AML		
	comp=E,24900μm,0.5s						
PSB1	Pescosannita	1.15	193	P	Pb	16 25 01.4	+0.1
PSB1				AML	AML		
	comp=E,9240μm,1.2s						
PSB1				AML	AML		
	comp=N,8040μm,1.0s						
PSB1				AML	AML		
	comp=E,8975μm,1.2s						
PSB1				AML	AML		
	comp=N,8540μm,1.0s						
VAGA	Valle Agricola	1.15	216	P	Pb	16 25 01.1	-0.3
VAGA				AML	AML		

	comp=E,16050µm,1.0s						
VAGA				AML	AML		
	comp=E,16550µm,0.9s						
VAGA				AML	AML		
	comp=N,16850µm,1.2s						
VAGA				AML	AML		
	comp=N,17350µm,1.2s						
FAGN	**Fagnano**	**1.16**	**267**	P	**Pb**	**16 25 01.6**	**0.0**
FAGN				AML	AML		
	comp=N,76300µm,0.5s						
FAGN				AML	AML		
	comp=E,86600µm,0.5s						
GIGS	**Gran Sasso**	**1.17**	**276**	P	**Pb**	**16 25 00.5**	**-1.3**
GIGS				AML	AML		
	comp=N,6585µm,0.8s						
GIGS				AML	AML		
	comp=E,7655µm,0.9s						
TERO	**Teramo**	**1.17**	**284**	P	**Pb**	**16 25 00.8**	**-1.1**
TERO				S	**Sg**	**16 25 17.4**	**-0.4**
SGTA	**Sant Agata di**	**1.22**	**172**	P	**Pn**	**16 25 02.5**	**+0.1**
VITU	**Vitulano (BN)**	**1.22**	**198**	P	**Pn**	**16 25 02.3**	**-0.1**
VITU				AML	AML		
	comp=N,14200µm,0.4s						
VITU				AML	AML		
	comp=E,10645µm,0.7s						
MRB1	**Monte Rocchett**	**1.22**	**186**	P	**Pn**	**16 25 02.8**	**+0.4**
MRB1				AML	AML		
	comp=N,16500µm,0.7s						
MRB1				AML	AML		
	comp=N,16150µm,0.7s						
MRB1				AML	AML		
	comp=E,13350µm,1.5s						
MRB1				AML	AML		
	comp=E,13350µm,1.5s						
VVLD	**Villa Vallelon**	**1.23**	**248**	P	**Pn**	**16 25 00.8**	**-1.7**
VVLD				S	**Sg**	**16 25 20.8**	**+1.3**
VVLD				AML	AML		
	comp=E,8190µm,0.6s						
VVLD				AML	AML		
	comp=N,6770µm,0.5s						
OFFI	**Offida**	**1.23**	**299**	P	**Pg**	**16 25 03.2**	**-0.3**
OFFI				AML	AML		
	comp=N,54750µm,0.7s						
OFFI				AML	AML		
	comp=E,56100µm,0.8s						
CAPA	**Cerignola FG**	**1.29**	**157**	P	**Pn**	**16 25 03.0**	**-0.2**
CAPA				AML	AML		
	comp=E,17100µm,1.3s						
CAPA				AML	AML		
	comp=N,15300µm,1.0s						
AQU	**L'Aquila**	**1.29**	**271**	P	**Pn**	**16 25 03.2**	**-0.1**
AQU	**L'Aquila**	**1.29**	**271**	*e*Pn	**Pn**	**16 25 02.4**	**-0.9**
AQU	**L'Aquila**	**1.29**	**271**	P	**Pn**	**16 25 03.2**	**-0.1**
AQU				AML	AML		
	comp=N,19800µm,1.0s						
AQU				AML	AML		
	comp=E,21950µm,0.8s						
AQU				AML	AML		
	comp=E,22000µm,0.8s						
AQU				AML	AML		
	comp=N,19100µm,1.1s						
AQU	**L'Aquila**	**1.29**	**271**		**Pn**	**16 25 03.2**	**-0.1**
CAMP	**Campotosto**	**1.30**	**279**	P	**Pn**	**16 25 02.8**	**-0.8**
CAMP				AML	AML		
	comp=E,10800µm,0.8s						
CAMP				AML	AML		
	comp=N,10275µm,0.7s						
CAFE	**Carife**	**1.31**	**177**	P	**Pn**	**16 25 03.5**	**-0.2**
CAFE				AML	AML		
	comp=N,4960µm,1.4s						
CAFE				AML	AML		
	comp=E,6095µm,1.4s						
CAFE				AML	AML		
	comp=N,5075µm,1.5s						
CAFE				AML	AML		
	comp=E,6120µm,1.4s						
CADA	**Capodarco di F**	**1.33**	**310**	P	**Pb**	**16 25 04.0**	**-0.5**
PTQR	**Pietraquaria**	**1.33**	**257**	P	**Pn**	**16 25 04.3**	**+0.4**
PTQR				AML	AML		
	comp=N,8610µm,0.6s						
PTQR				AML	AML		
	comp=E,5945µm,0.6s						
PIGN	**Pignataro Magg**	**1.35**	**213**	P	**Pn**	**16 25 04.7**	**+0.6**
PIGN				AML	AML		
	comp=E,5530µm,1.2s						
PIGN				AML	AML		
	comp=N,5275µm,0.8s						
PIGN				AML	AML		
	comp=N,5375µm,0.8s						
PIGN				AML	AML		
	comp=E,5615µm,1.2s						
PIGN				AML	AML		
	comp=N,5275µm,0.8s						
LSTV	**Lastovo**	**1.36**	**71**	*e*Pn	**Pn**	**16 25 03.8**	**-0.5**
ZIRJ	**Zirje**	**1.36**	**16**	*e*Pn	**Pn**	**16 25 03.0**	**-1.3**
ZIRJ				Sn	**Sb**	**16 25 21.5**	**-0.7**
SMA1	**SAN MARTINO**	**1.37**	**283**	P	**Pn**	**16 25 04.4**	**-0.1**
SMA1				AML	AML		
	comp=N,15550µm,0.7s						
SMA1				AML	AML		
	comp=E,23200µm,0.6s						
PAOL	**Paolisi**	**1.38**	**198**	⇑P	**Pn**	**16 25 05.0**	**+0.5**
PAOL				AML	AML		
	comp=N,5060µm,0.9s						
PAOL				AML	AML		
	comp=N,5020µm,0.9s						
PAOL				AML	AML		
	comp=E,4775µm,1.0s						
PAOL				AML	AML		
	comp=E,4565µm,1.0s						
PAOL				AML	AML		
	comp=N,5055µm,0.9s						
PAOL	**Paolisi**	**1.38**	**198**		**Pn**	**16 25 05.1**	**+0.5**
SNAL	**S. Angelo Dei**	**1.42**	**178**	P	**Pn**	**16 25 05.0**	**0.0**
SNAL				AML	AML		
	comp=E,6475µm,0.9s						
SNAL				AML	AML		
	comp=N,9435µm,0.9s						
VULT	**Monte Vulture**	**1.43**	**165**	P	**Pn**	**16 25 05.3**	**0.0**
VULT				AML	AML		
	comp=E,8320µm,0.9s						
VULT				AML	AML		
	comp=N,11350µm,1.0s						
VULT				AML	AML		
	comp=E,8325µm,0.9s						
VULT				AML	AML		
	comp=N,11375µm,1.0s						
VULT				AML	AML		
	comp=N,11650µm,1.0s						
VULT				AML	AML		
	comp=E,8405µm,0.9s						
RM33	**Pellescritta (**	**1.44**	**277**	P	**Pn**	**16 25 05.5**	**+0.1**
RM33				AML	AML		
	comp=E,14950µm,0.7s						
RM33				AML	AML		
	comp=N,14750µm,0.9s						
RM33				AML	AML		
	comp=N,15050µm,0.9s						
RM33				AML	AML		
	comp=N,14800µm,0.9s						
RM33				AML	AML		
	comp=E,15000µm,0.7s						
RM33				AML	AML		
	comp=E,15000µm,0.7s						
CIMA	**Civitanova Mar**	**1.45**	**312**	P	**Pb**	**16 25 06.3**	**-0.2**
MNTP	**Montappone**	**1.47**	**303**	P	**Pn**	**16 25 06.0**	**+0.2**
GUAR	**Guarcino**	**1.47**	**249**	P	**Pn**	**16 25 06.5**	**+0.7**
GUAR				AML	AML		
	comp=N,7855µm,0.6s						
GUAR				AML	AML		
	comp=E,5860µm,1.3s						
FIAM	**Fiamignano**	**1.50**	**268**	P	**Pb**	**16 25 07.2**	**-0.3**
MRVN	**Minervino Murg**	**1.50**	**148**	P	**Pn**	**16 25 05.8**	**-0.5**
MRVN				AML	AML		
	comp=N,3050µm,1.6s						
MRVN				AML	AML		
	comp=E,3210µm,0.9s						
MODR	**Mondragone**	**1.52**	**219**	P	**Pn**	**16 25 06.7**	**+0.1**
MODR				AML	AML		
	comp=E,5335µm,0.7s						
MODR				AML	AML		
	comp=N,8510µm,0.8s						
PALZ	**Palazzo San Ge**	**1.53**	**156**	P	**Pn**	**16 25 06.5**	**-0.1**
PALZ				AML	AML		
	comp=N,8505µm,1.6s						
PALZ				AML	AML		
	comp=E,11430µm,0.7s						
PP3	**Marolino**	**1.53**	**313**	P	**Pn**	**16 25 07.0**	**+0.5**
PP3				AML	AML		
	comp=N,23050µm,0.6s						
PP3				AML	AML		
	comp=N,23450µm,0.6s						
PP3				AML	AML		
	comp=E,30500µm,0.9s						
PP3				AML	AML		
	comp=E,31750µm,0.9s						
MCRV	**Calabrutti - M**	**1.56**	**179**	P	**Pn**	**16 25 07.1**	**0.0**
MCRV				AML	AML		
	comp=E,6070µm,0.9s						
MCRV				AML	AML		
	comp=N,5185µm,1.4s						
NRCA	**Norcia**	**1.57**	**289**	P	**Pb**	**16 25 08.0**	**-0.7**
NRCA				AML	AML		
	comp=N,12200µm,0.6s						
NRCA				AML	AML		
	comp=E,8885µm,0.7s						
NRCA				AML	AML		
	comp=N,12550µm,0.6s						
NRCA				AML	AML		
	comp=E,8630µm,1.0s						
NRCA	**Norcia**	**1.57**	**289**		**Pb**	**16 25 08.0**	**-0.7**
LNSS	**Leonessa**	**1.58**	**280**	P	**Pn**	**16 25 08.0**	**+0.7**
LNSS				AML	AML		
	comp=N,14500µm,1.0s						
LNSS				AML	AML		
	comp=E,19250µm,0.9s						
MORI	**Morici**	**1.58**	**15**	*i* Pn	**Pn**	**16 25 06.5**	**-0.7**
MORI				Sn	**Sb**	**16 25 27.7**	**-0.8**
MRLC	**Muro Lucano**	**1.61**	**171**	P	**Pn**	**16 25 07.9**	**+0.2**
MRLC				AML	AML		
	comp=N,3510µm,1.2s						
MRLC				AML	AML		
	comp=E,3715µm,0.6s						
MRLC				AML	AML		
	comp=E,3245µm,1.1s						
MRLC				AML	AML		
	comp=N,3575µm,0.6s						
DUGI	**Dugi Otok**	**1.65**	**358**	*e*Pn	**Pn**	**16 25 07.5**	**-0.8**
DUGI				Sn	**Sb**	**16 25 29.4**	**-1.1**
CERT	**Cerreto**	**1.65**	**257**	P	**Pn**	**16 25 09.2**	**+0.9**
CERT				AML	AML		
	comp=E,7245µm,0.5s						
CERT				AML	AML		
	comp=N,5575µm,1.1s						
AOI	**Ancona**	**1.65**	**317**	P	**Pn**	**16 25 07.5**	**-0.9**
ACER	**Acerenza**	**1.67**	**159**	P	**Pn**	**16 25 08.3**	**-0.2**
ACER				AML	AML		
	comp=N,6335µm,0.8s						
ACER				AML	AML		
	comp=E,8435µm,0.5s						
ACER				AML	AML		
	comp=E,8085µm,0.5s						
ACER				AML	AML		
	comp=N,6515µm,0.8s						
MAKA	**Makarska**	**1.67**	**55**	*e*Pn	**Pn**	**16 25 07.8**	**-0.7**
MAKA				Sn	**Sn**	**16 25 29.3**	**-0.4**
CING	**Cingoli**	**1.77**	**306**	P	**Pn**	**16 25 09.9**	**+0.1**
CING				AML	AML		
	comp=N,6955µm,0.7s						
CING				AML	AML		
	comp=E,10850µm,0.7s						
ARRO	**Arrone**	**1.77**	**278**	P	**Pb**	**16 25 11.2**	**-0.9**
ARRO				AML	AML		
	comp=E,4855µm,0.7s						
ARRO				AML	AML		
	comp=N,5000µm,1.0s						
CESI	**CESI - Serrava**	**1.78**	**293**	⇓P	**Pn**	**16 25 10.9**	**+0.8**
CESI				AML	AML		
	comp=E,6955µm,0.8s						
CESI				AML	AML		
	comp=N,4665µm,0.7s						
EL6	**Elcito**	**1.80**	**304**	P	**Pn**	**16 25 10.5**	**+0.2**
EL6				AML	AML		
	comp=E,13700µm,0.9s						
EL6				AML	AML		
	comp=N,22100µm,0.8s						
AMUR	**Altamura**	**1.81**	**142**	P	**Pn**	**16 25 09.9**	**-0.5**
AMUR				AML	AML		
	comp=E,4045µm,0.6s						
AMUR				AML	AML		
	comp=N,4105µm,0.6s						
MTCE	**Montecelio**	**1.81**	**261**	P	**Pn**	**16 25 11.1**	**+0.6**
MTCE				AML	AML		
	comp=N,5320µm,1.0s						
MTCE				AML	AML		
	comp=E,5410µm,0.8s						
LATB	**Latina**	**1.83**	**243**	P	**Pn**	**16 25 11.2**	**+0.5**
LATB				AML	AML		
	comp=N,1095µm,0.8s						
LATB				AML	AML		
	comp=E,1870µm,1.1s						
CDRU	**Civita di Ruta**	**1.85**	**176**	P	**Pn**	**16 25 11.5**	**+0.4**
SNTG	**Esanatoglia**	**1.86**	**300**	P	**Pn**	**16 25 11.4**	**+0.3**
SNTG				AML	AML		
	comp=N,8450µm,0.8s						
SNTG				AML	AML		
	comp=E,6030µm,0.7s						
SNTG				AML	AML		
	comp=E,734µm,0.7s						
SNTG				AML	AML		
	comp=N,997µm,0.7s						
RICI	**Ricice**	**1.86**	**51**	*e*Pn	**Pn**	**16 25 10.8**	**-0.3**
RICI				Sn	**Sn**	**16 25 33.8**	**-0.6**
VIVA	**Pratoni del Vi**	**1.86**	**252**	P	**Pn**	**16 25 12.3**	**+1.1**
VIVA				AML	AML		
	comp=E,9745µm,0.6s						
VIVA				AML	AML		
	comp=N,10600µm,0.6s						
RMP	**Rome, Mte Porz**	**1.89**	**255**	P	**Pn**	**16 25 12.6**	**+1.0**
RMP				AML	AML		
	comp=E,5845µm,1.2s						
RMP				AML	AML		
	comp=N,6825µm,1.0s						
RDP	**Rocca di Papa**	**1.90**	**253**	P	**Pn**	**16 25 12.7**	**+1.0**
RDP				AML	AML		
	comp=N,11100µm,1.0s						
RDP				AML	AML		
	comp=E,8355µm,0.8s						
CESX	**Cesi**	**1.91**	**279**	P	**Pn**	**16 25 12.8**	**+1.0**
CESX				AML	AML		
	comp=N,5440µm,0.6s						
CESX				AML	AML		
	comp=E,5645µm,0.5s						
LAV9	**Lanuvio**	**1.94**	**251**	P	**Pn**	**16 25 13.3**	**+1.1**
LAV9				AML	AML		
	comp=N,9050µm,0.6s						
LAV9				AML	AML		
	comp=E,9455µm,0.8s						
MOMA	**Monte Martano**	**1.95**	**285**	P	**Pn**	**16 25 13.6**	**+1.1**
MOMA				AML	AML		
	comp=E,5900µm,0.7s						
MOMA				AML	AML		
	comp=N,6700µm,0.4s						
MOMA				AML	AML		
	comp=N,6750µm,0.4s						
MOMA				AML	AML		
	comp=E,5935µm,0.7s						
SRES	**S.Oreste - Sor**	**1.96**	**268**	P	**Pn**	**16 25 13.6**	**+1.2**
SRES				AML	AML		
	comp=E,3150µm,0.9s						
SRES				AML	AML		
	comp=N,3240µm,1.2s						
ASSB	**Assisi San Ben**	**1.96**	**292**	P	**Pn**	**16 25 13.7**	**+1.1**
ASSB				AML	AML		
	comp=E,5810µm,0.7s						
ASSB				AML	AML		
	comp=N,5955µm,0.9s						
STON	**Ston**	**1.96**	**73**	*e*Pn	**Pn**	**16 25 12.1**	**-0.4**
STON	**Ston**	**1.96**	**73**	*e*Pn	**Pn**	**16 25 12.0**	**-0.4**
STON	**Ston**	**1.96**	**73**	P	**Pn**	**16 25 11.8**	**-0.7**
STON				AML	AML		
	comp=E,2135µm,0.8s						
STON				AML	AML		
	comp=N,3005µm,0.8s						
ARVD	**Arcevia**	**1.99**	**306**	P	**Pn**	**16 25 13.0**	**+0.1**
ARVD				AML	AML		
	comp=N,3965µm,0.8s						
ARVD				AML	AML		
	comp=E,4870µm,0.8s						
MIGL	**Miglionico**	**1.99**	**150**	P	**Pn**	**16 25 12.9**	**-0.1**
MIGL				AML	AML		
	comp=N,12800µm,1.3s						
MIGL				AML	AML		
	comp=E,10405µm,0.7s						
FOSV	**Fossato di Vic**	**1.99**	**299**	P	**Pn**	**16 25 13.3**	**+0.3**
FOSV				AML	AML		
	comp=E,7845µm,0.7s						
FOSV				AML	AML		
	comp=N,8810µm,0.8s						
VENT	**Ventotene**	**2.01**	**220**	P	**Pn**	**16 25 13.8**	**+0.6**
VENT				AML	AML		
	comp=N,4225µm,0.9s						
VENT				AML	AML		
	comp=E,2780µm,0.8s						
ATCC	**AVT- Casa Cast**	**2.02**	**295**	P	**Pn**	**16 25 14.4**	**+1.0**
CMPR	**Campora**	**2.03**	**176**	P	**Pn**	**16 25 14.1**	**+0.7**
CMPR				AML	AML		
	comp=N,1720µm,0.8s						
CMPR				AML	AML		
	comp=E,2165µm,1.0s						
COR1	**Corinaldo**	**2.03**	**310**	P	**Pn**	**16 25 13.8**	**+0.3**
COR1				AML	AML		
	comp=E,8875µm,1.6s						
COR1				AML	AML		
	comp=N,12815µm,0.7s						
COR1				AML	AML		
	comp=E,15150µm,0.7s						
COR1				AML	AML		
	comp=N,15400µm,0.9s						
SSFR	**Montelago di S**	**2.05**	**303**	P	**Pn**	**16 25 14.1**	**+0.3**
SSFR				AML	AML		
	comp=E,4515µm,0.6s						
SSFR				AML	AML		
	comp=N,4765µm,0.3s						
SSFR				AML	AML		
	comp=E,4865µm,0.4s						
SSFR				AML	AML		
	comp=N,4630µm,1.0s						
MATE	**Matera**	**2.06**	**145**	⇑P	**Pn**	**16 25 13.9**	**+0.1**
MATE				⇑S	**Sn**	**16 25 40.3**	**+1.2**
MATE	**Matera**	**2.06**	**145**	P	**Pn**	**16 25 13.8**	**0.0**
MATE				AML	AML		
	comp=N,3615µm,0.6s						
MATE				AML	AML		
	comp=E,4305µm,1.3s						
MCEL	**Monticello**	**2.08**	**166**	P	**Pn**	**16 25 14.6**	**+0.4**
NOCI	**Noci**	**2.12**	**136**	P	**Pn**	**16 25 14.4**	**-0.3**
NOCI				AML	AML		
	comp=E,2575µm,0.5s						
NOCI				AML	AML		
	comp=N,4800µm,0.8s						
MTSN	**Montesano sull**	**2.12**	**167**	P	**Pn**	**16 25 14.7**	**-0.2**
MTSN				AML	AML		
	comp=E,1800µm,0.8s						
MTSN				AML	AML		
	comp=N,1605µm,1.2s						
MURB	**Monte Urbino**	**2.13**	**296**		**Pn**	**16 25 15.8**	**+0.8**
LTRZ	**Laterza**	**2.15**	**143**	P	**Pn**	**16 25 14.3**	**-0.8**
LTRZ				AML	AML		
	comp=E,2535µm,0.4s						
LTRZ				AML	AML		
	comp=N,2990µm,1.0s						
ATFO	**Monte Foce - G**	**2.15**	**299**	P	**Pn**	**16 25 15.7**	**+0.5**
ATFO				AML	AML		
	comp=N,4465µm,0.9s						
ATFO				AML	AML		
	comp=E,8215µm,1.0s						
MPAG	**Monte Paganucc**	**2.17**	**307**	P	**Pn**	**16 25 15.7**	**+0.2**
MPAG				AML	AML		
	comp=N,5415µm,0.8s						
MPAG				AML	AML		
	comp=E,3050µm,1.5s						
MPAG				AML	AML		
	comp=E,3120µm,1.4s						
MPAG				AML	AML		
	comp=N,5515µm,0.8s						
FSSB	**Fossombrone**	**2.20**	**309**	P	**Pn**	**16 25 15.8**	**+0.1**
FSSB				AML	AML		
	comp=E,6045µm,1.4s						
FSSB				AML	AML		
	comp=N,7745µm,0.6s						
ATTE	**AVT- Monte Tez**	**2.22**	**294**	P	**Pn**	**16 25 17.2**	**+1.0**
ATTE				AML	AML		
	comp=E,3755µm,0.8s						
ATTE				AML	AML		
	comp=N,3940µm,0.7s						
MGR	**Morigerati**	**2.22**	**172**	P	**Pn**	**16 25 16.7**	**+0.6**
MGR				AML	AML		
	comp=N,1250µm,0.8s						
MGR				AML	AML		
	comp=E,1395µm,1.3s						
SIRI	**Monte Sirino -**	**2.23**	**166**	P	**Pn**	**16 25 16.7**	**+0.4**
SIRI				AML	AML		
	comp=E,1715µm,1.0s						
SIRI				AML	AML		
	comp=N,1725µm,1.5s						
NVLJ	**Novalja**	**2.23**	**355**	*e*Pn	**Pn**	**16 25 16.2**	**0.0**
UDBI	**Udbina**	**2.23**	**12**	*e*Pn	**Pn**	**16 25 17.2**	**+0.9**
UDBI				Sn	**Sb**	**16 25 45.4**	**-1.9**
DBRK	**Dubrovnik**	**2.25**	**81**	*e*Pn	**Pn**	**16 25 16.4**	**0.0**
SCHR	**S. Chirico Rap**	**2.25**	**161**	P	**Pn**	**16 25 16.8**	**+0.2**
SCHR				AML	AML		
	comp=E,1305µm,0.6s						
SCHR				AML	AML		
	comp=N,1325µm,0.8s						
PIEI	**Pieia**	**2.25**	**303**	P	**Pn**	**16 25 16.7**	**+0.1**
PIEI				AML	AML		
	comp=N,2375µm,0.9s						
PIEI				AML	AML		
	comp=E,2635µm,0.8s						
NARO	**Abbazia di Nar**	**2.27**	**305**	P	**Pn**	**16 25 17.0**	**+0.2**
NARO				AML	AML		
	comp=N,716µm,0.9s						
NARO				AML	AML		
	comp=E,615µm,0.7s						
BULG	**Bulgheria - Ca**	**2.27**	**175**	P	**Pn**	**16 25 16.9**	**+0.1**
BULG				AML	AML		
	comp=N,2985µm,0.9s						
BULG				AML	AML		
	comp=E,1805µm,1.2s						
BULG				AML	AML		
	comp=N,3045µm,0.9s						
BULG				AML	AML		
	comp=E,1830µm,1.2s						
ATPI	**Pietralunga -**	**2.30**	**300**	P	**Pn**	**16 25 17.8**	**+0.6**
ATPI				AML	AML		
	comp=E,5365µm,1.0s						
ATPI				AML	AML		
	comp=N,6080µm,1.3s						
MGAB	**Montegabbione**	**2.31**	**285**	P	**Pn**	**16 25 18.5**	**+1.2**
MGAB				AML	AML		
	comp=N,5185µm,0.8s						
MGAB				AML	AML		
	comp=E,4715µm,0.8s						
MGAB				AML	AML		
	comp=N,5235µm,0.8s						
MGAB				AML	AML		
	comp=E,4060µm,0.7s						
PESA	**Pesaro**	**2.32**	**314**	P	**Pn**	**16 25 17.3**	**-0.2**
PESA				AML	AML		
	comp=E,4795µm,0.9s						
PESA				AML	AML		
	comp=N,4750µm,1.5s						
CUC	**Castrocucco**	**2.40**	**168**	P	**Pn**	**16 25 18.9**	**+0.3**
CUC				AML	AML		
	comp=E,1345µm,1.1s						
CUC				AML	AML		
	comp=N,1059µm,0.7s						
TREB	**Trebinje**	**2.40**	**80**	*e*Pn	**Pn**	**16 25 18.6**	**0.0**
BADI	**Badiali**	**2.43**	**300**	P	**Pn**	**16 25 19.6**	**+0.7**
BADI				AML	AML		
	comp=E,4045µm,0.8s						
BADI				AML	AML		
	comp=N,3670µm,1.1s						
SACS	**San Casciano d**	**2.44**	**283**	P	**Pn**	**16 25 19.8**	**+0.7**
SACS				AML	AML		
	comp=E,3660µm,1.2s						
SACS				AML	AML		
	comp=N,3285µm,0.9s						
SACS				AML	AML		
	comp=E,3705µm,1.2s						
SACS				AML	AML		
	comp=N,3370µm,1.2s						
HCY	**Herceg Novi**	**2.49**	**86**	*e*Pn	**Pn**	**16 25 19.7**	**0.0**
HCY	**Herceg Novi**	**2.49**	**86**	⇓*i*Pn	**Pn**	**16 25 19.7**	**0.0**
HCY				*i* Sn	**Sn**	**16 25 51.3**	**+1.6**
PARC	**Parchiule**	**2.50**	**302**	P	**Pn**	**16 25 20.6**	**+0.7**
PARC				AML	AML		

	comp=E,4505µm,0.8s						
PARC				AML	AML		
	comp=N,3250µm,0.7s						
MGRS	**Mrkonjic Grad**	2.51	34	*e*Pn	Pn	16 25 21.3	+1.2
CPGN	**Carpegna, Ital**	2.53	306	P	Pn	16 25 21.1	+0.6
CPGN				AML	AML		
	comp=N,3920µm,0.7s						
CPGN				AML	AML		
	comp=E,6490µm,0.9s						
CPGN				AML	AML		
	comp=E,5280µm,0.7s						
CPGN				AML	AML		
	comp=N,5775µm,0.9s						
SSP9	**Sansepolcro**	2.53	300	AML	AML		
	comp=N,3800µm,1.6s						
SSP9				AML	AML		
	comp=E,5285µm,1.3s						
CAFI	**Castiglion Fio**	2.54	294	P	Pn	16 25 21.4	+1.0
CAFI				AML	AML		
	comp=E,1805µm,0.8s						
CAFI				AML	AML		
	comp=N,2265µm,1.2s						
CAFI				AML	AML		
	comp=E,1795µm,0.8s						
CAFI				AML	AML		
	comp=N,2325µm,1.2s						
PLIT	**Plitvice**	2.56	8	*e*Pn	Pn	16 25 21.5	+0.7
BRY	**Bratogost**	2.57	76	*e*Pn	Pb	16 25 24.4	-1.3
SALB	**San Lorenzo Be**	2.62	159	P	Pn	16 25 22.1	+0.3
SALB				AML	AML		
	comp=E,844µm,0.6s						
SALB				AML	AML		
	comp=N,920µm,1.0s						
SALB				AML	AML		
	comp=E,876µm,0.6s						
SALB				AML	AML		
	comp=N,957µm,1.1s						
CRE	**Caprese Michel**	2.67	300	P	Pn	16 25 22.8	+0.4
CRE				AML	AML		
	comp=E,1590µm,1.0s						
CRE				AML	AML		
	comp=N,1705µm,0.9s						
BUM	**Brajici-Budva**	2.78	90	⇓*i*Pn	Pn	16 25 24.1	+0.2
BUM				*i* Sn	Sn	16 25 58.8	+1.6
SMRN	**Sveta Marina**	2.79	345	*e*Pn	Pn	16 25 23.2	-0.6
CEME	**Cevo**	2.80	85	⇓*i*Pn	Pn	16 25 24.4	+0.3
CEME				*i* Sn	Sn	16 25 59.3	+1.7
BLY	**Banja Luka**	2.83	31	*e*Pn	Pn	16 25 25.1	+0.7
BLY	**Banja Luka**	2.83	31	P	Pn	16 25 24.2	-0.2
NKME	**Niksic**	2.85	80	⇓*i*Pn	Pn	16 25 24.8	0.0
NKME				*i* Sn	Sn	16 25 59.9	+1.2
ASQU	**Asqua**	2.85	302	P	Pn	16 25 25.6	+0.8
ASQU				AML	AML		
	comp=N,1780µm,0.8s						
ASQU				AML	AML		
	comp=E,1825µm,0.8s						
PRIJ	**Prijedor**	2.87	23	*e*Pn	Pb	16 25 30.3	-0.4
SFI	**Santa Sofia**	2.87	304	P	Pn	16 25 26.0	+0.9
SFI				AML	AML		
	comp=E,1700µm,0.9s						
SFI				AML	AML		
	comp=N,1615µm,1.1s						
SFI				AML	AML		
	comp=E,1555µm,0.9s						
SFI				AML	AML		
	comp=N,1445µm,1.0s						
NKY	**Niksic**	2.88	79	⇓*i*Pn	Pn	16 25 25.5	+0.2
NKY				*i* Sn	Sn	16 26 00.7	+1.0
UPM	**Unac-Piva**	2.90	71	*e*Pn	Pn	16 25 26.3	+0.7
UPM	**Unac-Piva**	2.90	71	⇑*i*Pn	Pn	16 25 25.9	+0.3
UPM				*i* Sn	Sn	16 26 01.5	+1.2
MAON	**Monte Argentar**	2.97	273	P	Pn	16 25 26.8	+0.4
MAON				AML	AML		
	comp=N,416µm,0.8s						
MAON				AML	AML		
	comp=E,1375µm,0.6s						
DRME	**Dracevica, Mon**	3.00	92	*e*Pn	Pn	16 25 27.4	+0.5
DRME	**Dracevica, Mon**	3.00	92	⇓*i*Pn	Pn	16 25 27.4	+0.5
DRME				*i* Sn	Sn	16 26 04.2	+1.7
RIY	**Rijeka**	3.02	351	*e*Pn	Pn	16 25 26.9	-0.2
RIY	**Rijeka**	3.02	351	*e*Pn	Pn	16 25 27.0	0.0
CSNT	**Castellina Chi**	3.05	293	P	Pn	16 25 27.8	+0.3
CSNT				AML	AML		
	comp=N,1205µm,1.0s						
CSNT				AML	AML		
	comp=E,806µm,1.5s						
PDG	**Podgorica**	3.05	87	⇑P	Pn	16 25 28.1	+0.7
PDG				⇓S	Sn	16 26 06.5	+2.9
PDG	**Podgorica**	3.05	87	*e*Pn	Pn	16 25 27.9	+0.5
PDG	**Podgorica**	3.05	87	P	Pn	16 25 26.2	-1.3
PDG	**Podgorica**	3.05	87	Pn	Pn	16 25 27.2	-0.3
TTG	**Podgorica**	3.05	87	⇑*i*Pn	Pn	16 25 27.9	+0.5
TTG				*i* Sn	Sn	16 26 05.0	+1.4
LMD	**Lutirano**	3.05	306	P	Pn	16 25 28.1	+0.6
LMD				AML	AML		
	comp=E,1300µm,1.4s						
LMD				AML	AML		
	comp=N,1325µm,0.9s						
RUFI	**Rufina**	3.05	301	P	Pn	16 25 28.2	+0.7
ULC	**Ulcinj**	3.07	96	⇑*i*Pn	Pn	16 25 28.1	+0.3
ULC				*i* Sn	Sn	16 26 05.4	+1.1
OSSC	**Osservatorio P**	3.10	294	P	Pn	16 25 28.7	+0.6
OSSC				AML	AML		
	comp=N,1032µm,1.3s						
OSSC				AML	AML		
	comp=E,1036µm,0.8s						
OSSC	**Osservatorio P**	3.10	294		Pn	16 25 28.6	+0.4
BOJS	**Bojanci**	3.16	1	*i* Pn	Pn	16 25 29.0	0.0
BOJS				*i*		16 25 30.2	
BOJS				*i*		16 25 35.6	
BOJS				*e*		16 25 38.3	
BOJS				*i* Pg	Pg	16 25 43.7	+3.2
BOJS				*i* Sn	Sn	16 26 09.0	+2.6
BOJS				*e*		16 26 25.7	
BOJS				IAML		16 26 39.0	
BOJS	**Bojanci**	3.16	1	P	Pn	16 25 29.0	0.0
BOJS				AML	AML		
	comp=E,6895µm,1.5s						
BOJS				AML	AML		
	comp=N,3845µm,0.6s						
CASP	**Castiglione de**	3.19	280	P	Pn	16 25 29.5	+0.1
CASP				AML	AML		
	comp=N,286µm,1.1s						
CASP				AML	AML		
	comp=E,248µm,1.6s						
CASP	**Castiglione de**	3.19	280	Pn	Pn	16 25 30.1	+0.7
IMOL	**Imola, Italy**	3.19	310	P	Pn	16 25 30.9	+1.4
IMOL				AML	AML		
	comp=N,2720µm,1.4s						
IMOL				AML	AML		
	comp=E,3180µm,1.1s						
TRIF	**Trifonti**	3.22	285	P	Pn	16 25 30.5	+0.7
TRIF				AML	AML		
	comp=E,610µm,0.7s						
TRIF				AML	AML		
	comp=N,716µm,0.7s						
SEI	**Scarperia**	3.25	303	P	Pn	16 25 31.3	+1.0
SEI				AML	AML		
	comp=N,2255µm,0.5s						
SEI				AML	AML		
	comp=E,1630µm,1.0s						
KOME	**Kolasin**	3.27	80	⇑*i*Pn	Pn	16 25 30.9	+0.3
KOME				*i* Sn	Sn	16 26 10.6	+1.4
PLE	**Pljevlja**	3.28	71	⇓*i*Pn	Pn	16 25 31.8	+1.1
PLE				*i* Sn	Sn	16 26 10.6	+1.2
OZLJ	**Ozalj**	3.28	4	*e*Pn	Pn	16 25 31.7	+1.1
RUDO	**Rudo**	3.35	66	*e*Pn	Pb	16 25 38.0	-1.0
MPPT	**Montemurlo**	3.38	300	P	Pn	16 25 32.5	+0.4
CRMI	**Carmignano**	3.38	297	P	Pn	16 25 32.7	+0.6
CRMI				AML	AML		
	comp=E,576µm,0.8s						
CRMI				AML	AML		
	comp=N,857µm,1.0s						
SCTE	**Santa Cesarea**	3.38	131	P	Pn	16 25 31.7	-0.3
SCTE				AML	AML		
	comp=N,1496µm,1.0s						
SCTE				AML	AML		
	comp=E,1970µm,0.9s						
SCTE	**Santa Cesarea**	3.38	131		Pn	16 25 31.5	-0.6
TIP	**Timpagrande**	3.39	158	⇑P	Pn	16 25 32.7	+0.4
TIP	**Timpagrande**	3.39	158	Pn	Pn	16 25 31.5	-0.7
CEY	**Cerknica**	3.44	352	*e*Pn	Pn	16 25 32.6	-0.2
MOSL	**Moslavina**	3.47	19	*e*Pn	Pn	16 25 33.5	+0.2
BBLS	**Lazići**	3.47	63	*e*Pn	Pn	16 25 33.9	+0.5
BBLS	**Lazići**	3.47	63	*e*Pn	Pn	16 25 34.5	+1.1
CRES	**Cresnjev**	3.49	4	*e*Pn	Pn	16 25 33.1	-0.5
SERS	**Sersale**	3.51	160	AML	AML		
	comp=N,320µm,1.0s						
SERS				AML	AML		
	comp=E,367µm,1.2s						
ZAG	**Zagreb**	3.54	10	*e*Pn	Pn	16 25 34.5	+0.3
IVA	**Berane**	3.55	80	*e*Pn	Pn	16 25 36.2	+1.8
PVY	**Plav**	3.57	84	*e*Pn	Pn	16 25 36.6	+1.8
PTJ	**Puntijarka**	3.61	9	*e*Pn	Pn	16 25 35.4	+0.1
ZCCA	**Zocca**	3.64	305		Pn	16 25 37.1	+1.4
PII	**Pisa**	3.65	294	AML	AML		
	comp=N,1420µm,1.1s						
PII				AML	AML		
	comp=E,1125µm,0.5s						
TIR	**Tirane**	3.67	104	⇑P	Pn	16 25 36.5	+0.6
TIR				⇓S	Sn	16 26 22.2	+3.3
TIR	**Tirane**	3.67	104	P	Pn	16 25 33.9	-2.1
TIR	**Tirane**	3.67	104	P	Pn	16 25 34.6	-1.4
TIR	**Tirane**	3.67	104	Pn	Pn	16 25 33.9	-2.1
SJES	**Sjenica**	3.67	74	*e*Pn	Pn	16 25 38.1	+2.0
LJU	**Ljubljana**	3.73	353	*e*Pn	Pn	16 25 36.6	-0.2
LJU	**Ljubljana**	3.73	353	AML	AML		
	comp=E,12650µm,1.5s						
LJU				AML	AML		
	comp=N,10395µm,1.5s						
BDI	**Bagni Di Lucca**	3.74	299	AML	AML		
	comp=E,1006µm,0.4s						
BDI				AML	AML		
	comp=N,732µm,0.8s						
BDI				AML	AML		
	comp=N,702µm,0.9s						
BDI				AML	AML		
	comp=E,924µm,0.4s						
JOPP	**Joppolo**	3.77	171	AML	AML		
	comp=N,202µm,1.0s						
JOPP				AML	AML		
	comp=E,232µm,1.1s						
SABO	**M.te Sabotino**	3.80	344	P	Pn	16 25 36.5	-1.4
IVAS	**Ivanjica**	3.88	70	*e*Pn	Pn	16 25 39.1	+0.2
TEKS	**Tekeris**	3.88	54	*e*Pn	Pb	16 25 47.5	-0.5
TEKS	**Tekeris**	3.88	54	*e*Pn	Pn	16 25 41.2	+2.3
KALN	**Kalnik**	3.90	14	*e*Pn	Pn	16 25 39.0	-0.3
VLC	**Villacollemand**	3.92	299	AML	AML		
	comp=E,440µm,1.6s						
VLC				AML	AML		
	comp=N,472µm,0.9s						
VLC				AML	AML		
	comp=E,418µm,1.6s						
VLC				AML	AML		
	comp=N,450µm,0.9s						
VLC	**Villacollemand**	3.92	299	Pn	Pn	16 25 39.1	-0.3
SARO	**Sassorosso**	3.92	300	AML	AML		
	comp=N,462µm,0.5s						
SARO				AML	AML		
	comp=E,318µm,0.6s						
TEOL	**Teolo**	3.92	321	P	Pn	16 25 38.5	-1.0
TEOL				AML	AML		
	comp=N,2955µm,0.9s						
TEOL				AML	AML		
	comp=E,3760µm,1.2s						
TEOL	**Teolo**	3.92	321	Pn	Pn	16 25 38.2	-1.3
DIVS	**Divibare**	3.96	62	*e*Pn	Pn	16 25 40.8	+0.8
DIVS	**Divibare**	3.96	62	⇑P	Pn	16 25 42.5	+2.5
DIVS				⇓P	Pg	16 25 52.5	-3.1
DIVS	**Divibare**	3.96	62	Pn	Pn	16 25 39.4	-0.6
DIVS	**Divibare**	3.96	62	*e*Pn	Pn	16 25 41.3	+1.3
MSRU	**Castanea**	4.08	176	AML	AML		
	comp=E,398µm,0.9s						
MSRU				AML	AML		
	comp=N,378µm,1.0s						
CEL	**Celeste**	4.12	172		Pn	16 25 40.7	-1.6
OBKA	**Obir**	4.19	354	*i* Pn	Pn	16 25 42.8	-0.4
	comp=N,14nm,0.2s,SNR=26						
OBKA				*e*Sn	Sb	16 26 47.9	+4.3
	comp=N,271nm,0.6s						
OBKA	**Obir**	4.19	354	*e*Pn	Pn	16 25 42.9	-0.4
OBKA				*e*Sg	Sg	16 27 04.4	+10
OBKA	**Obir**	4.19	354		Pn	16 25 42.8	-0.4
OBKA					Sb	16 26 47.9	+4.3
MPRI	**Monte Prat**	4.19	339	P	Pn	16 25 42.4	-0.9
MPRI				AML	AML		
	comp=E,1385µm,1.6s						
MPRI				AML	AML		
	comp=N,1665µm,1.6s						
PRED	**Cave del Predi**	4.25	345		Pn	16 25 43.6	-0.4
VARN	**Col Varnada, M**	4.25	330	P	Pn	16 25 42.8	-1.3
VARN				AML	AML		
	comp=E,2630µm,0.4s						
VARN				AML	AML		
	comp=N,1505µm,0.7s						
PTCC	**Patocco-Chiusa**	4.26	343	P	Pn	16 25 43.7	-0.5
PRMA	**PARMA**	4.26	306		Pn	16 25 45.2	+1.1
CGRP	**Cima Grappa**	4.28	327	P	Pn	16 25 43.4	-1.2
TRUS	**Trudelj**	4.28	62	*e*Pn	Pn	16 25 46.5	+2.1
STAL	**STALIGIAL**	4.29	337	P	Pn	16 25 43.1	-1.4
STAL				AML	AML		
	comp=N,902µm,1.3s						
STAL				AML	AML		
	comp=E,1074µm,0.8s						
STAL				AML	AML		
	comp=N,855µm,0.2s						
STAL				AML	AML		
	comp=E,1395µm,0.8s						
STAL	**STALIGIAL**	4.29	337		Pn	16 25 43.1	-1.4
KOVH	**Kovagotottos**	4.31	29	*e*PN	Pn	16 25 44.5	-0.3
KOVH	**Kovagotottos**	4.31	29	*e*P	Pn	16 25 44.4	-0.3
KOVH	**Kovagotottos**	4.31	29	*e*SN	Sn	16 26 32.8	-1.8
SOKA	**Soboth**	4.34	359	*i* Pn	Pn	16 25 44.9	-0.3
	comp=E,6.0nm,0.2s,SNR=16						
SOKA				*e*Sn	Sn	16 26 35.0	-0.5
	comp=E,29nm,0.5s						
SOKA	**Soboth**	4.34	359		Pn	16 25 44.9	-0.3
SOKA					Sn	16 26 35.0	-0.5
GRUS	**Gruza**	4.36	67	*e*Pn	Pn	16 25 48.1	+2.6
ACOM	**Acomizza, Ital**	4.36	345	AML	AML		
	comp=E,1472µm,0.9s						
ACOM				AML	AML		
	comp=N,1540µm,0.7s						
KEK	**Kerkira**	4.39	125	⇓P	Pn	16 25 46.3	+0.3
KEK				AML	AML		
	comp=E,79µm,0.4s						
KEK				AML	AML		
	comp=N,92µm,0.6s						
FRGS	**Fruska Gora**	4.40	49	⇑P	Pn	16 25 48.0	+1.9
FRGS				⇑S	Sn	16 26 41.1	+4.1
FRGS	**Fruska Gora**	4.40	49	*e*Pn	Pn	16 25 46.6	+0.5
FRGS	**Fruska Gora**	4.40	49	*e*Pn	Pn	16 25 49.0	+2.9
OHR	**Ohrid**	4.41	104	*i* Pn	Pn	16 25 47.3	+1.0
CIMO	**Cimolais**	4.42	335	P	Pn	16 25 45.0	-1.3
CIMO				AML	AML		
	comp=E,308µm,0.8s						
CIMO				AML	AML		
	comp=N,381µm,1.6s						
CIMO	**Cimolais**	4.42	335	Pn	Pn	16 25 44.8	-1.5
MYKA	**Terra Mystica**	4.42	346	*i* Pn	Pn	16 25 46.5	+0.1
	comp=N,3.0nm,0.2s,SNR=6.8						
MYKA				*e*Sn	Sn	16 26 39.0	+1.5
	comp=N,94nm,0.7s						
MYKA	**Terra Mystica**	4.42	346		Pn	16 25 46.5	+0.1
MYKA					Sn	16 26 39.0	+1.5
ROVR	**Rover Verones**	4.42	320	P	Pn	16 25 45.3	-1.1
ROVR				AML	AML		
	comp=N,598µm,0.5s						
ROVR				AML	AML		
	comp=E,1764µm,0.9s						
ROVR				AML	AML		
	comp=E,341µm,1.0s						
ROVR				AML	AML		
	comp=N,1510µm,0.5s						
CTI	**Castel Tesino**	4.47	327	P	Pn	16 25 45.9	-1.3
CTI	**Castel Tesino**	4.47	327	P	Pn	16 25 46.0	-1.3
CTI				AML	AML		
	comp=N,2135µm,0.6s						
CTI				AML	AML		
	comp=E,2495µm,0.3s						
CTI	**Castel Tesino**	4.47	327	Pn	Pn	16 25 45.9	-1.3
SELS	**Selova**	4.49	77	*e*Pn	Pn	16 25 47.6	+0.3
ZOU	**Zoufplan**	4.49	341	P	Pn	16 25 46.4	-1.0
ZOU	**Zoufplan**	4.49	341		Pn	16 25 46.7	-0.8
AGOR	**Agordo**	4.52	332	P	Pn	16 25 46.3	-1.5
AGOR				AML	AML		
	comp=E,473µm,0.7s						
AGOR				AML	AML		
	comp=N,472µm,1.4s						
DOSS	**Dosso del Somm**	4.54	323	P	Pn	16 25 46.9	-1.2
DOSS				AML	AML		
	comp=E,1200µm,0.7s						
DOSS				AML	AML		
	comp=N,1120µm,0.8s						
DOSS				AML	AML		
	comp=N,1135µm,0.7s						
DOSS				AML	AML		
	comp=E,1106µm,0.8s						
PGF	**Pioggiola**	4.55	275	*e*P	Pn	16 25 48.6	+0.4
PGF				*e*Sn	Sn	16 26 36.3	-4.5
	comp=E,54nm,0.6s						
MSSA	**Maissana**	4.55	298	Pn	Pn	16 25 48.8	+0.6
KBN	**Korca**	4.58	110	P	Pn	16 25 48.7	+0.2
KBN	**Korca**	4.58	110		Pn	16 25 48.7	+0.2
FVI	**Forni Avoltri**	4.58	339	P	Pn	16 25 47.7	-0.8
FVI				AML	AML		
	comp=N,402µm,0.6s						
FVI				AML	AML		
	comp=E,260µm,0.7s						
MORH	**Mrgy, Hungar**	4.62	32	⇑P	Pn	16 25 50.4	+1.4
MORH	**Mrgy, Hungar**	4.62	32	*e*PN	Pn	16 25 50.7	+1.7
MORH				*e*SN	Sn	16 26 39.1	-3.1
MORH	**Mrgy, Hungar**	4.62	32	*e*Pn	Pn	16 25 47.7	-1.3
CORL	**Corleone**	4.66	198		Pn	16 25 50.2	+0.5
SALO	**Salr**	4.67	316	AML	AML		
	comp=E,1305µm,1.0s						
SALO				AML	AML		
	comp=N,1455µm,1.0s						
SALO	**Salr**	4.67	316		Pn	16 25 49.1	-0.7
SKO	**Skopje**	4.70	92	*i* Pn	Pn	16 25 52.0	+1.8
MAGA	**Magasa**	4.73	318	P	Pn	16 25 49.5	-1.1
MAGA				AML	AML		
	comp=N,2580µm,0.3s						
MAGA				AML	AML		
	comp=E,2525µm,1.2s						
ABTA	**Abfaltersbach**	4.79	338	*i* Pn	Pn	16 25 51.1	-0.4
	comp=E,4.5nm,0.2s,SNR=11						
ABTA				*e*Sn	Sn	16 26 45.0	-1.6
	comp=E,123nm,0.8s						
ABTA	**Abfaltersbach**	4.79	338		Pn	16 25 51.1	-0.4
ABTA					Sn	16 26 45.0	-1.6
BOB	**Bobbio (Coli)**	4.79	302	AML	AML		
	comp=E,1305µm,0.5s						
BOB				AML	AML		
	comp=N,1345µm,0.5s						
GAGG	**Gaggia**	4.80	323	P	Pn	16 25 50.8	-0.8
GAGG				AML	AML		
	comp=E,1165µm,1.2s						
GAGG				AML	AML		
	comp=N,1155µm,1.2s						
GAGG				AML	AML		
	comp=E,1280µm,1.0s						
GAGG				AML	AML		
	comp=N,1241µm,1.1s						
KBA	**Koelnbreinsper**	4.91	345	*i* Pn	Pn	16 25 53.7	+0.5
	comp=N,3.8nm,0.3s,SNR=5.2						
KBA				*e*Sn	Sn	16 26 50.3	+0.6
	comp=N,86nm,0.6s						
KBA	**Koelnbreinsper**	4.91	345	P	Pn	16 25 53.7	+0.5
KBA						16 26 50.3	
KBA	**Koelnbreinsper**	4.91	345	*e*Pn	Pn	16 25 53.1	0.0
KBA	**Koelnbreinsper**	4.91	345		Pn	16 25 53.7	+0.5
KBA					Sn	16 26 50.3	+0.6
ARSA	**Arzberg**	4.92	3	*i* Pn	Pn	16 25 52.6	-0.6
	comp=N,1.6nm,0.1s,SNR=11						
ARSA				*e*Sn	Sb	16 27 08.5	+4.0
	comp=N,36nm,0.6s						
ARSA	**Arzberg**	4.92	3	*e*Pn	Pn	16 25 52.3	-0.8
ARSA				*e*Sg	Sg	16 27 25.9	+8.2
ARSA	**Arzberg**	4.92	3	⇑P	Pn	16 25 53.4	+0.2
ARSA	**Arzberg**	4.92	3		Pn	16 25 52.6	-0.6
ARSA					Sb	16 27 08.5	+4.0
KOSI	**Kohlern**	4.92	328	P	Pn	16 25 52.5	-0.9
FNA	**Florina**	4.93	106	P	Pn	16 25 53.4	0.0
FNA	**Florina**	4.93	106	Pn	Pn	16 25 53.4	0.0
BARS	**Barje**	4.95	82	*e*Pn	Pn	16 25 53.9	+0.3
BARS	**Barje**	4.95	82	*e*Pn	Pn	16 25 56.4	+2.8
TIH	**Tihany**	4.96	22	*e*PN	Pn	16 25 55.4	+1.6
TIH				*e*SN	Sn	16 26 50.7	0.0
CLTB	**Caltabellotta**	4.98	198	Pn	Pn	16 25 55.5	+1.4
MABI	**Malga Bissina**	4.98	320	AML	AML		
	comp=E,378µm,0.8s						
MABI				AML	AML		
	comp=N,668µm,0.5s						
APPI	**Appiano**	5.00	327	P	Pn	16 25 53.5	-0.8
APPI				AML	AML		
	comp=N,2610µm,1.3s						
APPI				AML	AML		
	comp=E,1585µm,0.9s						
RISI	**Rein**	5.10	336	P	Pn	16 25 55.6	-0.2
MPLH	**Magyarpolny**	5.12	19	*e*PN	Pn	16 25 55.2	-0.8
PRVS	**Prvonek**	5.14	86	*e*Pn	Pn	16 25 57.2	+1.0
RAFF	**Raffo Rosso**	5.15	187	Pn	Pn	16 25 55.6	-0.7
ABSI	**Aberstueckl**	5.17	329	P	Pn	16 25 56.2	-0.6
KUBS	**Kucevo**	5.19	64	*e*Pn	Pn	16 26 01.6	+4.7
VSL	**Villasalto**	5.21	239	⇓P	Pn	16 25 57.6	+0.4
VSL	**Villasalto**	5.21	239	Pn	Pn	16 25 57.8	+0.6
STIP	**Stip**	5.29	95	*i* Pn	Pn	16 26 01.3	+3.1
ROSI	**Rosskopf**	5.30	331	P	Pn	16 25 58.4	-0.2
EGYH	**Egyhazaskeszo**	5.31	16	*e*PN	Pn	16 25 58.7	+0.3
MDVR	**Moldovita**	5.36	61	⇓P	Pn	16 26 00.3	+1.0
ZAGS	**Zajecar**	5.40	72	*e*Pn	Pn	16 26 01.4	+1.7
BOSS	**Bosilegrad**	5.43	86	*e*Pn	Pn	16 26 01.3	+1.0
SOP	**Sopron**	5.43	10	*e*PN	Pn	16 26 00.1	-0.1
SOP				*e*SN	Sn	16 26 59.2	-3.2
CSKK	**Cskako**	5.49	23	*e*PN	Pn	16 26 02.1	+1.1
CSKK				*e*SN	Sn	16 27 01.5	-2.2
WTTA	**Wattenberg**	5.52	334	*i* Pn	Pn	16 26 02.0	+0.4
	comp=E,8.8nm,0.3s,SNR=5.7						
WTTA				*e*Sn	Sn	16 27 06.2	+1.5
	comp=E,156nm,0.4s						
WTTA	**Wattenberg**	5.52	334	P	Pn	16 26 02.0	+0.4
WTTA						16 27 06.2	
WTTA	**Wattenberg**	5.52	334	*e*Pn	Pn	16 26 02.5	+0.9
WTTA				*e*Sn	Sn	16 27 06.9	+2.2
WTTA	**Wattenberg**	5.52	334	⇑P	Pn	16 26 01.9	+0.3
WTTA	**Wattenberg**	5.52	334		Pn	16 26 02.0	+0.4
WTTA					Sn	16 27 06.2	+1.5
MOA	**Molln**	5.54	354	*i* Pn	Pn	16 26 01.7	-0.1
	comp=E,8.7nm,0.2s,SNR=11						
MOA				*e*Sn	Sn	16 27 04.3	-0.8
	comp=E,126nm,0.7s						
MOA	**Molln**	5.54	354	*e*Pn	Pn	16 26 01.9	+0.1
MOA				*e*Sn	Sn	16 27 05.0	-0.1
MOA				*e*Sg	Sg	16 27 47.0	+9.3
MOA	**Molln**	5.54	354		Pn	16 26 01.7	-0.1
MOA					Sn	16 27 04.3	-0.8
ZAPS	**Zavoj**	5.59	78	*e*Pn	Pn	16 26 04.6	+2.2
WATA	**Walderalm**	5.60	334	*i* Pn	Pn	16 26 03.3	+0.7
	comp=E,21nm,0.2s,SNR=13						
WATA				*e*Sn	Sn	16 27 06.3	-0.4
	comp=E,179nm,0.7s						
WATA	**Walderalm**	5.60	334		Pn	16 26 03.3	+0.7
WATA					Sn	16 27 06.3	-0.4
CONA	**Conrad Observa**	5.61	5	*i* Pn	Pn	16 26 02.7	-0.1
	comp=E,5.6nm,0.2s,SNR=15						
CONA				*e*Sn	Sn	16 27 04.3	-2.5
	comp=E,25nm,0.5s						
CONA	**Conrad Observa**	5.61	5		Pn	16 26 02.7	-0.1
CONA					Sn	16 27 04.3	-2.5
SQTA	**Sankt Quirin**	5.62	332	*i* Pn	Pn	16 26 03.3	+0.4
	comp=E,9.5nm,0.4s,SNR=17						
SQTA				*e*Sn	Sn	16 27 06.1	-1.1
	comp=E,121nm,0.5s						
SQTA	**Sankt Quirin**	5.62	332	P	Pn	16 26 03.3	+0.4
SQTA						16 27 06.1	
SQTA	**Sankt Quirin**	5.62	332		Pn	16 26 03.3	+0.4
SQTA					Sn	16 27 06.1	-1.1
FETA	**Feichten**	5.64	328	*e*Pn	Pn	16 26 02.9	-0.2
	comp=E,2.1nm,0.3s						
FETA				*e*Sn	Sn	16 27 07.9	+0.3
	comp=E,83nm,0.8s						
FETA	**Feichten**	5.64	328		Pn	16 26 02.9	-0.2
FETA					Sn	16 27 07.9	+0.3
VAY	**Valandovo**	5.64	98	*i* Pn	Pn	16 26 03.2	+0.1
MOTA	**Moosalm**	5.77	332	*i* Pn	Pn	16 26 05.2	+0.3
	comp=E,2.0nm,0.2s,SNR=7.1						
MOTA				*e*Sn	Sn	16 27 11.4	+0.6
	comp=E,50nm,0.3s						
MOTA	**Moosalm**	5.77	332	P	Pn	16 26 05.2	+0.3
MOTA						16 27 11.4	
MOTA	**Moosalm**	5.77	332		Pn	16 26 05.2	+0.3
MOTA					Sn	16 27 11.4	+0.6

DAVOX	Davos/Dischmat	5.81	322	Pn	Pn	16 26 06.9	+1.3
	comp=E,4.2nm,0.3s,baz=161,slow=19,SNR=41						
DAVOX				Sn	Sn	16 27 11.6	-0.5
	comp=E,9.5nm,0.3s,baz=257,slow=20,SNR=3.7						
DAVOX				LR	LR	16 29 15.8	
	comp=E,1µm,20.4s,baz=137,slow=48						
DAVOX	Davos/Dischmat	5.81	322		Pn	16 26 06.9	+1.3
SBF	Sospel	5.84	288	eP	Pn	16 26 06.9	+1.0
SBF				eSn	Sn	16 27 06.2	-6.4
	comp=E,104nm,0.5s						
HERR	Herculane	5.86	62	⇑P	Pn	16 26 07.5	+1.5
HERR				⇑S	Sn	16 27 17.3	+4.4
SRO	Srobarova	5.91	21	eP	Pn	16 26 07.3	+0.5
SRO				e		16 27 13.5	
SRO	Srobarova	5.91	21	ePN	Pn	16 26 07.3	+0.5
SRO				eSN	Sn	16 27 13.5	-0.7
VTS	Vitosha	5.99	85	⇑P	Pn	16 26 08.7	+0.7
VTS				⇑S	Sn	16 27 19.4	+3.1
VTS	Vitosha	5.99	85	P	Pn	16 26 08.6	+0.6
VTS	Vitosha	5.99	85	⇓P	Pn	16 26 09.5	+1.5
VTS	Vitosha	5.99	85	Pn	Pn	16 26 08.6	+0.6
RETA	Reutte	6.01	330	ePn	Pn	16 26 08.6	+0.4
	comp=E,2.8nm,0.2s						
RETA				eSn	Sn	16 27 16.5	-0.2
	comp=E,29nm,0.3s						
RETA	Reutte	6.01	330		Pn	16 26 08.6	+0.4
RETA					Sn	16 27 16.5	-0.2
ZST	Bratislava	6.01	13	eP	Pn	16 26 07.8	-0.4
ZST				e		16 27 13.6	
ZST	Bratislava	6.01	13	ePN	Pn	16 26 07.8	-0.4
ZST				eSN	Sn	16 27 13.6	-3.1
SIRR	Siria	6.10	48	⇓P	Pn	16 26 10.5	+1.1
DAVA	Damuels	6.20	325	ePn	Pn	16 26 12.5	+1.6
	comp=E,8.2nm,0.2s						
DAVA				eSn	Sn	16 27 20.4	-1.1
	comp=E,166nm,0.5s						
DAVA	Damuels	6.20	325	ePn	Pn	16 26 12.3	+1.4
DAVA				eSn	Sn	16 27 20.3	-1.2
DAVA	Damuels	6.20	325		Pn	16 26 12.5	+1.6
DAVA					Sn	16 27 20.4	-1.1
MODS	Modra-Piesok	6.22	13	eP	Pn	16 26 10.7	-0.3
MODS				e		16 27 18.1	
MODS	Modra-Piesok	6.22	13	ePN	Pn	16 26 10.7	-0.3
MODS				eSN	Sn	16 27 18.1	-3.6
GZR	Gura Zlata	6.30	58	⇑P	Pn	16 26 13.4	+1.2
SMOL	Smolenice	6.38	14	eP	Pn	16 26 13.4	+0.2
SMOL	Smolenice	6.38	14	ePN	Pn	16 26 13.4	+0.2
AGG	Agios Georgios	6.39	119	P	Pn	16 26 14.5	+1.0
AGG	Agios Georgios	6.39	119		Pn	16 26 14.5	+1.0
LMR	La Mourre	6.42	282	ePn	Pn	16 26 10.4	-3.4
LMR	La Mourre	6.42	282	eP	Pn	16 26 15.1	+1.3
LMR				eSn	Sn	16 27 20.3	-6.5
	comp=E,7.5nm,0.3s						
CKRC	Cesky Krumlov	6.50	355	ePN	Pn	16 26 15.2	+0.2
CKRC				eSN	Sn	16 27 26.1	-2.7
PSZ	Piszkesteto	6.51	29	⇑P	Pn	16 26 15.4	+0.4
PSZ	Piszkesteto	6.51	29	ePN	Pn	16 26 15.7	+0.7
PSZ	Piszkesteto	6.51	29	P	Pn	16 26 14.6	-0.5
PSZ	Piszkesteto	6.51	29	Pn	Pn	16 26 14.6	-0.5
MBDF	Montbardon	6.53	294	ePn	Pn	16 26 12.1	-3.4
MBDF	Montbardon	6.53	294	eP	Pn	16 26 16.1	+0.6
MBDF				eSn	Sn	16 27 22.7	-7.0
	comp=E,112nm,0.6s						
GEC2	GERESS Array S	6.58	352		Pn	16 26 15.0	-1.1
GERES	GERESS Array B	6.58	352	Pn	Pn	16 26 15.3	-0.8
	comp=E,3.8nm,0.3s,baz=173,slow=14,SNR=82						
GERES				Sn	Sn	16 27 26.9	-3.9
	comp=E,15nm,0.3s,baz=161,slow=25,SNR=16						
GERES				LR	LR	16 29 34.8	
	comp=E,564nm,18.9s,baz=186,slow=45						
GERES	GERESS Array B	6.58	352	P	Pn	16 26 14.9	-1.1
GERES	GERESS Array B	6.58	352	Pn	Pn	16 26 14.9	-1.1
KOLL	Kolacno	6.64	19	ePN	Pn	16 26 16.8	0.0
KOLL				eSN	Sn	16 27 29.9	-2.3
VYHS	Vyhne	6.68	22	eP	Pn	16 26 18.4	+1.1
VYHS				e		16 27 30.1	
VYHS	Vyhne	6.68	22	ePN	Pn	16 26 18.4	+1.1
VYHS				eSN	Sn	16 27 30.1	-3.0
BNI	Bardonecchia	6.71	297	P	Pn	16 26 16.4	-1.4
BNI	Bardonecchia	6.71	297	Pn	Pn	16 26 16.4	-1.4
KRUC	Moravsky	6.78	7	ePN	Pn	16 26 18.8	+0.1
KRUC				eSN	Sn	16 27 32.6	-2.9
LPG	La Plagne	6.83	300	ePn	Pn	16 26 16.0	-3.7
LPG	La Plagne	6.83	300	eP	Pn	16 26 20.8	+1.1
LPG				eSn	Sn	16 27 30.6	-6.6
	comp=E,125nm,0.6s						
LPL	La Plagne	6.85	300	ePn	Pn	16 26 16.5	-3.4
LPL	La Plagne	6.85	300	eP	Pn	16 26 21.2	+1.3
LPL				eSn	Sn	16 27 30.5	-7.1
	comp=E,197nm,0.4s						
KHC	Kasperske Hory	6.88	351	ePN	Pn	16 26 19.1	-1.0
KHC				ex	x	16 26 29.0	
KHC				eSN	Sn	16 27 34.8	-3.2
KHC				ex	x	16 28 00.0	
KHC	Kasperske Hory	6.88	351	eP	Pn	16 26 19.1	-1.0
KHC				e		16 27 34.8	
KHC	Kasperske Hory	6.88	351		Pn	16 26 18.9	-1.2
SENIN	Lac Senin/Sane	6.91	308	Pn	Pn	16 26 20.3	-0.4
TREC	Trest	6.96	2	ePN	Pn	16 26 20.7	-0.5
TREC	Trest	6.96	2	eP	Pn	16 26 20.7	-0.5
DRGR		7.00	48	⇑P	Pn	16 26 23.2	+1.4
VRAC	Vranov	7.04	8	⇑P	Pn	16 26 22.0	-0.4
VRAC	Vranov	7.04	8	Pn	Pn	16 26 23.3	+1.0
	comp=E,0.4nm,0.3s,baz=185,slow=16,SNR=4.2						
VRAC				LR	LR	16 28 58.5	
	comp=E,305nm,21.6s,baz=231,slow=37						
VRAC	Vranov	7.04	8	ePN	Pn	16 26 21.9	-0.4
VRAC				eSN	Sn	16 27 38.5	-3.5
VRAC	Vranov	7.04	8		Pn	16 26 23.3	+1.0
SMRF	Simiane la Rot	7.18	286	ePn	Pn	16 26 20.6	-3.7
SMRF	Simiane la Rot	7.18	286	eP	Pn	16 26 26.1	+1.8
SMRF				eSn	Sn	16 27 38.3	-7.3
	comp=E,25nm,0.6s						
ORIF	Oris-en-Rattie	7.20	294	ePn	Pn	16 26 21.1	-3.4
ORIF	Oris-en-Rattie	7.20	294	eP	Pn	16 26 25.0	+0.5
ORIF				eSn	Sn	16 27 38.5	-7.4
	comp=E,67nm,0.5s						
KECS	Kecovo	7.20	30	eSN	Sn	16 27 43.2	-2.7
ITM	Ithomi	7.34	132	Pn	Pn	16 26 24.1	-2.4
ARR	Arges	7.50	63	⇑P	Pn	16 26 29.9	+1.2
MORC	Moravsky Berou	7.62	12	⇓P	Pn	16 26 31.0	+0.7
MORC	Moravsky Berou	7.62	12	ePN	Pn	16 26 30.8	+0.5
MORC				eSN	Sn	16 27 54.0	-2.3
MORC	Moravsky Berou	7.62	12	P	Pn	16 26 29.2	-1.1
MORC	Moravsky Berou	7.62	12	Pn	Pn	16 26 29.2	-1.1
PRU	Pruhonice	7.66	357	ePN	Pn	16 26 29.6	-1.2
PRU				eSN	Sn	16 27 52.5	-4.7
PRU	Pruhonice	7.66	357	eP	Pn	16 26 29.6	-1.2
PRU				e		16 27 52.5	
BFO	Black Forest	7.67	324	P	Pn	16 26 29.5	-1.5
BFO	Black Forest	7.67	324	Pn	Pn	16 26 29.5	-1.5
CABF	La Chapelle	7.75	306	ePn	Pn	16 26 29.0	-3.2
CABF				eSn	Sn	16 27 51.6	-8.0
	comp=E,157nm,0.7s						
VOIR		7.80	63	⇑P	Pn	16 26 34.2	+1.4
KRLC	Kraliky	7.82	8	ePN	Pn	16 26 33.3	+0.3
KRLC				eSN	Sn	16 27 58.4	-2.7
KRLC	Kraliky	7.82	8	eP	Pn	16 26 33.3	+0.3
KRLC				e		16 27 58.4	
GRFO	Grafenberg	7.84	341	P	Pn	16 26 32.0	-1.3
GRFO	Grafenberg	7.84	341	Pn	Pn	16 26 32.0	-1.3
GRA1	Grafenberg Arr	7.84	341	Pn	Pn	16 26 32.6	-0.7
GRF	Grafenberg Arr	7.84	341	P	Pn	16 26 32.6	-0.7
KEST	Kesra	7.99	216	Pn	Pn	16 26 40.0	+4.5
	comp=E,2.1nm,0.3s,baz=321,slow=4.1,SNR=29						
KEST				LR	LR	16 29 43.1	
	comp=E,289nm,18.1s,baz=186,slow=38						
VIVF	Saint-Julien-l	8.00	292	ePn	Pn	16 26 32.0	-3.5
VIVF	Saint-Julien-l	8.00	292	eP	Pn	16 26 36.4	+0.9
VIVF				eSn	Sn	16 27 57.9	-7.8
	comp=E,9.5nm,0.4s						
HINF	Hinteralfeld	8.02	316	ePn	Pn	16 26 32.5	-3.3
HINF				eSn	Sn	16 27 57.9	-8.2
	comp=E,177nm,0.4s						
UZH	Uzhgorod	8.05	36	eP	Pn	16 26 42.3	+6.2
UZH				eS	Sn	16 28 16.3	+10
UZH				MLR	MLR		
	comp=N,100nm,15.0s						
UZH				MLR	MLR		
	comp=E,200nm,15.0s						
UZH				MLR	MLR		
	comp=Z,140nm,15.0s						
DPC	Dobruska-Polom	8.05	5	ePN	Pn	16 26 36.0	-0.2
DPC	Dobruska-Polom	8.05	5	eP	Pn	16 26 36.0	-0.2
NKC	Novy Kostel	8.11	348	ePN	Pn	16 26 35.6	-1.4
NKC	Novy Kostel	8.11	348	eP	Pn	16 26 35.6	-1.4
ECH	Echery	8.13	319	P	Pn	16 26 36.7	-0.6
ECH	Echery	8.13	319		Pn	16 26 36.7	-0.6
SSB	Saint Sauveur	8.21	295	P	Pn	16 26 37.1	-1.3
SSB	Saint Sauveur	8.21	295	Pn	Pn	16 26 37.1	-1.3
CDF	Champ du Feu	8.21	320	ePn	Pn	16 26 34.7	-3.7
CDF	Champ du Feu	8.21	320	eP	Pn	16 26 38.7	+0.3
CDF				eSn	Sn	16 28 03.3	-7.6
	comp=Z,42nm,0.6s						
ALN	Alexandroupoli	8.30	96	P	Pn	16 26 38.5	-1.0
ALN	Alexandroupoli	8.30	96	Pn	Pn	16 26 38.5	-1.0
HAU	Haudompre	8.40	315	ePn	Pn	16 26 37.4	-3.6
HAU				eSn	Sn	16 28 08.9	-6.6
	comp=Z,274nm,0.4s						
MLR	Muntele Rosu	8.41	64	⇑P	Pn	16 26 42.8	+1.6
MLR	Muntele Rosu	8.41	64	Pn	Pn	16 26 42.3	+1.1
	comp=Z,0.1nm,0.3s,baz=178,slow=6.7,SNR=5.3						
MLR				LR	LR	16 30 29.7	
	comp=Z,1µm,18.8s,baz=258,slow=42						
LASF	Ste Croix	8.42	286	eP	Pn	16 26 42.6	+1.3
LASF				eSn	Sn	16 28 07.4	-8.6
	comp=Z,5.0nm,0.4s						
MILB	Miltenberg	8.52	334	ePn	Pn	16 26 41.2	-1.3
BRG	Berggiesshubel	8.57	355	eP	Pn	16 26 42.4	-0.9
BRG				Amp		16 26 45.3	
	comp=Z,2.1nm,0.6s						
BRG	Berggiesshubel	8.57	355	P	Pn	16 26 50.2	+6.9
BRG				Amp		16 26 51.5	
	comp=Z,4.6nm,0.7s						
BURAR	Bucovina Array	8.87	50	⇑P	Pn	16 26 49.1	+1.5
PAGF	Fort de Pagny	9.07	316	ePn	Pn	16 26 46.4	-3.8
PAGF	Fort de Pagny	9.07	316	eP	Pn	16 26 51.5	+1.3
PAGF				eSn	Sn	16 28 21.4	-11
	comp=Z,133nm,0.6s						
CLL	Collm	9.09	351	i P	Pn	16 26 50.9	+0.6
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CLL	Collm	9.09	351	i Pn	Pn	16 26 50.9	+0.6
	comp=Z,6.0nm,0.8s						
CLL				eSn	Sn	16 28 29.0	-3.2
CLL				e		16 29 12.0	
CLL				eSg		16 29 37.0	
	comp=N,500nm,20.0s						
CLL				eSg		16 29 37.0	
	comp=E,2µm,17.2s						
CLL				eSg		16 29 37.0	
	comp=Z,300nm,22.5s						
SMF	Signal de Mont	9.15	302	ePn	Pn	16 26 47.9	-3.3
SMF				eSn	Sn	16 28 25.7	-8.1
	comp=Z,109nm,0.5s						
SFTF	Sexfontaines	9.22	313	ePn	Pn	16 26 48.5	-3.7
SFTF	Sexfontaines	9.22	313	eP	Pn	16 26 54.4	+2.2
SFTF				eSn	Sn	16 28 28.2	-7.3
	comp=Z,76nm,0.7s						
MEZF	Maizieres J'vi	9.39	314	ePn	Pn	16 26 51.2	-3.3
MEZF				eSn	Sn	16 28 31.6	-8.1
	comp=Z,70nm,0.6s						
LOR	Lormes	9.41	305	ePn	Pn	16 26 50.9	-3.9
LOR				eSn	Sn	16 28 31.5	-8.7
	comp=Z,150nm,0.6s						
SAVF	Savonnieres en	9.42	315	ePn	Pn	16 26 52.0	-2.9
SAVF				eSn	Sn	16 28 31.3	-9.1
	comp=Z,60nm,0.6s						
AVF	Avril sur Loir	9.52	302	ePn	Pn	16 26 52.9	-3.3
AVF				eSn	Sn	16 28 33.8	-8.9
	comp=Z,43nm,0.6s						
SSF	Saint Saulge	9.53	304	ePn	Pn	16 26 52.9	-3.5
SSF	Saint Saulge	9.53	304	eP	Pn	16 26 59.7	+3.3
SSF				eSn	Sn	16 28 33.1	-10
	comp=Z,75nm,0.7s						
MTLF	Montolieu	9.55	280	ePn	Pn	16 26 53.3	-3.4
MTLF	Montolieu	9.55	280	eP	Pn	16 26 59.0	+2.3
WLF	Walferdange	9.62	323	dPn	Pn	16 26 58.5	+0.8
WLF				dSn	Sn	16 28 43.4	-2.1
BGF	Bois d'Agland	9.75	300	ePn	Pn	16 26 55.9	-3.5
BGF				eSn	Sn	16 28 40.1	-8.4
	comp=Z,96nm,0.6s						
CAF	Calviac	9.83	290	ePn	Pn	16 26 56.9	-3.6
CAF	Calviac	9.83	290	eP	Pn	16 27 01.9	+1.4
CAF				eSn	Sn	16 28 41.5	-9.0
	comp=Z,5.8nm,0.6s						
TCF	Toulx Ste Croi	10.07	297	ePn	Pn	16 27 02.0	-1.9
TCF				eSn	Sn	16 28 50.4	-6.1
	comp=Z,41nm,0.5s						
HYF	Humbligny	10.15	303	ePn	Pn	16 27 01.5	-3.5
HYF				eSn	Sn	16 28 51.8	-6.7
	comp=Z,250nm,0.5s						
RJF	Les Rejaudoux	10.28	291	ePn	Pn	16 27 03.2	-3.5
RJF	Les Rejaudoux	10.28	291	eP	Pn	16 27 08.9	+2.2
RJF				eSn	Sn	16 28 52.2	-9.4
	comp=Z,5.2nm,0.5s						
IDI	Anoyia	10.36	130	Pn	Pn	16 27 07.3	-0.6
	comp=Z,0.9nm,0.3s,baz=0.3,slow=12,SNR=7.2						
IDI				Sn	Sn	16 28 53.7	-10
	comp=Z,0.6nm,0.3s,baz=72,slow=20,SNR=2.0						
IDI				LR	LR	16 32 00.7	
	comp=Z,333nm,18.4s,baz=316,slow=43						
IDI	Anoyia	10.36	130		Pn	16 27 07.3	-0.6
IDI					Sn	16 28 53.7	-10
MEM	Membach	10.39	326	dPn	Pn	16 27 08.7	+0.6
MEM				dPbPb	PbPb	16 27 42.8	+0.8
GIVF	Givet	10.54	321	ePn	Pn	16 27 07.5	-2.8
GIVF	Givet	10.54	321	eP	Pn	16 27 12.6	+2.3
GIVF				eSn	Sn	16 28 57.3	-11
	comp=Z,31nm,0.7s						
BCLA	Clavier	10.55	323	dPn	Pn	16 27 10.7	+0.3
BCLA				dPnPn	PnPn	16 27 18.2	+0.2
BCLA				dPgPg	PgPg	16 28 00.9	-1.1
BCLA				dSn	Sn	16 28 58.9	-9.2
BGES	Gesves	10.62	323	dPnPn	Pn	16 27 19.9	+8.6
BGES				dPbPb	PbPb	16 27 46.2	+0.3
BGES				dSn	Sn	16 29 04.7	-5.2
DOU	Dourbes	10.65	320	dPnPn	Pn	16 27 19.9	+8.2
DOU				dPgPg	PgPg	16 28 04.7	+0.9
DOU				dSn	Sn	16 29 06.8	-3.6
BEBN	Eben Emael	10.67	326	dSn	Sn	16 29 07.6	-3.4
BMRD	Maredsous	10.71	322	dPnPn	Pn	16 27 20.3	+7.8
BMRD				dSn	Sn	16 29 07.6	-4.4
BAIF	Baives	10.81	319	ePn	Pn	16 27 14.6	+0.7
BAIF				eSn	Sn	16 29 04.9	-10
	comp=Z,12nm,0.6s						
ETSF	Etsaut	11.59	278	ePn	Pn	16 27 20.7	-3.9
MFF	Saint Martin d	11.72	297	eP	Pn	16 27 27.0	+0.6
MFF				eSn	Sn	16 29 26.4	-10
	comp=Z,13nm,0.7s						
LDF	La Druitiere	12.39	305	eSn	Sn	16 29 42.4	-11
	comp=Z,7.6nm,0.5s						
FLN	La Foliniere	12.68	306	eP	Pn	16 27 41.1	+1.6
FLN				eSn	Sn	16 29 49.4	-11
	comp=Z,28nm,0.7s						
GRR	Gorron	12.76	304	ePn	Pn	16 27 36.6	-4.0
GRR	Gorron	12.76	304	eP	Pn	16 27 41.5	+0.9
GRR				eSn	Sn	16 29 51.4	-11
	comp=Z,10nm,0.5s						
AKASG	Malin Array Be	12.79	44	LR	LR	16 32 20.9	
	comp=Z,97nm,19.5s,baz=235,slow=36						
SGMF	Saint Gilles	13.78	301	eP	Pn	16 27 55.8	+1.4
QUIF	Quistinic	14.06	300	eP	Pn	16 27 59.1	+0.8
BRTR	Keskin Array B	14.21	94	Pn	Pn	16 28 03.5	+2.9
	comp=Z,0.1nm,0.3s,baz=248,slow=6.1,SNR=2.0						
BRTR				LR	LR	16 34 07.3	
	comp=Z,485nm,20.0s,baz=300,slow=40						
BRTR	Keskin Array B	14.21	94	P	P	16 28 05.3	-2.6
ESDC	Sonseca Array	14.67	266	Pn	P	16 28 12.0	-1.0
	comp=Z,0.1nm,0.3s,baz=70,slow=12,SNR=14						
ESDC				LR	LR	16 33 48.8	
	comp=Z,388nm,19.0s,baz=35,slow=38						
ESDC	Sonseca Array	14.67	266	P	P	16 28 12.0	-1.0
MNK	Minsk	14.79	30	i P	Pn	16 28 07.3	-0.9
MNK				i S	Sn	16 30 49.8	-1.8
MNK				pmax	pmax		
	comp=E,7.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,16nm,0.6s						
MNK				pmax	pmax		
	comp=N,21nm,0.8s						
MNK				MLR	MLR		
	comp=Z,33nm,7.0s						
MNK				MLR	MLR		
	comp=E,62nm,16.0s						
MNK				MLR	MLR		
	comp=N,83nm,8.0s						
MNK	Minsk	14.79	30	i P	Pn	16 28 07.3	-0.9
	comp=E,7.0nm,0.9s						
MNK				i P	Pn	16 28 07.3	-0.9
	comp=N,21nm,0.8s						
MNK				i P	Pn	16 28 07.3	-0.9
	comp=Z,16nm,0.7s,baz=40						
MNK				i PP	PnPn	16 28 15.3	-0.8
MNK				i PPP	PPP	16 28 23.0	
MNK				i S	Sn	16 30 49.9	-1.7
MNK				i SS	SnSn	16 31 04.5	+0.4
MNK				i SSS	SSS	16 31 17.1	
MNK				i LQ	LQ	16 32 28.9	
MNK				i LR	LR	16 33 32.1	
MNK				i LRM	MLR	16 34 18.8	
	comp=Z,33nm,6.8s						
MNK				i LRM	MLR	16 34 24.0	
	comp=E,62nm,15.8s						
MNK				i LRM	MLR	16 34 24.0	
	comp=N,83nm,8.2s						
EKA	Eskdalemuir Ar	17.65	324	P	P	16 28 46.1	+0.3
	baz=204,slow=9.8,SNR=1.5						
EKA	Eskdalemuir Ar	17.65	324	P	P	16 28 46.1	+0.3
HFS	Hagfors	17.84	358	P	P	16 28 48.3	+0.5
	comp=N,0.1nm,0.3s,baz=181,slow=14,SNR=2.1						
HFS				LR	LR	16 36 42.5	
	comp=N,354nm,20.9s,baz=180,slow=41						
HFS	Hagfors	17.84	358	P	P	16 28 48.4	+0.5
MDT	Midelt	18.28	245	P	P	16 28 53.8	+0.7
	comp=N,0.1nm,0.3s,baz=84,slow=13,SNR=6.6						
MDT				LR	LR	16 34 15.7	
	comp=N,164nm,20.9s,baz=51,slow=32						
MDT	Midelt	18.28	245	P	P	16 28 53.8	+0.7
MMAI	Mount Meron Ar	18.51	114	P	Pn	16 28 57.3	+1.6
	comp=N,0.5nm,0.3s,baz=294,slow=14,SNR=2.8						
MMAI				LR	LR	16 37 56.7	
	comp=N,288nm,18.3s,baz=305,slow=43						
NOA	NORSAR Array B	18.88	354	P	P	16 28 58.7	-0.6
	comp=N,0.0nm,0.3s,baz=176,slow=7.1,SNR=3.8						
NOA				LR	LR	16 37 13.8	
	comp=N,284nm,18.1s,baz=175,slow=40						
NC405	NORSAR Array S	18.91	355	P	Pn	16 29 00.2	-0.1
OBN	Obninsk	18.95	40	eP	P	16 29 00.3	+0.2
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NC303	NORSAR Array S	19.05	354	P	Pn	16 29 01.8	-0.2
NC303				IAmb	IAmb	16 29 25.1	
	comp=Z,43nm,1.5s						
KIV	Kislovodsk	20.13	76	eP	P	16 29 13.2	0.0
KIV				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,89nm,14.0s						
FINES	FINESS Array B	20.23	15	P	P	16 29 12.7	-1.3
	comp=Z,5.5nm,0.8s,baz=178,slow=8.3,SNR=2.8						
FINES	FINESS Array B	20.23	15	P	P	16 29 13.2	-0.9
FIA1	FINESS Array S	20.23	15	P	P	16 29 13.3	-0.8
KBZ	Khabaz	20.30	77	LR	LR	16 40 06.2	
	comp=Z,184nm,19.6s,baz=282,slow=46						
KBZ	Khabaz	20.30	77	ceP	Pn	16 29 17.4	+0.4
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
EIL	Elat	20.36	122	LR	LR	16 40 08.2	
	comp=Z,75nm,19.9s,baz=284,slow=46						
GNI	Garni	22.32	86	ceP	P	16 29 40.1	+3.2
GNI				pmax	pmax		
	comp=Z,19nm,1.7s						
KLMR	Klimovskoe	23.69	30	eP	P	16 29 51.6	+1.0
KLMR				pmax	pmax		
	comp=Z,26nm,1.4s						
KLMR	Klimovskoe	23.69	30	eP	P	16 29 51.7	+1.1
KLMR				AMP		16 29 57.3	
	comp=Z,26nm,1.4s						
BELG	Belogornoye	24.00	54	P	P	16 29 53.6	0.0
	comp=Z,11nm,0.9s,baz=238,slow=9.5,SNR=2.3						
BELG				LR	LR	16 40 46.8	
	comp=Z,226nm,18.0s,baz=251,slow=40						
LVZ	Lovozero	27.67	16	P	P	16 30 25.9	-0.9
LVZ				pmax	pmax		
	comp=Z,41nm,1.3s						
LVZ	Lovozero	27.67	16	P	P	16 30 25.9	-0.9
MACI	Morro de la Ar	29.22	251	P	P	16 30 40.1	-1.0
ARU	Arti	31.00	48	P	P	16 30 56.1	-0.2
	comp=Z,0.6nm,0.5s,baz=266,slow=4.7,SNR=4.8						
ARU	Arti	31.00	48	c iP	P	16 30 55.7	-0.7
ARU				S	S	16 35 56.2	-4.1
ARU				pmax	pmax		
	comp=Z,18nm,2.1s						
ARU	Arti	31.00	48	P	P	16 30 56.1	-0.2
ARU	Arti	31.00	48	IAmb	IAmb	16 30 58.2	
	comp=Z,5.5nm,0.9s						
TORD	Torodi Ar. Bea	31.34	206	LR	LR	16 44 07.9	
	comp=Z,102nm,18.4s,baz=355,slow=37						
TORD	Torodi Ar. Bea	31.34	206	P	P	16 30 59.5	-0.2
ABKAR	Akbulak array	31.61	62	P	P	16 31 00.5	-1.4
BRVK	Borovoye	37.74	54	i P	P	16 31 56.5	+1.8
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DBIC	Dimbokro	39.69	212	P	P	16 32 10.3	-1.1
	comp=Z,2.9nm,0.9s,baz=36,slow=6.5,SNR=4.4						
DBIC	Dimbokro	39.69	212	P	P	16 32 10.8	-0.6
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DBIC	Dimbokro	39.69	212	P	P	16 32 10.8	-0.6
KURBB	Kurchatov Arra	43.21	56	P	P	16 32 41.1	+1.2
	comp=Z,0.4nm,0.7s,baz=286,slow=10.0,SNR=4.3						
KURK	Kurchatov	43.24	56	P	P	16 32 41.2	+1.0
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KURK	Kurchatov	43.24	56	P	P	16 32 41.1	+1.0
MBAR	Mbarara	45.01	158	i P	P	16 32 54.5	-0.4
NRIK	Noril'sk	45.02	29	P	P	16 32 54.5	+0.3
	comp=Z,0.7nm,0.4s,baz=278,slow=5.3,SNR=3.6						
NRIK	Noril'sk	45.02	29	ceP	P	16 32 54.6	+0.3
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
NRIK	Noril'sk	45.02	29	P	P	16 32 54.5	+0.3
ZALV	Zalesovo Beam	46.09	50	P	P	16 33 03.0	+0.1
	comp=Z,1.2nm,0.6s,baz=278,slow=8.6,SNR=5.9						
ZALV				LR	LR	16 54 23.4	
	comp=Z,126nm,19.4s,baz=320,slow=39						
ZALV	Zalesovo Beam	46.09	50	i P	P	16 33 03.9	+1.0
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	46.09	50	P	P	16 33 03.0	+0.1
MK31	Makanchi Array	46.73	60	P	P	16 33 07.7	-0.4
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	Makanchi Array	46.73	60	P	P	16 33 07.7	-0.4
MKAR	Makanchi Array	46.73	60	P	P	16 33 08.2	+0.1
	comp=Z,0.8nm,0.6s,baz=285,slow=6.8,SNR=8.8						
MKAR	Makanchi Array	46.73	60	ceP	P	16 33 10.3	+2.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	46.73	60	P	P	16 33 08.0	-0.1
DGZ	Jazzator, Alta	48.94	55	i P	P	16 33 27.0	+1.7
DGZ				pmax	pmax		
	comp=Z,21nm,4.8s						
EUNU	Eureka	50.58	347	P	P	16 33 37.5	+0.3
SCHQ	Schefferville	52.61	314	P	P	16 33 52.1	-0.6
	comp=Z,3.8nm,0.7s,baz=113,slow=2.9,SNR=5.0						
SCHQ				LR	LR	16 54 48.0	
	comp=Z,83nm,18.0s,baz=16,slow=34						
SCHQ	Schefferville	52.61	314	P	P	16 33 52.4	-0.3
SCHQ				IAmb	IAmb	16 33 53.9	
	comp=Z,6.7nm,0.9s						
RES	Resolute Bay	54.59	342	P	P	16 34 06.7	-0.2
RES				pmax	pmax		
	comp=Z,6.0nm,1.4s						
RES	Resolute Bay	54.59	342	P	P	16 34 06.7	-0.2
PQI	Presque Isle	56.81	305	P	P	16 34 23.3	+0.1
PQI				IAmb	IAmb	16 34 26.1	
	comp=Z,9.4nm,1.0s						
TIXI	Tiksi	57.18	20	ceP	P	16 34 25.8	+0.3
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.8s						
TIXI	Tiksi	57.18	20	P	P	16 34 25.5	0.0
D62A	Allapoint, All	57.23	306	P	P	16 34 26.8	+0.6
D62A				IAmb	IAmb	16 34 27.8	
	comp=Z,9.1nm,1.0s						
E62A	Clayton Lake	57.74	306	P	P	16 34 30.2	+0.4
E62A				IAmb	IAmb	16 34 39.4	
	comp=Z,14nm,1.2s						
LMQ	La Malbaie	57.77	307	P	P	16 34 29.1	-0.9
SONM	Songino Array	60.99	50	P	P	16 34 52.2	-0.3

	comp=Z,0.8nm,0.9s,baz=302,slow=8.5,SNR=4.5						
SONM				LR	LR	17 03 38.9	
	comp=Z,132nm,19.1s,baz=308,slow=38						
WES	**Weston**	**61.01**	**302**	P	**P**	**16 34 54.6**	**+2.1**
WES				pmax	pmax		
	comp=Z,11nm,1.1s						
WES	**Weston**	**61.01**	**302**	P	**P**	**16 34 54.6**	**+2.1**
WES				IAmb	IAmb	16 35 09.3	
	comp=Z,11nm,1.1s						
ACCN	**Adirondack Com**	**61.93**	**304**	P	**P**	**16 34 59.7**	**+1.0**
A36M	**Sachs Harbour**	**62.61**	**347**	P	**P**	**16 35 03.7**	**+0.9**
A36M				IAmb	IAmb	16 35 05.0	
	comp=Z,3.3nm,0.9s						
PLVO	**Plevna**	**63.07**	**307**	P	**P**	**16 35 07.1**	**+0.8**
PLVO				IAmb	IAmb	16 35 08.3	
	comp=Z,6.3nm,0.8s						
L59A	**Walton**	**63.43**	**304**	P	**P**	**16 35 10.4**	**+1.6**
L59A				IAmb	IAmb	16 35 13.0	
	comp=Z,3.8nm,0.8s						
KSPA	**Keystone Colle**	**64.24**	**304**	P	**P**	**16 35 15.4**	**+1.4**
KSPA				IAmb	IAmb	16 35 42.0	
	comp=Z,13nm,1.4s						
SADO	**Sadowa**	**64.43**	**308**	P	**P**	**16 35 16.3**	**+1.0**
N59A	**State Game Lan**	**64.60**	**303**	P	**P**	**16 35 17.3**	**+0.8**
N59A				IAmb	IAmb	16 35 22.3	
	comp=Z,9.6nm,1.1s						
P60A	**Greenville**	**65.15**	**302**	P	**P**	**16 35 19.6**	**-0.4**
M57A	**Sunshine Farm,**	**65.20**	**304**	P	**P**	**16 35 21.2**	**+0.9**
M57A				IAmb	IAmb	16 35 21.8	
	comp=Z,10nm,1.0s						
N58A	**Sunbury**	**65.23**	**303**	P	**P**	**16 35 21.6**	**+1.0**
N58A				IAmb	IAmb	16 35 44.5	
	comp=Z,14nm,1.4s						
SSPA	**Standing Stone**	**66.08**	**304**	P	**P**	**16 35 27.1**	**+1.1**
SSPA				IAmb	IAmb	16 35 47.8	
	comp=Z,15nm,1.5s						
M54A	**Oil Creek Stat**	**66.65**	**305**	P	**P**	**16 35 30.4**	**+0.8**
O56A	**Blue Knob Stat**	**66.71**	**304**	P	**P**	**16 35 31.0**	**+0.9**
INK	**Inuvik**	**67.20**	**348**	P	**P**	**16 35 32.4**	**-0.3**
INK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
INK	**Inuvik**	**67.20**	**348**	P	**P**	**16 35 32.4**	**-0.3**
LBTB	**Lobatse**	**67.71**	**170**	P	**P**	**16 35 36.5**	**0.0**
LBTB				pmax	pmax		
	comp=Z,5.0nm,1.2s						
LBTB	**Lobatse**	**67.71**	**170**	P	**P**	**16 35 36.5**	**0.0**
LBTB				IAmb	IAmb	16 35 43.8	
	comp=Z,4.9nm,1.2s						
Q56A	**Snyder Ridge,**	**67.83**	**303**	P	**P**	**16 35 37.8**	**+0.6**
YKA	**Yellowknife Ar**	**68.02**	**337**	P	**P**	**16 35 38.8**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=36,slow=5.9,SNR=9.9						
YKA				LR	LR	17 06 45.2	
	comp=Z,130nm,18.4s,baz=0.0,slow=37						
YKA	**Yellowknife Ar**	**68.02**	**337**	P	**P**	**16 35 38.8**	**+0.8**
EYMN	**Ely**	**69.26**	**316**	P	**P**	**16 35 46.9**	**+0.9**
EYMN				IAmb	IAmb	16 35 47.6	
	comp=Z,5.8nm,0.9s						
P52A	**Corning**	**69.28**	**305**	P	**P**	**16 35 46.8**	**+0.6**
BMAR	**Burnt Mountain**	**69.48**	**352**	P	**P**	**16 35 48.8**	**+1.7**
FFC	**Flin Flon**	**69.48**	**327**	P	**P**	**16 35 47.7**	**+0.5**
FFC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FFC	**Flin Flon**	**69.48**	**327**	P	**P**	**16 35 47.7**	**+0.5**
FFC				IAmb	IAmb	16 35 50.4	
	comp=Z,4.4nm,0.9s						
ULM	**Lac du Bonnet**	**69.89**	**320**	P	**P**	**16 35 50.5**	**+0.8**
	comp=Z,6.8nm,0.7s,baz=39,slow=6.4,SNR=9.1						
ULM				LR	LR	17 05 32.4	
	comp=Z,163nm,19.5s,baz=322,slow=35						
ULM	**Lac du Bonnet**	**69.89**	**320**	P	**P**	**16 35 50.1**	**+0.3**
ULM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULM	**Lac du Bonnet**	**69.89**	**320**	P	**P**	**16 35 50.1**	**+0.3**
ULM				IAmb	IAmb	16 35 51.4	
	comp=Z,9.0nm,0.9s						
R53A	**Hurricane**	**69.97**	**304**	P	**P**	**16 35 50.4**	**-0.1**
I42A	**Draeger Farm,**	**70.52**	**312**	P	**P**	**16 35 54.6**	**+0.8**
STVI	**Saint Thomas**	**70.66**	**277**	P	**P**	**16 35 55.2**	**+0.2**
BOSA	**Boshof**	**71.22**	**171**	P	**P**	**16 35 57.8**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=2.4,slow=5.3,SNR=5.6						
BOSA				LR	LR	17 09 37.4	
	comp=Z,50nm,18.6s,baz=8.5,slow=38						
BOSA	**Boshof**	**71.22**	**171**	P	**P**	**16 35 57.9**	**-0.2**
BOSA				pmax	pmax		
	comp=Z,12nm,1.5s						
BOSA	**Boshof**	**71.22**	**171**	P	**P**	**16 35 57.9**	**-0.2**
BOSA				IAmb	IAmb	16 36 06.3	
	comp=Z,12nm,1.4s						
IMAR	**Indian Mountai**	**71.67**	**355**	P	**P**	**16 36 01.9**	**+1.6**
H21K	**Melozitna Rive**	**71.93**	**355**	P	**P**	**16 36 03.3**	**+1.3**
H21K				IAmb	IAmb	16 36 05.6	
	comp=Z,4.5nm,0.8s						
DAWY	**Dawson**	**72.04**	**349**	P	**P**	**16 36 04.0**	**+1.3**
DAWY				IAmb	IAmb	16 36 04.6	
	comp=Z,5.3nm,1.1s						
ILAR	**Eielson Array**	**72.30**	**352**	P	**P**	**16 36 05.2**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=0.6,slow=6.7,SNR=13						
ILAR	**Eielson Array**	**72.30**	**352**	P	**P**	**16 36 05.2**	**+1.1**
CMAR	**Chiang Mai Arr**	**73.31**	**80**	P	**P**	**16 36 10.8**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=300,slow=7.8,SNR=7.4						
CMAR				LR	LR	17 14 52.9	
	comp=Z,21nm,21.6s,baz=320,slow=41						
BCAR	**Beaver Creek A**	**73.33**	**349**	P	**P**	**16 36 12.1**	**+1.7**
L27K	**Beaver Creek,**	**73.34**	**349**	P	**P**	**16 36 12.1**	**+1.7**
J20K	**Nowinta River**	**73.49**	**355**	P	**P**	**16 36 11.8**	**+0.6**
RND	**Reindeer**	**73.83**	**353**	P	**P**	**16 36 13.9**	**+0.6**
RND				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RND	**Reindeer**	**73.83**	**353**	P	**P**	**16 36 13.9**	**+0.6**
RND				IAmb	IAmb	16 36 31.5	
	comp=Z,5.6nm,1.2s						
W50A	**Signal Mountai**	**74.04**	**303**	P	**P**	**16 36 15.8**	**+0.8**
W50A				IAmb	IAmb	16 36 37.3	
	comp=Z,14nm,1.2s						
CLTN	**Cedars of Leba**	**74.09**	**304**	P	**P**	**16 36 15.4**	**+0.2**
CLTN				IAmb	IAmb	16 36 15.9	
	comp=Z,5.4nm,0.9s						
ECSD	**EROS Data Cent**	**74.75**	**316**	P	**P**	**16 36 19.7**	**+0.7**
HYT	**Haines Junctio**	**74.79**	**347**	P	**P**	**16 36 19.4**	**+0.3**
SCM	**Sheep Creek Mo**	**75.21**	**351**	P	**P**	**16 36 22.5**	**+1.1**
SCM				pmax	pmax		
	comp=Z,24nm,1.4s						
SCM	**Sheep Creek Mo**	**75.21**	**351**	P	**P**	**16 36 22.5**	**+1.1**
FVM	**French Village**	**75.28**	**308**	P	**P**	**16 36 22.3**	**+0.2**
FVM				pmax	pmax		
	comp=Z,10.0nm,1.3s						
FVM	**French Village**	**75.28**	**308**	P	**P**	**16 36 22.3**	**+0.2**
FVM				IAmb	IAmb	16 36 49.3	
	comp=Z,9.6nm,1.3s						
CCM	**Cathedral Cave**	**75.71**	**309**	P	**P**	**16 36 24.6**	**0.0**
CCM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CCM	**Cathedral Cave**	**75.71**	**309**	P	**P**	**16 36 24.6**	**0.0**
CCM				IAmb	IAmb	16 36 25.4	
	comp=Z,6.1nm,0.8s						
R40A	**Maddies Statio**	**76.14**	**309**	P	**P**	**16 36 27.8**	**+0.8**
R40A				IAmb	IAmb	16 36 28.5	
	comp=Z,5.2nm,0.8s						
RC01	**Rabbit Creek A**	**76.19**	**352**	P	**P**	**16 36 28.2**	**+1.3**
RC01				IAmb	IAmb	16 36 40.8	
	comp=Z,13nm,1.3s						
MGMO	**Mountain Grove**	**76.92**	**308**	P	**P**	**16 36 31.6**	**+0.1**
MGMO				IAmb	IAmb	16 36 38.2	
	comp=Z,6.3nm,1.1s						
USRK	**Ussuriysk Ar.**	**76.97**	**41**	P	**P**	**16 36 31.2**	**-0.4**
USRK	**Ussuriysk Ar.**	**76.97**	**41**	P	**P**	**16 36 31.1**	**-0.4**
U40A	**Yellville**	**77.81**	**308**	P	**P**	**16 36 37.2**	**+0.7**
U40A				IAmb	IAmb	16 36 38.6	
	comp=Z,5.3nm,0.7s						
WHAR	**Wooly Hollow**	**78.21**	**307**	P	**P**	**16 36 39.2**	**+0.5**
WHAR				IAmb	IAmb	16 36 39.7	
	comp=Z,4.8nm,0.9s						
PDAR	**Pinedale Array**	**81.77**	**322**	P	**P**	**16 36 57.2**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=84,slow=8.3,SNR=1.8						
PDAR				LR	LR	17 13 28.7	
	comp=Z,109nm,18.3s,baz=7.0,slow=36						
ROSC	**El Rosal**	**86.38**	**273**	LR	LR	17 11 19.2	
	comp=Z,142nm,19.9s,baz=222,slow=32						
TXAR	**Lajitas Array**	**89.13**	**310**	P	**P**	**16 37 36.9**	**+2.0**
	comp=Z,0.9nm,0.9s,baz=67,slow=4.2,SNR=6.4						
LPAZ	**La Paz**	**95.95**	**254**	LR	LR	17 17 53.3	
	comp=Z,29nm,18.4s,baz=66,slow=33						

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*ROM **06** 16:42:30.4±0.1, 42°.341N±0°.010×15°.16E±0°.01, h7^{km}±1^{km}, Md2.6/3, Error ellipse: s-maj=1.2km s-min=0.6km az=40.0*

ISC 06 16:42:30.3±1.4**, 42°.36N**±0°.03×**15°.15E**±0°.02**, h11**^{km}±12^{km}**, n40, σ0^{s}.49**/52**, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TREM	**Isole Tremiti**	**0.35**	**131**	P	**Pb**	**16 42 38.5**	**-0.1**
TREM				S	**Sb**	**16 42 43.5**	**-0.7**
FRES	**Fresagrandinar**	**0.52**	**223**	P	**Pg**	**16 42 40.4**	**-0.1**
CAFR	**Castel Frentan**	**0.61**	**258**	P	**Pb**	**16 42 43.2**	**+0.3**
CIGN	**Sant'Elia a Pi**	**0.72**	**195**	P	**Pg**	**16 42 44.6**	**+0.3**
CIGN				S	**Sb**	**16 42 55.0**	**+0.2**
TRIV	**Trivento**	**0.74**	**217**	P	**Pb**	**16 42 45.3**	**+0.1**
SGRT	**San Giovanni R**	**0.75**	**143**	P	**Pg**	**16 42 44.7**	**0.0**
SGRT				S	**Sb**	**16 42 55.7**	**+0.2**
SGRT				AML	AML		
	comp=N,658μm,1.2s						
SGRT				AML	AML		
	comp=E,1250μm,0.5s						
SGRT				END			
LPEL	**Lama dei Pelig**	**0.78**	**247**	P	**Pg**	**16 42 45.8**	**+0.4**
LPEL				S	**Sb**	**16 42 56.9**	**+0.4**
LPEL				END			
MSAG	**Monte S. Angel**	**0.86**	**138**	P	**Pg**	**16 42 46.8**	**-0.1**
MSAG				S	**Sb**	**16 42 58.6**	**-0.1**
MSAG				AML	AML		
	comp=E,1385μm,0.3s						
MSAG				AML	AML		
	comp=E,1525μm,0.3s						
MSAG				AML	AML		
	comp=N,2390μm,0.3s						
MSAG				AML	AML		
	comp=N,2370μm,0.3s						
MSAG				END			
BSSO	**Busso**	**0.91**	**207**	P	**Pg**	**16 42 47.9**	**+0.1**
VCEL	**Villa Celiera**	**0.97**	**273**	P	**Pg**	**16 42 49.4**	**+0.5**
MIDA	**Miranda**	**0.98**	**223**	P	**Pg**	**16 42 48.6**	**-0.5**
MOCO	**Biccari - m.te**	**0.98**	**180**	P	**Pb**	**16 42 49.6**	**+0.2**
MOCO				S	**Sb**	**16 43 02.5**	**+0.1**
MOCO				AML	AML		
	comp=E,167μm,0.7s						
MOCO				AML	AML		
	comp=N,115μm,0.6s						
RNI2	**Rionero Sannit**	**0.99**	**229**	P	**Pg**	**16 42 49.3**	**-0.1**
SACR	**S. Croce Del S**	**1.01**	**199**	P	**Pg**	**16 42 49.3**	**-0.5**
TRTR	**Tortoreto Alta**	**1.02**	**297**	P	**Pg**	**16 42 50.0**	**+0.2**
T0110	**Collepietro**	**1.02**	**263**	P	**Pb**	**16 42 50.5**	**+0.4**
T0110				S	**Sb**	**16 43 04.5**	**+1.0**
CERA	**Filignano**	**1.13**	**228**	P	**Pg**	**16 42 52.0**	**-0.1**
PSB1	**Pescosannita**	**1.16**	**193**	P	**Pg**	**16 42 51.9**	**-0.7**
VAGA	**Valle Agricola**	**1.16**	**216**	P	**Pg**	**16 42 51.5**	**-1.1**
FAGN	**Fagnano**	**1.16**	**266**	P	**Pg**	**16 42 52.2**	**-0.5**
TERO	**Teramo**	**1.17**	**284**	P	**Pg**	**16 42 51.9**	**-0.9**
VITU	**Vitulano (BN)**	**1.23**	**198**	P	**Pg**	**16 42 53.4**	**-0.6**
VITU				AML	AML		
	comp=N,270μm,0.5s						
VITU				AML	AML		
	comp=E,278μm,0.4s						
VVLD	**Villa Vallelon**	**1.23**	**247**	P	**Pg**	**16 42 53.2**	**-0.8**
POFI	**Posta Fibreno**	**1.25**	**240**	P	**Pb**	**16 42 53.6**	**-0.2**
CAPA	**Cerignola FG**	**1.30**	**157**	P	**Pn**	**16 42 54.0**	**-0.3**
ZIRJ	**Zirje**	**1.35**	**15**	*e*Pn	**Pn**	**16 42 53.9**	**-1.1**
ZIRJ				Sn	**Sb**	**16 43 12.7**	**-0.1**
LSTV	**Lastovo**	**1.35**	**72**	*e*Pn	**Pg**	**16 42 56.6**	**+0.3**
PIGN	**Pignataro Magg**	**1.36**	**212**	P	**Pn**	**16 42 54.9**	**-0.3**
VULT	**Monte Vulture**	**1.44**	**166**	P	**Pn**	**16 42 56.9**	**+0.5**
MRVN	**Minervino Murg**	**1.51**	**148**	P	**Pn**	**16 42 57.2**	**-0.1**
PALZ	**Palazzo San Ge**	**1.54**	**156**	P	**Pn**	**16 42 58.4**	**+0.8**
MORI	**Morici**	**1.56**	**15**	*e*Pn	**Pn**	**16 42 57.7**	**-0.3**
MORI				Sn	**Sn**	**16 43 18.3**	**+0.1**
DUGI	**Dugi Otok**	**1.64**	**358**	*e*Pn	**Pn**	**16 42 59.0**	**0.0**
DUGI				Sn	**Sn**	**16 43 19.4**	**-0.7**
MAKA	**Makarska**	**1.66**	**55**	*e*Pn	**Pn**	**16 42 59.2**	**-0.1**
RICI	**Ricice**	**1.85**	**51**	*e*Pn	**Pn**	**16 43 01.8**	**-0.1**
RICI				Sn	**Sn**	**16 43 25.0**	**-0.3**
STON	**Ston**	**1.95**	**74**	*e*Pn	**Pn**	**16 43 03.3**	**0.0**
NVLJ	**Novalja**	**2.22**	**355**	*e*Pn	**Pn**	**16 43 06.8**	**-0.1**
UDBI	**Udbina**	**2.22**	**11**	*e*Pn	**Pn**	**16 43 07.3**	**+0.3**
UDBI				Sn	**Sn**	**16 43 35.1**	**+0.7**
DBRK	**Dubrovnik**	**2.24**	**81**	*e*Pn	**Pn**	**16 43 08.2**	**+1.0**
PLIT	**Plitvice**	**2.54**	**8**	*e*Pn	**Pn**	**16 43 11.2**	**-0.3**

NOU 06 17:03:36.5, 16°.83S×168°.05E, h32^{km}**, MLv4.1**/14**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.90**	**172**	P	Pn	17 03 53.1	+0.2
RTV	**Rentapao**	**1.02**	**160**	P	Pb	17 03 55.2	-0.5
SANVU	**Saraoutou**	**1.60**	**329**	P	Pn	17 04 02.3	-0.2
KOUNC	**Koumac, New Ca**	**5.14**	**223**	P	Pn	17 04 51.6	+0.3
YATNC	**Mamie plateau,**	**5.32**	**192**	P	Pn	17 04 53.4	-0.3
DZM	**Mont Dzumac**	**5.43**	**196**	P	Pn	17 04 55.2	-0.1
NOUC	**Port Laguerre**	**5.50**	**197**	P	Pn	17 04 56.0	-0.2
OUENC	**Ouen Island, N**	**5.67**	**191**	P	Pn	17 04 58.8	+0.2
PINNC	**Pines Island,**	**5.78**	**186**	P	Pn	17 05 00.4	+0.3

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*NEIC **06** 17:09:27.7, 18°.14S×178°.72W, h547^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.74; $M_{\theta\theta}$1.71; $M_{\phi\phi}$-0.96; $M_{r\theta}$1.20; $M_{\theta\phi}$1.12; $M_{\phi r}$-1.80; Fault plane solution: $M_0$2.85000×10^{17} NP1:ϕ_s291.90000°, δ74.26000°, λ-42.97000°. NP2:ϕ_s36.09000°, δ49.00000°, λ-158.93000°. Principal axes: T 2.2617, Plg16.0000°, Azm349.0000°; N 0.9455, Plg45.0000°, Azm96.0000°; P -3.2072, Plg41.0000°, Azm245.0000°;*

*NOU **06** 17:09:28.0, 18°.14S×178°.59W, h543^{km}, ML5.6/136, Fiji Islands Region*

*BJI **06** 17:09:28.1±0.0, 17°.85S×178°.53W, h541^{km}, mB5.0/39, mb5.1/70*

*IDC **06** 17:09:28.0±0.4, 18°.11S×178°.73W, h533^{km}±3^{km}, mb4.9/42, mb1 4.9/45, mb1mx4.8/49, mbtmp5.7/45, Error ellipse: s-maj=8.1km s-min=5.5km az=171.0*

*BGR **06** 17:09:29.2±0.0, 18°.48S×178°.17W, h552^{km}±5^{km}*

*NEIC **06** 17:09:29.3±2.6, 18°.16S±0°.09×178°.69W±0°.10, h547^{km}±1^{km}, mb5.4/293, Mwb5.6/20, Mww5.6, Error ellipse: s-maj=15.9km s-min=14.7km az=132.0*

*MOS **06** 17:09:29.6±1.0, 17°.93S×178°.86W, h555^{km}, mb5.1/16, Error ellipse: s-maj=8.7km s-min=7.4km az=91.3*

*GCMT **06** 17:09:32.3±0.2, 18°.06S±0°.02×178°.61W±0°.03, h558^{km}±1^{km}, MW5.6/111, Moment Tensor Solution. s111,c165; Duration: 1^{s}.5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.59±.04; $M_{\theta\theta}$1.88±.07; $M_{\phi\phi}$-1.30±.07; $M_{r\theta}$0.95±.07; $M_{\theta\phi}$0.88±.06; $M_{\phi r}$-2.22±.07; Best double couple: $M_0$2.85600×10^{17} NP1:ϕ_s42.00000°, δ50.00000°, λ-160.00000°. NP2:ϕ_s299.00000°, δ75.00000°, λ-41.00000°. Principal axes: T 2.2110, Plg16.0000°, Azm356.0000°; N 1.2820, Plg46.0000°, Azm103.0000°; P -3.5000, Plg40.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*NEIC **06** 17:09:32, 18°.19S×178°.57W, h550^{km}, Moment Tensor Solution. Duration: 8^{s}.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.53; $M_{\theta\theta}$1.81; $M_{\phi\phi}$-1.27; $M_{r\theta}$0.86; $M_{\theta\phi}$0.58; $M_{\phi r}$-1.97; Fault plane solution: $M_0$2.75000×10^{17} NP1:ϕ_s46.00000°, δ47.00000°, λ-162.00000°. NP2:ϕ_s304.00000°, δ78.00000°, λ-44.00000°. Principal axes: T 2.0890, Plg19.0000°, Azm2.0000°; N 1.0209, Plg44.0000°, Azm112.0000°; P -3.1099, Plg39.0000°, Azm255.0000°;*

ISC 06 17:09:28.6±0.3**, 18°.12S**±0°.03×**178°.66W**±0°.03**, h547**^{km}±2^{km}**, h547**^{km}**:pP-P, n1619, σ1^{s}.39**/1694**, mb5.4**/289**, 318C-141D, Fault plane solution: NP1:**ϕ_s122.27214°**,** δ88.69103°**,** λ65.91917°. **NP2:**ϕ_s29.34606°**,** δ24.11427°**,** λ176.79471°. **Principal axes:** T Plg41.4184°**,** Azm9.6444°**;** N Plg24.0742°**,** Azm122.8571°**;** P Plg38.9945°**,** Azm234.0632°**; Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**1.84**	**320**	P	**P**	**17 10 38.5**	**+1.1**
DGTI	**Dogotuki**	**2.37**	**319**	P	**P**	**17 10 40.3**	**+0.4**
MSVF	**Nonsavu**	**3.16**	**276**	P	**P**	**17 10 45.9**	**+1.3**
	baz=123,slow=10						
MSVF				S	**S**	**17 11 50.9**	**+4.7**
	15nm,0.3s,baz=148,slow=22,SNR=6.3						
MSVF	**Nonsavu**	**3.16**	**276***c*	*i*P	**P**	**17 10 45.7**	**+1.2**
MSVF	**Nonsavu**	**3.16**	**276**	P	**P**	**17 10 45.8**	**+1.3**
MSVF	**Nonsavu**	**3.16**	**276**	P	**P**	**17 10 46.2**	**+1.7**
AFI	**Afiamalu**	**7.83**	**59**	P	**P**	**17 11 22.0**	**-2.8**
	71nm,0.3s,baz=200,slow=1.8,SNR=62						
AFI				S	**S**	**17 13 00.1**	**+0.3**
	14nm,0.3s,baz=245,slow=22,SNR=2.0						
NIUE	**Niue**	**8.34**	**98**	P	**P**	**17 11 29.4**	**-0.3**
	baz=8.4,SNR=169						
NIUE	**Niue**	**8.34**	**98**	P	**P**	**17 11 29.3**	**-0.3**
NIUE	**Niue**	**8.34**	**98**	P	**P**	**17 11 29.7**	**+0.1**
FUNA	**Funafuti**	**9.76**	**347**		**P**	**17 11 43.8**	**-0.4**
RAO	**Raoul Island**	**11.10**	**177**	P	**P**	**17 11 55.3**	**-2.4**
	166nm,0.3s,baz=326,slow=18,SNR=5.5						
RAO				S	**S**	**17 14 00.6**	**+0.2**
	74nm,0.3s,baz=37,slow=20,SNR=3.8						
RAO	**Raoul Island**	**11.10**	**177**	P	**P**	**17 11 55.3**	**-2.4**
RAO				S	**S**	**17 14 00.6**	**+0.2**
RAO	**Raoul Island**	**11.10**	**177**	P	**P**	**17 11 55.5**	**-2.2**
RAO	**Raoul Island**	**11.10**	**177**	P	**P**	**17 11 56.0**	**-1.7**
GLKZ	**Green Lake**	**11.11**	**177**	P	**P**	**17 11 54.9**	**-3.0**
GLKZ				S	**S**	**17 13 59.9**	**-0.8**
RTV	**Rentapao**	**12.30**	**270**	P	**P**	**17 12 10.3**	**+0.1**
DVP	**Devils Point**	**12.53**	**270**	P	**P**	**17 12 12.3**	**-0.3**
MARNC	**Mare, Loyalty**	**12.97**	**253**	P	**P**	**17 12 15.3**	**-1.8**
MARNC	**Mare, Loyalty**	**12.97**	**253**	P	**P**	**17 12 15.8**	**-1.3**
LIFNC	**LIFOU**	**13.56**	**256**	P	**P**	**17 12 21.1**	**-2.2**
LIFNC	**LIFOU**	**13.56**	**256**	P	**P**	**17 12 21.6**	**-1.7**
PINNC	**Pines Island,**	**13.77**	**249**	P	**P**	**17 12 24.5**	**-0.9**
PINNC	**Pines Island,**	**13.77**	**249**	P	**P**	**17 12 24.8**	**-0.7**
SANVU	**Saraoutou**	**13.80**	**279**	P	**P**	**17 12 24.1**	**-1.7**
SANVU	**Saraoutou**	**13.80**	**279**	P	**P**	**17 12 24.8**	**-1.0**
YATNC	**Mamie plateau,**	**14.13**	**252**	P	**P**	**17 12 27.6**	**-1.6**
OUENC	**Ouen Island, N**	**14.26**	**250**	P	**P**	**17 12 28.9**	**-1.6**
OUENC	**Ouen Island, N**	**14.26**	**250**	P	**P**	**17 12 29.6**	**-0.9**
DZM	**Mont Dzumac**	**14.53**	**252**	*e*P	**P**	**17 12 32.1**	**-1.4**
	797nm,1.4s						
DZM	**Mont Dzumac**	**14.53**	**252**	P	**P**	**17 12 31.7**	**-1.8**
	8.2nm,0.3s,baz=130,slow=18,SNR=103						
DZM				S	**S**	**17 15 05.5**	**-0.3**
	baz=88,slow=16,SNR=1.5						
DZM	**Mont Dzumac**	**14.53**	**252**	P	**P**	**17 12 32.0**	**-1.4**
DZM	**Mont Dzumac**	**14.53**	**252**	P	**P**	**17 12 32.3**	**-1.2**
ONTNC	**Ouen Toro**	**14.58**	**251**	P	**P**	**17 12 32.2**	**-1.6**
ONTNC	**Ouen Toro**	**14.58**	**251**	P	**P**	**17 12 33.1**	**-0.7**
NOUC	**Port Laguerre**	**14.67**	**252**	P	**P**	**17 12 33.7**	**-1.0**
KOUNC	**Koumac, New Ca**	**16.28**	**259**	P	**P**	**17 12 50.6**	**-0.3**
NFK	**Norfolk Island**	**16.39**	**226**	P	**P**	**17 12 53.5**	**+1.7**
	baz=16,SNR=32						
NFK	**Norfolk Island**	**16.39**	**226**	P	**P**	**17 12 53.2**	**+1.4**
KNTN	**Kanton**	**16.70**	**25**	P	**P**	**17 12 54.0**	**-0.9**
RAR	**Rarotonga**	**18.05**	**103**	P	**P**	**17 13 07.1**	**0.0**
	7.4nm,0.3s,baz=252,slow=6.4,SNR=23						
RAR	**Rarotonga**	**18.05**	**103**	P	**P**	**17 13 07.1**	**0.0**
RAR	**Rarotonga**	**18.05**	**103**	P	**P**	**17 13 07.9**	**+0.8**
RAR	**Rarotonga**	**18.05**	**103**	P	**P**	**17 13 06.4**	**-0.7**
OUZ	**Omahuta**	**18.37**	**200**	P	**P**	**17 13 12.0**	**+2.2**
OUZ	**Omahuta**	**18.37**	**200**	P	**P**	**17 13 12.3**	**+2.4**
OUZ	**Omahuta**	**18.37**	**200**	P	**P**	**17 13 12.3**	**+2.4**
WCZ	**Waipu Caves**	**18.80**	**198**	P	**P**	**17 13 16.0**	**+2.2**
KUZ	**Kuaotunu**	**19.21**	**194**	P	**P**	**17 13 18.2**	**+0.8**
ABAZ	**Army Bay**	**19.29**	**196**	P	**P**	**17 13 19.9**	**+1.8**
MXZ	**Matakaoa Point**	**19.55**	**187**	P	**P**	**17 13 18.9**	**-1.7**
MXZ				S	**S**	**17 16 23.1**	**-5.8**
MXZ	**Matakaoa Point**	**19.55**	**187**	P	**P**	**17 13 17.9**	**-2.7**
MXZ				IAmb	IAmb	17 13 22.3	
	comp=Z,116nm,1.1s						
MYRZ	**Mayor Island**	**19.61**	**192**	P	**P**	**17 13 22.8**	**+1.7**
WMGZ	**Waiomatatini S**	**19.80**	**187**	P	**P**	**17 13 21.9**	**-0.9**
WMGZ				S	**S**	**17 16 31.8**	**-0.9**
HAZ	**Te Kaha**	**19.81**	**188**	P	**P**	**17 13 20.9**	**-2.0**
PKGZ	**Pakihiroa**	**19.90**	**188**	P	**P**	**17 13 23.3**	**-0.5**
RUGZ	**Raukumara Rang**	**20.03**	**188**	P	**P**	**17 13 23.2**	**-1.9**
RUGZ				S	**S**	**17 16 29.6**	**-7.2**
TGRZ	**Tauranga**	**20.04**	**192**	P	**P**	**17 13 26.3**	**+1.3**
PUZ	**Puketiti**	**20.06**	**187**	P	**P**	**17 13 24.7**	**-0.6**
PUZ				S	**S**	**17 16 32.4**	**-4.7**
OPRZ	**Ohinepanea**	**20.09**	**191**	P	**P**	**17 13 25.9**	**+0.4**
TOZ	**Tahuroa Road**	**20.20**	**194**	P	**P**	**17 13 27.8**	**+1.4**
KMRZ	**Kaimai**	**20.22**	**192**	P	**P**	**17 13 28.1**	**+1.5**
OMRZ	**Omania**	**20.38**	**191**	P	**P**	**17 13 28.9**	**+0.7**
URZ	**Urewera**	**20.41**	**190**	P	**P**	**17 13 25.0**	**-3.2**
	comp=Z,81nm,0.3s,baz=342,slow=6.4,SNR=75						
URZ				S	**S**	**17 16 35.8**	**-6.6**
	comp=Z,73nm,0.8s,baz=308,slow=20,SNR=6.8						
URZ	**Urewera**	**20.41**	**190**	P	**P**	**17 13 25.1**	**-3.2**
URZ				S	**S**	**17 16 35.0**	**-7.4**
URZ	**Urewera**	**20.41**	**190**	P	**P**	**17 13 25.2**	**-3.1**
URZ	**Urewera**	**20.41**	**190**	P	**P**	**17 13 26.0**	**-2.3**
MWZ	**Matawai**	**20.42**	**189**	P	**P**	**17 13 26.1**	**-2.3**
MWZ				S	**S**	**17 16 36.5**	**-6.2**
CNGZ	**Carnagh Statio**	**20.48**	**187**	P	**P**	**17 13 28.9**	**0.0**
CNGZ				S	**S**	**17 16 50.2**	**+6.7**
TKGZ	**Te Karaka**	**20.48**	**188**	P	**P**	**17 13 28.7**	**-0.2**
TARZ	**Mount Tarawera**	**20.48**	**191**	P	**P**	**17 13 29.5**	**+0.3**
RRRZ	**Republican Roa**	**20.58**	**191**	P	**P**	**17 13 28.3**	**-1.6**
RAGZ	**Rawiri**	**20.59**	**189**	P	**P**	**17 13 29.4**	**-0.7**
MUGZ	**Murupara**	**20.67**	**190**	P	**P**	**17 13 29.1**	**-1.6**
HRRZ	**Handcock Road**	**20.68**	**191**	P	**P**	**17 13 31.7**	**+0.9**
RIGZ	**Rimuhau**	**20.75**	**188**	P	**P**	**17 13 29.7**	**-1.8**
RIGZ				S	**S**	**17 16 44.4**	**-3.6**
RTZ	**Ruatahuna**	**20.77**	**190**	P	**P**	**17 13 29.2**	**-2.5**
PRGZ	**Paritu Road**	**20.95**	**188**	P	**P**	**17 13 33.4**	**+0.2**
PRGZ				S	**S**	**17 16 56.9**	**+5.8**
WHTZ	**Whakaora**	**21.00**	**192**	P	**P**	**17 13 29.0**	**-4.8**
MTHZ	**Maungataniwha**	**21.03**	**190**	P	**P**	**17 13 32.8**	**-1.2**
MTHZ				S	**S**	**17 16 52.8**	**+0.4**
TARA	**Tarawa**	**21.05**	**336**	P	**P**	**17 13 34.1**	**-0.3**
TARA	**Tarawa**	**21.05**	**336**	P	**P**	**17 13 34.3**	**-0.2**
RAHZ	**Arahi**	**21.05**	**189**	P	**P**	**17 13 32.0**	**-2.2**
MRHZ	**Matea Rd**	**21.08**	**191**	P	**P**	**17 13 32.6**	**-1.9**
MRHZ				S	**S**	**17 16 56.5**	**+3.2**
HIZ	**Hauiti**	**21.09**	**194**	P	**P**	**17 13 36.8**	**+2.3**
HIZ	**Hauiti**	**21.09**	**194**	P	**P**	**17 13 36.6**	**+2.1**
HIZ	**Hauiti**	**21.09**	**194**	P	**P**	**17 13 33.8**	**-0.7**
MHGZ	**Mahia Peninsul**	**21.17**	**187**	P	**P**	**17 13 35.6**	**+0.4**
RATZ	**Rangitukua**	**21.23**	**192**	P	**P**	**17 13 35.2**	**-0.7**
BKZ	**Black Stump Fm**	**21.39**	**190**	P	**P**	**17 13 34.8**	**-2.5**
BKZ	**Black Stump Fm**	**21.39**	**190**	P	**P**	**17 13 34.7**	**-2.6**
BKZ	**Black Stump Fm**	**21.39**	**190**	P	**P**	**17 13 34.8**	**-2.5**
ARHZ	**Aropaoanui**	**21.41**	**189**	P	**P**	**17 13 37.0**	**-0.3**
TMVZ	**Te Maari**	**21.49**	**192**	P	**P**	**17 13 36.5**	**-1.8**
TWVZ	**Taurewa**	**21.50**	**193**	P	**P**	**17 13 37.3**	**-1.0**
ETVZ	**East Tongariro**	**21.51**	**192**	P	**P**	**17 13 36.4**	**-2.0**
WTVZ	**West Tongariro**	**21.51**	**192**	P	**P**	**17 13 38.6**	**+0.1**
NNVZ	**North Ngauruho**	**21.52**	**192**	P	**P**	**17 13 38.4**	**-0.2**
NGZ	**Ngauruhoe**	**21.57**	**192**	P	**P**	**17 13 39.3**	**+0.3**
SNVZ	**South Ngauruho**	**21.57**	**192**	P	**P**	**17 13 38.3**	**-0.7**
MCHZ	**McNeill Hill**	**21.63**	**190**	P	**P**	**17 13 37.7**	**-1.7**
TUVZ	**Tukino**	**21.65**	**192**	P	**P**	**17 13 38.4**	**-1.3**
FWVZ	**Far West T-bar**	**21.65**	**192**	P	**P**	**17 13 39.7**	**-0.1**
KWHZ	**Kaweka Forest**	**21.66**	**190**	P	**P**	**17 13 37.4**	**-2.2**
WHVZ	**Whangaehu Hut**	**21.67**	**192**	P	**P**	**17 13 39.5**	**-0.5**
VRZ	**Vera Road**	**21.70**	**194**	P	**P**	**17 13 41.4**	**+1.5**
WNVZ	**Wahianoa**	**21.71**	**192**	P	**P**	**17 13 38.9**	**-1.4**
MOVZ	**Moawhango**	**21.76**	**192**	P	**P**	**17 13 39.2**	**-1.4**
CKHZ	**Cape Kidnapper**	**21.78**	**189**	P	**P**	**17 13 39.3**	**-1.4**
BHHZ	**Black Hill Sta**	**21.78**	**191**	P	**P**	**17 13 37.8**	**-3.0**
KRHZ	**Kereru**	**21.88**	**190**	P	**P**	**17 13 39.4**	**-2.2**
KAHZ	**Kahuranaki**	**21.94**	**189**	P	**P**	**17 13 40.5**	**-1.7**
NEZ	**North Egmont**	**22.00**	**195**	P	**P**	**17 13 45.6**	**+2.9**
KHEZ	**Kahui Hut**	**22.04**	**195**	P	**P**	**17 13 46.2**	**+3.0**
PNHZ	**Pukenui**	**22.17**	**191**	P	**P**	**17 13 42.3**	**-2.0**
PXZ	**Pawanui**	**22.18**	**189**	P	**P**	**17 13 42.5**	**-1.7**
WAZ	**Wanganui**	**22.25**	**193**	P	**P**	**17 13 44.9**	**0.0**
TSZ	**Takapari Road**	**22.35**	**191**	P	**P**	**17 13 44.2**	**-1.6**
PRHZ	**Porangahau**	**22.44**	**189**	P	**P**	**17 13 45.3**	**-1.3**
HNR	**Honiara**	**22.48**	**290**	P	**P**	**17 13 46.1**	**-1.2**
	comp=Z,128nm,0.6s,baz=134,slow=5.3,SNR=14						
HNR				S	**S**	**17 17 15.9**	**+0.1**
	comp=Z,30nm,1.0s,baz=173,slow=16,SNR=0.8						
HNR	**Honiara**	**22.48**	**290**	P	**P**	**17 13 46.1**	**-1.2**
HNR				S	**S**	**17 17 15.9**	**+0.1**
HNR	**Honiara**	**22.48**	**290**	P	**P**	**17 13 46.3**	**-1.0**
HNR	**Honiara**	**22.48**	**290**	P	**P**	**17 13 46.1**	**-1.2**
DVHZ	**Dannevirke**	**22.55**	**190**	P	**P**	**17 13 45.9**	**-1.7**
BFZ	**Birch Farm**	**22.91**	**190**	P	**P**	**17 13 48.5**	**-2.3**
BFZ				IAmb	IAmb	17 13 50.5	
	comp=Z,65nm,0.6s						
BFZ	**Birch Farm**	**22.91**	**190**	P	**P**	**17 13 48.5**	**-2.3**
MSWZ	**Moikau Station**	**23.80**	**191**	P	**P**	**17 13 56.0**	**-2.7**
BHW	**Baring Head**	**23.87**	**192**	P	**P**	**17 13 57.2**	**-2.0**
QRZ	**Quartz Range**	**23.87**	**197**	P	**P**	**17 13 59.1**	**-0.2**

QRZ				IAmb	IAmb	17 14 00.0	
	comp=Z,137nm,0.9s						
QRZ	**Quartz Range**	**23.87**	**197**	P	**P**	**17 13 59.4**	**+0.1**
PLWZ	**Palliser**	**23.95**	**191**	P	**P**	**17 13 58.0**	**-2.0**
NNZ	**Nelson**	**24.01**	**195**	P	**P**	**17 14 00.0**	**-0.6**
NNZ				IAmb	IAmb	17 14 00.7	
	comp=Z,165nm,1.1s						
TUWZ	**Tuamarina**	**24.08**	**194**	P	**P**	**17 13 59.6**	**-1.6**
LHI	**Lord Howe Isla**	**24.16**	**232**	P	**P**	**17 14 02.7**	**+0.7**
	baz=24,SNR=11						
LHI	**Lord Howe Isla**	**24.16**	**232**	P	**P**	**17 14 02.2**	**+0.2**
LHI	**Lord Howe Isla**	**24.16**	**232**	P	**P**	**17 14 01.7**	**-0.3**
BSWZ	**Blackbirch Sta**	**24.37**	**194**	P	**P**	**17 14 02.8**	**-0.9**
KHZ	**Kahutara**	**25.11**	**194**	P	**P**	**17 14 08.7**	**-1.6**
MQZ	**McQueen's Vall**	**26.54**	**194**	P	**P**	**17 14 21.2**	**-1.6**
MQZ				IAmb	IAmb	17 14 23.1	
	comp=Z,332nm,1.8s						
RPZ	**Rata Peaks**	**26.95**	**197**	P	**P**	**17 14 24.7**	**-1.8**
RPZ				IAmb	IAmb	17 14 32.1	
	comp=Z,59nm,0.5s						
RPZ	**Rata Peaks**	**26.95**	**197**	P	**P**	**17 14 24.5**	**-2.0**
PAE	**Paea**	**27.67**	**94**	*e*P	**P**	**17 14 33.6**	**+0.5**
	comp=Z,47nm,1.2s						
PPT2	**Papeete2**	**27.68**	**93**	*e*P	**P**	**17 14 33.9**	**+0.6**
	comp=Z,246nm,1.3s						
PPT	**Papeete**	**27.68**	**93**	P	**P**	**17 14 32.5**	**-0.7**
	comp=Z,97nm,0.9s,baz=259,slow=10,SNR=8.0						
PPT	**Papeete**	**27.68**	**93**	P	**P**	**17 14 32.5**	**-0.7**
PPTF	**Pamatai, Papee**	**27.69**	**93**	P	**P**	**17 14 32.7**	**-0.7**
TIAR	**Tiarei**	**27.90**	**93**	*e*P	**P**	**17 14 35.6**	**+0.4**
	comp=Z,0.4nm,0.9s						
ODZ	**Otahua Downs**	**28.30**	**196**	P	**P**	**17 14 36.9**	**-1.3**
EIDS	**Eidsvold**	**28.97**	**250**	P	**P**	**17 14 44.1**	**-0.3**
	baz=29,SNR=236						
EIDS	**Eidsvold**	**28.97**	**250**	P	**P**	**17 14 44.4**	**-0.1**
EIDS	**Eidsvold**	**28.97**	**250**	P	**P**	**17 14 44.3**	**-0.1**
RK1H	**Rockhampton Ha**	**29.28**	**254**	P	**P**	**17 14 46.8**	**-0.3**
ARMA	**Armidale**	**29.63**	**240**	P	**P**	**17 14 51.0**	**+0.9**
	baz=30,SNR=701						
ARMA	**Armidale**	**29.63**	**240**	P	**P**	**17 14 50.5**	**+0.3**
ARMA	**Armidale**	**29.63**	**240**	P	**P**	**17 14 51.2**	**+1.0**
PMOR	**Pomariorio Ree**	**29.63**	**89**	*e*P	**P**	**17 14 50.8**	**+0.6**
	comp=Z,481nm,1.2s						
PMOR				*e*ScP	**ScP**	**17 20 27.3**	**-0.5**
	comp=Z,203nm,1.2s						
DCZ	**Deep Cove**	**29.72**	**200**	P	**P**	**17 14 50.0**	**-0.6**
DCZ				IAmb	IAmb	17 14 57.0	
	comp=Z,186nm,1.2s						
VAH	**Vaihoa**	**29.85**	**89**	*e*P	**P**	**17 14 52.3**	**+0.2**
	comp=Z,289nm,1.2s						
KWAJ	**Kwajalein Atol**	**29.99**	**332**	P	**P**	**17 14 53.2**	**0.0**
NTLH	**Newcastle Hard**	**30.40**	**235**	P	**P**	**17 14 57.8**	**+1.2**
MGCD	**Mangrove Creek**	**30.98**	**235**	P	**P**	**17 15 02.5**	**+0.9**
	baz=31,SNR=187						
MGCD	**Mangrove Creek**	**30.98**	**235**	P	**P**	**17 15 02.6**	**+1.0**
RIV	**Riverview**	**31.17**	**234**	P	**P**	**17 15 04.0**	**+0.8**
	baz=31,SNR=16						
RMQ	**Roma**	**31.21**	**249**	P	**P**	**17 15 04.1**	**+0.5**
	baz=31,SNR=496						
RMQ	**Roma**	**31.21**	**249**	P	**P**	**17 15 04.4**	**+0.7**
SYDH	**Sydney Hard Ro**	**31.47**	**234**	P	**P**	**17 15 06.8**	**+1.1**
RABL	**Rabaul**	**31.72**	**292**	P	**P**	**17 15 07.1**	**-1.1**
RABL				IAmb	IAmb	17 15 07.7	
	comp=Z,196nm,1.1s						
RABL	**Rabaul**	**31.72**	**292**	P	**P**	**17 15 07.5**	**-0.7**
CNB	**Canberra Magne**	**33.11**	**232**	P	**P**	**17 15 20.6**	**+0.8**
	baz=33,SNR=417						
CNB	**Canberra Magne**	**33.11**	**232**	P	**P**	**17 15 20.6**	**+0.8**
CTA	**Charters Tower**	**33.18**	**261**	P	**P**	**17 15 20.4**	**-0.1**
	comp=Z,276nm,0.3s,baz=76,slow=8.1						
CTA				S	**S**	**17 20 00.1**	**-1.8**
	comp=Z,6.5nm,0.7s,baz=203,slow=20,SNR=2.0						
CTA				ScP	**ScP**	**17 20 42.9**	**+3.0**
	comp=Z,18nm,1.0s,baz=31,slow=4.0,SNR=5.5						
CTA	**Charters Tower**	**33.18**	**261**	P	**P**	**17 15 20.4**	**-0.1**
CTA				S	**S**	**17 20 00.1**	**-1.8**
CTA	**Charters Tower**	**33.18**	**261**	P	**P**	**17 15 20.5**	**-0.1**
CTAO	**Charters Tower**	**33.18**	**261**	P	**P**	**17 15 20.4**	**-0.1**
CTAO				PcP	**PcP**	**17 17 48.1**	**+0.9**
CTAO	**Charters Tower**	**33.18**	**261**	P	**P**	**17 15 20.4**	**-0.1**
CAN	**Canberra**	**33.39**	**233**	P	**P**	**17 15 22.5**	**+0.4**
MILA	**Mila**	**33.97**	**230**	P	**P**	**17 15 27.9**	**+1.0**
	baz=34,SNR=5.0						
PMG	**Port Moresby**	**34.26**	**280**	P	**P**	**17 15 29.4**	**-0.2**
	comp=Z,372nm,0.9s,baz=79,slow=5.7,SNR=90						
PMG				S	**S**	**17 20 20.0**	**+1.7**
	comp=Z,7.9nm,0.9s,baz=108,slow=20,SNR=9.6						
PMG				ScP	**ScP**	**17 20 46.2**	**+2.4**
	comp=Z,7.2nm,0.7s,baz=198,slow=3.2,SNR=4.0						
PMG	**Port Moresby**	**34.26**	**280**	P	**P**	**17 15 29.4**	**-0.2**
PMG				S	**S**	**17 20 20.0**	**+1.7**
PMG	**Port Moresby**	**34.26**	**280**	P	**P**	**17 15 30.1**	**+0.4**
PMG	**Port Moresby**	**34.26**	**280**	P	**P**	**17 15 30.3**	**+0.7**
PMG	**Port Moresby**	**34.26**	**280**	P	**P**	**17 15 30.1**	**+0.4**
CMSA	**Cobar Meteorol**	**34.84**	**241**	P	**P**	**17 15 34.6**	**+0.3**
	baz=35,SNR=877						
CMSA	**Cobar Meteorol**	**34.84**	**241**	P	**P**	**17 15 34.6**	**+0.3**
MTSU	**Mount Surprise**	**35.15**	**264**	P	**P**	**17 15 36.8**	**-0.2**
	baz=35,SNR=292						
MTSU	**Mount Surprise**	**35.15**	**264**	P	**P**	**17 15 36.8**	**-0.2**
QLP	**Quilpie**	**35.24**	**249**	P	**P**	**17 15 37.5**	**-0.1**
	baz=35,SNR=849						
QLP	**Quilpie**	**35.24**	**249**	P	**P**	**17 15 37.4**	**-0.2**
GLAD	**Gladstone**	**36.53**	**224**	P	**P**	**17 15 48.3**	**+0.2**
TOO	**Toolangi**	**36.85**	**231**	P	**P**	**17 15 51.6**	**+0.7**
	baz=37,SNR=432						
TOO	**Toolangi**	**36.85**	**231**	P	**P**	**17 15 51.7**	**+0.8**
TOO				pmax	pmax		
	comp=Z,1µm,1.0s						
TOO	**Toolangi**	**36.85**	**231**	P	**P**	**17 15 51.7**	**+0.7**
TOO	**Toolangi**	**36.85**	**231**	P	**P**	**17 15 51.5**	**+0.7**
COEN	**Coen**	**36.87**	**271**	P	**P**	**17 15 51.8**	**+0.5**
COEN	**Coen**	**36.87**	**271**	P	**P**	**17 15 51.6**	**+0.3**
MOO	**Moorlands**	**37.78**	**223**	P	**P**	**17 15 58.8**	**+0.5**
	baz=38,SNR=18						
MOO	**Moorlands**	**37.78**	**223**	P	**P**	**17 15 57.8**	**-0.5**
TAU	**Tasmania Unive**	**37.92**	**222**	P	**P**	**17 15 59.5**	**0.0**
TAU				pmax	pmax		
	comp=Z,203nm,1.1s						
TAU	**Tasmania Unive**	**37.92**	**222**	P	**P**	**17 15 59.5**	**0.0**
TAU				IAmb	IAmb	17 16 01.0	
	comp=Z,203nm,1.1s						
TAU	**Tasmania Unive**	**37.92**	**222**	P	**P**	**17 15 58.9**	**-0.6**
GEXS	**Deakin Univers**	**37.97**	**230**	P	**P**	**17 16 00.8**	**+0.9**
BRAT	**Ballarat**	**38.00**	**232**	P	**P**	**17 16 01.6**	**+1.4**
STKA	**Stephens Creek**	**38.32**	**241**	P	**P**	**17 16 03.6**	**+0.7**
	comp=Z,456nm,0.7s,baz=92,slow=8.2,SNR=884						
STKA	**Stephens Creek**	**38.32**	**241**	P	**P**	**17 16 03.7**	**+0.9**
	baz=38,SNR=920						
STKA	**Stephens Creek**	**38.32**	**241**	P	**P**	**17 16 03.8**	**+0.9**
STKA				pmax	pmax		
	comp=Z,163nm,0.9s						
STKA	**Stephens Creek**	**38.32**	**241**	P	**P**	**17 16 03.8**	**+0.9**
STKA				IAmb	IAmb	17 16 04.8	
	comp=Z,163nm,0.9s						
STKA	**Stephens Creek**	**38.32**	**241**	P	**P**	**17 16 03.7**	**+0.9**
INKA	**Innaminka**	**38.45**	**248**	P	**P**	**17 16 05.0**	**+1.0**
TAOE	**Nuku Hiva Isla**	**38.49**	**81**	*e*P	**P**	**17 16 04.6**	**0.0**
	comp=Z,348nm,0.9s						
TAOE	**Nuku Hiva Isla**	**38.49**	**81**	P	**P**	**17 16 04.1**	**-0.5**
TAOE				IAmb	IAmb	17 16 06.5	
	comp=Z,132nm,0.8s						
ARPS	**Mount Arapiles**	**39.33**	**234**	P	**P**	**17 16 11.3**	**+0.3**
	baz=39,SNR=78						
ARPS	**Mount Arapiles**	**39.33**	**234**	P	**P**	**17 16 11.3**	**+0.3**
QIS	**Mount Isa**	**39.38**	**259**	P	**P**	**17 16 10.8**	**-0.9**
	baz=39,SNR=133						
QIS	**Mount Isa**	**39.38**	**259**	P	**P**	**17 16 10.9**	**-0.8**
H11N3	**WAKE ISLAND Hy**	**40.18**	**339**	P	**P**	**17 16 17.5**	**-0.2**
	baz=179,slow=14,SNR=9.2						
H11N1	**WAKE ISLAND Hy**	**40.18**	**339**	P	**P**	**17 16 17.5**	**-0.2**
	baz=179,slow=14,SNR=7.7						
H11N2	**WAKE ISLAND Hy**	**40.20**	**339**	P	**P**	**17 16 17.7**	**-0.1**
	baz=179,slow=14,SNR=6.0						
HTT	**Hallett**	**40.83**	**240**	P	**P**	**17 16 23.7**	**+0.6**
	baz=41,SNR=359						
HTT	**Hallett**	**40.83**	**240**	P	**P**	**17 16 23.7**	**+0.6**
MMPI	**Merauke**	**40.91**	**278**	P	**P**	**17 16 23.8**	**-0.1**
	comp=Z,19µmcomp=Z,2µm,1.0s						
LCRK	**Leigh Creek**	**40.95**	**244**	P	**P**	**17 16 24.5**	**+0.5**
GHSS	**Government Hou**	**41.40**	**237**	P	**P**	**17 16 26.8**	**-0.7**
NAPP	**Napperby**	**41.42**	**240**	P	**P**	**17 16 28.6**	**+0.9**
TWOA	**Tennyson Woods**	**41.44**	**237**	P	**P**	**17 16 28.1**	**+0.3**
PTPS	**Port Pirie**	**41.55**	**240**	P	**P**	**17 16 29.4**	**+0.7**
OOD	**Oodnadatta**	**42.92**	**248**	P	**P**	**17 16 40.3**	**+0.7**
BBOO	**Buckleboo**	**43.10**	**241**	P	**P**	**17 16 41.1**	**+0.3**
	baz=43,SNR=800						
BBOO	**Buckleboo**	**43.10**	**241**	P	**P**	**17 16 41.2**	**+0.3**
BBOO	**Buckleboo**	**43.10**	**241**	P	**P**	**17 16 41.0**	**+0.1**
KHLU	**Kahalu`u**	**43.63**	**32**	P	**P**	**17 16 45.8**	**+0.5**
MLOA	**Mauna Loa Obse**	**43.75**	**32**	P	**P**	**17 16 46.7**	**+0.2**
POHA	**Pohakuloa**	**43.96**	**32**	P	**P**	**17 16 47.3**	**-0.6**
POHA	**Pohakuloa**	**43.96**	**32**	P	**P**	**17 16 47.3**	**-0.6**
HPAH	**Hawaii Prepara**	**44.10**	**32**	P	**P**	**17 16 49.7**	**+0.8**
WR0	**Warramunga Arr**	**44.17**	**260**	P	**P**	**17 16 48.5**	**-0.9**
KIP	**Kipapa**	**44.20**	**28**	*ce*P	**P**	**17 16 49.8**	**+0.4**
KIP				pmax	pmax		
	comp=Z,484nm,1.7s						
KIP	**Kipapa**	**44.20**	**28**	P	**P**	**17 16 49.4**	**0.0**
KIP	**Kipapa**	**44.20**	**28**	P	**P**	**17 16 49.1**	**-0.3**
KIP	**Kipapa**	**44.20**	**28**	P	**P**	**17 16 49.2**	**-0.2**
WB0	**Warramunga Arr**	**44.33**	**260**	P	**P**	**17 16 49.9**	**-0.7**
WB2	**Warramunga Arr**	**44.35**	**260**	P	**P**	**17 16 49.9**	**-0.9**
WRA	**Warramunga Arr**	**44.36**	**260**	P	**P**	**17 16 49.8**	**-1.1**
	comp=Z,131nm,0.3s,baz=97,slow=6.9,SNR=905						
WRA				PcP	**PcP**	**17 18 23.6**	**+0.6**
	comp=Z,28nm,0.8s,baz=92,slow=4.8,SNR=5.9						
WRA				ScP	**ScP**	**17 21 25.5**	**+2.4**
	comp=Z,16nm,1.0s,baz=84,slow=4.3,SNR=7.0						
WRA				S	**S**	**17 22 37.7**	**-8.2**
	comp=Z,2.4nm,0.7s,baz=97,slow=13,SNR=1.6						
WRA	**Warramunga Arr**	**44.36**	**260**	P	**P**	**17 16 49.8**	**-1.1**
WRA						17 18 23.6	
HLK	**Haleakala**	**44.45**	**31**	P	**P**	**17 16 52.5**	**+0.8**
ASAR	**Alice Springs**	**44.51**	**254**	P	**P**	**17 16 51.6**	**-0.4**
	comp=Z,1µm,0.7s,baz=90,slow=6.8						
ASAR				PcP	**PcP**	**17 18 23.2**	**-0.2**
	comp=Z,37nm,0.8s,baz=96,slow=4.2,SNR=3.2						
ASAR				ScP	**ScP**	**17 21 26.5**	**+2.8**
	comp=Z,16nm,0.9s,baz=91,slow=4.4,SNR=6.4						
ASAR				S	**S**	**17 22 44.8**	**-3.1**
	comp=Z,14nm,0.8s,baz=88,slow=16,SNR=7.0						
ASAR				PKP2bc		17 48 49.5	
	comp=Z,1.7nm,1.0s,baz=263,slow=5.3,SNR=7.7						
ASAR	**Alice Springs**	**44.51**	**254**	P	**P**	**17 16 51.6**	**-0.4**
ASAR						17 18 23.2	
ASAR	**Alice Springs**	**44.51**	**254**	P	**P**	**17 16 51.4**	**-0.6**
ASAR				PcP	**PcP**	**17 18 23.7**	**+0.2**
ASAR				ScP	**ScP**	**17 21 26.4**	**+2.7**
MULG	**Mulgathing**	**44.51**	**245**	P	**P**	**17 16 51.8**	**0.0**
SMPI	**Sarmi**	**44.77**	**286**	P	**P**	**17 16 54.2**	**+0.1**
	comp=Z,2µmcomp=Z,264nm,0.9s						
SRPI	**Serui, Papua**	**47.08**	**285**	P	**P**	**17 17 12.1**	**+0.4**
	comp=Z,3µmcomp=Z,290nm,0.9s						
KDU	**Kakadu**	**47.31**	**269**	P	**P**	**17 17 13.1**	**-0.3**
	baz=47,SNR=491						
KDU	**Kakadu**	**47.31**	**269**	P	**P**	**17 17 13.3**	**-0.1**
GUMO	**Guam**	**47.82**	**309**	P	**P**	**17 17 16.9**	**-0.2**
	comp=Z,111nm,0.4s,baz=186,slow=9.3,SNR=7.3						
GUMO	**Guam**	**47.82**	**309**	P	**P**	**17 17 16.9**	**-0.2**
GUMO	**Guam**	**47.82**	**309**	P	**P**	**17 17 17.1**	**0.0**
MTN	**Manton Dam**	**48.55**	**269**	P	**P**	**17 17 22.0**	**-0.6**
	baz=48,SNR=602						
MTN	**Manton Dam**	**48.55**	**269**	P	**P**	**17 17 22.0**	**-0.6**
MTN	**Manton Dam**	**48.55**	**269**	P	**P**	**17 17 22.1**	**-0.6**
DRS	**Darwin Rock St**	**48.87**	**269**	P	**P**	**17 17 24.7**	**-0.3**
WRKA	**Warakurna**	**49.55**	**252**	P	**P**	**17 17 29.9**	**0.0**
	baz=50,SNR=1000						
WRKA	**Warakurna**	**49.55**	**252**	P	**P**	**17 17 30.4**	**+0.4**
SAUI	**Saumlaki**	**49.64**	**275**	P	**P**	**17 17 31.2**	**+0.5**
	comp=Z,10µmcomp=Z,938nm,1.3s						
SAUI	**Saumlaki**	**49.64**	**275**	P	**P**	**17 17 31.1**	**+0.4**
SAUI	**Saumlaki**	**49.64**	**275**	P	**P**	**17 17 31.4**	**+0.7**
FORT	**Forrest**	**49.70**	**245**	P	**P**	**17 17 30.5**	**-0.4**
	baz=50,SNR=530						
FORT	**Forrest**	**49.70**	**245**	P	**P**	**17 17 30.5**	**-0.4**
FORT	**Forrest**	**49.70**	**245**	P	**P**	**17 17 30.6**	**-0.4**
KNRA	**Kununurra**	**50.23**	**264**	P	**P**	**17 17 34.7**	**-0.3**
	baz=50,SNR=1000						
KNRA	**Kununurra**	**50.23**	**264**	P	**P**	**17 17 34.9**	**-0.1**
KNRA	**Kununurra**	**50.23**	**264**	P	**P**	**17 17 34.7**	**-0.3**
FAKI	**Fak Fak**	**50.38**	**282**	P	**P**	**17 17 35.7**	**-0.5**
	comp=Z,3µmcomp=Z,191nm,1.2s						
FAKI	**Fak Fak**	**50.38**	**282**	P	**P**	**17 17 36.0**	**-0.2**
FAKI	**Fak Fak**	**50.38**	**282**	P	**P**	**17 17 36.0**	**-0.2**
SIJI	**Sorong**	**52.05**	**283**	P	**P**	**17 17 48.5**	**+0.3**
	comp=Z,719nm,0.8s,baz=67,slow=7.2,SNR=554						
SIJI				S	**S**	**17 24 32.0**	**+0.4**
	comp=Z,4.6nm,1.0s,baz=198,slow=19,SNR=9.6						
SWI	**Sorong**	**52.06**	**284**	P	**P**	**17 17 48.1**	**-0.2**
	comp=Z,9µmcomp=Z,1µm,0.9s						
FITZ	**Fitzroy Crossi**	**52.76**	**261**	P	**P**	**17 17 53.4**	**+0.2**
	comp=Z,186nm,0.8s,baz=105,slow=5.1,SNR=13						
FITZ				S	**S**	**17 24 39.6**	**-1.2**
	comp=Z,8.7nm,1.1s,baz=123,slow=6.2,SNR=3.5						
AAI	**Ambon**	**53.91**	**279**	P	**P**	**17 18 01.1**	**-0.4**
	comp=Z,5µmcomp=Z,416nm,1.2s						
LBMI	**Labuha**	**55.63**	**282**	P	**P**	**17 18 13.8**	**+0.3**
	comp=Z,3µmcomp=Z,355nm,1.1s						
SOEI	**Soe**	**55.83**	**270**	P	**P**	**17 18 16.1**	**+1.1**
	comp=Z,13µmcomp=Z,2µm,0.9s						
SOEI	**Soe**	**55.83**	**270**	P	**P**	**17 18 16.3**	**+1.3**
SOEI	**Soe**	**55.83**	**270**	P	**P**	**17 18 16.6**	**+1.6**
TNTI	**Ternate**	**56.28**	**284**	P	**P**	**17 18 18.1**	**+0.2**
	comp=Z,4µmcomp=Z,458nm,1.2s						
TNTI	**Ternate**	**56.28**	**284**	P	**P**	**17 18 18.4**	**+0.4**
TNTI	**Ternate**	**56.28**	**284**	P	**P**	**17 18 18.4**	**+0.4**
BATI	**Baumata**	**56.29**	**270**	P	**P**	**17 18 19.6**	**+1.5**
	comp=Z,377nm,0.7s,baz=191,slow=1.2,SNR=209						
BATI				S	**S**	**17 25 27.6**	**+0.4**
	comp=Z,7.2nm,0.6s,baz=160,slow=19,SNR=2.3						
SANI	**Sanana**	**56.54**	**280**	P	**P**	**17 18 19.0**	**-0.8**
	comp=Z,5µmcomp=Z,631nm,0.9s						
SANI	**Sanana**	**56.54**	**280**	P	**P**	**17 18 19.7**	**-0.1**
PSA00	**Pilbara Seismi**	**57.62**	**256**	P	**P**	**17 18 26.6**	**-0.5**
PSA00				PcP	**PcP**	**17 19 11.7**	**-1.1**
PSA00	**Pilbara Seismi**	**57.62**	**256**	P	**P**	**17 18 26.8**	**-0.3**
MBWA	**Marble Bar**	**57.79**	**256**	P	**P**	**17 18 28.0**	**-0.2**
MMRI	**Maumere**	**58.06**	**271**	P	**P**	**17 18 29.3**	**-0.8**
	comp=Z,2µmcomp=Z,5µmcomp=Z,552nm,1.1s						
MMRI	**Maumere**	**58.06**	**271**	P	**P**	**17 18 29.9**	**-0.3**
MMRI	**Maumere**	**58.06**	**271**	P	**P**	**17 18 29.8**	**-0.3**
MEEK	**Meekatharra**	**58.14**	**250**	P	**P**	**17 18 30.0**	**-0.5**
	baz=58,SNR=121						
MEEK	**Meekatharra**	**58.14**	**250**	P	**P**	**17 18 30.0**	**-0.5**
KLBR	**Kellerberrin**	**58.52**	**244**	P	**P**	**17 18 32.6**	**-0.4**
	baz=58,SNR=63						
KLBR	**Kellerberrin**	**58.52**	**244**	P	**P**	**17 18 32.6**	**-0.4**
JCJ	**Chichijima**	**58.84**	**319**	P	**P**	**17 18 35.5**	**+0.4**
	comp=Z,42nm,0.6s,baz=242,slow=18,SNR=2.2						
NWAO	**Narrogin (SRO)**	**58.90**	**242**	P	**P**	**17 18 35.3**	**-0.2**
SGSI	**Sangihe**	**59.10**	**286**	P	**P**	**17 18 37.7**	**+0.6**
	comp=Z,3µmcomp=Z,272nm,0.7s						
KMSI	**Cibinong**	**59.35**	**282**	P	**P**	**17 18 38.5**	**-0.3**
	comp=Z,4µmcomp=Z,490nm,0.8s						
BLDU	**Ballidu**	**59.48**	**245**	P	**P**	**17 18 38.9**	**-0.5**
	baz=59,SNR=169						
BLDU	**Ballidu**	**59.48**	**245**	P	**P**	**17 18 38.9**	**-0.5**
MUN	**Mundaring**	**59.82**	**243**	P	**P**	**17 18 41.3**	**-0.3**
	baz=60,SNR=46						
MUN	**Mundaring**	**59.82**	**243**	P	**P**	**17 18 41.5**	**-0.1**
MORW	**Morawa**	**60.18**	**246**	P	**P**	**17 18 43.5**	**-0.6**
	baz=60,SNR=99						
MORW	**Morawa**	**60.18**	**246**	P	**P**	**17 18 43.8**	**-0.4**
MORW				IAmb	IAmb	17 18 44.8	
	comp=Z,186nm,0.9s						
MORW	**Morawa**	**60.18**	**246**	P	**P**	**17 18 43.7**	**-0.4**
MTKN	**Mount Kenneth**	**60.19**	**243**	P	**P**	**17 18 45.4**	**+1.3**
	comp=Z,1µm,1.0s						
SBA	**Scott Base**	**60.20**	**184**	P	**P**	**17 18 45.4**	**+2.1**
SBA				pmax	pmax		
	comp=Z,151nm,1.2s						
SBA	**Scott Base**	**60.20**	**184**	P	**P**	**17 18 45.4**	**+2.1**
SBA				IAmb	IAmb	17 18 47.1	
	comp=Z,151nm,1.1s						
GTOI	**Gorontalo**	**60.27**	**281**	P	**P**	**17 18 45.5**	**+0.6**
	comp=Z,1µmcomp=Z,126nm,0.9s						
BSSI	**Bau Bau, Buton**	**60.43**	**273**	P	**P**	**17 18 45.4**	**-0.6**
	comp=Z,2µmcomp=Z,146nm,1.1s						
DAV	**Davao City (W)**	**60.44**	**289**	P	**P**	**17 18 45.3**	**-0.7**
	comp=Z,142nm,0.4s,baz=123,slow=4.2,SNR=10						
APSI	**Ampana**	**61.00**	**279**	P	**P**	**17 18 50.5**	**+0.8**
	comp=Z,6µmcomp=Z,496nm,1.2s						
BKSI	**Bulukumba**	**61.02**	**274**	P	**P**	**17 18 49.0**	**-0.9**
	comp=Z,1µmcomp=Z,99nm,0.9s						
MRSI	**Marisa**	**61.21**	**281**	P	**P**	**17 18 50.8**	**-0.3**
	comp=Z,2µmcomp=Z,299nm,0.9s						
BNSI	**Bone**	**61.32**	**275**	P	**P**	**17 18 51.7**	**-0.1**
	comp=Z,3µmcomp=Z,369nm,1.2s						
H01W1	**Cape Leeuwin H**	**61.37**	**240**	P	**P**	**17 18 52.7**	**+1.1**
	baz=111,slow=7.7,SNR=14						
H01W3	**Cape Leeuwin H**	**61.39**	**240**	P	**P**	**17 18 52.9**	**+1.3**
	baz=111,slow=7.7,SNR=12						
H01W2	**Cape Leeuwin H**	**61.39**	**240**	P	**P**	**17 18 53.2**	**+1.5**
	baz=111,slow=7.7,SNR=8.3						
KAPI	**Kappang**	**61.47**	**274**	P	**P**	**17 18 52.8**	**0.0**
	comp=Z,60nm,0.8s,baz=150,slow=3.4,SNR=57						
KAPI				S	**S**	**17 26 32.3**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=94,slow=22,SNR=2.1						
KAPI	**Kappang**	**61.47**	**274**	P	**P**	**17 18 52.2**	**-0.6**
KAPI				pmax	pmax		
	comp=Z,263nm,1.5s						
KAPI	**Kappang**	**61.47**	**274**	P	**P**	**17 18 52.2**	**-0.6**
KAPI				IAmb	IAmb	17 18 54.0	
	comp=Z,263nm,1.4s						
KAPI	**Kappang**	**61.47**	**274**	P	**P**	**17 18 52.9**	**+0.1**
SPSI	**Sidrap Palu**	**61.78**	**275**	P	**P**	**17 18 53.8**	**-1.0**
	comp=Z,2µmcomp=Z,219nm,1.0s						
TTSI	**Tana Toraja**	**62.02**	**276**	P	**P**	**17 18 56.4**	**0.0**
	comp=Z,2µmcomp=Z,108nm,1.1s						
PLAI	**Plampang**	**62.25**	**269**	P	**P**	**17 18 57.3**	**-0.6**
	comp=Z,9µmcomp=Z,898nm,1.1s						
PLAI	**Plampang**	**62.25**	**269**	P	**P**	**17 18 57.7**	**-0.2**
TOLI2	**Tolitoli**	**62.52**	**281**	P	**P**	**17 18 59.5**	**-0.1**
TOLI2				IAmb	IAmb	17 19 00.7	
	comp=Z,169nm,1.0s						
TOLI2	**Tolitoli**	**62.52**	**281**	P	**P**	**17 18 59.8**	**+0.2**
GIRL	**Giralia**	**62.61**	**253**	P	**P**	**17 19 01.2**	**+1.2**
	baz=63,SNR=43						
GIRL	**Giralia**	**62.61**	**253**	P	**P**	**17 18 59.6**	**-0.5**
GIRL	**Giralia**	**62.61**	**253**	P	**P**	**17 19 01.1**	**+1.1**
MPSI	**Mapaga**	**63.08**	**280**	P	**P**	**17 19 02.9**	**-0.3**
	comp=Z,3µmcomp=Z,324nm,0.9s						
TWSI	**Taliwang, Sumb**	**63.13**	**269**	P	**P**	**17 19 02.8**	**-0.7**
	comp=Z,5µmcomp=Z,480nm,1.0s						
JHJ2	**Mitsune**	**64.56**	**322**	P	**P**	**17 19 12.8**	**+0.6**
JHJ	**Hachijo jima 2**	**64.59**	**322**	P	**P**	**17 19 12.4**	**0.0**
	comp=Z,65nm,0.4s,baz=157,slow=4.5,SNR=9.9						
DNP	**Denpasar**	**64.73**	**269**	P	**P**	**17 19 14.0**	**+0.2**
	comp=Z,10µmcomp=Z,1µm,0.9s						
IGBI	**Denpasar**	**64.76**	**269**	P	**P**	**17 19 13.7**	**-0.2**
	comp=Z,7µmcomp=Z,786nm,0.9s						
SRBI	**Singaraja**	**64.89**	**269**	P	**P**	**17 19 14.2**	**-0.6**
	comp=Z,5µmcomp=Z,438nm,1.1s						
SMKI	**Samarinda**	**65.33**	**278**	P	**P**	**17 19 19.7**	**+2.1**
	comp=Z,483nm,1.1s						
BKB	**Balikpapan**	**65.36**	**277**	P	**P**	**17 19 19.2**	**+1.5**
	comp=Z,4µmcomp=Z,333nm,1.0s						
KBKI	**Kotabaru**	**65.40**	**275**	P	**P**	**17 19 18.4**	**+0.5**
	comp=Z,2µmcomp=Z,194nm,1.2s						
JAGI	**Jajag, Banyuwa**	**65.80**	**269**	P	**P**	**17 19 18.9**	**-1.5**
	comp=Z,7µmcomp=Z,792nm,0.9s						
JAGI	**Jajag, Banyuwa**	**65.80**	**269**	P	**P**	**17 19 19.0**	**-1.5**
JAGI	**Jajag, Banyuwa**	**65.80**	**269**	P	**P**	**17 19 19.4**	**-1.0**
CASY	**Casey**	**65.85**	**205**	P	**P**	**17 19 20.2**	**+0.5**
ABJI	**Asem Bagus**	**65.91**	**269**	P	**P**	**17 19 20.9**	**-0.2**
	comp=Z,4µmcomp=Z,462nm,1.1s						
MYLDM	**Lahad Datu**	**66.13**	**284**	IAmb	IAmb	17 19 26.7	
	comp=Z,225nm,1.1s						
GMJI	**Gumukmas**	**66.52**	**269**	P	**P**	**17 19 24.1**	**-0.8**
	comp=Z,3µmcomp=Z,326nm,0.6s						
BLJI	**Banyuglugur**	**66.53**	**269**	P	**P**	**17 19 24.6**	**-0.4**
	comp=Z,4µmcomp=Z,380nm,0.8s						
JYT	**Yasato**	**66.60**	**325**	IAmb	IAmb	17 19 26.3	
	comp=Z,73nm,0.5s						
MTKI	**Muara Teweh, K**	**67.35**	**277**	P	**P**	**17 19 30.4**	**+0.3**
	comp=Z,141nm,0.9s						
TGY	**Tagaytay City**	**67.61**	**294**	P	**P**	**17 19 32.1**	**+0.5**
	comp=Z,90nm,0.4s,baz=130,slow=1.1,SNR=6.7						
TGY	**Tagaytay City**	**67.61**	**294**	P	**P**	**17 19 32.1**	**+0.5**
INU	**Inuyama**	**67.78**	**322**	P	**P**	**17 19 32.1**	**-0.1**
SPMM	**Sapulut**	**67.84**	**283**	P	**P**	**17 19 34.0**	**+1.0**
MJAR	**Matsushiro Arr**	**67.93**	**324**	P	**P**	**17 19 32.2**	**-0.9**
	comp=Z,18nm,0.5s,baz=154,slow=6.3,SNR=85						
MJAR				PcP	**PcP**	**17 19 56.1**	**+1.4**
	comp=Z,7.5nm,0.7s,baz=163,slow=3.7,SNR=5.2						
MJAR	**Matsushiro Arr**	**67.93**	**324**	P	**P**	**17 19 32.2**	**-0.9**
MJAR						17 19 56.1	
MAJO	**Matsushiro**	**67.93**	**324**	*i* P	**P**	**17 19 32.8**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,20nm,0.5s						
MAJO	**Matsushiro**	**67.93**	**324**	P	**P**	**17 19 33.3**	**+0.2**
MAJO				IAmb	IAmb	17 19 34.0	
	comp=Z,37nm,0.5s						
MAJO	**Matsushiro**	**67.93**	**324**	P	**P**	**17 19 33.3**	**+0.2**
MAT	**Matsushiro**	**67.93**	**324**	P	**P**	**17 19 33.1**	**0.0**
MAT				S	**S**	**17 27 48.4**	**-0.6**
JOW	**Kunigami**	**68.17**	**310**	P	**P**	**17 19 34.6**	**-0.1**
	comp=Z,36nm,0.7s,baz=110,slow=18,SNR=2.6						
KKM	**Kota Kinabalu**	**68.56**	**284**	IAmb	IAmb	17 19 38.9	
	comp=Z,137nm,0.8s						
KKM	**Kota Kinabalu**	**68.56**	**284**	P	**P**	**17 19 37.8**	**+0.3**
UGM	**Wanagama**	**69.40**	**268**	P	**P**	**17 19 42.4**	**-0.1**
	comp=Z,9µmcomp=Z,694nm,0.9s						
UGM	**Wanagama**	**69.40**	**268**	P	**P**	**17 19 42.5**	**-0.1**
UWJI	**Ujung Watu**	**69.42**	**270**	P	**P**	**17 19 43.7**	**+1.1**
	comp=Z,5µmcomp=Z,449nm,1.1s						
ADK	**Adak**	**69.72**	**1**	P	**P**	**17 19 43.0**	**-0.5**
ADK				pmax	pmax		
	comp=Z,130nm,0.7s						
ADK	**Adak**	**69.72**	**1**	P	**P**	**17 19 43.0**	**-0.5**
ADK				IAmb	IAmb	17 19 44.1	
	comp=Z,130nm,0.7s						
ADK	**Adak**	**69.72**	**1**	P	**P**	**17 19 43.4**	**-0.1**
SMRI	**Semarang**	**69.72**	**269**	P	**P**	**17 19 44.9**	**+0.5**
	comp=Z,5µmcomp=Z,566nm,0.9s						
PBKI	**Pangkalan Bun**	**69.85**	**274**	P	**P**	**17 19 46.2**	**+1.1**
	comp=Z,9µmcomp=Z,1µm,1.0s						
JNU	**Nakatsue**	**70.13**	**317**	IAmb	IAmb	17 21 24.7	
	comp=Z,69nm,0.8s						
ATKA	**Atka Island**	**70.13**	**3**	P	**P**	**17 19 45.5**	**-0.4**
STKI	**Sintang**	**70.91**	**277**	P	**P**	**17 19 52.4**	**+1.0**
	comp=Z,2µmcomp=Z,254nm,1.2s						
SBUM	**Sibu**	**71.00**	**279**	P	**P**	**17 19 53.0**	**+1.1**
NIKH	**Nikolski High**	**71.30**	**6**	P	**P**	**17 19 52.5**	**-0.3**
	baz=190						
ASAJ	**Asahikawa**	**71.35**	**332**	P	**P**	**17 19 54.2**	**+0.9**
	comp=Z,30nm,0.5s,baz=230,slow=4.7,SNR=58						
ASAJ	**Asahikawa**	**71.35**	**332**	P	**P**	**17 19 54.2**	**+0.9**
CMJI	**Cimerak**	**71.41**	**268**	P	**P**	**17 19 53.5**	**-0.8**
	comp=Z,2µmcomp=Z,241nm,0.9s						
NACB	**Ninganchiao**	**71.83**	**304**	IAmb	IAmb	17 19 57.4	
	comp=Z,129nm,1.0s						
QSPA	**South Pole Qui**	**71.94**	**180**	P	**P**	**17 19 57.7**	**+1.1**
	comp=Z,210nm,1.0s,baz=7.9,slow=0.7,SNR=892						
QSPA	**South Pole Qui**	**71.94**	**180**	P	**P**	**17 19 56.6**	**0.0**
QSPA				IAmb	IAmb	17 19 58.8	
	comp=Z,187nm,0.9s						
SKR	**Severo-Kuril's**	**72.01**	**343**	*e*P	**P**	**17 19 57.1**	**+0.2**
SKR				pmax	pmax		
	comp=Z,67nm,1.0s						
SSLB	**Suanglung**	**72.15**	**303**	P	**P**	**17 19 57.9**	**-0.6**
SSLB				IAmb	IAmb	17 19 59.0	
	comp=Z,75nm,0.6s						
SSLB	**Suanglung**	**72.15**	**303**	P	**P**	**17 19 58.1**	**-0.3**
TPUB	**Ta-pu**	**72.17**	**303**	P	**P**	**17 19 57.9**	**-0.7**
TPUB	**Ta-pu**	**72.17**	**303**	P	**P**	**17 19 58.0**	**-0.6**
YHNB	**Yeheng**	**72.25**	**304**	P	**P**	**17 19 58.5**	**-0.6**
YHNB				IAmb	IAmb	17 20 00.2	
	comp=Z,139nm,1.1s						
YHNB	**Yeheng**	**72.25**	**304**	P	**P**	**17 19 59.4**	**+0.3**
UNV	**Unalaska Valle**	**72.43**	**8**	P	**P**	**17 19 58.6**	**-0.7**
UNV				IAmb	IAmb	17 19 59.4	
	comp=Z,81nm,0.8s						
UNV	**Unalaska Valle**	**72.43**	**8**	P	**P**	**17 19 58.5**	**-0.7**
	baz=192						
LEM	**Lembang**	**72.47**	**268**	P	**P**	**17 20 01.4**	**+0.7**
	comp=Z,822nm,0.8s,baz=31,slow=3.9,SNR=196						
LEM				S	**S**	**17 28 41.0**	**-0.7**
	comp=Z,5.5nm,0.3s,baz=90,slow=20,SNR=1.7						
LEM	**Lembang**	**72.47**	**268**	P	**P**	**17 20 01.4**	**+0.7**
LEM				S	**S**	**17 28 41.0**	**-0.7**
KSM	**Kuching**	**72.47**	**278**	P	**P**	**17 20 02.0**	**+1.5**
KSM	**Kuching**	**72.47**	**278**	P	**P**	**17 20 01.1**	**+0.6**
CNJI	**Cibinong**	**72.80**	**268**	P	**P**	**17 20 01.8**	**-0.6**
	comp=Z,4µmcomp=Z,8µmcomp=Z,849nm,0.9s						
DBJI	**Dramaga**	**73.37**	**268**	P	**P**	**17 20 05.5**	**-0.2**
	comp=Z,168µmcomp=Z,851nm,1.1s						
YSS	**Yuzh-Sakhalins**	**73.50**	**334**	*ce*P	**P**	**17 20 05.2**	**-0.4**
YSS				pmax	pmax		
	comp=Z,77nm,2.5s						
PET	**Petropavlovsk**	**73.52**	**346**	⇑*i*P	**P**	**17 20 05.4**	**-0.1**
PET				*e*S	**S**	**17 28 52.8**	**+1.5**
PET				pmax	pmax		
	comp=Z,97nm,0.6s						

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PET    Petropavlovsk      73.52 346    P       P       17 20 05.4 -0.1
PET    Petropavlovsk      73.52 346    P       P       17 20 05.7 +0.1
PEA0B  Petropavlovsk-     73.82 345    P       P       17 20 07.6 +0.3
PEA0B                                  pmax    pmax
       comp=Z,89nm,0.7s
PEA0B  Petropavlovsk-     73.82 345    P       P       17 20 07.6 +0.3
PEA0B                                  IAmb    IAmb    17 20 08.7
       comp=Z,89nm,0.7s
PETK   Petropavlovsk-     73.82 345    P       P       17 20 07.0 -0.2
       comp=Z,63nm,0.6s,baz=136,slow=6.6,SNR=182
PETK   Petropavlovsk-     73.82 345    P       P       17 20 07.1 -0.2
PETK   Petropavlovsk-     73.82 345    P       P       17 20 07.1 -0.2
SBJI   Serang             74.09 269    P       P       17 20 09.7  0.0
       comp=Z,7µmcomp=Z,719nm,1.1s
CGJI   Cibinong           74.36 268    P       P       17 20 10.4 -0.9
       comp=Z,9µmcomp=Z,839nm,0.9s
TJN    Taejon             74.40 317  i P       P       17 20 10.3 -0.7
QZH    Quanzhou           74.59 303⇑iP       P       17 20 13.5 +1.2
QZH                                    pmax    pmax
       comp=Z,83nm,0.8s
KSRS   Korea Array        74.70 319    P       P       17 20 13.8 +1.2
       comp=Z,5.0nm,0.5s,baz=130,slow=6.2,SNR=43
KSRS   Korea Array        74.70 319    P       P       17 20 13.8 +1.2
KSAR   Wonju Array Be     74.72 318    P       P       17 20 12.2 -0.5
KSAR   Wonju Array Be     74.72 318    P       P       17 20 12.2 -0.5
BLSI   Bandar Lampung     75.15 269    P       P       17 20 14.7 -1.0
       comp=Z,4µmcomp=Z,452nm,0.9s
PPBI   Pangkal Pinang     75.27 273    P       P       17 20 16.8 +0.4
       comp=Z,4µmcomp=Z,265nm,0.9s
SPIA   Saint Paul Isl     75.34   5    P       P       17 20 15.8 +0.1
SPIA   Saint Paul Isl     75.34   5    P       P       17 20 15.2 -0.4
       baz=188
KLI    Kotabumi           75.67 270    P       P       17 20 18.2 -0.4
       comp=Z,110nm,0.5s
KASI   Kota Agung         75.82 269    P       P       17 20 18.5 -0.9
       comp=Z,7µmcomp=Z,1µm,0.9s
KLSI                      75.84 270    P       P       17 20 18.3 -1.3
       comp=Z,41nm,1.3s
H06S1  SOCORRO T          75.92  65    P       P       17 20 20.4 +0.6
       SNR=12
H06E1  SOCORRO T-PHAS75.97  65    P       P       17 20 21.8 +1.7
       SNR=22
CHIR   Chirikof Islan     76.19  13    P       P       17 20 20.5 +0.1
CHIR   Chirikof Islan     76.19  13    P       P       17 20 20.2 -0.2
       baz=202
PMBI   Palembang          76.33 271    P       P       17 20 23.4 +1.2
       comp=Z,5µmcomp=Z,589nm,1.1s
LWLI   Liwa               76.38 269    P       P       17 20 21.9 -0.8
       comp=Z,5µmcomp=Z,470nm,0.9s
MDSI   Maura Dua          76.43 270    P       P       17 20 21.4 -1.4
       comp=Z,1µmcomp=Z,118nm,1.0s
SCZ2   Santa Cruz Isl     76.43  47    P       P       17 20 24.3 +1.9
       baz=237,SNR=12
SBC    Santa Barbara      76.62  47    P       P       17 20 24.9 +1.5
       baz=237
TYV    Tymovskoe          76.62 336   eP       P       17 20 23.3 +0.3
TYV                                   eS       S       17 29 17.6 -7.3
TYV                                    pmax    pmax
       comp=Z,54nm,0.9s
TYV                                    pmax    pmax
       comp=Z,600nm,3.9s
TYV                                    smax    smax
       comp=N,1µm,4.5s
TYV                                    smax    smax
       comp=E,700nm,4.5s
SCI2   San Clemente I     76.65  49    P       P       17 20 24.9 +1.4
       baz=238,SNR=8.8
USRK   Ussuriysk Ar.      76.65 326    P       P       17 20 24.6 +1.4
       comp=E,8.8nm,0.5s,baz=122,slow=4.3,SNR=23
USRK   Ussuriysk Ar.      76.65 326    P       P       17 20 24.0 +0.7
USRK   Ussuriysk Ar.      76.65 326    P       P       17 20 24.0 +0.7
USA0B  Ussuriysk Arra     76.65 326    P       P       17 20 24.0 +0.7
USA0B                                  pmax    pmax
       comp=Z,63nm,1.6s
USA0B  Ussuriysk Arra     76.65 326    P       P       17 20 24.0 +0.7
SAO    San Andreas Ge     76.74  44    P       P       17 20 24.8 +0.8
SAO                                    pmax    pmax
       comp=Z,140nm,0.8s
SAO    San Andreas Ge     76.74  44    P       P       17 20 24.8 +0.8
SAO                                    IAmb    IAmb    17 20 26.6
       comp=Z,140nm,0.8s
PKM    Mcpherson Peak     76.79  46    P       P       17 20 26.3 +1.8
       baz=237,SNR=16
PMPB   Monarch Peak       76.86  45    P       P       17 20 26.3 +1.5
PMPB                                   IAmb    IAmb    17 20 27.1
       comp=Z,105nm,0.7s
SMMC   Simmler            76.90  46    P       P       17 20 26.9 +1.9
       baz=236,SNR=19
PAGB   Antelope Grade     76.96  45    P       P       17 20 26.9 +1.7
CIS    Catalina Islan     76.97  48    P       P       17 20 26.5 +1.2
       baz=238,SNR=9.3
HOPS   Hopland Field      76.99  41    P       P       17 20 26.6 +1.3
HOPS                                   IAmb    IAmb    17 20 27.9
       comp=Z,197nm,1.2s
SII    Sitkinak Islan     77.18  14    P       P       17 20 26.4 +0.5
       baz=204
FMP    Fort Macarthur     77.22  48    P       P       17 20 28.2 +1.6
       baz=238,SNR=5.8
LHSI   Lahat              77.25 270    P       P       17 20 26.6 -0.6
       comp=Z,1µmcomp=Z,138nm,1.0s
DSRI   Dabo               77.27 274    P       P       17 20 28.0 +0.6
       comp=Z,1µmcomp=Z,93nm,1.3s
DECC   Green Verdugo      77.48  47    P       P       17 20 29.2 +1.1
       baz=238,SNR=12
PASC   Pasadena Art C     77.54  48    P       P       17 20 27.9 -0.4
PASC                                   IAmb    IAmb    17 20 30.5
       comp=Z,102nm,0.8s
ARVC   Arvin              77.60  47    P       P       17 20 30.2 +1.6
       baz=237,SNR=12
109C   Camp Elliot, M     77.64  49    P       P       17 20 30.3 +1.3
       baz=239,SNR=12
MWC    Mount Wilson       77.66  48    IAmb    IAmb    17 20 31.4
       comp=Z,118nm,0.8s
CBX    Cerro Bola         77.66  50    P       P       17 20 30.7 +1.5
JMBI   JAMBI              77.80 272    P       P       17 20 32.1 +1.8
       comp=Z,3µmcomp=Z,256nm,1.3s
VES    Vestal, Richgr     77.81  46    P       P       17 20 31.0 +1.3
       baz=237,SNR=50
BAR    Barrett            77.84  50    P       P       17 20 30.8 +0.7
O02D   Mt. Diablo Mer     77.87  40    P       P       17 20 32.1 +2.0
       baz=234,SNR=24
VOG    Valley Oaks Go     77.87  45    P       P       17 20 31.3 +1.2
       baz=237,SNR=7.1
NJ2    Nanjing            77.89 310  ⇓P       P       17 20 31.1 +0.8
NJ2                                    PcP     PcP     17 20 38.8 +1.2
NJ2                                    pP      pP      17 22 28.2 +1.9
NJ2                                    sP      sP      17 23 23.1 +0.7
NJ2                                    S       S       17 29 37.6 -1.5
NJ2                                    pmax    pmax
       comp=Z,54nm,0.8s
NJ2                                    pmax    pmax
       comp=Z,180nm,4.3s
MURC   Murrieta           77.94  49    P       P       17 20 32.0 +1.3
       baz=239,SNR=27
BFSC   Mount Baldy Ra     77.94  48    P       P       17 20 31.8 +1.1
       baz=238
EDW2   Edwards Air Fo     78.05  47    P       P       17 20 32.7 +1.5
       baz=238,SNR=157
MONP2  Monument Peak      78.13  50    P       P       17 20 33.6 +1.8
       baz=239,SNR=152
ISA    Isabella, Lake     78.13  46    P       P       17 20 33.3 +1.6
ISA                                    pmax    pmax
       comp=Z,150nm,1.0s
ISA    Isabella, Lake     78.13  46    P       P       17 20 33.3 +1.6
ISA                                    IAmb    IAmb    17 20 34.3
       comp=Z,150nm,0.9s
ISA    Isabella, Lake     78.13  46    P       P       17 20 33.2 +1.6
       baz=237,SNR=121
CMB    Columbia Colle     78.16  43    P       P       17 20 32.7 +1.0
CMB                                    pmax    pmax
       comp=Z,111nm,1.0s
CMB    Columbia Colle     78.16  43    P       P       17 20 32.7 +1.0
CMB                                    IAmb    IAmb    17 20 34.0
       comp=Z,111nm,1.0s
MDJ    Mudanjiang         78.22 325    P       P       17 20 33.5 +1.7
MDJ                                    pmax    pmax
       comp=Z,37nm,0.7s
MDJ                                    pmax    pmax
       comp=Z,200nm,3.6s
RMX    La Rumorosa        78.23  50    P       P       17 20 33.9 +1.6
RMX                                    IAmb    IAmb    17 20 35.1
       comp=Z,141nm,0.8s
IKP    In-Ko-Pah, Jac     78.24  50    P       P       17 20 34.1 +1.8
       baz=239,SNR=54
WDC    Whiskeytown Da     78.26  40    P       P       17 20 33.3 +1.2
WDC                                    pmax    pmax
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       comp=Z,122nm,1.4s
WDC    Whiskeytown Da     78.26  40    P       P       17 20 33.3 +1.2
ORV    Oroville           78.31  42    P       P       17 20 33.5 +1.1
ORV                                    pmax    pmax
       comp=Z,87nm,1.1s
ORV    Oroville           78.31  42    P       P       17 20 33.5 +1.1
N02D   Trinity Center     78.39  40    P       P       17 20 34.7 +1.8
       baz=234,SNR=20
PFO    Pinyon Flats O     78.47  49    P       P       17 20 34.9 +1.3
       comp=Z,31nm,0.8s,baz=257,slow=4.1,SNR=50
PFO    Pinyon Flats O     78.47  49    P       P       17 20 34.1 +0.5
PFO                                    pmax    pmax
       comp=Z,45nm,1.0s
PFO    Pinyon Flats O     78.47  49    P       P       17 20 34.1 +0.5
PFO    Pinyon Flats O     78.47  49    P       P       17 20 34.9 +1.3
       baz=239,SNR=23
TPFO   Pinon Flats        78.47  49    P       P       17 20 34.9 +1.4
       baz=239,SNR=22
BBRC   Big Bear Solar     78.48  48    P       P       17 20 35.1 +1.4
       baz=239
O03E   Paynes Creek       78.55  41    P       P       17 20 34.9 +1.1
       baz=234,SNR=21
M02C   Callahan           78.55  39    P       P       17 20 35.7 +2.0
       baz=233,SNR=20
L02E   Cave Junction      78.56  38    P       P       17 20 35.5 +1.8
       baz=233,SNR=5.1
LRMC   Laurel Mtn Rad     78.58  47    P       P       17 20 35.5 +1.3
       baz=238,SNR=27
SWSC   Sam W. Stewart     78.61  50    P       P       17 20 35.6 +1.4
       baz=240,SNR=31
KDAK   Kodiak Island      78.66  14    P       P       17 20 34.3 +0.5
KDAK                                   pmax    pmax
       comp=Z,87nm,0.9s
KDAK   Kodiak Island      78.66  14    P       P       17 20 34.3 +0.5
KDAK                                   IAmb    IAmb    17 20 36.1
       comp=Z,87nm,0.8s
KDAK   Kodiak Island      78.66  14    P       P       17 20 34.5 +0.7
       baz=205
MASI   Maura Aman, Be     78.67 270    P       P       17 20 35.3 +0.3
       comp=Z,3µmcomp=Z,279nm,1.4s
MYKOM  Kota Tinggi        78.68 276    P       P       17 20 36.0 +1.1
MYKOM  Kota Tinggi        78.68 276    P       P       17 20 35.6 +0.7
MYKOM                                  IAmb    IAmb    17 20 36.8
       comp=Z,113nm,0.9s
RRX    Edison Barstow     78.74  48    P       P       17 20 36.2 +1.4
       baz=238
CWC    Cottonwood Cre     78.82  46    P       P       17 20 36.8 +1.4
       baz=238
YBH    Yreka Blue Hor     78.84  39    P       P       17 20 36.7 +1.4
       comp=Z,74nm,0.7s,baz=194,slow=2.1,SNR=154
YBH    Yreka Blue Hor     78.84  39    P       P       17 20 37.0 +1.7
YBH                                    pmax    pmax
       comp=Z,87nm,0.9s
YBH    Yreka Blue Hor     78.84  39    P       P       17 20 37.0 +1.7
YBH                                    IAmb    IAmb    17 20 38.0
       comp=Z,87nm,0.8s
K02D   Willamette Mer     78.85  38    P       P       17 20 36.9 +1.6
       baz=232,SNR=8.1
SLBS   Sierra La Lagu     78.87  61    P       P       17 20 37.9 +2.0
SLBS                                   IAmb    IAmb    17 20 38.7
       comp=Z,89nm,0.7s
MLAC   Mammoth, Mammo78.95  44    P       P       17 20 38.3 +2.1
       baz=237,SNR=8.4
J01E   Myrtle Point       78.98  37    P       P       17 20 37.4 +1.5
       baz=232
BELC   Belle Mtn. Jos     79.00  49    P       P       17 20 38.0 +1.6
       baz=239,SNR=81
MPMC   Manual Prospec     79.02  46    P       P       17 20 37.9 +1.4
       baz=238,SNR=69
TIN    Tinemaha, Big      79.05  45    P       P       17 20 38.4 +1.8
       baz=237,SNR=43
MPK    Martis Peak        79.09  42    P       P       17 20 38.8 +1.9
MPK                                    IAmb    IAmb    17 20 39.4
       comp=Z,170nm,0.7s
GSC    Goldstone, Bar     79.10  47    P       P       17 20 38.4 +1.6
GSC                                    pmax    pmax
       comp=Z,219nm,1.9s
GSC    Goldstone, Bar     79.10  47    P       P       17 20 38.4 +1.6
GSC                                    IAmb    IAmb    17 20 39.3
       comp=Z,219nm,1.9s
GSC    Goldstone, Bar     79.10  47    P       P       17 20 38.2 +1.4
       baz=239,SNR=29
GRNR   Gornyy             79.11 333⇑iP       P       17 20 37.8 +1.4
GRNR                                  eS       S       17 29 47.7 -3.4
GRNR                                   pmax    pmax
       comp=E,10.0nm,0.9s
GRNR                                   pmax    pmax
       comp=N,10.0nm,0.8s
GRNR                                   pmax    pmax
       comp=Z,50nm,0.9s
GRNR                                   smax    smax
       comp=N,1.0nm,0.9s
HEC    Hector,Ludlow      79.19  48    P       P       17 20 38.5 +1.2
       baz=239,SNR=66
HUMO   Hull Mountain      79.21  38    P       P       17 20 39.0 +1.8
HUMO                                   IAmb    IAmb    17 20 40.1
       comp=Z,112nm,1.1s
BC3    Big Chuckawall     79.22  49    P       P       17 20 39.3 +1.8
       baz=240,SNR=37
PNTR   Pine Nut           79.26  43    P       P       17 20 39.3 +1.5
PNTR                                   IAmb    IAmb    17 20 40.4
       comp=Z,212nm,0.8s
VCNR   Virginia City      79.34  43    P       P       17 20 38.9 +0.8
DBO    Dodson Butte       79.35  38    P       P       17 20 38.8 +0.8
L04D   Klamath Falls      79.37  39    P       P       17 20 39.6 +1.5
       baz=234,SNR=23
GLA    Glamis             79.37  50    P       P       17 20 40.3 +2.1
       baz=240,SNR=31
M04C   Macdoel            79.39  40    P       P       17 20 39.8 +1.5
       baz=234,SNR=14
QSM    Queen of Sheba     79.40  47    P       P       17 20 39.6 +1.3
Q19K   Cape Douglas,      79.47  13    P       P       17 20 38.3 +0.1
Q19K                                   IAmb    IAmb    17 20 39.3
       comp=Z,138nm,0.9s
Q19K   Cape Douglas,      79.47  13    P       P       17 20 38.5 +0.4
       baz=204
LCH    Last Change Ra     79.54  45    P       P       17 20 39.4 +0.3
P18K   Big Mountain,      79.58  12    P       P       17 20 38.5 -0.2
P18K                                   IAmb    IAmb    17 20 39.5
       comp=Z,164nm,0.8s
P18K   Big Mountain,      79.58  12    P       P       17 20 38.6 -0.1
       baz=203,SNR=26
DL2    Dalian             79.58 317    P       P       17 20 40.5 +1.4
DL2                                   esP      sP      17 23 28.3 -3.4
DL2                                    S       S       17 29 58.8 +2.5
DL2                                    pmax    pmax
       comp=Z,48nm,0.7s
DL2                                    pmax    pmax
       comp=Z,250nm,4.4s
GMRC   Granite Mounta     79.64  48    P       P       17 20 40.9 +1.2
       baz=239,SNR=38
I03D   Drain, OR          79.64  37    P       P       17 20 40.8 +1.5
       baz=233,SNR=7.2
GWY    Greenwater Val     79.65  47    P       P       17 20 40.7 +0.9
FURC   Furnace Creek,     79.67  46    P       P       17 20 41.1 +1.5
       baz=238,SNR=38
IRM    Iron Mountain      79.69  49    P       P       17 20 41.7 +1.8
       baz=240,SNR=48
KRJI   Kerinci            79.73 271    P       P       17 20 40.2 -0.5
       comp=Z,3µmcomp=Z,187nm,0.9s
PAHR   Pah Rah Range      79.74  42    P       P       17 20 41.4 +1.2
PAHR                                   IAmb    IAmb    17 20 42.6
       comp=Z,124nm,1.2s
NVAR   Mina Array Bea     79.74  44    P       P       17 20 41.7 +1.4
       comp=Z,75nm,0.8s,baz=225,slow=8.9,SNR=351
NVAR                                   PP      PP      17 23 49.1 -2.7
       comp=Z,1.3nm,0.9s,baz=236,slow=9.7,SNR=3.4
NVAR                                   PKKPbc  PKKPbc  17 39 25.4 +1.8
       comp=Z,0.5nm,0.6s,baz=60,slow=5.8,SNR=4.0
NVAR                                   PKPPKP  P'P'df  17 47 26.9 +1.6
       comp=Z,0.8nm,0.7s,baz=100,slow=3.1,SNR=5.6
NVAR   Mina Array Bea     79.74  44    P       P       17 20 41.3 +1.0
SHOC   Shoshone, Teco     79.78  47    P       P       17 20 41.8 +1.5
       baz=239,SNR=30
TUQ    Turquoise Moun     79.78  48    P       P       17 20 41.9 +1.4
       baz=239,SNR=77
NV11   Mina Array Sit     79.84  44    P       P       17 20 41.9 +1.2
NV11                                   IAmb    IAmb    17 20 43.2
       comp=Z,119nm,1.1s
K04D   Chiloquin, OR      79.94  39    P       P       17 20 42.5 +1.4
       baz=234,SNR=5.2
O18K   Koktuh Hills       80.01  12    IAmb    IAmb    17 20 42.0
       comp=Z,257nm,0.9s
O18K   Koktuh Hills       80.01  12    P       P       17 20 41.2 +0.3
       baz=203
J04D   Umpqua Nationa     80.09  38    P       P       17 20 43.7 +1.7
       baz=234,SNR=30
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KLR    Kul'dur            80.17 330    P       P       17 20 42.8 +0.8
       comp=Z,4.8nm,0.6s,baz=102,slow=4.3,SNR=19
KLR    Kul'dur            80.17 330ceP       P       17 20 41.9 -0.1
KLR                                    pmax    pmax
       comp=Z,19nm,1.3s
KVN    Kaiserville        80.21  43    P       P       17 20 44.0 +1.3
KVN                                    pmax    pmax
       comp=Z,105nm,1.0s
KVN    Kaiserville        80.21  43    P       P       17 20 44.0 +1.3
KVN                                    IAmb    IAmb    17 20 45.0
       comp=Z,105nm,1.0s
P19K   Oil Pt             80.22  13    IAmb    IAmb    17 20 42.6
       comp=Z,87nm,0.7s
P19K   Oil Pt             80.22  13    P       P       17 20 42.2 +0.2
       baz=204
I04A   Tendick Farm,      80.24  38    P       P       17 20 43.6 +1.1
       baz=233,SNR=12
214A   Organ Pipe Nat     80.33  52    P       P       17 20 45.4 +2.1
214A                                   IAmb    IAmb    17 20 46.6
       comp=Z,84nm,0.9s
214A   Organ Pipe Nat     80.33  52    P       P       17 20 45.4 +2.1
       baz=242,SNR=30
NEE2   Needles Airpor     80.37  49    P       P       17 20 45.4 +2.0
       baz=240,SNR=5.2
MOD    Modoc Plateau      80.40  40    P       P       17 20 44.9 +1.3
MOD                                    IAmb    IAmb    17 20 46.0
       comp=Z,124nm,0.8s
HSIG                      80.40  55    P       P       17 20 45.0 +1.4
PDMCI  Parker Dam,Lak     80.48  49    P       P       17 20 45.8 +1.8
       baz=240,SNR=24
H04D   Lebanon            80.49  37    P       P       17 20 45.3 +1.5
       baz=233,SNR=6.5
O19K   Port Alsworth      80.50  12    P       P       17 20 43.5 +0.1
O19K   Port Alsworth      80.50  12    P       P       17 20 43.5 +0.1
       baz=203,SNR=45
K05A   Summer Lake        80.51  39    P       P       17 20 45.9 +1.7
K05A                                   IAmb    IAmb    17 20 47.0
       comp=Z,217nm,1.0s
WHN    Wuhan              80.54 306  ⇑P       P       17 20 45.9 +1.6
WHN                                    pmax    pmax
       comp=Z,98nm,1.0s
CNPM   China Poot         80.54  14    P       P       17 20 44.3 +0.6
CNPM                                   IAmb    IAmb    17 20 45.0
       comp=Z,109nm,1.0s
HOM    Homer              80.57  14    P       P       17 20 44.1 +0.3
       baz=206
G03D   McMinnville, O     80.61  36    P       P       17 20 45.9 +1.6
       baz=232
J05D   Fort Rock, OR      80.63  39    P       P       17 20 46.6 +1.8
       baz=234,SNR=80
JRMM   Jerantut           80.65 277    P       P       17 20 46.0 +0.7
O20K   Slope Mountain     80.74  13    P       P       17 20 44.9 +0.1
       baz=205
BRLK   Bradley Lake       80.84  14    P       P       17 20 45.3 +0.1
BRLK                                   IAmb    IAmb    17 20 46.3
       comp=Z,106nm,0.8s
BRSE   Bradley Lake S     80.85  14    P       P       17 20 45.7 +0.4
       baz=207,SNR=20
SHPR   Sheep Range        80.86  47    P       P       17 20 47.4 +1.3
BKNI   Bangkinang         80.88 273    P       P       17 20 47.5 +1.0
       comp=Z,4µmcomp=Z,371nm,1.2s
PPSI   Pulau Pagai        80.91 270    P       P       17 20 48.0 +1.3
       comp=Z,3µmcomp=Z,295nm,1.1s
N19K   Bonanza Creek      81.03  12    P       P       17 20 45.4 -0.9
N19K   Bonanza Creek      81.03  12    P       P       17 20 45.9 -0.4
       baz=203
PDSI   Padang             81.05 272    P       P       17 20 46.1 -1.3
       comp=Z,93nm,1.0s
SVW2   Sparrevohn         81.09  11    P       P       17 20 46.4 -0.1
PINE   Pine Mountain      81.10  38    P       P       17 20 48.9 +1.7
PINE                                   IAmb    IAmb    17 20 50.0
       comp=Z,208nm,1.0s
I05D   Terrebonne, OR     81.19  38    P       P       17 20 48.8 +1.3
       baz=234,SNR=21
TIA    Tai'an             81.21 313  ⇓P       P       17 20 48.3 +0.6
TIA                                    pmax    pmax
       comp=Z,28nm,0.7s
PPI    Padang Panjang     81.25 272    P       P       17 20 48.3 -0.1
       comp=Z,486nmcomp=Z,62nm,0.8s
F04D   Rainier, OR        81.28  36    P       P       17 20 49.6 +1.8
       baz=232,SNR=6.0
MA2    Magadan            81.33 345ceP       P       17 20 46.3 -1.5
MA2                                    pmax    pmax
       comp=Z,33nm,0.7s
MA2    Magadan            81.33 345    P       P       17 20 47.3 -0.4
MA2    Magadan            81.33 345    P       P       17 20 47.4 -0.4
H02S1  DAWSON INLET T     81.42  26    P       P       17 20 49.1 +0.8
SEW    Seward             81.47  14    P       P       17 20 48.3 -0.1
SEW    Seward             81.47  14    P       P       17 20 48.3 -0.1
       baz=208,SNR=5.9
WISH   Wishkah            81.50  34    P       P       17 20 50.2 +1.3
R11A   Troy Canyon, C     81.51  45    P       P       17 20 50.5 +1.1
R11A   Troy Canyon, C     81.51  45    P       P       17 20 50.5 +1.1
       baz=239,SNR=52
F04A   Amboy              81.52  36    P       P       17 20 49.8 +0.7
F04A                                   IAmb    IAmb    17 20 51.2
       comp=Z,260nm,1.5s
BMN    Battle Mountai     81.52  43    P       P       17 20 50.5 +1.1
BMN                                    pmax    pmax
       comp=Z,147nm,1.0s
BMN    Battle Mountai     81.52  43    P       P       17 20 50.5 +1.1
BMN                                    IAmb    IAmb    17 20 51.9
       comp=Z,147nm,1.0s
NLWA   Neilton Lookou     81.62  34    P       P       17 20 50.5 +0.9
WVOR   Wild Horse Val     81.72  40    P       P       17 20 51.6 +1.3
WVOR                                   pmax    pmax
       comp=Z,170nm,1.0s
WVOR   Wild Horse Val     81.72  40    P       P       17 20 51.6 +1.3
WVOR                                   IAmb    IAmb    17 20 52.9
       comp=Z,170nm,1.0s
G05D   Wamic, OR          81.73  37    P       P       17 20 51.5 +1.3
       baz=234,SNR=10
O22K   Cooper Landing     81.74  14    P       P       17 20 50.0 +0.2
O22K                                   IAmb    IAmb    17 20 50.6
       comp=Z,122nm,0.6s
O22K   Cooper Landing     81.74  14    P       P       17 20 50.0 +0.2
       baz=208,SNR=11
UBPT   Khong Chiam        81.77 289    P       P       17 20 52.1 +1.2
GAMB   Gambell            81.81   3    P       P       17 20 51.1 +1.1
       baz=187
E04D   Cinebar            81.81  35    P       P       17 20 52.2 +1.6
       baz=233,SNR=11
SPCR   Spurr Chakacha     81.84  13    P       P       17 20 49.6 -0.8
       baz=205,SNR=12
TUC    Tucson             82.02  52    P       P       17 20 54.2 +2.2
TUC                                    pmax    pmax
       comp=Z,122nm,1.1s
TUC    Tucson             82.02  52    P       P       17 20 54.2 +2.2
TUC                                    IAmb    IAmb    17 20 55.5
       comp=Z,122nm,1.1s
TUC    Tucson             82.02  52    P       P       17 20 54.2 +2.2
       baz=243
F05D   White Salmon       82.03  36    P       P       17 20 53.0 +1.3
       baz=234,SNR=16
M19K   Big River Lodg     82.06  11    P       P       17 20 51.5 +0.1
       baz=203
D04E   Lakebay            82.08  35    P       P       17 20 54.1 +2.3
       baz=233
I07A   Izee               82.12  39    P       P       17 20 53.7 +1.4
I07A                                   IAmb    IAmb    17 20 54.9
       comp=Z,128nm,0.8s
D03D   Eldon              82.12  34    P       P       17 20 53.7 +1.6
       baz=232,SNR=12
IPM    Ipoh               82.21 277    P       P       17 20 54.0 +0.7
IPM    Ipoh               82.21 277    P       P       17 20 53.9 +0.5
IPM                                    IAmb    IAmb    17 20 55.1
       comp=Z,175nm,0.8s
IPM    Ipoh               82.21 277    P       P       17 20 54.0 +0.7
B04A   Port Angeles       82.22  34    P       P       17 20 53.6 +1.0
SISI   Saibi              82.22 271    P       P       17 20 54.1 +0.7
       comp=Z,896nmcomp=Z,73nm,0.9s
L19K   White Mountain     82.23  11    P       P       17 20 52.8 +0.5
L19K                                   IAmb    IAmb    17 20 54.1
       comp=Z,71nm,0.9s
L19K   White Mountain     82.23  11    P       P       17 20 52.8 +0.5
       baz=203,SNR=27
RC01   Rabbit Creek A     82.28  14    P       P       17 20 52.4 -0.2
RC01                                   IAmb    IAmb    17 20 53.7
       comp=Z,108nm,1.1s
RC01   Rabbit Creek A     82.28  14    P       P       17 20 52.6  0.0
       baz=208,SNR=16
PWL    Port Wells         82.40  14    P       P       17 20 52.7 -0.5
PWL                                    IAmb    IAmb    17 20 54.0
       comp=Z,109nm,0.8s
PWL    Port Wells         82.40  14    P       P       17 20 53.2  0.0
       baz=209,SNR=18
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MNSI  Mandailing Nat    82.41 273   P       P       17 20 53.6 -0.7
      comp=Z,1µmcomp=Z,95nm,0.8s
LCMT  Little Creek M    82.45  47   P       P       17 20 55.7 +1.5
LCMT                                IAmb    IAmb    17 20 56.8
      comp=Z,94nm,0.9s
X16A  Lo Mia Camp, P    82.50  50   P       P       17 20 56.3 +1.8
X16A                                IAmb    IAmb    17 20 57.7
      comp=Z,122nm,1.0s
KAIM  Kayak Island      82.59  17   P       P       17 20 55.0 +0.8
KAIM                                IAmb    IAmb    17 20 55.9
      comp=Z,196nm,1.0s
KAIM  Kayak Island      82.59  17   P       P       17 20 55.1 +1.0
      baz=213
PGC   Sidney            82.62  33   P       P       17 20 55.5 +1.1
PGC                                 IAmb    IAmb    17 20 56.2
      comp=Z,62nm,0.8s
L20K  Farewell, AK      82.68  11   P       P       17 20 54.7 +0.1
      baz=204
SPR3  Spring Creek 3    82.69  45   P       P       17 20 56.3 +0.8
SPR3                                IAmb    IAmb    17 20 57.6
      comp=Z,67nm,0.9s
GLI   Glacier Island    82.72  15   P       P       17 20 54.7 -0.1
      baz=210
TTA   Tatalina          82.72  10   P       P       17 20 55.4 +0.6
TTA                                 pmax    pmax
      comp=Z,87nm,1.2s
TTA   Tatalina          82.72  10   P       P       17 20 55.4 +0.6
TTA                                 IAmb    IAmb    17 20 56.6
      comp=Z,87nm,1.2s
TTA   Tatalina          82.72  10   P       P       17 20 55.5 +0.7
      baz=202,SNR=27
FID   Port Fidalgo      82.76  15   P       P       17 20 54.2 -0.8
EYAK  Cordova Ski Ar    82.77  16   P       P       17 20 55.1 +0.1
EYAK  Cordova Ski Ar    82.77  16   P       P       17 20 54.7 -0.3
      baz=211
PSUT  Pine Spring       82.78  46   P       P       17 20 57.0 +1.1
PSUT                                IAmb    IAmb    17 20 58.2
      comp=Z,80nm,0.7s
M22K  Willow            82.78  13   P       P       17 20 54.9 -0.1
      baz=207,SNR=22
KULM  Kulim             82.83 278   P       P       17 20 57.0 +0.6
KULM  Kulim             82.83 278   P       P       17 20 57.2 +0.8
KULM                                IAmb    IAmb    17 20 58.5
      comp=Z,101nm,1.0s
SZCU  Shurtz Canyon     82.84  47   IAmb    IAmb    17 20 59.1
      comp=Z,85nm,1.0s
KNK   Knik Glacier      82.86  14   IAmb    IAmb    17 20 56.5
      comp=Z,83nm,0.7s
KNK   Knik Glacier      82.86  14   P       P       17 20 55.6 +0.2
      baz=209,SNR=20
PMR   Palmer            82.86  14   P       P       17 20 55.2 -0.2
PMR                                 pmax    pmax
      comp=Z,55nm,0.7s
PMR   Palmer            82.86  14   P       P       17 20 55.2 -0.2
PMR                                 IAmb    IAmb    17 20 55.9
      comp=Z,55nm,0.7s
PMR   Palmer            82.86  14   P       P       17 20 55.4  0.0
      baz=208,SNR=22
ELK   Elko              82.97  43   P       P       17 20 56.7 -0.2
ELK                                 pmax    pmax
      comp=Z,75nm,1.0s
ELK   Elko              82.97  43   P       P       17 20 56.7 -0.2
ELK                                 IAmb    IAmb    17 20 59.2
      comp=Z,75nm,0.9s
HMT   Hamilton          82.98  16   P       P       17 20 56.1 -0.1
HMT                                 IAmb    IAmb    17 20 57.0
      comp=Z,64nm,0.8s
A04D  Lummi Island      83.05  34   P       P       17 20 58.2 +1.5
      baz=232,SNR=6.3
ANM   Nome              83.06   6   P       P       17 20 57.1 +0.7
ANM                                 pmax    pmax
      comp=Z,39nm,1.4s
ANM   Nome              83.06   6   P       P       17 20 57.1 +0.7
ANM   Nome              83.06   6   P       P       17 20 56.8 +0.4
      baz=193
WUAZ  Wupatki           83.06  49   P       P       17 20 59.2 +1.9
      baz=242,SNR=64
B05A  Bryant            83.10  34   P       P       17 20 58.2 +1.3
      baz=233,SNR=19
SML   Sawmill           83.23  14   IAmb    IAmb    17 20 59.4
      comp=Z,195nm,1.8s
SML   Sawmill           83.23  14   P       P       17 20 57.3 -0.1
      baz=209,SNR=10
DIV   Divide            83.26  15   IAmb    IAmb    17 20 58.6
      comp=Z,112nm,0.7s
LTY   Liberty           83.28  36   IAmb    IAmb    17 20 59.8
      comp=Z,70nm,0.9s
PKCU  Pink Cliffs       83.31  47   IAmb    IAmb    17 21 02.3
      comp=Z,162nm,1.0s
E07A  Sunnyside         83.33  36   IAmb    IAmb    17 21 00.6
      comp=Z,132nm,1.0s
CUT   Chulitna          83.33  13   P       P       17 20 57.7  0.0
      baz=207,SNR=30
PPLA  Purkeypile        83.39  12   P       P       17 20 57.3 -0.9
PPLA  Purkeypile        83.39  12   P       P       17 20 57.0 -1.3
      baz=205,SNR=8.7
HAWA  Hanford           83.42  37   IAmb    IAmb    17 21 01.0
      comp=Z,126nm,0.9s
BMRM  Bremner River     83.42  16   P       P       17 20 58.6 +0.2
      baz=212,SNR=19
K20K  Telida            83.45  11   IAmb    IAmb    17 20 59.8
      comp=Z,94nm,0.8s
K20K  Telida            83.45  11   P       P       17 20 58.7 +0.3
      baz=204
SCM   Sheep Creek Mo    83.49  14   P       P       17 20 59.0 +0.3
      baz=210,SNR=46
MESA  MESA              83.49  18   P       P       17 20 59.7 +0.8
MESA  MESA              83.49  18   P       P       17 20 59.8 +0.9
      baz=215,SNR=16
KLU   Klutina           83.54  15   P       P       17 20 59.1 +0.1
      baz=211,SNR=12
MAW   Mawson            83.58 200   P       P       17 20 59.9 +0.8
      comp=Z,60nm,0.6s,baz=130,slow=6.3,SNR=81
MAW   Mawson            83.58 200   P       P       17 21 00.0 +0.9
      baz=84,SNR=62
MAW   Mawson            83.58 200   P       P       17 20 59.9 +0.8
MAW                                 pmax    pmax
      comp=Z,27nm,1.1s
MAW   Mawson            83.58 200   P       P       17 20 59.9 +0.8
CRQM  Cirque            83.64  17   IAmb    IAmb    17 21 01.0
      comp=Z,138nm,1.1s
CRQE  Cirque            83.65  17   P       P       17 20 59.9 +0.3
      baz=214
PSI   Prapat            83.66 275   P       P       17 21 00.3 -0.5
      comp=Z,96nm,0.8s,baz=134,slow=3.3,SNR=96
PSI                                 PP      PP      17 24 18.3 -5.5
      comp=Z,12nm,0.7s,baz=108,slow=6.4,SNR=6.2
PSI   Prapat            83.66 275   P       P       17 21 00.3 -0.5
YAH   Yahtse            83.70  17   P       P       17 21 00.8 +0.8
YAH                                 IAmb    IAmb    17 21 01.7
      comp=Z,104nm,0.8s
PMSA  Palmer Station    83.71 157   P       P       17 20 59.4 -0.4
      comp=Z,24nm,0.9s,baz=168,slow=9.3,SNR=2.2
PMSA  Palmer Station    83.71 157   P       P       17 20 59.9 +0.1
ISLE  Juniper Island    83.73  17   P       P       17 21 00.3 +0.3
ISLE                                IAmb    IAmb    17 21 01.3
      comp=Z,90nm,0.9s
BJI   Beijing           83.77 316   P       P       17 21 01.4 +0.9
BJI                                 pmax    pmax
      comp=Z,42nm,0.9s
WRAK  Wrangell Islan    83.80  24   P       P       17 21 01.0 +0.8
      baz=224
TNA   Tin City          83.82   4   P       P       17 21 00.7 +0.6
      baz=190,SNR=5.3
PNL   Peninsula         83.84  19   P       P       17 21 01.0 +0.6
      baz=217,SNR=6.9
CAST  Castle Rocks      83.88  12   P       P       17 20 59.7 -0.8
      baz=205,SNR=8.1
PCA   Pinnacle          83.92  18   P       P       17 21 00.8  0.0
PINM  Pinnacle          83.92  18   P       P       17 21 01.1 +0.3
      baz=216,SNR=5.2
SEY   Seymchan          83.93 347   P       P       17 21 01.1 +0.4
      comp=Z,96nm,0.5s,baz=153,slow=5.4,SNR=763
SEY   Seymchan          83.93 347   P       P       17 21 01.1 +0.4
TABL  Table Mountain    83.94  18   IAmb    IAmb    17 21 02.5
      comp=Z,110nm,0.8s
VRDI  Verde Repeater    83.95  16   IAmb    IAmb    17 21 02.4
      comp=Z,200nm,1.5s
N25K  Chitina, Valde    83.97  16   P       P       17 21 01.1 +0.1
N25K                                IAmb    IAmb    17 21 02.4
      comp=Z,125nm,0.7s
N25K  Chitina, Valde    83.97  16   P       P       17 21 01.6 +0.5
      baz=212,SNR=61
M24K  Tolsona, Glenn    84.00  15   P       P       17 21 01.8 +0.6
M24K  Tolsona, Glenn    84.00  15   P       P       17 21 02.0 +0.8
      baz=211,SNR=26
GLB   Gilahina Butte    84.03  16   IAmb    IAmb    17 21 02.5
      comp=Z,84nm,0.6s
WAT6  Susitna Watana    84.05  14   P       P       17 21 01.6  0.0
      baz=209
W18A  Petrified Fore    84.07  50   IAmb    IAmb    17 21 05.1
      comp=Z,75nm,1.2s
W18A  Petrified Fore    84.07  50   P       P       17 21 03.6 +1.2
      baz=243
WAT1  Susitna Watana    84.08  13   P       P       17 21 01.3 -0.3
      baz=209
D08A  Wollman Farm,     84.14  36   IAmb    IAmb    17 21 04.5
      comp=Z,99nm,0.9s
MCARA McCarthy VSAT     84.19  16   P       P       17 21 02.7 +0.6
MCARA                               IAmb    IAmb    17 21 03.6
      comp=Z,90nm,1.2s
MCARA McCarthy VSAT     84.19  16   P       P       17 21 02.6 +0.5
      baz=214,SNR=13
J20K  Nowinta River     84.20  11   P       P       17 21 02.0  0.0
J20K                                IAmb    IAmb    17 21 03.5
      comp=Z,52nm,0.8s
J20K  Nowinta River     84.20  11   P       P       17 21 02.3 +0.3
      baz=203,SNR=32
TSI   Tuntungan         84.22 276   P       P       17 21 03.8 +0.5
      comp=Z,2µmcomp=Z,276nm,0.9s
KTH   Kantishna Hill    84.23  12   IAmb    IAmb    17 21 02.4
      comp=Z,77nm,0.9s
CHUM  Lake Minchumin    84.26  11   P       P       17 21 01.7 -0.6
      baz=205,SNR=32
TRF   Thorofare Moun    84.27  12   IAmb    IAmb    17 21 03.0
      comp=Z,139nm,0.8s
TRF   Thorofare Moun    84.27  12   P       P       17 21 02.2 -0.4
      baz=207
GCSA  Galena City Sc    84.28   9   P       P       17 21 02.9 +0.5
      baz=201,SNR=15
LOGN  Logan Glacier     84.29  18   IAmb    IAmb    17 21 04.2
      comp=Z,102nm,1.1s
DUG   Dugway, Tooele    84.30  45   P       P       17 21 04.2 +0.9
      baz=241,SNR=18
CTG   Chitna Glacier    84.31  17   P       P       17 21 03.2 +0.4
      baz=215,SNR=25
CTGM  Chitina Glacie    84.31  17   IAmb    IAmb    17 21 04.3
      comp=Z,71nm,0.8s
121A  Cookes Peak, D    84.39  53   P       P       17 21 06.0 +2.0
      baz=244
GSI   Gunungsitoli      84.47 273   P       P       17 21 05.6 +1.0
      comp=Z,3µmcomp=Z,342nm,1.0s
GSI   Gunungsitoli      84.47 273   P       P       17 21 04.5 -0.1
HARP  HAARP             84.50  15   P       P       17 21 04.0 +0.4
      baz=212,SNR=24
F10A  Beach Ranch, E    84.51  38   IAmb    IAmb    17 21 06.0
      comp=Z,160nm,0.9s
B08A  Colville Reser    84.65  35   IAmb    IAmb    17 21 06.2
      comp=Z,78nm,0.8s
BPAW  Bear Paw Mtn.     84.71  12   P       P       17 21 03.9 -0.7
      baz=206
PLID  Pearl Lake        84.76  39   IAmb    IAmb    17 21 07.5
      comp=Z,239nm,1.9s
MCK   McKinley          84.80  13   IAmb    IAmb    17 21 05.8
      comp=Z,118nm,1.1s
MCK   McKinley          84.80  13   P       P       17 21 04.8 -0.3
      baz=208,SNR=39
PAX   Paxson            84.91  15   P       P       17 21 05.3 -0.4
      baz=212,SNR=21
GYA   Guiyang           84.93 300⇓iP    P       17 21 07.5 +0.8
GYA                                 pP      pP      17 23 07.6 +2.3
GYA                                 SKS     SKSac   17 30 41.8 +2.4
GYA                                 S       S       17 30 52.5 +2.0
GYA                                 pmax    pmax
      comp=Z,59nm,0.9s
GYA                                 pmax    pmax
      comp=Z,190nm,4.3s
HLID  Hailey            84.94  41   IAmb    IAmb    17 21 09.1
      comp=Z,65nm,0.8s
HLID  Hailey            84.94  41   P       P       17 21 08.1 +1.6
      baz=239,SNR=104
TMUT  Trail Mountain    84.95  46   IAmb    IAmb    17 21 09.5
      comp=Z,61nm,0.8s
SKAG  Skagway           84.98  21   P       P       17 21 06.7 +0.8
SKAG                                IAmb    IAmb    17 21 08.6
      comp=Z,276nm,1.8s
SKAG  Skagway           84.98  21   P       P       17 21 07.5 +1.6
      baz=221,SNR=9.6
KCSI  Kotacane, Aceh    84.98 275   P       P       17 21 06.9 -0.2
      comp=Z,1µmcomp=Z,103nm,0.9s
M26K  Nabesna, AK       85.05  16   P       P       17 21 06.5 +0.2
M26K                                IAmb    IAmb    17 21 07.9
      comp=Z,90nm,0.9s
M26K  Nabesna, AK       85.05  16   P       P       17 21 06.7 +0.4
      baz=214,SNR=58
BWN   Browne            85.08  12   IAmb    IAmb    17 21 07.2
      comp=Z,186nm,1.2s
YUK6  Outpost Mounta    85.16  18   P       P       17 21 07.6 +0.5
      baz=218,SNR=7.4
YUK3  Moose Creek       85.22  17   P       P       17 21 07.9 +0.5
      baz=216,SNR=72
TIY   Taiyuan           85.23 312⇑iP    P       17 21 09.6 +1.8
TIY                                 pmax    pmax
      comp=Z,120nm,0.9s
ZEA   Zeya              85.25 331 eP    P       17 21 09.0 +1.6
ZEA                                 pmax    pmax
      comp=E,10.0nm,0.9s
ZEA                                 pmax    pmax
      comp=N,20nm,0.8s
ZEA                                 pmax    pmax
      comp=Z,30nm,0.7s
M27K  Edge Creek, AK    85.31  16   IAmb    IAmb    17 21 09.6
      comp=Z,155nm,1.2s
M27K  Edge Creek, AK    85.31  16   P       P       17 21 08.5 +0.8
      baz=215
HYT   Haines Junctio    85.33  19   P       P       17 21 08.6 +0.8
      baz=219,SNR=14
SRU   San Rafael Swe    85.33  46   IAmb    IAmb    17 21 10.6
      comp=Z,67nm,0.8s
YUK4  Talbot Arm        85.39  18   P       P       17 21 09.2 +1.0
      baz=218,SNR=12
TPTI                    85.46 275   P       P       17 21 09.8 +0.4
      comp=Z,456nmcomp=Z,43nm,1.3s
L26K  Log Cabin Wild    85.48  15   P       P       17 21 08.8 +0.4
      baz=214,SNR=14
I21K  Tanana            85.50  11   P       P       17 21 08.4  0.0
      baz=205
NEA2  Nenana            85.53  12   P       P       17 21 07.5 -1.0
      baz=208,SNR=11
MLY   Manley            85.59  11   P       P       17 21 08.1 -0.8
      baz=206,SNR=26
BVCY  Beaver Creek      85.63  17   P       P       17 21 09.8 +0.7
      baz=216,SNR=40
WRH   Wood River Hil    85.63  13   IAmb    IAmb    17 21 10.4
      comp=Z,84nm,0.8s
Y22D  IRIS PASSCAL I    85.70  52   P       P       17 21 12.6 +2.3
      baz=245
RIDG  Independent Ri    85.72  14   IAmb    IAmb    17 21 10.7
      comp=Z,72nm,1.0s
RIDG  Independent Ri    85.72  14   P       P       17 21 09.5  0.0
      baz=212,SNR=26
H21K  Melozitna Rive    85.79  10   P       P       17 21 09.9 +0.1
      baz=205
HDA   Harding Lake      85.82  13   IAmb    IAmb    17 21 10.7
      comp=Z,66nm,1.1s
HDA   Harding Lake      85.82  13   P       P       17 21 09.6 -0.3
      baz=210,SNR=33
NEW   Newport           85.82  36   P       P       17 21 10.8 +0.5
      comp=Z,33nm,0.7s,baz=236,slow=4.4,SNR=96
NEW                                 PP      PP      17 24 38.5 -1.8
      comp=Z,3.6nm,0.9s,baz=226,slow=4.2,SNR=3.2
NEW   Newport           85.82  36   P       P       17 21 10.8 +0.5
NEW   Newport           85.82  36   IAmb    IAmb    17 21 11.9
      comp=Z,41nm,0.8s
NEW   Newport           85.82  36   P       P       17 21 10.9 +0.6
      baz=237,SNR=36
DOT   Dot Lake          85.83  15   IAmb    IAmb    17 21 11.2
      comp=Z,55nm,0.8s
CCB   Clear Creek Bu    85.84  13   IAmb    IAmb    17 21 10.6
      comp=Z,143nm,1.3s
MNTX  Cornudas Mount    85.89  55   IAmb    IAmb    17 21 13.3
      comp=Z,39nm,0.8s
MNTX  Cornudas Mount    85.89  55   P       P       17 21 12.8 +1.7
      baz=246
MVCO  Mesa Verde        85.90  49   P       P       17 21 10.4 -0.8
MVCO  Mesa Verde        85.90  49   P       P       17 21 12.2 +1.0
      baz=244
L27K  Beaver Creek,     85.90  16   P       P       17 21 10.7 +0.3
      baz=215
BCAR  Beaver Creek A    85.91  16   P       P       17 21 10.6 +0.2
IMAR  Indian Mountai    85.93  10   P       P       17 21 10.5 +0.2
I23K  Minto, Yukon-K    85.97  12   P       P       17 21 08.1 -2.5
      baz=208,SNR=18
MDM   Murphy Dome       86.03  12   P       P       17 21 10.1 -0.8
MDM                                 IAmb    IAmb    17 21 11.4
      comp=Z,105nm,1.3s
TCOL  CIGO, UAF Yank    86.03  13   P       P       17 21 10.5 -0.4
      baz=209,SNR=25
COLA  College           86.03  13c iP   P       17 21 09.8 -1.0
COLA                                pmax    pmax
      comp=Z,123nm,1.4s
COLA  College           86.03  13   P       P       17 21 10.4 -0.4
COLA                                IAmb    IAmb    17 21 12.1
      comp=Z,66nm,0.8s
WHY   Whitehorse        86.03  20   P       P       17 21 11.8 +0.6
WHY   Whitehorse        86.03  20   P       P       17 21 12.0 +0.9
      baz=221,SNR=18
DLBC  Dease Lake        86.12  23   P       P       17 21 12.6 +1.1
DLBC                                IAmb    IAmb    17 21 13.8
      comp=Z,226nm,1.9s
SCRK  Sand Creek        86.12  15   P       P       17 21 11.8 +0.3
SCRK  Sand Creek        86.12  15   P       P       17 21 11.7 +0.3
      baz=213,SNR=29
IL31                    86.14  13   P       P       17 21 11.1 -0.3
IL31                                IAmb    IAmb    17 21 12.0
      comp=Z,37nm,0.7s
ILAR  Eielson Array     86.14  13   P       P       17 21 10.8 -0.6
      comp=Z,20nm,0.5s,baz=220,slow=4.9,SNR=421
ILAR                                pP      pP      17 23 09.7 -0.3
      comp=Z,10nm,1.1s,baz=225,slow=5.6,SNR=6.4
ILAR                                PP      PP      17 24 42.2 -0.2
      comp=Z,7.4nm,1.0s,baz=224,slow=7.4,SNR=5.3
ILAR                                PKiKP   PKiKP   17 26 14.7 -0.5
      comp=Z,0.6nm,0.6s,baz=286,slow=1.9,SNR=5.3
ILAR                                S       SKSac   17 30 48.1 +3.3
      comp=Z,1.1nm,0.9s,baz=243,slow=6.3,SNR=6.2
ILAR                                PKKPbc  PKKPdf  17 39 06.2 +3.4
      comp=Z,0.9nm,0.6s,baz=339,slow=2.3,SNR=9.3
ILAR  Eielson Array     86.14  13   P       P       17 21 10.9 -0.6
ILAR                                *PP     pP      17 23 09.7 -0.3
ILAR                                S       SKSac   17 30 48.2 +3.3
ILAR  Eielson Array     86.14  13   P       P       17 21 10.9 -0.5
XAN   Xi'an             86.20 308   P       P       17 21 13.8 +1.3
XAN                                 pmax    pmax
      comp=Z,96nm,1.1s
LHMI  Lhok Sumawe       86.30 277   P       P       17 21 15.4 +2.1
      comp=Z,311nm,1.1s
TX31  Lajitas Ar. Si    86.31  58   P       P       17 21 14.7 +1.5
TXAR  Lajitas Array     86.31  58   P       P       17 21 15.5 +2.3
      comp=Z,98nm,0.8s,baz=221,slow=6.1,SNR=722
TXAR                                pP      pP      17 23 11.0 -0.6
      comp=Z,1.8nm,0.9s,baz=214,slow=9.4,SNR=1.4
TXAR                                S       SKSac   17 30 47.7  0.0
      comp=Z,0.1nm,0.4s,baz=213,slow=18,SNR=1.8
TXAR                                PKKP    PKKPdf  17 39 02.1 +1.1
      comp=Z,0.5nm,0.8s,baz=81,slow=5.6,SNR=3.3
TXAR                                PKKPbc  PKKPbc  17 39 08.8 +1.1
      comp=Z,0.9nm,0.8s,baz=100,slow=2.8,SNR=4.9
TXAR                                PKPPKP  P'P'df  17 47 19.0 +4.9
      comp=Z,0.7nm,1.0s,baz=90,slow=3.8,SNR=3.7
TXAR  Lajitas Array     86.31  58   P       P       17 21 15.5 +2.3
TXAR                                S       SKSac   17 30 47.7  0.0
POKR  Poker Plat Res    86.33  13   P       P       17 21 11.6 -0.7
POKR                                IAmb    IAmb    17 21 12.6
      comp=Z,44nm,0.7s
POKR  Poker Plat Res    86.33  13   P       P       17 21 11.8 -0.5
      baz=210,SNR=19
N31M  Braeburn, Yuko    86.38  19   P       P       17 21 13.4 +0.7
      baz=220,SNR=20
P33M  Teslin, Yukon     86.39  21   P       P       17 21 13.5 +0.7
      baz=223,SNR=12
HIA   Hailar            86.40 325 i P       P       17 21 13.4 +0.3
HIA                                 pmax    pmax
      comp=Z,14nm,0.9s
ANMO  Albuquerque       86.41  52ceP    P       17 21 14.7 +1.0
ANMO                                pmax    pmax
      comp=Z,74nm,1.3s
ANMO  Albuquerque       86.41  52   P       P       17 21 14.4 +0.8
ANMO                                IAmb    IAmb    17 21 16.1
      comp=Z,52nm,1.0s
ANMO  Albuquerque       86.41  52   P       P       17 21 14.9 +1.2
      baz=245
MCMT  McKenzie Canyo    86.55  41   P       P       17 21 15.4 +1.2
BILL  Bilibino          86.62 354ceP    P       17 21 13.5 -0.1
BILL                              e                 17 24 44.6
BILL                              eS        SKSac   17 30 47.4 -0.2
BILL                              i                 17 31 05.5
BILL                                pmax    pmax
      comp=Z,41nm,0.8s
BILL  Bilibino          86.62 354   P       P       17 21 14.2 +0.6
J26L  Joseph Creek      86.67  14   P       P       17 21 14.7 +0.7
      baz=213
RDOG  Red Dog Mine      86.70   6   P       P       17 21 21.8 +7.8
      baz=195,SNR=7.9
H24K  Noodor Dome       86.87  12   P       P       17 21 13.5 -1.4
      baz=209
MSO   Missoula          86.90  38   P       P       17 21 15.9 +0.4
      baz=239,SNR=9.0
M30M  Minto, Yukon      86.91  18   P       P       17 21 15.8 +0.6
      baz=220,SNR=45
TPAW  Teton Pass        87.10  42   P       P       17 21 17.8 +1.0
TPAW                                IAmb    IAmb    17 21 19.4
      comp=Z,76nm,1.0s
JTMT  Jette             87.17  38   P       P       17 21 16.9 +0.1
HHC   Hu-ho-hao-te      87.25 315 eP    P       17 21 18.3 +0.9
HHC                                 S       S       17 31 16.2 +4.4
HHC                                 pmax    pmax
      comp=Z,32nm,0.9s
HHC                                 pmax    pmax
      comp=Z,95nm,6.6s
S22A  4UR Ranch, Cre    87.33  49   P       P       17 21 19.5 +1.4
      baz=245,SNR=43
M31M  Drury Creek, Y    87.35  19   P       P       17 21 17.3 +0.1
      baz=222,SNR=17
DAWY  Dawson            87.36  16   P       P       17 21 17.6 +0.4
DAWY                                IAmb    IAmb    17 21 18.9
      comp=Z,71nm,1.3s
DAWY  Dawson            87.36  16   P       P       17 21 17.7 +0.4
      baz=217,SNR=35
MOOW  Moose Ponds       87.36  42   P       P       17 21 18.7 +0.7
O20A  White River Ci    87.37  46   P       P       17 21 19.2 +1.1
      baz=244,SNR=36
EGAK  Eagle             87.48  15   IAmb    IAmb    17 21 19.0
      comp=Z,123nm,1.6s
EGAK  Eagle             87.48  15   P       P       17 21 17.9 +0.2
      baz=215
YHL   Hebgen Lake       87.60  41   IAmb    IAmb    17 21 22.3
      comp=Z,122nm,1.0s
COLD  Coldfoot          87.66  11   P       P       17 21 19.3 +0.7
COLD                                IAmb    IAmb    17 21 20.2
      comp=Z,60nm,1.0s
COLD  Coldfoot          87.66  11   P       P       17 21 19.2 +0.7
      baz=207,SNR=48
BW06  Boulder Array     87.67  44   P       P       17 21 20.2 +0.8
BW06                                IAmb    IAmb    17 21 21.2
      comp=Z,57nm,0.8s
BW06  Boulder Array     87.67  44   P       P       17 21 20.2 +0.8
      baz=243,SNR=84
PD31  Pinedale Array    87.67  44   P       P       17 21 20.3 +0.8
PD31                                IAmb    IAmb    17 21 21.3
      comp=Z,51nm,0.8s
PDAR  Pinedale Array    87.67  44   P       P       17 21 20.1 +0.7
      comp=Z,37nm,0.6s,baz=220,slow=3.1,SNR=398
PDAR                                pP      pP      17 23 18.8 +0.5
      comp=Z,2.2nm,0.9s,baz=171,slow=3.2,SNR=3.1
PDAR                                PP      PP      17 24 51.9 -3.5
      comp=Z,6.6nm,0.9s,baz=242,slow=6.2,SNR=10
PDAR                                S       SKSac   17 30 57.6 +2.0
      comp=Z,0.1nm,0.4s,baz=337,slow=4.1,SNR=1.4
PDAR                                PKKP    PKKPbc  17 39 04.5 -0.8
      comp=Z,1.4nm,0.9s,baz=78,slow=2.1,SNR=7.5
PDAR                                PKPPKP  P'P'df  17 47 10.7 -0.1
      comp=Z,0.6nm,0.9s,baz=80,slow=2.1,SNR=2.9
PDAR  Pinedale Array    87.67  44   P       P       17 21 20.1 +0.6
BOZ   Bozeman (W)       87.68  40   P       P       17 21 20.8 +1.4
      baz=241,SNR=9.2
FARO  Faro, Yukon       87.70  19   P       P       17 21 19.2 +0.3
      baz=223,SNR=15
KMI   Kunming           87.71 297 ⇓P    P       17 21 21.8 +1.8
KMI                                 pP      pP      17 23 23.0 +3.7
KMI                                 SKS     SKSac   17 30 57.4 +0.8
KMI                                 S       S       17 31 16.7 -0.3
KMI                                 SS      SS      17 37 24.1 +3.6
KMI                                 pmax    pmax
      comp=Z,75nm,1.1s
KMI                                 pmax    pmax
      comp=Z,220nm,3.5s
H17A  Grant Village     87.77  42   P       P       17 21 22.7 +2.8
      baz=242,SNR=64
MAYO  Mayo, Yukon       87.96  18   P       P       17 21 21.3 +1.3
      baz=220,SNR=15
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J29M  Klondike Camp    87.98  16  P        P        17 21 21.5 +1.4
      baz=218,SNR=8.0
BTO   Baotou           88.19 314  eP       P        17 21 24.4 +2.6
BTO                               S        S        17 31 15.8 -4.7
SDCO  Great Sand Dun   88.28  49  P        P        17 21 23.2 +0.7
SDCO  Great Sand Dun   88.28  49  P        P        17 21 23.4 +0.9
      baz=246,SNR=23
I29M  Ogilvie Camp,    88.67  16  P        P        17 21 23.4 +0.1
      baz=218,SNR=7.5
CMAR  Chiang Mai Arr   88.73 290  P        P        17 21 26.1 +1.5
      comp=Z,39nm,0.9s,baz=111,slow=2.8,SNR=223
CMAR                              pP       pP       17 23 24.3 +0.3
      comp=Z,3.4nm,1.0s,baz=104,slow=5.1,SNR=3.8
CMAR                              PP       PP       17 25 05.2 +1.4
      comp=Z,7.0nm,1.0s,baz=130,slow=5.6,SNR=7.8
CMAR                              PKKPbc   PKKPbc   17 39 02.8 +1.3
      comp=Z,1.0nm,0.6s,baz=286,slow=4.5,SNR=8.5
CMAR  Chiang Mai Arr   88.73 290  P        P        17 21 26.2 +1.5
CMAR                              *PP      pP       17 23 24.3 +0.3
MSTX  Muleshoe         88.81  54  P        P        17 21 25.8 +1.0
MSTX  Muleshoe         88.81  54  P        P        17 21 25.9 +1.1
      baz=247,SNR=43
T25A  Trinidad         88.83  50  P        P        17 21 26.0 +1.0
      baz=246,SNR=11
CHTO  Chiang Mai       88.85 290  P        P        17 21 25.7 +0.5
CHTO                              pmax     pmax
      comp=Z,55nm,0.9s
CHTO  Chiang Mai       88.85 290  P        P        17 21 25.7 +0.5
CHTO                              IAmb     IAmb     17 21 27.5
      comp=Z,55nm,0.9s
CHTO  Chiang Mai       88.85 290  P        P        17 21 26.2 +1.0
SYO   Syowa Base       88.90 193⇑eX        P        17 21 21.4 -3.0
SYO   Syowa Base       88.90 193⇓ePcP      P        17 21 24.2 -0.2
SYO   Syowa Base       88.90 193⇑epP       pP       17 23 24.1 +0.4
BMAR  Burnt Mountain   88.92  12  P        P        17 21 24.9 +0.5
RLMT  Red Lodge        88.93  42  P        P        17 21 26.8 +1.6
      baz=243,SNR=27
CD2   Chengdu          88.98 303  P        P        17 21 25.6  0.0
CD2                               pmax     pmax
      comp=Z,40nm,0.5s
Q24A  Divide           89.03  48  P        P        17 21 27.3 +1.2
      baz=246,SNR=19
TOLK  Toolik Lake Re   89.03  10  P        P        17 21 25.0 +0.1
TOLK  Toolik Lake Re   89.03  10  P        P        17 21 25.3 +0.3
      baz=208,SNR=22
ISCO  Idaho Springs    89.05  47  P        P        17 21 26.4 +0.3
ISCO                              pmax     pmax
      comp=Z,74nm,1.8s
ISCO  Idaho Springs    89.05  47  P        P        17 21 26.4 +0.3
ISCO                              IAmb     IAmb     17 21 28.6
      comp=Z,74nm,1.8s
ISCO  Idaho Springs    89.05  47  P        P        17 21 27.2 +1.1
      baz=245,SNR=17
N23A  Red Feather La   89.28  46  P        P        17 21 28.6 +1.5
      baz=245,SNR=44
833A  Chaparral WMA,   89.41  60  P        P        17 21 29.2 +1.6
      baz=249,SNR=7.5
K22A  Casper           89.62  45  P        P        17 21 29.5 +1.0
      baz=245,SNR=7.9
YAK   Yakutsk          89.68 338  P        P        17 21 27.1 -0.9
      comp=Z,12nm,0.7s,baz=123,slow=0.3,SNR=16
YAK                               S        SKSac    17 31 05.3 -0.5
      comp=Z,1.2nm,0.4s,baz=117,slow=6.8,SNR=5.7
YAK   Yakutsk          89.68 338  eP       P        17 21 27.4 -0.6
YAK                               e                 17 25 07.1
YAK                               eS       SKSac    17 31 06.7 +0.9
YAK                               e                 17 31 39.2
YAK                               pmax     pmax
      comp=Z,17nm,0.9s
YAK                               pmax     pmax
      comp=N,2.0nm,0.9s
YAK                               pmax     pmax
      comp=E,3.0nm,0.9s
YAK                               pmax     pmax
      comp=Z,119nm,3.0s
YAK                               pmax     pmax
      comp=N,104nm,3.3s
YAK                               pmax     pmax
      comp=E,104nm,2.6s
YAK                               smax     smax
      comp=N,137nm,3.8s
YAK                               smax     smax
      comp=E,48nm,2.5s
YAK   Yakutsk          89.68 338  P        P        17 21 27.4 -0.6
YAK                               IAmb     IAmb     17 21 29.4
      comp=Z,124nm,1.9s
JCT   Junction City    89.85  58  P        P        17 21 30.8 +1.1
      baz=249,SNR=20
EGMT  Eagleton         89.96  39  P        P        17 21 30.8 +1.0
      baz=242
AMTX  Amarillo         89.99  53  P        P        17 21 31.1 +0.9
      baz=248
SNAA  Sanae            90.39 179  P        P        17 21 31.3 -0.1
SNAA  Sanae            90.39 179  S        SKSac    17 31 11.5 +1.3
      comp=Z,1.6nm,0.9s,baz=195,slow=20,SNR=2.0
SNAA  Sanae            90.39 179ceP        P        17 21 31.0 -0.4
SNAA                              pmax     pmax
      comp=Z,64nm,1.2s
SNAA  Sanae            90.39 179  P        P        17 21 31.2 -0.2
SNAA                              IAmb     IAmb     17 21 32.3
      comp=Z,103nm,1.4s
EDM   Edmonton         90.46  33  P        P        17 21 32.0 +0.1
EDM                               pmax     pmax
      comp=Z,115nm,1.3s
EDM   Edmonton         90.46  33  P        P        17 21 32.0 +0.1
A21K  Barrow           90.49   7  P        P        17 21 31.8 +0.3
      baz=201
VNA3  Neumayer Olymp   90.55 176  P        P        17 21 32.4 +0.3
ABTX  Abilene, Hawle   90.74  56  P        P        17 21 34.9 +1.2
      baz=249,SNR=41
LZH   Lanzhou          90.83 308 ⇓P        P        17 21 35.9 +1.7
LZH                               S        S        17 31 51.7 +7.0
LZH                               pmax     pmax
      comp=Z,120nm,1.3s
LZH                               pmax     pmax
      comp=Z,230nm,5.4s
KSCO  Kaye Shedlock'   90.86  49  P        P        17 21 36.6 +2.4
      baz=247,SNR=6.0
VNA2  Neumayer--Watz   90.98 177  P        P        17 21 34.4 +0.3
      baz=172,slow=3.9
NVL   N'lazarevskaya   91.05 183  eP       P        17 21 38.2 +3.9
NVL                               pmax     pmax
      comp=Z,67nm,0.9s
VNA1  Neumayer--Stat   91.21 177  P        P        17 21 35.8 +0.8
PLCA  Paso Flores      91.36 134  P        P        17 21 38.0 +1.5
      comp=Z,3.9nm,1.0s,baz=248,slow=4.2,SNR=17
PLCA  Paso Flores      91.36 134  P        P        17 21 37.6 +1.0
PLCA                              pmax     pmax
      comp=Z,30nm,1.7s
PLCA  Paso Flores      91.36 134  P        P        17 21 37.6 +1.0
LAO   LASA Array       91.53  41  P        P        17 21 38.9 +1.9
      baz=245
435B  Jarrell          91.74  58  P        P        17 21 39.7 +1.4
      baz=250
RSSD  Black Hills      91.88  44  P        P        17 21 39.6 +0.7
      baz=246
OGNE  Ogallala         92.02  48  P        P        17 21 40.4 +0.9
      baz=248
INK   Inuvik           92.15  15  P        P        17 21 38.9 -0.4
      comp=Z,44nm,0.9s,baz=208,slow=3.9,SNR=136
INK                               S        SKSac    17 31 19.4  0.0
      comp=Z,1.7nm,1.1s,baz=250,slow=7.3,SNR=2.0
INK                               PKKP     PKKPdf   17 38 50.7 -1.3
      comp=Z,0.9nm,0.7s,baz=1.4,slow=5.8,SNR=4.2
INK   Inuvik           92.15  15  P        P        17 21 38.9 -0.4
INK                               pmax     pmax
      comp=Z,44nm,0.9s
INK   Inuvik           92.15  15  P        P        17 21 38.9 -0.4
INK                               IAmb     IAmb     17 21 40.1
      comp=Z,44nm,0.9s
INK   Inuvik           92.15  15  P        P        17 21 39.0 -0.2
      baz=222
WHTX  Lake Whitney,    92.26  57  P        P        17 21 42.0 +1.4
      baz=250
CBKS  Cedar Bluff      92.88  50  P        P        17 21 44.6 +1.3
      baz=249
HKT   Hockley          92.89  60 i P       P        17 21 44.4 +0.9
HKT                               pmax     pmax
      comp=Z,30nm,1.7s
ULN   Ulaanbaatar      93.16 320ceP        P        17 21 44.7 +0.1
ULN                               pmax     pmax
      comp=Z,8.0nm,0.8s
DGMT  Dagmar           93.51  40  P        P        17 21 47.3 +1.2
      baz=247
SONM  Songino Array    93.55 319  P        P        17 21 46.3 -0.1
      comp=Z,2.9nm,0.5s,baz=133,slow=5.1,SNR=20
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SONM                              pP       pP       17 23 45.5 -1.4
      comp=Z,2.2nm,1.1s,baz=141,slow=3.9,SNR=3.6
SONM                              S        SKSac    17 31 28.2 -0.1
      comp=Z,0.4nm,0.7s,baz=170,slow=2.1,SNR=3.3
SONM                              PKKP     PKKPdf   17 38 47.4 -1.7
      comp=Z,0.7nm,1.0s,baz=353,slow=7.3,SNR=2.7
SONM  Songino Array    93.55 319  P        P        17 21 46.3 -0.1
SONM                              *PP      pP       17 23 45.5 -1.4
SONM                              S        SKSac    17 31 28.2 -0.1
KAN06 Argonia West S   93.72  52  IAmb     IAmb     17 21 49.4
      comp=Z,50nm,0.9s
OK030 Cody Creek RV    94.10  54  IAmb     IAmb     17 21 50.7
      comp=Z,42nm,1.4s
OK034 N. Norfolk Rd.   94.18  54  IAmb     IAmb     17 23 19.9
      comp=Z,20nm,0.9s
YKA   Yellowknife Ar   94.62  25  P        P        17 21 50.7  0.0
      comp=Z,16nm,0.8s,baz=238,slow=4.6,SNR=68
YKA                               pP       pP       17 23 50.1 -0.5
      comp=Z,0.7nm,0.9s,baz=239,slow=3.7,SNR=1.7
YKA                               PKiKP    PKiKP    17 26 28.9 -0.5
      comp=Z,0.5nm,0.5s,baz=261,slow=1.8,SNR=9.0
YKA                               PKKP     PKKPdf   17 38 45.5 -1.9
      comp=Z,1.3nm,0.9s,baz=29,slow=2.0,SNR=5.6
YKA   Yellowknife Ar   94.62  25  P        P        17 21 50.7  0.0
YKA                               *PP      pP       17 23 50.1 -0.5
X37A  Clayton          94.76  55  IAmb     IAmb     17 22 03.3
      comp=Z,14nm,0.8s
TUL1  Leonard          94.86  54  P        P        17 21 53.5 +1.1
      baz=251
BGNE  Belgrade         94.92  48  P        P        17 21 54.4 +1.8
      baz=250
GTA   Gaotai           94.98 310 ⇓P        P        17 21 53.4 +0.3
GTA                               PP       PP       17 25 54.4 +2.3
GTA                               pmax     pmax
      comp=Z,17nm,1.1s
KSU1  Kansas State U   95.27  51  P        P        17 21 55.8 +1.6
      baz=251
TIXI  Tiksi            96.30 345  P        P        17 21 56.9 -1.1
      comp=Z,7.2nm,0.7s,baz=132,slow=5.2,SNR=29
TIXI  Tiksi            96.30 345ceP        P        17 21 56.9 -1.1
TIXI                              pmax     pmax
      comp=Z,8.0nm,0.7s
ZAK   Zakamensk        96.40 321  eP       P        17 21 58.2 -1.0
ZAK                               pmax     pmax
      comp=Z,5.0nm,1.3s
A36M  Sachs Harbour    96.74  15  Pdiff    P        17 22 00.3 +0.2
      baz=230
ECSD  EROS Data Cent   96.75  46  IAmb     IAmb     17 22 02.1
      comp=Z,20nm,1.0s
ECSD  EROS Data Cent   96.75  46  Pdiff    P        17 22 00.9 +0.2
      baz=252
U40A  Yellville        97.25  54  Pdiff    P        17 22 03.7 +0.5
      baz=253
S39A  Bolivar          97.29  53  IAmb     IAmb     17 22 05.7
      comp=Z,15nm,0.8s
W41B  Gary Mavity, V   97.38  56  Pdiff    P        17 22 05.1 +1.4
      baz=253
WHAR  Wooly Hollow     97.39  55  IAmb     IAmb     17 24 11.4
      comp=Z,44nm,1.6s
344A  Westbrook Farm   97.53  59  IAmb     IAmb     17 22 09.9
      comp=Z,27nm,0.8s
CCM   Cathedral Cave   98.97  53  Pdiff    P        17 22 12.2 +1.3
      baz=254
ULM   Lac du Bonnet    99.22  40  P        Pdif     17 22 10.8 -0.8
      comp=Z,2.6nm,0.6s,baz=222,slow=6.7,SNR=4.1
ULM                               PP       PP       17 26 20.5 -3.1
      comp=Z,4.1nm,0.8s,baz=253,slow=8.6,SNR=4.1
ULM   Lac du Bonnet    99.22  40  P        Pdif     17 22 10.8 -0.8
SPMN  Marine on St.    99.80  46  Pdiff    Pdif     17 22 15.2 +1.0
      baz=254
LVC   Limon Verde     100.30 118  PKKPbc   PKKPbc   17 38 32.3 +0.4
      comp=Z,4.3nm,0.6s,baz=302,slow=5.3,SNR=3.8
JFWS  Jewell Farm     100.97  48  Pdiff    Pdif     17 22 20.9 +1.3
      baz=256
LPAZ  La Paz          103.54 112  Pdiff    Pdif     17 22 34.9 +2.5
      comp=Z,1.2nm,0.8s,baz=230,slow=4.5,SNR=4.5
LPAZ                              Sdiff             17 32 20.4
      comp=Z,1.2nm,1.0s,baz=180,slow=11,SNR=2.0
RES   Resolute Bay    105.69  16  Pdiff    Pdif     17 22 40.2 +0.4
      comp=Z,1.7nm,0.9s,baz=239,slow=4.2,SNR=6.0
HYB   Hyderabad       107.03 283 i PKP     PKiKP    17 27 13.0  +20
ZALV  Zalesovo Beam   108.25 322  Pdiff    Pdif     17 22 52.6 +0.9
      comp=Z,0.2nm,0.3s,baz=97,slow=4.6,SNR=3.6
ZALV                              PKiKP    PKiKP    17 26 54.0 -0.5
      comp=Z,4.0nm,0.6s,baz=143,slow=0.9,SNR=22
ZALV                              PKKPbc   PKKPbc   17 38 06.8 -1.8
      comp=Z,0.9nm,0.6s,baz=232,slow=3.6,SNR=4.3
MKAR  Makanchi Array  109.11 314  Pdiff    Pdif     17 22 57.1 +1.4
      comp=Z,1.1nm,0.6s,baz=89,slow=4.9,SNR=17
MKAR                              PKiKP    PKiKP    17 26 56.0 -0.4
      comp=Z,5.8nm,0.5s,baz=169,slow=0.5,SNR=104
MKAR                              Sdiff             17 32 41.0
      comp=Z,0.4nm,0.7s,baz=151,slow=5.4,SNR=2.3
MKAR                              PKKPbc   PKKPbc   17 38 05.3 -0.5
      comp=Z,0.7nm,0.7s,baz=257,slow=2.2,SNR=5.4
SIV   San Ignacio     109.81 115  Sdiff             17 32 47.4
      comp=Z,0.3nm,0.3s,baz=133,slow=19,SNR=2.0
SIV                               PKKPbc   PKKPbc   17 38 01.8 -1.2
      comp=Z,3.7nm,0.8s,baz=89,slow=5.1,SNR=12
SIV                               PKKP     PKKPab   17 38 16.5 -1.0
      comp=Z,2.9nm,0.8s,baz=97,slow=6.2,SNR=7.0
SEM   Semipalatinsk   110.77 318  ePKiKP   PKiKP    17 26 58.2 -1.5
      baz=318
SEM   Semipalatinsk   110.77 318 i PKIKP   PKiKP    17 26 58.2 -1.5
UZB   Uzynbulak       111.05 310  ePKiKP   PKiKP    17 26 58.4 -2.0
      baz=310
UZB   Uzynbulak       111.05 310 i PKIKP   PKiKP    17 26 58.3 -2.0
SATY  Saty            111.49 310  ePKiKP   PKiKP    17 26 60.0 -1.2
      baz=310
SATY  Saty            111.49 310 i PKIKP   PKiKP    17 26 59.9 -1.2
KURK  Kurchatov       111.82 318 i PKIKP   PKiKP    17 27 01.2 -0.1
KURBB Kurchatov Arra  111.88 318  PKiKP    PKiKP    17 27 01.1 -0.3
      comp=Z,8.1nm,0.7s,baz=98,slow=1.8,SNR=36
KURBB                             PP       PP       17 27 54.9 -0.5
      comp=Z,1.9nm,0.9s,baz=92,slow=6.5,SNR=4.9
KURBB                             SKP               17 29 47.0
      comp=Z,1.2nm,0.3s,baz=126,slow=2.6,SNR=5.6
KURBB                             PKKPbc   PKKPbc   17 37 56.4 -0.6
      comp=Z,1.1nm,0.5s,baz=269,slow=4.1,SNR=5.4
KURBB                             PKKP     PKKPdf   17 38 15.2 +0.2
      comp=Z,0.3nm,0.2s,baz=20,slow=5.9,SNR=1.9
KSH   Kashi           113.01 306  PKP      PKiKP    17 27 05.4 +1.2
KUU   Kurty           113.05 311  ePKiKP   PKiKP    17 27 02.7 -1.3
      baz=311
KUU   Kurty           113.05 311 i PKIKP   PKiKP    17 27 02.6 -1.3
TKM2  Tokmak 2        113.53 310  P        PKiKP    17 27 05.0 -0.2
      SNR=6.4
KBK   Karagaybulak    114.00 309  P        PKiKP    17 27 06.0  0.0
      SNR=6.4
CHMS  Chumysh         114.16 310  P        PKiKP    17 27 06.1  0.0
      SNR=6.8
SGDS  Sogindy         114.27 310  ePKP     PKPdf    17 27 05.0 -1.4
      baz=310
UCH   Uchtor          114.30 309  P        PKiKP    17 27 07.5 +0.6
      SNR=8.1
AAK   Ala-Archa       114.33 309  PKP      PKPdf    17 27 06.3 -0.3
      comp=Z,4.0nm,0.8s,baz=154,slow=3.1,SNR=10.0
AAK                               PKKPbc   PKKPbc   17 37 46.8 -2.0
      comp=Z,0.6nm,0.4s,baz=296,slow=3.6,SNR=2.0
AAK   Ala-Archa       114.33 309  PKiKP    PKPdf    17 27 06.5 -0.1
AAK   Ala-Archa       114.33 309  PKIKP    PKPdf    17 27 06.3 -0.3
USP   Ospenovka       114.35 310  P        PKPdf    17 27 06.3 -0.2
      SNR=5.9
BTLS  Baital          114.73 312  ePKP     PKPdf    17 27 06.3 -0.8
      baz=312
BTLS  Baital          114.73 312  ePKIKP   PKPdf    17 27 06.3 -0.8
AML   Almayashu       114.90 309  P        PKiKP    17 27 08.5 +0.4
      SNR=6.7
AML   Almayashu       114.90 309 i PKiKP   PKiKP    17 27 08.4 +0.4
      SNR=6.8
FRB   Frobisher Bay   114.98  27  PKP      PKPdf    17 27 06.7 -0.2
      comp=Z,4.3nm,0.6s,baz=330,slow=3.1,SNR=16
FRB                               PP       PP       17 28 13.1 -3.4
      comp=Z,3.1nm,0.7s,baz=257,slow=5.4,SNR=3.9
FRB                               SKP               17 29 53.5
      comp=Z,1.8nm,0.8s,baz=190,slow=12,SNR=1.8
FRB                               PKKPbc   PKKPbc   17 37 45.5 -1.5
      comp=Z,1.1nm,0.6s,baz=174,slow=10,SNR=1.8
FRB   Frobisher Bay   114.98  27  PKIKP    PKPdf    17 27 06.7 -0.3
NEEM  North Greenlan  115.38  11 i P       PKPdf    17 27 07.5 -0.4
NEEM                              IAmb     IAmb     17 27 08.9
      comp=Z,16nm,0.7s
BRZS  Berezniki       115.63 317  ePKP     PKPdf    17 27 07.3 -1.5
      baz=317
BRZS  Berezniki       115.63 317  ePKIKP   PKPdf    17 27 07.2 -1.5
PKME  Peaks-Kenny Pk  116.20  48           PKiKP    17 27 10.2 +0.2
PKME  Peaks-Kenny Pk  116.20  48  P        PKiKP    17 27 10.1 +0.2
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      baz=270
DZA   Taraz           116.67 309  ePKP     PKPdf    17 27 09.1 -1.9
      baz=309
DZA   Taraz           116.67 309  ePKIKP   PKPdf    17 27 09.9 -1.1
BVAR  Borovoye Array  116.86 321  PKP      PKPdf    17 27 10.7 -0.2
      comp=Z,9.8nm,0.5s,baz=216,slow=8.1,SNR=82
BVAR                              SKP               17 29 56.2
      comp=Z,4.4nm,0.9s,baz=61,slow=10,SNR=5.0
BVAR  Borovoye Array  116.86 321  PKIKP    PKPdf    17 27 10.7 -0.2
BRVK  Borovoye        116.92 321  PKIKP    PKPdf    17 27 10.9 -0.2
BRVK  Borovoye        116.92 321  PKPdf    PKPdf    17 27 10.9 -0.2
SCHQ  Schefferville   117.17  37  PKP      PKPdf    17 27 10.8 -0.7
      comp=Z,2.2nm,0.6s,baz=340,slow=3.5,SNR=6.4
BRLS  Borolday        117.76 310  ePKP     PKPdf    17 27 11.7 -1.4
      baz=309
BRLS  Borolday        117.76 310  ePKIKP   PKPdf    17 27 11.6 -1.4
KBS   Kingsbay        118.95 358  ePKPdf   PKiKP    17 27 14.6 +0.2
SPA0  Spitsbergen Ar  119.46 356  ePKPdf   PKPdf    17 27 15.1 -0.2
SPITS Spitsbergen Ar  119.46 356  PKP      PKPdf    17 27 15.4  0.0
      comp=Z,10nm,0.5s,baz=93,slow=5.0,SNR=20
SPITS Spitsbergen Ar  119.46 356  PKIKP    PKPdf    17 27 15.4  0.0
HOPEN Hopen           120.33 354  ePKPdf   PKiKP    17 27 17.5 +0.4
DAG   Danmarks Havn   120.44   5 i P       PKPdf    17 27 16.2 -1.0
HSPB  Hornsund (broa  120.65 356  ePKPdf   PKiKP    17 27 17.9 +0.1
BDFB  Brasilia        120.93 122  PKP      PKiKP    17 27 20.3 +0.1
      comp=Z,2.2nm,0.4s,baz=214,slow=7.2,SNR=4.7
BDFB                              SKP               17 30 04.5
      comp=Z,3.5nm,0.8s,baz=210,slow=0.8,SNR=4.3
BDFB                              PKKPbc   PKKPbc   17 37 25.7 +0.2
      comp=Z,4.6nm,0.8s,baz=34,slow=3.5,SNR=7.9
BDFB  Brasilia        120.93 122  PKIKP    PKiKP    17 27 20.3 +0.1
SFJD  Kangerlussuaq   120.97  21  PKP      PKPdf    17 27 17.8 -0.6
      comp=Z,6.6nm,0.5s,baz=236,slow=0.7,SNR=14
SFJD  Kangerlussuaq   120.97  21  PKIKP    PKPdf    17 27 18.4  0.0
SFJD  Kangerlussuaq   120.97  21 i P       PKPdf    17 27 17.7 -0.6
SFJD  Kangerlussuaq   120.97  21           PKPdf    17 27 18.4  0.0
SUMG  Summit          120.99  13  PKIKP    PKiKP    17 27 19.0 -0.1
SUMG  Summit          120.99  13 i P       PKiKP    17 27 18.9 -0.1
SUMG                              IAmb     IAmb     17 27 20.6
      comp=Z,7.7nm,0.9s
SUMG  Summit          120.99  13  PKPdf    PKiKP    17 27 19.0 -0.1
SVE   Sverdlovsk      121.68 326  ePKIKP   PKPdf    17 27 19.7 -0.4
SVE                               pmax     pmax
      comp=Z,19nm,0.8s
OPO   Ambohidratompo122.04 233    PKP      PKPdf    17 27 22.2  0.0
      comp=Z,15nm,0.9s,baz=124,slow=1.7,SNR=17
OPO                               SKP               17 30 06.8
      comp=Z,3.8nm,0.8s,baz=144,slow=3.9,SNR=3.2
DBG   Daneborg        122.56   7 i P       PKPdf    17 27 19.8 -1.5
DBG                               IAmb     IAmb     17 27 22.0
      comp=Z,17nm,0.7s
DY2G  Dye2            122.72  21 i P       PKPdf    17 27 21.8 -0.3
DY2G                              IAmb     IAmb     17 27 22.8
      comp=Z,38nm,0.6s
ARU   Arti            122.89 326  PKP      PKiKP    17 27 22.8 +0.1
      comp=Z,6.7nm,0.5s,baz=92,slow=2.1,SNR=40
ARU                               PKKPbc   PKKPab   17 37 17.8 +0.5
      comp=Z,0.9nm,0.5s,baz=270,slow=7.1,SNR=5.6
ARU   Arti            122.89 326 i PKIKP   PKPdf    17 27 21.9 -0.5
ARU                                                 17 29 06.4
ARU                                                 17 33 39.5
ARU   Arti            122.89 326  PKPdf    PKiKP    17 27 22.8 +0.1
ICESG Greenland Ices  123.11  16 i P       PKPdf    17 27 22.7 -0.3
ICESG                             IAmb     IAmb     17 27 23.4
      comp=Z,23nm,0.6s
ABKAR Akbulak array   123.93 318  PKPdf    PKiKP    17 27 25.3 +0.3
AKTO  Aktyubinsk      124.87 319  PKP      PKiKP    17 27 26.7 -0.1
      comp=Z,13nm,0.8s,baz=72,slow=4.0,SNR=38
AKTO  Aktyubinsk      124.87 319  PKIKP    PKiKP    17 27 26.7 -0.1
HAMF  Hammerfest      125.78 351  ePKPdf   PKPdf    17 27 27.6 +0.1
SUR   Sutherland      126.44 201  PKP      PKiKP    17 27 30.9  0.0
      comp=Z,28nm,0.8s,baz=99,slow=1.8,SNR=21
SUR   Sutherland      126.44 201  PKPdf    PKiKP    17 27 31.2 +0.4
WSAR  Wadi Sarin      126.44 286  PKP      PKPdf    17 27 30.3  0.0
      comp=Z,6.1nm,1.0s,baz=252,slow=6.2,SNR=4.0
ARA0  ARCESS Array S  126.48 350  ePKPdf   PKPdf    17 27 29.1 +0.2
ARCES ARCESS Array B  126.48 350  PKhKP    PKPpre   17 27 15.8
      comp=Z,4.9nm,1.0s,baz=305,slow=4.3,SNR=3.6
ARCES                             PKP      PKPdf    17 27 28.4 -0.5
      comp=Z,12nm,0.5s,baz=20,slow=1.6,SNR=62
ARCES                             PKKPbc   PKKPab   17 37 02.7 +0.9
      comp=Z,0.8nm,0.5s,baz=200,slow=3.2,SNR=6.1
ARCES ARCESS Array B  126.48 350  PKIKP    PKPdf    17 27 28.5 -0.5
APA   Apatity         126.49 345⇓iPKIKP    PKPdf    17 27 29.0  0.0
APA                               i                 17 29 33.0
APA                               i                 17 29 40.5
APA                               pmax     pmax
      comp=Z,11nm,0.6s
KIRV  Kirov           126.59 331  PKP      PKiKP    17 27 30.1 +0.1
      comp=Z,21nm,0.7s,baz=188,slow=1.6,SNR=6.8
KIRV  Kirov           126.59 331  PKIKP    PKiKP    17 27 30.1 +0.1
GEYT  Alibeck         126.96 304  PKhKP    PKPpre   17 27 18.2
      comp=Z,3.9nm,0.7s,baz=55,slow=24,SNR=5.8
GEYT                              PKP      PKPdf    17 27 31.1 +0.2
      comp=Z,19nm,0.9s,baz=126,slow=2.0,SNR=24
JETT  Jettan, Norway  127.24 352  ePKPdf   PKPdf    17 27 30.6 +0.1
KTK1  Kautokeino      127.32 350  ePKPdf   PKPdf    17 27 30.6  0.0
TRO   Tromso          127.37 352  ePKPdf   PKiKP    17 27 30.9 -0.3
BOSA  Boshof          128.10 207  PKP      PKPdf    17 27 33.4 -0.1
      comp=Z,13nm,0.8s,baz=119,slow=1.7,SNR=15
BOSA                              PP       PP       17 29 43.0 -1.2
      comp=Z,14nm,0.9s,baz=110,slow=8.6,SNR=3.4
BOSA                              SKPbc    SKPbc    17 30 03.9
      comp=Z,8.2nm,0.7s,baz=162,slow=3.4,SNR=8.9
BOSA  Boshof          128.10 207  PKIKP    PKPdf    17 27 33.4 -0.1
SOHO  SOHO            128.44 287 i PKiKP   PKPdf    17 27 34.0  0.0
      SNR=30
MDH   Madha           128.73 288  PKiKP    PKPdf    17 27 34.3 -0.3
BANOM Banah           128.76 289  PKiKP    PKPdf    17 27 34.3 -0.4
UOSS  Minazif         128.79 288 i PKPdf   PKPdf    17 27 33.9 -0.8
      SNR=7.3
HATD  Hatta, Dubai    128.85 288 i PKiKP   PKPdf    17 27 34.8 -0.1
      SNR=16
MSFE  Esma-Masafi     128.86 288 i PKiKP   PKPdf    17 27 35.0 +0.1
      SNR=10
ASHO  Ashiyiah        128.91 287 i PKiKP   PKPdf    17 27 35.0  0.0
      SNR=6.0
ALNE  Al Ain          129.14 287 i PKiKP   PKiKP    17 27 35.8 -0.4
      SNR=6.3
NAZ   Nazwa, Dubai    129.29 288  PKiKP    PKiKP    17 27 36.2 -0.3
FAQ   Al Faqa, Dubai  129.34 287  PKiKP    PKiKP    17 27 36.9 +0.4
KLMR  Klimovskoe      129.46 337  ePKIKP   PKPdf    17 27 33.3 -1.5
KLMR                              e                 17 29 50.6
KLMR                              pmax     pmax
      comp=Z,24nm,1.2s
KLMR  Klimovskoe      129.46 337  ePKPdf   PKPdf    17 27 33.4 -1.4
KLMR                              AMP               17 27 36.9
      comp=Z,24nm,1.2s
KLMR                              ePP      PP       17 29 50.6 -2.3
FAUS  Fauske          129.94 353  ePKPdf   PKPdf    17 27 35.5  0.0
BELG  Belogornoye     130.32 324  PKP      PKPdf    17 27 36.7  0.0
      comp=Z,41nm,0.8s,baz=235,slow=2.4,SNR=9.1
BELG                              SKPbc    SKPab    17 30 10.4 +0.8
      comp=Z,83nm,1.0s,baz=310,slow=6.3,SNR=9.0
BELG  Belogornoye     130.32 324 i PKIKP   PKPdf    17 27 35.8 -0.9
BORG  Borgarnes       130.97  13  PKP      PKiKP    17 27 38.4 -0.2
      comp=Z,10nm,0.7s,baz=250,slow=4.4,SNR=6.8
BORG                              SKPbc    SKPab    17 30 14.5 +2.6
      comp=Z,30nm,0.9s,baz=14,slow=2.8,SNR=5.8
BORG  Borgarnes       130.97  13  PKIKP    PKiKP    17 27 38.4 -0.2
KONS  Konsvik         131.03 354  ePKPdf   PKPdf    17 27 37.9 +0.2
LBTB  Lobatse         131.05 210  PKP      PKPdf    17 27 38.5 -0.7
      comp=Z,7.6nm,0.8s,baz=133,slow=4.5,SNR=7.9
LBTB                              PP       PP       17 30 03.8 +0.7
      comp=Z,4.2nm,0.8s,baz=113,slow=7.3,SNR=4.1
LBTB                              SKPbc    SKPab    17 30 15.6 +1.8
      comp=Z,22nm,0.9s,baz=136,slow=4.0,SNR=13
LBTB  Lobatse         131.05 210  PKIKP    PKPdf    17 27 38.5 -0.7
LBTB                                                17 30 15.6
MOR8  Moi Rana        131.21 353  ePKPdf   PKPdf    17 27 37.7 -0.3
STOK  Stokkvaagen     131.21 354  ePKPdf   PKPdf    17 27 38.0 +0.1
FINES FINESS Array B  133.32 344  PKhKP    PKPpre   17 27 26.9
      comp=Z,1.8nm,0.8s,baz=40,slow=3.2,SNR=11
FINES                             PKP      PKPdf    17 27 41.0 -1.1
      comp=Z,11nm,0.6s,baz=63,slow=3.8,SNR=6.6
FINES                             SKPbc    SKPab    17 30 20.8 -1.4
      comp=Z,21nm,0.8s,baz=79,slow=4.1,SNR=9.8
FINES FINESS Array B  133.32 344  PKIKP    PKPdf    17 27 41.0 -1.1
FINES                                               17 30 20.8
MATP  Matopo          133.34 216  PKP      PKPdf    17 27 42.5 -1.1
      comp=Z,5.8nm,0.7s,baz=138,slow=4.6,SNR=8.2
MATP                              SKPbc    SKPbc    17 30 22.3 +1.3
      comp=Z,15nm,1.0s,baz=145,slow=9.0,SNR=11
VRH   Novokhopyorsk   134.11 325  ePKIKP   PKPdf    17 27 43.4 -0.5
VRH                               e                 17 30 22.8
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VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
OBN	Obninsk	134.37	332	PKP	PKPdf	17 27 42.5	-1.7
	comp=Z,5.1nm,0.4s,baz=54,slow=17,SNR=3.1						
OBN	Obninsk	134.37	332	i PKIKP	PKPdf	17 27 44.7	+0.5
OBN				i		17 30 23.9	
OBN				pmax	pmax		
	comp=Z,13nm,0.8s						
LPSR	Galich'ya Gora	134.80	328	ePKIKP	PKPdf	17 27 45.6	+0.5
LPSR				e		17 30 25.5	
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VSR	Storozhevoye	135.46	327	ePKIKP	PKPdf	17 27 46.0	-0.4
VSR				e		17 30 26.0	
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VORD	Divnogorie	135.53	326	ePKIKP	PKPdf	17 27 46.1	-0.4
VORD				e		17 30 27.4	
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
VSU	Vasula	135.60	341	eP	PKPdf	17 27 41.0	-5.4
DOMB	Dombas	135.79	355	ePKPdf	PKPdf	17 27 45.6	-1.2
AAL	Aland	135.90	347	eP	PKPdf	17 27 42.2	-4.7
NCK	Nalchik	136.41	315	ePKIKP	PKPdf	17 27 46.6	-1.9
NB2	NORSAR Subarra	136.55	353	PKP	PKPdf	17 27 38.2	-10
	comp=Z,6.9nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	136.55	353	PKhKP	PKPpre	17 27 36.9	
	comp=Z,1.7nm,0.7s,baz=41,slow=2.7,SNR=5.7						
NOA				PKP	PKPdf	17 27 48.3	+0.1
	comp=Z,5.2nm,0.7s,baz=14,slow=4.0,SNR=11						
NOA				SKPbc	SKPbc	17 30 30.8	+1.2
	comp=Z,7.0nm,0.9s,baz=16,slow=4.5,SNR=10.0						
NOA	NORSAR Array B	136.55	353	PKIKP	PKPdf	17 27 48.3	+0.1
UPP	Uppsala	136.68	348	eP	PKPdf	17 27 38.4	-10
GNI	Garni	136.73	310	PKP	PKPdf	17 27 49.1	-0.3
	comp=Z,13nm,0.8s,baz=352,slow=10,SNR=7.9						
GNI				SKPbc	SKPbc	17 30 32.5	+1.6
	comp=Z,13nm,0.9s,baz=166,slow=9.1,SNR=4.4						
GNI	Garni	136.73	310	PKiKP	PKPdf	17 27 50.2	+0.9
GNI	Garni	136.73	310	ePKIKP	PKPdf	17 27 47.7	-1.7
KBZ	Khabaz	136.79	315	PKP	PKPdf	17 27 48.8	-0.3
	comp=Z,5.9nm,0.8s,baz=26,slow=3.1,SNR=10						
KBZ				SKPbc	SKPbc	17 30 32.1	+1.5
	comp=Z,12nm,1.0s,baz=135,slow=4.3,SNR=9.2						
KBZ	Khabaz	136.79	315	i PKIKP	PKPdf	17 27 47.5	-1.6
KVAR	Kislovodsk Arr	136.83	316	PKP	PKiKP	17 27 51.4	+0.1
	comp=Z,5.8nm,0.8s,baz=102,slow=23,SNR=3.1						
KVAR				SKPbc	SKiKP	17 30 34.1	-1.5
	comp=Z,8.2nm,0.8s,baz=350,slow=6.1,SNR=4.6						
KIV	Kislovodsk	136.84	316	PKiKP	PKiKP	17 27 50.4	-0.9
KIV	Kislovodsk	136.84	316	i PKIKP	PKPdf	17 27 47.9	-1.5
KIV				e		17 30 37.2	
KIV				eSS	SS	17 47 56.8	-4.8
KIV				eSSS	SSS	17 53 14.5	
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
SHA1	Shidzhatmaz	136.94	315	i PKIKP	PKPdf	17 27 49.5	-0.2
NEY	Neytrino	137.09	315	i PKIKP	PKPdf	17 27 49.9	-0.1
HFS	Hagfors	137.10	351	PKhKP	PKPpre	17 27 37.4	
	comp=Z,6.3nm,0.6s,baz=64,slow=3.4,SNR=4.2						
HFS				SKPbc	SKPbc	17 30 33.1	+2.0
	comp=Z,19nm,0.9s,baz=48,slow=2.2,SNR=10.0						
HFS				PP	PP	17 30 41.0	+0.4
	comp=Z,7.3nm,1.0s,baz=14,slow=3.1,SNR=4.5						
SKAR	Skarslia	137.20	355	ePKPdf	PKPdf	17 27 49.4	-0.1
LSZ	Lusaka	137.56	220	PKhKP	PKPpre	17 27 42.2	
	comp=Z,1.9nm,0.3s,baz=141,slow=4.4,SNR=6.3						
LSZ				PKP	PKPdf	17 27 51.6	0.0
	comp=Z,10nm,0.6s,baz=104,slow=2.0,SNR=5.7						
LSZ				SKPbc	SKiKP	17 30 36.3	-1.8
	comp=Z,9.3nm,0.8s,baz=146,slow=3.6,SNR=7.4						
LSZ	Lusaka	137.56	220	PKIKP	PKPdf	17 27 51.6	0.0
SLIT	Slitere, Latvi	137.59	343	eP	PKPdf	17 27 45.0	-5.2
KONO	Kongsberg	138.09	354	ePKPdf	PKPdf	17 27 50.2	-0.9
MNK	Minsk	138.36	337	i PKIKP	PKPdf	17 27 47.7	-4.0
MNK				i		17 30 45.3	
MNK				i PPP	PPP	17 33 53.1	
MNK				i		17 34 04.2	
MNK				i SS	SS	17 48 14.0	-3.7
MNK				pmax	pmax		
	comp=Z,14nm,0.7s						
MNK				pmax	pmax		
	comp=N,28nm,0.9s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,399nm,16.0s						
MNK				MLR	MLR		
	comp=E,110nm,20.0s						
MNK				MLR	MLR		
	comp=Z,74nm,9.0s						
MNK	Minsk	138.36	337	i PKP	PKPdf	17 27 47.7	-4.0
	comp=E,4.0nm,0.8s						
MNK				i PKP	PKPdf	17 27 47.7	-4.0
	comp=N,28nm,0.9s						
MNK				i PKP	PKPdf	17 27 47.7	-4.0
	comp=Z,14nm,0.7s,baz=40						
MNK				i pPKP	pPKPdf	17 30 00.3	+0.5
MNK				i PP	PP	17 30 45.4	-3.2
MNK				i PPP	PPP	17 33 53.1	
MNK				i SKS	SKSdf	17 34 04.2	-6.1
MNK				i SKKS	SKKSdf	17 43 37.3	-8.2
MNK				i SS	SS	17 48 14.0	-3.7
MNK				i SSS	SSS	17 53 27.7	
MNK				i LRM	MLR	18 28 41.9	
	comp=N,399nm,15.9s						
MNK				i LRM	MLR	18 28 45.5	
	comp=E,110nm,20.3s						
MNK				i LRM	MLR	18 29 00.0	
	comp=Z,74nm,9.4s						
NACGM	Naroch	138.44	338	i PKP	PKPdf	17 27 51.6	-0.2
STRU	Stroemstad	138.51	352	i P	PKPdf	17 27 42.4	-9.4
PABE	Paberze	138.90	341	eP	PKPdf	17 27 48.1	-4.5
SOC	Sochi	138.95	317	i PKIKP	PKPdf	17 27 51.4	-1.7
SOC				e		17 29 54.2	
SOC				ePPP	PPP	17 33 57.0	
SOC				eSSS	SSS	17 53 49.6	
SOC				pmax	pmax		
	comp=Z,14nm,0.6s						
TJOU	Tjoern	139.43	352	i P	PKPdf	17 27 46.6	-6.8
HOMB	Homborsund	139.56	354	i P	PKPdf	17 27 47.3	-6.4
TSUM	Tsumeb	139.63	204	PKhKP	PKPpre	17 27 47.0	
	comp=Z,7.1nm,0.9s,baz=101,slow=4.8,SNR=2.9						
TSUM				PKP	PKPdf	17 27 55.1	-0.2
	comp=Z,8.4nm,0.8s,baz=153,slow=5.7,SNR=6.4						
TSUM				SKPbc	SKPbc	17 30 40.7	+1.0
	comp=Z,8.5nm,1.1s,baz=217,slow=1.2,SNR=5.5						
KMBO	Kilima Mbogo	139.82	245	PKhKP	PKPpre	17 27 49.7	
	comp=Z,4.1nm,0.6s,baz=62,slow=5.9,SNR=6.1						
KMBO				PKP	PKPdf	17 27 56.1	+0.2
	comp=Z,13nm,1.0s,baz=59,slow=1.2,SNR=8.5						
KMBO				SKPbc	SKPbc	17 30 41.4	+0.9
	comp=Z,8.3nm,1.0s,baz=91,slow=0.9,SNR=12						
KMBO	Kilima Mbogo	139.82	245	i PKPdf	PKPdf	17 27 50.7	-5.3
	SNR=6.8						
KMBO	Kilima Mbogo	139.82	245c	iPKIKP	PKPdf	17 27 57.0	+1.1
KMBO				pmax	pmax		
	comp=Z,13nm,1.0s						
ANN	Anapa	139.83	319	i PKIKP	PKiKP	17 27 57.2	0.0
ANN				pmax	pmax		
	comp=Z,62nm,1.0s						
ONAU	Onsala	140.00	351	i P	PKPdf	17 27 47.1	-7.4
FABU	Falkenberg	140.25	350	i P	PKPdf	17 27 48.6	-6.4
FABU				IAmb	IAmb	17 27 49.1	
	comp=Z,29nm,0.5s						
BLEU	Blekinge	140.34	347	i P	PKPdf	17 27 48.9	-6.3
BLEU				IAmb	IAmb	17 27 49.8	
	comp=Z,4.5nm,0.6s						
KAC	Achnashellach	140.37	6	⇑eP	PKPdf	17 27 49.0	-6.2
MDO	Dochfour	140.51	5	⇑eP	PKPdf	17 27 49.9	-5.6
DEL	Delary	140.56	349	i P	PKPdf	17 27 49.0	-6.6
DEL				IAmb	IAmb	17 27 49.9	
	comp=Z,13nm,0.5s						
AKASG	Malin Array Be	140.63	332	PKhKP	PKPpre	17 27 49.6	
	comp=Z,10nm,0.4s,baz=42,slow=4.0,SNR=128						
AKASG				PKP	PKPdf	17 27 56.6	+0.7
	comp=Z,3.1nm,0.5s,baz=44,slow=3.6,SNR=9.3						
AKASG				SKPbc	SKPbc	17 30 41.7	+0.7
	comp=Z,9.1nm,0.7s,baz=39,slow=3.4,SNR=14						
AKASG	Malin Array Be	140.63	332	PKIKP	PKPdf	17 27 56.6	+0.7
AKBB	Malin Array Si	140.63	332	i PKIKP	PKPdf	17 27 53.2	-2.7
BJUU	Bjuv	141.09	350	i P	PKPdf	17 27 51.6	-5.0
DRUM	Mains of Drumt	141.16	3	⇑eP	PKPdf	17 27 51.2	-5.4
INVG	Invergeldie, C	141.54	5	eP	PKPdf	17 27 52.2	-5.1
LAWE	Loch Awe, Argy	141.58	6	eP	PKPdf	17 27 52.9	-4.5
BSD	Bornholm Skovb	141.64	347	eP	PKPdf	17 27 53.0	-4.6
BSD	Bornholm Skovb	141.64	347	i P	PKPdf	17 27 53.1	-4.5
BSD				IAmb	IAmb	17 27 56.1	
	comp=Z,29nm,0.7s						
SIM	Simferopol'	141.76	322	ePKHKP	PKPpre	17 27 54.2	
SIM				pmax	pmax		
	comp=Z,24nm,0.5s						
PGBU	Glenifferbraes	142.11	5	⇑eP	PKPdf	17 27 54.9	-3.5
CLGH	Cloghs, Cushen	142.66	7	eP	PKPdf	17 27 57.3	-2.1
EKA	Eskdalemuir Ar	142.69	4	PKhKP	PKPpre	17 27 56.4	
	comp=Z,11nm,0.5s,baz=333,slow=2.7,SNR=76						
EKA				PKP	PKPdf	17 28 00.4	+1.0
	comp=Z,5.6nm,0.5s,baz=66,slow=1.3,SNR=8.6						
EKA	Eskdalemuir Ar	142.69	4	PKIKP	PKPdf	17 28 00.4	+1.0
DIKM	Dikmen	142.76	316	⇓P	PKPdf	17 27 59.4	-0.6
GKP	Gorka Klasztor	142.80	344	ePKiKP	PKPdf	17 27 57.8	-2.0
GKP	Gorka Klasztor	142.80	344	eP	PKPdf	17 27 57.7	-2.0
NEWG	New Galloway	142.82	5	eP	PKPdf	17 27 56.7	-3.0
SORM	Soroca	142.85	330	⇑P	PKPdf	17 27 57.3	-2.6
SORM	Soroca	142.85	330	⇑P	SKKPab	17 39 00.9	-1.6
SORM	Soroca	142.85	330	⇑PKIKP	PKPdf	17 27 57.3	-2.6
BEL	Belsk	143.02	340	ePKiKP	PKPdf	17 27 59.2	-0.9
GAL1	Galloway	143.03	6	eP	PKPab	17 27 57.3	-0.3
PURM	Purcari	143.18	327	⇑P	PKPdf	17 27 59.7	-0.9
EDMD	Edmundbyers	143.27	3	eP	PKPab	17 27 58.5	0.0
GAZ	Gaziantep	143.28	308	PKPdf	PKPbc	17 27 59.9	+0.3
BZK	Bozkurt	143.42	318	⇑P	PKPdf	17 28 01.7	+0.5
BZK	Bozkurt	143.42	318	PKPdf	PKPdf	17 28 01.6	+0.5
KESW	Keswick, Cumbr	143.44	4	eP	PKPbc	17 27 59.4	+0.1
MILM	Milestii Mici	143.46	328	⇓P	PKPbc	17 27 59.8	+0.2
MILM	Milestii Mici	143.46	328	⇓PKIKP	PKPbc	17 27 59.8	+0.1
LVV	L'vov	143.50	335	ePKIKP	PKPbc	17 27 59.8	+0.1
GMM	Mts of Mourne	143.51	7	eP	PKPab	17 27 59.3	-0.1
BSEG	Bad Segeberg	143.58	351	ePKPbc	PKPbc	17 28 00.2	+0.4
	baz=16,slow=2.8						
BNN	Bunyan	143.62	312	PKPdf	PKPdf	17 28 02.0	+0.2
LODK	Lodwar	143.63	250	PKPdf	PKPdf	17 28 02.5	+0.1
IOMK	Kirk Michael	143.64	6	eP	PKPab	17 27 59.8	-0.2
ILTH	Belurgan, Co L	143.67	8	⇑eP	PKPab	17 27 59.9	-0.2
WIM	Isle of Man	143.74	6	⇑eP	PKPab	17 28 00.2	-0.1
IAS	Iasi	143.89	329	⇑P	PKPdf	17 28 01.9	+0.1
IAS	Iasi	143.89	329	⇑PKIKP	PKPdf	17 28 01.9	+0.1
LEOM	Leova	144.05	328	⇑P	PKPdf	17 28 02.4	+0.3
LEOM	Leova	144.05	328	⇑PKIKP	PKPdf	17 28 02.4	+0.3
HPK	Haverah Park	144.16	3	⇑eP	PKPab	17 28 01.8	-0.1
VASR	Vaslui	144.16	328	⇓P	PKPdf	17 28 02.7	+0.5
KWP	Kalwaria Pacla	144.17	336	ePKPdf	PKPbc	17 28 00.6	-1.2
KWP				ePKiKP	PKPdf	17 28 02.9	+0.7
RUE	Ruedersdorf	144.35	347	eP	PKPbc	17 27 58.4	-3.8
RUE	Ruedersdorf	144.35	347	ePKPbc	PKPab	17 28 02.8	+0.2
	baz=16,slow=2.8						
PRAR	RASCA	144.41	331	⇓P	PKPab	17 28 03.3	+0.2
PRAR	RASCA	144.41	331	⇓P	SKKPab	17 38 54.0	-1.5
DSB	Dublin	144.43	8	eP	PKPdf	17 28 02.7	+0.2
DSB	Dublin	144.43	8	PKPdf	PKPab	17 28 03.7	+0.7
BIR	Birlad	144.50	328	⇑P	PKPab	17 28 04.7	+1.2
BIR	Birlad	144.50	328	⇑PKIKP	PKPab	17 28 04.7	+1.2
WME	Myndd Eilian	144.52	6	⇑eP	PKPbc	17 28 02.8	+0.1
VLDR	Vladesti	144.56	327	⇓P	PKPab	17 28 04.3	+0.6
TLCR		144.61	326	⇑P	PKPab	17 28 04.0	+0.1
TLCR		144.61	326	⇑PKIKP	PKPab	17 28 04.0	+0.1
WLF1	Llynfaes	144.62	6	⇑eP	PKPbc	17 28 03.2	+0.1
YRC	Rhoscolyn	144.64	6	eP	PKPbc	17 28 03.1	0.0
VARL	Varlezi	144.64	327	⇓P	PKPab	17 28 04.3	+0.3
BUR08	Bucovina Ar. S	144.67	332	PKPdf	PKPab	17 28 05.1	+0.9
BURAR	Bucovina Array	144.69	332	⇓P	PKPab	17 28 04.9	+0.6
BURAR	Bucovina Array	144.69	332	⇑P	SKKPab	17 38 54.7	+0.3
BURAR	Bucovina Array	144.69	332	⇓PKIKP	PKPab	17 28 04.9	+0.6
BUR01	Bucovina Ar. S	144.69	332	⇓P	PKPab	17 28 05.1	+0.8
LBWR	Ladybower, Pea	144.71	3	⇑eP	PKPbc	17 28 03.4	0.0
LMK	Market Rasen	144.71	2	eP	PKPbc	17 28 03.6	+0.2
SCTR	Scanteiesti	144.72	327	⇑P	PKPab	17 28 05.0	+0.7
OJC	Ojcow	144.72	339	ePKiKP	PKPab	17 28 04.4	+0.2
OJC	Ojcow	144.72	339	PKIKP	PKPab	17 28 04.2	0.0
OJC	Ojcow	144.72	339	PKPdf	PKPab	17 28 04.2	0.0
GIUM	Giurgiulesti	144.74	327	⇓P	PKPab	17 28 05.2	+0.8
TATR	Tatarca	144.74	327	⇑P	PKPab	17 28 04.8	+0.4
BR131	Keskin Array S	144.76	314	PKIKP	PKPab	17 28 04.8	-0.1
BR131	Keskin Array S	144.76	314	PKPdf	PKPab	17 28 04.8	-0.1
BRTR	Keskin Array B	144.76	314	PKP	PKPdf	17 28 03.7	0.0
	comp=Z,52nm,0.8s,baz=140,slow=4.5,SNR=210						
BRTR				pPKP	pPKPdf	17 30 10.2	-1.6
	comp=Z,1.5nm,0.8s,baz=135,slow=2.0,SNR=1.4						
BRTR				SKPbc	SKiKP	17 30 53.0	+0.9
	comp=Z,8.0nm,0.8s,baz=118,slow=3.7,SNR=5.6						
BRTR	Keskin Array B	144.76	314	PKIKP	PKPdf	17 28 03.7	0.0
BRTR						17 30 10.3	
BRTR	Keskin Array B	144.76	314	PKPdf	PKPab	17 28 04.8	-0.1
YLL	Llanberis	144.79	6	eP	PKPdf	17 28 03.2	+0.1
TESR	Tescani	144.82	329	⇑P	PKPab	17 28 04.6	-0.1
JURR	Jurilovca	144.85	325	⇓P	PKPab	17 28 05.2	+0.3
STHS	Stebnicka Huta	144.89	337	ePKIKP	PKPdf	17 28 03.7	+0.2
STHS	Stebnicka Huta	144.89	337	ePKP	PKPdf	17 28 03.7	+0.2
SLCR	Slobozia Conac	144.89	327	⇑P	PKPab	17 28 05.4	+0.4
KOLS	Kolonicke sedl	144.90	336	ePKIKP	PKPab	17 28 04.9	0.0
KOLS	Kolonicke sedl	144.90	336	ePKP	PKPab	17 28 04.9	0.0
SCHL	Schela	144.92	327	⇑P	PKPab	17 28 05.3	+0.2
IZVR	Izvoarele	144.93	327	⇑P	PKPab	17 28 05.9	+0.8
TUDR		144.94	327	⇓P	PKPab	17 28 05.6	+0.4
CFR	Carcaliu	144.98	326	⇑P	PKPbc	17 28 04.1	-0.3
CFR	Carcaliu	144.98	326	⇓P	SKKPab	17 38 52.6	-0.4
CFR	Carcaliu	144.98	326	⇑PKIKP	PKPbc	17 28 04.1	-0.3
FLTG	Flechtingen	144.98	349	ePKPbc	PKPbc	17 28 04.5	+0.3
	baz=16,slow=2.8						
NRDL	Niedersach Rie	145.01	351	ePKPbc	PKPab	17 28 04.8	-0.3
	baz=16,slow=2.8						
TPGR	Topolog	145.04	326	⇑P	PKPab	17 28 06.0	+0.4
ASF	Jabal al Asfar	145.08	301	PKPbc	PKPab	17 28 06.1	-0.2
	comp=Z,69nm,0.9s,baz=81,slow=1.4,SNR=72						
ASF	Jabal al Asfar	145.08	301	PKIKP	PKPab	17 28 06.1	-0.2
FOEL	Foel Wylfa	145.12	5	⇑eP	PKPbc	17 28 05.0	+0.4
LLW	Llanuwychllyn	145.12	5	⇑eP	PKPbc	17 28 04.5	-0.1
UZH	Uzhgorod	145.13	335	ePKIKP	PKPab	17 28 05.6	-0.2
IWEX	Carrickbyrne,	145.23	9	⇑eP	PKPbc	17 28 05.1	+0.2
NIE	Niedzica	145.23	338	ePKiKP	PKPab	17 28 07.0	+0.8
VRI	Vrincioaia	145.23	328	⇑P	PKPab	17 28 06.0	-0.3
VRI	Vrincioaia	145.23	328	⇑P	SKKPab	17 38 52.0	0.0
VRI	Vrincioaia	145.23	328	⇑PKIKP	PKPab	17 28 06.0	-0.3
HWQ	Hawqa	145.23	304	eP	PKPbc	17 28 06.0	+0.2
CRVS	Cervenica-Dubn	145.24	337	ePKIKP	PKPab	17 28 05.9	-0.3
CRVS	Cervenica-Dubn	145.24	337	ePKP	PKPab	17 28 05.9	-0.3
KSP	Ksiaz	145.24	343	ePKiKP	PKPab	17 28 06.2	0.0
ASSE	Asse, Remlinge	145.27	350	ePKPbc	PKPab	17 28 05.7	-0.5
	baz=16,slow=2.8						
PLOR	Plostina	145.28	328	⇑P	PKPab	17 28 06.1	-0.4
PLOR	Plostina	145.28	328	⇑PKP2	PKPab	17 28 06.1	-0.4
TIRR	Tirgusor	145.30	325	⇑P	PKPbc	17 28 05.5	+0.1
TIRR	Tirgusor	145.30	325	⇑P	SKKPab	17 38 51.5	-0.1
TIRR	Tirgusor	145.30	325	⇑PKP2	PKPbc	17 28 05.5	+0.1
TIRR	Tirgusor	145.30	325	PKPdf	PKPab	17 28 06.2	-0.3
CWF	Charnwood Fore	145.39	3	eP	PKPbc	17 28 05.4	0.0
BMR	Baia Mare	145.40	333	⇓P	PKPab	17 28 06.3	-0.6
BMR	Baia Mare	145.40	333	⇓PKP2	PKPab	17 28 06.3	-0.6
HARR	Harsova	145.41	326	⇑P	PKPab	17 28 06.5	-0.5
HARR	Harsova	145.41	326	⇑PKP2	PKPab	17 28 06.5	-0.5
TRPA	Tarpa	145.44	335	⇓P	PKPbc	17 28 06.3	+0.6
TRPA	Tarpa	145.44	335	⇓P	SKKPab	17 38 51.2	+0.2
TRPA	Tarpa	145.44	335	ePKPDF	PKPdf	17 28 04.4	0.0
TRPA	Tarpa	145.44	335	eP	PKPbc	17 28 06.1	+0.5
TLBR	Topalu	145.44	325	⇓P	PKPab	17 28 06.9	-0.3
GRER		145.44	327	⇓P	PKPab	17 28 07.9	+0.8
WACR	West Acre	145.46	1	eP	PKPbc	17 28 05.6	0.0
BISRR	Bisoca	145.46	328	⇑P	PKPab	17 28 07.2	-0.1
ARCR	ARCALIA	145.47	332	⇑P	PKPab	17 28 07.1	-0.1
ARCR	ARCALIA	145.47	332	⇓P	SKKPbc	17 38 51.4	-1.1
MFTR	Murfatlar	145.48	325	⇓P	PKPbc	17 28 05.8	-0.1
COVR	Voineasa-Covas	145.51	329	⇓P	PKPbc	17 28 06.7	+0.6
COVR	Voineasa-Covas	145.51	329	⇑P	SKKPab	17 38 51.4	+0.6
IBBN	Ibbenburen	145.51	353	ePKPbc	PKPab	17 28 06.5	-0.6
	baz=16,slow=2.8						
HLM1	Long Mynd	145.51	5	⇑eP	PKPbc	17 28 06.1	+0.3
OSTC	Ostas	145.52	343	⇑ePKP	PKPab	17 28 07.0	-0.3
OZUR		145.53	329	⇓P	PKPab	17 28 07.4	-0.2
OZUR		145.53	329	⇑P	SKKPab	17 38 51.0	+0.4
CHVC	Chvalec	145.54	343	⇑ePKP	PKPab	17 28 07.0	-0.4
RCY	Rachaya	145.56	303	eP	PKPbc	17 28 07.0	+0.3
BHL	Bhannes	145.58	304	eP	PKPbc	17 28 06.7	0.0
OKC	Ostrava-Krasne	145.59	341	⇑ePKP	PKPab	17 28 06.9	-0.7
OKC	Ostrava-Krasne	145.59	341	ePKP2	PKPab	17 28 06.9	-0.7
CLZ	Clausthal	145.60	350	ePKPbc	PKPab	17 28 06.9	-0.7
	baz=16,slow=2.8						
CLL	Collm	145.61	347	⇑iPKP2	PKPbc	17 28 06.8	+0.7
CLL				pmax	pmax		
	comp=Z,244nm,0.6s						
CLL	Collm	145.61	347	⇑iPKPbc	PKPbc	17 28 06.8	+0.7
	comp=Z,244nm,0.6s						
CLL				epPKP	pPKPdf	17 30 16.0	+3.1
	comp=Z,24nm,1.3s						
CLL	Collm	145.61	347	ePKPbc	PKPbc	17 28 06.7	+0.6
	baz=16,slow=2.8						
MANR	Mangalia	145.62	324	⇑P	PKPab	17 28 07.5	-0.4
MBAR	Mbarara	145.62	240	PKPbc	PKPbc	17 28 07.9	+0.4
	comp=Z,91nm,1.0s,baz=107,slow=4.1,SNR=60						
MBAR	Mbarara	145.62	240	i PKP2	PKPbc	17 28 07.9	+0.4
UPC	Upice	145.62	343	⇑ePKP	PKPab	17 28 07.3	-0.4
UPC	Upice	145.62	343	ePKP2	PKPab	17 28 07.3	-0.4
TSMN	Mangalia Port-	145.62	324	⇓P	PKPab	17 28 07.8	-0.1
DPC	Dobruska-Polom	145.68	343	⇑ePKP	PKPab	17 28 07.7	-0.3
DPC				epPKP	pPKPdf	17 30 14.4	+1.3
DPC	Dobruska-Polom	145.68	343	ePKP2	PKPab	17 28 07.7	-0.3
SHBL	Chebaa	145.68	303	eP	PKPbc	17 28 07.4	+0.3
DQRL	Deir Qamar	145.71	304	eP	PKPab	17 28 08.0	-0.7
WIMM	Wimmelburg	145.71	349	ePKPbc	PKPbc	17 28 07.1	+0.8
	baz=16,slow=2.8						
LANS	Liptovska Anna	145.75	339	ePKP2	PKPab	17 28 08.0	-0.3
LANS	Liptovska Anna	145.75	339	ePKP	PKPab	17 28 08.0	-0.3
NEHR	Nehoiu	145.76	328	⇓P	PKPbc	17 28 07.5	+0.7
AMRR	Amara	145.78	326	⇑P	PKPab	17 28 08.5	0.0
AMRR	Amara	145.78	326	⇑PKP2	PKPab	17 28 08.5	0.0
KRLC	Kraliky	145.79	342	⇑ePKP	PKPab	17 28 07.6	-0.8
KRLC	Kraliky	145.79	342	ePKP2	PKPab	17 28 07.6	-0.8
BRG	Berggiesshubel	145.81	346	ePKPbc	PKPbc	17 28 07.4	+0.7
	baz=16,slow=2.8						
BRG	Berggiesshubel	145.81	346	⇓ePKPf		17 28 06.4	
BRG				Amp		17 28 06.9	
	comp=Z,11nm,1.1s						
BRG				⇑iPKP	PKPab	17 28 07.6	-0.8
BRG				Amp		17 28 08.4	
	comp=Z,89nm,0.6s						
BRG				i PKPab	PKiKP	17 28 09.4	+0.1
BRG				Amp		17 28 10.6	
	comp=Z,36nm,0.6s						
DOPR	Dopca	145.82	330	⇓P	PKPab	17 28 08.4	-0.2
DOPR	Dopca	145.82	330	⇓P	SKKPab	17 38 50.4	+1.1
CEI	Carei	145.82	334	⇓P	PKPab	17 28 08.1	-0.4
CEI	Carei	145.82	334	⇓PKP2	PKPab	17 28 08.1	-0.4
MORC	Moravsky Berou	145.83	341	⇓P	PKPbc	17 28 07.5	+0.7
MORC	Moravsky Berou	145.83	341	⇓P	SKKPab	17 38 49.6	+0.3
MORC	Moravsky Berou	145.83	341	ePKP	PKPbc	17 28 07.6	+0.7
MORC				e		17 30 14.2	
MORC	Moravsky Berou	145.83	341	PKP2	PKPab	17 28 07.8	-0.8
MORC	Moravsky Berou	145.83	341	PKPbc	PKPab	17 28 07.8	-0.8
ISR	Istrita	145.85	328	⇑P	PKPab	17 28 08.2	-0.6
ISR	Istrita	145.85	328	⇑PKP2	PKPab	17 28 08.2	-0.6
ICOR	Ion Corvin	145.86	325	⇓P	PKiKP	17 28 10.8	+1.2
ICOR	Ion Corvin	145.86	325	⇓P	SKKPab	17 38 58.1	+9.0
MLR	Muntele Rosu	145.89	329	⇓P	PKPbc	17 28 07.9	+0.7
MLR	Muntele Rosu	145.89	329	⇓P	SKKPab	17 38 49.3	+0.1
MLR	Muntele Rosu	145.89	329	PKPbc	PKPbc	17 28 07.7	+0.5
	comp=Z,40nm,0.5s,baz=335,slow=10,SNR=34						
MLR	Muntele Rosu	145.89	329	⇓PKP2	PKPbc	17 28 07.9	+0.7
MLR	Muntele Rosu	145.89	329	PKPbc	PKPbc	17 28 08.0	+0.7
RSBS	Rosebush, Pemb	145.90	7	⇑eP	PKPbc	17 28 06.8	0.0
FBE	Freiberg	145.90	346	ePKPbc	PKPab	17 28 08.1	-0.6
	baz=16,slow=2.8						
KECS	Kecovo	145.95	337	ePKP2	PKPab	17 28 08.3	-0.7
KECS	Kecovo	145.95	337	ePKP	PKPab	17 28 08.3	-0.7
GTTG	Gottingen	145.95	350	ePKPbc	PKPbc	17 28 07.9	+0.8
	baz=16,slow=2.8						
NEUB	Neuenburg	145.96	348	ePKPbc	PKPbc	17 28 07.9	+0.8
	baz=16,slow=2.8						
KALB	Balgarevo	145.98	324	⇓P	PKPab	17 28 08.7	-0.6
PVCC	Panska Ves	145.98	345	⇑ePKP	PKPab	17 28 08.4	-0.7
PVCC				epPKP	pPKPdf	17 30 15.6	+2.1
PVCC	Panska Ves	145.98	345	ePKP2	PKPab	17 28 08.4	-0.7
MCH1	Michaelchurch	146.02	5	⇑eP	PKPbc	17 28 07.2	0.0
MESR	Meseseni	146.04	333	⇑P	PKPbc	17 28 08.4	+1.0
MMAI	Mount Meron Ar	146.06	303	PKPbc	PKPbc	17 28 08.5	+0.5
	comp=Z,87nm,0.6s,baz=65,slow=4.9,SNR=136						
MMAI				pPKPbc	pPKPab	17 30 11.0	-1.8
	comp=Z,18nm,1.1s,baz=61,slow=6.8,SNR=1.5						
MMAI				SKPbc	SKiKP	17 30 57.3	+2.3
	comp=Z,20nm,1.0s,baz=85,slow=10,SNR=3.1						
CBBR	Cluj-Babes-Bol	146.07	332	⇑P	PKPbc	17 28 08.3	+0.7
CJR	Cluj-Napoca	146.09	332	⇑P	PKPbc	17 28 08.7	+1.0
CJR	Cluj-Napoca	146.09	332	⇑PKP2	PKPbc	17 28 08.7	+1.0
ELMS	Elmsett, Ipswi	146.10	0	eP	PKPbc	17 28 07.7	+0.3
LEHL	Lehliu	146.15	326	⇓P	PKPab	17 28 08.9	-1.0
SECR		146.15	328	⇑P	PKPbc	17 28 08.6	+0.8
IZAB	Izabela	146.16	338	ePKP2	PKPab	17 28 08.9	-1.0
MDB	Medias	146.17	331	⇑P	PKPab	17 28 09.6	-0.4
MDB	Medias	146.17	331	⇑PKP2	PKPab	17 28 09.6	-0.4
PLAR	PLOIESTI	146.25	328	⇑P	PKPab	17 28 09.4	-1.0
MQOL	MQOL	146.26	280	i P	PKPbc	17 28 09.7	+0.9
MQOL				i		17 28 21.4	
	baz=16,slow=9.3						
SULR		146.30	327	⇑P	PKPbc	17 28 08.1	-0.1
STRD	Stroud	146.30	4	⇑eP	PKPbc	17 28 08.1	+0.1
VOIR		146.37	329	⇑P	PKPbc	17 28 09.1	+0.6
VOIR		146.37	329	⇑P	SKKPab	17 38 47.5	+0.5
VOIR		146.37	329	⇑PKP2	PKPbc	17 28 09.1	+0.6
OLDB	Oldbury-Upon-S	146.39	4	eP	PKPbc	17 28 08.2	-0.1
DRGR		146.42	333	⇑P	PKPbc	17 28 09.2	+0.6
DRGR		146.42	333	⇑P	SKKPab	17 38 47.7	+0.9
DRGR		146.42	333	⇑PKP2	PKPbc	17 28 09.2	+0.6
BUG	Bochum--Univer	146.42	353	ePKPbc	PKPbc	17 28 08.8	+0.4
	baz=16,slow=2.8						
PRA	Prague	146.44	345	⇑ePKP	PKPbc	17 28 09.5	+1.1
PRA	Prague	146.44	345	ePKP2	PKPbc	17 28 09.5	+1.1
PRU	Pruhonice	146.48	345	⇑ePKP	PKPbc	17 28 09.4	+0.8
PRU	Pruhonice	146.48	345	ePKP2	PKPbc	17 28 09.4	+0.8
KASTN	Kahler Asten	146.51	352	ePKPbc	PKPbc	17 28 09.4	+0.7
	baz=16,slow=2.8						
MOX	Moxa	146.53	348	ePKPbc	PKPbc	17 28 09.4	+0.7
	baz=16,slow=2.8						
VYHS	Vyhne	146.53	339	ePKP2	PKPbc	17 28 09.8	+1.0
VYHS	Vyhne	146.53	339	ePKP	PKPbc	17 28 09.8	+1.0
VRAC	Vranov	146.53	342	⇑P	PKPbc	17 28 09.7	+0.9
VRAC	Vranov	146.53	342	PKPbc	PKPbc	17 28 09.1	+0.3
	comp=Z,32nm,0.8s,baz=40,slow=2.6,SNR=21						
VRAC				pPKPbc	pPKPab	17 30 12.0	-2.3
	comp=Z,6.6nm,1.0s,baz=22,slow=3.3,SNR=2.0						
VRAC	Vranov	146.53	342	ePKP	PKPbc	17 28 09.5	+0.7
VRAC				e		17 30 16.2	
VRAC	Vranov	146.53	342	⇑PKP2	PKPbc	17 28 09.7	+0.9
PLN	Plauen	146.57	347	ePKPbc	PKPbc	17 28 09.6	+0.7
	baz=16,slow=2.8						
PLN				epPKPbc	pPKPdf	17 30 16.3	+1.6
	baz=14,slow=3.1						
TANN	Tannenbergstha	146.57	347	ePKPbc	PKPbc	17 28 09.7	+0.8
	baz=16,slow=2.8						
TANN				epPKPbc	pPKPdf	17 30 15.9	+1.1
	baz=14,slow=3.1						
WERD	Werda	146.57	347	ePKPbc	PKPbc	17 28 09.7	+0.8
	baz=16,slow=2.8						
WERD				epPKPbc	pPKPdf	17 30 16.5	+1.8
	baz=14,slow=3.1						
SWN1	Swindon	146.59	4	⇑eP	PKPbc	17 28 09.2	+0.4
JAVC	Velka Javorina	146.60	340	ePKP	PKiKP	17 28 10.9	-0.2
JAVC				e		17 30 17.9	
ARR	Arges	146.62	330	⇑P	PKPdf	17 28 07.6	+1.0
ARR	Arges	146.62	330	⇑P	SKKPbc	17 38 46.5	-1.2
PSZ	Piszkesteto	146.64	337	⇑P	PKPbc	17 28 09.7	+0.5
PSZ	Piszkesteto	146.64	337	⇑P	SKKPbc	17 38 45.6	-2.2
PSZ	Piszkesteto	146.64	337	ePKPDF	PKPbc	17 28 08.7	-0.4
PSZ	Piszkesteto	146.64	337	eP	PKPbc	17 28 09.9	+0.7
PSZ	Piszkesteto	146.64	337	⇑PKP2	PKPbc	17 28 09.7	+0.5
PSZ	Piszkesteto	146.64	337	PKPbc	PKPbc	17 28 09.6	+0.5
GUNZ	Gunzen	146.65	347	ePKPbc	PKPbc	17 28 10.1	+1.0
	baz=16,slow=2.8						
UBBA	Unterbreizbach	146.65	350	ePKPbc	PKPbc	17 28 09.5	+0.7
	baz=16,slow=2.8						
WERN	Wernitzgruen	146.71	347	ePKPbc	PKiKP	17 28 10.3	-1.0
	baz=16,slow=2.8						
WERN				epPKPbc	pPKPbc	17 30 17.0	+1.7
	baz=14,slow=3.1						
BUW	Bucklebury Wes	146.72	3	eP	PKPbc	17 28 09.4	+0.3
NKC	Novy Kostel	146.75	347	⇑ePKP	PKPbc	17 28 10.3	+1.0
NKC	Novy Kostel	146.75	347	ePKP2	PKPbc	17 28 10.3	+1.0
SGRR	Singureni	146.76	327	⇑P	PKPbc	17 28 09.4	-0.1
KRUC	Moravsky	146.81	342	ePKP	PKPbc	17 28 10.2	+0.7
KRUC				e		17 30 17.0	
WOL	Wolverton	146.82	3	eP	PKPbc	17 28 09.5	0.0
TREC	Trest	146.87	343	⇑ePKP	PKPbc	17 28 10.6	+0.9

TREC	Trest	146.87	343	*e*PKP2	PKPbc	17 28 10.6	+0.9
HTL	Hartland	146.87	7	*e*P	PKPbc	17 28 09.8	+0.3
RAZG	Razgrad	146.92	326	⇑P	PKPbc	17 28 10.4	+0.4
LOT	Lotru	146.97	330	⇑P	PKPbc	17 28 10.5	+0.3
SMOL	Smolenice	146.98	340	*e*PKP2	PKiKP	17 28 11.3	-0.5
SMOL	Smolenice	146.98	340	*e*PKP	PKiKP	17 28 11.3	-0.5
BSZH	Besenyszg	147.01	336	⇓P	PKPbc	17 28 10.6	+0.6
BSZH	Besenyszg	147.01	336	*e*PKPDF	PKPbc	17 28 10.4	+0.3
DEV	Deva	147.04	332	⇓P	PKPbc	17 28 11.0	+0.8
DEV	Deva	147.04	332	⇓PKP2	PKPbc	17 28 11.0	+0.8
ELSH	Elham, Standar	147.04	0	*e*P	PKPbc	17 28 10.8	+0.8
HUMR	Humele	147.05	328	⇓P	PKPbc	17 28 10.8	+0.5
MODS	Modra-Piesok	147.15	340	*e*PKP2	PKPbc	17 28 10.6	+0.1
MODS	Modra-Piesok	147.15	340	*e*PKP	PKPbc	17 28 10.6	+0.1
BEBN	Eben Emael	147.21	355	*d*PKiKP	PKPbc	17 28 11.1	+0.7
BEBN				*d*PKPab	PKiKP	17 28 12.9	+0.7
ROTZ	Rotzenmuhle	147.24	347	*e*PKPbc	PKPbc	17 28 11.4	+0.8
	baz=16,slow=2.8						
ROTZ				*e*pPKPbc	pPKPab	17 30 18.3	+1.4
	baz=14,slow=3.1						
SIRR	Siria	147.28	334	⇑P	PKPbc	17 28 11.7	+0.8
LEF	Lefka	147.29	307	⇓P	PKPbc	17 28 10.4	-0.8
SRO	Srobarova	147.29	339	*e*PKP2	PKiKP	17 28 11.8	-0.7
SRO	Srobarova	147.29	339	*e*PKP	PKiKP	17 28 11.8	-0.7
EIL	Elat	147.30	297	PKP	PKPdf	17 28 08.5	+0.4
	comp=Z,69nm,1.0s,baz=172,slow=1.1,SNR=29						
EIL				PKPbc	PKPbc	17 28 11.9	+0.5
	comp=Z,69nm,1.0s,baz=46,slow=1.0,SNR=29						
EIL				SKPbc	SKiKP	17 30 59.1	+1.5
	comp=Z,14nm,1.0s,baz=86,slow=8.4,SNR=3.3						
UCC	Uccle	147.31	356	*d*PKiKP	PKPbc	17 28 11.4	+0.7
BUD	Budapest	147.32	338	*e*PKPDF	PKPbc	17 28 10.4	-0.4
BUD	Budapest	147.32	338	*e*P	PKiKP	17 28 12.0	-0.6
AHRW	Bad Neuenahr-A	147.33	353	*e*PKPbc	PKPbc	17 28 11.5	+0.7
	baz=16,slow=2.8						
ZST	Bratislava	147.36	340	*e*PKP2	PKiKP	17 28 12.2	-0.4
ZST	Bratislava	147.36	340	*e*PKP	PKiKP	17 28 12.2	-0.4
MEM	Membach	147.37	354	*d*PKiKP	PKPbc	17 28 11.4	+0.5
BTNL	Ternell	147.38	354	*d*PKiKP	PKPbc	17 28 11.2	+0.2
GZR	Gura Zlata	147.47	331	⇑P	PKPbc	17 28 11.7	+0.3
GZR	Gura Zlata	147.47	331	⇑PKHKP	PKPpre	17 28 11.7	
TNS	Taunus Mts	147.47	352	*e*PKPbc	PKPbc	17 28 12.0	+0.7
	baz=16,slow=2.8						
DYA	Yadsworthy	147.48	6	*e*P	PKPbc	17 28 10.8	-0.5
GRA1	Grafenberg Arr	147.51	348	PKPbc	PKiKP	17 28 12.5	-0.4
GRF	Grafenberg Arr	147.51	348	PKP2	PKiKP	17 28 12.5	-0.4
GRF	Grafenberg Arr	147.51	348	*e*PKPbc	PKiKP	17 28 12.3	-0.6
	baz=16,slow=2.8						
GRF				*e*pPKPbc	pPKPab	17 30 19.5	+1.4
	baz=14,slow=3.1						
GRFO	Grafenberg	147.51	348	PKP2	PKiKP	17 28 12.5	-0.4
GRFO	Grafenberg	147.51	348	PKPbc	PKiKP	17 28 12.5	-0.4
KHC	Kasperske Hory	147.52	345	*e*PKPDF	PKPdf	17 28 09.0	+1.1
KHC				⇑*e*PKP	PKiKP	17 28 12.4	-0.6
KHC				*e*pPKP	pPKPab	17 30 19.6	+1.6
KHC	Kasperske Hory	147.52	345	*e*PKIKP	PKPdf	17 28 09.0	+1.1
KHC				*e*		17 28 12.4	
KHC				*e*		17 30 19.6	
KHC	Kasperske Hory	147.52	345	PKPbc	PKiKP	17 28 12.4	-0.6
CCA1	Carnmenellis	147.58	8	*e*P	PKPbc	17 28 11.6	+0.1
SNF	Seneffe	147.60	356	*d*PKiKP	PKPbc	17 28 12.2	+0.7
AMBH	Ambrzfalva	147.60	335	⇑P	PKiKP	17 28 13.6	+0.4
AMBH	Ambrzfalva	147.60	335	*e*PKPDF	PKiKP	17 28 12.7	-0.5
BCLA	Clavier	147.62	355	*d*PKiKP	PKPbc	17 28 11.8	+0.2
CKRC	Cesky Krumlov	147.62	344	*e*PKPDF	PKPbc	17 28 10.4	-1.3
CKRC				⇑*e*PKP	PKiKP	17 28 13.7	+0.5
CKRC				*e*pPKP	pPKPab	17 30 21.2	+2.8
BHOU	Houvegnez	147.62	354	*d*PKiKP	PKPbc	17 28 12.3	+0.7
BGES	Gesves	147.67	356	*d*PKiKP	PKPbc	17 28 12.2	+0.5
WET	Wettzell	147.67	346	*e*PKPbc	PKiKP	17 28 12.6	-0.7
	baz=16,slow=2.8						
CSKK	Cskako	147.70	338	*e*PKPDF	PKPbc	17 28 11.3	-0.6
CSKK	Cskako	147.70	338	*e*P	PKiKP	17 28 12.6	-0.7
VLAD	Vladila	147.72	328	⇓P	PKiKP	17 28 12.9	-0.6
MILB	Miltenberg	147.72	350	*e*PKPbc	PKiKP	17 28 12.8	-0.6
	baz=16,slow=2.8						
MILB				*e*pPKPbc	pPKPab	17 30 19.6	+0.6
	baz=14,slow=3.1						
GEC2	GERESS Array S	147.75	345	*e*PKPbc	PKPbc	17 28 12.8	+0.6
	baz=16,slow=2.8						
GERES	GERESS Array B	147.75	345	PKPbc	PKPbc	17 28 12.7	+0.6
	comp=Z,59nm,0.6s,baz=30,slow=3.3,SNR=301						
GERES				pPKPbc	pPKPdf	17 30 14.7	-2.0
	comp=Z,2.1nm,1.0s,baz=46,slow=5.9,SNR=0.9						
GERES	GERESS Array B	147.75	345	PKP2	PKiKP	17 28 12.9	-0.7
GERES	GERESS Array B	147.75	345	PKPbc	PKiKP	17 28 12.9	-0.7
BMRD	Maredsous	147.77	356	*d*PKiKP	PKPbc	17 28 12.6	+0.6
SRE	Strehaia	147.82	330	⇑P	PKiKP	17 28 13.5	-0.2
SRE	Strehaia	147.82	330	⇑PKP2	PKiKP	17 28 13.5	-0.2
RCHB	Rochefort	147.89	355	*d*PKiKP	PKPbc	17 28 12.6	+0.4
EDRB	Edirne	147.92	323	P	PKPbc	17 28 13.1	+0.5
EGYH	Egyhazaskeszo	147.97	339	*e*PKPDF	PKPbc	17 28 12.6	+0.1
EGYH	Egyhazaskeszo	147.97	339	*e*P	PKiKP	17 28 13.8	-0.1
CONA	Conrad Observa	147.99	341	*i* P	PKiKP	17 28 13.7	-0.3
	comp=Z,29nm,0.6s,SNR=18						
SOP	Sopron	147.99	340	*e*PKPDF	PKPbc	17 28 12.9	+0.3
SOP	Sopron	147.99	340	*e*P	PKiKP	17 28 13.6	-0.3
DOU	Dourbes	147.99	356	*e*P	PKiKP	17 28 13.2	-0.6
DOU	Dourbes	147.99	356	*d*PKiKP	PKiKP	17 28 13.3	-0.6
HERR	Herculane	148.02	331	⇑P	PKPbc	17 28 13.2	+0.5
RMGR	Halanga-Turnu	148.06	331	⇑P	PKPab	17 28 18.3	+0.6
MPLH	Magyarpolny	148.11	339	*e*PKPDF	PKPbc	17 28 12.1	-0.8
MPLH	Magyarpolny	148.11	339	*e*P	PKiKP	17 28 13.6	-0.6
BANR	Banloc	148.20	333	⇓P	PKiKP	17 28 14.7	+0.3
TIH	Tihany	148.22	338	*e*PKPDF	PKPbc	17 28 13.6	+0.4
TIH	Tihany	148.22	338	*e*P	PKiKP	17 28 14.7	+0.3
BAIL	Bailesti	148.23	329	⇓P	PKiKP	17 28 14.3	-0.3
WLF	Walferdange	148.29	354	*d*PKiKP	PKiKP	17 28 13.9	-0.6
WLF				*d*PKPab	PKPab	17 28 17.6	-0.8
WLF	Walferdange	148.29	354	PKP2	PKiKP	17 28 14.8	+0.3
WLF	Walferdange	148.29	354	*e*PKPbc	PKiKP	17 28 14.6	+0.1
	baz=16,slow=2.8						
WLF				*e*pPKPbc	pPKPab	17 30 21.4	+0.4
	baz=14,slow=3.1						
WLF	Walferdange	148.29	354	PKPbc	PKiKP	17 28 14.8	+0.3
MDVR	Moldovita	148.42	332	⇓P	PKiKP	17 28 14.5	-0.5
MOA	Molln	148.52	343	*i* P	PKiKP	17 28 14.7	-0.4
	comp=Z,8.8nm,0.6s,SNR=6.3						
MORH	Mrgy, Hungar	148.53	337	⇑P	PKPdf	17 28 10.0	+0.4
MORH	Mrgy, Hungar	148.53	337	*e*PKPDF	PKPdf	17 28 09.2	-0.4
MORH	Mrgy, Hungar	148.53	337	*e*P	PKPdf	17 28 10.1	+0.5
MORH	Mrgy, Hungar	148.53	337	*e*P	PKPdf	17 28 09.5	-0.1
ARSA	Arzberg	148.69	341	*i* P	PKPbc	17 28 14.8	+0.4
	comp=Z,3.8nm,0.6s,SNR=6.8						
KULA	Kula-Manisa	148.71	316	P	PKPbc	17 28 15.1	+0.3
KUBS	Kucevo	148.72	331	*e*P	PKPbc	17 28 14.7	+0.2
ELL	Elmali	148.76	312	PKP2	PKiKP	17 28 15.8	-0.3
ELL	Elmali	148.76	312	PKPbc	PKiKP	17 28 15.8	-0.3
STU	Stuttgart	148.76	350	*e*PKPbc	PKiKP	17 28 15.3	-0.2
	baz=16,slow=2.8						
KOVH	Kovagotottos	148.84	337	*e*PKPDF	PKPdf	17 28 10.9	+0.8
KOVH	Kovagotottos	148.84	337	*e*P	PKPdf	17 28 11.8	+1.7
JVM	Valle D.L. Mar	148.85	4	*e*P	PKiKP	17 28 15.2	-0.5
JQE	Queens East	148.88	4	⇑*e*P	PKPbc	17 28 15.0	+0.3
JSA	Saint Aubin	148.88	4	⇑*e*P	PKiKP	17 28 15.2	-0.4
ZAGS	Zajecar	148.92	330	*e*P	PKPbc	17 28 14.3	-0.7
ALN	Alexandroupoli	148.93	322	P	PKPbc	17 28 14.7	-0.4
ALN	Alexandroupoli	148.93	322	PKHKP	PKPpre	17 28 15.0	
ALN	Alexandroupoli	148.93	322	PKPbc	PKPbc	17 28 15.0	-0.1
FRGS	Fruska Gora	148.94	334	⇑P	PKPbc	17 28 15.5	+0.4
FRGS	Fruska Gora	148.94	334	*e*P	PKPbc	17 28 15.5	+0.4
FRGS	Fruska Gora	148.94	334	*e*P	PKPbc	17 28 15.4	+0.4
FUR	Furstenfeldbru	148.95	347	*e*PKPbc	PKiKP	17 28 15.8	-0.1
	baz=16,slow=2.8						
ENEZ	Enez	148.97	322	P	PKPbc	17 28 15.5	+0.3
RJOB	Jochberg	149.01	345	*e*PKPbc	PKPbc	17 28 15.6	+0.4
	baz=16,slow=2.8						
SVIS	Svilajnac	149.04	332	*e*P	PKiKP	17 28 17.6	+1.4
RDO	Rodhopi	149.06	323	P	PKPbc	17 28 15.8	+0.4
ZAPS	Zavoj	149.13	329	*e*P	PKiKP	17 28 16.5	0.0
KSL	Kastellorizon	149.27	311	P	PKPbc	17 28 16.0	-0.1
BOVS	Bovan	149.30	330	⇑P	PKPbc	17 28 15.9	0.0
BOVS	Bovan	149.30	330	*e*P	PKPbc	17 28 15.6	-0.4
VTS	Vitosha	149.31	327	⇓P	PKiKP	17 28 16.8	-0.2
VTS	Vitosha	149.31	327	⇓PKP2	PKiKP	17 28 16.8	-0.2
BFO	Black Forest	149.33	351	PKHKP	PKPpre	17 28 16.7	
BFO	Black Forest	149.33	351	*e*PKPbc	PKiKP	17 28 16.5	-0.2
	baz=16,slow=2.8						
BFO				*e*pPKPbc	pPKPab	17 30 24.5	-0.8
	baz=14,slow=3.1						
BFO	Black Forest	149.33	351	PKPbc	PKiKP	17 28 16.7	-0.1
SOKA	Soboth	149.36	341	*i* P	PKPbc	17 28 16.3	+0.2
	comp=Z,33nm,0.9s,SNR=15						
PERS	Pernice	149.37	341	*i* PKPbc	PKPbc	17 28 16.1	0.0
FETY	Fethiye	149.39	313	P	PKPbc	17 28 16.5	+0.1
EZN	Ezine	149.43	320	P	PKiKP	17 28 17.1	0.0
TRUS	Trudelj	149.44	332	*e*P	PKiKP	17 28 16.8	-0.3
KBA	Koelnbreinsper	149.47	344	*i* P	PKPbc	17 28 16.2	-0.3
	comp=Z,27nm,0.6s,SNR=21						
TEKS	Tekeris	149.55	334	*e*P	PKPbc	17 28 15.3	-1.3
TEKS	Tekeris	149.55	334	*e*P	PKPbc	17 28 16.5	-0.1
GRUS	Gruza	149.56	332	*e*P	PKiKP	17 28 17.2	-0.1
UBR	Ueberruh	149.65	348	*e*PKPbc	PKiKP	17 28 17.2	-0.3
	baz=16,slow=2.8						
OBKA	Obir	149.66	342	*i* P	PKPbc	17 28 16.8	-0.1
	comp=Z,14nm,0.8s,SNR=7.8						
WATA	Walderalm	149.67	346	*i* P	PKiKP	17 28 17.3	-0.3
	comp=Z,33nm,0.6s,SNR=15						
RETA	Reutte	149.71	347	*i* P	PKiKP	17 28 17.3	-0.3
	comp=Z,24nm,0.5s,SNR=11						
DIVS	Divibare	149.72	333	*e*P	PKPbc	17 28 17.2	+0.1
DIVS	Divibare	149.72	333	*e*P	PKiKP	17 28 17.7	-0.1
WTTA	Wattenberg	149.73	346	*i* P	PKiKP	17 28 17.6	-0.2
	comp=Z,60nm,0.6s,SNR=36						
MOTA	Moosalm	149.77	347	*i* P	PKiKP	17 28 17.6	-0.3
	comp=Z,56nm,0.8s,SNR=19						
BOSS	Bosilegrad	149.78	328	*e*P	PKiKP	17 28 17.6	-0.2
MYKA	Terra Mystica	149.81	343	*i* P	PKPbc	17 28 17.0	-0.2
	comp=Z,41nm,0.6s,SNR=22						
ZAG	Zagreb	149.81	339	*e*P	PKPbc	17 28 16.5	-0.6
PRK	Paraskevi	149.82	319	P	PKiKP	17 28 18.3	+0.3
SQTA	Sankt Quirin	149.86	347	*i* P	PKiKP	17 28 17.9	-0.1
	comp=Z,66nm,0.6s,SNR=24						
NVR	Nevrokopi	149.87	325	P	PKPbc	17 28 17.4	0.0
BARS	Barje	149.87	329	*e*P	PKPdf	17 28 13.6	+1.7
BARS	Barje	149.87	329	*e*P	PKiKP	17 28 18.3	+0.3
THAS	Thassos island	149.88	323	P	PKPbc	17 28 17.0	-0.4
SELS	Selova	149.90	330	*e*P	PKPbc	17 28 17.6	+0.2
PRVS	Prvonek	149.97	328	*e*P	PKPbc	17 28 17.9	+0.3
CRES	Cresnjev	149.98	340	*e*P	PKPbc	17 28 17.8	+0.3
ABTA	Abfaltersbach	150.00	345	*i* P	PKPbc	17 28 17.6	0.0
	comp=Z,83nm,0.7s,SNR=25						
JAWL	J.Aulia	150.04	269	*i* P	PKiKP	17 28 19.2	+0.1
ZOU	Zoufplan	150.06	344	PKPbc	PKPbc	17 28 17.6	-0.3
IVAS	Ivanjica	150.06	332	*e*P	PKPbc	17 28 18.0	+0.1
LIA	Limnos Island	150.07	321	P	PKPbc	17 28 17.7	-0.2
DAVA	Damuels	150.07	348	*i* P	PKiKP	17 28 18.7	+0.2
	comp=Z,35nm,0.7s,SNR=11						
LJU	Ljubljana	150.08	341	*i* PKPbc	PKiKP	17 28 18.1	-0.2
LJU	Ljubljana	150.08	341	*e*P	PKPbc	17 28 17.9	+0.2
FETA	Feichten	150.16	347	*i* P	PKiKP	17 28 18.8	+0.2
	comp=Z,31nm,0.6s,SNR=12						
BBLS	Lazići	150.16	333	*e*P	PKiKP	17 28 18.6	0.0
BBLS	Lazići	150.16	333	*e*P	PKiKP	17 28 18.8	+0.2
SRS	Serrai	150.17	325	P	PKPbc	17 28 17.5	-0.6
BLY	Banja Luka	150.32	337	*e*P	PKiKP	17 28 19.3	+0.5
BOJS	Bojanci	150.34	340	*i* PKPbc	PKiKP	17 28 19.1	+0.2
RUDO	Rudo	150.37	333	*e*P	PKPbc	17 28 18.4	-0.1
CEY	Cerknica	150.39	341	*i* PKPbc	PKiKP	17 28 18.8	-0.2
CEY	Cerknica	150.39	341	*e*P	PKPbc	17 28 18.6	+0.1
DAT	Datca	150.39	314	P	PKPbc	17 28 18.3	-0.6
SJES	Sjenica	150.39	332	*e*P	PKiKP	17 28 19.0	-0.2
CIMO	Cimolais	150.42	344	PKPbc	PKPbc	17 28 18.6	0.0
OUR	Ouranopolis	150.49	323	P	PKPbc	17 28 18.4	-0.4
STIP	Stip	150.51	327	*i* P	PKPbc	17 28 18.3	-0.6
KNT	Kendrikon	150.52	326	P	PKPbc	17 28 18.6	-0.3
DAVOX	Davos/Dischmat	150.56	348	PKPbc	PKiKP	17 28 19.8	+0.3
	comp=Z,101nm,0.7s,baz=290,slow=0.9,SNR=178						
DAVOX				PKPab	PKPab	17 28 28.2	0.0
	comp=Z,18nm,0.5s,baz=299,slow=13,SNR=9.9						
DAVOX				pPKPab	pPKPbc	17 30 28.1	+1.7
	comp=Z,10nm,0.8s,baz=74,slow=3.5,SNR=5.2						
DAVOX	Davos/Dischmat	150.56	348	PKIKP	PKiKP	17 28 19.8	+0.3
DAVOX						17 28 28.2	
VAY	Valandovo	150.58	326	*i* P	PKPbc	17 28 18.9	-0.1
MGRS	Mrkonjic Grad	150.64	337	*e*P	PKiKP	17 28 20.0	+0.4
SKO	Skopje	150.69	328	*i* P	PKiKP	17 28 20.0	+0.3
RIY	Rijeka	150.74	341	*e*P	PKPbc	17 28 18.7	-0.6
PLG	Polygyros	150.76	324	P	PKPbc	17 28 19.1	-0.4
UPM	Unac-Piva	150.91	333	*e*P	PKPbc	17 28 19.1	-0.9
GRG	Griva	150.93	326	P	PKPbc	17 28 19.3	-0.6
PDG	Podgorica	151.37	332	⇓P	PKiKP	17 28 21.1	0.0
PDG	Podgorica	151.37	332	⇓*i*P	PKPbc	17 28 20.7	-0.1
PHP	Peshkopia	151.39	329	P	PKPbc	17 28 20.8	-0.1
SENIN	Lac Senin/Sane	151.41	351	PKPbc	PKiKP	17 28 21.9	+0.6
TREB	Trebinje	151.54	333	*e*P	PKPbc	17 28 20.5	-0.7
FNA	Florina	151.59	327	P	PKPbc	17 28 21.1	-0.3
FNA	Florina	151.59	327	PKIKP	PKPbc	17 28 21.5	+0.1
FNA	Florina	151.59	327	PKPbc	PKPbc	17 28 21.5	+0.1
DRME	Dracevica, Mon	151.60	331	*e*P	PKiKP	17 28 21.5	-0.1
OHR	Ohrid	151.65	328	*i* P	PKiKP	17 28 21.9	+0.1
STON	Ston	151.69	334	⇓*i*P	PKPbc	17 28 19.9	-1.5
HCY	Herceg Novi	151.70	333	*e*P	PKPbc	17 28 20.6	-0.9
TIR	Tirane	151.93	329	⇑P	PKiKP	17 28 22.2	-0.1
TIR	Tirane	151.93	329	⇑PKIKP	PKiKP	17 28 22.2	-0.1
DION	Dionisos Attik	151.98	320	P	PKPbc	17 28 21.6	-0.7
THR8	Santorini-Mono	151.98	315	P	PKPbc	17 28 21.2	-1.1
NEST	Nestorio	152.03	327	P	PKiKP	17 28 22.8	+0.1
PTL	Penteli	152.04	320	P	PKPbc	17 28 21.9	-0.6
THR6	Thira Island,	152.06	315	P	PKPbc	17 28 22.0	-0.5
LKR	Lokris	152.17	322	P	PKPbc	17 28 22.0	-0.7
KPRO	Kipourio	152.20	326	P	PKPbc	17 28 22.8	0.0
AGG	Agios Georgios	152.31	323	P	PKPbc	17 28 22.3	-0.7
LTK	Loutraki	152.60	321	P	PKPbc	17 28 22.7	-1.0
BNI	Bardonecchia	152.78	352	PKIKP	PKiKP	17 28 25.3	+1.2
BNI	Bardonecchia	152.78	352	PKPbc	PKiKP	17 28 25.3	+1.2
ANX	Ano Chora	152.84	323	P	PKiKP	17 28 24.9	+0.5
SERG	Sergoula	152.88	322	P	PKiKP	17 28 24.4	0.0
EFP	Efpalio	152.96	323	P	PKiKP	17 28 25.2	+0.7
IDI	Anoyia	153.00	314	PKP	PKPdf	17 28 17.2	+0.3
	comp=Z,6.4nm,0.9s,baz=354,slow=10,SNR=2.0						
IDI				PKPbc	PKiKP	17 28 25.5	+0.8
	comp=Z,18nm,0.5s,baz=27,slow=6.8,SNR=23						
GUR	Goura	153.03	321	P	PKPbc	17 28 24.6	-0.1
KLV	Kalavryta, Ach	153.07	322	P	PKiKP	17 28 24.9	+0.1
LKD2	Lefkada island	153.41	325	P	PKiKP	17 28 25.9	+0.4
NRCA	Norcia	153.41	340	PKPbc	PKiKP	17 28 25.4	0.0
RLS	Riolos of Patr	153.46	323	P	PKiKP	17 28 26.4	+0.9
DRAG	Dragano-Lefkad	153.53	325	P	PKiKP	17 28 25.8	+0.1
EVGI	Lefkada island	153.53	324	P	PKiKP	17 28 26.0	+0.3
ANKY	Antikythira Is	153.73	317	P	PKiKP	17 28 26.7	+0.5
AQU	L'Aquila	153.75	340	*e*P	PKPbc	17 28 23.7	-2.4
PGAV	Gavieira, Arco	154.85	17	*e*PKPdf	PKPbc	17 28 28.8	+0.3
PGAV	Gavieira, Arco	154.85	17	*e*PKPab	PKPab	17 28 47.4	+0.9
PCAB	Cabril	155.16	17	*e*PKPdf	PKPdf	17 28 29.6	+10
PCAB	Cabril	155.16	17	*e*PKPab	PKPab	17 28 48.6	+0.9
PBRG	Braganca	155.40	15	*e*PKPdf	PKPdf	17 28 29.9	+10
PBRG	Braganca	155.40	15	*e*PKPab	PKPab	17 28 49.1	+0.3
POLO	Lamas de Olo	155.53	17	*e*PKPdf	PKPdf	17 28 30.4	+10
POLO	Lamas de Olo	155.53	17	*e*PKPab	PKPab	17 28 50.0	+0.6
PVRL	Vila Real	155.65	17	*e*PKPdf	PKPdf	17 28 30.7	+10
PVRL	Vila Real	155.65	17	*e*PKPab	PKPab	17 28 50.7	+0.8
MVO	Moncorvo	155.93	16	*e*PKPdf	PKPdf	17 28 31.4	+11
MVO	Moncorvo	155.93	16	*e*PKPab	PKPab	17 28 51.9	+0.8
PVIS	Viseu	156.12	18	*e*PKPdf	PKPdf	17 28 31.4	+10
PVIS	Viseu	156.12	18	*e*PKPab	PKPab	17 28 52.2	+0.3
COI	Coimbra	156.43	19	*e*PKPab	PKPab	17 28 54.0	+0.8
MTE	Manteigas	156.51	17	*e*PKPab	PKPab	17 28 53.8	+0.2
PCAS	Casmilo, Conde	156.54	19	*e*PKPab	PKPab	17 28 53.9	+0.2
PSBE	So Bento	156.94	20	*e*PKPdf	PKPdf	17 28 33.4	+11
PSBE	So Bento	156.94	20	*e*PKPab	PKPab	17 28 55.9	+0.4
PCBR	Castelo Branco	157.05	18	*e*PKPdf	PKPdf	17 28 23.5	+1.5
PCBR	Castelo Branco	157.05	18	*e*PKPab	PKPab	17 28 56.0	+0.1
PMAFR	Mafra	157.27	22	*e*PKPab	PKPab	17 28 57.2	+0.3
PMRV	Marv??o	157.45	18	*e*PKPdf	PKPdf	17 28 34.3	+12
PMRV	Marv??o	157.45	18	*e*PKPab	PKPab	17 28 57.9	+0.2
PMTG	Montargil	157.53	20	*e*PKPab	PKPab	17 28 57.6	-0.4
PESTR	Estremoz	157.91	19	*e*PKPab	PKPab	17 28 59.8	+0.1
PESTR	Estremoz	157.91	19	PKPab	PKPab	17 28 60.0	+0.3
ESDC	Sonseca Array	158.03	11	PKP	PKPdf	17 28 23.9	+0.6
	comp=Z,1.4nm,0.8s,baz=344,slow=3.0,SNR=11						
ESDC				PKPab	PKPab	17 29 00.2	0.0
	comp=Z,12nm,0.9s,baz=336,slow=3.8,SNR=23						
ESDC				SKP		17 31 10.8	
	comp=Z,1.9nm,0.9s,baz=342,slow=3.4,SNR=4.5						
ESDC				PP	PP	17 32 39.0	-2.3
	comp=Z,1.5nm,1.0s,baz=0.0,slow=4.9,SNR=3.8						
ESDC	Sonseca Array	158.03	11	PKPab	PKPab	17 29 00.2	0.0
EVO	Evora	158.08	20	*e*PKPab	PKPab	17 29 00.7	+0.3
PNCL	Nicolau / Gran	158.29	21	*e*PKPab	PKPab	17 29 01.7	+0.4
PBEJ	Beja	158.59	20	*e*PKPdf	PKPdf	17 28 26.0	+2.0
PBEJ	Beja	158.59	20	*e*PKPab	PKPab	17 29 03.9	+1.2
MESJ	Messejana	158.64	21	*e*PKPab	PKPab	17 29 01.3	-1.6
PTEO	Sao Teotonio	158.72	23	*e*PKPab	PKPab	17 29 03.6	+0.4
PCVE	Castro Verde	158.89	21	*e*PKPab	PKPab	17 29 04.5	+0.5
PVAQ	Vaqueiros	159.21	21	*e*PKPab	PKPab	17 29 05.9	+0.6
KEST	Kesra	161.07	340	PKPab	PKPab	17 29 13.7	0.0
	comp=Z,6.8nm,0.6s,baz=3.7,slow=1.6,SNR=9.0						
MDT	Midelt	164.42	19	PKP	PKPdf	17 28 30.6	+0.4
	comp=Z,4.3nm,0.9s,baz=337,slow=10.0,SNR=13						
MDT				PKPab	PKPab	17 29 29.5	+1.0
	comp=Z,27nm,0.9s,baz=16,slow=2.6,SNR=43						
MDT				pPKPab	pPKPab	17 31 27.8	-1.1
	comp=Z,6.7nm,1.1s,baz=50,slow=1.7,SNR=4.4						
LIC	Lamto	166.65	151	*e*PKIKP	PKPdf	17 28 31.9	-0.5
	comp=Z,98nm,1.7s						
LIC	Lamto	166.65	151	*e*P	PKPab	17 29 39.5	+0.9
	comp=Z,33nm,1.1s						
KIC	Kosan Boka	166.89	152	*e*PKIKP	PKPdf	17 28 32.2	-0.4
	comp=Z,20nm,0.9s						
KIC	Kosan Boka	166.89	152	*e*P	PKPab	17 29 41.1	+1.4
	comp=Z,22nm,0.8s						
TIC	Toumodi	167.02	151	*e*PKIKP	PKPdf	17 28 32.2	-0.5
TIC	Toumodi	167.02	151	*e*P	PKPab	17 29 41.6	+1.3
DBIC	Dimbokro	167.12	151	PKP	PKPdf	17 28 31.9	-0.9
	comp=Z,6.7nm,0.7s,baz=188,slow=4.9,SNR=9.3						
DBIC				PKPab	PKPab	17 29 42.4	+1.7
	comp=Z,2.9nm,0.8s,baz=171,slow=4.5,SNR=5.3						
DBIC	Dimbokro	167.12	151	PKIKP	PKPdf	17 28 31.9	-0.9
DBIC						17 29 42.4	
KOWA	Kowa	173.72	124	PKP	PKPdf	17 28 35.6	-0.6
	comp=Z,7.0nm,0.8s,baz=135,slow=2.9,SNR=18						
KOWA				PP	PP	17 34 12.8	+10
	comp=Z,3.6nm,0.9s,baz=244,slow=3.6,SNR=3.6						
TORD	Torodi Ar. Bea	175.05	184	PKP	PKPdf	17 28 36.0	-0.7
	comp=Z,6.2nm,0.9s,baz=118,slow=0.4,SNR=24						
TORD				PKPab	PKPab	17 30 15.8	+0.1
	comp=Z,8.5nm,0.6s,baz=179,slow=3.8,SNR=24						
TORD				pPKPab	pPKPab	17 32 15.6	-0.6
	comp=Z,4.2nm,0.9s,baz=187,slow=2.1,SNR=8.9						
TORD				PP	PP	17 34 06.5	-0.6
	comp=Z,5.6nm,1.0s,baz=166,slow=4.0,SNR=10						

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*TUL **06** 17:11:28.6±1.2, 36°.50N±0°.01×96°.94W±0°.02, h4^{km}±7^{km}, ML2.6, mb_Lg2.5/6(NEIC) Error ellipse: s-maj=3.1km s-min=1.6km az=62.0*

NEIC 06 17:11:28.7±0.6, **36°.49N**±0°.02×**96°.97W**±0°.03, **h17**^{km}±4^{km}, **Error ellipse: s-maj=4.1km s-min=1.2km az=47.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLOK	Blackwell	0.33	324	Pg	Pg	17 11 35.7	0.0
BLOK				Sg	Sg	17 11 39.8	-0.6
OK033	Mehan	0.45	176	Pg	Pg	17 11 37.8	0.0
OK033				Sg	Sg	17 11 43.9	0.0
OK034	N. Norfolk Rd.	0.53	156		Pg	17 11 39.2	-0.1
OK034				Sg	Sg	17 11 44.7	-1.6
OK031	S. Brethren Rd	0.55	169	Pg	Pg	17 11 39.6	0.0
T35A	Sooner Cattle	0.56	41	Pg	Pg	17 11 39.4	-0.5
OK030	Cody Creek RV	0.58	165		Pg	17 11 40.2	-0.2
KAN13	South Haven SW	0.66	322	Pg	Pg	17 11 41.7	0.0
GC02	Grant County #	0.80	297	Pg	Pg	17 11 44.3	+0.1
OK029	Liberty Lake	0.80	209	Pg	Pb	17 11 44.1	0.0
CROK	Carrier	0.81	271		Pg	17 11 44.8	+0.2
KAN09	Caldwell North	0.82	321	Pg	Pg	17 11 44.8	0.0
KAN17	Caldwell West	0.84	311	Pg	Pb	17 11 44.9	-0.1
KAN01	Argonia South	0.91	317	Pg	Pb	17 11 46.0	-0.2
OK025	Westminster Rd	0.96	198		Pb	17 11 46.7	-0.2
BCOK	Bluff Creek, N	0.98	212	Pg	Pb	17 11 46.4	-1.0
OK032	Salt Plains WL	1.04	288		Pn	17 11 48.7	+0.1
TUL1	Leonard	1.12	121		Pb	17 11 49.5	-0.1
OKCFA	Oklahoma City	1.14	200	Pg	Pb	17 11 50.4	+0.3
OKCSW	OKLAHOMA CITY	1.15	199		Pb	17 11 50.5	+0.3
FNO	Franklin	1.28	196		Pb	17 11 52.4	0.0
R32A	Long Quarter,	2.37	325	IAmb_Lg		17 12 44.8	
	comp=Z,15nm,1.0s						
U40A	Yellville	3.33	91	Pn	Pn	17 12 22.1	+2.0
AMTX	Amarillo	4.15	249	IAmb_Lg		17 13 44.1	
	comp=Z,7.0nm,0.8s						
R40A	Maddies Statio	4.16	63	IAmb_Lg		17 13 39.6	
	comp=Z,10.0nm,1.1s						
L34A	Svendsen Farm,	5.49	5	IAmb_Lg		17 14 30.2	
	comp=Z,12nm,0.8s						

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*IDC **06** 17:38:49.4±1.2, 42°.55N×15°.20E, h0^{km}, mb3.8/7, mb1 3.8/15, mb1mx3.5/56, mbtmp3.6/15, ML3.2/7, MS3.3/4, Ms1 3.3/4, ms1mx2.8/53, Error ellipse: s-maj=18.2km s-min=12.2km az=56.0*

*ROM **06** 17:38:49.9±0.1, 42°.375N±0°.007×15°.217E±0°.010, h11^{km}, ML3.5/87, Error ellipse: s-maj=1.0km s-min=0.6km az=226.0*

*PDG **06** 17:38:50.0±0.5, 42°.40N×15°.20E, h12^{km}, ML3.7/12, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

*PRU **06** 17:38:51.3±0.0, 42°.46N×15°.15E, h0^{km}*

*LDG **06** 17:38:51.2±0.1, 42°.35N×15°.17E, h20^{km}, Ml4.0/24, Error ellipse: s-maj=3.7km s-min=2.8km az=38.0*

ISC 06 17:38:49.2±1.1, **42°.44N**±0°.02×**15°.09E**±0°.02, **h6**^{km}±8^{km}, **n281**, σ**2^{s}02**/330, **mb3.9**/6, **6C-7D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TREM	Isole Tremiti	0.44	135	P	Pg	17 38 56.7	-1.0
TREM				S	Sg	17 39 02.9	-0.6
FRES	Fresagrandinar	0.56	214	P	Pg	17 39 00.1	+0.1
FRES				AML	AML		
	comp=N,1345µm,0.6s						
FRES				AML	AML		
	comp=N,1430µm,1.1s						
FRES				AML	AML		
	comp=E,2410µm,1.5s						
CAFR	Castel Frentan	0.59	249	P	Pb	17 39 02.3	+0.3
CAFR				S	Sb	17 39 10.3	-0.3
CAFR				AML	AML		
	comp=E,4420µm,1.3s						
CAFR				AML	AML		
	comp=E,4590µm,0.7s						
CAFR				AML	AML		
	comp=N,5615µm,0.4s						
CAFR				AML	AML		
	comp=E,4925µm,1.1s						
LPEL	Lama dei Pelig	0.78	240	P	Pb	17 39 04.9	-0.3
LPEL				AML	AML		
	comp=E,5500µm,0.4s						
LPEL				AML	AML		
	comp=N,4450µm,0.5s						
LPEL				AML	AML		
	comp=E,5495µm,0.4s						
TRIV	Trivento	0.78	211	P	Pb	17 39 04.9	-0.4
TRIV				AML	AML		
	comp=E,3535µm,0.9s						
TRIV				AML	AML		
	comp=N,2850µm,0.8s						
TRIV				AML	AML		
	comp=N,2845µm,0.8s						
TRIV				AML	AML		
	comp=E,3510µm,0.9s						
TRIV				AML	AML		
	comp=N,2835µm,0.9s						
TRIV				AML	AML		
	comp=E,3540µm,0.9s						
CIGN	Sant'Elia a Pi	0.80	190	P	Pg	17 39 04.8	+0.3
CIGN				AML	AML		
	comp=E,1800µm,0.6s						
CIGN				AML	AML		
	comp=N,2535µm,0.8s						
SGRT	San Giovanni R	0.84	144	P	Pg	17 39 03.9	-1.4
SGRT				AML	AML		
	comp=N,6625µm,1.5s						
SGRT				AML	AML		
	comp=E,6715µm,1.3s						
VCEL	Villa Celiera	0.93	268	P	Pb	17 39 08.2	+0.4
VCEL				AML	AML		
	comp=E,5795µm,0.9s						
VCEL				AML	AML		
	comp=N,5165µm,0.7s						
VCEL				AML	AML		
	comp=N,5160µm,0.7s						
GATE	Gambatesa	0.94	188	P	Pb	17 39 08.0	+0.1
GATE				AML	AML		
	comp=E,2315µm,0.6s						
GATE				AML	AML		
	comp=N,2695µm,0.4s						
GATE				AML	AML		
	comp=E,2315µm,0.6s						
GATE				AML	AML		

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      comp=N,2700µm,0.4s
GATE                              AML   AML
      comp=E,2320µm,0.6s
GATE                              AML   AML
      comp=E,1820µm,0.5s
GATE                              AML   AML
      comp=N,2700µm,0.4s
TRTR  Tortoreto Alta    0.94 293  P     Pn    17 39 11.1 +2.1
TRTR                              AML   AML
      comp=E,21100µm,1.4s
TRTR                              AML   AML
      comp=N,14150µm,1.2s
MSAG  Monte S. Angel    0.95 140  P     Pg    17 39 05.9 -1.4
MSAG                              AML   AML
      comp=E,13150µm,1.0s
MSAG                              AML   AML
      comp=E,13800µm,1.0s
MSAG                              AML   AML
      comp=N,15300µm,0.9s
MSAG                              AML   AML
      comp=N,14750µm,0.9s
BSSO  Busso             0.97 203  P     Pg    17 39 08.0 +0.2
BSSO                              AML   AML
      comp=E,926µm,1.4s
BSSO                              AML   AML
      comp=E,2375µm,0.4s
BSSO                              AML   AML
      comp=N,2545µm,0.9s
BSSO                              AML   AML
      comp=N,994µm,0.4s
T0110 Collepietro       1.00 258  P     Pn    17 39 10.4 +0.6
T0110                             AML   AML
      comp=E,5235µm,0.4s
T0110                             AML   AML
      comp=N,4455µm,0.7s
MIDA  Miranda           1.01 218  P     Pg    17 39 07.9 -0.7
MIDA                              S     Sn    17 39 23.5 -1.1
MIDA                              AML   AML
      comp=E,2430µm,1.6s
MIDA                              AML   AML
      comp=E,2435µm,1.6s
MIDA                              AML   AML
      comp=E,2490µm,1.6s
MIDA                              AML   AML
      comp=N,2345µm,0.5s
MIDA                              AML   AML
      comp=N,2335µm,0.5s
RNI2  Rionero Sannit    1.02 224  P     Pg    17 39 08.9 +0.3
RNI2                              AML   AML
      comp=E,2685µm,1.3s
RNI2                              AML   AML
      comp=E,2750µm,1.3s
RNI2                              AML   AML
      comp=N,1815µm,1.3s
RNI2                              AML   AML
      comp=E,2690µm,1.3s
RNI2                              AML   AML
      comp=N,1810µm,1.3s
MOCO  Biccari - m.te    1.07 177  P     Pg    17 39 09.1 -0.6
MOCO                              AML   AML
      comp=E,1505µm,0.8s
MOCO                              AML   AML
      comp=N,810µm,1.0s
MOCO                              AML   AML
      comp=E,1520µm,0.8s
MOCO                              AML   AML
      comp=N,834µm,1.0s
MOCO                              AML   AML
      comp=N,811µm,1.0s
MOCO                              AML   AML
      comp=E,1510µm,0.8s
SACR  S. Croce Del S    1.08 196  P     Pg    17 39 09.3 -0.6
SACR                              AML   AML
      comp=E,1350µm,0.7s
SACR                              AML   AML
      comp=N,1625µm,1.4s
TERO  Teramo            1.12 280  P     Pn    17 39 11.7 +0.3
TERO                              AML   AML
      comp=N,1200µm,0.5s
TERO                              AML   AML
      comp=E,3490µm,0.6s
TERO                              AML   AML
      comp=N,2940µm,0.5s
TERO                              AML   AML
      comp=E,1440µm,0.6s
GIGS  Gran Sasso        1.13 271  P     Pn    17 39 12.7 +1.1
GIGS                              AML   AML
      comp=E,1068µm,0.9s
GIGS                              AML   AML
      comp=N,810µm,0.7s
FAGN  Fagnano           1.13 262  P     Pn    17 39 12.2 +0.6
FAGN                              AML   AML
      comp=E,6460µm,0.5s
FAGN                              AML   AML
      comp=N,5350µm,0.5s
OFFI  Offida            1.15 296  AML   AML
      comp=N,14150µm,0.7s
OFFI                              AML   AML
      comp=E,11455µm,0.9s
CERA  Filignano         1.16 224  P     Pn    17 39 11.8 -0.3
CERA                              AML   AML
      comp=N,1565µm,0.7s
CERA                              AML   AML
      comp=E,1725µm,1.6s
CERA                              AML   AML
      comp=N,1620µm,0.7s
CERA                              AML   AML
      comp=E,1750µm,1.6s
CERA                              AML   AML
      comp=N,1560µm,0.7s
SGG   Gregorio Mates    1.18 207  P     Pb    17 39 11.8 -0.2
SGG                               AML   AML
      comp=N,4.5nm,1.0s
SGG                               AML   AML
      comp=E,1990µm,0.7s
SGG                               AML   AML
      comp=E,6.0nm,0.7s
SGG                               AML   AML
      comp=N,1455µm,1.4s
VAGA  Valle Agricola    1.21 212  P     Pb    17 39 11.9 -0.6
VAGA                              AML   AML
      comp=E,2015µm,1.2s
VAGA                              AML   AML
      comp=N,2410µm,1.2s
VAGA                              AML   AML
      comp=N,2460µm,1.2s
VAGA                              AML   AML
      comp=E,2075µm,1.2s
VAGA                              AML   AML
      comp=N,2415µm,1.2s
VAGA                              AML   AML
      comp=E,2010µm,1.2s
VVLD  Villa Vallelon    1.23 243  P     Pn    17 39 12.4 -0.7
VVLD                              AML   AML
      comp=E,921µm,1.3s
VVLD                              AML   AML
      comp=N,868µm,1.3s
CADA  Capodarco di F    1.24 308  P     Pn    17 39 12.7 -0.3
CAMP  Campotosto        1.25 275  P     Pg    17 39 14.0 +0.9
CAMP                              AML   AML
      comp=N,1960µm,1.0s
CAMP                              AML   AML
      comp=E,2270µm,1.0s
AQU   L'Aquila          1.25 267  ePn   Pg    17 39 14.0 +0.8
ZIRJ  Zirje             1.28  18  i Pn  Pb    17 39 13.7 +0.1
ZIRJ                              Sn    Sn    17 39 32.8 +1.7
VITU  Vitulano (BN)     1.30 196  P     Pn    17 39 13.3 -0.7
VITU                              AML   AML
      comp=N,1960µm,0.5s
VITU                              AML   AML
      comp=E,2020µm,0.3s
SMA1  SAN MARTINO       1.31 279  P     Pg    17 39 15.2 +0.8
SMA1                              AML   AML
      comp=N,3040µm,0.6s
SMA1                              AML   AML
      comp=E,2685µm,0.9s
MRB1  Monte Rocchett    1.31 184  P     Pn    17 39 13.9 -0.3
MRB1                              AML   AML
      comp=E,2200µm,0.7s
MRB1                              AML   AML
      comp=N,2270µm,0.9s
MRB1                              AML   AML
      comp=E,2195µm,0.7s
MRB1                              AML   AML
      comp=N,2275µm,0.9s
MRB1                              AML   AML
      comp=E,2215µm,0.7s
MRB1                              AML   AML
      comp=N,2225µm,1.3s
PTQR  Pietraquaria      1.32 252  P     Pg    17 39 14.9 +0.3
PTQR                              AML   AML
      comp=E,728µm,1.6s
PTQR                              AML   AML
      comp=E,728µm,1.6s
PTQR                              AML   AML
      comp=N,1126µm,0.8s
LSTV  Lastovo           1.37  75  ePn   Pn    17 39 14.4 -0.4
LSTV                              Sn    Sg    17 39 34.4 +1.2
CAPA  Cerignola FG      1.39 157  P     Pn    17 39 13.7 -1.4
CAPA                              AML   AML
      comp=N,3615µm,1.4s
CAPA                              AML   AML
      comp=E,3780µm,1.1s
RM33  Pellescritta (    1.39 273  AML   AML
      comp=E,2095µm,0.8s
RM33                              AML   AML
      comp=E,2090µm,0.8s
RM33                              AML   AML
      comp=N,2770µm,1.0s
RM33                              AML   AML
      comp=N,2765µm,1.1s
RM33                              AML   AML
      comp=E,2310µm,0.8s
CAFE  Carife            1.41 176  P     Pn    17 39 14.7 -0.8
CAFE                              AML   AML
      comp=E,1210µm,1.6s
CAFE                              AML   AML
      comp=N,1180µm,0.8s
CAFE                              AML   AML
      comp=E,1165µm,0.6s
CAFE                              AML   AML
      comp=N,1180µm,0.8s
CAFE                              AML   AML
      comp=E,1208µm,1.6s
CAFE                              AML   AML
      comp=N,1140µm,1.6s
PIGN  Pignataro Magg    1.41 209  P     Pb    17 39 15.7 -0.3
PIGN                              AML   AML
      comp=E,787µm,0.5s
PIGN                              AML   AML
      comp=N,844µm,1.5s
PIGN                              AML   AML
      comp=E,852µm,1.5s
PIGN                              AML   AML
      comp=N,772µm,1.5s
PIGN                              AML   AML
      comp=E,788µm,0.5s
PIGN                              AML   AML
      comp=N,844µm,1.5s
PP3   Marolino          1.44 311  AML   AML
      comp=N,5805µm,0.9s
PP3                               AML   AML
      comp=N,5730µm,0.9s
PP3                               AML   AML
      comp=E,6085µm,0.7s
PP3                               AML   AML
      comp=E,5775µm,0.7s
PAOL  Paolisi           1.46 196  P     Pn    17 39 16.3 +0.2
PAOL                              AML   AML
      comp=E,894µm,0.5s
PAOL                              AML   AML
      comp=N,858µm,0.6s
PAOL                              AML   AML
      comp=E,894µm,0.5s
PAOL                              AML   AML
      comp=N,859µm,0.6s
PAOL                              AML   AML
      comp=E,850µm,0.5s
PAOL                              AML   AML
      comp=N,930µm,0.6s
FIAM  Fiamignano        1.47 264  AML   AML
      comp=E,1705µm,1.0s
FIAM                              AML   AML
      comp=N,1305µm,0.8s
MORI  Morici            1.50  17  ePn   Pb    17 39 17.5 +0.1
MORI                              Sn    Sg    17 39 38.4 +1.1
NRCA  Norcia            1.51 286  P     Pg    17 39 18.9 +0.8
NRCA                              AML   AML
      comp=E,1740µm,1.1s
NRCA                              AML   AML
      comp=N,2365µm,0.7s
SNAL  S. Angelo Dei     1.52 177  P     Pn    17 39 16.0 -1.0
SNAL                              AML   AML
      comp=E,1420µm,0.7s
SNAL                              AML   AML
      comp=N,1750µm,0.8s
SNAL                              AML   AML
      comp=N,1760µm,0.8s
SNAL                              AML   AML
      comp=E,1275µm,0.7s
LNSS  Leonessa          1.53 277  P     Pg    17 39 19.0 +0.5
LNSS                              AML   AML
      comp=E,2330µm,0.7s
LNSS                              AML   AML
      comp=N,2020µm,0.9s
VULT  Monte Vulture     1.53 165  P     Pn    17 39 16.1 -1.1
VULT                              AML   AML
      comp=E,1985µm,0.4s
VULT                              AML   AML
      comp=N,2570µm,0.4s
VULT                              AML   AML
      comp=N,2565µm,0.4s
VULT                              AML   AML
      comp=E,1980µm,0.4s
VULT                              AML   AML
      comp=E,2060µm,0.4s
VULT                              AML   AML
      comp=N,2600µm,0.4s
DUGI  Dugi Otok         1.55 359  ePn   Pb    17 39 18.5 +0.2
DUGI                              Sn    Sg    17 39 39.5 +0.4
AOI   Ancona            1.56 316  P     Pg    17 39 19.0 -0.1
MODR  Mondragone        1.58 216  P     Pn    17 39 18.1 +0.4
MODR                              AML   AML
      comp=N,1075µm,1.3s
MODR                              AML   AML
      comp=E,758µm,0.9s
MRVN  Minervino Murg    1.61 149  P     Pn    17 39 16.6 -1.6
MRVN                              AML   AML
      comp=N,1018µm,0.8s
MRVN                              AML   AML
      comp=E,1515µm,0.9s
GIUL  Giuliano Di Ro    1.63 238  P     Pb    17 39 19.0 -0.7
GIUL                              AML   AML
      comp=E,524µm,1.4s
GIUL                              AML   AML
      comp=N,863µm,1.2s
PALZ  Palazzo San Ge    1.63 156  P     Pn    17 39 17.0 -1.4
PALZ                              AML   AML
      comp=N,2960µm,1.6s
PALZ                              AML   AML
      comp=E,2535µm,1.2s
CERT  Cerreto           1.64 253  P     Pg    17 39 20.6 -0.1
CERT                              AML   AML
      comp=E,914µm,1.4s
CERT                              AML   AML
      comp=N,774µm,0.8s
MAKA  Makarska          1.65  58  ePn   Pn    17 39 18.6 -0.1
MAKA                              Sn    Sg    17 39 42.7 +0.5
MCRV  Calabrutti - M    1.66 178  P     Pn    17 39 18.3 -0.6
MCRV                              AML   AML
      comp=N,881µm,0.4s
MCRV                              AML   AML
      comp=E,772µm,0.4s
CING  Cingoli           1.68 305  P     Pb    17 39 21.0 +0.5
CING                              AML   AML
      comp=N,1785µm,0.7s
CING                              AML   AML
      comp=E,2710µm,0.6s
MRLC  Muro Lucano       1.71 170  P     Pn    17 39 18.5 -1.0
MRLC                              AML   AML
      comp=E,920µm,0.6s
MRLC                              AML   AML
      comp=N,759µm,0.7s
MRLC                              AML   AML
      comp=E,959µm,0.6s
MRLC                              AML   AML
      comp=N,806µm,0.6s
CESI  CESI - Serrava    1.71 290  P     Pg    17 39 22.2 +0.2
CESI                              AML   AML
      comp=E,984µm,1.0s
CESI                              AML   AML
      comp=N,911µm,0.6s
ARRO  Arrone            1.73 275  P     Pg    17 39 22.5 +0.2
ARRO                              AML   AML
      comp=E,678µm,0.7s
ARRO                              AML   AML
      comp=N,956µm,0.8s
ACER  Acerenza          1.77 159  P     Pn    17 39 19.2 -1.2
ACER                              AML   AML
      comp=E,1860µm,0.8s
ACER                              AML   AML
      comp=N,2125µm,0.7s
ACER                              AML   AML
      comp=E,1790µm,0.8s
ACER                              AML   AML
      comp=N,2220µm,0.6s
SNTG  Esanatoglia       1.78 298  P     Pb    17 39 22.5 +0.3
SNTG                              AML   AML
      comp=E,1095µm,1.0s
SNTG                              AML   AML
      comp=N,1590µm,1.0s
RICI  Ricice            1.83  54  ePn   Pn    17 39 21.6 +0.4
RICI                              Sn    Sn    17 39 45.0 +0.3
LATB  Latina            1.85 240  P     Pn    17 39 21.5 +0.1
LATB                              AML   AML
      comp=E,184µm,1.1s
LATB                              AML   AML
      comp=N,132µm,1.4s
ASSB  Assisi San Ben    1.89 289  P     Pg    17 39 25.3 -0.1
ASSB                              AML   AML
      comp=N,1250µm,0.9s
ASSB                              AML   AML
      comp=E,886µm,1.3s
AMUR  Altamura          1.90 143  P     Pn    17 39 20.9 -1.3
AMUR                              AML   AML
      comp=E,1440µm,1.2s
AMUR                              AML   AML
      comp=N,846µm,1.1s
FOSV  Fossato di Vic    1.92 297  P     Pb    17 39 24.7 +0.1
FOSV                              AML   AML
      comp=E,1297µm,0.7s
FOSV                              AML   AML
      comp=N,1555µm,1.0s
COR1  Corinaldo         1.94 309  P     Pb    17 39 25.0  0.0
ATCC  AVT- Casa Cast    1.95 293  P     Pb    17 39 25.7 +0.5
ATCC                              AML   AML
      comp=E,3520µm,1.0s
ATCC                              AML   AML
      comp=N,2250µm,1.1s
CDRU  Civita di Ruta    1.96 175  P     Pn    17 39 22.2 -0.8
CDRU                              AML   AML
      comp=N,284µm,0.7s
CDRU                              AML   AML
      comp=E,450µm,0.9s
SSFR  Montelago di S    1.97 301  P     Pb    17 39 25.1 -0.3
SSFR                              AML   AML
      comp=E,908µm,0.3s
SSFR                              AML   AML
      comp=N,1050µm,1.1s
SSFR                              AML   AML
      comp=N,1096µm,0.9s
SSFR                              AML   AML
      comp=E,1004µm,0.8s
STON  Ston              1.97  76  ePn   Pn    17 39 22.8 -0.3
STON  Ston              1.97  76  ePn   Pn    17 39 23.4 +0.3
STON  Ston              1.97  76  P     Pn    17 39 23.0 -0.1
STON                              AML   AML
      comp=E,642µm,0.5s
STON                              AML   AML
      comp=N,892µm,1.0s
ATFO  Monte Foce - G    2.07 297  P     Pb    17 39 27.0 -0.3
ATFO                              AML   AML
      comp=N,1335µm,1.0s
ATFO                              AML   AML
      comp=E,1280µm,0.7s
MPAG  Monte Paganucc    2.08 306  P     Pb    17 39 26.5 -1.0
MPAG                              AML   AML
      comp=E,858µm,0.6s
MPAG                              AML   AML
      comp=N,1226µm,0.9s
MPAG                              AML   AML
      comp=E,956µm,0.7s
MPAG                              AML   AML
      comp=N,1215µm,0.9s
MIGL  Miglionico        2.09 151  P     Pn    17 39 23.8 -1.1
MIGL                              AML   AML
      comp=E,3295µm,1.5s
MIGL                              AML   AML
      comp=N,3910µm,1.1s
FSSB  Fossombrone       2.11 307  P     Pb    17 39 26.8 -1.0
FSSB                              AML   AML
      comp=E,1080µm,1.3s
FSSB                              AML   AML
      comp=N,1415µm,0.5s
NVLJ  Novalja           2.13 356  ePn   Pb    17 39 27.5 -0.7
NVLJ                              Sn    Sb    17 39 54.7 -0.1
UDBI  Udbina            2.14  13  ePn   Pb    17 39 27.6 -0.8
UDBI                              Sn    Sb    17 39 55.2 -0.2
ATTE  AVT- Monte Tez    2.15 292  P     Pb    17 39 28.7 +0.1
ATTE                              AML   AML
      comp=E,720µm,1.0s
ATTE                              AML   AML
      comp=N,906µm,1.4s
PIEI  Pieia             2.17 301  P     Pb    17 39 28.0 -1.0
PIEI                              AML   AML
      comp=N,794µm,1.5s
PIEI                              AML   AML
      comp=E,538µm,0.5s
MCEL  Monticello        2.18 166  P     Pn    17 39 25.4 -0.7
MCEL                              AML   AML
      comp=N,454µm,0.7s
MCEL                              AML   AML
      comp=N,462µm,0.7s
MCEL                              AML   AML
      comp=E,401µm,1.1s
MCEL                              AML   AML
      comp=E,396µm,1.1s
NARO  Abbazia di Nar    2.18 303  P     Pb    17 39 28.0 -1.1
NARO                              AML   AML
      comp=N,606µm,0.9s
NARO                              AML   AML
      comp=E,762µm,1.6s
NOCI  Noci              2.21 137  P     Pn    17 39 25.2 -1.3
NOCI                              AML   AML
      comp=N,1007µm,1.2s
NOCI                              AML   AML
      comp=E,894µm,0.4s
ATPI  Pietralunga -     2.22 298  P     Pb    17 39 29.2 -0.5
ATPI                              AML   AML
      comp=E,1083µm,0.9s
ATPI                              AML   AML
      comp=N,1000µm,0.8s
MTSN  Montesano sull    2.23 167  P     Pn    17 39 25.8 -0.9
MTSN                              AML   AML
      comp=N,482µm,1.1s
MTSN                              AML   AML
      comp=E,360µm,1.2s
LTRZ  Laterza           2.25 144  P     Pn    17 39 25.5 -1.4
LTRZ                              AML   AML
      comp=N,1030µm,0.7s
LTRZ                              AML   AML
      comp=E,763µm,0.6s
MGAB  Montegabbione     2.25 283  P     Pb    17 39 29.9 -0.3
MGAB                              AML   AML
      comp=N,754µm,1.3s
MGAB                              AML   AML
      comp=E,998µm,0.9s
MGAB                              AML   AML
      comp=E,878µm,0.9s
MGAB                              AML   AML
      comp=N,734µm,1.0s
DBRK  Dubrovnik         2.27  83  i Pn  Pn    17 39 27.0 -0.2
MGR   Morigerati        2.33 171  P     Pn    17 39 27.9 -0.1
MGR                               AML   AML
      comp=N,232µm,0.6s
MGR                               AML   AML
      comp=E,257µm,0.9s
BADI  Badiali           2.35 298  P     Pb    17 39 31.7 -0.2
BADI                              AML   AML
      comp=E,632µm,1.0s
BADI                              AML   AML
      comp=N,940µm,0.8s
BULG  Bulgheria - Ca    2.37 175  P     Pn    17 39 28.3 -0.4
BULG                              AML   AML
      comp=N,521µm,1.2s
BULG                              AML   AML
      comp=E,421µm,0.8s
PARC  Parchiule         2.42 301  P     Pb    17 39 31.9 -1.2
PARC                              AML   AML
      comp=E,788µm,0.8s
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PARC				AML	AML		
	comp=N,944µm,0.8s						
TREB	Trebinje	2.42	82	*e*Pn	Pn	17 39 28.1	-1.2
MGRS	Mrkonjic Grad	2.45	36	*e*Pn	Pb	17 39 32.7	-1.0
CAFI	Castiglion Fio	2.46	292	P	Pb	17 39 32.8	-1.1
CAFI				AML	AML		
	comp=E,482µm,0.9s						
CAFI				AML	AML		
	comp=N,508µm,1.3s						
CUC	Castrocucco	2.50	167	P	Pn	17 39 30.4	0.0
CUC				AML	AML		
	comp=N,234µm,0.8s						
CUC				AML	AML		
	comp=E,268µm,0.8s						
HCY	Herceg Novi	2.52	89	*e*Pn	Pn	17 39 30.2	-0.4
HCY	Herceg Novi	2.52	89	⇑*i*Pn	Pn	17 39 30.5	-0.1
HCY				*i* Sn	Sn	17 40 02.6	+1.0
BRY	Bratogost	2.58	79	*e*Pn	Pb	17 39 34.0	-2.0
CRE	Caprese Michel	2.59	298	P	Pb	17 39 34.2	-1.9
CRE				AML	AML		
	comp=N,452µm,1.6s						
CRE				AML	AML		
	comp=E,375µm,0.9s						
SMRN	Sveta Marina	2.68	346	*e*Pn	Pn	17 39 34.1	+1.2
SALB	San Lorenzo Be	2.73	159	P	Pn	17 39 32.8	-0.9
SALB				AML	AML		
	comp=E,214µm,1.4s						
SALB				AML	AML		
	comp=N,286µm,0.5s						
BLY	Banja Luka	2.76	33	*e*Pn	Pn	17 39 36.0	+2.0
BLY	Banja Luka	2.76	33	P	Pn	17 39 35.9	+1.9
PRIJ	Prijedor	2.80	24	*e*Pn	Pn	17 39 31.1	-3.3
BUM	Brajici-Budva	2.82	92	⇑*i*Pn	Pn	17 39 35.2	+0.3
BUM				*i* Sn	Sn	17 40 09.7	+0.5
CEME	Cevo	2.83	87	⇓*i*Pn	Pn	17 39 35.3	+0.3
CEME				*i* Sn	Sn	17 40 10.1	+0.6
NKME	Niksic	2.87	82	⇑*i*Pn	Pn	17 39 36.1	+0.6
NKME				*i* Sn	Sn	17 40 11.4	+1.0
NKY	Niksic	2.90	81	⇓*i*Pn	Pn	17 39 36.8	+0.8
NKY				*i* Sn	Sn	17 40 11.9	+0.6
UPM	Unac-Piva	2.91	73	*e*Pn	Pn	17 39 37.3	+1.1
UPM	Unac-Piva	2.91	73	⇓*i*Pn	Pn	17 39 36.6	+0.4
UPM				*i* Sn	Sn	17 40 12.8	+1.3
RIY	Rijeka	2.92	352	*e*Pn	Pn	17 39 36.9	+0.8
RIY	Rijeka	2.92	352	*e*Pn	Pn	17 39 38.5	+2.4
RUFI	Rufina	2.97	299	P	Pb	17 39 39.7	-2.9
CET2	Cetraro	2.98	167	P	Pn	17 39 37.0	-0.1
DRME	Dracevica, Mon	3.04	93	*e*Pn	Pn	17 39 37.8	-0.1
DRME	Dracevica, Mon	3.04	93	⇓*i*Pn	Pn	17 39 38.3	+0.4
DRME				*i* Sn	Sn	17 40 15.0	+0.3
PDG	Podgorica	3.08	89	*e*Pn	Pn	17 39 38.2	-0.2
PDG	Podgorica	3.08	89	P	Pn	17 39 38.7	+0.3
TTG	Podgorica	3.08	89	⇑*i*Pn	Pn	17 39 38.8	+0.4
TTG				*i* Sn	Sn	17 40 16.3	+0.8
ULC	Ulcinj	3.12	97	⇓*i*Pn	Pn	17 39 38.7	-0.3
ULC				*i* Sn	Sn	17 40 17.1	+0.5
SEI	Scarperia	3.17	302	P	Pb	17 39 43.2	-2.8
SEI				AML	AML		
	comp=N,620µm,0.8s						
SEI				AML	AML		
	comp=E,322µm,0.7s						
OZLJ	Ozalj	3.19	5	*e*Pn	Pn	17 39 41.0	+1.2
PLE	Pljevlja	3.28	73	⇓*i*Pn	Pn	17 39 41.8	+0.6
PLE				*i* Sn	Sn	17 40 21.6	+1.0
KOME	Kolasin	3.29	81	⇑*i*Pn	Pn	17 39 42.0	+0.7
KOME				*i* Sn	Sn	17 40 21.1	+0.3
CEY	Cerknica	3.33	352	*e*Pn	Pn	17 39 42.7	+0.8
RUDO	Rudo	3.35	68	*e*Pn	Pn	17 39 43.1	+1.0
MOSL	Moslavina	3.39	20	*e*Pn	Pn	17 39 43.4	+0.7
CRES	Cresnjev	3.40	4	*e*Pn	Pn	17 39 44.1	+1.4
ZAG	Zagreb	3.45	10	*e*Pn	Pn	17 39 44.7	+1.3
BBLS	Lazići	3.46	64	*e*Pn	Pb	17 39 53.2	+2.3
BBLS	Lazići	3.46	64	*e*Pn	Pg	17 39 53.4	-2.1
PTJ	Puntijarka	3.52	10	*e*Pn	Pn	17 39 46.1	+1.6
IVA	Berane	3.57	81	⇓*i*Pn	Pn	17 39 45.7	+0.6
IVA				*i* Sn	Sn	17 40 28.4	+0.7
PVY	Plav	3.60	86	⇑*i*Pn	Pn	17 39 45.8	+0.2
PVY				*i* Sn	Sn	17 40 28.3	-0.2
LJU	Ljubljana	3.63	354	*e*Pn	Pn	17 39 47.6	+1.8
LJU	Ljubljana	3.63	354	P	Pn	17 39 47.7	+1.8
LJU				AML	AML		
	comp=E,2865µm,1.1s						
LJU				AML	AML		
	comp=N,3040µm,0.6s						
SJES	Sjenica	3.68	75	*e*Pn	Pb	17 39 57.1	+2.4
SABO	M.te Sabotino	3.70	344	P	Pn	17 39 48.2	+1.3
SABO				AML	AML		
	comp=E,502µm,0.7s						
SABO				AML	AML		
	comp=N,888µm,0.8s						
TIR	Tirane	3.73	105	P	Pn	17 39 46.8	-0.5
KALN	Kalnik	3.82	14	*e*Pn	Pn	17 39 49.4	+0.8
BLJ	Bijeljina	3.83	51	*e*Pn	Pn	17 39 52.2	+3.5
TEKS	Tekeris	3.85	55	*e*Pn	Pb	17 39 57.4	-0.2
IVAS	Ivanjica	3.88	71	*e*Pn	Pn	17 39 51.1	+1.7
DIVS	Divibare	3.94	63	*e*Pn	Pn	17 39 51.8	+1.5
DIVS	Divibare	3.94	63	*e*Pn	Pb	17 40 01.4	+2.3
PHP	Peshkopia	4.05	99	P	Pn	17 39 52.8	+1.0
OBKA	Obir	4.09	355	Pn	Pn	17 39 53.7	+1.4
	comp=N,3.4nm,0.2s,SNR=34						
OBKA				*e*Sn	Sb	17 40 46.0	-5.3
	comp=N,88nm,0.7s						
KOGS	Kog	4.09	11	AML	AML		
	comp=N,1870µm,0.9s						
KOGS				AML	AML		
	comp=E,1900µm,1.0s						
CGRP	Cima Grappa	4.18	327	P	Pn	17 39 54.1	+0.5
CGRP				AML	AML		
	comp=N,353µm,0.6s						
CGRP				AML	AML		
	comp=E,412µm,0.5s						
STAL	STALIGIAL	4.18	337	P	Pn	17 39 54.3	+0.7
STAL				AML	AML		
	comp=E,380µm,0.6s						
STAL				AML	AML		
	comp=N,263µm,1.1s						
SOKA	Soboth	4.24	359	Pn	Pn	17 39 55.8	+1.4
	comp=N,2.8nm,0.3s,SNR=13						
SOKA				*e*Sn	Sn	17 40 45.8	+1.6
	comp=N,6.3nm,0.4s						
KOVH	Kovagotottos	4.24	30	*e*PN	Pn	17 39 55.2	+1.0
KOVH	Kovagotottos	4.24	30	*e*P	Pn	17 39 56.9	+2.6
ACOM	Acomizza, Ital	4.26	345	P	Pn	17 39 57.0	+2.2
ACOM				AML	AML		
	comp=E,385µm,0.7s						
ACOM				AML	AML		
	comp=N,344µm,0.7s						
TRUS	Trudelj	4.27	63	*e*Pn	Pn	17 39 56.6	+1.9
MYKA	Terra Mystica	4.32	347	Pn	Pn	17 39 58.3	+2.9
	comp=N,2.9nm,0.4s,SNR=6.2						
MYKA				*e*Sn	Sn	17 40 50.2	+4.1
	comp=N,3.8nm,0.3s						
ROVR	Rover Verones	4.32	319	P	Pn	17 39 56.2	+0.6
ROVR				AML	AML		
	comp=E,85µm,0.3s						
ROVR				AML	AML		
	comp=N,463µm,0.5s						
ROVR				AML	AML		
	comp=N,180µm,0.5s						
ROVR				AML	AML		
	comp=E,3445µm,1.4s						
GRUS	Gruza	4.36	69	*e*Pn	Pb	17 40 04.9	-1.3
FRGS	Fruska Gora	4.36	50	*e*Pn	Pn	17 39 54.0	-2.0
FRGS	Fruska Gora	4.36	50	*e*Pn	Pb	17 40 04.4	-1.9
DOSS	Dosso del Somm	4.44	322	P	Pn	17 39 58.1	+0.9
OHR	Ohrid	4.47	105	*i* Pn	Pn	17 39 58.2	+0.7
KEK	Kerkira	4.48	126	P	Pn	17 39 57.2	-0.4
KEK	Kerkira	4.48	126	P	Pn	17 39 56.9	-0.7
KEK				AML	AML		
	comp=E,31µm,0.6s						
KEK				AML	AML		
	comp=N,26µm,0.6s						
SELS	Selova	4.50	78	*e*Pn	Pn	17 39 58.3	+0.4
PGF	Pioggiola	4.51	273	*e*P	Pn	17 40 00.4	+2.3
MORH	Mrgy, Hungar	4.55	33	*e*PN	Pn	17 40 01.8	+3.2
MORH	Mrgy, Hungar	4.55	33	*e*P	Pb	17 40 06.2	-3.3
MORH	Mrgy, Hungar	4.55	33	*e*Pn	Pn	17 39 59.0	+0.4
MAGA	Magasa	4.63	318	P	Pn	17 40 00.2	+0.4
ABTA	Abfaltersbach	4.69	338	*e*Pn	Pn	17 40 02.3	+1.8
	comp=N,4.3nm,0.5s						
ABTA				*e*Sn	Sn	17 40 56.9	+1.7
	comp=N,31nm,0.7s						
SKO	Skopje	4.74	94	*i* Pn	Pn	17 40 02.4	+1.2
KBA	Koelnbreinsper	4.80	346	*e*Pn	Pn	17 40 05.2	+3.0
	comp=N,4.1nm,0.3s						
KBA				*e*Sn	Sn	17 41 01.0	+2.8
	comp=N,16nm,0.5s						
ARSA	Arzberg	4.82	3	Pn	Pn	17 40 03.5	+1.2
	SNR=9.1						
ARSA				*e*Sn	Sn	17 40 59.2	+0.7
	comp=N,7.9nm,0.5s						
MABI	Malga Bissina	4.89	319	P	Pn	17 40 04.1	+0.7
TIH	Tihany	4.89	23	*e*PN	Pn	17 40 05.4	+2.2
TIH	Tihany	4.89	23	*e*P	Pn	17 40 09.0	+5.8
BARS	Barje	4.97	83	*e*Pn	Pn	17 40 04.9	+0.5
MPLH	Magyarpolny	5.04	19	*e*PN	Pn	17 40 06.5	+1.2
MPLH	Magyarpolny	5.04	19	*e*P	Pn	17 40 09.5	+4.2
MPLH	Magyarpolny	5.04	19	*e*SN	Sn	17 41 06.5	+2.7
PRVS	Prvonek	5.17	87	*e*Pn	Pn	17 40 08.8	+1.7
EGYH	Egyhazaskeszo	5.22	17	*e*PN	Pn	17 40 11.2	+3.4
STIP	Stip	5.33	96	*i* Pn	Pn	17 40 11.9	+2.6
KPRO	Kipourio	5.34	116	P	Pn	17 40 10.6	+1.1
SOP	Sopron	5.34	11	*e*PN	Pn	17 40 10.2	+0.8
SOP	Sopron	5.34	11	*e*P	Pn	17 40 11.9	+2.4
SOP	Sopron	5.34	11	*e*SN	Sn	17 41 09.9	-1.5
CSKK	Cskako	5.41	23	*e*PN	Pn	17 40 15.5	+5.1
CSKK				*e*SN	Sn	17 41 11.9	-1.1
WTTA	Wattenberg	5.41	334	*i* Pn	Pn	17 40 13.1	+2.5
	comp=N,1.0nm,0.2s,SNR=7.6						
WTTA				*e*Sn	Sn	17 41 17.4	+4.1
	comp=N,50nm,0.6s						
MOA	Molln	5.44	354	*i* Pn	Pn	17 40 12.9	+2.1
	comp=N,2.9nm,0.3s,SNR=15						
MOA				*e*Sn	Sn	17 41 14.9	+1.1
	comp=N,8.2nm,0.5s						
BOSS	Bosilegrad	5.46	87	*e*Pn	Pn	17 40 11.9	+0.7
WATA	Walderalm	5.50	334	*i* Pn	Pn	17 40 14.0	+2.3
	comp=N,0.2nm,0.1s,SNR=13						
WATA				*e*Sn	Sn	17 41 17.8	+2.5
	comp=N,42nm,0.6s						
CONA	Conrad Observa	5.52	5	*i* Pn	Pn	17 40 13.6	+1.7
	comp=N,1.9nm,0.3s,SNR=12						
CONA				*e*Sn	Sn	17 41 16.2	+0.6
	comp=N,11nm,0.6s						
SQTA	Sankt Quirin	5.52	331	*i* Pn	Pn	17 40 14.1	+2.1
	comp=N,4.7nm,0.4s,SNR=10						
SQTA				*e*Sn	Sn	17 41 17.7	+1.9
	comp=N,26nm,0.3s						
FETA	Feichten	5.54	327	*e*Pn	Pn	17 40 14.1	+1.8
	comp=N,0.9nm,0.3s						
FETA				*e*Sn	Sn	17 41 18.6	+2.3
	comp=N,18nm,0.5s						
TSLK	Tsoukalades, L	5.56	129	P	Pn	17 40 12.5	0.0
LKD2	Lefkada island	5.59	129	P	Pn	17 40 12.7	-0.2
ZAPS	Zavoj	5.61	79	*e*Pn	Pb	17 40 20.7	-6.7
MOTA	Moosalm	5.66	331	*e*Pn	Pn	17 40 16.2	+2.2
	comp=N,0.8nm,0.3s						
MOTA				*e*Sn	Sn	17 41 22.5	+3.1
	comp=N,16nm,0.4s						
VAY	Valandovo	5.69	99	*i* Pn	Pn	17 40 13.8	-0.5
DAVOX	Davos/Dischmat	5.72	321	Pn	Pn	17 40 17.3	+2.5
	comp=N,1.1nm,0.3s,baz=96,slow=4.7,SNR=14						
DAVOX				Sn	Sn	17 41 22.1	+1.4
	comp=N,3.1nm,0.3s,baz=150,slow=22,SNR=6.6						
DAVOX				LR	LR	17 43 04.3	
	comp=N,197nm,20.9s,baz=182,slow=45						
SBF	Sospel	5.78	287	*e*Pn	Pn	17 40 15.6	+0.1
SBF	Sospel	5.78	287	*e*P	Pn	17 40 18.9	+3.4
SBF				*e*Sn	Sn	17 41 19.3	-2.9
	comp=N,12nm,0.4s						
DMLN	Damoulianata-K	5.82	134	P	Pn	17 40 18.0	+2.0
SRO	Srobarova	5.84	22	*e*PN	Pn	17 40 19.9	+3.7
SRO				*e*SN	Sn	17 41 24.3	+0.9
ZST	Bratislava	5.93	13	*e*PN	Pn	17 40 21.0	+3.5
PSDA	Pessada-Kefalo	6.02	134	P	Pn	17 40 17.9	-0.9
DAVA	Damuels	6.10	324	*i* Pn	Pn	17 40 23.4	+3.4
	comp=N,1.1nm,0.2s,SNR=4.2						
DAVA				*e*Sn	Sn	17 41 31.1	+0.9
	comp=N,19nm,0.3s						
EVR	Evrytania	6.20	122	P	Pn	17 40 22.2	+0.9
LMR	La Mourre	6.37	281	*e*Pn	Pn	17 40 22.8	-0.7
LMR	La Mourre	6.37	281	*e*P	Pn	17 40 26.4	+2.9
LMR				*e*Sn	Sn	17 41 32.5	-4.1
	comp=N,1.6nm,0.3s						
CKRC	Cesky Krumlov	6.41	355	*e*PN	Pn	17 40 25.9	+1.8
CKRC				*e*SN	Sn	17 41 37.5	0.0
MBDF	Montbardon	6.46	294	*e*Pn	Pn	17 40 24.4	-0.6
MBDF	Montbardon	6.46	294	*e*P	Pn	17 40 28.6	+3.6
MBDF				*e*Sn	Sn	17 41 34.5	-4.6
	comp=N,28nm,0.7s						
ANX	Ano Chora	6.47	124	P	Pn	17 40 25.5	+0.5
GERES	GERESS Array B	6.48	352	Pn	Pn	17 40 26.0	+0.9
	comp=N,1.3nm,0.3s,baz=175,slow=14,SNR=41						
GERES				Sn	Sn	17 41 38.1	-1.3
	comp=N,2.4nm,0.3s,baz=161,slow=25,SNR=10						
SRS	Serrai	6.49	99	P	Pn	17 40 24.9	-0.3
EFP	Efpalio	6.56	125	P	Pn	17 40 26.7	+0.5
KOLL	Kolacno	6.56	20	*e*PN	Pn	17 40 27.7	+1.5
KOLL				*e*SN	Sn	17 41 40.6	-0.8
VYHS	Vyhne	6.60	22	*e*PN	Pn	17 40 29.6	+2.9
VYHS				*e*SN	Sn	17 41 41.2	-1.1
SERG	Sergoula	6.66	125	P	Pn	17 40 36.3	+8.7
KRUC	Moravsky	6.69	7	*e*PN	Pn	17 40 31.7	+3.8
LPG	La Plagne	6.75	300	*e*Pn	Pn	17 40 28.7	-0.3
LPG				*e*Sn	Sn	17 41 41.0	-5.4
	comp=N,42nm,0.7s						
LPL	La Plagne	6.77	300	*e*Pn	Pn	17 40 29.3	0.0
LPL	La Plagne	6.77	300	*e*P	Pn	17 40 33.8	+4.5
LPL				*e*Sn	Sn	17 41 42.7	-4.1
	comp=N,40nm,0.6s						
KHC	Kasperske Hory	6.78	352	*e*PN	Pn	17 40 29.8	+0.6
KHC				*e*x	x	17 40 38.5	
KHC				*e*SN	Sn	17 41 46.1	-0.5
KHC				*e*x	x	17 42 22.0	
VRAC	Vranov	6.95	8	Pn	Pn	17 40 33.2	+1.7
	comp=N,0.1nm,0.3s,baz=215,slow=22,SNR=1.8						
VRAC				Sn	Sn	17 41 48.0	-2.8
	comp=N,0.2nm,0.3s,baz=263,slow=21,SNR=1.5						
KLV	Kalavryta, Ach	6.96	127	P	Pn	17 40 32.2	+0.5
SMRF	Simiane la Rot	7.12	286	*e*Pn	Pn	17 40 33.1	-0.8
SMRF	Simiane la Rot	7.12	286	*e*P	Pn	17 40 38.1	+4.2
SMRF				*e*Sn	Sn	17 41 50.0	-5.2
ORIF	Oris-en-Rattie	7.12	293	*e*Pn	Pn	17 40 33.8	-0.2
ORIF	Oris-en-Rattie	7.12	293	*e*P	Pn	17 40 38.4	+4.4
ORIF				*e*Sn	Sn	17 41 51.9	-3.4
	comp=N,22nm,0.7s						
GUR	Goura	7.14	127	P	Pn	17 40 34.1	-0.2
PRU	Pruhonice	7.56	357	*e*SN	Sn	17 42 02.7	-3.2
CABF	La Chapelle	7.67	306	*e*Pn	Pn	17 40 41.8	+0.4
CABF	La Chapelle	7.67	306	*e*P	Pn	17 40 45.9	+4.5
CABF				*e*Sn	Sn	17 42 06.0	-2.6
	comp=N,54nm,0.8s						
KRLC	Kraliky	7.73	8	*e*PN	Pn	17 40 44.3	+2.1
HINF	Hinteralfeld	7.92	316	*e*Pn	Pn	17 40 44.7	-0.2
HINF	Hinteralfeld	7.92	316	*e*P	Pn	17 40 50.5	+5.6
HINF				*e*Sn	Sn	17 42 09.1	-5.8
	comp=N,65nm,0.5s						
VIVF	Saint-Julien-l	7.93	291	*e*Pn	Pn	17 40 44.3	-0.8
VIVF	Saint-Julien-l	7.93	291	*e*P	Pn	17 40 49.1	+4.0
VIVF				*e*Sn	Sn	17 42 10.0	-5.1
	comp=N,1.2nm,0.3s						
KEST	Kesra	8.05	216	Pn	Pn	17 40 48.0	+1.3
	comp=N,0.1nm,0.3s,baz=17,slow=8.7,SNR=2.0						
CDF	Champ du Feu	8.11	320	*e*Pn	Pn	17 40 47.0	-0.6
CDF	Champ du Feu	8.11	320	*e*P	Pn	17 40 51.6	+4.0
CDF				*e*Sn	Sn	17 42 14.9	-4.7
	comp=N,16nm,0.6s						
HAU	Haudompre	8.31	315	*e*Pn	Pn	17 40 50.5	+0.3
HAU	Haudompre	8.31	315	*e*P	Pn	17 40 55.3	+5.1
HAU				*e*Sn	Sn	17 42 18.9	-5.4
	comp=N,110nm,0.4s						
MLR	Muntele Rosu	8.40	65	Pn	Pn	17 40 51.3	-0.3
	comp=N,0.1nm,0.3s,baz=242,slow=20,SNR=2.3						
MLR				LR	LR	17 44 46.8	
	comp=N,230nm,18.4s,baz=292,slow=43						
BRG	Berggiesshubel	8.47	355	*e*P	Pn	17 40 54.2	+1.8
BRG				Amp		17 40 57.4	
	comp=Z,2.0nm,0.8s						
KTHA	Kythira Island	8.73	132	P	Pn	17 40 56.5	+0.6
PAGF	Fort de Pagny	8.98	316	*e*Pn	Pn	17 40 59.8	+0.5
PAGF	Fort de Pagny	8.98	316	*e*P	Pn	17 41 04.8	+5.5
PAGF				*e*Sn	Sn	17 42 36.7	-4.0
	comp=Z,26nm,0.6s						
CLL	Collm	8.99	352	*e*Sn	Sn	17 42 30.0	-11
CLL				*e*Sb	Sg	17 43 07.0	-30
CLL				*e*Sg	Sg	17 43 42.0	+4.6
SMF	Signal de Mont	9.07	301	*e*Pn	Pn	17 41 00.4	-0.2
SMF				*e*Sn	Sn	17 42 36.6	-6.3
	comp=Z,15nm,0.4s						
SFTF	Sexfontaines	9.13	313	*e*Pn	Pn	17 41 01.1	-0.3
SFTF	Sexfontaines	9.13	313	*e*P	Pn	17 41 06.8	+5.4
SFTF				*e*Sn	Sn	17 42 39.5	-4.9
	comp=Z,18nm,0.5s						
MEZF	Maizieres J’vi	9.30	314	*e*Sn	Sn	17 42 44.2	-4.3
	comp=Z,29nm,0.7s						
LOR	Lormes	9.32	305	*e*Pn	Pn	17 41 03.5	-0.6
	baz=125						
LOR	Lormes	9.32	305	*e*P	Pn	17 41 09.3	+5.2
LOR				*e*Sn	Sn	17 42 41.9	-7.3
	comp=Z,17nm,0.5s						
SAVF	Savonnieres en	9.33	315	*e*Sn	Sn	17 42 43.1	-6.2
	comp=Z,20nm,0.7s						
AVF	Avril sur Loir	9.43	301	*e*Pn	Pn	17 41 04.7	-0.9
AVF	Avril sur Loir	9.43	301	*e*P	Pn	17 41 10.3	+4.7
AVF				*e*Sn	Sn	17 42 46.7	-5.2
	comp=Z,14nm,0.8s						
SSF	Saint Saulge	9.45	303	*e*Pn	Pn	17 41 04.9	-0.9
SSF	Saint Saulge	9.45	303	*e*P	Pn	17 41 10.5	+4.7
SSF				*e*Sn	Sn	17 42 44.2	-8.1
	comp=Z,18nm,0.7s						
BGF	Bois d'Agland	9.67	299	*e*Pn	Pn	17 41 08.2	-0.6
BGF	Bois d'Agland	9.67	299	*e*P	Pn	17 41 14.3	+5.5
BGF				*e*Sn	Sn	17 42 52.3	-5.4
	comp=Z,17nm,0.7s						
TCF	Toulx Ste Croi	9.99	297	*e*Sn	Sn	17 43 02.2	-3.5
	comp=Z,4.0nm,0.5s						
HYF	Humbligny	10.07	303	*e*Pn	Pn	17 41 14.6	+0.3
HYF				*e*Sn	Sn	17 43 04.3	-3.3
	comp=Z,73nm,0.5s						
IDI	Anoyia	10.45	130	Pn	Pn	17 41 16.3	-3.3
	comp=Z,0.3nm,0.3s,baz=287,slow=14,SNR=1.4						
IDI				Sn	Sn	17 43 06.5	-11
	comp=Z,0.3nm,0.3s,baz=270,slow=14,SNR=1.6						
AKASG	Malin Array Be	12.74	45	Pn	Pn	17 41 50.8	-0.1
	comp=Z,0.2nm,0.3s,baz=176,slow=19,SNR=1.4						
BRTR	Keskin Array B	14.25	95	Pn	Pn	17 42 13.1	+1.4
	baz=346,slow=9.2,SNR=2.7						
BRTR				LR	LR	17 48 39.4	
	comp=Z,169nm,18.9s,baz=332,slow=42						
NOA	NORSAR Array B	18.78	354	P	Pn	17 43 09.4	+0.1
	comp=Z,0.0nm,0.3s,baz=169,slow=9.5,SNR=2.2						
NOA				LR	LR	17 50 30.9	
	comp=Z,61nm,20.4s,baz=355,slow=38						
FINES	FINESS Array B	20.15	15	P	P	17 43 23.3	-0.5
	comp=Z,0.1nm,0.3s,baz=192,slow=5.6,SNR=2.4						
ZALV	Zalesovo Beam	46.06	50	P	P	17 47 13.8	+0.4
	comp=Z,0.5nm,0.5s,baz=288,slow=7.0,SNR=3.8						
MKAR	Makanchi Array	46.72	60	P	P	17 47 19.1	+0.3
	comp=Z,0.7nm,0.7s,baz=306,slow=4.2,SNR=4.7						
SONM	Songino Array	60.95	50	P	P	17 49 03.5	+0.4
	comp=Z,0.9nm,1.0s,baz=246,slow=6.1,SNR=4.2						
YKA	Yellowknife Ar	67.92	337	P	P	17 49 49.4	+1.2
	comp=Z,0.9nm,0.8s,baz=32,slow=5.6,SNR=4.9						
ULM	Lac du Bonnet	69.79	320	P	P	17 50 00.4	+0.3
	comp=Z,1.8nm,0.5s,baz=9.9,slow=6.2,SNR=3.1						
CMAR	Chiang Mai Arr	73.33	80	P	P	17 50 22.3	+0.4
	comp=Z,0.4nm,0.4s,baz=306,slow=7.7,SNR=4.6						

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*IDC **06** 17:55:23.3±1.2, 31.°41S×71.°88W, h0^{km}, mb3.9/4, mb1 3.9/8, mb1mx3.8/23, mbtmp3.7/8, ML3.3/4, MS3.1/3, Ms1 3.1/3, ms1mx3.0/18, Error ellipse: s-maj=35.8km s-min=27.1km az=101.0*

*SJA **06** 17:55:25.7±0.7, 31.°45S×72.°04W, h28^{km}±8^{km}, ML4.3, MW4.2*

*GUC **06** 17:55:28.6±0.8, 31.°48S×71.°71W, h37^{km}±3^{km}, ML3.9*

*NEIC **06** 17:55:29.5±1.4, 31.°47S±0.°03×71.°9W±0.°1, h35^{km}±2^{km}, mb4.4/3, ML3.9(GUC), Error ellipse: s-maj=19.3km s-min=3.0km az=281.0*

ISC 06 17:55:26.9±0.9, **31.°48S**±0.°02×**71.°91W**±0.°04, **h23**^{km}±7^{km}, **n91**, σ**2.^{s}03**/132, **mb4.2**/6, **2C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.83	16	⇓*i*P	Pn	17 55 44.0	+0.7
CO06				*i* S	Sn	17 55 54.9	+0.1
CO06				IAML		17 55 56.5	
	comp=N,8µm,0.5s						
CO06	Fray Jorge	0.83	16		Pn	17 55 44.1	+0.8
VA06	Catapilco	1.20	155	⇓*i*P	Pn	17 55 48.8	+0.5
VA06				*i* S	Sn	17 56 03.3	-0.5
VA06				IAML		17 56 05.8	
	comp=E,6µm,0.6s						
CO03	El Pedregal	1.22	59	⇓*i*P	Pn	17 55 48.1	-0.6
CO03				*i* S	Sn	17 56 02.9	-1.7
CO03				IAML		17 56 07.2	
	comp=N,4µm,0.4s						
CO03	El Pedregal	1.22	59		Pn	17 55 48.3	-0.5
VA01	Torpederas	1.56	172		Pb	17 55 54.4	-0.6
VA01	Torpederas	1.56	172	*e*P	Pb	17 55 54.8	-0.3
GO04	Tololo Observa	1.61	37	⇑*i*P	Pb	17 55 55.1	-1.0
GO04				*i* S	Sn	17 56 14.7	+0.3
GO04	Tololo Observa	1.61	37	Pn	Pb	17 55 55.4	-0.7
GO04	Tololo Observa	1.61	37	*e*P	Pb	17 55 55.2	-0.9
CO05	La Serena	1.66	21	*e*P	Pb	17 55 55.9	-0.8
CO05				IAML		17 56 24.8	
	comp=N,2µm,0.4s						
CO05	La Serena	1.66	21		Pb	17 55 56.2	-0.6
ROCH	El Roble	1.67	153	⇓*i*P	Pn	17 55 56.0	+1.0
ROCH				*e*P	Pn	17 55 55.8	+0.8
ROCH				*i* S	Sb	17 56 17.7	-0.2
ROCH				IAML		17 56 21.2	
	comp=N,3µm,0.8s						
ROCH				IAML		17 56 21.2	
	comp=E,1µm,0.5s						
ROC1	El Roble	1.68	153	*e*P	Pn	17 55 56.0	+0.9
ROC1				*e*S	Sb	17 56 17.7	-0.3
VA03	San Esteban	1.72	138	⇓*i*P	Pn	17 55 56.8	+1.1
VA03				*i* S	Sn	17 56 17.7	+0.7
VA03				IAML		17 56 20.5	
	comp=E,4µm,0.6s						
VA03	San Esteban	1.72	138		Pn	17 55 56.7	+1.1
VA03	San Esteban	1.72	138	*e*P	Pb	17 55 57.2	-0.8
MT02	Curacav	1.89	160	*e*P	Pn	17 55 58.8	+0.9
MT02				*i* S	Sb	17 56 23.4	-0.6
MT02				IAML		17 56 28.1	
	comp=E,483nm,0.2s						
MT02	Curacav	1.89	160		Pb	17 55 59.6	-1.1
MT02	Curacav	1.89	160	*e*P	Pn	17 55 54.5	-3.4
MT02				*e*P	Pn	17 55 59.0	+1.1
MT02				*e*S	Sb	17 56 25.1	+1.1
PEL	Peldehue	1.96	148	⇑*i*P	Pn	17 56 00.3	+1.5
PEL				*i* S	Sn	17 56 24.4	+1.7
PEL				IAML		17 56 29.2	
	comp=E,1µm,0.1s						
PEL	Peldehue	1.96	148	Pn	Pn	17 55 59.8	+1.0
PEL	Peldehue	1.96	148	*e*P	Pn	17 56 00.6	+1.8
PEL				*e*S	Sb	17 56 27.4	+1.5
MT05	Renca	2.15	153	*e*P	Pn	17 56 03.1	+1.7
MT05				*i* S	Sn	17 56 28.9	+1.4
MT05				IAML		17 56 36.0	
	comp=E,1µm,0.1s						
MT05	Renca	2.15	153		Pn	17 56 03.3	+1.9
MT05	Renca	2.15	153	*e*P	Pn	17 56 03.0	+1.5
MT05				IAML		17 56 37.6	
	comp=Z,928nm,1.0s						
VA05	Santo Domingo	2.19	174		Pn	17 56 03.1	+1.2
RTLS	Leoncito	2.25	99	*e*P	Pn	17 56 05.0	+2.0
AUSP	Uspallata	2.27	110	*e*P	Pn	17 56 05.0	+1.7
AUSP				*e*P	Pn	17 56 06.0	+2.7
FCH	Farellones	2.30	144	*e*P	Pn	17 56 05.4	+1.7
FCH				*i* S	Sn	17 56 33.1	+1.6
FCH				IAML		17 56 41.4	
	comp=E,566nm,0.3s						
MT09	Talagante	2.42	162	*e*P	Pn	17 56 07.2	+2.0
MT09				IAML		17 56 41.8	
	comp=E,646nm,0.1s						
MT09	Talagante	2.42	162	Pn	Pn	17 56 07.6	+2.3
MT01	Popeta	2.44	167	*e*P	Pn	17 56 06.8	+1.4
MT01				IAML		17 56 48.2	
	comp=E,1µm,0.9s						
MT01	Popeta	2.44	167		Pn	17 56 08.1	+2.6
MT01	Popeta	2.44	167	*e*P	Pn	17 56 07.0	+1.6
MT01				*e*S	Sn	17 56 30.0	-4.6
AROD	Rodeo	2.47	59	*e*P	Pb	17 56 09.0	-1.8
AROD				*e*S	Sb	17 56 40.3	-0.5
ACCO	Cerro Coronel	2.59	71	*e*P	Pb	17 56 11.0	-1.9
ACCO				*e*S	Sb	17 56 45.1	+0.6
LCO	Las Campanas	2.67	23	*i* P	Pn	17 56 09.9	+1.2

LCO				*i* S	Sn	17 56 42.5	+1.9
LCO	Las Campanas	2.67	23	Pn	Pn	17 56 10.0	+1.2
LCO	Las Campanas	2.67	23	*e*P	Pn	17 56 10.0	+1.2
BO04	La Punta	2.73	157	*e*P	Pn	17 56 11.5	+2.0
BO04				IAML		17 56 51.9	
	comp=E,612nm,0.7s						
ZON	Zonda	2.76	92	Pn	Pb	17 56 13.2	-2.4
ZON	Zonda	2.76	92	*e*P	Pb	17 56 13.0	-2.6
ZON				IAML		17 57 00.6	
	comp=Z,437nm,0.7s						
LMEL	Las Melosas	2.77	149	*e*P	Pn	17 56 11.8	+1.7
LMEL				*i* S	Sn	17 56 45.0	+2.2
LMEL				IAML		17 56 55.0	
	comp=N,538nm,0.2s						
ASAL	Salagasta	2.84	114	*e*P	Pb	17 56 14.9	-1.9
ASAL				*e*P	Pb	17 56 15.0	-1.9
ASAL				*e*S	Sb	17 56 53.0	+1.8
RTCV	Cerro Valdivia	2.90	99	*e*P	Pb	17 56 15.0	-2.9
RTCV				*e*S	Sb	17 56 53.0	+0.1
BO01	Tunca	2.99	167	*e*P	Pn	17 56 14.5	+1.6
BO01				IAML		17 57 05.6	
	comp=E,144nm,0.1s						
BO01	Tunca	2.99	167		Pn	17 56 14.6	+1.7
BO01	Tunca	2.99	167	*e*P	Pn	17 56 11.0	-1.9
BO01				*e*P	Pn	17 56 14.8	+1.8
BO01				*e*P	Pn	17 56 15.0	+2.1
AAGR	Agrelo	3.06	122	*e*P	Pn	17 56 13.0	-1.0
AAGR				*e*P	Pn	17 56 18.0	+4.0
AAGR				*e*S	Sb	17 57 00.8	+3.1
AAGR				*e*S	Sb	17 57 02.5	+4.8
AC04	Llanos de Chal	3.34	13	*e*P	Pn	17 56 18.8	+1.1
AC04				IAML		17 57 20.7	
	comp=E,374nm,0.6s						
AC04	Llanos de Chal	3.34	13		Pn	17 56 19.7	+2.0
AC04	Llanos de Chal	3.34	13	*e*P	Pn	17 56 20.0	+2.2
AC04				*e*S	Sn	17 56 54.5	-2.2
AC04				*e*S	Sn	17 57 02.5	+5.8
AC04				IAML		17 57 15.8	
	comp=Z,390nm,0.5s						
BO02	Sierra Bellavi	3.44	164	*e*P	Pn	17 56 21.4	+2.2
BO02				IAML		17 57 13.3	
	comp=E,458nm,0.8s						
BO02	Sierra Bellavi	3.44	164	Pn	Pn	17 56 21.7	+2.6
BO02	Sierra Bellavi	3.44	164	*e*P	Pn	17 56 21.8	+2.6
BO02				*e*S	Sn	17 57 02.5	+3.2
BO02				IAML		17 57 15.6	
	comp=Z,309nm,0.6s						
GO05	Huala	3.52	180	Pn	Pn	17 56 20.9	+0.5
GO05	Huala	3.52	180	*e*P	Pn	17 56 21.0	+0.7
GO05				*e*S	Sb	17 57 13.0	+2.1
AVFE	Valle Fertil	3.91	79	*e*P	Pn	17 56 27.8	+2.2
AVFE				*e*S	Sn	17 57 15.0	+4.2
AVFE				IAML		17 57 30.3	
	comp=Z,623nm,0.7s						
GO03	Copiap	4.13	21	*e*P	Pn	17 56 29.9	+1.2
GO03				*e*P	Pn	17 56 30.0	+1.2
GO03				*e*S	Sn	17 57 20.0	+3.6
GO03				*e*S	Sb	17 57 33.5	+4.9
VCA	Vinchina	4.21	51	*e*P	Pn	17 56 34.0	+4.1
VCA				*e*S	Sb	17 57 28.5	-2.4
VCA				IAML		17 57 46.0	
	comp=Z,528nm,0.7s						
RFA	San Rafael	4.37	140	*e*P	Pn	17 56 34.0	+2.0
RFA				*e*P	Pn	17 56 35.0	+3.0
ACHE	Chepes	4.50	87	*e*P	Pn	17 56 36.0	+2.2
ACHE				*e*S	Sn	17 57 30.5	+5.0
ACLC	CERRO LA CRUZ	4.74	66	*e*P	Pn	17 56 39.3	+2.1
ACLC				*e*S	Sn	17 57 29.5	-2.1
ACLC				IAML		17 57 40.6	
	comp=Z,446nm,0.9s						
APLL	PUNTA DE LOS L	4.75	78	*e*P	Pn	17 56 39.6	+2.5
APLL				*e*S	Sn	17 57 35.0	+3.5
APLL				IAML		17 57 40.7	
	comp=Z,403nm,0.9s						
AC02	Maricunga	5.22	28	Pn	Pn	17 56 45.2	+1.1
AC02	Maricunga	5.22	28	*e*P	Pn	17 56 45.0	+0.9
AC02				IAML		17 58 16.9	
	comp=Z,144nm,0.7s						
CYA	Choya	6.10	62	*e*P	Pn	17 56 56.8	+1.1
CYA				IAML		17 58 43.7	
	comp=Z,69nm,1.4s						
H03N1	Juan Fernandez	6.24	250	Pn	Pn	17 57 01.0	+3.7
	baz=121,slow=19,SNR=12						
H03N1				T	T	18 03 41.0	
	baz=78,slow=72,SNR=5030						
H03N3	Juan Fernandez	6.25	250	Pn	Pn	17 57 00.3	+2.8
	baz=121,slow=19,SNR=18						
H03N3				T	T	18 03 40.6	
	baz=78,slow=72,SNR=3544						
H03N2	Juan Fernandez	6.25	250	Pn	Pn	17 57 00.6	+3.1
	baz=121,slow=19,SNR=12						
H03N2				T	T	18 03 41.9	
	baz=78,slow=72,SNR=3607						
TCA	Tanti	6.25	91	*e*P	Pn	17 56 58.8	+0.9
LC01	Cunco	7.40	180	Pn	Pn	17 57 15.5	+1.9
LVC	Limon Verde	9.23	18	Pn	Pn	17 57 36.8	-2.1
	comp=Z,0.2nm,0.3s,baz=107,slow=22,SNR=1.4						
LVC				Sn	Sn	17 59 24.1	+1.8
	comp=Z,0.7nm,0.3s,baz=321,slow=21,SNR=2.0						
LVC				LR	LR	18 01 20.1	
	comp=Z,139nm,18.7s,baz=208,slow=39						
PLCA	Paso Flores	9.30	174	Pn	Pn	17 57 40.6	+1.0
	comp=Z,0.1nm,0.3s,baz=237,slow=13,SNR=1.0						
PLCA				LR	LR	18 01 27.9	
	comp=Z,64nm,20.5s,baz=340,slow=39						
TRQA	Tornquist	10.47	132	Pn	Pn	17 57 55.3	-0.4
CPUP	Villa Florida	13.76	72	Sn	Sn	18 01 12.6	-0.1
	comp=Z,0.2nm,0.3s,baz=210,slow=4.0,SNR=3.3						
CPUP				LR	LR	18 04 21.3	
	comp=Z,146nm,18.2s,baz=225,slow=39						
LPAZ	La Paz	15.51	14	Pn	Pn	17 59 04.4	-0.4
	comp=Z,0.1nm,0.3s,baz=209,slow=9.5,SNR=3.8						
SIV	San Ignacio	18.31	35	P	Pn	17 59 38.9	-0.7
	comp=Z,0.1nm,0.3s,baz=216,slow=7.1,SNR=6.1						
BDFB	Brasilia	26.89	60	P	P	18 01 05.3	-1.1
	comp=Z,4.7nm,0.9s,baz=219,slow=5.3,SNR=5.2						
SNAA	Sanae	53.88	159	P	P	18 04 47.3	-0.7
SNAA				IAmb	IAmb	18 04 49.9	
	comp=Z,3.3nm,1.0s						
QSPA	South Pole Qui	58.75	180	P	P	18 05 22.3	-0.6
QSPA				IAmb	IAmb	18 05 45.1	
	comp=Z,5.0nm,1.4s						
TXAR	Lajitas Array	67.60	330	P	P	18 06 20.7	-1.1
	comp=Z,0.2nm,0.7s,baz=150,slow=5.0,SNR=1.5						
NVAR	Mina Array Bea	81.88	325	P	P	18 07 44.6	-0.1
	comp=Z,0.2nm,0.3s,baz=159,slow=5.1,SNR=1.6						
TORD	Torodi Ar. Bea	83.25	70	P	P	18 07 51.2	-0.8
	comp=Z,3.2nm,0.8s,baz=258,slow=4.6,SNR=21						
TORD	Torodi Ar. Bea	83.25	70	P	P	18 07 51.8	-0.2
TORD				IAmb	IAmb	18 07 53.1	
	comp=Z,2.8nm,0.8s						
H11S2	WAKE ISLAND Hy	125.88	271	T	T	20 33 18.9	
	baz=116,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	125.89	271	T	T	20 33 22.0	
	baz=116,slow=75,SNR=18						
H11S3	WAKE ISLAND Hy	125.90	271	T	T	20 33 20.3	
	baz=116,slow=75,SNR=16						
ZALV	Zalesovo Beam	152.01	30	PKPbc	PKiKP	18 15 20.6	+0.6
	comp=Z,7.7nm,0.7s,baz=297,slow=3.3,SNR=30						
ZALV				PKPab	sPKPbc	18 15 29.1	-0.2
	comp=Z,3.0nm,0.6s,baz=287,slow=3.1,SNR=7.8						
MKAR	Makanchi Array	154.97	45	PKPbc	PKPbc	18 15 26.1	-0.3
	comp=Z,0.6nm,0.8s,baz=273,slow=2.3,SNR=4.8						

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*ISK **06** 17:57:58.8, 35°.82N×31°.84E, h24^{km}, ML2.4/13*
*DDA **06** 17:58:00.3, 35°.83N×31°.90E, h27^{km}, ML1.9*
*NIC **06** 17:58:01.1±0.0, 35°.93N×32°.06E, h32^{km}±14^{km}, Ml2.5/4*
ISC 06 17:58:00.6±1.1**, 35°.86N**±0°.03×**31°.90E**±0°.03**, h31**^{km}±10^{km}**,**
n31, σ0^{s}.85/48**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.51	42	*i* P	Pb	17 58 10.7	-0.5
GAZI				*i* S	Sb	17 58 18.9	+0.4
GAZI				IAML		17 58 21.0	
	comp=E,32nm,0.3s						
GAZI				IAML		17 58 22.0	
	comp=N,32nm,0.3s						
GAZI	Gazipasa	0.51	42	PG	Pb	17 58 10.8	-0.5
GAZI				SG	Sb	17 58 19.1	+0.6
ALFC	Alefka	0.90	140	P	Pn	17 58 17.3	+0.1
ALFC				S	Sn	17 58 29.6	+0.4
ALFC				AML	AML	17 58 31.7	
	comp=N,0.6nm,0.1s						
ALFC				AML	AML	17 58 31.7	
	comp=N,0.6nm,0.1s						
ALFC				AML	AML	17 58 37.9	
	comp=N,0.7nm,0.2s						
ALFC				AML	AML	17 58 37.9	
	comp=N,0.7nm,0.2s						
AKMS	Akamas	0.91	157	P	Pb	17 58 17.7	-0.2
AKMS				S	Sn	17 58 30.7	+1.4
AKMS				AML	AML	17 58 37.8	
	comp=N,0.7nm,0.3s						
AKMS				AML	AML	17 58 37.8	
	comp=N,0.7nm,0.3s						
AKMS				AML	AML	17 58 38.6	
	comp=N,1.0nm,0.4s						
AKMS				AML	AML	17 58 38.6	
	comp=N,1.0nm,0.4s						
TEKE	Tekeli-Mersin	1.03	73	PN	Pn	17 58 18.9	0.0
TEKE				SN	Sb	17 58 33.3	+0.3
LEF	Lefka	1.09	132	*i* P	Pn	17 58 19.8	0.0
LEF				*i* S	Sn	17 58 33.4	-0.4
LEF				IAML		17 58 34.0	
	comp=N,58nm,0.1s						
LEF				IAML		17 58 35.0	
	comp=E,43nm,0.2s						
LEF	Lefka	1.09	132	PN	Pn	17 58 19.5	-0.3
LEF				SN	Sn	17 58 33.4	-0.4
ERMK	Ermenek	1.14	46	*i* P	Pn	17 58 20.7	+0.1
ERMK				*i* S	Sn	17 58 35.7	+0.5
ERMK				IAML		17 58 39.0	
	comp=E,20nm,0.3s						
ERMK				IAML		17 58 41.0	
	comp=N,32nm,0.4s						
BERE	Bereket-Mersin	1.18	65	PN	Pn	17 58 21.2	+0.1
BERE				SN	Sb	17 58 37.5	0.0
NATA	Nata	1.21	153	S	Sb	17 58 37.8	-0.3
AKUM	Antalya-Kumluc	1.34	291	*i* P	Pn	17 58 21.6	-1.6
AKUM				IAML		17 58 43.0	
	comp=N,21nm,0.8s						
AKUM				*i* S	Sb	17 58 44.3	+2.3
AKUM				IAML		17 58 47.0	
	comp=E,26nm,0.6s						
AKKU	Akkuyu-Mersin	1.37	77	PN	Pn	17 58 24.0	+0.4
AKKU				SN	Sb	17 58 42.3	-0.6
GULN	MERSIN_Gulnar	1.37	76	*i* P	Pn	17 58 24.0	+0.3
GULN				IAML		17 58 41.0	
	comp=E,16nm,1.8s						
GULN				*i* S	Sn	17 58 41.5	+0.7
GULN				IAML		17 58 46.0	
	comp=N,19nm,0.8s						
LFK	Lefkose	1.45	113	PN	Pn	17 58 24.7	-0.1
CSS	Mathiatis	1.47	127	PN	Pn	17 58 24.1	-1.0
CSS	Mathiatis	1.47	127	P	Pn	17 58 24.0	-1.0
CSS				S	Sn	17 58 42.9	-0.3
TISA	Tisan-Mersin	1.48	78	PN	Pn	17 58 25.6	+0.6
IKL	Isikli	1.50	75	PN	Pn	17 58 25.8	+0.4
ASGA	Asgata	1.54	134	S	Sn	17 58 44.7	-0.1
ASGA				AML	AML	17 58 55.1	
	comp=N,0.2nm,0.6s						
ASGA				AML	AML	17 58 55.9	
	comp=N,0.2nm,0.7s						
SEYD	Seydisehir-KON	1.55	358	PN	Pn	17 58 25.8	-0.4
KEBE	Keben-Mersin	1.58	68	PN	Pn	17 58 27.2	+0.6
SEDI	Konya, Seydise	1.60	356	*i* P	Pn	17 58 26.4	-0.4
SEDI				*i* S	Sn	17 58 46.2	-0.3
SEDI				IAML		17 58 47.0	
	comp=N,29nm,0.8s						
SEDI				IAML		17 58 52.0	
	comp=E,19nm,0.7s						
KKBE	Karaman, Kazim	1.60	31	*i* P	Pn	17 58 26.7	-0.1
KKBE				*i* S	Sn	17 58 46.4	-0.2
KKBE				IAML		17 58 49.0	
	comp=N,9.7nm,0.4s						
KKBE				IAML		17 58 49.0	
	comp=E,9.9nm,0.3s						
MVOU	Mavrovouni	1.65	120	P	Pn	17 58 26.7	-0.7
MVOU				S	Sn	17 58 46.2	-1.3
MVOU				AML	AML	17 58 57.5	
	comp=E,0.2nm,0.6s						
MVOU				AML	AML	17 58 57.5	
	comp=E,0.2nm,0.6s						
MVOU				AML	AML	17 58 57.6	
	comp=E,0.1nm,0.5s						
MVOU				AML	AML	17 58 57.6	
	comp=E,0.1nm,0.5s						
KORT	Korkueli	1.69	313	*i* P	Pn	17 58 29.6	+1.4
KORT				IAML		17 58 53.0	
	comp=N,15nm,0.6s						
KORT				IAML		17 58 58.0	
	comp=E,24nm,0.5s						
KORT	Korkueli	1.69	313	PN	Pn	17 58 27.8	-0.4
AKAS	Kas	1.90	282	PN	Pn	17 58 29.9	-1.1
KIZK	Mersin	1.92	70	PN	Pn	17 58 31.9	+0.7
CAME	Cameli-Denizli	2.36	298	PN	Pn	17 58 36.0	-1.3
KERG	Konya-Eregli	2.37	48	*i* P	Pn	17 58 37.7	+0.2
KERG				IAML		17 59 05.0	
	comp=N,10.0nm,0.8s						
KERG				*i* S	Sn	17 59 05.4	-0.3
KERG				IAML		17 59 08.0	
	comp=E,6.9nm,0.5s						
OSC2	CSNet OBS 4	2.79	174	S	Sn	17 59 18.5	+2.8

NOU 06 18:05:13.0, 14°.26S×166°.50E, h0^{km}, MLv4.3/6**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.36	150	P	Pg	18 05 38.1	-1.0
YATNC	Mamie plateau,	7.77	177	P	Pn	18 07 06.1	-1.3
	14nm,0.9s						
DZM	Mont Dzumac	7.77	180	P	Pn	18 07 07.3	-0.2
NOUC	Port Laguerre	7.80	181	P	Pn	18 07 08.2	+0.4
	7.8nm,1.0s						
PINNC	Pines Island,	8.36	174	P	Pn	18 07 15.7	+0.2
	40nm,1.5s						

NOU 06 18:13:51.0, 12°.90S×166°.01E, h143^{km}, MLv4.7/11**, Santa Cruz Islands, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.78	156	P	Pn	18 14 36.0	+0.6
DVP	Devils Point	5.24	157	P	Pn	18 15 07.6	+0.1
KOUNC	Koumac, New Ca	7.79	192	P	Pn	18 15 41.5	0.0
DZM	Mont Dzumac	9.13	177	P	Pn	18 15 58.9	-0.7
YATNC	Mamie plateau,	9.15	175	P	Pn	18 15 59.7	-0.1
NOUC	Port Laguerre	9.15	178	P	Pn	18 16 00.0	+0.1
OUENC	Ouen Island, N	9.50	175	P	Pn	18 16 04.5	0.0

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*ROM **06** 18:23:02.1±0.4, 42°.60N±0°.02×15°.28E±0°.02, h10^{km},*
ML2.6/1, Error ellipse: s-maj=2.7km s-min=1.3km az=19.0
ISC 06 18:23:03.6±1.4**, 42°.42N**±0°.04×**14°.99E**±0°.04**, h83**^{km}±13^{km}**,**
n46, σ2^{s}.82/48**, 1D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TREM	Isole Tremiti	0.49	128	P	Pn	18 23 13.2	-4.4
CAFR	Castel Frentan	0.52	248	P	Pn	18 23 17.6	-0.2
CAFR				AML	AML		
	comp=N,383µm,0.4s						
CAFR				AML	AML		
	comp=E,310µm,0.3s						
LPEL	Lama dei Pelig	0.71	238	P	Pn	18 23 20.1	+0.4
LPEL				S	Sn	18 23 34.4	+2.8
LPEL				AML	AML		
	comp=E,324µm,0.8s						
LPEL				AML	AML		
	comp=N,307µm,0.3s						
TRIV	Trivento	0.73	207	P	Pn	18 23 20.2	+0.2
TRIV				AML	AML		
	comp=E,218µm,0.9s						
TRIV				AML	AML		
	comp=N,156µm,0.7s						
TRIV				AML	AML		
	comp=N,157µm,0.7s						
CIGN	Sant'Elia a Pi	0.77	185	P	Pn	18 23 20.2	-0.2
SGRT	San Giovanni R	0.87	140	P	Pn	18 23 19.0	-2.6
SGRT				S	Sn	18 23 31.6	-3.2
SGRT				AML	AML		
	comp=E,644µm,0.2s						
SGRT				AML	AML		
	comp=N,546µm,0.2s						
TRTR	Tortoreto Alta	0.88	296	AML	AML		
	comp=N,620µm,0.4s						
TRTR				AML	AML		
	comp=E,766µm,1.3s						
TRTR				AML	AML		
	comp=N,620µm,0.4s						
GATE	Gambatesa	0.91	184	P	Pn	18 23 22.8	+0.9
T0110	Collepietro	0.92	258	AML	AML		
	comp=E,268µm,0.5s						
T0110				AML	AML		
	comp=N,296µm,0.6s						
BSSO	Busso	0.93	199	P	Pn	18 23 23.5	+1.4
MSAG	Monte S. Angel	0.99	136	P	Pn	18 23 21.5	-1.4
MSAG				S	Sn	18 23 35.1	-2.1
MSAG				AML	AML		
	comp=E,741µm,0.7s						
MSAG				AML	AML		
	comp=N,1165µm,0.6s						
MSAG				AML	AML		
	comp=N,1200µm,0.6s						
MSAG				AML	AML		
	comp=N,1168µm,0.6s						
MSAG				AML	AML		
	comp=E,776µm,1.3s						
MSAG				AML	AML		
	comp=E,740µm,0.7s						
TERO	Teramo	1.04	281	AML	AML		
	comp=E,73µm,0.6s						
TERO				AML	AML		
	comp=N,80µm,0.5s						
SACR	S. Croce Del S	1.05	192	P	Pn	18 23 24.9	+1.4
SACR				S	Sn	18 23 42.4	+4.0
FAGN	Fagnano	1.05	262	AML	AML		
	comp=E,634µm,0.6s						
FAGN				AML	AML		
	comp=N,428µm,0.4s						
FAGN				AML	AML		
	comp=E,634µm,0.6s						
MOCO	Biccari - m.te	1.06	173	P	Pn	18 23 24.1	+0.3
CERA	Filignano	1.10	222	P	Pn	18 23 26.9	+2.8
CERA				AML	AML		
	comp=N,107µm,0.6s						
CERA				AML	AML		
	comp=E,140µm,0.4s						
PTRJ	Pietraroja	1.11	198	P	Pn	18 23 27.6	+3.2
SGG	Gregorio Mates	1.13	204	AML	AML		
	comp=N,127µm,0.4s						
SGG				AML	AML		
	comp=E,164µm,0.5s						
SMA1	SAN MARTINO	1.24	280	AML	AML		
	comp=N,166µm,0.7s						
SMA1				AML	AML		
	comp=E,139µm,0.7s						
SMA1				AML	AML		
	comp=E,139µm,0.7s						
ZIRJ	Zirje	1.32	21	*e*Pg	Pn	18 23 28.1	+1.3
ZIRJ				Sg	Sn	18 23 44.8	+0.6
CAFE	Carife	1.41	172	⇓P	Pn	18 23 30.0	+2.0
NRCA	Norcia	1.44	287	AML	AML		
	comp=N,117µm,1.0s						
NRCA				AML	AML		
	comp=E,119µm,0.2s						
NRCA				AML	AML		
	comp=N,117µm,1.0s						
LSTV	Lastovo	1.45	76	*e*Pg	Pn	18 23 29.1	+0.7
LSTV				Sg	Sn	18 23 48.2	+1.2
CSP1	Cessapalombo	1.47	298	AML	AML		
	comp=E,98µm,1.6s						
CSP1				AML	AML		
	comp=N,117µm,0.6s						
CSP1				AML	AML		
	comp=N,121µm,0.6s						
CSP1				AML	AML		
	comp=E,99µm,1.6s						
FDMO	Fiordimonte	1.53	294	AML	AML		
	comp=N,80µm,0.7s						
FDMO				AML	AML		
	comp=E,76µm,1.3s						
FDMO				AML	AML		
	comp=N,80µm,0.7s						
MORI	Morici	1.53	20	*e*Pg	Pn	18 23 32.0	+2.5
MORI				Sg	Sn	18 23 50.7	+1.7
GIUL	Giuliano Di Ro	1.56	237	AML	AML		
	comp=E,28µm,0.8s						
GIUL				AML	AML		
	comp=N,41µm,0.9s						
DUGI	Dugi Otok	1.57	2	*e*Pg	Pn	18 23 32.7	+2.7
DUGI				Sg	Sn	18 23 54.3	+4.5
CESI	CESI - Serrava	1.64	291	AML	AML		
	comp=N,43µm,0.5s						
CESI				AML	AML		
	comp=E,50µm,0.8s						
MAKA	Makarska	1.73	59	*e*Pn	Pn	18 23 33.9	+2.0
MAKA				Sn	Sn	18 23 54.9	+1.5
ARVD	Arcevia	1.85	306	AML	AML		
	comp=N,41µm,0.6s						
ARVD				AML	AML		
	comp=E,33µm,1.3s						
RICI	Ricice	1.90	55	*e*Pn	Pn	18 23 36.2	+1.9
AMUR	Altamura	1.94	141	P	Pn	18 23 35.6	+0.7
AMUR				AML	AML		
	comp=E,87µm,0.9s						
AMUR				AML	AML		
	comp=N,71µm,0.2s						
STON	Ston	2.05	76	*e*Pn	Pn	18 23 38.0	+1.8
NVLJ	Novalja	2.14	358	*e*Pn	Pn	18 23 41.2	+3.7
NVLJ				Sn	Sn	18 24 09.9	+6.7
UDBI	Udbina	2.18	15	*e*Pn	Pn	18 23 42.9	+4.9
UDBI				Sn	Sn	18 24 10.4	+6.1
DBRK	Dubrovnik	2.35	83	*e*Pn	Pn	18 23 41.2	+1.0
SMRN	Sveta Marina	2.68	347	*e*Pn	Pn	18 23 47.8	+3.2
SMRN				Sn	Sn	18 24 20.9	+4.8
OBKA	Obir	4.10	356	*e*Pn	Pn	18 24 08.8	+4.9
	comp=N,0.3nm,0.2s						
OBKA				*e*Sn	Sn	18 24 58.6	+7.9
	comp=N,1.2nm,0.3s						
SOKA	Soboth	4.25	0	*e*Pn	Pn	18 24 10.2	+4.1
	comp=N,0.1nm,0.2s						
SOKA				*e*Sn	Sn	18 24 48.0	-6.5
	comp=N,0.1nm,0.1s						
ABTA	Abfaltersbach	4.67	339	*e*Pn	Pn	18 24 10.3	-1.5
	comp=N,0.1nm,0.1s						
ABTA				*e*Sn	Sn	18 25 03.1	-1.6
	comp=N,2.5nm,0.7s						
WTTA	Wattenberg	5.39	335	*e*Pn	Pn	18 24 19.3	-2.4
	comp=N,0.2nm,0.2s						
WTTA				*e*Sn	Sn	18 25 20.3	-2.2
	comp=N,1.9nm,0.4s						
MOA	Molln	5.45	355	*e*Pn	Pn	18 24 27.5	+5.2
	comp=N,0.3nm,0.3s						
MOA				*e*Sn	Sn	18 25 18.6	-5.0
	comp=N,0.8nm,0.4s						
WATA	Walderalm	5.48	335	*e*Pn	Pn	18 24 20.6	-2.2
	comp=N,0.4nm,0.1s						
WATA				*e*Sn	Sn	18 25 19.4	-5.0
	comp=N,0.8nm,0.2s						
SQTA	Sankt Quirin	5.50	332	*e*Pn	Pn	18 24 21.6	-1.5
	comp=N,0.1nm,0.1s						
SQTA				*e*Sn	Sn	18 25 21.5	-3.4
	comp=N,0.9nm,0.2s						
FETA	Feichten	5.51	328	*e*Pn	Pn	18 24 20.1	-3.1
	comp=N,0.1nm,0.2s						
FETA				*e*Sn	Sn	18 25 24.9	-0.3
	comp=N,3.2nm,0.0s						

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*TUL **06** 18:25:37.3±1.2, 35°.849N±0°.010×96°.65W±0°.03, h5^{km}±7^{km},*
ML3.1, mb_Lg3.0/63(NEIC), Error ellipse: s-maj=4.0km
s-min=1.2km az=101.0
*ANF **06** 18:25:37.6±0.3, 35°.89N×96°.66W, h5^{km}, ML3.4/10, Error*
ellipse: s-maj=2.9km s-min=2.2km az=168.0
*NEIC **06** 18:25:37.9±1.8, 35°.86N±0°.02×96°.66W±0°.04, h11^{km}±6^{km},*
Error ellipse: s-maj=5.0km s-min=2.6km az=116.0
ISC 06 18:25:37.7±0.9**, 35°.86N**±0°.03×**96°.67W**±0°.02**, h10**^{km}±7^{km}**,**
n73, σ0^{s}.80/57**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK030	Cody Creek RV	0.12	306		Pg	18 25 40.5	-0.2
OK030				Sg	Sg	18 25 42.6	-0.1
OK034	N. Norfolk Rd.	0.16	345	Pg	Pg	18 25 41.1	-0.1
OK034				Sg	Sg	18 25 43.6	0.0
OK031	S. Brethren Rd	0.17	304	Pg	Pg	18 25 41.4	0.0
OK031				Sg	Sg	18 25 44.1	0.0
OK033	Mehan	0.29	310	Pg	Pg	18 25 43.6	+0.1

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OK033                           Sg       Sg        18 25 47.9 +0.5
OK025 Westminster Rd     0.61 243 Pg     Pg        18 25 49.2 -0.3
OK025                           Sg       Sg        18 25 58.3 +0.6
OK029 Liberty Lake       0.65 265 Pg     Pg        18 25 50.0 -0.2
TUL1  Leonard            0.71  86 Pg     Pg        18 25 50.8 -0.6
TUL1  Leonard            0.71  86 P      Pg        18 25 50.8 -0.6
      baz=265,SNR=133
TUL1                            S        Sg        18 26 00.2 -0.5
      baz=265
OKCSW OKLAHOMA CITY      0.78 235        Pg        18 25 51.6 -1.0
OKCFA Oklahoma City      0.78 236 Pg     Pg        18 25 51.9 -0.8
OKCFA Oklahoma City      0.78 236 S      Sg        18 26 03.3 +0.4
      baz=56
BCOK  Bluff Creek, N     0.79 256 Pg     Pg        18 25 52.5 -0.5
FNO   Franklin           0.85 225 Pg     Pg        18 25 53.2 -0.8
BLOK  Blackwell          1.00 334 Pg     Pg        18 25 56.6 -0.4
T35A  Sooner Cattle      1.06   7        Pb        18 25 57.2 -0.9
T35B  Sooner Cattle      1.06   7 P      Pb        18 25 57.4 -0.7
      baz=186
T35B                            S        Sg        18 26 11.8 -0.2
      baz=186
CROK  Carrier            1.25 302        Pn        18 26 00.9 -0.2
KAN13 South Haven SW     1.33 331        Pn        18 26 02.3 +0.1
GC02  Grant County #     1.38 316 Pn     Pn        18 26 03.2 +0.2
KAN17 Caldwell West      1.48 323        Pn        18 26 04.8 +0.5
KAN09 Caldwell North     1.49 329 Pn     Pn        18 26 05.1 +0.6
KAN01 Argonia South      1.56 326        Pn        18 26 05.9 +0.4
OK032 Salt Plains WL     1.56 308        Pn        18 26 06.2 +0.7
X34A  Smith Ranch, M     1.58 218 Pn     Pn        18 26 06.5 +0.8
X34A                            IAmb_Lg            18 26 27.2
      comp=Z,50nm,1.2s
X37A  Clayton            1.65 140        Pb        18 26 07.6 -0.6
X37A  Clayton            1.65 140 P      Pn        18 26 07.5 +0.8
      baz=321,SNR=20
X37A                            S        Sg        18 26 30.3 -0.4
      baz=321
KAN06 Argonia West S     1.69 326        Pb        18 26 08.2 -0.5
KAN06                           IAmb_Lg            18 26 33.3
      comp=Z,53nm,0.8s
KAN10 Anthony SW Sta     1.71 318        Pn        18 26 08.2 +0.7
KAN08 Anthony NE Sta     1.72 323 Pn     Pb        18 26 08.8 -0.6
KAN16 Harper SW Stat     1.77 321        Pb        18 26 09.8 -0.4
LOOK  Love County        1.91 193 Pn     Pn        18 26 11.5 +1.2
LOOK                            IAmb_Lg            18 26 41.1
      comp=Z,47nm,0.9s
U38A  Gravette           1.93  72 Pn     Pb        18 26 11.9 -1.1
U38A  Gravette           1.93  72 P      Pn        18 26 11.7 +1.1
      baz=253,SNR=28
U38A                            Sb       Sb        18 26 37.8 +0.7
      baz=253
U32A  Winter Ranch,      1.96 286 Pn     Pn        18 26 11.9 +1.0
U32A  Winter Ranch,      1.96 286 P      Pn        18 26 12.0 +1.1
      baz=105,SNR=11
U32A                            Sb       Sg        18 26 39.8 -1.0
      baz=105
HHAR  Hobbs              2.25  78        Pn        18 26 15.7 +0.8
W39A  Magazine           2.44 105        Pn        18 26 17.2 -0.3
W39A                            IAmb_Lg            18 26 58.0
      comp=Z,34nm,0.8s
W39A  Magazine           2.44 105 P      Pn        18 26 18.5 +1.0
      baz=286,SNR=30
MIAR  Mount Ida          2.85 116 P      Pn        18 26 24.5 +1.4
      baz=298,SNR=14
Z38A  Mt. Pleasant       2.94 151 IAmb_Lg          18 27 13.7
      comp=Z,43nm,0.7s
U40A  Yellville          3.13  80        Pn        18 26 28.2 +1.2
U40A  Yellville          3.13  80 P      Pn        18 26 28.1 +1.1
      baz=262,SNR=12
U40A                            P        Pn        18 26 28.1 +1.1
      baz=262,SNR=12
KSU1  Kansas State U     3.24   1 IAmb_Lg          18 27 27.1
      comp=Z,34nm,1.0s
S39A  Bolivar            3.25  55        Pn        18 26 30.0 +1.4
S39A                            IAmb_Lg            18 27 25.1
      comp=Z,43nm,0.8s
S39A  Bolivar            3.25  55 P      Pn        18 26 29.9 +1.3
      baz=236,SNR=40
X40A  Basin Creek Fa     3.42 112        Pn        18 26 32.8 +1.7
WHAR  Wooly Hollow       3.61  98 Pn     Pn        18 26 34.5 +0.9
WHAR                            IAmb_Lg            18 27 35.0
      comp=Z,21nm,0.8s
W41B  Gary Mavity, V     3.67  99 P      Pn        18 26 35.2 +0.8
      baz=282,SNR=7.4
FCAR  Ozark Folk Cen     3.69  88 IAmb_Lg          18 27 34.1
      comp=Z,31nm,0.8s
MGMO  Mountain Grove     3.77  69 IAmb_Lg          18 27 38.1
      comp=Z,73nm,0.8s
CBKS  Cedar Bluff        3.83 321 IAmb_Lg          18 27 50.4
      comp=Z,26nm,0.7s
AMTX  Amarillo           4.21 258 IAmb_Lg          18 27 56.7
      comp=Z,27nm,0.9s
R40A  Maddies Statio     4.27  54 IAmb_Lg          18 27 54.6
      comp=Z,41nm,0.9s
LCAR  Lake Charles       4.47  86 IAmb_Lg          18 28 03.4
      comp=Z,28nm,0.9s
P38A  Dawn               4.50  32 IAmb_Lg          18 28 00.2
      comp=Z,26nm,1.0s
CCM   Cathedral Cave     4.86  62 IAmb_Lg          18 28 09.5
      comp=Z,48nm,0.9s
N35A  Tabor              5.06   9 IAmb_Lg          18 28 30.8
      comp=Z,42nm,0.8s
P40A  Paris              5.18  44 IAmb_Lg          18 28 27.3
      comp=Z,29nm,0.7s
FVM   French Village     5.43  65 IAmb_Lg          18 28 36.8
      comp=Z,27nm,0.7s
N38A  Joes South For     5.62  28 IAmb_Lg          18 28 45.0
      comp=Z,23nm,0.7s
BGNE  Belgrade           5.66 349 IAmb_Lg          18 28 49.4
      comp=Z,37nm,0.7s
L34A  Svendsen Farm,     6.10   2 IAmb_Lg          18 28 59.1
      comp=Z,33nm,0.8s
W45A  Hickory Valley     6.14  94 IAmb_Lg          18 28 52.5
      comp=Z,27nm,0.7s
T25A  Trinidad           6.37 284 IAmb_Lg          18 29 05.2
      comp=Z,19nm,1.0s
OGNE  Ogallala           6.60 322 IAmb_Lg          18 29 06.6
      comp=Z,18nm,0.8s
SCIA  State Center       6.61  23 IAmb_Lg          18 29 25.2
      comp=Z,21nm,1.1s
N41A  Harden Midland     6.66  42 IAmb_Lg          18 29 07.6
      comp=Z,26nm,0.8s
P43A  Skaggs, Pawnee     6.80  54 IAmb_Lg          18 29 18.7
      comp=Z,35nm,0.7s
Q44A  Meyer Farm, Va     6.80  61 IAmb_Lg          18 29 25.7
      comp=Z,30nm,0.8s
K31A  O'Neill            6.95 347 IAmb_Lg          18 29 19.3
      comp=Z,26nm,0.7s
O44A  Mansfield          7.76  54 IAmb_Lg          18 29 47.7
      comp=Z,25nm,0.8s
L42A  Oliver, Polo       8.21  40 IAmb_Lg          18 30 08.9
      comp=Z,14nm,0.8s
SFIN  Lafayette          8.79  56 IAmb_Lg          18 30 17.5
      comp=Z,25nm,1.0s
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*NEIC **06** 18:29:50.6±1.1, 36°.75N±0°.01×98°.12W±0°.04, h13^{km}±3^{km}, Error ellipse: s-maj=5.1km s-min=1.4km az=105.0*

*TUL **06** 18:29:50.7±1.3, 36°.760N±0°.004×98°.07W±0°.02, h7^{km}±6^{km}, ML3.5, mb_Lg3.0/60(NEIC), Error ellipse: s-maj=2.1km s-min=0.6km az=90.0*

*ANF **06** 18:29:50.5±0.4, 36°.73N×98°.06W, h4^{km}±2^{km}, ML3.6/7, Error ellipse: s-maj=2.8km s-min=1.8km az=47.0*

ISC 06 18:29:50.7±0.9**, 36°.75N**±0°.02×**98°.07W**±0°.03**, h12**^{km}±7^{km}**, n67, σ0^{s}.66**/46**, Oklahoma**

```
Code  Station Name        Δ°  AZ°   Phase ID           Time      Res
                                  Op       ISC      h  m  s    ISC
OK032 Salt Plains WL     0.13 297 Pg       Pg       18 29 53.6 -0.2
OK032                             Sg       Sg       18 29 55.8 -0.4
GC02  Grant County #     0.20  58 Pg       Pg       18 29 55.0  0.0
GC02                              Sg       Sg       18 29 58.0  0.0
KAN14 Manchester OK      0.23  22          Pg       18 29 55.5  0.0
KAN14                             Sg       Sg       18 29 58.7 -0.1
CROK  Carrier            0.25 164 Pg       Pg       18 29 56.1 +0.2
CROK                              Sg       Sg       18 30 00.0 +0.6
KAN10 Anthony SW Sta     0.38 357 Pg       Pg       18 29 58.2  0.0
KAN10                             Sg       Sg       18 30 03.4 +0.2
KAN17 Caldwell West      0.38  39 Pg       Pg       18 29 58.4  0.0
KAN01 Argonia South      0.48  31 Pg       Pg       18 30 00.0  0.0
KAN16 Harper SW Stat     0.48   0 Pg       Pg       18 30 00.0  0.0
KAN08 Anthony NE Sta     0.49   9          Pg       18 30 00.2  0.0
KAN06 Argonia West S     0.53  19          Pg       18 30 01.0  0.0
KAN09 Caldwell North     0.53  43 Pg       Pg       18 30 00.9 -0.1
KAN13 South Haven SW     0.54  61 Pg       Pg       18 30 01.2 -0.1
KAN12 Harper NE Stat     0.55   6 Pg       Pg       18 30 01.5  0.0
BLOK  Blackwell          0.69  89 Pg       Pg       18 30 03.8 -0.2
U32A  Winter Ranch,      0.83 244 Pg       Pg       18 30 06.5 -0.3
U32A  Winter Ranch,      0.83 244 P        Pg       18 30 06.5 -0.3
      baz=63,SNR=80
OK029 Liberty Lake       1.07 152          Pg       18 30 10.8 -0.4
BCOK  Bluff Creek, N     1.15 161 Pg       Pg       18 30 12.1 -0.7
OK033 Mehan              1.15 127          Pg       18 30 12.3 -0.5
T35A  Sooner Cattle      1.26  82 Pn       Pn       18 30 14.1  0.0
T35B  Sooner Cattle      1.26  82 P        Pn       18 30 14.0 -0.1
      baz=263
OK031 S. Brethren Rd     1.27 128          Pn       18 30 14.4 +0.1
OK025 Westminster Rd     1.30 153          Pn       18 30 15.1 +0.3
OK034 N. Norfolk Rd.     1.32 123          Pn       18 30 15.1 +0.2
OK030 Cody Creek RV      1.32 128          Pn       18 30 15.2 +0.2
OKCFA Oklahoma City      1.42 159          Pn       18 30 16.7 +0.4
OKCFA Oklahoma City      1.42 159 P        Pn       18 30 16.8 +0.5
      baz=340,SNR=9.0
OKCFA                             S        Sg       18 30 36.5 +0.2
      baz=340
OKCSW OKLAHOMA CITY      1.43 159          Pn       18 30 17.0 +0.5
FNO   Franklin           1.58 160          Pn       18 30 19.6 +1.0
R32A  Long Quarter,      1.75 343          Pb       18 30 22.4 -0.4
R32A  Long Quarter,      1.75 343 P        Pb       18 30 22.2 -0.5
      baz=163,SNR=139
R32A                              S        Sb       18 30 45.6 +1.0
      baz=163
TUL1  Leonard            2.02 114 IAmb_Lg           18 30 54.6
      comp=Z,60nm,0.7s
TUL1  Leonard            2.02 114 P        Pn       18 30 25.5 +0.9
      baz=296,SNR=34
TUL1                              Sb       Sg       18 30 54.3 -1.3
      baz=296
X34A  Smith Ranch, M     2.15 175 Pn       Pn       18 30 28.3 +1.9
CBKS  Cedar Bluff        2.45 328 S        Sb       18 31 03.3 -1.6
      baz=147
U38A  Gravette           2.98  95 Pn       Pn       18 30 39.1 +1.3
U38A  Gravette           2.98  95 P        Pn       18 30 39.1 +1.3
      baz=277,SNR=19
HHAR  Hobbs              3.36  97 IAmb_Lg           18 31 42.2
      comp=Z,31nm,0.8s
AMTX  Amarillo           3.47 239 IAmb_Lg           18 31 49.6
      comp=Z,29nm,0.8s
N33A  J Bar K, Exete     4.01   7 IAmb_Lg           18 31 57.7
      comp=Z,50nm,1.1s
U40A  Yellville          4.22  94 IAmb_Lg           18 32 13.7
      comp=Z,42nm,0.7s
U40A  Yellville          4.22  94 P        Pn       18 30 55.6 +0.8
      baz=277,SNR=8.0
U40A                              P        Pn       18 30 55.6 +0.8
      baz=277,SNR=8.0
MIAR  Mount Ida          4.27 120 IAmb_Lg           18 32 10.8
      comp=Z,25nm,0.7s
Z38A  Mt. Pleasant       4.30 143 IAmb_Lg           18 32 12.6
      comp=Z,48nm,0.7s
ABTX  Abilene, Hawle     4.31 198 IAmb_Lg           18 32 08.3
      comp=Z,36nm,1.1s
P38A  Dawn               4.59  50 IAmb_Lg           18 32 17.5
      comp=Z,37nm,0.8s
BGNE  Belgrade           4.66 359 IAmb_Lg           18 32 24.4
      comp=Z,46nm,0.8s
MGMO  Mountain Grove     4.66  83 IAmb_Lg           18 32 25.5
      comp=Z,23nm,0.9s
FCAR  Ozark Folk Cen     4.88  98 IAmb_Lg           18 32 25.3
      comp=Z,20nm,0.7s
WHAR  Wooly Hollow       4.91 106 IAmb_Lg           18 32 35.4
      comp=Z,18nm,0.7s
WLAR  White Oak Lake     5.08 125 IAmb_Lg           18 32 44.9
      comp=Z,25nm,0.9s
T25A  Trinidad           5.09 276 IAmb_Lg           18 32 36.5
      comp=Z,38nm,0.7s
OGNE  Ogallala           5.21 325 IAmb_Lg           18 32 37.4
      comp=Z,26nm,0.8s
P40A  Paris              5.50  58 IAmb_Lg           18 32 57.0
      comp=Z,16nm,1.0s
N38A  Joes South For     5.53  42 IAmb_Lg           18 32 48.3
      comp=Z,29nm,0.9s
CCM   Cathedral Cave     5.59  74 IAmb_Lg           18 32 53.0
      comp=Z,19nm,0.9s
435B  Jarrell            5.96 176 IAmb_Lg           18 33 06.5
      comp=Z,24nm,0.9s
PBMO  Poplar Bluff       6.13  87 IAmb_Lg           18 33 13.7
      comp=Z,24nm,0.8s
FVM   French Village     6.21  76 IAmb_Lg           18 33 11.2
      comp=Z,19nm,0.8s
SCIA  State Center       6.38  35 IAmb_Lg           18 33 17.2
      comp=Z,27nm,0.7s
JCT   Junction City      6.42 194 IAmb_Lg           18 33 23.1
      comp=Z,23nm,0.8s
S44A  Carbondale         7.10  80 IAmb_Lg           18 33 38.4
      comp=Z,29nm,0.8s
SIUC  Southern Illin     7.13  80 IAmb_Lg           18 33 38.7
      comp=Z,19nm,0.8s
L40A  Anamosa            7.50  43 IAmb_Lg           18 33 51.9
      comp=Z,17nm,0.8s
OLIL  Olney              8.14  73 IAmb_Lg           18 34 23.3
      comp=Z,16nm,0.9s
L42A  Oliver, Polo       8.36  49 IAmb_Lg           18 34 19.9
      comp=Z,16nm,0.8s
JFWS  Jewell Farm        8.61  42 IAmb_Lg           18 34 24.1
      comp=Z,17nm,0.8s
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*IDC **06** 18:43:48.9±1.9, 16°.92S×174°.02W, h358^{km}±292^{km}, mb3.2/3, mb1 3.3/4, mb1mx3.0/31, mbtmp3.9/4, Error ellipse: s-maj=460.4km s-min=46.9km az=88.0*

ISC 06 18:43:48.8±1.1**, 16°.9S**±0°.2×**174°.1W**±0°.2**, h350**^{km}**, n5, σ0^{s}.49**/6**, mb3.3**/3**, Tonga Islands**

```
Code  Station Name        Δ°  AZ°   Phase ID           Time      Res
                                  Op       ISC      h  m  s    ISC
AFI   Afiamalu           3.75  37 P        Pn       18 44 55.1 -0.4
      4.9nm,0.3s,baz=220,slow=7.9,SNR=2.0
AFI                               S        S        18 45 49.6 +0.5
      14nm,0.3s,baz=225,slow=20,SNR=9.4
RAO   Raoul Island      12.76 195 P        P        18 46 38.7  0.0
      114nm,0.3s,baz=37,slow=20,SNR=2.8
STKA  Stephens Creek    42.70 241 P        P        18 51 13.2 +0.4
      1.7nm,0.9s,baz=84,slow=9.2,SNR=2.0
WRA   Warramunga Arr    48.85 258 P        P        18 52 00.4 -0.2
      0.1nm,0.3s,baz=97,slow=6.9,SNR=11
ASAR  Alice Springs     49.01 253 P        P        18 52 01.4 -0.3
      3.6nm,0.5s,baz=88,slow=8.4,SNR=118
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*IDC **06** 18:45:38.7±2.6, 13°.77N×92°.70W, h0^{km}, mb3.7/5, mb1 4.1/8, mb1mx3.8/42, mbtmp3.7/8, ML3.9/3, MS3.0/3, Ms1 3.0/3, ms1mx2.8/44, Error ellipse: s-maj=55.9km s-min=24.5km az=8.0*

*GCG **06** 18:45:42.1±0.4, 14°.05N×92°.77W, h25^{km}±831^{km}, MD4.1*

*MEX **06** 18:45:44.4±1.6, 14°.02N×92°.62W, h14^{km}±315^{km}, MD4.3*

ISC 06 18:45:41.4±1.9**, 14°.08N**±0°.06×**92°.59W**±0°.05**, h6**^{km}±11^{km}**, n29, σ2^{s}.02**/41**, mb3.6**/5**, Near coast of Chiapas**

```
Code  Station Name        Δ°  AZ°   Phase ID           Time      Res
                                  Op       ISC      h  m  s    ISC
THIG                     0.88  21 eP       Pn       18 45 59.7 -0.5
THIG                              eS       Sb       18 46 10.9  0.0
PATR  El Naranjo         1.08  18 eP       Pn       18 46 02.3 -1.0
PATR                              eS       Sg       18 46 16.4 +0.1
STG3  Santiaguito 3,     1.17  57 eP       Pg       18 46 05.6 +1.8
PAVE  Pavencul           1.17  20 eP       Pg       18 46 03.8 -0.1
PAVE                              eS       Sb       18 46 18.6 -1.2
PCIG                     1.73 339 eP       Pn       18 46 10.7 -1.3
PCIG                              eS       Sn       18 46 32.7 -1.6
FUG   Fuego 3            1.73  78 eP       Pb       18 46 13.4 -0.2
PCG   Pacaya             1.94  81 eP       Pb       18 46 16.9 -0.5
PCG                               eS       Sg       18 46 43.9  0.0
NBG   Las Nubes          2.23  77 eP       Pb       18 46 22.2  0.0
CCIG  Comitan            2.23  11 eP       Pb       18 46 21.5 -0.7
CCIG                              i S      Sg       18 46 51.8 -1.3
APG   El Apazote         2.25  66 Pn       Pb       18 46 21.6 -1.0
      49nm,0.3s,baz=274,slow=6.8,SNR=322
APG                               Sn       Sb       18 46 52.1 +1.4
      53nm,0.3s,baz=169,slow=16,SNR=8.0
APG                               LR       LR       18 47 07.6
      comp=Z,122nm,19.9s,baz=274,slow=36
TGIG                     2.73 349 eP       Pn       18 46 26.6 +0.8
TGIG                              eS       Sn       18 46 58.7 -0.5
MRL   Marmol             2.98  70 eP       Pb       18 46 32.3 -2.7
UXUV  UXUV               3.55 335 eP       Pn       18 46 37.8 +0.8
UXUV                              i S      Sn       18 47 18.8 -0.5
CMIG  Matias Romero      3.72 324 Pn       Pn       18 46 39.4  0.0
      5.2nm,0.3s,baz=143,slow=12,SNR=13
CMIG                              Sn       Sn       18 47 24.8 +1.2
      18nm,0.3s,baz=118,slow=15,SNR=4.5
CMIG  Matias Romero      3.72 324 eP       Pn       18 46 39.1 -0.3
CMIG                              eS       Sn       18 47 24.6 +1.0
HUIG  Huatulco           3.80 297 eP       Pn       18 46 38.5 -1.9
HUIG                              eS       Sn       18 47 18.6 -6.8
PEIG  Puerto Escondi     4.80 294 eP       Pn       18 46 52.8 -1.5
TOIG  Toxpalan           5.87 313 eP       Pn       18 47 10.2 +1.1
TOIG                              eS       Sn       18 48 21.8 +5.1
HLIG  Huajuapan de L     6.25 307 eP       Pb       18 47 21.0  -10
HLIG                              eS       Sn       18 48 30.4 +4.2
FTIG  Fresnillo de T     6.55 306 eP       Pn       18 47 20.1 +1.7
FTIG                              eS       Sn       18 48 37.9 +4.3
TXAR  Lajitas Array     18.32 328 P        P        18 49 58.4 +2.0
      0.1nm,0.3s,baz=152,slow=12,SNR=11
TKL   Tuckaleechee C    22.90  19 LR       LR       19 00 32.1
      comp=Z,70nm,19.6s,baz=346,slow=38
ANMO  Albuquerque       24.25 331 P        P        18 51 00.1 +0.7
      0.6nm,0.6s,baz=138,slow=19,SNR=2.3
NNA   Nana              30.24 148 LR       LR       19 02 53.0
      comp=Z,39nm,18.4s,baz=297,slow=34
PDAR  Pinedale Array    32.11 336 P        P        18 52 09.6 -0.2
      0.7nm,0.9s,baz=154,slow=11,SNR=3.6
NVAR  Mina Array Bea    33.25 322 P        P        18 52 20.1 +0.3
      0.9nm,0.5s,baz=133,slow=7.5,SNR=4.0
ILAR  Eielson Array     62.54 337 P        P        18 56 05.0 -0.7
      1.3nm,0.9s,baz=92,slow=6.2,SNR=10
ESDC  Sonseca Array     80.11  52 P        P        18 57 52.4 -0.1
      0.4nm,0.8s,baz=303,slow=3.0,SNR=1.8
CMAR  Chiang Mai Arr   145.73 340 PKPbc    PKPdf    19 05 20.6 -1.2
      1.3nm,0.8s,baz=334,slow=3.1,SNR=12
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*IDC **06** 18:49:11.4±6.3, 14°.20N×92°.67W, h0^{km}, mb3.6/2, mb1 3.8/5, mb1mx3.3/47, mbtmp3.4/5, ML3.4/3, MS3.2/1, Ms1 3.2/1, ms1mx2.7/34, Error ellipse: s-maj=119.0km s-min=25.5km az=7.0*

*MEX **06** 18:49:12.7±0.6, 14°.02N×92°.73W, h11^{km}, MD4.1*

ISC 06 18:49:12.7±2.5**, 14°.21N**±0°.10×**92°.67W**±0°.06**, h10**^{km}±12^{km}**, n14, σ0^{s}.81**/22**, Near coast of Chiapas**

```
Code  Station Name        Δ°  AZ°   Phase ID           Time      Res
                                  Op       ISC      h  m  s    ISC
THIG                     0.79  29 eP       Pg       18 49 27.8 -0.1
THIG                              eS       Sb       18 49 39.9 +0.6
PATR  El Naranjo         0.99  25 eP       Pb       18 49 31.5 -0.6
PATR                              eS       Sn       18 49 46.7 -0.4
PAVE  Pavencul           1.08  26 eP       Pb       18 49 33.1 -0.6
PAVE                              eS       Sn       18 49 49.5 +0.1
PCIG                     1.58 340 eP       Pn       18 49 39.9 -0.8
PCIG                              eS       Sn       18 50 00.1 -1.2
CCIG  Comitan            2.12  14 eP       Pb       18 49 51.2 -0.2
CCIG                              eS       Sg       18 50 21.4 +0.5
APG   El Apazote         2.27  69 Pn       Pn       18 49 51.0 +0.5
      12nm,0.3s,baz=249,slow=7.3,SNR=13
APG                               Sn       Sb       18 50 21.5 -0.7
      14nm,0.3s,baz=336,slow=20,SNR=4.1
TGIG                     2.59 350 eP       Pn       18 49 54.8 +0.1
TGIG                              eS       Sn       18 50 26.5 +0.1
UXUV  UXUV               3.40 335 eP       Pn       18 50 07.5 +1.6
UXUV                              eS       Sn       18 50 47.0 +0.7
CMIG  Matias Romero      3.57 324 Pn       Pn       18 50 08.6 +0.4
      2.2nm,0.3s,baz=147,slow=13,SNR=1.5
CMIG  Matias Romero      3.57 324 eP       Pn       18 50 07.5 -0.7
CMIG                              eS       Sn       18 50 49.7 -0.9
TXAR  Lajitas Array     18.17 328 P        P        18 53 26.3 +0.7
      0.0nm,0.3s,baz=142,slow=12,SNR=2.3
ROSC  El Rosal          20.33 115 LR       LR       19 01 46.1
      comp=Z,60nm,18.5s,baz=49,slow=37
NVAR  Mina Array Bea    33.10 322 P        P        18 55 50.4 +1.2
      0.2nm,0.4s,baz=146,slow=8.5,SNR=2.4
YKA   Yellowknife Ar    50.67 347 P        P        18 58 11.1 -1.0
      0.9nm,0.6s,baz=150,slow=7.9,SNR=5.6
```

RSPR 06 18:55:55.7, 18°.14N×67°.18W, h20^{km}±1^{km}**, 3C, Mona Passage**

```
Code  Station Name        Δ°  AZ°   Phase ID           Time      Res
                                  Op       ISC      h  m  s    ISC
LSP   Las Mesas          0.10  68⥣eP       Pg       18 55 59.2 -0.4
LSP   Las Mesas          0.10  68 eS       Sg       18 56 02.5 +0.1
CRPR  Cabo Rojo, PR      0.15 152⥣eP       Pg       18 56 00.2  0.0
CRPR  Cabo Rojo, PR      0.15 152 eS       Sg       18 56 03.1  0.0
MLPR  Magueyes Islan     0.21 142⥣eP       Pb       18 56 00.7 -0.1
MLPR  Magueyes Islan     0.21 142 eS       Sg       18 56 04.7 +0.1
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*NEIC **06** 18:57:36.3±2.0, 19°.5S±0°.1×178°.2W±0°.2, h606^{km}±8^{km}, mb4.5/42, Error ellipse: s-maj=23.8km s-min=19.3km az=105.0*

*NOU **06** 18:57:36.6, 19°.53S×178°.17W, h623^{km}, mb4.7/48, Fiji Islands Region*

*IDC **06** 18:57:37.4±0.9, 19°.65S×178°.38W, h615^{km}±9^{km}, mb3.7/19, mb1 3.8/23, mb1mx3.5/37, mbtmp4.6/23, Error ellipse: s-maj=13.7km s-min=10.1km az=144.0*

ISC 06 18:57:35.8±0.4**, 19°.59S**±0°.08×**178°.26W**±0°.06**, h600**^{km}**, n270, σ0^{s}.99**/284**, mb4.5**/57**, 39C-18D, Fiji Islands region**

```
Code  Station Name        Δ°  AZ°   Phase ID           Time      Res
                                  Op       ISC      h  m  s    ISC
TAVE  Taveuni            3.27 331 P        P        18 58 59.5 +2.9
DGTI  Dogotuki           3.79 329 P        P        18 59 02.5 +2.5
MSVF  Nonsavu            3.96 297 P        P        18 59 03.3 +2.1
      31nm,0.3s,baz=163,slow=3.2,SNR=78
MSVF                              S        S        19 00 14.1 +3.5
      baz=150,slow=20,SNR=0.5
MSVF  Nonsavu            3.96 297 P        P        18 59 03.4 +2.3
MSVF  Nonsavu            3.96 297 P        P        18 59 04.1 +2.9
NIUE  Niue               7.88  88 P        P        18 59 35.0 +0.9
AFI   Afiamalu           8.39  49 P        P        18 59 38.5 -0.5
      26nm,0.3s,baz=186,slow=1.5,SNR=28
AFI                               S        S        19 01 16.5 -3.5
      8.1nm,0.3s,baz=220,slow=16,SNR=4.6
RTV   Rentapao          12.75 276 P        P        19 00 24.1 +2.0
DVP   Devils Point      12.98 276 P        P        19 00 26.1 +1.6
YATNC Mamie plateau,    14.10 257 P        P        19 00 36.6 +0.9
SANVU Saraoutou         14.46 284 P        P        19 00 39.8 +0.6
SANVU Saraoutou         14.46 284 P        P        19 00 39.3 +0.1
DZM   Mont Dzumac       14.52 258 P        P        19 00 40.5 +0.8
      1.8nm,0.3s,baz=90,slow=18,SNR=31
DZM   Mont Dzumac       14.52 258 P        P        19 00 41.9 +2.2
DZM   Mont Dzumac       14.52 258 P        P        19 00 41.9 +2.2
OUZ   Omahuta           17.16 203 P        P        19 01 05.5 +1.9
OUZ                               IAmb     IAmb     19 01 10.2
      comp=Z,14nm,1.1s
OUZ   Omahuta           17.16 203 P        P        19 01 05.9 +2.3
RAR   Rarotonga         17.41  99 P        P        19 01 06.5 +0.4
      comp=Z,2.9nm,0.3s,baz=251,slow=4.0,SNR=6.7
URZ   Urewera           19.04 191 P        P        19 01 19.4 -1.2
      comp=Z,0.6nm,0.3s,baz=307,slow=20,SNR=2.5
QRZ   Quartz Range      22.59 198 P        P        19 01 53.4 +0.9
EIDS  Eidsvold          28.87 253 P        P        19 02 47.7 -0.3
EIDS                              IAmb     IAmb     19 02 48.3
      comp=Z,11nm,1.0s
ARMA  Armidale          29.26 242 P        P        19 02 51.6 +0.3
ARMA                              IAmb     IAmb     19 02 52.8
      comp=Z,6.0nm,0.7s
CTAO  Charters Tower    33.35 263 P        P        19 03 26.7 +0.5
CTAO  Charters Tower    33.35 263 P        P        19 03 26.7 +0.5
CMSA  Cobar Meteorol    34.48 243 P        P        19 03 35.9 +0.5
PMG   Port Moresby      34.91 282 P        P        19 03 37.3 -1.9
TOO   Toolangi          36.24 233 P        P        19 03 49.3 -0.6
TOO                               IAmb     IAmb     19 03 51.3
      comp=Z,16nm,0.8s
COEN  Coen              37.29 273 P        P        19 03 59.1 +0.3
STKA  Stephens Creek    37.97 243 P        P        19 04 04.3 +0.3
      comp=Z,15nm,0.8s,baz=92,slow=9.7,SNR=23
STKA                              PcP      PcP      19 06 03.7 +0.1
      comp=Z,1.5nm,0.5s,baz=135,slow=4.3,SNR=2.2
STKA  Stephens Creek    37.97 243 P        P        19 04 04.5 +0.5
STKA  Stephens Creek    37.97 243 P        P        19 04 04.6 +0.5
HTT   Hallett           40.44 241 P        P        19 04 24.3 +0.4
LCRK  Leigh Creek       40.68 246 P        P        19 04 26.0 +0.3
BBOO  Buckleboo         42.74 243 P        P        19 04 41.9  0.0
BBOO  Buckleboo         42.74 243 P        P        19 04 41.9  0.0
MULG  Mulgathing        44.25 246 P        P        19 04 53.5 -0.1
WR0   Warramunga Arr    44.30 261 P        P        19 04 53.6 -0.5
WR0                               IAmb     IAmb     19 04 55.2
      comp=Z,9.3nm,0.9s
WB0   Warramunga Arr    44.47 261 P        P        19 04 54.6 -0.8
WB0                               IAmb     IAmb     19 04 55.6
      comp=Z,28nm,1.1s
WB2   Warramunga Arr    44.48 261 P        P        19 04 55.1 -0.5
```

WRAB	**Tennant Creek**	**44.48**	**261**	P	**P**	**19 04 55.0**	**-0.5**
WRA	**Warramunga Arr**	**44.49**	**261**	P	**P**	**19 04 54.4**	**-1.3**
	comp=Z,7.1nm,0.5s,baz=97,slow=7.7,SNR=286						
WRA				PcP	**PcP**	**19 06 25.1**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=92,slow=3.4,SNR=6.3						
WRA				ScP	**ScP**	**19 09 21.6**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=142,slow=5.6,SNR=2.8						
WRA				S	**S**	**19 10 44.8**	**-3.8**
	comp=Z,0.4nm,0.9s,baz=111,slow=13,SNR=4.7						
WRA	**Warramunga Arr**	**44.49**	**261**	P	**P**	**19 04 54.0**	**-1.6**
AS31	**Alice Springs**	**44.50**	**256**	P	**P**	**19 04 54.4**	**-1.2**
AS31				IAmb	IAmb	19 04 56.9	
	comp=Z,9.5nm,0.9s						
ASAR	**Alice Springs**	**44.50**	**256**	P	**P**	**19 04 55.3**	**-0.4**
	comp=Z,26nm,0.8s,baz=87,slow=8.3,SNR=364						
ASAR				PcP	**PcP**	**19 06 25.4**	**-0.2**
	comp=Z,4.2nm,0.8s,baz=102,slow=4.2,SNR=9.1						
ASAR				ScP	**ScP**	**19 09 20.3**	**-1.1**
	comp=Z,0.6nm,0.9s,baz=94,slow=4.6,SNR=3.3						
ASAR				S	**S**	**19 10 46.1**	**-2.5**
	comp=Z,1.4nm,1.0s,baz=89,slow=14,SNR=10						
MTN	**Manton Dam**	**48.92**	**270**	P	**P**	**19 05 28.6**	**-0.2**
FORT	**Forrest**	**49.44**	**246**	P	**P**	**19 05 31.9**	**-0.6**
FORT	**Forrest**	**49.44**	**246**	P	**P**	**19 05 31.8**	**-0.6**
KNRA	**Kununurra**	**50.48**	**266**	P	**P**	**19 05 40.0**	**-0.3**
KNRA				IAmb	IAmb	19 05 40.9	
	comp=Z,16nm,0.7s						
KNRA	**Kununurra**	**50.48**	**266**	P	**P**	**19 05 40.0**	**-0.3**
FAKI	**Fak Fak**	**51.06**	**283**	P	**P**	**19 05 43.8**	**-0.7**
SWI	**Sorong**	**52.78**	**284**	P	**P**	**19 05 57.0**	**+0.2**
	comp=Z,59nm,0.8s						
AAI	**Ambon**	**54.53**	**280**	P	**P**	**19 06 08.6**	**-0.5**
	comp=Z,14nm,1.5s						
SOEI	**Soe**	**56.23**	**271**	P	**P**	**19 06 22.2**	**+1.1**
	comp=Z,65nm,0.8s						
LBMI	**Labuha**	**56.32**	**283**	P	**P**	**19 06 22.3**	**+0.8**
	comp=Z,486nmcomp=Z,13nm,0.9s						
TNTI	**Ternate**	**57.00**	**284**	P	**P**	**19 06 27.0**	**+0.9**
	comp=Z,28nm,0.9s						
SANI	**Sanana**	**57.17**	**281**	P	**P**	**19 06 26.9**	**-0.5**
	comp=Z,20nm,0.9s						
PSA00	**Pilbara Seismi**	**57.64**	**256**	P	**P**	**19 06 29.6**	**-0.8**
PSA00				IAmb	IAmb	19 06 30.7	
	comp=Z,22nm,0.8s						
PSA00	**Pilbara Seismi**	**57.64**	**256**	P	**P**	**19 06 29.4**	**-1.0**
PSA00				IAmb	IAmb	19 06 30.7	
	comp=Z,11nm,0.8s						
PSA00	**Pilbara Seismi**	**57.64**	**256**	P	**P**	**19 06 30.0**	**-0.4**
MBWA	**Marble Bar**	**57.82**	**257**	P	**P**	**19 06 31.2**	**-0.4**
MEEK	**Meekatharra**	**57.99**	**250**	P	**P**	**19 06 31.9**	**-0.9**
KLBR	**Kellerberrin**	**58.22**	**244**	P	**P**	**19 06 33.5**	**-0.7**
	comp=Z,69nm,0.7s						
MMRI	**Maumere**	**58.48**	**272**	P	**P**	**19 06 35.7**	**-0.5**
	comp=Z,28nm,0.8s						
BLDU	**Ballidu**	**59.20**	**245**	P	**P**	**19 06 40.3**	**-0.5**
MUN	**Mundaring**	**59.50**	**244**	P	**P**	**19 06 42.9**	**+0.2**
MORW	**Morawa**	**59.95**	**247**	P	**P**	**19 06 44.3**	**-1.5**
MORW	**Morawa**	**59.95**	**247**	P	**P**	**19 06 45.1**	**-0.7**
GIRL	**Giralia**	**62.56**	**254**	P	**P**	**19 07 01.8**	**-1.1**
GIRL	**Giralia**	**62.56**	**254**	P	**P**	**19 07 02.5**	**-0.4**
PLAI	**Plampang**	**62.63**	**270**	P	**P**	**19 07 02.5**	**-0.9**
	comp=Z,38nm,0.9s						
PLAI	**Plampang**	**62.63**	**270**	P	**P**	**19 07 02.9**	**-0.5**
TOLI2	**Tolitoli**	**63.18**	**282**	P	**P**	**19 07 06.8**	**-0.2**
TWSI	**Taliwang, Sumb**	**63.50**	**270**	P	**P**	**19 07 07.9**	**-1.1**
	comp=Z,24nm,1.1s						
MPSI	**Mapaga**	**63.71**	**280**	P	**P**	**19 07 09.5**	**-0.8**
	comp=Z,24nm,0.9s						
JHJ	**Hachijo jima 2**	**65.97**	**322**	P	**P**	**19 07 24.9**	**+0.9**
	comp=Z,41nm,0.4s,baz=86,slow=24,SNR=4.7						
JAGI	**Jajag, Banyuwa**	**66.15**	**269**	P	**P**	**19 07 24.4**	**-1.2**
	comp=Z,37nm,1.0s						
JAGI	**Jajag, Banyuwa**	**66.15**	**269**	P	**P**	**19 07 23.7**	**-1.9**
JAGI				IAmb	IAmb	19 07 25.1	
	comp=Z,37nm,1.1s						
JAGI	**Jajag, Banyuwa**	**66.15**	**269**	P	**P**	**19 07 24.7**	**-0.9**
KKM	**Kota Kinabalu**	**69.29**	**285**	P	**P**	**19 07 45.0**	**+0.2**
KKM				IAmb	IAmb	19 07 45.9	
	comp=Z,16nm,0.7s						
KKM	**Kota Kinabalu**	**69.29**	**285**	P	**P**	**19 07 45.0**	**+0.2**
MJAR	**Matsushiro Arr**	**69.34**	**324**	P	**P**	**19 07 44.2**	**-0.3**
	comp=Z,5.6nm,0.5s,baz=156,slow=6.0,SNR=22						
MJAR	**Matsushiro Arr**	**69.34**	**324**	P	**P**	**19 07 43.9**	**-0.6**
MAJO	**Matsushiro**	**69.34**	**324**	P	**P**	**19 07 43.6**	**-0.8**
MAJO				IAmb	IAmb	19 07 45.4	
	comp=Z,7.0nm,0.6s						
MAJO	**Matsushiro**	**69.34**	**324**	P	**P**	**19 07 43.9**	**-0.6**
MAT	**Matsushiro**	**69.34**	**324**	P	**P**	**19 07 44.5**	**0.0**
UGM	**Wanagama**	**69.74**	**269**	P	**P**	**19 07 46.2**	**-1.2**
UGM	**Wanagama**	**69.74**	**269**	P	**P**	**19 07 47.0**	**-0.4**
JWT	**Wachi**	**70.07**	**321**	P	**P**	**19 07 48.0**	**-0.9**
JWT				IAmb	IAmb	19 07 49.6	
	comp=Z,15nm,1.1s						
QSPA	**South Pole Qui**	**70.47**	**180**	P	**P**	**19 07 51.4**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=73,slow=2.4,SNR=7.1						
QSPA	**South Pole Qui**	**70.47**	**180**	P	**P**	**19 07 50.9**	**0.0**
ADK	**Adak**	**71.18**	**1**	P	**P**	**19 07 54.5**	**-0.4**
ADK				IAmb	IAmb	19 07 55.3	
	comp=Z,19nm,0.7s						
ADK	**Adak**	**71.18**	**1**	P	**P**	**19 07 54.7**	**-0.2**
ASAJ	**Asahikawa**	**72.81**	**332**	P	**P**	**19 08 06.2**	**+1.6**
	comp=Z,13nm,1.0s,baz=178,slow=6.2,SNR=5.2						
KSM	**Kuching**	**73.05**	**278**	P	**P**	**19 08 05.4**	**-1.2**
KSM				IAmb	IAmb	19 08 07.7	
	comp=Z,12nm,0.7s						
KSM	**Kuching**	**73.05**	**278**	P	**P**	**19 08 07.2**	**+0.6**
SSLB	**Suanglung**	**73.27**	**303**	P	**P**	**19 08 06.8**	**-0.9**
TPUB	**Ta-pu**	**73.28**	**303**	P	**P**	**19 08 06.5**	**-1.2**
TPUB				IAmb	IAmb	19 08 19.1	
	comp=Z,28nm,1.0s						
TPUB	**Ta-pu**	**73.28**	**303**	P	**P**	**19 08 06.9**	**-0.8**
PETK	**Petropavlovsk-**	**75.33**	**345**	P	**P**	**19 08 18.5**	**0.0**
	comp=Z,6.2nm,0.7s,baz=112,slow=6.4,SNR=14						
KSRS	**Korea Array**	**76.05**	**319**	P	**P**	**19 08 23.3**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=130,slow=7.0,SNR=8.1						
MDSI	**Maura Dua**	**76.80**	**270**	P	**P**	**19 08 26.8**	**-0.7**
USRK	**Ussuriysk Ar.**	**78.08**	**326**	P	**P**	**19 08 34.3**	**+0.6**
	comp=Z,5.9nm,0.7s,baz=138,slow=3.6,SNR=9.1						
USRK	**Ussuriysk Ar.**	**78.08**	**326**	P	**P**	**19 08 34.0**	**+0.3**
KSI	**Kapahiang**	**78.57**	**270**	P	**P**	**19 08 36.7**	**-0.4**
	comp=Z,34nm,0.8s						
NJ2	**Nanjing**	**79.11**	**310**	*e*P	**P**	**19 08 40.0**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
BKNI	**Bangkinang**	**81.35**	**273**	P	**P**	**19 08 46.9**	**-4.6**
KLR	**Kul'dur**	**81.62**	**330**	P	**P**	**19 08 52.9**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=92,slow=9.6,SNR=4.5						
IPM	**Ipoh**	**82.77**	**277**	P	**P**	**19 08 59.0**	**+0.3**
IPM	**Ipoh**	**82.77**	**277**	P	**P**	**19 08 59.5**	**+0.8**
SEY	**Seymchan**	**85.44**	**347**	P	**P**	**19 09 10.8**	**+0.3**
	comp=Z,6.4nm,0.6s,baz=138,slow=6.0,SNR=19						
TRF	**Thorofare Moun**	**85.61**	**12**	P	**P**	**19 09 11.4**	**-0.3**
TRF				IAmb	IAmb	19 09 12.2	
	comp=Z,8.0nm,0.9s						
RND	**Reindeer**	**85.87**	**13**	P	**P**	**19 09 13.0**	**+0.3**
RND				IAmb	IAmb	19 09 13.8	
	comp=Z,11nm,0.9s						
TXAR	**Lajitas Array**	**86.77**	**57**	P	**P**	**19 09 19.3**	**+1.4**
	comp=Z,1.0nm,0.8s,baz=220,slow=5.9,SNR=10.0						
I21K	**Tanana**	**86.86**	**11**	P	**P**	**19 09 17.5**	**+0.2**
I21K				IAmb	IAmb	19 09 18.3	
	comp=Z,6.1nm,0.7s						
HDA	**Harding Lake**	**87.16**	**13**	P	**P**	**19 09 18.8**	**+0.1**
HDA				IAmb	IAmb	19 09 19.7	
	comp=Z,11nm,0.7s						
H21K	**Melozitna Rive**	**87.16**	**10**	P	**P**	**19 09 19.1**	**+0.4**
MDM	**Murphy Dome**	**87.37**	**12**	P	**P**	**19 09 19.0**	**-0.7**
MDM				IAmb	IAmb	19 09 20.2	
	comp=Z,7.8nm,0.8s						
XAN	**Xi'an**	**87.39**	**307**	P	**P**	**19 09 21.5**	**+0.9**
XAN				pP	PcP	19 09 29.2	+7.3
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
IL31		**87.48**	**13**	P	**P**	**19 09 19.8**	**-0.4**
ILAR	**Eielson Array**	**87.48**	**13**	P	**P**	**19 09 19.9**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=217,slow=5.4,SNR=44						
PDAR	**Pinedale Array**	**88.47**	**43**	P	**P**	**19 09 26.6**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=220,slow=3.6,SNR=3.9						
HHC	**Hu-ho-hao-te**	**88.55**	**314**	*e*P	**P**	**19 09 26.8**	**+0.9**
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,6.6s						
DAWY	**Dawson**	**88.66**	**16**	P	**P**	**19 09 26.1**	**+0.3**
KMI	**Kunming**	**88.72**	**297**	⇓P	**P**	**19 09 28.4**	**+1.2**
KMI				pmax	pmax		
	comp=Z,17nm,0.8s						
EGAK	**Eagle**	**88.79**	**15**	P	**P**	**19 09 27.1**	**+0.8**
EGAK				IAmb	IAmb	19 09 27.7	
	comp=Z,5.0nm,0.8s						
VNA3	**Neumayer Olymp**	**89.06**	**176**	P	**P**	**19 09 27.9**	**+0.2**
VNA2	**Neumayer--Watz**	**89.50**	**177**	P	**P**	**19 09 30.2**	**+0.5**
CMAR	**Chiang Mai Arr**	**89.58**	**290**	P	**P**	**19 09 32.5**	**+1.4**
	comp=Z,4.5nm,0.9s,baz=118,slow=2.8,SNR=29						
YAK	**Yakutsk**	**91.18**	**338**	P	**P**	**19 09 36.4**	**-0.9**
	comp=Z,2.1nm,0.5s,baz=115,slow=17,SNR=4.9						
INK	**Inuvik**	**93.46**	**15**	P	**P**	**19 09 47.2**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=261,slow=4.3,SNR=4.7						
INK	**Inuvik**	**93.46**	**15**	P	**P**	**19 09 47.8**	**+0.1**
SONM	**Songino Array**	**94.91**	**319**	P	**P**	**19 09 55.2**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=127,slow=4.8,SNR=3.1						
YKA	**Yellowknife Ar**	**95.79**	**25**	P	**P**	**19 09 58.4**	**0.0**
	comp=Z,0.2nm,0.5s,baz=240,slow=4.8,SNR=3.1						
ZALV	**Zalesovo Beam**	**109.63**	**321**	PKiKP	**PKiKP**	**19 14 57.8**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=92,slow=1.2,SNR=4.1						
MKAR	**Makanchi Array**	**110.40**	**314**	PKiKP	**PKiKP**	**19 14 59.7**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=124,slow=0.9,SNR=13						
KSH	**Kashi**	**114.17**	**305**	PKP	**PKiKP**	**19 15 09.9**	**+1.6**
ARCES	**ARCESS Array B**	**127.99**	**350**	PKP	**PKPdf**	**19 15 33.3**	**-0.5**
	comp=Z,1.6nm,0.4s,baz=111,slow=1.0,SNR=27						
ARCES	**ARCESS Array B**	**127.99**	**350**		**PKPdf**	**19 15 33.5**	**-0.3**
FINES	**FINESS Array B**	**134.84**	**344**	PKP	**PKPdf**	**19 15 47.6**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=56,slow=3.5,SNR=2.0						
AKASG	**Malin Array Be**	**142.10**	**331**	PKhKP	PKPpre	19 15 56.2	
	comp=Z,3.0nm,0.3s,baz=43,slow=4.2,SNR=37						
AKASG	**Malin Array Be**	**142.10**	**331**		**PKPdf**	**19 15 56.5**	**-4.0**
AKBB	**Malin Array Si**	**142.10**	**331**	PKPdf	**PKPdf**	**19 15 56.4**	**-4.0**
LODK	**Lodwar**	**143.47**	**248**	PKPdf	PKPbc	19 16 03.5	+0.5
SORM	**Soroca**	**144.30**	**329**	⇓P	PKPbc	19 16 03.8	-0.6
MILM	**Milestii Mici**	**144.90**	**327**	⇓P	**PKPdf**	**19 16 04.4**	**-1.0**
VASR	**Vaslui**	**145.60**	**328**	⇑P	**PKPbc**	**19 16 08.1**	**-0.2**
VLDR	**Vladesti**	**145.99**	**326**	⇑P	**PKPbc**	**19 16 09.6**	**+0.2**
TLCR		**146.03**	**325**	⇑P	**PKPbc**	**19 16 09.2**	**-0.3**
BR131	**Keskin Array S**	**146.05**	**313**		**PKPbc**	**19 16 10.0**	**0.0**
BRTR	**Keskin Array B**	**146.05**	**313**	PKPbc	**PKPdf**	**19 16 08.8**	**+0.9**
	comp=Z,6.1nm,0.8s,baz=133,slow=4.1,SNR=31						
BRTR	**Keskin Array B**	**146.05**	**313**		**PKPbc**	**19 16 09.7**	**-0.3**
BUR08	**Bucovina Ar. S**	**146.14**	**331**		**PKPbc**	**19 16 10.9**	**+1.0**
SCTR	**Scanteiesti**	**146.15**	**326**	⇓P	**PKPbc**	**19 16 09.9**	**0.0**
BURAR	**Bucovina Array**	**146.15**	**331**	⇑P	**PKPbc**	**19 16 10.6**	**+0.6**
BURAR	**Bucovina Array**	**146.15**	**331**		**PKPbc**	**19 16 10.8**	**+0.8**
OJC	**Ojcow**	**146.23**	**339**	*e*PKPbc	**PKPbc**	**19 16 10.3**	**+0.3**
TESR	**Tescani**	**146.26**	**328**	⇓P	**PKPbc**	**19 16 09.7**	**-0.5**
KOLS	**Kolonicke sedl**	**146.39**	**335**	*e*PKP	**PKPbc**	**19 16 11.0**	**+0.6**
CFR	**Carcaliu**	**146.40**	**325**	⇑P	**PKPbc**	**19 16 10.3**	**-0.3**
TPGR	**Topolog**	**146.46**	**325**	⇑P	**PKPbc**	**19 16 11.0**	**+0.3**
VRI	**Vrincioaia**	**146.67**	**328**	⇑P	**PKPbc**	**19 16 10.4**	**-0.9**
PLOR	**Plostina**	**146.72**	**328**	⇑P	**PKPdf**	**19 16 08.3**	**-0.4**
CRVS	**Cervenica-Dubn**	**146.73**	**336**	*e*PKP	**PKPbc**	**19 16 11.7**	**+0.3**
NIE	**Niedzica**	**146.73**	**338**	*e*PKPbc	**PKiKP**	**19 16 12.8**	**-0.5**
KSP	**Ksiaz**	**146.75**	**343**	*e*PKPbc	**PKPbc**	**19 16 12.1**	**+0.8**
HARR	**Harsova**	**146.83**	**325**	⇑P	**PKPbc**	**19 16 11.7**	**0.0**
BMR	**Baia Mare**	**146.87**	**333**	⇑P	**PKPbc**	**19 16 11.7**	**-0.1**
TRPA	**Tarpa**	**146.92**	**334**	⇓P	**PKPbc**	**19 16 11.8**	**-0.1**
TRPA	**Tarpa**	**146.92**	**334**	*e*PKPDF	**PKPdf**	**19 16 08.0**	**-0.8**
TRPA	**Tarpa**	**146.92**	**334**	*e*P	**PKPbc**	**19 16 11.8**	**0.0**
ARCR	**ARCALIA**	**146.94**	**331**	⇑P	**PKPbc**	**19 16 12.6**	**+0.6**
COVR	**Voineasa-Covas**	**146.95**	**328**	⇑P	**PKPbc**	**19 16 11.3**	**-0.7**
OZUR		**146.98**	**329**	⇑P	**PKPbc**	**19 16 11.7**	**-0.5**
MANR	**Mangalia**	**147.02**	**323**	⇓P	**PKPbc**	**19 16 12.5**	**+0.3**
OSTC	**Ostas**	**147.03**	**343**	⇑*e*PKP	**PKiKP**	**19 16 13.3**	**-0.6**
CLZ	**Clausthal**	**147.11**	**350**	*e*PKPbc	**PKPbc**	**19 16 12.8**	**+0.5**
	baz=17,slow=2.4						
CLL	**Collm**	**147.12**	**347**	*i* PKPbc	**PKPbc**	**19 16 12.2**	**-0.1**
	comp=Z,13nm,0.6s						
CLL				*i* PKPab	**PKPab**	**19 16 16.0**	**+0.1**
	comp=Z,10.0nm,0.8s						
CLL	**Collm**	**147.12**	**347**	*e*PKPbc	**PKPbc**	**19 16 12.3**	**0.0**
	baz=17,slow=2.4						
UPC	**Upice**	**147.13**	**343**	⇑*e*PKP	**PKPbc**	**19 16 13.0**	**+0.6**
DPC	**Dobruska-Polom**	**147.19**	**343**	⇑*e*PKP	**PKPbc**	**19 16 12.9**	**+0.3**
DPC				*e*PKPAB	**PKPab**	**19 16 17.0**	**+0.7**
NEHR	**Nehoiu**	**147.20**	**327**	⇑P	**PKPbc**	**19 16 12.6**	**-0.2**
LANS	**Liptovska Anna**	**147.25**	**338**	*e*PKP	**PKiKP**	**19 16 13.9**	**-0.5**
DOPR	**Dopca**	**147.27**	**329**	⇑P	**PKPbc**	**19 16 13.3**	**+0.4**
ISR	**Istrita**	**147.28**	**327**	⇑P	**PKPbc**	**19 16 13.2**	**+0.2**
KRLC	**Kraliky**	**147.30**	**342**	⇑*e*PKP	**PKPbc**	**19 16 13.3**	**+0.4**
KRLC				*e*PKPAB	**PKPab**	**19 16 17.4**	**+0.6**
BRG	**Berggiesshubel**	**147.32**	**346**	*e*PKPbc	**PKPbc**	**19 16 13.0**	**+0.2**
	baz=17,slow=2.4						
BRG	**Berggiesshubel**	**147.32**	**346**	*i* PKP	**PKPbc**	**19 16 13.4**	**+0.6**
BRG				Amp		19 16 14.1	
	comp=Z,6.9nm,0.7s						
BRG	**Berggiesshubel**	**147.32**	**346**	P	**PKPab**	**19 16 16.9**	**+0.1**
BRG				Amp		19 16 17.7	
	comp=Z,5.9nm,0.8s						
MLR	**Muntele Rosu**	**147.33**	**328**	⇑P	**PKPbc**	**19 16 12.6**	**-0.6**
MORC	**Moravsky Berou**	**147.34**	**341**	*e*PKP	**PKPbc**	**19 16 13.1**	**+0.1**
MORC				*e*		19 16 17.7	
FBE	**Freiberg**	**147.41**	**346**	*e*PKPbc	**PKPbc**	**19 16 13.6**	**+0.6**
	baz=17,slow=2.4						
GTTG	**Gottingen**	**147.46**	**350**	*e*PKPbc	**PKPbc**	**19 16 13.5**	**+0.3**
	baz=17,slow=2.4						
NEUB	**Neuenburg**	**147.47**	**348**	*e*PKPbc	**PKPbc**	**19 16 13.5**	**+0.3**
	baz=17,slow=2.4						
PVCC	**Panska Ves**	**147.49**	**345**	⇑*e*PKP	**PKPbc**	**19 16 13.7**	**+0.4**
SECR		**147.58**	**327**	⇑P	**PKPbc**	**19 16 12.6**	**-1.1**
VOIR		**147.81**	**328**	⇓P	**PKPbc**	**19 16 14.2**	**-0.2**
PRU	**Pruhonice**	**148.00**	**344**	⇑*e*PKP	**PKPbc**	**19 16 14.9**	**+0.3**
PRU				*e*PKPAB	**PKPab**	**19 16 20.5**	**+0.9**
VYHS	**Vyhne**	**148.03**	**338**	*e*PKP	**PKPbc**	**19 16 15.4**	**+0.7**
MOX	**Moxa**	**148.04**	**348**	*e*PKPbc	**PKPbc**	**19 16 14.9**	**+0.2**
	baz=17,slow=2.4						
VRAC	**Vranov**	**148.04**	**342**	⇑P	**PKPbc**	**19 16 14.1**	**-0.6**
VRAC	**Vranov**	**148.04**	**342**	*e*PKP	**PKPbc**	**19 16 14.6**	**-0.1**
VRAC				*e*		19 16 20.6	
BORR	**Bors**	**148.05**	**334**	⇑P	**PKPdf**	**19 16 07.4**	**-3.4**
ARR	**Arges**	**148.07**	**329**	⇑P	**PKiKP**	**19 16 16.0**	**-0.2**
PLN	**Plauen**	**148.08**	**347**	*e*PKPbc	**PKPbc**	**19 16 15.0**	**+0.2**
	baz=17,slow=2.4						
TANN	**Tannenbergstha**	**148.08**	**347**	*e*PKPbc	**PKPbc**	**19 16 15.1**	**+0.2**
	baz=17,slow=2.4						
WERD	**Werda**	**148.08**	**347**	*e*PKPbc	**PKPbc**	**19 16 15.0**	**+0.2**
	baz=17,slow=2.4						
JAVC	**Velka Javorina**	**148.10**	**340**	*e*PKP	**PKiKP**	**19 16 16.4**	**+0.2**
KOLL	**Kolacno**	**148.10**	**339**	*e*PKP	**PKiKP**	**19 16 15.6**	**-0.5**
PSZ	**Piszkesteto**	**148.13**	**337**	⇑P	**PKPbc**	**19 16 15.2**	**+0.1**
GUNZ	**Gunzen**	**148.16**	**347**	*e*PKPbc	**PKPbc**	**19 16 15.3**	**+0.3**
	baz=17,slow=2.4						
NKC	**Novy Kostel**	**148.26**	**347**	⇑*e*PKP	**PKPbc**	**19 16 15.7**	**+0.4**
KRUC	**Moravsky**	**148.32**	**342**	*e*PKP	**PKPbc**	**19 16 15.7**	**+0.3**
KRUC				*e*		19 16 21.6	
RAZG	**Razgrad**	**148.34**	**325**	⇑P	**PKPbc**	**19 16 15.3**	**-0.4**
SMOL	**Smolenice**	**148.48**	**340**	*e*PKP	**PKiKP**	**19 16 16.8**	**-0.1**
MODS	**Modra-Piesok**	**148.66**	**340**	*e*PKP	**PKPbc**	**19 16 16.4**	**+0.1**
ROTZ	**Rotzenmuhle**	**148.75**	**347**	*e*PKPbc	**PKPbc**	**19 16 16.7**	**+0.3**
	baz=17,slow=2.4						
SIRR	**Siria**	**148.76**	**333**	⇑P	**PKPbc**	**19 16 16.4**	**-0.2**
MEM	**Membach**	**148.86**	**355**	*d*PKiKP	**PKPbc**	**19 16 17.0**	**+0.3**
BTNL	**Ternell**	**148.88**	**355**	*d*PKiKP	**PKPbc**	**19 16 17.1**	**+0.4**
GZR	**Gura Zlata**	**148.93**	**331**	⇑P	**PKPbc**	**19 16 16.7**	**-0.4**
TNS	**Taunus Mts**	**148.97**	**352**	*e*PKPbc	**PKPbc**	**19 16 17.2**	**+0.2**
	baz=17,slow=2.4						
KHC	**Kasperske Hory**	**149.03**	**345**	⇑*e*PKP	**PKPbc**	**19 16 17.6**	**+0.4**
KHC				*e*PKPAB	**PKPab**	**19 16 24.5**	**+0.6**
SNF	**Seneffe**	**149.08**	**357**	*d*PKiKP	**PKPbc**	**19 16 17.6**	**+0.4**
BHOU	**Houvegnez**	**149.12**	**355**	*d*PKiKP	**PKPbc**	**19 16 16.6**	**-0.8**
CKRC	**Cesky Krumlov**	**149.13**	**344**	⇑*e*PKP	**PKiKP**	**19 16 18.8**	**+0.5**
CKRC				*e*PKPAB	**PKPab**	**19 16 25.7**	**+1.4**
BGES	**Gesves**	**149.16**	**356**	*d*PKiKP	**PKPbc**	**19 16 17.4**	**-0.1**
BMRD	**Maredsous**	**149.26**	**356**	*d*PKiKP	**PKPbc**	**19 16 18.0**	**+0.3**
GEC2	**GERESS Array S**	**149.26**	**344**	*e*PKPbc	**PKPbc**	**19 16 17.8**	**0.0**
	baz=17,slow=2.4						
GERES	**GERESS Array B**	**149.26**	**344**	PKPbc	**PKPbc**	**19 16 18.0**	**+0.1**
	comp=Z,4.4nm,0.5s,baz=31,slow=3.1,SNR=42						
GERES				PKPab	**PKPab**	**19 16 25.1**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=48,slow=4.2,SNR=5.8						
RCHB	**Rochefort**	**149.38**	**356**	*d*PKiKP	**PKPbc**	**19 16 17.9**	**0.0**
DOU	**Dourbes**	**149.48**	**356**	*d*PKiKP	**PKPbc**	**19 16 18.3**	**+0.1**
HERR	**Herculane**	**149.49**	**330**	⇓P	**PKPbc**	**19 16 18.1**	**-0.2**
SOP	**Sopron**	**149.49**	**340**	*e*P	**PKiKP**	**19 16 19.0**	**0.0**
CONA	**Conrad Observa**	**149.49**	**341**	*e*P	**PKPbc**	**19 16 18.6**	**+0.2**
	comp=Z,8.7nm,0.7s						
MPLH	**Magyarpolny**	**149.61**	**338**	*e*P	**PKiKP**	**19 16 19.0**	**-0.2**
WLF	**Walferdange**	**149.79**	**354**	*d*PKiKP	**PKiKP**	**19 16 19.7**	**+0.1**
WLF	**Walferdange**	**149.79**	**354**	*e*PKPbc	**PKiKP**	**19 16 19.7**	**+0.1**
	baz=17,slow=2.4						
MDVR	**Moldovita**	**149.89**	**331**	⇑P	**PKPbc**	**19 16 18.6**	**-0.8**
MORH	**Mrgy, Hungar**	**150.02**	**336**	⇑P	**PKPbc**	**19 16 18.9**	**-0.7**
MORH	**Mrgy, Hungar**	**150.02**	**336**	*e*P	**PKPbc**	**19 16 19.4**	**-0.1**
MOA	**Molln**	**150.03**	**343**	*i* P	**PKPbc**	**19 16 19.6**	**0.0**
	comp=Z,4.7nm,0.9s,SNR=4.3						
ARSA	**Arzberg**	**150.20**	**341**	*e*P	**PKPbc**	**19 16 20.1**	**+0.1**
	comp=Z,4.5nm,1.2s						
STU	**Stuttgart**	**150.27**	**350**	*e*PKPbc	**PKPbc**	**19 16 20.3**	**+0.2**
	baz=17,slow=2.4						
ALN	**Alexandroupoli**	**150.31**	**321**		**PKPbc**	**19 16 19.7**	**-0.7**
KOVH	**Kovagotottos**	**150.34**	**337**	*e*P	**PKPbc**	**19 16 20.3**	**0.0**
FRGS	**Fruska Gora**	**150.43**	**334**	⇑P	**PKPbc**	**19 16 20.2**	**-0.4**
FUR	**Furstenfeldbru**	**150.46**	**347**	*e*PKPbc	**PKPbc**	**19 16 20.6**	**0.0**
	baz=17,slow=2.4						
VTS	**Vitosha**	**150.74**	**326**	⇑P	**PKPbc**	**19 16 21.3**	**-0.3**
BOVS	**Bovan**	**150.76**	**330**	⇑P	**PKPbc**	**19 16 20.4**	**-1.0**
BFO	**Black Forest**	**150.84**	**351**	*e*PKPbc	**PKiKP**	**19 16 21.8**	**0.0**
	baz=17,slow=2.4						
SOKA	**Soboth**	**150.87**	**341**	*i* P	**PKPbc**	**19 16 21.0**	**-0.6**
	comp=Z,4.1nm,0.9s,SNR=5.2						
PERS	**Pernice**	**150.88**	**341**	*i* PKPbc	**PKPbc**	**19 16 20.9**	**-0.7**
KBA	**Koelnbreinsper**	**150.99**	**344**	*i* P	**PKPbc**	**19 16 21.1**	**-0.9**
	comp=Z,2.1nm,0.5s,SNR=7.6						
OBKA	**Obir**	**151.16**	**341**	*e*P	**PKPbc**	**19 16 21.4**	**-0.9**
	comp=Z,3.4nm,1.0s						
UBR	**Ueberruh**	**151.16**	**348**	*e*PKPbc	**PKPbc**	**19 16 22.4**	**+0.2**
	baz=17,slow=2.4						
WATA	**Walderalm**	**151.18**	**346**	*i* P	**PKPbc**	**19 16 22.0**	**-0.4**
	comp=Z,0.5nm,0.3s,SNR=6.9						
RETA	**Reutte**	**151.22**	**347**	*e*P	**PKPbc**	**19 16 22.3**	**-0.1**
	comp=Z,6.3nm,1.3s						
WTTA	**Wattenberg**	**151.24**	**346**	*i* P	**PKPbc**	**19 16 22.4**	**-0.1**
	comp=Z,1.2nm,0.3s,SNR=13						
WTTA	**Wattenberg**	**151.24**	**346**	*e*PKPbc	**PKPbc**	**19 16 22.4**	**-0.2**
	baz=17,slow=2.4						
MOTA	**Moosalm**	**151.28**	**347**	*i* P	**PKPbc**	**19 16 22.4**	**-0.2**
	comp=Z,9.0nm,1.0s,SNR=6.6						
MYKA	**Terra Mystica**	**151.32**	**343**	*i* P	**PKPbc**	**19 16 21.7**	**-1.0**
	comp=Z,3.5nm,0.4s,SNR=6.2						
SQTA	**Sankt Quirin**	**151.37**	**346**	*i* P	**PKPbc**	**19 16 22.6**	**-0.3**
	comp=Z,7.0nm,0.9s,SNR=4.2						
GCIS	**Gornji Cirnik**	**151.40**	**339**	*i* PKPbc	**PKPbc**	**19 16 22.6**	**-0.1**
DAVA	**Damuels**	**151.59**	**348**	*e*P	**PKPbc**	**19 16 23.4**	**+0.1**
	comp=Z,9.5nm,1.3s						
LJU	**Ljubljana**	**151.59**	**341**	*i* PKPbc	**PKPbc**	**19 16 22.9**	**-0.3**
FETA	**Feichten**	**151.67**	**347**	*e*P	**PKPbc**	**19 16 23.3**	**-0.2**
	comp=Z,8.0nm,1.3s						
STAL	**STALIGIAL**	**151.91**	**344**		**PKPbc**	**19 16 23.1**	**-0.8**
CIMO	**Cimolais**	**151.93**	**344**		**PKPbc**	**19 16 23.3**	**-0.6**
ESDC	**Sonseca Array**	**159.39**	**13**	PKPab	**PKPab**	**19 17 09.0**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=347,slow=3.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**173.59**	**180**	PKP	**PKPdf**	**19 16 36.6**	**-1.5**
	comp=Z,0.9nm,1.1s,baz=243,slow=0.5,SNR=3.8						
TORD				PKPab	**PKPab**	**19 18 12.7**	**+1.1**
	comp=Z,1.9nm,1.3s,baz=176,slow=2.6,SNR=3.9						

UCR ***06*** *19:00:23.7±1.3, 13°.89N×91°.30W, h29^{km}±265^{km}, ML3.7*
SNET ***06*** *19:00:23.7±1.2, 13°.89N×91°.22W, h16^{km}±7^{km}, ML3.7*
GCG ***06*** *19:00:24.7±0.5, 14°.02N×91°.20W, h78^{km}±22^{km}, MD3.7*
ISC 06 19:00:24.6±2.7**, 13°.9N**±0°.1×**91°.3W**±0°.1**, h74^{km}**±30^{km}**, n38,**
σ0^s.79/54**, 2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.70**	**38**	*e*P	**Pn**	**19 00 39.3**	**-0.7**
PCG	**Pacaya**	**0.82**	**53**	*e*P	**Pn**	**19 00 40.9**	**-0.6**
STG3	**Santiaguito 3,**	**0.85**	**341**	*e*P	**Pn**	**19 00 41.8**	**-0.1**
NBG	**Las Nubes**	**1.14**	**53**	*e*P	**Pn**	**19 00 44.9**	**-0.5**
NBG				*e*S	**Sn**	**19 01 01.5**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.47**	**85**	*i* P	**Pn**	**19 00 48.4**	**-0.9**
SLOZ				*e*S	**Sn**	**19 01 07.6**	**-0.3**
RTR	**El Retiro**	**1.59**	**90**	*e*P	**Pn**	**19 00 50.1**	**-1.0**
RTR				*e*S	**Sn**	**19 01 11.7**	**+0.5**
RTR	**El Retiro**	**1.59**	**90**	*e*P	**Pn**	**19 00 50.1**	**-1.0**
RTR				*e*S	**Sn**	**19 01 11.7**	**+0.5**
CEVE	**Cerro Verde**	**1.62**	**92**	*e*P	**Pn**	**19 00 51.6**	**+0.1**
CEVE				*e*S	**Sn**	**19 01 12.8**	**+1.0**
CEVE				IAML		19 01 15.0	
	comp=Z,2μm,0.5s						
CEVE	**Cerro Verde**	**1.62**	**92**	*e*P	**Pn**	**19 00 51.6**	**+0.1**
CEVE				*e*S	**Sn**	**19 01 12.8**	**+1.0**
CEVE				IAML		19 01 15.0	
	comp=Z,2μm,0.5s						
SBLS	**San Blas**	**1.62**	**92**	*e*P	**Pn**	**19 00 51.6**	**+0.1**
SBLS	**San Blas**	**1.62**	**92**	*e*P	**Pn**	**19 00 51.6**	**+0.1**
SNJE	**San Jose**	**1.63**	**91**	*e*P	**Pn**	**19 00 51.1**	**-0.6**
SNJE	**San Jose**	**1.63**	**91**	*e*P	**Pn**	**19 00 51.1**	**-0.6**
JAYA	**Jayaque - finc**	**1.80**	**97**	*i* P	**Pn**	**19 00 53.5**	**-0.4**
JAYA				*e*S	**Sn**	**19 01 15.3**	**-0.8**
JAYA				IAML		19 01 23.6	
	comp=Z,1μm,0.2s						
JAYA	**Jayaque - finc**	**1.80**	**97**	*i* P	**Pn**	**19 00 53.5**	**-0.4**
JAYA				*e*S	**Sn**	**19 01 15.3**	**-0.8**
JAYA				IAML		19 01 23.6	
	comp=Z,1μm,0.2s						
CEDA	**San Andres**	**1.84**	**93**	*e*S	**Sn**	**19 01 17.5**	**+0.7**
CEDA				IAML		19 01 34.4	
	comp=Z,469nm,0.3s						
CEDA	**San Andres**	**1.84**	**93**	*e*S	**Sn**	**19 01 17.5**	**+0.7**
CEDA				IAML		19 01 34.4	
	comp=Z,469nm,0.3s						
TACO	**Tacachico**	**1.88**	**88**	⇓*i*P	**Pn**	**19 00 53.6**	**-1.2**
TACO	**Tacachico**	**1.88**	**88**	⇓*i*P	**Pn**	**19 00 53.6**	**-1.2**
PMON	**Piamonte**	**1.93**	**95**	*e*P	**Pn**	**19 00 54.7**	**-0.8**
PMON				*e*S	**Sn**	**19 01 18.8**	**-0.2**
PMON	**Piamonte**	**1.93**	**95**	*e*P	**Pn**	**19 00 54.7**	**-0.8**
PMON				*e*S	**Sn**	**19 01 18.8**	**-0.2**
MTO3	**Montecristo**	**1.94**	**75**	*e*S	**Sn**	**19 01 20.6**	**+1.3**
MTO3	**Montecristo**	**1.94**	**75**	*e*S	**Sn**	**19 01 20.6**	**+1.3**
MRL	**Marmol**	**1.95**	**53**	*e*P	**Pn**	**19 00 55.0**	**-1.0**
LALI	**Alcalda de L**	**1.95**	**102**	*e*P	**Pn**	**19 00 55.6**	**-0.2**
LALI				*e*S	**Sn**	**19 01 19.5**	**0.0**
LALI	**Alcalda de L**	**1.95**	**102**	*e*P	**Pn**	**19 00 55.6**	**-0.2**
LALI				*e*S	**Sn**	**19 01 19.5**	**0.0**
BOQS	**Boqueron**	**1.96**	**94**	*e*P	**Pn**	**19 00 55.6**	**-0.4**
BOQS				*e*S	**Sn**	**19 01 21.9**	**+2.0**
BOQS	**Boqueron**	**1.96**	**94**	*e*P	**Pn**	**19 00 55.6**	**-0.4**
BOQS				*e*S	**Sn**	**19 01 21.9**	**+2.0**
SNET	**Serv Nac Est T**	**2.01**	**96**	*e*S	**Sn**	**19 01 21.4**	**+0.5**
SNET				IAML		19 01 29.7	
	comp=Z,644nm,0.2s						
SNET	**Serv Nac Est T**	**2.01**	**96**	*e*S	**Sn**	**19 01 21.4**	**+0.5**
SNET				IAML		19 01 29.7	
	comp=Z,644nm,0.2s						
LFRS	**El Faro**	**2.18**	**97**	*e*P	**Pn**	**19 00 58.8**	**-0.1**
LFRS	**El Faro**	**2.18**	**97**	*e*P	**Pn**	**19 00 58.8**	**-0.1**
SCLA	**Alcaldia de Sa**	**2.49**	**94**	*e*P	**Pn**	**19 01 02.6**	**-0.5**
SCLA				*e*S	**Sn**	**19 01 33.7**	**+1.1**
SCLA	**Alcaldia de Sa**	**2.49**	**94**	*e*P	**Pn**	**19 01 02.6**	**-0.5**
SCLA				*e*S	**Sn**	**19 01 33.7**	**+1.1**
ALJI	**Alcalda de J**	**2.70**	**102**	*e*S	**Sn**	**19 01 38.1**	**+0.6**
ALJI	**Alcalda de J**	**2.70**	**102**	*e*S	**Sn**	**19 01 38.1**	**+0.6**
COEB	**Comit de Eme**	**2.71**	**98**	*e*S	**Sn**	**19 01 38.1**	**+0.2**
COEB				IAML		19 01 46.1	
	comp=Z,175nm,0.4s						
COEB	**Comit de Eme**	**2.71**	**98**	*e*S	**Sn**	**19 01 38.1**	**+0.2**
COEB				IAML		19 01 46.1	
	comp=Z,175nm,0.4s						

PRU ***06*** *19:03:10.4±0.0, 42°.34N×18°.92E, h0^{km}*
PDG ***06*** *19:03:12.4±0.3, 42°.56N×18°.58E, h6^{km}, MD3.0/8,*
ML2.9/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0
RHSSO ***06*** *19:03:12.6±0.2, 42°.54N×18°.58E, h5^{km}±1^{km}, ML3.0/15*
BEO ***06*** *19:03:13.7±0.3, 42°.57N×18°.56E, h4^{km}±1^{km}, ML2.7/15*
ISC 06 19:03:12.6±1.0**, 42°.56N**±0°.02×**18°.56E**±0°.01**, h3^{km}**±8^{km}**,**
n102, σ1^s.40/181**, 27C-17D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HCY	**Herceg Novi**	**0.12**	**205**	⇑*i*Pg	**Pg**	**19 03 15.1**	**+0.1**
HCY				*e*Sg	**Sg**	**19 03 17.1**	**+0.5**
HCY	**Herceg Novi**	**0.12**	**205**	⇑*i*Pg	**Pg**	**19 03 15.1**	**+0.1**
HCY				*i* Sg	**Sg**	**19 03 16.9**	**+0.3**
TREB	**Trebinje**	**0.22**	**315**	⇑*i*Pg	**Pg**	**19 03 17.2**	**+0.2**
TREB				*e*Sg	**Sg**	**19 03 21.6**	**+1.7**
TREB	**Trebinje**	**0.22**	**315**	*e*Pg	**Pg**	**19 03 17.5**	**+0.5**
TREB				*e*Sg	**Sg**	**19 03 21.9**	**+2.0**
CEME	**Cevo**	**0.26**	**92**	⇓*i*Pg	**Pg**	**19 03 17.4**	**-0.3**
CEME				*i* Sg	**Sg**	**19 03 21.3**	**+0.2**
DBRK	**Dubrovnik**	**0.33**	**290**	*i* Pg	**Pg**	**19 03 19.0**	**+0.1**
DBRK				Sg	**Sg**	**19 03 23.9**	**+0.7**

BRY	**Bratogost**	0.34	357	ePg	Pg	19 03 19.2	-0.1
BRY				eSg	Sg	19 03 25.3	+1.5
BRY	**Bratogost**	0.34	357	⇑iPg	Pg	19 03 19.0	-0.3
BRY				i Sg	Sg	19 03 24.5	+0.7
BUM	**Brajici-Budva**	0.35	136	⇑iPg	Pg	19 03 19.0	-0.5
BUM				i Sg	Sg	19 03 24.5	+0.4
NKME	**Niksic**	0.35	54	⇓iPg	Pg	19 03 19.0	-0.5
NKME				i Sg	Sg	19 03 24.6	+0.5
NKY	**Niksic**	0.41	51	⇓iPg	Pg	19 03 19.8	-0.7
NKY				i Sg	Sg	19 03 26.2	+0.4
PDG	**Podgorica**	0.53	104	⇓P	Pb	19 03 23.8	-0.6
PDG				⇓S	Sg	19 03 30.0	+0.5
PDG	**Podgorica**	0.53	104	⇓iPg	Pg	19 03 21.7	-1.0
PDG				eSg	Sg	19 03 29.7	+0.1
PDG	**Podgorica**	0.53	104	ePg	Pg	19 03 21.9	-0.8
PDG				eSg	Sb	19 03 32.1	-0.4
TTG	**Podgorica**	0.53	104	⇓iPg	Pg	19 03 21.7	-1.0
TTG				i Sg	Sg	19 03 30.1	+0.5
DRME	**Dracevica, Mon**	0.59	129	⇓iPg	Pg	19 03 22.4	-1.6
DRME				eSg	Sg	19 03 31.9	+0.3
DRME	**Dracevica, Mon**	0.59	129	⇑iPg	Pg	19 03 23.2	-0.8
DRME				i Sg	Sg	19 03 32.2	+0.6
UPM	**Unac-Piva**	0.69	21	⇓iPg	Pg	19 03 25.0	-0.9
UPM				eSg	Sg	19 03 35.2	+0.3
UPM	**Unac-Piva**	0.69	21	⇑iPg	Pg	19 03 25.1	-0.9
UPM				i Sg	Sg	19 03 35.7	+0.8
STON	**Ston**	0.71	297	ePg	Pg	19 03 25.4	-0.8
STON				eSg	Sg	19 03 36.0	+0.6
STON	**Ston**	0.71	297	ePg	Pg	19 03 25.4	-0.8
STON				Sg	Sg	19 03 36.7	+1.3
STON	**Ston**	0.71	297	ePg	Pg	19 03 25.5	-0.8
STON				eSg	Sg	19 03 36.6	+1.2
KOME	**Kolasin**	0.76	67	⇓iPg	Pg	19 03 25.9	-1.3
KOME				i Sg	Sb	19 03 37.9	-1.4
ULC	**Ulcinj**	0.78	139	⇓iPg	Pg	19 03 26.4	-1.2
ULC				i Sg	Sb	19 03 38.5	-1.3
IVA	**Berane**	1.03	72	⇑iPg	Pg	19 03 31.0	-1.3
IVA				i Sg	Sb	19 03 47.2	+0.2
PVY	**Plav**	1.03	88	⇓iPg	Pg	19 03 31.0	-1.4
PVY				i Sg	Sb	19 03 47.4	+0.3
RUDO	**Rudo**	1.21	29	⇑iPg	Pg	19 03 34.0	-1.9
RUDO				eSg	Sb	19 03 51.8	-0.5
LSTV	**Lastovo**	1.25	280	ePg	Pg	19 03 35.9	-0.7
LSTV				Sg	Sn	19 03 54.2	-0.1
SJES	**Sjenica**	1.25	55	ePg	Pg	19 03 35.5	-1.1
SJES				eSg	Sb	19 03 53.5	0.0
MAKA	**Makarska**	1.35	303	ePn	Pn	19 03 37.0	-1.3
MAKA				Sn	Sn	19 03 57.0	+0.4
RICI	**Ricice**	1.41	312	ePn	Pn	19 03 38.1	-1.0
RICI				Sn	Sn	19 04 00.2	+2.0
BBLS	**Lazići**	1.45	25	⇑iPg	Pn	19 03 39.0	-0.7
BBLS				eSg	Sg	19 03 59.3	+0.2
BBLS	**Lazići**	1.45	25	ePg	Pn	19 03 39.7	0.0
BBLS				eSg	Sg	19 04 00.1	+1.0
IVAS	**Ivanjica**	1.55	48	ePg	Pn	19 03 40.4	-0.7
IVAS				eSg	Sg	19 04 02.9	+0.6
TIR	**Tirane**	1.55	141	⇑P	Pg	19 03 42.9	+0.5
TIR				⇑S	Sg	19 04 04.3	+1.9
TIR	**Tirane**	1.55	141	ePg	Pg	19 03 42.0	-0.3
TIR				eSg	Sg	19 04 03.3	+0.9
DIVS	**Divibare**	1.86	34	⇑iPn	Pn	19 03 45.8	+0.4
DIVS				eSn	Sn	19 04 09.5	0.0
DIVS	**Divibare**	1.86	34	ePn	Pn	19 03 46.0	+0.6
DIVS				eSn	Sb	19 04 10.1	-0.8
SELS	**Selova**	1.99	70	ePn	Pn	19 03 47.6	+0.4
SELS				eSn	Sb	19 04 13.9	-0.8
GRUS	**Gruza**	2.06	49	ePn	Pn	19 03 48.8	+0.7
GRUS				eSn	Sb	19 04 15.6	-1.0
TEKS	**Tekeris**	2.11	19	ePn	Pn	19 03 49.4	+0.6
TEKS				eSn	Sn	19 04 16.0	+0.4
TRUS	**Trudelj**	2.14	38	ePn	Pn	19 03 49.6	+0.4
TRUS				eSn	Sb	19 04 17.2	-1.7
MGRS	**Mrkonjic Grad**	2.15	330	ePn	Pn	19 03 49.5	+0.2
MGRS				eSn	Sn	19 04 16.3	-0.2
DOB	**Doboj**	2.20	351	eSn	Sn	19 04 17.8	+0.1
OHR	**Ohrid**	2.21	130	i Pn	Pb	19 03 52.4	-0.8
OHR	**Ohrid**	2.21	130	ePn	Pb	19 03 52.2	-1.0
OHR				eSn	Sb	19 04 19.5	-1.5
BLJ	**Bijeljina**	2.28	13	ePn	Pn	19 03 50.4	-0.7
BLJ				eSn	Sn	19 04 18.8	-0.9
MATE	**Matera**	2.36	217	⇓P	Pb	19 03 54.3	-1.5
MATE				⇓S	Sb	19 04 23.5	-1.7
ZIRJ	**Zirje**	2.40	298	ePn	Pn	19 03 52.2	-0.6
ZIRJ				Sn	Sn	19 04 23.5	+0.8
BLY	**Banja Luka**	2.41	336	ePn	Pn	19 03 53.4	+0.5
BLY				eSn	Sn	19 04 22.9	+0.1
BLY	**Banja Luka**	2.41	336	ePn	Pb	19 03 54.9	-1.7
BLY				eSn	Sb	19 04 25.1	-1.5
BARS	**Barje**	2.41	83	ePn	Pn	19 03 53.6	+0.7
BARS	**Barje**	2.41	83	ePn	Pg	19 03 59.7	+0.9
BARS				eSn	Sg	19 04 36.6	+6.5
MORI	**Morici**	2.46	303	ePn	Pn	19 03 53.6	0.0
MORI				Sn	Sn	19 04 26.1	+1.9
BOVS	**Bovan**	2.54	64	⇑P	Pn	19 03 55.7	+1.0
PRVS	**Prvonek**	2.60	90	ePn	Pn	19 03 56.9	+1.4
PRVS				eSn	Sn	19 04 27.9	+0.3
FRGS	**Fruska Gora**	2.75	19	⇑P	Pn	19 03 57.5	-0.1
FRGS				⇓S	Sn	19 04 32.6	+1.2
FRGS	**Fruska Gora**	2.75	19	⇑iPn	Pn	19 03 57.3	-0.3
FRGS				eSn	Sn	19 04 31.5	+0.1
FRGS	**Fruska Gora**	2.75	19	ePn	Pn	19 03 57.1	-0.5
STIP	**Stip**	2.83	107	i Pn	Pb	19 04 01.5	-2.2
UDBI	**Udbina**	2.83	315	ePn	Pn	19 03 59.8	+1.0
UDBI				Sn	Sn	19 04 34.4	+1.0
BOSS	**Bosilegrad**	2.90	90	ePn	Pn	19 04 00.6	+1.0
BOSS				eSn	Sn	19 04 35.5	+0.6
DUGI	**Dugi Otok**	2.93	300	ePn	Pn	19 04 00.6	+0.5
DUGI				Sn	Sn	19 04 37.5	+1.7
ZAGS	**Zajecar**	2.96	64	ePn	Pn	19 04 00.8	+0.3
ZAPS	**Zavoj**	3.07	75	ePn	Pn	19 04 04.2	+2.1
MDVR	**Moldovita**	3.19	45	⇑P	Pn	19 04 03.5	-0.2
BLKB	**Belogradchik**	3.19	69	⇑S	Sn	19 04 43.5	+1.2
VAY	**Valandovo**	3.23	111	i Pn	Pb	19 04 12.3	+1.7
NVLJ	**Novalja**	3.35	308	ePn	Pn	19 04 06.6	+0.8
NVLJ				Sn	Sn	19 04 46.5	+0.5
VTS	**Vitosha**	3.45	87	⇑P	Pn	19 04 08.6	+1.2
VTS				⇑S	Sn	19 04 51.2	+2.5
KOVH	**Kovagotottos**	3.54	355	ePN	Pn	19 04 05.8	-2.7
KOVH				eSN	Sn	19 04 51.6	+0.7
KOVH				ePKPDF		19 16 16.9	
HERR	**Herculane**	3.63	49	⇑P	Pn	19 04 10.4	+0.7
HERR				⇓S	Sn	19 04 53.4	+0.3
MORH	**Mrgy, Hungar**	3.66	1	⇑P	Pn	19 04 10.5	+0.5
MORH				⇓S	Sn	19 04 53.8	+0.2
MORH	**Mrgy, Hungar**	3.66	1	ePN	Pn	19 04 13.5	+3.5
MORH	**Mrgy, Hungar**	3.66	1	eP	Pb	19 04 18.5	+0.7
MORH	**Mrgy, Hungar**	3.66	1	eSN	Sn	19 04 53.3	-0.3
MORH	**Mrgy, Hungar**	3.66	1	ePn	Pn	19 04 09.4	-0.6
MORH				eSn	Sn	19 04 52.5	-1.1
CRES	**Cresnjev**	3.96	327	ePn	Pn	19 04 13.9	-0.3
CRES				eSn	Sn	19 05 00.6	-0.5
SMRN	**Sveta Marina**	4.04	309	Sn	Sn	19 05 03.3	+0.3
GZR	**Gura Zlata**	4.16	46	⇑P	Pn	19 04 17.4	+0.5
GZR				⇑S	Sn	19 05 05.8	-0.3
SIRR	**Siria**	4.32	30	⇑P	Pn	19 04 18.8	-0.4
CEY	**Cerknica**	4.36	318	ePn	Pn	19 04 19.8	+0.1
CEY				eSn	Sn	19 05 09.4	-1.5
TIH	**Tihany**	4.37	354	ePN	Pn	19 04 20.7	+1.0
TIH	**Tihany**	4.37	354	eP	Pb	19 04 26.5	-3.4
MPLH	**Magyarpolny**	4.67	351	ePN	Pn	19 04 24.8	+0.9
MPLH	**Magyarpolny**	4.67	351	eP	Pn	19 04 25.3	+1.4
MPLH	**Magyarpolny**	4.67	351	eSN	Sn	19 05 21.6	+3.0
SOKA	**Soboth**	4.83	330	ePn	Pn	19 04 28.9	+2.6
	1.6nm,0.3s						
SOKA				eSn	Sn	19 05 23.3	+0.6
	1.6nm,0.7s						
OBKA	**Obir**	4.88	325	ePn	Pn	19 04 30.3	+3.4
	0.3nm,0.2s						
OBKA				eSn	Sn	19 05 24.3	+0.3
	5.1nm,0.7s						
ARSA	**Arzberg**	5.17	336	ePn	Pn	19 04 32.4	+1.6
	2.4nm,0.5s						
ARSA				eSn	Sn	19 05 31.7	+0.9
	0.6nm,0.4s						
ARR	**Arges**	5.20	55	⇑P	Pn	19 04 32.3	+1.0
ARR				⇑S	Sn	19 05 33.5	+1.6
CONA	**Conrad Observa**	5.70	341	ePn	Pn	19 04 40.2	+2.0
	1.0nm,0.6s						
CONA				eSn	Sn	19 05 44.1	0.0
KBA	**Koelnbreinsper**	5.85	322	ePn	Pn	19 04 36.2	-4.1
KBA				eSn	Sn	19 05 49.2	+1.4
	1.1nm,0.6s						
VYHS	**Vyhne**	5.94	2	eSN	Sn	19 05 52.5	+2.6
ABTA	**Abfaltersbach**	6.01	316	ePn	Pn	19 04 38.8	-3.7
	0.6nm,0.3s						
ABTA				eSn	Sn	19 05 54.4	+2.5
	0.1nm,0.1s						
MOA	**Molln**	6.10	332	ePn	Pn	19 04 46.6	+3.0
	0.5nm,0.2s						
MOA				eSn	Sn	19 05 55.5	+1.6
	1.5nm,0.5s						
WTTA	**Wattenberg**	6.80	316	ePn	Pn	19 04 54.9	+1.5
	0.3nm,0.2s						
WTTA				eSn	Sn	19 06 13.1	+1.7
	0.9nm,0.3s						
WATA	**Walderalm**	6.88	316	ePn	Pn	19 04 56.2	+1.8
	0.2nm,0.2s						
WATA				eSn	Sn	19 06 17.9	+4.6
	4.1nm,0.6s						
SQTA	**Sankt Quirin**	7.00	314	ePn	Pn	19 04 57.6	+1.6
	0.8nm,0.3s						
SQTA				eSn	Sn	19 06 18.4	+2.3
	1.9nm,0.4s						
MOTA	**Moosalm**	7.13	315	ePn	Pn	19 04 59.2	+1.3
	2.4nm,0.9s						
MOTA				eSn	Sn	19 06 21.4	+1.9
	5.6nm,0.8s						
FETA	**Feichten**	7.14	311	ePn	Pn	19 05 00.1	+2.1
	0.2nm,0.2s						
FETA				eSn	Sn	19 06 20.1	+0.5
	1.7nm,0.7s						
KHC	**Kasperske Hory**	7.44	334	ePN	Pn	19 05 01.3	-0.7

IDC ***06*** *19:12:06.4±0.5, 43.°86N×147.°25E, h0km, mb4.7/41, mb1 4.8/43, mb1mx4.7/51, mbtmp4.7/43, ML3.7/2, MS3.6/16, Ms1 3.6/16, ms1mx3.5/44, Error ellipse: s-maj=14.1km s-min=11.4km az=153.0*

BJI ***06*** *19:12:11.1±0.0, 43.°70N×147.°45E, h57km, mB5.1/24, mb4.6/44, Ms4.1/7, Ms7 3.9/6*

NEIC ***06*** *19:12:12.9±2.1, 43.°68N±0.°04×147.°4E±0.°1, h50km±6km, mb4.9/95, Error ellipse: s-maj=12.4km s-min=6.2km az=85.0*

MOS ***06*** *19:12:12.5±1.1, 43.°84N×147.°32E, h60km, mb5.0/23, Error ellipse: s-maj=6.9km s-min=4.3km az=110.9*

MOS Felt (III-IV) at Malokuril'skoye.

NIED ***06*** *19:12:14.0, 43.°57N×147.°23E, h32km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}4.55; $M_{\theta\theta}$-4.14; $M_{\phi\phi}$-0.40; $M_{r\theta}$5.21; $M_{\theta\phi}$-2.00; $M_{\phi r}$-0.79; Fault plane solution: $M_0$7.11000×10^{15} NP1:ϕ_s89.00000°, δ70.00000°, λ107.00000°. NP2:ϕ_s227.00000°, δ26.00000°, λ51.00000°.*

SKHL ***06*** *19:12:13.9±0.1, 43.°70N×147.°30E, h67km±3km, mb5.7/4*

JMA ***06*** *19:12:13.9±0.2, 43.°57N×147.°23E, h32km, M4.3*

JMA Felt I J1.

BGR ***06*** *19:12:14.2±0.0, 44.°50N×147.°50E, h33km, mb5.1*

ISC 06 19:12:13.6±0.6, **43.°76N**±0.°04×**147.°30E**±0.°04, **h57**km±4km, **h56**km**:pP-P, n632,** σ1ˢ**27**/660, **mb4.8**/175, **MS3.8**/15, **64C-14D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	1.08	285	d iPN	Pn	19 12 32.6	+0.1
YUK				i S	Sn	19 12 46.2	-0.3
YUK				pmax	pmax		
	comp=N,860nm,0.1s						
YUK				pmax	pmax		
	comp=E,1µm,0.1s						
YUK				pmax	pmax		
	comp=Z,3µm,0.1s						
YUK				smax	smax		
	comp=E,25µm,1.1s						
YUK				smax	smax		
	comp=N,39µm,1.4s						
YUK				smax	smax		
	comp=E,10µm,0.2s						
YUK				smax	smax		
	comp=N,19µm,0.5s						
YUK	**Yuzh-Kuril'sk**	1.08	285	i P	Pn	19 12 32.7	+0.2
YUK				AMB	AMB	19 12 34.0	
	comp=N,3µm,0.3s						
YUK				i S	Sn	19 12 46.6	+0.1
YUK				A	A	19 12 49.0	
	comp=N,39µm,1.0s						
YUK				A	A	19 12 49.0	
	comp=N,25µm,1.0s						
YUK				A	A	19 12 51.0	
	comp=N,19µm,0.4s						
YUK				A	A	19 12 51.0	
	comp=N,10µm,0.4s						
GRPR	**Tuman**	1.13	282	⇓iPN	Pn	19 12 33.3	+0.1
GRPR				i S	Sn	19 12 46.8	-1.0
GRPR				pmax	pmax		
	comp=N,856nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,2µm,0.1s						
GRPR				pmax	pmax		
	comp=E,605nm,0.2s						
GRPR				smax	smax		
	comp=N,13µm,0.2s						
GRPR				smax	smax		
	comp=E,23µm,0.3s						
GRPR	**Tuman**	1.13	282	i P	Pn	19 12 33.3	+0.1
GRPR				AMB	AMB	19 12 35.0	
	comp=E,2µm,0.2s						
GRPR				i S	Sn	19 12 46.8	-1.0
GRPR				A	A	19 12 49.0	
	comp=E,13µm,0.4s						
GRPR				A	A	19 12 49.0	
	comp=E,23µm,0.4s						
NEM2	**Nemuro 2**	1.20	251	P	Pn	19 12 33.6	-0.5
NEM2				eS	Sn	19 12 47.7	-1.8
NMR	**Nemuro--Hokkai**	1.21	252	c iPN	Pn	19 12 33.6	-0.6
NMR				i S	Sn	19 12 48.4	-1.2
NMR	**Nemuro--Hokkai**	1.21	252	i P	Pn	19 12 33.6	-0.6
NMR				i S	Sn	19 12 48.5	-1.2
RUSJ	**Misakicho**	1.52	284	⇓iPN	Pn	19 12 40.3	+1.8
RUSJ				i S	Sn	19 12 53.7	-3.5
KUR	**Kuril'sk**	1.52	15	d iPN	Pn	19 12 38.9	+0.4
KUR				i S	Sn	19 12 57.2	0.0
KUR				pmax	pmax		
	comp=Z,729nm,0.5s						
KUR				pmax	pmax		
	comp=N,402nm,0.2s						
KUR				pmax	pmax		
	comp=E,353nm,0.3s						
KUR				smax	smax		
	comp=E,7µm,0.4s						
KUR				smax	smax		
	comp=N,5µm,0.3s						
KUR	**Kuril'sk**	1.52	15	i P	Pn	19 12 39.1	+0.6
KUR				AMB	AMB	19 12 45.0	
	comp=N,730nm,0.4s						
KUR				i S	Sn	19 12 57.4	+0.2
KUR				A	A	19 12 59.0	
	comp=N,5µm,0.4s						
KUR				A	A	19 12 59.0	
	comp=N,7µm,0.4s						
JRA	**Rausu**	1.59	277	P	Pn	19 12 40.2	+0.9
JRA				eS	Sn	19 12 59.7	+0.9
JNSB	**Nemuroshibetsu**	1.67	271	P	Pn	19 12 41.5	+1.1
JNSB				eS	Sn	19 13 01.9	+1.2
JKHN	**Kushirohamanak**	1.70	247	P	Pn	19 12 40.8	-0.1
JNK	**Nakash**	1.88	265	P	Pn	19 12 43.8	+0.4
AKK	**Akkeshi**	1.94	248	i P	Pn	19 12 44.0	-0.2
AKK				eS	Sn	19 13 06.3	-1.1
JAK	**Akkeshi**	2.05	249	P	Pn	19 12 45.4	-0.2
JAK				eS	Sn	19 13 09.2	-0.8
JTKR	**Abashiri--Toko**	2.46	276	P	Pn	19 12 52.8	+1.5
JAR	**Ashorobuto**	2.61	261	P	Pn	19 12 54.3	+1.0
JAR				eS	Sn	19 13 25.0	+1.2
JOB	**Onbets**	2.67	252	P	Pn	19 12 54.7	+0.6
JOB				eS	Sn	19 13 25.5	+0.2
JCH	**Churui**	3.10	250	P	Pn	19 12 59.9	-0.1
JKA	**Kamikawa-asahi**	3.42	278	eP	Pn	19 13 05.0	+0.7
JKA	**Kamikawa-asahi**	3.42	278	Pn	Pn	19 13 05.0	+0.7
ASAJ	**Asahikawa**	3.42	278	Pn	Pn	19 13 06.1	+1.8
	comp=N,2.9nm,0.3s,baz=72,slow=19,SNR=17						
ASAJ				Sn	Sn	19 13 42.6	-1.0
	comp=N,14nm,0.3s,baz=50,slow=3.8,SNR=5.5						
ASAJ	**Asahikawa**	3.42	278	PN	Pn	19 13 05.0	+0.7
JFR	**Furan**	3.48	262	P	Pn	19 13 07.3	+2.1
JEM	**Erimo**	3.51	242	P	Pn	19 13 07.7	+2.1
JEM	**Erimo**	3.51	242		Pn	19 13 07.1	+1.5
ERM	**Erimo**	3.51	242	i PN	Pn	19 13 07.3	+1.6
ERM	**Erimo**	3.51	242	Pn	Pn	19 13 07.2	+1.6
JNBK	**Urakawa-nobuka**	3.65	248	P	Pn	19 13 07.7	+0.2
JEW	**Eniwo**	4.37	260		Pn	19 13 19.7	+2.3
YSS	**Yuzh-Sakhalins**	4.52	316	⇓iPN	Pn	19 13 21.4	+2.0
YSS				eS	Sn	19 14 11.2	+0.6
YSS				pmax	pmax		
	comp=Z,110nm,0.7s						
YSS				smax	smax		
	comp=N,110nm,0.5s						
YSS				smax	smax		
	comp=E,190nm,0.5s						
YSS				MLR	MLR		
	comp=Z,900nm,15.0s						
YSS	**Yuzh-Sakhalins**	4.52	316	eP	Pn	19 13 21.4	+2.0
YSS				AMB	AMB	19 13 22.0	
	comp=Z,110nm,0.7s						
YSS				eS	Sn	19 14 11.2	+0.6
YSS				A	A	19 14 15.3	
	comp=Z,110nm,0.5s						
YSS				A	A	19 14 15.3	
	comp=Z,190nm,0.5s						
YSS				AMS	AMS	19 15 00.0	
	comp=Z,900nm,15.0s						
YSS	**Yuzh-Sakhalins**	4.52	316	Pn	Pn	19 13 21.5	+2.1
JTM	**Tenmabayashi**	5.50	239	Pn	Pn	19 13 32.8	0.0
UGL	**Uglegorsk**	6.43	328	ePN	Pn	19 13 44.3	-1.2
UGL				e		19 15 00.5	
UGL				pmax	pmax		
	comp=Z,170nm,1.5s						
UGL	**Uglegorsk**	6.43	328	eP	Pn	19 13 48.4	+2.9
UGL				AMB	AMB	19 13 53.0	
	comp=Z,170nm,1.0s						
UGL				eS	Sn	19 14 58.3	+0.9
UGL				A	A	19 15 15.2	
	comp=Z,140nm,0.7s						
UGL				A	A	19 15 15.2	
	comp=Z,180nm,0.7s						
JMM	**Marumori**	7.68	222		Pn	19 14 00.9	-1.8
TYV	**Tymovskoe**	7.77	338	ePN	Pn	19 14 07.3	+3.4
TYV				eS	Sn	19 15 33.1	+2.7
TYV				pmax	pmax		
	comp=Z,12nm,0.8s						
TYV				pmax	pmax		
	comp=Z,300nm,3.0s						
TYV				smax	smax		
	comp=N,31nm,0.9s						
TYV				smax	smax		
	comp=E,50nm,0.9s						
TYV				smax	smax		
	comp=E,600nm,3.2s						
TYV	**Tymovskoe**	7.77	338	eP	Pn	19 14 06.3	+2.4
TYV				AMB	AMB	19 14 08.0	
	comp=E,20nm,0.8s						
TYV				AMB	AMB	19 14 09.0	
	comp=E,300nm,3.0s						
TYV				eS	Sn	19 15 31.4	+1.0
TYV				A	A	19 15 33.0	
	comp=E,30nm,0.8s						
TYV				A	A	19 15 33.0	
	comp=E,50nm,0.8s						
TYV				A	A	19 15 35.0	
	comp=E,600nm,3.0s						
JSD	**Sado**	8.92	233	Pn	Pn	19 14 18.3	-1.3
SKR	**Severo-Kuril's**	9.15	38	ePN	Pn	19 14 22.1	-0.7
SKR				pmax	pmax		
	comp=Z,423nm,0.7s						
SKR	**Severo-Kuril's**	9.15	38	eP	Pn	19 14 23.5	+0.7
SKR				AMB	AMB	19 14 24.5	
	comp=Z,420nm,0.7s						
SKR				eS	Sn	19 16 02.5	-1.7
SKR				A	A	19 16 05.4	
	comp=Z,70nm,0.6s						
SKR				A	A	19 16 05.4	
	comp=Z,200nm,0.6s						
JYT	**Yasato**	9.29	218		Pn	19 14 22.3	-2.4
MAJO	**Matsushiro**	10.02	227	i PN	Pn	19 14 33.5	-1.2
MAJO	**Matsushiro**	10.02	227		Pn	19 14 33.0	-1.8
MAT	**Matsushiro**	10.02	227	P	Pn	19 14 33.7	-1.0
MAT				S	Sn	19 16 22.1	-3.5
MJAR	**Matsushiro Arr**	10.02	227	Pn	Pn	19 14 33.6	-1.1
	comp=Z,0.2nm,0.3s,baz=26,slow=14,SNR=13						
MJAR	**Matsushiro Arr**	10.02	227	Pn	Pn	19 14 32.9	-1.8
PAU	**Pauzhetka**	10.02	36	eP	Pn	19 14 35.0	+0.3
PAU				AMB	AMB	19 14 35.6	
	comp=Z,140nm,0.5s						
PAU				eS	Sn	19 16 23.5	-2.0
PAU				A	A	19 16 31.7	
	comp=Z,30nm,0.3s						
PAU				A	A	19 16 31.7	
	comp=Z,60nm,0.3s						
GRNR	**Gornyy**	10.18	317	ePN	Pn	19 14 39.9	+3.0
GRNR				MLR	MLR		
	comp=E,240nm,18.0s						
GRNR				MLR	MLR		
	comp=N,160nm,13.0s						
GRNR	**Gornyy**	10.18	317	eP	Pn	19 14 39.9	+3.0
GRNR				AMS	AMS	19 18 50.0	
	comp=N,240nm,0.2s						
NKL	**Nikolayevsk**	10.37	337	eP	Pn	19 14 42.2	+2.9
NKL				AMB	AMB	19 14 43.7	
	comp=N,50nm,0.6s						
USRK	**Ussuriysk Ar.**	11.05	278	LR	LR	19 19 11.3	
	comp=N,148nm,21.2s,baz=48,slow=39						
PEA0B	**Petropavlovsk-**	11.61	33	c ePN	Pn	19 14 54.5	-1.9
PEA0B	**Petropavlovsk-**	11.61	33	Pn	Pn	19 14 55.6	-0.8
PETK	**Petropavlovsk-**	11.61	33	Pn	Pn	19 14 55.1	-1.2
	comp=N,1.7nm,0.3s,baz=202,slow=14,SNR=30						
PETK				LR	LR	19 19 16.8	
	comp=N,133nm,18.5s,baz=204,slow=37						
PETK	**Petropavlovsk-**	11.61	33	PN	Pn	19 14 55.5	-0.9
PETK	**Petropavlovsk-**	11.61	33	Pn	Pn	19 14 55.5	-0.9
KLR	**Kul'dur**	12.02	302	Pn	Pn	19 15 06.2	+4.2
	comp=N,0.1nm,0.3s,baz=110,slow=16,SNR=6.7						
KLR				LR	LR	19 20 08.1	
	comp=N,167nm,18.6s,baz=117,slow=40						
KLR	**Kul'dur**	12.02	302	i PN	Pn	19 15 00.8	-1.2
KLR				pmax	pmax		
	comp=Z,20nm,1.5s						
KLR	**Kul'dur**	12.02	302	eP	Pn	19 15 01.2	-0.8
JHJ	**Hachijo jima 2**	12.14	211	LR	LR	19 19 41.3	
	comp=Z,116nm,21.6s,baz=12,slow=37						
JWT	**Wachi**	12.48	231	Pn	Pn	19 15 08.0	-0.4
MA2	**Magadan**	15.98	6	P	Pn	19 15 53.9	-0.5
MA2				pmax	pmax		
	comp=Z,28nm,1.0s						
MA2	**Magadan**	15.98	6	eP	Pn	19 15 53.9	-0.5
MA2	**Magadan**	15.98	6	P	Pn	19 15 53.9	-0.5
KSRS	**Korea Array**	15.99	253	Pn	P	19 15 57.9	+0.6
	comp=Z,0.2nm,0.3s,baz=90,slow=40,SNR=4.3						
KSRS				LR	LR	19 22 02.4	
	comp=Z,110nm,19.0s,baz=48,slow=37						
ZEA	**Zeya**	16.51	314	eP	P	19 16 09.4	+6.5
ZEA				pmax	pmax		
	comp=N,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=E,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.8s						
ZEA	**Zeya**	16.51	314	eP	Pn	19 15 58.8	-2.3
SEY	**Seymchan**	19.43	7	P	P	19 16 33.8	-1.1
	comp=Z,1.0nm,0.3s,baz=182,slow=7.7,SNR=30						
SEY				LR	LR	19 23 34.6	
	comp=Z,202nm,21.8s,baz=182,slow=36						
YAK	**Yakutsk**	21.03	337	P	P	19 16 48.7	-3.5
	comp=Z,2.5nm,0.2s,baz=124,slow=4.3,SNR=15						
YAK				S	S	19 20 34.2	-8.7
	comp=Z,4.5nm,0.8s,baz=120,slow=21,SNR=8.7						
YAK				LR	LR	19 24 39.7	
	comp=Z,176nm,20.8s,baz=89,slow=36						
YAK	**Yakutsk**	21.03	337	eP	P	19 16 50.3	-1.9
YAK				e		19 17 08.2	
YAK				eS	S	19 20 43.8	+0.9
YAK				e*SS	sS	19 20 58.8	-4.7
YAK				e		19 28 11.2	
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				smax	smax		
	comp=N,68nm,2.3s						

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YAK                                 smax    smax
       comp=E,38nm,2.5s
YAK                                 MLR     MLR
       comp=Z,180nm,21.0s
YAK                                 MLR     MLR
       comp=E,79nm,23.0s
YAK                                 MLR     MLR
       comp=N,180nm,23.0s
YAK    Yakutsk           21.03 337  P       P       19 16 49.0 -3.3
JOW    Kunigami          22.86 229  P       P       19 17 12.8 +0.8
       comp=N,15nm,0.4s,baz=182,slow=17,SNR=2.0
BJI    Beijing           23.39 272  P       P       19 17 18.0 +0.8
BJI                                 pmax    pmax
       comp=N,6.0nm,1.0s
BOD    Bodaibo           25.00 316  eP      P       19 17 28.5 -3.2
BOD                                 pmax    pmax
       comp=Z,6.0nm,1.1s
NJ2    Nanjing           25.18 252  eP      P       19 17 34.2 +0.6
NJ2                                 pmax    pmax
       comp=Z,10.0nm,0.5s
BILL   Bilibino          26.32  16  eP      P       19 17 40.8 -2.7
BILL                                e               19 18 24.7
BILL                                eS      S       19 22 10.0 -2.0
BILL                                pmax    pmax
       comp=Z,6.0nm,0.9s
BILL                                MLR     MLR
       comp=Z,113nm,19.0s
HHC    Hu-ho-hao-te      26.46 276  eP      P       19 17 45.7 +0.4
HHC                                 pmax    pmax
       comp=Z,12nm,0.7s
HHC                                 pmax    pmax
       comp=Z,140nm,6.6s
ULN    Ulaanbaatar       28.12 293  i P     P       19 17 58.6 -1.5
ULN                                 pmax    pmax
       comp=Z,7.0nm,1.2s
ULN    Ulaanbaatar       28.12 293  P       P       19 17 59.0 -1.1
SONM   Songino Array     28.57 293  P       P       19 18 04.3 +0.3
       comp=Z,1.7nm,0.5s,baz=83,slow=8.5,SNR=16
SONM                                LR      LR      19 30 43.9
       comp=Z,180nm,18.4s,baz=122,slow=39
SONM   Songino Array     28.57 293  P       P       19 18 03.0 -1.0
SONM                                pmax    pmax
       comp=Z,5.0nm,1.3s
SONM   Songino Array     28.57 293  P       P       19 18 03.0 -1.0
H11N2  WAKE ISLAND Hy    29.04 139  T       T       19 48 47.5
       baz=331,slow=76,SNR=1565
H11N1  WAKE ISLAND Hy    29.05 139  T       T       19 48 48.5
       baz=331,slow=76,SNR=829
H11N3  WAKE ISLAND Hy    29.06 139  T       T       19 48 49.7
       baz=331,slow=76,SNR=2269
TIXI   Tiksi             29.37 348  P       P       19 18 06.3 -4.4
       comp=Z,4.4nm,0.8s,baz=142,slow=7.4,SNR=21
TIXI                                PcP     PcP     19 21 14.8 -0.6
       comp=Z,1.8nm,0.3s,baz=100,slow=1.0,SNR=7.6
TIXI                                LR      LR      19 29 43.9
       comp=Z,99nm,20.7s,baz=176,slow=36
TIXI   Tiksi             29.37 348  ceP     P       19 18 06.3 -4.4
TIXI                                pmax    pmax
       comp=Z,5.0nm,0.8s
TIXI   Tiksi             29.37 348  P       P       19 18 06.6 -4.1
H11S1  WAKE ISLAND Hy    30.01 141  T       T       19 49 58.2
       baz=332,slow=76,SNR=5870
H11S3  WAKE ISLAND Hy    30.01 141  T       T       19 50 00.3
       baz=332,slow=76,SNR=2845
H11S2  WAKE ISLAND Hy    30.02 141  T       T       19 50 02.3
       baz=332,slow=76,SNR=3020
GUMO   Guam              30.14 185  LR      LR      19 30 28.4
       comp=Z,40nm,19.0s,baz=82,slow=36
LZH    Lanzhou           33.88 272  eP      P       19 18 52.0 +1.1
LZH                                 pP      sP      19 19 10.9 -1.1
LZH                                 pmax    pmax
       comp=Z,18nm,1.3s
GTA    Gaotai            35.40 280  eP      P       19 19 05.0 +1.0
GTA                                 pP      sP      19 19 20.5 -4.6
GTA                                 sP      pP      19 19 26.0 +7.6
GTA                                 pmax    pmax
       comp=Z,3.0nm,0.9s
RDOG   Red Dog Mine      35.46  30  P       P       19 19 11.2 +7.3
       baz=252
CD2    Chengdu           36.52 264  eP      P       19 19 13.0 -0.5
CD2                                 pmax    pmax
       comp=Z,10.0nm,0.5s
GCSA   Galena City Sc    37.13  36  P       P       19 19 19.0 +0.8
       baz=263,SNR=5.6
TTA    Tatalina          37.35  39  P       P       19 19 21.4 +1.2
TTA                                 pmax    pmax
       comp=Z,21nm,0.8s
TTA    Tatalina          37.35  39  P       P       19 19 21.4 +1.2
TTA                                 IAmb    IAmb    19 19 22.5
       comp=Z,21nm,0.8s
TTA    Tatalina          37.35  39  P       P       19 19 21.5 +1.2
       baz=266,SNR=15
O18K   Koktuh Hills      37.67  44  P       P       19 19 24.5 +1.6
       baz=271
P18K   Big Mountain,     37.67  45  P       P       19 19 24.1 +1.2
       baz=272
L19K   White Mountain    37.85  40  P       P       19 19 23.5 -0.9
L19K                                IAmb    IAmb    19 19 27.0
       comp=Z,24nm,1.4s
L19K   White Mountain    37.85  40  P       P       19 19 25.9 +1.5
       baz=268,SNR=6.7
N19K   Bonanza Creek     38.02  43  P       P       19 19 25.6 -0.3
N19K                                IAmb    IAmb    19 19 28.6
       comp=Z,26nm,1.0s
N19K   Bonanza Creek     38.02  43  P       P       19 19 27.6 +1.7
       baz=270
M19K   Big River Lodg    38.06  41  P       P       19 19 24.3 -1.9
M19K                                IAmb    IAmb    19 19 30.4
       comp=Z,11nm,1.0s
M19K   Big River Lodg    38.06  41  P       P       19 19 27.8 +1.6
       baz=269
K20K   Telida            38.25  38  P       P       19 19 28.4 +0.6
K20K                                IAmb    IAmb    19 19 30.3
       comp=Z,22nm,0.9s
K20K   Telida            38.25  38  P       P       19 19 29.5 +1.7
       baz=268
J20K   Nowinta River     38.26  37  P       P       19 19 29.2 +1.4
J20K   Nowinta River     38.26  37  P       P       19 19 29.3 +1.5
       baz=266
L20K   Farewell, AK      38.31  40  P       P       19 19 29.9 +1.7
       baz=269
A21K   Barrow            38.49  25  P       P       19 19 29.3 -0.3
A21K   Barrow            38.49  25  P       P       19 19 28.6 -0.9
       baz=255
IMAR   Indian Mountai    38.57  34  P       P       19 19 30.4 +0.1
H21K   Melozitna Rive    38.93  35  P       P       19 19 34.5 +1.1
H21K                                IAmb    IAmb    19 19 35.8
       comp=Z,32nm,1.1s
H21K   Melozitna Rive    38.93  35  P       P       19 19 34.7 +1.3
       baz=266
CHUM   Lake Minchumin    39.05  38  P       P       19 19 36.4 +2.0
       baz=268,SNR=19
PPLA   Purkeypile        39.10  39  P       P       19 19 36.1 +1.1
PPLA   Purkeypile        39.10  39  P       P       19 19 37.1 +2.1
       baz=270,SNR=10
SPCR   Spurr Chakacha    39.12  42  P       P       19 19 37.2 +2.2
       baz=272
CAST   Castle Rocks      39.15  38  P       P       19 19 34.9 -0.4
CAST   Castle Rocks      39.15  38  P       P       19 19 37.4 +2.2
       baz=269,SNR=6.9
I21K   Tanana            39.25  36  P       P       19 19 37.2 +1.2
I21K                                IAmb    IAmb    19 19 38.6
       comp=Z,42nm,1.4s
I21K   Tanana            39.25  36  P       P       19 19 37.5 +1.6
       baz=267,SNR=9.2
NRIK   Noril'sk          39.29 331  PcP     PcP     19 21 43.5 -0.4
       comp=Z,3.3nm,0.6s,baz=141,slow=3.6,SNR=5.8
NRIK                                LR      LR      19 35 07.4
       comp=Z,94nm,19.8s,baz=108,slow=35
BPAW   Bear Paw Mtn.     39.64  37  P       P       19 19 40.9 +1.5
       baz=269
KTH    Kantishna Hill    39.67  38  P       P       19 19 41.2 +1.6
MLY    Manley            39.77  36  P       P       19 19 42.0 +1.6
       baz=268,SNR=15
BRSE   Bradley Lake S    39.93  44  P       P       19 19 43.2 +1.4
       baz=275
TRF    Thorofare Moun    39.96  38  P       P       19 19 43.3 +1.1
TRF                                 IAmb    IAmb    19 19 45.2
       comp=Z,19nm,0.8s
TRF    Thorofare Moun    39.96  38  P       P       19 19 43.2 +1.1
       baz=271
CUT    Chulitna          39.99  40  P       P       19 19 41.3 -0.9
CUT    Chulitna          39.99  40  P       P       19 19 43.1 +0.9
       baz=272
COLD   Coldfoot          40.08  32  P       P       19 19 42.5 -0.5
COLD                                IAmb    IAmb    19 19 45.0
       comp=Z,12nm,0.8s
COLD   Coldfoot          40.08  32  P       P       19 19 43.7 +0.7
       baz=266,SNR=8.9
BWN    Browne            40.31  37  P       P       19 19 46.3 +1.5
RC01   Rabbit Creek A    40.32  42  P       P       19 19 46.0 +1.0
RC01                                IAmb    IAmb    19 19 46.5
       comp=Z,20nm,0.9s
RC01   Rabbit Creek A    40.32  42  P       P       19 19 45.2 +0.2
       baz=274
I23K   Minto, Yukon-K    40.35  36  P       P       19 19 46.7 +1.6
       baz=270
TOLK   Toolik Lake Re    40.42  30  P       P       19 19 46.5 +0.7
TOLK                                IAmb    IAmb    19 19 47.3
       comp=Z,17nm,0.8s
TOLK   Toolik Lake Re    40.42  30  P       P       19 19 46.6 +0.8
       baz=265,SNR=16
NEA2   Nenana            40.48  37  P       P       19 19 47.3 +1.1
NEA2   Nenana            40.48  37  P       P       19 19 47.5 +1.2
       baz=270,SNR=39
DGZ    Jazzator, Alta    40.51 300  eP      P       19 19 46.0 -0.9
DGZ                                 pmax    pmax
       comp=Z,3.0nm,1.4s
MCK    McKinley          40.55  38  P       P       19 19 47.0 +0.1
MCK                                 pmax    pmax
       comp=Z,34nm,0.8s
MCK    McKinley          40.55  38  P       P       19 19 47.0 +0.1
MCK    McKinley          40.55  38  P       P       19 19 47.8 +0.8
       baz=272,SNR=15
PMR    Palmer            40.57  41  P       P       19 19 47.5 +0.5
       baz=274
RND    Reindeer          40.60  38  P       P       19 19 48.0 +0.6
RND                                 pmax    pmax
       comp=Z,30nm,0.8s
RND    Reindeer          40.60  38  P       P       19 19 48.0 +0.6
RND                                 IAmb    IAmb    19 19 48.9
       comp=Z,30nm,0.8s
GHO    Glory Hole Cre    40.66  41  P       P       19 19 48.3 +0.4
GHO                                 IAmb    IAmb    19 19 49.6
       comp=Z,28nm,1.1s
WAT1   Susitna Watana    40.77  39  P       P       19 19 49.0 +0.3
       baz=273
MDM    Murphy Dome       40.83  36  P       P       19 19 50.4 +1.2
MDM                                 IAmb    IAmb    19 19 52.4
       comp=Z,27nm,1.0s
WRH    Wood River Hil    40.90  37  P       P       19 19 50.6 +0.9
WRH                                 IAmb    IAmb    19 19 56.0
       comp=Z,21nm,1.0s
KNK    Knik Glacier      40.91  41  P       P       19 19 50.3 +0.5
KNK                                 IAmb    IAmb    19 19 52.3
       comp=Z,30nm,1.0s
KNK    Knik Glacier      40.91  41  P       P       19 19 50.2 +0.4
       baz=275
SML    Sawmill           40.94  41  P       P       19 19 50.5 +0.4
SML    Sawmill           40.94  41  P       P       19 19 51.0 +0.9
       baz=274,SNR=8.0
H24K   Noodor Dome       40.97  35  P       P       19 19 51.8 +1.5
H24K                                IAmb    IAmb    19 19 53.2
       comp=Z,57nm,1.4s
H24K   Noodor Dome       40.97  35  P       P       19 19 52.0 +1.6
       baz=270
TCOL   CIGO, UAF Yank    40.99  36  P       P       19 19 51.8 +1.4
       baz=271,SNR=6.5
COLA   College           41.00  36  i P     P       19 19 50.8 +0.4
COLA                                pmax    pmax
       comp=Z,45nm,0.9s
CCB    Clear Creek Bu    41.02  36  P       P       19 19 50.5 -0.2
CCB                                 IAmb    IAmb    19 19 54.3
       comp=Z,22nm,1.3s
ZALV   Zalesovo Beam     41.08 307  P       P       19 19 48.7 -2.6
       comp=Z,0.9nm,0.4s,baz=79,slow=8.0,SNR=5.6
ZALV                                PcP     PcP     19 21 49.4 -0.5
       comp=Z,6.5nm,0.7s,baz=73,slow=3.1,SNR=19
ZALV                                LR      LR      19 37 07.9
       comp=Z,127nm,18.0s,baz=14,slow=37
ZALV   Zalesovo Beam     41.08 307  i P     P       19 19 51.5 +0.2
ZALV                                pmax    pmax
       comp=Z,1.0nm,0.4s
WAT6   Susitna Watana    41.16  40  P       P       19 19 52.8 +0.7
       baz=274
POKR   Poker Plat Res    41.17  36  P       P       19 19 53.6 +1.6
POKR   Poker Plat Res    41.17  36  P       P       19 19 53.9 +1.9
       baz=271,SNR=19
DHY    Denali Highway    41.29  39  P       P       19 19 54.0 +0.9
       baz=274
HDA    Harding Lake      41.40  37  P       P       19 19 54.1 +0.3
HDA                                 IAmb    IAmb    19 19 55.3
       comp=Z,27nm,0.7s
HDA    Harding Lake      41.40  37  P       P       19 19 54.1 +0.3
       baz=273,SNR=20
SCM    Sheep Creek Mo    41.41  41  P       P       19 19 55.1 +1.1
SCM                                 pmax    pmax
       comp=Z,21nm,1.1s
SCM    Sheep Creek Mo    41.41  41  P       P       19 19 55.1 +1.1
SCM                                 IAmb    IAmb    19 20 02.9
       comp=Z,21nm,1.1s
SCM    Sheep Creek Mo    41.41  41  P       P       19 19 54.7 +0.7
       baz=275
IL31                     41.41  36  P       P       19 19 54.1 +0.3
IL31                                IAmb    IAmb    19 19 55.5
       comp=Z,34nm,1.1s
ILAR   Eielson Array     41.41  36  P       P       19 19 54.4 +0.4
       comp=Z,15nm,0.8s,baz=255,slow=6.4,SNR=107
M24K   Tolsona, Glenn    41.92  40  P       P       19 20 00.0 +1.8
M24K   Tolsona, Glenn    41.92  40  P       P       19 19 60.0 +1.8
       baz=276
KLU    Klutina           42.11  41  P       P       19 20 00.8 +1.0
KLU                                 IAmb    IAmb    19 20 02.6
       comp=Z,38nm,1.2s
KLU    Klutina           42.11  41  P       P       19 20 01.2 +1.5
       baz=277,SNR=6.2
PAX    Paxson            42.16  39  P       P       19 20 01.5 +1.3
       baz=276,SNR=5.9
WMQ    Urumqi            42.19 292  eP      P       19 20 02.2 +1.6
WMQ                                 pP      pP      19 20 11.6 -3.8
WMQ                                 pmax    pmax
       comp=Z,19nm,0.9s
WMQ                                 pmax    pmax
       comp=Z,390nm,5.5s
BMAR   Burnt Mountain    42.26  32  P       P       19 20 01.7 +0.8
HARP   HAARP             42.37  40  P       P       19 20 03.7 +1.9
       baz=276,SNR=7.9
RIDG   Independent Ri    42.37  38  P       P       19 20 02.2 +0.4
RIDG                                IAmb    IAmb    19 20 03.7
       comp=Z,31nm,0.9s
RIDG   Independent Ri    42.37  38  P       P       19 20 02.2 +0.4
       baz=275,SNR=13
DOT    Dot Lake          42.73  38  P       P       19 20 05.0 +0.3
DOT                                 IAmb    IAmb    19 20 05.8
       comp=Z,17nm,0.7s
SCRK   Sand Creek        42.73  37  P       P       19 20 03.4 -1.4
SCRK                                IAmb    IAmb    19 20 06.1
       comp=Z,27nm,0.8s
SCRK   Sand Creek        42.73  37  P       P       19 20 05.0 +0.2
       baz=276,SNR=18
ZSN    Zaisan            42.80 298  eP      P       19 20 05.0 -0.5
       baz=298
ZSN    Zaisan            42.80 298  eP      P       19 20 05.0 -0.5
BMRM   Bremner River     42.81  42  P       P       19 20 06.6 +1.2
       baz=278
J26L   Joseph Creek      42.86  36  P       P       19 20 05.5 -0.3
       baz=275
MENT   Mentasta          42.96  39  P       P       19 20 08.3 +1.7
MENT                                IAmb    IAmb    19 20 09.2
       comp=Z,13nm,0.6s
M26K   Nabesna, AK       43.36  40  P       P       19 20 11.4 +1.5
M26K                                IAmb    IAmb    19 20 12.9
       comp=Z,33nm,0.9s
M26K   Nabesna, AK       43.36  40  P       P       19 20 11.8 +1.9
       baz=278
MCARA  McCarthy VSAT     43.51  41  P       P       19 20 12.8 +1.8
       baz=279
CRQM   Cirque            43.56  42  P       P       19 20 12.5 +0.9
CRQE   Cirque            43.58  42  P       P       19 20 13.3 +1.6
       baz=280
L27K   Beaver Creek,     43.80  38  P       P       19 20 15.1 +1.8
L27K                                IAmb    IAmb    19 20 16.2
       comp=Z,31nm,0.8s
L27K   Beaver Creek,     43.80  38  P       P       19 20 15.3 +1.9
       baz=278
BCAR   Beaver Creek A    43.82  38  P       P       19 20 15.3 +1.8
EGAK   Eagle             43.86  36  P       P       19 20 14.2 +0.5
EGAK                                IAmb    IAmb    19 20 15.3
       comp=Z,22nm,0.8s
EGAK   Eagle             43.86  36  P       P       19 20 14.4 +0.7
       baz=277
M27K   Edge Creek, AK    43.89  39  P       P       19 20 15.7 +1.6
M27K                                IAmb    IAmb    19 20 17.1
       comp=Z,22nm,0.9s
M27K   Edge Creek, AK    43.89  39  P       P       19 20 16.2 +2.0
       baz=279
BARN   Barnard Glacie    44.21  41  P       P       19 20 17.7 +0.8
BARN                                IAmb    IAmb    19 20 39.8
       comp=Z,20nm,1.1s
BVCY   Beaver Creek      44.34  39  P       P       19 20 19.1 +1.4
       baz=280,SNR=11
CTG    Chitna Glacier    44.38  41  P       P       19 20 18.8 +0.6
       baz=281
CTGM   Chitina Glacie    44.39  41  P       P       19 20 18.5 +0.3
CTGM                                IAmb    IAmb    19 20 41.1
       comp=Z,25nm,1.0s
YUK3   Moose Creek       44.65  40  P       P       19 20 21.5 +1.2
       baz=281,SNR=6.3
MK31   Makanchi Array    44.68 298  P       P       19 20 20.7 +0.2
MK31                                pmax    pmax
       comp=Z,4.0nm,0.7s
MK31   Makanchi Array    44.68 298  P       P       19 20 20.7 +0.2
MKAR   Makanchi Array    44.68 298  P       P       19 20 21.2 +0.6
       comp=Z,3.7nm,0.7s,baz=80,slow=9.2,SNR=48
MKAR                                PcP     PcP     19 22 02.3 +0.2
       comp=Z,0.5nm,0.7s,baz=64,slow=5.0,SNR=3.5
MKAR   Makanchi Array    44.68 298  eP      P       19 20 21.1 +0.5
MKAR   Makanchi Array    44.68 298  P       P       19 20 20.6 +0.1
DAWY   Dawson            44.72  37  P       P       19 20 21.6 +0.9
DAWY   Dawson            44.72  37  P       P       19 20 21.6 +0.9
       baz=279,SNR=7.0
SEM    Semipalatinsk     44.73 303  eP      P       19 20 19.5 -1.6
       baz=303
SEM    Semipalatinsk     44.73 303  eP      P       19 20 19.5 -1.6
MAKZ   Makanchi          44.87 298  P       P       19 20 22.1  0.0
MAKZ                                pmax    pmax
       comp=Z,4.0nm,0.8s
MAKZ   Makanchi          44.87 298  P       P       19 20 22.1  0.0
I29M   Ogilvie Camp,     44.97  35  P       P       19 20 24.1 +1.5
       baz=279,SNR=10
KURK   Kurchatov         45.61 304  P       P       19 20 27.0 -0.9
KURK                                pmax    pmax
       comp=Z,13nm,1.3s
KURK   Kurchatov         45.61 304  eP      P       19 20 27.0 -0.9
KURK   Kurchatov         45.61 304  P       P       19 20 26.9 -0.9
M30M   Minto, Yukon      46.16  39  P       P       19 20 34.1 +2.0
       baz=283,SNR=5.6
HYT    Haines Junctio    46.24  41  P       P       19 20 35.3 +2.4
       baz=284,SNR=15
INK    Inuvik            46.33  30  P       P       19 20 34.1 +0.9
       comp=Z,33nm,1.0s,baz=293,slow=7.0,SNR=88
INK    Inuvik            46.33  30  P       P       19 20 34.1 +0.9
INK                                 pmax    pmax
       comp=Z,27nm,0.9s
INK    Inuvik            46.33  30  P       P       19 20 34.1 +0.9
INK    Inuvik            46.33  30  P       P       19 20 34.2 +0.9
       baz=280,SNR=33
N31M   Braeburn, Yuko    46.89  40  P       P       19 20 40.0 +2.2
       baz=285
M31M   Drury Creek, Y    47.34  39  P       P       19 20 43.0 +1.8
       baz=285,SNR=7.0
WHY    Whitehorse        47.53  41  P       P       19 20 45.0 +2.1
       baz=286
CMAR   Chiang Mai Arr    47.63 254  P       P       19 20 45.0 +0.9
       comp=Z,1.2nm,0.7s,baz=43,slow=7.2,SNR=9.8
CMAR                                LR      LR      19 40 38.5
       comp=Z,42nm,19.3s,baz=52,slow=36
FARO   Faro, Yukon       47.80  38  P       P       19 20 46.4 +1.6
       baz=286,SNR=7.1
TDK    Taldyqorghan      47.87 297  eP      P       19 20 45.2 -0.5
       comp=Z,13nm,1.0s,baz=297
TDK    Taldyqorghan      47.87 297  eP      P       19 20 45.1 -0.5
TDK                                 pmax    pmax
       comp=Z,13nm,1.0s
SHLS   Shalkode          47.95 294  eP      P       19 20 43.5 -2.9
       baz=294
SHLS   Shalkode          47.95 294  eP      P       19 20 43.5 -2.9
UZB    Uzynbulak         48.25 294  eP      P       19 20 48.3 -0.5
       baz=294
UZB    Uzynbulak         48.25 294  eP      P       19 20 48.2 -0.5
A36M   Sachs Harbour     48.31  25  P       P       19 20 49.1 +0.5
A36M   Sachs Harbour     48.31  25  P       P       19 20 49.0 +0.5
       baz=284,SNR=16
P33M   Teslin, Yukon     48.64  41  P       P       19 20 53.3 +1.9
       baz=288,SNR=6.1
SATY   Saty              48.69 294  eP      P       19 20 51.9 -0.3
       comp=Z,7.0nm,1.1s,baz=294
SATY   Saty              48.69 294  eP      P       19 20 51.8 -0.3
SATY                                pmax    pmax
       comp=Z,7.0nm,1.1s
BRZS   Berezniki         49.43 305  eP      P       19 20 56.7 -0.8
       baz=305
BRZS   Berezniki         49.43 305  eP      P       19 20 56.6 -0.8
MDOK   Medeo             49.54 295  eP      P       19 20 57.8 -0.8
       baz=295
MDOK   Medeo             49.54 295  eP      P       19 20 57.8 -0.8
BRVK   Borovoye          49.63 309  ceP     P       19 20 59.0 +0.1
BRVK                                pmax    pmax
       comp=Z,8.0nm,1.3s
BRVK   Borovoye          49.63 309  eP      P       19 20 59.0 +0.1
KUU    Kurty             49.68 296  eP      P       19 20 59.1 -0.5
       comp=Z,9.5nm,1.0s,baz=296
KUU    Kurty             49.68 296  eP      P       19 20 59.0 -0.5
KUU                                 pmax    pmax
       comp=Z,10.0nm,1.0s
DLBC   Dease Lake        50.59  42  P       P       19 21 07.8 +1.6
       comp=Z,6.2nm,0.8s,baz=268,slow=8.8,SNR=6.1
TKM2   Tokmak 2          50.60 296  P       P       19 21 08.0 +1.3
       SNR=13
BTLS   Baital            50.65 299  eP      P       19 21 05.8 -1.0
       baz=299
BTLS   Baital            50.65 299  eP      P       19 21 05.8 -1.0
SGDS   Sogindy           50.99 297  eP      P       19 21 08.7 -0.8
       baz=296
KBK    Karagaybulak      51.15 295  P       P       19 21 12.0 +1.2
       SNR=14
USP    Ospenovka         51.16 296  P       P       19 21 11.8 +1.1
       SNR=12
AAK    Ala-Archa         51.45 296  P       P       19 21 14.0 +0.9
       SNR=7.3
AAK    Ala-Archa         51.45 296  P       P       19 21 13.3 +0.2
AAK                                 pmax    pmax
       comp=Z,6.0nm,0.8s
AAK    Ala-Archa         51.45 296  eP      P       19 21 13.3 +0.2
AAK    Ala-Archa         51.45 296  P       P       19 21 13.2 +0.2
AAK                                 IAmb    IAmb    19 21 14.9
       comp=Z,6.0nm,0.8s
WRGLY  Wrigley           51.77  35  P       P       19 21 16.9 +2.1
       baz=293
EKS2   Erkin-Say         51.91 296  P       P       19 21 17.5 +1.1
       SNR=5.5
KSH    Kashi             51.96 291  P       P       19 21 21.5 +4.7
KSH                                 pP      sP      19 21 36.9 -1.6
KSH                                 pmax    pmax
       comp=Z,8.0nm,0.9s
AML    Almayashu         52.21 295  P       P       19 21 20.4 +1.3
       SNR=6.3
EUNU   Eureka            52.83  10  P       P       19 21 21.5 -1.2
SVE    Sverdlovsk        53.21 317  eP      P       19 21 25.4 -0.2
SVE                                 pmax    pmax
       comp=Z,9.0nm,0.8s
DZA    Taraz             53.38 297  eP      P       19 21 26.6 -0.6
       baz=297
DZA    Taraz             53.38 297  eP      P       19 21 26.5 -0.6
KKAR   Karatay Array     53.80 298  P       P       19 21 30.3 +0.1
KKAR   Karatay Array     53.80 298  P       P       19 21 30.3 +0.1
BRLS   Borolday          54.27 298  eP      P       19 21 35.1 +1.4
       baz=298
BRLS   Borolday          54.27 298  eP      P       19 21 35.0 +1.4
ARU    Arti              54.41 317  P       P       19 21 34.0 -0.4
       comp=Z,2.5nm,0.5s,baz=80,slow=5.6
ARU                                 PcP     PcP     19 22 37.5 +0.1
       comp=Z,1.4nm,0.6s,baz=207,slow=2.3,SNR=4.1
ARU    Arti              54.41 317  d iP    P       19 21 32.9 -1.5
ARU                                                 19 22 35.8
ARU                                                 19 23 33.3
ARU                                 S       S       19 29 08.6 +0.2
ARU                                 pmax    pmax
       comp=Z,5.0nm,0.5s
ARU    Arti              54.41 317  P       P       19 21 34.2 -0.2
ARU                                 IAmb    IAmb    19 21 35.1
       comp=Z,7.4nm,0.6s
RES    Resolute Bay      54.92  17  P       P       19 21 37.3 -0.6
       comp=Z,16nm,0.7s,baz=322,slow=8.1,SNR=60
RES                                 PcP     PcP     19 22 40.0 +0.9
       comp=Z,2.8nm,0.7s,baz=297,slow=4.4,SNR=3.8
RES    Resolute Bay      54.92  17  P       P       19 21 37.2 -0.6
RES                                 pmax    pmax
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	comp=Z,19nm,0.8s						
RES	Resolute Bay	54.92	17	P	P	19 21 37.2	-0.6
YKA	Yellowknife Ar	55.73	34	P	P	19 21 44.1	+0.3
	comp=Z,7.2nm,0.8s,baz=298,slow=6.9,SNR=26						
CHGR	Chuyangaron	56.95	294	P	P	19 21 53.4	+0.3
ABKAR	Akbulak array	57.14	309	P	P	19 21 54.1	+0.1
AKTO	Aktyubinsk	57.61	311	P	P	19 21 57.4	0.0
	comp=Z,4.9nm,0.6s,baz=70,slow=7.4,SNR=24						
AKTO				PcP	PcP	19 22 50.2	+0.2
	comp=Z,3.2nm,0.7s,baz=79,slow=5.6,SNR=4.8						
PRGR	Permogore	57.62	326	eP	P	19 21 56.5	-0.7
PRGR				pmax	pmax		
	comp=Z,21nm,0.9s						
KIRV	Kirov	57.65	322	P	P	19 21 56.6	-0.9
	comp=Z,25nm,0.6s,baz=81,slow=3.2,SNR=7.5						
KIRV	Kirov	57.65	322	ceP	P	19 21 56.8	-0.7
APA	Apatity	58.41	336	⇓iP	P	19 22 17.7	+15
APA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,3µm,18.0s						
NEEM	North Greenlan	58.52	5	i P	P	19 22 02.6	-1.1
NEEM				IAmb	IAmb	19 22 04.6	
	comp=Z,6.2nm,0.6s						
HAMF	Hammerfest	58.93	341	eP	P	19 22 06.8	+0.5
ARA0	ARCESS Array S	59.27	340	eP	P	19 22 09.2	+0.6
ARCES	ARCESS Array B	59.27	340	P	P	19 22 06.8	-1.8
	comp=Z,4.4nm,0.8s,baz=52,slow=7.9,SNR=13						
KTK1	Kautokeino	60.21	340	eP	P	19 22 15.3	+0.2
KLMR	Klimovskoe	60.48	328	eP	P	19 22 16.3	-0.7
KLMR				pmax	pmax		
	comp=Z,18nm,0.8s						
KLMR	Klimovskoe	60.48	328	eP	P	19 22 16.4	-0.6
KLMR				AMP		19 22 17.8	
	comp=Z,18nm,0.8s						
JETT	Jettan, Norway	60.50	341	eP	P	19 22 17.9	+0.9
TRO	Tromso	60.78	342	eP	P	19 22 19.0	+0.1
BELG	Belogornoye	61.96	317	P	P	19 22 26.3	-0.9
	comp=Z,33nm,0.8s,baz=115,slow=1.8,SNR=7.2						
BELG	Belogornoye	61.96	317	i P	P	19 22 27.1	-0.1
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NEW	Newport	62.24	49	P	P	19 22 29.7	+0.5
	baz=305						
L04D	Klamath Falls	62.76	57	P	P	19 22 33.2	+0.3
	baz=305						
J05D	Fort Rock, OR	62.78	55	P	P	19 22 34.3	+1.2
	baz=306						
N02D	Trinity Center	63.24	58	P	P	19 22 37.6	+1.6
	baz=306						
M04C	Macdoel	63.29	57	P	P	19 22 38.1	+1.7
	baz=306						
FAUS	Fauske	63.38	341	eP	P	19 22 36.8	+0.4
O02D	Mt. Diablo Mer	63.65	59	P	P	19 22 40.5	+1.8
	baz=306						
SUMG	Summit	63.89	2	P	P	19 22 39.0	-1.2
SUMG				pmax	pmax		
	comp=Z,17nm,0.8s						
SUMG	Summit	63.89	2	i P	P	19 22 39.8	-0.4
SUMG				IAmb	IAmb	19 22 41.5	
	comp=Z,20nm,0.8s						
SUMG	Summit	63.89	2	P	P	19 22 39.0	-1.2
O03E	Paynes Creek	64.19	58	P	P	19 22 43.2	+0.9
	baz=306						
WB0	Warramunga Arr	64.32	194	P	P	19 22 42.2	-0.8
WR0	Warramunga Arr	64.48	193	P	P	19 22 42.5	-1.7
WRA	Warramunga Arr	64.50	194	P	P	19 22 44.1	-0.2
	comp=Z,4.5nm,1.0s,baz=12,slow=6.7,SNR=20						
WRA	Warramunga Arr	64.50	194	i P	P	19 22 44.5	+0.2
WRA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WRA	Warramunga Arr	64.50	194	P	P	19 22 43.8	-0.5
MOS	Moscow	64.50	324	eP	P	19 22 43.4	-0.5
GEYT	Alibeck	64.53	299	P	P	19 22 45.5	+1.0
	comp=Z,4.1nm,0.8s,baz=324,slow=2.0,SNR=5.4						
MOR8	Moi Rana	64.56	341	eP	P	19 22 42.9	-1.2
PLID	Pearl Lake	64.75	51	P	P	19 22 45.5	-0.5
PLID				IAmb	IAmb	19 22 47.7	
	comp=Z,13nm,1.2s						
MSO	Missoula	64.83	49	P	P	19 22 47.1	+0.8
	baz=308,SNR=7.5						
FINES	FINESS Array B	64.91	333	P	P	19 22 46.0	-0.5
	comp=Z,11nm,0.5s,baz=41,slow=7.7,SNR=121						
FINES	FINESS Array B	64.91	333	P	P	19 22 45.5	-1.0
OBN	Obninsk	65.37	324	P	P	19 22 48.3	-1.3
	comp=Z,5.1nm,0.6s,baz=31,slow=8.4,SNR=5.6						
OBN	Obninsk	65.37	324	ceP	P	19 22 47.9	-1.6
OBN				eS	S	19 31 26.2	-2.8
OBN				pmax	pmax		
	comp=Z,86nm,2.5s						
VRH	Novokhopyorsk	65.59	318	eP	P	19 22 50.8	-0.2
VRH				pmax	pmax		
	comp=Z,30nm,0.8s						
LPSR	Galich'ya Gora	65.99	321	eP	P	19 22 53.3	-0.3
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
EGMT	Eagleton	66.30	46	P	P	19 22 56.7	+0.9
	baz=310,SNR=5.5						
NSS	Namsos	66.50	341	eP	P	19 22 56.8	+0.1
HLID	Hailey	66.58	52	P	P	19 22 58.9	+1.1
	baz=309,SNR=5.2						
VSR	Storozhevoye	66.80	319	eP	P	19 22 58.6	-0.2
VSR				pmax	pmax		
	comp=Z,20nm,0.7s						
BOZ	Bozeman (W)	66.85	49	P	P	19 23 00.5	+1.1
	baz=309						
VORD	Divnogorie	66.90	319	eP	P	19 22 59.5	+0.1
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
KVN	Kaiserville	67.22	57	P	P	19 23 01.8	-0.2
KVN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KVN	Kaiserville	67.22	57	P	P	19 23 01.8	-0.2
KVN				IAmb	IAmb	19 23 04.1	
	comp=Z,10nm,0.9s						
ICESG	Greenland Ices	67.35	3	i P	P	19 23 02.3	-0.1
ICESG				IAmb	IAmb	19 23 03.6	
	comp=Z,35nm,0.8s						
NVAR	Mina Array Bea	67.48	58	P	P	19 23 04.9	+1.2
	comp=Z,6.0nm,0.8s,baz=288,slow=6.7,SNR=29						
NVAR	Mina Array Bea	67.48	58	P	P	19 23 03.7	+0.1
TBLU	Trondheim	67.99	341	eP	P	19 23 05.8	-0.4
H17A	Grant Village	68.19	49	P	P	19 23 11.0	+3.0
	baz=310						
AS31	Alice Springs	68.22	193	P	P	19 23 07.1	-0.9
ASAR	Alice Springs	68.22	193	P	P	19 23 09.1	+1.1
	comp=Z,1.3nm,0.9s,baz=13,slow=6.5,SNR=14						
ASAR				PKP2bc		19 51 27.6	
	comp=Z,0.4nm,0.7s,baz=168,slow=3.3,SNR=6.2						
ASAR	Alice Springs	68.22	193	P	P	19 23 06.5	-1.5
DGMT	Dagmar	68.81	43	P	P	19 23 12.5	+0.9
	baz=312						
CWC	Cottonwood Cre	68.86	60	P	P	19 23 13.3	+1.1
	baz=309						
R11A	Troy Canyon, C	69.19	57	P	P	19 23 15.2	+0.9
	baz=310,SNR=7.9						
DOMB	Dombas	69.31	340	eP	P	19 23 14.7	+0.2
MNK	Minsk	69.37	327	i P	P	19 23 15.4	+0.5
MNK				i *PP	pP	19 23 31.8	+1.2
MNK				i		19 23 38.3	
MNK				i		19 25 49.2	
MNK				i PPP	PPP	19 27 30.5	
MNK				i S	S	19 32 16.7	-0.4
MNK				i *SS	sS	19 32 46.6	+3.1
MNK				i		19 33 08.6	
MNK				i SS	SS	19 36 47.3	+3.4
MNK				pmax	pmax		
	comp=Z,68nm,0.8s						
MNK				pmax	pmax		
	comp=E,5.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,42nm,1.0s						
MNK				MLR	MLR		
	comp=Z,174nm,13.0s						
MNK				MLR	MLR		
	comp=E,99nm,17.0s						
MNK				MLR	MLR		
	comp=N,1µm,22.0s						
MNK	Minsk	69.37	327	i P	P	19 23 15.5	+0.6
	comp=E,5.0nm,0.9s						
MNK				i P	P	19 23 15.5	+0.6
	comp=N,42nm,1.0s						
MNK				i P	P	19 23 15.5	+0.6
	comp=Z,68nm,0.8s,baz=223						
MNK				i pP	pP	19 23 31.9	+1.3
MNK				i PP	PP	19 25 49.2	+1.1
MNK				i PPP	PPP	19 27 30.5	
MNK				i S	S	19 32 16.8	-0.3
MNK				i sS	sS	19 32 46.6	+3.1
MNK				i SS	SS	19 36 47.4	+3.4
MNK				i SSS	SSS	19 39 59.7	
MNK				i LR	LR	19 50 28.5	
MNK				i LRM	MLR	19 54 59.9	
	comp=Z,174nm,13.0s						
MNK				i LRM	MLR	19 55 05.7	
	comp=E,99nm,17.4s						
MNK				i LRM	MLR	19 55 06.4	
	comp=N,1µm,21.7s						
NC405	NORSAR Array S	69.44	339	P	P	19 23 14.0	-1.2
MPMC	Manual Prospec	69.47	60	P	P	19 23 16.8	+0.7
	baz=310,SNR=7.6						
NACGM	Naroch	69.50	328	i P	P	19 23 14.2	-1.4
DY2G	Dye2	69.60	6	i P	P	19 23 15.8	-0.6
DY2G				IAmb	IAmb	19 23 17.2	
	comp=Z,20nm,0.8s						
FURC	Furnace Creek,	69.60	59	P	P	19 23 17.9	+1.4
	baz=310,SNR=5.1						
NB2	NORSAR Subarra	69.63	339	P	P	19 23 15.7	-0.7
	comp=Z,15nm,0.6s,baz=32,slow=6.5						
NB2	NORSAR Subarra	69.63	339	P	P	19 23 15.7	-0.7
	baz=32,slow=6.5						
NOA	NORSAR Array B	69.63	339	P	P	19 23 15.8	-0.6
	comp=Z,8.2nm,0.6s,baz=32,slow=6.6,SNR=35						
NOA				LR	LR	19 56 34.6	
	comp=Z,72nm,20.9s,baz=355,slow=38						
DUG	Dugway, Tooele	69.64	54	P	P	19 23 17.4	+0.4
DUG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DUG	Dugway, Tooele	69.64	54	P	P	19 23 17.4	+0.4
DUG	Dugway, Tooele	69.64	54	P	P	19 23 18.4	+1.4
	baz=310,SNR=7.1						
NC602	NORSAR Array S	69.80	339	eP	P	19 23 17.9	+0.5
BW06	Boulder Array	69.82	50	P	P	19 23 18.8	+0.6
	baz=311,SNR=6.1						
PD31	Pinedale Array	69.82	50	P	P	19 23 17.9	-0.3
PDAR	Pinedale Array	69.82	50	P	P	19 23 18.7	+0.6
	comp=Z,3.3nm,0.8s,baz=275,slow=2.4,SNR=23						
PDAR	Pinedale Array	69.82	50	P	P	19 23 18.5	+0.4
KVAR	Kislovodsk Arr	69.83	312	P	P	19 23 20.1	+2.0
	comp=Z,11nm,0.8s,baz=11,slow=16,SNR=8.9						
KIV	Kislovodsk	69.84	312	⇑P	P	19 23 20.0	+1.9
KIV	Kislovodsk	69.84	312	eP	P	19 23 17.7	-0.4
KIV				pmax	pmax		
	comp=Z,60nm,1.1s						
KIV				MLR	MLR		
	comp=Z,75nm,17.0s						
KIV	Kislovodsk	69.84	312	eP	P	19 23 17.7	-0.4
KIV	Kislovodsk	69.84	312	P	P	19 23 19.2	+1.1
KBZ	Khabaz	69.87	312	P	P	19 23 19.8	+1.7
	comp=Z,27nm,0.8s,baz=43,slow=4.3,SNR=52						
KBZ				LR	LR	19 56 05.6	
	comp=Z,124nm,18.4s,baz=42,slow=38						
KBZ	Khabaz	69.87	312	ceP	P	19 23 19.2	+1.1
KBZ				pmax	pmax		
	comp=Z,32nm,0.9s						
KBZ	Khabaz	69.87	312	eP	P	19 23 19.2	+1.1
GWY	Greenwater Val	69.90	59	P	P	19 23 19.0	+0.3
EDW2	Edwards Air Fo	69.91	61	P	P	19 23 19.6	+1.0
	baz=310						
ZEI	Tsey	69.95	310	eP	P	19 23 18.3	-0.6
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SHA1	Shidzhatmaz	70.00	312	i P	P	19 23 18.8	-0.4
PABE	Paberze	70.10	330	P	P	19 23 19.2	-0.1
NEY	Neytrino	70.29	311	i P	P	19 23 20.9	0.0
NEY				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ONI	Oni	70.33	310	P	P	19 23 21.4	+0.4
ONI				pmax	pmax		
	comp=Z,21nm,0.9s						
ONI	Oni	70.33	310	P	P	19 23 21.4	+0.4
ONI				IAmb	IAmb	19 23 24.3	
	comp=Z,21nm,0.9s						
GSC	Goldstone, Bar	70.39	60	P	P	19 23 22.3	+0.8
	baz=310						
BFSC	Mount Baldy Ra	70.53	61	P	P	19 23 23.4	+0.9
	baz=310						
SKAR	Skarslia	70.68	340	eP	P	19 23 23.5	+0.6
TUQ	Turquoise Moun	70.85	59	P	P	19 23 25.4	+1.0
	baz=310,SNR=6.7						
HEC	Hector,Ludlow	70.98	60	P	P	19 23 26.4	+1.2
	baz=310						
GNI	Garni	71.22	308	P	P	19 23 28.2	+1.6
	comp=Z,3.2nm,0.6s,baz=98,slow=7.1,SNR=3.9						
GNI	Garni	71.22	308	i P	P	19 23 28.5	+1.8
GNI				pmax	pmax		
	comp=Z,12nm,0.9s						
MURC	Murrieta	71.24	61	P	P	19 23 27.2	+0.6
	baz=310						
KONO	Kongsberg	71.24	339	eP	P	19 23 26.7	+0.6
ULM	Lac du Bonnet	71.42	37	P	P	19 23 27.6	+0.1
	comp=Z,4.4nm,0.9s,baz=300,slow=2.8,SNR=4.1						
GMRC	Granite Mounta	71.44	60	P	P	19 23 28.9	+0.9
	baz=311						
MDND	Maddock	71.46	41	P	P	19 23 29.0	+1.3
	baz=315						
AKASG	Malin Array Be	71.63	324	P	P	19 23 28.9	+0.1
	comp=Z,15nm,0.6s,baz=39,slow=6.3,SNR=62						
AKASG	Malin Array Be	71.63	324	P	P	19 23 28.5	-0.2
AKASG				pmax	pmax		
	comp=Z,12nm,0.9s						
AKASG	Malin Array Be	71.63	324	P	P	19 23 28.5	-0.2
AKASG				IAmb	IAmb	19 23 30.1	
	comp=Z,12nm,0.9s						
BER	Bergen	71.65	341	eP	P	19 23 29.6	+1.0
PFO	Pinyon Flats O	71.69	61	P	P	19 23 30.2	+0.6
	baz=311						
RSSD	Black Hills	71.87	46	P	P	19 23 29.5	-1.1
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RSSD	Black Hills	71.87	46	P	P	19 23 29.5	-1.1
RSSD	Black Hills	71.87	46	P	P	19 23 31.0	+0.5
	baz=314						
ANN	Anapa	72.02	315	eP	P	19 23 26.0	-5.1
ANN				e*PP	pP	19 23 43.8	-3.1
ANN				pmax	pmax		
	comp=Z,76nm,0.9s						
IRM	Iron Mountain	72.17	60	P	P	19 23 33.1	+0.8
	baz=311						
BC3	Big Chuckawall	72.30	60	P	P	19 23 33.8	+0.6
	baz=311						
O20A	White River Ci	72.31	51	P	P	19 23 34.0	+0.8
	baz=313						
AGMN	Agassiz Nation	72.86	39	P	P	19 23 36.3	+0.2
	baz=317,SNR=5.0						
N23A	Red Feather La	73.07	49	P	P	19 23 39.0	+1.2
	baz=314						
WUAZ	Wupatki	73.58	57	P	P	19 23 42.3	+1.5
	baz=312						
B35A	Bob, Littlefor	73.77	37	P	P	19 23 40.1	-1.4
SORM	Soroca	73.93	322	⇑P	P	19 23 42.6	+0.3
SORM	Soroca	73.93	322	⇑P	P	19 23 42.6	+0.3
ISCO	Idaho Springs	74.01	50	P	P	19 23 44.6	+1.2
	baz=314,SNR=6.3						
MVCO	Mesa Verde	74.15	54	P	P	19 23 44.8	+0.6
	baz=313						
BEL	Belsk	74.16	329	eP	P	19 23 44.9	+1.3
PURM	Purcari	74.44	320	⇑P	P	19 23 46.0	+0.6
LVV	L'vov	74.47	326	eP	P	19 23 46.3	+0.8
S22A	4UR Ranch, Cre	74.74	52	P	P	19 23 49.0	+1.3
	baz=314,SNR=5.3						
Q24A	Divide	74.85	50	P	P	19 23 49.1	+0.8
	baz=314						
OGNE	Ogallala	75.15	47	P	P	19 23 50.6	+0.9
	baz=316						
KWP	Kalwaria Pacla	75.16	326	eP	P	19 23 50.8	+1.3
VASR	Vaslui	75.31	322	⇑P	P	19 23 51.4	+1.0
SDCO	Great Sand Dun	75.50	51	P	P	19 23 52.6	+0.6
	baz=314						
BUR08	Bucovina Ar. S	75.67	324	P	P	19 23 53.5	+0.8
BUR08				IAmb	IAmb	19 23 54.8	
	comp=Z,12nm,0.7s						
BURAR	Bucovina Array	75.69	324	⇑P	P	19 23 53.6	+0.9
BURAR	Bucovina Array	75.69	324	⇑P	P	19 23 53.6	+0.9
BURAR	Bucovina Array	75.69	324	P	P	19 23 53.4	+0.7
BURAR				IAmb	IAmb	19 23 55.2	
	comp=Z,17nm,0.7s						
VLDR	Vladesti	75.78	321	⇓P	P	19 23 54.3	+1.3
OJC	Ojcow	75.83	328	eP	P	19 23 54.2	+0.9
OJC	Ojcow	75.83	328	P	P	19 23 53.4	+0.1
OJC				pmax	pmax		
	comp=Z,27nm,0.9s						
OJC	Ojcow	75.83	328	P	P	19 23 53.4	+0.1
ECSD	EROS Data Cent	75.88	42	P	P	19 23 54.1	+0.4
	baz=318,SNR=7.7						
KOLS	Kolonicke sedl	75.88	326	eP	P	19 23 55.1	+1.4
KOLS				pmax	pmax		
	comp=Z,25nm,1.2s						
KOLS	Kolonicke sedl	75.88	326	eP	Pg	19 23 55.1	+2.2
TESR	Tescani	75.92	322	⇑P	P	19 23 54.5	+0.7
BSEG	Bad Segeberg	75.96	335	eP	P	19 23 54.9	+0.9
	comp=Z,38nm,0.9s,baz=30,slow=5.5						
RUE	Ruedersdorf	76.10	333	eP	P	19 23 55.9	+1.2
	comp=Z,51nm,1.1s,baz=30,slow=5.5						
CRVS	Cervenica-Dubn	76.23	327	eP	P	19 23 56.6	+0.9
CRVS	Cervenica-Dubn	76.23	327	eP	P	19 23 56.6	+0.9
CFR	Carcaliu	76.26	321	⇑P	P	19 23 56.5	+0.7
CFR	Carcaliu	76.26	321	⇑P	P	19 23 56.5	+0.7
NIE	Niedzica	76.28	328	eP	P	19 23 58.1	+2.2
TPGR	Topolog	76.37	320	⇑P	P	19 23 57.0	+0.5
VRI	Vrincioaia	76.38	322	⇓P	P	19 23 57.6	+1.1
VRI	Vrincioaia	76.38	322	⇓P	P	19 23 57.6	+1.1
TRPA	Tarpa	76.41	326	⇑P	P	19 23 57.8	+1.1
PLOR	Plostina	76.42	322	⇑P	P	19 24 04.6	+7.8
PLOR	Plostina	76.42	322	⇑P	P	19 24 04.6	+7.8
ARCR	ARCALIA	76.47	324	⇑P	P	19 23 57.9	+0.9
T25A	Trinidad	76.54	51	P	P	19 23 58.5	+0.6
	baz=315						
KSP	Ksiaz	76.61	331	eP	P	19 23 58.4	+0.7
OZUR		76.62	322	⇑P	P	19 23 59.4	+1.5
COVR	Voineasa-Covas	76.62	322	⇑P	P	19 23 59.2	+1.2
BISRR	Bisoca	76.63	322	⇑P	P	19 23 59.8	+1.7
HARR	Harsova	76.72	320	⇑P	P	19 23 59.2	+0.7
HARR	Harsova	76.72	320	⇑P	P	19 23 59.2	+0.7
LANS	Liptovska Anna	76.82	328	eP	P	19 24 00.5	+1.5
LANS				pmax	pmax		
	comp=Z,21nm,1.7s						
LANS	Liptovska Anna	76.82	328	eP	P	19 24 00.5	+1.5
DOPR	Dopca	76.89	323	⇑P	P	19 24 00.9	+1.4
CHVC	Chvalec	76.90	331	eP	P	19 24 00.4	+1.0
ANMO	Albuquerque	76.91	54	ceP	P	19 23 58.2	-1.7
ANMO				pmax	pmax		
	comp=Z,11nm,2.5s						
ANMO	Albuquerque	76.91	54	P	P	19 24 01.2	+1.2
	baz=314						
DPC	Dobruska-Polom	77.01	330	⇑iP	P	19 24 01.1	+1.1
DPC	Dobruska-Polom	77.01	330	⇑iP	P	19 24 01.1	+1.1
MLR	Muntele Rosu	77.01	322	⇑P	P	19 24 01.0	+0.7
MLR	Muntele Rosu	77.01	322	P	P	19 24 01.3	+1.0
	comp=Z,5.0nm,0.6s,baz=139,slow=23,SNR=9.0						
MORC	Moravsky Berou	77.03	329	⇑P	P	19 24 01.0	+0.8
MORC	Moravsky Berou	77.03	329	eP	P	19 24 01.1	+0.8
MORC	Moravsky Berou	77.03	329	⇑P	P	19 24 01.0	+0.8
FLTG	Flechtingen	77.05	334	eP	P	19 24 00.4	+0.3
	comp=Z,39nm,1.0s,baz=30,slow=5.5						
KRLC	Kraliky	77.07	330	⇑iP	P	19 24 01.3	+0.9
KRLC	Kraliky	77.07	330	⇑iP	P	19 24 01.3	+0.9
CJR	Cluj-Napoca	77.08	324	⇑P	P	19 24 00.4	-0.1
CJR	Cluj-Napoca	77.08	324	⇑P	P	19 24 00.4	-0.1
ICOR	Ion Corvin	77.22	320	⇑P	P	19 24 02.7	+1.5
NRDL	Niedersach Rie	77.27	335	eP	P	19 24 01.3	+0.1
	comp=Z,33nm,1.3s,baz=30,slow=5.5						
RETH	Rethem/Aller,	77.28	335	eP	P	19 24 01.6	+0.2
	comp=Z,30nm,1.1s,baz=30,slow=5.5						
CLL	Collm	77.35	333	⇑iP	P	19 24 02.1	+0.2
CLL				pmax	pmax		
	comp=Z,36nm,1.1s						
CLL	Collm	77.35	333	⇑iP	P	19 24 02.1	+0.2
	comp=Z,36nm,1.1s						
CLL	Collm	77.35	333	eP	P	19 24 02.3	+0.4
	comp=Z,36nm,1.1s,baz=30,slow=5.5						
BRG	Berggiesshubel	77.40	332	eP	P	19 24 02.9	+0.7
	comp=Z,21nm,1.4s,baz=30,slow=5.5						
BRG	Berggiesshubel	77.40	332	eP	P	19 24 03.0	+0.9
BRG				Amp		19 24 04.4	
	comp=Z,6.0nm,0.8s						
VOIR		77.45	322	⇑P	P	19 24 03.7	+1.1
VOIR		77.45	322	⇑P	P	19 24 03.7	+1.1
PVCC	Panska Ves	77.48	331	⇑eP	P	19 24 04.1	+1.5
PVCC	Panska Ves	77.48	331	eP	P	19 24 04.1	+1.5
FBE	Freiberg	77.56	332	eP	P	19 24 03.9	+0.8
	comp=Z,18nm,1.0s,baz=30,slow=5.5						
SCHQ	Schefferville	77.57	19	P	P	19 24 03.1	0.0
	comp=Z,7.1nm,0.9s,baz=343,slow=8.1,SNR=5.8						
VYHS	Vyhne	77.59	328	eP	P	19 24 03.8	+0.5
VYHS	Vyhne	77.59	328	eP	P	19 24 03.8	+0.5
BR131	Keskin Array S	77.61	314	P	P	19 24 03.9	+0.2
BR131				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BR131	Keskin Array S	77.61	314	P	P	19 24 03.9	+0.2
BRTR	Keskin Array B	77.61	314	P	P	19 24 04.1	+0.3
	comp=Z,2.9nm,0.7s,baz=73,slow=3.1,SNR=16						
BRTR	Keskin Array B	77.61	314	P	P	19 24 04.5	+0.7
PSZ	Piszkesteto	77.65	327	⇑P	P	19 24 04.6	+0.9
PSZ	Piszkesteto	77.65	327	⇑P	P	19 24 04.6	+0.9
ARR	Arges	77.69	323	⇑P	P	19 24 05.8	+1.9
JAVC	Velka Javorina	77.74	329	eP	P	19 24 06.0	+1.8
CLZ	Clausthal	77.75	334	eP	P	19 24 05.2	+1.1
	comp=Z,26nm,1.0s,baz=30,slow=5.5						
VRAC	Vranov	77.77	329	⇑P	P	19 24 05.3	+1.0
VRAC	Vranov	77.77	329	P	P	19 24 04.2	-0.1
	comp=Z,7.6nm,0.8s,baz=33,slow=5.0,SNR=12						
VRAC	Vranov	77.77	329	eP	P	19 24 05.1	+0.8
VRAC	Vranov	77.77	329	⇑P	P	19 24 05.3	+1.0
121A	Cookes Peak, D	77.80	57	P	P	19 24 06.7	+1.8
	baz=314						
NEUB	Neuenburg	77.84	333	eP	P	19 24 04.8	+0.3
	comp=Z,24nm,1.0s,baz=30,slow=5.5						
CBKS	Cedar Bluff	77.91	47	P	P	19 24 05.1	-0.2
	baz=317						
PRU	Pruhonice	77.94	331	⇑eP	P	19 24 06.2	+1.0
PRU	Pruhonice	77.94	331	eP	P	19 24 06.2	+1.0
KRUC	Moravsky	78.05	329	eP	P	19 24 06.5	+0.7
SMOL	Smolenice	78.11	329	eP	P	19 24 07.4	+1.2
SMOL	Smolenice	78.11	329	eP	P	19 24 07.4	+1.2
GTTG	Gottingen	78.13	334	eP	P	19 24 07.1	+0.9
	comp=Z,36nm,1.1s,baz=30,slow=5.5						
IBBN	Ibbenburen	78.14	336	eP	P	19 24 06.8	+0.6
	comp=Z,24nm,0.9s,baz=30,slow=5.5						
SIRR	Siria	78.25	325	⇑P	P	19 24 07.6	+0.6
MODS	Modra-Piesok	78.29	329	eP	P	19 24 07.4	+0.2
MODS	Modra-Piesok	78.29	329	eP	P	19 24 07.4	+0.2
PLN	Plauen	78.33	333	eP	P	19 24 08.2	+0.8
	comp=Z,13nm,1.2s,baz=30,slow=5.5						
SRO	Srobarova	78.35	328	eP	P	19 24 09.2	+1.7
SRO				pmax	pmax		
	comp=Z,17nm,1.3s						
SRO	Srobarova	78.35	328	eP	P	19 24 09.2	+1.7
MOX	Moxa	78.38	333	eP	P	19 24 07.8	+0.2
	comp=Z,17nm,1.4s,baz=30,slow=5.5						
GUNZ	Gunzen	78.38	332	eP	P	19 24 08.3	+0.6
	comp=Z,7.1nm,0.7s,baz=30,slow=5.5						
COPA	Copaceanca	78.39	321	⇑P	P	19 24 08.2	+0.4
WERN	Wernitzgruen	78.43	332	eP	P	19 24 08.6	+0.6
	comp=Z,9.6nm,0.6s,baz=30,slow=5.5						
GZR	Gura Zlata	78.48	324	⇑P	P	19 24 08.8	+0.5
GZR	Gura Zlata	78.48	324	⇑P	P	19 24 08.8	+0.5
VLAD	Vladila	78.86	322	⇑P	P	19 24 12.8	+2.4
ROTZ	Rotzenmuhle	78.93	332	eP	P	19 24 11.1	+0.4
	comp=Z,2.4nm,1.2s,baz=30,slow=5.5						
KHC	Kasperske Hory	79.00	331	⇑iP	P	19 24 12.0	+0.9
KHC				ex	x	19 24 29.5	
KHC	Kasperske Hory	79.00	331	i P	P	19 24 11.3	+0.2
KHC				pmax	pmax		
	comp=Z,21nm,0.8s						
KHC	Kasperske Hory	79.00	331	P	P	19 24 12.1	+0.9
CKRC	Cesky Krumlov	79.00	330	eP	P	19 24 12.7	+1.6
HERR	Herculane	79.04	324	⇑P	P	19 24 10.4	-0.9
BUG	Bochum--Univer	79.05	336	eP	P	19 24 11.8	+0.6
	comp=Z,52nm,2.0s,baz=30,slow=5.5						
CONA	Conrad Observa	79.19	329	eP	P	19 24 13.3	+1.1
	comp=Z,3.8nm,0.6s						
GEC2	GERESS Array S	79.20	331	eP	P	19 24 12.7	+0.4
	comp=Z,6.1nm,0.7s,baz=30,slow=5.5						
GERES	GERESS Array B	79.20	331	P	P	19 24 12.7	+0.4
	comp=Z,2.9nm,0.5s,baz=39,slow=6.0,SNR=26						
WET	Wettzell	79.23	331	eP	P	19 24 13.3	+1.0
	comp=Z,7.8nm,0.7s,baz=30,slow=5.5						
GRA1	Grafenberg Arr	79.33	333	P	P	19 24 12.5	-0.3
GRA1				IAmb	IAmb	19 24 14.3	
	comp=Z,16nm,0.7s						
GRF	Grafenberg Arr	79.33	333	P	P	19 24 12.5	-0.3
GRF				pmax	pmax		
	comp=Z,16nm,0.7s						

GRF	Grafenberg Arr	79.33	333	eP	P	19 24 13.5	+0.7
	comp=Z,21nm,0.8s,baz=30,slow=5.5						
MDVR	Moldovita	79.42	324	⇑P	P	19 24 13.3	-0.2
MORH	Mrgy, Hungar	79.53	327	⇑P	P	19 24 14.0	0.0
AMTX	Amarillo	79.70	51	P	P	19 24 16.3	+1.0
	baz=317						
TNS	Taunus Mts	79.76	335	eP	P	19 24 15.2	0.0
	comp=Z,24nm,1.4s,baz=30,slow=5.5						
MNTX	Cornudas Mount	79.83	56	P	P	19 24 17.0	+1.1
	baz=315,SNR=5.5						
MOA	Molln	79.84	330	eP	P	19 24 16.3	+0.6
	comp=Z,3.4nm,0.7s						
ARSA	Arzberg	79.88	329	eP	P	19 24 16.6	+0.7
	comp=Z,1.8nm,0.6s						
FRGS	Fruska Gora	79.92	325	⇑P	P	19 24 16.2	+0.1
MEM	Membach	80.15	336	dP	P	19 24 17.6	+0.3
BOVS	Bovan	80.34	323	⇑P	P	19 24 18.1	-0.3
RJOB	Jochberg	80.46	331	eP	P	19 24 20.1	+1.1
	comp=Z,9.8nm,0.9s,baz=30,slow=5.5						
VTS	Vitosha	80.48	322	⇑P	P	19 24 20.5	+1.1
VTS	Vitosha	80.48	322	⇑P	P	19 24 20.5	+1.1
VTS	Vitosha	80.48	322	P	P	19 24 19.6	+0.3
VTS				IAmb	IAmb	19 24 21.5	
	comp=Z,12nm,0.8s						
BCLA	Clavier	80.53	336	dP	P	19 24 18.8	-0.5
SOKA	Soboth	80.54	329	i P	P	19 24 20.1	+0.5
	comp=Z,9.6nm,0.8s,SNR=7.3						
GROS	Grobnik	80.55	329	i P	P	19 24 19.9	+0.3
BGES	Gesves	80.62	337	dP	P	19 24 20.2	+0.4
FUR	Furstenfeldbru	80.62	332	eP	P	19 24 20.7	+0.9
	comp=Z,19nm,0.8s,baz=30,slow=5.5						
DIVS	Divibare	80.70	325	P	P	19 24 20.4	0.0
BMRD	Maredsous	80.79	337	dP	P	19 24 21.0	+0.3
STU	Stuttgart	80.79	333	eP	P	19 24 21.4	+0.7
	comp=Z,23nm,0.6s,baz=30,slow=5.5						
KBA	Koelnbreinsper	80.83	330	i P	P	19 24 22.5	+1.4
	comp=Z,12nm,0.7s,SNR=7.7						
KBA	Koelnbreinsper	80.83	330	eP	P	19 24 22.2	+1.0
	comp=Z,12nm,0.8s,baz=30,slow=5.5						
OBKA	Obir	80.86	329	eP	P	19 24 21.5	+0.3
	comp=Z,4.7nm,0.7s						
OBKA	Obir	80.86	329	eP	P	19 24 21.5	+0.3
	comp=Z,6.8nm,0.8s,baz=30,slow=5.5						
GOLS	Golise	80.88	328	i P	P	19 24 21.6	+0.4
WLF	Walferdange	80.95	336	eP	P	19 24 22.9	+1.3
	comp=Z,17nm,1.3s,baz=30,slow=5.5						
MYKA	Terra Mystica	81.10	330	eP	P	19 24 23.0	+0.5
	comp=Z,5.0nm,0.7s						
WATA	Walderalm	81.23	331	i P	P	19 24 24.0	+0.7
	comp=Z,7.7nm,0.6s,SNR=5.5						
WTTA	Wattenberg	81.27	331	eP	P	19 24 24.3	+0.8
	comp=Z,10nm,0.5s						
WTTA	Wattenberg	81.27	331	eP	P	19 24 24.1	+0.6
	comp=Z,13nm,0.8s,baz=30,slow=5.5						
PRED	Cave del Predi	81.28	330	P	P	19 24 23.2	-0.3
ASF	Jabal al Asfar	81.31	306	P	P	19 24 25.2	+1.3
	comp=Z,4.0nm,0.8s,baz=30,slow=6.9,SNR=6.5						
RETA	Reutte	81.38	332	eP	P	19 24 24.7	+0.8
	comp=Z,9.4nm,0.9s						
MOTA	Moosalm	81.39	332	eP	P	19 24 24.8	+0.7
	comp=Z,16nm,0.8s						
ABTA	Abfaltersbach	81.41	330	eP	P	19 24 24.9	+0.8
	comp=Z,5.0nm,0.8s						
BFO	Black Forest	81.45	334	P	P	19 24 24.4	+0.1
BFO				pmax	pmax		
	comp=Z,14nm,1.5s						
BFO	Black Forest	81.45	334	eP	P	19 24 24.8	+0.5
	comp=Z,9.4nm,0.8s,baz=30,slow=5.5						
BFO	Black Forest	81.45	334	P	P	19 24 24.4	+0.1
BFO				IAmb	IAmb	19 24 38.1	
	comp=Z,14nm,1.5s						
SQTA	Sankt Quirin	81.46	331	i P	P	19 24 25.3	+0.9
	comp=Z,12nm,0.7s,SNR=5.8						
MMAI	Mount Meron Ar	81.56	308	P	P	19 24 26.1	+0.9
	comp=Z,15nm,0.8s,baz=36,slow=7.3,SNR=17						
JAVS	Javornik	81.57	329	i P	P	19 24 24.4	-0.7
STAL	STALIGIAL	81.75	330	P	P	19 24 24.7	-1.2
STAL				IAmb	IAmb	19 24 25.9	
	comp=Z,8.3nm,0.8s						
FETA	Feichten	81.80	332	eP	P	19 24 27.0	+0.7
	comp=Z,6.0nm,0.8s						
CIMO	Cimolais	81.81	330	P	P	19 24 24.9	-1.3
HDIL	Hopedale	81.81	40	P	P	19 24 26.9	+0.6
	baz=322						
DAVA	Damuels	81.86	332	eP	P	19 24 27.3	+0.7
	comp=Z,7.9nm,0.7s						
DAVA	Damuels	81.86	332	eP	P	19 24 27.0	+0.4
	comp=Z,8.4nm,0.8s,baz=30,slow=5.5						
TUL1	Leonard	82.17	47	P	P	19 24 28.9	+0.6
	baz=319						
DAVOX	Davos/Dischmat	82.30	332	P	P	19 24 29.6	+0.7
	comp=Z,5.3nm,0.6s,baz=16,slow=4.6,SNR=19						
CTI	Castel Tesino	82.31	331	P	P	19 24 28.2	-0.8
CTI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CTI	Castel Tesino	82.31	331	P	P	19 24 28.2	-0.8
CTI				IAmb	IAmb	19 24 29.1	
	comp=Z,6.4nm,0.7s						
PDG	Podgorica	82.37	324	⇑P	P	19 24 29.5	+0.3
PDG	Podgorica	82.37	324	P	P	19 24 27.9	-1.3
PDG				IAmb	IAmb	19 24 30.2	
	comp=Z,17nm,0.8s						
TXAR	Lajitas Array	82.55	56	P	P	19 24 31.2	+0.8
	comp=Z,3.8nm,0.8s,baz=298,slow=4.0,SNR=37						
STON	Ston	82.66	325	ePn	P	19 24 35.7	+5.1
CCM	Cathedral Cave	82.84	43	P	P	19 24 31.3	-0.3
	baz=322						
U40A	Yellville	83.35	45	P	P	19 24 34.5	+0.1
	baz=321,SNR=6.0						
SENIN	Lac Senin/Sane	83.52	333	P	P	19 24 34.6	-0.7
SENIN				IAmb	IAmb	19 24 36.6	
	comp=Z,7.8nm,0.8s						
AGG	Agios Georgios	83.76	320	P	P	19 24 35.6	-0.9
AGG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AGG	Agios Georgios	83.76	320	P	P	19 24 35.5	-0.9
AGG				IAmb	IAmb	19 24 37.0	
	comp=Z,9.2nm,0.9s						
EIL	Elat	84.28	306	P	P	19 24 40.3	+1.1
	comp=Z,8.6nm,0.8s,baz=52,slow=4.6,SNR=5.6						
MIAR	Mount Ida	84.38	46	P	P	19 24 40.5	+0.9
	baz=321						
NRCA	Norcia	84.52	328	P	P	19 24 40.6	+0.3
NRCA				IAmb	IAmb	19 24 42.0	
	comp=Z,14nm,0.8s						
ERPA	Erie	84.55	33	P	P	19 24 41.0	+0.6
	baz=328						
W41B	Gary Mavity, V	84.58	45	P	P	19 24 41.0	+0.4
	baz=321						
MOQ	Mont Orford	84.59	27	P	P	19 24 40.3	-0.3
P49A	Miami Univ. Ec	84.71	38	P	P	19 24 41.4	+0.2
	baz=325						
M54A	Oil Creek Stat	85.20	33	P	P	19 24 44.2	+0.6
	baz=328						
IDI	Anoyia	85.49	316	P	P	19 24 45.5	+0.2
	comp=Z,11nm,0.7s,baz=72,slow=6.4,SNR=14						
H62A	Milan	85.61	26	P	P	19 24 45.8	+0.2
O53A	New Philadelph	85.63	35	P	P	19 24 45.4	-0.4
	baz=327						
O56A	Blue Knob Stat	86.69	33	P	P	19 24 51.0	-0.1
	baz=329						
N59A	State Game Lan	87.21	31	P	P	19 24 54.2	+0.6
	baz=330						
KEST	Kesra	92.12	327	P	P	19 25 16.0	-0.7
	comp=Z,3.1nm,0.8s,baz=303,slow=7.0,SNR=3.6						
ESDC	Sonseca Array	92.98	338	P	P	19 25 20.4	-0.3
	comp=Z,1.8nm,0.9s,baz=16,slow=4.0,SNR=9.8						
ESDC				LR	LR	20 12 43.9	
	comp=Z,73nm,18.2s,baz=355,slow=39						
TORD	Torodi Ar. Bea	115.25	323	PKP	PKiKP	19 30 47.5	-1.5
	comp=Z,0.4nm,0.6s,baz=43,slow=1.3,SNR=2.3						
TORD				PP	PP	19 31 48.8	-0.2
	comp=Z,1.2nm,1.0s,baz=24,slow=5.5,SNR=5.0						
H03N2	Juan Fernandez	142.85	90	T	T	22 11 08.2	
	baz=304,slow=77,SNR=30						
H03N3	Juan Fernandez	142.87	90	T	T	22 11 09.1	
	baz=304,slow=77,SNR=30						
H03N1	Juan Fernandez	142.87	90	T	T	22 11 09.5	
	baz=304,slow=77,SNR=31						
CO06	Fray Jorge	146.66	80	PKPdf	PKPdf	19 31 45.9	-1.1
BDFB	Brasilia	149.08	30	PKPbc	PKPbc	19 31 56.4	+0.7
	comp=Z,3.6nm,0.7s,baz=240,slow=3.4,SNR=6.6						
PLCA	Paso Flores	151.98	97	PKPbc	PKiKP	19 32 03.1	+0.9
	comp=Z,6.7nm,0.8s,baz=253,slow=2.3,SNR=11						

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*IDC **06** 19:16:34.1±0.6,48°.10S×10°.06W,h0^{km},mb4.3/13, mb1 4.4/13,mb1mx4.2/30,mbtmp4.3/13,MS4.3/13, Ms1 4.3/13,ms1mx4.1/19,Error ellipse: s-maj=20.4km s-min=15.6km az=171.0*

*NEIC **06** 19:16:37.0±1.6,48°.2S±0°.1×10°.1W±0°.2,h10^{km}±1^{km}, mb5.0/34,Error ellipse: s-maj=20.2km s-min=17.8km az=158.0*

*GCMT **06** 19:16:39.0±0.3,48°.63S±0°.03×9°.82W±0°.02,h13^{km}±1^{km}, MW4.9/95,Moment Tensor Solution. s25,c28; s95,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.89±.19; $M_{\theta\theta}$0.16±.13; $M_{\phi\phi}$2.73±.13; $M_{r\theta}$-1.91±.41; $M_{\theta\phi}$0.09±.08; $M_{\phi r}$-0.22±.29; Best double couple: $M_0$3.28300×10^{16} NP1:ϕ_s160.00000°,δ47.00000°,λ-126.00000°. NP2: ϕ_s27.00000°,δ54.00000°,λ-58.00000°. Principal axes: T 2.7530, Plg4.0000°, Azm95.0000°; N 1.0570, Plg25.0000°, Azm187.0000°; P -3.8140, Plg64.0000°, Azm357.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 19:16:36.4±0.4**,48°.27S**±0°.09×**9°.85W**±0°.08**,h10**^{km}**,n119,** σ1^s**48**/112**,mb4.9**/26**,MS4.2**/13**,1C,Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	17.66	240	Pn	Pn	19 20 34.0	-8.2
HOPE				IAmb	IAmb	19 20 35.7	
	comp=Z,365nm,1.9s						
VNA1	Neumayer--Stat	22.47	179	P	P	19 21 38.3	+2.9
VNA2	Neumayer--Watz	22.76	178	P	P	19 21 40.2	+1.7
SNAA	Sanae	23.71	174	P	P	19 21 49.1	+1.0
SNAA	Sanae	23.71	174	P	P	19 21 48.8	+0.7
	comp=Z,11nm,0.9s,baz=346,slow=7.6,SNR=16						
SNAA	Sanae	23.71	174	P	P	19 21 46.5	-1.7
SNAA				IAmb	IAmb	19 21 57.3	
	comp=Z,39nm,1.2s						
SUR	Sutherland	28.01	67	P	P	19 22 27.4	-0.3
	comp=Z,9.5nm,1.0s,baz=205,slow=10.0,SNR=3.8						
SUR				LR	LR	19 31 19.5	
	comp=Z,835nm,18.4s,baz=226,slow=32						
SUR	Sutherland	28.01	67	P	P	19 22 29.2	+1.4
SUR				IAmb	IAmb	19 22 36.1	
	comp=Z,15nm,0.8s						
SYO	Syowa Base	31.73	149	⇑epP	pP	19 23 01.8	-0.4
BOSA	Boshof	33.38	67	P	P	19 23 15.2	+0.2
	comp=Z,8.1nm,0.8s,baz=221,slow=8.0,SNR=17						
BOSA				LR	LR	19 34 26.3	
	comp=Z,582nm,18.2s,baz=224,slow=32						
BOSA	Boshof	33.38	67	P	P	19 23 15.7	+0.7
BOSA				IAmb	IAmb	19 23 22.4	
	comp=Z,22nm,0.9s						
LBTB	Lobatse	36.22	63	P	P	19 23 39.7	+0.1
	comp=Z,4.9nm,0.8s,baz=224,slow=9.6,SNR=7.3						
LBTB	Lobatse	36.22	63	P	P	19 23 40.1	+0.5
LBTB				IAmb	IAmb	19 23 47.6	
	comp=Z,13nm,0.8s						
TSUM	Tsumeb	36.52	47	P	P	19 23 43.0	+0.9
CAM01	Campos-RJ	36.62	305	eP	P	19 23 43.9	+1.1
BSCB	Bom Sucesso	39.02	302	eP	P	19 24 03.9	+0.7
ITQB	Itaqui	40.12	280	eP	P	19 24 12.3	+0.1
MAW	Mawson	40.25	146	P	P	19 24 13.5	+0.7
	comp=Z,3.7nm,0.9s,baz=258,slow=12,SNR=5.2						
MAW				LR	LR	19 37 31.0	
	comp=Z,317nm,21.8s,baz=244,slow=31						
MAW	Mawson	40.25	146	P	P	19 24 14.0	+1.2
DIAM	Diamantina, MG	40.58	306	eP	P	19 24 16.9	+0.7
PTGB	Pitanga	40.59	290	eP	P	19 24 16.3	+0.1
NBIT	Itapeh - BA	41.22	314	eP	P	19 24 23.4	+2.0
MATP	Matopo	41.45	62	P	P	19 24 23.7	+0.3
	comp=Z,1.7nm,0.7s,baz=214,slow=11,SNR=1.9						
QSPA	South Pole Qui	41.99	180	LR	LR	19 39 58.8	
	comp=Z,183nm,21.9s,baz=210,slow=33						
QSPA	South Pole Qui	41.99	180	P	P	19 24 28.0	+0.6
LL02	Futaleuf	42.54	253	P	P	19 24 31.2	-0.8
LL02				IAmb	IAmb	19 24 39.0	
	comp=Z,28nm,1.1s						
CPUP	Villa Florida	42.82	283	P	P	19 24 32.4	-2.0
	comp=Z,1.7nm,0.8s,baz=174,slow=10,SNR=1.4						
CPUP				PcP	PcP	19 26 25.6	0.0
	comp=Z,6.5nm,0.9s,baz=191,slow=2.9,SNR=3.6						
CPUP				LR	LR	19 39 08.6	
	comp=Z,316nm,21.8s,baz=156,slow=32						
CPUP	Villa Florida	42.82	283	eP	P	19 24 35.5	+1.1
CPUP	Villa Florida	42.82	283	P	P	19 24 32.7	-1.7
PLCA	Paso Flores	42.94	257	P	P	19 24 33.8	-1.6
	comp=Z,6.3nm,1.0s,baz=114,slow=4.8,SNR=6.4						
PLCA				LR	LR	19 39 33.0	
	comp=Z,360nm,20.8s,baz=134,slow=32						
PLCA	Paso Flores	42.94	257	eP	P	19 24 35.2	-0.2
PLCA	Paso Flores	42.94	257	P	P	19 24 34.7	-0.7
PLCA				IAmb	IAmb	19 24 42.4	
	comp=Z,41nm,1.6s						
ITRB	Iturama	43.28	297	eP	P	19 24 39.7	+1.4
IPMB	Ipameri, GO	43.37	301	eP	P	19 24 40.1	+1.1
JANB	Januaria	43.59	308	eP	P	19 24 42.3	+1.5
NBLA	Lagarto - SE	43.90	318	eP	P	19 24 44.4	+1.2
LL04	Puerto Octay	44.05	255	P	P	19 24 42.7	-1.5
LL04				IAmb	IAmb	19 24 50.0	
	comp=Z,20nm,0.9s						
NBPN	Ponto Novo - B	45.12	316	eP	P	19 24 55.1	+2.0
BDFB	Brasilia	45.13	303	P	P	19 24 50.3	-2.9
	comp=Z,4.1nm,0.8s,baz=139,slow=8.5,SNR=5.8						
BDFB				LR	LR	19 40 29.5	
	comp=Z,644nm,19.5s,baz=142,slow=32						
BDFB	Brasilia	45.13	303	P	P	19 24 49.7	-3.5
BDFB				IAmb	IAmb	19 25 00.0	
	comp=Z,23nm,1.4s						
AQDB	Aquidauana	45.96	291	eP	P	19 24 59.8	+0.1
AQDB	Aquidauana	45.96	291	P	P	19 24 58.1	-1.5
AQDB				IAmb	IAmb	19 25 06.2	
	comp=Z,18nm,0.8s						
SDBA	SAO DESIDERIO	46.11	309	eP	P	19 25 02.4	+1.5
NBLV	Livramento - P	46.78	322	eP	P	19 25 09.5	+3.4
BO01	Tunca	46.82	264	P	P	19 25 05.2	-1.1
BO01				IAmb	IAmb	19 25 13.1	
	comp=Z,25nm,1.1s						
NBPV	Pedro Velho	46.98	324	eP	P	19 25 11.5	+3.8
MT09	Talagante	47.13	264	P	P	19 25 08.2	-0.6
MT01	Popeta	47.25	264	P	P	19 25 09.4	-0.2
ARAG	Araguaiana, MT	47.26	299	eP	P	19 25 11.6	+1.8
NBMA	Muriti-CE	47.55	319	eP	P	19 25 12.2	+0.1
PP1B	Ponte de Pedra	47.62	294	eP	P	19 25 14.7	+2.0
PEXB	Peixe	48.18	305	eP	P	19 25 17.3	+0.3
SALV	Santo Antonio	49.42	295	eP	P	19 25 27.6	+1.1
NBPB	Pedra_Branca-C	49.54	320	eP	P	19 25 30.7	+3.3
SNDB	Serra Nova Dou	49.95	302	eP	P	19 25 32.7	+2.1
SMTB	Santa Maria do	50.50	308	eP	P	19 25 35.5	+0.7
PTLB	Pontes e Lacer	51.88	292	eP	P	19 25 45.2	+0.1
PTLB	Pontes e Lacer	51.88	292	P	P	19 25 44.5	-0.5
LVC	Limon Verde	53.00	277	eP	P	19 25 54.5	+0.7
PDRB	Porto dos Gac	53.39	297	eP	P	19 25 57.0	+0.7
CLDB	Colider	53.43	298	eP	P	19 25 57.4	+0.9
LIC	Lamto	54.42	6	ePKP2	P	19 26 04.2	+0.5
	comp=Z,45nm,1.4s						
VILB	Vilhena	54.45	293	eP	P	19 26 05.7	+1.6
VILB	Vilhena	54.45	293	P	P	19 26 03.6	-0.5
PB01	IPOC Station P	54.47	278	P	P	19 26 02.5	-1.8
PB01				IAmb	IAmb	19 26 11.2	
	comp=Z,16nm,1.0s						
KIC	Kosan Boka	54.58	6	ePKP2	P	19 26 05.0	+0.1
	comp=Z,11nm,0.9s						
TIC	Toumodi	54.84	6	ePKP2	P	19 26 05.9	-0.9
DBIC	Dimbokro	54.88	6	P	P	19 26 04.2	-2.8
	comp=Z,2.8nm,0.9s,baz=180,slow=11,SNR=2.7						
DBIC				LR	LR	19 44 10.0	
	comp=Z,124nm,20.6s,baz=175,slow=30						
PB11	IPOC Station P	55.49	279	P	P	19 26 10.5	-1.2
PB11				IAmb	IAmb	19 26 18.6	
	comp=Z,22nm,0.9s						
NPGB	Novo Progresso	56.26	302	eP	P	19 26 18.3	+1.2
PB16	IPOC Station P	56.41	280	P	P	19 26 18.2	-0.6
LPAZ	La Paz	56.99	283	P	P	19 26 20.8	-2.2
	comp=Z,1.9nm,0.7s,baz=126,slow=4.4,SNR=7.0						
LPAZ				PcP	PcP	19 27 17.0	-1.1
	comp=Z,2.6nm,0.8s,baz=198,slow=2.7,SNR=4.5						
LPAZ				LR	LR	19 49 02.5	
	comp=Z,260nm,21.4s,baz=108,slow=34						
LPAZ	La Paz	56.99	283	eP	P	19 26 21.6	-1.4
LPAZ	La Paz	56.99	283	P	P	19 26 20.2	-2.8
ITTB	Itaituba	58.66	303	eP	P	19 26 35.0	+1.0
SAML	Samuel	59.39	293	P	P	19 26 38.1	-0.9
MALB	Monte Alegre	59.94	306	eP	P	19 26 45.2	+2.4
MCPB	Macapa, AP	60.03	309	eP	P	19 26 45.8	+2.3
ETMB	Extrema	60.61	290	eP	P	19 26 46.5	-0.9
ETMB	Extrema	60.61	290	P	P	19 26 46.4	-1.0
ETMB				IAmb	IAmb	19 26 53.2	
	comp=Z,15nm,1.0s						
TORD	Torodi Ar. Bea	61.99	13	P	P	19 26 54.5	-2.2
	comp=Z,2.3nm,0.9s,baz=201,slow=6.7,SNR=11						
TORD				LR	LR	19 48 29.3	
	comp=Z,127nm,20.5s,baz=175,slow=31						
TORD	Torodi Ar. Bea	61.99	13	P	P	19 26 56.1	-0.6
KMBO	Kilima Mbogo	62.02	56	LR	LR	19 52 09.0	
	comp=Z,760nm,19.2s,baz=229,slow=34						
MACA	Manacapuru-AM	62.48	299	eP	P	19 27 00.6	+0.6
KOWA	Kowa	62.70	6	P	P	19 26 59.9	-1.5
KOWA				IAmb	IAmb	19 27 09.1	
	comp=Z,26nm,1.4s						
CZSB	Cruzeiro do Su	66.33	286	eP	P	19 27 25.4	+0.1
BOAV	Boa Vista	66.91	303	eP	P	19 27 30.0	+1.0
BOAV	Boa Vista	66.91	303	P	P	19 27 28.5	-0.5
BOAV				IAmb	IAmb	19 27 35.2	
	comp=Z,13nm,1.3s						
OTAV	Otavalo	76.07	286	eP	P	19 28 27.2	+2.4
OTAV	Otavalo	76.07	286	P	P	19 28 23.6	-1.3
RPN	Rapa Nui	76.15	245	LR	LR	19 56 20.4	
	comp=Z,80nm,19.8s,baz=62,slow=31						
ROSC	El Rosal	77.02	293	LR	LR	20 01 24.1	
	comp=Z,301nm,18.6s,baz=186,slow=35						
SDV	Santo Domingo	77.99	298	eP	P	19 28 37.6	+2.4
ZARC	Zaragoza, Cauc	79.42	294	P	P	19 28 41.2	-1.7
ZARC				IAmb	IAmb	19 28 47.8	
	comp=Z,11nm,0.9s						
MOTC	Monteria, Cord	80.92	294	P	P	19 28 50.7	-0.3
SJCC	San Jacinto, C	81.50	295	P	P	19 28 54.3	+0.2
SJCC				IAmb	IAmb	19 29 03.6	
	comp=Z,27nm,1.0s						
H01W2	Cape Leeuwin H	83.30	137	T	T	21 02 02.4	
	baz=211						
H01W1	Cape Leeuwin H	83.31	137	T	T	21 02 06.5	
	baz=211						
H01W3	Cape Leeuwin H	83.31	137	T	T	21 02 05.0	
	baz=211						
ESDC	Sonseca Array	87.72	5	P	P	19 29 23.6	-1.3
	comp=Z,1.0nm,1.0s,baz=187,slow=4.8,SNR=3.4						
COVE	Coope Vega, Sa	87.85	289	P	P	19 29 24.0	-2.1
JTS	Las Juntas de	87.88	288	P	P	19 29 26.1	-0.2
KHZ	Kahutara	89.65	183	P	P	19 29 33.9	-0.4
ASAR	Alice Springs	101.37	146	PKiKP	PKiKP	19 34 53.2	+0.9
	comp=Z,0.4nm,0.9s,baz=193,slow=3.8,SNR=1.3						
WRA	Warramunga Arr	104.92	145	PKiKP	PKiKP	19 35 00.0	+1.2
	comp=Z,0.3nm,0.8s,baz=226,slow=2.1,SNR=2.1						
TXAR	Lajitas Array	113.67	288	PKiKP	PKiKP	19 35 15.6	+0.7
	comp=Z,0.6nm,1.0s,baz=180,slow=1.3,SNR=3.5						
CMAR	Chiang Mai Arr	116.01	91	PKP	PKPdf	19 35 17.3	-2.3
	comp=Z,0.3nm,0.7s,baz=238,slow=2.9,SNR=1.9						
PDAR	Pinedale Array	125.90	296	PKP	PKPdf	19 35 37.1	-1.1
	comp=Z,1.1nm,0.9s,baz=130,slow=4.6,SNR=8.0						
CD2	Chengdu	127.61	84	PKP	PKPdf	19 35 41.7	+0.1
NVAR	Mina Array Bea	128.80	287	PKP	PKPdf	19 35 41.3	-2.6
	comp=Z,3.8nm,1.2s,baz=176,slow=3.6,SNR=2.6						
YKA	Yellowknife Ar	137.56	318	PKP	PKPdf	19 35 57.5	-1.7
	comp=Z,1.6nm,0.8s,baz=116,slow=2.3,SNR=5.7						
SONM	Songino Array	138.49	66	PKP	PKPdf	19 36 00.4	-1.2
	comp=Z,0.4nm,0.7s,baz=219,slow=1.8,SNR=1.9						
INK	Inuvik	145.94	326		PKPbc	19 36 14.4	-0.3
KSAR	Wonju Array Be	147.56	94		PKPdf	19 36 16.9	-0.9
KSRS	Korea Array	147.60	94	PKPbc	PKPdf	19 36 17.1	-0.7
	comp=Z,1.5nm,0.8s,baz=249,slow=4.6,SNR=5.8						
BMAR	Burnt Mountain	150.21	326		PKPbc	19 36 26.4	+0.1
N25K	Chitina, Valde	151.44	315		PKiKP	19 36 31.9	+2.1
IL31		151.86	322		PKiKP	19 36 30.8	+0.4
ILAR	Eielson Array	151.86	322	PKPbc	PKPbc	19 36 28.9	-1.3
	comp=Z,3.5nm,0.8s,baz=27,slow=1.1,SNR=28						

ROM 06 19:21:03.8±0.2**,42°.893N**±0°.008×**13°.003E**±0°.005**,h11**^{km}**, ML0.8**/2**,2C,Error ellipse: s-maj=0.9km s-min=0.3km az=348.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CESI	CESI - Serrava	0.13	327	P	Pg	19 21 07.6	+0.5
CESI				S	Sg	19 21 10.2	+0.8
FDMO	Fiordimonte	0.16	23	⇑P	Pg	19 21 07.9	+0.5
FDMO				S	Sg	19 21 10.7	+0.8
FDMO				AML	AML		
	comp=E,88μm,0.1s						
FDMO				AML	AML		
	comp=N,69μm,0.1s						
FDMO				AML	AML		
	comp=E,88μm,0.1s						
CSP1	Cessapalombo	0.25	37	⇑P	Pg	19 21 09.4	+0.4
CSP1				S	Sg	19 21 13.8	+1.2
ASSB	Assisi San Ben	0.29	301	P	Pg	19 21 10.1	+0.3
ASSB				S	Sb	19 21 15.0	-1.1
ASSB				AML	AML		
	comp=E,21μm,1.6s						
ASSB				AML	AML		
	comp=N,18μm,1.6s						
PLMA	Palmaria, Port	2.57	298	S	Sg	19 22 26.0	-0.3
CET2	Cetraro	4.03	145	S	Sn	19 22 36.0	-17
SPS2	Spezzano della	4.39	144	P	Pn	19 22 04.4	-6.0

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*IDC **06** 19:51:32.5±0.5,10°.91S×163°.72E,h0^{km},mb4.9/29, mb1 5.0/33,mb1mx4.8/45,mbtmp4.9/33,ML2.4/1,MS4.8/25, Ms1 4.8/25,ms1mx4.7/27,Error ellipse: s-maj=13.6km s-min=12.6km az=144.0*

*NEIC **06** 19:51:35.5±2.9,10°.7S±0°.1×164°.1E±0°.1,h39^{km}±8^{km}, mb5.4/32,Ms_20 4.9/52,Error ellipse: s-maj=17.2km s-min=11.4km az=223.0*

*BJI **06** 19:51:36.7±0.0,11°.05S×163°.84E,h46^{km},mB5.5/49, mb4.8/66,Ms5.2/49,Ms7 4.9/50*

*MOS **06** 19:51:36.5±1.2,10°.84S×163°.78E,h50^{km},mb5.4/17, MS4.8/6,Error ellipse: s-maj=11.9km s-min=10.0km az=13.8*

*GCMT **06** 19:51:37.5±0.1,10°.82S±0°.01×163°.78E±0°.01,h20^{km}, MW5.4/136,Moment Tensor Solution. s109,c175; s136,c251; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.04±.02; $M_{\theta\theta}$-0.77±.02; $M_{\phi\phi}$0.80±.02; $M_{r\theta}$0.47±.04; $M_{\theta\phi}$1.00±.02; $M_{\phi r}$-0.94±.06; Best double couple: $M_0$1.64600×10^{17} NP1:ϕ_s249.00000°,δ51.00000°, λ-3.00000°. NP2:ϕ_s341.00000°,δ88.00000°, λ-141.00000°. Principal axes: T 1.5880, Plg25.0000°, Azm108.0000°; N 0.1170, Plg51.0000°, Azm344.0000°; P -1.7050, Plg28.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 19:51:36.7±0.3**,10°.99S**±0°.04×**163°.77E**±0°.04**,h29**^{km}**,n441,** σ**2^{s}09**/436**,mb5.2**/107**,MS4.9**/67**,8C-4D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.07	292	Pn	Pn	19 52 38.2	+1.1
	625nm,0.3s,baz=149,slow=3.5,SNR=141						
HNR				Sn	Sn	19 53 24.7	+1.0
	baz=7.5,slow=19,SNR=1.1						
HNR				LR	LR	19 54 24.8	
	comp=Z,37μm,18.5s,baz=130,slow=43						
HNR	Honiara	4.07	292	P	Pn	19 52 38.0	+1.0
HNR	Honiara	4.07	292	Pn	Pn	19 52 38.0	+1.0
HNR	Honiara	4.07	292	P	Pn	19 52 38.7	+1.6
SANVU	Saraoutou	5.55	143	Pn	Pn	19 52 56.6	-0.8
SANVU	Saraoutou	5.55	143	P	Pn	19 52 57.3	-0.1
DVP	Devils Point	7.95	148	P	Pn	19 53 30.8	+0.5
RTV	Rentapao	8.13	147	P	Pn	19 53 33.5	+0.7
LIFNC	LIFOU	10.29	162	Pn	Pn	19 54 01.6	-0.8
MARNC	Mare, Loyalty	11.20	159	Pn	Pn	19 54 13.7	-1.3
DZM	Mont Dzumac	11.31	167	ePn	Pn	19 54 18.0	+1.4
	311nm,1.2s						
DZM				eSn	Sn	19 56 20.7	-1.4
	162nm,1.2s						
DZM	Mont Dzumac	11.31	167	Pn	Pn	19 54 18.1	+1.4
	2.4nm,0.3s,baz=27,slow=10,SNR=31						
DZM				Sn	Sn	19 56 17.6	-4.6
	1.1nm,0.3s,baz=314,slow=23,SNR=1.3						
DZM				LR	LR	19 58 02.2	
	comp=Z,4μm,18.9s,baz=7.5,slow=34						
DZM	Mont Dzumac	11.31	167	Pn	Pn	19 54 17.9	+1.4
DZM	Mont Dzumac	11.31	167	P	Pn	19 54 17.8	+1.2
NOUC	Port Laguerre	11.31	168	P	Pn	19 54 18.7	+2.2

YATNC	**Mamie plateau,**	11.41	165	P	Pn	19 54 18.9	+1.1
ONTNC	**Ouen Toro**	11.54	167	Pn	Pn	19 54 22.5	+2.8
ONTNC	**Ouen Toro**	11.54	167	P	Pn	19 54 22.8	+3.2
OUENC	**Ouen Island, N**	11.74	166	Pn	Pn	19 54 24.8	+2.4
OUENC	**Ouen Island, N**	11.74	166	P	Pn	19 54 24.0	+1.7
PINNC	**Pines Island,**	12.08	164		Pn	19 54 28.9	+1.9
RABL	**Rabaul**	13.34	300	Pn	Pn	19 54 45.3	+1.0
RABL	**Rabaul**	13.34	300	P	Pn	19 54 46.8	+2.6
MSVF	**Nonsavu**	15.37	117	Pn	Pn	19 55 12.2	+0.5
	0.6nm,0.3s,baz=278,slow=6.4,SNR=28						
MSVF				LR	LR	20 00 00.3	
	comp=Z,5µm,21.2s,baz=304,slow=33						
MSVF	**Nonsavu**	15.37	117	*i* P	Pn	19 55 12.4	+0.7
MSVF	**Nonsavu**	15.37	117	P	Pn	19 55 12.6	+0.9
PMG	**Port Moresby**	16.43	274	Pn	Pn	19 55 23.5	-1.8
	0.5nm,0.3s,baz=138,slow=2.9,SNR=3.3						
PMG				Sn	Sn	19 58 21.9	-5.0
	0.5nm,0.3s,baz=335,slow=22,SNR=0.9						
PMG				LR	LR	20 01 20.7	
	comp=Z,8µm,21.4s,baz=124,slow=36						
PMG	**Port Moresby**	16.43	274	P	Pn	19 55 24.2	-1.1
PMG				pmax	pmax		
	comp=Z,147nm,1.2s						
PMG	**Port Moresby**	16.43	274		Pn	19 55 24.2	-1.1
RK1H	**Rockhampton Ha**	17.67	224	P	P	19 55 42.5	+0.9
PATS	**Pohnpei**	18.52	343	P	Pn	19 55 53.1	+1.8
	baz=19,SNR=3.9						
EIDS	**Eidsvold**	18.68	218	P	Pn	19 55 56.9	+3.7
	baz=19,SNR=37						
EIDS	**Eidsvold**	18.68	218	P	Pn	19 55 55.8	+2.6
EIDS				IAmb	IAmb	19 56 00.9	
	comp=Z,201nm,1.1s						
EIDS	**Eidsvold**	18.68	218	P	Pn	19 55 54.7	+1.5
CTA	**Charters Tower**	19.13	240	P	P	19 55 56.8	-0.9
	comp=Z,2.7nm,0.3s,baz=65,slow=15,SNR=29						
CTA				S	Sn	19 59 28.6	-3.8
	baz=106,slow=8.1,SNR=1.5						
CTAO	**Charters Tower**	19.13	240	P	Pn	19 56 00.8	+2.1
CTAO				pmax	pmax		
	comp=Z,140nm,1.0s						
CTAO	**Charters Tower**	19.13	240	P	Pn	19 56 00.8	+2.1
CTAO				IAmb	IAmb	19 56 07.7	
	comp=Z,140nm,0.9s						
CTAO	**Charters Tower**	19.13	240	P	Pn	19 56 01.3	+2.6
KWAJ	**Kwajalein Atol**	20.03	11	P	Pn	19 56 10.8	+1.4
MTSU	**Mount Surprise**	20.11	247	P	Pn	19 56 11.7	+1.2
	baz=20,SNR=101						
COEN	**Coen**	20.32	260	P	Pn	19 56 13.3	+0.4
	baz=20						
COEN	**Coen**	20.32	260	P	Pn	19 56 13.4	+0.5
COEN				IAmb	IAmb	19 56 18.8	
	comp=Z,241nm,1.1s						
COEN	**Coen**	20.32	260	P	Pn	19 56 13.3	+0.4
LHI	**Lord Howe Isla**	20.89	191	P	Pn	19 56 19.6	+0.3
	baz=21						
RMQ	**Roma**	20.93	221	P	Pn	19 56 20.9	+1.0
	baz=21,SNR=134						
RMQ	**Roma**	20.93	221	P	Pn	19 56 19.1	-0.8
ARMA	**Armidale**	22.39	208	P	P	19 56 35.7	+2.8
	baz=23,SNR=29						
ARMA	**Armidale**	22.39	208	P	P	19 56 36.0	+3.0
ARMA				IAmb	IAmb	19 56 38.3	
	comp=Z,197nm,1.2s						
AFI	**Afiamalu**	24.05	99	P	P	19 56 49.5	-0.2
	comp=Z,156nm,1.0s,baz=78,slow=7.8,SNR=11						
AFI				LR	LR	20 04 24.4	
	comp=Z,5µm,19.3s,baz=280,slow=32						
QLP	**Quilpie**	24.08	227	P	P	19 56 52.1	+2.3
	baz=24,SNR=19						
QLP	**Quilpie**	24.08	227	P	P	19 56 52.1	+2.3
	comp=Z,196nm,1.6s						
RAO	**Raoul Island**	24.95	139	LR	LR	20 05 42.3	
	comp=Z,1µm,19.1s,baz=305,slow=34						
MGCD	**Mangrove Creek**	24.99	206	P	P	19 57 01.8	+3.8
	baz=25,SNR=8.1						
QIS	**Mount Isa**	25.09	245	P	P	19 56 59.9	+0.7
	baz=25,SNR=50						
QIS	**Mount Isa**	25.09	245	P	P	19 56 59.9	+0.7
CMSA	**Cobar Meteorol**	26.42	217	P	P	19 57 13.1	+2.1
	baz=27,SNR=22						
SMPI	**Sarmi**	26.43	288	P	P	19 57 11.0	-0.3
	comp=Z,836nmcomp=Z,72nm,1.2s						
CNB	**Canberra Magne**	27.53	206	P	P	19 57 24.0	+2.9
	baz=28,SNR=7.4						
CAN	**Canberra**	27.70	207	IAMs_20	IAMs_20	20 08 13.8	
	comp=Z,2µm,18.0s						
HIZ	**Hauiti**	29.15	162	IAMs_20	IAMs_20	20 08 15.5	
	comp=Z,2µm,18.0s						
STKA	**Stephens Creek**	29.18	221	P	P	19 57 37.5	+1.8
	comp=Z,47nm,0.9s,baz=28,slow=9.3,SNR=68						
STKA	**Stephens Creek**	29.18	221	P	P	19 57 37.7	+2.0
	baz=29,SNR=34						
STKA	**Stephens Creek**	29.18	221	P	P	19 57 37.8	+2.1
STKA				pmax	pmax		
	comp=Z,18nm,1.1s						
STKA	**Stephens Creek**	29.18	221	P	P	19 57 37.8	+2.1
STKA	**Stephens Creek**	29.18	221	P	P	19 57 37.8	+2.1
H11S2	**WAKE ISLAND Hy**	29.43	6	T	T	20 28 19.9	
	baz=183,slow=74						
H11S3	**WAKE ISLAND Hy**	29.44	6	T	T	20 28 08.0	
	baz=183						
H11S1	**WAKE ISLAND Hy**	29.45	6	T	T	20 28 20.5	
	baz=183,slow=74						
WR0	**Warramunga Arr**	29.51	249	P	P	19 57 37.7	-1.1
WR0				IAmb	IAmb	19 57 44.1	
	comp=Z,76nm,1.1s						
WB0	**Warramunga Arr**	29.60	249	P	P	19 57 39.4	-0.2
URZ	**Urewera**	29.67	158	P	P	19 57 41.5	+1.6
	comp=Z,2.4nm,0.4s,baz=122,slow=23,SNR=3.3						
URZ				LR	LR	20 08 47.9	
	comp=Z,2µm,18.2s,baz=31,slow=35						
URZ	**Urewera**	29.67	158	IAMs_20	IAMs_20	20 08 26.7	
	comp=Z,2µm,19.0s						
WRAB	**Tennant Creek**	29.68	249	P	P	19 57 40.1	-0.2
WRAB				pmax	pmax		
	comp=Z,156nm,1.4s						
WRAB				MLR	MLR		
	comp=Z,4µm,20.0s						
WRAB	**Tennant Creek**	29.68	249	P	P	19 57 40.1	-0.2
WRAB	**Tennant Creek**	29.68	249	IAMs_20	IAMs_20	20 09 10.5	
	comp=Z,4µm,20.0s						
WRAB	**Tennant Creek**	29.68	249	P	P	19 57 40.4	+0.1
WB2	**Warramunga Arr**	29.68	249	P	P	19 57 39.7	-0.6
WRA	**Warramunga Arr**	29.69	249	P	P	19 57 40.0	-0.3
	comp=Z,48nm,0.9s,baz=77,slow=9.1,SNR=122						
WRA				S	S	20 02 30.5	-4.2
	comp=Z,15nm,1.2s,baz=80,slow=14,SNR=7.6						
WRA				LR	LR	20 10 11.0	
	comp=Z,3µm,18.4s,baz=65,slow=38						
WRA	**Warramunga Arr**	29.69	249	P	P	19 57 39.5	-0.9
LCRK	**Leigh Creek**	30.63	227	P	P	19 57 49.9	+1.3
H11N1	**WAKE ISLAND Hy**	30.66	6	T	T	20 29 49.7	
	baz=182,slow=76						
H11N3	**WAKE ISLAND Hy**	30.67	6	T	T	20 29 45.6	
	baz=182,slow=76						
KDU	**Kakadu**	30.67	264	P	P	19 57 48.2	-0.9
	baz=31,SNR=7.7						
H11N2	**WAKE ISLAND Hy**	30.68	6	T	T	20 29 40.1	
	baz=182,slow=76						
QRZ	**Quartz Range**	30.71	167	IAMs_20	IAMs_20	20 10 26.7	
	comp=Z,2µm,18.0s						
AS31	**Alice Springs**	31.09	242	P	P	19 57 52.4	-0.4
ASAR	**Alice Springs**	31.09	242	P	P	19 57 52.1	-0.7
	comp=Z,14nm,0.8s,baz=62,slow=10,SNR=173						
ASAR				PcP	PcP	20 00 50.3	+2.3
	comp=Z,3.0nm,1.0s,baz=84,slow=2.9,SNR=2.7						
ASAR				S	S	20 02 55.0	-1.8
	comp=Z,0.8nm,0.9s,baz=102,slow=15,SNR=3.1						
ASAR				ScP	ScP	20 04 31.0	+1.9
	comp=Z,2.0nm,1.2s,baz=77,slow=5.8,SNR=3.2						
ASAR				LR	LR	20 10 12.8	
	comp=Z,2µm,18.0s,baz=72,slow=36						
TOO	**Toolangi**	31.15	209	P	P	19 57 56.6	+3.5
	baz=31,SNR=4.6						
TOO	**Toolangi**	31.15	209	P	P	19 57 54.6	+1.5
TOO				pmax	pmax		
	comp=Z,55nm,1.1s						
TOO	**Toolangi**	31.15	209	P	P	19 57 54.6	+1.5
TOO				IAmb	IAmb	19 57 56.9	
	comp=Z,55nm,1.1s						
TOO	**Toolangi**	31.15	209	P	P	19 57 55.2	+2.1
OOD	**Oodnadatta**	31.21	234	P	P	19 57 57.1	+3.4
SNZO	**South Karori**	31.70	164	IAMs_20	IAMs_20	20 10 17.4	
	comp=Z,1µm,18.0s						
HTT	**Hallett**	31.90	222	P	P	19 58 02.0	+2.2
	baz=32,SNR=23						
HTT	**Hallett**	31.90	222	P	P	19 58 01.8	+2.0
MTN	**Manton Dam**	31.98	263	P	P	19 57 59.8	-0.8
	baz=32,SNR=6.6						
MTN	**Manton Dam**	31.98	263	P	P	19 58 00.2	-0.4
SAUI	**Saumlaki**	32.16	272	IAMs_20	IAMs_20	20 10 32.6	
	comp=Z,3µm,18.0s						
FAKI	**Fak Fak**	32.27	282	IAMs_20	IAMs_20	20 11 35.0	
	comp=Z,2µm,22.0s						
TWOA	**Tennyson Woods**	33.14	220	P	P	19 58 12.1	+1.6
BBOO	**Buckleboo**	33.47	225	P	P	19 58 15.0	+1.5
	baz=34,SNR=23						
BBOO	**Buckleboo**	33.47	225	P	P	19 58 13.1	-0.4
BBOO	**Buckleboo**	33.47	225	P	P	19 58 14.8	+1.3
MULG	**Mulgathing**	33.62	231	P	P	19 58 15.5	+0.7
SIJI	**Sorong**	33.81	285	P	P	19 58 15.3	-1.4
	comp=Z,4.6nm,0.7s,baz=95,slow=6.9,SNR=7.0						
SWI	**Sorong**	33.82	285	P	P	19 58 17.9	+1.1
	comp=Z,15nm,1.0s						
KNRA	**Kununurra**	34.35	258	P	P	19 58 20.7	-0.7
	baz=34,SNR=52						
KNRA	**Kununurra**	34.35	258	P	P	19 58 20.9	-0.5
KNRA				IAmb	IAmb	19 58 21.4	
	comp=Z,40nm,0.7s						
KNRA	**Kununurra**	34.35	258	P	P	19 58 21.0	-0.4
MOO	**Moorlands**	34.52	202	P	P	19 58 25.9	+3.4
	baz=35,SNR=7.2						
WRKA	**Warakurna**	36.38	243	P	P	19 58 38.8	0.0
	baz=37,SNR=79						
WRKA	**Warakurna**	36.38	243	P	P	19 58 38.8	0.0
LBMI	**Labuha**	37.47	283	P	P	19 58 48.7	+0.6
	comp=Z,988nmcomp=Z,61nm,1.2s						
FITZ	**Fitzroy Crossi**	37.52	255	P	P	19 58 47.7	-0.8
	comp=Z,31nm,0.7s,baz=76,slow=9.1,SNR=145						
FITZ	**Fitzroy Crossi**	37.52	255	P	P	19 58 47.7	-0.8
	baz=38,SNR=76						
TNTI	**Ternate**	38.03	286	P	P	19 58 52.3	-0.5
	comp=Z,502nmcomp=Z,28nm,1.6s						
TNTI	**Ternate**	38.03	286	IAMs_20	IAMs_20	20 16 07.0	
	comp=Z,1µm,19.0s						
FORT	**Forrest**	38.50	234	P	P	19 58 57.3	+0.7
FORT				IAmb	IAmb	19 59 00.7	
	comp=Z,71nm,0.8s						
FORT	**Forrest**	38.50	234	P	P	19 58 57.8	+1.2
SANI	**Sanana**	38.53	281	P	P	19 58 56.0	-1.1
	comp=Z,709nmcomp=Z,41nm,1.1s						
SOEI	**Soe**	38.86	268	P	P	19 59 00.7	+0.7
	comp=Z,912nmcomp=Z,31nm,0.8s						
BATI	**Baumata**	39.41	267	P	P	19 59 02.4	-2.1
	comp=Z,37nm,0.6s,baz=129,slow=1.6,SNR=25						
MMRI	**Maumere**	40.97	269	P	P	19 59 15.9	-1.5
	comp=Z,1µmcomp=Z,65nm,1.4s						
MMRI	**Maumere**	40.97	269	P	P	19 59 17.0	-0.4
MMRI				IAmb	IAmb	19 59 21.0	
	comp=Z,127nm,1.4s						
MMRI	**Maumere**	40.97	269	P	P	19 59 20.5	+3.1
	comp=Z,58nm,0.9s						
KMSI	**Cibinong**	41.19	284	P	P	19 59 18.5	-0.6
	comp=Z,1µmcomp=Z,122nm,1.1s						
APSI	**Ampana**	43.01	281	P	P	19 59 34.5	+0.4
	comp=Z,695nmcomp=Z,47nm,1.4s						
BSSI	**Bau Bau, Buton**	43.04	273	P	P	19 59 33.6	-0.7
	comp=Z,696nmcomp=Z,37nm,1.0s						
PSA00	**Pilbara Seismi**	43.32	250	P	P	19 59 37.2	+0.7
PSA00	**Pilbara Seismi**	43.32	250	P	P	19 59 36.8	+0.3
PSA00				IAmb	IAmb	19 59 42.1	
	comp=Z,75nm,1.0s						
PSA00	**Pilbara Seismi**	43.32	250	P	P	19 59 37.0	+0.5
MBWA	**Marble Bar**	43.38	251	IAMs_20	IAMs_20	20 17 28.7	
	comp=Z,2µm,20.0s						
MBWA	**Marble Bar**	43.38	251	P	P	19 59 37.8	+0.8
BKSI	**Bulukumba**	43.54	274	P	P	19 59 38.2	-0.1
	comp=Z,384nmcomp=Z,20nm,1.2s						
BNSI	**Bone**	43.73	275	P	P	19 59 39.7	-0.1
	comp=Z,950nmcomp=Z,78nm,1.1s						
KAPI	**Kappang**	43.96	274	P	P	19 59 41.1	-0.6
	comp=Z,8.8nm,0.6s,baz=123,slow=3.5,SNR=18						
SPSI	**Sidrap Palu**	44.14	276	P	P	19 59 42.6	-0.5
	comp=Z,35nm,1.1s						
TTSI	**Tana Toraja**	44.28	277	P	P	19 59 43.9	-0.4
	comp=Z,451nmcomp=Z,20nm,1.0s						
TOLI2	**Tolitoli**	44.40	283	P	P	19 59 46.0	+0.8
	comp=Z,22nm,0.9s						
MPSI	**Mapaga**	45.03	282	P	P	19 59 49.6	-0.7
	comp=Z,413nmcomp=Z,21nm,1.5s						
MEEK	**Meekatharra**	45.24	243	P	P	19 59 52.5	+0.6
	baz=45,SNR=15						
MEEK	**Meekatharra**	45.24	243	P	P	19 59 52.4	+0.6
PLAI	**Plampang**	45.33	268	P	P	19 59 51.4	-1.2
	comp=Z,1µmcomp=Z,61nm,1.7s						
PAE	**Paea**	45.59	104	*e*P	P	19 59 54.5	-0.1
	comp=Z,51nm,1.4s						
PPT	**Papeete**	45.59	104	LR	LR	20 15 23.1	
	comp=Z,2µm,18.1s,baz=274,slow=31						
PPT2	**Papeete2**	45.59	104	*e*P	P	19 59 55.0	+0.2
	comp=Z,140nm,1.3s						
PPT2				*e*S	S	20 06 30.6	-5.2
	comp=Z,413nm,29.0s						
PPT2				*e*LQ	LQ	20 10 44.2	
	comp=Z,2µm,28.0s						
PPT2				*e*LR	LR	20 12 37.3	
	comp=Z,2µm,22.0s						
TIAR	**Tiarei**	45.81	104	*e*P	P	19 59 56.2	-0.2
	comp=Z,0.9nm,1.4s						
TWSI	**Taliwang, Sumb**	46.22	268	P	P	19 59 59.3	-0.3
	comp=Z,467nmcomp=Z,24nm,1.2s						
MEH	**Mehetia**	47.04	104	*e*P	P	20 00 06.0	-0.1
	comp=Z,78nm,1.3s						
PMOR	**Pomariorio Ree**	47.20	100	*e*P	P	20 00 07.4	+0.1
	comp=Z,171nm,1.2s						
VAH	**Vaihoa**	47.45	101	*e*P	P	20 00 09.1	-0.1
	comp=Z,180nm,1.4s						
IGBI	**Denpasar**	47.91	268	P	P	20 00 13.0	+0.1
	comp=Z,1µmcomp=Z,93nm,1.1s						
SRBI	**Singaraja**	47.94	269	P	P	20 00 14.9	+1.8
	comp=Z,38nm,0.9s						
MORW	**Morawa**	47.96	241	P	P	20 00 13.6	+0.5
	baz=48,SNR=5.5						
MORW	**Morawa**	47.96	241	P	P	20 00 11.0	-2.0
MORW				IAmb	IAmb	20 00 40.2	
	comp=Z,27nm,1.0s						
MORW	**Morawa**	47.96	241	P	P	20 00 13.6	+0.5
JAGI	**Jajag, Banyuwa**	48.93	268	P	P	20 00 20.0	-0.7
	comp=Z,61nm,1.0s						
JAGI	**Jajag, Banyuwa**	48.93	268	P	P	20 00 18.1	-2.6
KIP	**Kipapa**	49.45	49	*i* P	P	20 00 22.8	-1.8
SPMM	**Sapulut**	49.60	286	P	P	20 00 26.0	+0.1
KKM	**Kota Kinabalu**	50.27	287	P	P	20 00 29.0	-2.0
KKM				IAmb	IAmb	20 00 41.7	
	comp=Z,51nm,1.0s						
JOW	**Kunigami**	51.00	318	P	P	20 00 32.0	-4.2
UGM	**Wanagama**	52.56	268	P	P	20 00 46.8	-1.3
INU	**Inuyama**	52.58	332	IAMs_20	IAMs_20	20 21 21.4	
	comp=Z,882nm,19.0s						
MJAR	**Matsushiro Arr**	53.05	334	P	P	20 00 51.9	+0.6
	comp=Z,6.4nm,1.1s,baz=154,slow=7.2,SNR=9.6						
MJAR				LR	LR	20 21 02.7	
	comp=Z,482nm,21.9s,baz=295,slow=33						
MAJO	**Matsushiro**	53.05	334	*i* P	P	20 00 50.0	-1.4
MAJO				pmax	pmax		
	comp=Z,29nm,1.1s						
MAT	**Matsushiro**	53.05	334	P	P	20 00 50.8	-0.6
MAT				S	S	20 08 17.2	-2.5
JNU	**Nakatsue**	53.92	326	P	P	20 00 58.5	+0.6
	comp=Z,33nm,1.0s,baz=111,slow=3.5,SNR=4.5						
JHS	**Saijyo**	54.17	329	P	P	20 00 54.5	-5.1
JHS				IAmb	IAmb	20 01 04.7	
	comp=Z,30nm,1.0s						
TAOE	**Nuku Hiva Isla**	55.22	93	*e*P	P	20 01 07.2	-0.5
	comp=Z,349nm,1.4s						
LEM	**Lembang**	55.57	269	P	P	20 01 09.9	-0.3
	comp=Z,15nm,0.6s,baz=342,slow=1.5,SNR=5.6						
CGJI	**Cibinong**	57.49	269	P	P	20 01 37.8	+14
TJN	**Taejon**	58.27	326	*i* P	P	20 01 25.1	-3.7
SSE	**Sheshan**	58.48	317	P	P	20 01 33.0	+2.7
SSE				S	S	20 09 36.7	+4.6
SSE				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,110nm,5.5s						
SSE				LR	LR		
	comp=Z,260nm,17.4s						
SSE				LR	LR		
	comp=Z,290nm,18.2s						
KSRS	**Korea Array**	58.76	327	P	P	20 01 32.2	+0.1
	comp=Z,5.5nm,1.1s,baz=139,slow=6.1,SNR=7.0						
KSRS				LR	LR	20 24 10.9	
	comp=Z,460nm,19.5s,baz=134,slow=33						
NJ2	**Nanjing**	60.63	317	*e*P	P	20 01 43.1	-2.1
NJ2				pP	sP	20 01 54.5	-0.5
NJ2				sP	pwP	20 02 01.2	+4.1
NJ2				S	S	20 09 55.9	-4.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NJ2				LR	LR		
	comp=Z,560nm,16.6s						
NJ2				LR	LR		
	comp=Z,470nm,14.7s						
NJ2				LR	LR		
	comp=Z,920nm,19.2s						
YSS	**Yuzh-Sakhalins**	60.66	344	*e*P	P	20 01 48.6	+3.5
YSS				*e*S	S	20 10 02.5	+2.8
YSS				*e*SSS	SSS	20 16 36.8	
YSS				smax	smax		
	comp=N,100nm,6.3s						
YSS				smax	smax		
	comp=E,200nm,11.7s						
YSS				MLR	MLR		
	comp=Z,300nm,18.0s						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
QIZ	**Qiongzhong**	60.95	299	P	P	20 01 45.5	-2.1
QIZ				S	S	20 10 04.0	-0.4
QIZ				LR	LR		
	comp=N,470nm,19.8s						
QIZ				LR	LR		
	comp=N,730nm,23.5s						
QIZ				LR	LR		
	comp=N,990nm,23.1s						
VLA	**Vladivostok**	61.22	334	*i* P	P	20 01 46.5	-2.4
VLA				pmax	pmax		
	comp=Z,68nm,1.3s						
USRK	**Ussuriysk Ar.**	62.05	335	P	P	20 01 56.0	+1.4
	comp=Z,31nm,1.1s,baz=131,slow=5.4,SNR=12						
WHN	**Wuhan**	62.92	313	⇓P	P	20 02 03.6	+3.0
WHN				LR	LR		
	comp=Z,1µm,16.6s						
DL2	**Dalian**	63.28	324	P	P	20 02 07.4	+4.5
DL2				pmax	pmax		
	comp=Z,38nm,0.9s						
DL2				pmax	pmax		
	comp=Z,390nm,4.4s						
DL2				LR	LR		
	comp=Z,330nm,13.1s						
DL2				LR	LR		
	comp=Z,490nm,15.0s						
DL2				LR	LR		
	comp=Z,630nm,17.3s						
MDJ	**Mudanjiang**	63.41	333	P	P	20 02 06.6	+3.0
MDJ				pmax	pmax		
	comp=Z,22nm,2.5s						
MDJ				pmax	pmax		
	comp=Z,510nm,6.0s						
PPI	**Padang Panjang**	63.80	275	P	P	20 02 06.4	-0.4
	comp=Z,8.2nm,0.8s						
PETK	**Petropavlovsk-**	64.05	356	P	P	20 02 08.0	+0.4
	comp=Z,14nm,1.0s,baz=140,slow=5.3,SNR=6.3						
PETK				LR	LR	20 24 25.6	
	comp=Z,545nm,21.7s,baz=175,slow=31						
IPM	**Ipoh**	64.30	280	P	P	20 02 10.0	-0.2
CN2	**Changchun**	64.71	330	*e*P	P	20 02 12.0	-0.2
CN2				*e*sP	pwP	20 02 26.4	+2.0
CN2				*e*S	S	20 10 49.0	-1.7
CN2				*e*SS	SS	20 15 02.3	-0.1
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=Z,690nm,17.0s						
CN2				LR	LR		
	comp=Z,650nm,17.0s						
CN2				LR	LR		
	comp=Z,630nm,20.0s						
MNSI	**Mandailing Nat**	64.86	276	P	P	20 02 12.0	-1.8
	comp=Z,22nm,0.8s						
KULM	**Kulim**	64.87	281	P	P	20 02 15.0	+1.2
PSI	**Prapat**	65.94	278	P	P	20 02 19.5	-1.4
	comp=Z,1.5nm,0.3s,baz=84,slow=3.4,SNR=4.9						
GRNR	**Gornyy**	65.95	341	⇑*i*P	P	20 02 22.7	+2.6
GRNR				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KLR	**Kul'dur**	66.25	338	*ce*P	P	20 02 21.2	-0.8
KLR				pmax	pmax		
	comp=Z,31nm,1.1s						
VNDA	**Vanda**	66.53	180	P	P	20 02 23.4	0.0
VNDA				pmax	pmax		
	comp=Z,22nm,1.4s						
VNDA	**Vanda**	66.53	180	P	P	20 02 23.4	0.0
GYA	**Guiyang**	66.79	305	⇑P	P	20 02 27.0	+0.9
GYA				pP	sP	20 02 35.7	-0.5
GYA				sP	pwP	20 02 42.5	+1.6
GYA				pmax	pmax		
	comp=Z,18nm,1.4s						
SLVN	**Son La**	66.98	299	IAMs_20	IAMs_20	20 27 51.3	
	comp=Z,541nm,22.0s						
BJT	**Baijiatuau**	67.22	322	IAMs_20	IAMs_20	20 30 02.5	
	comp=Z,714nm,19.0s						
BJI	**Beijing**	67.23	322	P	P	20 02 29.2	+0.7
BJI				SS	SS	20 15 41.4	-0.3
BJI				pmax	pmax		
	comp=Z,11nm,1.7s						
BJI				pmax	pmax		
	comp=Z,270nm,3.8s						
BJI				LR	LR		
	comp=Z,490nm,19.8s						
BJI				LR	LR		
	comp=Z,760nm,21.2s						
BJI				LR	LR		
	comp=Z,970nm,20.2s						
XAN	**Xi'an**	68.66	313	P	P	20 02 38.1	+0.4
XAN				S	S	20 11 41.1	+2.1
XAN				pmax	pmax		
	comp=Z,9.0nm,1.7s						
XAN				pmax	pmax		
	comp=Z,220nm,3.9s						
XAN				LR	LR		
	comp=Z,520nm,17.2s						
XAN				LR	LR		
	comp=Z,480nm,15.5s						
XAN				LR	LR		
	comp=Z,750nm,21.9s						
KMI	**Kunming**	69.44	302	⇑P	P	20 02 45.0	+2.1
KMI				pP	sP	20 02 53.2	+0.2
KMI				S	S	20 11 42.0	-6.9
KMI				pmax	pmax		
	comp=Z,32nm,1.3s						
KMI				pmax	pmax		
	comp=Z,390nm,4.9s						
KMI				LR	LR		
	comp=Z,310nm,14.3s						
KMI				LR	LR		
	comp=Z,520nm,21.0s						
KMI				LR	LR		
	comp=Z,750nm,23.2s						
CMAR	**Chiang Mai Arr**	70.32	294	P	P	20 02 48.9	+0.7
	comp=Z,7.3nm,0.9s,baz=118,slow=4.5,SNR=37						
CMAR				LR	LR	20 33 21.9	
	comp=Z,154nm,19.7s,baz=133,slow=36						
HHC	**Hu-ho-hao-te**	70.55	321	*e*P	P	20 02 47.5	-1.7
HHC				pP	sP	20 02 59.4	+0.2
HHC				S	S	20 11 59.8	-1.2
HHC				SS	SS	20 16 28.8	-4.3
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,93nm,5.7s						
HHC				LR	LR		
	comp=Z,490nm,19.0s						
HHC				LR	LR		
	comp=Z,530nm,18.0s						
HHC				LR	LR		
	comp=Z,1µm,17.7s						
CD2	**Chengdu**	71.03	308	P	P	20 02 49.2	-3.2
CD2				S	S	20 12 03.5	-3.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,550nm,17.6s						
CD2				LR	LR		
	comp=Z,670nm,23.5s						
CD2				LR	LR		
	comp=Z,740nm,23.5s						
BTO	**Baotou**	71.38	320	*e*P	P	20 02 56.7	+2.4
BTO				S	S	20 12 14.6	+3.8
BTO				LR	LR		

	comp=Z,2μm,22.5s						
BTO				LR	LR		
	comp=Z,1μm,20.4s						
ZEA	**Zeya**	**71.55**	**338**	*e*P	**P**	**20 02 58.3**	**+3.4**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.3s						
LZH	**Lanzhou**	**73.29**	**313**	⇑P	**P**	**20 03 07.8**	**+1.9**
LZH				pP	sP	20 03 16.1	+0.1
LZH				sP	pwP	20 03 20.7	-0.1
LZH				S	**SKiKP**	**20 12 36.7**	**+1.0**
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
LZH				pmax	pmax		
	comp=Z,280nm,4.3s						
LZH				LR	LR		
	comp=Z,410nm,18.4s						
LZH				LR	LR		
	comp=Z,450nm,18.4s						
LZH				LR	LR		
	comp=Z,500nm,19.5s						
ULN	**Ulaanbaatar**	**77.13**	**325**	*i* P	**P**	**20 03 26.8**	**-0.9**
ULN				pmax	pmax		
	comp=Z,25nm,1.2s						
SONM	**Songino Array**	**77.48**	**324**	P	**P**	**20 03 30.3**	**+0.7**
	comp=Z,7.4nm,0.8s,baz=140,slow=5.2,SNR=33						
SONM				LR	LR	20 36 46.9	
	comp=Z,381nm,19.9s,baz=126,slow=35						
P18K	**Big Mountain,**	**77.50**	**20**	P	**P**	**20 03 28.7**	**-0.7**
	baz=221						
YAK	**Yakutsk**	**77.50**	**344**	*e*P	**P**	**20 03 32.1**	**+2.8**
YAK				*e*		20 03 41.0	
YAK				*e**PP	**pwP**	**20 03 45.0**	**+3.5**
YAK				*e*S	**S**	**20 13 18.9**	**+0.7**
YAK				*e**SS	**ScS**	**20 13 44.1**	**-1.1**
YAK				*e*		20 13 55.5	
YAK				*e*SS	**SS**	**20 18 16.4**	**-1.6**
YAK				pmax	pmax		
	comp=Z,41nm,1.2s						
YAK				pmax	pmax		
	comp=N,14nm,1.4s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,295nm,4.8s						
YAK				pmax	pmax		
	comp=N,225nm,4.6s						
YAK				pmax	pmax		
	comp=E,90nm,2.9s						
YAK				smax	smax		
	comp=N,244nm,5.1s						
YAK				smax	smax		
	comp=E,554nm,7.2s						
GTA	**Gaotai**	**77.63**	**315**	⇓P	**P**	**20 03 31.9**	**+1.2**
GTA				pP	PcP	20 03 40.8	0.0
GTA				sP	pwP	20 03 44.9	-0.7
GTA				PP	**PP**	**20 06 28.2**	**+2.0**
GTA				S	**S**	**20 13 24.4**	**+3.6**
GTA				pmax	pmax		
	comp=E,7.0nm,1.2s						
GTA				pmax	pmax		
	comp=E,250nm,5.1s						
GTA				LR	LR		
	comp=E,390nm,19.6s						
GTA				LR	LR		
	comp=E,430nm,18.9s						
GTA				LR	LR		
	comp=E,520nm,18.9s						
P19K	**Oil Pt**	**78.38**	**21**	P	**P**	**20 03 35.3**	**+1.1**
	baz=223						
BILL	**Bilibino**	**78.84**	**1**	*ce*P	**P**	**20 03 36.0**	**-0.6**
BILL				*e*		20 06 33.8	
BILL				*e*S	**S**	**20 13 35.8**	**+3.4**
BILL				*e*SS	**SS**	**20 18 41.9**	**+4.0**
BILL				pmax	pmax		
	comp=Z,37nm,0.8s						
QSPA	**South Pole Qui**	**79.01**	**180**	P	**P**	**20 03 39.5**	**+1.6**
	comp=Z,40nm,1.2s,baz=3.3,slow=1.3,SNR=17						
QSPA	**South Pole Qui**	**79.01**	**180**	P	**P**	**20 03 39.5**	**+1.6**
QSPA	**South Pole Qui**	**79.01**	**180**	IAMs_20	IAMs_20	20 35 48.7	
	comp=Z,434nm,20.0s						
M19K	**Big River Lodg**	**79.66**	**19**	P	**P**	**20 03 41.6**	**+0.4**
	baz=222						
L19K	**White Mountain**	**79.72**	**18**	P	**P**	**20 03 41.7**	**+0.2**
	baz=221,SNR=9.1						
TTA	**Tatalina**	**79.94**	**17**	P	**P**	**20 03 43.7**	**+0.9**
	baz=220						
L20K	**Farewell, AK**	**80.25**	**19**	P	**P**	**20 03 45.3**	**+0.8**
	baz=222,SNR=12						
ZAK	**Zakamensk**	**80.55**	**326**	*e*P	**P**	**20 03 46.6**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,26nm,1.2s						
RC01	**Rabbit Creek A**	**80.62**	**21**	P	**P**	**20 03 46.6**	**+0.2**
	baz=226						
LSA	**Lhasa**	**80.69**	**303**	P	**P**	**20 03 47.2**	**-0.9**
LSA				pmax	pmax		
	comp=Z,24nm,1.9s						
LSA	**Lhasa**	**80.69**	**303**	IAMs_20	IAMs_20	20 38 25.1	
	comp=Z,468nm,22.0s						
K20K	**Telida**	**80.84**	**18**	P	**P**	**20 03 48.5**	**+0.9**
	baz=222						
PWL	**Port Wells**	**80.96**	**22**	P	**P**	**20 03 50.2**	**+2.0**
	baz=227						
TLY	**Talaya**	**81.01**	**327**	*e*P	P	20 03 56.4	+7.7
TLY				*e*S	**S**	**20 14 03.6**	**+7.6**
TLY				*e*SS	**SS**	**20 19 13.7**	**+2.6**
TLY				pmax	pmax		
	comp=Z,54nm,1.5s						
TLY				MLR	MLR		
	comp=Z,921nm,18.0s						
GCSA	**Galena City Sc**	**81.10**	**16**	P	**P**	**20 03 49.6**	**+0.8**
	baz=219						
KNK	**Knik Glacier**	**81.29**	**21**	P	**P**	**20 03 52.9**	**+2.9**
	baz=227						
GHO	**Glory Hole Cre**	**81.38**	**21**	IAMs_20	IAMs_20	20 31 31.0	
	comp=Z,866nm,19.0s						
J20K	**Nowinta River**	**81.44**	**17**	P	**P**	**20 03 51.5**	**+0.9**
	baz=222						
CAST	**Castle Rocks**	**81.50**	**18**	P	**P**	**20 03 50.9**	**-0.2**
	baz=224						
SML	**Sawmill**	**81.61**	**21**	P	**P**	**20 03 51.3**	**-0.4**
	baz=227						
CHUM	**Lake Minchumin**	**81.77**	**18**	P	**P**	**20 03 52.4**	**0.0**
	baz=223						
SCM	**Sheep Creek Mo**	**81.98**	**21**	P	**P**	**20 03 55.8**	**+2.1**
	baz=228						
TRF	**Thorofare Moun**	**82.09**	**19**	P	P	20 03 59.8	+5.4
	baz=225						
WAT1	**Susitna Watana**	**82.23**	**20**	P	**P**	**20 03 54.8**	**-0.2**
	baz=227						
KLU	**Klutina**	**82.26**	**22**	P	**P**	**20 03 55.9**	**+0.7**
	baz=230						
RDOG	**Red Dog Mine**	**82.36**	**12**	P	P	20 04 03.4	+7.9
	baz=213						
M24K	**Tolsona, Glenn**	**82.57**	**21**	P	**P**	**20 03 57.5**	**+0.7**
	baz=229						
MCK	**McKinley**	**82.72**	**19**	P	**P**	**20 03 57.4**	**0.0**
	baz=226,SNR=7.3						
I21K	**Tanana**	**82.81**	**17**	P	**P**	**20 03 58.4**	**+0.5**
	baz=223						
N25K	**Chitina, Valde**	**82.82**	**22**	P	**P**	**20 03 58.5**	**+0.4**
	baz=231						
CRQE	**Cirque**	**82.86**	**23**	P	**P**	**20 03 58.5**	**+0.2**
	baz=232						
TAPN	**Taplejung**	**82.89**	**300**	*e*P	**P**	**20 04 00.4**	**+0.9**
H21K	**Melozitna Rive**	**82.92**	**17**	P	**P**	**20 03 59.2**	**+0.7**
	baz=223						
ODAN	**Odare**	**83.03**	**299**	*e*P	**P**	**20 04 00.5**	**+0.4**
MLY	**Manley**	**83.07**	**18**	P	**P**	**20 03 58.9**	**-0.3**
	baz=225						
HARP	**HAARP**	**83.12**	**21**	P	**P**	**20 04 00.3**	**+0.7**
	baz=230						
NEA2	**Nenana**	**83.27**	**19**	P	**P**	**20 03 59.5**	**-0.7**
	baz=226,SNR=6.7						
MCARA	**McCarthy VSAT**	**83.27**	**23**	P	**P**	**20 04 03.8**	**+3.5**
	baz=232						
PAX	**Paxson**	**83.38**	**21**	P	**P**	**20 03 59.6**	**-1.4**
	baz=230						
PINM	**Pinnacle**	**83.60**	**25**	P	**P**	**20 04 01.4**	**-0.8**
	baz=235						
CTG	**Chitna Glacier**	**83.67**	**24**	P	**P**	**20 04 03.2**	**+0.6**
	baz=234						
MDM	**Murphy Dome**	**83.78**	**19**	P	**P**	**20 03 58.8**	**-4.2**
MDM				IAmb	IAmb	20 04 18.0	
	comp=Z,29nm,1.2s						
HDA	**Harding Lake**	**83.82**	**19**	P	**P**	**20 04 02.8**	**-0.3**
	baz=228,SNR=16						
TCOL	**CIGO, UAF Yank**	**83.84**	**19**	P	**P**	**20 04 04.7**	**+1.6**
	baz=227						
COLA	**College**	**83.85**	**19**	*i* P	**P**	**20 04 00.3**	**-2.9**
COLA				pmax	pmax		
	comp=Z,18nm,0.9s						
M26K	**Nabesna, AK**	**83.91**	**22**	P	**P**	**20 04 03.9**	**+0.2**
	baz=232						
MAW	**Mawson**	**84.04**	**202**	P	**P**	**20 04 06.0**	**+1.8**
	comp=Z,23nm,1.1s,baz=95,slow=6.9,SNR=17						
MAW				LR	LR	20 38 59.4	
	comp=Z,277nm,18.4s,baz=65,slow=34						
MAW	**Mawson**	**84.04**	**202**	P	**P**	**20 04 06.8**	**+2.5**
	baz=84,SNR=12						
ILAR	**Eielson Array**	**84.08**	**19**	P	**P**	**20 04 03.9**	**-0.5**
	comp=Z,6.7nm,1.0s,baz=218,slow=5.5,SNR=14						
ILAR				LR	LR	20 35 00.6	
	comp=Z,351nm,20.3s,baz=264,slow=31						
RIDG	**Independent Ri**	**84.09**	**20**	P	**P**	**20 04 04.1**	**-0.4**
	baz=230						
L26K	**Log Cabin Wild**	**84.17**	**21**	P	**P**	**20 04 06.0**	**+1.0**
	baz=232,SNR=13						
M27K	**Edge Creek, AK**	**84.30**	**22**	P	**P**	**20 04 06.3**	**+0.6**
	baz=233						
H24K	**Noodor Dome**	**84.49**	**18**	P	**P**	**20 04 08.1**	**+1.6**
	baz=227						
YUK3	**Moose Creek**	**84.49**	**23**	P	**P**	**20 04 07.3**	**+0.5**
	baz=234,SNR=12						
SCRK	**Sand Creek**	**84.53**	**21**	P	**P**	**20 04 07.3**	**+0.5**
	baz=231,SNR=8.9						
GUN	**Gumba**	**84.60**	**300**	*e*P	**P**	**20 04 08.0**	**-0.3**
	comp=Z,130nm,1.4s						
O02D	**Mt. Diablo Mer**	**84.68**	**48**	P	**P**	**20 04 09.0**	**+0.9**
	baz=251,SNR=6.0						
BVCY	**Beaver Creek**	**84.71**	**23**	P	**P**	**20 04 08.3**	**+0.6**
	baz=234,SNR=8.2						
L27K	**Beaver Creek,**	**84.74**	**22**	P	**P**	**20 04 08.5**	**+0.7**
	baz=233,SNR=9.5						
COLD	**Coldfoot**	**84.78**	**16**	P	**P**	**20 04 09.5**	**+1.6**
	baz=225						
YUK6	**Outpost Mounta**	**84.86**	**25**	P	**P**	**20 04 09.7**	**+1.0**
	baz=236						
K02D	**Willamette Mer**	**84.90**	**45**	P	**P**	**20 04 08.8**	**-0.3**
	baz=250						
PKI	**Pulchoki**	**84.92**	**299**	*e*P	**P**	**20 04 09.8**	**-0.1**
	comp=Z,34nm,0.9s						
PKIN	**Phulchoki**	**84.93**	**299**	*e*P	**P**	**20 04 09.6**	**-0.3**
	comp=Z,102nm,1.4s						
YUK4	**Talbot Arm**	**84.96**	**24**	P	**P**	**20 04 10.8**	**+1.6**
	baz=236,SNR=8.1						
N02D	**Trinity Center**	**85.00**	**47**	P	**P**	**20 04 10.5**	**+0.8**
	baz=251						
J26L	**Joseph Creek**	**85.01**	**20**	P	**P**	**20 04 11.2**	**+2.0**
	baz=231						
M02C	**Callahan**	**85.03**	**46**	P	**P**	**20 04 10.7**	**+0.8**
	baz=251,SNR=5.1						
KKN	**Kakani**	**85.08**	**299**	*e*P	**P**	**20 04 10.4**	**-0.2**
HYT	**Haines Junctio**	**85.14**	**25**	P	**P**	**20 04 10.6**	**+0.6**
	baz=237						
DMN	**Daman**	**85.19**	**299**	*e*P	**P**	**20 04 10.6**	**-0.6**
	comp=Z,50nm,0.9s						
PKM	**Mcpherson Peak**	**85.31**	**53**	P	**P**	**20 04 12.0**	**+0.5**
	baz=253						
O03E	**Paynes Creek**	**85.43**	**48**	P	**P**	**20 04 11.8**	**-0.1**
	baz=252,SNR=11						
TIXI	**Tiksi**	**85.67**	**350**	*ce*P	**P**	**20 04 11.9**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,15nm,1.1s						
GKN	**Gorkha**	**85.69**	**299**	*e*P	**P**	**20 04 13.0**	**-0.5**
L04D	**Klamath Falls**	**85.69**	**46**	P	**P**	**20 04 13.5**	**+0.3**
	baz=251						
M04C	**Macdoel**	**85.88**	**46**	P	**P**	**20 04 14.6**	**+0.5**
	baz=251,SNR=6.4						
TOLK	**Toolik Lake Re**	**85.95**	**15**	P	P	20 04 18.9	+5.1
	baz=226						
EGAK	**Eagle**	**86.00**	**21**	P	**P**	**20 04 14.6**	**+0.6**
	baz=234						
I04A	**Tendick Farm,**	**86.13**	**44**	P	**P**	**20 04 15.2**	**0.0**
	baz=251						
H04D	**Lebanon**	**86.14**	**43**	P	**P**	**20 04 15.8**	**+0.6**
	baz=251						
ARVC	**Arvin**	**86.15**	**53**	P	**P**	**20 04 16.2**	**+0.7**
	baz=254						
N31M	**Braeburn, Yuko**	**86.20**	**25**	P	**P**	**20 04 15.0**	**-0.1**
	baz=239						
DAWY	**Dawson**	**86.21**	**22**	P	**P**	**20 04 15.8**	**+0.7**
	baz=235,SNR=9.2						
M30M	**Minto, Yukon**	**86.37**	**24**	P	**P**	**20 04 14.6**	**-1.3**
	baz=238						
KOLN	**Koldanda**	**86.52**	**299**	*e*P	**P**	**20 04 16.8**	**-0.9**
	comp=Z,29nm,1.1s						
DANN	**Dangsing**	**86.52**	**300**	*e*P	**P**	**20 04 17.1**	**-0.7**
	comp=Z,30nm,1.0s						
ISA	**Isabella, Lake**	**86.58**	**53**	P	**P**	**20 04 17.8**	**+0.1**
	baz=254,SNR=12						
EDW2	**Edwards Air Fo**	**86.75**	**54**	P	**P**	**20 04 18.5**	**0.0**
	baz=254,SNR=20						
J05D	**Fort Rock, OR**	**86.77**	**45**	P	**P**	**20 04 18.6**	**+0.1**
	baz=252						
BFSC	**Mount Baldy Ra**	**86.84**	**54**	P	**P**	**20 04 18.9**	**-0.1**
	baz=255						
E04D	**Cinebar**	**86.93**	**42**	P	**P**	**20 04 19.8**	**+0.8**
	baz=251						
I05D	**Terrebonne, OR**	**87.03**	**44**	P	**P**	**20 04 20.0**	**+0.3**
	baz=252						
MURC	**Murrieta**	**87.04**	**55**	P	**P**	**20 04 20.1**	**+0.1**
	baz=255						
CWC	**Cottonwood Cre**	**87.10**	**52**	P	**P**	**20 04 20.5**	**+0.2**
	baz=254						
PYUN	**Piuthan**	**87.12**	**299**	*e*P	**P**	**20 04 19.1**	**-1.5**
	comp=Z,17nm,0.9s						
LRMC	**Laurel Mtn Rad**	**87.15**	**53**	P	**P**	**20 04 20.6**	**+0.1**
	baz=254,SNR=9.8						
TIN	**Tinemaha, Big**	**87.15**	**52**	P	**P**	**20 04 20.9**	**+0.4**
	baz=254						
I29M	**Ogilvie Camp,**	**87.33**	**21**	P	**P**	**20 04 21.5**	**+1.0**
	baz=236,SNR=8.5						
F05D	**White Salmon**	**87.44**	**42**	P	**P**	**20 04 22.2**	**+0.7**
	baz=251						
MPMC	**Manual Prospec**	**87.46**	**53**	P	**P**	**20 04 22.1**	**0.0**
	baz=255,SNR=14						
NVAR	**Mina Array Bea**	**87.47**	**50**	P	**P**	**20 04 22.4**	**+0.3**
	comp=Z,14nm,1.0s,baz=236,slow=7.0,SNR=42						
NVAR				LR	LR	20 36 53.5	
	comp=Z,702nm,19.4s,baz=268,slow=31						
NVAR	**Mina Array Bea**	**87.47**	**50**	P	**P**	**20 04 21.9**	**-0.2**
MONP2	**Monument Peak**	**87.49**	**56**	P	**P**	**20 04 22.4**	**+0.1**
	baz=255,SNR=12						
PFO	**Pinyon Flats O**	**87.64**	**55**	P	**P**	**20 04 23.1**	**+0.2**
	baz=255						
IKP	**In-Ko-Pah, Jac**	**87.68**	**56**	P	**P**	**20 04 23.3**	**+0.3**
	baz=256						
WMQ	**Urumqi**	**87.69**	**315**	*e*P	**P**	**20 04 20.4**	**-2.4**
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,340nm,5.7s						
WMQ				LR	LR		
	comp=Z,380nm,22.1s						
GSC	**Goldstone, Bar**	**87.80**	**54**	P	**P**	**20 04 23.9**	**+0.3**
	baz=255,SNR=7.3						
SWSC	**Sam W. Stewart**	**88.01**	**56**	P	**P**	**20 04 24.9**	**+0.4**
	baz=256,SNR=8.4						
HEC	**Hector,Ludlow**	**88.05**	**54**	P	**P**	**20 04 25.0**	**+0.3**
	baz=255,SNR=8.1						
FURC	**Furnace Creek,**	**88.05**	**52**	P	**P**	**20 04 25.1**	**+0.5**
	baz=255,SNR=7.1						
BELC	**Belle Mtn. Jos**	**88.11**	**55**	P	**P**	**20 04 25.3**	**+0.1**
	baz=256,SNR=21						
SHOC	**Shoshone, Teco**	**88.37**	**53**	P	**P**	**20 04 26.4**	**+0.2**
	baz=255						
BC3	**Big Chuckawall**	**88.46**	**55**	P	**P**	**20 04 27.2**	**+0.4**
	baz=256,SNR=12						
TUQ	**Turquoise Moun**	**88.53**	**54**	P	**P**	**20 04 27.3**	**+0.2**
	baz=256,SNR=8.8						
GMRC	**Granite Mounta**	**88.57**	**54**	P	**P**	**20 04 27.5**	**+0.1**
	baz=256,SNR=14						
GLA	**Glamis**	**88.83**	**56**	P	**P**	**20 04 29.4**	**+0.9**
	baz=256,SNR=7.7						
IRM	**Iron Mountain**	**88.83**	**55**	P	**P**	**20 04 28.9**	**+0.4**
	baz=256,SNR=20						
R11A	**Troy Canyon, C**	**89.51**	**51**	P	**P**	**20 04 31.6**	**-0.1**
	baz=256,SNR=14						
DGZ	**Jazzator, Alta**	**89.63**	**321**	*i* P	**P**	**20 04 30.5**	**-1.5**
DGZ				pmax	pmax		
	comp=Z,11nm,1.5s						
PDMCI	**Parker Dam,Lak**	**89.68**	**55**	P	**P**	**20 04 32.9**	**+0.6**
	baz=257,SNR=6.2						
214A	**Organ Pipe Nat**	**90.23**	**58**	P	**P**	**20 04 35.9**	**+0.8**
	baz=257						
INK	**Inuvik**	**90.48**	**19**	P	**P**	**20 04 37.5**	**+2.2**
	baz=241						
NEW	**Newport**	**90.97**	**41**	P	**P**	**20 04 38.1**	**0.0**
	baz=255,SNR=7.9						
SYO	**Syowa Base**	**91.27**	**197**	⇓*e*P	**P**	**20 04 36.8**	**-2.3**
SYO	**Syowa Base**	**91.27**	**197**	⇓*e*pP	pP	20 04 50.9	+4.8
HLID	**Hailey**	**91.63**	**46**	P	**P**	**20 04 42.0**	**+0.6**
	baz=256,SNR=24						
MK31	**Makanchi Array**	**92.16**	**317**	*i* P	**P**	**20 04 42.0**	**-1.6**
MKAR	**Makanchi Array**	**92.16**	**317**	P	**P**	**20 04 43.8**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=98,slow=6.4,SNR=16						
MKAR				PP	**PP**	**20 08 25.4**	**+1.3**
	comp=Z,2.0nm,1.0s,baz=118,slow=7.2,SNR=3.7						
MKAR				LR	LR	20 45 32.5	
	comp=Z,185nm,21.9s,baz=97,slow=35						
MKAR	**Makanchi Array**	**92.16**	**317**	*i* P	**P**	**20 04 43.7**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**92.16**	**317**	P	**P**	**20 04 40.2**	**-3.4**
WUAZ	**Wupatki**	**92.16**	**54**	IAMs_20	IAMs_20	20 40 50.3	
	comp=Z,635nm,20.0s						
WUAZ	**Wupatki**	**92.16**	**54**	P	**P**	**20 04 45.4**	**+1.3**
	baz=258						
MAKZ	**Makanchi**	**92.37**	**317**	P	**P**	**20 04 41.3**	**-3.3**
MAKZ				pmax	pmax		
	comp=Z,25nm,1.3s						
MAKZ	**Makanchi**	**92.37**	**317**	P	**P**	**20 04 41.3**	**-3.3**
MAKZ				IAmb	IAmb	20 04 54.4	
	comp=Z,25nm,1.2s						
ZALV	**Zalesovo Beam**	**92.38**	**325**	P	**P**	**20 04 43.7**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=127,slow=4.4,SNR=7.3						
ZALV				LR	LR	20 48 08.7	
	comp=Z,134nm,18.2s,baz=113,slow=37						
ZALV	**Zalesovo Beam**	**92.38**	**325**	*i* P	**P**	**20 04 43.0**	**-1.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MSO	**Missoula**	**92.71**	**43**	P	**P**	**20 04 45.7**	**-0.6**
	baz=257						
Q16A	**Castle Valley**	**93.01**	**51**	P	P	20 04 38.8	-9.2
SRU	**San Rafael Swe**	**93.54**	**51**	P	P	20 04 39.5	-11
SRU				pmax	pmax		
	comp=Z,15nm,0.9s						
SRU	**San Rafael Swe**	**93.54**	**51**	P	P	20 04 39.5	-11
SRU				IAmb	IAmb	20 04 44.9	
	comp=Z,15nm,0.9s						
BOZ	**Bozeman (W)**	**94.01**	**44**	P	**P**	**20 04 53.0**	**+0.6**
	baz=258,SNR=9.2						
FXWY	**Fox Creek**	**94.05**	**46**	IAMs_20	IAMs_20	20 39 37.6	
	comp=Z,755nm,18.0s						
H17A	**Grant Village**	**94.51**	**46**	P	**P**	**20 04 56.9**	**+2.1**
	baz=259						
A36M	**Sachs Harbour**	**94.61**	**17**	P	**P**	**20 04 54.5**	**+0.2**
	baz=248						
BW06	**Boulder Array**	**94.94**	**48**	P	**P**	**20 04 56.4**	**-0.4**
	baz=260						
PDAR	**Pinedale Array**	**94.94**	**48**	P	**P**	**20 04 56.5**	**-0.4**
	comp=Z,3.9nm,1.0s,baz=259,slow=3.0,SNR=20						
PDAR				PP	**PP**	**20 08 41.1**	**-5.2**
	comp=Z,1.4nm,1.2s,baz=265,slow=5.2,SNR=2.2						
PDAR				LR	LR	20 42 09.0	
	comp=Z,308nm,19.8s,baz=270,slow=32						
NRIK	**Noril'sk**	**95.40**	**340**	P	**P**	**20 04 56.1**	**-1.9**
	comp=Z,1.4nm,0.5s,baz=130,slow=3.7,SNR=1.6						
NRIK				LR	LR	20 47 35.6	
	comp=Z,244nm,21.3s,baz=116,slow=35						
NRIK	**Noril'sk**	**95.40**	**340**	*ce*P	**P**	**20 04 55.2**	**-2.8**
NRIK				pmax	pmax		
	comp=Z,13nm,1.5s						
EGMT	**Eagleton**	**95.73**	**42**	P	**P**	**20 04 59.5**	**-0.6**
	baz=260						
YKA	**Yellowknife Ar**	**95.81**	**27**	P	**P**	**20 04 58.9**	**-1.1**
	comp=Z,5.5nm,1.0s,baz=255,slow=4.8,SNR=17						
YKA				LR	LR	20 42 37.5	
	comp=Z,592nm,20.1s,baz=0.0,slow=32						
ANMO	**Albuquerque**	**96.01**	**56**	*i* P	**P**	**20 05 00.6**	**-1.3**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ANMO	**Albuquerque**	**96.01**	**56**	P	**P**	**20 05 02.1**	**+0.3**
	baz=261						
S22A	**4UR Ranch, Cre**	**96.16**	**53**	P	**P**	**20 05 04.3**	**+1.7**
	baz=261						
SNAA	**Sanae**	**97.04**	**184**	P	Pdif	20 05 06.3	+0.6
SNAA	**Sanae**	**97.04**	**184**	P	Pdif	20 05 05.9	+0.1
	comp=Z,3.4nm,1.0s,baz=224,slow=4.7,SNR=3.9						
SNAA				LR	LR	20 45 53.0	
	comp=Z,373nm,20.9s,baz=185,slow=34						
SNAA	**Sanae**	**97.04**	**184**	*i* P	**P**	**20 05 02.9**	**-2.7**
SNAA				pmax	pmax		
	comp=Z,12nm,1.3s						
SNAA	**Sanae**	**97.04**	**184**	IAMs_20	IAMs_20	20 45 31.5	
	comp=Z,463nm,21.0s						
TXAR	**Lajitas Array**	**97.51**	**62**	P	**P**	**20 05 07.6**	**-1.0**
	comp=Z,0.2nm,0.7s,baz=267,slow=2.5,SNR=3.0						
TXAR				PP	**PP**	**20 09 04.1**	**-2.2**
	comp=Z,1.6nm,1.1s,baz=256,slow=7.3,SNR=6.5						
TXAR				LR	LR	20 43 19.6	
	comp=Z,382nm,19.1s,baz=0.0,slow=32						
VNA2	**Neumayer--Watz**	**98.06**	**183**	Pdiff	**P**	**20 05 07.5**	**-2.6**
VNA1	**Neumayer--Stat**	**98.37**	**183**	Pdiff	**P**	**20 05 08.5**	**-3.0**
BRVK	**Borovoye**	**100.78**	**322**	*i* P	**Pdif**	**20 05 19.6**	**-2.9**
BRVK				pmax	pmax		
	comp=Z,26nm,4.0s						
OK029	**Liberty Lake**	**103.42**	**56**	IAMs_20	IAMs_20	20 54 11.5	
	comp=Z,538nm,18.0s						
OK031	**S. Brethren Rd**	**103.93**	**56**	IAMs_20	IAMs_20	20 52 33.9	
	comp=Z,648nm,19.0s						
ARCES	**ARCESS Array B**	**115.78**	**345**	PKP	**PKiKP**	**20 10 14.5**	**-1.5**
	comp=Z,3.9nm,1.0s,baz=77,slow=26,SNR=1.6						
KBZ	**Khabaz**	**119.72**	**314**	*e*PKIKP	**PKPdf**	**20 10 20.1**	**-4.1**
KIV	**Kislovodsk**	**119.81**	**315**	*i* PKIKP	**PKPdf**	**20 10 22.2**	**-2.3**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,164nm,22.0s						
RAYN	**Ar Rayn**	**120.13**	**291**	IAMs_20	IAMs_20	21 04 19.3	
	comp=Z,241nm,20.0s						
SOC	**Sochi**	**121.98**	**315**	*i* PKIKP	**PKPdf**	**20 10 23.0**	**-5.6**
SOC				*e*PPP	PPP	20 14 32.6	
SOC				*e*PS	**PS**	**20 21 51.0**	**-6.3**
SOC				*e*SS	SS	20 28 48.7	+10
SOC				*e*SSS	SSS	20 33 01.1	
SOC				MLR	MLR		
	comp=Z,280nm,16.0s						
ATD	**Arta Tunnel**	**122.15**	**277**	IAMs_20	IAMs_20	21 01 54.0	
	comp=Z,313nm,20.0s						
MNK	**Minsk**	**124.40**	**331**	*i* P	**Pdif**	**20 07 10.9**	**+3.3**
MNK				*i*		20 17 21.4	
MNK				*i* PS	**SP**	**20 22 06.5**	**-6.9**
MNK				*i* SS	**SS**	**20 28 58.3**	**-10**
MNK				pmax	pmax		
	comp=E,5.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,48nm,0.9s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,1μm,22.0s						
MNK				MLR	MLR		
	comp=Z,352nm,18.0s						
MNK				MLR	MLR		
	comp=E,180nm,26.0s						
MNK	**Minsk**	**124.40**	**331**	*i* P	**Pdif**	**20 07 11.0**	**+3.4**
	comp=E,5.0nm,1.0s						
MNK				*i* P	**Pdif**	**20 07 11.0**	**+3.4**
	comp=N,48nm,0.9s						
MNK				*i* P	**Pdif**	**20 07 11.0**	**+3.4**
	comp=Z,7.0nm,0.9s,baz=236						
MNK				*i* PKP	PKPdf	20 10 24.2	-8.7
MNK				*i* PP	PP	20 12 09.8	-8.8
MNK				*i* PPP	PPP	20 14 48.6	
MNK				*i* SKS	SKSac	20 17 21.4	-12
MNK				*i* PS	**SP**	**20 22 06.6**	**-6.9**
MNK				*i* SS	**SS**	**20 28 58.4**	**-10**
MNK				*i* SSS	SSS	20 33 30.6	
MNK				*i* LR	LR	21 02 04.3	
MNK				*i* LRM	MLR	21 03 54.3	
	comp=N,1μm,22.4s						
MNK				*i* LRM	MLR	21 04 04.4	
	comp=Z,352nm,18.1s						
MNK				*i* LRM	MLR	21 04 07.3	
	comp=E,180nm,26.1s						
KMBO	**Kilima Mbogo**	**125.49**	**261**	IAMs_20	IAMs_20	21 01 20.5	
	comp=Z,515nm,20.0s						
AKASG	**Malin Array Be**	**125.75**	**326**	PKP	**PKPdf**	**20 10 35.0**	**-0.5**

	comp=Z,0.4nm,0.4s,baz=85,slow=37,SNR=5.2						
NB2	NORSAR Subarra	126.12	344	PKPdf	PKPdf	20 10 35.6	-0.5
	comp=Z,22nm,1.7s,baz=27,slow=1.8						
NB2	NORSAR Subarra	126.12	344	PKPdf	PKPdf	20 10 35.6	-0.5
	baz=27,slow=1.8						
NOA	NORSAR Array B	126.12	344	PKP	PKPdf	20 10 35.1	-0.9
	comp=Z,0.8nm,0.8s,baz=236,slow=18,SNR=2.2						
BRTR	Keskin Array B	127.49	312	PKP	PKiKP	20 10 41.1	+1.1
	comp=Z,1.6nm,0.9s,baz=46,slow=3.6,SNR=7.0						
BRTR				PP	PP	20 12 41.1	+1.1
	comp=Z,1.9nm,1.1s,baz=54,slow=7.3,SNR=3.9						
LODK	Lodwar	128.33	266	IAMs_20	IAMs_20	21 05 31.4	
	comp=Z,265nm,18.0s						
MBAR	Mbarara	131.92	259	IAMs_20	IAMs_20	21 00 26.1	
	comp=Z,348nm,22.0s						
CHVC	Chvalec	132.46	333	ePKP	PKiKP	20 10 53.5	+4.0
KRLC	Kraliky	132.48	332	ePKP	PKiKP	20 10 53.9	+4.3
KRLC	Kraliky	132.48	332	ePKIKP	PKiKP	20 10 53.9	+4.3
DPC	Dobruska-Polom	132.50	332	ePKP	PKiKP	20 10 53.8	+4.2
DPC	Dobruska-Polom	132.50	332	ePKIKP	PKiKP	20 10 53.8	+4.2
CLL	Collm	133.26	335	epPKPdf	pPKPdf	20 10 59.0	+1.5
CLL				LmV		21 15 00.0	
	comp=Z,400nm,18.3s						
PRU	Pruhonice	133.57	333	ePKP	PKiKP	20 10 55.0	+3.3
PRU				epPKP	sPKPdf	20 11 00.5	-0.3
PRU	Pruhonice	133.57	333	ePKIKP	PKiKP	20 10 55.0	+3.3
CONA	Conrad Observa	134.40	330	eP	PKiKP	20 10 54.4	+0.8
	comp=Z,1.6nm,0.6s						
CKRC	Cesky Krumlov	134.51	332	ePKP	PKiKP	20 10 57.4	+3.7
CKRC				ex	x	20 11 03.0	
KHC	Kasperske Hory	134.62	333	ePKP	PKPdf	20 10 48.0	-4.5
KHC				ex	x	20 10 56.5	
KHC	Kasperske Hory	134.62	333	ePKIKP	PKiKP	20 10 56.5	+2.5
GERES	GERESS Array B	134.78	332	PKP	PKPdf	20 10 52.5	-0.5
	comp=Z,1.7nm,0.9s,baz=14,slow=2.8,SNR=8.1						
ARSA	Arzberg	135.03	330	eP	PKiKP	20 10 56.6	+1.8
	comp=Z,1.9nm,1.1s						
SOKA	Soboth	135.66	329	eP	PKiKP	20 10 56.9	+0.7
	comp=Z,2.6nm,0.9s						
OBKA	Obir	136.02	329	eP	PKiKP	20 10 56.3	-0.6
	comp=Z,1.8nm,0.8s						
MYKA	Terra Mystica	136.39	330	eP	PKiKP	20 10 58.8	+1.1
	comp=Z,2.2nm,0.9s						
ABTA	Abfaltersbach	136.85	331	eP	PKiKP	20 10 57.9	-0.7
	comp=Z,3.8nm,0.7s						
WATA	Walderalm	136.85	332	eP	PKiKP	20 10 59.2	+0.5
	comp=Z,5.6nm,1.2s						
WTTA	Wattenberg	136.88	332	eP	PKiKP	20 10 59.0	+0.2
	comp=Z,4.1nm,0.9s						
MOTA	Moosalm	137.06	333	eP	PKiKP	20 10 58.7	-0.5
	comp=Z,8.0nm,1.7s						
RETA	Reutte	137.10	333	eP	PKPdf	20 10 56.5	-0.7
	comp=Z,1.5nm,0.7s						
SQTA	Sankt Quirin	137.10	333	eP	PKiKP	20 11 00.4	+1.2
	comp=Z,5.8nm,1.0s						
FETA	Feichten	137.47	333	eP	PKiKP	20 11 01.5	+1.6
	comp=Z,6.0nm,1.0s						
DAVA	Damuels	137.65	334	eP	PKiKP	20 11 00.5	+0.2
	comp=Z,5.0nm,0.8s						
KEST	Kesra	146.17	321	PKPbc	PKPdf	20 11 14.3	+0.5
	comp=Z,5.6nm,0.8s,baz=279,slow=6.6,SNR=4.1						
CMAH	Djebel Manchou	146.73	324	P	PKPab	20 11 18.0	+0.4
CKFL	Kef-Lekhel	147.29	324	P	PKiKP	20 11 24.5	+4.1
DFRA	Djebel Bou Aff	147.66	325	P	PKPab	20 11 21.6	+0.3
PBRG	Braganca	148.19	346	ePKP	PKPab	20 11 22.7	-0.4
POLO	Lamas de Olo	148.84	348	ePKP	PKPab	20 11 26.1	+0.3
MVO	Moncorvo	148.87	346	ePKP	PKPab	20 11 25.8	-0.1
PVRL	Vila Real	148.91	348	ePKP	PKiKP	20 11 24.7	+1.2
ESDC	Sonseca Array	149.42	341	PKPbc	PKPbc	20 11 23.3	-0.1
	comp=Z,1.7nm,0.8s,baz=8.3,slow=1.8,SNR=9.1						
PVIS	Viseu	149.49	347	ePKP	PKPbc	20 11 24.0	+0.4
MTE	Manteigas	149.72	347	ePKP	PKPab	20 11 28.2	-1.2
COI	Coimbra	150.09	348	ePKP	PKPab	20 11 30.3	-0.5
PCBR	Castelo Branco	150.23	346	ePKP	PKiKP	20 11 26.5	+0.3
PMRV	Marv??o	150.61	346	ePKP	PKiKP	20 11 27.6	+0.6
PMTG	Montargil	151.14	347	ePKP	PKiKP	20 11 31.5	+3.4
PESTR	Estremoz	151.19	346	ePKP	PKiKP	20 11 31.7	+3.5
EVO	Evora	151.60	346	ePKP	PKiKP	20 11 32.8	+3.7
PBEJ	Beja	152.05	346	ePKP	PKiKP	20 11 32.0	+2.0
MESJ	Messejana	152.31	346	ePKP	PKiKP	20 11 32.0	+1.5
PCVE	Castro Verde	152.47	346	ePKP	PKiKP	20 11 35.0	+4.1
PVAQ	Vaqueiros	152.61	345	ePKP	PKPab	20 11 42.0	+0.7
MORF	Marmelete	152.92	347	ePKP	PKiKP	20 11 34.8	+2.9
TORD	Torodi Ar. Bea	162.34	279	PKP	PKPdf	20 11 37.5	+0.9
	comp=Z,1.9nm,1.1s,baz=0.1,slow=1.5,SNR=6.5						
TORD				PKPab	PKPab	20 12 22.8	-1.4
	comp=Z,3.8nm,1.0s,baz=65,slow=2.6,SNR=7.8						

UPA ***06*** *20:03:55.0±1.3, 6°.46N×79°.41W, h20km±44km, MW3.8*
RSNC ***06*** *20:03:55.2±0.7, 6°.49N×79°.00W, h4km±5km, ML2.2*
ISC 06 20:03:47.2±1.5**, 6°.51N**±0°.05×**79°.18W**±0°.03**, h7**km±12km**,**
n19, σ1s.60/32**, 1C, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTAC	Punta Ardita,	1.50	65	eP	Pg	20 04 17.6	+1.6
PTAC				eS	Sn	20 04 34.0	-0.4
PTAC				i		20 04 40.2	
	comp=Z,49nm,0.1s						
PTAC	Punta Ardita,	1.50	65	eP	Pg	20 04 17.7	+1.8
AZU	Azuero	1.68	320	⇑iP	Pg	20 04 21.0	+1.6
AZU				eS	Sg	20 04 41.3	+0.2
SOLC	Bahia Solano	1.78	99	eP	Pb	20 04 20.7	+0.5
SOLC				eS	Sn	20 04 40.2	-1.2
SOLC				i		20 04 46.6	
	comp=Z,40nm,0.1s						
CACAO	El Cacao, Vera	1.87	296	eP	Pg	20 04 23.2	+0.2
CACAO				eS	Sn	20 04 44.0	+0.5
CHIT3	Chitre	1.89	319	eP	Pg	20 04 24.2	+0.7
CHIT3				eS	Sb	20 04 47.0	+1.0
VTON	El Valle, Cocl	2.29	336	eP	Pg	20 04 31.6	+0.6
VTON				eS	Sg	20 04 59.3	-1.4
GMAL	Guarumal, Vera	2.39	302	eP	Pb	20 04 29.1	-1.5
GMAL				eS	Sb	20 04 59.9	-0.5
CHPO	Chepo, Panama	2.64	1	eS	Sb	20 05 05.5	-2.2
GAMB1	Gamboa	2.65	349	eP	Pg	20 04 38.1	+0.1
GAMB1				eS	Sb	20 05 07.8	+0.1
BCIP	Isla Barro Col	2.72	346	eP	Pb	20 04 36.8	+0.6
BCIP				eS	Sb	20 05 10.4	+0.5
BCIP				i		20 05 15.2	
	comp=Z,17nm,0.3s						
BCIP	Isla Barro Col	2.72	346	eP	Pg	20 04 38.5	-0.8
DBBC	Dabeiba	2.99	80	eP	Pb	20 04 40.6	-0.3
CBOC	Ciudad Bolivar	3.21	101	eP	Pb	20 04 42.3	-2.5
CBOC				eS	Sn	20 05 16.8	-0.1
CBOC				i		20 05 19.3	
	comp=Z,6.2nm,0.2s						
PLMC	San Jos del P	3.29	119	eP	Pn	20 04 37.5	-1.9
PLMC				eS	Sn	20 05 18.4	-0.4
PLMC				i		20 05 23.5	
	comp=Z,11nm,0.2s						
YOTC	Yotoco, Valle	3.77	132	eP	Pn	20 04 48.3	+2.2
YOTC				eS	Sn	20 05 31.1	+0.3
YOTC				i		20 05 40.6	
	comp=Z,2.5nm,0.4s						
UREC	San Jos de Ur	3.82	71	eP	Pb	20 04 52.8	-2.3
GUY2C	Guyana, Caldas	4.00	108	eP	Pn	20 04 52.2	+2.8
NORC	Norcasia	4.39	102	eP	Pb	20 05 01.0	-3.7
NORC				eS	Sn	20 05 48.4	+2.6
NORC				i		20 05 51.8	
	comp=Z,2.6nm,0.4s						

IDC ***06*** *20:54:36.9±0.6, 11°.49S×117°.52E, h0km, mb4.6/16, mb1 4.8/21, mb1mx4.5/39, mbtmp4.7/21, ML4.9/5, MS3.6/8, Ms1 3.6/8, ms1mx3.3/35, Error ellipse: s-maj=18.9km s-min=14.1km az=54.0*
DJA ***06*** *20:54:38.1±1.3, 12°S±2°×11°7E±°, h12km±9km, M5.0/53, mB5.4/24, mb4.9/53, MLv5.3/23, Mw(mB)4.9/24*
NEIC ***06*** *20:54:40.0±1.5, 11°.70S±0°.08×117°.47E±0°.08, h30km±6km, mb4.6/27, Error ellipse: s-maj=12.3km s-min=10.0km az=224.0*
ISC 06 20:54:41.1±0.3**, 11°.63S**±0°.04×**117°.50E**±0°.05**, h34km, n228,**
σ1s.69/237**, mb4.9**/55**, MS4.1**/4**, 1C, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	2.72	43	P	Pn	20 55 22.6	+0.1
PLAI	Plampang	2.80	6	P	Pn	20 55 23.2	-0.4
PLAI				S	Sn	20 55 52.5	-3.8
PLAI	Plampang	2.80	6	P	Pn	20 55 24.1	+0.5
TWSI	Taliwang, Sumb	2.94	348	P	Pn	20 55 25.3	-0.2
BASI	Baing, Sumba	3.34	65	P	Pn	20 55 30.7	-0.3
IGBI	Denpasar	3.63	320	P	Pn	20 55 34.8	-0.2
DNP	Denpasar	3.70	322	P	Pn	20 55 36.5	+0.5
DNP				S	Sn	20 56 13.4	-5.0
SRBI	Singaraja	4.18	327	P	Pn	20 55 43.4	+0.8
JAGI	Jajag, Banyuwa	4.55	313	P	Pn	20 55 46.4	-1.3
JAGI	Jajag, Banyuwa	4.55	313	Pn	Pn	20 55 46.1	-1.6
JAGI	Jajag, Banyuwa	4.55	313	P	Pn	20 55 46.6	-1.1
ABJI	Asem Bagus	4.99	320	P	Pn	20 55 53.4	-0.3
	7.8nm15µm142nm,0.9s						
EDFI	Ende, Flores	5.03	56	P	Pn	20 55 53.2	-1.1
	0.6nm3µm54nm,0.5s						
GMJI	Gumukmas	5.20	310	P	Pn	20 55 55.0	-1.6
	3.9nm16µm221nm,0.8s						
BLJI	Banyuglugur	5.45	315	P	Pn	20 55 59.8	-0.2
MMRI	Maumere	5.54	58	P	Pn	20 56 00.6	-0.6
MMRI	Maumere	5.54	58	Pn	Pn	20 56 00.3	-0.9
MMRI	Maumere	5.54	58	P	Pn	20 56 01.3	+0.1
KMMI	Kalianget	5.73	322	P	Pn	20 56 04.2	+0.3
	1.0nm1µm76nm,0.8s						
BSSI	Bau Bau, Buton	6.21	29	P	Pn	20 56 11.6	+1.2
	1.0nm3µm236nm,0.7s						
BATI	Baumata	6.22	77	Pn	Pn	20 56 11.2	+0.6
	84nm,0.3s,baz=276,slow=4.2,SNR=57						
BATI				Sn	Sn	20 57 18.5	-2.1
	41nm,0.3s,baz=32,slow=23,SNR=16						
BATI				LR	LR	20 59 15.2	
	comp=Z,255nm,19.0s,baz=277,slow=45						
BATI	Baumata	6.22	77	P	Pn	20 56 10.9	+0.3
	0.7nm3µm133nm,0.6s						
BKSI	Bulukumba	6.79	23	P	Pn	20 56 19.9	+1.5
	1.1nm3µm282nm,0.5s						
SOEI	Soe	6.91	75	P	Pn	20 56 21.0	+0.8
	1.4nm4µm356nm,0.8s						
SOEI	Soe	6.91	75	Pn	Pn	20 56 20.2	0.0
SOEI	Soe	6.91	75	P	Pn	20 56 20.9	+0.7
KAPI	Kappang	6.95	19	Pn	Pn	20 56 22.5	+1.9
	28nm,0.3s,baz=214,slow=7.8,SNR=205						
KAPI				Sn	Sn	20 57 33.2	-5.3
	41nm,0.3s,baz=92,slow=22,SNR=16						
KAPI				LR	LR	20 59 16.6	
	comp=Z,171nm,19.4s,baz=221,slow=41						
KAPI	Kappang	6.95	19	Pn	Pn	20 56 21.4	+0.9
KAPI	Kappang	6.95	19	P	Pn	20 56 22.5	+1.9
BNSI	Bone	7.64	20	P	Pn	20 56 32.4	+2.3
	0.5nm2µm166nm,0.7s						
UGM	Wanagama	7.80	298	P	Pn	20 56 31.3	-1.1
	2.1nm188nm,1.2s						
UGM	Wanagama	7.80	298		Pn	20 56 31.0	-1.4
UGM	Wanagama	7.80	298	P	Pn	20 56 32.1	-0.3
SPSI	Sidrap Palu	7.95	17	P	Pn	20 56 35.8	+1.5
	1µm79nm,0.5s						
UWJI	Ujung Watu	8.29	308	P	Pn	20 56 38.3	-0.7
	6µm154nm,0.7s						
KBKI	Kotabaru	8.38	351	P	Pn	20 56 42.5	+2.2
BBKI	Banjar Baru	8.53	342	P	Pn	20 56 42.7	+0.3
	19nm,1.0s						
TTSI	Tana Toraja	8.84	15	P	Pn	20 56 48.3	+1.7
	722nm72nm,0.5s						
CMJI	Cimerak	9.70	292	P	Pn	20 56 56.4	-2.0
	44nm,0.8s						
MBWA	Marble Bar	9.71	168	P	Pn	20 56 56.5	-2.0
PSA00	Pilbara Seismi	10.14	167	Pn	Pn	20 57 01.8	-2.6
PSA00	Pilbara Seismi	10.14	167		Pn	20 57 01.1	-3.3
PSA00	Pilbara Seismi	10.14	167	P	Pn	20 57 02.1	-2.2
FITZ	Fitzroy Crossi	10.16	130	Pn	Pn	20 57 03.0	-1.6
	7.2nm,0.3s,baz=296,slow=6.8,SNR=92						
FITZ				Sn	Sn	20 58 49.1	-8.4
	23nm,0.3s,baz=171,slow=20,SNR=14						
FITZ				LR	LR	21 00 54.9	
	comp=Z,448nm,21.8s,baz=272,slow=37						
FITZ	Fitzroy Crossi	10.16	130	P	Pn	20 57 03.1	-1.6
	baz=10,SNR=55						
LEM	Lembang	10.86	295	Pn	Pn	20 57 12.8	-1.5
	2.8nm,0.3s,baz=0.1,slow=22,SNR=2.1						
LEM				Sn	Sn	20 59 07.2	-7.6
	4.6nm,0.3s,baz=157,slow=15,SNR=2.6						
LEM				LR	LR	21 02 16.9	
	comp=Z,240nm,18.2s,baz=116,slow=42						
MTKI	Muara Teweh, K	10.93	346	P	Pn	20 57 15.9	+0.6
	2µm63nm,0.7s						
GIRL	Giralia	11.38	195	P	Pn	20 57 20.7	-0.8
	baz=11,SNR=56						
GIRL	Giralia	11.38	195	Pn	Pn	20 57 19.8	-1.6
GIRL	Giralia	11.38	195	P	Pn	20 57 20.6	-0.8
XMI	Christmas Isla	11.65	275	P	Pn	20 57 25.0	-0.1
	104nm,1.1s						
KNRA	Kununurra	11.66	111	P	Pn	20 57 23.6	-1.6
	baz=12,SNR=59						
KNRA	Kununurra	11.66	111	Pn	Pn	20 57 23.7	-1.6
KNRA	Kununurra	11.66	111	P	Pn	20 57 24.0	-1.3
XMIS	Christmas Isla	11.68	274	P	Pn	20 57 23.1	-2.5
CGJI	Cibinong	12.68	292	P	Pn	20 57 38.9	-0.2
	2µm54nm,0.5s						
SANI	Sanana	12.71	42	P	Pn	20 57 42.4	+2.8
MRSI	Marisa	12.82	20	P	Pn	20 57 42.5	+1.4
	12nm,0.7s						
STKI	Sintang	13.07	332	P	Pn	20 57 45.3	+0.8
	8µm17nm,0.8s						
TOLI2	Tolitoli	13.08	15		Pn	20 57 44.3	-0.3
TOLI2	Tolitoli	13.08	15	P	Pn	20 57 43.5	-1.1
DRS	Darwin Rock St	13.13	95	P	Pn	20 57 44.6	-0.8
MTN	Manton Dam	13.38	97	P	Pn	20 57 48.0	-0.8
	baz=14,SNR=31						
MTN	Manton Dam	13.38	97	Pn	Pn	20 57 47.2	-1.6
MTN	Manton Dam	13.38	97	P	Pn	20 57 48.2	-0.6
SAUI	Saumlaki	14.08	76	P	Pn	20 57 58.4	+0.1
	187nm,0.9s						
KLSI		14.39	298	P	Pn	20 58 01.4	-1.2
	10nm,1.2s						
PPBI	Pangkal Pinang	14.68	309	P	Pn	20 58 05.8	-0.7
KDU	Kakadu	14.68	96	P	Pn	20 58 04.9	-1.6
	baz=15,SNR=14						
KDU	Kakadu	14.68	96	P	Pn	20 58 05.5	-1.0
LBMI	Labuha	14.77	43	P	Pn	20 58 08.9	+1.3
	503nm12nm,0.6s						
LWLI	Liwa	14.83	295	P	Pn	20 58 06.5	-2.1
	47nm,0.6s						
MEEK	Meekatharra	14.96	176	P	Pn	20 58 08.4	-1.9
	baz=15,SNR=24						
MEEK	Meekatharra	14.96	176	P	Pn	20 58 08.6	-1.7
MDSI	Maura Dua	14.97	297	P	Pn	20 58 07.8	-2.6
	10.0nm,1.2s						
LHSI	Lahat	15.86	298	P	Pn	20 58 21.4	-0.6
	84nm,0.9s						
SPMM	Sapulut	16.27	356	P	P	20 58 31.0	+1.0
WRKA	Warakurna	16.80	144	P	Pn	20 58 32.4	-1.6
	baz=17,SNR=17						
FAKI	Fak Fak	16.99	60	P	Pn	20 58 35.1	-1.3
FAKI	Fak Fak	16.99	60	P	Pn	20 58 32.7	-3.7
MASI	Maura Aman, Be	17.31	298	P	Pn	20 58 39.9	-0.5
	111nm,1.4s						
SWI	Sorong	17.35	53	P	Pn	20 58 38.9	-2.0
SIJI	Sorong	17.36	53	P	Pn	20 58 38.7	-2.2
	6.9nm,0.3s,baz=249,slow=6.2,SNR=8.8						
SIJI				S	Sn	21 01 39.7	-13
	0.2nm,0.3s,baz=304,slow=24,SNR=1.8						
SIJI				LR	LR	21 05 24.6	
	comp=Z,138nm,20.1s,baz=192,slow=38						
MORW	Morawa	17.40	184	P	Pn	20 58 39.4	-1.9
	baz=18,SNR=35						
MORW	Morawa	17.40	184		Pn	20 58 38.8	-2.5
MORW				IAmb	IAmb	20 58 53.2	
	comp=Z,19nm,0.6s						
MORW	Morawa	17.40	184	P	Pn	20 58 39.6	-1.8
KKM	Kota Kinabalu	17.61	356		Pn	20 58 43.0	-1.1
KKM	Kota Kinabalu	17.61	356	P	P	20 58 44.7	-0.2
WB0	Warramunga Arr	18.15	119	P	Pn	20 58 48.7	-2.0
WRA	Warramunga Arr	18.18	119	P	Pn	20 58 49.0	-2.1
	comp=Z,2.2nm,0.3s,baz=283,slow=12,SNR=73						
WRA				S	Sn	21 01 54.9	-18
	comp=Z,0.7nm,0.3s,baz=285,slow=23,SNR=5.2						
WRA	Warramunga Arr	18.18	119	P	Pn	20 58 48.8	-2.2
WRAB	Tennant Creek	18.18	119	P	Pn	20 58 49.3	-1.8
WRAB				IAmb	IAmb	20 58 52.2	
	comp=Z,22nm,0.8s						
WRAB	Tennant Creek	18.18	119	P	Pn	20 58 50.6	-0.5
WB2	Warramunga Arr	18.19	119	P	Pn	20 58 49.1	-2.1
	baz=18						
WB2	Warramunga Arr	18.19	119	P	Pn	20 58 49.6	-1.6
WB2				IAmb	IAmb	20 58 52.6	
	comp=Z,24nm,0.8s						
KRJI	Kerinci	18.51	300	P	P	20 58 52.2	-2.7
RGRI	Rengat	18.77	306	P	P	20 58 56.8	-0.8
	comp=Z,29nm,0.4s						
BLDU	Ballidu	18.90	182	P	P	20 58 59.1	+0.1
	baz=19,SNR=32						
BLDU	Ballidu	18.90	182	P	P	20 58 59.0	+0.1
ASPA	Alice Springs	19.66	130	P	Pn	20 59 08.6	-0.3
	baz=20						
ASAR	Alice Springs	19.66	130	P	Pn	20 59 08.8	-0.1
	comp=Z,3.6nm,0.3s,baz=303,slow=9.8,SNR=334						
ASAR				S	S	21 02 34.8	-13
	comp=Z,1.7nm,0.3s,baz=314,slow=26,SNR=9.0						
ASAR	Alice Springs	19.66	130	P	P	20 59 06.1	-1.3
AS31	Alice Springs	19.66	130	P	P	20 59 06.6	-0.8
KLBR	Kellerberrin	19.86	179	P	Pn	20 59 11.4	+0.2
	baz=20,SNR=42						
KLBR	Kellerberrin	19.86	179	P	Pn	20 59 11.1	-0.1
PDSI	Padang	19.98	301	P	P	20 59 10.4	-0.5
MUN	Mundaring	20.28	183	P	Pn	20 59 15.8	-0.3
	baz=20,SNR=15						
MUN	Mundaring	20.28	183	P	Pn	20 59 15.6	-0.5
NWAO	Narrogin (SRO)	21.20	181	P	P	20 59 25.2	+1.4
FORT	Forrest	21.42	154	P	P	20 59 27.6	+1.3
	baz=22,SNR=27						
FORT	Forrest	21.42	154	P	P	20 59 25.0	-1.3
FORT	Forrest	21.42	154	P	P	20 59 27.7	+1.5
JRMM	Jerantut	21.47	315	P	P	20 59 29.0	+2.1
IPM	Ipoh	22.91	313	P	P	20 59 44.0	+1.7
IPM	Ipoh	22.91	313	P	P	20 59 43.4	+1.1
IPM				IAmb	IAmb	20 59 44.9	
	comp=Z,20nm,0.7s						
IPM	Ipoh	22.91	313	P	P	20 59 44.2	+1.9
	comp=Z,30nm,0.9s						
QIS	Mount Isa	23.00	115	P	P	20 59 44.7	+1.5
	baz=23,SNR=12						
QIS	Mount Isa	23.00	115	P	P	20 59 43.2	0.0
SMPI	Sarmi	23.12	67	P	P	20 59 56.4	+12
PSI	Prapat	23.38	307	P	P	20 59 47.0	-0.2
	comp=Z,19nm,1.0s,baz=144,slow=8.7						
OOD	Oodnadatta	23.44	136	P	P	20 59 48.8	+1.3
KULM	Kulim	23.74	314	P	P	20 59 50.2	-0.3
KULM				IAmb	IAmb	20 59 51.8	
	comp=Z,27nm,0.8s						
TSI	Tuntungan	24.10	308	P	P	20 59 54.1	+0.3
	comp=Z,141nm,0.9s						
MULG	Mulgathing	24.10	143	P	P	20 59 55.0	+1.3
KCSI	Kotacane, Aceh	24.73	306	P	P	21 00 00.1	+0.5
	comp=Z,24nm,1.0s						
TPTI		25.04	305	P	P	21 00 04.1	+1.6
COEN	Coen	25.14	98	P	P	21 00 05.0	+1.6
	baz=25						
COEN	Coen	25.14	98	P	P	21 00 03.7	+0.3
COEN				IAmb	IAmb	21 00 06.5	
	comp=Z,18nm,0.9s						
COEN	Coen	25.14	98	P	P	21 00 04.7	+1.3
TGY	Tagaytay City	25.80	8	P	P	21 00 08.8	-0.5
	comp=Z,155nm,0.3s,baz=273,slow=2.6,SNR=2.1						
MTSU	Mount Surprise	26.69	107	P	P	21 00 19.6	+2.1
	baz=27,SNR=18						
LCRK	Leigh Creek	26.83	137	P	P	21 00 20.0	+1.5
BBOO	Buckleboo	27.10	144	P	P	21 00 22.4	+1.4
	baz=27,SNR=16						
BBOO	Buckleboo	27.10	144	P	P	21 00 20.3	-0.7
BBOO				IAmb	IAmb	21 00 23.0	
	comp=Z,17nm,0.8s						
BBOO	Buckleboo	27.10	144	P	P	21 00 22.3	+1.4
HTT	Hallett	29.25	141	P	P	21 00 42.3	+2.2
	baz=29,SNR=8.1						
HTT	Hallett	29.25	141	P	P	21 00 42.0	+1.9
STKA	Stephens Creek	29.98	136	P	P	21 00 48.5	+1.8
	comp=Z,16nm,0.7s,baz=307,slow=9.1,SNR=34						
STKA	Stephens Creek	29.98	136	P	P	21 00 48.4	+1.8
	baz=30,SNR=27						
STKA	Stephens Creek	29.98	136	P	P	21 00 47.4	+0.8
STKA	Stephens Creek	29.98	136	P	P	21 00 48.8	+2.2
RMQ	Roma	32.92	121	P	P	21 01 14.9	+2.3
	baz=33,SNR=4.7						
ARPS	Mount Arapiles	33.26	143	P	P	21 01 17.9	+2.5
	baz=33,SNR=18						
ARPS	Mount Arapiles	33.26	143	P	P	21 01 16.4	+1.0
CMAR	Chiang Mai Arr	35.06	328	P	P	21 01 31.9	+0.7
	comp=Z,5.0nm,0.8s,baz=156,slow=6.6,SNR=42						
CMAR				PcP	PcP	21 04 05.5	+2.8
	comp=Z,1.0nm,0.7s,baz=184,slow=2.6,SNR=5.8						
CMAR				LR	LR	21 16 58.0	
	comp=Z,112nm,18.1s,baz=187,slow=38						
CHTO	Chiang Mai	35.36	329	P	P	21 01 32.7	-1.0
CHTO				IAmb	IAmb	21 01 35.1	
	comp=Z,5.3nm,0.8s						
TOO	Toolangi	36.00	141	P	P	21 01 42.4	+3.3
	baz=36,SNR=7.1						
TOO	Toolangi	36.00	141	P	P	21 01 39.5	+0.4
ARMA	Armidale	36.73	126	P	P	21 01 49.0	+3.5
	baz=37,SNR=4.8						
NJ2	Nanjing	43.46	2	eP	P	21 02 42.5	+1.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ODAN	Odare	48.16	323	eP	P	21 03 18.5	-0.1
	comp=Z,56nm,0.8s						
LSA	Lhasa	48.31	329	P	P	21 03 20.6	+0.6
TAPN	Taplejung	48.34	324	eP	P	21 03 20.4	+0.4
	comp=Z,72nm,0.9s						
RAMN	Ramite	48.69	322	eP	P	21 03 22.9	+0.2
	comp=Z,28nm,0.5s						
LZH	Lanzhou	49.18	345	eP	P	21 03 26.8	+0.6
LZH				pP	sP	21 03 36.9	-1.1
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
KSRS	Korea Array	49.80	11	P	P	21 03 30.6	0.0
	comp=Z,4.2nm,0.7s,baz=187,slow=8.9,SNR=20						
GUN	Gumba	49.83	323	eP	P	21 03 31.6	+0.1
	comp=Z,78nm,0.9s						
PKI	Pulchoki	49.86	322	eP	P	21 03 31.1	-0.7
	comp=Z,25nm,0.6s						
PKIN	Phulchoki	49.88	322	eP	P	21 03 31.4	-0.4
	comp=Z,24nm,0.5s						
DMN	Daman	50.08	322	eP	P	21 03 32.9	-0.4
	comp=Z,40nm,0.7s						
KKN	Kakani	50.10	322	eP	P	21 03 33.2	-0.2
GKN	Gorkha	50.65	322	eP	P	21 03 37.3	-0.2
	comp=Z,42nm,0.5s						
KOLN	Koldanda	51.12	321	eP	P	21 03 40.4	-0.7
	comp=Z,28nm,0.6s						
BJI	Beijing	51.42	359	P	P	21 03 41.9	-0.9
BJI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DANN	Dangsing	51.43	321	eP	P	21 03 43.3	-0.2
	comp=Z,95nm,0.5s						
PYUN	Piuthan	51.73	320	eP	P	21 03 45.2	-0.5
	comp=Z,35nm,0.6s						
MAT	Matsushiro	51.74	21	P	P	21 03 43.6	-1.7
MJAR	Matsushiro Arr	51.74	21	P	P	21 03 43.9	-1.4
	comp=Z,4.7nm,0.8s,baz=187,slow=7.7,SNR=11						
HHC	Hu-ho-hao-te	52.51	354	eP	P	21 03 54.2	+3.1
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,270nm,7.6s						
GTA	Gaotai	53.38	343	⇑P	P	21 03 58.4	+0.8
GTA				pP	pP	21 04 02.2	-3.9
GTA				sP	sP	21 04 05.6	-3.9
GTA				PcP	PcP	21 05 07.2	+2.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MDJ	Mudanjiang	57.05	10	P	P	21 04 23.9	+0.1
MDJ				pmax	pmax		
	comp=Z,38nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,220nm,6.4s						
MDJ	Mudanjiang	57.05	10	P	P	21 04 21.7	-2.0
USRK	Ussuriysk Ar.	57.11	12	P	P	21 04 23.7	-0.5
	comp=Z,8.8nm,0.6s,baz=188,slow=5.7,SNR=13						
USRK	Ussuriysk Ar.	57.11	12	P	P	21 04 23.0	-1.2
ULN	Ulaanbaatar	59.96	352	P	P	21 04 44.0	-0.2
ULN				IAmb	IAmb	21 04 50.3	
	comp=Z,3.1nm,0.8s						
SONM	Songino Array	60.02	351	P	P	21 04 44.2	-0.4
	comp=Z,2.7nm,0.7s,baz=171,slow=8.4,SNR=18						
WMQ	Urumqi	61.50	336	eP	P	21 04 55.6	+0.9
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,110nm,6.1s						
KSH	Kashi	63.87	325	P	P	21 05 10.6	0.0
KSH				pP	pP	21 05 20.7	+1.4
KSH				sP	sP	21 05 24.4	+1.8
KSH				pmax	pmax		
	comp=Z,16nm,0.8s						
SHLS	Shalkode	64.65	330	eP	P	21 05 13.7	-2.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,8.8nm,0.7s,baz=330						
UZB	Uzynbulak	64.86	330	*e*P	P	21 05 17.2	+0.1
	comp=Z,6.5nm,0.7s,baz=330						
KBL	Kabul	64.96	317	P	P	21 05 17.3	-0.7
SATY	Saty	65.10	329	*e*P	P	21 05 18.8	+0.2
	comp=Z,6.2nm,0.7s,baz=329						
ZSN	Zaisan	65.62	336	*e*P	P	21 05 21.7	0.0
	baz=336						
TNSS	Tian-Shan	65.82	329	*e*P	P	21 05 23.9	+0.2
	baz=328						
MDOK	Medeo	65.86	329	*e*P	P	21 05 23.6	0.0
	baz=329						
BOOM	Boomskoye usch	65.96	328	P	P	21 05 22.8	-1.5
AAA	Alma-Ata	65.96	329	*e*P	P	21 05 23.9	-0.2
	comp=Z,13nm,1.0s,baz=328						
MK31	Makanchi Array	66.14	334	P	P	21 05 23.9	-1.3
MK31				IAmb	IAmb	21 05 26.3	
	comp=Z,8.6nm,0.9s						
MKAR	Makanchi Array	66.14	334	P	P	21 05 25.4	+0.3
	comp=Z,10nm,0.8s,baz=149,slow=7.2,SNR=87						
MKAR	Makanchi Array	66.14	334	P	P	21 05 24.2	-0.9
MAKZ	Makanchi	66.29	334	P	P	21 05 24.8	-1.3
MAKZ				IAmb	IAmb	21 05 27.1	
	comp=Z,4.9nm,0.8s						
TKM2	Tokmak 2	66.44	328	P	P	21 05 28.1	+0.7
	SNR=7.2						
TDK	Taldyqorghan	66.53	331	*e*P	P	21 05 27.3	-0.4
	comp=Z,16nm,0.7s,baz=331						
KBK	Karagaybulak	66.60	327	P	P	21 05 29.7	+1.3
	SNR=6.7						
KUU	Kurty	66.74	329	*e*P	P	21 05 28.7	-0.4
	comp=Z,7.5nm,0.7s,baz=329						
AAK	Ala-Archa	66.83	327	P	P	21 05 30.7	+0.9
	SNR=11						
AAK	Ala-Archa	66.83	327	P	P	21 05 27.6	-2.2
AAK				IAmb	IAmb	21 05 31.5	
	comp=Z,8.0nm,0.8s						
AML	Almayashu	66.92	326	P	P	21 05 31.4	+0.8
	SNR=8.0						
BTK	Batken	67.20	323	P	P	21 05 31.4	-0.7
BTK				IAmb	IAmb	21 05 34.6	
	comp=Z,4.3nm,0.8s						
EKS2	Erkin-Say	67.23	326	P	P	21 05 33.2	+0.9
	SNR=9.3						
USP	Ospenovka	67.26	327	P	P	21 05 32.7	+0.3
	SNR=6.9						
SGDS	Sogindy	67.32	328	*e*P	P	21 05 32.3	-0.4
	baz=328						
BTLS	Baital	68.72	328	*e*P	P	21 05 40.7	-0.7
	baz=328						
BRLS	Borolday	69.66	325	*e*P	P	21 05 46.8	-0.6
	baz=324						
SEM	Semipalatinsk	69.82	336	*e*P	P	21 05 47.7	-0.7
	baz=336						
KURK	Kurchatov	70.72	335	P	P	21 05 53.6	0.0
KURK				IAmb	IAmb	21 05 54.8	
	comp=Z,13nm,0.9s						
ZAA0	Zalesovo Array	70.98	340	P	P	21 05 54.3	-0.8
ZALV	Zalesovo Beam	70.98	340	P	P	21 05 54.5	-0.6
	comp=Z,17nm,0.6s,baz=145,slow=4.8,SNR=90						
BRZS	Berezniki	72.81	332	*e*P	P	21 06 06.2	-0.1
	baz=332						
PETK	Petropavlovsk-	73.07	24	P	P	21 06 08.8	+1.1
	comp=Z,3.4nm,0.6s,baz=217,slow=3.5,SNR=12						
GEYT	Alibeck	74.22	315	P	P	21 06 15.1	+0.3
	comp=Z,5.1nm,0.8s,baz=198,slow=8.9,SNR=6.6						
QSPA	South Pole Qui	78.38	180	P	P	21 06 39.6	+1.5
	baz=295,slow=5.9,SNR=2.0						
ABKAR	Akbulak array	78.87	326	P	P	21 06 40.4	-0.4
ABKAR	Akbulak array	78.87	326	P	P	21 06 41.5	+0.7
ABKAR				IAmb	IAmb	21 06 42.5	
	comp=Z,16nm,0.8s						
KMBO	Kilima Mbogo	80.22	271	P	P	21 06 50.0	+0.7
	comp=Z,0.5nm,0.3s,baz=21,slow=22,SNR=2.0						
AKTO	Aktyubinsk	80.55	326	LR	LR	21 49 12.8	
	comp=Z,81nm,19.6s,baz=305,slow=41						
ARU	Arti	83.44	331	LR	LR	21 47 42.5	
	comp=Z,64nm,18.0s,baz=206,slow=38						
NRIK	Noril'sk	83.45	350	P	P	21 07 05.0	+0.2
	comp=Z,4.3nm,0.6s,baz=139,slow=4.2,SNR=7.4						
BOSA	Boshof	86.46	242	P	P	21 07 22.8	+1.7
	comp=Z,1.0nm,0.5s,baz=83,slow=4.1,SNR=5.6						
KBZ	Khabaz	87.10	316	P	P	21 07 24.9	+1.3
	comp=Z,2.2nm,0.9s,baz=208,slow=2.8,SNR=4.0						
VNA2	Neumayer--Watz	89.71	196	P	P	21 07 33.0	-2.5
BRTR	Keskin Array B	92.68	310	P	P	21 07 50.9	+0.8
	comp=Z,2.2nm,0.8s,baz=135,slow=6.2,SNR=15						
MNK	Minsk	99.14	324	*i* P	Pdif	21 08 19.8	+0.9
	comp=E,4.0nm,1.1s						
MNK				*i* P	Pdif	21 08 19.8	+0.9
	comp=N,16nm,1.0s						
MNK				*i* P	Pdif	21 08 19.8	+0.9
	comp=Z,12nm,0.9s,baz=277						
MNK				*i* PP	PP	21 12 23.1	+1.4
MNK				*i* PPP	PPP	21 14 28.7	
MNK				*i* S	SKSac	21 18 60.0	+5.5
MNK				*i* PS	PS	21 21 19.9	+1.5
MNK				*i* SS	SS	21 26 41.8	+5.3
MNK				*i* SSS	SSS	21 30 30.4	
MNK				*i* LR	LR	21 51 12.2	
MNK				*i* LRM	MLR	21 53 46.9	
	comp=E,189nm,23.8s						
MNK				*i* LRM	MLR	21 53 56.4	
	comp=Z,256nm,17.0s						
MNK				*i* LRM	MLR	21 53 57.7	
	comp=N,1µm,22.4s						
FINES	FINESS Array B	100.80	331	P	Pdif	21 08 26.2	+0.1
	comp=N,3.6nm,1.0s,baz=353,slow=27,SNR=2.9						
ARCES	ARCESS Array B	101.51	339	P	Pdif	21 08 28.5	-0.6
	comp=N,2.6nm,0.8s,baz=350,slow=3.7,SNR=5.3						
YKA	Yellowknife Ar	117.19	24	PKP	PKiKP	21 13 23.6	+1.2
	comp=N,0.8nm,0.7s,baz=310,slow=2.1,SNR=5.5						
TORD	Torodi Ar. Bea	117.43	279	PKP	PKiKP	21 13 25.3	+1.0
	comp=N,0.4nm,0.6s,baz=52,slow=0.4,SNR=6.7						
LPAZ	La Paz	151.70	169	PKPbc	PKiKP	21 14 35.8	+1.5
	comp=N,0.9nm,0.6s,baz=131,slow=5.3,SNR=4.5						

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*IDC **06** 21:01:53.8±1.0, 10°.97S×163°.74E, h0^{km}, mb4.2/10, mb1 4.4/12, mb1mx4.0/36, mbtmp4.2/12, ML4.4/2, MS3.9/4, Ms1 3.9/4, ms1mx3.4/30, Error ellipse: s-maj=32.7km s-min=21.0km az=136.0*

*NEIC **06** 21:01:59.4±1.7, 10°.99S±0°.06×163°.8E±0°.1, h34^{km}±4^{km}, mb4.6/13, Error ellipse: s-maj=16.0km s-min=6.4km az=64.0*

ISC 06 21:01:58.0±0.6, **11°.08S**±0°.07×**163°.81E**±0°.08, **h29^{km}, n51,** σ**1^s.49**/47, **mb4.4**/18, **MS3.9**/4, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.14	293	Pn	Pn	21 02 59.5	+0.2
	140nm,0.3s,baz=79,slow=0.3,SNR=37						
HNR				Sn	Sn	21 03 46.5	-0.2
	baz=183,slow=10,SNR=1.5						
HNR				LR	LR	21 04 46.0	
	comp=Z,3µm,18.1s,baz=131,slow=43						
HNR	Honiara	4.14	293	Pn	Pn	21 02 59.5	+0.2
HNR				Sn	Sn	21 03 45.7	-1.0
SANVU	Saraoutou	5.46	143	Pn	Pn	21 03 18.3	+0.9
DZM	Mont Dzumac	11.22	167	*e*Pn	Pn	21 04 39.7	+3.2
	67nm,1.4s						
DZM				*e*Sn	Sn	21 06 36.5	-4.6
	21nm,1.4s						
DZM				*e*LR	LR	21 07 15.0	
	comp=Z,363nm,25.2s						
DZM	Mont Dzumac	11.22	167	Pn	Pn	21 04 39.1	+2.6
	1.7nm,0.3s,baz=24,slow=9.1,SNR=28						
DZM				Sn	Sn	21 06 41.7	+0.6
DZM	Mont Dzumac	11.22	167		Pn	21 04 39.2	+2.7
ONTNC	Ouen Toro	11.45	168		Pn	21 04 40.5	+0.8
OUENC	Ouen Island, N	11.64	166		Pn	21 04 44.3	+2.0
MSVF	Nonsavu	15.29	117	LR	LR	21 10 21.0	
	comp=Z,344nm,19.4s,baz=329,slow=33						
EIDS	Eidsvold	18.63	219	P	P	21 06 13.3	-0.1
CTA	Charters Tower	19.12	240	P	Pn	21 06 19.9	+0.1
	0.9nm,0.3s,baz=63,slow=15,SNR=6.0						
CTAO	Charters Tower	19.12	240	P	Pn	21 06 21.2	+1.4
COEN	Coen	20.34	260	P	Pn	21 06 34.8	+0.4
COEN				IAmb	IAmb	21 06 45.5	
	comp=Z,34nm,1.3s						
ARMA	Armidale	22.32	209	P	P	21 06 54.8	+1.2
ARMA				IAmb	IAmb	21 06 59.5	
	comp=Z,27nm,1.4s						
WRA	Warramunga Arr	29.69	249	P	P	21 08 01.5	-0.2
	comp=Z,4.3nm,0.5s,baz=79,slow=9.1,SNR=10						
WRA				LR	LR	21 19 33.7	
	comp=Z,260nm,20.5s,baz=70,slow=36						
WRA	Warramunga Arr	29.69	249	P	P	21 08 01.1	-0.5
H11N1	WAKE ISLAND Hy	30.75	6	T	T	21 40 09.6	
	baz=182,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.76	6	T	T	21 40 10.5	
	baz=182,slow=76,SNR=8.7						
H11N2	WAKE ISLAND Hy	30.77	6	T	T	21 40 03.0	
	baz=182,slow=76,SNR=13						
ASAR	Alice Springs	31.08	242	P	P	21 08 12.3	-1.6
	comp=Z,1.9nm,0.6s,baz=60,slow=10,SNR=4.7						
ASAR				LR	LR	21 20 05.9	
	comp=Z,132nm,18.4s,baz=75,slow=35						
ASAR	Alice Springs	31.08	242	P	P	21 08 14.4	+0.4
FITZ	Fitzroy Crossi	37.53	255	P	P	21 09 09.2	-0.6
	comp=Z,5.1nm,0.6s,baz=90,slow=8.7						
SANI	Sanana	38.58	281	P	P	21 09 28.3	+10
SOEI	Soe	38.89	268	P	P	21 09 19.4	-2.0
SOEI				IAmb	IAmb	21 09 20.3	
	comp=Z,22nm,1.4s						
PPT2	Papeete2	45.54	104	*e*LR	LR	21 23 03.4	
	comp=Z,150nm,22.2s						
TAOE	Nuku Hiva Isla	55.18	93	*e*LR	LR	21 27 24.7	
	comp=Z,137nm,28.6s						
KSRS	Korea Array	58.85	327	P	P	21 11 56.4	+2.3
	comp=Z,1.1nm,0.8s,baz=144,slow=7.5,SNR=4.1						
USRK	Ussuriysk Ar.	62.14	335	P	P	21 12 20.1	+3.7
	comp=Z,3.2nm,0.8s,baz=153,slow=7.3,SNR=4.3						
USRK	Ussuriysk Ar.	62.14	335	P	P	21 12 17.2	+0.7
KLR	Kul'dur	66.35	338	P	P	21 12 43.8	-0.1
	comp=Z,2.9nm,0.9s,baz=28,slow=6.3,SNR=5.2						
CMAR	Chiang Mai Arr	70.39	294	P	P	21 13 09.8	-0.1
	comp=Z,0.7nm,0.9s,baz=119,slow=4.9,SNR=4.9						
CMAR	Chiang Mai Arr	70.39	294	P	P	21 13 10.6	+0.7
ULN	Ulaanbaatar	77.22	325	P	P	21 13 49.5	-0.1
ULN				IAmb	IAmb	21 13 54.8	
	comp=Z,4.3nm,0.8s						
SONM	Songino Array	77.58	324	P	P	21 13 51.5	0.0
	comp=Z,0.3nm,0.4s,baz=315,slow=25,SNR=4.6						
BILL	Bilibino	78.93	1	P	P	21 13 58.2	-0.1
BILL				IAmb	IAmb	21 14 02.7	
	comp=Z,17nm,1.4s						
NVAR	Mina Array Bea	87.51	50	P	P	21 14 43.2	-0.4
	comp=Z,1.2nm,0.7s,baz=232,slow=7.6,SNR=7.1						
NVAR	Mina Array Bea	87.51	50	P	P	21 14 43.5	0.0
J08A	Circle Bar Ran	88.76	45	P	P	21 14 49.4	+0.1
PRN	Pahroc Range	89.72	52	P	P	21 14 54.1	+0.1
SPR3	Spring Creek 3	90.66	50	P	P	21 14 56.2	-2.4
SPR3				IAmb	IAmb	21 14 59.3	
	comp=Z,3.8nm,1.0s						
HLID	Hailey	91.67	46	P	P	21 15 01.7	-1.3
HLID				IAmb	IAmb	21 15 08.5	
	comp=Z,3.8nm,1.2s						
MKAR	Makanchi Array	92.25	317	P	P	21 15 05.7	+0.4
	comp=Z,1.0nm,0.7s,baz=92,slow=6.9,SNR=9.2						
ZALV	Zalesovo Beam	92.47	324	P	P	21 15 05.6	-0.6
	comp=Z,0.4nm,0.4s,baz=55,slow=27,SNR=3.4						
ZALV	Zalesovo Beam	92.47	324	P	P	21 15 06.2	0.0
PDAR	Pinedale Array	94.98	48	P	P	21 15 17.9	-0.4
	comp=Z,0.2nm,0.6s,baz=242,slow=1.9,SNR=2.8						
KEST	Kesra	146.27	321	PKPbc	PKPbc	21 21 36.3	-0.1
	comp=Z,6.1nm,1.0s,baz=178,slow=3.6,SNR=4.8						
KEST	Kesra	146.27	321		PKPdf	21 21 34.8	-0.5
ESDC	Sonseca Array	149.52	341	PKPbc	PKiKP	21 21 45.2	-0.9
	comp=Z,0.6nm,0.8s,baz=11,slow=1.3,SNR=1.4						
TORD	Torodi Ar. Bea	162.39	279	PKP	PKPdf	21 21 57.8	-0.2
	comp=Z,0.2nm,0.8s,baz=264,slow=1.9,SNR=1.4						
TORD	Torodi Ar. Bea	162.39	279		PKPdf	21 21 55.8	-2.2
DBIC	Dimbokro	167.97	250	PKP	PKPdf	21 22 02.9	+0.2
	comp=Z,3.1nm,1.0s,baz=184,slow=15,SNR=2.2						

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*MOS **06** 21:33:48.3±1.1, 47°.74N×154°.34E, h44^{km}, mb4.6/12, MS3.5/4, Error ellipse: s-maj=7.2km s-min=4.0km az=73.8*

*SKHL **06** 21:33:49.6±0.2, 47°.60N×154°.60E, h55^{km}±4^{km}, mb5.5/15, msh5.5/3*

*NIED **06** 21:33:49.1, 47°.43N×154°.58E, h30^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-3.32; M$_{\theta\theta}$5.53; M$_{\phi\phi}$-2.21; M$_{r\theta}$2.51; M$_{\theta\phi}$-0.40; M$_{\phi r}$2.47; Fault plane solution: M$_0$5.97000×10^{15} NP1: ϕ_s242.00000°, δ68.00000°, λ-126.00000°. NP2: ϕ_s125.00000°, δ42.00000°, λ-34.00000°.*

*NEIC **06** 21:33:51.4±1.0, 47°.75N±0°.09×154°.2E±0°.1, h53^{km}±6^{km}, mb4.8/237 Error ellipse: s-maj=15.3km s-min=9.2km az=133.0*

*IDC **06** 21:33:52.1±2.4, 47°.78N×154°.24E, h62^{km}±20^{km}, mb4.0/34, mb1 4.2/40, mb1mx4.1/59, mbtmp4.3/40, MS3.7/21, Ms1 3.8/21, ms1mx3.6/43, Error ellipse: s-maj=12.1km s-min=9.7km az=135.0*

ISC 06 21:33:49.2±0.4, **47°.59N**±0°.05×**154°.42E**±0°.05, **h40^{km}**±4^{km}, **n590,** σ**1^s.44**/536, **mb4.8**/206, **MS4.0**/18, **30C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.29	19	*e*PN	Pn	21 34 37.8	-0.4
SKR				*e*S	Sn	21 35 12.6	-3.5
SKR				pmax	pmax		
	comp=Z,492nm,0.7s						
SKR				smax	smax		
	comp=N,483nm,0.4s						
SKR				smax	smax		
	comp=E,738nm,0.4s						
SKR	Severo-Kuril's	3.29	19	*e*P	Pn	21 34 37.4	-0.8
SKR				AMB	AMB	21 34 43.2	
	comp=E,690nm,0.7s						
SKR				*e*S	Sn	21 35 13.4	-2.7
SKR				A	A	21 35 19.5	
	comp=E,1µm,0.6s						
SKR				A	A	21 35 19.5	
	comp=E,1µm,0.6s						
PAU	Pauzhetka	4.19	21	PN	Pn	21 34 49.5	-0.9
PAU				S	Sn	21 35 35.2	-2.8
PAU	Pauzhetka	4.19	21	*e*P	Pn	21 34 50.4	0.0
PAU				AMB	AMB	21 34 55.5	
	comp=E,380nm,0.4s						
PAU				*e*S	Sn	21 35 35.9	-2.1
PAU				A	A	21 35 39.3	
	comp=E,650nm,0.4s						
PAU				A	A	21 35 39.3	
	comp=E,660nm,0.4s						
KDTR	Khodutka, Kamc	4.85	28	PN	Pn	21 34 57.6	-1.9
MIPR	Malaya Ipel'ka	4.93	17	PN	Pn	21 35 00.4	-0.3
KUR	Kuril'sk	5.10	245	*c i*PN	Pn	21 35 06.5	+3.5
KUR				*i* S	Sn	21 36 04.4	+3.8
KUR				pmax	pmax		
	comp=Z,643nm,0.6s						
KUR				pmax	pmax		
	comp=N,88nm,0.3s						
KUR				pmax	pmax		
	comp=E,72nm,0.3s						
KUR				smax	smax		
	comp=N,467nm,0.7s						
KUR				smax	smax		
	comp=E,273nm,0.6s						
KUR	Kuril'sk	5.10	245	*i* P	Pn	21 35 06.5	+3.5
KUR				AMB	AMB	21 35 07.0	
	comp=E,640nm,0.4s						
KUR				*i* S	Sn	21 36 03.6	+3.0
KUR				A	A	21 36 08.1	
	comp=E,2µm,2.0s						
KUR				A	A	21 36 08.1	
	comp=E,2µm,2.0s						
KUR				A	A	21 36 11.0	
	comp=E,480nm,0.6s						
KUR				A	A	21 36 11.0	
	comp=E,270nm,0.6s						
ASAK	Asacha	5.30	24	PN	Pn	21 35 05.1	-0.7
MTVR	Mutnovka	5.47	25	PN	Pn	21 35 07.5	-0.7
RUS	Russkaya	5.52	27	PN	Pn	21 35 06.6	-2.2
APC	Apacha	5.63	17	PN	Pn	21 35 11.5	+1.3
PEA0B	Petropavlovsk-	5.91	20	*ce*PN	Pn	21 35 13.8	-0.3
PEA0B	Petropavlovsk-	5.91	20	Pn	Pn	21 35 14.6	+0.5
PETK	Petropavlovsk-	5.91	20	P	Pn	21 35 13.9	-0.3
	comp=E,8.6nm,0.3s,baz=182,slow=15,SNR=110						
PETK				S	Sn	21 36 25.6	+5.0
	baz=269,slow=15,SNR=0.8						
PETK				LR	LR	21 37 42.7	
	comp=E,640nm,19.9s,baz=195,slow=40						
PETK	Petropavlovsk-	5.91	20	PN	Pn	21 35 14.2	0.0
PETK						21 36 19.9	
PETK	Petropavlovsk-	5.91	20	Pn	Pn	21 35 14.2	0.0
PETK					Sn	21 36 19.9	-0.7
PET	Petropavlovsk	6.08	25	*e*PN	Pn	21 35 14.1	-2.3
PET				pmax	pmax		
	comp=Z,172nm,0.6s						
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
PET	Petropavlovsk	6.08	25	*e*P	Pn	21 35 16.8	+0.4
PET				AMB	AMB	21 35 19.7	
	comp=Z,160nm,0.6s						
PET				*e*S	Sn	21 36 20.7	-4.0
PET	Petropavlovsk	6.08	25		Pn	21 35 17.1	+0.7
DALK	Dalny	6.12	25	PN	Pn	21 35 15.1	-1.8
KOK	Koryaka	6.32	24	PN	Pn	21 35 20.4	+0.7
AVH	Avacha	6.32	24	PN	Pn	21 35 19.9	+0.1
SDLR	Sedlovina	6.37	25	PN	Pn	21 35 19.3	-1.2
SPN	Mys Shipunski	6.58	31	PN	Pn	21 35 21.3	-2.0
YUK	Yuzh-Kuril'sk	6.95	242	*i* PN	Pn	21 35 29.4	+1.0
YUK	Yuzh-Kuril'sk	6.95	242	*e*P	Pn	21 35 31.5	+3.1
YUK				AMB	AMB	21 35 33.4	
	comp=Z,230nm,0.3s						
NEM2	Nemuro 2	7.41	238	P	Pn	21 35 34.3	-0.4
NEM2				*e*S	Sn	21 36 52.4	-5.1
JNK	Nakash	7.89	243	P	Pn	21 35 42.6	+1.3
YSS	Yuzh-Sakhalins	7.96	270	*e*PN	Pn	21 35 46.0	+3.8
YSS				*e*S	Sn	21 37 14.3	+3.4
YSS				pmax	pmax		
	comp=Z,140nm,0.9s						
YSS				smax	smax		
	comp=N,40nm,0.5s						
YSS				smax	smax		
	comp=E,50nm,0.6s						
YSS				MLR	MLR		
	comp=Z,1µm,13.0s						
YSS				pmax	pmax		
	comp=N,10.0nm,0.4s						
YSS	Yuzh-Sakhalins	7.96	270	*e*P	Pn	21 35 46.0	+3.8
YSS				AMB	AMB	21 35 47.0	
	comp=N,140nm,0.9s						
YSS				*e*S	Sn	21 37 13.0	+2.1
YSS				A	A	21 37 15.0	
	comp=N,40nm,0.5s						
YSS				A	A	21 37 15.0	
	comp=N,50nm,0.5s						
YSS				AMS	AMS	21 38 30.0	
	comp=N,1µm,13.0s						
YSS	Yuzh-Sakhalins	7.96	270	Pn	Pn	21 35 45.3	+3.1
JTKR	Abashiri--Toko	8.19	248	P	Pn	21 35 48.0	+2.7
JAK	Akkeshi	8.24	240	P	Pn	21 35 45.6	-0.5
JAK				*e*S	Sn	21 37 11.4	-6.5
UGL	Uglegorsk	8.37	285	*e*PN	Pn	21 35 51.8	+4.1
UGL				pmax	pmax		
	comp=Z,200nm,0.6s						
UGL	Uglegorsk	8.37	285	*e*P	Pn	21 35 50.8	+3.1
UGL				AMB	AMB	21 35 57.0	
	comp=Z,200nm,0.6s						
UGL				*e*S	Sn	21 37 22.0	+1.2
UGL				A	A	21 37 27.0	
	comp=Z,1µm,3.0s						
UGL				A	A	21 37 27.0	
	comp=Z,1µm,3.0s						
UGL				A	A	21 37 36.0	
	comp=Z,140nm,1.0s						
UGL				A	A	21 37 36.0	
	comp=Z,130nm,1.0s						
TYV	Tymovskoe	8.37	297	*e*PN	Pn	21 35 51.4	+3.6
TYV				*e*S	Sn	21 37 23.1	+2.2
TYV				pmax	pmax		
	comp=Z,60nm,0.5s						
TYV				pmax	pmax		
	comp=Z,500nm,2.9s						
TYV				smax	smax		
	comp=E,25nm,0.9s						
TYV				smax	smax		
	comp=N,500nm,3.4s						
TYV				smax	smax		
	comp=E,800nm,3.4s						
TYV	Tymovskoe	8.37	297	*e*P	Pn	21 35 51.0	+3.2
TYV				AMB	AMB	21 35 51.9	
	comp=E,60nm,0.5s						
TYV				AMB	AMB	21 35 53.0	
	comp=E,500nm,3.0s						
TYV				*e*S	Sn	21 37 22.0	+1.1
TYV				A	A	21 37 25.2	
	comp=E,20nm,0.5s						
TYV				A	A	21 37 25.2	
	comp=E,20nm,0.5s						
TYV				A	A	21 37 26.0	
	comp=E,500nm,3.0s						
TYV				A	A	21 37 26.0	
	comp=E,800nm,3.0s						
JMP	Maruseppu	8.51	249	P	Pn	21 35 54.0	+4.2
JAR	Ashorobuto	8.62	244	P	Pn	21 35 52.9	+1.6
JOB	Onbets	8.81	242	P	Pn	21 35 54.3	+0.4
JWK2	Keihoku	8.94	260	P	Pn	21 36 02.0	+6.4
JKA	Kamikawa-asahi	8.95	252	*e*P	Pn	21 35 59.4	+3.7
JKA	Kamikawa-asahi	8.95	252	Pn	Pn	21 35 59.1	+3.3
ASAJ	Asahikawa	8.95	252	P	Pn	21 35 59.4	+3.6
	comp=E,2.1nm,0.3s,baz=95,slow=13,SNR=18						
ASAJ				LR	LR	21 39 03.9	
	comp=E,530nm,21.1s,baz=60,slow=35						
JKK2	Kamakawa 2	8.96	250	P	Pn	21 35 59.3	+3.3
JCH	Churui	9.26	242	P	Pn	21 35 59.9	-0.1
JCH				*e*S	Sn	21 37 36.3	-6.6
ERM	Erimo	9.75	239	*i* PN	Pn	21 36 06.8	+0.1
ERM	Erimo	9.75	239	Pn	Pn	21 36 07.9	+1.2
JNBK	Urakawa-nobuka	9.82	242	P	Pn	21 36 06.7	-1.0
JNBK				*e*S	Sn	21 37 48.5	-8.1
NKL	Nikolayevsk	10.39	308	*e*P	Pn	21 36 17.7	+2.3
NKL				AMB	AMB	21 36 19.2	
	comp=E,230nm,0.8s						
JNB	Noboribetsu	10.76	247	P	Pn	21 36 21.1	+0.6
JANG	Nango	11.75	237	P	Pn	21 36 30.5	-3.7
JTH	Tanohata	11.86	234	*e*S	Sn	21 38 33.6	-13
GRNR	Gornyy	12.20	292	⇓*i*PN	Pn	21 36 44.3	+4.1
GRNR				pmax	pmax		
	comp=E,10.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,250nm,18.0s						
GRNR				MLR	MLR		
	comp=N,110nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,420nm,20.0s						
GRNR	Gornyy	12.20	292	*e*P	Pn	21 36 44.3	+4.1
GRNR				AMB	AMB	21 36 45.0	
	comp=Z,10.0nm,0.7s						
GRNR				AMS	AMS	21 41 28.0	
	comp=Z,100nm,17.0s						
GRNR				AMS	AMS	21 41 28.0	
	comp=Z,300nm,17.0s						
GRNR				AMS	AMS	21 41 28.0	
	comp=Z,400nm,17.0s						
MA2	Magadan	12.20	351	*ce*PN	Pn	21 36 40.0	-0.2
MA2				pmax	pmax		
	comp=Z,16nm,0.6s						
MA2	Magadan	12.20	351	*e*P	Pn	21 36 40.0	-0.2
MA2	Magadan	12.20	351	Pn	Pn	21 36 40.2	0.0
JRG	Rokugo	12.91	236	P	Pn	21 36 47.5	-2.5
JRG				*e*S	Sn	21 39 02.4	-10
KLR	Kul'dur	15.13	285	P	Pn	21 37 21.6	+1.7
	comp=Z,0.5nm,0.3s,baz=77,slow=10,SNR=11						
KLR				LR	LR	21 43 13.4	
	comp=Z,331nm,20.0s,baz=90,slow=38						
KLR	Kul'dur	15.13	285	*i* P	Pn	21 37 19.3	-0.7
KLR				pmax	pmax		
	comp=Z,19nm,1.1s						
KLR	Kul'dur	15.13	285	*e*P	Pn	21 37 19.3	-0.7
SEY	Seymchan	15.43	356	P	Pn	21 37 24.9	+1.2
	comp=Z,0.7nm,0.3s,baz=179,slow=14,SNR=9.6						
SEY				LR	LR	21 43 28.4	
	comp=Z,227nm,20.7s,baz=158,slow=38						
USRK	Ussuriysk Ar.	15.97	266	P	Pn	21 37 31.6	+0.9
	baz=64,slow=13,SNR=13						
USRK				LR	LR	21 43 42.7	
	comp=Z,233nm,18.7s,baz=59,slow=37						
USRK	Ussuriysk Ar.	15.97	266	Pn	Pn	21 37 29.8	-1.0
MAJO	Matsushiro	16.29	233	P	Pn	21 37 34.0	-1.0
MAJO				pmax	pmax		
	comp=Z,20nm,0.9s						
MAJO	Matsushiro	16.29	233	Pn	Pn	21 37 34.0	-1.0
MAT	Matsushiro	16.29	233	P	Pn	21 37 33.2	-1.8
MAT				*e*S	Sn	21 40 33.4	-1.2
MJAR	Matsushiro Arr	16.29	233	P	Pn	21 37 33.9	-1.1
	comp=Z,0.1nm,0.3s,baz=28,slow=12,SNR=7.7						
MJAR				LR	LR	21 44 22.0	

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         comp=Z,162nm,19.8s,baz=40,slow=39
JHJ   Hachijo jima 2   18.21 223   LR     LR      21 45 07.1
         comp=Z,67nm,19.6s,baz=44,slow=37
ZEA   Zeya             18.22 300  eP      Pn      21 38 01.6 +2.9
ZEA                                pmax   pmax
         comp=E,10.0nm,0.6s
ZEA                                pmax   pmax
         comp=Z,10.0nm,1.0s
ZEA                                MLR    MLR
         comp=Z,200nm,16.0s
ZEA   Zeya             18.22 300  eP      Pn      21 37 59.8 +1.1
ZEA                                AMB    AMB     21 38 04.3
         comp=Z,10.0nm,1.0s
YAK   Yakutsk          20.12 325   P      P       21 38 18.6 -0.8
         comp=Z,0.0nm,0.3s,baz=95,slow=4.2,SNR=1.3
YAK                                LR     LR      21 45 34.0
         comp=Z,132nm,21.6s,baz=87,slow=35
YAK   Yakutsk          20.12 325  eP      Pn      21 38 23.3 +1.9
YAK                               eS      Sn      21 42 04.3 -2.3
YAK                                pmax   pmax
         comp=Z,24nm,0.8s
YAK                                pmax   pmax
         comp=N,8.0nm,1.4s
YAK                                pmax   pmax
         comp=E,8.0nm,1.1s
YAK                                smax   smax
         comp=N,117nm,2.8s
YAK                                smax   smax
         comp=E,74nm,2.7s
YAK   Yakutsk          20.12 325   P      P       21 38 16.5 -2.8
CN2   Changchun        20.53 270  eP      P       21 38 21.5 -2.4
CN2                                pmax   pmax
         comp=Z,10.0nm,0.7s
BILL  Bilibino         21.38  12  eP      P       21 38 32.9  0.0
BILL                              e               21 38 54.2
BILL                               pmax   pmax
         comp=Z,11nm,1.1s
BILL                               MLR    MLR
         comp=Z,112nm,15.0s
BILL  Bilibino         21.38  12  eP      P       21 38 32.9  0.0
BILL  Bilibino         21.38  12   P      P       21 38 29.8 -3.1
KSRS  Korea Array      21.90 252   P      P       21 38 39.9 +1.2
         comp=Z,10nm,0.9s,baz=58,slow=9.7,SNR=18
KSRS                               PcP    PcP     21 42 37.1 +0.4
         comp=Z,1.1nm,0.5s,baz=11,slow=1.3,SNR=5.3
KSRS                               LR     LR      21 45 50.3
         comp=Z,151nm,20.9s,baz=44,slow=33
KS19  Wonju Array Si   21.91 252   P      P       21 38 36.2 -2.6
KSAR  Wonju Array Be   21.93 252   P      P       21 38 37.9 -1.1
KSAR  Wonju Array Be   21.93 252   P      P       21 38 37.9 -1.1
JCJ   Chichijima       22.59 209   LR     LR      21 46 10.0
         comp=Z,80nm,19.8s,baz=46,slow=32
TJN   Taejon           22.90 251ceP       P       21 38 50.6 +1.2
TIXI  Tiksi            26.93 342   P      P       21 39 23.9 -2.3
         comp=Z,0.6nm,0.3s,baz=141,slow=4.2,SNR=5.9
TIXI                               PcP    PcP     21 42 46.8 -0.3
         comp=Z,0.8nm,0.5s,baz=106,slow=1.7,SNR=4.1
TIXI                               LR     LR      21 50 30.7
         comp=Z,147nm,19.3s,baz=189,slow=37
TIXI  Tiksi            26.93 342ceP       P       21 39 24.8 -1.4
TIXI                               pmax   pmax
         comp=Z,22nm,3.9s
TIXI  Tiksi            26.93 342   P      P       21 39 23.7 -2.5
H11N2 WAKE ISLAND Hy   29.58 156   T      T       22 11 28.3
         baz=343,slow=76,SNR=1090
H11N1 WAKE ISLAND Hy   29.60 156   T      T       22 11 30.4
         baz=343,slow=76,SNR=2195
H11N3 WAKE ISLAND Hy   29.60 156   T      T       22 11 32.7
         baz=343,slow=76,SNR=730
H11S1 WAKE ISLAND Hy   30.70 157   T      T       22 12 56.6
         baz=344,slow=76,SNR=5872
H11S3 WAKE ISLAND Hy   30.70 157   T      T       22 12 45.8
         baz=344,slow=76,SNR=4769
H11S2 WAKE ISLAND Hy   30.71 157   T      T       22 12 54.8
         baz=344,slow=76,SNR=4020
NJ2   Nanjing          31.09 253  eP      P       21 40 05.8 +2.2
NJ2                                pmax   pmax
         comp=Z,12nm,0.5s
HHC   Hu-ho-hao-te     31.12 274  eP      P       21 40 06.4 +2.5
HHC                                pmax   pmax
         comp=Z,10.0nm,0.8s
HHC                                pmax   pmax
         comp=Z,230nm,5.7s
TTA   Tatalina         31.20  42   P      P       21 40 05.0 +0.6
TTA                                pmax   pmax
         comp=Z,5.0nm,0.7s
TTA   Tatalina         31.20  42   P      P       21 40 05.0 +0.6
TTA   Tatalina         31.20  42   P      P       21 40 04.8 +0.5
         baz=264
SONM  Songino Array    31.90 289   P      P       21 40 08.5 -2.3
         comp=Z,0.8nm,0.7s,baz=72,slow=8.3,SNR=3.6
SONM                               PcP    PcP     21 42 59.9 -0.5
         comp=Z,0.9nm,0.8s,baz=326,slow=0.5,SNR=3.6
SONM                               LR     LR      21 53 37.2
         comp=Z,164nm,20.8s,baz=93,slow=37
SONM  Songino Array    31.90 289   P      P       21 40 09.4 -1.3
SONM                               pmax   pmax
         comp=Z,3.0nm,1.3s
SONM  Songino Array    31.90 289   P      P       21 40 09.4 -1.3
K20K  Telida           32.12  42   P      P       21 40 13.0 +0.7
         baz=266
J20K  Nowinta River    32.17  40   P      P       21 40 13.3 +0.6
J20K  Nowinta River    32.17  40   P      P       21 40 13.5 +0.8
         baz=264
IMAR  Indian Mountai   32.57  37   P      P       21 40 16.7 +0.6
A21K  Barrow           32.86  27   P      P       21 40 19.5 +0.8
H21K  Melozitna Rive   32.91  37   P      P       21 40 19.9 +0.7
H21K  Melozitna Rive   32.91  37   P      P       21 40 19.9 +0.7
         baz=263
PPLA  Purkeypile       32.95  43   P      P       21 40 21.0 +1.3
         baz=268
KTH   Kantishna Hill   33.55  41   P      P       21 40 25.6 +0.7
MLY   Manley           33.71  39   P      P       21 40 27.0 +0.8
MLY   Manley           33.71  39   P      P       21 40 27.0 +0.8
         baz=266,SNR=7.5
TRF   Thorofare Moun   33.83  42   P      P       21 40 27.9 +0.5
TRF   Thorofare Moun   33.83  42   P      P       21 40 28.0 +0.6
         baz=269
COLD  Coldfoot         34.14  35   P      P       21 40 30.4 +0.5
COLD  Coldfoot         34.14  35   P      P       21 40 30.6 +0.8
         baz=263,SNR=6.2
BWN   Browne           34.21  40   P      P       21 40 32.2 +1.7
PMR   Palmer           34.38  45   P      P       21 40 32.0  0.0
         baz=273
NEA2  Nenana           34.40  40   P      P       21 40 32.6 +0.5
NEA2                               IAmb   IAmb    21 40 34.0
         comp=Z,12nm,0.6s
NEA2  Nenana           34.40  40   P      P       21 40 32.8 +0.7
         baz=268,SNR=13
MCK   McKinley         34.44  41   P      P       21 40 32.6 +0.1
MCK                                pmax   pmax
         comp=Z,22nm,1.2s
MCK   McKinley         34.44  41   P      P       21 40 32.5 +0.1
MCK                                IAmb   IAmb    21 40 34.7
         comp=Z,22nm,1.2s
MCK   McKinley         34.44  41   P      P       21 40 32.8 +0.3
         baz=270,SNR=8.4
RND   Reindeer         34.47  42   P      P       21 40 32.8 -0.1
RND                                pmax   pmax
         comp=Z,14nm,0.9s
RND   Reindeer         34.47  42   P      P       21 40 32.8 -0.1
RND                                IAmb   IAmb    21 40 33.6
         comp=Z,14nm,0.9s
TOLK  Toolik Lake Re   34.56  32   P      P       21 40 33.5 -0.1
TOLK                               IAmb   IAmb    21 40 35.8
         comp=Z,11nm,1.0s
TOLK  Toolik Lake Re   34.56  32   P      P       21 40 34.2 +0.6
         baz=262,SNR=6.1
WAT1  Susitna Watana   34.61  43   P      P       21 40 33.4 -0.7
         baz=271
KNK   Knik Glacier     34.71  45   P      P       21 40 35.0 +0.1
KNK                                IAmb   IAmb    21 40 35.8
         comp=Z,17nm,0.8s
KNK   Knik Glacier     34.71  45   P      P       21 40 35.2 +0.3
         baz=273
SML   Sawmill          34.75  44   P      P       21 40 35.7 +0.4
SML   Sawmill          34.75  44   P      P       21 40 35.5 +0.2
         baz=273,SNR=7.1
MDM   Murphy Dome      34.77  39   P      P       21 40 35.8 +0.4
MDM                                IAmb   IAmb    21 40 37.0
         comp=Z,12nm,0.8s
WRH   Wood River Hil   34.82  40   P      P       21 40 36.0 +0.2
TCOL  CIGO, UAF Yank   34.92  39   P      P       21 40 37.5 +0.8
TCOL  CIGO, UAF Yank   34.92  39   P      P       21 40 37.6 +1.0
         baz=269
COLA  College          34.93  39  i P     P       21 40 37.3 +0.6
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COLA                               pmax   pmax
         comp=Z,21nm,1.0s
COLA  College          34.93  39   P      P       21 40 37.3 +0.6
CCB   Clear Creek Bu   34.94  39   P      P       21 40 37.3 +0.5
CCB                                IAmb   IAmb    21 40 38.1
         comp=Z,16nm,1.2s
H24K  Noodor Dome      34.95  37   P      P       21 40 37.7 +0.7
H24K                               IAmb   IAmb    21 40 49.4
         comp=Z,22nm,1.5s
H24K  Noodor Dome      34.95  37   P      P       21 40 38.0 +1.0
         baz=268,SNR=5.3
WAT6  Susitna Watana   34.99  43   P      P       21 40 37.7 +0.2
         baz=272
POKR  Poker Plat Res   35.11  39   P      P       21 40 39.1 +0.8
POKR  Poker Plat Res   35.11  39   P      P       21 40 39.5 +1.3
         baz=269,SNR=7.8
DHY   Denali Highway   35.15  42   P      P       21 40 39.4 +0.6
DHY                                IAmb   IAmb    21 40 39.6
         comp=Z,16nm,1.0s
DHY   Denali Highway   35.15  42   P      P       21 40 39.0 +0.2
         baz=272
HDA   Harding Lake     35.31  40   P      P       21 40 40.8 +0.7
HDA                                IAmb   IAmb    21 40 40.9
         comp=Z,9.9nm,0.6s
HDA   Harding Lake     35.31  40   P      P       21 40 40.0  0.0
         baz=270,SNR=7.8
IL31                   35.34  39   P      P       21 40 40.6 +0.4
IL31                               IAmb   IAmb    21 40 41.9
         comp=Z,12nm,1.1s
ILAR  Eielson Array    35.34  39   P      P       21 40 40.1 -0.1
         comp=Z,4.0nm,0.8s,baz=251,slow=7.0,SNR=45
ILAR  Eielson Array    35.34  39   P      P       21 40 40.0 -0.2
PAX   Paxson           36.02  42   P      P       21 40 47.3 +1.1
PAX                                pmax   pmax
         comp=Z,10.0nm,1.2s
PAX   Paxson           36.02  42   P      P       21 40 47.3 +1.1
PAX   Paxson           36.02  42   P      P       21 40 46.8 +0.6
         baz=274
HARP  HAARP            36.20  43   P      P       21 40 48.7 +1.0
         baz=275
RIDG  Independent Ri   36.26  41   P      P       21 40 47.5 -0.6
RIDG                               IAmb   IAmb    21 40 49.3
         comp=Z,22nm,1.1s
RIDG  Independent Ri   36.26  41   P      P       21 40 48.4 +0.2
         baz=273,SNR=6.1
BMAR  Burnt Mountain   36.33  35   P      P       21 40 49.6 +0.9
XAN   Xi'an            36.47 265   P      P       21 40 50.0 -0.3
XAN                                pP     pP      21 40 54.6 -6.4
XAN                                pmax   pmax
         comp=Z,5.0nm,0.8s
BMRM  Bremner River    36.61  46   P      P       21 40 52.1 +0.9
DOT   Dot Lake         36.61  41   P      P       21 40 50.5 -0.7
DOT                                IAmb   IAmb    21 40 51.5
         comp=Z,12nm,0.8s
SCRK  Sand Creek       36.62  41   P      P       21 40 50.9 -0.5
SCRK  Sand Creek       36.62  41   P      P       21 40 51.1 -0.3
         baz=274,SNR=5.2
J26L  Joseph Creek     36.78  40   P      P       21 40 52.8 +0.1
         baz=273
MENT  Mentasta         36.82  42   P      P       21 40 54.1 +1.2
MENT                               IAmb   IAmb    21 41 02.9
         comp=Z,13nm,1.2s
L26K  Log Cabin Wild   36.98  42   P      P       21 40 55.2 +0.9
L26K                               IAmb   IAmb    21 40 56.4
         comp=Z,7.1nm,0.7s
L26K  Log Cabin Wild   36.98  42   P      P       21 40 55.5 +1.1
         baz=276,SNR=6.3
M26K  Nabesna, AK      37.20  43   P      P       21 40 57.2 +1.0
M26K  Nabesna, AK      37.20  43   P      P       21 40 57.9 +1.6
         baz=277,SNR=12
CRQM  Cirque           37.35  46   P      P       21 40 58.1 +0.4
CRQE  Cirque           37.37  46   P      P       21 40 59.0 +1.2
         baz=279
L27K  Beaver Creek,    37.66  42   P      P       21 41 00.9 +0.7
L27K  Beaver Creek,    37.66  42   P      P       21 41 01.6 +1.5
         baz=277
BCAR  Beaver Creek A   37.68  42   P      P       21 41 01.4 +1.1
M27K  Edge Creek, AK   37.73  43   P      P       21 41 01.5 +0.7
M27K                               IAmb   IAmb    21 41 03.6
         comp=Z,13nm,1.0s
M27K  Edge Creek, AK   37.73  43   P      P       21 41 02.3 +1.5
         baz=278
ISLE  Juniper Island   37.76  46   P      P       21 41 02.0 +0.9
EGAK  Eagle            37.79  39   P      P       21 41 01.4 +0.3
EGAK                               IAmb   IAmb    21 41 02.0
         comp=Z,16nm,0.9s
EGAK  Eagle            37.79  39   P      P       21 41 01.1  0.0
         baz=275
BARN  Barnard Glacie   38.02  45   P      P       21 41 04.0 +0.7
CTG   Chitna Glacier   38.19  45   P      P       21 41 05.9 +1.2
         baz=280,SNR=7.2
BVCY  Beaver Creek     38.19  43   P      P       21 41 05.8 +1.3
         baz=278,SNR=10
CTGM  Chitina Glacie   38.19  45   P      P       21 41 05.7 +1.0
CTGM                               IAmb   IAmb    21 41 06.7
         comp=Z,16nm,0.9s
LOGN  Logan Glacier    38.37  45   P      P       21 41 07.2 +0.9
LOGN                               IAmb   IAmb    21 41 19.1
         comp=Z,16nm,1.0s
ENH   Enshi            38.39 260   P      P       21 41 06.3 -0.2
YUK3  Moose Creek      38.47  44   P      P       21 41 07.7 +0.6
         baz=279
DAWY  Dawson           38.63  40   P      P       21 41 09.0 +0.7
DAWY  Dawson           38.63  40   P      P       21 41 08.7 +0.4
         baz=277
LZH   Lanzhou          38.75 272  eP      P       21 41 10.8 +1.1
LZH                                pP     pP      21 41 22.3 +2.0
LZH                                pmax   pmax
         comp=Z,17nm,1.1s
I29M  Ogilvie Camp,    38.94  38   P      P       21 41 11.7 +0.9
         baz=277,SNR=8.2
YUK4  Talbot Arm       39.40  44   P      P       21 41 15.4 +0.5
         baz=281
GTA   Gaotai           39.72 279  eP      P       21 41 17.7  0.0
GTA                                pP     pP      21 41 25.4 -3.0
GTA                                sP     pwP     21 41 29.5 -1.0
GTA                                PcP    PcP     21 43 24.4 +0.8
GTA                                pmax   pmax
         comp=Z,3.0nm,1.2s
M30M  Minto, Yukon     40.02  42   P      P       21 41 21.4 +1.5
         baz=281
HYT   Haines Junctio   40.05  45   P      P       21 41 20.9 +0.7
HYT   Haines Junctio   40.05  45   P      P       21 41 21.9 +1.6
         baz=283,SNR=6.3
MAYO  Mayo, Yukon      40.23  40   P      P       21 41 23.5 +1.9
         baz=281
INK   Inuvik           40.47  33   LR     LR      21 58 00.8
         comp=Z,134nm,21.2s,baz=294,slow=36
INK   Inuvik           40.47  33   P      P       21 41 23.9 +0.6
INK                                pmax   pmax
         comp=Z,7.0nm,0.9s
INK   Inuvik           40.47  33   P      P       21 41 23.9 +0.6
INK   Inuvik           40.47  33   P      P       21 41 24.4 +1.0
         baz=277,SNR=7.9
N31M  Braeburn, Yuko   40.72  44   P      P       21 41 27.6 +2.0
         baz=283
M31M  Drury Creek, Y   41.20  42   P      P       21 41 31.2 +1.6
         baz=284,SNR=5.8
WHY   Whitehorse       41.34  45   P      P       21 41 32.9 +2.0
         baz=285
FARO  Faro, Yukon      41.66  42   P      P       21 41 34.8 +1.4
         baz=284,SNR=6.0
CD2   Chengdu          41.84 265  eP      P       21 41 35.0 -0.2
P33M  Teslin, Yukon    42.45  45   P      P       21 41 40.6 +0.7
         baz=287,SNR=5.8
A36M  Sachs Harbour    42.70  27   P      P       21 41 41.6  0.0
A36M                               IAmb   IAmb    21 41 54.5
         comp=Z,13nm,0.8s
A36M  Sachs Harbour    42.70  27   P      P       21 41 42.8 +1.2
         baz=280,SNR=15
GYA   Guiyang          42.76 258  ⇑P      P       21 41 43.8 +1.0
GYA                                pP     pP      21 41 55.0 +1.4
GYA                                pmax   pmax
         comp=Z,20nm,1.0s
ZALV  Zalesovo Beam    42.85 305   P      P       21 41 41.1 -1.9
         comp=Z,0.7nm,0.4s,baz=63,slow=8.7,SNR=5.7
ZALV                               LR     LR      22 00 11.4
         comp=Z,220nm,19.5s,baz=50,slow=37
ZALV  Zalesovo Beam    42.85 305   P      P       21 41 41.2 -1.8
ZALV  Zalesovo Beam    42.85 305   P      P       21 41 41.2 -1.8
DGZ   Jazzator, Alta   42.98 299  i P     P       21 41 43.8 -0.6
DGZ                                pmax   pmax
         comp=Z,3.0nm,0.5s
WMQ   Urumqi           45.45 291  eP      P       21 42 06.1 +2.0
WMQ                                pmax   pmax
         comp=Z,9.0nm,0.9s
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WMQ                                pmax   pmax
         comp=Z,75nm,4.1s
WRGLY Wrigley          45.72  39   P      P       21 42 07.4 +1.6
         baz=291
KMI   Kunming          46.27 260  ⇑P      P       21 42 12.0 +1.1
KMI                                pmax   pmax
         comp=Z,15nm,1.0s
MK31  Makanchi Array   47.35 297   P      P       21 42 17.2 -1.7
MK31                               pmax   pmax
         comp=Z,4.0nm,0.8s
MK31  Makanchi Array   47.35 297   P      P       21 42 17.2 -1.7
MKAR  Makanchi Array   47.35 297   P      P       21 42 17.4 -1.5
         comp=Z,2.3nm,0.8s,baz=67,slow=7.4,SNR=20
MKAR                               LR     LR      22 03 45.2
         comp=Z,120nm,18.4s,baz=358,slow=38
MAKZ  Makanchi         47.53 297   P      P       21 42 18.9 -1.4
MAKZ                               pmax   pmax
         comp=Z,9.0nm,1.5s
MAKZ  Makanchi         47.53 297   P      P       21 42 18.9 -1.4
KURK  Kurchatov        47.64 303   P      P       21 42 19.6 -1.5
KURK                                              21 43 50.1
KURK                               pmax   pmax
         comp=Z,5.0nm,0.8s
KURK  Kurchatov        47.64 303  eP      P       21 42 19.6 -1.5
KURK  Kurchatov        47.64 303   P      P       21 42 19.6 -1.5
KURK                                      PcP     21 43 50.1  0.0
KURBB Kurchatov Arra   47.74 303   P      P       21 42 20.2 -1.6
         comp=Z,2.1nm,0.6s,baz=68,slow=8.4,SNR=14
KURBB                              PcP    PcP     21 43 49.8 -0.7
         comp=Z,2.0nm,0.7s,baz=62,slow=3.3,SNR=4.7
EUNU  Eureka           48.13  12   P      P       21 42 24.3 -0.3
EUNU                               IAmb   IAmb    21 42 26.1
         comp=Z,12nm,0.8s
YKA   Yellowknife Ar   49.72  37   P      P       21 42 37.4 +0.6
         comp=Z,6.3nm,0.9s,baz=297,slow=7.6,SNR=14
YKA                                PcP    PcP     21 43 56.8 -0.6
         comp=Z,2.5nm,0.9s,baz=303,slow=3.6,SNR=6.5
RES   Resolute Bay     49.76  19   P      P       21 42 37.3 +0.3
RES                                pmax   pmax
         comp=Z,4.0nm,1.0s
RES   Resolute Bay     49.76  19   P      P       21 42 37.3 +0.3
BVAR  Borovoye Array   51.02 309   P      P       21 42 45.4 -1.4
         comp=Z,1.0nm,0.5s,baz=194,slow=0.6,SNR=3.6
BVAR                               PcP    PcP     21 44 01.8 -0.5
         comp=Z,2.3nm,0.6s,baz=220,slow=5.8,SNR=4.1
BRVK  Borovoye         51.05 309  i P     P       21 42 43.7 -3.4
BRVK                               pmax   pmax
         comp=Z,2.0nm,0.8s
LSA   Lhasa            51.11 273   P      P       21 42 47.9 -0.5
LSA                                pmax   pmax
         comp=Z,7.0nm,0.7s
LSA   Lhasa            51.11 273   P      P       21 42 47.9 -0.5
LSA                                IAmb   IAmb    21 42 50.8
         comp=Z,6.5nm,0.7s
SIJI  Sorong           52.32 210   P      P       21 42 58.0 +1.1
         comp=Z,2.9nm,0.5s,baz=14,slow=12,SNR=5.1
CHTO  Chiang Mai       53.17 257   P      P       21 43 03.3  0.0
CHTO                               pmax   pmax
         comp=Z,10.0nm,1.0s
CHTO  Chiang Mai       53.17 257   P      P       21 43 03.3  0.0
CHTO                               IAmb   IAmb    21 43 08.7
         comp=Z,10.0nm,0.9s
SHL   Shillong         53.28 269   P      P       21 43 02.5 -1.7
SHL                                pmax   pmax
         comp=Z,17nm,0.8s
SHL   Shillong         53.28 269   P      P       21 43 02.5 -1.7
CM31  Chiang Mai Arr   53.43 257   P      P       21 43 05.0 -0.2
CM31                               IAmb   IAmb    21 43 08.6
         comp=Z,7.8nm,1.0s
CMAR  Chiang Mai Arr   53.43 257   P      P       21 43 06.2 +1.1
         comp=Z,3.0nm,0.8s,baz=32,slow=7.1,SNR=23
CMAR                               PcP    PcP     21 44 13.2 +1.3
         comp=Z,1.7nm,0.8s,baz=0.3,slow=3.1,SNR=4.9
CMAR  Chiang Mai Arr   53.43 257   P      P       21 43 04.8 -0.4
FAKI  Fak Fak          53.92 208   P      P       21 43 09.1 +0.4
FAKI                               IAmb   IAmb    21 43 10.4
         comp=Z,12nm,1.0s
NEEM  North Greenlan   54.23   7  i P     P       21 43 09.3 -1.3
NEEM                               IAmb   IAmb    21 43 11.1
         comp=Z,14nm,0.8s
AAK   Ala-Archa        54.26 296   P      P       21 43 10.2 -0.9
         comp=Z,1.8nm,0.7s,baz=140,slow=5.7,SNR=7.9
AAK                                PcP    PcP     21 44 14.1 -0.9
         comp=Z,1.4nm,0.7s,baz=171,slow=4.6,SNR=2.2
AAK   Ala-Archa        54.26 296   P      P       21 43 09.2 -1.9
AAK                                pmax   pmax
         comp=Z,3.0nm,0.8s
AAK   Ala-Archa        54.26 296   P      P       21 43 09.2 -1.9
B08A  Colville Reser   54.70  55   P      P       21 43 13.0 -1.0
B08A                               IAmb   IAmb    21 43 15.1
         comp=Z,6.3nm,0.7s
ARU   Arti             55.00 318   P      P       21 43 14.4 -1.7
         comp=Z,0.7nm,0.4s,baz=321,slow=2.8,SNR=7.8
ARU                                PcP    PcP     21 44 17.0 -0.3
         comp=Z,0.7nm,0.4s,baz=344,slow=2.0,SNR=2.2
ARU   Arti             55.00 318c iP      P       21 43 13.7 -2.4
ARU                                *PP    pP      21 43 26.2 -0.9
ARU                                               21 44 16.3
ARU                                S      S       21 50 51.5 -3.5
ARU                                pmax   pmax
         comp=Z,13nm,1.6s
ARU   Arti             55.00 318   P      P       21 43 14.3 -1.7
EDM   Edmonton         55.09  47   P      P       21 43 17.2 +0.3
EDM                                pmax   pmax
         comp=Z,15nm,0.6s
EDM   Edmonton         55.09  47   P      P       21 43 17.2 +0.3
KSH   Kashi            55.15 293   P      P       21 43 21.6 +4.0
C09A  Chrisman Ranch   55.60  55   P      P       21 43 21.2 +0.7
C09A                               IAmb   IAmb    21 43 21.5
         comp=Z,6.8nm,0.7s
GUN   Gumba            55.81 275  eP      P       21 43 23.0 +0.2
         comp=Z,12nm,0.5s
DAG   Danmarks Havn    55.84 358  i P     P       21 43 14.8 -7.1
DAG                                IAmb   IAmb    21 43 15.4
         comp=Z,11nm,0.5s
I05D  Terrebonne, OR   55.85  60   P      P       21 43 23.9 +1.4
         baz=306
RAMN  Ramite           55.95 274  eP      P       21 43 23.8 +0.2
         comp=Z,20nm,0.4s
NEW   Newport          55.96  54   P      P       21 43 23.8 +0.6
         baz=306
KKN   Kakani           56.29 276  eP      P       21 43 26.1 +0.1
         comp=Z,9.9nm,0.5s
PKI   Pulchoki         56.35 275  eP      P       21 43 26.5 -0.1
PKIN  Phulchoki        56.35 275  eP      P       21 43 26.6 +0.1
PINE  Pine Mountain    56.40  60   P      P       21 43 27.4 +0.8
L04D  Klamath Falls    56.52  62   P      P       21 43 28.8 +1.4
         baz=307
DMN   Daman            56.53 276  eP      P       21 43 27.6 -0.2
         comp=Z,95nm,1.0s
J05D  Fort Rock, OR    56.53  61   P      P       21 43 29.3 +1.9
         baz=306,SNR=8.8
YBH   Yreka Blue Hor   56.57  63   P      P       21 43 28.3 +0.6
YBH                                pmax   pmax
         comp=Z,33nm,1.4s
YBH   Yreka Blue Hor   56.57  63   P      P       21 43 28.3 +0.6
GKN   Gorkha           56.59 276  eP      P       21 43 28.3 +0.2
         comp=Z,15nm,0.5s
M02C  Callahan         56.68  63   P      P       21 43 29.8 +1.3
         baz=307
DANN  Dangsing         56.95 277  eP      P       21 43 31.3 +0.5
         comp=Z,16nm,0.5s
N02D  Trinity Center   57.02  64   P      P       21 43 32.7 +1.8
         baz=307
M04C  Macdoel          57.06  62   P      P       21 43 32.9 +1.7
         baz=307
K05A  Summer Lake      57.06  61   P      P       21 43 32.5 +1.2
I07A  Izee             57.07  59   P      P       21 43 31.9 +0.6
I07A                               IAmb   IAmb    21 43 33.7
         comp=Z,11nm,1.1s
ARCES ARCESS Array B   57.35 341   P      P       21 43 32.3 -0.4
         comp=Z,2.1nm,0.8s,baz=30,slow=7.3,SNR=1.0
ARCES                              LR     LR      22 11 22.4
         comp=Z,166nm,20.0s,baz=5.0,slow=39
ARCES ARCESS Array B   57.35 341   P      P       21 43 31.6 -1.1
ARCES ARCESS Array B   57.35 341   P      P       21 43 31.6 -1.1
KOLN  Koldanda         57.44 277  eP      P       21 43 34.4 +0.3
         comp=Z,3.4nm,0.3s
O02D  Mt. Diablo Mer   57.45  64   P      P       21 43 35.7 +1.8
         baz=307
PYUN  Piuthan          57.63 277  eP      P       21 43 36.1 +0.6
JTMT  Jette            57.81  53   P      P       21 43 36.9 +0.5
BMO   Blue Mountains   57.87  57   P      P       21 43 37.6 +0.8
BMO                                pmax   pmax
         comp=Z,8.0nm,0.8s
BMO   Blue Mountains   57.87  57   P      P       21 43 37.6 +0.8
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BMO				IAmb	IAmb	21 43 39.0	
	comp=Z,7.6nm,0.8s						
MOD	Modoc Plateau	57.91	61	P	P	21 43 37.8	+0.6
O03E	Paynes Creek	57.98	64	P	P	21 43 38.7	+1.0
	baz=308,SNR=5.3						
BTK	Batken	58.01	296	P	P	21 43 37.0	-0.9
BTK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BTK	Batken	58.01	296	P	P	21 43 37.0	-0.9
J08A	Circle Bar Ran	58.10	59	P	P	21 43 39.0	+0.5
J08A				IAmb	IAmb	21 43 41.5	
	comp=Z,7.1nm,0.8s						
PLID	Pearl Lake	58.47	56	P	P	21 43 41.9	+0.7
MSO	Missoula	58.55	54	P	P	21 43 42.1	+0.6
MSO				IAmb	IAmb	21 43 44.1	
	comp=Z,15nm,1.2s						
MSO	Missoula	58.55	54	P	P	21 43 42.7	+1.1
	baz=308,SNR=6.1						
WVOR	Wild Horse Val	58.57	60	P	P	21 43 42.5	+0.7
WVOR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WVOR	Wild Horse Val	58.57	60	P	P	21 43 42.5	+0.7
WVOR				IAmb	IAmb	21 43 44.0	
	comp=Z,9.1nm,0.8s						
ABKAR	Akbulak array	58.57	310	P	P	21 43 39.7	-1.8
ORV	Oroville	58.62	64	P	P	21 43 42.9	+0.9
ORV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ORV	Oroville	58.62	64	P	P	21 43 42.9	+0.9
ORV				IAmb	IAmb	21 43 43.4	
	comp=Z,5.4nm,0.8s						
AKTO	Aktyubinsk	58.83	312	P	P	21 43 42.2	-1.1
	comp=Z,0.7nm,0.6s,baz=70,slow=8.2,SNR=2.2						
AKTO				PcP	PcP	21 44 32.0	-0.5
	comp=Z,2.8nm,0.8s,baz=34,slow=3.4,SNR=6.6						
GAR	Garm	58.97	295	P	P	21 43 43.7	-0.9
GAR				IAmb	IAmb	21 43 58.1	
	comp=Z,7.3nm,0.9s						
FFC	Flin Flon	59.52	41	P	P	21 43 48.8	+0.7
FFC				pmax	pmax		
	comp=Z,16nm,1.0s						
FFC	Flin Flon	59.52	41	P	P	21 43 48.8	+0.7
MFID	Camas Ranch	59.59	58	P	P	21 43 49.8	+0.9
MFID				IAmb	IAmb	21 43 51.0	
	comp=Z,6.7nm,0.8s						
SUMG	Summit	59.80	4	P	P	21 43 49.8	-0.4
SUMG				pmax	pmax		
	comp=Z,24nm,1.0s						
SUMG	Summit	59.80	4	*i* P	P	21 43 50.2	+0.1
SUMG				IAmb	IAmb	21 43 51.3	
	comp=Z,17nm,0.9s						
SUMG	Summit	59.80	4	P	P	21 43 49.8	-0.4
PAHR	Pah Rah Range	59.80	63	P	P	21 43 50.6	+0.2
PAHR				IAmb	IAmb	21 43 52.3	
	comp=Z,16nm,1.3s						
CHGR	Chuyangaron	59.89	296	P	P	21 43 49.7	-1.2
CHGR				IAmb	IAmb	21 43 58.5	
	comp=Z,8.8nm,0.9s						
LRM	Limekiln Ridge	59.98	54	P	P	21 43 52.4	+0.8
EGMT	Eagleton	60.04	50	P	P	21 43 52.3	+0.5
EGMT	Eagleton	60.04	50	P	P	21 43 53.1	+1.3
	baz=309						
PNTR	Pine Nut	60.06	64	P	P	21 43 52.1	-0.2
HLID	Hailey	60.30	57	P	P	21 43 54.6	+0.8
HLID				IAmb	IAmb	21 43 56.1	
	comp=Z,8.3nm,1.1s						
HLID	Hailey	60.30	57	P	P	21 43 55.0	+1.2
	baz=309,SNR=9.8						
YERR	Yerington	60.34	64	P	P	21 43 53.5	-0.6
YERR				IAmb	IAmb	21 43 56.3	
	comp=Z,9.4nm,0.9s						
MCMT	McKenzie Canyo	60.39	55	P	P	21 43 55.1	+0.7
NIL	Nilore	60.48	289	P	P	21 43 53.7	-1.3
NIL				pmax	pmax		
	comp=Z,13nm,0.9s						
NIL	Nilore	60.48	289	P	P	21 43 53.7	-1.3
BOZ	Bozeman (W)	60.57	54	P	P	21 43 56.6	+1.0
	baz=309						
KAPI	Kappang	60.61	221	P	P	21 43 56.9	+1.0
	comp=Z,2.3nm,0.3s,baz=67,slow=5.5,SNR=4.6						
BMN	Battle Mountai	60.64	61	P	P	21 43 57.0	+0.8
BMN				pmax	pmax		
	comp=Z,12nm,0.7s						
BMN	Battle Mountai	60.64	61	P	P	21 43 57.0	+0.8
KVN	Kaiserville	60.99	63	P	P	21 43 59.4	+0.8
KVN				pmax	pmax		
	comp=Z,13nm,1.1s						
KVN	Kaiserville	60.99	63	P	P	21 43 59.4	+0.8
KVN				IAmb	IAmb	21 44 00.7	
	comp=Z,13nm,1.1s						
RYN	Ryan	61.00	63	P	P	21 43 58.3	-0.3
RYN				IAmb	IAmb	21 44 00.7	
	comp=Z,6.3nm,0.9s						
QLMT	Earthquake Lak	61.17	54	P	P	21 43 59.4	-0.3
LHV	Little Huntoon	61.25	64	P	P	21 44 00.5	+0.4
NVAR	Mina Array Bea	61.26	63	P	P	21 44 01.6	+1.2
	comp=Z,5.1nm,0.7s,baz=296,slow=7.4,SNR=30						
NVAR				PcP	PcP	21 44 43.7	+1.0
	comp=Z,2.2nm,0.9s,baz=280,slow=3.5,SNR=4.9						
NVAR	Mina Array Bea	61.26	63	P	P	21 44 00.9	+0.5
NVAR					PcP	21 44 42.4	-0.3
NV11	Mina Array Sit	61.35	63	IAmb	IAmb	21 44 02.9	
	comp=Z,8.0nm,1.1s						
YHH	Holmes Hill	61.51	54	IAmb	IAmb	21 44 04.9	
	comp=Z,8.1nm,1.0s						
YMR	Madison River	61.52	54	IAmb	IAmb	21 44 04.7	
	comp=Z,16nm,1.3s						
H17A	Grant Village	61.91	54	P	P	21 44 08.1	+3.3
	baz=310						
FLWY	Flagg Ranch	62.05	54	IAmb	IAmb	21 44 08.8	
	comp=Z,7.7nm,1.0s						
RLMT	Red Lodge	62.16	53	P	P	21 44 07.8	+1.5
	baz=311						
MOOW	Moose Ponds	62.24	55	IAmb	IAmb	21 44 09.8	
	comp=Z,16nm,1.4s						
HVU	Hansel Valley	62.37	57	IAmb	IAmb	21 44 10.1	
	comp=Z,5.9nm,0.8s						
LOHW	Long Hollow	62.41	55	IAmb	IAmb	21 44 11.5	
	comp=Z,16nm,1.3s						
LCH	Last Change Ra	62.43	64	IAmb	IAmb	21 44 10.3	
	comp=Z,15nm,1.4s						
VES	Vestal, Richgr	62.44	66	P	P	21 44 08.7	+0.5
	baz=311						
BELG	Belogornoye	62.50	319	P	P	21 44 08.2	+0.1
	comp=Z,10nm,0.8s,baz=331,slow=6.6,SNR=3.7						
BELG	Belogornoye	62.50	319	*i* P	P	21 44 05.9	-2.3
BELG				pmax	pmax		
	comp=Z,7.0nm,2.7s						
DGMT	Dagmar	62.59	47	P	P	21 44 09.8	+0.9
	baz=312						
CWC	Cottonwood Cre	62.67	65	P	P	21 44 10.8	+0.9
	baz=311						
AHID	Auburn Hatcher	62.68	56	IAmb	IAmb	21 44 12.2	
	comp=Z,6.5nm,1.1s						
LAO	LASA Array	62.74	50	IAmb	IAmb	21 44 12.5	
	comp=Z,11nm,0.9s						
LAO	LASA Array	62.74	50	P	P	21 44 10.7	+0.7
	baz=312						
SPUT	South Promonto	62.86	58	IAmb	IAmb	21 44 13.4	
	comp=Z,10nm,1.0s						
ISA	Isabella, Lake	62.94	66	P	P	21 44 11.8	+0.3
	baz=311						
R11A	Troy Canyon, C	62.95	62	IAmb	IAmb	21 44 13.6	
	comp=Z,8.8nm,1.1s						
R11A	Troy Canyon, C	62.95	62	P	P	21 44 12.5	+0.8
	baz=311,SNR=12						
HWUT	Hardware Ranch	63.17	57	IAmb	IAmb	21 44 16.2	
	comp=Z,5.2nm,0.8s						
SPR3	Spring Creek 3	63.27	61	IAmb	IAmb	21 44 16.2	
	comp=Z,6.6nm,0.8s						
MPMC	Manual Prospec	63.28	65	P	P	21 44 14.8	+0.8
	baz=311,SNR=8.2						
DUG	Dugway, Tooele	63.38	59	IAmb	IAmb	21 44 16.8	
	comp=Z,13nm,1.0s						
DUG	Dugway, Tooele	63.38	59	P	P	21 44 15.7	+1.2
	baz=311,SNR=13						
FURC	Furnace Creek,	63.40	64	P	P	21 44 15.7	+1.3
	baz=311,SNR=7.4						
BW06	Boulder Array	63.54	55	IAmb	IAmb	21 44 17.5	
	comp=Z,9.7nm,1.1s						
BW06	Boulder Array	63.54	55	P	P	21 44 16.6	+1.0
	baz=312,SNR=9.6						
PD31	Pinedale Array	63.54	55	IAmb	IAmb	21 44 17.6	
	comp=Z,8.8nm,1.1s						
PDAR	Pinedale Array	63.54	55	P	P	21 44 16.4	+0.8
	comp=Z,4.9nm,0.9s,baz=294,slow=2.2,SNR=33						
LRMC	Laurel Mtn Rad	63.54	66	P	P	21 44 16.0	+0.4
	baz=311						
FINES	FINESS Array B	63.66	335	P	P	21 44 14.4	-1.3
	comp=Z,5.3nm,0.9s,baz=32,slow=7.7,SNR=20						
GWY	Greenwater Val	63.70	64	IAmb	IAmb	21 44 18.5	
	comp=Z,11nm,1.1s						
QSM	Queen of Sheba	63.73	65	IAmb	IAmb	21 44 18.6	
	comp=Z,8.3nm,1.0s						
EDW2	Edwards Air Fo	63.74	66	P	P	21 44 17.7	+0.9
	baz=311,SNR=9.9						
PSUT	Pine Spring	63.86	61	IAmb	IAmb	21 44 19.7	
	comp=Z,11nm,1.4s						
JLU	Jordanelle	63.90	58	IAmb	IAmb	21 44 20.3	
	comp=Z,13nm,1.3s						
NLU	North Lily Min	63.96	59	IAmb	IAmb	21 44 20.5	
	comp=Z,7.3nm,0.8s						
MWC	Mount Wilson	64.13	67	IAmb	IAmb	21 44 21.3	
	comp=Z,21nm,1.4s						
MPU	Maple Canyon	64.18	58	IAmb	IAmb	21 44 22.0	
	comp=Z,8.9nm,0.9s						
GSC	Goldstone, Bar	64.20	65	P	P	21 44 20.5	+0.7
	baz=312,SNR=5.0						
BFSC	Mount Baldy Ra	64.37	67	P	P	21 44 21.6	+0.5
	baz=312						
TUQ	Turquoise Moun	64.65	65	P	P	21 44 23.8	+0.9
	baz=312,SNR=7.8						
CCUT	Cedar City	64.80	61	IAmb	IAmb	21 44 26.2	
	comp=Z,11nm,1.1s						
HEC	Hector,Ludlow	64.80	65	P	P	21 44 24.7	+0.9
	baz=312,SNR=5.3						
TMUT	Trail Mountain	64.90	59	IAmb	IAmb	21 44 26.7	
	comp=Z,7.7nm,1.0s						
P17A	Butcher Ranch,	65.05	58	IAmb	IAmb	21 44 27.7	
	comp=Z,14nm,1.1s						
Q16A	Castle Valley	65.17	59	IAmb	IAmb	21 44 28.5	
	comp=Z,9.9nm,1.0s						
LCMT	Little Creek M	65.22	62	IAmb	IAmb	21 44 28.9	
	comp=Z,12nm,0.9s						
P18A	Preston Nutter	65.23	58	IAmb	IAmb	21 44 29.2	
	comp=Z,12nm,1.4s						
GMRC	Granite Mounta	65.25	65	P	P	21 44 27.6	+0.8
	baz=312,SNR=6.1						
ULM	Lac du Bonnet	65.31	42	P	P	21 44 25.9	-0.8
	comp=Z,2.8nm,0.6s,baz=306,slow=8.4,SNR=5.0						
SRU	San Rafael Swe	65.42	58	IAmb	IAmb	21 44 29.8	
	comp=Z,16nm,1.0s						
KNB	Kanab	65.47	61	IAmb	IAmb	21 44 30.8	
	comp=Z,14nm,1.0s						
PKCU	Pink Cliffs	65.49	61	IAmb	IAmb	21 44 31.6	
	comp=Z,12nm,1.3s						
BELC	Belle Mtn. Jos	65.56	66	P	P	21 44 28.9	+0.1
	baz=312						
RSSD	Black Hills	65.61	51	P	P	21 44 29.4	+0.3
RSSD				pmax	pmax		
	comp=Z,12nm,0.9s						
RSSD	Black Hills	65.61	51	P	P	21 44 29.4	+0.3
RSSD				IAmb	IAmb	21 44 30.5	
	comp=Z,12nm,0.9s						
RSSD	Black Hills	65.61	51	P	P	21 44 29.8	+0.7
	baz=314						
IRM	Iron Mountain	65.98	65	P	P	21 44 32.4	+1.0
	baz=312,SNR=8.9						
BC3	Big Chuckawall	66.13	66	P	P	21 44 33.1	+0.6
	baz=312,SNR=5.0						
IKP	In-Ko-Pah, Jac	66.39	67	P	P	21 44 34.8	+0.6
	baz=313						
PDMCI	Parker Dam,Lak	66.50	64	P	P	21 44 35.7	+1.1
	baz=313						
AGMN	Agassiz Nation	66.71	43	IAmb	IAmb	21 44 36.9	
	comp=Z,16nm,1.4s						
AGMN	Agassiz Nation	66.71	43	P	P	21 44 35.8	-0.1
	baz=316						
N23A	Red Feather La	66.79	54	P	P	21 44 37.9	+1.1
	baz=314						
GLA	Glamis	66.92	66	IAmb	IAmb	21 44 39.3	
	comp=Z,21nm,1.4s						
GLA	Glamis	66.92	66	P	P	21 44 38.4	+1.0
	baz=313						
GEYT	Alibeck	66.93	301	LR	LR	22 16 17.7	
	comp=Z,129nm,20.4s,baz=315,slow=38						
WUAZ	Wupatki	67.35	62	IAmb	IAmb	21 44 42.6	
	comp=Z,9.3nm,1.1s						
WUAZ	Wupatki	67.35	62	P	P	21 44 41.8	+1.5
	baz=313						
SMCO	Snowmass	67.40	56	IAmb	IAmb	21 44 42.6	
	comp=Z,6.9nm,0.8s						
Y14A	Wickenburg	67.44	64	IAmb	IAmb	21 44 42.6	
	comp=Z,11nm,1.3s						
NB2	NORSAR Subarra	67.72	342	P	P	21 44 41.4	-0.6
	comp=Z,0.9nm,0.6s,baz=26,slow=6.5						
NOA	NORSAR Array B	67.72	342	P	P	21 44 41.2	-0.8
	comp=Z,1.8nm,0.7s,baz=27,slow=6.4,SNR=5.3						
NOA				LR	LR	22 16 39.7	
	comp=Z,70nm,18.1s,baz=5.0,slow=38						
ISCO	Idaho Springs	67.73	55	IAmb	IAmb	21 44 45.0	
	comp=Z,7.8nm,0.9s						
ISCO	Idaho Springs	67.73	55	P	P	21 44 44.0	+1.2
	baz=314,SNR=8.5						
HYB	Hyderabad	67.86	272	*i* P	P	21 44 43.5	-0.1
MVCO	Mesa Verde	67.88	59	IAmb	IAmb	21 44 45.5	
	comp=Z,8.8nm,1.1s						
MVCO	Mesa Verde	67.88	59	P	P	21 44 44.6	+0.9
	baz=314						
X16A	Lo Mia Camp, P	68.06	63	IAmb	IAmb	21 44 47.7	
	comp=Z,14nm,1.5s						
F33A	5 Mile Ranch,	68.29	45	IAmb	IAmb	21 44 47.4	
	comp=Z,17nm,1.4s						
S22A	4UR Ranch, Cre	68.47	57	P	P	21 44 48.7	+1.2
	baz=314,SNR=10.0						
Q24A	Divide	68.57	55	P	P	21 44 48.7	+0.6
	baz=315						
MNK	Minsk	68.73	330	*i* P	P	21 44 53.7	+5.3
MNK				*i*		21 45 18.1	
MNK				*i*		21 47 25.4	
MNK				*i* PPP	PPP	21 49 05.1	
MNK				*i* S	S	21 53 51.3	+2.9
MNK				*i* SS	SS	21 58 19.2	+6.7
MNK				pmax	pmax		
	comp=N,34nm,1.0s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,10.0nm,1.1s						
MNK				MLR	MLR		
	comp=N,739nm,25.0s						
MNK				MLR	MLR		
	comp=E,65nm,19.0s						
MNK				MLR	MLR		
	comp=Z,341nm,22.0s						
MNK	Minsk	68.73	330	*i* P	P	21 44 53.7	+5.3
	comp=E,10.0nm,1.1s						
MNK				*i* P	P	21 44 53.7	+5.3
	comp=N,34nm,1.0s						
MNK				*i* P	P	21 44 53.7	+5.3
	comp=Z,7.0nm,0.8s,baz=35						
MNK				*i* PcP	PcP	21 45 18.1	+5.3
MNK				*i* PP	PP	21 47 25.4	+5.7
MNK				*i* PPP	PPP	21 49 05.1	
MNK				*i* S	S	21 53 51.4	+2.9
MNK				*i* SS	SS	21 58 19.2	+6.8
MNK				*i* SSS	SSS	22 01 36.2	
MNK				*i* LR	LR	22 15 29.5	
MNK				*i* LRM	MLR	22 17 38.7	
	comp=N,739nm,24.6s						
MNK				*i* LRM	MLR	22 17 47.3	
	comp=E,65nm,18.8s						
MNK				*i* LRM	MLR	22 17 56.7	
	comp=Z,341nm,21.7s						
OGNE	Ogallala	68.88	52	P	P	21 44 50.5	+0.8
	baz=315						
SDCO	Great Sand Dun	69.22	57	P	P	21 44 53.3	+1.2
	baz=315						
WR0	Warramunga Arr	69.57	200	P	P	21 44 55.1	+1.2
WRAB	Tennant Creek	69.59	200	P	P	21 44 54.8	+0.8
WRAB				pmax	pmax		
	comp=Z,16nm,1.3s						
WRAB	Tennant Creek	69.59	200	P	P	21 44 54.8	+0.8
WRAB				IAmb	IAmb	21 44 56.3	
	comp=Z,16nm,1.2s						
WB2	Warramunga Arr	69.60	200	P	P	21 44 54.6	+0.6
WB2				IAmb	IAmb	21 44 56.3	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	69.60	200	P	P	21 44 54.6	+0.5
	comp=Z,7.0nm,1.0s,baz=18,slow=6.2,SNR=18						
WRA	Warramunga Arr	69.60	200	P	P	21 44 54.6	+0.5
ECSD	EROS Data Cent	69.66	47	IAmb	IAmb	21 44 55.4	
	comp=Z,11nm,0.9s						
ECSD	EROS Data Cent	69.66	47	P	P	21 44 54.4	0.0
	baz=317,SNR=11						
TUC	Tucson	69.91	64	P	P	21 44 57.0	+0.9
TUC				pmax	pmax		
	comp=Z,8.0nm,1.4s						
TUC	Tucson	69.91	64	P	P	21 44 57.0	+0.9
TUC	Tucson	69.91	64	P	P	21 44 57.1	+0.9
	baz=314						
DZM	Mont Dzumac	70.17	168	P	P	21 44 59.2	+1.5
	comp=Z,5.0nm,0.9s,baz=287,slow=6.9,SNR=4.2						
DZM	Mont Dzumac	70.17	168	IAmb	IAmb	21 45 02.6	
	comp=Z,12nm,1.2s						
T25A	Trinidad	70.27	56	P	P	21 44 59.1	+0.7
	baz=315						
FITZ	Fitzroy Crossi	70.30	209	P	P	21 44 59.4	+1.0
	comp=Z,5.6nm,0.8s,baz=17,slow=5.5,SNR=13						
SPMN	Marine on St.	70.40	44	P	P	21 44 59.1	+0.2
	baz=319						
ANMO	Albuquerque	70.64	59	*ce*P	P	21 45 02.1	+1.3
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANMO	Albuquerque	70.64	59	P	P	21 45 01.1	+0.3
ANMO	Albuquerque	70.64	59	P	P	21 45 01.7	+0.9
	baz=315						
KIV	Kislovodsk	70.85	315	*e*P	P	21 45 01.0	-0.7
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,123nm,18.0s						
KIV	Kislovodsk	70.85	315	*e*P	P	21 45 01.0	-0.7
KBZ	Khabaz	70.92	314	P	P	21 45 01.9	-0.1
	comp=Z,1.3nm,0.7s,baz=186,slow=1.9,SNR=6.7						
KBZ				LR	LR	22 18 49.9	
	comp=Z,125nm,18.1s,baz=14,slow=38						
L34A	Svendsen Farm,	71.08	48	IAmb	IAmb	21 45 04.0	
	comp=Z,15nm,0.8s						
AKASG	Malin Array Be	71.34	327	P	P	21 45 03.0	-1.5
	comp=Z,1.1nm,0.3s,baz=33,slow=6.1,SNR=8.1						
AKASG	Malin Array Be	71.34	327	P	P	21 45 03.0	-1.5
AKBB	Malin Array Si	71.34	327	*ce*P	P	21 45 03.5	-0.9
319A	Douglas	71.47	64	IAmb	IAmb	21 45 07.8	
	comp=Z,16nm,0.9s						
121A	Cookes Peak, D	71.56	62	IAmb	IAmb	21 45 08.9	
	comp=Z,15nm,1.4s						
121A	Cookes Peak, D	71.56	62	P	P	21 45 07.9	+1.6
	baz=315						
SCHQ	Schefferville	72.19	24	P	P	21 45 09.5	0.0
	comp=Z,3.6nm,0.7s,baz=353,slow=9.7,SNR=2.6						
SCIA	State Center	72.69	46	P	P	21 45 13.3	+0.6
	baz=319						
AS31	Alice Springs	73.29	200	P	P	21 45 17.2	+0.9
ASAR	Alice Springs	73.29	200	P	P	21 45 17.8	+1.4
	comp=Z,5.7nm,0.9s,baz=12,slow=5.6,SNR=46						
ASAR	Alice Springs	73.29	200	P	P	21 45 17.3	+1.0
ASAR	Alice Springs	73.29	200	P	P	21 45 17.3	+1.0
AMTX	Amarillo	73.42	56	IAmb	IAmb	21 45 19.0	
	comp=Z,10.0nm,0.9s						
AMTX	Amarillo	73.42	56	P	P	21 45 18.4	+1.2
	baz=317						
MSTX	Muleshoe	73.47	58	P	P	21 45 18.1	+0.6
	baz=317						
MNTX	Cornudas Mount	73.58	61	P	P	21 45 19.3	+1.1
	baz=316,SNR=6.0						
P38A	Dawn	74.26	48	IAmb	IAmb	21 45 22.8	
	comp=Z,13nm,0.8s						
P40A	Paris	75.08	47	IAmb	IAmb	21 45 27.7	
	comp=Z,20nm,1.1s						
KOLS	Kolonicke sedl	75.30	330	*e*P	P	21 45 26.1	-1.7
KOLS	Kolonicke sedl	75.30	330	*e*P	P	21 45 26.1	-1.7
OK030	Cody Creek RV	75.35	53	IAmb	IAmb	21 45 29.4	
	comp=Z,20nm,1.0s						
BURAR	Bucovina Array	75.37	327	⇑P	P	21 45 28.0	-0.4
BURAR	Bucovina Array	75.37	327	⇑P	P	21 45 28.0	-0.4
HDIL	Hopedale	75.63	45	P	P	21 45 30.2	+0.4
	baz=321						
VLDR	Vladesti	75.76	324	⇑P	P	21 45 30.5	0.0
CHVC	Chvalec	75.84	334	*e*P	P	21 45 30.4	-0.5
TRPA	Tarpa	75.89	329	⇑P	P	21 45 31.0	-0.2
DPC	Dobruska-Polom	75.97	334	*e*P	P	21 45 31.7	0.0
DPC				*e*x	x	21 45 37.4	
DPC	Dobruska-Polom	75.97	334	*e*P	P	21 45 31.7	0.0
DPC				*e*		21 45 37.4	
LANS	Liptovska Anna	76.05	331	*e*P	P	21 45 33.1	+0.9
LANS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LANS	Liptovska Anna	76.05	331	*e*P	P	21 45 33.1	+0.9
CLL	Collm	76.06	336	*i* P	P	21 45 31.7	-0.4
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CLL	Collm	76.06	336	*i* P	P	21 45 31.7	-0.4
	comp=Z,7.0nm,1.0s						
CFR	Carcaliu	76.29	324	⇑P	P	21 45 32.7	-0.8
CFR	Carcaliu	76.29	324	⇑P	P	21 45 32.7	-0.8
TX32	Lajitas Array	76.31	62	IAmb	IAmb	21 45 35.8	
	comp=Z,22nm,1.3s						
TXAR	Lajitas Array	76.31	62	P	P	21 45 34.9	+0.8
	comp=Z,8.2nm,0.7s,baz=299,slow=4.6,SNR=87						
TPGR	Topolog	76.44	324	⇑P	P	21 45 34.2	-0.2
COVR	Voineasa-Covas	76.49	326	⇑P	P	21 45 35.2	+0.5
HHAR	Hobbs	76.59	51	IAmb	IAmb	21 45 35.9	
	comp=Z,7.8nm,0.8s						
PRU	Pruhonice	76.82	335	*e*P	P	21 45 36.2	-0.2
PRU	Pruhonice	76.82	335	*e*P	P	21 45 36.2	-0.2
HPIG		76.85	65	IAmb	IAmb	21 45 38.8	
	comp=Z,8.5nm,1.0s						
TLBR	Topalu	76.85	324	⇑P	P	21 45 36.7	0.0
MLR	Muntele Rosu	76.89	326	⇑P	P	21 45 37.9	+0.8
MLR	Muntele Rosu	76.89	326	⇑P	P	21 45 37.9	+0.8
MLR	Muntele Rosu	76.89	326	P	P	21 45 36.4	-0.7
MLR				IAmb	IAmb	21 45 40.4	
	comp=Z,14nm,1.5s						
U40A	Yellville	77.10	50	P	P	21 45 38.1	-0.2
	baz=320,SNR=13						
TRQ	Mont Tremblant	77.22	32	P	P	21 45 38.8	-0.1
TRQ				IAmb	IAmb	21 45 39.3	
	comp=Z,12nm,1.0s						
VOIR		77.27	326	⇑P	P	21 45 39.0	-0.2
VOIR		77.27	326	⇑P	P	21 45 39.0	-0.2
ICOR	Ion Corvin	77.30	324	⇑P	P	21 45 38.8	-0.5
ARR	Arges	77.49	326	⇓P	P	21 45 41.0	+0.7
W39A	Magazine	77.50	51	P	P	21 45 40.3	-0.3
	baz=320						
JCT	Junction City	77.73	58	P	P	21 45 42.4	+0.5
	baz=318						
SIRR	Siria	77.80	329	⇑P	P	21 45 41.7	-0.3
FCAR	Ozark Folk Cen	77.83	50	P	P	21 45 42.2	-0.2
FCAR				IAmb	IAmb	21 45 42.7	
	comp=Z,9.0nm,0.7s						
KHC	Kasperske Hory	77.86	335	*e*P	P	21 45 42.2	-0.2
KHC				*e*x	x	21 45 46.5	
KHC	Kasperske Hory	77.86	335	*e*P	P	21 45 42.2	-0.2
KHC				*e*		21 45 46.5	
KHC	Kasperske Hory	77.86	335	P	P	21 45 42.1	-0.3
CKRC	Cesky Krumlov	77.93	334	*e*P	P	21 45 40.0	-2.7
CKRC				*e*x	x	21 45 43.4	
GERES	GERESS Array B	78.09	335	P	P	21 45 43.1	-0.6
	comp=Z,1.6nm,0.6s,baz=32,slow=5.4,SNR=17						
GERES				LR	LR	22 24 17.1	
	comp=Z,101nm,18.6s,baz=11,slow=39						
MIAR	Mount Ida	78.11	51	P	P	21 45 44.3	+0.4
	baz=320						
WHAR	Wooly Hollow	78.21	50	IAmb	IAmb	21 45 45.4	
	comp=Z,20nm,1.3s						
CONA	Conrad Observa	78.26	333	*e*P	P	21 45 44.9	+0.2
	comp=Z,2.5nm,0.9s						
COPA	Copaceanca	78.31	325	⇑P	P	21 45 43.3	-1.5
W41B	Gary Mavity, V	78.32	50	P	P	21 45 45.4	+0.3
	baz=321						
BRTR	Keskin Array B	78.38	317	P	P	21 45 45.6	+0.1
	comp=Z,2.4nm,0.9s,baz=62,slow=4.3,SNR=14						
ACSO	Alum Creek Sta	78.80	41	IAmb	IAmb	21 45 48.5	
	comp=Z,12nm,0.8s						
ACSO	Alum Creek Sta	78.80	41	P	P	21 45 47.9	+0.3
	baz=325						
M53A	WI Miller and	78.81	39	P	P	21 45 48.0	+0.3
M53A	WI Miller and	78.81	39	P	P	21 45 48.2	+0.5
	baz=326						
MOA	Molln	78.82	334	*e*P	P	21 45 44.1	-3.5
	comp=Z,2.7nm,0.8s						
WCI	Wyandotte Cave	78.89	44	P	P	21 45 48.5	+0.4
WCI				pmax	pmax		
	comp=Z,29nm,0.9s						
WCI	Wyandotte Cave	78.89	44	P	P	21 45 48.5	+0.4
WCI	Wyandotte Cave	78.89	44	P	P	21 45 48.6	+0.4
	baz=323						

ARSA	Arzberg	78.97	333	*e*P	P	21 45 46.7	-1.8
	comp=Z,2.7nm,0.8s						
MDVR	Moldovita	79.06	328	⇑P	P	21 45 47.7	-1.4
M54A	Oil Creek Stat	79.18	38	P	P	21 45 49.4	-0.4
	baz=326						
FRGS	Fruska Gora	79.41	329	⇑P	P	21 45 50.2	-0.7
FRGS	Fruska Gora	79.41	329	*e*P	P	21 45 50.0	-0.9
N54A	Moraine State	79.50	39	P	P	21 45 51.7	+0.2
	baz=326						
O53A	New Philadelph	79.56	40	P	P	21 45 52.1	+0.3
O53A				IAmb	IAmb	21 45 52.6	
	comp=Z,12nm,0.7s						
O53A	New Philadelph	79.56	40	P	P	21 45 52.1	+0.3
	baz=326						
SOKA	Soboth	79.63	333	*e*P	P	21 45 51.9	-0.3
	comp=Z,3.4nm,0.7s						
P52A	Corning	79.66	41	IAmb	IAmb	21 45 52.9	
	comp=Z,11nm,0.8s						
P52A	Corning	79.66	41	P	P	21 45 52.1	-0.2
	baz=325						
R50A	Paris	79.77	43	IAmb	IAmb	21 45 54.6	
	comp=Z,13nm,1.1s						
KBA	Koelnbreinsper	79.78	334	*e*P	P	21 45 53.3	+0.2
	comp=Z,8.8nm,0.8s						
WVT	Waverly	79.81	47	P	P	21 45 53.6	+0.4
	baz=323						
OBKA	Obir	79.93	333	*e*P	P	21 45 53.3	-0.5
	comp=Z,1.5nm,0.8s						
ZAPS	Zavoj	80.02	326	*e*P	P	21 45 49.8	-4.5
BOVS	Bovan	80.05	327	⇑P	P	21 45 52.2	-2.2
WATA	Walderalm	80.06	335	*e*P	P	21 45 54.5	-0.1
	comp=Z,7.4nm,0.9s						
MYKA	Terra Mystica	80.10	334	*e*P	P	21 45 54.4	-0.3
	comp=Z,3.3nm,0.8s						
WTTA	Wattenberg	80.11	335	*e*P	P	21 45 55.0	+0.1
	comp=Z,7.5nm,0.6s						
RETA	Reutte	80.15	336	*e*P	P	21 45 55.0	0.0
	comp=Z,2.7nm,0.6s						
MOTA	Moosalm	80.19	336	*e*P	P	21 45 55.5	+0.2
	comp=Z,7.5nm,0.8s						
GRUS	Gruza	80.19	328	*e*P	P	21 45 54.3	-0.9
DIVS	Divibare	80.27	329	*e*P	P	21 45 54.7	-1.0
SQTA	Sankt Quirin	80.27	336	*e*P	P	21 45 55.8	+0.1
	comp=Z,6.1nm,0.9s						
ABTA	Abfaltersbach	80.33	335	*e*P	P	21 45 55.7	-0.2
	comp=Z,0.8nm,0.5s						
VTS	Vitosha	80.36	326	⇑P	P	21 45 55.7	-0.5
VTS	Vitosha	80.36	326	P	P	21 45 55.4	-0.9
VTS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VTS	Vitosha	80.36	326	P	P	21 45 55.4	-0.9
DAVA	Damuels	80.58	336	*e*P	P	21 45 57.2	-0.1
	comp=Z,5.3nm,0.9s						
CLTN	Cedars of Leba	80.58	46	IAmb	IAmb	21 45 58.7	
	comp=Z,15nm,0.9s						
FETA	Feichten	80.58	336	*e*P	P	21 45 57.4	0.0
	comp=Z,2.4nm,0.8s						
V48A	Smith Brothers	80.62	46	IAmb	IAmb	21 45 58.6	
	comp=Z,11nm,1.1s						
MCWV	Mont Chateau	80.64	39	P	P	21 45 58.2	+0.6
	baz=326						
IVAS	Ivanjica	80.67	328	*e*P	P	21 45 56.4	-1.4
O56A	Blue Knob Stat	80.67	38	P	P	21 45 57.9	0.0
	baz=327						
BBLS	Lazići	80.68	329	*e*P	P	21 45 57.4	-0.5
BARS	Barje	80.72	327	*e*P	P	21 45 49.4	-8.6
BOSS	Bosilegrad	80.75	326	*e*P	P	21 45 57.7	-0.5
SJES	Sjenica	81.00	328	*e*P	P	21 45 59.0	-0.7
SWET	Sewanee	81.47	46	IAmb	IAmb	21 46 02.8	
	comp=Z,12nm,0.8s						
TEOL	Teolo	81.83	334	IAmb	IAmb	21 46 06.4	
	comp=Z,9.3nm,0.9s						
PDG	Podgorica	81.99	328	⇓P	P	21 46 03.7	-1.0
PDG	Podgorica	81.99	328	*e*P	P	21 46 03.6	-1.1
FPAL	Fort Paine	82.17	46	IAmb	IAmb	21 46 07.3	
	comp=Z,21nm,1.2s						
CSS	Mathiatis	82.37	315	P	P	21 46 06.3	-0.6
SSF	Saint Saulge	82.37	340	P	P	21 46 07.0	+0.3
LPL	La Plagne	83.04	338	P	P	21 46 10.8	+0.3
LPG	La Plagne	83.05	338	P	P	21 46 11.0	+0.4
MURB	Monte Urbino	83.48	333	IAmb	IAmb	21 46 14.6	
	comp=Z,6.7nm,0.8s						
NRCA	Norcia	83.69	332	IAmb	IAmb	21 46 15.0	
	comp=Z,9.2nm,0.9s						
SGRT	San Giovanni R	83.80	330	IAmb	IAmb	21 46 13.9	
	comp=Z,8.2nm,0.9s						
SSB	Saint Sauveur	83.81	339	IAmb	IAmb	21 46 15.3	
	comp=Z,7.8nm,0.9s						
AQU	L'Aquila	84.03	332	IAmb	IAmb	21 46 33.0	
	comp=Z,13nm,1.1s						
RAYN	Ar Rayn	84.80	299	P	P	21 46 18.5	-1.1
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RAYN	Ar Rayn	84.80	299	P	P	21 46 18.5	-1.1
RAYN				IAmb	IAmb	21 46 19.9	
	comp=Z,5.9nm,0.7s						
ESDC	Sonseca Array	91.01	343	P	P	21 46 47.6	-1.5
	comp=Z,1.0nm,0.8s,baz=8.2,slow=3.6,SNR=6.0						
ESDC				LR	LR	22 32 03.6	
	comp=Z,57nm,20.2s,baz=315,slow=38						
KEST	Kesra	91.35	332	P	P	21 46 50.6	-0.2
	comp=Z,5.3nm,1.0s,baz=292,slow=6.6,SNR=4.9						
TORD	Torodi Ar. Bea	114.82	331	PKP	PKiKP	21 52 24.6	-1.1
	comp=Z,0.4nm,0.4s,baz=24,slow=2.3,SNR=7.1						
LPAZ	La Paz	133.17	63	PKP	PKPdf	21 53 01.6	+0.1
	comp=Z,0.9nm,0.5s,baz=305,slow=4.5,SNR=4.2						
LPAZ	La Paz	133.17	63		PKPdf	21 53 01.2	-0.3
H03N2	Juan Fernandez	137.87	90	T	T	00 26 40.5	
	baz=310,slow=77,SNR=351						
H03N1	Juan Fernandez	137.88	90	T	T	00 26 36.8	
	baz=310,slow=77,SNR=90						
H03N3	Juan Fernandez	137.88	90	T	T	00 26 37.1	
	baz=310,slow=77,SNR=110						
BDFB	Brasilia	143.14	38	PKhKP	PKPpre	21 53 14.2	
	comp=Z,3.9nm,0.7s,baz=326,slow=2.3,SNR=5.7						
CPUP	Villa Florida	147.28	61	PKPbc	PKPdf	21 53 26.8	+0.9
	comp=Z,8.0nm,1.0s,baz=325,slow=2.9,SNR=6.1						
CPUP	Villa Florida	147.28	61		PKPdf	21 53 25.6	-0.2
PLCA	Paso Flores	147.39	95	PKPbc	PKPbc	21 53 27.6	-0.6
	comp=Z,10nm,0.9s,baz=276,slow=4.3,SNR=15						
PLCA	Paso Flores	147.39	95	PKPdf	PKPdf	21 53 26.9	+1.2
SNAA	Sanae	153.60	196	PKPdf	PKPdf	21 53 37.2	+2.8
VNA2	Neumayer--Watz	155.03	194	PKPdf	PKPdf	21 53 38.6	+2.3

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*SOME **06** 21:41:21.8, 50°.83N×85°.60E, h20^{km}*

*NNC **06** 21:41:24.9±1.4, 51°.03N×86°.43E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=14.7km s-min=6.5km az=100.0*

ISC 06 21:41:23.9±1.0**, 50°.99N**±0°.04×**86°.88E**±0°.03**, h22**^{km}±10^{km}**, n12, σ1^{s}.84**/22**, 6C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULGR	Ulagan, Altay	0.78	118	Pg	Pb	21 41 39.6	+0.8
ULGR				Sg	Sb	21 41 50.3	+1.3
CHBI	Chibit, Altay	0.79	149	Pg	Pb	21 41 38.9	-0.1
CHBI				Sg	Sn	21 41 48.6	-2.3
AKAR	Aktash	0.82	145	Pg	Pn	21 41 38.5	-1.7
AKAR				Sg	Sn	21 41 49.6	-2.1
ARTR	Artybash	0.85	17	Pg	Pb	21 41 39.9	0.0
ARTR				Sg	Sn	21 41 50.8	-1.5
CUR	Chagan-Uzun	1.29	133	Pg	Pb	21 41 47.4	-0.2
CUR				Sg	Sb	21 42 05.3	+1.5
UKR	Ust'-Kan	1.33	269	Pg	Pb	21 41 46.7	-1.5
UKR				Sg	Sb	21 42 05.1	+0.2
DGZ	Jazzator, Alta	1.34	165	Pg	Pb	21 41 47.7	-0.7
DGZ				Sg	Sn	21 42 03.9	-0.7
ZAA0	Zalesovo Array	3.22	338	⇑Pn	Pb	21 42 14.2	-6.2
	0.3nm,0.3s						
ZAA0				⇑Lg	Lg	21 43 03.3	
	3.7nm,0.5s						
ZSN	Zaisan	3.78	201	*e*P	Pb	21 42 27.1	-2.9
	2.6nm,0.3s						
ZSN				*e*S	Sb	21 43 14.4	-0.9
	13nm,0.5s						
MK31	Makanchi Array	5.18	218	Pn	Pn	21 42 43.0	+3.0
	0.5nm,0.4s,baz=28,slow=10,SNR=20						
MK31				⇑Sn	Sn	21 43 42.6	+3.5
	1.4nm,0.5s						
MK31				⇑Lg	Lg	21 44 03.4	
	1.9nm,0.4s,baz=30,slow=32,SNR=4.5						
MAKZ	Makanchi	5.29	220	⇓Pn	Pn	21 42 43.9	+2.3
	0.6nm,0.4s						
MAKZ				⇓Sn	Sn	21 43 43.1	+1.3
	1.3nm,0.5s						
MAKZ				⇓Lg	Lg	21 44 04.9	
	1.9nm,0.5s						
KURBB	Kurchatov Arra	5.31	269	⇓Pn	Pn	21 42 42.0	+0.2
	2.7nm,0.3s						
KURBB				⇑Sn	Sn	21 43 41.6	-0.6
	4.9nm,0.5s						
KURBB				⇑Lg	Lg	21 44 05.1	
	12nm,0.6s						

WEL 06 21:43:45.6±0.8**, 36°S**±9°×**17°8E**±1°1**, h251**^{km}±10^{km}**, M3.6**/19**, ML3.8**/19**, MLv3.6**/19**, Error ellipse: s-maj=0.0km s-min=0.0km az=109.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.80	174	P	Pn	21 44 25.9	-0.4
MXZ				S	S	21 44 58.5	+0.1
HAZ	Te Kaha	2.00	186	P	Pn	21 44 27.7	-0.2
HAZ				S	S	21 45 01.5	0.0
WMGZ	Waiomatatini S	2.07	172	P	Pn	21 44 28.6	0.0
WMGZ				S	S	21 45 03.1	+0.4
PKGZ	Pakihiroa	2.12	180	P	Pn	21 44 28.9	-0.2
RUGZ	Raukumara Rang	2.22	188	P	Pn	21 44 29.3	-0.8
RUGZ				S	S	21 45 04.5	-0.9
PUZ	Puketiti	2.31	176	P	Pn	21 44 30.4	-0.5
PUZ				S	S	21 45 06.4	-0.4
TWGZ	Tauwhareparae	2.41	181	P	Pn	21 44 32.2	+0.3
TWGZ				S	S	21 45 10.3	+1.7
MWZ	Matawai	2.60	189	P	Pn	21 44 34.1	+0.3
MWZ				S	S	21 45 12.3	+0.3
URZ	Urewera	2.60	197	P	Pn	21 44 33.6	-0.1
URZ				S	S	21 45 12.0	0.0
TKGZ	Te Karaka	2.67	183	P	Pn	21 44 34.6	+0.1
TKGZ				S	S	21 45 13.9	+0.6
CNGZ	Carnagh Statio	2.71	177	P	Pn	21 44 35.3	+0.3
RAGZ	Rawiri	2.77	190	P	Pn	21 44 36.5	+0.9
RAGZ				S	S	21 45 17.4	+2.0
MUGZ	Murupara	2.89	200	P	Pn	21 44 37.1	+0.3
MUGZ				S	S	21 45 18.2	+0.6
RIGZ	Rimuhau	2.94	184	P	Pn	21 44 38.1	+0.6
RIGZ				S	S	21 45 18.8	+0.2
RTZ	Ruatahuna	2.97	196	P	Pn	21 44 37.7	0.0
HRRZ	Handcock Road	2.98	208	P	Pn	21 44 39.2	+1.4
WCZ	Waipu Caves	3.02	266	P	Pn	21 44 38.2	0.0
SNGZ	Shannon Statio	3.06	191	P	Pn	21 44 38.1	-0.6
SNGZ				S	S	21 45 23.5	+2.6
PRGZ	Paritu Road	3.15	182	P	Pn	21 44 40.6	+0.9
RAHZ	Arahi	3.24	194	P	Pn	21 44 39.9	-0.7
KNZ	Kokohu	3.26	185	P	Pn	21 44 41.3	+0.4
KNZ				S	S	21 45 24.4	-0.3
WHHZ	Waihua	3.37	191	P	Pn	21 44 42.4	+0.4
MHGZ	Mahia Peninsul	3.38	182	P	Pn	21 44 42.0	-0.3
NMHZ	Naumai	3.47	196	P	Pn	21 44 43.9	+0.6
ARHZ	Aropaoanui	3.59	193	P	Pn	21 44 44.6	+0.1
BKZ	Black Stump Fm	3.61	200	P	Pn	21 44 44.4	-0.5
KAHZ	Kahuranaki	4.13	193	P	Pn	21 44 50.6	-0.3
PNHZ	Pukenui	4.39	199	P	Pn	21 44 53.1	-0.8
PNHZ				S	S	21 45 46.8	-1.7

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*IDC **06** 21:55:47.0±4.9, 8°.01S×128°.22E, h204^{km}±51^{km}, mb2.9/1, mb1 3.1/5, mb1mx2.7/33, mbtmp3.6/5, Error ellipse: s-maj=52.9km s-min=19.7km az=50.0*

ISC 06 21:55:46.3±1.6**, 8°.0S**±0°.1×**128°.3E**±0°.1**, h200**^{km}**, n5, σ1^{s}.44**/9**, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.09	245	P	Pn	21 57 02.0	+0.1
	4.9nm,0.3s,baz=188,slow=3.2,SNR=7.2						
BATI				S	Sn	21 58 00.6	-0.9
	4.4nm,0.3s,baz=322,slow=22,SNR=6.9						
FITZ	Fitzroy Crossi	10.34	194	P	Pn	21 58 10.3	+0.4
	0.4nm,0.3s,baz=11,slow=11,SNR=24						
FITZ				S	S	22 00 05.7	-0.1
	0.4nm,0.3s,baz=28,slow=8.1,SNR=2.8						
WRA	Warramunga Arr	13.19	154	P	Pn	21 58 46.9	+0.7
	0.2nm,0.3s,baz=335,slow=11,SNR=16						
WRA				S	S	22 01 10.7	-2.6
	0.7nm,0.3s,baz=337,slow=20,SNR=9.8						
ASAR	Alice Springs	16.43	162	P	Pn	21 59 27.9	+2.0
	0.2nm,0.3s,baz=342,slow=11,SNR=17						
ASAR				S	S	22 02 27.4	+0.4
	0.1nm,0.3s,baz=322,slow=16,SNR=3.2						
MKAR	Makanchi Array	68.20	328	P	P	22 06 24.9	-0.3
	0.2nm,0.4s,baz=120,slow=7.8,SNR=7.4						

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*IDC **06** 21:56:50.8±0.7, 17°.87S×172°.81E, h0^{km}, mb4.5/10, mb1 4.6/12, mb1mx4.5/25, mbtmp4.4/12, ML5.1/1, MS4.2/22, Ms1 4.2/22, ms1mx4.2/23, Error ellipse: s-maj=25.9km s-min=18.0km az=148.0*

*NEIC **06** 21:56:56.1±1.6, 17°.96S±0°.10×172°.82E±0°.08, h32^{km}±4^{km}, mb4.8/39, Error ellipse: s-maj=14.2km s-min=10.9km az=165.0*

*GCMT **06** 21:56:57.1±0.2, 17°.97S±0°.01×172°.89E±0°.02, h12^{km}, MW5.1/128, Moment Tensor Solution. s61,c82; s128,c191; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.01±.10; $M_{\theta\theta}$5.18±.09; $M_{\phi\phi}$-0.16±.10; $M_{r\theta}$-0.50±.28; $M_{\theta\phi}$-0.57±.09; $M_{\phi r}$0.25±.36; Best double couple: $M_0$5.15600×10^{16} NP1:ϕ_s274.00000°, δ42.00000°, λ-93.00000°. NP2:ϕ_s98.00000°, δ48.00000°, λ-87.00000°. Principal axes: T 5.2670, Plg3.0000°, Azm186.0000°; N -0.2160, Plg2.0000°, Azm276.0000°; P -5.0450, Plg86.0000°, Azm45.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 21:56:56.1±0.4**, 17°.96S**±0°.08×**172°.84E**±0°.08**, h35**^{km}**, n135, σ1^{s}.25**/121**, mb4.8**/38**, MS4.2**/22**, 2C-8D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.97	88	Pn	Pn	21 58 09.0	+0.6
	2.7nm,0.3s,baz=250,slow=13,SNR=17						
SANVU	Saraoutou	5.95	294	Pn	Pn	21 58 20.4	-1.3
LIFNC	LIFOU	5.98	241		Pn	21 58 21.1	-1.1
PINNC	Pines Island,	6.86	227	Pn	Pn	21 58 33.7	-0.5
YATNC	Mamie plateau,	6.92	233	P	Pn	21 58 39.1	+4.0
OUENC	Ouen Island, N	7.17	231		Pn	21 58 37.5	-1.0
OUENC	Ouen Island, N	7.17	231	P	Pn	21 58 41.9	+3.4
DZM	Mont Dzumac	7.27	235	*e*Pn	Pn	21 58 40.4	+0.4
	62nm,1.1s						
DZM				*e*LR	LR	22 00 23.4	
	comp=Z,4μm,26.8s						
DZM	Mont Dzumac	7.27	235	Pn	Pn	21 58 40.0	0.0
	0.6nm,0.3s,baz=58,slow=18,SNR=12						
DZM	Mont Dzumac	7.27	235		Pn	21 58 40.4	+0.4
ONTNC	Ouen Toro	7.39	233		Pn	21 58 42.0	+0.4
ONTNC	Ouen Toro	7.39	233	P	Pn	21 58 43.3	+1.7
NOUC	Port Laguerre	7.39	235	P	Pn	21 58 45.6	+4.0
RAO	Raoul Island	14.07	145	LR	LR	22 04 24.9	
	comp=Z,2μm,20.4s,baz=317,slow=32						
URZ	Urewera	20.57	170	P	P	22 01 32.8	+0.9
	31nm,1.1s,baz=121,slow=24,SNR=5.8						
URZ	Urewera	20.57	170		P	22 01 32.1	+0.3
URZ				IAmb	IAmb	22 01 39.9	
	comp=Z,70nm,1.1s						
ARMA	Armidale	22.93	233	P	P	22 01 56.6	-0.8
KHZ	Kahutara	24.38	179	P	P	22 02 10.3	-0.7
KHZ				IAmb	IAmb	22 02 24.4	
	comp=Z,48nm,1.2s						
CTA	Charters Tower	25.21	261	P	P	22 02 20.3	+1.5
	comp=Z,9.8nm,0.7s,baz=87,slow=12,SNR=4.5						
STKA	Stephens Creek	31.41	238	P	P	22 03 13.5	-0.6
	comp=Z,6.0nm,0.9s,baz=156,slow=6.3,SNR=3.7						
STKA				LR	LR	22 15 21.8	
	comp=Z,572nm,18.4s,baz=62,slow=35						
STKA	Stephens Creek	31.41	238	P	P	22 03 13.6	-0.4
PPT2	Papeete2	35.76	95	*e*LR	LR	22 13 07.9	
	comp=Z,320nm,27.2s						
PPT	Papeete	35.76	95	LR	LR	22 15 12.9	
	comp=Z,126nm,21.2s,baz=300,slow=31						
WR0	Warramunga Arr	36.22	261	P	P	22 03 55.2	-0.8
WB0	Warramunga Arr	36.37	261	P	P	22 03 55.4	-2.0
WB0				IAmb	IAmb	22 03 59.7	
	comp=Z,11nm,0.9s						
WB2	Warramunga Arr	36.40	261	P	P	22 03 56.8	-0.7
WB2				IAmb	IAmb	22 03 59.4	
	comp=Z,12nm,1.1s						
WRAB	Tennant Creek	36.40	261	P	P	22 03 56.3	-1.3
WRAB				IAmb	IAmb	22 03 59.9	
	comp=Z,12nm,1.0s						
WRA	Warramunga Arr	36.41	261	P	P	22 03 57.2	-0.5
	comp=Z,8.2nm,1.0s,baz=91,slow=8.3,SNR=15						
WRA				LR	LR	22 17 52.7	
	comp=Z,111nm,20.8s,baz=145,slow=35						
WRA	Warramunga Arr	36.41	261	P	P	22 03 56.2	-1.5
WRA					PcP	22 06 20.5	-1.1
H11S2	WAKE ISLAND Hy	36.72	350	T	T	22 43 02.9	
	baz=171						
H11S3	WAKE ISLAND Hy	36.73	350	T	T	22 43 01.7	
	baz=171						
H11S1	WAKE ISLAND Hy	36.74	350	T	T	22 43 01.2	
	baz=171						
AS31	Alice Springs	36.75	254	P	P	22 04 00.2	-0.4
ASAR	Alice Springs	36.75	254	P	P	22 04 00.3	-0.3
	comp=Z,12nm,0.9s,baz=84,slow=8.8,SNR=45						
ASAR				PcP	PcP	22 06 21.4	-1.2
	comp=Z,2.1nm,0.9s,baz=90,slow=2.5,SNR=8.4						
ASAR				LR	LR	22 18 31.3	
	comp=Z,221nm,21.3s,baz=100,slow=35						
ASAR	Alice Springs	36.75	254	P	P	22 04 00.1	-0.5
ASAR					PcP	22 06 22.5	-0.1
MTN	Manton Dam	40.47	271	P	P	22 04 31.7	-0.1
MTN				IAmb	IAmb	22 04 34.9	
	comp=Z,20nm,1.1s						
KNRA	Kununurra	42.18	266	P	P	22 04 45.1	-0.7
KNRA				IAmb	IAmb	22 04 48.8	
	comp=Z,26nm,1.1s						
FORT	Forrest	42.47	244	P	P	22 04 47.3	-0.8
FORT				IAmb	IAmb	22 04 49.0	
	comp=Z,28nm,1.0s						
SWI	Sorong	44.23	288	P	P	22 05 03.1	+0.7
	comp=Z,27nm,1.1s						
SOEI	Soe	47.74	273	P	P	22 05 30.5	+0.2
	comp=Z,26nm,1.1s						
SOEI	Soe	47.74	273	P	P	22 05 29.4	-0.9
SANI	Sanana	48.59	284	P	P	22 05 36.9	+0.2
	comp=Z,702nmcomp=Z,11nm,0.9s						
PSA00	Pilbara Seismi	49.81	257	P	P	22 05 45.7	-0.2
KAPI	Kappang	53.40	277	P	P	22 06 12.1	-0.8
TOLI2	Tolitoli	54.60	285	P	P	22 06 20.3	-1.3
TOLI2				IAmb	IAmb	22 06 24.2	
	comp=Z,9.9nm,1.0s						
MJAR	Matsushiro Arr	63.31	329	P	P	22 07 22.3	+0.7
	comp=Z,4.7nm,0.9s,baz=156,slow=6.6,SNR=5.2						
MJAR				LR	LR	22 30 59.9	
	comp=Z,141nm,21.8s,baz=145,slow=32						
MJAR	Matsushiro Arr	63.31	329	P	P	22 07 21.8	+0.1
KSRS	Korea Array	69.46	323	P	P	22 08 04.8	+3.9
	comp=Z,0.6nm,0.6s,baz=137,slow=7.1,SNR=1.8						
KSRS				LR	LR	22 36 33.3	
	comp=Z,84nm,19.4s,baz=122,slow=34						
NJ2	Nanjing	71.73	314	*e*P	P	22 08 16.3	+1.4
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
PETK	Petropavlovsk-	71.97	350	LR	LR	22 32 10.2	
	comp=Z,376nm,21.7s,baz=150,slow=30						
QSPA	South Pole Qui	72.09	180	P	P	22 08 15.7	-1.0
QSPA				IAmb	IAmb	22 08 17.0	
	comp=Z,17nm,1.1s						
USRK	Ussuriysk Ar.	72.24	330	LR	LR	22 36 58.8	
	comp=Z,143nm,19.7s,baz=135,slow=33						
TIA	Tai'an	75.32	316	⇑P	P	22 08 37.5	+1.5
TIA				pmax	pmax		
	comp=Z,12nm,1.1s						
BJI	Beijing	78.16	319	P	P	22 08 55.7	+3.8
BJI				pmax	pmax		
	comp=Z,10.0nm,2.3s						
XAN	Xi'an	79.82	311	P	P	22 09 02.6	+1.4
XAN				pP	PcP	22 09 06.8	-2.0
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MAW	Mawson	80.88	201	P	P	22 09 06.5	+0.2
	comp=Z,3.8nm,0.8s,baz=191,slow=5.2,SNR=4.2						
MAW				LR	LR	22 41 22.1	
	comp=Z,110nm,18.6s,baz=66,slow=33						
CMAR	Chiang Mai Arr	81.13	293	LR	LR	22 43 39.5	
	comp=Z,25nm,20.9s,baz=100,slow=35						
HHC	Hu-ho-hao-te	81.53	318	*e*P	P	22 09 13.0	+2.7
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,6.6s						
SEY	Seymchan	82.22	351	LR	LR	22 39 42.7	
	comp=Z,412nm,21.9s,baz=160,slow=31						
CMB	Columbia Colle	83.78	47	P	P	22 09 21.3	-0.7
L19K	White Mountain	83.87	15	P	P	22 09 23.4	+1.6
YBH	Yreka Blue Hor	84.03	43	LR	LR	22 37 51.2	
	comp=Z,214nm,20.6s,baz=286,slow=29						
ISA	Isabella, Lake	84.04	50	P	P	22 09 22.9	-0.5
ISA				IAmb	IAmb	22 09 26.0	
	comp=Z,8.6nm,1.1s						
TTA	Tatalina	84.25	14	P	P	22 09 25.3	+1.5
TTA				IAmb	IAmb	22 09 26.7	
	comp=Z,12nm,1.2s						
LZH	Lanzhou	84.45	311	*e*P	P	22 09 29.5	+3.9
LZH				pP	pP	22 09 34.0	-1.7
LZH				sP	pwP	22 09 48.1	+8.4
LZH				pmax	pmax		
	comp=Z,14nm,1.4s						
NVAR	Mina Array Bea	85.42	47	LR	LR	22 43 57.6	
	comp=Z,182nm,18.0s,baz=272,slow=33						
BILL	Bilibino	85.89	358	P	P	22 09 31.3	-0.5
BBB	Bella Bella	86.57	32	LR	LR	22 37 45.0	
	comp=Z,394nm,22.0s,baz=250,slow=28						
ILAR	Eielson Array	88.03	16	P	P	22 09 40.7	-1.6
	comp=Z,0.9nm,0.7s,baz=236,slow=5.0,SNR=11						
ILAR				LR	LR	22 44 28.0	
	comp=Z,235nm,19.1s,baz=200,slow=32						
ILAR	Eielson Array	88.03	16	P	P	22 09 40.4	-1.9
SONM	Songino Array	88.29	322	P	P	22 09 42.6	-1.5
	comp=Z,1.3nm,1.0s,baz=114,slow=1.8,SNR=7.1						
SONM				LR	LR	22 49 40.4	
	comp=Z,51nm,18.4s,baz=123,slow=36						
SONM	Songino Array	88.29	322	P	P	22 09 44.0	-0.2
SONM				IAmb	IAmb	22 09 48.4	
	comp=Z,8.4nm,1.4s						
SPR3	Spring Creek 3	88.46	48	P	P	22 09 45.3	-0.1
SPR3				IAmb	IAmb	22 09 50.5	
	comp=Z,13nm,1.4s						
E08A	Dider Farm, El	88.64	40	P	P	22 09 45.1	-0.5
GTA	Gaotai	88.77	312	⇑P	P	22 09 48.3	+1.7
GTA				pP	pP	22 09 54.3	-2.4
GTA				sP	sP	22 09 57.3	-3.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BMO	Blue Mountains	88.98	42	P	P	22 09 46.8	-0.6
BMO				IAmb	IAmb	22 10 03.5	
	comp=Z,5.1nm,1.4s						
B08A	Colville Reser	89.36	38	P	P	22 09 49.6	+0.6
F10A	Beach Ranch, E	89.54	41	P	P	22 09 50.2	+0.2
F10A				IAmb	IAmb	22 09 54.0	
	comp=Z,5.4nm,1.1s						
MVU	Marysvale	89.78	49	P	P	22 09 50.5	-1.0
SNAA	Sanae	90.55	181	P	P	22 09 51.9	-2.4
SNAA	Sanae	90.55	181	P	P	22 09 53.0	-1.3
NEW	Newport	90.63	39	LR	LR	22 41 17.9	
	comp=Z,175nm,21.9s,baz=274,slow=29						
Q16A	Castle Valley	90.69	49	P	P	22 09 54.0	-1.6
TMUT	Trail Mountain	90.81	49	P	P	22 09 55.4	-1.0
TMUT				IAmb	IAmb	22 10 00.1	
	comp=Z,7.1nm,1.4s						
VNA3	Neumayer Olymp	91.01	179	P	P	22 09 54.9	-1.5
P17A	Butcher Ranch,	91.21	49	P	P	22 09 57.3	-0.8
P17A				IAmb	IAmb	22 10 03.6	
	comp=Z,5.7nm,1.3s						
MNTX	Cornudas Mount	92.54	58	P	P	22 10 03.0	-1.1
MNTX				IAmb	IAmb	22 10 07.0	
	comp=Z,3.4nm,1.1s						
TX31	Lajitas Ar. Si	93.17	60	P	P	22 10 06.5	-0.8
TX32	Lajitas Array	93.17	60	P	P	22 10 06.8	-0.4
TX32				IAmb	IAmb	22 10 10.1	
	comp=Z,6.7nm,1.1s						
TXAR	Lajitas Array	93.17	60	P	P	22 10 08.4	+1.2
	comp=Z,3.0nm,0.9s,baz=230,slow=5.7,SNR=24						
TXAR				LR	LR	22 43 36.0	
	comp=Z,164nm,21.0s,baz=0.0,slow=30						
PDAR	Pinedale Array	93.26	46	LR	LR	22 50 13.8	
	comp=Z,79nm,18.1s,baz=303,slow=34						
PLCA	Paso Flores	97.17	137	LR	LR	22 44 02.8	
	comp=Z,73nm,21.7s,baz=235,slow=29						
YKA	Yellowknife Ar	97.99	27	LR	LR	22 46 58.7	
	comp=Z,176nm,21.5s,baz=0.0,slow=31						
WMQ	Urumqi	98.81	313	*e*P	Pdif	22 10 34.8	+2.3

AKASG	Malin Array Be	136.37	327	PKP	PKPdf	22 16 13.3	-0.7
	comp=Z,0.1nm,0.3s,baz=40,slow=1.0,SNR=5.1						
MPLH	Magyarpolny	144.50	331	*e*P	PKPdf	22 16 28.7	-0.2
CKRC	Cesky Krumlov	144.63	335	*e*PKP	PKPdf	22 16 30.0	+0.9
KHC	Kasperske Hory	144.67	336	*e*PKP	PKPdf	22 16 29.2	0.0
CONA	Conrad Observa	144.69	333	*e*P	PKPdf	22 16 29.4	+0.1
	comp=Z,12nm,1.4s						
GERES	GERESS Array B	144.85	336	PKP	PKPdf	22 16 29.8	+0.2
	comp=Z,2.8nm,0.7s,baz=32,slow=3.3,SNR=28						
KOVH	Kovagotottos	145.00	329	*e*P	PKPdf	22 16 29.9	+0.1
GRF	Grafenberg Arr	145.05	339	*e*PKPbc	PKPdf	22 16 30.2	+0.5
	baz=30,slow=3.0						
ARSA	Arzberg	145.35	332	*e*P	PKPab	22 16 31.3	+0.9
	comp=Z,14nm,1.6s						
MOA	Molln	145.42	334	*i* P	PKPab	22 16 31.7	+1.0
	comp=Z,16nm,1.1s,SNR=7.5						
TNS	Taunus Mts	145.47	342	*e*PKPbc	PKPab	22 16 31.4	+0.6
	baz=30,slow=3.0						
KOGS	Kog	145.63	331	*i* PKPbc	PKPab	22 16 31.6	+0.1
BTNL	Ternell	145.76	345	*d*PKP	PKPab	22 16 32.6	+0.8
MEM	Membach	145.77	345	*d*PKP	PKPab	22 16 32.2	+0.4
BHOU	Houvegnez	146.00	345	*d*PKPab	PKPab	22 16 33.4	+0.7
SOKA	Soboth	146.01	332	*i* P	PKPab	22 16 33.3	+0.4
	comp=Z,13nm,1.3s,SNR=7.2						
RJOB	Jochberg	146.10	336	*e*PKPbc	PKPab	22 16 33.5	+0.2
	baz=30,slow=3.0						
BCLA	Clavier	146.11	346	*d*PKPab	PKPab	22 16 33.1	0.0
FUR	Furstenfeldbru	146.33	338	*e*PKPbc	PKPab	22 16 34.7	+0.7
	baz=30,slow=3.0						
BMRD	Maredsous	146.35	346	*d*PKPab	PKPab	22 16 34.3	+0.4
OBKA	Obir	146.35	333	*e*P	PKPbc	22 16 33.6	+0.2
	comp=Z,6.7nm,1.2s						
RCHB	Rochefort	146.38	346	*d*PKPab	PKPab	22 16 34.1	+0.1
KBA	Koelnbreinsper	146.41	334	*e*P	PKPbc	22 16 34.1	+0.4
	comp=Z,8.7nm,1.1s						
STU	Stuttgart	146.52	340	*e*PKPbc	PKPab	22 16 35.2	+0.5
	baz=30,slow=3.0						
DOU	Dourbes	146.58	346	*d*PKPab	PKPab	22 16 35.1	+0.2
WLF	Walferdange	146.60	344	*d*PKPab	PKPab	22 16 35.3	+0.3
MYKA	Terra Mystica	146.65	334	*e*P	PKPbc	22 16 34.6	+0.3
	comp=Z,0.4nm,0.3s						
BOJS	Bojanci	146.80	331	*i* PKPbc	PKPab	22 16 35.6	-0.3
WATA	Walderalm	146.91	336	*e*P	PKPbc	22 16 35.6	+0.5
	comp=Z,11nm,1.0s						
WTTA	Wattenberg	146.94	336	*i* P	PKPbc	22 16 35.8	+0.6
	comp=Z,22nm,1.7s,SNR=6.8						
ABTA	Abfaltersbach	147.02	335	*e*P	PKPbc	22 16 35.4	0.0
	comp=Z,9.4nm,1.0s						
MOTA	Moosalm	147.08	337	*e*P	PKPbc	22 16 36.2	+0.6
	comp=Z,20nm,1.2s						
RETA	Reutte	147.08	337	*e*P	PKPbc	22 16 36.1	+0.6
	comp=Z,12nm,1.4s						
SQTA	Sankt Quirin	147.14	337	*i* P	PKPbc	22 16 36.3	+0.6
	comp=Z,18nm,1.4s,SNR=7.0						
UBR	Ueberruh	147.16	338	*e*PKPbc	PKPbc	22 16 36.2	+0.6
	baz=30,slow=3.0						
BFO	Black Forest	147.18	341	*e*PKPbc	PKPbc	22 16 36.4	+0.7
	baz=30,slow=3.0						
FETA	Feichten	147.49	337	*e*P	PKPbc	22 16 37.2	+0.5
	comp=Z,12nm,1.1s						
DAVA	Damuels	147.57	338	*e*P	PKPbc	22 16 37.7	+0.7
	comp=Z,14nm,1.2s						
ESDC	Sonseca Array	158.19	353	PKPab	PKPab	22 17 23.9	+0.3
	comp=Z,2.0nm,1.1s,baz=21,slow=3.2,SNR=5.5						
TORD	Torodi Ar. Bea	170.22	242	PKP	PKPdf	22 16 59.9	-1.4
	comp=Z,1.3nm,1.1s,baz=217,slow=4.1,SNR=4.7						
TORD				PKPab	PKPab	22 18 16.3	-0.9
	comp=Z,0.6nm,0.9s,baz=121,slow=1.5,SNR=4.6						
TORD	Torodi Ar. Bea	170.22	242		PKPdf	22 17 00.5	-0.8

NOU ***06*** *22:12:05.3, 33°.57S×118°.08E, h0km, MLv3.7/9, Western Australia*

AUST ***06*** *22:12:07.4±1.2, 33°.51S×118°.09E, h10km, Error ellipse: s-maj=12.8km s-min=11.1km az=68.0*

CUPWA ***06*** *22:12:08.5±0.9, 33°.51S×117°.94E, h2km±22km, ML2.9, Region: WESTERN AUSTRALIA*

ISC 06 22:12:06.8±1.3, **33°.48S**±0°.03×**118°.07E**±0°.05, **h9**km±11km, **n26,** σ**1ˢ22**/34, **Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GNOW	Gnowangerup	0.42	200	P	Pg	22 12 15.1	+0.2
GNOW				S	Sg	22 12 20.1	-0.4
AUKUL	Kulin High Sch	0.81	5	P	Pg	22 12 23.8	+1.4
NWAO	Narrogin (SRO)	0.89	308	P	Pg	22 12 23.8	-0.2
BEAU	Beaufort	0.90	262	P	Pg	22 12 22.7	-1.4
PING	Pingelly	1.33	317	P	Pn	22 12 31.3	-0.3
AUALB	St Joseph's Co	1.52	185	P	Pn	22 12 34.9	+0.7
	baz=1.5						
AUALB				S	Sb	22 12 53.0	-1.6
	baz=1.5						
AUHAR	St Anne's Scho	1.87	281	P	Pn	22 12 40.7	+1.8
	baz=1.9						
AUHAR				S	Sn	22 13 03.8	+1.1
	baz=1.9						
KLBR	Kellerberrin	1.90	352	P	Pn	22 12 41.0	+1.6
	baz=1.9						
KLBR	Kellerberrin	1.90	352	P	Pn	22 12 41.0	+1.6
MUN	Mundaring	2.17	313	P	Pn	22 12 43.4	+0.3
	baz=2.2						
MUN				S	Sn	22 13 10.3	+0.1
	baz=2.2						
MUN	Mundaring	2.17	313	P	Pn	22 12 43.4	+0.3
MUN				S	Sn	22 13 10.3	+0.1
MUN	Mundaring	2.17	313	P	Pn	22 12 43.3	+0.2
AUBUS	Georgiana Moll	2.25	265	P	Pn	22 12 46.1	+1.9
	baz=2.3						
AUBUS				S	Sn	22 13 14.8	+2.6
	baz=2.3						
AUMAZ	Mazenod Senior	2.25	310	P	Pn	22 12 45.3	+1.0
	baz=2.3						
BLDU	Ballidu	3.08	338	P	Pn	22 12 56.2	+0.5
MORW	Morawa	4.73	338	P	Pn	22 13 18.9	+0.5
	baz=4.8						
MORW				S	Sn	22 14 11.0	-2.3
	baz=4.8						
MORW	Morawa	4.73	338	P	Pn	22 13 18.9	+0.5
MORW				S	Sn	22 14 11.0	-2.3
MORW	Morawa	4.73	338	P	Pn	22 13 18.7	+0.4
MEEK	Meekatharra	6.84	4	P	Pn	22 13 48.4	+1.1
	baz=6.9						
MEEK	Meekatharra	6.84	4	P	Pn	22 13 48.4	+1.1
MEEK	Meekatharra	6.84	4	P	Pn	22 13 48.4	+1.1
FORT	Forrest	8.89	75	P	Pn	22 14 16.3	+0.9
	baz=8.9						
FORT	Forrest	8.89	75	P	Pn	22 14 15.3	-0.1
WRKA	Warakurna	12.26	49	P	Pn	22 15 01.2	-0.5
MULG	Mulgathing	13.95	81	P	Pn	22 15 24.3	-0.4
OOD	Oodnadatta	16.18	74	P	Pn	22 15 54.3	-0.1

FUNV ***06*** *22:14:59.0, 8°.41N×71°.44W, h5km, MW3.6*

ISC 06 22:14:57.8±1.3, **8°.48N**±0°.04×**71°.42W**±0°.03, **h3**km±11km, **n25,** σ**1ˢ09**/44, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.59	109	*e*P	Pg	22 15 02.4	-6.8
SOCV				*e*S	Sg	22 15 16.9	+0.1
SOCV	Socops	0.59	109	*e*S	Sb	22 15 17.7	-1.9
SDV	Santo Domingo	0.88	62	*e*P	Pg	22 15 14.6	-0.1
SDV				*e*S	Sg	22 15 26.6	+0.4
CAPV	Capacho	1.07	236	*e*P	Pg	22 15 18.0	-0.4
CAPV				*e*S	Sg	22 15 32.7	+0.4
TORV	Torococo	1.60	47	*e*S	Sn	22 15 47.9	-0.5
PAMC	Pamplona, Colo	1.70	228	*e*P	Pn	22 15 23.8	-5.0
PAMC				*e*S	Sg	22 15 52.8	+0.3
OCAC	Ocana	1.89	263	*e*P	Pn	22 15 25.3	-5.9
OCAC				*e*S	Sn	22 15 56.1	+0.4
TAMC	Tame, Arauca	2.06	190	*e*P	Pg	22 15 37.9	+0.6
TAMC				*e*S	Sg	22 16 03.8	-0.3
SANV	Sanarito	2.12	61	*e*P	Pn	22 15 34.7	+0.3
SANV				*e*S	Sn	22 16 02.4	+1.1
ELOV	Elorza	2.42	127	*e*P	Pn	22 15 38.6	+0.3
ELOV				*e*S	Sb	22 16 11.3	-0.9
DABV	Dabajuro	2.55	18	*e*P	Pn	22 15 41.7	+1.6
DABV				*e*S	Sn	22 16 11.5	-0.2
DABV	Dabajuro	2.55	18	*e*P	Pn	22 15 40.7	+0.5
DABV				*e*S	Sn	22 16 12.0	+0.3
BARC	Barichara	2.56	223	*e*P	Pn	22 15 38.7	-1.8
BARC				*e*S	Sg	22 16 19.0	-1.1
SMLC	San Martn de	2.64	277	*e*P	Pn	22 15 41.0	-0.3
SMLC				*e*S	Sn	22 16 11.7	-2.2
BRRC	Barranca, Sant	2.65	239	*e*P	Pb	22 15 46.3	+0.4
BRRC				*e*S	Sg	22 16 22.0	-0.9
SIQV	Siquisique	2.68	36	*e*P	Pn	22 15 43.2	+1.2
SIQV				*e*S	Sn	22 16 15.2	+0.1
CRJC	Cerrejon, Guaj	2.91	330	*e*P	Pn	22 15 44.2	-1.0
CRJC				*e*S	Sn	22 16 20.6	-0.2
RUSC	La Rusia	3.05	213	*e*P	Pn	22 15 48.2	+0.8
RUSC				*e*S	Sn	22 16 25.9	+1.1
MAPV	Macapo	3.22	65	*e*P	Pn	22 15 50.0	+0.6
MAPV				*e*S	Sn	22 16 27.5	-0.8
BAUV	El Baul	3.37	82	*e*P	Pn	22 15 51.8	+0.3
BAUV				*e*S	Sn	22 16 31.5	-0.6
ZARC	Zaragoza, Cauc	3.54	254	*e*P	Pn	22 15 54.0	+0.2
ZARC				*e*S	Sn	22 16 35.9	-0.4
PTBC	PUERTO BERRIO,	3.57	238	*e*P	Pn	22 15 53.7	-0.5
BENV	Beln	4.05	68	*e*P	Pn	22 16 01.6	+0.7
BENV				*e*S	Sn	22 16 47.3	-1.6
MOTC	Monteria, Cord	4.21	274	*e*P	Pn	22 16 04.1	+1.1
MOTC				*e*S	Sn	22 16 54.4	+1.8
GUY2C	Guyana, Caldas	5.08	231	*e*P	Pn	22 16 18.2	+2.9
GUY2C				*e*S	Sn	22 17 16.9	+2.2

CNRM ***06*** *22:17:41.0, 34°.94N×6°.06W, h75km, ml3.1*

INMG ***06*** *22:17:43.5±2.7, 35°.13N×6°.03W, h82km±8km, ML2.8, Error ellipse: s-maj=5.6km s-min=5.0km az=7.0*

MDD ***06*** *22:17:43.7±0.9, 35°.11N×5°.96W, h73km±14km, mb3.9/21, Error ellipse: s-maj=8.8km s-min=4.6km az=7.0, PRXIMO*

IGIL ***06*** *22:17:43.0, 35°.09N×5°.90W, h30km, ML3.1*

SFS ***06*** *22:17:43.0, 35°.10N×5°.90W, h84km, ML3.5, TLETA RISSANA (MARRUECOS)*

LDG ***06*** *22:17:44.5±0.2, 35°.14N×5°.93W, h30km, Ml3.3/5, Error ellipse: s-maj=4.0km s-min=2.0km az=3.0*

ISC 06 22:17:40.7±0.9, **35°.09N**±0°.04×**5°.94W**±0°.03, **h93**km±12km, **n143,** σ**2ˢ19**/258, **8D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEU	Ceuta	0.93	30	P	Pn	22 18 01.1	+1.3
CEU				S	Sn	22 18 14.4	+0.4
CEU	Ceuta	0.93	30	P	Pn	22 18 01.1	+1.3
CEU				S	Sn	22 18 14.4	+0.4
EJIF	Jimena Fronter	1.41	16	⇓P	Pn	22 18 07.7	+2.3
	SNR=18						
EJIF				S	Sn	22 18 24.9	+0.8
	SNR=7.9						
PALE	Palemas	1.64	85	P	Pn	22 18 09.2	+0.7
PALE				S	Sn	22 18 29.7	+0.2
LCRM	LCR	1.66	147	P	Pn	22 18 09.9	+1.1
LCRM				S	Sn	22 18 30.9	+0.7
IFR	Ifrane	1.71	157	P	Pn	22 18 07.7	-1.8
IFR				S	Sn	22 18 27.0	-4.3
ZHG	ZHG	1.74	200	P	Pn	22 18 09.2	-0.7
ZHG				S	Sn	22 18 30.1	-1.8
ESPR	Espera	1.77	2	⇓P	Pn	22 18 11.7	+1.7
	4.2nm,0.1s,SNR=18						
ESPR				S	Sn	22 18 32.4	0.0
	11nm,0.2s,SNR=6.0						
AKLM	AKL	1.80	108	P	Pn	22 18 12.0	+1.4
AKLM				S	Sn	22 18 32.5	-0.7
LIJA	Lijar	1.86	13	P	Pn	22 18 12.5	+1.2
LIJA				S	Sn	22 18 32.0	-2.5
LIJA	Lijar	1.86	13	P	Pn	22 18 12.5	+1.2
LIJA				S	Sn	22 18 32.0	-2.5
EMAL	Malaga-Limoner	2.07	36	P	Pn	22 18 14.6	+0.7
EMAL				S	Sn	22 18 34.3	-4.9
EMAL	Malaga-Limoner	2.07	36	P	Pn	22 18 14.6	+0.7
EMAL				S	Sn	22 18 34.3	-4.9
AVE	Averroes	2.17	215	P	Pn	22 18 15.7	+0.4
AVE				S	Sn	22 18 32.7	-9.0
AVE	Averroes	2.17	215	P	Pn	22 18 14.5	-0.8
AVE				S	Sn	22 18 38.7	-2.9
GOG	Mont Gurugu	2.41	86	P	Pn	22 18 18.8	+0.2
GOG				S	Sn	22 18 48.2	+0.7
MD31	MD31	2.43	156	P	Pn	22 18 18.9	+0.2
MD31				S	Sn	22 18 45.1	-2.8
EMEL	Melilla	2.45	84	S	Sn	22 18 47.2	-1.0
	67nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	2.50	36	P	Pn	22 18 22.6	+2.9
	3.0nm,0.2s,SNR=7.9						
EGOR				S	Sn	22 18 51.4	+1.8
	17nm,0.2s,SNR=7.9						
MDT	Midelt	2.53	154	P	Pn	22 18 20.0	-0.1
MDT				S	Sn	22 18 46.2	-4.1
ELGU	Los Guajares,	2.58	46	P	Pn	22 18 22.1	+1.4
	2.3nm,0.1s,SNR=7.9						
ELGU				S	Sn	22 18 50.4	-1.0
	12nm,0.1s,SNR=7.9						
PBDV	Barranco-do-Ve	2.68	324	*e*P	Pn	22 18 23.4	+1.3
PBDV				S	Sn	22 18 52.9	-1.0
PBDV				A	A	22 18 58.8	
	33nm,0.2s						
PBDV	Barranco-do-Ve	2.68	324	P	Pn	22 18 23.4	+1.3
PBDV				S	Sn	22 18 52.9	-1.0
	33nm,0.2s						
PVAQ	Vaqueiros	2.72	329	⇓*e*P	Pn	22 18 23.9	+1.4
PVAQ				S	Sn	22 18 53.7	-0.9
PVAQ				A	A	22 18 55.1	
	81nm,0.1s						
PVAQ	Vaqueiros	2.72	329	P	Pn	22 18 23.9	+1.4
PVAQ				S	Sn	22 18 53.7	-0.9
	81nm,0.1s						
PVAQ	Vaqueiros	2.72	329	P	Pn	22 18 23.8	+1.4
PVAQ				S	Sn	22 18 55.7	+1.1
EMIN	Mina Concepcio	2.73	348	⇓P	Pn	22 18 24.1	+1.3
	12nm,0.1s,SNR=18						
EMIN				S	Sn	22 18 53.0	-2.0
	7.2nm,0.1s,SNR=5.8						
EGRO	El Granado	2.74	333	⇓P	Pn	22 18 24.2	+1.5
	32nm,0.1s,SNR=18						
EGRO				S	Sn	22 18 53.9	-1.2
	48nm,0.2s,SNR=14						
JBK	JBK	2.88	104	P	Pn	22 18 25.2	+0.3
JBK				S	Sn	22 18 58.1	-0.7
TAF	Taforalt	2.91	94	P	Pn	22 18 26.7	+1.6
TAF				S	Sn	22 19 03.0	+3.7
ECAB	El Cabril	3.00	8	P	Pn	22 18 27.8	+1.4
	7.1nm,0.1s,SNR=84						
ECAB				S	Sn	22 18 59.7	-1.8
	3.1nm,0.2s,SNR=6.2						
PCVE	Castro Verde	3.05	327	*e*P	Pn	22 18 28.7	+1.8
PCVE				S	Sn	22 19 02.1	-0.5
PCVE				A	A	22 19 03.5	
	42nm,0.6s						
PCVE	Castro Verde	3.05	327	P	Pn	22 18 28.7	+1.8
PCVE				S	Sn	22 19 02.1	-0.5
	42nm,0.6s						
EBER	Berja	3.06	53	P	Pn	22 18 28.7	+1.5
	1.4nm,0.2s,SNR=9.1						
EBER				S	Sn	22 19 02.4	-0.6
	7.8nm,0.2s,SNR=9.3						
SRHM	Skhour des Reh	3.08	213	P	Pn	22 18 27.1	-0.5
SRHM				S	Sn	22 19 05.6	+2.0
PFVI	Vila Bisbo	3.10	312	*e*P	Pn	22 18 28.8	+1.2
PFVI				S	Sn	22 19 02.7	-1.1
PFVI				A	A	22 19 07.7	
	18nm,0.1s						
PFVI	Vila Bisbo	3.10	312	P	Pn	22 18 28.5	+0.8
	5.4nm,0.1s,SNR=8.4						
PFVI				S	Sn	22 19 02.6	-1.2
	29nm,0.1s,SNR=9.7						
PFVI	Vila Bisbo	3.10	312	P	Pn	22 18 28.7	+1.0
PFVI				S	Sn	22 19 04.8	+1.0
MORF	Marmelete	3.11	316	*e*P	Pn	22 18 29.0	+1.1
MORF				*e*S	Sn	22 19 02.7	-1.5
MORF				IAML		22 19 06.2	
	comp=N,68nm,0.2s						
MORF	Marmelete	3.11	316	*e*P	Pn	22 18 28.8	+0.9
MORF				S	Sn	22 19 03.0	-1.2
MORF				A	A	22 19 05.2	
	comp=N,58nm,0.1s						
MORF	Marmelete	3.11	316	P	Pn	22 18 28.8	+0.9
MORF				S	Sn	22 19 03.0	-1.2
	comp=N,58nm,0.1s						
PBAR	Barrancos	3.20	344	*e*P	Pn	22 18 30.6	+1.6
PBAR				S	Sn	22 19 05.5	-0.7
PBAR				A	A	22 19 07.4	
	comp=N,14nm,0.1s						
PBAR	Barrancos	3.20	344	P	Pn	22 18 30.6	+1.6
PBAR				S	Sn	22 19 05.5	-0.7
	comp=N,14nm,0.1s						
EADA	Adamuz	3.26	19	P	Pn	22 18 31.7	+1.9
	comp=N,2.3nm,0.0s,SNR=56						
EADA				S	Sn	22 19 06.0	-1.7
	comp=N,14nm,0.1s,SNR=5.5						
MESJ	Messejana	3.30	327	*e*P	Pn	22 18 31.8	+1.5
MESJ				*e*S	Sn	22 19 07.3	-1.3
MESJ				IAML		22 19 09.8	
	comp=N,56nm,0.2s						
MESJ	Messejana	3.30	327	⇓*e*P	Pn	22 18 31.9	+1.5
MESJ				S	Sn	22 19 08.1	-0.5
MESJ				A	A	22 19 12.9	
	comp=N,31nm,0.3s						
MESJ	Messejana	3.30	327	P	Pn	22 18 31.9	+1.5
MESJ				S	Sn	22 19 08.1	-0.5
	comp=N,31nm,0.3s						
PBEJ	Beja	3.31	333	*e*P	Pn	22 18 32.0	+1.5
PBEJ				S	Sn	22 19 08.1	-0.8
PBEJ				A	A	22 19 11.8	
	comp=N,19nm,0.4s						
PBEJ	Beja	3.31	333	P	Pn	22 18 32.0	+1.5
PBEJ				S	Sn	22 19 08.1	-0.8
	comp=N,9.6nm,0.4s						
PTEO	Sao Teotonio	3.33	318	*e*P	Pn	22 18 32.0	+1.4
PTEO				S	Sn	22 19 08.5	-0.7
PTEO				A	A	22 19 11.2	
	comp=N,23nm,0.2s						
PTEO	Sao Teotonio	3.33	318	P	Pn	22 18 32.0	+1.4
PTEO				S	Sn	22 19 08.5	-0.7
	comp=N,12nm,0.2s						
GORA	Gorafe	3.34	44	S	Sn	22 19 11.0	+1.3
	SNR=7.9						
EQES	Quesada	3.56	40	P	Pn	22 18 36.3	+2.5
	comp=N,2.6nm,0.1s,SNR=18						
EQES				S	Sn	22 19 14.8	-0.1
	comp=N,14nm,0.1s,SNR=18						
ENIJ	Nijar	3.56	57	P	Pn	22 18 36.3	+2.5
	comp=N,1.3nm,0.2s,SNR=4.0						
ENIJ				S	Sn	22 19 13.7	-1.2
	comp=N,5.4nm,0.2s,SNR=7.9						
PNCL	Nicolau / Gran	3.66	326	*e*P	Pn	22 18 36.7	+1.5
PNCL				S	Sn	22 19 16.6	-0.8
PNCL				A	A	22 19 18.3	
	comp=N,17nm,0.4s						
PNCL	Nicolau / Gran	3.66	326	P	Pn	22 18 36.7	+1.5
PNCL				S	Sn	22 19 16.6	-0.8
	comp=N,17nm,0.4s						
EBAD	Badajoz	3.75	347	P	Pn	22 18 38.1	+1.7
	comp=N,17nm,0.1s,SNR=116						
EBAD				S	Sn	22 19 17.9	-1.8
	comp=N,11nm,0.1s,SNR=4.8						
EVO	Evora	3.81	335	P	Pn	22 18 39.1	+1.8
EVO				S	Sn	22 19 19.6	-1.4
EVO	Evora	3.81	335	⇓*i*P	Pn	22 18 39.1	+1.8
EVO				S	Sn	22 19 19.9	-1.1
EVO				A	A	22 19 21.4	
	comp=N,43nm,0.1s						
EVO	Evora	3.81	335	P	Pn	22 18 39.1	+1.8
EVO				S	Sn	22 19 19.9	-1.1
	comp=N,43nm,0.1s						
TDRA	Tendrara	3.84	121	P	Pn	22 18 38.6	+0.8
TDRA				S	Sn	22 19 19.2	-2.7
PESTR	Estremoz	3.99	341	*e*P	Pn	22 18 41.4	+1.7
PESTR				S	Sn	22 19 24.0	-1.4
PESTR				A	A	22 19 31.8	
	comp=N,6.5nm,0.3s						
PESTR	Estremoz	3.99	341	P	Pn	22 18 41.2	+1.6
PESTR				S	Sn	22 19 27.3	+1.9
SESP	Santiago Espad	4.07	41	P	Pn	22 18 43.2	+2.3
	comp=N,1.5nm,0.1s,SNR=7.9						
SESP				S	Sn	22 19 26.1	-1.4
	comp=N,18nm,0.2s,SNR=7.9						
OUK	Oukaimeden	4.20	203	P	Pn	22 18 42.6	-0.2
OUK				S	Sn	22 19 26.6	-4.3
OUZM	OUZ	4.23	190	P	Pn	22 18 43.4	+0.4
OUZM				S	Sn	22 19 28.7	-2.7
TZRR	Tazzarine	4.31	176	P	Pn	22 18 45.1	+1.0
TZRR				S	Sn	22 19 28.9	-4.4
PMTG	Montargil	4.37	336	⇓*e*P	Pn	22 18 46.5	+1.7
PMTG				S	Sn	22 19 33.9	-0.6
PMTG				A	A	22 19 42.4	
	comp=N,9.8nm,0.2s						
PMTG	Montargil	4.37	336	P	Pn	22 18 46.5	+1.7
PMTG				S	Sn	22 19 33.9	-0.6
	comp=N,9.8nm,0.2s						
PMRV	Marv??o	4.48	345	*e*P	Pn	22 18 48.4	+2.1
PMRV				S	Sn	22 19 36.9	-0.3
PMRV				A	A	22 19 48.3	
	comp=N,7.3nm,0.9s						
PMRV	Marv??o	4.48	345	P	Pn	22 18 48.4	+2.1
PMRV				S	Sn	22 19 36.9	-0.3
	comp=N,7.3nm,0.9s						
EAH	EAH	4.60	223	P	Pn	22 18 46.3	-1.5
EAH				S	Sn	22 19 35.3	-4.8
PAB	San Pablo	4.62	15	P	Pn	22 18 49.8	+1.5
	comp=N,0.6nm,0.1s,SNR=7.9						
PAB				S	Sn	22 19 37.7	-3.0
	comp=N,1.7nm,0.1s,SNR=7.9						
EMUR	La Murta	4.67	53	S	Sn	22 19 41.6	-0.4
	comp=N,0.8nm,0.3s,SNR=7.9						
PMAFR	Mafra	4.69	326	*e*P	Pn	22 18 51.6	+2.4
PMAFR				S	Sn	22 19 41.8	-0.6
PMAFR				A	A	22 19 45.7	
	comp=N,24nm,0.3s						
PMAFR	Mafra	4.69	326	P	Pn	22 18 51.2	+2.0
	comp=N,4.3nm,0.1s,SNR=7.9						
PMAFR				S	Sn	22 19 41.8	-0.6
	comp=N,55nm,0.4s,SNR=7.9						
ESDC	Sonseca Array	4.83	18	P	Pn	22 18 53.1	+2.0
	comp=N,1.6nm,0.1s,baz=202,slow=12,SNR=26						
ESDC				S	Sn	22 19 42.7	-3.2
	comp=N,8.5nm,0.3s,baz=203,slow=22,SNR=9.3						
FIGM	Figuig	4.89	126	P	Pn	22 18 53.5	+1.4
FIGM				S	Sn	22 19 45.9	-1.6
PCBR	Castelo Branco	4.89	346	*e*P	Pn	22 18 54.1	+2.2
PCBR				S	Sn	22 19 44.8	-2.4
PCBR				A	A	22 19 47.4	
	comp=N,6.6nm,0.3s						
PCBR	Castelo Branco	4.89	346	P	Pn	22 18 54.1	+2.2
PCBR				S	Sn	22 19 44.8	-2.4
	comp=N,3.3nm,0.3s						
EPLA	Plasencia	4.96	359	P	Pn	22 18 55.3	+2.5
	comp=N,8.4nm,0.1s,SNR=71						
EPLA				S	Sn	22 19 47.1	-1.9
	comp=N,2.5nm,0.2s						
PSBE	So Bento	4.97	334	*e*P	Pn	22 18 55.2	+2.3
PSBE				S	Sn	22 19 48.0	-1.1
PSBE				A	A	22 20 04.5	
	comp=N,4.8nm,0.5s						
ZGR	Zagora	4.97	177	P	Pn	22 18 54.1	+1.0
ZGR				S	Sn	22 19 46.5	-2.8
ETOB	Tobarra	4.99	44	P	Pn	22 18 55.6	+2.3
	comp=N,1.3nm,0.1s,SNR=38						
ETOB				S	Sn	22 19 47.6	-2.2
	comp=N,1.7nm,0.1s						
TTIG	Tnine Tigouga,	5.00	206	P	Pn	22 18 51.5	-2.0
TTIG				S	Sn	22 19 44.9	-5.2
PCAS	Casmilo, Conde	5.35	338	*e*P	Pn	22 19 00.5	+2.4
PCAS				S	Sn	22 19 56.7	-1.7
PCAS				A	A	22 20 10.7	
	comp=N,4.3nm,0.5s						
PCAS	Casmilo, Conde	5.35	338	P	Pn	22 19 00.5	+2.4
PCAS				S	Sn	22 19 56.7	-1.7
	comp=N,4.3nm,0.5s						
MTE	Manteigas	5.45	347	*e*P	Pn	22 19 02.0	+2.5
MTE				S	Sn	22 20 00.3	-0.5
MTE	Manteigas	5.45	347	P	Pn	22 19 02.0	+2.5
MTE				S	Sn	22 20 00.3	-0.5
AFON	Font Roja	5.60	49	P	Pn	22 19 05.4	+3.7
	comp=N,0.8nm,0.2s,SNR=7.9						
AFON				S	Sn	22 20 04.7	0.0
	comp=N,2.0nm,0.3s,SNR=7.9						
UCM	Universidad Co	5.63	22	P	Pn	22 19 04.7	+2.9
UCM				S	Sn	22 20 02.7	-2.5
UCM	Universidad Co	5.63	22	P	Pn	22 19 04.7	+2.9
UCM				S	Sn	22 20 02.7	-2.5
GUD	Guadarrama	5.72	14	P	Pn	22 19 05.5	+2.3
	comp=N,0.6nm,0.1s,SNR=17						
GUD				S	Sn	22 20 04.0	-3.4
	comp=N,2.2nm,0.3s,SNR=5.6						
PVIS	Viseu	5.82	345	*e*P	Pn	22 19 06.9	+2.3
PVIS				S	Sn	22 20 07.5	-2.4
PVIS				A	A	22 20 12.2	
	comp=N,4.1nm,0.4s						
PVIS	Viseu	5.82	345	P	Pn	22 19 06.9	+2.3
PVIS				S	Sn	22 20 07.5	-2.4
	comp=N,2.0nm,0.4s						

ECHE	Chera	5.98	40	P	Pn	22 19 08.3	+1.6
	comp=N,0.6nm,0.1s,SNR=7.9						
ECHE				S	Sn	22 20 10.1	-3.8
	comp=N,2.1nm,0.2s,SNR=7.9						
MVO	Moncorvo	6.12	352	*e*P	Pn	22 19 11.3	+2.6
MVO				S	Sn	22 20 15.2	-2.1
MVO				A	A	22 20 19.1	
	comp=N,4.1nm,0.7s						
MVO	Moncorvo	6.12	352	P	Pn	22 19 11.1	+2.4
	comp=N,9.0nm,0.1s,SNR=44						
MVO				S	Sn	22 20 14.8	-2.4
	comp=N,2.0nm,0.1s,SNR=6.5						
PVRL	Vila Real	6.33	348	*e*P	Pn	22 19 13.9	+2.5
PVRL				S	Sn	22 20 20.3	-2.0
PVRL				A	A	22 20 22.5	
	comp=N,5.7nm,0.3s						
PVRL	Vila Real	6.33	348	P	Pn	22 19 13.9	+2.5
PVRL				S	Sn	22 20 20.3	-2.0
	comp=N,2.8nm,0.3s						
POLO	Lamas de Olo	6.44	347	*e*P	Pn	22 19 15.3	+2.3
POLO				S	Sn	22 20 22.5	-2.5
POLO				A	A	22 20 24.8	
	comp=N,1.7nm,0.7s						
POLO	Lamas de Olo	6.44	347	P	Pn	22 19 15.3	+2.3
POLO				S	Sn	22 20 22.5	-2.5
	comp=N,1.7nm,0.7s						
ETOR	Torete	6.49	27	P	Pn	22 19 15.8	+2.2
	comp=N,16nm,0.1s,SNR=35						
ETOR				S	Sn	22 20 21.9	-4.3
	comp=N,25nm,0.3s,SNR=13						
PBRG	Braganca	6.73	355	*e*P	Pn	22 19 19.6	+2.7
PBRG				S	Sn	22 20 28.8	-3.3
PBRG				A	A	22 20 35.4	
	comp=N,1.9nm,0.9s						
PBRG	Braganca	6.73	355	P	Pn	22 19 19.6	+2.7
PBRG				S	Sn	22 20 28.8	-3.3
	comp=N,0.9nm,0.9s						
PCAB	Cabril	6.81	347	*e*P	Pn	22 19 20.4	+2.5
PCAB				S	Sn	22 20 31.3	-2.6
PCAB	Cabril	6.81	347	P	Pn	22 19 20.4	+2.5
PCAB				S	Sn	22 20 31.3	-2.6
EMOS	Mosqueruela	6.81	38	P	Pn	22 19 20.9	+2.7
	comp=N,0.5nm,0.1s,SNR=7.9						
EMOS				S	Sn	22 20 30.3	-4.0
	comp=N,2.6nm,0.2s,SNR=14						
ECAL	Calabor	6.87	355	P	Pn	22 19 21.1	+2.4
	comp=N,1.6nm,0.1s,SNR=21						
ECAL				S	Sn	22 20 33.4	-2.0
	comp=N,1.9nm,0.2s						
ELOB	Lobios	6.96	347	P	Pn	22 19 22.4	+2.3
	comp=N,0.7nm,0.1s,SNR=8.5						
ELOB				S	Sn	22 20 34.3	-3.5
	comp=N,1.5nm,0.2s						
PGAV	Gavieira, Arco	7.10	346	*e*P	Pn	22 19 24.3	+2.3
PGAV				S	Sn	22 20 40.5	-0.6
PGAV				A	A	22 21 06.1	
	comp=N,4.6nm,0.8s						
PGAV	Gavieira, Arco	7.10	346	P	Pn	22 19 24.3	+2.3
PGAV				S	Sn	22 20 40.5	-0.6
	comp=N,4.6nm,0.8s						
EZAM	Zamans	7.37	344	P	Pn	22 19 26.6	+1.1
	comp=N,1.1nm,0.1s,SNR=7.9						
ERTA	Horta de San J	7.66	38	S	Sn	22 20 51.8	-3.0
	comp=N,1.3nm,0.3s,SNR=7.9						
EAGO	Agolada(Pontev	7.88	348	P	Pn	22 19 34.9	+2.4
	comp=N,1.4nm,0.1s,SNR=7.9						
EAGO				S	Sn	22 20 56.6	-3.3
	comp=N,0.8nm,0.1s,SNR=4.0						
EARI	Arriondas	8.22	4	P	Pn	22 19 40.4	+3.3
	comp=N,0.4nm,0.1s,SNR=7.9						
EARI				S	Sn	22 21 04.5	-3.8
	comp=N,0.7nm,0.3s,SNR=4.0						
ELAN	Lanestosa	8.36	13	P	Pn	22 19 41.6	+2.6
	comp=N,1.3nm,0.2s,SNR=7.9						
ELAN				S	Sn	22 21 05.7	-5.9
	comp=N,1.4nm,0.3s,SNR=7.9						
EORO	Oroz-Betelu	8.58	23	P	Pn	22 19 44.9	+2.8
	comp=N,0.3nm,0.1s,SNR=7.9						
EORO				S	Sn	22 21 15.6	-1.6
	comp=N,1.4nm,0.3s,SNR=7.9						
SJPF	Ste Jean	8.80	23	*e*Pn	Pn	22 19 47.9	+2.8
SJPF				*e*Sn	Sn	22 21 19.6	-2.9
	comp=N,1.9nm,0.3s						
EALK	Alkurruntz	8.81	22	P	Pn	22 19 48.4	+3.2
	comp=N,0.6nm,0.1s,SNR=7.9						
EALK				S	Sn	22 21 20.0	-2.8
	comp=N,10nm,0.3s,SNR=4.0						
ETSF	Etsaut	8.84	27	*e*Pn	Pn	22 19 48.1	+2.4
ETSF				*e*Sn	Sn	22 21 20.6	-3.0
	comp=N,1.1nm,0.3s						
ECHI	Chisagues Biel	8.94	30	P	Pn	22 19 49.0	+1.9
	comp=N,0.3nm,0.1s,SNR=7.9						
ECHI				S	Sn	22 21 22.0	-4.1
	comp=N,0.5nm,0.2s,SNR=7.9						
ATE	Arette	8.96	25	P	Pn	22 19 49.8	+2.6
	comp=N,0.6nm,0.1s,SNR=7.9						
ATE				S	Sn	22 21 21.5	-4.7
	comp=N,2.1nm,0.3s,SNR=7.9						
CSOR	Sort	9.13	35	P	Pn	22 19 51.1	+1.4
	comp=N,0.1nm,0.1s,SNR=7.9						
CSOR				S	Sn	22 21 26.6	-4.0
	comp=N,0.7nm,0.2s,SNR=7.9						
EPF	Esparros	9.30	30	*e*Pn	Pn	22 19 54.0	+2.0
EPF				*e*Sn	Sn	22 21 31.6	-3.2
	comp=N,3.5nm,0.3s						
CFUE	Fuerteventura	9.35	229	S	Sn	22 21 29.8	-6.3
	comp=N,4.3nm,0.2s,SNR=7.9						
PMOZ	Porto Moniz, M	9.62	260	S	Sn	22 21 34.9	-7.9
PMOZ	Porto Moniz, M	9.62	260	S	Sn	22 21 34.9	-7.9
	comp=N,28nm,0.3s,SNR=7.9						
CGIN	Giniginamar, F	9.76	228	S	Sn	22 21 36.1	-10
	comp=N,1.7nm,0.3s,SNR=7.9						
MTLF	Montolieu	10.38	35	*e*Pn	Pn	22 20 08.6	+2.0
MTLF				*e*Sn	Sn	22 21 57.2	-3.7
	comp=N,0.5nm,0.3s						
CGUI	Guimar, Teneri	11.20	236	S	Sn	22 22 11.6	-10
	comp=N,6.5nm,0.4s,SNR=7.9						
MACI	Morro de la Ar	11.29	236	S	Sn	22 22 12.7	-11
	comp=N,0.9nm,0.2s,SNR=7.9						
CAF	Calviac	11.57	30	*e*Pn	Pn	22 20 24.7	+2.0
CAF				*e*Sn	Sn	22 22 25.4	-4.5
	comp=N,0.9nm,0.3s						
RJF	Les Rejaudoux	11.68	27	*e*Pn	Pn	22 20 26.1	+2.0
MFF	Saint Martin d	12.30	19	*e*Pn	Pn	22 20 34.4	+2.0
QUIF	Quistinic	12.98	8	*e*Pn	Pn	22 20 43.5	+2.1
BGF	Bois d'Agland	13.23	27	*e*Pn	Pn	22 20 47.2	+2.4
ROSF	Rostrenen	13.38	8	*e*Pn	Pn	22 20 49.0	+2.3
SGMF	Saint Gilles	13.39	10	*e*Pn	Pn	22 20 49.1	+2.3
SMF	Signal de Mont	13.69	30	*e*Pn	Pn	22 20 53.0	+2.2
GRR	Gorron	13.81	14	*e*Pn	Pn	22 20 54.9	+2.6
LDF	La Druitiere	14.16	16	*e*Pn	Pn	22 20 59.7	+2.8
FLN	La Foliniere	14.24	15	*e*Pn	Pn	22 21 00.8	+2.9

IDC ***06*** *22:26:14.7±0.8, 63°.23N×151°.20W, h0^{km}, mb3.7/16, mb1 3.9/20, mb1mx3.7/43, mbtmp3.8/20, ML3.6/4, MS3.8/2, Ms1 3.8/2, ms1mx3.0/37, Error ellipse: s-maj=17.0km s-min=11.4km az=3.0*

NEIC ***06*** *22:26:14, 63°.30N×151°.34W, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.47; $M_{\theta\theta}$-1.20; $M_{\phi\phi}$0.74; $M_{r\theta}$0.02; $M_{\theta\phi}$-0.89; $M_{\phi r}$0.10; Fault plane solution: $M_0$1.38000×10^{15} NP1:ϕ_s293.52000°, δ83.40000°, λ175.44000°. NP2:ϕ_s24.04000°, δ85.47000°, λ6.62000°. Principal axes: T 1.0941, Plg8.0000°, Azm249.0000°; N 0.4555, Plg82.0000°, Azm58.0000°; P -1.5496, Plg1.0000°, Azm159.0000°;*

NEIC ***06*** *22:26:15.7±1.6, 63°.32N±0°.02×151°.44W±0°.06, h13^{km}±4^{km} Error ellipse: s-maj=5.2km s-min=1.2km az=127.0*

AEIC ***06*** *22:26:15±1.8, 63°.31N±0°.02×151°.37W±0°.06, h11^{km}±5^{km}, ML4.3, mb4.5/4(NEIC), ML4.5/154(NEIC), Mwr4.0/97(NEIC), Error ellipse: s-maj=4.7km s-min=2.4km az=129.0*

ISC 06 22:26:15.8±0.9**, 63°.31N**±0°.02×**151°.35W**±0°.02**, h14**^{km}±5^{km}**, n308, σ1^{s}.08**/274**, mb3.8**/17**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTH	Kantishna Hill	0.32	38		Pg	22 26 22.2	-0.2
KTH					Sg	22 26 26.6	-0.2
KTH	Kantishna Hill	0.32	38	IAML		22 26 27.3	
	comp=E,34μm,0.4s						
KTH				IAML		22 26 27.6	
	comp=N,57μm,0.4s						
CAST	Castle Rocks	0.35	289		Pg	22 26 22.3	-0.6
CAST					Sg	22 26 26.9	-0.9
CAST	Castle Rocks	0.35	289	IAML		22 26 27.1	
	comp=E,35μm,0.6s						
CAST	Castle Rocks	0.35	289	P	Pg	22 26 22.3	-0.6
	baz=109						
CAST				S	Sg	22 26 26.9	-0.9
	baz=109						
TRF	Thorofare Moun	0.50	73		Pg	22 26 25.1	-0.7
TRF					Sg	22 26 32.2	-0.2
TRF	Thorofare Moun	0.50	73	P	Pg	22 26 25.1	-0.7
	baz=254						
TRF				S	Sg	22 26 32.2	-0.2
	baz=254						
PPLA	Purkeypile	0.56	223		Pg	22 26 25.4	-1.5
PPLA					Sg	22 26 33.8	-0.6
PPLA	Purkeypile	0.56	223	P	Pg	22 26 25.4	-1.5
	baz=42						
PPLA				S	Sg	22 26 33.8	-0.6
	baz=42						
CHUM	Lake Minchumin	0.72	324		Pg	22 26 29.6	-0.3
CHUM	Lake Minchumin	0.72	324	P	Pg	22 26 29.6	-0.3
	baz=144						
BPAW	Bear Paw Mtn.	0.81	11		Pb	22 26 30.9	-0.9
BPAW					Sg	22 26 42.1	-0.2
BPAW	Bear Paw Mtn.	0.81	11	IAML		22 26 45.5	
	comp=N,12μm,0.6s						
BPAW	Bear Paw Mtn.	0.81	11	P	Pb	22 26 30.9	-0.9
	baz=192						
BPAW				S	Sg	22 26 42.1	-0.2
	baz=192						
CUT	Chulitna	1.03	151		Pb	22 26 34.4	-1.0
CUT	Chulitna	1.03	151	IAML		22 26 47.5	
	comp=E,17μm,0.5s						
CUT	Chulitna	1.03	151	P	Pb	22 26 34.4	-1.0
	baz=331						
RND	Reindeer	1.13	84		Pn	22 26 35.9	-1.4
MCK	McKinley	1.17	67		Pn	22 26 36.8	-0.9
MCK	McKinley	1.17	67	P	Pn	22 26 36.8	-0.9
	baz=250						
BWN	Browne	1.21	43		Pn	22 26 38.3	0.0
BWN					Sg	22 26 56.3	+1.5
BWN	Browne	1.21	43	IAML		22 26 59.2	
	comp=N,11μm,1.1s						
K20K	Telida	1.23	274		Pb	22 26 37.9	-0.9
K20K	Telida	1.23	274	IAML		22 26 55.0	
	comp=N,12μm,0.5s						
K20K	Telida	1.23	274	P	Pb	22 26 37.8	-0.9
	baz=91						
WAT7	Susitna Watana	1.23	111		Pn	22 26 37.7	-1.0
L20K	Farewell, AK	1.42	235		Pn	22 26 40.1	-1.2
L20K	Farewell, AK	1.42	235	P	Pn	22 26 40.1	-1.2
	baz=53						
J20K	Nowinta River	1.52	306		Pb	22 26 42.5	-1.2
J20K	Nowinta River	1.52	306	IAML		22 27 04.9	
	comp=N,8μm,0.3s						
J20K	Nowinta River	1.52	306	P	Pb	22 26 42.5	-1.2
	baz=124						
NEA2	Nenana	1.64	37		Pn	22 26 42.7	-1.5
NEA2					Sb	22 27 07.2	+0.9
NEA2	Nenana	1.64	37	IAML		22 27 08.4	
	comp=N,6μm,0.6s						
NEA2	Nenana	1.64	37	P	Pn	22 26 42.7	-1.5
	baz=219						
NEA2				S	Sb	22 27 07.2	+0.9
	baz=219						
M22K	Willow	1.66	159		Pn	22 26 43.8	-0.6
M22K	Willow	1.66	159	P	Pn	22 26 43.8	-0.6
	baz=340						
MLY	Manley	1.75	9		Pn	22 26 45.2	-0.6
MLY					Sb	22 27 10.1	+0.5
MLY	Manley	1.75	9	IAML		22 27 11.9	
	comp=E,4μm,0.5s						
MLY	Manley	1.75	9	P	Pn	22 26 45.2	-0.6
	baz=189						
MLY				S	Sb	22 27 10.1	+0.5
	baz=189						
DHY	Denali Highway	1.82	96		Pn	22 26 46.9	+0.1
DHY	Denali Highway	1.82	96	IAML		22 27 12.7	
	comp=E,3μm,0.6s						
DHY				IAML		22 27 13.9	
	comp=N,5μm,0.5s						
DHY	Denali Highway	1.82	96	P	Pn	22 26 46.9	+0.1
	baz=279						
STLK	Strandline Lak	1.83	187		Pn	22 26 46.8	-0.1
WRH	Wood River Hil	1.86	50		Pn	22 26 45.9	-1.3
I21K	Tanana	1.90	352		Pn	22 26 47.5	-0.3
I21K	Tanana	1.90	352	P	Pn	22 26 47.5	-0.3
	baz=172						
GHO	Glory Hole Cre	1.91	143		Pn	22 26 47.2	-0.7
GHO	Glory Hole Cre	1.91	143	IAML		22 27 17.3	
	comp=E,4μm,0.6s						
GHO				IAML		22 27 17.6	
	comp=N,5μm,0.8s						
L19K	White Mountain	1.97	237		Pn	22 26 48.9	+0.2
L19K	White Mountain	1.97	237	IAML		22 27 17.0	
	comp=N,3μm,1.1s						
L19K				IAML		22 27 21.6	
	comp=E,3μm,0.6s						
L19K	White Mountain	1.97	237	P	Pn	22 26 48.9	+0.2
	baz=53						
M19K	Big River Lodg	1.99	226		Pn	22 26 47.9	-1.1
M19K	Big River Lodg	1.99	226	IAML		22 27 19.3	
	comp=N,5μm,0.5s						
M19K				IAML		22 27 21.6	
	comp=E,4μm,0.5s						
M19K	Big River Lodg	1.99	226	P	Pn	22 26 47.9	-1.1
	baz=43						
PMR	Palmer	2.01	148		Pn	22 26 48.5	-0.6
PMR	Palmer	2.01	148	P	Pn	22 26 48.5	-0.6
	baz=330						
I23K	Minto, Yukon-K	2.04	24		Pn	22 26 49.1	-0.6
I23K	Minto, Yukon-K	2.04	24	P	Pn	22 26 49.1	-0.6
	baz=206						
SPCG	Spurr Capps Gl	2.04	189		Pn	22 26 49.5	-0.4
SML	Sawmill	2.05	136		Pn	22 26 49.1	-0.9
SML	Sawmill	2.05	136	IAML		22 27 18.8	
	comp=N,4μm,0.6s						
SML	Sawmill	2.05	136	P	Pn	22 26 49.1	-0.9
	baz=318						
CCB	Clear Creek Bu	2.06	48		Pn	22 26 48.8	-1.2
CCB	Clear Creek Bu	2.06	48	IAML		22 27 21.4	
	comp=N,3μm,0.5s						
CCB				IAML		22 27 23.6	
	comp=E,3μm,0.6s						
SPBG	Spurr Blockage	2.11	193		Pn	22 26 51.0	+0.3
SPCN	Chakachatna No	2.12	191		Pn	22 26 51.2	+0.3
SPCR	Spurr Chakacha	2.15	191		Pn	22 26 51.6	+0.3
SPCR	Spurr Chakacha	2.15	191	P	Pn	22 26 51.6	+0.3
	baz=10						
TTA	Tatalina	2.15	262		Pn	22 26 49.6	-1.6
TTA	Tatalina	2.15	262	IAML		22 27 23.0	
	comp=N,3μm,1.1s						
TTA	Tatalina	2.15	262	P	Pn	22 26 49.6	-1.6
	baz=78						
MDM	Murphy Dome	2.15	38		Pn	22 26 50.1	-1.1
MDM	Murphy Dome	2.15	38	IAML		22 27 24.5	
	comp=N,2μm,0.4s						
MDM				IAML		22 27 25.1	
	comp=E,2μm,0.6s						
SPU	Mount Spurr	2.16	189		Pn	22 26 50.8	-0.5
TCOL	CIGO, UAF Yank	2.20	43		Pn	22 26 51.2	-0.6
TCOL	CIGO, UAF Yank	2.20	43	P	Pn	22 26 51.2	-0.6
	baz=226						
I53US	FAIRBANKS INFR	2.20	43	*i*		22 39 20.0	
	baz=212,slow=333,SNR=0.3						
COLA	College	2.20	43		Pn	22 26 50.9	-0.9
COLA	College	2.20	43	IAML		22 27 24.8	
	comp=E,2μm,0.5s						
COLA				IAML		22 27 25.0	
	comp=E,4μm,0.5s						
FIS	Fire Island	2.23	166		Pn	22 26 52.9	+0.6
HDA	Harding Lake	2.24	58		Pn	22 26 51.3	-1.2
HDA	Harding Lake	2.24	58	IAML		22 27 26.9	
	comp=N,4μm,0.5s						
HDA				IAML		22 27 27.7	
	comp=E,3μm,0.5s						
HDA	Harding Lake	2.24	58	P	Pn	22 26 51.3	-1.2
	baz=242						
KNK	Knik Glacier	2.33	143		Pn	22 26 53.6	-0.1
KNK	Knik Glacier	2.33	143	IAML		22 27 31.2	
	comp=E,3μm,0.4s						
KNK	Knik Glacier	2.33	143	P	Pn	22 26 53.6	-0.1
	baz=326						
RC01	Rabbit Creek A	2.35	160		Pn	22 26 54.2	+0.3
RC01	Rabbit Creek A	2.35	160	P	Pn	22 26 54.2	+0.3
	baz=342						
PS08	TAPS Pump Stn8	2.36	56		Pn	22 26 52.7	-1.3
SCM	Sheep Creek Mo	2.38	127		Pn	22 26 53.5	-0.9
SCM	Sheep Creek Mo	2.38	127	IAML		22 27 30.2	
	comp=N,3μm,1.2s						
SCM				IAML		22 27 30.7	
	comp=E,2μm,0.9s						
H21K	Melozitna Rive	2.44	346		Pn	22 26 55.0	-0.3
H21K	Melozitna Rive	2.44	346	P	Pn	22 26 55.0	-0.3
	baz=165						
IL31		2.46	51		Pn	22 26 54.1	-1.2
ILAR	Eielson Array	2.46	51	Pn	Pn	22 26 54.1	-1.3
	comp=E,8.3nm,0.3s,baz=237,slow=14,SNR=221						
ILAR				Lg	Lg	22 27 31.4	
	comp=E,266nm,0.3s,baz=229,slow=30,SNR=5.5						
POKR	Poker Plat Res	2.50	42		Pn	22 26 55.6	-0.4
POKR	Poker Plat Res	2.50	42	IAML		22 27 35.3	
	comp=N,2μm,0.5s						
POKR				IAML		22 27 36.5	
	comp=E,2μm,0.3s						
POKR	Poker Plat Res	2.50	42	P	Pn	22 26 55.6	-0.4
	baz=225						
CAPN	Captain Cook N	2.55	178		Pn	22 26 58.3	+1.6
CAPN	Captain Cook N	2.55	178	P	Pn	22 26 58.3	+1.6
	baz=358						
PS06	TAPS Pump Stn6	2.65	15		Pn	22 26 58.0	-0.1
M24K	Tolsona, Glenn	2.67	114		Pn	22 26 58.7	+0.3
M24K	Tolsona, Glenn	2.67	114	IAML		22 27 57.9	
	comp=E,3μm,1.6s						
M24K	Tolsona, Glenn	2.67	114	P	Pn	22 26 58.7	+0.3
	baz=299						
PAX	Paxson	2.69	95		Pn	22 26 59.0	+0.3
PAX	Paxson	2.69	95	P	Pn	22 26 59.0	+0.3
	baz=280						
DFR	Drift River	2.79	194		Pn	22 27 00.9	+0.7
GCSA	Galena City Sc	2.83	303		Pn	22 27 01.1	+0.6
GCSA	Galena City Sc	2.83	303	P	Pn	22 27 01.1	+0.6
	baz=118						
PWL	Port Wells	2.84	149		Pn	22 27 01.3	+0.7
PWL	Port Wells	2.84	149	IAML		22 27 44.8	
	comp=N,2μm,0.5s						
NCT	North Crescent	2.85	196		Pn	22 27 01.3	+0.4
SLKM	Skilak Lake	2.86	169		Pn	22 27 01.3	+0.4
IMAR	Indian Mountai	2.88	340		Pn	22 27 00.4	-0.9
N19K	Bonanza Creek	2.90	212		Pn	22 27 00.8	-0.9
N19K				IAML		22 27 47.6	
	comp=N,1μm,0.8s						
N19K				IAML		22 27 50.0	
	comp=E,2μm,0.6s						
RSO	Redoubt South	2.93	194		Pn	22 27 02.9	+0.8
O22K	Cooper Landing	2.94	164		Pn	22 27 03.1	+1.2
O22K	Cooper Landing	2.94	164	P	Pn	22 27 03.1	+1.2
	baz=345						
RIDG	Independent Ri	2.95	79		Pn	22 27 03.5	+1.3
RIDG	Independent Ri	2.95	79	IAML		22 27 53.7	
	comp=E,1μm,0.6s						
RIDG				IAML		22 27 56.4	
	comp=N,2μm,0.8s						
RIDG	Independent Ri	2.95	79	P	Pn	22 27 03.5	+1.3
	baz=264						
H24K	Noodor Dome	2.95	29		Pn	22 27 01.9	-0.3
H24K	Noodor Dome	2.95	29	IAML		22 27 51.6	
	comp=E,1μm,0.9s						
H24K				IAML		22 27 57.2	
	comp=N,1μm,0.7s						
H24K	Noodor Dome	2.95	29	P	Pn	22 27 01.9	-0.3
	baz=212						
SVW2	Sparrevohn	2.97	224		Pn	22 27 03.4	+0.9
SVW2	Sparrevohn	2.97	224	IAML		22 27 53.0	
	comp=E,2μm,0.7s						
RED	Redoubt Volcan	2.97	194		Pn	22 27 03.2	+0.6
PS11	TAPS Pump St11	2.98	112		Pn	22 27 04.0	+1.4
HARP	HAARP	2.98	105		Pn	22 27 03.6	+1.0
HARP	HAARP	2.98	105	P	Pn	22 27 03.6	+1.0
	baz=290						
KLU	Klutina	3.11	123		Pn	22 27 05.5	+1.0
KLU	Klutina	3.11	123	IAML		22 27 48.2	
	comp=E,1μm,0.7s						
KLU				IAML		22 27 48.3	
	comp=N,1μm,0.4s						
KLU	Klutina	3.11	123	P	Pn	22 27 05.5	+1.0
	baz=308						
GLI	Glacier Island	3.15	139		Pn	22 27 05.7	+0.8
GLI	Glacier Island	3.15	139	IAML		22 27 55.6	
	comp=N,2μm,0.8s						
GLI				IAML		22 27 59.7	
	comp=E,1μm,0.9s						
GLI	Glacier Island	3.15	139	P	Pn	22 27 05.7	+0.8
	baz=322						
JPK	Jack Peak	3.17	133		Pn	22 27 06.1	+0.8
VMT	TAPS Tl Valdez	3.23	131		Pn	22 27 06.6	+0.6
DOT	Dot Lake	3.29	81		Pn	22 27 07.5	+0.7
O20K	Slope Mountain	3.29	191		Pn	22 27 07.6	+0.7
O20K	Slope Mountain	3.29	191	P	Pn	22 27 07.6	+0.7
	baz=9.9						
SEW	Seward	3.34	163		Pn	22 27 08.3	+0.8
SEW	Seward	3.34	163	P	Pn	22 27 08.3	+0.8
	baz=345						
SCRK	Sand Creek	3.35	75		Pn	22 27 08.7	+0.8
SCRK	Sand Creek	3.35	75	P	Pn	22 27 08.6	+0.8
	baz=262						
IVE	Iliamna Volcan	3.40	194		Pn	22 27 09.5	+1.1
DIV	Divide	3.41	127		Pn	22 27 08.9	+0.4
PS12	TAPS Pump St12	3.42	120		Pn	22 27 08.6	-0.1
O19K	Port Alsworth	3.42	206	Pn	Pn	22 27 08.5	-0.2
FID	Port Fidalgo	3.44	136		Pn	22 27 09.5	+0.6
FID	Port Fidalgo	3.44	136	IAML		22 28 04.8	
	comp=E,810nm,0.6s						
FID				IAML		22 28 07.2	
	comp=N,899nm,1.1s						
ILSW	Iliamna Southw	3.44	195		Pn	22 27 10.0	+0.9
ILS	Iliamna Low So	3.46	194		Pn	22 27 09.5	+0.2
MENT	Mentasta	3.49	93		Pn	22 27 10.8	+1.2
MENT	Mentasta	3.49	93	IAML		22 28 16.0	
	comp=N,1μm,0.8s						
PS05	TAPS Pump Stn5	3.53	4		Pn	22 27 10.9	+0.7
BRLK	Bradley Lake	3.56	176		Pn	22 27 11.0	+0.4
N25K	Chitina, Valde	3.57	115		Pn	22 27 12.1	+1.2
N25K	Chitina, Valde	3.57	115	P	Pn	22 27 12.0	+1.2
	baz=302						
BRSE	Bradley Lake S	3.59	175		Pn	22 27 11.6	+0.6
BRSE	Bradley Lake S	3.59	175	P	Pn	22 27 11.6	+0.6
	baz=356						
L26K	Log Cabin Wild	3.64	91		Pn	22 27 13.0	+1.3
L26K	Log Cabin Wild	3.64	91	IAML		22 28 19.5	
	comp=N,1μm,0.3s						
L26K				IAML		22 28 22.3	
	comp=E,1μm,0.4s						
L26K	Log Cabin Wild	3.64	91	P	Pn	22 27 13.0	+1.3
	baz=278						
J26L	Joseph Creek	3.65	67		Pn	22 27 12.8	+0.9
J26L	Joseph Creek	3.65	67	P	Pn	22 27 12.8	+0.9
	baz=254						
HOM	Homer	3.66	182		Pn	22 27 12.9	+0.9
HOM	Homer	3.66	182	P	Pn	22 27 12.9	+0.9
	baz=2.0						
OPT	Oil Point	3.77	195		Pn	22 27 14.3	+0.7
OPT	Oil Point	3.77	195	P	Pn	22 27 14.3	+0.7
	baz=13						
P19K	Oil Pt	3.77	195		Pn	22 27 14.7	+1.2
P19K	Oil Pt	3.77	195	IAML		22 28 07.3	
	comp=E,769nm,0.6s						
P19K				IAML		22 28 17.3	
	comp=N,1μm,0.9s						
P19K	Oil Pt	3.77	195	P	Pn	22 27 14.7	+1.2
	baz=13						
CNPM	China Poot	3.79	179		Pn	22 27 14.6	+0.8
CNPM	China Poot	3.79	179	IAML		22 28 05.1	
	comp=N,518nm,0.5s						
CNPM				IAML		22 28 23.1	
	comp=E,621nm,0.6s						
EYAK	Cordova Ski Ar	3.83	134		Pn	22 27 15.2	+1.0
EYAK	Cordova Ski Ar	3.83	134	P	Pn	22 27 15.2	+1.0
	baz=319						
O18K	Koktuh Hills	3.92	210		Pn	22 27 16.2	+0.6
O18K	Koktuh Hills	3.92	210	IAML		22 28 20.9	
	comp=E,873nm,0.8s						
O18K	Koktuh Hills	3.92	210	P	Pn	22 27 16.2	+0.6
	baz=26						
M26K	Nabesna, AK	3.94	100		Pn	22 27 17.2	+1.4
M26K	Nabesna, AK	3.94	100	IAML		22 28 17.8	
	comp=E,908nm,0.5s						
M26K	Nabesna, AK	3.94	100	P	Pn	22 27 17.2	+1.4
	baz=287						
BMRM	Bremner River	3.94	123		Pn	22 27 16.5	+0.6
BMRM	Bremner River	3.94	123	IAML		22 28 18.9	

	comp=N,752nm,0.9s						
BMRM				IAML		22 28 22.0	
	comp=E,648nm,0.9s						
BMRM	Bremner River	3.94	123	P	Pn	22 27 16.5	+0.6
	baz=309						
COLD	Coldfoot	3.97	6		Pn	22 27 16.4	+0.2
COLD	Coldfoot	3.97	6	P	Pn	22 27 16.4	+0.2
	baz=188						
GLB	Gilahina Butte	3.98	115		Pn	22 27 17.5	+1.2
GLB	Gilahina Butte	3.98	115	IAML		22 28 22.7	
	comp=N,523nm,1.1s						
GOAT	Goat Mountain	4.16	128		Pn	22 27 19.6	+0.8
VRDI	Verde Repeater	4.24	116		Pn	22 27 20.6	+0.5
VRDI	Verde Repeater	4.24	116	IAML		22 28 27.3	
	comp=N,426nm,1.1s						
RAGM	Ragged Mountai	4.31	130		Pn	22 27 20.1	-0.8
L27K	Beaver Creek,	4.32	89		Pn	22 27 21.6	+0.5
L27K	Beaver Creek,	4.32	89	P	Pn	22 27 21.6	+0.5
	baz=278						
MCARA	McCarthy VSAT	4.33	113		Pn	22 27 22.8	+1.6
MCARA	McCarthy VSAT	4.33	113	P	Pn	22 27 22.8	+1.6
	baz=300						
BCAR	Beaver Creek A	4.34	89	Pn	Pn	22 27 21.0	-0.3
P18K	Big Mountain,	4.35	207		Pn	22 27 21.4	-0.1
P18K	Big Mountain,	4.35	207	IAML		22 28 33.6	
	comp=E,415nm,1.0s						
P18K	Big Mountain,	4.35	207	P	Pn	22 27 21.4	-0.1
	baz=24						
M27K	Edge Creek, AK	4.45	98		Pn	22 27 24.6	+1.7
M27K	Edge Creek, AK	4.45	98	IAML		22 28 37.0	
	comp=N,377nm,0.8s						
M27K	Edge Creek, AK	4.45	98	P	Pn	22 27 24.5	+1.7
	baz=286						
HMT	Hamilton	4.49	128		Pn	22 27 24.5	+1.1
Q19K	Cape Douglas,	4.53	195		Pn	22 27 25.1	+1.1
Q19K	Cape Douglas,	4.53	195	P	Pn	22 27 25.0	+1.1
	baz=13						
CRQM	Cirque	4.64	120		Pn	22 27 25.0	-0.5
CRQM				IAML		22 28 42.3	
	comp=N,570nm,0.9s						
BERG	Berg Lake	4.65	125		Pn	22 27 26.6	+1.0
PTPK	Patty Peak	4.67	113		Pn	22 27 27.4	+1.5
EGAK	Eagle	4.72	67		Pn	22 27 27.2	+0.8
EGAK	Eagle	4.72	67	P	Pn	22 27 27.2	+0.8
	baz=256						
KAIM	Kayak Island	4.74	133		Pn	22 27 26.8	+0.1
KAIM	Kayak Island	4.74	133	IAML		22 29 08.5	
	comp=N,309nm,2.3s						
KAIM				IAML		22 29 28.9	
	comp=E,317nm,3.2s						
KAIM	Kayak Island	4.74	133	P	Pn	22 27 26.8	+0.1
	baz=319						
TGL	Tana Glacier	4.76	119		Pn	22 27 27.9	+0.7
TGL	Tana Glacier	4.76	119	IAML		22 28 47.9	
	comp=N,452nm,1.0s						
TGL				IAML		22 28 48.6	
	comp=E,394nm,0.8s						
KHIT	Khitrov Hills	4.79	123		Pn	22 27 28.3	+0.7
BALM	Baldy	4.80	114		Pn	22 27 28.2	+0.5
SUCK	Suckling Hills	4.85	129		Pn	22 27 28.6	+0.4
SUCK	Suckling Hills	4.85	129	IAML		22 28 43.1	
	comp=N,282nm,0.7s						
SUCK				IAML		22 28 52.4	
	comp=E,245nm,1.1s						
KIAG	Kiagna River	4.85	115		Pn	22 27 28.8	+0.4
GRIN	Grindle Hills	4.87	125		Pn	22 27 29.1	+0.5
BVCY	Beaver Creek	4.89	96		Pn	22 27 29.8	+1.0
BVCY	Beaver Creek	4.89	96	P	Pn	22 27 29.8	+1.0
	baz=285						
WAX	Waxell Ridge	4.94	122		Pn	22 27 30.4	+0.9
BMAR	Burnt Mountain	5.01	31	Pn	Pn	22 27 29.6	-1.0
ISLE	Juniper Island	5.04	118		Pn	22 27 31.6	+0.5
ISLE	Juniper Island	5.04	118	IAML		22 28 53.7	
	comp=E,247nm,1.5s						
BARN	Barnard Glacie	5.07	112		Pn	22 27 32.8	+1.4
BARN	Barnard Glacie	5.07	112	IAML		22 28 53.1	
	comp=N,227nm,1.2s						
YUK2	White River	5.10	103		Pn	22 27 33.4	+1.6
SNH	Sunshine Point	5.12	124		Pn	22 27 33.1	+1.1
SNH	Sunshine Point	5.12	124	IAML		22 28 55.7	
	comp=E,253nm,0.8s						
SNH				IAML		22 29 11.1	
	comp=N,255nm,2.4s						
GRNC	Granite Creek	5.21	115		Pn	22 27 33.7	+0.3
BAGL	Bagley Icefiel	5.21	119		Pn	22 27 33.8	+0.7
CTG	Chitna Glacier	5.25	112	P	Pn	22 27 35.1	+1.2
	baz=301						
CTGM	Chitina Glacie	5.25	112		Pn	22 27 35.1	+1.2
CTGM	Chitina Glacie	5.25	112	IAML		22 29 01.1	
	comp=N,182nm,1.4s						
YUK3	Moose Creek	5.27	102		Pn	22 27 36.1	+1.8
YUK3	Moose Creek	5.27	102	P	Pn	22 27 36.1	+1.8
	baz=292						
DAWY	Dawson	5.38	77		Pn	22 27 34.8	-0.7
DAWY	Dawson	5.38	77	IAML		22 29 24.0	
	comp=E,256nm,1.1s						
DAWY				IAML		22 29 25.3	
	comp=N,301nm,0.9s						
DAWY	Dawson	5.38	77	P	Pn	22 27 34.8	-0.7
	baz=267						
TOLK	Toolik Lake Re	5.41	7		Pn	22 27 37.2	+1.2
TOLK	Toolik Lake Re	5.41	7	P	Pn	22 27 37.2	+1.2
	baz=189						
YAH	Yahtse	5.42	119		Pn	22 27 37.2	+0.8
MESA	MESA	5.46	121		Pn	22 27 37.3	+0.5
MESA	MESA	5.46	121	P	Pn	22 27 37.3	+0.5
	baz=309						
LOGN	Logan Glacier	5.46	112		Pn	22 27 37.8	+0.9
KDAK	Kodiak Island	5.58	187	Pn	Pn	22 27 37.8	-0.4
KDAK	Kodiak Island	5.58	187	P	Pn	22 27 38.1	-0.1
	baz=5.6						
TABL	Table Mountain	5.62	116		Pn	22 27 39.3	+0.2
RKAV	Rock Avalanche	5.62	118		Pn	22 27 39.3	+0.3
YUK8	Steele Glacier	5.77	105		Pn	22 27 42.0	+0.8
SAMH	Samovar Hills	5.95	118		Pn	22 27 44.8	+1.3
PCA	Pinnacle	6.18	116		Pn	22 27 48.0	+1.4
PINM	Pinnacle	6.18	116	P	Pn	22 27 48.0	+1.4
	baz=306						
YUK4	Talbot Arm	6.24	103	P	Pn	22 27 48.7	+1.2
	baz=293						
ANM	Nome	6.31	288		Pn	22 27 48.9	+0.6
ANM	Nome	6.31	288	P	Pn	22 27 48.9	+0.6
	baz=95						
BCPM	Bancas Point	6.52	116		Pn	22 27 51.1	-0.1
YUK6	Outpost Mounta	6.54	105		Pn	22 27 52.8	+1.1
YUK6	Outpost Mounta	6.54	105	P	Pn	22 27 52.7	+1.1
	baz=297						
YUK5	Granite Creek	6.67	103		Pn	22 27 54.8	+1.4
M30M	Minto, Yukon	6.68	90		Pn	22 27 53.5	0.0
HYT	Haines Junctio	6.96	105		Pn	22 27 58.5	+1.1
HYT	Haines Junctio	6.96	105	P	Pn	22 27 58.5	+1.1
	baz=297						
TNA	Tin City	7.51	295		Pn	22 28 04.6	-0.2
TNA	Tin City	7.51	295	P	Pn	22 28 04.6	-0.2
	baz=100						
WHY	Whitehorse	8.19	101		Pn	22 28 14.7	+0.5
WHY	Whitehorse	8.19	101	P	Pn	22 28 14.7	+0.5
	baz=296						
A21K	Barrow	8.30	348		Pn	22 28 16.1	+0.6
A21K	Barrow	8.30	348	P	Pn	22 28 16.1	+0.6
	baz=163						
SKAG	Skagway	8.59	109		Pn	22 28 20.3	+0.7
INK	Inuvik	8.85	48	Pn	Pn	22 28 22.7	-0.3
	comp=N,1.0nm,0.3s,baz=225,slow=15,SNR=30						
INK				Sn	Sn	22 29 57.9	-4.5
	comp=N,1.1nm,0.3s,baz=258,slow=30,SNR=1.9						
INK				Lg	Lg	22 30 48.9	
	comp=N,0.2nm,0.3s,baz=186,slow=21,SNR=1.9						
INK	Inuvik	8.85	48	P	Pn	22 28 22.7	-0.3
	baz=244						
JIS	Juneau Island	9.69	114		Pn	22 28 34.5	0.0
DLBC	Dease Lake	11.45	105	Pn	Pn	22 28 58.0	-0.8
	comp=N,0.2nm,0.3s,baz=224,slow=23,SNR=1.1						
DLBC				Lg	Lg	22 32 13.1	
	comp=N,0.1nm,0.3s,baz=21,slow=25,SNR=2.6						
DLBC	Dease Lake	11.45	105		Pn	22 28 57.9	-0.8
A36M	Sachs Harbour	13.07	37	Pn	Pn	22 29 20.0	-0.7
YKA	Yellowknife Ar	16.62	76	Pn	Pn	22 30 07.7	-0.3
	comp=N,0.2nm,0.3s,baz=291,slow=10,SNR=7.3						
YKA	Yellowknife Ar	16.62	76	P	Pn	22 30 06.1	-1.9
EDM	Edmonton	22.05	99	P	P	22 31 08.7	-1.1
EDM				IAmb	IAmb	22 31 15.5	
	comp=Z,21nm,1.0s						
RES	Resolute Bay	22.11	36	P	P	22 31 09.7	-0.5
	comp=Z,0.6nm,0.4s,baz=288,slow=13,SNR=2.2						
NEW	Newport	24.03	113	P	P	22 31 29.2	-0.9
	comp=Z,0.6nm,0.6s,baz=360,slow=16,SNR=1.4						
SEY	Seymchan	24.75	295	P	P	22 31 37.5	+1.1
	comp=Z,2.6nm,0.8s,baz=176,slow=9.7,SNR=6.6						
PDAR	Pinedale Array	31.62	111	P	P	22 32 38.7	+0.5
	comp=Z,0.2nm,0.5s,baz=46,slow=2.6,SNR=2.8						
PDAR	Pinedale Array	31.62	111	P	P	22 32 36.5	-1.7
NVAR	Mina Array Bea	31.83	126	P	P	22 32 41.3	+1.2
	comp=Z,0.6nm,0.6s,baz=313,slow=9.2,SNR=2.4						
NRIK	Noril'sk	41.29	333	P	P	22 34 01.8	+1.7
	comp=Z,1.6nm,0.6s,baz=62,slow=5.0,SNR=4.3						
NRIK				LR	LR	22 54 20.4	
	comp=Z,266nm,21.4s,baz=118,slow=41						
NRIK	Noril'sk	41.29	333	P	P	22 33 59.6	-0.5
NRIK				IAmb	IAmb	22 34 06.5	
	comp=Z,22nm,2.1s						
TXAR	Lajitas Array	45.55	115	P	P	22 34 35.5	+0.6
	comp=Z,0.2nm,0.5s,baz=338,slow=6.8,SNR=2.6						
TXAR				PcP	PcP	22 36 13.8	+0.4
	comp=Z,0.3nm,0.8s,baz=18,slow=3.1,SNR=1.8						
ARCES	ARCESS Array B	47.42	2	P	P	22 34 49.3	+0.2
	comp=Z,4.3nm,1.0s,baz=0.0,slow=7.2,SNR=1.7						
KSRS	Korea Array	53.26	281	P	P	22 35 33.9	+0.3
	comp=Z,0.3nm,0.3s,baz=20,slow=6.0,SNR=4.3						
KSRS				LR	LR	23 01 18.0	
	comp=Z,44nm,19.1s,baz=55,slow=39						
SONM	Songino Array	53.51	305	P	P	22 35 36.6	+1.1
	comp=Z,0.8nm,0.7s,baz=18,slow=4.6,SNR=5.1						
SONM	Songino Array	53.51	305	P	P	22 35 34.2	-1.2
ZALV	Zalesovo Beam	55.18	323	P	P	22 35 50.7	+3.4
	comp=Z,0.8nm,0.5s,baz=35,slow=6.2,SNR=5.1						
FINES	FINESS Array B	55.55	1	P	P	22 35 50.6	+0.7
	comp=Z,2.7nm,0.8s,baz=3.2,slow=10,SNR=3.9						
KURBB	Kurchatov Arra	59.84	326	P	P	22 36 21.6	+1.4
	comp=Z,0.4nm,0.7s,baz=27,slow=7.0,SNR=2.5						
MKAR	Makanchi Array	62.34	321	P	P	22 36 40.4	+3.1
	comp=Z,0.3nm,0.6s,baz=43,slow=7.0,SNR=7.3						
CLL	Collm	65.07	11	*e*P	P	22 36 56.0	+0.9
AKASG	Malin Array Be	66.34	360	P	P	22 37 05.0	+1.7
	comp=Z,0.3nm,0.3s,baz=5.0,slow=6.4,SNR=6.7						
AKASG	Malin Array Be	66.34	360	P	P	22 37 03.5	+0.2
NVLJ	Novalja	71.92	10	Sn	S	22 46 54.0	-4.2
UDBI	Udbina	72.03	10	Sn	S	22 46 53.5	-6.1
ESDC	Sonseca Array	74.11	26	P	P	22 37 53.2	+1.9
	comp=Z,0.6nm,0.8s,baz=346,slow=6.5,SNR=6.1						

NEIC ***06*** *23:17:57.8±2.1, 18°.53S±0°.10×175°.42W±0°.08, h217km±6km, mb4.6/77, Error ellipse: s-maj=14.0km s-min=10.7km az=174.0*

NOU ***06*** *23:17:58.8, 18°.37S×175°.08W, h266km, mb4.6/22, Tonga Islands*

BGR ***06*** *23:17:58.3±0.0, 19°.12S×175°.31W, h226km*

IDC ***06*** *23:18:01.9±2.6, 18°.67S×175°.57W, h259km±23km, mb4.0/13, mb1 4.3/15, mb1mx4.1/23, mbtmp4.6/15, Error ellipse: s-maj=19.8km s-min=14.1km az=122.0*

ISC 06 23:17:59.0±0.3, **18°.68S**±0°.07×**175°.38W**±0°.05, **h238**km, **n228**, σ1s.**17**/219, **mb4.6**/48, **30C-6D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVE	Taveuni	4.74	294	P	Pn	23 19 13.4	+2.2
NIUE	Niue	5.18	95		Pn	23 19 15.3	-1.3
NIUE				Sn	S	23 20 16.2	-2.1
AFI	Afiamalu	5.87	37	P	Pn	23 19 21.3	-4.1
	9.3nm,0.3s,baz=194,slow=5.7,SNR=5.7						
AFI				S	S	23 20 22.0	-12
	56nm,0.3s,baz=76,slow=21,SNR=8.7						
MSVF	Nonsavu	6.32	278	P	Pn	23 19 33.3	+2.4
	20nm,0.3s,baz=112,slow=12,SNR=164						
MSVF	Nonsavu	6.32	278		Pn	23 19 31.5	+0.6
MSVF	Nonsavu	6.32	278	P	Pn	23 19 33.7	+2.7
RAR	Rarotonga	14.89	102	P	P	23 21 18.2	-0.1
	0.7nm,0.3s,baz=277,slow=12,SNR=4.1						
DVP	Devils Point	15.64	271	P	Pn	23 21 28.7	+1.2
MARNC	Mare, Loyalty	15.83	257	P	P	23 21 29.0	+0.3
KNTN	Kanton	16.21	13	P	P	23 21 30.9	-2.0
KNTN				IAmb	IAmb	23 21 48.0	
	comp=Z,25nm,0.9s						
LIFNC	LIFOU	16.50	260	P	P	23 21 35.8	-0.2
PINNC	Pines Island,	16.54	253	P	Pn	23 21 37.4	-0.6
PINNC				IAmb	IAmb	23 21 43.6	
	comp=Z,29nm,1.0s						
SANVU	Saraoutou	16.96	278	P	P	23 21 40.6	-0.5
SANVU				IAmb	IAmb	23 21 53.0	
	comp=Z,24nm,0.6s						
SANVU	Saraoutou	16.96	278	P	P	23 21 41.8	+0.7
YATNC	Mamie plateau,	16.96	256	P	Pn	23 21 44.0	+1.0
OUENC	Ouen Island, N	17.06	254		P	23 21 42.5	+0.4
OUENC				IAmb	IAmb	23 21 47.3	
	comp=Z,16nm,0.8s						
OUENC	Ouen Island, N	17.06	254	P	Pn	23 21 44.7	+0.6
DZM	Mont Dzumac	17.37	256	P	Pn	23 21 46.9	-1.0
	comp=Z,1.0nm,0.3s,baz=86,slow=13,SNR=25						
DZM	Mont Dzumac	17.37	256		P	23 21 46.3	+0.6
DZM				IAmb	IAmb	23 21 48.7	
	comp=Z,22nm,0.8s						
ONTNC	Ouen Toro	17.40	255		P	23 21 46.6	+0.7
ONTNC				IAmb	IAmb	23 21 48.9	
	comp=Z,29nm,0.8s						
OUZ	Omahuta	19.16	208	P	Pn	23 22 07.1	-1.6
OUZ	Omahuta	19.16	208	P	Pn	23 22 07.6	-1.1
MXZ	Matakaoa Point	19.61	195	P	P	23 22 11.5	+2.0
URZ	Urewera	20.58	197	P	P	23 22 20.5	+0.6
	comp=Z,11nm,0.4s,baz=121,slow=24,SNR=12						
URZ				S	S	23 25 52.2	-3.5
	comp=Z,4.1nm,0.5s,baz=121,slow=24,SNR=1.9						
URZ	Urewera	20.58	197	P	P	23 22 20.6	+0.7
URZ				IAmb	IAmb	23 22 25.8	
	comp=Z,16nm,0.7s						
URZ	Urewera	20.58	197	P	P	23 22 20.7	+0.8
HIZ	Hauiti	21.51	201	P	P	23 22 31.2	+1.9
HIZ				IAmb	IAmb	23 22 47.0	
	comp=Z,24nm,1.0s						
BKZ	Black Stump Fm	21.60	197	P	P	23 22 31.1	+1.0
BKZ	Black Stump Fm	21.60	197	P	P	23 22 31.2	+1.0
MSWZ	Moikau Station	24.04	197	P	P	23 22 53.0	+0.5
SNZO	South Karori	24.10	199	P	P	23 22 54.1	+1.2
BHW	Baring Head	24.14	198	P	P	23 22 54.7	+1.4
PLWZ	Palliser	24.18	197	P	P	23 22 55.4	+1.7
QRZ	Quartz Range	24.39	203	P	P	23 22 57.5	+1.9
QRZ	Quartz Range	24.39	203	P	P	23 22 58.0	+2.4
NNZ	Nelson	24.44	201	P	P	23 22 57.5	+1.4
NNZ				IAmb	IAmb	23 23 12.0	
	comp=Z,34nm,1.2s						
TUWZ	Tuamarina	24.44	200	P	P	23 22 57.6	+1.5
PPTF	Pamatai, Papee	24.55	92	P	P	23 22 58.4	+0.9
BSWZ	Blackbirch Sta	24.72	199	P	P	23 23 01.1	+2.4
THZ	Tophouse	25.09	201	P	P	23 23 03.4	+1.4
THZ				IAmb	IAmb	23 23 20.5	
	comp=Z,21nm,1.1s						
KHZ	Kahutara	25.46	199	P	P	23 23 06.2	+0.9
KHZ				IAmb	IAmb	23 23 21.9	
	comp=Z,24nm,1.1s						
KHZ	Kahutara	25.46	199	P	P	23 23 05.7	+0.5
LTZ	Lake Taylor	26.21	201	P	P	23 23 14.6	+2.7
LHI	Lord Howe Isla	26.36	236	P	P	23 23 14.8	+1.3
OXZ	Oxford	26.77	201	P	P	23 23 20.0	+3.1
MQZ	McQueen's Vall	26.91	199	P	P	23 23 21.0	+2.8
RPZ	Rata Peaks	27.45	202	P	P	23 23 26.7	+3.7
RPZ				IAmb	IAmb	23 23 28.1	
	comp=Z,17nm,0.9s						
RPZ	Rata Peaks	27.45	202	P	P	23 23 24.6	+1.6
FOZ	Fox Glacier	27.74	204	P	P	23 23 27.7	+2.2
FOZ				IAmb	IAmb	23 23 29.4	
	comp=Z,20nm,0.9s						
WKZ	Wanaka	29.14	203	P	P	23 23 39.2	+1.2
MLZ	Mavora Lakes	29.94	204	P	P	23 23 45.2	+0.2
MLZ				IAmb	IAmb	23 23 52.5	
	comp=Z,17nm,1.0s						
DCZ	Deep Cove	30.40	205	P	P	23 23 49.5	+0.5
EIDS	Eidsvold	31.74	252	P	P	23 24 00.6	-0.4
ARMA	Armidale	32.09	242	P	P	23 24 04.2	+0.1
ARMA	Armidale	32.09	242	P	P	23 24 04.2	+0.1
RMQ	Roma	33.92	250	P	P	23 24 19.9	-0.1
	comp=Z,19nm,0.7s						
RABL	Rabaul	34.83	290	P	P	23 24 27.1	-0.7
	comp=Z,60nm,0.6s						
CTA	Charters Tower	36.17	261	P	P	23 24 38.5	-0.6
CTAO	Charters Tower	36.17	261	P	P	23 24 38.4	-0.8
CTAO	Charters Tower	36.17	261	P	P	23 24 38.4	-0.8
CMSA	Cobar Meteorol	37.31	242	P	P	23 24 48.4	-0.2
TOO	Toolangi	38.96	233	P	P	23 25 01.6	-0.7
TOO				IAmb	IAmb	23 25 04.3	
	comp=Z,15nm,1.1s						
COEN	Coen	39.99	270	P	P	23 25 10.0	-1.0
COEN	Coen	39.99	270	P	P	23 25 10.2	-0.8
STKA	Stephens Creek	40.81	243	P	P	23 25 16.7	-0.8
	comp=Z,3.5nm,0.6s,baz=90,slow=11,SNR=6.4						
STKA				PcP	PcP	23 27 14.6	+0.9
	comp=Z,1.6nm,0.5s,baz=70,slow=19,SNR=2.9						
STKA	Stephens Creek	40.81	243	P	P	23 25 17.0	-0.6
BBOO	Buckleboo	45.57	242	P	P	23 25 54.7	-0.8
WR0	Warramunga Arr	47.13	260	P	P	23 26 06.8	-1.1
WR0				PcP	PcP	23 27 35.9	+0.3
WB0	Warramunga Arr	47.30	260	P	P	23 26 08.2	-0.9
WB0				IAmb	IAmb	23 26 08.4	
	comp=Z,17nm,0.8s						
WB2	Warramunga Arr	47.31	260	P	P	23 26 08.1	-1.1
WB2				IAmb	IAmb	23 26 08.6	
	comp=Z,16nm,0.7s						
WRAB	Tennant Creek	47.32	260	P	P	23 26 07.7	-1.5
WRAB				IAmb	IAmb	23 26 08.5	
	comp=Z,15nm,0.7s						
WRA	Warramunga Arr	47.33	260	P	P	23 26 07.9	-1.5
	comp=Z,7.9nm,0.5s,baz=97,slow=7.6,SNR=117						
WRA				PcP	PcP	23 27 36.2	-0.1
	comp=Z,4.3nm,0.6s,baz=95,slow=3.6,SNR=10						
AS31	Alice Springs	47.36	255	IAmb	IAmb	23 26 09.7	
	comp=Z,18nm,0.7s						
ASAR	Alice Springs	47.36	255	P	P	23 26 08.7	-0.9
	comp=Z,71nm,0.8s,baz=87,slow=8.5,SNR=616						
ASAR				PcP	PcP	23 27 36.5	+0.2
	comp=Z,7.1nm,0.6s,baz=102,slow=3.9,SNR=14						
ASAR				S	S	23 32 37.8	-7.4
	comp=Z,0.5nm,0.7s,baz=94,slow=13,SNR=6.4						
ASAR	Alice Springs	47.36	255	P	P	23 26 09.0	-0.6
MTN	Manton Dam	51.65	268	IAmb	IAmb	23 26 41.1	
	comp=Z,20nm,0.8s						
FORT	Forrest	52.29	245	P	P	23 26 45.4	-1.1
SOEI	Soe	58.95	270	P	P	23 27 34.7	+0.6
VNDA	Vanda	59.94	186	P	P	23 27 41.5	+1.7
PSA00	Pilbara Seismi	60.50	255	P	P	23 27 43.1	-1.3
PSA00				IAmb	IAmb	23 27 44.0	
	comp=Z,18nm,0.8s						
PSA00	Pilbara Seismi	60.50	255	P	P	23 27 43.4	-1.1
PSA00				IAmb	IAmb	23 27 44.1	
	comp=Z,8.9nm,0.8s						
MORW	Morawa	62.81	246	P	P	23 27 58.6	-1.1
MORW				IAmb	IAmb	23 27 59.3	
	comp=Z,17nm,1.1s						
TOLI2	Tolitoli	65.68	280	P	P	23 28 18.4	-0.2
TOLI2				IAmb	IAmb	23 28 18.4	
	comp=Z,11nm,1.0s						
MJAR	Matsushiro Arr	70.27	322	P	P	23 28 45.3	-1.3
	comp=Z,5.5nm,0.7s,baz=154,slow=6.3,SNR=11						
MJAR	Matsushiro Arr	70.27	322	P	P	23 28 46.4	-0.2
QSPA	South Pole Qui	71.38	180	P	P	23 28 54.9	+1.9
PETK	Petropavlovsk-	75.19	344	P	P	23 29 15.0	-0.1
	comp=Z,4.1nm,0.7s,baz=124,slow=7.4,SNR=5.4						
KSRS	Korea Array	77.21	317	P	P	23 29 27.7	+0.9
	comp=Z,1.8nm,0.7s,baz=134,slow=5.6,SNR=6.2						
NVAR	Mina Array Bea	78.02	42	P	P	23 29 33.1	+1.6
	comp=Z,1.9nm,0.7s,baz=225,slow=8.5,SNR=9.9						
NJ2	Nanjing	80.66	308	*e*P	P	23 29 47.0	+1.4
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
U15A	North Rim	80.92	47	P	P	23 29 49.1	+1.8
GHO	Glory Hole Cre	82.91	12	P	P	23 29 57.2	+0.4
GHO				IAmb	IAmb	23 29 59.6	
	comp=Z,8.5nm,0.8s						
TMUT	Trail Mountain	83.13	45	P	P	23 30 00.2	+1.4
MNTX	Cornudas Mount	83.69	54	P	P	23 30 01.8	+0.4
TXAR	Lajitas Array	84.00	56	P	P	23 30 04.8	+1.7
	comp=Z,0.7nm,0.8s,baz=194,slow=4.6,SNR=6.1						
MAW	Mawson	84.09	199	P	P	23 30 03.5	+0.8
	comp=Z,2.2nm,0.7s,baz=130,slow=6.6,SNR=15						
MAW	Mawson	84.09	199	IAmb	IAmb	23 30 04.4	
	comp=Z,1.0nm,0.6s						
TRF	Thorofare Moun	84.18	11	IAmb	IAmb	23 30 04.0	
	comp=Z,12nm,0.8s						
J20K	Nowinta River	84.21	9	P	P	23 30 03.7	+0.5
J20K				IAmb	IAmb	23 30 04.6	
	comp=Z,11nm,0.8s						
RND	Reindeer	84.41	12	P	P	23 30 04.8	+0.5
RND				IAmb	IAmb	23 30 05.8	
	comp=Z,21nm,1.0s						
MCK	McKinley	84.69	11	IAmb	IAmb	23 30 06.9	
	comp=Z,15nm,0.9s						
M26K	Nabesna, AK	84.77	15	IAmb	IAmb	23 30 08.2	
	comp=Z,14nm,1.1s						
H03S2	Juan Fernandez	84.97	124	T	T	01 03 26.9	
	baz=252						
H03S1	Juan Fernandez	84.98	124	T	T	01 03 28.9	
	baz=252						
H03S3	Juan Fernandez	84.98	124	T	T	01 03 38.0	
	baz=252						
M27K	Edge Creek, AK	85.00	15	P	P	23 30 07.9	+0.5
M27K				IAmb	IAmb	23 30 09.3	
	comp=Z,7.4nm,0.8s						
IPM	Ipoh	85.37	276	P	P	23 30 09.5	-0.7
I21K	Tanana	85.49	10	IAmb	IAmb	23 30 11.0	
	comp=Z,9.9nm,1.0s						
WRH	Wood River Hil	85.52	11	P	P	23 30 09.7	0.0
MLY	Manley	85.56	10	IAmb	IAmb	23 30 10.2	
	comp=Z,9.4nm,1.0s						
DOT	Dot Lake	85.61	13	P	P	23 30 10.6	+0.3
DOT				IAmb	IAmb	23 30 11.3	
	comp=Z,9.3nm,0.8s						
H21K	Melozitna Rive	85.81	9	P	P	23 30 11.5	+0.4
H21K				IAmb	IAmb	23 30 13.3	
	comp=Z,8.5nm,1.1s						
SCRK	Sand Creek	85.92	13	P	P	23 30 12.2	+0.4
COLA	College	85.93	11	P	P	23 30 11.5	-0.1
MDM	Murphy Dome	85.93	11	IAmb	IAmb	23 30 12.3	
	comp=Z,12nm,0.9s						
IL31		86.02	12	IAmb	IAmb	23 30 13.4	
	comp=Z,5.8nm,0.8s						
ILAR	Eielson Array	86.02	12	P	P	23 30 12.0	-0.2
	comp=Z,4.4nm,0.8s,baz=231,slow=6.2,SNR=42						
ILAR	Eielson Array	86.02	12	P	P	23 30 11.7	-0.5
DAWY	Dawson	87.06	15	P	P	23 30 17.5	+0.2
DAWY				IAmb	IAmb	23 30 18.8	
	comp=Z,6.2nm,0.9s						
ENH	Enshi	87.09	303	P	P	23 30 18.7	+0.5
ENH				IAmb	IAmb	23 30 19.7	
	comp=Z,11nm,0.8s						
XAN	Xi'an	89.02	306	P	P	23 30 28.6	+1.4
XAN				pP	PcP	23 30 34.8	+6.3
XAN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HHC	Hu-ho-hao-te	89.88	313	*e*P	P	23 30 32.2	+1.1
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,7.6s						
CMAR	Chiang Mai Arr	91.85	289	P	P	23 30 42.1	+1.5
	comp=Z,1.5nm,0.3s,baz=112,slow=2.9,SNR=21						
YKA	Yellowknife Ar	93.84	24	P	P	23 30 48.7	-0.1
	comp=Z,1.2nm,0.8s,baz=234,slow=5.1,SNR=4.5						
ZALV	Zalesovo Beam	110.62	322	PKiKP	PKiKP	23 36 02.2	-0.7
	comp=Z,1.4nm,0.6s,baz=117,slow=1.6,SNR=9.1						
MKAR	Makanchi Array	111.74	314	PKiKP	PKiKP	23 36 04.6	-0.8
	comp=Z,0.6nm,0.4s,baz=138,slow=0.7,SNR=24						
ARU	Arti	125.08	327	PKP	PKPdf	23 36 30.7	+0.1
	comp=Z,1.9nm,0.5s,baz=62,slow=1.9,SNR=11						
AKTO	Aktyubinsk	127.32	320	PKP	PKiKP	23 36 35.4	-0.3
	comp=Z,1.5nm,0.7s,baz=63,slow=2.9,SNR=5.6						
ARCES	ARCESS Array B	127.55	351	PKP	PKPdf	23 36 35.0	0.0
	comp=Z,1.4nm,0.4s,baz=6.5,slow=0.5,SNR=20						
FINES	FINESS Array B	134.68	346	PKP	PKiKP	23 36 50.0	-0.1
	comp=Z,4.1nm,0.7s,baz=30,slow=3.1,SNR=16						
HFS	Hagfors	138.08	353	PKhKP	PKPpre	23 36 44.6	
	comp=Z,2.8nm,0.8s,baz=97,slow=3.5,SNR=4.2						
KMBO	Kilima Mbogo	142.37	242	PKhKP	PKPpre	23 37 00.8	
	comp=Z,0.7nm,0.3s,baz=20,slow=7.6,SNR=3.8						
AKASG	Malin Array Be	142.54	334	PKhKP	PKPpre	23 36 59.0	
	comp=Z,0.7nm,0.5s,baz=41,slow=4.4,SNR=5.8						
EKA	Eskdalemuir Ar	142.93	7	PKhKP	PKPpre	23 37 00.1	
	comp=Z,0.6nm,0.5s,baz=310,slow=1.9,SNR=5.8						
PURM	Purcari	145.31	329	⇑P	PKPab	23 37 08.9	-0.1
MILM	Milestii Mici	145.54	330	⇑P	PKPdf	23 37 09.0	+0.3
KWP	Kalwaria Pacla	145.87	339	*e*PKPbc	PKPbc	23 37 09.8	-0.4
NRDL	Niedersach Rie	145.98	354	*e*PKPbc	PKPab	23 37 11.1	-0.2
	baz=10,slow=2.7						
FLTG	Flechtingen	146.02	353	*e*PKPbc	PKPbc	23 37 10.9	+0.3
	baz=10,slow=2.7						
LEOM	Leova	146.13	330	⇑P	PKPbc	23 37 11.3	+0.2
VASR	Vaslui	146.22	331	⇑P	PKPab	23 37 12.3	-0.3

OJC	Ojcow	146.27	342	ePKPbc	PKPbc	23 37 11.7	+0.2
KSP	Ksiaz	146.59	347	ePKPbc	PKPab	23 37 13.1	-0.8
CLZ	Clausthal	146.60	354	ePKPbc	PKPbc	23 37 13.0	+0.7
	baz=10,slow=2.7						
KOLS	Kolonicke sedl	146.62	339	ePKP	PKPab	23 37 13.3	-0.8
VLDR	Vladesti	146.67	330	⇑P	PKPbc	23 37 13.4	+0.7
CLL	Collm	146.77	350	⇓iPKPbc	PKPbc	23 37 13.2	+0.4
	comp=Z,26nm,1.2s						
CLL	Collm	146.77	350	ePKPbc	PKPbc	23 37 13.1	+0.4
	baz=10,slow=2.7						
TLCR		146.78	328	⇑P	PKPbc	23 37 13.5	+0.5
NIE	Niedzica	146.84	341	ePKPbc	PKPbc	23 37 13.1	0.0
TESR	Tescani	146.84	332	⇑P	PKPbc	23 37 13.2	0.0
OSTC	Ostas	146.88	346	ePKP	PKPbc	23 37 14.0	+0.8
CHVC	Chvalec	146.88	347	ePKP	PKPbc	23 37 13.8	+0.6
CRVS	Cervenica-Dubn	146.92	339	ePKP	PKPbc	23 37 13.7	+0.4
BRG	Berggiesshubel	147.03	349	ePKPbc	PKPbc	23 37 14.3	+0.7
	baz=10,slow=2.7						
BRG	Berggiesshubel	147.03	349	i PKP	PKPbc	23 37 14.3	+0.7
BRG				Amp		23 37 15.0	
	comp=Z,7.1nm,1.0s						
DPC	Dobruska-Polom	147.05	346	ePKP	PKPbc	23 37 14.6	+0.9
FBE	Freiberg	147.09	350	ePKPbc	PKPab	23 37 14.8	-1.1
	baz=10,slow=2.7						
CFR	Carcaliu	147.12	329	⇑P	PKPbc	23 37 14.6	+0.7
KRLC	Kraliky	147.20	345	ePKP	PKPbc	23 37 15.0	+0.9
TRPA	Tarpa	147.21	338	⇑P	PKPbc	23 37 14.6	+0.6
TRPA	Tarpa	147.21	338	ePKPDF	PKPbc	23 37 13.5	-0.6
TPGR	Topolog	147.21	328	⇑P	PKPbc	23 37 15.1	+0.8
PVCC	Panska Ves	147.25	348	ePKP	PKPbc	23 37 15.1	+1.0
MORC	Moravsky Berou	147.29	344	⇑P	PKPbc	23 37 15.0	+0.6
MORC	Moravsky Berou	147.29	344	ePKP	PKPbc	23 37 15.0	+0.6
VRI	Vrincioaia	147.29	331	⇑P	PKPbc	23 37 14.8	+0.4
LANS	Liptovska Anna	147.33	342	ePKP	PKiKP	23 37 15.7	-0.8
BRTR	Keskin Array B	147.35	316	PKPbc	PKPbc	23 37 15.2	+0.3
	comp=Z,7.1nm,0.8s,baz=116,slow=2.9,SNR=8.1						
ARCR	ARCALIA	147.37	335	⇑P	PKPbc	23 37 15.3	+0.7
TIRR	Tirgusor	147.50	327	⇑P	PKPbc	23 37 15.1	+0.1
OZUR		147.54	332	⇑P	PKPbc	23 37 15.7	+0.5
HARR	Harsova	147.57	328	⇑P	PKPbc	23 37 15.5	+0.3
TLBR	Topalu	147.62	328	⇑P	PKiKP	23 37 16.4	-0.8
MULD	Muldenberg	147.74	351	esPKPbc	sPKPbc	23 38 37.4	-1.6
PRU	Pruhonice	147.77	348	ePKP	PKPbc	23 37 16.3	+0.8
GUNZ	Gunzen	147.79	351	ePKPbc	PKPbc	23 37 16.4	+0.8
	baz=10,slow=2.7						
GUNZ				esPKPbc	sPKPdf	23 38 37.3	+0.8
DOPR	Dopca	147.82	332	⇑P	PKiKP	23 37 16.9	-0.7
TRIB	Obertriebel	147.83	351	ePKPbc	PKiKP	23 37 16.7	-0.8
	baz=10,slow=2.7						
TRIB				esPKPbc	sPKPdf	23 38 37.4	+0.9
NKC	Novy Kostel	147.90	351	ePKP	PKPbc	23 37 16.6	+0.7
MLR	Muntele Rosu	147.93	331	⇑P	PKPbc	23 37 16.7	+0.3
MLR	Muntele Rosu	147.93	331	PKPbc	PKPbc	23 37 16.6	+0.3
	comp=Z,5.0nm,0.8s,baz=90,slow=3.0,SNR=5.4						
CBBR	Cluj-Babes-Bol	147.95	335	⇑P	PKPbc	23 37 16.9	+0.7
VRAC	Vranov	147.96	345	⇑P	PKPbc	23 37 16.0	-0.1
VRAC	Vranov	147.96	345	PKPbc	PKPbc	23 37 16.1	0.0
	comp=Z,1.7nm,0.4s,baz=357,slow=2.5,SNR=3.8						
VRAC	Vranov	147.96	345	ePKP	PKPbc	23 37 16.5	+0.4
CJR	Cluj-Napoca	147.98	335	⇑P	PKPbc	23 37 17.0	+0.7
JAVC	Velka Javorina	148.10	344	ePKP	PKiKP	23 37 18.0	-0.1
VYHS	Vyhne	148.10	342	ePKP	PKPbc	23 37 17.0	+0.5
MEM	Membach	148.12	358	dPKiKP	PKiKP	23 37 18.1	0.0
SECR		148.22	331	⇓P	PKPbc	23 37 17.4	+0.5
TREC	Trest	148.23	346	ePKP	PKPbc	23 37 17.4	+0.6
KRUC	Moravsky	148.23	345	ePKP	PKPbc	23 37 17.5	+0.7
PSZ	Piszkesteto	148.29	340	ePKPDF	PKPbc	23 37 16.4	-0.7
VOIR		148.38	332	⇑P	PKiKP	23 37 18.6	-0.3
ROTZ	Rotzenmuhle	148.39	351	ePKPbc	PKiKP	23 37 17.9	-0.7
	baz=10,slow=2.7						
SMOL	Smolenice	148.48	344	ePKP	PKiKP	23 37 18.7	-0.2
ARR	Arges	148.62	332	⇑P	PKiKP	23 37 19.3	0.0
MODS	Modra-Piesok	148.65	344	ePKP	PKPbc	23 37 18.2	+0.3
KHC	Kasperske Hory	148.77	349	ePKP	PKiKP	23 37 18.9	-0.6
KHC				ex	x	23 38 20.7	
CKRC	Cesky Krumlov	148.93	348	ePKP	PKiKP	23 37 20.3	+0.5
MMAI	Mount Meron Ar	148.97	303	PKPbc	PKPbc	23 37 19.2	-0.1
	comp=Z,7.4nm,0.4s,baz=77,slow=6.2,SNR=1.7						
GEC2	GERESS Array S	149.02	348	ePKPbc	PKPbc	23 37 19.5	+0.5
	baz=10,slow=2.7						
GERES	GERESS Array B	149.02	348	PKPbc	PKPbc	23 37 19.5	+0.5
	comp=Z,3.7nm,0.7s,baz=33,slow=2.9,SNR=33						
WLF	Walferdange	149.06	358	dPKiKP	PKiKP	23 37 20.1	0.0
WLF	Walferdange	149.06	358	ePKPbc	PKiKP	23 37 20.0	0.0
	baz=10,slow=2.7						
SIRR	Siria	149.10	337	⇓P	PKPbc	23 37 19.6	+0.5
GZR	Gura Zlata	149.38	334	⇑P	PKPbc	23 37 19.8	-0.1
SOP	Sopron	149.47	344	ePKPDF	PKPbc	23 37 19.3	-0.6
EGYH	Egyhazaskeszo	149.51	343	ePKPDF	PKPbc	23 37 20.0	0.0
ZIMR		149.59	329	⇑P	PKiKP	23 37 21.3	0.0
MPLH	Magyarpolny	149.67	342	ePKPDF	PKPbc	23 37 20.0	-0.5
HERR	Herculane	149.95	334	⇑P	PKPbc	23 37 21.4	+0.2
FUR	Furstenfeldbru	150.09	351	ePKPbc	PKiKP	23 37 22.0	-0.2
	baz=10,slow=2.7						
RJOB	Jochberg	150.26	349	ePKPbc	PKiKP	23 37 23.1	+0.5
	baz=10,slow=2.7						
BFO	Black Forest	150.27	355	ePKPbc	PKiKP	23 37 22.4	-0.2
	baz=10,slow=2.7						
MDVR	Moldovita	150.32	335	⇑P	PKPbc	23 37 22.4	+0.3
KOVH	Kovagotottos	150.48	341	ePKPDF	PKPbc	23 37 21.9	-0.5
FRGS	Fruska Gora	150.72	338	⇑P	PKiKP	23 37 23.4	-0.2
UBR	Ueberruh	150.73	352	ePKPbc	PKiKP	23 37 23.5	-0.1
	baz=10,slow=2.7						
PERS	Pernice	150.81	345	i PKPbc	PKPbc	23 37 23.0	-0.2
BOVS	Bovan	151.26	334	⇑P	PKPbc	23 37 22.3	-2.0
VTS	Vitosha	151.39	331	⇓P	PKiKP	23 37 25.2	0.0
DAVOX	Davos/Dischmat	151.64	352	PKPbc	PKiKP	23 37 25.9	+0.2
	comp=Z,10nm,0.4s,baz=254,slow=3.2,SNR=48						
BOJS	Bojanci	151.83	344	i PKPbc	PKiKP	23 37 26.0	+0.2
GBRS	Gornja Briga	151.92	345	i PKPbc	PKiKP	23 37 26.0	-0.1
ESDC	Sonseca Array	157.80	18	PKPab	PKPab	23 38 01.5	+0.4
	comp=Z,3.3nm,1.2s,baz=329,slow=4.3,SNR=12						
TORD	Torodi Ar. Bea	173.82	152	PKP	PKPdf	23 37 39.8	-1.0
	comp=Z,1.0nm,1.1s,baz=219,slow=0.4,SNR=4.4						

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*TIF **06** 23:28:20.5, 43°.84N×45°.09E, h19^{km}±2^{km}*
*MOS **06** 23:28:21.2±0.0, 43°.78N×45°.10E, h19^{km}, MPVA3.7*
*NORS **06** 23:28:21.0±0.0, 43°.80N×45°.13E, h26^{km}, MPVA3.8*
*DRS **06** 23:28:21.4±0.0, 43°.77N×44°.74E, h21^{km}*
ISC 06 23:28:23.0±1.2**, 43°.71N**±0°.05×**45°.07E**±0°.02**, h14**^{km}±9^{km}**,**
n32, σ1^{s}.**39**/62**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKR	Terskaya	0.24	274	i Pg	Pb	23 28 28.3	-0.9
TRKR				eSg	Sb	23 28 34.3	+0.9
BTKR	Batakoyurt	0.51	229	ePg	Pb	23 28 33.3	-0.5
BTKR				eSg	Sn	23 28 44.3	-0.1
PRTR	Priterechnaya	0.57	275	ePg	Pb	23 28 34.4	-0.3
PRTR				eSg	Sn	23 28 44.6	-1.3
KMGR	Komgaron	0.67	193	i Pg	Pb	23 28 36.5	+0.1
KMGR				eSg	Sn	23 28 49.0	+0.7
VLKR	Vladikavkaz	0.72	204	ePg	Pg	23 28 37.2	+0.3
VLKR				eSg	Sn	23 28 50.5	+0.9
GROC	Groznyy	0.73	133	ePg	Pb	23 28 36.6	-0.8
GROC				eSg	Sn	23 28 48.8	-1.0
ARNR	Ardon	0.78	228	i Pg	Pn	23 28 38.7	-0.9
ARNR				eSg	Sn	23 28 52.8	+1.8
STDR	Stavd-Durt	0.81	246	ePg	Pn	23 28 39.2	-0.7
STDR				eSg	Sn	23 28 53.6	+1.9
KORR	Kora	0.96	230	ePg	Pn	23 28 41.5	-0.6
KORR				eSg	Sn	23 28 57.7	+2.2
LSNR	Lesken	1.00	245	ePg	Pg	23 28 42.6	+0.3
LSNR				eSg	Sn	23 28 59.2	+2.7
LACR	Lac	1.04	213	ePg	Pb	23 28 41.9	-1.0
LACR				eSg	Sn	23 28 59.2	+1.4
DVE	Vedeno	1.07	134	ePg	Pb	23 28 42.9	-0.5
DVE				eSg	Sg	23 28 60.0	+2.2
NCK	Nalchik	1.09	259	ePg	Pg	23 28 43.7	-0.3
NCK				eSg	Sg	23 29 00.4	+2.1
MTEO	Meteo	1.10	201	P	Pb	23 28 43.3	-0.7
MTEO				S	Sn	23 29 00.5	+1.0
PNSH	Pansheti	1.12	197	P	Pn	23 28 34.8	-10
PNSH				S	Sb	23 28 52.1	-6.6
ZEI	Tsey	1.25	223	ePg	Pn	23 28 45.4	-0.9
ZEI				eSg	Sg	23 29 03.7	+0.3
DLMR	Dylym	1.30	119	ePg	Pb	23 28 46.8	-0.4
DLMR				eSg	Sg	23 29 05.7	+0.7
GUDG	Gudauri	1.31	199	P	Pb	23 28 47.5	0.0
BTLR	Botlikh	1.34	141	ePg	Pb	23 28 47.4	-0.5
BTLR				eSg	Sg	23 29 06.7	+0.4
DBC	Dubki	1.46	117	ePg	Pn	23 28 48.6	-0.4
DBC				eSg	Sg	23 29 09.1	-0.8
KRNR	Karanay	1.60	123	ePg	Pb	23 28 51.2	-1.3
KRNR				eSg	Sb	23 29 13.4	+0.8
UNCR	Uncukul	1.60	128	i Pg	Pn	23 28 50.8	-0.2
UNCR				eSg	Sb	23 29 13.0	+0.4
ONI	Oni	1.63	227	P	Pn	23 28 51.2	0.0
ONI				S	Sb	23 29 14.2	+1.0
XNZR	Khunzakh	1.67	134	ePg	Pb	23 28 52.3	-1.3
XNZR				eSg	Sb	23 29 15.5	+0.9
BUJR	Buynaksk	1.73	120	ePg	Pb	23 28 53.9	-0.7
BUJR				eSg	Sg	23 29 18.4	-0.3
SHA1	Shidzhatmaz	1.75	272	ePg	Pb	23 28 53.3	-1.7
SHA1				eSg	Sb	23 29 16.4	-0.5
NEY	Neytrino	1.77	256	ePg	Pb	23 28 54.0	-1.3
NEY				eSg	Sb	23 29 17.8	+0.4
ARKR	Arakani	1.79	127	ePg	Pb	23 28 54.1	-1.4
ARKR				eSg	Sb	23 29 19.0	+1.2
GNBR	Gunib	1.91	133	ePg	Pb	23 28 56.3	-1.4
GNBR				eSg	Sg	23 29 23.4	-1.2
LGD	Lagodekhi	2.06	155	P	Pb	23 28 58.5	-1.7
LGD				S	Sb	23 29 25.9	+0.3
KMKR	Kumukh	2.17	136	i Pg	Pn	23 28 59.9	+1.0
KMKR				eSg	Sb	23 29 29.5	+0.5
SGKR	Sergokala	2.27	122	ePn	Pn	23 29 01.2	+1.1
SGKR				eSn	Sb	23 29 31.4	-0.2

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*IDC **06** 23:34:11.2±1.0, 35°.79N×29°.45E, h0^{km}, mb3.8/5, mb1 4.0/12, mb1mx3.7/47, mbtmp3.9/12, ML3.9/7, MS2.6/1, Ms1 2.6/1, ms1mx2.2/43, Error ellipse: s-maj=22.7km s-min=15.9km az=2.0*
*THE **06** 23:34:16.8, 35°.85N×29°.23E, h0^{km}, ML3.3/2, Error ellipse: s-maj=1.7km s-min=0.5km az=167.0*
*DDA **06** 23:34:16.0, 35°.73N×29°.36E, h27^{km}±1^{km}, MW3.7*
*NIC **06** 23:34:17.5±0.0, 35°.74N×29°.72E, h26^{km}±1^{km}, Ml4.1/3*
*ATH **06** 23:34:17.3, 36°.34N×29°.34E, h41^{km}±14^{km}, ML3.2/2, Error ellipse: s-maj=15.9km s-min=1.6km az=145.0*
*HLW **06** 23:34:17.2, 35°.38N×29°.40E, h8^{km}±12^{km}, Md3.9, Ml4.0*
ISC 06 23:34:13.2±1.3**, 35°.65N**±0°.03×**29°.49E**±0°.03**, h23**^{km}±11^{km}**,**
n110, σ1^{s}.**94**/136**, mb3.7**/5**, 6C-6D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.51	8	P	Pn	23 34 25.4	+0.3
KSL				S	Sn	23 34 33.2	+0.1
	7μm,0.5s						
KSL	Kastellorizon	0.51	8	P	Pn	23 34 25.4	+0.3
KSL				S	Sb	23 34 31.4	+0.9
KSL				AML	AML	23 34 34.5	
	comp=E,19627μm,0.5s						
KSL				AML	AML	23 34 36.0	
	comp=N,9508μm,0.6s						
KSL	Kastellorizon	0.51	8	⇓P	Pn	23 34 25.4	+0.3
KSL				S	Sn	23 34 33.7	+0.6
AKAS	Kas	0.59	9	i P	Pn	23 34 27.3	+0.9
AKAS				IAML		23 34 36.0	
	comp=N,2μm,0.4s						
AKUM	Antalya-Kumluc	0.96	45	i P	Pn	23 34 33.0	+1.7
AKUM				i S	Sn	23 34 46.0	+1.7
AKUM				IAML		23 34 47.0	
	comp=N,578nm,0.7s						
AKUM				IAML		23 34 49.0	
	comp=E,538nm,0.3s						
FETY	Fethiye	1.04	342	P	Pb	23 34 32.7	+0.1
FETY				S	Sb	23 34 45.6	-0.2
FETY	Fethiye	1.04	342	i P	Pb	23 34 32.7	+0.1
FETY				IAML		23 34 45.0	
	comp=E,1μm,0.3s						
FETY				i S	Sb	23 34 45.6	-0.2
FETY				IAML		23 34 50.0	
	comp=N,750nm,0.3s						
ELL	Elmali	1.15	17	P	Pb	23 34 35.6	+1.1
ELL				S	Sn	23 34 50.4	+1.3
ARG	Arkhangelos	1.25	298	P	Pb	23 34 35.9	-0.1
ARG	Arkhangelos	1.25	298	P	Pb	23 34 35.9	-0.1
ARG				AML	AML	23 35 02.7	
	comp=E,1533μm,0.6s						
ARG				AML	AML	23 35 15.6	
	comp=N,1390μm,1.0s						
DALY	Dalyan (Mula)	1.35	330	i P	Pn	23 34 36.7	+0.1
DALY				IAML		23 35 06.0	
	comp=E,324nm,0.6s						
DALY				IAML		23 35 08.0	
	comp=N,362nm,0.7s						
CAEL	Denizli, Camel	1.48	355	i P	Pb	23 34 40.3	+0.2
CAEL				IAML		23 35 12.0	
	comp=E,711nm,0.5s						
CAEL				IAML		23 35 14.0	
	comp=N,533nm,1.2s						
TURN	Turunc	1.51	319	i P	Pn	23 34 39.2	+0.3
TURN				IAML		23 35 09.0	
	comp=E,240nm,0.4s						
TURN				IAML		23 35 17.0	
	comp=N,149nm,0.4s						
GOLH	Golhisar	1.59	2	i P	Pb	23 34 42.3	+0.3
GOLH				IAML		23 35 19.0	
	comp=E,380nm,1.0s						
GOLH				IAML		23 35 19.0	
	comp=N,288nm,1.1s						
MULA	Mugla, Merkez-	1.86	330	i P	Pn	23 34 43.6	-0.3
MULA				i S	Sn	23 35 06.6	-0.1
MULA				IAML		23 35 07.0	
	comp=N,216nm,0.4s						
MULA				IAML		23 35 10.0	
	comp=E,401nm,0.6s						
TAVA	DENIZLI_Tavas	1.88	346	i P	Pn	23 34 45.4	+1.4
TAVA				i S	Sn	23 35 06.0	-1.0
TAVA				IAML		23 35 08.0	
	comp=N,299nm,0.5s						
TAVA				IAML		23 35 24.0	
	comp=E,182nm,0.5s						
BUCA	Burdur, Bucak-	1.89	27	i P	Pb	23 34 47.2	+0.3
BUCA				IAML		23 35 24.0	
	comp=N,109nm,0.5s						
BUCA				IAML		23 35 29.0	
	comp=E,198nm,0.5s						
DAT	Datca	1.89	305	P	Pn	23 34 45.3	+1.1
DAT	Datca	1.89	305	i P	Pn	23 34 45.4	+1.2
DAT				i S	Sn	23 35 06.8	-0.5
DAT				IAML		23 35 09.0	
	comp=E,295nm,0.4s						
DAT				IAML		23 35 12.0	
	comp=N,336nm,0.6s						
BRDR	BURDUR-Merkez	2.10	12	i P	Pb	23 34 49.5	-1.0
BRDR				IAML		23 35 29.0	
	comp=E,125nm,0.6s						
BRDR				IAML		23 35 44.0	
	comp=N,102nm,0.8s						
NISR	Nisiros	2.14	297	P	Pn	23 34 49.3	+1.8
BODT	Bodrum	2.26	309	P	Pn	23 34 49.9	+0.7
BODT				S	Sn	23 35 14.9	-1.4
GAZI	Gazipasa	2.36	75	i P	Pn	23 34 52.1	+1.5
GAZI				i S	Sn	23 35 18.8	-0.1
AKMS	Akamas	2.41	104	⇑P	Pn	23 34 53.8	+2.6
AKMS				S	Sn	23 35 20.7	+0.7
AKMS				AML	AML	23 35 22.2	
	comp=N,4.7nm,0.6s						
AKMS				AML	AML	23 35 22.2	
	comp=N,4.7nm,0.6s						
AKMS				AML	AML	23 35 22.6	
	comp=N,3.6nm,0.3s						
AKMS				AML	AML	23 35 22.6	
	comp=N,3.6nm,0.3s						
BAGO	Egridir - ISPA	2.56	24	i P	Pn	23 34 56.0	+2.6
BAGO				IAML		23 35 54.0	
	comp=E,53nm,1.1s						
BAGO				IAML		23 36 00.0	
	comp=N,54nm,1.0s						
DDIM	Aydin, Didim	2.56	316	i P	Pn	23 34 54.4	+1.1
DDIM				i S	Sn	23 35 21.3	-2.5
DDIM				IAML		23 35 28.0	
	comp=E,151nm,0.6s						
DDIM				IAML		23 35 52.0	
	comp=N,196nm,0.8s						
SEDI	Konya, Seydise	2.56	45	i P	Pb	23 34 56.9	-1.6
SEDI				i S	Sb	23 35 27.2	-2.4
SEDI				IAML		23 35 30.0	
	comp=N,187nm,0.4s						
SEDI				IAML		23 35 32.0	
	comp=E,212nm,0.4s						
ALFC	Alefka	2.58	100	⇑P	Pn	23 34 55.6	+1.9
ALFC				S	Sn	23 35 25.5	+1.1
ALFC				AML	AML	23 35 26.8	
	comp=E,3.9nm,0.2s						
ALFC				AML	AML	23 35 26.8	
	comp=E,3.9nm,0.2s						
ALFC				AML	AML	23 35 27.0	
	comp=E,2.6nm,0.2s						
ALFC				AML	AML	23 35 27.0	
	comp=E,2.6nm,0.2s						
OSC1	CSNet OBS 1	2.60	145	P	Pb	23 34 57.5	-1.6
KZIL	AFYON_Kizioren	2.66	11	i P	Pn	23 34 56.0	+1.2
KZIL				IAML		23 36 00.0	
	comp=E,52nm,1.1s						
KZIL				IAML		23 36 03.0	
	comp=N,54nm,1.1s						
NATA	Nata	2.66	108	P	Pn	23 34 57.4	+2.7
NATA				S	Sn	23 35 27.7	+1.4
PASA	Karahalli, USA	2.70	360	i P	Pn	23 34 56.1	+0.9
PASA				IAML		23 35 37.0	
	comp=N,33nm,0.6s						
PASA				IAML		23 35 56.0	
	comp=E,58nm,0.9s						
GCAM	G?zelcaml?	2.74	319	i P	Pn	23 34 56.8	+1.0
GCAM				i S	Sn	23 35 26.8	-1.3
GCAM				IAML		23 35 28.0	
	comp=N,234nm,0.8s						
GCAM				IAML		23 35 30.0	
	comp=E,169nm,0.2s						
STIA	Sitia Lasithi	2.81	262	P	Pn	23 35 00.0	+3.2
KULA	Kula-Manisa	2.94	347	P	Pn	23 34 59.2	+0.6
SMG	Samos	2.97	315	P	Pn	23 34 59.7	+0.8
YVAC	Isparta, Yalva	2.97	28	i P	Pn	23 35 02.1	+3.0
YVAC				IAML		23 35 39.0	
	comp=E,41nm,0.5s						
YVAC				IAML		23 35 43.0	
	comp=N,24nm,0.6s						
DOGA	KONYA_Doganhis	3.01	35	i P	Pb	23 35 03.7	-2.5
DOGA				IAML		23 35 40.0	
	comp=N,162nm,0.5s						
DOGA				IAML		23 35 40.0	
	comp=E,130nm,0.5s						
USAK	Uak-Merkez	3.09	353	i P	Pn	23 35 01.0	+0.4
USAK				IAML		23 35 34.0	
	comp=E,53nm,1.2s						
USAK				IAML		23 35 35.0	
	comp=N,16nm,0.5s						
KMER	Konya-Meram	3.13	47	i P	Pn	23 35 05.0	+3.7
KMER				IAML		23 35 44.0	
	comp=N,69nm,0.4s						
KMER				IAML		23 35 48.0	
	comp=E,60nm,0.3s						
ASGA	Asgata	3.19	105	⇑P	Pn	23 35 04.4	+2.5
ASGA				S	Sn	23 35 41.0	+1.7
NPS	Neapolis	3.19	264	P	Pn	23 35 04.4	+2.4
CSS	Mathiatis	3.21	101	P	Pn	23 35 04.2	+1.9
ATHAL	Athalassa	3.23	98	P	Pn	23 35 05.3	+2.8
KONT	Konya--Tatoy	3.25	44	i P	Pn	23 35 06.7	+3.9
KONT				IAML		23 35 50.0	
	comp=N,28nm,0.4s						
KONT				IAML		23 35 54.0	
	comp=E,49nm,0.4s						
THR8	Santorini-Mono	3.34	284	P	Pn	23 35 05.1	+1.1
BLCB	Balcova	3.37	325	P	Pn	23 35 05.8	+1.4
THR2	Thira island,	3.38	285	P	Pn	23 35 06.8	+2.2
THR6	Thira Island,	3.40	283	P	Pn	23 35 06.3	+1.5
THR3	Thira Island,	3.40	284	P	Pn	23 35 06.3	+1.4
OSC2	CSNet OBS 4	3.44	137	P	Pn	23 35 09.4	+4.1
MVOU	Mavrovouni	3.44	99	⇓P	Pn	23 35 07.1	+1.7
MVOU				AML	AML	23 35 54.9	
	comp=E,1.0nm,0.5s						
MVOU				AML	AML	23 35 55.5	
	comp=E,0.7nm,0.4s						
IDI	Anoyia	3.77	266	Pn	Pn	23 35 11.8	+1.8
	comp=E,26nm,0.3s,baz=60,slow=18,SNR=106						
IDI				Sn	Sn	23 35 52.6	-1.2
	comp=E,15nm,0.3s,baz=171,slow=21,SNR=6.0						
IDI	Anoyia	3.77	266	P	Pn	23 35 11.7	+1.7
CHOS	Chios island	3.88	316	P	Pn	23 35 12.7	+1.2
CHOS				S	Sn	23 35 55.1	-1.3
	comp=E,82nm,0.4s						
VAM	Vamos	4.32	268	P	Pn	23 35 18.9	+1.4
GVDS	Gavdos	4.49	261	P	Pn	23 35 22.3	+2.4
GVD	Gavdhos	4.50	261	P	Pn	23 35 22.1	+2.2
IMMV	Iera Moni Meta	4.50	269	P	Pn	23 35 22.3	+2.4
RODP	Rodopos	4.67	271	P	Pn	23 35 24.2	+1.8
ANKY	Antikythira Is	5.04	274	P	Pn	23 35 29.0	+1.6
DION	Dionisos Attik	5.08	300	P	Pn	23 35 29.1	+1.2
BRTR	Keskin Array B	5.23	38	Pn	Pn	23 35 32.6	+2.5
	comp=E,0.7nm,0.3s,baz=194,slow=15,SNR=18						
BRTR				Sn	Sn	23 36 27.9	-1.9
	comp=E,1.7nm,0.3s,baz=204,slow=23,SNR=5.6						
BRTR				LR	LR	23 37 58.1	
	comp=E,68nm,20.9s,baz=42,slow=44						
BEYL	Beirut	5.25	108	eP	Pn	23 35 32.1	+1.9
KTHA	Kythira Island	5.25	279	P	Pn	23 35 31.8	+1.5
KTHR	Kythira	5.30	279	P	Pn	23 35 32.4	+1.4
BHL	Bhannes	5.36	107	eP	Pn	23 35 32.6	+0.8
DQRL	Deir Qamar	5.37	109	eP	Pn	23 35 33.2	+1.2
KRND	KRANIDI	5.39	291	P	Pn	23 35 34.0	+1.8
VLI	Veliai	5.41	283	P	Pn	23 35 34.8	+2.3
HWQ	Hawqa	5.47	103	eP	Pn	23 35 35.5	+2.1
MMAI	Mount Meron Ar	5.55	117	Pn	Pn	23 35 36.4	+2.0
	comp=E,26nm,0.3s,baz=315,slow=12,SNR=101						
MMAI				Sn	Sn	23 36 36.1	-1.5
	comp=E,54nm,0.3s,baz=310,slow=24,SNR=20						
SHBL	Chebaa	5.65	112	eP	Pn	23 35 38.3	+2.4
RCY	Rachaya	5.65	110	eP	Pn	23 35 38.0	+2.0
LTK	Loutraki	5.75	296	P	Pn	23 35 38.1	+1.0
HNAT	Natroun	6.07	171	P	Pn	23 35 44.9	+3.3
	baz=169						
HHAG	Hagoal	6.08	158	P	Pn	23 35 44.6	+2.8
	baz=156						
HSAF	As Saff	6.26	163	P	Pn	23 35 47.2	+3.1
	baz=161						
ITM	Ithomi	6.29	286	P	Pn	23 35 46.8	+2.2
GLL	Jalalah	6.33	162	P	Pn	23 35 48.2	+3.0
	baz=160						
PYL	PYLOS	6.38	284	P	Pn	23 35 47.2	+1.3
SUZ	Suez	6.43	153	P	Pn	23 35 49.6	+3.0
	baz=151						
DRO	Drossia	6.66	293	P	Pn	23 35 51.3	+1.7
ASF	Jabal al Asfar	7.06	117	Pn	Pn	23 35 58.3	+3.1
	comp=E,2.2nm,0.3s,baz=310,slow=5.7,SNR=39						
ASF				Sn	Sn	23 37 15.2	+0.4
	comp=E,2.2nm,0.3s,baz=277,slow=22,SNR=2.7						
NBNS	Bani Suef	7.17	167	P	Pn	23 35 59.1	+2.5
	baz=166						
SWA2		7.24	209	P	Pn	23 35 59.4	+1.8
	baz=210						
SWA2				S	Sn	23 37 14.5	-4.5
	baz=210						
LTHK	Lithakia	7.25	289	P	Pn	23 35 59.6	+1.8
EIL	Elat	7.53	141	Pn	Pn	23 36 04.4	+2.8
	comp=E,2.9nm,0.3s,baz=3.6,slow=2.5,SNR=40						
EIL				Sn	Sn	23 37 20.9	-5.3
	comp=E,5.2nm,0.3s,baz=163,slow=7.3,SNR=9.6						
PSDA	Pessada-Kefalo	7.55	292	P	Pn	23 36 03.4	+1.5
VLS	Valsamata	7.57	292	P	Pn	23 36 03.4	+1.3
TAMRE	El Minia	8.03	171	P	Pn	23 36 10.6	+2.2
	baz=170						
TR2	Tor 2	8.08	152	P	Pn	23 36 11.3	+2.1
	baz=151						
ASUT		8.41	167	P	Pn	23 36 16.3	+2.6
	baz=166						
HFRF	Wahat Farafira	8.53	187	P	Pn	23 36 16.9	+1.6
	baz=187						
HFRF				AMP		23 37 00.0	
	baz=187						
HFRF				S	Sn	23 37 45.4	-5.5
	baz=187						
PDG	Podgorica	10.45	313	⇑P	Pn	23 36 44.9	+3.3
TIP	Timpagrande	10.72	293	⇓P	Pn	23 36 44.8	-0.6
DRGR		12.24	338	⇓P	P	23 37 16.9	-1.5
BURAR	Bucovina Array	12.38	346	⇑P	Pn	23 37 13.6	+5.6
SORM	Soroca	12.51	356	⇓P	Pn	23 37 06.5	-3.2
BMR	Baia Mare	12.82	341	⇑P	Pn	23 37 14.8	+0.9
KVAR	Kislovodsk Arr	13.10	47	Pn	Pn	23 37 16.2	-1.7
	baz=25,slow=4.7,SNR=6.0						
CEI	Carei	13.12	339	⇓P	P	23 37 27.3	-0.7
KOVH	Kovagotottos	13.52	324	eP	Pn	23 37 22.7	-0.7
KEST	Kesra	16.37	276	Pn	Pn	23 38 01.4	-0.2
	comp=E,0.4nm,0.3s,baz=44,slow=8.0,SNR=10						
GERES	GERESS Array B	17.58	323	Pn	P	23 38 18.3	+0.7
	comp=E,0.1nm,0.3s,baz=151,slow=14,SNR=3.3						
GEYT	Alibeck	23.00	76	P	P	23 39 17.7	+1.3

	comp=E,1.4nm,0.5s,baz=42,slow=18,SNR=2.4						
FINES	FINESS Array B	25.91	356	P	P	23 39 43.2	0.0
	comp=E,10nm,1.1s,baz=198,slow=13,SNR=1.7						
ESDC	Sonseca Array	26.70	289	P	P	23 39 51.0	+0.2
	comp=E,1.8nm,0.6s,baz=80,slow=9.7,SNR=21						
TORD	Torodi Ar. Bea	33.59	235	P	P	23 40 53.4	+1.6
	comp=E,0.6nm,0.6s,baz=40,slow=7.3,SNR=7.9						
MKAR	Makanchi Array	40.54	57	P	P	23 41 50.2	-0.4
	comp=E,0.4nm,0.8s,baz=261,slow=9.1,SNR=2.3						

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*NEIC **06** 23:59:06.6±1.6, 14.°2S±0.°1×178.°4W±0.°1, h407^{km}±13^{km}, mb4.2/15, Error ellipse: s-maj=19.1km s-min=16.6km az=170.0*

*IDC **06** 23:59:14.0±2.6, 14.°60S×179.°06W, h426^{km}±40^{km}, mb3.0/6, mb1 3.4/7, mb1mx3.2/24, mbtmp3.8/7, Error ellipse: s-maj=121.3km s-min=19.7km az=154.0*

ISC 06 23:59:05.6±0.8**, 14.°1S**±0.°1×**178.°43W**±0.°09**, h400**^{km}**, n30,** σ**1**^{s}**17**/26**, mb3.8**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.94	223	P	Pn	00 00 29.6	+2.6
	1.9nm,0.3s,baz=6.5,slow=21,SNR=14						
MSVF	Nonsavu	4.94	223		Pn	00 00 28.2	+1.2
NIUE	Niue	9.52	122	P	P	00 01 18.2	+0.4
MARNC	Mare, Loyalty	14.82	238	P	P	00 02 15.5	-0.6
LIFNC	LIFOU	15.19	242	P	P	00 02 20.9	+0.8
RAR	Rarotonga	19.11	114	P	P	00 03 01.3	-0.5
RAR				IAmb	IAmb	00 03 12.1	
	comp=Z,16nm,1.1s						
MXZ	Matakaoa Point	23.53	187	P	P	00 03 42.5	+0.6
MXZ				IAmb	IAmb	00 03 58.3	
	comp=Z,39nm,0.9s						
PLWZ	Palliser	27.89	190	P	P	00 04 21.6	+0.8
PPTF	Pamatai, Papee	27.96	101	P	P	00 04 20.4	-1.4
PPTF				IAmb	IAmb	00 04 27.9	
	comp=Z,26nm,0.8s						
CMWZ	Cape Campbell	28.26	192	P	P	00 04 23.2	-0.7
PATS	Pohnpei	31.09	311	P	P	00 04 48.6	-0.3
ARMA	Armidale	31.97	235	P	P	00 04 55.0	-1.6
ARMA				IAmb	IAmb	00 05 03.8	
	comp=Z,2.6nm,0.9s						
ODZ	Otahua Downs	32.19	195	P	P	00 04 58.3	+0.2
ODZ				IAmb	IAmb	00 05 18.2	
	comp=Z,14nm,1.0s						
TOO	Toolangi	39.63	227	P	P	00 06 00.1	-0.5
TOO				IAmb	IAmb	00 06 07.0	
	comp=Z,9.7nm,1.1s						
BBOO	Buckleboo	45.31	238	P	P	00 06 43.5	-2.3
BBOO				IAmb	IAmb	00 06 53.7	
	comp=Z,5.2nm,1.1s						
WB0	Warramunga Arr	45.37	256	P	P	00 06 46.8	+0.4
WB2	Warramunga Arr	45.41	256	P	P	00 06 46.4	-0.3
WRA	Warramunga Arr	45.42	256	P	P	00 06 47.4	+0.6
	comp=Z,0.2nm,0.3s,baz=92,slow=6.0,SNR=13						
WRA	Warramunga Arr	45.42	256	P	P	00 06 46.0	-0.8
AS31	Alice Springs	45.91	251	P	P	00 06 51.1	+0.6
AS31				IAmb	IAmb	00 06 51.7	
	comp=Z,2.6nm,0.5s						
ASAR	Alice Springs	45.91	251	P	P	00 06 51.1	+0.6
	comp=Z,5.3nm,0.5s,baz=84,slow=8.3,SNR=94						
ASAR	Alice Springs	45.91	251	P	P	00 06 51.0	+0.4
FORT	Forrest	51.69	242	P	P	00 07 33.0	-0.7
FORT				IAmb	IAmb	00 07 37.2	
	comp=Z,17nm,1.1s						
JCJ	Chichijima	56.04	317	P	P	00 08 05.1	+0.3
NVAR	Mina Array Bea	76.73	44	P	P	00 10 24.6	+10
	comp=Z,0.5nm,0.6s,baz=229,slow=8.2,SNR=2.6						
ILAR	Eielson Array	82.22	13	P	P	00 10 52.1	+9.3
	comp=Z,0.4nm,0.4s,baz=230,slow=6.1,SNR=0.7						
TXAR	Lajitas Array	84.00	58	P	P	00 11 02.4	+10
	comp=Z,0.2nm,0.7s,baz=285,slow=5.1,SNR=2.0						
PDAR	Pinedale Array	84.63	44	P	P	00 11 05.2	+9.4
	comp=Z,0.2nm,0.5s,baz=198,slow=4.7,SNR=3.8						
BRTR	Keskin Array B	142.03	318	PKP	PKiKP	00 17 54.5	+0.2
	comp=Z,0.5nm,0.5s,baz=50,slow=1.9,SNR=3.6						
GERES	GERESS Array B	143.96	346	PKP	PKiKP	00 18 00.7	+2.8
	comp=Z,0.2nm,0.4s,baz=350,slow=5.1,SNR=1.7						

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*IDC **07** 00:05:43.7±15.0, 56.°08S×27.°86W, h0^{km}, mb4.1/1, mb1 4.1/1, mb1mx3.6/15, mbtmp4.1/1, Error ellipse: s-maj=955.8km s-min=67.8km az=144.0*

*NEIC **07** 00:06:01.4±1.7, 56.°1S±0.°1×28.°8W±0.°1, h119^{km}±11^{km}, mb4.3/10, Error ellipse: s-maj=20.7km s-min=5.0km az=201.0*

ISC 07 00:05:58.6±0.7**, 56.°0S**±0.°1×**28.°45W**±0.°09**, h100**^{km}**, n18,** σ**2**^{s}**06**/16**, mb4.2**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	4.91	287	Pn	Pn	00 07 11.8	+1.8
HOPE				Sn	Sn	00 08 05.2	-0.3
SNAA	Sanae	19.10	155	P	P	00 10 11.3	-1.8
SNAA				IAmb	IAmb	00 10 13.2	
	comp=Z,7.9nm,0.5s						
MG02	Cerro Sombrero	23.71	261	P	P	00 10 56.6	-4.4
MG05	Puerto Natales	26.01	261	P	P	00 11 20.7	-1.1
MG05				IAmb	IAmb	00 11 21.2	
	comp=Z,25nm,1.1s						
QSPA	South Pole Qui	34.28	180	P	P	00 12 35.5	+0.7
CO03	El Pedregal	38.76	293	P	P	00 13 12.9	-0.2
AC04	Llanos de Chal	41.07	295	P	P	00 13 32.0	-0.2
SUR	Sutherland	41.30	76	P	P	00 13 34.2	0.0
SUR				IAmb	IAmb	00 13 49.6	
	comp=Z,6.5nm,1.1s						
PB09	IPOC Station P	45.51	302	P	P	00 14 08.2	+0.2
VNDA	Vanda	46.61	183	P	P	00 14 16.9	+1.0
VNDA				IAmb	IAmb	00 14 21.0	
	comp=Z,2.5nm,1.0s						
BOSA	Boshof	46.64	77	P	P	00 14 18.9	+2.1
BOSA				IAmb	IAmb	00 14 32.3	
	comp=Z,2.5nm,1.0s						
TA01	Diego Aracena	47.01	301	P	P	00 14 20.1	+0.5
TA01				IAmb	IAmb	00 14 30.9	
	comp=Z,13nm,1.1s						
H10N1	ASCENSION HYDR	49.26	18	T	T	01 08 02.6	
	baz=190						
H10N3	ASCENSION HYDR	49.26	18	T	T	01 07 58.8	
	baz=190						
H10N2	ASCENSION HYDR	49.27	18	T	T	01 07 58.7	
	baz=190						
TORD	Torodi Ar. Bea	73.34	31	P	P	00 17 16.7	-2.5
	comp=Z,0.8nm,0.4s,baz=198,slow=6.0,SNR=16						
YKA	Yellowknife Ar	135.64	319	PKP	PKPdf	00 25 04.5	-1.0
	comp=Z,0.5nm,0.7s,baz=132,slow=1.9,SNR=2.6						
ILAR	Eielson Array	149.54	312	PKPbc	PKPdf	00 25 33.8	+3.8
	comp=Z,0.4nm,0.7s,baz=135,slow=4.1,SNR=6.0						

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*ANF **07** 00:14:34.9±0.8, 36.°83N×98.°26W, h6^{km}±6^{km}, ML3.1/6, Error ellipse: s-maj=4.8km s-min=2.6km az=70.0*

*TUL **07** 00:14:35.1±0.9, 36.°83N±0.°02×98.°28W±0.°02, h5^{km}±5^{km}, ML2.7, mb_Lg2.6/19(NEIC), Error ellipse: s-maj=2.3km s-min=2.1km az=55.0*

*NEIC **07** 00:14:35.5±1.0, 36.°799N±0.°007×98.°27W±0.°02, h5^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.9km az=89.0*

ISC 07 00:14:35.6±1.0**, 36.°81N**±0.°02×**98.°27W**±0.°02**, h7**^{km}±6^{km}**, n54,** σ**0**^{s}**50**/70**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.05	99		Pg	00 14 36.9	-0.2
OK032				Sg	Sg	00 14 38.1	0.0
KAN14	Manchester OK	0.29	60		Pg	00 14 41.1	-0.1
KAN14				Sg	Sg	00 14 45.2	+0.2
GC02	Grant County #	0.33	83	Pg	Pg	00 14 42.0	-0.1
GC02				Sg	Sg	00 14 47.0	+0.5
KAN10	Anthony SW Sta	0.34	24	Pg	Pg	00 14 41.9	-0.4
KAN10				Sg	Sg	00 14 47.0	+0.1
CROK	Carrier	0.38	143	Pg	Pg	00 14 43.2	+0.1
CROK				Sg	Sg	00 14 48.5	+0.5
KAN16	Harper SW Stat	0.45	22	Pg	Pg	00 14 43.8	-0.4
KAN16				Sg	Sg	00 14 50.0	0.0
KAN17	Caldwell West	0.47	60	Pg	Pg	00 14 44.3	-0.3
KAN17				Sg	Sg	00 14 50.8	0.0
KAN08	Anthony NE Sta	0.48	30		Pg	00 14 44.5	-0.3
KAN08				Sg	Sg	00 14 51.6	+0.5
KAN12	Harper NE Stat	0.53	24	Pg	Pg	00 14 45.2	-0.6
KAN12				Sg	Sg	00 14 54.2	+1.4
KAN01	Argonia South	0.53	50		Pg	00 14 45.6	-0.2
KAN01				Sg	Sg	00 14 53.2	+0.3
KAN06	Argonia West S	0.55	37	Pg	Pg	00 14 45.3	-0.8
KAN06				Sg	Sg	00 14 54.0	+0.7
KAN09	Caldwell North	0.62	58	Pg	Pg	00 14 47.1	-0.3
KAN09				Sg	Sg	00 14 55.6	+0.1
KAN13	South Haven SW	0.67	72	Pg	Pg	00 14 48.0	-0.4
KAN13				Sg	Sg	00 14 57.5	+0.4
U32A	Winter Ranch,	0.73	234	Pg	Pg	00 14 49.3	-0.3
U32A				Sg	Sg	00 14 59.0	-0.1
U32A	Winter Ranch,	0.73	234	P	Pg	00 14 49.3	-0.3
	baz=52						
U32A				S	Sg	00 14 59.4	+0.4
	baz=52						
BLOK	Blackwell	0.85	93		Pg	00 14 51.5	-0.4
BLOK				Sg	Sg	00 15 02.3	-0.7
OK029	Liberty Lake	1.21	147		Pg	00 14 58.1	-0.6
BCOK	Bluff Creek, N	1.27	155		Pg	00 14 58.8	-1.1
T35A	Sooner Cattle	1.42	85	Pn	Pn	00 15 01.5	-0.3
T35B	Sooner Cattle	1.42	85	P	Pn	00 15 01.4	-0.4
	baz=267						
T35B				S	Sb	00 15 20.6	0.0
	baz=267						
OK031	S. Brethren Rd	1.44	126		Pn	00 15 02.0	-0.1
OK025	Westminster Rd	1.44	148		Pn	00 15 02.1	-0.1
OK025				IAmb_Lg		00 15 24.5	
	comp=Z,44nm,0.8s						
OK030	Cody Creek RV	1.49	126		Pn	00 15 02.8	0.0
OK034	N. Norfolk Rd.	1.49	122		Pn	00 15 03.0	+0.2
OKCFA	Oklahoma City	1.54	154	Pn	Pn	00 15 03.5	0.0
OKCFA	Oklahoma City	1.54	154	P	Pn	00 15 03.4	-0.2
	baz=335						
OKCFA				S	Sg	00 15 24.8	-0.3
	baz=335						
OKCSW	OKLAHOMA CITY	1.56	154		Pn	00 15 03.9	+0.1
R32A	Long Quarter,	1.65	348		Pn	00 15 05.1	+0.1
R32A	Long Quarter,	1.65	348	P	Pn	00 15 05.1	+0.1
	baz=168						
FNO	Franklin	1.70	155		Pn	00 15 06.5	+0.7
CBKS	Cedar Bluff	2.31	330		Pn	00 15 15.2	+1.0
CBKS	Cedar Bluff	2.31	330	S	Sn	00 15 43.8	+0.9
	baz=149						
KSU1	Kansas State U	2.64	29		Pn	00 15 18.6	0.0
KSU1				IAmb_Lg		00 16 04.7	
	comp=Z,33nm,1.2s						
LOOK	Love County	2.95	162		Pn	00 15 23.5	+0.6
U38A	Gravette	3.15	96	Pn	Pn	00 15 26.1	+0.5
U38A				IAmb_Lg		00 16 20.4	
	comp=Z,21nm,1.1s						
X37A	Clayton	3.24	132	Pn	Pn	00 15 27.1	+0.3
X37A	Clayton	3.24	132	S	Sn	00 16 06.7	+1.0
	baz=314						
AMTX	Amarillo	3.37	236		Pn	00 15 28.6	-0.1
AMTX				IAmb_Lg		00 16 31.3	
	comp=Z,12nm,0.8s						
HHAR	Hobbs	3.53	97		Pn	00 15 30.9	+0.1
HHAR				IAmb_Lg		00 16 33.0	
	comp=Z,11nm,0.7s						
Z35A	Perchaven, San	3.57	166	Pn	Pn	00 15 31.5	0.0
N33B	J Bar K, Exete	3.97	9	S	Sn	00 16 23.0	-0.8
	baz=190						
N33A	J Bar K, Exete	3.97	9	Pn	Pn	00 15 36.0	-0.9
W39A	Magazine	3.98	113	Pn	Pn	00 15 36.7	-0.4
W39A				IAmb_Lg		00 16 50.4	
	comp=Z,15nm,0.9s						
S39A	Bolivar	4.04	76	Pn	Pn	00 15 37.8	-0.2
ABTX	Abilene, Hawle	4.33	196	Pn	Pn	00 15 41.4	-0.5
ABTX				IAmb_Lg		00 16 51.6	
	comp=Z,8.8nm,1.0s						
U40A	Yellville	4.38	94	Pn	Pn	00 15 42.6	0.0
U40A				IAmb_Lg		00 16 54.7	
	comp=Z,8.8nm,0.8s						
MIAR	Mount Ida	4.44	119	Pn	Pn	00 15 44.4	+1.0
BGNE	Belgrade	4.59	1	Pn	Pn	00 15 44.8	-0.7
P38A	Dawn	4.67	52	Pn	Pn	00 15 46.4	-0.2
MGMO	Mountain Grove	4.82	84	Pn	Pn	00 15 48.9	+0.3
T25A	Trinidad	4.93	276	IAmb_Lg		00 17 13.6	
	comp=Z,13nm,0.8s						
R40A	Maddies Statio	4.99	71	Pn	Pn	00 15 51.6	+0.6
X40A	Basin Creek Fa	5.00	116	Pn	Pn	00 15 51.1	+0.1
X40A				IAmb_Lg		00 17 15.0	
	comp=Z,7.1nm,0.7s						
SCIA	State Center	6.42	36	IAmb_Lg		00 18 10.7	
	comp=Z,11nm,0.9s						

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*ANF **07** 00:27:24.9±0.3, 32.°85N×96.°94W, h5^{km}, ML3.3/11, Error ellipse: s-maj=3.5km s-min=2.9km az=93.0*

*NEIC **07** 00:27:24.9±1.0, 32.°82N±0.°03×96.°92W±0.°04, h5^{km}±2^{km}, mb_Lg2.8/43, Error ellipse: s-maj=6.8km s-min=3.0km az=307.0*

ISC 07 00:27:24.4±1.3**, 32.°83N**±0.°03×**96.°92W**±0.°04**, h2**^{km}±13^{km}**, n56,** σ**0**^{s}**57**/52**, Central Texas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
Z35A	Perchaven, San	0.57	331		Pg	00 27 35.3	0.0
Z35A				Sg	Sg	00 27 42.8	+0.1
Z35A	Perchaven, San	0.57	331	P	Pg	00 27 35.4	0.0
	baz=151,SNR=95						
Z35A				S	Sg	00 27 43.0	+0.3
	baz=151						
WHTX	Lake Whitney,	0.95	208		Pg	00 27 43.1	+0.4
WHTX	Lake Whitney,	0.95	208	P	Pg	00 27 43.2	+0.4
	baz=29,SNR=79						
WHTX				S	Sb	00 27 55.9	-0.8
	baz=29						
LOOK	Love County	1.18	350		Pg	00 27 46.2	-0.7
237A	Washetta, Mont	1.26	131		Pg	00 27 48.5	0.0
237A	Washetta, Mont	1.26	131	P	Pg	00 27 48.6	+0.1
	baz=311,SNR=40						
237A				S	Sn	00 28 06.9	+0.4
	baz=311						
Z38A	Mt. Pleasant	1.68	75	Pn	Pn	00 27 54.6	-0.3
Z38A	Mt. Pleasant	1.68	75	P	Pn	00 27 54.4	-0.5
	baz=255,SNR=6.1						
X34A	Smith Ranch, M	1.92	337		Pn	00 27 58.7	+0.6
435B	Jarrell	2.12	196		Pn	00 28 01.1	+0.3
435B	Jarrell	2.12	196	P	Pn	00 28 01.2	+0.3
	baz=15						
435B				S	Sg	00 28 32.3	-0.2
	baz=15						
X37A	Clayton	2.18	36		Pn	00 28 02.3	+0.6
X37A	Clayton	2.18	36	P	Pn	00 28 02.7	+1.0
	baz=216,SNR=18						
NATX	Nacogdoches	2.19	119	Pn	Pn	00 28 02.4	+0.4
NATX				IAmb_Lg		00 28 37.0	
	comp=Z,27nm,0.8s						
NATX	Nacogdoches	2.19	119	P	Pn	00 28 02.3	+0.4
	baz=300						
ABTX	Abilene, Hawle	2.30	266		Pn	00 28 03.3	-0.1
ABTX	Abilene, Hawle	2.30	266	P	Pn	00 28 03.4	-0.1
	baz=84,SNR=55						
FNO	Franklin	2.45	351		Pn	00 28 06.2	+0.8
FNO				IAmb_Lg		00 28 48.5	
	comp=Z,48nm,0.8s						
OKCSW	OKLAHOMA CITY	2.60	351	Pn	Pn	00 28 09.7	+2.1
OKCFA	Oklahoma City	2.61	351	Pn	Pn	00 28 07.6	0.0
OKCFA				IAmb_Lg		00 28 54.9	
	comp=Z,36nm,0.7s						
OK025	Westminster Rd	2.76	353		Pn	00 28 10.5	+0.8
OK025				IAmb_Lg		00 28 59.2	
	comp=Z,35nm,1.1s						
BCOK	Bluff Creek, N	2.87	349		Pn	00 28 11.3	+0.1
BCOK				IAmb_Lg		00 28 57.8	
	comp=Z,41nm,0.8s						
OK029	Liberty Lake	2.99	352	Pn	Pn	00 28 13.5	+0.7
OK029				IAmb_Lg		00 29 05.3	
	comp=Z,22nm,0.7s						
OK031	S. Brethren Rd	3.11	1		Pn	00 28 13.6	-0.9
MIAR	Mount Ida	3.27	58	Pn	Pn	00 28 17.0	+0.3
WLAR	White Oak Lake	3.31	74	Pn	Pn	00 28 16.7	-0.5
WLAR				IAmb_Lg		00 29 16.2	
	comp=Z,19nm,0.8s						
JCT	Junction City	3.40	227		Pn	00 28 18.6	+0.1
JCT				IAmb_Lg		00 29 16.9	
	comp=Z,34nm,0.9s						
JCT	Junction City	3.40	227	P	Pn	00 28 18.6	+0.1
	baz=46,SNR=17						
W39A	Magazine	3.51	47	Pn	Pn	00 28 20.8	+0.8
W39A				IAmb_Lg		00 29 21.3	
	comp=Z,23nm,0.8s						
W39A	Magazine	3.51	47	P	Pn	00 28 20.7	+0.6
	baz=228,SNR=22						
CROK	Carrier	3.77	347	Pn	Pn	00 28 24.0	+0.5
CROK				IAmb_Lg		00 29 32.0	
	comp=Z,21nm,0.8s						
X40A	Basin Creek Fa	3.79	63	Pn	Pn	00 28 23.0	-0.8
U32A	Winter Ranch,	3.93	335	Pn	Pn	00 28 25.8	0.0
T35A	Sooner Cattle	4.09	5	IAmb_Lg		00 29 44.3	
	comp=Z,18nm,0.8s						
OK032	Salt Plains WL	4.10	345	Pn	Pn	00 28 27.9	-0.2
OK032				IAmb_Lg		00 29 45.1	
	comp=Z,17nm,0.8s						
U38A	Gravette	4.16	29	Pn	Pn	00 28 29.4	+0.5
U38A				IAmb_Lg		00 29 40.3	
	comp=Z,18nm,0.8s						
342A	Flagon Creek P	4.17	109	IAmb_Lg		00 29 40.0	
	comp=Z,20nm,1.0s						
KAN09	Caldwell North	4.33	353	IAmb_Lg		00 29 42.4	
	comp=Z,16nm,0.8s						
KAN01	Argonia South	4.36	351	IAmb_Lg		00 29 43.5	
	comp=Z,15nm,0.9s						
CCAR	Cane Creek	4.44	75	Pn	Pn	00 28 32.4	-0.5
CCAR	Cane Creek	4.44	75	P	Pn	00 28 32.5	-0.3
	baz=257,SNR=8.6						
KAN16	Harper SW Stat	4.48	348	Pn	Pn	00 28 32.7	-0.7
KAN16				IAmb_Lg		00 29 46.3	
	comp=Z,12nm,0.9s						
W41B	Gary Mavity, V	4.53	58	P	Pn	00 28 33.8	-0.2
	baz=240,SNR=13						
WHAR	Wooly Hollow	4.56	56	Pn	Pn	00 28 34.1	-0.3
U40A	Yellville	4.86	43	Pn	Pn	00 28 38.8	+0.3
FCAR	Ozark Folk Cen	5.00	51		Pn	00 28 40.8	+0.3
MSTX	Muleshoe	5.02	285	IAmb_Lg		00 30 17.0	
	comp=Z,22nm,0.8s						
MGMO	Mountain Grove	5.76	40	IAmb_Lg		00 30 28.0	
	comp=Z,15nm,1.0s						
KSU1	Kansas State U	6.26	2	IAmb_Lg		00 30 55.6	
	comp=Z,11nm,0.7s						
TX31	Lajitas Ar. Si	6.75	241		Pn	00 29 04.4	-0.3
TX31	Lajitas Ar. Si	6.75	241	P	Pn	00 29 04.2	-0.5
	baz=57,SNR=14						
TX32	Lajitas Array	6.75	241		Pn	00 29 04.4	-0.3
TXAR	Lajitas Array	6.75	241	Pn	Pn	00 29 04.5	-0.2
MNTX	Cornudas Mount	7.25	263	IAmb_Lg		00 31 23.8	
	comp=Z,12nm,0.9s						
P38A	Dawn	7.31	21	IAmb_Lg		00 31 27.1	
	comp=Z,7.7nm,0.8s						

IDC 07 00:28:16.5±25.0**, 21.°67N**×**143.°16E, h370**^{km}±277^{km}**, mb3.0**/5**, mb1 3.2**/5**, mb1mx2.8**/34**, mbtmp3.7**/5**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.5**/6**, Error ellipse: s-maj=76.5km s-min=29.3km az=64.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	Korea Array	20.52	323	LR	LR	00 40 02.5	
	comp=Z,28nm,18.3s,baz=320,slow=34						
WRA	Warramunga Arr	42.25	192	P	P	00 35 35.0	-0.2
	0.1nm,0.3s,baz=18,slow=7.9,SNR=10						
ZALV	Zalesovo Beam	54.22	322	P	P	00 37 04.9	-0.2
	0.4nm,0.3s,baz=101,slow=7.5,SNR=1.4						
MKAR	Makanchi Array	54.70	313	P	P	00 37 08.7	-0.1
	0.1nm,0.5s,baz=90,slow=7.2,SNR=2.1						
YKA	Yellowknife Ar	76.49	28	P	P	00 39 26.5	+0.2
	0.4nm,0.6s,baz=294,slow=5.8,SNR=1.6						
FINES	FINESS Array B	83.19	334	P	P	00 40 01.9	0.0
	4.7nm,1.1s,baz=46,slow=4.0,SNR=4.4						

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*NEIC **07** 00:43:39.3±0.7, 37.°13N±0.°02×97.°62W±0.°02, h4^{km}±4^{km}, mb_Lg2.4/17, ML2.5/22, Error ellipse: s-maj=2.7km s-min=2.0km az=211.0*

NEIC 07 00:43:39.7±0.7**, 37.°120N**±0.°008×**97.°63W**±0.°02**, h5**^{km}±4^{km}**, Error ellipse: s-maj=2.3km s-min=1.1km az=80.0, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN09	Caldwell North	0.02	28	Pg	Pg	00 43 40.2	-0.6
KAN09				Sg	Sg	00 43 40.9	-0.7
KAN01	Argonia South	0.11	288		Pg	00 43 42.0	0.0
KAN01				Sg	Sg	00 43 43.8	+0.2
KAN17	Caldwell West	0.13	235		Pg	00 43 42.5	0.0
KAN17					Sg	00 43 44.7	+0.5
KAN13	South Haven SW	0.16	131		Pg	00 43 42.8	-0.2
KAN13					Sg	00 43 45.2	0.0
KAN06	Argonia West S	0.22	305		Pg	00 43 44.0	-0.1
KAN06					Sg	00 43 47.3	+0.2
KAN08	Anthony NE Sta	0.29	291		Pg	00 43 45.4	0.0
KAN08					Sg	00 43 49.6	+0.3
KAN14	Manchester OK	0.31	239		Pg	00 43 45.7	-0.1
KAN14					Sg	00 43 50.2	+0.3
GC02	Grant County #	0.33	215	Pg	Pg	00 43 46.1	0.0
KAN12	Harper NE Stat	0.34	301		Pg	00 43 46.2	-0.2
KAN12					Sg	00 43 51.2	+0.3
KAN16	Harper SW Stat	0.36	287		Pg	00 43 46.6	-0.1
KAN16					Sg	00 43 51.8	+0.2
KAN10	Anthony SW Sta	0.37	271		Pg	00 43 46.9	0.0
KAN10					Sg	00 43 52.1	+0.3
BLOK	Blackwell	0.49	137	Pg	Pg	00 43 48.8	-0.4
OK032	Salt Plains WL	0.56	236		Pg	00 43 50.3	-0.2
OK032					Sg	00 43 58.1	+0.2
CROK	Carrier	0.68	205	Pg	Pg	00 43 52.5	-0.2
T35A	Sooner Cattle	0.92	103	Pg	Pg	00 43 56.5	-0.9
OK031	S. Brethren Rd	1.33	151	Pn	Pn	00 44 04.2	-0.7
U32A	Winter Ranch,	1.33	237	Pn	Pn	00 44 04.0	-1.0
OK029	Liberty Lake	1.33	174	Pn	Pn	00 44 03.5	-1.4
OK034	N. Norfolk Rd.	1.33	146	Pn	Pn	00 44 04.2	-0.8
OK030	Cody Creek RV	1.37	150		Pn	00 44 04.8	-0.7
BCOK	Bluff Creek, N	1.46	179		Pn	00 44 06.4	-0.3
OK025	Westminster Rd	1.55	171		Pn	00 44 07.9	-0.1
R32A	Long Quarter,	1.56	327		Pn	00 44 07.8	-0.3
OKCFA	Oklahoma City	1.71	175	Pn	Pn	00 44 10.1	0.0
OKCSW	OKLAHOMA CITY	1.72	175		Pn	00 44 10.7	+0.4
FNO	Franklin	1.87	174		Pn	00 44 12.6	+0.3
KSU1	Kansas State U	2.13	22	Pn	Pn	00 44 15.8	-0.2
KSU1				IAmb_Lg		00 44 45.8	
	comp=Z,14nm,0.7s						
CBKS	Cedar Bluff	2.37	316		Pn	00 44 19.4	0.0
X34A	Smith Ranch, M	2.52	184		Pn	00 44 21.2	-0.1
X34A				IAmb_Lg		00 45 04.1	
	comp=Z,11nm,0.8s						
U38A	Gravette	2.69	104		Pn	00 44 23.8	+0.2
HHAR	Hobbs	3.08	105		Pn	00 44 29.6	+0.6
X37A	Clayton	3.12	143	Pn	Pn	00 44 29.5	0.0
LOOK	Love County	3.14	173	Pg	Pg	00 44 38.7	-1.3
S39A	Bolivar	3.48	79		Pn	00 44 34.1	-0.3
W39A	Magazine	3.66	121	IAmb_Lg		00 45 35.7	
	comp=Z,12nm,0.8s						
U40A	Yellville	3.91	100		Pn	00 44 40.4	0.0
AMTX	Amarillo	3.97	237		Pb	00 44 52.8	+2.6
P38A	Dawn	4.08	51	Pn	Pn	00 44 42.6	-0.1
P38A				IAmb_Lg		00 45 48.8	
	comp=Z,6.4nm,0.9s						
MGMO	Mountain Grove	4.28	88	IAmb_Lg		00 45 55.6	
	comp=Z,7.7nm,0.9s						
WHAR	Wooly Hollow	4.69	111	IAmb_Lg		00 46 11.0	
	comp=Z,9.8nm,0.8s						
X40A	Basin Creek Fa	4.70	123	IAmb_Lg		00 46 06.9	
	comp=Z,8.3nm,0.8s						
P40A	Paris	5.00	60	IAmb_Lg		00 46 25.2	
	comp=Z,7.9nm,0.8s						
CCM	Cathedral Cave	5.16	78	IAmb_Lg		00 46 28.6	
	comp=Z,7.9nm,1.1s						

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*NEIC **07** 00:51:44.7±0.6, 37.°12N±0.°04×97.°62W±0.°04, h5^{km}±2^{km}, mb_Lg2.6/29, ML2.7/22, Error ellipse: s-maj=5.9km s-min=5.0km az=179.0*

*ANF **07** 00:51:44.8±0.5, 37.°09N×97.°61W, h5^{km}, ML3.3/7, Error ellipse: s-maj=5.1km s-min=4.0km az=19.0*

*NEIC **07** 00:51:45.0±0.7, 37.°11N±0.°04×97.°62W±0.°04, h5^{km}±2^{km}, Error ellipse: s-maj=7.2km s-min=5.4km az=190.0*

ISC 07 00:51:45.1±0.9**, 37.°12N**±0.°02×**97.°61W**±0.°02**, h4**^{km}±6^{km}**, n61,** σ**0**^{s}**55**/64**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN09	Caldwell North	0.02	334	Pg	Pg	00 51 45.7	-0.3
KAN09				Sg	Sg	00 51 46.4	-0.3
KAN01	Argonia South	0.13	286		Pg	00 51 47.4	-0.3
KAN01				Sg	Sg	00 51 49.2	-0.1
KAN17	Caldwell West	0.15	239	Pg	Pg	00 51 47.7	-0.3
KAN17				Sg	Sg	00 51 50.0	0.0
KAN13	South Haven SW	0.15	135	Pg	Pg	00 51 48.3	+0.2
KAN06	Argonia West S	0.24	303		Pg	00 51 49.5	-0.3

KAN08	Anthony NE Sta	0.31	290		Pg	00 51 50.9	-0.2
KAN08					Sg	00 51 55.2	0.0
KAN14	Manchester OK	0.33	240	Pg	Pg	00 51 51.3	-0.2
KAN14				Sg	Sg	00 51 55.6	-0.1
GC02	Grant County #	0.33	217	Pg	Pg	00 51 51.5	-0.1
KAN12	Harper NE Stat	0.36	300	Pg	Pg	00 51 51.7	-0.4
KAN16	Harper SW Stat	0.38	286		Pg	00 51 52.1	-0.3
KAN16					Sg	00 51 57.4	-0.1
KAN10	Anthony SW Sta	0.39	271	Pg	Pg	00 51 52.4	-0.2
KAN10					Sg	00 51 57.6	-0.1
BLOK	Blackwell	0.48	139	Pg	Pg	00 51 54.3	0.0
OK032	Salt Plains WL	0.58	237	Pg	Pg	00 51 55.9	-0.3
OK032					Sg	00 52 03.7	0.0
CROK	Carrier	0.68	206	Pg	Pg	00 51 58.0	-0.2
T35A	Sooner Cattle	0.90	103		Pg	00 52 01.9	-0.4
T35B	Sooner Cattle	0.90	103	P	Pg	00 52 02.0	-0.4
	baz=284						
T35B				S	Sg	00 52 14.0	-0.1
	baz=284						
OK031	S. Brethren Rd	1.32	152		Pn	00 52 09.4	-0.9
OK034	N. Norfolk Rd.	1.32	147	Pn	Pn	00 52 09.7	-0.7
OK029	Liberty Lake	1.32	175		Pn	00 52 09.6	-0.8
U32A	Winter Ranch,	1.34	237		Pn	00 52 09.6	-1.1
U32A	Winter Ranch,	1.34	237	P	Pn	00 52 09.6	-1.1
	baz=56						
U32A				S	Sb	00 52 28.1	-0.3
	baz=56						
OK030	Cody Creek RV	1.36	151		Pn	00 52 10.3	-0.6
BCOK	Bluff Creek, N	1.46	180		Pn	00 52 11.8	-0.4
OK025	Westminster Rd	1.55	172		Pn	00 52 13.3	-0.2
R32A	Long Quarter,	1.57	326		Pn	00 52 13.4	-0.4
R32A	Long Quarter,	1.57	326	P	Pn	00 52 13.4	-0.4
	baz=146						
R32A				S	Sn	00 52 34.2	-0.4
	baz=146						
OKCFA	Oklahoma City	1.71	176		Pn	00 52 15.4	-0.2
OKCFA	Oklahoma City	1.71	176	S	Sg	00 52 39.3	-0.6
	baz=356						
OKCSW	OKLAHOMA CITY	1.71	175		Pn	00 52 15.9	+0.1
FNO	Franklin	1.86	175		Pn	00 52 18.3	+0.4
KSU1	Kansas State U	2.13	21		Pn	00 52 21.5	0.0
KSU1				IAmb_Lg		00 52 51.3	
	comp=Z,24nm,0.7s						
KSU1	Kansas State U	2.13	21	S	Sb	00 52 50.7	-0.4
	baz=202						
CBKS	Cedar Bluff	2.39	316		Pn	00 52 25.0	0.0
CBKS	Cedar Bluff	2.39	316	P	Pn	00 52 25.3	+0.2
	baz=135						
CBKS				S	Sb	00 52 58.6	+0.1
	baz=135						
X34A	Smith Ranch, M	2.52	184		Pn	00 52 27.0	+0.1
U38A	Gravette	2.67	104		Pn	00 52 29.5	+0.5
HHAR	Hobbs	3.06	105		Pn	00 52 34.6	+0.3
X37A	Clayton	3.11	144		Pn	00 52 35.3	+0.3
LOOK	Love County	3.14	173	Pg	Pg	00 52 43.8	-1.5
S39A	Bolivar	3.46	79		Pn	00 52 39.4	-0.4
S39A	Bolivar	3.46	79	P	Pn	00 52 39.2	-0.6
	baz=262						
N33B	J Bar K, Exete	3.62	2	P	Pn	00 52 41.4	-0.5
	baz=182						
N33A	J Bar K, Exete	3.62	2	Pn	Pn	00 52 41.5	-0.5
W39A	Magazine	3.64	121	IAmb_Lg		00 53 41.3	
	comp=Z,18nm,0.8s						
Z35A	Perchaven, San	3.79	176	Pn	Pn	00 52 43.9	-0.4
U40A	Yellville	3.89	100		Pn	00 52 46.0	+0.3
AMTX	Amarillo	3.98	237	Pg	Pb	00 52 58.0	+2.1
AMTX				IAmb_Lg		00 53 56.9	
	comp=Z,12nm,0.8s						
N35A	Tabor	4.04	22		Pn	00 52 47.1	-0.7
P38A	Dawn	4.06	51	Pn	Pn	00 52 47.5	-0.6
MIAR	Mount Ida	4.16	127	IAmb_Lg		00 54 00.5	
	comp=Z,13nm,0.7s						
MGMO	Mountain Grove	4.27	88	Pn	Pn	00 52 51.1	+0.2
MGMO				IAmb_Lg		00 54 01.5	
	comp=Z,14nm,0.8s						
KSCO	Kaye Shedlock’	4.39	297	IAmb_Lg		00 54 13.6	
	comp=Z,16nm,1.0s						
R40A	Maddies Statio	4.39	73		Pn	00 52 52.3	-0.3
R40A				IAmb_Lg		00 54 06.4	
	comp=Z,10nm,1.2s						
Z38A	Mt. Pleasant	4.41	150	Pn	Pn	00 52 51.9	-0.9
Z38A				IAmb_Lg		00 54 09.4	
	comp=Z,12nm,0.8s						
FCAR	Ozark Folk Cen	4.58	104	Pn	Pn	00 52 54.3	-0.9
FCAR				IAmb_Lg		00 54 08.8	
	comp=Z,12nm,0.7s						
WHAR	Wooly Hollow	4.67	111	IAmb_Lg		00 54 21.7	
	comp=Z,16nm,0.8s						
L34A	Svendsen Farm,	4.93	11	IAmb_Lg		00 54 28.4	
	comp=Z,16nm,0.7s						
N38A	Joes South For	5.01	42	IAmb_Lg		00 54 27.1	
	comp=Z,15nm,0.8s						
OGNE	Ogallala	5.14	319	IAmb_Lg		00 54 29.9	
	comp=Z,12nm,0.8s						
PBMO	Poplar Bluff	5.76	91	IAmb_Lg		00 54 51.2	
	comp=Z,13nm,0.8s						
JCT	Junction City	6.87	196	IAmb_Lg		00 55 25.9	
	comp=Z,7.3nm,0.8s						

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*IDC **07** 00:56:42.3±7.6, 31°.90S×179°.33E, h540^{km}±105^{km}, mb3.5/2, mb1 3.6/3, mb1mx2.8/38, mbtmp4.3/3, Error ellipse: s-maj=137.8km s-min=37.0km az=6.0*

*NEIC **07** 00:56:44.4±1.0, 31°.8S±0°.1×178°.9E±0°.1, h520^{km}±18^{km}, mb4.2/5, Error ellipse: s-maj=25.4km s-min=6.2km az=136.0*

ISC 07 00:56:43.0±0.9**, 31°.8S**±0°.1×**178°.9E**±0°.1**, h500^{km}, n15,** σ**1^{s}77**/16**, mb4.0**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUZ	Omahuta	5.61	231	P	P	00 58 19.0	+3.6
URZ	Urewera	6.65	192	P	P	00 58 26.7	+1.3
	1.4nm,0.3s,baz=121,slow=23,SNR=8.0						
URZ				S	S	00 59 49.9	+0.3
	0.5nm,0.3s,baz=302,slow=23,SNR=1.5						
TUWZ	Tuamarina	10.44	201	P	P	00 59 05.2	+0.5
KHZ	Kahutara	11.46	200	P	P	00 59 17.0	+1.4
RPZ	Rata Peaks	13.44	205	P	P	00 59 37.3	+0.7
DZM	Mont Dzumac	14.69	308	P	P	00 59 50.2	+0.1
ODZ	Otahua Downs	14.75	204	P	P	00 59 48.0	-2.3
NIUE	Niue	16.15	41	P	P	01 00 07.5	+2.2
TOO	Toolangi	27.98	249	P	P	01 01 52.3	-0.4
TOO				IAmb	IAmb	01 02 00.8	
	comp=Z,5.2nm,1.0s						
ASAR	Alice Springs	40.40	270	P	P	01 03 37.1	-0.2
	comp=Z,11nm,0.3s,baz=82,slow=8.5,SNR=4.3						
WB2	Warramunga Arr	41.51	275	P	P	01 03 45.6	-0.5
WRA	Warramunga Arr	41.52	275	P	P	01 03 45.6	-0.6
	comp=Z,0.5nm,0.3s,baz=111,slow=8.0,SNR=18						
WB0	Warramunga Arr	41.55	276	P	P	01 03 45.9	-0.6
WB0				IAmb	IAmb	01 03 49.5	
	comp=Z,3.0nm,1.1s						
TAOE	Nuku Hiva Isla	44.29	68	P	P	01 04 07.7	-0.3
TAOE				IAmb	IAmb	01 04 08.0	
	comp=Z,34nm,0.7s						
FINES	FINESS Array B	145.43	337	PKPbc	PKPdf	01 15 19.3	-3.5
	comp=Z,5.5nm,1.0s,baz=52,slow=4.2,SNR=17						

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*IDC **07** 01:01:46.0±2.4, 53°.28N×166°.49W, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.1/54, mbtmp3.7/4, MS3.6/1, Ms1 3.6/1, ms1mx2.7/31, Error ellipse: s-maj=80.9km s-min=31.4km az=12.0*

*AEIC **07** 01:01:46±1.2, 52°.56N±0°.08×166°.93W±0°.10, h13^{km}±7^{km}, Error ellipse: s-maj=12.8km s-min=5.3km az=145.0*

*NEIC **07** 01:01:48.8±1.6, 52°.58N±0°.03×166°.93W±0°.05, h34^{km}±10^{km}, ML3.0/20(AEIC), Error ellipse: s-maj=5.3km s-min=4.5km az=139.0*

ISC 07 01:01:47.9±1.2**, 52°.61N**±0°.08×**166°.89W**±0°.06**, h25^{km}, n26,** σ**1^{s}10**/24**, mb3.6**/4**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKFG	Magazine Ridge	1.01	323		Pn	01 02 05.8	-0.7
OKFG					Sn	01 02 21.2	+1.2
OKTU	Okmok Mt. Tuli	1.04	318		Pn	01 02 06.3	-0.7
OKSP	Okmok Steeple	1.06	308		Pb	01 02 06.8	-0.9
OKSO	Okmok South	1.07	315		Pn	01 02 06.6	-0.8
OKSO					Sn	01 02 22.2	+0.7
OKER	Okmok East Rim	1.10	321		Pn	01 02 06.5	-1.3
MAPS	Pakushin South	1.20	358		Pn	01 02 08.7	-0.5
MAPS					Sb	01 02 26.6	+1.6
NIKH	Nikolski High	1.25	288		Pn	01 02 09.1	-0.7
UNV	Unalaska Valle	1.26	10		Pn	01 02 09.6	-0.2
MNAT	Makushin Natee	1.28	5		Pn	01 02 10.4	+0.2
MNAT					Sb	01 02 28.2	+0.9
MSW	Makushin Switc	1.31	3		Pn	01 02 10.9	+0.3
MTBL	Makushin Table	1.37	5		Pb	01 02 12.2	-0.6
AKMO	Akutan Morgan	1.57	19		Pn	01 02 15.0	+0.8
AKRB	Akutan Reef Bi	1.60	18		Pb	01 02 15.5	-1.3
AKLV	Akutan Long Va	1.65	19		Pn	01 02 15.9	+0.6
ADK	Adak	6.06	267	Pn	Pn	01 03 16.4	+0.5
KIWB	Kanaga Island	6.35	267	Pn	Pn	01 03 21.1	+1.2
PETK	Petropavlovsk-	21.26	286	P	P	01 06 34.6	+2.6
	1.5nm,0.5s,baz=81,slow=13,SNR=7.1						
H11N2	WAKE ISLAND Hy	38.62	222	T	T	01 50 45.6	
	baz=25,slow=76,SNR=8.1						
H11N3	WAKE ISLAND Hy	38.63	222	T	T	01 50 37.1	
	baz=25,slow=76,SNR=6.1						
H11N1	WAKE ISLAND Hy	38.64	222	T	T	01 50 46.1	
	baz=25,slow=76,SNR=6.1						
H11S1	WAKE ISLAND Hy	39.80	221	T	T	01 52 04.4	
	baz=24,slow=74						
H11S2	WAKE ISLAND Hy	39.81	221	T	T	01 52 09.6	
	baz=24,slow=74						
H11S3	WAKE ISLAND Hy	39.82	221	T	T	01 52 18.6	
	baz=24						
TXAR	Lajitas Array	51.23	91	P	P	01 10 49.5	+0.1
	0.2nm,0.7s,baz=307,slow=6.7,SNR=2.3						
TXAR				LR	LR	01 30 36.9	
	comp=Z,52nm,18.4s,baz=0.0,slow=34						
MKAR	Makanchi Array	64.73	315	P	P	01 12 23.0	-0.7
	0.2nm,0.6s,baz=53,slow=8.0,SNR=2.3						
FINES	FINESS Array B	65.82	353	P	P	01 12 28.6	-1.8
	3.5nm,0.9s,baz=28,slow=8.6,SNR=6.4						

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*BJI **07** 01:47:02.3±0.0, 29°.80S×177°.01W, h11^{km}, mB5.8/19, mb5.3/33, Ms5.2/14, Ms7 4.9/18*

*MOS **07** 01:47:05.0±0.9, 30°.13S×177°.75W, h21^{km}, mb5.6/33, MS5.0/7, Error ellipse: s-maj=10.5km s-min=8.6km az=99.5*

*IDC **07** 01:47:08.1±1.9, 30°.18S×177°.74W, h32^{km}±12^{km}, mb4.8/16, mb1 5.0/16, mb1mx5.0/20, mbtmp5.0/16, MS4.7/21, Ms1 4.8/21, ms1mx4.7/24, Error ellipse: s-maj=13.8km s-min=12.9km az=73.0*

*NEIC **07** 01:47:08.5±2.3, 30°.14S±0°.08×177°.6W±0°.1, h32^{km}±3^{km}, mb5.4/169, Error ellipse: s-maj=14.2km s-min=11.4km az=81.0*

*GCMT **07** 01:47:10.5±0.1, 30°.25S±0°.01×177°.43W±0°.01, h37^{km}, MW5.4/139, Moment Tensor Solution. s122,c213; s139,c230; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.43±.03; $M_{\theta\theta}$0.06±.02; $M_{\phi\phi}$-1.49±.02; $M_{r\theta}$0.16±.03; $M_{\theta\phi}$-0.40±.02; $M_{\phi r}$1.03±.02; Best double couple: $M_0$1.83300×10^{17} NP1:ϕ_s197.00000°, δ28.00000°, λ96.00000°. NP2:ϕ_s11.00000°, δ62.00000°, λ87.00000°. Principal axes: T 1.7570, Plg72.0000°, Azm273.0000°; N 0.1510, Plg3.0000°, Azm12.0000°; P -1.9090, Plg17.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NOU **07** 01:47:13.0, 30°.51S×177°.31W, h88^{km}, ML5.3/91, Kermadec Islands, New Zealand*

ISC 07 01:47:07.5±0.2**, 30°.34S**±0°.04×**177°.49W**±0°.04**, h33^{km}, n941,** σ**1^{s}77**/895**, mb5.4**/146**, MS4.9**/34**, 33C-36D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.14	340	P	Pn	01 47 25.5	-1.6
GLKZ				S	Sn	01 47 38.2	-3.3
RAO	Raoul Island	1.15	341	Pn	Pn	01 47 25.2	-2.0
	3μm,0.3s,baz=196,slow=4.3,SNR=147						
RAO				Sn	Sn	01 47 38.2	-3.6
	24μm,0.3s,baz=67,slow=23,SNR=17						
RAO	Raoul Island	1.15	341	P	Pn	01 47 25.1	-2.1
RAO	Raoul Island	1.15	341	Pn	Pn	01 47 25.1	-2.1
RIZ	Raoul Island	1.16	340	P	Pn	01 47 26.0	-1.3
RIZ				S	Sn	01 47 39.3	-2.7
MXZ	Matakaoa Point	8.01	205	P	Pn	01 48 59.1	-2.4
MXZ	Matakaoa Point	8.01	205	Pn	Pn	01 48 58.9	-2.5
WMGZ	Waiomatatini S	8.20	203	P	Pn	01 49 01.5	-2.6
PKGZ	Pakihiroa	8.38	205	P	Pn	01 49 03.3	-3.3
PUZ	Puketiti	8.48	203	P	Pn	01 49 04.1	-3.9
PUZ				S	Sn	01 50 40.8	-1.8
KUZ	Kuaotunu	8.54	220	P	Pn	01 49 12.1	+3.3
RUGZ	Raukumara Rang	8.60	206	P	Pn	01 49 07.4	-2.3
RUGZ				S	Sn	01 50 44.8	-0.8
TWGZ	Tauwhareparae	8.67	204	P	Pn	01 49 08.2	-2.4
TWGZ				S	Sn	01 50 46.3	-1.0
WCZ	Waipu Caves	8.84	229	P	Pn	01 49 21.2	+8.4
CNGZ	Carnagh Statio	8.87	202	P	Pn	01 49 10.3	-3.0
OUZ	Omahuta	8.95	235	P	Pn	01 49 20.3	+6.0
OUZ	Omahuta	8.95	235	P	Pn	01 49 20.3	+5.9
MWZ	Matawai	8.98	206	P	Pn	01 49 12.1	-2.7
MWZ				S	Sn	01 50 52.5	-2.3
URZ	Urewera	9.08	208	Pn	Pn	01 49 12.2	-3.9
	3.3nm,0.3s,baz=302,slow=23,SNR=12						
URZ				Sn	Sn	01 50 51.4	-5.7
	21nm,0.3s,baz=133,slow=19,SNR=1.9						
URZ	Urewera	9.08	208	P	Pn	01 49 13.0	-3.1
URZ				S	Sn	01 50 54.6	-2.5
URZ	Urewera	9.08	208	Pn	Pn	01 49 12.9	-3.2
PRGZ	Paritu Road	9.37	203	P	Pn	01 49 17.7	-2.6
PRGZ				S	Sn	01 50 59.8	-4.7
MUGZ	Murupara	9.40	209	P	Pn	01 49 17.7	-2.9
MUGZ				S	Sn	01 51 02.3	-2.9
SNGZ	Shannon Statio	9.44	205	P	Pn	01 49 18.0	-3.1
SNGZ				S	Sn	01 51 03.9	-2.2
MHGZ	Mahia Peninsul	9.57	202	P	Pn	01 49 20.6	-2.4
MTHZ	Maungataniwha	9.69	207	P	Pn	01 49 23.3	-1.4
ARHZ	Aropaoanui	9.99	205	P	Pn	01 49 25.8	-2.8
BKZ	Black Stump Fm	10.10	208	P	Pn	01 49 27.6	-2.6
HIZ	Hauiti	10.31	216	P	Pn	01 49 38.0	+4.9
TMVZ	Te Maari	10.39	211	P	Pn	01 49 34.0	-0.3
ETVZ	East Tongariro	10.40	211	P	Pn	01 49 34.1	-0.4
OTVZ	Oturere	10.45	211	P	Pn	01 49 30.7	-4.4
KAHZ	Kahuranaki	10.50	205	P	Pn	01 49 31.6	-4.1
BHHZ	Black Hill Sta	10.55	208	P	Pn	01 49 37.5	+1.1
KRHZ	Kereru	10.56	207	P	Pn	01 49 31.7	-4.8
FWVZ	Far West T-bar	10.57	211	P	Pn	01 49 36.3	-0.5
MOVZ	Moawhango	10.61	210	P	Pn	01 49 38.0	+0.7
WNVZ	Wahianoa	10.61	210	P	Pn	01 49 40.7	+3.3
VRZ	Vera Road	10.84	214	P	Pn	01 49 41.6	+1.4
PNHZ	Pukenui	10.86	207	P	Pn	01 49 38.1	-2.5
KHEZ	Kahui Hut	11.34	216	P	Pn	01 49 56.7	+10
BFZ	Birch Farm	11.51	205	P	Pn	01 49 49.6	+0.1
HOWZ	Holdsworth Sta	11.97	206	P	Pn	01 49 55.7	-0.1
TMWZ	Te Maipa	12.01	205	P	Pn	01 49 51.0	-5.3
OGWZ	Otaki Gorge	12.04	208	P	Pn	01 49 55.9	-0.8
TRWZ	Traveller	12.34	205	P	Pn	01 49 58.6	-2.3
PAWZ	Paruwai Farm	12.42	206	P	Pn	01 49 56.2	-5.8
MSWZ	Moikau Station	12.52	206	P	Pn	01 49 59.5	-3.8
DUWZ	D’Urville Isla	12.56	211	P	Pn	01 50 01.8	-2.0
BHW	Baring Head	12.66	207	P	Pn	01 50 02.4	-2.8
BHW	Baring Head	12.66	207	Pn	Pn	01 50 02.0	-3.1
NFK	Norfolk Island	12.74	272	P	Pn	01 50 08.0	+1.7
	baz=13						
NFK	Norfolk Island	12.74	272	P	P	01 50 12.9	-4.1
TUWZ	Tuamarina	13.06	210	P	Pn	01 50 05.7	-4.9
NNZ	Nelson	13.14	212	P	Pn	01 50 12.8	+1.1
NIUE	Niue	13.14	33	P	Pn	01 50 08.4	-3.4
	baz=13,SNR=9.1						
NIUE	Niue	13.14	33	Pn	Pn	01 50 08.1	-3.8
MSVF	Nonsavu	13.19	341	Pn	Pn	01 50 12.8	+0.1
	1.4nm,0.3s,baz=145,slow=13,SNR=17						
MSVF				LR	LR	01 54 31.8	
	comp=Z,8μm,19.1s,baz=180,slow=34						
MSVF	Nonsavu	13.19	341	*i* P	Pn	01 50 11.3	-1.3
MSVF	Nonsavu	13.19	341	Pn	Pn	01 50 10.7	-1.9
MSVF	Nonsavu	13.19	341	P	P	01 50 18.8	-3.4
QRZ	Quartz Range	13.24	215	P	Pn	01 50 13.9	+0.8
QRZ	Quartz Range	13.24	215	P	Pn	01 50 15.5	+2.4
BSWZ	Blackbirch Sta	13.32	209	P	Pn	01 50 13.9	-0.4
TAVE	Taveuni	13.75	350	P	P	01 50 27.0	-1.3
THZ	Tophouse	13.79	212	P	Pn	01 50 17.1	-3.5
THZ	Tophouse	13.79	212	Pn	Pn	01 50 18.6	-2.0
DGTI	Dogotuki	14.20	349	P	P	01 50 32.6	-0.8
DSZ	Denniston Nort	14.29	214	P	Pn	01 50 25.8	-1.7
GVZ	Greta Valley S	14.71	208	P	Pn	01 50 29.0	-4.1
INZ	Inchbonnie	15.21	213	P	Pn	01 50 37.6	-2.2
PINNC	Pines Island,	15.52	296	P	P	01 50 46.0	-1.9
PINNC				IAmb	IAmb	01 51 00.5	
	comp=Z,167nm,1.0s						
PINNC	Pines Island,	15.52	296	P	P	01 50 49.5	+1.5
MARNC	Mare, Loyalty	15.72	301	P	P	01 50 48.8	-1.5
MARNC	Mare, Loyalty	15.72	301	P	P	01 50 52.0	+1.8
OUENC	Ouen Island, N	16.10	296	P	P	01 50 53.0	-1.4
OUENC				IAmb	IAmb	01 51 06.5	
	comp=Z,304nm,1.1s						
OUENC	Ouen Island, N	16.10	296	P	P	01 50 57.7	+3.3
RPZ	Rata Peaks	16.16	211		Pn	01 50 48.9	-3.2
YATNC	Mamie plateau,	16.25	297	P	P	01 50 58.6	+2.5
ONTNC	Ouen Toro	16.46	295	P	P	01 50 58.8	+0.4
ONTNC	Ouen Toro	16.46	295	P	P	01 51 01.1	+2.7
DZM	Mont Dzumac	16.59	296	*e*Pn	P	01 51 01.3	+1.3
	comp=Z,505nm,1.1s						
DZM				*e*LR	LR	01 54 54.8	
	comp=Z,13μm,24.6s,baz=138						
DZM	Mont Dzumac	16.59	296	Pn	Pn	01 50 58.2	+0.4
	comp=Z,0.7nm,0.3s,baz=123,slow=11,SNR=39						
DZM	Mont Dzumac	16.59	296	P	P	01 51 00.6	+0.6
DZM				IAmb	IAmb	01 51 16.5	
	comp=Z,480nm,1.4s						
DZM	Mont Dzumac	16.59	296	P	P	01 51 02.6	+2.6
NOUC	Port Laguerre	16.69	296	P	P	01 51 03.9	+3.0
LIFNC	LIFOU	16.73	301	P	Pn	01 51 00.1	+0.7
LIFNC	LIFOU	16.73	301	P	P	01 51 04.7	+3.3
AFI	Afiamalu	17.18	19	P	Pn	01 51 02.0	-3.1
	comp=Z,5.1nm,0.3s,baz=3.3,slow=2.6,SNR=4.8						
AFI	Afiamalu	17.18	19	P	Pn	01 51 02.0	-3.1
ODZ	Otahua Downs	17.40	209		Pn	01 51 05.5	-2.1
ODZ	Otahua Downs	17.40	209	P	Pn	01 51 07.7	+0.1
RTV	Rentapao	17.91	311	P	P	01 51 17.9	+3.5
RAR	Rarotonga	18.34	64	P	P	01 51 18.0	-1.1
	comp=Z,1.9nm,0.3s,baz=263,slow=5.8,SNR=9.5						
RAR				S	Sn	01 54 25.9	-17
	comp=Z,1.7nm,0.3s,baz=11,slow=11,SNR=2.5						
RAR				LR	LR	01 56 42.0	
	comp=Z,2μm,21.3s,baz=252,slow=31						
RAR	Rarotonga	18.34	64	P	P	01 51 16.7	-2.5
RAR				pmax	pmax		
	comp=Z,167nm,1.3s						
RAR	Rarotonga	18.34	64	P	P	01 51 16.7	-2.5
RAR	Rarotonga	18.34	64	P	Pn	01 51 20.1	+0.8
MLZ	Mavora Lakes	18.78	213	P	P	01 51 21.4	-2.4
KOUNC	Koumac, New Ca	19.11	296	P	Pn	01 51 33.3	+4.7
LHI	Lord Howe Isla	20.15	261	P	Pn	01 51 42.1	+1.2
	baz=20,SNR=12						
LHI	Lord Howe Isla	20.15	261	P	Pn	01 51 42.1	+1.1
LHI				IAmb	IAmb	01 51 44.2	
	comp=Z,341nm,1.2s						
LHI	Lord Howe Isla	20.15	261	P	Pn	01 51 42.8	+1.9
SANVU	Saraoutou	20.43	313	P	Pn	01 51 44.9	+0.7
SANVU				IAmb	IAmb	01 52 00.2	
	comp=Z,130nm,0.9s						
SANVU	Saraoutou	20.43	313	P	Pn	01 51 45.9	+1.7
NTLH	Newcastle Hard	26.32	256	P	P	01 52 42.9	+2.7
ARMA	Armidale	26.61	262	P	P	01 52 45.0	+2.0
	baz=27,SNR=26						
ARMA	Armidale	26.61	262	P	P	01 52 45.2	+2.1
ARMA				IAmb	IAmb	01 52 47.0	
	comp=Z,115nm,1.2s						
ARMA	Armidale	26.61	262	P	P	01 52 45.5	+2.5
RIV	Riverview	26.74	254	P	P	01 52 46.9	+2.8
	baz=27,SNR=4.6						
MGCD	Mangrove Creek	26.80	256	P	P	01 52 47.2	+2.6
	baz=27,SNR=17						
MGCD	Mangrove Creek	26.80	256	P	P	01 52 45.8	+1.2
SYDH	Sydney Hard Ro	27.09	254	P	P	01 52 49.7	+2.5
	comp=Z,127nm,1.1s						
EIDS	Eidsvold	28.18	272	P	P	01 52 57.9	+0.9
	baz=28,SNR=22						
EIDS	Eidsvold	28.18	272	P	P	01 52 56.9	-0.1
EIDS				IAmb	IAmb	01 52 59.1	
	comp=Z,160nm,1.3s						
EIDS	Eidsvold	28.18	272	P	P	01 52 58.0	+1.0
CNB	Canberra Magne	28.22	251	P	P	01 52 59.2	+1.9
	baz=28,SNR=10						
CNB	Canberra Magne	28.22	251	P	P	01 52 58.3	+0.9
PAE	Paea	28.36	70	*e*T	T	02 21 55.4	
	comp=Z,19nm,0.3s						
PPT2	Papeete2	28.40	70	*e*S	S	01 57 41.5	-2.7
	comp=Z,907nm,25.8s						
PPT2				*e*LQ	LQ	01 58 52.0	
	comp=Z,2μm,23.8s						
PPT2				*e*LR	LR	02 00 02.9	
	comp=Z,6μm,26.0s,baz=235						
PPT2	Papeete2	28.40	70	*e*T	T	02 21 59.5	
	comp=Z,11nm,0.2s						
PPT	Papeete	28.41	70	LR	LR	02 01 22.4	
	comp=Z,2μm,20.8s,baz=212,slow=30						
MILA	Mila	28.45	247	P	P	01 53 01.6	+2.1
	baz=29,SNR=9.4						
CAN	Canberra	28.52	251	P	P	01 53 01.4	+1.4
CAN				pmax	pmax		
	comp=Z,168nm,1.3s						
CAN	Canberra	28.52	251	P	P	01 53 01.4	+1.4
CAN				IAmb	IAmb	01 53 03.1	
	comp=Z,168nm,1.3s						
CAN	Canberra	28.52	251	P	P	01 53 01.7	+1.7
TIAR	Tiarei	28.60	70	*e*P	P	01 53 02.6	+1.7
	comp=Z,0.3nm,0.8s						
TIAR	Tiarei	28.60	70	*e*T	T	02 22 14.6	
	comp=Z,0.7nm,0.2s						
RK1H	Rockhampton Ha	29.32	276	P	P	01 53 09.0	+1.8
MEH	Mehetia	29.49	72	*e*T	T	02 23 20.7	
	comp=Z,22nm,0.2s						
HNR	Honiara	29.60	310	LR	LR	02 04 12.6	
	comp=Z,1μm,18.7s,baz=148,slow=35						
GLAD	Gladstone	29.81	240	P	P	01 53 11.9	+0.6
RMQ	Roma	29.87	269	P	P	01 53 14.1	+2.1
	baz=30,SNR=34						
RMQ	Roma	29.87	269	P	P	01 53 14.2	+2.1
MOO	Moorlands	30.68	237	P	P	01 53 19.2	+0.2
	baz=31,SNR=4.1						
TAU	Tasmania Unive	30.68	236	P	P	01 53 20.1	+1.1
TAU				pmax	pmax		
	comp=Z,86nm,1.4s						
TAU	Tasmania Unive	30.68	236	P	P	01 53 20.1	+1.1
TAU				IAmb	IAmb	01 53 20.7	
	comp=Z,86nm,1.4s						
PMOR	Pomariorio Ree	31.16	67	*e*T	T	02 25 24.8	
	comp=Z,9.4nm,0.4s						
VAH	Vaihoa	31.24	68	*e*T	T	02 25 31.0	
	comp=Z,96nm,0.2s						
TOO	Toolangi	31.40	247	P	P	01 53 27.1	+1.7
	baz=32,SNR=12						
TOO	Toolangi	31.40	247	P	P	01 53 25.7	+0.2
TOO				pmax	pmax		
	comp=Z,195nm,1.3s						
TOO	Toolangi	31.40	247	P	P	01 53 25.7	+0.2
TOO	Toolangi	31.40	247	P	P	01 53 27.3	+1.8
CMSA	Cobar Meteorol	31.52	258	P	P	01 53 27.5	+1.0
	baz=32,SNR=80						
CMSA	Cobar Meteorol	31.52	258	P	P	01 53 28.1	+1.6
GEXS	Deakin Univers	32.37	246	P	P	01 53 34.4	+0.5
BRAT	Ballarat	32.63	247	P	P	01 53 38.2	+2.0
QLP	Quilpie	33.76	267	P	P	01 53 47.0	+0.8
	baz=34,SNR=17						
QLP	Quilpie	33.76	267	P	P	01 53 46.6	+0.4
CTA	Charters Tower	34.23	279	P	P	01 53 51.9	+1.6
CTAO	Charters Tower	34.23	279	P	P	01 53 51.0	+0.7
CTAO				pmax	pmax		
	comp=Z,295nm,1.1s						
CTAO	Charters Tower	34.23	279	P	P	01 53 51.0	+0.7
CTAO	Charters Tower	34.23	279	P	P	01 53 52.0	+1.6
ARPS	Mount Arapiles	34.31	248	P	P	01 53 52.3	+1.5
	baz=34,SNR=8.6						
ARPS	Mount Arapiles	34.31	248	P	P	01 53 51.6	+0.7
STKA	Stephens Creek	34.92	257	P	P	01 53 56.3	0.0
	comp=Z,135nm,1.0s,baz=92,slow=9.6,SNR=128						
STKA				ScP	ScP	02 00 12.9	+1.4
	comp=Z,2.8nm,0.8s,baz=333,slow=4.5,SNR=2.6						
STKA				LR	LR	02 06 57.8	
	comp=Z,2μm,18.8s,baz=92,slow=34						
STKA	Stephens Creek	34.92	257	P	P	01 53 57.3	+1.0
	baz=35,SNR=113						
STKA	Stephens Creek	34.92	257	P	P	01 53 56.9	+0.6
STKA				pmax	pmax		
	comp=Z,40nm,1.1s						
STKA	Stephens Creek	34.92	257	P	P	01 53 56.9	+0.6
STKA				IAmb	IAmb	01 53 58.8	
	comp=Z,40nm,1.1s						
STKA	Stephens Creek	34.92	257	P	P	01 53 57.9	+1.6

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INKA  Innaminka         36.47 263  P      P      01 54 11.1 +1.6
MTSU  Mount Surprise    36.72 280  P      P      01 54 12.5 +0.7
      baz=37,SNR=41
MTSU  Mount Surprise    36.72 280  P      P      01 54 13.2 +1.4
HTT   Hallett           36.95 254  P      P      01 54 14.3 +0.6
      baz=37,SNR=81
HTT   Hallett           36.95 254  P      P      01 54 14.7 +1.1
TWOA  Tennyson Woods    37.05 251  P      P      01 54 15.3 +0.9
NAPP  Napperby          37.62 254  P      P      01 54 20.8 +1.5
PTPS  Port Pirie        37.75 254  P      P      01 54 22.4 +2.1
LCRK  Leigh Creek       38.02 258  P      P      01 54 23.5 +0.8
WHYH  Whyalla           38.12 254  P      P      01 54 24.7 +1.2
PMG   Port Moresby      38.98 295  LR     LR     02 07 36.9
      comp=Z,2µm,21.8s,baz=132,slow=32
PMG   Port Moresby      38.98 295  P      P      01 54 30.2  -0.7
PMG                                pmax   pmax
      comp=Z,77nm,1.2s
PMG   Port Moresby      38.98 295         P      01 54 30.1  -0.7
PMG                                IAmb   IAmb   01 54 31.9
      comp=Z,77nm,1.1s
PMG   Port Moresby      38.98 295  P      P      01 54 32.3 +1.4
PMG   Port Moresby      38.98 295  P      P      01 54 32.5 +1.6
BBOO  Buckleboo         39.41 254  P      P      01 54 34.3   0.0
      baz=40,SNR=38
BBOO  Buckleboo         39.41 254  P      P      01 54 33.2  -1.2
BBOO  Buckleboo         39.41 254  P      P      01 54 34.7 +0.3
COEN  Coen              39.68 285  P      P      01 54 36.9 +0.2
COEN                               IAmb   IAmb   01 54 38.8
      comp=Z,100nm,1.1s
COEN  Coen              39.68 285  P      P      01 54 37.7 +1.0
QIS   Mount Isa         39.75 274  P      P      01 54 37.4 +0.1
      baz=40,SNR=30
QIS   Mount Isa         39.75 274  P      P      01 54 38.0 +0.7
OOD   Oodnadatta        40.79 262  P      P      01 54 46.6 +0.8
TAOE  Nuku Hiva Isla    40.87  66 eS      S      02 00 54.1  -2.1
      comp=Z,814nm,26.0s
TAOE                              eLR     LR     02 05 50.2
      comp=Z,4µm,26.4s
MULG  Mulgathing        41.57 257  P      P      01 54 51.6  -0.6
AS31  Alice Springs     43.56 267  P      P      01 55 06.8  -1.7
ASAR  Alice Springs     43.56 267  P      P      01 55 07.2  -1.3
      comp=Z,28nm,0.6s,baz=111,slow=8.0,SNR=151
ASAR                               PcP    PcP    01 56 55.9   0.0
      comp=Z,3.2nm,0.8s,baz=121,slow=3.9,SNR=1.0
ASAR                               ScP    ScP    02 00 44.5  -0.5
      comp=Z,2.1nm,0.8s,baz=120,slow=4.8,SNR=4.9
ASAR                               S      S      02 01 36.9 +1.2
      comp=Z,1.0nm,1.0s,baz=105,slow=16,SNR=2.1
ASAR                               PKiKP  PKiKP  02 03 57.4  -0.8
      comp=Z,0.4nm,0.7s,baz=90,slow=1.9,SNR=1.9
ASAR                               ScS    ScS    02 05 05.9  -0.1
      comp=Z,0.4nm,0.8s,baz=112,slow=6.1,SNR=2.3
ASAR                               LR     LR     02 12 58.7
      comp=Z,4µm,18.0s,baz=112,slow=36
ASPA  Alice Springs     43.56 267  P      P      01 55 08.3  -0.2
      baz=44
MANU  Manus Island      43.59 303  P      P      01 55 07.5  -1.2
WR0   Warramunga Arr    44.36 272  P      P      01 55 13.2  -1.8
WR0                                IAmb   IAmb   01 55 18.0
      comp=Z,94nm,0.9s
WC3   Warramunga Arr    44.51 272  P      P      01 55 14.7  -1.4
      baz=44
WB2   Warramunga Arr    44.53 272  P      P      01 55 14.4  -1.9
WRAB  Tennant Creek     44.53 272c iP     P      01 55 14.5  -1.8
WRAB                               pmax   pmax
      comp=Z,209nm,1.2s
WRAB                               MLR    MLR
      comp=Z,3µm,18.0s
WRAB  Tennant Creek     44.53 272  P      P      01 55 14.8  -1.5
WRAB  Tennant Creek     44.53 272  P      P      01 55 16.5 +0.2
WRA   Warramunga Arr    44.54 272  P      P      01 55 14.9  -1.4
      comp=Z,94nm,0.8s,baz=110,slow=8.1,SNR=757
WRA                                PcP    PcP    01 56 59.1  -0.1
      comp=Z,3.2nm,0.7s,baz=116,slow=3.3,SNR=1.3
WRA                                ScP    ScP    02 00 48.8  -0.1
      comp=Z,5.3nm,1.1s,baz=109,slow=4.0,SNR=6.6
WRA                                S      S      02 01 44.6  -5.4
      comp=Z,4.6nm,0.9s,baz=113,slow=13,SNR=4.6
WRA                                PKiKP  PKiKP  02 03 58.1  -1.1
      comp=Z,0.7nm,0.7s,baz=92,slow=0.3,SNR=6.9
WRA                                LR     LR     02 13 51.2
      comp=Z,3µm,18.1s,baz=110,slow=36
WRA   Warramunga Arr    44.54 272  P      P      01 55 15.0  -1.3
WB0   Warramunga Arr    44.56 272  P      P      01 55 15.1  -1.5
MMPI  Merauke           44.95 290  P      P      01 55 31.0  +11
FORT  Forrest           46.49 255  P      P      01 55 30.2  -1.5
      baz=47,SNR=26
FORT  Forrest           46.49 255  P      P      01 55 29.2  -2.5
FORT  Forrest           46.49 255  P      P      01 55 30.7  -1.0
WRKA  Warakurna         47.93 262  P      P      01 55 41.2  -1.8
      baz=48,SNR=19
WRKA  Warakurna         47.93 262  P      P      01 55 42.8  -0.2
VNDA  Vanda             48.20 186  P      P      01 55 46.6 +2.3
VNDA                               pmax   pmax
      comp=Z,17nm,1.1s
VNDA  Vanda             48.20 186  P      P      01 55 46.6 +2.3
KDU   Kakadu            49.34 280  P      P      01 55 52.5  -1.4
      baz=49,SNR=6.2
MTN   Manton Dam        50.41 279  P      P      01 56 00.7  -1.3
      baz=50,SNR=6.2
MTN   Manton Dam        50.41 279  P      P      01 56 00.1  -1.9
MTN   Manton Dam        50.41 279  P      P      01 56 01.9  -0.1
KNRA  Kununurra         51.14 274  P      P      01 56 06.4  -1.1
      baz=51,SNR=33
KNRA  Kununurra         51.14 274  P      P      01 56 05.8  -1.8
KNRA                               IAmb   IAmb   01 56 09.3
      comp=Z,37nm,0.8s
KNRA  Kununurra         51.14 274  P      P      01 56 07.8 +0.3
H11N3 WAKE ISLAND Hy    51.98 341  P      P      01 56 07.5  -5.9
      baz=177,slow=10,SNR=5.7
H11N1 WAKE ISLAND Hy    51.98 341  P      P      01 56 14.8 +1.4
      baz=177,slow=10,SNR=6.1
H11N2 WAKE ISLAND Hy    52.00 341  P      P      01 56 14.9 +1.4
      baz=177,slow=10,SNR=6.4
SAUI  Saumlaki          52.72 284         P      01 56 18.7  -0.6
FITZ  Fitzroy Crossi    52.80 270  P      P      01 56 18.8  -1.1
      baz=53,SNR=13
FAKI  Fak Fak           54.74 290  P      P      01 56 33.2  -0.9
      comp=Z,847nmcomp=Z,53nm,1.1s
FAKI  Fak Fak           54.74 290  P      P      01 56 31.6  -2.5
FAKI                               IAmb   IAmb   01 56 33.6
      comp=Z,74nm,1.2s
FAKI  Fak Fak           54.74 290  P      P      01 56 35.6 +1.5
KLBR  Kellerberrin      54.79 251  P      P      01 56 32.6  -1.6
      baz=55,SNR=8.2
CASY  Casey             55.40 208  P      P      01 56 38.2 +0.1
MEEK  Meekatharra       55.63 257  P      P      01 56 38.6  -1.9
      baz=56,SNR=4.8
MEEK  Meekatharra       55.63 257  P      P      01 56 39.6  -0.9
BLDU  Ballidu           55.94 252  P      P      01 56 40.8  -1.7
      baz=56
PSA00 Pilbara Seismi    56.41 263  P      P      01 56 43.0  -3.1
PSA00 Pilbara Seismi    56.41 263  P      P      01 56 45.3  -0.8
      comp=Z,27nm,1.7s
MBWA  Marble Bar        56.67 263  P      P      01 56 47.2  -0.7
SWI   Sorong            56.73 291  P      P      01 56 47.4  -1.0
      comp=Z,65nm,0.8s
MORW  Morawa            56.97 253  P      P      01 56 48.3  -1.7
      baz=57,SNR=5.5
MORW  Morawa            56.97 253         P      01 56 47.5  -2.5
MORW                               IAmb   IAmb   01 56 49.3
      comp=Z,44nm,1.3s
MORW  Morawa            56.97 253  P      P      01 56 49.1  -0.9
SOEI  Soe               57.79 278  P      P      01 56 57.0 +1.0
      comp=Z,1µmcomp=Z,75nm,1.2s
SOEI  Soe               57.79 278  P      P      01 56 55.4  -0.6
SOEI                               IAmb   IAmb   01 57 17.9
      comp=Z,55nm,0.9s
SOEI  Soe               57.79 278  P      P      01 56 57.0 +1.0
      comp=Z,75nm,1.2s
QSPA  South Pole Qui    59.77 180  P      P      01 57 11.2 +2.1
      comp=Z,30nm,1.0s,baz=157,slow=1.0,SNR=20
QSPA  South Pole Qui    59.77 180  P      P      01 57 11.8 +2.7
LBMI  Labuha            59.92 289  P      P      01 57 11.1 +0.4
      comp=Z,1µmcomp=Z,57nm,1.4s
MMRI  Maumere           60.08 278         P      01 57 10.1  -1.6
SANI  Sanana            60.37 286  P      P      01 57 12.1  -1.6
      comp=Z,987nmcomp=Z,42nm,0.8s
SANI  Sanana            60.37 286  P      P      01 57 13.4  -0.3
BASI  Baing, Sumba      60.73 275  P      P      01 57 25.5 +9.3
GIRL  Giralia           60.80 259  P      P      01 57 16.6   0.0
      baz=61,SNR=5.1
TNTI  Ternate           60.84 290  P      P      01 57 16.2  -0.7
      comp=Z,47nm,0.8s
TNTI  Ternate           60.84 290         P      01 57 14.7  -2.2
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WBSI  Waikabubak, Su    62.03 275  P      P      01 57 26.3 +1.2
      comp=Z,750nmcomp=Z,34nm,0.9s
BKSI  Bulukumba         63.56 280  P      P      01 57 33.7  -1.5
      comp=Z,554nmcomp=Z,19nm,0.6s
PLAI  Plampang          63.82 275  P      P      01 57 35.6  -1.3
      comp=Z,46nm,0.8s
PLAI  Plampang          63.82 275  P      P      01 57 36.8  -0.1
KAPI  Kappang           64.04 280  P      P      01 57 36.0  -2.3
KAPI                               pmax   pmax
      comp=Z,45nm,1.5s
KAPI  Kappang           64.04 280         P      01 57 36.0  -2.3
KAPI                               IAmb   IAmb   01 57 38.5
      comp=Z,44nm,1.4s
KAPI  Kappang           64.04 280  P      P      01 57 39.1 +0.8
BNSI  Bone              64.05 281  P      P      01 57 39.3 +0.9
      comp=Z,22nm,0.5s
GTOI  Gorontalo         64.33 287  P      P      01 57 40.4 +0.2
      comp=Z,15nm,0.6s
SPSI  Sidrap Palu       64.56 281  P      P      01 57 40.4  -1.4
      comp=Z,17nm,1.0s
APSI  Ampana            64.61 285  P      P      01 57 42.1   0.0
      comp=Z,27nm,1.2s
TWSI  Taliwang, Sumb    64.63 275  P      P      01 57 41.0  -1.2
      comp=Z,19nm,1.1s
TTSI  Tana Toraja       65.00 282  P      P      01 57 43.6  -1.1
      comp=Z,27nm,0.6s
MRSI  Marisa            65.13 286  P      P      01 57 58.2  +13
IGBI  Denpasar          66.09 274  P      P      01 57 57.4 +5.7
SRBI  Singaraja         66.39 274  P      P      01 57 53.0  -0.6
MPSI  Mapaga            66.75 285  P      P      01 57 54.1  -1.8
      comp=Z,21nm,0.9s
JAGI  Jajag, Banyuwa    67.11 274  P      P      01 57 56.9  -1.3
      comp=Z,32nm,1.0s
JAGI  Jajag, Banyuwa    67.11 274         P      01 57 55.4  -2.9
JAGI                               IAmb   IAmb   01 57 57.2
      comp=Z,53nm,1.2s
JAGI  Jajag, Banyuwa    67.11 274  P      P      01 57 58.3 +0.1
ABJI  Asem Bagus        67.37 274  P      P      01 58 06.4 +6.5
GMJI  Gumukmas          67.82 273  P      P      01 58 00.6  -2.1
      comp=Z,33nm,0.7s
BLJI  Banyuglugur       67.95 274  P      P      01 58 09.6 +6.1
KMMI  Kalianget         67.97 275  P      P      01 58 02.9  -0.7
      comp=Z,43nm,1.1s
KBKI  Kotabaru          67.98 279  P      P      01 58 02.4  -1.3
      comp=Z,23nm,0.9s
MYLDM Lahad Datu        70.60 288  P      P      01 58 19.6  -0.3
MYLDM                              IAmb   IAmb   01 59 01.3
      comp=Z,30nm,1.0s
MAW   Mawson            72.52 200  P      P      01 58 31.7 +1.2
      comp=Z,25nm,1.0s,baz=133,slow=9.6,SNR=20
MAW                                LR     LR     02 29 07.3
      comp=Z,751nm,20.8s,baz=106,slow=35
MAW   Mawson            72.52 200  P      P      01 58 32.2 +1.6
      baz=73,SNR=12
MAW   Mawson            72.52 200  P      P      01 58 30.9 +0.3
MAW                                pmax   pmax
      comp=Z,18nm,1.5s
MAW   Mawson            72.52 200  P      P      01 58 30.9 +0.3
KKM   Kota Kinabalu     72.96 288  P      P      01 58 31.9  -2.3
KKM                                IAmb   IAmb   01 58 43.8
      comp=Z,36nm,0.8s
KKM   Kota Kinabalu     72.96 288  P      P      01 58 33.1  -1.1
STKI  Sintang           73.72 280  P      P      01 58 38.3  -0.3
      comp=Z,12µmcomp=Z,30nm,0.5s
SBUM  Sibu              74.34 282  P      P      01 58 41.0  -1.3
KSM   Kuching           75.45 280  P      P      01 58 46.6  -2.0
KSM                                IAmb   IAmb   01 58 48.5
      comp=Z,46nm,1.2s
KSM   Kuching           75.45 280  P      P      01 58 48.2  -0.4
      comp=Z,27nm,0.8s
KASI  Kota Agung        76.90 271  P      P      01 58 56.5  -0.4
      comp=Z,32nm,1.0s
KLSI                    77.11 272  P      P      01 58 58.0  -0.1
      comp=Z,14nm,1.3s
SYO   Syowa Base        77.27 193⇑iP     P      01 58 59.2 +1.2
SYO   Syowa Base        77.27 193⇓epP    pP     01 59 08.6 +1.6
MDSI  Maura Dua         77.69 272  P      P      01 58 58.9  -2.4
      comp=Z,821nmcomp=Z,27nm,1.2s
INU   Inuyama           78.12 323  P      P      01 59 00.3  -2.8
INU   Inuyama           78.12 323  P      P      01 59 02.9  -0.2
JGF   Kuroka            78.14 324  P      P      01 59 02.2  -1.1
JGF                                IAmb   IAmb   01 59 08.1
      comp=Z,19nm,0.7s
SNAA  Sanae             78.20 178  P      P      01 59 04.7 +1.4
SNAA  Sanae             78.20 178  P      P      01 59 04.1 +0.8
SNAA                               pmax   pmax
      comp=Z,27nm,0.9s
SNAA  Sanae             78.20 178  P      P      01 59 04.1 +0.8
SNAA                               IAmb   IAmb   01 59 15.7
      comp=Z,27nm,0.9s
VNA3  Neumayer Olymp    78.34 176  P      P      01 59 05.4 +1.4
VNA3  Neumayer Olymp    78.34 176  PcP    PcP    01 59 13.0  -0.2
MJAR  Matsushiro Arr    78.45 325  P      P      01 59 02.8  -2.1
      comp=Z,16nm,1.1s,baz=158,slow=5.3,SNR=11
MJAR                               LR     LR     02 28 46.6
      comp=Z,139nm,21.9s,baz=110,slow=32
MJAR  Matsushiro Arr    78.45 325  P      P      01 59 03.2  -1.8
MJAR                               pmax   pmax
      comp=Z,14nm,1.0s
MJAR  Matsushiro Arr    78.45 325  P      P      01 59 03.2  -1.8
MAJO  Matsushiro        78.45 325  P      P      01 59 03.6  -1.4
MAJO                               pmax   pmax
      comp=Z,21nm,0.9s
MAJO  Matsushiro        78.45 325  P      P      01 59 03.6  -1.4
MAJO  Matsushiro        78.45 325  P      P      01 59 05.1 +0.1
      comp=Z,32nm,0.9s
VNA2  Neumayer--Watz    78.78 177  P      P      01 59 08.0 +1.7
      baz=170,slow=5.2
VNA2  Neumayer--Watz    78.78 177  PcP    PcP    01 59 15.8 +0.7
JWT   Wachi             78.91 322  P      P      01 59 07.0  -0.5
JWT                                IAmb   IAmb   01 59 12.5
      comp=Z,28nm,0.7s
NVL   N'lazarevskaya    78.96 183 eP      P      01 59 21.6  +14
NVL                                pmax   pmax
      comp=Z,50nm,1.3s
VNA1  Neumayer--Stat    79.00 176  P      P      01 59 09.3 +1.7
VNA1  Neumayer--Stat    79.00 176  PcP    PcP    01 59 17.2 +1.2
JNU   Nakatsue          79.81 318  P      P      01 59 11.2  -1.3
JHS   Saijyo            79.92 321  P      P      01 59 12.7  -0.3
JHS                                IAmb   IAmb   01 59 27.0
      comp=Z,35nm,0.9s
MASI  Maura Aman, Be    80.03 272  P      P      01 59 10.3  -3.9
LL02  Futaleuf          80.08 134  P      P      01 59 16.1 +2.2
H03S2 Juan Fernandez    80.13 123  T      T      03 28 31.6
      baz=238
H03S1 Juan Fernandez    80.14 123  T      T      03 28 34.0
      baz=238
H03S3 Juan Fernandez    80.14 123  T      T      03 28 33.5
      baz=238
H03N3 Juan Fernandez    80.32 123  T      T      03 28 41.6
      baz=242,slow=73,SNR=35
H03N2 Juan Fernandez    80.32 123  T      T      03 28 37.6
      baz=242,slow=73,SNR=48
H03N1 Juan Fernandez    80.33 123  T      T      03 28 51.5
      baz=242,slow=73,SNR=147
YUK   Yuzh-Kuril'sk     81.25 334 eP      P      01 59 20.1 +0.2
YUK                               e              01 59 26.4
YUK                               e              02 02 25.0
YUK                               ePPP    PPP    02 04 15.1
YUK                               eS      S      02 09 30.1 +2.3
YUK                               eSS     SS     02 14 45.9 +1.3
YUK                                pmax   pmax
      comp=Z,502nm,1.8s
YUK                                pmax   pmax
      comp=Z,142nm,0.7s
YUK                                pmax   pmax
      comp=N,148nm,0.8s
YUK                                pmax   pmax
      comp=E,173nm,0.8s
YUK                                MLR    MLR
      comp=Z,247nm,14.0s
YUK                                MLR    MLR
      comp=E,182nm,15.0s
YUK                                MLR    MLR
      comp=N,1µm,16.0s
KIWB  Kanaga Island     81.84   0  P      P      01 59 23.2 +0.4
ADK   Adak              81.87   1  P      P      01 59 22.7  -0.3
ADK                                pmax   pmax
      comp=Z,350nm,1.3s
ADK   Adak              81.87   1  P      P      01 59 22.6  -0.3
ADK   Adak              81.87   1  P      P      01 59 23.7 +0.7
PLCA  Paso Flores       82.22 133  P      P      01 59 27.8 +2.2
      comp=Z,8.1nm,1.1s,baz=260,slow=8.6,SNR=4.7
PLCA                               LR     LR     02 27 25.0
      comp=Z,766nm,21.8s,baz=250,slow=29
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PLCA  Paso Flores       82.22 133  P      P      01 59 27.0 +1.4
ATKA  Atka Island       82.24   2  P      P      01 59 25.5 +0.6
LC01  Cunco             82.37 131  P      P      01 59 28.5 +2.2
NIKH  Nikolski High     83.30   5  P      P      01 59 32.4 +2.0
      baz=188
TJN   Taejon            84.15 318 iP      P      01 59 33.2  -2.0
TJN   Taejon            84.15 318  P      P      01 59 35.6 +0.4
MNSI  Mandailing Nat    84.30 274  P      P      01 59 36.6 +0.1
      comp=Z,6µmcomp=Z,18nm,0.9s
UNV   Unalaska Valle    84.37   7  P      P      01 59 38.1 +2.2
      baz=190
CIS   Catalina Islan    84.47  46  P      P      01 59 38.7 +1.7
      baz=228
KSRS  Korea Array       84.59 319  P      P      01 59 37.7 +0.3
      comp=Z,5.9nm,0.9s,baz=141,slow=5.9,SNR=16
KSRS                               LR     LR     02 34 51.5
      comp=Z,183nm,19.2s,baz=129,slow=34
KSAR  Wonju Array Be    84.60 319  P      P      01 59 37.2  -0.3
KSAR  Wonju Array Be    84.60 319  P      P      01 59 37.2  -0.3
PKM   Mcpherson Peak    84.61  44  P      P      01 59 39.5 +1.6
      baz=227
YSS   Yuzh-Sakhalins    84.89 334 eP      P      01 59 39.7 +1.1
YSS                               eS      S      02 10 09.1 +4.5
YSS                                pmax   pmax
      comp=Z,70nm,1.2s
YSS                                pmax   pmax
      comp=Z,300nm,3.5s
YSS                                MLR    MLR
      comp=Z,1µm,21.0s
YSS   Yuzh-Sakhalins    84.89 334  P      P      01 59 39.4 +0.8
YSS   Yuzh-Sakhalins    84.89 334  P      P      01 59 40.5 +1.9
      comp=Z,91nm,1.1s
IPM   Ipoh              84.92 278  P      P      01 59 38.4  -1.3
PAGB  Antelope Grade    84.92  43  P      P      01 59 39.3 +0.1
PMPB  Monarch Peak      84.93  43  P      P      01 59 41.1 +1.9
OSI   Osito Audit: C    85.09  45  P      P      01 59 42.2 +2.2
      baz=228
MWC   Mount Wilson      85.24  46  IAmb   IAmb   01 59 44.6
      comp=Z,38nm,1.4s
MURC  Murrieta          85.37  47  P      P      01 59 43.8 +2.3
      baz=229,SNR=7.7
ARVC  Arvin             85.37  45  P      P      01 59 43.6 +2.3
      baz=228
MONP2 Monument Peak     85.39  48  P      P      01 59 43.8 +1.9
      baz=230,SNR=5.9
RMX   La Rumorosa       85.43  48  IAmb   IAmb   01 59 45.8
      comp=Z,33nm,1.4s
IKP   In-Ko-Pah, Jac    85.44  48  P      P      01 59 44.5 +2.6
      baz=230
BFSC  Mount Baldy Ra    85.50  46  P      P      01 59 44.2 +2.0
      baz=229
PET   Petropavlovsk     85.58 346 eP      P      01 59 41.2  -0.7
PET                               eS      S      02 10 10.2  -0.9
PET                                pmax   pmax
      comp=Z,71nm,1.2s
PET   Petropavlovsk     85.58 346  P      P      01 59 42.9 +1.0
      comp=Z,239nm,1.5s
KULM  Kulim             85.65 279  P      P      01 59 41.5  -1.8
KULM                               IAmb   IAmb   01 59 45.9
      comp=Z,35nm,1.4s
VES   Vestal, Richgr    85.69  44  P      P      01 59 45.0 +2.0
      baz=228,SNR=7.9
EDW2  Edwards Air Fo    85.72  45  P      P      01 59 45.5 +2.3
      baz=228,SNR=12
SWSC  Sam W. Stewart    85.83  48  P      P      01 59 45.6 +1.9
      baz=230,SNR=6.4
TPFO  Pinon Flats       85.84  47  P      P      01 59 45.9 +2.0
      baz=229,SNR=10
PFO   Pinyon Flats O    85.84  47  P      P      01 59 45.4 +1.5
PFO                                pmax   pmax
      comp=Z,49nm,1.6s
PFO   Pinyon Flats O    85.84  47  P      P      01 59 45.4 +1.5
PFO                                IAmb   IAmb   01 59 47.9
      comp=Z,49nm,1.6s
PFO   Pinyon Flats O    85.84  47  P      P      01 59 46.0 +2.1
      baz=229,SNR=9.1
PEA0B Petropavlovsk-    85.86 345ceP      P      01 59 43.5 +0.1
PETK  Petropavlovsk-    85.86 345  P      P      01 59 43.3  -0.1
      comp=Z,48nm,0.9s,baz=152,slow=6.7,SNR=34
PETK                               LR     LR     02 36 33.4
      comp=Z,354nm,18.9s,baz=164,slow=35
ISA   Isabella, Lake    85.94  44  IAmb   IAmb   01 59 56.6
      comp=Z,37nm,1.1s
ISA   Isabella, Lake    85.94  44  P      P      01 59 46.8 +2.5
      baz=228,SNR=22
BBRC  Big Bear Solar    85.97  46  P      P      01 59 46.9 +2.2
      baz=229
GSI   Gunungsitoli      86.28 274  P      P      01 59 47.3 +0.8
      comp=Z,2µmcomp=Z,57nm,0.8s
GSI   Gunungsitoli      86.28 274  P      P      01 59 47.3 +0.8
LRMC  Laurel Mtn Rad    86.30  45  P      P      01 59 48.4 +2.2
      baz=229,SNR=23
BELC  Belle Mtn. Jos    86.38  47  P      P      01 59 49.3 +2.7
      baz=230,SNR=13
CMB   Columbia Colle    86.42  42  P      P      01 59 47.5 +0.9
CMB                                pmax   pmax
      comp=Z,34nm,1.4s
CMB   Columbia Colle    86.42  42  P      P      01 59 47.5 +0.9
CMB                                IAmb   IAmb   01 59 49.8
      comp=Z,34nm,1.4s
BC3   Big Chuckawall    86.50  48  P      P      01 59 49.9 +2.7
      baz=230,SNR=15
GLA   Glamis            86.52  48  P      P      01 59 48.8 +1.6
GLA                                pmax   pmax
      comp=Z,71nm,1.6s
GLA   Glamis            86.52  48  P      P      01 59 48.8 +1.6
GLA   Glamis            86.52  48  P      P      01 59 50.1 +2.9
      baz=230,SNR=9.1
NJ2   Nanjing           86.54 310 eP      P      01 59 49.0 +1.8
NJ2                                pmax   pmax
      comp=Z,6.0nm,0.5s
O02D  Mt. Diablo Mer    86.57  39  P      P      01 59 49.7 +2.3
      baz=225
HSIG                    86.62  54  IAmb   IAmb   01 59 51.1
      comp=Z,37nm,1.4s
CWC   Cottonwood Cre    86.70  44  P      P      01 59 50.3 +2.2
      baz=228
HEC   Hector,Ludlow     86.71  46  P      P      01 59 50.2 +2.1
      baz=229,SNR=13
GSC   Goldstone, Bar    86.72  46  IAmb   IAmb   01 59 52.0
      comp=Z,48nm,1.4s
GSC   Goldstone, Bar    86.72  46  P      P      01 59 50.5 +2.3
      baz=229,SNR=18
MPMC  Manual Prospec    86.80  45  P      P      01 59 51.1 +2.4
      baz=229,SNR=18
WDC   Whiskeytown Da    86.99  39  P      P      01 59 49.7 +0.5
WDC                                pmax   pmax
      comp=Z,49nm,1.5s
WDC   Whiskeytown Da    86.99  39  P      P      01 59 49.6 +0.5
WDC                                IAmb   IAmb   01 59 52.7
      comp=Z,49nm,1.4s
TIN   Tinemaha, Big     87.02  44  P      P      01 59 51.8 +2.2
      baz=228
IRM   Iron Mountain     87.02  47  P      P      01 59 52.3 +2.7
      baz=230,SNR=23
MLAC  Mammoth, Mammo87.05  43  P      P      01 59 52.2 +2.3
      baz=228
GMRC  Granite Mounta    87.10  47  P      P      01 59 52.6 +2.5
      baz=230,SNR=8.4
QSM   Queen of Sheba    87.12  45  IAmb   IAmb   01 59 53.6
      comp=Z,51nm,1.5s
214A  Organ Pipe Nat    87.15  50  P      P      01 59 52.5 +2.2
      baz=232
N02D  Trinity Center    87.18  38  P      P      01 59 52.2 +2.0
      baz=225
O03E  Paynes Creek      87.19  39  P      P      01 59 51.8 +1.5
      baz=226
USA0B Ussuriysk Arra    87.36 326  IAmb   IAmb   02 00 05.6
      comp=Z,21nm,1.0s
USRK  Ussuriysk Ar.     87.36 326  P      P      01 59 50.6  -0.3
      comp=Z,11nm,0.9s,baz=143,slow=4.1,SNR=11
USRK                               LR     LR     02 32 53.8
      comp=Z,311nm,21.9s,baz=122,slow=32
TUQ   Turquoise Moun    87.36  46  P      P      01 59 53.5 +2.1
      baz=230,SNR=8.2
GWY   Greenwater Val    87.39  45  IAmb   IAmb   02 00 10.4
      comp=Z,20nm,1.0s
SPIA  Saint Paul Isl    87.39   4  P      P      01 59 53.1 +2.4
      baz=186
M02C  Callahan          87.39  38  P      P      01 59 53.3 +2.0
      baz=225
SHOC  Shoshone, Teco    87.44  45  P      P      01 59 53.8 +2.2
      baz=229
FURC  Furnace Creek,    87.45  45  P      P      01 59 53.8 +2.3
      baz=229
LCH   Last Change Ra    87.48  44  IAmb   IAmb   01 59 55.2
      comp=Z,31nm,1.5s
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L02E	Cave Junction	87.55	37	P	P	01 59 54.5	+2.6
	baz=224						
TPTI		87.60	275	P	P	01 59 53.1	+0.2
	comp=Z,9.1nm,0.8s						
LHV	Little Huntoon	87.66	42	IAmb	IAmb	02 00 16.8	
	comp=Z,19nm,1.0s						
VCNR	Virginia City	87.70	41	P	P	01 59 53.1	+0.1
NEE2	Needles Airpor	87.75	47	P	P	01 59 55.4	+2.4
	baz=230						
PDMCI	Parker Dam,Lak	87.76	48	P	P	01 59 55.1	+2.1
	baz=231						
NVAR	Mina Array Bea	87.89	42	P	P	01 59 55.5	+1.6
	comp=Z,12nm,1.1s,baz=220,slow=7.2,SNR=38						
NVAR				PKKPbc	PKKPbc	02 17 41.6	+0.5
	comp=Z,0.6nm,0.7s,baz=115,slow=2.1,SNR=4.2						
NVAR				PKPPKP	P'P'df	02 25 48.3	+3.5
	comp=Z,0.3nm,0.4s,baz=72,slow=2.1,SNR=5.7						
NVAR				LR	LR	02 36 31.7	
	comp=Z,588nm,18.1s,baz=236,slow=34						
K02D	Willamette Mer	87.90	37	P	P	01 59 56.1	+2.4
	baz=224						
RYN	Ryan	87.90	42	IAmb	IAmb	01 59 57.2	
	comp=Z,24nm,1.4s						
NV11	Mina Array Sit	87.98	43	P	P	01 59 54.9	+0.6
NV11				IAmb	IAmb	02 00 11.7	
	comp=Z,22nm,1.4s						
TYV	Tymovskoe	88.18	336	eP	P	01 59 53.9	-0.7
TYV				pmax	pmax		
	comp=Z,400nm,4.2s						
TYV				pmax	pmax		
	comp=Z,53nm,1.1s						
Y14A	Wickenburg	88.26	49	IAmb	IAmb	01 59 59.6	
	comp=Z,60nm,1.7s						
L04D	Klamath Falls	88.27	38	P	P	01 59 57.6	+2.1
	baz=225						
TPH	Tonopah	88.29	43	P	P	01 59 56.6	+0.8
TPH				pmax	pmax		
	comp=Z,78nm,0.9s						
TPH	Tonopah	88.29	43	P	P	01 59 56.6	+0.8
W13A	Hualapai Mount	88.42	47	IAmb	IAmb	02 00 00.6	
	comp=Z,38nm,1.5s						
KVN	Kaiserville	88.43	42	IAmb	IAmb	01 59 59.5	
	comp=Z,33nm,1.5s						
SHPR	Sheep Range	88.52	46	IAmb	IAmb	02 00 01.0	
	comp=Z,30nm,1.4s						
TUC	Tucson	88.73	51	P	P	02 00 00.2	+2.3
TUC				pmax	pmax		
	comp=Z,57nm,1.6s						
TUC	Tucson	88.73	51	P	P	02 00 00.2	+2.3
TUC	Tucson	88.73	51	P	P	02 00 00.3	+2.5
	baz=233						
I03D	Drain, OR	88.78	36	P	P	02 00 00.2	+2.5
	baz=225						
MDJ	Mudanjiang	88.83	325	P	P	01 59 58.2	+0.3
MDJ				sP	pP	02 00 04.6	-2.5
MDJ				pmax	pmax		
	comp=Z,11nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,240nm,3.6s						
MDJ				LR	LR		
	comp=Z,440nm,23.7s						
MDJ				LR	LR		
	comp=Z,240nm,24.7s						
MDJ				LR	LR		
	comp=Z,490nm,24.9s						
MDJ	Mudanjiang	88.83	325	P	P	01 59 57.7	-0.2
PRN	Pahroc Range	89.17	45	IAmb	IAmb	02 00 04.1	
	comp=Z,40nm,1.3s						
I04A	Tendick Farm,	89.32	36	P	P	02 00 02.7	+2.4
	baz=225						
R11A	Troy Canyon, C	89.45	44	P	P	02 00 03.0	+1.8
	baz=230						
X16A	Lo Mia Camp, P	89.57	49	IAmb	IAmb	02 00 06.2	
	comp=Z,32nm,1.2s						
J05D	Fort Rock, OR	89.58	37	P	P	02 00 03.6	+2.0
	baz=226						
H04D	Lebanon	89.67	36	P	P	02 00 04.0	+2.2
	baz=225						
BMN	Battle Mountai	89.85	42	P	P	02 00 04.1	+1.1
BMN				pmax	pmax		
	comp=Z,26nm,1.3s						
BMN	Battle Mountai	89.85	42	P	P	02 00 04.1	+1.1
BMN				IAmb	IAmb	02 00 06.1	
	comp=Z,26nm,1.3s						
I05D	Terrebonne, OR	90.25	37	P	P	02 00 07.1	+2.4
	baz=226						
U15A	North Rim	90.26	47	IAmb	IAmb	02 00 09.4	
	comp=Z,46nm,1.5s						
WUAZ	Wupatki	90.29	48	P	P	02 00 06.9	+1.7
WUAZ				IAmb	IAmb	02 00 09.3	
	comp=Z,35nm,1.2s						
WUAZ	Wupatki	90.29	48	P	P	02 00 07.5	+2.3
	baz=232						
CCUT	Cedar City	90.29	46	IAmb	IAmb	02 00 09.4	
	comp=Z,23nm,1.4s						
KNB	Kanab	90.30	46	IAmb	IAmb	02 00 30.1	
	comp=Z,33nm,1.3s						
CN2	Changchun	90.36	323	eP	P	02 00 04.0	-1.1
CN2				epP	PcP	02 00 08.8	+2.6
CN2				eS	S	02 10 56.8	-0.4
CN2				eSS	SS	02 17 01.7	+3.1
CN2				pmax	pmax		
	comp=Z,40nm,1.2s						
CN2				LR	LR		
	comp=Z,280nm,17.0s						
CN2				LR	LR		
	comp=Z,310nm,17.0s						
CN2				LR	LR		
	comp=Z,460nm,19.0s						
WVOR	Wild Horse Val	90.39	39	IAmb	IAmb	02 00 32.3	
	comp=Z,34nm,1.6s						
GRNR	Gornyy	90.43	333	⇑iP	P	02 00 06.3	+1.0
GRNR				pmax	pmax		
	comp=Z,20nm,1.2s						
SZCU	Shurtz Canyon	90.49	46	IAmb	IAmb	02 00 10.2	
	comp=Z,29nm,1.5s						
X18A	Snowflake	90.62	50	IAmb	IAmb	02 00 11.0	
	comp=Z,38nm,1.4s						
PKCU	Pink Cliffs	90.88	46	IAmb	IAmb	02 00 20.6	
	comp=Z,26nm,1.1s						
121A	Cookes Peak, D	90.89	52	P	P	02 00 09.8	+1.6
121A				IAmb	IAmb	02 00 33.5	
	comp=Z,19nm,1.1s						
121A	Cookes Peak, D	90.89	52	P	P	02 00 10.5	+2.4
	baz=234						
G05D	Wamic, OR	90.89	36	P	P	02 00 10.6	+3.0
	baz=226						
I07A	Izee	91.04	38	IAmb	IAmb	02 00 11.0	
	comp=Z,19nm,1.2s						
J08A	Circle Bar Ran	91.10	39	P	P	02 00 09.7	+1.0
J08A				IAmb	IAmb	02 00 11.8	
	comp=Z,20nm,1.1s						
W18A	Petrified Fore	91.11	49	P	P	02 00 11.1	+2.0
	baz=233						
E04D	Cinebar	91.19	34	P	P	02 00 11.4	+2.5
	baz=225						
KLR	Kul'dur	91.21	329	ceP	P	02 00 08.8	-0.1
KLR				pmax	pmax		
	comp=Z,31nm,1.4s						
KLR				MLR	MLR		
	comp=Z,661nm,20.0s						
MTPU	Mount Pierson	91.33	46	IAmb	IAmb	02 00 29.1	
	comp=Z,24nm,1.3s						
D04E	Lakebay	91.54	34	P	P	02 00 12.9	+2.5
	baz=225						
D03D	Eldon	91.64	33	P	P	02 00 13.2	+2.2
	baz=225						
O18K	Koktuh Hills	91.72	11	P	P	02 00 13.8	+2.7
	baz=199						
GYA	Guiyang	91.91	300	⇓iP	P	02 00 13.0	+0.1
GYA				pmax	pmax		
	comp=Z,16nm,1.0s						
TXAR	Lajitas Array	91.98	57	P	P	02 00 14.5	+1.3
	comp=Z,3.3nm,1.1s,baz=202,slow=6.3,SNR=14						
TXAR				LR	LR	02 37 30.0	
	comp=Z,325nm,18.0s,baz=0.0,slow=33						
MNTX	Cornudas Mount	92.08	54	P	P	02 00 15.8	+2.3
	baz=236						
G08A	Pilot Rock	92.14	37	IAmb	IAmb	02 00 16.5	
	comp=Z,24nm,1.2s						
O19K	Port Alsworth	92.19	11	P	P	02 00 16.1	+3.0
	baz=200						
DUG	Dugway, Tooele	92.28	44	P	P	02 00 14.6	+0.3
DUG				pmax	pmax		
	comp=Z,14nm,1.5s						
DUG	Dugway, Tooele	92.28	44	P	P	02 00 14.6	+0.3
DUG	Dugway, Tooele	92.28	44	P	P	02 00 16.6	+2.3
	baz=232						
BRSE	Bradley Lake S	92.43	13	P	P	02 00 16.2	+1.9
	baz=203						
Q16A	Castle Valley	92.49	46	IAmb	IAmb	02 00 19.3	
	comp=Z,18nm,1.5s						
MFID	Camas Ranch	92.58	40	IAmb	IAmb	02 00 39.1	
	comp=Z,14nm,1.0s						
TMUT	Trail Mountain	92.70	45	P	P	02 00 16.8	+0.3
TMUT				IAmb	IAmb	02 00 28.6	
	comp=Z,16nm,1.0s						
BMO	Blue Mountains	92.72	38	IAmb	IAmb	02 00 44.0	
	comp=Z,20nm,1.8s						
N19K	Bonanza Creek	92.75	11	IAmb	IAmb	02 02 23.8	
	comp=Z,36nm,1.6s						
N19K	Bonanza Creek	92.75	11	P	P	02 00 18.7	+2.8
	baz=200						
P17A	Butcher Ranch,	93.10	45	IAmb	IAmb	02 00 21.5	
	comp=Z,18nm,1.5s						
MVCO	Mesa Verde	93.16	48	P	P	02 00 20.3	+1.8
	baz=234						
SPUT	South Promonto	93.19	43	IAmb	IAmb	02 00 42.4	
	comp=Z,18nm,1.1s						
ANMO	Albuquerque	93.19	51	ceP	P	02 00 20.7	+2.0
ANMO				pmax	pmax		
	comp=Z,12nm,1.5s						
ANMO	Albuquerque	93.19	51	P	P	02 00 19.5	+0.8
ANMO	Albuquerque	93.19	51	P	P	02 00 20.5	+1.8
	baz=235						
HVU	Hansel Valley	93.29	43	IAmb	IAmb	02 00 42.7	
	comp=Z,15nm,0.9s						
MA2	Magadan	93.35	344	ceP	P	02 00 16.8	-1.8
MA2				pmax	pmax		
	comp=Z,45nm,1.5s						
D08A	Wollman Farm,	93.35	36	IAmb	IAmb	02 00 49.2	
	comp=Z,20nm,1.3s						
HLID	Hailey	93.47	40	P	P	02 00 19.5	-0.3
HLID	Hailey	93.47	40	P	P	02 00 21.4	+1.7
	baz=231						
F10A	Beach Ranch, E	93.50	37	IAmb	IAmb	02 00 42.1	
	comp=Z,12nm,0.9s						
CRAG	Craig	93.51	24	P	P	02 00 23.2	+3.9
	baz=217						
SPCR	Spurr Chakacha	93.51	12	P	P	02 00 22.5	+3.2
	baz=202						
PLID	Pearl Lake	93.58	39	P	P	02 00 20.3	+0.1
PLID				IAmb	IAmb	02 00 22.8	
	comp=Z,23nm,1.4s						
M19K	Big River Lodg	93.80	11	P	P	02 00 23.7	+3.1
	baz=200						
CMAR	Chiang Mai Arr	93.80	289	P	P	02 00 21.4	-0.2
	comp=Z,3.2nm,0.9s,baz=146,slow=3.4,SNR=13						
CMAR				PP	PP	02 04 08.9	+1.3
	comp=Z,1.2nm,0.4s,baz=138,slow=6.4,SNR=5.7						
CMAR				LR	LR	02 45 09.2	
	comp=Z,93nm,19.2s,baz=135,slow=37						
CMAR	Chiang Mai Arr	93.80	289	i P	P	02 00 25.1	+3.5
CMAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RC01	Rabbit Creek A	93.87	13	P	P	02 00 23.0	+2.1
	baz=204						
L19K	White Mountain	93.98	10	IAmb	IAmb	02 00 30.4	
	comp=Z,20nm,1.0s						
L19K	White Mountain	93.98	10	P	P	02 00 23.8	+2.3
	baz=200						
KMI	Kunming	94.19	297	⇑P	P	02 00 25.9	+2.3
KMI				sP	pP	02 00 31.6	-1.2
KMI				PP	PP	02 04 14.7	+3.8
KMI				S	S	02 11 37.6	+4.8
KMI				SS	SS	02 17 57.8	+3.1
KMI				pmax	pmax		
	comp=Z,14nm,0.8s						
KMI				LR	LR		
	comp=Z,290nm,23.1s						
KMI				LR	LR		
	comp=Z,270nm,23.1s						
KMI				LR	LR		
	comp=Z,340nm,20.5s						
KNK	Knik Glacier	94.42	14	P	P	02 00 26.3	+2.8
	baz=205						
L20K	Farewell, AK	94.42	11	P	P	02 00 25.5	+2.1
	baz=200						
XAN	Xi'an	94.43	307	P	P	02 00 24.4	+0.2
XAN				pP	pP	02 00 29.1	-4.4
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PMR	Palmer	94.45	13	P	P	02 00 26.8	+3.3
	baz=204						
TTA	Tatalina	94.52	10	P	P	02 00 26.9	+2.9
	baz=199						
S22A	4UR Ranch, Cre	94.55	49	P	P	02 00 26.9	+1.9
	baz=235						
GHO	Glory Hole Cre	94.65	13	IAmb	IAmb	02 00 31.6	
	comp=Z,21nm,0.9s						
MESA	MESA	94.80	17	P	P	02 00 28.0	+2.6
	baz=210						
AHID	Auburn Hatcher	94.88	43	IAmb	IAmb	02 00 41.0	
	comp=Z,12nm,1.1s						
CRQE	Cirque	95.02	16	P	P	02 00 29.0	+2.7
	baz=210						
KLU	Klutina	95.02	15	P	P	02 00 29.2	+2.9
	baz=207						
SCM	Sheep Creek Mo	95.03	14	P	P	02 00 29.3	+3.0
	baz=206						
O20A	White River Ci	95.04	46	P	P	02 00 28.5	+1.4
	baz=234						
NEW	Newport	95.06	36	P	P	02 00 28.5	+1.8
	baz=229						
ANM	Nome	95.06	5	P	P	02 00 29.0	+2.7
	baz=191						
MSTX	Muleshoe	95.17	54	P	P	02 00 29.3	+1.6
	baz=237						
REDW	Red Top Meadow	95.38	42	IAmb	IAmb	02 00 39.3	
	comp=Z,17nm,1.3s						
TPAW	Teton Pass	95.40	42	P	P	02 00 29.7	+1.0
SDCO	Great Sand Dun	95.42	49	P	P	02 00 30.7	+1.7
	baz=236						
N25K	Chitina, Valde	95.42	15	P	P	02 00 30.8	+2.7
	baz=208						
FXWY	Fox Creek	95.45	42	IAmb	IAmb	02 01 05.3	
	comp=Z,22nm,1.8s						
MCARA	McCarthy VSAT	95.59	16	P	P	02 00 31.8	+3.0
	baz=210						
WAT6	Susitna Watana	95.62	13	P	P	02 00 30.6	+1.5
	baz=206						
CTG	Chitna Glacier	95.63	17	P	P	02 00 30.9	+1.7
	baz=211						
WAT1	Susitna Watana	95.69	13	P	P	02 00 32.5	+3.2
	baz=205						
BW06	Boulder Array	95.78	43	P	P	02 00 31.8	+1.3
	baz=234						
PDAR	Pinedale Array	95.78	43	P	P	02 00 31.6	+1.2
	comp=Z,1.4nm,0.9s,baz=207,slow=3.0,SNR=7.7						
PDAR				PKKP	PKKPbc	02 17 20.8	-0.2
	comp=Z,0.9nm,0.6s,baz=79,slow=3.7,SNR=8.0						
PDAR				LR	LR	02 41 17.0	
	comp=Z,379nm,18.1s,baz=256,slow=34						
TNA	Tin City	95.87	4	P	P	02 00 32.1	+2.2
	baz=188						
FLWY	Flagg Ranch	95.90	42	IAmb	IAmb	02 00 48.7	
	comp=Z,27nm,1.4s						
TRF	Thorofare Moun	95.94	12	P	P	02 00 30.5	-0.1
TRF	Thorofare Moun	95.94	12	P	P	02 00 32.4	+1.8
	baz=204						
QLMT	Earthquake Lak	95.94	41	P	P	02 00 32.0	+0.9
J20K	Nowinta River	95.98	10	P	P	02 00 33.5	+3.0
	baz=200						
CHUM	Lake Minchumin	95.99	11	P	P	02 00 34.0	+3.4
	baz=202						
HARP	HAARP	96.00	15	P	P	02 00 33.7	+3.0
	baz=208						
Q24A	Divide	96.33	48	P	P	02 00 34.9	+1.7
	baz=236						
ZEA	Zeya	96.41	331	eP	P	02 00 32.8	+0.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PAX	Paxson	96.44	14	P	P	02 00 34.7	+2.0
	baz=208						
MCK	McKinley	96.44	12	IAmb	IAmb	02 00 39.3	
	comp=Z,12nm,1.0s						
MCK	McKinley	96.44	12	P	P	02 00 35.3	+2.7
	baz=205						
M26K	Nabesna, AK	96.48	15	P	P	02 00 35.6	+2.7
	baz=210						
ISCO	Idaho Springs	96.50	47	P	P	02 00 35.5	+1.6
	baz=236						
HHC	Hu-ho-hao-te	96.51	314	eP	P	02 00 35.0	+1.3
HHC				PP	PP	02 04 24.9	-3.6
HHC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,120nm,6.9s						
HHC				LR	LR		
	comp=Z,220nm,19.0s						
HHC				LR	LR		
	comp=Z,350nm,21.2s						
HHC				LR	LR		
	comp=Z,680nm,21.1s						
HYT	Haines Junctio	96.52	18	P	P	02 00 35.6	+2.4
	baz=214						
M27K	Edge Creek, AK	96.70	16	IAmb	IAmb	02 00 44.3	
	comp=Z,25nm,1.2s						
M27K	Edge Creek, AK	96.70	16	P	P	02 00 37.2	+3.2
	baz=211						
NEA2	Nenana	97.20	12	P	Pdif	02 00 38.8	+2.7
	baz=205						
I21K	Tanana	97.25	11	P	Pdif	02 00 39.6	+3.3
	baz=202						
RIDG	Independent Ri	97.25	14	P	Pdif	02 00 39.1	+2.6
	baz=208						
WRH	Wood River Hil	97.27	12	IAmb	IAmb	02 00 44.7	
	comp=Z,14nm,1.0s						
MLY	Manley	97.32	11	P	Pdif	02 00 39.8	+3.1
	baz=203						
L27K	Beaver Creek,	97.33	16	P	Pdif	02 00 39.0	+2.3
	baz=211						
DOT	Dot Lake	97.34	14	P	P	02 00 36.3	-0.4
DOT				IAmb	IAmb	02 00 46.0	
	comp=Z,9.1nm,1.0s						
P33M	Teslin, Yukon	97.38	21	P	Pdif	02 00 40.0	+2.9
	baz=218						
K22A	Casper	97.54	45	P	Pdif	02 00 40.1	+1.7
	baz=236						
N31M	Braeburn, Yuko	97.54	19	P	Pdif	02 00 40.0	+2.3
	baz=216						
H21K	Melozitna Rive	97.57	10	P	Pdif	02 00 40.4	+2.6
	baz=202						
SCRK	Sand Creek	97.64	14	P	Pdif	02 00 40.4	+2.1
	baz=209						
COLA	College	97.68	12	i P	P	02 00 37.3	-0.8
COLA				pmax	pmax		
	comp=Z,12nm,1.1s						
LPAZ	La Paz	97.76	114	P	Pdif	02 00 41.8	+1.1
	comp=Z,0.9nm,0.6s,baz=342,slow=3.2,SNR=2.4						
LPAZ				LR	LR	02 35 59.9	
	comp=Z,290nm,21.7s,baz=228,slow=30						
ILAR	Eielson Array	97.77	13	P	P	02 00 38.0	-0.6
	comp=Z,1.2nm,0.9s,baz=205,slow=5.4,SNR=5.5						
ILAR				PKiKP	PKiKP	02 05 12.0	-0.3
	comp=Z,0.9nm,0.9s,baz=243,slow=2.4,SNR=1.9						
ILAR				PKKPbc	PKKPbc	02 17 16.2	+0.3
	comp=Z,0.6nm,0.8s,baz=327,slow=3.0,SNR=4.2						
ILAR				LR	LR	02 44 15.2	
	comp=Z,148nm,18.2s,baz=202,slow=35						
J25K	Salcha River,	97.92	13	P	Pdif	02 00 40.8	+1.3
	baz=208						
POKR	Poker Plat Res	97.98	12	P	Pdif	02 00 41.5	+1.9
	baz=206						
J26L	Joseph Creek	98.19	14	P	Pdif	02 00 43.1	+2.4
	baz=209						
H24K	Noodor Dome	98.55	12	P	Pdif	02 00 44.8	+2.6
	baz=206						
DAWY	Dawson	98.75	16	P	Pdif	02 00 44.9	+1.8
	baz=213						
BILL	Bilibino	98.83	354	i P	P	02 00 42.1	-1.2
BILL				i		02 00 52.6	
BILL				e		02 04 43.5	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,412nm,19.0s						
COLD	Coldfoot	99.43	10	P	Pdif	02 00 48.3	+2.3
	baz=204						
CPUP	Villa Florida	99.67	128	LR	LR	02 41 47.9	
	comp=Z,374nm,18.2s,baz=241,slow=33						
RSSD	Black Hills	99.86	44	P	Pdif	02 00 50.4	+1.6
	baz=237						
YAK	Yakutsk	101.36	337	i P	Pdif	02 00 53.4	-1.2
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SONM	Songino Array	103.39	318	Pdiff	Pdif	02 01 03.6	-0.7
	comp=Z,0.2nm,0.6s,baz=132,slow=2.8,SNR=1.4						
SONM				PP	PP	02 05 15.0	-5.6
	comp=Z,1.4nm,1.0s,baz=123,slow=5.3,SNR=4.7						
SONM				PKKP	PKKPdf	02 17 10.3	+2.2
	comp=Z,0.3nm,0.6s,baz=308,slow=3.3,SNR=1.9						
YKA	Yellowknife Ar	105.20	25	PKiKP	PKiKP	02 05 26.2	+0.5
	comp=Z,0.7nm,0.8s,baz=245,slow=1.6,SNR=1.9						
WMQ	Urumqi	113.54	308	ePKP	PKiKP	02 05 42.5	+0.4
WMQ				LR	LR		
	comp=Z,310nm,19.3s						
M53A	WI Miller and	114.11	55	P	PKiKP	02 05 45.4	+2.2
	baz=250						
M54A	Oil Creek Stat	114.84	55	P	PKiKP	02 05 45.8	+1.1
	baz=251						
O56A	Blue Knob Stat	115.22	57	P	PKiKP	02 05 46.4	+0.9
	baz=251						
DGZ	Jazzator, Alta	115.59	314	i PKIKP	PKPdf	02 05 44.3	-1.7
SSPA	Standing Stone	115.83	56	P	PKiKP	02 05 47.4	+0.9
	baz=252						
ZSN	Zaisan	116.56	311	ePKP	PKPdf	02 05 46.3	-1.5
	baz=311						
ZSN	Zaisan	116.56	311	ePKIKP	PKPdf	02 05 46.3	-1.5
RES	Resolute Bay	117.06	17	PKIKP	PKPdf	02 05 47.0	-0.9
RES	Resolute Bay	117.06	17	PKPdf	PKPdf	02 05 47.0	-0.9
BOSA	Boshof	117.49	203	PKP	PKiKP	02 05 50.8	+0.3
	comp=Z,2.0nm,0.7s,baz=199,slow=6.8,SNR=2.2						
MK31	Makanchi Array	118.07	310	i PKIKP	PKPdf	02 05 49.3	-1.4
MKAR	Makanchi Array	118.07	310	PKP	PKPdf	02 05 49.7	-1.0
	comp=Z,4.4nm,0.7s,baz=101,slow=1.2,SNR=34						
MKAR				PKKPbc	PKKPbc	02 16 11.0	+0.3
	comp=Z,0.3nm,0.5s,baz=295,slow=2.5,SNR=3.7						
MKAR	Makanchi Array	118.07	310	PKPdf	PKPdf	02 05 49.2	-1.5
ZALV	Zalesovo Beam	118.28	318	PKP	PKPdf	02 05 50.0	-0.8
	comp=Z,2.5nm,0.8s,baz=236,slow=1.6,SNR=13						
ZALV	Zalesovo Beam	118.28	318	PKIKP	PKPdf	02 05 50.0	-0.8
MAKZ	Makanchi	118.28	310	PKIKP	PKPdf	02 05 49.5	-1.6
MAKZ	Makanchi	118.28	310	PKPdf	PKPdf	02 05 49.5	-1.6
PAL	Palisades	118.82	57	P	PKiKP	02 05 53.1	+0.8
	baz=254						
SHLS	Shalkode	119.04	305	ePKP	PKPdf	02 05 50.8	-2.1
	baz=306						
SHLS	Shalkode	119.04	305	ePKIKP	PKPdf	02 05 50.7	-2.1
UZB	Uzynbulak	119.35	305	ePKP	PKPdf	02 05 51.7	-1.8
	baz=305						
UZB	Uzynbulak	119.35	305	ePKIKP	PKPdf	02 05 51.6	-1.8
SATY	Saty	119.76	305	ePKP	PKPdf	02 05 52.8	-1.5
	baz=305						
SATY	Saty	119.76	305	ePKIKP	PKPdf	02 05 52.7	-1.5
NRIK	Noril'sk	119.76	336	PKP	PKPdf	02 05 52.5	-0.7
	comp=Z,1.8nm,0.5s,baz=78,slow=3.0,SNR=5.6						
NRIK	Noril'sk	119.76	336	PKPdf	PKPdf	02 05 52.9	-0.4
TDK	Taldyqorghan	120.25	307	ePKP	PKPdf	02 05 53.2	-1.7
	baz=307						
TDK	Taldyqorghan	120.25	307	ePKIKP	PKPdf	02 05 53.2	-1.7
SEM	Semipalatinsk	120.25	314	ePKP	PKPdf	02 05 53.1	-1.9
	baz=314						
SEM	Semipalatinsk	120.25	314	ePKIKP	PKPdf	02 05 53.1	-1.9
KSH	Kashi	120.59	301	PKP	PKiKP	02 05 56.4	+0.4
KSH				PP	PP	02 07 28.6	+4.6
MDOK	Medeo	120.75	305	ePKP	PKPdf	02 05 54.5	-1.6
	baz=305						
MDOK	Medeo	120.75	305	ePKIKP	PKPdf	02 05 54.5	-1.6
HRV	Adam Dziewonsk	120.92	56	P	PKiKP	02 05 57.5	+1.1
	baz=256						
NIL	Nilore	121.00	293	PKIKP	PKPdf	02 05 55.4	-1.4
NIL	Nilore	121.00	293	PKPdf	PKPdf	02 05 55.4	-1.4
LBNH	Lisbon	121.07	54	P	PKiKP	02 05 57.1	+0.4
	baz=257						
ULHL	Ulahol	121.10	304	P	PKiKP	02 05 57.1	+0.1
	SNR=13						
KURK	Kurchatov	121.33	314	PKIKP	PKPdf	02 05 55.3	-1.5
KURK	Kurchatov	121.33	314	PKPdf	PKPdf	02 05 55.3	-1.5
KURBB	Kurchatov Arra	121.37	314	PKIKP	PKPdf	02 05 54.6	-2.2
KUU	Kurty	121.42	306	ePKP	PKPdf	02 05 55.6	-1.6
	baz=306						
KUU	Kurty	121.42	306	ePKIKP	PKPdf	02 05 55.6	-1.6
TKM2	Tokmak 2	121.72	304	P	PKPdf	02 05 57.5	-0.6
	SNR=18						
TKM2	Tokmak 2	121.72	304	PKIKP	PKPdf	02 05 56.2	-1.9
KBK	Karagaybulak	122.13	304	P	PKPdf	02 05 58.6	-0.2
	SNR=12						
UCH	Uchtor	122.34	303	P	PKiKP	02 05 59.8	-0.1
	SNR=35						
CHMS	Chumysh	122.35	304	P	PKPdf	02 05 58.8	-0.3

	SNR=11						
AAK	**Ala-Archa**	**122.45**	**304**	P	**PKPdf**	**02 05 59.3**	**-0.1**
	SNR=10						
AAK	**Ala-Archa**	**122.45**	**304***c*	*i*PKIKP	**PKPdf**	**02 05 58.7**	**-0.7**
AAK				pmax	pmax		
	comp=Z,61nm,1.3s						
AAK	**Ala-Archa**	**122.45**	**304**	PKPdf	**PKPdf**	**02 05 58.9**	**-0.6**
SGDS	**Sogindy**	**122.53**	**305**	*e*PKP	**PKPdf**	**02 05 57.9**	**-1.6**
	baz=305						
USP	**Ospenovka**	**122.58**	**304**	P	**PKPdf**	**02 05 58.9**	**-0.6**
	SNR=22						
AML	**Almayashu**	**122.91**	**303**	P	**PKPdf**	**02 06 00.6**	**0.0**
	SNR=34						
EKS2	**Erkin-Say**	**122.97**	**304**	P	**PKPdf**	**02 06 00.3**	**-0.1**
	SNR=11						
BTLS	**Baital**	**123.27**	**306**	*e*PKP	**PKPdf**	**02 05 58.9**	**-1.9**
	baz=307						
BTLS	**Baital**	**123.27**	**306**	*e*PKIKP	**PKPdf**	**02 05 58.8**	**-1.9**
TULEG	**Thule**	**123.60**	**15**	*i* P	**PKPdf**	**02 05 59.9**	**-0.5**
TULEG				IAmb	IAmb	02 06 01.9	
	comp=Z,7.2nm,0.9s						
TULEG	**Thule**	**123.60**	**15**	PKPdf	**PKPdf**	**02 05 59.7**	**-0.8**
KBL	**Kabul**	**124.61**	**293**	PKIKP	**PKPdf**	**02 06 03.7**	**-0.2**
KBL	**Kabul**	**124.61**	**293**	PKPdf	**PKPdf**	**02 06 03.7**	**-0.2**
DZA	**Taraz**	**124.78**	**303**	*e*PKP	**PKPdf**	**02 06 02.2**	**-1.6**
	baz=304						
DZA	**Taraz**	**124.78**	**303**	*e*PKIKP	**PKPdf**	**02 06 02.1**	**-1.6**
BRZS	**Berezniki**	**124.97**	**312**	*e*PKP	**PKPdf**	**02 06 02.2**	**-1.7**
	baz=312						
BRZS	**Berezniki**	**124.97**	**312**	*e*PKIKP	**PKPdf**	**02 06 02.1**	**-1.7**
KKAR	**Karatay Array**	**125.41**	**304**	PKIKP	**PKPdf**	**02 06 04.1**	**-0.8**
KKAR	**Karatay Array**	**125.41**	**304**	PKPdf	**PKPdf**	**02 06 04.1**	**-0.8**
SCHQ	**Schefferville**	**125.90**	**42**	PKP	**PKiKP**	**02 06 05.8**	**-0.1**
	comp=Z,5.9nm,0.9s,baz=270,slow=5.1,SNR=3.8						
BRVK	**Borovoye**	**126.74**	**316**	PKIKP	**PKPdf**	**02 06 06.4**	**-0.7**
BRVK	**Borovoye**	**126.74**	**316**	PKPdf	**PKPdf**	**02 06 06.4**	**-0.7**
NEEM	**North Greenlan**	**127.06**	**13**	*i* P	**PKPdf**	**02 06 07.5**	**0.0**
NEEM				IAmb	IAmb	02 06 11.3	
	comp=Z,11nm,0.8s						
LSZ	**Lusaka**	**128.35**	**212**	PKP	**PKiKP**	**02 06 12.1**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=72,slow=2.4,SNR=8.1						
SPITS	**Spitsbergen Ar**	**131.67**	**356**	PKP	**PKPdf**	**02 06 16.3**	**+0.4**
	comp=Z,4.6nm,0.6s,baz=35,slow=3.5,SNR=2.3						
SVE	**Sverdlovsk**	**132.13**	**321**	*e*PKIKP	**PKPdf**	**02 06 17.5**	**+0.3**
SVE				pmax	pmax		
	comp=Z,24nm,1.4s						
DAG	**Danmarks Havn**	**132.43**	**6**	*i* P	**PKPdf**	**02 06 16.8**	**-0.5**
SUMG	**Summit**	**132.52**	**16**	PKIKP	**PKiKP**	**02 06 18.7**	**-0.5**
SUMG	**Summit**	**132.52**	**16**	*i* P	**PKiKP**	**02 06 19.0**	**-0.2**
SUMG				IAmb	IAmb	02 06 21.9	
	comp=Z,5.8nm,1.0s						
SUMG	**Summit**	**132.52**	**16**	PKPdf	**PKiKP**	**02 06 18.7**	**-0.5**
AB31	**Akbulak array**	**133.21**	**311**	*i* PKIKP	**PKPdf**	**02 06 19.1**	**-0.4**
ARU	**Arti**	**133.32**	**321**	*i* PKIKP	**PKPdf**	**02 06 19.4**	**-0.1**
ARU						02 08 43.5	
ARU				SS	SS	02 26 21.6	-7.7
ARU	**Arti**	**133.32**	**321**	PKPdf	**PKPdf**	**02 06 18.6**	**-0.9**
GEYT	**Alibeck**	**133.94**	**295**	PKP	**PKPdf**	**02 06 21.6**	**+0.3**
	comp=Z,10nm,0.9s,baz=245,slow=12,SNR=12						
GEYT				SKPbc	**SKPbc**	**02 09 47.2**	**-0.8**
	comp=Z,3.1nm,0.8s,baz=74,slow=7.2,SNR=3.2						
ICESG	**Greenland Ices**	**134.36**	**20**	*i* P	**PKPdf**	**02 06 19.5**	**-2.1**
ICESG				IAmb	IAmb	02 06 26.9	
	comp=Z,7.6nm,1.0s						
AKTO	**Aktyubinsk**	**134.39**	**312**	PKIKP	**PKPdf**	**02 06 22.1**	**+0.4**
KMBO	**Kilima Mbogo**	**134.47**	**233**	PKP	**PKiKP**	**02 06 24.1**	**-0.6**
	comp=Z,4.5nm,0.9s,baz=40,slow=3.1,SNR=9.9						
KMBO				SKPbc	**SKPbc**	**02 09 51.6**	**+0.8**
	comp=Z,1.1nm,0.4s,baz=104,slow=2.8,SNR=13						
KMBO	**Kilima Mbogo**	**134.47**	**233***c*	*i*PKIKP	**PKiKP**	**02 06 25.7**	**+1.0**
KMBO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMBO	**Kilima Mbogo**	**134.47**	**233**	PKPdf	**PKPdf**	**02 06 21.6**	**-1.7**
KIRV	**Kirov**	**137.52**	**326***c*	*i*PKIKP	**PKiKP**	**02 06 30.0**	**+0.9**
PRGR	**Permogore**	**137.98**	**331**	*e*PKIKP	**PKPdf**	**02 06 26.2**	**-1.8**
PRGR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARCES	**ARCESS Array B**	**138.62**	**348**	PKhKP	PKPpre	02 06 19.5	
	comp=Z,3.1nm,0.8s,baz=13,slow=1.5,SNR=11						
ARCES				PKP	**PKPdf**	**02 06 28.8**	**-0.2**
	comp=Z,3.6nm,0.6s,baz=52,slow=1.5,SNR=3.0						
H10N3	**ASCENSION HYDR**	**138.67**	**154**	T	T	04 42 19.5	
	baz=204,slow=75,SNR=187						
H10N1	**ASCENSION HYDR**	**138.68**	**154**	T	T	04 42 24.5	
	baz=204,slow=75,SNR=200						
H10N2	**ASCENSION HYDR**	**138.69**	**154**	T	T	04 42 29.6	
	baz=204,slow=75,SNR=185						
MBAR	**Mbarara**	**139.15**	**226**	PKhKP	PKPpre	02 06 23.2	
	comp=Z,2.3nm,0.2s,baz=257,slow=3.3,SNR=1.9						
MBAR				PKP	**PKPdf**	**02 06 32.4**	**+0.5**
	comp=Z,2.4nm,0.2s,baz=112,slow=4.8,SNR=6.7						
MBAR	**Mbarara**	**139.15**	**226**	PKPdf	**PKPdf**	**02 06 30.8**	**-1.1**
BELG	**Belogornoye**	**140.45**	**317**	PKhKP	PKPpre	02 06 23.9	
	comp=Z,16nm,0.9s,baz=143,slow=6.8,SNR=5.8						
BELG				PKP	**PKPdf**	**02 06 32.0**	**-0.7**
	comp=Z,61nm,0.9s,baz=307,slow=5.1,SNR=7.2						
KLMR	**Klimovskoe**	**140.92**	**332**	*e*PKIKP	**PKPdf**	**02 06 29.6**	**-3.8**
KLMR				pmax	pmax		
	comp=Z,26nm,1.1s						
KLMR	**Klimovskoe**	**140.92**	**332**	*e*PKPdf	**PKPdf**	**02 06 29.6**	**-3.8**
KLMR				AMP		02 06 45.1	
	comp=Z,26nm,1.1s						
KLMR				*e*PP	PP	02 09 17.2	-17
RAYN	**Ar Rayn**	**141.25**	**271**	PKIKP	**PKPdf**	**02 06 32.5**	**-2.7**
RAYN	**Ar Rayn**	**141.25**	**271**	PKPdf	**PKPdf**	**02 06 32.5**	**-2.7**
GROC	**Groznyy**	**143.42**	**303**	*e*PKIKP	**PKPdf**	**02 06 38.8**	**+0.4**
GROC				*e*		02 09 48.7	
GROC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
VRH	**Novokhopyorsk**	**144.30**	**317**	*e*PKIKP	**PKPab**	**02 06 36.9**	**-0.8**
VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
GNI	**Garni**	**144.44**	**298**	PKP	**PKPab**	**02 06 38.6**	**-0.2**
	comp=Z,4.7nm,0.6s,baz=189,slow=1.5,SNR=8.3						
GNI	**Garni**	**144.44**	**298**	PKPdf	**PKPab**	**02 06 38.1**	**-0.7**
MOS	**Moscow**	**144.53**	**326**	*i* PKIKP	**PKPab**	**02 06 37.0**	**-1.4**
MOS				pmax	pmax		
	comp=Z,67nm,1.0s						
ZEI	**Tsey**	**144.85**	**302**	*i* PKIKP	**PKPab**	**02 06 39.7**	**-0.6**
ZEI				pmax	pmax		
	comp=Z,23nm,1.3s						
NCK	**Nalchik**	**144.98**	**304**	*i* PKIKP	PKPbc	02 06 40.5	0.0
GOF	**Gofitskoye**	**145.11**	**306**	⇑*e*PKIKP	**PKPbc**	**02 06 40.3**	**-0.6**
GOF				pmax	pmax		
	comp=Z,88nm,1.1s						
PUL	**Pulkovo**	**145.13**	**336**	*e*P	**PKPab**	**02 06 40.5**	**+0.1**
PUL	**Pulkovo**	**145.13**	**336**	*i* PKIKP	**PKPbc**	**02 06 39.9**	**-0.5**
FINES	**FINESS Array B**	**145.24**	**340**	PKPbc	**PKPbc**	**02 06 40.2**	**-0.5**
	comp=Z,580nm,1.3s,baz=62,slow=3.2,SNR=189						
FINES	**FINESS Array B**	**145.24**	**340**		**PKPbc**	**02 06 39.8**	**-0.9**
LPSR	**Galich'ya Gora**	**145.35**	**320**	*e*PKIKP	**PKPbc**	**02 06 40.5**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,120nm,1.1s						
OBN	**Obninsk**	**145.37**	**326**	⇓P	**PKPbc**	**02 06 41.3**	**0.0**
OBN	**Obninsk**	**145.37**	**326**	PKPbc	**PKPbc**	**02 06 40.9**	**-0.4**
	comp=Z,17nm,0.7s,baz=2.3,slow=1.4,SNR=25						
OBN	**Obninsk**	**145.37**	**326***c*	*i*PKP2	**PKPbc**	**02 06 39.8**	**-1.5**
OBN				pmax	pmax		
	comp=Z,162nm,1.1s						
OBN	**Obninsk**	**145.37**	**326**		**PKPbc**	**02 06 40.1**	**-1.2**
KBZ	**Khabaz**	**145.45**	**304**	PKPbc	**PKPdf**	**02 06 41.5**	**-0.4**
	comp=Z,23nm,0.9s,baz=81,slow=1.8,SNR=24						
KIV	**Kislovodsk**	**145.56**	**305**	*i* PKIKP	**PKPdf**	**02 06 41.5**	**-0.7**
KIV				pmax	pmax		
	comp=Z,43nm,1.1s						
KIV	**Kislovodsk**	**145.56**	**305**	PKPbc	**PKPdf**	**02 06 41.7**	**-0.5**
SHA1	**Shidzhatmaz**	**145.62**	**304**	*i* PKP2	**PKPdf**	**02 06 40.3**	**-2.2**
NEY	**Neytrino**	**145.65**	**303**	*i* PKIKP	**PKPdf**	**02 06 41.9**	**-0.6**
VSR	**Storozhevoye**	**145.79**	**318**	*e*PKIKP	**PKPdf**	**02 06 41.5**	**-0.7**
VSR				pmax	pmax		
	comp=Z,190nm,1.3s						
VORD	**Divnogorie**	**145.81**	**318**	*e*PKIKP	**PKPdf**	**02 06 41.8**	**-0.5**
VORD				pmax	pmax		
	comp=Z,120nm,1.2s						
CHVG	**Ch'k'valeri**	**146.19**	**302**	⇓P	**PKPdf**	**02 06 43.7**	**+0.5**
CHVG	**Ch'k'valeri**	**146.19**	**302**	⇓PKP2	**PKPdf**	**02 06 43.7**	**+0.5**
BCA	**Borcka**	**146.69**	**300**	⇑P	**PKPab**	**02 06 46.7**	**-0.4**
VSU	**Vasula**	**147.35**	**336**	*e*P	**PKPbc**	**02 06 47.5**	**+0.5**
VSU	**Vasula**	**147.35**	**336**	*i* PKP2	**PKPbc**	**02 06 46.3**	**-0.8**
SOC	**Sochi**	**147.74**	**305**	*i* PKP2	**PKPbc**	**02 06 47.5**	**-1.2**
SOC				*e*PPP	PPP	02 13 31.3	
SOC				*e*SS	SS	02 29 10.8	-7.9
SOC				pmax	pmax		
	comp=Z,73nm,0.9s						
DOMB	**Dombas**	**148.00**	**354**	*e*PKPab	**PKPab**	**02 06 51.1**	**-0.4**
AKN	**Aaknes**	**148.02**	**356**	*e*PKPbc	**PKPbc**	**02 06 48.6**	**-0.2**
MTSE	**Matsula**	**148.11**	**339**	*e*P	**PKPbc**	**02 06 49.4**	**+0.3**
KTUT	**Trabzon**	**148.14**	**300**	⇓P	**PKPbc**	**02 06 49.5**	**-0.2**
NC204	**NORSAR Array S**	**148.58**	**352**		**PKiKP**	**02 06 51.5**	**-0.4**
FOO	**Floro**	**148.69**	**358**	*e*PKPbc	**PKPbc**	**02 06 50.5**	**-0.1**
NB201	**NORSAR Array S**	**148.74**	**352**		**PKPbc**	**02 06 49.8**	**-1.0**
NB2	**NORSAR Subarra**	**148.75**	**352**	PKP	**PKPbc**	**02 06 50.7**	**-0.1**
	comp=Z,109nm,1.4s,baz=16,slow=3.2						
NB2	**NORSAR Subarra**	**148.75**	**352**	PKPab	**PKPbc**	**02 06 50.7**	**-0.1**
	baz=16,slow=3.2						
NOA	**NORSAR Array B**	**148.75**	**352**	PKPbc	**PKPbc**	**02 06 50.5**	**-0.3**
	comp=Z,20nm,1.0s,baz=14,slow=4.3,SNR=29						
UPP	**Uppsala**	**148.77**	**345**	*e*P	**PKPbc**	**02 06 50.6**	**-0.1**
NC602	**NORSAR Array S**	**149.01**	**351**	*e*PKPbc	**PKPbc**	**02 06 51.4**	**0.0**
ANN	**Anapa**	**149.05**	**308**	*i* PKP2	**PKPbc**	**02 06 51.2**	**-0.8**
ANN				pmax	pmax		
	comp=Z,248nm,1.0s						
HYA	**Hoyanger**	**149.07**	**357**	*e*PKPbc	**PKPbc**	**02 06 51.5**	**0.0**
SUE	**Sulen**	**149.24**	**358**	*e*pPKPdf	**PKPbc**	**02 06 50.8**	**-1.1**
HFS	**Hagfors**	**149.27**	**349**	PKPbc	**PKPbc**	**02 06 51.5**	**-0.6**
	comp=Z,20nm,0.8s,baz=50,slow=4.3,SNR=27						
SKAR	**Skarslia**	**149.41**	**354**	*e*PKPbc	**PKPbc**	**02 06 52.3**	**-0.2**
ISAL	**Salakas**	**149.72**	**333**	*e*P	**PKPbc**	**02 06 53.6**	**+0.3**
MNK	**Minsk**	**149.75**	**330**	*i* PKIKP	**PKPdf**	**02 06 46.5**	**-2.2**
MNK				*i*		02 10 30.5	
MNK				*i* PPP	PPP	02 13 44.3	
MNK				*i* SS	SS	02 29 38.1	-1.6
MNK				pmax	pmax		
	comp=N,28nm,1.0s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,113nm,1.0s						
MNK				MLR	MLR		
	comp=N,831nm,20.0s						
MNK				MLR	MLR		
	comp=Z,574nm,20.0s						
MNK				MLR	MLR		
	comp=E,118nm,21.0s						
MNK	**Minsk**	**149.75**	**330**	*i* PKP	**PKPdf**	**02 06 46.5**	**-2.2**
	comp=E,4.0nm,1.0s						
MNK				*i* PKP	**PKPdf**	**02 06 46.5**	**-2.2**
	comp=N,28nm,1.0s						
MNK				*i* PKP	**PKPdf**	**02 06 46.5**	**-2.2**
	comp=Z,113nm,1.0s,baz=48						
MNK				*i* SKP		02 10 16.6	
MNK				*i* PKS	**PP**	**02 10 30.5**	**+3.5**
MNK				*i* PP	PP	02 10 34.0	+7.1
MNK				*i* PPP	PPP	02 13 44.4	
MNK				*i* SKS	SKSdf	02 14 10.1	+16
MNK				*i* SKKS		02 21 22.6	
MNK				*i* SS	**SS**	**02 29 38.1**	**-1.6**
MNK				*i* SSS	SSS	02 37 19.1	
MNK				*i* LQ	LQ	03 00 12.6	
MNK				*i* LR	LR	03 05 47.1	
MNK				*i* LRM	MLR	03 12 19.1	
	comp=N,831nm,20.4s						
MNK				*i* LRM	MLR	03 12 45.2	
	comp=Z,574nm,20.0s						
MNK				*i* LRM	MLR	03 13 58.5	
	comp=E,118nm,20.5s						
ASK	**Askoy**	**149.80**	**357**	*e*pPKPdf	**PKPbc**	**02 06 51.8**	**-1.5**
OSL	**Oslo**	**149.89**	**352**	*e*PKPbc	**PKPbc**	**02 06 53.7**	**+0.1**
BER	**Bergen**	**149.89**	**357**	*e*PKPbc	**PKPbc**	**02 06 53.6**	**0.0**
NACGM	**Naroch**	**149.94**	**332**	*i* PKP	**PKPbc**	**02 06 51.9**	**-1.9**
	baz=45						
ODD1	**Odda**	**150.30**	**356**	*e*PKPbc	**PKPbc**	**02 06 54.9**	**+0.3**
KONO	**Kongsberg**	**150.30**	**353**	PKIKP	**PKPbc**	**02 06 54.7**	**+0.1**
KONO	**Kongsberg**	**150.30**	**353**	*e*PKPbc	**PKPbc**	**02 06 54.7**	**+0.1**
KONO	**Kongsberg**	**150.30**	**353**		**PKPbc**	**02 06 54.6**	**+0.1**
PABE	**Paberze**	**150.59**	**335**	*e*P	**PKiKP**	**02 06 56.1**	**0.0**
ASF	**Jabal al Asfar**	**150.62**	**283**	PKPbc	**PKPbc**	**02 06 56.2**	**-0.2**
	comp=E,39nm,1.1s,baz=153,slow=0.2,SNR=22						
STRU	**Stroemstad**	**150.70**	**351**	*e*P	**PKiKP**	**02 06 56.2**	**0.0**
BLS5	**Blasjo**	**150.79**	**356**	*e*PKPbc	**PKPbc**	**02 06 55.9**	**+0.1**
SIM	**Simferopol'**	**151.25**	**309***c*	*i*PKIKP	**PKPbc**	**02 06 56.7**	**-0.6**
SIM				*e*		02 07 06.3	
SIM				pmax	pmax		
	comp=Z,78nm,0.9s						
DIKM	**Dikmen**	**151.37**	**302**	⇑P	**PKPdf**	**02 06 53.8**	**+2.1**
AKASG	**Malin Array Be**	**151.52**	**323**	PKP	**PKPdf**	**02 06 51.1**	**-0.4**
	comp=Z,3.6nm,0.9s,baz=69,slow=1.4,SNR=12						
AKASG				PKPbc	**PKPbc**	**02 06 57.3**	**-0.4**
	comp=Z,45nm,0.8s,baz=46,slow=2.3,SNR=79						
HOMB	**Homborsund**	**151.77**	**353**	*i* P	**PKPbc**	**02 06 58.0**	**0.0**
HOMB	**Homborsund**	**151.77**	**353**	*e*PKPbc	**PKiKP**	**02 06 58.5**	**+0.1**
SNART	**Snartemo**	**151.82**	**355**	*e*P	**PKiKP**	**02 06 58.9**	**+0.3**
SNART	**Snartemo**	**151.82**	**355**	*e*PKPbc	**PKiKP**	**02 06 58.5**	**0.0**
MMAI	**Mount Meron Ar**	**151.95**	**284**	PKPbc	**PKiKP**	**02 07 00.1**	**+0.3**
	comp=Z,70nm,0.9s,baz=65,slow=4.7,SNR=51						
EIL	**Elat**	**151.95**	**277**	PKPbc	**PKPbc**	**02 06 58.2**	**-1.2**
	comp=Z,31nm,0.9s,baz=164,slow=2.5,SNR=15						
SUW	**Suwalki**	**152.02**	**334**	*e*PKPbc	**PKiKP**	**02 06 59.1**	**0.0**
SUW	**Suwalki**	**152.02**	**334**	*e*P	**PKiKP**	**02 06 59.2**	**+0.1**
ONAU	**Onsala**	**152.17**	**349**	*e*P	**PKiKP**	**02 06 59.1**	**-0.1**
BZK	**Bozkurt**	**152.21**	**303**	⇑P	**PKPbc**	**02 06 58.6**	**-1.0**
BLEU	**Blekinge**	**152.40**	**344**	*i* P	**PKPbc**	**02 06 59.4**	**-0.2**
FABU	**Falkenberg**	**152.41**	**348**	*i* P	**PKPbc**	**02 06 59.6**	**+0.1**
BRTR	**Keskin Array B**	**152.96**	**299**	PKP	**PKPdf**	**02 06 54.0**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=132,slow=3.5,SNR=10						
BRTR				PKPbc	**PKPbc**	**02 07 00.8**	**-0.7**
	comp=Z,29nm,1.1s,baz=139,slow=2.9,SNR=41						
BRTR	**Keskin Array B**	**152.96**	**299**	PKPdf	**PKPdf**	**02 06 53.1**	**-1.1**
BRTR					**PKPbc**	**02 07 00.9**	**-0.7**
BJUU	**Bjuv**	**153.22**	**347**	*e*P	**PKiKP**	**02 07 02.5**	**+1.0**
PURM	**Purcari**	**153.34**	**315**	⇓P	**PKiKP**	**02 07 02.3**	**+0.2**
SORM	**Soroca**	**153.43**	**319**	⇓P	**PKiKP**	**02 07 02.2**	**0.0**
SORM	**Soroca**	**153.43**	**319**	⇓PKIKP	**PKiKP**	**02 07 02.2**	**0.0**
ANTO	**Ankara**	**153.57**	**299**	PKIKP	**PKiKP**	**02 07 03.2**	**+0.3**
ANTO	**Ankara**	**153.57**	**299**		**PKPdf**	**02 06 54.2**	**-0.9**
ANTO				PKPbc	**PKiKP**	**02 07 03.2**	**+0.3**
BR231	**Keskin MP Arra**	**153.59**	**299**	PKPdf	**PKPdf**	**02 06 54.0**	**-1.1**
BR231				PKPbc	**PKPbc**	**02 07 02.2**	**-0.7**
BSD	**Bornholm Skovb**	**153.70**	**344**	*e*P	**PKiKP**	**02 07 02.7**	**+0.2**
MILM	**Milestii Mici**	**153.79**	**317**	⇑P	**PKPbc**	**02 07 02.5**	**-0.4**
MILM	**Milestii Mici**	**153.79**	**317**	⇑PKIKP	**PKPbc**	**02 07 02.5**	**-0.4**
LEF	**Lefka**	**154.06**	**289**	⇑P	**PKiKP**	**02 07 04.3**	**+0.4**
LEOM	**Leova**	**154.35**	**316**	⇑P	**PKiKP**	**02 07 05.7**	**+1.6**
LEOM	**Leova**	**154.35**	**316**	⇑PKIKP	**PKiKP**	**02 07 05.7**	**+1.6**
VASR	**Vaslui**	**154.54**	**317**	⇑P	**PKiKP**	**02 07 04.6**	**+0.1**
RGN	**Rugen**	**154.59**	**345**	*e*PKPab	**PKPab**	**02 07 19.3**	**+0.3**
	baz=19,slow=4.3						
TLCR		**154.61**	**313**	⇓P	**PKPbc**	**02 07 04.5**	**-0.2**
TLCR		**154.61**	**313**	⇓PKIKP	**PKPbc**	**02 07 04.5**	**-0.2**
BEL	**Belsk**	**154.62**	**333**	*e*PKPbc	**PKiKP**	**02 07 05.6**	**+1.0**
LVV	**L'vov**	**154.67**	**326**	*e*PKIKP	**PKPbc**	**02 07 01.9**	**-2.8**
EKA	**Eskdalemuir Ar**	**154.69**	**8**	PKPbc	**PKiKP**	**02 07 05.0**	**+0.5**
	comp=Z,2.4nm,0.8s,baz=25,slow=1.9,SNR=3.4						
EKA				PKPab	**PKPab**	**02 07 18.6**	**-0.9**
	comp=Z,2.2nm,0.5s,baz=333,slow=2.0,SNR=6.6						
GKP	**Gorka Klasztor**	**154.69**	**339**	*e*PKPbc	**PKiKP**	**02 07 04.8**	**+0.2**
GKP				*e*PKPab	**PKPab**	**02 07 20.7**	**+1.2**
GKP	**Gorka Klasztor**	**154.69**	**339**	*e*P	**PKPbc**	**02 07 01.8**	**-2.8**
VLDR	**Vladesti**	**154.76**	**315**	⇑P	**PKiKP**	**02 07 06.1**	**+1.1**
TPGR	**Topolog**	**155.01**	**313**	⇑P	PKPdf	02 07 06.6	+10
CFR	**Carcaliu**	**155.04**	**314**	⇓P	**PKPdf**	**02 07 04.4**	**+7.6**
CFR	**Carcaliu**	**155.04**	**314**	⇓PKIKP	**PKPdf**	**02 07 04.4**	**+7.6**
SLCR	**Slobozia Conac**	**155.08**	**315**	⇓P	PKPab	02 07 11.3	-10
TIRR	**Tirgusor**	**155.19**	**312**	⇓P	PKPdf	02 07 06.5	+10
TIRR	**Tirgusor**	**155.19**	**312**	⇓PKIKP	PKPdf	02 07 06.5	+9.5
HARR	**Harsova**	**155.40**	**313**	⇑P	PKPdf	02 07 06.5	+9.2
HARR	**Harsova**	**155.40**	**313**	⇑PKIKP	PKPdf	02 07 06.5	+9.2
KWP	**Kalwaria Pacla**	**155.43**	**327**	*e*PKPab	**PKPab**	**02 07 22.6**	**-0.2**
DBIC	**Dimbokro**	**155.46**	**162**	PKP	**PKPdf**	**02 06 58.7**	**+0.4**
	comp=Z,2.5nm,0.8s,baz=182,slow=2.7,SNR=2.2						
DBIC	**Dimbokro**	**155.46**	**162**		**PKPdf**	**02 06 57.5**	**-0.8**
BURAR	**Bucovina Array**	**155.46**	**321**	⇓P	PKPdf	02 07 08.3	+11
BURAR	**Bucovina Array**	**155.46**	**321**	⇓PKIKP	PKPdf	02 07 08.3	+11
BURAR	**Bucovina Array**	**155.46**	**321**	PKPdf	**PKPdf**	**02 06 57.3**	**-0.1**
BURAR				PKPbc	**pPKPdf**	**02 07 07.6**	**+0.6**
VRI	**Vrincioaia**	**155.57**	**316**	⇑P	**PKPdf**	**02 06 54.5**	**-3.1**
VRI	**Vrincioaia**	**155.57**	**316**	⇑PKIKP	**PKPdf**	**02 06 54.5**	**-3.1**
GRER		**155.67**	**315**	⇓P	**PKPab**	**02 07 17.2**	**-6.8**
BSEG	**Bad Segeberg**	**155.75**	**349**	*e*PKPab	**PKPab**	**02 07 24.1**	**+0.1**
	baz=19,slow=4.3						
OZUR		**156.01**	**317**	⇓P	**PKPdf**	**02 07 05.3**	**+7.2**
KOLS	**Kolonicke sedl**	**156.12**	**327**	*e*PKIKP	**PKPdf**	**02 06 58.9**	**+0.7**
KOLS				*e*		02 07 09.2	
KOLS				*e*		02 07 25.0	
KOLS	**Kolonicke sedl**	**156.12**	**327**	*e*PKP	**PKPdf**	**02 06 58.9**	**+0.7**
KOLS				*e*		02 07 09.2	
KOLS				*e*		02 07 25.0	
MLR	**Muntele Rosu**	**156.24**	**316**	⇑P	PKPdf	02 06 49.9	-8.7
MLR	**Muntele Rosu**	**156.24**	**316**	⇑PKIKP	PKPdf	02 06 49.9	-8.7
OJC	**Ojcow**	**156.27**	**332**	*e*PKPab	**PKPab**	**02 07 26.5**	**+0.1**
OJC	**Ojcow**	**156.27**	**332**	*e*PKPdf	**PKPdf**	**02 06 58.8**	**+0.4**
DOPR	**Dopca**	**156.31**	**318**	⇑P	**PKPdf**	**02 07 03.0**	**+4.5**
UZH	**Uzhgorod**	**156.31**	**326**	*e*PKIKP	PKPdf	02 07 07.2	+8.8
UZH				*e*		02 07 13.6	
UZH				*i*		02 07 25.8	
RUE	**Ruedersdorf**	**156.38**	**343**	*e*PKPab	**PKPab**	**02 07 26.7**	**0.0**
	baz=19,slow=4.3						
CRVS	**Cervenica-Dubn**	**156.52**	**327**	*e*PKIKP	**PKPdf**	**02 07 01.9**	**+3.2**
CRVS	**Cervenica-Dubn**	**156.52**	**327**	*e*PKP	**PKPdf**	**02 07 01.9**	**+3.2**
CRVS				*e*		02 07 27.8	
TRPA	**Tarpa**	**156.53**	**325**	⇑P	**PKPdf**	**02 06 53.7**	**-5.0**
NIE	**Niedzica**	**156.67**	**330**	*e*PKPdf	**PKPdf**	**02 07 00.5**	**+1.6**
NIE				*e*PKPab	**PKPab**	**02 07 29.6**	**+1.4**
RETH	**Rethem/Aller,**	**157.06**	**349**	*e*PKPab	**PKPab**	**02 07 29.7**	**+0.1**
	baz=19,slow=4.3						
KSP	**Ksiaz**	**157.07**	**337**	*e*PKPab	**PKPab**	**02 07 30.4**	**+0.6**
KSP	**Ksiaz**	**157.07**	**337**	*e*PKPdf	**PKPdf**	**02 06 59.7**	**+0.4**
ARR	**Arges**	**157.08**	**317**	⇓P	**PKPdf**	**02 06 59.7**	**+0.1**
FLTG	**Flechtingen**	**157.10**	**346**	*e*PKPab	**PKPab**	**02 07 29.4**	**-0.5**
	baz=19,slow=4.3						
NRDL	**Niedersach Rie**	**157.17**	**348**	*e*PKPab	**PKPab**	**02 07 30.1**	**+0.1**
	baz=19,slow=4.3						
LANS	**Liptovska Anna**	**157.23**	**330**	*e*PKIKP	**PKPdf**	**02 07 01.6**	**+2.0**
LANS	**Liptovska Anna**	**157.23**	**330**	*e*PKP	**PKPdf**	**02 07 01.6**	**+2.0**
LANS				*e*		02 07 30.1	
DRGR		**157.32**	**322**	⇓P	PKPdf	02 07 10.9	+11
CHVC	**Chvalec**	**157.37**	**337**	*e*PKPAB	**PKPab**	**02 07 31.5**	**+0.3**
ASSE	**Asse, Remlinge**	**157.41**	**347**	*e*PKPab	**PKPab**	**02 07 31.2**	**0.0**
	baz=19,slow=4.3						
UPC	**Upice**	**157.45**	**337**	*e*PKPAB	**PKPab**	**02 07 32.1**	**+0.6**
UPC	**Upice**	**157.45**	**337**	*e*PKP2	**PKPab**	**02 07 32.1**	**+0.6**
DPC	**Dobruska-Polom**	**157.48**	**336**	*e*PKPAB	**PKPab**	**02 07 32.3**	**+0.6**
DPC	**Dobruska-Polom**	**157.48**	**336**	*e*PKIKP	**PKPdf**	**02 07 00.5**	**+0.6**
DPC	**Dobruska-Polom**	**157.48**	**336**	*e*PKPDF	**PKPdf**	**02 07 00.5**	**+0.6**
MORC	**Moravsky Berou**	**157.51**	**334**	*e*PKP	**PKPab**	**02 07 30.8**	**-1.0**
KRLC	**Kraliky**	**157.55**	**335**	*e*PKPAB	**PKPab**	**02 07 31.2**	**-0.8**
KRLC	**Kraliky**	**157.55**	**335**	*e*PKIKP	**PKPdf**	**02 07 00.5**	**+0.5**
KRLC	**Kraliky**	**157.55**	**335**	*e*PKPDF	**PKPdf**	**02 07 00.5**	**+0.5**
IZAB	**Izabela**	**157.56**	**329**	*e*PKP2	**PKPab**	**02 07 33.1**	**+1.1**
CLL	**Collm**	**157.64**	**343**	*i* PKP2	**PKPab**	**02 07 32.0**	**-0.3**
CLL				pmax	pmax		
	comp=Z,62nm,1.3s						
CLL				MLR	MLR		
	comp=Z,400nm,20.6s						
CLL	**Collm**	**157.64**	**343**	*i* PKPdf	**PKPdf**	**02 07 01.7**	**+1.7**
	comp=Z,3.0nm,0.7s						
CLL				*i* PKPab	**PKPab**	**02 07 32.0**	**-0.3**
	comp=Z,62nm,1.3s						
CLL				*e*SS	SS	02 31 12.0	+6.8
CLL				*e*SSS	SSS	02 37 12.0	
CLL				L	L	03 17 00.0	
	comp=Z,400nm,20.6s						
CLL	**Collm**	**157.64**	**343**	*e*PKPab	**PKPab**	**02 07 32.0**	**-0.3**
	baz=19,slow=4.3						
CLL	**Collm**	**157.64**	**343**	*i*	**PKPab**	**02 07 31.9**	**-0.3**
	comp=Z,62nm,1.3s						
CLL	**Collm**	**157.64**	**343**	*e*	**PKPab**	**02 07 38.0**	**+5.8**
IBBN	**Ibbenburen**	**157.71**	**351**	*e*PKPab	**PKPab**	**02 07 32.7**	**+0.2**
	baz=19,slow=4.3						
CLZ	**Clausthal**	**157.74**	**347**	*e*PKPab	**PKPab**	**02 07 32.9**	**+0.1**
	baz=19,slow=4.3						
BRG	**Berggiesshubel**	**157.78**	**341**	*e*PKPab	**PKPab**	**02 07 32.9**	**0.0**
	baz=19,slow=4.3						
BRG	**Berggiesshubel**	**157.78**	**341**	⇓*e*PKPf		02 07 01.1	
BRG				Amp		02 07 04.4	
	comp=Z,5.9nm,1.1s						
BRG				*i* PKPab	**PKPab**	**02 07 33.1**	**+0.2**
BRG				Amp		02 07 34.5	
	comp=Z,33nm,1.0s						
BRG	**Berggiesshubel**	**157.78**	**341**	P	**PKPab**	**02 07 39.2**	**+6.3**
BRG				Amp		02 07 40.9	
	comp=Z,14nm,0.7s						
PVCC	**Panska Ves**	**157.90**	**339**	*e*PKPAB	**PKPab**	**02 07 33.9**	**+0.5**
PVCC	**Panska Ves**	**157.90**	**339**	*e*PKP2	**PKPab**	**02 07 33.9**	**+0.5**
FBE	**Freiberg**	**157.90**	**342**	*e*PKPab	**PKPab**	**02 07 33.7**	**+0.3**
	baz=19,slow=4.3						
PSZ	**Piszkesteto**	**157.95**	**328**	PKP2	**PKPab**	**02 07 32.7**	**-1.2**
PSZ	**Piszkesteto**	**157.95**	**328**	PKPab	**PKPab**	**02 07 32.7**	**-1.2**
VYHS	**Vyhne**	**158.00**	**330**	*e*PKP2	**PKPab**	**02 07 34.1**	**+0.2**
VYHS	**Vyhne**	**158.00**	**330**	*e*PKP	**PKPab**	**02 07 34.1**	**+0.2**
NEUB	**Neuenburg**	**158.04**	**344**	*e*PKPab	**PKPab**	**02 07 33.9**	**-0.1**
	baz=19,slow=4.3						
GTTG	**Gottingen**	**158.10**	**347**	*e*PKPab	**PKPab**	**02 07 34.4**	**+0.1**
	baz=19,slow=4.3						
JAVC	**Velka Javorina**	**158.20**	**332**	*e*PKP	**PKPab**	**02 07 35.7**	**+0.9**
VRAC	**Vranov**	**158.25**	**335**	PKPab	**PKPab**	**02 07 34.5**	**-0.5**
	comp=Z,15nm,1.1s,baz=50,slow=4.1,SNR=11						
VRAC	**Vranov**	**158.25**	**335**	*e*PKP	**PKPab**	**02 07 34.8**	**-0.2**
PRU	**Pruhonice**	**158.38**	**339**	*e*PKPAB	**PKPab**	**02 07 34.9**	**-0.6**
PRU	**Pruhonice**	**158.38**	**339**	*e*PKP2	**PKPab**	**02 07 34.9**	**-0.6**
KRUC	**Moravsky**	**158.53**	**334**	*e*PKP	**PKPab**	**02 07 35.9**	**-0.3**
SMOL	**Smolenice**	**158.57**	**332**	*e*PKP2	**PKPab**	**02 07 36.8**	**+0.4**
SMOL	**Smolenice**	**158.57**	**332**	*e*PKP	**PKPab**	**02 07 36.8**	**+0.4**
MOX	**Moxa**	**158.60**	**344**	*e*PKPab	**PKPab**	**02 07 36.4**	**-0.1**
	baz=19,slow=4.3						
MOX				*e*L	L	03 18 08.6	
	comp=Z,303nm,20.4s						
TANN	**Tannenbergstha**	**158.60**	**342**	*e*PKPab	**PKPab**	**02 07 36.7**	**+0.1**
	baz=19,slow=4.3						
WERD	**Werda**	**158.61**	**343**	*e*PKPab	**PKPab**	**02 07 36.7**	**+0.1**
	baz=19,slow=4.3						
PLN	**Plauen**	**158.61**	**343**	*e*PKPab	**PKPab**	**02 07 36.6**	**+0.1**
	baz=19,slow=4.3						
BUG	**Bochum--Univer**	**158.62**	**352**	*e*PKPab	**PKPab**	**02 07 36.4**	**0.0**
	baz=19,slow=4.3						
TREC	**Trest**	**158.66**	**336**	*e*PKPAB	**PKPab**	**02 07 36.5**	**-0.3**
TREC	**Trest**	**158.66**	**336**	*e*PKP2	**PKPab**	**02 07 36.5**	**-0.3**
GUNZ	**Gunzen**	**158.68**	**343**	*e*PKPab	**PKPab**	**02 07 37.1**	**+0.2**
	baz=19,slow=4.3						
WERN	**Wernitzgruen**	**158.74**	**342**	*e*PKPab	**PKPab**	**02 07 37.4**	**+0.3**
	baz=19,slow=4.3						
MODS	**Modra-Piesok**	**158.74**	**332**	*e*PKIKP	**PKPdf**	**02 07 01.7**	**+0.2**
MODS				*e*		02 07 36.9	
MODS	**Modra-Piesok**	**158.74**	**332**	*e*PKP	**PKPdf**	**02 07 01.7**	**+0.2**
MODS				*e*		02 07 36.9	
SRO	**Srobarova**	**158.74**	**330**	*e*PKP2	**PKPab**	**02 07 37.1**	**0.0**
SRO	**Srobarova**	**158.74**	**330**	*e*PKP	**PKPab**	**02 07 37.1**	**0.0**
NKC	**Novy Kostel**	**158.77**	**342**	*e*PKPAB	**PKPab**	**02 07 37.3**	**+0.1**
NKC	**Novy Kostel**	**158.77**	**342**	*e*PKP2	**PKPab**	**02 07 37.3**	**+0.1**
UBBA	**Unterbreizbach**	**158.79**	**347**	*e*PKPab	**PKPab**	**02 07 37.0**	**-0.1**
	baz=19,slow=4.3						
ZST	**Bratislava**	**158.96**	**332**	*e*PKP2	**PKPab**	**02 07 37.9**	**-0.2**
ZST	**Bratislava**	**158.96**	**332**	*e*PKP	**PKPab**	**02 07 37.9**	**-0.2**
ROTZ	**Rotzenmuhle**	**159.26**	**342**	*e*PKPab	**PKPab**	**02 07 39.8**	**+0.5**
	baz=19,slow=4.3						
BEBN	**Eben Emael**	**159.43**	**354**	*d*PKPab	**PKPab**	**02 07 39.9**	**0.0**
KHC	**Kasperske Hory**	**159.43**	**339**	*e*PKPAB	**PKPab**	**02 07 40.3**	**+0.1**
KHC	**Kasperske Hory**	**159.43**	**339**	*e*PKIKP	**PKPdf**	**02 07 03.8**	**+1.5**
KHC	**Kasperske Hory**	**159.43**	**339**	*e*PKPDF	**PKPdf**	**02 07 03.8**	**+1.5**
CKRC	**Cesky Krumlov**	**159.47**	**337**	*e*PKPDF	**PKPdf**	**02 07 03.2**	**+0.9**
CKRC				*e*PKPAB	**PKPab**	**02 07 40.9**	**+0.6**
EGYH	**Egyhazaskeszo**	**159.47**	**330**	*e*P	**PKPab**	**02 07 41.9**	**+1.5**
UCC	**Uccle**	**159.51**	**357**	*d*PKPab	**PKPab**	**02 07 40.8**	**+0.5**
AHRW	**Bad Neuenahr-A**	**159.53**	**352**	*e*PKPab	**PKPab**	**02 07 40.6**	**+0.2**
	baz=19,slow=4.3						
MPLH	**Magyarpolny**	**159.57**	**330**	*e*P	**PKPdf**	**02 06 58.6**	**-3.9**
GRF	**Grafenberg Arr**	**159.58**	**344**	*e*PKPab	**PKPab**	**02 07 40.7**	**0.0**
	baz=19,slow=4.3						
GRF				*e*L	L	03 17 26.4	
	comp=Z,272nm,21.1s						
GRFO	**Grafenberg**	**159.58**	**344**	PKP2	**PKPab**	**02 07 40.5**	**-0.2**
GRFO	**Grafenberg**	**159.58**	**344**	PKPab	**PKPab**	**02 07 40.5**	**-0.2**
MEM	**Membach**	**159.58**	**354**	*d*PKPab	**PKPab**	**02 07 41.2**	**+0.6**
SOP	**Sopron**	**159.59**	**332**	*e*P	**PKPab**	**02 07 35.8**	**-5.0**
BTNL	**Ternell**	**159.59**	**353**	*d*PKPab	**PKPab**	**02 07 40.9**	**+0.1**
WET	**Wettzell**	**159.63**	**340**	*e*PKPab	**PKPab**	**02 07 41.4**	**+0.4**
	baz=19,slow=4.3						
TNS	**Taunus Mts**	**159.64**	**349**	*e*PKPab	**PKPab**	**02 07 41.0**	**-0.1**
	baz=19,slow=4.3						
GEC2	**GERESS Array S**	**159.65**	**338**	*e*PKPab	**PKPab**	**02 07 41.3**	**+0.1**
	baz=19,slow=4.3						
GERES	**GERESS Array B**	**159.65**	**338**	PKPab	**PKPab**	**02 07 39.8**	**-1.4**
	comp=Z,9.5nm,1.0s,baz=49,slow=4.1,SNR=19						
GERES	**GERESS Array B**	**159.65**	**338**	PKIKP	**PKPdf**	**02 07 01.8**	**-0.9**
GERES						02 07 40.7	
GERES	**GERESS Array B**	**159.65**	**338**	PKPdf	**PKPdf**	**02 07 01.8**	**-0.9**
GERES				PKPab	**PKPab**	**02 07 40.7**	**-0.5**
CONA	**Conrad Observa**	**159.66**	**333**	*e*P	**PKPab**	**02 07 41.5**	**+0.3**
	comp=Z,15nm,1.0s						
SNF	**Seneffe**	**159.81**	**357**	*d*PKPab	**PKPab**	**02 07 41.7**	**+0.1**
BCLA	**Clavier**	**159.83**	**355**	*d*PKPab	**PKPab**	**02 07 41.5**	**-0.2**
BCLA				*d*pPKPab	**pPKPab**	**02 07 46.2**	**-4.7**

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BHOU  Houvegnez        159.84 354 dPKPab   PKPab    02 07 42.2 +0.4
BGES  Gesves           159.88 355 dPKPab   PKPab    02 07 41.6 -0.4
BMRD  Maredsous        159.99 356 dPKPab   PKPab    02 07 42.8 +0.4
RCHB  Rochefort        160.10 355 dPKPab   PKPab    02 07 42.5 -0.4
KOVH  Kovagotottos     160.13 327 eP       PKPdf    02 07 00.2 -2.9
DOU   Dourbes          160.20 356 dPKPab   PKPab    02 07 43.5 +0.2
MOA   Molln            160.32 336 eP       PKPab    02 07 44.2 +0.1
      comp=Z,22nm,1.3s
ARSA  Arzberg          160.35 333 eP       PKPab    02 07 44.0 -0.2
      comp=Z,12nm,1.3s
VAY   Valandovo        160.44 310 i P      PKPab    02 07 44.0 -0.8
WLF   Walferdange      160.50 353 dPKPab   PKPab    02 07 44.9 +0.3
WLF   Walferdange      160.50 353 ePKPab   PKPab    02 07 45.2 +0.5
      baz=19,slow=4.3
STIP  Stip             160.51 311 i P      PKPab    02 07 43.4 -1.7
IDI   Anoyia           160.57 291  PKPab   PKPab    02 07 46.2 +0.5
      comp=Z,15nm,1.0s,baz=76,slow=8.3,SNR=2.8
SKO   Skopje           160.85 312 i P      PKPab    02 07 46.9 +0.3
STU   Stuttgart        160.90 346 ePKPab   PKPab    02 07 46.4 -0.1
      baz=19,slow=4.3
RJOB  Jochberg         160.91 338 ePKPab   PKPab    02 07 47.1 +0.4
      baz=19,slow=4.3
FUR   Furstenfeldbru   160.97 342 ePKPab   PKPab    02 07 47.2 +0.3
      baz=19,slow=4.3
SOKA  Soboth           161.01 333 i P      PKPab    02 07 46.5 -0.7
      comp=Z,16nm,1.1s,SNR=6.0
KBA   Koelnbreinsper   161.30 336 eP       PKPab    02 07 48.2 -0.3
      comp=Z,4.6nm,0.9s
OBKA  Obir             161.34 333 eP       PKPab    02 07 47.2 -1.4
      comp=Z,7.0nm,0.9s
BFO   Black Forest     161.49 348  PKP2    PKPab    02 07 48.4 -0.7
BFO   Black Forest     161.49 348 ePKPab   PKPab    02 07 48.8 -0.3
      baz=19,slow=4.3
BFO   Black Forest     161.49 348  PKPab   PKPab    02 07 48.4 -0.7
MYKA  Terra Mystica    161.58 335 eP       PKPab    02 07 48.8 -0.8
      comp=Z,10nm,0.8s
WATA  Walderalm        161.64 340 i P      PKPab    02 07 50.2 +0.3
      comp=Z,34nm,1.1s,SNR=9.9
WTTA  Wattenberg       161.69 340 i P      PKPab    02 07 50.5 +0.3
      comp=Z,50nm,1.2s,SNR=7.4
UBR   Ueberruh         161.72 343 ePKPab   PKPab    02 07 50.2  0.0
      baz=19,slow=4.3
LJU   Ljubljana        161.73 332 i PKPdf  PKPdf    02 07 04.2 -0.7
RETA  Reutte           161.73 342 i P      PKPab    02 07 50.7 +0.4
      comp=Z,51nm,1.1s,SNR=8.7
MOTA  Moosalm          161.77 341 i P      PKPab    02 07 50.6 +0.1
      comp=Z,59nm,1.1s,SNR=13
SQTA  Sankt Quirin     161.85 341 i P      PKPab    02 07 50.8  0.0
      comp=Z,40nm,1.0s,SNR=8.5
BOJS  Bojanci          161.87 330 i PKPdf  PKPdf    02 07 04.7 -0.4
ABTA  Abfaltersbach    161.87 337 i P      PKPab    02 07 50.2 -0.7
      comp=Z,20nm,1.1s,SNR=6.2
CEY   Cerknica         162.02 332 i PKPdf  PKPdf    02 07 04.8 -0.4
CEY                               i PKPab  PKPab    02 07 50.4 -1.1
DAVA  Damuels          162.15 343 i P      PKPab    02 07 52.3 +0.2
      comp=Z,38nm,1.2s,SNR=6.4
FETA  Feichten         162.17 341 i P      PKPab    02 07 52.9 +0.6
      comp=Z,26nm,1.2s,SNR=6.0
CIMO  Cimolais         162.28 337  PKPdf   PKPdf    02 07 03.5 -2.0
CIMO                               PKPab   PKPab    02 07 50.9 -1.8
DAVOX Davos/Dischmat   162.62 343  PKP     PKPdf    02 07 04.9 -1.1
      comp=Z,1.0nm,0.4s,baz=152,slow=7.4,SNR=4.6
DAVOX                              PKPab   PKPab    02 07 54.2 -0.1
      comp=Z,29nm,1.0s,baz=27,slow=0.8,SNR=16
TORD  Torodi Ar. Bea   162.88 177  PKP     PKPdf    02 07 06.5 -0.4
      comp=Z,3.8nm,1.2s,baz=293,slow=0.7,SNR=13
TORD                               PKPab   PKPab    02 07 57.0 +1.1
      comp=Z,10nm,1.1s,baz=191,slow=2.8,SNR=15
TORD                               PP      PP       02 11 40.8 +1.6
      comp=Z,2.3nm,1.1s,baz=159,slow=4.5,SNR=3.6
TORD  Torodi Ar. Bea   162.88 177  PKPdf   PKPdf    02 07 07.3 +0.4
TORD                               PKPab   PKPab    02 07 55.5 -0.3
KOWA  Kowa             163.12 158  PKP     PKPdf    02 07 07.2 +0.1
      comp=Z,9.9nm,1.2s,baz=310,slow=1.8,SNR=8.5
KOWA  Kowa             163.12 158  PKPdf   PKPdf    02 07 07.5 +0.3
SSB   Saint Sauveur    165.00 354  PKP2    PKPab    02 08 04.0 -0.6
SSB   Saint Sauveur    165.00 354  PKPab   PKPab    02 08 04.0 -0.6
ESDC  Sonseca Array    169.28  28  PKP     PKPdf    02 07 11.5 +0.1
      comp=Z,4.9nm,1.2s,baz=340,slow=3.0,SNR=12
ESDC                               PKPab   PKPab    02 08 24.0 +0.2
      comp=Z,1.8nm,1.1s,baz=350,slow=1.6,SNR=2.4
ESDC                               PP      PP       02 12 13.4 +0.5
      comp=Z,2.3nm,1.2s,baz=1.3,slow=4.4,SNR=5.3
ESDC  Sonseca Array    169.28  28  PKPdf   PKPdf    02 07 11.7 +0.3
KEST  Kesra            172.14 315  PKPab   PKPab    02 08 35.3 -1.3
      comp=Z,4.1nm,1.0s,baz=147,slow=18,SNR=2.1
MDT   Midelt           173.44  66  PKP     PKPdf    02 07 14.6 +0.9
      comp=Z,5.0nm,1.1s,baz=292,slow=3.6,SNR=7.8
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*IDC **07** 02:03:33.9±0.7, 23°.52S×176°.08W, h0^{km}, mb4.4/10, mb1 4.6/12, mb1mx4.4/24, mbtmp4.4/12, ML4.5/2, MS4.0/8, Ms1 3.9/8, ms1mx3.7/33, Error ellipse: s-maj=27.4km s-min=19.0km az=135.0*

*NEIC **07** 02:03:33.9±2.6, 23°.7S±0°.1×175°.5W±0°.1, h10^{km}±1^{km}, mb4.6/25, Error ellipse: s-maj=28.2km s-min=11.1km az=129.0*

ISC 07 02:03:34.1±0.4**, 23°.69S**±0°.07×**175°.55W**±0°.07**, h10^{km}, n74, σ1§89**/71**, mb4.6**/22**, MS3.9**/6**, Tonga Islands region**

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Code  Station Name      Δ°   AZ°    Phase ID           Time      Res
                                   Op       ISC      h  m  s    ISC
RAO   Raoul Island      5.93 200   Pn       Pn       02 05 02.5 +0.5
      28nm,0.3s,baz=71,slow=22,SNR=1.5
RAO                                Sn       Sn       02 06 08.8 -1.3
      73nm,0.3s,baz=104,slow=22,SNR=2.4
RAO   Raoul Island      5.93 200            Pn       02 05 01.9 -0.1
NIUE  Niue              6.97  50   Pn       Pn       02 05 14.3 -1.9
MSVF  Nonsavu           8.42 314   Pn       Pn       02 05 40.4 +4.1
      5.7nm,0.3s,baz=173,slow=10,SNR=18
MSVF                               LR       LR       02 08 36.9
      comp=Z,2µm,18.9s,baz=147,slow=38
MSVF  Nonsavu           8.42 314   Pn       Pn       02 05 40.9 +4.6
AFI   Afiamalu         10.36  21   Pn       Pn       02 06 00.1 -2.8
      12nm,0.3s,baz=312,slow=10,SNR=6.8
AFI                                Sn       Sn       02 07 41.9  -17
      6.1nm,0.3s,baz=33,slow=20,SNR=1.8
RAR   Rarotonga        14.80  83   Pn       Pn       02 07 01.1 -2.4
      11nm,0.3s,baz=262,slow=7.2,SNR=21
RAR   Rarotonga        14.80  83   Pn       Pn       02 07 02.1 -1.3
OUZ   Omahuta          14.86 217            P        02 07 12.4 +2.2
PINNC Pines Island,    15.67 271            P        02 07 20.7 +1.4
PINNC                              IAmb     IAmb     02 07 48.7
      comp=Z,24nm,0.9s
URZ   Urewera          15.82 202   Pn       Pn       02 07 16.2 -0.7
      comp=Z,0.6nm,0.3s,baz=300,slow=24,SNR=1.9
URZ                                Sn       Sn       02 09 56.7  -16
      comp=Z,1.3nm,0.3s,baz=304,slow=24,SNR=2.1
DZM   Mont Dzumac      16.67 272   Pn       P        02 07 30.8 +0.4
      comp=Z,0.1nm,0.3s,baz=36,slow=21,SNR=3.9
DZM                                LR       LR       02 12 12.5
      comp=Z,471nm,20.9s,baz=299,slow=32
BKZ   Black Stump Fm   16.84 202   Pn       Pn       02 07 28.0 -2.0
PPT   Papeete          25.04  81   LR       LR       02 18 17.1
      comp=Z,179nm,18.4s,baz=208,slow=35
HNR   Honiara          27.36 297   LR       LR       02 19 39.7
      comp=Z,280nm,18.1s,baz=150,slow=36
ARMA  Armidale         29.91 250   P        P        02 09 43.1 +0.7
ARMA                               IAmb     IAmb     02 09 52.0
      comp=Z,7.7nm,1.0s
EIDS  Eidsvold         30.36 260   P        P        02 09 46.2 -0.1
EIDS                               IAmb     IAmb     02 09 48.9
      comp=Z,14nm,1.4s
CTAO  Charters Tower   35.55 268   P        P        02 10 30.3 -1.4
PMG   Port Moresby     38.32 285   P        P        02 10 52.1 -3.2
      comp=Z,15nm,0.9s,baz=60,slow=9.0,SNR=2.0
STKA  Stephens Creek   38.58 248   P        P        02 10 54.2 -3.1
      comp=Z,1.9nm,0.4s,baz=81,slow=8.8,SNR=9.0
STKA                               LR       LR       02 24 17.9
      comp=Z,156nm,20.8s,baz=28,slow=33
STKA  Stephens Creek   38.58 248   P        P        02 10 54.6 -2.7
COEN  Coen             40.12 276   P        P        02 11 09.9 -0.5
COEN                               IAmb     IAmb     02 11 33.0
      comp=Z,13nm,1.2s
BBOO  Buckleboo        43.27 247   P        P        02 11 34.1 -1.9
BBOO                               IAmb     IAmb     02 11 38.3
      comp=Z,15nm,1.4s
AS31  Alice Springs    46.08 259   P        P        02 11 57.1 -1.6
ASAR  Alice Springs    46.08 259   P        P        02 11 56.5 -2.1
      comp=Z,2.6nm,0.3s,baz=95,slow=6.9,SNR=31
ASAR                               PcP      PcP      02 13 36.3 +1.4
      comp=Z,0.5nm,0.4s,baz=104,slow=4.6,SNR=1.9
ASAR                               S        S        02 18 32.8  -12
      comp=Z,0.5nm,0.9s,baz=96,slow=15,SNR=2.1
ASAR                               LR       LR       02 30 46.4
      comp=Z,256nm,18.6s,baz=52,slow=36
ASAR  Alice Springs    46.08 259   P        P        02 11 56.7 -1.9
WR0   Warramunga Arr   46.30 265   P        P        02 11 58.8 -1.5
WR0                                IAmb     IAmb     02 12 02.9
      comp=Z,15nm,1.5s
WB2   Warramunga Arr   46.47 264   P        P        02 11 58.4 -3.3
WB2                                IAmb     IAmb     02 12 06.1
      comp=Z,8.5nm,1.1s
WB0   Warramunga Arr   46.48 265   P        P        02 11 59.0 -2.8
WB0                                IAmb     IAmb     02 12 06.0
      comp=Z,6.5nm,0.9s
WRA   Warramunga Arr   46.48 264   P        P        02 11 59.1 -2.7
      comp=Z,3.5nm,0.4s,baz=102,slow=8.6,SNR=54
WRA                                PcP      PcP      02 13 37.5 +1.1
      comp=Z,1.7nm,1.0s,baz=99,slow=4.0,SNR=3.0
WRA                                S        S        02 18 39.6  -11
      comp=Z,2.0nm,1.0s,baz=103,slow=13,SNR=8.6
WRA   Warramunga Arr   46.48 264   P        P        02 11 58.6 -3.2
FORT  Forrest          50.19 249   P        P        02 12 27.4 -2.9
KNRA  Kununurra        52.76 268   P        P        02 12 47.8 -1.9
KNRA                               IAmb     IAmb     02 12 58.8
      comp=Z,14nm,1.2s
PSA00 Pilbara Seismi   59.20 258   P        P        02 13 34.1 -1.7
MBWA  Marble Bar       59.41 259   P        P        02 13 36.0 -1.2
MBWA                               IAmb     IAmb     02 13 36.1
      comp=Z,15nm,1.3s
MORW  Morawa           60.76 249   P        P        02 13 45.0 -1.5
DAV   Davao City (W)   65.07 290   LR       LR       02 37 40.3
      comp=Z,70nm,21.3s,baz=148,slow=32
QSPA  South Pole Qui   66.40 180   P        P        02 14 26.0 +2.8
MAW   Mawson           79.33 199   P        P        02 15 41.7 +2.0
      comp=Z,3.2nm,0.5s,baz=164,slow=3.3,SNR=10
MAW   Mawson           79.33 199   P        P        02 15 41.6 +1.9
PETK  Petropavlovsk-   79.93 344   P        P        02 15 43.5 +0.5
      comp=Z,2.6nm,0.7s,baz=165,slow=8.4,SNR=3.4
NVAR  Mina Array Bea   81.82  42   P        P        02 15 57.5 +3.8
      comp=Z,0.4nm,0.5s,baz=217,slow=6.8,SNR=3.4
H03N2 Juan Fernandez   82.49 123   T        T        03 47 41.1
      baz=251,slow=73,SNR=84
H03N3 Juan Fernandez   82.49 123   T        T        03 47 45.3
      baz=251,slow=73,SNR=72
H03N1 Juan Fernandez   82.50 123   T        T        03 47 18.2
      baz=251,slow=73,SNR=57
SNAA  Sanae            84.76 178   P        P        02 16 10.4 +2.1
SNAA  Sanae            84.76 178   P        P        02 16 08.0 -0.3
VNA3  Neumayer Olymp   84.81 175   P        P        02 16 09.7 +1.2
VNA2  Neumayer--Watz   85.28 176   P        P        02 16 12.5 +1.7
      baz=188,slow=6.3
PLCA  Paso Flores      85.45 133   LR       LR       02 46 28.1
      comp=Z,67nm,21.3s,baz=219,slow=30
VNA1  Neumayer--Stat   85.49 176   P        P        02 16 13.5 +1.7
MNTX  Cornudas Mount   86.78  53   P        P        02 16 18.0 -0.8
MNTX                               IAmb     IAmb     02 16 23.4
      comp=Z,4.1nm,1.2s
TX31  Lajitas Ar. Si   86.90  56   P        P        02 16 20.6 +1.1
TX32  Lajitas Array    86.90  56   P        P        02 16 20.6 +1.1
TX32                               IAmb     IAmb     02 16 24.2
      comp=Z,6.7nm,1.4s
TXAR  Lajitas Array    86.90  56   P        P        02 16 21.3 +1.8
      comp=Z,1.7nm,1.0s,baz=207,slow=7.9,SNR=10.0
TXAR  Lajitas Array    86.90  56   P        P        02 16 20.7 +1.2
DOT   Dot Lake         90.50  13   P        P        02 16 36.7 +1.0
DOT                                IAmb     IAmb     02 16 50.4
      comp=Z,3.5nm,1.0s
ILAR  Eielson Array    90.93  12   P        P        02 16 38.0 +0.4
      comp=Z,0.5nm,0.6s,baz=222,slow=6.2,SNR=7.7
CMAR  Chiang Mai Arr   93.30 289   P        P        02 16 48.7 -0.9
      comp=Z,0.9nm,0.4s,baz=107,slow=3.0,SNR=1.2
MKAR  Makanchi Array  115.02 312   PKP      PKPdf    02 22 14.7 -0.6
      comp=Z,0.3nm,0.6s,baz=82,slow=0.4,SNR=4.4
MKAR  Makanchi Array  115.02 312            PKPdf    02 22 14.2 -1.1
BOSA  Boshof          124.27 202   PKP      PKiKP    02 22 34.9 +0.6
      comp=Z,2.1nm,0.9s,baz=261,slow=5.0,SNR=2.2
ARCES ARCESS Array B  132.44 350   PKP      PKPdf    02 22 48.0  0.0
      comp=Z,1.5nm,0.8s,baz=352,slow=3.2,SNR=6.9
FINES FINESS Array B  139.45 344   PKhKP    PKPpre   02 22 51.7
      comp=Z,6.1nm,1.1s,baz=76,slow=5.9,SNR=1.7
AKASG Malin Array Be  146.89 331   PKPbc    PKPbc    02 23 16.2 -0.3
      comp=Z,1.8nm,0.5s,baz=42,slow=4.1,SNR=13
BRTR  Keskin Array B  150.63 310   PKPbc    PKPbc    02 23 26.6 -0.1
      comp=Z,1.2nm,1.0s,baz=135,slow=3.2,SNR=6.1
BRTR  Keskin Array B  150.63 310            PKPbc    02 23 26.0 -0.7
CLL   Collm           151.65 349  ePKPbc    PKiKP    02 23 29.0 +0.1
DPC   Dobruska-Polom  151.82 344  ePKP      PKiKP    02 23 29.1 -0.3
KRLC  Kraliky         151.95 343  ePKP      PKPbc    02 23 27.1 -2.2
GERES GERESS Array B  153.85 346   PKP      PKPdf    02 23 26.2 +0.5
      comp=Z,0.1nm,0.3s,baz=345,slow=3.0,SNR=1.8
GERES                              PKPab    PKPab    02 23 46.2 -0.4
      comp=Z,0.7nm,0.6s,baz=353,slow=4.0,SNR=6.1
GERES GERESS Array B  153.85 346   PKPdf    PKPdf    02 23 25.3 -0.4
TORD  Torodi Ar. Bea  169.20 166   PKPab    PKPab    02 24 56.7 +2.6
      comp=Z,0.9nm,0.8s,baz=169,slow=2.8,SNR=5.8
TORD  Torodi Ar. Bea  169.20 166   PKPdf    PKPdf    02 23 40.5 -2.0
TORD                                        sPKPab   02 24 56.9 +0.2
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*IDC **07** 02:03:59.0±1.3, 38°.35N×21°.62E, h0^{km}, mb4.0/6, mb1 3.9/10, mb1mx3.7/43, mbtmp3.8/10, ML3.5/4, MS3.6/3, Ms1 3.6/3, ms1mx2.8/55, Error ellipse: s-maj=24.7km s-min=19.6km az=72.0*

*THE **07** 02:04:00.9, 38°.35N×21°.76E, h16^{km}±1^{km}, ML3.4/10, Error ellipse: s-maj=1.1km s-min=0.4km az=109.0*

*NEIC **07** 02:04:01.4±2.7, 38°.26N±0°.09×21°.83E±0°.04, h10^{km}±1^{km}, mb4.4/6, Error ellipse: s-maj=15.7km s-min=4.4km az=163.0*

*ATH **07** 02:04:01.1, 38°.34N×21°.75E, h13^{km}±1^{km}, ML3.3/32, Error ellipse: s-maj=1.4km s-min=0.7km az=98.0*

ISC 07 02:04:01.1±0.8**, 38°.38N**±0°.02×**21°.73E**±0°.02**, h13^{km}**±5^{km}**, n180, σ1§63**/208**, mb4.3**/10**, 10C-7D, Greece**

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Code  Station Name      Δ°   AZ°    Phase ID           Time      Res
                                   Op       ISC      h  m  s    ISC
EFP   Efpalio           0.15  70   P        Pg       02 04 04.4 -0.4
EFP                                S        Sg       02 04 07.2 -0.1
      27µm,0.2s
EFP   Efpalio           0.15  70   P        Pg       02 04 04.4 -0.4
EFP                                S        Sg       02 04 07.1 -0.1
EFP                                AML      AML      02 04 07.4
      comp=E,65844µm,0.2s
EFP                                AML      AML      02 04 07.7
      comp=N,36341µm,0.3s
LAKA  Lakka             0.24 125   P        Pg       02 04 05.5 -0.7
LAKA                               S        Sg       02 04 08.9 -0.9
LAKA                               AML      AML      02 04 09.1
LAKA                               AML      AML      02 04 10.8
      comp=N,64275µm,0.3s
SERG  Sergoula          0.26  82   P        Pg       02 04 06.3 -0.3
SERG                               S        Sg       02 04 10.4 +0.1
      comp=N,27µm,0.2s
SERG  Sergoula          0.26  82   P        Pg       02 04 06.4 -0.3
SERG                               S        Sg       02 04 10.4 +0.1
SERG                               AML      AML      02 04 10.6
      comp=E,52562µm,0.2s
SERG                               AML      AML      02 04 10.6
      comp=N,85803µm,0.2s
ANX   Ano Chora         0.26  35   P        Pg       02 04 06.8 +0.1
ANX                                S        Sg       02 04 11.3 +0.8
      comp=N,17µm,0.3s
ANX   Ano Chora         0.26  35   P        Pg       02 04 06.8 +0.1
ANX                                S        Sb       02 04 11.7 -0.5
ANX                                AML      AML      02 04 13.8
      comp=N,34773µm,0.3s
ANX                                AML      AML      02 04 14.3
      comp=E,31881µm,0.3s
TRIZ  Trizonia          0.27  93   P        Pg       02 04 06.4 -0.4
TRIZ                               S        Sg       02 04 10.4 -0.2
      comp=E,2µm,0.3s
TRIZ  Trizonia          0.27  93   P        Pg       02 04 06.5 -0.3
TRIZ                               S        Sg       02 04 10.4 -0.2
ALIK  Aliki, Aigiali    0.32 111   P        Pg       02 04 07.3 -0.4
ALIK                               S        Sg       02 04 12.1  0.0
RLS   Riolos of Patr    0.38 213   P        Pg       02 04 08.4 -0.4
RLS                                S        Sg       02 04 14.5 +0.5
      comp=E,5µm,0.4s
RLS   Riolos of Patr    0.38 213   P        Pg       02 04 08.5 -0.4
RLS                                S        Sg       02 04 13.9  0.0
RLS                                AML      AML      02 04 14.7
      comp=N,10098µm,0.5s
RLS                                AML      AML      02 04 16.0
      comp=E,10421µm,0.3s
DRO   Drossia           0.43 182   P        Pg       02 04 08.8 -0.8
DRO                                S        Sg       02 04 15.2 -0.1
      comp=E,12µm,0.3s
DRO   Drossia           0.43 182   P        Pg       02 04 08.7 -0.8
DRO                                S        Sg       02 04 14.9 -0.4
DRO                                AML      AML      02 04 15.8
      comp=N,20525µm,0.3s
DRO                                AML      AML      02 04 19.2
      comp=E,27327µm,0.3s
KLV   Kalavryta, Ach    0.47 135   P        Pg       02 04 09.4 -1.0
KLV                                S        Sg       02 04 15.5 -1.2
      comp=E,2µm,0.2s
KLV   Kalavryta, Ach    0.47 135   P        Pg       02 04 09.4 -1.0
KLV                                S        Sg       02 04 15.3 -1.4
KLV                                AML      AML      02 04 18.1
      comp=E,4332µm,0.2s
KLV                                AML      AML      02 04 18.7
      comp=N,5265µm,0.3s
EVR   Evrytania         0.54   6   P        Pg       02 04 11.5 -0.3
EVR                                S        Sb       02 04 21.1 +0.9
      comp=N,3µm,0.3s
EVR   Evrytania         0.54   6   P        Pg       02 04 11.8  0.0
EVR                                S        Sb       02 04 20.3 +0.1
EVR                                AML      AML      02 04 23.9
      comp=N,6018µm,0.3s
EVR                                AML      AML      02 04 24.9
      comp=E,5797µm,0.2s
DLFA  Delphi            0.61  80   P        Pg       02 04 12.0 -1.0
VTN   Vitineika         0.63 223   P        Pb       02 04 13.6 -0.3
GUR   Goura             0.65 132   P        Pg       02 04 12.4 -1.5
GUR                                S        Sg       02 04 21.8 -0.7
      comp=E,5µm,0.3s
GUR   Goura             0.65 132   P        Pg       02 04 12.6 -1.3
GUR                                S        Sg       02 04 21.4 -1.2
GUR                                AML      AML      02 04 23.2
      comp=E,11081µm,0.3s
GUR                                AML      AML      02 04 23.9
      comp=N,10158µm,0.3s
MAKR  Makrakomi, Fth    0.71  26   P        Pg       02 04 15.0 +0.1
MAKR                               AML      AML      02 04 28.4
      comp=N,3877µm,0.3s
MAKR                               AML      AML      02 04 29.3
      comp=E,6838µm,0.3s
AGG   Agios Georgios    0.80  36   P        Pg       02 04 15.8 -0.7
AGG                                S        Sb       02 04 28.4 +0.9
      comp=E,3µm,0.4s
AGG   Agios Georgios    0.80  36   P        Pg       02 04 16.1 -0.5
AGG                                AML      AML      02 04 29.7
      comp=E,4877µm,0.5s
AGG                                AML      AML      02 04 30.5
      comp=N,7069µm,0.4s
AGG   Agios Georgios    0.80  36   Pg       Pg       02 04 15.9 -0.7
THAL  Thalero           0.81 115   P        Pg       02 04 15.8 -1.0
THAL                               AML      AML      02 04 32.8
      comp=E,11085µm,0.2s
THAL                               AML      AML      02 04 33.8
      comp=N,9730µm,0.4s
EVGI  Lefkada island    0.88 286   P        Pg       02 04 17.3 -0.8
EVGI  Lefkada island    0.88 286   P        Pg       02 04 17.9 -0.2
VLS   Valsamata         0.92 258   P        Pg       02 04 18.0 -0.9
VLS   Valsamata         0.92 258   P        Pg       02 04 18.2 -0.7
VLS                                AML      AML      02 04 34.3
      comp=E,2816µm,0.2s
VLS                                AML      AML      02 04 35.0
      comp=N,3639µm,0.2s
FSK   Fiskardo          0.92 275   P        Pb       02 04 18.5 -0.5
FSK                                AML      AML      02 04 35.2
      comp=N,2641µm,0.2s
FSK                                AML      AML      02 04 35.3
      comp=E,7119µm,0.1s
LKD2  Lefkada island    0.94 296   P        Pb       02 04 18.6 -0.6
LKD2  Lefkada island    0.94 296   P        Pb       02 04 18.9 -0.3
LKD2                               AML      AML      02 04 42.9
      comp=E,4184µm,0.5s
LKD2                               AML      AML      02 04 43.2
      comp=N,4008µm,0.4s
PSDA  Pessada-Kefalo    0.94 254   P        Pb       02 04 18.1 -1.1
PSDA  Pessada-Kefalo    0.94 254   P        Pb       02 04 18.6 -0.7
TSLK  Tsoukalades, L    0.95 298   P        Pb       02 04 19.3 -0.2
LTHK  Lithakia          0.97 227   P        Pb       02 04 19.0 -0.7
LTHK  Lithakia          0.97 227   P        Pb       02 04 19.0 -0.7
LTHK                               AML      AML      02 04 41.4
      comp=N,4173µm,0.6s
LTHK                               AML      AML      02 04 41.8
      comp=E,7107µm,0.6s
LKR   Lokris            1.03  74   P        Pb       02 04 19.9 -0.9
LKR                                AML      AML      02 04 39.4
      comp=N,4078µm,0.2s
LKR                                AML      AML      02 04 39.7
      comp=E,3926µm,0.2s
LXRA  Lixouri, Kepha    1.03 260   P        Pb       02 04 20.3 -0.5
KEF4  Livadi, Kephal    1.03 264   P        Pb       02 04 19.9 -0.9
LTK   Loutraki          1.04 110   P        Pb       02 04 20.1 -0.8
LTK                                AML      AML      02 04 38.4
      comp=N,1648µm,0.6s
LTK                                AML      AML      02 04 40.5
      comp=E,3290µm,0.5s
ATAL  Atalanti          1.06  72   P        Pb       02 04 19.8 -1.5
ATAL                               AML      AML      02 04 37.0
      comp=N,2606µm,0.7s
ATAL                               AML      AML      02 04 37.9
      comp=E,1053µm,0.3s
KEF3  Kipouria, Keph    1.10 261   P        Pb       02 04 20.8 -1.2
THL   Klokotos Trika    1.21  10   P        Pn       02 04 23.6  0.0
THL   Klokotos Trika    1.21  10   P        Pg       02 04 24.5 +0.1
THL                                AML      AML      02 04 44.6
      comp=N,988µm,0.5s
THL                                AML      AML      02 04 46.7
      comp=E,2137µm,1.0s
ITM   Ithomi            1.21 173   P        Pn       02 04 22.9 -0.8
ITM                                AML      AML      02 04 46.7
      comp=E,1332µm,0.5s
ITM                                AML      AML      02 04 46.8
      comp=N,1447µm,0.5s
ITM   Ithomi            1.21 173            Pn       02 04 22.9 -0.8
VIL2  Platees           1.22  97   P        Pg       02 04 24.8 +0.2
VIL2                               AML      AML      02 04 44.1
      comp=N,2093µm,0.3s
VIL2                               AML      AML      02 04 45.0
      comp=E,2835µm,0.3s
EPID  Epidavros         1.34 124   P        Pb       02 04 26.0  0.0
JAN   Janina            1.45 332   P        Pg       02 04 28.9 -0.1
JAN                                AML      AML      02 04 58.7
      comp=E,1380µm,0.5s
JAN                                AML      AML      02 05 01.0
      comp=N,1303µm,0.4s
NEO   Neokhori          1.49  51   P        Pb       02 04 28.3 -0.3
KRND  KRANIDI           1.50 131   P        Pn       02 04 28.1 +0.5
KRND                               AML      AML      02 04 57.9
      comp=E,2085µm,0.5s
KRND                               AML      AML      02 04 58.6
      comp=N,1664µm,0.4s
XOR   Xorichti          1.51  49   P        Pb       02 04 28.6 -0.4
KPRO  Kipourio          1.60 350   P        Pg       02 04 31.7 -0.2
KPRO                               AML      AML      02 05 04.0
      comp=N,1447µm,0.9s
KPRO                               AML      AML      02 05 12.3
      comp=E,1382µm,0.7s
ATH   Athens Observa    1.62 104   P        Pb       02 04 30.1 -0.7
ATH                                AML      AML      02 04 56.1
      comp=N,1160µm,0.4s
ATH                                AML      AML      02 04 57.5
      comp=E,1714µm,0.7s
ATHU  Athens Univers    1.67 104   P        Pn       02 04 30.2 +0.2
ATHU                               AML      AML      02 04 53.2
      comp=N,897µm,0.5s
ATHU                               AML      AML      02 04 55.6
      comp=E,338µm,0.4s
VLY   Voula,Athens      1.71 107   P        Pn       02 04 31.1 +0.5
VLY                                AML      AML      02 04 58.2
      comp=N,834µm,0.6s
VLY                                AML      AML      02 04 59.3
      comp=E,958µm,0.3s
PTL   Penteli           1.71 100   P        Pn       02 04 31.1 +0.4
PTL                                AML      AML      02 04 57.6
      comp=N,1020µm,0.4s
PTL                                AML      AML      02 04 58.9
      comp=E,1075µm,0.5s
DION  Dionisos Attik    1.76  99   P        Pn       02 04 32.2 +0.9
DION                               AML      AML      02 04 56.0
      comp=E,1889µm,0.4s
DION                               AML      AML      02 04 59.7
      comp=N,2153µm,0.7s
KYMI  Kymi, Euboea I    1.88  81   P        Pn       02 04 33.3 +0.4
VLI   Veliai            1.91 150   P        Pn       02 04 34.0 +0.6
VLI                                AML      AML      02 05 08.8
      comp=N,688µm,1.0s
VLI                                AML      AML      02 05 14.1
      comp=E,714µm,1.0s
```

KZN	Kozani	1.93	1	P	Pb	02 04 36.8	+0.7
KZN				AML	AML	02 05 10.1	
	comp=E,1045µm,0.6s						
KZN				AML	AML	02 05 10.4	
	comp=N,593µm,0.5s						
KEK	Kerkira	2.01	312	P	Pb	02 04 37.1	-0.4
KARY	Karystos	2.16	98	P	Pn	02 04 37.4	+0.7
KBN	Korca	2.36	342		Pb	02 04 44.3	+0.9
KTHA	Kythira Island	2.37	153	P	Pb	02 04 42.8	-0.9
FNA	Florina	2.42	354		Pb	02 04 43.8	-0.7
VLO	Vlora	2.71	321	Pn	Pb	02 04 47.5	-1.9
ANKY	Antikythira Is	2.80	153	P	Pb	02 04 48.8	-2.2
OHR	Ohrid	2.82	346	*i* Pn	Pb	02 04 50.4	-1.0
VAY	Valandovo	3.01	12	*i* Pn	Pb	02 04 51.6	-2.9
TIR	Tirane	3.29	335	⇑P	Pg	02 05 05.3	+1.0
STIP	Stip	3.33	6	*i* Pn	Pb	02 04 56.6	-3.4
SKO	Skopje	3.60	357	*i* Pn	Pn	02 04 58.8	+2.3
TIP	Timpagrande	3.97	283	⇑P	Pn	02 05 04.5	+2.9
TIP				⇓S	Sn	02 05 52.1	+4.0
TIP	Timpagrande	3.97	283	Pn	Pn	02 05 02.9	+1.2
IDI	Anoyia	3.99	140	Pn	Pn	02 05 03.1	+1.1
	comp=N,1.0nm,0.3s,baz=321,slow=13,SNR=2.8						
IDI				Sn	Sn	02 05 50.4	+1.7
	comp=N,2.8nm,0.3s,baz=264,slow=20,SNR=2.2						
PRVS	Prvonek	4.13	4	*e*Pn	Pn	02 05 07.9	+4.0
BOSS	Bosilegrad	4.15	8	*e*Pn	Pn	02 05 07.4	+3.2
ALN	Alexandroupoli	4.17	52	Pn	Pn	02 05 04.6	+0.1
DRME	Dracevica, Mon	4.27	334	*e*Pn	Pn	02 05 08.3	+2.5
VTS	Vitosha	4.39	15	⇓P	Pb	02 05 12.9	-5.2
VTS	Vitosha	4.39	15	Pn	Pn	02 05 09.9	+2.4
BARS	Barje	4.43	1	*e*Pn	Pn	02 05 11.4	+3.4
PDG	Podgorica	4.47	336	⇑P	Pg	02 05 24.9	-1.8
PDG	Podgorica	4.47	336	*e*Pn	Pn	02 05 10.2	+1.8
PDG	Podgorica	4.47	336	Pn	Pn	02 05 10.0	+1.5
MATE	Matera	4.50	302	⇑P	Pb	02 05 19.6	-0.3
MATE				⇑S	Sg	02 06 37.8	+12
HCY	Herceg Novi	4.76	330	*e*Pn	Pn	02 05 13.1	+0.6
SELS	Selova	4.86	355	*e*Pn	Pn	02 05 16.2	+2.3
ZAPS	Zavoj	4.94	8	*e*Pn	Pn	02 05 18.0	+3.0
TREB	Trebinje	5.04	330	*e*Pn	Pn	02 05 17.0	+0.6
SJES	Sjenica	5.06	345	*e*Pn	Pn	02 05 19.7	+3.0
DBRK	Dubrovnik	5.08	329	*e*Pn	Pn	02 05 17.4	+0.5
DBRK				Sn	Sn	02 06 12.9	-2.5
BOVS	Bovan	5.25	360	⇑P	Pb	02 05 26.3	-6.4
UPM	Unac-Piva	5.28	337	*e*Pn	Pn	02 05 22.4	+2.6
IVAS	Ivanjica	5.33	348	*e*Pn	Pn	02 05 22.8	+2.4
STON	Ston	5.44	327	*e*Pn	Pn	02 05 21.7	0.0
STON	Ston	5.44	327	*e*Pn	Pn	02 05 22.0	+0.3
STON				Sn	Sn	02 06 20.9	-3.2
ZAGS	Zajecar	5.44	4	*e*Pn	Pn	02 05 24.2	+2.3
RUDO	Rudo	5.53	342	*e*Pn	Pn	02 05 24.0	+0.9
GRUS	Gruza	5.56	352	*e*Pn	Pn	02 05 27.9	+4.4
SGRT	San Giovanni R	5.70	308		Pn	02 05 26.6	+1.1
LSTV	Lastovo	5.73	321	*e*Pn	Pn	02 05 25.6	-0.1
LSTV				Sn	Sn	02 06 27.2	-4.0
BBLS	Lazići	5.76	343	*e*Pn	Pn	02 05 28.2	+1.9
BBLS	Lazići	5.76	343	*e*Pn	Pn	02 05 28.6	+2.3
DIVS	Divibare	5.86	348	*e*Pn	Pn	02 05 29.3	+1.6
DIVS				*e*Pn	Pb	02 05 29.6	-14
DIVS	Divibare	5.86	348	Pn	Pn	02 05 29.3	+1.6
DIVS	Divibare	5.86	348	*e*Pn	Pn	02 05 29.8	+2.1
TRUS	Trudelj	5.92	351	*e*Pn	Pn	02 05 32.1	+3.6
RAFF	Raffo Rosso	5.95	261	Pn	Pn	02 05 31.6	+2.7
MAKA	Makarska	6.07	325	*e*Pn	Pn	02 05 30.8	+0.3
MAKA				Sn	Sn	02 06 36.0	-3.7
PAOL	Paolisi	6.13	298	Pn	Pn	02 05 33.6	+2.3
RICI	Ricice	6.18	327	*e*Pn	Pn	02 05 32.3	+0.2
RICI				Sn	Sn	02 06 40.0	-2.5
HVAR	Hvar	6.25	322	*e*Pn	Pn	02 05 32.0	-0.9
HVAR				Sn	Sn	02 06 39.9	-4.3
FRGS	Fruska Gora	6.92	349	*e*Pn	Pn	02 05 42.5	+0.3
MGRS	Mrkonjic Grad	6.97	331	*e*Pn	Pn	02 05 43.7	+0.8
ZIRJ	Zirje	7.00	321	*e*Pn	Pn	02 05 42.4	-0.8
ZIRJ				Sn	Sn	02 06 58.5	-4.0
GZR	Gura Zlata	7.05	6	⇑P	Pn	02 05 51.0	+7.0
MORI	Morici	7.12	322	*e*Pn	Pn	02 05 45.5	+0.6
MORI				Sn	Sn	02 07 02.6	-3.0
BLY	Banja Luka	7.22	333	*e*Pn	Pn	02 05 46.2	-0.1
VOIR		7.47	18	⇑P	Pg	02 06 39.3	+15
DUGI	Dugi Otok	7.53	320	*e*Pn	Pn	02 05 51.0	+0.5
DUGI				Sn	Sn	02 07 12.7	-3.1
UDBI	Udbina	7.60	326	*e*Pn	Pn	02 05 52.9	+1.3
UDBI				Sn	Sn	02 07 15.0	-2.6
MDUB	Mudurnu	7.62	71	Pn	Pn	02 05 53.8	+1.9
MLR	Muntele Rosu	7.77	22	Pn	Pn	02 05 56.6	+2.7
	comp=N,0.3nm,0.3s,baz=189,slow=13,SNR=2.4						
MLR				Sn	Sn	02 07 11.8	-10
	comp=N,0.2nm,0.3s,baz=65,slow=3.8,SNR=4.4						
SIRR	Siria	7.88	360	⇓P	Pg	02 06 46.6	+15
NRCA	Norcia	7.92	307	Pn	Pn	02 05 57.7	+1.7
NVLJ	Novalja	8.04	322	*e*Pn	Pn	02 05 58.5	+1.0
NVLJ				Sn	Sn	02 07 24.6	-3.7
DOPR	Dopca	8.05	19	⇓P	Pg	02 06 47.8	+13
MOSL	Moslavina	8.12	334	*e*Pn	Pn	02 05 59.2	+0.5
MOSL				Sn	Sn	02 07 28.9	-1.4
MORH	Mrgy, Hungar	8.16	345	*e*Pn	Pn	02 05 59.3	+0.2
RABC	Rab	8.22	323	*e*Pn	Pn	02 05 59.6	-0.4
RABC				Sn	Sn	02 07 28.5	-4.2
PLOR	Plostina	8.31	24	⇓P	Pn	02 06 08.6	+7.3
MURB	Monte Urbino	8.51	308	Pn	Pn	02 06 06.7	+2.6
SMRN	Sveta Marina	8.73	322	*e*Pn	Pn	02 06 07.8	+0.8
SMRN				Sn	Sn	02 07 41.9	-3.4
CRES	Cresnjev	8.78	330	*e*Pn	Pn	02 06 07.7	0.0
BRJN	Brijuni	8.84	320	*e*Pn	Pn	02 06 08.3	-0.1
BRJN				Sn	Sn	02 07 43.4	-4.5
TESR	Tescani	8.90	22	⇑P	Pg	02 07 04.9	+13
ARCR	ARCALIA	8.91	12	⇓P	Pg	02 06 49.9	-1.7
CEY	Cerknica	9.14	326	*e*Pn	Pn	02 06 13.1	+0.5
BRTR	Keskin Array B	9.36	78	Pn	Pn	02 06 18.6	+2.8
	comp=N,0.2nm,0.3s,baz=256,slow=12,SNR=9.6						
BRTR	Keskin Array B	9.36	78	Pn	Pn	02 06 17.0	+1.2
PSZ	Piszkesteto	9.63	353	⇑P	Pn	02 06 24.7	+5.3
SOKA	Soboth	9.65	331	Pn	Pn	02 06 20.7	+1.0
	comp=N,1.0nm,0.3s,SNR=5.3						
OBKA	Obir	9.70	329	*e*Pn	Pn	02 06 21.4	+1.1
	comp=N,0.2nm,0.2s						
ARSA	Arzberg	9.97	335	*e*Pn	Pn	02 06 26.3	+2.4
	comp=N,0.4nm,0.3s						
PRED	Cave del Predi	10.06	326	Pn	Pn	02 06 26.4	+1.1
TEOL	Teolo	10.24	316	Pn	Pn	02 06 28.7	+1.0
STAL	STALIGIAL	10.32	323	Pn	Pn	02 06 29.2	+0.4
ZOU	Zoufplan	10.42	324	Pn	Pn	02 06 30.6	+0.3
CIMO	Cimolais	10.49	322	Pn	Pn	02 06 29.8	-1.3
CTI	Castel Tesino	10.70	319	Pn	Pn	02 06 34.0	-0.1
ABTA	Abfaltersbach	10.77	324	*e*Pn	Pn	02 06 35.5	+0.5
	comp=N,1.0nm,0.4s						
MOA	Molln	10.92	332	*e*Pn	Pn	02 06 39.5	+2.5
	comp=N,1.1nm,0.3s						
VRAC	Vranov	11.54	343	⇓P	Pn	02 06 41.9	-3.5
VRAC	Vranov	11.54	343	LR	LR	02 11 28.3	
	comp=N,99nm,18.4s,baz=326,slow=39						
WTTA	Wattenberg	11.56	323	*e*Pn	Pn	02 06 47.1	+1.2
	comp=N,0.5nm,0.2s						
WATA	Walderalm	11.64	324	*e*Pn	Pn	02 06 48.2	+1.3
	comp=N,1.9nm,0.4s						
SQTA	Sankt Quirin	11.73	322	*e*Pn	Pn	02 06 49.3	+1.1
	comp=N,1.1nm,0.3s						
GERES	GERESS Array B	11.96	334	Pn	Pn	02 06 52.0	+0.7
	comp=N,0.2nm,0.3s,baz=155,slow=14,SNR=3.0						
GERES				LR	LR	02 11 52.7	
	comp=N,146nm,20.2s,baz=250,slow=40						
KHC	Kasperske Hory	12.25	334	*e*PN	Pn	02 06 56.2	+1.0
SENIN	Lac Senin/Sane	13.31	311	Pn	Pn	02 07 13.1	+3.3
CLL	Collm	14.32	337	*e*P	Pn	02 07 25.0	+1.6
CLF	Chambon-Foret	17.12	311	P	Pn	02 07 58.9	-1.0
FINES	FINESS Array B	23.25	5	P	P	02 09 08.4	+0.5
	comp=N,4.9nm,0.9s,baz=187,slow=10,SNR=1.2						
TORD	Torodi Ar. Bea	30.79	221	P	P	02 10 16.0	-0.6
	comp=N,0.2nm,0.5s,baz=46,slow=7.8,SNR=0.7						
ARCES	ARCESS Array B	31.28	3	P	P	02 10 20.0	-0.3
	comp=N,1.5nm,0.8s,baz=185,slow=9.0,SNR=1.2						
KKAR	Karatay Array	36.84	67	P	P	02 11 09.5	+0.6
GAR	Garm	37.57	73	P	P	02 11 16.7	+1.5
GAR				IAmb	IAmb	02 11 23.4	
	comp=Z,10nm,1.4s						
BOOM	Boomskoye usch	40.88	66	P	P	02 11 42.7	-0.3
MAKZ	Makanchi	44.17	59	P	P	02 12 09.4	-0.1
MAKZ				IAmb	IAmb	02 12 10.3	
	comp=Z,7.8nm,1.5s						
MK31	Makanchi Array	44.38	59	P	P	02 12 11.6	+0.5
MK31				IAmb	IAmb	02 12 12.4	
	comp=Z,3.7nm,0.6s						
MKAR	Makanchi Array	44.38	59	P	P	02 12 11.8	+0.7
	comp=Z,5.4nm,0.5s,baz=275,slow=7.5,SNR=109						
ZAA0	Zalesovo Array	44.85	48	P	P	02 12 15.3	+0.6
ZAA0				IAmb	IAmb	02 12 15.6	
	comp=Z,2.8nm,0.6s						
ZALV	Zalesovo Beam	44.85	48	P	P	02 12 14.9	+0.2
	comp=Z,3.1nm,0.5s,baz=271,slow=8.6,SNR=14						
ZALV	Zalesovo Beam	44.85	48	P	P	02 12 15.1	+0.4
SONM	Songino Array	59.59	51	P	P	02 14 04.8	+0.2
	comp=Z,0.3nm,0.5s,baz=282,slow=8.8,SNR=2.4						
SONM				LR	LR	02 44 00.8	
	comp=Z,263nm,21.1s,baz=126,slow=40						

EAF ***07*** *02:12:56.8±1.1,25°.84S×27°.55E,h10^{km},MD3.6*

BUL 07 02:12:56.8±1.1,**25°.84S**×**27°.55E,h10**^{km}**,MD3.8,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	1.94	295	*i* P	Pn	02 13 29.7	-0.3
LBTB	Lobatse	1.94	295	*i* P	Pn	02 13 29.7	-0.3
MATP	Matopo	5.46	9	*i* P	Pn	02 14 18.7	+0.3
MATP				*i* S	Sn	02 15 16.9	-4.5
MATP	Matopo	5.46	9	*i* P	Pn	02 14 18.7	+0.3
MATP				*i* S	Sn	02 15 16.9	-4.5
BLWY	Bulawayo	5.76	10	*i* P	Pn	02 14 21.0	-1.5
BLWY				*i* S	Sn	02 15 22.9	-5.8
BLWY	Bulawayo	5.76	10	*i* P	Pn	02 14 21.0	-1.5
BLWY				*i* S	Sn	02 15 22.9	-5.8
KRI	Karoi	9.17	13	*i* P	Pn	02 15 00.7	-8.7
KRI				*i* S	Sn	02 16 32.8	-20
KRI	Karoi	9.17	13	*i* P	Pn	02 15 00.7	-8.7
KRI				*i* S	Sn	02 16 32.8	-20

IDC ***07*** *02:35:31.0±1.2,29°.62N×140°.92E,h0^{km},mb3.4/6, mb1 3.6/7,mb1mx3.2/34,mbtmp3.4/7,ML3.1/1,Error ellipse: s-maj=44.7km s-min=19.2km az=70.0*

ISC 07 02:35:38.8±0.9,**29°.5N**±0°.1×**141°.0E**±0°.2,**h67**^{km}**,n7,** σ**1^{s}.43**/8,**mb3.5**/6,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.62	157	Pn	Pn	02 36 16.8	-2.0
	3.2nm,0.3s,baz=124,slow=21,SNR=1.6						
JCJ				Sn	Sn	02 36 50.2	+0.8
	15nm,0.3s,baz=272,slow=23,SNR=7.1						
SONM	Songino Array	32.29	314	P	P	02 42 00.6	-0.7
	0.6nm,0.9s,baz=105,slow=10.0,SNR=4.0						
MKAR	Makanchi Array	48.17	308	P	P	02 44 12.3	0.0
	0.4nm,0.7s,baz=92,slow=8.5,SNR=4.1						
WRA	Warramunga Arr	49.59	188	P	P	02 44 24.7	+1.3
	0.6nm,0.7s,baz=6.3,slow=7.7,SNR=7.7						
ASAR	Alice Springs	53.32	188	P	P	02 44 52.8	+1.6
	0.2nm,0.7s,baz=0.4,slow=5.2,SNR=4.7						
ILAR	Eielson Array	56.09	29	P	P	02 45 11.5	+0.7
	0.3nm,0.8s,baz=266,slow=5.4,SNR=2.2						
BRTR	Keskin Array B	83.62	312	P	P	02 47 59.9	-0.4
	0.5nm,0.8s,baz=66,slow=5.4,SNR=2.4						

IDC ***07*** *02:39:26.7±0.8,39°.03N×140°.84E,h0^{km},mb3.6/11, mb1 3.8/14,mb1mx3.5/43,mbtmp3.6/14,ML2.5/3,Error ellipse: s-maj=21.1km s-min=15.0km az=119.0*

JMA ***07*** *02:39:27.8,39°.06N×140°.86E,h8^{km}±1^{km},M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s189.00000°,δ33.00000°,λ131.00000°. NP2: ϕ_s323.00000°,δ66.00000°,λ67.00000°. Principal axes: T Plg62.0000°, Azm197.0000°; N Plg21.0000°, Azm333.0000°; P Plg18.0000°, Azm70.0000°;*

JMA Felt II J1.

ISC 07 02:39:27.8±1.0,**39°.04N**±0°.03×**140°.86E**±0°.03,**h8**^{km}±7^{km}, **n27,**σ**0^{s}.81**/33,**mb3.8**/11,**3C-5D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.29	107	⇓P	Pg	02 39 33.6	0.0
JMK				S	Sg	02 39 37.8	+0.3
JRG	Rokugo	0.40	334	⇑P	Pg	02 39 35.4	-0.2
JRG				S	Sg	02 39 40.9	0.0
JYK	Kaneyama	0.41	253	⇓P	Pg	02 39 35.9	+0.2
JYK				S	Sg	02 39 41.5	+0.4
JKMT	Kesennumamotoy	0.53	115	⇓P	Pg	02 39 37.9	-0.1
JKMT				S	Sg	02 39 45.5	+0.6
JOM	Ohasama	0.55	37	⇓P	Pg	02 39 38.0	-0.4
JOM				S	Sg	02 39 45.6	-0.1
OFUJ	Ofunato	0.63	86	⇓P	Pg	02 39 39.7	-0.3
JOU	Okura	0.69	193	⇑P	Pb	02 39 41.4	-0.6
JOU				S	Sb	02 39 50.8	-0.9
JIO	Ouri	0.70	147	⇑P	Pg	02 39 41.1	-0.1
JIO				S	Sg	02 39 50.7	+0.5
JYA	Atsumi	1.00	244	P	Pb	02 39 46.8	-0.5
JYA				S	Sb	02 40 00.9	+0.2
MAT	Matsushiro	3.26	221	P	Pn	02 40 21.1	+1.9
MAT				*e*S	Sb	02 41 03.4	-2.3
MJAR	Matsushiro Arr	3.26	221	Pn	Pn	02 40 19.2	0.0
	0.4nm,0.3s,baz=28,slow=14,SNR=6.7						
MJAR				Lg	Lg	02 41 11.0	
	0.2nm,0.3s,baz=28,slow=26,SNR=1.6						
USRK	Ussuriysk Ar.	8.41	311	Pn	Pn	02 41 30.3	+0.4
	baz=116,slow=14,SNR=6.0						
KSRS	Korea Array	10.30	265	Pn	Pn	02 41 57.7	+1.9
	0.2nm,0.3s,baz=84,slow=15,SNR=2.4						
SONM	Songino Array	26.34	301	P	P	02 45 03.9	-0.4
	0.1nm,0.4s,baz=100,slow=6.0,SNR=1.8						
H11N2	WAKE ISLAND Hy	29.58	123	T	T	03 16 03.5	
	baz=317,slow=75,SNR=210						
H11N1	WAKE ISLAND Hy	29.59	123	T	T	03 16 06.1	
	baz=317,slow=75,SNR=259						
H11N3	WAKE ISLAND Hy	29.59	123	T	T	03 16 06.0	
	baz=317,slow=75,SNR=167						
ZALV	Zalesovo Beam	40.26	311	P	P	02 47 04.9	-0.1
	0.4nm,0.4s,baz=82,slow=11,SNR=4.4						
MKAR	Makanchi Array	42.71	300	P	P	02 47 24.6	-0.6
	0.6nm,0.8s,baz=78,slow=11,SNR=5.6						
ILAR	Eielson Array	48.05	33	P	P	02 48 07.8	+0.6
	0.7nm,0.9s,baz=264,slow=7.3,SNR=4.3						
INK	Inuvik	52.81	28	P	P	02 48 44.2	+1.1
	1.4nm,0.9s,baz=259,slow=6.9,SNR=4.3						
WRA	Warramunga Arr	58.99	187	P	P	02 49 27.4	-0.5
	0.6nm,0.4s,baz=2.9,slow=7.4,SNR=31						
ASAR	Alice Springs	62.71	187	P	P	02 49 53.0	-0.2
	0.2nm,0.3s,baz=355,slow=5.0,SNR=4.7						
FINES	FINESS Array B	66.84	332	P	P	02 50 19.1	-0.7
	2.8nm,1.0s,baz=56,slow=8.6,SNR=0.9						
AKASG	Malin Array Be	72.45	322	P	P	02 50 54.8	+0.3
	0.2nm,0.2s,baz=47,slow=6.0,SNR=2.2						
NVAR	Mina Array Bea	74.14	53	P	P	02 51 05.7	+0.7
	0.1nm,0.3s,baz=260,slow=7.0,SNR=2.7						
PDAR	Pinedale Array	76.58	46	P	P	02 51 19.3	+0.4
	0.2nm,0.6s,baz=344,slow=3.0,SNR=2.2						

IDC ***07*** *02:51:10.6±1.7,17°.55S×174°.73W,h0^{km},mb3.7/6, mb1 4.1/7,mb1mx3.9/26,mbtmp3.7/7,ML4.6/1,Error ellipse: s-maj=104.7km s-min=22.0km az=154.0*

ISC 07 02:51:29.2±1.6,**17°.2S**±0°.5×**175°.1W**±0°.3,**h150**^{km}**,n22,** σ**2^{s}.10**/19,**mb3.4**/6,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.60	264	Pn	Pn	02 52 53.3	-11
	0.4nm,0.3s,baz=193,slow=22,SNR=1.5						
WRA	Warramunga Arr	47.90	258	P	P	02 59 52.7	+0.1
	0.6nm,0.7s,baz=96,slow=8.4,SNR=6.2						
ASAR	Alice Springs	48.06	253	P	P	02 59 53.0	-0.9
	3.9nm,0.8s,baz=90,slow=7.8,SNR=29						
ASAR				PcP	PcP	03 01 21.5	+2.1
	0.4nm,0.8s,baz=95,slow=5.0,SNR=1.4						
NVAR	Mina Array Bea	76.72	42	P	P	03 03 05.6	+1.3
	0.3nm,0.7s,baz=219,slow=7.9,SNR=3.0						
TXAR	Lajitas Array	82.93	56	P	P	03 03 36.6	-1.1
	0.3nm,0.8s,baz=215,slow=7.7,SNR=3.6						
ILAR	Eielson Array	84.51	12	P	P	03 03 45.2	+0.4
	1.0nm,1.0s,baz=221,slow=5.4,SNR=3.9						
PDAR	Pinedale Array	84.66	42	P	P	03 03 46.7	+0.3
	0.4nm,0.6s,baz=217,slow=2.8,SNR=3.4						
H03N2	Juan Fernandez	85.65	124	T	T	04 37 32.8	
	baz=257,slow=73,SNR=18						
H03N3	Juan Fernandez	85.65	124	T	T	04 37 35.7	
	baz=257,slow=73,SNR=18						
H03N1	Juan Fernandez	85.66	124	T	T	04 37 35.0	
	baz=257,slow=73,SNR=11						
BRTR	Keskin Array B	146.48	318	PKPbc	PKiKP	03 10 55.3	-0.7
	1.2nm,0.8s,baz=116,slow=2.9,SNR=7.9						
GERES	GERESS Array B	147.64	349	PKPbc	PKPab	03 10 58.4	-0.3
	1.1nm,0.9s,baz=45,slow=2.5,SNR=6.7						
CONA	Conrad Observa	148.07	346	*e*P	PKPab	03 10 58.7	-1.7
	4.2nm,1.1s						
MOA	Molln	148.49	348	*e*P	PKPab	03 11 03.0	+1.0
	7.5nm,2.0s						
KBA	Koelnbreinsper	149.41	349	*e*P	PKPab	03 11 09.4	+3.5
	0.5nm,0.5s						
RETA	Reutte	149.42	352	*e*P	PKPab	03 11 04.5	-1.3
	4.0nm,1.2s						
MOTA	Moosalm	149.51	352	*e*P	PKPab	03 11 07.0	+0.7
	5.6nm,1.4s						
WTTA	Wattenberg	149.51	351	*e*P	PKPab	03 11 04.1	-2.3
	4.9nm,1.2s						
SQTA	Sankt Quirin	149.62	352	*e*P	PKPab	03 11 03.7	-3.0
	3.9nm,1.3s						
DAVA	Damuels	149.72	353	*e*P	PKPab	03 11 04.5	-2.6
	6.2nm,1.2s						
ABTA	Abfaltersbach	149.87	350	*e*P	PKPab	03 11 05.0	-2.8
	4.4nm,1.0s						
FETA	Feichten	149.88	352	*e*P	PKPab	03 11 11.7	+3.8
	5.6nm,1.1s						

IDC ***07*** *02:54:37.2±0.7,17°.63S×174°.72W,h0^{km},mb4.6/12, mb1 4.8/13,mb1mx4.6/29,mbtmp4.6/13,ML4.9/1,MS4.2/24, Ms1 4.2/24,ms1mx4.1/33,Error ellipse: s-maj=30.6km s-min=15.8km az=151.0*

NEIC ***07*** *02:54:39.6±3.0,17°.65S±0°.09×174°.38W±0°.08,h10^{km}±1^{km}, mb5.2/129,Error ellipse: s-maj=15.8km s-min=12.6km az=167.0*

BGR ***07*** *02:54:41.7±0.0,17°.62S×174°.45W,h21^{km}±1^{km}*

BJI ***07*** *02:54:42.9±0.0,17°.79S×174°.25W,h54^{km},mB5.4/2, mb5.0/24,Ms4.8/2,Ms7 4.5/3*

GCMT ***07*** *02:54:42.7±0.2,17°.71S±0°.02×174°.42W±0°.01,h12^{km}, MW5.0/118,Moment Tensor Solution. s56,c63; s118,c169; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.14±.16; M$_{\theta\theta}$0.09±.11; M$_{\phi\phi}$4.05±.12; M$_{r\theta}$0.37±.29; M$_{\theta\phi}$0.68±.07; M$_{\phi r}$1.62±.28; Best double couple: M$_0$4.47200×10^{16} NP1:ϕ_s8.00000°,δ34.00000°, λ-92.00000°. NP2:ϕ_s191.00000°,δ56.00000°, λ-89.00000°. Principal axes: T 4.4820, Plg11.0000°, Azm280.0000°; N -0.0230, Plg1.0000°, Azm10.0000°; P -4.4610, Plg79.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***07*** *02:54:45.5±2.2,17°.34S×174°.99W,h48^{km},mb5.2/17 Error ellipse: s-maj=12.7km s-min=11.2km az=154.6*

ISC 07 02:54:39.1±0.6,**17°.72S**±0°.07×**174°.46W**±0°.06,**h13**^{km}±3^{km}, **h13**^{km}**:pP-P,n548,**σ**1^{s}.10**/481,**mb5.2**/88,**MS4.2**/22, **49C-16D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.51	108	Pn	Pn	02 55 44.5	-2.7
AFI	Afiamalu	4.58	35	Pn	Pn	02 55 44.6	-3.6
	8.3nm,0.3s,baz=236,slow=13,SNR=5.0						
AFI				Sn	Sn	02 56 39.1	-2.3
	5.8nm,0.3s,baz=75,slow=16,SNR=3.7						
AFI				LR	LR	02 57 13.4	
	comp=Z,2µm,20.8s,baz=166,slow=34						
MSVF	Nonsavu	7.14	269	Pn	Pn	02 56 21.7	-1.8
	0.8nm,0.3s,baz=137,slow=23,SNR=1.7						
MSVF				LR	LR	02 58 45.7	
	comp=Z,9µm,19.6s,baz=95,slow=36						
MSVF	Nonsavu	7.14	269	Pn	Pn	02 56 25.9	+2.5
RAO	Raoul Island	11.91	195	LR	LR	03 01 16.9	
	comp=Z,562nm,21.7s,baz=19,slow=34						
RAR	Rarotonga	14.28	106	LR	LR	03 02 20.3	
	comp=Z,722nm,21.8s,baz=278,slow=32						
MARNC	Mare, Loyalty	16.92	254		Pn	02 58 38.3	+2.6
LIFNC	LIFOU	17.55	257	P	Pn	02 58 44.8	+1.1
LIFNC				IAmb	IAmb	02 58 54.4	
	comp=Z,311nm,1.2s						
PINNC	Pines Island,	17.67	251	P	P	02 58 48.0	+2.0
PINNC				IAmb	IAmb	02 58 57.5	
	comp=Z,191nm,1.4s						
SANVU	Saraoutou	17.72	275	P	Pn	02 58 46.1	+0.3
SANVU				IAmb	IAmb	02 59 07.8	
	comp=Z,162nm,1.3s						
OUENC	Ouen Island, N	18.18	252	P	Pn	02 58 51.7	+0.3
DZM	Mont Dzumac	18.47	253	*e*P	P	02 58 55.3	+0.3
	comp=Z,114nm,1.6s						
DZM				*e*LR	LR	03 03 14.0	
	comp=Z,4µm,25.6s						
DZM	Mont Dzumac	18.47	253	P	P	02 58 53.1	-1.9
	comp=Z,0.1nm,0.3s,baz=83,slow=8.1,SNR=2.4						
DZM				LR	LR	03 04 47.4	
	comp=Z,2µm,21.1s,baz=138,slow=33						
DZM	Mont Dzumac	18.47	253	P	P	02 58 56.2	+1.2
ONTNC	Ouen Toro	18.51	253	P	P	02 58 57.1	+1.8
OUZ	Omahuta	20.42	209	P	P	02 59 17.1	+1.1
PAE	Paea	23.70	94	*e*T	T	03 24 15.3	
	comp=Z,3.4nm,0.2s						
PPT2	Papeete2	23.71	94	*e*P	P	02 59 51.1	0.0
	comp=Z,99nm,1.2s						
PPT2				*e*LR	LR	03 05 34.2	
	comp=Z,3µm,26.8s						
PPT2	Papeete2	23.71	94	*e*T	T	03 24 16.1	
	comp=Z,4.1nm,0.3s						
PPT	Papeete	23.71	93	LR	LR	03 06 38.8	
	comp=Z,491nm,20.0s,baz=274,slow=30						
TIAR	Tiarei	23.93	93	*e*P	P	02 59 53.3	+0.1
	comp=Z,0.3nm,1.0s						
TIAR	Tiarei	23.93	93	*e*T	T	03 24 39.0	
	comp=Z,0.3nm,0.2s						
MEH	Mehetia	25.12	94	*e*T	T	03 26 06.8	
	comp=Z,16nm,0.2s						
PMOR	Pomariorio Ree	25.62	88	*e*T	T	03 26 45.7	
	comp=Z,6.4nm,0.3s						
VAH	Vaihoa	25.84	88	*e*T	T	03 26 58.2	
	comp=Z,11nm,0.2s						
HNR	Honiara	26.18	285	LR	LR	03 08 51.4	
	comp=Z,1µm,20.5s,baz=136,slow=33						
TAOE	Nuku Hiva Isla	34.48	80	*e*LR	LR	03 10 24.8	
	comp=Z,1µm,26.9s						
TAOE	Nuku Hiva Isla	34.48	80	*e*T	T	03 37 48.4	
	comp=Z,75nm,0.2s						
PMG	Port Moresby	38.15	277	P	P	03 01 55.8	-2.8
	comp=Z,5.0nm,0.3s,baz=129,slow=6.5,SNR=2.2						
PMG	Port Moresby	38.15	277	P	P	03 01 57.3	-1.2
H11N3	WAKE ISLAND Hy	41.45	333	T	T	03 46 23.5	
	baz=152,slow=77,SNR=16						
H11N1	WAKE ISLAND Hy	41.46	333	T	T	03 46 23.9	
	baz=152,slow=77,SNR=58						
H11N2	WAKE ISLAND Hy	41.47	333	T	T	03 46 25.1	
	baz=152,slow=77,SNR=20						
STKA	Stephens Creek	42.03	242	P	P	03 02 29.2	-1.4
	comp=Z,4.2nm,1.1s,baz=99,slow=8.1,SNR=4.4						
STKA				LR	LR	03 17 14.4	
	comp=Z,320nm,20.8s,baz=60,slow=32						
STKA	Stephens Creek	42.03	242	P	P	03 02 29.5	-1.1
STKA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
STKA	Stephens Creek	42.03	242	P	P	03 02 29.4	-1.1
KIP	Kipapa	42.10	23	*ce*P	P	03 02 32.3	+1.2
KIP				pmax	pmax		
	comp=Z,166nm,1.7s						
BBOO	Buckleboo	46.80	241	P	P	03 03 06.8	-1.9
BBOO				IAmb	IAmb	03 03 15.8	
	comp=Z,24nm,1.1s						
WB0	Warramunga Arr	48.33	259	P	P	03 03 18.6	-2.3
WB2	Warramunga Arr	48.35	259	P	P	03 03 20.5	-0.5
WRAB	Tennant Creek	48.35	259	P	P	03 03 19.0	-2.0
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WRAB	Tennant Creek	48.35	259	P	P	03 03 19.0	-2.0
WRA	Warramunga Arr	48.37	259	P	P	03 03 19.0	-2.1
	comp=Z,3.1nm,0.9s,baz=92,slow=7.5,SNR=17						
WRA				PcP	PcP	03 04 47.2	-0.5
	comp=Z,3.6nm,1.2s,baz=95,slow=3.3,SNR=4.7						
WRA				LR	LR	03 21 46.5	
	comp=Z,682nm,21.6s,baz=115,slow=34						
WRA	Warramunga Arr	48.37	259	P	P	03 03 18.4	-2.7
AS31	Alice Springs	48.46	254	P	P	03 03 19.7	-2.1
ASAR	Alice Springs	48.46	254	P	P	03 03 20.1	-1.8
	comp=Z,18nm,0.9s,baz=88,slow=7.7,SNR=52						
ASAR				LR	LR	03 22 21.3	
	comp=Z,368nm,20.1s,baz=96,slow=34						
ASAR	Alice Springs	48.46	254	P	P	03 03 19.7	-2.1
MTN	Manton Dam	52.57	267	P	P	03 03 51.6	-1.3

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FORT  Forrest           53.49 245    P      P      03 03 58.9 -0.7
FORT                                 IAmb   IAmb   03 04 17.4
      comp=Z,40nm,1.1s
KNRA  Kununurra         54.25 263    P      P      03 04 03.2 -2.1
KNRA                                 IAmb   IAmb   03 04 11.9
      comp=Z,22nm,1.0s
SOEI  Soe               59.84 269    P      P      03 04 42.9 -2.1
PSA00 Pilbara Seismi    61.59 255    P      P      03 04 54.9 -1.9
MJAR  Matsushiro Arr    70.06 321    LR     LR     03 36 36.0
      comp=Z,20nm,18.0s,baz=140,slow=36
NIKH  Nikolski High     70.56   4    P      P      03 05 55.1 +1.4
      baz=186
SKR   Severo-Kuril's    72.85 341   eP      P      03 06 15.5 +8.0
SKR                                 eS      S      03 15 34.8 +1.6
SKR                                 eSSS    SSS    03 20 08.9
SKR                                  pmax   pmax
      comp=Z,600nm,5.3s
PKM   Mcpherson Peak    73.67  44    P      P      03 06 14.1 +1.1
      baz=234
SMMC  Simmler           73.80  44    P      P      03 06 14.5 +0.9
      baz=234
FMP   Fort Macarthur    74.02  46    P      P      03 06 15.4 +0.6
      baz=235
OSI   Osito Audit: C    74.24  45    P      P      03 06 17.2 +1.1
      baz=235
109C  Camp Elliot, M    74.38  47    P      P      03 06 18.2 +1.3
      baz=236
ARVC  Arvin             74.46  45    P      P      03 06 18.9 +1.5
      baz=235
PEA0B Petropavlovsk-    74.52 343  i P      P      03 06 16.1 -1.2
PETK  Petropavlovsk-    74.52 343    P      P      03 06 15.6 -1.7
      comp=Z,7.7nm,0.9s,baz=153,slow=11,SNR=6.7
PETK                                 LR     LR     03 31 41.5
      comp=Z,117nm,22.0s,baz=144,slow=30
PETK  Petropavlovsk-    74.52 343    P      P      03 06 17.3  0.0
PETK  Petropavlovsk-    74.52 343    P      P      03 06 17.3  0.0
VES   Vestal, Richgr    74.71  44    P      P      03 06 19.6 +0.9
      baz=234
MURC  Murrieta          74.71  47    P      P      03 06 20.5 +1.6
      baz=236
BFSC  Mount Baldy Ra    74.75  46    P      P      03 06 20.4 +1.2
      baz=236
MONP2 Monument Peak     74.86  48    P      P      03 06 20.8 +0.8
      baz=237
EDW2  Edwards Air Fo    74.89  45    P      P      03 06 20.4 +0.5
      baz=235,SNR=7.2
IKP   In-Ko-Pah, Jac    74.95  48    P      P      03 06 21.3 +0.9
      baz=237
YSS   Yuzh-Sakhalins    75.00 331  i P      P      03 06 20.3 +0.2
YSS                                  pmax   pmax
      comp=Z,86nm,1.9s
ISA   Isabella, Lake    75.01  44    P      P      03 06 20.6  0.0
ISA                                  pmax   pmax
      comp=Z,24nm,1.5s
ISA   Isabella, Lake    75.01  44    P      P      03 06 20.6  0.0
ISA                                  IAmb   IAmb   03 06 24.4
      comp=Z,24nm,1.4s
ISA   Isabella, Lake    75.01  44    P      P      03 06 21.7 +1.1
      baz=235,SNR=8.7
O02D  Mt. Diablo Mer    75.01  38    P      P      03 06 21.5 +0.9
      baz=231
PFO   Pinyon Flats O    75.23  47    P      P      03 06 22.1 +0.1
      baz=237
TPFO  Pinon Flats       75.23  47    P      P      03 06 22.2 +0.2
      baz=237
SWSC  Sam W. Stewart    75.33  48    P      P      03 06 22.9 +0.5
      baz=237
LRMC  Laurel Mtn Rad    75.43  45    P      P      03 06 24.1 +1.0
      baz=235,SNR=6.3
N02D  Trinity Center    75.57  38    P      P      03 06 24.9 +1.2
      baz=230
O03E  Paynes Creek      75.67  39    P      P      03 06 25.5 +1.2
      baz=231
CWC   Cottonwood Cre    75.72  44    P      P      03 06 26.0 +1.2
      baz=235
M02C  Callahan          75.75  37    P      P      03 06 26.2 +1.4
      baz=230
BELC  Belle Mtn. Jos    75.77  47    P      P      03 06 26.2 +1.1
      baz=237,SNR=7.7
MPMC  Manual Prospec    75.89  44    P      P      03 06 26.9 +1.1
      baz=235,SNR=15
MLAC  Mammoth, Mammo75.91  42    P      P      03 06 27.6 +1.6
      baz=234
SII   Sitkinak Islan    75.92  11    P      P      03 06 27.4 +2.1
      baz=200
GSC   Goldstone, Bar    75.93  45    IAmb   IAmb   03 06 28.6
      comp=Z,21nm,1.3s
GSC   Goldstone, Bar    75.93  45    P      P      03 06 27.1 +1.2
      baz=236,SNR=5.8
BC3   Big Chuckawall    75.96  47    P      P      03 06 28.0 +1.8
      baz=237,SNR=6.8
TIN   Tinemaha, Big     75.97  43    P      P      03 06 27.3 +1.1
      baz=235
HEC   Hector,Ludlow     75.99  46    P      P      03 06 27.3 +1.0
      baz=236
GLA   Glamis            76.08  48    P      P      03 06 28.5 +1.7
      baz=238
QSM   Queen of Sheba    76.25  45    P      P      03 06 28.4 +0.7
QSM                                  IAmb   IAmb   03 06 30.3
      comp=Z,28nm,1.4s
J01E  Myrtle Point      76.28  36    P      P      03 06 29.6 +2.0
      baz=229
GMRC  Granite Mounta    76.43  46    P      P      03 06 29.8 +1.0
      baz=237,SNR=7.5
IRM   Iron Mountain     76.45  47    P      P      03 06 30.6 +1.7
      baz=237
LHV   Little Huntoon    76.49  42    IAmb   IAmb   03 06 38.6
      comp=Z,27nm,1.3s
FURC  Furnace Creek,    76.54  44    P      P      03 06 30.4 +1.2
      baz=236
M04C  Macdoel           76.58  38    P      P      03 06 30.8 +1.2
      baz=231
L04D  Klamath Falls     76.59  37    P      P      03 06 30.6 +1.0
      baz=231
TUQ   Turquoise Moun    76.60  46    P      P      03 06 31.3 +1.5
      baz=237
SHOC  Shoshone, Teco    76.62  45    P      P      03 06 31.2 +1.5
      baz=236
RYN   Ryan              76.69  42    IAmb   IAmb   03 06 34.0
      comp=Z,20nm,1.4s
NVAR  Mina Array Bea    76.72  42    P      P      03 06 31.9 +1.4
      comp=Z,6.4nm,1.0s,baz=226,slow=8.7,SNR=29
NVAR                                 LR     LR     03 32 06.8
      comp=Z,289nm,20.8s,baz=230,slow=29
NV11  Mina Array Sit    76.81  42    IAmb   IAmb   03 06 33.6
      comp=Z,37nm,1.4s
214A  Organ Pipe Nat    76.97  50    P      P      03 06 32.2 +0.4
214A  Organ Pipe Nat    76.97  50    P      P      03 06 32.5 +0.7
      baz=239
KSRS  Korea Array       77.11 316    P      P      03 06 32.6 +0.2
      comp=Z,0.6nm,0.3s,baz=132,slow=5.3,SNR=1.9
KSRS                                 LR     LR     03 36 40.6
      comp=Z,110nm,18.8s,baz=142,slow=33
KSAR  Wonju Array Be    77.13 316    P      P      03 06 33.1 +0.6
KSAR  Wonju Array Be    77.13 316    P      P      03 06 33.1 +0.6
KVN   Kaiserville       77.21  42    P      P      03 06 33.7 +0.5
KVN                                  pmax   pmax
      comp=Z,19nm,1.4s
KVN   Kaiserville       77.21  42    P      P      03 06 33.7 +0.5
KVN                                  IAmb   IAmb   03 06 36.5
      comp=Z,19nm,1.4s
PDMCI Parker Dam,Lak    77.23  48    P      P      03 06 35.1 +1.9
      baz=238
J04D  Umpqua Nationa    77.35  36    P      P      03 06 35.0 +1.1
      baz=230
I04A  Tendick Farm,     77.53  36    P      P      03 06 35.7 +1.0
      baz=230
MOD   Modoc Plateau     77.56  38    IAmb   IAmb   03 06 37.5
      comp=Z,20nm,1.2s
SHPR  Sheep Range       77.70  45    IAmb   IAmb   03 06 39.1
      comp=Z,28nm,1.4s
H04D  Lebanon           77.82  35    P      P      03 06 36.9 +0.7
      baz=230
J05D  Fort Rock, OR     77.87  37    P      P      03 06 37.7 +0.9
      baz=231
G03D  McMinnville, O    77.98  34    P      P      03 06 38.4 +1.3
      baz=229
PRN   Pahroc Range      78.27  44    IAmb   IAmb   03 06 42.3
      comp=Z,38nm,1.3s
P18K  Big Mountain,     78.42  10    P      P      03 06 40.0 +0.7
      baz=199
R11A  Troy Canyon, C    78.43  43    P      P      03 06 40.7 +0.7
      baz=236,SNR=11
I05D  Terrebonne, OR    78.47  36    P      P      03 06 40.7 +0.7
      baz=231
USRK  Ussuriysk Ar.     78.63 324    LR     LR     03 34 56.5
      comp=Z,195nm,21.7s,baz=123,slow=31
TUC   Tucson            78.63  51    P      P      03 06 43.2 +2.0
      baz=240
O18K  Koktuh Hills      78.86  10    P      P      03 06 42.4 +0.7
      baz=199
G05D  Wamic, OR         79.05  35    P      P      03 06 43.7 +0.6
      baz=231
X16A  Lo Mia Camp, P    79.20  49    IAmb   IAmb   03 06 47.8
      comp=Z,20nm,1.2s
O19K  Port Alsworth     79.33  10    P      P      03 06 44.5 +0.3
      baz=199
CCUT  Cedar City        79.48  45    P      P      03 06 45.6 -0.3
BRSE  Bradley Lake S    79.56  12    P      P      03 06 45.8 +0.3
      baz=203
KNB   Kanab             79.56  46    IAmb   IAmb   03 07 03.7
      comp=Z,41nm,1.4s
D03D  Eldon             79.58  33    P      P      03 06 46.5 +0.6
      baz=229
U15A  North Rim         79.62  46    IAmb   IAmb   03 06 50.2
      comp=Z,38nm,1.3s
WUAZ  Wupatki           79.80  48    P      P      03 06 49.3 +1.7
      baz=240
N19K  Bonanza Creek     79.89  10    P      P      03 06 48.1 +0.7
      baz=199
ELK   Elko              79.98  42    P      P      03 06 49.1 +0.6
ELK                                  pmax   pmax
      comp=Z,19nm,1.4s
ELK   Elko              79.98  42    P      P      03 06 49.1 +0.6
Q23K  Middleton Isla    80.22  14    P      P      03 06 49.7 +0.6
      baz=207
SPCR  Spurr Chakacha    80.64  11    P      P      03 06 51.6 +0.2
      baz=201
NJ2   Nanjing           80.76 308   eP      P      03 06 54.0 +1.4
NJ2                                  pmax   pmax
      comp=Z,6.0nm,0.5s
W18A  Petrified Fore    80.77  49    P      P      03 06 53.5 +0.6
      baz=241
M19K  Big River Lodg    80.94   9    P      P      03 06 53.7 +0.8
      baz=199
121A  Cookes Peak, D    80.97  52    P      P      03 06 55.0 +1.0
      baz=242
RC01  Rabbit Creek A    81.00  12    P      P      03 06 53.5 +0.3
      baz=204
PWL   Port Wells        81.07  13    P      P      03 06 53.8 +0.2
      baz=205
L19K  White Mountain    81.13   9    P      P      03 06 54.7 +0.7
      baz=199
DUG   Dugway, Tooele    81.24  43    P      P      03 06 55.3 +0.1
      baz=238,SNR=5.4
GAMB  Gambell           81.25   1    P      P      03 06 54.7 +0.3
      baz=183
KNK   Knik Glacier      81.55  12    P      P      03 06 56.2  0.0
      baz=205
L20K  Farewell, AK      81.56  10    P      P      03 06 56.0 -0.2
      baz=200
PMR   Palmer            81.58  12    P      P      03 06 56.5 +0.2
      baz=204
TTA   Tatalina          81.68   8    P      P      03 06 56.8  0.0
      baz=198
GHO   Glory Hole Cre    81.79  12    IAmb   IAmb   03 07 04.4
      comp=Z,44nm,1.4s
DIV   Divide            81.87  14    IAmb   IAmb   03 06 58.9
      comp=Z,23nm,1.0s
KLR   Kul'dur           81.91 328    LR     LR     03 35 44.0
      comp=Z,110nm,21.0s,baz=176,slow=30
KLR   Kul'dur           81.91 328  i P      P      03 06 56.8 -1.5
KLR                                  pmax   pmax
      comp=Z,11nm,1.5s
SML   Sawmill           81.94  12    P      P      03 06 58.0 -0.3
      baz=205
MESA  MESA              81.96  16    P      P      03 06 58.4 -0.2
      baz=211
BMRM  Bremner River     82.00  14    P      P      03 06 58.7 +0.1
      baz=208
HLID  Hailey            82.05  39    P      P      03 07 00.4 +0.9
      baz=236,SNR=12
SPUT  South Promonto    82.06  42    IAmb   IAmb   03 07 02.1
      comp=Z,33nm,1.5s
HVU   Hansel Valley     82.10  42    IAmb   IAmb   03 07 02.2
      comp=Z,19nm,1.3s
KLU   Klutina           82.16  13    IAmb   IAmb   03 07 06.0
      comp=Z,32nm,1.4s
KLU   Klutina           82.16  13    P      P      03 06 59.7 +0.2
      baz=207
SCM   Sheep Creek Mo    82.17  13    IAmb   IAmb   03 07 00.5
      comp=Z,30nm,1.1s
SCM   Sheep Creek Mo    82.17  13    P      P      03 06 59.5  0.0
      baz=206
CRQE  Cirque            82.17  15    P      P      03 06 59.6  0.0
      baz=210
JLU   Jordanelle        82.34  43    P      P      03 07 01.0 -0.1
JLU                                  IAmb   IAmb   03 07 10.3
      comp=Z,22nm,1.5s
K20K  Telida            82.36   9    P      P      03 07 00.5 +0.1
      baz=200
MNTX  Cornudas Mount    82.41  53    P      P      03 07 02.5 +1.1
      baz=244
VRDI  Verde Repeater    82.50  15    IAmb   IAmb   03 07 02.6
      comp=Z,27nm,1.4s
N25K  Chitina, Valde    82.56  14    P      P      03 07 01.5  0.0
      baz=208
MVCO  Mesa Verde        82.65  47    P      P      03 07 02.7 -0.1
      baz=241
M24K  Tolsona, Glenn    82.66  13    IAmb   IAmb   03 07 03.8
      comp=Z,30nm,1.1s
M24K  Tolsona, Glenn    82.66  13    P      P      03 07 02.6 +0.6
      baz=207
MCARA McCarthy VSAT     82.73  15    P      P      03 07 02.4  0.0
      baz=210
TX32  Lajitas Array     82.74  56    P      P      03 07 05.0 +1.7
TX32                                 IAmb   IAmb   03 07 06.2
      comp=Z,18nm,1.4s
TXAR  Lajitas Array     82.74  56    P      P      03 07 05.4 +2.2
      comp=Z,5.1nm,1.0s,baz=216,slow=6.2,SNR=26
TXAR                                 LR     LR     03 37 00.6
      comp=Z,106nm,20.1s,baz=0.0,slow=31
WAT6  Susitna Watana    82.76  12    P      P      03 07 02.4 -0.3
      baz=206
BARN  Barnard Glacie    82.79  15    IAmb   IAmb   03 07 03.8
      comp=Z,15nm,1.0s
CTG   Chitna Glacier    82.79  16    P      P      03 07 02.8  0.0
      baz=212
WAT1  Susitna Watana    82.82  12    P      P      03 07 02.5 -0.3
      baz=205
KTH   Kantishna Hill    83.06  10    IAmb   IAmb   03 07 11.9
      comp=Z,19nm,1.4s
ANMO  Albuquerque       83.06  50ceP        P      03 07 06.2 +1.3
ANMO                                 pmax   pmax
      comp=Z,26nm,1.3s
ANMO  Albuquerque       83.06  50    P      P      03 07 06.9 +2.0
      baz=243
TRF   Thorofare Moun    83.07  11    P      P      03 07 03.5 -0.8
      baz=203
J20K  Nowinta River     83.13   9    IAmb   IAmb   03 07 23.1
      comp=Z,23nm,1.4s
J20K  Nowinta River     83.13   9    P      P      03 07 04.2 -0.1
      baz=199
CHUM  Lake Minchumin    83.13  10    P      P      03 07 03.4 -0.9
      baz=201
HARP  HAARP             83.14  13    P      P      03 07 04.3 -0.1
      baz=208
TNA   Tin City          83.17   3    P      P      03 07 04.7 +0.2
      baz=186
SKAG  Skagway           83.25  19    IAmb   IAmb   03 07 12.3
      comp=Z,16nm,1.3s
SKAG  Skagway           83.25  19    P      P      03 07 05.3 +0.3
      baz=217
DHY   Denali Highway    83.28  12    P      P      03 07 04.3 -1.0
      baz=206
RND   Reindeer          83.29  11    IAmb   IAmb   03 07 06.4
      comp=Z,28nm,1.3s
RDMU  Red Mountain      83.56  44    P      P      03 07 07.5 +0.1
RDMU                                 IAmb   IAmb   03 07 09.6
      comp=Z,18nm,1.2s
WHN   Wuhan             83.56 305  ⇑P      P      03 07 08.7 +1.4
YUK6  Outpost Mounta    83.57  17    P      P      03 07 06.4 -0.5
      baz=214
PAX   Paxson            83.57  13    P      P      03 07 06.1 -0.7
      baz=208
MCK   McKinley          83.58  11    P      P      03 07 06.1 -0.6
      baz=204,SNR=7.4
M26K  Nabesna, AK       83.63  14    IAmb   IAmb   03 07 08.5
      comp=Z,20nm,1.1s
M26K  Nabesna, AK       83.63  14    P      P      03 07 07.2 +0.2
      baz=210,SNR=8.3
AHID  Auburn Hatcher    83.68  41    IAmb   IAmb   03 07 10.3
      comp=Z,30nm,1.3s
YUK3  Moose Creek       83.71  16    P      P      03 07 07.8 +0.1
      baz=212,SNR=6.8
HYT   Haines Junctio    83.71  17    P      P      03 07 07.6  0.0
      baz=215
YUK4  Talbot Arm        83.82  16    P      P      03 07 08.8 +0.6
      baz=214
M27K  Edge Creek, AK    83.85  15    P      P      03 07 08.0 -0.3
      baz=211
MENT  Mentasta          83.93  14    IAmb   IAmb   03 07 10.1
      comp=Z,16nm,1.2s
S22A  4UR Ranch, Cre    84.08  47    P      P      03 07 11.9 +1.7
      baz=242
L26K  Log Cabin Wild    84.09  14    IAmb   IAmb   03 07 10.9
      comp=Z,12nm,1.2s
L26K  Log Cabin Wild    84.09  14    P      P      03 07 09.3  0.0
      baz=210,SNR=5.4
MSO   Missoula          84.13  37    P      P      03 07 10.6 +0.5
      baz=236
TPAW  Teton Pass        84.14  41    P      P      03 07 10.7 +0.4
TPAW                                 IAmb   IAmb   03 07 12.9
      comp=Z,26nm,1.3s
BVCY  Beaver Creek      84.15  15    P      P      03 07 09.8 +0.1
      baz=212
FXWY  Fox Creek         84.17  41    IAmb   IAmb   03 07 13.0
      comp=Z,26nm,1.4s
O20A  White River Ci    84.23  45    P      P      03 07 10.2 -0.6
      baz=241
SNOW  Snow King Moun    84.25  41    IAmb   IAmb   03 07 13.4
      comp=Z,27nm,1.2s
NEA2  Nenana            84.34  11    P      P      03 07 09.5 -1.0
      baz=204
WHY   Whitehorse        84.34  18    P      P      03 07 11.1 +0.4
      baz=218
RIDG  Independent Ri    84.39  13    P      P      03 07 10.6 -0.3
      baz=208,SNR=6.3
I21K  Tanana            84.40   9    P      P      03 07 10.5 -0.3
      baz=201
LOHW  Long Hollow       84.42  41    IAmb   IAmb   03 07 14.1
      comp=Z,27nm,1.4s
MLY   Manley            84.46  10    IAmb   IAmb   03 07 12.4
      comp=Z,23nm,1.4s
MLY   Manley            84.46  10    P      P      03 07 10.2 -1.0
      baz=203,SNR=8.0
L27K  Beaver Creek,     84.47  14    P      P      03 07 11.0 -0.3
      baz=211,SNR=5.7
SEY   Seymchan          84.48 345    LR     LR     03 40 08.3
      comp=Z,91nm,19.9s,baz=155,slow=32
QLMT  Earthquake Lak    84.54  40    P      P      03 07 13.6 +1.3
HDA   Harding Lake      84.56  12    IAmb   IAmb   03 07 18.7
      comp=Z,16nm,1.0s
HDA   Harding Lake      84.56  12    P      P      03 07 10.9 -0.7
      baz=206,SNR=6.5
P33M  Teslin, Yukon     84.63  19    P      P      03 07 12.2  0.0
      baz=219
BW06  Boulder Array     84.66  42    IAmb   IAmb   03 07 21.4
      comp=Z,20nm,1.3s
BW06  Boulder Array     84.66  42    P      P      03 07 13.4 +0.4
      baz=240
PD31  Pinedale Array    84.66  42    IAmb   IAmb   03 07 21.4
      comp=Z,20nm,1.4s
PDAR  Pinedale Array    84.66  42    P      P      03 07 13.4 +0.4
      comp=Z,5.0nm,0.9s,baz=217,slow=3.7,SNR=29
PDAR                                 PP     PP     03 10 27.9 -1.1
      comp=Z,0.4nm,0.7s,baz=264,slow=4.2,SNR=4.2
PDAR                                 LR     LR     03 38 13.3
      comp=Z,234nm,20.1s,baz=296,slow=31
PDAR  Pinedale Array    84.66  42    P      P      03 07 13.2 +0.2
H21K  Melozitna Rive    84.72   9    P      P      03 07 12.9 +0.4
      baz=201
N31M  Braeburn, Yuko    84.74  18    P      P      03 07 12.7  0.0
      baz=217
YMR   Madison River     84.74  40    IAmb   IAmb   03 07 17.2
      comp=Z,26nm,1.2s
SCRK  Sand Creek        84.78  13    P      P      03 07 12.1 -0.9
      baz=209,SNR=7.9
I23K  Minto, Yukon-K    84.80  10    IAmb   IAmb   03 07 16.4
      comp=Z,14nm,1.1s
I23K  Minto, Yukon-K    84.80  10    P      P      03 07 12.0 -0.8
      baz=204,SNR=8.9
TCOL  CIGO, UAF Yank    84.81  11    P      P      03 07 11.8 -1.0
      baz=205
COLA  College           84.81  11  i P      P      03 07 11.4 -1.5
COLA                                 pmax   pmax
      comp=Z,38nm,1.3s
COLA  College           84.81  11    P      P      03 07 12.4 -0.5
COLA  College           84.81  11    P      P      03 07 12.3 -0.6
      baz=205
BOZ   Bozeman (W)       84.82  39    IAmb   IAmb   03 07 16.8
      comp=Z,26nm,1.4s
BOZ   Bozeman (W)       84.82  39    P      P      03 07 14.6 +0.9
      baz=238,SNR=11
MDM   Murphy Dome       84.82  11    P      P      03 07 12.3 -0.7
YHH   Holmes Hill       84.87  40    IAmb   IAmb   03 07 18.0
      comp=Z,30nm,1.5s
H03N2 Juan Fernandez    84.89 123    T      T      04 41 00.1
      baz=257,slow=73,SNR=32
H03N3 Juan Fernandez    84.89 123    T      T      04 40 59.2
      baz=257,slow=73,SNR=31
IL31                    84.90  11    IAmb   IAmb   03 07 21.7
      comp=Z,28nm,1.3s
ILAR  Eielson Array     84.90  11    P      P      03 07 12.5 -0.9
      comp=Z,9.4nm,1.1s,baz=216,slow=5.3,SNR=30
ILAR  Eielson Array     84.90  11    P      P      03 07 11.6 -1.8
H03N1 Juan Fernandez    84.90 123    T      T      04 41 08.1
      baz=257,slow=73,SNR=17
SDCO  Great Sand Dun    85.01  48    P      P      03 07 16.3 +1.3
      baz=243
J25K  Salcha River,     85.06  12    P      P      03 07 13.2 -1.0
      baz=208
POKR  Poker Plat Res    85.11  11    P      P      03 07 14.0 -0.4
      baz=206,SNR=8.7
MAW   Mawson            85.29 199    P      P      03 07 15.2 -0.2
      comp=Z,7.6nm,0.9s,baz=115,slow=5.9,SNR=9.5
MAW                                  LR     LR     03 45 32.3
      comp=Z,83nm,18.3s,baz=63,slow=36
MAW   Mawson            85.29 199    P      P      03 07 15.0 -0.4
MAW                                  pmax   pmax
      comp=Z,4.0nm,1.2s
MAW   Mawson            85.29 199    P      P      03 07 15.0 -0.4
J26L  Joseph Creek      85.33  13    P      P      03 07 15.9 +0.2
      baz=209
M30M  Minto, Yukon      85.34  16    P      P      03 07 15.1 -0.6
      baz=216,SNR=7.4
MSTX  Muleshoe          85.37  52    P      P      03 07 16.5 -0.1
      baz=245
T25A  Trinidad          85.52  49    P      P      03 07 18.4 +1.0
      baz=244
RWWY  Rawlins           85.66  44    IAmb   IAmb   03 07 21.5
      comp=Z,11nm,1.0s
H24K  Noodor Dome       85.68  11    P      P      03 07 16.9 -0.5
      baz=205
M31M  Drury Creek, Y    85.71  18    P      P      03 07 17.2 -0.3
      baz=218
833A  Chaparral WMA,    85.77  59    P      P      03 07 19.1 +0.5
      baz=247
Q24A  Divide            85.81  47    P      P      03 07 19.3 +0.4
      baz=243
ISCO  Idaho Springs     85.86  46    P      P      03 07 20.1 +0.9
      baz=243
DAWY  Dawson            85.90  15    P      P      03 07 18.7 +0.3
      baz=213,SNR=15
FARO  Faro, Yukon       86.03  18    P      P      03 07 19.1  0.0
      baz=219
EGAK  Eagle             86.09  14    P      P      03 07 19.8 +0.5
      baz=212
N23A  Red Feather La    86.13  45    P      P      03 07 21.5 +1.0
      baz=243
JCT   Junction City     86.27  57    P      P      03 07 22.7 +1.7
      baz=247
MAYO  Mayo, Yukon       86.41  16    P      P      03 07 22.2 +1.3
      baz=216
J29M  Klondike Camp     86.51  15    P      P      03 07 22.3 +0.8
      baz=214
K22A  Casper            86.56  43    P      P      03 07 21.9 -0.4
      baz=242
COLD  Coldfoot          86.58   9    P      P      03 07 21.3 -0.3
      baz=203
BILL  Bilibino          86.66 353  i P      P      03 07 22.2 +0.2
BILL                                 pmax   pmax
      comp=Z,22nm,1.3s
BILL  Bilibino          86.66 353    P      P      03 07 21.2 -0.8
BILL                                 IAmb   IAmb   03 07 23.1
      comp=Z,21nm,1.2s
LL02  Futaleuf          86.90 134    P      P      03 07 22.1 -1.9
ABTX  Abilene, Hawle    87.22  55    P      P      03 07 25.9 +0.2
ABTX  Abilene, Hawle    87.22  55    P      P      03 07 26.7 +1.1
      baz=247
I29M  Ogilvie Camp,     87.24  14    P      P      03 07 25.1 +0.2
      baz=214,SNR=8.5
TOLK  Toolik Lake Re    87.97   9    P      P      03 07 29.2 +0.8
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	baz=204						
435B	Jarrell	88.15	57	P	P	03 07 31.1	+1.0
	baz=248						
HIA	Hailar	88.43	323	*i* P	P	03 07 30.4	-0.6
HIA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PLCA	Paso Flores	88.71	132	LR	LR	03 38 49.0	
	comp=Z,97nm,20.6s,baz=225,slow=30						
RSSD	Black Hills	88.84	43	P	P	03 07 32.8	-0.5
RSSD				pmax	pmax		
	comp=Z,7.0nm,1.1s						
RSSD	Black Hills	88.84	43	P	P	03 07 32.8	-0.5
RSSD	Black Hills	88.84	43	P	P	03 07 33.7	+0.4
	baz=244						
XAN	Xi'an	89.16	306	P	P	03 07 35.7	+0.9
XAN				pmax	pmax		
	comp=Z,12nm,1.2s						
U32A	Winter Ranch,	89.17	51	IAmb	IAmb	03 07 37.6	
	comp=Z,15nm,1.1s						
HKT	Hockley	89.26	58	*i* P	P	03 07 35.8	+0.6
HKT				pmax	pmax		
	comp=Z,13nm,1.4s						
CBKS	Cedar Bluff	89.57	49	P	P	03 07 36.9	+0.2
	baz=247						
HHC	Hu-ho-hao-te	89.86	313	*e*P	P	03 07 39.1	+1.1
HHC				pmax	pmax		
	comp=Z,15nm,1.2s						
FNO	Franklin	89.95	53	IAmb	IAmb	03 07 49.6	
	comp=Z,22nm,1.2s						
VNA3	Neumayer Olymp	90.65	175	P	P	03 07 42.3	+1.2
SNAA	Sanae	90.66	177	P	P	03 07 40.7	-0.5
SNAA	Sanae	90.66	177	c*e*P	P	03 07 44.0	+2.8
SNAA				pmax	pmax		
	comp=Z,14nm,1.8s						
DGMT	Dagmar	90.66	39	P	P	03 07 42.4	+0.9
	baz=244						
INK	Inuvik	90.75	14	P	P	03 07 41.5	+0.1
	baz=219						
NATX	Nacogdoches	90.84	57	P	P	03 07 42.8	+0.2
	baz=250						
BTO	Baotou	90.84	313	*e*P	P	03 07 44.6	+2.0
BTO				S	S	03 18 40.3	+1.0
KMI	Kunming	91.11	296	⇑P	P	03 07 46.3	+1.9
KMI				pmax	pmax		
	comp=Z,15nm,1.2s						
KMI				LR	LR		
	comp=Z,140nm,20.7s						
KMI				LR	LR		
	comp=Z,230nm,28.8s						
VNA2	Neumayer--Watz	91.14	176	P	P	03 07 43.6	+0.2
VNA1	Neumayer--Stat	91.34	175	P	P	03 07 38.4	-5.9
CMAR	Chiang Mai Arr	92.38	288	P	P	03 07 49.6	-0.5
	comp=Z,1.2nm,0.3s,baz=118,slow=3.3,SNR=1.5						
CMAR				LR	LR	03 47 05.2	
	comp=Z,70nm,19.3s,baz=140,slow=34						
CMAR	Chiang Mai Arr	92.38	288	P	P	03 07 50.8	+0.7
CMAR	Chiang Mai Arr	92.38	288	P	P	03 07 50.8	+0.7
JTS	Las Juntas de	92.61	80	*i* P	P	03 07 52.8	+1.5
JTS				pmax	pmax		
	comp=Z,12nm,1.0s						
MIAR	Mount Ida	92.64	55	IAmb	IAmb	03 08 00.3	
	comp=Z,20nm,1.4s						
MIAR	Mount Ida	92.64	55	P	P	03 07 52.6	+1.6
	baz=250						
U38A	Gravette	92.66	53	IAmb	IAmb	03 07 60.0	
	comp=Z,14nm,1.2s						
W39A	Magazine	92.69	54	P	P	03 07 52.4	+1.2
	baz=250						
Z41A	Richland Creek	92.82	56	P	P	03 07 53.3	+1.6
	baz=251						
X40A	Basin Creek Fa	93.20	55	P	P	03 07 54.0	+0.4
	baz=251						
MDND	Maddock	93.20	41	P	P	03 07 53.9	+0.7
	baz=247						
ECSD	EROS Data Cent	93.60	45	P	P	03 07 56.2	+1.0
	baz=249						
LZH	Lanzhou	93.78	307	*e*P	P	03 07 59.3	+2.9
LZH				pP	sP	03 08 10.1	+8.6
LZH				pmax	pmax		
	comp=Z,11nm,1.2s						
U40A	Yellville	93.79	53	P	P	03 07 57.0	+0.8
	baz=251						
S39A	Bolivar	93.88	52	IAmb	IAmb	03 07 58.6	
	comp=Z,14nm,1.2s						
W41B	Gary Mavity, V	93.88	54	P	P	03 07 57.3	+0.7
	baz=251						
P38A	Dawn	94.36	50	P	P	03 07 58.4	-0.4
P38A				IAmb	IAmb	03 08 00.3	
	comp=Z,14nm,1.2s						
SCIA	State Center	95.33	48	P	P	03 08 04.1	+1.0
	baz=251						
A36M	Sachs Harbour	95.38	14	P	P	03 08 02.0	-0.6
A36M	Sachs Harbour	95.38	14	P	P	03 08 02.1	-0.6
	baz=226						
ULN	Ulaanbaatar	95.48	318	*i* P	P	03 08 02.8	-1.1
ULN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CCM	Cathedral Cave	95.55	52	P	P	03 08 03.9	-0.4
	baz=252						
AGMN	Agassiz Nation	95.70	41	IAmb	IAmb	03 08 06.7	
	comp=Z,13nm,1.4s						
AGMN	Agassiz Nation	95.70	41	P	P	03 08 05.2	+0.5
	baz=250						
PBMO	Poplar Bluff	95.78	53	IAmb	IAmb	03 08 07.4	
	comp=Z,14nm,1.2s						
FVM	French Village	96.14	52	IAmb	IAmb	03 08 09.0	
	comp=Z,16nm,1.3s						
ULM	Lac du Bonnet	96.36	39	LR	LR	03 43 58.4	
	comp=Z,244nm,21.1s,baz=286,slow=31						
F36A	Milaca	96.39	44	IAmb	IAmb	03 08 09.5	
	comp=Z,13nm,1.2s						
SPMN	Marine on St.	96.67	45	P	P	03 08 09.7	+0.5
	baz=252						
BRAL	Brewton	96.82	60	P	P	03 08 10.3	+0.1
	baz=254						
TIXI	Tiksi	96.95	345	c*e*P	P	03 08 08.4	-1.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
JFWS	Jewell Farm	97.73	48	P	P	03 08 13.9	-0.1
	baz=253						
TLY	Talaya	98.80	321	LR	LR	03 48 12.1	
	comp=Z,78nm,19.7s,baz=118,slow=33						
KMSC	Kings Mountain	102.47	57	P	Pdif	03 08 35.4	0.0
	baz=257						
M53A	WI Miller and	104.28	51	P	Pdif	03 08 44.0	+0.8
	baz=259						
MKAR	Makanchi Array	111.71	314	PKiKP	PKiKP	03 13 12.6	-1.2
	comp=Z,0.7nm,0.8s,baz=64,slow=1.9,SNR=5.2						
BRVK	Borovoye	119.12	321	*i* PKIKP	PKPdf	03 13 25.6	-2.1
BRVK	Borovoye	119.12	321		PKPdf	03 13 26.6	-1.1
GAR	Garm	120.40	305	PKPdf	PKPdf	03 13 29.7	-1.1
ARU	Arti	124.75	327	*i* PKIKP	PKPdf	03 13 38.3	-0.1
ARU						03 15 26.0	
ARU						03 20 43.3	
ARU				SP	SP	03 25 24.5	+1.4
ARCES	ARCESS Array B	126.74	351	PKP	PKPdf	03 13 41.7	-0.2
	comp=Z,5.2nm,1.0s,baz=20,slow=3.0,SNR=2.3						
KIRV	Kirov	128.13	333	*i* PKIKP	PKPdf	03 13 43.6	-1.1
KLMR	Klimovskoe	130.59	339	*e*PKIKP	PKPdf	03 13 44.8	-4.6
KLMR				pmax	pmax		
	comp=Z,27nm,1.5s						
KLMR	Klimovskoe	130.59	339	*e*PKPdf	PKPdf	03 13 44.8	-4.6
KLMR				AMP		03 13 59.1	
	comp=Z,27nm,1.5s						
AKASG	Malin Array Be	142.04	335	PKhKP	PKPpre	03 14 05.8	
	comp=Z,0.1nm,0.2s,baz=28,slow=2.2,SNR=1.5						
KMBO	Kilima Mbogo	143.59	242	PKP	PKPab	03 14 13.2	+1.6
	comp=Z,3.9nm,1.1s,baz=102,slow=3.7,SNR=7.5						
KMBO	Kilima Mbogo	143.59	242	PKPdf	PKPab	03 14 12.8	+1.2
LVV	L'vov	144.68	339	*e*PKIKP	PKPab	03 14 13.8	-0.5
NRDL	Niedersach Rie	145.11	355	*e*PKPbc	PKPbc	03 14 15.9	+0.3
	baz=9.2,slow=2.9						
FLTG	Flechtingen	145.17	354	*e*PKPbc	PKPbc	03 14 15.5	-0.4
	baz=9.2,slow=2.9						
KWP	Kalwaria Pacla	145.28	340	*e*PKPbc	PKPbc	03 14 16.7	+0.3
ASSE	Asse, Remlinge	145.42	354	*e*PKPbc	PKPbc	03 14 17.1	+0.5
	baz=9.2,slow=2.9						
ASSE				*e*pPKPbc	sPKPdf	03 14 23.1	+1.3
IBBN	Ibbenburen	145.44	358	*e*PKPbc	PKPbc	03 14 17.2	+0.5
	baz=9.2,slow=2.9						
IBBN				*e*pPKPbc	sPKPdf	03 14 23.5	+1.6
OJC	Ojcow	145.61	344	*e*PKPbc	PKPdf	03 14 17.6	+0.4
CLZ	Clausthal	145.74	355	*e*PKPbc	PKPdf	03 14 18.3	+0.9
	baz=9.2,slow=2.9						
CLZ				*e*pPKPbc	sPKPab	03 14 24.5	+1.3
VASR	Vaslui	145.79	332	⇑P	PKPdf	03 14 17.2	-0.5
KSP	Ksiaz	145.85	348	*e*PKPbc	PKPdf	03 14 18.6	+1.1
CLL	Collm	145.96	352	*i* PKIKP	PKPdf	03 14 18.7	+0.9
CLL				pmax	pmax		
	comp=Z,59nm,1.1s						
CLL	Collm	145.96	352	*i* PKPbc	PKPdf	03 14 18.7	+0.9
	comp=Z,59nm,1.1s						
CLL				*i* (PKiKP)		03 14 24.9	
	comp=Z,54nm,1.3s						
CLL	Collm	145.96	352	*e*PKPbc	PKPdf	03 14 18.5	+0.8
	baz=9.2,slow=2.9						
CLL				*e*pPKPbc	sPKPab	03 14 25.0	+1.0
KOLS	Kolonicke sedl	146.03	340	*e*PKIKP	PKPdf	03 14 19.0	+1.0
KOLS	Kolonicke sedl	146.03	340	*e*PKP	PKPdf	03 14 19.0	+1.0
GTTG	Gottingen	146.06	355	*e*PKPbc	PKPbc	03 14 19.3	+0.5
	baz=9.2,slow=2.9						
GTTG				*e*pPKPbc	sPKPab	03 14 25.7	+1.4
BURAR	Bucovina Array	146.09	336	⇑P	PKPdf	03 14 19.1	+0.9
BURAR	Bucovina Array	146.09	336	⇑PKIKP	PKPdf	03 14 19.1	+0.9
OSTC	Ostas	146.14	348	*e*PKP	PKPbc	03 14 19.8	+0.7
CHVC	Chvalec	146.14	348	*e*PKP	PKPbc	03 14 19.7	+0.6
NIE	Niedzica	146.20	343	*e*PKPbc	PKPbc	03 14 20.5	+1.2
NEUB	Neuenburg	146.22	353	*e*PKPbc	PKPbc	03 14 19.6	+0.4
	baz=9.2,slow=2.9						
NEUB				*e*pPKPbc	sPKPab	03 14 26.0	+1.1
UPC	Upice	146.23	348	*e*PKP	PKPbc	03 14 19.9	+0.6
UPC	Upice	146.23	348	*e*PKP2	PKPbc	03 14 19.9	+0.6
BRG	Berggiesshubel	146.25	350	*e*PKPbc	PKPbc	03 14 19.8	+0.5
	baz=9.2,slow=2.9						
BRG				*e*pPKPbc	sPKPab	03 14 26.3	+1.2
BRG	Berggiesshubel	146.25	350	Amp		03 14 21.7	
	comp=Z,38nm,1.2s						
BRG	Berggiesshubel	146.25	350	Amp		03 14 27.2	
	comp=Z,17nm,1.0s						
BRG	Berggiesshubel	146.25	350	*i* PKP	PKPdf	03 14 19.6	+1.3
BRG	Berggiesshubel	146.25	350	P	PKiKP	03 14 26.3	+3.8
BNN	Bunyan	146.25	315		PKPbc	03 14 20.5	+0.5
VLDR	Vladesti	146.27	331	⇓P	PKPdf	03 14 18.3	-0.1
UZH	Uzhgorod	146.28	340	⇓*i*PKIKP	PKPdf	03 14 18.1	-0.3
UZH				*i*		03 14 19.6	
UZH				*i*		03 14 32.9	
UZH				*i*		03 14 39.8	
FBE	Freiberg	146.29	351	*e*PKPbc	PKPbc	03 14 20.2	+0.8
	baz=9.2,slow=2.9						
FBE				*e*pPKPbc	sPKPab	03 14 26.6	+1.4
CRVS	Cervenica-Dubn	146.31	341	*e*PKP2	PKPbc	03 14 20.1	+0.5
CRVS	Cervenica-Dubn	146.31	341	*e*PKP	PKPbc	03 14 20.1	+0.5
DPC	Dobruska-Polom	146.31	348	*e*PKP	PKPbc	03 14 20.1	+0.5
DPC	Dobruska-Polom	146.31	348	*e*PKP2	PKPbc	03 14 20.1	+0.5
BUG	Bochum--Univer	146.32	358	*e*PKPbc	PKPbc	03 14 19.9	+0.4
	baz=9.2,slow=2.9						
TESR	Tescani	146.39	333	⇑P	PKPdf	03 14 20.0	+1.3
TLCR		146.41	330	⇑P	PKPbc	03 14 20.3	+0.3
TLCR		146.41	330	⇑PKP2	PKPbc	03 14 20.3	+0.3
SCTR	Scanteiesti	146.44	331	⇑P	PKPbc	03 14 20.8	+0.7
PVCC	Panska Ves	146.47	350	*e*PKP	PKPbc	03 14 20.9	+0.9
PVCC	Panska Ves	146.47	350	*e*PKP2	PKPbc	03 14 20.9	+0.9
KRLC	Kraliky	146.47	347	*e*x	x	03 14 26.6	
KRLC	Kraliky	146.47	347	*e*PKP2	PKPbc	03 14 20.7	+0.6
KRLC	Kraliky	146.47	347	*e*PKP	PKPbc	03 14 20.7	+0.6
MORC	Moravsky Berou	146.58	346	⇑P	PKPdf	03 14 19.3	+0.4
MORC	Moravsky Berou	146.58	346	*e*PKP	PKPbc	03 14 20.9	+0.5
MORC	Moravsky Berou	146.58	346	⇑PKIKP	PKPdf	03 14 19.3	+0.4
TRPA	Tarpa	146.64	339	⇑P	PKPbc	03 14 20.9	+0.4
TRPA	Tarpa	146.64	339	*e*PKPDF	PKPdf	03 14 16.1	-2.9
TRPA	Tarpa	146.64	339	*e*P	PKPbc	03 14 21.0	+0.5
LANS	Liptovska Anna	146.67	343	*e*PKP2	PKPbc	03 14 21.7	+1.0
LANS	Liptovska Anna	146.67	343	*e*PKP	PKPbc	03 14 21.7	+1.0
CFR	Carcaliu	146.74	330	⇑P	PKPdf	03 14 20.6	+1.3
CFR	Carcaliu	146.74	330	⇑PKP2	PKPdf	03 14 20.6	+1.3
UBBA	Unterbreizbach	146.78	355	*e*PKPbc	PKPbc	03 14 21.4	+0.7
	baz=9.2,slow=2.9						
MOX	Moxa	146.79	353	*e*PKPbc	PKPbc	03 14 21.3	+0.4
	baz=9.2,slow=2.9						
MOX				*e*pPKPbc	sPKPab	03 14 27.8	+0.5
TPGR	Topolog	146.84	330	⇑P	PKPbc	03 14 22.1	+0.8
ARCR	ARCALIA	146.86	336	⇑P	PKPbc	03 14 21.5	+0.3
VRI	Vrincioaia	146.86	332	⇑P	PKPdf	03 14 21.1	+1.6
VRI	Vrincioaia	146.86	332	⇑PKP2	PKPdf	03 14 21.1	+1.6
PLN	Plauen	146.88	352	*e*PKPbc	PKPbc	03 14 22.0	+0.7
	baz=9.2,slow=2.9						
WERD	Werda	146.90	352	*e*PKPbc	PKPbc	03 14 21.8	+0.5
	baz=9.2,slow=2.9						
PLOR	Plostina	146.91	333	⇑P	PKPdf	03 14 21.4	+1.8
PLOR	Plostina	146.91	333	⇑PKP2	PKPdf	03 14 21.4	+1.8
TANN	Tannenbergstha	146.91	352	*e*PKPbc	PKPbc	03 14 22.0	+0.6
	baz=9.2,slow=2.9						
GUNZ	Gunzen	146.98	352	*e*PKPbc	PKPbc	03 14 22.4	+0.8
	baz=9.2,slow=2.9						
BEBN	Eben Emael	147.00	360	*d*PKP	PKPbc	03 14 22.1	+0.7
PRU	Pruhonice	147.00	349	*e*PKP	PKPbc	03 14 22.0	+0.5
PRU	Pruhonice	147.00	349	*e*PKP2	PKPbc	03 14 22.0	+0.5
WERN	Wernitzgruen	147.04	352	*e*PKPbc	PKPbc	03 14 22.4	+0.7
	baz=9.2,slow=2.9						
NKC	Novy Kostel	147.09	352	*e*PKP	PKPbc	03 14 22.4	+0.6
NKC	Novy Kostel	147.09	352	*e*PKP2	PKPbc	03 14 22.4	+0.6
OZUR		147.09	334	⇑P	PKPbc	03 14 22.3	+0.3
COVR	Voineasa-Covas	147.11	333	⇑P	PKPdf	03 14 21.7	+1.8
TIRR	Tirgusor	147.14	329	⇓P	PKPdf	03 14 21.3	+1.3
TIRR	Tirgusor	147.14	329	⇓PKIKP	PKPdf	03 14 21.3	+1.3
MEM	Membach	147.18	359	*d*PKP	PKPbc	03 14 22.6	+0.6
BTNL	Ternell	147.20	359	*d*PKP	PKPbc	03 14 22.2	0.0
HARR	Harsova	147.20	330	⇑P	PKPbc	03 14 22.8	+0.6
HARR	Harsova	147.20	330	⇑PKP2	PKPbc	03 14 22.8	+0.6
AHRW	Bad Neuenahr-A	147.23	358	*e*PKPbc	PKPbc	03 14 23.0	+0.9
	baz=9.2,slow=2.9						
VRAC	Vranov	147.24	347	⇑P	PKPbc	03 14 23.0	+0.7
VRAC	Vranov	147.24	347	*e*PKP	PKPbc	03 14 23.0	+0.7
VRAC	Vranov	147.24	347	⇑PKP2	PKPbc	03 14 23.0	+0.7
BRTR	Keskin Array B	147.25	318	PKPbc	PKPdf	03 14 20.8	+0.3
	comp=Z,10.0nm,1.0s,baz=156,slow=6.5,SNR=40						
BRTR	Keskin Array B	147.25	318	PKIKP	PKPdf	03 14 19.9	-0.6
BRTR	Keskin Array B	147.25	318	PKPdf	PKPdf	03 14 19.9	-0.6
TLBR	Topalu	147.25	330	⇑P	PKPdf	03 14 21.5	+1.3
SNF	Seneffe	147.27	1	*d*PKP	PKPbc	03 14 23.1	+0.8
DOPR	Dopca	147.36	334	⇑P	PKPbc	03 14 23.3	+0.6
BCLA	Clavier	147.37	0	*d*PKP	PKPbc	03 14 23.7	+1.1
BGES	Gesves	147.41	1	*d*PKP	PKPbc	03 14 24.3	+1.6
JAVC	Velka Javorina	147.41	345	*e*PKP	PKPbc	03 14 24.6	+1.8
BHOU	Houvegnez	147.44	359	*d*PKP	PKPbc	03 14 23.6	+0.9
VYHS	Vyhne	147.44	343	*e*PKP2	PKPbc	03 14 23.6	+0.7
VYHS	Vyhne	147.44	343	*e*PKP	PKPbc	03 14 23.6	+0.7
CJR	Cluj-Napoca	147.46	337	⇑P	PKPbc	03 14 23.7	+0.7
CJR	Cluj-Napoca	147.46	337	⇑PKP2	PKPbc	03 14 23.7	+0.7
KOLL	Kolacno	147.48	344	*e*PKP	PKPbc	03 14 24.1	+1.2
BMRD	Maredsous	147.48	1	*d*PKP	PKPbc	03 14 23.6	+0.7
TREC	Trest	147.49	348	*e*PKP	PKPbc	03 14 23.4	+0.4
TREC	Trest	147.49	348	*e*PKP2	PKPbc	03 14 23.4	+0.4
TNS	Taunus Mts	147.49	357	*e*PKPbc	PKPbc	03 14 23.5	+0.5
	baz=9.2,slow=2.9						
MLR	Muntele Rosu	147.50	333	⇑P	PKPbc	03 14 23.0	-0.3
MLR	Muntele Rosu	147.50	333	⇑PKP2	PKPbc	03 14 23.0	-0.3
MLR	Muntele Rosu	147.50	333	PKPdf	PKPdf	03 14 20.5	-0.3
LODK	Lodwar	147.50	248		PKPdf	03 14 24.1	+2.5
KRUC	Moravsky	147.51	347	*e*PKP	PKPbc	03 14 23.5	+0.5
ROTZ	Rotzenmuhle	147.58	352	*e*PKPbc	PKPbc	03 14 23.6	+0.5
	baz=9.2,slow=2.9						
RCHB	Rochefort	147.64	0	*d*PKP	PKPbc	03 14 23.6	+0.3
PSZ	Piszkesteto	147.66	342	⇑P	PKPbc	03 14 23.4	-0.1
PSZ	Piszkesteto	147.66	342	*e*PKPDF	PKPdf	03 14 18.0	-2.9
PSZ	Piszkesteto	147.66	342	*e*P	PKPbc	03 14 24.4	+0.9
PSZ	Piszkesteto	147.66	342	⇑PKP2	PKPbc	03 14 23.4	-0.1
PSZ	Piszkesteto	147.66	342		PKPbc	03 14 23.5	-0.1
DOU	Dourbes	147.69	1	*d*PKP	PKPbc	03 14 24.1	+0.7
DRGR		147.72	338	⇑P	PKPbc	03 14 23.4	-0.4
DRGR		147.72	338	⇑PKP2	PKPbc	03 14 23.4	-0.4
GRF	Grafenberg Arr	147.77	353	*e*PKPbc	PKPbc	03 14 24.6	+0.8
	baz=9.2,slow=2.9						
GRF				*e*pPKPbc	sPKPab	03 14 30.7	-0.4
GRFO	Grafenberg	147.78	353	PKP2	PKPbc	03 14 24.5	+0.8
GRFO	Grafenberg	147.78	353	PKPbc	PKPbc	03 14 24.5	+0.8
VOIR		147.92	334	⇑P	PKPbc	03 14 25.1	+0.7
VOIR		147.92	334	⇑PKP2	PKPbc	03 14 25.1	+0.7
MODS	Modra-Piesok	147.96	345	*e*PKP2	PKPbc	03 14 24.5	+0.2
MODS	Modra-Piesok	147.96	345	*e*PKP	PKPbc	03 14 24.5	+0.2
KHC	Kasperske Hory	147.99	350	*e*PKP	PKPbc	03 14 24.7	+0.3
KHC				*e*x	x	03 14 31.6	
KHC	Kasperske Hory	147.99	350	*e*PKP2	PKPbc	03 14 24.7	+0.3
WET	Wettzell	148.09	351	*e*PKPbc	PKPbc	03 14 25.5	+0.9
	baz=9.2,slow=2.9						
WLF	Walferdange	148.12	359	*d*PKP	PKPbc	03 14 25.5	+0.8
WLF	Walferdange	148.12	359	*e*PKPbc	PKPbc	03 14 25.8	+1.2
	baz=9.2,slow=2.9						
WLF				*e*pPKPbc	sPKPab	03 14 32.3	-0.2
ARR	Arges	148.16	334	⇑P	PKPdf	03 14 23.6	+1.9
ZST	Bratislava	148.16	345	*e*PKP2	PKPbc	03 14 25.9	+1.1
ZST	Bratislava	148.16	345	*e*PKP	PKPbc	03 14 25.9	+1.1
CKRC	Cesky Krumlov	148.17	349	*e*PKP	PKiKP	03 14 26.6	0.0
SRO	Srobarova	148.21	344	*e*PKP2	PKPbc	03 14 26.1	+1.2
SRO	Srobarova	148.21	344	*e*PKP	PKPbc	03 14 26.1	+1.2
GEC2	GERESS Array S	148.25	350	*e*PKPbc	PKPbc	03 14 25.9	+0.7
	baz=9.2,slow=2.9						
GERES	GERESS Array B	148.25	350	PKPbc	PKPdf	03 14 24.3	+2.5
	comp=Z,6.7nm,0.9s,baz=29,slow=3.0,SNR=34						
DEV	Deva	148.42	337	⇑P	PKPbc	03 14 25.7	+0.2
DEV	Deva	148.42	337	⇑PKP2	PKPbc	03 14 25.7	+0.2
SIRR	Siria	148.55	338	⇓P	PKPbc	03 14 26.0	+0.1
CONA	Conrad Observa	148.70	347	*i* P	PKPbc	03 14 27.1	+0.8
	comp=Z,36nm,1.3s,SNR=11						
SOP	Sopron	148.77	346	*e*PKPDF	PKPdf	03 14 18.8	-3.8
SOP	Sopron	148.77	346	*e*P	PKPbc	03 14 27.4	+1.0
EGYH	Egyhazaskeszo	148.83	344	*e*PKPDF	PKPdf	03 14 24.9	+2.2
EGYH	Egyhazaskeszo	148.83	344	*e*P	PKPbc	03 14 27.9	+1.3
GZR	Gura Zlata	148.88	336	⇑P	PKPbc	03 14 26.3	-0.5
GZR	Gura Zlata	148.88	336	⇑PKIKP	PKPbc	03 14 26.3	-0.5
STU	Stuttgart	148.88	355	*e*PKPbc	PKPbc	03 14 27.7	+1.1
	baz=9.2,slow=2.9						
STU				*e*pPKPbc	pPKPab	03 14 33.8	-0.5
MPLH	Magyarpolny	149.01	344	*e*PKPDF	PKPdf	03 14 25.2	+2.2
MPLH	Magyarpolny	149.01	344	*e*P	PKPbc	03 14 27.4	+0.4
MOA	Molln	149.11	349	*e*P	PKPbc	03 14 27.7	+0.4
	comp=Z,15nm,1.4s						
MBAR	Mbarara	149.24	236	c *i*PKP2	PKPbc	03 14 30.0	+1.2
FUR	Furstenfeldbru	149.27	352	*e*PKPbc	PKPbc	03 14 28.2	+0.5
	baz=9.2,slow=2.9						
BFO	Black Forest	149.38	356	PKP2	PKPbc	03 14 27.9	-0.1
BFO	Black Forest	149.38	356	*e*PKPbc	PKPbc	03 14 28.5	+0.5
	baz=9.2,slow=2.9						
BFO	Black Forest	149.38	356	PKPbc	PKPbc	03 14 27.9	-0.1
ARSA	Arzberg	149.42	347	*e*P	PKPbc	03 14 28.7	+0.6
	comp=Z,13nm,1.1s						
RJOB	Jochberg	149.47	350	*e*PKPbc	PKPbc	03 14 28.5	+0.3
	baz=9.2,slow=2.9						
CLF	Chambon-Foret	149.65	4		PKPbc	03 14 29.4	+0.8
KOVH	Kovagotottos	149.84	342	*e*PKPDF	PKPbc	03 14 28.8	-0.3
KOVH	Kovagotottos	149.84	342	*e*P	PKPdf	03 14 26.0	+1.7
UBR	Ueberruh	149.88	354	*e*PKPbc	PKPbc	03 14 29.6	+0.3
	baz=9.2,slow=2.9						
UBR				*e*pPKPbc	PKPab	03 14 35.9	+1.2
CSS	Mathiatis	149.90	310		PKPbc	03 14 28.5	-1.1
RETA	Reutte	150.00	353	*e*P	PKPbc	03 14 29.7	+0.2
	comp=Z,20nm,1.5s						
KOGS	Kog	150.00	345	*i* PKPbc	PKPbc	03 14 29.1	-0.4
KBA	Koelnbreinsper	150.02	349	*e*P	PKPbc	03 14 29.8	+0.1
	comp=Z,8.0nm,0.8s						
WATA	Walderalm	150.04	352	*i* P	PKPbc	03 14 29.8	0.0
	comp=Z,15nm,1.0s,SNR=6.2						
SOKA	Soboth	150.07	347	*i* P	PKPbc	03 14 29.5	-0.2
	comp=Z,19nm,1.2s,SNR=6.5						
MOTA	Moosalm	150.10	352	*i* P	PKPbc	03 14 30.2	+0.3
	comp=Z,28nm,1.1s,SNR=8.4						
WTTA	Wattenberg	150.11	352	*i* P	PKPbc	03 14 30.3	+0.3
	comp=Z,25nm,1.2s,SNR=8.0						
FRGS	Fruska Gora	150.15	339	⇑P	PKPbc	03 14 30.2	+0.3
SQTA	Sankt Quirin	150.21	352	*i* P	PKPbc	03 14 30.4	+0.3
	comp=Z,21nm,1.2s,SNR=5.9						
DAVA	Damuels	150.29	354	*i* P	PKPbc	03 14 31.0	+0.6
	comp=Z,32nm,1.0s,SNR=8.2						
OBKA	Obir	150.33	347	*e*P	PKPdf	03 14 27.2	+2.0
	comp=Z,3.0nm,0.9s						
MYKA	Terra Mystica	150.40	349	*i* P	PKPbc	03 14 30.0	-0.6
	comp=Z,14nm,1.2s,SNR=5.7						
FETA	Feichten	150.46	353	*i* P	PKPbc	03 14 31.3	+0.5
	comp=Z,27nm,1.1s,SNR=9.2						
ABTA	Abfaltersbach	150.48	350	*i* P	PKPbc	03 14 30.7	-0.1
	comp=Z,29nm,1.0s,SNR=9.7						
LJU	Ljubljana	150.78	347	*e*PKPdf	PKPdf	03 14 26.4	+0.6
LJU				*i* PKPbc	sPKPdf	03 14 31.4	+0.5
LJU				*i* PKPab	PKPab	03 14 38.0	-0.4
CEY	Cerknica	151.09	347	*i* PKPbc	PKPbc	03 14 32.1	-0.1
TEOL	Teolo	151.96	351	PKPdf	PKPdf	03 14 25.5	-2.1
ESDC	Sonseca Array	156.61	19	PKPab	PKPab	03 15 03.7	+0.4
	comp=Z,3.3nm,1.1s,baz=322,slow=4.0,SNR=8.8						
ESDC	Sonseca Array	156.61	19	PKPab	PKPab	03 15 02.7	-0.6
TORD	Torodi Ar. Bea	174.14	140	PKPab	PKPab	03 16 21.2	+0.4
	comp=Z,2.9nm,1.1s,baz=228,slow=2.9,SNR=6.7						
TORD				PP	PP	03 20 12.6	+0.5
	comp=Z,2.0nm,1.3s,baz=285,slow=3.3,SNR=4.0						
TORD	Torodi Ar. Bea	174.14	140	PKPdf	PKPdf	03 14 48.4	-1.1
TORD				PKPab	PKPab	03 16 20.8	-0.1

INET ***07*** *02:57:51.1, 11°.50N×85°.70W, h206^{km}, MW2.9*

UCR 07 02:57:54.0±0.9**, 11°.33N×85°.79W, h184**^{km}±3^{km}**, MW3.5, 4C, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBS3	Finca Las Img	0.63	149	⇑*i*P	Pn	02 58 19.8	-0.1
GBS3				*i* S	Sn	02 58 40.4	+0.4
BUAI	Buenos Aires	0.63	135	⇑*i*P	Pn	02 58 20.3	+0.4
BUAI				*i* S	Sn	02 58 40.9	+1.0
HZTE	Horizontes, Gu	0.64	163	*e*P	Pn	02 58 20.3	+0.4
HZTE				*e*S	Sn	02 58 41.1	+1.1
LAPC	Finca la Perla	0.66	148	⇑*i*P	Pn	02 58 19.9	-0.2
LAPC				*i* S	Sn	02 58 40.5	+0.3
GUAB	Guayabo de Bag	0.82	138	*i* P	Pn	02 58 21.2	+0.2
HORNC	Hornillas	0.85	135	*i* P	Pn	02 58 21.5	+0.2
COLC	Colonia	0.87	139	*i* P	Pn	02 58 21.6	+0.3
CUI	Cuipilapa	0.90	137	*i* P	Pn	02 58 22.0	+0.4
ACAL	Aguas Claras	1.01	133	*i* P	Pn	02 58 22.9	+0.6
GUAI	GUAI	1.08	165	⇑*i*P	Pn	02 58 23.3	+0.5
SAJU	San Juanillo,	1.25	176	*e*P	Pn	02 58 24.4	+0.2
JTS	Las Juntas de	1.32	141	*e*P	Pn	02 58 24.8	0.0
ARE1	Arenal 1	1.36	129	*e*P	Pn	02 58 25.6	+0.5
INDI	Punta indio, G	1.48	169	*e*P	Pn	02 58 26.4	+0.2
INDI				*e*S	Sn	02 58 51.2	+0.1
LAFE	Finca La Fe, P	1.74	150	*e*P	Pn	02 58 28.8	+0.2
JACO	JACO, Garabito	1.99	146	*e*P	Pn	02 58 31.8	+0.5
LCR2	La Lucha 2	2.36	132	*e*P	Pn	02 58 36.4	+0.8
RIMA	Rio Macho	2.45	129	*e*P	Pn	02 58 37.0	+0.5

IDC ***07*** *03:08:30.2±1.7, 35°.12N×141°.48E, h0^{km}, mb3.6/4, mb1 3.7/8, mb1mx3.3/36, mbtmp3.7/8, ML3.2/3, MS3.7/1, Ms1 3.7/1, ms1mx2.6/40, Error ellipse: s-maj=46.6km s-min=19.9km az=73.0*

JMA ***07*** *03:08:34.8±0.2, 35°.18N×140°.89E, h33^{km}±2^{km}, M3.1*

ISC 07 03:08:32.4±1.7**, 35°.09N**±0°.05×**141°.06E**±0°.07**, h10**^{km}±10^{km}**, n24, σ1.^{s}69**/20**, mb3.5**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.63	345	P	Pg	03 08 45.4	+0.7
CHOJ				*e*S	Sg	03 08 53.2	+0.2
JKUC	kamogawauchiur	0.70	276	P	Pg	03 08 46.1	+0.1
JKUC				S	Sg	03 08 54.2	-1.1
JSMT	Sammumatsuo	0.74	318	P	Pg	03 08 46.8	+0.1
JSMT				*e*S	Sg	03 08 55.5	-0.9
JCN	Nagara	0.77	295	P	Pg	03 08 47.4	+0.1
JYT	Yasato	1.33	329	P	Pn	03 08 55.5	-1.6
JYT				S	Sn	03 09 11.1	-3.8
JHJ	Hachijo jima 2	2.23	209	Pn	Pn	03 09 09.0	-0.4
	33nm,0.3s,baz=329,slow=18,SNR=16						
JHJ				Sn	Sn	03 09 33.7	-3.3
	56nm,0.3s,baz=129,slow=22,SNR=9.8						
MJAR	Matsushiro Arr	2.73	303	Pn	Pn	03 09 18.3	+2.0
	0.6nm,0.3s,baz=145,slow=13,SNR=5.3						
MAT	Matsushiro	2.73	303	P	Pn	03 09 17.1	+0.8
MAT				*e*S	Sn	03 09 49.5	+0.1
JCJ	Chichijima	8.03	173	Pn	Pn	03 10 29.6	+0.5
	5.2nm,0.3s,baz=79,slow=19,SNR=1.7						
ASAJ	Asahikawa	9.09	7	Pn	Pn	03 10 41.5	-2.1
	0.4nm,0.3s,baz=277,slow=34,SNR=1.0						
GUMO	Guam	21.68	170	LR	LR	03 22 04.7	
	comp=Z,186nm,20.2s,baz=106,slow=38						
H11N2	WAKE ISLAND Hy	27.46	117	T	T	03 43 19.2	
	baz=308,slow=75						
H11N1	WAKE ISLAND Hy	27.47	117	T	T	03 43 22.1	
	baz=308,slow=75						
H11N3	WAKE ISLAND Hy	27.48	117	T	T	03 43 20.0	
	baz=308,slow=75						
H11S1	WAKE ISLAND Hy	28.11	119	T	T	03 44 08.8	
	baz=312,slow=76						
H11S3	WAKE ISLAND Hy	28.11	119	T	T	03 44 08.7	

	baz=312,slow=76						
H11S2	WAKE ISLAND Hy	28.12	119	T	T	03 44 09.6	
	baz=312,slow=76						
SONM	Songino Array	28.68	307	P	P	03 14 31.0	+1.6
	0.5nm,0.9s,baz=116,slow=9.8,SNR=2.6						
MKAR	Makanchi Array	44.93	304	P	P	03 16 49.3	+1.9
	0.3nm,0.6s,baz=90,slow=7.8,SNR=2.8						
WRA	Warramunga Arr	55.10	188	P	P	03 18 05.0	+0.3
	0.5nm,0.4s,baz=23,slow=7.1,SNR=23						
ASAR	Alice Springs	58.83	188	P	P	03 18 30.9	-0.3
	0.3nm,0.6s,baz=4.5,slow=6.6,SNR=5.9						
H03N2	Juan Fernandez	147.06	99	T	T	06 12 54.6	
	baz=289,slow=76,SNR=25						
H03N3	Juan Fernandez	147.07	99	T	T	06 12 47.8	
	baz=289,slow=76,SNR=23						
H03N1	Juan Fernandez	147.08	99	T	T	06 12 54.1	
	baz=289,slow=76,SNR=22						

ATH 07 03:11:43.3, 38°.35N×22°.10E, h8^{km}±2^{km}, ML1.3/3, Error ellipse: s-maj=2.2km s-min=0.9km az=285.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRIZ	Trizonia	0.03	299	P	Pg	03 11 44.8	0.0
TRIZ				S	Sg	03 11 45.9	-0.1
SERG	Sergoula	0.07	329	P	Pg	03 11 45.3	-0.1
SERG				S	Sg	03 11 46.8	-0.1
SERG				AML	AML	03 11 47.0	
	comp=E,1017µm,0.1s						
SERG				AML	AML	03 11 47.0	
	comp=N,1010µm,0.2s						
LAKA	Lakka	0.15	221	P	Pg	03 11 46.4	-0.1
LAKA				S	Sg	03 11 48.8	+0.1
EFP	Efpalio	0.17	296	P	Pg	03 11 46.5	-0.3
EFP				S	Sg	03 11 49.3	0.0
EFP				AML	AML	03 11 49.4	
	comp=E,172µm,0.2s						
EFP				AML	AML	03 11 49.5	
	comp=N,158µm,0.3s						
ANX	Ano Chora	0.28	329	P	Pg	03 11 48.7	-0.3
ANX				AML	AML	03 11 53.3	
	comp=N,183µm,0.2s						
ANX				S	Sg	03 11 53.3	+0.6
ANX				AML	AML	03 11 53.4	
	comp=E,163µm,0.3s						
KLV	Kalavryta, Ach	0.31	173	P	Pg	03 11 49.3	-0.2
KLV				S	Sg	03 11 54.1	+0.6
GUR	Goura	0.46	155	P	Pg	03 11 51.2	-1.0
GUR				S	Sg	03 11 58.9	+0.8
DRO	Drossia	0.51	218	P	Pg	03 11 52.6	-0.5
RLS	Riolos of Patr	0.58	240	P	Pg	03 11 54.2	-0.3
RLS				S	Sg	03 12 03.0	+0.9
EVR	Evrytania	0.61	338	P	Pg	03 11 54.8	-0.3
EVR				S	Sg	03 12 03.9	+0.8

ROM 07 03:11:45.9±0.1, 42°.608N±0°.005×12°.991E±0°.006, h11^{km}, ML1.2/2, 2C-2D, Error ellipse: s-maj=0.6km s-min=0.5km az=198.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNSS	Leonessa	0.04	98	P	Pg	03 11 48.5	+0.3
LNSS				S	Sg	03 11 50.0	+0.2
LNSS				AML	AML		
	comp=E,266µm,0.3s						
LNSS				AML	AML		
	comp=N,325µm,0.3s						
ARRO	Arrone	0.17	260	⇓P	Pg	03 11 50.3	+0.6
ARRO				S	Sg	03 11 53.2	+0.8
RM33	Pellescritta (	0.19	121	P	Pg	03 11 50.6	+0.5
RM33				S	Sg	03 11 54.0	+0.9
NRCA	Norcia	0.24	22	⇑P	Pg	03 11 51.2	+0.2
NRCA				S	Sg	03 11 55.1	+0.6
NRCA				AML	AML		
	comp=E,79µm,0.2s						
NRCA				AML	AML		
	comp=N,40µm,0.6s						
SMA1	SAN MARTINO	0.26	85	P	Pg	03 11 51.8	+0.5
SMA1				S	Sb	03 11 56.0	-1.0
FIAM	Fiamignano	0.35	165	⇓P	Pg	03 11 53.2	+0.2
CESI	CESI - Serrava	0.40	351	⇑P	Pg	03 11 54.3	+0.4
CESI				S	Sb	03 12 00.7	-0.6

IDC 07 03:39:13.2±2.0, 2°.41N×127°.87E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.1/38, mbtmp3.6/3, Error ellipse: s-maj=148.0km s-min=23.4km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.10	164	P	P	03 44 21.0	+0.1
	0.4nm,0.3s,baz=343,slow=10,SNR=20						
ASAR	Alice Springs	26.58	168	P	P	03 44 52.9	-0.4
	0.5nm,0.5s,baz=358,slow=8.3,SNR=15						
MKAR	Makanchi Array	59.28	325	P	P	03 49 17.0	+0.2
	0.4nm,0.4s,baz=118,slow=7.9,SNR=12						

IDC 07 03:59:18.2±2.5, 5°.62S×150°.96E, h0^{km}, mb3.3/2, mb1 3.7/2, mb1mx3.3/30, mbtmp3.4/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/21, Error ellipse: s-maj=119.9km s-min=42.9km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.32	225	Sn	Sn	04 01 38.0	-3.1
	3.7nm,0.3s,baz=194,slow=13,SNR=2.0						
WRA	Warramunga Arr	21.54	227	P	P	04 04 09.3	0.0
	0.9nm,0.7s,baz=54,slow=10,SNR=13						
WRA				PcP	PcP	04 08 11.7	-0.5
	0.2nm,0.5s,baz=46,slow=2.1,SNR=2.4						
ASAR	Alice Springs	24.32	221	P	P	04 04 38.1	+0.2
	0.5nm,0.5s,baz=55,slow=9.3,SNR=10						
BATI	Baumata	27.41	259	LR	LR	04 16 36.3	
	comp=Z,63nm,18.3s,baz=271,slow=38						
TORD	Torodi Ar. Bea	148.79	286	PKPbc	PKPbc	04 19 08.2	-0.7
	1.2nm,0.6s,baz=96,slow=2.6,SNR=16						

IDC 07 04:24:35.3±1.0, 6°.03N×60°.83E, h0^{km}, mb3.7/8, mb1 3.9/8, mb1mx3.6/52, mbtmp3.7/8, MS3.2/6, Ms1 3.2/6, ms1mx2.9/36, Error ellipse: s-maj=30.7km s-min=22.1km az=1.0

ISC 07 04:24:37.0±1.0, 6°.1N±0°.2×60°.8E±0°.1, h10^{km}, n14, σ0^{s}.77/9, mb3.8/8, MS3.1/4, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	17.19	353	LR	LR	04 33 48.4	
	comp=Z,49nm,21.0s,baz=191,slow=32						
PALK	Pallekele	19.80	85	LR	LR	04 34 44.4	
	comp=Z,93nm,22.0s,baz=20,slow=31						
KMBO	Kilima Mbogo	24.58	254	P	P	04 29 58.5	+0.6
	1.2nm,0.4s,baz=54,slow=13,SNR=6.1						
OPO	Ambohidratompo	27.93	208	LR	LR	04 38 57.7	
	comp=Z,44nm,21.2s,baz=230,slow=31						
CMAR	Chiang Mai Arr	39.15	68	P	P	04 32 06.2	+0.9
	1.3nm,0.3s,baz=264,slow=8.8,SNR=4.7						
CMAR				LR	LR	04 47 59.5	
	comp=Z,20nm,18.9s,baz=8.5,slow=36						
BRTR	Keskin Array B	41.47	328	P	P	04 32 23.7	-0.7
	0.4nm,0.7s,baz=160,slow=11,SNR=4.6						
KURBB	Kurchatov Arra	46.81	15	P	P	04 33 06.6	-0.3
	0.6nm,0.5s,baz=207,slow=9.4,SNR=4.8						
BOSA	Boshof	48.60	223	LR	LR	04 52 03.9	
	comp=Z,39nm,18.8s,baz=7.5,slow=34						
KEST	Kesra	55.58	310	LR	LR	04 57 13.4	
	comp=Z,20nm,18.6s,baz=314,slow=35						
SONM	Songino Array	56.87	35	P	P	04 34 22.6	+0.4
	0.8nm,0.9s,baz=258,slow=6.9,SNR=5.6						
TORD	Torodi Ar. Bea	58.59	282	P	P	04 34 35.0	+0.2
	0.3nm,0.7s,baz=80,slow=3.8,SNR=2.4						
WRA	Warramunga Arr	76.73	112	P	P	04 36 28.2	-1.0
	0.7nm,0.8s,baz=289,slow=4.9,SNR=4.8						
ASAR	Alice Springs	77.11	116	P	P	04 36 30.7	-0.6
	0.6nm,0.7s,baz=280,slow=5.6,SNR=6.5						
TXAR	Lajitas Array	141.75	338	PKP	PKPdf	04 44 10.0	+0.1
	0.3nm,0.8s,baz=100,slow=2.7,SNR=2.5						

NOU 07 04:25:00.7, 38°.38S×176°.21E, h193^{km}, MLv4.5/9, North Island, New Zealand

IDC 07 04:25:02.1±3.4, 37°.57S×176°.48E, h156^{km}±57^{km}, mb3.0/2, mb1 3.3/2, mb1mx3.2/25, mbtmp3.5/2, Error ellipse: s-maj=210.6km s-min=60.2km az=2.0

WEL 07 04:25:04.0±0.5, 38°S±3°×17°6E±°, h157^{km}±5^{km}, M3.6/80, ML2.8/8, MLv3.6/80, Error ellipse: s-maj=0.0km s-min=0.0km az=114.2

ISC 07 04:24:59.8±1.3, 38°.32S±0°.05×176°.17E±0°.05, h191^{km}±7^{km}, n159, σ1^{s}.43/169, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRRZ	Galatos Road	0.06	237	P	Pn	04 25 25.9	+1.0
HSRZ	Hossack Road	0.06	83	P	Pn	04 25 25.9	+1.0
HRRZ	Handcock Road	0.12	128	P	Pn	04 25 25.8	+0.8
UTU	Utuhina	0.14	8	P	Pn	04 25 25.9	+0.9
HLRZ	Highlands Stat	0.16	65	P	Pn	04 25 26.2	+1.2
WPRZ	Whakapapatarin	0.20	181	P	Pn	04 25 26.0	+0.9
NGRZ	Ngongotaha	0.22	4	P	Pn	04 25 26.0	+0.8
PRRZ	Plateau Road	0.25	136	P	Pn	04 25 25.9	+0.8
OMRZ	Omania	0.27	37	P	Pn	04 25 25.9	+0.7
RRRZ	Republican Roa	0.27	94	P	Pn	04 25 25.9	+0.8
TARZ	Mount Tarawera	0.28	73	P	Pn	04 25 26.1	+0.8
ALRZ	Allen Road	0.28	151	P	Pn	04 25 26.0	+0.8
MKRZ	Makatiti	0.30	53	P	Pn	04 25 26.7	+1.3
KARZ	Kaharoa	0.30	11	P	Pn	04 25 26.0	+0.7
KUTZ	Kaahu Road	0.32	238	P	Pn	04 25 26.3	+1.0
LIRZ	Lichensteins R	0.36	28	P	Pn	04 25 25.9	+0.5
WHTZ	Whakaora	0.38	206	P	Pn	04 25 26.8	+1.3
TLZ	Tolley Road	0.50	269	P	Pn	04 25 27.0	+1.2
EDRZ	Edgecumbe	0.50	65	P	Pn	04 25 26.5	+0.5
MUGZ	Murupara	0.50	109	P	Pn	04 25 26.4	+0.6
KMRZ	Kaimai	0.51	339	P	Pn	04 25 26.8	+0.8
WATZ	Wairara	0.52	221	P	Pn	04 25 27.1	+1.1
MARZ	Manawahe	0.52	50	P	Pn	04 25 26.8	+0.8
MRHZ	Matea Rd	0.55	159	P	Pn	04 25 27.0	+0.9
OPRZ	Ohinepanea	0.56	33	P	Pn	04 25 26.6	+0.5
HATZ	Hinemaiaia	0.57	186	P	Pn	04 25 27.1	+1.0
TGRZ	Tauranga	0.59	7	P	Pn	04 25 26.9	+0.6
RATZ	Rangitukua	0.63	210	P	Pn	04 25 27.6	+1.1
RITZ	Rihia Road	0.70	200	P	Pn	04 25 28.4	+1.6
RTZ	Ruatahuna	0.70	115	P	Pn	04 25 27.8	+1.0
RTZ				S	Sn	04 25 46.1	-1.7
URZ	Urewera	0.74	86	P	Pn	04 25 27.4	+0.5
	70nm,0.3s,baz=260,slow=5.5,SNR=855						
URZ				S	Sn	04 25 45.2	-2.7
	397nm,0.3s,baz=215,slow=5.3,SNR=36						
URZ	Urewera	0.74	86	P	Pn	04 25 27.5	+0.5
URZ				S	Sn	04 25 45.3	-2.7
URZ	Urewera	0.74	86	P	Pn	04 25 27.6	+0.6
MTHZ	Maungataniwha	0.75	136	P	Pn	04 25 28.3	+1.3
MTHZ				S	Sn	04 25 46.5	-1.8
KATZ	Kakaramea	0.75	209	P	Pn	04 25 28.5	+1.3
TOZ	Tahuroa Road	0.79	318	P	Pn	04 25 28.3	+1.1
NTVZ	North Tongarir	0.87	206	P	Pn	04 25 29.2	+1.4
TMVZ	Te Maari	0.88	204	P	Pn	04 25 29.2	+1.3
KRVZ	Karewarewa	0.88	208	P	Pn	04 25 29.2	+1.3
BKZ	Black Stump Fm	0.88	163	P	Pn	04 25 29.2	+1.4
BKZ				S	Sn	04 25 47.8	-2.0
BKZ	Black Stump Fm	0.88	163	P	Pn	04 25 29.3	+1.4
ETVZ	East Tongariro	0.89	204	P	Pn	04 25 29.4	+1.4
WTVZ	West Tongariro	0.92	209	P	Pn	04 25 29.5	+1.3
NNVZ	North Ngauruho	0.92	208	P	Pn	04 25 29.6	+1.4
NMHZ	Naumai	0.92	147	P	Pn	04 25 30.4	+2.3
NMHZ				S	Sn	04 25 50.5	+0.2
OTVZ	Oturere	0.93	205	P	Pn	04 25 29.9	+1.6
RAHZ	Arahi	0.93	130	P	Pn	04 25 30.0	+1.9
RAHZ				S	Sn	04 25 49.6	-0.6
TWVZ	Taurewa	0.94	217	P	Pn	04 25 29.7	+1.4
SNVZ	South Ngauruho	0.96	205	P	Pn	04 25 29.9	+1.4
NGZ	Ngauruhoe	0.96	207	P	Pn	04 25 29.9	+1.4
RAGZ	Rawiri	0.99	101	P	Pn	04 25 30.2	+1.5
RAGZ				S	Sn	04 25 49.8	-1.2
SNGZ	Shannon Statio	1.03	117	P	Pn	04 25 30.6	+1.8
SNGZ				S	Sn	04 25 50.4	-1.0
TUVZ	Tukino	1.03	203	P	Pn	04 25 30.6	+1.6
MYRZ	Mayor Island	1.04	3	P	Pn	04 25 30.4	+1.5
HIZ	Hauiti	1.05	259	P	Pn	04 25 30.5	+1.5
HIZ	Hauiti	1.05	259	P	Pn	04 25 30.5	+1.6
FWVZ	Far West T-bar	1.05	207	P	Pn	04 25 30.4	+1.2
WHVZ	Whangaehu Hut	1.06	205	P	Pn	04 25 30.6	+1.3
DRZ	Dome Shelter	1.07	206	P	Pn	04 25 30.7	+1.3
MWZ	Matawai	1.07	91	P	Pn	04 25 30.3	+1.1
MWZ				S	Sn	04 25 50.1	-1.8
TRVZ	Turoa	1.09	206	P	Pn	04 25 30.9	+1.4
WNVZ	Wahianoa	1.10	204	P	Pn	04 25 31.1	+1.6
KWHZ	Kaweka Forest	1.12	170	P	Pn	04 25 31.3	+1.8
KWHZ				S	Sn	04 25 52.4	-0.4
WHHZ	Waihua	1.13	133	P	Pn	04 25 31.5	+2.0
MOVZ	Moawhango	1.13	197	P	Pn	04 25 30.9	+1.2
ARHZ	Aropaoanui	1.14	146	P	Pn	04 25 31.9	+2.2
ARHZ				S	Sn	04 25 52.7	-0.2
PKVZ	Pokaka	1.16	213	P	Pn	04 25 31.4	+1.5
BHHZ	Black Hill Sta	1.17	184	P	Pn	04 25 31.4	+1.5
MTVZ	Mangateitei	1.20	207	P	Pn	04 25 31.8	+1.6
MCHZ	McNeill Hill	1.20	160	P	Pn	04 25 32.5	+2.4
RUGZ	Raukumara Rang	1.24	74	P	Pn	04 25 30.8	+0.2
RIGZ	Rimuhau	1.31	108	P	Pn	04 25 33.0	+1.9
TKGZ	Te Karaka	1.33	96	P	Pn	04 25 32.8	+1.7
KRHZ	Kereru	1.33	173	P	Pn	04 25 33.1	+1.9
VRZ	Vera Road	1.36	233	P	Pn	04 25 33.5	+2.0
KNZ	Kokohu	1.37	121	P	Pn	04 25 33.3	+1.9
HAZ	Te Kaha	1.39	67	P	Pn	04 25 32.2	+0.5
TWGZ	Tauwhareparae	1.43	85	P	Pn	04 25 33.9	+1.7
PRGZ	Paritu Road	1.47	115	P	Pn	04 25 34.5	+2.1
CKHZ	Cape Kidnapper	1.51	152	P	Pn	04 25 35.2	+2.5
PKGZ	Pakihiroa	1.56	75	P	Pn	04 25 34.7	+1.3
KAHZ	Kahuranaki	1.57	160	P	Pn	04 25 35.8	+2.4
PNHZ	Pukenui	1.59	179	P	Pn	04 25 35.3	+1.7
MHGZ	Mahia Peninsul	1.59	122	P	Pn	04 25 35.9	+2.4
CNGZ	Carnagh Statio	1.61	96	P	Pn	04 25 36.1	+2.4
KUZ	Kuaotunu	1.61	347	P	Pn	04 25 35.1	+1.3
PUZ	Puketiti	1.66	82	P	Pn	04 25 35.4	+1.1
ETAZ	East Tamaki Re	1.68	324	P	Pn	04 25 35.9	+1.5
WAZ	Wanganui	1.70	212	P	Pn	04 25 36.5	+1.9
WIAZ	Waiheke Island	1.73	331	P	Pn	04 25 36.6	+1.7
AWAZ	Awhitu Peninsu	1.74	316	P	Pn	04 25 36.6	+1.6
TSZ	Takapari Road	1.75	185	P	Pn	04 25 36.8	+1.8
LREZ	Lake Rotokare	1.79	230	P	Pn	04 25 37.8	+2.4
PXZ	Pawanui	1.79	163	P	Pn	04 25 37.6	+2.2
WMGZ	Waiomatatini S	1.84	75	P	Pn	04 25 37.4	+1.4
MBAZ	Motutapu North	1.85	326	P	Pn	04 25 37.7	+1.7
MXZ	Matakaoa Point	1.85	67	P	Pn	04 25 37.6	+1.5
PREZ	Palmer Road	1.87	236	P	Pn	04 25 38.9	+2.6
WTAZ	Waiatarua	1.88	317	P	Pn	04 25 38.2	+1.8
NEZ	North Egmont	1.88	239	P	Pn	04 25 39.0	+2.6
PKE	Pukeiti	1.92	242	P	Pn	04 25 39.3	+2.6
KHEZ	Kahui Hut	1.94	239	P	Pn	04 25 39.5	+2.4
DVHZ	Dannevirke	1.98	180	P	Pn	04 25 39.0	+1.6
PRHZ	Porangahau	1.98	170	P	Pn	04 25 39.4	+2.0
OHWZ	Ohakea	2.00	199	P	Pn	04 25 39.7	+2.2
NBEZ	Newall Road No	2.03	242	P	Pn	04 25 40.4	+2.5
POWZ	Post Office Ro	2.09	188	P	Pn	04 25 40.2	+1.6
NMEZ	Namu Road	2.10	238	P	Pn	04 25 40.9	+2.3
ANWZ	Angora Road	2.15	174	P	Pn	04 25 41.3	+2.1
PRWZ	Pori Road	2.24	184	P	Pn	04 25 42.0	+1.9
BFZ	Birch Farm	2.36	179	P	Pn	04 25 43.1	+1.6
BFZ	Birch Farm	2.36	179	P	Pn	04 25 43.1	+1.6
MRZ	Mangatainoka R	2.38	191	P	Pn	04 25 43.1	+1.4
TIWZ	Tintock	2.46	185	P	Pn	04 25 44.2	+1.5
CPWZ	Castlepoint	2.59	179	P	Pn	04 25 46.0	+2.0
OGWZ	Otaki Gorge	2.61	197	P	Pn	04 25 45.8	+1.4
HOWZ	Holdsworth Sta	2.62	191	P	Pn	04 25 45.6	+1.1
KIW	Kapiti Island	2.72	201	P	Pn	04 25 46.5	+1.0
TMWZ	Te Maipa	2.79	184	P	Pn	04 25 47.5	+1.1
MTW	Mount Morrison	2.88	190	P	Pn	04 25 48.3	+0.8
CAW	Cannon Point	2.91	197	P	Pn	04 25 48.8	+1.0
DUWZ	D'Urville Isla	3.03	214	P	Pn	04 25 49.9	+0.7
TRWZ	Traveller	3.10	187	P	Pn	04 25 50.9	+0.8
PAWZ	Paruwai Farm	3.11	190	P	Pn	04 25 50.9	+0.7
WEL	Wellington	3.15	200	P	Pn	04 25 51.5	+0.8
MSWZ	Moikau Station	3.17	193	P	Pn	04 25 51.6	+0.6
TCW	Tory Channel	3.23	206	P	Pn	04 25 52.3	+0.6
BHW	Baring Head	3.24	198	P	Pn	04 25 52.5	+0.7
PLWZ	Palliser	3.32	192	P	Pn	04 25 53.2	+0.4
TUWZ	Tuamarina	3.55	208	P	Pn	04 25 55.9	+0.4
NNZ	Nelson	3.60	216	P	Pn	04 25 56.8	+0.6
OUZ	Omahuta	3.72	325	P	Pn	04 26 00.3	+2.6
OUZ	Omahuta	3.72	325	P	Pn	04 26 00.0	+2.3
QRZ	Quartz Range	3.77	227	P	Pn	04 25 58.1	-0.1
QRZ	Quartz Range	3.77	227	P	Pn	04 25 58.4	+0.2
BSWZ	Blackbirch Sta	3.82	207	P	Pn	04 25 59.6	+0.7
THZ	Tophouse	4.25	215	P	Pn	04 26 04.8	+0.4
KHZ	Kahutara	4.56	205	P	Pn	04 26 08.7	+0.5
KHZ	Kahutara	4.56	205	P	Pn	04 26 08.7	+0.5
DSZ	Denniston Nort	4.79	223	P	Pn	04 26 10.7	-0.5
GVZ	Greta Valley S	5.22	206	P	Pn	04 26 16.9	+0.2
LTZ	Lake Taylor	5.36	212	P	Pn	04 26 18.9	+0.4
INZ	Inchbonnie	5.69	218	P	Pn	04 26 23.4	+0.7
OKCZ	Okains Bay	5.89	203	P	Pn	04 26 25.2	-0.2
OXZ	Oxford	5.90	211	P	Pn	04 26 24.8	-0.7
MQZ	McQueen's Vall	6.00	205	P	Pn	04 26 25.9	-0.9
AKCZ	Akaroa Harbour	6.07	203	P	Pn	04 26 27.7	0.0
RACZ	Rakaia	6.20	208	P	Pn	04 26 28.7	-0.7
MHCZ	Mount Hutt	6.26	212	P	Pn	04 26 30.3	0.0
RPZ	Rata Peaks	6.63	214	P	Pn	04 26 35.3	+0.2
RPZ	Rata Peaks	6.63	214	P	Pn	04 26 35.3	+0.2
ARCZ	Arundel	6.77	212	P	Pn	04 26 36.9	+0.1
TMZ	Timaru	7.20	211	P	Pn	04 26 42.2	-0.2
ODZ	Otahua Downs	7.89	210	P	Pn	04 26 51.5	+0.1
ODZ	Otahua Downs	7.89	210	P	Pn	04 26 51.8	+0.4
JCZ	Jackson Bay	8.00	222	P	Pn	04 26 53.1	+0.1
ASAR	Alice Springs	38.72	280	P	P	04 32 11.0	+5.5
	0.4nm,0.5s,baz=120,slow=8.3,SNR=5.0						
WRA	Warramunga Arr	40.47	285	P	P	04 32 27.1	+7.2
	0.7nm,1.0s,baz=118,slow=9.4,SNR=3.1						
ARCES	ARCESS Array B	145.00	343	PKP	PKiKP	04 44 16.9	+0.1
	3.1nm,1.0s,baz=29,slow=2.1,SNR=5.5						

IDC 07 04:30:24.7±0.9, 41°.22N×79°.37E, h0^{km}, mb3.7/12, mb1 3.8/18, mb1mx3.7/56, mbtmp3.7/18, ML3.3/6, Error ellipse: s-maj=16.8km s-min=16.0km az=38.0

SOME 07 04:30:26.7, 41°.37N×79°.38E, h20^{km}, MS3.2

KRNET 07 04:30:27.1±0.1, 41°.40N×79°.39E, h14^{km}, mb4.3

MOS 07 04:30:27.0±1.6, 41°.30N×79°.58E, h25^{km}, mb3.9/4, Error ellipse: s-maj=8.3km s-min=4.4km az=119.7

NNC 07 04:30:29.2±0.9, 41°.56N×79°.37E, h0^{km}, mb4.7, mpv4.4, Error ellipse: s-maj=6.6km s-min=4.3km az=153.0

ISC 07 04:30:27.0±1.6, 41°.45N±0°.05×79°.46E±0°.03, h8^{km}±9^{km}, n146, σ1^{s}.90/204, mb3.6/10, 41C-14D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	1.71	0	*e*P	Pg	04 31 01.2	+1.4
	386nm,0.5s						
SHLS				*e*S	Sg	04 31 25.9	+3.9
	5µm,0.4s						
SHLS	Shalkode	1.71	0	*e*Pn	Pn	04 30 58.7	+1.3
	baz=12						
SHLS	Shalkode	1.71	0	*e*PN	Pn	04 30 58.6	+1.3
SHLS	Shalkode	1.71	0	P	Pg	04 30 59.5	-0.4
	337nm,0.4s						
SHLS				S	Sg	04 31 23.0	+1.0
	5µm,0.4s						
UZB	Uzynbulak	1.73	349	*e*P	Pg	04 31 01.0	+0.7
	105nm,0.3s						
UZB				*e*S	Sg	04 31 25.4	+2.8
	548nm,0.3s						
UZB	Uzynbulak	1.73	349	*e*P	Pn	04 30 58.0	+0.4
	baz=351						
UZB				*e*S	Sb	04 31 20.2	-0.9
	baz=351						
UZB	Uzynbulak	1.73	349	*e*PN	Pn	04 30 58.0	+0.4
UZB	Uzynbulak	1.73	349	P	Pn	04 30 58.1	+0.4
	233nm,0.4s						
UZB				S	Sg	04 31 20.6	-2.1
	548nm,0.3s						
SATY	Saty	1.79	334	*e*P	Pg	04 31 01.3	-0.1
	87nm,0.4s						
SATY				*e*S	Sg	04 31 26.0	+1.4
	424nm,0.4s						
SATY	Saty	1.79	334	*e*Pn	Pn	04 30 59.0	+0.6
	baz=336						
SATY				*e*Sn	Sb	04 31 22.1	-0.8
	baz=336						
SATY	Saty	1.79	334	*e*PN	Pn	04 30 58.9	+0.6
SATY	Saty	1.79	334	P	Pn	04 30 59.0	+0.6
	283nm,0.5s						
SATY				S	Sg	04 31 22.5	-2.1
	381nm,0.3s						
KDJ	Kajisay	1.83	293	*i* PN	Pn	04 30 59.5	+0.4
KDJ				*i* S	Sn	04 31 23.4	+0.8
KDJ	Kajisay	1.83	293	⇑*i*P	Pn	04 30 59.9	+0.8
	baz=95						
KDJ				⇑*i*S	Sb	04 31 24.4	+0.2
	baz=95						
PDGK	Podgornoye	1.88	1	PN	Pn	04 31 00.5	+0.8
PDGK	Podgornoye	1.88	1	P	Pn	04 31 01.2	+1.5
	100nm,0.4s						
PDGK				S	Sg	04 31 26.1	-1.4
	1µm,0.5s						
PDGK	Podgornoye	1.88	1	⇑Pn	Pn	04 31 00.5	+0.8
	98nm,0.4s						
PDGK				⇓Lg	Lg	04 31 28.3	
	2µm,0.6s						
ANVS	Anan'yevo	1.89	316	*i* PN	Pb	04 31 01.7	-0.2
ANVS				*i* S	Sg	04 31 27.0	-0.7
ANVS	Anan'yevo	1.89	316	⇑*i*P	Pb	04 31 01.7	-0.2
	baz=18						
ANVS				⇑*i*S	Sg	04 31 27.4	-0.3
	baz=18						
KPKS	Kokpek	2.10	344	*e*P	Pb	04 31 06.0	+0.6
	221nm,0.5s						
KPKS				*e*S	Sg	04 31 33.6	-0.9
	2µm,0.3s						
KPKS	Kokpek	2.10	344	*e*Pg	Pn	04 31 04.5	+1.9
	baz=346						
KPKS				*e*Lg	Lg	04 31 31.2	
	baz=346						
KPKS	Kokpek	2.10	344	*e*PN	Pn	04 31 04.5	+1.9
KPKS				*e*		04 31 31.2	
KTMS	Ketmen	2.10	18	*e*P	Pb	04 31 06.2	+0.6
	142nm,0.5s						
KTMS				*e*S	Sg	04 31 34.5	-0.2
	728nm,0.5s						
KTMS	Ketmen	2.10	18	Pg	Pb	04 31 05.2	-0.3
	142nm,0.5s						
KTMS				Lg	Lg	04 31 32.9	
	728nm,0.5s						
KURS	Kuram	2.25	335	*e*P	Pg	04 31 09.3	-0.9
	380nm,0.6s						
KURS				*e*S	Sg	04 31 39.8	+0.4
	346nm,0.5s						
KURS	Kuram	2.25	335	Pg	Pb	04 31 07.5	-0.5
	380nm,0.6s						
KURS				Lg	Lg	04 31 36.7	
	286nm,0.4s						
TNSS	Tian-Shan	2.45	311	*e*P	Pb	04 31 11.5	-0.1
	78nm,0.6s						
TNSS				*e*S	Sb	04 31 42.9	+0.8
	256nm,0.3s						
TNSS	Tian-Shan	2.45	311	*e*Pg	Pn	04 31 10.0	+2.3
	baz=312						
TNSS	Tian-Shan	2.45	311	Pg	Pb	04 31 10.5	-1.1
	159nm,0.4s						
TNSS				Lg	Lg	04 31 41.8	
	258nm,0.6s						
MDOK	Medeo	2.48	315	*e*P	Pb	04 31 12.0	+0.1
	90nm,0.2s						
MDOK				*e*S	Sb	04 31 43.3	+0.7
	610nm,3.0s						
MDOK	Medeo	2.48	315	*e*Pg	Pn	04 31 10.6	+2.7
	baz=315						
MDOK				*e*Lg	Lg	04 31 41.5	
	baz=315						
MDOK	Medeo	2.48	315	*e*PN	Pn	04 31 10.6	+2.7
MDOK	Medeo	2.48	315	⇓Pn	Pn	04 31 10.5	+2.6
	131nm,0.5s						
MDOK				⇑Lg	Lg	04 31 44.3	
	385nm,0.6s						
MDOK	Medeo	2.48	315	Pg	Pn	04 31 10.7	+2.7
	163nm,0.4s						
MDOK				Lg	Lg	04 31 42.4	
	356nm,0.5s						
KOTS	Kotyrbulak	2.49	317	*e*P	Pb	04 31 12.9	+0.7
	153nm,0.0s						
KOTS				*e*S	Sg	04 31 45.0	-2.2
	806nm,0.6s						
KOTS	Kotyrbulak	2.49	317	Pg	Pb	04 31 12.0	-0.2
	258nm,0.6s						
KOTS				Lg	Lg	04 31 44.1	
	806nm,0.6s						
ULHL	Ulahol	2.53	289	P	Pn	04 31 11.5	+2.8

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      SNR=70
ULHL  Ulahol              2.53 289  ePN   Pn     04 31 10.6 +1.9
ULHL                                iS    Sn     04 31 42.2 +2.4
ULHL  Ulahol              2.53 289⇑ eP    Pn     04 31 10.6 +1.9
      baz=91
ULHL                               ⇑iS    Sn     04 31 42.2 +2.4
      baz=91
KNDC  Almaty              2.56 315   PN   Pg     04 31 15.5 -0.6
KNDC  Almaty              2.56 315  ⇓Pg   Pg     04 31 15.1 -1.0
      419nm,0.8s
KNDC                                ⇑Lg   Lg     04 31 47.8
      1μm,0.9s
AAA   Alma-Ata            2.58 314  eP    Pb     04 31 14.5 +0.9
      164nm,0.3s
AAA                                 eS    Sg     04 31 48.3 -1.6
      2μm,22.2s
AAA   Alma-Ata            2.58 314  eLg   Lg     04 31 44.6
      baz=314
AAA   Alma-Ata            2.58 314   Pg   Pb     04 31 13.7 +0.1
      367nm,0.4s
AAA                                  Lg   Lg     04 31 46.8
      706nm,0.3s
IZV   Izvestkoviy         2.64 308  eP    Pb     04 31 14.6 -0.2
      268nm,0.8s
IZV                                 eS    Sb     04 31 48.6 +1.2
      861nm,0.5s
IZV   Izvestkoviy         2.64 308   Pg   Pb     04 31 14.6 -0.2
      268nm,0.8s
IZV                                  Lg   Lg     04 31 48.6
      861nm,0.5s
BLB   Baldybastay         2.75 345   Pg   Pb     04 31 16.3 -0.2
      896nm,0.6s
BLB                                  Lg   Lg     04 31 51.7
      552nm,0.4s
BOOM  Boomskoye usch      2.82 293  ePN   Pn     04 31 14.7 +2.1
BOOM                                iS    Sn     04 31 49.0 +2.0
BOOM  Boomskoye usch      2.82 293⇑ eP    Pn     04 31 14.7 +2.1
      baz=94
BOOM                               ⇑iS    Sn     04 31 49.0 +2.0
      baz=94
DJR   Jarkent             2.89   5  eP    Pb     04 31 19.3 +0.3
      22nm,0.3s
DJR                                 eS    Sg     04 31 56.4 -3.6
      253nm,0.5s
DJR   Jarkent             2.89   5   Pg   Pb     04 31 19.3 +0.3
      22nm,0.3s
DJR                                  Lg   Lg     04 31 56.4
      253nm,0.5s
ARXS  Arharly             3.01 337  eP    Pb     04 31 20.8 -0.2
      120nm,0.5s
ARXS                                eS    Sg     04 31 59.8 -4.0
      143nm,0.5s
ARXS  Arharly             3.01 337  iPN   Pn     04 31 18.0 +2.8
ARXS  Arharly             3.01 337   Pg   Pb     04 31 20.8 -0.2
      120nm,0.5s
ARXS                                 Lg   Lg     04 31 59.8
      143nm,0.5s
KST   Kastek              3.05 303  eP    Pb     04 31 21.8 +0.2
      161nm,0.6s
KST                                 eS    Sb     04 32 00.9 +1.9
      513nm,0.7s
KST   Kastek              3.05 303   Pg   Pb     04 31 21.8 +0.2
      161nm,0.6s
KST                                  Lg   Lg     04 32 00.9
      513nm,0.7s
KTBS  Karatobe            3.05 319  eP    Pb     04 31 22.0 +0.3
      76nm,0.6s
KTBS                                eS    Sg     04 32 01.0 -4.1
      684nm,0.8s
KTBS  Karatobe            3.05 319   Pg   Pb     04 31 22.0 +0.3
      76nm,0.6s
KTBS                                 Lg   Lg     04 32 01.0
      684nm,0.8s
TKM2  Tokmak 2            3.23 298   P    Pn     04 31 20.8 +2.6
      SNR=19
TKM2  Tokmak 2            3.23 298  ePN   Pn     04 31 20.4 +2.2
TKM2                                iS    Sn     04 31 59.3 +2.4
TKM2  Tokmak 2            3.23 298  ⇓Pn   Pn     04 31 20.6 +2.4
      26nm,0.5s
TKM2                                ⇓Lg   Lg     04 32 10.9
      59nm,0.5s
TKM2  Tokmak 2            3.23 298⇑ eP    Pn     04 31 20.4 +2.2
      baz=0.0
TKM2                               ⇑iS    Sn     04 31 58.9 +2.0
      baz=0.0
DGS   Degeres             3.27 305  eP    Pb     04 31 25.9 +0.5
      77nm,0.7s
DGS                                 eS    Sb     04 32 07.9 +2.5
      142nm,0.6s
DGS   Degeres             3.27 305   Pg   Pb     04 31 25.9 +0.5
      77nm,0.7s
DGS                                  Lg   Lg     04 32 07.9
      142nm,0.6s
KUU   Kurty               3.36 318  eP    Pb     04 31 26.5 -0.3
      34nm,0.6s
KUU                                 eS    Sb     04 32 09.2 +1.4
      378nm,0.8s
KUU   Kurty               3.36 318  ePg   Pb     04 31 26.2 -0.7
      baz=318
KUU   Kurty               3.36 318  ePN   Pb     04 31 26.1 -0.7
KUU   Kurty               3.36 318   Pg   Pb     04 31 26.5 -0.3
      34nm,0.6s
KUU                                  Lg   Lg     04 32 09.2
      378nm,0.8s
KBK   Karagaybulak        3.57 291   P    Pn     04 31 25.8 +2.9
      SNR=18
KBK   Karagaybulak        3.57 291  ePN   Pn     04 31 25.0 +2.1
KBK                                 eS    Sn     04 32 07.0 +1.6
KBK   Karagaybulak        3.57 291⇑ eP    Pn     04 31 25.0 +2.1
      baz=92
KBK                                ⇑eS    Sn     04 32 07.0 +1.6
      baz=92
KRBS  Karabastau          3.58 310  eP    Pb     04 31 30.5 -0.3
      32nm,0.6s
KRBS                                eS    Sb     04 32 15.8 +1.3
      102nm,0.7s
KRBS  Karabastau          3.58 310   Pg   Pb     04 31 30.5 -0.3
      32nm,0.6s
KRBS                                 Lg   Lg     04 32 15.8
      102nm,0.7s
TDK   Taldyqorghan        3.64 348  eP    Pb     04 31 31.9 +0.3
      345nm,0.9s
TDK                                 eS    Sg     04 32 19.0 -4.8
      546nm,0.7s
TDK   Taldyqorghan        3.64 348  iPn   Pn     04 31 22.9 -0.8
      baz=349
TDK                                 eLg   Lg     04 32 17.0
      baz=349
TDK   Taldyqorghan        3.64 348  iPN   Pn     04 31 22.8 -0.8
TDK   Taldyqorghan        3.64 348   Pg   Pb     04 31 31.9 +0.3
      345nm,0.9s
TDK                                  Lg   Lg     04 32 19.0
      546nm,0.7s
UCH   Uchtor              3.78 284   P    Pn     04 31 28.2 +2.2
      SNR=12
UCH   Uchtor              3.78 284  ePN   Pn     04 31 27.8 +1.8
UCH                                 iS    Sn     04 32 12.1 +1.2
UCH   Uchtor              3.78 284⇑ eP    Pn     04 31 27.8 +1.8
      baz=84
UCH                                ⇑iS    Sn     04 32 11.7 +0.8
      baz=84
CHMS  Chumysh             3.82 295   P    Pn     04 31 28.4 +2.2
      SNR=5.0
CHMS  Chumysh             3.82 295  ePN   Pn     04 31 28.2 +1.9
CHMS                                eS    Sn     04 32 13.1 +1.7
CHMS  Chumysh             3.82 295⇑ eP    Pn     04 31 28.2 +1.9
      baz=96
CHMS                               ⇑eS    Sn     04 32 13.1 +1.7
      baz=96
KAPS  Kapalarasan         3.84 359  eP    Pb     04 31 37.4 +2.4
      49nm,0.5s
KAPS                                eS    Sg     04 32 28.0 -2.2
      512nm,0.8s
KAPS  Kapalarasan         3.84 359   Pg   Pb     04 31 37.4 +2.4
      49nm,0.5s
KAPS                                 Lg   Lg     04 32 28.0
      512nm,0.8s
FRU1  Bishkek             3.84 292⇑ iP    Pn     04 31 29.0 +2.5
      baz=94
FRU1                               ⇑iS    Sn     04 32 14.0 +2.1
      baz=94
AAK   Ala-Archa           3.88 289   Pn   Pn     04 31 30.1 +2.9
      3.6nm,0.3s,baz=124,slow=10,SNR=36
AAK                                  Lg   Lg     04 32 23.3
      4.6nm,0.3s,baz=299,slow=15,SNR=8.5
AAK   Ala-Archa           3.88 289   P    Pn     04 31 29.8 +2.6
      SNR=16
AAK   Ala-Archa           3.88 289c ePN   Pn     04 31 28.7 +1.5
AAK                                  pmax pmax
      comp=Z,29nm,1.0s
AAK   Ala-Archa           3.88 289  ⇑Pn   Pn     04 31 29.7 +2.5
      comp=Z,10nm,0.7s
AAK                                 ⇑Pg   Pg     04 31 41.8 +0.4
      comp=Z,44nm,0.8s
AAK                                 ⇓Lg   Lg     04 32 31.3
      comp=Z,76nm,0.8s
AAK   Ala-Archa           3.88 289⇓ eP    Pn     04 31 29.2 +2.0
      baz=90
AAK                                ⇓iS    Sn     04 32 14.6 +1.5
      baz=90
SGDS  Sogindy             4.10 301  ePn   Pn     04 31 31.0 +0.9
      baz=301
SGDS                                ePg   Pb     04 31 40.9 +1.4
      baz=301
USP   Ospenovka           4.10 298   P    Pg     04 31 45.1 -0.4
      SNR=18
USP   Ospenovka           4.10 298  ePN   Pn     04 31 32.0 +1.9
USP                                 iS    Sn     04 32 20.0 +1.7
USP   Ospenovka           4.10 298⇑ eP    Pn     04 31 32.0 +1.9
      baz=99
USP                                ⇑iS    Sn     04 32 20.0 +1.7
      baz=99
AML   Almayashu           4.36 281   P    Pn     04 31 36.2 +2.2
      SNR=9.1
AML   Almayashu           4.36 281  ePN   Pn     04 31 35.6 +1.6
AML   Almayashu           4.36 281⇑ eP    Pn     04 31 35.6 +1.6
      baz=82
AML                                ⇑iS    Sn     04 32 25.7 +0.4
      baz=82
EKS2  Erkin-Say           4.40 288   P    Pb     04 31 46.6 +1.9
      SNR=14
EKS2  Erkin-Say           4.40 288  iPN   Pn     04 31 36.4 +2.1
EKS2  Erkin-Say           4.40 288⇑ iP    Pn     04 31 36.4 +2.1
      baz=89
EKS2                               ⇑eS    Sn     04 32 26.9 +1.1
      baz=89
MRKS  Merke               4.81 288  eP    Pb     04 31 53.3 +1.6
      comp=Z,29nm,0.8s
MRKS                                eS    Sb     04 32 55.2 +5.3
      comp=Z,38nm,0.8s
MRKS  Merke               4.81 288   Pg   Pb     04 31 53.3 +1.6
      comp=Z,29nm,0.8s
MRKS                                 Lg   Lg     04 32 55.2
      comp=Z,38nm,0.8s
OHH   Osh                 5.13 262  ePN   Pn     04 31 46.0 +1.7
OHH   Osh                 5.13 262⇓ eP    Pn     04 31 46.0 +1.7
      baz=62
OHH                                ⇓eS    Sn     04 32 43.0 -0.8
      baz=62
MNAS  Manas               5.29 284  ePN   Pn     04 31 48.4 +1.9
MNAS  Manas               5.29 284⇑ eP    Pn     04 31 48.4 +1.9
      baz=84
MNAS                               ⇑eS    Sn     04 32 47.4 -0.3
      baz=84
BTLS  Baital              5.34 314  ePn   Pn     04 31 46.5 -0.6
      baz=314
BTLS                                ePg   Pb     04 32 01.0 +0.4
      baz=314
BTLS  Baital              5.34 314  ePN   Pn     04 31 46.5 -0.6
MAKZ  Makanchi            5.66  18  ⇓Pn   Pn     04 31 54.0 +2.5
      comp=Z,11nm,1.1s
MAKZ                                ⇑Sn   Sn     04 32 57.3 +0.7
      comp=Z,19nm,0.5s
MK31  Makanchi Array      5.72  20  iPN   Pn     04 31 54.1 +1.8
MK31  Makanchi Array      5.72  20  ⇓Pn   Pn     04 31 54.2 +1.9
      comp=Z,7.0nm,0.6s,baz=199,slow=11,SNR=60
MK31                                ⇑Sn   Sn     04 33 00.8 +2.6
      comp=Z,18nm,0.6s,baz=200,slow=26,SNR=9.1
MK31                                ⇑Lg   Lg     04 33 27.4
      comp=Z,12nm,0.5s
MKAR  Makanchi Array      5.72  20   Pn   Pn     04 31 55.0 +2.7
      comp=Z,2.3nm,0.3s,baz=206,slow=14,SNR=50
MKAR                                 Sn   Sn     04 32 59.6 +1.5
      comp=Z,7.9nm,0.3s,baz=349,slow=21,SNR=6.8
MKAR                                 Lg   Lg     04 33 33.1
      comp=Z,2.4nm,0.3s,baz=265,slow=35,SNR=4.1
MKAR  Makanchi Array      5.72  20  iPN   Pn     04 31 54.2 +1.9
MKAR                                 pmax pmax
      comp=Z,3.0nm,0.3s
TRKS  Terek-Say           6.25 274  ePN   Pn     04 32 01.0 +1.3
TRKS  Terek-Say           6.25 274⇑ eP    Pn     04 32 01.0 +1.3
      baz=73
TRKS                               ⇑eS    Sn     04 33 09.5 -1.9
      baz=73
WMQ   Urumqi              6.52  66  ePn   Pn     04 32 05.9 +2.5
WMQ                                  Sn   Sn     04 33 20.8 +2.8
WMQ                                  smax smax
      comp=N,49nm,0.9s
WMQ                                  smax smax
      comp=E,54nm,0.7s
KK09  Karatay Array       6.85 287  ⇓Pg   Pg     04 32 34.3 -3.9
      comp=E,6.3nm,0.6s
KK09                                ⇑Lg   Lg     04 34 05.6
      comp=E,11nm,0.7s
ZSN   Zaisan              7.14  31  ePg   Pb     04 32 36.0 +4.8
      baz=31
ZSN                                 eSn   Sn     04 33 34.6 +1.5
      baz=31
KURBB Kurchatov Arra      9.20 356   Pn   Pn     04 32 42.5 +2.5
      comp=E,0.0nm,0.3s,baz=24,slow=31,SNR=2.0
KURBB                                Lg   Lg     04 35 19.9
      comp=E,0.3nm,0.3s,baz=178,slow=29,SNR=5.6
KURBB Kurchatov Arra      9.20 356  ⇑Lg   Lg     04 35 17.9
      comp=E,76nm,0.8s
KURK  Kurchatov           9.29 357c eP    Pn     04 32 45.4 +4.2
KURK                                 pmax pmax
      comp=Z,7.0nm,1.3s
KURK  Kurchatov           9.29 357  ⇓Lg   Lg     04 35 22.1
      comp=Z,64nm,1.3s
DGZ   Jazzator, Alta      9.96  31  iP    Pn     04 32 53.8 +3.2
ZALV  Zalesovo Beam      13.01  14   Pn   Pn     04 33 34.6 +2.5
      comp=Z,0.6nm,0.3s,baz=203,slow=13,SNR=8.6
ZALV                                 Sn   Sn     04 35 52.4 -4.6
      comp=Z,0.5nm,0.3s,baz=198,slow=21,SNR=8.0
ZALV  Zalesovo Beam      13.01  14  iP    Pn     04 33 35.0 +2.9
ZALV                                 pmax pmax
      comp=Z,2.0nm,0.4s
BVAR  Borovoye Array     13.11 335   Pn   Pn     04 33 33.9 +0.4
      comp=Z,0.1nm,0.3s,baz=165,slow=18,SNR=1.2
BVAR                                 Lg   Lg     04 37 21.4
      comp=Z,0.1nm,0.3s,baz=169,slow=31,SNR=5.3
BRVK  Borovoye           13.17 335  iP    Pn     04 33 37.3 +3.1
AKTO  Aktyubinsk         17.36 308   P    Pn     04 34 28.6 -1.0
      comp=Z,0.2nm,0.3s,baz=120,slow=15,SNR=5.5
SONM  Songino Array      20.14  62   P    P      04 35 02.5 +0.9
      comp=Z,1.1nm,0.7s,baz=263,slow=11,SNR=6.1
ARU   Arti               20.20 325   P    P      04 35 01.5 -0.6
      comp=Z,3.1nm,0.2s,baz=88,slow=8.0,SNR=3.8
ARU   Arti               20.20 325c iP    P      04 35 03.7 +1.6
ARU                                                  04 35 18.5
ARU                                  S    Sn     04 38 53.4 +2.1
ARU                                  SS   SnSn   04 39 14.2 +8.5
ARU                                  pmax pmax
      comp=Z,16nm,1.8s
BELG  Belogornoye        24.15 308   P    P      04 35 42.8 -0.5
      comp=Z,13nm,0.9s,baz=191,slow=2.1,SNR=4.9
BELG  Belogornoye        24.15 308  iP    P      04 35 43.0 -0.4
BELG                                 pmax pmax
      comp=Z,4.0nm,1.4s
BRTR  Keskin Array B     34.53 283   P    P      04 37 15.4 -0.6
      comp=Z,0.7nm,0.8s,baz=82,slow=9.2,SNR=6.0
BRTR  Keskin Array B     34.53 283  iP    P      04 37 16.0  0.0
BRTR                                 pmax pmax
      comp=Z,1.0nm,0.8s
AKASG Malin Array Be     35.44 303   P    P      04 37 22.9 -0.6
      comp=Z,0.1nm,0.2s,baz=66,slow=10,SNR=3.3
ARCES ARCESS Array B     39.39 333   P    P      04 37 56.2 -0.5
      comp=Z,1.9nm,0.7s,baz=96,slow=6.1,SNR=6.5
NB2   NORSAR Subarra     44.63 320   P    P      04 38 39.1 -0.6
      comp=Z,1.1nm,0.5s,baz=84,slow=8.6
NOA   NORSAR Array B     44.63 320   P    P      04 38 39.1 -0.6
      comp=Z,1.1nm,0.5s,baz=84,slow=8.0,SNR=5.9
GERES GERESS Array B     45.66 303   P    P      04 38 45.4 -2.7
      comp=Z,0.5nm,0.7s,baz=76,slow=4.1,SNR=3.5
ILAR  Eielson Array      68.08  20   P    P      04 41 25.6 -1.2
      comp=Z,0.3nm,0.9s,baz=308,slow=4.4,SNR=2.6
TORD  Torodi Ar. Bea     72.29 272   P    P      04 41 51.1 -2.2
      comp=Z,0.5nm,0.6s,baz=38,slow=5.3,SNR=4.7
WRA   Warramunga Arr     79.44 128   P    P      04 42 33.1 -0.9
      comp=Z,0.4nm,0.6s,baz=332,slow=5.1,SNR=7.6
WRA   Warramunga Arr     79.44 128  iP    P      04 42 33.7 -0.3
WRA                                  pmax pmax
      comp=Z,1.0nm,0.9s
ASAR  Alice Springs      82.09 131   P    P      04 42 47.2 -0.9
      comp=Z,0.3nm,0.7s,baz=335,slow=5.5,SNR=4.1
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*EAF **07** 04:44:44.3±0.9, 14°.04S×26°.40E, h10^{km}, MD3.5*

BUL 07 04:44:44.3±0.9**, 14°.04S×26°.40E, h10^{km}, MD3.7, Zambia**

```
Code  Station Name        Δ°   AZ°     Phase ID          Time      Res
                                      Op    ISC         h  m  s    ISC
LSZ   Lusaka              2.12 126  iP    Pn     04 45 20.2 +0.2
LSZ                                 iSg   Sb     04 45 49.9 +0.5
LSZ   Lusaka              2.12 126  iP    Pn     04 45 20.2 +0.2
LSZ                                 iSg   Sb     04 45 49.9 +0.5
MATP  Matopo              6.66 163  iP    Pn     04 46 20.9 -1.5
MATP                                iS    Sn     04 47 32.9 -5.5
MATP  Matopo              6.66 163  iP    Pn     04 46 20.9 -1.5
MATP                                iS    Sn     04 47 32.9 -5.5
LBTB  Lobatse            10.94 184  iP    Pn     04 47 17.3 -3.8
LBTB                                iS    Sn     04 49 10.6  -13
LBTB  Lobatse            10.94 184  iP    Pn     04 47 17.3 -3.8
LBTB                                iS    Sn     04 49 10.6  -13
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*IDC **07** 04:47:35.0±1.9, 7°.09S×123°.46E, h0^{km}, mb3.4/1, mb1 3.4/4, mb1mx3.3/30, mbtmp3.2/4, ML2.9/3, MS2.3/1, Ms1 2.3/1, ms1mx2.1/17, Error ellipse: s-maj=90.7km s-min=24.5km az=46.0*

*DJA **07** 04:47:38.1±0.4, 8°S±3°×12°3E±°, h10^{km}, M3.5/10, MLv3.5/10*

ISC 07 04:47:37.8±1.0**, 7°.64S**±0°.07×**122°.85E**±0°.08**, h10^{km}, n14,** σ1^{s}**76**/17**, Flores Sea**

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Code  Station Name        Δ°   AZ°     Phase ID          Time      Res
                                      Op    ISC         h  m  s    ISC
MMRI  Maumere             1.16 212   P    Pn     04 48 00.2 +0.1
MMRI                                 S    Sb     04 48 14.8 -0.3
EDFI  Ende, Flores        1.59 226   P    Pb     04 48 08.3 +0.9
SOEI  Soe                 2.52 146   P    Pn     04 48 21.9 +2.9
BATI  Baumata             2.67 163   P    Pn     04 48 22.8 +1.8
BSSI  Bau Bau, Buton      2.78 302   P    Pn     04 48 22.8 +0.4
BSSI                                 S    Sn     04 48 55.7 -0.3
BASI  Baing, Sumba        3.41 221   P    Pn     04 48 33.0 +1.9
BKSI  Bulukumba           3.56 310   P    Pn     04 48 33.3 +0.1
KAPI  Kappang             4.04 310   Pn   Pn     04 48 40.7 +1.0
      0.9nm,0.3s,baz=131,slow=11,SNR=8.8
KAPI                                 Sn   Sn     04 49 29.9 +2.8
      0.5nm,0.3s,baz=220,slow=18,SNR=1.8
KAPI                                 LR   LR     04 50 29.9
      comp=Z,36nm,21.0s,baz=128,slow=41
BNSI  Bone                4.22 320   P    Pn     04 48 42.9 +0.6
SPSI  Sidrap Palu         4.77 320   P    Pn     04 48 48.7 -1.1
MTKI  Muara Teweh, K     10.35 310   P    Pn     04 50 08.4 +1.9
WRA   Warramunga Arr     16.54 139   Pn   Pn     04 51 27.2 -2.8
      0.0nm,0.3s,baz=317,slow=12,SNR=1.9
ASAR  Alice Springs      19.14 148   P    P      04 52 02.2 +0.9
      0.1nm,0.3s,baz=329,slow=11,SNR=5.5
MKAR  Makanchi Array     65.08 330   P    P      04 58 16.5 -2.1
      0.3nm,0.8s,baz=136,slow=7.6,SNR=2.6
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*IDC **07** 05:18:41.0±0.6, 15°.30S×173°.46W, h0^{km}, mb4.5/14, mb1 4.7/16, mb1mx4.6/39, mbtmp4.6/16, ML4.1/2, MS3.8/26, Ms1 3.8/26, ms1mx3.8/28, Error ellipse: s-maj=24.0km s-min=13.9km az=139.0*

*NEIC **07** 05:18:43.5±1.7, 15°.14S±0°.08×173°.50W±0°.08, h10^{km}±1^{km}, mb4.8/111, Error ellipse: s-maj=14.1km s-min=13.3km az=336.0*

*BGR **07** 05:18:43.5±0.0, 16°.49S×173°.22W, h33^{km}*

*NOU **07** 05:18:49.6, 15°.04S×172°.89W, h88^{km}, mb4.8/17, Samoa Islands Region*

*GCMT **07** 05:18:54.5±0.5, 15°.06S±0°.04×173°.28W±0°.03, h50^{km}±3^{km}, MW5.0/68, Moment Tensor Solution. s16,c17; s68,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.11±.26; M$_{\theta\theta}$-2.87±.19; M$_{\phi\phi}$0.75±.21; M$_{r\theta}$-2.29±.17; M$_{\theta\phi}$-0.40±.17; M$_{\phi r}$0.29±.09; Best double couple: M$_0$3.42700×10^{16} NP1:φ$_s$68.00000°,δ26.00000°,λ65.00000°. NP2: φ$_s$275.00000°,δ67.00000°,λ102.00000°. Principal axes: T 3.0760, Plg66.0000°, Azm206.0000°; N 0.6990, Plg11.0000°, Azm91.0000°; P -3.7780, Plg21.0000°, Azm356.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 05:18:45.5±0.3**, 15°.16S**±0°.06×**173°.40W**±0°.06**, h30^{km}, n309,** σ1^{s}**13**/279**, mb4.8**/65**, MS3.8**/25**, 22C-15D, Tonga Islands**

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Code  Station Name        Δ°   AZ°     Phase ID          Time      Res
                                      Op    ISC         h  m  s    ISC
AFI   Afiamalu            2.00  52   Pn   Pn     05 19 16.6 -0.7
      272nm,0.3s,baz=193,slow=2.1,SNR=156
AFI                                  Sn   Sn     05 19 36.7 -4.7
      752nm,0.3s,baz=241,slow=24,SNR=32
AFI                                  LR   LR     05 20 00.2
      comp=Z,2μm,19.0s,baz=180,slow=37
NIUE  Niue                5.12 140   Pn   Pn     05 19 59.9 -0.3
NIUE  Niue                5.12 140   P    Pn     05 20 00.1  0.0
MSVF  Nonsavu             8.60 252   Pn   Pn     05 20 57.7  +10
      0.5nm,0.3s,baz=90,slow=17,SNR=6.3
MSVF                                 LR   LR     05 23 48.5
      comp=Z,930nm,21.8s,baz=91,slow=36
MSVF  Nonsavu             8.60 252   Pn   Pn     05 20 46.4 -1.6
MSVF  Nonsavu             8.60 252   P    Pn     05 20 57.9  +10
KNTN  Kanton             12.42   8        Pn     05 21 38.8 -1.5
KNTN  Kanton             12.42   8   P    Pn     05 21 39.7 -0.6
RAR   Rarotonga          14.27 117   Pn   Pn     05 22 04.4 -1.2
      1.7nm,0.3s,baz=281,slow=14,SNR=1.5
RAR                                  LR   LR     05 26 01.8
      comp=Z,278nm,20.6s,baz=298,slow=31
RAR   Rarotonga          14.27 117   Pn   Pn     05 22 05.2 -0.4
LIFNC LIFOU              19.24 250   P    P      05 23 06.3 -1.2
LIFNC                                IAmb IAmb   05 23 13.3
      comp=Z,46nm,0.8s
PINNC Pines Island,      19.57 245   P    P      05 23 10.5 -0.6
PINNC                                IAmb IAmb   05 23 23.3
      comp=Z,39nm,0.8s
YATNC Mamie plateau,     19.89 247   P    Pn     05 23 19.2 +2.8
OUENC Ouen Island, N     20.04 246   P    P      05 23 15.5 -0.8
OUENC                                IAmb IAmb   05 23 24.2
      comp=Z,63nm,1.1s
OUENC Ouen Island, N     20.04 246   P    Pn     05 23 21.3 +3.2
DZM   Mont Dzumac        20.29 247  eP    P      05 23 19.6 +0.5
      comp=Z,96nm,1.2s
DZM                                 eLR   LR     05 28 01.3
      comp=Z,786nm,26.4s
DZM   Mont Dzumac        20.29 247   P    P      05 23 18.6 -0.5
      comp=Z,4.4nm,0.6s,baz=92,slow=18,SNR=3.6
DZM                                  LR   LR     05 30 13.2
      comp=Z,264nm,18.0s,baz=36,slow=34
DZM   Mont Dzumac        20.29 247   P    P      05 23 17.7 -1.3
DZM                                  IAmb IAmb   05 23 25.8
      comp=Z,84nm,1.5s
DZM   Mont Dzumac        20.29 247   P    Pn     05 23 25.0 +3.8
ONTNC Ouen Toro          20.35 247   P    P      05 23 19.1 -0.5
ONTNC                                IAmb IAmb   05 23 25.6
      comp=Z,46nm,0.8s
NOUC  Port Laguerre      20.43 247   P    Pn     05 23 25.3 +2.7
PAE   Paea               22.98 100  eT    T      05 47 22.0
      comp=Z,1.6nm,0.2s
PPT   Papeete            22.98  99   LR   LR     05 32 21.0
      comp=Z,62nm,18.2s,baz=291,slow=36
PPT2  Papeete2           22.98  99  eLR   LR     05 29 16.1
      comp=Z,311nm,26.0s
PPT2  Papeete2           22.98  99  eT    T      05 47 23.2
      comp=Z,2.4nm,0.3s
OUZ   Omahuta            23.14 208   P    P      05 23 50.0 +0.7
OUZ   Omahuta            23.14 208   P    P      05 23 50.9 +1.6
TIAR  Tiarei             23.20  99  eT    T      05 47 38.2
      comp=Z,0.3nm,0.2s
XMAS  Kiritimati         23.27  44   P    P      05 23 50.4 -0.3
URZ   Urewera            24.49 198   P    P      05 24 00.8 -1.2
      comp=Z,9.7nm,0.4s,baz=121,slow=23,SNR=17
URZ                                  LR   LR     05 32 45.2
      comp=Z,348nm,18.2s,baz=31,slow=35
URZ   Urewera            24.49 198   P    P      05 24 01.7 -0.3
URZ                                  IAmb IAmb   05 24 10.1
      comp=Z,29nm,1.0s
URZ   Urewera            24.49 198   P    P      05 24 03.4 +1.4
VAH   Vaihoa             24.87  94  eT    T      05 49 40.7
      comp=Z,4.8nm,0.4s
BKZ   Black Stump Fm     25.51 198   P    P      05 24 13.4 +2.0
HNR   Honiara            26.64 279   LR   LR     05 33 17.0
      comp=Z,42nm,21.4s,baz=117,slow=33
MSWZ  Moikau Station     27.95 198   P    P      05 24 32.9 -0.5
QRZ   Quartz Range       28.35 203   P    P      05 24 37.3 +0.4
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THZ	**Tophouse**	**29.04**	**201**	P	**P**	**05 24 42.8**	**-0.2**
KHZ	**Kahutara**	**29.40**	**200**	P	**P**	**05 24 45.9**	**-0.2**
KHZ	**Kahutara**	**29.40**	**200**	P	**P**	**05 24 46.4**	**+0.3**
LTZ	**Lake Taylor**	**30.16**	**201**	P	**P**	**05 24 51.8**	**-1.1**
OXZ	**Oxford**	**30.71**	**201**	P	**P**	**05 24 56.6**	**-1.2**
ODZ	**Otahua Downs**	**32.70**	**201**	P	**P**	**05 25 15.7**	**+0.5**
TAOE	**Nuku Hiva Isla**	**33.09**	**83**	*e*LR	LR	05 33 51.8	
	comp=Z,259nm,26.2s						
TAOE	**Nuku Hiva Isla**	**33.09**	**83**	*e*T	T	05 59 54.4	
	comp=Z,22nm,0.2s						
DCZ	**Deep Cove**	**34.37**	**205**	P	**P**	**05 25 28.7**	**-1.0**
ARMA	**Armidale**	**35.47**	**239**	P	**P**	**05 25 37.7**	**-1.9**
H11S2	**WAKE ISLAND Hy**	**38.76**	**329**	T	T	06 06 50.3	
	baz=145,slow=76						
H11S3	**WAKE ISLAND Hy**	**38.77**	**329**	T	T	06 06 57.4	
	baz=145,slow=76						
H11S1	**WAKE ISLAND Hy**	**38.78**	**329**	T	T	06 06 50.6	
	baz=145,slow=76						
CAN	**Canberra**	**39.18**	**232**	P	**P**	**05 26 09.3**	**-1.6**
CAN				IAmb	IAmb	05 26 09.8	
	comp=Z,14nm,0.8s						
H11N3	**WAKE ISLAND Hy**	**39.70**	**330**	T	T	06 08 00.4	
	baz=157,slow=80						
H11N1	**WAKE ISLAND Hy**	**39.71**	**330**	T	T	06 08 00.4	
	baz=157,slow=80						
H11N2	**WAKE ISLAND Hy**	**39.72**	**330**	T	T	06 08 00.4	
	baz=157,slow=80						
TOO	**Toolangi**	**42.62**	**230**	P	**P**	**05 26 38.0**	**-1.2**
TOO				IAmb	IAmb	05 26 38.7	
	comp=Z,23nm,0.9s						
STKA	**Stephens Creek**	**44.16**	**240**	P	**P**	**05 26 50.9**	**-0.8**
	comp=Z,11nm,0.8s,baz=88,slow=10,SNR=15						
STKA				LR	LR	05 43 32.5	
	comp=Z,57nm,18.9s,baz=34,slow=34						
STKA	**Stephens Creek**	**44.16**	**240**	P	**P**	**05 26 50.4**	**-1.3**
BBOO	**Buckleboo**	**48.94**	**240**	P	**P**	**05 27 27.3**	**-1.9**
BBOO				IAmb	IAmb	05 27 28.4	
	comp=Z,8.3nm,0.8s						
WR0	**Warramunga Arr**	**49.71**	**257**	P	**P**	**05 27 33.7**	**-1.6**
WB0	**Warramunga Arr**	**49.86**	**257**	P	**P**	**05 27 34.1**	**-2.3**
WB0				IAmb	IAmb	05 27 36.6	
	comp=Z,7.7nm,0.6s						
WB2	**Warramunga Arr**	**49.89**	**257**	P	**P**	**05 27 35.2**	**-1.4**
WRAB	**Tennant Creek**	**49.89**	**257**	P	**P**	**05 27 34.6**	**-2.0**
WRAB				IAmb	IAmb	05 27 36.3	
	comp=Z,22nm,1.5s						
WRA	**Warramunga Arr**	**49.90**	**257**	P	**P**	**05 27 34.9**	**-1.8**
	comp=Z,6.2nm,0.7s,baz=92,slow=7.7,SNR=107						
WRA				PcP	**PcP**	**05 28 56.2**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=95,slow=3.3,SNR=2.5						
WRA				LR	LR	05 46 09.2	
	comp=Z,82nm,22.0s,baz=115,slow=33						
WRA	**Warramunga Arr**	**49.90**	**257**	P	**P**	**05 27 34.6**	**-2.1**
AS31	**Alice Springs**	**50.19**	**252**	P	**P**	**05 27 37.5**	**-1.4**
AS31				IAmb	IAmb	05 27 38.4	
	comp=Z,6.0nm,0.7s						
ASAR	**Alice Springs**	**50.19**	**252**	P	**P**	**05 27 37.1**	**-1.8**
	comp=Z,20nm,0.7s,baz=87,slow=8.3,SNR=227						
ASAR				LR	LR	05 47 38.6	
	comp=Z,68nm,21.5s,baz=100,slow=35						
ASAR	**Alice Springs**	**50.19**	**252**	P	**P**	**05 27 37.4**	**-1.5**
FORT	**Forrest**	**55.53**	**243**	P	**P**	**05 28 16.9**	**-1.2**
FORT				IAmb	IAmb	05 28 18.3	
	comp=Z,13nm,0.8s						
BATI	**Baumata**	**61.43**	**266**	LR	LR	05 52 31.2	
	comp=Z,60nm,20.7s,baz=129,slow=33						
PSA00	**Pilbara Seismi**	**63.27**	**253**	P	**P**	**05 29 10.5**	**-1.4**
SBA	**Scott Base**	**63.49**	**185**	P	**P**	**05 29 14.2**	**+1.9**
VNDA	**Vanda**	**63.61**	**186**	P	**P**	**05 29 13.8**	**+0.7**
KAPI	**Kappang**	**66.38**	**271**	LR	LR	05 55 51.7	
	comp=Z,18nm,21.4s,baz=105,slow=34						
MJAR	**Matsushiro Arr**	**68.76**	**320**	LR	LR	05 54 32.4	
	comp=Z,51nm,21.9s,baz=155,slow=31						
PEA0B	**Petropavlovsk-**	**72.40**	**342**	P	**P**	**05 30 08.4**	**-0.2**
PETK	**Petropavlovsk-**	**72.40**	**342**	P	**P**	**05 30 09.4**	**+0.8**
	comp=Z,4.0nm,0.8s,baz=173,slow=13,SNR=6.0						
PETK				LR	LR	05 58 07.1	
	comp=Z,30nm,22.0s,baz=130,slow=33						
PETK	**Petropavlovsk-**	**72.40**	**342**	P	**P**	**05 30 08.8**	**+0.2**
QSM	**Queen of Sheba**	**73.73**	**45**	P	**P**	**05 30 16.9**	**0.0**
RYN	**Ryan**	**74.12**	**42**	P	**P**	**05 30 19.8**	**+0.5**
NVAR	**Mina Array Bea**	**74.15**	**42**	P	**P**	**05 30 20.7**	**+1.2**
	comp=Z,1.3nm,0.6s,baz=228,slow=9.6,SNR=7.1						
NVAR				LR	LR	05 53 54.8	
	comp=Z,170nm,21.6s,baz=292,slow=28						
NV11	**Mina Array Sit**	**74.25**	**42**	P	**P**	**05 30 20.7**	**+0.7**
TPH	**Tonopah**	**74.66**	**43**	P	**P**	**05 30 24.1**	**+1.6**
QSPA	**South Pole Qui**	**74.88**	**180**	P	**P**	**05 30 24.5**	**+1.2**
MOD	**Modoc Plateau**	**74.93**	**38**	P	**P**	**05 30 25.4**	**+1.5**
MOD				IAmb	IAmb	05 30 29.4	
	comp=Z,15nm,1.4s						
Y14A	**Wickenburg**	**75.39**	**48**	P	**P**	**05 30 27.9**	**+1.3**
BMN	**Battle Mountai**	**75.97**	**41**	P	**P**	**05 30 31.2**	**+1.3**
KSRS	**Korea Array**	**75.99**	**316**	P	**P**	**05 30 30.9**	**+1.0**
	comp=Z,1.0nm,0.5s,baz=116,slow=5.7,SNR=4.5						
KSRS				LR	LR	05 57 55.8	
	comp=Z,33nm,20.5s,baz=53,slow=31						
TUC	**Tucson**	**76.24**	**51**	P	**P**	**05 30 33.5**	**+2.0**
TUC				IAmb	IAmb	05 30 34.4	
	comp=Z,6.0nm,0.9s						
WVOR	**Wild Horse Val**	**76.24**	**38**	P	**P**	**05 30 32.6**	**+1.3**
WVOR				IAmb	IAmb	05 30 33.9	
	comp=Z,6.1nm,0.9s						
X16A	**Lo Mia Camp, P**	**76.76**	**49**	P	**P**	**05 30 36.6**	**+2.1**
X16A				IAmb	IAmb	05 30 37.5	
	comp=Z,6.1nm,0.9s						
319A	**Douglas**	**76.94**	**52**	P	**P**	**05 30 37.0**	**+1.5**
319A				IAmb	IAmb	05 30 38.4	
	comp=Z,11nm,0.9s						
CCUT	**Cedar City**	**76.96**	**45**	P	**P**	**05 30 37.5**	**+1.8**
CCUT				IAmb	IAmb	05 30 40.4	
	comp=Z,8.9nm,1.5s						
SPR3	**Spring Creek 3**	**77.06**	**43**	P	**P**	**05 30 37.4**	**+1.1**
U15A	**North Rim**	**77.13**	**46**	P	**P**	**05 30 38.4**	**+1.6**
U15A				IAmb	IAmb	05 30 39.8	
	comp=Z,12nm,1.3s						
SZCU	**Shurtz Canyon**	**77.17**	**45**	P	**P**	**05 30 38.1**	**+1.3**
USRK	**Ussuriysk Ar.**	**77.19**	**323**	P	**P**	**05 30 38.1**	**+1.6**
	comp=Z,5.7nm,1.1s,baz=116,slow=8.9,SNR=4.1						
USRK				LR	LR	05 58 43.0	
	comp=Z,75nm,21.2s,baz=128,slow=31						
WUAZ	**Wupatki**	**77.33**	**48**	P	**P**	**05 30 39.1**	**+1.3**
ELK	**Elko**	**77.40**	**41**	P	**P**	**05 30 39.4**	**+1.3**
ELK				IAmb	IAmb	05 30 40.4	
	comp=Z,6.3nm,1.1s						
PKCU	**Pink Cliffs**	**77.63**	**46**	P	**P**	**05 30 42.2**	**+2.7**
PKCU				IAmb	IAmb	05 30 43.3	
	comp=Z,16nm,1.2s						
X18A	**Snowflake**	**77.89**	**49**	P	**P**	**05 30 42.7**	**+1.8**
MTPU	**Mount Pierson**	**78.01**	**45**	P	**P**	**05 30 44.4**	**+2.6**
MTPU				IAmb	IAmb	05 30 45.2	
	comp=Z,11nm,1.3s						
MVU	**Marysvale**	**78.23**	**45**	P	**P**	**05 30 44.7**	**+2.0**
MSU	**Marysvale**	**78.25**	**45**	P	**P**	**05 30 45.1**	**+2.3**
BMO	**Blue Mountains**	**78.43**	**37**	P	**P**	**05 30 44.6**	**+1.0**
MFID	**Camas Ranch**	**78.50**	**39**	P	**P**	**05 30 45.4**	**+1.4**
MFID				IAmb	IAmb	05 30 46.7	
	comp=Z,8.1nm,1.1s						
121A	**Cookes Peak, D**	**78.60**	**52**	P	**P**	**05 30 46.8**	**+2.0**
121A				IAmb	IAmb	05 30 47.8	
	comp=Z,7.4nm,0.8s						
DUG	**Dugway, Tooele**	**78.68**	**43**	P	**P**	**05 30 46.5**	**+1.4**
DUG				IAmb	IAmb	05 30 47.9	
	comp=Z,10nm,1.3s						
TTA	**Tatalina**	**79.02**	**8**	P	**P**	**05 30 48.0**	**+1.7**
TTA				IAmb	IAmb	05 30 49.0	
	comp=Z,12nm,1.2s						
GHO	**Glory Hole Cre**	**79.09**	**12**	P	**P**	**05 30 47.8**	**+1.0**
GHO				IAmb	IAmb	05 31 10.2	
	comp=Z,19nm,1.4s						
MPU	**Maple Canyon**	**79.37**	**44**	P	**P**	**05 30 50.5**	**+1.5**
HLID	**Hailey**	**79.44**	**39**	P	**P**	**05 30 51.2**	**+2.0**
HLID				IAmb	IAmb	05 30 51.9	
	comp=Z,10.0nm,0.9s						
SPUT	**South Promonto**	**79.49**	**42**	P	**P**	**05 30 51.1**	**+1.6**
SPUT				IAmb	IAmb	05 30 52.5	
	comp=Z,8.8nm,1.2s						
HVU	**Hansel Valley**	**79.53**	**42**	P	**P**	**05 30 51.1**	**+1.4**
HVU				IAmb	IAmb	05 30 52.0	
	comp=Z,8.5nm,0.9s						
CTU	**Camp Tracy**	**79.64**	**43**	P	**P**	**05 30 51.7**	**+1.4**
SRU	**San Rafael Swe**	**79.67**	**45**	P	**P**	**05 30 52.2**	**+1.6**
JLU	**Jordanelle**	**79.79**	**43**	P	**P**	**05 30 53.4**	**+2.1**
NJ2	**Nanjing**	**80.02**	**307**	*e*P	**P**	**05 30 53.1**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MNTX	**Cornudas Mount**	**80.08**	**53**	P	**P**	**05 30 53.9**	**+1.2**
HWUT	**Hardware Ranch**	**80.22**	**42**	P	**P**	**05 30 54.5**	**+1.0**
TRF	**Thorofare Moun**	**80.39**	**10**	P	**P**	**05 30 54.1**	**+0.3**
J20K	**Nowinta River**	**80.46**	**8**	P	**P**	**05 30 55.3**	**+1.3**
TX31	**Lajitas Ar. Si**	**80.48**	**56**	P	**P**	**05 30 56.4**	**+1.4**
TX32	**Lajitas Array**	**80.48**	**56**	P	**P**	**05 30 56.5**	**+1.5**
TX32				IAmb	IAmb	05 30 57.9	
	comp=Z,11nm,1.2s						
TXAR	**Lajitas Array**	**80.48**	**56**	P	**P**	**05 30 56.9**	**+1.9**
	comp=Z,5.4nm,1.0s,baz=224,slow=5.2,SNR=22						
TXAR				LR	LR	06 00 36.7	
	comp=Z,84nm,18.6s,baz=0.0,slow=31						
TXAR	**Lajitas Array**	**80.48**	**56**	P	**P**	**05 30 56.2**	**+1.2**
ANMO	**Albuquerque**	**80.65**	**50**	P	**P**	**05 30 57.5**	**+1.6**
MCK	**McKinley**	**80.89**	**11**	P	**P**	**05 30 57.2**	**+0.8**
MCK				IAmb	IAmb	05 30 58.3	
	comp=Z,13nm,1.0s						
M26K	**Nabesna, AK**	**80.91**	**14**	P	**P**	**05 30 57.8**	**+1.2**
M26K				IAmb	IAmb	05 30 59.2	
	comp=Z,10nm,1.1s						
MCMT	**McKenzie Canyo**	**81.07**	**39**	P	**P**	**05 30 59.8**	**+1.8**
AHID	**Auburn Hatcher**	**81.10**	**41**	P	**P**	**05 30 59.3**	**+1.1**
AHID				IAmb	IAmb	05 31 00.4	
	comp=Z,7.3nm,1.1s						
MSO	**Missoula**	**81.49**	**37**	P	**P**	**05 31 00.5**	**+0.5**
MSO				IAmb	IAmb	05 31 02.1	
	comp=Z,8.9nm,1.1s						
DLMT	**Dillon**	**81.50**	**38**	P	**P**	**05 31 00.9**	**+0.7**
REDW	**Red Top Meadow**	**81.55**	**41**	P	**P**	**05 31 02.3**	**+1.6**
REDW				IAmb	IAmb	05 31 03.6	
	comp=Z,19nm,1.4s						
TPAW	**Teton Pass**	**81.55**	**41**	P	**P**	**05 31 01.7**	**+1.0**
TPAW				IAmb	IAmb	05 31 03.2	
	comp=Z,12nm,1.0s						
FXWY	**Fox Creek**	**81.58**	**41**	P	**P**	**05 31 02.5**	**+1.8**
FXWY				IAmb	IAmb	05 31 03.3	
	comp=Z,9.9nm,1.3s						
NEA2	**Nenana**	**81.65**	**10**	P	**P**	**05 31 01.3**	**+0.9**
SNOW	**Snow King Moun**	**81.66**	**41**	P	**P**	**05 31 02.1**	**+0.9**
SNOW				IAmb	IAmb	05 31 03.7	
	comp=Z,8.6nm,0.8s						
RIDG	**Independent Ri**	**81.69**	**12**	P	**P**	**05 31 01.2**	**+0.6**
RIDG				IAmb	IAmb	05 31 02.3	
	comp=Z,12nm,1.2s						
WRH	**Wood River Hil**	**81.72**	**11**	P	**P**	**05 31 01.7**	**+1.1**
WRH				IAmb	IAmb	05 31 02.8	
	comp=Z,13nm,1.0s						
DOT	**Dot Lake**	**81.77**	**13**	P	**P**	**05 31 01.7**	**+0.6**
DOT				IAmb	IAmb	05 31 02.8	
	comp=Z,8.7nm,1.0s						
MLY	**Manley**	**81.78**	**10**	P	**P**	**05 31 01.4**	**+0.3**
LOHW	**Long Hollow**	**81.83**	**41**	P	**P**	**05 31 03.6**	**+1.5**
LOHW				IAmb	IAmb	05 31 04.4	
	comp=Z,8.3nm,1.1s						
HDA	**Harding Lake**	**81.87**	**11**	P	**P**	**05 31 02.4**	**+0.8**
HDA				IAmb	IAmb	05 31 03.5	
	comp=Z,7.1nm,0.8s						
CCB	**Clear Creek Bu**	**81.93**	**11**	P	**P**	**05 31 02.7**	**+0.9**
CCB				IAmb	IAmb	05 31 03.1	
	comp=Z,8.8nm,0.8s						
QLMT	**Earthquake Lak**	**81.93**	**39**	P	**P**	**05 31 04.8**	**+2.2**
FLWY	**Flagg Ranch**	**82.01**	**40**	P	**P**	**05 31 05.1**	**+2.2**
SCRK	**Sand Creek**	**82.08**	**13**	P	**P**	**05 31 03.9**	**+1.2**
SCRK				IAmb	IAmb	05 31 04.6	
	comp=Z,6.8nm,1.0s						
BW06	**Boulder Array**	**82.08**	**42**	P	**P**	**05 31 04.1**	**+0.7**
BW06				IAmb	IAmb	05 31 05.2	
	comp=Z,7.8nm,0.9s						
PD31	**Pinedale Array**	**82.08**	**42**	P	**P**	**05 31 04.5**	**+1.1**
PD31				IAmb	IAmb	05 31 05.2	
	comp=Z,7.6nm,1.0s						
PDAR	**Pinedale Array**	**82.08**	**42**	P	**P**	**05 31 04.3**	**+0.8**
	comp=Z,4.6nm,0.8s,baz=216,slow=3.0,SNR=35						
PDAR				LR	LR	06 02 01.1	
	comp=Z,128nm,19.2s,baz=290,slow=32						
PDAR	**Pinedale Array**	**82.08**	**42**	P	**P**	**05 31 04.1**	**+0.7**
YHL	**Hebgen Lake**	**82.09**	**39**	P	**P**	**05 31 06.1**	**+2.5**
TCOL	**CIGO, UAF Yank**	**82.12**	**11**	P	**P**	**05 31 03.9**	**+1.1**
COLA	**College**	**82.13**	**11**	P	**P**	**05 31 03.9**	**+1.1**
MDM	**Murphy Dome**	**82.14**	**11**	P	**P**	**05 31 03.0**	**+0.1**
MDM				IAmb	IAmb	05 31 17.2	
	comp=Z,15nm,1.4s						
YMR	**Madison River**	**82.14**	**40**	P	**P**	**05 31 05.3**	**+1.7**
YMR				IAmb	IAmb	05 31 06.7	
	comp=Z,10nm,0.8s						
SMCO	**Snowmass**	**82.14**	**46**	P	**P**	**05 31 05.2**	**+1.2**
SMCO				IAmb	IAmb	05 31 08.9	
	comp=Z,4.9nm,0.8s						
BOZ	**Bozeman (W)**	**82.20**	**39**	P	**P**	**05 31 05.5**	**+1.6**
BOZ				IAmb	IAmb	05 31 06.9	
	comp=Z,13nm,1.4s						
IL31		**82.21**	**11**	P	**P**	**05 31 03.5**	**+0.3**
IL31				IAmb	IAmb	05 31 18.2	
	comp=Z,11nm,1.4s						
ILAR	**Eielson Array**	**82.21**	**11**	P	**P**	**05 31 03.8**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=226,slow=6.7,SNR=25						
ILAR				LR	LR	05 59 05.5	
	comp=Z,89nm,20.8s,baz=180,slow=29						
YHH	**Holmes Hill**	**82.27**	**40**	P	**P**	**05 31 05.6**	**+1.2**
YHH				IAmb	IAmb	05 31 08.9	
	comp=Z,11nm,1.3s						
SEY	**Seymchan**	**82.29**	**345**	P	**P**	**05 31 04.5**	**+0.8**
	comp=Z,1.9nm,0.6s,baz=158,slow=8.1,SNR=5.6						
POKR	**Poker Plat Res**	**82.42**	**11**	P	**P**	**05 31 04.9**	**+0.5**
SDCO	**Great Sand Dun**	**82.55**	**48**	P	**P**	**05 31 07.1**	**+1.1**
SDCO				IAmb	IAmb	05 31 08.4	
	comp=Z,6.1nm,1.2s						
HRY	**Holter Researc**	**82.66**	**38**	P	**P**	**05 31 06.9**	**+0.8**
MSTX	**Muleshoe**	**83.01**	**52**	P	**P**	**05 31 09.1**	**+0.8**
RWWY	**Rawlins**	**83.12**	**44**	P	**P**	**05 31 10.0**	**+1.2**
ISCO	**Idaho Springs**	**83.36**	**46**	P	**P**	**05 31 11.0**	**+0.8**
ISCO				IAmb	IAmb	05 31 28.2	
	comp=Z,9.1nm,1.5s						
AMTX	**Amarillo**	**84.20**	**52**	P	**P**	**05 31 14.9**	**+0.6**
ABTX	**Abilene, Hawle**	**84.92**	**54**	P	**P**	**05 31 18.9**	**+0.9**
BMAR	**Burnt Mountain**	**85.02**	**11**	P	**P**	**05 31 18.3**	**+0.6**
MAW	**Mawson**	**88.02**	**199**	P	**P**	**05 31 32.8**	**+0.4**
	comp=Z,10nm,0.7s,baz=134,slow=5.4,SNR=17						
MAW				LR	LR	06 08 33.5	
	comp=Z,107nm,20.5s,baz=68,slow=34						
MAW	**Mawson**	**88.02**	**199**	P	**P**	**05 31 32.9**	**+0.4**
DGMT	**Dagmar**	**88.04**	**38**	P	**P**	**05 31 33.6**	**+0.7**
HHC	**Hu-ho-hao-te**	**88.86**	**313**	*e*P	**P**	**05 31 38.4**	**+1.3**
HHC				pmax	pmax		
	comp=Z,15nm,1.4s						
HHC				pmax	pmax		
	comp=Z,77nm,5.4s						
PLCA	**Paso Flores**	**89.67**	**132**	LR	LR	06 03 35.2	
	comp=Z,55nm,19.0s,baz=244,slow=30						
YKA	**Yellowknife Ar**	**89.88**	**23**	LR	LR	06 06 38.0	
	comp=Z,61nm,19.6s,baz=0.0,slow=32						
CMAR	**Chiang Mai Arr**	**92.54**	**288**	LR	LR	06 08 32.3	
	comp=Z,18nm,22.0s,baz=110,slow=32						
A36M	**Sachs Harbour**	**92.67**	**13**	P	**P**	**05 31 54.8**	**+0.9**
SYO	**Syowa Base**	**92.83**	**191**	⇑*e*P	**P**	**05 31 54.2**	**-0.7**
VNA3	**Neumayer Olymp**	**93.09**	**175**	P	**P**	**05 31 56.7**	**+0.5**
SNAA	**Sanae**	**93.14**	**177**	P	**P**	**05 31 57.5**	**+1.0**
VNA2	**Neumayer--Watz**	**93.59**	**175**	P	**P**	**05 31 59.7**	**+1.3**
ULM	**Lac du Bonnet**	**93.75**	**39**	LR	LR	06 07 57.7	
	comp=Z,112nm,20.4s,baz=292,slow=32						
VNA1	**Neumayer--Stat**	**93.79**	**175**	P	**P**	**05 32 00.1**	**+0.9**
SONM	**Songino Array**	**94.67**	**318**	LR	LR	06 07 43.3	
	comp=Z,64nm,21.8s,baz=47,slow=31						
ARCES	**ARCESS Array B**	**124.37**	**352**	PKP	**PKiKP**	**05 37 41.1**	**-0.1**
	comp=Z,7.7nm,0.8s,baz=0.0,slow=0.9,SNR=11						
KLMR	**Klimovskoe**	**128.57**	**340**	*e*PKPdf	**PKPdf**	**05 37 47.8**	**-1.4**
KLMR				AMP		05 37 52.0	
	comp=Z,16nm,1.4s						
KSP	**Ksiaz**	**143.56**	**350**	*e*PKPdf	PKPbc	05 38 15.9	+1.3
CLL	**Collm**	**143.58**	**353**	*i* PKiKP	**PKiKP**	**05 38 20.6**	**0.0**
	comp=Z,4.0nm,0.7s						
PRAR	**RASCA**	**143.99**	**337**	⇑P	**PKiKP**	**05 38 24.2**	**+2.6**
DPC	**Dobruska-Polom**	**144.03**	**349**	*e*PKP	**PKPdf**	**05 38 17.8**	**-0.4**
NIE	**Niedzica**	**144.04**	**345**	*e*PKPdf	**PKPdf**	**05 38 18.1**	**-0.1**
BURAR	**Bucovina Array**	**144.15**	**338**	⇑P	**PKPdf**	**05 38 17.6**	**-0.9**
KRLC	**Kraliky**	**144.21**	**349**	*e*PKP	**PKPdf**	**05 38 18.0**	**-0.5**
CRVS	**Cervenica-Dubn**	**144.21**	**343**	*e*PKP	**PKPdf**	**05 38 18.0**	**-0.5**
MORC	**Moravsky Berou**	**144.34**	**348**	*e*PKP	**PKPdf**	**05 38 18.1**	**-0.6**
MOX	**Moxa**	**144.37**	**355**	*e*PKPbc	**PKPdf**	**05 38 18.5**	**-0.2**
	baz=8.2,slow=2.8						
PLN	**Plauen**	**144.48**	**354**	*e*PKPbc	**PKPdf**	**05 38 18.8**	**-0.1**
	baz=8.2,slow=2.8						
WERD	**Werda**	**144.50**	**354**	*e*PKPbc	**PKPdf**	**05 38 18.9**	**-0.1**
	baz=8.2,slow=2.8						
TANN	**Tannenbergstha**	**144.52**	**354**	*e*PKPbc	**PKPdf**	**05 38 18.9**	**-0.1**
	baz=8.2,slow=2.8						
GUNZ	**Gunzen**	**144.58**	**354**	*e*PKPbc	**PKPdf**	**05 38 18.8**	**-0.3**
	baz=8.2,slow=2.8						
TRPA	**Tarpa**	**144.59**	**341**	⇑P	PKPbc	05 38 18.2	+0.4
TRPA	**Tarpa**	**144.59**	**341**	*e*PKPDF	PKPbc	05 38 18.2	+0.4
TRPA	**Tarpa**	**144.59**	**341**	*e*P	**PKPdf**	**05 38 18.6**	**-0.5**
MEM	**Membach**	**144.64**	**1**	*d*PKPdf	**PKPdf**	**05 38 18.6**	**-0.5**
MEM				*d*PKiKP	**PKiKP**	**05 38 22.5**	**-0.4**
WERN	**Wernitzgruen**	**144.65**	**354**	*e*PKPbc	**PKPdf**	**05 38 19.6**	**+0.4**
	baz=8.2,slow=2.8						
BTNL	**Ternell**	**144.66**	**1**	*d*PKPdf	PKPbc	05 38 18.6	+0.5
SNF	**Seneffe**	**144.69**	**3**	*d*PKPdf	**PKPdf**	**05 38 18.9**	**-0.3**
BCLA	**Clavier**	**144.82**	**1**	*d*PKPdf	**PKPdf**	**05 38 19.2**	**-0.3**
BGES	**Gesves**	**144.84**	**2**	*d*PKPdf	PKPbc	05 38 18.9	+0.4
BHOU	**Houvegnez**	**144.89**	**1**	*d*PKPdf	**PKPdf**	**05 38 19.8**	**+0.2**
ARCR	**ARCALIA**	**144.90**	**339**	⇑P	**PKPab**	**05 38 18.8**	**-0.1**
BMRD	**Maredsous**	**144.92**	**2**	*d*PKPdf	**PKPdf**	**05 38 19.3**	**-0.3**
VRAC	**Vranov**	**144.98**	**349**	*e*PKP	**PKPdf**	**05 38 20.2**	**+0.4**
CFR	**Carcaliu**	**144.99**	**333**	⇑P	**PKPdf**	**05 38 20.3**	**+0.4**
TNS	**Taunus Mts**	**145.00**	**358**	*e*PKPbc	**PKPdf**	**05 38 19.8**	**-0.1**
	baz=8.2,slow=2.8						
VRI	**Vrincioaia**	**145.03**	**335**	⇑P	**PKPbc**	**05 38 19.0**	**-0.4**
VRI				⇑P	**PKPab**	**05 38 19.5**	**+0.1**
PLOR	**Plostina**	**145.07**	**335**	⇑P	**PKPdf**	**05 38 20.4**	**+0.3**
TPGR	**Topolog**	**145.11**	**332**	⇑P	**PKPdf**	**05 38 20.4**	**+0.2**
DOU	**Dourbes**	**145.12**	**2**	*d*PKPdf	**PKPdf**	**05 38 20.1**	**+0.1**
ROTZ	**Rotzenmuhle**	**145.18**	**354**	*e*PKPbc	**PKPdf**	**05 38 20.7**	**+0.6**
	baz=8.2,slow=2.8						
JAVC	**Velka Javorina**	**145.19**	**347**	*e*PKP	**PKPdf**	**05 38 21.7**	**+1.5**
KRUC	**Moravsky**	**145.25**	**349**	*e*PKP	**PKPdf**	**05 38 20.7**	**+0.4**
COVR	**Voineasa-Covas**	**145.26**	**336**	⇓P	**PKPab**	**05 38 20.2**	**0.0**
VYHS	**Vyhne**	**145.26**	**346**	*e*PKP	**PKPdf**	**05 38 21.0**	**+0.7**
GRF	**Grafenberg Arr**	**145.35**	**355**	*e*PKPbc	**PKPdf**	**05 38 21.6**	**+1.1**
	baz=8.2,slow=2.8						
TIRR	**Tirgusor**	**145.43**	**332**	⇑P	**PKPab**	**05 38 21.3**	**+0.4**
HARR	**Harsova**	**145.46**	**333**	⇑P	**PKPab**	**05 38 21.8**	**+0.8**
DOPR	**Dopca**	**145.47**	**337**	⇑P	**PKPab**	**05 38 22.3**	**+1.3**
PSZ	**Piszkesteto**	**145.53**	**344**	*e*PKPDF	**PKPdf**	**05 38 19.2**	**-1.7**
NEHR	**Nehoiu**	**145.56**	**335**	⇑P	**PKPab**	**05 38 22.6**	**+1.2**
SMOL	**Smolenice**	**145.56**	**347**	*e*PKP	**PKPab**	**05 38 23.0**	**+1.8**
WLF	**Walferdange**	**145.59**	**1**	*d*PKP	**PKPdf**	**05 38 20.3**	**-0.5**
WLF				*d*x	x	05 38 22.0	
WLF	**Walferdange**	**145.59**	**1**	*e*PKPbc	**PKPab**	**05 38 22.3**	**+1.0**
	baz=8.2,slow=2.8						
KMBO	**Kilima Mbogo**	**145.64**	**245**	PKPbc	**PKPdf**	**05 38 21.0**	**-1.3**
	comp=Z,2.6nm,0.5s,baz=31,slow=2.5,SNR=7.5						
KMBO	**Kilima Mbogo**	**145.64**	**245**		**PKPbc**	**05 38 22.6**	**0.0**
KHC	**Kasperske Hory**	**145.64**	**352**	*e*PKP	**PKPab**	**05 38 22.2**	**+0.6**
MLR	**Muntele Rosu**	**145.65**	**336**	⇑P	**PKPab**	**05 38 23.0**	**+1.2**
ISR	**Istrita**	**145.71**	**335**	⇓P	**PKPab**	**05 38 22.8**	**+0.9**
WET	**Wettzell**	**145.72**	**353**	*e*PKPbc	**PKPab**	**05 38 22.3**	**+0.5**
	baz=8.2,slow=2.8						
MODS	**Modra-Piesok**	**145.73**	**347**	*e*PKP	**PKPab**	**05 38 21.9**	**0.0**
MANR	**Mangalia**	**145.84**	**331**	⇑P	**PKPab**	**05 38 23.6**	**+1.2**
CKRC	**Cesky Krumlov**	**145.84**	**351**	*e*PKP	**PKPab**	**05 38 23.7**	**+1.4**
GEC2	**GERESS Array S**	**145.91**	**352**	*e*PKPbc	**PKPab**	**05 38 22.8**	**+0.2**
	baz=8.2,slow=2.8						
GERES	**GERESS Array B**	**145.91**	**352**	PKPbc	**PKPab**	**05 38 22.7**	**+0.1**
	comp=Z,7.9nm,0.9s,baz=29,slow=3.0,SNR=39						
BRTR	**Keskin Array B**	**145.97**	**321**	PKPbc	**PKPab**	**05 38 23.1**	**-0.1**
	comp=Z,8.1nm,0.8s,baz=96,slow=2.7,SNR=54						
BRTR	**Keskin Array B**	**145.97**	**321**		**PKPbc**	**05 38 23.0**	**+0.3**
SECR		**145.97**	**335**	⇑P	**PKPab**	**05 38 23.2**	**+0.3**
BSZH	**Besenyszg**	**146.00**	**343**	*e*P	PKPdf	05 38 09.7	-12
VOIR		**146.05**	**336**	⇓P	**PKPab**	**05 38 24.0**	**+0.7**
ARR	**Arges**	**146.26**	**337**	⇑P	**PKPab**	**05 38 25.0**	**+0.9**
CONA	**Conrad Observa**	**146.44**	**349**	*i* P	**PKPbc**	**05 38 24.2**	**+0.5**
	comp=Z,14nm,0.9s,SNR=8.1						
SOP	**Sopron**	**146.53**	**348**	*e*P	**PKiKP**	**05 38 26.3**	**-0.5**
EGYH	**Egyhazaskeszo**	**146.62**	**347**	*e*PKPDF	**PKPbc**	**05 38 24.7**	**+0.5**
EGYH	**Egyhazaskeszo**	**146.62**	**347**	*e*P	**PKPab**	**05 38 26.0**	**+0.7**
MOA	**Molln**	**146.79**	**351**	*i* P	**PKPab**	**05 38 25.5**	**-0.4**
	comp=Z,16nm,1.0s,SNR=7.2						
MOA	**Molln**	**146.79**	**351**	*e*PKPbc	**PKPab**	**05 38 25.6**	**-0.4**
	baz=8.2,slow=2.8						
MPLH	**Magyarpolny**	**146.81**	**346**	*e*PKPDF	**PKPdf**	**05 38 23.2**	**+0.2**
MPLH	**Magyarpolny**	**146.81**	**346**	*e*P	**PKPab**	**05 38 25.6**	**-0.4**
FUR	**Furstenfeldbru**	**146.86**	**354**	*e*PKPbc	**PKPab**	**05 38 26.3**	**+0.1**
	baz=8.2,slow=2.8						
BFO	**Black Forest**	**146.89**	**358**	*e*PKPbc	**PKPab**	**05 38 25.7**	**-0.6**
	baz=8.2,slow=2.8						
GZR	**Gura Zlata**	**146.92**	**339**	⇑P	**PKPbc**	**05 38 25.6**	**+0.4**
RJOB	**Jochberg**	**147.11**	**352**	*e*PKPbc	**PKPbc**	**05 38 26.5**	**+0.8**
	baz=8.2,slow=2.8						
ARSA	**Arzberg**	**147.15**	**349**	*i* P	**PKPab**	**05 38 26.6**	**-0.8**
	comp=Z,14nm,1.1s,SNR=6.0						
ARSA	**Arzberg**	**147.15**	**349**	*e*PKPbc	**PKPab**	**05 38 26.7**	**-0.8**
	baz=8.2,slow=2.8						
UBR	**Ueberruh**	**147.44**	**356**	*e*PKPbc	**PKPbc**	**05 38 27.6**	**+0.9**
	baz=8.2,slow=2.8						
HERR	**Herculane**	**147.49**	**339**	⇓P	**PKPbc**	**05 38 27.4**	**+0.6**
RETA	**Reutte**	**147.58**	**355**	*e*P	**PKPbc**	**05 38 27.7**	**+0.7**
	comp=Z,18nm,1.3s						
WATA	**Walderalm**	**147.65**	**354**	*e*P	**PKPbc**	**05 38 28.1**	**+0.8**
	comp=Z,14nm,1.0s						
KBA	**Koelnbreinsper**	**147.68**	**351**	*i* P	**PKPbc**	**05 38 27.9**	**+0.4**
	comp=Z,16nm,1.2s,SNR=5.1						
KBA	**Koelnbreinsper**	**147.68**	**351**	*e*PKPbc	**PKPbc**	**05 38 27.5**	**+0.1**
	baz=8.2,slow=2.8						
KOVH	**Kovagotottos**	**147.69**	**345**	*e*PKPDF	**PKPbc**	**05 38 25.9**	**-1.3**
MOTA	**Moosalm**	**147.69**	**354**	*e*P	**PKPbc**	**05 38 28.1**	**+0.7**
	comp=Z,19nm,1.0s						
WTTA	**Wattenberg**	**147.72**	**354**	*i* P	**PKPbc**	**05 38 28.2**	**+0.6**
	comp=Z,14nm,0.8s,SNR=6.0						
WTTA	**Wattenberg**	**147.72**	**354**	*e*PKPbc	**PKPbc**	**05 38 28.1**	**+0.6**
	baz=8.2,slow=2.8						
SOKA	**Soboth**	**147.79**	**349**	*i* P	**PKPbc**	**05 38 27.8**	**+0.2**
	comp=Z,22nm,1.0s,SNR=12						
SQTA	**Sankt Quirin**	**147.80**	**354**	*e*P	**PKPbc**	**05 38 28.3**	**+0.7**
	comp=Z,14nm,1.2s						
MDVR	**Moldovita**	**147.82**	**340**	⇑P	**PKiKP**	**05 38 28.9**	**-0.8**
DAVA	**Damuels**	**147.85**	**356**	*e*P	**PKPbc**	**05 38 28.6**	**+0.8**
	comp=Z,15nm,1.0s						
DAVA	**Damuels**	**147.85**	**356**	*e*PKPbc	**PKPbc**	**05 38 28.3**	**+0.5**
	baz=8.2,slow=2.8						
GROS	**Grobnik**	**147.92**	**348**	*i* PKPbc	**PKPbc**	**05 38 28.1**	**+0.1**
OBKA	**Obir**	**148.04**	**350**	*e*P	**PKPbc**	**05 38 28.2**	**-0.1**
	comp=Z,8.8nm,0.9s						
OBKA	**Obir**	**148.04**	**350**	*e*PKPbc	**PKPbc**	**05 38 28.8**	**+0.5**
	baz=8.2,slow=2.8						
FETA	**Feichten**	**148.05**	**355**	*e*P	**PKPdf**	**05 38 26.4**	**+1.2**
	comp=Z,14nm,1.1s						
MYKA	**Terra Mystica**	**148.08**	**351**	*i* P	**PKPbc**	**05 38 28.2**	**-0.1**
	comp=Z,10.0nm,0.9s,SNR=5.3						
FRGS	**Fruska Gora**	**148.08**	**342**	⇑P	**PKPbc**	**05 38 29.1**	**+0.7**
FRGS	**Fruska Gora**	**148.08**	**342**	*e*P	**PKPbc**	**05 38 28.8**	**+0.4**
ABTA	**Abfaltersbach**	**148.12**	**352**	*i* P	**PKPbc**	**05 38 28.5**	**0.0**
	comp=Z,16nm,0.9s,SNR=10						
ZAGS	**Zajecar**	**148.48**	**338**	*e*P	**PKPbc**	**05 38 28.4**	**-1.0**
LJU	**Ljubljana**	**148.50**	**349**	*i* PKPbc	**PKPbc**	**05 38 29.9**	**+0.5**
TRUS	**Trudelj**	**148.74**	**341**	*e*P	**PKiKP**	**05 38 31.0**	**-0.5**
ZAPS	**Zavoj**	**148.80**	**337**	*e*P	**PKiKP**	**05 38 31.4**	**-0.3**
CEY	**Cerknica**	**148.81**	**349**	*i* PKPbc	**PKPbc**	**05 38 30.6**	**+0.3**
BOVS	**Bovan**	**148.82**	**339**	⇑P	**PKPbc**	**05 38 30.3**	**0.0**
BOVS	**Bovan**	**148.82**	**339**	*e*P	**PKPbc**	**05 38 30.0**	**-0.3**
GRUS	**Gruza**	**148.94**	**340**	*e*P	**PKiKP**	**05 38 31.4**	**-0.5**
DIVS	**Divibare**	**148.98**	**341**	*e*P	**PKPbc**	**05 38 31.2**	**+0.4**
BBLS	**Lazići**	**149.38**	**342**	*e*P	**PKiKP**	**05 38 32.9**	**0.0**
SELS	**Selova**	**149.40**	**339**	*e*P	**PKPbc**	**05 38 31.7**	**-0.1**
IVAS	**Ivanjica**	**149.40**	**340**	*e*P	**PKPbc**	**05 38 31.9**	**+0.1**
BARS	**Barje**	**149.50**	**338**	*e*P	**PKPdf**	**05 38 27.9**	**+0.4**
BARS	**Barje**	**149.50**	**338**	*e*P	**PKPbc**	**05 38 32.4**	**+0.4**
BOSS	**Bosilegrad**	**149.52**	**336**	*e*P	**PKPbc**	**05 38 32.3**	**+0.2**
PRVS	**Prvonek**	**149.67**	**337**	*e*P	**PKPbc**	**05 38 32.3**	**-0.2**
SJES	**Sjenica**	**149.74**	**340**	*e*P	**PKPbc**	**05 38 32.6**	**-0.2**
ESDC	**Sonseca Array**	**153.88**	**19**	PKPab	**PKPab**	**05 38 56.4**	**+1.1**
	comp=Z,1.8nm,0.9s,baz=332,slow=3.2,SNR=5.1						
TORD	**Torodi Ar. Bea**	**174.84**	**112**	PKPab	**PKPab**	**05 40 26.6**	**-1.3**
	comp=Z,1.1nm,0.9s,baz=261,slow=5.0,SNR=4.4						
TORD	**Torodi Ar. Bea**	**174.84**	**112**		**PKPdf**	**05 38 52.3**	**-1.1**

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*ATH **07** 05:31:38.4, 38°.50N×20°.57E, h11^{km}±1^{km}, ML2.7/3, Error ellipse: s-maj=2.5km s-min=0.7km az=284.0*

ISC 07 05:31:36.7±0.9**, 38°.52N**±0°.02×**20°.49E**±0°.03**, h18**^{km}±2^{km}**,**
n45, σ1**§21**/68**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.09**	**135**	P	**Pg**	**05 31 40.2**	**-0.1**
FSK				S	**Sg**	**05 31 41.6**	**-1.0**
FSK				AML	AML	05 31 42.0	
	comp=E,48526μm,0.2s						

FSK				AML	AML	05 31 42.7	
	comp=N,29257μm,0.4s						
EVGI	Lefkada island	0.17	53	P	Pg	05 31 41.6	+0.4
EVGI	Lefkada island	0.17	53	P	Pg	05 31 41.6	+0.4
EVGI				S	Sg	05 31 44.6	+0.3
DRAG	Dragano-Lefkad	0.18	23	P	Pg	05 31 41.7	+0.4
DRAG	Dragano-Lefkad	0.18	23	P	Pg	05 31 41.8	+0.4
DRAG				S	Sg	05 31 45.4	+0.8
KEF4	Livadi, Kephal	0.27	190	P	Pg	05 31 43.5	+0.8
KEF4				S	Sg	05 31 48.1	+1.4
DMLN	Damoulianata-K	0.29	197	P	Pn	05 31 46.6	+0.5
LKD2	Lefkada island	0.30	27	P	Pb	05 31 43.8	+0.3
LKD2	Lefkada island	0.30	27	P	Pb	05 31 43.9	+0.4
LKD2				S	Sb	05 31 49.0	+0.9
LKD2				AML	AML	05 31 54.1	
	comp=E,1625μm,0.3s						
LKD2				AML	AML	05 31 56.0	
	comp=N,2591μm,0.6s						
LXRA	Lixouri, Kepha	0.32	187	P	Pb	05 31 44.5	+0.6
LXRA				S	Sb	05 31 50.1	+1.4
TSLK	Tsoukalades, L	0.33	24	P	Pb	05 31 44.6	+0.5
TSLK	Tsoukalades, L	0.33	24	P	Pb	05 31 44.7	+0.5
TSLK				S	Sb	05 31 50.4	+1.4
KEF3	Kipouria, Keph	0.34	199	P	Pg	05 31 44.2	+0.4
KEF3	Kipouria, Keph	0.34	199	P	Pg	05 31 44.2	+0.4
KEF3				S	Sb	05 31 50.0	+0.9
ARGA	Argostoli. Kep	0.34	181	P	Pn	05 31 45.8	-0.9
ARGA				S	Sb	05 31 49.6	+0.2
VLS	Valsamata	0.35	167	P	Pg	05 31 44.5	+0.4
VLS	Valsamata	0.35	167	P	Pg	05 31 44.6	+0.4
VLS				S	Sb	05 31 50.5	+0.8
VLS				AML	AML	05 31 51.0	
	comp=N,5515μm,0.4s						
VLS				AML	AML	05 31 51.0	
	comp=E,1979μm,0.3s						
PSDA	Pessada-Kefalo	0.41	169	P	Pb	05 31 45.7	+0.2
PSDA	Pessada-Kefalo	0.41	169	P	Pb	05 31 45.9	+0.5
PSDA				S	Sb	05 31 51.6	+0.2
VTN	Vitineika	0.82	137	P	Pb	05 31 52.0	-0.3
LTHK	Lithakia	0.86	161	P	Pb	05 31 53.4	+0.5
RLS	Riolos of Patr	0.90	121	P	Pb	05 31 54.2	+0.5
DRO	Drossia	1.12	120	P	Pg	05 31 58.4	0.0
EFP	Efpalio	1.12	94	P	Pn	05 31 57.5	+0.2
ANX	Ano Chora	1.13	86	P	Pg	05 31 58.6	0.0
LAKA	Lakka	1.21	103	P	Pb	05 31 59.5	+0.5
SERG	Sergoula	1.24	94	P	Pb	05 32 00.2	+0.7
TRIZ	Trizonia	1.26	97	P	Pb	05 32 00.5	+0.7
KEK	Kerkira	1.30	336	P	Pg	05 32 02.3	+0.4
MAKR	Makrakomi, Fth	1.38	69	P	Pg	05 32 03.3	+0.1
KLV	Kalavryta, Ach	1.39	109	P	Pb	05 32 02.5	+0.4
AGG	Agios Georgios	1.53	70	P	Pg	05 32 06.2	+0.1
THL	Klokotos Trika	1.58	48	P	Pb	05 32 05.7	+0.3
DBRK	Dubrovnik	4.51	337	*e*Pn	Pn	05 32 44.4	+0.4
DBRK				Sn	Sn	05 33 34.5	-1.5
STON	Ston	4.83	335	*e*Pn	Pn	05 32 49.0	+0.6
STON				Sn	Sn	05 33 41.8	-2.1
LSTV	Lastovo	5.05	328	*e*Pn	Pn	05 32 52.3	+0.9
LSTV				Sn	Sn	05 33 47.4	-1.8
MAKA	Makarska	5.44	332	*e*Pn	Pn	05 32 57.9	+1.2
MAKA				Sn	Sn	05 33 57.1	-1.7
HVAR	Hvar	5.57	328	*e*Pn	Pn	05 32 60.0	+1.5
HVAR				Sn	Sn	05 33 59.2	-2.8
RICI	Ricice	5.58	334	*e*Pn	Pn	05 32 59.5	+0.8
RICI				Sn	Sn	05 34 00.9	-1.3
ZIRJ	Zirje	6.30	326	*e*Pn	Pn	05 33 08.8	+0.2
ZIRJ				Sn	Sn	05 34 17.6	-2.4
MORI	Morici	6.44	328	*e*Pn	Pn	05 33 12.0	+1.5
MORI				Sn	Sn	05 34 20.6	-2.8
DUGI	Dugi Otok	6.82	325	*e*Pn	Pn	05 33 16.6	+0.8
DUGI				Sn	Sn	05 34 30.7	-2.2
UDBI	Udbina	6.97	331	*e*Pn	Pn	05 33 18.5	+0.7
UDBI				Sn	Sn	05 34 34.3	-2.3
NVLJ	Novalja	7.36	327	*e*Pn	Pn	05 33 23.6	+0.6
NVLJ				Sn	Sn	05 34 42.9	-3.2
BRJN	Brijuni	8.13	324	*e*Pn	Pn	05 33 34.4	+0.8
BRJN				Sn	Sn	05 35 01.8	-3.2

KRSC ***07*** *06:18:10.6±2.1, 49°.69N×156°.73E, h99^{km}±36^{km}, ML4.4*

MOS ***07*** *06:18:10.4±0.8, 49°.93N×155°.65E, h128^{km}, mb4.1/1, Error ellipse: s-maj=33.5km s-min=5.5km az=68.9*

IDC ***07*** *06:18:16.9±3.8, 50°.60N×154°.90E, h163^{km}±24^{km}, mb3.4/9, mb1 3.7/11, mb1mx3.3/40, mbtmp3.9/11, Error ellipse: s-maj=48.3km s-min=17.2km az=172.0*

ISC 07 06:18:12.7±1.7**, 49°.8N**±0°.2×**156°.5E**±0°.1**, h108**^{km}±14^{km}**, n51,** σ**1**^{s}**.26**/77**, mb3.9**/9**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.94	345	⇓*i*PN	Pn	06 18 32.6	-0.5
SKR				*e*S	Sn	06 18 47.7	-0.7
SKR				pmax	pmax		
	comp=Z,2μm,0.7s						
SKR				smax	smax		
	comp=N,687nm,0.5s						
SKR				smax	smax		
	comp=E,2μm,0.7s						
SKR	Severo-Kuril's	0.94	345	*i* P	Pn	06 18 32.8	-0.3
SKR				*e*S	Sn	06 18 48.2	-0.2
PAU	Pauzhetka	1.71	7	PN	Pn	06 18 41.4	-0.5
PAU				S	Sn	06 19 04.2	+0.1
PAU	Pauzhetka	1.71	7	*e*P	Pn	06 18 41.4	-0.5
PAU				*e*S	Sn	06 19 04.2	+0.1
ASAK	Asacha	2.76	18	PN	Pn	06 18 56.5	+1.0
ASAK				S	Sn	06 19 30.0	+1.6
ASAK	Asacha	2.76	18	*e*P	Pn	06 18 56.5	+1.0
ASAK				*e*S	Sn	06 19 30.0	+1.6
MTVR	Mutnovka	2.92	21	PN	Pn	06 18 58.8	+1.2
MTVR				S	Sn	06 19 34.3	+2.2
MTVR	Mutnovka	2.92	21	*e*P	Pn	06 18 58.8	+1.2
MTVR				*e*S	Sn	06 19 34.3	+2.2
RUS	Russkaya	2.95	25	PN	Pn	06 18 58.6	+0.7
RUS				S	Sn	06 19 33.0	+0.2
RUS	Russkaya	2.95	25	*e*P	Pn	06 18 58.6	+0.7
RUS				*e*S	Sn	06 19 33.0	+0.2
KRMR	Karymshinskiy	3.23	18	PN	Pn	06 19 02.0	+0.4
KRMR				S	Sn	06 19 40.0	+0.7
KRMR	Karymshinskiy	3.23	18	*e*P	Pn	06 19 02.0	+0.4
KRMR				*e*S	Sn	06 19 40.0	+0.7
PETK	Petropavlovsk-	3.42	12	P	Pn	06 19 03.2	-1.0
	comp=E,2.5nm,0.3s,baz=179,slow=12,SNR=45						
PETK				S	Sn	06 19 44.2	+0.2
	comp=E,2.2nm,0.3s,baz=132,slow=17,SNR=5.8						
PET	Petropavlovsk	3.52	22	*e*PN	Pn	06 19 05.9	+0.4
PET				*e*S	Sn	06 19 46.8	+0.4
PET				pmax	pmax		
	comp=Z,32nm,0.3s						
PET				smax	smax		
	comp=N,232nm,0.5s						
PET				smax	smax		
	comp=E,117nm,0.5s						
PET	Petropavlovsk	3.52	22	*e*P	Pn	06 19 05.9	+0.4
PET				*e*S	Sn	06 19 45.6	-0.8
DALK	Dalny	3.56	23	PN	Pn	06 19 06.6	+0.7
DALK				S	Sn	06 19 47.6	+0.5
DALK	Dalny	3.56	23	*e*P	Pn	06 19 06.6	+0.7
DALK				*e*S	Sn	06 19 47.6	+0.5
UGLR	Uglovaya	3.74	22	PN	Pn	06 19 09.9	+1.4
UGLR				S	Sn	06 19 53.0	+1.3
UGLR	Uglovaya	3.74	22	*e*P	Pn	06 19 09.9	+1.4
UGLR				*e*S	Sn	06 19 53.0	+1.3
AVH	Avacha	3.77	21	PN	Pn	06 19 10.3	+1.4
AVH	Avacha	3.77	21	*e*P	Pn	06 19 10.3	+1.4
KOK	Koryaka	3.77	20	PN	Pn	06 19 10.4	+1.5
KOK	Koryaka	3.77	20	*e*P	Pn	06 19 10.4	+1.5
SMAR	Somma	3.78	22	PN	Pn	06 19 10.4	+1.2
SMAR	Somma	3.78	22	*e*P	Pn	06 19 10.4	+1.2
KRER	Koryakskii	3.81	21	PN	Pn	06 19 10.5	+1.0
KRER				S	Sn	06 19 55.0	+1.5
KRER	Koryakskii	3.81	21	*e*P	Pn	06 19 10.5	+1.0
KRER				*e*S	Sn	06 19 55.0	+1.5
SDLR	Sedlovina	3.81	22	PN	Pn	06 19 10.5	+1.0
SDLR				S	Sn	06 19 53.7	+0.1
SDLR	Sedlovina	3.81	22	*e*P	Pn	06 19 10.5	+1.0
SDLR				*e*S	Sn	06 19 53.7	+0.1
NLC	Nalytchevo	3.84	27	PN	Pn	06 19 09.8	0.0
NLC				S	Sn	06 19 52.1	-1.9
NLC	Nalytchevo	3.84	27	*e*P	Pn	06 19 09.8	0.0
NLC				*e*S	Sn	06 19 52.1	-1.9
GNL	Ganaly	4.03	12	PN	Pn	06 19 11.6	-0.8
GNL	Ganaly	4.03	12	*e*P	Pn	06 19 11.6	-0.8
KII	Karymskiy	4.64	22	PN	Pn	06 19 21.3	+0.6
KII				S	Sn	06 20 12.8	-0.7
KII	Karymskiy	4.64	22	*e*P	Pn	06 19 21.3	+0.6
KII				*e*S	Sn	06 20 12.8	-0.7
MKZ	Mys Kozlova	5.77	32	PN	Pn	06 19 35.6	-0.2
MKZ	Mys Kozlova	5.77	32	*e*P	Pn	06 19 35.6	-0.2
MKZ				*e*S	Sn	06 20 37.4	-3.2
KBTR	Krutoberegovo	7.49	28	PN	Pn	06 19 57.9	-1.2
KBTR	Krutoberegovo	7.49	28	*e*P	Pn	06 19 57.9	-1.2
BKI	Bering	7.94	43	PN	Pn	06 20 06.3	+1.2
BKI	Bering	7.94	43	*e*P	Pn	06 20 06.3	+1.2
BKI				*e*S	Sn	06 21 28.3	-4.8
KLR	Kul'dur	16.07	278	P	Pn	06 21 42.3	-10
	comp=E,0.2nm,0.3s,baz=73,slow=11,SNR=11						
ILAR	Eielson Array	32.78	41	P	P	06 24 33.9	-1.2
	comp=E,0.6nm,0.7s,baz=263,slow=8.3,SNR=6.8						
INK	Inuvik	37.88	35	P	P	06 25 17.0	-1.6
	comp=E,0.7nm,0.6s,baz=216,slow=5.9,SNR=3.1						
YKA	Yellowknife Ar	47.15	39	P	P	06 26 32.4	-1.3
	comp=E,1.1nm,0.9s,baz=298,slow=6.5,SNR=4.3						
MKAR	Makanchi Array	47.59	296	P	P	06 26 26.1	-11
	comp=E,0.3nm,0.4s,baz=37,slow=5.4,SNR=6.6						
NVAR	Mina Array Bea	59.08	66	P	P	06 28 03.9	+2.2
	comp=E,0.9nm,0.5s,baz=292,slow=7.3,SNR=8.3						
PDAR	Pinedale Array	61.17	57	P	P	06 28 16.9	+1.0
	comp=E,1.1nm,0.7s,baz=311,slow=1.7,SNR=10						
FINES	FINESS Array B	62.24	336	P	P	06 28 11.5	-11
	comp=E,2.3nm,0.8s,baz=45,slow=6.2,SNR=4.6						
ULM	Lac du Bonnet	62.76	43	P	P	06 28 26.5	+0.3
	comp=E,1.9nm,0.6s,baz=111,slow=1.6,SNR=2.8						
TXAR	Lajitas Array	74.08	63	P	P	06 29 38.0	+1.0
	comp=E,1.0nm,0.5s,baz=299,slow=4.8,SNR=16						

IDC ***07*** *07:05:34.5±0.9, 34°.86N×136°.13E, h348^{km}±9^{km}, mb2.9/7, mb1 3.1/11, mb1mx2.8/54, mbtmp3.7/11, Error ellipse: s-maj=19.0km s-min=13.2km az=96.0*

NIED ***07*** *07:05:35.0, 35°.04N×135°.97E, h344^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.56; $M_{\theta\theta}$1.84; $M_{\phi\phi}$0.72; $M_{r\theta}$2.77; $M_{\theta\phi}$-2.61; $M_{\phi r}$-0.06; Fault plane solution: $M_0$4.42000×10^{14} NP1: ϕ_s282.00000°, δ68.00000°, λ-120.00000°. NP2: ϕ_s159.00000°, δ36.00000°, λ-39.00000°.*

JMA ***07*** *07:05:35.0±0.1, 35°.04N×135°.97E, h344^{km}±1^{km}, M3.5*

ISC 07 07:05:34.7±0.8**, 34°.92N**±0°.09×**136°.01E**±0°.08**, h346**^{km}±7^{km}**, n27,** σ**0**^{s}**.84**/33**, mb3.1**/7**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	Wachi	0.62	306	P	Pn	07 06 18.7	0.0
JWT				S	S	07 06 53.0	-1.1
JIE	Ise	0.78	132	P	Pn	07 06 19.9	+0.6
JIE				S	S	07 06 54.8	-0.2
JWY	Kouya	0.78	207	P	Pn	07 06 19.9	+0.4
JWY				*e*S	S	07 06 54.6	-0.6
JYTA	Yamagatataniai	0.90	41	P	Pn	07 06 19.8	+0.2
JTNC	Tanabenakahech	1.15	197	P	Pn	07 06 21.2	+0.4
JTNC				S	S	07 06 57.3	-0.4
JKG	Kaga	1.38	11	P	Pn	07 06 21.3	-0.4
TTO1	TONANKAI O.B.S	1.44	154	P	Pn	07 06 23.3	+1.4
JAI	Aioi	1.71	229	P	Pn	07 06 24.1	+0.3
JAI				*e*S	S	07 07 03.0	-0.1
JMN	Monobe	2.13	237	P	Pn	07 06 27.1	+0.4
MAT	Matsushiro	2.41	47	P	Pn	07 06 28.2	-0.5
MAT				S	S	07 07 14.1	+2.0
MAT	Matsushiro	2.41	47	P	Pn	07 06 28.1	-0.6
MJAR	Matsushiro Arr	2.41	47	P	Pn	07 06 28.6	-0.1
	1.5nm,0.3s,baz=219,slow=8.4,SNR=52						
MJAR				S	S	07 07 12.6	+0.5
	baz=202,slow=0.4,SNR=0.8						
JRY	Ryogami san	2.60	64	P	Pn	07 06 30.4	+0.1
JOI	OKI	2.64	302	P	Pn	07 06 30.7	+0.2
JSZ	Suzu	2.75	23	P	Pn	07 06 31.1	-0.3
JTO	Tosashimizu	3.37	233	P	Pn	07 06 37.7	+0.5
JNU	Nakatsue	4.63	249	P	Pn	07 06 50.8	+0.7
	0.9nm,0.3s,baz=176,slow=9.3,SNR=2.8						
JCJ	Chichijima	9.42	144	S	S	07 09 23.5	-10
	6.6nm,0.3s,baz=275,slow=7.7,SNR=1.7						
USRK	Ussuriysk Ar.	9.77	343	P	Pn	07 07 49.4	-0.3
	baz=146,slow=11,SNR=15						
ASAJ	Asahikawa	10.49	27	P	Pn	07 07 57.4	-1.0
	2.0nm,0.3s,baz=224,slow=6.2,SNR=6.8						
SONM	Songino Array	25.52	309	P	P	07 10 35.5	+2.6
	0.2nm,0.5s,baz=116,slow=12,SNR=2.1						
ZALV	Zalesovo Beam	40.18	314	P	P	07 12 37.5	-0.7
	0.4nm,0.3s,baz=96,slow=13,SNR=1.8						
MKAR	Makanchi Array	41.57	303	P	P	07 12 49.7	+0.1
	0.2nm,0.4s,baz=96,slow=11,SNR=2.6						
ILAR	Eielson Array	53.60	31	P	P	07 14 20.4	-0.4
	0.3nm,0.6s,baz=265,slow=6.2,SNR=7.0						
WRA	Warramunga Arr	54.58	182	P	P	07 14 27.6	-0.8
	1.2nm,0.5s,baz=358,slow=7.7,SNR=39						
INK	Inuvik	58.23	26	P	P	07 14 53.2	0.0
	0.4nm,0.5s,baz=273,slow=7.0,SNR=5.9						
ASAR	Alice Springs	58.30	182	P	P	07 14 53.4	-0.9
	0.7nm,0.6s,baz=14,slow=13,SNR=12						

THE ***07*** *07:33:32.5, 38°.43N×20°.42E, h18^{km}±1^{km}, ML2.7/4, Error ellipse: s-maj=1.8km s-min=0.3km az=121.0*

ATH ***07*** *07:33:33.3, 38°.45N×20°.46E, h11^{km}±1^{km}, ML2.5/7, Error ellipse: s-maj=2.1km s-min=0.7km az=282.0*

ISC 07 07:33:31.8±0.9**, 38°.47N**±0°.02×**20°.34E**±0°.04**, h16**^{km}±6^{km}**, n34,** σ**1**^{s}**.06**/61**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.18	92	P	Pg	07 33 35.5	-0.7
FSK				S	Sg	07 33 37.3	-1.8
FSK				AML	AML	07 33 37.4	
	comp=E,25295μm,0.2s						
FSK				AML	AML	07 33 38.7	
	comp=N,14845μm,0.4s						
KEF4	Livadi, Kephal	0.22	162	P	Pg	07 33 37.0	+0.2
KEF4				S	Sb	07 33 40.7	-0.4
KEF4	Livadi, Kephal	0.22	162	P	Pg	07 33 37.1	+0.2
KEF4				S	Sb	07 33 40.7	-0.4
DMLN	Damoulianata-K	0.23	173	P	Pb	07 33 40.1	+2.5
DMLN				S	Sb	07 33 44.1	+2.7
KEF3	Kipouria, Keph	0.26	178	P	Pg	07 33 37.7	+0.2
KEF3				S	Sg	07 33 41.9	+0.5
	comp=N,3μm,0.2s						
KEF3	Kipouria, Keph	0.26	178	P	Pg	07 33 37.7	+0.2
KEF3				S	Sg	07 33 42.1	+0.7
LXRA	Lixouri, Kepha	0.28	164	P	Pg	07 33 38.2	+0.5
LXRA				S	Sb	07 33 42.8	+0.1
DRAG	Dragano-Lefkad	0.28	40	P	Pg	07 33 38.4	+0.5
DRAG				S	Sb	07 33 43.4	+0.3
	comp=N,6μm,0.4s						
DRAG	Dragano-Lefkad	0.28	40	P	Pg	07 33 38.6	+0.7
DRAG				S	Sg	07 33 42.0	-0.2
EVGI	Lefkada island	0.29	58	P	Pg	07 33 38.2	+0.1
EVGI				S	Sb	07 33 42.7	-0.6
EVGI	Lefkada island	0.29	58	P	Pg	07 33 38.2	+0.1
EVGI				S	Sg	07 33 42.1	-0.3
ARGA	Argostoli. Kep	0.31	159	P	Pb	07 33 39.3	+0.4
ARGA				S	Sb	07 33 43.7	0.0
VLS	Valsamata	0.35	146	P	Pg	07 33 38.5	-0.5
VLS				S	Sg	07 33 43.3	-0.7
	comp=N,2μm,0.2s						
VLS	Valsamata	0.35	146	P	Pg	07 33 38.6	-0.4
VLS				S	Sg	07 33 43.4	-0.6
VLS				AML	AML	07 33 43.7	
	comp=N,3322μm,0.4s						
VLS				AML	AML	07 33 43.7	
	comp=E,3256μm,0.1s						
NYDR	Nydri-Lefkada	0.38	49	P	Pn	07 33 45.5	+3.0
NYDR				S	Sn	07 33 51.0	+1.5
PSDA	Pessada-Kefalo	0.40	151	P	Pg	07 33 39.7	-0.3
PSDA				S	Sg	07 33 45.2	-0.3
PSDA	Pessada-Kefalo	0.40	151	P	Pg	07 33 39.7	-0.3
PSDA				S	Sg	07 33 45.2	-0.3
LKD2	Lefkada island	0.41	38	P	Pg	07 33 40.6	+0.5
LKD2				S	Sb	07 33 46.9	+0.3
	comp=E,450nm,0.3s						
LKD2	Lefkada island	0.41	38	P	Pg	07 33 40.6	+0.5
LKD2				S	Sg	07 33 46.4	+0.7
LKD2				AML	AML	07 33 48.0	
	comp=N,1050μm,0.4s						
LKD2				AML	AML	07 33 50.3	
	comp=E,749μm,0.3s						
TSLK	Tsoukalades, L	0.44	35	P	Pg	07 33 41.2	+0.7
TSLK				S	Sb	07 33 48.6	+1.2
TSLK	Tsoukalades, L	0.44	35	P	Pg	07 33 41.3	+0.7
TSLK				S	Sg	07 33 47.1	+0.6
TSLK				AML	AML	07 33 49.3	
	comp=E,1393μm,0.3s						
TSLK				AML	AML	07 33 52.3	
	comp=N,1656μm,0.4s						
RLS	Riolos of Patr	0.98	114	P	Pb	07 33 49.9	-0.4
RLS				AML	AML	07 34 10.9	
	comp=N,226μm,0.3s						
RLS				AML	AML	07 34 12.8	
	comp=E,298μm,0.5s						
DRO	Drossia	1.20	115	P	Pb	07 33 53.5	-0.6
ANX	Ano Chora	1.25	84	P	Pn	07 33 54.9	+0.2
ANX				AML	AML	07 34 18.6	
	comp=E,413μm,0.6s						
ANX				AML	AML	07 34 19.3	
	comp=N,700μm,0.6s						
LAKA	Lakka	1.31	99	P	Pb	07 33 55.7	-0.3
LAKA				AML	AML	07 34 22.0	
	comp=E,737μm,0.5s						
LAKA				AML	AML	07 34 22.9	
	comp=N,483μm,0.5s						
SERG	Sergoula	1.35	92	P	Pn	07 33 56.1	+0.1
TRIZ	Trizonia	1.37	94	P	Pn	07 33 56.5	+0.4
KLV	Kalavryta, Ach	1.49	106	P	Pn	07 33 58.4	+0.4
DBRK	Dubrovnik	4.52	339	*e*Pn	Pn	07 34 39.2	-0.3
DBRK				Sn	Sn	07 35 30.7	-1.0
STON	Ston	4.84	336	*e*Pn	Pn	07 34 44.8	+0.9
STON				Sn	Sn	07 35 37.5	-2.0
RICI	Ricice	5.58	335	*e*Pn	Pn	07 34 54.1	0.0
RICI				Sn	Sn	07 35 55.9	-1.9
ZIRJ	Zirje	6.28	327	*e*Pn	Pn	07 35 03.5	-0.2
ZIRJ				Sn	Sn	07 36 12.1	-3.0
MORI	Morici	6.43	329	*e*Pn	Pn	07 35 05.7	0.0
MORI				Sn	Sn	07 36 16.9	-1.8
DUGI	Dugi Otok	6.80	326	*e*Pn	Pn	07 35 11.1	+0.2
DUGI				Sn	Sn	07 36 25.8	-2.2

IDC ***07*** *07:50:01.8±0.3, 38°.16N×72°.87E, h0^{km}, mb5.6/45, mb1 5.7/51, mb1mx5.6/55, mbtmp5.6/51, ML4.7/6, MS7.3/67, Ms1 7.3/67, ms1mx7.3/73, Error ellipse: s-maj=8.8km s-min=7.9km az=6.0*

BJI ***07*** *07:50:04.6±0.0, 38°.18N×72°.91E, h30^{km}, mB6.9/65, mb5.8/63, Ms7.7/88, Ms7 7.7/84*

MOS ***07*** *07:50:04.3±1.3, 38°.16N×72°.91E, h25^{km}, mb6.7/68, MS7.5/91, Error ellipse: s-maj=3.8km s-min=2.9km az=107.8 Broadband fault plane solution: P waves. $M_0$2.30000×10^{19} NP1: ϕ_s309.00000°, δ88.00000°, λ-164.00000°. NP2: ϕ_s218.00000°, δ74.00000°, λ-2.00000°. Principal axes: T Plg10.0000°, Azm82.0000°; N Plg74.0000°, Azm315.0000°; P Plg13.0000°, Azm175.0000°;*

MOS Fault plane solution: P-wave C56, D49 . Felt (V) at Sarez, Daraut-Kurgan, Irkeshtam, Bor-Debe; (IV) at Osh; (III-IV) at Dushanbe; (III) at Bishkek, Naryn; (II-III) at Almaty.

NEIC ***07*** *07:50:06.0±1.9, 38°.21N±0°.05×72°.78E±0°.06, h22^{km}±1^{km}, mb6.6/305, Ms_20 7.6/452, Mwb7.1/72, Mwc7.3/133, Mww7.2, Mwc7.2(GCMT) Error ellipse: s-maj=8.5km s-min=8.4km az=85.0*

BGR ***07*** *07:50:06.9±0.0, 38°.60N×73°.24E, h22^{km}±2^{km}, mb6.6, mB_BB7.0, Ms7.4*

KRNET ***07*** *07:50:06.8±0.1, 38°.54N×72°.64E, mb6.8*

NEIC ***07*** *07:50:07.5, 38°.23N×72°.75E, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-0.29; $M_{\theta\theta}$-5.41; $M_{\phi\phi}$5.70; $M_{r\theta}$0.28; $M_{\theta\phi}$-1.31; $M_{\phi r}$0.12; Fault plane solution: $M_0$5.72000×10^{19} NP1: ϕ_s308.42000°, δ87.15000°, λ-178.35000°. NP2: ϕ_s218.34000°, δ88.35000°, λ-2.85000°. Principal axes: T 5.8504, Plg1.0000°, Azm263.0000°; N -0.2741, Plg87.0000°, Azm8.0000°; P -5.5763, Plg3.0000°, Azm173.0000°;*

SOME ***07*** *07:50:10.4, 38°.50N×73°.05E, h5^{km}, MS6.9*

NNC ***07*** *07:50:12.7±2.1, 38°.73N×72°.63E, h0^{km}, mb7.2, mpv6.8, Error ellipse: s-maj=20.6km s-min=11.6km az=158.0*

NEIC ***07*** *07:50:12, 38°.26N×72°.72E, h20^{km}, Moment Tensor Solution. Duration: 10^{s}.0 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.88; $M_{\theta\theta}$-5.83; $M_{\phi\phi}$6.71; $M_{r\theta}$0.27; $M_{\theta\phi}$-2.72; $M_{\phi r}$-1.57; Fault plane solution: $M_0$7.06000×10^{19} NP1: ϕ_s123.00000°, δ82.00000°, λ173.00000°. NP2: ϕ_s214.00000°, δ83.00000°, λ8.00000°. Principal axes: T 7.5751, Plg11.0000°, Azm78.0000°; N -1.1749, Plg79.0000°, Azm255.0000°; P -6.4002, Plg1.0000°, Azm348.0000°;*

GCMT ***07*** *07:50:13.5±0.1, 38°.39N±0°.01×72°.91E±0°.01, h12^{km}, MW7.2/165, Moment Tensor Solution. s165,c435; s165,c799; Duration: 9^{s}.6 Moment tensor: Scale 10^{20} Nm; M_{rr}-0.11±.00; $M_{\theta\theta}$-0.63±.00; $M_{\phi\phi}$0.74±.00; $M_{r\theta}$0.13±.02; $M_{\theta\phi}$-0.30±.00; $M_{\phi r}$-0.01±.02; Best double couple: $M_0$0.76300×10^{20} NP1: ϕ_s212.00000°, δ80.00000°, λ-7.00000°. NP2: ϕ_s304.00000°, δ83.00000°, λ-170.00000°. Principal axes: T 0.8070, Plg2.0000°, Azm78.0000°; N -0.0880, Plg78.0000°, Azm338.0000°; P -0.7190, Plg12.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***07*** *07:50:14, 38°.35N×72°.88E, h12^{km}, Moment Tensor Solution. Duration: 19^{s}.2 Moment tensor: Scale 10^{19}Nm; M_{rr}-1.12; $M_{\theta\theta}$-6.23; $M_{\phi\phi}$7.34; $M_{r\theta}$0.68; $M_{\theta\phi}$-3.06; $M_{\phi r}$1.97; Fault plane solution: $M_0$7.79000×10^{19} NP1: ϕ_s303.00000°, δ75.00000°, λ180.00000°. NP2: ϕ_s33.00000°, δ90.00000°, λ15.00000°. Principal axes: T 8.3403, Plg11.0000°, Azm259.0000°; N -1.2534, Plg75.0000°, Azm33.0000°; P -7.0869, Plg11.0000°, Azm167.0000°;*

NEIC ***07*** *07:50:26.6, 38°.81N×72°.48E, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}-0.12; $M_{\theta\theta}$-0.72; $M_{\phi\phi}$0.83; $M_{r\theta}$0.47; $M_{\theta\phi}$-0.29; $M_{\phi r}$0.33; Fault plane solution: $M_0$1.01000×10^{20} NP1: ϕ_s308.60000°, δ58.18000°, λ-168.39000°. NP2: ϕ_s212.42000°, δ80.16000°, λ-32.35000°. Principal axes: T 0.9487, Plg15.0000°, Azm264.0000°; N 0.1164, Plg56.0000°, Azm17.0000°; P -1.0651, Plg30.0000°, Azm166.0000°;*

ISC 07 07:50:04.5±0.3**, 38°.13N**±0°.02×**72°.89E**±0°.02**, h14**^{km}±1^{km}**, h14**^{km}**:pP-P, n2544,** σ**2**^{s}**.27**/2903**, mb6.5**/472**, MS7.6**/398**, 298C-185D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.60	328	Pn	Pn	07 50 28.9	-3.7
DRK	Karamyk	1.60	328	⇓*e*P	Pn	07 50 28.8	-3.8
	baz=26						
DRK				⇓*i*S	Sn	07 50 45.1	-8.1
	baz=26						
GAR	Garm	2.19	294	*i* PN	Pn	07 50 40.0	-0.7
GAR	Garm	2.19	294		Pn	07 50 40.2	-0.4
OHH	Osh	2.40	358	⇑*e*P	Pn	07 50 44.0	+0.6
	baz=3.0						
OHH				⇑*e*S	Sn	07 51 10.5	-2.1
	baz=3.0						
BTK	Batken	2.51	321	PN	Pn	07 50 46.4	+1.4
BTK	Batken	2.51	321	Pn	Pn	07 50 46.4	+1.4
BTK	Batken	2.51	321	⇑*e*P	Pn	07 50 45.3	+0.3
	baz=18						
BTK				⇑*i*S	Sn	07 51 12.9	-2.6
	baz=18						
KSH	Kashi	2.78	59	Pn	Pn	07 50 44.5	-4.2
KSH				Sn	Sn	07 51 19.8	-2.4
KSH				pmax	pmax		
	comp=Z,171μm,1.2s						
KSH				smax	smax		
	comp=N,855μm,1.2s						
KSH				smax	smax		
	comp=E,959μm,1.0s						
KSH				LR	LR		
	comp=N,9818μm,6.9s						
KSH				LR	LR		
	comp=E,10140μm,7.4s						
KSH				LR	LR		
	comp=Z,3700μm,8.6s						
KSH	Kashi	2.78	59	*i* Pn	Pn	07 50 44.6	-4.2
KSH				Sn	Sn	07 51 15.9	-6.3

CHGR	Chuyangaron	2.98	281	iPN	Pn	07 50 53.0	+1.6
CHGR	Chuyangaron	2.98	281	Pn	Pn	07 50 52.1	+0.7
TRKS	Terek-Say	3.66	339	ePN	Pn	07 50 59.9	-0.9
TRKS	Terek-Say	3.66	339	⇑eP	Pn	07 50 59.9	-0.9
	baz=39						
TRKS				⇑eS	Sn	07 51 38.4	-5.4
	baz=39						
AML	Almayashu	4.05	9	iP	Pn	07 51 07.0	+0.6
	SNR=5137						
AML	Almayashu	4.05	9	ePN	Pn	07 51 07.4	+1.0
AML				eS	Sn	07 51 51.8	-2.0
AML	Almayashu	4.05	9	P	Pb	07 51 14.0	-1.9
AML	Almayashu	4.05	9	⇓eP	Pn	07 51 07.4	+1.0
	baz=12						
AML				⇓eS	Sn	07 51 51.8	-2.0
	baz=12						
TAS	Tashkent	4.23	320	PN	Pn	07 51 09.0	+0.4
TAS	Tashkent	4.23	320	Pn	Pn	07 51 09.0	+0.4
TAS	Tashkent	4.23	320	⇑eP	Pn	07 51 08.9	+0.4
	baz=18						
TAS				⇑iS	Sn	07 51 54.2	-3.5
	baz=18						
UCH	Uchtor	4.28	16	P	Pn	07 51 11.7	+2.0
	SNR=24						
UCH	Uchtor	4.28	16	ePN	Pn	07 51 11.6	+1.9
UCH				eS	Sn	07 51 58.6	-1.1
UCH	Uchtor	4.28	16	⇓eP	Pn	07 51 11.6	+1.9
	baz=21						
UCH				⇓eS	Sn	07 51 58.6	-1.1
	baz=21						
CEP	Cherat	4.37	191	P	Pb	07 51 16.0	-5.1
MNAS	Manas	4.37	356	ePN	Pn	07 51 11.4	+0.8
MNAS	Manas	4.37	356	⇓eP	Pn	07 51 11.4	+0.8
	baz=59						
MNAS				⇓eS	Sn	07 51 57.9	-3.4
	baz=59						
CHCP	Chirah Chowk	4.47	176	P	Pn	07 51 16.4	+4.5
NIL	Nilore	4.48	176	PN	Pn	07 51 15.8	+3.9
NIL	Nilore	4.48	176	Pn	Pn	07 51 15.8	+3.9
EKS2	Erkin-Say	4.58	8	P	Pn	07 51 16.9	+3.4
	SNR=47						
EKS2	Erkin-Say	4.58	8	ePN	Pn	07 51 14.7	+1.2
EKS2	Erkin-Say	4.58	8	⇓eP	Pn	07 51 14.7	+1.2
	baz=11						
EKS2				⇓eS	Sn	07 52 04.5	-2.1
	baz=11						
MRKS	Merke	4.62	3	eP	Pb	07 51 28.3	+2.9
	comp=Z,11µm,0.5s						
MRKS				eS	Sb	07 52 24.6	+3.6
	comp=Z,98µm,0.9s						
AAK	Ala-Archa	4.67	15	Pn	Pn	07 51 16.5	+1.8
	comp=Z,72nm,0.3s,baz=191,slow=6.5,SNR=104						
AAK				Lg	Lg	07 52 23.0	
	comp=Z,2µm,0.3s,baz=62,slow=17,SNR=6.4						
AAK				LR	LR	07 52 25.7	
	comp=Z,607µm,21.9s,baz=6.0,slow=31						
AAK	Ala-Archa	4.67	15	P	Pn	07 51 17.9	+3.1
	SNR=30						
AAK	Ala-Archa	4.67	15	iP	Pn	07 51 16.6	+1.8
	SNR=2405						
AAK	Ala-Archa	4.67	15	d iPN	Pn	07 51 16.4	+1.6
AAK				MLR	MLR		
	comp=Z,2704µm,3.0s						
AAK	Ala-Archa	4.67	15	P	Pb	07 51 23.6	-2.7
AAK				S	Sb	07 52 21.0	-1.5
AAK	Ala-Archa	4.67	15	⇓Pn	Pn	07 51 17.9	+3.1
	comp=Z,7µm,0.7s						
AAK				⇓Lg	Lg	07 52 21.0	
	comp=Z,4µm,0.5s						
AAK	Ala-Archa	4.67	15	⇓eP	Pn	07 51 16.6	+1.8
	baz=18						
AAK				⇓eS	Sn	07 52 07.2	-1.6
	baz=18						
KBL	Kabul	4.73	222	PN	Pn	07 51 19.7	+4.0
KBL	Kabul	4.73	222	P	Pn	07 51 14.5	-1.2
	SNR=2979						
KBL				S	Sn	07 52 06.0	-4.5
KBL	Kabul	4.73	222		Pn	07 51 19.6	+4.0
KBK	Karagaybulak	4.79	19	P	Pn	07 51 19.0	+2.6
	SNR=85						
KBK	Karagaybulak	4.79	19	ePN	Pn	07 51 18.5	+2.1
KBK				eS	Sn	07 52 10.7	-1.1
KBK	Karagaybulak	4.79	19	⇓eP	Pn	07 51 18.5	+2.1
	baz=22						
KBK				⇓eS	Sn	07 52 10.7	-1.1
	baz=22						
ULHL	Ulahol	4.85	31	P	Pn	07 51 19.2	+1.9
	SNR=213						
FRU1	Bishkek	4.87	15	PN	Pn	07 51 19.7	+2.3
FRU1	Bishkek	4.87	15		Pn	07 51 19.7	+2.3
FRU1	Bishkek	4.87	15	⇑eP	Pn	07 51 19.4	+2.1
	baz=19						
FRU1				⇑eS	Sn	07 52 12.6	-0.9
	baz=19						
CHM	Chimkent	4.88	330	eP	Pg	07 51 37.7	-0.4
	comp=Z,13µm,0.5s						
CHM				eS	Sg	07 52 41.1	-0.2
	comp=Z,80µm,0.7s						
DZA	Taraz	4.91	347	eP	Pg	07 51 36.5	-2.0
	comp=Z,55µm,0.6s						
DZA				eS	Sg	07 52 39.0	-3.0
	comp=Z,9145µm,6.7s						
DZA	Taraz	4.91	347	ePg	Pb	07 51 31.9	+1.7
	baz=346						
BOOM	Boomskoye usch	4.95	27	PN	Pn	07 51 20.1	+1.6
BOOM	Boomskoye usch	4.95	27	Pn	Pn	07 51 20.1	+1.6
BOOM	Boomskoye usch	4.95	27	⇑eP	Pn	07 51 21.3	+2.8
	baz=31						
BOOM				⇑eS	Sn	07 52 16.0	+0.4
	baz=31						
CHMS	Chumysh	5.07	16	P	Pn	07 51 22.2	+2.1
	SNR=32						
KDJ	Kajisay	5.18	38	PN	Pn	07 51 24.2	+2.4
KDJ	Kajisay	5.18	38	Pn	Pn	07 51 24.2	+2.4
TKM2	Tokmak 2	5.22	22	P	Pn	07 51 24.0	+1.7
	SNR=66						
TKM2	Tokmak 2	5.22	22	PN	Pn	07 51 27.1	+4.8
TKM2	Tokmak 2	5.22	22	⇓Pn	Pn	07 51 26.4	+4.1
	comp=Z,18µm,1.1s						
TKM2				⇓Lg	Lg	07 52 41.1	
	comp=Z,10µm,0.8s						
TKM2	Tokmak 2	5.22	22	⇑eP	Pn	07 51 24.3	+2.0
	baz=26						
TKM2				⇑eS	Sn	07 52 21.8	-0.5
	baz=26						
TARG	Taragay, Kyrgy	5.22	45	Pn	Pn	07 51 24.7	+2.1
USP	Ospenovka	5.28	13	P	Pn	07 51 25.5	+2.5
	SNR=32						
KK31	Karatay Array	5.29	341	PN	Pn	07 51 23.9	+0.8
KKAR	Karatay Array	5.29	341	PN	Pn	07 51 23.1	0.0
KKAR	Karatay Array	5.29	341	Pn	Pn	07 51 23.1	0.0
KK09	Karatay Array	5.31	341	⇓Pn	Pn	07 51 23.5	+0.1
	comp=Z,8µm,0.8s,baz=154,slow=12						
KK09				⇑Lg	Lg	07 52 37.7	
	comp=Z,31µm,0.8s,baz=152,slow=30						
THW	Thamme Wali	5.40	190	P	Pn	07 51 27.0	+2.3
KST	Kastek	5.44	25	eP	Pg	07 51 46.7	-2.1
	comp=Z,35µm,1.2s						
KST				eS	Sg	07 52 56.5	-2.8
	comp=Z,60µm,0.8s						
KST	Kastek	5.44	25	Pg	Pg	07 51 46.7	-2.1
	comp=Z,35µm,1.2s						
KST				Lg	Lg	07 52 56.4	
	comp=Z,60µm,0.8s						
SGDS	Sogindy	5.48	13	ePg	Pb	07 51 43.2	+3.1
	baz=14						
SGDS				eSn	Sn	07 52 23.9	-4.9
	baz=14						
DGS	Degeres	5.56	22	eP	Pg	07 51 48.4	-2.6
	comp=Z,20µm,0.8s						
DGS				eS	Sg	07 52 59.1	-3.9
	comp=Z,39µm,0.9s						
DGS	Degeres	5.56	22	Pg	Pg	07 51 48.4	-2.6
	comp=Z,20µm,0.8s						
DGS				Lg	Lg	07 52 59.1	
	comp=Z,39µm,0.9s						
TNSS	Tian-Shan	5.80	31	eP	Pg	07 51 52.4	-3.2
	comp=Z,7µm,0.9s						
TNSS				eS	Sg	07 53 06.0	-4.6
	comp=Z,25µm,1.2s						
TNSS	Tian-Shan	5.80	31	ePg	Pb	07 51 49.5	+3.9
	baz=33						
TNSS	Tian-Shan	5.80	31	Pg	Pg	07 51 52.0	-3.6
	comp=Z,7µm,0.9s						
TNSS				Lg	Lg	07 53 06.0	
	comp=Z,25µm,1.2s						
AAA	Alma-Ata	5.93	30	ePg	Pb	07 51 51.0	+3.3
	baz=32						
AAA	Alma-Ata	5.93	30	iPN	Pn	07 51 35.0	+3.0
MDOK	Medeo	5.95	31	eP	Pb	07 51 53.1	+5.1
	comp=Z,9µm,0.8s						
MDOK				eS	Sg	07 53 07.5	-7.9
	comp=Z,62µm,1.3s						
MDOK	Medeo	5.95	31	ePg	Pb	07 51 52.4	+4.4
	baz=32						
MDOK	Medeo	5.95	31	⇓Pn	Pn	07 51 36.7	+4.5
	comp=Z,11µm,0.8s						
MDOK				⇑Lg	Lg	07 53 05.3	
	comp=Z,8µm,0.6s						
KRBS	Karabastau	5.95	20	eP	Pg	07 51 54.7	-3.8
	comp=Z,10µm,0.6s						
KRBS				eS	Sg	07 53 09.8	-5.8
	comp=Z,63µm,1.4s						
KRBS	Karabastau	5.95	20	Pg	Pg	07 51 54.7	-3.8
	comp=Z,10µm,0.6s						
KRBS				Lg	Lg	07 53 09.8	
	comp=Z,63µm,1.4s						
KNDC	Almaty	5.96	30	PN	Pn	07 51 35.4	+3.1
KNDC	Almaty	5.96	30	⇓Pn	Pn	07 51 35.4	+3.1
	comp=Z,9µm,0.7s						
KNDC				⇑Lg	Lg	07 53 05.6	
KOTS	Kotyrbulak	6.03	31	eP	Pg	07 51 56.6	-3.4
	comp=Z,20µm,0.8s						
KOTS				eS	Sg	07 53 12.9	-5.1
	comp=Z,109µm,0.8s						
KOTS	Kotyrbulak	6.03	31	Pg	Pg	07 51 56.6	-3.4
	comp=Z,20µm,0.8s						
KOTS				Lg	Lg	07 53 12.9	
	comp=Z,11µm,0.8s						
PRZ	Przheval'sk	6.06	42	PN	Pn	07 51 36.8	+3.0
PRZ	Przheval'sk	6.06	42	Pn	Pn	07 51 36.8	+3.0
PRZ	Przheval'sk	6.06	42	⇓eP	Pn	07 51 37.8	+4.0
	baz=46						
PRZ				⇓eS	Sn	07 52 44.6	+1.6
	baz=46						
SARP	Sargodha	6.19	182	P	Pn	07 51 37.3	+1.8
KTBS	Karatobe	6.28	26	eP	Pg	07 52 00.9	-3.8
	comp=Z,13µm,0.7s						
KTBS				eS	Sg	07 53 20.1	-5.9
	comp=Z,105µm,1.8s						
KTBS	Karatobe	6.28	26	Pg	Pg	07 52 00.9	-3.8
	comp=Z,13µm,0.7s						
KTBS				Lg	Lg	07 53 20.1	
	comp=Z,10µm,1.8s						
KUU	Kurty	6.33	23	eP	Pg	07 52 01.8	-3.8
	comp=Z,3µm,0.5s						
KUU				eS	Sg	07 53 21.9	-5.6
	comp=Z,69µm,1.7s						
KUU	Kurty	6.33	23	ePg	Pb	07 51 58.6	+4.2
	baz=25						
KUU	Kurty	6.33	23	Pg	Pg	07 52 01.8	-3.8
	comp=Z,3µm,0.5s						
KUU				Lg	Lg	07 53 21.9	
	comp=Z,69µm,1.7s						
SATY	Saty	6.47	39	eP	Pg	07 52 05.6	-2.9
	comp=Z,13µm,1.1s						
SATY				eS	Sg	07 53 28.4	-3.9
	comp=Z,71µm,2.3s						
SATY	Saty	6.47	39	ePg	Pg	07 52 02.8	-5.7
	baz=40						
SATY	Saty	6.47	39	Pg	Pg	07 52 05.6	-2.9
	comp=Z,13µm,1.1s						
SATY				Lg	Lg	07 53 28.4	
	comp=Z,71µm,2.3s						
DHRM	DHARAMSHALA	6.49	153	eP	Pn	07 51 42.3	+2.4
DHRM				eS	Sn	07 52 49.2	-4.7
DHRM				IAML		07 53 22.6	
	comp=N,30µm,1.2s						
KURS	Kuram	6.69	35	eP	Pg	07 52 07.8	-4.8
	comp=N,8µm,0.9s						
KURS				eS	Sg	07 53 32.1	-7.0
	comp=N,53µm,2.0s						
KURS	Kuram	6.69	35	Pg	Pg	07 52 07.8	-4.8
	comp=N,8µm,0.9s						
KURS				Lg	Lg	07 53 32.1	
	comp=N,53µm,2.0s						
UZB	Uzynbulak	6.85	41	eP	Pg	07 52 10.1	-5.6
	comp=N,7µm,1.0s						
UZB				eS	Sg	07 53 36.3	-8.0
	comp=N,33µm,2.0s						
UZB	Uzynbulak	6.85	41	ePn	Pn	07 51 43.0	-1.7
	baz=43						
UZB				ePg	Pb	07 52 09.4	+6.0
	baz=43						
UZB	Uzynbulak	6.85	41	ePN	Pn	07 51 43.0	-1.7
UZB				e		07 52 09.3	
UZB	Uzynbulak	6.85	41	Pg	Pg	07 52 10.1	-5.6
	comp=N,7µm,1.0s						
UZB				Lg	Lg	07 53 36.3	
	comp=N,33µm,2.0s						
KPKS	Kokpek	6.91	38	eP	Pg	07 52 11.4	-5.5
	comp=N,7µm,0.8s						
KPKS				eS	Sg	07 53 38.3	-8.0
	comp=N,37µm,2.4s						
KPKS	Kokpek	6.91	38	ePn	Pn	07 51 43.6	-1.9
	baz=39						
KPKS	Kokpek	6.91	38	ePN	Pn	07 51 43.6	-1.9
BTLS	Baital	6.96	7	eP	Pb	07 52 10.1	+4.9
	comp=N,4µm,1.0s						
BTLS				eS	Sb	07 53 36.2	+8.0
	comp=N,19µm,1.0s						
BTLS	Baital	6.96	7	ePg	Pb	07 52 09.4	+4.1
	comp=N,1µm,1.2s,baz=7.4						
BTLS	Baital	6.96	7	iPN	Pn	07 51 51.0	+4.9
SHLS	Shalkode	7.09	43	eP	Pg	07 52 18.1	-2.1
	comp=N,13µm,0.9s						
SHLS				eS	Sg	07 53 49.9	-2.1
	comp=N,36µm,1.1s						
SHLS	Shalkode	7.09	43	ePn	Pn	07 51 49.6	+1.7
	baz=46						
SHLS	Shalkode	7.09	43	eP	Pn	07 51 49.6	+1.7
ARXS	Arharly	7.13	30	eP	Pg	07 52 16.2	-4.8
	comp=N,7µm,1.4s						
ARXS				eS	Sg	07 53 46.8	-6.5
	comp=N,38µm,1.5s						
ARXS	Arharly	7.13	30	ePN	Pn	07 51 50.0	+1.5
ARXS	Arharly	7.13	30	Pg	Pg	07 52 16.0	-5.0
ARXS				Lg	Lg	07 53 46.9	
PDGK	Podgornoye	7.22	42	Pg	Pg	07 52 19.1	-3.6
	comp=N,5µm,0.9s						
PDGK				Lg	Lg	07 53 51.2	
	comp=N,8µm,0.9s						
SMLA	Simla	7.82	152	eP	Pn	07 51 59.0	+1.2
SMLA				IAmb	IAmb	07 52 12.2	
	comp=Z,6µm,0.7s						
TDK	Taldyqorghan	8.02	29	ePn	Pn	07 51 59.4	-1.2
	baz=30						
TDK				iPg	Pb	07 52 29.9	+6.6
	baz=30						
TDK	Taldyqorghan	8.02	29	eP	Pn	07 51 59.3	-1.2
TDK	Taldyqorghan	8.02	29	Pg	Pg	07 52 34.8	-3.2
	comp=Z,13µm,1.0s						
TDK				Lg	Lg	07 54 19.1	
	comp=Z,75µm,1.2s						
DJR	Jarkent	8.09	38	Pg	Pg	07 52 36.1	-3.3
DJR				Lg	Lg	07 54 21.4	
KAPS	Kapalarasan	8.63	32	Pg	Pg	07 52 45.2	-4.5
KAPS				Lg	Lg	07 54 36.7	
HRA	Herat	9.37	250	Pn	Pn	07 52 18.9	-0.4
NDI	New Delhi	10.09	158	eP	Pn	07 52 30.0	+1.0
OTUK	Ortayu	10.12	358	P	Pn	07 52 30.1	+0.7
OTUK	Ortayu	10.12	358	⇓Pn	Pn	07 52 30.1	+0.7
	comp=Z,3µm,1.2s						
PTH	Pithoragarh	10.50	142	eP	Pn	07 52 32.1	-2.7
LGTI	Lohaghat	10.60	143	eP	Pn	07 52 50.2	+14
LGTI				eS	Pg	07 53 57.9	
MAKZ	Makanchi	10.96	35	P	Pn	07 52 42.3	+1.4
MAKZ	Makanchi	10.96	35	⇑P	Pn	07 52 41.1	+0.1
MAKZ	Makanchi	10.96	35	⇓Pn	Pn	07 52 43.5	+2.6
	comp=Z,5µm,1.5s						
MAKZ	Makanchi	10.96	35	Pn	Pn	07 52 42.3	+1.4
MK31	Makanchi Array	11.10	36	c iP	Pn	07 52 43.4	+0.7
MK31	Makanchi Array	11.10	36	⇑Pn	Pn	07 52 45.2	+2.5
	comp=Z,6µm,1.4s,baz=208,slow=12,SNR=6150						
MK31	Makanchi Array	11.10	36	Pn	Pn	07 52 44.1	+1.3
MKAR	Makanchi Array	11.10	36	Pn	Pn	07 52 43.8	+1.1
	comp=Z,9.4nm,0.3s,baz=210,slow=13,SNR=358						
MKAR				Lg	Lg	07 55 54.9	
	comp=Z,17nm,0.3s,baz=247,slow=8.0,SNR=1.7						
MKAR				LR	LR	07 57 33.4	
	comp=Z,1184µm,19.8s,baz=201,slow=41						
MKAR	Makanchi Array	11.10	36	P	Pn	07 52 44.1	+1.4
MKAR	Makanchi Array	11.10	36	Pn	Pn	07 52 44.1	+1.4
GEYT	Alibeck	11.65	274	Pn	Pn	07 52 46.1	-4.3
	comp=Z,21nm,0.3s,baz=124,slow=7.9,SNR=185						
GEYT				Sn	Sn	07 55 07.0	+6.8
	comp=Z,80nm,0.3s,baz=166,slow=41,SNR=1.8						
GEYT				LR	LR	07 58 40.9	
	comp=Z,1344µm,18.3s,baz=80,slow=45						
GEYT	Alibeck	11.65	274		Pn	07 52 45.8	-4.6
GYA0B	ALIBECK ARRAY	11.65	274	Pn	Pn	07 52 46.0	-4.3
BRZS	Berezniki	11.86	359	ePn	Pn	07 52 50.7	-2.4
	baz=360						
BRZS	Berezniki	11.86	359	eP	Pn	07 52 50.7	-2.4
WMQ	Urumqi	12.55	58	P	Pn	07 53 02.1	-0.6
WMQ				pP	P	07 53 10.2	-4.1
WMQ				sP		07 53 14.7	
WMQ				PP	PnPn	07 53 16.7	+6.3
WMQ				S	Sn	07 55 17.2	-5.0
WMQ				sS		07 55 34.7	
WMQ				pmax	pmax		
	comp=Z,63µm,8.3s						
WMQ				LR	LR		
	comp=Z,1704µm,11.3s						
WMQ				LR	LR		
	comp=Z,2092µm,15.3s						
ZSN	Zaisan	12.80	39	ePn	Pn	07 53 04.8	-1.2
	comp=Z,273nm,2.2s,baz=40						
ZSN	Zaisan	12.80	39	eP	Pn	07 53 04.8	-1.2
ZSN				pmax	pmax		
	comp=Z,273nm,2.2s						
PYUN	Piuthan	13.09	137	eP	Pn	07 53 06.8	-3.5
	comp=Z,3µm,0.4s						
KURBB	Kurchatov Arra	13.12	16	Pn	Pn	07 53 07.9	-2.5
	comp=Z,1.9nm,0.3s,baz=205,slow=11,SNR=93						
KURBB				Sn	Sn	07 55 27.5	-8.6
	comp=Z,3.1nm,0.3s,baz=93,slow=13,SNR=2.5						
KURBB				Lg	Lg	07 56 56.5	
	comp=Z,8.6nm,0.3s,baz=204,slow=27,SNR=6.7						
KURBB	Kurchatov Arra	13.12	16	Pn	Pn	07 53 10.3	-0.1
KURK	Kurchatov	13.23	16	ce P	Pn	07 53 09.4	-2.4
KURK				pmax	pmax		
	comp=Z,446nm,0.8s						
KURK				MLR	MLR		
	comp=Z,2265µm,13.0s						
KURK	Kurchatov	13.23	16	P	P	07 53 20.0	-1.8
KURK				P	P	07 53 20.0	-1.8
KURK	Kurchatov	13.23	16	⇓P	Pn	07 53 08.8	-3.1
KURK	Kurchatov	13.23	16	⇓Pn	Pn	07 53 13.2	+1.4
	comp=Z,2µm,1.3s						
KURK	Kurchatov	13.23	16	Pn	Pn	07 53 09.1	-2.8
DANN	Dangsing	13.33	134	eP	Pn	07 53 10.0	-3.5
SEM	Semipalatinsk	13.36	21	ePn	Pn	07 53 11.7	-2.1
	comp=Z,991nm,1.9s,baz=21						
SEM	Semipalatinsk	13.36	21	eP	Pn	07 53 11.6	-2.1
SEM				pmax	pmax		
	comp=Z,991nm,1.9s						
KOLN	Koldanda	13.68	136	eP	Pn	07 53 14.9	-3.4
GKN	Gorkha	14.09	132	eP	Pn	07 53 19.8	-4.1
	comp=Z,4µm,0.5s						
GKN	Gorkha	14.09	132	eP	Pn	07 53 19.8	-4.1
GKN				eS	Sn	07 55 55.7	-4.5
AB31	Akbulak array	14.52	324	iP	Pn	07 53 24.8	-4.6
AB31						07 56 06.1	
AB31	Akbulak array	14.52	324	⇑Pn	Pn	07 53 29.6	+0.1
	comp=Z,1µm,0.6s,baz=134,slow=11,SNR=2096						
AB31				⇓Sn	Sn	07 56 05.5	-4.5
	comp=Z,4µm,0.9s,baz=142,slow=21,SNR=3.9						
ABKAR	Akbulak array	14.52	324	⇓P	Pn	07 53 24.3	-5.1
ABKAR	Akbulak array	14.52	324	Pn	Pn	07 53 25.6	-3.8
KKN	Kakani	14.63	131	eP	Pn	07 53 26.4	-4.9
	comp=Z,4µm,0.7s						
DMN	Daman	14.66	132	eP	Pn	07 53 27.1	-4.7
PKIN	Phulchoki	14.86	131	eP	Pn	07 53 29.0	-5.4
PKIN				eS	Sn	07 56 13.0	-5.9
PKI	Pulchoki	14.87	131	eP	Pn	07 53 29.2	-5.5
GUN	Gumba	14.90	129	eP	Pn	07 53 29.7	-5.4
BVAR	Borovoye Array	15.00	354	Pn	Pn	07 53 32.4	-3.6
	comp=Z,3.5nm,0.3s,baz=184,slow=17,SNR=57						
BRVK	Borovoye	15.04	354	de P	Pn	07 53 33.3	-3.2
BRVK				pmax	pmax		
	comp=Z,428nm,1.3s						
BRVK				MLR	MLR		
	comp=Z,3858µm,12.0s						
BRVK	Borovoye	15.04	354	P	P	07 53 44.2	+2.4
BRVK	Borovoye	15.04	354	⇓P	Pn	07 53 32.0	-4.5
BRVK	Borovoye	15.04	354		Pn	07 53 32.1	-4.5
BHUJ	Bhuj	15.08	191	eP	Pn	07 53 34.4	-2.7
BHUJ				eS	Sn	07 56 24.4	+0.4
BHUJ				IAML		07 57 05.5	
	comp=E,7µm,1.9s						
BHUJ				IAML		07 57 12.8	
	comp=N,3µm,1.2s						
BHPL	Bhopal	15.34	164	eP	Pn	07 53 37.2	-3.4
BHPL				eS	Sn	07 56 27.1	-3.3
BHPL				IAML		07 56 55.6	
	comp=N,2µm,1.6s						
DGZ	Jazzator, Alta	15.58	37	c iP	Pn	07 53 41.5	-2.3
DGZ				MLR	MLR		
	comp=Z,2010µm,11.0s						
RAMN	Ramite	16.04	130	eP	Pn	07 53 43.9	-6.0
RAMN				eS	Sn	07 56 40.7	-7.0
AKTO	Aktyubinsk	16.23	324	Pn	Pn	07 53 47.7	-4.3
	comp=Z,2.1nm,0.3s,baz=134,slow=13,SNR=51						
AKTO				Sn	Sn	07 56 47.0	-4.8
	comp=Z,44nm,0.3s,baz=179,slow=19,SNR=2.5						
AKTO				LR	LR	08 00 18.7	
	comp=Z,1150µm,19.1s,baz=157,slow=38						
AKTO	Aktyubinsk	16.23	324	⇑Pn	P	07 53 54.4	-0.7
	comp=Z,8µm,0.9s						
AKTO				⇓Sn	Sn	07 56 47.1	-4.7
	comp=Z,6µm,1.1s						
TAPN	Taplejung	16.44	126	eP	Pn	07 53 49.0	-6.1
ODAN	Odare	16.59	128	eP	Pn	07 53 50.9	-6.0
ODAN				eS	Sn	07 56 52.1	-8.9
GTK	Tadong	17.03	125	IAmb	IAmb	07 54 31.9	
	comp=Z,3µm,1.4s						
LSA	Lhasa	17.31	114	P	Pn	07 54 04.0	-2.3
LSA				pP	P	07 54 09.0	+1.3
LSA				sP	sP	07 54 15.5	+0.1
LSA				S	Sn	07 57 15.6	-3.3
LSA				pmax	pmax		
	comp=Z,2µm,2.1s						
LSA				LR	LR		
	comp=Z,936µm,12.8s						
LSA				LR	LR		
	comp=Z,1362µm,10.0s						
LSA				LR	LR		
	comp=Z,1477µm,15.7s						
LSA	Lhasa	17.31	114	P	Pn	07 54 05.4	-0.8
LSA				pmax	pmax		
	comp=Z,1µm,1.1s						
LSA	Lhasa	17.31	114	P	P	07 54 09.8	+2.1
LSA				P	P	07 54 09.8	+2.1
LSA	Lhasa	17.31	114	Pn	Pn	07 54 05.4	-0.8
ZAA0	Zalesovo Array	17.82	24	Pn	Pn	07 54 09.6	-2.3
ZAA0				IAmb	IAmb	07 54 35.2	
	comp=Z,4µm,1.1s						
ZALV	Zalesovo Beam	17.82	24	P	Pn	07 54 09.6	-2.3
	comp=Z,11nm,0.3s,baz=221,slow=11,SNR=167						
ZALV				Lg	Lg	07 59 23.9	
	baz=226,slow=12,SNR=2.7						
ZALV				LR	LR	08 01 17.5	
	comp=Z,525µm,18.0s,baz=200,slow=38						
ZALV	Zalesovo Beam	17.82	24	P	Pn	07 54 10.1	-1.8
ZALV	Zalesovo Beam	17.82	24	Pn	Pn	07 54 10.1	-1.8
I46RU	ZALESOVO INFRA	17.82	24	i		09 12 30.0	
	baz=203,slow=312,SNR=3.9						
BANOM	Banah	18.56	234	iP	P	07 54 18.2	-2.7
	SNR=92						
BANOM	Banah	18.56	234	P	P	07 54 20.0	-1.0
	SNR=90						
BANOM				P	P	07 54 20.0	-1.0
	SNR=90						
BANOM				P	P	07 54 20.0	-1.0
	SNR=90						
BANOM				S	Sn	07 57 43.6	-4.9
BANOM				S	Sn	07 57 43.6	-4.9
BANOM				S	Sn	07 57 43.6	-4.9
SHME	Shamm	18.57	234	iP	P	07 54 18.1	-3.0
	SNR=38						
SHME	Shamm	18.57	234	P	P	07 54 20.8	-0.2
	SNR=37						
SHME				P	P	07 54 20.8	-0.2
	SNR=37						
SHME				P	P	07 54 20.8	-0.2
	SNR=37						

SHME			S	**Sn**	**07 57 45.1**	**-3.7**
SHME			S	**Sn**	**07 57 45.1**	**-3.7**
SHME			S	**Sn**	**07 57 45.1**	**-3.7**
LKRN	**Lenkeran, Azer**	**18.89 279**	P	**Pn**	**07 54 25.5**	**+0.4**
MDH	**Madha**	**19.00 233**	*i* P	**P**	**07 54 23.5**	**-2.3**
	SNR=29					
MDH	**Madha**	**19.00 233**	P	**P**	**07 54 25.1**	**-0.7**
	SNR=27					
MDH			P	**P**	**07 54 25.1**	**-0.7**
	SNR=27					
MDH			P	**P**	**07 54 25.1**	**-0.7**
	SNR=27					
MDH			S	**Sn**	**07 57 50.5**	**-8.7**
MDH			S	**Sn**	**07 57 50.5**	**-8.7**
MDH			S	**Sn**	**07 57 50.5**	**-8.7**
MASF	**Masafi**	**19.04 233**	P	**Pn**	**07 54 28.4**	**+1.4**
	SNR=132					
MASF			P	**Pn**	**07 54 28.4**	**+1.4**
	SNR=132					
MASF			P	**Pn**	**07 54 28.4**	**+1.4**
	SNR=132					
MASF			S	**Sn**	**07 57 56.6**	**-3.5**
MASF			S	**Sn**	**07 57 56.6**	**-3.5**
MASF			S	**Sn**	**07 57 56.6**	**-3.5**
MSFE	**Esma-Masafi**	**19.05 233**	*i* P	**P**	**07 54 25.6**	**-0.8**
	SNR=132					
UMQ	**Umm Al-Quwin**	**19.25 234**	*i* P	**P**	**07 54 28.0**	**-0.4**
	SNR=36					
UMQ	**Umm Al-Quwin**	**19.25 234**	P	**Pn**	**07 54 30.6**	**+1.2**
	SNR=32					
UMQ			P	**Pn**	**07 54 30.6**	**+1.2**
	SNR=32					
UMQ			P	**Pn**	**07 54 30.6**	**+1.2**
	SNR=32					
UMQ			S	**Sn**	**07 58 03.7**	**-1.3**
UMQ			S	**Sn**	**07 58 03.7**	**-1.3**
UMQ			S	**Sn**	**07 58 03.7**	**-1.3**
BIDO	**Bidbid**	**19.26 225**	P	**P**	**07 54 28.9**	**+0.2**
	SNR=40					
BIDO			P	**P**	**07 54 28.9**	**+0.2**
	SNR=40					
BIDO			P	**P**	**07 54 28.9**	**+0.2**
	SNR=40					
BIDO			S	**Sn**	**07 57 59.2**	**-6.2**
BIDO			S	**Sn**	**07 57 59.2**	**-6.2**
BIDO			S	**Sn**	**07 57 59.2**	**-6.2**
UOSS	**Minazif**	**19.32 232**	*i* P	**P**	**07 54 27.9**	**-1.3**
	SNR=140					
UOSS	**Minazif**	**19.32 232**	P	**P**	**07 54 29.5**	**+0.2**
UOSS			P	**P**	**07 54 29.5**	**+0.2**
UOSS			P	**P**	**07 54 29.5**	**+0.2**
UOSS			S	**Sn**	**07 58 02.4**	**-4.4**
UOSS			S	**Sn**	**07 58 02.4**	**-4.4**
UOSS			S	**Sn**	**07 58 02.4**	**-4.4**
UOSS	**Minazif**	**19.32 232**	⇑P	**P**	**07 54 27.2**	**-2.1**
UOSS	**Minazif**	**19.32 232**	P	**P**	**07 54 26.9**	**-2.4**
UOSS			IAmb	IAmb	07 54 38.3	
	comp=Z,4µm,1.4s					
HATD	**Hatta, Dubai**	**19.45 232**	*i* P	**P**	**07 54 29.0**	**-1.8**
	SNR=155					
HATD	**Hatta, Dubai**	**19.45 232**	P	**Pn**	**07 54 32.4**	**+0.5**
	SNR=211					
HATD			P	**Pn**	**07 54 32.4**	**+0.5**
	SNR=211					
HATD			P	**Pn**	**07 54 32.4**	**+0.5**
	SNR=211					
HATD			S	**Sn**	**07 58 01.8**	**-8.2**
HATD			S	**Sn**	**07 58 01.8**	**-8.2**
HATD			S	**Sn**	**07 58 01.8**	**-8.2**
WBK	**Wadi Bani Khal**	**19.54 222**	P	**Pn**	**07 54 34.1**	**+1.1**
	SNR=183					
WBK			P	**Pn**	**07 54 34.1**	**+1.1**
	SNR=183					
WBK			P	**Pn**	**07 54 34.1**	**+1.1**
	SNR=183					
WBK			S	**S**	**07 58 08.2**	**-3.9**
WBK			S	**S**	**07 58 08.2**	**-3.9**
WBK			S	**S**	**07 58 08.2**	**-3.9**
POO	**Poona**	**19.54 177**	*e*P	**P**	**07 54 32.4**	**+0.6**
POO			IAmb	IAmb	07 54 38.0	
	comp=Z,3µm,1.2s					
POO			*e*S	**Sn**	**07 58 13.1**	**+0.9**
AKT	**Akhty**	**19.59 288**	*c i*P	**P**	**07 54 31.8**	**-0.5**
AKT			MLR	MLR		
	comp=Z,254µm,15.0s					
ASHO	**Ashiyiah**	**19.60 232**	*i* P	**P**	**07 54 31.7**	**-0.7**
	SNR=259					
ASHO	**Ashiyiah**	**19.60 232**	P	**Pn**	**07 54 33.4**	**-0.4**
	SNR=521					
ASHO			P	**Pn**	**07 54 33.4**	**-0.4**
	SNR=521					
ASHO			P	**Pn**	**07 54 33.4**	**-0.4**
	SNR=521					
ASHO			S	**S**	**07 58 08.2**	**-5.1**
ASHO			S	**S**	**07 58 08.2**	**-5.1**
ASHO			S	**S**	**07 58 08.2**	**-5.1**
NAZ	**Nazwa, Dubai**	**19.63 233**	*i* P	**P**	**07 54 31.9**	**-0.7**
	SNR=56					
NAZ	**Nazwa, Dubai**	**19.63 233**	P	**P**	**07 54 33.3**	**+0.7**
	SNR=54					
NAZ			P	**P**	**07 54 33.3**	**+0.7**
	SNR=54					
NAZ			P	**P**	**07 54 33.3**	**+0.7**
	SNR=54					
NAZ			S	**S**	**07 58 08.9**	**-4.9**
NAZ			S	**S**	**07 58 08.9**	**-4.9**
NAZ			S	**S**	**07 58 08.9**	**-4.9**
SMDO	**Samad**	**19.67 224**	P	**Pn**	**07 54 34.0**	**-0.7**
	SNR=104					
SMDO			P	**Pn**	**07 54 34.0**	**-0.7**
	SNR=104					
SMDO			P	**Pn**	**07 54 34.0**	**-0.7**
	SNR=104					
SMDO			S	**S**	**07 58 09.2**	**-5.7**
SMDO			S	**S**	**07 58 09.2**	**-5.7**
SMDO			S	**S**	**07 58 09.2**	**-5.7**
HOQ	**Hoqain**	**19.68 227**	P	**P**	**07 54 33.6**	**+0.3**
	SNR=37					
HOQ			P	**P**	**07 54 33.6**	**+0.3**
	SNR=37					
HOQ			P	**P**	**07 54 33.6**	**+0.3**
	SNR=37					
HOQ			S	**S**	**07 58 10.1**	**-4.8**
HOQ			S	**S**	**07 58 10.1**	**-4.8**
HOQ			S	**S**	**07 58 10.1**	**-4.8**
JLN	**Jalan Bani Buh**	**19.69 220**	P	**Pn**	**07 54 36.0**	**+1.1**
	SNR=699					
JLN			P	**Pn**	**07 54 36.0**	**+1.1**
	SNR=699					
JLN			P	**Pn**	**07 54 36.0**	**+1.1**
	SNR=699					
JLN			S	**S**	**07 58 10.2**	**-5.0**
JLN			S	**S**	**07 58 10.2**	**-5.0**
JLN			S	**S**	**07 58 10.2**	**-5.0**
SOHO	**SOHO**	**19.72 230**	*i* P	**P**	**07 54 31.6**	**-2.0**
	SNR=46					
SOHO	**SOHO**	**19.72 230**	P	**Pn**	**07 54 34.7**	**-0.4**
SOHO			P	**Pn**	**07 54 34.7**	**-0.4**
SOHO			P	**Pn**	**07 54 34.7**	**-0.4**
SOHO			S	**S**	**07 58 09.5**	**-6.0**
SOHO			S	**S**	**07 58 09.5**	**-6.0**
SOHO			S	**S**	**07 58 09.5**	**-6.0**
FAQ	**Al Faqa, Dubai**	**19.85 233**	*i* P	**P**	**07 54 34.1**	**-1.0**
	SNR=24					
FAQ	**Al Faqa, Dubai**	**19.85 233**	P	**Pn**	**07 54 36.6**	**0.0**
	SNR=24					
FAQ			P	**Pn**	**07 54 36.6**	**0.0**
	SNR=24					
FAQ			P	**Pn**	**07 54 36.6**	**0.0**
	SNR=24					
FAQ			S	**S**	**07 58 12.8**	**-5.4**
FAQ			S	**S**	**07 58 12.8**	**-5.4**
FAQ			S	**S**	**07 58 12.8**	**-5.4**
FAQ			S	**Sn**	**07 58 13.9**	**-5.6**
FAQ			S	**Sn**	**07 58 13.9**	**-5.6**
FAQ			S	**Sn**	**07 58 13.9**	**-5.6**
MAK	**Makhachkala**	**19.85 292**	*e*P	**P**	**07 54 33.9**	**-1.1**
MAK			*e*S	**S**	**07 58 15.8**	**-2.2**
MAK			pmax	pmax		
	comp=Z,59µm,2.8s					
MAK			pmax	pmax		
	comp=Z,8µm,1.9s					
MAK			MLR	MLR		
	comp=Z,1246µm,12.0s					
MAK			MLR	MLR		
	comp=E,1880µm,12.0s					
MAK			MLR	MLR		
	comp=N,778µm,11.0s					
SEKA	**Sheki**	**19.99 287**	P	**P**	**07 54 36.6**	**0.0**
MNGR	**Mingechevir, A**	**20.08 286**	P	**P**	**07 54 38.0**	**+0.6**
ASUD	**Al Ashush, Dub**	**20.10 233**	*i* P	**P**	**07 54 37.5**	**-0.2**
	SNR=69					
ASUD	**Al Ashush, Dub**	**20.10 233**	P	**P**	**07 54 37.9**	**+0.1**
	SNR=69					
ASUD			P	**P**	**07 54 37.9**	**+0.1**
	SNR=69					
ASUD			S	**S**	**07 58 18.4**	**-4.7**
ASUD			S	**S**	**07 58 18.4**	**-4.7**
JMDO	**Jabal Madar**	**20.20 223**	P	Pn	07 54 41.1	+0.3
	SNR=491					
JMDO			P	Pn	07 54 41.1	+0.3
	SNR=491					
JMDO			P	Pn	07 54 41.1	+0.3
	SNR=491					
JMDO			S	**S**	**07 58 21.1**	**-4.1**
JMDO			S	**S**	**07 58 21.1**	**-4.1**
JMDO			S	**S**	**07 58 21.1**	**-4.1**
GNBR	**Gunib**	**20.21 290**	*de*P	Pn	07 54 39.9	-0.9
GNBR			MLR	MLR		
	comp=Z,176µm,14.0s					
ALNE	**Al Ain**	**20.25 231**	*i* P	**P**	**07 54 38.6**	**-0.8**
	SNR=262					
ALNE	**Al Ain**	**20.25 231**	P	**P**	**07 54 39.7**	**+0.2**
	SNR=261					
ALNE			P	**P**	**07 54 39.7**	**+0.2**
	SNR=261					
ALNE			P	**P**	**07 54 39.7**	**+0.2**
	SNR=261					
ALNE			S	**S**	**07 58 24.1**	**-2.2**
ALNE			S	**S**	**07 58 24.1**	**-2.2**
ALNE			S	**S**	**07 58 24.1**	**-2.2**
ARQ	**Araqi**	**20.33 228**	P	Pn	07 54 41.7	-0.7
	SNR=336					
ARQ			P	Pn	07 54 41.7	-0.7
	SNR=336					
ARQ			P	Pn	07 54 41.7	-0.7
	SNR=336					
ARQ			S	**S**	**07 58 25.0**	**-2.8**
ARQ			S	**S**	**07 58 25.0**	**-2.8**
ARQ			S	**S**	**07 58 25.0**	**-2.8**
AJN	**Ajban**	**20.36 234**	*i* P	**P**	**07 54 40.1**	**-0.5**
	SNR=88					
AJN	**Ajban**	**20.36 234**	P	**P**	**07 54 40.9**	**+0.3**
	SNR=77					
AJN			P	**P**	**07 54 40.9**	**+0.3**
	SNR=77					
AJN			S	**S**	**07 58 25.6**	**-2.8**
AJN			S	**S**	**07 58 25.6**	**-2.8**
SHL	**Shillong**	**20.38 122**	P	**P**	**07 54 38.6**	**-2.4**
SHL			pmax	pmax		
	comp=Z,6µm,1.4s					
SHL	**Shillong**	**20.38 122**	*e*P	Pn	07 54 43.5	+0.4
SHL			IAmb	IAmb	07 55 06.2	
	comp=Z,4µm,1.3s					
SHL			IAmb	IAmb	07 55 06.7	
	comp=N,2µm,1.0s					
SHL			*e*S	**S**	**07 58 30.8**	**+1.7**
SHL	**Shillong**	**20.38 122**	P	Pn	07 54 43.0	-0.1
	SNR=509					
SHL	**Shillong**	**20.38 122**	P	**P**	**07 54 38.6**	**-2.4**
BSY	**Bisya**	**20.40 226**	P	**P**	**07 54 42.0**	**+0.9**
	SNR=549					
BSY			P	**P**	**07 54 42.0**	**+0.9**
	SNR=549					
BSY			P	**P**	**07 54 42.0**	**+0.9**
	SNR=549					
BSY			S	**S**	**07 58 29.5**	**+0.3**
BSY			S	**S**	**07 58 29.5**	**+0.3**
BSY			S	**S**	**07 58 29.5**	**+0.3**
SVE	**Sverdlovsk**	**20.40 340**	*c i*P	**P**	**07 54 39.3**	**-1.5**
SVE			*e*S	**S**	**07 58 20.7**	**-8.1**
SVE			pmax	pmax		
	comp=Z,83µm,11.9s					
SVE			pmax	pmax		
	comp=Z,4µm,1.5s					
SVE			MLR	MLR		
	comp=N,1798µm,13.0s					
SVE			MLR	MLR		
	comp=Z,2639µm,13.0s					
SVE			MLR	MLR		
	comp=E,1389µm,13.0s					
ITAN	**ITANAGAR**	**20.64 116**	*e*P	**P**	**07 54 43.6**	**-0.1**
ITAN			IAmb	IAmb	07 55 07.2	
	comp=Z,8µm,0.9s					
ARU	**Arti**	**20.65 337**	P	**P**	**07 54 41.4**	**-2.1**
	comp=Z,85nm,0.8s,baz=152,slow=7.7,SNR=130					
ARU			LR	LR	08 03 22.0	
	comp=Z,1204µm,19.1s,baz=146,slow=39					
ARU	**Arti**	**20.65 337**	*d i*P	**P**	**07 54 41.7**	**-1.9**
ARU					07 54 59.9	
ARU			S	**S**	**07 58 30.5**	**-3.3**
ARU			SS	**SnSn**	**07 58 50.7**	**-2.5**
ARU			SSS	SSS	07 59 08.6	
ARU			pmax	pmax		
	comp=Z,1µm,2.1s					
ARU			pmax	pmax		
	comp=Z,93µm,12.0s					
ARU			MLR	MLR		
	comp=Z,2232µm,14.0s					
ARU	**Arti**	**20.65 337**	⇓P	**P**	**07 54 41.5**	**-2.1**
ARU	**Arti**	**20.65 337**	P	**P**	**07 54 41.9**	**-1.6**
GANJ	**Ganja**	**20.66 285**	P	**P**	**07 54 43.0**	**-0.8**
KAD	**Karad**	**20.77 177**	⇓*i*P	**P**	**07 54 45.4**	**+0.2**
KAD			*i* S	Sn	07 58 39.6	-2.3
DDFL	**Dedoflistskaro**	**20.80 288**	P	Pn	07 54 47.5	-0.4
GTA	**Gaotai**	**21.01 78**	⇑P	**P**	**07 54 47.8**	**0.0**
GTA			pP	sP	07 54 56.0	+0.4
GTA			sP	pP	07 55 00.0	+6.9
GTA			S	**S**	**07 58 44.1**	**+2.6**
GTA			SS	**SnSn**	**07 59 10.0**	**+7.6**
GTA			pmax	pmax		
	comp=Z,290nm,2.0s					
GTA			pmax	pmax		
	comp=Z,240µm,10.5s					
GTA			LR	LR		
	comp=Z,1497µm,17.1s					
GTA			LR	LR		
	comp=Z,1938µm,19.6s					
GROC	**Groznyy**	**21.12 292**	*e*P	**P**	**07 54 49.1**	**+0.4**
GROC			*e*		07 55 08.3	
GROC			*e*S	**S**	**07 58 41.2**	**-2.1**
GROC			pmax	pmax		
	comp=Z,6µm,1.0s					
GROC			MLR	MLR		
	comp=Z,381µm,11.0s					
AGT	**Agartala**	**21.14 127**	*e*S	**S**	**07 58 43.9**	**0.0**
HYB	**Hyderabad**	**21.22 165**	*i* P	**P**	**07 54 49.0**	**-1.0**
	comp=Z,1µm,1.0s					
HYB			*e*S	**S**	**07 58 40.0**	**-5.6**
HYB	**Hyderabad**	**21.22 165**	*e*P	**P**	**07 54 49.4**	**-0.6**
JORH	**JORHAT**	**21.26 116**	*e*P	**P**	**07 54 50.6**	**+0.3**
JORH			IAmb	IAmb	07 55 06.8	
	comp=Z,25µm,1.7s					
DIBR	**DIBRUGARH**	**21.30 113**	*e*P	**P**	**07 54 52.4**	**+1.7**
DIBR			IAmb	IAmb	07 54 57.9	
	comp=Z,2µm,1.5s					
DIBR			*e*S	Sn	07 58 51.5	-3.0
NAX	**Nakhchivan**	**21.39 281**	P	**P**	**07 54 52.9**	**+1.1**
SILR	**SILCHAR**	**21.52 122**	*e*P	**P**	**07 54 56.3**	**+3.1**
SILR			IAmb	IAmb	07 55 15.1	
	comp=Z,7µm,0.9s					
UMZA	**Um Al Zommool**	**21.61 230**	P	**P**	**07 54 52.7**	**-1.4**
UMZA			P	**P**	**07 54 52.7**	**-1.4**
UMZA			P	**P**	**07 54 52.7**	**-1.4**
UMZA			S	**S**	**07 58 49.5**	**-3.7**
UMZA			S	**S**	**07 58 49.5**	**-3.7**
UMZA			S	**S**	**07 58 49.5**	**-3.7**
MZWR	**Madinat Zayed**	**21.64 234**	P	**P**	**07 54 54.7**	**+0.3**
MZWR			P	**P**	**07 54 54.7**	**+0.3**
MZWR			P	**P**	**07 54 54.7**	**+0.3**
MZWR			S	**S**	**07 58 45.6**	**-8.0**
MZWR			S	**S**	**07 58 45.6**	**-8.0**
MZWR			S	**S**	**07 58 45.6**	**-8.0**
MOKO	**MOKOCHONG**	**21.70 117**	*e*P	**P**	**07 54 55.2**	**-0.1**
MOKO			IAmb	IAmb	07 55 10.0	
	comp=Z,12µm,1.2s					
KOHI	**KOHIMA**	**21.79 118**	*e*P	**P**	**07 54 56.3**	**+0.1**
KOHI			IAmb	IAmb	07 55 12.0	
	comp=Z,11µm,1.1s					
GNI	**Garni**	**21.89 284**	P	**P**	**07 54 57.0**	**-0.2**
	comp=Z,952nm,1.0s,baz=50,slow=1.4,SNR=204					
GNI			LR	LR	08 05 29.5	
	comp=Z,349µm,20.4s,baz=87,slow=42					
GNI	**Garni**	**21.89 284**	*ce*P	**P**	**07 54 58.3**	**+1.1**
GNI			MLR	MLR		
	comp=Z,307µm,18.0s					
GNI	**Garni**	**21.89 284**	P	**P**	**07 54 59.4**	**+2.2**
GNI			P	**P**	**07 54 59.4**	**+2.2**
GNI			P	**P**	**07 54 59.4**	**+2.2**
GNI			S	**S**	**07 58 59.8**	**+1.1**
GNI			S	**S**	**07 58 59.8**	**+1.1**
GNI			S	**S**	**07 58 59.8**	**+1.1**
GNI	**Garni**	**21.89 284**	⇑P	**P**	**07 54 58.2**	**+1.1**
KHOR	**Al-Khor Airpor**	**21.96 242**	P	**P**	**07 54 57.9**	**+0.1**
KHOR			S	**S**	**07 58 54.0**	**-5.9**
GUDG	**Gudauri**	**22.05 290**	P	**P**	**07 55 00.1**	**+1.1**
LKP	**Lekhapani**	**22.05 112**	*e*P	**P**	**07 55 02.2**	**+3.3**
LKP			IAmb	IAmb	07 55 16.0	
	comp=Z,4µm,0.7s					
KZRT	**Kazreti**	**22.10 287**	P	**P**	**07 54 55.0**	**-4.3**
GHWR	**Ruwais**	**22.14 236**	P	**P**	**07 54 59.3**	**-0.5**
GHWR			P	**P**	**07 54 59.3**	**-0.5**
GHWR			P	**P**	**07 54 59.3**	**-0.5**
GHWR			S	**S**	**07 58 55.3**	**-8.1**
GHWR			S	**S**	**07 58 55.3**	**-8.1**
GHWR			S	**S**	**07 58 55.3**	**-8.1**
SHMA	**Al-Shehemyia**	**22.19 243**	P	**P**	**07 54 57.9**	**-2.5**
SHMA			S	**S**	**07 58 58.0**	**-6.3**
IMP	**Imphal**	**22.26 120**	*e*P	**P**	**07 55 00.8**	**-0.4**
IMP			IAmb	IAmb	07 55 15.4	
	comp=Z,2µm,0.6s					
BRDH	**Bariadhala**	**22.27 128**	P	**P**	**07 55 02.5**	**+1.3**
	comp=Z,0.7nm,0.4s,baz=304,slow=24,SNR=17					
SAKB	**Bahrain**	**22.42 244**	P	**P**	**07 55 00.5**	**-2.3**
SAKB			S	**S**	**07 59 03.1**	**-5.6**
ZEI	**Tsey**	**22.48 291**	*e*P	**P**	**07 55 01.3**	**-2.3**
ZEI			pmax	pmax		
	comp=Z,641nm,1.6s					
DQM	**DQM**	**22.50 221**	P	**P**	**07 55 05.0**	**+1.3**
	SNR=115					
DQM			P	**P**	**07 55 05.0**	**+1.3**
	SNR=115					
DQM			P	**P**	**07 55 05.0**	**+1.3**
	SNR=115					
DQM			S	**S**	**07 59 03.0**	**-7.1**
DQM			S	**S**	**07 59 03.0**	**-7.1**
DQM			S	**S**	**07 59 03.0**	**-7.1**
UMR	**Umm Al-Rimmam**	**22.54 255**	*e*P	**P**	**07 55 03.4**	**-0.6**
BELG	**Belogornoye**	**22.64 317**	P	**P**	**07 55 03.1**	**-1.8**
	comp=Z,2µm,0.9s,baz=333,slow=1.1,SNR=110					
BELG			LR	LR	08 04 49.8	
	comp=Z,535µm,21.0s,baz=113,slow=39					
BELG	**Belogornoye**	**22.64 317**	*d i*P	**P**	**07 55 03.0**	**-1.9**
BELG			pmax	pmax		
	comp=Z,2µm,0.9s					
BELG			MLR	MLR		
	comp=Z,155µm,17.0s					
BGD	**Bogdanovka**	**22.70 287**	P	**P**	**07 55 06.7**	**+0.7**
MIB	**Mutribah**	**22.70 256**	*e*P	**P**	**07 55 05.5**	**-0.3**
KBD	**Kabd**	**22.74 254**	*e*P	**P**	**07 55 05.6**	**-0.5**
TRNA	**Turayna**	**22.74 240**	P	**P**	**07 55 05.0**	**-1.2**
TRNA			S	**S**	**07 59 08.9**	**-5.6**
AKH	**Akhalkalaki**	**22.78 288**	⇑P	**P**	**07 55 08.0**	**+1.3**
QRN	**Al-Qurain**	**22.78 253**	*e*P	**P**	**07 55 06.4**	**-0.3**
ONI	**Oni**	**22.81 291**	P	**P**	**07 55 06.6**	**-0.3**
ONI			pmax	pmax		
	comp=Z,5µm,1.0s					
ONI	**Oni**	**22.81 291**	P	**P**	**07 55 06.6**	**-0.3**
SLWR	**Sila**	**22.86 238**	P	**P**	**07 55 05.6**	**-1.8**
SLWR			P	**P**	**07 55 05.6**	**-1.8**
SLWR			P	**P**	**07 55 05.6**	**-1.8**
SLWR			S	**S**	**07 59 08.1**	**-8.5**
SLWR			S	**S**	**07 59 08.1**	**-8.5**
SLWR			S	**S**	**07 59 08.1**	**-8.5**
KARS	**Kars**	**23.13 286**	P	**P**	**07 55 11.3**	**+1.0**
KBZ	**Khabaz**	**23.26 293**	P	**P**	**07 55 09.4**	**-2.1**
	comp=Z,116nm,1.1s,baz=99,slow=6.7,SNR=57					
KBZ			LR	LR	08 06 40.9	
	comp=Z,639µm,19.1s,baz=94,slow=43					
KBZ	**Khabaz**	**23.26 293**	*ce*P	**P**	**07 55 09.3**	**-2.1**
KBZ			pmax	pmax		
	comp=Z,1µm,1.2s					
KBZ			MLR	MLR		
	comp=Z,793µm,16.0s					
GOF	**Gofitskoye**	**23.28 297**	⇑*e*P	**P**	**07 55 11.3**	**-0.3**
GOF			pmax	pmax		
	comp=Z,1µm,1.4s					
NEY	**Neytrino**	**23.37 292**	*de*P	**P**	**07 55 13.2**	**+0.5**
NEY			pmax	pmax		
	comp=Z,615nm,1.0s					
NEY			MLR	MLR		
	comp=Z,764µm,16.0s					
KVAR	**Kislovodsk Arr**	**23.43 294**	LR	LR	08 04 52.6	
	comp=Z,2220µm,21.4s,baz=236,slow=38					
KIV	**Kislovodsk**	**23.43 294**	⇑P	**P**	**07 55 12.8**	**-0.5**
KIV	**Kislovodsk**	**23.43 294**	*i* P	**P**	**07 55 12.0**	**-1.3**
	SNR=156					
KIV	**Kislovodsk**	**23.43 294**	*e*P	**P**	**07 55 12.4**	**-0.9**
KIV			*e*S	**S**	**07 59 23.5**	**-2.7**
KIV			pmax	pmax		
	comp=Z,2µm,4.5s					
KIV			pmax	pmax		
	comp=Z,1µm,1.0s					
KIV			MLR	MLR		
	comp=Z,392µm,14.0s					
KIV	**Kislovodsk**	**23.43 294**	S	**S**	**07 59 30.2**	**+4.0**
KIV	**Kislovodsk**	**23.43 294**	⇑P	**P**	**07 55 11.8**	**-1.5**
KIV	**Kislovodsk**	**23.43 294**	P	**P**	**07 55 12.2**	**-1.1**
KIV			IAmb	IAmb	07 55 53.3	
	comp=Z,2µm,0.8s					
CHVG	**Ch'k'valeri**	**23.82 291**	⇑P	**P**	**07 55 19.1**	**+2.1**
MOY	**Mondy**	**23.90 46**	*e*P	**P**	**07 55 18.5**	**+0.7**
MOY			pmax	pmax		
	comp=Z,7µm,2.0s					
SIRT	**Sirnak**	**24.01 278**	P	**P**	**07 55 19.0**	**0.0**
BATM	**Batumi**	**24.12 288**	⇑P	**P**	**07 55 22.0**	**+2.2**
BATM	**Batumi**	**24.12 288**	P	**P**	**07 55 22.0**	**+2.2**
BCA	**Borcka**	**24.18 288**	⇑P	**P**	**07 55 21.9**	**+1.4**
LZH	**Lanzhou**	**24.72 85**	⇑P	**P**	**07 55 25.2**	**-0.3**
LZH			pP	pP	07 55 32.2	+1.0
LZH			sP	sP	07 55 36.7	+3.1
LZH			PP	**PnPn**	**07 56 03.1**	**+5.8**
LZH			S	**S**	**07 59 46.4**	**-0.7**
LZH			sS	sS	07 59 58.5	+1.8
LZH			pmax	pmax		
	comp=Z,1µm,1.4s					
LZH			pmax	pmax		
	comp=Z,64µm,6.0s					
LZH			LR	LR		
	comp=Z,1378µm,16.7s					
LZH			LR	LR		
	comp=Z,1738µm,17.3s					
ZAK	**Zakamensk**	**24.80 51**	*e*P	**P**	**07 55 26.5**	**+0.5**
ZAK			pmax	pmax		
	comp=Z,2µm,1.4s					
SHAO	**Shalim**	**25.08 222**	*i* P	**P**	**07 55 28.0**	**-0.7**
	SNR=16					
SHAO	**Shalim**	**25.08 222**	P	**P**	**07 55 29.9**	**+1.3**
	SNR=91					
SHAO			P	**P**	**07 55 29.9**	**+1.3**
	SNR=91					
SHAO			P	**P**	**07 55 29.9**	**+1.3**
	SNR=91					
DOK	**Doka**	**25.41 225**	P	**P**	**07 55 32.8**	**+1.2**
	SNR=320					
DOK			P	**P**	**07 55 32.8**	**+1.2**
	SNR=320					
DOK			P	**P**	**07 55 32.8**	**+1.2**
	SNR=320					
TLY	**Talaya**	**25.43 48**	P	**P**	**07 55 32.1**	**+0.4**
	comp=Z,39nm,0.7s,baz=248,slow=9.8,SNR=52					
TLY			LR	LR	08 05 32.8	
	comp=Z,1167µm,20.8s,baz=253,slow=37					
TLY	**Talaya**	**25.43 48**	*c i*P	**P**	**07 55 31.2**	**-0.5**
TLY			*e*PPP	PPP	07 56 13.0	
TLY			*e*S	**S**	**07 59 54.2**	**-3.8**
TLY			*e*SSS	SSS	08 00 56.7	
TLY			pmax	pmax		
	comp=Z,2µm,0.9s					
TLY			MLR	MLR		
	comp=Z,1781µm,12.0s					
TLY	**Talaya**	**25.43 48**	P	P	07 55 39.4	+7.7
TLY			P	P	07 55 39.4	+7.7
TLY			P	P	07 55 39.4	+7.7

TLY	**Talaya**	**25.43**	**48**	⇑P	**P**	**07 55 32.0**	**+0.4**
TLY	**Talaya**	**25.43**	**48**	P	**P**	**07 55 32.8**	**+1.1**
TLY				IAMs_20	IAMs_20	08 05 18.7	
	comp=Z,1363µm,18.0s						
KIRV	**Kirov**	**25.49**	**331**	P	**P**	**07 55 31.3**	**-0.7**
	comp=Z,701nm,1.0s,baz=126,slow=4.8,SNR=39						
KIRV				LR	LR	08 06 26.2	
	comp=Z,1285µm,21.5s,baz=134,slow=39						
KIRV	**Kirov**	**25.49**	**331**	*de*P	**P**	**07 55 31.0**	**-1.0**
VRH	**Novokhopyorsk**	**25.52**	**311**	*e*P	**P**	**07 55 31.7**	**-0.6**
VRH				*e*		07 55 33.9	
VRH				*e*S	**S**	**07 59 58.4**	**-0.8**
VRH				smax	smax		
	comp=N,206µm,12.8s						
VRH				MLR	MLR		
	comp=Z,830µm,16.0s						
SOC	**Sochi**	**25.57**	**293**	*e*P	**P**	**07 55 33.6**	**+0.7**
SOC				*e*		07 56 07.3	
SOC				*e*PPP	PPP	07 56 18.6	
SOC				*e*S	**S**	**07 59 58.6**	**-1.5**
SOC				*e*SS		08 00 52.1	
SOC				pmax	pmax		
	comp=Z,8µm,3.1s						
SOC				pmax	pmax		
	comp=Z,2µm,1.0s						
SOC				MLR	MLR		
	comp=Z,741µm,17.0s						
KTUT	**Trabzon**	**25.61**	**287**	P	**P**	**07 55 35.5**	**+2.2**
DMTO	**DMTO**	**25.69**	**223**	P	**P**	**07 55 36.3**	**+2.1**
	SNR=91						
DMTO				P	**P**	**07 55 36.3**	**+2.1**
	SNR=91						
DMTO				P	**P**	**07 55 36.3**	**+2.1**
	SNR=91						
DMTO				S	**S**	**08 00 01.8**	**-0.7**
DMTO				S	**S**	**08 00 01.8**	**-0.7**
DMTO				S	**S**	**08 00 01.8**	**-0.7**
IRK	**Irkutsk**	**25.99**	**47**	*e*P	**P**	**07 55 37.3**	**+0.6**
IRK				pmax	pmax		
	comp=Z,3µm,1.9s						
WHFO	**Wadi Hawf**	**26.17**	**225**	P	**P**	**07 55 39.8**	**+1.2**
	SNR=277						
WHFO				P	**P**	**07 55 39.8**	**+1.2**
	SNR=277						
WHFO				P	**P**	**07 55 39.8**	**+1.2**
	SNR=277						
WHFO				S	**S**	**08 00 08.2**	**-1.9**
WHFO				S	**S**	**08 00 08.2**	**-1.9**
WHFO				S	**S**	**08 00 08.2**	**-1.9**
SONM	**Songino Array**	**26.18**	**57**	P	**P**	**07 55 38.3**	**-0.3**
	comp=Z,112nm,0.8s,baz=256,slow=11,SNR=112						
SONM				LR	LR	08 07 24.8	
	comp=Z,1496µm,21.7s,baz=262,slow=40						
SONM				P3KPbc		08 28 40.1	
	comp=Z,3.7nm,1.0s,baz=103,slow=4.7,SNR=6.7						
SONM	**Songino Array**	**26.18**	**57**	P	**P**	**07 55 39.1**	**+0.4**
SONM	**Songino Array**	**26.18**	**57**	P	**P**	**07 55 39.0**	**+0.4**
I34MN	**SONGINO INFRAS**	**26.19**	**58**	*i*		10 07 10.0	
	baz=253,slow=306,SNR=0.4						
RBK	**Rabkut**	**26.27**	**224**	P	**P**	**07 55 40.0**	**+0.5**
	SNR=248						
RBK				P	**P**	**07 55 40.0**	**+0.5**
	SNR=248						
RBK				P	**P**	**07 55 40.0**	**+0.5**
	SNR=248						
RBK				S	**S**	**08 00 15.3**	**+3.7**
RBK				S	**S**	**08 00 15.3**	**+3.7**
RBK				S	**S**	**08 00 15.3**	**+3.7**
CD2	**Chengdu**	**26.35**	**97**	⇑P	**P**	**07 55 40.5**	**+0.3**
CD2				pP	sP	07 55 47.3	-1.0
CD2				sP	pP	07 55 56.7	+11
CD2				S	**S**	**08 00 13.4**	**+0.5**
CD2				sS	sS	08 00 27.4	+4.9
CD2				pmax	pmax		
	comp=Z,340nm,0.8s						
CD2				pmax	pmax		
	comp=Z,55µm,9.3s						
CD2				LR	LR		
	comp=Z,1985µm,18.2s						
CD2				LR	LR		
	comp=Z,2289µm,16.5s						
CD2				LR	LR		
	comp=Z,1512µm,13.7s						
ULN	**Ulaanbaatar**	**26.63**	**58**	*ce*P	**P**	**07 55 42.3**	**-0.3**
ULN				pmax	pmax		
	comp=Z,3µm,1.5s						
ULN				MLR	MLR		
	comp=Z,2356µm,20.0s						
ULN	**Ulaanbaatar**	**26.63**	**58**	P	**P**	**07 55 48.8**	**+6.1**
ULN				P	**P**	**07 55 48.8**	**+6.1**
ULN				P	**P**	**07 55 48.8**	**+6.1**
ULN	**Ulaanbaatar**	**26.63**	**58**	⇑P	**P**	**07 55 42.0**	**-0.7**
ULN	**Ulaanbaatar**	**26.63**	**58**	P	**P**	**07 55 42.4**	**-0.3**
ULN	**Ulaanbaatar**	**26.63**	**58**	IAMs_20	IAMs_20	08 07 26.9	
	comp=Z,2531µm,22.0s						
ABTO	**Aybut**	**26.89**	**225**	P	**P**	**07 55 46.0**	**+0.9**
	SNR=293						
ABTO				P	**P**	**07 55 46.0**	**+0.9**
	SNR=293						
ABTO				P	**P**	**07 55 46.0**	**+0.9**
	SNR=293						
ABTO				S	**S**	**08 00 19.8**	**-1.7**
ABTO				S	**S**	**08 00 19.8**	**-1.7**
ABTO				S	**S**	**08 00 19.8**	**-1.7**
VORD	**Divnogorie**	**26.91**	**309**	*e*P	**P**	**07 55 45.5**	**+0.5**
VORD				*e*S	**S**	**08 00 22.2**	**+1.0**
VORD				pmax	pmax		
	comp=Z,540nm,0.9s						
VORD				pmax	pmax		
	comp=Z,470nm,0.8s						
VORD				smax	smax		
	comp=N,210µm,11.2s						
VORD				MLR	MLR		
	comp=Z,106µm,9.0s						
VSR	**Storozhevoye**	**27.05**	**310**	*e*P	**P**	**07 55 46.2**	**-0.1**
VSR				*e*S	**S**	**08 00 16.5**	**-7.0**
VSR				pmax	pmax		
	comp=Z,3µm,2.4s						
VSR				smax	smax		
	comp=N,170µm,12.4s						
VSR				MLR	MLR		
	comp=Z,1024µm,15.0s						
VORR	**Voronezh**	**27.16**	**311**	*e*P	**P**	**07 55 46.0**	**-1.2**
VORR				pmax	pmax		
	comp=Z,8µm,3.0s						
ANN	**Anapa**	**27.23**	**296**	*e*P	**P**	**07 55 47.1**	**-0.8**
ANN				*e*		07 56 31.3	
ANN				*e*PPP	PPP	07 56 41.9	
ANN				*e*S	**S**	**08 00 24.1**	**-2.3**
ANN				*e*S	**S**	**08 00 24.1**	**-2.3**
ANN				*e*SSS	SSS	08 01 49.1	
ANN				pmax	pmax		
	comp=Z,5µm,2.4s						
ANN				pmax	pmax		
	comp=N,2µm,2.7s						
ANN				pmax	pmax		
	comp=E,1µm,2.1s						
ANN				pmax	pmax		
	comp=Z,1µm,2.2s						
ANN				pmax	pmax		
	comp=N,398nm,2.6s						
ANN				pmax	pmax		
	comp=E,419nm,1.7s						
ANN				smax	smax		
	comp=E,185µm,18.0s						
ANN				smax	smax		
	comp=N,95µm,7.9s						
ANN				MLR	MLR		
	comp=Z,490µm,17.0s						
ANN				MLR	MLR		
	comp=E,914µm,18.0s						
ANN				MLR	MLR		
	comp=N,592µm,16.0s						
RAYN	**Ar Rayn**	**27.53**	**246**	*i* P	**P**	**07 55 50.8**	**-0.1**
	SNR=107						
RAYN	**Ar Rayn**	**27.53**	**246**	P	**P**	**07 55 51.0**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,766nm,0.9s						
RAYN	**Ar Rayn**	**27.53**	**246**	S	**S**	**08 00 28.9**	**-2.7**
RAYN	**Ar Rayn**	**27.53**	**246**	⇑P	**P**	**07 55 48.6**	**-2.3**
RAYN	**Ar Rayn**	**27.53**	**246**	P	**P**	**07 55 51.0**	**+0.2**
LPSR	**Galich'ya Gora**	**27.60**	**313**	*e*P	**P**	**07 55 51.7**	**+0.6**
LPSR				*e*S	**S**	**08 00 28.9**	**-3.1**
LPSR				pmax	pmax		
	comp=Z,650nm,0.8s						
LPSR				pmax	pmax		
	comp=Z,2µm,1.4s						
LPSR				smax	smax		
	comp=N,137µm,11.6s						
LPSR				MLR	MLR		
	comp=Z,669µm,17.0s						
GAZ	**Gaziantep**	**28.16**	**279**		**P**	**07 55 55.9**	**-0.5**
GAZ				IAmb	IAmb	07 56 56.4	
	comp=Z,1µm,1.2s						
KMI	**Kunming**	**28.40**	**108**	⇑P	**P**	**07 55 58.0**	**-0.8**
KMI				pP	sP	07 56 07.8	+0.8
KMI				sP	pP	07 56 11.5	+6.9
KMI				PP	**PnPn**	**07 56 53.8**	**+6.0**
KMI				S	**S**	**08 00 44.6**	**-1.0**
KMI				sS	sS	08 01 00.5	+5.2
KMI				pmax	pmax		
	comp=Z,400nm,1.3s						
KMI				pmax	pmax		
	comp=Z,16µm,10.4s						
KMI				LR	LR		
	comp=Z,1208µm,19.7s						
KMI				LR	LR		
	comp=Z,271µm,18.0s						
KMI				LR	LR		
	comp=Z,766µm,28.2s						
BTO	**Baotou**	**28.68**	**73**	*e*P	**P**	**07 55 59.0**	**-2.1**
BTO				S	**S**	**08 00 49.2**	**-0.4**
BTO				LR	LR		
	comp=Z,3421µm,11.8s						
BNN	**Bunyan**	**28.88**	**283**		**P**	**07 56 03.8**	**+1.0**
BNN				IAmb	IAmb	07 56 53.7	
	comp=Z,2µm,1.3s						
DIKM	**Dikmen**	**28.93**	**289**	⇑P	**P**	**07 56 05.0**	**+1.8**
SNOP	**Sinop**	**28.94**	**290**	P	**P**	**07 56 03.5**	**+0.3**
SNOP				IAmb	IAmb	07 56 58.5	
	comp=Z,1µm,1.2s						
PRGR	**Permogore**	**28.96**	**333**	*e*P	**P**	**07 56 01.9**	**-1.2**
PRGR				*e**SP	**sP**	**07 56 17.1**	**+6.1**
PRGR				*e*		07 56 52.6	
PRGR				pmax	pmax		
	comp=Z,368nm,0.9s						
XAN	**Xi'an**	**29.29**	**87**	P	**P**	**07 56 05.1**	**-1.4**
XAN				PP	**PP**	**07 57 03.5**	**-9.0**
XAN				S	**S**	**08 01 00.8**	**+1.6**
XAN				SS	ScP	08 02 31.5	-23
XAN				pmax	pmax		
	comp=Z,25µm,12.1s						
XAN				LR	LR		
	comp=Z,1919µm,13.6s						
XAN				LR	LR		
	comp=Z,1094µm,15.7s						
XAN				LR	LR		
	comp=Z,2113µm,17.6s						
MOS	**Moscow**	**29.40**	**318**	*e*P	**P**	**07 56 06.1**	**-1.0**
MOS				*e*		07 56 58.8	
MOS				*e*S	**S**	**08 00 56.8**	**-3.4**
MOS				*e*SS	**SnSn**	**08 02 25.7**	**-1.1**
MOS				*e*		08 02 51.9	
MOS				*e*		08 06 49.4	
MOS				pmax	pmax		
	comp=E,976nm,1.0s						
MOS				pmax	pmax		
	comp=Z,12µm,2.4s						
MOS				pmax	pmax		
	comp=Z,3µm,1.8s						
MOS				pmax	pmax		
	comp=N,344nm,0.9s						
MOS				pmax	pmax		
	comp=E,6µm,3.0s						
MOS				pmax	pmax		
	comp=N,4µm,3.5s						
MOS				smax	smax		
	comp=N,52µm,5.8s						
MOS				MLR	MLR		
	comp=E,1013µm,13.0s						
MOS				MLR	MLR		
	comp=Z,1113µm,13.0s						
SIM	**Simferopol'**	**29.59**	**296**	*c i*P	**P**	**07 56 09.6**	**+0.6**
SIM				S	**S**	**08 01 02.0**	**-1.6**
OBN	**Obninsk**	**29.74**	**317**	P	**P**	**07 56 09.2**	**-0.9**
	comp=Z,90nm,0.6s,baz=91,slow=2.8,SNR=15						
OBN				LR	LR	08 08 01.1	
	comp=Z,137µm,20.8s,baz=100,slow=36						
OBN	**Obninsk**	**29.74**	**317**	*d i*P	**P**	**07 56 09.0**	**-1.1**
OBN				*i*		07 57 04.9	
OBN				*i* S	**S**	**08 01 01.4**	**-4.1**
OBN				pmax	pmax		
	comp=Z,1µm,1.1s						
OBN				pmax	pmax		
	comp=Z,7µm,1.9s						
OBN				MLR	MLR		
	comp=Z,512µm,15.0s						
OBN	**Obninsk**	**29.74**	**317**	⇑P	**P**	**07 56 09.5**	**-0.6**
OBN	**Obninsk**	**29.74**	**317**	P	**P**	**07 56 08.7**	**-1.4**
CHTO	**Chiang Mai**	**29.75**	**123**	P	**P**	**07 56 09.3**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,2µm,1.9s						
CHTO				MLR	MLR		
	comp=Z,851µm,21.0s						
CHTO	**Chiang Mai**	**29.75**	**123**	⇓P	**P**	**07 56 10.9**	**+0.3**
CHTO	**Chiang Mai**	**29.75**	**123**	P	**P**	**07 56 09.2**	**-1.3**
CHTO				IAmb	IAmb	07 56 25.8	
	comp=Z,2µm,1.9s						
CHTO	**Chiang Mai**	**29.75**	**123**	IAMs_20	IAMs_20	08 08 16.4	
	comp=Z,851µm,21.0s						
CHTO	**Chiang Mai**	**29.75**	**123**	P	**P**	**07 56 11.8**	**+1.2**
HHC	**Hu-ho-hao-te**	**29.81**	**72**	*e*P	**P**	**07 56 11.6**	**+0.5**
HHC				PP	**PP**	**07 57 13.2**	**-5.1**
HHC				S	**S**	**08 01 05.6**	**-1.8**
HHC				pmax	pmax		
	comp=Z,110nm,1.1s						
HHC				pmax	pmax		
	comp=Z,14µm,5.1s						
HHC				LR	LR		
	comp=Z,2042µm,14.6s						
HHC				LR	LR		
	comp=Z,2100µm,13.7s						
HHC				LR	LR		
	comp=Z,2621µm,15.5s						
BZK	**Bozkurt**	**29.84**	**290**	⇑P	**P**	**07 56 12.2**	**+1.1**
BZK	**Bozkurt**	**29.84**	**290**	P	**P**	**07 56 12.9**	**+1.8**
ASF	**Jabal al Asfar**	**29.89**	**270**	P	**P**	**07 56 11.4**	**-0.5**
	comp=Z,30nm,0.8s,baz=89,slow=2.5,SNR=18						
ASF				LR	LR	08 10 41.7	
	comp=Z,295µm,19.2s,baz=78,slow=42						
HWQ	**Hawqa**	**29.93**	**274**	*e*P	**P**	**07 56 15.0**	**+2.8**
CM31	**Chiang Mai Arr**	**30.00**	**124**	P	**P**	**07 56 11.9**	**-0.9**
CMAR	**Chiang Mai Arr**	**30.00**	**124**	P	**P**	**07 56 11.4**	**-1.4**
	comp=Z,42nm,0.9s,baz=316,slow=9.0,SNR=45						
CMAR				LR	LR	08 09 34.9	
	comp=Z,226µm,20.2s,baz=1.0,slow=39						
CMAR				P3KPbc		08 28 14.2	
	comp=Z,7.3nm,0.7s,baz=160,slow=4.0,SNR=8.8						
CMAR	**Chiang Mai Arr**	**30.00**	**124**	P	**P**	**07 56 13.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**30.00**	**124**	P	**P**	**07 56 13.0**	**+0.1**
RCY	**Rachaya**	**30.27**	**273**	*e*P	**P**	**07 56 17.4**	**+2.2**
BHL	**Bhannes**	**30.27**	**273**	*e*P	**P**	**07 56 16.9**	**+1.7**
QRWL	**Qaraoun**	**30.37**	**273**	*e*P	**P**	**07 56 18.3**	**+2.2**
SHBL	**Chebaa**	**30.39**	**272**	*e*P	**P**	**07 56 18.5**	**+2.2**
DQRL	**Deir Qamar**	**30.41**	**273**	*e*P	**P**	**07 56 18.6**	**+2.2**
BR131	**Keskin Array S**	**30.41**	**285**	P	**P**	**07 56 16.3**	**-0.2**
BR131				pmax	pmax		
	comp=Z,941nm,1.2s						
BR131	**Keskin Array S**	**30.41**	**285**	P	**P**	**07 56 16.3**	**-0.2**
BR131				IAmb	IAmb	07 56 47.0	
	comp=Z,942nm,1.2s						
BRTR	**Keskin Array B**	**30.41**	**285**	P	**P**	**07 56 16.6**	**+0.1**
	comp=Z,78nm,1.0s,baz=102,slow=5.5,SNR=168						
BRTR				LR	LR	08 10 27.9	
	comp=Z,286µm,19.5s,baz=86,slow=40						
GYA	**Guiyang**	**30.67**	**102**	⇓*i*P	**P**	**07 56 18.8**	**0.0**
GYA				S	**S**	**08 01 20.9**	**-0.2**
GYA				pmax	pmax		
	comp=Z,150nm,0.9s						
GYA				pmax	pmax		
	comp=Z,15µm,8.7s						
GYA				LR	LR		
	comp=Z,692µm,19.8s						
GYA				LR	LR		
	comp=Z,1051µm,22.6s						
GYA				LR	LR		
	comp=Z,1127µm,19.5s						
MMAI	**Mount Meron Ar**	**30.77**	**272**	LR	LR	08 10 32.9	
	comp=Z,244µm,20.2s,baz=55,slow=40						
KLMR	**Klimovskoe**	**30.84**	**328**	*d i*P	**P**	**07 56 20.1**	**+0.3**
KLMR				*e*		07 59 14.9	
KLMR				*e*S	**S**	**08 01 26.5**	**+3.7**
KLMR				pmax	pmax		
	comp=Z,6µm,2.2s						
KLMR				pmax	pmax		
	comp=Z,2µm,1.5s						
KLMR	**Klimovskoe**	**30.84**	**328**	⇓*i*P	**P**	**07 56 20.4**	**+0.6**
KLMR				⇓*i*P	**P**	**07 56 20.4**	**+0.6**
KLMR				⇑*i*P	**P**	**07 56 20.4**	**+0.6**
KLMR				AMP		07 56 26.7	
	comp=Z,2µm,1.5s						
KLMR				*e*PcP	**PcP**	**07 59 15.0**	**-1.4**
KLMR				*e*S	**S**	**08 01 26.6**	**+3.7**
KLMR				*e*S	**S**	**08 01 26.6**	**+3.7**
KLMR				LQ	LQ	08 05 15.1	
KLMR				LQ	LQ	08 05 15.1	
KLMR				LR	LR	08 06 58.7	
SOCY	**Socotra**	**30.85**	**218**	P	**P**	**07 56 20.0**	**-0.4**
	SNR=30						
SOCY	**Socotra**	**30.85**	**218**	⇑P	**P**	**07 56 18.3**	**-2.1**
SOCY	**Socotra**	**30.85**	**218**		**P**	**07 56 16.0**	**-4.4**
SOCY				IAmb	IAmb	07 56 52.1	
	comp=Z,1µm,1.7s						
ANTO	**Ankara**	**31.03**	**286**	P	**P**	**07 56 22.0**	**+0.2**
ANTO				pmax	pmax		
	comp=Z,2µm,1.5s						
ANTO	**Ankara**	**31.03**	**286**	P	**P**	**07 56 21.9**	**+0.2**
ANTO				IAmb	IAmb	07 56 52.0	
	comp=Z,2µm,1.4s						
TIY	**Taiyuan**	**31.04**	**78**	⇓P	**P**	**07 56 22.2**	**+0.2**
TIY				S	**S**	**08 01 27.7**	**+1.1**
TIY				pmax	pmax		
	comp=Z,160nm,0.8s						
TIY				pmax	pmax		
	comp=Z,15µm,9.2s						
TIY				LR	LR		
	comp=Z,442µm,12.1s						
TIY				LR	LR		
	comp=Z,1417µm,14.8s						
TIY				LR	LR		
	comp=Z,2026µm,20.7s						
BR231	**Keskin MP Arra**	**31.05**	**286**	P	**P**	**07 56 22.6**	**+0.5**
BR231				IAmb	IAmb	07 56 52.9	
	comp=Z,1µm,1.4s						
ENH	**Enshi**	**31.12**	**93**	P	**P**	**07 56 22.0**	**-0.6**
ENH				IAmb	IAmb	07 57 08.0	
	comp=Z,680nm,1.0s						
ENH				IAMs_20	IAMs_20	08 10 43.6	
	comp=Z,900µm,18.0s						
CIT	**Chita**	**31.46**	**51**	*e*P	P	07 56 31.2	+5.8
CIT				*e*		07 57 35.1	
CIT				pmax	pmax		
	comp=Z,3µm,1.5s						
SLVN	**Son La**	**31.52**	**113**	P	**P**	**07 56 26.9**	**+0.6**
PALK	**Pallekele**	**31.52**	**165**	P	**P**	**07 56 26.9**	**+0.7**
	comp=Z,212nm,0.8s,baz=89,slow=9.4,SNR=46						
PALK	**Pallekele**	**31.52**	**165**	P	**P**	**07 56 26.8**	**+0.5**
PALK				pmax	pmax		
	comp=Z,638nm,0.9s						
PALK				MLR	MLR		
	comp=Z,525µm,18.0s						
PALK	**Pallekele**	**31.52**	**165**	⇓P	**P**	**07 56 26.7**	**+0.5**
PALK	**Pallekele**	**31.52**	**165**	P	**P**	**07 56 26.8**	**+0.5**
PALK				IAmb	IAmb	07 56 40.7	
	comp=Z,638nm,0.8s						
CSS	**Mathiatis**	**31.77**	**277**	⇑P	**P**	**07 56 27.6**	**-0.7**
CSS	**Mathiatis**	**31.77**	**277**		**P**	**07 56 26.5**	**-1.8**
PBA	**Port Blair**	**31.78**	**141**	⇓P	**P**	**07 56 29.7**	**+1.2**
PBA	**Port Blair**	**31.78**	**141**		**P**	**07 56 29.3**	**+0.8**
LEF	**Lefka**	**32.07**	**277**	⇑P	**P**	**07 56 31.7**	**+0.8**
MDUB	**Mudurnu**	**32.13**	**287**	P	**P**	**07 56 31.4**	**-0.2**
NRIK	**Noril'sk**	**32.27**	**10**	P	**P**	**07 56 32.5**	**+0.3**
	comp=Z,143nm,0.8s,baz=200,slow=7.5,SNR=68						
NRIK				LR	LR	08 11 15.4	
	comp=Z,1096µm,19.6s,baz=199,slow=40						
NRIK	**Noril'sk**	**32.27**	**10**	⇑*e*P	**P**	**07 56 31.2**	**-1.1**
NRIK				pmax	pmax		
	comp=Z,1µm,1.4s						
NRIK				MLR	MLR		
	comp=Z,1273µm,17.0s						
NRIK	**Noril'sk**	**32.27**	**10**	P	**P**	**07 56 31.4**	**-0.8**
NRIK				IAmb	IAmb	07 56 54.4	
	comp=Z,906nm,1.1s						
EIL	**Elat**	**32.42**	**266**	P	**P**	**07 56 34.5**	**+0.5**
	comp=Z,93nm,1.1s,baz=94,slow=4.2,SNR=29						
EIL				LR	LR	08 12 46.9	
	comp=Z,465µm,18.7s,baz=68,slow=42						
EIL	**Elat**	**32.42**	**266**	⇑P	**P**	**07 56 33.9**	**-0.1**
PURM	**Purcari**	**32.55**	**299**	⇑P	**P**	**07 56 35.4**	**+0.4**
BOD	**Bodaibo**	**33.14**	**40**	⇓*i*P	**P**	**07 56 39.5**	**-0.5**
BOD				pmax	pmax		
	comp=Z,2µm,1.4s						
AKASG	**Malin Array Be**	**33.14**	**307**	P	**P**	**07 56 38.9**	**-1.2**
	comp=Z,55nm,0.6s,baz=77,slow=7.3,SNR=100						
AKASG				LR	LR	08 12 45.8	
	comp=Z,757µm,18.4s,baz=90,slow=41						
AKASG	**Malin Array Be**	**33.14**	**307**	P	**P**	**07 56 38.9**	**-1.2**
AKASG				IAmb	IAmb	07 57 09.3	
	comp=Z,1µm,1.4s						
AKBB	**Malin Array Si**	**33.14**	**307**	P	**P**	**07 56 39.0**	**-1.2**
AKBB				pmax	pmax		
	comp=Z,721nm,1.0s						
AKBB	**Malin Array Si**	**33.14**	**307**	P	**P**	**07 56 39.0**	**-1.2**
AKBB				IAmb	IAmb	07 57 06.8	
	comp=Z,720nm,1.0s						
ISP	**Isparta**	**33.19**	**283**	P	**P**	**07 56 40.3**	**-0.5**
ISP				pmax	pmax		
	comp=Z,582nm,1.1s						
ISP				MLR	MLR		
	comp=Z,112µm,20.0s						
ISP	**Isparta**	**33.19**	**283**	P	**P**	**07 56 40.3**	**-0.5**
ISP				IAmb	IAmb	07 56 51.4	
	comp=Z,582nm,1.1s						
KIS	**Kishinev**	**33.27**	**300**	⇑*i*P	**P**	**07 56 42.0**	**+0.7**
	comp=Z,4µm,3.1s						
KIS				*e*S	**S**	**08 02 00.0**	**-1.0**
KIS				*e*SS	ScP	08 03 31.0	+24
	comp=Z,41µm,16.5s						
KIS				LQ	LQ	08 09 58.0	
	comp=Z,168µm,18.0s						
KIS				LR	LR	08 13 43.0	
	comp=Z,297µm,13.0s						
KIS	**Kishinev**	**33.27**	**300**	*c i*P	**P**	**07 56 42.0**	**+0.7**
KIS				*e*		07 56 54.0	
KIS				*e*S	**S**	**08 02 00.0**	**-1.0**
KIS				pmax	pmax		
	comp=Z,4µm,3.1s						
KIS				MLR	MLR		
	comp=E,190µm,13.0s						
KIS				MLR	MLR		
	comp=Z,297µm,13.0s						
MILM	**Milestii Mici**	**33.27**	**300**	⇓P	**P**	**07 56 42.8**	**+1.5**
MILM	**Milestii Mici**	**33.27**	**300**	*e*P	**P**	**07 56 42.0**	**+0.7**
MILM				*e*		07 56 54.0	
MILM				*e*PPP	PPP	07 58 17.0	
MILM				*e*S	**S**	**08 01 59.0**	**-2.0**
MILM				pmax	pmax		
	comp=E,6µm,3.1s						
MILM				pmax	pmax		
	comp=Z,9µm,3.1s						
MILM				MLR	MLR		
	comp=E,383µm,13.0s						
MILM				MLR	MLR		
	comp=Z,590µm,13.0s						
JURR	**Jurilovca**	**33.33**	**296**	⇑P	**P**	**07 56 43.0**	**+1.2**
BJT	**Baijiatuau**	**33.41**	**73**	P	**P**	**07 56 43.0**	**+0.3**
BJT				pmax	pmax		
	comp=Z,214nm,0.9s						
BJT				MLR	MLR		
	comp=Z,1912µm,19.0s						
BJT	**Baijiatuau**	**33.41**	**73**	P	**P**	**07 56 43.0**	**+0.3**
BJI	**Beijing**	**33.42**	**73**	P	**P**	**07 56 42.4**	**-0.2**
BJI				S	**S**	**08 02 05.0**	**+1.6**
BJI				pmax	pmax		
	comp=Z,40nm,0.9s						
BJI				pmax	pmax		
	comp=Z,20µm,10.0s						
BJI				LR	LR		
	comp=Z,2784µm,18.4s						
BJI				LR	LR		
	comp=Z,1279µm,17.1s						
BJI				LR	LR		
	comp=Z,2621µm,19.6s						
EFOR	**EFORIE**	**33.56**	**295**	⇑P	**P**	**07 56 45.8**	**+2.0**
MANR	**Mangalia**	**33.61**	**294**	⇑P	**P**	**07 56 46.4**	**+2.1**

TPGR	Topolog	33.64	296	⇑P	P	07 56 44.6	0.0
LEOM	Leova	33.67	299	⇑P	P	07 56 46.1	+1.3
TIRR	Tirgusor	33.68	295	⇑P	P	07 56 45.1	+0.2
TIRR	Tirgusor	33.68	295	P	P	07 56 44.2	-0.7
TIRR				pmax	pmax		
	comp=Z,1µm,1.3s						
TIRR				MLR	MLR		
	comp=Z,710µm,20.0s						
TIRR	Tirgusor	33.68	295	⇓P	P	07 56 45.6	+0.7
TIRR	Tirgusor	33.68	295	P	P	07 56 44.2	-0.7
TIRR				IAmb	IAmb	07 57 22.5	
	comp=Z,1µm,1.3s						
TIRR				IAMs_20	IAMs_20	08 12 18.6	
	comp=Z,710µm,20.0s						
MFTR	Murfatlar	33.70	295	⇑P	P	07 56 46.2	+1.1
GIUM	Giurgiulesti	33.75	297	⇑P	P	07 56 46.4	+1.0
KALB	Balgarevo	33.78	293	⇑P	P	07 56 47.6	+1.8
VLDR	Vladesti	33.82	298	⇑P	P	07 56 47.8	+1.7
CFR	Carcaliu	33.82	297	⇑P	P	07 56 46.2	+0.1
TATR	Tatarca	33.85	297	⇑P	P	07 56 47.6	+1.2
SCTR	Scanteiesti	33.89	297	⇑P	P	07 56 48.0	+1.3
ELL	Elmali	33.93	281	P	P	07 56 47.0	-0.3
ELL				pmax	pmax		
	comp=Z,2µm,0.8s						
ELL	Elmali	33.93	281	P	P	07 56 47.0	-0.3
VASR	Vaslui	33.98	299	⇑P	P	07 56 48.1	+0.6
HARR	Harsova	34.00	296	⇑P	P	07 56 48.3	+0.6
SCHL	Schela	34.01	297	⇑P	P	07 56 47.9	+0.2
SLCR	Slobozia Conac	34.05	297	⇑P	P	07 56 49.3	+1.2
BIR	Birlad	34.11	299	⇑P	P	07 56 50.4	+1.8
IAS	Iasi	34.12	300	⇑P	P	07 56 50.3	+1.6
ICOR	Ion Corvin	34.15	295	⇑P	P	07 56 51.1	+2.1
KSL	Kastellorizon	34.35	280	P	P	07 56 48.9	-1.9
MNK	Minsk	34.45	313	*i* P	P	07 56 48.9	-2.5
MNK				*i*		07 58 03.7	
MNK				*i*		07 59 24.5	
MNK				*i* S	S	08 02 14.5	-4.5
MNK				*i* SS	SnSn	08 04 26.3	-3.1
MNK				pmax	pmax		
	comp=N,130nm,0.9s						
MNK				pmax	pmax		
	comp=E,89nm,0.9s						
MNK				pmax	pmax		
	comp=Z,797nm,0.9s						
MNK				MLR	MLR		
	comp=E,84µm,17.0s						
MNK				MLR	MLR		
	comp=Z,154µm,17.0s						
MNK	Minsk	34.45	313	*i* P	P	07 56 48.9	-2.5
	comp=E,89nm,0.8s						
MNK				*i* P	P	07 56 48.9	-2.5
	comp=N,130nm,0.8s						
MNK				*i* P	P	07 56 48.9	-2.5
	comp=Z,797nm,0.8s,baz=99						
MNK				*i* PP	PP	07 58 03.8	-5.6
MNK				*i* PPP	PPP	07 58 18.4	
MNK				*i* S	S	08 02 14.5	-4.5
MNK				*i* SS	SnSn	08 04 26.4	-3.1
MNK				*i* SSS	SSS	08 05 30.7	
MNK				*i* LQ	LQ	08 08 58.7	
MNK				*i* LR	LR	08 11 09.8	
MNK				*i* LRM	MLR	08 13 14.3	
	comp=E,84µm,17.4s						
MNK				*i* LRM	MLR	08 13 17.9	
	comp=Z,154µm,17.4s						
MNK				*i* LRM	MLR	08 15 17.6	
	comp=N,113µm,17.9s						
KULA	Kula-Manisa	34.45	285	P	P	07 56 49.8	-1.9
PUL	Pulkovo	34.49	323	*e*P	P	07 56 54.6	+2.9
PUL	Pulkovo	34.49	323	*de*P	P	07 56 51.3	-0.4
PUL				pmax	pmax		
	comp=Z,1µm,0.8s						
PUL				MLR	MLR		
	comp=Z,618µm,17.0s						
FETY	Fethiye	34.60	281	P	P	07 56 50.5	-2.5
GRER		34.62	297	⇑P	P	07 56 55.1	+2.0
VRI	Vrincioaia	34.76	298	⇓P	P	07 56 55.3	+1.0
TESR	Tescani	34.78	299	⇑P	P	07 56 55.0	+0.6
BALB	Balikesir	34.79	287	P	P	07 56 54.2	-0.4
BALB				IAmb	IAmb	07 57 04.7	
	comp=Z,1µm,1.2s						
BISRR	Bisoca	34.80	297	⇑P	P	07 56 56.9	+2.2
LEHL	Lehliu	34.81	295	⇑P	P	07 56 56.8	+2.1
PLOR	Plostina	34.82	298	⇓P	P	07 56 56.8	+2.0
WHN	Wuhan	34.84	90	⇓*i*P	P	07 56 54.7	-0.4
WHN				pP	sP	07 57 02.3	-1.0
WHN				S	S	08 02 31.2	+5.7
WHN				pmax	pmax		
	comp=Z,350nm,1.0s						
WHN				pmax	pmax		
	comp=Z,36µm,12.0s						
WHN				LR	LR		
	comp=Z,1830µm,15.0s						
WHN				LR	LR		
	comp=Z,965µm,12.5s						
WHN				LR	LR		
	comp=Z,2368µm,15.5s						
ISR	Istrita	34.95	297	⇑P	P	07 56 57.6	+1.6
TIA	Tai'an	35.06	79	⇑P	P	07 56 56.4	-0.6
TIA				S	S	08 02 33.9	+5.0
TIA				pmax	pmax		
	comp=Z,55nm,1.0s						
TIA				pmax	pmax		
	comp=Z,20µm,8.3s						
TIA				LR	LR		
	comp=Z,819µm,17.6s						
TIA				LR	LR		
	comp=Z,1489µm,20.5s						
NEHR	Nehoiu	35.10	297	⇑P	P	07 56 59.2	+2.0
COVR	Voineasa-Covas	35.13	298	⇑P	P	07 56 58.4	+0.9
HIA	Hailar	35.13	56	⇑*i*P	P	07 56 57.6	+0.1
HIA				pmax	pmax		
	comp=Z,798nm,3.0s						
HIA				MLR	MLR		
	comp=Z,1771µm,21.0s						
HIA	Hailar	35.13	56	P	P	07 56 57.3	-0.2
NACGM	Naroch	35.14	314	*i* P	P	07 56 56.5	-0.9
RAZG	Razgrad	35.14	294	⇓P	P	07 56 58.6	+1.0
SULR		35.19	296	⇑P	P	07 57 00.2	+2.3
MLR	Muntele Rosu	35.34	297	⇑P	P	07 57 00.8	+1.4
MLR	Muntele Rosu	35.34	297	LR	LR	08 13 04.6	
	comp=Z,880µm,21.3s,baz=57,slow=39						
MLR	Muntele Rosu	35.34	297	P	P	07 56 59.7	+0.3
MLR				pmax	pmax		
	comp=Z,3µm,1.2s						
MLR				MLR	MLR		
	comp=Z,904µm,21.0s						
MLR	Muntele Rosu	35.34	297	P	P	07 56 59.7	+0.3
MLR				IAMs_20	IAMs_20	08 12 53.4	
	comp=Z,904µm,21.0s						
OZUR		35.40	298	⇑P	P	07 57 01.1	+1.2
SGRR	Singureni	35.44	295	⇑P	P	07 57 01.7	+1.6
ARG	Arkhangelos	35.46	281	P	P	07 56 59.4	-1.0
ARG	Arkhangelos	35.46	281	⇑P	P	07 57 00.0	-0.4
ISAL	Salakas	35.62	315	*e*P	P	07 57 04.4	+2.8
DOPR	Dopca	35.69	298	⇑P	P	07 57 03.0	+0.8
BURAR	Bucovina Array	35.70	301	⇑P	P	07 57 02.6	+0.1
BURAR	Bucovina Array	35.70	301	P	P	07 57 01.5	-1.0
BURAR				pP	pP	07 57 07.5	-0.8
BUR08	Bucovina Ar. S	35.71	301	P	P	07 57 02.1	-0.5
BLCB	Balcova	35.71	285	P	P	07 57 01.8	-0.7
DAT	Datca	35.74	282	P	P	07 57 01.0	-1.9
BODT	Bodrum	35.85	283	P	P	07 57 02.6	-1.2
VSU	Vasula	35.88	320	*e*P	P	07 57 05.3	+1.6
VSU	Vasula	35.88	320	*ce*P	P	07 57 02.8	-0.9
VSU				pmax	pmax		
	comp=Z,5µm,2.3s						
VSU				MLR	MLR		
	comp=Z,1634µm,17.0s						
VSU	Vasula	35.88	320	⇓P	P	07 57 03.3	-0.4
ALN	Alexandroupoli	35.91	289	P	P	07 57 03.4	-0.8
ALN	Alexandroupoli	35.91	289	P	P	07 57 04.0	-0.2
ALN				pmax	pmax		
	comp=Z,769nm,1.3s						
ALN	Alexandroupoli	35.91	289	⇑P	P	07 57 04.4	+0.2
ALN	Alexandroupoli	35.91	289	P	P	07 57 04.0	-0.2
ALN				IAmb	IAmb	07 57 33.7	
	comp=Z,769nm,1.3s						
VOIR		35.97	297	⇑P	P	07 57 05.2	+0.4
MTUR	Matau	35.98	297	⇑P	P	07 57 06.5	+1.6
COPA	Copaceanca	36.00	295	⇑P	P	07 57 05.8	+0.9
SMG	Samos	36.04	284	P	P	07 57 02.6	-2.8
STFAR	Stefanesti-Arg	36.09	296	⇑P	P	07 57 07.5	+1.8
PRK	Paraskevi	36.09	287	P	P	07 57 05.8	0.0
HUMR	Humele	36.12	296	⇑P	P	07 57 07.5	+1.6
RDO	Rodhopi	36.24	290	P	P	07 57 06.6	-0.4
RDO	Rodhopi	36.24	290	⇑P	P	07 57 06.3	-0.7
TGMR	Targu Mures	36.24	299	⇑P	P	07 57 08.1	+1.1
ARR	Arges	36.27	297	⇑P	P	07 57 07.9	+0.6
ARCR	ARCALIA	36.32	300	⇑P	P	07 57 08.9	+1.2
MDB	Medias	36.37	299	⇑P	P	07 57 09.4	+1.3
SMTH	Samothraki Isl	36.38	289	P	P	07 57 06.6	-1.7
SIGR	SIGRI	36.41	287	P	P	07 57 07.4	-1.1
LVV	L'vov	36.44	305	*e*P	P	07 57 10.0	+1.4
LVV				*i*		07 58 34.7	
LVV				*e*S	S	08 02 49.8	+0.1
LVV				MLR	MLR		
	comp=Z,503µm,14.0s						
CHOS	Chios island	36.46	285	P	P	07 57 07.4	-1.7
LVZ	Lovozero	36.53	337	*c i*P	P	07 57 08.4	-0.8
LVZ				pmax	pmax		
	comp=Z,2µm,1.1s						
LVZ				MLR	MLR		
	comp=Z,1108µm,15.0s						
LVZ	Lovozero	36.53	337	⇑P	P	07 57 08.3	-1.0
LVZ	Lovozero	36.53	337	P	P	07 57 08.4	-0.8
LVZ				IAMs_20	IAMs_20	08 13 26.1	
	comp=Z,958µm,21.0s						
VLAD	Vladila	36.59	295	⇓P	P	07 57 11.3	+1.3
UBPT	Khong Chiam	36.65	119	⇑P	P	07 57 09.2	-1.5
UBPT				⇓S	S	08 03 12.0	+19
UBPT	Khong Chiam	36.65	119	P	P	07 57 10.7	0.0
UBPT				IAmb	IAmb	07 57 22.0	
	comp=Z,797nm,1.2s						
APA	Apatity	36.74	336	⇓*i*P	P	07 57 11.7	+0.7
APA				*i* S	S	08 02 52.0	-1.9
APA				pmax	pmax		
	comp=Z,180nm,0.9s						
APA				MLR	MLR		
	comp=Z,1714µm,15.0s						
LIA	Limnos Island	36.76	288	P	P	07 57 11.4	-0.1
PABE	Paberze	36.82	314	*e*P	P	07 57 14.1	+2.3
PABE	Paberze	36.82	314	P	P	07 57 11.4	-0.4
PABE				IAmb	IAmb	07 57 27.7	
	comp=Z,1µm,0.9s						
PABE				IAMs_20	IAMs_20	08 13 32.2	
	comp=Z,970µm,22.0s						
BMR	Baia Mare	36.86	301	⇑P	P	07 57 14.1	+1.9
CJR	Cluj-Napoca	36.86	300	⇑P	P	07 57 14.3	+1.9
LOT	Lotru	36.86	297	⇑P	P	07 57 13.7	+1.3
CBBR	Cluj-Babes-Bol	36.89	300	⇑P	P	07 57 14.2	+1.6
THAS	Thassos island	36.96	289	P	P	07 57 13.9	+0.8
FIA1	FINESS Array S	37.01	324	P	P	07 57 12.3	-1.0
FIA1				IAmb	IAmb	07 57 20.9	
	comp=Z,2µm,1.6s						
FINES	FINESS Array B	37.01	324	P	P	07 57 12.1	-1.2
	comp=Z,79nm,0.5s,baz=115,slow=8.7,SNR=178						
FINES				LR	LR	08 13 14.7	
	comp=Z,991µm,18.7s,baz=106,slow=38						
SUW	Suwalki	37.12	312	*e*P	P	07 57 15.4	+1.1
SUW				*e*S	S	08 03 05.2	+5.1
SUW				*e*L	L	08 12 00.8	
	comp=Z,701µm,23.9s						
SUW	Suwalki	37.12	312	*e*P	P	07 57 15.6	+1.2
SUW	Suwalki	37.12	312	P	P	07 57 13.3	-1.1
SUW				pmax	pmax		
	comp=Z,1µm,1.0s						
SUW				MLR	MLR		
	comp=Z,690µm,20.0s						
SUW	Suwalki	37.12	312	⇓P	P	07 57 16.5	+2.1
SUW	Suwalki	37.12	312	P	P	07 57 13.3	-1.1
SUW				IAmb	IAmb	07 57 37.9	
	comp=Z,1µm,1.0s						
SUW				IAMs_20	IAMs_20	08 13 27.2	
	comp=Z,690µm,20.0s						
APE	Apeiranthos	37.22	283	⇑P	P	07 57 16.4	+1.0
APE	Apeiranthos	37.22	283	P	P	07 57 17.9	+2.4
APE	Apeiranthos	37.22	283	⇑P	P	07 57 15.3	-0.1
MESR	Meseseni	37.27	300	⇑P	P	07 57 17.4	+1.6
ZKR	Zakros	37.27	280	P	P	07 57 15.5	-0.4
KWP	Kalwaria Pacla	37.30	304	*e*P	P	07 57 16.8	+0.8
KWP				*e*S	S	08 03 02.5	-0.3
KWP	Kalwaria Pacla	37.30	304	P	P	07 57 16.0	0.0
KWP				MLR	MLR		
	comp=Z,4470µm,19.0s						
KWP	Kalwaria Pacla	37.30	304	⇑P	P	07 57 16.0	0.0
KWP	Kalwaria Pacla	37.30	304	P	P	07 57 16.0	0.0
QIZ	Qiongzhong	37.30	110	P	P	07 57 17.7	+1.4
QIZ				PP	PnPn	07 58 43.1	+1.2
QIZ				S	S	08 03 02.8	-0.7
QIZ				pmax	pmax		
	comp=Z,99nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,9µm,7.7s						
QIZ				LR	LR		
	comp=Z,488µm,24.9s						
QIZ				LR	LR		
	comp=Z,660µm,18.6s						
QIZ				LR	LR		
	comp=Z,897µm,19.5s						
SRE	Strehaia	37.36	296	⇑P	P	07 57 17.6	+1.1
MTSE	Matsula	37.43	320	*e*P	P	07 57 19.9	+3.0
NVR	Nevrokopi	37.44	291	P	P	07 57 17.9	+0.6
KAAM	Kaadhehdhoo	37.45	180	P	P	07 57 19.2	+1.7
KAAM	Kaadhehdhoo	37.45	180	⇓P	P	07 57 18.0	+0.5
KAAM	Kaadhehdhoo	37.45	180	P	P	07 57 17.6	+0.1
KAAM				IAmb	IAmb	07 57 41.7	
	comp=Z,1µm,1.2s						
DRGR		37.46	300	⇑P	P	07 57 18.8	+1.4
DRGR		37.46	300	P	P	07 57 18.6	+1.1
TRPA	Tarpa	37.48	302	⇑P	P	07 57 18.0	+0.6
TRPA	Tarpa	37.48	302	*e*P	P	07 57 18.9	+1.5
SKY	Skiros Island	37.48	287	P	P	07 57 17.9	+0.3
OUR	Ouranopolis	37.56	289	P	P	07 57 17.1	-1.2
GZR	Gura Zlata	37.56	298	⇑P	P	07 57 19.0	+0.7
GZH	Guangzhou	37.60	102	P	P	07 57 19.0	+0.3
GZH				S	S	08 03 06.3	-1.6
GZH				LR	LR		
	comp=N,470µm,14.1s						
GZH				LR	LR		
	comp=E,525µm,13.9s						
PUNG	Punghina	37.60	296	⇑P	P	07 57 19.8	+1.2
KOLS	Kolonicke sedl	37.61	303	*e*P	P	07 57 20.9	+2.3
KOLS				pmax	pmax		
	comp=Z,608nm,1.1s						
KOLS	Kolonicke sedl	37.61	303	*e*P	P	07 57 20.9	+2.3
KOLS				*e*PP	PnPn	07 58 49.3	+4.1
KOLS				*e*S	S	08 03 07.9	+0.3
KOLS				*e*SS	SS	08 05 26.9	-25
KOLS				*e*L	L	08 10 45.8	
UZH	Uzhgorod	37.61	303	*e*P	P	07 57 18.6	0.0
UZH				*i*		07 57 24.8	
UZH				*e*		07 58 54.0	
UZH				*e*S	S	08 03 04.7	-2.8
UZH				MLR	MLR		
	comp=E,162µm,14.0s						
UZH				MLR	MLR		
	comp=Z,110µm,14.0s						
VTS	Vitosha	37.66	293	⇓P	P	07 57 19.5	+0.3
VTS	Vitosha	37.66	293	P	P	07 57 18.9	-0.4
VTS				pmax	pmax		
	comp=Z,395nm,1.0s						
VTS	Vitosha	37.66	293	⇑P	P	07 57 19.8	+0.5
VTS	Vitosha	37.66	293	P	P	07 57 18.9	-0.4
SRS	Serrai	37.68	290	P	P	07 57 19.5	+0.2
NPS	Neapolis	37.70	281	P	P	07 57 18.7	-0.8
ATD	Arta Tunnel	37.70	233	LR	LR	08 15 16.5	
	comp=Z,165µm,20.6s,baz=49,slow=40						
ATD	Arta Tunnel	37.70	233	⇓P	P	07 57 20.6	+0.9
ATD	Arta Tunnel	37.70	233	*e*P	P	07 57 20.6	+0.9
ATD	Arta Tunnel	37.70	233	P	P	07 57 19.3	-0.4
ATD				IAmb	IAmb	07 57 42.2	
	comp=Z,1µm,1.2s						
ATD	Arta Tunnel	37.70	233	*i* P	P	07 57 20.7	+1.0
ATD				PP	PnPn	07 58 55.1	+8.2
DL2	Dalian	37.78	73	P	P	07 57 20.6	+0.4
DL2				PP	PnPn	07 58 47.0	-0.5
DL2				S	S	08 03 11.2	+0.8
DL2				pmax	pmax		
	comp=Z,290nm,0.9s						
DL2				pmax	pmax		
	comp=Z,21µm,9.1s						
DL2				LR	LR		
	comp=Z,1927µm,19.8s						
DL2				LR	LR		
	comp=Z,1110µm,17.9s						
DL2				LR	LR		
	comp=Z,1528µm,20.1s						
NJ2	Nanjing	37.80	85	⇓P	P	07 57 20.0	-0.4
NJ2				pP	sP	07 57 27.8	-0.8
NJ2				S	S	08 03 13.3	+2.5
NJ2				sS	sS	08 03 21.7	+1.2
NJ2				ScP	ScP	08 03 23.8	-0.1
NJ2				ScS	ScS	08 07 31.4	-1.4
NJ2				pmax	pmax		
	comp=Z,44nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,18µm,6.4s						
NJ2				LR	LR		
	comp=Z,1645µm,16.6s						
NJ2				LR	LR		
	comp=Z,1376µm,17.5s						
NJ2				LR	LR		
	comp=Z,724µm,17.7s						
DJES	Djerdap	37.84	296	*e*P	P	07 57 24.8	+4.2
PAIG	Paliouri	37.88	289	P	P	07 57 18.7	-2.3
HERR	Herculane	37.88	297	⇑P	P	07 57 20.9	0.0
KYMI	Kymi, Euboea I	37.88	286	P	P	07 57 20.3	-0.7
SOH	Sokhos	37.92	290	P	P	07 57 21.9	+0.5
ZAPS	Zavoj	37.98	294	*e*P	P	07 57 26.0	+4.2
SRIT	Nakonsritamara	38.01	134	P	P	07 57 22.1	-0.1
PBUR	Paburge	38.03	315	*e*P	P	07 57 24.8	+2.8
SLIT	Slitere, Latvi	38.04	318	*e*P	P	07 57 24.3	+2.3
SLIT	Slitere, Latvi	38.04	318	⇑P	P	07 57 24.6	+2.5
BORR	Bors	38.06	300	⇑P	P	07 57 24.3	+1.9
CRVS	Cervenica-Dubn	38.14	303	*e*P	P	07 57 25.2	+2.1
CRVS				*e*		07 58 57.8	
CRVS				*e*S	S	08 03 14.5	-1.2
CRVS				MLR	MLR		
	comp=Z,640µm,17.3s						
CRVS	Cervenica-Dubn	38.14	303	*e*P	P	07 57 25.2	+2.1
CRVS				*e*PP	PnPn	07 58 57.8	+6.1
CRVS				*e*S	S	08 03 14.5	-1.2
CRVS				*e*SS	SnSn	08 05 39.6	-19
CRVS				*e*L	L	08 15 01.6	
DION	Dionisos Attik	38.16	286	P	P	07 57 21.9	-1.5
ZAGS	Zajecar	38.17	295	*e*P	P	07 57 23.3	-0.1
KNT	Kendrikon	38.19	291	P	P	07 57 22.7	-0.9
PTL	Penteli	38.22	286	P	P	07 57 21.1	-2.8
BOSS	Bosilegrad	38.23	293	*e*P	P	07 57 24.6	+0.7
SIRR	Siria	38.24	299	⇑P	P	07 57 25.0	+1.1
IDI	Anoyia	38.25	281	LR	LR	08 17 46.9	
	comp=Z,155µm,20.3s,baz=74,slow=44						
STHS	Stebnicka Huta	38.26	304	*e*P	P	07 57 26.3	+2.2
STHS	Stebnicka Huta	38.26	304	*e*P	P	07 57 26.3	+2.2
ATHU	Athens Univers	38.30	285	P	P	07 57 21.9	-2.7
VLY	Voula,Athens	38.32	285	P	P	07 57 23.5	-1.3
NEO	Neokhori	38.37	288	P	P	07 57 24.3	-0.9
XOR	Xorichti	38.38	288	P	P	07 57 24.3	-1.0
MDVR	Moldovita	38.39	297	⇑P	P	07 57 25.7	+0.3
VAY	Valandovo	38.40	291	*i* Pn	P	07 57 26.0	+0.7
KUBS	Kucevo	38.48	296	*e*P	P	07 57 26.5	+0.5
BEL	Belsk	38.48	308	*e*P	P	07 57 27.6	+1.6
BEL				*e*pP	pP	07 57 32.0	+0.2
BEL				*e*S	S	08 03 26.2	+5.5
BEL				*e*L	L	08 12 32.3	
	comp=Z,645µm,31.4s						
BEL	Belsk	38.48	308	⇑P	P	07 57 29.3	+3.4
PRVS	Prvonek	38.52	293	*e*P	P	07 57 26.9	+0.5
SNY	Shenyang	38.57	68	⇑P	P	07 57 25.5	-1.2
SNY				S	S	08 03 15.5	-6.7
SNY				SS	SS	08 05 55.7	-16
SNY				pmax	pmax		
	comp=Z,310nm,1.5s						
SNY				pmax	pmax		
	comp=Z,20µm,9.0s						
SNY				LR	LR		
	comp=Z,2802µm,20.6s						
SNY				LR	LR		
	comp=Z,906µm,17.1s						
SNY				LR	LR		
	comp=Z,1301µm,15.2s						
BOVS	Bovan	38.58	295	⇑P	P	07 57 28.0	+1.1
BOVS	Bovan	38.58	295	*e*P	P	07 57 27.4	+0.6
STIP	Stip	38.60	292	*i* Pn	P	07 57 25.8	-1.2
BARS	Barje	38.65	294	*e*P	P	07 57 23.3	-4.1
BARS	Barje	38.65	294	*e*P	P	07 57 27.6	+0.2
HKC	Hong Kong Obse	38.67	102	⇑P	P	07 57 31.0	+3.2
TEND	Ethiopian Broa	38.69	236	*e*P	P	07 57 29.3	+1.3
KECS	Kecovo	38.82	303	*e*P	P	07 57 31.5	+2.7
KECS				*e*		07 59 02.1	
KECS	Kecovo	38.82	303	*e*P	P	07 57 31.5	+2.7
KECS				*e*PP	PnPn	07 59 02.1	+2.3
SVIS	Svilajnac	38.83	296	*e*P	P	07 57 36.4	+7.5
AMBH	Ambrzfalva	38.87	299	⇑P	P	07 57 31.4	+2.2
AMBH	Ambrzfalva	38.87	299	*e*P	P	07 57 30.9	+1.7
NIE	Niedzica	38.87	304	*e*P	P	07 57 30.6	+1.3
NIE				*e*S	S	08 03 17.2	-10
NIE				*e*S	ScP	08 03 26.9	-0.8
NIE				*e*L	L	08 11 42.5	
	comp=Z,284µm,31.4s						
KLNR	Kaliningrad	38.90	313	*c i*P	P	07 57 31.2	+1.9
KLNR				pmax	pmax		
	comp=Z,2µm,1.0s						
KLNR				MLR	MLR		
	comp=Z,340µm,18.0s						
BSZH	Besenyszg	39.07	301	⇑P	P	07 57 33.4	+2.4
BSZH	Besenyszg	39.07	301	*e*P	P	07 57 33.3	+2.4
SELS	Selova	39.08	294	*e*P	P	07 57 31.3	+0.3
SKO	Skopje	39.09	292	*i* Pn	P	07 57 30.9	-0.2
AGG	Agios Georgios	39.12	288	P	P	07 57 30.9	-0.6
AGG				pmax	pmax		
	comp=Z,567nm,1.0s						
AGG	Agios Georgios	39.12	288	⇑P	P	07 57 30.5	-0.9
AGG	Agios Georgios	39.12	288	P	P	07 57 30.9	-0.6
OJC	Ojcow	39.15	306	*e*P	P	07 57 31.2	-0.4
OJC				*e*S	S	08 03 27.9	-3.0
OJC				*e*SS	SnSn	08 05 38.0	-45
OJC				*e*L	L	08 11 46.3	
	comp=Z,490µm,32.0s						
OJC	Ojcow	39.15	306	P	P	07 57 31.0	-0.6
OJC				pmax	pmax		
	comp=Z,803nm,0.9s						
OJC	Ojcow	39.15	306	⇑P	P	07 57 31.2	-0.4
OJC	Ojcow	39.15	306	P	P	07 57 31.0	-0.6
OJC				IAmb	IAmb	07 58 02.1	
	comp=Z,803nm,0.9s						
GRUS	Gruza	39.24	295	*e*P	P	07 57 32.8	+0.4
PSZ	Piszkesteto	39.26	302	⇓P	P	07 57 33.3	+0.7
PSZ	Piszkesteto	39.26	302	*e*P	P	07 57 33.3	+0.7
PSZ	Piszkesteto	39.26	302	P	P	07 57 33.1	+0.5
PSZ				pmax	pmax		
	comp=Z,2µm,1.9s						
PSZ				MLR	MLR		
	comp=Z,838µm,19.0s						
PSZ	Piszkesteto	39.26	302	⇓P	P	07 57 33.3	+0.7
PSZ	Piszkesteto	39.26	302	P	P	07 57 33.1	+0.5
PSZ				IAmb	IAmb	07 57 47.9	
	comp=Z,2µm,1.9s						
PSZ				IAMs_20	IAMs_20	08 15 52.5	
	comp=Z,838µm,19.0s						
IZAB	Izabela	39.32	303	*e*P	P	07 57 38.8	+5.8
LHMI	Lhok Sumawe	39.39	140	⇓P	P	07 57 33.1	-0.8
LHMI	Lhok Sumawe	39.39	140	P	P	07 57 34.5	+0.7
	comp=Z,92µmcomp=Z,30µmcomp=Z,820nm,1.8s						
LHMI	Lhok Sumawe	39.39	140	P	P	07 57 34.3	+0.4
LHMI				IAmb	IAmb	07 58 19.7	
	comp=Z,2µm,1.2s						
LHMI	Lhok Sumawe	39.39	140	P	P	07 57 36.1	+2.3
FNA	Florina	39.40	291	P	P	07 57 32.3	-1.5
FNA	Florina	39.40	291	⇑P	P	07 57 33.3	-0.5
FNA	Florina	39.40	291	P	P	07 57 32.3	-1.5
TRUS	Trudelj	39.41	296	*e*P	P	07 57 34.8	+1.0
LANS	Liptovska Anna	39.44	304	*e*P	P	07 57 36.6	+2.6
LANS	Liptovska Anna	39.44	304	*e*P	P	07 57 36.6	+2.6
TRIZ	Trizonia	39.49	287	P	P	07 57 33.0	-1.5
CN2	Changchun	39.54	65	*e*P	P	07 57 32.0	-2.9
CN2				pP	sP	07 57 42.8	-0.3
CN2				sP	pP	07 57 46.8	+6.1
CN2				S	S	08 03 32.2	-4.6
CN2				SS	SS	08 06 19.5	-12
CN2				pmax	pmax		
	comp=Z,40nm,1.2s						
CN2				pmax	pmax		
	comp=Z,18µm,10.0s						
CN2				LR	LR		
	comp=Z,2737µm,18.0s						
CN2				LR	LR		
	comp=Z,777µm,18.0s						

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CN2                                   LR       LR
      comp=Z,1388µm,20.0s
FRGS  Fruska Gora      39.67 298 ⇑P      P        07 57 36.9 +1.0
FRGS  Fruska Gora      39.67 298⇑iP      P        07 57 35.9 -0.1
FRGS  Fruska Gora      39.67 298 eP      P        07 57 36.4 +0.4
IVAS  Ivanjica         39.70 295 eP      P        07 57 36.5 +0.2
DIVS  Divibare         39.72 296⇑iP      P        07 57 36.5 +0.1
DIVS  Divibare         39.72 296 ⇑P      P        07 57 36.6 +0.1
DIVS  Divibare         39.72 296  P      P        07 57 35.5 -1.0
DIVS                              IAmb     IAmb     07 58 01.8
      comp=Z,2µm,1.5s
DIVS  Divibare         39.72 296 eP      P        07 57 37.0 +0.5
OHR   Ohrid            39.74 291 i Pn    P        07 57 40.5 +3.8
ZEA   Zeya             39.87  49 eP      P        07 57 38.5 +1.0
ZEA                              e                07 59 19.2
ZEA                              eS      S        08 03 36.2 -5.3
ZEA                               pmax     pmax
      comp=N,100nm,0.9s
ZEA                               pmax     pmax
      comp=E,180nm,1.0s
ZEA                               pmax     pmax
      comp=Z,330nm,1.0s
ZEA                               pmax     pmax
      comp=Z,6µm,6.5s
ZEA                               smax     smax
      comp=E,39µm,12.0s
ZEA                               MLR      MLR
      comp=N,190µm,14.0s
ZEA                               MLR      MLR
      comp=E,470µm,14.0s
ZEA                               MLR      MLR
      comp=Z,920µm,14.0s
KBN   Korca            39.87 290  P      P        07 57 37.0 -0.8
KBN                               pmax     pmax
      comp=Z,2µm,1.7s
KBN   Korca            39.87 290  P      P        07 57 37.0 -0.8
KBN                               IAmb     IAmb     07 58 27.5
      comp=Z,2µm,1.7s
KEV   Kevo             39.87 337  P      P        07 57 36.6 -0.6
KEV                               pmax     pmax
      comp=Z,659nm,0.9s
KEV                               MLR      MLR
      comp=Z,608µm,21.0s
KEV   Kevo             39.87 337 ⇓P      P        07 57 36.7 -0.6
KEV   Kevo             39.87 337  P      P        07 57 36.6 -0.6
KEV                               IAMs_20  IAMs_20  08 13 36.4
      comp=Z,608µm,21.0s
SJES  Sjenica          39.89 295 eP      P        07 57 38.5 +0.6
BUD   Budapest         39.89 301 eP      P        07 57 38.8 +1.1
VYHS  Vyhne            39.91 303 eP      P        07 57 39.0 +1.1
VYHS                              pmax     pmax
      comp=Z,1µm,1.7s
VYHS  Vyhne            39.91 303 eP      P        07 57 39.0 +1.1
VYHS                             ePP     PnPn     07 59 12.9 +0.1
VYHS                             eS      S        08 03 46.1 +3.8
VYHS                             eSS     SS       08 06 38.7 +0.1
VYHS                             eL      L        08 16 12.4
ITM   Ithomi           39.94 285 ⇑P      P        07 57 35.5 -2.8
ITM   Ithomi           39.94 285  P      P        07 57 36.3 -2.0
TEKS  Tekeris          39.97 297 eP      P        07 57 39.3 +0.8
TEKS  Tekeris          39.97 297 eP      P        07 57 39.0 +0.5
SSE   Sheshan          40.00  85  P      P        07 57 39.6 +0.8
SSE                               PP     PP       07 59 10.8  0.0
SSE                               S      S        08 03 46.5 +2.5
SSE                               pmax     pmax
      comp=Z,80nm,1.3s
SSE                               LR       LR
      comp=Z,423µm,17.0s
SSE                               LR       LR
      comp=Z,298µm,17.0s
SSE                               LR       LR
      comp=Z,518µm,16.3s
SILA  Clinic, Silare   40.01 240⇑iP      P        07 57 40.3 +1.0
SILA                              PP     PP       07 59 04.8 -6.5
DESE  Dese             40.08 237 eP      P        07 57 49.3 +9.3
BLJ   Bijeljina        40.11 297 eP      P        07 57 44.9 +5.3
BBLS  Lazi&#263;i      40.18 296⇑iP      P        07 57 40.5 +0.2
BBLS  Lazi&#263;i      40.18 296 eP      P        07 57 40.8 +0.5
RAC   Raciborz         40.19 305 eP      P        07 57 41.8 +1.6
RAC                              ePP     PP       07 59 14.5 +2.0
RAC                              eS      S        08 03 45.3 -1.1
RAC                               LMZ      LR       08 15 34.0
      comp=Z,640nm,17.4s
RAC   Raciborz         40.19 305 eP      P        07 57 41.8 +1.6
RAC                              e                07 59 14.5
RAC                              eS      S        08 03 45.3 -1.1
RAC                               MLR      MLR
      comp=Z,640µm,17.4s
ARA0  ARCESS Array S   40.24 336 eP      P        07 57 40.5 +0.2
ARCES ARCESS Array B   40.24 336  P      P        07 57 39.8 -0.6
      comp=Z,88nm,0.5s,baz=112,slow=7.7,SNR=120
ARCES                             LR       LR       08 15 33.8
      comp=Z,1069µm,18.8s,baz=120,slow=38
ARCES ARCESS Array B   40.24 336  P      P        07 57 39.2 -1.1
ARCES                             pmax     pmax
      comp=Z,755nm,0.9s
ARCES ARCESS Array B   40.24 336  P      P        07 57 39.2 -1.1
ARCES                             IAmb     IAmb     07 58 00.2
      comp=Z,755nm,0.8s
OKC   Ostrava-Krasne   40.24 305 eP      P        07 57 42.3 +1.7
OKC                               AMS      AMS      08 15 20.0
      comp=Z,565µm,17.1s
OKC   Ostrava-Krasne   40.24 305 eP      P        07 57 42.3 +1.7
OKC                               MLR      MLR
      comp=Z,565µm,17.1s
RUDO  Rudo             40.25 295 eP      P        07 57 41.4 +0.6
MORH  Mrgy, Hungar     40.32 299 eP      P        07 57 41.5 +0.2
MORH  Mrgy, Hungar     40.32 299⇑iP      P        07 57 41.1 -0.2
SRO   Srobarova        40.33 302 eP      P        07 57 43.8 +2.4
SRO                              e                07 59 21.2
SRO   Srobarova        40.33 302 eP      P        07 57 43.8 +2.4
SRO                              ePP     PnPn     07 59 21.2 +3.4
TIR   Tirane           40.38 292 ⇑P      P        07 57 43.9 +2.0
TIR   Tirane           40.38 292  P      P        07 57 40.8 -1.1
TIR                               pmax     pmax
      comp=Z,384nm,1.0s
TIR                               MLR      MLR
      comp=Z,259µm,22.0s
TIR   Tirane           40.38 292  P      P        07 57 40.8 -1.1
CSKK  Cskako           40.42 301 eP      P        07 57 44.0 +1.8
GOND  University, Go   40.50 241⇑iP      P        07 57 45.1 +1.7
GOND                              PP     PnPn     07 59 20.2 -0.4
PDG   Podgorica        40.58 294 ⇑P      P        07 57 44.3 +0.8
PDG   Podgorica        40.58 294 eP      P        07 57 42.7 -0.8
PDG   Podgorica        40.58 294 ⇑P      P        07 57 42.7 -0.8
PDG   Podgorica        40.58 294  P      P        07 57 42.4 -1.1
MORC  Moravsky Berou   40.63 305 ⇑P      P        07 57 44.3 +0.3
MORC  Moravsky Berou   40.63 305 eP      P        07 57 43.9 -0.1
MORC                             epP     pP       07 57 49.0 -0.8
MORC                             eS      S        08 03 54.7 +1.5
MORC  Moravsky Berou   40.63 305  P      P        07 57 43.2 -0.8
MORC                              pmax     pmax
      comp=Z,398nm,1.0s
MORC  Moravsky Berou   40.63 305  P      P        07 57 43.2 -0.8
GKP   Gorka Klasztor   40.64 310 eP      P        07 57 43.8  0.0
GKP                              epP     pP       07 57 49.6 -0.1
GKP                              eS      S        08 03 55.9 +2.9
GKP                              eSS     SS       08 06 28.9  -24
JAVC  Velka Javorina   40.64 304 eP      P        07 57 45.2 +1.2
JAVC                             epP     pP       07 57 49.9  0.0
JAVC                             eS      S        08 03 58.6 +5.3
UPM   Unac-Piva        40.67 295 eP      P        07 57 44.4 -0.1
DRME  Dracevica, Mon   40.68 293⇑iP      P        07 57 44.2 -0.2
KOVH  Kovagotottos     40.71 299 eP      P        07 57 44.8 +0.2
QZH   Quanzhou         40.73  95⇑iP      P        07 57 49.5 +4.6
QZH                               PP     PP       07 59 21.0 +2.3
QZH                               S      S        08 04 01.0 +6.1
QZH                               pmax     pmax
      comp=Z,230nm,1.1s
QZH                               pmax     pmax
      comp=Z,14µm,9.6s
QZH                               LR       LR
      comp=Z,392µm,14.2s
QZH                               LR       LR
      comp=Z,839µm,14.3s
TIH   Tihany           40.73 301 eP      P        07 57 45.8 +1.1
UPP   Uppsala          40.75 321 eP      P        07 57 46.7 +2.1
KTK1  Kautokeino       40.76 335 eP      P        07 57 44.9 +0.2
KTK1                              IVmB_BB           07 57 49.8
      comp=Z,8µm,2.3s
KTK1                             eS      S        08 03 54.1 -0.4
KTK1                              IVMs_BB  IVMs_BB  08 14 45.1
      comp=Z,694µm,12.2s
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KNMB  Chin-men Tao     40.81  96  P      P        07 57 45.3 -0.3
KNMB                              IAMs_20  IAMs_20  08 16 35.3
      comp=Z,529µm,20.0s
KEK   Kerkira          40.83 289 ⇑P      P        07 57 44.0 -1.7
SMOL  Smolenice        40.84 303 eP      P        07 57 47.8 +2.2
SMOL  Smolenice        40.84 303 eP      P        07 57 47.8 +2.2
VLO   Vlora            40.86 291  P      P        07 57 43.8 -2.0
VLO                               pmax     pmax
      comp=Z,1µm,0.8s
VLO   Vlora            40.86 291  P      P        07 57 43.8 -2.0
VLO                               IAmb     IAmb     07 58 19.4
      comp=Z,1µm,0.8s
MPLH  Magyarpolny      40.93 301 eP      P        07 57 47.0 +0.6
MODS  Modra-Piesok     40.95 303 eP      P        07 57 47.7 +1.1
MODS                              pmax     pmax
      comp=Z,3µm,2.6s
MODS  Modra-Piesok     40.95 303 eP      P        07 57 47.7 +1.1
MODS                             ePP     PnPn     07 59 26.0 +0.8
MODS                             eS      S        08 03 58.8 +0.9
MODS                             eSS     SS       08 06 58.4 -1.1
MODS                             eL      L        08 15 38.3
BRY   Bratogost        40.99 294 eP      P        07 57 50.1 +3.0
EGYH  Egyhazaskeszo    41.04 301 eP      P        07 57 48.0 +0.8
DLV   T  Lat           41.06 120  P      P        07 57 48.1 +0.1
DLV                               IAmb     IAmb     07 57 59.6
      comp=Z,1µm,1.5s
DLV                               IAMs_20  IAMs_20  08 14 38.9
      comp=Z,717µm,21.0s
DLV   T  Lat           41.06 120  P      P        07 57 49.0 +1.0
ZST   Bratislava       41.09 303 eP      P        07 57 49.8 +2.1
ZST                              e                07 59 28.6
ZST                              eS      S        08 04 05.2 +5.3
ZST   Bratislava       41.09 303 eP      P        07 57 49.8 +2.1
ZST                              ePP     PnPn     07 59 28.5 +1.8
ZST                              eS      S        08 04 05.2 +5.3
ZST                              eSS     SnSn     08 07 07.9 -2.2
KRLC  Kraliky          41.10 306 eP      P        07 57 47.6 -0.2
KRLC                             eS      S        08 03 57.4 -2.7
KRLC                              AMS      AMS      08 15 50.0
      comp=Z,524µm,19.7s
KRLC  Kraliky          41.10 306 eP      P        07 57 47.6 -0.2
KRLC                             eS      S        08 03 57.4 -2.7
KRLC                              MLR      MLR
      comp=Z,524µm,19.7s
HCY   Herceg Novi      41.12 294 eP      P        07 57 48.4 +0.4
ANKE  Ethiopia-Afar    41.15 235 eP      P        07 57 49.3 +0.4
MERTO Secondary Scho   41.17 238⇑iP      P        07 57 50.5 +1.5
TREB  Trebinje         41.17 294 eP      P        07 57 48.7 +0.3
TPTI                   41.20 141  P      P        07 57 46.1 -2.7
      comp=Z,22µmcomp=Z,4µmcomp=Z,247nm,1.1s
BAHR  High School, B   41.27 240 i P     P        07 57 51.7 +2.0
BAHR                              PP     PP       07 59 28.6 +3.6
KCSI  Kotacane, Aceh   41.27 140  P      P        07 57 45.8 -3.6
      comp=Z,86µmcomp=Z,7µmcomp=Z,379nm,1.0s
HAMF  Hammerfest       41.28 338 eP      P        07 57 49.0 +0.1
HAMF                              IVmB_BB           07 57 55.2
      comp=Z,17µm,2.0s
HAMF                             eS      S        08 04 01.9 -0.3
HAMF                              IVMs_BB  IVMs_BB  08 15 21.6
      comp=Z,1181µm,12.3s
VRAC  Vranov           41.30 304 ⇑P      P        07 57 49.8 +0.4
VRAC  Vranov           41.30 304  LR     LR       08 16 41.6
      comp=Z,425µm,18.2s,baz=90,slow=39
VRAC  Vranov           41.30 304 eP      P        07 57 49.7 +0.4
VRAC                             epP     pP       07 57 55.1 -0.1
VRAC                             eS      S        08 04 04.6 +1.6
KULM  Kulim            41.30 135 ⇓P      P        07 57 49.4 -0.3
KULM  Kulim            41.30 135  P      P        07 57 50.0 +0.3
KULM  Kulim            41.30 135  P      P        07 57 49.6 -0.1
KULM                              IAmb     IAmb     07 58 03.6
      comp=Z,2µm,1.4s
DBRK  Dubrovnik        41.32 294  P      P        07 57 49.3 -0.4
KSP   Ksiaz            41.34 307 eP      P        07 57 49.5 -0.2
KSP                              epP     pP       07 57 55.9 +0.3
KSP                              eS      S        08 04 03.1 -0.5
KSP                              eSS     SS       08 06 32.4  -35
KSP                              eL      L        08 13 40.2
      comp=Z,561µm,30.0s
KSP   Ksiaz            41.34 307 ⇑P      P        07 57 49.5 -0.2
SHAW  Medical Clinic   41.36 241⇑iP      P        07 57 52.7 +2.2
DPC   Dobruska-Polom   41.37 306 eP      P        07 57 50.0  0.0
DPC                              eS      S        08 04 03.7 -0.4
DPC                               AMS      AMS      08 15 50.0
      comp=Z,420µm,15.6s
DPC   Dobruska-Polom   41.37 306 eP      P        07 57 50.0  0.0
DPC                              eS      S        08 04 03.7 -0.4
DPC                               MLR      MLR
      comp=Z,420µm,15.6s
OSTC  Ostas            41.42 306 eP      P        07 57 50.4 +0.1
OSTC                              AMS      AMS      08 16 10.0
      comp=Z,577µm,13.9s
KRUC  Moravsky         41.45 304 eP      P        07 57 50.9 +0.3
KRUC                             epP     pP       07 57 56.1 -0.4
KRUC                             eS      S        08 04 07.2 +1.9
CHVC  Chvalec          41.52 306 eP      P        07 57 51.2  0.0
CHVC                             ex      x        07 57 58.7
CHVC                             eS      S        08 04 08.1 +1.9
CHVC                              AMS      AMS      08 16 30.0
      comp=Z,610µm,13.9s
SOP   Sopron           41.52 302 eP      P        07 57 50.9 -0.3
SNSI  Sinabang, Aceh   41.53 143  P      P        07 57 52.7 +1.2
      comp=Z,52µmcomp=Z,3µm,1.4s
UPC   Upice            41.55 306 eP      P        07 57 51.5 +0.1
UPC                               AMS      AMS      08 16 20.0
      comp=Z,632µm,13.7s
UPC   Upice            41.55 306 eP      P        07 57 51.5 +0.1
UPC                               MLR      MLR
      comp=Z,632µm,13.7s
BLY   Banja Luka       41.58 298⇑iP      P        07 57 52.6 +0.9
BLY   Banja Luka       41.58 298 ⇑P      P        07 57 51.8 +0.1
STON  Ston             41.60 295⇑iP      P        07 57 51.1 -0.8
STON  Ston             41.60 295  P      P        07 57 51.8 -0.1
MUKA  Police Camp, M   41.60 241 i P     P        07 57 55.0 +2.7
KSDEI Deokjeokdo       41.64  74  P      P        07 57 54.6 +2.4
      SNR=29
MELAE School, Dubaba   41.66 242⇑iP      P        07 57 51.1 -1.6
TSI   Tuntungan        41.69 139  P      P        07 57 52.4 -0.5
      comp=Z,85µmcomp=Z,41µmcomp=Z,423nm,0.8s
MGRS  Mrkonjic Grad    41.71 297 eP      P        07 57 51.1 -1.8
MOSL  Moslavina        41.72 299  P      P        07 57 53.6 +0.7
SCTE  Santa Cesarea    41.72 290  P      P        07 57 51.2 -1.7
SCTE                              IAmb     IAmb     07 58 13.3
      comp=Z,1µm,1.3s
KSGAH Ganghwa          41.76  73  P      P        07 57 52.8 -0.5
      SNR=39
KSGAH Ganghwa          41.76  73  P      P        07 57 56.4 +3.1
      SNR=26
YAK   Yakutsk          41.77  36  P      P        07 57 52.8 -0.2
      comp=Z,113nm,0.8s,baz=357,slow=1.7,SNR=20
YAK                               LR       LR       08 15 24.5
      comp=Z,1423µm,18.9s,baz=268,slow=36
YAK   Yakutsk          41.77  36 eP      P        07 57 51.7 -1.3
YAK                              e*PP    sP       07 58 03.7 +2.4
YAK                              e                07 59 37.1
YAK                              e                07 59 53.2
YAK                              ePPP    PPP      08 00 01.3
YAK                              eS      S        08 04 11.2 +1.6
YAK                               pmax     pmax
      comp=Z,690nm,1.6s
YAK                               pmax     pmax
      comp=N,64nm,1.2s
YAK                               pmax     pmax
      comp=E,481nm,1.3s
YAK                               pmax     pmax
      comp=Z,1µm,1.9s
YAK                               pmax     pmax
      comp=N,347nm,1.4s
YAK                               pmax     pmax
      comp=E,1µm,1.5s
YAK                               smax     smax
      comp=E,8µm,4.1s
YAK                               smax     smax
      comp=N,68µm,8.8s
YAK                               MLR      MLR
      comp=Z,1430µm,18.0s
YAK                               MLR      MLR
      comp=E,927µm,16.0s
YAK                               MLR      MLR
      comp=N,320µm,12.0s
YAK   Yakutsk          41.77  36 ⇓P      P        07 57 52.4 -0.6
YAK   Yakutsk          41.77  36  P      P        07 57 51.7 -1.3
YAK                               IAmb     IAmb     07 58 22.2
      comp=Z,2µm,1.3s
KALN  Kalnik           41.83 300  P      P        07 57 54.9 +1.1
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RICI  Ricice           41.87 296  P      P        07 57 54.8 +0.7
JETT  Jettan, Norway   41.89 335 eP      P        07 57 54.6 +0.6
KOGS  Kog              41.92 300 i P     P        07 57 54.0 -0.4
KOGS                             i pP    pP       07 57 59.0 -1.4
KOGS                             eS      S        08 04 15.0 +2.8
KOGS                             eSS     SS       08 06 59.9  -19
KSMUS Musan            41.94  73  P      P        07 57 57.8 +3.1
      SNR=16
KSMUS Musan            41.94  73  P      P        07 57 59.4 +4.7
      SNR=21
OYDB  Oeyeondo         41.94  76  P      P        07 57 58.0 +3.2
      SNR=12
CONA  Conrad Observa   41.95 302 i P     P        07 57 55.1 +0.3
      comp=Z,499nm,0.9s,SNR=53
GGDB  Gageodo          41.96  79  P      P        07 58 02.0 +7.0
      SNR=11
INCN  Inchon           41.97  74  P      P        07 57 54.2 -0.8
INCN                              pmax     pmax
      comp=Z,692nm,1.0s
INCN                              MLR      MLR
      comp=Z,996µm,19.0s
INCN  Inchon           41.97  74 ⇑P      P        07 57 54.0 -1.0
INCN  Inchon           41.97  74  P      P        07 57 54.2 -0.8
INCN  Inchon           41.97  74  IAMs_20  IAMs_20  08 17 41.3
      comp=Z,995µm,19.0s
INCN  Inchon           41.97  74  P      P        07 57 56.1 +1.1
BSD   Bornholm Skovb   41.97 313 eP      P        07 57 57.4 +2.7
BSD   Bornholm Skovb   41.97 313 i P     P        07 57 57.0 +2.3
BSD                               IAmb     IAmb     07 58 23.8
      comp=Z,376nm,1.0s
BSD   Bornholm Skovb   41.97 313 ⇓P      P        07 57 55.7 +1.0
HUK2  Heuksan-myeon    41.98  78  P      P        07 58 06.0  +11
      SNR=9.1
MAKA  Makarska         41.99 295  P      P        07 57 55.3 +0.2
YNCB  YEONCHEON        42.02  73  P      P        07 57 58.6 +3.2
      SNR=22
TREC  Trest            42.02 305 eP      P        07 57 55.9 +0.6
TREC                             eS      S        08 04 16.1 +2.4
TREC                              AMS      AMS      08 15 30.0
      comp=Z,468µm,13.7s
TREC  Trest            42.02 305 eP      P        07 57 55.9 +0.6
TREC                             eS      S        08 04 16.1 +2.4
TREC                              MLR      MLR
      comp=Z,468µm,13.7s
KSSES Seosan           42.05  75  P      P        07 57 59.0 +3.3
      SNR=16
SHHB  Siheung-si       42.06  74  P      P        07 57 59.0 +3.3
      SNR=24
LOBO  Lobor            42.09 300  P      P        07 57 55.3 -0.6
KSDDC Dongducheon      42.16  73  P      P        07 58 01.1 +4.5
      SNR=20
IPM   Ipoh             42.18 136  P      P        07 57 56.5 -0.4
IPM                               IAmb     IAmb     07 58 10.2
      comp=Z,1µm,1.1s
IPM   Ipoh             42.18 136  P      P        07 57 56.2 -0.7
KSSEO Seoul            42.18  73  P      P        07 58 01.5 +4.8
      SNR=18
KSSEO Seoul            42.18  73  P      P        07 58 02.0 +5.3
      SNR=15
KSSOD Songwoldong      42.19  73  P      P        07 58 03.1 +6.4
      SNR=14
AAE   Adis Abeba       42.20 236 eP      P        07 58 01.6 +4.2
AAE   Adis Abeba       42.20 236 eP      P        07 57 59.3 +1.9
LSTV  Lastovo          42.20 295  P      P        07 57 56.9 +0.1
PTJ   Puntijarka       42.21 299  P      P        07 57 58.1 +1.1
ZAG   Zagreb           42.21 299 eP      P        07 57 58.1 +1.3
ZAG   Zagreb           42.21 299  P      P        07 58 00.7 +3.8
PORA  Boryeong         42.28  75  P      P        07 58 02.0 +4.5
      SNR=17
ARSA  Arzberg          42.28 301 i P     P        07 57 57.3 -0.1
      comp=Z,231nm,0.9s,SNR=45
KSSWO Suwon            42.29  74  P      P        07 57 59.6 +2.1
      SNR=23
CHGE  School, Chagni   42.29 240⇑iP      P        07 57 59.3 +1.3
MDJ   Mudanjiang       42.31  62  P      P        07 57 57.1 -0.6
MDJ                               pP     sP       07 58 05.7 -0.2
MDJ                               ScP    ScP      08 03 35.5 -5.8
MDJ                               S      S        08 04 20.9 +2.9
MDJ                               sS     sS       08 04 33.8 +6.2
MDJ                               ScS    ScS      08 07 56.5 -2.7
MDJ                               pmax     pmax
      comp=Z,76nm,2.4s
MDJ                               pmax     pmax
      comp=Z,19µm,9.8s
MDJ                               LR       LR
      comp=N,1370µm,17.8s
MDJ                               LR       LR
      comp=E,506µm,13.2s
MDJ                               LR       LR
      comp=Z,2057µm,18.5s
MDJ   Mudanjiang       42.31  62  P      P        07 57 57.7  0.0
MDJ                               IAmb     IAmb     07 58 19.7
      comp=Z,3µm,2.0s
MDJ   Mudanjiang       42.31  62  P      P        07 57 58.0 +0.3
ABMD  Abulta/Almeha    42.32 242⇑iP      P        07 57 58.4 +0.3
ABMD                              PP     PP       07 59 43.6 +7.4
MNYD  Munyeodo         42.35  76  P      P        07 58 04.1 +6.0
      SNR=9.7
FURI  Furi             42.36 236 eP      P        07 58 02.9 +4.2
FURI  Furi             42.36 236 eP      P        07 57 59.3 +0.6
FURI  Furi             42.36 236 i P     P        07 58 01.8 +3.0
TRO   Tromso           42.41 335 eP      P        07 57 58.4 +0.3
TRO                               IVmB_BB           07 58 03.2
      comp=Z,9µm,2.3s
TRO                              eS      S        08 04 18.8  0.0
TRO                              eSS     SS       08 07 28.2 +0.7
TRO                               IVMs_BB  IVMs_BB  08 16 08.3
      comp=Z,786µm,19.2s
GINR  Hospital, Gini   42.41 232 i P     P        07 58 01.1 +2.0
HVAR  Hvar             42.42 295  P      P        07 57 58.0 -0.7
GCIS  Gornji Cirnik    42.45 299 eP      P        07 57 59.0 +0.1
KSCWO Cheorwon         42.45  72  P      P        07 58 01.9 +2.9
      SNR=10
PVCC  Panska Ves       42.47 306 eP      P        07 58 01.0 +2.1
PVCC                              AMS      AMS      08 17 00.0
      comp=Z,519µm,13.9s
PVCC  Panska Ves       42.47 306 eP      P        07 58 01.0 +2.1
PVCC                              MLR      MLR
      comp=Z,519µm,13.9s
PSI   Prapat           42.47 140  P      P        07 57 58.3 -1.1
      comp=Z,144nm,0.9s,baz=304,slow=7.2,SNR=48
PSI                               LR       LR       08 19 42.2
      comp=Z,107µm,18.1s,baz=312,slow=42
PYTK  Pyeongtaek       42.48  74  P      P        07 58 05.3 +6.1
      SNR=18
SMKB  Mukjeong-gil     42.49  76  P      P        07 58 07.0 +7.8
      SNR=11
GAPB  Gapyeong         42.51  73  P      P        07 58 06.1 +6.8
      SNR=19
HWCB  Hwacheon         42.52  72  P      P        07 57 60.0 +0.5
      SNR=24
HWCB  Hwacheon         42.52  72  P      P        07 58 04.0 +4.5
      SNR=17
KSGUS GUNSAN           42.54  76  P      P        07 58 04.7 +5.0
      SNR=10
PRU   Pruhonice        42.54 306 eP      P        07 57 59.6 +0.1
PRU                              epP     sP       07 58 07.2 -0.5
PRU                              eS      S        08 04 25.0 +3.6
PRU                               AMS      AMS      08 16 30.0
      comp=Z,570µm,15.5s
PRU   Pruhonice        42.54 306 eP      P        07 57 59.6 +0.1
PRU                              e                07 58 07.2
PRU                              eS      S        08 04 25.0 +3.6
PRU                               MLR      MLR
      comp=Z,570µm,15.5s
BUYB  Buyeo            42.57  75  P      P        07 58 03.1 +3.2
      SNR=19
BUYB  Buyeo            42.57  75  P      P        07 58 06.1 +6.2
      SNR=16
CRES  Cresnjev         42.57 299⇑iP      P        07 57 59.8  0.0
PRA   Prague           42.60 306 eP      P        07 58 00.6 +0.6
PRA                               AMS      AMS      08 19 00.0
      comp=Z,445µm,15.2s
PRA   Prague           42.60 306 eP      P        07 58 00.6 +0.6
PRA                               MLR      MLR
      comp=Z,445µm,15.2s
OZLJ  Ozalj            42.61 299  P      P        07 58 00.3 +0.3
UDBI  Udbina           42.62 297  P      P        07 58 03.2 +3.0
KSICN Icheon           42.62  74  P      P        07 58 03.6 +3.3
      SNR=26
GOCB  Gochang-gun      42.64  77  P      P        07 58 07.0 +6.6
      SNR=5.2
KSCEA Cheonan          42.65  74  P      P        07 58 03.3 +2.8
      SNR=14
KOJ2  Gongju-si        42.68  75  P      P        07 58 09.0 +8.2
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	SNR=11						
SOKA	**Soboth**	42.71	301	*i*P	**P**	**07 58 00.6**	**-0.4**
	comp=Z,117nm,1.0s,SNR=60						
HFS	**Hagfors**	42.74	321	LR	LR	08 17 33.3	
	comp=Z,573µm,19.6s,baz=90,slow=39						
KSCHC	**Chuncheon**	42.77	73	P	P	07 58 08.0	+6.5
	SNR=17						
KSCHC	**Chuncheon**	42.77	73	P	**P**	**07 58 01.0**	**-0.5**
	SNR=56						
RUE	**Ruedersdorf**	42.77	309	*e*P	**P**	**07 58 02.8**	**+1.5**
RUE	**Ruedersdorf**	42.77	309	*e*P	**P**	**07 58 00.4**	**-0.9**
	comp=Z,1µm,1.4s,baz=81,slow=8.0						
RUE	**Ruedersdorf**	42.77	309	⇑P	**P**	**07 58 05.3**	**+4.1**
KIRE	**School, Kiremu**	42.77	239	⇑*i*P	**P**	**07 58 04.7**	**+2.6**
MORI	**Morici**	42.80	297	P	**P**	**07 58 01.7**	**0.0**
BRG	**Berggiesshubel**	42.82	307	*e*P	**P**	**07 58 01.5**	**-0.2**
	comp=Z,973nm,1.2s,baz=81,slow=8.0						
BRG				*e*S	**S**	**08 04 30.2**	**+4.8**
	baz=81,slow=14						
BRG				*e*SS	**SS**	**08 07 37.8**	**+1.5**
	baz=80,slow=18						
BRG	**Berggiesshubel**	42.82	307	⇑*i*P	**P**	**07 58 01.9**	**+0.1**
BRG				Amp		07 58 04.9	
	comp=Z,127nm,0.7s						
BRG	**Berggiesshubel**	42.82	307	P	P	07 58 09.8	+8.0
BRG				Amp		07 58 11.1	
	comp=Z,759nm,1.1s						
BRG	**Berggiesshubel**	42.82	307	S	**S**	**08 04 31.0**	**+5.6**
KSJEU	**Jeongeup**	42.84	76	P	**P**	**07 58 04.8**	**+2.7**
	SNR=17						
CKRC	**Cesky Krumlov**	42.85	304	*e*P	**P**	**07 58 04.7**	**+2.7**
CKRC				AMS	AMS	08 16 10.0	
	comp=Z,478µm,13.8s						
MATE	**Matera**	42.87	292	⇓P	**P**	**07 58 02.4**	**+0.2**
MATE	**Matera**	42.87	292	⇑P	**P**	**07 58 00.9**	**-1.3**
TJN	**Taejon**	42.87	75	*de*P	**P**	**07 58 01.4**	**-1.0**
TJN	**Taejon**	42.87	75	P	**P**	**07 58 04.0**	**+1.6**
EMSB	**Eumseong**	42.88	74	P	P	07 58 09.0	+6.6
	SNR=15						
ZIRJ	**Zirje**	42.89	296	P	**P**	**07 58 01.6**	**-0.8**
HANB	**Haenam**	42.89	78	P	P	07 58 09.0	+6.5
	SNR=7.3						
KS19	**Wonju Array Si**	42.89	73	P	**P**	**07 58 01.8**	**-0.7**
KS19				IAmb	IAmb	07 58 29.9	
	comp=Z,1µm,1.6s						
RGN	**Rugen**	42.91	312	*e*P	P	07 58 07.2	+4.8
RGN	**Rugen**	42.91	312	*e*P	**P**	**07 58 01.9**	**-0.4**
	comp=Z,6µm,1.6s,baz=81,slow=8.0						
RGN	**Rugen**	42.91	312	⇓P	**P**	**07 58 06.5**	**+4.1**
RGN	**Rugen**	42.91	312	P	**P**	**07 57 59.4**	**-2.9**
RGN				IAMs_20	IAMs_20	08 19 11.6	
	comp=Z,734µm,18.0s						
GUBA	**Police Station**	42.91	242	⇑*i*P	**P**	**07 58 02.9**	**-0.1**
KSAR	**Wonju Array Be**	42.92	73	P	**P**	**07 58 02.1**	**-0.7**
KSAR	**Wonju Array Be**	42.92	73	P	**P**	**07 58 02.0**	**-0.7**
KSIJA	**INJE**	42.92	72	P	**P**	**07 58 04.7**	**+2.0**
	SNR=18						
KSIJA	**INJE**	42.92	72	P	P	07 58 08.2	+5.4
	SNR=26						
SEHB	**SEOHWA**	42.95	72	P	**P**	**07 58 06.6**	**+3.7**
	SNR=15						
KSRS	**Korea Array**	42.95	73	P	**P**	**07 58 02.0**	**-0.9**
	comp=Z,38nm,0.9s,baz=282,slow=7.2,SNR=25						
KSRS				PP	**PcP**	**07 59 58.1**	**+4.7**
	comp=Z,85nm,0.9s,baz=277,slow=5.9,SNR=2.5						
KSRS				LR	LR	08 18 23.0	
	comp=Z,1011µm,19.7s,baz=300,slow=40						
N2ST	**Straumen**	42.95	331	*e*P	**P**	**07 58 02.8**	**+0.2**
KSJEO	**Jeonju**	42.97	76	P	P	07 58 09.0	+5.9
	SNR=13						
KSJEO	**Jeonju**	42.97	76	P	**P**	**07 58 06.0**	**+2.8**
	SNR=15						
N2IH	**Innhavet**	42.97	332	*e*P	**P**	**07 58 03.1**	**+0.4**
KLR	**Kul'dur**	42.98	55	P	**P**	**07 58 03.0**	**-0.1**
	comp=Z,22nm,0.5s,baz=280,slow=7.3,SNR=34						
KLR				LR	LR	08 17 34.7	
	comp=Z,1165µm,21.0s,baz=278,slow=38						
KLR	**Kul'dur**	42.98	55	*c i*P	**P**	**07 58 02.6**	**-0.5**
KLR				pmax	pmax		
	comp=Z,651nm,1.2s						
KLR				MLR	MLR		
	comp=Z,1143µm,21.0s						
TATO	**Taipei**	42.99	93	IAMs_20	IAMs_20	08 18 54.2	
	comp=Z,638µm,18.0s						
MOA	**Molln**	43.03	303	*i*P	**P**	**07 58 03.3**	**-0.2**
	comp=Z,54nm,0.9s,SNR=37						
SUCA	**Sunchang**	43.04	76	P	P	07 58 11.0	+7.2
	SNR=8.9						
YHNB	**Yeheng**	43.05	94	P	**P**	**07 58 05.2**	**+1.2**
YHNB				IAMs_20	IAMs_20	08 18 56.7	
	comp=Z,576µm,18.0s						
KSWJU	**Wonju**	43.06	73	P	**P**	**07 58 04.0**	**+0.1**
	SNR=43						
KSWJU	**Wonju**	43.06	73	P	**P**	**07 58 08.0**	**+4.0**
	SNR=25						
OBKA	**Obir**	43.07	301	*i*P	**P**	**07 58 04.3**	**+0.4**
	comp=Z,36nm,1.3s,SNR=41						
FAUS	**Fauske**	43.08	331	*e*P	**P**	**07 58 03.7**	**+0.2**
FAUS				IVmB_BB		07 58 11.0	
	comp=Z,12µm,2.5s						
FAUS				*e*S	**S**	**08 04 28.5**	**-0.2**
FAUS				*i*		08 07 25.4	
FAUS				IVMs_BB	IVMs_BB	08 16 57.9	
	comp=Z,448µm,9.6s						
GSI	**Gunungsitoli**	43.09	142	⇓P	**P**	**07 58 04.6**	**+0.3**
GSI	**Gunungsitoli**	43.09	142	P	**P**	**07 58 04.1**	**-0.2**
	comp=Z,103µmcomp=Z,41µmcomp=Z,1µm,0.7s						
GSI	**Gunungsitoli**	43.09	142	P	**P**	**07 58 04.9**	**+0.6**
GSI	**Gunungsitoli**	43.09	142	P	**P**	**07 58 04.8**	**+0.6**
DEBR	**School, Debre**	43.11	240	⇑*i*P	**P**	**07 58 06.1**	**+1.3**
DEBR				PP	**PP**	**07 59 46.3**	**+1.3**
MRVN	**Minervino Murg**	43.13	292	⇑P	**P**	**07 58 03.7**	**-0.8**
KSSKC	**Sokcho**	43.14	72	P	**P**	**07 58 07.5**	**+3.1**
	SNR=36						
TPUB	**Ta-pu**	43.16	96	P	**P**	**07 58 05.7**	**+0.8**
TPUB				IAMs_20	IAMs_20	08 18 17.7	
	comp=Z,533µm,19.0s						
KSBON	**Boeun**	43.16	75	P	P	07 58 11.2	+6.5
	SNR=16						
SSLB	**Suanglung**	43.17	95	P	**P**	**07 58 05.6**	**+0.7**
SSLB				IAmb	IAmb	07 58 49.1	
	comp=Z,801nm,1.0s						
SSLB				IAMs_20	IAMs_20	08 19 09.8	
	comp=Z,895µm,19.0s						
SSLB	**Suanglung**	43.17	95	P	**P**	**07 58 06.4**	**+1.5**
LJU	**Ljubljana**	43.17	300	*i*P	**P**	**07 58 05.1**	**+0.4**
LJU				*e*pP	**pP**	**07 58 09.7**	**-0.9**
LJU				*e*PcP	**PcP**	**07 59 49.7**	**-4.3**
LJU				*e*S	**S**	**08 04 31.5**	**+0.9**
LJU				*e*SS	**SS**	**08 07 32.5**	**-11**
LJU	**Ljubljana**	43.17	300	⇑*i*P	**P**	**07 58 04.8**	**+0.1**
KSCHJ	**Chungju**	43.17	74	P	**P**	**07 58 07.4**	**+2.5**
	SNR=14						
FBE	**Freiberg**	43.19	307	*e*P	**P**	**07 58 04.6**	**-0.1**
	comp=Z,1µm,1.2s,baz=81,slow=8.0						
OKCB	**Cheongsan-myeo**	43.21	75	P	P	07 58 11.0	+5.9
	SNR=10.0						
OKCB	**Cheongsan-myeo**	43.21	75	P	**P**	**07 58 08.0**	**+2.9**
	SNR=17						
NAWB	**Namwon**	43.22	76	P	P	07 58 13.0	+7.8
	SNR=12						
NAWB	**Namwon**	43.22	76	P	**P**	**07 58 09.0**	**+3.8**
	SNR=15						
DUGI	**Dugi Otok**	43.23	297	P	**P**	**07 58 05.1**	**0.0**
KSSCH	**SUNCHEON**	43.23	77	P	**P**	**07 58 09.3**	**+4.1**
	SNR=8.3						
HARO	**School, Haroo**	43.23	239	⇑*i*P	**P**	**07 58 07.6**	**+1.8**
HARO				PP	**PcP**	**07 59 52.5**	**-2.4**
NVLJ	**Novalja**	43.23	298	P	**P**	**07 58 04.4**	**-0.7**
TIP	**Timpagrande**	43.24	290	⇑P	**P**	**07 58 04.7**	**-0.7**
TIP	**Timpagrande**	43.24	290	P	**P**	**07 58 03.6**	**-1.8**
TIP				IAmb	IAmb	07 58 28.1	
	comp=Z,1µm,1.2s						
GEC2	**GERESS Array S**	43.24	304	*e*P	**P**	**07 58 05.3**	**0.0**
	comp=Z,1µm,1.5s,baz=81,slow=8.0						
GEC2				*e*S	**S**	**08 04 31.8**	**-0.1**
	baz=81,slow=14						
GEC2				*e*SS	**SS**	**08 07 50.7**	**+5.9**
	baz=80,slow=18						
GEC2	**GERESS Array S**	43.24	304	P	**P**	**07 58 04.6**	**-0.6**
GERES	**GERESS Array B**	43.24	304	P	**P**	**07 58 05.2**	**-0.1**
	comp=Z,36nm,0.7s,baz=75,slow=7.1,SNR=48						
GERES				LR	LR	08 17 42.1	
	comp=Z,471µm,19.9s,baz=90,slow=38						
GERES	**GERESS Array B**	43.24	304	P	**P**	**07 58 04.7**	**-0.6**
JECH	**Jecheon**	43.25	73	P	P	07 58 12.0	+6.6
	SNR=16						
JECH	**Jecheon**	43.25	73	P	**P**	**07 58 09.0**	**+3.6**
	SNR=23						
RABC	**Rab**	43.26	298	P	**P**	**07 58 03.8**	**-1.5**
SGRT	**San Giovanni R**	43.27	294	P	**P**	**07 58 05.2**	**-0.5**
SGRT				IAmb	IAmb	07 58 27.4	
	comp=Z,993nm,1.0s						
KHC	**Kasperske Hory**	43.28	305	*e*P	**P**	**07 58 05.5**	**-0.1**
KHC				*e*S	**S**	**08 04 33.9**	**+1.6**
KHC				AMS	AMS	08 17 10.0	
	comp=Z,580µm,15.5s						
KHC	**Kasperske Hory**	43.28	305	*c i*P	**P**	**07 58 05.5**	**-0.1**
KHC				pmax	pmax		
	comp=Z,2µm,1.1s						
KHC				MLR	MLR		
	comp=Z,990µm,18.0s						
KHC	**Kasperske Hory**	43.28	305	⇑P	**P**	**07 58 05.6**	**+0.1**
KHC	**Kasperske Hory**	43.28	305	P	**P**	**07 58 04.8**	**-0.8**
CEY	**Cerknica**	43.30	300	⇑*i*P	**P**	**07 58 05.5**	**-0.2**
BOSB	**Boseong-gun**	43.31	77	P	P	07 58 12.0	+6.1
	SNR=13						
KSMGY	**Mungyeong**	43.31	74	P	P	07 58 12.1	+6.2
	SNR=16						
KSMGY	**Mungyeong**	43.31	74	P	**P**	**07 58 08.5**	**+2.5**
	SNR=16						
RIY	**Rijeka**	43.34	299	*e*P	**P**	**07 58 07.3**	**+1.3**
RIY	**Rijeka**	43.34	299	P	**P**	**07 58 06.7**	**+0.7**
NBB28	**Valnes**	43.35	331	*e*P	**P**	**07 58 06.3**	**+0.5**
CLL	**Collm**	43.36	308	*i*P	**P**	**07 58 05.8**	**-0.3**
CLL				*e*S	**S**	**08 04 35.0**	**+1.7**
CLL				pmax	pmax		
	comp=Z,728nm,1.1s						
CLL	**Collm**	43.36	308	*i*P	**P**	**07 58 05.8**	**-0.3**
	comp=Z,728nm,1.1s						
CLL				*i*		07 58 22.0	
	comp=Z,971nm,1.5s						
CLL				*e*Pmax		07 58 25.0	
CLL				*e*		07 58 28.0	
	comp=Z,952nm,1.4s						
CLL				*e*Plp		07 58 46.0	
	comp=N,2µm,16.9s						
CLL				*e*Plp		07 58 46.0	
	comp=E,8µm,17.0s						
CLL				*e*Plp		07 58 46.0	
	comp=Z,11µm,16.5s						
CLL				*e*PP	**PcP**	**07 59 58.0**	**+3.5**
CLL				*e*PPlp		08 00 04.0	
CLL				*e*PPlp		08 00 04.0	
CLL				*e*PPlp		08 00 04.0	
	comp=Z,26µm,10.2s						
CLL				*e*S	**S**	**08 04 35.0**	**+1.7**
	comp=N,84µm,27.1s						
CLL				*e*S	**S**	**08 04 35.0**	**+1.7**
	comp=E,31µm,16.3s						
CLL				*e*sS	**sS**	**08 04 49.0**	**+6.3**
CLL				*e*SS	SS	08 07 30.0	-17
CLL				Lmax		08 18 00.0	
CLL	**Collm**	43.36	308	*e*P	**P**	**07 58 05.3**	**-0.8**
	comp=E,728nm,1.1s,baz=81,slow=8.0						
CLL				*e*S	**S**	**08 04 38.7**	**+5.4**
	baz=81,slow=14						
CLL	**Collm**	43.36	308	P	**P**	**07 58 05.0**	**-1.1**
CLL				IAMs_20	IAMs_20	08 17 54.4	
	comp=Z,454µm,20.0s						
COP	**Copenhagen**	43.37	314	*e*P	**P**	**07 58 07.9**	**+1.8**
COP				IVmB_BB		07 58 13.2	
	comp=Z,142µm,2.2s						
COP				IAmb	IAmb	07 58 20.8	
	comp=Z,9µm,1.0s						
KSCPR	**CHUPUNGNYEONG**	43.39	75	P	**P**	**07 58 09.2**	**+2.6**
	SNR=7.5						
KOHB	**KOHEUNG**	43.41	77	P	**P**	**07 58 09.3**	**+2.6**
	SNR=19						
KSDGY	**Daegwallycong**	43.44	73	P	**P**	**07 58 11.0**	**+3.9**
	SNR=19						
KSJMJ	**Jumunjin**	43.44	72	P	P	07 58 14.1	+7.1
	SNR=19						
KSJMJ	**Jumunjin**	43.44	72	P	**P**	**07 58 09.7**	**+2.8**
	SNR=17						
KSYOW	**Yeongwol**	43.44	73	P	**P**	**07 58 10.4**	**+3.4**
	SNR=35						
KSYOW	**Yeongwol**	43.44	73	P	**P**	**07 58 06.5**	**-0.5**
	SNR=24						
HAMB	**Hamyang**	43.46	76	P	P	07 58 13.1	+6.0
	SNR=12						
KSSAJ	**Sangju**	43.47	75	P	**P**	**07 58 11.8**	**+4.6**
	SNR=12						
NBB17	**Glomfjord B¥r**	43.47	330	*e*P	**P**	**07 58 07.2**	**+0.4**
NACB	**Ninganchiao**	43.47	94	P	**P**	**07 58 08.8**	**+1.4**
NACB				IAmb	IAmb	07 59 02.1	
	comp=Z,1µm,1.2s						
NACB				IAMs_20	IAMs_20	08 19 06.9	
	comp=Z,422µm,20.0s						
JRMM	**Jerantut**	43.48	134	P	**P**	**07 58 07.0**	**-0.4**
NBB05	**Inndyr**	43.48	331	*e*P	**P**	**07 58 07.8**	**+1.0**
KSKCH	**Geochang**	43.56	76	P	**P**	**07 58 10.8**	**+2.9**
	SNR=18						
NBB30	**Finnes**	43.59	331	*e*P	**P**	**07 58 08.2**	**+0.5**
YOJB	**Youngju**	43.59	74	P	**P**	**07 58 12.0**	**+3.8**
	SNR=19						
YOJB	**Youngju**	43.59	74	P	**P**	**07 58 08.0**	**-0.2**
	SNR=30						
GWYB	**Gwangyang**	43.62	77	P	P	07 58 16.0	+7.6
	SNR=11						
SMRN	**Sveta Marina**	43.63	299	P	**P**	**07 58 06.4**	**-1.9**
GMDB	**Geomundo**	43.63	78	P	P	07 58 15.0	+6.4
	SNR=6.9						
YULB	**Yu-li**	43.64	95	P	**P**	**07 58 10.7**	**+1.9**
YULB				IAmb	IAmb	07 58 52.0	
	comp=Z,1µm,1.5s						
YULB				IAMs_20	IAMs_20	08 19 27.3	
	comp=Z,795µm,19.0s						
MYKA	**Terra Mystica**	43.66	301	*i*P	**P**	**07 58 08.5**	**-0.1**
	comp=Z,81nm,0.8s,SNR=68						
CADS	**Cadrg**	43.67	300	*i*P	**P**	**07 58 08.3**	**-0.4**
NBB13	**Alf Garage**	43.68	330	*e*P	**P**	**07 58 08.9**	**+0.4**
N2VI	**Vinje**	43.69	333	*e*P	**P**	**07 58 08.1**	**-0.4**
OKEB	**Okgye-meyeon**	43.69	73	P	P	07 58 15.0	+6.0
	SNR=20						
OKEB	**Okgye-meyeon**	43.69	73	P	**P**	**07 58 12.0**	**+3.0**
	SNR=19						
TIXI	**Tiksi**	43.70	22	P	**P**	**07 58 06.9**	**-1.7**
	comp=Z,78nm,0.7s,baz=264,slow=5.2,SNR=56						
TIXI				LR	LR	08 17 18.0	
	comp=Z,1375µm,18.6s,baz=254,slow=38						
TIXI	**Tiksi**	43.70	22	*d i*P	**P**	**07 58 07.7**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,536nm,1.4s						
TIXI				MLR	MLR		
	comp=Z,1319µm,18.0s						
TIXI	**Tiksi**	43.70	22	⇑P	**P**	**07 58 07.2**	**-1.4**
TIXI	**Tiksi**	43.70	22	P	**P**	**07 58 07.1**	**-1.5**
TIXI				IAmb	IAmb	07 58 41.6	
	comp=Z,592nm,0.7s						
KSGWL	**Sabuk**	43.71	73	P	P	07 58 14.3	+5.2
	SNR=7.5						
KSGWL	**Sabuk**	43.71	73	P	**P**	**07 58 11.4**	**+2.4**
	SNR=21						
WET	**Wettzell**	43.73	305	*e*P	**P**	**07 58 09.1**	**-0.1**
	comp=Z,769nm,1.2s,baz=81,slow=8.0						
WET				*e*SS	SS	08 08 04.4	+10
	baz=80,slow=18						
SHERE	**Police Station**	43.74	241	⇑*i*P	**P**	**07 58 10.5**	**+0.9**
KONS	**Konsvik**	43.74	330	*e*P	**P**	**07 58 09.4**	**+0.5**
KONS				*e*S	**S**	**08 04 37.2**	**-1.2**
PRED	**Cave del Predi**	43.75	301	P	**P**	**07 58 09.0**	**-0.4**
STOK	**Stokkvaagen**	43.75	330	*e*P	**P**	**07 58 09.5**	**+0.4**
TWG	**Pinlang**	43.76	96	P	**P**	**07 58 11.6**	**+2.0**
TWG				IAmb	IAmb	07 58 53.1	
	comp=Z,2µm,1.1s						
TWG				IAMs_20	IAMs_20	08 18 38.8	
	comp=Z,658µm,20.0s						
NC405	**NORSAR Array S**	43.77	322	P	**P**	**07 58 07.5**	**-1.8**
KBA	**Koelnbreinsper**	43.77	302	*i*P	**P**	**07 58 09.6**	**-0.2**
	comp=Z,36nm,0.7s,SNR=41						
NBB40	**Tonnes**	43.79	330	*e*P	**P**	**07 58 10.0**	**+0.7**
HOPEN	**Hopen**	43.80	345	*e*P	**P**	**07 58 09.6**	**+0.3**
HOPEN				IVmBBB		07 58 16.8	
	comp=Z,19µm,2.2s						
HOPEN				*e*S	**S**	**08 04 39.7**	**+0.6**
HOPEN				*e*SS	**SS**	**08 07 55.2**	**+0.7**
HOPEN				IVMs_BB	IVMs_BB	08 18 41.1	
	comp=Z,691µm,12.8s						
TANN	**Tannenbergstha**	43.81	307	*e*P	**P**	**07 58 09.6**	**-0.3**
	comp=Z,866nm,1.4s,baz=81,slow=8.0						
KSTBA	**Taebaek**	43.83	73	P	**P**	**07 58 14.1**	**+3.9**
	SNR=31						
NC602	**NORSAR Array S**	43.84	322	*e*P	**P**	**07 58 09.8**	**0.0**
NC602				IVmB_BB		07 58 16.9	
	comp=Z,10µm,2.0s						
NC602				*e*S	**S**	**08 04 39.5**	**-0.5**
NC602				*e*SS	**SS**	**08 07 56.3**	**+0.5**
NC602				IVMs_BB	IVMs_BB	08 17 16.1	
	comp=Z,551µm,12.1s						
NC602	**NORSAR Array S**	43.84	322	P	**P**	**07 58 08.4**	**-1.4**
NKC	**Novy Kostel**	43.85	306	*e*P	**P**	**07 58 10.8**	**+0.7**
NKC				AMS	AMS	08 18 00.0	
	comp=Z,687µm,14.4s						
NKC	**Novy Kostel**	43.85	306	*e*P	**P**	**07 58 10.8**	**+0.7**
NKC				MLR	MLR		
	comp=Z,687µm,14.4s						
CHYB	**Chungyang**	43.86	74	P	**P**	**07 58 14.0**	**+3.6**
	SNR=18						
CHYB	**Chungyang**	43.86	74	P	P	07 58 17.0	+6.6
	SNR=19						
YNDB	**Yeoundo**	43.88	77	P	P	07 58 17.0	+6.4
	SNR=11						
WERN	**Wernitzgruen**	43.89	306	*e*P	**P**	**07 58 10.4**	**0.0**
	comp=Z,1µm,1.9s,baz=81,slow=8.0						
EUSB	**Uiseong**	43.89	74	P	**P**	**07 58 14.0**	**+3.4**
	SNR=18						
LOF	**Lofoten**	43.89	332	*e*P	**P**	**07 58 10.7**	**+0.6**
LOF				*e*S	**S**	**08 04 40.7**	**+0.2**
LOF				IVMs_BB	IVMs_BB	08 17 06.3	
	comp=Z,438µm,13.6s						
KSEUS	**ULSEONG**	43.89	74	P	**P**	**07 58 14.1**	**+3.6**
	SNR=18						
PTCC	**Patocco-Chiusa**	43.90	301	⇑P	**P**	**07 58 09.9**	**-0.6**
GUNZ	**Gunzen**	43.91	306	*e*P	**P**	**07 58 10.3**	**-0.2**
	comp=Z,889nm,1.4s,baz=81,slow=8.0						
WERD	**Werda**	43.91	307	*e*P	**P**	**07 58 10.2**	**-0.4**
	comp=Z,856nm,1.3s,baz=81,slow=8.0						
NSS	**Namsos**	43.94	327	*e*P	**P**	**07 58 11.6**	**+1.1**
NSS				IVmB_BB		07 58 19.0	
	comp=Z,11µm,5.0s						
NSS				*e*S	**S**	**08 04 38.8**	**-2.5**
NSS				IVMs_BB	IVMs_BB	08 16 56.2	
	comp=Z,1032µm,12.5s						
BRJN	**Brijuni**	43.94	298	P	**P**	**07 58 11.7**	**+0.9**
EURB	**Uiryeong-eup**	43.94	76	P	P	07 58 17.0	+6.0
	SNR=8.2						
NC303	**NORSAR Array S**	43.94	322	P	**P**	**07 58 09.6**	**-1.1**
NC303				IAmb	IAmb	07 58 33.8	
	comp=Z,899nm,0.8s						
NB201	**NORSAR Array S**	43.97	322	P	**P**	**07 58 09.0**	**-2.0**
PLN	**Plauen**	44.00	307	*e*P	**P**	**07 58 11.0**	**-0.3**
	comp=Z,781nm,1.4s,baz=81,slow=8.0						
NB2	**NORSAR Subarra**	44.01	322	P	**P**	**07 58 09.5**	**-1.8**
	comp=Z,1µm,1.1s,baz=92,slow=8.6						
NB2	**NORSAR Subarra**	44.01	322	P	**P**	**07 58 09.5**	**-1.8**
	baz=92,slow=8.6						
NOA	**NORSAR Array B**	44.01	322	P	**P**	**07 58 09.8**	**-1.5**
	comp=Z,165nm,0.8s,baz=330,slow=11,SNR=93						
NOA				PP	PP	08 00 15.5	+22
	comp=Z,108nm,0.9s,baz=82,slow=9.4,SNR=3.3						
NOA				LR	LR	08 17 53.7	
	comp=Z,766µm,19.9s,baz=90,slow=38						
RJOB	**Jochberg**	44.02	303	*e*P	**P**	**07 58 11.1**	**-0.4**
	comp=Z,461nm,1.1s,baz=81,slow=8.0						
KSADO	**Andong**	44.07	74	P	P	07 58 17.0	+5.0
	SNR=23						
KSADO	**Andong**	44.07	74	P	**P**	**07 58 15.0**	**+3.0**
	SNR=22						
I45RU	**USSURIYSK INFR**	44.07	63	*i*		12 00 10.0	
	baz=282,slow=314,SNR=9.2						
ROTZ	**Rotzenmuhle**	44.07	306	*e*P	**P**	**07 58 12.1**	**+0.3**
	comp=Z,259nm,1.5s,baz=81,slow=8.0						
USA0B	**Ussuriysk Arra**	44.08	63	P	**P**	**07 58 11.3**	**-0.6**
USA0B				pmax	pmax		
	comp=Z,252nm,1.2s						
USA0B	**Ussuriysk Arra**	44.08	63	P	**P**	**07 58 11.3**	**-0.6**
USRK	**Ussuriysk Ar.**	44.08	63	P	**P**	**07 58 11.2**	**-0.8**
	comp=Z,71nm,0.9s,baz=289,slow=6.9,SNR=27						
USRK				PP	PP	08 00 16.2	+22
	comp=Z,53nm,0.9s,baz=289,slow=5.8,SNR=4.8						
USRK				LR	LR	08 18 33.3	
	comp=Z,1029µm,18.6s,baz=281,slow=39						
USRK	**Ussuriysk Ar.**	44.08	63	P	**P**	**07 58 10.8**	**-1.2**
MEND	**High School, M**	44.09	240	⇑*i*P	**P**	**07 58 11.7**	**-0.9**
IMWB	**Imwonan-gil**	44.09	73	P	P	07 58 19.0	+6.8
	SNR=15						
N2VA	**Vr¸y**	44.11	332	*e*P	**P**	**07 58 12.4**	**+0.5**
ZOU	**Zoufplan**	44.13	301	P	**P**	**07 58 11.8**	**-0.8**
NEUB	**Neuenburg**	44.14	308	*e*P	**P**	**07 58 11.8**	**-0.5**
	comp=Z,1µm,1.1s,baz=81,slow=8.0						
NAO01	**NORSAR Array S**	44.16	322	P	**P**	**07 58 10.9**	**-1.5**
NAO01				IAmb	IAmb	07 59 10.6	
	comp=Z,1µm,1.1s						
CEL	**Celeste**	44.16	289	⇑P	**P**	**07 58 12.2**	**-0.7**
CEL	**Celeste**	44.16	289	P	**P**	**07 58 12.6**	**-0.2**
YKDB	**Yokjido**	44.18	77	P	P	07 58 19.0	+6.1
	SNR=12						
BJO1	**Bjornoya**	44.18	342	*e*P	**P**	**07 58 12.7**	**+0.3**
BJO1				IVmB_BB		07 58 19.6	
	comp=Z,17µm,2.3s						
BJO1				*e*S	**S**	**08 04 45.6**	**+0.9**
BJO1				*e*SS	**SS**	**08 08 03.2**	**+1.1**
BJO1				IVMs_BB	IVMs_BB	08 18 08.2	
	comp=Z,497µm,13.5s						
KSMAS	**Masan**	44.21	76	P	**P**	**07 58 17.7**	**+4.6**
	SNR=19						
KSYOC	**YEONGCHEON**	44.22	75	P	P	07 58 19.2	+6.0
	SNR=8.1						
NBO00	**NORSAR Array S**	44.22	322	P	**P**	**07 58 10.4**	**-2.5**
OSL	**Oslo**	44.22	320	*e*P	**P**	**07 58 13.9**	**+1.0**
OSL				IVmB_BB		07 58 20.2	
	comp=Z,11µm,2.1s						
OSL				*e*S	**S**	**08 04 43.2**	**-2.4**
OSL				IVMs_BB	IVMs_BB	08 16 54.3	
	comp=Z,368µm,11.1s						
UJN	**ULJIN**	44.22	73	P	P	07 58 19.7	+6.5
	SNR=17						
MIYA	**Miryang-si**	44.23	76	P	P	07 58 20.0	+6.7
	SNR=13						
NC204	**NORSAR Array S**	44.24	322	P	**P**	**07 58 11.0**	**-2.1**
KSDAG	**Daegu**	44.25	75	P	P	07 58 20.0	+6.5
	SNR=12						
VLA	**Vladivostok**	44.26	64	*d i*P	**P**	**07 58 13.3**	**-0.1**
VLA				pmax	pmax		
	comp=Z,998nm,1.1s						
VLA				MLR	MLR		
	comp=Z,936µm,19.0s						
N2RO	**R¸st**	44.30	331	*e*P	**P**	**07 58 14.2**	**+0.8**
KSULJ	**Uljin**	44.32	74	P	P	07 58 21.0	+7.0
	SNR=15						
MOX	**Moxa**	44.32	307	*e*P	**P**	**07 58 13.5**	**-0.3**
	comp=Z,779nm,1.2s,baz=81,slow=8.0						
MOX				*e*S	**S**	**08 04 49.1**	**+1.7**
	baz=81,slow=14						
MOX				*e*SS	**ScS**	**08 08 16.8**	**+5.3**
	baz=80,slow=18						
MOX				*e*L	L	08 16 37.3	
	comp=Z,392µm,20.7s						
PAOL	**Paolisi**	44.32	293	P	**P**	**07 58 14.0**	**-0.1**
PAOL				IAmb	IAmb	07 58 47.0	
	comp=Z,574nm,0.9s						
WADE	**Clinic, Wadera**	44.33	232	*i*P	**P**	**07 58 15.4**	**+0.8**
FLTG	**Flechtingen**	44.33	309	*e*P	**P**	**07 58 12.8**	**-1.1**
	comp=Z,1µm,1.1s,baz=81,slow=8.0						
FLTG	**Flechtingen**	44.33	309	P	**P**	**07 58 13.2**	**-0.6**
KUJA	**Jangpyeong**	44.34	76	P	P	07 58 22.0	+7.8
	SNR=6.5						
KUJA	**Jangpyeong**	44.34	76	P	P	07 58 20.0	+5.8
	SNR=11						
STAL	**STALIGIAL**	44.36	301	P	**P**	**07 58 13.3**	**-1.0**
STAL				IAmb	IAmb	07 58 38.7	
	comp=Z,713nm,1.1s						
YODB	**Yeongdeok**	44.38	74	P	P	07 58 21.1	+6.6
	SNR=13						
ABTA	**Abfaltersbach**	44.40	301	*i*P	**P**	**07 58 13.5**	**-1.1**
	comp=Z,225nm,0.9s,SNR=30						
DILA	**Dilla**	44.47	234	*e*P	P	07 58 23.3	+7.7
NGLE	**Hospital, Nege**	44.52	231	*i*P	**P**	**07 58 16.6**	**+0.6**
MNSI	**Mandailing Nat**	44.52	140	P	**P**	**07 58 14.8**	**-1.0**
	comp=Z,17µmcomp=Z,1µm,0.9s						
OVD	**Ostervraa, Den**	44.53	317	*e*P	**P**	**07 58 18.6**	**+3.2**
OVD				IAmb	IAmb	07 58 30.9	
	comp=Z,2µm,1.3s						
CIMO	**Cimolais**	44.54	301	P	**P**	**07 58 14.6**	**-1.1**
CIMO				IAmb	IAmb	07 58 39.4	
	comp=Z,935nm,1.1s						
TBLU	**Trondheim**	44.57	325	*e*P	**P**	**07 58 15.1**	**-0.6**

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TBLU                                eS        S         08 04 50.2 -0.5
TBLU                                eSS       SS        08 08 08.3 -1.8
TBLU                                 IVMs_BB  IVMs_BB   08 17 54.1
      comp=Z,340μm,11.3s
ASSE  Asse, Remlinge    44.70 309   eP        P         07 58 16.2 -0.6
      comp=Z,2μm,2.1s,baz=81,slow=8.0
ASSE                                epP       pP        07 58 21.5 -1.2
BSEG  Bad Segeberg      44.71 312   eP        P         07 58 16.6 -0.3
      comp=Z,2μm,1.3s,baz=81,slow=8.0
BSEG                                eS        S         08 04 55.5 +2.6
      baz=81,slow=14
GRA1  Grafenberg Arr    44.71 306    P        P         07 58 15.5 -1.5
GRA1                                 IAmb     IAmb      07 58 54.8
      comp=Z,1μm,1.0s
GRA1                                 IAMs_20  IAMs_20   08 18 59.2
      comp=Z,485μm,18.0s
GRF   Grafenberg Arr    44.71 306    P        P         07 58 15.5 -1.5
GRF                                  pmax     pmax
      comp=Z,1μm,1.0s
GRF                                  MLR      MLR
      comp=Z,485μm,18.0s
GRF   Grafenberg Arr    44.71 306   eP        P         07 58 17.5 +0.5
      comp=Z,2μm,1.3s,baz=81,slow=8.0
GRF                                 epP       pP        07 58 23.7 +0.7
GRF                                 eS        S         08 04 58.5 +5.4
      baz=81,slow=14
GRF                                 eSS       ScS       08 08 25.0  +11
      baz=80,slow=18
GRF                                 eL        L         08 19 09.4
      comp=Z,452μm,18.1s
GRFO  Grafenberg        44.72 306    P        P         07 58 16.5 -0.5
GRFO                                 pmax     pmax
      comp=Z,1μm,1.1s
GRFO                                 MLR      MLR
      comp=Z,354μm,18.0s
GRFO  Grafenberg        44.72 306    P        P         07 58 16.5 -0.5
GRFO                                 IAmb     IAmb      07 58 54.8
      comp=Z,1μm,1.1s
GRFO                                 IAMs_20  IAMs_20   08 20 33.2
      comp=Z,354μm,18.0s
KONO  Kongsberg         44.79 320ceP          P         07 58 17.3 -0.2
KONO                                 pmax     pmax
      comp=Z,777nm,1.1s
KONO                                 MLR      MLR
      comp=Z,366μm,15.0s
KONO  Kongsberg         44.79 320   eP        P         07 58 17.6 +0.2
KONO                                eS        S         08 04 54.0 +0.1
KONO                                 IVMs_BB  IVMs_BB   08 17 13.4
      comp=Z,341μm,11.6s
KONO  Kongsberg         44.79 320  ⇓P         P         07 58 16.8 -0.7
KONO  Kongsberg         44.79 320    P        P         07 58 16.6 -0.9
KONO                                 IAmb     IAmb      07 58 33.0
      comp=Z,756nm,1.1s
KONO  Kongsberg         44.79 320    IAMs_20  IAMs_20   08 20 13.3
      comp=Z,386μm,18.0s
AQU   L'Aquila          44.80 295    P        P         07 58 18.2 +0.3
AQU                                  pmax     pmax
      comp=Z,1μm,1.0s
AQU                                  MLR      MLR
      comp=Z,376μm,20.0s
AQU   L'Aquila          44.80 295   eP        P         07 58 18.1 +0.2
AQU   L'Aquila          44.80 295  ⇑P         P         07 58 18.2 +0.3
AQU   L'Aquila          44.80 295    P        P         07 58 18.2 +0.3
AQU                                  IAMs_20  IAMs_20   08 20 23.9
      comp=Z,376μm,20.0s
NRCA  Norcia            44.88 296    P        P         07 58 18.2 -0.3
NRCA                                 IAmb     IAmb      07 58 41.4
      comp=Z,1μm,1.0s
WTTA  Wattenberg        44.88 302   i P       P         07 58 17.9 -0.7
      comp=Z,700nm,1.0s,SNR=46
WATA  Walderalm         44.91 302   i P       P         07 58 17.8 -0.9
      comp=Z,310nm,0.9s,SNR=38
CLZ   Clausthal         44.93 309   eP        P         07 58 18.3 -0.4
      comp=Z,1μm,1.6s,baz=81,slow=8.0
CLZ                                 eS        S         08 04 57.0 +0.8
      baz=81,slow=14
FUR   Furstenfeldbru    44.95 304   eP        P         07 58 19.1 +0.2
      comp=Z,2μm,1.2s,baz=81,slow=8.0
FUR                                 eS        S         08 05 00.5 +4.0
      baz=81,slow=14
FUR                                 eSS       SS        08 08 18.1 +0.3
      baz=80,slow=18
GOREE District Admin    44.99 238⇑iP          P         07 58 23.4 +3.5
NRDL  Niedersach Rie    45.00 310   eP        P         07 58 19.0 -0.1
      comp=Z,2μm,1.4s,baz=81,slow=8.0
NRDL                                eS        S         08 04 59.1 +2.2
      baz=81,slow=14
GIDAE Health Center,    45.01 240⇑iP          P         07 58 21.9 +1.9
DOMB  Dombas            45.07 323   eP        P         07 58 19.4 -0.3
DOMB                                eS        S         08 04 57.0 -1.0
DOMB                                eSS       SS        08 08 18.9 -0.8
DOMB                                 IVMs_BB  IVMs_BB   08 18 05.0
      comp=Z,451μm,12.2s
JTU   Tsushima          45.08  77  ⇑P         P         07 58 24.9 +4.8
JTU   Tsushima          45.08  77    P        P         07 58 21.4 +1.4
GOET  G??ttrup          45.08 316   i P       P         07 58 23.6 +3.8
GOET                                 IAmb     IAmb      07 58 40.6
      comp=Z,932nm,0.9s
CTI   Castel Tesino     45.13 301    P        P         07 58 19.6 -0.9
CTI                                  pmax     pmax
      comp=Z,537nm,0.9s
CTI   Castel Tesino     45.13 301    P        P         07 58 19.6 -0.9
CTI                                  IAmb     IAmb      07 58 43.7
      comp=Z,537nm,0.9s
MUD   Monsted U'grnd    45.15 315   i P       P         07 58 23.0 +2.7
MUD                                  IAmb     IAmb      07 58 44.3
      comp=Z,10μm,2.8s
MUD   Monsted U'grnd    45.15 315  ⇓P         P         07 58 24.1 +3.8
SQTA  Sankt Quirin      45.18 302   i P       P         07 58 19.8 -1.0
      comp=Z,414nm,1.0s,SNR=33
MURB  Monte Urbino      45.19 296    P        P         07 58 22.0 +1.0
GTTG  Gottingen         45.22 308   eP        P         07 58 20.8 -0.2
      comp=Z,2μm,1.1s,baz=81,slow=8.0
MOTA  Moosalm           45.22 302   i P       P         07 58 20.3 -1.0
      comp=Z,544nm,1.0s,SNR=65
TEOL  Teolo             45.27 300    P        P         07 58 21.3 -0.2
DGAR  Diego Garcia      45.30 181⇑eP          P         07 58 22.3 +0.4
DGAR                                 pmax     pmax
      comp=Z,743nm,2.5s
DGAR  Diego Garcia      45.30 181    P        P         07 58 24.1 +2.2
DGAR                                 P        P         07 58 24.1 +2.2
DGAR  Diego Garcia      45.30 181  ⇓P         P         07 58 22.8 +0.8
DGAR  Diego Garcia      45.30 181    P        P         07 58 20.9 -1.1
UBBA  Unterbreizbach    45.31 307   eP        P         07 58 21.2 -0.4
      comp=Z,1μm,1.8s,baz=81,slow=8.0
UBBA                                eS        S         08 05 01.7 +0.3
      baz=81,slow=14
HOMB  Homborsund        45.40 318   eP        P         07 58 22.8 +0.5
HOMB                                 IVmBBB             07 58 29.8
      comp=Z,15μm,2.3s
HOMB                                eS        S         08 05 01.9 -0.7
HOMB                                eScS      ScS       08 08 16.9 -1.2
HOMB                                 IVMs_BB  IVMs_BB   08 18 10.7
      comp=Z,462μm,9.7s
RETA  Reutte            45.42 303   i P       P         07 58 21.7 -1.1
      comp=Z,213nm,1.5s,SNR=38
RETH  Rethem/Aller,     45.42 310   eP        P         07 58 22.2 -0.3
      comp=Z,1μm,1.4s,baz=81,slow=8.0
RETH                                epP       pP        07 58 28.6 +0.2
SKAR  Skarslia          45.43 321   eP        P         07 58 23.4 +0.8
SKAR                                 IVmBBB             07 58 28.6
      comp=Z,11μm,2.5s
SKAR                                eS        S         08 05 04.3 +1.0
SKAR                                eSS       SS        08 08 27.1 +0.9
SKAR                                 IVMs_BB  IVMs_BB   08 18 09.4
      comp=Z,438μm,10.2s
FETA  Feichten          45.54 302   i P       P         07 58 21.3 -2.5
      comp=Z,309nm,1.1s,SNR=31
MSEY  Mahe Island       45.55 205   i P       P         07 58 22.3 -1.7
      SNR=11
MSEY  Mahe Island       45.55 205    P        P         07 58 24.9 +0.9
MSEY                                 pmax     pmax
      comp=Z,238nm,1.1s
MSEY  Mahe Island       45.55 205    P        P         07 58 25.4 +1.4
MSEY  Mahe Island       45.55 205  ⇓P         P         07 58 23.1 -0.8
MSEY  Mahe Island       45.55 205    P        P         07 58 24.9 +0.9
MSEY  Mahe Island       45.55 205   i P       P         07 58 21.6 -2.4
MGAB  Montegabbione     45.57 296  ⇓P         P         07 58 24.0 +0.1
RAFF  Raffo Rosso       45.65 288    P        P         07 58 24.4 -0.2
BKNI  Bangkinang        45.67 139  ⇓P         P         07 58 23.9 -1.0
BKNI  Bangkinang        45.67 139    P        P         07 58 24.0 -0.9
      comp=Z,82μmcomp=Z,22μmcomp=Z,2μm,0.9s
BKNI  Bangkinang        45.67 139    P        P         07 58 24.3 -0.6
BKNI  Bangkinang        45.67 139    P        P         07 58 24.9  0.0
GRNR  Gornyy            45.72  53⇑iP          P         07 58 25.1 +0.1
GRNR                                eS        S         08 05 08.0 +0.3
GRNR                                 pmax     pmax
      comp=E,10.0nm,1.1s
GRNR                                 pmax     pmax
      comp=Z,30nm,1.1s
GRNR                                 smax     smax
      comp=E,20nm,1.1s
GRNR                                 MLR      MLR
      comp=E,629μm,14.0s
GRNR                                 MLR      MLR
      comp=N,493μm,15.0s
GRNR                                 MLR      MLR
      comp=Z,1028μm,14.0s
BBP   Basco             45.74  98⇓eP          P         07 58 29.3 +3.8
BBP   Basco             45.74  98⇑eP          P         07 58 41.0  +16
MOL   Molde             45.79 324   eP        P         07 58 25.7 +0.4
MOL                                  IVmBBB             07 58 33.3
      comp=Z,14μm,2.1s
MOL                                 eS        S         08 05 10.4 +2.2
MOL                                 eSS       SS        08 08 34.5 +2.3
MOL                                  IVMs_BB  IVMs_BB   08 17 15.3
      comp=Z,391μm,12.7s
UBR   Ueberruh          45.81 303   eP        P         07 58 25.4 -0.4
      comp=Z,1μm,1.2s,baz=81,slow=8.0
HSPB  Hornsund (broa    45.96 345   eP        P         07 58 27.0 +0.5
HSPB                                 IVmB_BB            07 58 35.3
      comp=Z,8μm,2.0s
HSPB                                eS        S         08 05 10.5 +0.2
HSPB                                eSS       SS        08 08 39.8 +5.1
HSPB                                 IVMs_BB  IVMs_BB   08 20 02.0
      comp=Z,509μm,11.8s
MYKOM Kota Tinggi       45.97 134    P        P         07 58 30.0 +2.7
MYKOM Kota Tinggi       45.97 134    P        P         07 58 27.4 +0.1
SALO  Salr              45.99 300  ⇑P         P         07 58 27.7 +0.4
SALO  Salr              45.99 300    P        P         07 58 27.2  0.0
ZCCA  Zocca             45.99 298    P        P         07 58 27.4 +0.1
PPI   Padang Panjang    46.01 140    P        P         07 58 27.2 -0.4
OSSC  Osservatorio P    46.02 297    P        P         07 58 27.9 +0.4
AKN   Aaknes            46.04 323   eP        P         07 58 27.4  0.0
AKN                                  IVmB_BB            07 58 35.7
      comp=Z,10μm,2.1s
AKN                                 eS        S         08 05 13.3 +1.3
AKN                                 eSS       SS        08 08 34.2 -2.4
AKN                                  IVMs_BB  IVMs_BB   08 18 36.6
      comp=Z,502μm,13.6s
DAVA  Damuels           46.05 303   i P       P         07 58 26.8 -1.1
      comp=Z,141nm,0.7s,SNR=81
SNART Snartemo          46.08 318   eP        P         07 58 28.1 +0.4
SNART                               eS        S         08 05 14.7 +2.2
SNART                               eSS       SS        08 08 35.6 -1.5
SNART                                IVMs_BB  IVMs_BB   08 18 32.4
      comp=Z,1003μm,11.0s
HLG   Helgoland         46.11 312   eP        P         07 58 27.5 -0.4
      comp=Z,3μm,1.5s,baz=81,slow=8.0
HLG   Helgoland         46.11 312  ⇑P         P         07 58 32.6 +4.7
SISI  Saibi             46.11 142    P        P         07 58 28.2 -0.2
      comp=Z,47μmcomp=Z,15μmcomp=Z,739nm,0.9s
STU   Stuttgart         46.19 305    P        P         07 58 29.0 +0.3
STU                                  pmax     pmax
      comp=Z,918nm,1.3s
STU                                  MLR      MLR
      comp=Z,378μm,20.0s
STU   Stuttgart         46.19 305   eP        P         07 58 28.5 -0.2
      comp=Z,2μm,1.2s,baz=81,slow=8.0
STU                                 eS        S         08 05 15.0 +0.6
      baz=81,slow=14
STU                                 eSS       SS        08 08 42.5 +3.2
      baz=80,slow=18
STU   Stuttgart         46.19 305  ⇑P         P         07 58 31.4 +2.7
STU   Stuttgart         46.19 305    P        P         07 58 29.0 +0.3
STU                                  IAmb     IAmb      07 58 53.2
      comp=Z,918nm,1.3s
STU                                  IAMs_20  IAMs_20   08 18 58.2
      comp=Z,378μm,20.0s
CORL  Corleone          46.22 289    P        P         07 58 28.3 -0.9
CORL                                 IAmb     IAmb      07 59 03.2
      comp=Z,2μm,1.6s
SPB2  Spitsbergen Ar    46.26 346    P        P         07 58 28.9  0.0
SPB2                                 IAmb     IAmb      07 59 01.4
      comp=Z,864nm,0.9s
SPA0  Spitsbergen Ar    46.27 346   eP        P         07 58 29.1 +0.2
SPA0                                 IVmB_BB            07 58 37.1
      comp=Z,14μm,2.3s
SPA0                                eS        S         08 05 13.8 -1.0
SPA0                                eSS       SS        08 08 42.0 +2.2
SPA0                                 IVMs_BB  IVMs_BB   08 21 02.0
      comp=Z,485μm,16.8s
SPITS Spitsbergen Ar    46.27 346    LR       LR        08 21 25.2
      comp=Z,1315μm,18.3s,baz=95,slow=41
SPITS Spitsbergen Ar    46.27 346    P        P         07 58 28.8 -0.1
SPITS                                pmax     pmax
      comp=Z,2μm,1.4s
ODD1  Odda              46.28 320   eP        P         07 58 29.6 +0.3
ODD1                                 IVmB_BB            07 58 37.9
      comp=Z,14μm,3.0s
ODD1                                eS        S         08 05 19.5 +4.0
ODD1                                eSS       SS        08 08 45.1 +4.4
ODD1                                 IVMs_BB  IVMs_BB   08 18 51.7
      comp=Z,372μm,14.6s
PRMA  PARMA             46.35 299    P        P         07 58 31.8 +1.8
TNS   Taunus Mts        46.39 307   eP        P         07 58 30.0 -0.3
      comp=Z,521nm,1.3s,baz=81,slow=8.0
CLTB  Caltabellotta     46.39 289  ⇑P         P         07 58 29.6 -0.9
CLTB  Caltabellotta     46.39 289    P        P         07 58 28.8 -1.7
CLTB                                 IAmb     IAmb      07 58 52.4
      comp=Z,1μm,1.4s
BLS5  Blasjo            46.40 320   eP        P         07 58 30.8 +0.5
BLS5                                 IVmBBB             07 58 36.3
      comp=Z,16μm,2.5s
BLS5                                eS        S         08 05 16.9 -0.3
BLS5                                 IVMs_BB  IVMs_BB   08 18 12.1
      comp=Z,429μm,12.0s
PDSI  Padang            46.43 140    P        P         07 58 29.5 -1.4
      comp=Z,49μmcomp=Z,12μmcomp=Z,792nm,1.1s
HYA   Hoyanger          46.45 322   eP        P         07 58 30.5  0.0
HYA                                 eS        S         08 05 17.6 -0.1
IBBN  Ibbenburen        46.45 310   eP        P         07 58 30.2 -0.5
      comp=Z,2μm,1.6s,baz=81,slow=8.0
IBBN  Ibbenburen        46.45 310  ⇑P         P         07 58 30.7  0.0
VLC   Villacollemand    46.45 298  ⇑P         P         07 58 31.4 +0.5
VLC   Villacollemand    46.45 298    P        P         07 58 31.4 +0.5
VLC                                  IAMs_20  IAMs_20   08 19 50.5
      comp=Z,395μm,20.0s
CASP  Castiglione de    46.49 296    P        P         07 58 30.5 -0.7
CASP                                 IAmb     IAmb      07 59 27.1
      comp=Z,1μm,1.7s
APYP  Conner            46.64 102⇓eP          P         07 58 33.3 +0.7
APYP  Conner            46.64 102⇓iP          P         07 58 35.7 +3.1
JNU   Nakatsue          46.75  78    LR       LR        08 19 47.1
      comp=Z,837μm,21.9s,baz=300,slow=38
JNU   Nakatsue          46.75  78  ⇑P         P         07 58 33.0 -0.3
JNU   Nakatsue          46.75  78    P        P         07 58 33.2 -0.2
JNU   Nakatsue          46.75  78    P        P         07 58 33.7 +0.3
SAMP  Sagada Mountai    46.84 103⇓iP          P         07 58 35.6 +1.4
SAMP  Sagada Mountai    46.84 103⇑eP          S         08 05 14.0  -10
BFO   Black Forest      46.84 304    P        P         07 58 32.9 -1.0
BFO                                  pmax     pmax
      comp=Z,781nm,1.2s
BFO                                  MLR      MLR
      comp=Z,476μm,19.0s
BFO   Black Forest      46.84 304   eP        P         07 58 33.3 -0.6
      comp=Z,420nm,1.1s,baz=81,slow=8.0
BFO                                 eS        S         08 05 26.3 +2.5
      baz=81,slow=14
BFO                                 eSS       SS        08 08 57.0 +6.9
      baz=80,slow=18
BFO   Black Forest      46.84 304    P        P         07 58 33.3 -0.6
BFO   Black Forest      46.84 304    P        P         07 58 32.9 -1.0
BFO                                  IAmb     IAmb      07 58 57.9
      comp=Z,782nm,1.2s
BFO                                  IAMs_20  IAMs_20   08 19 19.5
      comp=Z,476μm,19.0s
BUG   Bochum--Univer    46.90 309   eP        P         07 58 33.8 -0.4
      comp=Z,1μm,1.4s,baz=81,slow=8.0
BUG                                 eS        S         08 05 25.1 +0.6
      baz=81,slow=14
BUG                                 eSS       SS        08 08 54.5 +3.7
      baz=80,slow=18
BER   Bergen            46.91 321   eP        P         07 58 34.0 -0.1
BER                                  IVmB_BB            07 58 39.6
      comp=Z,11μm,3.6s
BER                                 eS        S         08 05 23.7 -0.6
BER                                 eSS       SS        08 08 50.6 +0.1
BER                                  IVMs_BB  IVMs_BB   08 19 04.9
      comp=Z,461μm,11.4s
BOB   Bobbio (Coli)     46.94 299  ⇑P         P         07 58 35.3 +0.5
ASK   Askoy             46.97 321   eP        P         07 58 34.6 +0.1
ASK                                  IVmB_BB            07 58 42.4
      comp=Z,28μm,2.6s
ASK                                 eS        S         08 05 25.2  0.0
ASK                                 eSS       SS        08 08 53.6 +2.1
ASK                                  IVMs_BB  IVMs_BB   08 19 05.9
      comp=Z,966μm,11.6s
FOO   Floro             46.98 323   eP        P         07 58 34.8 +0.1
FOO                                  IVmB_BB            07 58 41.5
      comp=Z,13μm,4.3s
FOO                                 eS        S         08 05 26.0 +0.7
FOO                                 eSS       SS        08 08 52.1 +0.4
FOO                                  IVMs_BB  IVMs_BB   08 19 13.7
      comp=Z,403μm,16.3s
MSSA  Maissana          47.01 299    P        P         07 58 33.2 -2.1
MSSA                                 IAmb     IAmb      07 59 03.5
      comp=Z,888nm,1.1s
KMY   Karmoy            47.03 319   eP        P         07 58 35.6 +0.5
KMY                                  IVmB_BB            07 58 43.2
      comp=Z,9μm,2.6s
KMY                                 eS        S         08 05 27.4 +1.3
KMY                                 eSS       SS        08 08 51.0 -1.6
KMY                                  IVMs_BB  IVMs_BB   08 18 40.5
      comp=Z,287μm,12.5s
TEY   Ternei            47.07  60⇑eP          P         07 58 37.1 +1.5
TEY                                 e                   08 05 27.2
TEY                                  pmax     pmax
      comp=N,10.0nm,1.0s
TEY                                  pmax     pmax
      comp=E,20nm,1.0s
TEY                                  pmax     pmax
      comp=Z,30nm,1.0s
TEY                                  pmax     pmax
      comp=Z,800nm,5.8s
TEY                                  pmax     pmax
      comp=E,300nm,7.4s
JSU   Suzuyama          47.08  80  ⇑P         P         07 58 36.0 +0.1
JSU   Suzuyama          47.08  80    P        P         07 58 34.9 -1.0
JSU                                  IAmb     IAmb      07 59 02.8
      comp=Z,1μm,1.5s
SUE   Sulen             47.15 322   eP        P         07 58 36.0 +0.1
SUE                                 eS        S         08 05 29.1 +1.4
SUE                                 eSS       SS        08 08 54.8 +0.5
SUE                                  IVMs_BB  IVMs_BB   08 19 16.7
      comp=Z,321μm,22.1s
AHRW  Bad Neuenahr-A    47.19 307   eP        P         07 58 36.3 -0.2
      comp=Z,817nm,1.1s,baz=81,slow=8.0
SMPP  San Manuel, Pa    47.22 104⇑eP          P         07 58 25.8  -11
SMPP  San Manuel, Pa    47.22 104⇓iP          S         08 05 20.0  -10
KBS   Kingsbay          47.37 347⇑eP          P         07 58 37.4 -0.1
KBS                                  pmax     pmax
      comp=Z,1μm,0.9s
KBS                                  MLR      MLR
      comp=Z,1249μm,17.0s
KBS   Kingsbay          47.37 347   i P       P         07 58 40.4 +2.9
KBS   Kingsbay          47.37 347   eP        P         07 58 38.0 +0.4
KBS                                  IVmBBB             07 58 45.5
      comp=Z,13μm,2.7s
KBS                                 eS        S         08 05 30.7 +0.1
KBS                                 eSS       SS        08 08 58.1 +0.5
KBS                                  IVMs_BB  IVMs_BB   08 21 54.2
      comp=Z,538μm,17.0s
KBS   Kingsbay          47.37 347  ⇑P         P         07 58 37.4 -0.1
KBS   Kingsbay          47.37 347    P        P         07 58 36.4 -1.1
JOW   Kunigami          47.44  87    P        P         07 58 38.1 -0.7
      comp=Z,86nm,0.5s,baz=301,slow=10,SNR=11
JOW   Kunigami          47.44  87  ⇑P         P         07 58 38.5 -0.3
JOW   Kunigami          47.44  87    P        P         07 58 38.3 -0.5
JOW                                  IAmb     IAmb      07 59 01.4
      comp=Z,779nm,1.2s
JOW   Kunigami          47.44  87    P        P         07 58 40.3 +1.5
ECH   Echery            47.63 304    P        P         07 58 37.8 -2.2
ECH                                  pmax     pmax
      comp=Z,763nm,1.6s
ECH                                  MLR      MLR
      comp=Z,434μm,20.0s
ECH   Echery            47.63 304  ⇓P         P         07 58 41.5 +1.5
ECH   Echery            47.63 304    P        P         07 58 37.8 -2.2
ECH                                  IAmb     IAmb      07 59 04.3
      comp=Z,763nm,1.6s
ECH                                  IAMs_20  IAMs_20   08 19 42.3
      comp=Z,434μm,20.0s
JHS   Saijyo            47.74  74  ⇓P         P         07 58 39.2 -1.8
JHS   Saijyo            47.74  74    P        P         07 58 40.1 -1.0
JHS                                  IAmb     IAmb      07 59 09.9
      comp=Z,553nm,0.9s
BTNL  Ternell           47.77 308   dP        P         07 58 40.7 -0.4
      comp=Z,274nm,1.0s
BTNL                                dPP       PP        08 00 38.9 +6.3
BTNL                                dS        S         08 05 45.2 +8.3
PPSI  Pulau Pagai       47.80 142    P        P         07 58 42.3 +0.7
      comp=Z,81μmcomp=Z,33μmcomp=Z,2μm,1.6s
MEM   Membach           47.84 308   dP        P         07 58 41.4 -0.2
      comp=Z,273nm,0.9s
MEM                                 dPP       PP        08 00 38.8 +5.6
MEM                                 dS        S         08 05 40.6 +2.7
MEM                                 dS        S         08 05 49.0  +11
MEM                                 dx        x         08 09 01.6
BHOU  Houvegnez         47.90 307   dP        P         07 58 42.5 +0.5
      comp=Z,202nm,1.1s
BHOU                                dPP       PP        08 00 38.3 +4.6
BHOU                                dS        S         08 05 42.4 +3.7
BHOU                                dx        x         08 09 03.0
BHOU                                dx        x         08 09 24.5
MONC  Moncucco Torin    47.90 300  ⇓P         P         07 58 42.2  0.0
NKL   Nikolayevsk       47.91  49   eP        P         07 58 40.5 -1.5
NKL                                 e                   08 00 04.0
NKL                                 e                   08 00 35.6
NKL                                 eS        S         08 05 33.4 -5.3
NKL                                 e                   08 08 33.6
NKL                                  pmax     pmax
      comp=E,2.0nm,1.2s
NKL                                  pmax     pmax
      comp=N,2.0nm,1.0s
NKL                                  pmax     pmax
      comp=Z,943nm,1.3s
NKL                                  pmax     pmax
      comp=Z,2μm,4.0s
NKL                                  smax     smax
      comp=E,3.0nm,1.0s
NKL                                  smax     smax
      comp=N,12nm,1.8s
NKL                                  MLR      MLR
      comp=Z,870μm,15.0s
KRJI  Kerinci           47.94 140    P        P         07 58 41.4 -1.4
      comp=Z,88μmcomp=Z,53μmcomp=Z,4μm,1.0s
WLF   Walferdange       47.95 306   dP        P         07 58 42.5 +0.1
      comp=Z,467nm,0.9s
WLF                                 dPP       PP        08 00 39.1 +4.8
WLF   Walferdange       47.95 306    P        P         07 58 42.4  0.0
WLF                                  pmax     pmax
      comp=Z,648nm,0.9s
WLF                                  MLR      MLR
      comp=Z,397μm,19.0s
WLF   Walferdange       47.95 306   eP        P         07 58 42.4  0.0
      comp=Z,841nm,1.0s,baz=81,slow=8.0
WLF   Walferdange       47.95 306  ⇓P         P         07 58 43.0 +0.6
WLF   Walferdange       47.95 306    P        P         07 58 42.4  0.0
WLF                                  IAmb     IAmb      07 58 51.8
      comp=Z,648nm,0.9s
WLF                                  IAMs_20  IAMs_20   08 20 45.7
      comp=Z,397μm,19.0s
SENIN Lac Senin/Sane    47.99 302    P        P         07 58 41.6 -1.5
SENIN                                IAmb     IAmb      07 59 09.5
      comp=Z,632nm,0.9s
SENIN                                IAMs_20  IAMs_20   08 21 13.9
      comp=Z,494μm,20.0s
BEBN  Eben Emael        48.01 308   dP        P         07 58 42.8  0.0
      comp=Z,188nm,0.8s
BEBN                                dPP       PP        08 00 40.8 +6.1
BEBN                                dS        S         08 05 40.7 +0.5
BEBN                                dx        x         08 09 00.2
DSRI  Dabo              48.25 135    P        P         07 58 44.8 -0.3
      comp=Z,43μmcomp=Z,8μmcomp=Z,439nm,1.2s
BCLA  Clavier           48.32 308   dP        P         07 58 44.7 -0.5
      comp=Z,150nm,1.1s
BCLA                                dS        S         08 05 54.4  +10
LUBP  Lubang            48.38 107⇑iP          P         07 58 46.7 +0.6
LUBP  Lubang            48.38 107⇓iP          P         07 58 49.0 +2.9
MACP  Maragondon, Ca    48.41 106⇓iP          P         07 58 47.4 +1.1
RCHB  Rochefort         48.42 307   dP        P         07 58 45.8 -0.3
RCHB                                dPP       PP        08 00 43.5 +5.0
RCHB                                dS        S         08 05 45.2 -1.0
RCHB                                dx        x         08 09 11.2
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BGES	**Gesves**	**48.46**	**308**	*d*P	**P**	**07 58 46.0**	**-0.3**
	comp=Z,185nm,1.1s						
BGES				*d*S	S	08 05 56.5	+10
BGES				*d*PKiKP	**PKiKP**	**08 07 08.0**	**+5.9**
VSL	**Villasalto**	**48.57**	**293**	⇑P	**P**	**07 58 47.1**	**-0.3**
VSL	**Villasalto**	**48.57**	**293**	P	**P**	**07 58 46.3**	**-1.1**
VSL				IAmb	IAmb	07 59 17.8	
	comp=Z,454nm,1.1s						
LODK	**Lodwar**	**48.63**	**234**	P	**P**	**07 58 48.3**	**+0.1**
TGY	**Tagaytay City**	**48.67**	**106**	LR	LR	08 22 01.9	
	comp=Z,296µm,21.9s,baz=270,slow=39						
BMRD	**Maredsous**	**48.68**	**308**	*d*P	**P**	**07 58 47.8**	**-0.3**
	comp=Z,332nm,1.0s						
BMRD				*d*S	S	08 06 02.8	+13
BMRD				*d*x	x	08 09 43.7	
JMBI	**JAMBI**	**48.70**	**137**	P	**P**	**07 58 48.9**	**+0.4**
	comp=Z,13µmcomp=Z,653nm,1.5s						
BNI	**Bardonecchia**	**48.76**	**300**	P	**P**	**07 58 47.7**	**-1.2**
BNI				pmax	pmax		
	comp=Z,1µm,1.3s						
BNI				MLR	MLR		
	comp=Z,599µm,20.0s						
BNI	**Bardonecchia**	**48.76**	**300**	⇑P	**P**	**07 58 48.3**	**-0.7**
BNI	**Bardonecchia**	**48.76**	**300**	P	**P**	**07 58 47.7**	**-1.2**
BNI				IAMs_20	IAMs_20	08 20 47.5	
	comp=Z,599µm,20.0s						
JMN	**Monobe**	**48.81**	**76**	⇑P	**P**	**07 58 50.2**	**+0.8**
JMN	**Monobe**	**48.81**	**76**	P	**P**	**07 58 49.1**	**-0.3**
UCC	**Uccle**	**48.82**	**308**	*d*P	**P**	**07 58 53.6**	**+4.5**
UCC				*d*S	**S**	**08 05 53.3**	**+1.6**
UCC				*d*x	x	08 09 15.2	
DOU	**Dourbes**	**48.84**	**307**	*d*P	**P**	**07 58 48.5**	**-0.8**
	comp=Z,282nm,1.1s						
DOU				*d*PP	**PP**	**08 00 46.3**	**+4.0**
DOU				*d*S	**S**	**08 05 53.6**	**+1.6**
DOU				*d*x	x	08 09 37.1	
SNF	**Seneffe**	**48.94**	**308**	*d*P	**P**	**07 58 49.7**	**-0.2**
	comp=Z,292nm,1.0s						
SNF				*d*S	**S**	**08 05 51.3**	**-2.0**
PGP	**Puerto Galera**	**49.06**	**107**	⇑*e*P	**P**	**07 58 55.0**	**+3.6**
LQP	**Lukban**	**49.12**	**106**	⇑*e*P	**P**	**07 58 55.2**	**+3.1**
MASI	**Maura Aman, Be**	**49.24**	**140**	P	**P**	**07 58 51.6**	**-1.1**
	comp=Z,50µmcomp=Z,4µm,0.9s						
JWT	**Wachi**	**49.36**	**73**	⇑P	**P**	**07 58 53.3**	**-0.2**
JWT	**Wachi**	**49.36**	**73**	P	**P**	**07 58 53.0**	**-0.4**
ENPP	**El Nido**	**49.38**	**110**	⇓*i*P	**P**	**07 58 56.6**	**+2.7**
TYV	**Tymovskoe**	**49.58**	**51**	*e*P	P	07 58 59.9	+5.0
TYV				*e*S	**S**	**08 06 10.7**	**+8.4**
TYV				pmax	pmax		
	comp=Z,10µm,6.4s						
TYV				pmax	pmax		
	comp=Z,272nm,1.2s						
TAMR	**Tamra**	**49.63**	**290**	⇑P	**P**	**07 58 55.2**	**-0.3**
UGL	**Uglegorsk**	**49.65**	**54**	*e*P	**P**	**07 58 55.1**	**-0.3**
UGL				*e*		08 00 45.4	
UGL				*e*S	**S**	**08 05 56.8**	**-6.5**
UGL				pmax	pmax		
	comp=Z,11µm,7.1s						
UGL				pmax	pmax		
	comp=Z,700nm,1.1s						
UGL				smax	smax		
	comp=N,37µm,11.0s						
UGL				smax	smax		
	comp=E,66µm,9.0s						
UGL				MLR	MLR		
	comp=Z,1155µm,15.0s						
UGL				MLR	MLR		
	comp=N,1654µm,14.0s						
UGL				MLR	MLR		
	comp=E,885µm,14.0s						
BATP	**Bataraza**	**49.80**	**114**	⇑*e*P	**P**	**07 58 58.6**	**+1.5**
PPR	**Puerto Princes**	**49.82**	**112**	⇑*e*P	**P**	**07 58 59.9**	**+2.8**
SJMP	**San Jose**	**49.84**	**108**	⇓*i*P	**P**	**07 59 00.3**	**+3.0**
JCNP	**Jose Panganiba**	**49.90**	**104**	⇑*i*P	**P**	**07 58 55.6**	**-2.1**
RUSF	**Rustrel**	**49.90**	**299**	⇑P	P	07 59 02.4	+4.9
KEST	**Kesra**	**49.96**	**288**	P	**P**	**07 58 58.0**	**-0.1**
	comp=E,96nm,0.8s,baz=20,slow=0.5,SNR=28						
KEST				LR	LR	08 24 00.6	
	comp=E,282µm,20.0s,baz=8.5,slow=41						
KEST	**Kesra**	**49.96**	**288**	P	**P**	**07 58 58.3**	**+0.2**
KSM	**Kuching**	**50.07**	**128**	⇑P	**P**	**07 58 59.1**	**0.0**
KSM	**Kuching**	**50.07**	**128**	P	**P**	**07 59 01.0**	**+1.9**
KSM	**Kuching**	**50.07**	**128**	P	**P**	**07 58 59.1**	**0.0**
KSM				IAmb	IAmb	07 59 30.8	
	comp=Z,999nm,1.2s						
KSM	**Kuching**	**50.07**	**128**	P	**P**	**07 58 59.5**	**+0.4**
SSB	**Saint Sauveur**	**50.14**	**301**	P	**P**	**07 58 57.6**	**-1.8**
SSB				pmax	pmax		
	comp=Z,849nm,1.2s						
SSB				MLR	MLR		
	comp=Z,370µm,18.0s						
SSB	**Saint Sauveur**	**50.14**	**301**	⇑P	**P**	**07 58 59.0**	**-0.4**
SSB	**Saint Sauveur**	**50.14**	**301**	P	**P**	**07 58 57.5**	**-1.8**
SSB				IAmb	IAmb	07 59 23.9	
	comp=Z,849nm,1.2s						
SSB	**Saint Sauveur**	**50.14**	**301**	IAMs_20	IAMs_20	08 23 03.9	
	comp=Z,370µm,18.0s						
LRW	**Lerwick**	**50.16**	**321**	*e*P	**P**	**07 58 58.2**	**-1.0**
LRW				IAmb	IAmb	07 59 07.0	
	comp=Z,1µm,1.1s						
LRW				IAMs_20	IAMs_20	08 21 32.8	
	comp=Z,964µm,15.3s						
LRW	**Lerwick**	**50.16**	**321**	⇓P	**P**	**07 58 58.6**	**-0.6**
JMZ	**Minamidaito 2**	**50.25**	**86**	⇑P	P	07 59 06.5	+6.1
TATN	**Tataouine**	**50.33**	**284**	⇑P	**P**	**07 59 00.1**	**-0.8**
PMBI	**Palembang**	**50.39**	**137**	P	**P**	**07 59 01.3**	**-0.1**
	comp=Z,81µmcomp=Z,77µmcomp=Z,2µm,1.3s						
PMBI	**Palembang**	**50.39**	**137**	P	**P**	**07 59 01.3**	**-0.1**
PMBI	**Palembang**	**50.39**	**137**	P	**P**	**07 59 02.0**	**+0.6**
JSD	**Sado**	**50.45**	**69**	⇑P	**P**	**07 59 01.6**	**-0.1**
JSD	**Sado**	**50.45**	**69**	P	**P**	**07 59 02.2**	**+0.5**
AUQP	**San Andres**	**50.48**	**105**	⇓*i*P	P	07 59 11.5	+9.4
LHSI	**Lahat**	**50.48**	**139**	P	**P**	**07 59 00.0**	**-2.1**
	comp=Z,65µmcomp=Z,12µmcomp=Z,314nm,0.8s						
PPBI	**Pangkal Pinang**	**50.50**	**135**	P	**P**	**07 59 01.1**	**-1.2**
	comp=Z,67µmcomp=Z,19µmcomp=Z,776nm,1.0s						
SBUM	**Sibu**	**50.54**	**125**	⇓P	**P**	**07 59 02.9**	**+0.3**
SBUM	**Sibu**	**50.54**	**125**	P	**P**	**07 59 04.0**	**+1.4**
SBUM	**Sibu**	**50.54**	**125**	P	**P**	**07 59 02.5**	**-0.1**
INU	**Inuyama**	**50.55**	**72**	⇓P	**P**	**07 59 01.9**	**-0.7**
INU	**Inuyama**	**50.55**	**72**	P	**P**	**07 59 01.7**	**-0.8**
INU				IAmb	IAmb	07 59 23.9	
	comp=Z,426nm,0.9s						
INU				IAMs_20	IAMs_20	08 21 35.8	
	comp=Z,715µm,21.0s						
INU	**Inuyama**	**50.55**	**72**	P	**P**	**07 59 02.4**	**-0.1**
ELMS	**Elmsett, Ipswi**	**50.58**	**311**	*e*P	**P**	**07 59 02.6**	**+0.2**
ELMS				IAmb	IAmb	07 59 10.1	
	comp=Z,2µm,1.1s						
ELMS				IAMs_20	IAMs_20	08 23 29.8	
	comp=Z,1001µm,16.2s						
KKM	**Kota Kinabalu**	**50.59**	**118**	⇓P	**P**	**07 59 03.5**	**+0.3**
KKM	**Kota Kinabalu**	**50.59**	**118**	P	**P**	**07 59 03.1**	**0.0**
KKM				IAMs_20	IAMs_20	08 21 07.6	
	comp=Z,443µm,22.0s						
KKM	**Kota Kinabalu**	**50.59**	**118**	P	**P**	**07 59 03.7**	**+0.6**
WACR	**West Acre**	**50.64**	**311**	*e*P	**P**	**07 59 02.5**	**-0.4**
WACR				IAmb	IAmb	07 59 10.9	
	comp=Z,2µm,0.9s						
WACR				IAMs_20	IAMs_20	08 24 15.4	
	comp=Z,705µm,16.4s						
YSS	**Yuzh-Sakhalins**	**50.67**	**56**	*ce*P	**P**	**07 59 02.0**	**-1.2**
YSS				*e*		08 01 05.0	
YSS				*e*S	**S**	**08 06 13.6**	**-4.0**
YSS				pmax	pmax		
	comp=E,4µm,7.0s						
YSS				pmax	pmax		
	comp=Z,13µm,7.0s						
YSS				pmax	pmax		
	comp=Z,750nm,1.2s						
YSS				smax	smax		
	comp=E,49µm,12.4s						
YSS				MLR	MLR		
	comp=E,482µm,18.0s						
YSS				MLR	MLR		
	comp=Z,706µm,18.0s						
YSS	**Yuzh-Sakhalins**	**50.67**	**56**	⇑P	**P**	**07 59 03.1**	**-0.1**
YSS	**Yuzh-Sakhalins**	**50.67**	**56**	P	**P**	**07 59 02.5**	**-0.8**
YSS				IAmb	IAmb	07 59 25.6	
	comp=Z,1µm,1.2s						
YSS				IAMs_20	IAMs_20	08 22 07.8	
	comp=Z,950µm,22.0s						
YSS	**Yuzh-Sakhalins**	**50.67**	**56**	P	**P**	**07 59 03.5**	**+0.3**
JGF	**Kuroka**	**50.71**	**72**	⇓P	**P**	**07 59 02.8**	**-1.0**
JGF	**Kuroka**	**50.71**	**72**	P	**P**	**07 59 03.4**	**-0.4**
CLF	**Chambon-Foret**	**50.85**	**305**	⇑P	**P**	**07 59 04.0**	**-0.5**
CLF	**Chambon-Foret**	**50.85**	**305**	P	**P**	**07 59 02.1**	**-2.5**
CLF				IAmb	IAmb	07 59 12.5	
	comp=Z,954nm,1.1s						
CLF				IAMs_20	IAMs_20	08 21 49.5	
	comp=Z,353µm,19.0s						
SCSP	**San Jose Seism**	**50.91**	**104**	⇓*i*P	P	07 59 10.7	+5.2
MJB9	**Matsu-Tunnel**	**50.97**	**70**	P	**P**	**07 59 05.2**	**-0.5**
MJB9				IAmb	IAmb	07 59 25.5	
	comp=Z,532nm,0.9s						
MAJO	**Matsushiro**	**50.98**	**70**	*d i*P	**P**	**07 59 04.6**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,471nm,0.9s						
MAJO				MLR	MLR		
	comp=Z,559µm,19.0s						
MAJO	**Matsushiro**	**50.98**	**70**	⇑P	**P**	**07 59 04.4**	**-1.4**
MAJO	**Matsushiro**	**50.98**	**70**	P	**P**	**07 59 04.5**	**-1.2**
MAJO	**Matsushiro**	**50.98**	**70**	IAMs_20	IAMs_20	08 21 39.0	
	comp=Z,577µm,21.0s						
MAJO	**Matsushiro**	**50.98**	**70**	P	**P**	**07 59 04.1**	**-1.6**
MAT	**Matsushiro**	**50.98**	**70**	P	**P**	**07 59 03.6**	**-2.1**
MAT				S	**S**	**08 06 26.2**	**+4.0**
MJAR	**Matsushiro Arr**	**50.98**	**70**	P	**P**	**07 59 04.8**	**-0.9**
	comp=Z,77nm,1.0s,baz=289,slow=9.0,SNR=33						
MJAR				LR	LR	08 22 01.1	
	comp=Z,510µm,19.6s,baz=305,slow=38						
MJAR	**Matsushiro Arr**	**50.98**	**70**	P	**P**	**07 59 04.6**	**-1.2**
MJAR				pmax	pmax		
	comp=Z,377nm,1.0s						
MJAR	**Matsushiro Arr**	**50.98**	**70**	P	**P**	**07 59 04.6**	**-1.2**
KMBO	**Kilima Mbogo**	**51.03**	**229**	P	**P**	**07 59 06.8**	**+0.2**
	comp=Z,29nm,1.1s,baz=27,slow=10,SNR=8.8						
KMBO				LR	LR	08 21 27.8	
	comp=Z,92µm,21.8s,baz=38,slow=37						
KMBO	**Kilima Mbogo**	**51.03**	**229**	*i* P	**P**	**07 59 05.5**	**-1.1**
	SNR=41						
KMBO	**Kilima Mbogo**	**51.03**	**229**	P	**P**	**07 59 06.0**	**-0.6**
KMBO				pmax	pmax		
	comp=Z,491nm,1.4s						
KMBO	**Kilima Mbogo**	**51.03**	**229**	P	**P**	**07 59 08.9**	**+2.3**
KMBO				P	**P**	**07 59 08.9**	**+2.3**
KMBO	**Kilima Mbogo**	**51.03**	**229**	⇑P	**P**	**07 59 06.2**	**-0.4**
KMBO	**Kilima Mbogo**	**51.03**	**229**	*e*P	**P**	**07 59 07.2**	**+0.6**
KMBO	**Kilima Mbogo**	**51.03**	**229**	P	**P**	**07 59 06.0**	**-0.6**
KMBO	**Kilima Mbogo**	**51.03**	**229**	*i* P	**P**	**07 59 07.9**	**+1.3**
CMAH	**Djebel Manchou**	**51.05**	**290**	P	**P**	**07 59 06.2**	**-0.2**
JEW	**Eniwo**	**51.06**	**62**	⇑P	**P**	**07 59 05.0**	**-1.2**
JEW	**Eniwo**	**51.06**	**62**	P	**P**	**07 59 05.2**	**-1.0**
ABSA	**Djebel Ababsia**	**51.14**	**289**	P	**P**	**07 59 05.2**	**-1.9**
MDSI	**Maura Dua**	**51.38**	**138**	P	**P**	**07 59 04.9**	**-4.0**
	comp=Z,43µmcomp=Z,4µmcomp=Z,102nm,0.9s						
ASAJ	**Asahikawa**	**51.43**	**60**	LR	LR	08 21 33.9	
	comp=Z,653µm,21.5s,baz=290,slow=37						
ASAJ	**Asahikawa**	**51.43**	**60**	P	**P**	**07 59 11.2**	**+2.2**
ASAJ				pmax	pmax		
	comp=Z,10µm,3.0s						
JKA	**Kamikawa-asahi**	**51.43**	**60**	P	**P**	**07 59 11.2**	**+2.2**
DRUM	**Mains of Drumt**	**51.44**	**317**	*e*P	**P**	**07 59 07.8**	**-1.1**
DRUM				IAmb	IAmb	07 59 16.2	
	comp=Z,820nm,1.2s						
DRUM				IAMs_20	IAMs_20	08 22 12.5	
	comp=Z,632µm,16.7s						
JTM	**Tenmabayashi**	**51.49**	**64**	⇓P	**P**	**07 59 08.5**	**-1.0**
JTM	**Tenmabayashi**	**51.49**	**64**	P	**P**	**07 59 08.2**	**-1.3**
KIBK	**Kibwezi**	**51.55**	**227**	P	**P**	**07 59 09.7**	**-0.6**
MLA1	**Latheron**	**51.60**	**319**	*e*P	**P**	**07 59 09.0**	**-1.0**
EDMD	**Edmundbyers**	**51.63**	**315**	*e*P	**P**	**07 59 09.4**	**-0.9**
EDMD				IAmb	IAmb	07 59 17.7	
	comp=Z,1µm,1.3s						
EDMD				IAMs_20	IAMs_20	08 24 24.0	
	comp=Z,514µm,14.9s						
RCP	**Roxas**	**51.64**	**107**	⇓*e*P	P	07 59 16.9	+6.0
HPK	**Haverah Park**	**51.65**	**313**	*e*P	**P**	**07 59 09.6**	**-0.9**
HPK				IAmb	IAmb	07 59 17.9	
	comp=Z,2µm,1.3s						
HPK				IAMs_20	IAMs_20	08 24 53.3	
	comp=Z,483µm,14.3s						
CKFL	**Kef-Lekhel**	**51.66**	**290**	P	**P**	**07 59 12.2**	**+1.2**
JSG	**Sagara**	**51.70**	**73**	⇑P	P	07 59 16.6	+5.4
JSG	**Sagara**	**51.70**	**73**	P	**P**	**07 59 12.7**	**+1.6**
JSG				IAmb	IAmb	07 59 39.1	
	comp=Z,1µm,1.1s						
MCD	**Coleburn Disti**	**51.70**	**318**	*e*P	**P**	**07 59 09.9**	**-0.9**
JMIC	**Jan Mayen**	**51.72**	**336**	*e*P	**P**	**07 59 11.4**	**+0.7**
JMIC				*e*S	**S**	**08 06 33.5**	**+2.0**
JMIC				IVMs_BB	IVMs_BB	08 21 14.2	
	comp=Z,186µm,15.5s						
SPMM	**Sapulut**	**51.72**	**119**	P	**P**	**07 59 14.0**	**+2.5**
LWLI	**Liwa**	**51.77**	**139**	P	**P**	**07 59 07.9**	**-4.0**
	comp=Z,13µmcomp=Z,1µm,0.6s						
CWF	**Charnwood Fore**	**51.78**	**312**	*e*P	**P**	**07 59 10.7**	**-0.7**
CWF				IAmb	IAmb	07 59 18.5	
	comp=Z,3µm,2.7s						
CWF				IAMs_20	IAMs_20	08 24 09.4	
	comp=Z,493µm,13.9s						
BIGH	**Upper Bighouse**	**51.84**	**319**	*e*P	**P**	**07 59 11.0**	**-0.8**
BIGH				IAmb	IAmb	07 59 19.3	
	comp=Z,1µm,1.2s						
BIGH				IAMs_20	IAMs_20	08 22 28.4	
	comp=Z,557µm,13.9s						
KLSI		**51.84**	**138**	P	P	07 59 07.0	-5.4
	comp=Z,24µmcomp=Z,4µmcomp=Z,146nm,1.1s						
LBWR	**Ladybower, Pea**	**51.85**	**313**	*e*P	**P**	**07 59 11.2**	**-0.8**
LBWR				IAmb	IAmb	07 59 19.3	
	comp=Z,1µm,1.2s						
LBWR				IAMs_20	IAMs_20	08 25 00.1	
	comp=Z,413µm,13.5s						
CASM	**Ain Smara**	**51.88**	**290**	P	**P**	**07 59 11.6**	**-1.0**
STKI	**Sintang**	**51.89**	**128**	P	**P**	**07 59 12.4**	**-0.4**
	comp=Z,38µmcomp=Z,15µmcomp=Z,645nm,1.2s						
CTEI	**Djebel Teioual**	**52.02**	**290**	P	**P**	**07 59 13.3**	**-0.4**
EDI	**Edinburgh**	**52.05**	**316**	*e*P	**P**	**07 59 12.3**	**-1.1**
EDI				IAmb	IAmb	07 59 20.6	
	comp=Z,1µm,1.3s						
EDI				IAMs_20	IAMs_20	08 24 01.4	
	comp=Z,674µm,15.4s						
KLI	**Kotabumi**	**52.06**	**138**	P	**P**	**07 59 10.8**	**-3.1**
	comp=Z,71µmcomp=Z,10µmcomp=Z,424nm,0.9s						
WOL	**Wolverton**	**52.11**	**310**	*e*P	**P**	**07 59 13.7**	**-0.2**
WOL				IAMs_20	IAMs_20	08 24 18.0	
	comp=Z,804µm,15.9s						
MA2	**Magadan**	**52.16**	**39**	*de*P	**P**	**07 59 13.9**	**-0.3**
MA2				pmax	pmax		
	comp=Z,343nm,1.2s						
MA2				MLR	MLR		
	comp=Z,773µm,16.0s						
MA2	**Magadan**	**52.16**	**39**	⇑P	**P**	**07 59 14.0**	**-0.2**
MA2	**Magadan**	**52.16**	**39**	P	**P**	**07 59 13.6**	**-0.6**
MA2				IAmb	IAmb	08 00 02.6	
	comp=Z,1µm,1.6s						
MA2	**Magadan**	**52.16**	**39**	P	**P**	**07 59 13.6**	**-0.6**
ESK	**Eskdalemuir**	**52.20**	**315**	*e*P	**P**	**07 59 13.5**	**-1.1**
ESK				IAmb	IAmb	07 59 21.8	
	comp=Z,812nm,1.2s						
ESK				IAMs_20	IAMs_20	08 23 58.5	
	comp=Z,1063µm,15.1s						
ESK	**Eskdalemuir**	**52.20**	**315**	P	**P**	**07 59 14.5**	**-0.1**
ESK				pmax	pmax		
	comp=Z,753nm,1.2s						
ESK	**Eskdalemuir**	**52.20**	**315**	⇓P	**P**	**07 59 13.8**	**-0.8**
ESK	**Eskdalemuir**	**52.20**	**315**	P	**P**	**07 59 14.5**	**-0.1**
ESK				IAmb	IAmb	07 59 22.1	
	comp=Z,754nm,1.2s						
ESK	**Eskdalemuir**	**52.20**	**315**	IAMs_20	IAMs_20	08 20 18.9	
	comp=Z,517µm,21.0s						
DFRA	**Djebel Bou Aff**	**52.22**	**290**	P	**P**	**07 59 14.7**	**-0.5**
SEY	**Seymchan**	**52.23**	**35**	LR	LR	08 20 57.5	
	comp=Z,999µm,18.0s,baz=280,slow=36						
KESW	**Keswick, Cumbr**	**52.33**	**314**	*e*P	**P**	**07 59 15.4**	**-0.1**
KESW				IAmb	IAmb	07 59 23.1	
	comp=Z,2µm,1.4s						
JMM	**Marumori**	**52.37**	**68**	⇓P	**P**	**07 59 14.7**	**-1.4**
JMM	**Marumori**	**52.37**	**68**	P	**P**	**07 59 15.6**	**-0.5**
INVG	**Invergeldie, C**	**52.39**	**317**	*e*P	**P**	**07 59 14.7**	**-1.3**
INVG				IAmb	IAmb	07 59 23.1	
	comp=Z,588nm,1.2s						
INVG				IAMs_20	IAMs_20	08 22 01.6	
	comp=Z,587µm,18.8s						
SWN1	**Swindon**	**52.40**	**310**	*e*P	**P**	**07 59 16.3**	**+0.2**
SWN1				IAmb	IAmb	07 59 23.1	
	comp=Z,11µm,2.5s						
SWN1				IAMs_20	IAMs_20	08 24 35.0	
	comp=Z,700µm,16.6s						
KASI	**Kota Agung**	**52.43**	**139**	P	**P**	**07 59 14.8**	**-1.9**
	comp=Z,62µmcomp=Z,7µmcomp=Z,636nm,0.9s						
NOR	**Nord**	**52.48**	**349**	*i* P	**P**	**07 59 18.1**	**+1.8**
NOR	**Nord**	**52.48**	**349**	⇑P	**P**	**07 59 15.8**	**-0.6**
ERM	**Erimo**	**52.53**	**62**	*ce*P	**P**	**07 59 17.7**	**+0.5**
ERM				pmax	pmax		
	comp=Z,496nm,0.8s						
ERM				MLR	MLR		
	comp=Z,1257µm,17.0s						
ERM	**Erimo**	**52.53**	**62**	⇑P	**P**	**07 59 18.8**	**+1.6**
ERM	**Erimo**	**52.53**	**62**	P	**P**	**07 59 16.9**	**-0.3**
ERM				IAmb	IAmb	07 59 50.2	
	comp=Z,382nm,0.7s						
JEM	**Erimo**	**52.53**	**62**	P	P	07 59 10.8	-6.4
JEM				IAmb	IAmb	07 59 50.2	
	comp=Z,395nm,0.7s						
STRD	**Stroud**	**52.54**	**311**	*e*P	**P**	**07 59 16.8**	**-0.4**
STRD				IAmb	IAmb	07 59 24.2	
	comp=Z,908nm,1.1s						
STRD				IAMs_20	IAMs_20	08 24 49.6	
	comp=Z,857µm,15.1s						
JYT	**Yasato**	**52.57**	**70**	⇑P	**P**	**07 59 15.8**	**-1.8**
JYT	**Yasato**	**52.57**	**70**	P	**P**	**07 59 16.3**	**-1.3**
CNOP	**Candoni, Negro**	**52.67**	**109**	⇓*e*P	P	07 59 25.1	+6.5
BLSI	**Bandar Lampung**	**52.69**	**138**	P	**P**	**07 59 16.6**	**-2.0**
	comp=Z,53µmcomp=Z,6µmcomp=Z,228nm,0.5s						
CKHR	**Kef el Ahmar**	**52.70**	**290**	P	**P**	**07 59 18.0**	**-0.8**
SET	**Setif**	**52.71**	**290**	P	**P**	**07 59 20.0**	**+1.2**
HLM1	**Long Mynd**	**52.76**	**312**	*e*P	**P**	**07 59 17.5**	**-1.3**
HLM1				IAMs_20	IAMs_20	08 24 40.1	
	comp=Z,687µm,14.1s						
PGBU	**Glenifferbraes**	**52.78**	**316**	*e*P	**P**	**07 59 18.1**	**-0.7**
PGBU				IAmb	IAmb	07 59 26.3	
	comp=Z,1µm,1.2s						
KAC	**Achnashellach**	**52.79**	**318**	*e*P	**P**	**07 59 18.1**	**-0.9**
MYLDM	**Lahad Datu**	**52.80**	**117**	⇑P	**P**	**07 59 22.1**	**+2.6**
MYLDM	**Lahad Datu**	**52.80**	**117**	P	**P**	**07 59 20.9**	**+1.4**
MYLDM				IAMs_20	IAMs_20	08 26 05.1	
	comp=Z,683µm,18.0s						
OLDB	**Oldbury-Upon-S**	**52.81**	**311**	*e*P	**P**	**07 59 18.7**	**-0.4**
OLDB				IAmb	IAmb	07 59 26.2	
	comp=Z,958nm,1.2s						
OLDB				IAMs_20	IAMs_20	08 24 58.2	
	comp=Z,760µm,15.2s						
NEWG	**New Galloway**	**52.82**	**315**	IAMs_20	IAMs_20	08 24 16.2	
	comp=Z,929µm,15.5s						
FOEL	**Foel Wylfa**	**52.84**	**312**	IAmb	IAmb	07 59 26.9	
	comp=Z,1µm,1.4s						
FOEL				IAMs_20	IAMs_20	08 24 41.2	
	comp=Z,523µm,16.5s						
KPL	**Plockton**	**53.02**	**318**	*e*P	**P**	**07 59 19.5**	**-1.1**
KPL				IAmb	IAmb	07 59 27.8	
	comp=Z,771nm,1.2s						
KPL				IAMs_20	IAMs_20	08 23 24.2	
	comp=Z,925µm,15.6s						
TEBE	**Entebbe**	**53.05**	**234**	*i* P	**P**	**07 59 21.2**	**-0.4**
LLW	**Llanuwychllyn**	**53.12**	**312**	*e*P	**P**	**07 59 21.4**	**0.0**
LLW				IAMs_20	IAMs_20	08 24 49.2	
	comp=Z,256µm,15.9s						
GAL1	**Galloway**	**53.16**	**315**	*e*P	**P**	**07 59 21.4**	**-0.2**
GAL1				IAmb	IAmb	07 59 29.1	
	comp=Z,714nm,1.2s						
GAL1				IAMs_20	IAMs_20	08 24 27.2	
	comp=Z,789µm,15.1s						
LAWE	**Loch Awe, Argy**	**53.16**	**317**	*e*P	**P**	**07 59 20.7**	**-0.9**
LAWE				IAmb	IAmb	07 59 29.2	
	comp=Z,1µm,1.2s						
JSA	**Saint Aubin**	**53.31**	**308**	*e*P	**P**	**07 59 21.3**	**-1.6**
JSA				IAMs_20	IAMs_20	08 26 03.4	
	comp=Z,428µm,14.0s						
JSA	**Saint Aubin**	**53.31**	**308**	⇑P	**P**	**07 59 22.4**	**-0.4**
LLP	**Lapu-Lapu**	**53.35**	**107**	*e*P	P	07 59 29.9	+6.3
WLF1	**Llynfaes**	**53.42**	**313**	*e*P	**P**	**07 59 23.8**	**+0.2**
WLF1				IAmb	IAmb	07 59 31.0	
	comp=Z,2µm,1.3s						
WLF1				IAMs_20	IAMs_20	08 26 04.9	
	comp=Z,1007µm,14.4s						
LEWI	**Lewis, Hebride**	**53.44**	**319**	*e*P	**P**	**07 59 23.7**	**0.0**
LEWI				IAmb	IAmb	07 59 31.2	
	comp=Z,1µm,1.4s						
LEWI				IAMs_20	IAMs_20	08 21 52.9	
	comp=Z,420µm,19.7s						
YRC	**Rhoscolyn**	**53.53**	**313**	*e*P	**P**	**07 59 24.6**	**+0.2**
DAG	**Danmarks Havn**	**53.60**	**343**	*i* P	**P**	**07 59 24.2**	**-0.4**
DAG	**Danmarks Havn**	**53.60**	**343**	⇑P	**P**	**07 59 23.1**	**-1.5**
YUK	**Yuzh-Kuril'sk**	**53.67**	**59**	*c i*P	**P**	**07 59 26.2**	**+0.6**
YUK				*e*		08 01 28.5	
YUK				*i* S	**S**	**08 07 00.1**	**+1.2**
YUK				*e*		08 09 14.6	
YUK				pmax	pmax		
	comp=Z,3µm,1.4s						
YUK				pmax	pmax		
	comp=Z,2µm,1.1s						
YUK				pmax	pmax		
	comp=N,1µm,1.4s						
YUK				pmax	pmax		
	comp=E,1µm,1.0s						
ATAF	**Djebel Tarf**	**53.68**	**290**	P	**P**	**07 59 25.0**	**-0.9**
SBJI	**Serang**	**53.79**	**137**	P	**P**	**07 59 24.4**	**-2.3**
	comp=E,265nm,0.9s						
CLGH	**Cloghs, Cushen**	**53.87**	**316**	IAMs_20	IAMs_20	08 24 27.6	
	comp=Z,509µm,15.6s						
ABMS	**Boumerdes**	**53.91**	**291**	P	**P**	**07 59 27.8**	**+0.4**
CGJI	**Cibinong**	**53.97**	**138**	P	**P**	**07 59 25.4**	**-2.7**
	comp=Z,60µmcomp=Z,10µmcomp=Z,383nm,0.9s						
DYA	**Yadsworthy**	**54.01**	**310**	*e*P	**P**	**07 59 27.4**	**-0.6**
DYA				IAmb	IAmb	07 59 34.9	
	comp=Z,864nm,1.4s						
DYA				IAMs_20	IAMs_20	08 22 18.5	
	comp=Z,805µm,15.7s						
RSBS	**Rosebush, Pemb**	**54.02**	**312**	*e*P	**P**	**07 59 27.0**	**-1.1**
RSBS				IAmb	IAmb	07 59 35.3	
	comp=Z,699nm,1.2s						
RSBS				IAMs_20	IAMs_20	08 22 01.5	
	comp=Z,627µm,20.6s						
PBKI	**Pangkalan Bun**	**54.18**	**129**	P	**P**	**07 59 28.2**	**-1.4**
	comp=Z,60µmcomp=Z,16µmcomp=Z,810nm,1.1s						
ADJB	**Djebel Djouab**	**54.18**	**291**	P	**P**	**07 59 28.7**	**-0.9**
ABA	**Alger-Bouzarea**	**54.21**	**292**	P	**P**	**07 59 29.9**	**+0.2**
DBJI	**Dramaga**	**54.48**	**137**	P	**P**	**07 59 28.2**	**-3.6**
	comp=Z,19µmcomp=Z,228nm,0.9s						
PAGZ	**Pagadian**	**54.52**	**110**	⇓*i*P	P	07 59 39.0	+6.8
DBG	**Daneborg**	**54.55**	**341**	*i* P	**P**	**07 59 32.3**	**+0.7**
DBG	**Daneborg**	**54.55**	**341**	⇑P	**P**	**07 59 31.6**	**+0.1**
DSB	**Dublin**	**54.57**	**314**	⇑P	**P**	**07 59 36.5**	**+4.5**
DSB	**Dublin**	**54.57**	**314**	P	**P**	**07 59 31.7**	**-0.3**
DSB				IAMs_20	IAMs_20	08 27 11.5	
	comp=Z,288µm,19.0s						
KUR	**Kuril'sk**	**54.59**	**57**	*c i*P	**P**	**07 59 36.4**	**+4.2**
KUR				*e*		08 01 35.8	
KUR				*e*PPP	PPP	08 02 51.2	
KUR				*e*S	**S**	**08 07 16.7**	**+5.5**
KUR				*e*SSS	SSS	08 12 52.2	
KUR				pmax	pmax		
	comp=N,171nm,1.2s						
KUR				pmax	pmax		
	comp=E,323nm,1.2s						
KUR				pmax	pmax		
	comp=Z,920nm,1.2s						
KUR				pmax	pmax		
	comp=Z,13µm,8.8s						
KUR				MLR	MLR		
	comp=Z,545µm,20.0s						
KUR				MLR	MLR		
	comp=N,479µm,17.0s						
KUR				MLR	MLR		
	comp=E,518µm,17.0s						
MBAR	**Mbarara**	**54.67**	**235**	P	**P**	**07 59 32.2**	**-1.2**
MBAR				pmax	pmax		
	comp=Z,188nm,0.8s						
MBAR				MLR	MLR		
	comp=Z,115µm,20.0s						
MBAR	**Mbarara**	**54.67**	**235**	P	**P**	**07 59 35.3**	**+1.9**
MBAR				P	**P**	**07 59 35.3**	**+1.9**
MBAR				P	**P**	**07 59 35.3**	**+1.9**
MBAR	**Mbarara**	**54.67**	**235**	⇑P	**P**	**07 59 32.1**	**-1.3**
MBAR	**Mbarara**	**54.67**	**235**	P	**P**	**07 59 32.1**	**-1.2**
MBAR	**Mbarara**	**54.67**	**235**	*i* P	**P**	**07 59 34.1**	**+0.7**
MTKI	**Muara Teweh, K**	**54.84**	**125**	P	**P**	**07 59 33.6**	**-0.8**
	comp=Z,41µmcomp=Z,9µmcomp=Z,240nm,1.2s						
COCO	**West Island**	**54.85**	**151**	P	**P**	**07 59 34.7**	**+0.3**
COCO				pmax	pmax		
	comp=Z,578nm,0.9s						
COCO	**West Island**	**54.85**	**151**	P	**P**	**07 59 34.7**	**+0.3**
COCO				IAmb	IAmb	08 00 04.0	
	comp=Z,578nm,0.8s						

CCA1	Carnmenellis	54.87	310	*e*P	P	07 59 33.4	-0.9
CCA1				IAmb	IAmb	07 59 41.4	
	comp=Z,464nm,1.1s						
CCA1				IAMs_20	IAMs_20	08 27 37.8	
	comp=Z,584µm,15.8s						
KOND	Kondoa	54.93	227	*i* P	P	07 59 36.6	+1.4
KOND				*e*		07 59 39.5	
	baz=32,slow=7.9						
KOND				*i* S	PcP	08 00 34.0	-3.2
IWEX	Carrickbyrne,	55.08	313	*e*P	P	07 59 35.4	-0.3
LEM	Lembang	55.18	136	LR	LR	08 27 22.8	
	comp=Z,109µm,19.2s,baz=329,slow=41						
LEM	Lembang	55.18	136	P	P	07 59 35.1	-1.9
	comp=Z,36µmcomp=Z,3µmcomp=Z,57nm,0.9s						
CNJI	Cibinong	55.32	137	P	P	07 59 33.9	-3.9
	comp=Z,62µmcomp=Z,5µmcomp=Z,298nm,1.1s						
GLSP	General Luna,	55.32	106	⇓*i*P	P	07 59 38.0	+0.1
EBNR	Beni Rached	55.53	292	P	P	07 59 42.0	+2.7
SBV	Sambava	55.65	207	⇓P	P	07 59 38.5	-1.7
SBV	Sambava	55.65	207	P	P	07 59 42.4	+2.2
ECHA	Ech Chlef	55.71	292	P	P	07 59 40.5	0.0
BUKP	Musuan	55.75	109	⇓*e*P	P	07 59 43.5	+2.4
SMKI	Samarinda	55.98	123	P	P	07 59 41.0	-1.7
	comp=Z,90µmcomp=Z,23µmcomp=Z,743nm,1.5s						
EANR	'Ain N'Sour	55.99	292	P	P	07 59 43.0	+0.4
DODT	Dodoma, Tanzan	55.99	226	*i* P	P	07 59 41.1	-1.8
SCO	Scoresbysund	56.17	336	P	P	07 59 43.7	+0.4
SCO				pmax	pmax		
	comp=Z,2µm,2.3s						
SCO				MLR	MLR		
	comp=Z,544µm,19.0s						
SCO	Scoresbysund	56.17	336	*i* P	P	07 59 45.0	+1.7
SCO	Scoresbysund	56.17	336	⇓P	P	07 59 46.4	+3.1
SCO	Scoresbysund	56.17	336	P	P	07 59 43.7	+0.4
SCO				IAmb	IAmb	08 00 15.6	
	comp=Z,2µm,2.3s						
SCO				IAMs_20	IAMs_20	08 23 28.2	
	comp=Z,544µm,19.0s						
OKGL	Djebel Kef Gue	56.28	292	P	P	07 59 49.0	+4.3
KPJI	Karang Pucung	56.32	135	P	P	07 59 42.1	-2.9
	comp=Z,226nm,0.9s						
BKB	Balikpapan	56.38	123	P	P	07 59 44.2	-1.3
	comp=Z,96µmcomp=Z,16µmcomp=Z,736nm,0.9s						
BKB	Balikpapan	56.38	123	P	P	07 59 46.1	+0.6
BKB				IAmb	IAmb	07 59 57.5	
	comp=Z,673nm,1.0s						
BKB				IAMs_20	IAMs_20	08 27 32.3	
	comp=Z,271µm,20.0s						
CMJI	Cimerak	56.43	136	P	P	07 59 42.3	-3.5
	comp=Z,34µmcomp=Z,3µmcomp=Z,105nm,0.8s						
OJGS	Djebel Guires	56.44	291	P	P	07 59 47.0	+1.2
BILL	Bilibino	56.49	27	*c* *i*P	P	07 59 44.8	-0.8
BILL				*i*		07 59 59.7	
BILL				*i*		08 00 40.4	
BILL				*i* S	S	08 07 33.0	-3.0
BILL				*i* SS	SS	08 11 21.7	-0.9
BILL				pmax	pmax		
	comp=Z,76nm,1.3s						
BILL				pmax	pmax		
	comp=Z,2µm,1.9s						
BILL				MLR	MLR		
	comp=Z,661µm,18.0s						
BILL	Bilibino	56.49	27	P	P	07 59 45.3	-0.3
BILL				IAmb	IAmb	08 00 33.2	
	comp=Z,681nm,1.4s						
DMPH	Davao City--Mi	56.60	109	⇑*e*P	P	07 59 54.5	+7.3
DAV	Davao City (W)	56.66	109	LR	LR	08 27 48.0	
	comp=Z,345µm,18.5s,baz=357,slow=40						
DAV	Davao City (W)	56.66	109	P	P	07 59 52.6	+5.0
DAV				P	P	07 59 52.6	+5.0
DAV				P	P	07 59 52.6	+5.0
DAV	Davao City (W)	56.66	109	IAMs_20	IAMs_20	08 27 37.1	
	comp=Z,401µm,19.0s						
OJBR	Djebel Berber	56.70	292	P	P	07 59 46.0	-1.7
UWJI	Ujung Watu	56.71	133	P	P	07 59 46.9	-0.9
	comp=Z,18µmcomp=Z,866nm,1.4s						
BBKI	Banjar Baru	56.73	127	P	P	07 59 47.0	-1.0
	comp=Z,40µmcomp=Z,10µmcomp=Z,572nm,1.1s						
CART	Cartagena	56.82	294	P	P	07 59 52.0	+3.6
CART				S	S	08 07 41.8	+0.6
CART	Cartagena	56.82	294	⇑P	P	07 59 47.9	-0.5
CART	Cartagena	56.82	294	P	P	07 59 47.6	-0.8
CART				IAmb	IAmb	08 00 09.5	
	comp=Z,739nm,0.8s						
CART	Cartagena	56.82	294	P	P	07 59 48.4	0.0
GSPH	General Santos	56.84	110	⇑*i*P	P	07 59 57.4	+8.4
SMRI	Semarang	56.93	134	P	P	07 59 48.4	-1.0
SMRI	Semarang	56.93	134	P	P	07 59 49.6	+0.2
SMRI				IAmb	IAmb	08 00 34.1	
	comp=Z,618nm,1.3s						
SMRI	Semarang	56.93	134	P	P	07 59 50.2	+0.8
ODJA	Bouhanifia	57.17	291	P	P	07 59 52.0	+1.0
MPSI	Mapaga	57.23	120	P	P	07 59 50.6	-0.9
	comp=Z,93µmcomp=Z,10µmcomp=Z,504nm,1.1s						
XMI	Christmas Isla	57.23	141	P	P	07 59 53.5	+2.0
VAL	Valentia	57.23	313	⇑P	P	07 59 54.6	+3.6
XMIS	Christmas Isla	57.24	141	P	P	07 59 51.6	+0.1
XMIS	Christmas Isla	57.24	141	P	P	07 59 53.1	+1.6
MATI	Mati	57.25	109	⇑*e*P	P	07 59 57.5	+5.8
BWJI	Bawean	57.26	131	P	P	07 59 51.6	-0.1
	comp=Z,37µmcomp=Z,12µmcomp=Z,486nm,0.7s						
UCM	Universidad Co	57.27	298	P	P	07 59 55.1	+3.5
UCM				S	S	08 07 46.7	-0.5
TOLI2	Tolitoli	57.28	118	P	P	07 59 52.2	+0.3
TOLI2	Tolitoli	57.28	118	P	P	07 59 53.8	+1.9
USTO	Oran	57.29	292	P	P	07 59 58.0	+6.3
DDMP	Don Marcelino,	57.40	110	⇓*i*P	P	07 59 51.9	-0.9
KBKI	Kotabaru	57.45	126	P	P	07 59 52.3	-0.8
	comp=Z,6µmcomp=Z,772nm,1.0s						
YOGI	Yogyakarta	57.48	134	P	P	07 59 52.8	-0.4
	comp=Z,34µmcomp=Z,4µmcomp=Z,121nm,1.2s						
ALE	Alert	57.59	354	IAMs_20	IAMs_20	08 24 23.8	
	comp=Z,342µm,21.0s						
OTSS	Djebel Tessala	57.67	292	P	P	07 59 59.0	+4.4
UGM	Wanagama	57.68	134	P	P	07 59 53.9	-0.8
	comp=Z,65µmcomp=Z,7µmcomp=Z,113nm,0.9s						
UGM	Wanagama	57.68	134	P	P	07 59 55.0	+0.3
PEA0B	Petropavlovsk-	57.76	45	P	P	07 59 54.6	-0.2
PEA0B				pmax	pmax		
	comp=Z,518nm,1.1s						
PEA0B	Petropavlovsk-	57.76	45	P	P	07 59 54.6	-0.2
PEA0B				IAmb	IAmb	08 00 24.1	
	comp=Z,518nm,1.1s						
PETK	Petropavlovsk-	57.76	45	P	P	07 59 55.5	+0.7
	comp=Z,18nm,0.8s,baz=227,slow=9.9,SNR=22						
PETK				PKP2bc		08 29 54.7	
	comp=Z,29nm,1.2s,baz=86,slow=7.6,SNR=4.6						
PETK	Petropavlovsk-	57.76	45	P	P	07 59 54.6	-0.2
SKR	Severo-Kuril's	57.76	48	*e*P	P	07 59 57.4	+2.6
SKR				*e*		08 02 03.9	
SKR				*e*PPP	PPP	08 03 31.0	
SKR				*e*S	S	08 07 52.1	-1.1
SKR				pmax	pmax		
	comp=Z,244nm,1.1s						
SKR				pmax	pmax		
	comp=Z,4µm,9.0s						
SKR				pmax	pmax		
	comp=Z,4µm,6.4s						
SKR				MLR	MLR		
	comp=Z,297µm,14.0s						
SKR				MLR	MLR		
	comp=Z,311µm,14.0s						
BORG	Borgarnes	57.96	330	P	P	07 59 58.3	+2.3
	comp=Z,46nm,1.1s,baz=75,slow=4.4,SNR=13						
BORG	Borgarnes	57.96	330	P	P	07 59 54.2	-1.8
BORG				pmax	pmax		
	comp=Z,287nm,1.0s						
BORG				MLR	MLR		
	comp=Z,469µm,18.0s						
BORG	Borgarnes	57.96	330	⇓P	P	08 00 03.9	+7.9
BORG	Borgarnes	57.96	330	P	P	07 59 54.2	-1.8
BORG	Borgarnes	57.96	330	IAMs_20	IAMs_20	08 24 50.6	
	comp=Z,469µm,18.0s						
ESBB	Sonseca Array	58.03	298	P	P	07 59 55.5	-1.5
ESBB				IAmb	IAmb	08 00 21.5	
	comp=Z,503nm,1.2s						
ESDC	Sonseca Array	58.03	298	P	P	07 59 56.2	-0.8
	comp=Z,42nm,0.8s,baz=55,slow=7.0,SNR=60						
ESDC				LR	LR	08 28 40.5	
	comp=Z,155µm,18.5s,baz=335,slow=40						
ESDC	Sonseca Array	58.03	298	P	P	07 59 55.9	-1.1
ESDC				pP	pP	08 00 01.5	-1.6
JCJ	Chichijima	58.19	79	P	P	07 59 58.2	-0.1
JCJ				IAmb	IAmb	08 01 01.2	
	comp=Z,489nm,1.3s						
JCJ	Chichijima	58.19	79	P	P	07 59 59.9	+1.7
PET	Petropavlovsk	58.32	45	*e*P	P	07 59 56.2	-2.5
PET				*e*		08 02 07.5	
PET				*e*S	S	08 07 54.3	-6.2
PET				pmax	pmax		
	comp=Z,4µm,10.2s						
PET				pmax	pmax		
	comp=Z,6µm,12.0s						
PET				pmax	pmax		
	comp=Z,245nm,1.0s						
PET				smax	smax		
	comp=N,21µm,12.1s						
PET				smax	smax		
	comp=E,25µm,10.5s						
PET				MLR	MLR		
	comp=Z,422µm,16.0s						
PET				MLR	MLR		
	comp=Z,411µm,15.0s						
PET	Petropavlovsk	58.32	45	⇑P	P	08 00 00.0	+1.3
PET	Petropavlovsk	58.32	45	P	P	07 59 58.2	-0.6
PET				IAMs_20	IAMs_20	08 23 23.3	
	comp=Z,395µm,20.0s						
PET	Petropavlovsk	58.32	45	P	P	08 00 00.5	+1.8
PAB	San Pablo	58.36	298	P	P	07 59 58.6	-0.7
PAB				pmax	pmax		
	comp=Z,723nm,1.5s						
PAB				MLR	MLR		
	comp=Z,195µm,19.0s						
PAB	San Pablo	58.36	298	⇓P	P	07 59 58.9	-0.5
PAB	San Pablo	58.36	298	P	P	07 59 58.6	-0.7
PAB				IAmb	IAmb	08 00 57.2	
	comp=Z,723nm,1.5s						
MRSI	Marisa	58.54	118	P	P	08 00 00.0	-0.8
	comp=Z,87µmcomp=Z,13µmcomp=Z,924nm,1.1s						
CHAS	Isla Isabel II	58.91	292	P	P	08 00 06.5	+3.4
CHAS				S	S	08 08 08.4	-0.2
KMMI	Kalianget	59.00	130	P	P	08 00 03.0	-0.9
	comp=Z,62µmcomp=Z,10µmcomp=Z,158nm,1.2s						
PBRG	Braganca	59.04	301	*e*P	P	08 00 07.1	+3.1
	comp=Z,722nm,1.7s						
TAF	Taforalt	59.06	292	P	P	08 00 05.0	+0.7
BLJI	Banyuglugur	59.33	131	P	P	08 00 04.9	-1.3
	comp=Z,38µmcomp=Z,7µmcomp=Z,207nm,1.0s						
APSI	Ampana	59.33	119	P	P	08 00 05.5	-0.7
	comp=Z,45µmcomp=Z,9µmcomp=Z,629nm,0.9s						
JBK	JBK	59.40	291	P	P	08 00 07.0	+0.2
MVO	Moncorvo	59.51	300	*e*P	P	08 00 08.5	+1.2
	comp=Z,664nm,1.7s						
MVO				*e*S	S	08 08 20.1	+3.7
MVO				*e*SS	SS	08 12 16.3	+5.1
MVO				*e*LQ	LQ	08 14 35.1	
MVO				*e*LR	LR	08 18 32.8	
	comp=Z,186µm,20.0s						
EMAL	Malaga-Limoner	59.64	295	P	P	08 00 11.1	+3.0
EMAL				S	S	08 08 13.9	-4.1
TTSI	Tana Toraja	59.65	122	P	P	08 00 06.8	-1.6
	comp=Z,56µmcomp=Z,8µmcomp=Z,470nm,1.0s						
GMJI	Gumukmas	59.66	132	P	P	08 00 05.3	-3.1
	comp=Z,57µmcomp=Z,6µmcomp=Z,142nm,1.9s						
ABJI	Asem Bagus	59.75	131	P	P	08 00 08.1	-1.0
	comp=Z,69µmcomp=Z,13µmcomp=Z,418nm,1.6s						
NEEM	North Greenlan	59.76	348	*e*P	P	08 00 10.2	+1.4
KMSI	Cibinong	59.91	116	P	P	08 00 08.4	-1.8
	comp=Z,1µmcomp=Z,7µmcomp=Z,637nm,0.8s						
PVRL	Vila Real	59.93	301	*e*P	P	08 00 14.9	+4.8
	comp=Z,544nm,1.5s						
POLO	Lamas de Olo	59.94	301	*e*P	P	08 00 12.1	+1.8
	comp=Z,234nm,1.5s						
PCAB	Cabril	59.95	301	*e*P	P	08 00 11.5	+1.2
	comp=Z,1µm,2.0s						
PGAV	Gavieira, Arco	60.00	302	*e*P	P	08 00 11.3	+0.6
	comp=Z,1µm,1.7s						
PGAV				*e*S	S	08 08 25.8	+3.0
PGAV				*e*SS	SS	08 12 20.8	+1.9
PGAV				*e*LQ	LQ	08 15 01.9	
PGAV				*e*LR	LR	08 21 05.0	
	comp=Z,166µm,20.0s						
SUMG	Summit	60.01	341	P	P	08 00 10.5	-0.1
SUMG				pmax	pmax		
	comp=Z,1µm,1.0s						
SUMG				MLR	MLR		
	comp=Z,224µm,18.0s						
SUMG	Summit	60.01	341	*i* P	P	08 00 14.4	+3.8
SUMG	Summit	60.01	341	⇑P	P	08 00 09.9	-0.8
SUMG	Summit	60.01	341	P	P	08 00 10.5	-0.1
SUMG				IAMs_20	IAMs_20	08 26 51.7	
	comp=Z,225µm,18.0s						
MTE	Manteigas	60.19	300	*e*P	P	08 00 12.7	+0.7
	comp=Z,855nm,1.5s						
MTE				*e*S	S	08 08 27.1	+1.8
MTE				*e*SS	SS	08 12 30.4	+8.4
MTE				*e*LQ	LQ	08 15 13.2	
MTE				*e*LR	LR	08 17 00.4	
	comp=Z,153µm,20.0s						
MTE	Manteigas	60.19	300	⇑P	P	08 00 12.8	+0.7
MTE	Manteigas	60.19	300	P	P	08 00 11.3	-0.7
MTE				IAmb	IAmb	08 01 00.3	
	comp=Z,592nm,1.1s						
MTE				IAMs_20	IAMs_20	08 28 30.1	
	comp=Z,214µm,18.0s						
LUWI	Luwuk	60.20	118	⇓P	P	08 00 12.9	+0.7
LUWI	Luwuk	60.20	118	P	P	08 00 12.6	+0.3
LUWI				IAmb	IAmb	08 01 32.0	
	comp=Z,476nm,0.9s						
LUWI	Luwuk	60.20	118	P	P	08 00 13.5	+1.3
JAGI	Jajag, Banyuwa	60.23	131	⇓P	P	08 00 11.9	-0.6
JAGI	Jajag, Banyuwa	60.23	131	P	P	08 00 09.8	-2.6
	comp=Z,62µmcomp=Z,6µmcomp=Z,109nm,0.8s						
JAGI	Jajag, Banyuwa	60.23	131	P	P	08 00 13.2	+0.8
JAGI	Jajag, Banyuwa	60.23	131	P	P	08 00 10.7	-1.7
LIJA	Lijar	60.27	295	P	P	08 00 11.0	-1.6
PVIS	Viseu	60.29	300	*e*P	P	08 00 14.2	+1.5
	comp=Z,659nm,1.2s						
SPSI	Sidrap Palu	60.30	123	P	P	08 00 11.4	-1.5
	comp=Z,62µmcomp=Z,7µmcomp=Z,187nm,1.3s						
PCBR	Castelo Branco	60.40	299	*e*P	P	08 00 14.6	+1.3
	comp=Z,452nm,1.7s						
PMRV	Marv??o	60.52	299	*e*P	P	08 00 14.4	+0.2
	comp=Z,682nm,1.5s						
PMRV				*e*S	S	08 08 29.5	+0.1
PMRV				*e*SS	SS	08 12 29.1	+2.0
PMRV				*e*LQ	LQ	08 15 12.1	
PMRV				*e*LR	LR	08 17 49.8	
	comp=Z,292µm,18.0s						
SRBI	Singaraja	60.56	130	P	P	08 00 13.0	-1.7
	comp=Z,58µmcomp=Z,12µmcomp=Z,247nm,1.2s						
CEU	Ceuta	60.71	294	P	P	08 00 17.4	+1.9
CEU				S	S	08 08 29.1	-2.7
BNSI	Bone	60.84	123	P	P	08 00 14.6	-2.0
	comp=Z,7µmcomp=Z,169nm,1.0s						
PESTR	Estremoz	60.91	298	*e*P	P	08 00 18.3	+1.4
	comp=Z,453nm,1.7s						
PESTR	Estremoz	60.91	298	⇓P	P	08 00 18.4	+1.5
PESTR	Estremoz	60.91	298	P	P	08 00 15.8	-1.1
PESTR	Estremoz	60.91	298	P	P	08 00 19.0	+2.1
CNIL	Conil	60.98	295	P	P	08 00 18.0	+0.7
PCAS	Casmilo, Conde	61.00	300	*e*P	P	08 00 16.9	-0.6
	comp=Z,610nm,1.5s						
DNP	Denpasar	61.03	130	P	P	08 00 17.0	-0.8
	comp=Z,57µmcomp=Z,27µmcomp=Z,646nm,1.2s						
SFS	San Fernando	61.04	295	P	P	08 00 20.9	+3.1
SFS				S	S	08 08 35.8	-0.3
KAPI	Kappang	61.07	124	LR	LR	08 30 28.1	
	comp=Z,128µm,19.9s,baz=331,slow=40						
KAPI	Kappang	61.07	124	P	P	08 00 16.8	-1.3
KAPI				pmax	pmax		
	comp=Z,394nm,1.3s						
KAPI				MLR	MLR		
	comp=Z,171µm,22.0s						
KAPI	Kappang	61.07	124	P	P	08 00 21.7	+3.6
KAPI				P	P	08 00 21.7	+3.6
KAPI				P	P	08 00 21.7	+3.6
KAPI	Kappang	61.07	124	⇑P	P	08 00 16.8	-1.3
KAPI	Kappang	61.07	124	P	P	08 00 16.8	-1.3
KAPI				IAmb	IAmb	08 01 00.2	
	comp=Z,394nm,1.2s						
KAPI	Kappang	61.07	124	P	P	08 00 18.9	+0.8
IGBI	Denpasar	61.10	131	P	P	08 00 16.4	-1.9
	comp=Z,28µmcomp=Z,4µmcomp=Z,308nm,1.1s						
ARNO	Arenosillo	61.12	296	P	P	08 00 21.9	+3.7
ARNO				S	S	08 08 38.2	+1.2
RER	Riviere de l'E	61.13	198	P	P	08 00 18.8	+0.4
RER				IAmb	IAmb	08 00 56.2	
	comp=Z,337nm,0.9s						
RER	Riviere de l'E	61.13	198	*i* P	P	08 00 20.2	+1.8
RER				*i* P	pP	08 00 21.3	-3.1
PMTG	Montargil	61.26	299	*e*P	P	08 00 20.2	+1.0
	comp=Z,357nm,1.3s						
EVO	Evora	61.36	298	P	P	08 00 24.0	+4.1
EVO				S	S	08 08 38.5	-1.7
EVO	Evora	61.36	298	*e*P	P	08 00 21.8	+1.9
	comp=Z,489nm,1.9s						
LCRM	LCR	61.38	292	P	P	08 00 21.0	+0.7
PSBE	So Bento	61.45	299	*e*P	P	08 00 20.9	+0.4
	comp=Z,1µm,1.9s						
PBEJ	Beja	61.49	298	*e*P	P	08 00 22.2	+1.4
	comp=Z,583nm,2.2s						
EUNU	Eureka	61.50	356	P	P	08 00 20.4	+0.1
BKSI	Bulukumba	61.54	124	P	P	08 00 20.0	-1.3
	comp=Z,61µmcomp=Z,7µmcomp=Z,205nm,1.5s						
MDT	Midelt	61.61	291	P	P	08 00 21.6	-0.2
IFR	Ifrane	61.66	292	P	P	08 00 26.3	+4.1
IFR				S	S	08 08 43.1	-1.2
PVAQ	Vaqueiros	61.68	297	*e*P	P	08 00 22.4	+0.3
	comp=Z,1µm,1.9s						
PVAQ				*e*S	S	08 08 45.9	+1.7
PVAQ				*e*SS	SS	08 12 57.3	+12
PVAQ				*e*LQ	LQ	08 15 25.7	
PVAQ				*e*LR	LR	08 21 39.6	
	comp=Z,205µm,18.0s						
PVAQ	Vaqueiros	61.68	297	P	P	08 00 20.6	-1.4
PVAQ				IAmb	IAmb	08 00 31.2	
	comp=Z,554nm,1.2s						
PVAQ	Vaqueiros	61.68	297	P	P	08 00 24.5	+2.4
ABPO	Ambohimpanom	61.74	208	*i* P	P	08 00 20.3	-2.4
PCVE	Castro Verde	61.80	297	*e*P	P	08 00 24.1	+1.2
	comp=Z,397nm,1.9s						
MESJ	Messejana	61.83	297	*e*P	P	08 00 23.5	+0.5
MESJ				*e*S	S	08 08 44.8	-1.2
MESJ				IAMs_20	IAMs_20	08 27 14.1	
	comp=N,439µm,18.5s						
MESJ	Messejana	61.83	297	*e*P	P	08 00 24.6	+1.6
	comp=N,547nm,1.4s						
MESJ	Messejana	61.83	297	*e*P	P	08 00 23.5	+0.5
MESJ				*e*S	S	08 08 44.8	-1.2
PBDV	Barranco-do-Ve	61.90	297	*e*P	P	08 00 24.2	+0.6
	comp=N,1µm,2.3s						
PNCL	Nicolau / Gran	61.92	298	*e*P	P	08 00 27.1	+3.5
	comp=N,530nm,2.1s						
PMAFR	Mafra	62.05	299	*e*P	P	08 00 26.7	+2.2
	comp=N,958nm,1.7s						
LIS	Lisbon	62.06	299	*e*P	P	08 00 25.0	+0.4
LIS				*e*S	S	08 08 47.6	-1.4
LIS				IAMs_20	IAMs_20	08 20 10.7	
	comp=N,753µm,46.0s						
LIS	Lisbon	62.06	299	*e*P	P	08 00 29.4	+4.8
	comp=N,914nm,1.2s						
LIS	Lisbon	62.06	299	*e*P	P	08 00 25.0	+0.4
LIS				*e*S	S	08 08 47.6	-1.4
TWSI	Taliwang, Sumb	62.09	129	P	P	08 00 23.3	-1.7
	comp=N,34µmcomp=N,3µmcomp=N,85nm,0.9s						
TNTI	Ternate	62.20	113	P	P	08 00 23.9	-1.9
	comp=N,45µmcomp=N,10µmcomp=N,432nm,1.8s						
TNTI	Ternate	62.20	113	P	P	08 00 26.3	+0.4
TNTI	Ternate	62.20	113	P	P	08 00 27.0	+1.2
ICESG	Greenland Ices	62.27	338	*e*P	P	08 00 26.5	+0.6
PTEO	Sao Teotonio	62.32	297	*e*P	P	08 00 30.3	+4.0
	comp=N,772nm,2.2s						
MORF	Marmelete	62.38	297	*e*P	P	08 00 27.2	+0.4
MORF				*e*S	S	08 08 52.0	-1.2
MORF				IAMs_20	IAMs_20	08 27 40.5	
	comp=N,421µm,21.1s						
MORF	Marmelete	62.38	297	*e*P	P	08 00 30.0	+3.2
	comp=N,409nm,1.8s						
MORF	Marmelete	62.38	297	*e*P	P	08 00 27.2	+0.4
MORF				*e*S	S	08 08 52.0	-1.2
MORF	Marmelete	62.38	297	⇑P	P	08 00 31.2	+4.4
BSSI	Bau Bau, Buton	62.39	124	P	P	08 00 25.3	-1.8
	comp=N,38µmcomp=N,6µmcomp=N,244nm,1.4s						
GOLM	Goulmima	62.41	290	P	P	08 00 28.0	+0.7
PFVI	Vila Bisbo	62.59	297	*e*P	P	08 00 33.0	+4.8
	comp=N,719nm,2.2s						
PFVI	Vila Bisbo	62.59	297	P	P	08 00 27.7	-0.5
PFVI				IAmb	IAmb	08 00 55.4	
	comp=Z,365nm,1.1s						
PLAI	Plampang	62.71	128	P	P	08 00 25.2	-4.0
	comp=Z,58µmcomp=Z,9µmcomp=Z,295nm,1.0s						
ZHG	ZHG	62.80	292	P	P	08 00 30.0	+0.2
TULEG	Thule	63.09	351	*i* P	P	08 00 31.4	+0.5
TULEG	Thule	63.09	351	⇓P	P	08 00 30.2	-0.6
TULEG	Thule	63.09	351	P	P	08 00 30.0	-0.8
TULEG				IAMs_20	IAMs_20	08 30 59.9	
	comp=Z,501µm,19.0s						
SANI	Sanana	63.17	116	⇓P	P	08 00 30.8	-1.5
SANI	Sanana	63.17	116	P	P	08 00 31.0	-1.3
	comp=Z,74µmcomp=Z,13µmcomp=Z,354nm,1.0s						
SANI	Sanana	63.17	116	P	P	08 00 32.0	-0.3
LBMI	Labuha	63.27	114	P	P	08 00 31.2	-1.7
	comp=Z,48µmcomp=Z,11µmcomp=Z,531nm,1.4s						
TZRR	Tazzarine	63.32	289	P	P	08 00 33.0	-0.3
AVE	Averroes	63.43	293	P	P	08 00 37.8	+3.9
AVE				S	S	08 09 06.8	+0.4
AVE	Averroes	63.43	293	⇑P	P	08 00 33.8	-0.1
AVE	Averroes	63.43	293	P	P	08 00 34.1	+0.3
ANGG	Ammassalik, Gr	63.61	334	⇓P	P	08 00 38.5	+4.0
ANGG	Ammassalik, Gr	63.61	334	P	P	08 00 35.1	+0.7
ANGG				IAMs_20	IAMs_20	08 27 49.5	
	comp=Z,358µm,19.0s						
ZGR	Zagora	63.70	289	P	P	08 00 36.0	+0.2
ZOMB	Zomba	63.82	221	*i* P	P	08 00 29.7	-6.8
UPNV	Upernavik	63.96	345	*i* P	P	08 00 38.3	+1.6
OUZM	OUZ	64.14	290	P	P	08 00 40.0	+1.2
NUUG	Nuugaatsiaq	64.23	343	*i* P	P	08 00 38.8	+0.3
WBSI	Waikabubak, Su	64.34	127	P	P	08 00 36.3	-3.7
	comp=Z,53µmcomp=Z,12µmcomp=Z,863nm,1.0s						
VOI	Vohitsoka	64.55	207	⇓P	P	08 00 40.1	-1.1
VOI	Vohitsoka	64.55	207	P	P	08 00 41.8	+0.6
VOI				IAmb	IAmb	08 01 28.0	
	comp=Z,491nm,1.2s						
VOI	Vohitsoka	64.55	207	P	P	08 00 42.3	+1.1
OUK	Oukaimeden	64.81	291	P	P	08 00 44.0	+0.6
EDFI	Ende, Flores	65.13	125	P	P	08 00 40.3	-4.9
	comp=Z,30µmcomp=Z,3µmcomp=Z,124nm,0.8s						
A21K	Barrow	65.35	16	P	P	08 00 45.6	-0.2
A21K				IAMs_20	IAMs_20	08 33 40.8	
	comp=Z,427µm,19.0s						
A21K	Barrow	65.35	16	P	P	08 00 45.2	-0.5
	baz=319						
A21K				S	S	08 09 33.3	+4.4
	baz=319						
ILULI	Ilulissat	65.36	341	P	P	08 00 44.7	-1.2
ILULI				pmax	pmax		
	comp=Z,737nm,0.8s						
ILULI				MLR	MLR		
	comp=Z,448µm,18.0s						
ILULI	Ilulissat	65.36	341	*i* P	P	08 00 47.8	+2.0
ILULI	Ilulissat	65.36	341	P	P	08 00 44.7	-1.2
ILULI				IAMs_20	IAMs_20	08 34 05.0	
	comp=Z,448µm,18.0s						
TETE	Tete	65.38	222	*i* P	P	08 00 45.2	-1.4
MMRI	Maumere	65.40	124	P	P	08 00 44.2	-2.6
	comp=Z,53µmcomp=Z,11µmcomp=Z,394nm,0.7s						
MMRI	Maumere	65.40	124	P	P	08 00 44.4	-2.5
MMRI				IAmb	IAmb	08 01 34.2	
	comp=Z,428nm,1.0s						
MMRI	Maumere	65.40	124	P	P	08 00 45.0	-1.8
BASI	Baing, Sumba	65.53	127	P	P	08 00 44.4	-3.3
	comp=Z,33µmcomp=Z,22µmcomp=Z,2µm,0.8s						
TTIG	Tnine Tigouga,	65.57	290	P	P	08 00 48.0	0.0
DY2G	Dye2	65.86	337	*i* P	P	08 00 51.2	+1.8
SKRH	Sakahara	66.15	208	*i* P	P	08 00 55.0	+3.4
SWI	Sorong	66.15	111	P	P	08 00 50.3	-1.5
	comp=Z,69µmcomp=Z,9µmcomp=Z,283nm,1.1s						
MSAI	Masohi	66.16	115	P	P	08 00 50.2	-1.6
	comp=Z,1µmcomp=Z,44nm,1.0s						
RDOG	Red Dog Mine	66.23	20	P	P	08 00 52.1	+0.6
RDOG				IAmb	IAmb	08 01 38.6	
	comp=Z,498nm,1.2s						
RDOG	Red Dog Mine	66.23	20	P	P	08 00 57.4	+5.9
	baz=315						
RDOG				S	S	08 09 47.6	+7.8
	baz=315						
GAMB	Gambell	66.39	26	P	P	08 00 53.0	+0.5
GAMB	Gambell	66.39	26	P	P	08 00 54.5	+2.0
	baz=309						
GAMB				S	S	08 09 45.5	+3.8
	baz=309						
TNA	Tin City	66.48	23	⇑P	P	08 00 55.6	+2.5
TNA	Tin City	66.48	23	P	P	08 00 53.1	0.0

TNA				IAmb	IAmb	08 01 33.8	
	comp=Z,389nm,1.1s						
TNA	**Tin City**	**66.48**	**23**	P	**P**	**08 00 54.0**	**+0.9**
	baz=312,SNR=14						
TNA				S	**S**	**08 09 48.0**	**+5.3**
	baz=312						
CGR	**Cap Guir**	**66.59**	**291**	P	**P**	**08 00 56.0**	**+1.6**
EKNA	**AfricaArray -**	**66.71**	**256**	*e*P	P	08 01 00.3	+4.9
SFJD	**Kangerlussuaq**	**66.78**	**339**	P	**P**	**08 00 53.5**	**-1.5**
	comp=Z,19nm,0.7s,baz=50,slow=6.1,SNR=3.8						
SFJD	**Kangerlussuaq**	**66.78**	**339**	P	**P**	**08 00 55.0**	**0.0**
SFJD				pmax	pmax		
	comp=Z,2µm,1.9s						
SFJD				MLR	MLR		
	comp=Z,309µm,20.0s						
SFJD	**Kangerlussuaq**	**66.78**	**339**	*i* P	**P**	**08 00 57.6**	**+2.6**
SFJD	**Kangerlussuaq**	**66.78**	**339**	⇑P	**P**	**08 00 58.4**	**+3.4**
SFJD	**Kangerlussuaq**	**66.78**	**339**	P	**P**	**08 00 55.0**	**0.0**
SFJD	**Kangerlussuaq**	**66.78**	**339**	IAMs_20	IAMs_20	08 34 48.5	
	comp=Z,309µm,20.0s						
RES	**Resolute Bay**	**67.18**	**357**	P	**P**	**08 00 56.5**	**-0.9**
	comp=Z,31nm,1.2s,baz=19,slow=8.0,SNR=21						
RES				LR	LR	08 31 24.9	
	comp=Z,241µm,21.3s,baz=12,slow=37						
RES	**Resolute Bay**	**67.18**	**357**	P	**P**	**08 00 57.1**	**-0.3**
RES				pmax	pmax		
	comp=Z,723nm,1.9s						
RES	**Resolute Bay**	**67.18**	**357**	⇓P	**P**	**08 00 57.0**	**-0.3**
RES	**Resolute Bay**	**67.18**	**357**	P	**P**	**08 00 57.1**	**-0.3**
RES				IAmb	IAmb	08 01 45.9	
	comp=Z,723nm,1.9s						
TORD	**Torodi Ar. Bea**	**67.25**	**269**	P	**P**	**08 00 56.7**	**-2.1**
	comp=Z,28nm,0.4s,baz=42,slow=5.3,SNR=72						
TORD				PKPPKP	P'P'df	08 29 37.6	+11
	comp=Z,33nm,0.9s,baz=269,slow=3.6,SNR=7.6						
TORD				LR	LR	08 33 35.6	
	comp=Z,92µm,19.1s,baz=60,slow=39						
TORD	**Torodi Ar. Bea**	**67.25**	**269**	P	**P**	**08 00 56.7**	**-2.1**
BATI	**Baumata**	**67.50**	**124**	LR	LR	08 34 46.9	
	comp=Z,201µm,21.4s,baz=318,slow=40						
BATI	**Baumata**	**67.50**	**124**	P	**P**	**08 00 58.0**	**-2.3**
	comp=Z,30µmcomp=Z,7µmcomp=Z,405nm,0.8s						
SOEI	**Soe**	**67.56**	**124**	⇓P	**P**	**08 00 58.9**	**-1.9**
SOEI	**Soe**	**67.56**	**124**	P	**P**	**08 00 58.6**	**-2.2**
SOEI	**Soe**	**67.56**	**124**	P	**P**	**08 00 59.2**	**-1.6**
SOEI				IAMs_20	IAMs_20	08 33 31.5	
	comp=Z,245µm,22.0s						
SOEI	**Soe**	**67.56**	**124**	P	**P**	**08 00 59.7**	**-1.1**
GUMO	**Guam**	**67.62**	**90**	LR	LR	08 33 37.3	
	comp=Z,87µm,19.7s,baz=305,slow=39						
GUMO	**Guam**	**67.62**	**90**	⇑P	**P**	**08 01 04.9**	**+3.7**
LSZ	**Lusaka**	**67.66**	**227**	P	**P**	**08 01 00.4**	**-1.0**
LSZ				pmax	pmax		
	comp=Z,231nm,1.2s						
LSZ	**Lusaka**	**67.66**	**227**	P	**P**	**08 01 00.4**	**-1.0**
LSZ	**Lusaka**	**67.66**	**227**	*i* P	**P**	**08 01 00.1**	**-1.3**
ANM	**Nome**	**67.95**	**23**	P	**P**	**08 01 02.7**	**+0.2**
ANM				pmax	pmax		
	comp=Z,328nm,1.0s						
ANM	**Nome**	**67.95**	**23**	P	**P**	**08 01 02.7**	**+0.2**
ANM				IAmb	IAmb	08 01 33.4	
	comp=Z,328nm,1.0s						
ANM				IAMs_20	IAMs_20	08 28 19.1	
	comp=Z,549µm,22.0s						
ANM	**Nome**	**67.95**	**23**	P	**P**	**08 01 03.6**	**+1.1**
	baz=314,SNR=36						
ANM				S	**S**	**08 10 05.5**	**+4.9**
	baz=314						
KRI	**Karoi**	**68.10**	**225**	*i* P	**P**	**08 01 05.2**	**+1.0**
KRI	**Karoi**	**68.10**	**225**	*i* P	**P**	**08 01 05.2**	**+1.0**
FAKI	**Fak Fak**	**68.27**	**112**	⇑P	**P**	**08 01 04.2**	**-1.0**
FAKI	**Fak Fak**	**68.27**	**112**	P	**P**	**08 01 04.4**	**-0.8**
FAKI				IAmb	IAmb	08 01 47.3	
	comp=Z,1µm,1.8s						
FAKI	**Fak Fak**	**68.27**	**112**	P	**P**	**08 01 06.3**	**+1.1**
TOLK	**Toolik Lake Re**	**68.97**	**15**	P	**P**	**08 01 08.8**	**0.0**
TOLK				IAMs_20	IAMs_20	08 33 23.3	
	comp=Z,425µm,20.0s						
TOLK	**Toolik Lake Re**	**68.97**	**15**	P	**P**	**08 01 08.1**	**-0.7**
	baz=325						
TOLK				S	**S**	**08 10 12.9**	**+0.3**
	baz=325						
NUUK	**Nuuk**	**69.11**	**337**	*i* P	**P**	**08 01 10.8**	**+1.1**
NUUK	**Nuuk**	**69.11**	**337**	⇑P	**P**	**08 01 10.9**	**+1.3**
NRS	**Narsarsuaq**	**69.12**	**333**	P	**P**	**08 01 10.8**	**+1.0**
NRS				pmax	pmax		
	comp=Z,710nm,1.1s						
NRS				MLR	MLR		
	comp=Z,251µm,20.0s						
NRS	**Narsarsuaq**	**69.12**	**333**	*e*P	**P**	**08 01 09.7**	**-0.1**
NRS	**Narsarsuaq**	**69.12**	**333**	⇓P	**P**	**08 01 11.0**	**+1.2**
NRS	**Narsarsuaq**	**69.12**	**333**	P	**P**	**08 01 10.8**	**+1.0**
NRS				IAmb	IAmb	08 01 50.5	
	comp=Z,710nm,1.1s						
NRS				IAMs_20	IAMs_20	08 34 58.3	
	comp=Z,251µm,20.0s						
A36M	**Sachs Harbour**	**69.44**	**6**	P	**P**	**08 01 11.7**	**+0.1**
A36M				IAMs_20	IAMs_20	08 33 27.4	
	comp=Z,506µm,21.0s						
A36M	**Sachs Harbour**	**69.44**	**6**	P	**P**	**08 01 10.0**	**-1.6**
	baz=345						
A36M				S	**S**	**08 10 18.2**	**+0.2**
	baz=345						
PMPST	**Porto Santo, M**	**69.94**	**297**	*e*P	**P**	**08 01 19.6**	**+4.2**
	comp=Z,922nm,1.6s						
PMPS	**Porto Santo**	**69.95**	**297**	*e*P	**P**	**08 01 20.2**	**+4.8**
	comp=Z,868nm,1.9s						
COLD	**Coldfoot**	**70.00**	**16**	P	**P**	**08 01 15.2**	**+0.1**
COLD	**Coldfoot**	**70.00**	**16**	P	**P**	**08 01 15.2**	**+0.1**
	baz=325						
COLD				S	**S**	**08 10 25.0**	**+0.3**
	baz=325						
IVI	**Ivigtut**	**70.06**	**334**	*i* P	**P**	**08 01 18.1**	**+2.5**
IVI	**Ivigtut**	**70.06**	**334**	⇑P	**P**	**08 01 20.4**	**+4.7**
IVI	**Ivigtut**	**70.06**	**334**	P	**P**	**08 01 16.9**	**+1.2**
IVI				IAMs_20	IAMs_20	08 31 18.2	
	comp=Z,463µm,20.0s						
AMKA	**Amchitka**	**70.16**	**40**	P	**P**	**08 01 17.4**	**+1.1**
IMAR	**Indian Mountai**	**70.17**	**18**	P	**P**	**08 01 15.2**	**-1.0**
GCSA	**Galena City Sc**	**70.32**	**20**	P	**P**	**08 01 17.6**	**+0.5**
	baz=320,SNR=65						
GCSA				S	**S**	**08 10 29.9**	**+1.5**
	baz=320						
PMAR	**Madeira**	**70.54**	**297**	*e*P	**P**	**08 01 23.8**	**+4.5**
	comp=Z,1µm,2.1s						
FUL	**Funchal**	**70.57**	**297**	*e*P	P	08 01 25.1	+5.9
	comp=Z,995nm,1.9s						
H21K	**Melozitna Rive**	**70.66**	**18**	P	**P**	**08 01 18.7**	**-0.5**
H21K				IAmb	IAmb	08 01 46.4	
	comp=Z,558nm,1.1s						
H21K				IAMs_20	IAMs_20	08 32 38.2	
	comp=Z,442µm,21.0s						
H21K	**Melozitna Rive**	**70.66**	**18**	P	**P**	**08 01 19.3**	**0.0**
	baz=323						
H21K				S	**S**	**08 10 34.0**	**+1.4**
	baz=323						
PMOZ	**Porto Moniz, M**	**70.69**	**297**	*e*P	**P**	**08 01 24.5**	**+4.4**
	comp=Z,812nm,2.4s						
PMOZ				*e*S	**S**	**08 10 37.5**	**+3.4**
PMOZ				*e*SS	**SS**	**08 15 03.2**	**-2.2**
PMOZ				*e*LQ	LQ	08 19 30.6	
PMOZ				*e*LR	LR	08 22 38.7	
	comp=Z,86µm,18.0s						
PMOZ	**Porto Moniz, M**	**70.69**	**297**	⇑P	**P**	**08 01 24.6**	**+4.4**
PMOZ	**Porto Moniz, M**	**70.69**	**297**	P	**P**	**08 01 19.2**	**-0.9**
KOWA	**Kowa**	**70.97**	**274**	⇓P	**P**	**08 01 20.2**	**-1.7**
KOWA	**Kowa**	**70.97**	**274**	P	**P**	**08 01 20.3**	**-1.7**
KOWA				IAmb	IAmb	08 01 54.1	
	comp=Z,379nm,0.8s						
KOWA	**Kowa**	**70.97**	**274**	P	**P**	**08 01 21.0**	**-0.9**
KOWA	**Kowa**	**70.97**	**274**	*i* P	**P**	**08 01 21.0**	**-0.9**
BMAR	**Burnt Mountain**	**71.00**	**14**	P	**P**	**08 01 20.8**	**-0.5**
BMAR				pP	**pP**	**08 01 26.9**	**-0.6**
SAUI	**Saumlaki**	**71.08**	**117**	⇓P	**P**	**08 01 24.1**	**+1.6**
SAUI	**Saumlaki**	**71.08**	**117**	P	**P**	**08 01 23.5**	**+1.0**
SAUI	**Saumlaki**	**71.08**	**117**	P	**P**	**08 01 24.1**	**+1.6**
SPIA	**Saint Paul Isl**	**71.25**	**31**	P	**P**	**08 01 26.1**	**+3.2**
	baz=312						
SPIA				S	**S**	**08 10 44.0**	**+4.5**
	baz=312						
I21K	**Tanana**	**71.25**	**18**	P	**P**	**08 01 22.4**	**-0.4**
I21K				IAmb	IAmb	08 01 45.1	
	comp=Z,419nm,1.1s						
I21K				IAMs_20	IAMs_20	08 33 33.8	
	comp=Z,420µm,20.0s						
I21K	**Tanana**	**71.25**	**18**	P	**P**	**08 01 23.2**	**+0.3**
	baz=324,SNR=66						
I21K				S	**S**	**08 10 40.4**	**+1.1**
	baz=324						
BLWY	**Bulawayo**	**71.33**	**224**	*i* P	**P**	**08 01 24.0**	**0.0**
BLWY	**Bulawayo**	**71.33**	**224**	*i* P	**P**	**08 01 24.0**	**0.0**
J20K	**Nowinta River**	**71.50**	**20**	P	**P**	**08 01 23.8**	**-0.6**
J20K				IAmb	IAmb	08 01 42.3	
	comp=Z,351nm,0.9s						
J20K				IAMs_20	IAMs_20	08 35 22.6	
	comp=Z,502µm,21.0s						
J20K	**Nowinta River**	**71.50**	**20**	P	**P**	**08 01 24.5**	**+0.1**
	baz=323						
J20K				S	**S**	**08 10 44.8**	**+2.5**
	baz=323						
MATP	**Matopo**	**71.62**	**224**	*i* P	**P**	**08 01 25.9**	**+0.2**
MATP	**Matopo**	**71.62**	**224**	*i* P	**P**	**08 01 25.9**	**+0.2**
H24K	**Noodor Dome**	**71.67**	**16**	P	**P**	**08 01 25.2**	**-0.2**
H24K				IAmb	IAmb	08 01 56.9	
	comp=Z,354nm,0.9s						
H24K				IAMs_20	IAMs_20	08 32 45.9	
	comp=Z,397µm,21.0s						
H24K	**Noodor Dome**	**71.67**	**16**	P	**P**	**08 01 25.2**	**-0.2**
	baz=327						
H24K				S	**S**	**08 10 44.6**	**+0.2**
	baz=327						
MLY	**Manley**	**71.68**	**18**	P	**P**	**08 01 24.9**	**-0.6**
MLY				IAmb	IAmb	08 01 52.1	
	comp=Z,374nm,1.0s						
MLY				IAMs_20	IAMs_20	08 33 30.1	
	comp=Z,466µm,20.0s						
MLY	**Manley**	**71.68**	**18**	P	**P**	**08 01 25.1**	**-0.3**
	baz=325,SNR=117						
MLY				S	**S**	**08 10 46.7**	**+2.2**
	baz=325						
ADK	**Adak**	**71.83**	**38**	IAMs_20	IAMs_20	08 31 10.5	
	comp=Z,449µm,20.0s						
GIRL	**Giralia**	**71.84**	**140**	⇓P	**P**	**08 01 27.6**	**+0.8**
GIRL	**Giralia**	**71.84**	**140**	P	**P**	**08 01 28.0**	**+1.2**
GIRL	**Giralia**	**71.84**	**140**	P	**P**	**08 01 29.9**	**+3.0**
I23K	**Minto, Yukon-K**	**71.91**	**17**	P	**P**	**08 01 26.9**	**+0.1**
I23K				IAmb	IAmb	08 01 54.4	
	comp=Z,897nm,1.4s						
I23K	**Minto, Yukon-K**	**71.91**	**17**	P	**P**	**08 01 26.5**	**-0.3**
	baz=326,SNR=128						
I23K				S	**S**	**08 10 48.5**	**+1.5**
	baz=326						
TTA	**Tatalina**	**71.97**	**21**	P	**P**	**08 01 27.0**	**-0.3**
TTA				pmax	pmax		
	comp=Z,792nm,1.6s						
TTA	**Tatalina**	**71.97**	**21**	⇓P	**P**	**08 01 27.3**	**0.0**
TTA	**Tatalina**	**71.97**	**21**	P	**P**	**08 01 27.0**	**-0.3**
TTA				IAmb	IAmb	08 02 08.7	
	comp=Z,792nm,1.6s						
TTA	**Tatalina**	**71.97**	**21**	P	**P**	**08 01 27.3**	**0.0**
	baz=322,SNR=44						
TTA				S	**S**	**08 10 49.7**	**+1.8**
	baz=322						
INK	**Inuvik**	**72.05**	**10**	LR	LR	08 34 55.2	
	comp=Z,246µm,21.3s,baz=356,slow=37						
INK	**Inuvik**	**72.05**	**10**	P	**P**	**08 01 27.6**	**0.0**
INK				pmax	pmax		
	comp=Z,673nm,1.0s						
INK	**Inuvik**	**72.05**	**10**	⇓P	**P**	**08 01 26.7**	**-0.9**
INK	**Inuvik**	**72.05**	**10**	P	**P**	**08 01 27.6**	**0.0**
INK				IAmb	IAmb	08 01 55.1	
	comp=Z,673nm,1.0s						
INK	**Inuvik**	**72.05**	**10**	P	**P**	**08 01 27.0**	**-0.5**
	baz=338						
INK				S	**S**	**08 10 50.4**	**+2.0**
	baz=338						
K20K	**Telida**	**72.18**	**20**	P	**P**	**08 01 28.4**	**-0.1**
K20K				IAmb	IAmb	08 01 40.1	
	comp=Z,560nm,1.1s						
K20K	**Telida**	**72.18**	**20**	P	**P**	**08 01 28.4**	**-0.1**
	baz=323						
K20K				S	**S**	**08 10 52.6**	**+2.4**
	baz=323						
CHUM	**Lake Minchumin**	**72.22**	**19**	P	**P**	**08 01 28.7**	**0.0**
	baz=324,SNR=101						
CHUM				S	**S**	**08 10 52.0**	**+1.5**
	baz=324						
MDM	**Murphy Dome**	**72.33**	**17**	P	**P**	**08 01 28.9**	**-0.4**
MDM				IAmb	IAmb	08 01 56.0	
	comp=Z,1µm,1.6s						
MDM				IAMs_20	IAMs_20	08 36 22.3	
	comp=Z,436µm,20.0s						
MSNA	**Messina**	**72.37**	**221**	*i* P	P	08 01 23.4	-6.7
MSNA	**Messina**	**72.37**	**221**	*i* P	P	08 01 23.4	-6.7
BPAW	**Bear Paw Mtn.**	**72.38**	**19**	P	**P**	**08 01 28.3**	**-1.4**
BPAW				IAmb	IAmb	08 01 47.5	
	comp=Z,779nm,1.3s						
BPAW				IAMs_20	IAMs_20	08 31 50.8	
	comp=Z,397µm,19.0s						
BPAW	**Bear Paw Mtn.**	**72.38**	**19**	P	**P**	**08 01 29.2**	**-0.5**
	baz=325,SNR=21						
BPAW				S	**S**	**08 10 53.8**	**+1.3**
	baz=325						
POKR	**Poker Plat Res**	**72.38**	**17**	P	**P**	**08 01 29.3**	**-0.4**
POKR				IAMs_20	IAMs_20	08 35 27.6	
	comp=Z,410µm,18.0s						
POKR	**Poker Plat Res**	**72.38**	**17**	P	**P**	**08 01 29.5**	**-0.1**
	baz=328,SNR=241						
POKR				S	**S**	**08 10 53.3**	**+0.9**
	baz=328						
NEA2	**Nenana**	**72.44**	**18**	P	**P**	**08 01 29.5**	**-0.5**
NEA2				IAmb	IAmb	08 01 56.4	
	comp=Z,624nm,1.0s						
NEA2				IAMs_20	IAMs_20	08 36 46.3	
	comp=Z,430µm,20.0s						
NEA2	**Nenana**	**72.44**	**18**	P	**P**	**08 01 29.8**	**-0.2**
	baz=327,SNR=212						
NEA2				S	**S**	**08 10 52.1**	**-1.1**
	baz=327						
TCOL	**CIGO, UAF Yank**	**72.49**	**17**	P	**P**	**08 01 29.6**	**-0.6**
TCOL				IAmb	IAmb	08 01 57.4	
	comp=Z,835nm,0.9s						
TCOL				IAMs_20	IAMs_20	08 36 25.5	
	comp=Z,457µm,20.0s						
TCOL	**CIGO, UAF Yank**	**72.49**	**17**	P	**P**	**08 01 30.0**	**-0.2**
	baz=328,SNR=167						
TCOL				S	**S**	**08 10 54.8**	**+1.2**
	baz=328						
COLA	**College**	**72.49**	**17**	*d* *i*P	**P**	**08 01 29.7**	**-0.6**
COLA				pmax	pmax		
	comp=Z,864nm,1.1s						
COLA				MLR	MLR		
	comp=Z,409µm,18.0s						
COLA	**College**	**72.49**	**17**	⇑P	**P**	**08 01 29.6**	**-0.6**
COLA	**College**	**72.49**	**17**	P	**P**	**08 01 29.6**	**-0.6**
COLA				IAmb	IAmb	08 01 57.4	
	comp=Z,834nm,0.9s						
COLA	**College**	**72.49**	**17**	IAMs_20	IAMs_20	08 36 26.5	
	comp=Z,436µm,20.0s						
COLA	**College**	**72.49**	**17**	P	**P**	**08 01 29.8**	**-0.4**
	baz=328						
COLA				S	**S**	**08 10 54.8**	**+1.2**
	baz=328						
CAST	**Castle Rocks**	**72.66**	**19**	P	**P**	**08 01 31.1**	**-0.2**
CAST				IAMs_20	IAMs_20	08 32 33.1	
	comp=Z,496µm,21.0s						
CAST	**Castle Rocks**	**72.66**	**19**	P	**P**	**08 01 31.1**	**-0.2**
	baz=324,SNR=29						
CAST				S	**S**	**08 10 56.2**	**+0.6**
	baz=324						
CCB	**Clear Creek Bu**	**72.70**	**17**	P	**P**	**08 01 30.7**	**-0.8**
CCB				IAmb	IAmb	08 01 42.2	
	comp=Z,1µm,2.0s						
CCB				IAMs_20	IAMs_20	08 34 17.0	
	comp=Z,426µm,20.0s						
BWN	**Browne**	**72.70**	**18**	P	**P**	**08 01 31.4**	**-0.1**
BWN				IAMs_20	IAMs_20	08 32 53.2	
	comp=Z,321µm,18.0s						
MACI	**Morro de la Ar**	**72.73**	**293**	P	**P**	**08 01 31.4**	**-1.1**
WRH	**Wood River Hil**	**72.78**	**17**	P	**P**	**08 01 31.2**	**-0.8**
WRH				IAmb	IAmb	08 01 58.3	
	comp=Z,486nm,1.2s						
IL31		**72.80**	**17**	P	**P**	**08 01 31.0**	**-1.0**
ILAR	**Eielson Array**	**72.80**	**17**	P	**P**	**08 01 31.0**	**-1.2**
	comp=Z,77nm,0.9s,baz=318,slow=4.7,SNR=118						
ILAR				PKPPKP	P'P'df	08 29 12.3	-9.1
	comp=Z,2.8nm,0.9s,baz=236,slow=2.6,SNR=6.3						
ILAR				LR	LR	08 36 29.4	
	comp=Z,265µm,19.5s,baz=320,slow=38						
ILAR	**Eielson Array**	**72.80**	**17**	P	**P**	**08 01 30.9**	**-1.2**
ILAR	**Eielson Array**	**72.80**	**17**	P	**P**	**08 01 30.9**	**-1.2**
KTH	**Kantishna Hill**	**72.85**	**19**	P	**P**	**08 01 31.5**	**-1.1**
KTH				IAMs_20	IAMs_20	08 36 18.1	
	comp=Z,383µm,19.0s						
L19K	**White Mountain**	**72.89**	**21**	P	**P**	**08 01 33.2**	**+0.5**
L19K				IAmb	IAmb	08 01 52.1	
	comp=Z,499nm,1.2s						
L19K				IAMs_20	IAMs_20	08 34 41.5	
	comp=Z,395µm,20.0s						
L19K	**White Mountain**	**72.89**	**21**	P	**P**	**08 01 33.2**	**+0.5**
	baz=322						
L19K				S	**S**	**08 11 00.5**	**+2.1**
	baz=322						
L20K	**Farewell, AK**	**72.93**	**21**	P	**P**	**08 01 33.2**	**+0.2**
	baz=323,SNR=109						
L20K				S	**S**	**08 11 01.6**	**+2.7**
	baz=323						
KUKU	**Kukurantumi**	**73.03**	**265**	⇑*i*P	**P**	**08 01 32.9**	**-1.5**
PPLA	**Purkeypile**	**73.06**	**20**	P	**P**	**08 01 33.7**	**-0.2**
PPLA				IAmb	IAmb	08 01 59.7	
	comp=Z,601nm,1.0s						
PPLA	**Purkeypile**	**73.06**	**20**	P	**P**	**08 01 33.5**	**-0.4**
	baz=324,SNR=47						
PPLA				S	**S**	**08 11 01.1**	**+0.6**
	baz=324						
HDA	**Harding Lake**	**73.10**	**17**	P	**P**	**08 01 32.8**	**-1.1**
HDA				IAMs_20	IAMs_20	08 34 40.5	
	comp=Z,399µm,19.0s						
HDA	**Harding Lake**	**73.10**	**17**	P	**P**	**08 01 32.6**	**-1.3**
	baz=328,SNR=90						
HDA				S	**S**	**08 10 59.6**	**-1.0**
	baz=328						
HDA				S	**S**	**08 10 59.6**	**-1.0**
	baz=328						
TRF	**Thorofare Moun**	**73.10**	**19**	P	**P**	**08 01 32.0**	**-2.1**
TRF				IAMs_20	IAMs_20	08 36 36.6	
	comp=Z,386µm,19.0s						
TRF	**Thorofare Moun**	**73.10**	**19**	P	**P**	**08 01 33.2**	**-0.9**
	baz=326						
TRF				S	**S**	**08 10 58.0**	**-2.9**
	baz=326						
MCK	**McKinley**	**73.20**	**18**	P	**P**	**08 01 34.2**	**-0.3**
MCK				pmax	pmax		
	comp=Z,787nm,1.6s						
MCK				MLR	MLR		
	comp=Z,407µm,21.0s						
MCK	**McKinley**	**73.20**	**18**	P	**P**	**08 01 34.2**	**-0.3**
MCK				IAmb	IAmb	08 02 02.1	
	comp=Z,787nm,1.6s						
MCK				IAMs_20	IAMs_20	08 33 43.3	
	comp=Z,407µm,21.0s						
MCK	**McKinley**	**73.20**	**18**	P	**P**	**08 01 34.1**	**-0.3**
	baz=327,SNR=68						
MCK				S	**S**	**08 10 59.8**	**-2.0**
	baz=327						
M19K	**Big River Lodg**	**73.25**	**21**	P	**P**	**08 01 36.9**	**+2.1**
M19K	**Big River Lodg**	**73.25**	**21**	P	**P**	**08 01 35.4**	**+0.5**
	baz=323						
M19K				S	**SKiKP**	**08 11 05.5**	**-0.3**
	baz=323						
J25K	**Salcha River,**	**73.28**	**16**	P	**P**	**08 01 34.2**	**-0.8**
	baz=330,SNR=147						
J25K				S	**S**	**08 11 02.7**	**-0.1**
	baz=330						
BART	**Pico Bartolome**	**73.29**	**305**	*e*P	**P**	**08 01 36.2**	**+0.6**
	comp=Z,302nm,1.4s						
EPYK	**Eagle Plains**	**73.37**	**12**	P	**P**	**08 01 36.8**	**+1.3**
EPYK				IAMs_20	IAMs_20	08 36 21.3	
	comp=Z,183µm,19.0s						
EPYK	**Eagle Plains**	**73.37**	**12**	P	**P**	**08 01 34.6**	**-0.9**
	baz=336						
EPYK				S	**SKiKP**	**08 11 06.4**	**+0.5**
	baz=336						
RND	**Reindeer**	**73.49**	**18**	P	**P**	**08 01 35.1**	**-1.2**
RND				pmax	pmax		
	comp=Z,459nm,1.0s						
RND				MLR	MLR		
	comp=Z,388µm,19.0s						
RND	**Reindeer**	**73.49**	**18**	P	**P**	**08 01 35.1**	**-1.2**
RND				IAmb	IAmb	08 02 01.9	
	comp=Z,459nm,1.0s						
RND				IAMs_20	IAMs_20	08 33 51.0	
	comp=Z,388µm,19.0s						
CMLA	**Cha da Macela**	**73.53**	**305**	*e*P	**P**	**08 01 36.3**	**-0.6**
	comp=Z,520nm,1.4s						
GRON	**Grota Negra**	**73.53**	**305**	*e*P	**P**	**08 01 35.7**	**-1.3**
	comp=Z,536nm,1.6s						
SVW2	**Sparrevohn**	**73.54**	**22**	P	**P**	**08 01 37.6**	**+1.0**
MBWA	**Marble Bar**	**73.57**	**135**	P	**P**	**08 01 41.5**	**+4.4**
MBWA				P	**P**	**08 01 41.5**	**+4.4**
MBWA	**Marble Bar**	**73.57**	**135**	⇑P	**P**	**08 01 36.5**	**-0.7**
MBWA	**Marble Bar**	**73.57**	**135**	P	**P**	**08 01 37.0**	**-0.2**
PSET	**Sete Cidades**	**73.62**	**305**	*e*P	**P**	**08 01 38.3**	**+0.8**
	comp=Z,765nm,1.7s						
PSMN	**Pico do Norte,**	**73.67**	**304**	*e*P	**P**	**08 01 37.2**	**-0.6**
	comp=Z,583nm,1.5s						
PSMA	**Santa Maria**	**73.72**	**304**	*e*P	**P**	**08 01 38.1**	**+0.1**
	comp=Z,899nm,1.7s						
J26L	**Joseph Creek**	**73.76**	**16**	P	**P**	**08 01 37.6**	**-0.3**
	baz=331						
J26L				S	**S**	**08 11 10.4**	**+2.1**
	baz=331						
DRS	**Darwin Rock St**	**73.94**	**120**	P	**P**	**08 01 38.9**	**-0.6**
FRB	**Frobisher Bay**	**73.95**	**343**	P	**P**	**08 01 37.8**	**-1.0**
	comp=Z,136nm,1.0s,baz=19,slow=6.9,SNR=26						
FRB				LR	LR	08 38 58.3	
	comp=Z,221µm,18.4s,baz=29,slow=40						
FRB	**Frobisher Bay**	**73.95**	**343**	⇑P	**P**	**08 01 37.9**	**-1.0**
PSA00	**Pilbara Seismi**	**73.96**	**135**	P	**P**	**08 01 38.9**	**-0.6**
PSA00				IAmb	IAmb	08 02 08.1	
	comp=Z,446nm,1.1s						
PSA00	**Pilbara Seismi**	**73.96**	**135**	P	**P**	**08 01 38.6**	**-0.8**
PSA00				IAmb	IAmb	08 02 08.1	
	comp=Z,409nm,1.0s						
PSA00	**Pilbara Seismi**	**73.96**	**135**	P	**P**	**08 01 39.0**	**-0.5**
CUT	**Chulitna**	**73.97**	**19**	P	**P**	**08 01 38.4**	**-0.6**
CUT				IAMs_20	IAMs_20	08 33 23.8	
	comp=Z,398µm,20.0s						
CUT	**Chulitna**	**73.97**	**19**	P	**P**	**08 01 39.4**	**+0.4**
	baz=326,SNR=19						
CUT				S	**S**	**08 11 10.5**	**+0.1**
	baz=326						
PSCM	**Serra do Cume**	**74.00**	**307**	*e*P	**P**	**08 01 37.4**	**-2.3**
	comp=Z,622nm,1.5s						
PAGU	**Agualva, Azore**	**74.00**	**307**	*e*P	**P**	**08 01 38.8**	**-0.9**
	comp=Z,809nm,1.6s						
EGAK	**Eagle**	**74.01**	**14**	P	**P**	**08 01 38.8**	**-0.4**
EGAK				IAmb	IAmb	08 02 06.5	
	comp=Z,724nm,1.1s						
EGAK				IAMs_20	IAMs_20	08 34 56.4	
	comp=Z,464µm,20.0s						
EGAK	**Eagle**	**74.01**	**14**	P	**P**	**08 01 38.6**	**-0.6**
	baz=333,SNR=113						
EGAK				S	**S**	**08 11 11.9**	**+1.0**
	baz=333						
I29M	**Ogilvie Camp,**	**74.02**	**13**	P	**P**	**08 01 38.4**	**-0.9**
	baz=335,SNR=190						
I29M				S	**S**	**08 11 09.8**	**-1.2**
	baz=335						
WAT1	**Susitna Watana**	**74.05**	**18**	P	**P**	**08 01 38.7**	**-0.9**
	baz=327						
WAT1				S	**S**	**08 11 10.6**	**-0.9**
	baz=327						
N19K	**Bonanza Creek**	**74.09**	**22**	P	**P**	**08 01 40.2**	**+0.3**
N19K	**Bonanza Creek**	**74.09**	**22**	P	**P**	**08 01 40.8**	**+0.8**
	baz=323						
N19K				S	**S**	**08 11 13.3**	**+1.2**
	baz=323						
ADH	**Angra Heroismo**	**74.10**	**307**	*e*P	**P**	**08 01 39.5**	**-0.7**
	comp=Z,420nm,1.7s						
SCRK	**Sand Creek**	**74.13**	**16**	P	**P**	**08 01 39.8**	**-0.3**
SCRK				IAmb	IAmb	08 02 06.7	
	comp=Z,661nm,1.1s						
SCRK	**Sand Creek**	**74.13**	**16**	P	**P**	**08 01 39.8**	**-0.3**
	baz=331,SNR=148						
SCRK				S	**S**	**08 11 11.4**	**-1.1**
	baz=331						
DHY	**Denali Highway**	**74.13**	**18**	P	**P**	**08 01 39.7**	**-0.5**
DHY				IAmb	IAmb	08 02 03.9	
	comp=Z,382nm,0.8s						
DHY				IAMs_20	IAMs_20	08 37 58.9	
	comp=Z,361µm,19.0s						
DHY	**Denali Highway**	**74.13**	**18**	P	**P**	**08 01 40.4**	**+0.2**
	baz=328						
DHY				S	**S**	**08 11 10.6**	**-2.0**
	baz=328						
RIDG	**Independent Ri**	**74.15**	**16**	P	**P**	**08 01 39.5**	**-0.6**
RIDG				IAmb	IAmb	08 02 06.1	

	comp=Z,952nm,1.0s						
RIDG				IAMs_20	IAMs_20	08 38 14.3	
	comp=Z,402µm,19.0s						
RIDG	Independent Ri	74.15	16	P	P	08 01 39.2	-1.0
	baz=330,SNR=196						
RIDG				S	S	08 11 11.1	-1.5
	baz=330						
LESE	Lesego, Limpop	74.22	220	*i* P	P	08 01 39.8	-1.3
PGRA	Graciosa	74.35	307	*e*P	P	08 01 41.6	-0.1
	comp=Z,1µm,2.0s						
MTN	Manton Dam	74.40	121	⇑P	P	08 01 42.5	+0.3
MTN	Manton Dam	74.40	121	P	P	08 01 41.1	-1.1
MTN	Manton Dam	74.40	121	P	P	08 01 42.0	-0.1
DOT	Dot Lake	74.40	16	P	P	08 01 40.8	-0.8
SPCR	Spurr Chakacha	74.44	21	P	P	08 01 41.6	-0.3
	baz=325,SNR=25						
SPCR				S	S	08 11 15.3	-0.6
	baz=325						
WAT6	Susitna Watana	74.46	18	P	P	08 01 42.3	+0.1
	baz=328						
WAT6				S	S	08 11 13.4	-3.0
	baz=328						
SPU	Mount Spurr	74.49	21	P	P	08 01 41.2	-1.0
M22K	Willow	74.55	20	P	P	08 01 41.6	-0.7
	baz=326,SNR=81						
M22K				S	S	08 11 15.5	-1.4
	baz=326						
O19K	Port Alsworth	74.64	22	P	P	08 01 43.0	+0.1
O19K				IAMs_20	IAMs_20	08 36 48.6	
	comp=Z,402µm,18.0s						
O19K	Port Alsworth	74.64	22	P	P	08 01 43.4	+0.5
	baz=323,SNR=32						
O19K				S	S	08 11 21.0	+3.0
	baz=323						
O18K	Koktuh Hills	74.64	23	P	P	08 01 43.0	0.0
O18K				IAmb	IAmb	08 02 02.7	
	comp=Z,855nm,1.1s						
O18K	Koktuh Hills	74.64	23	P	P	08 01 43.7	+0.7
	baz=323						
O18K				S	S	08 11 21.8	+3.7
	baz=323						
PMAN	Manadas	74.65	307	*e*P	P	08 01 43.0	-0.4
	comp=Z,1µm,1.6s						
PAX	Paxson	74.67	17	P	P	08 01 42.3	-1.0
PAX				pmax	pmax		
	comp=Z,1µm,1.2s						
PAX	Paxson	74.67	17	P	P	08 01 42.3	-1.0
PAX	Paxson	74.67	17	P	P	08 01 42.6	-0.7
	baz=330,SNR=228						
PAX				S	S	08 11 17.8	-0.7
	baz=330						
ROSA	Rosais	74.70	307	*e*P	P	08 01 42.2	-1.5
	comp=Z,748nm,1.6s						
NIKH	Nikolski High	74.70	34	S	S	08 11 20.0	+1.0
	baz=314						
PID	Ribeirinha	74.78	307	*e*P	P	08 01 43.4	-0.9
	comp=Z,618nm,1.1s						
GHO	Glory Hole Cre	74.85	19	P	P	08 01 43.6	-0.6
J29M	Klondike Camp	74.86	13	P	P	08 01 43.1	-1.2
	baz=335,SNR=37						
J29M				S	S	08 11 22.9	+2.3
	baz=335						
KNRA	Kununurra	74.87	124	P	P	08 01 44.3	-0.6
KNRA	Kununurra	74.87	124	P	P	08 01 44.2	-0.6
RSO	Redoubt South	74.88	22	P	P	08 01 43.5	-1.2
PICO	Pico	74.94	307	*e*P	P	08 01 44.1	-1.1
	comp=Z,835nm,1.8s						
PMR	Palmer	74.94	19	P	P	08 01 44.2	-0.5
PMR				pmax	pmax		
	comp=Z,897nm,1.3s						
PMR	Palmer	74.94	19	P	P	08 01 44.2	-0.5
PMR				IAmb	IAmb	08 02 03.0	
	comp=Z,897nm,1.3s						
PMR	Palmer	74.94	19	P	P	08 01 44.0	-0.6
	baz=327,SNR=96						
PMR				S	S	08 11 22.7	+1.3
	baz=327						
SML	Sawmill	74.97	19	P	P	08 01 44.5	-0.4
SML	Sawmill	74.97	19	P	P	08 01 44.5	-0.4
	baz=328,SNR=209						
SML				S	S	08 11 21.6	-0.2
	baz=328						
DAWY	Dawson	74.99	14	P	P	08 01 44.6	-0.4
DAWY				IAmb	IAmb	08 02 11.6	
	comp=Z,504nm,1.0s						
DAWY	Dawson	74.99	14	P	P	08 01 44.3	-0.7
	baz=334,SNR=250						
DAWY				S	S	08 11 21.6	-0.3
	baz=334						
P18K	Big Mountain,	75.00	23	P	P	08 01 45.5	+0.4
P18K				IAmb	IAmb	08 02 04.6	
	comp=Z,907nm,1.3s						
P18K				IAMs_20	IAMs_20	08 34 14.4	
	comp=Z,374µm,19.0s						
P18K	Big Mountain,	75.00	23	P	P	08 01 46.4	+1.3
	baz=323,SNR=25						
P18K				S	S	08 11 25.6	+3.3
	baz=323						
FIS	Fire Island	75.03	20	IAMs_20	IAMs_20	08 37 23.9	
	comp=Z,404µm,18.0s						
CALA	Caldeira	75.07	307	*e*P	P	08 01 45.2	-0.8
	comp=Z,1µm,1.2s						
CAPN	Captain Cook N	75.09	21	P	P	08 01 44.3	-1.2
	baz=326						
CAPN				S	S	08 11 24.8	+1.8
	baz=326						
UNV	Unalaska Valle	75.09	32	S	S	08 11 25.1	+1.8
	baz=316						
MENT	Mentasta	75.10	16	P	P	08 01 46.8	+1.1
MENT				IAmb	IAmb	08 02 26.6	
	comp=Z,1µm,1.8s						
L26K	Log Cabin Wild	75.10	16	P	P	08 01 45.5	-0.2
L26K	Log Cabin Wild	75.10	16	P	P	08 01 45.4	-0.2
	baz=331,SNR=71						
L26K				S	S	08 11 22.3	-0.9
	baz=331						
KDU	Kakadu	75.20	119	⇑P	P	08 01 45.5	-1.3
KDU	Kakadu	75.20	119	P	P	08 01 46.5	-0.3
SCM	Sheep Creek Mo	75.20	18	IAMs_20	IAMs_20	08 39 07.3	
	comp=Z,373µm,18.0s						
SCM	Sheep Creek Mo	75.20	18	P	P	08 01 45.9	-0.4
	baz=328,SNR=104						
SCM				S	S	08 11 24.6	+0.1
	baz=328						
RC01	Rabbit Creek A	75.21	20	P	P	08 01 45.8	-0.4
	baz=327,SNR=117						
RC01				S	S	08 11 25.0	+0.7
	baz=327						
O20K	Slope Mountain	75.23	22	P	P	08 01 47.0	+0.5
	baz=325,SNR=9.6						
O20K				S	S	08 11 25.2	+0.4
	baz=325						
HARP	HAARP	75.24	17	P	P	08 01 46.6	+0.1
	baz=330,SNR=230						
HARP				S	S	08 11 27.2	+2.5
	baz=330						
M24K	Tolsona, Glenn	75.25	18	IAMs_20	IAMs_20	08 36 00.5	
	comp=Z,397µm,21.0s						
M24K	Tolsona, Glenn	75.25	18	P	P	08 01 46.5	0.0
	baz=329,SNR=161						
M24K				S	S	08 11 26.1	+1.1
	baz=329						
KNK	Knik Glacier	75.27	19	IAMs_20	IAMs_20	08 37 54.2	
	comp=Z,441µm,20.0s						
KNK	Knik Glacier	75.27	19	P	P	08 01 46.5	-0.1
	baz=328,SNR=147						
KNK				S	S	08 11 25.0	-0.1
	baz=328						
CRLN	Carolina, Mapu	75.39	219	*e*P	P	08 01 47.3	-0.6
L27K	Beaver Creek,	75.40	16	P	P	08 01 47.6	+0.2
L27K				IAmb	IAmb	08 02 14.6	
	comp=Z,357nm,0.9s						
L27K	Beaver Creek,	75.40	16	P	P	08 01 47.3	-0.1
	baz=332						
L27K				S	S	08 11 28.5	+2.0
	baz=332						
P19K	Oil Pt	75.40	22	IAMs_20	IAMs_20	08 36 59.8	
	comp=Z,452µm,21.0s						
P19K	Oil Pt	75.40	22	P	P	08 01 48.8	+1.4
	baz=324						
P19K				S	S	08 11 25.8	-0.8
	baz=324						
BCAR	Beaver Creek A	75.41	16	P	P	08 01 47.2	-0.2
NEPA	Kaukuwa	75.48	233	*i* P	P	08 01 47.8	-0.7
FALS	False Pass	75.60	30	P	P	08 01 49.9	+1.3
	baz=318						
FALS				S	S	08 11 28.4	-0.5
	baz=318						
POGA	Pongola	75.69	217	*i* P	P	08 01 51.9	+2.5
O22K	Cooper Landing	75.72	20	IAMs_20	IAMs_20	08 33 58.1	
	comp=Z,461µm,21.0s						
O22K	Cooper Landing	75.72	20	P	P	08 01 49.3	+0.1
	baz=327,SNR=29						
O22K				S	S	08 11 28.0	-2.0
	baz=327						
M26K	Nabesna, AK	75.73	16	P	P	08 01 49.2	-0.1
M26K				IAMs_20	IAMs_20	08 37 28.1	
	comp=Z,418µm,21.0s						
M26K	Nabesna, AK	75.73	16	P	P	08 01 49.3	-0.1
	baz=332						
M26K				S	S	08 11 31.2	+1.0
	baz=332						
PWL	Port Wells	75.77	19	P	P	08 01 49.2	-0.3
PWL				IAmb	IAmb	08 02 07.9	
	comp=Z,493nm,1.0s						
PWL	Port Wells	75.77	19	P	P	08 01 49.0	-0.6
	baz=328						
PWL				S	S	08 11 31.1	+0.5
	baz=328						
KLU	Klutina	75.84	18	IAMs_20	IAMs_20	08 35 15.2	
	comp=Z,416µm,21.0s						
KLU	Klutina	75.84	18	P	P	08 01 50.0	0.0
	baz=330,SNR=155						
KLU				S	S	08 11 31.5	-0.1
	baz=330						
HOM	Homer	75.86	22	IAMs_20	IAMs_20	08 34 49.0	
	comp=Z,440µm,21.0s						
HOM	Homer	75.86	22	P	P	08 01 51.3	+1.3
	baz=325						
HOM				S	S	08 11 28.8	-2.8
	baz=325						
Q19K	Cape Douglas,	75.86	23	P	P	08 01 51.1	+1.0
	baz=324						
Q19K				S	S	08 11 30.5	-1.3
	baz=324						
BRLK	Bradley Lake	75.99	21	IAMs_20	IAMs_20	08 38 48.5	
	comp=Z,441µm,20.0s						
M27K	Edge Creek, AK	76.02	16	P	P	08 01 51.5	+0.4
M27K				IAmb	IAmb	08 02 11.8	
	comp=Z,698nm,1.1s						
M27K				IAMs_20	IAMs_20	08 34 59.6	
	comp=Z,390µm,21.0s						
M27K	Edge Creek, AK	76.02	16	P	P	08 01 50.9	-0.2
	baz=333						
M27K				S	S	08 11 35.7	+2.1
	baz=333						
BRSE	Bradley Lake S	76.05	21	P	P	08 01 51.0	-0.1
	baz=326,SNR=14						
BRSE				S	S	08 11 28.7	-5.1
	baz=326						
MAYO	Mayo, Yukon	76.06	13	P	P	08 01 50.6	-0.5
	baz=337,SNR=32						
MAYO				S	S	08 11 35.1	+1.3
	baz=337						
N25K	Chitina, Valde	76.06	17	IAMs_20	IAMs_20	08 36 28.9	
	comp=Z,293µm,20.0s						
N25K	Chitina, Valde	76.06	17	P	P	08 01 51.4	+0.1
	baz=330,SNR=57						
N25K				S	S	08 11 34.8	+0.8
	baz=330						
GLI	Glacier Island	76.08	19	IAMs_20	IAMs_20	08 41 05.4	
	comp=Z,385µm,20.0s						
GLI	Glacier Island	76.08	19	P	P	08 01 51.1	-0.2
	baz=329						
GLI				S	S	08 11 34.1	+0.1
	baz=329						
SEW	Seward	76.11	20	P	P	08 01 52.5	+1.1
	baz=327,SNR=16						
SEW				S	S	08 11 31.9	-2.4
	baz=327						
BVCY	Beaver Creek	76.18	15	P	P	08 01 51.9	0.0
	baz=333,SNR=103						
BVCY				S	S	08 11 37.1	+1.9
	baz=333						
DBIC	Dimbokro	76.27	268	P	P	08 01 51.6	-1.4
	comp=Z,43nm,0.9s,baz=51,slow=6.7,SNR=25						
DBIC				LR	LR	08 40 46.5	
	comp=Z,245µm,18.4s,baz=57,slow=40						
DBIC	Dimbokro	76.27	268	P	P	08 01 51.5	-1.6
DBIC				pmax	pmax		
	comp=Z,505nm,1.3s						
DBIC	Dimbokro	76.27	268	P	P	08 01 51.5	-1.6
DBIC				IAmb	IAmb	08 02 05.7	
	comp=Z,505nm,1.3s						
SDPT	Sand Point	76.36	28	S	S	08 11 39.2	+2.0
	baz=320						
KIC	Kosan Boka	76.37	267	*e*PKIKP	P	08 01 52.2	-1.5
	comp=Z,1µm,1.3s						
GLB	Gilahina Butte	76.39	17	IAMs_20	IAMs_20	08 41 21.6	
	comp=Z,272µm,19.0s						
TIC	Toumodi	76.42	268	*e*PKIKP	P	08 01 52.4	-1.5
HRAO	HartRAO	76.49	221	*e*P	P	08 02 04.0	+10
BMRM	Bremner River	76.62	18	P	P	08 01 54.2	-0.2
	baz=331,SNR=70						
BMRM				S	S	08 11 39.2	-0.9
	baz=331						
MCARA	McCarthy VSAT	76.62	17	IAMs_20	IAMs_20	08 34 28.7	
	comp=Z,390µm,22.0s						
MCARA	McCarthy VSAT	76.62	17	P	P	08 01 54.3	0.0
	baz=332,SNR=59						
MCARA				S	S	08 11 40.0	0.0
	baz=332						
VRDI	Verde Repeater	76.66	17	IAMs_20	IAMs_20	08 34 17.8	
	comp=Z,356µm,22.0s						
LIC	Lamto	76.68	267	*e*PKIKP	P	08 01 51.9	-3.5
	comp=Z,1µm,1.4s						
EYAK	Cordova Ski Ar	76.70	18	P	P	08 01 54.8	0.0
	baz=330						
EYAK				S	S	08 11 41.7	+0.9
	baz=330						
M30M	Minto, Yukon	76.84	14	P	P	08 01 55.3	-0.3
	baz=336,SNR=30						
M30M				S	S	08 11 45.6	+3.2
	baz=336						
YUK3	Moose Creek	76.84	16	P	P	08 01 55.4	-0.4
	baz=334,SNR=174						
YUK3				S	S	08 11 47.7	+4.9
	baz=334						
LBTB	Lobatse	76.89	223	*e*P	P	08 01 56.8	+0.4
LBTB	Lobatse	76.89	223	P	P	08 01 56.1	-0.3
LBTB				pmax	pmax		
	comp=Z,286nm,1.0s						
LBTB	Lobatse	76.89	223	*i* P	P	08 01 58.6	+2.3
LBTB	Lobatse	76.89	223	⇑P	P	08 01 55.2	-1.1
LBTB	Lobatse	76.89	223	*i* P	P	08 01 58.6	+2.3
LBTB	Lobatse	76.89	223	P	P	08 01 56.1	-0.3
LBTB	Lobatse	76.89	223	*i* P	P	08 01 54.3	-2.1
CHNA	Chernabura Isl	77.08	28	P	P	08 01 57.3	+0.3
	baz=320						
CHNA				S	S	08 11 46.9	+1.8
	baz=320						
TSUM	Tsumeb	77.10	233	⇑P	P	08 01 57.9	+0.2
TSUM	Tsumeb	77.10	233	P	P	08 01 57.0	-0.6
TSUM	Tsumeb	77.10	233	*i* P	P	08 01 56.6	-1.0
KDAK	Kodiak Island	77.12	23	P	P	08 01 57.2	0.0
KDAK				pmax	pmax		
	comp=Z,980nm,1.3s						
KDAK				MLR	MLR		
	comp=Z,468µm,21.0s						
KDAK	Kodiak Island	77.12	23	⇓P	P	08 01 57.6	+0.5
KDAK	Kodiak Island	77.12	23	P	P	08 01 57.2	0.0
KDAK				IAmb	IAmb	08 02 16.8	
	comp=Z,980nm,1.3s						
KDAK	Kodiak Island	77.12	23	P	P	08 01 58.7	+1.5
	baz=325						
KDAK				S	S	08 11 45.4	-0.1
	baz=325						
CRQM	Cirque	77.15	17	P	P	08 01 57.6	0.0
CRQM				IAmb	IAmb	08 02 16.6	
	comp=Z,869nm,1.2s						
CRQM				IAMs_20	IAMs_20	08 38 41.1	
	comp=Z,382µm,20.0s						
CRQE	Cirque	77.17	17	P	P	08 01 57.8	+0.2
	baz=332						
CRQE				S	S	08 11 46.3	+0.1
	baz=332						
BARN	Barnard Glacie	77.22	16	IAMs_20	IAMs_20	08 37 01.5	
	comp=Z,398µm,20.0s						
TGL	Tana Glacier	77.22	17	IAMs_20	IAMs_20	08 38 43.7	
	comp=Z,361µm,20.0s						
OHAK	Old Harbor	77.36	24	P	P	08 01 57.8	-0.7
OHAK	Old Harbor	77.36	24	P	P	08 02 00.3	+1.8
	baz=324						
MEEK	Meekatharra	77.37	139	P	P	08 01 59.2	+0.2
CTG	Chitna Glacier	77.38	16	P	P	08 01 59.0	+0.3
	baz=333,SNR=115						
CTG				S	S	08 11 50.3	+1.9
	baz=333						
CTGM	Chitina Glacie	77.38	16	IAMs_20	IAMs_20	08 39 03.6	
	comp=Z,438µm,20.0s						
WAX	Waxell Ridge	77.49	17	IAMs_20	IAMs_20	08 37 22.7	
	comp=Z,415µm,21.0s						
Q23K	Middleton Isla	77.51	19	P	P	08 02 00.4	+1.1
	baz=330						
Q23K				S	S	08 11 53.2	+3.6
	baz=330						
KAIM	Kayak Island	77.57	18	IAMs_20	IAMs_20	08 41 40.9	
	comp=Z,357µm,20.0s						
KAIM	Kayak Island	77.57	18	P	P	08 02 00.1	+0.4
	baz=331						
KAIM				S	S	08 11 54.7	+4.4
	baz=331						
YUK4	Talbot Arm	77.61	15	P	P	08 02 00.2	+0.1
	baz=335,SNR=134						
YUK4				S	S	08 11 53.3	+2.2
	baz=335						
SII	Sitkinak Islan	77.61	25	P	P	08 02 00.1	+0.1
	baz=324						
SII				S	S	08 11 54.7	+3.8
	baz=324						
M31M	Drury Creek, Y	77.62	13	P	P	08 02 00.1	+0.2
	baz=338,SNR=103						
M31M				S	S	08 11 52.0	+1.2
	baz=338						
BGLC	Bering Glacier	77.68	18	P	P	08 01 59.3	-0.9
	baz=332						
BGLC				S	S	08 11 53.7	+2.3
	baz=332						
CHIR	Chirikof Islan	77.72	26	P	P	08 02 01.3	+0.7
	baz=323						
CHIR				S	S	08 11 56.6	+4.5
	baz=323						
SNH	Sunshine Point	77.73	17	IAMs_20	IAMs_20	08 41 10.1	
	comp=Z,352µm,20.0s						
FARO	Faro, Yukon	77.77	12	P	P	08 02 00.8	0.0
	baz=339,SNR=87						
FARO				S	S	08 11 53.7	+1.2
	baz=339						
MESA	MESA	77.94	17	P	P	08 02 01.9	0.0
	baz=333,SNR=28						
MESA				S	S	08 11 56.4	+1.6
	baz=333						
YUK6	Outpost Mounta	78.03	15	P	P	08 02 02.7	+0.1
	baz=335,SNR=64						
YUK6				S	S	08 11 57.6	+1.9
	baz=335						
N31M	Braeburn, Yuko	78.03	14	P	P	08 02 02.1	-0.2
	baz=337,SNR=90						
N31M				S	S	08 11 56.8	+1.5
	baz=337						
MORW	Morawa	78.08	142	⇑P	P	08 02 02.1	-0.7
MORW	Morawa	78.08	142	P	P	08 02 02.1	-0.7
MORW	Morawa	78.08	142	P	P	08 02 02.2	-0.7
WRGLY	Wrigley	78.14	7	P	P	08 02 02.6	-0.2
	baz=347,SNR=152						
WRGLY				S	S	08 11 57.7	+1.4
	baz=347						
HYT	Haines Junctio	78.31	15	P	P	08 02 04.3	+0.4
	baz=336,SNR=190						
HYT				S	S	08 12 00.8	+2.3
	baz=336						
PINM	Pinnacle	78.39	16	P	P	08 02 04.8	+0.4
	baz=334,SNR=30						
PINM				S	S	08 12 02.1	+2.8
	baz=334						
BCPM	Bancas Point	78.66	16	IAMs_20	IAMs_20	08 40 12.5	
	comp=Z,373µm,20.0s						
WHY	Whitehorse	78.97	14	⇑P	P	08 02 07.0	-0.6
WHY	Whitehorse	78.97	14	P	P	08 02 07.0	-0.6
WHY	Whitehorse	78.97	14	P	P	08 02 08.1	+0.6
	baz=338,SNR=32						
WHY				S	S	08 12 05.2	-0.3
	baz=338						
PNL	Peninsula	78.97	16	P	P	08 02 08.2	+0.8
	baz=335,SNR=27						
PNL				S	S	08 12 07.7	+2.3
	baz=335						
MANU	Manus Island	79.10	101	⇑P	P	08 02 01.9	-6.9
YKA	Yellowknife Ar	79.54	4	P	P	08 02 10.0	-0.5
	comp=Z,168nm,0.9s,baz=347,slow=5.6,SNR=53						
YKA				PKKPbc	PKKPbc	08 21 02.1	+3.6
	comp=Z,1.5nm,0.6s,baz=170,slow=2.0,SNR=7.6						
YKA				PKPPKP	P'P'df	08 29 05.6	-3.6
	comp=Z,2.0nm,0.8s,baz=134,slow=2.4,SNR=3.7						
YKA				LR	LR	08 41 27.6	
	comp=Z,465µm,18.6s,baz=0.0,slow=39						
YKA	Yellowknife Ar	79.54	4	P	P	08 02 10.0	-0.5
YKA	Yellowknife Ar	79.54	4	P	P	08 02 10.7	+0.2
BLDU	Ballidu	79.69	143	P	P	08 02 11.8	+0.2
P33M	Teslin, Yukon	79.75	13	P	P	08 02 11.8	0.0
	baz=340,SNR=125						
P33M				S	S	08 12 13.6	-0.3
	baz=340						
WIN	Windhoek	79.90	231	*i* P	P	08 02 13.4	+0.2
BOSA	Boshof	79.96	221	P	P	08 02 13.9	+0.6
	comp=Z,25nm,1.1s,baz=31,slow=4.7,SNR=9.9						
BOSA				PKKPbc	PKKPbc	08 21 02.1	+3.3
	comp=Z,2.8nm,0.9s,baz=306,slow=14,SNR=2.1						
BOSA				LR	LR	08 36 40.7	
	comp=Z,95µm,21.6s,baz=40,slow=35						
BOSA	Boshof	79.96	221	*e*P	P	08 02 11.8	-1.5
BOSA	Boshof	79.96	221	P	P	08 02 12.4	-0.9
BOSA				pmax	pmax		
	comp=Z,270nm,1.2s						
BOSA	Boshof	79.96	221	⇑P	P	08 02 12.2	-1.0
BOSA				⇑P	pP	08 02 14.6	-4.8
BOSA	Boshof	79.96	221	P	P	08 02 12.4	-0.9
BOSA	Boshof	79.96	221	*i* P	P	08 02 11.4	-1.9
SKAG	Skagway	80.00	14	⇑P	P	08 02 13.8	+0.8
SKAG	Skagway	80.00	14	P	P	08 02 13.5	+0.5
	baz=338,SNR=32						
SKAG				S	S	08 12 20.2	+4.0
	baz=338						
WTLY	Watson Lake, Y	80.50	11	P	P	08 02 16.2	+0.5
	baz=343,SNR=6.5						
WTLY				S	S	08 12 24.5	+2.9
	baz=343						
MUN	Mundaring	80.59	144	P	P	08 02 17.1	+0.7
KLBR	Kellerberrin	81.00	142	P	P	08 02 19.5	+0.9
MBO	M'Bour	81.14	281	IAMs_20	IAMs_20	08 44 42.3	
	comp=Z,225µm,20.0s						
SCHQ	Schefferville	81.18	338	P	P	08 02 20.4	+0.9
	comp=Z,84nm,0.9s,baz=39,slow=6.4,SNR=32						
SCHQ				PKKPbc	PKKPbc	08 21 00.0	+5.2
	comp=Z,9.8nm,1.1s,baz=58,slow=2.7,SNR=3.6						
SCHQ				LR	LR	08 37 43.5	
	comp=Z,307µm,21.6s,baz=29,slow=35						
SCHQ	Schefferville	81.18	338	⇑P	P	08 02 18.3	-1.1
WAKE	Wake Island	81.21	73	⇑P	P	08 02 26.9	+6.7
WAKE	Wake Island	81.21	73	P	P	08 02 21.9	+1.7
JIS	Juneau Island	81.28	14	P	P	08 02 20.2	+0.4
JIS				IAMs_20	IAMs_20	08 37 44.7	
	comp=Z,355µm,19.0s						
WB0	Warramunga Arr	81.51	123	P	P	08 02 20.4	-1.2
WRKA	Warakurna	81.53	131	⇑P	P	08 02 20.7	-0.9
WRKA	Warakurna	81.53	131	P	P	08 02 20.9	-0.7
WRA	Warramunga Arr	81.60	123	P	P	08 02 20.6	-1.6
	comp=Z,62nm,0.9s,baz=325,slow=4.9,SNR=112						
WRA				PKKPbc	PKKPbc	08 20 55.7	+1.4
	comp=Z,5.4nm,0.9s,baz=137,slow=2.0,SNR=9.7						
WRA				PKPPKP	P'P'df	08 28 59.1	+2.6
	comp=Z,8.0nm,1.2s,baz=194,slow=1.6,SNR=5.7						
WRA				LR	LR	08 45 47.9	
	comp=Z,51µm,19.6s,baz=350,slow=41						
WRAB	Tennant Creek	81.60	123	*d i*P	P	08 02 20.0	-2.1
WRAB				pmax	pmax		
	comp=Z,271nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,154µm,24.0s						
WRAB	Tennant Creek	81.60	123	⇓P	P	08 02 20.2	-1.9
WRAB	Tennant Creek	81.60	123	P	P	08 02 20.8	-1.2
WRAB	Tennant Creek	81.60	123	P	P	08 02 20.9	-1.2
WB2	Warramunga Arr	81.61	123	P	P	08 02 20.4	-1.7
WR0	Warramunga Arr	81.74	123	P	P	08 02 21.1	-1.7
NWAO	Narrogin (SRO)	81.85	144	P	P	08 02 27.6	+4.4
NWAO				P	P	08 02 27.6	+4.4
NWAO	Narrogin (SRO)	81.85	144	P	P	08 02 23.5	+0.4
DLBC	Dease Lake	81.91	12	LR	LR	08 44 29.5	
	comp=Z,217µm,18.1s,baz=332,slow=40						
SIT	Sitka	82.23	15	P	P	08 02 24.4	-0.5

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      baz=338,SNR=12
SIT                              S         S         08 12 41.5 +2.1
      baz=338
PATS  Pohnpei          82.23  87 P         P         08 02 28.7 +3.0
DRLN  Deer Lake        82.55 330⇓P         P         08 02 30.8 +4.1
WRAK  Wrangell Islan   83.41  14 IAMs_20   IAMs_20   08 41 18.1
      comp=Z,304µm,18.0s
WRAK  Wrangell Islan   83.41  14 P         P         08 02 32.4 +1.3
      baz=340,SNR=18
WRAK                             S         S         08 12 52.5 +1.0
      baz=340
PMG   Port Moresby     83.62 107 LR        LR        08 45 41.9
      comp=Z,38µm,18.1s,baz=286,slow=40
PMG   Port Moresby     83.62 107 P         P         08 02 31.9 -0.9
PMG                              pmax      pmax
      comp=Z,310nm,1.1s
PMG                              MLR       MLR
      comp=Z,60µm,20.0s
PMG   Port Moresby     83.62 107⇑P         P         08 02 33.6 +0.9
PMG   Port Moresby     83.62 107 P         P         08 02 31.9 -0.9
PMG                              IAmb      IAmb      08 03 01.0
      comp=Z,310nm,1.1s
PMG   Port Moresby     83.62 107 P         P         08 02 33.5 +0.7
PMG   Port Moresby     83.62 107 P         P         08 02 33.4 +0.7
COEN  Coen             83.63 113⇑P         P         08 02 32.1 -0.7
COEN  Coen             83.63 113 P         P         08 02 32.0 -0.7
COEN  Coen             83.63 113 P         P         08 02 33.6 +0.8
ASAR  Alice Springs    83.97 126 P         P         08 02 33.2 -1.2
      comp=Z,28nm,0.9s,baz=88,slow=8.5,SNR=59
ASAR                             PKKPbc    PKKPbc    08 20 48.2 -0.8
      comp=Z,2.8nm,1.0s,baz=122,slow=1.8,SNR=6.3
ASAR                             PKPPKP    P'P'df    08 28 57.8 +5.9
      comp=Z,2.4nm,1.0s,baz=98,slow=1.3,SNR=4.3
CRAG  Craig            84.16  15⇓P         P         08 02 39.3 +4.4
CRAG                            ⇑P         PcP       08 02 39.9 +1.1
CRAG  Craig            84.16  15 P         P         08 02 35.9 +1.0
      baz=340
CRAG                             S         S         08 13 03.7 +4.6
      baz=340
RABL  Rabaul           84.16 100 P         P         08 02 38.5 +2.9
CVNA  Calvinia         85.13 223eP         P         08 02 41.1 +0.9
SUR   Sutherland       85.27 222i P        P         08 02 42.8 +1.9
QIS   Mount Isa        85.56 120 P         P         08 02 41.3 -1.1
FORT  Forrest          85.72 135⇑P         P         08 02 41.4 -1.6
FORT  Forrest          85.72 135 P         P         08 02 42.4 -0.6
FORT                             IAmb      IAmb      08 02 57.2
      comp=Z,356nm,0.7s
FORT  Forrest          85.72 135 P         P         08 02 42.4 -0.6
ICQ   Pointe Anglais   85.89 335⇑P         P         08 02 46.2 +2.6
MIDW  Midway           86.90  56 IAMs_20   IAMs_20   08 40 13.9
      comp=Z,149µm,20.0s
MTSU  Mount Surprise   87.21 116 P         P         08 02 50.8 +0.2
FFC   Flin Flon        87.41 357 P         P         08 02 50.6 -0.5
FFC                              pmax      pmax
      comp=Z,410nm,1.0s
FFC                              MLR       MLR
      comp=Z,221µm,18.0s
FFC   Flin Flon        87.41 357 P         P         08 02 50.6 -0.5
FFC                              IAmb      IAmb      08 03 18.2
      comp=Z,410nm,1.0s
FFC   Flin Flon        87.41 357 IAMs_20   IAMs_20   08 45 30.0
      comp=Z,221µm,18.0s
OOD   Oodnadatta       88.04 128 P         P         08 02 53.1 -1.2
D62A  Allapoint, All   88.60 335 P         P         08 02 56.1 -0.7
D62A                             IAmb      IAmb      08 03 52.1
      comp=Z,453nm,1.6s
PQI   Presque Isle     88.61 334 IAMs_20   IAMs_20   08 47 51.8
      comp=Z,247µm,20.0s
MULG  Mulgathing       88.83 131 P         P         08 02 56.9 -1.1
EDM   Edmonton         88.86   4 P         P         08 02 58.2 +0.1
EDM                              pmax      pmax
      comp=Z,900nm,1.1s
EDM   Edmonton         88.86   4 P         P         08 02 58.2 +0.1
F64A  Sherman          89.42 334 P         P         08 02 58.7 -2.0
CTA   Charters Tower   89.87 116 P         P         08 03 04.9 +1.7
CTAO  Charters Tower   89.87 116 P         P         08 03 02.0 -1.2
CTAO                             pmax      pmax
      comp=Z,289nm,1.2s
CTAO  Charters Tower   89.87 116⇓P         P         08 03 03.4 +0.2
CTAO  Charters Tower   89.87 116 P         P         08 03 02.0 -1.2
CTAO  Charters Tower   89.87 116 P         P         08 03 04.0 +0.8
EMMW  East Machias     90.11 333 IAMs_20   IAMs_20   08 46 06.6
      comp=Z,194µm,21.0s
KAPO  Kapuskasing      90.12 344⇑P         P         08 03 06.0 +2.1
PKME  Peaks-Kenny Pk   90.27 334 IAMs_20   IAMs_20   08 49 09.8
      comp=Z,279µm,19.0s
PKME  Peaks-Kenny Pk   90.27 334 P         P         08 03 06.8 +2.1
      baz=29
PKME                             S         S         08 13 54.0 -4.3
      baz=29
MOQ   Mont Orford      91.20 336 P         P         08 03 08.2 -1.0
INKA  Innaminka        91.22 125 P         P         08 03 09.9 +0.7
ULM   Lac du Bonnet    91.44 353 P         P         08 03 09.0 -1.1
      comp=Z,68nm,1.0s,baz=0.3,slow=5.3,SNR=30
ULM                              LR        LR        08 46 55.3
      comp=Z,293µm,20.5s,baz=4.0,slow=37
MNTQ  Montreal, Queb   91.46 337⇑P         P         08 03 15.1 +4.8
LCRK  Leigh Creek      91.47 128 P         P         08 03 10.3 -0.1
BBOO  Buckleboo        91.82 131 P         P         08 03 11.3 -0.6
BBOO                             IAmb      IAmb      08 03 49.8
      comp=Z,210nm,1.2s
BBOO  Buckleboo        91.82 131 P         P         08 03 12.1 +0.1
GAC   Glen Almond      91.83 338⇓P         P         08 03 12.6 +0.6
LBNH  Lisbon           92.05 336 IAMs_20   IAMs_20   08 43 38.0
      comp=Z,315µm,21.0s
LBNH  Lisbon           92.05 336 P         P         08 03 15.1 +2.0
      baz=27
LBNH                             S         SKKSac    08 14 05.2 +2.6
      baz=27
PNT   Penticton        92.23   8⇑P         P         08 03 16.6 +2.8
PNT                             ⇑P         pP        08 03 17.4 -2.7
VT1   Waterbury        92.24 336 IAMs_20   IAMs_20   08 43 55.1
      comp=Z,305µm,21.0s
A04D  Lummi Island     92.43  10 P         P         08 03 17.2 +2.6
      baz=348
A04D                             S         S         08 14 14.3 -3.5
      baz=348
LONY  Lake Ozonia      92.55 337 IAMs_20   IAMs_20   08 46 42.0
      comp=Z,218µm,20.0s
LONY  Lake Ozonia      92.55 337 P         P         08 03 18.0 +2.6
      baz=25
HNH   Hanover          92.65 336 IAMs_20   IAMs_20   08 44 05.7
      comp=Z,291µm,20.0s
FFD   Franklin Falls   92.65 335 IAMs_20   IAMs_20   08 51 34.7
      comp=Z,230µm,19.0s
QLP   Quilpie          92.74 122 P         P         08 03 16.6 +0.3
WHYH  Whyalla          92.89 131 P         P         08 03 17.1 +0.3
B05A  Bryant           92.96  10 P         P         08 03 19.7 +2.6
      baz=348
B05A                             S         S         08 14 18.8 -3.8
      baz=348
EYMN  Ely              93.18 350 IAMs_20   IAMs_20   08 46 43.6
      comp=Z,255µm,20.0s
EYMN  Ely              93.18 350 P         P         08 03 20.4 +2.1
      baz=12
EYMN                             S         S         08 14 20.1 -4.6
      baz=12
AGMN  Agassiz Nation   93.37 352 IAMs_20   IAMs_20   08 49 47.6
      comp=Z,229µm,19.0s
AGMN  Agassiz Nation   93.37 352 P         P         08 03 20.6 +1.5
      baz=8.9
AGMN                             S         S         08 14 20.5 -5.7
      baz=8.9
HNR   Honiara          93.45  99 LR        LR        08 47 28.0
      comp=Z,33µm,19.2s,baz=311,slow=37
C06D  Leavenworth      93.45   9 P         P         08 03 20.6 +1.1
      baz=349
C06D                             S         S         08 14 23.1 -4.0
      baz=349
HRV   Adam Dziewonsk   93.47 334 IAMs_20   IAMs_20   08 50 52.6
      comp=Z,216µm,20.0s
HRV   Adam Dziewonsk   93.47 334 P         P         08 03 19.5 -0.1
      baz=27
HRV                              S         S         08 14 24.3 -3.0
      baz=27
BCX   Boston College   93.49 334 IAMs_20   IAMs_20   08 51 05.1
      comp=Z,186µm,18.0s
WES   Weston           93.50 334 IAMs_20   IAMs_20   08 51 11.3
      comp=Z,202µm,18.0s
NEW   Newport          93.53   7 P         P         08 03 21.2 +1.3
      comp=Z,40nm,1.0s,baz=350,slow=4.4,SNR=20
NEW                              PP        PP        08 07 18.0  +15
      comp=Z,34nm,1.1s,baz=338,slow=8.9,SNR=4.1
NEW   Newport          93.53   7 P         P         08 03 19.8  0.0
      baz=352
NEW                              S         S         08 14 21.4 -6.4
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      baz=352
D03D  Eldon            93.53  11 P         P         08 03 22.9 +3.1
      baz=348
D03D                             S         S         08 14 26.3 -1.4
      baz=348
NLWA  Neilton Lookou   93.56  11 IAMs_20   IAMs_20   08 46 07.1
      comp=Z,308µm,20.0s
SADO  Sadowa           93.70 340 PP        PP        08 07 24.7  +20
      comp=Z,41nm,1.1s,baz=81,slow=3.9,SNR=3.1
DGMT  Dagmar           93.74 358 P         P         08 03 22.9 +2.1
      baz=2.4
L61B  Northampton      93.90 335 P         P         08 03 24.4 +2.8
      baz=26
D04E  Lakebay          93.93  11 P         P         08 03 23.2 +1.6
      baz=348
QUA2  Belchertown      93.94 335 IAMs_20   IAMs_20   08 49 45.0
      comp=Z,229µm,21.0s
TRY   Troy             93.97 336 IAMs_20   IAMs_20   08 44 46.6
      comp=Z,332µm,21.0s
HTT   Hallett          93.97 130 P         P         08 03 22.4 +0.5
BRYW  Bryant College   93.99 334 IAMs_20   IAMs_20   08 51 10.2
      comp=Z,248µm,19.0s
M65A  Busby, Falmout   93.99 333 IAMs_20   IAMs_20   08 46 37.4
      comp=Z,297µm,19.0s
M65A  Busby, Falmout   93.99 333 P         P         08 03 22.5 +0.5
      baz=28
MDND  Maddock          94.14 355 P         P         08 03 24.6 +2.0
      baz=6.0
EGMT  Eagleton         94.20   2 P         P         08 03 21.2 -1.7
EGMT                             IAmb      IAmb      08 03 36.6
      comp=Z,188nm,1.1s
EGMT  Eagleton         94.20   2 P         P         08 03 24.9 +1.9
      baz=358
EGMT                             S         S         08 14 32.1 -1.6
      baz=358
JTMT  Jette            94.27   5 P         P         08 03 23.4  0.0
JTMT                             IAmb      IAmb      08 03 44.7
      comp=Z,256nm,0.9s
STKA  Stephens Creek   94.56 127 P         P         08 03 23.9 -0.7
      comp=Z,12nm,0.9s,baz=327,slow=4.6,SNR=13
STKA                             PP        PP        08 07 15.6 +2.6
      comp=Z,27nm,1.0s,baz=324,slow=3.5,SNR=2.9
STKA                             PKKPbc    PKKPbc    08 20 21.6 -1.3
      comp=Z,1.5nm,0.8s,baz=106,slow=9.4,SNR=2.8
STKA                             LR        LR        08 53 15.7
      comp=Z,41µm,19.1s,baz=315,slow=40
STKA  Stephens Creek   94.56 127 P         P         08 03 24.9 +0.3
E04D  Cinebar          94.56  11 P         P         08 03 26.0 +1.5
      baz=348
COWI  Conover          94.61 348 P         P         08 03 22.6 -2.2
F04D  Rainier, OR      94.96  11 P         P         08 03 28.3 +2.0
      baz=348
GLMI  Grayling         94.97 344 IAMs_20   IAMs_20   08 47 43.2
      comp=Z,217µm,18.0s
GLMI  Grayling         94.97 344 P         P         08 03 28.4 +1.9
      baz=18
RK1H  Rockhampton Ha   95.00 116 P         P         08 03 29.8 +3.0
HAWA  Hanford          95.13   9 IAMs_20   IAMs_20   08 47 48.5
      comp=Z,301µm,22.0s
BINY  Binghamton       95.17 337 IAMs_20   IAMs_20   08 51 51.5
      comp=Z,172µm,20.0s
BINY  Binghamton       95.17 337 P         P         08 03 28.6 +1.1
      baz=24
MSO   Missoula         95.20   5 P         P         08 03 29.3 +1.7
      baz=355
WSPT  Westport, CT     95.26 335 IAMs_20   IAMs_20   08 51 14.8
      comp=Z,227µm,20.0s
F05D  White Salmon     95.38  10 P         P         08 03 30.2 +1.8
      baz=349
LAO   LASA Array       95.56 359 P         P         08 03 31.3 +2.1
      baz=0.8
PAL   Palisades        95.60 335 IAMs_20   IAMs_20   08 48 49.8
      comp=Z,240µm,21.0s
PAL   Palisades        95.60 335 P         P         08 03 30.3 +0.9
      baz=26
RMQ   Roma             95.75 119 P         P         08 03 31.8 +1.6
G03D  McMinnville, O   95.77  11 P         P         08 03 32.7 +2.6
      baz=347
G05D  Wamic, OR        96.03  10 P         P         08 03 32.9 +1.5
      baz=349
SPMN  Marine on St.    96.03 350 P         P         08 03 32.8 +1.5
      baz=11
N59A  State Game Lan   96.28 337 IAMs_20   IAMs_20   08 46 18.7
      comp=Z,237µm,21.0s
N59A  State Game Lan   96.28 337 P         P         08 03 33.6 +1.1
      baz=24
M57A  Sunshine Farm,   96.31 338 P         P         08 03 31.3 -1.4
M57A                             IAmb      IAmb      08 03 52.5
      comp=Z,256nm,1.2s
COR   Corvallis        96.38  12 IAMs_20   IAMs_20   08 53 27.9
      comp=Z,191µm,18.0s
ERPA  Erie             96.40 340 IAMs_20   IAMs_20   08 47 09.8
      comp=Z,261µm,20.0s
ERPA  Erie             96.40 340 P         P         08 03 35.2 +2.2
      baz=21
H04D  Lebanon          96.53  11 P         P         08 03 34.7 +1.1
      baz=348
BOZ   Bozeman (W)      96.56   3 P         P         08 03 35.4 +1.5
      baz=356
BOZ                              S         S         08 14 53.9 -0.6
      baz=356
I02E  Swisshome, OR    96.76  12 P         P         08 03 35.9 +1.3
      baz=347
I02E                             S         S         08 14 52.8 -2.9
      baz=347
M54A  Oil Creek Stat   96.88 340 IAMs_20   IAMs_20   08 48 36.5
      comp=Z,265µm,18.0s
M54A  Oil Creek Stat   96.88 340 P         P         08 03 35.3  0.0
      baz=21
I05D  Terrebonne, OR   96.91  10 P         P         08 03 36.1 +0.7
      baz=349
CMSA  Cobar Meteorol   96.95 125 P         P         08 03 35.6 +0.1
RLMT  Red Lodge        97.11   2 IAMs_20   IAMs_20   08 49 56.7
      comp=Z,311µm,21.0s
RLMT  Red Lodge        97.11   2 P         Pdif      08 03 37.6 +1.1
      baz=358
RLMT                             S         S         08 14 57.6 -1.8
      baz=358
AAM   Ann Arbor        97.15 343 IAMs_20   IAMs_20   08 51 49.0
      comp=Z,222µm,18.0s
AAM   Ann Arbor        97.15 343 P         P         08 03 35.7 -0.7
      baz=18
SSPA  Standing Stone   97.18 338⇑P         Pdif      08 03 40.3 +3.7
SSPA                            ⇑P         pP        08 03 40.7 -2.2
SSPA  Standing Stone   97.18 338 IAMs_20   IAMs_20   08 46 28.5
      comp=Z,259µm,22.0s
SSPA  Standing Stone   97.18 338 P         Pdif      08 03 36.6  0.0
      baz=23
M53A  WI Miller and    97.21 340 IAMs_20   IAMs_20   08 47 46.4
      comp=Z,258µm,21.0s
M53A  WI Miller and    97.21 340 P         Pdif      08 03 37.6 +0.7
      baz=21
I03D  Drain, OR        97.24  12 P         Pdif      08 03 39.3 +2.5
      baz=347
I03D                             S         S         08 14 59.1 -0.9
      baz=347
P60A  Greenville       97.24 336 IAMs_20   IAMs_20   08 46 45.2
      comp=Z,292µm,20.0s
P60A  Greenville       97.24 336 P         Pdif      08 03 38.4 +1.5
      baz=24
I04A  Tendick Farm,    97.29  11 P         Pdif      08 03 38.8 +1.7
      baz=348
I04A                             S         S         08 14 56.9 -3.7
      baz=348
N54A  Moraine State    97.47 340 IAMs_20   IAMs_20   08 48 20.3
      comp=Z,225µm,20.0s
N54A  Moraine State    97.47 340 P         Pdif      08 03 39.3 +1.3
      baz=21
SUSD  Miller           97.48 354 P         Pdif      08 03 38.9 +0.9
      baz=6.5
J01E  Myrtle Point     97.66  12 P         Pdif      08 03 40.0 +1.2
      baz=347
O56A  Blue Knob Stat   97.72 338 IAMs_20   IAMs_20   08 47 18.7
      comp=Z,312µm,21.0s
O56A  Blue Knob Stat   97.72 338 P         Pdif      08 03 40.1 +1.0
      baz=22
H17A  Grant Village    97.80   3 P         Pdif      08 03 41.4 +1.7
      baz=357
J04D  Umpqua Nationa   97.88  11 P         Pdif      08 03 42.4 +2.4
      baz=348
JFWS  Jewell Farm      97.89 348 P         Pdif      08 03 41.1 +1.3
      baz=13
ECSD  EROS Data Cent   97.97 352 IAMs_20   IAMs_20   08 52 01.1
      comp=Z,182µm,20.0s
ECSD  EROS Data Cent   97.97 352 P         Pdif      08 03 42.1 +1.9
      baz=8.4
Q61A  Milford          97.98 335 P         Pdif      08 03 41.9 +1.6
      baz=25
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RSSD  Black Hills      98.08 358 P         Pdif      08 03 42.1 +1.2
      baz=2.5
RSSD                             S         S         08 15 03.9 -3.7
      baz=2.5
K02D  Willamette Mer   98.16  12 P         Pdif      08 03 43.8 +2.7
      baz=347
L44A  Lake County Fo   98.18 346 P         Pdif      08 03 43.4 +2.3
      baz=15
L44A                             S         S         08 15 06.0 -2.1
      baz=15
HUMO  Hull Mountain    98.36  12 IAMs_20   IAMs_20   08 49 11.4
      comp=Z,196µm,21.0s
HLID  Hailey           98.42   5 P         Pdif      08 03 44.4 +2.0
      baz=354
HLID                             S         S         08 15 06.7 -3.7
      baz=354
O53A  New Philadelph   98.47 340 IAMs_20   IAMs_20   08 51 27.7
      comp=Z,321µm,22.0s
O53A  New Philadelph   98.47 340 P         Pdif      08 03 44.7 +2.3
      baz=20
O53A                             S         S         08 15 07.3 -3.3
      baz=20
K04D  Chiloquin, OR    98.53  11 P         Pdif      08 03 45.6 +2.8
      baz=348
K04D                             S         S         08 15 09.3 -2.0
      baz=348
LOHW  Long Hollow      98.58   3 IAMs_20   IAMs_20   08 50 21.6
      comp=Z,271µm,22.0s
MCWV  Mont Chateau     98.65 339 P         Pdif      08 03 46.6 +3.4
      baz=21
L02E  Cave Junction    98.69  12 P         Pdif      08 03 47.0 +3.6
      baz=347
L02E                             S         S         08 15 03.6 -8.9
      baz=347
L04D  Klamath Falls    98.85  11 P         Pdif      08 03 46.6 +2.4
      baz=348
L04D                             S         S         08 15 07.9 -6.1
      baz=348
ACSO  Alum Creek Sta   98.94 342 IAMs_20   IAMs_20   08 46 42.1
      comp=Z,227µm,22.0s
ACSO  Alum Creek Sta   98.94 342 P         Pdif      08 03 47.2 +2.7
      baz=19
WVOR  Wild Horse Val   99.14   9⇑P         Pdif      08 03 44.8 -0.7
WVOR  Wild Horse Val   99.14   9 IAMs_20   IAMs_20   08 50 47.6
      comp=Z,234µm,20.0s
CBN   Corbin Frederi   99.25 337 IAMs_20   IAMs_20   08 47 59.5
      comp=Z,234µm,20.0s
CBN   Corbin Frederi   99.25 337 P         Pdif      08 03 47.5 +1.6
      baz=23
YBH   Yreka Blue Hor   99.26  12 LR        LR        08 51 20.7
      comp=Z,131µm,21.9s,baz=336,slow=37
YBH   Yreka Blue Hor   99.26  12 IAMs_20   IAMs_20   08 50 13.0
      comp=Z,174µm,20.0s
P52A  Corning          99.29 341 P         Pdif      08 03 47.1 +1.0
      baz=20
SCIA  State Center     99.34 350 P         Pdif      08 03 46.8 +0.5
      baz=11
SCIA                             S         S         08 15 16.5 -1.5
      baz=11
MOD   Modoc Plateau    99.45  10 IAMs_20   IAMs_20   08 49 34.0
      comp=Z,227µm,21.0s
BW06  Boulder Array    99.46   2 P         Pdif      08 03 47.8 +0.8
      baz=358
BW06                             S         S         08 15 18.6 -0.7
      baz=358
PDAR  Pinedale Array   99.46   2 PP        PP        08 07 39.0  -10
      comp=Z,17nm,1.1s,baz=17,slow=6.2,SNR=6.2
PDAR                             PKKP      PKKPdf    08 20 25.0  +13
      comp=Z,1.9nm,0.8s,baz=110,slow=6.4,SNR=4.4
PDAR                             LR        LR        08 51 47.1
      comp=Z,250µm,21.9s,baz=2.0,slow=37
BBSR  BB Station       99.50 325 IAMs_20   IAMs_20   08 46 41.8
      comp=Z,112µm,22.0s
M02C  Callahan         99.56  12 P         Pdif      08 03 47.4  0.0
      baz=348
M02C                             S         S         08 15 18.8 -1.2
      baz=348
K22A  Casper           99.60 360 P         Pdif      08 03 47.4 -0.2
      baz=0.6
K22A                             S         S         08 15 15.2 -5.3
      baz=0.6
SFIN  Lafayette        99.75 345 P         Pdif      08 03 48.8 +0.8
      baz=16
JCC   Jacoby Creek,    99.92  13 IAMs_20   IAMs_20   08 56 02.8
      comp=Z,203µm,18.0s
N02D  Trinity Center  100.00  12 P         Pdif      08 03 51.4 +2.1
      baz=348
HDIL  Hopedale        100.01 346 IAMs_20   IAMs_20   08 53 55.3
      comp=Z,204µm,20.0s
HDIL  Hopedale        100.01 346 P         Pdif      08 03 50.5 +1.3
      baz=14
JOHN  Johnston Islan  100.02  60 IAMs_20   IAMs_20   08 48 10.9
      comp=Z,164µm,21.0s
P49A  Miami Univ. Ec  100.03 343 IAMs_20   IAMs_20   08 48 58.1
      comp=Z,231µm,22.0s
P49A  Miami Univ. Ec  100.03 343 P         Pdif      08 03 51.7 +2.3
      baz=18
WDC   Whiskeytown Da  100.41  12 IAMs_20   IAMs_20   08 49 43.5
      comp=Z,234µm,21.0s
BGNE  Belgrade        100.42 353 P         Pdif      08 03 53.1 +2.0
      baz=7.2
O02D  Mt. Diablo Mer  100.76  12 P         Pdif      08 03 54.0 +1.3
      baz=348
O03E  Paynes Creek    100.81  11 P         Pdif      08 03 53.4 +0.5
      baz=348
PHWY  Pilot Hill      100.94 359 IAMs_20   IAMs_20   08 52 22.7
      comp=Z,255µm,21.0s
BLA   Blacksburg      101.09 339 P         Pdif      08 03 53.8 -0.4
      baz=21
ELK   Elko            101.16   6 IAMs_20   IAMs_20   08 53 36.0
      comp=Z,262µm,19.0s
OGNE  Ogallala        101.17 356 P         Pdif      08 03 53.5 -1.0
      baz=4.2
N23A  Red Feather La  101.35 359 P         Pdif      08 03 56.0 +0.4
      baz=1.0
ORV   Oroville        101.58  11 IAMs_20   IAMs_20   08 55 52.4
      comp=Z,205µm,19.0s
WCI   Wyandotte Cave  101.64 343 IAMs_20   IAMs_20   08 50 09.7
      comp=Z,224µm,22.0s
WCI   Wyandotte Cave  101.64 343 P         Pdif      08 03 56.4 -0.1
      baz=17
HOPS  Hopland Field   101.87  13 IAMs_20   IAMs_20   08 55 34.2
      comp=Z,156µm,20.0s
DUG   Dugway, Tooele  101.88   4 P         Pdif      08 03 58.5 +0.7
      baz=356
O20A  White River Ci  102.11   1 P         Pdif      08 03 59.4 +0.5
      baz=359
CNNC  Cliffs of the   102.14 336 P         Pdif      08 03 59.3 +0.5
      baz=23
ISCO  Idaho Springs   102.44 359 P         Pdif      08 04 00.6 +0.1
      baz=1.3
KSU1  Kansas State U  102.54 352 IAMs_20   IAMs_20   08 52 56.3
      comp=Z,209µm,22.0s
KSU1  Kansas State U  102.54 352 P         Pdif      08 04 01.9 +1.3
      baz=8.5
TZTN  Tazewell        102.57 341 P         Pdif      08 04 01.9 +1.1
      baz=19
MCCM  Marconi Confer  102.73  13 IAMs_20   IAMs_20   08 50 48.9
      comp=Z,186µm,20.0s
CCM   Cathedral Cave  102.79 347 P         Pdif      08 04 03.7 +2.0
      baz=13
NVAR  Mina Array Bea  103.13   9 Pdiff     Pdif      08 04 09.1 +5.6
      comp=Z,1.6nm,0.7s,baz=237,slow=34,SNR=5.2
NVAR                             PP        PP        08 08 26.9  +10
      comp=Z,2.0nm,0.8s,baz=232,slow=34,SNR=1.8
NVAR                             PKPPKP              08 28 28.8
      comp=Z,0.8nm,0.8s,baz=210,slow=5.1,SNR=4.2
KSCO  Kaye Shedlock'  103.13 356 P         Pdif      08 04 05.2 +1.8
      baz=3.7
CBKS  Cedar Bluff     103.14 354 IAMs_20   IAMs_20   08 57 35.0
      comp=Z,226µm,19.0s
CBKS  Cedar Bluff     103.14 354 P         Pdif      08 04 05.3 +2.0
      baz=6.0
CMB   Columbia Colle  103.23  11 IAMs_20   IAMs_20   08 55 37.2
      comp=Z,165µm,20.0s
Q24A  Divide          103.26 358 P         Pdif      08 04 06.0 +1.8
      baz=1.7
KMSC  Kings Mountain  103.28 339 P         Pdif      08 04 05.1 +1.2
      baz=21
R11A  Troy Canyon, C  103.50   7 P         Pdif      08 04 05.3 +0.2
      baz=353
MLAC  Mammoth, Mammo  103.85  10 P         Pdif      08 04 06.1 -0.6
      baz=351
KIP   Kipapa          103.90  48 IAMs_20   IAMs_20   08 48 54.1
      comp=Z,130µm,21.0s
WVT   Waverly         103.99 344 P         Pdif      08 04 07.4 +0.4
      baz=16
SAO   San Andreas Ge  104.31  12 IAMs_20   IAMs_20   08 57 44.9
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	comp=Z,243µm,20.0s						
SDCO	Great Sand Dun	104.49	359	P	Pdif	08 04 08.3	-1.3
	baz=1.4						
TIN	Tinemaha, Big	104.49	9	P	Pdif	08 04 07.7	-1.8
	baz=351						
S22A	4UR Ranch, Cre	104.50	360	P	Pdif	08 04 08.9	-0.8
	baz=0.3						
U40A	Yellville	104.72	348	IAMs_20	IAMs_20	08 55 34.0	
	comp=Z,210µm,20.0s						
U40A	Yellville	104.72	348	P	Pdif	08 04 08.3	-2.0
	baz=12						
MVCO	Mesa Verde	105.03	1	P	Pdif	08 04 11.8	-0.2
	baz=359						
T25A	Trinidad	105.07	358	P	Pdif	08 04 10.9	-1.2
	baz=2.3						
PLAL	Pickwick Lake	105.15	344	IAMs_20	IAMs_20	08 54 50.6	
	comp=Z,232µm,21.0s						
U32A	Winter Ranch,	105.49	353	IAMs_20	IAMs_20	09 00 20.2	
	comp=Z,211µm,18.0s						
GOGA	Godfrey	105.50	340	P	PKiKP	08 08 27.5	+0.2
	baz=19						
MPMC	Manual Prospec	105.56	9	P	PKiKP	08 08 28.1	+0.5
	baz=352						
VES	Vestal, Richgr	105.57	10	P	PKiKP	08 08 27.1	-0.2
	baz=350						
MAW	Mawson	105.68	184	PP	PP	08 08 39.8	+3.2
	comp=Z,29nm,1.3s,baz=10,slow=8.8,SNR=4.2						
W41B	Gary Mavity, V	105.78	347	P	PKiKP	08 08 26.9	-0.8
	baz=12						
ISA	Isabella, Lake	105.83	10	P	PKiKP	08 08 28.6	+0.7
	baz=351						
SHOC	Shoshone, Teco	105.86	8	P	PKiKP	08 08 27.1	-0.8
	baz=353						
OK029	Liberty Lake	105.91	352	IAMs_20	IAMs_20	08 58 55.3	
	comp=Z,183µm,19.0s						
SMMC	Simmler	105.96	11	P	PKiKP	08 08 27.0	-1.1
	baz=350						
DZM	Mont Dzumac	105.97	106	*e*PP	PP	08 08 38.3	-1.5
	comp=Z,8µm,32.9s						
DZM				*e*SKSac	SKSac	08 14 56.6	+0.6
	comp=Z,14µm,28.9s						
DZM	Mont Dzumac	105.97	106	*e*PS	PS	08 17 56.6	-0.4
	comp=Z,38µm,27.6s						
DZM				*e*SS	SS	08 23 39.5	-0.6
	comp=Z,94µm,34.2s						
DZM	Mont Dzumac	105.97	106	*e*LR	LR	08 39 20.8	
	comp=Z,213µm,37.9s						
W39A	Magazine	106.01	349	IAMs_20	IAMs_20	08 56 42.0	
	comp=Z,216µm,19.0s						
W39A	Magazine	106.01	349	P	PKiKP	08 08 27.8	-0.3
	baz=11						
OK025	Westminster Rd	106.11	352	IAMs_20	IAMs_20	08 56 41.6	
	comp=Z,171µm,20.0s						
LRMC	Laurel Mtn Rad	106.11	9	P	PKiKP	08 08 28.1	-0.4
	baz=352						
ARVC	Arvin	106.31	10	P	PKiKP	08 08 27.9	-0.8
	baz=351						
TUQ	Turquoise Moun	106.35	7	P	PKiKP	08 08 28.3	-0.7
	baz=353						
GSC	Goldstone, Bar	106.39	8	P	PKiKP	08 08 28.9	-0.1
	baz=352						
PKM	Mcpherson Peak	106.40	11	P	PKiKP	08 08 25.8	-3.4
	baz=350						
X40A	Basin Creek Fa	106.55	348	P	PKiKP	08 08 25.8	-3.4
	baz=12						
MIAR	Mount Ida	106.61	348	IAMs_20	IAMs_20	08 56 52.0	
	comp=Z,241µm,20.0s						
MIAR	Mount Ida	106.61	348	P	PKiKP	08 08 25.9	-3.4
	baz=11						
WUAZ	Wupatki	106.62	4	P	PKiKP	08 08 26.1	-3.4
	baz=357						
POHA	Pohakuloa	106.64	47	IAMs_20	IAMs_20	08 51 51.6	
	comp=Z,131µm,20.0s						
EDW2	Edwards Air Fo	106.66	9	P	PKiKP	08 08 27.8	-1.7
	baz=351						
RRX	Edison Barstow	106.79	8	P	PKiKP	08 08 28.4	-1.2
	baz=352						
OSI	Osito Audit: C	106.83	10	P	PKiKP	08 08 27.6	-2.2
	baz=351						
SBC	Santa Barbara	106.86	11	P	PKiKP	08 08 26.4	-3.3
	baz=350						
HEC	Hector,Ludlow	106.91	8	P	PKiKP	08 08 27.2	-2.7
	baz=353						
GMRC	Granite Mounta	107.03	7	P	PKiKP	08 08 27.9	-2.3
	baz=353						
W18A	Petrified Fore	107.08	2	P	PKiKP	08 08 28.9	-1.5
	baz=358						
NEE2	Needles Airpor	107.14	6	P	PKiKP	08 08 29.7	-0.6
	baz=354						
AMTX	Amarillo	107.18	355	P	PKiKP	08 08 30.2	-0.3
	baz=4.5						
DECC	Green Verdugo	107.24	10	P	PKiKP	08 08 30.4	-0.1
	baz=351						
ANMO	Albuquerque	107.29	359	Pdiff	Pdif	08 04 25.7	+3.7
	comp=Z,2.7nm,0.8s,baz=0.2,slow=2.6,SNR=4.1						
ANMO				PP	PP	08 08 15.9	-32
	comp=Z,13nm,1.1s,baz=17,slow=7.3,SNR=4.1						
ANMO	Albuquerque	107.29	359	P	Pdif	08 04 20.4	-1.7
ANMO	Albuquerque	107.29	359		Pdif	08 04 20.4	-1.7
ANMO	Albuquerque	107.29	359	P	PKiKP	08 08 31.5	+0.6
	baz=0.6						
SCZ2	Santa Cruz Isl	107.31	11	P	PKiKP	08 08 29.0	-1.6
	baz=350						
PASC	Pasadena Art C	107.34	10	IAMs_20	IAMs_20	08 58 43.8	
	comp=Z,252µm,20.0s						
BFSC	Mount Baldy Ra	107.34	9	P	PKiKP	08 08 33.1	+2.2
	baz=352						
TIGA	Tifton	107.40	339	P	PKiKP	08 08 31.1	+0.3
	baz=19						
BBRC	Big Bear Solar	107.40	9	P	PKiKP	08 08 29.6	-1.5
	baz=352						
PDMCI	Parker Dam,Lak	107.64	6	P	PKiKP	08 08 27.8	-3.4
	baz=354						
IRM	Iron Mountain	107.70	7	P	PKiKP	08 08 32.2	+0.9
	baz=354						
Z41A	Richland Creek	107.74	347	P	PKiKP	08 08 30.1	-1.3
	baz=12						
BELC	Belle Mtn. Jos	107.77	8	P	PKiKP	08 08 32.4	+0.7
	baz=353						
FMP	Fort Macarthur	107.77	10	P	PKiKP	08 08 32.4	+1.0
	baz=351						
MURC	Murrieta	108.03	9	P	PKiKP	08 08 35.0	+3.0
	baz=352						
SNCC	San Nicolas Is	108.06	11	P	PKiKP	08 08 32.4	+0.4
	baz=350						
CIS	Catalina Islan	108.06	10	P	PKiKP	08 08 31.9	-0.2
	baz=351						
PFO	Pinyon Flats O	108.10	8	P	PKiKP	08 08 31.5	-0.8
	baz=352						
TPFO	Pinon Flats	108.11	8	P	PKiKP	08 08 32.0	-0.3
	baz=352						
MSTX	Muleshoe	108.16	356	P	PKiKP	08 08 32.0	-0.3
	baz=3.7						
BC3	Big Chuckawall	108.16	7	P	PKiKP	08 08 31.6	-0.8
	baz=353						
Y22D	IRIS PASSCAL I	108.17	360	P	PKiKP	08 08 31.5	-0.9
	baz=0.3						
VBMS	Vicksburg	108.33	345	P	PKiKP	08 08 31.3	-1.2
	baz=14						
SCI2	San Clemente I	108.46	10	P	PKiKP	08 08 30.6	-2.1
	baz=351						
BRAL	Brewton	108.56	342	P	PKiKP	08 08 32.8	-0.2
	baz=17						
109C	Camp Elliot, M	108.74	9	IAMs_20	IAMs_20	08 59 13.8	
	comp=Z,209µm,19.0s						
109C	Camp Elliot, M	108.74	9	P	PKiKP	08 08 37.2	+3.9
	baz=352						
MONP2	Monument Peak	108.81	8	P	PKiKP	08 08 35.3	+1.6
	baz=352						
GLA	Glamis	108.82	7	P	PKiKP	08 08 37.4	+3.8
	baz=354						
SWSC	Sam W. Stewart	108.83	8	P	PKiKP	08 08 35.9	+2.4
	baz=353						
IKP	In-Ko-Pah, Jac	109.09	8	P	PKiKP	08 08 35.8	+1.8
	baz=353						
ABTX	Abilene, Hawle	109.27	353	P	PKiKP	08 08 36.1	+1.8
	baz=6.3						
NATX	Nacogdoches	109.51	349	P	PKiKP	08 08 35.1	+0.3
	baz=10						
SYO	Syowa Base	109.63	192⇑	*e*X	Pdif	08 04 29.0	-2.0
SYO	Syowa Base	109.63	192⇑	*e*pPdiff	pPdif	08 04 39.1	+1.9
SYO	Syowa Base	109.63	192⇑	*e*PKiKP	PKiKP	08 08 38.3	+4.7
SYO	Syowa Base	109.63	192⇑	*e*sPKiKP	PKiKP	08 08 46.0	+12
WHTX	Lake Whitney,	109.66	351	P	PKiKP	08 08 34.9	-0.2
	baz=8.1						
121A	Cookes Peak, D	109.70	1	P	PKiKP	08 08 34.4	-0.9
	baz=360						
TUC	Tucson	109.84	3	P	PKiKP	08 08 36.2	+0.7
	baz=357						
DWPF	Disney Wildern	109.86	336	IAMs_20	IAMs_20	09 05 00.3	
	comp=Z,152µm,20.0s						
DWPF	Disney Wildern	109.86	336	P	PKiKP	08 08 38.3	+2.8
	baz=21						
ANWB	Willy Bob	110.07	314	IAMs_20	IAMs_20	08 49 56.6	
	comp=Z,90µm,21.0s						
214A	Organ Pipe Nat	110.08	5	P	PKiKP	08 08 39.2	+3.3
	baz=355						
SMRT	St. Maarten	110.49	315	IAMs_20	IAMs_20	08 54 19.6	
	comp=Z,114µm,21.0s						
MNTX	Cornudas Mount	110.52	358	P	PKiKP	08 08 39.5	+2.8
	baz=1.6						
435B	Jarrell	110.87	351	P	PKiKP	08 08 41.7	+4.3
	baz=8.1						
SEUS	St. Eustatius	110.89	315	IAMs_20	IAMs_20	08 54 21.2	
	comp=Z,98µm,20.0s						
SABA	Saba	110.93	315	IAMs_20	IAMs_20	08 54 33.3	
	comp=Z,102µm,20.0s						
JCT	Junction City	111.41	353	P	PKiKP	08 08 43.7	+5.3
	baz=6.2						
HKT	Hockley	111.46	349	IAMs_20	IAMs_20	09 04 59.1	
	comp=Z,211µm,19.0s						
KNTN	Kanton	111.56	76	IAMs_20	IAMs_20	08 51 45.3	
	comp=Z,100µm,22.0s						
GRTK	Grand Turk	111.72	324	IAMs_20	IAMs_20	08 51 33.5	
	comp=Z,96µm,21.0s						
BBGH	Gun Hill	112.31	309	IAMs_20	IAMs_20	08 54 14.4	
	comp=Z,135µm,21.0s						
TXAR	Lajitas Array	112.81	357	Pdiff	Pdif	08 04 47.3	+0.7
	comp=Z,0.3nm,0.6s,baz=26,slow=3.2,SNR=1.7						
TXAR				PKiKP	PKiKP	08 08 41.8	+0.6
	comp=Z,6.7nm,0.9s,baz=27,slow=3.9,SNR=5.8						
TXAR				PKKPbc	PKKPab	08 19 34.9	-5.2
	comp=Z,2.8nm,0.9s,baz=174,slow=5.7,SNR=4.5						
TXAR				PKPPKP		08 28 12.4	
	comp=Z,1.0nm,0.9s,baz=151,slow=2.9,SNR=3.5						
TXAR	Lajitas Array	112.81	357	*i* PKIKP	PKiKP	08 08 39.0	-2.2
TXAR	Lajitas Array	112.81	357		Pdif	08 04 46.3	-0.3
TXAR					PKiKP	08 08 39.0	-2.2
833A	Chaparral WMA,	113.50	353	P	PKiKP	08 08 47.2	+4.8
	baz=6.7						
SDDR	Presa de Saban	113.97	323	IAMs_20	IAMs_20	09 04 16.2	
	comp=Z,143µm,19.0s						
KVTX	Kingsville	114.10	351	IAMs_20	IAMs_20	09 08 05.4	
	comp=Z,181µm,18.0s						
GTBY	Guantanamo Bay	114.89	327	IAMs_20	IAMs_20	08 54 05.3	
	comp=Z,112µm,21.0s						
NVL	N'lazarevskaya	116.97	199⇓	*i*PKIKP	PKiKP	08 08 54.8	+7.2
NVL				*e*S	SKSac	08 15 48.7	+10
NVL				pmax	pmax		
	comp=Z,92nm,1.1s						
MTDJ	Mount Denham	117.44	328	IAMs_20	IAMs_20	09 08 28.6	
	comp=Z,81µm,20.0s						
AFI	Afiamalu	118.33	86	PKP	PKiKP	08 08 53.8	+1.8
	comp=Z,39nm,1.0s,baz=206,slow=20,SNR=1.2						
SLBS	Sierra La Lagu	118.46	3	IAMs_20	IAMs_20	09 05 19.0	
	comp=Z,175µm,20.0s						
WHZ	Wether Hill Ro	119.25	127	IAMs_20	IAMs_20	09 01 39.3	
	comp=Z,103µm,22.0s						
SJMB	Sao Joao De Ma	120.06	269	*e*P	PKPdf	08 08 55.0	-0.1
RPZ	Rata Peaks	120.31	124	IAMs_20	IAMs_20	09 02 25.4	
	comp=Z,83µm,22.0s						
JANB	Januaria	120.46	275	*e*P	PKPdf	08 08 55.9	-0.1
ALF01	Guarapari-ES	120.74	267	*e*P	PKiKP	08 08 57.1	+0.6
NNZ	Nelson	120.79	120	IAMs_20	IAMs_20	09 04 36.3	
	comp=Z,85µm,22.0s						
BOAV	Boa Vista	121.06	302	*e*P	PKPdf	08 08 56.9	-0.4
BOAV	Boa Vista	121.06	302		PKPdf	08 08 54.5	-2.7
MC01	Montes Claros	121.11	273	*e*P	PKPdf	08 08 56.1	-1.1
SNAA	Sanae	121.45	201	PKiKP	PKiKP	08 08 58.8	+2.4
SNAA	Sanae	121.45	201	PKIKP	PKPdf	08 08 56.3	0.0
SNAA	Sanae	121.45	201		PKPdf	08 08 56.3	0.0
DIAM	Diamantina, MG	121.79	271	*e*P	PKiKP	08 08 59.1	+0.3
PEXB	Peixe	121.84	280	*e*P	PKPdf	08 08 58.5	-0.2
CAM01	Campos-RJ	122.12	266	*e*P	PKPdf	08 08 58.9	-0.1
URZ	Urewera	122.12	116		PKiKP	08 08 58.8	+0.1
SDV	Santo Domingo	122.16	316	*e*P	PKPdf	08 08 59.1	-0.5
UNM	Universidad Na	122.37	351	IAMs_20	IAMs_20	09 05 54.3	
	comp=Z,168µm,22.0s						
VNA2	Neumayer--Watz	122.47	203	PKiKP	PKiKP	08 09 01.1	+2.7
VNA2	Neumayer--Watz	122.47	203	pPKPdf	pPKPdf	08 09 06.4	+1.8
ITTB	Itaituba	122.50	293	*e*P	PKPdf	08 08 60.0	0.0
BFZ	Birch Farm	122.54	119	IAMs_20	IAMs_20	09 07 55.5	
	comp=Z,94µm,20.0s						
VNA1	Neumayer--Stat	122.63	203	PKiKP	PKiKP	08 09 01.6	+2.9
VNA1	Neumayer--Stat	122.63	203	pPKPdf	pPKPdf	08 09 07.0	+2.1
DUB01	Friburgo-RJ	122.82	266	*e*P	PKPdf	08 08 59.9	-0.5
PTGA	Pitinga	122.97	299	PKP	PKPdf	08 08 59.7	-1.2
	comp=Z,11nm,0.9s,baz=336,slow=21,SNR=8.0						
PTGA				PP	PP	08 10 42.6	+3.2
	comp=Z,12nm,1.0s,baz=53,slow=8.9,SNR=4.3						
ELOV	Elorza	123.06	314	*e*P	PKiKP	08 09 03.5	+2.1
VNA3	Neumayer Olymp	123.28	203	PKiKP	PKiKP	08 09 02.2	+2.3
VNA3	Neumayer Olymp	123.28	203	pPKPdf	pPKPdf	08 09 07.9	+1.8
SJCC	San Jacinto, C	123.68	321	*e*P	PKiKP	08 09 03.1	+0.5
BDFB	Brasilia	123.71	276	PKP	PKPdf	08 09 01.9	-0.4
	comp=Z,6.7nm,0.8s,baz=156,slow=2.6,SNR=3.4						
BDFB				PP	PP	08 10 53.6	+8.7
	comp=Z,18nm,0.9s,baz=51,slow=12,SNR=4.0						
BDFB	Brasilia	123.71	276	PKIKP	PKPdf	08 09 02.0	-0.4
BDFB	Brasilia	123.71	276		PKiKP	08 09 02.5	0.0
VAS01	Vassouras-RJ	123.76	267	*e*P	PKPdf	08 09 01.2	-1.0
CMIG	Matias Romero	123.89	346	PKP	PKPdf	08 09 02.1	-0.6
	comp=Z,3.7nm,0.6s,baz=17,slow=2.7,SNR=4.8						
NPGB	Novo Progresso	124.02	290	*e*P	PKPdf	08 09 02.7	-0.3
SMLC	San Martn de	124.05	319	*e*P	PKiKP	08 09 04.3	+1.0
SNDB	Serra Nova Dou	124.08	282	*e*P	PKPdf	08 09 00.7	-2.2
BSCB	Bom Sucesso	124.13	269	*e*P	PKPdf	08 09 02.7	-0.3
OCAC	Ocana	124.14	318	*e*P	PKiKP	08 09 03.6	-0.1
MAN01	Angra dos Reis	124.48	267	*e*P	PKPdf	08 09 03.3	-0.2
TAMC	Tame, Arauca	124.82	316	*e*P	PKiKP	08 09 15.3	+10
TGUH	Tegucigalpa,Un	124.86	336	*e*P	PKiKP	08 09 11.1	+6.1
TGUH	Tegucigalpa,Un	124.86	336	IAMs_20	IAMs_20	09 08 20.7	
	comp=Z,168µm,21.0s						
APG	El Apazote	124.89	340	PKP	PKPdf	08 09 04.6	-0.3
	comp=Z,4.3nm,0.5s,baz=322,slow=7.6,SNR=3.1						
APG				PP	PP	08 10 57.2	+5.7
	comp=Z,33nm,1.1s,baz=38,slow=11,SNR=3.9						
IPMB	Ipameri, GO	125.19	274	*e*P	PKPdf	08 09 04.5	-0.6
MACA	Manacapuru-AM	125.20	298	*e*P	PKPdf	08 09 05.4	+0.2
MACA	Manacapuru-AM	125.20	298		PKPdf	08 09 03.3	-1.9
BRRC	Barranca, Sant	125.30	318	*e*P	PKiKP	08 09 07.4	+1.6
BARC	Barichara	125.45	317	*e*P	PKiKP	08 09 11.7	+5.3
ZARC	Zaragoza, Cauc	125.57	319	*e*P	PKPdf	08 09 05.9	0.0
UREC	San Jos de Ur	125.69	320	*e*P	PKiKP	08 09 12.4	+5.8
SNET	Serv Nac Est T	125.80	338	IAMs_20	IAMs_20	09 08 22.6	
	comp=Z,146µm,21.0s						
RUSC	La Rusia	125.98	317	*e*P	PKiKP	08 09 12.7	+4.9
PARB	Paraibuna	126.03	267	*e*P	PKPdf	08 09 05.8	-0.7
PTBC	PUERTO BERRIO,	126.17	318	*e*P	PKPdf	08 09 06.4	-0.7
BCIP	Isla Barro Col	126.50	326	*e*P	PKPdf	08 09 03.4	-4.3
VNDA	Vanda	126.66	164	PKIKP	PKPdf	08 09 06.2	+0.1
VNDA	Vanda	126.66	164		PKPdf	08 09 06.2	+0.1
DBBC	Dabeiba	126.66	321	*e*P	PKiKP	08 09 09.8	+1.2
ARAG	Araguaiana, MT	126.71	279	*e*P	PKPdf	08 09 07.3	-0.6
SPBC	San Pablo de B	126.71	317	*e*P	PKiKP	08 09 09.2	+0.5
CLDB	Colider	126.83	287	*e*P	PKPdf	08 09 07.8	-0.4
PTGC	Puerto Gaitan,	126.85	314	*e*P	PKPdf	08 09 07.0	-1.5
VAO	Valinhos	126.91	268	*e*P	PKPdf	08 09 08.0	-0.3
HELC	Santa Helena	127.02	319	*e*P	PKiKP	08 09 12.5	+2.9
RCLB	Rio Claro- Sao	127.06	269	*e*P	PKPdf	08 09 07.3	-1.3
BB19B	Bebedouro	127.13	271	*e*P	PKPdf	08 09 08.6	-0.1
NORC	Norcasia	127.21	318	*e*P	PKiKP	08 09 14.8	+5.2
HDC	Heredia	127.52	331	IAMs_20	IAMs_20	09 09 56.4	
	comp=Z,122µm,20.0s						
ROSC	El Rosal	127.53	317	PKP	PKPdf	08 09 08.9	-1.2
	comp=Z,64nm,0.9s,baz=0.1,slow=14,SNR=15						
ROSC	El Rosal	127.53	317	PKIKP	PKPdf	08 09 09.0	-1.2
ROSC	El Rosal	127.53	317	*e*P	PKiKP	08 09 12.3	+1.6
ROSC	El Rosal	127.53	317	PKPdf	PKPdf	08 09 09.2	-1.0
CBOC	Ciudad Bolivar	127.55	320	*e*P	PKPdf	08 09 10.2	+0.3
JTS	Las Juntas de	127.57	332	IAMs_20	IAMs_20	09 11 21.7	
	comp=Z,106µm,20.0s						
GUY2C	Guyana, Caldas	127.76	318	*e*P	PKPdf	08 09 11.0	+0.3
VILC	Villavicencio,	127.79	316	*e*P	PKPdf	08 09 09.2	-1.1
PET01	Itanhaem-SP	127.81	267	*e*P	PKPdf	08 09 09.9	+0.1
ITRB	Iturama	127.84	274	*e*P	PKPdf	08 09 10.1	+0.1
QSPA	South Pole Qui	127.92	180		PKPdf	08 09 08.8	0.0
PDRB	Porto dos Gac	128.00	287	*e*P	PKPdf	08 09 10.5	0.0
BRU2	Volcan	128.05	329	*e*P	PKiKP	08 09 13.6	+2.1
ANIL	Santa Ana	128.39	318	*e*P	PKiKP	08 09 12.7	+0.3
PLMC	San Jos del P	128.50	319	*e*P	PKPdf	08 09 11.3	-0.3
PRAC	Prado	128.77	317	*e*P	PKiKP	08 09 13.5	+0.7
ORTC	Ortega, Tolima	128.80	317	*e*P	PKiKP	08 09 15.1	+2.2
FRTB	Fartura	129.14	269	*e*P	PKPdf	08 09 12.4	-0.1
YOTC	Yotoco, Valle	129.32	319	*e*P	PKPdf	08 09 13.4	+0.1
MACC	Macarena, Meta	129.50	315	*e*P	PKiKP	08 09 14.0	-0.3
PCMB	Pacaembu	129.57	272	*e*P	PKiKP	08 09 14.6	+0.5
TIJ01	Guaruva-PR	129.69	267	*e*P	PKPdf	08 09 13.3	-0.3
SALV	Santo Antonio	129.84	282	*e*P	PKPdf	08 09 13.7	-0.2
MARP	Paez Belalcaza	130.07	318	*e*P	PKiKP	08 09 20.3	+4.6
PP1B	Ponte de Pedra	130.20	279	*e*P	PKPdf	08 09 14.7	+0.2
GARC	Garzon, Huila	130.38	317	*e*P	PKiKP	08 09 21.6	+5.3
POPC	Popayan, Colom	130.71	318	*e*P	PKPdf	08 09 16.3	+0.2
PCON	Cinco Dias	130.74	318	*e*P	PKiKP	08 09 20.8	+3.4
SOTA	Rioblanco	131.02	318	*e*P	PKiKP	08 09 19.9	+2.0
TER01	Tubaro-SC	131.30	263	*e*P	PKPdf	08 09 16.2	-0.2
VILB	Vilhena	131.46	288	*e*P	PKPdf	08 09 16.8	-0.3
PTGB	Pitanga	131.80	269	*e*P	PKPdf	08 09 17.6	+0.1
RAR	Rarotonga	131.88	85	IAMs_20	IAMs_20	09 08 10.7	
	comp=Z,76µm,21.0s						
TBTG	Tabatinga, AM	132.15	306	*e*P	PKiKP	08 09 24.4	+4.9
TBTG	Tabatinga, AM	132.15	306	*e*P	PKPdf	08 09 18.1	-0.4
GCUF	Volcan Galeras	132.17	318	*e*P	PKiKP	08 09 30.4	+10
PTLB	Pontes e Lacer	132.21	285	*e*P	PKPdf	08 09 18.4	0.0
PTLB	Pontes e Lacer	132.21	285	PKPdf	PKPdf	08 09 17.4	-1.0
AQDB	Aquidauana	132.45	277	*e*P	PKPdf	08 09 18.7	-0.1
AQDB	Aquidauana	132.45	277	PKPdf	PKPdf	08 09 17.4	-1.3
CMBC	Cumbal	132.67	318	*e*P	PKPdf	08 09 18.1	-1.9
TULM	Tulcn-Chalpat	132.84	318	*e*P	PKiKP	08 09 23.6	+2.1
CNLB	Canela	133.00	263	*e*P	PKPdf	08 09 18.9	-0.7
ITAB	Concordia	133.06	266	*e*P	PKPdf	08 09 19.5	-0.2
CUSE	Cuicocha Este	133.50	319	*e*P	PKiKP	08 09 26.1	+3.3
OTAV	Otavalo	133.59	319	*e*P	PKiKP	08 09 28.4	+5.4
OTAV	Otavalo	133.59	319	*e*P	PKPdf	08 09 21.0	-0.8
OTAV	Otavalo	133.59	319	IAMs_20	IAMs_20	09 09 02.5	
	comp=Z,69µm,21.0s						
ETMB	Extrema	133.76	297	*e*P	PKPdf	08 09 21.4	0.0
ETMB	Extrema	133.76	297	PKPdf	PKPdf	08 09 19.4	-2.0
SIV	San Ignacio	134.01	286	PKP	PKPdf	08 09 20.8	-1.0
	comp=Z,9.1nm,0.6s,baz=55,slow=3.4,SNR=11						
CPSB	Cacapava Do Su	135.50	263	*e*P	PKPdf	08 09 24.8	+0.6
PLTB	Pedras Altas	136.18	262	*e*P	PKPdf	08 09 25.6	+0.2
PLTB	Pedras Altas	136.18	262		PKPdf	08 09 23.8	-1.7
CZSB	Cruzeiro do Su	136.63	305	*e*P	PKPdf	08 09 27.2	+0.4
CPUP	Villa Florida	136.74	271	PKhKP	PKPpre	08 09 17.3	
	comp=Z,8.2nm,1.0s,baz=129,slow=3.3,SNR=3.7						
CPUP				PKP	PKPdf	08 09 24.3	-2.3
	comp=Z,20nm,0.9s,baz=49,slow=3.8,SNR=13						
CPUP	Villa Florida	136.74	271	*e*P	PKPdf	08 09 26.6	0.0
PMOR	Pomariorio Ree	137.33	69	*e*PKiKP	PKiKP	08 09 29.0	-0.8
	comp=Z,146nm,1.2s						
ITQB	Itaqui	137.69	266	*e*P	PKPdf	08 09 28.6	+0.3
PPT2	Papeete2	137.70	73	*e*PKiKP	PKiKP	08 09 30.0	-0.7
	comp=Z,158nm,1.1s						
PPT2	Papeete2	137.70	73	*e*PP	PP	08 12 14.2	-1.3
	comp=Z,16µm,26.2s						
PPT2	Papeete2	137.70	73	*e*SS	SS	08 30 25.2	+0.6
	comp=Z,201µm,37.2s						
PPT2	Papeete2	137.70	73	*e*LR	LR	08 54 01.7	
	comp=Z,214µm,23.5s						
PPTF	Pamatai, Papee	137.71	73	IAMs_20	IAMs_20	09 05 20.0	
	comp=Z,81µm,22.0s						
PAE	Paea	137.74	73	*e*PKiKP	PKPdf	08 09 29.6	+0.9
	comp=Z,31nm,1.2s						
TIAR	Tiarei	137.85	73	*e*PKiKP	PKPdf	08 09 29.8	+0.9
	comp=Z,0.3nm,0.8s						
TAOE	Nuku Hiva Isla	138.37	54	*e*PKiKP	PKiKP	08 09 31.5	-0.7
	comp=Z,317nm,1.3s						
TAOE	Nuku Hiva Isla	138.37	54	*e*PP	PP	08 12 22.5	+3.3
	comp=Z,9µm,26.7s						
TAOE	Nuku Hiva Isla	138.37	54	*e*SS	SS	08 30 29.5	-2.2
	comp=Z,68µm,33.3s						
TAOE	Nuku Hiva Isla	138.37	54	*e*LQ	LQ	08 48 27.2	
	comp=Z,236µm,41.9s						
TAOE				*e*LR	LR	08 54 09.0	
	comp=Z,201µm,25.1s						
MEH	Mehetia	139.01	72	*e*PKiKP	PKiKP	08 09 33.0	-0.3
	comp=Z,25nm,1.0s						
LPAZ	La Paz	139.47	292	PKP	PKPdf	08 09 31.1	-1.6
	comp=Z,12nm,0.9s,baz=157,slow=2.1,SNR=8.3						
LPAZ	La Paz	139.47	292	PKIKP	PKPdf	08 09 30.6	-2.1
LPAZ	La Paz	139.47	292	*e*P	PKPdf	08 09 32.5	-0.2
LPAZ	La Paz	139.47	292	*e*P	PKPdf	08 09 32.0	-0.6
LPAZ	La Paz	139.47	292		PKPdf	08 09 30.6	-2.1
PAYG	Puerto Ayora	139.64	333	IAMs_20	IAMs_20	09 13 42.7	
	comp=Z,71µm,22.0s						
ATAH	Atahualpa	139.66	313	PKP	PKPdf	08 09 32.2	-0.7
	comp=Z,18nm,0.9s,baz=56,slow=2.9,SNR=6.6						
LPA	La Plata	140.71	259	*de*PKIKP	PKPdf	08 09 27.8	-5.8
LPA				PP	PP	08 12 34.7	+0.6
LPA				SKIKP		08 13 07.8	
LPA				PPP	PPP	08 15 35.2	
LPA				SKS	SKSdf	08 16 45.9	+2.6
LPA				SDIFF	Sdif	08 21 07.4	+4.6
PB16	IPOC Station P	141.79	290	IAMs_20	IAMs_20	09 18 42.6	
	comp=Z,70µm,20.0s						
NNA	Nana	142.50	306	PKP	PKPdf	08 09 38.6	+1.1
	comp=Z,15nm,0.8s,baz=334,slow=2.4,SNR=7.5						
PB12	IPOC Station P	142.57	291	IAMs_20	IAMs_20	09 22 07.2	
	comp=Z,57µm,20.0s						
PB08	IPOC Station P	142.63	288	IAMs_20	IAMs_20	09 21 33.7	
	comp=Z,58µm,20.0s						
PB11	IPOC Station P	142.77	289	PKPdf	PKPdf	08 09 36.2	-1.7
PB11				IAMs_20	IAMs_20	09 14 25.5	
	comp=Z,63µm,22.0s						
PMSA	Palmer Station	143.36	209	*e*P	PKPdf	08 09 36.3	-1.1
LVC	Limon Verde	143.87	284	PKP	PKPdf	08 09 40.8	+0.7
	comp=Z,42nm,1.0s,baz=103,slow=3.1,SNR=12						
LVC	Limon Verde	143.87	284	*e*P	PKPdf	08 09 40.2	+0.1
LVC	Limon Verde	143.87	284	IAMs_20	IAMs_20	09 12 46.5	
	comp=Z,62µm,21.0s						
PB07	IPOC Station P	144.11	286	IAMs_20	IAMs_20	09 12 06.1	
	comp=Z,70µm,22.0s						
PB06	IPOC Station P	144.43	285	IAMs_20	IAMs_20	09 12 34.2	
	comp=Z,63µm,22.0s						
TRQA	Tornquist	144.75	256	PKIKP	PKPab	08 09 39.4	-0.2
TRQA	Tornquist	144.75	256	*e*P	PKPab	08 09 39.5	-0.2
TRQA	Tornquist	144.75	256		PKPab	08 09 39.4	-0.2
TRQA				IAMs_20	IAMs_20	09 17 51.9	
	comp=Z,119µm,21.0s						
LCO	Las Campanas	148.49	276	PKP2	PKPbc	08 09 49.6	-1.6
LCO	Las Campanas	148.49	276		PKPbc	08 09 49.6	-1.6
LCO	Las Campanas	148.49	276	IAMs_20	IAMs_20	09 26 02.5	
	comp=Z,51µm,20.0s						
MG01	Puerto William	148.58	225	PKPdf	PKPdf	08 09 47.7	+1.2
CO03	El Pedregal	149.25	273		PKPdf	08 09 50.3	+1.7
MG02	Cerro Sombrero	150.05	228		PKPbc	08 09 53.6	-0.3
PEL	Peldehue	150.10	268	PKIKP	PKPbc	08 09 54.3	-0.6
PEL	Peldehue	150.10	268		PKPbc	08 09 54.3	-0.6
MT02	Curacav	150.50	268		PKPbc	08 09 53.4	-2.3
VA01	Torpederas	150.82	269		PKPbc	08 09 54.7	-1.7
VA05	Santo Domingo	151.01	268		PKPbc	08 09 56.0	-0.9
PLCA	Paso Flores	151.76	253	PKP	PKPdf	08 09 53.0	+0.8
	comp=Z,84nm,1.2s,baz=351,slow=1.3,SNR=13						
PLCA				PKPbc	PKiKP	08 09 59.0	+0.1
	comp=Z,228nm,1.2s,baz=92,slow=2.7,SNR=32						
PLCA	Paso Flores	151.76	253	*e*P	PKPdf	08 09 52.6	+0.4
MG05	Puerto Natales	152.28	229		PKiKP	08 09 59.9	+0.4
LC01	Cunco	152.51	257	PKPdf	PKPdf	08 09 52.2	-1.1
LC01				PKPab	PKPab	08 10 10.6	0.0
COYC	Coyhaique	153.03	243		PKiKP	08 10 02.0	+0.8
COYC	Coyhaique	153.03	243	IAMs_20	IAMs_20	09 25 14.2	
	comp=Z,66µm,22.0s						
LL03	Petrohue	153.20	253		PKPbc	08 09 58.9	-2.7
LL03				PKPab	PKPab	08 10 11.9	-1.5
LL05	Los Muermos	154.03	252	PKPdf	PKPdf	08 09 55.7	+0.4
LL05					PKPbc	08 10 03.0	-0.4
LL05				PKPab	PKPab	08 10 14.6	-2.3
LL07	Hotel Espejo d	154.09	249	PKPdf	PKPdf	08 09 53.2	-2.1
LL07					PKPbc	08 10 03.4	-0.1
LL07				PKPab	PKPab	08 10 15.0	-2.1

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*SJA **07** 07:51:09.4±0.7, 31.°43S×71.°61W, h69^{km}±6^{km}, ML5.4, MW5.1*

*MOS **07** 07:51:11.3±1.7, 31.°42S×71.°35W, h58^{km}, mb5.5/8, Error ellipse: s-maj=18.3km s-min=7.2km az=98.8*

*NEIC **07** 07:51:11.4±1.9, 31.°40S±0.°04×71.°26W±0.°06, h50^{km}±4^{km}, mb5.6/380, Mwr5.1/50, Mwr5.5(GUC), Error ellipse: s-maj=7.7km s-min=5.9km az=103.0*

*IDC **07** 07:51:11.3±0.3, 31.°50S×71.°37W, h49^{km}±2^{km}, mb4.8/14, mb1 4.9/16, mb1mx4.8/28, mbtmp5.0/16, MS4.3/2, Ms1 4.3/2, ms1mx3.9/32, Error ellipse: s-maj=18.7km s-min=11.1km az=68.0*

NEIC ***07*** *07:51:12.1, 31.°40S×71.°35W, h60km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}3.62; $M_{\theta\theta}$0.81; $M_{\phi\phi}$-4.43; $M_{r\theta}$0.58; $M_{\theta\phi}$0.01; $M_{\phi r}$-4.69; Fault plane solution: $M_0$6.25000×10^{16} NP1:ϕ_s8.07000°, δ20.66000°, λ103.19000°. NP2:ϕ_s174.01000°, δ69.91000°, λ85.08000°. Principal axes: T 5.8309, Plg65.0000°, Azm76.0000°; N 0.7665, Plg5.0000°, Azm176.0000°; P -6.5975, Plg25.0000°, Azm268.0000°;*

GUC ***07*** *07:51:13.9±0.7, 31.°13S×71.°26W, h47km±7km, MW5.5*

VAO ***07*** *07:51:13.5±0.5, 31.°22S×71.°02W, h48km, mb5.4*

ISC 07 07:51:11.0±0.3, **31.°38S**±0.°03×**71.°38W**±0.°04, **h48km**±2km, **h48km:pP-P, n571,** σ1.s42/504, **mb5.6**/206, **15C-10D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.74**	**342**	⇑iP	**Pn**	**07 51 26.1**	**+1.0**
CO06				eS	**Sn**	**07 51 36.0**	**+0.5**
CO06	**Fray Jorge**	**0.74**	**342**		**Pn**	**07 51 26.2**	**+1.1**
CO06				Sn	**Sn**	**07 51 35.5**	**+0.1**
CO03	**El Pedregal**	**0.80**	**48**	⇓iP	**Pn**	**07 51 27.1**	**+1.0**
CO03				eS	**Sn**	**07 51 36.6**	**-0.3**
CO03	**El Pedregal**	**0.80**	**48**	Pn	**Pn**	**07 51 26.8**	**+0.7**
CO03				Sn	**Sn**	**07 51 36.7**	**-0.3**
CO03	**El Pedregal**	**0.80**	**48**	eP	**Pn**	**07 51 29.0**	**+2.9**
CO03				eS	**Sn**	**07 51 39.4**	**+2.4**
CO03				IAML		07 51 41.8	
	comp=Z,59µm,0.6s						
VA06	**Catapilco**	**1.18**	**177**	⇑iP	**Pn**	**07 51 31.3**	**+0.3**
VA06				eS	**Sn**	**07 51 42.1**	**-3.9**
CO05	**La Serena**	**1.46**	**5**	⇓iP	**Pn**	**07 51 36.2**	**+1.3**
CO05	**La Serena**	**1.46**	**5**		**Pn**	**07 51 36.5**	**+1.6**
VA03	**San Esteban**	**1.54**	**153**	⇓iP	**Pn**	**07 51 36.4**	**+0.2**
VA03	**San Esteban**	**1.54**	**153**		**Pn**	**07 51 36.6**	**+0.4**
VA03	**San Esteban**	**1.54**	**153**	eP	**Pn**	**07 51 36.0**	**-0.2**
VA03				IAML		07 52 02.5	
	comp=Z,35µm,0.7s						
ROCH	**El Roble**	**1.61**	**169**	⇓iP	**Pn**	**07 51 37.1**	**-0.1**
ROCH				eP	**Pn**	**07 51 37.0**	**-0.2**
ROC1	**El Roble**	**1.62**	**169**	eP	**Pn**	**07 51 37.0**	**-0.3**
VA01	**Torpederas**	**1.65**	**188**	Pn	**Pn**	**07 51 37.5**	**0.0**
VA01	**Torpederas**	**1.65**	**188**	eP	**Pn**	**07 51 37.0**	**-0.5**
VA01				IAML		07 52 03.1	
	comp=Z,24µm,0.6s						
RTLS	**Leoncito**	**1.82**	**104**	eP	**Pn**	**07 51 43.0**	**+2.9**
RTLS				IAML		07 52 11.7	
	comp=Z,11µm,0.8s						
PEL	**Peldehue**	**1.85**	**162**	P	**Pn**	**07 51 40.6**	**+0.3**
PEL	**Peldehue**	**1.85**	**162**	eP	**Pn**	**07 51 40.5**	**+0.2**
PEL	**Peldehue**	**1.85**	**162**	Pn	**Pn**	**07 51 40.6**	**+0.3**
PEL	**Peldehue**	**1.85**	**162**	eP	**Pn**	**07 51 40.0**	**-0.3**
PEL				eS	**Sn**	**07 52 08.5**	**+5.9**
MT02	**Curacav**	**1.88**	**174**	⇓iP	**Pn**	**07 51 41.0**	**+0.3**
MT02	**Curacav**	**1.88**	**174**		**Pn**	**07 51 41.6**	**+1.0**
MT02	**Curacav**	**1.88**	**174**	eP	**Pn**	**07 51 41.0**	**+0.3**
MT02				IAML		07 52 18.0	
	comp=Z,25µm,0.6s						
AUSP	**Uspallata**	**1.89**	**117**	eP	**Pn**	**07 51 44.0**	**+3.0**
AROD	**Rodeo**	**2.04**	**54**	eP	**Pn**	**07 51 47.0**	**+3.9**
MT05	**Renca**	**2.08**	**165**	eP	**Pn**	**07 51 43.6**	**+0.2**
MT05	**Renca**	**2.08**	**165**		**Pn**	**07 51 44.5**	**+1.1**
MT05	**Renca**	**2.08**	**165**	eP	**Pn**	**07 51 44.0**	**+0.6**
MT05				IAML		07 52 24.0	
	comp=Z,34µm,0.7s						
ACCO	**Cerro Coronel**	**2.14**	**69**	eP	**Pn**	**07 51 48.4**	**+3.9**
FCH	**Farellones**	**2.15**	**155**	eP	**Pn**	**07 51 45.0**	**+0.4**
VA05	**Santo Domingo**	**2.28**	**185**	⇓iP	**Pn**	**07 51 46.0**	**-0.1**
VA05	**Santo Domingo**	**2.28**	**185**		**Pn**	**07 51 46.2**	**+0.1**
ACDV	**Cuesta del Vie**	**2.29**	**59**	eP	**Pn**	**07 51 50.0**	**+3.6**
ACDV				IAML		07 52 29.6	
	comp=Z,10µm,0.7s						
ZON	**Zonda**	**2.31**	**95**	eP	**Pn**	**07 51 50.0**	**+3.4**
ZON				IAML		07 52 38.3	
	comp=Z,8µm,0.6s						
MT09	**Talagante**	**2.41**	**172**	eP	**Pn**	**07 51 48.6**	**+0.6**
MT09	**Talagante**	**2.41**	**172**	Pn	**Pn**	**07 51 48.9**	**+0.8**
LCO	**Las Campanas**	**2.44**	**14**	eP	**Pn**	**07 51 50.8**	**+2.3**
LCO	**Las Campanas**	**2.44**	**14**	eP	**Pn**	**07 51 50.0**	**+1.5**
LCO	**Las Campanas**	**2.44**	**14**	Pn	**Pn**	**07 51 50.6**	**+2.1**
LCO	**Las Campanas**	**2.44**	**14**	eP	**Pn**	**07 51 50.0**	**+1.5**
RTCV	**Cerro Valdivia**	**2.47**	**102**	eP	**Pn**	**07 51 52.0**	**+3.3**
ASAL	**Salagasta**	**2.47**	**120**	eP	**Pn**	**07 51 52.0**	**+3.1**
ASAL				eS	**Sn**	**07 52 10.2**	**-7.7**
MT01	**Popeta**	**2.48**	**178**	⇓iP	**Pn**	**07 51 49.3**	**+0.5**
MT01	**Popeta**	**2.48**	**178**		**Pn**	**07 51 49.6**	**+0.8**
MT01	**Popeta**	**2.48**	**178**	eP	**Pn**	**07 51 49.0**	**+0.2**
MT01				eS	**Sn**	**07 52 19.3**	**+1.4**
MT01				IAML		07 52 32.1	
	comp=Z,20µm,0.7s						
ARCO	**CERRO ARCO**	**2.53**	**126**	eP	**Pn**	**07 51 53.0**	**+3.2**
ARCO				IAML		07 52 32.6	
	comp=Z,9µm,0.8s						
LMEL	**Las Melosas**	**2.65**	**158**	eP	**Pn**	**07 51 53.0**	**+1.6**
BO04	**La Punta**	**2.68**	**166**	eP	**Pn**	**07 51 52.3**	**+0.6**
AAGR	**Agrelo**	**2.75**	**129**	eP	**Pn**	**07 51 56.0**	**+3.4**
BO01	**Tunca**	**3.01**	**175**	eP	**Pn**	**07 51 55.7**	**-0.4**
BO01	**Tunca**	**3.01**	**175**		**Pn**	**07 51 57.1**	**+0.9**
BO01	**Tunca**	**3.01**	**175**	eP	**Pn**	**07 51 56.0**	**-0.2**
BO01				eP	**Pn**	**07 51 56.6**	**+0.4**
BO01				eS	**Sn**	**07 52 34.8**	**+3.8**
BO01				IAML		07 52 45.2	
	comp=Z,8µm,0.7s						
AC04	**Llanos de Chal**	**3.18**	**5**	⇑iP	**Pn**	**07 51 59.8**	**+1.3**
AC04	**Llanos de Chal**	**3.18**	**5**	Pn	**Pn**	**07 51 59.9**	**+1.3**
AC04	**Llanos de Chal**	**3.18**	**5**	eS	**Sn**	**07 52 39.3**	**+4.1**
AC04				eS		07 52 50.3	
AC04				IAML		07 53 04.1	
	comp=Z,7µm,0.8s						
AC04				eP			
BO02	**Sierra Bellavi**	**3.44**	**172**	eP	**Pn**	**07 52 02.6**	**+0.6**
BO02	**Sierra Bellavi**	**3.44**	**172**	Pn	**Pn**	**07 52 02.9**	**+0.9**
BO02	**Sierra Bellavi**	**3.44**	**172**	eP	**Pn**	**07 52 03.0**	**+0.9**
BO02				eS	**Sn**	**07 52 45.8**	**+4.2**
BO02				IAML		07 52 59.0	
	comp=Z,8µm,0.6s						
AVFE	**Valle Fertil**	**3.44**	**79**	eP	**Pn**	**07 52 04.7**	**+2.5**
AVFE				IAML		07 52 54.1	
	comp=Z,6µm,0.9s						
VCA	**Vinchina**	**3.81**	**47**	eP	Pn	07 51 53.4	-14
VCA				IAML		07 53 24.2	
	comp=Z,10µm,0.9s						
ACHE	**Chepes**	**4.04**	**88**	eP	**Pn**	**07 52 13.0**	**+2.6**
RFA	**San Rafael**	**4.17**	**145**	eP	**Pn**	**07 52 13.0**	**+0.9**
RFA				IAML		07 53 34.5	
	comp=Z,2µm,1.1s						
APLL	**PUNTA DE LOS L**	**4.28**	**78**	eP	**Pn**	**07 52 15.0**	**+1.3**
ACLC	**CERRO LA CRUZ**	**4.29**	**64**	eP	**Pn**	**07 52 16.0**	**+2.1**
ACLC				IAML		07 53 10.9	
	comp=Z,9µm,1.0s						
TINO	**Tinogasta**	**4.68**	**46**	eP	**Pn**	**07 52 23.0**	**+3.8**
MRA	**San Martin**	**4.92**	**104**	eP	**Pn**	**07 52 23.0**	**+0.5**
MRA				eS	**Sn**	**07 53 15.3**	**-2.9**
MRA				IAML		07 54 00.1	
	comp=Z,4µm,0.8s						
AC02	**Maricunga**	**4.94**	**24**	eP	**Pn**	**07 52 24.6**	**+1.6**
AC02	**Maricunga**	**4.94**	**24**	Pn	**Pn**	**07 52 24.9**	**+1.8**
AC02	**Maricunga**	**4.94**	**24**	eP	**Pn**	**07 52 19.3**	**-3.8**
AC02				eP	**Pn**	**07 52 25.2**	**+2.1**
AC02				eS	Sn	07 53 28.8	+10
AC02				IAML		07 54 04.0	
	comp=Z,3µm,0.9s						
CYA	**Choya**	**5.66**	**60**	eP	**Pn**	**07 52 34.0**	**+1.5**
CYA				eS	**Sn**	**07 53 39.3**	**+3.1**
CYA				IAML		07 53 44.7	
	comp=Z,3µm,1.6s						
VA04	**Juan Fernndez**	**6.69**	**248**		**Pn**	**07 52 46.0**	**-0.6**
PB14	**IPOC Station P**	**6.79**	**8**	Pn	**Pn**	**07 52 47.9**	**-0.4**
FSA	**Cafayete**	**7.07**	**43**	eP	**Pn**	**07 52 53.0**	**+0.9**
PB06	**IPOC Station P**	**8.79**	**11**	Pn	**Pn**	**07 53 14.1**	**-1.5**
LVC	**Limon Verde**	**9.01**	**15**	P	**Pn**	**07 53 16.7**	**-2.1**
	comp=Z,3.1nm,0.3s,baz=200,slow=8.6,SNR=26						
LVC				S	Sn	07 55 09.5	+10
	comp=Z,13nm,0.3s,baz=225,slow=19,SNR=5.4						
LVC	**Limon Verde**	**9.01**	**15**	eP	**Pn**	**07 53 16.8**	**-2.0**
PB04	**IPOC Station P**	**9.08**	**7**		**Pn**	**07 53 19.0**	**-0.6**
PLCA	**Paso Flores**	**9.36**	**176**	P	**Pn**	**07 53 22.9**	**-0.3**
	comp=Z,2.7nm,0.3s,baz=342,slow=11,SNR=103						
PLCA				LR	LR	07 57 47.5	
	comp=Z,820nm,18.1s,baz=353,slow=43						
PLCA	**Paso Flores**	**9.36**	**176**	eP	**Pn**	**07 53 23.5**	**+0.3**
PLCA	**Paso Flores**	**9.36**	**176**	Pn	**Pn**	**07 53 22.4**	**-0.8**
LL04	**Puerto Octay**	**9.54**	**185**		**Pn**	**07 53 23.3**	**-2.4**
PB09	**IPOC Station P**	**9.74**	**12**	Pn	**Pn**	**07 53 25.8**	**-2.8**
LL03	**Petrohue**	**9.77**	**185**	Pn	**Pn**	**07 53 26.4**	**-2.4**
TRQA	**Tornquist**	**10.20**	**133**	P	**Pn**	**07 53 34.3**	**-0.4**
TRQA	**Tornquist**	**10.20**	**133**	Pn	**Pn**	**07 53 34.2**	**-0.4**
PB11	**IPOC Station P**	**11.68**	**8**	Pn	**Pn**	**07 53 55.9**	**+0.7**
PSGCX	**Pisagua**	**11.79**	**6**	Pn	**Pn**	**07 53 53.5**	**-3.1**
LL02	**Futaleuf**	**11.79**	**182**	Pn	**Pn**	**07 53 54.6**	**-1.9**
LPA	**La Plata**	**11.80**	**111**	deP	Pn	07 54 03.9	+7.3
LPA				S	**Sn**	**07 56 09.0**	**+2.1**
PB12	**IPOC Station P**	**12.75**	**5**	Pn	**Pn**	**07 54 09.8**	**0.0**
ITQB	**Itaqui**	**12.83**	**86**	eP	**Pn**	**07 54 08.8**	**-1.9**
ITQB	**Itaqui**	**12.83**	**86**	Pn	**Pn**	**07 54 07.6**	**-3.1**
CPUP	**Villa Florida**	**13.30**	**71**	P	**Pn**	**07 54 14.7**	**-2.3**
	comp=Z,3.9nm,0.3s,baz=237,slow=12,SNR=46						
CPUP				S	**Sn**	**07 56 38.0**	**-5.5**
	comp=Z,1.8nm,0.3s,baz=147,slow=19,SNR=1.8						
CPUP				LR	LR	07 59 54.9	
	comp=Z,2µm,20.5s,baz=252,slow=39						
CPUP	**Villa Florida**	**13.30**	**71**	Pn	**Pn**	**07 54 15.3**	**-1.8**
COYC	**Coyhaique**	**14.18**	**182**	Pn	**Pn**	**07 54 29.7**	**+0.7**
LPAZ	**La Paz**	**15.31**	**12**	P	**Pn**	**07 54 45.0**	**+0.3**
	comp=Z,3.2nm,0.3s,baz=182,slow=9.2,SNR=93						
LPAZ	**La Paz**	**15.31**	**12**	P	**Pn**	**07 54 45.9**	**+1.2**
LPAZ				pmax	pmax		
	comp=Z,167nm,1.1s						
LPAZ	**La Paz**	**15.31**	**12**	eP	**Pn**	**07 54 43.7**	**-1.0**
LPAZ	**La Paz**	**15.31**	**12**	P	**Pn**	**07 54 45.9**	**+1.2**
CPSB	**Cacapava Do Su**	**15.43**	**91**	eP	**Pn**	**07 54 44.5**	**-1.0**
ITAB	**Concordia**	**17.28**	**81**	eP	**Pn**	**07 55 08.6**	**-0.3**
ITAB	**Concordia**	**17.28**	**81**	P	**Pn**	**07 55 08.6**	**-0.3**
ITAB				IAmb	IAmb	07 55 29.8	
	comp=Z,629nm,1.6s						
AQDB	**Aquidauana**	**17.78**	**56**	eP	**Pn**	**07 55 14.0**	**-0.9**
AQDB	**Aquidauana**	**17.78**	**56**	P	**Pn**	**07 55 13.5**	**-1.5**
CNLB	**Canela**	**17.83**	**89**	eP	**Pn**	**07 55 13.8**	**-1.9**
SIV	**San Ignacio**	**17.98**	**34**	P	**Pn**	**07 55 15.8**	**-1.7**
	comp=Z,9.8nm,0.3s,baz=205,slow=9.0,SNR=389						
PTGB	**Pitanga**	**18.28**	**73**	eP	**Pn**	**07 55 22.0**	**+0.8**
TRCB	**Terra Rica**	**18.73**	**67**	P	**P**	**07 55 24.9**	**-1.0**
PTLB	**Pontes e Lacer**	**19.41**	**38**	eP	**P**	**07 55 33.3**	**+0.1**
PTLB	**Pontes e Lacer**	**19.41**	**38**	P	**P**	**07 55 32.2**	**-1.0**
TER01	**Tubaro-SC**	**19.48**	**87**	eP	**P**	**07 55 32.7**	**-1.3**
NNA	**Nana**	**19.95**	**344**	P	**Pn**	**07 55 41.7**	**+0.5**
	comp=Z,23nm,0.8s,baz=214,slow=10,SNR=8.1						
NNA	**Nana**	**19.95**	**344**	eP	**Pn**	**07 55 40.8**	**-0.4**
NNA	**Nana**	**19.95**	**344**	P	**P**	**07 55 39.3**	**+0.1**
MG05	**Puerto Natales**	**20.30**	**182**	P	**P**	**07 55 43.0**	**+0.4**
MG05				IAmb	IAmb	07 56 05.7	
	comp=Z,169nm,0.8s						
PP1B	**Ponte de Pedra**	**20.30**	**51**	eP	**P**	**07 55 42.6**	**-0.4**
PCMB	**Pacaembu**	**20.44**	**66**	eP	**P**	**07 55 44.1**	**-0.3**
TIJ01	**Guaruva-PR**	**20.58**	**79**	eP	**P**	**07 55 43.4**	**-2.7**
FRTB	**Fartura**	**20.94**	**73**	eP	**P**	**07 55 49.4**	**-0.5**
SALV	**Santo Antonio**	**21.03**	**46**	eP	**P**	**07 55 50.1**	**-0.6**
VILB	**Vilhena**	**21.03**	**32**	eP	**P**	**07 55 50.5**	**-0.3**
VILB	**Vilhena**	**21.03**	**32**	P	**P**	**07 55 49.6**	**-1.3**
VILB				IAmb	IAmb	07 55 54.5	
	comp=Z,164nm,0.8s						
GO10	**Punta Arenas**	**21.76**	**179**	P	**P**	**07 55 59.4**	**+1.0**
GO10				IAmb	IAmb	07 56 20.5	
	comp=Z,296nm,0.9s						
ETMB	**Extrema**	**21.99**	**14**	eP	**P**	**07 56 02.1**	**+1.0**
ETMB	**Extrema**	**21.99**	**14**	P	**P**	**07 56 01.8**	**+0.7**
ETMB				IAmb	IAmb	07 56 23.0	
	comp=Z,178nm,0.9s						
ITRB	**Iturama**	**22.20**	**63**	eP	**P**	**07 56 02.4**	**-1.0**
PET01	**Itanhaem-SP**	**22.43**	**78**	eP	**P**	**07 56 04.6**	**-1.1**
EFI	**East Falkland**	**22.52**	**158**	⇑eP	**P**	**07 56 07.0**	**+0.5**
EFI				pmax	pmax		
	comp=Z,336nm,1.7s						
EFI	**East Falkland**	**22.52**	**158**	P	**P**	**07 56 07.0**	**+0.5**
EFI				IAmb	IAmb	07 56 09.3	
	comp=Z,407nm,1.4s						
BB19B	**Bebedouro**	**22.89**	**69**	eP	**P**	**07 56 08.5**	**-2.1**
RCLB	**Rio Claro- Sao**	**23.02**	**73**	eP	**P**	**07 56 10.2**	**-1.9**
VAO	**Valinhos**	**23.23**	**75**	eP	**P**	**07 56 12.7**	**-1.4**
USHA	**Ushuaia**	**23.53**	**176**	P	**P**	**07 56 16.8**	**+0.2**
	comp=Z,25nm,0.5s,baz=3.1,slow=8.3,SNR=23						
CZSB	**Cruzeiro do Su**	**23.57**	**357**	eP	**P**	**07 56 18.5**	**+1.2**
CZSB	**Cruzeiro do Su**	**23.57**	**357**	P	**P**	**07 56 17.4**	**+0.1**
CZSB				IAmb	IAmb	07 56 40.7	
	comp=Z,209nm,1.0s						
SAML	**Samuel**	**23.59**	**21**	P	**P**	**07 56 16.4**	**-1.1**
SAML				pmax	pmax		
	comp=Z,83nm,1.1s						
SAML	**Samuel**	**23.59**	**21**	P	**P**	**07 56 16.4**	**-1.1**
MG01	**Puerto William**	**23.69**	**175**	P	**P**	**07 56 18.6**	**+0.5**
MG01				IAmb	IAmb	07 56 36.9	
	comp=Z,164nm,0.8s						
ARAG	**Araguaiana, MT**	**23.71**	**53**	eP	**P**	**07 56 16.9**	**-1.7**
PDRB	**Porto dos Gac**	**23.88**	**38**	eP	**P**	**07 56 18.9**	**-1.4**
PARB	**Paraibuna**	**24.20**	**77**	eP	**P**	**07 56 22.0**	**-1.2**
IPMB	**Ipameri, GO**	**24.85**	**63**	eP	**P**	**07 56 27.8**	**-1.4**
CLDB	**Colider**	**24.99**	**39**	eP	**P**	**07 56 29.8**	**-0.6**
ATAH	**Atahualpa**	**25.00**	**343**	P	**P**	**07 56 33.5**	**+2.7**
	comp=Z,11nm,0.9s,baz=185,slow=6.4,SNR=6.2						
MAN01	**Angra dos Reis**	**25.78**	**78**	eP	**P**	**07 56 37.0**	**-0.5**
BSCB	**Bom Sucesso**	**25.95**	**73**	eP	**P**	**07 56 38.5**	**-0.6**
BDFB	**Brasilia**	**26.45**	**59**	P	**P**	**07 56 43.2**	**-0.6**
	comp=Z,144nm,0.9s,baz=230,slow=8.3,SNR=137						
BDFB	**Brasilia**	**26.45**	**59**	P	**P**	**07 56 42.7**	**-1.1**
BDFB				pmax	pmax		
	comp=Z,152nm,1.0s						
BDFB	**Brasilia**	**26.45**	**59**	P	**P**	**07 56 42.7**	**-1.1**
BDFB				IAmb	IAmb	07 56 44.2	
	comp=Z,152nm,1.0s						
VAS01	**Vassouras-RJ**	**26.46**	**77**	eP	**P**	**07 56 43.6**	**-0.1**
SNDB	**Serra Nova Dou**	**26.77**	**48**	eP	**P**	**07 56 46.0**	**-0.5**
TBTG	**Tabatinga, AM**	**27.09**	**3**	eP	**P**	**07 56 50.0**	**+0.7**
TBTG	**Tabatinga, AM**	**27.09**	**3**	P	**P**	**07 56 49.3**	**0.0**
DUB01	**Friburgo-RJ**	**27.44**	**77**	eP	**P**	**07 56 52.3**	**-0.3**
CAM01	**Campos-RJ**	**28.15**	**78**	eP	**P**	**07 56 58.6**	**-0.2**
DIAM	**Diamantina, MG**	**28.22**	**69**	eP	**P**	**07 56 59.5**	**-0.2**
NPGB	**Novo Progresso**	**28.47**	**35**	eP	**P**	**07 57 00.3**	**-1.4**
PEXB	**Peixe**	**28.65**	**53**	eP	**P**	**07 57 03.0**	**-0.4**
MC01	**Montes Claros**	**28.90**	**66**	eP	**P**	**07 57 04.7**	**-0.9**
ALF01	**Guarapari-ES**	**29.47**	**76**	eP	**P**	**07 57 09.7**	**-0.8**
JANB	**Januaria**	**29.59**	**63**	eP	**P**	**07 57 10.9**	**-0.8**
MACA	**Manacapuru-AM**	**29.83**	**22**	eP	**P**	**07 57 13.6**	**-0.1**
SJMB	**Sao Joao De Ma**	**30.02**	**72**	eP	**P**	**07 57 14.8**	**-0.6**
BSFB	**Barra de Sao F**	**30.23**	**73**	eP	**P**	**07 57 16.6**	**-0.6**
RIB01	**Linhares ES**	**30.36**	**74**	eP	**P**	**07 57 17.7**	**-0.7**
ITTB	**Itaituba**	**30.64**	**32**	eP	**P**	**07 57 19.6**	**-1.3**
SDBA	**SAO DESIDERIO**	**30.84**	**58**	eP	**P**	**07 57 22.0**	**-0.8**
NAN01	**Guarapari, ES**	**31.32**	**72**	eP	**P**	**07 57 25.9**	**-1.1**
SMTB	**Santa Maria do**	**31.49**	**50**	eP	**P**	**07 57 28.6**	**+0.1**
OTAV	**Otavalo**	**32.16**	**347**	P	**P**	**07 57 37.3**	**+2.6**
OTAV				pmax	pmax		
	comp=Z,20nm,1.1s						
OTAV	**Otavalo**	**32.16**	**347**	eP	**P**	**07 57 38.1**	**+3.4**
OTAV	**Otavalo**	**32.16**	**347**	P	**P**	**07 57 37.3**	**+2.6**
PRPB	**Parauapebas**	**32.20**	**43**	eP	**P**	**07 57 33.8**	**-0.8**
GUA01	**Guaratinga, BA**	**32.25**	**70**	eP	**P**	**07 57 34.6**	**-0.5**
CMC01	**Camacan, BA**	**33.15**	**69**	eP	**P**	**07 57 42.5**	**-0.4**
NBIT	**Itapeh - BA**	**33.46**	**68**	eP	**P**	**07 57 45.3**	**-0.4**
MALB	**Monte Alegre**	**33.53**	**32**	eP	**P**	**07 57 45.6**	**-0.6**
PMSA	**Palmer Station**	**33.72**	**174**	eP	**P**	**07 57 51.1**	**+3.7**
GDU01	**Guandu, BA**	**34.05**	**66**	eP	**P**	**07 57 50.3**	**-0.5**
BOAV	**Boa Vista**	**35.14**	**19**	eP	**P**	**07 58 00.0**	**-0.2**
BOAV	**Boa Vista**	**35.14**	**19**	IAmb	IAmb	07 58 20.9	
	comp=Z,50nm,1.0s						
NBPN	**Ponto Novo - B**	**35.34**	**62**	eP	**P**	**07 58 01.0**	**-1.0**
MCPB	**Macapa, AP**	**35.87**	**34**	eP	**P**	**07 58 06.2**	**-0.2**
ROSC	**El Rosal**	**36.13**	**355**	P	**P**	**07 58 11.7**	**+2.7**
	comp=Z,23nm,0.7s,baz=211,slow=5.2,SNR=5.4						
TMAB	**Tom-Au,PA,Br**	**36.27**	**42**	eP	**P**	**07 58 10.1**	**+0.3**
NBLA	**Lagarto - SE**	**37.09**	**64**	eP	**P**	**07 58 15.6**	**-1.3**
ROSB	**Rosrio**	**38.24**	**48**	eP	**P**	**07 58 26.0**	**-0.6**
NBMA	**Muriti-CE**	**38.69**	**59**	eP	**P**	**07 58 30.0**	**-0.4**
ZARC	**Zaragoza, Cauc**	**38.80**	**354**	P	**P**	**07 58 30.6**	**-0.6**
ZARC				pP	**pP**	**07 58 44.3**	**+0.1**
ZARC				IAmb	IAmb	07 58 46.5	
	comp=Z,133nm,1.8s						
NBPS	**Pedro II - PI**	**38.88**	**52**	eP	**P**	**07 58 31.6**	**-0.5**
NBAN	**Anadia - AL**	**39.07**	**64**	eP	**P**	**07 58 32.5**	**-1.1**
NBPB	**Pedra_Branca-C**	**39.35**	**56**	eP	**P**	**07 58 35.6**	**-0.3**
SDV	**Santo Domingo**	**40.05**	**1**	eP	**P**	**07 58 42.7**	**+0.9**
SDV	**Santo Domingo**	**40.05**	**1**	P	**P**	**07 58 41.4**	**-0.4**
NBLV	**Livramento - P**	**40.06**	**61**	eP	**P**	**07 58 41.2**	**-0.7**
BAUV	**El Baul**	**40.22**	**5**	IAmb	IAmb	07 58 57.9	
	comp=Z,96nm,0.9s						
NBRF	**Rio Formoso -**	**40.57**	**64**	eP	**P**	**07 58 44.7**	**-1.4**
NBMO	**Morrinhos-CE**	**40.62**	**53**	eP	**P**	**07 58 45.4**	**-1.1**
NBPA	**Parau_RN**	**40.98**	**59**	eP	**P**	**07 58 49.0**	**-0.4**
NBCL	**Cascavel-CE**	**41.19**	**56**	eP	**P**	**07 58 50.9**	**-0.2**
SJCC	**San Jacinto, C**	**41.20**	**354**	P	**P**	**07 58 51.2**	**0.0**
CDITO	**Canoas**	**41.23**	**343**	P	**P**	**07 58 52.6**	**+1.3**
NBPV	**Pedro Velho**	**41.89**	**61**	eP	**P**	**07 58 56.9**	**0.0**
BIRV	**Birongo**	**41.91**	**8**	IAmb	IAmb	07 59 18.2	
	comp=Z,116nm,1.3s						
JTS	**Las Juntas de**	**43.43**	**340**	⇓eP	**P**	**07 59 08.3**	**-1.0**
JTS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TOSP	**Speyside**	**43.69**	**15**	P	**P**	**07 59 11.0**	**-0.3**
TOSP				IAmb	IAmb	07 59 13.3	
	comp=Z,226nm,1.2s						
BIM	**Bigot**	**46.70**	**14**	P	**P**	**07 59 33.6**	**-1.6**
TGUH	**Tegucigalpa,Un**	**47.69**	**339**	P	**P**	**07 59 43.0**	**0.0**
TGUH				pP	**pP**	**07 59 57.0**	**+0.7**
TGUH				IAmb	IAmb	07 59 58.3	
	comp=Z,81nm,0.8s						
MLPR	**Magueyes Islan**	**49.24**	**5**	P	**P**	**07 59 53.5**	**-1.3**
OBIP	**Obispado Ponce**	**49.35**	**6**	P	**P**	**07 59 54.1**	**-1.5**
OBIP				pP	**pP**	**08 00 08.6**	**-0.3**
PDPR	**Patillas Dam,**	**49.38**	**7**	IAmb	IAmb	08 00 10.1	
	comp=Z,99nm,1.2s						
CELP	**Cerrillos**	**49.39**	**6**	P	**P**	**07 59 54.4**	**-1.6**
CELP				pP	**pP**	**08 00 08.9**	**-0.3**
SJG	**San Juan**	**49.47**	**7**	P	**P**	**07 59 55.2**	**-1.3**
SJG				pP	**pP**	**08 00 09.6**	**-0.2**
SJG				IAmb	IAmb	08 00 15.6	
	comp=Z,48nm,0.8s						
APG	**El Apazote**	**49.63**	**335**	P	**P**	**07 59 59.9**	**+1.8**
	comp=Z,8.1nm,0.9s,baz=156,slow=12,SNR=1.3						
APG				pP	**pP**	**08 00 12.0**	**+0.6**
	comp=Z,61nm,0.8s,baz=166,slow=7.1,SNR=12						
CBYP	**Canovanas**	**49.65**	**7**	IAmb	IAmb	08 00 12.2	
	comp=Z,71nm,0.9s						
GCPR	**Guaynabo City**	**49.67**	**7**	P	**P**	**07 59 56.0**	**-2.0**
SC01	**Santiago de lo**	**50.52**	**1**	P	**P**	**08 00 03.2**	**-1.3**
SC01				pP	**pP**	**08 00 17.4**	**-0.5**
VNA3	**Neumayer Olymp**	**51.58**	**159**	P	**P**	**08 00 12.4**	**+0.5**
VNA3	**Neumayer Olymp**	**51.58**	**159**	sP	sP	08 00 31.5	+0.8
VNA1	**Neumayer--Stat**	**51.87**	**158**	P	**P**	**08 00 14.8**	**+0.8**
VNA2	**Neumayer--Watz**	**52.21**	**158**	P	**P**	**08 00 17.1**	**+0.5**
	baz=289,slow=8.5						
VNA2	**Neumayer--Watz**	**52.21**	**158**	sP	sP	08 00 36.3	+0.7
CMIG	**Matias Romero**	**53.22**	**332**	P	**P**	**08 00 26.1**	**+1.5**
	comp=Z,3.8nm,0.8s						
CMIG				pP	**pP**	**08 00 38.7**	**+0.6**
	comp=Z,31nm,0.9s,baz=160,slow=5.7,SNR=5.6						
SNAA	**Sanae**	**53.80**	**159**	P	**P**	**08 00 28.7**	**+0.3**
SNAA	**Sanae**	**53.80**	**159**	sP	sP	08 00 48.0	+0.6
SNAA	**Sanae**	**53.80**	**159**	ceP	**P**	**08 00 28.6**	**+0.2**
SNAA				pmax	pmax		
	comp=Z,127nm,1.3s						
SNAA	**Sanae**	**53.80**	**159**	P	**P**	**08 00 28.0**	**-0.4**
SNAA				pP	**pP**	**08 00 42.8**	**+1.0**
SNAA					**sP**	**08 00 47.4**	**-0.1**
SOR	**Soroa**	**55.01**	**347**	P	**P**	**08 00 37.1**	**-0.5**
SOR					**pP**	**08 00 50.8**	**-0.3**
SOR				IAmb	IAmb	08 00 52.3	
	comp=Z,82nm,0.9s						
NVL	**N'lazarevskaya**	**58.50**	**157**	eP	**P**	**08 01 06.4**	**+4.5**
NVL				pmax	pmax		
	comp=Z,73nm,1.3s						
QSPA	**South Pole Qui**	**58.85**	**180**	P	**P**	**08 01 04.3**	**-0.2**
QSPA				pP	**pP**	**08 01 18.4**	**+0.4**
QSPA				IAmb	IAmb	08 01 20.4	
	comp=Z,46nm,0.8s						
BRAL	**Brewton**	**63.96**	**345**	IAmb	IAmb	08 01 54.4	
	comp=Z,107nm,1.1s						
154A	**Montrose**	**64.61**	**349**	IAmb	IAmb	08 01 45.0	
	comp=Z,92nm,1.1s						
152A	**Waverly Hall**	**64.94**	**348**	P	**P**	**08 01 44.7**	**-0.8**
152A					**pP**	**08 01 59.1**	**-0.2**
SACV	**Santiago Islan**	**65.00**	**52**	P	**P**	**08 01 45.1**	**-1.2**
833A	**Chaparral WMA,**	**65.10**	**333**	P	**P**	**08 01 48.6**	**+1.9**
	baz=154						
344A	**Westbrook Farm**	**65.13**	**342**	IAmb	IAmb	08 02 03.0	
	comp=Z,99nm,1.1s						
441A	**DeRidder**	**65.17**	**339**	IAmb	IAmb	08 02 03.7	
	comp=Z,84nm,0.9s						
HKT	**Hockley**	**65.27**	**337**	⇑eP	**P**	**08 01 48.3**	**+0.6**
HKT				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HKT	**Hockley**	**65.27**	**337**	P	**P**	**08 01 48.1**	**+0.4**
HKT				pP	**pP**	**08 02 02.0**	**+0.6**
146A	**Union**	**65.83**	**344**	IAmb	IAmb	08 02 07.2	
	comp=Z,85nm,1.0s						
Y52A	**Lilburn**	**65.99**	**348**	IAmb	IAmb	08 02 07.2	
	comp=Z,64nm,1.1s						
X58A	**Rowland**	**66.01**	**353**	IAmb	IAmb	08 02 07.5	
	comp=Z,66nm,0.7s						
Z47A	**Carrollton**	**66.14**	**345**	IAmb	IAmb	08 02 08.4	
	comp=Z,69nm,1.1s						
NATX	**Nacogdoches**	**66.56**	**338**	IAmb	IAmb	08 02 12.2	
	comp=Z,107nm,1.1s						
HPIG		**66.59**	**327**	IAmb	IAmb	08 02 12.5	
	comp=Z,52nm,1.1s						
435B	**Jarrell**	**66.64**	**336**	P	**P**	**08 01 57.3**	**+0.7**
435B				pP	**pP**	**08 02 11.1**	**+0.7**
435B	**Jarrell**	**66.64**	**336**	P	**P**	**08 01 58.2**	**+1.7**
	baz=156						
W57A	**Gilead**	**66.68**	**352**	IAmb	IAmb	08 04 22.1	
	comp=Z,57nm,1.1s						
X51A	**Calhoun**	**66.82**	**348**	IAmb	IAmb	08 02 12.7	
	comp=Z,97nm,1.0s						
KMSC	**Kings Mountain**	**66.83**	**351**	P	**P**	**08 01 58.7**	**+1.0**
	baz=171						
X48A	**Hartselle**	**67.13**	**346**	IAmb	IAmb	08 02 14.7	
	comp=Z,98nm,1.1s						
237A	**Washetta, Mont**	**67.15**	**338**	P	**P**	**08 02 01.1**	**+1.4**
237A				pP	**pP**	**08 02 14.1**	**+0.5**
237A				IAmb	IAmb	08 02 16.0	
	comp=Z,101nm,1.0s						
W52A	**Murphy**	**67.17**	**349**	IAmb	IAmb	08 02 15.1	
	comp=Z,47nm,1.1s						
JCT	**Junction City**	**67.18**	**334**	IAmb	IAmb	08 02 15.9	
	comp=Z,75nm,1.1s						
V58A	**Windy Hill, Pi**	**67.22**	**353**	IAmb	IAmb	08 02 14.9	
	comp=Z,34nm,0.8s						
Z41A	**Richland Creek**	**67.40**	**341**	P	**P**	**08 02 02.5**	**+1.2**
	baz=160						
W50A	**Signal Mountai**	**67.52**	**348**	IAmb	IAmb	08 02 17.2	
	comp=Z,88nm,1.1s						
CPCT	**Cooper Cave**	**67.62**	**348**	IAmb	IAmb	08 02 17.7	
	comp=Z,41nm,0.8s						
SWET	**Sewanee**	**67.65**	**347**	IAmb	IAmb	08 02 17.9	
	comp=Z,77nm,1.1s						
WHTX	**Lake Whitney,**	**67.70**	**336**	IAmb	IAmb	08 02 18.9	
	comp=Z,72nm,1.2s						
WHTX	**Lake Whitney,**	**67.70**	**336**	P	**P**	**08 02 04.5**	**+1.3**
	baz=156						
TKL	**Tuckaleechee C**	**67.70**	**349**	IAmb	IAmb	08 02 17.8	
	comp=Z,32nm,0.8s						
CCAR	**Cane Creek**	**67.74**	**342**	IAmb	IAmb	08 02 19.4	
	comp=Z,59nm,1.2s						
TXAR	**Lajitas Array**	**67.75**	**330**	P	**P**	**08 02 05.0**	**+1.3**
	comp=Z,9.9nm,0.9s,baz=149,slow=8.3,SNR=61						
TXAR				pP	**pP**	**08 02 18.3**	**+0.7**
	comp=Z,14nm,0.7s,baz=155,slow=6.8,SNR=30						
TX31	**Lajitas Ar. Si**	**67.75**	**330**	IAmb	IAmb	08 02 19.5	
	comp=Z,58nm,0.8s						
TX32	**Lajitas Array**	**67.75**	**330**	P	**P**	**08 02 03.9**	**+0.1**
TX32				pP	**pP**	**08 02 18.0**	**+0.4**
V52A	**Sevierville**	**67.85**	**349**	IAmb	IAmb	08 02 18.7	
	comp=Z,51nm,0.8s						
PLAL	**Pickwick Lake**	**67.86**	**345**	IAmb	IAmb	08 02 18.9	
	comp=Z,51nm,1.1s						
WLAR	**White Oak Lake**	**67.89**	**341**	P	**P**	**08 02 05.2**	**+0.8**
WLAR				pP	**pP**	**08 02 18.8**	**+0.5**
WLAR				IAmb	IAmb	08 02 20.7	
	comp=Z,87nm,1.2s						
U56A	**King**	**67.90**	**352**	IAmb	IAmb	08 02 19.8	
	comp=Z,36nm,0.8s						
V51A	**Loudon**	**67.93**	**349**	IAmb	IAmb	08 02 19.4	
	comp=Z,31nm,0.8s						
Z38A	**Mt. Pleasant**	**68.05**	**339**	IAmb	IAmb	08 02 21.4	
	comp=Z,65nm,1.2s						
SYO	**Syowa Base**	**68.09**	**159**	⇑eP	**P**	**08 02 01.2**	**-4.1**
SYO	**Syowa Base**	**68.09**	**159**	⇑epP	pP	08 02 18.8	-0.3
T59A	**Double "B" Far**	**68.24**	**355**	IAmb	IAmb	08 02 22.2	
	comp=Z,48nm,1.0s						
U54A	**Nelsons Funny**	**68.25**	**351**	IAmb	IAmb	08 02 21.6	
	comp=Z,50nm,0.8s						

V48A	**Smith Brothers**	68.33	347	IAmb	IAmb	08 02 22.3	
	comp=Z,107nm,1.2s						
MET	**Memphis--Engin**	68.42	344	P	P	08 02 08.7	+1.0
X40A	**Basin Creek Fa**	68.57	341	P	P	08 02 09.2	+0.6
	baz=160						
CLTN	**Cedars of Leba**	68.57	347	IAmb	IAmb	08 02 23.7	
	comp=Z,44nm,0.8s						
Z35A	**Perchaven, San**	68.85	337	IAmb	IAmb	08 02 26.0	
	comp=Z,127nm,1.1s						
WVT	**Waverly**	68.91	346	P	P	08 02 10.2	-0.5
WVT				pP	pP	08 02 24.2	-0.4
WVT				IAmb	IAmb	08 02 25.7	
	comp=Z,103nm,1.1s						
ABTX	**Abilene, Hawle**	69.05	335	IAmb	IAmb	08 02 27.4	
	comp=Z,64nm,0.9s						
ABTX	**Abilene, Hawle**	69.05	335	P	P	08 02 12.9	+1.2
	baz=154						
W41B	**Gary Mavity, V**	69.05	342	P	P	08 02 12.1	+0.5
	baz=161						
R58B	**Mineral**	69.26	355	IAmb	IAmb	08 04 18.2	
	comp=Z,59nm,1.1s						
LOOK	**Love County**	69.43	337	P	P	08 02 14.6	+0.6
LOOK				pP	pP	08 02 27.9	-0.1
LOOK				IAmb	IAmb	08 02 29.6	
	comp=Z,90nm,1.5s						
W39A	**Magazine**	69.50	341	IAmb	IAmb	08 02 30.3	
	comp=Z,99nm,1.1s						
W39A	**Magazine**	69.50	341	P	P	08 02 15.6	+1.2
	baz=160						
T47A	**Sharon Grove**	69.59	347	IAmb	IAmb	08 02 29.9	
	comp=Z,140nm,1.4s						
HICK	**Hickman**	69.61	345	P	P	08 02 15.1	+0.1
HICK				pP	pP	08 02 29.2	+0.3
HICK				IAmb	IAmb	08 02 31.3	
	comp=Z,137nm,1.1s						
LCAR	**Lake Charles**	69.62	343	IAmb	IAmb	08 02 30.0	
	comp=Z,95nm,1.2s						
R55A	**Marlinton**	69.79	353	IAmb	IAmb	08 04 23.8	
	comp=Z,128nm,1.4s						
PARMO	**Parma**	69.85	344	IAmb	IAmb	08 02 32.0	
	comp=Z,94nm,0.9s						
PBMO	**Poplar Bluff**	70.12	344	IAmb	IAmb	08 02 33.1	
	comp=Z,78nm,1.2s						
X34A	**Smith Ranch, M**	70.20	337	IAmb	IAmb	08 02 34.4	
	comp=Z,98nm,1.3s						
U40A	**Yellville**	70.33	342	P	P	08 02 19.1	-0.3
U40A				pP	pP	08 02 33.1	-0.3
U40A				IAmb	IAmb	08 02 34.6	
	comp=Z,69nm,1.1s						
U40A	**Yellville**	70.33	342	P	P	08 02 20.2	+0.7
	baz=161						
R49A	**Shelbyville**	70.50	349	IAmb	IAmb	08 04 44.8	
	comp=Z,86nm,1.6s						
HHAR	**Hobbs**	70.56	341	IAmb	IAmb	08 02 35.5	
	comp=Z,39nm,0.7s						
WCI	**Wyandotte Cave**	70.64	348	P	P	08 02 20.6	-0.7
WCI				*PP	pP	08 02 34.4	-0.8
WCI				pmax	pmax		
	comp=Z,207nm,1.9s						
WCI	**Wyandotte Cave**	70.64	348	P	P	08 02 20.6	-0.7
WCI				pP	pP	08 02 34.4	-0.8
WCI				IAmb	IAmb	08 04 46.0	
	comp=Z,207nm,1.9s						
Q52A	**Bidwell**	70.72	351	IAmb	IAmb	08 04 09.4	
	comp=Z,91nm,1.0s						
S44A	**Carbondale**	70.72	345	IAmb	IAmb	08 02 36.7	
	comp=Z,50nm,0.7s						
SIUC	**Southern Illin**	70.73	345	IAmb	IAmb	08 02 36.8	
	comp=Z,192nm,1.6s						
P57A	**Homestead Farm**	70.78	355	IAmb	IAmb	08 03 55.4	
	comp=Z,56nm,1.1s						
OKCFA	**Oklahoma City**	70.82	338	IAmb	IAmb	08 02 37.5	
	comp=Z,69nm,1.3s						
U38A	**Gravette**	70.83	341	IAmb	IAmb	08 04 59.8	
	comp=Z,103nm,1.7s						
MGMO	**Mountain Grove**	70.93	342	P	P	08 02 23.5	+0.4
MGMO				pP	pP	08 02 36.9	-0.1
MGMO				IAmb	IAmb	08 04 29.4	
	comp=Z,79nm,1.4s						
Q51A	**Peebles**	70.93	350	IAmb	IAmb	08 04 01.9	
	comp=Z,56nm,1.0s						
OK025	**Westminster Rd**	70.94	338	IAmb	IAmb	08 02 38.1	
	comp=Z,111nm,1.2s						
P60A	**Greenville**	70.94	357	IAmb	IAmb	08 03 57.0	
	comp=Z,73nm,1.0s						
P60A	**Greenville**	70.94	357	P	P	08 02 24.1	+1.0
	baz=176						
OK030	**Cody Creek RV**	71.08	338	IAmb	IAmb	08 02 39.1	
	comp=Z,87nm,1.3s						
BCOK	**Bluff Creek, N**	71.09	338	IAmb	IAmb	08 02 39.3	
	comp=Z,74nm,1.3s						
OK031	**S. Brethren Rd**	71.12	338	IAmb	IAmb	08 02 39.4	
	comp=Z,97nm,1.4s						
P53A	**Whipple**	71.12	352	IAmb	IAmb	08 04 06.6	
	comp=Z,101nm,1.1s						
OK034	**N. Norfolk Rd.**	71.13	338	IAmb	IAmb	08 02 39.5	
	comp=Z,78nm,1.3s						
MVL	**Millersville**	71.17	356	P	P	08 02 24.9	+0.5
MVL				pP	pP	08 02 39.2	+0.8
MVL				IAmb	IAmb	08 03 56.1	
	comp=Z,63nm,1.1s						
OK029	**Liberty Lake**	71.17	338	IAmb	IAmb	08 02 39.7	
	comp=Z,61nm,1.2s						
FVM	**French Village**	71.26	344	IAmb	IAmb	08 02 40.4	
	comp=Z,76nm,1.1s						
P52A	**Corning**	71.36	351	IAmb	IAmb	08 04 06.2	
	comp=Z,74nm,0.9s						
P52A	**Corning**	71.36	351	P	P	08 02 25.7	+0.1
	baz=170						
PAGS	**Pennsylvania G**	71.42	356	IAmb	IAmb	08 03 56.8	
	comp=Z,62nm,1.1s						
MSTX	**Muleshoe**	71.43	333	IAmb	IAmb	08 02 42.1	
	comp=Z,88nm,0.8s						
MSTX	**Muleshoe**	71.43	333	P	P	08 02 27.2	+0.9
	baz=152						
CCM	**Cathedral Cave**	71.53	344	P	P	08 02 26.9	+0.2
CCM				pP	pP	08 02 40.6	0.0
CCM				IAmb	IAmb	08 02 41.9	
	comp=Z,75nm,1.0s						
O56A	**Blue Knob Stat**	71.60	354	IAmb	IAmb	08 03 50.7	
	comp=Z,155nm,1.4s						
O56A	**Blue Knob Stat**	71.60	354	P	P	08 02 27.9	+0.8
	baz=174						
P49A	**Miami Univ. Ec**	71.64	349	P	P	08 02 26.9	-0.5
	baz=168						
S39A	**Bolivar**	71.71	342	IAmb	IAmb	08 02 43.2	
	comp=Z,83nm,1.4s						
LUPA	**Lehigh Univers**	71.72	357	P	P	08 02 28.2	+0.5
LUPA				IAmb	IAmb	08 03 53.6	
	comp=Z,53nm,1.0s						
O52A	**Adamsville**	71.80	352	IAmb	IAmb	08 04 31.9	
	comp=Z,62nm,1.1s						
AMTX	**Amarillo**	71.82	334	IAmb	IAmb	08 02 44.3	
	comp=Z,70nm,1.1s						
Q44A	**Meyer Farm, Va**	71.83	346	IAmb	IAmb	08 04 45.4	
	comp=Z,107nm,1.3s						
SLM	**Saint Louis**	71.84	345	IAmb	IAmb	08 02 43.6	
	comp=Z,49nm,0.8s						
O53A	**New Philadelph**	71.85	352	IAmb	IAmb	08 04 30.8	
	comp=Z,75nm,1.0s						
O53A	**New Philadelph**	71.85	352	P	P	08 02 28.4	-0.2
	baz=171						
SSPA	**Standing Stone**	71.91	355	P	P	08 02 28.2	-0.7
SSPA				IAmb	IAmb	08 03 57.1	
	comp=Z,84nm,1.0s						
BLOK	**Blackwell**	71.98	338	P	P	08 02 29.8	+0.4
BLOK				pP	pP	08 02 44.0	+0.6
R40A	**Maddies Statio**	72.00	343	IAmb	IAmb	08 02 44.6	
	comp=Z,69nm,0.8s						
N58A	**Sunbury**	72.03	356	IAmb	IAmb	08 03 53.7	
	comp=Z,67nm,1.1s						
N59A	**State Game Lan**	72.05	357	IAmb	IAmb	08 03 53.1	
	comp=Z,48nm,0.9s						
N59A	**State Game Lan**	72.05	357	P	P	08 02 31.1	+1.3
	baz=176						
ACSO	**Alum Creek Sta**	72.06	351	IAmb	IAmb	08 02 44.7	
	comp=Z,62nm,0.8s						
P46A	**Rosedale**	72.16	347	IAmb	IAmb	08 04 44.0	
	comp=Z,60nm,0.9s						
ODNJ	**Ogdensburg**	72.17	357	IAmb	IAmb	08 04 07.7	
	comp=Z,167nm,1.8s						
U32A	**Winter Ranch,**	72.21	337	P	P	08 02 31.0	+0.1
U32A				IAmb	IAmb	08 02 46.5	
	comp=Z,102nm,1.2s						
TRNY	**Table Rock, Ra**	72.21	358	P	P	08 02 30.7	0.0
TRNY				pP	pP	08 02 43.9	-0.9
O49A	**Covington**	72.22	350	IAmb	IAmb	08 04 05.9	
	comp=Z,57nm,0.8s						
121A	**Cookes Peak, D**	72.30	328	P	P	08 02 32.7	+1.0
121A				IAmb	IAmb	08 02 48.2	
	comp=Z,63nm,0.9s						
121A	**Cookes Peak, D**	72.30	328	P	P	08 02 33.7	+2.0
	baz=148						
OK032	**Salt Plains WL**	72.34	338	IAmb	IAmb	08 02 47.1	
	comp=Z,84nm,1.4s						
N53A	**Lisbon**	72.36	352	IAmb	IAmb	08 04 00.0	
	comp=Z,65nm,1.1s						
KAN17	**Caldwell West**	72.41	338	IAmb	IAmb	08 05 07.6	
	comp=Z,89nm,1.6s						
N54A	**Moraine State**	72.42	353	IAmb	IAmb	08 03 49.5	
	comp=Z,102nm,1.2s						
N54A	**Moraine State**	72.42	353	P	P	08 02 32.7	+0.7
	baz=172						
KAN09	**Caldwell North**	72.45	338	IAmb	IAmb	08 02 47.9	
	comp=Z,106nm,1.4s						
M57A	**Sunshine Farm,**	72.55	355	P	P	08 02 33.4	+0.7
KAN06	**Argonia West S**	72.63	338	P	P	08 02 33.7	+0.4
KAN06				pP	pP	08 02 47.6	+0.3
KAN08	**Anthony NE Sta**	72.65	338	IAmb	IAmb	08 02 49.2	
	comp=Z,126nm,1.3s						
P43A	**Skaggs, Pawnee**	72.65	345	IAmb	IAmb	08 04 42.6	
	comp=Z,134nm,1.3s						
N51A	**Ashland**	72.66	351	IAmb	IAmb	08 04 12.7	
	comp=Z,82nm,0.9s						
KSPA	**Keystone Colle**	72.69	357	IAmb	IAmb	08 03 41.3	
	comp=Z,96nm,1.3s						
KAN12	**Harper NE Stat**	72.72	338	IAmb	IAmb	08 02 49.6	
	comp=Z,42nm,0.7s						
SFIN	**Lafayette**	72.87	347	P	P	08 02 33.1	-1.5
SFIN				pP	pP	08 02 47.5	-1.1
SFIN	**Lafayette**	72.87	347	P	P	08 02 33.7	-1.0
	baz=166						
N49A	**Columbus Grove**	72.91	350	IAmb	IAmb	08 04 02.7	
	comp=Z,93nm,0.9s						
O44A	**Mansfield**	72.92	346	IAmb	IAmb	08 04 39.6	
	comp=Z,127nm,1.4s						
M54A	**Oil Creek Stat**	72.93	353	P	P	08 02 35.3	+0.3
	baz=173						
M53A	**WI Miller and**	72.97	353	IAmb	IAmb	08 04 53.0	
	comp=Z,141nm,1.6s						
M53A	**WI Miller and**	72.97	353	P	P	08 02 35.7	+0.4
	baz=172						
N47A	**Urbana**	73.11	349	IAmb	IAmb	08 04 31.2	
	comp=Z,71nm,1.0s						
P40A	**Paris**	73.12	343	IAmb	IAmb	08 02 51.4	
	comp=Z,84nm,0.8s						
M52A	**Chesterland**	73.14	352	P	P	08 02 35.8	-0.5
M52A				pP	pP	08 02 49.8	-0.5
M52A				IAmb	IAmb	08 03 57.5	
	comp=Z,85nm,0.8s						
M50A	**Fremont**	73.22	351	IAmb	IAmb	08 03 59.5	
	comp=Z,64nm,0.9s						
BINY	**Binghamton**	73.34	356	IAmb	IAmb	08 03 47.4	
	comp=Z,99nm,1.1s						
HDIL	**Hopedale**	73.48	346	P	P	08 02 37.3	-0.9
HDIL				pP	pP	08 02 51.5	-0.7
L61B	**Northampton**	73.48	359	P	P	08 02 39.7	+1.5
	baz=179						
TUC	**Tucson**	73.51	326	P	P	08 02 39.6	+0.9
TUC				*PP	pP	08 02 52.6	-0.2
TUC				pmax	pmax		
	comp=Z,53nm,1.8s						
TUC	**Tucson**	73.51	326	P	P	08 02 39.6	+0.9
TUC				pP	pP	08 02 52.5	-0.2
HRV	**Adam Dziewonsk**	73.53	360	P	P	08 02 39.4	+0.9
HRV				IAmb	IAmb	08 03 40.7	
	comp=Z,65nm,0.9s						
ERPA	**Erie**	73.57	353	IAmb	IAmb	08 03 52.1	
	comp=Z,127nm,1.2s						
K62A	**Royalston**	73.69	359	IAmb	IAmb	08 03 32.5	
	comp=Z,138nm,1.2s						
ANMO	**Albuquerque**	73.77	331	*de*P	P	08 02 41.3	+0.9
ANMO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ANMO	**Albuquerque**	73.77	331	P	P	08 02 40.5	+0.1
ANMO					pP	08 02 54.9	+0.6
TRY	**Troy**	73.78	358	IAmb	IAmb	08 03 34.1	
	comp=Z,167nm,1.4s						
DBIC	**Dimbokro**	73.82	72	P	P	08 02 41.4	+0.6
	comp=Z,100nm,0.8s,baz=190,slow=4.3,SNR=1.6						
DBIC				pP	pP	08 02 55.5	+0.6
	comp=Z,160nm,0.8s,baz=321,slow=3.6,SNR=2.7						
KSU1	**Kansas State U**	73.95	340	IAmb	IAmb	08 04 58.0	
	comp=Z,143nm,1.4s						
L48A	**N Adams**	73.95	350	IAmb	IAmb	08 04 10.2	
	comp=Z,103nm,1.1s						
N41A	**Harden Midland**	73.96	345	IAmb	IAmb	08 04 39.9	
	comp=Z,129nm,1.2s						
R32A	**Long Quarter,**	73.97	338	IAmb	IAmb	08 05 01.8	
	comp=Z,159nm,1.7s						
214A	**Organ Pipe Nat**	74.21	324	P	P	08 02 45.0	+2.2
	baz=144						
L46A	**Eue Claire**	74.32	349	IAmb	IAmb	08 04 37.2	
	comp=Z,144nm,1.3s						
ACCN	**Adirondack Com**	74.43	358	IAmb	IAmb	08 03 40.2	
	comp=Z,122nm,1.0s						
J58A	**Remsen**	74.47	357		P	08 02 44.2	+0.2
FFD	**Franklin Falls**	74.49	360	IAmb	IAmb	08 03 28.2	
	comp=Z,74nm,1.2s						
N38A	**Joes South For**	74.61	343	IAmb	IAmb	08 04 40.9	
	comp=Z,95nm,1.1s						
CBKS	**Cedar Bluff**	74.66	337	IAmb	IAmb	08 03 01.1	
	comp=Z,64nm,1.0s						
L44A	**Lake County Fo**	74.77	347	P	P	08 02 44.9	-0.8
L44A				pP	PcP	08 02 59.6	0.0
L44A				IAmb	IAmb	08 04 38.1	
	comp=Z,108nm,1.2s						
L44A	**Lake County Fo**	74.77	347	P	P	08 02 45.6	-0.1
	baz=165						
T25A	**Trinidad**	74.84	333	IAmb	IAmb	08 03 03.1	
	comp=Z,59nm,0.9s						
T25A	**Trinidad**	74.84	333	P	P	08 02 48.0	+1.4
	baz=151						
NCB	**Newcomb**	75.03	358	IAmb	IAmb	08 03 37.8	
	comp=Z,106nm,1.1s						
I63A	**Otisfield**	75.07	1	P	P	08 02 48.9	+1.4
I63A				IAmb	IAmb	08 03 35.0	
	comp=Z,120nm,1.2s						
L40A	**Anamosa**	75.33	345	IAmb	IAmb	08 03 03.9	
	comp=Z,94nm,0.9s						
W18A	**Petrified Fore**	75.34	328	IAmb	IAmb	08 03 05.9	
	comp=Z,76nm,1.4s						
W18A	**Petrified Fore**	75.34	328	P	P	08 02 51.4	+1.9
	baz=147						
MAW	**Mawson**	75.52	164	P	P	08 02 50.2	+0.3
	comp=Z,20nm,0.6s,baz=218,slow=7.5,SNR=51						
MAW				pP	pP	08 03 03.7	-0.2
	comp=Z,24nm,0.8s,baz=228,slow=6.5,SNR=14						
MAW	**Mawson**	75.52	164	P	P	08 02 49.4	-0.4
MAW				pP	PcP	08 03 02.9	+0.2
MAW					sP	08 03 09.7	+0.4
SUR	**Sutherland**	75.61	119	⇑P	P	08 02 52.2	+0.9
KSCO	**Kaye Shedlock’**	75.83	335	P	P	08 02 52.8	+0.7
KSCO				IAmb	IAmb	08 04 53.0	
	comp=Z,82nm,1.2s						
KSCO	**Kaye Shedlock’**	75.83	335	P	P	08 02 53.7	+1.5
	baz=153						
FRNY	**Flat Rock**	75.88	358	IAmb	IAmb	08 03 33.6	
	comp=Z,123nm,1.1s						
JFWS	**Jewell Farm**	75.94	346	P	P	08 02 52.0	-0.4
JFWS				pmax	pmax		
	comp=Z,113nm,0.9s						
JFWS	**Jewell Farm**	75.94	346	P	P	08 02 52.0	-0.4
GLA	**Glamis**	76.10	323	P	P	08 02 55.8	+2.1
	baz=143						
SADO	**Sadowa**	76.12	354	P	P	08 02 53.7	+0.3
	comp=Z,16nm,0.6s,baz=202,slow=1.8,SNR=16						
SADO				pP	pP	08 03 07.8	+0.2
	comp=Z,28nm,0.7s,baz=226,slow=2.7,SNR=11						
G62A	**West of Eustis**	76.24	1	P	P	08 02 54.4	+0.3
G65A	**Princeton**	76.30	3	P	P	08 02 54.2	-0.1
S22A	**4UR Ranch, Cre**	76.33	332	P	P	08 02 56.6	+1.5
	baz=149						
IKP	**In-Ko-Pah, Jac**	76.45	322	P	P	08 02 56.5	+0.8
	baz=142						
SWSC	**Sam W. Stewart**	76.52	323	P	P	08 02 58.1	+2.2
	baz=142						
BGNE	**Belgrade**	76.53	340	P	P	08 02 56.9	+1.1
	baz=157						
L34A	**Svendsen Farm,**	76.54	341	IAmb	IAmb	08 04 53.9	
	comp=Z,60nm,0.6s						
MNTQ	**Montreal, Queb**	76.55	358	IAmb	IAmb	08 03 30.4	
	comp=Z,119nm,1.1s						
MVCO	**Mesa Verde**	76.56	330	P	P	08 02 57.5	+1.1
I42A	**Draeger Farm,**	76.61	347	IAmb	IAmb	08 04 11.2	
	comp=Z,91nm,0.9s						
Q24A	**Divide**	76.72	334	P	P	08 02 59.4	+2.0
	baz=151						
PDMCI	**Parker Dam,Lak**	76.76	325	P	P	08 02 59.2	+1.9
	baz=144						
MONP2	**Monument Peak**	76.80	322	P	P	08 02 60.0	+2.1
	baz=142						
BC3	**Big Chuckawall**	76.90	323	P	P	08 03 00.6	+2.3
	baz=142						
F62A	**Pittston Farm,**	76.93	1	P	P	08 02 56.9	-1.1
F62A				IAmb	IAmb	08 03 15.7	
	comp=Z,81nm,1.0s						
IRM	**Iron Mountain**	77.14	324	P	P	08 03 02.0	+2.5
	baz=143						
PFO	**Pinyon Flats O**	77.38	323	P	P	08 03 00.9	-0.1
PFO				*PP	pP	08 03 16.0	+1.0
PFO				pmax	pmax		
	comp=Z,28nm,1.2s						
PFO	**Pinyon Flats O**	77.38	323	P	P	08 03 00.9	-0.1
PFO				pP	pP	08 03 16.0	+1.0
PFO	**Pinyon Flats O**	77.38	323	P	P	08 03 03.1	+2.1
	baz=142						
BELC	**Belle Mtn. Jos**	77.45	323	P	P	08 03 03.5	+2.1
	baz=142						
U15A	**North Rim**	77.59	327	P	P	08 03 03.2	+0.9
U15A				pP	pP	08 03 16.9	+0.5
SMCO	**Snowmass**	77.61	332	IAmb	IAmb	08 03 19.2	
	comp=Z,73nm,1.3s						
ISCO	**Idaho Springs**	77.62	334	IAmb	IAmb	08 03 18.7	
	comp=Z,90nm,1.8s						
MURC	**Murrieta**	77.76	322	P	P	08 03 05.2	+2.2
	baz=141						
GMRC	**Granite Mounta**	77.90	324	P	P	08 03 06.1	+2.3
	baz=142						
BBRC	**Big Bear Solar**	78.13	323	P	P	08 03 07.8	+2.5
	baz=142						
HEC	**Hector,Ludlow**	78.27	324	P	P	08 03 08.3	+2.5
	baz=142						
KNB	**Kanab**	78.32	327	IAmb	IAmb	08 03 23.0	
	comp=Z,125nm,1.7s						
PKCU	**Pink Cliffs**	78.43	328	IAmb	IAmb	08 04 57.9	
	comp=Z,106nm,1.5s						
BFSC	**Mount Baldy Ra**	78.50	322	P	P	08 03 09.3	+2.1
	baz=141						
TUQ	**Turquoise Moun**	78.54	324	P	P	08 03 09.9	+2.5
	baz=142						
RRX	**Edison Barstow**	78.65	323	P	P	08 03 10.9	+3.0
	baz=142						
E43A	**Lone Tree Farm**	78.68	349	IAmb	IAmb	08 03 54.1	
	comp=Z,94nm,0.8s						
SPMN	**Marine on St.**	78.70	345	IAmb	IAmb	08 04 08.7	
	comp=Z,68nm,0.8s						
SPMN	**Marine on St.**	78.70	345	P	P	08 03 07.8	-0.1
	baz=162						
N23A	**Red Feather La**	78.70	334	P	P	08 03 10.4	+2.1
	baz=150						
COWI	**Conover**	78.78	348	IAmb	IAmb	08 03 51.7	
	comp=Z,129nm,1.1s						
DECC	**Green Verdugo**	78.86	322	P	P	08 03 09.6	+0.6
	baz=141						
MTPU	**Mount Pierson**	78.86	328	IAmb	IAmb	08 04 47.0	
	comp=Z,124nm,1.7s						
GSC	**Goldstone, Bar**	78.88	324	P	P	08 03 10.8	+1.6
	baz=142						
O20A	**White River Ci**	78.94	332	IAmb	IAmb	08 04 48.0	
	comp=Z,129nm,1.4s						
O20A	**White River Ci**	78.94	332	P	P	08 03 11.4	+1.8
	baz=149						
SHPR	**Sheep Range**	79.02	325	P	P	08 03 10.2	+0.1
SHPR				pP	pP	08 03 24.8	+0.7
SHOC	**Shoshone, Teco**	79.08	324	P	P	08 03 12.0	+1.8
	baz=142						
Q16A	**Castle Valley**	79.14	329	IAmb	IAmb	08 05 12.6	
	comp=Z,100nm,1.6s						
EDW2	**Edwards Air Fo**	79.17	323	P	P	08 03 12.4	+1.7
	baz=141						
MVU	**Marysvale**	79.26	329	IAmb	IAmb	08 04 27.7	
	comp=Z,119nm,1.2s						
OSI	**Osito Audit: C**	79.34	322	P	P	08 03 12.9	+1.2
OSI				IAmb	IAmb	08 03 28.1	
	comp=Z,108nm,1.8s						
OSI	**Osito Audit: C**	79.34	322	P	P	08 03 13.8	+2.0
	baz=140						
F36A	**Milaca**	79.46	344	IAmb	IAmb	08 04 05.4	
	comp=Z,85nm,0.9s						
LRMC	**Laurel Mtn Rad**	79.47	323	P	P	08 03 14.6	+2.1
	baz=141						
SUSD	**Miller**	79.55	340	P	P	08 03 13.8	+1.3
	baz=156						
ARVC	**Arvin**	79.79	322	P	P	08 03 16.1	+2.0
	baz=140						
MPMC	**Manual Prospec**	79.82	324	P	P	08 03 16.0	+1.5
	baz=141						
FURC	**Furnace Creek,**	79.82	324	P	P	08 03 16.9	+2.8
	baz=142						
RDMU	**Red Mountain**	79.84	331	P	P	08 03 14.9	+0.4
RDMU				pP	pP	08 03 29.0	+0.4
RWWY	**Rawlins**	79.86	334	IAmb	IAmb	08 04 32.7	
	comp=Z,136nm,1.3s						
ISA	**Isabella, Lake**	80.02	323	P	P	08 03 17.9	+2.5
	baz=141						
PKM	**Mcpherson Peak**	80.13	321	P	P	08 03 18.4	+2.2
	baz=140						
CWC	**Cottonwood Cre**	80.42	323	P	P	08 03 19.2	+1.6
	baz=141						
K22A	**Casper**	80.44	334	IAmb	IAmb	08 04 26.7	
	comp=Z,87nm,1.4s						
K22A	**Casper**	80.44	334	P	P	08 03 19.0	+1.4
	baz=150						
VES	**Vestal, Richgr**	80.47	322	P	P	08 03 20.0	+2.3
	baz=140						
SMMC	**Simmler**	80.55	322	P	P	08 03 20.6	+2.4
	baz=140						
SPR3	**Spring Creek 3**	80.62	327	IAmb	IAmb	08 04 23.1	
	comp=Z,88nm,1.2s						
JLU	**Jordanelle**	80.66	330	IAmb	IAmb	08 04 38.3	
	comp=Z,104nm,1.6s						
R11A	**Troy Canyon, C**	80.69	326	P	P	08 03 20.9	+1.9
	baz=143						
RSSD	**Black Hills**	80.85	337	P	P	08 03 19.6	-0.2
RSSD				*PP	pP	08 03 34.0	0.0
RSSD				pmax	pmax		
	comp=Z,80nm,0.9s						
RSSD	**Black Hills**	80.85	337	P	P	08 03 19.6	-0.2
RSSD				pP	pP	08 03 34.0	0.0
RSSD				IAmb	IAmb	08 04 06.8	
	comp=Z,80nm,0.9s						
CTU	**Camp Tracy**	80.86	330	IAmb	IAmb	08 05 13.3	
	comp=Z,165nm,1.8s						
DUG	**Dugway, Tooele**	80.91	329	IAmb	IAmb	08 04 31.1	
	comp=Z,59nm,1.1s						
TIN	**Tinemaha, Big**	80.97	324	P	P	08 03 22.5	+2.0
	baz=141						
BGU	**Big Grassy Mou**	81.60	329	IAmb	IAmb	08 04 22.6	
	comp=Z,62nm,1.4s						
SPUT	**South Promonto**	81.67	330	IAmb	IAmb	08 05 09.5	
	comp=Z,177nm,1.7s						
PDAR	**Pinedale Array**	81.69	333	P	P	08 03 24.7	+0.4
	comp=Z,2.5nm,0.7s,baz=144,slow=6.2,SNR=22						
PDAR				pP	pP	08 03 38.7	+0.2
	comp=Z,4.6nm,0.6s,baz=132,slow=7.3,SNR=17						
MLAC	**Mammoth, Mammo**	81.72	324	P	P	08 03 26.5	+1.8
	baz=141						
LHV	**Little Huntoon**	82.03	324	IAmb	IAmb	08 05 33.5	
	comp=Z,86nm,1.4s						
NVAR	**Mina Array Bea**	82.07	325	P	P	08 03 27.3	+0.9
	comp=Z,8.3nm,0.9s,baz=153,slow=5.7,SNR=33						
NVAR				pP	pP	08 03 40.7	+0.1
	comp=Z,6.9nm,0.8s,baz=148,slow=5.8,SNR=12						
HVU	**Hansel Valley**	82.19	330	IAmb	IAmb	08 04 21.1	
	comp=Z,56nm,1.0s						
RYN	**Ryan**	82.33	325	IAmb	IAmb	08 04 41.2	
	comp=Z,65nm,1.5s						
ELK	**Elko**	82.44	328	IAmb	IAmb	08 04 11.4	
	comp=Z,127nm,1.9s						
ECR	**Eagle Creek**	82.66	332	P	P	08 03 29.1	-0.3
REDW	**Red Top Meadow**	82.71	332	IAmb	IAmb	08 04 32.7	
	comp=Z,92nm,1.4s						
SNOW	**Snow King Moun**	82.75	332	P	P	08 03 29.8	-0.1
TORD	**Torodi Ar. Bea**	82.79	70	P	P	08 03 29.9	-0.5
	comp=Z,99nm,1.0s,baz=280,slow=3.9,SNR=5.0						
TORD				pP	pP	08 03 45.6	+0.9
	comp=Z,62nm,0.7s,baz=280,slow=6.2,SNR=3.6						
TPAW	**Teton Pass**	82.85	332	IAmb	IAmb	08 05 00.4	
	comp=Z,79nm,1.2s						
YERR	**Yerington**	82.96	324	IAmb	IAmb	08 03 47.6	

	comp=Z,86nm,1.8s						
MOOW	Moose Ponds	82.99	332	IAmb	IAmb	08 04 20.9	
	comp=Z,132nm,1.6s						
BMN	Battle Mountai	83.11	327	IAmb	IAmb	08 04 19.3	
	comp=Z,56nm,1.3s						
VCNR	Virginia City	83.41	324	P	P	08 03 34.4	+1.1
PAHR	Pah Rah Range	83.59	325	P	P	08 03 34.4	+0.2
PAHR				pP	pP	08 03 49.2	+0.8
YHL	Hebgen Lake	84.08	333	P	P	08 03 37.1	+0.4
QLMT	Earthquake Lak	84.16	333	P	P	08 03 38.7	+1.6
HLID	Hailey	84.34	330	IAmb	IAmb	08 04 20.8	
	comp=Z,118nm,1.6s						
ORV	Oroville	84.53	323	P	P	08 03 39.4	+0.6
ORV				pmax	pmax		
	comp=Z,21nm,1.0s						
ORV	Oroville	84.53	323	P	P	08 03 39.4	+0.6
MSVF	Nonsavu	97.44	244	⇑iP	P	08 04 38.7	-1.5
MSVF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIP	Kipapa	98.13	290	⇑eP	P	08 04 40.6	-2.3
KIP				pmax	pmax		
	comp=Z,26nm,1.0s						
MMAI	Mount Meron Ar	119.24	67	PKP	PKiKP	08 09 55.8	+0.7
	comp=Z,1.7nm,0.4s,baz=289,slow=40,SNR=2.0						
MMAI				pPKP	pPKPdf	08 10 09.4	-0.5
	comp=Z,3.6nm,0.5s,baz=355,slow=1.9,SNR=2.9						
NACGM	Naroch	119.55	41	i PKP	PKiKP	08 10 07.3	+12
AKASG	Malin Array Be	120.00	46	PKP	PKPdf	08 09 55.1	-0.7
	comp=Z,3.4nm,0.6s,baz=266,slow=2.9,SNR=6.3						
AKASG				pPKP	pPKPdf	08 10 09.7	-0.8
	comp=Z,10nm,0.7s,baz=267,slow=2.6,SNR=7.3						
AKASG	Malin Array Be	120.00	46	c iPKIKP	PKPdf	08 09 55.0	-0.7
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SPITS	Spitsbergen Ar	120.01	14	PKP	PKPdf	08 09 55.0	-0.2
	comp=Z,18nm,1.0s,baz=143,slow=2.9,SNR=6.4						
SPITS				pPKP	pPKPdf	08 10 09.4	-0.4
	comp=Z,32nm,1.1s,baz=108,slow=2.7,SNR=2.0						
BRTR	Keskin Array B	120.05	59	PKP	PKPdf	08 09 56.4	-0.1
	comp=Z,3.0nm,0.7s,baz=268,slow=1.5,SNR=2.9						
BRTR				pPKP	pPKPdf	08 10 10.7	-0.7
	comp=Z,11nm,0.8s,baz=188,slow=3.0,SNR=9.6						
ASAR	Alice Springs	120.15	207	PKP	PKPdf	08 09 56.0	-1.2
	comp=Z,5.1nm,0.9s,baz=122,slow=1.6,SNR=4.3						
ASAR				pPKP	pPKPdf	08 10 10.2	-1.8
	comp=Z,4.0nm,0.8s,baz=134,slow=1.8,SNR=2.7						
ASAR				PKKPbc	PKKPbc	08 20 04.6	+0.1
	comp=Z,1.4nm,0.5s,baz=331,slow=3.2,SNR=12						
FINES	FINESS Array B	120.52	34	PKP	PKPdf	08 09 56.0	-0.5
	comp=Z,27nm,1.0s,baz=157,slow=5.4,SNR=1.5						
ARCES	ARCESS Array B	121.41	24	PKP	PKPdf	08 09 57.8	-0.2
	comp=Z,19nm,1.1s,baz=146,slow=6.7,SNR=3.8						
ARCES				pPKP	pPKPdf	08 10 12.6	-0.2
	comp=Z,16nm,1.0s,baz=90,slow=1.2,SNR=1.4						
WRA	Warramunga Arr	123.31	209	PKP	PKPdf	08 10 02.7	-0.6
	comp=Z,4.3nm,0.4s,baz=156,slow=1.8,SNR=42						
WRA				pPKP	pPKPdf	08 10 16.9	-1.2
	comp=Z,11nm,0.8s,baz=160,slow=1.7,SNR=5.2						
WRA				PKKPbc	PKKPbc	08 19 53.1	+0.7
	comp=Z,1.0nm,0.6s,baz=338,slow=4.4,SNR=6.6						
LVZ	Lovozero	124.68	26	⇑iPKIKP	PKiKP	08 10 06.9	+2.2
H11S2	WAKE ISLAND Hy	126.33	271	T	T	10 29 07.3	
	baz=116,slow=75,SNR=637						
H11S1	WAKE ISLAND Hy	126.35	271	T	T	10 29 11.1	
	baz=116,slow=75,SNR=661						
H11S3	WAKE ISLAND Hy	126.35	271	T	T	10 29 12.1	
	baz=116,slow=75,SNR=510						
H11N3	WAKE ISLAND Hy	126.68	272	T	T	10 29 36.5	
	baz=116,slow=75,SNR=255						
H11N1	WAKE ISLAND Hy	126.69	272	T	T	10 29 33.7	
	baz=116,slow=75,SNR=77						
H11N2	WAKE ISLAND Hy	126.70	272	T	T	10 29 33.4	
	baz=116,slow=75,SNR=586						
BILL	Bilibino	130.72	335	i PKIKP	PKiKP	08 10 16.9	+0.2
BILL				i		08 10 28.1	
BILL				pmax	pmax		
	comp=Z,22nm,1.3s						
BELG	Belogornoye	131.57	46	PKP	PKiKP	08 10 18.6	-0.2
	comp=Z,154nm,1.3s,baz=242,slow=23,SNR=1.2						
KIRV	Kirov	132.12	37	⇑iPKIKP	PKiKP	08 10 19.3	-0.5
ARU	Arti	137.38	39	PKP	PKPdf	08 10 28.8	+0.2
	comp=Z,6.9nm,0.6s,baz=297,slow=4.6,SNR=4.6						
ARU				pPKP	pPKPdf	08 10 43.8	+0.4
	comp=Z,6.2nm,0.6s,baz=291,slow=2.1,SNR=2.9						
ARU	Arti	137.38	39	⇑iPKIKP	PKiKP	08 10 30.6	+0.1
ARU	Arti	137.38	39		PKPdf	08 10 29.2	+0.5
SEY	Seymchan	138.02	332	PKP	PKiKP	08 10 30.7	-0.9
	comp=Z,27nm,1.1s,baz=87,slow=4.2,SNR=9.4						
SEY				pPKP	pPKPdf	08 10 45.6	+1.2
	comp=Z,26nm,0.8s,baz=116,slow=2.5,SNR=7.3						
PEA0B	Petropavlovsk-	138.69	316	i PKIKP	PKiKP	08 10 33.6	+0.3
PETK	Petropavlovsk-	138.69	316	PKP	PKiKP	08 10 32.5	-0.9
	comp=Z,13nm,0.9s,baz=171,slow=2.9,SNR=6.5						
PETK				pPKP	pPKPdf	08 10 46.5	+0.5
	comp=Z,33nm,1.0s,baz=130,slow=6.5,SNR=9.0						
PETK	Petropavlovsk-	138.69	316	PKPdf	PKPdf	08 10 31.4	+0.2
BVAR	Borovoye Array	144.96	41	PKPbc	PKPdf	08 10 42.4	+0.1
	comp=Z,46nm,0.5s,baz=248,slow=8.4,SNR=50						
BVAR				pPKPbc	pPKPdf	08 10 57.8	+0.7
	comp=Z,70nm,0.6s,baz=250,slow=8.1,SNR=16						
YAK	Yakutsk	146.44	342	PKPbc	PKPbc	08 10 46.0	0.0
	comp=Z,53nm,0.6s,baz=190,slow=0.9,SNR=11						
YAK				pPKPbc	pPKPbc	08 11 00.8	+0.1
	comp=Z,73nm,0.6s,baz=112,slow=0.2,SNR=7.2						
YAK	Yakutsk	146.44	342	ePKP2	PKPdf	08 10 44.9	+0.3
YAK				pmax	pmax		
	comp=Z,189nm,1.0s						
YAK				pmax	pmax		
	comp=E,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,64nm,1.3s						
YAK	Yakutsk	146.44	342	PKPdf	PKPdf	08 10 45.2	+0.6
CHGR	Chuyangaron	147.07	66	PKPdf	PKPdf	08 10 45.1	-1.5
TOLI2	Tolitoli	147.77	203		PKPbc	08 10 50.2	-1.0
GSI	Gunungsitoli	148.31	159		PKPbc	08 10 53.1	+0.4
HYB	Hyderabad	149.41	110	i PKP	PKPbc	08 10 55.0	-0.4
YSS	Yuzh-Sakhalins	149.60	311	ePKP2	PKPbc	08 10 55.2	+0.3
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS	Yuzh-Sakhalins	149.60	311	PKPbc	PKiKP	08 10 55.7	-0.2
JKA	Kamikawa-asahi	150.50	305	PKPbc	PKPbc	08 10 56.7	-0.5
ASAJ	Asahikawa	150.50	305	PKPbc	PKPbc	08 10 56.8	-0.4
	comp=Z,62nm,1.0s,baz=262,slow=8.0,SNR=11						
ASAJ				pPKPbc	sPKPdf	08 11 11.9	0.0
	comp=Z,95nm,0.8s,baz=281,slow=2.2,SNR=14						
KURBB	Kurchatov Arra	150.55	41	PKPbc	PKiKP	08 10 57.5	-0.3
	comp=Z,49nm,1.0s,baz=302,slow=3.0,SNR=13						
KURBB				pPKPbc	pPKPbc	08 11 12.4	+0.5
	comp=Z,65nm,0.7s,baz=301,slow=3.0,SNR=18						
KURK	Kurchatov	150.56	40	PKIKP	PKiKP	08 10 57.5	-0.3
KURK						08 11 12.4	
ZALV	Zalesovo Beam	151.70	30	PKPbc	PKiKP	08 11 00.2	+0.2
	comp=Z,143nm,0.6s,baz=72,slow=0.7,SNR=4.0						
ZALV				pPKPbc	pPKPbc	08 11 15.1	+0.6
	comp=Z,200nm,0.5s,baz=315,slow=3.0,SNR=26						
ZALV	Zalesovo Beam	151.70	30	PKIKP	PKiKP	08 10 59.9	-0.2
ZALV	Zalesovo Beam	151.70	30	PKPbc	PKiKP	08 10 59.9	-0.2
MKAR	Makanchi Array	154.58	45	PKPbc	PKPbc	08 11 06.2	-0.1
	comp=Z,16nm,0.7s,baz=280,slow=1.9,SNR=17						
MKAR				pPKPbc	pPKPbc	08 11 21.1	0.0
	comp=Z,42nm,0.7s,baz=315,slow=3.0,SNR=15						
MJAR	Matsushiro Arr	154.98	290	PKP	PKPdf	08 10 57.5	-1.1
	comp=Z,7.4nm,1.1s,baz=87,slow=1.0,SNR=4.2						
MJAR				pPKP	pPKPdf	08 11 12.9	-0.6
	comp=Z,8.2nm,0.9s,baz=135,slow=1.3,SNR=7.0						
MJAR				PKPab	pPKPbc	08 11 21.7	-0.4
	comp=Z,5.4nm,0.6s,baz=115,slow=2.1,SNR=7.2						
MAT	Matsushiro	154.98	290	ePKP	PKPdf	08 10 58.0	-0.6
KLR	Kul'dur	155.08	322	PKP	PKPdf	08 10 57.6	-0.7
	comp=Z,8.8nm,1.0s,baz=40,slow=2.1,SNR=3.8						
KLR				pPKPbc	pPKPdf	08 11 12.7	-0.5
	comp=Z,18nm,1.0s,baz=1.2,slow=3.3,SNR=6.9						
WMQ	Urumqi	159.35	47	eP	PKPdf	08 11 04.7	+0.7
WMQ				pmax	pmax		
	comp=Z,27µm,4.1s						
WMQ				LR	LR		
	comp=N,31µm,19.9s						
WMQ				LR	LR		
	comp=E,21µm,18.7s						
WMQ				LR	LR		
	comp=Z,17µm,18.7s						
KSRS	Korea Array	162.97	296	PKP	PKPdf	08 11 07.6	-0.4
	comp=Z,0.7nm,0.5s,baz=267,slow=38,SNR=2.6						
KSRS				pPKP	pPKPdf	08 11 22.4	-0.4
	comp=Z,7.5nm,0.9s,baz=76,slow=0.3,SNR=7.9						
SONM	Songino Array	163.48	5	PP	PP	08 15 33.2	-11
	comp=Z,2.7nm,0.7s,baz=266,slow=9.7,SNR=4.7						
CMAR	Chiang Mai Arr	164.43	144	PKP	PKPdf	08 11 09.7	-0.1
	comp=Z,1.0nm,0.3s,baz=128,slow=26,SNR=2.1						
CMAR				pPKP	pPKPdf	08 11 24.6	-0.1
	comp=Z,4.8nm,0.7s,baz=240,slow=2.6,SNR=5.0						
CMAR				PKPab	PKPab	08 12 02.5	-1.9
	comp=Z,2.8nm,0.5s,baz=230,slow=6.0,SNR=5.1						
QIZ	Qiongzhong	167.65	185	PKP	PKPdf	08 11 12.9	+0.5
QIZ				PP	PP	08 16 07.5	+1.7
HHC	Hu-ho-hao-te	170.26	347	eP	PKPdf	08 11 14.1	+0.5
HHC				LR	LR		
	comp=N,19µm,19.5s						
HHC				LR	LR		
	comp=E,23µm,20.3s						
HHC				LR	LR		
	comp=Z,35µm,18.7s						
NJ2	Nanjing	171.26	277	eP	PKPdf	08 11 15.0	+0.8
NJ2				pmax	pmax		
	comp=Z,280nm,0.8s						

NEIC ***07*** *07:59:10.0±1.9, 38°.75N±0°.05×72°.85E±0°.07, h18^{km}±5^{km},*
mb5.3/49, Error ellipse: s-maj=8.4km s-min=7.4km
az=118.0
KRNET ***07*** *07:59:10.0±0.1, 38°.45N×73°.27E, mb5.4*
IDC ***07*** *07:59:17.3±9.1, 38°.44N×73°.26E, h94^{km}±79^{km}, mb4.5/12,*
mb1 4.6/13, mb1mx4.2/53, mbtmp4.9/13, ML5.6/1, Error
ellipse: s-maj=31.2km s-min=26.8km az=31.0
ISC 07 07:59:08.8±0.5**, 38°.65N**±0°.05×**72°.94E**±0°.04**, h10^{km}, n91,**
σ**1^{s}.94**/91**, mb5.2**/36**, 15C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.21	313	Pn	Pg	07 59 30.9	-1.2
DRK	Karamyk	1.21	313	⇑iP	Pn	07 59 38.0	+5.9
	baz=12						
DRK				⇑iS	Sn	07 59 58.7	+10
	baz=12						
OHH	Osh	1.87	356	⇑eP	Pg	07 59 46.6	+1.9
	baz=50						
OHH				⇑iS	Sg	08 00 13.1	+4.2
	baz=50						
GAR	Garm	2.08	280		Pn	07 59 42.7	-1.1
GAR	Garm	2.08	280	⇑iP	Pg	07 59 50.3	+1.7
	baz=84						
GAR				⇑iS	Sg	08 00 19.7	+4.2
	baz=84						
BTK	Batken	2.16	311	Pn	Pn	07 59 42.3	-2.6
BTK	Batken	2.16	311	⇑iP	Pg	07 59 52.1	+1.9
	baz=11						
BTK				⇑iS	Sg	08 00 22.6	+4.4
	baz=11						
CHGR	Chuyangaron	2.96	271	Pn	Pn	07 59 54.6	-1.3
CHGR	Chuyangaron	2.96	271	⇑iP	Pb	08 00 02.3	+0.6
	baz=75						
CHGR				⇑iS	Sg	08 00 40.5	-3.4
	baz=75						
TRKS	Terek-Say	3.19	335	⇑eP	Pb	08 00 04.6	-1.0
	baz=32						
TRKS				⇑iS	Sb	08 00 44.9	+0.4
	baz=32						
AML	Almayashu	3.52	9	⇑iP	Pb	08 00 08.8	-2.6
	baz=5.0						
AML				⇑iS	Sb	08 00 51.6	-2.7
	baz=5.0						
TAS	Tashkent	3.87	315	Pn	Pn	08 00 06.9	-1.4
AAK	Ala-Archa	4.15	16	Pn	Pn	08 00 11.2	-1.2
BOOM	Boomskoye usch	4.46	30	Pn	Pn	08 00 17.1	+0.5
KDJ	Kajisay	4.75	42	Pn	Pn	08 00 22.2	+1.6
KKAR	Karatay Array	4.81	338		Pn	08 00 22.2	+1.0
TARG	Taragay, Kyrgy	4.83	49	Pn	Pn	08 00 22.7	+0.8
NIL	Nilore	5.00	177	Pn	Pn	08 00 25.8	+1.9
BVAR	Borovoye Array	14.48	354	P	P	08 02 42.2	+1.7
	25nm,0.3s,baz=186,slow=15,SNR=11						
ZALV	Zalesovo Beam	17.32	24	Pn	Pn	08 03 09.3	-1.1
GNI	Garni	21.81	283	P	P	08 03 58.2	-2.9
TLY	Talaya	25.05	49	P	P	08 04 33.3	+0.2
ANTO	Ankara	30.93	285	P	P	08 05 23.7	-2.1
ANTO				IAmb	IAmb	08 05 44.9	
	comp=Z,45nm,1.4s						
ENH	Enshi	31.11	94	P	P	08 05 28.8	+1.3
CSS	Mathiatis	31.76	276	P	P	08 05 32.6	-0.4
CSS				IAmb	IAmb	08 05 54.5	
	comp=Z,34nm,1.2s						
AKASG	Malin Array Be	32.87	306	P	P	08 05 44.4	+1.8
	comp=Z,4.6nm,0.5s,baz=78,slow=7.6,SNR=4.3						
ISP	Isparta	33.11	282	P	P	08 05 44.4	-0.6
ISP				IAmb	IAmb	08 06 12.9	
	comp=Z,26nm,0.9s						
FINES	FINESS Array B	36.60	324	P	P	08 06 16.8	+2.1
	comp=Z,76nm,1.1s,baz=123,slow=10,SNR=1.2						
FINES	FINESS Array B	36.60	324	P	P	08 06 15.6	+0.9
FINES	FINESS Array B	36.60	324	P	P	08 06 15.6	+0.9
VAY	Valandovo	38.25	290	i P	P	08 06 28.8	-0.1
SKO	Skopje	38.93	292	i P	P	08 06 30.0	-4.7
ARCES	ARCESS Array B	39.77	336	P	P	08 06 42.3	+0.9
	comp=Z,87nm,1.2s,baz=116,slow=7.7,SNR=6.5						
ARCES	ARCESS Array B	39.77	336	P	P	08 06 39.0	-2.4
KNMB	Chin-men Tao	40.82	97	P	P	08 06 51.5	+0.9
KNMB				IAmb	IAmb	08 06 56.9	
	comp=Z,55nm,0.9s						
HFS	Hagfors	42.36	320	P	P	08 07 04.1	+1.3
	comp=Z,13nm,0.6s,baz=97,slow=12,SNR=4.5						
USRK	Ussuriysk Ar.	43.80	63	P	P	08 07 13.3	-1.3
SPITS	Spitsbergen Ar	45.76	346	P	P	08 07 30.7	+0.9
	comp=Z,32nm,1.0s,baz=106,slow=8.8,SNR=4.6						
KBS	Kingsbay	46.87	347	P	P	08 07 39.8	+1.4
SENIN	Lac Senin/Sane	47.75	302	P	P	08 07 44.5	-1.5
SENIN				IAmb	IAmb	08 08 04.4	
	comp=Z,48nm,1.4s						
BNI	Bardonecchia	48.53	300	P	P	08 07 52.3	+0.2
LODK	Lodwar	48.98	234	P	P	08 07 56.6	+0.9
JWT	Wachi	49.17	73	P	P	08 07 55.3	-1.6
KEST	Kesra	49.84	288	P	P	08 08 02.7	+0.6
JTM	Tenmabayashi	51.23	65	P	P	08 08 09.7	-2.7
JTM				IAmb	IAmb	08 08 13.7	
	comp=Z,54nm,1.2s						
EKA	Eskdalemuir Ar	51.83	315	P	P	08 08 16.9	+0.2
	comp=Z,8.3nm,0.9s,baz=92,slow=7.2,SNR=4.3						
JMM	Marumori	52.13	68	P	P	08 08 18.4	-0.8
JMM				IAmb	IAmb	08 08 23.5	
	comp=Z,29nm,1.0s						
SUMG	Summit	59.53	341	P	P	08 09 10.8	-1.4
TORD	Torodi Ar. Bea	67.31	269	P	P	08 10 05.0	+1.0
	comp=Z,3.8nm,0.8s,baz=46,slow=5.9,SNR=4.2						
TOLK	Toolik Lake Re	68.45	15	P	P	08 10 10.4	0.0
A36M	Sachs Harbour	68.92	6	P	P	08 10 13.1	-0.1
A36M				IAmb	IAmb	08 10 23.8	
	comp=Z,30nm,1.0s						
COLD	Coldfoot	69.48	17	P	P	08 10 16.4	-0.4
COLD				IAmb	IAmb	08 10 21.1	
	comp=Z,40nm,1.5s						
IMAR	Indian Mountai	69.65	19	P	P	08 10 17.5	-0.5
KOWA	Kowa	70.98	274	P	P	08 10 25.1	-1.7
KOWA				IAmb	IAmb	08 10 29.1	
	comp=Z,34nm,1.4s						
J20K	Nowinta River	70.99	20	P	P	08 10 26.1	0.0
H24K	Noodor Dome	71.16	17	P	P	08 10 25.3	-1.9
H24K				IAmb	IAmb	08 10 32.4	
	comp=Z,37nm,1.4s						
I23K	Minto, Yukon-K	71.39	17	P	P	08 10 27.9	-0.7
I23K				IAmb	IAmb	08 10 30.9	
	comp=Z,24nm,1.1s						
INK	Inuvik	71.53	10	P	P	08 10 28.5	-0.8
	comp=Z,7.5nm,0.5s,baz=343,slow=4.9,SNR=11						
INK	Inuvik	71.53	10	IAmb	IAmb	08 10 31.9	
	comp=Z,43nm,1.3s						
MDM	Murphy Dome	71.82	17	P	P	08 10 30.9	-0.3
POKR	Poker Plat Res	71.86	17	P	P	08 10 31.8	+0.4
CCB	Clear Creek Bu	72.18	17	P	P	08 10 32.9	-0.4
WRH	Wood River Hil	72.26	17	P	P	08 10 33.4	-0.4
IL31		72.28	17	P	P	08 10 34.1	+0.2
IL31				IAmb	IAmb	08 10 48.7	
	comp=Z,30nm,1.3s						
ILAR	Eielson Array	72.28	17	P	P	08 10 33.5	-0.5
	comp=Z,7.1nm,1.0s,baz=331,slow=3.3,SNR=4.8						
ILAR	Eielson Array	72.28	17	P	P	08 10 32.8	-1.2
PPLA	Purkeypile	72.55	20	P	P	08 10 35.0	-0.7
PPLA				IAmb	IAmb	08 10 49.2	
	comp=Z,48nm,1.3s						
HDA	Harding Lake	72.58	17	P	P	08 10 33.2	-2.5
MCK	McKinley	72.68	18	P	P	08 10 35.5	-0.8
MCK				IAmb	IAmb	08 10 38.5	
	comp=Z,44nm,1.5s						
EPYK	Eagle Plains	72.84	12	P	P	08 10 35.1	-2.1
EPYK				IAmb	IAmb	08 10 49.1	
	comp=Z,31nm,1.2s						
RND	Reindeer	72.98	18	P	P	08 10 36.5	-1.7
SCRK	Sand Creek	73.61	16	P	P	08 10 41.8	-0.2
SCRK				IAmb	IAmb	08 10 43.9	
	comp=Z,22nm,1.1s						
RIDG	Independent Ri	73.63	17	P	P	08 10 41.5	-0.5
O18K	Koktuh Hills	74.14	23	P	P	08 10 43.7	-1.3
O18K				IAmb	IAmb	08 10 47.8	
	comp=Z,27nm,1.0s						
GHO	Glory Hole Cre	74.33	19	P	P	08 10 45.0	-1.2
GHO				IAmb	IAmb	08 11 09.8	
	comp=Z,36nm,1.3s						
PMR	Palmer	74.43	19	P	P	08 10 45.6	-1.0
SML	Sawmill	74.46	19	P	P	08 10 46.2	-0.7
SML				IAmb	IAmb	08 10 49.0	
	comp=Z,33nm,0.9s						
DAWY	Dawson	74.47	14	P	P	08 10 46.3	-0.6
SCM	Sheep Creek Mo	74.69	19	P	P	08 10 47.6	-0.7
SCM				IAmb	IAmb	08 11 14.9	
	comp=Z,51nm,1.3s						
RC01	Rabbit Creek A	74.69	20	P	P	08 10 48.3	+0.1
RC01				IAmb	IAmb	08 10 50.3	
	comp=Z,32nm,1.4s						
M24K	Tolsona, Glenn	74.73	18	P	P	08 10 48.3	-0.2
KNK	Knik Glacier	74.76	19	P	P	08 10 48.0	-0.6
KNK				IAmb	IAmb	08 10 53.9	
	comp=Z,37nm,1.3s						
L27K	Beaver Creek,	74.88	16	P	P	08 10 48.4	-0.9
L27K				IAmb	IAmb	08 10 48.5	
	comp=Z,28nm,1.4s						
PWL	Port Wells	75.26	20	P	P	08 10 52.1	+0.6
YKA	Yellowknife Ar	79.02	4	P	P	08 11 12.1	-0.4
	comp=Z,3.3nm,0.6s,baz=347,slow=5.7,SNR=6.5						
YKA	Yellowknife Ar	79.02	4	P	P	08 11 09.5	-3.0
WRA	Warramunga Arr	81.85	123	P	P	08 11 23.9	-4.4
	comp=Z,2.7nm,0.7s,baz=264,slow=2.8,SNR=4.6						
ASAR	Alice Springs	84.25	126	P	P	08 11 37.2	-3.6
	comp=Z,2.6nm,0.9s,baz=311,slow=0.3,SNR=1.8						
SYO	Syowa Base	110.16	192	⇑ePdiff	Pdif	08 13 39.0	+0.7
SYO	Syowa Base	110.16	192	⇓epPdiff	pPdif	08 13 44.0	+1.0
SYO	Syowa Base	110.16	192	⇓esPdiff	Pdif	08 13 49.0	+11

KRNET ***07*** *08:03:01.2±0.1, 39°.40N×73°.38E, mb5.0*
ISC 07 08:03:03.4±1.3**, 39°.42N**±0°.07×**73°.28E**±0°.05**, h10^{km}, n19,**
σ**1^{s}.71**/33**, 18C-10D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.15	273	⇑iP	Pg	08 03 24.5	-0.9
	baz=74						
DRK				⇑iS	Sn	08 03 41.9	+0.2
	baz=74						
OHH	Osh	1.17	341	⇑iP	Pb	08 03 24.1	-1.6
	baz=38						
OHH				⇑iS	Sg	08 03 41.1	+0.1
	baz=38						
BTK	Batken	2.00	289	⇑iP	Pb	08 03 39.3	-0.6
	baz=89						
BTK				⇑iS	Sg	08 04 07.4	-0.3
	baz=89						
GAR	Garm	2.34	261	⇓iP	Pb	08 03 44.2	-1.5
	baz=61						
GAR				⇓iS	Sb	08 04 15.3	+0.6
	baz=61						
TRKS	Terek-Say	2.67	323	⇑eP	Pn	08 03 47.5	+1.0
	baz=21						
TRKS				⇑iS	Sn	08 04 21.1	+2.1
	baz=21						
AML	Almayashu	2.73	6	P	Pb	08 03 49.9	-2.6
	SNR=6.5						
AML	Almayashu	2.73	6	⇑iP	Pn	08 03 48.8	+1.2
	baz=5.0						
AML				⇑iS	Sb	08 04 23.3	-2.8
	baz=5.0						
UCH	Uchtor	2.96	18	P	Pb	08 03 54.7	-1.7
	SNR=13						
UCH	Uchtor	2.96	18	⇓iP	Pn	08 03 51.6	+0.8
	baz=17						
UCH				⇓iS	Sn	08 04 28.5	+1.9
	baz=17						
MNAS	Manas	3.12	349	⇓iP	Pn	08 03 54.5	+1.8
	baz=48						
MNAS				⇓iS	Sn	08 04 33.2	+3.1
	baz=48						
EKS2	Erkin-Say	3.26	6	⇑iP	Pn	08 03 56.0	+1.3
	baz=5.0						
EKS2				⇑iS	Sn	08 04 35.9	+2.3
	baz=5.0						
AAK	Ala-Archa	3.34	16	P	Pb	08 03 59.4	-3.4
	SNR=5.6						
AAK	Ala-Archa	3.34	16	⇑eP	Pn	08 03 56.8	+1.0
	baz=14						
AAK				⇑iS	Sn	08 04 37.6	+1.9
	baz=14						
KBK	Karagaybulak	3.47	21	⇓iP	Pn	08 03 58.5	+0.9
	baz=20						
KBK				⇓iS	Sn	08 04 40.6	+1.8
	baz=20						
ULHL	Ulahol	3.61	38	P	Pb	08 04 08.1	+0.8
	SNR=5.8						
ULHL	Ulahol	3.61	38	⇓eP	Pn	08 04 00.1	+0.6
	baz=36						
ULHL				⇓iS	Sn	08 04 43.4	+1.1
	baz=36						
BOOM	Boomskoye usch	3.67	32	⇑eP	Pn	08 04 01.3	+1.0
	baz=31						
BOOM				⇑iS	Sn	08 04 44.8	+1.1
	baz=31						
CHMS	Chumysh	3.74	17	P	Pn	08 04 04.0	+2.8
	SNR=8.2						
KDJ	Kajisay	4.01	46	⇑eP	Pn	08 04 05.7	+0.7
	baz=46						
KDJ				⇑iS	Sn	08 04 52.7	+0.5
	baz=46						

NEIC ***07*** *08:09:44.9±2.0, 38°.45N±0°.05×73°.29E±0°.08, h10^{km}±2^{km},*
mb5.2/3, Error ellipse: s-maj=11.1km s-min=8.8km
az=85.0
IDC ***07*** *08:09:44.6±8.8, 38°.24N×74°.71E, h71^{km}±53^{km}, mb3.8/8,*
mb1 3.9/10, mb1mx3.4/65, mbtmp4.1/10, ML4.4/2, Error
ellipse: s-maj=108.4km s-min=45.7km az=111.0
ISU ***07*** *08:09:48, 39°.36N×73°.62E, h10^{km}*
KRNET ***07*** *08:09:52.0±0.1, 39°.37N×73°.39E, h7^{km}, mb4.9*
NNC ***07*** *08:09:56.3±2.2, 39°.48N×73°.52E, h0^{km}, mb5.0, mpv4.6,*
Error ellipse: s-maj=18.3km s-min=12.3km az=6.0
ISC 07 08:09:46.5±0.8**, 39°.15N**±0°.04×**73°.67E**±0°.03**, h10^{km}, n67,**
σ**2^{s}.33**/89**, mb4.3**/11**, 22C-25D, Tajikistan-Xinjiang border**
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.87	352	eP	Pb	08 10 03.0	-0.9
SFK				eS	Sg	08 10 14.0	-0.8
SFK	Sufi-Kurgan	0.87	352	⇑eP	Pn	08 10 03.8	-1.3
	baz=8.0						
SFK				⇑eS	Sg	08 10 14.0	-0.8
	baz=8.0						
DRK	Karamyk	1.48	284	Pn	Pn	08 10 12.9	-0.6
DRK				Sn	Sn	08 10 32.1	-1.0
DRK	Karamyk	1.48	284	⇓iP	Pg	08 10 15.1	+0.1
	baz=76						
DRK				⇓iS	Sn	08 10 31.8	-1.3
	baz=76						
OHH	Osh	1.53	334	⇑eP	Pg	08 10 15.0	-0.9
	baz=38						
OHH				⇑iS	Sn	08 10 31.7	-2.3
	baz=38						
FRG	Fergana	1.90	311	eP	Pb	08 10 21.0	-0.2
FRG				eS	Sb	08 10 44.0	-1.0
BTK	Batken	2.38	293	i P	Pg	08 10 31.0	-1.1
BTK				i S	Sg	08 11 02.0	-1.0
BTK	Batken	2.38	293	Pn	Pb	08 10 27.2	-2.2
BTK	Batken	2.38	293	⇓eP	Pb	08 10 29.4	-0.1
	baz=90						
BTK				⇓iS	Sb	08 10 56.6	-2.4
	baz=90						
MINT	Mingtut	2.46	303	i P	Pg	08 10 32.0	-1.5
MINT				i S	Sg	08 11 03.0	-2.4
GAR	Garm	2.61	268	Pn	Pn	08 10 24.4	-4.4
GAR	Garm	2.61	268	⇓iP	Pb	08 10 33.8	+0.4
	baz=62						
GAR				⇓eS	Sb	08 11 03.8	-1.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=62						
AML	Almayashu	2.98	0	P	Pb	08 10 40.0	+0.1
	SNR=8.9						
AML	Almayashu	2.98	0	⇓iP	Pb	08 10 38.5	-1.4
	baz=5.0						
AML				⇓iS	Sb	08 11 12.6	-3.9
	baz=5.0						
TRKS	Terek-Say	3.06	322	⇓eP	Pb	08 10 37.4	-3.8
	baz=22						
TRKS				⇓iS	Sn	08 11 10.6	-1.3
	baz=22						
UCH	Uchtor	3.14	12	P	Pb	08 10 43.0	+0.3
	SNR=6.4						
UCH	Uchtor	3.14	12	⇑iP	Pb	08 10 41.6	-1.1
	baz=16						
UCH				⇑eS	Sb	08 11 18.0	-3.3
	baz=16						
MNAS	Manas	3.45	346	⇑iP	Pb	08 10 44.0	-3.8
	baz=48						
MNAS				⇑iS	Sn	08 11 22.4	+1.0
	baz=48						
EKS2	Erkin-Say	3.51	1	P	Pb	08 10 47.5	-1.3
	SNR=9.9						
EKS2	Erkin-Say	3.51	1	⇑eP	Pb	08 10 45.9	-2.9
	baz=5.0						
EKS2				⇑iS	Sn	08 11 25.3	+2.4
	baz=5.0						
AAK	Ala-Archa	3.54	10	P	Pb	08 10 48.9	-0.5
	21nm,0.3s,baz=177,slow=7.2,SNR=11						
AAK				S	Sg	08 11 39.4	-0.9
	31nm,0.3s,baz=35,slow=14,SNR=13						
AAK	Ala-Archa	3.54	10	P	Pb	08 10 48.9	-0.5
	SNR=7.7						
AAK	Ala-Archa	3.54	10	PKIKP	Pb	08 10 48.9	-0.5
AAK	Ala-Archa	3.54	10	⇑Pn	Pb	08 10 48.0	-1.3
	128nm,0.6s						
AAK				⇓Lg	Lg	08 11 40.1	
	519nm,0.7s						
AAK	Ala-Archa	3.54	10	iP	Pb	08 10 47.0	-2.3
	baz=14						
AAK				iS	Sn	08 11 26.8	+3.1
	baz=14						
CHGR	Chuyangaron	3.55	263	Pn	Pn	08 10 35.5	-6.3
CHGR	Chuyangaron	3.55	263	⇓eP	Pb	08 10 46.9	-2.5
	baz=59						
CHGR				⇓iS	Sn	08 11 26.9	+3.1
	baz=59						
KBK	Karagaybulak	3.64	15	⇓eP	Pb	08 10 48.5	-2.5
	baz=19						
KBK				⇓iS	Sb	08 11 29.7	-5.5
	baz=19						
ULHL	Ulahol	3.66	31	P	Pg	08 10 56.6	0.0
	SNR=5.3						
ULHL	Ulahol	3.66	31	⇑iP	Pb	08 10 49.9	-1.5
	baz=36						
ULHL				⇑iS	Sb	08 11 32.6	-3.4
	baz=36						
FRU1	Bishkek	3.73	11	PKIKP	Pb	08 10 53.7	+1.2
FRU1	Bishkek	3.73	11	Pn	Pb	08 10 53.7	+1.2
BOOM	Boomskoye usch	3.76	27	PKIKP	Pb	08 10 50.8	-2.2
BOOM	Boomskoye usch	3.76	27	Pn	Pb	08 10 50.8	-2.2
BOOM	Boomskoye usch	3.76	27	⇑eP	Pb	08 10 51.0	-2.0
	baz=31						
BOOM				⇑eS	Sb	08 11 34.1	-4.6
	baz=31						
CHMS	Chumysh	3.94	12	⇑iP	Pb	08 10 52.3	-3.6
	baz=15						
CHMS				⇑iS	Sn	08 11 36.4	+3.2
	baz=15						
TAS	Tashkent	3.99	304	PKP2	Pn	08 10 48.4	+0.7
TAS	Tashkent	3.99	304	Pn	Pn	08 10 48.4	+0.7
TAS	Tashkent	3.99	304	⇓iP	Pn	08 10 51.3	+3.6
	baz=3.0						
TAS				⇓iS	Sn	08 11 34.6	+0.1
	baz=3.0						
KDJ	Kajisay	4.00	41	⇓iP	Pb	08 10 55.9	-1.3
	baz=45						
KDJ				⇓iS	Sb	08 11 41.7	-4.0
	baz=45						
TKM2	Tokmak 2	4.04	21	⇓Pn	Pb	08 10 56.8	-1.1
	195nm,1.2s						
TKM2				⇓Lg	Lg	08 11 56.5	
	419nm,0.9s						
TKM2	Tokmak 2	4.04	21	⇓iP	Pb	08 10 54.6	-3.3
	baz=24						
TKM2				⇓iS	Sn	08 11 40.0	+3.9
	baz=24						
USP	Ospenovka	4.16	8	P	Pb	08 10 57.9	-2.0
	SNR=5.9						
USP	Ospenovka	4.16	8	⇓eP	Pb	08 10 55.2	-4.7
	baz=12						
USP				⇓iS	Sn	08 11 41.3	+2.4
	baz=12						
KK07	Karatay Array	4.61	330	⇑Pn	Pb	08 11 01.9	-5.5
	109nm,0.8s,baz=143,slow=12						
KK07				⇑Sn	Sn	08 11 54.2	+4.5
	421nm,0.9s,baz=146,slow=23						
KK07				⇑Lg	Lg	08 12 11.8	
	144nm,0.6s						
KKAR	Karatay Array	4.62	330	PKP2	Pn	08 11 00.7	+4.4
KKAR	Karatay Array	4.62	330	Pn	Pn	08 11 00.7	+4.5
GYA0B	ALIBECK ARRAY	12.24	269	Pn	Pn	08 12 35.3	-5.5
BVAR	Borovoye Array	14.06	352	P	P	08 13 14.7	+1.2
	1.6nm,0.3s,baz=195,slow=15,SNR=2.7						
ABKAR	Akbulak array	14.08	320	Pn	Pn	08 13 05.6	-0.3
BRVK	Borovoye	14.11	352	Pn	P	08 13 09.7	-4.3
BRTR	Keskin Array B	30.74	284	P	P	08 16 02.5	+0.6
	1.8nm,0.6s,baz=90,slow=8.6,SNR=3.8						
AKASG	Malin Array Be	33.04	305	P	P	08 16 22.4	+0.6
	0.5nm,0.5s,baz=76,slow=7.8,SNR=3.6						
FIA1	FINESS Array S	36.54	323	P	P	08 16 54.2	+2.3
FIA1				IAmb	IAmb	08 17 48.3	
	comp=Z,145nm,1.9s						
FINES	FINESS Array B	36.54	323	P	P	08 16 52.9	+1.0
	comp=Z,3.6nm,0.7s,baz=111,slow=10,SNR=5.8						
FINES	FINESS Array B	36.54	323	P	P	08 16 53.7	+1.8
ARCES	ARCESS Array B	39.55	336	P	P	08 17 18.6	+1.4
	comp=Z,7.4nm,1.1s,baz=122,slow=1.6,SNR=1.9						
HFS	Hagfors	42.34	320	P	P	08 17 41.2	+0.9
	comp=Z,4.1nm,0.5s,baz=96,slow=11,SNR=10						
GERES	GERESS Array B	43.19	303	P	P	08 17 49.2	+1.8
	comp=Z,1.2nm,0.8s,baz=70,slow=7.7,SNR=4.3						
NB201	NORSAR Array S	43.55	321	P	P	08 17 50.2	+0.1
NOA	NORSAR Array B	43.59	321	P	P	08 17 50.0	-0.5
	comp=Z,1.1nm,0.5s,baz=93,slow=7.7,SNR=2.0						
NC204	NORSAR Array S	43.81	322	P	P	08 17 53.7	+1.4
ESDC	Sonseca Array	58.10	297	P	P	08 19 36.9	-3.2
	comp=Z,0.3nm,0.5s,baz=281,slow=36,SNR=2.0						
INK	Inuvik	70.94	10	P	P	08 21 06.7	+3.3
INK				IAmb	IAmb	08 21 47.2	
	comp=Z,36nm,1.9s						
SCRK	Sand Creek	72.98	16	P	P	08 21 18.8	+2.9
SCRK				IAmb	IAmb	08 23 33.3	
	comp=Z,25nm,1.8s						
SYO	Syowa Base	110.76	192	⇑ePdiff	Pdif	08 24 15.8	-2.8
SYO	Syowa Base	110.76	192	⇑epPdiff	Pdif	08 24 19.4	+0.8

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*KRNET **07** 08:15:08.1±0.1, 38°.82N×73°.37E, h16^{km}, mb4.7*

*NNC **07** 08:15:17.4±18.0, 38°.77N×72°.96E, h0^{km}, mb4.6, mpv4.2, Error ellipse: s-maj=142.7km s-min=95.4km az=167.0*

ISC 07 08:15:09.5±2.1**, 38°.92N**±0°.08×**73°.25E**±0°.06**, h3**^{km}±12^{km}**, n14,** $\sigma 3^{s}.$**01**/28**, 21C-7D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	1.11	10	⇓eP	Pg	08 15 31.1	+0.2
	baz=5.0						
SFK				⇓eS	Sg	08 15 47.0	+1.6
	baz=5.0						
DRK	Karamyk	1.26	297	⇑iP	Pg	08 15 34.7	+1.1
	baz=99						
DRK				⇑iS	Sg	08 15 54.1	+4.2
	baz=99						
OHH	Osh	1.65	348	⇑eP	Pb	08 15 40.3	-0.3
	baz=45						
OHH				⇑eS	Sg	08 16 04.7	+2.3
	baz=45						
BTK	Batken	2.20	302	⇑iP	Pb	08 15 49.5	-0.5
	baz=3.0						
BTK				⇑iS	Sb	08 16 18.9	+1.2
	baz=3.0						
GAR	Garm	2.29	273	⇑iP	Pb	08 15 50.3	-1.2
	baz=75						
GAR				⇑iS	Sb	08 16 20.7	+0.5
	baz=75						
TRKS	Terek-Say	3.07	329	⇑iP	Pn	08 16 00.6	+1.5
	baz=28						
TRKS				⇑iS	Sn	08 16 38.3	+1.9
	baz=28						
CHGR	Chuyangaron	3.21	267	⇑iP	Pb	08 16 03.0	-4.2
	baz=69						
CHGR				⇑iS	Sb	08 16 42.9	-3.7
	baz=69						
AML	Almayashu	3.23	6	⇑iP	Pn	08 16 03.1	+1.6
	baz=4.0						
AML				⇑iS	Sb	08 16 43.5	-4.2
	baz=4.0						
UCH	Uchtor	3.45	16	⇑eP	Pn	08 16 05.3	+0.7
	baz=14						
UCH				⇑iS	Sb	08 16 48.7	-5.3
	baz=14						
MNAS	Manas	3.61	351	⇑iP	Pn	08 16 08.8	+2.2
	baz=50						
MNAS				⇑iS	Sb	08 16 54.2	-4.2
	baz=50						
AAK	Ala-Archa	3.84	14	⇑Pn	Pg	08 16 20.0	-3.1
	47nm,0.8s						
AAK				⇓Sn	Sg	08 17 12.7	-0.1
	156nm,0.8s						
AAK	Ala-Archa	3.84	14	⇓iP	Pn	08 16 11.6	+1.9
	baz=12						
AAK				⇓iS	Sn	08 16 57.8	+2.4
	baz=12						
TKM2	Tokmak 2	4.38	23	⇑Pn	Pb	08 16 28.9	+1.6
	65nm,1.3s						
TKM2				⇑Sn	Sb	08 17 24.3	+3.8
	62nm,1.2s						
KK09	Karatay Array	4.69	335	⇓Pn	Pb	08 16 27.7	-4.7
	15nm,0.5s,baz=137,slow=12						
KK09				⇓Sn	Sb	08 17 24.6	-4.6
	75nm,0.8s,baz=140,slow=22						

IDC 07 08:16:05.3±2.1**, 27°.57N**×**79°.69E, h0**^{km}**, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.2**/68**, mbtmp4.0**/4**, Error ellipse: s-maj=95.3km s-min=30.4km az=57.0, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	Zalesovo Beam	26.62	7	P	P	08 21 45.2	-0.1
	1.2nm,0.4s,baz=216,slow=12,SNR=4.3						
FINES	FINESS Array B	48.94	329	P	P	08 24 52.7	-0.4
	3.5nm,0.9s,baz=111,slow=8.4,SNR=3.8						
ARCES	ARCESS Array B	52.14	339	P	P	08 25 17.4	+0.3
	2.4nm,0.8s,baz=113,slow=6.9,SNR=4.0						
WRA	Warramunga Arr	70.91	126	P	P	08 27 24.7	0.0
	0.3nm,0.8s,baz=318,slow=5.3,SNR=4.8						

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*SOME **07** 08:24:07.6, 38°.12N×73°.08E, h0^{km}, MS4.7*

*IDC **07** 08:24:08.3±0.8, 38°.12N×72°.93E, h0^{km}, mb4.4/23, mb1 4.6/30, mb1mx4.3/81, mbtmp4.5/30, ML4.2/7, Error ellipse: s-maj=15.6km s-min=11.7km az=168.0*

*KRNET **07** 08:24:11.6±0.1, 38°.34N×72°.72E, mb5.3*

*NEIC **07** 08:24:11.3±2.2, 38°.23N±0°.05×72°.74E±0°.07, h10^{km}±1^{km}, mb4.7/58, Error ellipse: s-maj=9.0km s-min=8.3km az=234.0*

*MOS **07** 08:24:12.3±1.4, 38°.24N×72°.77E, h31^{km}, mb4.9/29, Error ellipse: s-maj=5.7km s-min=4.0km az=95.3*

*NNC **07** 08:24:18.1±1.6, 38°.69N×72°.84E, h0^{km}, mb5.5, mpv5.2, Error ellipse: s-maj=14.6km s-min=9.7km az=158.0*

ISC 07 08:24:09.9±1.2**, 38°.19N**±0°.03×**72°.89E**±0°.02**, h4**^{km}±7^{km}**, n353,** $\sigma 2^{s}.$**17**/370**, mb4.6**/74**, 45C-32D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.54	327		Pn	08 24 36.6	-1.8
DRK				Sn	Sb	08 24 56.6	-2.6
DRK	Karamyk	1.54	327	⇑iP	Pn	08 24 37.0	-1.4
	baz=28						
DRK				⇑eS	Sb	08 24 55.7	-3.5
	baz=28						
GAR	Garm	2.17	293		Pb	08 24 48.7	-1.1
GAR	Garm	2.17	293	⇓eP	Pb	08 24 48.3	-1.5
	baz=90						
GAR				⇓eS	Sb	08 25 15.4	-1.7
	baz=90						
OHH	Osh	2.33	358	⇓iP	Pb	08 24 51.1	-1.4
	baz=1.0						
OHH				⇓iS	Sb	08 25 20.0	-1.7
	baz=1.0						
BTK	Batken	2.46	320	PN	Pn	08 24 48.7	-2.2
BTK	Batken	2.46	320	Pn	Pn	08 24 48.6	-2.2
BTK				Pg	Pb	08 24 55.5	+0.8
BTK	Batken	2.46	320	⇓iP	Pn	08 24 52.2	+1.3
	baz=20						
BTK				⇓iS	Sn	08 25 22.0	+0.5
	baz=20						
KSH	Kashi	2.75	60	Pn	Pn	08 24 52.5	-2.4
KSH				Sn	Sn	08 25 22.2	-6.4
KSH				pmax	pmax		
	comp=Z,4µm,0.7s						
KSH				smax	smax		
	comp=N,19µm,1.0s						
KSH				smax	smax		
	comp=E,14µm,1.0s						
CHGR	Chuyangaron	2.96	280		Pn	08 24 59.8	+2.0
CHGR	Chuyangaron	2.96	280	⇑eP	Pn	08 24 59.8	+2.0
	baz=78						
CHGR				⇑iS	Sn	08 25 35.0	+1.2
	baz=78						
TRKS	Terek-Say	3.60	339	⇓eP	Pn	08 25 07.3	+0.8
	baz=40						
TRKS				⇓iS	Sn	08 25 48.0	-1.5
	baz=40						
AML	Almayashu	3.98	9	P	Pn	08 25 15.6	+3.5
	SNR=7.1						
AML	Almayashu	3.98	9	Pn	Pn	08 25 15.3	+3.2
AML	Almayashu	3.98	9	⇑eP	Pn	08 25 14.6	+2.5
	baz=11						
AML				⇑iS	Sn	08 26 00.5	+1.1
	baz=11						
TAS	Tashkent	4.18	320	PN	Pn	08 25 14.9	+0.5
TAS	Tashkent	4.18	320		Pn	08 25 14.9	+0.5
TAS	Tashkent	4.18	320	⇓eP	Pn	08 25 16.1	+1.7
	baz=20						
TAS				⇓iS	Sn	08 26 03.0	-0.7
	baz=20						
UCH	Uchtor	4.22	17	P	Pn	08 25 19.1	+3.7
	SNR=8.1						
UCH	Uchtor	4.22	17	⇑iP	Pn	08 25 18.2	+2.8
	baz=19						
UCH				⇑iS	Sn	08 26 06.5	+1.2
	baz=19						
MNAS	Manas	4.30	356	⇓iP	Pn	08 25 18.4	+2.2
	baz=58						
MNAS				⇓iS	Sn	08 26 07.3	+0.4
	baz=58						
CEP	Cherat	4.43	191	P	Pn	08 25 23.1	+5.1
EKS2	Erkin-Say	4.52	8	⇓eP	Pn	08 25 21.9	+2.7
	baz=10.0						
EKS2				⇓eS	Sn	08 26 13.0	+0.8
	baz=10.0						
NIL	Nilore	4.54	176	PN	Pn	08 25 23.6	+4.2
NIL	Nilore	4.54	176		Pn	08 25 23.6	+4.2
MRKS	Merke	4.56	3	eP	Pb	08 25 32.6	+2.1
	comp=E,595nm,0.4s						
MRKS				eS	Sg	08 26 33.6	-2.7
	comp=E,551nm,0.1s						
MRKS	Merke	4.56	3	Pg	Pg	08 25 34.2	-3.0
	comp=E,594nm,0.6s						
MRKS				Lg	Lg	08 26 32.1	
	comp=E,396nm,0.9s						
AAK	Ala-Archa	4.61	15	Pn	Pn	08 25 24.0	+3.6
	comp=E,15nm,0.3s,baz=163,slow=4.9,SNR=12						
AAK				Lg	Lg	08 26 26.0	
	comp=E,27nm,0.3s,baz=325,slow=13,SNR=5.0						
AAK	Ala-Archa	4.61	15	P	Pn	08 25 24.2	+3.7
	SNR=12						
AAK	Ala-Archa	4.61	15	Pn	Pn	08 25 24.4	+4.0
AAK	Ala-Archa	4.61	15	⇑ePN	Pn	08 25 23.2	+2.7
AAK	Ala-Archa	4.61	15	⇓Pn	Pn	08 25 24.1	+3.6
	comp=E,271nm,0.7s						
AAK				Lg	Lg	08 26 28.1	
AAK	Ala-Archa	4.61	15	Pn	Pn	08 25 23.9	+3.5
AAK	Ala-Archa	4.61	15	⇑eP	Pn	08 25 23.5	+3.0
	baz=17						
AAK				⇑iS	Sn	08 26 16.0	+1.5
	baz=17						
KBK	Karagaybulak	4.73	19	P	Pn	08 25 26.3	+4.1
	SNR=12						
KBK	Karagaybulak	4.73	19	⇑eP	Pn	08 25 25.2	+3.1
	baz=21						
KBK				⇑eS	Sn	08 26 19.1	+1.6
	baz=21						
KBL	Kabul	4.78	222	PN	Pn	08 25 21.4	-1.5
KBL	Kabul	4.78	222	Pn	Pn	08 25 21.4	-1.5
ULHL	Ulahol	4.80	31	P	Pn	08 25 27.9	+4.8
	SNR=7.1						
ULHL	Ulahol	4.80	31	⇑eP	Pn	08 25 26.7	+3.6
	baz=34						
ULHL				⇑iS	Sn	08 26 21.5	+2.3
	baz=34						
FRU1	Bishkek	4.80	16	PN	Pn	08 25 25.3	+2.3
FRU1	Bishkek	4.80	16	Pn	Pn	08 25 25.3	+2.3
FRU1	Bishkek	4.80	16	⇑eP	Pn	08 25 26.2	+3.2
	baz=17						
FRU1				⇑eS	Sn	08 26 20.7	+1.6
	baz=17						
CHM	Chimkent	4.83	330	eP	Pg	08 25 41.8	-0.6
	comp=E,464nm,0.6s						
CHM				eS	Sg	08 26 49.9	+4.9
	comp=E,3µm,1.0s						
DZA	Taraz	4.84	346	eP	Pg	08 25 42.1	-0.6
	comp=E,2µm,0.5s						
DZA				eS	Sg	08 26 50.2	+4.8
	comp=E,2µm,0.8s						
BOOM	Boomskoye usch	4.89	28	PN	Pn	08 25 26.9	+2.6
BOOM	Boomskoye usch	4.89	28	Pn	Pn	08 25 26.9	+2.6
CHMS	Chumysh	5.01	16	P	Pn	08 25 29.5	+3.7
	SNR=14						
KDJ	Kajisay	5.13	39	PN	Pn	08 25 29.6	+2.0
KDJ	Kajisay	5.13	39	Pn	Pn	08 25 29.6	+2.0
TKM2	Tokmak 2	5.16	23	P	Pn	08 25 31.7	+3.7
	SNR=8.9						
TKM2	Tokmak 2	5.16	23	PN	Pn	08 25 31.3	+3.3
TKM2	Tokmak 2	5.16	23	⇑Pn	Pn	08 25 31.3	+3.3
	comp=E,301nm,0.9s						
TKM2				⇑Lg	Lg	08 26 49.1	
	comp=E,794nm,1.0s						
TARG	Taragay, Kyrgy	5.17	45	Pn	Pn	08 25 32.1	+3.7
USP	Ospenovka	5.22	13	P	Pb	08 25 35.6	-6.0
	SNR=5.3						
USP	Ospenovka	5.22	13	⇓eP	Pn	08 25 31.6	+2.9
	baz=15						
USP				⇓eS	Sn	08 26 30.0	+0.7
	baz=15						
KKAR	Karatay Array	5.23	341	PN	Pn	08 25 29.9	+1.1
KKAR	Karatay Array	5.23	341	Pn	Pn	08 25 29.9	+1.1
KK08	Karatay Array	5.24	340	⇓Pn	Pn	08 25 30.9	+1.9
	comp=E,187nm,0.8s,baz=156,slow=12						
KK08				⇑Lg	Lg	08 26 46.1	
	comp=E,972nm,0.8s,baz=156,slow=26						
KST	Kastek	5.38	25	eP	Pg	08 25 49.0	-4.0
	comp=E,201nm,1.3s						
KST				eS	Sg	08 27 01.6	-1.1
	comp=E,508nm,0.9s						
KST	Kastek	5.38	25	Pg	Pg	08 25 49.2	-3.8
	comp=E,232nm,0.8s						
KST				Lg	Lg	08 26 57.9	
	comp=E,281nm,0.8s						
SGDS	Sogindy	5.42	14	ePg	Pg	08 25 50.0	-3.8
	baz=15						
THW	Thamme Wali	5.46	190	⇓P	Pn	08 25 36.9	+4.8
DGS	Degeres	5.50	23	eP	Pb	08 25 50.1	+3.6
	comp=E,170nm,0.9s						
DGS				eS	Sg	08 27 04.0	-2.5
	comp=E,445nm,1.1s						
DGS	Degeres	5.50	23	Pg	Pb	08 25 50.2	+3.6
	comp=E,256nm,0.6s						
DGS				Lg	Lg	08 26 59.8	
	comp=E,445nm,1.1s						
IZV	Izvestkoviy	5.61	29	eP	Pb	08 25 51.9	+3.5
	comp=E,170nm,0.6s						
IZV				eS	Sg	08 27 06.9	-3.1
	comp=E,491nm,1.0s						
IZV	Izvestkoviy	5.61	29	Pg	Pb	08 25 51.9	+3.5
	comp=E,208nm,0.7s						
IZV				Lg	Lg	08 27 02.0	
	comp=E,491nm,1.0s						
TNSS	Tian-Shan	5.74	31	eP	Pb	08 25 53.5	+2.6
	comp=E,79nm,0.3s						
TNSS				eS	Sg	08 27 09.8	-4.6
	comp=E,120nm,0.8s						
TNSS	Tian-Shan	5.74	31	ePg	Pg	08 25 56.8	-3.1
	baz=33						
TNSS	Tian-Shan	5.74	31	Pg	Pb	08 25 53.5	+2.6
	comp=E,125nm,0.7s						
TNSS				Lg	Lg	08 27 05.6	
	comp=E,120nm,0.8s						
AAA	Alma-Ata	5.87	30	ePg	Pg	08 25 59.2	-3.2
	baz=32						
MDOK	Medeo	5.89	31	Pn	Pn	08 25 41.9	+3.9
	comp=E,341nm,0.9s						
MDOK				Lg	Lg	08 27 14.7	
	comp=E,777nm,1.1s						
KRBS	Karabastau	5.89	20	eP	Pb	08 25 56.8	+3.6
	comp=E,76nm,1.1s						
KRBS				eS	Sg	08 27 15.8	-3.2
	comp=E,214nm,0.7s						
KRBS	Karabastau	5.89	20	Pg	Pb	08 25 56.8	+3.6
	comp=E,162nm,0.6s						
KRBS				Lg	Lg	08 27 11.2	
	comp=E,214nm,0.7s						
KNDC	Almaty	5.90	30	PN	Pn	08 25 42.5	+4.4
KNDC	Almaty	5.90	30	⇓Pn	Pn	08 25 42.5	+4.4
	comp=E,708nm,1.0s						
KNDC				⇓Lg	Lg	08 27 12.2	
	comp=E,2µm,1.1s						
KOTS	Kotyrbulak	5.97	31	eP	Pb	08 25 57.6	+3.0
	comp=E,227nm,0.5s						
KOTS				eS	Sg	08 27 17.1	-4.6
	comp=E,824nm,0.9s						
KOTS	Kotyrbulak	5.97	31	Pg	Pb	08 25 57.9	+3.2
	comp=E,227nm,0.5s						
KOTS				Lg	Lg	08 27 12.2	
	comp=E,824nm,0.9s						
PRZ	Przheval'sk	6.01	43	PN	Pn	08 25 43.6	+3.9
PRZ	Przheval'sk	6.01	43	Pn	Pn	08 25 43.6	+3.9
SARP	Sargodha	6.26	182	P	Pn	08 25 45.9	+3.0
KUU	Kurty	6.27	24	ePn	Pn	08 25 42.7	-0.4
	comp=E,9.6nm,0.6s,baz=25						
KUU	Kurty	6.27	24	ePN	Pn	08 25 42.7	-0.4
KUU				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SATY	Saty	6.42	39	ePg	Pg	08 26 08.8	-4.1
	baz=41						
DHRM	DHARAMSHALA	6.55	154	eP	Pn	08 25 49.5	+2.3
DHRM				IAmb	IAmb	08 26 00.3	
	comp=Z,248nm,0.6s						
UZB	Uzynbulak	6.80	41	eP	Pg	08 26 14.9	-5.3
	comp=Z,71nm,1.3s						
UZB				eS	Sg	08 27 46.4	-1.8
	comp=Z,287nm,3.0s						
UZB	Uzynbulak	6.80	41	ePg	Pg	08 26 16.2	-4.0
	baz=43						
UZB	Uzynbulak	6.80	41	Pg	Pg	08 26 15.3	-4.9
UZB				Lg	Lg	08 27 42.4	
KPKS	Kokpek	6.86	38	ePn	Pn	08 25 50.4	-0.9
	baz=40						
KPKS				ePg	Pg	08 26 16.8	-4.5
	baz=40						
KPKS	Kokpek	6.86	38	ePN	Pn	08 25 50.4	-0.9
KPKS				e		08 26 16.7	
BTLS	Baital	6.90	7	ePg	Pg	08 26 16.4	-5.6
	baz=8.0						
SHLS	Shalkode	7.04	43	ePg	Pg	08 26 25.2	+0.4
	baz=46						
BHK	Bhakra	7.35	156	eP	Pn	08 25 59.7	+1.6
TDK	Taldyqorghan	7.96	30	ePg	Pg	08 26 37.0	-5.3
	baz=31						
HRA	Herat	9.39	249	Pn	Pn	08 26 27.4	+1.2
OTUK	Ortayu	10.06	358	P	Pn	08 26 37.2	+2.2
OTUK	Ortayu	10.06	358	⇑Pn	Pn	08 26 37.3	+2.2
	comp=Z,29nm,0.8s						
NDI	New Delhi	10.15	158	eP	Pn	08 26 35.8	-0.5
AYAN	Aya Nagar	10.31	159	eP	Pn	08 26 38.5	0.0
KUDL	Kundal	10.46	162	eP	Pn	08 26 41.2	+0.5
SONA	Sohna	10.52	159	eP	Pn	08 26 43.8	+2.5
MAKZ	Makanchi	10.91	35	P	Pn	08 26 50.0	+3.2
MAKZ	Makanchi	10.91	35	⇓Pn	Pn	08 26 48.7	+1.9
	comp=Z,46nm,1.4s						
MAKZ	Makanchi	10.91	35	Pn	Pn	08 26 50.0	+3.2
MK31	Makanchi Array	11.04	36	⇑eP	Pn	08 26 50.8	+2.3
MK31	Makanchi Array	11.04	36	Pn	Pn	08 26 50.9	+2.3
	comp=Z,24nm,0.8s,baz=210,slow=13,SNR=21						
MK31	Makanchi Array	11.04	36	Pn	Pn	08 26 50.9	+2.4

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MKAR  Makanchi Array   11.04  36   Pn      Pn      08 26 50.4 +1.8
      comp=Z,1.9nm,0.3s,baz=221,slow=13,SNR=24
MKAR                               Lg      Lg      08 29 58.4
      comp=Z,0.1nm,0.3s,baz=227,slow=19,SNR=1.8
MKAR  Makanchi Array   11.04  36  i P      Pn      08 26 51.0 +2.4
MKAR                               pmax    pmax
      comp=Z,8.0nm,0.5s
GEYT  Alibeck          11.65 273   Pn      Pn      08 26 55.3  -1.6
      comp=Z,8.1nm,0.3s,baz=106,slow=11,SNR=32
GEYT                               Sn      Sn      08 29 02.0  -5.4
      comp=Z,1.3nm,0.3s,baz=91,slow=10,SNR=1.7
GEYT  Alibeck          11.65 273           Pn      08 26 55.9  -1.0
GYA0B ALIBECK ARRAY    11.65 273           Pn      08 26 55.6  -1.3
BRZS  Berezniki        11.79 359  ePn      Pn      08 26 57.1  -1.7
      comp=Z,8.1nm,1.0s,baz=360
BRZS  Berezniki        11.79 359  eP       Pn      08 26 57.0  -1.7
BRZS                               pmax    pmax
      comp=Z,8.0nm,1.0s
WMQ   Urumqi           12.52  59  eP       Pn      08 27 17.1 +8.3
WMQ                                pmax    pmax
      comp=Z,65nm,0.9s
WMQ                                pmax    pmax
      comp=Z,900nm,3.9s
KURBB Kurchatov Arra   13.06  16   Pn      Pn      08 27 15.1  -1.0
      comp=Z,0.2nm,0.3s,baz=206,slow=11,SNR=26
KURBB                              Lg      Lg      08 31 01.6
      comp=Z,0.2nm,0.3s,baz=208,slow=32,SNR=11
PYUN  Piuthan          13.14 137  eP       Pn      08 27 14.2  -3.3
      comp=Z,78nm,0.5s
KURK  Kurchatov        13.17  16⇓eP       Pn      08 27 17.8 +0.2
KURK                               pmax    pmax
      comp=Z,24nm,0.9s
KURK  Kurchatov        13.17  16   Pn      Pn      08 27 17.6 +0.1
SEM   Semipalatinsk    13.29  21  ePn      Pn      08 27 18.3  -1.3
      comp=Z,11nm,0.8s,baz=22
SEM   Semipalatinsk    13.29  21  eP       Pn      08 27 18.2  -1.3
SEM                                pmax    pmax
      comp=Z,11nm,0.8s
DANN  Dangsing         13.37 134  eP       Pn      08 27 19.4  -1.3
JHNI  Jhansi           13.56 158  eP       Pn      08 27 20.1  -2.9
KOLN  Koldanda         13.73 136  eP       Pn      08 27 22.9  -2.6
      comp=Z,35nm,0.5s
GKN   Gorkha           14.14 132  eP       Pn      08 27 28.6  -2.4
      comp=Z,13nm,0.2s
AB31  Akbulak array    14.46 324   P       Pn      08 27 35.7 +0.5
AB31                               S       Sn      08 30 15.1  -0.9
AB31  Akbulak array    14.46 324   Pn      Pn      08 27 35.8 +0.5
      comp=Z,14nm,0.5s,baz=134,slow=13,SNR=26
AB31                              ⇑Sn      Sn      08 30 15.1  -0.9
      comp=Z,28nm,0.7s,baz=137,slow=22,SNR=4.5
ABKAR Akbulak array    14.46 324   Pn      Pn      08 27 33.0  -2.3
ABKAR Akbulak array    14.46 324           Pn      08 27 32.7  -2.6
KKN   Kakani           14.67 131  eP       Pn      08 27 35.9  -2.5
DMN   Daman            14.71 132  eP       Pn      08 27 35.5  -3.4
      comp=Z,50nm,0.5s
PKIN  Phulchoki        14.90 132  eP       Pn      08 27 38.1  -3.5
PKI   Pulchoki         14.91 132  eP       Pn      08 27 38.1  -3.7
BVAR  Borovoye Array   14.94 354   Pn      Pn      08 27 39.2  -2.5
      comp=Z,0.7nm,0.3s,baz=188,slow=16,SNR=12
GUN   Gumba            14.94 129  eP       Pn      08 27 39.8  -2.4
      comp=Z,45nm,0.5s
BRVK  Borovoye         14.98 354⇓eP       Pn      08 27 40.7  -1.5
BRVK                               pmax    pmax
      comp=Z,11nm,1.0s
BRVK  Borovoye         14.98 354   Pn      Pn      08 27 40.8  -1.5
BHUJ  Bhuj             15.14 191  eP       Pn      08 27 41.5  -3.0
BHPL  Bhopal           15.40 164  eP       Pn      08 27 44.5  -3.6
DGZ   Jazzator, Alta   15.53  38⇑eP       Pn      08 27 50.1 +0.4
DGZ                                pmax    pmax
      comp=Z,10.0nm,0.9s
RAMN  Ramite           16.08 130  eP       Pn      08 27 52.0  -5.1
      comp=Z,56nm,0.5s
AKTO  Aktyubinsk       16.18 324   Pn      Pn      08 27 56.5  -1.5
      comp=Z,2.2nm,0.3s,baz=128,slow=12,SNR=25
AKTO                               Sn      Sn      08 30 45.5   -12
      comp=Z,0.5nm,0.3s,baz=257,slow=17,SNR=1.9
AKTO  Aktyubinsk       16.18 324 ⇑Pn      Pn      08 27 59.5 +1.5
      comp=Z,79nm,0.9s
AKTO                              ⇑Sn      Sn      08 30 55.0  -2.8
      comp=Z,98nm,1.3s
TAPN  Taplejung        16.48 127  eP       Pn      08 27 56.7  -5.5
      comp=Z,29nm,0.6s
ODAN  Odare            16.63 129  eP       Pn      08 27 58.3  -5.8
      comp=Z,38nm,0.5s
LSA   Lhasa            17.34 114   P       P       08 28 15.6 +0.9
LSA                                pmax    pmax
      comp=Z,17nm,0.9s
LSA   Lhasa            17.34 114           P       08 28 15.6 +0.9
ZAA0  Zalesovo Array   17.76  24           Pn      08 28 17.5  -0.4
ZAA0                               IAmb    IAmb    08 28 22.6
      comp=Z,37nm,0.8s
ZALV  Zalesovo Beam    17.76  24   P       Pn      08 28 17.0  -0.8
      comp=Z,1.5nm,0.3s,baz=214,slow=10,SNR=18
ZALV  Zalesovo Beam    17.76  24   P       Pn      08 28 17.0  -0.8
ZALV  Zalesovo Beam    17.76  24   P       Pn      08 28 17.5  -0.4
BOK   Bokaro           18.14 139  eP       Pn      08 28 21.8  -0.9
BANOM Banah            18.60 234   P       P       08 28 27.2  -1.0
LKRN  Lenkeran, Azer   18.88 279   P       Pn      08 28 32.0 +0.4
MSFE  Esma-Masafi      19.09 233   P       P       08 28 34.4 +0.9
UOSS  Minazif          19.36 232   P       P       08 28 36.3  -0.2
UOSS  Minazif          19.36 232   P       P       08 28 35.8  -0.7
UOSS                               IAmb    IAmb    08 28 48.6
      comp=Z,64nm,1.2s
HATD  Hatta, Dubai     19.49 232   P       P       08 28 38.1 +0.1
AKT   Akhty            19.57 288d iP       P       08 28 38.8  -0.1
AKT                                pmax    pmax
      comp=Z,53nm,1.3s
ASHO  Ashiyiah         19.64 232   P       P       08 28 39.3  -0.3
MAK   Makhachkala      19.83 292  eP       P       08 28 39.8  -1.7
MAK                               eS       S       08 32 20.0  -5.2
MAK                                pmax    pmax
      comp=Z,132nm,1.2s
SEKA  Sheki            19.97 287   P       P       08 28 43.9 +0.7
ASUD  Al Ashush, Dub   20.14 233   P       P       08 28 45.4 +0.4
GNBR  Gunib            20.18 290⇓eP       P       08 28 45.7 +0.3
GNBR                               pmax    pmax
      comp=Z,55nm,0.4s
ALNE  Al Ain           20.29 231   P       P       08 28 46.4  -0.2
AJN   Ajban            20.40 233   P       P       08 28 47.3  -0.5
SHL   Shillong         20.41 123   P       P       08 28 49.5 +1.3
SHL                                pmax    pmax
      comp=Z,55nm,1.1s
SHL   Shillong         20.41 123   P       P       08 28 49.5 +1.3
SHL                                IAmb    IAmb    08 29 09.3
      comp=Z,55nm,1.1s
ARU   Arti             20.59 337   P       P       08 28 49.6  -0.1
      comp=Z,2.7nm,0.2s,baz=158,slow=7.4,SNR=9.5
ARU   Arti             20.59 337c iP       P       08 28 49.7   0.0
ARU                                                08 29 05.3
ARU                                S       S       08 32 37.9  -2.3
ARU                                SS      SnSn    08 32 56.9  -2.0
ARU                                pmax    pmax
      comp=Z,100nm,2.2s
ARU   Arti             20.59 337   P       P       08 28 49.4  -0.3
ARU                                IAmb    IAmb    08 28 58.1
      comp=Z,48nm,1.2s
GANJ  Ganja            20.64 285   P       P       08 28 50.9 +0.5
DDFL  Dedoflistskaro   20.79 287   P       Pn      08 28 56.1 +1.7
GTA   Gaotai           21.00  78  eP       P       08 28 58.9 +4.5
GTA                                pP      sP      08 29 06.4 +8.4
GTA                                sP      pP      08 29 09.5  +13
GTA                                pmax    pmax
      comp=Z,22nm,1.5s
GROC  Groznyy          21.10 292  eP       P       08 28 56.2 +1.0
GROC                               S       S       08 32 49.6  -0.8
GROC                               pmax    pmax
      comp=Z,267nm,1.4s
HYB   Hyderabad        21.28 165  i P      P       08 28 56.5  -0.9
NAX   Nakhchivan       21.38 281   P       P       08 29 01.0 +2.6
GNI   Garni            21.87 284   P       P       08 29 04.6 +0.8
      comp=Z,71nm,1.0s,baz=169,slow=6.6,SNR=9.5
GNI   Garni            21.87 284deP        P       08 29 05.5 +1.7
GNI                                pmax    pmax
      comp=Z,60nm,0.8s
GNI   Garni            21.87 284   P       P       08 29 03.5  -0.3
GUDG  Gudauri          22.03 290   P       P       08 29 09.3 +3.8
KZRT  Kazreti          22.08 287   P       P       08 29 05.5  -0.4
ZEI   Tsey             22.46 291  eP       P       08 29 12.7 +2.6
ZEI                                pmax    pmax
      comp=Z,7.0nm,0.7s
UMR   Umm Al-Rimmam    22.55 255  eP       P       08 29 11.6 +0.6
BELG  Belogornoye      22.59 317   P       P       08 29 10.3  -0.9
      comp=Z,70nm,0.8s,baz=130,slow=2.4,SNR=13
BELG  Belogornoye      22.59 317⇓iP       P       08 29 10.0  -1.2
BELG                               pmax    pmax
      comp=Z,11nm,0.8s
NCK   Nalchik          22.72 293⇑eP       P       08 29 13.5 +0.8
NCK                                pmax    pmax
      comp=Z,31nm,0.8s
MIB   Mutribah         22.72 256  eP       P       08 29 12.8 +0.1
KBD   Kabd             22.75 254  eP       P       08 29 13.2 +0.1
AKH   Akhalkalaki      22.76 287 ⇑P        P       08 29 14.7 +1.3
ONI   Oni              22.79 290   P       P       08 29 12.3  -1.2
ONI                                pmax    pmax
      comp=Z,61nm,0.9s
ONI   Oni              22.79 290   P       P       08 29 12.3  -1.2
KARS  Kars             23.11 285   P       P       08 29 16.3  -0.6
KARS                               pmax    pmax
      comp=Z,252nm,1.3s
KARS  Kars             23.11 285   P       P       08 29 16.3  -0.6
PYA1  Pyatigorsk       23.12 294⇑eP       P       08 29 17.0 +0.1
RST   Umm Al-Ruwaisa   23.13 256  eP       P       08 29 22.4 +5.4
KBZ   Khabaz           23.24 293   P       P       08 29 20.1 +2.1
      comp=Z,9.0nm,0.8s,baz=146,slow=8.3,SNR=5.7
KBZ   Khabaz           23.24 293⇑eP       P       08 29 16.7  -1.3
KBZ                                pmax    pmax
      comp=Z,109nm,3.9s
GOF   Gofitskoye       23.25 297⇑eP       P       08 29 14.0  -4.2
NEY   Neytrino         23.34 292⇑eP       P       08 29 17.2  -2.1
NEY                                pmax    pmax
      comp=Z,2.0nm,0.8s
KVAR  Kislovodsk Arr   23.40 294   P       P       08 29 19.6  -0.2
      comp=Z,2.4nm,0.3s,baz=151,slow=19,SNR=1.8
KIV   Kislovodsk       23.41 294  eP       P       08 29 17.8  -2.0
KIV                                pmax    pmax
      comp=Z,40nm,1.1s
KIV   Kislovodsk       23.41 294   P       P       08 29 21.3 +1.5
SIRT  Sirnak           24.00 278   P       P       08 29 26.1 +0.4
GURO  Guroymak-BITLI   24.14 281   P       P       08 29 28.1 +1.0
GURO                               IAmb    IAmb    08 29 31.3
      comp=Z,24nm,1.5s
TLY   Talaya           25.39  48   P       P       08 29 38.8 +0.7
SONM  Songino Array    26.15  58   P       P       08 29 46.2 +1.0
      comp=Z,5.3nm,0.8s,baz=256,slow=9.7,SNR=3.8
ULN   Ulaanbaatar      26.59  58   P       P       08 29 51.3 +2.1
ULN                                pmax    pmax
      comp=Z,32nm,1.5s
ULN   Ulaanbaatar      26.59  58   P       P       08 29 51.3 +2.1
ULN                                IAmb    IAmb    08 30 09.8
      comp=Z,32nm,1.5s
RAYN  Ar Rayn          27.55 246   P       P       08 29 56.6  -1.3
RAYN                               pmax    pmax
      comp=Z,27nm,1.5s
RAYN  Ar Rayn          27.55 246   P       P       08 29 56.6  -1.3
RAYN                               IAmb    IAmb    08 30 09.8
      comp=Z,27nm,1.4s
OBN   Obninsk          29.69 317  i P      P       08 30 15.2  -1.3
OBN                               i                08 30 20.6
OBN                               i                08 31 09.3
OBN                                pmax    pmax
      comp=Z,16nm,1.0s
HHC   Hu-ho-hao-te     29.79  73  eP       P       08 30 19.9 +2.1
HHC                                pmax    pmax
      comp=Z,42nm,1.0s
HHC                                pmax    pmax
      comp=Z,55µm,4.0s
HHC                                LR      LR
      comp=N,56µm,14.1s
HHC                                LR      LR
      comp=E,136µm,13.4s
HHC                                LR      LR
      comp=Z,76µm,14.0s
CMAR  Chiang Mai Arr   30.04 124  i P      P       08 30 22.7 +2.7
CMAR                               pmax    pmax
      comp=Z,3.0nm,0.5s
BRTR  Keskin Array B   30.39 285   P       P       08 30 24.1 +0.9
      comp=Z,4.0nm,0.8s,baz=101,slow=6.5,SNR=6.2
KLMR  Klimovskoe       30.79 328  eP       P       08 30 15.3   -11
KLMR                               pmax    pmax
      comp=Z,34nm,1.3s
KLMR  Klimovskoe       30.79 328  eP       P       08 30 15.3   -11
KLMR                               AMP             08 30 21.9
      comp=Z,34nm,1.3s
ANTO  Ankara           31.01 286   P       P       08 30 25.4  -3.1
ANTO                               pmax    pmax
      comp=Z,26nm,1.2s
ANTO  Ankara           31.01 286   P       P       08 30 25.4  -3.1
NRIK  Noril'sk         32.20  10   P       P       08 30 38.4  -0.2
      comp=Z,4.9nm,0.8s,baz=185,slow=7.3,SNR=4.2
NRIK  Noril'sk         32.20  10⇑eP       P       08 30 38.6   0.0
NRIK                               pmax    pmax
      comp=Z,8.0nm,1.2s
AKASG Malin Array Be   33.10 307   P       P       08 30 45.5  -1.2
      comp=Z,1.3nm,0.5s,baz=77,slow=7.2,SNR=8.5
AKASG Malin Array Be   33.10 307   P       P       08 30 46.8 +0.1
AKASG Malin Array Be   33.10 307   P       P       08 30 46.8 +0.1
AKBB  Malin Array Si   33.10 307   P       P       08 30 46.1  -0.6
AKBB                               pmax    pmax
      comp=Z,13nm,1.1s
AKBB  Malin Array Si   33.10 307   P       P       08 30 46.1  -0.6
AKBB                               IAmb    IAmb    08 30 46.7
      comp=Z,13nm,1.1s
MILM  Milestii Mici    33.24 300 ⇑P        P       08 30 48.1 +0.1
MILM  Milestii Mici    33.24 300 ⇑P        P       08 30 48.1 +0.1
PLOR  Plostina         34.79 298 ⇓P        P       08 31 04.7 +3.3
PLOR  Plostina         34.79 298 ⇓P        P       08 31 04.7 +3.3
COVR  Voineasa-Covas   35.10 298 ⇑P        P       08 31 05.6 +1.5
MLR   Muntele Rosu     35.31 297 ⇑P        P       08 31 10.8 +4.8
MLR   Muntele Rosu     35.31 297   P       P       08 31 06.1 +0.1
      comp=Z,7.5nm,0.8s,baz=155,slow=6.2,SNR=6.8
MLR   Muntele Rosu     35.31 297   P       P       08 31 05.1  -0.9
MLR                                IAmb    IAmb    08 31 29.5
      comp=Z,24nm,1.2s
BURAR Bucovina Array   35.67 301 ⇑P        P       08 31 18.2 +9.1
BURAR Bucovina Array   35.67 301 ⇑P        P       08 31 18.2 +9.1
BURAR Bucovina Array   35.67 301   P       P       08 31 07.8  -1.3
BUR08 Bucovina Ar. S   35.68 301   P       P       08 31 09.0  -0.1
VOIR                   35.94 297 ⇓P        P       08 31 22.1  +11
ARR   Arges            36.24 297 ⇑P        P       08 31 15.2 +1.2
LVZ   Lovozero         36.47 337   P       P       08 31 17.9 +2.2
LVZ                                pmax    pmax
      comp=Z,22nm,1.0s
LVZ   Lovozero         36.47 337   P       P       08 31 17.9 +2.2
LVZ                                IAmb    IAmb    08 31 18.5
      comp=Z,22nm,1.0s
APA   Apatity          36.68 336⇓iP       P       08 31 06.3   -11
APA                                pmax    pmax
      comp=Z,18nm,1.4s
APA                                MLR     MLR
      comp=Z,58µm,14.0s
FIA1  FINESS Array S   36.95 324   P       P       08 31 19.6  -0.2
FINES FINESS Array B   36.95 324   P       P       08 31 19.3  -0.4
      comp=Z,6.0nm,0.4s,baz=114,slow=9.5,SNR=49
FINES FINESS Array B   36.95 324  i P      P       08 31 19.2  -0.5
FINES                              pmax    pmax
      comp=Z,6.0nm,0.4s
FINES FINESS Array B   36.95 324   P       P       08 31 19.6  -0.2
DRGR                   37.43 300   P       P       08 31 25.8 +1.7
TRPA  Tarpa            37.44 302 ⇑P        P       08 31 25.3 +1.3
NJ2   Nanjing          37.79  85  eP       P       08 31 28.1 +0.9
NJ2                                pmax    pmax
      comp=Z,24nm,0.6s
DIVS  Divibare         39.69 296   P       P       08 31 44.1 +0.9
KEV   Kevo             39.81 337   P       P       08 31 43.2  -0.5
KEV                                pmax    pmax
      comp=Z,58nm,1.4s
KEV   Kevo             39.81 337   P       P       08 31 43.2  -0.5
ARCES ARCESS Array B   40.18 336   P       P       08 31 46.5  -0.3
      comp=Z,3.6nm,0.6s,baz=109,slow=7.9,SNR=24
ARCES ARCESS Array B   40.18 336   P       P       08 31 45.5  -1.3
ARCES                              pmax    pmax
      comp=Z,20nm,1.2s
ARCES ARCESS Array B   40.18 336   P       P       08 31 45.5  -1.3
ARCES                              IAmb    IAmb    08 31 59.1
      comp=Z,20nm,1.1s
MORC  Moravsky Berou   40.60 305  eP       P       08 31 55.2 +4.6
JAVC  Velka Javorina   40.60 304  eP       P       08 31 51.8 +1.2
VRAC  Vranov           41.26 304  eP       P       08 31 56.9 +0.9
KRUC  Moravsky         41.42 304  eP       P       08 31 57.6 +0.4
YAK   Yakutsk          41.72  36⇑eP       P       08 32 01.6 +2.1
YAK                                pmax    pmax
      comp=Z,12nm,0.9s
CONA  Conrad Observa   41.92 302  eP       P       08 32 01.7 +0.2
      comp=Z,14nm,1.5s
ARSA  Arzberg          42.25 301  eP       P       08 32 02.0  -2.1
      comp=Z,2.7nm,0.9s
PSI   Prapat           42.52 140   P       P       08 32 09.3 +2.6
      comp=Z,2.3nm,0.5s,baz=242,slow=6.6,SNR=4.0
SOKA  Soboth           42.68 301  eP       P       08 32 06.6  -1.1
      comp=Z,6.0nm,1.0s
BRG   Berggiesshubel   42.78 307  eP       P       08 32 08.9 +0.5
BRG                                Amp             08 32 10.6
      comp=Z,12nm,1.0s
BRG   Berggiesshubel   42.78 307   P       P       08 32 13.8 +5.4
BRG                                Amp             08 32 15.5
      comp=Z,3.5nm,0.6s
KSRS  Korea Array      42.93  73   P       P       08 32 10.1 +0.4
      comp=Z,1.9nm,0.8s,baz=291,slow=7.7,SNR=2.8
KLR   Kul'dur          42.94  55   P       P       08 32 09.8 +0.1
      comp=Z,0.9nm,0.5s,baz=307,slow=16,SNR=2.0
OBKA  Obir             43.03 301  eP       P       08 32 09.3  -1.3
      comp=Z,5.7nm,1.1s
GSI   Gunungsitoli     43.14 142   P       P       08 32 12.2 +0.7
GSI                                IAmb    IAmb    08 32 21.8
      comp=Z,24nm,0.9s
GEC2  GERESS Array S   43.21 304   P       P       08 32 11.8  -0.2
GERES GERESS Array B   43.21 304   P       P       08 32 11.5  -0.5
      comp=Z,1.4nm,0.7s,baz=60,slow=7.9,SNR=6.4
KHC   Kasperske Hory   43.24 304⇑eP       P       08 32 12.5 +0.3
KHC                                pmax    pmax
      comp=Z,13nm,0.9s
KHC   Kasperske Hory   43.24 304   P       P       08 32 12.6 +0.5
TIXI  Tiksi            43.64  22   P       P       08 32 14.1  -0.9
      comp=Z,7.3nm,0.6s,baz=270,slow=5.6,SNR=6.6
TIXI  Tiksi            43.64  22⇑eP       P       08 32 14.5  -0.5
TIXI                               pmax    pmax
      comp=Z,4.0nm,0.8s
TIXI  Tiksi            43.64  22   P       P       08 32 15.0   0.0
TIXI                               IAmb    IAmb    08 32 28.5
      comp=Z,12nm,1.0s
NC405 NORSAR Array S   43.72 322   P       P       08 32 14.5  -1.3
KBA   Koelnbreinsper   43.74 302  eP       P       08 32 14.6  -1.8
      comp=Z,3.4nm,0.6s
NC602 NORSAR Array S   43.79 321   P       P       08 32 16.4   0.0
NC303 NORSAR Array S   43.89 322   P       P       08 32 17.0  -0.2
NC303                              IAmb    IAmb    08 32 23.9
      comp=Z,24nm,1.0s
NB201 NORSAR Array S   43.92 322   P       P       08 32 16.8  -0.7
NB2   NORSAR Subarra   43.96 322   P       P       08 32 16.9  -0.9
      comp=Z,3.5nm,0.5s,baz=92,slow=8.6
NOA   NORSAR Array B   43.96 322   P       P       08 32 16.9  -0.9
      comp=Z,3.9nm,0.5s,baz=97,slow=7.6,SNR=22
NAO01 NORSAR Array S   44.11 322   P       P       08 32 18.9   0.0
NBO00 NORSAR Array S   44.17 322   P       P       08 32 17.9  -1.6
NC204 NORSAR Array S   44.19 322   P       P       08 32 19.0  -0.6
NRCA  Norcia           44.85 296   P       P       08 32 22.8  -2.4
NRCA                               IAmb    IAmb    08 32 38.9
      comp=Z,6.8nm,0.9s
WATA  Walderalm        44.88 302  eP       P       08 32 22.0  -3.5
      comp=Z,4.9nm,0.8s
CTI   Castel Tesino    45.10 300   P       P       08 32 22.8  -4.3
CTI                                pmax    pmax
      comp=Z,10.0nm,1.2s
CTI   Castel Tesino    45.10 300   P       P       08 32 22.8  -4.3
CTI                                IAmb    IAmb    08 32 43.7
      comp=Z,10.0nm,1.2s
MURB  Monte Urbino     45.16 296   P       P       08 32 28.0 +0.3
MURB                               IAmb    IAmb    08 32 29.7
      comp=Z,17nm,1.0s
MOTA  Moosalm          45.19 302  eP       P       08 32 25.7  -2.2
      comp=Z,9.6nm,1.1s
FETA  Feichten         45.51 302  eP       P       08 32 28.9  -1.6
      comp=Z,11nm,1.7s
SALO  Salr             45.96 300   P       P       08 32 33.4  -0.6
DAVA  Damuels          46.01 303  eP       P       08 32 31.2  -3.2
      comp=Z,8.9nm,0.7s
DAVOX Davos/Dischmat   46.13 302   P       P       08 32 34.5  -0.8
      comp=Z,8.0nm,0.6s,baz=100,slow=13,SNR=7.2
SENIN Lac Senin/Sane   47.95 302   P       P       08 32 49.5  -0.2
SENIN                              IAmb    IAmb    08 32 59.8
      comp=Z,15nm,1.1s
BNI   Bardonecchia     48.73 300   P       P       08 32 53.4  -2.2
BNI   Bardonecchia     48.73 300   P       P       08 32 53.4  -2.2
JWT   Wachi            49.34  73   P       P       08 33 01.2 +1.0
JWT                                IAmb    IAmb    08 33 16.7
      comp=Z,12nm,1.1s
KEST  Kesra            49.94 288   P       P       08 33 05.2 +0.3
      comp=Z,5.1nm,0.8s,baz=212,slow=2.1,SNR=4.8
MAT   Matsushiro       50.95  70   P       P       08 33 15.1 +2.6
NOR   Nord             52.42 349  eP       P       08 33 24.7 +1.9
DAG   Danmarks Havn    53.54 343  i P      P       08 33 30.0  -1.1
SUMG  Summit           59.95 341   P       P       08 34 16.7  -0.5
SUMG                               pmax    pmax
      comp=Z,17nm,1.2s
SUMG  Summit           59.95 341  eP       P       08 34 19.9 +2.7
SUMG  Summit           59.95 341   P       P       08 34 16.7  -0.5
EUNU  Eureka           61.43 356   P       P       08 34 26.6  -0.2
EUNU                               IAmb    IAmb    08 34 37.4
      comp=Z,5.6nm,1.4s
TORD  Torodi Ar. Bea   67.25 269   P       P       08 35 03.9  -1.9
TORD                               IAmb    IAmb    08 35 21.5
      comp=Z,2.7nm,0.7s
TOLK  Toolik Lake Re   68.90  15   P       P       08 35 15.7 +0.2
TOLK                               IAmb    IAmb    08 35 21.2
      comp=Z,5.0nm,0.9s
A36M  Sachs Harbour    69.38   6   P       P       08 35 18.1  -0.1
COLD  Coldfoot         69.93  16   P       P       08 35 22.0 +0.2
COLD                               IAmb    IAmb    08 35 49.0
      comp=Z,6.2nm,1.0s
IMAR  Indian Mountai   70.10  18   P       P       08 35 21.8  -1.1
H21K  Melozitna Rive   70.60  18   P       P       08 35 25.8  -0.1
BMAR  Burnt Mountain   70.94  14   P       P       08 35 28.8 +0.8
J20K  Nowinta River    71.44  20   P       P       08 35 30.6  -0.4
H24K  Noodor Dome      71.61  16   P       P       08 35 32.1   0.0
MLY   Manley           71.62  18   P       P       08 35 32.0  -0.1
I23K  Minto, Yukon-K   71.85  17   P       P       08 35 33.8 +0.4
I23K                               IAmb    IAmb    08 35 54.4
      comp=Z,5.8nm,1.1s
INK   Inuvik           71.99  10   P       P       08 35 33.0  -1.2
      comp=Z,1.7nm,0.5s,baz=338,slow=4.9,SNR=11
INK   Inuvik           71.99  10   P       P       08 35 34.3 +0.1
INK                                pmax    pmax
      comp=Z,7.0nm,0.8s
INK   Inuvik           71.99  10   P       P       08 35 34.3 +0.1
INK                                IAmb    IAmb    08 35 40.9
      comp=Z,6.8nm,0.8s
MDM   Murphy Dome      72.27  17   P       P       08 35 35.8  -0.2
NEA2  Nenana           72.38  18   P       P       08 35 37.8 +1.1
NEA2                               IAmb    IAmb    08 35 48.0
      comp=Z,3.0nm,0.8s
WRH   Wood River Hil   72.72  17   P       P       08 35 38.6   0.0
ILAR  Eielson Array    72.74  17   P       P       08 35 37.7  -1.1
      comp=Z,3.9nm,0.9s,baz=340,slow=3.6,SNR=6.8
KTH   Kantishna Hill   72.79  19   P       P       08 35 38.3  -0.8
KTH                                IAmb    IAmb    08 35 58.5
      comp=Z,17nm,1.3s
PPLA  Purkeypile       73.00  20   P       P       08 35 40.0  -0.5
HDA   Harding Lake     73.03  17   P       P       08 35 40.7 +0.2
TRF   Thorofare Moun   73.03  19   P       P       08 35 41.1 +0.4
MCK   McKinley         73.14  18   P       P       08 35 42.0 +0.8
MCK                                pmax    pmax
      comp=Z,2.0nm,0.8s
MCK   McKinley         73.14  18   P       P       08 35 42.0 +0.8
PSA00 Pilbara Seismi   74.01 135   P       P       08 35 45.5  -1.2
PSA00 Pilbara Seismi   74.01 135   P       P       08 35 45.2  -1.5
PSA00                              IAmb    IAmb    08 36 12.2
      comp=Z,23nm,1.4s
SCRK  Sand Creek       74.07  16   P       P       08 35 46.6  -0.1
DHY   Denali Highway   74.07  18   P       P       08 35 46.7  -0.1
RIDG  Independent Ri   74.08  16   P       P       08 35 49.0 +2.3
DOT   Dot Lake         74.34  16   P       P       08 35 49.0 +0.8
PAX   Paxson           74.61  17   P       P       08 35 48.7  -1.2
PAX                                pmax    pmax
      comp=Z,4.0nm,0.8s
PAX   Paxson           74.61  17   P       P       08 35 48.7  -1.2
PAX                                IAmb    IAmb    08 35 54.3
      comp=Z,3.8nm,0.8s
SML   Sawmill          74.91  19   P       P       08 35 52.1 +0.5
SML                                IAmb    IAmb    08 35 57.1
      comp=Z,14nm,0.9s
DAWY  Dawson           74.93  14   P       P       08 35 51.6   0.0
DAWY                               IAmb    IAmb    08 36 09.0
      comp=Z,7.8nm,1.1s
KIC   Kosan Boka       76.37 267  ePKP2    P       08 35 58.7  -2.0
      comp=Z,20nm,1.1s
TIC   Toumodi          76.42 268  ePKP2    P       08 35 58.7  -2.2
LIC   Lamto            76.68 267  ePKP2    P       08 35 59.8  -2.6
      comp=Z,63nm,2.0s
YKA   Yellowknife Ar   79.48   4   P       P       08 36 16.2  -0.9
      comp=Z,3.0nm,0.8s,baz=348,slow=5.6,SNR=9.2
YKA   Yellowknife Ar   79.48   4  i P      P       08 36 18.6 +1.5
YKA                                pmax    pmax
      comp=Z,3.0nm,0.8s
WRA   Warramunga Arr   81.64 123   P       P       08 36 27.3  -2.0
      comp=Z,1.7nm,0.7s,baz=324,slow=5.0,SNR=9.6
```

ASAR	Alice Springs	84.01	126	P	P	08 36 39.7	-2.0
	comp=Z,1.0nm,0.8s,baz=305,slow=4.6,SNR=2.6						
ASAR	Alice Springs	84.01	126	P	P	08 36 40.5	-1.2
PLCA	Paso Flores	151.78	253	PKPbc	PKPbc	08 44 04.6	-1.0
	comp=Z,3.6nm,1.0s,baz=112,slow=4.3,SNR=4.6						

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*NEIC **07** 08:28:56.8±2.4, 28°.53N±0°.05×143°.0E±0°.1, h10^{km}±1^{km}, mb4.6/7, Error ellipse: s-maj=17.3km s-min=5.5km az=69.0*

*IDC **07** 08:28:56.7±1.0, 28°.42N×142°.55E, h0^{km}, mb4.1/7, mb1 4.3/9, mb1mx3.7/85, mbtmp4.0/9, ML3.0/2, Error ellipse: s-maj=34.8km s-min=15.7km az=93.0*

*JMA **07** 08:28:58.7±0.1, 28°.57N×142°.52E, h52^{km}, M4.0*

ISC 07 08:28:59.5±0.7**, 28°.55N**±0°.05×**142°.7E**±0°.1**, h25**^{km}**, n30,** σ1^{s}.**73**/33**, mb4.5**/11**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.51	197	P	Pn	08 29 23.9	-1.0
CBIJ				*e*S	Sn	08 29 42.3	-1.5
JCJ	Chichijima	1.51	197	Pn	Pn	08 29 23.9	-1.0
	19nm,0.3s,baz=242,slow=23,SNR=19						
JCJ				Sn	Sn	08 29 42.0	-1.8
	38nm,0.3s,baz=284,slow=24,SNR=14						
JHH2	Haha-jima-NKT2	1.96	193	*e*S	Sn	08 29 53.6	-1.3
JOD2	Odawara 2	7.35	336	P	Pn	08 30 45.9	+0.6
JHU	Hanno	7.83	339	*e*S	Sn	08 32 15.9	-3.6
JRY	Ryogami san	8.10	338	*e*S	Sn	08 32 24.3	-2.0
JAG	Ashikaga	8.31	342	P	Pn	08 30 58.2	-0.2
JAG				*e*S	Sn	08 32 26.8	-4.6
MJAR	Matsushiro Arr	8.81	336	Pn	Pn	08 31 04.7	-0.6
	0.3nm,0.3s,baz=154,slow=11,SNR=11						
MJAR	Matsushiro Arr	8.81	336		Pn	08 31 06.1	+0.8
MAJO	Matsushiro	8.81	336	Pn	Pn	08 31 06.2	+0.9
JWT	Wachi	9.12	319	Pn	Pn	08 31 11.7	+2.2
JMM	Marumori	9.42	351	Pn	Pn	08 31 11.9	-1.7
USRK	Ussuriysk Ar.	17.80	334	P	Pn	08 33 05.4	0.0
	baz=149,slow=40,SNR=3.9						
SSLB	Suanglung	20.05	261	P	Pn	08 33 33.6	+0.9
SSLB				IAmb	IAmb	08 33 49.2	
	comp=Z,75nm,1.3s						
SONM	Songino Array	33.98	315	P	P	08 35 42.6	+1.4
	comp=Z,1.7nm,1.0s,baz=131,slow=6.8,SNR=2.9						
WB0	Warramunga Arr	48.69	190	P	P	08 37 40.7	-1.1
PSI	Prapat	48.86	246	P	P	08 37 43.5	+0.1
	comp=Z,2.4nm,0.4s,baz=49,slow=8.0,SNR=3.6						
WR0	Warramunga Arr	48.86	190	P	P	08 37 42.5	-0.6
WR0				IAmb	IAmb	08 38 02.9	
	comp=Z,5.0nm,1.0s						
WRAB	Tennant Creek	48.86	190	P	P	08 37 42.1	-1.0
WRAB				IAmb	IAmb	08 37 47.4	
	comp=Z,9.8nm,1.1s						
WB2	Warramunga Arr	48.87	190	P	P	08 37 43.3	+0.1
WB2				IAmb	IAmb	08 37 45.2	
	comp=Z,6.4nm,0.8s						
WRA	Warramunga Arr	48.87	190	P	P	08 37 42.9	-0.4
	comp=Z,3.2nm,0.6s,baz=13,slow=8.4,SNR=10						
WRA	Warramunga Arr	48.87	190	P	P	08 37 42.0	-1.3
RPSI	Rantau Prapat	48.92	246	P	P	08 37 43.5	-0.3
ASAR	Alice Springs	52.59	190	P	P	08 38 10.5	-0.8
	comp=Z,0.5nm,0.5s,baz=357,slow=5.3,SNR=4.9						
PSA00	Pilbara Seismi	54.48	206	P	P	08 38 24.7	-0.4
PSA00				IAmb	IAmb	08 38 43.8	
	comp=Z,1.3nm,1.1s						
COLD	Coldfoot	55.18	26	P	P	08 38 29.6	-0.1
TABL	Table Mountain	58.87	34	P	P	08 38 53.3	-2.8
ARCES	ARCESS Array B	72.31	341	P	P	08 40 25.6	+3.0
	comp=Z,10nm,0.9s,baz=101,slow=3.8,SNR=2.0						
NVAR	Mina Array Bea	79.29	52	P	P	08 41 05.1	+1.8
	comp=Z,0.2nm,0.3s,baz=296,slow=8.8,SNR=2.4						
TXAR	Lajitas Array	94.40	53	P	P	08 42 19.7	+2.0
	comp=Z,0.2nm,0.8s,baz=325,slow=5.8,SNR=2.0						

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*IDC **07** 08:30:52.1±0.4, 41°.59N×74°.70E, h0^{km}, mb5.0/55, mb1 5.1/61, mb1mx4.9/83, mbtmp5.0/61, ML4.1/6, MS6.4/1, Ms1 6.4/1, ms1mx5.3/48, Error ellipse: s-maj=7.8km s-min=7.0km az=129.0*

*KNET **07** 08:30:53.3±0.8, 41°.74N×74°.72E, h0^{km}, ml5.0, Error ellipse: s-maj=5.2km s-min=3.1km az=175.0*

*KRNET **07** 08:30:53.2±0.1, 41°.67N×74°.69E, h16^{km}, mb5.7*

*SOME **07** 08:30:54.2, 41°.68N×74°.67E, h15^{km}, MS5.2*

*MOS **07** 08:30:54.3±1.1, 41°.69N×74°.66E, h21^{km}, mb5.5/101, Error ellipse: s-maj=4.1km s-min=3.3km az=123.3*

MOS Felt (VI) at Kara-Keche, Min-Kush; (V) at Bor-Debe, Irkeshtam, Kok-Oy, Dodomol, Chayek; (IV) at Kazarman, Bishkek, Osh, Aral, Cholpon, Kyzyl-Oy; (III-IV) at Kyzart, Tash-Dobo; (III) at Kochkor, Naryn, Bayetovo; (II-III) at Almaty.

*NNC **07** 08:30:55.5±0.7, 41°.77N×74°.72E, h0^{km}, mb6.1, mpv5.8, Error ellipse: s-maj=4.3km s-min=2.7km az=32.0*

*NEIC **07** 08:30:56.7±1.4, 41°.73N±0°.04×74°.61E±0°.06, h22^{km}±3^{km}, mb5.5/338, Error ellipse: s-maj=6.4km s-min=5.6km az=138.0*

*BJI **07** 08:30:56.6±0.0, 41°.46N×74°.84E, h8^{km}, mB4.6/1, mb4.9/29, ML5.2/6*

ISC 07 08:30:54.9±0.9**, 41°.71N**±0°.02×**74°.57E**±0°.01**, h14**^{km}±5^{km}**, n1280,** σ1^{s}.**29**/1359**, mb5.4**/342**, MS6.4**/3**, 138C-64D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	Uchtor	0.52	356	P	Pg	08 31 04.8	-0.7
	38µm,0.3s,SNR=6606						
UCH				⇓S	Sg	08 31 12.6	+0.1
	32µm,0.3s						
UCH	Uchtor	0.52	356	*i* PG	Pg	08 31 04.6	-0.8
UCH				*i* S	Sg	08 31 12.6	+0.1
UCH	Uchtor	0.52	356	⇓*i*P	Pg	08 31 04.3	-1.1
	baz=47						
UCH				⇓*i*S	Sg	08 31 12.3	-0.2
	baz=47						
AML	Almayashu	0.78	303	P	Pg	08 31 09.8	-0.4
	6µm,0.2s,SNR=856						
AML				⇓S	Sb	08 31 21.7	+0.6
	32µm,0.3s						
AML	Almayashu	0.78	303	*i* PG	Pg	08 31 09.8	-0.4
AML				*i* S	Sb	08 31 22.1	+1.0
AML	Almayashu	0.78	303	⇓*i*P	Pg	08 31 09.8	-0.4
	baz=2.0						
AML				⇓*i*S	Sb	08 31 22.1	+1.0
	baz=2.0						
AAK	Ala-Archa	0.93	357	Pg	Pb	08 31 12.0	-1.0
	3µm,0.3s,baz=164,slow=10,SNR=1336						
AAK				Lg	Lg	08 31 25.1	
	4µm,0.3s,baz=152,slow=7.8,SNR=12						
AAK	Ala-Archa	0.93	357	P	Pb	08 31 12.0	-1.0
	10µm,0.5s,SNR=543						
AAK				⇓S	Sg	08 31 25.6	+0.2
	24µm,0.4s						
AAK	Ala-Archa	0.93	357	PG	Pb	08 31 12.1	-0.9
AAK				S	Sg	08 31 26.0	+0.7
AAK	Ala-Archa	0.93	357	P	Pb	08 31 11.9	-1.1
	3µm,0.5s						
AAK				S	Sb	08 31 25.3	-0.1
	8µm,0.6s						
AAK	Ala-Archa	0.93	357		Pb	08 31 12.1	-0.9
AAK				Sn	Sg	08 31 26.0	+0.7
AAK	Ala-Archa	0.93	357	⇓*i*P	Pb	08 31 12.0	-1.0
	baz=51						
AAK				⇓*i*S	Sb	08 31 25.4	+0.1
	baz=51						
KBK	Karagaybulak	0.99	16	P	Pb	08 31 12.6	-1.4
	5µm,0.2s,SNR=565						
KBK				⇓S	Sb	08 31 26.6	-0.4
	86µm,0.5s						
KBK	Karagaybulak	0.99	16	*i* PG	Pb	08 31 12.6	-1.4
KBK				*i* S	Sb	08 31 26.4	-0.6
KBK	Karagaybulak	0.99	16	⇓*i*P	Pb	08 31 12.4	-1.6
	baz=11						
KBK				⇓*i*S	Sb	08 31 26.2	-0.8
	baz=11						
SALK	Salom-Alik	1.00	215	⇑*e*P	Pb	08 31 12.5	-1.6
	baz=20						
SALK				⇑*e*S	Sb	08 31 26.6	-0.6
	baz=20						
FRU1	Bishkek	1.10	2	*i* PG	Pb	08 31 15.5	-0.4
FRU1				*i* S	Sn	08 31 31.3	+0.2
FRU1	Bishkek	1.10	2		Pb	08 31 15.5	-0.4
FRU1				Sn	Sn	08 31 32.0	+0.9
FRU1	Bishkek	1.10	2	⇑*i*P	Pb	08 31 15.5	-0.4
	baz=57						
FRU1				⇑*i*S	Sn	08 31 31.3	+0.2
	baz=57						
EKS2	Erkin-Say	1.12	329	P	Pb	08 31 16.0	-0.2
	5µm,0.4s,SNR=1355						
EKS2				⇑S	Sn	08 31 32.3	+0.7
	7µm,0.2s						
EKS2	Erkin-Say	1.12	329	*i* PG	Pb	08 31 16.0	-0.2
EKS2				*i* S	Sn	08 31 32.6	+1.0
EKS2	Erkin-Say	1.12	329	⇓*i*P	Pb	08 31 16.0	-0.2
	baz=26						
EKS2				⇓*i*S	Sn	08 31 32.6	+1.0
	baz=26						
BOOM	Boomskoye usch	1.29	52	PG	Pn	08 31 16.7	-1.9
BOOM	Boomskoye usch	1.29	52		Pn	08 31 16.7	-1.9
BOOM	Boomskoye usch	1.29	52	⇑*e*P	Pn	08 31 16.6	-2.1
	baz=48						
BOOM				⇑*i*S	Sb	08 31 33.7	-1.8
	baz=48						
CHMS	Chumysh	1.30	6	P	Pn	08 31 18.3	-0.4
	8µm,0.4s,SNR=2230						
CHMS				⇑S	Sn	08 31 36.2	+0.3
	13µm,0.4s						
CHMS	Chumysh	1.30	6	*i* PG	Pn	08 31 18.3	-0.4
CHMS				*i* S	Sn	08 31 36.2	+0.3
CHMS	Chumysh	1.30	6	⇓*i*P	Pn	08 31 18.3	-0.4
	baz=2.0						
CHMS				⇓*i*S	Sn	08 31 36.4	+0.5
	baz=2.0						
ULHL	Ulahol	1.36	66	⇑P	Pn	08 31 17.0	-2.7
	3µm,0.2s,SNR=85						
ULHL				⇓S	Sn	08 31 34.7	-2.9
	9µm,0.4s						
ULHL	Ulahol	1.36	66	*i* PG	Pn	08 31 17.4	-2.3
ULHL				*i* S	Sn	08 31 35.2	-2.4
ULHL	Ulahol	1.36	66	⇓*i*P	Pn	08 31 17.4	-2.3
	baz=63						
ULHL				⇓*i*S	Sn	08 31 35.2	-2.4
	baz=63						
TKM2	Tokmak 2	1.43	32	P	Pn	08 31 19.7	-1.0
	3µm,0.2s,SNR=2256						
TKM2				⇑S	Sn	08 31 38.3	-1.2
	23µm,0.4s						
TKM2	Tokmak 2	1.43	32	*i* PG	Pn	08 31 19.9	-0.8
TKM2				*i* S	Sn	08 31 39.1	-0.4
TKM2	Tokmak 2	1.43	32	⇓P	Pn	08 31 19.7	-1.0
	4µm,0.5s						
TKM2				⇑S	Sn	08 31 38.1	-1.4
	4µm,0.3s						
TKM2	Tokmak 2	1.43	32	⇑*i*P	Pn	08 31 19.9	-0.8
	baz=28						
TKM2				⇑*i*S	Sn	08 31 39.1	-0.4
	baz=28						
MRKS	Merke	1.44	317	*e*P	Pb	08 31 22.0	+0.4
	10µm,0.5s						
MRKS				*e*S	Sg	08 31 42.0	+0.6
	15µm,0.3s						
USP	Ospenovka	1.56	358	⇓P	Pb	08 31 23.2	-0.4
	4µm,0.3s,SNR=2812						
USP	Ospenovka	1.56	358	*i* PN	Pb	08 31 23.2	-0.4
USP				*i* S	Sg	08 31 44.6	-0.7
USP	Ospenovka	1.56	358	⇓*i*P	Pb	08 31 23.2	-0.4
	baz=55						
USP				⇓*i*S	Sg	08 31 44.6	-0.7
	baz=55						
KST	Kastek	1.69	37	*e*P	Pn	08 31 24.8	+0.6
	3µm,0.5s						
KST				*e*S	Sb	08 31 46.5	-0.5
	31µm,0.9s						
MNAS	Manas	1.72	298	*e*PN	Pb	08 31 26.9	+0.4
MNAS				*i* S	Sg	08 31 51.5	+1.0
MNAS	Manas	1.72	298	⇑*e*P	Pb	08 31 26.7	+0.2
	baz=98						
MNAS				⇑*i*S	Sg	08 31 51.2	+0.7
	baz=98						
SGDS	Sogindy	1.75	1	*e*Pg	Pb	08 31 26.1	-0.8
	baz=360						
SGDS				*e*Lg	Lg	08 31 50.0	
	baz=360						
DGS	Degeres	1.77	30	*e*P	Pb	08 31 26.9	-0.5
	10µm,0.3s						
DGS				*e*S	Sb	08 31 50.0	+0.5
	42µm,0.6s						
OHH	Osh	1.79	229	*e*PN	Pb	08 31 27.0	-0.5
OHH				*i* S	Sg	08 31 51.7	-0.9
OHH	Osh	1.79	229	⇑*e*P	Pb	08 31 27.1	-0.5
	baz=32						
OHH				⇑*i*S	Sg	08 31 51.9	-0.7
	baz=32						
SFK	Sufi-Kurgan	1.87	206	⇑*e*P	Pn	08 31 27.8	+1.0
	baz=9.0						
SFK				⇑*e*S	Sb	08 31 52.9	+0.5
	baz=9.0						
KDJ	Kajisay	2.00	77	PN	Pn	08 31 28.6	+0.2
KDJ	Kajisay	2.00	77		Pn	08 31 28.6	+0.2
KDJ	Kajisay	2.00	77	⇑*i*P	Pn	08 31 28.5	+0.2
	baz=75						
KDJ				⇑*i*S	Sn	08 31 54.4	+1.2
	baz=75						
IZV	Izvestkoviy	2.02	48	*e*P	Pb	08 31 30.1	-1.4
	524nm,0.4s						
IZV				*e*S	Sb	08 31 55.5	-1.0
	2µm,0.6s						
KRBS	Karabastau	2.15	22	*e*P	Pb	08 31 33.6	-0.1
	8µm,0.5s						
KRBS				*e*S	Sb	08 32 01.3	+1.1
	48µm,0.5s						
KRBS	Karabastau	2.15	22	Pg	Pb	08 31 33.6	-0.1
	8µm,0.5s						
KRBS				Lg	Lg	08 32 01.3	
	48µm,0.5s						
TNSS	Tian-Shan	2.21	52	*e*P	Pb	08 31 33.5	-1.4
	5µm,0.3s						
TNSS				*e*S	Sb	08 32 01.5	-0.7
	8µm,0.6s						
TNSS	Tian-Shan	2.21	52	*e*Pg	Pb	08 31 33.8	-1.1
	baz=51						
TNSS				*e*Lg	Lg	08 32 03.3	
	baz=51						
TNSS	Tian-Shan	2.21	52	Pg	Pb	08 31 33.5	-1.4
	5µm,0.3s						
TNSS				Lg	Lg	08 32 01.5	
	8µm,0.6s						
AAA	Alma-Ata	2.30	48	*e*P	Pb	08 31 35.8	-0.3
	14µm,0.4s						
AAA				*e*S	Sb	08 32 05.9	+1.5
	34µm,0.5s						
AAA	Alma-Ata	2.30	48	*e*Pg	Pb	08 31 35.2	-1.0
	baz=48						
AAA				*e*Lg	Lg	08 32 05.9	
	baz=48						
AAA	Alma-Ata	2.30	48	*e*PN	Pb	08 31 35.1	-1.0
AAA	Alma-Ata	2.30	48	Pg	Pb	08 31 35.8	-0.3
	14µm,0.4s						
AAA				Lg	Lg	08 32 05.9	
	34µm,0.5s						
KNDC	Almaty	2.33	49	⇑Pn	Pn	08 31 34.4	+1.5
	7µm,0.6s						
KNDC				⇑Lg	Lg	08 32 07.5	
	6µm,0.4s						
MDOK	Medeo	2.34	51	*e*P	Pb	08 31 36.0	-1.0
	5µm,0.4s						
MDOK				*e*S	Sb	08 32 05.6	-0.3
	12µm,0.5s						
MDOK	Medeo	2.34	51	*e*Pb	Pb	08 31 35.6	-1.4
	baz=50						
MDOK				*e*Pg	Pn	08 31 36.1	+3.0
	baz=50						
MDOK				*e*Lg	Lg	08 32 07.4	
	baz=50						
MDOK	Medeo	2.34	51	*e*PN	Pb	08 31 35.6	-1.4
MDOK	Medeo	2.34	51	⇓Pn	Pb	08 31 35.5	-1.6
	4µm,0.6s						
MDOK				⇑Lg	Lg	08 32 06.8	
	8µm,0.5s						
MDOK	Medeo	2.34	51	Pg	Pb	08 31 36.0	-1.0
	5µm,0.4s						
MDOK				Lg	Lg	08 32 05.6	
	12µm,0.5s						
TARG	Taragay, Kyrgy	2.42	88		Pn	08 31 34.7	+0.2
TARG	Taragay, Kyrgy	2.42	88	⇑*e*P	Pn	08 31 34.2	-0.3
	baz=87						
TARG				⇑*i*S	Sn	08 32 04.2	+0.1
	baz=87						
KOTS	Kotyrbulak	2.42	50	*e*P	Pb	08 31 38.1	-0.3
	11µm,0.7s						
KOTS				*e*S	Sb	08 32 09.4	+1.2
	43µm,0.6s						
KOTS	Kotyrbulak	2.42	50	Pg	Pb	08 31 38.1	-0.3
	11µm,0.7s						
KOTS				Lg	Lg	08 32 09.4	
	43µm,0.6s						
KSH	Kashi	2.43	153	Pn	Pg	08 31 42.2	+0.6
KSH				Sn	Sg	08 32 13.8	+0.6
KSH				pmax	pmax		
	comp=Z,13µm,0.6s						
KSH				smax	smax		
	comp=N,11µm,0.8s						
KSH				smax	smax		
	comp=E,13µm,0.9s						
KTBS	Karatobe	2.54	37	*e*P	Pb	08 31 40.6	+0.3
	comp=E,4µm,0.4s						
KTBS				*e*S	Sb	08 32 13.2	+1.8
	comp=E,61µm,0.5s						
KTBS	Karatobe	2.54	37	Pg	Pb	08 31 40.6	+0.3
	comp=E,4µm,0.4s						
KTBS				Lg	Lg	08 32 13.2	
	comp=E,61µm,0.5s						
ANVS	Anan'yevo	2.54	64	*e*PN	Pn	08 31 36.4	+0.5
ANVS				*i* S	Sn	08 32 07.6	+0.9
ANVS	Anan'yevo	2.54	64	⇑*e*P	Pn	08 31 36.4	+0.5
	baz=62						
ANVS				⇑*i*S	Sn	08 32 07.6	+0.9
	baz=62						
KUU	Kurty	2.54	30	*e*P	Pb	08 31 40.4	0.0
	comp=E,7µm,0.4s						
KUU				*e*S	Sb	08 32 13.2	+1.6
	comp=E,59µm,0.5s						
KUU	Kurty	2.54	30	*e*Pg	Pb	08 31 39.5	-0.9
	baz=29						
KUU				*e*Lg	Lg	08 32 13.8	
	baz=29						
KUU	Kurty	2.54	30	*e*PN	Pb	08 31 39.5	-0.9
KUU				*e*		08 32 13.7	
KUU	Kurty	2.54	30	Pg	Pb	08 31 40.4	0.0
	comp=E,7µm,0.4s						
KUU				Lg	Lg	08 32 13.2	
	comp=E,59µm,0.5s						
TRKS	Terek-Say	2.58	267	*e*PN	Pb	08 31 38.9	-2.1
TRKS				*e*S	Sb	08 32 12.0	-0.6
TRKS	Terek-Say	2.58	267	⇑*e*P	Pb	08 31 38.9	-2.1
	baz=67						
TRKS				⇑*e*S	Sb	08 32 12.0	-0.6
	baz=67						
DZA	Taraz	2.68	297	*e*P	Pb	08 31 44.3	+1.7
	comp=E,26µm,0.7s						
DZA				*e*S	Sg	08 32 19.9	-1.1
	comp=E,45µm,0.5s						
DZA	Taraz	2.68	297	*e*Pb	Pb	08 31 42.5	-0.2
	baz=297						
DZA				*e*Pg	Pg	08 31 43.6	-2.7
	baz=297						
DZA	Taraz	2.68	297	*e*PN	Pb	08 31 42.4	-0.2
PRZ	Przheval'sk	2.96	73	PN	Pn	08 31 43.5	+1.9
PRZ	Przheval'sk	2.96	73	Pn	Pn	08 31 43.5	+1.9
PRZ	Przheval'sk	2.96	73	⇑*e*P	Pn	08 31 42.0	+0.4
	baz=72						
PRZ				⇑*i*S	Sn	08 32 17.4	+0.5
	baz=72						
DRK	Karamyk	3.06	224		Pn	08 31 45.5	+2.3
DRK	Karamyk	3.06	224	⇑*e*P	Pn	08 31 44.9	+1.7
	baz=26						
DRK				⇑*i*S	Sn	08 32 22.7	+2.9
	baz=26						
SATY	Saty	3.15	63	*e*P	Pb	08 31 50.5	-0.2
	comp=E,841nm,0.4s						
SATY				*e*S	Sb	08 32 30.2	+1.2
	comp=E,11µm,0.6s						
SATY	Saty	3.15	63	*e*Pg	Pb	08 31 50.2	-0.6
	baz=63						
SATY	Saty	3.15	63	*e*PN	Pb	08 31 50.1	-0.6
SATY	Saty	3.15	63	Pg	Pb	08 31 50.5	-0.2
	comp=E,841nm,0.4s						
SATY				Lg	Lg	08 32 30.2	
	comp=E,11µm,0.6s						
KURS	Kuram	3.20	55	*e*P	Pb	08 31 51.9	+0.3
	comp=E,2µm,0.6s						
KURS				*e*S	Sb	08 32 32.6	+2.2
	comp=E,6µm,0.6s						
KURS	Kuram	3.20	55	Pg	Pb	08 31 51.9	+0.3
	comp=E,2µm,0.6s						
KURS				Lg	Lg	08 32 32.6	
	comp=E,6µm,0.6s						
BTK	Batken	3.29	241	PN	Pn	08 31 43.4	-2.7
BTK	Batken	3.29	241	Pn	Pn	08 31 43.4	-2.7
BTK	Batken	3.29	241	⇑*e*P	Pn	08 31 48.2	+2.2
	baz=43						
BTK				⇑*e*S	Sn	08 32 28.5	+3.6
	baz=43						
KK02	Karatay Array	3.31	296	⇓Pg	Pg	08 31 56.1	-2.3
	comp=E,1µm,0.6s,baz=107,slow=16						
KK02				⇑Lg	Lg	08 32 41.1	
	comp=E,3µm,0.6s,baz=110,slow=30						
KKAR	Karatay Array	3.31	296	PN	Pn	08 31 47.8	+1.4
KKAR	Karatay Array	3.31	296	Pn	Pn	08 31 47.8	+1.4
BTLS	Baital	3.36	354	*e*P	Pb	08 31 55.6	+1.4
	comp=E,964nm,0.3s						
BTLS				*e*S	Sg	08 32 39.1	-3.6
	comp=E,14µm,0.6s						
BTLS	Baital	3.36	354	*e*Pb	Pb	08 31 53.2	-1.0
	baz=353						
BTLS				*e*Pg	Pg	08 31 55.9	-3.3
	baz=353						
BTLS	Baital	3.36	354	*e*PN	Pb	08 31 53.2	-1.0
BTLS				*e*		08 31 55.8	
BTLS	Baital	3.36	354	Pg	Pb	08 31 55.6	+1.4
	comp=E,964nm,0.3s						
BTLS				Lg	Lg	08 32 39.1	
	comp=E,14µm,0.6s						
ARXS	Arharly	3.46	43	*e*P	Pb	08 31 56.1	+0.1
	comp=E,2µm,0.4s						
ARXS				*e*S	Sb	08 32 40.4	+2.4
	comp=E,11µm,0.8s						
ARXS	Arharly	3.46	43	*e*PN	Pn	08 31 50.0	+1.5
ARXS	Arharly	3.46	43	Pg	Pb	08 31 56.1	+0.1
	comp=E,2µm,0.4s						
ARXS				Lg	Lg	08 32 40.4	
	comp=E,11µm,0.8s						
KPKS	Kokpek	3.51	59	*e*P	Pb	08 31 57.0	+0.1
	comp=E,1µm,0.5s						
KPKS				*e*S	Sb	08 32 41.5	+2.0
	comp=E,12µm,0.4s						
KPKS	Kokpek	3.51	59	*e*Pg	Pb	08 31 57.2	+0.3
	baz=58						
KPKS	Kokpek	3.51	59	*e*PN	Pb	08 31 57.2	+0.3
UZB	Uzynbulak	3.60	65	*e*P	Pb	08 31 58.1	-0.3
	comp=E,905nm,0.4s						
UZB				*e*S	Sb	08 32 43.5	+1.6
	comp=E,5µm,0.5s						
UZB	Uzynbulak	3.60	65	*e*Pg	Pb	08 31 59.6	+1.1
	baz=65						
UZB	Uzynbulak	3.60	65	*e*PN	Pb	08 31 59.5	+1.1
UZB	Uzynbulak	3.60	65	Pg	Pb	08 31 58.1	-0.3
	comp=E,905nm,0.4s						
UZB				Lg	Lg	08 32 43.5	
	comp=E,5µm,0.5s						
BLB	Baldybastay	3.74	49	Pg	Pb	08 32 00.7	-0.1
	comp=E,9µm,0.8s						
BLB				Lg	Lg	08 32 48.2	
	comp=E,8µm,0.4s						
CHM	Chimkent	3.75	281	*e*P	Pg	08 32 05.4	-1.4
	comp=E,2µm,0.5s						
CHM				*e*S	Sg	08 32 55.6	+0.3
	comp=E,8µm,0.4s						
SHLS	Shalkode	3.90	67	*e*P	Pg	08 32 08.6	-1.1
	comp=E,1µm,0.4s						
SHLS				*e*S	Sg	08 33 01.2	+1.0
	comp=E,8µm,0.8s						
SHLS	Shalkode	3.90	67	*e*Pb	Pb	08 32 05.9	+2.3
	baz=68						
SHLS	Shalkode	3.90	67	*e*PN	Pb	08 32 05.8	+2.3
SHLS	Shalkode	3.90	67	Pg	Pg	08 32 08.6	-1.1
	comp=E,1µm,0.4s						
SHLS				Lg	Lg	08 33 01.3	
	comp=E,8µm,0.8s						
TAS	Tashkent	3.98	266	PN	Pn	08 31 56.5	+1.0
TAS	Tashkent	3.98	266	Pn	Pn	08 31 56.5	+1.0
PDGK	Podgornoye	3.98	64	Pg	Pb	08 32 05.6	+0.6
	comp=E,400nm,0.6s						
PDGK				Lg	Lg	08 32 56.1	
	comp=E,3µm,0.6s						
PDGK	Podgornoye	3.98	64	⇓Pn	Pn	08 31 56.6	+0.9
	comp=E,186nm,0.6s						

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PDGK                               ⇓Pg      Pb        08 32 06.6 +1.7
          comp=E,815nm,0.5s
PDGK                               ⇑Lg      Lg        08 32 56.8
          comp=E,6µm,0.8s
GAR   Garm                4.22 232          Pn        08 31 59.2 +0.2
TDK   Taldyqorghan        4.32  39 eP       Pb        08 32 12.0 +1.4
          comp=E,3µm,0.7s
TDK                                eS       Sb        08 33 07.1 +4.5
          comp=E,8µm,0.6s
TDK   Taldyqorghan        4.32  39 ePb      Pb        08 32 08.9  -1.7
          baz=38
TDK                                ePg      Pg        08 32 13.2  -4.5
          baz=38
TDK   Taldyqorghan        4.32  39 ePN      Pb        08 32 08.9  -1.7
TDK                                e                  08 32 13.2
TDK   Taldyqorghan        4.32  39  Pg      Pb        08 32 12.0 +1.4
          comp=E,3µm,0.7s
TDK                                 Lg      Lg        08 33 07.1
          comp=E,8µm,0.6s
DJR   Jarkent             4.64  54 eP       Pb        08 32 17.0 +0.9
          comp=E,1µm,1.1s
DJR                                eS       Sb        08 33 15.9 +4.0
          comp=E,6µm,0.8s
DJR   Jarkent             4.64  54  Pg      Pb        08 32 17.0 +0.9
          comp=E,1µm,1.1s
DJR                                 Lg      Lg        08 33 15.9
          comp=E,6µm,0.8s
KAPS  Kapalarasan         4.99  43 eP       Pb        08 32 22.9 +0.8
          comp=E,895nm,0.4s
KAPS                               eS       Sb        08 33 25.9 +3.9
          comp=E,4µm,0.8s
CHGR  Chuyangaron         5.14 235  Pn      Pn        08 32 09.3  -2.2
OTUK  Ortayu              6.73 347 ⇑Pn      Pn        08 32 34.6 +1.3
          comp=E,292nm,1.0s
OTUK                               ⇓Lg      Lg        08 34 28.0
          comp=E,2µm,0.8s
MAKZ  Makanchi            7.37  44  P       Pn        08 32 43.4 +1.4
MAKZ  Makanchi            7.37  44 ⇑Pn      Pn        08 32 43.9 +1.9
          comp=E,158nm,0.7s
MAKZ                               ⇑Lg      Lg        08 34 46.6
          comp=E,1µm,1.0s
MAKZ  Makanchi            7.37  44  Pn      Pn        08 32 43.4 +1.4
MK31  Makanchi Array      7.52  45ceP       Pn        08 32 44.4 +0.2
MK31  Makanchi Array      7.52  45 ⇓Pn      Pn        08 32 45.6 +1.4
          comp=E,174nm,0.6s,baz=219,slow=12,SNR=232
MK31                               ⇓Lg      Lg        08 34 49.4
          comp=E,961nm,0.8s,baz=228,slow=22,SNR=4.8
MK31  Makanchi Array      7.52  45  Pn      Pn        08 32 45.8 +1.6
MKAR  Makanchi Array      7.52  45  Pn      Pn        08 32 45.0 +0.8
          comp=E,14nm,0.3s,baz=224,slow=13,SNR=84
MKAR                                Lg      Lg        08 34 47.5
          comp=E,54nm,0.3s,baz=227,slow=23,SNR=6.5
MKAR  Makanchi Array      7.52  45 i P      Pn        08 32 45.4 +1.2
MKAR                                pmax    pmax
          comp=Z,47nm,0.5s
MKAR  Makanchi Array      7.52  45  Pn      Pn        08 32 43.9  -0.3
NIL   Nilore              8.11 188  P       Pn        08 32 53.9 +1.6
NIL   Nilore              8.11 188          Pn        08 32 53.9 +1.6
CEP   Cherat              8.14 196  P       Pn        08 32 46.4  -6.4
KBL   Kabul               8.37 213  P       Pn        08 32 57.1 +1.1
KBL   Kabul               8.37 213  Pn      Pn        08 32 57.1 +1.1
BRZS  Berezniki           8.38 352 ePn      Pn        08 32 54.8  -1.1
          comp=Z,16nm,1.0s,baz=351
BRZS  Berezniki           8.38 352 eP       Pn        08 32 54.8  -1.1
BRZS                                pmax    pmax
          comp=Z,16nm,1.0s
KURBB Kurchatov Arra      9.33  16  Pn      Pn        08 33 08.5  -0.4
          comp=Z,1.9nm,0.3s,baz=204,slow=13,SNR=12
KURBB                               Lg      Lg        08 35 45.7
          comp=Z,13nm,0.3s,baz=202,slow=30,SNR=9.2
KURK  Kurchatov           9.44  16⇑eP       Pn        08 33 09.9  -0.4
KURK                                pmax    pmax
          comp=Z,40nm,0.9s
KURK  Kurchatov           9.44  16  Pn      Pn        08 33 09.2  -1.2
DHRM  DHARAMSHALA         9.54 171 eP       Pn        08 33 10.9  -1.1
DHRM                                IAmb    IAmb      08 33 16.9
          comp=Z,408nm,0.7s
DHRM                               eS       Sn        08 34 54.2  -4.9
DHRM                                IAML              08 35 00.2
          comp=N,998nm,0.9s
SEM   Semipalatinsk       9.55  22 ePn      Pn        08 33 10.5  -1.7
          comp=N,21nm,1.5s,baz=22
SEM                                eSn      Sn        08 34 58.3  -1.1
          baz=22
SEM   Semipalatinsk       9.55  22 eP       Pn        08 33 10.4  -1.7
SEM                                e                  08 34 58.3
SEM                                 pmax    pmax
          comp=Z,21nm,1.5s
SARP  Sargodha            9.88 189 ⇑P       Pn        08 33 14.2  -2.3
WMQ   Urumqi              9.88  73 eP       Pn        08 33 22.5 +5.9
WMQ                                 S       Sn        08 35 08.4 +1.1
WMQ                                 smax    smax
          comp=Z,460nm,1.1s
WMQ                                 smax    smax
          comp=Z,480nm,1.3s
SMLA  Simla              10.76 168 eP       Pn        08 33 26.9  -1.6
SMLA                                IAmb    IAmb      08 33 36.0
          comp=Z,81nm,0.6s
SMLA                               eS       Sn        08 35 23.4  -5.4
SMLA                                IAML              08 35 28.5
          comp=N,368nm,0.5s
BVAR  Borovoye Array     11.67 347  Pn      Pn        08 33 40.3  -0.6
          comp=N,7.5nm,0.3s,baz=311,slow=32,SNR=25
BVAR                                Sn      Sn        08 35 40.9   -10
          comp=N,12nm,0.3s,baz=181,slow=26,SNR=2.7
BVAR                                Lg      Lg        08 37 05.6
          comp=N,28nm,0.3s,baz=172,slow=32,SNR=7.7
BRVK  Borovoye           11.72 347⇑iP       Pn        08 33 41.4  -0.2
BRVK                                pmax    pmax
          comp=Z,69nm,0.8s
BRVK  Borovoye           11.72 347 ⇑Pn      Pn        08 33 42.5 +0.9
          comp=Z,183nm,0.9s
BRVK  Borovoye           11.72 347  Pn      Pn        08 33 41.3  -0.2
DGZ   Jazzator, Alta     12.02  44⇑eP       Pn        08 33 47.4 +1.5
DGZ                                 pmax    pmax
          comp=Z,97nm,0.8s
HRA   Herat              12.15 237  Pn      Pn        08 33 47.7   0.0
AB31  Akbulak array      12.73 311 ⇑Pn      Pn        08 33 57.2 +1.8
          comp=Z,63nm,0.5s,baz=123,slow=14,SNR=137
AB31                               ⇓Lg      Lg        08 37 39.3
          comp=Z,120nm,0.8s
ABKAR Akbulak array      12.73 311  Pn      Pn        08 33 55.4 +0.1
NDI   New Delhi          13.17 170 eP       Pn        08 33 56.8  -4.7
GEYT  Alibeck            13.20 259  Pn      Pn        08 33 59.9  -2.0
          comp=Z,2.3nm,0.3s,baz=114,slow=6.8,SNR=4.6
GYA0B ALIBECK ARRAY      13.20 259  Pn      Pn        08 33 59.6  -2.3
AYAN  Aya Nagar          13.36 170 eP       Pn        08 33 59.3  -4.7
SONA  Sohna              13.58 171 eP       Pn        08 34 02.8  -4.3
KUDL  Kundal             13.62 173 eP       Pn        08 34 03.8  -3.9
ZAA0  Zalesovo Array     14.03  26  Pn      Pn        08 34 13.6 +0.5
ZALV  Zalesovo Beam      14.03  26  Pn      Pn        08 34 12.9  -0.2
          comp=Z,4.1nm,0.3s,baz=222,slow=14,SNR=20
ZALV                                Sn      Sn        08 36 45.1  -3.4
          comp=Z,4.4nm,0.3s,baz=214,slow=15,SNR=3.0
ZALV                                Lg      Lg        08 38 16.9
          comp=Z,6.5nm,0.3s,baz=205,slow=24,SNR=3.7
ZALV  Zalesovo Beam      14.03  26 i P      Pn        08 34 14.3 +1.2
ZALV                                pmax    pmax
          comp=Z,38nm,0.6s
ZALV  Zalesovo Beam      14.03  26  Pn      Pn        08 34 13.5 +0.3
AKTO  Aktyubinsk         14.40 313  Pn      Pn        08 34 19.5 +1.2
          comp=Z,18nm,0.3s,baz=121,slow=14,SNR=39
AKTO                                Sn      Sn        08 36 54.5  -3.2
          comp=Z,5.4nm,0.3s,baz=211,slow=17,SNR=8.5
AKTO                                Lg      Lg        08 38 38.6
          comp=Z,1.3nm,0.3s,baz=229,slow=21,SNR=3.4
AKTO  Aktyubinsk         14.40 313 ⇑Pn      Pn        08 34 21.0 +2.7
          comp=Z,1µm,0.9s
AJM   Ajmer              15.19 180 eP       Pn        08 34 25.1  -3.9
PYUN  Piuthan            15.22 150 eP       Pn        08 34 22.7  -6.9
          comp=Z,71nm,0.6s
DANN  Dangsing           15.29 148 eP       Pn        08 34 24.4  -6.2
          comp=Z,69nm,0.4s
KOLN  Koldanda           15.74 149 eP       Pn        08 34 30.3  -6.2
          comp=Z,102nm,0.6s
GKN   Gorkha             15.96 146 eP       Pn        08 34 34.1  -5.0
          comp=Z,73nm,0.5s
KKN   Kakani             16.42 144 eP       Pn        08 34 40.9  -4.2
          comp=Z,124nm,0.6s
DMN   Daman              16.50 145 eP       Pn        08 34 42.1  -4.1
PKI   Pulchoki           16.66 144 eP       Pn        08 34 44.5  -3.8
          comp=Z,47nm,0.6s
SVE   Sverdlovsk         17.60 334 eP       Pn        08 34 58.2  -1.3
SVE                                eS       Sn        08 38 07.1  -8.0
SVE                                 pmax    pmax
          comp=Z,671nm,1.4s
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RAMN  Ramite             17.73 142 eP       Pn        08 35 00.0  -1.6
          comp=Z,86nm,0.5s
TAPN  Taplejung          17.92 139 eP       P         08 35 05.0 +0.4
LSA   Lhasa              17.99 126  P       P         08 35 06.8 +1.3
LSA   Lhasa              17.99 126  P       P         08 35 05.4  -0.1
LSA                                 pmax    pmax
          comp=Z,19nm,0.7s
LSA   Lhasa              17.99 126          P         08 35 05.4  -0.1
ARU   Arti               18.02 330  P       P         08 35 05.1  -0.1
          comp=Z,0.0nm,0.3s,baz=140,slow=11,SNR=12
ARU                                 S       Sn        08 38 17.6  -7.6
          comp=Z,0.0nm,0.3s,baz=336,slow=23,SNR=1.7
ARU                                 Lg      Lg        08 40 25.3
          comp=Z,0.0nm,0.3s,baz=266,slow=2.8,SNR=6.6
ARU   Arti               18.02 330d iP      P         08 35 05.0  -0.1
ARU                                 S       S         08 38 28.5  -2.7
ARU                                 pmax    pmax
          comp=Z,117nm,0.8s
ARU   Arti               18.02 330          Pn        08 35 04.7 +0.1
ODAN  Odare              18.18 141 eP       Pn        08 35 06.9  -0.2
          comp=Z,83nm,0.7s
GTK   Tadong             18.39 137 eP       P         08 35 09.0  -0.6
KRAR  Krasnoyarsk        18.62  34⇑eP       P         08 35 11.4  -0.3
GTA   Gaotai             19.30  88 eP       Pn        08 35 20.1  -0.5
GTA                                 pP      sP        08 35 26.0  -0.8
GTA                                 sP      pP        08 35 29.4 +4.9
GTA                                 pmax    pmax
          comp=Z,12nm,0.7s
MAK   Makhachkala        20.02 283 eP       P         08 35 24.8  -2.4
MAK                                eS       S         08 39 09.7  -2.0
MAK                                 pmax    pmax
          comp=Z,303nm,1.9s
AKT   Akhty              20.05 278⇓eP       Pn        08 35 29.1  -0.4
GNBR  Gunib              20.48 281deP       Pn        08 35 33.5  -1.0
GNBR                                pmax    pmax
          comp=Z,147nm,0.9s
MOY   Mondy              20.58  52 eP       P         08 35 34.4 +1.1
MOY                                 pmax    pmax
          comp=Z,284nm,1.8s
BTLR  Botlikh            20.99 282⇑eP       P         08 35 37.8   0.0
BTLR                                pmax    pmax
          comp=Z,64nm,0.7s
DVE   Vedeno             21.03 283c iP      P         08 35 38.8 +0.6
DVE                                 pmax    pmax
          comp=Z,219nm,1.1s
BELG  Belogornoye        21.12 310⇓iP       P         08 35 38.8  -0.2
BELG                                pmax    pmax
          comp=Z,55nm,0.9s
GROC  Groznyy            21.24 284 eP       P         08 35 41.5 +1.1
GROC                               e                  08 36 01.0
GROC                                pmax    pmax
          comp=Z,257nm,1.5s
SHL   Shillong           21.54 133  P       P         08 35 42.3  -1.6
SHL                                 pmax    pmax
          comp=Z,85nm,0.9s
SHL   Shillong           21.54 133 eP       P         08 35 42.6  -1.3
SHL                                 IAmb    IAmb      08 36 00.8
          comp=Z,84nm,1.1s
SHL   Shillong           21.54 133  P       P         08 35 42.3  -1.6
ZAK   Zakamensk          21.63  57 eP       P         08 35 45.5 +0.9
ZAK                                 pmax    pmax
          comp=Z,263nm,1.0s
TLY   Talaya             22.16  53  P       P         08 35 51.6 +1.3
          comp=Z,29nm,0.7s,baz=251,slow=8.8,SNR=28
TLY   Talaya             22.16  53⇓eP       P         08 35 51.1 +0.8
TLY                                 pmax    pmax
          comp=Z,51nm,1.0s
TLY   Talaya             22.16  53  P       P         08 35 50.9 +0.7
MOKO  MOKOCHONG          22.48 127 eP       P         08 35 53.0  -1.0
GNI   Garni              22.54 276  P       P         08 35 56.1 +1.6
          comp=Z,60nm,0.9s,baz=13,slow=1.6,SNR=16
GNI   Garni              22.54 276⇑iP       P         08 35 55.4 +0.8
GNI                                 pmax    pmax
          comp=Z,67nm,0.9s
GNI   Garni              22.54 276  P       P         08 35 55.8 +1.2
ZEI   Tsey               22.67 283 eP       P         08 35 57.2 +1.2
ZEI                                 pmax    pmax
          comp=Z,12nm,0.9s
KOHI  KOHIMA             22.69 129 eP       P         08 35 54.2  -1.9
IRK   Irkutsk            22.69  52 eP       P         08 35 54.0  -1.8
NCK   Nalchik            22.81 285⇑iP       P         08 35 57.7 +0.5
NCK                                 pmax    pmax
          comp=Z,71nm,1.4s
ONI   Oni                23.03 283  P       P         08 36 02.2 +2.6
ONI                                 pmax    pmax
          comp=Z,324nm,1.8s
ONI   Oni                23.03 283  P       P         08 36 02.2 +2.6
ONI                                 IAmb    IAmb      08 36 04.5
          comp=Z,324nm,1.8s
GOF   Gofitskoye         23.08 289⇑eP       P         08 35 51.9  -8.1
PYA1  Pyatigorsk         23.11 286⇑iP       P         08 36 00.4   0.0
KIRV  Kirov              23.13 325  P       P         08 36 02.2 +2.0
          comp=Z,50nm,0.7s,baz=110,slow=1.0,SNR=7.6
KIRV                                Lg      Lg        08 43 05.0
          comp=Z,58nm,1.1s,baz=15,slow=23,SNR=2.3
KIRV  Kirov              23.13 325deP       P         08 36 01.1 +0.8
AKH   Akhalkalaki        23.20 280 ⇑P       P         08 36 00.1  -1.3
IMP   Imphal             23.27 130 eP       P         08 36 02.5 +0.3
KBZ   Khabaz             23.29 286  P       P         08 36 05.0 +3.0
          comp=Z,19nm,0.8s,baz=103,slow=7.4,SNR=6.5
KBZ   Khabaz             23.29 286⇓eP       P         08 36 02.9 +0.8
KBZ                                 pmax    pmax
          comp=Z,29nm,1.0s
SONM  Songino Array      23.30  64  P       P         08 36 02.3  -0.1
          comp=Z,43nm,0.9s,baz=266,slow=9.1,SNR=52
SONM  Songino Array      23.30  64  P       P         08 36 02.2  -0.1
SONM                                pmax    pmax
          comp=Z,64nm,1.2s
SONM  Songino Array      23.30  64  P       P         08 36 02.2  -0.1
LZH   Lanzhou            23.40  94 eP       P         08 36 04.6 +1.1
LZH                                 pP      pP        08 36 08.6   0.0
LZH                                 sP      sP        08 36 13.8 +2.9
LZH                                 pmax    pmax
          comp=Z,30nm,1.2s
KVAR  Kislovodsk Arr     23.41 286  P       P         08 36 09.1 +5.7
          comp=Z,17nm,0.8s,baz=246,slow=19,SNR=2.9
KIV   Kislovodsk         23.42 286 ⇑P       P         08 36 02.5  -1.0
KIV   Kislovodsk         23.42 286 eP       P         08 36 05.0 +1.5
KIV                                 pmax    pmax
          comp=Z,73nm,1.0s
KIV   Kislovodsk         23.42 286  P       P         08 36 04.6 +1.1
KIV                                 IAmb    IAmb      08 36 30.2
          comp=Z,86nm,0.8s
SHA1  Shidzhatmaz        23.46 286⇑eP       P         08 36 03.2  -0.9
NEY   Neytrino           23.47 285⇑eP       P         08 36 04.3 +0.2
NEY                                 pmax    pmax
          comp=Z,35nm,2.5s
KARS  Kars               23.67 278  P       P         08 36 07.8 +1.8
KARS                                pmax    pmax
          comp=Z,2µm,1.9s
KARS  Kars               23.67 278  P       P         08 36 07.8 +1.8
ULN   Ulaanbaatar        23.75  64⇑eP       P         08 36 07.4 +0.6
ULN                                 pmax    pmax
          comp=Z,183nm,1.7s
ULN   Ulaanbaatar        23.75  64  P       P         08 36 06.2  -0.6
ULN                                 IAmb    IAmb      08 36 08.6
          comp=Z,74nm,0.8s
VRH   Novokhopyorsk      24.36 304 eP       P         08 36 15.6 +3.3
VRH                                 pmax    pmax
          comp=Z,140nm,1.1s
HYB   Hyderabad          24.45 171 i P      P         08 36 12.0  -1.3
MIB   Mutribah           24.98 250 eP       P         08 36 19.3 +1.2
GURO  Guroymak-BITLI     25.00 274  P       P         08 36 19.9 +1.6
SIRT  Sirnak             25.03 271  P       P         08 36 19.7 +1.1
SIRT                                IAmb    IAmb      08 36 34.0
          comp=Z,142nm,0.9s
KBD   Kabd               25.10 249 eP       P         08 36 20.9 +1.7
QRN   Al-Qurain          25.21 248 eP       P         08 36 21.4 +1.3
RST   Umm Al-Ruwaisa     25.40 250 eP       P         08 36 23.0 +1.1
SOC   Sochi              25.60 286 eP       P         08 36 22.4  -1.1
SOC                                eS       S         08 40 50.3  -0.7
SOC                                eSS      SnSn      08 41 48.2 +3.6
SOC                                 pmax    pmax
          comp=Z,45nm,1.1s
SOC                                 MLR     MLR
          comp=Z,27µm,18.0s
VSR   Storozhevoye       25.95 304 eP       P         08 36 27.1 +0.4
VSR                                 pmax    pmax
          comp=Z,60nm,0.9s
LPSR  Galich'ya Gora     26.31 307 eP       P         08 36 30.9 +1.0
LPSR                                pmax    pmax
          comp=Z,100nm,1.0s
PRGR  Permogore          26.46 329 eP       P         08 36 31.0  -0.1
PRGR                               e                  08 37 09.1
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PRGR                                pmax    pmax
          comp=Z,44nm,1.2s
ANN   Anapa              27.07 289 eP       P         08 36 36.3  -0.5
ANN                                 pmax    pmax
          comp=Z,161nm,1.2s
HHC   Hu-ho-hao-te       27.68  79 eP       P         08 36 43.9 +1.4
HHC                                 pmax    pmax
          comp=Z,20nm,1.0s
MOS   Moscow             27.74 313 eP       P         08 36 42.9 +0.2
MOS                                e                  08 37 32.9
MOS                                ePPP     PPP       08 37 40.4
MOS                                eS       S         08 41 26.5 +2.0
MOS                                 pmax    pmax
          comp=Z,98nm,1.2s
OBN   Obninsk            28.18 311  P       P         08 36 46.5  -0.1
          comp=Z,5.1nm,0.4s,baz=74,slow=13,SNR=3.4
OBN   Obninsk            28.18 311 i P      P         08 36 46.0  -0.6
OBN                                i                  08 37 34.9
OBN                                i                  08 39 59.5
OBN                                 pmax    pmax
          comp=Z,59nm,1.3s
OBN   Obninsk            28.18 311  IAmb    IAmb      08 37 22.0
          comp=Z,65nm,0.7s
NRIK  Noril'sk           28.52  10  P       P         08 36 50.0 +0.4
          comp=Z,12nm,1.0s,baz=174,slow=7.3,SNR=6.8
NRIK  Noril'sk           28.52  10⇓eP       P         08 36 50.1 +0.5
NRIK  Noril'sk           28.52  10  P       P         08 36 49.7 +0.1
KLMR  Klimovskoe         28.59 324 eP       P         08 36 49.0  -1.2
KLMR                                pmax    pmax
          comp=Z,48nm,1.3s
KLMR  Klimovskoe         28.59 324 eP       P         08 36 49.1  -1.2
KLMR                                AMP               08 36 58.9
          comp=Z,48nm,1.3s
GAZ   Gaziantep          29.05 274  P       P         08 36 55.8 +1.1
SNOP  Sinop              29.14 284  P       P         08 36 56.4 +1.0
DIKM  Dikmen             29.19 283 ⇑P       P         08 36 57.3 +1.5
SIM   Simferopol'        29.39 290 eP       P         08 36 58.2 +0.6
SIM                                                   08 37 53.0
SIM                                 pmax    pmax
          comp=Z,162nm,1.8s
BNN   Bunyan             29.51 277  P       P         08 37 00.2 +1.3
BNN                                 IAmb    IAmb      08 37 01.8
          comp=Z,98nm,1.4s
BOD   Bodaibo            29.61  43 eP       P         08 36 59.0  -0.3
BOD                                 pmax    pmax
          comp=Z,58nm,1.5s
RAYN  Ar Rayn            30.26 242  P       P         08 37 06.1 +0.7
RAYN                                pmax    pmax
          comp=Z,29nm,1.0s
RAYN  Ar Rayn            30.26 242  P       P         08 37 06.1 +0.7
ENH   Enshi              30.27 101  P       P         08 37 05.1  -0.5
GYA   Guiyang            30.41 110 ⇑P       P         08 37 06.5  -0.4
GYA                                 pmax    pmax
          comp=Z,18nm,0.6s
CHTO  Chiang Mai         30.85 130  P       P         08 37 09.6  -1.0
CHTO                                pmax    pmax
          comp=Z,72nm,2.0s
CHTO  Chiang Mai         30.85 130  P       P         08 37 09.6  -1.0
CHTO  Chiang Mai         30.85 130  P       P         08 37 11.0 +0.3
BR131 Keskin Array S     30.88 280  P       P         08 37 11.9 +0.9
BR131                               pmax    pmax
          comp=Z,72nm,1.0s
BR131 Keskin Array S     30.88 280  P       P         08 37 11.9 +0.9
BR131                               IAmb    IAmb      08 37 13.4
          comp=Z,72nm,0.9s
BRTR  Keskin Array B     30.88 280  P       P         08 37 12.2 +1.2
          comp=Z,32nm,0.8s,baz=93,slow=7.9,SNR=67
CM31  Chiang Mai Arr     31.13 131  P       P         08 37 11.7  -1.4
CMAR  Chiang Mai Arr     31.13 131  P       P         08 37 11.2  -2.0
          comp=Z,2.8nm,0.3s,baz=96,slow=33,SNR=6.5
CMAR                                PP      PnPn      08 37 54.2   -21
          comp=Z,4.2nm,0.8s,baz=315,slow=11,SNR=5.3
CMAR                                PcP     PcP       08 40 05.2  -3.0
          comp=Z,1.1nm,0.3s,baz=66,slow=41,SNR=1.5
ASF   Jabal al Asfar     31.37 265  P       P         08 37 15.9 +0.7
          comp=Z,12nm,0.8s,baz=178,slow=21,SNR=8.9
ANTO  Ankara             31.46 281  P       P         08 37 15.5  -0.5
ANTO                                pmax    pmax
          comp=Z,42nm,1.0s
ANTO  Ankara             31.46 281  P       P         08 37 15.5  -0.5
ANTO                                IAmb    IAmb      08 37 19.7
          comp=Z,42nm,1.0s
BR231 Keskin MP Arra     31.48 281  P       P         08 37 17.2 +1.0
BR231                               IAmb    IAmb      08 37 19.0
          comp=Z,168nm,1.9s
SLVN  Son La             31.97 120  P       P         08 37 20.2  -0.4
MMAI  Mount Meron Ar     32.09 267  P       P         08 37 22.6 +1.1
          comp=Z,11nm,0.8s,baz=82,slow=8.5,SNR=13
PURM  Purcari            32.12 294 ⇑P       P         08 37 23.6 +2.0
HIA   Hailar             32.16  61⇓eP       P         08 37 22.5 +0.5
HIA                                 pmax    pmax
          comp=Z,32nm,0.9s
HIA   Hailar             32.16  61  P       P         08 37 22.0   0.0
AKASG Malin Array Be     32.20 302  P       P         08 37 22.8 +0.5
          comp=Z,12nm,0.7s,baz=74,slow=8.8,SNR=22
AKASG                               PP      PnPn      08 38 09.8   -18
          comp=Z,9.0nm,0.7s,baz=75,slow=9.6,SNR=5.3
AKASG Malin Array Be     32.20 302  P       P         08 37 22.5 +0.2
AKASG                               pmax    pmax
          comp=Z,10.0nm,1.3s
AKASG Malin Array Be     32.20 302  P       P         08 37 22.5 +0.2
AKBB  Malin Array Si     32.20 302  P       P         08 37 22.8 +0.5
AKBB                                pmax    pmax
          comp=Z,86nm,1.4s
AKBB  Malin Array Si     32.20 302  P       P         08 37 22.8 +0.5
AKBB                                IAmb    IAmb      08 37 23.7
          comp=Z,86nm,1.4s
MDUB  Mudurnu            32.46 283  P       P         08 37 26.3 +1.5
MILM  Milestii Mici      32.78 295 ⇑P       P         08 37 28.7 +1.3
MILM  Milestii Mici      32.78 295 ⇑P       P         08 37 28.7 +1.3
CSS   Mathiatis          32.80 272  P       P         08 37 29.0 +1.2
SORM  Soroca             32.95 297 ⇑P       P         08 37 29.8 +1.0
SORM  Soroca             32.95 297 ⇑P       P         08 37 29.8 +1.0
TLCR                     33.06 292 ⇑P       P         08 37 31.5 +1.7
TLCR                     33.06 292 ⇑P       P         08 37 31.5 +1.7
LEF   Lefka              33.06 272 ⇑P       P         08 37 31.5 +1.5
MNK   Minsk              33.07 309 i P      P         08 37 28.7  -1.1
MNK                                i S      S         08 42 47.9  -0.2
MNK                                 pmax    pmax
          comp=N,25nm,0.9s
MNK                                 pmax    pmax
          comp=E,9.0nm,0.9s
MNK                                 pmax    pmax
          comp=Z,85nm,0.9s
MNK   Minsk              33.07 309 i P      P         08 37 28.8  -1.1
          comp=E,9.0nm,0.9s
MNK                                i P      P         08 37 28.8  -1.1
          comp=N,25nm,0.9s
MNK                                i P      P         08 37 28.8  -1.1
          comp=Z,85nm,0.9s,baz=93
MNK                                i S      S         08 42 47.9  -0.1
JURR  Jurilovca          33.09 291 ⇑P       P         08 37 31.5 +1.4
TPGR  Topolog            33.40 291 ⇓P       P         08 37 33.7 +0.9
EFOR  EFORIE             33.41 290 ⇑P       P         08 37 35.4 +2.5
VLDR  Vladesti           33.45 293 ⇑P       P         08 37 35.5 +2.2
TIRR  Tirgusor           33.48 291 ⇑P       P         08 37 35.3 +1.8
TIRR  Tirgusor           33.48 291  P       P         08 37 34.3 +0.8
TIRR                                pmax    pmax
          comp=Z,68nm,0.9s
TIRR  Tirgusor           33.48 291  P       P         08 37 34.3 +0.8
TIRR                                IAmb    IAmb      08 37 35.7
          comp=Z,68nm,0.9s
TATR  Tatarca            33.52 293 ⇑P       P         08 37 36.1 +2.3
VASR  Vaslui             33.52 295 ⇑P       P         08 37 35.3 +1.5
CFR   Carcaliu           33.53 292 ⇑P       P         08 37 35.0 +1.1
CFR   Carcaliu           33.53 292 ⇑P       P         08 37 35.0 +1.1
MFTR  Murfatlar          33.53 290 ⇑P       P         08 37 36.0 +2.0
SCTR  Scanteiesti        33.54 293 ⇑P       P         08 37 36.2 +2.2
VARL  Varlezi            33.60 293 ⇑P       P         08 37 37.0 +2.5
NACGM Naroch             33.73 310 i P      P         08 37 40.4 +4.9
HARR  Harsova            33.77 291 ⇑P       P         08 37 37.9 +1.9
HARR  Harsova            33.77 291 ⇑P       P         08 37 37.9 +1.9
ISP   Isparta            33.80 278  P       P         08 37 38.0 +1.5
ISP                                 pmax    pmax
          comp=Z,88nm,1.2s
ISP   Isparta            33.80 278  P       P         08 37 38.0 +1.5
ISP                                 IAmb    IAmb      08 37 38.7
          comp=Z,88nm,1.2s
LVZ   Lovozero           33.81 334⇑eP       P         08 37 37.8 +1.6
LVZ                                 pmax    pmax
          comp=Z,80nm,1.2s
ICOR  Ion Corvin         33.98 290 ⇑P       P         08 37 40.3 +2.4
EIL   Elat               34.06 262  P       P         08 37 39.9 +1.1
          comp=Z,29nm,1.1s,baz=51,slow=3.7,SNR=9.2
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APA    Apatity          34.07 333⇓iP  P      08 37 37.5 -0.8
APA                               pmax  pmax
       comp=Z,12nm,1.1s
APA                               MLR   MLR
       comp=Z,58µm,15.0s
VSU    Vasula           34.10 316 eP  P      08 37 40.7 +2.0
VSU    Vasula           34.10 316⇓eP  P      08 37 39.5 +0.8
VSU                               pmax  pmax
       comp=Z,226nm,1.2s
ISAL   Salakas          34.14 311 eP  P      08 37 40.2 +1.0
ODBI   Odobesti         34.17 293 ⇑P  P      08 37 42.3 +2.8
TESR   Tescani          34.32 295 ⇑P  P      08 37 42.0 +1.2
VRI    Vrincioaia       34.38 293 ⇑P  P      08 37 43.3 +1.9
VRI    Vrincioaia       34.38 293 ⇑P  P      08 37 43.3 +1.9
PLOR   Plostina         34.43 293 ⇑P  P      08 37 43.6 +1.7
PLOR   Plostina         34.43 293 ⇑P  P      08 37 43.6 +1.7
BISRR  Bisoca           34.45 293 ⇑P  P      08 37 44.1 +2.1
PRAR   RASCA            34.47 296 ⇑P  P      08 37 43.9 +1.7
ISR    Istrita          34.65 292 ⇑P  P      08 37 46.0 +2.2
ISR    Istrita          34.65 292 ⇑P  P      08 37 46.0 +2.2
ELL    Elmali           34.65 277  P  P      08 37 44.4 +0.5
ELL                               pmax  pmax
       comp=Z,86nm,1.2s
ELL    Elmali           34.65 277  P  P      08 37 44.4 +0.5
ELL                               IAmb  IAmb 08 37 46.6
       comp=Z,86nm,1.2s
COVR   Voineasa-Covas   34.74 294 ⇑P  P      08 37 46.5 +2.0
NEHR   Nehoiu           34.76 293 ⇑P  P      08 37 47.3 +2.6
FINES  FINESS Array B   34.94 321  P  P      08 37 47.0 +1.0
       comp=Z,10nm,0.6s,baz=111,slow=9.4,SNR=18
FINES                             PP    PnPn 08 38 44.8  -18
       comp=Z,10nm,0.7s,baz=104,slow=14,SNR=4.1
MLR    Muntele Rosu     34.99 293 ⇑P  P      08 37 48.9 +2.1
MLR    Muntele Rosu     34.99 293  P  P      08 37 48.9 +2.1
       comp=Z,67nm,0.7s,baz=37,slow=3.6,SNR=63
MLR    Muntele Rosu     34.99 293  P  P      08 37 48.5 +1.7
MLR                               pmax  pmax
       comp=Z,163nm,1.2s
MLR    Muntele Rosu     34.99 293  P  P      08 37 48.5 +1.7
SECR                    35.00 292 ⇑P  P      08 37 48.6 +1.9
BURAR  Bucovina Array   35.11 297 ⇑P  P      08 37 49.4 +1.7
BURAR  Bucovina Array   35.11 297 ⇑P  P      08 37 49.4 +1.7
BURAR  Bucovina Array   35.11 297  P  P      08 37 48.9 +1.2
BUR08  Bucovina Ar. S   35.11 297  P  P      08 37 48.4 +0.6
BALB   Balikesir        35.14 283  P  P      08 37 48.6 +0.7
BALB                              IAmb  IAmb 08 37 50.2
       comp=Z,70nm,0.9s
DOPR   Dopca            35.28 294 ⇑P  P      08 37 50.9 +1.7
PABE   Paberze          35.37 311 eP  P      08 37 50.2 +0.6
PABE   Paberze          35.37 311  P  P      08 37 51.1 +1.4
PABE                              IAmb  IAmb 08 37 58.1
       comp=Z,74nm,1.0s
LVV    L'vov            35.59 301 eP  P      08 37 53.0 +1.3
LVV                               e          08 39 18.8
LVV                               eS    S    08 43 27.1 +0.1
VOIR                    35.62 293 ⇑P  P      08 37 53.4 +1.3
VOIR                    35.62 293 ⇑P  P      08 37 53.4 +1.3
MTSE   Matsula          35.65 316 eP  P      08 37 52.7 +0.6
MTUR   Matau            35.65 293 ⇑P  P      08 37 53.0 +0.6
MTUR   Matau            35.65 293 ⇑P  P      08 37 53.0 +0.6
TGMR   Targu Mures      35.76 295 ⇑P  P      08 37 56.1 +2.9
ARCR   ARCALIA          35.77 296 ⇑P  P      08 37 56.0 +2.6
COPA   Copaceanca       35.79 291 ⇑P  P      08 37 55.2 +1.7
STFAR  Stefanesti-Arg   35.80 292 ⇑P  P      08 37 55.4 +1.8
SUW    Suwalki          35.82 308 eP  P      08 37 54.6 +0.9
SUW    Suwalki          35.82 308 eP  P      08 37 54.9 +1.3
SUW    Suwalki          35.82 308  P  P      08 37 53.9 +0.3
SUW                               pmax  pmax
       comp=Z,69nm,0.9s
SUW    Suwalki          35.82 308  P  P      08 37 53.9 +0.3
SUW                               IAmb  IAmb 08 39 11.2
       comp=Z,69nm,0.9s
HUMR   Humele           35.86 292 ⇑P  P      08 37 56.4 +2.3
ARR    Arges            35.92 293 ⇑P  P      08 37 56.3 +1.7
ALN    Alexandroupoli   36.08 285  P  P      08 37 57.1 +1.1
ALN                               pmax  pmax
       comp=Z,47nm,1.1s
ALN    Alexandroupoli   36.08 285  P  P      08 37 57.1 +1.1
ALN                               IAmb  IAmb 08 37 58.3
       comp=Z,47nm,1.1s
NJ2    Nanjing          36.37  91 eP  P      08 37 58.1 -0.5
NJ2                               pmax  pmax
       comp=Z,10.0nm,0.5s
KWP    Kalwaria Pacla   36.46 301 eP  P      08 38 00.2 +1.0
KWP    Kalwaria Pacla   36.46 301  P  P      08 38 00.2 +1.0
KWP    Kalwaria Pacla   36.46 301  P  P      08 38 00.2 +1.0
LOT    Lotru            36.49 293 ⇑P  P      08 38 02.0 +2.4
TRPA   Tarpa            36.80 298 ⇑P  P      08 38 03.5 +1.4
TRPA   Tarpa            36.80 298 eP  P      08 38 03.3 +1.2
KOLS   Kolonicke sedl   36.84 300 eP  P      08 38 04.1 +1.6
KOLS   Kolonicke sedl   36.84 300 eP  P      08 38 04.1 +1.6
UZH    Uzhgorod         36.88 299⇓iP  P      08 38 03.0 +0.3
UZH                               i          08 38 08.0
UZH                               e          08 39 32.5
DRGR                    36.93 296 ⇑P  P      08 38 04.6 +1.3
DRGR                    36.93 296 ⇑P  P      08 38 04.6 +1.3
GZR    Gura Zlata       37.19 294 ⇑P  P      08 38 06.7 +1.2
PUNG   Punghina         37.35 292 ⇑P  P      08 38 07.9 +1.1
CRVS   Cervenica-Dubn   37.38 300 eP  P      08 38 09.0 +2.0
CRVS   Cervenica-Dubn   37.38 300 eP  P      08 38 09.0 +2.0
ARCES  ARCESS Array B   37.53 334  P  P      08 38 09.2 +1.2
       comp=Z,15nm,0.5s,baz=105,slow=9.1,SNR=91
ARCES  ARCESS Array B   37.53 334  P  P      08 38 09.3 +1.2
ARCES                             pmax  pmax
       comp=Z,91nm,1.3s
ARCES  ARCESS Array B   37.53 334  P  P      08 38 09.3 +1.2
ARCES                             IAmb  IAmb 08 38 16.4
       comp=Z,92nm,1.2s
HERR   Herculane        37.56 293 ⇑P  P      08 38 09.1 +0.5
VTS    Vitosha          37.58 289 ⇑P  P      08 38 10.8 +1.7
VTS    Vitosha          37.58 289  P  P      08 38 10.7 +1.7
VTS                               pmax  pmax
       comp=Z,67nm,0.9s
VTS    Vitosha          37.58 289  P  P      08 38 10.7 +1.7
VTS                               IAmb  IAmb 08 38 12.0
       comp=Z,67nm,0.9s
SIRR   Siria            37.75 295 ⇑P  P      08 38 11.9 +1.7
APE    Apeiranthos      37.77 280 ⇑P  P      08 38 11.4 +0.9
APE    Apeiranthos      37.77 280 ⇑P  P      08 38 11.4 +0.9
ZAPS   Zavoj            37.82 290 eP  P      08 38 12.4 +1.5
ZAGS   Zajecar          37.96 291 eP  P      08 38 13.4 +1.5
NIE    Niedzica         38.05 301 eP  P      08 38 15.1 +2.4
MDVR   Moldovita        38.07 293 ⇑P  P      08 38 14.4 +1.5
KECS   Kecovo           38.09 299 eP  P      08 38 15.0 +2.0
KECS                              pmax  pmax
       comp=Z,21nm,0.8s
KECS   Kecovo           38.09 299 eP  P      08 38 15.0 +2.0
YAK    Yakutsk          38.15  39  P  P      08 38 12.3 -1.0
       comp=Z,6.8nm,0.4s,baz=98,slow=12,SNR=9.6
YAK    Yakutsk          38.15  39 eP  P      08 38 10.8 -2.5
YAK                               pmax  pmax
       comp=Z,63nm,1.2s
YAK                               pmax  pmax
       comp=E,32nm,1.0s
YAK                               pmax  pmax
       comp=N,11nm,1.4s
YAK    Yakutsk          38.15  39  P  P      08 38 12.6 -0.7
YAK                               IAmb  IAmb 08 38 13.5
       comp=Z,78nm,1.2s
BOSS   Bosilegrad       38.15 289 eP  P      08 38 15.9 +2.3
OJC    Ojcow            38.24 302 eP  P      08 38 15.3 +1.0
OJC    Ojcow            38.24 302  P  P      08 38 14.6 +0.3
OJC                               pmax  pmax
       comp=Z,48nm,0.9s
OJC    Ojcow            38.24 302  P  P      08 38 14.6 +0.3
OJC                               IAmb  IAmb 08 38 16.2
       comp=Z,48nm,0.9s
BOVS   Bovan            38.37 291 ⇑P  P      08 38 16.4 +0.9
BOVS   Bovan            38.37 291 eP  P      08 38 16.4 +0.9
PRVS   Prvonek          38.43 289 eP  P      08 38 17.8 +1.8
VAY    Valandovo        38.44 287 i P P      08 38 17.4 +1.3
BARS   Barje            38.53 290 eP  P      08 38 12.8 -4.0
BARS   Barje            38.53 290 eP  P      08 38 18.0 +1.2
PSZ    Piszkesteto      38.59 298 ⇑P  P      08 38 18.7 +1.4
PSZ    Piszkesteto      38.59 298 eP  P      08 38 18.5 +1.2
PSZ    Piszkesteto      38.59 298 ⇑P  P      08 38 18.7 +1.4
PSZ    Piszkesteto      38.59 298  P  P      08 38 17.6 +0.4
STIP   Stip             38.60 288 i P P      08 38 17.4  0.0
LANS   Liptovska Anna   38.63 300 eP  P      08 38 19.8 +2.2
LANS                              pmax  pmax
       comp=Z,9.0nm,0.9s
LANS   Liptovska Anna   38.63 300 eP  P      08 38 19.8 +2.2
SELS   Selova           38.90 291 eP  P      08 38 21.0 +1.1
IDI    Anoyia           38.96 277  P  P      08 38 20.4 -0.2
       comp=Z,31nm,0.9s,baz=53,slow=9.7,SNR=9.8
GRUS   Gruza            38.99 292 eP  P      08 38 21.9 +1.2
SKO    Skopje           39.05 289 i P P      08 38 22.4 +1.3
TRUS   Trudelj          39.12 293 eP  P      08 38 23.5 +1.8
VYHS   Vyhne            39.16 299 eP  P      08 38 23.8 +1.7
VYHS                              pmax  pmax
       comp=Z,28nm,1.2s
VYHS   Vyhne            39.16 299 eP  P      08 38 23.8 +1.7
FRGS   Fruska Gora      39.28 294 ⇑P  P      08 38 23.9 +0.9
FRGS   Fruska Gora      39.28 294 eP  P      08 38 23.9 +0.9
FRGS   Fruska Gora      39.28 294 eP  P      08 38 24.6 +1.5
AGG    Agios Georgios   39.39 284  P  P      08 38 24.7 +0.6
AGG                               pmax  pmax
       comp=Z,103nm,1.4s
AGG    Agios Georgios   39.39 284  P  P      08 38 24.7 +0.6
AGG                               IAmb  IAmb 08 38 25.5
       comp=Z,103nm,1.4s
GKP    Gorka Klasztor   39.40 307 eP  P      08 38 25.4 +1.5
GKP    Gorka Klasztor   39.40 307 eP  P      08 38 25.3 +1.3
KOLL   Kolacno          39.43 300 eP  P      08 38 26.4 +2.2
DIVS   Divibare         39.44 292 eP  P      08 38 25.5 +1.1
DIVS   Divibare         39.44 292  P  P      08 38 25.3 +0.8
DIVS                              IAmb  IAmb 08 38 26.9
       comp=Z,87nm,1.0s
DIVS   Divibare         39.44 292 eP  P      08 38 25.6 +1.1
FNA    Florina          39.47 287  P  P      08 38 25.1 +0.3
FNA                               pmax  pmax
       comp=Z,45nm,0.8s
FNA    Florina          39.47 287  P  P      08 38 25.1 +0.3
IVAS   Ivanjica         39.47 292 eP  P      08 38 25.9 +1.1
MDJ    Mudanjiang       39.60  67  P  P      08 38 25.3 -0.4
MDJ                               pmax  pmax
       comp=Z,75nm,6.4s
MDJ    Mudanjiang       39.60  67  P  P      08 38 25.1 -0.7
MDJ    Mudanjiang       39.60  67  P  P      08 38 26.5 +0.8
TEKS   Tekeris          39.63 293 eP  P      08 38 25.5 -0.5
TEKS   Tekeris          39.63 293 eP  P      08 38 27.2 +1.2
SJES   Sjenica          39.69 291 eP  P      08 38 28.0 +1.4
MORC   Moravsky Berou   39.75 302 ⇑P  P      08 38 28.1 +1.1
MORC   Moravsky Berou   39.75 302 eP  P      08 38 27.9 +1.0
MORC   Moravsky Berou   39.75 302  P  P      08 38 28.0 +1.0
MORC                              pmax  pmax
       comp=Z,26nm,0.9s
MORC   Moravsky Berou   39.75 302  P  P      08 38 28.0 +1.1
CSKK   Cskako           39.78 298 eP  P      08 38 28.2 +1.0
MORH   Mrgy, Hungar     39.80 296 eP  P      08 38 27.8 +0.5
MORH   Mrgy, Hungar     39.80 296 eP  P      08 38 27.8 +0.5
JAVC   Velka Javorina   39.85 300 eP  P      08 38 29.9 +2.1
TIXI   Tiksi            39.91  24  P  P      08 38 28.1 +0.2
       comp=Z,31nm,0.6s,baz=273,slow=6.0,SNR=32
TIXI                              PcP   PcP  08 40 32.1 -1.0
       comp=Z,16nm,0.7s,baz=309,slow=1.6,SNR=3.7
TIXI   Tiksi            39.91  24ceP  P      08 38 27.6 -0.3
TIXI                              pmax  pmax
       comp=Z,37nm,0.7s
TIXI   Tiksi            39.91  24  P  P      08 38 27.6 -0.3
TIXI                              IAmb  IAmb 08 38 29.9
       comp=Z,36nm,0.6s
BBLS   Lazi&#263;i      39.91 292 eP  P      08 38 29.4 +1.0
BBLS   Lazi&#263;i      39.91 292 eP  P      08 38 30.0 +1.6
KBN    Korca            39.95 287  P  P      08 38 27.8 -1.0
KBN                               pmax  pmax
       comp=Z,61nm,1.5s
KBN    Korca            39.95 287  P  P      08 38 27.8 -1.0
KLR    Kul'dur          39.95  59  P  P      08 38 28.4 -0.2
       comp=Z,25nm,0.5s,baz=283,slow=7.5,SNR=84
KLR    Kul'dur          39.95  59⇑eP  P      08 38 28.6  0.0
KLR                               pmax  pmax
       comp=Z,82nm,1.4s
SMOL   Smolenice        40.08 300 eP  P      08 38 31.0 +1.4
SMOL                              pmax  pmax
       comp=Z,15nm,1.0s
SMOL   Smolenice        40.08 300 eP  P      08 38 31.0 +1.4
KRLC   Kraliky          40.18 302 eP  P      08 38 30.6 +0.1
KRLC   Kraliky          40.18 302 eP  P      08 38 30.6 +0.1
KOVH   Kovagotottos     40.20 296 eP  P      08 38 31.1 +0.4
MPLH   Magyarpolny      40.31 298 eP  P      08 38 32.4 +0.8
KSP    Ksiaz            40.34 304 eP  P      08 38 32.7 +0.9
ZST    Bratislava       40.36 299 eP  P      08 38 33.4 +1.4
ZST    Bratislava       40.36 299 eP  P      08 38 33.4 +1.4
ITM    Ithomi           40.38 282  P  P      08 38 31.6 -0.8
DPC    Dobruska-Polom   40.41 303 eP  P      08 38 33.9 +1.4
DPC    Dobruska-Polom   40.41 303 eP  P      08 38 33.9 +1.4
PDG    Podgorica        40.44 290 ⇑P  P      08 38 33.8 +1.0
PDG    Podgorica        40.44 290 eP  P      08 38 34.0 +1.3
PDG    Podgorica        40.44 290  P  P      08 38 33.9 +1.2
PDG                               IAmb  IAmb 08 38 34.8
       comp=Z,92nm,0.7s
VRAC   Vranov           40.45 301 ⇑P  P      08 38 34.4 +1.7
VRAC   Vranov           40.45 301  P  P      08 38 34.3 +1.6
       comp=Z,16nm,0.8s,baz=81,slow=9.8,SNR=13
VRAC   Vranov           40.45 301 eP  P      08 38 34.0 +1.3
VRAC   Vranov           40.45 301 ⇑P  P      08 38 34.4 +1.7
UPM    Unac-Piva        40.45 291 eP  P      08 38 34.4 +1.4
DRME   Dracevica, Mon   40.57 290 eP  P      08 38 34.8 +1.0
UPC    Upice            40.58 303 eP  P      08 38 35.3 +1.5
UPC    Upice            40.58 303 eP  P      08 38 35.3 +1.5
KRUC   Moravsky         40.63 301 eP  P      08 38 35.3 +1.1
KS19   Wonju Array Si   40.74  78  P  P      08 38 34.4 -0.8
KSAR   Wonju Array Be   40.77  78  P  P      08 38 35.5  0.0
KSAR   Wonju Array Be   40.77  78  P  P      08 38 35.5  0.0
KSRS   Korea Array      40.80  78  P  P      08 38 34.9 -0.8
       comp=Z,2.9nm,0.5s,baz=286,slow=7.3,SNR=11
BRY    Bratogost        40.80 291 eP  P      08 38 37.0 +1.1
TJN    Taejon           40.82  80⇓eP  P      08 38 34.8 -1.1
SOP    Sopron           40.83 299 eP  P      08 38 37.5 +1.6
HFS    Hagfors          40.87 318  P  P      08 38 36.9 +0.9
       comp=Z,23nm,0.6s,baz=96,slow=11,SNR=36
ATD    Arta Tunnel      40.90 232  P  P      08 38 37.7 +0.9
VLO    Vlora            40.92 287  P  P      08 38 36.9 +0.2
VLO                               pmax  pmax
       comp=Z,134nm,0.8s
VLO    Vlora            40.92 287  P  P      08 38 36.9 +0.2
HCY    Herceg Novi      40.97 291 eP  P      08 38 37.6 +0.5
TREC   Trest            41.16 301 eP  P      08 38 40.1 +1.5
TREC   Trest            41.16 301 eP  P      08 38 40.1 +1.5
BLY    Banja Luka       41.18 294 eP  P      08 38 39.5 +0.7
CONA   Conrad Observa   41.23 299 i P P      08 38 40.7 +1.4
       comp=Z,34nm,1.0s,SNR=9.2
MGRS   Mrkonjic Grad    41.35 294 eP  P      08 38 41.9 +1.7
USA0B  Ussuriysk Arra   41.37  66  P  P      08 38 40.3  0.0
USA0B                             pmax  pmax
       comp=Z,21nm,0.9s
USA0B  Ussuriysk Arra   41.37  66  P  P      08 38 40.3  0.0
USRK   Ussuriysk Ar.    41.37  66  P  P      08 38 40.1 -0.2
       comp=Z,18nm,0.9s,baz=288,slow=9.3,SNR=19
USRK   Ussuriysk Ar.    41.37  66  P  P      08 38 40.2 -0.1
USRK   Ussuriysk Ar.    41.37  66  P  P      08 38 40.2 -0.1
STON   Ston             41.39 291 eP  P      08 38 40.8 +0.3
PRU    Pruhonice        41.61 303 eP  P      08 38 43.7 +1.5
PRU    Pruhonice        41.61 303 eP  P      08 38 43.7 +1.5
ARSA   Arzberg          41.62 298 i P P      08 38 43.6 +1.2
       comp=Z,14nm,0.9s,SNR=5.5
BRG    Berggiesshubel   41.80 304 eP  P      08 38 44.7 +0.9
       comp=Z,18nm,0.9s,baz=75,slow=8.2
BRG    Berggiesshubel   41.80 304 eP  P      08 38 45.2 +1.4
BRG                               Amp        08 38 46.2
       comp=Z,15nm,0.8s
NC405  NORSAR Array S   41.81 320  P  P      08 38 43.5 -0.3
GOLS   Golise           41.88 297 i P P      08 38 45.3 +0.7
NC602  NORSAR Array S   41.91 319  P  P      08 38 45.8 +1.2
NC303  NORSAR Array S   41.98 320  P  P      08 38 45.8 +0.6
NC303                             IAmb  IAmb 08 38 47.2
       comp=Z,143nm,1.4s
CKRC   Cesky Krumlov    42.02 301 eP  P      08 38 48.9 +3.2
NB201  NORSAR Array S   42.02 320  P  P      08 38 45.9 +0.3
CRES   Cresnjev         42.05 296 eP  P      08 38 46.5 +0.6
NB2    NORSAR Subarra   42.06 320  P  P      08 38 46.0 +0.2
       comp=Z,6.3nm,0.6s,baz=88,slow=8.6
NOA    NORSAR Array B   42.06 320  P  P      08 38 46.2 +0.4
       comp=Z,27nm,0.9s,baz=89,slow=8.1,SNR=24
SOKA   Soboth           42.09 298 i P P      08 38 47.4 +1.0
       comp=Z,27nm,1.0s,SNR=10
FBE    Freiberg         42.15 304 eP  P      08 38 47.8 +1.1
       comp=Z,38nm,1.1s,baz=75,slow=8.2
NAO01  NORSAR Array S   42.23 319  P  P      08 38 47.1 -0.1
NAO01                             IAmb  IAmb 08 38 55.5
       comp=Z,161nm,1.6s
NC204  NORSAR Array S   42.27 320  P  P      08 38 48.4 +0.8
NC204                             IAmb  IAmb 08 38 55.9
       comp=Z,214nm,1.6s
NBO00  NORSAR Array S   42.27 320  P  P      08 38 47.1 -0.5
MOA    Molln            42.29 300 i P P      08 38 49.0 +1.2
       comp=Z,13nm,0.9s,SNR=8.9
CLL    Collm            42.29 305  P  P      08 38 48.4 +0.6
CLL                               pmax  pmax
       comp=Z,17nm,0.7s
CLL    Collm            42.29 305 i P P      08 38 48.4 +0.6
       comp=Z,32nm,1.1s
CLL    Collm            42.29 305 eP  P      08 38 48.5 +0.7
       comp=Z,32nm,1.1s,baz=75,slow=8.2
CLL    Collm            42.29 305  P  P      08 38 48.4 +0.6
GEC2   GERESS Array S   42.40 301 eP  P      08 38 50.0 +1.1
       comp=Z,55nm,1.1s,baz=75,slow=8.2
GEC2   GERESS Array S   42.40 301  P  P      08 38 49.8 +0.9
GERES  GERESS Array B   42.40 301  P  P      08 38 50.1 +1.2
       comp=Z,18nm,0.6s,baz=78,slow=8.3,SNR=72
GERES                             PcP   PcP  08 40 42.6 +0.7
       comp=Z,4.7nm,0.8s,baz=81,slow=1.8,SNR=4.2
GERES  GERESS Array B   42.40 301  P  P      08 38 49.5 +0.6
KHC    Kasperske Hory   42.41 302 eP  P      08 38 50.3 +1.4
KHC    Kasperske Hory   42.41 302⇓eP  P      08 38 50.3 +1.4
KHC                               pmax  pmax
       comp=Z,19nm,0.9s
KHC    Kasperske Hory   42.41 302  P  P      08 38 50.4 +1.4
OBKA   Obir             42.46 298 i P P      08 38 50.3 +0.9
       comp=Z,27nm,0.9s,SNR=9.5
LJU    Ljubljana        42.60 297 i P P      08 38 51.6 +1.2
LJU    Ljubljana        42.60 297 eP  P      08 38 51.3 +0.9
CEY    Cerknica         42.76 297 i P P      08 38 52.6 +0.9
CEY    Cerknica         42.76 297 eP  P      08 38 52.4 +0.7
TANN   Tannenbergstha   42.82 304 eP  P      08 38 53.0 +0.8
       comp=Z,21nm,1.1s,baz=75,slow=8.2
RIY    Rijeka           42.84 296 eP  P      08 38 52.8 +0.4
WET    Wettzell         42.86 302 eP  P      08 38 54.0 +1.5
       comp=Z,61nm,1.7s,baz=75,slow=8.2
GUNZ   Gunzen           42.91 304 eP  P      08 38 53.9 +1.0
       comp=Z,54nm,1.4s,baz=75,slow=8.2
KONO   Kongsberg        42.96 318⇓eP  P      08 38 53.7 +0.6
KONO                              pmax  pmax
       comp=Z,44nm,1.2s
PLN    Plauen           42.99 304 eP  P      08 38 54.7 +1.2
       comp=Z,33nm,1.4s,baz=75,slow=8.2
MYKA   Terra Mystica    43.03 298 eP  P      08 38 54.8 +0.9
       comp=Z,5.9nm,0.8s
NEUB   Neuenburg        43.06 305 eP  P      08 38 55.3 +1.2
       comp=Z,30nm,0.8s,baz=75,slow=8.2
KBA    Koelnbreinsper   43.10 299 eP  P      08 38 55.2 +0.6
       comp=Z,10nm,0.5s
SPITS  Spitsbergen Ar   43.12 345  P  P      08 38 56.2 +2.0
       comp=Z,50nm,1.1s,baz=111,slow=14,SNR=5.3
SPITS                             PcP   PcP  08 40 43.8 +0.1
       comp=Z,12nm,0.7s,baz=100,slow=9.4,SNR=5.1
PRED   Cave del Predi   43.13 298  P  P      08 38 55.5 +0.7
SGRT   San Giovanni R   43.13 291  P  P      08 38 54.9 +0.1
FLTG   Flechtingen      43.15 307 eP  P      08 38 55.1 +0.4
       comp=Z,26nm,1.1s,baz=75,slow=8.2
MOX    Moxa             43.29 304 eP  P      08 38 56.7 +0.8
       comp=Z,26nm,1.2s,baz=75,slow=8.2
TIP    Timpagrande      43.36 287  P  P      08 38 57.1 +0.4
TIP                               IAmb  IAmb 08 38 58.3
       comp=Z,78nm,1.0s
ZOU    Zoufplan         43.49 298  P  P      08 38 58.0 +0.1
ABTA   Abfaltersbach    43.74 299 eP  P      08 38 59.8 +0.1
       comp=Z,12nm,0.9s
ABTA                              eP    PcP  08 40 44.5 -1.9
       comp=Z,11nm,1.0s
STAL   STALIGIAL        43.75 298  P  P      08 38 59.5 -0.2
GRA1   Grafenberg Arr   43.77 303  P  P      08 39 00.7 +0.9
GRA1                              IAmb  IAmb 08 39 02.6
       comp=Z,54nm,0.9s
GRF    Grafenberg Arr   43.77 303  P  P      08 39 00.7 +0.9
GRF                               pmax  pmax
       comp=Z,54nm,0.9s
GRF    Grafenberg Arr   43.77 303 eP  P      08 39 01.5 +1.7
       comp=Z,73nm,1.0s,baz=75,slow=8.2
GRFO   Grafenberg       43.77 303  P  P      08 39 00.8 +1.0
GRFO                              pmax  pmax
       comp=Z,50nm,0.9s
GRFO   Grafenberg       43.77 303  P  P      08 39 00.8 +1.0
GRFO                              IAmb  IAmb 08 39 02.6
       comp=Z,50nm,0.9s
NRDL   Niedersach Rie   43.79 307 eP  P      08 39 01.6 +1.8
       comp=Z,485nm,2.6s,baz=75,slow=8.2
CIMO   Cimolais         43.91 298  P  P      08 39 00.8 -0.2
GTTG   Gottingen        44.09 306 eP  P      08 39 03.7 +1.3
       comp=Z,69nm,1.1s,baz=75,slow=8.2
FUR    Furstenfeldbru   44.14 301 eP  P      08 39 04.7 +1.8
       comp=Z,75nm,0.7s,baz=75,slow=8.2
WTTA   Wattenberg       44.16 299 i P P      08 39 04.0 +0.8
       comp=Z,18nm,0.7s,SNR=7.8
WTTA                              eP    PcP  08 40 47.9  0.0
       comp=Z,7.8nm,0.6s
WATA   Walderalm        44.18 300 eP  P      08 39 03.5 +0.2
       comp=Z,13nm,0.7s
WATA                              eP    PcP  08 40 47.8 -0.1
       comp=Z,6.0nm,0.7s
PAOL   Paolisi          44.22 290  P  P      08 39 04.3 +0.7
PAOL                              IAmb  IAmb 08 39 12.0
       comp=Z,97nm,1.7s
CEL    Celeste          44.34 286  P  P      08 39 05.0 +0.4
SQTA   Sankt Quirin     44.45 300 i P P      08 39 06.0 +0.6
       comp=Z,16nm,0.9s,SNR=6.6
SQTA                              eP    PcP  08 40 48.8 -0.1
       comp=Z,9.3nm,0.6s
MOTA   Moosalm          44.48 300 eP  P      08 39 06.3 +0.6
       comp=Z,29nm,1.5s
MOTA                              eP    PcP  08 40 48.7 -0.3
       comp=Z,17nm,0.9s
CTI    Castel Tesino    44.52 298  P  P      08 39 06.2 +0.2
CTI                               pmax  pmax
       comp=Z,18nm,0.9s
CTI    Castel Tesino    44.52 298  P  P      08 39 06.2 +0.2
AQU    L'Aquila         44.55 292  P  P      08 39 07.6 +1.3
AQU                               pmax  pmax
       comp=Z,120nm,0.9s
AQU    L'Aquila         44.55 292 eP  P      08 39 07.5 +1.3
AQU    L'Aquila         44.55 292  P  P      08 39 07.6 +1.3
NRCA   Norcia           44.59 293     P      08 39 07.4 +0.9
NRCA                              IAmb  IAmb 08 39 09.0
       comp=Z,48nm,1.1s
RETA   Reutte           44.66 300 eP  P      08 39 07.8 +0.7
       comp=Z,29nm,1.0s
RETA                              eP    PcP  08 40 50.1 +0.6
       comp=Z,8.0nm,0.8s
TEOL   Teolo            44.72 297  P  P      08 39 07.8 +0.3
TEOL                              IAmb  IAmb 08 39 13.3
       comp=Z,72nm,0.9s
FETA   Feichten         44.83 299 eP  P      08 39 09.0 +0.5
       comp=Z,17nm,1.2s
FETA                              eP    PcP  08 40 50.5 +0.3
       comp=Z,15nm,0.9s
MURB   Monte Urbino     44.84 294  P  P      08 39 08.9 +0.3
JNU    Nakatsue         44.84  82  P  P      08 39 08.4 -0.3
JNU                               IAmb  IAmb 08 39 10.3
       comp=Z,68nm,1.3s
JNU    Nakatsue         44.84  82  P  P      08 39 08.9 +0.2
UBR    Ueberruh         45.03 300 eP  P      08 39 10.9 +0.9
       comp=Z,86nm,1.2s,baz=75,slow=8.2
IBBN   Ibbenburen       45.24 307 eP  P      08 39 12.3 +0.9
       comp=Z,30nm,1.0s,baz=75,slow=8.2
GSI    Gunungsitoli     45.25 147  P  P      08 39 10.0 -1.9
STU    Stuttgart        45.30 302  P  P      08 39 13.6 +1.6
STU                               pmax  pmax
       comp=Z,50nm,1.2s
STU    Stuttgart        45.30 302 eP  P      08 39 13.5 +1.5
       comp=Z,161nm,1.4s,baz=75,slow=8.2
STU    Stuttgart        45.30 302  P  P      08 39 13.6 +1.5
STU                               IAmb  IAmb 08 39 14.3
       comp=Z,50nm,1.2s
DAVA   Damuels          45.30 300 i P P      08 39 12.8 +0.6
       comp=Z,48nm,0.8s,SNR=16
JSU    Suzuyama         45.30  84  P  P      08 39 12.5 +0.3
TNS    Taunus Mts       45.36 304 eP  P      08 39 13.5 +0.9
       comp=Z,20nm,1.2s,baz=75,slow=8.2
SALO   Salr             45.40 298  P  P      08 39 13.8 +0.9
DAVOX  Davos/Dischmat   45.45 299  P  P      08 39 14.1 +0.6
       comp=Z,29nm,0.5s,baz=101,slow=5.1,SNR=27
OSSC   Osservatorio P   45.62 295  P  P      08 39 14.5 -0.2
OSSC                              IAmb  IAmb 08 39 16.5
       comp=Z,52nm,1.1s
RAFF   Raffo Rosso      45.88 285  P  P      08 39 17.8 +1.1
BFO    Black Forest     45.98 302  P  P      08 39 18.4 +1.0
BFO                               pmax  pmax
       comp=Z,50nm,1.5s
BFO    Black Forest     45.98 302 eP  P      08 39 18.1 +0.7
       comp=Z,23nm,1.2s,baz=75,slow=8.2
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BFO    Black Forest     45.98 302   P      P      08 39 18.4 +1.0
VLC    Villacollemand   45.98 296   P      P      08 39 18.9 +1.3
VLC                                 IAmb   IAmb   08 39 24.7
       comp=Z,58nm,0.7s
JOW    Kunigami         46.08  91   P      P      08 39 17.6 -0.9
MSSA   Maissana         46.51 296   P      P      08 39 22.4 +0.6
MSSA                                IAmb   IAmb   08 39 28.0
       comp=Z,51nm,0.9s
BTNL   Ternell          46.68 305  dP      P      08 39 23.9 +1.0
MEM    Membach          46.75 305  dP      P      08 39 24.4 +1.0
MEM                                dPcP    PcP    08 40 57.4 +0.8
ECH    Echery           46.76 302   P      P      08 39 24.0 +0.5
ECH                                 pmax   pmax
       comp=Z,52nm,1.3s
ECH    Echery           46.76 302   P      P      08 39 24.0 +0.5
ECH                                 IAmb   IAmb   08 39 31.6
       comp=Z,52nm,1.3s
JMN    Monobe           46.78  80   P      P      08 39 23.8 -0.1
JMN                                 IAmb   IAmb   08 39 32.0
       comp=Z,45nm,1.0s
BHOU   Houvegnez        46.82 305  dP      P      08 39 25.0 +1.0
BHOU                               dPP     PP     08 41 15.2 +1.2
WLF    Walferdange      46.94 304  dP      P      08 39 26.9 +2.0
       comp=Z,19nm,1.0s
WLF                                dPcP    PcP    08 40 58.0 +0.8
WLF    Walferdange      46.94 304   P      P      08 39 26.3 +1.4
WLF                                 pmax   pmax
       comp=Z,30nm,1.0s
WLF    Walferdange      46.94 304  eP      P      08 39 26.7 +1.8
       comp=Z,112nm,1.7s,baz=75,slow=8.2
WLF    Walferdange      46.94 304   P      P      08 39 26.3 +1.4
WLF                                 IAmb   IAmb   08 39 33.8
       comp=Z,30nm,1.0s
JWT    Wachi            47.18  77   P      P      08 39 27.4 +0.4
JWT                                 IAmb   IAmb   08 39 28.2
       comp=Z,89nm,1.3s
BCLA   Clavier          47.23 305  dP      P      08 39 28.2 +1.0
SENIN  Lac Senin/Sane   47.27 300   P      P      08 39 28.0 +0.2
RCHB   Rochefort        47.36 305  dP      P      08 39 29.2 +1.1
RCHB                               dPP     PP     08 41 19.9 +0.7
BGES   Gesves           47.37 305  dP      P      08 39 28.9 +0.6
BMRD   Maredsous        47.59 305  dP      P      08 39 31.2 +1.2
BMRD                               dPcP    PcP    08 41 00.2 +0.7
YSS    Yuzh-Sakhalins   47.66  59⇑eP      P      08 39 29.8 -0.8
YSS                                 pmax   pmax
       comp=Z,35nm,1.0s
YSS    Yuzh-Sakhalins   47.66  59   P      P      08 39 31.2 +0.7
YSS                                 IAmb   IAmb   08 39 31.5
       comp=Z,110nm,1.6s
YSS    Yuzh-Sakhalins   47.66  59   P      P      08 39 31.4 +0.8
DOU    Dourbes          47.76 305  dP      P      08 39 32.6 +1.2
BNI    Bardonecchia     48.14 298   P      P      08 39 35.7 +1.2
BNI                                 pmax   pmax
       comp=Z,47nm,1.0s
BNI    Bardonecchia     48.14 298   P      P      08 39 35.7 +1.2
BNI                                 IAmb   IAmb   08 39 41.3
       comp=Z,48nm,1.0s
JEW    Eniwo            48.30  65   P      P      08 39 35.5  0.0
INU    Inuyama          48.33  76   P      P      08 39 35.7 -0.1
INU                                 IAmb   IAmb   08 39 36.1
       comp=Z,46nm,1.1s
INU    Inuyama          48.33  76   P      P      08 39 35.5 -0.4
JGF    Kuroka           48.46  76   P      P      08 39 36.3 -0.7
JGF                                 IAmb   IAmb   08 39 37.0
       comp=Z,20nm,0.7s
PDSI   Padang           48.47 144   P      P      08 39 38.0 +0.9
       comp=Z,18nm,0.6s
VSL    Villasalto       48.47 290   P      P      08 39 38.0 +1.0
VSL                                 IAmb   IAmb   08 40 00.9
       comp=Z,34nm,1.1s
SEY    Seymchan         48.57  37   P      P      08 39 37.4  0.0
       comp=Z,18nm,0.8s,baz=268,slow=7.7,SNR=24
SEY                                 PcP    PcP    08 41 02.6 -0.3
       comp=Z,12nm,0.8s,baz=263,slow=4.1,SNR=10
ASAJ   Asahikawa        48.58  63   P      P      08 39 36.5 -1.2
       comp=Z,36nm,1.0s,baz=264,slow=7.5,SNR=8.2
ASAJ   Asahikawa        48.58  63   P      P      08 39 37.8 +0.1
ASAJ                                pmax   pmax
       comp=Z,43nm,1.0s
JKA    Kamikawa-asahi   48.58  63   P      P      08 39 37.8 +0.1
JKA                                 IAmb   IAmb   08 39 51.7
       comp=Z,43nm,1.0s
MA2    Magadan          48.59  41⇓eP      P      08 39 37.5 -0.1
MA2                                 pmax   pmax
       comp=Z,27nm,1.0s
MA2    Magadan          48.59  41   P      P      08 39 38.0 +0.4
MA2                                 IAmb   IAmb   08 41 03.4
       comp=Z,52nm,0.9s
MA2    Magadan          48.59  41   P      P      08 39 38.2 +0.6
MJB9   Matsu-Tunnel     48.64  74   P      P      08 39 37.5 -0.8
MJB9                                IAmb   IAmb   08 39 38.2
       comp=Z,53nm,0.8s
MAJO   Matsushiro       48.65  74⇓iP      P      08 39 37.6 -0.8
MAJO                                pmax   pmax
       comp=Z,45nm,1.0s
MAJO   Matsushiro       48.65  74   P      P      08 39 37.4 -1.0
MAJO                                IAmb   IAmb   08 39 38.2
       comp=Z,44nm,0.8s
MAJO   Matsushiro       48.65  74   P      P      08 39 37.2 -1.2
MAT    Matsushiro       48.65  74   P      P      08 39 37.4 -1.0
MJAR   Matsushiro Arr   48.65  74   P      P      08 39 37.2 -1.2
       comp=Z,51nm,1.0s,baz=282,slow=5.2,SNR=4.9
MJAR   Matsushiro Arr   48.65  74   P      P      08 39 37.4 -1.0
MJAR                                pmax   pmax
       comp=Z,30nm,1.0s
MJAR   Matsushiro Arr   48.65  74   P      P      08 39 37.4 -1.0
MJAR                                IAmb   IAmb   08 39 39.3
       comp=Z,30nm,1.0s
JTM    Tenmabayashi     48.85  68   P      P      08 39 38.6 -1.3
NOR    Nord             49.22 349 i P      P      08 39 42.7 +0.6
NOR                                 IAmb   IAmb   08 39 44.0
       comp=Z,3.7nm,0.9s
SSB    Saint Sauveur    49.46 299   P      P      08 39 44.5  0.0
SSB                                 pmax   pmax
       comp=Z,42nm,1.4s
SSB    Saint Sauveur    49.46 299   P      P      08 39 44.5  0.0
SSB                                 IAmb   IAmb   08 39 52.6
       comp=Z,42nm,1.4s
JMM    Marumori         49.91  71   P      P      08 39 47.1 -0.8
CLF    Chambon-Foret    49.91 303   P      P      08 39 48.3 +0.5
CLF                                 IAmb   IAmb   08 39 55.6
       comp=Z,56nm,0.9s
KRJI   Kerinci          49.96 144   P      P      08 39 56.5 +7.9
KEST   Kesra            50.16 286   P      P      08 39 50.5 +0.6
       comp=Z,26nm,1.0s,baz=30,slow=4.8,SNR=16
KEST                                LR     LR     09 06 42.6
       comp=Z,38µm,19.6s,baz=329,slow=43
KEST   Kesra            50.16 286   P      P      08 39 51.2 +1.2
KEST                                IAmb   IAmb   08 39 51.9
       comp=Z,59nm,1.2s
JYT    Yasato           50.22  73   P      P      08 39 49.3 -1.0
DAG    Danmarks Havn    50.56 343 i P      P      08 39 52.0 -0.3
DAG                                 IAmb   IAmb   08 40 00.4
       comp=Z,25nm,1.1s
EKA    Eskdalemuir Ar   50.59 314   P      P      08 39 53.2 +0.3
       comp=Z,20nm,0.8s,baz=74,slow=8.4,SNR=32
EKA                                 PcP    PcP    08 41 11.3 +1.0
       comp=Z,8.9nm,0.8s,baz=77,slow=5.6,SNR=5.4
DBG    Daneborg         51.63 340 i P      P      08 40 01.1 +0.7
DBG                                 IAmb   IAmb   08 40 07.9
       comp=Z,8.2nm,0.8s
BILL   Bilibino         52.72  28 i P      P      08 40 08.5 -0.1
BILL                              i               08 40 15.9
BILL                              i               08 41 17.5
BILL                                pmax   pmax
       comp=Z,52nm,1.2s
BILL   Bilibino         52.72  28   P      P      08 40 08.7 +0.1
BILL                                IAmb   IAmb   08 40 11.2
       comp=Z,115nm,1.4s
PEA0B  Petropavlovsk-   54.35  47   P      P      08 40 19.8 -1.0
PEA0B                               pmax   pmax
       comp=Z,41nm,1.3s
PEA0B  Petropavlovsk-   54.35  47   P      P      08 40 19.8 -1.0
PEA0B                               IAmb   IAmb   08 40 38.9
       comp=Z,41nm,1.3s
PETK   Petropavlovsk-   54.35  47   P      P      08 40 19.9 -0.9
       comp=Z,12nm,1.0s,baz=285,slow=2.3,SNR=11
KMBO   Kilima Mbogo     54.38 228   P      P      08 40 20.9 -0.8
       comp=Z,4.0nm,0.7s,baz=304,slow=23,SNR=3.1
KMBO   Kilima Mbogo     54.38 228   IAmb   IAmb   08 40 25.9
       comp=Z,13nm,1.2s
PET    Petropavlovsk    54.91  47d iP      P      08 40 23.4 -1.4
PET                                 pmax   pmax
       comp=Z,36nm,1.1s
PET    Petropavlovsk    54.91  47   P      P      08 40 23.3 -1.5
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KIBK   Kibwezi          54.95 227   P      P      08 40 25.8 +0.2
NEEM   North Greenlan   56.54 348 i P      P      08 40 37.1 +0.6
NEEM                                IAmb   IAmb   08 40 44.6
       comp=Z,48nm,0.9s
CART   Cartagena        56.58 293   P      P      08 40 36.1 -0.9
CART                                IAmb   IAmb   08 40 38.6
       comp=Z,64nm,1.0s
SUMG   Summit           57.06 341   P      P      08 40 41.4 +1.0
SUMG                                pmax   pmax
       comp=Z,45nm,1.0s
SUMG   Summit           57.06 341 i P      P      08 40 41.2 +0.8
SUMG                                IAmb   IAmb   08 40 49.9
       comp=Z,29nm,0.9s
SUMG   Summit           57.06 341   P      P      08 40 41.4 +1.0
SUMG                                IAmb   IAmb   08 40 49.0
       comp=Z,45nm,1.0s
ESBB   Sonseca Array    57.56 296   P      P      08 40 44.6 +0.6
ESDC   Sonseca Array    57.56 296   P      P      08 40 44.3 +0.2
       comp=Z,13nm,0.7s,baz=56,slow=6.9,SNR=63
ESDC   Sonseca Array    57.56 296   P      P      08 40 44.3 +0.2
MBAR   Mbarara          57.78 235   P      P      08 40 45.2 -0.7
       comp=Z,4.4nm,0.2s,baz=22,slow=15,SNR=5.4
MBAR   Mbarara          57.78 235   P      P      08 40 45.9  0.0
MBAR                                pmax   pmax
       comp=Z,10.0nm,0.8s
MBAR   Mbarara          57.78 235   P      P      08 40 45.9  0.0
PAB    San Pablo        57.88 296   P      P      08 40 46.9 +0.5
PAB                                 pmax   pmax
       comp=Z,88nm,1.9s
PAB    San Pablo        57.88 296   P      P      08 40 46.9 +0.5
PAB                                 IAmb   IAmb   08 40 47.6
       comp=Z,88nm,1.9s
MPSI   Mapaga           57.98 123   P      P      08 40 46.4 -0.7
       comp=Z,11nm,0.6s
EUNU   Eureka           58.02 356   P      P      08 40 47.5 +0.8
PBRG   Braganca         58.35 300  eP      P      08 40 50.5 +1.0
       comp=Z,47nm,2.0s
MVO    Moncorvo         58.85 299  eP      P      08 40 54.0 +0.9
       comp=Z,729nm,1.6s
MRSI   Marisa           59.16 121   P      P      08 40 54.2 -1.2
       comp=Z,47nm,0.9s
PVRL   Vila Real        59.25 300  eP      P      08 40 56.9 +1.1
       comp=Z,96nm,1.7s
PGAV   Gavieira, Arco   59.26 301  eP      P      08 40 57.4 +1.5
       comp=Z,372nm,1.9s
ICESG  Greenland Ices   59.45 338 i P      P      08 40 57.3 +0.2
ICESG                               IAmb   IAmb   08 41 05.6
       comp=Z,32nm,1.1s
MTE    Manteigas        59.58 299  eP      P      08 40 59.6 +1.5
       comp=Z,56nm,1.3s
MTE    Manteigas        59.58 299   P      P      08 40 59.0 +0.9
MTE                                 IAmb   IAmb   08 41 01.6
       comp=Z,22nm,0.9s
PVIS   Viseu            59.65 299  eP      P      08 40 59.5 +0.9
       comp=Z,60nm,1.5s
TULEG  Thule            59.77 351 i P      P      08 40 59.0 +0.3
TULEG                               IAmb   IAmb   08 41 07.0
       comp=Z,18nm,0.9s
TULEG  Thule            59.77 351   P      P      08 40 58.8  0.0
TULEG                               IAmb   IAmb   08 41 00.2
       comp=Z,51nm,1.2s
PMRV   Marv??o          59.98 298  eP      P      08 41 01.8 +1.0
       comp=Z,58nm,1.6s
APSI   Ampana           60.04 122   P      P      08 40 59.7 -1.8
       comp=Z,23nm,1.3s
PCAS   Casmilo, Conde   60.38 299  eP      P      08 41 04.6 +1.0
       comp=Z,275nm,1.6s
PESTR  Estremoz         60.40 297  eP      P      08 41 05.0 +1.3
       comp=Z,149nm,1.6s
PESTR  Estremoz         60.40 297   P      P      08 41 04.0 +0.3
TTSI   Tana Toraja      60.56 125   P      P      08 41 03.5 -1.5
       comp=Z,15nm,0.4s
PMTG   Montargil        60.72 298  eP      P      08 41 06.4 +0.6
       comp=Z,116nm,1.6s
EVO    Evora            60.85 297  eP      P      08 41 07.3 +0.5
       comp=Z,43nm,1.7s
PBEJ   Beja             61.02 297  eP      P      08 41 09.1 +1.1
       comp=Z,39nm,1.4s
PVAQ   Vaqueiros        61.25 296  eP      P      08 41 10.6 +1.1
       comp=Z,174nm,1.8s
PVAQ   Vaqueiros        61.25 296   P      P      08 41 10.3 +0.8
PVAQ                                IAmb   IAmb   08 41 11.1
       comp=Z,33nm,1.0s
PCVE   Castro Verde     61.35 296  eP      P      08 41 11.1 +0.9
       comp=Z,463nm,1.6s
MESJ   Messejana        61.36 296  eP      P      08 41 11.0 +0.8
       comp=Z,498nm,1.7s
PBDV   Barranco-do-Ve   61.48 296  eP      P      08 41 12.1 +1.0
       comp=Z,110nm,1.7s
A21K   Barrow           61.56  17   P      P      08 41 11.5 +0.5
A21K   Barrow           61.56  17   P      P      08 41 11.3 +0.3
       baz=318,SNR=19
RDOG   Red Dog Mine     62.43  21   P      P      08 41 24.1 +7.2
       baz=314
TNTI   Ternate          62.51 116   P      P      08 41 17.2 -1.0
       comp=Z,50nm,0.5s
TNTI   Ternate          62.51 116   P      P      08 41 18.4 +0.2
TNA    Tin City         62.69  25   P      P      08 41 19.5 +0.8
       baz=312,SNR=5.7
DY2G   Dye2             63.06 337 i P      P      08 41 21.8 +0.3
DY2G                                IAmb   IAmb   08 41 29.4
       comp=Z,32nm,0.9s
RES    Resolute Bay     63.68 357   P      P      08 41 25.4 +0.3
       comp=Z,4.7nm,0.8s,baz=19,slow=8.7,SNR=12
RES    Resolute Bay     63.68 357   P      P      08 41 25.8 +0.7
RES                                 pmax   pmax
       comp=Z,19nm,1.4s
RES    Resolute Bay     63.68 357   P      P      08 41 25.8 +0.7
SANI   Sanana           63.70 119   P      P      08 41 22.0 -4.1
       comp=Z,24nm,2.4s
SANI   Sanana           63.70 119   P      P      08 41 24.6 -1.5
SFJD   Kangerlussuaq    63.90 339   P      P      08 41 26.8 +0.1
       comp=Z,14nm,0.7s,baz=42,slow=7.9,SNR=5.7
SFJD   Kangerlussuaq    63.90 339   P      P      08 41 27.7 +1.0
SFJD                                pmax   pmax
       comp=Z,203nm,1.9s
SFJD   Kangerlussuaq    63.90 339   P      P      08 41 27.7 +1.0
ANM    Nome             64.16  25   P      P      08 41 30.0 +1.5
ANM                                 pmax   pmax
       comp=Z,69nm,0.9s
ANM    Nome             64.16  25   P      P      08 41 30.0 +1.5
ANM    Nome             64.16  25   P      P      08 41 29.6 +1.1
       baz=314,SNR=12
TOLK   Toolik Lake Re   65.17  16   P      P      08 41 35.8 +0.7
TOLK   Toolik Lake Re   65.17  16   P      P      08 41 35.2 +0.1
       baz=325,SNR=34
A36M   Sachs Harbour    65.75   7   P      P      08 41 39.0 +0.4
A36M   Sachs Harbour    65.75   7   P      P      08 41 38.7  0.0
       baz=344
COLD   Coldfoot         66.20  17   P      P      08 41 41.9 +0.3
COLD   Coldfoot         66.20  17   P      P      08 41 41.9 +0.3
       baz=325,SNR=79
EDFI   Ende, Flores     66.20 128   P      P      08 41 37.4 -5.1
SWI    Sorong           66.34 114   P      P      08 41 42.0 -1.3
       comp=Z,28nm,1.1s
IMAR   Indian Mountai   66.36  19   P      P      08 41 41.6 -1.2
GCSA   Galena City Sc   66.51  21   P      P      08 41 44.0 +0.3
       baz=320,SNR=21
H21K   Melozitna Rive   66.86  19   P      P      08 41 46.0 +0.1
H21K                                IAmb   IAmb   08 41 47.2
       comp=Z,53nm,1.1s
H21K   Melozitna Rive   66.86  19   P      P      08 41 45.9  0.0
       baz=323
BMAR   Burnt Mountain   67.22  15   P      P      08 41 49.0 +0.8
I21K   Tanana           67.45  19   P      P      08 41 49.6 -0.1
I21K   Tanana           67.45  19   P      P      08 41 49.9 +0.2
       baz=324
SPIA   Saint Paul Isl   67.52  32   P      P      08 41 50.9 +0.8
       baz=313
J20K   Nowinta River    67.70  21   P      P      08 41 51.9 +0.7
J20K   Nowinta River    67.70  21   P      P      08 41 51.5 +0.3
       baz=322
H24K   Noodor Dome      67.88  17   P      P      08 41 53.4 +1.0
H24K                                IAmb   IAmb   08 41 54.1
       comp=Z,39nm,1.1s
H24K   Noodor Dome      67.88  17   P      P      08 41 52.8 +0.4
       baz=327
MLY    Manley           67.88  19   P      P      08 41 52.6 +0.2
MLY                                 IAmb   IAmb   08 41 53.8
       comp=Z,56nm,1.1s
MLY    Manley           67.88  19   P      P      08 41 52.6 +0.2
       baz=325,SNR=35
I23K   Minto, Yukon-K   68.11  18   P      P      08 41 54.6 +0.8
I23K   Minto, Yukon-K   68.11  18   P      P      08 41 54.0 +0.3
       baz=326,SNR=33
TTA    Tatalina         68.17  22   P      P      08 41 54.9 +0.5
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TTA                                 pmax   pmax
       comp=Z,80nm,1.4s
TTA    Tatalina         68.17  22   P      P      08 41 54.9 +0.5
TTA                                 IAmb   IAmb   08 41 56.0
       comp=Z,80nm,1.4s
TTA    Tatalina         68.17  22   P      P      08 41 54.7 +0.4
       baz=321,SNR=12
INK    Inuvik           68.30  11   P      P      08 41 55.1 +0.2
       comp=Z,77nm,0.9s,baz=345,slow=8.5,SNR=105
INK    Inuvik           68.30  11   P      P      08 41 55.2 +0.2
INK                                 pmax   pmax
       comp=Z,95nm,1.0s
INK    Inuvik           68.30  11   P      P      08 41 55.2 +0.2
INK    Inuvik           68.30  11   P      P      08 41 55.2 +0.2
       baz=338
VOI    Vohitsoka        68.32 208   P      P      08 41 55.4 -0.3
VOI                                 IAmb   IAmb   08 42 04.6
       comp=Z,31nm,1.3s
VOI    Vohitsoka        68.32 208   P      P      08 41 56.9 +1.2
K20K   Telida           68.37  21   P      P      08 41 55.9 +0.3
K20K   Telida           68.37  21   P      P      08 41 56.0 +0.5
       baz=323
CHUM   Lake Minchumin   68.42  20   P      P      08 41 56.0 +0.2
       baz=324,SNR=14
FAKI   Fak Fak          68.51 115   P      P      08 41 55.4 -1.6
       comp=Z,36nm,2.5s
FAKI   Fak Fak          68.51 115   P      P      08 41 56.0 -1.1
FAKI                                IAmb   IAmb   08 42 01.3
       comp=Z,28nm,1.1s
FAKI   Fak Fak          68.51 115   P      P      08 41 56.0 -1.1
BATI   Baumata          68.53 127   P      P      08 41 53.4 -3.7
       comp=Z,24nm,1.5s
MDM    Murphy Dome      68.53  18   P      P      08 41 57.1 +0.5
SOEI   Soe              68.54 126   P      P      08 41 57.9 +0.6
       comp=Z,28nm,0.9s
SOEI   Soe              68.54 126   P      P      08 41 54.8 -2.5
SOEI                                IAmb   IAmb   08 42 26.6
       comp=Z,36nm,1.0s
SOEI   Soe              68.54 126   P      P      08 41 59.7 +2.4
BPAW   Bear Paw Mtn.    68.58  20   P      P      08 41 57.1 +0.3
BPAW   Bear Paw Mtn.    68.58  20   P      P      08 41 56.4 -0.5
       baz=325,SNR=9.4
POKR   Poker Plat Res   68.58  18   P      P      08 41 57.6 +0.8
POKR   Poker Plat Res   68.58  18   P      P      08 41 57.1 +0.3
       baz=327,SNR=24
TORD   Torodi Ar. Bea   68.62 269   P      P      08 41 57.1 -0.6
       comp=Z,41nm,0.6s,baz=50,slow=5.3,SNR=96
TORD   Torodi Ar. Bea   68.62 269   P      P      08 41 57.1 -0.6
TORD                                IAmb   IAmb   08 41 58.0
       comp=Z,38nm,0.8s
NEA2   Nenana           68.64  19   P      P      08 41 57.4 +0.3
NEA2                                IAmb   IAmb   08 41 58.2
       comp=Z,61nm,1.0s
NEA2   Nenana           68.64  19   P      P      08 41 56.7 -0.5
       baz=326,SNR=33
TCOL   CIGO, UAF Yank   68.69  18   P      P      08 41 57.3 -0.1
TCOL   CIGO, UAF Yank   68.69  18   P      P      08 41 57.6 +0.1
       baz=327,SNR=11
COLA   College          68.69  18⇑iP      P      08 41 57.6 +0.2
COLA                                pmax   pmax
       comp=Z,86nm,1.0s
COLA   College          68.69  18   P      P      08 41 57.3 -0.2
COLA   College          68.69  18   P      P      08 41 57.4 -0.1
       baz=327
CAST   Castle Rocks     68.86  21   P      P      08 41 58.7 +0.1
       baz=324
CCB    Clear Creek Bu   68.90  18   P      P      08 41 58.3 -0.4
CCB                                 IAmb   IAmb   08 42 00.3
       comp=Z,95nm,1.6s
BWN    Browne           68.90  19   P      P      08 41 59.3 +0.5
WRH    Wood River Hil   68.98  18   P      P      08 41 59.0 -0.2
IL31                    69.00  18   P      P      08 41 58.9 -0.5
IL31                                IAmb   IAmb   08 42 00.1
       comp=Z,45nm,0.9s
ILAR   Eielson Array    69.00  18   P      P      08 41 59.0 -0.4
       comp=Z,27nm,0.8s,baz=319,slow=4.8,SNR=131
KTH    Kantishna Hill   69.05  20   P      P      08 41 59.8  0.0
L19K   White Mountain   69.09  22   P      P      08 42 01.0 +1.0
L19K                                IAmb   IAmb   08 42 01.7
       comp=Z,57nm,1.1s
L19K   White Mountain   69.09  22   P      P      08 42 00.4 +0.3
       baz=322
L20K   Farewell, AK     69.13  22   P      P      08 42 00.7 +0.4
       baz=323
PPLA   Purkeypile       69.25  21   P      P      08 42 01.5 +0.3
PPLA   Purkeypile       69.25  21   P      P      08 42 01.2  0.0
       baz=324,SNR=21
TRF    Thorofare Moun   69.29  20   P      P      08 42 01.2 -0.2
TRF                                 IAmb   IAmb   08 42 21.8
       comp=Z,45nm,1.5s
TRF    Thorofare Moun   69.29  20   P      P      08 42 00.7 -0.7
       baz=326
HDA    Harding Lake     69.30  18   P      P      08 42 00.5 -0.8
HDA                                 IAmb   IAmb   08 42 01.2
       comp=Z,34nm,1.2s
HDA    Harding Lake     69.30  18   P      P      08 42 00.2 -1.1
       baz=328,SNR=17
MCK    McKinley         69.40  19   P      P      08 42 01.7 -0.2
MCK                                 pmax   pmax
       comp=Z,11nm,0.9s
MCK    McKinley         69.40  19   P      P      08 42 01.7 -0.2
MCK    McKinley         69.40  19   P      P      08 42 01.6 -0.2
       baz=327
M19K   Big River Lodg   69.45  22   P      P      08 42 03.1 +0.9
M19K   Big River Lodg   69.45  22   P      P      08 42 02.7 +0.5
       baz=323
J25K   Salcha River,    69.48  17   P      P      08 42 01.7 -0.8
       baz=329,SNR=20
EPYK   Eagle Plains     69.60  13   P      P      08 42 03.2 +0.2
EPYK                                IAmb   IAmb   08 42 04.8
       comp=Z,44nm,1.2s
EPYK   Eagle Plains     69.60  13   P      P      08 42 02.7 -0.4
       baz=335
RND    Reindeer         69.69  19   P      P      08 42 03.0 -0.8
RND                                 pmax   pmax
       comp=Z,65nm,1.6s
RND    Reindeer         69.69  19   P      P      08 42 03.0 -0.8
RND                                 IAmb   IAmb   08 42 04.1
       comp=Z,65nm,1.6s
SVW2   Sparrevohn       69.74  23   P      P      08 42 04.6 +0.6
SVW2                                IAmb   IAmb   08 42 12.5
       comp=Z,32nm,1.1s
J26L   Joseph Creek     69.97  17   P      P      08 42 05.2 -0.3
       baz=330,SNR=24
PMAR   Madeira          70.11 296  eP      P      08 42 08.2 +1.2
       comp=Z,153nm,2.0s
CUT    Chulitna         70.17  20   P      P      08 42 06.0 -0.6
CUT    Chulitna         70.17  20   P      P      08 42 05.8 -0.8
       baz=326
EGAK   Eagle            70.22  15   P      P      08 42 06.9 +0.1
EGAK                                IAmb   IAmb   08 42 08.2
       comp=Z,48nm,1.3s
EGAK   Eagle            70.22  15   P      P      08 42 06.7 -0.2
       baz=332
I29M   Ogilvie Camp,    70.24  14   P      P      08 42 06.7 -0.3
       baz=334,SNR=30
WAT1   Susitna Watana   70.25  19   P      P      08 42 05.8 -1.4
       baz=327
N19K   Bonanza Creek    70.29  23   P      P      08 42 08.0 +0.5
N19K                                IAmb   IAmb   08 42 16.3
       comp=Z,34nm,0.9s
N19K   Bonanza Creek    70.29  23   P      P      08 42 07.9 +0.3
       baz=323,SNR=6.9
DHY    Denali Highway   70.33  19   P      P      08 42 07.0 -0.7
DHY                                 IAmb   IAmb   08 42 08.2
       comp=Z,31nm,0.8s
DHY    Denali Highway   70.33  19   P      P      08 42 07.1 -0.7
       baz=328
SCRK   Sand Creek       70.33  17   P      P      08 42 07.5 -0.2
SCRK                                IAmb   IAmb   08 42 09.0
       comp=Z,59nm,1.0s
SCRK   Sand Creek       70.33  17   P      P      08 42 07.6 -0.2
       baz=330,SNR=35
RIDG   Independent Ri   70.35  17   P      P      08 42 07.0 -0.8
RIDG   Independent Ri   70.35  17   P      P      08 42 07.2 -0.6
       baz=330,SNR=30
DOT    Dot Lake         70.60  17   P      P      08 42 08.8 -0.5
SPCR   Spurr Chakacha   70.63  22   P      P      08 42 09.2 -0.4
       baz=325,SNR=8.0
WAT6   Susitna Watana   70.66  19   P      P      08 42 08.7 -1.2
       baz=328
SPU    Mount Spurr      70.69  22   P      P      08 42 09.8 -0.2
M22K   Willow           70.75  21   P      P      08 42 09.2 -0.9
       baz=326,SNR=12
O19K   Port Alsworth    70.84  23   P      P      08 42 11.2 +0.5
O19K                                IAmb   IAmb   08 42 12.3
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      comp=Z,92nm,1.5s
O19K  Port Alsworth     70.84  23 P      P      08 42 11.0 +0.3
      baz=323
O18K  Koktuh Hills      70.84  24 P      P      08 42 11.9 +1.1
O18K  Koktuh Hills      70.84  24 P      P      08 42 11.6 +0.8
      baz=323
PAX   Paxson            70.87  18 P      P      08 42 11.1  0.0
PAX                               pmax   pmax
      comp=Z,77nm,1.1s
PAX   Paxson            70.87  18 P      P      08 42 11.1  0.0
PAX   Paxson            70.87  18 P      P      08 42 10.6 -0.4
      baz=329,SNR=43
FRB   Frobisher Bay     70.90 344 P      P      08 42 11.2 +0.2
      comp=Z,19nm,1.0s,baz=14,slow=6.3,SNR=16
LSZ   Lusaka            71.03 228 P      P      08 42 12.0 -0.6
LSZ                               pmax   pmax
      comp=Z,47nm,1.7s
LSZ   Lusaka            71.03 228 P      P      08 42 12.0 -0.6
LSZ                               IAmb   IAmb   08 42 13.5
      comp=Z,47nm,1.6s
GHO   Glory Hole Cre    71.05  20 P      P      08 42 12.5 +0.4
J29M  Klondike Camp     71.08  14 P      P      08 42 12.0 -0.2
      baz=335,SNR=6.9
RSO   Redoubt South     71.08  23 P      P      08 42 13.4 +0.9
PMR   Palmer            71.14  20 P      P      08 42 12.2 -0.3
PMR                               pmax   pmax
      comp=Z,39nm,0.9s
PMR   Palmer            71.14  20 P      P      08 42 12.2 -0.3
PMR                               IAmb   IAmb   08 42 13.1
      comp=Z,39nm,0.9s
PMR   Palmer            71.14  20 P      P      08 42 12.0 -0.5
      baz=327,SNR=17
SML   Sawmill           71.17  20 P      P      08 42 12.8  0.0
SML   Sawmill           71.17  20 P      P      08 42 12.6 -0.2
      baz=327,SNR=16
DAWY  Dawson            71.20  15 P      P      08 42 12.8 -0.2
DAWY                              IAmb   IAmb   08 42 14.1
      comp=Z,37nm,1.1s
DAWY  Dawson            71.20  15 P      P      08 42 12.7 -0.2
      baz=334,SNR=22
P18K  Big Mountain,     71.21  24 P      P      08 42 13.7 +0.7
P18K  Big Mountain,     71.21  24 P      P      08 42 13.7 +0.7
      baz=323,SNR=5.2
L26K  Log Cabin Wild    71.31  17 P      P      08 42 13.7 +0.1
L26K                              IAmb   IAmb   08 42 15.8
      comp=Z,28nm,1.1s
L26K  Log Cabin Wild    71.31  17 P      P      08 42 13.5 -0.1
      baz=331,SNR=11
UNV   Unalaska Valle    71.38  33 P      P      08 42 15.0 +0.9
      baz=316
SCM   Sheep Creek Mo    71.40  20 P      P      08 42 13.9 -0.3
      baz=328,SNR=17
RC01  Rabbit Creek A    71.40  21 P      P      08 42 14.1 -0.1
RC01  Rabbit Creek A    71.40  21 P      P      08 42 13.8 -0.4
      baz=326,SNR=29
O20K  Slope Mountain    71.43  23 P      P      08 42 14.7 +0.3
      baz=325
HARP  HAARP             71.44  18 P      P      08 42 14.4  0.0
      baz=330,SNR=43
M24K  Tolsona, Glenn    71.45  19 P      P      08 42 14.9 +0.4
M24K  Tolsona, Glenn    71.45  19 P      P      08 42 14.8 +0.3
      baz=329,SNR=22
KNK   Knik Glacier      71.47  20 P      P      08 42 15.1 +0.5
KNK   Knik Glacier      71.47  20 P      P      08 42 14.6  0.0
      baz=327,SNR=14
P19K  Oil Pt            71.60  23 P      P      08 42 15.3 -0.1
      baz=324
L27K  Beaver Creek,     71.61  17 P      P      08 42 16.2 +0.8
L27K                              IAmb   IAmb   08 42 16.9
      comp=Z,29nm,1.0s
L27K  Beaver Creek,     71.61  17 P      P      08 42 15.8 +0.4
      baz=332
BCAR  Beaver Creek A    71.61  17 P      P      08 42 16.3 +0.9
SAUI  Saumlaki          71.61 119 P      P      08 42 15.7 -0.3
SAUI  Saumlaki          71.61 119 P      P      08 42 16.9 +0.9
O22K  Cooper Landing    71.92  21 P      P      08 42 16.8 -0.5
O22K  Cooper Landing    71.92  21 P      P      08 42 16.9 -0.3
      baz=327,SNR=9.1
M26K  Nabesna, AK       71.93  17 P      P      08 42 17.7 +0.3
M26K                              IAmb   IAmb   08 42 19.0
      comp=Z,45nm,1.2s
M26K  Nabesna, AK       71.93  17 P      P      08 42 17.7 +0.3
      baz=331
PWL   Port Wells        71.97  21 P      P      08 42 17.6  0.0
PWL                               IAmb   IAmb   08 42 18.2
      comp=Z,31nm,0.8s
PWL   Port Wells        71.97  21 P      P      08 42 17.1 -0.5
      baz=328
KOWA  Kowa              72.04 274 P      P      08 42 18.3 -0.4
KOWA                              IAmb   IAmb   08 42 19.2
      comp=Z,29nm,0.8s
KLU   Klutina           72.04  19 P      P      08 42 18.8 +0.7
KLU                               IAmb   IAmb   08 42 19.5
      comp=Z,43nm,1.0s
KLU   Klutina           72.04  19 P      P      08 42 18.6 +0.5
      baz=329,SNR=11
BRLK  Bradley Lake      72.19  22 P      P      08 42 18.0 -0.9
BRLK                              IAmb   IAmb   08 42 18.9
      comp=Z,41nm,0.9s
M27K  Edge Creek, AK    72.22  17 P      P      08 42 20.1 +0.9
M27K                              IAmb   IAmb   08 42 21.1
      comp=Z,52nm,1.1s
M27K  Edge Creek, AK    72.22  17 P      P      08 42 20.1 +0.9
      baz=332,SNR=18
BRSE  Bradley Lake S    72.25  22 P      P      08 42 18.4 -0.9
      baz=326
N25K  Chitina, Valde    72.26  18 P      P      08 42 20.1 +0.7
N25K  Chitina, Valde    72.26  18 P      P      08 42 19.8 +0.4
      baz=330,SNR=16
GLI   Glacier Island    72.27  20 P      P      08 42 19.2 -0.1
      baz=328
MAYO  Mayo, Yukon       72.28  14 P      P      08 42 19.9 +0.5
      baz=336,SNR=6.7
SEW   Seward            72.31  21 P      P      08 42 19.0 -0.5
      baz=327
BVCY  Beaver Creek      72.39  16 P      P      08 42 20.8 +0.7
      baz=333,SNR=9.3
DIV   Divide            72.39  19 P      P      08 42 20.2  0.0
DIV                               IAmb   IAmb   08 42 21.2
      comp=Z,30nm,0.8s
FID   Port Fidalgo      72.54  20 P      P      08 42 21.3 +0.3
GLB   Gilahina Butte    72.59  18 P      P      08 42 21.8 +0.4
BMRM  Bremner River     72.82  19 P      P      08 42 23.5 +0.8
BMRM  Bremner River     72.82  19 P      P      08 42 23.0 +0.4
      baz=330,SNR=13
MCARA McCarthy VSAT     72.82  18 P      P      08 42 23.7 +1.0
MCARA                             IAmb   IAmb   08 42 24.1
      comp=Z,32nm,0.9s
MCARA McCarthy VSAT     72.82  18 P      P      08 42 22.9 +0.3
      baz=331,SNR=11
VRDI  Verde Repeater    72.86  18 P      P      08 42 23.2 +0.1
VRDI                              IAmb   IAmb   08 42 24.4
      comp=Z,39nm,1.1s
EYAK  Cordova Ski Ar    72.90  20 P      P      08 42 23.4 +0.4
EYAK                              IAmb   IAmb   08 42 24.6
      comp=Z,50nm,0.9s
EYAK  Cordova Ski Ar    72.90  20 P      P      08 42 23.5 +0.4
      baz=330,SNR=6.8
YUK3  Moose Creek       73.05  17 P      P      08 42 24.5 +0.3
      baz=333,SNR=19
M30M  Minto, Yukon      73.06  15 P      P      08 42 24.4 +0.3
      baz=336,SNR=14
CHNA  Chernabura Isl    73.33  29 P      P      08 42 25.3 -0.4
      baz=321
KDAK  Kodiak Island     73.33  24 P      P      08 42 25.8 +0.1
KDAK                              pmax   pmax
      comp=Z,44nm,0.7s
KDAK  Kodiak Island     73.33  24 P      P      08 42 25.8 +0.1
KDAK                              IAmb   IAmb   08 42 26.6
      comp=Z,44nm,0.7s
KDAK  Kodiak Island     73.33  24 P      P      08 42 25.8 +0.1
      baz=325
CRQM  Cirque            73.35  18 P      P      08 42 26.8 +0.7
CRQE  Cirque            73.36  18 P      P      08 42 26.5 +0.5
      baz=331
BARN  Barnard Glacie    73.42  17 P      P      08 42 27.0 +0.5
BARN                              IAmb   IAmb   08 42 28.6
      comp=Z,54nm,1.4s
TGL   Tana Glacier      73.42  18 P      P      08 42 26.4 +0.1
TGL                               IAmb   IAmb   08 42 36.3
      comp=Z,43nm,1.0s
BERG  Berg Lake         73.54  19 P      P      08 42 27.5 +0.6
BERG                              IAmb   IAmb   08 42 28.7
      comp=Z,62nm,0.9s
CTG   Chitna Glacier    73.58  17 P      P      08 42 27.6 +0.3
      baz=333,SNR=8.4
CTGM  Chitina Glacie    73.58  17 P      P      08 42 27.9 +0.6
CTGM                              IAmb   IAmb   08 42 28.7
      comp=Z,108nm,1.6s
ISLE  Juniper Island    73.67  18 P      P      08 42 27.9  0.0
WAX   Waxell Ridge      73.69  18 P      P      08 42 28.4 +0.5
Q23K  Middleton Isla    73.71  20 P      P      08 42 28.5 +0.6
      baz=329
KAIM  Kayak Island      73.77  19 P      P      08 42 29.1 +0.8
      baz=331
LOGN  Logan Glacier     73.78  17 P      P      08 42 29.1 +0.6
YUK4  Talbot Arm        73.81  16 P      P      08 42 28.7 -0.1
      baz=335,SNR=14
SII   Sitkinak Islan    73.82  26 P      P      08 42 29.3 +0.7
      baz=324
M31M  Drury Creek, Y    73.84  14 P      P      08 42 29.0 +0.3
      baz=338,SNR=18
BGLC  Bering Glacier    73.88  19 P      P      08 42 29.2 +0.4
      baz=331
FARO  Faro, Yukon       74.00  13 P      P      08 42 29.8 +0.2
      baz=339,SNR=8.0
YAH   Yahtse            74.02  18 P      P      08 42 30.5 +0.5
YAH                               IAmb   IAmb   08 42 31.1
      comp=Z,64nm,1.4s
MESA  MESA              74.14  18 P      P      08 42 31.1 +0.5
      baz=332
YUK6  Outpost Mounta    74.24  16 P      P      08 42 31.4 +0.1
      baz=335,SNR=5.7
N31M  Braeburn, Yuko    74.25  15 P      P      08 42 31.5 +0.4
      baz=337,SNR=14
WRGLY Wrigley           74.42   8 P      P      08 42 32.6 +0.6
      baz=346,SNR=17
HYT   Haines Junctio    74.52  16 P      P      08 42 33.3 +0.5
HYT   Haines Junctio    74.52  16 P      P      08 42 33.1 +0.3
      baz=336,SNR=32
PCA   Pinnacle          74.60  17 P      P      08 42 33.6 +0.4
PCA                               IAmb   IAmb   08 42 34.6
      comp=Z,41nm,0.8s
PINM  Pinnacle          74.60  17 P      P      08 42 33.6 +0.4
      baz=334,SNR=6.1
BCPM  Bancas Point      74.86  17 P      P      08 42 35.7 +1.0
BCPM                              IAmb   IAmb   08 42 36.3
      comp=Z,30nm,0.8s
PNL   Peninsula         75.17  17 P      P      08 42 37.0 +0.5
      baz=334
WHY   Whitehorse        75.18  15 P      P      08 42 35.9 -0.7
WHY   Whitehorse        75.18  15 P      P      08 42 36.3 -0.3
      baz=338,SNR=7.3
MBWA  Marble Bar        75.23 137 P      P      08 42 40.2 +3.1
PSA00 Pilbara Seismi    75.63 137 P      P      08 42 37.8 -1.6
PSA00 Pilbara Seismi    75.63 137 P      P      08 42 43.5 +4.0
      comp=Z,20nm,2.1s
KNRA  Kununurra         75.88 126 P      P      08 42 39.6 -1.3
KNRA  Kununurra         75.88 126 P      P      08 42 39.9 -1.1
      comp=Z,32nm,0.8s
YKA   Yellowknife Ar    75.89   4 P      P      08 42 40.8 +0.4
      comp=Z,37nm,0.7s,baz=349,slow=5.8,SNR=106
KDU   Kakadu            75.90 122 P      P      08 42 45.3 +4.2
      comp=Z,14nm,0.8s
P33M  Teslin, Yukon     75.98  14 P      P      08 42 41.0 -0.1
      baz=339,SNR=13
SKAG  Skagway           76.21  15 P      P      08 42 43.3 +0.9
SKAG                              IAmb   IAmb   08 42 44.2
      comp=Z,26nm,0.8s
SKAG  Skagway           76.21  15 P      P      08 42 43.1 +0.8
      baz=337,SNR=6.0
DBIC  Dimbokro          77.70 268 P      P      08 42 50.8 -0.7
      comp=Z,19nm,0.7s,baz=41,slow=5.5,SNR=25
DBIC  Dimbokro          77.70 268 P      P      08 42 50.9 -0.6
DBIC                              pmax   pmax
      comp=Z,21nm,0.9s
DBIC  Dimbokro          77.70 268 P      P      08 42 50.9 -0.6
KIC   Kosan Boka        77.82 268 ePKP2  P      08 42 50.8 -1.3
      comp=Z,51nm,0.6s
TIC   Toumodi           77.84 268 ePKP2  P      08 42 50.9 -1.4
LIC   Lamto             78.12 268 ePKP2  P      08 42 52.0 -1.8
      comp=Z,70nm,0.9s
DLBC  Dease Lake        78.14  13 P      P      08 42 53.8 +0.5
      comp=Z,12nm,0.8s,baz=320,slow=7.7,SNR=15
DLBC  Dease Lake        78.14  13 P      P      08 42 53.5 +0.3
SCHQ  Schefferville     78.34 338 P      P      08 42 54.0 -0.4
      comp=Z,14nm,0.9s,baz=30,slow=8.0,SNR=8.6
SCHQ  Schefferville     78.34 338 P      P      08 42 54.6 +0.2
SCHQ                              IAmb   IAmb   08 42 56.9
      comp=Z,77nm,1.6s
SIT   Sitka             78.44  16 P      P      08 42 55.7 +0.9
      baz=338
WRAK  Wrangell Islan    79.63  15 P      P      08 43 01.3 -0.1
      baz=340
CRAG  Craig             80.37  16 P      P      08 43 06.1 +0.7
      baz=339
LBTB  Lobatse           80.37 224 P      P      08 43 05.7 -0.2
LBTB                              pmax   pmax
      comp=Z,28nm,1.3s
LBTB  Lobatse           80.37 224 P      P      08 43 05.7 -0.2
WB0   Warramunga Arr    82.44 125 P      P      08 43 16.2 -0.6
WRA   Warramunga Arr    82.53 125 P      P      08 43 15.5 -1.8
      comp=Z,8.8nm,1.0s,baz=332,slow=4.5,SNR=42
WRA                               PKKPbc PKKPbc 09 01 42.4  0.0
      comp=Z,1.2nm,0.7s,baz=142,slow=2.6,SNR=11
WRA   Warramunga Arr    82.53 125 P      P      08 43 16.1 -1.2
WRA   Warramunga Arr    82.53 125 P      P      08 43 16.1 -1.2
WRAB  Tennant Creek     82.53 125⇑iP     P      08 43 16.0 -1.3
WRAB                              pmax   pmax
      comp=Z,14nm,1.0s
WRAB  Tennant Creek     82.53 125 P      P      08 43 15.6 -1.7
WRAB  Tennant Creek     82.53 125 P      P      08 43 20.7 +3.4
WB2   Warramunga Arr    82.54 125 P      P      08 43 15.7 -1.6
WR0   Warramunga Arr    82.67 125 P      P      08 43 16.8 -1.3
WRKA  Warakurna         82.94 133 P      P      08 43 22.6 +3.2
      comp=Z,20nm,0.8s
BOSA  Boshof            83.49 222 P      P      08 43 20.2 -2.0
      comp=Z,2.7nm,0.6s,baz=36,slow=5.6,SNR=7.6
BOSA  Boshof            83.49 222 P      P      08 43 21.2 -1.0
BOSA                              pmax   pmax
      comp=Z,49nm,1.9s
BOSA  Boshof            83.49 222 P      P      08 43 21.2 -1.0
BOSA                              IAmb   IAmb   08 46 06.3
      comp=Z,49nm,1.9s
COEN  Coen              83.90 115 P      P      08 43 28.4 +3.9
      comp=Z,17nm,1.2s
FFC   Flin Flon         83.90 358 P      P      08 43 23.8 -0.1
FFC                               pmax   pmax
      comp=Z,59nm,1.0s
FFC   Flin Flon         83.90 358 P      P      08 43 23.8 -0.1
BATG  Bathurst New B    84.76 334 P      P      08 43 29.6 +1.1
GBN   Guysborough       84.81 331 P      P      08 43 29.1 +0.4
AS31  Alice Springs     85.09 128 P      P      08 43 28.6 -1.8
ASAR  Alice Springs     85.09 128 P      P      08 43 28.4 -2.0
      comp=Z,2.5nm,0.5s,baz=320,slow=4.9,SNR=44
ASAR                              PKKPbc PKKPbc 09 01 38.5 +2.0
      comp=Z,0.5nm,1.0s,baz=132,slow=2.8,SNR=6.7
EDM   Edmonton          85.20   5 P      P      08 43 30.8 +0.2
EDM                               pmax   pmax
      comp=Z,54nm,0.8s
EDM   Edmonton          85.20   5 P      P      08 43 30.8 +0.2
LMQ   La Malbaie        85.84 337 P      P      08 43 34.4 +0.5
LMQ                               IAmb   IAmb   08 43 35.7
      comp=Z,48nm,1.0s
PQI   Presque Isle      85.92 335 P      P      08 43 34.8 +0.5
QIS   Mount Isa         86.29 122 P      P      08 43 35.0 -1.4
      comp=Z,23nm,0.8s
F64A  Sherman           86.75 335 P      P      08 43 38.7 +0.4
LLLB  Lillooet          86.95  10 P      P      08 43 40.1 +0.8
LLLB                              IAmb   IAmb   08 43 40.9
      comp=Z,31nm,1.2s
G65A  Princeton         87.09 334 P      P      08 43 40.8 +0.8
VLDQ  Val d'Or          87.20 342 P      P      08 43 40.8 +0.3
VLDQ                              IAmb   IAmb   08 43 41.9
      comp=Z,43nm,1.1s
FORT  Forrest           87.37 136 P      P      08 43 40.4 -1.0
FORT  Forrest           87.37 136 P      P      08 43 47.0 +5.7
      comp=Z,71nm,0.8s
PKME  Peaks-Kenny Pk    87.58 335 P      P      08 43 43.0 +0.6
PKME  Peaks-Kenny Pk    87.58 335 P      P      08 43 43.1 +0.7
      baz=26,SNR=8.5
MTSU  Mount Surprise    87.62 117 P      P      08 43 46.7 +3.8
      comp=Z,5.9nm,0.7s
G62A  West of Eustis    88.00 336 P      P      08 43 45.1 +0.6
G62A                              IAmb   IAmb   08 43 47.1
      comp=Z,38nm,1.2s
ULM   Lac du Bonnet     88.04 354 P      P      08 43 43.6 -0.9
      comp=Z,17nm,0.9s,baz=358,slow=5.9,SNR=13
ULM   Lac du Bonnet     88.04 354 P      P      08 43 44.0 -0.5
ULM                               pmax   pmax
      comp=Z,23nm,1.0s
ULM   Lac du Bonnet     88.04 354 P      P      08 43 44.0 -0.5
ULM                               IAmb   IAmb   08 43 44.9
      comp=Z,23nm,1.0s
TRQ   Mont Tremblant    88.23 339 P      P      08 43 45.7 +0.1
TRQ                               IAmb   IAmb   08 43 47.1
      comp=Z,34nm,1.0s
MOQ   Mont Orford       88.43 337 P      P      08 43 47.6 +1.0
B05A  Bryant            89.21  11 P      P      08 43 50.0  0.0
      baz=348
FRNY  Flat Rock         89.25 338 P      P      08 43 51.0 +0.7
OOD   Oodnadatta        89.26 129 P      P      08 43 49.9 -0.5
      comp=Z,35nm,1.1s
LBNH  Lisbon            89.31 337 P      P      08 43 51.7 +1.1
      baz=24
B08A  Colville Reser    89.48   9 P      P      08 43 51.6 +0.2
B08A                              IAmb   IAmb   08 43 52.6
      comp=Z,44nm,1.4s
C06D  Leavenworth       89.71  10 P      P      08 43 52.6 +0.2
      baz=348
LONY  Lake Ozonia       89.72 339 P      P      08 43 53.4 +0.8
LONY                              IAmb   IAmb   08 43 54.4
      comp=Z,39nm,1.1s
LONY  Lake Ozonia       89.72 339 P      P      08 43 53.1 +0.6
      baz=22,SNR=14
D03D  Eldon             89.77  12 S      P      08 43 52.3 -0.4
      baz=347
NEW   Newport           89.82   8 P      P      08 43 53.1 +0.2
      comp=Z,13nm,0.7s,baz=347,slow=4.4,SNR=31
NEW   Newport           89.82   8 P      P      08 43 53.6 +0.6
NEW                               pmax   pmax
      comp=Z,18nm,0.9s
NEW   Newport           89.82   8 P      P      08 43 53.6 +0.6
NEW                               IAmb   IAmb   08 43 54.2
      comp=Z,18nm,0.8s
NEW   Newport           89.82   8 P      P      08 43 53.2 +0.2
      baz=351,SNR=9.4
EYMN  Ely               89.88 351 P      P      08 43 53.1 -0.1
EYMN                              IAmb   IAmb   08 43 54.3
      comp=Z,43nm,1.1s
EYMN  Ely               89.88 351 P      P      08 43 53.5 +0.2
      baz=10
HNH   Hanover           89.90 337 P      P      08 43 54.0 +0.6
HNH                               IAmb   IAmb   08 43 55.0
      comp=Z,58nm,1.6s
AGMN  Agassiz Nation    89.98 354 P      P      08 43 53.3 -0.4
AGMN                              IAmb   IAmb   08 43 54.6
      comp=Z,23nm,1.1s
AGMN  Agassiz Nation    89.98 354 P      P      08 43 53.5 -0.1
      baz=7.1
C09A  Chrisman Ranch    90.15   9 P      P      08 43 54.6 +0.1
C09A                              IAmb   IAmb   08 43 55.9
      comp=Z,27nm,0.8s
DGMT  Dagmar            90.20 359 P      P      08 43 55.6 +0.9
DGMT                              IAmb   IAmb   08 43 56.6
      comp=Z,36nm,0.8s
DGMT  Dagmar            90.20 359 P      P      08 43 55.6 +0.9
      baz=0.9
MULG  Mulgathing        90.21 132 P      P      08 43 58.1 +3.3
      comp=Z,13nm,0.6s
CTAO  Charters Tower    90.30 117 P      P      08 43 58.8 +3.3
E46A  Sault Ste Mari    90.31 346 P      P      08 43 55.8 +0.5
EGMT  Eagleton          90.57   3 P      P      08 43 57.2 +0.6
EGMT                              IAmb   IAmb   08 43 57.8
      comp=Z,36nm,1.1s
EGMT  Eagleton          90.57   3 P      P      08 43 56.7 +0.1
      baz=357,SNR=6.7
JTMT  Jette             90.59   6 P      P      08 43 57.3 +0.6
JTMT                              IAmb   IAmb   08 43 58.1
      comp=Z,36nm,1.2s
DELO  Deloro Mine       90.61 340 P      P      08 43 57.6 +0.9
DELO                              IAmb   IAmb   08 43 58.1
      comp=Z,30nm,0.9s
MDND  Maddock           90.68 356 P      P      08 43 57.0  0.0
      baz=4.3
SADO  Sadowa            90.75 342 P      P      08 43 57.3  0.0
      comp=Z,17nm,1.1s,baz=59,slow=1.7,SNR=6.4
SADO  Sadowa            90.75 342 P      P      08 43 57.0 -0.3
SADO                              IAmb   IAmb   08 43 58.4
      comp=Z,24nm,1.1s
HRV   Adam Dziewonsk    90.78 336 P      P      08 43 58.4 +0.9
      baz=24
E04D  Cinebar           90.81  12 P      P      08 43 58.3 +0.8
      baz=347
D08A  Wollman Farm,     90.81   9 P      P      08 43 58.2 +0.6
D08A                              IAmb   IAmb   08 43 58.9
      comp=Z,24nm,1.0s
L61B  Northampton       91.17 336 P      P      08 43 59.8 +0.5
      baz=24
F04D  Rainier, OR       91.20  12 P      P      08 44 00.3 +0.9
      baz=347
E38A  The Farm, Brul    91.21 350 P      P      08 43 59.1 -0.3
E38A                              IAmb   IAmb   08 44 00.2
      comp=Z,47nm,1.4s
COWI  Conover           91.38 349 P      P      08 44 00.2  0.0
COWI                              IAmb   IAmb   08 44 01.1
      comp=Z,39nm,1.3s
MSO   Missoula          91.52   6 P      P      08 44 00.6 -0.4
MSO   Missoula          91.52   6 P      P      08 44 00.6 -0.4
      baz=354,SNR=8.7
F05D  White Salmon      91.63  11 P      P      08 44 01.9 +0.5
      baz=348
HRY   Holter Researc    91.78   4 P      P      08 44 02.5 +0.3
F07A  Phinny Hill Vi    91.83  10 P      P      08 44 02.8 +0.5
F07A                              IAmb   IAmb   08 44 04.7
      comp=Z,30nm,1.2s
G45A  Suttons Bay       91.84 346 P      P      08 44 02.0 -0.4
GLMI  Grayling          91.86 345 P      P      08 44 02.7 +0.2
GLMI  Grayling          91.86 345 P      P      08 44 02.8 +0.3
      baz=15
LAO   LASA Array        91.99   1 P      P      08 44 02.8 -0.3
LAO   LASA Array        91.99   1 P      P      08 44 04.1 +1.0
      baz=359,SNR=9.8
K57A  Scipio Center     92.00 339 P      P      08 44 03.4 +0.2
K57A                              IAmb   IAmb   08 44 04.4
      comp=Z,28nm,0.9s
E28A  Huff              92.00 357 P      P      08 44 03.6 +0.4
F10A  Beach Ranch, E    92.07   8 P      P      08 44 04.1 +0.5
F10A                              IAmb   IAmb   08 44 04.8
      comp=Z,38nm,1.6s
L59A  Walton            92.09 338 P      P      08 44 03.7  0.0
L59A                              IAmb   IAmb   08 44 04.8
      comp=Z,18nm,0.8s
HOOD  Mount Hood Mea    92.15  11 P      P      08 44 04.9 +0.9
G40A  Rib Lake          92.34 349 P      P      08 44 04.8 +0.1
BINY  Binghamton        92.35 339 P      P      08 44 05.2 +0.4
BINY                              IAmb   IAmb   08 44 06.1
      comp=Z,27nm,0.8s
BINY  Binghamton        92.35 339 P      P      08 44 04.9 +0.1
      baz=22,SNR=8.8
MMNY  Mt. Morris Dam    92.36 340 P      P      08 44 04.8  0.0
LRM   Limekiln Ridge    92.63   5 P      P      08 44 06.5 +0.1
LCRK  Leigh Creek       92.70 129 P      P      08 44 11.8 +5.4
      comp=Z,27nm,0.8s
SPMN  Marine on St.     92.72 351 P      P      08 44 06.5 +0.1
      baz=9.3
H43A  Windswept, Lux    92.76 347 P      P      08 44 06.7 +0.1
H04D  Lebanon           92.76  12 P      P      08 44 06.1 -0.5
      baz=347
GCMT  Greycliff         92.81   3 P      P      08 44 07.7 +0.6
L56A  Greenwood         92.83 340 P      P      08 44 07.6 +0.6
PAL   Palisades         92.86 337 P      P      08 44 07.3 +0.2
      baz=23
KSPA  Keystone Colle    92.88 338 P      P      08 44 07.0 -0.3
KSPA                              IAmb   IAmb   08 44 08.3
      comp=Z,17nm,0.9s
BOZ   Bozeman (W)       92.91   4 P      P      08 44 07.2 -0.3
BOZ                               pmax   pmax
      comp=Z,15nm,0.8s
BOZ   Bozeman (W)       92.91   4 P      P      08 44 07.2 -0.3
BOZ                               IAmb   IAmb   08 44 08.9
      comp=Z,14nm,0.8s
BOZ   Bozeman (W)       92.91   4 P      P      08 44 07.6 +0.1
      baz=355,SNR=12
ODNJ  Ogdensburg        92.99 337 P      P      08 44 07.6 -0.2
ODNJ                              IAmb   IAmb   08 44 08.7
      comp=Z,21nm,1.2s
PLID  Pearl Lake        93.07   7 P      P      08 44 07.9 -0.5
PLID                              IAmb   IAmb   08 44 09.2
      comp=Z,12nm,0.8s
DLMT  Dillon            93.08   5 P      P      08 44 08.8 +0.5
DLMT                              IAmb   IAmb   08 44 09.9
      comp=Z,33nm,1.4s
I05D  Terrebonne, OR    93.16  11 P      P      08 44 08.8 +0.2
      baz=348
K50A  Casco             93.42 343 P      P      08 44 10.2 +0.5
ERPA  Erie              93.45 341 P      P      08 44 10.0 +0.1
      baz=19
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M57A	Sunshine Farm,	93.46	339	P	P	08 44 10.0	+0.1
M57A				IAmb	IAmb	08 44 11.1	
	comp=Z,25nm,0.8s						
I03D	Drain, OR	93.47	13	P	P	08 44 10.6	+0.7
	baz=347						
N59A	State Game Lan	93.48	338	P	P	08 44 09.8	-0.2
N59A				IAmb	IAmb	08 44 11.1	
	comp=Z,12nm,0.8s						
N59A	State Game Lan	93.48	338	P	P	08 44 10.2	+0.2
	baz=22						
RLMT	Red Lodge	93.49	3	P	P	08 44 10.8	+0.6
	baz=357						
I04A	Tendick Farm,	93.53	12	P	P	08 44 10.5	+0.2
	baz=347						
QLP	Quilpie	93.55	123	P	P	08 44 14.7	+4.3
	comp=Z,20nm,1.3s						
MCMT	McKenzie Canyo	93.59	5	P	P	08 44 10.9	+0.1
I07A	Izee	93.67	10	P	P	08 44 11.6	+0.6
I07A				IAmb	IAmb	08 44 12.8	
	comp=Z,15nm,1.0s						
QLMT	Earthquake Lak	93.68	4	P	P	08 44 11.7	+0.5
I40A	Norwalk	93.75	349	P	P	08 44 11.3	+0.1
YHH	Holmes Hill	93.75	4	P	P	08 44 11.6	0.0
M55A	Ridgway	93.76	340	P	P	08 44 11.8	+0.4
M55A				IAmb	IAmb	08 44 12.3	
	comp=Z,17nm,0.8s						
J01E	Myrtle Point	93.89	13	P	P	08 44 11.9	+0.1
	baz=346						
M54A	Oil Creek Stat	93.95	341	P	P	08 44 12.7	+0.5
M54A				IAmb	IAmb	08 44 13.2	
	comp=Z,23nm,0.8s						
M54A	Oil Creek Stat	93.95	341	P	P	08 44 12.1	-0.1
	baz=19,SNR=5.4						
I37A	Lemond, Waseca	93.98	351	P	P	08 44 11.4	-0.9
I37A				IAmb	IAmb	08 44 13.6	
	comp=Z,22nm,0.9s						
SUSD	Miller	94.04	355	P	P	08 44 12.7	+0.1
	baz=4.8						
BCYI	Bear Canyon	94.07	6	P	P	08 44 12.7	-0.3
AAM	Ann Arbor	94.10	344	P	P	08 44 13.0	+0.2
	baz=16						
J04D	Umpqua Nationa	94.11	12	P	P	08 44 12.5	-0.7
	baz=348						
H17A	Grant Village	94.16	4	P	P	08 44 15.6	+2.2
	baz=356,SNR=6.8						
J05D	Fort Rock, OR	94.20	12	P	P	08 44 14.3	+0.8
	baz=348						
M53A	WI Miller and	94.26	342	P	P	08 44 13.9	+0.3
	baz=18						
SSPA	Standing Stone	94.32	339	P	P	08 44 13.7	-0.2
	baz=20						
FLWY	Flagg Ranch	94.46	4	P	P	08 44 15.0	+0.2
FLWY				IAmb	IAmb	08 44 17.3	
	comp=Z,20nm,0.8s						
P60A	Greenville	94.46	337	P	P	08 44 14.5	-0.1
	baz=22						
J08A	Circle Bar Ran	94.51	10	P	P	08 44 15.6	+0.8
J08A				IAmb	IAmb	08 44 17.4	
	comp=Z,19nm,1.2s						
N54A	Moraine State	94.55	341	P	P	08 44 15.0	+0.1
	baz=19						
RSSD	Black Hills	94.55	359	P	P	08 44 15.2	0.0
RSSD				pmax	pmax		
	comp=Z,24nm,0.7s						
RSSD	Black Hills	94.55	359	P	P	08 44 15.2	0.0
RSSD	Black Hills	94.55	359	P	P	08 44 16.0	+0.8
	baz=1.0						
ECSD	EROS Data Cent	94.58	354	P	P	08 44 15.0	-0.1
ECSD				IAmb	IAmb	08 44 16.1	
	comp=Z,26nm,1.0s						
ECSD	EROS Data Cent	94.58	354	P	P	08 44 15.1	+0.1
	baz=6.5,SNR=20						
JFWS	Jewell Farm	94.66	349	P	P	08 44 14.9	-0.5
JFWS				pmax	pmax		
	comp=Z,37nm,0.7s						
JFWS	Jewell Farm	94.66	349	P	P	08 44 14.9	-0.5
JFWS	Jewell Farm	94.66	349	P	P	08 44 15.3	-0.1
	baz=11,SNR=18						
HLID	Hailey	94.73	7	P	P	08 44 16.1	+0.2
HLID	Hailey	94.73	7	P	P	08 44 16.2	+0.2
	baz=353						
MFID	Camas Ranch	94.75	8	P	P	08 44 16.3	+0.3
MFID				IAmb	IAmb	08 44 17.4	
	comp=Z,11nm,0.9s						
MOOW	Moose Ponds	94.80	4	P	P	08 44 16.3	0.0
O56A	Blue Knob Stat	94.84	340	P	P	08 44 16.6	+0.3
	baz=20						
L46A	Eue Claire	94.89	346	P	P	08 44 16.1	-0.3
LOHW	Long Hollow	94.94	4	P	P	08 44 16.1	-0.9
L04D	Klamath Falls	95.08	13	P	P	08 44 17.6	0.0
	baz=347						
SNOW	Snow King Moun	95.08	4	P	P	08 44 18.8	+1.1
K38A	Parkersburg	95.26	351	P	P	08 44 18.1	-0.1
HQIL	Hanson Quary C	95.37	347	P	P	08 44 18.5	-0.2
O54A	Avella	95.38	341	P	P	08 44 18.5	-0.2
O54A				IAmb	IAmb	08 44 19.8	
	comp=Z,22nm,1.0s						
WVOR	Wild Horse Val	95.40	10	P	P	08 44 19.3	+0.3
WVOR				pmax	pmax		
	comp=Z,29nm,1.7s						
WVOR	Wild Horse Val	95.40	10	P	P	08 44 19.3	+0.3
WVOR				IAmb	IAmb	08 44 21.1	
	comp=Z,29nm,1.7s						
ECR	Eagle Creek	95.45	4	P	P	08 44 20.0	+0.6
L42A	Oliver, Polo	95.46	348	P	P	08 44 19.0	-0.1
O53A	New Philadelph	95.51	342	P	P	08 44 19.3	-0.1
	baz=18,SNR=5.7						
N49A	Columbus Grove	95.53	344	P	P	08 44 19.5	+0.1
N49A				IAmb	IAmb	08 44 20.1	
	comp=Z,24nm,0.8s						
M04C	Macdoel	95.58	12	P	P	08 44 19.9	+0.1
	baz=348						
STKA	Stephens Creek	95.72	128	P	P	08 44 17.7	-2.5
	comp=Z,2.5nm,0.9s,baz=56,slow=2.1,SNR=4.0						
MCWV	Mont Chateau	95.74	340	P	P	08 44 20.7	+0.3
	baz=19						
AHID	Auburn Hatcher	95.76	4	P	P	08 44 20.9	+0.2
AHID				IAmb	IAmb	08 44 22.0	
	comp=Z,12nm,0.8s						
M02C	Callahan	95.79	13	P	P	08 44 21.7	+1.0
	baz=347						
BW06	Boulder Array	95.83	3	P	P	08 44 20.7	-0.4
BW06	Boulder Array	95.83	3	P	P	08 44 20.9	-0.2
	baz=357,SNR=8.7						
PD31	Pinedale Array	95.83	3	P	P	08 44 21.0	-0.1
PDAR	Pinedale Array	95.83	3	P	P	08 44 21.2	+0.1
	comp=Z,5.1nm,0.7s,baz=40,slow=3.1,SNR=50						
ACSO	Alum Creek Sta	95.94	343	P	P	08 44 21.3	0.0
ACSO				IAmb	IAmb	08 44 21.9	
	comp=Z,12nm,0.8s						
ACSO	Alum Creek Sta	95.94	343	P	P	08 44 21.2	-0.1
	baz=17						
K22A	Casper	96.02	1	P	P	08 44 21.5	-0.4
K22A	Casper	96.02	1	P	P	08 44 21.7	-0.2
	baz=359						
SCIA	State Center	96.04	351	P	P	08 44 21.6	-0.1
SCIA				IAmb	IAmb	08 44 22.7	
	comp=Z,18nm,0.7s						
SCIA	State Center	96.04	351	P	P	08 44 21.9	+0.2
	baz=9.1,SNR=5.3						
N02D	Trinity Center	96.23	13	P	P	08 44 23.4	+0.7
	baz=347						
P52A	Corning	96.31	342	P	P	08 44 22.8	-0.2
	baz=17						
CBN	Corbin Frederi	96.45	338	P	P	08 44 23.7	+0.1
	baz=21						
SFIN	Lafayette	96.62	346	P	P	08 44 24.3	0.0
	baz=14						
HVU	Hansel Valley	96.63	6	P	P	08 44 25.6	+1.0
HVU				pmax	pmax		
	comp=Z,12nm,0.8s						
HVU	Hansel Valley	96.63	6	P	P	08 44 25.6	+1.0
HVU				IAmb	IAmb	08 44 26.3	
	comp=Z,12nm,0.8s						
HDIL	Hopedale	96.82	348	P	P	08 44 25.2	-0.1
HDIL				IAmb	IAmb	08 44 26.1	
	comp=Z,22nm,1.0s						
HDIL	Hopedale	96.82	348	P	P	08 44 25.6	+0.3
	baz=12						
HWUT	Hardware Ranch	96.88	5	P	P	08 44 26.5	+0.6
P49A	Miami Univ. Ec	96.97	344	P	P	08 44 25.7	-0.3
	baz=15						
O02D	Mt. Diablo Mer	96.99	13	P	P	08 44 26.1	-0.1
	baz=347						
O03E	Paynes Creek	97.04	13	P	Pdif	08 44 26.5	0.0
	baz=348						
SPUT	South Promonto	97.12	5	P	Pdif	08 44 27.4	+0.4
SPUT				IAmb	IAmb	08 44 28.6	
	comp=Z,9.4nm,1.0s						
ELK	Elko	97.45	8	P	Pdif	08 44 28.8	+0.2
	comp=Z,2.5nm,0.8s,baz=322,slow=3.7,SNR=10.0						
ELK	Elko	97.45	8	P	Pdif	08 44 28.9	+0.4
ELK				pmax	pmax		
	comp=Z,9.0nm,1.6s						
ELK	Elko	97.45	8	P	Pdif	08 44 28.9	+0.3
OGNE	Ogallala	97.67	357	P	P	08 44 29.3	0.0
	baz=2.5						
N23A	Red Feather La	97.78	0	P	Pdif	08 44 30.4	+0.4
	baz=360						
JLU	Jordanelle	97.89	5	P	Pdif	08 44 31.0	+0.5
JLU				IAmb	IAmb	08 44 34.1	
	comp=Z,19nm,1.6s						
RDMU	Red Mountain	98.02	3	P	Pdif	08 44 31.7	+0.7
DUG	Dugway, Tooele	98.20	6	P	Pdif	08 44 32.4	+0.6
DUG				pmax	pmax		
	comp=Z,9.0nm,1.2s						
DUG	Dugway, Tooele	98.20	6	P	Pdif	08 44 32.4	+0.6
DUG	Dugway, Tooele	98.20	6	P	Pdif	08 44 32.4	+0.6
	baz=354						
P40A	Paris	98.23	350	P	P	08 44 31.3	-0.4
P40A				IAmb	IAmb	08 44 32.6	
	comp=Z,13nm,0.8s						
P38A	Dawn	98.33	351	P	P	08 44 31.7	-0.4
P38A				IAmb	IAmb	08 44 33.7	
	comp=Z,7.4nm,0.9s						
O20A	White River Ci	98.50	2	P	Pdif	08 44 33.4	+0.3
O20A				IAmb	IAmb	08 44 34.9	
	comp=Z,18nm,1.1s						
O20A	White River Ci	98.50	2	P	Pdif	08 44 33.6	+0.5
	baz=358						
WCI	Wyandotte Cave	98.55	345	P	Pdif	08 44 33.3	+0.2
	baz=14						
ISCO	Idaho Springs	98.88	0	P	Pdif	08 44 35.1	+0.1
	baz=360						
P18A	Preston Nutter	98.93	4	P	Pdif	08 44 35.8	+0.6
P17A	Butcher Ranch,	99.06	4	P	Pdif	08 44 36.9	+1.3
TMUT	Trail Mountain	99.21	5	P	Pdif	08 44 37.4	+1.0
TMUT				IAmb	IAmb	08 44 51.6	
	comp=Z,24nm,2.0s						
NVAR	Mina Array Bea	99.38	10	P	Pdif	08 44 37.3	+0.1
	comp=Z,1.4nm,0.7s,baz=1.0,slow=3.5,SNR=9.0						
NVAR	Mina Array Bea	99.38	10	P	Pdif	08 44 36.8	-0.3
SMCO	Snowmass	99.48	1		Pdif	08 44 37.3	-0.5
SMCO				IAmb	IAmb	08 47 07.2	
	comp=Z,18nm,1.9s						
CCM	Cathedral Cave	99.57	349	P	Pdif	08 44 37.6	-0.1
	baz=11						
KSCO	Kaye Shedlock'	99.62	358	P	Pdif	08 44 37.7	-0.4
	baz=2.1						
CBKS	Cedar Bluff	99.69	355	P	Pdif	08 44 38.4	+0.1
	baz=4.2						
Q24A	Divide	99.71	360	P	Pdif	08 44 38.7	0.0
	baz=0.1						
R11A	Troy Canyon, C	99.79	8	P	Pdif	08 44 38.9	0.0
	baz=352						
WVT	Waverly	100.88	346	P	Pdif	08 44 43.5	0.0
	baz=13						
S22A	4UR Ranch, Cre	100.92	1	P	Pdif	08 44 44.7	+0.6
	baz=359						
SDCO	Great Sand Dun	100.93	0	P	Pdif	08 44 44.4	+0.2
	baz=360						
CWC	Cottonwood Cre	101.37	10	P	Pdif	08 44 46.4	+0.4
	baz=350						
MVCO	Mesa Verde	101.41	2	P	Pdif	08 44 46.4	+0.2
	baz=358						
U40A	Yellville	101.46	350	P	Pdif	08 44 46.2	0.0
	baz=9.5						
FURC	Furnace Creek,	101.50	9	P	Pdif	08 44 46.8	+0.5
	baz=351						
T25A	Trinidad	101.53	359	P	Pdif	08 44 46.8	+0.1
	baz=0.7						
MPMC	Manual Prospec	101.83	10	P	Pdif	08 44 47.8	-0.2
	baz=351						
TUL1	Leonard	102.25	352	P	Pdif	08 44 49.9	+0.2
	baz=7.3						
LRMC	Laurel Mtn Rad	102.37	10	P	Pdif	08 44 50.2	-0.2
	baz=351						
GOGA	Godfrey	102.57	341	P	Pdif	08 44 51.5	+0.4
	baz=17						
TUQ	Turquoise Moun	102.63	9	P	Pdif	08 44 51.5	-0.1
	baz=352						
GSC	Goldstone, Bar	102.66	10	P	Pdif	08 44 50.8	-0.8
	baz=351						
W39A	Magazine	102.73	350	P	Pdif	08 44 51.7	-0.1
	baz=8.8						
EDW2	Edwards Air Fo	102.92	11	P	Pdif	08 44 52.0	-0.8
	baz=350						
SBC	Santa Barbara	103.10	12	P	Pdif	08 44 52.5	-0.9
	baz=349						
HEC	Hector,Ludlow	103.18	9	P	Pdif	08 44 54.0	+0.1
	baz=352						
X40A	Basin Creek Fa	103.30	349	P	Pdif	08 44 54.3	0.0
	baz=9.6						
GMRC	Granite Mounta	103.30	9	P	Pdif	08 44 54.3	-0.3
	baz=352						
SCZ2	Santa Cruz Isl	103.55	12	P	Pdif	08 44 55.6	+0.1
	baz=349						
TXAR	Lajitas Array	109.30	358	Pdiff	Pdif	08 45 22.4	+1.1
	comp=Z,0.3nm,0.8s,baz=28,slow=4.3,SNR=1.9						
TXAR				PP	PP	08 49 57.4	+4.6
	comp=Z,0.9nm,1.1s,baz=356,slow=3.8,SNR=3.5						
AOPR	Arecibo Observ	110.36	321	e	Pdif	08 45 30.9	+4.9
CAM01	Campos-RJ	123.54	270	eP	PKiKP	08 49 53.9	+1.7
MACA	Manacapuru-AM	124.56	301	eP	PKPdf	08 49 53.9	-0.4
MACA	Manacapuru-AM	124.56	301	PKPdf	PKPdf	08 49 53.3	-1.0
VNA2	Neumayer--Watz	126.27	204	PKPdf	PKPdf	08 49 55.0	-0.8
VNA3	Neumayer Olymp	127.07	204	PKPdf	PKPdf	08 49 56.4	-0.9
SALV	Santo Antonio	130.25	286	eP	PKPdf	08 50 05.0	0.0
SAML	Samuel	130.55	299	PKIKP	PKPdf	08 50 05.4	-0.2
SAML	Samuel	130.55	299		PKPdf	08 50 05.4	-0.2
TBTG	Tabatinga, AM	130.99	310	eP	PKPdf	08 50 06.0	-0.5
OTAV	Otavalo	131.65	323	eP	PKiKP	08 50 09.5	+0.2
PTLB	Pontes e Lacer	132.41	289	eP	PKiKP	08 50 09.8	-0.3
ETMB	Extrema	133.16	301	eP	PKPdf	08 50 11.0	+0.5
SIV	San Ignacio	134.14	290	PKP	PKPdf	08 50 11.7	-0.6
	comp=Z,2.1nm,0.7s,baz=79,slow=1.9,SNR=13						
ITAB	Concordia	134.44	271	eP	PKiKP	08 50 14.6	+0.6
CZSB	Cruzeiro do Su	135.47	310	eP	PKiKP	08 50 17.0	+0.5
CPSB	Cacapava Do Su	137.07	268	eP	PKiKP	08 50 20.2	+1.0
CPUP	Villa Florida	137.83	276	PKP	PKPdf	08 50 18.3	-0.6
	comp=Z,5.9nm,1.0s,baz=339,slow=4.0,SNR=4.1						
CPUP	Villa Florida	137.83	276		PKPdf	08 50 17.9	-1.0
LPAZ	La Paz	139.18	297	PKP	PKPdf	08 50 21.7	-0.8
	comp=Z,1.8nm,0.9s,baz=28,slow=5.4,SNR=4.2						
LPAZ	La Paz	139.18	297	eP	PKPdf	08 50 22.5	+0.1
PB16	IPOC Station P	141.56	296		PKPdf	08 50 23.6	-3.0
PB09	IPOC Station P	143.74	292		PKPdf	08 50 29.1	-0.8
LVC	Limon Verde	144.04	291	PKP	PKPbc	08 50 28.7	+0.1
	comp=Z,14nm,0.8s,baz=25,slow=4.1,SNR=11						
LVC	Limon Verde	144.04	291	PKIKP	PKPbc	08 50 29.4	+0.8
LVC	Limon Verde	144.04	291	eP	PKPbc	08 50 29.5	+0.9
LVC	Limon Verde	144.04	291	PKPdf	PKPbc	08 50 29.4	+0.8
PB07	IPOC Station P	144.14	293		PKPbc	08 50 29.5	+0.8
PB06	IPOC Station P	144.56	291		PKPbc	08 50 30.0	0.0
PB04	IPOC Station P	144.72	292		PKPbc	08 50 30.7	+0.2
PB15	IPOC Station P	144.82	290		PKPbc	08 50 31.3	+0.4
TRQA	Tornquist	146.72	262	PKP2	PKPdf	08 50 34.9	+0.5
TRQA	Tornquist	146.72	262	eP	PKPab	08 50 37.0	-0.3
TRQA	Tornquist	146.72	262	PKPdf	PKPdf	08 50 34.9	+0.5
AC02	Maricunga	146.81	285	PKPbc	PKPbc	08 50 37.0	-0.3
ZON	Zonda	149.01	277	PKP2	PKPbc	08 50 42.4	-0.1
ZON	Zonda	149.01	277		PKPbc	08 50 42.4	-0.1
CO03	El Pedregal	150.15	280		PKPbc	08 50 44.7	-0.6
VA03	San Esteban	150.99	276		PKPbc	08 50 46.7	-0.6
BO02	Sierra Bellavi	152.06	273		PKPbc	08 50 48.4	-1.3
PLCA	Paso Flores	153.85	260	PKPbc	PKPbc	08 50 51.5	-1.9
	comp=Z,9.1nm,1.1s,baz=80,slow=2.8,SNR=7.0						
PLCA	Paso Flores	153.85	260	PKP2	PKPab	08 51 06.7	+0.1
PLCA	Paso Flores	153.85	260	eP	PKPdf	08 50 46.6	+1.1
PLCA	Paso Flores	153.85	260	PKPab	PKPab	08 51 06.7	+0.1
LC01	Cunco	154.35	265	PKPbc	PKPbc	08 50 54.4	-0.1

IDC ***07*** *08:43:26.8±1.7, 37°.72N×73°.32E, h0^{km}, mb3.8/5, mb1 4.0/9, mb1mx3.5/65, mbtmp3.9/9, ML3.6/4, Error ellipse: s-maj=34.3km s-min=25.7km az=29.0*

ISC 07 08:43:29.0±1.2**, 37°.7N**±0°.1×**73°.1E**±0°.1**, h10**^{km}**, n12, σ2ˢ.15**/14**, mb3.6**/5**, 5C, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.06	12	Pn	Pn	08 44 48.6	+3.6
	2.0nm,0.3s,baz=204,slow=13,SNR=3.7						
AAK				Sn	Sn	08 45 44.1	+0.5
	2.3nm,0.3s,baz=314,slow=22,SNR=1.8						
AAK	Ala-Archa	5.06	12	⇑Pn	Pn	08 44 48.3	+3.4
	27nm,0.7s						
AAK				⇑Sn	Sn	08 45 43.2	-0.4
	62nm,0.9s						
KK02	Karatay Array	5.74	341	⇑Pn	Pn	08 44 56.0	+1.8
	9.2nm,0.5s,baz=149,slow=12						
KK02				⇑Sn	Sn	08 45 56.8	-3.3
	29nm,0.7s,baz=147,slow=21						
KK02				⇑Lg	Lg	08 46 22.5	
	33nm,0.7s						
GEYT	Alibeck	11.82	276	Pn	Pn	08 46 19.0	+1.4
	1.0nm,0.3s,baz=172,slow=12,SNR=2.6						
BVAR	Borovoye Array	15.44	354	Pn	Pn	08 47 06.2	-0.5
	0.3nm,0.3s,baz=150,slow=15,SNR=1.5						
AKTO	Aktyubinsk	16.66	325	Pn	Pn	08 47 21.9	-0.5
	0.6nm,0.3s,baz=108,slow=18,SNR=4.6						
ZALV	Zalesovo Beam	18.16	23	P	Pn	08 47 39.6	-1.4
	0.2nm,0.3s,baz=226,slow=15,SNR=3.1						
SONM	Songino Array	26.31	57	P	P	08 49 02.4	-2.4
	1.1nm,0.8s,baz=247,slow=11,SNR=1.5						
FINES	FINESS Array B	37.43	325	P	P	08 50 42.0	+0.1
	3.4nm,0.9s,baz=105,slow=14,SNR=1.5						
ARCES	ARCESS Array B	40.68	337	P	P	08 51 08.1	-1.1
	3.0nm,0.9s,baz=98,slow=7.6,SNR=3.9						
ILAR	Eielson Array	73.17	17	P	P	08 54 56.9	-2.6
	0.1nm,0.5s,baz=320,slow=34,SNR=2.8						
WRA	Warramunga Arr	81.26	123	P	P	08 55 45.0	-0.4
	0.2nm,0.7s,baz=326,slow=4.8,SNR=2.0						

NEIC ***07*** *08:45:59.3±2.5, 19°.52N±0°.06×65°.54W±0°.02, h19^{km}±8^{km}, Error ellipse: s-maj=9.1km s-min=2.7km az=176.0*

RSPR ***07*** *08:46:00.3, 19°.67N×65°.48W, h34^{km}±31^{km}, MD4.0/14*

ISC 07 08:45:57.9±1.1**, 19°.56N**±0°.06×**65°.48W**±0°.04**, h16**^{km}**, n61, σ0ˢ.86**/64**, 13C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	1.26	171	⇑eP	Pb	08 46 21.2	-0.1
CUPR	Culebra, Puert	1.26	171	eS	Sg	08 46 38.5	-0.2
CUPR	Culebra, Puert	1.26	171		Pn	08 46 20.6	-0.3
CUPR				IAML		08 46 38.7	
	comp=N,713nm,0.8s						
CUPR	Culebra, Puert	1.26	171		Sg	08 46 38.5	-0.2
STVI	Saint Thomas	1.30	157	⇑eP	Pb	08 46 21.9	-0.1
STVI	Saint Thomas	1.30	157	eS	Sb	08 46 38.9	+0.4
STVI	Saint Thomas	1.30	157		Pb	08 46 21.9	-0.1
STVI				IAML		08 46 57.4	
	comp=N,557nm,1.0s						
STVI	Saint Thomas	1.30	157		Sb	08 46 38.9	+0.4
CBYP	Canovanas	1.33	196	⇓eP	Pn	08 46 20.9	-0.9
CBYP	Canovanas	1.33	196		Pn	08 46 20.8	-1.1
CBYP				IAML		08 46 42.9	
	comp=N,2µm,0.2s						
CBYP				IAML		08 46 44.2	
	comp=E,1µm,0.2s						
GCPR	Guaynabo City	1.37	205	⇓eP	Pn	08 46 21.8	-0.6
GCPR	Guaynabo City	1.37	205	eS	Sn	08 46 39.8	-0.4
GCPR	Guaynabo City	1.37	205		Pn	08 46 21.8	-0.6
GCPR				IAML		08 46 48.6	
	comp=E,486nm,0.7s						
GCPR	Guaynabo City	1.37	205		Sn	08 46 39.8	-0.4
TBVI	Tortola	1.40	144	⇓eP	Pb	08 46 23.5	-0.2
TBVI	Tortola	1.40	144	eS	Sg	08 46 42.5	-0.6
EMPR	Esperanza - Ma	1.47	223	⇑eP	Pn	08 46 24.2	+0.5
EMPR	Esperanza - Ma	1.47	223	eS	Sn	08 46 42.6	+0.1
EMPR	Esperanza - Ma	1.47	223		Pn	08 46 24.1	+0.4
EMPR					Sn	08 46 42.9	+0.4
EMPR				IAML		08 46 47.7	
	comp=E,972nm,0.7s						
EMPR				IAML		08 46 54.4	
	comp=N,849nm,0.6s						
SJG	San Juan	1.57	204		Pn	08 46 24.9	-0.2
SJG				IAML		08 46 49.9	
	comp=N,479nm,0.5s						
SJG				IAML		08 46 54.1	
	comp=N,409nm,0.5s						
PDPR	Patillas Dam,	1.62	199		Pn	08 46 25.2	-0.5
IGPR	InterUniversit	1.69	201	⇑eP	Pb	08 46 28.0	-0.7
IGPR	InterUniversit	1.69	201	eS	Sb	08 46 49.3	-0.4
AOPR	Arecibo Observ	1.71	225	⇑eP	Pn	08 46 27.2	+0.1
AOPR	Arecibo Observ	1.71	225	eS	Sn	08 46 49.2	+0.6
AOPR	Arecibo Observ	1.71	225		Pn	08 46 27.0	0.0
AOPR					Sn	08 46 49.0	+0.5
CELP	Cerrillos	1.81	215	⇑eP	Pn	08 46 29.0	+0.6
CELP	Cerrillos	1.81	215	eS	Sn	08 46 51.3	+0.3
CELP	Cerrillos	1.81	215		Pn	08 46 29.0	+0.6
CELP					Sn	08 46 51.8	+0.8
OBIP	Obispado Ponce	1.85	215	⇑eP	Pn	08 46 29.5	+0.5
OBIP	Obispado Ponce	1.85	215	eS	Sn	08 46 52.3	+0.3
OBIP	Obispado Ponce	1.85	215		Pn	08 46 29.0	0.0
OBIP	Obispado Ponce	1.85	215		Sn	08 46 52.3	+0.3
AGPR	Aguadilla, PR	1.89	235	⇑eP	Pn	08 46 30.1	+0.6
AGPR	Aguadilla, PR	1.89	235	eS	Sn	08 46 53.9	+0.9
AGPR	Aguadilla, PR	1.89	235		Pn	08 46 30.6	+1.1
AGPR				IAML		08 47 27.4	
	comp=N,306nm,1.9s						
AGPR	Aguadilla, PR	1.89	235		Sn	08 46 53.9	+0.9
CDVI	St. Croix	1.92	159	⇑eP	Pb	08 46 32.4	-0.2
CDVI	St. Croix	1.92	159		Pb	08 46 31.8	-0.7
LSP	Las Mesas	2.05	228	⇑eP	Pn	08 46 32.2	+0.4
LSP	Las Mesas	2.05	228	eS	Sn	08 46 57.7	+0.6
GBPR	Guanica, Bosqu	2.06	220	⇓eP	Pn	08 46 33.2	+1.4
GBPR	Guanica, Bosqu	2.06	220	eS	Sn	08 46 58.1	+0.8
PRSN	Puerto Rico Se	2.07	230		Pn	08 46 32.5	+0.5
PRSN				IAML		08 47 08.8	
	comp=E,623nm,0.3s						
PRSN				IAML		08 47 12.5	
	comp=N,698nm,0.3s						
MLPR	Magueyes Islan	2.17	223	⇑eP	Pn	08 46 34.4	+1.1
MLPR	Magueyes Islan	2.17	223		Pn	08 46 34.5	+1.1
CRPR	Cabo Rojo, PR	2.18	225	⇑eP	Pn	08 46 33.9	+0.4
CRPR	Cabo Rojo, PR	2.18	225		Pn	08 46 35.3	+1.8
CRPR				IAML		08 47 20.7	
	comp=N,199nm,0.8s						
IDE	Isla Desecheo	2.22	239	⇑eP	Pn	08 46 34.1	0.0
SMRT	St. Maarten	2.73	123	Pn	Pn	08 46 42.3	+1.2
SMRT				IAML		08 47 41.6	
	comp=N,298nm,1.2s						
SMRT				IAML		08 47 45.3	
	comp=E,342nm,1.4s						
SABA	Saba	2.87	132	Pn	Pn	08 46 45.4	+2.4
SABA				IAML		08 47 49.2	
	comp=N,362nm,1.4s						
SC01	Santiago de lo	4.95	269	Pn	Pn	08 47 11.8	+0.1
SDDR	Presa de Saban	5.52	265	Pn	Pn	08 47 20.2	+0.7
GRTK	Grand Turk	5.64	291	Pn	Pn	08 47 20.8	-0.4
DLPL	La Plaine	5.83	135	Pn	Pn	08 47 24.3	+0.5
FDF	Fort de France	6.34	139	Pn	Pn	08 47 29.0	-1.8
BIRV	Birongo	9.06	185	Pn	Pn	08 48 09.3	+1.2
BAUV	El Baul	10.84	194	Pn	Pn	08 48 35.1	+2.6
BOAV	Boa Vista	17.73	164	Pn	Pn	08 50 03.9	-0.4
BOAV				IAmb	IAmb	08 50 08.9	
	comp=Z,2.4nm,0.8s						
V58A	Windy Hill, Pi	20.15	326	P	P	08 50 29.9	-1.5
V58A				IAmb	IAmb	08 50 49.7	
	comp=Z,10nm,1.0s						
K57A	Scipio Center	24.91	340	P	P	08 51 18.5	-1.7
K57A				IAmb	IAmb	08 51 28.6	
	comp=Z,10nm,1.1s						

NEIC ***07*** *08:53:28.9±1.6, 19°.54N±0°.09×65°.49W±0°.06, h36^{km}±45^{km}, Error ellipse: s-maj=14.0km s-min=7.9km az=199.0*

RSPR ***07*** *08:53:28.2, 19°.48N×65°.44W, h91^{km}±9^{km}, MD3.7/9*

ISC 07 08:53:26.3±1.8**, 19°.51N**±0°.08×**65°.49W**±0°.04**, h16**^{km}**, n44, σ0ˢ.70**/46**, 11C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	1.21	171	⇓eP	Pg	08 53 49.1	-0.5
CUPR	Culebra, Puert	1.21	171	eS	Sg	08 54 05.2	-0.2
CUPR	Culebra, Puert	1.21	171		Pg	08 53 49.3	-0.4
CUPR	Culebra, Puert	1.21	171		Sg	08 54 05.2	-0.2
STVI	Saint Thomas	1.26	156	⇑eP	Pg	08 53 50.0	-0.5
STVI	Saint Thomas	1.26	156	eS	Sg	08 54 07.7	+0.8
STVI	Saint Thomas	1.26	156		Pg	08 53 50.0	-0.5
STVI					Sg	08 54 07.4	+0.5
STVI				IAML		08 54 13.1	
	comp=N,167nm,2.1s						

CBYP	Canovanas	1.28	196	⇑eP	Pn	08 53 49.4	-0.1
CBYP	Canovanas	1.28	196		Pn	08 53 48.9	-0.6
CBYP				IAML		08 54 09.6	
	comp=N,511nm,0.2s						
CBYP				IAML		08 54 16.2	
	comp=E,443nm,0.2s						
GCPR	Guaynabo City	1.32	205		Pn	08 53 50.1	+0.1
GCPR				IAML		08 54 14.5	
	comp=E,136nm,1.0s						
TBVI	Tortola	1.36	143	⇑eP	Pb	08 53 51.4	0.0
TBVI	Tortola	1.36	143	eS	Sg	08 54 09.5	-0.9
EMPR	Esperanza - Ma	1.42	224	⇑eP	Pb	08 53 52.6	+0.2
EMPR	Esperanza - Ma	1.42	224	eS	Sg	08 54 11.8	-0.3
EMPR	Esperanza - Ma	1.42	224		Pb	08 53 52.2	-0.2
EMPR				IAML		08 54 27.7	
	comp=E,267nm,0.7s						
EMPR				IAML		08 54 35.8	
	comp=N,230nm,2.4s						
EMPR	Esperanza - Ma	1.42	224		Sg	08 54 11.8	-0.3
SJG	San Juan	1.52	204		Pb	08 53 53.5	-0.6
SJG				IAML		08 54 26.0	
	comp=N,138nm,1.5s						
SJG				IAML		08 54 26.3	
	comp=N,115nm,1.1s						
PDPR	Patillas Dam,	1.56	199		Pb	08 53 54.2	-0.6
PDPR				IAML		08 54 16.0	
	comp=E,121nm,0.9s						
IGPR	InterUniversit	1.64	201	⇑eP	Pn	08 53 54.9	+0.4
IGPR	InterUniversit	1.64	201	eS	Sb	08 54 16.5	-0.1
AOPR	Arecibo Observ	1.66	226	⇓eP	Pb	08 53 55.7	-0.8
AOPR	Arecibo Observ	1.66	226	eS	Sb	08 54 17.7	+0.5
AOPR	Arecibo Observ	1.66	226		Pb	08 53 55.7	-0.8
AOPR					Sb	08 54 17.7	+0.5
AOPR	Arecibo Observ	1.66	226	IAML		08 54 20.4	
	comp=N,413nm,0.4s						
CELP	Cerrillos	1.76	216	⇑eP	Pn	08 53 56.8	+0.7
CELP	Cerrillos	1.76	216	eS	Sn	08 54 19.1	+0.9
CELP	Cerrillos	1.76	216		Pb	08 53 57.5	-0.7
CELP				IAML		08 54 25.4	
	comp=N,78nm,0.7s						
CELP	Cerrillos	1.76	216		Sn	08 54 19.1	+0.9
OBIP	Obispado Ponce	1.80	216	⇑eP	Pn	08 53 57.2	+0.5
OBIP	Obispado Ponce	1.80	216	eS	Sb	08 54 20.5	-0.7
OBIP	Obispado Ponce	1.80	216		Pb	08 53 58.3	-0.6
OBIP					Sn	08 54 19.9	+0.7
CDVI	St. Croix	1.88	158	Pn	Pb	08 53 59.9	-0.3
LSP	Las Mesas	2.01	229	⇑eP	Pb	08 54 01.3	-1.1
PRSN	Puerto Rico Se	2.02	231	Pn	Pn	08 54 00.1	+0.4
PRSN				IAML		08 54 30.3	
	comp=E,224nm,0.3s						
PRSN				IAML		08 54 36.4	
	comp=N,200nm,1.5s						
MLPR	Magueyes Islan	2.12	224	⇑eP	Pn	08 54 02.0	+0.9
MLPR	Magueyes Islan	2.12	224	eS	Sn	08 54 28.4	+1.2
MLPR	Magueyes Islan	2.12	224		Pn	08 54 02.3	+1.2
MLPR	Magueyes Islan	2.12	224		Sn	08 54 28.4	+1.2
CRPR	Cabo Rojo, PR	2.14	226	⇑eP	Pn	08 54 02.6	+1.3
CRPR	Cabo Rojo, PR	2.14	226		Pn	08 54 01.5	+0.1
CRPR				IAML		08 54 42.0	
	comp=E,82nm,1.6s						
CRPR				IAML		08 54 56.9	
	comp=N,63nm,1.5s						
IDE	Isla Desecheo	2.18	240	⇑eP	Pn	08 54 01.0	-1.0
IDE	Isla Desecheo	2.18	240	eS	Sn	08 54 28.6	-0.1
SC01	Santiago de lo	4.94	270	Pn	Pn	08 54 39.8	-0.1
SDDR	Presa de Saban	5.50	266		Pn	08 54 48.7	+1.1

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*IDC **07** 08:54:10.3±1.1, 38°.52N×73°.25E, h0^{km}, mb4.0/12, mb1 4.1/19, mb1mx3.9/51, mbtmp4.0/19, ML3.7/7, Error ellipse: s-maj=18.5km s-min=16.7km az=40.0*

*NEIC **07** 08:54:14.3±2.6, 38°.82N±0°.04×73°.11E±0°.07, h10^{km}±1^{km}, mb4.4/12, Error ellipse: s-maj=10.6km s-min=4.3km az=129.0*

*KRNET **07** 08:54:15.8±0.1, 38°.75N×73°.13E, mb4.4*

ISC 07 08:54:13.7±0.6**, 38°.74N**±0°.05×**73°.27E**±0°.04**, h10^{km}, n64, σ1$\overset{s}{.}$81**/72**, mb4.1**/16**, 11C-3D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	1.36	303	Pn	Pn	08 54 37.7	-1.3
DRK	Karamyk	1.36	303	⇑iP	Pn	08 54 39.5	+0.5
	baz=6.0						
DRK				⇑iS	Sb	08 54 56.8	-0.1
	baz=6.0						
BTK	Batken	2.31	305	Pn	Pn	08 54 49.0	-2.8
BTK				Pg	Pb	08 54 55.7	+0.3
BTK	Batken	2.31	305	⇑iP	Pb	08 54 55.3	-0.1
	baz=7.0						
BTK				⇑iS	Sb	08 55 23.9	-0.1
	baz=7.0						
GAR	Garm	2.32	277		Pn	08 54 51.8	-0.2
GAR				Pg	Pg	08 54 58.6	+0.5
GAR	Garm	2.32	277	⇓iP	Pb	08 54 55.1	-0.5
	baz=77						
GAR				⇓iS	Sb	08 55 24.0	-0.3
	baz=77						
CHGR	Chuyangaron	3.21	270		Pn	08 55 04.8	+0.5
CHGR	Chuyangaron	3.21	270	⇑eP	Pn	08 55 07.6	+3.3
	baz=70						
CHGR				⇑iS	Sn	08 55 45.5	+2.8
	baz=70						
TRKS	Terek-Say	3.23	330	⇑eP	Pn	08 55 07.5	+3.0
	baz=32						
TRKS				⇑iS	Sn	08 55 45.3	+2.2
	baz=32						
TAS	Tashkent	3.99	311	Pn	Pn	08 55 13.2	-1.8
AAK	Ala-Archa	4.00	13	Pn	Pn	08 55 19.2	+4.0
	6.9nm,0.3s,baz=202,slow=7.2,SNR=6.1						
AAK				Sn	Sb	08 56 10.8	-2.0
	5.4nm,0.3s,baz=65,slow=15,SNR=2.8						
AAK	Ala-Archa	4.00	13	⇑Pn	Pn	08 55 19.1	+4.0
	77nm,0.7s						
AAK				⇑Sn	Sb	08 56 12.2	-0.7
	100nm,0.7s						
AAK	Ala-Archa	4.00	13		Pn	08 55 14.7	-0.5
FRU1	Bishkek	4.19	14	Pn	Pn	08 55 17.7	0.0
BOOM	Boomskoye usch	4.26	28		Pn	08 55 20.7	+1.9
KDJ	Kajisay	4.51	40	Pn	Pn	08 55 23.7	+1.5
TARG	Taragay, Kyrgy	4.58	48	Pn	Pn	08 55 22.6	-0.8
KKAR	Karatay Array	4.83	335		Pn	08 55 27.6	+1.2
KK09	Karatay Array	4.85	335	⇑Pn	Pn	08 55 29.6	+2.9
	35nm,0.6s,baz=144,slow=12						
KK09				⇓Sn	Sn	08 56 28.4	+5.4
	90nm,0.7s,baz=150,slow=23						
NIL	Nilore	5.08	180	Pn	Pn	08 55 32.6	+2.6
KBL	Kabul	5.39	220	Pn	Pn	08 55 36.7	+2.2
PRZ	Przheval'sk	5.41	45	Pn	Pn	08 55 35.4	+0.9
MAKZ	Makanchi	10.29	36	Pn	Pn	08 56 45.0	+3.7
MK31	Makanchi Array	10.42	37	Pn	Pn	08 56 45.0	+1.9
MKAR	Makanchi Array	10.42	37	Pn	Pn	08 56 46.1	+3.0
	0.3nm,0.3s,baz=215,slow=12,SNR=24						
GEYT	Alibeck	11.93	271	Pn	Pn	08 57 03.4	-0.4
	0.4nm,0.3s,baz=97,slow=9.4,SNR=2.0						
GEYT	Alibeck	11.93	271	Pn	Pn	08 57 02.5	-1.3
GYA0B	ALIBECK ARRAY	11.93	271	Pn	Pn	08 57 02.3	-1.5
WMQ	Urumqi	11.98	60	eP	Pn	08 57 08.2	+3.7
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
KURBB	Kurchatov Arra	12.45	16	Pn	Pn	08 57 10.3	-0.5
	comp=Z,0.2nm,0.3s,baz=198,slow=12,SNR=4.0						
KURK	Kurchatov	12.56	16		Pn	08 57 11.5	-0.7
ABKAR	Akbulak array	14.20	322	Pn	Pn	08 57 32.2	-2.6
ABKAR	Akbulak array	14.20	322	Pn	Pn	08 57 32.6	-2.1
BVAR	Borovoye Array	14.42	353	Pn	Pn	08 57 37.2	-0.6
	comp=Z,0.5nm,0.3s,baz=128,slow=13,SNR=2.8						
BRVK	Borovoye	14.46	353	Pn	Pn	08 57 37.5	-0.8
AKTO	Aktyubinsk	15.92	322	Pn	Pn	08 57 57.1	-0.6
	comp=Z,1.3nm,0.3s,baz=113,slow=18,SNR=16						
ZAA0	Zalesovo Array	17.14	24	Pn	Pn	08 58 12.2	-0.9
ZALV	Zalesovo Beam	17.14	24	P	Pn	08 58 13.6	+0.5
	comp=Z,0.9nm,0.3s,baz=216,slow=11,SNR=9.3						
ZALV	Zalesovo Beam	17.14	24		Pn	08 58 11.7	-1.4
ARU	Arti	20.21	336	P	P	08 58 49.4	+0.9
	comp=Z,2.2nm,0.2s,baz=131,slow=14,SNR=4.4						
ARU	Arti	20.21	336	IAmb	IAmb	08 58 57.7	
	comp=Z,7.3nm,1.0s						
BELG	Belogornoye	22.40	316	P	P	08 59 10.3	-1.8
	comp=Z,16nm,0.7s,baz=72,slow=8.0,SNR=3.6						
TLY	Talaya	24.80	49	P	P	08 59 37.0	+1.3
TLY				IAmb	IAmb	08 59 58.5	
	comp=Z,6.4nm,1.3s						
SONM	Songino Array	25.61	58	P	P	08 59 43.2	0.0
	comp=Z,2.8nm,0.9s,baz=258,slow=7.8,SNR=10						
SONM	Songino Array	25.61	58	IAmb	IAmb	08 59 47.3	
	comp=Z,3.2nm,1.1s						
NRIK	Noril'sk	31.61	10	P	P	09 00 36.6	+0.4
	comp=Z,2.2nm,0.9s,baz=186,slow=5.5,SNR=3.0						
FIA1	FINESS Array S	36.68	324	P	P	09 01 19.6	-0.7
FINES	FINESS Array B	36.68	324	P	P	09 01 19.6	-0.7
	comp=Z,7.0nm,0.9s,baz=126,slow=9.7,SNR=7.2						
ARCES	ARCESS Array B	39.79	336	P	P	09 01 45.9	-0.6
	comp=Z,2.1nm,0.8s,baz=108,slow=4.0,SNR=8.2						
KLR	Kul'dur	42.38	56	P	P	09 02 07.5	-0.6
	comp=Z,0.6nm,0.5s,baz=326,slow=7.3,SNR=2.2						
NC303	NORSAR Array S	43.64	322	P	P	09 02 17.5	-0.5
NOA	NORSAR Array B	43.71	322	P	P	09 02 17.3	-1.4
	comp=Z,1.0nm,0.7s,baz=100,slow=8.0,SNR=2.3						
NC204	NORSAR Array S	43.93	322	P	P	09 02 19.7	-0.8
PEA0B	Petropavlovsk-	57.11	46	P	P	09 03 59.8	-0.3
TOLK	Toolik Lake Re	68.29	16	P	P	09 05 14.6	+0.1
TOLK				IAmb	IAmb	09 05 22.7	
	comp=Z,3.3nm,1.3s						
A36M	Sachs Harbour	68.80	6	P	P	09 05 16.9	-0.6
A36M				IAmb	IAmb	09 05 25.7	
	comp=Z,2.0nm,0.8s						
IMAR	Indian Mountai	69.48	19	P	P	09 05 20.9	-1.0
BMAR	Burnt Mountain	70.33	15	P	P	09 05 27.5	+0.4
INK	Inuvik	71.39	10	P	P	09 05 32.8	-0.6
INK				IAmb	IAmb	09 05 33.6	
	comp=Z,1.3nm,0.8s						
MDM	Murphy Dome	71.66	17	P	P	09 05 35.1	-0.1
MDM				IAmb	IAmb	09 06 00.4	
	comp=Z,6.2nm,1.4s						
ILAR	Eielson Array	72.12	17	P	P	09 05 36.6	-1.3
	comp=Z,0.4nm,0.7s,baz=338,slow=3.1,SNR=5.2						
YKA	Yellowknife Ar	78.91	4	P	P	09 06 16.2	-0.6
	comp=Z,1.1nm,0.7s,baz=348,slow=5.5,SNR=7.0						
WRA	Warramunga Arr	81.69	124	P	P	09 06 30.1	-2.3
	comp=Z,0.4nm,0.6s,baz=327,slow=4.7,SNR=5.7						
ASAR	Alice Springs	84.10	127	P	P	09 06 42.5	-2.4
	comp=Z,0.3nm,0.8s,baz=313,slow=4.1,SNR=2.5						

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*SOME **07** 08:55:42.8, 38°.78N×72°.85E, h5^{km}, MS4.8*

*KRNET **07** 08:55:45.0±0.1, 38°.49N×73°.55E, mb5.1*

*IDC **07** 08:55:46.4±0.6, 38°.68N×73°.23E, h0^{km}, mb4.4/24, mb1 4.5/31, mb1mx4.4/50, mbtmp4.5/31, ML4.0/5, MS5.8/1, Ms1 5.8/1, ms1mx5.1/54, Error ellipse: s-maj=12.8km s-min=10.5km az=16.0*

*BJI **07** 08:55:46.2±0.0, 38°.65N×73°.18E, h7^{km}, mb4.7/37, ML4.6/5*

*NEIC **07** 08:55:48.4±2.0, 38°.58N±0°.05×73°.27E±0°.02, h10^{km}±1^{km}, mb4.7/64, Error ellipse: s-maj=8.5km s-min=3.4km az=357.0*

*MOS **07** 08:55:50.2±1.6, 38°.72N×73°.46E, h33^{km}, mb4.9/28, Error ellipse: s-maj=5.4km s-min=4.0km az=84.1*

*NNC **07** 08:56:13.4±3.9, 40°.03N×72°.46E, h0^{km}, mb5.4, mpv4.7, Error ellipse: s-maj=41.8km s-min=25.8km az=171.0*

ISC 07 08:55:47.7±0.3**, 38°.59N**±0°.02×**73°.36E**±0°.02**, h10^{km}, n323, σ2$\overset{s}{.}$22**/351**, mb4.7**/89**, MS6.0**/4**, 34C-19D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	1.50	306		Pn	08 56 13.3	-1.7
DRK	Karamyk	1.50	306	⇓iP	Pb	08 56 16.0	+0.1
	baz=7.0						
DRK				⇓iS	Sg	08 56 39.5	+3.4
	baz=7.0						
KSH	Kashi	2.23	65	Pg	Pn	08 56 20.1	-4.7
KSH				Sg	Sn	08 56 42.9	-10
KSH				smax	smax		
	comp=N,6µm,0.9s						
KSH				smax	smax		
	comp=E,9µm,0.8s						
GAR	Garm	2.42	281		Pn	08 56 27.2	-0.1
GAR	Garm	2.42	281	⇑iP	Pb	08 56 29.6	-1.7
	baz=82						
GAR				⇑iS	Sg	08 57 02.4	-2.9
	baz=82						
BTK	Batken	2.46	307	PN	Pn	08 56 28.0	+0.1
BTK	Batken	2.46	307		Pn	08 56 28.0	+0.1
BTK	Batken	2.46	307	⇑iP	Pb	08 56 30.3	-1.7
	baz=7.0						
BTK				⇑iS	Sb	08 57 03.3	+1.0
	baz=7.0						
CHGR	Chuyangaron	3.29	272	PN	Pn	08 56 41.4	+2.0
CHGR	Chuyangaron	3.29	272	Pn	Pn	08 56 40.4	+1.0
CHGR	Chuyangaron	3.29	272	⇑eP	Pn	08 56 41.7	+2.3
	baz=74						
CHGR				⇑iS	Sb	08 57 23.2	-3.2
	baz=74						
TRKS	Terek-Say	3.39	331	⇑iP	Pn	08 56 42.2	+1.4
	baz=29						
TRKS				⇑iS	Sn	08 57 23.8	+2.6
	baz=29						
AML	Almayashu	3.54	4	P	Pn	08 56 46.6	+3.5
	SNR=16						
AML	Almayashu	3.54	4	⇑eP	Pn	08 56 44.4	+1.3
	baz=2.0						
AML				⇑iS	Sn	08 57 28.0	+2.8
	baz=2.0						
UCH	Uchtor	3.73	13	P	Pn	08 56 49.3	+3.5
	SNR=9.8						
UCH	Uchtor	3.73	13	⇑iP	Pn	08 56 47.0	+1.2
	baz=11						
UCH				⇑iS	Sn	08 57 32.0	+2.0
	baz=11						
MNAS	Manas	3.94	351	⇑iP	Pn	08 56 50.3	+1.9
	baz=49						
MNAS				⇑iS	Sn	08 57 38.1	+3.3
	baz=49						
EKS2	Erkin-Say	4.08	4	P	Pn	08 56 54.8	+4.6
	SNR=6.6						
EKS2	Erkin-Say	4.08	4	⇓iP	Pn	08 56 51.6	+1.4
	baz=2.0						
EKS2				⇓iS	Sn	08 57 40.3	+2.3
	baz=2.0						
AAK	Ala-Archa	4.13	12	Pn	Pn	08 56 54.4	+3.5
	28nm,0.3s,baz=219,slow=15,SNR=17						
AAK				Sn	Sn	08 57 41.7	+2.2
	baz=39,slow=20,SNR=1.6						
AAK	Ala-Archa	4.13	12	P	Pn	08 56 55.7	+4.8
	SNR=15						
AAK	Ala-Archa	4.13	12	i PN	Pn	08 56 54.3	+3.3
AAK	Ala-Archa	4.13	12	Pn	Pb	08 57 04.7	+4.2
	597nm,1.1s						
AAK				Lg	Lg	08 57 50.5	
	968nm,1.0s						
AAK	Ala-Archa	4.13	12	Pn	Pn	08 56 52.2	+1.3
AAK	Ala-Archa	4.13	12	⇓eP	Pn	08 56 52.4	+1.4
	baz=10.0						
AAK				⇓iS	Sn	08 57 41.6	+2.2
	baz=10.0						
MRKS	Merke	4.15	359	eP	Pn	08 56 54.1	+3.0
	142nm,0.7s						
MRKS				eS	Sn	08 57 45.2	+5.5
	156nm,1.1s						
TAS	Tashkent	4.15	312	PN	Pn	08 56 51.3	+0.2
TAS	Tashkent	4.15	312	Pn	Pn	08 56 51.3	+0.2
TAS	Tashkent	4.15	312	⇑eP	Pn	08 56 53.9	+2.8
	baz=12						
TAS				⇑iS	Sn	08 57 43.7	+4.1
	baz=12						
ULHL	Ulahol	4.26	30	P	Pb	08 57 04.0	+1.2
	SNR=6.7						
FRU1	Bishkek	4.32	12	PN	Pn	08 56 56.0	+2.5
FRU1	Bishkek	4.32	12		Pn	08 56 56.0	+2.5
BOOM	Boomskoye usch	4.36	26	PN	Pn	08 56 57.4	+3.3
BOOM	Boomskoye usch	4.36	26	Pn	Pn	08 56 57.4	+3.3
BOOM	Boomskoye usch	4.36	26	⇑eP	Pn	08 56 54.8	+0.7
	baz=24						
BOOM				⇑iS	Sn	08 57 45.8	+0.8
	baz=24						
CHMS	Chumysh	4.53	13	P	Pn	08 57 00.6	+4.3
	SNR=8.0						
DZA	Taraz	4.56	341	eP	Pn	08 57 00.5	+3.7
	766nm,0.4s						
DZA				eS	Sn	08 57 56.1	+6.2
	1µm,0.8s						
DZA	Taraz	4.56	341	ePg	Pb	08 57 11.9	+4.1
	baz=338						
KDJ	Kajisay	4.58	38	PN	Pn	08 57 00.3	+3.1
KDJ	Kajisay	4.58	38	Pn	Pn	08 57 00.2	+3.1
TARG	Taragay, Kyrgy	4.62	46	Pn	Pn	08 56 59.8	+1.8
TKM2	Tokmak 2	4.64	21	PN	Pb	08 57 11.3	+2.0
TKM2	Tokmak 2	4.64	21	⇓Pn	Pb	08 57 11.6	+2.3
	200nm,0.9s						
TKM2				⇓Lg	Lg	08 58 13.9	
	432nm,1.2s						
CHM	Chimkent	4.70	324	eP	Pn	08 57 03.4	+4.8
	287nm,0.4s						
CHM				eS	Sb	08 58 01.1	-5.6
	644nm,0.5s						
KST	Kastek	4.86	23	eP	Pb	08 57 13.4	+0.4
	358nm,0.9s						
KST				eS	Sb	08 58 18.9	+7.3
	466nm,0.9s						
CEP	Cherat	4.90	194	P	Pb	08 57 17.2	+3.5
NIL	Nilore	4.94	181	Pn	Pn	08 57 02.2	+0.3
SGDS	Sogindy	4.95	11	ePg	Pb	08 57 17.7	+3.3
	baz=9.8						
DGS	Degeres	4.99	21	eP	Pb	08 57 16.8	+1.6
	154nm,0.7s						
DGS				eS	Sg	08 58 24.9	-2.9
	478nm,0.7s						
KK31	Karatay Array	5.00	335	PN	Pn	08 57 04.6	+1.9
KKAR	Karatay Array	5.00	335	PN	Pn	08 57 03.2	+0.5
KKAR	Karatay Array	5.00	335		Pn	08 57 03.2	+0.5
KK09	Karatay Array	5.02	335	⇓Pn	Pn	08 57 05.5	+2.5
	100nm,0.6s,baz=142,slow=13						
KK09				⇓Lg	Lg	08 58 04.0	
	830nm,1.1s,baz=150,slow=28						
IZV	Izvestkoviy	5.08	28	eP	Pb	08 57 18.8	+2.2
	136nm,0.4s						
IZV				eS	Sg	08 58 27.9	-2.8
	405nm,0.7s						
MTBS	Maitube	5.09	26	eP	Pb	08 57 18.7	+1.8
	125nm,1.1s						
MTBS				eS	Sg	08 58 27.5	-3.6
	242nm,1.1s						
TNSS	Tian-Shan	5.21	30	eP	Pb	08 57 21.1	+2.2
	64nm,0.8s						
TNSS				eS	Sg	08 58 32.2	-2.6
	88nm,0.1s						
TNSS	Tian-Shan	5.21	30	ePn	Pn	08 57 03.5	-2.4
	baz=30						
TNSS				ePg	Pb	08 57 22.1	+3.1
	baz=30						
AAA	Alma-Ata	5.34	29	ePn	Pn	08 57 05.3	-2.2
	baz=29						
AAA				ePg	Pb	08 57 24.9	+3.9
	baz=29						
AAA				eSn	Sn	08 58 04.2	-4.9
	baz=29						
AAA				eLg	Lg	08 58 33.9	
	baz=29						
AAA	Alma-Ata	5.34	29	ePN	Pn	08 57 05.2	-2.2
AAA				e		08 57 24.9	
MDOK	Medeo	5.35	30	eP	Pb	08 57 23.4	+2.1
	114nm,1.3s						
MDOK				eS	Sg	08 58 36.5	-3.0
	289nm,1.4s						
MDOK	Medeo	5.35	30	ePn	Pn	08 57 05.4	-2.4
	baz=30						
MDOK				ePg	Pb	08 57 24.4	+3.0
	baz=30						
MDOK	Medeo	5.35	30	ePN	Pn	08 57 05.3	-2.4
MDOK				e		08 57 24.3	
MDOK	Medeo	5.35	30	⇑Pn	Pb	08 57 24.0	+2.6
	298nm,0.9s						
MDOK				⇑Pn	Pb	08 57 24.0	+2.6
	298nm,0.9s						
MDOK				⇓Lg	Lg	08 58 42.2	
	477nm,1.1s						
KNDC	Almaty	5.36	29	⇑Pn	Pb	08 57 25.7	+4.2
	418nm,0.8s						
KNDC				⇑Pn	Pb	08 57 25.7	+4.2
	418nm,0.8s						
KNDC				⇓Lg	Lg	08 58 43.5	
	2µm,1.2s						
KRBS	Karabastau	5.39	18	eP	Pb	08 57 23.0	+1.1
	174nm,0.7s						
KRBS				eS	Sg	08 58 36.0	-4.5
	359nm,1.7s						
KOTS	Kotyrbulak	5.44	30	eP	Pb	08 57 25.5	+2.8
	85nm,0.4s						
KOTS				eS	Sg	08 58 39.7	-2.4
	343nm,1.1s						
PRZ	Przheval'sk	5.46	43	PN	Pn	08 57 10.3	+1.0
PRZ	Przheval'sk	5.46	43	Pn	Pn	08 57 10.3	+1.0
KTBS	Karatobe	5.69	25	eP	Pb	08 57 28.6	+1.5
	81nm,1.0s						
KTBS				eS	Sb	08 58 44.6	+9.2
	268nm,1.0s						
KUU	Kurty	5.75	22	eP	Pb	08 57 29.8	+1.7
	62nm,0.7s						
KUU				eS	Sg	08 58 46.8	-5.4
	424nm,2.0s						
KUU	Kurty	5.75	22	ePn	Pn	08 57 11.8	-1.3
	baz=22						
KUU				ePg	Pb	08 57 32.4	+4.3
	baz=22						
KUU	Kurty	5.75	22	ePN	Pn	08 57 11.8	-1.3
KUU				e		08 57 32.3	
SATY	Saty	5.88	39	eP	Pb	08 57 33.2	+3.0
	94nm,0.8s						
SATY				eS	Sg	08 58 52.6	-3.7
	426nm,1.6s						
SATY	Saty	5.88	39	ePg	Pb	08 57 33.9	+3.6
	baz=39						
THW	Thamme Wali	5.94	193	P	Pn	08 57 21.0	+5.3
KURS	Kuram	6.09	35	eP	Pb	08 57 35.6	+1.7
	94nm,0.7s						
KURS				eS	Sb	08 58 57.4	+11
	226nm,1.8s						
UZB	Uzynbulak	6.25	42	eP	Pb	08 57 41.0	+4.3
	37nm,1.0s						
UZB				eS	Sg	08 59 05.8	-2.5
	169nm,2.5s						
UZB	Uzynbulak	6.25	42	ePn	Pn	08 57 17.7	-2.4
	baz=42						
UZB				ePg	Pb	08 57 41.6	+5.0
	baz=42						
UZB	Uzynbulak	6.25	42	ePN	Pn	08 57 17.6	-2.5
UZB				e		08 57 41.6	
KPKS	Kokpek	6.31	38	eP	Pb	08 57 39.5	+1.8
	40nm,0.8s						
KPKS				eS	Sb	08 59 03.8	+11
	229nm,1.3s						
KPKS	Kokpek	6.31	38	ePn	Pn	08 57 19.9	-1.0
	baz=38						
KPKS				ePg	Pb	08 57 42.6	+5.0
	baz=38						
KPKS	Kokpek	6.31	38	ePN	Pn	08 57 19.8	-1.0
KPKS				e		08 57 42.6	
BTLS	Baital	6.46	4	eP	Pb	08 57 39.2	-1.0
	41nm,0.9s						
BTLS				eS	Sb	08 59 03.0	+5.6
	77nm,1.2s						
SHLS	Shalkode	6.49	43	eP	Pg	08 57 49.7	-2.2
	93nm,1.8s						
SHLS				eS	Sg	08 59 21.2	+5.2
	282nm,0.9s						
SHLS	Shalkode	6.49	43	ePn	Pn	08 57 25.4	+2.0
	22nm,0.9s,baz=46						
SHLS				ePg	Pg	08 57 49.7	-2.2
	baz=46						
SHLS	Shalkode	6.49	43	ePN	Pn	08 57 25.3	+2.0
SHLS				e		08 57 49.7	
SHLS				pmax	pmax		
	comp=Z,22nm,0.9s						
ARXS	Arharly	6.54	29	eP	Pb	08 57 47.1	+5.5
	comp=Z,59nm,0.7s						
ARXS				eS	Sg	08 59 16.5	-1.0
	comp=Z,246nm,0.9s						
PDGK	Podgornoye	6.62	42	PN	Pn	08 57 29.2	+4.0
SARP	Sargodha	6.68	185	P	Pn	08 57 28.5	+2.6
KTMS	Ketmen	7.17	45	eP	Pb	08 58 00.0	+7.7
	comp=Z,33nm,0.9s						
KTMS				eS	Sg	08 59 39.0	+1.3
	comp=Z,78nm,0.8s						
TDK	Taldyqorghan	7.43	29	ePg	Pb	08 58 03.1	+6.5
	baz=29						
HRA	Herat	9.89	248	Pn	Pn	08 58 09.5	-0.5
MAKZ	Makanchi	10.37	35	P	Pn	08 58 17.6	+1.2
MAKZ	Makanchi	10.37	35	Pn	Pn	08 58 17.6	+1.2
MKAR	Makanchi Array	10.50	36	Pn	Pn	08 58 20.9	+2.8
	comp=Z,0.3nm,0.3s,baz=225,slow=12,SNR=11						
MKAR				Lg	Lg	09 01 14.9	
	comp=Z,0.1nm,0.3s,baz=31,slow=17,SNR=2.2						
MKAR	Makanchi Array	10.50	36	P	Pn	08 58 20.8	+2.6
MKAR	Makanchi Array	10.50	36	Pn	Pn	08 58 20.8	+2.6

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MK31  Makanchi Array    10.50  36⇑eP     Pn      08 58 16.2 -2.0
MK31  Makanchi Array    10.50  36  Pn    Pn      08 58 19.7 +1.5
BRZS  Berezniki         11.40 358 ePn    Pn      08 58 30.1 -0.4
      comp=Z,6.4nm,0.8s,baz=357
BRZS  Berezniki         11.40 358 eP     Pn      08 58 30.0 -0.4
BRZS                               pmax  pmax
      comp=Z,6.0nm,0.8s
WMQ   Urumqi            11.99  60 eP     Pn      08 58 39.9 +1.3
WMQ                                pP            08 58 43.3
WMQ                                pmax  pmax
      comp=Z,35nm,0.9s
GEYT  Alibeck           12.01 272  Pn    Pn      08 58 37.0 -1.8
      comp=Z,1.3nm,0.3s,baz=179,slow=13,SNR=7.0
GEYT                               Sn    Sn      09 00 50.1 -2.7
      comp=Z,0.5nm,0.3s,baz=90,slow=24,SNR=5.6
GEYT  Alibeck           12.01 272        Pn      08 58 37.4 -1.4
GYA0B ALIBECK ARRAY     12.01 272  Pn    Pn      08 58 37.6 -1.3
ZSN   Zaisan            12.20  40 ePn    Pn      08 58 41.0 -0.5
      comp=Z,5.7nm,1.2s,baz=40
ZSN   Zaisan            12.20  40 eP     Pn      08 58 41.0 -0.5
ZSN                                pmax  pmax
      comp=Z,6.0nm,1.2s
KURBB Kurchatov Arra    12.57  15  Pn    Pn      08 58 46.3 -0.2
      baz=207,slow=12,SNR=9.6
KURBB                              Sn    Sn      09 00 51.7  -15
      comp=Z,0.0nm,0.3s,baz=223,slow=31,SNR=5.3
KURBB                              Lg    Lg      09 02 20.4
      comp=Z,0.1nm,0.3s,baz=210,slow=25,SNR=7.6
KURK  Kurchatov         12.68  15⇑iP     Pn      08 58 47.8 -0.1
KURK                               pmax  pmax
      comp=Z,9.0nm,0.9s
KURK  Kurchatov         12.68  15  Pn    Pn      08 58 47.9  0.0
SEM   Semipalatinsk     12.79  20 ePn    Pn      08 58 48.9 -0.7
      comp=Z,3.4nm,0.9s,baz=20
SEM   Semipalatinsk     12.79  20 eP     Pn      08 58 48.8 -0.8
SEM                                pmax  pmax
      comp=Z,3.0nm,0.9s
PYUN  Piuthan           13.19 140 eP     Pn      08 58 52.0 -3.2
      comp=Z,58nm,0.4s
DANN  Dangsing          13.39 137 eP     Pn      08 58 55.1 -3.0
      comp=Z,42nm,0.4s
KOLN  Koldanda          13.77 139 eP     Pn      08 58 59.5 -3.7
      comp=Z,29nm,0.4s
GKN   Gorkha            14.14 135 eP     Pn      08 59 04.8 -3.4
      comp=Z,35nm,0.5s
ABKAR Akbulak array     14.37 322  Pn    Pn      08 59 07.1 -3.9
BVAR  Borovoye Array    14.58 353  Pn    Pn      08 59 12.1 -1.8
      baz=184,slow=19,SNR=8.9
BVAR                               Lg    Lg      09 03 23.9
      comp=Z,0.3nm,0.3s,baz=211,slow=19,SNR=2.7
BRVK  Borovoye          14.62 353⇑iP     Pn      08 59 13.9 -0.6
BRVK                               pmax  pmax
      comp=Z,15nm,0.9s
BRVK  Borovoye          14.62 353  Pn    Pn      08 59 13.4 -1.1
KKN   Kakani            14.67 134 eP     Pn      08 59 11.9 -3.6
      comp=Z,38nm,0.7s
PKIN  Phulchoki         14.90 134 eP     Pn      08 59 14.7 -3.9
      comp=Z,40nm,0.6s
PKI   Pulchoki          14.91 134 eP     Pn      08 59 15.4 -3.4
      comp=Z,39nm,0.7s
GUN   Gumba             14.92 132 eP     Pn      08 59 16.0 -3.0
DGZ   Jazzator, Alta    14.98  38⇑eP     Pn      08 59 18.5 -1.0
RAMN  Ramite            16.07 132 eP     Pn      08 59 29.3 -4.6
      comp=Z,38nm,0.5s
AKTO  Aktyubinsk        16.08 322  Pn    Pn      08 59 31.8 -2.0
      comp=Z,0.6nm,0.3s,baz=128,slow=14,SNR=14
AKTO                               Sn    Sn      09 02 22.5  -10
      comp=Z,0.2nm,0.3s,baz=165,slow=20,SNR=3.4
TAPN  Taplejung         16.43 129 eP     Pn      08 59 35.0 -3.6
ODAN  Odare             16.60 131 eP     Pn      08 59 36.0 -4.7
      comp=Z,41nm,0.7s
LSA   Lhasa             17.17 116  P     Pn      08 59 47.1 -1.0
LSA                                pmax  pmax
      comp=Z,9.0nm,0.8s
LSA   Lhasa             17.17 116  Pn    Pn      08 59 47.1 -1.0
ZAA0  Zalesovo Array    17.24  23        Pn      08 59 48.8 +0.4
ZALV  Zalesovo Beam     17.24  23  P     Pn      08 59 47.3 -1.1
      comp=Z,1.8nm,0.3s,baz=216,slow=11,SNR=18
ZALV  Zalesovo Beam     17.24  23 i P    Pn      08 59 49.0 +0.6
ZALV                               pmax  pmax
      comp=Z,16nm,0.7s
ZALV  Zalesovo Beam     17.24  23        Pn      08 59 48.6 +0.2
UOSS  Minazif           19.90 232  P     P       09 00 19.2 -0.1
MAK   Makhachkala       20.03 291 eP     Pn      09 00 21.6 -0.8
MAK                               eS     Sn      09 04 07.0 -0.6
MAK                                pmax  pmax
      comp=Z,39nm,0.4s
MAK                                MLR   MLR
      comp=Z,53µm,17.0s
SVE   Sverdlovsk        20.09 339 eP     Pn      09 00 23.6 +0.6
SEKA  Sheki             20.22 286  P     Pn      09 00 24.0 -0.7
SHL   Shillong          20.32 124  P     P       09 00 23.9 -0.2
SHL                                pmax  pmax
      comp=Z,18nm,0.8s
SHL   Shillong          20.32 124  P     P       09 00 23.9 -0.2
ARU   Arti              20.37 336  P     P       09 00 23.0 -1.2
      comp=Z,1.7nm,0.3s,baz=183,slow=5.3,SNR=7.1
ARU   Arti              20.37 336c iP    P       09 00 23.0 -1.2
ARU                                              09 00 38.7
ARU                                S     S       09 04 08.5 -3.8
ARU                                pmax  pmax
      comp=Z,9.0nm,0.6s
ARU   Arti              20.37 336  P     P       09 00 24.0 -0.3
GTA   Gaotai            20.55  79 eP     P       09 00 28.6 +2.1
GTA                                pP    sP      09 00 38.2 +5.6
GTA                                sP    pP      09 00 43.2  +13
GTA                                pmax  pmax
      comp=Z,40nm,1.0s
GANJ  Ganja             20.90 284  P     Pn      09 00 33.9 +1.2
DDFL  Dedoflistskaro    21.03 286  P     P       09 00 37.9 +6.3
GROC  Groznyy           21.30 291 eP     P       09 00 36.0 +1.7
GROC                              e              09 00 56.1
GROC                              eS     S       09 04 31.8 +1.0
GROC                               pmax  pmax
      comp=Z,42nm,0.9s
HYB   Hyderabad         21.58 166 i P    P       09 00 38.5 +0.9
GNI   Garni             22.14 283  P     P       09 00 45.3 +1.7
      comp=Z,29nm,0.9s,baz=56,slow=7.3,SNR=3.0
GNI   Garni             22.14 283⇑eP     P       09 00 47.4 +3.7
GNI                                pmax  pmax
      comp=Z,39nm,1.0s
GNI   Garni             22.14 283  P     P       09 00 43.8 +0.1
GUDG  Gudauri           22.24 289  P     P       09 00 51.1 +6.3
KZRT  Kazreti           22.32 286  P     P       09 00 46.6 +1.2
BELG  Belogornoye       22.56 316  P     P       09 00 45.6 -2.2
      comp=Z,33nm,0.7s,baz=111,slow=1.0,SNR=6.5
BELG  Belogornoye       22.56 316⇑eP     P       09 00 50.4 +2.6
BELG                               pmax  pmax
      comp=Z,11nm,0.9s
ZEI   Tsey              22.67 290 eP     P       09 00 52.5 +3.2
ZEI                                pmax  pmax
      comp=Z,5.0nm,0.9s
NCK   Nalchik           22.91 292⇑eP     P       09 00 54.9 +3.2
NCK                                pmax  pmax
      comp=Z,20nm,0.9s
ONI   Oni               23.00 290  P     P       09 00 52.6  0.0
ONI                                pmax  pmax
      comp=Z,29nm,0.9s
ONI   Oni               23.00 290  P     P       09 00 52.6  0.0
ONI                                IAmb  IAmb    09 01 22.6
      comp=Z,29nm,0.9s
MOY   Mondy             23.30  47 eP     P       09 00 56.4 +0.7
MOY                                pmax  pmax
      comp=Z,63nm,1.6s
KARS  Kars              23.37 285  P     P       09 00 55.3 -1.2
KARS                               pmax  pmax
      comp=Z,64nm,0.8s
KARS  Kars              23.37 285  P     P       09 00 55.3 -1.2
KBZ   Khabaz            23.43 292  P     P       09 00 55.9 -0.9
      comp=Z,4.4nm,0.8s,baz=136,slow=7.1,SNR=5.8
KBZ   Khabaz            23.43 292⇑eP     P       09 00 58.3 +1.5
KBZ                                pmax  pmax
      comp=Z,54nm,5.0s
NEY   Neytrino          23.54 291⇓eP     P       09 01 01.2 +3.0
NEY                                pmax  pmax
      comp=Z,5.0nm,0.8s
KIV   Kislovodsk        23.59 293 eP     P       09 01 00.3 +1.7
KIV                                pmax  pmax
      comp=Z,9.0nm,1.0s
KIV   Kislovodsk        23.59 293  P     P       09 00 57.7 -0.9
KIV                                IAmb  IAmb    09 01 26.8
      comp=Z,15nm,0.7s
SHA1  Shidzhatmaz       23.60 292⇓eP     P       09 01 00.4 +1.5
ZAK   Zakamensk         24.21  51 eP     P       09 01 04.7 +0.3
ZAK                                pmax  pmax
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      comp=Z,19nm,1.0s
LZH   Lanzhou           24.31  86 eP     P       09 01 07.2 +1.6
LZH                                pP    pP      09 01 10.7 +0.7
LZH                                pmax  pmax
      comp=Z,26nm,1.3s
TLY   Talaya            24.84  48  P     P       09 01 10.7 +0.7
      comp=Z,13nm,0.8s,baz=246,slow=4.6,SNR=11
TLY   Talaya            24.84  48 eP     P       09 01 11.7 +1.6
TLY                                pmax  pmax
      comp=Z,16nm,0.6s
TLY   Talaya            24.84  48  P     P       09 01 11.2 +1.1
TLY                                IAmb  IAmb    09 01 15.9
      comp=Z,14nm,0.8s
KIRV  Kirov             25.27 330⇓eP     P       09 01 15.5 +1.8
SONM  Songino Array     25.62  58  P     P       09 01 18.4 +1.2
      comp=Z,26nm,0.9s,baz=262,slow=9.4,SNR=53
SONM  Songino Array     25.62  58  P     P       09 01 18.8 +1.5
SONM                               pmax  pmax
      comp=Z,31nm,1.0s
SONM  Songino Array     25.62  58  P     P       09 01 18.8 +1.5
SONM                               IAmb  IAmb    09 01 21.2
      comp=Z,31nm,1.0s
SOC   Sochi             25.73 292 eP     P       09 01 20.0 +1.8
SOC                               e              09 01 55.5
SOC                               i S    S       09 05 48.5 +1.5
SOC                               eSS    SnSn    09 06 45.0 +3.4
SOC                                MLR   MLR
      comp=Z,49µm,18.0s
ULN   Ulaanbaatar       26.06  58deP     P       09 01 20.0 -1.3
ULN                                pmax  pmax
      comp=Z,9.0nm,0.7s
ULN   Ulaanbaatar       26.06  58  P     P       09 01 22.3 +1.0
ULN                                IAmb  IAmb    09 01 26.9
      comp=Z,20nm,0.9s
ANN   Anapa             27.38 295 eP     P       09 01 36.1 +3.1
ANN                                pmax  pmax
      comp=Z,131nm,1.1s
RAYN  Ar Rayn           28.06 246  P     P       09 01 39.1 -0.3
RAYN                               pmax  pmax
      comp=Z,8.0nm,0.9s
RAYN  Ar Rayn           28.06 246  P     P       09 01 39.1 -0.3
HHC   Hu-ho-hao-te      29.32  73 eP     P       09 01 49.7 -0.8
HHC                                pmax  pmax
      comp=Z,24nm,0.8s
OBN   Obninsk           29.66 316 i P    P       09 01 52.9 -0.2
OBN                               i              09 04 56.8
OBN                                pmax  pmax
      comp=Z,7.0nm,0.6s
CMAR  Chiang Mai Arr    29.96 125  P     P       09 01 58.5 +2.3
      comp=Z,1.2nm,0.3s,baz=305,slow=10,SNR=1.9
KLMR  Klimovskoe        30.65 328 eP     P       09 01 58.4 -3.4
KLMR                               pmax  pmax
      comp=Z,26nm,1.4s
KLMR  Klimovskoe        30.65 328 eP     P       09 01 58.5 -3.4
KLMR                               AMP           09 02 11.2
      comp=Z,26nm,1.4s
BRTR  Keskin Array B    30.65 285  P     P       09 02 01.5 -0.8
      comp=Z,1.9nm,0.7s,baz=102,slow=5.2,SNR=4.9
BRTR  Keskin Array B    30.65 285 i P    P       09 02 04.1 +1.8
BRTR                               pmax  pmax
      comp=Z,2.0nm,0.8s
BRTR  Keskin Array B    30.65 285  P     P       09 02 02.2 -0.1
NRIK  Noril'sk          31.74  10  P     P       09 02 11.3 -0.1
      comp=Z,9.8nm,0.9s,baz=189,slow=7.4,SNR=14
NRIK  Noril'sk          31.74  10⇑iP     P       09 02 11.9 +0.5
NRIK                               pmax  pmax
      comp=Z,214nm,9.9s
NRIK  Noril'sk          31.74  10  P     P       09 02 12.3 +0.9
NRIK                               IAmb  IAmb    09 02 15.7
      comp=Z,15nm,1.1s
BOD   Bodaibo           32.54  40 eP     P       09 02 18.2 -0.4
BOD                                pmax  pmax
      comp=Z,11nm,0.9s
AKASG Malin Array Be    33.17 306  P     P       09 02 22.2 -1.9
      comp=Z,0.7nm,0.4s,baz=77,slow=8.7,SNR=5.7
AKASG Malin Array Be    33.17 306 i P    P       09 02 27.2 +3.1
AKASG                              pmax  pmax
      comp=Z,2.0nm,0.4s
AKASG Malin Array Be    33.17 306  P     P       09 02 24.8 +0.7
AKBB  Malin Array Si    33.17 306⇑eP     P       09 02 25.4 +1.3
MLR   Muntele Rosu      35.46 297  P     P       09 02 43.8 -0.4
MLR                                pmax  pmax
      comp=Z,18nm,1.0s
MLR   Muntele Rosu      35.46 297  P     P       09 02 43.8 -0.4
MLR                                IAmb  IAmb    09 02 56.5
      comp=Z,18nm,1.0s
BURAR Bucovina Array    35.78 300  P     P       09 02 46.5 -0.5
BUR08 Bucovina Ar. S    35.80 301  P     P       09 02 47.2 +0.2
APA   Apatity           36.47 336⇓iP     P       09 02 48.1 -4.3
APA                                pmax  pmax
      comp=Z,9.0nm,1.1s
APA                                MLR   MLR
      comp=Z,19µm,16.0s
FINES FINESS Array B    36.85 324  P     P       09 02 54.8 -1.0
      comp=Z,9.4nm,0.8s,baz=116,slow=5.7,SNR=9.9
FINES FINESS Array B    36.85 324 i P    P       09 02 54.7 -1.0
FINES                              pmax  pmax
      comp=Z,10.0nm,0.8s
FINES FINESS Array B    36.85 324  P     P       09 02 54.5 -1.2
NJ2   Nanjing           37.38  86 eP     P       09 03 02.1 +1.5
NJ2                                pmax  pmax
      comp=Z,8.0nm,0.5s
TRPA  Tarpa             37.55 302 eP     P       09 03 02.7 +0.8
IDI   Anoyia            38.53 281  LR    LR      09 21 14.1
      comp=Z,15µm,20.1s,baz=340,slow=40
DIVS  Divibare          39.86 296  P     P       09 03 21.4  0.0
ARCES ARCESS Array B    39.96 336  P     P       09 03 20.9 -0.9
      comp=Z,3.2nm,0.6s,baz=112,slow=6.9,SNR=13
ARCES ARCESS Array B    39.96 336  P     P       09 03 21.0 -0.9
ARCES ARCESS Array B    39.96 336  IAmb  IAmb    09 03 44.7
      comp=Z,17nm,1.2s
VLO   Vlora             41.05 290  P     P       09 03 32.4 +1.2
VLO                                pmax  pmax
      comp=Z,66nm,0.8s
VLO   Vlora             41.05 290  P     P       09 03 32.4 +1.2
YAK   Yakutsk           41.17  37  P     P       09 03 31.4 -0.5
      comp=Z,9.8nm,0.4s,baz=82,slow=1.2,SNR=6.0
YAK   Yakutsk           41.17  37 eP     P       09 03 31.0 -0.9
YAK                                pmax  pmax
      comp=Z,29nm,0.9s
YAK   Yakutsk           41.17  37  P     P       09 03 32.6 +0.7
DPC   Dobruska-Polom    41.40 306 eP     P       09 03 35.7 +1.7
DPC   Dobruska-Polom    41.40 306 eP     P       09 03 35.7 +1.7
MDJ   Mudanjiang        41.76  63  P     P       09 03 39.3 +2.3
MDJ                                pmax  pmax
      comp=Z,8.0nm,2.0s
CONA  Conrad Observa    42.02 302 eP     P       09 03 40.5 +1.3
      comp=Z,5.7nm,1.1s
ARSA  Arzberg           42.36 301 eP     P       09 03 41.9  0.0
      comp=Z,2.8nm,0.9s
KLR   Kul'dur           42.40  56  P     P       09 03 42.4 +0.2
      comp=Z,3.2nm,0.8s,baz=227,slow=2.1,SNR=6.7
KSAR  Wonju Array Be    42.43  74  P     P       09 03 43.0 +0.5
KSAR  Wonju Array Be    42.43  74  P     P       09 03 43.0 +0.5
KSRS  Korea Array       42.46  74  P     P       09 03 43.2 +0.5
      comp=Z,2.7nm,0.8s,baz=279,slow=7.6,SNR=7.4
SOKA  Soboth            42.79 300 eP     P       09 03 45.9 +0.4
      comp=Z,5.0nm,1.0s
TIXI  Tiksi             43.13  22  P     P       09 03 47.1 -0.6
      comp=Z,9.7nm,0.7s,baz=267,slow=3.6,SNR=14
TIXI  Tiksi             43.13  22⇓eP     P       09 03 46.7 -1.0
TIXI                               pmax  pmax
      comp=Z,9.0nm,0.7s
TIXI  Tiksi             43.13  22  P     P       09 03 48.7 +0.9
TIXI                               IAmb  IAmb    09 03 50.4
      comp=Z,9.9nm,0.7s
OBKA  Obir              43.15 300 eP     P       09 03 47.4 -1.1
      comp=Z,5.0nm,1.1s
GSI   Gunungsitoli      43.23 143  P     P       09 03 50.6 +1.4
GSI                                IAmb  IAmb    09 03 56.2
      comp=Z,19nm,1.0s
GEC2  GERESS Array S    43.29 304  P     P       09 03 50.1 +0.6
GERES GERESS Array B    43.29 304  P     P       09 03 49.0 -0.5
      comp=Z,1.7nm,0.6s,baz=74,slow=7.1,SNR=9.3
GERES GERESS Array B    43.29 304  P     P       09 03 49.0 -0.5
KHC   Kasperske Hory    43.33 304 eP     P       09 03 51.2 +1.5
KHC   Kasperske Hory    43.33 304⇓eP     P       09 03 52.0 +2.3
KHC                                pmax  pmax
      comp=Z,11nm,1.0s
KHC   Kasperske Hory    43.33 304  P     P       09 03 51.0 +1.3
CLL   Collm             43.38 307  P     P       09 03 50.1 +0.1
CLL                                pmax  pmax
      comp=Z,12nm,1.1s
CLL   Collm             43.38 307 i P    P       09 03 51.3 +1.3
      comp=Z,5.0nm,0.8s
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CLL   Collm             43.38 307  P     P       09 03 50.1 +0.1
CLL                                IAmb  IAmb    09 04 10.2
      comp=Z,12nm,1.1s
NC602 NORSAR Array S    43.71 321  P     P       09 03 51.9 -0.7
MYKA  Terra Mystica     43.74 301 eP     P       09 03 52.4 -0.7
      comp=Z,1.8nm,0.6s
NC303 NORSAR Array S    43.80 322  P     P       09 03 52.6 -0.7
NC303                              IAmb  IAmb    09 03 54.9
      comp=Z,13nm,0.8s
KBA   Koelnbreinsper    43.85 301 eP     P       09 03 54.3 +0.2
      comp=Z,0.7nm,0.3s
NB2   NORSAR Subarra    43.87 322  P     P       09 03 52.6 -1.4
      comp=Z,14nm,1.0s,baz=91,slow=8.6
NOA   NORSAR Array B    43.87 322  P     P       09 03 51.5 -2.5
      comp=Z,3.6nm,0.7s,baz=92,slow=7.9,SNR=13
NC204 NORSAR Array S    44.10 322  P     P       09 03 54.7 -1.0
ABTA  Abfaltersbach     44.48 301 eP     P       09 03 59.1 +0.1
      comp=Z,5.4nm,1.3s
CIMO  Cimolais          44.62 300  P     P       09 04 01.2 +1.0
WTTA  Wattenberg        44.95 302 eP     P       09 04 05.2 +2.3
      comp=Z,4.5nm,0.9s
WATA  Walderalm         44.98 302 eP     P       09 04 08.0 +4.9
      comp=Z,1.3nm,0.4s
RETA  Reutte            45.48 302 eP     P       09 04 08.9 +1.9
      comp=Z,1.9nm,0.6s
FETA  Feichten          45.61 302 eP     P       09 04 08.1 -0.1
      comp=Z,4.2nm,1.2s
DAVA  Damuels           46.11 302 eP     P       09 04 14.0 +1.9
      comp=Z,3.0nm,0.5s
MJAR  Matsushiro Arr    50.47  71  P     P       09 04 45.9 +0.2
      comp=Z,8.7nm,0.9s,baz=284,slow=8.5,SNR=5.2
KMBO  Kilima Mbogo      51.62 229 i P    P       09 04 56.9 +2.1
KMBO                               pmax  pmax
      comp=Z,1.0nm,0.3s
DAG   Danmarks Havn     53.26 343 i P    P       09 05 05.0 -0.9
DAG                                IAmb  IAmb    09 05 09.7
      comp=Z,7.7nm,0.9s
BILL  Bilibino          55.90  27 i P    P       09 05 23.6 -1.6
BILL                              i              09 06 25.2
BILL                              i              09 07 27.9
BILL                               pmax  pmax
      comp=Z,2.0nm,0.8s
ESDC  Sonseca Array     58.15 298  P     P       09 05 41.4 -0.3
      comp=Z,1.3nm,0.7s,baz=55,slow=7.2,SNR=8.4
NEEM  North Greenlan    59.38 348 i P    P       09 05 50.9 +0.9
NEEM                               IAmb  IAmb    09 05 58.5
      comp=Z,5.3nm,0.8s
SUMG  Summit            59.69 341  P     P       09 05 52.3  0.0
SUMG                               pmax  pmax
      comp=Z,9.0nm,0.8s
SUMG  Summit            59.69 341 i P    P       09 05 53.0 +0.7
SUMG                               IAmb  IAmb    09 05 58.2
      comp=Z,7.4nm,0.9s
SUMG  Summit            59.69 341  P     P       09 05 52.3  0.0
EUNU  Eureka            61.06 356  P     P       09 06 01.4 +0.4
SOEI  Soe               67.51 124  P     P       09 06 44.3  0.0
TOLK  Toolik Lake Re    68.42  16  P     P       09 06 49.4 +0.2
A36M  Sachs Harbour     68.94   6  P     P       09 06 52.0 -0.3
COLD  Coldfoot          69.44  17  P     P       09 06 55.7 +0.1
COLD                               IAmb  IAmb    09 06 58.7
      comp=Z,8.8nm,0.9s
IMAR  Indian Mountai    69.60  19  P     P       09 06 57.6 +1.0
H21K  Melozitna Rive    70.10  19  P     P       09 07 01.5 +1.8
H21K                               IAmb  IAmb    09 07 23.9
      comp=Z,7.1nm,1.2s
BMAR  Burnt Mountain    70.46  15  P     P       09 07 04.0 +2.2
J20K  Nowinta River     70.93  20  P     P       09 07 07.0 +2.3
J20K                               IAmb  IAmb    09 07 08.1
      comp=Z,5.9nm,0.8s
MLY   Manley            71.12  18  P     P       09 07 07.2 +1.4
MLY                                IAmb  IAmb    09 07 15.4
      comp=Z,6.7nm,1.3s
H24K  Noodor Dome       71.12  17  P     P       09 07 08.0 +2.1
H24K                               IAmb  IAmb    09 07 13.7
      comp=Z,4.1nm,0.8s
KOWA  Kowa              71.31 274  P     P       09 07 08.8 +1.0
KOWA                               IAmb  IAmb    09 07 12.4
      comp=Z,9.0nm,1.1s
I23K  Minto, Yukon-K    71.35  18  P     P       09 07 09.2 +2.0
I23K                               IAmb  IAmb    09 07 31.0
      comp=Z,12nm,1.4s
INK   Inuvik            71.53  10  P     P       09 07 09.3 +1.1
INK                                pmax  pmax
      comp=Z,12nm,1.1s
INK   Inuvik            71.53  10  P     P       09 07 09.3 +1.1
INK                                IAmb  IAmb    09 07 11.5
      comp=Z,12nm,1.1s
MDM   Murphy Dome       71.78  17  P     P       09 07 09.3 -0.5
MDM                                IAmb  IAmb    09 07 13.5
      comp=Z,5.9nm,1.0s
POKR  Poker Plat Res    71.83  17  P     P       09 07 12.1 +2.0
POKR                               IAmb  IAmb    09 07 20.0
      comp=Z,13nm,1.1s
NEA2  Nenana            71.88  18  P     P       09 07 11.9 +1.4
NEA2                               IAmb  IAmb    09 07 13.3
      comp=Z,9.1nm,1.0s
TCOL  CIGO, UAF Yank    71.93  17  P     P       09 07 11.4 +0.7
COLA  College           71.94  17⇑iP     P       09 07 10.3 -0.4
COLA                               pmax  pmax
      comp=Z,13nm,0.9s
COLA  College           71.94  17  P     P       09 07 11.5 +0.8
BWN   Browne            72.14  18  P     P       09 07 12.7 +0.7
IL31                    72.24  17  P     P       09 07 12.7 +0.1
IL31                               IAmb  IAmb    09 07 14.6
      comp=Z,4.3nm,0.8s
ILAR  Eielson Array     72.24  17  P     P       09 07 11.2 -1.5
      comp=Z,3.8nm,0.8s,baz=320,slow=4.9,SNR=26
ILAR  Eielson Array     72.24  17  P     P       09 07 11.8 -0.8
ILAR  Eielson Array     72.24  17  P     P       09 07 11.8 -0.8
KTH   Kantishna Hill    72.28  19  P     P       09 07 13.5 +0.5
DHY   Denali Highway    73.57  18  P     P       09 07 21.4 +0.7
DHY                                IAmb  IAmb    09 07 23.0
      comp=Z,6.3nm,0.8s
SCRK  Sand Creek        73.58  16  P     P       09 07 22.2 +1.5
SCRK                               IAmb  IAmb    09 07 23.8
      comp=Z,8.4nm,1.2s
DOT   Dot Lake          73.85  16  P     P       09 07 21.2 -1.0
PAX   Paxson            74.11  17  P     P       09 07 24.6 +0.8
PAX                                pmax  pmax
      comp=Z,13nm,1.2s
PAX   Paxson            74.11  17  P     P       09 07 24.6 +0.8
PAX                                IAmb  IAmb    09 07 26.6
      comp=Z,13nm,1.2s
SML   Sawmill           74.41  19  P     P       09 07 26.8 +1.3
DAWY  Dawson            74.44  14  P     P       09 07 27.1 +1.5
DAWY                               IAmb  IAmb    09 07 28.6
      comp=Z,6.3nm,1.1s
RC01  Rabbit Creek A    74.64  20  P     P       09 07 28.5 +1.7
RC01                               IAmb  IAmb    09 07 28.9
      comp=Z,9.0nm,1.0s
M24K  Tolsona, Glenn    74.69  18  P     P       09 07 29.6 +2.4
KNK   Knik Glacier      74.70  19  P     P       09 07 28.0 +0.8
KNK                                IAmb  IAmb    09 07 30.3
      comp=Z,9.3nm,0.8s
L27K  Beaver Creek,     74.85  16  P     P       09 07 30.0 +2.0
BCAR  Beaver Creek A    74.85  16  P     P       09 07 27.2 -0.9
M27K  Edge Creek, AK    75.46  16  P     P       09 07 33.8 +2.1
M27K                               IAmb  IAmb    09 07 38.4
      comp=Z,6.0nm,1.0s
KIC   Kosan Boka        76.77 268 ePKP1  P       09 07 38.1 -1.6
      comp=Z,22nm,1.3s
TIC   Toumodi           76.81 268 ePKP1  P       09 07 38.5 -1.5
LIC   Lamto             77.07 268 ePKP1  P       09 07 37.4 -4.0
      comp=Z,40nm,1.6s
HYT   Haines Junctio    77.76  15  P     P       09 07 44.9 +0.2
YKA   Yellowknife Ar    79.05   4  P     P       09 07 51.1 -0.5
      comp=Z,5.5nm,0.8s,baz=347,slow=5.5,SNR=13
YKA   Yellowknife Ar    79.05   4 i P    P       09 07 52.7 +1.1
YKA                                pmax  pmax
      comp=Z,6.0nm,0.8s
YKA   Yellowknife Ar    79.05   4  P     P       09 07 53.2 +1.6
SCHQ  Schefferville     80.89 338  P     P       09 08 01.8 +0.1
      comp=Z,4.9nm,0.9s,baz=80,slow=10,SNR=3.8
WRA   Warramunga Arr    81.55 124  P     P       09 08 06.9 +1.2
      comp=Z,1.8nm,0.5s,baz=323,slow=4.6,SNR=18
WRA   Warramunga Arr    81.55 124  P     P       09 08 05.4 -0.2
WRA   Warramunga Arr    81.55 124  P     P       09 08 05.4 -0.2
ASAR  Alice Springs     83.95 127  P     P       09 08 19.4 +1.2
      comp=Z,1.0nm,0.7s,baz=326,slow=4.5,SNR=9.0
EDM   Edmonton          88.37   4  P     P       09 08 39.4 -0.2
EDM                                pmax  pmax
      comp=Z,8.0nm,0.8s
EDM   Edmonton          88.37   4  P     P       09 08 39.4 -0.2
X34A  Smith Ranch, M   106.72 352  Pdif  Pdif    09 10 03.6 +0.5
PLCA  Paso Flores      152.26 254  PKPbc PKiKP   09 15 45.6 +1.8
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	comp=Z,3.5nm,1.1s,baz=69,slow=3.6,SNR=6.7						

*IDC **07** 09:06:44.1±1.1, 38.°00N×72.°81E, h0km, mb3.8/11, mb1 3.9/17, mb1mx3.7/49, mbtmp3.8/17, ML3.4/6, Error ellipse: s-maj=20.6km s-min=19.4km az=23.0*
*NNC **07** 09:06:48.3±2.0, 38.°23N×72.°83E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=14.6km s-min=9.4km az=168.0*
ISC 07 09:06:45.6±0.9**, 37.°97N**±0.°08×**72.°65E**±0.°07**, h10km, n31, σ1.s73**/35**, mb3.7**/10**, 7C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	Merke	4.79	5	Pg	Pb	09 08 09.5	-0.2
	34nm,0.5s						
MRKS				Lg	Lg	09 09 09.6	
	60nm,0.7s						
AAK	Ala-Archa	4.87	16	Pn	Pn	09 07 58.8	-0.3
	2.0nm,0.3s,baz=202,slow=11,SNR=4.8						
AAK				Sn	Sn	09 08 52.6	-3.0
	1.8nm,0.3s,baz=234,slow=19,SNR=1.4						
AAK	Ala-Archa	4.87	16	Pn	Pn	09 07 59.4	+0.3
	17nm,0.5s						
AAK				Sn	Sn	09 08 55.6	0.0
	58nm,0.8s						
KK09	Karatay Array	5.40	343	⇑Pn	Pn	09 08 07.1	+0.9
	7.5nm,0.5s,baz=154,slow=12						
KK09				⇑Sn	Sn	09 09 08.7	+0.3
	22nm,0.7s,baz=160,slow=26						
KK09				⇓Lg	Lg	09 09 34.8	
	21nm,0.7s						
TKM2	Tokmak 2	5.43	24	⇑Pg	Pb	09 08 22.5	+1.8
	23nm,1.1s						
TKM2				⇓Lg	Lg	09 09 34.7	
	15nm,0.8s						
KST	Kastek	5.66	25	Pg	Pb	09 08 26.2	+1.7
	13nm,0.4s						
KST				Lg	Lg	09 09 38.0	
	14nm,0.8s						
TNSS	Tian-Shan	6.03	32	Pg	Pb	09 08 32.5	+1.5
	8.7nm,0.5s						
TNSS				Lg	Lg	09 09 48.4	
	7.0nm,0.7s						
MDOK	Medeo	6.17	31	Pg	Pg	09 08 37.4	-6.4
	13nm,0.7s						
MDOK				⇑Lg	Lg	09 09 56.3	
	34nm,0.9s						
MDOK	Medeo	6.17	31	Pg	Pb	09 08 35.8	+2.5
	9.4nm,0.6s						
MDOK				Lg	Lg	09 09 54.4	
	10nm,0.9s						
KTBS	Karatobe	6.50	27	Pg	Pb	09 08 40.0	+1.2
	6.1nm,0.8s						
KTBS				Lg	Lg	09 10 02.1	
	23nm,0.6s						
KUU	Kurty	6.54	24	Pg	Pb	09 08 41.1	+1.6
	4.8nm,0.4s						
KUU				Lg	Lg	09 10 03.1	
	12nm,0.7s						
SATY	Saty	6.71	39	Pg	Pb	09 08 45.1	+2.6
	5.6nm,0.8s						
SATY				Lg	Lg	09 10 09.8	
	8.0nm,0.4s						
MKAR	Makanchi Array	11.33	36	Pn	Pn	09 09 26.9	-0.7
	0.2nm,0.3s,baz=226,slow=13,SNR=6.6						
GEYT	Alibeck	11.48	274	Pn	Pn	09 09 30.7	+1.1
	0.7nm,0.3s,baz=123,slow=7.1,SNR=2.3						
GEYT				Sn	Sn	09 11 34.8	-3.0
	0.3nm,0.3s,baz=65,slow=18,SNR=1.8						
KURBB	Kurchatov Arra	13.33	16	Pn	Pn	09 09 51.8	-2.9
	0.0nm,0.3s,baz=206,slow=11,SNR=7.3						
AB31	Akbulak array	14.54	325	Pn	Pn	09 10 12.0	+0.8
	1.3nm,0.5s,baz=130,slow=13,SNR=28						
AB31				⇑Sn	Sn	09 12 56.0	+3.7
	4.3nm,0.8s,baz=140,slow=22,SNR=6.8						
BVAR	Borovoye Array	15.14	355	Pn	Pn	09 10 16.7	-2.7
	0.1nm,0.3s,baz=179,slow=19,SNR=3.6						
AKTO	Aktyubinsk	16.25	325	Pn	Pn	09 10 32.4	-1.5
	1.2nm,0.3s,baz=121,slow=10,SNR=14						
AKTO				Sn	Sn	09 13 30.7	-3.4
	0.1nm,0.3s,baz=252,slow=20,SNR=1.5						
AKTO	Aktyubinsk	16.25	325	⇑Pn	P	09 10 36.6	-0.3
	16nm,0.9s						
AKTO				⇑Sn	Sn	09 13 37.2	+3.1
	2.8nm,1.2s						
ZALV	Zalesovo Beam	18.04	24	P	Pn	09 10 53.6	-2.5
	0.2nm,0.3s,baz=214,slow=8.8,SNR=6.1						
ARU	Arti	20.72	338	P	P	09 11 25.2	-0.8
	1.3nm,0.3s,baz=111,slow=10,SNR=3.8						
SONM	Songino Array	26.43	57	P	P	09 12 22.3	-0.3
	0.4nm,0.7s,baz=268,slow=10,SNR=2.0						
FINES	FINESS Array B	37.02	325	P	P	09 13 55.7	+0.6
	8.6nm,1.1s,baz=113,slow=9.7,SNR=7.1						
ARCES	ARCESS Array B	40.31	337	P	P	09 14 22.2	-0.4
	1.3nm,0.5s,baz=101,slow=9.3,SNR=7.7						
NOA	NORSAR Array B	44.02	322	P	P	09 14 52.9	-0.2
	1.1nm,0.6s,baz=92,slow=7.8,SNR=3.7						
TORD	Torodi Ar. Bea	67.06	269	P	P	09 17 40.1	+0.7
	8.0nm,0.9s,baz=45,slow=7.2,SNR=1.4						
INK	Inuvik	72.24	10	P	P	09 18 10.1	-0.4
	0.5nm,0.5s,baz=122,slow=2.6,SNR=4.2						
ILAR	Eielson Array	73.00	17	P	P	09 18 15.8	+0.7
	0.4nm,0.9s,baz=350,slow=4.6,SNR=3.2						
YKA	Yellowknife Ar	79.71	3	P	P	09 18 53.3	+0.1
	0.4nm,0.5s,baz=346,slow=5.7,SNR=1.5						
WRA	Warramunga Arr	81.67	123	P	P	09 19 03.5	-0.7
	0.4nm,0.7s,baz=324,slow=5.4,SNR=2.7						
ASAR	Alice Springs	84.03	126	P	P	09 19 16.7	+0.2
	0.3nm,0.9s,baz=307,slow=5.2,SNR=1.5						

*ISK **07** 09:09:55.4, 36.°27N×37.°16E, h9km, ML2.7/10*
DDA 07 09:09:53.9, 36.°15N×37.°18E, h16km±5km, ML2.7, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUZU	Kuzuini	0.63	353	*i* P	Pg	09 10 06.0	-0.3
KUZU				*i* S	Sn	09 10 19.7	+1.6
TAHT	Tahtakopru-Hat	0.83	286	PG	Pn	09 10 11.4	+0.4
TAHT				SG	Sn	09 10 22.5	-0.4
YAYL	Yayladag	0.87	263	PG	Pn	09 10 12.8	+1.2
YAYL				SG	Sn	09 10 25.1	+1.0
GAZ	Gaziantep	1.03	2	PG	Pb	09 10 12.8	-0.5
GZT	Gaziantep	1.25	14	*i* P	Pb	09 10 17.4	+0.2
GZT				*i* S	Sg	09 10 34.1	-0.2
GZT				IAML		09 11 06.0	
	comp=E,86nm,1.4s						
SURC	SANLIURFA_SURC	1.37	57	*i* P	Pg	09 10 20.1	-0.2
SURC				*i* S	Sg	09 10 40.3	+2.1
KMRS	Kahramanmaras	1.38	351	PN	Pb	09 10 19.2	-0.1
KMRS				SN	Sb	09 10 37.4	+0.8
YURE	YUREGIR	1.42	299	*i* P	Pg	09 10 20.8	-0.4
YURE				*i* S	Sg	09 10 42.9	+3.2
YURE				IAML		09 10 43.0	
	comp=E,104nm,2.2s						
CEYT	Ceyhan	1.44	307	PN	Pg	09 10 21.4	-0.2
CEYT				SN	Sg	09 10 39.7	-0.6
KRTS	Karatas	1.52	287	PN	Pg	09 10 22.8	-0.2
ANDN	Andirin	1.58	335	*i* P	Pb	09 10 23.5	+0.7
ANDN				*i* S	Sg	09 10 45.3	+0.5
KOZT	Kozan	1.72	321	PN	Pb	09 10 24.8	-0.3
URFA	Urfa	1.85	45	PN	Pb	09 10 27.3	-0.1
AKCD	Akcadag	2.23	15	*i* P	Pn	09 10 31.9	+1.6
AKCD				*i* S	Sg	09 11 08.6	+3.0
AKCD				IAML		09 11 09.0	
	comp=E,77nm,1.2s						
KIZK	Mersin	2.47	279	PN	Pb	09 10 35.9	-2.0
KIZK				SN	Sb	09 11 06.6	-1.5
KERG	Konya-Eregli	2.76	298	*i* P	Pn	09 10 39.5	+2.0
KERG				*i* S	Sb	09 11 13.8	-2.6
KERG				IAML		09 12 10.0	
	comp=N,46nm,2.5s						
KEBE	Keben-Mersin	2.81	277	PN	Pb	09 10 41.1	-2.7

*IDC **07** 09:10:43.0±2.1, 38.°00N×73.°06E, h0km, mb4.0/2, mb1 3.8/6, mb1mx3.5/51, mbtmp3.8/6, ML3.1/3, Error ellipse: s-maj=39.9km s-min=24.4km az=140.0*
ISC 07 09:10:44.0±1.8**, 37.°9N**±0.°2×**72.°9E**±0.°2**, h10km, n6, σ1.s98**/7**, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.90	14	Pn	Pn	09 11 58.9	+1.1
	1.3nm,0.3s,baz=156,slow=1.2,SNR=2.9						
AAK				Sn	Sn	09 12 55.6	+1.0
	0.7nm,0.3s,baz=155,slow=22,SNR=1.7						
MKAR	Makanchi Array	11.29	35	Pn	Pn	09 13 26.6	+1.2
	0.0nm,0.3s,baz=220,slow=12,SNR=3.6						
AKTO	Aktyubinsk	16.40	325	Pn	Pn	09 14 34.0	-0.3
	0.2nm,0.3s,baz=126,slow=15,SNR=2.0						
ZALV	Zalesovo Beam	18.04	23	P	Pn	09 14 51.3	-3.3
	baz=202,slow=11,SNR=2.0						
SONM	Songino Array	26.33	57	P	P	09 16 19.2	-0.8
	0.3nm,0.6s,baz=246,slow=8.5,SNR=2.6						
TORD	Torodi Ar. Bea	67.23	269	P	P	09 21 39.7	+0.9
	7.2nm,0.9s,baz=65,slow=5.7,SNR=3.3						

*IDC **07** 09:13:30.9±2.2, 35.°96N×70.°59E, h87km±19km, mb4.1/25, mb1 4.2/31, mb1mx4.0/53, mbtmp4.5/31, Error ellipse: s-maj=13.2km s-min=10.8km az=179.0*
*MOS **07** 09:13:32.9±1.0, 36.°18N×70.°69E, h111km, mb4.4/16, Error ellipse: s-maj=8.3km s-min=4.0km az=75.5*
*NEIC **07** 09:13:34.6±2.6, 36.°15N±0.°06×70.°51E±0.°08, h118km±6km, mb4.4/17, Error ellipse: s-maj=9.6km s-min=8.4km az=120.0*
*BJI **07** 09:13:35.5±0.0, 36.°54N×70.°56E, h123km, mb4.6/14*
*NNC **07** 09:13:35.1±2.5, 36.°90N×70.°03E, h0km, mb5.0, mpv4.8, Error ellipse: s-maj=24.7km s-min=13.2km az=157.0*
*SOME **07** 09:13:47.2, 38.°22N×71.°62E, h15km, MS3.8*
ISC 07 09:13:33.4±0.4**, 36.°09N**±0.°04×**70.°59E**±0.°04**, h110km, n194, σ2.s09**/208**, mb4.3**/41**, 23C-12D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.00	220	PN	Pn	09 14 08.7	+2.1
KBL	Kabul	2.00	220	Pn	Pn	09 14 08.7	+2.1
CEP	Cherat	2.50	154	P	Pn	09 14 15.3	+2.3
CHGR	Chuyangaron	2.81	336		Pn	09 14 16.1	-0.8
GAR	Garm	2.92	356		Pn	09 14 18.2	-0.2
NIL	Nilore	3.27	137	PN	Pn	09 14 25.1	+2.1
NIL	Nilore	3.27	137		Pn	09 14 25.1	+2.1
THW	Thamme Wali	3.42	164	P	Pn	09 14 26.7	+1.7
DRK	Karamyk	3.52	15		Pn	09 14 27.2	+0.7
BTK	Batken	3.97	2	PN	Pn	09 14 33.0	+0.6
BTK	Batken	3.97	2		Pn	09 14 33.0	+0.6
SARP	Sargodha	4.50	157	P	Pn	09 14 39.9	+0.5
TAS	Tashkent	5.33	349	PN	Pn	09 14 50.1	-0.5
TAS	Tashkent	5.33	349		Pn	09 14 50.1	-0.5
KSH	Kashi	5.46	50	P	Pn	09 14 49.7	-2.9
KSH				S	Sn	09 15 43.8	-10
KSH				pmax	pmax		
	comp=Z,150nm,0.5s						
KSH				smax	smax		
	comp=N,1μm,0.8s						
KSH				smax	smax		
	comp=E,850nm,0.9s						
DHRM	DHARAMSHALA	6.08	127	*e*P	Pn	09 15 01.4	+0.3
DHRM				*e*S	Sn	09 16 07.4	-2.1
DHRM				IAML		09 16 09.4	
	comp=E,1μm,0.2s						
DHRM				IAML		09 16 10.8	
	comp=N,1μm,0.2s						
CHM	Chimkent	6.27	353	*e*P	Pn	09 15 06.3	+2.9
	comp=N,170nm,0.5s						
CHM				*e*S	Sn	09 16 09.8	-3.9
	comp=N,2μm,0.6s						
AML	Almayashu	6.50	21	P	Pn	09 15 06.2	-0.6
	SNR=332						
BHK	Bhakra	6.72	132	*e*P	Pn	09 15 09.6	+0.1
DZA	Taraz	6.82	5	*e*P	Pn	09 15 14.3	+3.5
	comp=N,136nm,0.3s						
DZA				*e*S	Sn	09 16 23.7	-3.3
	comp=N,448nm,0.5s						
DZA	Taraz	6.82	5	*e*P	Pn	09 15 09.4	-1.5
	baz=4.2						
DZA	Taraz	6.82	5	*e*PN	Pn	09 15 09.3	-1.5
UCH	Uchtor	6.85	25	P	Pn	09 15 11.1	-0.5
	SNR=45						
MRKS	Merke	6.95	16	*e*P	Pn	09 15 15.3	+2.6
	comp=N,144nm,0.3s						
MRKS				*e*S	Sn	09 16 25.5	-4.8
	comp=N,191nm,0.5s						
KK07	Karatay Array	6.99	359	⇑P	Pn	09 15 10.3	-2.9
	comp=N,60nm,0.5s,baz=188,slow=12						
KK07				⇓S	Sn	09 16 21.8	-9.4
	comp=N,50nm,0.6s,baz=189,slow=22						
KKAR	Karatay Array	7.01	360	PN	Pn	09 15 12.1	-1.2
KKAR	Karatay Array	7.01	360	Pn	Pn	09 15 12.1	-1.2
EKS2	Erkin-Say	7.01	20	P	Pn	09 15 13.1	-0.4
	SNR=41						
AAK	Ala-Archa	7.21	24	P	Pn	09 15 15.7	-0.4
	comp=N,13nm,0.3s,baz=166,slow=6.1,SNR=40						
AAK				S	Sn	09 16 32.6	-3.9
	comp=N,8.5nm,0.3s,baz=153,slow=22,SNR=5.6						
AAK	Ala-Archa	7.21	24	P	Pn	09 15 15.7	-0.4
	SNR=31						
AAK	Ala-Archa	7.21	24	*c i*PN	Pn	09 15 15.6	-0.6
AAK	Ala-Archa	7.21	24	⇓P	Pn	09 15 15.2	-1.0
	comp=N,41nm,0.5s						
AAK				⇑S	Sn	09 16 32.8	-3.7
	comp=N,201nm,1.1s						
AAK	Ala-Archa	7.21	24	Pn	Pn	09 15 16.1	0.0
KBK	Karagaybulak	7.38	26	P	Pn	09 15 18.6	+0.1
	SNR=20						
SMLA	Simla	7.38	130	*e*P	Pn	09 15 18.1	-0.3
SMLA				*e*S	Sn	09 16 39.1	-1.5
SMLA				IAML		09 16 40.8	
	comp=N,362nm,0.1s						
SMLA				IAML		09 16 41.1	
	comp=E,324nm,0.2s						
FRU1	Bishkek	7.40	24	PN	Pn	09 15 18.9	+0.1
FRU1	Bishkek	7.40	24		Pn	09 15 18.9	+0.1
ULHL	Ulahol	7.55	34	P	Pn	09 15 20.5	-0.5
	SNR=24						
CHMS	Chumysh	7.61	24	P	Pn	09 15 21.0	-0.5
	SNR=12						
BOOM	Boomskoye usch	7.62	31	PN	Pn	09 15 21.6	-0.2
BOOM	Boomskoye usch	7.62	31		Pn	09 15 21.6	-0.2
USP	Ospenovka	7.78	22	P	Pn	09 15 23.3	-0.5
	SNR=51						
TKM2	Tokmak 2	7.84	28	P	Pn	09 15 24.0	-0.8
	SNR=25						
TKM2	Tokmak 2	7.84	28	⇑P	Pn	09 15 23.6	-1.2
	comp=E,22nm,0.6s						
TKM2				⇑S	Sn	09 16 47.9	-4.2
	comp=E,39nm,0.8s						
KDJ	Kajisay	7.91	38	PN	Pn	09 15 25.4	-0.4
KDJ	Kajisay	7.91	38		Pn	09 15 25.4	-0.4
TARG	Taragay, Kyrgy	7.96	43	Pn	Pn	09 15 26.3	-0.3
SGDS	Sogindy	7.99	22	*e*P	Pn	09 15 24.6	-2.1
	comp=E,8.9nm,0.7s,baz=22						
KST	Kastek	8.09	29	*e*P	Pn	09 15 35.2	+7.1
	comp=E,19nm,0.5s						
KST				*e*S	Sn	09 17 01.6	+3.7
	comp=E,72nm,0.9s						
DGS	Degeres	8.18	28	*e*P	Pn	09 15 35.9	+6.6
	comp=E,12nm,0.4s						
DGS				*e*S	Sn	09 17 03.2	+3.0
	comp=E,35nm,1.0s						
AAA	Alma-Ata	8.62	32	*e*P	Pn	09 15 33.7	-1.6
	baz=32						
AAA	Alma-Ata	8.62	32	*e*PN	Pn	09 15 33.6	-1.6
MDOK	Medeo	8.64	33	*e*P	Pn	09 15 34.6	-1.1
	baz=33						
MDOK	Medeo	8.64	33	*e*PN	Pn	09 15 34.5	-1.1
MDOK	Medeo	8.64	33	P	Pn	09 15 35.5	-0.2
	comp=E,23nm,0.6s						
KUU	Kurty	8.96	28	*e*P	Pn	09 15 38.3	-1.5
	comp=E,7.9nm,0.8s,baz=28						
KUU	Kurty	8.96	28	*e*PN	Pn	09 15 38.2	-1.5
KUU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SATY	Saty	9.21	39	*e*P	Pn	09 15 41.0	-2.4
	comp=Z,3.4nm,0.8s,baz=39						
SATY	Saty	9.21	39	*e*P	Pn	09 15 40.9	-2.4
SATY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NDI	New Delhi	9.26	141	*e*P	Pn	09 15 43.4	-0.6
NDI				*e*S	Sn	09 17 19.9	-6.5
BTLS	Baital	9.32	15	*e*P	Pn	09 15 42.2	-2.5
	baz=15						
BTLS	Baital	9.32	15	*e*P	Pn	09 15 42.1	-2.5
KUDL	Kundal	9.36	146	*e*P	Pn	09 15 44.2	-1.1
KUDL				*e*S	Sn	09 17 21.9	-6.9
KUDL				IAML		09 17 25.2	
	comp=E,95nm,0.2s						
KUDL				IAML		09 17 26.9	
	comp=N,165nm,0.3s						
AYAN	Aya Nagar	9.38	142	*e*P	Pn	09 15 44.8	-0.8
AYAN				*e*S	Sn	09 17 23.4	-5.9
SONA	Sohna	9.55	143	*e*P	Pn	09 15 47.1	-0.8
SONA				*e*S	Sn	09 17 27.1	-6.2
SONA				IAML		09 17 31.0	
	comp=N,170nm,0.2s						
SONA				IAML		09 17 32.6	
	comp=E,401nm,0.4s						
UZB	Uzynbulak	9.59	40	*e*P	Pn	09 15 47.3	-1.2
	comp=E,3.3nm,0.8s,baz=40						
UZB	Uzynbulak	9.59	40	*e*P	Pn	09 15 47.2	-1.2
UZB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KPKS	Kokpek	9.64	38	*e*P	Pn	09 15 47.8	-1.4
	comp=Z,4.6nm,1.0s,baz=38						
KPKS	Kokpek	9.64	38	*e*P	Pn	09 15 47.7	-1.4
KPKS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SHLS	Shalkode	9.83	41	*e*P	Pn	09 15 53.1	+1.4
	baz=43						
SHLS	Shalkode	9.83	41	*e*P	Pn	09 15 53.0	+1.4
GEYT	Alibeck	10.15	284	P	Pn	09 15 52.4	-3.5
	comp=Z,2.5nm,0.3s,baz=96,slow=14,SNR=15						
GEYT				S	Sn	09 17 41.9	-5.9
	comp=Z,3.4nm,0.3s,baz=120,slow=29,SNR=5.6						
GEYT	Alibeck	10.15	284		Pn	09 15 54.6	-1.3
GYA0B	ALIBECK ARRAY	10.15	284	⇑P	Pn	09 15 54.8	-1.2
GYA0B				⇑S	Sn	09 17 41.3	-6.5
GYA0B	ALIBECK ARRAY	10.15	284	Pn	Pn	09 15 54.6	-1.4
AJM	Ajmer	10.18	159	*e*P	Pn	09 15 55.2	-1.3
AJM				*e*S	Sn	09 17 42.9	-6.0
AJM				IAML		09 17 47.4	
	comp=E,333nm,0.6s						
AJM				IAML		09 17 48.5	
	comp=N,527nm,0.3s						
TDK	Taldyqorghan	10.70	31	*e*P	Pn	09 16 02.0	-1.4
	baz=31						
TDK	Taldyqorghan	10.70	31	*e*P	Pn	09 16 01.9	-1.4
OTUK	Ortayu	12.22	6	⇓P	Pn	09 16 20.3	-3.3
	comp=N,16nm,0.9s						
OTUK				⇑S	Sn	09 18 29.8	-8.1
	comp=N,10nm,0.8s						
JHNI	Jhansi	12.59	145	*e*P	Pn	09 16 26.5	-2.2
BHUJ	Bhuj	12.81	184	*e*P	Pn	09 16 29.8	-1.8
BHUJ				IAmb	IAmb	09 16 30.6	
	comp=Z,147nm,0.7s						
PYUN	Piuthan	13.18	124	*e*P	Pn	09 16 33.2	-3.3
	comp=Z,59nm,0.4s						
DANN	Dangsing	13.55	121	*e*P	Pn	09 16 38.1	-3.2
	comp=Z,67nm,0.3s						
MAKZ	Makanchi	13.68	35	P	Pn	09 16 42.4	-0.2
MAKZ	Makanchi	13.68	35	⇓P	Pn	09 16 42.5	-0.2
	comp=Z,14nm,0.8s						
MAKZ	Makanchi	13.68	35	Pn	Pn	09 16 42.4	-0.2
KOLN	Koldanda	13.80	123	*e*P	Pn	09 16 41.6	-3.0
	comp=Z,50nm,0.4s						
MK31	Makanchi Array	13.82	36	*de*P	Pn	09 16 45.0	+0.6
MK31	Makanchi Array	13.82	36	⇑P	Pn	09 16 45.1	+0.6
	comp=Z,14nm,0.9s,baz=214,slow=12,SNR=31						
MK31	Makanchi Array	13.82	36	Pn	Pn	09 16 43.8	-0.7
MKAR	Makanchi Array	13.82	36	P	Pn	09 16 43.0	-1.4
	comp=Z,0.4nm,0.3s,baz=210,slow=12,SNR=10						
MKAR	Makanchi Array	13.82	36	Pn	Pn	09 16 44.6	+0.1
BHPL	Bhopal	14.10	153	*e*P	Pn	09 16 46.4	-1.9
BHPL				IAmb	IAmb	09 16 49.5	
	comp=Z,29nm,0.5s						
GKN	Gorkha	14.37	120	*e*P	Pn	09 16 48.7	-3.1
	comp=Z,78nm,0.5s						
KKN	Kakani	14.95	119	*e*P	Pn	09 16 56.6	-2.6
	comp=Z,49nm,0.5s						
PKIN	Phulchoki	15.16	120	*e*P	Pn	09 16 59.7	-2.3
	comp=Z,74nm,0.4s						
PKI	Pulchoki	15.17	120	*e*P	Pn	09 16 59.9	-2.3
	comp=Z,55nm,0.4s						
AB31	Akbulak array	15.29	333	⇑P	Pn	09 17 01.3	-1.9
	comp=Z,24nm,0.3s,baz=163,slow=12,SNR=1110						
AB31				⇓S	Sn	09 19 40.2	-12
	comp=Z,12nm,0.6s,baz=152,slow=26,SNR=8.0						
ABKAR	Akbulak array	15.29	333		Pn	09 17 01.8	-1.4
ABKAR	Akbulak array	15.29	333		Pn	09 17 02.1	-1.1
ABKAR				IAmb	IAmb	09 17 03.1	
	comp=Z,70nm,0.8s						
GUN	Gumba	15.30	118	*e*P	Pn	09 17 01.1	-2.7
	comp=Z,22nm,0.3s						
ZSN	Zaisan	15.54	39	*e*P	Pn	09 17 05.6	-0.6
	baz=39						
ZSN	Zaisan	15.54	39	*e*P	Pn	09 17 05.6	-0.6
KURBB	Kurchatov Arra	15.62	19	P	Pn	09 17 05.7	-1.5
	comp=Z,0.2nm,0.3s,baz=211,slow=10.0,SNR=9.7						
KURBB	Kurchatov Arra	15.62	19	⇑P	P	09 17 09.7	+0.6
	comp=Z,35nm,0.7s						
KURK	Kurchatov	15.73	19	⇑*e*P	Pn	09 17 06.5	-2.0
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	Kurchatov	15.73	19	⇑P	P	09 17 10.9	+0.6
	comp=Z,20nm,0.8s						
KURK	Kurchatov	15.73	19	P	P	09 17 10.2	-0.1
KURK				IAmb	IAmb	09 17 12.6	
	comp=Z,21nm,0.8s						
SEM	Semipalatinsk	15.93	23	*e*P	Pn	09 17 10.4	-1.0
	baz=23						
SEM	Semipalatinsk	15.93	23	*e*P	Pn	09 17 10.3	-1.0
RAMN	Ramite	16.39	119	*e*P	Pn	09 17 15.3	-1.9
	comp=Z,40nm,0.3s						
BVAR	Borovoye Array	16.94	360	P	Pn	09 17 22.5	-0.9
	comp=Z,3.4nm,0.3s,baz=194,slow=17,SNR=26						
TAPN	Taplejung	16.95	116	*e*P	Pn	09 17 23.4	-0.7
	comp=Z,40nm,0.3s						
BRVK	Borovoye	16.97	359	⇓*e*P	Pn	09 17 22.3	-1.5
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRVK	Borovoye	16.97	359	⇓P	Pn	09 17 22.4	-1.5
	comp=Z,5.1nm,0.6s						
BRVK	Borovoye	16.97	359		Pn	09 17 22.7	-1.2
BRVK				IAmb	IAmb	09 17 27.7	
	comp=Z,12nm,1.1s						
AKTO	Aktyubinsk	16.98	332	P	P	09 17 23.9	-0.2
	comp=Z,2.7nm,0.3s,baz=140,slow=14,SNR=64						
AKTO				S	Sn	09 20 20.7	-12
	comp=Z,0.3nm,0.3s,baz=342,slow=19,SNR=3.2						
AKTO	Aktyubinsk	16.98	332	⇑P	P	09 17 24.0	-0.2
	comp=Z,40nm,0.8s						
AKTO				⇑S	Sn	09 20 20.4	-12
	comp=Z,18nm,0.8s						
ODAN	Odare	17.01	118	*e*P	Pn	09 17 23.8	-1.0
	comp=Z,50nm,0.5s						
DGZ	Jazzator, Alta	18.31	37	⇑*e*P	P	09 17 38.7	-0.2
SEKA	Sheki	18.95	293	P	Pn	09 17 50.0	+2.2
HYB	Hyderabad	19.89	157	*i* P	Pn	09 18 00.0	+1.1
GROC	Groznyy	20.33	298	*e*P	Pn	09 18 01.5	-2.2
GROC				pmax	pmax		
	comp=Z,29nm,1.0s						
ZAA0	Zalesovo Array	20.43	25	P	P	09 18 02.3	+0.6
ZALV	Zalesovo Beam	20.43	25	P	P	09 18 02.2	+0.6
	comp=Z,63nm,0.4s,baz=218,slow=10,SNR=198						
ZALV				S	S	09 21 41.7	-2.4
	comp=Z,1.5nm,0.8s,baz=225,slow=16,SNR=2.1						
KBD	Kabd	20.45	257	*e*P	P	09 18 02.4	+0.3
MIB	Mutribah	20.47	259	*e*P	P	09 18 03.4	+1.0
GNI	Garni	20.71	289	⇓*e*P	P	09 18 05.6	+0.5
GNI				pmax	pmax		
	comp=Z,11nm,0.8s						
RST	Umm Al-Ruwaisa	20.87	258	*e*P	P	09 18 07.1	+0.5
SHL	Shillong	21.03	114	*e*P	P	09 18 11.9	+3.3
ZEI	Tsey	21.62	296	*e*P	P	09 18 19.9	+5.1
ZEI				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SVE	Sverdlovsk	21.81	345	*e*P	P	09 18 18.1	+1.8
SVE				pmax	pmax		
	comp=Z,27nm,1.1s						
ARU	Arti	21.92	342	P	P	09 18 18.6	+1.0
	comp=Z,4.2nm,0.3s,baz=156,slow=9.6,SNR=22						
ARU				S	S	09 22 16.8	+4.2
	comp=Z,1.9nm,0.2s,baz=247,slow=10.0,SNR=1.0						
ARU	Arti	21.92	342	*c i*P	P	09 18 18.7	+1.2
ARU				S	S	09 22 15.9	+3.3
ARU				pmax	pmax		
	comp=Z,31nm,0.7s						
KBZ	Khabaz	22.50	298	P	P	09 18 24.1	+0.4
	comp=Z,2.5nm,0.7s,baz=111,slow=8.6,SNR=7.3						
KIV	Kislovodsk	22.69	299	*e*P	P	09 18 27.4	+1.6
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BELG	Belogornoye	23.01	322	P	P	09 18 29.7	+1.1
	comp=Z,24nm,0.8s,baz=198,slow=6.4,SNR=4.7						

BELG	Belogornoye	23.01	322	⇑iP	P	09 18 29.5	+0.9
BELG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA	Gaotai	23.30	73	⇑P	P	09 18 33.9	+2.3
GTA				pmax	pmax		
	comp=Z,14nm,0.7s						
RAYN	Ar Rayn	25.03	247	P	P	09 18 47.7	+0.3
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RAYN	Ar Rayn	25.03	247	P	P	09 18 47.7	+0.3
KIRV	Kirov	26.47	335	P	P	09 19 01.2	+1.3
	comp=Z,11nm,0.5s,baz=189,slow=2.9,SNR=3.8						
KIRV	Kirov	26.47	335	⇑eP	P	09 19 02.8	+2.9
LZH	Lanzhou	26.80	80	sP	sP	09 19 29.4	-13
LZH	Lanzhou	26.80	80	pmax	pmax		
	comp=Z,35nm,1.3s						
LZH	Lanzhou	26.80	80	eP	P	09 19 18.6	+15
LZH	Lanzhou	26.80	80	pP	pP	09 19 24.9	-3.7
SONM	Songino Array	28.84	55	P	P	09 19 22.5	+1.1
	comp=Z,1.0nm,0.6s,baz=258,slow=9.1,SNR=9.7						
SONM				PcP	PcP	09 22 28.6	+0.4
	comp=Z,0.3nm,0.4s,baz=240,slow=2.6,SNR=2.2						
BRTR	Keskin Array B	29.25	288	P	P	09 19 26.5	+1.5
	comp=Z,1.8nm,0.6s,baz=104,slow=8.7,SNR=5.1						
BRTR	Keskin Array B	29.25	288	i P	P	09 19 27.1	+2.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ULN	Ulaanbaatar	29.28	55	⇑eP	P	09 19 26.6	+1.3
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
OBN	Obninsk	30.04	320	i P	P	09 19 31.8	+0.2
OBN				i *PP	pP	09 19 54.3	-2.2
OBN				i		09 20 37.4	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN	Xi'an	31.31	82	P	P	09 19 54.0	+11
XAN				pP	pP	09 20 06.3	-2.4
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKASG	Malin Array Be	32.95	309	P	P	09 19 57.9	+0.6
	comp=Z,1.6nm,0.5s,baz=83,slow=6.8,SNR=12						
AKASG				PcP	PcP	09 22 37.2	-1.6
	comp=Z,1.6nm,0.7s,baz=89,slow=2.7,SNR=6.1						
AKASG	Malin Array Be	32.95	309	IAmb	IAmb	09 19 59.0	
	comp=Z,1.7nm,1.1s						
NRIK	Noril'sk	34.59	11	P	P	09 20 12.4	+1.2
	comp=Z,3.9nm,0.6s,baz=196,slow=8.3,SNR=7.8						
NRIK	Noril'sk	34.59	11	⇑iP	P	09 20 11.5	+0.3
NRIK				pmax	pmax		
	comp=Z,37nm,3.7s						
NRIK	Noril'sk	34.59	11	P	P	09 20 11.5	+0.3
NRIK				IAmb	IAmb	09 20 15.2	
	comp=Z,5.2nm,0.7s						
IDI	Anoyia	36.87	283	P	P	09 20 30.6	-0.6
	comp=Z,4.5nm,0.5s,baz=95,slow=11,SNR=2.1						
FINES	FINESS Array B	37.65	327	P	P	09 20 38.1	+0.8
	comp=Z,6.3nm,0.7s,baz=115,slow=11,SNR=15						
FINES	FINESS Array B	37.65	327	i P	P	09 20 38.7	+1.4
FINES				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARCES	ARCESS Array B	41.40	338	P	P	09 21 09.4	+1.0
	comp=Z,4.0nm,0.6s,baz=106,slow=7.5,SNR=26						
YAK	Yakutsk	44.49	35	⇓iP	P	09 21 34.1	+0.7
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NOA	NORSAR Array B	44.51	323	P	P	09 21 34.2	+0.6
	comp=Z,2.2nm,0.6s,baz=98,slow=7.9,SNR=8.7						
KSRS	Korea Array	45.33	70	P	P	09 21 40.5	+0.2
	comp=Z,3.3nm,0.8s,baz=280,slow=6.5,SNR=8.1						
KLR	Kul'dur	45.65	53	P	P	09 21 43.6	+0.8
	comp=Z,4.0nm,0.7s,baz=283,slow=8.4,SNR=13						
TIXI	Tiksi	46.28	22	P	P	09 21 48.1	+0.8
	comp=Z,6.2nm,0.3s,baz=270,slow=4.9,SNR=12						
TIXI	Tiksi	46.28	22	⇑iP	P	09 21 48.0	+0.7
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TIXI	Tiksi	46.28	22	P	P	09 21 48.3	+0.9
TIXI				IAmb	IAmb	09 21 50.6	
	comp=Z,8.5nm,0.9s						
VLA	Vladivostok	46.82	62	⇓iP	P	09 21 51.8	-0.2
VLA				i *PP	pP	09 22 17.3	-1.6
VLA				pmax	pmax		
	comp=Z,21nm,0.9s						
ESDC	Sonseca Array	57.36	298	P	P	09 23 10.6	+0.4
	comp=Z,0.8nm,0.5s,baz=54,slow=7.4,SNR=8.4						
BILL	Bilibino	59.12	26	i P	P	09 23 22.9	+1.0
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TORD	Torodi Ar. Bea	65.38	269	P	P	09 24 03.5	-0.9
	comp=Z,5.8nm,0.5s,baz=49,slow=6.0,SNR=55						
TORD	Torodi Ar. Bea	65.38	269	P	P	09 24 03.8	-0.6
TORD				IAmb	IAmb	09 24 04.3	
	comp=Z,4.7nm,0.6s						
TOLK	Toolik Lake Re	71.40	14		P	09 24 42.4	+1.2
A36M	Sachs Harbour	71.65	5	P	P	09 24 43.5	+1.0
A36M				IAmb	IAmb	09 24 44.6	
	comp=Z,7.4nm,0.8s						
COLD	Coldfoot	72.46	15	P	P	09 24 48.2	+0.8
COLD				IAmb	IAmb	09 24 49.2	
	comp=Z,2.5nm,0.8s						
IMAR	Indian Mountai	72.67	17	P	P	09 24 47.9	-0.8
DBIC	Dimbokro	74.35	267	P	P	09 24 58.6	-0.7
	comp=Z,1.7nm,0.5s,baz=28,slow=5.1,SNR=5.0						
DBIC	Dimbokro	74.35	267	IAmb	IAmb	09 25 22.6	
	comp=Z,16nm,1.4s						
INK	Inuvik	74.36	9	P	P	09 24 59.4	+0.9
	comp=Z,3.7nm,0.7s,baz=345,slow=7.3,SNR=32						
INK	Inuvik	74.36	9	IAmb	IAmb	09 25 00.6	
	comp=Z,3.3nm,0.7s						
KIC	Kosan Boka	74.43	267	eP	P	09 24 59.6	-0.3
	comp=Z,8.2nm,0.6s						
TIC	Toumodi	74.50	267	eP	P	09 24 59.9	-0.3
LIC	Lamto	74.74	267	eP	P	09 25 00.9	-0.7
	comp=Z,13nm,0.7s						
COLA	College	74.96	16	deP	P	09 25 02.0	0.0
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	75.27	16	P	P	09 25 03.7	-0.1
	comp=Z,0.9nm,0.6s,baz=284,slow=5.3,SNR=19						
KNRA	Kununurra	75.28	122	P	P	09 25 05.3	+0.8
BOSA	Boshof	77.22	220	P	P	09 25 16.9	+1.4
	comp=Z,5.1nm,0.9s,baz=22,slow=4.2,SNR=7.1						
YKA	Yellowknife Ar	81.67	2	P	P	09 25 39.1	+0.1
	comp=Z,1.3nm,0.5s,baz=351,slow=5.3,SNR=12						
WRA	Warramunga Arr	82.05	122	P	P	09 25 41.3	-0.4
	comp=Z,1.6nm,0.7s,baz=324,slow=4.9,SNR=28						
WRA	Warramunga Arr	82.05	122	i P	P	09 25 41.5	-0.1
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR	Alice Springs	84.29	125	P	P	09 25 52.4	-0.7
	comp=Z,1.3nm,0.7s,baz=309,slow=5.0,SNR=28						
PLCA	Paso Flores	149.38	249	PKPbc	PKiKP	09 33 09.9	-0.5
	comp=Z,1.5nm,0.9s,baz=1.8,slow=8.1,SNR=4.7						

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*IDC **07** 09:18:50.6±1.1, 39°.00N×73°.24E, h0^{km}, mb4.0/6, mb1 4.1/8, mb1mx3.7/46, mbtmp4.0/8, ML3.4/2, Error ellipse: s-maj=27.4km s-min=18.5km az=93.0*

*KRNET **07** 09:18:53.2±0.1, 39°.21N×73°.76E, h12^{km}, mb4.3*

*NNC **07** 09:19:08.1±8.4, 39°.62N×72°.98E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=66.5km s-min=37.5km az=173.0*

ISC 07 09:18:52.8±1.6, **39°.23N**±0°.05×**73°.80E**±0°.04, **h4**^{km}±10^{km}, **n33**, σ**2.^{s}41**/51, **mb3.9**/6, **22C-10D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.82	344	⇑eP	Pg	09 19 09.4	+0.8
	baz=46						
SFK				⇑eS	Sb	09 19 21.0	-0.3
	baz=46						
OHH	Osh	1.51	329	⇓iP	Pb	09 19 21.4	-0.2
	baz=31						
OHH				⇓iS	Sg	09 19 42.4	+0.9
	baz=31						
DRK	Karamyk	1.57	280	⇑iP	Pb	09 19 22.4	-0.2
	baz=81						
DRK				⇑iS	Sg	09 19 43.8	+0.5
	baz=81						
SALK	Salom-Alik	1.65	1	⇑eP	Pg	09 19 24.8	+0.3
	baz=2.0						
SALK				⇑eS	Sg	09 19 47.7	+1.7
	baz=2.0						
BTK	Batken	2.45	291	⇑iP	Pb	09 19 36.1	-1.4
	baz=91						
BTK				⇑iS	Sb	09 20 07.7	-0.3
	baz=91						
GAR	Garm	2.72	266	⇑eP	Pb	09 19 39.9	-2.2
	baz=67						
GAR				⇑iS	Sb	09 20 13.8	-2.0
	baz=67						
AML	Almayashu	2.90	358	P	Pb	09 19 45.7	+0.3
	SNR=10						
AML	Almayashu	2.90	358	⇑eP	Pb	09 19 43.2	-2.3
	baz=59						
AML				⇑iS	Sb	09 20 19.8	-1.7
	baz=59						
UCH	Uchtor	3.05	10	P	Pb	09 19 48.3	+0.4
	SNR=12						
UCH	Uchtor	3.05	10	⇑eP	Pb	09 19 45.2	-2.7
	baz=10.0						
UCH				⇑eS	Sb	09 20 23.4	-2.3
	baz=10.0						
TRKS	Terek-Say	3.07	319	⇑iP	Pn	09 19 43.9	+1.6
	baz=20						
TRKS				⇑iS	Sn	09 20 21.5	+1.9
	baz=20						
MNAS	Manas	3.40	344	⇑eP	Pn	09 19 50.0	+3.1
	baz=44						
MNAS				⇑iS	Sb	09 20 31.4	-4.2
	baz=44						
EKS2	Erkin-Say	3.43	360	P	Pb	09 19 53.1	-1.2
	SNR=18						
EKS2	Erkin-Say	3.43	360	⇓eP	Pn	09 19 50.5	+3.2
	baz=0.0						
EKS2				⇓iS	Sb	09 20 32.2	-4.2
	baz=0.0						
AAK	Ala-Archa	3.45	9	Pn	Pb	09 19 53.2	-1.4
	8.7nm,0.3s,baz=159,slow=3.6,SNR=14						
AAK				Sn	Sg	09 20 40.9	-2.7
	6.5nm,0.3s,baz=83,slow=18,SNR=7.5						
AAK	Ala-Archa	3.45	9	P	Pb	09 19 53.9	-0.7
	SNR=6.6						
AAK	Ala-Archa	3.45	9	Pn	Pb	09 19 53.5	-1.1
	41nm,0.6s						
AAK				Sn	Sb	09 20 39.6	+2.6
	178nm,0.9s						
AAK	Ala-Archa	3.45	9	⇓eP	Pn	09 19 50.8	+3.3
	baz=9.0						
AAK				⇓iS	Sb	09 20 32.7	-4.3
	baz=9.0						
KBK	Karagaybulak	3.54	14	P	Pg	09 20 01.5	+0.9
	SNR=5.3						
ULHL	Ulahol	3.54	31	P	Pg	09 20 02.7	+2.0
	SNR=9.1						
BOOM	Boomskoye usch	3.64	26	⇓iP	Pn	09 19 53.7	+3.5
	baz=26						
BOOM				⇓iS	Sn	09 20 37.5	+3.7
	baz=26						
CHGR	Chuyangaron	3.66	263	⇑iP	Pn	09 19 53.2	+2.8
	baz=63						
CHGR				⇑iS	Sn	09 20 36.6	+2.5
	baz=63						
TKM2	Tokmak 2	3.93	20	⇑Pn	Pg	09 20 09.1	+0.8
	20nm,0.5s						
TKM2				⇑Sn	Sg	09 20 57.7	-1.5
	73nm,0.9s						
USP	Ospenovka	4.07	7	P	Pb	09 20 01.9	-3.3
	SNR=12						
KK09	Karatay Array	4.62	328	⇓Pn	Pn	09 20 08.1	+4.6
	36nm,0.6s,baz=141,slow=12						
KK09				⇓Sn	Sn	09 20 59.3	+1.7
	143nm,0.8s,baz=140,slow=22						
MDOK	Medeo	4.63	31	Pn	Pg	09 20 22.4	+0.8
	32nm,0.7s						
MDOK				Sn	Sg	09 21 17.7	-4.0
	127nm,1.1s						
ZALV	Zalesovo Beam	16.53	23	Pn	P	09 22 50.1	+2.0
	0.3nm,0.3s,baz=213,slow=9.7,SNR=2.5						
SONM	Songino Array	25.00	59	P	P	09 24 21.7	+3.9
	0.6nm,0.9s,baz=262,slow=10.0,SNR=1.9						
FINES	FINESS Array B	36.54	323	P	P	09 25 57.1	-2.2
	5.7nm,1.0s,baz=108,slow=8.9,SNR=1.8						
ARCES	ARCESS Array B	39.52	336	P	P	09 26 23.9	-0.4
	6.7nm,1.1s,baz=102,slow=8.4,SNR=1.6						
TORD	Torodi Ar. Bea	67.98	269	P	P	09 29 48.8	-4.7
	3.7nm,0.9s,baz=44,slow=6.0,SNR=1.4						
WRA	Warramunga Arr	81.61	124	P	P	09 31 11.6	-0.7
	0.4nm,0.6s,baz=327,slow=5.0,SNR=7.9						
ASAR	Alice Springs	84.06	127	P	P	09 31 24.2	-0.7
	0.3nm,0.7s,baz=310,slow=5.3,SNR=5.0						

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*IDC **07** 09:20:31.1±1.0, 38°.05N×72°.94E, h0^{km}, mb4.0/12, mb1 4.2/18, mb1mx3.9/51, mbtmp4.0/18, ML3.7/5, Error ellipse: s-maj=18.1km s-min=16.2km az=176.0*

*KRNET **07** 09:20:36.9±0.1, 38°.45N×72°.85E, mb4.6*

*NNC **07** 09:20:56.0±11.0, 38°.90N×72°.39E, h0^{km}, mb4.7, mpv4.3, Error ellipse: s-maj=91.7km s-min=51.1km az=4.0*

ISC 07 09:20:34.8±1.6, **38°.33N**±0°.06×**72°.79E**±0°.04, **h12**^{km}±9^{km}, **n31**, σ**2.^{s}33**/45, **mb3.9**/12, **20C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.39	326	⇑iP	Pg	09 21 01.5	0.0
	baz=22						
DRK				⇑iS	Sn	09 21 19.7	+0.9
	baz=22						
GAR	Garm	2.05	290	⇑iP	Pg	09 21 14.3	+0.2
	baz=86						
GAR				⇑iS	Sg	09 21 41.5	+0.7
	baz=86						
OHH	Osh	2.19	360	⇑eP	Pb	09 21 14.3	-0.2
	baz=59						
OHH				⇑iS	Sb	09 21 41.6	-0.1
	baz=59						
BTK	Batken	2.31	319	⇑iP	Pb	09 21 16.9	+0.4
	baz=16						
BTK				⇑iS	Sb	09 21 46.1	+1.0
	baz=16						
CHGR	Chuyangaron	2.87	278	⇑iP	Pb	09 21 25.9	-0.1
	baz=75						
CHGR				⇑iS	Sb	09 22 01.9	+0.7
	baz=75						
AML	Almayashu	3.86	10	⇑eP	Pn	09 21 37.6	+3.2
	baz=10.0						
AML				⇑iS	Sn	09 22 22.0	+2.1
	baz=10.0						
UCH	Uchtor	4.11	18	⇑iP	Pn	09 21 41.1	+3.2
	baz=18						
UCH				⇑eS	Sn	09 22 28.0	+1.8
	baz=18						
MNAS	Manas	4.16	357	⇑eP	Pn	09 21 41.8	+3.5
	baz=56						
MNAS				⇑iS	Sn	09 22 29.3	+2.4
	baz=56						
AAK	Ala-Archa	4.50	16	Pn	Pn	09 21 47.6	+4.7
	8.6nm,0.3s,baz=185,slow=12,SNR=3.1						
AAK				Sn	Sb	09 22 44.8	-3.1
	4.1nm,0.3s,baz=147,slow=17,SNR=1.2						
TKM2	Tokmak 2	5.06	24	⇓Pn	Pg	09 22 07.6	-4.0
	26nm,0.6s						
TKM2				⇑Sn	Sb	09 23 06.4	+2.2
	151nm,1.1s						
KK09	Karatay Array	5.10	341	⇑Pn	Pb	09 22 02.5	-1.4
	21nm,0.4s,baz=152,slow=14						
KK09				⇑Sn	Sb	09 22 57.7	-7.4
	43nm,0.5s,baz=150,slow=25						
KK09				⇑Lg	Lg	09 23 18.2	
	71nm,0.7s						
MDOK	Medeo	5.81	32	Pn	Pb	09 22 19.4	+3.2
	30nm,0.6s						
MDOK				Sn	Sb	09 23 27.4	+1.6
	128nm,1.1s						
MKAR	Makanchi Array	10.97	37	Pn	Pn	09 23 11.8	+0.2
	baz=185,slow=12,SNR=1.2						
GEYT	Alibeck	11.57	273	Pn	Pn	09 23 19.7	-0.1
	2.1nm,0.3s,baz=101,slow=12,SNR=9.3						
GEYT				Sn	Sn	09 25 31.4	+2.5
	0.5nm,0.3s,baz=92,slow=23,SNR=1.9						
WMQ	Urumqi	12.51	59	eP	Pn	09 23 36.6	+4.0
KURBB	Kurchatov Arra	12.95	17	Pn	Pn	09 23 38.2	-0.3
	0.1nm,0.3s,baz=206,slow=12,SNR=5.4						
AKTO	Aktyubinsk	16.03	324	Pn	Pn	09 24 20.4	+0.5
	0.3nm,0.3s,baz=121,slow=14,SNR=5.4						
AKTO				Sn	Sn	09 27 15.6	-2.0
	0.2nm,0.3s,baz=233,slow=19,SNR=2.5						
ZALV	Zalesovo Beam	17.66	24	P	Pn	09 24 40.6	+0.1
	0.5nm,0.3s,baz=204,slow=11,SNR=4.8						
BELG	Belogornoye	22.45	317	P	P	09 25 33.5	+0.1
	18nm,0.8s,baz=56,slow=5.4,SNR=6.2						
KBZ	Khabaz	23.12	293	P	P	09 25 40.0	-0.6
	1.6nm,0.9s,baz=118,slow=18,SNR=1.4						
SONM	Songino Array	26.14	58	P	P	09 26 08.3	-0.6
	0.6nm,0.5s,baz=258,slow=7.2,SNR=5.3						
FINES	FINESS Array B	36.80	324	P	P	09 27 43.2	+1.1
	6.3nm,1.0s,baz=105,slow=11,SNR=5.0						
ARCES	ARCESS Array B	40.02	336	P	P	09 28 09.2	0.0
	0.8nm,0.4s,baz=113,slow=9.2,SNR=1.4						
NB2	NORSAR Subarra	43.81	322	P	P	09 28 41.2	+0.9
	comp=Z,1.6nm,0.6s,baz=91,slow=7.9						
NOA	NORSAR Array B	43.81	322	P	P	09 28 39.8	-0.5
	comp=Z,1.4nm,0.8s,baz=62,slow=10,SNR=2.8						
TORD	Torodi Ar. Bea	67.19	269	P	P	09 31 27.7	-1.3
	comp=Z,11nm,1.2s,baz=47,slow=5.6,SNR=5.3						
ILAR	Eielson Array	72.63	17	P	P	09 32 01.1	-0.7
	comp=Z,0.9nm,0.9s,baz=345,slow=4.7,SNR=5.3						
YKA	Yellowknife Ar	79.35	3	P	P	09 32 40.4	+0.3
	comp=Z,1.5nm,0.8s,baz=348,slow=5.6,SNR=3.0						
SCHQ	Schefferville	80.96	338	P	P	09 32 48.9	-0.1
	comp=Z,2.7nm,0.8s,baz=301,slow=12,SNR=2.0						
WRA	Warramunga Arr	81.77	123	P	P	09 32 51.5	-2.2
	comp=Z,0.6nm,0.6s,baz=326,slow=5.1,SNR=2.8						
ASAR	Alice Springs	84.15	126	P	P	09 33 02.4	-3.5
	comp=Z,0.3nm,0.7s,baz=313,slow=5.6,SNR=2.2						

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*IDC **07** 09:24:49.2±0.5, 38°.45N×73°.13E, h0^{km}, mb4.4/31, mb1 4.5/38, mb1mx4.4/49, mbtmp4.4/38, ML4.1/7, MS5.7/3, Ms1 5.7/3, ms1mx4.7/71, Error ellipse: s-maj=11.1km s-min=9.6km az=17.0*

*BJI **07** 09:24:50.8±0.0, 38°.62N×73°.10E, h6^{km}, mB5.7/6, mb4.7/48, ML4.9/6, Ms5.4/6, Ms7 5.4/6*

*SOME **07** 09:24:52.1, 38°.77N×73°.08E, h10^{km}, MS4.5*

*MOS **07** 09:24:52.6±1.9, 38°.59N×73°.24E, h21^{km}, mb4.9/33, Error ellipse: s-maj=5.5km s-min=4.0km az=93.9*

*NEIC **07** 09:24:52.7±2.5, 38°.49N±0°.06×73°.24E±0°.07, h10^{km}±1^{km}, mb4.9/48, Error ellipse: s-maj=11.5km s-min=7.7km az=136.0*

*KRNET **07** 09:24:52.2±0.1, 38°.68N×73°.01E, h19^{km}, mb5.4*

*NNC **07** 09:25:04.9±3.1, 39°.37N×72°.95E, h0^{km}, mb5.3, mpv5.0, Error ellipse: s-maj=30.3km s-min=18.2km az=155.0*

*BGR **07** 09:25:07.4±0.0, 39°.59N×72°.24E, h33^{km}, mb4.5*

ISC 07 09:24:52.6±0.6, **38°.48N**±0°.01×**73°.23E**±0°.02, **h14**^{km}±4^{km}, **n392**, σ**2.^{s}71**/383, **mb4.7**/97, **MS5.6**/5, **55C-24D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.50	312	Pn	Pn	09 25 16.3	-3.0
DRK	Karamyk	1.50	312	⇑iP	Pn	09 25 16.1	-3.2
	baz=11						
DRK				⇑iS	Sn	09 25 33.1	-5.7
	baz=11						
SFK	Sufi-Kurgan	1.54	8	⇓eP	Pn	09 25 18.3	-1.6
	baz=16						
SFK				⇓eS	Sn	09 25 38.3	-1.5
	baz=16						
OHH	Osh	2.07	351	⇑eP	Pn	09 25 26.9	-0.1
	baz=55						
OHH				⇑iS	Sn	09 25 51.8	-0.8
	baz=55						
GAR	Garm	2.34	284		Pn	09 25 32.2	+1.4
GAR	Garm	2.34	284	⇑eP	Pn	09 25 31.9	+1.2
	baz=80						
GAR				⇑iS	Sn	09 26 00.0	+0.7
	baz=80						
KSH	Kashi	2.37	63	Pg	Pn	09 25 27.2	-4.0
KSH				Sg	Sn	09 25 51.7	-8.5
KSH				smax	smax		
	comp=N,10µm,1.2s						
KSH				smax	smax		
	comp=E,9µm,1.0s						
BTK	Batken	2.45	311	PN	Pn	09 25 33.8	+1.6
BTK	Batken	2.45	311		Pn	09 25 33.8	+1.6
BTK				Sn	Sn	09 26 04.9	+2.9
BTK	Batken	2.45	311	⇑iP	Pn	09 25 32.5	+0.3
	baz=10.0						
BTK				⇑iS	Sn	09 26 01.0	-0.9
	baz=10.0						
CHGR	Chuyangaron	3.20	274	PN	Pn	09 25 44.5	+2.0
CHGR	Chuyangaron	3.20	274	Pn	Pn	09 25 44.3	+1.8
CHGR	Chuyangaron	3.20	274	⇑eP	Pn	09 25 44.3	+1.8
	baz=71						
CHGR				⇑iS	Sn	09 26 21.3	+0.8
	baz=71						
AML	Almayashu	3.66	5	P	Pn	09 25 50.6	+1.4
	SNR=41						
AML	Almayashu	3.66	5	⇑eP	Pn	09 25 50.8	+1.6
	baz=8.0						
AML				⇑iS	Sn	09 26 32.7	+0.4
	baz=8.0						
UCH	Uchtor	3.87	14	P	Pn	09 25 54.1	+2.0
	SNR=33						
UCH	Uchtor	3.87	14	⇑eP	Pn	09 25 54.0	+2.0
	baz=17						
UCH				⇑eS	Sn	09 26 38.4	+0.9
	baz=17						
MNAS	Manas	4.04	352	⇑eP	Pn	09 25 55.0	+0.9
	baz=54						
MNAS				⇑iS	Sn	09 26 40.3	-1.0
	baz=54						
TAS	Tashkent	4.15	314	PN	Pn	09 25 56.9	+1.4
TAS	Tashkent	4.15	314	Pn	Pn	09 25 56.9	+1.4
EKS2	Erkin-Say	4.19	6	P	Pn	09 25 59.0	+2.8
	SNR=18						
MRKS	Merke	4.26	360	eP	Pb	09 26 07.2	-0.1
	276nm,0.9s						
MRKS				eS	Sb	09 27 01.7	+3.1
	530nm,0.9s						
AAK	Ala-Archa	4.26	13	Pn	Pn	09 25 59.6	+2.5
	38nm,0.3s,baz=208,slow=14,SNR=23						
AAK				Sn	Sn	09 26 52.7	+6.0
	12nm,0.3s,baz=18,slow=20,SNR=1.5						
AAK	Ala-Archa	4.26	13	P	Pn	09 25 59.1	+1.9
	SNR=29						
AAK	Ala-Archa	4.26	13	cePN	Pn	09 25 59.5	+2.3
AAK				pmax	pmax		
	comp=Z,2µm,1.3s						
AAK	Ala-Archa	4.26	13	Pn	Pn	09 25 59.0	+1.8
AAK	Ala-Archa	4.26	13	⇑eP	Pn	09 25 59.4	+2.3
	baz=15						
AAK				⇑iS	Sn	09 26 47.3	+0.5
	baz=15						
KBK	Karagaybulak	4.37	17	P	Pn	09 26 01.3	+2.6
	SNR=14						
ULHL	Ulahol	4.41	31	P	Pb	09 26 10.7	+0.8
	SNR=18						
FRU1	Bishkek	4.45	13	PN	Pn	09 26 02.4	+2.7
FRU1	Bishkek	4.45	13		Pn	09 26 02.4	+2.7
BOOM	Boomskoye usch	4.50	26	PN	Pn	09 26 01.0	+0.5
BOOM	Boomskoye usch	4.50	26	Pn	Pn	09 26 01.0	+0.5
DZA	Taraz	4.63	342	eP	Pb	09 26 09.5	-4.2
	comp=Z,1µm,0.5s						
DZA				eS	Sb	09 27 05.5	-3.9
	comp=Z,2µm,0.5s						
DZA	Taraz	4.63	342	ePn	Pn	09 26 01.1	-1.2
	baz=342						
DZA	Taraz	4.63	342	ePN	Pn	09 26 01.0	-1.2
CHMS	Chumysh	4.66	14	P	Pn	09 26 04.5	+2.0
	SNR=30						
CHM	Chimkent	4.73	325	eP	Pb	09 26 16.0	+0.7
	comp=Z,348nm,0.5s						
CHM				eS	Sb	09 27 16.0	+4.0
	comp=Z,2µm,1.1s						
KDJ	Kajisay	4.73	38	PN	Pn	09 26 05.2	+1.5
KDJ	Kajisay	4.73	38		Pn	09 26 05.2	+1.5
TARG	Taragay, Kyrgy	4.78	46	Pn	Pn	09 26 07.2	+2.7
TKM2	Tokmak 2	4.78	21	i PN	Pn	09 26 07.0	+2.6
TKM2				pmax	pmax		
	comp=Z,278nm,0.7s						
TKM2	Tokmak 2	4.78	21	⇑Pn	Pb	09 26 11.1	-5.2
	comp=Z,278nm,0.8s						
TKM2				⇓Lg	Lg	09 27 12.4	
	comp=Z,664nm,1.2s						
USP	Ospenovka	4.87	11	P	Pn	09 26 07.7	+2.2
	SNR=8.9						
KST	Kastek	5.00	24	eP	Pb	09 26 21.0	+1.0
	comp=Z,162nm,0.1s						
KST				eS	Sb	09 27 25.6	+5.5
	comp=Z,679nm,1.3s						
KST	Kastek	5.00	24	Pg	Pb	09 26 20.2	+0.1
	comp=Z,324nm,1.0s						
KST				Lg	Lg	09 27 23.3	
	comp=Z,679nm,1.3s						
KK31	Karatay Array	5.05	337	PN	Pn	09 26 08.3	+0.3
KKAR	Karatay Array	5.05	337	PN	Pn	09 26 08.3	+0.3

KKAR	Karatay Array	5.05	337	Pn	Pn	09 26 08.3	+0.3
SGDS	Sogindy	5.08	12	*e*Pg	Pb	09 26 24.0	+2.8
	baz=13						
KK09	Karatay Array	5.08	337	⇓Pn	Pn	09 26 08.2	-0.1
	comp=Z,150nm,0.6s,baz=153,slow=14						
KK09				⇓Lg	Lg	09 27 16.1	
	comp=Z,650nm,0.8s,baz=152,slow=27						
DGS	Degeres	5.13	21	*e*P	Pb	09 26 24.4	+2.3
	comp=Z,191nm,1.1s						
DGS				*e*S	Sg	09 27 30.9	-6.3
	comp=Z,274nm,0.8s						
DGS	Degeres	5.13	21	Pg	Pb	09 26 24.4	+2.3
	comp=Z,290nm,0.8s						
DGS				Lg	Lg	09 27 30.9	
	comp=Z,274nm,0.8s						
KBL	Kabul	5.18	222	PN	Pn	09 26 14.7	+4.8
KBL	Kabul	5.18	222	Pn	Pn	09 26 14.7	+4.8
IZV	Izvestkoviy	5.22	28	*e*P	Pb	09 26 26.0	+2.3
	comp=Z,121nm,0.7s						
IZV				*e*S	Sg	09 27 34.3	-6.0
	comp=Z,541nm,0.8s						
IZV	Izvestkoviy	5.22	28	Pg	Pb	09 26 25.4	+1.6
	comp=Z,179nm,0.7s						
IZV				Lg	Lg	09 27 33.3	
	comp=Z,541nm,0.8s						
MTBS	Maitube	5.24	27	*e*P	Pb	09 26 26.8	+2.9
	comp=Z,166nm,0.1s						
MTBS				*e*S	Sg	09 27 34.6	-6.1
	comp=Z,714nm,1.0s						
TNSS	Tian-Shan	5.35	31	*e*P	Pb	09 26 28.9	+2.8
	comp=Z,145nm,0.6s						
TNSS				*e*S	Sg	09 27 39.0	-5.4
	comp=Z,220nm,1.0s						
TNSS	Tian-Shan	5.35	31	*e*Pg	Pb	09 26 28.9	+2.8
	baz=33						
TNSS	Tian-Shan	5.35	31	Pg	Pb	09 26 28.9	+2.8
	comp=Z,145nm,0.6s						
TNSS				Lg	Lg	09 27 39.0	
	comp=Z,220nm,1.0s						
AAA	Alma-Ata	5.48	29	*e*P	Pb	09 26 31.3	+3.2
	comp=Z,84nm,0.5s						
AAA				*e*S	Sg	09 27 43.3	-5.3
	comp=Z,826nm,1.0s						
AAA	Alma-Ata	5.48	29	*e*Pg	Pb	09 26 31.7	+3.5
	comp=Z,3.4nm,0.4s,baz=32						
AAA	Alma-Ata	5.48	29	*i* PG	Pg	09 26 54.0	+16
MDOK	Medeo	5.50	31	*e*P	Pg	09 26 33.6	-4.3
	comp=Z,132nm,0.6s						
MDOK				*e*S	Sg	09 27 46.3	-2.8
	comp=Z,574nm,1.6s						
MDOK	Medeo	5.50	31	*e*Pg	Pb	09 26 31.4	+2.9
	baz=33						
MDOK	Medeo	5.50	31	⇑Pn	Pb	09 26 22.7	-5.8
	comp=Z,165nm,0.6s						
MDOK				⇑Lg	Lg	09 27 40.5	
	comp=Z,1μm,1.3s						
KNDC	Almaty	5.51	30	⇑Pn	Pb	09 26 24.0	-4.6
	comp=Z,537nm,0.7s						
KNDC				⇓Lg	Lg	09 27 40.3	
	comp=Z,2μm,0.9s						
KRBS	Karabastau	5.52	19	*e*P	Pb	09 26 29.9	+1.0
	comp=Z,160nm,0.9s						
KRBS				*e*S	Sb	09 27 40.2	+5.3
	comp=Z,375nm,0.8s						
KRBS	Karabastau	5.52	19	Pg	Pb	09 26 29.9	+1.0
	comp=Z,160nm,0.9s						
KRBS				Lg	Lg	09 27 40.2	
	comp=Z,375nm,0.8s						
KOTS	Kotyrbulak	5.58	31	*e*P	Pb	09 26 34.7	+4.8
	comp=Z,223nm,0.6s						
KOTS				*e*S	Sg	09 27 48.7	-3.1
	comp=Z,876nm,1.0s						
PRZ	Przheval'sk	5.61	43	PN	Pn	09 26 18.9	+3.1
PRZ	Przheval'sk	5.61	43	Pn	Pn	09 26 18.9	+3.1
KTBS	Karatobe	5.84	25	*e*P	Pb	09 26 37.1	+2.9
	comp=Z,145nm,1.0s						
KTBS				*e*S	Sg	09 27 52.4	-7.6
	comp=Z,456nm,0.9s						
KTBS	Karatobe	5.84	25	Pg	Pb	09 26 37.1	+2.9
	comp=Z,145nm,1.0s						
KTBS				Lg	Lg	09 27 52.4	
	comp=Z,456nm,0.9s						
KUU	Kurty	5.89	22	*e*P	Pb	09 26 38.4	+3.3
	comp=Z,79nm,0.7s						
KUU				*e*S	Sg	09 27 54.5	-7.1
	comp=Z,371nm,0.7s						
KUU	Kurty	5.89	22	*e*Pg	Pb	09 26 38.1	+3.1
	baz=24						
SATY	Saty	6.03	39	*e*P	Pb	09 26 40.7	+3.2
	comp=Z,133nm,0.9s						
SATY				*e*S	Sg	09 27 59.0	-6.9
	comp=Z,589nm,1.0s						
SATY	Saty	6.03	39	*e*Pg	Pb	09 26 42.0	+4.6
	baz=41						
SATY	Saty	6.03	39	Pg	Pb	09 26 40.6	+3.1
	comp=Z,158nm,1.0s						
SATY				Lg	Lg	09 27 59.8	
	comp=Z,589nm,1.0s						
UZB	Uzynbulak	6.40	41	*e*P	Pb	09 26 47.7	+3.8
	comp=Z,108nm,0.8s						
UZB				*e*S	Sg	09 28 11.2	-6.8
	comp=Z,294nm,1.4s						
UZB	Uzynbulak	6.40	41	*e*Pn	Pn	09 26 26.2	-0.4
	comp=Z,12nm,1.0s,baz=44						
UZB	Uzynbulak	6.40	41	*e*PN	Pn	09 26 26.2	-0.4
UZB				pmax	pmax		
	comp=Z,12nm,1.0s						
UZB	Uzynbulak	6.40	41	Pg	Pb	09 26 47.7	+3.8
	comp=Z,108nm,0.8s						
UZB				Lg	Lg	09 28 11.2	
	comp=Z,294nm,1.4s						
BTLS	Baital	6.58	5	*e*P	Pb	09 26 50.4	+3.6
	comp=Z,62nm,0.5s						
BTLS				*e*S	Sg	09 28 15.4	-8.3
	comp=Z,124nm,0.8s						
BTLS	Baital	6.58	5	*e*Pn	Pn	09 26 26.4	-2.5
	baz=5.8						
BTLS				*e*Pg	Pb	09 26 51.1	+4.3
	baz=5.8						
BTLS	Baital	6.58	5	*e*PN	Pn	09 26 26.4	-2.5
BTLS				*e*		09 26 51.0	
BTLS	Baital	6.58	5	Pg	Pb	09 26 50.4	+3.6
	comp=Z,62nm,0.5s						
BTLS				Lg	Lg	09 28 15.4	
	comp=Z,124nm,0.8s						
SHLS	Shalkode	6.64	43	*e*Pg	Pg	09 26 57.5	-2.2
	baz=47						
ARXS	Arharly	6.69	30	*e*P	Pb	09 26 52.8	+4.2
	comp=Z,162nm,1.2s						
ARXS				*e*S	Sg	09 28 19.6	-7.5
	comp=Z,304nm,1.1s						
ARXS	Arharly	6.69	30	Pg	Pb	09 26 52.8	+4.2
	comp=Z,162nm,1.2s						
ARXS				Lg	Lg	09 28 19.6	
	comp=Z,304nm,1.1s						
DHRM	DHARAMSHALA	6.71	157	*e*P	Pn	09 26 34.6	+3.7
DHRM				*e*S	Sn	09 27 52.3	+5.2
DHRM				IAML		09 28 00.5	
	comp=N,5μm,0.6s						
DHRM				IAML		09 28 01.1	
	comp=E,8μm,0.5s						
PDGK	Podgornoye	6.77	42	PN	Pn	09 26 34.1	+2.4
PDGK	Podgornoye	6.77	42	⇓Pn	Pb	09 26 42.2	-7.9
	comp=E,40nm,0.7s						
PDGK				⇓Lg	Lg	09 28 26.4	
	comp=E,534nm,1.2s						
BLB	Baldybastay	6.86	33	Pg	Pb	09 26 55.4	+3.7
	comp=E,229nm,0.7s						
BLB				Lg	Lg	09 28 23.9	
	comp=E,222nm,0.8s						
BHK	Bhakra	7.52	159	*e*P	Pn	09 26 46.4	+4.5
TDK	Taldyqorghan	7.57	29	*e*Pg	Pb	09 27 10.5	+6.8
	baz=31						
DJR	Jarkent	7.64	38	*e*P	Pb	09 27 09.9	+5.0
	comp=E,58nm,0.8s						
DJR				*e*S	Sg	09 28 49.5	-8.3
	comp=E,176nm,1.3s						
DJR	Jarkent	7.64	38	Pg	Pb	09 27 09.9	+5.0
	comp=E,58nm,0.8s						
DJR				Lg	Lg	09 28 49.5	
	comp=E,176nm,1.3s						
SMLA	Simla	8.02	155	*e*P	Pn	09 26 52.4	+3.7
SMLA				*e*S	Sn	09 28 21.4	+2.3
OTUK	Ortayu	9.78	356	⇑Pn	Pn	09 27 15.6	+2.8
	comp=E,29nm,1.1s						
NDI	New Delhi	10.32	160	*e*P	Pn	09 27 22.9	+2.6
NDI				*e*S	Sn	09 29 13.2	-2.6
NDI				IAML		09 29 25.6	
	comp=N,757nm,0.7s						
NDI				IAML		09 29 25.8	
	comp=E,797nm,0.7s						
AYAN	Aya Nagar	10.49	161	*e*P	Pn	09 27 24.7	+2.2
MAKZ	Makanchi	10.51	35	P	Pn	09 27 23.4	+0.6
MAKZ	Makanchi	10.51	35	Pn	Pn	09 27 23.4	+0.6
MK31	Makanchi Array	10.65	36	*d i*P	Pn	09 27 26.9	+2.2
MK31	Makanchi Array	10.65	36		Pn	09 27 26.2	+1.6
MKAR	Makanchi Array	10.65	36	Pn	Pn	09 27 25.9	+1.3
	comp=E,0.8nm,0.3s,baz=206,slow=12,SNR=14						
MKAR				Lg	Lg	09 30 28.5	
	comp=E,0.1nm,0.3s,baz=272,slow=38,SNR=2.0						
MKAR	Makanchi Array	10.65	36	*ce*P	Pn	09 27 27.2	+2.5
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MKAR	Makanchi Array	10.65	36	Pn	Pn	09 27 25.2	+0.6
KUDL	Kundal	10.66	164	*e*P	Pn	09 27 25.7	+0.7
KUDL				*e*S	Sn	09 29 17.3	-6.8
KUDL				IAML		09 29 27.8	
	comp=N,72nm,0.3s						
KUDL				IAML		09 29 28.4	
	comp=E,18nm,0.2s						
SONA	Sohna	10.70	161	*e*P	Pn	09 27 27.4	+1.9
JASL	Jaisalmer	11.69	190	*e*P	Pn	09 27 38.1	-0.9
GEYT	Alibeck	11.91	272	Pn	Pn	09 27 39.1	-2.8
	comp=E,3.2nm,0.3s,baz=96,slow=12,SNR=10						
GEYT				Sn	Sn	09 29 48.1	-6.5
	comp=E,1.1nm,0.3s,baz=112,slow=11,SNR=1.6						
GEYT	Alibeck	11.91	272		Pn	09 27 40.2	-1.8
AJM	Ajmer	12.03	174	*e*P	Pn	09 27 43.7	0.0
WMQ	Urumqi	12.13	59	*e*P	Pn	09 27 44.9	-0.1
WMQ				pP		09 27 53.4	
WMQ				S	Sn	09 30 05.2	+5.1
WMQ				pmax	pmax		
	comp=E,67nm,0.9s						
WMQ				LR	LR		
	comp=E,3μm,6.9s						
WMQ				LR	LR		
	comp=E,5μm,7.1s						
WMQ				LR	LR		
	comp=E,3μm,12.9s						
ZSN	Zaisan	12.35	40	*e*Pn	Pn	09 27 47.0	-1.0
	baz=41						
ZSN	Zaisan	12.35	40	*e*P	Pn	09 27 47.0	-1.0
KURBB	Kurchatov Arra	12.71	16	Pn	Pn	09 27 50.8	-2.0
	comp=E,0.1nm,0.3s,baz=212,slow=9.5,SNR=4.3						
KURBB				Lg	Lg	09 31 29.8	
	comp=E,0.1nm,0.3s,baz=204,slow=32,SNR=9.6						
KURK	Kurchatov	12.81	16	⇑*i*P	Pn	09 27 54.4	+0.2
KURK				pmax	pmax		
	comp=Z,22nm,1.2s						
PYUN	Piuthan	13.18	139	*e*P	Pn	09 27 57.4	-2.1
	comp=Z,61nm,0.5s						
DANN	Dangsing	13.38	136	*e*P	Pn	09 27 59.4	-3.0
	comp=Z,61nm,0.3s						
JHNI	Jhansi	13.73	159	*e*P	Pn	09 28 05.8	-1.1
KOLN	Koldanda	13.76	138	*e*P	Pn	09 28 04.6	-2.8
	comp=Z,20nm,0.4s						
GKN	Gorkha	14.14	134	*e*P	Pn	09 28 08.7	-3.9
	comp=Z,88nm,0.6s						
KKN	Kakani	14.67	133	*e*P	Pn	09 28 14.9	-5.0
	comp=Z,40nm,0.6s						
BVAR	Borovoye Array	14.68	353	Pn	Pn	09 28 16.6	-3.1
	comp=Z,0.2nm,0.3s,baz=205,slow=21,SNR=4.2						
BVAR				Lg	Lg	09 32 38.8	
	comp=Z,0.4nm,0.3s,baz=262,slow=40,SNR=2.0						
DMN	Daman	14.71	134	*e*P	Pn	09 28 15.5	-5.0
	comp=Z,13nm,0.4s						
BRVK	Borovoye	14.72	353	⇓*e*P	Pn	09 28 18.2	-2.0
BRVK				pmax	pmax		
	comp=Z,28nm,1.0s						
BRVK	Borovoye	14.72	353		Pn	09 28 18.6	-1.7
PKIN	Phulchoki	14.90	133	*e*P	Pn	09 28 17.4	-5.7
	comp=Z,57nm,0.5s						
PKI	Pulchoki	14.91	133	*e*P	Pn	09 28 18.0	-5.3
	comp=Z,68nm,0.5s						
GUN	Gumba	14.93	131	*e*P	Pn	09 28 17.1	-6.4
	comp=Z,40nm,0.5s						
DGZ	Jazzator, Alta	15.13	38	⇓*e*P	Pn	09 28 26.1	+0.1
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BHUJ	Bhuj	15.49	192	*e*P	Pn	09 28 28.7	-1.9
BHUJ				*e*S	Sn	09 31 16.1	-5.9
BHPL	Bhopal	15.61	166	*e*P	Pn	09 28 31.0	-1.3
BHPL				*e*S	Sn	09 31 16.6	-8.5
RAMN	Ramite	16.07	132	*e*P	Pn	09 28 30.0	-8.4
	comp=Z,55nm,0.5s						
AKTO	Aktyubinsk	16.11	323	Pn	Pn	09 28 35.3	-3.2
	comp=Z,6.3nm,0.3s,baz=129,slow=17,SNR=26						
AKTO				Sn	Sn	09 31 27.4	-9.5
	comp=Z,0.6nm,0.3s,baz=126,slow=19,SNR=4.4						
TAPN	Taplejung	16.44	128	*e*P	Pn	09 28 33.2	-10
	comp=Z,11nm,0.4s						
ODAN	Odare	16.60	130	*e*P	Pn	09 28 35.1	-10
	comp=Z,67nm,0.7s						
LSA	Lhasa	17.21	115	P	P	09 28 58.5	+3.9
LSA				pmax	pmax		
	comp=Z,19nm,0.9s						
ZALV	Zalesovo Beam	17.38	23	P	Pn	09 28 52.8	-1.8
	comp=Z,1.4nm,0.3s,baz=230,slow=9.3,SNR=16						
ZALV	Zalesovo Beam	17.38	23	*i* P	Pn	09 28 54.0	-0.6
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ZALV	Zalesovo Beam	17.38	23	Pn	Pn	09 28 54.2	-0.4
BOK	Bokaro	18.18	140	*e*S	Sn	09 32 17.6	-10
WSAR	Wadi Sarin	19.66	224	P	P	09 29 22.3	+1.2
	comp=Z,0.4nm,0.3s,baz=55,slow=9.4,SNR=7.4						
UOSS	Minazif	19.75	232	P	P	09 29 22.8	+0.6
UOSS				IAmb	IAmb	09 29 43.0	
	comp=Z,47nm,1.1s						
MAK	Makhachkala	19.97	291	*e*P	P	09 29 23.8	-0.6
MAK				*e*S	S	09 33 05.3	-3.3
MAK				pmax	pmax		
	comp=Z,93nm,0.8s						
SEKA	Sheki	20.15	286	P	Pn	09 29 29.3	+1.0
SVE	Sverdlovsk	20.16	340	*e*P	P	09 29 25.3	-1.0
SVE				pmax	pmax		
	comp=Z,34nm,1.1s						
MNGR	Mingechevir, A	20.25	285	P	Pn	09 29 34.1	+4.8
SHL	Shillong	20.35	124	P	P	09 29 29.6	+0.8
SHL				pmax	pmax		
	comp=Z,34nm,1.0s						
SHL	Shillong	20.35	124	P	P	09 29 29.6	+0.8
SHL				IAmb	IAmb	09 29 39.6	
	comp=Z,34nm,1.0s						
ARU	Arti	20.43	336	P	P	09 29 26.9	-2.3
	comp=Z,4.5nm,0.2s,baz=156,slow=9.5,SNR=19						
ARU	Arti	20.43	336	*c i*P	P	09 29 27.6	-1.6
ARU				S	S	09 33 13.5	-4.0
ARU				pmax	pmax		
	comp=Z,44nm,1.0s						
ARU	Arti	20.43	336	P	P	09 29 27.7	-1.5
ARU				IAmb	IAmb	09 29 30.3	
	comp=Z,42nm,1.0s						
GTA	Gaotai	20.68	79	⇑P	Pn	09 29 34.0	-0.5
GTA				pP	sP	09 29 44.5	+4.4
GTA				sP	pP	09 29 48.7	+11
GTA				pmax	pmax		
	comp=Z,60nm,1.2s						
GANJ	Ganja	20.83	284	P	Pn	09 29 36.1	-0.1
GROC	Groznyy	21.24	292	*e*P	P	09 29 36.9	-1.2
GROC				*e*		09 29 56.4	
GROC				*e*S	S	09 33 27.5	-6.2
GROC				pmax	pmax		
	comp=Z,101nm,1.2s						
HYB	Hyderabad	21.50	166	*i* P	P	09 29 41.5	+0.4
NAX	Nakhchivan	21.59	281	P	P	09 29 48.1	+6.1
GNI	Garni	22.07	283	P	P	09 29 49.4	+2.2
	comp=Z,52nm,0.8s,baz=149,slow=4.5,SNR=11						
GNI	Garni	22.07	283	P	P	09 29 48.2	+1.0
GNI				pmax	pmax		
	comp=Z,219nm,1.1s						
GNI	Garni	22.07	283	P	P	09 29 48.2	+1.0
GUDG	Gudauri	22.18	289	P	P	09 29 54.1	+5.6
KZRT	Kazreti	22.25	287	P	P	09 29 51.4	+2.3
BELG	Belogornoye	22.57	316	P	P	09 29 50.2	-2.0
	comp=Z,111nm,0.8s,baz=328,slow=0.5,SNR=25						
BELG				S	S	09 34 00.1	+1.1
	comp=Z,13nm,0.7s,baz=143,slow=20,SNR=2.0						
ZEI	Tsey	22.61	290	*e*P	P	09 29 56.0	+2.9
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NCK	Nalchik	22.86	292	⇑*e*P	P	09 29 58.1	+2.7
NCK				pmax	pmax		
	comp=Z,23nm,0.7s						
AKH	Akhalkalaki	22.93	287	⇓P	P	09 30 01.6	+5.2
ONI	Oni	22.94	290	P	P	09 29 57.7	+1.3
ONI				pmax	pmax		
	comp=Z,67nm,0.8s						
ONI	Oni	22.94	290	P	P	09 29 57.7	+1.3
MIB	Mutribah	23.06	256	*e*P	P	09 29 57.6	+0.1
KBZ	Khabaz	23.38	293	P	P	09 30 03.0	+2.3
	comp=Z,4.0nm,0.8s,baz=85,slow=11,SNR=3.9						
KBZ	Khabaz	23.38	293	P	P	09 30 03.0	+2.3
MOY	Mondy	23.45	47	*e*P	P	09 30 03.1	+1.6
MOY				pmax	pmax		
	comp=Z,79nm,1.9s						
RST	Umm Al-Ruwaisa	23.46	255	*e*P	P	09 29 55.9	-5.8
NEY	Neytrino	23.49	291	⇑*e*P	P	09 30 03.0	+1.0
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KIV	Kislovodsk	23.54	293	⇓P	P	09 30 06.9	+4.5
KIV	Kislovodsk	23.54	293	*e*P	P	09 30 04.9	+2.5
KIV				pmax	pmax		
	comp=Z,21nm,1.0s						
KIV	Kislovodsk	23.54	293	P	P	09 30 03.4	+1.0
BATM	Batumi	24.27	287	P	P	09 30 16.2	+6.9
BCA	Borcka	24.34	287	⇑P	P	09 30 15.0	+5.1
ZAK	Zakamensk	24.36	51	*e*P	P	09 30 10.3	+0.2
ZAK				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH	Lanzhou	24.42	86	*e*P	P	09 30 12.3	+1.4
LZH				pP	sP	09 30 22.9	+3.8
LZH				pmax	pmax		
	comp=Z,32nm,1.2s						
TLY	Talaya	24.99	48	P	P	09 30 15.7	-0.1
	comp=Z,1.8nm,0.6s,baz=235,slow=7.9,SNR=2.4						
TLY	Talaya	24.99	48	⇑*e*P	P	09 30 16.9	+1.1
TLY				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TLY	Talaya	24.99	48	P	P	09 30 16.4	+0.6
KIRV	Kirov	25.31	330	P	P	09 30 17.1	-1.4
	comp=Z,20nm,0.7s,baz=146,slow=1.4,SNR=4.6						
KIRV	Kirov	25.31	330	⇑*e*P	P	09 30 17.4	-1.1
VRH	Novokhopyorsk	25.49	310	*e*P	P	09 30 19.3	-0.9
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SOC	Sochi	25.68	292	*e*P	P	09 30 23.6	+1.6
SOC				*e*		09 30 58.6	
SOC				*e*S	S	09 34 51.3	+1.3
SOC				pmax	pmax		
	comp=Z,48nm,1.1s						
SOC				MLR	MLR		
	comp=Z,5μm,17.0s						
SONM	Songino Array	25.76	58	P	P	09 30 23.3	+0.4
	comp=Z,7.7nm,0.8s,baz=271,slow=8.8,SNR=25						
SONM	Songino Array	25.76	58	P	P	09 30 24.0	+1.1
SONM				pmax	pmax		
	comp=Z,29nm,1.0s						
SONM	Songino Array	25.76	58	P	P	09 30 24.0	+1.1
SONM				IAmb	IAmb	09 30 35.1	
	comp=Z,29nm,1.0s						
ULN	Ulaanbaatar	26.21	58	⇑*e*P	P	09 30 27.6	+0.7
ULN				pmax	pmax		
	comp=Z,31nm,2.5s						
ULN	Ulaanbaatar	26.21	58	P	P	09 30 27.6	+0.7
ULN				IAmb	IAmb	09 30 42.3	
	comp=Z,11nm,0.7s						
VORD	Divnogorie	26.90	309	*e*P	P	09 30 31.0	-1.9
VORD				pmax	pmax		
	comp=Z,20nm,1.2s						
VSR	Storozhevoye	27.04	309	*e*P	P	09 30 30.8	-3.4
VSR				pmax	pmax		
	comp=Z,30nm,1.7s						
ANN	Anapa	27.33	295	*e*P	P	09 30 37.4	+0.5
ANN				pmax	pmax		
	comp=Z,124nm,1.1s						
LPSR	Galich'ya Gora	27.56	312	*e*P	P	09 30 36.9	-2.0
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
RAYN	Ar Rayn	27.92	246	P	P	09 30 43.7	+1.2
RAYN				pmax	pmax		
	comp=Z,16nm,1.1s						
RAYN	Ar Rayn	27.92	246	P	P	09 30 43.7	+1.2
RAYN				IAmb	IAmb	09 31 12.9	
	comp=Z,16nm,1.1s						
KMI	Kunming	28.26	109	⇑P	P	09 30 55.4	+10
KMI				sP	sP	09 31 04.5	+11
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	29.00	88	P	P	09 30 52.5	+0.5
XAN				pP	sP	09 31 01.2	+1.0
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC	Hu-ho-hao-te	29.45	73	*e*P	P	09 30 55.8	-0.2
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,1μm,4.5s						
HHC				LR	LR		
	comp=Z,4μm,15.7s						
HHC				LR	LR		
	comp=Z,8μm,12.9s						
HHC				LR	LR		
	comp=Z,11μm,15.1s						
OBN	Obninsk	29.66	316	*i* P	P	09 30 55.6	-1.9
OBN				*i*		09 31 06.3	
OBN				*i*		09 31 53.5	
OBN				pmax	pmax		
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	29.98	125	P	P	09 31 01.4	+0.6
	comp=Z,1.7nm,0.3s,baz=312,slow=8.4,SNR=2.5						
BRTR	Keskin Array B	30.58	285	P	P	09 31 06.9	+0.9
	comp=Z,4.0nm,1.0s,baz=104,slow=8.0,SNR=8.6						
BRTR	Keskin Array B	30.58	285	*ce*P	P	09 31 10.1	+4.1
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRTR	Keskin Array B	30.58	285	P	P	09 31 08.1	+2.0
KLMR	Klimovskoe	30.69	328	*e*P	P	09 31 03.0	-3.5
KLMR				*e*		09 32 01.2	
KLMR				*e*		09 34 07.0	
KLMR				pmax	pmax		
	comp=Z,32nm,1.4s						
KLMR	Klimovskoe	30.69	328	*e*P	P	09 31 03.1	-3.5
KLMR				AMP		09 31 05.9	
	comp=Z,32nm,1.4s						
KLMR				*e*PP	PnPn	09 32 01.2	-4.9
KLMR				*e*PcP	PcP	09 34 07.1	+3.0
MMAI	Mount Meron Ar	31.03	272	P	P	09 31 08.9	-1.1
	comp=Z,0.9nm,0.3s,baz=70,slow=8.4,SNR=1.7						
PALK	Pallekele	31.80	166	P	P	09 31 14.3	-2.5
	comp=Z,7.2nm,1.0s,baz=80,slow=11,SNR=3.5						
NRIK	Noril'sk	31.87	10	P	P	09 31 15.6	-1.2
	comp=Z,7.2nm,0.8s,baz=195,slow=5.5,SNR=8.1						
NRIK	Noril'sk	31.87	10	*ce*P	P	09 31 16.9	+0.1
NRIK				pmax	pmax		
	comp=Z,11nm,1.0s						
NRIK	Noril'sk	31.87	10	P	P	09 31 16.7	-0.1
NRIK				IAmb	IAmb	09 31 29.1	
	comp=Z,20nm,1.4s						
BOD	Bodaibo	32.69	40	*e*P	P	09 31 24.4	+0.2
BOD				pmax	pmax		
	comp=Z,22nm,0.9s						
AKASG	Malin Array Be	33.15	306	P	P	09 31 26.9	-1.4
	comp=Z,2.5nm,0.4s,baz=77,slow=7.8,SNR=9.0						
AKASG	Malin Array Be	33.15	306	P	P	09 31 27.9	-0.4
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AKASG	Malin Array Be	33.15	306	P	P	09 31 27.9	-0.4
AKBB	Malin Array Si	33.15	306	⇑*e*P	P	09 31 30.9	+2.6
AKBB	Malin Array Si	33.15	306	P	P	09 31 28.5	+0.2
AKBB				IAmb	IAmb	09 31 33.2	
	comp=Z,11nm,0.8s						
MILM	Milestii Mici	33.34	299	⇓P	P	09 31 33.5	+3.6
SORM	Soroca	33.63	301	⇑P	P	09 31 35.9	+3.4
TPGR	Topolog	33.73	295	⇑P	P	09 31 37.3	+3.8
CFR	Carcaliu	33.91	296	⇓P	P	09 31 38.4	+3.5
SCTR	Scanteiesti	33.97	297	⇑P	P	09 31 38.9	+3.4
WHN	Wuhan	34.57	91	P	P	09 31 42.2	+1.4
TIA	Tai'an	34.72	80	⇑P	P	09 31 43.5	+1.3
TIA				pmax	pmax		
	comp=Z,18nm,1.1s						
VRI	Vrincioaia	34.84	297	⇑P	P	09 31 47.1	+4.0
TESR	Tescani	34.84	299	⇑P	P	09 31 46.0	+3.0
PLOR	Plostina	34.89	297	⇑P	P	09 31 48.1	+4.6
COVR	Voineasa-Covas	35.20	297	⇓P	P	09 31 50.7	+4.5
MLR	Muntele Rosu	35.42	297	⇑P	P	09 31 52.1	+4.0
MLR	Muntele Rosu	35.42	297	P	P	09 31 48.8	+0.6

MLR				pmax	pmax		
	comp=Z,30nm,1.0s						
MLR	Muntele Rosu	35.42	297	P	P	09 31 48.8	+0.6
BURAR	Bucovina Array	35.75	301	⇑P	P	09 31 55.1	+4.1
BURAR	Bucovina Array	35.75	301	P	P	09 31 52.4	+1.4
DOPR	Dopca	35.76	298	⇓P	P	09 31 55.0	+4.0
BUR08	Bucovina Ar. S	35.76	301	P	P	09 31 51.2	+0.2
ARR	Arges	36.35	297	⇑P	P	09 31 59.7	+3.6
ARCR	ARCALIA	36.37	300	⇑P	P	09 32 00.6	+4.4
LVV	L'vov	36.46	304	eP	P	09 32 00.1	+3.2
LVV				eS	S	09 37 37.9	-0.2
FINES	FINESS Array B	36.88	324	P	P	09 31 59.3	-1.0
	comp=Z,3.2nm,0.6s,baz=117,slow=9.7,SNR=8.3						
FINES	FINESS Array B	36.88	324	iP	P	09 31 58.2	-2.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NJ2	Nanjing	37.50	86	eP	P	09 32 09.1	+3.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
TRPA	Tarpa	37.52	302	⇑P	P	09 32 10.3	+4.4
TRPA	Tarpa	37.52	302	eP	P	09 32 06.4	+0.5
DRGR		37.52	299	⇑P	P	09 32 09.5	+3.4
DRGR		37.52	299	P	P	09 32 10.7	+4.6
KOLS	Kolonicke sedl	37.64	303	eP	P	09 32 12.2	+5.2
KOLS	Kolonicke sedl	37.64	303	eP	P	09 32 12.2	+5.2
GZR	Gura Zlata	37.64	297	⇓P	P	09 32 11.1	+4.0
UZH	Uzhgorod	37.65	303	eP	P	09 32 10.5	+3.5
UZH				e		09 32 15.1	
CRVS	Cervenica-Dubn	38.17	303	eP	P	09 32 16.8	+5.3
CRVS	Cervenica-Dubn	38.17	303	eP	P	09 32 16.8	+5.3
SIRR	Siria	38.30	299	⇓P	P	09 32 16.4	+3.8
IDI	Anoyia	38.45	281	P	P	09 32 11.9	-2.1
	comp=Z,9.5nm,1.0s,baz=357,slow=18,SNR=1.5						
MDVR	Moldovita	38.48	296	⇑P	P	09 32 16.8	+2.7
BOVS	Bovan	38.68	295	⇑P	P	09 32 18.1	+2.4
NIE	Niedzica	38.90	304	eP	P	09 32 23.2	+5.7
OJC	Ojcow	39.17	305	eP	P	09 32 23.9	+4.1
OJC	Ojcow	39.17	305	P	P	09 32 20.8	+1.0
OJC				pmax	pmax		
	comp=Z,17nm,0.9s						
OJC	Ojcow	39.17	305	P	P	09 32 20.8	+1.0
OJC				IAmb	IAmb	09 32 25.1	
	comp=Z,18nm,0.9s						
PSZ	Piszkesteto	39.30	302	eP	P	09 32 24.0	+3.0
FRGS	Fruska Gora	39.75	297	⇓P	P	09 32 27.6	+2.9
DIVS	Divibare	39.81	296	P	P	09 32 26.3	+0.9
DIVS				IAmb	IAmb	09 32 44.5	
	comp=Z,21nm,1.1s						
VYHS	Vyhne	39.94	303	eP	P	09 32 31.0	+4.7
VYHS	Vyhne	39.94	303	eP	P	09 32 31.0	+4.7
ARA0	ARCESS Array S	40.02	336	eP	P	09 32 29.2	+2.6
ARCES	ARCESS Array B	40.02	336	P	P	09 32 25.5	-1.1
	comp=Z,3.3nm,0.6s,baz=111,slow=7.8,SNR=16						
ARCES	ARCESS Array B	40.02	336	P	P	09 32 26.1	-0.5
ARCES				pmax	pmax		
	comp=Z,99nm,1.9s						
ARCES	ARCESS Array B	40.02	336	P	P	09 32 26.1	-0.5
ITM	Ithomi	40.11	285	P	P	09 32 27.6	-0.3
KTK1	Kautokeino	40.55	335	eP	P	09 32 32.1	+1.2
MORC	Moravsky Berou	40.65	305	eP	P	09 32 36.6	+4.4
JAVC	Velka Javorina	40.67	303	eP	P	09 32 36.1	+3.7
KOVH	Kovagotottos	40.77	299	eP	P	09 32 34.5	+1.3
HAMF	Hammerfest	41.06	337	eP	P	09 32 37.6	+2.5
KRLC	Kraliky	41.11	305	eP	P	09 32 40.2	+4.2
KRLC	Kraliky	41.11	305	eP	P	09 32 40.2	+4.2
VRAC	Vranov	41.32	304	eP	P	09 32 38.7	+1.1
YAK	Yakutsk	41.32	37	P	P	09 32 36.9	-0.5
	comp=Z,9.2nm,0.4s,baz=315,slow=0.4,SNR=2.0						
YAK	Yakutsk	41.32	37	⇓eP	P	09 32 37.0	-0.4
YAK				pmax	pmax		
	comp=Z,15nm,0.6s						
DPC	Dobruska-Polom	41.38	306	eP	P	09 32 39.6	+1.4
DPC				ex	x	09 32 43.0	
DPC	Dobruska-Polom	41.38	306	eP	P	09 32 39.6	+1.4
DPC				e		09 32 43.0	
KRUC	Moravsky	41.48	304	eP	P	09 32 38.6	-0.3
JETT	Jettan, Norway	41.68	335	eP	P	09 32 42.1	+1.7
MDJ	Mudanjiang	41.90	63	P	P	09 32 44.3	+1.9
MDJ				pmax	pmax		
	comp=Z,7.0nm,2.3s						
CONA	Conrad Observa	41.99	302	eP	P	09 32 45.4	+2.1
	comp=Z,13nm,1.0s						
TRO	Tromso	42.20	335	eP	P	09 32 47.6	+3.1
ARSA	Arzberg	42.33	301	eP	P	09 32 47.4	+1.5
	comp=Z,4.0nm,0.7s						
KLR	Kul'dur	42.55	56	P	P	09 32 46.5	-1.1
	comp=Z,2.3nm,0.4s,baz=278,slow=7.7,SNR=17						
KLR	Kul'dur	42.55	56	⇓eP	P	09 32 48.1	+0.4
KLR				pmax	pmax		
	comp=Z,11nm,1.5s						
KSAR	Wonju Array Be	42.56	74	P	P	09 32 49.9	+2.0
KSAR	Wonju Array Be	42.56	74	P	P	09 32 49.9	+2.0
PSI	Prapat	42.57	140	P	P	09 32 48.5	+0.2
	comp=Z,2.4nm,0.4s,baz=0.0,slow=20,SNR=2.4						
KSRS	Korea Array	42.59	74	P	P	09 32 46.6	-1.5
	comp=Z,3.1nm,0.9s,baz=271,slow=8.2,SNR=8.2						
KSRS				LR	LR	09 52 00.2	
	comp=Z,5µm,21.4s,baz=23,slow=38						
RPSI	Rantau Prapat	42.66	140	P	P	09 32 48.5	-0.4
SOKA	Soboth	42.76	300	eP	P	09 32 51.7	+2.2
	comp=Z,9.8nm,0.9s						
BRG	Berggiesshubel	42.83	307	eP	P	09 32 51.2	+1.3
BRG				Amp		09 32 58.6	
	comp=Z,8.6nm,0.9s						
FAUS	Fauske	42.89	331	eP	P	09 32 51.7	+1.5
OBKA	Obir	43.12	300	eP	P	09 32 55.9	+3.5
	comp=Z,8.5nm,1.0s						
GERES	GERESS Array B	43.27	304	P	P	09 32 50.8	-2.8
	comp=Z,0.2nm,0.2s,baz=66,slow=7.6,SNR=3.0						
TIXI	Tiksi	43.27	22	P	P	09 32 52.3	-0.9
	comp=Z,5.3nm,0.7s,baz=271,slow=6.0,SNR=8.2						
TIXI	Tiksi	43.27	22	⇓eP	P	09 32 52.6	-0.6
TIXI	Tiksi	43.27	22	P	P	09 32 52.9	-0.3
TIXI				IAmb	IAmb	09 33 00.9	
	comp=Z,15nm,0.6s						
KHC	Kasperske Hory	43.30	304	eP	P	09 32 57.1	+3.3
KHC	Kasperske Hory	43.30	304	⇓eP	P	09 32 54.3	+0.5
KHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KHC	Kasperske Hory	43.30	304	P	P	09 32 53.9	+0.1
CLL	Collm	43.36	307	eP	P	09 32 55.0	+0.8
CLL	Collm	43.36	307	eP	P	09 32 55.0	+0.8
KONS	Konsvik	43.57	330	eP	P	09 32 59.2	+3.5
STOK	Stokkvaagen	43.58	329	eP	P	09 32 59.9	+4.2
USRK	Ussuriysk Ar.	43.67	63	P	P	09 32 57.4	+0.6
	comp=Z,1.2nm,0.6s,baz=255,slow=9.7,SNR=2.1						
LOF	Lofoten	43.70	332	eP	P	09 32 59.9	+3.3
MYKA	Terra Mystica	43.71	301	eP	P	09 33 00.1	+2.9
	comp=Z,2.6nm,0.5s						
NSS	Namsos	43.78	327	eP	P	09 33 00.6	+3.2
PRED	Cave del Predi	43.80	300	P	P	09 32 58.1	+0.2
KBA	Koelnbreinsper	43.82	301	eP	P	09 33 00.3	+2.1
	comp=Z,10nm,1.6s						
NC303	NORSAR Array S	43.83	322	P	P	09 32 56.2	-1.6
NC303				IAmb	IAmb	09 33 06.0	
	comp=Z,23nm,0.9s						
NB2	NORSAR Subarra	43.90	322	P	P	09 32 56.7	-1.7
	comp=Z,17nm,1.1s,baz=89,slow=7.9						
NB2	NORSAR Subarra	43.90	322	P	P	09 32 56.7	-1.7
	baz=89,slow=7.9						
NOA	NORSAR Array B	43.90	322	P	P	09 32 56.4	-2.1
	comp=Z,9.9nm,1.1s,baz=93,slow=7.7,SNR=5.5						
ABTA	Abfaltersbach	44.45	301	eP	P	09 33 05.2	+2.0
	comp=Z,3.2nm,0.6s						
CIMO	Cimolais	44.59	300	P	P	09 33 03.0	-1.1
GRF	Grafenberg Arr	44.73	305	eP	P	09 33 06.5	+1.3
	comp=Z,9.8nm,0.9s,baz=86,slow=6.8						
WTTA	Wattenberg	44.92	302	eP	P	09 33 09.5	+2.5
	comp=Z,5.9nm,0.7s						
WATA	Walderalm	44.95	302	eP	P	09 33 09.1	+2.0
	comp=Z,2.3nm,0.5s						
NRCA	Norcia	44.97	296	P	P	09 33 07.7	+0.4
NRCA				IAmb	IAmb	09 33 20.9	
	comp=Z,13nm,0.7s						
CTI	Castel Tesino	45.18	300	P	P	09 33 08.4	-0.6
CTI				pmax	pmax		
	comp=Z,14nm,1.2s						
CTI	Castel Tesino	45.18	300	P	P	09 33 08.4	-0.6
CTI				IAmb	IAmb	09 33 16.8	
	comp=Z,14nm,1.2s						
SQTA	Sankt Quirin	45.22	302	eP	P	09 33 12.1	+2.8
	comp=Z,3.4nm,0.5s						
MOTA	Moosalm	45.26	302	eP	P	09 33 10.9	+1.2
	comp=Z,6.7nm,0.8s						
MURB	Monte Urbino	45.27	296	P	P	09 33 08.6	-1.1
TEOL	Teolo	45.33	299	P	P	09 33 10.0	-0.1
RETA	Reutte	45.46	302	eP	P	09 33 13.3	+2.2
	comp=Z,1.8nm,0.5s						
FETA	Feichten	45.58	302	eP	P	09 33 14.0	+1.8
	comp=Z,10nm,2.0s						
MOL	Molde	45.66	324	eP	P	09 33 15.7	+3.3
AKN	Aaknes	45.92	323	eP	P	09 33 18.9	+4.4
SPA0	Spitsbergen Ar	45.98	346	eP	P	09 33 18.4	+3.6
SPITS	Spitsbergen Ar	45.98	346	P	P	09 33 14.3	-0.5
	comp=Z,10nm,0.9s,baz=52,slow=7.5,SNR=1.6						
DAVA	Damuels	46.09	302	eP	P	09 33 17.8	+1.6
	comp=Z,13nm,0.7s						
ODD1	Odda	46.18	320	eP	P	09 33 20.9	+4.3
SENIN	Lac Senin/Sane	48.03	302	P	P	09 33 31.9	+0.5
KEST	Kesra	50.10	288	P	P	09 33 44.5	-2.8
	comp=Z,2.8nm,0.7s,baz=146,slow=3.6,SNR=2.2						
MAJO	Matsushiro	50.60	71	P	P	09 33 50.6	-0.4
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAJO	Matsushiro	50.60	71	P	P	09 33 50.6	-0.4
MAJO				IAmb	IAmb	09 33 58.8	
	comp=Z,10.0nm,0.7s						
MAT	Matsushiro	50.60	71	P	P	09 33 49.2	-1.8
MJAR	Matsushiro Arr	50.60	71	P	P	09 33 51.1	+0.1
	comp=Z,5.2nm,0.7s,baz=288,slow=8.2,SNR=10						
KMBO	Kilima Mbogo	51.47	229	P	P	09 33 58.8	+0.8
	comp=Z,0.8nm,0.3s,baz=75,slow=16,SNR=1.3						
DAG	Danmarks Havn	53.34	343	iP	P	09 34 09.0	-1.7
DAG				IAmb	IAmb	09 34 11.1	
	comp=Z,6.7nm,0.7s						
BILL	Bilibino	56.04	27	iP	P	09 34 28.6	-1.9
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MPSI	Mapaga	57.17	120	P	P	09 34 39.9	+0.7
ESDC	Sonseca Array	58.11	298	P	P	09 34 44.9	-0.8
	comp=Z,2.8nm,0.8s,baz=56,slow=7.0,SNR=10						
ESDC	Sonseca Array	58.11	298	P	P	09 34 45.8	+0.2
MRSI	Marisa	58.47	118	P	P	09 34 51.3	+3.0
NEEM	North Greenlan	59.47	348	iP	P	09 34 54.2	-0.6
NEEM				IAmb	IAmb	09 34 57.2	
	comp=Z,8.6nm,0.8s						
SUMG	Summit	59.76	341	P	P	09 34 56.6	-0.4
SUMG				pmax	pmax		
	comp=Z,74nm,1.9s						
SUMG	Summit	59.76	341	iP	P	09 34 56.0	-1.0
SUMG				IAmb	IAmb	09 35 10.4	
	comp=Z,8.7nm,0.7s						
SUMG	Summit	59.76	341	P	P	09 34 56.6	-0.4
TORD	Torodi Ar. Bea	67.53	269	P	P	09 35 47.5	-1.2
	comp=Z,5.6nm,0.8s,baz=52,slow=5.6,SNR=10.0						
TORD	Torodi Ar. Bea	67.53	269	P	P	09 35 47.8	-0.8
TORD				IAmb	IAmb	09 35 53.5	
	comp=Z,13nm,1.2s						
BMAR	Burnt Mountain	70.59	15	P	P	09 36 07.5	+0.6
H24K	Noodor Dome	71.25	17	IAmb	IAmb	09 36 23.4	
	comp=Z,21nm,1.6s						
INK	Inuvik	71.65	10	P	P	09 36 12.7	-0.6
INK				pmax	pmax		
	comp=Z,12nm,1.0s						
INK	Inuvik	71.65	10	P	P	09 36 12.7	-0.6
INK				IAmb	IAmb	09 36 23.2	
	comp=Z,12nm,0.9s						
MDM	Murphy Dome	71.91	17	IAmb	IAmb	09 36 44.3	
	comp=Z,9.8nm,1.1s						
NEA2	Nenana	72.02	18	IAmb	IAmb	09 38 16.1	
	comp=Z,21nm,1.6s						
TCOL	CIGO, UAF Yank	72.07	17	P	P	09 36 15.1	-0.8
TCOL				IAmb	IAmb	09 36 16.4	
	comp=Z,12nm,0.8s						
COLA	College	72.07	17	⇑eP	P	09 36 16.4	+0.6
COLA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ILAR	Eielson Array	72.38	17	P	P	09 36 16.7	-1.0
ILAR	Eielson Array	72.38	17	P	P	09 36 16.7	-1.0
L27K	Beaver Creek,	74.98	16	P	P	09 36 33.1	+0.1
L27K				IAmb	IAmb	09 36 42.8	
	comp=Z,33nm,1.9s						
DBIC	Dimbokro	76.56	268	P	P	09 36 39.9	-2.9
	comp=Z,3.3nm,1.0s,baz=28,slow=5.7,SNR=2.5						
KIC	Kosan Boka	76.66	268	eP	P	09 36 41.1	-2.3
	comp=Z,16nm,1.0s						
TIC	Toumodi	76.70	268	eP	P	09 36 40.2	-3.4
LIC	Lamto	76.97	268	eP	P	09 36 39.2	-5.9
	comp=Z,24nm,0.9s						
HYT	Haines Junctio	77.89	15	IAmb	IAmb	09 37 03.0	
	comp=Z,7.8nm,0.7s						
YKA	Yellowknife Ar	79.17	4	P	P	09 36 55.5	-1.0
	comp=Z,4.8nm,0.7s,baz=348,slow=5.5,SNR=14						
YKA	Yellowknife Ar	79.17	4	ceP	P	09 36 56.0	-0.5
YKA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SCHQ	Schefferville	80.95	338	P	P	09 37 05.3	-1.0
	comp=Z,3.1nm,0.7s,baz=26,slow=5.1,SNR=3.9						
SCHQ	Schefferville	80.95	338	IAmb	IAmb	09 37 24.4	
	comp=Z,14nm,1.1s						
WRA	Warramunga Arr	81.57	124	P	P	09 37 09.4	-0.6
	comp=Z,1.8nm,0.7s,baz=326,slow=4.8,SNR=11						
WRA				LR	LR	10 18 01.0	
	comp=Z,5µm,21.4s,baz=145,slow=39						
WRA	Warramunga Arr	81.57	124	iP	P	09 37 12.3	+2.3
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ASAR	Alice Springs	83.97	127	P	P	09 37 20.3	-2.2
	comp=Z,0.3nm,0.7s,baz=321,slow=5.1,SNR=2.8						
SADO	Sadowa	93.46	341	LR	LR	10 24 00.5	
	comp=Z,5µm,18.5s,baz=176,slow=38						
VNA2	Neumayer--Watz	122.91	203	PKPdf	PKiKP	09 43 50.7	+3.4
PLCA	Paso Flores	152.13	254	PKPbc	PKPbc	09 44 46.8	-0.7
	comp=Z,1.9nm,1.1s,baz=40,slow=3.6,SNR=2.2						

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*KRNET **07** 09:31:39.8±0.1, 39°.17N×73°.90E, h13^{km}, mb3.8*
*NNC **07** 09:31:47.0±1.8, 39°.34N×73°.66E, h0^{km}, mb4.3, mpv3.9,*
Error ellipse: s-maj=14.1km s-min=7.9km az=169.0
ISC 07 09:31:42.8±1.4**, 39°.25N**±0°.07×**73°.79E**±0°.05**, h10^{km}, n29,**
σ1ˢ.56/47**, 32C-8D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.79	344	⇑eP	Pg	09 31 57.1	-1.0
	baz=40						
SFK				⇑eS	Sb	09 32 09.3	-0.4
	baz=40						
OHH	Osh	1.49	329	⇓iP	Pb	09 32 09.7	-0.9
	baz=28						
OHH				⇓iS	Sg	09 32 31.2	+0.5
	baz=28						
DRK	Karamyk	1.56	279	⇑iP	Pn	09 32 10.6	-0.2
	baz=82						
DRK				⇑iS	Sg	09 32 33.2	+0.3
	baz=82						
SALK	Salom-Alik	1.63	1	⇓eP	Pn	09 32 11.6	-0.1
	baz=58						
SALK				⇓eS	Sg	09 32 34.9	-0.3
	baz=58						
BTK	Batken	2.43	290	⇑eP	Pn	09 32 24.0	+1.4
	baz=91						
BTK				⇑iS	Sb	09 32 56.1	-0.5
	baz=91						
GAR	Garm	2.71	266	⇑iP	Pn	09 32 27.1	+0.6
	baz=68						
GAR				⇑iS	Sb	09 33 02.3	-2.4
	baz=68						
AML	Almayashu	2.88	359	P	Pb	09 32 34.0	-0.5
	SNR=15						
AML	Almayashu	2.88	359	⇑eP	Pn	09 32 29.9	+0.8
	baz=57						
AML				⇑iS	Sb	09 33 06.8	-3.1
	baz=57						
UCH	Uchtor	3.03	10	P	Pb	09 32 36.4	-0.6
	SNR=8.1						
UCH	Uchtor	3.03	10	⇑iP	Pn	09 32 31.7	+0.5
	baz=9.0						
UCH				⇑iS	Sn	09 33 09.9	+2.2
	baz=9.0						
TRKS	Terek-Say	3.04	319	⇑iP	Pn	09 32 31.8	+0.7
	baz=19						
TRKS				⇑iS	Sn	09 33 09.7	+2.0
	baz=19						
MNAS	Manas	3.38	344	⇑iP	Pn	09 32 37.2	+1.5
	baz=43						
MNAS				⇑iS	Sn	09 33 18.8	+2.9
	baz=43						
EKS2	Erkin-Say	3.41	360	P	Pb	09 32 42.4	-1.0
	SNR=5.6						
EKS2	Erkin-Say	3.41	360	⇑eP	Pn	09 32 37.2	+1.1
	baz=59						
EKS2				⇑iS	Sn	09 33 19.0	+2.3
	baz=59						
AAK	Ala-Archa	3.43	9	P	Pb	09 32 42.5	-1.2
	SNR=5.6						
AAK	Ala-Archa	3.43	9	⇑Pn	Pb	09 32 41.7	-1.9
	25nm,0.9s						
AAK				⇓Lg	Lg	09 33 31.5	
	68nm,1.1s						
AAK	Ala-Archa	3.43	9	⇓eP	Pn	09 32 37.3	+0.9
	baz=7.0						
AAK				⇓iS	Sn	09 33 19.2	+2.0
	baz=7.0						
KBK	Karagaybulak	3.52	14	⇑eP	Pn	09 32 38.4	+0.8
	baz=13						
KBK				⇑iS	Sn	09 33 21.1	+1.7
	baz=13						
MRKS	Merke	3.52	353	Pg	Pb	09 32 44.2	-1.0
	24nm,0.5s						
MRKS				Lg	Lg	09 33 27.6	
	48nm,0.4s						
BOOM	Boomskoye usch	3.63	26	⇑eP	Pn	09 32 39.6	+0.4
	baz=24						
BOOM				⇑iS	Sn	09 33 23.3	+1.2
	baz=24						
CHGR	Chuyangaron	3.66	262	⇑iP	Pn	09 32 40.7	+1.2
	baz=64						
CHGR				⇑iS	Sn	09 33 24.9	+2.2
	baz=64						
TKM2	Tokmak 2	3.92	20	⇓Pg	Pg	09 32 57.0	-0.8
	29nm,1.3s						
TKM2				⇑Lg	Lg	09 33 50.8	
	29nm,0.8s						
TKM2	Tokmak 2	3.92	20	⇑iP	Pn	09 32 43.8	+0.6
	baz=18						
TKM2				⇑iS	Sn	09 33 30.5	+1.2
	baz=18						
KST	Kastek	4.13	23	Pg	Pg	09 33 01.8	-0.2
	19nm,0.5s						
KST				Lg	Lg	09 33 57.3	
	38nm,0.8s						
DGS	Degeres	4.26	20	Pg	Pg	09 33 03.5	-0.9
	19nm,0.6s						
DGS				Lg	Lg	09 34 00.6	
	30nm,0.7s						
TNSS	Tian-Shan	4.47	31	Pg	Pg	09 33 08.9	+0.4
	12nm,0.4s						
TNSS				Lg	Lg	09 34 09.4	
	16nm,0.9s						
KK09	Karatay Array	4.60	328	⇑Pn	Pn	09 32 54.1	+1.7
	11nm,0.7s,baz=145,slow=15						
KK09				⇑Pg	Pg	09 33 08.1	-2.7
	22nm,0.8s						
KK09				⇑Sn	Sn	09 33 50.3	+4.6
	38nm,0.8s,baz=144,slow=22						
KK09				⇑Lg	Lg	09 34 09.6	
	9.0nm,0.5s						
MDOK	Medeo	4.62	31	Pg	Pg	09 33 10.8	-0.5
	8.3nm,0.5s						
MDOK				Lg	Lg	09 34 13.4	
	27nm,0.8s						
KUU	Kurty	5.02	22	Pg	Pg	09 33 18.3	-0.6
	6.2nm,0.5s						
KUU				Lg	Lg	09 34 25.7	
	27nm,0.6s						

KRNET 07 09:32:45.1±0.1**, 42°.10N×76°.24E, h20^{km}, mb2.2, 4C-4D,**
Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	Ulahol	0.14	2	P	Pb	09 32 49.0	-0.7
	SNR=20						
ULHL	Ulahol	0.14	2	⇑iP	Pb	09 32 49.1	-0.7
	baz=2.0						
ULHL				⇑iS	Sb	09 32 51.9	-1.1
	baz=2.0						
BOOM	Boomskoye usch	0.45	331	⇓iP	Pb	09 32 54.0	-0.4
	baz=31						
BOOM				⇓iS	Sb	09 33 00.5	-0.2
	baz=31						
KDJ	Kajisay	0.70	87	⇑iP	Pb	09 32 58.6	-0.2
	baz=88						
KDJ				⇑iS	Sb	09 33 08.6	+0.5
	baz=88						
TKM2	Tokmak 2	0.94	330	⇓iP	Pb	09 33 02.7	-0.2
	baz=30						
TKM2				⇓iS	Sb	09 33 15.6	+0.5
	baz=30						

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*IDC **07** 09:36:06.9±5.1, 38°.39N×72°.95E, h0^{km}, mb3.9/2,*
mb1 3.8/5, mb1mx3.4/69, mbtmp3.7/5, ML3.1/3, Error
ellipse: s-maj=83.2km s-min=31.3km az=5.0
*KRNET **07** 09:36:09.8±0.1, 38°.56N×73°.32E, mb4.1*
*NNC **07** 09:36:16.8±2.7, 38°.82N×73°.23E, h0^{km}, mb4.4, mpv4.0,*
Error ellipse: s-maj=19.8km s-min=13.1km az=171.0
ISC 07 09:36:14.3±1.5**, 38°.59N**±0°.09×**73°.27E**±0°.06**, h10^{km}, n30,**
σ1ˢ.73/33**, 15C-10D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.45	308	⇑iP	Pn	09 36 37.9	-2.9
	baz=8.0						
DRK				⇑iS	Sb	09 36 58.5	-1.6
	baz=8.0						
GAR	Garm	2.34	281	⇓iP	Pn	09 36 52.2	-0.7
	baz=81						
GAR				⇓iS	Sn	09 37 23.1	+1.3
	baz=81						
BTK	Batken	2.40	308	⇑iP	Pn	09 36 52.8	-0.9
	baz=8.0						
BTK				⇑iS	Sn	09 37 24.4	+1.2
	baz=8.0						
CHGR	Chuyangaron	3.22	273	⇑iP	Pn	09 37 04.3	-0.7
	baz=73						
CHGR				⇑iS	Sn	09 37 44.0	+0.6
	baz=73						
AML	Almayashu	3.56	5	⇓iP	Pn	09 37 08.8	-1.1
	baz=5.0						
AML				⇓iS	Sn	09 37 51.8	-0.3
	baz=5.0						
UCH	Uchtor	3.76	14	⇑eP	Pn	09 37 11.6	-1.1
	baz=14						
UCH				⇑iS	Sn	09 37 56.6	-0.6
	baz=14						
MNAS	Manas	3.94	352	⇓eP	Pn	09 37 14.1	-0.8
	baz=51						
MNAS				⇓eS	Sn	09 38 01.1	-0.2
	baz=51						
AAK	Ala-Archa	4.15	13	⇓Pn	Pn	09 37 20.0	+2.2
	52nm,0.9s						
AAK				⇑Lg	Lg	09 38 19.4	
	63nm,0.7s						
MRKS	Merke	4.15	360	Pg	Pb	09 37 26.9	-0.6
	21nm,0.5s						
MRKS				Lg	Lg	09 38 22.1	
	55nm,0.4s						
KBK	Karagaybulak	4.26	17	⇑eP	Pn	09 37 18.4	-1.0
	baz=16						
KBK				⇑iS	Sn	09 38 08.3	-0.9
	baz=16						
ULHL	Ulahol	4.30	31	⇑eP	Pn	09 37 18.7	-1.3
	baz=30						
ULHL				⇑iS	Sn	09 38 09.1	-1.2
	baz=30						
TKM2	Tokmak 2	4.68	21	⇑Pg	Pb	09 37 41.6	+5.1
	14nm,0.6s						
TKM2				⇓Lg	Lg	09 38 39.5	
	21nm,0.5s						
KST	Kastek	4.90	24	Pg	Pb	09 37 41.6	+1.4
	12nm,0.6s						
KST				Lg	Lg	09 38 47.3	
	37nm,0.6s						
KK09	Karatay Array	4.99	336	⇓Pn	Pn	09 37 27.7	-1.6
	20nm,0.7s,baz=146,slow=13						
KK09				⇑Sn	Sn	09 38 27.5	+0.4
	41nm,0.8s,baz=150,slow=24						
KK09				⇓Lg	Lg	09 38 48.9	
	24nm,0.6s						
DGS	Degeres	5.02	21	Pg	Pb	09 37 44.7	+2.4
	18nm,0.5s						
DGS				Lg	Lg	09 38 52.5	
	40nm,0.7s						
IZV	Izvestkoviy	5.12	29	Pg	Pb	09 37 45.4	+1.5
	13nm,0.5s						

IZV				Lg	Lg	09 38 53.9	
	58nm,0.7s						
TNSS	**Tian-Shan**	**5.25**	**31**	Pg	**Pb**	**09 37 48.8**	**+2.5**
	12nm,0.6s						
TNSS				Lg	Lg	09 38 59.8	
	17nm,0.7s						
MDOK	**Medeo**	**5.39**	**31**	Pg	Pb	09 37 53.8	+5.1
	15nm,0.7s						
MDOK				Lg	Lg	09 39 04.1	
	41nm,0.8s						
MDOK	**Medeo**	**5.39**	**31**	Pg	**Pb**	**09 37 51.7**	**+3.0**
	11nm,0.4s						
MDOK				Lg	Lg	09 39 04.0	
	23nm,0.5s						
KRBS	**Karabastau**	**5.42**	**19**	Pg	**Pb**	**09 37 51.2**	**+2.2**
	7.6nm,0.5s						
KRBS				Lg	Lg	09 39 03.2	
	32nm,0.6s						
KOTS	**Kotyrbulak**	**5.48**	**31**	Pg	**Pb**	**09 37 52.6**	**+2.5**
	14nm,0.7s						
KOTS				Lg	Lg	09 39 06.3	
	62nm,0.7s						
KTBS	**Karatobe**	**5.73**	**26**	Pg	**Pb**	**09 37 56.5**	**+2.2**
	8.0nm,0.7s						
KTBS				Lg	Lg	09 39 12.6	
	52nm,0.6s						
MKAR	**Makanchi Array**	**10.55**	**36**	Pn	**Pn**	**09 38 44.9**	**-0.6**
	0.1nm,0.3s,baz=228,slow=14,SNR=2.1						
WMQ	**Urumqi**	**12.05**	**60**	*e*P	Pn	09 39 04.4	-1.7
WMQ				sP		09 39 13.1	
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s						
KURBB	**Kurchatov Arra**	**12.60**	**16**	Lg	Lg	09 42 50.4	
	comp=Z,0.0nm,0.3s,baz=189,slow=28,SNR=2.3						
BVAR	**Borovoye Array**	**14.58**	**353**	Pn	**Pn**	**09 39 43.5**	**+3.0**
	comp=Z,2.8nm,0.3s,baz=189,slow=16,SNR=29						
AKTO	**Aktyubinsk**	**16.04**	**323**	Pn	Pn	09 39 52.7	-7.1
	comp=Z,0.1nm,0.3s,baz=130,slow=12,SNR=2.1						
ZALV	**Zalesovo Beam**	**17.28**	**23**	P	**Pn**	**09 40 12.2**	**-3.2**
	comp=Z,0.4nm,0.3s,baz=203,slow=14,SNR=2.8						
SONM	**Songino Array**	**25.68**	**58**	P	**P**	**09 41 42.2**	**-2.3**
	comp=Z,0.7nm,0.7s,baz=262,slow=8.6,SNR=2.6						
ARCES	**ARCESS Array B**	**39.94**	**336**	P	P	09 43 41.6	-6.7
	comp=Z,2.2nm,0.7s,baz=118,slow=9.3,SNR=4.0						

JMA 07 09:41:30.9±0.1, 28°.31N×141°.23E, h113^{km}, M3.7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.48**	**145**	P	Pn	09 41 58.0	+0.4
CBIJ				*e*S	Sn	09 42 18.3	+0.4
JHH2	**Haha-jima-NKT2**	**1.87**	**153**	P	Pn	09 42 02.7	+0.3
JHH2				*e*S	Sn	09 42 26.8	+0.4
JOD2	**Odawara 2**	**7.17**	**346**	P	Pn	09 43 13.9	+0.8
JHO	**Hitachi**	**8.30**	**356**	P	Pn	09 43 27.8	-0.5

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*IDC **07** 09:43:01.7±0.5, 2°.97N×127°.81E, h97^{km}±4^{km}, mb4.1/28, mb1 4.2/31, mb1mx3.9/60, mbtmp4.5/31, Error ellipse: s-maj=14.5km s-min=7.9km az=82.0*

*BJI **07** 09:43:02.3±0.0, 2°.70N×128°.15E, h138^{km}, mB5.5/6, mb4.6/35*

*NEIC **07** 09:43:04.2±1.6, 2°.94N±0°.04×127°.85E±0°.09, h118^{km}±7^{km}, mb4.8/32, Error ellipse: s-maj=13.5km s-min=4.6km az=71.0*

*DJA **07** 09:43:04.0±0.3, 3°N±3°×12°8E±°, h107^{km}±3^{km}, M5.3/53, mB5.7/12, mb5.2/53, MLv5.4/18, Mw(mB)5.2/12*

ISC 07 09:43:02.3±0.3, 2°.97N±0°.04×127°.83E±0°.05, h100^{km}, n235, σ1^{s}.52/247, mb4.6/51, 9C-4D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.23**	**192**	P	**Pn**	**09 43 41.4**	**+3.5**
TNTI	**Ternate**	**2.23**	**192**		**Pn**	**09 43 40.8**	**+2.9**
TNTI	**Ternate**	**2.23**	**192**	P	**Pn**	**09 43 42.5**	**+4.6**
SGSI	**Sangihe**	**2.41**	**287**	P	**Pn**	**09 43 41.5**	**+1.3**
LBMI	**Labuha**	**3.60**	**185**	P	**Pn**	**09 43 59.5**	**+3.4**
DDMP	**Don Marcelino,**	**3.77**	**326**	⇓*i*P	**Pn**	**09 43 58.1**	**-0.2**
GSPH	**General Santos**	**4.23**	**317**	⇑*i*P	**Pn**	**09 44 04.5**	**-0.2**
GSPH				*i* S	**Sn**	**09 44 52.6**	**-0.5**
MATI	**Mati**	**4.25**	**338**	⇑*e*P	**Pn**	**09 44 07.0**	**+2.0**
KMSI	**Cibinong**	**4.53**	**238**	P	**Pn**	**09 44 11.4**	**+2.8**
DAV	**Davao City (W)**	**4.65**	**331**	P	**Pn**	**09 44 10.7**	**+0.3**
	71nm,0.3s,baz=197,slow=2.3,SNR=7.2						
DAV				S	**Sn**	**09 45 03.7**	**+0.5**
	58nm,0.3s,baz=354,slow=10,SNR=3.7						
DAV	**Davao City (W)**	**4.65**	**331**		**Pn**	**09 44 13.3**	**+2.9**
DMPH	**Davao City--Mi**	**4.70**	**331**	⇑*e*P	**Pn**	**09 44 11.8**	**+0.8**
DMPH				*e*S	**Sn**	**09 45 13.3**	**+8.9**
SWI	**Sorong**	**5.12**	**138**	P	**Pn**	**09 44 19.2**	**+2.5**
	3.0nm16µm604nm,0.8s						
SIJI	**Sorong**	**5.13**	**138**	P	**Pn**	**09 44 19.2**	**+2.3**
	216nm,0.3s,baz=158,slow=23,SNR=394						
SIJI				S	**Sn**	**09 45 14.9**	**+0.1**
	97nm,0.3s,baz=326,slow=15,SNR=17						
SANI	**Sanana**	**5.32**	**200**	P	**Pn**	**09 44 20.7**	**+1.3**
	5.2nm34µm862nm,0.8s						
SANI	**Sanana**	**5.32**	**200**	P	**Pn**	**09 44 20.7**	**+1.3**
GTOI	**Gorontalo**	**5.35**	**244**	P	**Pn**	**09 44 23.2**	**+3.4**
	1.2nm2µm209nm,0.6s						
BUKP	**Musuan**	**5.60**	**331**	⇑*i*P	**Pn**	**09 44 24.2**	**+0.9**
BUKP				*i* S	**Sn**	**09 45 26.6**	**+0.2**
MSAI	**Masohi**	**6.37**	**170**	P	**Pn**	**09 44 36.4**	**+2.7**
	0.2nm47nm,0.7s						
MRSI	**Marisa**	**6.39**	**247**	P	**Pn**	**09 44 37.2**	**+3.3**
	3.0nm7µm505nm,0.5s						
PAGZ	**Pagadian**	**6.57**	**318**	⇓*i*P	**Pn**	**09 44 35.9**	**-0.4**
AAI	**Ambon**	**6.62**	**177**	P	**Pn**	**09 44 40.0**	**+2.9**
	0.9nm233nm,0.9s						
GLSP	**General Luna,**	**6.98**	**346**	⇓*i*P	**Pn**	**09 44 42.4**	**+0.4**
APSI	**Ampana**	**7.28**	**238**	P	**Pn**	**09 44 48.4**	**+2.3**
	2.1nm4µm315nm,1.0s						
TOLI2	**Tolitoli**	**7.28**	**255**	Pn	**Pn**	**09 44 47.6**	**+1.5**
TOLI2	**Tolitoli**	**7.28**	**255**	P	**Pn**	**09 44 48.3**	**+2.2**
FAKI	**Fak Fak**	**7.33**	**143**	P	**Pn**	**09 44 49.6**	**+2.9**
	1.1nm322nm,0.7s						
FAKI	**Fak Fak**	**7.33**	**143**	Pn	**Pn**	**09 44 49.3**	**+2.6**
FAKI	**Fak Fak**	**7.33**	**143**	P	**Pn**	**09 44 50.0**	**+3.3**
MPSI	**Mapaga**	**8.35**	**252**	P	**Pn**	**09 45 03.1**	**+2.5**
	76nm,0.6s						
CNOP	**Candoni, Negro**	**8.55**	**323**	⇑*e*P	**Pn**	**09 45 03.0**	**-0.3**
MYLDM	**Lahad Datu**	**9.56**	**284**	Pn	**Pn**	**09 45 19.9**	**+2.7**
SRPI	**Serui, Papua**	**9.68**	**120**	P	Pn	09 45 23.5	+4.7
	172nm,0.7s						
RCP	**Roxas**	**9.91**	**330**	⇑*e*P	**Pn**	**09 45 21.7**	**-0.2**
TTSI	**Tana Toraja**	**9.99**	**233**	P	**Pn**	**09 45 23.7**	**+0.7**
	141nm,0.6s						
SPSI	**Sidrap Palu**	**10.60**	**230**	P	**Pn**	**09 45 32.0**	**+0.7**
	263nm,0.7s						
BNSI	**Bone**	**10.64**	**227**	P	**Pn**	**09 45 32.3**	**+0.5**
	98nm,0.7s						
SMKI	**Samarinda**	**11.15**	**252**	P	**Pn**	**09 45 40.7**	**+2.0**
	23µm682nm,0.9s						
BKSI	**Bulukumba**	**11.28**	**223**	P	**Pn**	**09 45 41.5**	**+1.1**
	145nm,0.6s						
KAPI	**Kappang**	**11.32**	**226**	P	**Pn**	**09 45 41.5**	**+0.6**
	7.2nm,0.3s,baz=51,slow=8.6,SNR=17						
KAPI				S	**Sn**	**09 47 43.3**	**-2.2**
	8.9nm,0.3s,baz=172,slow=19,SNR=10						
KAPI	**Kappang**	**11.32**	**226**	P	**Pn**	**09 45 43.0**	**+2.0**
SAUI	**Saumlaki**	**11.42**	**162**	P	**Pn**	**09 45 42.8**	**+0.5**
BSSI	**Bau Bau, Buton**	**11.65**	**219**	P	**Pn**	**09 45 46.3**	**+0.9**
	3µm212nm,0.9s						
BKB	**Balikpapan**	**11.71**	**249**	P	**Pn**	**09 45 47.8**	**+1.5**
SMPI	**Sarmi**	**11.94**	**114**	P	**Pn**	**09 45 51.3**	**+2.0**
	33nm,0.8s						
KKM	**Kota Kinabalu**	**11.98**	**285**	Pn	**Pn**	**09 45 50.9**	**+1.0**
KKM	**Kota Kinabalu**	**11.98**	**285**	P	**Pn**	**09 45 52.0**	**+2.1**
LQP	**Lukban**	**12.70**	**331**	⇑*e*P	**Pn**	**09 45 59.9**	**+0.4**
MMRI	**Maumere**	**12.81**	**206**	P	**P**	**09 46 11.5**	**+3.7**
MMRI	**Maumere**	**12.81**	**206**		**Pn**	**09 46 00.9**	**+0.1**
LUBP	**Lubang**	**13.06**	**325**	⇑*e*P	**Pn**	**09 46 04.5**	**+0.4**
SOEI	**Soe**	**13.13**	**196**	P	**P**	**09 46 08.8**	**-2.7**
	144nm,0.6s						
SOEI	**Soe**	**13.13**	**196**		**P**	**09 46 09.4**	**-2.1**
SOEI	**Soe**	**13.13**	**196**	P	**Pn**	**09 46 07.8**	**+2.7**
EDFI	**Ende, Flores**	**13.15**	**208**	P	**Pn**	**09 46 06.7**	**+1.3**
	79nm,0.9s						
KBKI	**Kotabaru**	**13.22**	**242**	P	**Pn**	**09 46 06.5**	**+0.3**
	2µm114nm,0.8s						
MTKI	**Muara Teweh, K**	**13.50**	**253**	P	**P**	**09 46 13.1**	**-2.5**
	35nm,0.5s						
BATI	**Baumata**	**13.73**	**198**	P	**Pn**	**09 46 13.1**	**+0.2**
	5.3nm,0.3s,baz=9.9,slow=3.0,SNR=3.4						
BATI	**Baumata**	**13.73**	**198**	P	**Pn**	**09 46 15.1**	**+2.2**
	88nm,0.5s						
JAY	**Jayapura**	**13.97**	**113**	P	**P**	**09 46 19.1**	**-1.7**
	5.3nm,0.3s,baz=279,slow=7.0,SNR=23						
JAY	**Jayapura**	**13.97**	**113**	P	**P**	**09 46 19.3**	**-1.5**
	80nm,0.9s						
BBKI	**Banjar Baru**	**14.47**	**244**	P	**P**	**09 46 24.9**	**-1.4**
	21nm,0.7s						
BASI	**Baing, Sumba**	**14.96**	**209**	P	**P**	**09 46 32.3**	**+0.6**
	3µm202nm,0.8s						
WBSI	**Waikabubak, Su**	**15.09**	**214**	P	**P**	**09 46 31.7**	**-1.5**
	120nm,1.0s						
PLAI	**Plampang**	**15.42**	**220**	P	**P**	**09 46 37.0**	**+0.1**
	261nm,0.8s						
PLAI	**Plampang**	**15.42**	**220**	P	**P**	**09 46 36.3**	**-0.6**
DRS	**Darwin Rock St**	**15.60**	**169**	P	**P**	**09 46 38.4**	**-0.4**
SBUM	**Sibu**	**15.60**	**268**	P	**Pn**	**09 46 37.7**	**+0.9**
TWSI	**Taliwang, Sumb**	**15.95**	**223**	P	**P**	**09 46 43.5**	**+0.8**
	90nm,1.0s						
MTN	**Manton Dam**	**16.05**	**168**	P	**Pn**	**09 46 42.5**	**+0.2**
	baz=16,SNR=41						
MTN	**Manton Dam**	**16.05**	**168**		**Pn**	**09 46 42.0**	**-0.3**
MTN				IAmb	IAmb	09 46 49.7	
	comp=Z,45nm,0.7s						
MTN	**Manton Dam**	**16.05**	**168**	P	**P**	**09 46 43.4**	**-0.4**
APYP	**Conner**	**16.15**	**337**	⇑*e*P	**P**	**09 46 47.3**	**+2.4**
KDU	**Kakadu**	**16.22**	**164**	P	**Pn**	**09 46 44.8**	**+0.3**
	baz=16,SNR=46						
KDU	**Kakadu**	**16.22**	**164**	P	**P**	**09 46 45.6**	**-0.1**
SRBI	**Singaraja**	**16.70**	**229**	P	**P**	**09 46 52.6**	**+1.5**
	comp=Z,141nm,0.9s						
KMMI	**Kalianget**	**17.05**	**234**	P	**P**	**09 46 57.9**	**+3.1**
	comp=Z,3µmcomp=Z,199nm,1.1s						
IGBI	**Denpasar**	**17.24**	**227**	P	**P**	**09 46 59.9**	**+3.0**
	comp=Z,115nm,0.6s						
ABJI	**Asem Bagus**	**17.27**	**232**	P	**Pn**	**09 47 01.6**	**+4.2**
	comp=Z,76nm,1.0s						
KSM	**Kuching**	**17.57**	**266**	P	**P**	**09 46 59.8**	**-0.9**
KSM				IAmb	IAmb	09 47 05.0	
	comp=Z,26nm,1.0s						
BLJI	**Banyuglugur**	**17.75**	**233**	P	**Pn**	**09 47 05.6**	**+2.4**
	comp=Z,113nm,0.9s						
JAGI	**Jajag, Banyuwa**	**17.75**	**230**	P	**Pn**	**09 47 05.0**	**+1.8**
	comp=Z,153nm,0.8s						
JAGI	**Jajag, Banyuwa**	**17.75**	**230**		**P**	**09 47 01.4**	**-1.3**
JAGI	**Jajag, Banyuwa**	**17.75**	**230**	P	**Pn**	**09 47 05.1**	**+1.9**
GMJI	**Gumukmas**	**18.18**	**232**	P	**Pn**	**09 47 10.6**	**+2.2**
	comp=Z,141nm,0.9s						
KNRA	**Kununurra**	**18.55**	**177**	P	**Pn**	**09 47 12.2**	**-0.5**
	baz=19,SNR=102						
KNRA	**Kununurra**	**18.55**	**177**	P	**P**	**09 47 10.7**	**-0.6**
KNRA	**Kununurra**	**18.55**	**177**	P	**Pn**	**09 47 12.5**	**-0.2**
PCJI	**Pacitan**	**19.97**	**236**	P	**P**	**09 47 27.7**	**+0.8**
	comp=Z,244nm,1.1s						
UGM	**Wanagama**	**20.37**	**238**	P	**P**	**09 47 32.5**	**+1.2**
	comp=Z,86nm,1.6s						
UGM	**Wanagama**	**20.37**	**238**	P	**P**	**09 47 32.4**	**+1.2**
FITZ	**Fitzroy Crossi**	**21.05**	**186**	P	**P**	**09 47 37.7**	**-0.7**
	comp=Z,17nm,0.4s,baz=1.2,slow=6.2						
FITZ	**Fitzroy Crossi**	**21.05**	**186**	P	**P**	**09 47 37.5**	**-0.8**
	baz=21						
KPJI	**Karang Pucung**	**21.46**	**241**	P	**P**	**09 47 43.6**	**+0.7**
CMJI	**Cimerak**	**22.09**	**241**	P	**P**	**09 47 48.8**	**-0.8**
	comp=Z,77nm,0.9s						
LEM	**Lembang**	**22.40**	**244**	P	**P**	**09 47 53.2**	**+0.2**
	comp=Z,45nm,0.6s,baz=108,slow=12,SNR=10.0						
LEM	**Lembang**	**22.40**	**244**	P	**P**	**09 47 53.8**	**+0.8**
	comp=Z,49nm,1.1s						
YHNB	**Yeheng**	**22.46**	**344**	P	**P**	**09 47 55.7**	**+2.4**
COEN	**Coen**	**22.68**	**138**	P	**P**	**09 47 54.9**	**-0.8**
	baz=23						
COEN	**Coen**	**22.68**	**138**	P	**P**	**09 47 54.2**	**-1.4**
COEN	**Coen**	**22.68**	**138**	P	**P**	**09 47 56.3**	**+0.7**
CNJI	**Cibinong**	**23.05**	**244**	P	**P**	**09 47 58.5**	**-0.8**
	comp=Z,206nm,0.9s						
WB0	**Warramunga Arr**	**23.50**	**164**	P	**P**	**09 48 03.4**	**0.0**
WRAB	**Tennant Creek**	**23.64**	**165**	P	**P**	**09 48 04.8**	**+0.1**
WRAB	**Tennant Creek**	**23.64**	**165**	P	**P**	**09 48 05.0**	**+0.3**
WRA	**Warramunga Arr**	**23.65**	**165**	P	**P**	**09 48 04.6**	**-0.2**
	comp=Z,59nm,0.8s,baz=344,slow=10,SNR=225						
WRA				S	**S**	**09 52 11.2**	**-1.0**
	comp=Z,2.0nm,0.9s,baz=352,slow=16,SNR=3.2						
WRA				ScP	**ScP**	**09 55 13.8**	**-2.4**
	comp=Z,1.2nm,1.0s,baz=350,slow=3.4,SNR=3.5						
WRA	**Warramunga Arr**	**23.65**	**165**	P	**P**	**09 48 03.7**	**-1.1**
WB2	**Warramunga Arr**	**23.65**	**165**	P	**P**	**09 48 04.3**	**-0.4**
	baz=24						
WB2	**Warramunga Arr**	**23.65**	**165**	P	**P**	**09 48 04.8**	**0.0**
WR0	**Warramunga Arr**	**23.72**	**164**	P	**P**	**09 48 05.7**	**+0.3**
WR0				IAmb	IAmb	09 48 07.5	
	comp=Z,60nm,0.9s						
CGJI	**Cibinong**	**24.07**	**247**	P	**P**	**09 48 08.2**	**-0.4**
	comp=Z,118nm,1.0s						
KLSI		**24.30**	**252**	P	**P**	**09 48 09.9**	**-0.9**
	comp=Z,14nm,0.9s						
MDSI	**Maura Dua**	**24.77**	**253**	P	**P**	**09 48 15.3**	**+0.3**
	comp=Z,26nm,1.1s						
KASI	**Kota Agung**	**24.79**	**250**	P	**P**	**09 48 16.0**	**+0.8**
MBWA	**Marble Bar**	**25.26**	**198**	P	**P**	**09 48 20.4**	**+1.1**
PSA00	**Pilbara Seismi**	**25.61**	**197**	P	**P**	**09 48 23.0**	**+0.4**
PSA00	**Pilbara Seismi**	**25.61**	**197**	P	**P**	**09 48 22.1**	**-0.5**
PSA00				IAmb	IAmb	09 48 24.6	
	comp=Z,50nm,1.2s						
PSA00	**Pilbara Seismi**	**25.61**	**197**	P	**P**	**09 48 23.7**	**+1.2**
QIS	**Mount Isa**	**26.08**	**154**	P	**P**	**09 48 27.3**	**+0.5**
	baz=26,SNR=30						
QIS	**Mount Isa**	**26.08**	**154**	P	**P**	**09 48 28.2**	**+1.4**
MTSU	**Mount Surprise**	**26.53**	**143**	P	**P**	**09 48 31.5**	**+0.6**
	baz=27,SNR=9.6						
AS31	**Alice Springs**	**27.13**	**168**	P	**P**	**09 48 35.8**	**-0.4**
ASAR	**Alice Springs**	**27.13**	**168**	P	**P**	**09 48 36.0**	**-0.1**
	comp=Z,4.4nm,0.6s,baz=348,slow=7.3,SNR=86						
ASAR				pP	**pP**	**09 48 59.1**	**+0.8**
	comp=Z,7.2nm,0.6s,baz=336,slow=9.9,SNR=6.0						
ASAR				PcP	**PcP**	**09 51 54.5**	**-0.1**
	comp=Z,2.7nm,0.7s,baz=14,slow=1.9,SNR=4.6						
ASAR				S	**S**	**09 53 05.3**	**-2.1**
	comp=Z,1.2nm,0.9s,baz=347,slow=17,SNR=3.3						
ASAR				ScP	**ScP**	**09 55 24.3**	**-1.8**
	comp=Z,1.2nm,0.9s,baz=331,slow=3.4,SNR=5.2						
ASAR	**Alice Springs**	**27.13**	**168**	P	**P**	**09 48 35.3**	**-0.9**
ASPA	**Alice Springs**	**27.13**	**168**	P	**P**	**09 48 36.4**	**+0.2**
	baz=27						
WRKA	**Warakurna**	**27.84**	**179**	P	**P**	**09 48 42.7**	**+0.2**
	baz=28,SNR=49						
WRKA	**Warakurna**	**27.84**	**179**	P	**P**	**09 48 43.2**	**+0.6**
GIRL	**Giralia**	**28.71**	**207**	P	**P**	**09 48 51.2**	**+0.9**
	baz=29,SNR=5.0						
GIRL	**Giralia**	**28.71**	**207**	P	**P**	**09 48 51.6**	**+1.3**
PSI	**Prapat**	**28.87**	**270**	P	**P**	**09 48 52.0**	**+0.1**
	comp=Z,6.7nm,0.8s,baz=123,slow=6.1,SNR=6.8						
RPSI	**Rantau Prapat**	**28.87**	**270**	P	**P**	**09 48 52.0**	**+0.2**
CTA	**Charters Tower**	**29.19**	**142**	P	**P**	**09 48 54.8**	**+0.2**
	comp=Z,8.2nm,0.8s,baz=241,slow=5.8,SNR=1.4						
JNU	**Nakatsue**	**30.13**	**5**	P	**P**	**09 49 02.6**	**-0.2**
	comp=Z,20nm,1.0s,baz=245,slow=0.9,SNR=3.7						
JNU	**Nakatsue**	**30.13**	**5**	IAmb	IAmb	09 49 11.5	
	comp=Z,43nm,1.4s						
NJ2	**Nanjing**	**30.14**	**345**	*e*P	**P**	**09 49 05.2**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
WHN	**Wuhan**	**30.25**	**336**	⇓P	**P**	**09 49 06.0**	**+2.2**
MEEK	**Meekatharra**	**30.75**	**196**	P	**P**	**09 49 08.2**	**-0.1**
	baz=31,SNR=48						
MEEK	**Meekatharra**	**30.75**	**196**	P	**P**	**09 49 08.8**	**+0.5**
OOD	**Oodnadatta**	**31.51**	**167**	P	**P**	**09 49 15.3**	**+0.4**
CMAR	**Chiang Mai Arr**	**32.20**	**301**	P	**P**	**09 49 20.4**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=110,slow=7.8,SNR=4.3						
CMAR				PcP	**PcP**	**09 52 08.0**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=134,slow=1.5,SNR=4.5						
INKA	**Innaminka**	**32.97**	**159**	P	**P**	**09 49 28.4**	**+0.7**
QLP	**Quilpie**	**33.38**	**153**	P	**P**	**09 49 31.3**	**-0.1**
	baz=34,SNR=7.0						
QLP	**Quilpie**	**33.38**	**153**	P	**P**	**09 49 31.7**	**+0.4**
FORT	**Forrest**	**33.56**	**180**	P	**P**	**09 49 32.9**	**+0.1**
	baz=34,SNR=29						
FORT	**Forrest**	**33.56**	**180**	P	**P**	**09 49 33.4**	**+0.6**
MULG	**Mulgathing**	**33.59**	**170**	P	**P**	**09 49 33.6**	**+0.5**
MORW	**Morawa**	**33.80**	**199**	P	**P**	**09 49 35.6**	**+0.6**
	baz=34,SNR=5.1						
MORW	**Morawa**	**33.80**	**199**	P	**P**	**09 49 35.3**	**+0.3**
KSRS	**Korea Array**	**34.32**	**0**	P	**P**	**09 49 39.2**	**0.0**
	comp=Z,1.7nm,0.5s,baz=178,slow=9.8,SNR=8.2						
KSRS				pP	**pP**	**09 49 60.0**	**-1.5**
	comp=Z,3.0nm,0.7s,baz=181,slow=10.0,SNR=5.2						
LCRK	**Leigh Creek**	**34.68**	**164**	P	**P**	**09 49 43.2**	**+0.7**
MJAR	**Matsushiro Arr**	**34.75**	**15**	P	**P**	**09 49 43.3**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=190,slow=8.9,SNR=2.9						
BLDU	**Ballidu**	**35.04**	**197**	P	**P**	**09 49 46.0**	**+0.4**
	baz=35,SNR=21						
BLDU	**Ballidu**	**35.04**	**197**	P	**P**	**09 49 45.5**	**-0.1**
RMQ	**Roma**	**35.59**	**147**	P	**P**	**09 49 50.9**	**+0.5**
XAN	**Xi'an**	**35.59**	**332**	P	**P**	**09 49 50.8**	**+0.4**
XAN				pmax	pmax		
	comp=Z,26nm,0.9s						
KLBR	**Kellerberrin**	**35.68**	**195**	P	**P**	**09 49 51.5**	**+0.4**
	baz=36,SNR=14						
KLBR	**Kellerberrin**	**35.68**	**195**	P	**P**	**09 49 51.5**	**+0.4**
EIDS	**Eidsvold**	**36.08**	**143**	P	**P**	**09 49 54.0**	**-0.6**
	baz=36,SNR=4.2						
BBOO	**Buckleboo**	**36.43**	**168**	P	**P**	**09 49 57.5**	**+0.1**
	baz=37,SNR=12						
BBOO	**Buckleboo**	**36.43**	**168**	P	**P**	**09 49 57.0**	**-0.5**
BBOO				IAmb	IAmb	09 49 58.9	
	comp=Z,10nm,0.6s						
BBOO	**Buckleboo**	**36.43**	**168**	P	**P**	**09 49 57.7**	**+0.3**
MUN	**Mundaring**	**36.47**	**197**	P	**P**	**09 49 57.7**	**0.0**
	baz=37,SNR=7.4						
MUN	**Mundaring**	**36.47**	**197**	P	**P**	**09 49 58.1**	**+0.3**
STKA	**Stephens Creek**	**37.04**	**160**	P	**P**	**09 50 03.0**	**+0.4**
	comp=Z,45nm,0.7s,baz=335,slow=8.6,SNR=82						
STKA	**Stephens Creek**	**37.04**	**160**	P	**P**	**09 50 03.3**	**+0.7**
	baz=37,SNR=65						
STKA	**Stephens Creek**	**37.04**	**160**	P	**P**	**09 50 02.5**	**-0.1**
STKA				IAmb	IAmb	09 50 04.6	
	comp=Z,8.9nm,0.7s						
STKA	**Stephens Creek**	**37.04**	**160**	P	**P**	**09 50 03.3**	**+0.7**
NWAO	**Narrogin (SRO)**	**37.08**	**195**	P	**P**	**09 50 03.7**	**+0.7**
HTT	**Hallett**	**37.69**	**165**	P	**P**	**09 50 09.6**	**+1.4**
	baz=38,SNR=8.2						
HTT	**Hallett**	**37.69**	**165**	P	**P**	**09 50 09.6**	**+1.4**
CMSA	**Cobar Meteorol**	**38.29**	**155**	P	**P**	**09 50 13.9**	**+0.7**
	baz=38,SNR=7.2						
CMSA	**Cobar Meteorol**	**38.29**	**155**	P	**P**	**09 50 14.4**	**+1.2**
LZH	**Lanzhou**	**39.72**	**329**	*e*P	**P**	**09 50 27.4**	**+2.2**
LZH				pP	pwP	09 50 53.2	+1.8
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
ARMA	**Armidale**	**40.23**	**147**	P	**P**	**09 50 30.5**	**+1.0**
	baz=40,SNR=20						
ARMA	**Armidale**	**40.23**	**147**	P	**P**	**09 50 30.2**	**+0.7**
ARMA				IAmb	IAmb	09 50 31.8	
	comp=Z,36nm,1.2s						
ARMA	**Armidale**	**40.23**	**147**	P	**P**	**09 50 30.5**	**+1.0**
HHC	**Hu-ho-hao-te**	**40.47**	**341**	*e*P	**P**	**09 50 31.6**	**+0.3**
HHC				S	**S**	**09 56 28.8**	**-3.9**
HHC				sS	sS	09 57 30.8	+20
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**41.04**	**65**	T	T	10 34 14.1	
	baz=253,slow=74						
H11S1	**WAKE ISLAND Hy**	**41.05**	**65**	T	T	10 34 09.7	
	baz=253						
H11S2	**WAKE ISLAND Hy**	**41.05**	**65**	T	T	10 34 10.5	
	baz=253,slow=74						
SHL	**Shillong**	**41.21**	**306**	P	**P**	**09 50 38.1**	**+0.3**
SHL				IAmb	IAmb	09 50 53.6	
	comp=Z,13nm,0.5s						
USRK	**Ussuriysk Ar.**	**41.22**	**5**	P	**P**	**09 50 38.1**	**+0.8**
	comp=Z,1.8nm,0.5s,baz=168,slow=9.1,SNR=4.7						
USRK				pP	**pP**	**09 51 00.0**	**+0.2**
	comp=Z,3.4nm,0.7s,baz=196,slow=10,SNR=4.0						
MDJ	**Mudanjiang**	**41.50**	**2**	P	**P**	**09 50 41.1**	**+1.5**
MDJ				S	**S**	**09 56 49.8**	**+2.0**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,2µm,11.4s						
MDJ				LR	LR		
	comp=Z,7µm,16.9s						
MDJ				LR	LR		
	comp=Z,2µm,16.4s						
MDJ				LR	LR		
	comp=Z,5µm,22.2s						
H11N1	**WAKE ISLAND Hy**	**41.60**	**63**	T	T	10 34 57.8	
	baz=250,slow=75						
H11N2	**WAKE ISLAND Hy**	**41.61**	**63**	T	T	10 34 57.1	
	baz=250						
H11N3	**WAKE ISLAND Hy**	**41.62**	**63**	T	T	10 35 02.1	
	baz=250,slow=75						
ARPS	**Mount Arapiles**	**41.63**	**163**	P	**P**	**09 50 42.2**	**+1.4**
	baz=42,SNR=9.6						
ARPS	**Mount Arapiles**	**41.63**	**163**	P	**P**	**09 50 42.5**	**+1.7**
CAN	**Canberra**	**42.95**	**154**	P	**P**	**09 50 51.5**	**0.0**
ASAJ	**Asahikawa**	**43.01**	**16**	P	**P**	**09 50 51.9**	**+0.1**
	comp=Z,3.7nm,0.6s,baz=186,slow=9.2,SNR=1.5						
TOO	**Toolangi**	**43.54**	**160**	P	**P**	**09 50 56.6**	**+0.3**
	baz=44,SNR=5.1						
TOO	**Toolangi**	**43.54**	**160**	P	**P**	**09 50 58.7**	**+2.4**
GTA	**Gaotai**	**44.31**	**329**	*e*P	**P**	**09 51 03.7**	**+1.1**
GTA				pP	pwP	09 51 30.2	+1.3
GTA				sP	sP	09 51 45.9	+10
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DZM	**Mont Dzumac**	**45.20**	**125**	P	**P**	**09 51 09.9**	**+0.1**
YATNC	**Mamie plateau,**	**45.56**	**125**	P	**P**	**09 51 13.2**	**+0.7**
KLR	**Kul'dur**	**46.21**	**4**	P	**P**	**09 51 16.7**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=191,slow=10,SNR=1.8						
SONM	**Songino Array**	**48.37**	**341**	P	**P**	**09 51 34.0**	**-0.2**
	comp=Z,3.0nm,0.7s,baz=152,slow=8.3,SNR=18						
HYB	**Hyderabad**	**50.41**	**290**	*i* P	**P**	**09 51 51.0**	**+0.9**
WMQ	**Urumqi**	**53.98**	**325**	*e*P	**P**	**09 52 18.0**	**+1.9**
WMQ				pP	pwP	09 52 45.7	+2.5
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
PETK	**Petropavlovsk-**	**55.73**	**21**	P	**P**	**09 52 28.2**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=193,slow=5.4,SNR=6.6						
PETK				pP	**pP**	**09 52 52.2**	**+0.1**
	comp=Z,6.6nm,1.0s,baz=176,slow=4.5,SNR=3.5						
MK31	**Makanchi Array**	**58.80**	**325**	P	**P**	**09 52 50.3**	**0.0**
MK31				IAmb	IAmb	09 52 51.8	
	comp=Z,4.7nm,0.8s						
MKAR	**Makanchi Array**	**58.80**	**325**	P	**P**	**09 52 50.9**	**+0.6**
	comp=Z,3.2nm,0.5s,baz=117,slow=7.9,SNR=24						
MKAR	**Makanchi Array**	**58.80**	**325**	P	**P**	**09 52 50.1**	**-0.1**
MAKZ	**Makanchi**	**58.99**	**325**	P	**P**	**09 52 51.4**	**-0.1**
MAKZ				IAmb	IAmb	09 52 53.6	
	comp=Z,12nm,1.1s						
KSH	**Kashi**	**59.36**	**315**	P	**P**	**09 52 56.7**	**+2.3**
ZALV	**Zalesovo Beam**	**61.76**	**333**	P	**P**	**09 53 09.3**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=104,slow=6.3,SNR=4.1						
ZALV				pP	**pP**	**09 53 33.2**	**-0.9**
	comp=Z,3.4nm,0.9s,baz=131,slow=6.1,SNR=2.6						
ZALV				sP	**sP**	**09 53 44.1**	**-0.8**
	comp=Z,5.8nm,0.6s,baz=86,slow=12,SNR=7.1						
ZALV	**Zalesovo Beam**	**61.76**	**333**	P	**P**	**09 53 09.6**	**-0.6**
KURBB	**Kurchatov Arra**	**62.97**	**327**	P	**P**	**09 53 18.0**	**-0.4**
	comp=Z,5.1nm,0.7s,baz=125,slow=6.0,SNR=14						
KURBB				pP	**pP**	**09 53 42.1**	**-0.3**
	comp=Z,3.0nm,0.5s,baz=127,slow=6.3,SNR=3.8						
KURK	**Kurchatov**	**62.97**	**327**	P	**P**	**09 53 17.5**	**-0.9**
KURK				IAmb	IAmb	09 53 48.2	
	comp=Z,11nm,0.7s						
KKAR	**Karatay Array**	**64.53**	**317**	P	**P**	**09 53 28.2**	**-0.7**
BVAR	**Borovoye Array**	**68.55**	**327**	P	**P**	**09 53 54.1**	**-0.1**
	comp=Z,4.8nm,0.9s,baz=171,slow=10,SNR=8.2						
BVAR				pP	**pP**	**09 54 17.8**	**-0.6**
	comp=Z,3.3nm,0.7s,baz=185,slow=15,SNR=2.2						
TIXI	**Tiksi**	**68.59**	**0**	P	**P**	**09 53 53.8**	**-0.2**
	comp=Z,1.5nm,0.4s,baz=232,slow=0.7,SNR=4.1						
TIXI				pP	**PcP**	**09 54 18.0**	**-0.4**
	comp=Z,3.1nm,0.3s,baz=160,slow=6.3,SNR=3.9						
TIXI	**Tiksi**	**68.59**	**0**	IAmb	IAmb	09 54 21.1	
	comp=Z,19nm,1.5s						
WSAR	**Wadi Sarin**	**69.73**	**294**	P	**P**	**09 54 01.4**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=142,slow=2.8,SNR=1.4						
NRIK	**Noril'sk**	**71.43**	**346**	P	**P**	**09 54 11.2**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=167,slow=3.4,SNR=3.9						
ABKAR	**Akbulak array**	**73.43**	**321**	P	**P**	**09 54 23.1**	**-0.7**
ABKAR	**Akbulak array**	**73.43**	**321**	P	**P**	**09 54 22.8**	**-1.0**
ARU	**Arti**	**76.16**	**328**	P	**P**	**09 54 38.8**	**-0.5**
	comp=Z,1.4nm,0.2s,baz=337,slow=6.9,SNR=3.2						
ARU	**Arti**	**76.16**	**328**	IAmb	IAmb	09 55 01.5	
	comp=Z,11nm,1.4s						
BELG	**Belogornoye**	**81.68**	**322**	P	**P**	**09 55 09.0**	**-0.5**
	comp=Z,11nm,0.6s,baz=156,slow=2.9,SNR=3.5						
RAYN	**Ar Rayn**	**81.79**	**293**	P	**P**	**09 55 10.3**	**-0.6**
RAYN				IAmb	IAmb	09 55 12.1	
	comp=Z,7.5nm,1.1s						
VNDA	**Vanda**	**82.54**	**173**	P	**P**	**09 55 13.5**	**-0.1**

VNDA				IAmb	IAmb	09 55 15.4	
	comp=Z,13nm,1.1s						
MAW	Mawson	83.43	200	P	P	09 55 16.5	-1.7
	comp=Z,6.7nm,1.0s,baz=76,slow=5.4,SNR=7.7						
MAW	Mawson	83.43	200	P	P	09 55 18.9	+0.6
	baz=84,SNR=5.2						
MAW	Mawson	83.43	200	IAmb	IAmb	09 55 20.6	
	comp=Z,2.2nm,1.1s						
ILAR	Eielson Array	85.31	25	P	P	09 55 26.3	-1.6
	comp=Z,0.2nm,0.5s,baz=253,slow=4.7,SNR=4.5						
KLMR	Klimovskoe	86.60	331	eP	P	09 55 31.8	-2.5
KLMR				AMP		09 55 33.2	
	comp=Z,9.0nm,1.1s						
ARCES	ARCESS Array B	91.54	340	P	P	09 55 56.0	-1.5
	comp=Z,2.6nm,1.0s,baz=79,slow=5.6,SNR=1.0						
QSPA	South Pole Qui	92.88	180	P	P	09 56 03.9	0.0
AKASG	Malin Array Be	93.17	321	P	P	09 56 03.7	-1.7
	comp=Z,0.2nm,0.2s,baz=71,slow=4.0,SNR=4.5						
SNAA	Sanae	104.76	194	PKiKP	PKiKP	10 01 11.5	-0.5
VNA2	Neumayer--Watz	106.36	194	PKiKP	PKiKP	10 01 14.1	-0.7
TXAR	Lajitas Array	121.18	53	PKP	PKiKP	10 01 44.5	0.0
	comp=Z,0.3nm,0.7s,baz=282,slow=4.2,SNR=3.8						
TORD	Torodi Ar. Bea	124.20	288	PKP	PKPdf	10 01 49.6	-0.7
	comp=Z,7.1nm,1.1s,baz=44,slow=2.0,SNR=10						
TORD	Torodi Ar. Bea	124.20	288		PKPdf	10 01 49.0	-1.4

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*IDC **07** 09:44:07.2±0.8, 16°.93N×98°.62W, h50^{km}±4^{km}, mb4.1/17, mb1 4.2/21, mb1mx3.9/53, mbtmp4.3/21, Error ellipse: s-maj=18.9km s-min=9.7km az=22.0*

*MEX **07** 09:44:07.8±0.9, 16°.97N×98°.74W, h45^{km}±6^{km}, MD4.7*

*NEIC **07** 09:44:08.8±3.0, 16°.9N±0°.1×99°.0W±0°.1, h61^{km}±8^{km}, mb4.7/145, Md4.7/12(MEX), Error ellipse: s-maj=21.4km s-min=10.3km az=215.0*

ISC 07 09:44:06.8±0.5**, 16°.95N**±0°.03×**98°.74W**±0°.03**, h45**^{km}±3^{km}**,** **n334, σ1^{s}23**/305**, mb4.6**/69**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGIG	Malinaltepec	0.30	19	i P	Pn	09 44 14.8	-0.8
MGIG				i S	Sn	09 44 21.2	-0.7
CRIG	Cruz Grande	0.43	241		Sn	09 44 23.8	-0.2
CRIG	Cruz Grande	0.43	241	eP	Pn	09 44 16.2	-0.7
CRIG				eS	Sn	09 44 23.8	-0.2
TLIG	Tlapa	0.63	15	eP	Pn	09 44 18.5	-1.1
TLIG				eS	Sn	09 44 27.3	-1.5
PNIG	Pinotepa	0.81	133	eP	Pn	09 44 21.1	-0.6
PNIG				i S	Sn	09 44 30.8	-1.9
HMTT	Tlapaneco	0.86	11	eP	Pn	09 44 21.7	-1.0
HMTT				eS	Sn	09 44 32.2	-2.0
DAIG	Los Arroyos	0.88	275		Pn	09 44 21.9	-0.9
DAIG					Sn	09 44 32.5	-1.9
DAIG	Los Arroyos	0.88	275	eP	Pn	09 44 21.9	-0.9
DAIG				eS	Sn	09 44 32.5	-1.9
TXIG	Tlaxiaco	0.98	72	eP	Pn	09 44 23.9	-0.5
TXIG				eS	Sn	09 44 36.5	-0.7
ACP2	Acapulco	1.10	266	eP	Pn	09 44 24.8	-1.0
ACP2				i S	Sn	09 44 38.4	-1.5
FTIG	Fresnillo de T	1.12	31	eP	Pn	09 44 25.3	-0.8
FTIG				eS	Sn	09 44 38.6	-1.8
YOIG	Yosondua	1.15	94	eP	Pn	09 44 26.4	-0.2
YOIG				i S	Sn	09 44 41.6	+0.3
HLIG	Huajuapan de L	1.25	45	eP	Pn	09 44 27.3	-0.7
HLIG				i S	Sn	09 44 42.8	-1.1
MEIG	Mezcala	1.29	319	eP	Pn	09 44 28.1	-0.3
MEIG				eS	Sn	09 44 43.1	-1.4
CAIG	El Cayaco	1.47	274	eP	Pn	09 44 29.9	-0.9
CAIG				i S	Sn	09 44 47.4	-1.4
PLIG	Platanillo	1.61	333	eP	Pn	09 44 33.2	+0.3
PLIG				i S	Sn	09 44 49.4	-3.2
VHO	Vista Hermosa	1.92	86	eP	Pn	09 44 37.4	+0.2
VHO				eS	Sn	09 44 58.7	-1.6
OXBJ	Oaxaca	1.93	86	eP	Pn	09 44 37.2	-0.2
OXLC	Oaxaca	1.95	86	eP	Pn	09 44 38.1	+0.5
TOIG	Toxpalan	1.96	54	eP	Pn	09 44 37.1	-0.7
TOIG				i S	Sn	09 45 00.1	-1.1
ARIG	Puente Sto Nin	2.03	311	eP	Pn	09 44 38.9	+0.4
ARIG				i S	Sn	09 45 01.1	-1.5
UNM	Universidad Na	2.41	350	Pn	Pn	09 44 45.8	+1.8
UNM	Universidad Na	2.41	350	eP	Pn	09 44 43.1	-0.8
UNM				i S	Sn	09 45 09.4	-2.9
OZST	Orizaba	2.46	39	eP	Pn	09 44 39.5	-5.1
ZIIG	Zihuatanejo	2.69	285	eP	Pn	09 44 47.5	-0.1
ZIIG				i S	Sn	09 45 16.1	-2.8
MOIG	Morelia	3.58	320		Pn	09 45 01.8	+1.8
CMIG	Matias Romero	3.69	87	P	Pn	09 45 01.2	-0.1
	2.7nm,0.3s,baz=264,slow=13,SNR=71						
CMIG				S	Sn	09 45 42.5	-1.1
	33nm,0.3s,baz=178,slow=24,SNR=4.2						
CCIG	Comitan	6.36	95		Pn	09 45 44.4	+6.2
ZAIG	Zacatecas	6.82	329		Pn	09 45 47.0	+2.4
APG	El Apazote	8.19	102	P	Pn	09 46 02.9	-0.4
	1.2nm,0.3s,baz=281,slow=19,SNR=6.0						
APG				S	Sn	09 47 31.4	-3.3
	1.1nm,0.3s,baz=68,slow=19,SNR=2.0						
833A	Chaparral WMA,	11.34	357	P	Pn	09 46 50.6	+4.4
	baz=178						
HPIG		11.83	328		Pn	09 46 54.2	+1.0
TX32	Lajitas Array	13.13	341		Pn	09 47 13.4	+2.6
TXAR	Lajitas Array	13.13	341	P	Pn	09 47 12.7	+1.8
	0.0nm,0.3s,baz=161,slow=14,SNR=3.1						
JCT	Junction City	13.51	356	Pn	Pn	09 47 17.6	+1.7
JCT	Junction City	13.51	356	P	Pn	09 47 16.9	+1.0
	baz=176						
435B	Jarrell	13.81	4		Pn	09 47 23.3	+3.3
435B	Jarrell	13.81	4	P	Pn	09 47 22.2	+2.2
	baz=185						
441A	DeRidder	14.64	19	P	P	09 47 36.5	-0.1
WHTX	Lake Whitney,	15.02	4	P	P	09 47 40.9	+0.1
WHTX	Lake Whitney,	15.02	4	P	P	09 47 40.2	-0.6
	baz=186						
NATX	Nacogdoches	15.21	13	P	P	09 47 42.5	-0.3
NATX	Nacogdoches	15.21	13	P	P	09 47 42.1	-0.7
	baz=196						
237A	Washetta, Mont	15.22	10	P	P	09 47 43.0	0.0
342A	Flagon Creek P	15.50	21	P	P	09 47 45.5	-0.6
ABTX	Abilene, Hawle	15.63	357		P	09 47 47.7	+0.1
ABTX				IAmb	IAmb	09 48 05.9	
	comp=Z,57nm,0.9s						
ABTX	Abilene, Hawle	15.63	357	P	P	09 47 47.3	-0.2
	baz=178						
MNTX	Cornudas Mount	15.88	339	P	Pn	09 47 48.5	+1.3
MNTX	Cornudas Mount	15.88	339	P	Pn	09 47 48.7	+1.5
	baz=157						
RIMA	Rio Macho	16.13	114	P	P	09 47 55.0	+1.6
344A	Westbrook Farm	16.17	25	P	P	09 47 56.7	+3.2
344A				IAmb	IAmb	09 48 10.9	
	comp=Z,100nm,1.1s						
Z35A	Perchaven, San	16.37	4	P	P	09 47 55.7	0.0
VBMS	Vicksburg	16.93	25	P	P	09 48 01.9	-0.1
	baz=208,SNR=7.1						
Z41A	Richland Creek	17.10	17	P	P	09 48 03.8	0.0
	baz=200,SNR=7.8						
319A	Douglas	17.27	328	P	P	09 48 06.3	+0.5
MSTX	Muleshoe	17.33	349	P	Pn	09 48 05.8	+0.2
MSTX				IAmb	IAmb	09 48 24.1	
	comp=Z,38nm,1.2s						
MSTX	Muleshoe	17.33	349	P	P	09 48 06.7	+0.2
	baz=168						
121A	Cookes Peak, D	17.54	334	P	P	09 48 09.9	+1.0
121A				IAmb	IAmb	09 48 29.1	
	comp=Z,62nm,1.4s						
121A	Cookes Peak, D	17.54	334	P	Pn	09 48 08.2	-0.1
	baz=151						
X34A	Smith Ranch, M	17.60	2		Pn	09 48 09.2	+0.4
X34A				IAmb	IAmb	09 48 27.4	
	comp=Z,59nm,1.2s						
146A	Union	17.91	27	P	P	09 48 15.9	+3.1
146A				IAmb	IAmb	09 48 30.0	
	comp=Z,101nm,1.1s						
CCAR	Cane Creek	18.02	19	P	P	09 48 16.8	+2.8
MIAR	Mount Ida	18.12	14		P	09 48 14.8	-0.3
MIAR				IAmb	IAmb	09 48 32.8	
	comp=Z,50nm,1.1s						
MIAR	Mount Ida	18.12	14	P	Pn	09 48 15.7	+0.5
	baz=197						
X40A	Basin Creek Fa	18.25	16	P	Pn	09 48 18.8	+2.0
	baz=199						
BNM	Barren Site	18.54	339	P	Pn	09 48 21.1	+0.6
OK025	Westminster Rd	18.60	4		P	09 48 20.2	-0.2
BCOK	Bluff Creek, N	18.66	3		Pn	09 48 22.1	+0.3
W39A	Magazine	18.70	13	IAmb	IAmb	09 48 42.1	
	comp=Z,54nm,1.2s						
W39A	Magazine	18.70	13	P	P	09 48 22.2	+0.7
	baz=196						
TUC	Tucson	18.79	327	P	P	09 48 22.7	+0.2
TUC	Tucson	18.79	327	P	P	09 48 23.1	+0.6
	baz=142						
OK029	Liberty Lake	18.81	3	IAmb	IAmb	09 48 40.1	
	comp=Z,110nm,1.4s						
OK030	Cody Creek RV	18.98	5	P	P	09 48 23.6	-1.0
W41B	Gary Mavity, V	19.05	16	P	Pn	09 48 26.3	-0.1
	baz=200						
OK034	N. Norfolk Rd.	19.07	5	IAmb	IAmb	09 48 42.0	
	comp=Z,64nm,1.0s						
WHAR	Wooly Hollow	19.15	16	P	Pn	09 48 27.6	0.0
WHAR				IAmb	IAmb	09 48 44.3	
	comp=Z,47nm,1.0s						
ANMO	Albuquerque	19.21	340	P	P	09 48 28.1	+0.8
	comp=Z,0.3nm,0.3s,baz=160,slow=11,SNR=20						
ANMO				pP	pP	09 48 39.8	+1.4
	comp=Z,0.3nm,0.3s,baz=148,slow=11,SNR=4.2						
ANMO	Albuquerque	19.21	340		P	09 48 28.0	+0.8
ANMO	Albuquerque	19.21	340	P	Pn	09 48 28.5	+0.1
	baz=158						
214A	Organ Pipe Nat	19.65	322	P	P	09 48 32.4	+0.5
	baz=137						
HHAR	Hobbs	19.72	12	IAmb	IAmb	09 48 49.4	
	comp=Z,68nm,1.1s						
FCAR	Ozark Folk Cen	19.76	16	P	P	09 48 32.4	-0.6
U38A	Gravette	19.80	10	IAmb	IAmb	09 48 49.5	
	comp=Z,50nm,1.2s						
T35A	Sooner Cattle	19.99	5		P	09 48 34.5	-1.0
U40A	Yellville	20.02	14	P	P	09 48 34.8	-1.2
	baz=197						
PLAL	Pickwick Lake	20.33	26	P	P	09 48 39.3	0.0
X48A	Hartselle	20.34	29	P	Pn	09 48 42.2	+0.6
X48A				IAmb	IAmb	09 48 56.8	
	comp=Z,59nm,1.5s						
T25A	Trinidad	20.73	347	IAmb	IAmb	09 49 05.8	
	comp=Z,18nm,0.8s						
T25A	Trinidad	20.73	347	P	P	09 48 45.2	+1.4
	baz=165						
X16A	Lo Mia Camp, P	20.79	329	IAmb	IAmb	09 48 50.4	
	comp=Z,22nm,0.7s						
MGMO	Mountain Grove	20.93	15	IAmb	IAmb	09 49 04.9	
	comp=Z,55nm,1.2s						
PBMO	Poplar Bluff	21.08	19	P	P	09 48 46.6	-0.6
T42A	Van Buren	21.12	17	IAmb	IAmb	09 49 05.2	
	comp=Z,52nm,1.1s						
S39A	Bolivar	21.21	12	P	P	09 48 47.3	-1.4
S39A				IAmb	IAmb	09 49 05.7	
	comp=Z,28nm,1.0s						
UTMT	University of	21.21	22		pP	09 49 04.4	+4.3
R32A	Long Quarter,	21.39	0	P	P	09 48 52.2	+1.5
R32A				IAmb	IAmb	09 49 10.5	
	comp=Z,32nm,0.9s						
GOGA	Godfrey	21.40	37	P	P	09 48 49.1	-1.6
	baz=224						
WVT	Waverly	21.42	25	P	P	09 48 53.3	+2.3
WVT				IAmb	IAmb	09 49 07.1	
	comp=Z,39nm,0.8s						
WVT	Waverly	21.42	25	P	P	09 48 48.4	-2.6
	baz=210						
SDCO	Great Sand Dun	21.56	345	P	P	09 48 52.9	+0.2
SDCO	Great Sand Dun	21.56	345	P	P	09 48 53.6	+0.9
	baz=163						
GLA	Glamis	21.63	321	IAmb	IAmb	09 49 14.7	
	comp=Z,19nm,0.9s						
GLA	Glamis	21.63	321	P	P	09 48 54.5	+1.2
	baz=135						
WUAZ	Wupatki	21.65	331	P	P	09 48 53.4	-0.2
WUAZ				IAmb	IAmb	09 48 58.9	
	comp=Z,45nm,0.9s						
WUAZ	Wupatki	21.65	331	P	P	09 48 55.4	+1.8
	baz=146,SNR=40						
S22A	4UR Ranch, Cre	21.91	343	P	P	09 48 57.7	+1.2
	baz=160						
MVCO	Mesa Verde	21.95	339	P	P	09 48 56.8	-0.1
MVCO				IAmb	IAmb	09 49 14.8	
	comp=Z,32nm,1.0s						
MVCO	Mesa Verde	21.95	339	P	P	09 48 58.2	+1.3
	baz=155,SNR=8.3						
R40A	Maddies Statio	22.01	14	P	P	09 48 57.2	0.0
CCM	Cathedral Cave	22.04	16	P	P	09 48 56.8	-0.7
CCM				IAmb	IAmb	09 49 17.3	
	comp=Z,22nm,0.9s						
CCM	Cathedral Cave	22.04	16	P	P	09 48 57.6	+0.1
	baz=200						
PDMCI	Parker Dam,Lak	22.12	324	P	P	09 48 59.9	+1.4
	baz=138						
KSU1	Kansas State U	22.15	4	IAmb	IAmb	09 49 18.6	
	comp=Z,27nm,0.9s						
KSU1	Kansas State U	22.15	4	P	P	09 48 58.5	-0.3
	baz=186						
SWSC	Sam W. Stewart	22.15	319	P	P	09 48 59.1	+0.2
	baz=132						
IKP	In-Ko-Pah, Jac	22.16	318	P	P	09 48 59.0	+0.1
	baz=131						
FVM	French Village	22.20	18	IAmb	IAmb	09 49 17.5	
	comp=Z,21nm,0.8s						
KSCO	Kaye Shedlock’	22.24	352	P	P	09 48 59.8	-0.1
	baz=171						
BC3	Big Chuckawall	22.42	321	P	P	09 49 02.9	+1.0
	baz=134,SNR=12						
MONP2	Monument Peak	22.51	318	P	P	09 49 03.3	+0.3
	baz=131						
IRM	Iron Mountain	22.59	322	P	P	09 49 03.8	+0.2
	baz=136,SNR=14						
SLM	Saint Louis	22.86	17		pP	09 49 23.4	+5.6
TKL	Tuckaleechee C	22.91	33	P	P	09 49 05.7	-1.2
	comp=Z,4.3nm,0.9s,baz=195,slow=12,SNR=2.4						
TKL				pP	pP	09 49 19.9	+1.6
	comp=Z,13nm,1.0s,baz=201,slow=12,SNR=4.0						
TKL	Tuckaleechee C	22.91	33	IAmb	IAmb	09 49 25.9	
	comp=Z,22nm,1.1s						
109C	Camp Elliot, M	22.95	317	P	P	09 49 07.3	0.0
	baz=130						
BELC	Belle Mtn. Jos	22.99	321	P	P	09 49 07.8	0.0
	baz=134,SNR=9.3						
TPFO	Pinon Flats	23.00	319	P	P	09 49 08.7	+0.8
	baz=132						
PFO	Pinyon Flats O	23.01	319	P	P	09 49 08.8	+0.7
	comp=Z,4.3nm,0.8s,baz=100,slow=7.5,SNR=4.5						
PFO	Pinyon Flats O	23.01	319	P	P	09 49 08.6	+0.5
	baz=132						
P40A	Paris	23.24	13	IAmb	IAmb	09 49 27.3	
	comp=Z,53nm,1.1s						
SMCO	Snowmass	23.29	344	P	P	09 49 11.5	+0.4
GMRC	Granite Mounta	23.33	323	P	P	09 49 11.2	-0.1
	baz=136,SNR=5.2						
MURC	Murrieta	23.46	318	P	P	09 49 12.5	+0.1
	baz=131						
ISCO	Idaho Springs	23.54	347	pP	pP	09 49 25.9	+0.7
ISCO	Idaho Springs	23.54	347	P	P	09 49 15.2	+1.8
	baz=164						
KNB	Kanab	23.55	331	P	P	09 49 13.8	+0.4
KNB				IAmb	IAmb	09 49 17.0	
	comp=Z,19nm,1.0s						
BBRC	Big Bear Solar	23.73	320	P	P	09 49 16.1	+1.0
	baz=133						
LCMT	Little Creek M	23.75	330	P	P	09 49 15.1	0.0
HEC	Hector,Ludlow	23.76	322	P	P	09 49 16.8	+1.5
	baz=135,SNR=5.6						
WCI	Wyandotte Cave	23.85	25	P	P	09 49 17.3	+1.4
	baz=211						
KMSC	Kings Mountain	23.87	37		pP	09 49 33.7	+5.5
KMSC	Kings Mountain	23.87	37	P	P	09 49 16.7	+0.6
	baz=225						
TUQ	Turquoise Moun	23.95	324	P	P	09 49 18.8	+1.8
	baz=136,SNR=8.4						
MTPU	Mount Pierson	24.11	333	IAmb	IAmb	09 49 22.1	
	comp=Z,34nm,0.8s						
CIS	Catalina Islan	24.13	316	P	P	09 49 19.3	+0.7
	baz=128						
SZCU	Shurtz Canyon	24.14	331	P	P	09 49 19.7	+0.8
N38A	Joes South For	24.23	10	IAmb	IAmb	09 49 37.4	
	comp=Z,33nm,1.1s						
SHPR	Sheep Range	24.32	326	P	P	09 49 20.6	+0.2
SRU	San Rafael Swe	24.36	337	IAmb	IAmb	09 49 39.5	
	comp=Z,14nm,0.9s						
GSC	Goldstone, Bar	24.37	322	P	P	09 49 22.2	+1.4
	baz=135						
Q16A	Castle Valley	24.44	336	IAmb	IAmb	09 49 40.8	
	comp=Z,20nm,0.9s						
SHOC	Shoshone, Teco	24.48	324	P	P	09 49 23.4	+1.6
	baz=136						
O20A	White River Ci	24.53	342	IAmb	IAmb	09 49 41.5	
	comp=Z,23nm,1.3s						
O20A	White River Ci	24.53	342	P	P	09 49 23.2	+0.8
	baz=158,SNR=7.6						
U54A	Nelsons Funny	24.59	34	IAmb	IAmb	09 49 41.4	
	comp=Z,36nm,0.8s						
N23A	Red Feather La	24.66	347	P	P	09 49 24.8	+1.1
	baz=164						
P18A	Preston Nutter	24.72	338	IAmb	IAmb	09 49 43.4	
	comp=Z,20nm,1.0s						
TMUT	Trail Mountain	24.78	336	IAmb	IAmb	09 49 45.0	
	comp=Z,20nm,1.2s						
EDW2	Edwards Air Fo	24.80	320	P	P	09 49 25.3	+0.6
	baz=132						
QSM	Queen of Sheba	24.86	323	P	P	09 49 23.8	-1.5
QSM				IAmb	IAmb	09 49 29.1	
	comp=Z,14nm,1.0s						
HDIL	Hopedale	24.91	17	P	P	09 49 25.6	0.0
	baz=202						
LRMC	Laurel Mtn Rad	25.01	321	P	P	09 49 27.4	+0.7
	baz=133,SNR=7.1						
MPMC	Manual Prospec	25.29	322	P	P	09 49 30.4	+1.0
	baz=134,SNR=11						
SCIA	State Center	25.32	10	P	P	09 49 28.8	-0.5
	baz=193						
RDMU	Red Mountain	25.34	340	IAmb	IAmb	09 49 32.0	
	comp=Z,20nm,1.1s						
SFIN	Lafayette	25.44	21	P	P	09 49 29.7	-0.6
	baz=207						
ARVC	Arvin	25.48	319	P	P	09 49 31.4	+0.6
	baz=131						
P49A	Miami Univ. Ec	25.61	26	P	P	09 49 31.4	-0.5
	baz=213						
ISA	Isabella, Lake	25.61	320	P	P	09 49 33.5	+1.4
	baz=132,SNR=5.7						
NLU	North Lily Min	25.69	336	IAmb	IAmb	09 49 35.2	
	comp=Z,11nm,0.8s						
Q51A	Peebles	25.78	28	IAmb	IAmb	09 49 51.7	
	comp=Z,34nm,0.9s						
SPR3	Spring Creek 3	25.85	331	P	P	09 49 33.4	-1.2
BLA	Blacksburg	25.86	35	P	P	09 49 33.8	-0.5
	baz=224						
CWC	Cottonwood Cre	25.90	322	P	P	09 49 35.4	+0.6
	baz=134						
R11A	Troy Canyon, C	25.94	329	P	P	09 49 36.5	+1.3
	baz=141						
PKM	Mcpherson Peak	25.95	318	P	P	09 49 35.7	+0.3
	baz=129						
VES	Vestal, Richgr	26.10	320	P	P	09 49 38.3	+1.9
	baz=131						
K38A	Parkersburg	26.12	10	IAmb	IAmb	09 49 54.1	
	comp=Z,46nm,1.2s						
DUG	Dugway, Tooele	26.19	335	P	P	09 49 37.6	+0.3
DUG	Dugway, Tooele	26.19	335	P	P	09 49 39.0	+1.7
	baz=149,SNR=12						
CTU	Camp Tracy	26.20	337	P	P	09 49 38.0	+0.4
Q52A	Bidwell	26.23	30	IAmb	IAmb	09 49 55.2	
	comp=Z,33nm,0.9s						
T57A	Hurt	26.37	37		pP	09 49 56.2	+5.1
TIN	Tinemaha, Big	26.41	323	P	P	09 49 41.3	+1.9
	baz=135						
K22A	Casper	26.47	347	P	P	09 49 40.8	+0.9
	baz=164						
TPH	Tonopah	26.58	326	IAmb	IAmb	09 50 02.4	
	comp=Z,25nm,1.1s						
ECSD	EROS Data Cent	26.76	3	P	P	09 49 43.3	+0.9
ECSD				IAmb	IAmb	09 50 04.6	
	comp=Z,10nm,0.9s						
ECSD	EROS Data Cent	26.76	3	P	P	09 49 41.6	-0.7
	baz=185						
JFWS	Jewell Farm	26.88	14	P	P	09 49 43.5	+0.2
	baz=199						
ACSO	Alum Creek Sta	26.93	27	P	P	09 49 43.3	-0.6
	baz=215						
MLAC	Mammoth, Mammo	27.16	323	P	P	09 49 44.1	-2.1
	baz=134						
BW06	Boulder Array	27.34	342	P	P	09 49 48.2	+0.4
	baz=158,SNR=12						
PDAR	Pinedale Array	27.34	342	P	P	09 49 48.1	+0.3
	comp=Z,3.9nm,0.8s,baz=140,slow=11,SNR=34						
PDAR				pP	pP	09 50 01.6	+1.4
	comp=Z,1.6nm,0.7s,baz=146,slow=10,SNR=6.9						
PDAR				PcP	PcP	09 53 06.1	-0.3
	comp=Z,0.5nm,0.5s,baz=133,slow=3.8,SNR=4.0						
NV11	Mina Array Sit	27.34	325	IAmb	IAmb	09 50 07.8	
	comp=Z,13nm,1.1s						
NVAR	Mina Array Bea	27.42	325	P	P	09 49 50.3	+1.7
	comp=Z,6.3nm,0.9s,baz=148,slow=9.7,SNR=29						
NVAR				pP	pP	09 50 03.0	+2.2
	comp=Z,1.7nm,0.8s,baz=139,slow=8.4,SNR=3.9						
NVAR				PcP	PcP	09 53 07.1	+0.5
	comp=Z,0.6nm,0.6s,baz=131,slow=2.5,SNR=3.9						
NVAR	Mina Array Bea	27.42	325	P	P	09 49 48.9	+0.3
HVU	Hansel Valley	27.53	337	IAmb	IAmb	09 49 51.5	
	comp=Z,13nm,0.8s						
ELK	Elko	27.67	332	P	P	09 49 51.7	+0.9
	comp=Z,1.3nm,0.6s,baz=115,slow=6.0,SNR=5.9						
ELK				pP	sP	09 50 05.7	-3.0
	comp=Z,3.3nm,1.1s,baz=174,slow=9.9,SNR=5.0						
ELK	Elko	27.67	332		P	09 49 50.5	-0.3
RYN	Ryan	27.68	325	P	P	09 49 51.7	+0.9
KVN	Kaiserville	27.76	326	P	P	09 49 51.6	0.0
REDW	Red Top Meadow	28.27	341	IAmb	IAmb	09 49 57.9	
	comp=Z,11nm,1.1s						
SNOW	Snow King Moun	28.33	341	IAmb	IAmb	09 49 58.7	
	comp=Z,14nm,0.9s						
LOHW	Long Hollow	28.42	342	IAmb	IAmb	09 49 59.2	
	comp=Z,12nm,0.8s						
O56A	Blue Knob Stat	29.08	33	P	P	09 50 01.5	-1.6
	baz=223						
RLMT	Red Lodge	29.45	345	P	P	09 50 04.0	-2.5
	baz=160						
M54A	Oil Creek Stat	29.46	30	P	P	09 50 05.8	-0.6
	baz=220						
YMR	Madison River	29.49	342	IAmb	IAmb	09 50 09.3	
	comp=Z,7.1nm,0.9s						
HLID	Hailey	29.68	337	P	P	09 50 09.5	+0.9
	baz=149,SNR=5.7						
SSPA	Standing Stone	29.70	33		pP	09 50 26.1	+5.1
SSPA	Standing Stone	29.70	33	P	P	09 50 07.8	-0.7
	baz=224						
GLMI	Grayling	30.22	20		pP	09 50 30.9	+5.2
BOZ	Bozeman (W)	30.53	342	P	P	09 50 17.5	+1.5
	baz=156,SNR=5.1						
DLMT	Dillon	30.62	341	IAmb	IAmb	09 50 19.3	
	comp=Z,15nm,0.8s						
J08A	Circle Bar Ran	31.21	332	IAmb	IAmb	09 50 25.2	
	comp=Z,18nm,1.1s						
AGMN	Agassiz Nation	31.36	4	IAmb	IAmb	09 50 40.1	
	comp=Z,6.9nm,0.9s						
AGMN	Agassiz Nation	31.36	4	P	P	09 50 23.1	+0.1
	baz=186						
PLID	Pearl Lake	31.57	336	IAmb	IAmb	09 50 27.2	
	comp=Z,14nm,1.1s						
BINY	Binghamton	31.82	33	P	P	09 50 25.6	-1.6
	baz=225						
BMO	Blue Mountains	31.90	335	IAmb	IAmb	09 50 46.2	
	comp=Z,7.1nm,1.0s						
EGMT	Eagleton	32.29	346	P	P	09 50 31.1	-0.3
	baz=160						
MSO	Missoula	32.35	340	IAmb	IAmb	09 50 33.4	
	comp=Z,5.3nm,0.8s						
MSO	Missoula	32.35	340	P	P	09 50 32.7	+0.7
	baz=152						
F10A	Beach Ranch, E	32.79	336	IAmb	IAmb	09 50 56.2	
	comp=Z,16nm,0.9s						
JTMT	Jette	33.27	341	IAmb	IAmb	09 50 41.9	
	comp=Z,5.4nm,0.9s						
LONY	Lake Ozonia	34.26	31	P	P	09 50 51.7	+3.2
	baz=224						
HRV	Adam Dziewonsk	34.45	37	P	P	09 50 53.3	+3.2
	baz=231						
F05D	White Salmon	34.52	332	P	P	09 50 53.0	+2.3
	baz=140						
B05A	Bryant	36.62	334	P	P	09 51 10.6	+2.0
	baz=141						
FFC	Flin Flon	37.79	357	P	P	09 51 17.3	-1.2
FFC				IAmb	IAmb	09 51 19.5	
	comp=Z,5.8nm,0.9s						
SCHQ	Schefferville	45.06	26	P	P	09 52 17.0	-1.1
	comp=Z,10nm,0.9s,baz=255,slow=4.8,SNR=6.0						
SCHQ				pP	pP	09 52 29.8	-1.2
	comp=Z,4.4nm,0.6s,baz=230,slow=7.4,SNR=3.0						
SCHQ	Schefferville	45.06	26	IAmb	IAmb	09 52 18.1	
	comp=Z,14nm,0.9s						
YKA	Yellowknife Ar	46.84	350	P	P	09 52 31.4	-0.6
	comp=Z,5.9nm,0.8s,baz=159,slow=7.6,SNR=11						
YKA				pP	pP	09 52 44.1	-0.7
	comp=Z,2.0nm,0.6s,baz=155,slow=7.5,SNR=5.2						
DLBC	Dease Lake	47.42	338	P	P	09 52 37.0	+0.3
	comp=Z,5.1nm,1.0s,baz=155,slow=9.1,SNR=4.4						

DLBC	Dease Lake	47.42	338	IAmb	IAmb	09 53 03.0	
	comp=Z,19nm,1.4s						
SIT	Sitka	48.51	334	P	P	09 52 47.1	+2.2
	baz=131						
WRGLY	Wrigley	49.31	346	P	P	09 52 52.3	+1.3
	baz=148						
P33M	Teslin, Yukon	49.70	338	P	P	09 52 55.5	+1.3
	baz=136						
WHY	Whitehorse	50.74	338	P	P	09 53 03.4	+1.2
	baz=134						
FARO	Faro, Yukon	51.32	340	P	P	09 53 07.7	+1.3
	baz=136,SNR=6.4						
N31M	Braeburn, Yuko	51.63	338	P	P	09 53 10.2	+1.5
	baz=133						
M31M	Drury Creek, Y	51.65	340	P	P	09 53 10.3	+1.5
	baz=135						
HYT	Haines Junctio	51.81	337	P	P	09 53 10.6	+0.4
	baz=131						
PNL	Peninsula	51.82	335	P	P	09 53 12.0	+1.9
	baz=128						
YUK6	Outpost Mounta	52.21	337	P	P	09 53 15.0	+1.7
	baz=130						
PINM	Pinnacle	52.42	335	P	P	09 53 16.5	+1.8
	baz=127						
YUK4	Talbot Arm	52.58	337	P	P	09 53 17.8	+1.9
	baz=130						
M30M	Minto, Yukon	52.72	339	P	P	09 53 18.5	+1.7
	baz=132						
MAYO	Mayo, Yukon	53.12	340	P	P	09 53 21.8	+2.1
	baz=134						
CTG	Chitna Glacier	53.38	336	P	P	09 53 22.7	+1.0
	baz=126						
YUK3	Moose Creek	53.52	337	P	P	09 53 24.3	+1.4
	baz=128						
H03N2	Juan Fernandez	53.55	159	T	T	10 50 34.0	
	baz=338,slow=77,SNR=80						
H03N1	Juan Fernandez	53.56	159	T	T	10 50 34.3	
	baz=338,slow=77,SNR=99						
H03N3	Juan Fernandez	53.57	159	T	T	10 50 33.3	
	baz=338,slow=77,SNR=104						
CRQE	Cirque	53.95	335	P	P	09 53 26.6	+0.6
	baz=124						
BVCY	Beaver Creek	54.06	337	P	P	09 53 28.2	+1.5
	baz=128						
MCARA	McCarthy VSAT	54.28	336	P	P	09 53 30.0	+1.8
	baz=125						
M27K	Edge Creek, AK	54.41	337	P	P	09 53 31.3	+2.0
	baz=127						
DAWY	Dawson	54.59	339	P	P	09 53 31.1	+0.7
	baz=130						
L27K	Beaver Creek,	54.81	338	IAmb	IAmb	09 53 35.2	
	comp=Z,3.6nm,0.9s						
L27K	Beaver Creek,	54.81	338	P	P	09 53 33.5	+1.4
	baz=127						
M26K	Nabesna, AK	54.86	337	P	P	09 53 34.1	+1.7
	baz=126						
EYAK	Cordova Ski Ar	54.95	334	P	P	09 53 34.0	+1.0
	baz=122						
N25K	Chitina, Valde	55.03	335	P	P	09 53 36.1	+2.3
	baz=123						
I29M	Ogilvie Camp,	55.09	341	P	P	09 53 34.4	+0.4
	baz=132,SNR=6.4						
EPYK	Eagle Plains	55.30	342	P	P	09 53 35.8	+0.2
	baz=134						
L26K	Log Cabin Wild	55.35	337	P	P	09 53 36.9	+0.9
	baz=126						
KLU	Klutina	55.51	335	P	P	09 53 39.0	+1.8
	baz=122						
EGAK	Eagle	55.63	340	IAmb	IAmb	09 53 39.3	
	comp=Z,9.7nm,0.8s						
EGAK	Eagle	55.63	340	P	P	09 53 38.8	+0.9
	baz=129						
HARP	HAARP	55.69	336	P	P	09 53 39.5	+1.2
	baz=123						
INK	Inuvik	55.86	345	P	P	09 53 39.7	+0.2
	comp=Z,7.4nm,0.9s,baz=127,slow=7.2,SNR=22						
INK	Inuvik	55.86	345	P	P	09 53 39.9	+0.4
	baz=139,SNR=9.2						
PAX	Paxson	56.12	336	P	P	09 53 42.5	+0.9
	baz=123						
SCRK	Sand Creek	56.13	338	P	P	09 53 43.3	+1.6
SCRK				IAmb	IAmb	09 53 44.1	
	comp=Z,6.0nm,0.9s						
SCRK	Sand Creek	56.13	338	P	P	09 53 42.3	+0.6
	baz=125,SNR=5.9						
J26L	Joseph Creek	56.29	338	P	P	09 53 43.5	+0.8
	baz=126,SNR=17						
RIDG	Independent Ri	56.31	337	P	P	09 53 42.5	-0.4
	baz=124,SNR=5.4						
WAT6	Susitna Watana	56.81	335	P	P	09 53 47.3	+0.8
	baz=121						
PMR	Palmer	56.89	334	P	P	09 53 47.7	+0.8
	baz=119						
RC01	Rabbit Creek A	56.91	333	P	P	09 53 47.7	+0.6
	baz=118						
DHY	Denali Highway	56.92	336	P	P	09 53 47.5	+0.2
	baz=121						
A36M	Sachs Harbour	57.19	350	P	P	09 53 48.5	-0.4
A36M	Sachs Harbour	57.19	350	P	P	09 53 48.8	-0.1
	baz=150,SNR=10						
WAT1	Susitna Watana	57.26	335	P	P	09 53 49.4	-0.1
	baz=120						
HDA	Harding Lake	57.45	337	IAmb	IAmb	09 53 52.4	
	comp=Z,6.7nm,0.8s						
HDA	Harding Lake	57.45	337	P	P	09 53 50.5	-0.4
	baz=122,SNR=5.6						
ILAR	Eielson Array	57.63	338	P	P	09 53 52.5	+0.4
	comp=Z,6.3nm,1.0s,baz=137,slow=4.9,SNR=36						
ILAR				pP	pP	09 54 06.8	+1.6
	comp=Z,1.5nm,0.9s,baz=133,slow=6.8,SNR=3.6						
ILAR	Eielson Array	57.63	338	P	P	09 53 51.2	-0.8
RND	Reindeer	57.66	336	IAmb	IAmb	09 53 54.6	
	comp=Z,8.6nm,0.9s						
RES	Resolute Bay	57.79	1	P	P	09 53 52.1	-0.9
	comp=Z,1.8nm,0.7s,baz=184,slow=8.7,SNR=7.7						
RES	Resolute Bay	57.79	1	P	P	09 53 52.5	-0.5
MCK	McKinley	57.85	336	P	P	09 53 53.9	+0.1
	baz=120						
WRH	Wood River Hil	57.91	337	IAmb	IAmb	09 53 55.5	
	comp=Z,7.7nm,1.1s						
POKR	Poker Plat Res	58.01	338	P	P	09 53 55.6	+0.8
	baz=122						
COLA	College	58.03	338	P	P	09 53 55.2	+0.3
	baz=122						
TCOL	CIGO, UAF Yank	58.03	338	P	P	09 53 55.5	+0.6
	baz=122						
SPCR	Spurr Chakacha	58.04	333	P	P	09 53 55.5	+0.4
	baz=115						
TRF	Thorofare Moun	58.25	336	P	P	09 53 57.2	+0.5
	baz=118						
NEA2	Nenana	58.34	337	IAmb	IAmb	09 54 19.8	
	comp=Z,7.3nm,1.3s						
NEA2	Nenana	58.34	337	P	P	09 53 57.6	+0.5
	baz=120						
H24K	Noodor Dome	58.55	339	P	P	09 53 59.5	+0.9
	baz=122						
I23K	Minto, Yukon-K	58.72	338	P	P	09 53 59.9	+0.2
	baz=120,SNR=10						
N19K	Bonanza Creek	58.90	332	P	P	09 54 01.2	0.0
	baz=113						
MLY	Manley	59.17	337	P	P	09 54 03.1	+0.2
	baz=119,SNR=8.6						
M19K	Big River Lodg	59.28	333	P	P	09 54 03.8	+0.2
	baz=114						
L20K	Farewell, AK	59.29	334	P	P	09 54 04.2	+0.4
	baz=114						
L19K	White Mountain	59.59	333	P	P	09 54 06.8	+1.0
	baz=113						
BDFB	Brasilia	59.59	120	P	P	09 54 05.9	-0.7
	comp=Z,2.2nm,0.5s,baz=299,slow=8.6,SNR=3.3						
I21K	Tanana	59.71	337	IAmb	IAmb	09 54 07.5	
	comp=Z,5.7nm,0.9s						
I21K	Tanana	59.71	337	P	P	09 54 07.0	+0.5
	baz=118						
K20K	Telida	59.73	335	P	P	09 54 07.0	+0.2
	baz=115						
COLD	Coldfoot	60.07	339	P	P	09 54 08.6	-0.4
COLD				IAmb	IAmb	09 54 11.7	
	comp=Z,14nm,1.5s						
COLD	Coldfoot	60.07	339	P	P	09 54 09.6	+0.7
	baz=120,SNR=5.7						
J20K	Nowinta River	60.10	335	P	P	09 54 09.0	-0.3
J20K	Nowinta River	60.10	335	P	P	09 54 09.6	+0.3
	baz=115						
H21K	Melozitna Rive	60.23	337	P	P	09 54 10.1	0.0
	baz=117						
TTA	Tatalina	60.37	334	P	P	09 54 11.0	-0.2
	baz=112						
TOLK	Toolik Lake Re	60.59	341	P	P	09 54 13.2	+0.6
	baz=122						
TNA	Tin City	66.11	335	P	P	09 54 49.9	+0.9
	baz=102						
ESDC	Sonseca Array	82.95	51	P	P	09 56 27.0	-0.4
	comp=Z,2.2nm,0.9s,baz=303,slow=4.9,SNR=7.5						
ESDC				pP	pP	09 56 40.8	-0.4
	comp=Z,1.4nm,0.8s,baz=297,slow=5.7,SNR=5.3						
SEY	Seymchan	83.34	334	P	P	09 56 29.0	+0.2
	comp=Z,3.6nm,0.8s,baz=48,slow=3.4,SNR=4.1						
PETK	Petropavlovsk-	84.50	324	P	P	09 56 33.4	-1.6
	comp=Z,2.1nm,0.7s,baz=70,slow=14,SNR=3.9						
GERES	GERESS Array B	91.37	38	P	P	09 57 06.5	-1.6
	comp=Z,0.2nm,0.3s,baz=25,slow=3.2,SNR=4.9						
TORD	Torodi Ar. Bea	95.93	74	P	P	09 57 29.1	-0.6
	comp=Z,4.0nm,0.9s,baz=290,slow=4.2,SNR=1.8						
HHC	Hu-ho-hao-te	115.98	335	*e*PKP	PKPdf	10 02 47.8	+2.5
HHC				PP	PP	10 04 03.8	+15
HHC	Hu-ho-hao-te	115.98	335	SS	SS	10 19 57.3	+10
HHC				AMB	AMB		
	comp=Z,9µm,14.4s						
HHC				LR	LR		
	comp=N,3µm,21.0s						
HHC				LR	LR		
	comp=E,3µm,20.1s						
HHC				LR	LR		
	comp=Z,7µm,21.9s						
STKA	Stephens Creek	123.73	243	PKP	PKiKP	10 03 00.4	0.0
	comp=Z,2.6nm,1.2s,baz=90,slow=9.1,SNR=3.5						
STKA				pPKP	pPKPdf	10 03 13.9	-0.5
	comp=Z,2.1nm,0.9s,baz=63,slow=6.8,SNR=2.9						
WRA	Warramunga Arr	129.73	258	PKP	PKPdf	10 03 11.9	-0.1
	comp=Z,1.6nm,0.8s,baz=84,slow=2.5,SNR=17						
WRA				pPKP	pPKPdf	10 03 26.1	-0.1
	comp=Z,0.4nm,0.6s,baz=4.8,slow=0.8,SNR=2.2						
WRA	Warramunga Arr	129.73	258		PKiKP	10 03 12.6	-0.1
ASAR	Alice Springs	130.40	253	PKP	PKPdf	10 03 13.3	+0.1
	comp=Z,1.2nm,0.9s,baz=83,slow=1.9,SNR=7.4						
ASAR				pPKP	pPKPdf	10 03 27.2	-0.1
	comp=Z,0.3nm,0.8s,baz=75,slow=2.3,SNR=2.5						
CMAR	Chiang Mai Arr	140.75	333	PKP	PKPdf	10 03 32.8	+0.2
	comp=Z,0.8nm,0.3s,baz=334,slow=3.4,SNR=4.1						
HYB	Hyderabad	145.75	5	*i* PKP	PKPdf	10 03 40.0	-1.4

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*IDC **07** 09:44:05.9±1.4, 27°.74N×139°.57E, h448^{km}±17^{km}, mb3.2/6, mb1 3.3/8, mb1mx2.8/69, mbtmp4.0/8, Error ellipse: s-maj=45.1km s-min=31.1km az=39.0*

*JMA **07** 09:44:09.3±0.1, 28°.51N×139°.93E, h425^{km}, M3.3*

ISC 07 09:44:08.6±0.9, **28°.5N**±0°.1×**140°.1E**±0°.2, **h450^{km}, n14, σ1^{s}.85**/19, **mb3.6**/6, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.26	126	P	P	09 45 10.7	0.0
CBIJ				*e*S	S	09 45 59.1	-1.9
JCJ	Chichijima	2.26	126	P	P	09 45 10.7	0.0
	12nm,0.3s,baz=282,slow=20,SNR=26						
JCJ				S	S	09 45 59.6	-1.4
	31nm,0.3s,baz=273,slow=22,SNR=10						
JHH2	Haha-jima-NKT2	2.56	134	P	P	09 45 12.7	+0.1
JHH2				*e*S	S	09 46 02.7	-1.8
JRY	Ryogami san	7.62	352	P	P	09 46 00.9	+1.1
JAG	Ashikaga	7.98	356	P	P	09 46 03.8	+0.2
JAG				*e*S	S	09 47 33.6	-4.5
JHO	Hitachi	8.15	2	P	P	09 46 07.1	+1.6
JHO				*e*S	S	09 47 40.2	-1.3
JFK	Kawauchi	8.92	4	*e*S	S	09 47 55.1	-1.7
USRK	Ussuriysk Ar.	17.02	340	P	P	09 47 43.5	+2.6
	baz=138,slow=8.5,SNR=8.2						
KLR	Kul'dur	21.73	345	P	P	09 48 27.1	+1.7
	2.2nm,0.6s,baz=168,slow=7.2,SNR=11						
SONM	Songino Array	32.48	316	P	P	09 49 59.2	-1.2
	0.2nm,0.3s,baz=129,slow=9.0,SNR=5.1						
KURBB	Kurchatov Arra	50.80	314	P	P	09 52 24.9	-1.0
	0.4nm,0.3s,baz=96,slow=7.0,SNR=1.5						
ARCES	ARCESS Array B	71.67	340	P	P	09 54 44.0	+0.8
	3.8nm,0.9s,baz=76,slow=7.5,SNR=4.5						
YKA	Yellowknife Ar	71.82	28	P	P	09 54 46.5	+2.3
	0.9nm,0.9s,baz=303,slow=5.9,SNR=1.6						
FINES	FINESS Array B	75.93	333	P	P	09 55 07.4	-0.2
	3.2nm,0.9s,baz=46,slow=4.0,SNR=5.5						

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*IDC **07** 09:44:49.3±1.6, 38°.25N×73°.16E, h0^{km}, mb3.7/5, mb1 3.8/8, mb1mx3.5/69, mbtmp3.6/8, ML3.0/3, Error ellipse: s-maj=27.2km s-min=25.5km az=43.0*

*KRNET **07** 09:44:50.2±0.1, 38°.61N×73°.48E, mb3.9*

ISC 07 09:44:52.6±1.0, **38°.68N**±0°.06×**73°.36E**±0°.05, **h10^{km}, n18, σ2^{s}.63**/26, **mb3.7**/5, **16C-2D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.45	304	⇑*i*P	Pb	09 45 19.8	-0.1
	baz=4.0						
DRK				⇑*i*S	Sg	09 45 41.2	+1.9
	baz=4.0						
GAR	Garm	2.40	279	⇑*i*P	Pb	09 45 34.1	-1.8
	baz=80						
GAR				⇑*i*S	Sb	09 46 06.4	+0.9
	baz=80						
BTK	Batken	2.40	306	⇑*i*P	Pb	09 45 34.2	-1.7
	baz=6.0						
BTK				⇑*i*S	Sb	09 46 06.6	+1.0
	baz=6.0						
CHGR	Chuyangaron	3.29	271	⇑*i*P	Pn	09 45 46.6	+2.4
	baz=72						
CHGR				⇑*i*S	Sb	09 46 27.5	-3.6
	baz=72						
AML	Almayashu	3.46	4	⇓*i*P	Pn	09 45 48.4	+1.6
	baz=3.0						
AML				⇓*i*S	Sn	09 46 30.8	+2.8
	baz=3.0						
UCH	Uchtor	3.65	14	⇑*e*P	Pn	09 45 50.9	+1.4
	baz=12						
UCH				⇑*i*S	Sn	09 46 35.3	+2.4
	baz=12						
MNAS	Manas	3.86	351	⇑*i*P	Pn	09 45 54.0	+1.9
	baz=49						
MNAS				⇑*i*S	Sn	09 46 40.8	+3.2
	baz=49						
AAK	Ala-Archa	4.05	12	Pn	Pb	09 46 03.4	-0.6
	1.1nm,0.3s,baz=180,slow=19,SNR=1.8						
AAK				Sn	Sg	09 46 57.1	-5.4
	1.2nm,0.3s,baz=79,slow=16,SNR=1.4						
AAK	Ala-Archa	4.05	12	⇑Pn	Pb	09 46 03.1	-0.9
	12nm,0.7s						
AAK				⇑Sn	Sb	09 46 55.7	+2.7
	16nm,0.6s						
KK09	Karatay Array	4.94	335	⇑Pn	Pn	09 46 11.3	+4.4
	7.0nm,0.6s,baz=154,slow=13						
KK09				⇑Sn	Sb	09 47 11.6	-6.9
	37nm,0.8s,baz=146,slow=22						
MKAR	Makanchi Array	10.43	36	Pn	Pn	09 47 27.9	+5.8
	0.1nm,0.3s,baz=226,slow=14,SNR=2.7						
BVAR	Borovoye Array	14.49	353	Pn	P	09 48 24.4	0.0
	1.9nm,0.3s,baz=190,slow=15,SNR=22						
AKTO	Aktyubinsk	16.01	322	Pn	Pn	09 48 38.3	+0.5
	0.1nm,0.3s,baz=135,slow=10.0,SNR=3.2						
SONM	Songino Array	25.58	58	P	P	09 50 24.1	+2.4
	0.7nm,0.8s,baz=273,slow=8.1,SNR=4.9						
AKASG	Malin Array Be	33.12	306	P	P	09 51 27.7	-0.8
	0.3nm,0.3s,baz=76,slow=8.0,SNR=2.7						
ARCES	ARCESS Array B	39.88	336	P	P	09 52 25.7	-0.3
	4.2nm,1.0s,baz=102,slow=8.4,SNR=1.6						
YKA	Yellowknife Ar	78.97	4	P	P	09 56 56.4	+0.3
	0.4nm,0.5s,baz=344,slow=5.4,SNR=1.7						
WRA	Warramunga Arr	81.60	124	P	P	09 57 08.6	-2.2
	0.5nm,1.0s,baz=339,slow=7.3,SNR=2.2						

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*IDC **07** 09:47:16.6±1.2, 38°.31N×73°.01E, h0^{km}, mb3.9/7, mb1 3.9/14, mb1mx3.6/71, mbtmp3.8/14, ML3.1/7, Error ellipse: s-maj=24.8km s-min=18.1km az=123.0*

*KRNET **07** 09:47:18.7±0.1, 38°.57N×73°.28E, mb4.3*

*NNC **07** 09:47:42.5±14.0, 39°.10N×72°.24E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=115.9km s-min=60.3km az=6.0*

ISC 07 09:47:18.4±1.7, **38°.38N**±0°.06×**73°.01E**±0°.05, **h11**^{km}±9^{km}, **n25, σ2^{s}.64**/40, **mb3.9**/7, **15C-7D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.45	320	⇑*i*P	Pg	09 47 46.4	+0.2
	baz=9.0						
DRK				⇑*i*S	Sg	09 48 06.7	+1.6
	baz=9.0						
SFK	Sufi-Kurgan	1.67	13	⇑*e*P	Pn	09 47 46.6	-1.2
	baz=7.0						
SFK				⇑*e*S	Sn	09 48 06.2	-3.2
	baz=7.0						
GAR	Garm	2.20	287	⇑*i*P	Pg	09 48 00.7	+0.2
	baz=82						
GAR				⇑*i*S	Sg	09 48 31.4	+2.4
	baz=82						
BTK	Batken	2.39	315	⇑*i*P	Pb	09 48 01.4	0.0
	baz=9.0						
BTK				⇑*i*S	Sg	09 48 32.9	-2.3
	baz=9.0						
CHGR	Chuyangaron	3.04	276	⇑*e*P	Pb	09 48 12.6	+0.1
	baz=73						
CHGR				⇑*i*S	Sg	09 48 52.4	-3.5
	baz=73						
AML	Almayashu	3.78	8	⇓*e*P	Pn	09 48 17.6	+0.7
	baz=5.0						
AML				⇓*i*S	Sn	09 49 00.9	-0.7
	baz=5.0						
UCH	Uchtor	4.01	16	⇓*e*P	Pn	09 48 20.5	+0.4
	baz=14						
UCH				⇓*i*S	Sn	09 49 05.6	-1.7
	baz=14						
MNAS	Manas	4.12	355	⇑*e*P	Pn	09 48 22.9	+1.5
	baz=52						
MNAS				⇑*i*S	Sn	09 49 09.6	0.0
	baz=52						
AAK	Ala-Archa	4.40	14	Pn	Pn	09 48 29.1	+3.9
	2.2nm,0.3s,baz=127,slow=5.5,SNR=2.3						
AAK				Sn	Sb	09 49 24.4	-4.4
	2.4nm,0.3s,baz=30,slow=20,SNR=1.3						
TKM2	Tokmak 2	4.94	23	⇑Pn	Pg	09 48 53.7	+0.6
	20nm,0.7s						
TKM2				⇑Sn	Sb	09 49 50.1	+5.5
	69nm,0.9s						
KK09	Karatay Array	5.11	339	⇓Pn	Pb	09 48 46.0	-1.7
	17nm,0.7s,baz=147,slow=14						
KK09				⇓Pg	Pg	09 48 56.9	+0.8
	15nm,0.5s						
KK09				⇓Sn	Sn	09 49 38.8	+5.1
	26nm,0.8s,baz=144,slow=23						
KK09				⇑Lg	Lg	09 49 59.9	
	25nm,0.6s						
MDOK	Medeo	5.67	31	Pn	Pg	09 49 03.2	-3.8
	20nm,0.6s						
MDOK				Sn	Sb	09 50 13.4	+7.9
	92nm,1.0s						
MKAR	Makanchi Array	10.83	36	Pn	Pn	09 49 56.4	+3.1
	0.1nm,0.3s,baz=218,slow=17,SNR=5.3						
GEYT	Alibeck	11.74	272	Pn	Pn	09 50 05.7	-0.1
	0.6nm,0.3s,baz=100,slow=17,SNR=2.2						
GEYT				Sn	Sn	09 52 14.8	-2.0
	0.3nm,0.3s,baz=301,slow=45,SNR=2.0						
KURBB	Kurchatov Arra	12.85	16	Pn	Pn	09 50 20.9	+0.1
	0.1nm,0.3s,baz=205,slow=11,SNR=1.9						
KURBB				Lg	Lg	09 54 06.4	
	0.1nm,0.3s,baz=127,slow=6.3,SNR=1.8						
BVAR	Borovoye Array	14.76	354	Pn	Pn	09 50 46.4	-0.5
	0.2nm,0.3s,baz=184,slow=16,SNR=4.6						
AKTO	Aktyubinsk	16.09	323	Pn	Pn	09 51 03.4	-0.9
	0.1nm,0.3s,baz=120,slow=15,SNR=3.3						
AKTO				Sn	Sn	09 53 59.1	-3.5
	0.1nm,0.3s,baz=50,slow=17,SNR=1.3						
ZALV	Zalesovo Beam	17.55	24	P	Pn	09 51 22.3	-0.4
	0.1nm,0.3s,baz=215,slow=10,SNR=2.2						
BELG	Belogornoye	22.52	317	P	P	09 52 17.9	0.0
	12nm,0.7s,baz=156,slow=10.0,SNR=2.4						
ARCES	ARCESS Array B	40.05	336	P	P	09 54 53.8	+0.7
	2.7nm,0.9s,baz=114,slow=9.0,SNR=1.0						
TORD	Torodi Ar. Bea	67.36	269	P	P	09 58 13.8	0.0
	1.7nm,0.8s,baz=42,slow=4.2,SNR=1.6						
INK	Inuvik	71.78	10	P	P	09 58 40.6	+0.4
	1.0nm,0.5s,baz=337,slow=5.4,SNR=7.8						
ILAR	Eielson Array	72.53	17	P	P	09 58 43.4	-1.4
	0.5nm,0.8s,baz=349,slow=3.7,SNR=0.9						
YKA	Yellowknife Ar	79.28	4	P	P	09 59 22.5	-0.8
	0.5nm,0.5s,baz=347,slow=5.3,SNR=4.8						
WRA	Warramunga Arr	81.66	123	P	P	09 59 38.3	+1.6
	0.2nm,0.9s,baz=322,slow=5.4,SNR=1.6						

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*KRNET **07** 09:53:31.4±0.1, 38°.44N×72°.96E, mb3.9*

*NNC **07** 09:53:43.0±3.1, 38°.88N×73°.17E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=23.0km s-min=14.8km az=172.0*

ISC 07 09:53:29.2±1.9, **38°.27N**±0°.10×**73°.02E**±0°.06, **h10^{km}, n22, σ2^{s}.48**/30, **17C-7D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.54	322	⇑*i*P	Pb	09 53 57.6	-0.4
	baz=19						
DRK				⇑*i*S	Sg	09 54 16.9	-1.8
	baz=19						
SFK	Sufi-Kurgan	1.78	12	⇑*e*P	Pg	09 54 02.4	-0.9
	baz=15						
SFK				⇑*e*S	Sg	09 54 23.7	-2.7
	baz=15						
GAR	Garm	2.24	290	⇑*e*P	Pb	09 54 10.4	+0.5
	baz=86						
GAR				⇑*i*S	Sg	09 54 39.0	-2.2
	baz=86						
BTK	Batken	2.47	317	⇑*e*P	Pb	09 54 12.9	-0.9
	baz=15						
BTK				⇑*i*S	Sb	09 54 43.3	-1.1
	baz=15						
CHGR	Chuyangaron	3.06	278	⇑*e*P	Pb	09 54 22.3	-1.5
	baz=75						
CHGR				⇑*i*S	Sb	09 54 59.4	-1.8
	baz=75						
AML	Almayashu	3.89	7	⇑*e*P	Pn	09 54 32.7	+3.3
	baz=8.0						
AML				⇑*i*S	Sn	09 55 17.6	+2.3
	baz=8.0						
UCH	Uchtor	4.11	16	⇓*e*P	Pn	09 54 35.9	+3.4
	baz=17						
UCH				⇓*e*S	Sn	09 55 23.1	+2.2
	baz=17						
MNAS	Manas	4.23	355	⇑*i*P	Pn	09 54 37.0	+3.2
	baz=55						
MNAS				⇑*e*S	Sn	09 55 25.1	+1.8
	baz=55						
MRKS	Merke	4.47	2	Pg	Pb	09 54 49.5	+1.6
	13nm,0.4s						
MRKS				Lg	Lg	09 55 40.6	
	38nm,0.6s						
AAK	Ala-Archa	4.50	14	⇑Pn	Pb	09 54 44.5	-3.9
	7.8nm,0.5s						
AAK				⇓Lg	Lg	09 55 48.1	
	18nm,0.7s						
TKM2	Tokmak 2	5.04	22	⇑Pg	Pg	09 55 04.3	-1.4
	6.3nm,0.7s						
TKM2				⇓Lg	Lg	09 56 06.5	
	14nm,0.8s						
KK09	Karatay Array	5.21	339	⇓Pn	Pn	09 54 52.9	+5.6
	2.7nm,0.3s,baz=146,slow=12						
KK09				⇓Sn	Sn	09 55 52.4	+5.0
	15nm,0.8s,baz=147,slow=26						
KK09				⇓Lg	Lg	09 56 13.5	
	11nm,0.6s						
KST	Kastek	5.26	24	Pg	Pg	09 55 09.1	-0.9
	7.9nm,0.5s						
KST				Lg	Lg	09 56 13.2	
	12nm,1.0s						
DGS	Degeres	5.38	22	Pg	Pg	09 55 08.9	-3.4
	7.6nm,0.5s						
DGS				Lg	Lg	09 56 13.2	
	14nm,0.8s						
IZV	Izvestkoviy	5.48	29	Pg	Pg	09 55 13.6	-0.7
	7.1nm,0.7s						
IZV				Lg	Lg	09 56 21.7	
	19nm,0.9s						
TNSS	Tian-Shan	5.62	31	Pg	Pg	09 55 15.7	-1.1
	7.8nm,0.6s						
TNSS				Lg	Lg	09 56 24.8	
	6.5nm,0.6s						
MDOK	Medeo	5.76	31	⇑Pg	Pg	09 55 17.2	-2.4
	10nm,0.8s						
MDOK				Lg	Lg	09 56 30.1	
	25nm,1.0s						
KRBS	Karabastau	5.78	19	Pg	Pg	09 55 16.6	-3.2
	3.3nm,0.4s						
KRBS				Lg	Lg	09 56 26.8	
	8.7nm,0.9s						
KOTS	Kotyrbulak	5.85	31	Pg	Pg	09 55 19.4	-1.8

	7.6nm,0.7s						
KOTS				Lg	Lg	09 56 31.4	
	25nm,0.6s						
KTBS	Karatobe	6.10	26	Pg	Pg	09 55 25.0	-1.0
	3.3nm,1.0s						
KTBS				Lg	Lg	09 56 40.6	
	13nm,0.5s						
SATY	Saty	6.29	39	Pg	Pg	09 55 29.0	-0.7
	6.0nm,0.9s						
SATY				Lg	Lg	09 56 48.0	
	7.1nm,0.7s						
ARXS	Arharly	6.95	30	Pg	Pg	09 55 38.3	-4.0
	3.0nm,0.6s						
ARXS				Lg	Lg	09 57 04.5	
	13nm,0.8s						

NNC 07 10:00:11.1±12.0**, 38°.09N×72°.51E, h0^{km}, mb4.0, mpv3.5, 1C-4D, Error ellipse: s-maj=95.1km s-min=75.2km az=168.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	4.79	18	⇓Pn	Pn	10 01 24.2	-0.4
	6.0nm,0.7s						
AAK				Sn	Sn	10 02 20.8	-0.1
	20nm,0.8s						
KK09	Karatay Array	5.25	344	⇑Pn	Pn	10 01 30.4	-0.5
	8.4nm,0.8s,baz=147,slow=13						
KK09				⇓Sn	Sn	10 02 33.1	+0.9
	5.7nm,0.6s						
TKM2	Tokmak 2	5.37	25	⇓Pn	Pn	10 01 32.7	+0.1
	2.8nm,0.7s						
TKM2				⇓Sn	Sn	10 02 38.8	+3.6
	11nm,1.2s						

BGR ***07*** *10:04:51.5±0.0, 38°.50N×74°.43E, h33^{km}, mb5.2*
SOME ***07*** *10:04:51.6, 38°.85N×72°.80E, h0^{km}, MS5.1*
KRNET ***07*** *10:04:53.0±0.1, 38°.62N×73°.23E, h20^{km}, mb6.1*
IDC ***07*** *10:04:54.1±0.3, 38°.58N×73°.24E, h0^{km}, mb4.9/54, mb1 5.0/61, mb1mx4.9/69, mbtmp4.9/61, ML4.5/8, MS5.3/15, Ms1 5.3/15, ms1mx5.0/49, Error ellipse: s-maj=8.3km s-min=7.3km az=21.0*
NEIC ***07*** *10:04:56.8, 38°.66N×73°.23E, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.12; $M_{\theta\theta}$-1.15; $M_{\phi\phi}$1.27; $M_{r\theta}$0.14; $M_{\theta\phi}$-0.91; $M_{\phi r}$1.09; Fault plane solution: $M_0$1.87000×10^{17} NP1:ϕ_s25.58000°, δ87.52000°, λ34.07000°. NP2:ϕ_s293.90000°, δ55.96000°, λ177.01000°. Principal axes: T 2.0369, Plg25.0000°, Azm255.0000°; N -0.3955, Plg56.0000°, Azm29.0000°; P -1.6414, Plg21.0000°, Azm155.0000°;*
MOS ***07*** *10:04:56.6±1.3, 38°.68N×73°.29E, h22^{km}, mb5.5/63, MS5.3/20 Error ellipse: s-maj=4.2km s-min=2.9km az=88.4*
BJI ***07*** *10:04:56.7±0.0, 38°.70N×73°.40E, h10^{km}, mB5.7/28, mb5.0/69, ML5.3/6, Ms5.6/51, Ms7 5.4/48*
NNC ***07*** *10:04:58.8±1.4, 39°.03N×72°.87E, h0^{km}, mb6.0, mpv5.6, Error ellipse: s-maj=14.6km s-min=8.4km az=154.0*
NEIC ***07*** *10:04:58.3±2.9, 38°.65N±0°.05×73°.20E±0°.07, h20^{km}±3^{km}, mb5.3/235, Mwr5.4/39, Error ellipse: s-maj=7.6km s-min=7.2km az=129.0*
ISC 07 10:04:57.2±0.5**, 38°.60N**±0°.02×**73°.17E**±0°.02**, h19^{km}**±2^{km}**, n1119, σ2^{s}.04**/1113**, mb5.3**/322**, MS5.4**/42**, 101C-60D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.38	310	Pn	Pn	10 05 18.8	-3.0
DRK	Karamyk	1.38	310	⇑iP	Pn	10 05 19.3	-2.6
	baz=8.0						
DRK				⇑iS	Sn	10 05 38.4	-1.4
	baz=8.0						
SFK	Sufi-Kurgan	1.44	10	⇑eP	Pn	10 05 19.4	-3.1
	baz=9.0						
SFK				⇑eS	Sn	10 05 38.9	-2.1
	baz=9.0						
OHH	Osh	1.95	351	⇓eP	Pn	10 05 28.5	-0.9
	baz=50						
OHH				⇓eS	Sn	10 05 54.6	+1.2
	baz=50						
GAR	Garm	2.27	281	i PN	Pn	10 05 35.0	+1.2
GAR	Garm	2.27	281		Pb	10 05 35.7	-1.9
GAR	Garm	2.27	281	⇑eP	Pn	10 05 34.0	+0.2
	baz=80						
GAR				⇑iS	Sb	10 06 03.7	-1.7
	baz=80						
BTK	Batken	2.34	309	PN	Pn	10 05 36.5	+1.8
BTK	Batken	2.34	309		Pn	10 05 36.5	+1.8
BTK	Batken	2.34	309	⇑eP	Pn	10 05 34.5	-0.2
	baz=8.0						
BTK				⇑iS	Sn	10 06 04.6	+1.6
	baz=8.0						
KSH	Kashi	2.37	66	Pn	Pn	10 05 28.2	-7.0
KSH				Sn	Sn	10 05 56.0	-7.8
KSH				smax	smax		
	comp=N,22µm,1.0s						
KSH				smax	smax		
	comp=E,55µm,0.9s						
CHGR	Chuyangaron	3.14	272	ePN	Pn	10 05 46.6	+0.7
CHGR				i S	Sn	10 06 25.4	+2.5
CHGR	Chuyangaron	3.14	272		Pn	10 05 48.4	+2.5
CHGR	Chuyangaron	3.14	272	⇑eP	Pn	10 05 46.3	+0.4
	baz=72						
CHGR				⇑iS	Sn	10 06 25.1	+2.2
	baz=72						
TRKS	Terek-Say	3.32	333	ePN	Pn	10 05 47.2	-1.1
TRKS				i S	Sn	10 06 26.7	-0.6
TRKS	Terek-Say	3.32	333	⇑eP	Pn	10 05 47.2	-1.1
	baz=32						
TRKS				⇑iS	Sn	10 06 26.7	-0.6
	baz=32						
AML	Almayashu	3.55	6	P	Pn	10 05 53.0	+1.3
	SNR=54						
AML	Almayashu	3.55	6	i P	Pn	10 05 53.1	+1.3
	SNR=135						
AML	Almayashu	3.55	6	i PN	Pn	10 05 51.4	-0.3
AML				i S	Sn	10 06 34.1	+0.7
AML	Almayashu	3.55	6	P	Pn	10 05 53.4	+1.7
AML				S	Sb	10 06 40.0	-2.6
AML	Almayashu	3.55	6	⇑iP	Pn	10 05 51.4	-0.3
	baz=6.0						
AML				⇑iS	Sn	10 06 33.6	+0.2
	baz=6.0						
UCH	Uchtor	3.77	15	P	Pn	10 05 55.8	+1.1
	SNR=248						
UCH	Uchtor	3.77	15	ePN	Pn	10 05 54.4	-0.4
UCH				eS	Sn	10 06 39.3	+0.5
UCH	Uchtor	3.77	15	⇑eP	Pn	10 05 54.4	-0.4
	baz=15						
UCH				⇑eS	Sn	10 06 38.6	-0.2
	baz=15						
MNAS	Manas	3.92	353	ePN	Pn	10 05 56.5	0.0
MNAS				eS	Sn	10 06 42.6	+0.5
MNAS	Manas	3.92	353	⇑eP	Pn	10 05 56.5	0.0
	baz=52						
MNAS				⇑eS	Sn	10 06 42.6	+0.5
	baz=52						
TAS	Tashkent	4.04	314	PN	Pn	10 05 59.8	+1.7
TAS	Tashkent	4.04	314		Pn	10 05 59.8	+1.7
TAS	Tashkent	4.04	314	⇑iP	Pn	10 05 58.3	+0.3
	baz=13						
TAS				⇑iS	Sn	10 06 45.6	+0.8
	baz=13						
EKS2	Erkin-Say	4.08	6	P	Pn	10 06 00.6	+1.7
	SNR=43						
EKS2	Erkin-Say	4.08	6	i PN	Pn	10 05 58.6	-0.2
EKS2				i S	Sn	10 06 46.4	+0.2
EKS2	Erkin-Say	4.08	6	⇑iP	Pn	10 05 58.6	-0.2
	baz=6.0						
EKS2				⇑iS	Sn	10 06 46.4	+0.2
	baz=6.0						
MRKS	Merke	4.14	1	eP	Pn	10 06 03.0	+3.4
	1µm,0.0s						
MRKS				eS	Sb	10 06 54.1	-5.2
	4µm,1.0s						
MRKS	Merke	4.14	1	Pg	Pn	10 06 02.7	+3.1
	1µm,0.7s						
MRKS				Lg	Lg	10 06 54.1	
	4µm,1.0s						
AAK	Ala-Archa	4.16	14	Pn	Pn	10 06 02.2	+2.3
	50nm,0.3s,baz=191,slow=7.1,SNR=186						
AAK				Sn	Sn	10 06 54.6	+6.5
	73nm,0.3s,baz=352,slow=19,SNR=8.5						
AAK				LR	LR	10 07 52.8	
	comp=Z,23µm,20.7s,baz=334,slow=43						
AAK	Ala-Archa	4.16	14	P	Pn	10 06 01.4	+1.5
	SNR=557						
AAK	Ala-Archa	4.16	14	i P	Pn	10 06 00.9	+1.0
	SNR=1771						
AAK	Ala-Archa	4.16	14	P	Pn	10 06 02.5	+2.6
AAK				S	Sb	10 06 55.7	-4.1
AAK	Ala-Archa	4.16	14	⇑Pn	Pn	10 06 01.3	+1.4
	3µm,0.7s						
AAK				⇓Lg	Lg	10 07 01.9	
	6µm,1.2s						
AAK	Ala-Archa	4.16	14		Pn	10 06 01.4	+1.5
AAK	Ala-Archa	4.16	14	⇑eP	Pn	10 05 58.8	-1.1
	baz=13						
AAK				⇑iS	Sn	10 06 47.3	-0.7
	baz=13						
KBK	Karagaybulak	4.27	18	P	Pn	10 06 03.5	+2.0
	SNR=139						
KBK	Karagaybulak	4.27	18	ePN	Pn	10 06 01.5	0.0
KBK				eS	Sn	10 06 51.1	+0.2
KBK	Karagaybulak	4.27	18	⇑eP	Pn	10 06 00.3	-1.2
	baz=17						
KBK				⇑eS	Sn	10 06 49.9	-1.0
	baz=17						
ULHL	Ulahol	4.33	32	P	Pn	10 06 04.9	+2.6
	SNR=57						
FRU1	Bishkek	4.35	14	PN	Pn	10 06 04.9	+2.5
FRU1	Bishkek	4.35	14		Pn	10 06 04.9	+2.5
FRU1	Bishkek	4.35	14	⇑iP	Pn	10 06 01.6	-0.8
	baz=14						
FRU1				⇑eS	Sn	10 06 52.0	-0.7
	baz=14						
BOOM	Boomskoye usch	4.42	28	PN	Pn	10 06 04.2	+0.7
BOOM	Boomskoye usch	4.42	28	Pn	Pn	10 06 04.2	+0.7
DZA	Taraz	4.51	343	eP	Pn	10 06 08.2	+3.7
	6µm,0.6s						
DZA				eS	Sn	10 07 02.8	+6.2
	11µm,0.9s						
DZA	Taraz	4.51	343	ePn	Pn	10 06 04.2	-0.4
	baz=342						
DZA				ePg	Pb	10 06 20.0	+4.1
	baz=342						
DZA	Taraz	4.51	343	ePN	Pn	10 06 04.2	-0.4
DZA				e		10 06 19.9	
CHMS	Chumysh	4.56	15	P	Pn	10 06 10.1	+4.9
	SNR=280						
CHM	Chimkent	4.61	325	eP	Pn	10 06 11.0	+5.1
	484nm,0.5s						
CHM				eS	Sb	10 07 08.3	-4.2
	7µm,1.3s						
CHM	Chimkent	4.61	325	ePg	Pg	10 06 22.8	-2.7
	baz=324						
CHM	Chimkent	4.61	325	ePN	Pg	10 06 22.7	-2.7
KDJ	Kajisay	4.67	40	PN	Pn	10 06 08.3	+1.4
KDJ	Kajisay	4.67	40	Pn	Pn	10 06 08.2	+1.4
TKM2	Tokmak 2	4.69	22	P	Pn	10 06 08.1	+0.9
	SNR=81						
TKM2	Tokmak 2	4.69	22	i PN	Pn	10 06 09.9	+2.6
TKM2				pmax	pmax		
	comp=Z,303nm,0.8s						
TKM2	Tokmak 2	4.69	22	⇑Pn	Pn	10 06 08.4	+1.1
	comp=Z,2µm,0.9s						
TKM2				⇓Lg	Lg	10 07 22.6	
	comp=Z,2µm,0.8s						
TARG	Taragay, Kyrgy	4.73	47	Pn	Pn	10 06 09.4	+1.4
USP	Ospenovka	4.77	12	P	Pn	10 06 09.8	+1.7
	SNR=34						
CEP	Cherat	4.87	192	P	Pn	10 06 14.3	+4.6
KST	Kastek	4.92	25	eP	Pb	10 06 22.2	-0.6
	comp=Z,704nm,1.2s						
KST				eS	Sb	10 07 28.0	+6.4
	comp=Z,6µm,1.1s						
KST	Kastek	4.92	25	Pg	Pb	10 06 22.2	-0.6
	comp=Z,2µm,1.0s						
KST				Lg	Lg	10 07 28.0	
	comp=Z,6µm,1.1s						
CHCP	Chirah Chowk	4.93	179	P	Pn	10 06 15.4	+5.0
KK02	Karatay Array	4.93	337	⇓Pn	Pn	10 06 10.4	0.0
	comp=Z,816nm,0.7s						
KK02				⇑Lg	Lg	10 07 21.6	
	comp=Z,2µm,0.7s						
KK31	Karatay Array	4.93	337	PN	Pn	10 06 12.5	+2.1
KKAR	Karatay Array	4.93	337	PN	Pn	10 06 12.1	+1.7
KKAR	Karatay Array	4.93	337		Pn	10 06 12.1	+1.7
NIL	Nilore	4.94	179	PN	Pn	10 06 15.0	+4.5
NIL	Nilore	4.94	179	P	Pn	10 06 14.9	+4.4
NIL	Nilore	4.94	179	Pn	Pn	10 06 15.0	+4.5
SGDS	Sogindy	4.97	12	ePn	Pn	10 06 10.2	-0.8
	baz=12						
SGDS				ePg	Pb	10 06 27.6	+3.9
	baz=12						
DGS	Degeres	5.04	22	eP	Pb	10 06 24.9	+0.1
	comp=Z,776nm,1.3s						
DGS				eS	Sb	10 07 31.6	+6.5
	comp=Z,5µm,1.4s						
DGS	Degeres	5.04	22	Pg	Pb	10 06 25.0	+0.1
	comp=Z,1µm,0.9s						
DGS				Lg	Lg	10 07 31.6	
	comp=Z,5µm,1.4s						
IZV	Izvestkoviy	5.14	29	eP	Pb	10 06 26.1	-0.6
	comp=Z,424nm,4.3s						
IZV				eS	Sb	10 07 35.1	+6.9
	comp=Z,2µm,1.0s						
IZV	Izvestkoviy	5.14	29	Pg	Pb	10 06 26.1	-0.6
	comp=Z,597nm,0.9s						
IZV				Lg	Lg	10 07 35.1	
	comp=Z,2µm,1.0s						
MTBS	Maitube	5.16	28	eP	Pb	10 06 28.3	+1.5
	comp=Z,546nm,0.2s						
MTBS				eS	Sg	10 07 37.6	-5.0
	comp=Z,3µm,1.9s						
KBL	Kabul	5.24	221	PN	Pn	10 06 20.8	+6.0
KBL	Kabul	5.24	221	P	Pn	10 06 20.3	+5.5
	SNR=237						
KBL				S	Sb	10 07 29.0	-2.0
KBL	Kabul	5.24	221		Pn	10 06 20.8	+6.0
TNSS	Tian-Shan	5.28	32	eP	Pb	10 06 29.5	+0.4
	comp=Z,690nm,0.6s						
TNSS				eS	Sg	10 07 40.7	-5.9
	comp=Z,981nm,1.0s						
TNSS	Tian-Shan	5.28	32	ePn	Pn	10 06 14.2	-1.3
	baz=31						
TNSS	Tian-Shan	5.28	32	Pg	Pb	10 06 29.5	+0.4
	comp=Z,690nm,0.6s						
TNSS				Lg	Lg	10 07 40.7	
	comp=Z,981nm,1.0s						
AAA	Alma-Ata	5.41	30	eP	Pb	10 06 31.5	+0.4
	comp=Z,1µm,0.9s						
AAA				eS	Sb	10 07 43.3	+7.6
	comp=Z,4µm,1.5s						
AAA	Alma-Ata	5.41	30	ePn	Pn	10 06 15.8	-1.1
	baz=30						
AAA	Alma-Ata	5.41	30	ePN	Pn	10 06 15.8	-1.1
AAA	Alma-Ata	5.41	30	Pg	Pb	10 06 31.5	+0.4
	comp=Z,1µm,0.9s						
AAA				Lg	Lg	10 07 43.3	
	comp=Z,4µm,1.5s						
MDOK	Medeo	5.42	32	eP	Pb	10 06 31.2	-0.3
	comp=Z,567nm,0.9s						
MDOK				eS	Sb	10 07 42.9	+6.7
	comp=Z,3µm,1.5s						
MDOK	Medeo	5.42	32	ePn	Pn	10 06 15.6	-1.7
	baz=31						
MDOK				ePg	Pb	10 06 35.5	+4.1
	baz=31						
MDOK	Medeo	5.42	32	PN	Pn	10 06 17.8	+0.6
MDOK						10 06 33.8	
MDOK	Medeo	5.42	32	⇓Pn	Pn	10 06 17.8	+0.6
	comp=Z,118nm,0.7s						
MDOK				⇓Pg	Pb	10 06 33.8	+2.4
	comp=Z,2µm,1.2s						
MDOK				⇓Lg	Lg	10 07 46.5	
	comp=Z,3µm,1.4s						
MDOK	Medeo	5.42	32	Pg	Pb	10 06 31.2	-0.3
	comp=Z,567nm,0.9s						
MDOK				Lg	Lg	10 07 42.9	
	comp=Z,3µm,1.5s						
KRBS	Karabastau	5.43	20	eP	Pb	10 06 30.6	-0.9
	comp=Z,761nm,0.6s						
KRBS				eS	Sb	10 07 42.7	+6.4
	comp=Z,1µm,1.1s						
KRBS	Karabastau	5.43	20	Pg	Pb	10 06 30.6	-0.9
	comp=Z,761nm,0.6s						
KRBS				Lg	Lg	10 07 42.7	
	comp=Z,1µm,1.1s						
KNDC	Almaty	5.43	31	PN	Pn	10 06 20.1	+2.8
KNDC						10 06 34.2	
KNDC	Almaty	5.43	31	⇓Pn	Pn	10 06 20.2	+2.8
	comp=Z,568nm,0.9s						
KNDC				⇑Pg	Pb	10 06 34.2	+2.6
	comp=Z,3µm,0.9s						
KNDC				⇓Lg	Lg	10 07 45.4	
	comp=Z,17µm,1.5s						
KOTS	Kotyrbulak	5.51	32	eP	Pb	10 06 33.0	+0.1
	comp=Z,863nm,0.7s						
KOTS				eS	Sb	10 07 46.8	+8.2
	comp=Z,3µm,0.7s						
KOTS	Kotyrbulak	5.51	32	Pg	Pb	10 06 33.0	+0.1
	comp=Z,863nm,0.7s						
KOTS				Lg	Lg	10 07 46.8	
	comp=Z,3µm,0.7s						
PRZ	Przheval'sk	5.56	44	PN	Pn	10 06 21.0	+1.9
PRZ	Przheval'sk	5.56	44	Pn	Pn	10 06 21.0	+1.9
KTBS	Karatobe	5.75	26	eP	Pb	10 06 37.9	+0.8
	comp=Z,561nm,1.0s						
KTBS				eS	Sb	10 07 54.4	+8.8
	comp=Z,2µm,0.8s						
KTBS	Karatobe	5.75	26	Pg	Pb	10 06 37.9	+0.8
	comp=Z,561nm,1.0s						
KTBS				Lg	Lg	10 07 54.4	
	comp=Z,2µm,0.8s						
KUU	Kurty	5.80	23	eP	Pb	10 06 37.5	-0.4
	comp=Z,223nm,0.7s						
KUU				eS	Sb	10 07 53.2	+6.3
	comp=Z,3µm,1.9s						
KUU	Kurty	5.80	23	i Pn	Pn	10 06 21.1	-1.3
	baz=23						
KUU	Kurty	5.80	23	i PN	Pn	10 06 21.0	-1.3
KUU	Kurty	5.80	23	Pg	Pb	10 06 37.4	-0.4
	comp=Z,869nm,1.0s						
KUU				Lg	Lg	10 07 53.5	
	comp=Z,3µm,1.4s						
THW	Thamme Wali	5.91	192	P	Pn	10 06 26.7	+2.9
SATY	Saty	5.97	40	eP	Pb	10 06 41.0	+0.3
	comp=Z,1µm,1.0s						
SATY				eS	Sb	10 08 00.4	+8.6
	comp=Z,3µm,1.7s						
SATY	Saty	5.97	40	ePn	Pn	10 06 23.2	-1.5
	baz=40						
SATY	Saty	5.97	40	ePN	Pn	10 06 23.2	-1.5
SATY	Saty	5.97	40	Pg	Pb	10 06 41.0	+0.3
	comp=Z,1µm,1.0s						
SATY				Lg	Lg	10 08 00.4	
	comp=Z,3µm,1.7s						
JMU	Jammu	6.04	166	eP	Pn	10 06 25.0	-0.5
KURS	Kuram	6.17	36	eP	Pb	10 06 45.8	+1.6
	comp=Z,292nm,0.5s						
KURS				eS	Sg	10 08 07.4	-7.9
	comp=Z,1µm,1.5s						
UZB	Uzynbulak	6.35	42	eP	Pb	10 06 49.7	+2.5
	comp=Z,607nm,0.9s						
UZB				eS	Sg	10 08 14.4	-6.4
	comp=Z,1µm,1.4s						
UZB	Uzynbulak	6.35	42	ePn	Pn	10 06 28.5	-1.5
	baz=42						
UZB	Uzynbulak	6.35	42	ePN	Pn	10 06 28.4	-1.5
UZB	Uzynbulak	6.35	42	Pg	Pb	10 06 49.7	+2.5
	comp=Z,607nm,0.9s						
UZB				Lg	Lg	10 08 14.4	
	comp=Z,1µm,1.4s						
KPKS	Kokpek	6.40	39	ePn	Pn	10 06 29.5	-1.2
	comp=Z,27nm,0.6s,baz=39						
KPKS	Kokpek	6.40	39	ePN	Pn	10 06 29.4	-1.2
KPKS				pmax	pmax		
	comp=Z,27nm,0.6s						
BTLS	Baital	6.47	6	eP	Pb	10 06 46.5	-2.7
	comp=Z,218nm,0.6s						
BTLS				eS	Sb	10 08 09.0	+2.8
	comp=Z,628nm,1.4s						
BTLS	Baital	6.47	6	ePn	Pn	10 06 29.6	-1.9
	comp=Z,41nm,0.9s,baz=5.1						
BTLS				ePg	Pb	10 06 54.9	+5.7
	baz=5.1						
BTLS	Baital	6.47	6	ePN	Pn	10 06 29.6	-1.9
BTLS				e		10 06 54.8	
BTLS				pmax	pmax		
	comp=Z,41nm,0.9s						
BTLS	Baital	6.47	6	Pg	Pb	10 06 46.5	-2.7
	comp=Z,218nm,0.6s						
BTLS				Lg	Lg	10 08 09.0	
	comp=Z,628nm,1.4s						
SHLS	Shalkode	6.59	44	eP	Pn	10 06 34.1	+0.8
	comp=Z,48nm,0.9s,baz=46						
SHLS				ePn	Pn	10 06 34.1	+0.8
	baz=46						
SHLS	Shalkode	6.59	44	ePN	Pn	10 06 34.0	+0.8
SHLS				pmax	pmax		
	comp=Z,48nm,0.9s						
ARXS	Arharly	6.61	30	eP	Pb	10 06 53.0	+1.4
	comp=Z,633nm,0.8s						
ARXS				eS	Sb	10 08 20.2	+10
	comp=Z,2µm,1.8s						
ARXS	Arharly	6.61	30	Pg	Pb	10 06 53.0	+1.4
	comp=Z,633nm,0.8s						
ARXS				Lg	Lg	10 08 20.2	
	comp=Z,2µm,1.8s						
SARP	Sargodha	6.67	184	P	Pn	10 06 36.8	+2.5
PDGK	Podgornoye	6.72	43	PN	Pn	10 06 35.2	+0.2
PDGK	Podgornoye	6.72	43	⇑Pn	Pn	10 06 37.1	+2.1
	comp=Z,274nm,0.8s						
PDGK				⇓Pg	Pg	10 07 02.5	-3.4
	comp=Z,768nm,1.3s						
PDGK				⇑Lg	Lg	10 08 32.1	
	comp=Z,2µm,1.2s						
BLB	Baldybastay	6.79	34	Pg	Pb	10 06 57.4	+2.7
BLB				Lg	Lg	10 08 27.6	
DHRM	DHARAMSHALA	6.83	157	eP	Pn	10 06 38.0	+1.3
DHRM				⇑eS	Sn	10 07 57.6	+3.6
DHRM				IAML		10 08 10.3	
	comp=N,2µm,0.7s						
DHRM				IAML		10 08 11.3	
	comp=E,3µm,0.7s						
KTMS	Ketmen	7.27	46	eP	Pb	10 07 09.3	+6.3
	comp=E,400nm,0.8s						
KTMS				eS	Sg	10 08 48.6	-1.8
	comp=E,381nm,0.8s						
KTMS	Ketmen	7.27	46	Pg	Pb	10 07 09.3	+6.3
	comp=E,400nm,0.8s						
KTMS				Lg	Lg	10 08 48.6	
	comp=E,381nm,0.8s						
TDK	Taldyqorghan	7.50	30	ePn	Pn	10 06 43.9	-1.7
	baz=30						
TDK	Taldyqorghan	7.50	30	eP	Pn	10 06 43.8	-1.7
DJR	Jarkent	7.58	39	eP	Pb	10 07 10.6	+2.5
	comp=E,103nm,0.9s						
DJR				eS	Sb	10 08 51.3	+13
	comp=E,587nm,1.5s						
DJR	Jarkent	7.58	39	Pg	Pb	10 07 10.6	+2.5
	comp=E,103nm,0.9s						
DJR				Lg	Lg	10 08 51.3	
	comp=E,587nm,1.5s						
BHK	Bhakra	7.64	159	eP	Pn	10 06 49.1	+1.5
SMLA	Simla	8.14	155	eP	Pn	10 06 55.2	+0.7
SMLA				eS	Sn	10 08 24.9	-1.0
SMLA				IAML		10 08 32.6	
	comp=E,858nm,0.7s						
SMLA				IAML		10 08 33.1	
	comp=N,1µm,0.9s						
KKR	Kurukshetra	9.13	160	eP	Pn	10 07 10.8	+2.8
OTUK	Ortayu	9.66	357	P	Pn	10 07 15.4	+0.2
OTUK	Ortayu	9.66	357	⇓Pn	Pn	10 07 15.4	+0.2
	comp=N,141nm,0.9s						
OTUK				⇑Lg	Lg	10 09 51.7	
	comp=N,2µm,1.3s						
NDI	New Delhi	10.45	160	eP	Pn	10 07 25.9	-0.1
NDI				eS	Sn	10 09 18.4	-4.2
MAKZ	Makanchi	10.45	35	P	Pn	10 07 26.8	+0.8
MAKZ	Makanchi	10.45	35	⇓Pn	Pn	10 07 27.4	+1.4
	comp=N,109nm,0.9s						
MAKZ	Makanchi	10.45	35		Pn	10 07 26.8	+0.8
MK31	Makanchi Array	10.58	36c	iP	Pn	10 07 28.2	+0.4
MK31	Makanchi Array	10.58	36	Pn	Pn	10 07 28.7	+0.9
	comp=N,103nm,0.8s,baz=219,slow=14,SNR=334						
MKAR	Makanchi Array	10.58	36	Pn	Pn	10 07 28.3	+0.5
	comp=N,2.3nm,0.3s,baz=210,slow=14,SNR=76						
MKAR				Lg	Lg	10 10 23.8	
	comp=N,0.7nm,0.3s,baz=213,slow=24,SNR=1.3						
MKAR				LR	LR	10 11 52.6	
	comp=N,14µm,21.1s,baz=72,slow=40						
MKAR	Makanchi Array	10.58	36	i P	Pn	10 07 28.8	+1.0
MKAR				pmax	pmax		
	comp=Z,92nm,0.8s						

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MKAR  Makanchi Array     10.58  36   Pn      Pn      10 07 27.9 +0.1
AYAN  Aya Nagar          10.61 161  eP       Pn      10 07 28.6 +0.2
PTH   Pithoragarh        10.75 145  ePN      Pn      10 07 29.9 -0.4
KUDL  Kundal             10.79 164  eP       Pn      10 07 29.9 -0.8
KUDL                                eS       Sn      10 09 23.9 -7.0
SONA  Sohna              10.82 161⇑eP       Pn      10 07 31.0 -0.2
SONA                                eP       Pn      10 07 31.9 +0.7
SONA                                eS       Sn      10 09 26.4 -5.4
BRZS  Berezniki          11.39 358  eP       Pn      10 07 38.3 -0.5
      comp=Z,31nm,0.8s,baz=358
BRZS  Berezniki          11.39 358  eP       Pn      10 07 38.3 -0.5
BRZS                                 pmax    pmax
      comp=Z,31nm,0.8s
GEYT  Alibeck            11.86 271   Pn      Pn      10 07 44.2 -1.1
      comp=Z,5.3nm,0.3s,baz=96,slow=10,SNR=23
GEYT                                 Sn      Sn      10 09 55.3 -1.9
      comp=Z,7.2nm,0.3s,baz=95,slow=11,SNR=6.9
GEYT                                 Lg      Lg      10 11 15.8
      baz=92,slow=39,SNR=1.5
GEYT                                 LR      LR      10 12 16.0
      comp=Z,7µm,19.8s,baz=85,slow=37
GEYT  Alibeck            11.86 271           Pn      10 07 44.5 -0.8
GYA0B ALIBECK ARRAY      11.86 271  ⇓Pn      Pn      10 07 44.1 -1.3
GYA0B                               ⇓Sn      Sn      10 09 53.8 -3.3
GYA0B ALIBECK ARRAY      11.86 271   Pn      Pn      10 07 44.4 -0.9
WMQ   Urumqi             12.11  60  eP       Pn      10 07 47.8 -1.1
WMQ                                  pP      P       10 07 59.0 -2.5
WMQ                                  S       Sn      10 10 08.5 +5.1
WMQ                                  sS              10 10 15.7
WMQ                                  pmax    pmax
      comp=Z,220nm,1.1s
WMQ                                  LR      LR
      comp=Z,24µm,11.3s
WMQ                                  LR      LR
      comp=Z,14µm,17.1s
WMQ                                  LR      LR
      comp=Z,12µm,19.3s
AJM   Ajmer              12.15 174  eP       Pn      10 07 48.2 -1.2
ZSN   Zaisan             12.29  40  eP       Pn      10 07 49.4 -1.9
      comp=Z,28nm,1.7s,baz=40
ZSN   Zaisan             12.29  40  eP       Pn      10 07 49.4 -1.9
ZSN                                  pmax    pmax
      comp=Z,28nm,1.7s
KURBB Kurchatov Arra     12.61  16   Pn      Pn      10 07 52.7 -2.8
      comp=Z,0.7nm,0.3s,baz=206,slow=12,SNR=40
KURBB                                Sn      Sn      10 10 18.1 +2.8
      comp=Z,0.2nm,0.3s,baz=200,slow=32,SNR=4.0
KURBB                                Lg      Lg      10 11 26.8
      comp=Z,0.5nm,0.3s,baz=207,slow=28,SNR=11
KURK  Kurchatov          12.71  16deP       Pn      10 07 56.4 -0.5
KURK                                 pmax    pmax
      comp=Z,69nm,0.8s
KURK  Kurchatov          12.71  16   P       Pn      10 07 55.5 -1.4
KURK  Kurchatov          12.71  16  ⇑Pn      Pn      10 07 56.0 -1.0
      comp=Z,82nm,1.0s
KURK  Kurchatov          12.71  16   Pn      Pn      10 07 55.5 -1.4
SEM   Semipalatinsk      12.83  21  eP       Pn      10 07 56.8 -2.0
      baz=21
SEM   Semipalatinsk      12.83  21  eP       Pn      10 07 56.7 -2.0
PYUN  Piuthan            13.29 139  eP       Pn      10 08 00.4 -4.8
      comp=Z,523nm,0.8s
DANN  Dangsing           13.50 136  eP       Pn      10 08 02.2 -5.9
      comp=Z,174nm,0.4s
KOLN  Koldanda           13.88 138  eP       Pn      10 08 07.7 -5.4
GKN   Gorkha             14.25 134  eP       Pn      10 08 11.7 -6.6
      comp=Z,270nm,0.6s
AB31  Akbulak array      14.27 323   Pn      Pn      10 08 16.2 -2.0
      comp=Z,92nm,0.5s,baz=130,slow=14,SNR=1599
AB31                                ⇑Sn      Sn      10 10 49.3 -6.6
      comp=Z,447nm,1.2s,baz=127,slow=24,SNR=11
ABKAR Akbulak array      14.27 323   Pn      Pn      10 08 15.2 -2.9
ABKAR Akbulak array      14.27 323   Pn      Pn      10 08 15.3 -2.9
BVAR  Borovoye Array     14.56 353   Pn      Pn      10 08 19.1 -3.0
      comp=Z,3.0nm,0.3s,baz=184,slow=17,SNR=75
BVAR                                 Sn      Sn      10 10 55.9 -6.9
      comp=Z,1.2nm,0.3s,baz=191,slow=22,SNR=2.3
BVAR                                 Lg      Lg      10 12 29.8
      comp=Z,2.4nm,0.3s,baz=170,slow=34,SNR=4.7
BRVK  Borovoye           14.60 353ceP       Pn      10 08 20.1 -2.6
BRVK                                 pmax    pmax
      comp=Z,168nm,1.7s
BRVK  Borovoye           14.60 353   P       Pn      10 08 21.0 -1.7
BRVK  Borovoye           14.60 353   Pn      Pn      10 08 20.7 -1.9
KKN   Kakani             14.78 133  eP       Pn      10 08 18.8 -6.7
      comp=Z,266nm,0.8s
DMN   Daman              14.82 134  eP       Pn      10 08 19.9 -6.2
PKIN  Phulchoki          15.01 133  eP       Pn      10 08 21.5 -7.1
      comp=Z,184nm,0.8s
PKI   Pulchoki           15.02 133  eP       Pn      10 08 21.7 -7.1
      comp=Z,261nm,0.8s
GUN   Gumba              15.04 131  eP       Pn      10 08 22.0 -7.1
      comp=Z,148nm,0.5s
DGZ   Jazzator, Alta     15.07  38ceP       Pn      10 08 28.5 -0.7
DGZ                                  pmax    pmax
      comp=Z,34nm,0.8s
BHUJ  Bhuj               15.59 192  eP       Pn      10 08 34.2 -1.8
BHUJ                               ⇑eS       Sn      10 11 22.9 -5.4
BHUJ                                 IAML            10 11 25.2
      comp=E,189nm,0.8s
BHPL  Bhopal             15.73 165  eP       Pn      10 08 34.7 -3.3
BHPL                                 IAmb    IAmb    10 08 44.7
      comp=Z,74nm,0.7s
AKTO  Aktyubinsk         15.99 323   Pn      Pn      10 08 38.9 -2.1
      comp=Z,5.8nm,0.3s,baz=125,slow=14,SNR=92
AKTO                                 Sn      Sn      10 11 27.8  -10
      comp=Z,2.3nm,0.3s,baz=44,slow=19,SNR=3.7
AKTO                                 Lg      Lg      10 13 29.4
      baz=86,slow=22,SNR=1.1
AKTO                                 LR      LR      10 15 33.0
      comp=Z,5µm,19.9s,baz=146,slow=40
AKTO  Aktyubinsk         15.99 323  ⇑Pn      Pn      10 08 39.5 -1.5
      comp=Z,280nm,0.7s
AKTO                                ⇑Sn      Sn      10 11 32.0 -5.6
      comp=Z,226nm,1.0s
RAMN  Ramite             16.18 132  eP       Pn      10 08 37.2 -6.6
      comp=Z,148nm,0.6s
TAPN  Taplejung          16.55 128  eP       Pn      10 08 42.4 -6.2
      comp=Z,42nm,0.4s
ODAN  Odare              16.71 130  eP       Pn      10 08 44.4 -6.2
      comp=Z,268nm,0.7s
GTK   Tadong             17.13 126  eP       Pn      10 08 52.9 -2.8
GTK                                  IAmb    IAmb    10 09 21.8
      comp=Z,170nm,1.4s
ZAA0  Zalesovo Array     17.30  24   Pn      Pn      10 08 56.6 -0.9
ZAA0                                 IAmb    IAmb    10 09 01.1
      comp=Z,238nm,1.1s
ZALV  Zalesovo Beam      17.30  24   P       Pn      10 08 56.2 -1.3
      comp=Z,4.4nm,0.3s,baz=218,slow=11,SNR=124
ZALV                                 Lg      Lg      10 14 01.8
      comp=Z,0.3nm,0.3s,baz=301,slow=26,SNR=2.2
ZALV                                 LR      LR      10 15 44.1
      comp=Z,7µm,19.0s,baz=340,slow=38
ZALV  Zalesovo Beam      17.30  24  i P      Pn      10 08 56.7 -0.8
ZALV                                 pmax    pmax
      comp=Z,182nm,0.9s
ZALV  Zalesovo Beam      17.30  24   Pn      Pn      10 08 56.6 -0.9
LSA   Lhasa              17.30 115   P       Pn      10 08 56.2 -2.0
LSA                                  S       Sn      10 12 11.0 +0.5
LSA                                  LR      LR
      comp=Z,11µm,7.1s
LSA                                  LR      LR
      comp=Z,8µm,7.1s
LSA                                  LR      LR
      comp=Z,21µm,7.1s
LSA   Lhasa              17.30 115   P       Pn      10 08 56.3 -2.0
LSA                                  pmax    pmax
      comp=Z,64nm,1.1s
LSA   Lhasa              17.30 115           Pn      10 08 56.3 -1.9
BLSP  Bilaspur           18.13 152  eP       Pn      10 09 04.9 -3.1
AKL   Akola              18.14 168⇑eP       Pn      10 09 05.6 -2.6
BOK   Bokaro             18.30 140  eP       Pn      10 09 05.0 -5.2
BOK                                  IAmb    IAmb    10 09 14.3
      comp=Z,83nm,0.7s
BANOM Banah              19.02 233  i P      Pn      10 09 20.8 +1.9
      SNR=6.5
BANOM Banah              19.02 233   P       Pn      10 09 20.1 +1.2
MDH   Madha              19.47 232   P       Pn      10 09 26.1 +1.8
MASF  Masafi             19.51 232   S       S       10 13 02.8 -0.3
MSFE  Esma-Masafi        19.52 232  i P      Pn      10 09 25.8 +0.9
      SNR=7.2
WSAR  Wadi Sarin         19.71 223   P       Pn      10 09 26.8 -0.3
      comp=Z,0.8nm,0.3s,baz=55,slow=11,SNR=10
WSAR  Wadi Sarin         19.71 223   P       Pn      10 09 28.0 +0.9
WSAR                                 S       Sn      10 13 08.5 +0.4
BIDO  Bidbid             19.76 225   P       Pn      10 09 29.0 +1.4
UOSS  Minazif            19.79 231  i P      P       10 09 26.5  0.0
      SNR=7.1
UOSS  Minazif            19.79 231   P       P       10 09 26.6  0.0
UOSS  Minazif            19.79 231   P       Pn      10 09 27.2 -0.9
MAK   Makhachkala        19.89 291  eP       Pn      10 09 30.5 +1.4
MAK                                 eS       Sn      10 13 13.5 +1.4
MAK                                  pmax    pmax
      comp=Z,193nm,1.1s
MAK                                  MLR     MLR
      comp=Z,5µm,10.0s
HATD  Hatta, Dubai       19.92 231   P       Pn      10 09 29.9 +0.3
HATD  Hatta, Dubai       19.92 231   P       Pn      10 09 29.9 +0.3
      SNR=5.4
POO   Poona              20.01 178  eP       P       10 09 26.0 -2.9
POO                                 eP       Pn      10 09 29.0 -1.7
POO                                  IAmb    IAmb    10 09 35.1
      comp=Z,56nm,0.6s
SVE   Sverdlovsk         20.03 340  eP       P       10 09 29.0 +0.1
SVE                                 eS       S       10 13 06.9 -6.2
SVE                                  pmax    pmax
      comp=Z,166nm,1.4s
SVE                                  MLR     MLR
      comp=Z,17µm,11.0s
WBK   Wadi Bani Khal     20.04 221   P       Pn      10 09 32.8 +1.7
      SNR=19
WBK                                  S       Sn      10 13 16.3 +0.2
ASHO  Ashiyiah           20.07 231  i P      P       10 09 30.0 +0.5
      SNR=31
ASHO  Ashiyiah           20.07 231   P       Pn      10 09 30.3 -1.2
      SNR=24
NAZ   Nazwa, Dubai       20.09 233   P       Pn      10 09 31.2 -0.4
NAZ   Nazwa, Dubai       20.09 233   P       Pn      10 09 31.8 +0.2
SMDO  Samad              20.17 224   P       Pn      10 09 33.9 +1.3
      SNR=9.1
SOHO  SOHO               20.20 229   P       P       10 09 31.0 +0.1
JLN   Jalan Bani Buh     20.20 220   P       Pn      10 09 33.8 +0.9
      SNR=34
ARU   Arti               20.31 336   P       P       10 09 31.8  0.0
      comp=Z,11nm,0.4s,baz=161,slow=7.0,SNR=46
ARU                                  S       S       10 13 12.3 -6.3
      comp=Z,2.5nm,0.4s,baz=354,slow=24,SNR=1.5
ARU                                  Lg      Lg      10 15 35.6
      comp=Z,2.4nm,0.3s,baz=293,slow=20,SNR=1.9
ARU                                  LR      LR      10 17 48.5
      comp=Z,10µm,19.9s,baz=173,slow=38
ARU   Arti               20.31 336c iP       P       10 09 32.4 +0.5
ARU                                                  10 09 52.4
ARU                                  S       Sn      10 13 21.3 -0.7
ARU                                  SS      SnSn    10 13 43.1 +6.5
ARU                                  pmax    pmax
      comp=Z,98nm,1.0s
ARU                                  MLR     MLR
      comp=Z,10µm,16.0s
ARU   Arti               20.31 336   P       P       10 09 32.6 +0.7
ARU                                  IAmb    IAmb    10 10 00.3
      comp=Z,205nm,1.1s
SHL   Shillong           20.45 124   P       P       10 09 34.4 +0.6
SHL                                  pmax    pmax
      comp=Z,80nm,0.6s
SHL   Shillong           20.45 124  eP       P       10 09 31.6 -2.2
SHL                                  IAmb    IAmb    10 09 42.2
      comp=Z,54nm,0.6s
SHL   Shillong           20.45 124   P       P       10 09 34.4 +0.6
      SNR=32
SHL   Shillong           20.45 124   P       P       10 09 34.4 +0.6
SHL                                  IAmb    IAmb    10 09 42.1
      comp=Z,80nm,0.6s
ASUD  Al Ashush, Dub     20.56 233   P       Pn      10 09 37.2  0.0
ITAN  ITANAGAR           20.65 117  eP       Pn      10 09 37.0 -1.1
ITAN                                 IAmb    IAmb    10 09 46.8
      comp=Z,139nm,0.7s
JMDO  Jabal Madar        20.70 223   P       Pn      10 09 37.8 -0.9
      SNR=23
GTA   Gaotai             20.70  79  ⇑P       P       10 09 36.7 +0.3
GTA                                  pP      pP      10 09 41.1 -1.9
GTA                                  sP      sP      10 09 44.6 -1.4
GTA                                  pmax    pmax
      comp=Z,60nm,0.9s
GTA                                  pmax    pmax
      comp=Z,2µm,6.9s
GTA                                  LR      LR
      comp=Z,8µm,18.9s
GTA                                  LR      LR
      comp=Z,10µm,19.6s
GTA                                  LR      LR
      comp=Z,15µm,19.6s
ALNE  Al Ain             20.72 231  i P      P       10 09 37.0 +0.4
      SNR=22
ALNE  Al Ain             20.72 231   P       P       10 09 37.1 +0.4
      SNR=10
ARQ   Araqi              20.81 228   P       Pn      10 09 41.3 +1.2
      SNR=13
DDFL  Dedoflistskaro     20.88 286   P       Pn      10 09 42.8 +1.9
BSY   Bisya              20.89 225   P       Pn      10 09 40.7 -0.3
      SNR=14
GROC  Groznyy            21.15 291  eP       P       10 09 42.0 +0.9
GROC                                e                10 10 02.2
GROC                                eS       S       10 13 36.5 +0.9
GROC                                 pmax    pmax
      comp=Z,338nm,1.0s
KAD   Karad              21.23 177  eP       P       10 09 41.0 -1.2
HYB   Hyderabad          21.62 166  i P      P       10 09 45.0 -1.4
HYB                                 eS       Sn      10 13 49.0 -5.1
HYB   Hyderabad          21.62 166  eP       P       10 09 44.9 -1.5
HYB                                  IAmb    IAmb    10 09 51.2
      comp=Z,143nm,1.0s
HYB                                  IAmb    IAmb    10 09 51.7
      comp=N,241nm,1.3s
MOKO  MOKOCHONG          21.72 118⇑eP       P       10 09 47.1 -0.4
MOKO                                 IAmb    IAmb    10 09 54.4
      comp=Z,151nm,0.7s
KOHI  KOHIMA             21.82 120  eP       P       10 09 47.1 -1.6
KOHI                                 IAmb    IAmb    10 09 58.8
      comp=Z,388nm,1.2s
GNI   Garni              22.00 283   P       P       10 09 53.7 +3.3
      comp=Z,118nm,0.9s,baz=169,slow=2.2,SNR=25
GNI   Garni              22.00 283deP       P       10 09 53.1 +2.7
GNI                                  pmax    pmax
      comp=Z,345nm,1.7s
GNI   Garni              22.00 283   P       P       10 09 56.1 +5.7
GNI   Garni              22.00 283   P       P       10 09 53.7 +3.3
LKP   Lekhapani          22.03 114  eP       P       10 09 51.4 +0.7
UMZA  Um Al Zommool      22.09 229   P       P       10 09 51.8 +0.5
GUDG  Gudauri            22.10 289   P       P       10 09 54.6 +3.0
KZRT  Kazreti            22.18 286   P       P       10 09 50.7 -1.5
BELG  Belogornoye        22.45 316   P       P       10 09 53.8 -1.1
      comp=Z,321nm,0.8s,baz=80,slow=0.7,SNR=66
BELG                                 S       S       10 13 59.1 -1.3
      comp=Z,47nm,1.0s,baz=117,slow=20,SNR=1.8
BELG                                 LR      LR      10 19 51.1
      comp=Z,6µm,18.8s,baz=358,slow=40
BELG  Belogornoye        22.45 316d iP       P       10 09 54.2 -0.7
BELG                                 pmax    pmax
      comp=Z,54nm,0.9s
ZEI   Tsey               22.53 290  eP       P       10 09 57.4 +1.3
ZEI                                  pmax    pmax
      comp=Z,19nm,0.7s
NCK   Nalchik            22.77 292⇑eP       P       10 10 00.5 +2.0
NCK                                  pmax    pmax
      comp=Z,96nm,0.8s
AKH   Akhalkalaki        22.86 286  ⇓P       P       10 10 03.8 +4.2
ONI   Oni                22.86 290   P       P       10 10 01.4 +1.9
ONI                                  pmax    pmax
      comp=Z,249nm,0.9s
ONI   Oni                22.86 290   P       P       10 10 01.4 +1.9
UMR   Umm Al-Rimmam      22.88 254  eP       P       10 10 01.5 +1.8
DQM   DQM                23.00 220   P       P       10 10 02.6 +1.5
      SNR=6.3
MIB   Mutribah           23.04 255  eP       P       10 10 03.7 +2.3
KBD   Kabd               23.08 254  eP       P       10 10 04.3 +2.5
QRN   Al-Qurain          23.14 252  eP       P       10 10 05.0 +2.6
KARS  Kars               23.22 285   P       P       10 10 05.5 +2.2
KARS                                 pmax    pmax
      comp=Z,411nm,0.9s
KARS  Kars               23.22 285   P       P       10 10 05.5 +2.2
GOF   Gofitskoye         23.27 296⇑eP       P       10 10 05.8 +2.2
GOF                                  pmax    pmax
      comp=Z,265nm,0.9s
KBZ   Khabaz             23.29 292   P       P       10 10 02.8 -0.9
      comp=Z,3.7nm,0.6s,baz=82,slow=8.6,SNR=13
KBZ                                  S       S       10 14 16.6 +1.5
      comp=Z,5.2nm,0.9s,baz=126,slow=23,SNR=0.8
KBZ                                  LR      LR      10 21 05.7
      comp=Z,6µm,18.3s,baz=85,slow=42
KBZ   Khabaz             23.29 292⇑eP       P       10 10 04.2 +0.5
KBZ                                  pmax    pmax
      comp=Z,42nm,1.1s
SLWR  Sila               23.30 238   P       P       10 10 05.5 +1.5
MOY   Mondy              23.41  47  eP       P       10 10 05.4 +0.4
MOY                                  pmax    pmax
      comp=Z,326nm,2.4s
KVAR  Kislovodsk Arr     23.44 293   P       P       10 10 05.9 +0.4
      comp=Z,18nm,0.9s,baz=259,slow=23,SNR=4.5
KVAR                                 S       S       10 14 17.9 -0.1
      comp=Z,25nm,1.1s,baz=223,slow=16,SNR=1.8
KVAR                                 LR      LR      10 19 32.0
      comp=Z,13µm,21.6s,baz=158,slow=37
RST   Umm Al-Ruwaisa     23.45 255  eP       P       10 10 07.2 +1.8
KIV   Kislovodsk         23.45 293  ⇑P       P       10 10 08.2 +2.7
KIV   Kislovodsk         23.45 293  i P      P       10 10 06.5 +1.0
      SNR=8.2
KIV   Kislovodsk         23.45 293  eP       P       10 10 06.5 +1.0
KIV                                 eS       S       10 14 18.6 +0.6
KIV                                  pmax    pmax
      comp=Z,66nm,1.0s
KIV                                  MLR     MLR
      comp=Z,2µm,14.0s
KIV   Kislovodsk         23.45 293   P       P       10 10 06.0 +0.5
KIV                                  IAmb    IAmb    10 11 01.5
      comp=Z,144nm,1.0s
CHVG  Ch'k'valeri        23.87 290  ⇑P       P       10 10 12.7 +3.2
SIRT  Sirnak             24.18 277   P       P       10 10 15.0 +2.5
BATM  Batumi             24.20 287   P       P       10 10 17.4 +4.9
BCA   Borcka             24.26 287  ⇓P       P       10 10 16.4 +3.2
GURO  Guroymak-BITLI     24.29 280   P       P       10 10 15.9 +2.3
ZAK   Zakamensk          24.32  51  eP       P       10 10 13.7  0.0
ZAK                                  pmax    pmax
      comp=Z,96nm,1.0s
LZH   Lanzhou            24.46  86  eP       P       10 10 16.0 +0.8
LZH                                  sP      sP      10 10 27.0 +1.9
LZH                                  pmax    pmax
      comp=Z,100nm,1.4s
LZH                                  LR      LR
      comp=Z,13µm,15.7s
LZH                                  LR      LR
      comp=Z,12µm,15.2s
LZH                                  LR      LR
      comp=Z,12µm,16.8s
TLY   Talaya             24.95  48   P       P       10 10 19.1 -0.2
      comp=Z,28nm,0.7s,baz=239,slow=11,SNR=4.9
TLY                                  Lg      Lg      10 18 02.2
      comp=Z,1.1nm,0.4s,baz=64,slow=20,SNR=1.3
TLY   Talaya             24.95  48ceP       P       10 10 20.0 +0.7
TLY                                  pmax    pmax
      comp=Z,34nm,0.9s
TLY   Talaya             24.95  48   IAmb    IAmb    10 10 24.2
      comp=Z,40nm,0.8s
KIRV  Kirov              25.19 330   P       P       10 10 21.3  0.0
      comp=Z,43nm,0.6s,baz=13,slow=2.0,SNR=9.4
KIRV                                 Lg      Lg      10 18 12.5
      comp=Z,6.2nm,0.3s,baz=223,slow=22,SNR=1.5
KIRV                                 LR      LR      10 20 40.3
      comp=Z,9µm,18.1s,baz=111,slow=38
KIRV  Kirov              25.19 330ceP       P       10 10 22.0 +0.7
VRH   Novokhopyorsk      25.38 310  eP       P       10 10 22.9 -0.2
VRH                                  pmax    pmax
      comp=Z,100nm,1.1s
VRH                                  MLR     MLR
      comp=Z,5µm,11.0s
IRK   Irkutsk            25.51  48  eP       P       10 10 24.4 +0.1
IRK                                  pmax    pmax
      comp=Z,215nm,2.2s
SHAO  Shalim             25.58 222  i P      P       10 10 26.1 +0.9
      SNR=6.5
SHAO  Shalim             25.58 222   P       P       10 10 26.5 +1.3
      SNR=5.3
SOC   Sochi              25.59 292  eP       P       10 10 24.8 -0.3
SOC                                 eS       S       10 14 51.8 -0.3
SOC                                 eSS      SnSn    10 15 47.4 +1.3
SOC                                 eSSS     SSS     10 16 04.6
SOC                                  pmax    pmax
      comp=Z,35nm,0.6s
SOC                                  MLR     MLR
      comp=Z,3µm,17.0s
SONM  Songino Array      25.74  58   P       P       10 10 26.6  0.0
      comp=Z,48nm,0.9s,baz=271,slow=9.0,SNR=102
SONM                                 Lg      Lg      10 18 29.8
      comp=Z,2.9nm,1.0s,baz=259,slow=30,SNR=2.7
SONM                                 LR      LR      10 21 29.0
      comp=Z,9µm,21.1s,baz=266,slow=39
SONM  Songino Array      25.74  58   P       P       10 10 27.2 +0.6
SONM                                 pmax    pmax
      comp=Z,122nm,1.0s
SONM  Songino Array      25.74  58   P       P       10 10 27.2 +0.6
SONM                                 IAmb    IAmb    10 10 32.8
      comp=Z,122nm,1.0s
DOK   Doka               25.90 225   P       P       10 10 28.5 +0.4
      SNR=23
ULN   Ulaanbaatar        26.19  58c iP       P       10 10 30.9 +0.2
ULN                                  pmax    pmax
      comp=Z,269nm,2.5s
ULN   Ulaanbaatar        26.19  58   P       P       10 10 30.5 -0.2
ULN                                  IAmb    IAmb    10 10 38.4
      comp=Z,83nm,0.9s
CD2   Chengdu            26.19  98   P       P       10 10 31.7 +1.0
CD2                                  S       S       10 15 01.5 -0.4
CD2                                  pmax    pmax
      comp=Z,30nm,0.6s
CD2                                  LR      LR
      comp=N,14µm,16.7s
CD2                                  LR      LR
      comp=E,11µm,20.1s
CD2                                  LR      LR
      comp=Z,8µm,15.2s
CD2   Chengdu            26.19  98⇓iP       P       10 10 31.9 +1.2
CD2                                  pP      pP      10 10 39.1 +1.3
CD2                                  sP      sP      10 10 42.9 +2.4
CD2                                  pmax    pmax
      comp=Z,60nm,1.3s
WHFO  Wadi Hawf          26.66 225   P       P       10 10 34.9 -0.1
      SNR=13
RBK   Rabkut             26.76 224   P       P       10 10 36.7 +0.7
      SNR=12
VORD  Divnogorie         26.79 309  eP       P       10 10 36.8 +0.9
VORD                                 pmax    pmax
      comp=Z,80nm,0.9s
VSR   Storozhevoye       26.93 309  eP       P       10 10 37.6 +0.5
VSR                                  pmax    pmax
      comp=Z,70nm,0.6s
VSR                                  MLR     MLR
      comp=Z,4µm,16.0s
ANN   Anapa              27.24 295⇓eP       P       10 10 39.6 -0.4
ANN                                  pmax    pmax
      comp=Z,114nm,1.0s
ABTO  Aybut              27.38 225   P       P       10 10 41.1 -0.4
      SNR=12
LPSR  Galich'ya Gora     27.45 312  eP       P       10 10 42.6 +0.8
LPSR                                 pmax    pmax
      comp=Z,130nm,1.2s
RAYN  Ar Rayn            27.93 246   P       P       10 10 48.7 +2.3
RAYN  Ar Rayn            27.93 246   P       P       10 10 48.1 +1.7
RAYN                                 pmax    pmax
      comp=Z,44nm,1.0s
RAYN  Ar Rayn            27.93 246   P       P       10 10 48.1 +1.7
RAYN                                 IAmb    IAmb    10 11 00.8
      comp=Z,44nm,1.0s
BTO   Baotou             28.33  74  eP       P       10 10 48.1 -1.9
BTO                                  S       S       10 15 35.3 -0.4
BTO                                  LR      LR
      comp=Z,21µm,14.5s
BTO                                  LR      LR
      comp=Z,18µm,17.1s
KMI   Kunming            28.34 110  ⇑P       P       10 10 51.1 +0.8
KMI                                  pP      pP      10 10 58.7 +1.2
KMI                                  sP      sP      10 11 01.2 +1.1
KMI                                  pmax    pmax
      comp=Z,16nm,1.0s
KMI                                  LR      LR
      comp=Z,5µm,15.4s
KMI                                  LR      LR
      comp=Z,7µm,15.4s
KMI                                  LR      LR
      comp=Z,7µm,19.6s
PRGR  Permogore          28.64 333  eP       P       10 10 52.0 -0.3
PRGR                                e                10 11 45.2
PRGR                                 pmax    pmax
      comp=Z,24nm,0.6s
BNN   Bunyan             28.99 282   P       P       10 10 58.1 +2.2
BNN                                  IAmb    IAmb    10 12 00.7
      comp=Z,80nm,1.2s
SNOP  Sinop              28.99 289   P       P       10 10 57.6 +1.9
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SNOP				IAmb	IAmb	10 11 00.2	
	comp=Z,42nm,0.8s						
DIKM	Dikmen	29.00	288	⇑P	P	10 10 59.2	+3.4
XAN	Xi'an	29.04	88	P	P	10 10 56.4	+0.1
XAN				pP	pP	10 11 03.3	-0.1
XAN				pmax	pmax		
	comp=Z,23nm,0.9s						
XAN				pmax	pmax		
	comp=Z,4µm,12.0s						
XAN				LR	LR		
	comp=Z,6µm,17.0s						
XAN				LR	LR		
	comp=Z,10µm,17.4s						
XAN				LR	LR		
	comp=Z,12µm,21.0s						
MOS	Moscow	29.20	318	eP	P	10 10 57.6	+0.3
MOS				e		10 11 48.8	
MOS				eSS	SS	10 17 13.3	-39
MOS				pmax	pmax		
	comp=Z,138nm,1.4s						
MOS				MLR	MLR		
	comp=Z,6µm,15.0s						
HHC	Hu-ho-hao-te	29.46	73	eP	P	10 11 00.0	0.0
HHC				sP	sP	10 11 10.4	+0.7
HHC				S	S	10 15 59.5	+6.1
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,2µm,4.3s						
HHC				LR	LR		
	comp=Z,5µm,13.9s						
HHC				LR	LR		
	comp=Z,5µm,12.9s						
HHC				LR	LR		
	comp=Z,10µm,16.3s						
OBN	Obninsk	29.55	316	P	P	10 11 01.8	+1.4
	comp=Z,9.5nm,0.5s,baz=111,slow=3.5,SNR=9.5						
OBN	Obninsk	29.55	316	d iP	P	10 11 00.9	+0.5
OBN				i		10 11 04.4	
OBN				i		10 11 54.2	
OBN				pmax	pmax		
	comp=Z,219nm,2.5s						
OBN				MLR	MLR		
	comp=Z,5µm,18.0s						
OBN	Obninsk	29.55	316	P	P	10 11 01.1	+0.7
OBN				IAmb	IAmb	10 11 56.5	
	comp=Z,71nm,0.8s						
SIM	Simferopol'	29.59	295	eP	P	10 11 02.0	+1.0
SIM				pmax	pmax		
	comp=Z,191nm,0.7s						
CHTO	Chiang Mai	29.82	124	P	P	10 11 02.7	-0.6
CHTO				pmax	pmax		
	comp=Z,18nm,0.9s						
CHTO	Chiang Mai	29.82	124	P	P	10 11 02.6	-0.6
CHTO	Chiang Mai	29.82	124	P	P	10 11 05.4	+2.1
BZK	Bozkurt	29.89	289	⇑P	P	10 11 06.8	+3.1
BZK	Bozkurt	29.89	289	P	P	10 11 03.8	+0.1
CMAR	Chiang Mai Arr	30.08	125	P	P	10 11 06.0	+0.4
	comp=Z,1.2nm,0.4s,baz=310,slow=8.5,SNR=9.9						
CMAR	Chiang Mai Arr	30.08	125	iP	P	10 11 06.4	+0.9
CMAR	Chiang Mai Arr	30.08	125	P	P	10 11 05.4	-0.1
BR131	Keskin Array S	30.51	285	P	P	10 11 11.0	+1.7
BR131				pmax	pmax		
	comp=Z,28nm,0.8s						
BR131	Keskin Array S	30.51	285	P	P	10 11 12.3	+3.0
	SNR=9.3						
BR131	Keskin Array S	30.51	285	P	P	10 11 11.0	+1.7
BR131				IAmb	IAmb	10 11 15.6	
	comp=Z,28nm,0.8s						
BRTR	Keskin Array B	30.51	285	P	P	10 11 11.3	+2.0
	comp=Z,14nm,0.8s,baz=100,slow=6.4,SNR=15						
BRTR	Keskin Array B	30.51	285	P	P	10 11 10.5	+1.2
GYA	Guiyang	30.56	103	⇑P	P	10 11 10.5	+0.7
GYA				pmax	pmax		
	comp=Z,19nm,1.2s						
KLMR	Klimovskoe	30.56	328	eP	P	10 11 08.4	-0.9
KLMR				pmax	pmax		
	comp=Z,109nm,1.5s						
KLMR	Klimovskoe	30.56	328	eP	P	10 11 08.5	-0.9
KLMR				AMP		10 11 19.1	
	comp=Z,109nm,1.5s						
TIY	Taiyuan	30.73	79	eP	P	10 11 12.9	+1.7
ENH	Enshi	30.93	94	P	P	10 11 12.0	-1.0
ENH				IAmb	IAmb	10 12 05.9	
	comp=Z,65nm,1.4s						
CIT	Chita	30.98	51	eP	P	10 11 13.0	-0.3
CIT				e		10 12 15.0	
CIT				pmax	pmax		
	comp=Z,185nm,2.0s						
SLVN	Son La	31.50	114	P	P	10 11 18.3	+0.2
NRIK	Noril'sk	31.76	10	P	P	10 11 19.7	-0.1
	comp=Z,55nm,1.0s,baz=196,slow=6.2,SNR=36						
NRIK	Noril'sk	31.76	10	d eP	P	10 11 19.5	-0.3
NRIK				pmax	pmax		
	comp=Z,79nm,1.1s						
NRIK	Noril'sk	31.76	10	P	P	10 11 19.2	-0.7
NRIK				IAmb	IAmb	10 11 22.6	
	comp=Z,78nm,1.1s						
PALK	Pallekele	31.92	166	LR	LR	10 24 36.9	
	comp=Z,8µm,20.6s,baz=101,slow=37						
PALK	Pallekele	31.92	166	P	P	10 11 22.8	+1.0
PALK				pmax	pmax		
	comp=Z,27nm,0.9s						
PALK	Pallekele	31.92	166	P	P	10 11 22.8	+1.0
PALK				IAmb	IAmb	10 11 27.2	
	comp=Z,27nm,0.8s						
LEF	Lefka	32.24	276	⇑P	P	10 11 29.1	+4.7
BOD	Bodaibo	32.63	40	eP	P	10 11 26.7	-0.9
BOD				e		10 21 51.8	
AKASG	Malin Array Be	33.04	306	P	P	10 11 31.5	+0.2
	comp=Z,5.4nm,0.4s,baz=78,slow=7.6,SNR=41						
AKASG	Malin Array Be	33.04	306	P	P	10 11 31.2	-0.1
AKASG				pmax	pmax		
	comp=Z,48nm,1.0s						
AKASG	Malin Array Be	33.04	306	P	P	10 11 31.2	-0.1
AKASG				IAmb	IAmb	10 11 36.4	
	comp=Z,41nm,1.0s						
AKBB	Malin Array Si	33.04	306	P	P	10 11 31.5	+0.2
AKBB				pmax	pmax		
	comp=Z,46nm,0.9s						
AKBB	Malin Array Si	33.04	306	P	P	10 11 31.5	+0.2
AKBB				IAmb	IAmb	10 11 36.5	
	comp=Z,46nm,0.8s						
BJI	Beijing	33.06	74	P	P	10 11 32.5	+0.9
BJI				pmax	pmax		
	comp=Z,27nm,0.7s						
MILM	Milestii Mici	33.24	299	⇑P	P	10 11 34.3	+1.3
JURR	Jurilovca	33.33	295	⇓P	P	10 11 36.1	+2.3
TLCR		33.33	296	⇑P	P	10 11 35.5	+1.6
SORM	Soroca	33.53	301	⇑P	P	10 11 36.5	+1.0
TPGR	Topolog	33.64	295	⇑P	P	10 11 38.2	+1.6
GIUM	Giurgiulesti	33.74	296	⇓P	P	10 11 38.8	+1.5
VLDR	Vladesti	33.80	297	⇑P	P	10 11 40.4	+2.5
CFR	Carcaliu	33.81	296	⇑P	P	10 11 40.1	+2.0
SCTR	Scanteiesti	33.87	297	⇑P	P	10 11 41.3	+2.8
TLBR	Topalu	33.94	295	⇑P	P	10 11 42.0	+2.9
HARR	Harsova	34.00	295	⇑P	P	10 11 42.0	+2.3
TUDR		34.11	297	⇓P	P	10 11 43.5	+2.9
ICOR	Ion Corvin	34.16	294	⇑P	P	10 11 43.5	+2.5
MNK	Minsk	34.29	313	iP	P	10 11 41.1	-1.0
MNK				i		10 12 56.0	
MNK				i		10 14 16.6	
MNK				iS	S	10 17 06.9	-1.2
MNK				iSSS	SSS	10 19 48.1	
MNK				pmax	pmax		
	comp=E,4.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,61nm,0.8s						
MNK				pmax	pmax		
	comp=N,21nm,0.8s						
MNK				MLR	MLR		
	comp=N,2µm,18.0s						
MNK				MLR	MLR		
	comp=Z,4µm,17.0s						
MNK				MLR	MLR		
	comp=E,544nm,17.0s						
ODBI	Odobesti	34.52	297	⇑P	P	10 11 47.0	+2.8
WHN	Wuhan	34.62	91	⇑P	P	10 11 47.0	+1.8
HIA	Hailar	34.68	57	⇓eP	P	10 11 45.9	+0.3
HIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VRI	Vrincioaia	34.74	297	⇑P	P	10 11 48.9	+2.8
TESR	Tescani	34.75	298	⇑P	P	10 11 48.2	+2.0
TIA	Tai'an	34.75	80	⇑P	P	10 11 47.0	+0.7
TIA				pmax	pmax		
	comp=Z,40nm,1.5s						
PLOR	Plostina	34.80	297	⇑P	P	10 11 49.1	+2.4
ISR	Istrita	34.94	296	⇑P	P	10 11 50.2	+2.3
NACGM	Naroch	34.98	313	iP	P	10 11 48.5	+0.5
PRAR	RASCA	34.98	300	⇑P	P	10 11 50.5	+2.3
NEHR	Nehoiu	35.08	297	⇓P	P	10 11 52.4	+3.3
COVR	Voineasa-Covas	35.11	297	⇑P	P	10 11 52.1	+2.7
RAZG	Razgrad	35.16	293	⇑P	P	10 11 52.3	+2.6
MLR	Muntele Rosu	35.32	297	⇑P	P	10 11 54.2	+2.9
MLR	Muntele Rosu	35.32	297	P	P	10 11 53.8	+2.5
MLR				pmax	pmax		
	comp=Z,129nm,0.9s						
MLR	Muntele Rosu	35.32	297	P	P	10 11 53.8	+2.5
BURAR	Bucovina Array	35.65	300	⇓P	P	10 11 56.3	+2.2
BURAR	Bucovina Array	35.65	300	P	P	10 11 55.6	+1.6
BURAR				IAmb	IAmb	10 11 59.7	
	comp=Z,28nm,0.8s						
BUR08	Bucovina Ar. S	35.66	301	P	P	10 11 55.5	+1.4
BUR08				IAmb	IAmb	10 11 59.5	
	comp=Z,27nm,0.8s						
VSU	Vasula	35.67	319	eP	P	10 11 57.0	+3.1
VSU	Vasula	35.67	319	⇑eP	P	10 11 54.7	+0.8
VSU				pmax	pmax		
	comp=Z,124nm,1.2s						
VOIR		35.95	297	⇑P	P	10 11 58.3	+1.7
MTUR	Matau	35.97	296	⇑P	P	10 11 59.9	+3.1
STFAR	Stefanesti-Arg	36.09	296	⇑P	P	10 12 01.0	+3.2
HUMR	Humele	36.12	295	⇑P	P	10 11 59.4	+1.5
LVZ	Lovozero	36.19	336	⇓eP	P	10 11 59.0	+0.7
LVZ				pmax	pmax		
	comp=Z,52nm,0.9s						
LVZ	Lovozero	36.19	336	P	P	10 11 58.6	+0.3
ARR	Arges	36.25	297	⇓P	P	10 12 01.7	+2.5
ARCR	ARCALIA	36.28	300	⇑P	P	10 12 02.1	+2.8
LVV	L'vov	36.35	304	eP	P	10 12 01.4	+1.5
LVV				e		10 13 26.8	
LVV				eS	S	10 17 40.9	+0.9
LVV				MLR	MLR		
	comp=Z,5µm,15.0s						
APA	Apatity	36.40	336	⇓iP	P	10 11 56.4	-3.7
APA				i		10 13 20.0	
APA				MLR	MLR		
	comp=Z,14µm,11.0s						
PABE	Paberze	36.66	314	eP	P	10 12 03.8	+1.5
FIA1	FINESS Array S	36.75	324	P	P	10 12 03.0	-0.1
FIA1				IAmb	IAmb	10 12 04.9	
	comp=Z,37nm,0.7s						
FINES	FINESS Array B	36.76	324	P	P	10 12 02.8	-0.4
	comp=Z,34nm,0.7s,baz=110,slow=8.0,SNR=50						
FINES				LR	LR	10 28 04.0	
	comp=Z,8µm,18.2s,baz=242,slow=38						
FINES	FINESS Array B	36.76	324	P	P	10 12 03.0	-0.1
BMR	Baia Mare	36.81	301	⇑P	P	10 12 06.4	+2.6
CJR	Cluj-Napoca	36.83	299	⇓P	P	10 12 06.8	+2.7
SUW	Suwalki	36.98	311	eP	P	10 12 07.2	+2.0
SUW				ePP	PnPn	10 13 32.3	+2.8
SUW	Suwalki	36.98	311	eP	P	10 12 06.9	+1.7
KWP	Kalwaria Pacla	37.22	304	eP	P	10 12 09.1	+1.8
MTSE	Matsula	37.22	319	eP	P	10 12 08.5	+1.4
QIZ	Qiongzhong	37.26	111	P	P	10 12 10.9	+3.0
QIZ				S	S	10 17 52.3	-2.0
QIZ				LR	LR		
	comp=Z,3µm,19.1s						
QIZ				LR	LR		
	comp=Z,6µm,20.1s						
TRPA	Tarpa	37.42	302	⇑P	P	10 12 11.4	+2.5
TRPA	Tarpa	37.42	302	eP	P	10 12 10.9	+2.0
DRGR		37.42	299	⇑P	P	10 12 11.7	+2.5
DL2	Dalian	37.43	74	P	P	10 12 11.8	+2.6
DL2				pmax	pmax		
	comp=Z,47nm,0.8s						
NJ2	Nanjing	37.53	86	eP	P	10 12 10.2	+0.1
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
KOLS	Kolonicke sedl	37.54	303	eP	P	10 12 12.5	+2.5
KOLS				e		10 13 32.8	
KOLS	Kolonicke sedl	37.54	303	eP	P	10 12 12.5	+2.5
KOLS				ePP	PP	10 13 32.8	-2.8
UZH	Uzhgorod	37.54	302	iP	P	10 12 12.5	+2.5
UZH				e		10 12 24.5	
UZH				e		10 13 40.0	
VTS	Vitosha	37.68	292	⇑P	P	10 12 13.6	+2.1
HERR	Herculane	37.88	296	⇓P	P	10 12 14.5	+1.6
ZAPS	Zavoj	37.99	294	eP	P	10 12 17.1	+3.2
CRVS	Cervenica-Dubn	38.07	303	eP	P	10 12 17.2	+2.7
CRVS	Cervenica-Dubn	38.07	303	eP	P	10 12 17.2	+2.7
ZAGS	Zajecar	38.18	295	eP	P	10 12 17.1	+1.6
SNY	Shenyang	38.18	69	⇑P	P	10 12 16.8	+1.3
SNY				pmax	pmax		
	comp=Z,16nm,0.5s						
SIRR	Siria	38.21	299	⇓P	P	10 12 17.3	+1.6
BOSS	Bosilegrad	38.25	292	eP	P	10 12 18.5	+2.4
MDVR	Moldovita	38.38	296	⇑P	P	10 12 19.2	+2.0
VAY	Valandovo	38.44	291	iP	P	10 12 21.1	+3.4
BOVS	Bovan	38.59	294	⇓P	P	10 12 20.8	+1.9
BOVS	Bovan	38.59	294	eP	P	10 12 20.5	+1.6
STIP	Stip	38.63	291	iP	P	10 12 19.6	+0.2
BARS	Barje	38.67	293	eP	P	10 12 21.3	+1.7
NIE	Niedzica	38.80	304	eP	P	10 12 23.3	+2.6
OJC	Ojcow	39.06	305	eP	P	10 12 24.0	+1.2
OJC	Ojcow	39.06	305	IAmb	IAmb	10 12 28.7	
	comp=Z,63nm,1.0s						
SELS	Selova	39.09	294	eP	P	10 12 25.3	+2.2
CN2	Changchun	39.13	65	eP	P	10 12 19.9	-3.6
CN2				epP	pP	10 12 29.7	-1.0
CN2				esP	sP	10 12 33.8	+0.5
CN2				eS	S	10 18 14.9	-7.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				LR	LR		
	comp=N,4µm,15.0s						
CN2				LR	LR		
	comp=E,7µm,15.0s						
CN2				LR	LR		
	comp=Z,7µm,16.0s						
AGG	Agios Georgios	39.19	287	P	P	10 12 25.9	+1.8
AGG				pmax	pmax		
	comp=Z,25nm,1.0s						
AGG	Agios Georgios	39.19	287	P	P	10 12 25.9	+1.8
PSZ	Piszkesteto	39.20	301	eP	P	10 12 26.1	+2.0
GRUS	Gruza	39.24	295	eP	P	10 12 26.4	+2.0
LANS	Liptovska Anna	39.36	303	eP	P	10 12 29.1	+3.7
LANS	Liptovska Anna	39.36	303	eP	P	10 12 29.1	+3.7
ZEA	Zeya	39.39	49	eP	P	10 12 26.5	+1.0
ZEA				pmax	pmax		
	comp=E,30nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.9s						
TRUS	Trudelj	39.40	296	eP	P	10 12 28.9	+3.2
FNA	Florina	39.44	290	P	P	10 12 27.3	+1.1
FNA				pmax	pmax		
	comp=Z,28nm,1.0s						
FNA	Florina	39.44	290	P	P	10 12 27.3	+1.1
FRGS	Fruska Gora	39.65	297	⇑P	P	10 12 30.1	+2.3
FRGS	Fruska Gora	39.65	297	eP	P	10 12 29.9	+2.1
FRGS	Fruska Gora	39.65	297	eP	P	10 12 29.9	+2.1
IVAS	Ivanjica	39.71	295	eP	P	10 12 29.8	+1.5
DIVS	Divibare	39.72	296	eP	P	10 12 29.9	+1.5
DIVS	Divibare	39.72	296	IAmb	IAmb	10 12 33.8	
	comp=Z,68nm,1.0s						
DIVS	Divibare	39.72	296	eP	P	10 12 30.0	+1.5
BUD	Budapest	39.84	301	eP	P	10 12 31.4	+2.1
VYHS	Vyhne	39.84	302	eP	P	10 12 33.8	+4.4
VYHS	Vyhne	39.84	302	eP	P	10 12 33.8	+4.4
ARA0	ARCESS Array S	39.90	336	eP	P	10 12 30.6	+1.0
ARCES	ARCESS Array B	39.90	336	P	P	10 12 29.5	0.0
	comp=Z,19nm,0.6s,baz=111,slow=8.9,SNR=84						
ARCES				LR	LR	10 29 48.7	
	comp=Z,7µm,19.3s,baz=240,slow=37						
ARCES	ARCESS Array B	39.90	336	P	P	10 12 29.6	0.0
ARCES				pmax	pmax		
	comp=Z,51nm,1.2s						
ARCES	ARCESS Array B	39.90	336	P	P	10 12 29.6	0.0
ARCES				IAmb	IAmb	10 12 37.0	
	comp=Z,51nm,1.1s						
SJES	Sjenica	39.90	294	eP	P	10 12 33.2	+3.2
TEKS	Tekeris	39.96	296	eP	P	10 12 30.6	+0.2
TEKS	Tekeris	39.96	296	eP	P	10 12 31.8	+1.4
OKC	Ostrava-Krasne	40.16	305	eP	P	10 12 36.3	+4.4
OKC				AMS	AMS	10 32 00.0	
	comp=Z,4µm,17.0s						
OKC	Ostrava-Krasne	40.16	305	eP	P	10 12 36.3	+4.4
OKC				MLR	MLR		
	comp=Z,4µm,17.0s						
BBLS	Lazići	40.18	295	eP	P	10 12 35.1	+2.8
BBLS	Lazići	40.18	295	eP	P	10 12 35.3	+3.0
RUDO	Rudo	40.26	295	eP	P	10 12 32.9	+0.1
MORH	Mrgy, Hungar	40.28	299	eP	P	10 12 34.3	+1.3
MORH	Mrgy, Hungar	40.28	299	eP	P	10 12 34.6	+1.6
CSKK	Cskako	40.37	301	eP	P	10 12 36.5	+2.8
KTK1	Kautokeino	40.42	335	eP	P	10 12 34.2	+0.3
HAPS	Han Pijesak,Bl	40.46	296	eP	P	10 12 36.2	+1.6
GKP	Gorka Klasztor	40.50	310	eP	P	10 12 35.8	+1.1
GKP				ePP	PP	10 14 08.8	+0.9
GKP	Gorka Klasztor	40.50	310	eP	P	10 12 36.6	+1.8
MORC	Moravsky Berou	40.55	305	eP	P	10 12 36.9	+1.7
JAVC	Velka Javorina	40.57	303	eP	P	10 12 38.4	+3.0
PDG	Podgorica	40.60	293	eP	P	10 12 36.2	+0.6
UPM	Unac-Piva	40.67	294	eP	P	10 12 38.6	+2.1
KOVH	Kovagotottos	40.68	299	eP	P	10 12 37.6	+1.3
DRME	Dracevica, Mon	40.70	293	eP	P	10 12 38.7	+2.1
SMOL	Smolenice	40.77	303	eP	P	10 12 40.6	+3.6
SMOL	Smolenice	40.77	303	eP	P	10 12 40.6	+3.6
MPLH	Magyarpolny	40.88	301	eP	P	10 12 39.0	+1.0
MODS	Modra-Piesok	40.89	302	eP	P	10 12 43.0	+5.0
MODS	Modra-Piesok	40.89	302	eP	P	10 12 43.0	+5.0
HAMF	Hammerfest	40.93	337	eP	P	10 12 39.3	+1.2
KRLC	Kraliky	41.01	305	eP	P	10 12 40.9	+1.9
KRLC				AMS	AMS	10 32 00.0	
	comp=Z,4µm,15.2s						
KRLC	Kraliky	41.01	305	eP	P	10 12 40.9	+1.9
KRLC				MLR	MLR		
	comp=Z,4µm,15.2s						
HCY	Herceg Novi	41.14	293	eP	P	10 12 41.4	+1.3
TREB	Trebinje	41.18	294	eP	P	10 12 41.6	+1.1
VRAC	Vranov	41.22	304	⇑P	P	10 12 42.5	+1.8
VRAC	Vranov	41.22	304	eP	P	10 12 42.0	+1.3
KSP	Ksiaz	41.24	306	eP	P	10 12 41.7	+0.8
YAK	Yakutsk	41.26	37	P	P	10 12 40.1	-0.7
	comp=Z,12nm,0.4s,baz=226,slow=2.8,SNR=9.7						
YAK	Yakutsk	41.26	37	eP	P	10 12 39.9	-0.9
YAK				e*PP	pP	10 12 47.9	+0.1
YAK				e		10 14 23.8	
YAK				e		10 14 40.1	
YAK				eS	S	10 18 48.3	-5.2
YAK				pmax	pmax		
	comp=Z,41nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,3µm,11.7s						
YAK				pmax	pmax		
	comp=E,146nm,2.8s						
YAK				smax	smax		
	comp=E,147nm,2.2s						
YAK				smax	smax		
	comp=N,494nm,4.1s						
YAK				MLR	MLR		
	comp=Z,5µm,12.0s						
YAK				MLR	MLR		
	comp=N,3µm,11.0s						
YAK				MLR	MLR		
	comp=E,4µm,11.0s						
YAK	Yakutsk	41.26	37	P	P	10 12 40.6	-0.2
DPC	Dobruska-Polom	41.27	306	eP	P	10 12 42.7	+1.5
DPC				AMS	AMS	10 32 10.0	
	comp=E,6µm,20.8s						
DPC	Dobruska-Polom	41.27	306	eP	P	10 12 42.7	+1.5
DPC				MLR	MLR		
	comp=Z,6µm,20.8s						
BLEU	Blekinge	41.29	315	iP	P	10 12 42.1	+1.0
OSTC	Ostas	41.32	306	eP	P	10 12 43.8	+2.3
KRUC	Moravsky	41.38	304	eP	P	10 12 44.1	+2.1
CHVC	Chvalec	41.42	306	eP	P	10 12 44.0	+1.6
CHVC				AMS	AMS	10 30 40.0	
	comp=Z,6µm,19.4s						
TPTI		41.43	142	P	P	10 12 40.2	-2.5
	comp=Z,18nm,1.0s						
UPC	Upice	41.45	306	eP	P	10 12 44.4	+1.8
UPC				AMS	AMS	10 30 40.0	
	comp=Z,6µm,17.1s						
UPC	Upice	41.45	306	eP	P	10 12 44.4	+1.8
UPC				MLR	MLR		
	comp=Z,6µm,17.1s						
SOP	Sopron	41.47	302	eP	P	10 12 44.1	+1.4
JETT	Jettan, Norway	41.56	335	eP	P	10 12 45.2	+2.0
BLY	Banja Luka	41.56	297	eP	P	10 12 45.1	+1.5
STON	Ston	41.61	294	eP	P	10 12 45.0	+1.1
STON	Ston	41.61	294	P	P	10 12 44.7	+0.8
INCN	Inchon	41.62	74	P	P	10 12 43.2	-1.0
INCN				pmax	pmax		
	comp=Z,40nm,0.7s						
INCN	Inchon	41.62	74	P	P	10 12 43.1	-1.0
INCN				IAmb	IAmb	10 12 46.6	
	comp=Z,40nm,0.7s						
INCN	Inchon	41.62	74	P	P	10 12 44.2	0.0
MGRS	Mrkonjic Grad	41.70	297	eP	P	10 12 46.8	+2.0
BSD	Bornholm Skovb	41.81	313	iP	P	10 12 46.2	+0.8
RICI	Ricice	41.87	295	P	P	10 12 45.7	-0.4
CONA	Conrad Observa	41.89	302	iP	P	10 12 48.0	+1.7
	comp=Z,42nm,1.1s,SNR=18						
CONA				eP	PcP	10 14 40.8	-1.0
	comp=Z,33nm,1.4s						
MDJ	Mudanjiang	41.89	63	P	P	10 12 47.5	+1.2
MDJ				sP	sP	10 12 59.3	+3.2
MDJ				PcS	PcS	10 18 37.4	+4.2
MDJ				S	S	10 19 01.7	-1.7
MDJ				ScS	ScS	10 22 47.8	-0.3
MDJ				pmax	pmax		
	comp=Z,21nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,3µm,11.8s						
MDJ				LR	LR		
	comp=Z,3µm,18.1s						
MDJ				LR	LR		
	comp=Z,2µm,10.4s						
MDJ				LR	LR		
	comp=Z,6µm,17.4s						
MDJ	Mudanjiang	41.89	63	P	P	10 12 48.5	+2.2
TREC	Trest	41.94	304	eP	P	10 12 51.0	+4.4
TREC				AMS	AMS	10 31 00.0	
	comp=Z,5µm,19.8s						
TREC	Trest	41.94	304	eP	P	10 12 51.0	+4.4
TREC				MLR	MLR		
	comp=Z,5µm,19.8s						
MAKA	Makarska	42.00	295	P	P	10 12 46.0	-1.1
TRO	Tromso	42.07	335	eP	P	10 12 49.8	+2.4
LSTV	Lastovo	42.21	294	P	P	10 12 47.3	-1.6
ARSA	Arzberg	42.23	301	eP	P	10 12 50.4	+1.4
	comp=Z,17nm,1.1s						
ARSA				eP	PcP	10 14 37.1	-5.7
	comp=Z,12nm,0.9s						
IPM	Ipoh	42.36	136	P	P	10 12 49.6	-0.8
IPM	Ipoh	42.36	136	P	P	10 12 50.2	-0.2
DEL	Delary	42.37	315	iP	P	10 12 50.5	+0.5
PVCC	Panska Ves	42.37	306	eP	P	10 12 51.8	+1.7
PVCC				AMS	AMS	10 33 20.0	
	comp=Z,5µm,18.0s						
PVCC	Panska Ves	42.37	306	eP	P	10 12 51.8	+1.7
PVCC				MLR	MLR		
	comp=Z,5µm,18.0s						
HVAR	Hvar	42.43	295	P	P	10 12 49.0	-1.7
PRU	Pruhonice	42.45	305	eP	P	10 12 51.5	+0.7
PRU				AMS	AMS	10 31 10.0	
	comp=Z,6µm,20.9s						
PRU	Pruhonice	42.45	305	eP	P	10 12 51.5	+0.7
PRU				MLR	MLR		
	comp=Z,6µm,20.9s						
KLR	Kul'dur	42.53	56	P	P	10 12 51.0	-0.4
	comp=Z,9.8nm,0.6s,baz=279,slow=8.1,SNR=37						
KLR	Kul'dur	42.53	56	⇓eP	P	10 12 51.5	+0.1
KLR				pmax	pmax		
	comp=Z,26nm,1.5s						
TJN	Taejon	42.53	75	⇓eP	P	10 12 51.0	-0.6
CRES	Cresnjev	42.54	299	eP	P	10 12 54.0	+2.4
KS19	Wonju Array Si	42.54	74	IAmb	IAmb	10 13 05.3	
	comp=Z,126nm,1.9s						
KSAR	Wonju Array Be	42.57	74	P	P	10 12 51.9	0.0
KSAR	Wonju Array Be	42.57	74	P	P	10 12 51.9	0.0
KSRS	Korea Array	42.60	74	P	P	10 12 51.4	-0.7
	comp=Z,8.2nm,0.7s,baz=286,slow=7.8,SNR=22						
KSRS				PcP	PcP	10 14 44.6	+0.5
	comp=Z,5.6nm,0.9s,baz=283,slow=3.1,SNR=5.9						
SOKA	Soboth	42.66	300	iP	P	10 12 54.0	+1.3

	comp=Z,28nm,0.9s,SNR=17						
BRG	Berggiesshubel	42.72	307	eP	P	10 12 54.4	+1.5
	comp=Z,36nm,1.2s,baz=81,slow=7.9						
BRG	Berggiesshubel	42.72	307	⇑iP	P	10 12 54.8	+1.9
BRG				Amp		10 12 58.0	
	comp=Z,31nm,0.9s						
RGN	Rugen	42.76	312	eP	P	10 12 54.7	+1.5
	comp=Z,109nm,0.8s,baz=81,slow=7.9						
FAUS	Fauske	42.77	331	eP	P	10 12 54.1	+1.0
CKRC	Cesky Krumlov	42.77	304	eP	P	10 12 58.1	+4.7
MORI	Morici	42.79	296	P	P	10 12 53.3	-0.3
BJUU	Bjuv	42.85	314	eP	P	10 12 54.6	+0.7
ZIRJ	Zirje	42.88	296	P	P	10 12 52.4	-2.0
BORU	Boraas	42.95	317	eP	P	10 12 54.6	-0.1
MOA	Molln	42.96	302	eP	P	10 12 56.1	+1.1
	comp=Z,5.7nm,0.9s						
MOA				eP	PcP	10 14 42.3	-2.9
	comp=Z,12nm,1.0s						
SSLB	Suanglung	42.99	96	P	P	10 12 55.9	+0.4
SSLB	Suanglung	42.99	96	P	P	10 12 57.3	+1.8
FABU	Falkenberg	42.99	316	eP	P	10 12 56.0	+1.0
OBKA	Obir	43.02	300	i P	P	10 12 57.5	+2.0
	comp=Z,25nm,1.1s,SNR=8.2						
FBE	Freiberg	43.08	307	eP	P	10 12 57.6	+1.7
	comp=Z,52nm,0.8s,baz=81,slow=7.9						
LJU	Ljubljana	43.13	300	eP	P	10 12 57.1	+0.8
GEC2	GERESS Array S	43.16	304	eP	P	10 12 58.5	+1.8
	comp=Z,30nm,1.1s,baz=81,slow=7.9						
GERES	GERESS Array B	43.16	304	P	P	10 12 57.5	+0.8
	comp=Z,12nm,0.8s,baz=64,slow=6.7,SNR=33						
GERES	GERESS Array B	43.16	304	P	P	10 12 58.7	+2.0
GERES	GERESS Array B	43.16	304	P	P	10 12 58.7	+2.0
TIXI	Tiksi	43.18	22	P	P	10 12 55.3	-1.1
	comp=Z,29nm,0.6s,baz=266,slow=5.2,SNR=62						
TIXI	Tiksi	43.18	22	⇓eP	P	10 12 55.4	-1.0
TIXI				pmax	pmax		
	comp=Z,36nm,0.8s						
TIXI	Tiksi	43.18	22	P	P	10 12 55.2	-1.1
TIXI				IAmb	IAmb	10 12 57.8	
	comp=Z,33nm,0.7s						
KHC	Kasperske Hory	43.20	304	eP	P	10 12 58.6	+1.7
KHC				ex	x	10 13 13.0	
KHC				AMS	AMS	10 32 00.0	
	comp=Z,6µm,17.6s						
KHC	Kasperske Hory	43.20	304	⇓eP	P	10 12 58.3	+1.4
KHC				pmax	pmax		
	comp=Z,52nm,0.8s						
DUGI	Dugi Otok	43.22	296	P	P	10 12 57.2	+0.2
CLL	Collm	43.25	307	i P	P	10 12 58.0	+0.8
CLL				pmax	pmax		
	comp=Z,25nm,0.8s						
CLL				MLR	MLR		
	comp=Z,3µm,19.9s						
CLL	Collm	43.25	307	i P	P	10 12 58.0	+0.8
	comp=Z,25nm,0.8s						
CLL				LmV		10 31 00.0	
	comp=Z,3µm,19.9s						
CLL	Collm	43.25	307	eP	P	10 12 58.2	+0.9
	comp=Z,27nm,1.0s,baz=81,slow=7.9						
CEY	Cerknica	43.26	299	eP	P	10 12 58.5	+1.1
NBB30	Finnes	43.28	330	eP	P	10 12 58.2	+1.0
SGRT	San Giovanni R	43.30	293	IAmb	IAmb	10 13 02.2	
	comp=Z,73nm,0.8s						
GSI	Gunungsitoli	43.33	143	P	P	10 12 58.5	+0.3
	comp=Z,92nm,0.9s						
GSI	Gunungsitoli	43.33	143	IAmb	IAmb	10 13 07.2	
	comp=Z,66nm,0.9s						
GSI	Gunungsitoli	43.33	143	P	P	10 12 59.2	+1.0
NBB13	Alf Garage	43.38	330	eP	P	10 12 59.3	+1.3
ONAU	Onsala	43.41	316	eP	P	10 12 59.7	+1.3
KONS	Konsvik	43.45	330	eP	P	10 12 59.6	+1.1
NBB40	Tonnes	43.49	330	eP	P	10 13 00.7	+1.7
LOF	Lofoten	43.58	332	eP	P	10 13 01.0	+1.5
NC602	NORSAR Array S	43.61	321	eP	P	10 13 00.6	+0.6
MYKA	Terra Mystica	43.61	301	eP	P	10 13 02.7	+2.4
	comp=Z,16nm,0.9s						
WET	Wettzell	43.65	304	eP	P	10 13 02.2	+1.6
	comp=Z,24nm,0.9s,baz=81,slow=7.9						
USRK	Ussuriysk Ar.	43.66	63	P	P	10 12 59.8	-0.8
	comp=Z,11nm,0.9s,baz=263,slow=8.6,SNR=14						
USRK	Ussuriysk Ar.	43.66	63	P	P	10 13 00.4	-0.2
USRK	Ussuriysk Ar.	43.66	63	P	P	10 13 00.3	-0.2
NSS	Namsos	43.66	327	eP	P	10 12 60.0	-0.3
NC303	NORSAR Array S	43.71	322	P	P	10 13 00.6	-0.1
NC303				IAmb	IAmb	10 13 02.8	
	comp=Z,58nm,0.7s						
TANN	Tannenbergstha	43.72	306	eP	P	10 13 02.5	+1.4
	comp=Z,20nm,1.1s,baz=81,slow=7.9						
KBA	Koelnbreinsper	43.72	301	i P	P	10 13 04.3	+3.0
	comp=Z,18nm,0.9s,SNR=5.2						
KBA				eP	PP	10 14 44.1	+1.1
	comp=Z,10nm,1.1s						
STRU	Stroemstad	43.77	319	i P	P	10 13 03.1	+1.8
NB2	NORSAR Subarra	43.78	322	P	P	10 13 01.7	+0.3
	comp=Z,17nm,0.6s,baz=90,slow=7.9						
NB2	NORSAR Subarra	43.78	322	P	P	10 13 01.7	+0.3
	baz=90,slow=7.9						
NOA	NORSAR Array B	43.78	322	P	P	10 13 01.2	-0.2
	comp=Z,24nm,0.7s,baz=92,slow=7.9,SNR=72						
NOA				LR	LR	10 32 01.9	
	comp=Z,3µm,19.7s,baz=225,slow=37						
WERN	Wernitzgruen	43.79	306	eP	P	10 13 03.9	+2.3
	comp=Z,33nm,1.6s,baz=81,slow=7.9						
BJO1	Bjornoya	43.80	342	eP	P	10 13 03.6	+2.3
GUNZ	Gunzen	43.81	306	eP	P	10 13 03.3	+1.5
	comp=Z,20nm,1.1s,baz=81,slow=7.9						
WERD	Werda	43.81	306	eP	P	10 13 03.1	+1.3
	comp=Z,30nm,1.2s,baz=81,slow=7.9						
VLA	Vladivostok	43.85	65	⇓eP	P	10 13 01.6	-0.6
VLA				pmax	pmax		
	comp=Z,58nm,1.0s						
PLN	Plauen	43.90	306	eP	P	10 13 03.8	+1.3
	comp=Z,15nm,0.8s,baz=81,slow=7.9						
BRJN	Brijuni	43.91	298	P	P	10 12 59.4	-3.2
NAO01	NORSAR Array S	43.93	321	P	P	10 13 02.6	0.0
RJOB	Jochberg	43.96	302	eP	P	10 13 05.5	+2.5
	comp=Z,26nm,1.4s,baz=81,slow=7.9						
ROTZ	Rotzenmuhle	43.98	305	eP	P	10 13 06.3	+3.2
	comp=Z,11nm,1.7s,baz=81,slow=7.9						
NC204	NORSAR Array S	44.00	322	P	P	10 13 02.6	-0.6
NC204				IAmb	IAmb	10 13 35.8	
	comp=Z,102nm,1.2s						
OSL	Oslo	44.00	320	eP	P	10 13 05.6	+2.5
NEUB	Neuenburg	44.03	307	eP	P	10 13 04.7	+1.2
	comp=Z,42nm,1.0s,baz=81,slow=7.9						
FLTG	Flechtingen	44.21	309	eP	P	10 13 05.6	+0.7
	comp=Z,49nm,0.8s,baz=81,slow=7.9						
MOX	Moxa	44.22	307	eP	P	10 13 06.4	+1.4
	comp=Z,31nm,1.1s,baz=81,slow=7.9						
TBLU	Trondheim	44.31	325	eP	P	10 13 06.3	+0.7
ABTA	Abfaltersbach	44.35	301	eP	P	10 13 09.0	+2.8
	comp=Z,15nm,0.9s						
ABTA				eP	PcP	10 14 52.5	+2.5
	comp=Z,14nm,1.2s						
BSEG	Bad Segeberg	44.57	311	eP	P	10 13 09.3	+1.6
	comp=Z,35nm,0.7s,baz=81,slow=7.9						
KONO	Kongsberg	44.58	320	P	P	10 13 08.0	+0.3
KONO				pmax	pmax		
	comp=Z,167nm,1.9s						
KONO	Kongsberg	44.58	320	eP	P	10 13 08.4	+0.7
KONO	Kongsberg	44.58	320	P	P	10 13 08.0	+0.3
GRF	Grafenberg Arr	44.62	305	eP	P	10 13 10.6	+2.3
	comp=Z,38nm,0.8s,baz=81,slow=7.9						
GRFO	Grafenberg	44.62	305	P	P	10 13 09.9	+1.6
GRFO				pmax	pmax		
	comp=Z,42nm,0.9s						
GRFO	Grafenberg	44.62	305	P	P	10 13 09.9	+1.6
GRFO				IAmb	IAmb	10 13 21.1	
	comp=Z,42nm,0.9s						
MNSI	Mandailing Nat	44.74	141	P	P	10 13 08.0	-1.5
	comp=Z,7µmcomp=Z,101nm,0.8s						
CLZ	Clausthal	44.81	308	eP	P	10 13 11.1	+1.3
	comp=Z,41nm,1.4s,baz=81,slow=7.9						
WTTA	Wattenberg	44.82	302	i P	P	10 13 11.3	+1.1
	comp=Z,27nm,1.1s,SNR=6.4						
WTTA				eP	PcP	10 14 53.1	+1.3
	comp=Z,15nm,1.1s						
DOMB	Dombas	44.83	323	eP	P	10 13 10.6	+0.8
WATA	Walderalm	44.85	302	i P	P	10 13 11.7	+1.5
	comp=Z,30nm,1.3s,SNR=7.9						
WATA				eP	PP	10 14 55.7	+0.8
	comp=Z,25nm,1.5s						
NRDL	Niedersach Rie	44.87	309	eP	P	10 13 11.9	+1.8
	comp=Z,47nm,1.0s,baz=81,slow=7.9						
NRCA	Norcia	44.88	295	IAmb	IAmb	10 13 19.5	
	comp=Z,50nm,0.9s						
CTI	Castel Tesino	45.09	300	P	P	10 13 12.6	+0.5
CTI				pmax	pmax		
	comp=Z,20nm,0.9s						
CTI	Castel Tesino	45.09	300	P	P	10 13 12.6	+0.5
GTTG	Gottingen	45.10	308	eP	P	10 13 13.7	+1.6
	comp=Z,96nm,1.1s,baz=81,slow=7.9						
SQTA	Sankt Quirin	45.12	302	eP	P	10 13 16.0	+3.6
	comp=Z,15nm,0.9s						
MOTA	Moosalm	45.16	302	i P	P	10 13 13.8	+1.1
	comp=Z,24nm,0.9s,SNR=8.8						
MOTA				eP	PcP	10 14 54.9	+1.9
	comp=Z,7.1nm,0.9s						
MURB	Monte Urbino	45.18	296	P	P	10 13 15.0	+2.2
SKAR	Skarslia	45.20	321	eP	P	10 13 14.0	+1.2
UBBA	Unterbreizbach	45.20	307	eP	P	10 13 13.6	+0.9
	comp=Z,10nm,0.9s,baz=81,slow=7.9						
RETA	Reutte	45.36	302	eP	P	10 13 17.5	+3.2
	comp=Z,16nm,1.3s						
RETA				eP	PcP	10 14 53.3	-0.2
	comp=Z,0.4nm,0.3s						
FETA	Feichten	45.48	302	eP	P	10 13 15.6	+0.3
	comp=Z,13nm,1.2s						
FETA				eP	PcP	10 14 56.0	+1.9
	comp=Z,10nm,0.9s						
MOL	Molde	45.54	324	eP	P	10 13 16.5	+1.2
UBR	Ueberruh	45.74	303	eP	P	10 13 18.3	+1.0
	comp=Z,63nm,1.2s,baz=81,slow=7.9						
SPA0	Spitsbergen Ar	45.86	346	eP	P	10 13 18.9	+1.1
SPITS	Spitsbergen Ar	45.86	346	P	P	10 13 19.2	+1.4
	comp=Z,16nm,0.6s,baz=102,slow=6.1,SNR=13						
SPITS	Spitsbergen Ar	45.86	346	P	P	10 13 18.3	+0.6
SPITS				pmax	pmax		
	comp=Z,101nm,1.3s						
HLG	Helgoland	45.96	312	eP	P	10 13 20.2	+1.5
	comp=Z,154nm,1.0s,baz=81,slow=7.9						
DAVA	Damuels	45.98	302	i P	P	10 13 20.0	+0.7
	comp=Z,22nm,0.7s,SNR=13						
DAVA				eP	PcP	10 14 56.3	+0.5
	comp=Z,12nm,0.8s						
OSSC	Osservatorio P	46.01	297	P	P	10 13 21.3	+1.9
OSSC				IAmb	IAmb	10 13 24.2	
	comp=Z,51nm,0.9s						
TNS	Taunus Mts	46.28	307	eP	P	10 13 23.2	+1.7
	comp=Z,14nm,0.8s,baz=81,slow=7.9						
IBBN	Ibbenburen	46.33	309	eP	P	10 13 23.0	+1.3
	comp=Z,36nm,0.9s,baz=81,slow=7.9						
SISI	Saibi	46.35	143	P	P	10 13 22.7	+0.5
	comp=Z,19nm,1.0s						
JNU	Nakatsue	46.43	78	P	P	10 13 22.4	-0.5
	comp=Z,46nm,0.9s,baz=322,slow=5.7,SNR=8.7						
JNU	Nakatsue	46.43	78	P	P	10 13 23.4	+0.5
PDSI	Padang	46.65	141	P	P	10 13 22.7	-2.0
	comp=Z,55nm,1.0s						
BFO	Black Forest	46.76	304	P	P	10 13 26.1	+0.9
BFO				pmax	pmax		
	comp=Z,23nm,1.1s						
BFO	Black Forest	46.76	304	eP	P	10 13 26.0	+0.7
	comp=Z,28nm,1.2s,baz=81,slow=7.9						
BFO	Black Forest	46.76	304	P	P	10 13 26.1	+0.9
BFO				IAmb	IAmb	10 13 32.2	
	comp=Z,23nm,1.1s						
BUG	Bochum--Univer	46.78	308	eP	P	10 13 26.7	+1.5
	comp=Z,30nm,0.9s,baz=81,slow=7.9						
KBS	Kingsbay	46.96	347	⇑eP	P	10 13 27.9	+1.6
KBS				pmax	pmax		
	comp=Z,168nm,2.5s						
KBS	Kingsbay	46.96	347	i P	P	10 13 27.2	+0.8
KBS	Kingsbay	46.96	347	eP	P	10 13 27.1	+0.8
KBS	Kingsbay	46.96	347	P	P	10 13 27.3	+1.0
AHRW	Bad Neuenahr-A	47.08	307	eP	P	10 13 29.2	+1.6
	comp=Z,31nm,0.8s,baz=81,slow=7.9						
JOW	Kunigami	47.20	87	P	P	10 13 28.2	-0.6
	comp=Z,24nm,0.5s,baz=243,slow=9.0,SNR=2.4						
JHS	Saijyo	47.40	75	IAmb	IAmb	10 13 34.8	
	comp=Z,42nm,0.9s						
BTNL	Ternell	47.66	307	dP	P	10 13 33.6	+1.4
	comp=Z,25nm,1.1s						
MEM	Membach	47.73	307	dP	P	10 13 33.4	+0.7
BHOU	Houvegnez	47.79	307	dP	P	10 13 35.0	+1.9
	comp=Z,17nm,1.1s						
BHOU				dPP	PP	10 15 25.8	+1.0
WLF	Walferdange	47.85	306	dP	P	10 13 35.7	+2.0
	comp=Z,29nm,1.0s						
WLF	Walferdange	47.85	306	eP	P	10 13 35.4	+1.8
	comp=Z,33nm,0.9s,baz=81,slow=7.9						
WLF	Walferdange	47.85	306	IAmb	IAmb	10 13 41.2	
	comp=Z,34nm,0.9s						
SENIN	Lac Senin/Sane	47.93	302	IAmb	IAmb	10 13 47.6	
	comp=Z,23nm,0.8s						
KRJI	Kerinci	48.16	141	P	P	10 13 35.9	-0.6
BCLA	Clavier	48.21	307	dP	P	10 13 37.7	+1.3
	comp=Z,14nm,1.0s						
BCLA				dPP	PP	10 15 31.2	+2.6
RCHB	Rochefort	48.32	307	dP	P	10 13 38.8	+1.6
	comp=Z,16nm,0.8s						
RCHB				dpP	pP	10 13 45.3	+1.0
RCHB				dPcP	PcP	10 15 05.8	+2.0
BGES	Gesves	48.35	307	dP	P	10 13 38.6	+1.0
	comp=Z,17nm,0.9s						
DSRI	Dabo	48.43	136	P	P	10 13 36.7	-1.7
	comp=Z,24nm,1.2s						
JMN	Monobe	48.48	76	IAmb	IAmb	10 13 47.0	
	comp=Z,43nm,1.0s						
BMRD	Maredsous	48.57	307	dP	P	10 13 41.1	+1.9
	comp=Z,22nm,1.0s						
DOU	Dourbes	48.73	307	dP	P	10 13 41.8	+1.4
DOU				dpP	pP	10 13 48.3	+0.7
DOU				dsP	sP	10 13 51.2	+0.7
SNF	Seneffe	48.82	308	dP	P	10 13 42.8	+1.7
	comp=Z,23nm,0.7s						
JWT	Wachi	49.01	74	P	P	10 13 43.7	+0.9
LODK	Lodwar	49.09	234	P	P	10 13 44.5	+0.8
	SNR=7.1						
LODK	Lodwar	49.09	234	P	P	10 13 43.8	+0.1
TYV	Tymovskoe	49.11	52	eP	P	10 13 50.2	+6.9
TYV				eS	S	10 20 59.1	+12
TYV				pmax	pmax		
	comp=Z,19nm,1.0s						
TYV				pmax	pmax		
	comp=Z,900nm,4.1s						
UGL	Uglegorsk	49.18	54	eP	P	10 13 41.2	-2.7
UGL				eS	S	10 20 40.8	-7.6
UGL				smax	smax		
	comp=E,4µm,16.0s						
UGL				smax	smax		
	comp=N,3µm,15.0s						
UGL				MLR	MLR		
	comp=E,6µm,18.0s						
UGL				MLR	MLR		
	comp=Z,6µm,16.0s						
MASI	Maura Aman, Be	49.46	140	P	P	10 13 42.7	-3.7
	comp=Z,236µmcomp=Z,5µmcomp=Z,78nm,0.8s						
KEST	Kesra	50.03	288	P	P	10 13 49.3	-1.4
	comp=Z,7.4nm,0.8s,baz=2.4,slow=3.7,SNR=3.4						
KEST	Kesra	50.03	288	P	P	10 13 53.5	+2.8
	SNR=6.4						
KEST	Kesra	50.03	288	IAmb	IAmb	10 13 56.0	
	comp=Z,70nm,1.4s						
SSB	Saint Sauveur	50.09	301	IAmb	IAmb	10 13 57.5	
	comp=Z,24nm,1.0s						
KSM	Kuching	50.18	128	P	P	10 13 51.3	-0.6
KSM				IAmb	IAmb	10 13 54.0	
	comp=Z,42nm,1.3s						
KSM	Kuching	50.18	128	P	P	10 13 52.5	+0.6
INU	Inuyama	50.19	73	P	P	10 13 53.4	+1.6
YSS	Yuzh-Sakhalins	50.22	57	eP	P	10 13 55.4	+3.6
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS	Yuzh-Sakhalins	50.22	57	P	P	10 13 53.3	+1.5
JGF	Kuroka	50.35	72	IAmb	IAmb	10 13 57.3	
	comp=Z,28nm,0.7s						
ELMS	Elmsett, Ipswi	50.44	310	eP	P	10 13 54.2	+0.8
WACR	West Acre	50.50	311	eP	P	10 13 53.8	0.0
WACR				IAmb	IAmb	10 13 58.0	
	comp=Z,202nm,0.8s						
MAJO	Matsushiro	50.60	71	d iP	P	10 13 54.5	-0.4
MAJO				pmax	pmax		
	comp=Z,30nm,0.9s						
MAJO	Matsushiro	50.60	71	P	P	10 13 54.3	-0.6
MAJO				IAmb	IAmb	10 13 59.4	
	comp=Z,43nm,0.8s						
MAJO	Matsushiro	50.60	71	P	P	10 13 54.6	-0.4
MAT	Matsushiro	50.60	71	P	P	10 13 54.0	-0.9
MJAR	Matsushiro Arr	50.61	71	P	P	10 13 54.8	-0.2
	comp=Z,28nm,0.8s,baz=290,slow=8.2,SNR=26						
MJAR	Matsushiro Arr	50.61	71	P	P	10 13 55.5	+0.6
MJAR				pmax	pmax		
	comp=Z,30nm,0.9s						
MJAR	Matsushiro Arr	50.61	71	P	P	10 13 55.5	+0.6
MJAR				IAmb	IAmb	10 14 00.2	
	comp=Z,30nm,0.9s						
KKM	Kota Kinabalu	50.62	119	P	P	10 13 54.9	-0.5
KKM	Kota Kinabalu	50.62	119	P	P	10 13 56.4	+1.1
SBUM	Sibu	50.63	125	P	P	10 13 54.3	-0.9
PPBI	Pangkal Pinang	50.68	135	P	P	10 13 53.6	-2.0
ASAJ	Asahikawa	51.00	60	P	P	10 13 57.0	-0.8
	comp=Z,5.9nm,0.5s,baz=43,slow=4.4,SNR=8.1						
JTM	Tenmabayashi	51.08	65	P	P	10 13 58.2	-0.3
EDMD	Edmundbyers	51.46	314	eP	P	10 14 01.6	+0.5
HPK	Haverah Park	51.49	313	eP	P	10 14 01.7	+0.4
KMBO	Kilima Mbogo	51.52	229	P	P	10 14 02.8	+0.5
	comp=Z,6.7nm,0.7s,baz=43,slow=13,SNR=15						
KMBO	Kilima Mbogo	51.52	229	P	P	10 14 03.6	+1.4
KMBO	Kilima Mbogo	51.52	229	i P	P	10 14 03.9	+1.7
KMBO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KMBO	Kilima Mbogo	51.52	229	P	P	10 14 03.1	+0.9
MDSI	Maura Dua	51.59	139	P	P	10 14 04.2	+1.8
	comp=Z,5.6nm,0.9s						
BIGH	Upper Bighouse	51.63	319	eP	P	10 14 03.1	+0.8
MA2	Magadan	51.65	39	⇓eP	P	10 14 03.5	+1.1
MA2	Magadan	51.65	39	P	P	10 14 05.0	+2.6
LBWR	Ladybower, Pea	51.69	313	eP	P	10 14 03.5	+0.7
SEY	Seymchan	51.71	35	P	P	10 14 03.4	+0.6
	comp=Z,6.6nm,0.8s,baz=305,slow=6.5,SNR=7.5						
EDI	Edinburgh	51.86	316	eP	P	10 14 04.6	+0.6
JMM	Marumori	51.98	68	IAmb	IAmb	10 14 09.6	
	comp=Z,59nm,0.9s						
STKI	Sintang	52.01	128	P	P	10 14 05.1	-0.5
KIBK	Kibwezi	52.04	227	P	P	10 14 06.3	+0.3
KLSI		52.05	139	P	P	10 14 00.7	-5.2
	comp=Z,6.0nm,1.4s						
NOR	Nord	52.06	349	i P	P	10 14 04.2	-1.0
STRD	Stroud	52.41	311	eP	P	10 14 08.5	+0.3
STRD				IAmb	IAmb	10 14 10.9	
	comp=Z,87nm,0.8s						
KAC	Achnashellach	52.59	318	eP	P	10 14 09.9	+0.5
HLM1	Long Mynd	52.61	312	eP	P	10 14 10.1	+0.4
NEWG	New Galloway	52.65	315	eP	P	10 14 10.3	+0.5
OLDB	Oldbury-Upon-S	52.67	311	eP	P	10 14 10.4	+0.4
OLDB				IAmb	IAmb	10 14 13.4	
	comp=Z,57nm,0.9s						
KPL	Plockton	52.81	318	eP	P	10 14 11.4	+0.4
MYLDM	Lahad Datu	52.81	117	P	P	10 14 12.9	+1.3
MYLDM				IAmb	IAmb	10 14 25.7	
	comp=Z,77nm,1.2s						
MCH1	Michaelchurch	52.83	311	eP	P	10 14 11.2	-0.1
MCH1				IAmb	IAmb	10 14 13.6	
	comp=Z,74nm,0.7s						
LAWE	Loch Awe, Argy	52.97	317	eP	P	10 14 12.4	+0.1
GAL1	Galloway	52.98	315	eP	P	10 14 13.1	+0.7
DAG	Danmarks Havn	53.21	343	i P	P	10 14 13.0	-0.7
DAG				IAmb	IAmb	10 14 15.3	
	comp=Z,25nm,0.8s						
RSBS	Rosebush, Pemb	53.88	311	eP	P	10 14 19.4	+0.4
RSBS				IAmb	IAmb	10 14 22.5	
	comp=Z,36nm,0.8s						
MBAR	Mbarara	55.12	235	ceP	P	10 14 30.2	+1.5
BILL	Bilibino	55.96	27	i P	P	10 14 33.9	+0.1
BILL				i		10 14 41.1	
BILL				i		10 15 29.1	
BILL				i		10 16 37.9	
BILL				pmax	pmax		
	comp=Z,20nm,1.2s						
BILL	Bilibino	55.96	27	P	P	10 14 34.7	+0.9
BILL				IAmb	IAmb	10 14 37.9	
	comp=Z,39nm,1.4s						
BBKI	Banjar Baru	56.84	128	P	P	10 14 40.9	+0.2
	comp=Z,40nm,1.2s						
MPSI	Mapaga	57.27	120	P	P	10 14 43.4	-0.4
	comp=Z,3µmcomp=Z,52nm,1.0s						
PEA0B	Petropavlovsk-	57.27	46	ceP	P	10 14 45.2	+1.9
PETK	Petropavlovsk-	57.27	46	P	P	10 14 43.2	-0.1
	comp=Z,4.3nm,0.9s,baz=300,slow=3.7,SNR=6.0						
KBKI	Kotabaru	57.54	126	P	P	10 14 45.3	-0.4
	comp=Z,46nm,0.9s						
ESDC	Sonseca Array	58.01	297	P	P	10 14 50.2	+1.3
	comp=Z,16nm,1.1s,baz=56,slow=6.9,SNR=39						
ESDC	Sonseca Array	58.01	297	P	P	10 14 48.7	-0.2
MRSI	Marisa	58.56	118	P	P	10 14 52.0	-0.9
	comp=Z,40nm,0.4s						
PBRG	Braganca	58.99	301	eP	P	10 14 57.1	+1.5
	comp=Z,44nm,1.9s						
NEEM	North Greenlan	59.35	348	i P	P	10 14 57.7	-0.2
NEEM				IAmb	IAmb	10 14 59.9	
	comp=Z,22nm,0.6s						
APSI	Ampana	59.37	120	P	P	10 14 57.2	-1.2
	comp=Z,36nm,1.2s						
JBK	JBK	59.43	291	P	P	10 15 04.0	+5.0
MVO	Moncorvo	59.46	300	eP	P	10 15 01.5	+2.5
	comp=Z,44nm,1.7s						
SUMG	Summit	59.64	341	P	P	10 15 00.2	+0.1
SUMG				pmax	pmax		
	comp=Z,31nm,0.8s						
SUMG	Summit	59.64	341	i P	P	10 15 01.0	+0.9
SUMG				IAmb	IAmb	10 15 11.7	
	comp=Z,1µm,3.7s						
SUMG	Summit	59.64	341	P	P	10 15 00.2	+0.1
SUMG				IAmb	IAmb	10 15 02.9	
	comp=Z,31nm,0.8s						
TTSI	Tana Toraja	59.71	123	P	P	10 14 59.6	-1.2
	comp=Z,33nm,1.1s						
PVRL	Vila Real	59.88	301	eP	P	10 15 03.6	+1.8
	comp=Z,46nm,1.4s						
POLO	Lamas de Olo	59.89	301	eP	P	10 15 03.8	+1.9
	comp=Z,22nm,1.3s						
PCAB	Cabril	59.89	301	eP	P	10 15 04.5	+2.6
	comp=Z,104nm,1.9s						
PGAV	Gavieira, Arco	59.94	302	eP	P	10 15 04.6	+2.3
	comp=Z,86nm,1.7s						
MTE	Manteigas	60.16	300	eP	P	10 15 06.0	+2.3
	comp=Z,52nm,1.1s						
PVIS	Viseu	60.25	300	eP	P	10 15 06.3	+1.9
	comp=Z,55nm,2.1s						
PCBR	Castelo Branco	60.36	299	eP	P	10 15 11.7	+6.6
	comp=Z,24nm,1.7s						
SPSI	Sidrap Palu	60.37	123	P	P	10 15 03.5	-1.8
	comp=Z,12nm,1.0s						
PMRV	Marv??o	60.49	299	eP	P	10 15 08.2	+2.2
	comp=Z,55nm,1.9s						
PESTR	Estremoz	60.89	298	eP	P	10 15 10.9	+2.2
	comp=Z,40nm,2.5s						
BNSI	Bone	60.91	124	P	P	10 15 07.4	-1.6
	comp=Z,11nm,1.1s						
PCAS	Casmilo, Conde	60.96	300	eP	P	10 15 09.8	+0.6
EUNU	Eureka	61.04	356	IAmb	IAmb	10 15 42.7	
	comp=Z,71nm,1.9s						
KAPI	Kappang	61.14	124	P	P	10 15 10.6	0.0
PMTG	Montargil	61.23	299	eP	P	10 15 16.2	+5.2
	comp=Z,37nm,1.3s						
EVO	Evora	61.34	298	eP	P	10 15 14.5	+2.8
	comp=Z,41nm,2.0s						
LCRM	LCR	61.41	292	P	P	10 15 17.0	+4.5
PSBE	So Bento	61.42	299	eP	P	10 15 15.1	+2.8
	comp=Z,73nm,2.6s						
PBEJ	Beja	61.48	297	eP	P	10 15 14.4	+1.7
	comp=Z,42nm,1.5s						
BKSI	Bulukumba	61.62	124	P	P	10 15 15.6	+1.8
MDT	Midelt	61.66	291	P	P	10 15 19.4	+5.4
PVAQ	Vaqueiros	61.67	297	eP	P	10 15 16.0	+2.1
	comp=Z,64nm,1.9s						
PCVE	Castro Verde	61.78	297	eP	P	10 15 18.9	+4.2
	comp=Z,40nm,1.4s						
MESJ	Messejana	61.81	297	eP	P	10 15 17.6	+2.7
	comp=Z,41nm,1.5s						
PBDV	Barranco-do-Ve	61.89	297	eP	P	10 15 17.5	+2.0
	comp=Z,106nm,1.5s						
ICESG	Greenland Ices	61.91	338	i P	P	10 15 15.6	0.0
ICESG				IAmb	IAmb	10 15 22.1	
	comp=Z,80nm,1.2s						
GOLM	Goulmima	62.46	290	P	P	10 15 24.0	+4.4
BSSI	Bau Bau, Buton	62.47	124	P	P	10 15 16.2	-3.4
	comp=Z,12nm,1.1s						
TULEG	Thule	62.66	351	i P	P	10 15 19.0	-1.0
TULEG				IAmb	IAmb	10 15 23.0	
	comp=Z,109nm,1.8s						
SANI	Sanana	63.18	117	P	P	10 15 22.2	-2.1
	comp=Z,23nm,1.2s						
SANI	Sanana	63.18	117	P	P	10 15 23.0	-1.3
TZRR	Tazzarine	63.38	289	P	P	10 15 30.0	+4.3
ZGR	Zagora	63.76	289	P	P	10 15 32.0	+3.8

OUZM	OUZ	64.19	290	P	P	10 15 35.0	+3.9
WBSI	Waikabubak, Su	64.45	128	P	P	10 15 29.5	-3.2
	comp=Z,48nm,1.1s						
OUK	Oukaimeden	64.85	291	P	P	10 15 39.0	+3.4
ILULI	Ilulissat	64.99	341	*i* P	P	10 15 35.5	+0.2
EDFI	Ende, Flores	65.22	125	P	P	10 15 33.8	-4.0
	comp=Z,7.4nm,0.8s						
DY2G	Dye2	65.51	337	*i* P	P	10 15 39.8	+0.6
DY2G				IAmb	IAmb	10 15 43.1	
	comp=Z,284nm,1.8s						
TTIG	Tnine Tigouga,	65.62	290	P	P	10 15 44.0	+3.7
BASI	Baing, Sumba	65.64	127	P	P	10 15 37.9	-2.4
	comp=Z,66nm,1.3s						
SWI	Sorong	66.12	112	P	P	10 15 42.1	-1.4
	comp=Z,22nm,1.2s						
SIJI	Sorong	66.13	112	P	P	10 15 42.2	-1.4
	comp=Z,13nm,0.9s,baz=327,slow=6.5,SNR=8.2						
SFJD	Kangerlussuaq	66.42	339	P	P	10 15 45.1	+0.4
	comp=Z,12nm,0.7s,baz=20,slow=11,SNR=4.9						
RES	Resolute Bay	66.72	357	P	P	10 15 47.2	+0.8
	comp=Z,3.8nm,0.7s,baz=32,slow=7.8,SNR=14						
ANM	Nome	67.43	24	P	P	10 15 50.7	-0.5
	baz=314						
TORD	Torodi Ar. Bea	67.49	269	P	P	10 15 50.9	-1.4
	comp=Z,7.6nm,0.6s,baz=48,slow=5.3,SNR=39						
TORD	Torodi Ar. Bea	67.49	269	P	P	10 15 51.2	-1.1
TORD				IAmb	IAmb	10 15 56.0	
	comp=Z,17nm,0.9s						
BATI	Baumata	67.58	125	P	P	10 15 51.4	-1.4
	comp=Z,8.7nm,0.3s,baz=111,slow=7.0,SNR=7.5						
BATI	Baumata	67.58	125	P	P	10 15 50.6	-2.2
	comp=Z,19nm,1.2s						
SOEI	Soe	67.64	124	P	P	10 15 50.7	-2.6
	comp=Z,28nm,1.1s						
SOEI	Soe	67.64	124	P	P	10 15 52.3	-1.0
LSZ	Lusaka	68.15	227	P	P	10 15 55.6	-0.8
LSZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LSZ	Lusaka	68.15	227	P	P	10 15 55.6	-0.8
FAKI	Fak Fak	68.24	113	P	P	10 15 54.3	-2.7
	comp=Z,22nm,1.1s						
FAKI	Fak Fak	68.24	113	P	P	10 15 57.3	+0.3
TOLK	Toolik Lake Re	68.45	16	P	P	10 15 57.1	-0.5
	baz=325						
A36M	Sachs Harbour	68.95	6	P	P	10 15 59.5	-1.1
	baz=345						
COLD	Coldfoot	69.48	17	IAmb	IAmb	10 16 14.4	
	comp=Z,30nm,1.0s						
COLD	Coldfoot	69.48	17	P	P	10 16 03.9	0.0
	baz=325						
IMAR	Indian Mountai	69.64	19	P	P	10 16 04.1	-0.8
GCSA	Galena City Sc	69.79	21	P	P	10 16 05.6	-0.2
	baz=320,SNR=8.1						
H21K	Melozitna Rive	70.14	18	IAmb	IAmb	10 16 19.0	
	comp=Z,23nm,1.1s						
H21K	Melozitna Rive	70.14	18	P	P	10 16 08.1	+0.1
	baz=323						
BMAR	Burnt Mountain	70.49	15	P	P	10 16 10.7	+0.5
I21K	Tanana	70.73	18	IAmb	IAmb	10 16 22.8	
	comp=Z,18nm,0.9s						
I21K	Tanana	70.73	18	P	P	10 16 11.2	-0.5
	baz=324,SNR=5.8						
J20K	Nowinta River	70.98	20	IAmb	IAmb	10 16 16.5	
	comp=Z,19nm,0.8s						
J20K	Nowinta River	70.98	20	P	P	10 16 13.3	+0.1
	baz=322						
H24K	Noodor Dome	71.16	17	IAmb	IAmb	10 16 29.9	
	comp=Z,15nm,0.8s						
H24K	Noodor Dome	71.16	17	P	P	10 16 13.6	-0.7
	baz=327						
MLY	Manley	71.16	18	P	P	10 16 13.6	-0.7
	baz=325,SNR=9.0						
KOWA	Kowa	71.17	274	P	P	10 16 14.8	-0.3
KOWA				IAmb	IAmb	10 16 25.4	
	comp=Z,22nm,0.7s						
KOWA	Kowa	71.17	274	P	P	10 16 15.6	+0.5
I23K	Minto, Yukon-K	71.39	18	IAmb	IAmb	10 16 27.0	
	comp=Z,27nm,0.9s						
I23K	Minto, Yukon-K	71.39	18	P	P	10 16 15.1	-0.5
	baz=326,SNR=9.6						
TTA	Tatalina	71.45	21	P	P	10 16 16.3	+0.2
TTA				pmax	pmax		
	comp=Z,62nm,2.0s						
TTA	Tatalina	71.45	21	P	P	10 16 16.3	+0.2
TTA				IAmb	IAmb	10 16 39.0	
	comp=Z,62nm,2.0s						
TTA	Tatalina	71.45	21	P	P	10 16 16.0	-0.1
	baz=321						
INK	Inuvik	71.55	10	P	P	10 16 15.8	-0.7
	comp=Z,17nm,0.8s,baz=346,slow=5.6,SNR=57						
INK	Inuvik	71.55	10	IAmb	IAmb	10 16 26.9	
	comp=Z,29nm,0.9s						
INK	Inuvik	71.55	10	P	P	10 16 16.2	-0.3
	baz=338						
K20K	Telida	71.66	20	IAmb	IAmb	10 16 28.7	
	comp=Z,17nm,0.8s						
K20K	Telida	71.66	20	P	P	10 16 17.1	-0.2
	baz=323						
CHUM	Lake Minchumin	71.70	19	P	P	10 16 17.7	+0.2
	baz=324,SNR=8.9						
MDM	Murphy Dome	71.82	17	IAmb	IAmb	10 16 22.0	
	comp=Z,47nm,1.5s						
BPAW	Bear Paw Mtn.	71.86	19	P	P	10 16 17.2	-1.3
	baz=325						
POKR	Poker Plat Res	71.86	17	P	P	10 16 18.3	-0.2
	baz=328,SNR=8.6						
NEA2	Nenana	71.92	18	IAmb	IAmb	10 16 23.8	
	comp=Z,25nm,1.0s						
NEA2	Nenana	71.92	18	P	P	10 16 18.3	-0.6
	baz=326,SNR=16						
TCOL	CIGO, UAF Yank	71.97	17	IAmb	IAmb	10 16 21.2	
	comp=Z,29nm,0.8s						
TCOL	CIGO, UAF Yank	71.97	17	P	P	10 16 18.7	-0.4
	baz=327,SNR=12						
COLA	College	71.97	17	P	P	10 16 20.1	+1.0
COLA	College	71.97	17	P	P	10 16 20.1	+1.0
COLA				IAmb	IAmb	10 16 21.2	
	comp=Z,29nm,0.8s						
COLA	College	71.97	17	P	P	10 16 19.0	-0.1
	baz=327						
CAST	Castle Rocks	72.14	20	P	P	10 16 19.8	-0.4
	baz=324						
ILAR	Eielson Array	72.28	17	P	P	10 16 20.0	-1.0
	comp=Z,8.5nm,0.7s,baz=327,slow=3.9,SNR=72						
ILAR	Eielson Array	72.28	17	P	P	10 16 20.3	-0.7
ILAR	Eielson Array	72.28	17	P	P	10 16 20.3	-0.7
KTH	Kantishna Hill	72.33	19	IAmb	IAmb	10 16 32.1	
	comp=Z,31nm,0.9s						
L19K	White Mountain	72.37	21	IAmb	IAmb	10 17 34.5	
	comp=Z,35nm,1.5s						
L19K	White Mountain	72.37	21	P	P	10 16 21.7	0.0
	baz=322						
L20K	Farewell, AK	72.41	21	P	P	10 16 21.6	-0.2
	baz=323						
PPLA	Purkeypile	72.53	20	IAmb	IAmb	10 16 33.1	
	comp=Z,19nm,0.8s						
PPLA	Purkeypile	72.53	20	P	P	10 16 22.5	-0.2
	baz=324						
TRF	Thorofare Moun	72.58	19	P	P	10 16 22.5	-0.5
	baz=326						
HDA	Harding Lake	72.58	17	P	P	10 16 21.5	-1.3
	baz=328,SNR=6.7						
MCK	McKinley	72.68	18	IAmb	IAmb	10 16 28.2	
	comp=Z,64nm,2.0s						
MCK	McKinley	72.68	18	P	P	10 16 22.5	-0.9
	baz=327						
M19K	Big River Lodg	72.72	21	IAmb	IAmb	10 17 21.9	
	comp=Z,32nm,1.5s						
M19K	Big River Lodg	72.72	21	P	P	10 16 23.6	-0.1
	baz=323						
EPYK	Eagle Plains	72.86	12	P	P	10 16 23.7	-0.7
	baz=336						
J26L	Joseph Creek	73.25	16	P	P	10 16 26.0	-0.8
	baz=331						
CUT	Chulitna	73.45	20	IAmb	IAmb	10 16 31.9	
	comp=Z,40nm,1.0s						
CUT	Chulitna	73.45	20	P	P	10 16 26.5	-1.4
	baz=326						
EGAK	Eagle	73.49	15	P	P	10 16 27.4	-0.7
	baz=332						
I29M	Ogilvie Camp,	73.50	13	P	P	10 16 27.6	-0.6
	baz=335						
WAT1	Susitna Watana	73.53	19	P	P	10 16 27.1	-1.4
	baz=327						
FRB	Frobisher Bay	73.56	343	P	P	10 16 28.4	-0.1
	comp=Z,16nm,1.0s,baz=29,slow=6.3,SNR=20						
N19K	Bonanza Creek	73.57	22	P	P	10 16 28.4	-0.5
	baz=323						
DHY	Denali Highway	73.61	18	IAmb	IAmb	10 16 31.5	
	comp=Z,26nm,0.7s						
DHY	Denali Highway	73.61	18	P	P	10 16 28.6	-0.5
	baz=328						
SCRK	Sand Creek	73.61	16	P	P	10 16 27.7	-1.4
	baz=330,SNR=14						
RIDG	Independent Ri	73.63	17	IAmb	IAmb	10 16 39.4	
	comp=Z,22nm,0.8s						
RIDG	Independent Ri	73.63	17	P	P	10 16 27.6	-1.4
	baz=330,SNR=10						
MBWA	Marble Bar	73.74	135	P	P	10 16 30.2	+0.1
GENI	Genyem	73.86	107	P	P	10 16 32.3	+1.2
SPCR	Spurr Chakacha	73.91	21	P	P	10 16 29.6	-1.2
	baz=324						
WAT6	Susitna Watana	73.94	18	P	P	10 16 30.2	-0.8
	baz=328						
DRS	Darwin Rock St	73.99	121	P	P	10 16 33.7	+2.0
	comp=Z,16nm,0.8s						
M22K	Willow	74.03	20	P	P	10 16 30.7	-0.6
	baz=326						
O18K	Koktuh Hills	74.12	23	IAmb	IAmb	10 16 35.3	
	comp=Z,30nm,0.8s						
O18K	Koktuh Hills	74.12	23	P	P	10 16 31.3	-0.6
	baz=322						
PSA00	Pilbara Seismi	74.14	135	P	P	10 16 32.3	-0.2
PSA00	Pilbara Seismi	74.14	135	P	P	10 16 31.6	-0.9
PSA00				IAmb	IAmb	10 16 35.6	
	comp=Z,20nm,0.9s						
PSA00	Pilbara Seismi	74.14	135	P	P	10 16 33.0	+0.5
	comp=Z,34nm,1.0s						
PAX	Paxson	74.16	17	IAmb	IAmb	10 16 35.6	
	comp=Z,25nm,1.0s						
PAX	Paxson	74.16	17	P	P	10 16 31.4	-0.8
	baz=329,SNR=8.8						
JAY	Jayapura	74.21	106	P	P	10 16 32.5	-0.7
	comp=Z,11nm,1.0s,baz=188,slow=12,SNR=2.0						
J29M	Klondike Camp	74.35	14	P	P	10 16 32.3	-1.0
	baz=335						
PMR	Palmer	74.42	20	IAmb	IAmb	10 17 15.5	
	comp=Z,22nm,1.0s						
PMR	Palmer	74.42	20	P	P	10 16 33.1	-0.6
	baz=327						
SML	Sawmill	74.45	19	P	P	10 16 33.1	-0.8
	baz=327,SNR=17						
DAWY	Dawson	74.48	14	P	P	10 16 33.0	-1.0
	baz=334,SNR=15						
L26K	Log Cabin Wild	74.59	16	P	P	10 16 33.7	-0.9
	baz=331						
SCM	Sheep Creek Mo	74.68	19	IAmb	IAmb	10 16 37.4	
	comp=Z,33nm,0.7s						
SCM	Sheep Creek Mo	74.68	19	P	P	10 16 34.3	-1.0
	baz=328,SNR=10						
RC01	Rabbit Creek A	74.69	20	IAmb	IAmb	10 16 38.4	
	comp=Z,22nm,0.8s						
RC01	Rabbit Creek A	74.69	20	P	P	10 16 35.0	-0.2
	baz=326						
HARP	HAARP	74.72	17	P	P	10 16 34.9	-0.6
	baz=330,SNR=17						
M24K	Tolsona, Glenn	74.73	18	P	P	10 16 35.4	-0.1
	baz=329,SNR=6.1						
KNK	Knik Glacier	74.75	19	IAmb	IAmb	10 16 52.3	
	comp=Z,33nm,0.8s						
KNK	Knik Glacier	74.75	19	P	P	10 16 35.6	0.0
	baz=327,SNR=5.4						
FITZ	Fitzroy Crossi	74.80	129	P	P	10 16 35.2	-1.2
	comp=Z,5.8nm,0.8s,baz=334,slow=4.8						
L27K	Beaver Creek,	74.88	16	P	P	10 16 36.1	-0.3
	baz=332,SNR=12						
BCAR	Beaver Creek A	74.89	16	P	P	10 16 36.5	+0.1
KNRA	Kununurra	74.95	125	IAmb	IAmb	10 16 38.5	
	comp=Z,55nm,1.2s						
KNRA	Kununurra	74.95	125	P	P	10 16 37.1	-0.2
	comp=Z,42nm,0.9s						
O22K	Cooper Landing	75.20	20	P	P	10 16 37.6	-0.6
	baz=326						
M26K	Nabesna, AK	75.21	17	P	P	10 16 37.7	-0.6
	baz=331						
KDU	Kakadu	75.24	120	P	P	10 16 41.0	+2.0
	comp=Z,13nm,0.9s						
PWL	Port Wells	75.25	20	IAmb	IAmb	10 16 41.9	
	comp=Z,18nm,0.7s						
PWL	Port Wells	75.25	20	P	P	10 16 37.7	-0.8
	baz=328						
KLU	Klutina	75.32	18	P	P	10 16 38.7	-0.2
	baz=329						
M27K	Edge Creek, AK	75.50	16	IAmb	IAmb	10 17 23.8	
	comp=Z,27nm,1.2s						
M27K	Edge Creek, AK	75.50	16	P	P	10 16 39.9	-0.2
	baz=332						
BRSE	Bradley Lake S	75.53	21	P	P	10 16 39.0	-1.1
	baz=326						
N25K	Chitina, Valde	75.54	18	IAmb	IAmb	10 16 43.6	
	comp=Z,90nm,1.9s						
N25K	Chitina, Valde	75.54	18	P	P	10 16 40.4	+0.1
	baz=330						
MAYO	Mayo, Yukon	75.55	13	P	P	10 16 39.7	-0.5
	baz=337						
GLI	Glacier Island	75.56	19	P	P	10 16 39.4	-0.8
	baz=328						
BVCY	Beaver Creek	75.67	16	P	P	10 16 40.9	+0.1
	baz=333,SNR=10.0						
DIV	Divide	75.67	18	IAmb	IAmb	10 16 43.7	
	comp=Z,14nm,0.7s						
FID	Port Fidalgo	75.82	19	P	P	10 16 41.8	0.0
BMRM	Bremner River	76.10	18	IAmb	IAmb	10 16 47.5	
	comp=Z,37nm,1.2s						
BMRM	Bremner River	76.10	18	P	P	10 16 43.1	-0.3
	baz=330						
MCARA	McCarthy VSAT	76.11	17	IAmb	IAmb	10 16 46.8	
	comp=Z,18nm,0.8s						
MCARA	McCarthy VSAT	76.11	17	P	P	10 16 43.4	0.0
	baz=332,SNR=5.3						
EYAK	Cordova Ski Ar	76.18	19	P	P	10 16 43.6	-0.2
	baz=330,SNR=5.2						
YUK3	Moose Creek	76.32	16	P	P	10 16 44.7	-0.2
	baz=333,SNR=11						
M30M	Minto, Yukon	76.33	14	P	P	10 16 43.7	-0.9
	baz=336						
DBIC	Dimbokro	76.52	268	P	P	10 16 46.0	-0.3
	comp=Z,7.7nm,0.9s,baz=32,slow=5.0,SNR=7.8						
DBIC	Dimbokro	76.52	268	P	P	10 16 46.1	-0.3
KDAK	Kodiak Island	76.60	23	P	P	10 16 46.1	-0.1
	baz=325						
KIC	Kosan Boka	76.62	267	*e*PKIKP	P	10 16 47.5	+0.5
	comp=Z,23nm,0.8s						
CRQM	Cirque	76.63	17	IAmb	IAmb	10 16 52.0	
	comp=Z,18nm,0.8s						
CRQE	Cirque	76.65	17	P	P	10 16 46.1	-0.5
	baz=332						
TIC	Toumodi	76.66	268	*e*PKIKP	P	10 16 47.7	+0.4
BARN	Barnard Glacie	76.70	17	IAmb	IAmb	10 16 51.3	
	comp=Z,34nm,1.3s						
TGL	Tana Glacier	76.70	17	IAmb	IAmb	10 16 52.3	
	comp=Z,21nm,0.9s						
OHAK	Old Harbor	76.84	24	P	P	10 16 47.5	0.0
	baz=324						
CTG	Chitna Glacier	76.86	16	P	P	10 16 47.3	-0.5
	baz=333,SNR=6.2						
LIC	Lamto	76.92	268	*e*PKIKP	P	10 16 48.0	-0.7
	comp=Z,42nm,0.9s						
ISLE	Juniper Island	76.95	17	IAmb	IAmb	10 19 10.2	
	comp=Z,52nm,1.6s						
WAX	Waxell Ridge	76.97	17	IAmb	IAmb	10 16 51.5	
	comp=Z,18nm,0.7s						
Q23K	Middleton Isla	76.99	20	P	P	10 16 48.1	-0.3
	baz=329						
LOGN	Logan Glacier	77.06	16	IAmb	IAmb	10 16 57.4	
	comp=Z,48nm,1.6s						
YUK4	Talbot Arm	77.09	15	P	P	10 16 48.2	-0.9
	baz=335,SNR=15						
M31M	Drury Creek, Y	77.11	13	P	P	10 16 48.5	-0.6
	baz=338,SNR=11						
FARO	Faro, Yukon	77.26	12	P	P	10 16 49.3	-0.6
	baz=339,SNR=9.4						
YAH	Yahtse	77.30	17	IAmb	IAmb	10 18 43.0	
	comp=Z,16nm,0.7s						
LBTB	Lobatse	77.39	223	P	P	10 16 50.5	-0.6
LBTB				pmax	pmax		
	comp=Z,18nm,1.0s						
LBTB	Lobatse	77.39	223	P	P	10 16 50.5	-0.6
MESA	MESA	77.42	17	P	P	10 16 51.0	-0.1
	baz=332						
YUK6	Outpost Mounta	77.51	15	P	P	10 16 51.2	-0.3
	baz=335						
N31M	Braeburn, Yuko	77.52	14	P	P	10 16 51.3	-0.1
	baz=337						
TSUM	Tsumeb	77.56	233	P	P	10 16 49.8	-2.5
WRGLY	Wrigley	77.65	8	P	P	10 16 51.4	-0.6
	baz=347						
HYT	Haines Junctio	77.80	15	IAmb	IAmb	10 16 58.9	
	comp=Z,30nm,0.8s						
HYT	Haines Junctio	77.80	15	P	P	10 16 52.1	-0.9
	baz=336,SNR=19						
PCA	Pinnacle	77.88	16	IAmb	IAmb	10 16 56.1	
	comp=Z,25nm,0.8s						
PINM	Pinnacle	77.88	16	P	P	10 16 53.3	-0.2
	baz=334						
MORW	Morawa	78.32	143	P	P	10 16 57.7	+1.6
	comp=Z,29nm,0.5s						
PNL	Peninsula	78.45	16	P	P	10 16 56.3	-0.3
	baz=334						
WHY	Whitehorse	78.45	14	IAmb	IAmb	10 17 06.1	
	comp=Z,35nm,1.7s						
WHY	Whitehorse	78.45	14	P	P	10 16 55.6	-1.0
	baz=338						
YKA	Yellowknife Ar	79.06	4	P	P	10 16 59.6	-0.2
	comp=Z,22nm,0.7s,baz=349,slow=5.6,SNR=80						
YKA				PKKPbc	PKKPbc	10 35 51.0	-0.5
	comp=Z,0.7nm,0.6s,baz=173,slow=1.8,SNR=4.7						
YKA	Yellowknife Ar	79.06	4	P	P	10 16 59.4	-0.4
P33M	Teslin, Yukon	79.24	13	P	P	10 17 00.4	-0.6
	baz=340,SNR=8.1						
SKAG	Skagway	79.48	14	P	P	10 17 03.0	+0.8
	baz=338						
BOSA	Boshof	80.46	221	P	P	10 17 07.0	-0.9
	comp=Z,2.3nm,0.6s,baz=21,slow=3.7,SNR=6.6						
BOSA	Boshof	80.46	221	P	P	10 17 07.0	-0.9
SCHQ	Schefferville	80.83	338	P	P	10 17 09.4	-0.1
	comp=Z,17nm,0.8s,baz=35,slow=5.2,SNR=13						
SCHQ	Schefferville	80.83	338	P	P	10 17 10.1	+0.5
SCHQ				IAmb	IAmb	10 17 13.4	
	comp=Z,18nm,0.8s						
DLBC	Dease Lake	81.40	12	P	P	10 17 12.5	-0.1
	comp=Z,5.1nm,0.7s,baz=320,slow=4.8,SNR=9.4						
DLBC	Dease Lake	81.40	12	P	P	10 17 13.5	+0.9
WB0	Warramunga Arr	81.58	123	IAmb	IAmb	10 17 16.3	
	comp=Z,21nm,0.9s						
WRKA	Warakurna	81.67	131	P	P	10 17 14.7	+0.4
	comp=Z,22nm,0.9s						
WRA	Warramunga Arr	81.67	124	P	P	10 17 12.5	-1.9
	comp=Z,21nm,0.8s,baz=324,slow=4.5,SNR=64						
WRA	Warramunga Arr	81.67	124	P	P	10 17 12.7	-1.7
WRA	Warramunga Arr	81.67	124	P	P	10 17 12.7	-1.7
WRAB	Tennant Creek	81.67	124	P	P	10 17 13.0	-1.4
WB2	Warramunga Arr	81.68	124	P	P	10 17 13.1	-1.3
WB2				IAmb	IAmb	10 17 16.9	
	comp=Z,33nm,0.8s						
WR0	Warramunga Arr	81.82	123	P	P	10 17 13.7	-1.5
WR0				IAmb	IAmb	10 17 17.5	
	comp=Z,22nm,0.9s						
WRAK	Wrangell Islan	82.90	14	P	P	10 17 20.9	+0.6
	baz=340						
PMG	Port Moresby	83.55	107	P	P	10 17 24.2	-0.1
	comp=Z,16nm,0.9s,baz=311,slow=9.3,SNR=3.8						
COEN	Coen	83.61	113	P	P	10 17 25.4	+0.8
COEN				IAmb	IAmb	10 17 39.3	
	comp=Z,15nm,0.9s						
COEN	Coen	83.61	113	P	P	10 17 25.5	+0.8
	comp=Z,20nm,1.0s						
CRAG	Craig	83.64	15	P	P	10 17 24.6	+0.4
	baz=340						
ASAR	Alice Springs	84.07	126	P	P	10 17 25.3	-1.6
	comp=Z,8.7nm,0.8s,baz=320,slow=3.9,SNR=35						
ASAR				PKKPbc	PKKPbc	10 35 42.5	+1.8
	comp=Z,0.3nm,0.7s,baz=155,slow=2.6,SNR=4.4						
ASAR	Alice Springs	84.07	126	P	P	10 17 24.8	-2.1
QIS	Mount Isa	85.60	121	P	P	10 17 34.7	+0.1
	comp=Z,9.3nm,1.1s						
FFC	Flin Flon	86.95	357	P	P	10 17 41.8	+1.0
FFC				pmax	pmax		
	comp=Z,21nm,1.1s						
FFC	Flin Flon	86.95	357	P	P	10 17 41.8	+1.0
FFC				IAmb	IAmb	10 17 46.1	
	comp=Z,21nm,1.1s						
BATG	Bathurst New B	87.08	334	IAmb	IAmb	10 17 46.8	
	comp=Z,24nm,0.9s						
MTSU	Mount Surprise	87.21	116	P	P	10 17 43.5	+0.9
	comp=Z,11nm,0.8s						
OOD	Oodnadatta	88.16	128	P	P	10 17 46.1	-0.7
	comp=Z,72nm,0.8s						
PQI	Presque Isle	88.28	334	IAmb	IAmb	10 17 54.7	
	comp=Z,16nm,0.9s						
MULG	Mulgathing	88.97	131	P	P	10 17 52.1	+1.5
	comp=Z,22nm,1.0s						
PKME	Peaks-Kenny Pk	89.94	335	P	P	10 17 56.2	+1.0
	baz=28						
TRQ	Mont Tremblant	90.73	338	IAmb	IAmb	10 18 04.8	
	comp=Z,16nm,1.1s						
ULM	Lac du Bonnet	91.00	353	P	P	10 18 00.0	0.0
	comp=Z,3.4nm,0.7s,baz=4.7,slow=4.8,SNR=4.0						
LBNH	Lisbon	91.72	336	P	P	10 18 04.2	+0.7
	baz=26						
LONY	Lake Ozonia	92.20	338	P	P	10 18 06.0	+0.3
	baz=25						
B05A	Bryant	92.46	10	P	P	10 18 06.9	+0.2
	baz=348						
WALA	Waterton Lakes	92.50	5	IAmb	IAmb	10 18 13.5	
	comp=Z,18nm,1.1s						
B08A	Colville Reser	92.71	8	IAmb	IAmb	10 18 14.2	
	comp=Z,15nm,1.2s						
EYMN	Ely	92.76	350	IAmb	IAmb	10 18 28.6	
	comp=Z,23nm,1.4s						
EYMN	Ely	92.76	350	P	P	10 18 08.7	+0.5
	baz=12						
QLP	Quilpie	92.80	122	P	P	10 18 08.9	+0.4
	comp=Z,15nm,1.2s						
AGMN	Agassiz Nation	92.93	353	P	P	10 18 09.5	+0.6
	baz=8.5						
D03D	Eldon	93.03	11	P	P	10 18 10.2	+0.8
	baz=347						
NEW	Newport	93.03	7	P	P	10 18 09.9	+0.4
	comp=Z,6.1nm,0.7s,baz=331,slow=4.4,SNR=14						
NEW	Newport	93.03	7	IAmb	IAmb	10 18 14.1	
	comp=Z,17nm,1.1s						
NEW	Newport	93.03	7	P	P	10 18 10.2	+0.7
	baz=352						
DELO	Deloro Mine	93.16	340	IAmb	IAmb	10 18 12.9	
	comp=Z,17nm,0.8s						
DGMT	Dagmar	93.28	358	P	P	10 18 11.5	+0.9
	baz=2.0						
SADO	Sadowa	93.33	341	P	P	10 18 11.9	+1.0
	comp=Z,4.4nm,0.9s,baz=82,slow=3.4,SNR=1.6						
EGMT	Eagleton	93.72	2	IAmb	IAmb	10 18 18.9	
	comp=Z,35nm,1.6s						
EGMT	Eagleton	93.72	2	P	P	10 18 13.2	+0.5
	baz=358						
JTMT	Jette	93.78	5	IAmb	IAmb	10 18 24.0	
	comp=Z,10nm,0.8s						
E08A	Dider Farm, El	94.58	8	IAmb	IAmb	10 18 29.6	
	comp=Z,20nm,1.5s						
STKA	Stephens Creek	94.67	127	P	P	10 18 17.2	+0.2
	comp=Z,1.8nm,0.8s,baz=350,slow=11,SNR=3.3						
MSO	Missoula	94.71	5	IAmb	IAmb	10 18 30.4	
	comp=Z,37nm,1.9s						
MSO	Missoula	94.71	5	P	P	10 18 17.5	+0.2
	baz=354						
BINY	Binghamton	94.82	338	P	P	10 18 18.4	+0.6
	baz=24						
F05D	White Salmon	94.87	10	P	P	10 18 18.5	+0.5
	baz=348						
LAO	LASA Array	95.09	360	IAmb	IAmb	10 18 26.2	
	comp=Z,16nm,0.9s						
LAO	LASA Array	95.09	360	P	P	10 18 20.3	+1.3
	baz=0.4						
RMQ	Roma	95.78	119	P	P	10 18 24.2	+1.9
	comp=Z,5.8nm,1.4s						
N59A	State Game Lan	95.93	337	P	P	10 18 24.0	+1.1
	baz=24						
M57A	Sunshine Farm,	95.95	338	IAmb	IAmb	10 18 27.0	
	comp=Z,13nm,0.8s						
DLMT	Dillon	96.26	4	IAmb	IAmb	10 18 30.8	
	comp=Z,17nm,1.4s						
I05D	Terrebonne, OR	96.41	10	P	P	10 18 25.9	+0.9
	baz=349						
M54A	Oil Creek Stat	96.51	340	P	P	10 18 26.4	+0.8
	baz=21						
SSPA	Standing Stone	96.82	338	P	P	10 18 27.7	+0.8
	baz=22						
H17A	Grant Village	97.32	3	P	Pdif	10 18 29.9	+0.4
	baz=357						
O56A	Blue Knob Stat	97.36	339	P	Pdif	10 18 29.9	+0.4
	baz=22						
JFWS	Jewell Farm	97.48	348	IAmb	IAmb	10 18 31.8	
	comp=Z,10nm,0.8s						
JFWS	Jewell Farm	97.48	348	P	Pdif	10 18 29.9	0.0

	baz=13						
ECSD	EROS Data Cent	97.53	353	IAmb	IAmb	10 19 04.9	
	comp=Z,16nm,1.4s						
ECSD	EROS Data Cent	97.53	353	P	Pdif	10 18 30.8	+0.7
	baz=8.0						
RSSD	Black Hills	97.62	358	P	Pdif	10 18 31.4	+0.6
RSSD				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RSSD	Black Hills	97.62	358	P	Pdif	10 18 31.4	+0.6
RSSD				IAmb	IAmb	10 18 45.3	
	comp=Z,6.0nm,0.9s						
RSSD	Black Hills	97.62	358	P	Pdif	10 18 31.5	+0.7
	baz=2.1						
L04D	Klamath Falls	98.34	12	P	Pdif	10 18 34.5	+0.5
	baz=348						
ACSO	Alum Creek Sta	98.57	342	P	Pdif	10 18 35.4	+0.6
	baz=19						
P52A	Corning	98.92	341	P	Pdif	10 18 37.1	+0.8
	baz=19						
PDAR	Pinedale Array	98.98	2	P	Pdif	10 18 38.4	+1.5
	comp=Z,0.7nm,0.7s,baz=28,slow=2.5,SNR=7.5						
DUG	Dugway, Tooele	101.39	5	P	Pdif	10 18 48.1	+0.6
	baz=355						
O20A	White River Ci	101.63	1	P	Pdif	10 18 49.1	+0.4
	baz=359						
NVAR	Mina Array Bea	102.62	9	P	Pdif	10 18 54.5	+1.4
	comp=Z,0.6nm,0.6s,baz=6.5,slow=3.6,SNR=5.0						
GOGA	Godfrey	105.14	340	P	Pdif	10 19 04.8	+0.6
	baz=19						
TXAR	Lajitas Array	112.35	357	Pdiff	Pdif	10 19 36.8	+0.4
	comp=Z,0.4nm,1.0s,baz=27,slow=4.2,SNR=2.6						
TXAR				PKiKP	PKiKP	10 23 33.9	+1.6
	comp=Z,0.5nm,0.8s,baz=345,slow=2.1,SNR=4.6						
TXAR				PKKPbc	PKKPbc	10 34 22.9	+1.4
	comp=Z,0.4nm,0.9s,baz=177,slow=6.3,SNR=5.3						
TXAR				PKKPab	PKKPab	10 34 33.1	-0.9
	comp=Z,0.6nm,1.0s,baz=182,slow=11,SNR=3.8						
ALF01	Guarapari-ES	120.99	267	*e*P	PKPdf	10 23 48.4	-0.3
SNAA	Sanae	121.97	201	PKP	PKiKP	10 23 50.5	+1.1
	comp=Z,1.6nm,0.7s,baz=135,slow=4.3,SNR=5.4						
SDV	Santo Domingo	121.97	317	*e*P	PKiKP	10 23 52.3	+1.0
VNA2	Neumayer--Watz	122.99	203	PKPdf	PKiKP	10 23 53.1	+1.7
VNA3	Neumayer Olymp	123.80	203	PKPdf	PKiKP	10 23 54.2	+1.3
ROSC	El Rosal	127.33	318	PKP	PKiKP	10 24 03.5	+1.3
	comp=Z,6.8nm,0.3s,baz=318,slow=4.3,SNR=3.8						
QSPA	South Pole Qui	128.39	180	PKP	PKPdf	10 24 01.4	-0.3
	comp=Z,6.3nm,0.8s,baz=264,slow=0.8,SNR=23						
QSPA	South Pole Qui	128.39	180		PKPdf	10 24 01.5	-0.2
PCMB	Pacaembu	129.77	273	*e*P	PKiKP	10 24 07.0	+0.6
SALV	Santo Antonio	129.96	282	*e*P	PKiKP	10 24 07.6	+0.7
PP1B	Ponte de Pedra	130.34	280	*e*P	PKiKP	10 24 08.2	+0.6
VILB	Vilhena	131.53	289	*e*P	PKiKP	10 24 11.2	+1.1
PTLB	Pontes e Lacer	132.31	285	*e*P	PKiKP	10 24 12.9	+1.4
ETMB	Extrema	133.75	297	*e*P	PKiKP	10 24 15.0	+0.5
SIV	San Ignacio	134.10	286	PKP	PKiKP	10 24 14.7	-0.6
	comp=Z,2.2nm,0.9s,baz=76,slow=6.8,SNR=8.3						
CZSB	Cruzeiro do Su	136.54	306	*e*P	PKiKP	10 24 19.8	-0.5
CPUP	Villa Florida	136.95	271	PKP	PKPdf	10 24 18.1	-0.8
	comp=Z,4.0nm,0.9s,baz=70,slow=5.4,SNR=4.4						
CPUP	Villa Florida	136.95	271	*e*P	PKiKP	10 24 21.0	+0.3
LPAZ	La Paz	139.51	292	PKP	PKPdf	10 24 24.1	-0.5
	comp=Z,2.1nm,0.8s,baz=28,slow=4.6,SNR=6.9						
LPAZ	La Paz	139.51	292	PKIKP	PKiKP	10 24 26.3	-0.7
LPAZ	La Paz	139.51	292	*e*P	PKPdf	10 24 25.5	+0.8
LPAZ	La Paz	139.51	292	PKPdf	PKiKP	10 24 26.3	-0.7
PB16	IPOC Station P	141.83	291		PKPdf	10 24 25.8	-3.0
NNA	Nana	142.40	307	PKP	PKPdf	10 24 29.1	-0.1
	comp=Z,4.6nm,0.4s,baz=182,slow=7.3,SNR=2.5						
LVC	Limon Verde	143.97	285	PKP	PKPdf	10 24 31.6	-0.6
	comp=Z,3.1nm,0.6s,baz=63,slow=11,SNR=2.0						
LVC	Limon Verde	143.97	285	*e*P	PKPdf	10 24 32.4	+0.2
TRQA	Tornquist	145.08	257	PKIKP	PKPdf	10 24 32.9	-0.3
TRQA	Tornquist	145.08	257	*e*P	PKPdf	10 24 33.0	-0.3
TRQA	Tornquist	145.08	257		PKPdf	10 24 32.9	-0.3
USHA	Ushuaia	149.55	225	PKPbc	PKiKP	10 24 46.1	+0.5
	comp=Z,17nm,1.1s,baz=144,slow=5.7,SNR=5.1						
PLCA	Paso Flores	152.12	254	PKPbc	PKPbc	10 24 50.6	-0.6
	comp=Z,12nm,0.9s,baz=50,slow=4.1,SNR=17						
PLCA	Paso Flores	152.12	254	PKIKP	PKiKP	10 24 51.3	-0.3
PLCA	Paso Flores	152.12	254	*e*P	PKPdf	10 24 45.8	+1.2
PLCA	Paso Flores	152.12	254		PKiKP	10 24 51.3	-0.3

IDC ***07*** *10:07:31.6±1.2, 38.°41N×73.°23E, h0^{km}, mb4.4/12, mb1 4.6/15, mb1mx4.1/71, mbtmp4.5/15, ML4.2/3, Error ellipse: s-maj=26.2km s-min=19.3km az=2.0*

NEIC ***07*** *10:07:33.6±1.4, 38.°58N±0.°06×73.°3E±0.°1, h10^{km}±1^{km}, mb4.6/10, Error ellipse: s-maj=15.4km s-min=9.5km az=104.0*

KRNET ***07*** *10:07:35.0±0.1, 38.°64N×73.°04E, h7^{km}, mb5.2*

ISC 07 10:07:36.2±2.3**, 38.°64N**±0.°09×**73.°30E**±0.°06**, h24**^{km}±15^{km}**, n39, σ1.^{s}52**/43**, mb4.5**/16**, 12C, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.38	7	⇑*e*P	Pb	10 08 01.3	-0.3
	baz=14						
SFK				⇑*e*S	Sb	10 08 20.9	+2.0
	baz=14						
DRK	Karamyk	1.44	306	Pn	Pn	10 07 59.4	-1.7
DRK	Karamyk	1.44	306	⇑*e*P	Pn	10 07 59.3	-1.7
	baz=12						
DRK				⇑*i*S	Sn	10 08 16.4	-3.0
	baz=12						
OHH	Osh	1.93	348	⇑*e*P	Pb	10 08 10.3	-0.4
	baz=54						
OHH				⇑*i*S	Sb	10 08 36.4	+2.1
	baz=54						
GAR	Garm	2.36	280	Pn	Pn	10 08 12.8	-0.7
GAR	Garm	2.36	280	⇑*i*P	Pn	10 08 14.0	+0.4
	baz=81						
GAR				⇑*e*S	Sn	10 08 42.4	+0.6
	baz=81						
BTK	Batken	2.39	307	Pn	Pn	10 08 14.4	+0.4
BTK	Batken	2.39	307	⇑*i*P	Pn	10 08 15.1	+1.1
	baz=10.0						
BTK				⇑*i*S	Sn	10 08 44.0	+1.5
	baz=10.0						
CHGR	Chuyangaron	3.24	272	Pn	Pn	10 08 26.3	+0.7
CHGR	Chuyangaron	3.24	272	⇑*e*P	Pn	10 08 26.2	+0.5
	baz=72						
CHGR				⇑*i*S	Sn	10 09 03.6	0.0
	baz=72						
TAS	Tashkent	4.08	312	Pn	Pn	10 08 36.9	-0.2
AAK	Ala-Archa	4.10	12	Pn	Pb	10 08 43.2	-4.6
	28nm,0.3s,baz=172,slow=7.1,SNR=1.1						
AAK				Sn	Sb	10 09 35.7	-1.2
	8.4nm,0.3s,baz=20,slow=20,SNR=1.0						
MKAR	Makanchi Array	10.49	36	Pn	Pn	10 10 07.5	+2.4
	1.3nm,0.3s,baz=225,slow=18,SNR=1.2						
WMQ	Urumqi	12.01	60	*e*P	Pn	10 10 28.9	+3.0
WMQ				LR	LR		
	comp=N,5μm,5.7s						
WMQ				LR	LR		
	comp=E,2μm,7.7s						
WMQ				LR	LR		
	comp=Z,4μm,15.3s						
ZAA0	Zalesovo Array	17.22	23		Pn	10 11 35.3	+0.3
ZALV	Zalesovo Beam	17.22	23	P	P	10 11 35.7	-0.6
	comp=Z,2.0nm,0.3s,baz=217,slow=11,SNR=2.9						
GTA	Gaotai	20.59	79	*e*P	Pn	10 12 16.1	+0.2
GTA				pP	pP	10 12 22.1	+0.5
GTA				sP	sP	10 12 25.4	0.0
GTA				pmax	pmax		
	comp=Z,18nm,0.8s						
SONM	Songino Array	25.64	58	P	P	10 13 04.5	+0.6
	comp=Z,20nm,0.8s,baz=256,slow=9.7,SNR=7.1						
SONM	Songino Array	25.64	58	IAmb	IAmb	10 13 08.2	
	comp=Z,31nm,1.0s						
ULN	Ulaanbaatar	26.08	58	P	P	10 13 08.2	+0.2
ULN				IAmb	IAmb	10 13 10.3	
	comp=Z,11nm,0.8s						
AKASG	Malin Array Be	33.10	306	P	P	10 14 10.6	+0.6
	comp=Z,1.2nm,0.4s,baz=82,slow=8.2,SNR=1.3						
FINES	FINESS Array B	36.78	324	P	P	10 14 42.2	+0.5
	comp=Z,6.5nm,0.7s,baz=110,slow=12,SNR=1.6						
ARCES	ARCESS Array B	39.90	336	P	P	10 15 08.7	+0.9
	comp=Z,5.3nm,0.6s,baz=109,slow=7.9,SNR=3.6						
KSRS	Korea Array	42.49	74	P	P	10 15 30.3	+0.9
	comp=Z,2.2nm,0.7s,baz=289,slow=6.4,SNR=1.8						
NOA	NORSAR Array B	43.81	322	P	P	10 15 39.6	-0.3
	comp=Z,3.2nm,0.8s,baz=93,slow=8.0,SNR=1.5						
SPITS	Spitsbergen Ar	45.84	346	P	P	10 15 55.9	0.0
	comp=Z,24nm,1.0s,baz=97,slow=12,SNR=2.6						
MJAR	Matsushiro Arr	50.50	71	P	P	10 16 33.0	+0.7
	comp=Z,5.7nm,0.8s,baz=293,slow=7.6,SNR=4.2						
TORD	Torodi Ar. Bea	67.59	269	P	P	10 18 29.8	-1.3
	comp=Z,2.1nm,0.6s,baz=45,slow=6.2,SNR=1.6						
TORD	Torodi Ar. Bea	67.59	269	IAmb	IAmb	10 18 45.8	
	comp=Z,3.2nm,0.9s						
A36M	Sachs Harbour	68.90	6	P	P	10 18 39.3	+0.8
COLD	Coldfoot	69.41	17	P	P	10 18 41.5	-0.2
COLD				IAmb	IAmb	10 18 44.5	
	comp=Z,4.6nm,0.9s						
INK	Inuvik	71.49	10	P	P	10 18 54.7	+0.3
	comp=Z,3.9nm,0.6s,baz=1.6,slow=5.3,SNR=2.7						
INK	Inuvik	71.49	10	P	P	10 18 55.2	+0.9
INK				IAmb	IAmb	10 18 55.4	
	comp=Z,5.8nm,0.8s						
ILAR	Eielson Array	72.22	17	P	P	10 18 55.6	-3.2
	comp=Z,2.0nm,0.8s,baz=313,slow=5.5,SNR=2.7						
RND	Reindeer	72.90	18	P	P	10 19 02.7	-0.3
RND				IAmb	IAmb	10 19 08.2	
	comp=Z,5.1nm,1.1s						
SCRK	Sand Creek	73.55	16	P	P	10 19 07.4	+0.5
EYAK	Cordova Ski Ar	76.11	19	P	P	10 19 20.4	-1.1
YKA	Yellowknife Ar	79.01	4	P	P	10 19 38.0	+0.3
	comp=Z,1.6nm,0.6s,baz=349,slow=5.8,SNR=2.3						
WRA	Warramunga Arr	81.61	124	P	P	10 19 50.0	-2.3
	comp=Z,1.2nm,0.9s,baz=324,slow=5.1,SNR=1.0						

NEIC ***07*** *10:21:22.5±2.1, 5.°89S±0.°06×151.°9E±0.°1, h40^{km}±7^{km}, mb4.4/18, Error ellipse: s-maj=16.4km s-min=8.4km az=103.0*

DJA ***07*** *10:21:23.8±0.5, 6°S±4°×15°2E±°, h68^{km}±9^{km}, M5.0/11, mB4.4/1, mb4.5/11, MLv5.2/3, Mw(mB)3.5/1*

IDC ***07*** *10:21:23.8±2.7, 5.°80S×151.°68E, h48^{km}±24^{km}, mb3.8/12, mb1 4.0/13, mb1mx3.7/49, mbtmp4.1/13, ML2.6/1, Error ellipse: s-maj=23.5km s-min=17.4km az=104.0*

ISC 07 10:21:22.0±0.6**, 5.°86S**±0.°07×**151.°84E**±0.°09**, h36**^{km}**, n42, σ1.^{s}26**/37**, mb4.3**/21**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.69	11	Pn	Pn	10 21 50.0	+1.0
PMG	Port Moresby	5.83	233	P	Pn	10 22 47.6	+1.7
	12nm,0.3s,baz=46,slow=8.5,SNR=6.6						
PMG				S	Sn	10 23 52.1	+0.6
	3.8nm,0.3s,baz=213,slow=20,SNR=2.3						
MANU	Manus Island	5.86	310	Pn	Pn	10 22 49.2	+2.8
SMPI	Sarmi	13.65	286	P	Pn	10 24 31.6	-1.6
	22nm,1.6s						
CTAO	Charters Tower	15.15	201	Pn	Pn	10 24 54.9	+1.4
CTAO				IAmb	IAmb	10 25 02.5	
	comp=Z,14nm,1.3s						
EIDS	Eidsvold	19.41	182	P	P	10 25 44.4	-0.7
DZM	Mont Dzumac	21.42	140	P	P	10 26 11.3	+4.2
	comp=Z,4.5nm,0.6s,baz=349,slow=5.2,SNR=7.2						
MTN	Manton Dam	21.57	250	P	P	10 26 07.9	-0.8
MTN				IAmb	IAmb	10 26 08.6	
	comp=Z,13nm,0.8s						
WB0	Warramunga Arr	21.89	229	P	P	10 26 11.3	-0.7
WB0				IAmb	IAmb	10 26 14.7	
	comp=Z,15nm,0.8s						
WR0	Warramunga Arr	21.89	229	P	P	10 26 11.5	-0.6
WR0				IAmb	IAmb	10 26 14.8	
	comp=Z,20nm,1.1s						
OUENC	Ouen Island, N	21.93	140	P	P	10 26 10.4	-2.0
OUENC				IAmb	IAmb	10 26 17.7	
	comp=Z,13nm,0.9s						
WRAB	Tennant Creek	22.02	229	P	P	10 26 12.6	-0.8
WB2	Warramunga Arr	22.02	229	P	P	10 26 12.5	-1.0
WRA	Warramunga Arr	22.03	229	P	P	10 26 12.6	-1.0
	comp=Z,14nm,0.6s,baz=54,slow=10.0,SNR=43						
WRA	Warramunga Arr	22.03	229	P	P	10 26 13.4	-0.2
KNRA	Kununurra	24.66	245	P	P	10 26 38.6	-0.9
AS31	Alice Springs	24.73	222	P	P	10 26 40.4	+0.2
AS31				IAmb	IAmb	10 26 41.9	
	comp=Z,5.4nm,1.1s						
ASAR	Alice Springs	24.73	222	P	P	10 26 40.1	-0.1
	comp=Z,10nm,0.8s,baz=57,slow=9.2,SNR=34						
ASAR				ScP	ScP	10 33 53.3	+0.3
	comp=Z,0.9nm,1.0s,baz=62,slow=2.5,SNR=4.3						
ASAR	Alice Springs	24.73	222	P	P	10 26 40.0	-0.2
STKA	Stephens Creek	27.60	199	P	P	10 27 06.8	+0.8
	comp=Z,1.5nm,0.5s,baz=40,slow=12,SNR=4.6						
STKA	Stephens Creek	27.60	199	IAmb	IAmb	10 27 14.1	
	comp=Z,0.7nm,0.8s						
FITZ	Fitzroy Crossi	28.32	242	P	P	10 27 11.4	-1.1
	comp=Z,49nm,1.2s,baz=79,slow=8.0						
BBOO	Buckleboo	30.58	207	P	P	10 27 32.4	-0.1
BBOO				IAmb	IAmb	10 27 51.3	
	comp=Z,13nm,1.2s						
FORT	Forrest	33.37	219	P	P	10 27 56.5	-0.4
PSA00	Pilbara Seismi	34.68	240	P	P	10 28 07.1	-1.3
PSA00				IAmb	IAmb	10 28 22.9	
	comp=Z,5.6nm,0.8s						
CMAR	Chiang Mai Arr	57.47	296	P	P	10 31 09.1	+1.2
	comp=Z,0.6nm,0.3s,baz=124,slow=4.5,SNR=1.8						
PETK	Petropavlovsk-	58.95	4	P	P	10 31 17.7	+0.1
	comp=Z,1.4nm,0.7s,baz=198,slow=9.1,SNR=2.2						
SONM	Songino Array	66.72	328	P	P	10 32 10.4	+0.8
	comp=Z,1.0nm,0.6s,baz=144,slow=6.0,SNR=8.6						
SONM	Songino Array	66.72	328	IAmb	IAmb	10 32 12.0	
	comp=Z,1.4nm,1.0s						
MKAR	Makanchi Array	80.50	319	P	P	10 33 29.0	-1.4
	comp=Z,0.5nm,0.8s,baz=120,slow=5.2,SNR=3.1						
ZALV	Zalesovo Beam	81.50	327	P	P	10 33 35.1	-0.5
	comp=Z,0.8nm,0.6s,baz=101,slow=4.6,SNR=3.6						
ILAR	Eielson Array	83.49	22	P	P	10 33 45.1	-0.6
	comp=Z,0.6nm,0.6s,baz=247,slow=5.1,SNR=6.9						
KURK	Kurchatov	84.02	322	P	P	10 33 48.8	+0.1
KURK	Kurchatov	84.02	322	IAmb	IAmb	10 33 52.9	
	comp=Z,3.8nm,1.4s						
KURBB	Kurchatov Arra	84.04	322	P	P	10 33 48.8	0.0
	comp=Z,0.5nm,0.8s,baz=99,slow=5.4,SNR=3.0						
QSPA	South Pole Qui	84.11	180	P	P	10 33 49.5	+0.4
	comp=Z,3.3nm,0.7s,baz=285,slow=2.0,SNR=5.3						
QSPA	South Pole Qui	84.11	180	IAmb	IAmb	10 33 51.0	
	comp=Z,4.1nm,0.8s						
H03S2	Juan Fernandez	117.87	133	T	T	12 48 37.7	
	baz=235						
H03S1	Juan Fernandez	117.88	133	T	T	12 48 45.1	
	baz=235						
H03S3	Juan Fernandez	117.89	133	T	T	12 48 40.1	
	baz=235						
GERES	GERESS Array B	124.45	328	PKP	PKPdf	10 40 16.8	-0.7
	comp=Z,0.7nm,0.7s,baz=46,slow=2.8,SNR=2.1						
TORD	Torodi Ar. Bea	149.71	286	PKPbc	PKPbc	10 41 08.2	-0.8
	comp=Z,3.8nm,0.6s,baz=64,slow=3.1,SNR=22						

IDC ***07*** *10:22:11.5±1.1, 30.°52S×177.°32W, h0^{km}, mb4.4/8, mb1 4.6/9, mb1mx4.3/35, mbtmp4.4/9, ML3.7/1, Error ellipse: s-maj=27.8km s-min=20.3km az=116.0*

NEIC ***07*** *10:22:13.7±1.4, 30.°51S±0.°05×177.°3W±0.°2, h10^{km}±1^{km}, mb4.6/7, Error ellipse: s-maj=27.7km s-min=7.8km az=88.0*

ISC 07 10:22:16.7±0.9**, 30.°53S**±0.°07×**177.°4W**±0.°1**, h33**^{km}**, n22, σ1.^{s}32**/26**, mb4.6**/11**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.35	340	Pn	Pn	10 22 38.4	-1.0
	854nm,0.3s,baz=192,slow=3.1,SNR=32						
RAO				Sn	Sb	10 22 57.1	-1.5
	1μm,0.3s,baz=107,slow=23,SNR=7.9						
RAO	Raoul Island	1.35	340		Pn	10 22 38.6	-0.7
URZ	Urewera	8.94	209	Pn	Pn	10 24 23.4	-0.1
	0.8nm,0.3s,baz=299,slow=23,SNR=6.9						
URZ				Sn	Sn	10 25 59.9	-3.1
	1.4nm,0.3s,baz=309,slow=22,SNR=4.6						
BKZ	Black Stump Fm	9.96	209	Pn	Pn	10 24 36.8	-0.8
DZM	Mont Dzumac	16.75	296	P	P	10 26 12.0	+1.1
DZM				IAmb	IAmb	10 26 27.1	
	comp=Z,11nm,0.8s						
CTA	Charters Tower	34.33	279	P	P	10 29 02.1	+1.6
	comp=Z,6.4nm,0.7s,baz=104,slow=6.7,SNR=2.6						
STKA	Stephens Creek	34.95	257	P	P	10 29 07.7	+1.9
	comp=Z,13nm,0.7s,baz=93,slow=9.7,SNR=23						
STKA	Stephens Creek	34.95	257	P	P	10 29 08.2	+2.4
STKA				IAmb	IAmb	10 29 09.4	
	comp=Z,3.6nm,0.9s						
ASAR	Alice Springs	43.62	267	P	P	10 30 18.4	+0.1
	comp=Z,2.3nm,0.7s,baz=110,slow=7.7,SNR=13						
ASAR				PcP	PcP	10 32 05.7	+0.3
	comp=Z,0.9nm,0.6s,baz=120,slow=4.0,SNR=6.7						
WB2	Warramunga Arr	44.61	272	P	P	10 30 26.5	+0.3
WB2				IAmb	IAmb	10 30 27.6	
	comp=Z,11nm,0.8s						
WRAB	Tennant Creek	44.62	272	P	P	10 30 26.5	+0.3
WRAB				IAmb	IAmb	10 30 28.1	
	comp=Z,15nm,1.1s						
WRA	Warramunga Arr	44.62	272	P	P	10 30 25.6	-0.6
	comp=Z,7.8nm,0.7s,baz=112,slow=7.6,SNR=28						
WRA				PcP	PcP	10 32 06.1	-2.7
	comp=Z,1.1nm,0.8s,baz=123,slow=3.2,SNR=4.0						
WRA	Warramunga Arr	44.62	272	P	P	10 30 26.3	+0.1
WB0	Warramunga Arr	44.65	272	P	P	10 30 26.7	+0.2
WB0				IAmb	IAmb	10 30 27.9	
	comp=Z,11nm,0.8s						
FITZ	Fitzroy Crossi	52.88	270	P	P	10 31 28.0	-1.7
	comp=Z,3.0nm,0.7s,baz=156,slow=12						
QSPA	South Pole Qui	59.58	180	P	P	10 32 18.0	+1.0
PETK	Petropavlovsk-	86.07	345	P	P	10 34 53.0	-0.6
	comp=Z,1.2nm,0.6s,baz=128,slow=9.3,SNR=6.0						
USRK	Ussuriysk Ar.	87.56	326	P	P	10 35 01.4	+0.2
	comp=Z,2.3nm,0.7s,baz=97,slow=7.4,SNR=5.9						
NVAR	Mina Array Bea	87.98	42	P	P	10 35 04.0	+0.4
	comp=Z,0.9nm,0.8s,baz=220,slow=8.3,SNR=4.4						
FINES	FINESS Array B	145.45	340	PKPbc	PKPab	10 41 50.8	-0.1
	comp=Z,13nm,0.7s,baz=46,slow=6.0,SNR=10						
NOA	NORSAR Array B	148.96	352	PKPbc	PKPbc	10 41 59.8	-0.8
	comp=Z,1.5nm,0.7s,baz=15,slow=4.3,SNR=3.8						
AKASG	Malin Array Be	151.72	323	PKPbc	PKiKP	10 42 08.0	+0.2
	comp=Z,2.5nm,0.5s,baz=46,slow=2.6,SNR=9.3						

TRN ***07*** *10:24:23.0, 13.°69N×58.°51W, h125^{km}, MD4.1*

ISC 07 10:24:24.6±3.3**, 13.°89N**±0.°07×**58.°6W**±0.°2**, h10**^{km}**, n15, σ1.^{s}31**/23**, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBGH	Gun Hill	1.21	232	*e*S	Sn	10 25 06.5	+2.5
MPOM	Morne Pois Mar	2.28	284	*e*P	Pn	10 25 02.7	+0.4
MPOM				*e*S	Sn	10 25 32.1	+1.7
MCLT	Moule a Chique	2.30	266	*e*S	Sn	10 25 32.1	+1.1
SLBI	Saint Lucia, B	2.33	274	*e*P	Pn	10 25 02.1	-0.9
SLBI				*e*S	Sn	10 25 31.9	+0.3
BIM	Bigot	2.49	285	*e*P	Pn	10 25 05.3	0.0
BIM				*e*S	Sn	10 25 34.5	-1.4
FDF	Fort de France	2.63	289	*e*P	Pn	10 25 07.6	+0.4
FDF				*e*S	Sn	10 25 39.6	+0.4
SVB	Belmont	2.67	257	*e*P	Pn	10 25 08.3	+0.6
SVB				*e*S	Sn	10 25 38.4	-1.7
MDN	Morne-Daniel	3.07	298	*e*P	Pn	10 25 13.7	+0.5
MDN				*e*S	Sn	10 25 50.5	+0.5
GCMP	Grenada, Carri	3.10	244	*e*S	Sn	10 25 47.0	-3.8
DSLB	Salisbury	3.15	300	*e*P	Pn	10 25 14.5	+0.2
DSLB				*e*S	Sn	10 25 52.2	+0.2
CBE	Ff, Capester	3.64	307	*e*P	Pn	10 25 22.0	+1.0
CBE				*e*S	Sn	10 26 04.1	0.0
ANBD	Bethesda, Anti	4.39	316	*e*P	Pn	10 25 31.5	+0.1
ANBD	Bethesda, Anti	4.39	316	*e*S	Sn	10 26 22.0	-0.6
ANWB	Willy Bob	4.86	321	*e*P	Pn	10 25 37.5	-0.3
ANWB	Willy Bob	4.86	321	*e*S	Sn	10 26 33.1	-1.1

IDC ***07*** *10:32:51.9±3.0, 38.°02N×73.°45E, h0^{km}, mb3.6/4, mb1 3.7/8, mb1mx3.5/50, mbtmp3.6/8, ML3.3/3, Error ellipse: s-maj=49.9km s-min=32.3km az=4.0*

ISC 07 10:32:52.0±1.9**, 37.°9N**±0.°2×**73.°3E**±0.°2**, h10**^{km}**, n9, σ1.^{s}12**/9**, mb3.5**/4**, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.84	10	Pn	Pn	10 34 06.7	+1.6
	2.4nm,0.3s,baz=174,slow=9.1,SNR=17						
AAK				Sn	Sn	10 35 01.0	-0.3
	0.3nm,0.3s,baz=162,slow=22,SNR=5.6						
MKAR	Makanchi Array	11.11	34	Pn	Pn	10 35 33.2	+2.3
	0.1nm,0.3s,baz=218,slow=15,SNR=5.0						
BVAR	Borovoye Array	15.29	353	Pn	Pn	10 36 26.9	-0.9
	0.3nm,0.3s,baz=186,slow=13,SNR=7.9						
AKTO	Aktyubinsk	16.64	324	Pn	Pn	10 36 44.6	-0.6
	0.2nm,0.3s,baz=115,slow=11,SNR=8.9						
ZALV	Zalesovo Beam	17.92	23	P	P	10 37 00.4	-1.4
	baz=216,slow=12,SNR=1.5						
SONM	Songino Array	26.03	57	P	P	10 38 25.2	-0.2
	0.4nm,0.6s,baz=256,slow=9.1,SNR=2.8						
ARCES	ARCESS Array B	40.61	336	P	P	10 40 31.7	+0.1
	6.2nm,1.1s,baz=121,slow=8.5,SNR=3.6						
INK	Inuvik	72.24	10	P	P	10 44 18.0	+1.1
	0.4nm,0.5s,baz=350,slow=4.4,SNR=4.8						
ILAR	Eielson Array	72.94	17	P	P	10 44 20.6	-0.6
	0.1nm,0.5s,baz=328,slow=6.6,SNR=1.8						

IDC ***07*** *10:34:19.4±0.6, 38.°15N×72.°88E, h0^{km}, mb4.2/24, mb1 4.3/32, mb1mx4.2/52, mbtmp4.2/32, ML3.9/8, Error ellipse: s-maj=12.3km s-min=10.6km az=159.0*

KRNET ***07*** *10:34:19.7±0.1, 38.°23N×72.°68E, mb5.0*

NEIC ***07*** *10:34:22.2±2.9, 38.°21N±0.°06×72.°94E±0.°07, h10^{km}±1^{km}, mb4.6/23, Error ellipse: s-maj=10.1km s-min=9.2km az=135.0*

BJI ***07*** *10:34:22.4±0.0, 38.°25N×72.°89E, h6^{km}, mB5.3/10, mb4.5/31, ML4.7/4, Ms4.7/4, Ms7 4.7/5*

NNC ***07*** *10:34:24.9±1.9, 38.°40N×72.°95E, h0^{km}, mb5.1, mpv4.8, Error ellipse: s-maj=15.9km s-min=11.0km az=160.0*

MOS ***07*** *10:34:24.5±1.1, 38.°26N×72.°86E, h36^{km}, mb4.7/29, Error ellipse: s-maj=5.8km s-min=3.4km az=83.3*

SOME ***07*** *10:34:24.2, 38.°53N×72.°82E, h0^{km}, MS4.2*

ISC 07 10:34:22.9±0.3**, 38.°33N**±0.°02×**72.°94E**±0.°02**, h10**^{km}**, n296, σ2.^{s}60**/309**, mb4.5**/64**, 53C-31D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.45	322	Pn	Pn	10 34 47.3	-2.2
DRK	Karamyk	1.45	322	⇓*e*P	Pn	10 34 46.8	-2.7
	baz=32						
DRK				⇓*i*S	Sb	10 35 06.6	-2.3
	baz=32						
SFK	Sufi-Kurgan	1.73	14	⇑*e*P	Pb	10 34 55.2	+0.2
	baz=20						
SFK				⇑*e*S	Sg	10 35 20.5	+1.8
	baz=20						
GAR	Garm	2.16	289	*i* PN	Pn	10 34 59.8	+0.7
GAR	Garm	2.16	289	Pn	Pn	10 34 59.7	+0.7
OHH	Osh	2.19	357	⇑*i*P	Pn	10 35 01.2	+1.7
	baz=2.0						
OHH				⇑*i*S	Sb	10 35 30.7	+0.7
	baz=2.0						
BTK	Batken	2.39	317	PN	Pn	10 35 04.1	+1.9
BTK	Batken	2.39	317	Pn	Pn	10 35 04.1	+1.9
BTK	Batken	2.39	317	⇓*e*P	Pn	10 35 01.8	-0.4
	baz=22						
BTK				⇓*i*S	Sn	10 35 32.0	+0.5
	baz=22						
KSH	Kashi	2.64	62	Pn	Pn	10 35 02.3	-3.4
KSH				Sn	Sn	10 35 31.9	-6.0
KSH				smax	smax		
	comp=N,5μm,0.7s						
KSH				smax	smax		
	comp=E,5μm,0.7s						
CHGR	Chuyangaron	2.99	277	*e*PN	Pn	10 35 07.1	-3.3
CHGR	Chuyangaron	2.99	277	Pn	Pn	10 35 11.2	+0.8
CHGR	Chuyangaron	2.99	277	⇓*e*P	Pn	10 35 08.4	-2.0
	baz=80						
CHGR				⇓*i*S	Sn	10 35 42.8	-3.6
	baz=80						
TRKS	Terek-Say	3.48	337	*e*PN	Pn	10 35 17.1	-0.2
TRKS	Terek-Say	3.48	337	⇑*e*P	Pn	10 35 17.1	-0.2
	baz=41						
TRKS				⇑*i*S	Sn	10 35 58.7	+0.1
	baz=41						
AML	Almayashu	3.84	8	*e*PN	Pn	10 35 25.5	+3.1
AML				*i* S	Sb	10 36 13.4	-4.2
AML	Almayashu	3.84	8	⇑*e*P	Pn	10 35 24.5	+2.1
	baz=11						
AML				⇑*i*S	Sn	10 36 11.5	+3.7
	baz=11						
UCH	Uchtor	4.07	17	*e*PN	Pn	10 35 29.3	+3.6
UCH				*i* S	Sb	10 36 19.7	-4.7
UCH	Uchtor	4.07	17	⇑*e*P	Pn	10 35 27.8	+2.1
	baz=19						
UCH				⇑*i*S	Sn	10 36 18.2	+4.6
	baz=19						
TAS	Tashkent	4.10	318	*e*PN	Pn	10 35 25.1	-0.6
TAS	Tashkent	4.10	318	⇑*e*P	Pn	10 35 25.6	-0.1
	baz=21						

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TAS                                ⇑iS    Sn     10 36 12.9  -0.8
      baz=21
MNAS  Manas              4.16 356  ePN    Pn     10 35 29.0 +2.4
MNAS                               eS     Sn     10 36 19.4 +4.0
MNAS  Manas              4.16 356⇑ eP     Pn     10 35 28.3 +1.7
      baz=58
MNAS                               ⇑eS    Sn     10 36 18.7 +3.3
      baz=58
EKS2  Erkin-Say          4.37   8  ePN    Pn     10 35 32.5 +3.0
EKS2                               i S    Sn     10 36 25.8 +5.3
EKS2  Erkin-Say          4.37   8⇓ eP     Pn     10 35 31.6 +2.1
      baz=10.0
EKS2                               ⇓iS    Sn     10 36 24.3 +3.8
      baz=10.0
MRKS  Merke              4.41   3  eP     Pb     10 35 43.2 +2.7
      164nm,0.5s
MRKS                               eS     Sg     10 36 40.5  -4.0
      340nm,0.7s
MRKS  Merke              4.41   3   Pg    Pb     10 35 43.2 +2.7
      221nm,0.5s
MRKS                                Lg    Lg     10 36 40.6
      340nm,0.7s
AAK   Ala-Archa          4.46  15   Pn    Pn     10 35 34.8 +4.1
      12nm,0.3s,baz=186,slow=10,SNR=11
AAK                                 Sn    Sb     10 36 33.6  -1.7
      13nm,0.3s,baz=346,slow=18,SNR=6.5
AAK                                 Lg    Lg     10 36 44.8
      20nm,0.3s,baz=56,slow=22,SNR=3.8
AAK   Ala-Archa          4.46  15⇑ ePN    Pn     10 35 34.6 +3.8
AAK                                 pmax  pmax
      comp=Z,232nm,1.0s
AAK   Ala-Archa          4.46  15  ⇓Pn    Pn     10 35 34.5 +3.8
      comp=Z,237nm,1.0s
AAK                                ⇓Lg    Lg     10 36 45.9
      comp=Z,527nm,1.0s
AAK   Ala-Archa          4.46  15   Pn    Pn     10 35 32.9 +2.1
AAK   Ala-Archa          4.46  15⇓ eP     Pn     10 35 33.2 +2.5
      baz=17
AAK                                ⇓iS    Sn     10 36 27.0 +4.2
      baz=17
KBK   Karagaybulak       4.58  19  ePN    Pn     10 35 36.3 +3.9
KBK                                eS     Sn     10 36 31.8 +6.0
KBK   Karagaybulak       4.58  19⇑ eP     Pn     10 35 34.9 +2.5
      baz=21
KBK                                ⇑eS    Sn     10 36 30.4 +4.6
      baz=21
ULHL  Ulahol             4.65  32  ePN    Pn     10 35 37.7 +4.3
ULHL                               i S    Sb     10 36 34.8  -6.1
ULHL  Ulahol             4.65  32⇑ eP     Pn     10 35 36.3 +2.9
      baz=33
ULHL                               ⇑iS    Sn     10 36 32.7 +5.1
      baz=33
FRU1  Bishkek            4.65  15  ePN    Pn     10 35 37.1 +3.8
FRU1                               i S    Sn     10 36 33.4 +6.0
FRU1  Bishkek            4.65  15⇑ eP     Pn     10 35 36.1 +2.8
      baz=17
FRU1                               ⇑iS    Sn     10 36 32.0 +4.6
      baz=17
NIL   Nilore             4.68 177   PN    Pn     10 35 31.8  -1.9
NIL   Nilore             4.68 177   Pn    Pn     10 35 31.8  -1.9
DZA   Taraz              4.72 345  eP     Pb     10 35 48.7 +3.0
      comp=Z,290nm,0.7s
DZA                                eS     Sg     10 36 49.6  -4.7
      comp=Z,822nm,0.8s
DZA   Taraz              4.72 345  ePn    Pn     10 35 34.8 +0.6
      baz=348
DZA                                ePg    Pg     10 35 52.2  -1.0
      baz=348
DZA   Taraz              4.72 345  ePN    Pn     10 35 34.7 +0.6
CHM   Chimkent           4.73 328  eP     Pb     10 35 49.5 +3.5
      comp=Z,423nm,0.5s
CHM                                eS     Sg     10 36 51.2  -3.5
      comp=Z,1µm,0.5s
BOOM  Boomskoye usch     4.74  28   PN    Pn     10 35 36.4 +1.8
BOOM  Boomskoye usch     4.74  28         Pn     10 35 36.4 +1.8
BOOM  Boomskoye usch     4.74  28⇑ eP     Pn     10 35 37.5 +2.9
      baz=29
BOOM                               ⇑iS    Sn     10 36 34.6 +4.9
      baz=29
KDJ   Kajisay            4.99  39   PN    Pn     10 35 39.6 +1.5
KDJ   Kajisay            4.99  39         Pn     10 35 39.6 +1.5
KDJ   Kajisay            4.99  39⇑ eP     Pn     10 35 41.2 +3.2
      baz=40
KDJ                                ⇑eS    Sn     10 36 41.2 +5.3
      baz=40
TKM2  Tokmak 2           5.01  23   PN    Pb     10 35 55.0 +4.3
TKM2  Tokmak 2           5.01  23  ⇑Pg    Pb     10 35 55.1 +4.3
      comp=Z,90nm,0.7s
TKM2                               ⇓Lg    Lg     10 37 03.2
      comp=Z,622nm,1.2s
TARG  Taragay, Kyrgy     5.04  46         Pn     10 35 40.2 +1.2
USP   Ospenovka          5.07  13  ePN    Pn     10 35 42.5 +3.5
USP                                i S    Sn     10 36 42.6 +5.0
USP   Ospenovka          5.07  13⇓ eP     Pn     10 35 41.5 +2.5
      baz=15
USP                                ⇓iS    Sn     10 36 41.6 +4.0
      baz=15
KK31  Karatay Array      5.11 340   PN    Pn     10 35 41.8 +2.3
KKAR  Karatay Array      5.11 340   PN    Pn     10 35 41.2 +1.7
KKAR  Karatay Array      5.11 340   Pn    Pn     10 35 41.2 +1.7
KK09  Karatay Array      5.13 340  ⇑Pn    Pn     10 35 41.3 +1.4
      comp=Z,102nm,0.6s,baz=156,slow=13
KK09                               ⇓Sn    Sn     10 36 44.0 +4.9
      comp=Z,207nm,0.7s
KK09                               ⇓Lg    Lg     10 37 05.3
      comp=Z,248nm,0.8s,baz=149,slow=28
KST   Kastek             5.24  25  eP     Pg     10 36 00.2  -2.9
      comp=Z,86nm,0.6s
KST                                eS     Sg     10 37 09.4  -1.6
      comp=Z,371nm,0.7s
KST   Kastek             5.24  25   Pg    Pg     10 36 00.2  -2.9
      comp=Z,156nm,1.0s
KST                                 Lg    Lg     10 37 09.4
      comp=Z,371nm,0.7s
SGDS  Sogindy            5.27  13  ePn    Pn     10 35 42.3 +0.5
      baz=15
SGDS                               ePg    Pg     10 36 02.9  -1.0
      baz=15
DGS   Degeres            5.35  23  eP     Pg     10 36 02.8  -2.6
      comp=Z,171nm,0.7s
DGS                                eS     Sg     10 37 13.2  -1.6
      comp=Z,276nm,0.6s
DGS   Degeres            5.35  23   Pg    Pg     10 36 02.8  -2.6
      comp=Z,171nm,0.7s
DGS                                 Lg    Lg     10 37 13.2
      comp=Z,276nm,0.6s
IZV   Izvestkoviy        5.46  30  eP     Pb     10 36 03.0 +4.4
      comp=Z,58nm,0.6s
IZV                                eS     Sg     10 37 14.0  -4.3
      comp=Z,272nm,0.7s
IZV   Izvestkoviy        5.46  30   Pg    Pb     10 36 02.9 +4.4
      comp=Z,58nm,0.6s
IZV                                 Lg    Lg     10 37 14.0
      comp=Z,272nm,0.7s
MTBS  Maitube            5.47  28  eP     Pg     10 36 04.3  -3.4
      comp=Z,88nm,1.0s
MTBS                               eS     Sg     10 37 16.1  -2.5
      comp=Z,308nm,3.0s
TNSS  Tian-Shan          5.60  32  eP     Pg     10 36 06.9  -3.2
      comp=Z,94nm,0.6s
TNSS                               eS     Sg     10 37 20.8  -1.8
      comp=Z,71nm,0.7s
TNSS  Tian-Shan          5.60  32  ePn    Pn     10 35 48.2 +1.7
      baz=32
TNSS                               ePg    Pg     10 36 10.2 +0.1
      baz=32
TNSS  Tian-Shan          5.60  32   Pg    Pg     10 36 06.9  -3.2
      comp=Z,94nm,0.6s
TNSS                                Lg    Lg     10 37 20.8
      comp=Z,71nm,0.7s
AAA   Alma-Ata           5.73  30  eP     Pb     10 36 08.6 +5.7
      comp=Z,101nm,0.4s
AAA                                eS     Sg     10 37 23.7  -3.0
      comp=Z,366nm,0.8s
AAA   Alma-Ata           5.73  30  ePg    Pg     10 36 13.2 +0.6
      baz=31
AAA   Alma-Ata           5.73  30   Pg    Pb     10 36 08.6 +5.7
      comp=Z,101nm,0.4s
AAA                                 Lg    Lg     10 37 23.7
      comp=Z,366nm,0.8s
KRBS  Karabastau         5.74  20  eP     Pb     10 36 08.2 +5.0
      comp=Z,73nm,0.6s
KRBS                               eS     Sg     10 37 23.1  -4.2
      comp=Z,167nm,0.8s
KRBS  Karabastau         5.74  20   Pg    Pb     10 36 08.2 +5.0
      comp=Z,73nm,0.6s
KRBS                                Lg    Lg     10 37 23.1
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      comp=Z,167nm,0.8s
MDOK  Medeo              5.74  32  eP     Pg     10 36 09.8  -3.1
      comp=Z,65nm,0.7s
MDOK                               eS     Sg     10 37 25.7  -1.6
      comp=Z,185nm,0.9s
MDOK  Medeo              5.74  32  ePn    Pn     10 35 50.2 +1.8
      baz=32
MDOK                               ePg    Pg     10 36 12.7  -0.2
      baz=32
MDOK  Medeo              5.74  32  ePN    Pn     10 35 50.1 +1.7
MDOK  Medeo              5.74  32  ⇓Pg    Pb     10 36 08.1 +4.8
      comp=Z,67nm,0.7s
MDOK                               ⇑Lg    Lg     10 37 25.3
      comp=Z,257nm,1.0s
MDOK  Medeo              5.74  32   Pg    Pg     10 36 09.8  -3.1
      comp=Z,65nm,0.7s
MDOK                                Lg    Lg     10 37 25.7
      comp=Z,185nm,0.9s
KNDC  Almaty             5.75  31  ⇑Pg    Pg     10 36 09.3  -3.8
      comp=Z,265nm,0.8s
KNDC                               ⇑Lg    Lg     10 37 29.8
      comp=Z,1µm,1.1s
KOTS  Kotyrbulak         5.83  32  eP     Pb     10 36 10.2 +5.5
      comp=Z,79nm,0.7s
KOTS                               eS     Sg     10 37 26.4  -3.6
      comp=Z,422nm,0.7s
KOTS  Kotyrbulak         5.83  32   Pg    Pb     10 36 10.2 +5.5
      comp=Z,79nm,0.7s
KOTS                                Lg    Lg     10 37 26.4
      comp=Z,422nm,0.7s
PRZ   Przheval'sk        5.88  43   PN    Pn     10 35 52.3 +2.1
PRZ   Przheval'sk        5.88  43         Pn     10 35 52.3 +2.1
KTBS  Karatobe           6.07  27  eP     Pg     10 36 15.3  -3.9
      comp=Z,65nm,1.2s
KTBS                               eS     Sg     10 37 35.1  -2.6
      comp=Z,268nm,0.7s
KTBS  Karatobe           6.07  27   Pg    Pg     10 36 15.3  -3.9
      comp=Z,65nm,1.2s
KTBS                                Lg    Lg     10 37 35.1
      comp=Z,268nm,0.7s
KUU   Kurty              6.12  24  eP     Pb     10 36 15.6 +6.1
      comp=Z,28nm,1.4s
KUU                                eS     Sg     10 37 35.8  -3.5
      comp=Z,397nm,0.8s
KUU   Kurty              6.12  24  ePn    Pn     10 35 55.2 +1.9
      baz=25
KUU   Kurty              6.12  24  ePN    Pn     10 35 55.2 +1.9
KUU   Kurty              6.12  24   Pg    Pb     10 36 15.6 +6.1
      comp=Z,28nm,1.4s
KUU                                 Lg    Lg     10 37 35.7
      comp=Z,397nm,0.8s
SATY  Saty               6.29  40  eP     Pg     10 36 18.9  -4.3
      comp=Z,53nm,0.5s
SATY                               eS     Sg     10 37 40.8  -3.8
      comp=Z,172nm,1.6s
SATY  Saty               6.29  40  ePn    Pn     10 35 57.9 +2.1
      comp=Z,5.7nm,0.7s,baz=40
SATY  Saty               6.29  40  ePN    Pn     10 35 57.9 +2.1
SATY                                pmax  pmax
      comp=Z,6.0nm,0.7s
KURS  Kuram              6.49  36  eP     Pb     10 36 22.4 +6.4
      comp=Z,50nm,1.2s
KURS                               eS     Sg     10 37 46.8  -4.5
      comp=Z,166nm,2.3s
DHRM  DHARAMSHALA        6.66 155  eP     Pn     10 36 00.6  -0.4
DHRM                               eS     Sn     10 37 15.3  -1.8
DHRM                                IAML         10 37 18.6
      comp=E,576nm,0.5s
DHRM                                IAML         10 37 22.5
      comp=N,410nm,0.2s
UZB   Uzynbulak          6.66  42  eP     Pb     10 36 25.6 +6.6
      comp=N,49nm,0.7s
UZB                                eS     Sg     10 37 53.0  -3.8
      comp=N,136nm,2.0s
UZB   Uzynbulak          6.66  42  ePn    Pn     10 36 03.4 +2.4
      comp=N,9.3nm,0.8s,baz=42
UZB   Uzynbulak          6.66  42  ePN    Pn     10 36 03.4 +2.4
UZB                                 pmax  pmax
      comp=Z,9.0nm,0.8s
KPKS  Kokpek             6.72  38  eP     Pb     10 36 26.3 +6.4
      comp=Z,38nm,0.9s
KPKS                               eS     Sg     10 37 54.1  -4.5
      comp=Z,160nm,1.3s
KPKS  Kokpek             6.72  38  ePn    Pn     10 36 03.4 +1.6
      comp=Z,4.0nm,0.6s,baz=39
KPKS  Kokpek             6.72  38  ePN    Pn     10 36 03.3 +1.6
KPKS                                pmax  pmax
      comp=Z,4.0nm,0.6s
BTLS  Baital             6.75   7  eP     Pb     10 36 25.3 +5.0
      comp=Z,33nm,0.6s
BTLS                               eS     Sg     10 37 52.6  -7.0
      comp=Z,52nm,0.6s
BTLS  Baital             6.75   7  ePn    Pn     10 36 02.5 +0.4
      baz=7.9
BTLS  Baital             6.75   7  ePN    Pn     10 36 02.5 +0.4
BTLS  Baital             6.75   7   Pg    Pb     10 36 25.3 +5.0
      comp=Z,33nm,0.6s
BTLS                                Lg    Lg     10 37 52.6
      comp=Z,52nm,0.6s
SHLS  Shalkode           6.91  44  ePn    Pn     10 36 09.6 +5.2
      baz=46
SHLS  Shalkode           6.91  44  eP     Pn     10 36 09.5 +5.2
ARXS  Arharly            6.93  30  ePN    Pn     10 36 08.4 +3.8
PDGK  Podgornoye         7.04  43   PN    Pn     10 36 09.1 +3.0
PDGK  Podgornoye         7.04  43  ⇓Pn    Pn     10 36 09.2 +3.0
      comp=Z,46nm,0.8s
PDGK                               ⇑Lg    Lg     10 38 10.1
      comp=Z,284nm,1.4s
BHK   Bhakra             7.47 157  eP     Pn     10 36 11.4  -0.5
TDK   Taldyqorghan       7.82  30  ePn    Pn     10 36 18.7 +2.0
      baz=30
TDK   Taldyqorghan       7.82  30  eP     Pn     10 36 18.6 +2.0
SMLA  Simla              7.98 153  eP     Pn     10 36 18.3  -0.7
SMLA                               eS     Sn     10 37 44.6  -4.7
SMLA                                IAML         10 37 49.7
      comp=N,267nm,0.6s
SMLA                                IAML         10 37 51.0
      comp=E,358nm,0.8s
HRA   Herat              9.48 249   Pn    Pn     10 36 37.7  -2.0
OTUK  Ortayu             9.92 358  ⇑Pn    Pn     10 36 47.0 +1.5
      comp=E,10nm,0.7s
OTUK                               ⇓Lg    Lg     10 39 40.4
      comp=E,188nm,1.0s
NDI   New Delhi         10.26 158  eP     Pn     10 36 48.7  -1.5
NDI                                eS     Sn     10 38 38.4  -6.9
AYAN  Aya Nagar         10.43 159  eP     Pn     10 36 50.8  -1.7
KUDL  Kundal            10.59 163  eP     Pn     10 36 50.9  -3.8
KUDL                               eS     Sn     10 38 41.8   -11
SONA  Sohna             10.63 160  eP     Pn     10 36 52.4  -2.9
MAKZ  Makanchi          10.77  35   P     Pn     10 36 59.7 +2.6
MAKZ  Makanchi          10.77  35  ⇓Pn    Pn     10 37 01.7 +4.6
      comp=E,24nm,1.0s
MAKZ  Makanchi          10.77  35         Pn     10 36 59.7 +2.6
MK31  Makanchi Array    10.90  36d iP     Pn     10 37 02.4 +3.4
MK31  Makanchi Array    10.90  36   Pn    Pn     10 37 02.6 +3.6
      comp=E,11nm,0.7s,baz=214,slow=14,SNR=31
MK31  Makanchi Array    10.90  36         Pn     10 37 01.4 +2.5
MKAR  Makanchi Array    10.90  36   Pn    Pn     10 37 02.5 +3.5
      comp=E,0.6nm,0.3s,baz=218,slow=14,SNR=25
MKAR                                Lg    Lg     10 40 07.2
      comp=E,0.2nm,0.3s,baz=225,slow=22,SNR=1.7
MKAR  Makanchi Array    10.90  36   Pn    Pn     10 37 02.0 +3.0
BRZS  Berezniki         11.65 359  ePn    Pn     10 37 10.0 +0.8
      comp=E,2.2nm,0.8s,baz=360
BRZS  Berezniki         11.65 359  eP     Pn     10 37 09.9 +0.8
BRZS                                pmax  pmax
      comp=Z,2.0nm,0.8s
GEYT  Alibeck           11.69 273   Pn    Pn     10 37 06.9  -2.8
      comp=Z,6.9nm,0.3s,baz=102,slow=12,SNR=32
GEYT                                Sn    Sn     10 39 18.1  -2.2
      comp=Z,2.1nm,0.3s,baz=63,slow=29,SNR=2.8
GEYT                                Lg    Lg     10 40 32.8
      baz=72,slow=42,SNR=1.1
GEYT  Alibeck           11.69 273         Pn     10 37 06.6  -3.1
GYA0B ALIBECK ARRAY     11.69 273  ⇑Pn    Pn     10 37 08.9  -0.9
GYA0B ALIBECK ARRAY     11.69 273   Pn    Pn     10 37 07.1  -2.7
AJM   Ajmer             11.91 173  eP     Pn     10 37 10.6  -2.2
WMQ   Urumqi            12.40  59  eP     Pn     10 37 21.3 +1.8
WMQ                                 pP           10 37 30.0
WMQ                                 sP           10 37 35.7
WMQ                                 S     Sn     10 39 46.1 +8.3
WMQ                                 pmax  pmax
      comp=Z,29nm,1.1s
WMQ                                 pmax  pmax
      comp=Z,260nm,5.1s
WMQ                                 LR    LR
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      comp=Z,510nm,7.1s
WMQ                                 LR    LR
      comp=Z,950nm,11.3s
ZSN   Zaisan            12.61  40  ePn    Pn     10 37 24.4 +2.1
      baz=40
ZSN   Zaisan            12.61  40  eP     Pn     10 37 24.4 +2.1
KURBB Kurchatov Arra    12.91  16   Pn    Pn     10 37 24.0  -2.4
      comp=Z,0.1nm,0.3s,baz=205,slow=12,SNR=13
KURBB                               Lg    Lg     10 41 07.4
      comp=Z,0.1nm,0.3s,baz=206,slow=30,SNR=5.3
KURBB Kurchatov Arra    12.91  16  ⇓Pn    Pn     10 37 26.4   0.0
      comp=Z,8.1nm,0.8s
KURK  Kurchatov         13.02  16⇓ eP     Pn     10 37 28.6 +0.8
KURK                                pmax  pmax
      comp=Z,10.0nm,1.3s
KURK  Kurchatov         13.02  16   Pn    Pn     10 37 28.4 +0.6
SEM   Semipalatinsk     13.15  21  ePn    Pn     10 37 30.9 +1.1
      comp=Z,2.7nm,0.8s,baz=21
SEM   Semipalatinsk     13.15  21  eP     Pn     10 37 30.9 +1.1
SEM                                 pmax  pmax
      comp=Z,3.0nm,0.8s
PYUN  Piuthan           13.21 138  eP     Pn     10 37 24.6  -6.2
      comp=Z,48nm,0.5s
DANN  Dangsing          13.44 135  eP     Pn     10 37 27.6  -6.3
      comp=Z,34nm,0.4s
JHNI  Jhansi            13.68 158  eP     Pn     10 37 31.8  -5.2
KOLN  Koldanda          13.80 137  eP     Pn     10 37 32.5  -6.3
      comp=Z,64nm,0.6s
GKN   Gorkha            14.20 133  eP     Pn     10 37 37.5  -6.7
      comp=Z,43nm,0.4s
AB31  Akbulak array     14.38 324   Pn    Pn     10 37 47.0 +0.7
      comp=Z,7.6nm,0.5s,baz=135,slow=12,SNR=67
AB31                               ⇑Sn    Sn     10 40 29.4 +3.6
      comp=Z,28nm,0.9s,baz=146,slow=22,SNR=3.5
ABKAR Akbulak array     14.38 324   Pn    Pn     10 37 43.4  -2.9
KKN   Kakani            14.73 132  eP     Pn     10 37 44.2  -7.4
      comp=Z,36nm,0.6s
DMN   Daman             14.77 133  eP     Pn     10 37 45.1  -7.0
      comp=Z,44nm,0.5s
BVAR  Borovoye Array    14.80 354   Pn    Pn     10 37 50.5  -1.6
      comp=Z,0.5nm,0.3s,baz=190,slow=15,SNR=4.4
BRVK  Borovoye          14.84 354deP      Pn     10 37 51.7  -1.0
BRVK                                pmax  pmax
      comp=Z,23nm,1.7s
BRVK  Borovoye          14.84 354   Pn    Pn     10 37 51.6  -1.1
PKIN  Phulchoki         14.96 132  eP     Pn     10 37 47.0  -7.7
      comp=Z,48nm,0.6s
PKI   Pulchoki          14.97 132  eP     Pn     10 37 47.4  -7.5
      comp=Z,33nm,0.6s
GUN   Gumba             15.00 130  eP     Pn     10 37 47.3  -8.0
      comp=Z,31nm,0.4s
DGZ   Jazzator, Alta    15.39  38⇓ eP     Pn     10 38 02.4 +2.2
DGZ                                 pmax  pmax
      comp=Z,9.0nm,0.6s
BHPL  Bhopal            15.53 164  eP     Pn     10 37 56.8  -5.2
BHPL                                IAmb  IAmb   10 38 06.4
      comp=Z,13nm,0.6s
BHPL                               eS     Sn     10 40 37.9   -16
AKTO  Aktyubinsk        16.09 324   Pn    Pn     10 38 06.0  -3.2
      comp=Z,0.3nm,0.3s,baz=125,slow=15,SNR=7.4
AKTO                                Sn    Sn     10 41 03.6  -3.9
      comp=Z,0.6nm,0.3s,baz=156,slow=18,SNR=3.2
AKTO  Aktyubinsk        16.09 324   P     Pn     10 38 06.0  -3.2
AKTO  Aktyubinsk        16.09 324  ⇑Pn    Pn     10 38 08.8  -0.4
      comp=Z,45nm,0.9s
AKTO                               ⇑Sn    Sn     10 41 11.1 +3.6
      comp=Z,26nm,0.9s
RAMN  Ramite            16.14 131  eP     Pn     10 38 02.3  -7.8
      comp=Z,21nm,0.4s
TAPN  Taplejung         16.53 127  eP     Pn     10 38 07.5  -7.6
      comp=Z,19nm,0.4s
ODAN  Odare             16.68 129  eP     Pn     10 38 10.0  -7.0
      comp=Z,50nm,0.5s
ZAA0  Zalesovo Array    17.61  24         P      10 38 30.1 +0.8
ZALV  Zalesovo Beam     17.61  24   P     Pn     10 38 28.0  -0.3
      comp=Z,0.9nm,0.3s,baz=210,slow=12,SNR=25
ZALV  Zalesovo Beam     17.61  24  i P    P      10 38 30.5 +1.2
ZALV                                pmax  pmax
      comp=Z,8.0nm,0.6s
BLSP  Bilaspur          17.98 151  eP     Pn     10 38 29.2  -3.8
BOK   Bokaro            18.22 139  eP     Pn     10 38 33.4  -2.5
BOK                                 IAmb  IAmb   10 38 34.7
      comp=Z,47nm,0.3s
WSAR  Wadi Sarin        19.39 223   P     P      10 38 45.7  -3.3
      comp=Z,0.6nm,0.3s,baz=40,slow=14,SNR=4.9
SEKA  Sheki             19.98 286   P     P      10 38 56.4 +1.0
SVE   Sverdlovsk        20.22 340  eP     Pn     10 39 01.9 +2.1
SHL   Shillong          20.45 123   P     P      10 38 59.5  -1.3
SHL                                 pmax  pmax
      comp=Z,16nm,0.6s
SHL   Shillong          20.45 123   P     P      10 38 59.5  -1.3
SHL                                 IAmb  IAmb   10 39 15.6
      comp=Z,16nm,0.6s
ARU   Arti              20.48 337   P     P      10 39 01.8 +1.1
      comp=Z,2.3nm,0.3s,baz=141,slow=5.6,SNR=12
ARU   Arti              20.48 337c iP     P      10 39 01.8 +1.1
ARU                                              10 39 15.8
ARU                                 S     S      10 42 50.0 +0.3
ARU                                 SS    SnSn   10 43 09.2 +1.1
ARU                                 pmax  pmax
      comp=Z,20nm,1.0s
ARU   Arti              20.48 337   P     P      10 38 59.9  -0.8
ARU                                 IAmb  IAmb   10 39 09.1
      comp=Z,50nm,1.4s
GANJ  Ganja             20.65 285   P     P      10 39 03.0 +0.3
DDFL  Dedoflistskaro    20.79 287   P     Pn     10 39 07.6 +1.0
GTA   Gaotai            20.93  79  ⇑P     P      10 39 06.2 +0.4
GTA                                 pP    Pn     10 39 10.0 +1.7
GTA                                 sP    sP     10 39 13.1 +1.4
GTA                                 pmax  pmax
      comp=Z,6.0nm,1.2s
GROC  Groznyy           21.09 292  eP     P      10 39 08.1 +0.8
GROC                               e             10 39 27.6
GROC                                pmax  pmax
      comp=Z,118nm,1.0s
NAX   Nakhchivan        21.40 281   P     P      10 39 12.5 +1.7
HYB   Hyderabad         21.41 165  i P    P      10 39 11.5 +0.5
GNI   Garni             21.88 284   P     P      10 39 16.4 +0.2
      comp=Z,18nm,0.7s,baz=66,slow=20,SNR=13
GNI   Garni             21.88 284⇓ eP     P      10 39 17.0 +0.9
GNI                                 pmax  pmax
      comp=Z,67nm,1.3s
GNI   Garni             21.88 284   P     P      10 39 14.6  -1.5
KZRT  Kazreti           22.08 287   P     P      10 39 18.0  -0.1
ZEI   Tsey              22.45 291  eP     P      10 39 24.0 +1.7
ZEI                                 pmax  pmax
      comp=Z,5.0nm,0.6s
BELG  Belogornoye       22.52 317   P     P      10 39 21.7  -0.9
      comp=Z,52nm,0.7s,baz=110,slow=3.6,SNR=12
NCK   Nalchik           22.70 292⇑ eP     P      10 39 24.7   0.0
NCK                                 pmax  pmax
      comp=Z,24nm,0.5s
ONI   Oni               22.78 290   P     P      10 39 23.4  -2.2
ONI                                 pmax  pmax
      comp=Z,53nm,1.0s
ONI   Oni               22.78 290   P     P      10 39 23.4  -2.2
KBZ   Khabaz            23.22 293   P     P      10 39 29.2  -0.9
      comp=Z,6.8nm,0.9s,baz=123,slow=9.4,SNR=6.7
KBZ   Khabaz            23.22 293ceP      P      10 39 29.6  -0.4
KBZ                                 pmax  pmax
      comp=Z,10.0nm,1.0s
GOF   Gofitskoye        23.23 296⇑ eP     P      10 39 39.8   +10
NEY   Neytrino          23.33 292⇑ eP     P      10 39 30.4  -1.0
NEY                                 pmax  pmax
      comp=Z,2.0nm,0.8s
KVAR  Kislovodsk Arr    23.38 294   P     P      10 39 32.2 +0.4
      comp=Z,3.1nm,0.4s,baz=73,slow=20,SNR=1.9
KIV   Kislovodsk        23.39 294  eP     P      10 39 31.6  -0.3
KIV                                 pmax  pmax
      comp=Z,25nm,1.1s
KIV   Kislovodsk        23.39 294   P     P      10 39 29.9  -1.9
MOY   Mondy             23.72  47  eP     P      10 39 40.3 +5.2
MOY                                 pmax  pmax
      comp=Z,66nm,3.1s
ZAK   Zakamensk         24.63  51  eP     P      10 39 44.2 +0.7
ZAK                                 pmax  pmax
      comp=Z,15nm,1.2s
LZH   Lanzhou           24.66  86  eP     P      10 39 47.0 +3.0
LZH                                 pmax  pmax
      comp=Z,21nm,1.3s
KIRV  Kirov             25.33 331   P     P      10 39 48.2  -1.4
      comp=Z,12nm,0.7s,baz=97,slow=8.1,SNR=4.2
KIRV  Kirov             25.33 331ceP      P      10 39 50.1 +0.5
SOC   Sochi             25.53 292  eP     P      10 39 46.6  -5.0
SOC                                e             10 40 28.0
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SOC				*e*S	S	10 44 10.7	-8.3
SOC				MLR	MLR		
	comp=Z,2μm,20.0s						
SONM	Songino Array	26.04	58	P	P	10 39 56.4	+0.1
	comp=Z,3.7nm,0.9s,baz=263,slow=10.0,SNR=17						
SONM	Songino Array	26.04	58	P	P	10 39 57.5	+1.2
SONM				pmax	pmax		
	comp=Z,20nm,1.4s						
SONM	Songino Array	26.04	58	P	P	10 39 57.5	+1.2
SONM				IAmb	IAmb	10 40 06.2	
	comp=Z,20nm,1.4s						
ULN	Ulaanbaatar	26.48	58	⇑*i*P	P	10 40 03.7	+3.4
ULN				pmax	pmax		
	comp=Z,15nm,1.6s						
ULN	Ulaanbaatar	26.48	58	P	P	10 40 00.7	+0.3
ULN				IAmb	IAmb	10 40 10.5	
	comp=Z,12nm,1.4s						
ANN	Anapa	27.19	295	*e*P	P	10 40 05.1	-1.4
ANN				pmax	pmax		
	comp=Z,118nm,1.0s						
OBN	Obninsk	29.62	316	*i* P	P	10 40 27.4	-0.6
OBN				*i*		10 41 20.6	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC	Hu-ho-hao-te	29.71	73	*e*P	P	10 40 31.8	+2.6
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,380nm,4.5s						
HHC				LR	LR		
	comp=Z,3μm,14.6s						
HHC				LR	LR		
	comp=Z,2μm,14.1s						
HHC				LR	LR		
	comp=Z,3μm,14.8s						
CMAR	Chiang Mai Arr	30.08	124	P	P	10 40 30.8	-1.8
	comp=Z,1.0nm,0.4s,baz=307,slow=11,SNR=6.1						
CMAR	Chiang Mai Arr	30.08	124	*ce*P	P	10 40 33.7	+1.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRTR	Keskin Array B	30.40	285	P	P	10 40 34.6	-0.8
	comp=Z,2.6nm,0.9s,baz=67,slow=11,SNR=4.8						
BRTR	Keskin Array B	30.40	285	*ce*P	P	10 40 35.0	-0.4
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	Keskin Array B	30.40	285	P	P	10 40 33.9	-1.5
KLMR	Klimovskoe	30.69	328	P	P	10 40 42.0	+4.5
KLMR				pmax	pmax		
	comp=Z,15nm,1.0s						
KLMR	Klimovskoe	30.69	328	P	P	10 40 42.0	+4.5
KLMR				AMP		10 40 48.9	
	comp=Z,15nm,1.0s						
NRIK	Noril'sk	32.05	10	P	P	10 40 49.5	+0.1
	comp=Z,1.6nm,0.4s,baz=188,slow=7.1,SNR=2.3						
NRIK	Noril'sk	32.05	10	⇓*e*P	P	10 40 50.5	+1.1
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NRIK	Noril'sk	32.05	10	P	P	10 40 50.6	+1.2
NRIK				IAmb	IAmb	10 40 59.9	
	comp=Z,6.4nm,1.1s						
AKASG	Malin Array Be	33.06	306	P	P	10 40 57.0	-1.3
	comp=Z,0.4nm,0.3s,baz=78,slow=7.3,SNR=9.2						
AKASG	Malin Array Be	33.06	306	*ce*P	P	10 41 04.6	+6.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	33.06	306	P	P	10 40 57.1	-1.3
AKBB	Malin Array Si	33.06	306	⇑*e*P	P	10 40 57.7	-0.7
MLR	Muntele Rosu	35.28	297	P	P	10 41 17.5	-0.5
MLR				pmax	pmax		
	comp=Z,15nm,1.3s						
MLR	Muntele Rosu	35.28	297	P	P	10 41 17.5	-0.5
MLR				IAmb	IAmb	10 41 25.8	
	comp=Z,15nm,1.3s						
BURAR	Bucovina Array	35.63	301	P	P	10 41 19.3	-1.6
FINES	FINESS Array B	36.87	324	P	P	10 41 30.2	-0.9
	comp=Z,4.1nm,0.5s,baz=113,slow=9.1,SNR=27						
NJ2	Nanjing	37.73	85	*e*P	P	10 41 40.3	+1.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NIE	Niedzica	38.80	304	*e*P	P	10 41 48.3	+0.6
OJC	Ojcow	39.07	305	*e*P	P	10 41 49.4	-0.5
ARCES	ARCESS Array B	40.07	336	P	P	10 41 57.1	-0.9
	comp=Z,4.2nm,0.7s,baz=110,slow=6.3,SNR=16						
ARCES	ARCESS Array B	40.07	336	IAmb	IAmb	10 42 20.5	
	comp=Z,32nm,1.4s						
KRLC	Kraliky	41.02	305	*e*P	P	10 42 05.7	-0.4
KRLC	Kraliky	41.02	305	*e*P	P	10 42 05.7	-0.4
DPC	Dobruska-Polom	41.28	306	*e*P	P	10 42 07.7	-0.6
DPC				*e*x	x	10 42 17.8	
DPC	Dobruska-Polom	41.28	306	*e*P	P	10 42 07.7	-0.6
DPC				*e*		10 42 17.8	
CONA	Conrad Observa	41.88	302	*e*P	P	10 42 13.0	-0.3
	comp=Z,7.8nm,0.9s						
MDJ	Mudanjiang	42.17	63	P	P	10 42 16.9	+1.3
MDJ				pmax	pmax		
	comp=Z,8.0nm,2.6s						
MDJ				pmax	pmax		
	comp=Z,1μm,7.6s						
ARSA	Arzberg	42.21	301	*e*P	P	10 42 14.9	-1.0
	comp=Z,2.0nm,0.7s						
SOKA	Soboth	42.64	301	*e*P	P	10 42 18.7	-0.8
	comp=Z,5.8nm,0.9s						
BRG	Berggiesshubel	42.73	307	*e*P	P	10 42 19.9	-0.2
BRG				Amp		10 42 21.1	
	comp=Z,11nm,1.1s						
BRG	Berggiesshubel	42.73	307	P	P	10 42 25.9	+5.8
BRG				Amp		10 42 27.6	
	comp=Z,4.9nm,0.8s						
KLR	Kul'dur	42.82	56	⇑*e*P	P	10 42 24.1	+3.3
KLR				pmax	pmax		
	comp=Z,14nm,2.2s						
KSRS	Korea Array	42.85	73	P	P	10 42 21.1	-0.1
	comp=Z,1.3nm,0.8s,baz=286,slow=9.9,SNR=3.2						
MOA	Molln	42.95	302	*e*P	P	10 42 21.2	-0.7
	comp=Z,2.4nm,0.8s						
OBKA	Obir	43.00	300	*e*P	P	10 42 22.1	-0.3
	comp=Z,5.6nm,1.2s						
GERES	GERESS Array B	43.16	304	P	P	10 42 23.1	-0.6
	comp=Z,0.4nm,0.3s,baz=66,slow=7.5,SNR=8.3						
KHC	Kasperske Hory	43.20	304	*e*P	P	10 42 23.7	-0.3
KHC				*e*x	x	10 42 31.4	
KHC	Kasperske Hory	43.20	304	⇓*i*P	P	10 42 23.7	-0.3
KHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CLL	Collm	43.27	308	*i* P	P	10 42 23.5	-0.9
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CLL	Collm	43.27	308	*i* P	P	10 42 23.5	-0.9
	comp=Z,6.0nm,0.8s						
TIXI	Tiksi	43.49	22	P	P	10 42 25.0	-0.9
	comp=Z,4.3nm,0.7s,baz=287,slow=6.5,SNR=3.0						
TIXI	Tiksi	43.49	22	*ce*P	P	10 42 26.3	+0.4
TIXI	Tiksi	43.49	22	P	P	10 42 24.9	-1.0
TIXI				IAmb	IAmb	10 42 38.7	
	comp=Z,7.8nm,0.8s						
PRED	Cave del Predi	43.68	301	P	P	10 42 27.3	-0.6
PRED				IAmb	IAmb	10 42 28.4	
	comp=Z,8.3nm,1.2s						
NB2	NORSAR Subarra	43.87	322	P	P	10 42 27.5	-1.7
	comp=Z,27nm,1.2s,baz=92,slow=7.9						
NOA	NORSAR Array B	43.87	322	P	P	10 42 27.6	-1.6
	comp=Z,6.2nm,0.9s,baz=92,slow=7.7,SNR=14						
VLA	Vladivostok	44.13	64	⇑*e*P	P	10 42 32.7	+1.3
VLA				pmax	pmax		
	comp=Z,13nm,0.7s						
ABTA	Abfaltersbach	44.33	301	*e*P	P	10 42 32.1	-1.0
	comp=Z,1.3nm,0.4s						
WTTA	Wattenberg	44.81	302	*e*P	P	10 42 35.7	-1.3
	comp=Z,3.3nm,0.6s						
MOTA	Moosalm	45.15	302	*e*P	P	10 42 38.3	-1.5
	comp=Z,1.9nm,0.5s						
FETA	Feichten	45.47	302	*e*P	P	10 42 40.6	-1.7
	comp=Z,2.6nm,0.6s						
DAVA	Damuels	45.98	302	*e*P	P	10 42 44.9	-1.4
	comp=Z,6.5nm,0.6s						
KEST	Kesra	49.94	288	P	P	10 43 15.9	-1.1
	comp=Z,3.8nm,0.7s,baz=18,slow=19,SNR=2.8						
KEST	Kesra	49.94	288	IAmb	IAmb	10 43 17.3	
	comp=Z,13nm,1.2s						
MAJO	Matsushiro	50.86	71	⇓*e*P	P	10 43 25.9	+2.0
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR	Matsushiro Arr	50.86	71	P	P	10 43 23.0	-0.9
	comp=Z,2.2nm,0.8s,baz=288,slow=10,SNR=3.7						
MJAR	Matsushiro Arr	50.86	71	IAmb	IAmb	10 43 29.2	
	comp=Z,5.4nm,1.2s						
DAG	Danmarks Havn	53.41	343	*i* P	P	10 43 42.0	-0.3
DAG				IAmb	IAmb	10 43 46.4	
	comp=Z,4.5nm,0.7s						
BILL	Bilibino	56.28	27	*i* P	P	10 44 04.2	+1.0
BILL				*i*		10 44 15.5	
BILL				*i*		10 45 00.7	
BILL				*i*		10 46 14.5	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ESDC	Sonseca Array	57.98	298	P	P	10 44 13.5	-2.2
	comp=Z,1.6nm,1.0s,baz=63,slow=6.9,SNR=6.2						
PET	Petropavlovsk	58.15	45	⇓*e*P	P	10 44 17.3	+0.8
PET				pmax	pmax		
	comp=Z,24nm,1.0s						
NEEM	North Greenlan	59.57	348	*i* P	P	10 44 26.0	-0.5
SUMG	Summit	59.83	341	*i* P	P	10 44 29.0	+0.5
SUMG				IAmb	IAmb	10 44 34.0	
	comp=Z,5.0nm,0.8s						
TORD	Torodi Ar. Bea	67.30	269	P	P	10 45 14.2	-4.0
	comp=Z,1.5nm,0.4s,baz=46,slow=5.8,SNR=10.0						
TORD	Torodi Ar. Bea	67.30	269	P	P	10 45 15.1	-3.1
TORD				IAmb	IAmb	10 45 21.1	
	comp=Z,2.7nm,0.9s						
COLD	Coldfoot	69.78	16	P	P	10 45 32.2	-0.8
COLD				IAmb	IAmb	10 45 38.2	
	comp=Z,5.7nm,0.8s						
IMAR	Indian Mountai	69.95	18	P	P	10 45 33.1	-0.9
INK	Inuvik	71.84	10	P	P	10 45 44.3	-1.0
	comp=Z,1.8nm,0.6s,baz=328,slow=5.5,SNR=12						
INK	Inuvik	71.84	10	P	P	10 45 44.2	-1.2
INK				IAmb	IAmb	10 46 00.9	
	comp=Z,11nm,1.3s						
COLA	College	72.28	17	⇑*e*P	P	10 45 48.4	+0.4
COLA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ILAR	Eielson Array	72.59	17	P	P	10 45 49.2	-0.7
	comp=Z,2.5nm,0.8s,baz=318,slow=5.2,SNR=14						
YKA	Yellowknife Ar	79.33	4	P	P	10 46 27.3	-1.1
	comp=Z,1.1nm,0.7s,baz=348,slow=5.4,SNR=6.3						
WRA	Warramunga Arr	81.67	123	P	P	10 46 38.0	-3.5
	comp=Z,1.1nm,0.7s,baz=326,slow=5.1,SNR=4.4						
WRA	Warramunga Arr	81.67	123	*i* P	P	10 46 42.7	+1.1
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRAB	Tennant Creek	81.68	123	⇑*e*P	P	10 46 42.5	+0.9
WRAB				pmax	pmax		
	comp=Z,11nm,1.9s						
ASAR	Alice Springs	84.06	126	P	P	10 46 51.9	-2.1
	comp=Z,0.5nm,0.7s,baz=308,slow=4.9,SNR=7.7						
PLCA	Paso Flores	151.87	254	PKPbc	PKPdf	10 54 15.9	+4.4
	comp=Z,1.8nm,0.9s,baz=34,slow=3.6,SNR=3.6						

EAF ***07*** *10:35:26.6±0.4, 18°.58S×29°.96E, h10^{km}, MD3.6*

BUL 07 10:35:25.7±1.4**, 21°.55S×26°.23E, h10**^{km}**, MD3.6, Botswana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATP	Matopo	2.40	63	*i* P	Pn	10 36 05.4	+0.2
MATP				*i* S	Sn	10 36 33.2	-1.4
MATP	Matopo	2.40	63	*i* P	Pn	10 36 04.5	-0.7
BLWY	Bulawayo	2.63	58	*i* P	Pn	10 36 07.8	-0.5
BLWY				*i* S	Sn	10 36 38.5	-1.9
BLWY	Bulawayo	2.63	58	*i* P	Pn	10 36 00.1	-8.2
LBTB	Lobatse	3.50	189	*i* P	Pn	10 36 19.3	-1.0
LBTB				*i* S	Sn	10 37 00.5	-1.4
MSNA	Messina	3.61	103	*i* P	Pn	10 36 22.0	+0.3
MSNA				*i* S	Sn	10 37 03.2	-1.3
MSNA	Messina	3.61	103	*i* S	Sn	10 37 06.1	+1.7
MOPA	Mopani	5.16	113	*i* P	Pn	10 36 47.3	+4.2
MOPA				*i* S	Sn	10 37 45.2	+2.4
MOPA	Mopani	5.16	113	*i* P	Pn	10 36 42.4	-0.7
MOPA				*i* S	Sn	10 37 44.5	+1.8
BOSA	Boshof	7.09	187	*i* P	Pn	10 37 08.1	-1.6
BOSA				*i* S	Sn	10 38 23.2	-7.2

IDC 07 10:39:19.5±1.2**, 28°.29S×178°.42W, h0**^{km}**, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.9**/21**, mbtmp4.2**/3**, Error ellipse: s-maj=34.2km s-min=17.1km az=38.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.05	155	Pn	Pb	10 39 40.9	+0.2
	879nm,0.3s,baz=106,slow=5.8,SNR=53						
RAO				Sn	Sn	10 39 58.8	+1.8
	673nm,0.3s,baz=291,slow=21,SNR=7.2						
STKA	Stephens Creek	34.65	254	P	P	10 46 10.4	-0.3
	6.4nm,0.7s,baz=90,slow=8.2,SNR=15						
ASAR	Alice Springs	42.89	265	P	P	10 47 20.4	+0.3
	1.0nm,0.7s,baz=104,slow=6.8,SNR=12						
ASAR				PcP	PcP	10 49 08.3	-2.8
	0.4nm,0.7s,baz=119,slow=4.1,SNR=3.0						
WRA	Warramunga Arr	43.69	270	P	P	10 47 28.1	+1.6
	3.4nm,0.8s,baz=109,slow=7.9,SNR=16						
WRA				PcP	PcP	10 49 11.1	-2.6
	0.8nm,0.9s,baz=115,slow=3.5,SNR=3.0						
RPN	Rapa Nui	60.37	107	P	P	10 49 32.2	+1.4
	34nm,0.3s,baz=270,slow=6.1,SNR=4.2						
H03S2	Juan Fernandez	81.94	124	T	T	12 21 03.3	
	baz=238						
H03S1	Juan Fernandez	81.95	124	T	T	12 20 57.3	
	baz=238						
H03S3	Juan Fernandez	81.95	124	T	T	12 20 54.5	
	baz=238						
FINES	FINESS Array B	143.04	341	PKP	PKPbc	10 58 52.9	+1.4
	4.1nm,0.7s,baz=60,slow=3.7,SNR=7.6						
AKASG	Malin Array Be	149.39	325	PKPbc	PKPbc	10 59 09.9	-0.3
	1.4nm,0.6s,baz=50,slow=2.7,SNR=5.5						

NNC 07 10:47:44.5±3.6**, 38°.83N×72°.63E, h0**^{km}**, mb4.0, mpv3.5, 5C-2D, Error ellipse: s-maj=31.9km s-min=18.9km az=155.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	Merke	3.94	6	Pg	Pb	10 48 54.5	-0.3
	13nm,0.6s						
MRKS				Lg	Lg	10 49 52.2	
	18nm,0.7s						
AAK	Ala-Archa	4.06	20	⇑Pn	Pn	10 48 51.5	+3.5
	5.0nm,0.5s						
AAK				⇑Lg	Lg	10 49 50.6	
	15nm,0.8s						
KK08	Karatay Array	4.57	340	⇑Pn	Pn	10 48 53.9	-0.9
	3.0nm,0.5s,baz=153,slow=12						
KK08				⇑Pg	Pg	10 49 09.2	-2.8
	4.5nm,0.6s						
KK08				⇑Lg	Lg	10 50 08.7	
	12nm,0.8s,baz=161,slow=28						
TKM2	Tokmak 2	4.67	28	⇓Pg	Pg	10 49 10.6	-3.3
	13nm,1.2s						
TKM2				⇓Lg	Lg	10 50 12.0	
	9.4nm,0.9s						
KST	Kastek	4.91	30	Pg	Pb	10 49 12.4	+1.0
	5.4nm,0.6s						
KST				Lg	Lg	10 50 22.2	
	8.5nm,0.8s						
DGS	Degeres	5.01	27	Pg	Pb	10 49 14.8	+1.8
	3.8nm,0.5s						
DGS				Lg	Lg	10 50 27.3	
	7.9nm,0.5s						
IZV	Izvestkoviy	5.17	34	Pg	Pb	10 49 17.3	+1.4
	5.6nm,0.8s						
IZV				Lg	Lg	10 50 31.0	
	8.3nm,1.1s						
KRBS	Karabastau	5.38	24	Pg	Pb	10 49 20.2	+0.9
KRBS				Lg	Lg	10 50 36.3	
	5.6nm,0.7s						
KOTS	Kotyrbulak	5.55	36	Pg	Pb	10 49 22.2	-0.2
	5.2nm,0.6s						
KOTS				Lg	Lg	10 50 39.2	
	18nm,1.1s						
KUU	Kurty	5.78	28	Pg	Pb	10 49 28.3	+2.2
	3.1nm,0.5s						
KUU				Lg	Lg	10 50 49.3	
	6.0nm,0.6s						

KRNET ***07*** *10:52:13.9±0.1, 39°.37N×73°.54E, h12^{km}, mb3.8*

NNC ***07*** *10:52:20.5±1.3, 39°.68N×73°.49E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=10.2km s-min=5.8km az=171.0*

ISC 07 10:52:17.7±1.2**, 39°.46N**±0°.06×**73°.44E**±0°.04**, h10**^{km}**, n40, σ1**^{s}**60**/64**, 35C-18D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.55	5	⇑*e*P	Pg	10 52 26.3	-2.2
	baz=57						
SFK				⇑*e*S	Sg	10 52 35.6	-0.3
	baz=57						
OHH	Osh	1.17	335	⇓*i*P	Pn	10 52 38.5	-1.8
	baz=33						
OHH				⇓*i*S	Sb	10 52 56.1	+0.7
	baz=33						
DRK	Karamyk	1.27	271	⇑*i*P	Pn	10 52 39.6	-2.1
	baz=75						
DRK				⇑*i*S	Sb	10 52 58.3	0.0
	baz=75						
SALK	Salom-Alik	1.45	12	⇓*e*P	Pn	10 52 42.5	-1.6
	baz=8.0						
SALK				⇓*e*S	Sb	10 53 03.4	0.0
	baz=8.0						
BTK	Batken	2.10	287	⇑*i*P	Pn	10 52 53.7	+0.7
	baz=89						
BTK				⇑*i*S	Sb	10 53 22.9	+0.7
	baz=89						
GAR	Garm	2.46	260	⇓*i*P	Pn	10 52 58.1	+0.1
	baz=63						
GAR				⇓*i*S	Sb	10 53 30.8	-1.8
	baz=63						
AML	Almayashu	2.67	4	P	Pb	10 53 03.3	-2.6
	SNR=21						
AML	Almayashu	2.67	4	⇑*e*P	Pn	10 53 02.0	+0.8
	baz=2.0						
AML				⇑*i*S	Sb	10 53 36.4	-2.5
	baz=2.0						
TRKS	Terek-Say	2.71	320	⇑*e*P	Pn	10 53 01.6	+0.2
	baz=20						
TRKS				⇑*i*S	Sn	10 53 36.2	+1.9
	baz=20						
UCH	Uchtor	2.88	16	P	Pb	10 53 06.5	-3.0
	SNR=8.5						
UCH	Uchtor	2.88	16	⇓*e*P	Pn	10 53 04.2	+0.1
	baz=14						
UCH				⇓*i*S	Sn	10 53 41.0	+1.9
	baz=14						
MNAS	Manas	3.10	347	⇑*e*P	Pn	10 53 07.8	+0.9
	baz=46						
MNAS				⇑*i*S	Sn	10 53 47.0	+2.9
	baz=46						
EKS2	Erkin-Say	3.21	5	P	Pn	10 53 10.6	+2.3
	SNR=7.7						
EKS2	Erkin-Say	3.21	5	⇓*e*P	Pn	10 53 08.8	+0.5
	baz=3.0						
EKS2				⇓*e*S	Sn	10 53 48.9	+2.3
	baz=3.0						
AAK	Ala-Archa	3.27	14	P	Pb	10 53 12.1	-3.9
	SNR=7.3						
AAK	Ala-Archa	3.27	14	⇑Pn	Pn	10 53 11.5	+2.3
	12nm,0.5s						
AAK				⇓Lg	Lg	10 53 55.6	
	48nm,0.6s						
AAK	Ala-Archa	3.27	14	⇑*e*P	Pn	10 53 09.5	+0.3
	baz=12						
AAK				⇑*i*S	Sn	10 53 50.1	+1.8
	baz=12						
KBK	Karagaybulak	3.39	19	P	Sg	10 54 06.0	-0.6
	SNR=5.2						
KBK	Karagaybulak	3.39	19	⇑*e*P	Pn	10 53 11.1	+0.3
	baz=18						
KBK				⇑*i*S	Sn	10 53 52.7	+1.5
	baz=18						
CHGR	Chuyangaron	3.42	258	⇑*e*P	Pn	10 53 11.2	0.0
	baz=60						
CHGR				⇑*e*S	Sn	10 53 53.7	+1.8
	baz=60						
FRU1	Bishkek	3.47	15	⇑*i*P	Pn	10 53 12.6	+0.8
	baz=13						
FRU1				⇑*e*S	Sn	10 53 55.0	+2.1
	baz=13						
ULHL	Ulahol	3.50	37	P	Pb	10 53 19.7	-0.2
	SNR=5.9						
ULHL	Ulahol	3.50	37	⇓*e*P	Pn	10 53 12.2	-0.2
	baz=35						
ULHL				⇓*i*S	Sn	10 53 54.7	+0.7
	baz=35						
BOOM	Boomskoye usch	3.57	31	⇓*e*P	Pn	10 53 13.4	+0.1
	baz=30						
BOOM				⇓*i*S	Sn	10 53 56.6	+1.0
	baz=30						
TAS	Tashkent	3.67	302	⇑*i*P	Pn	10 53 15.5	+1.0
	baz=2.0						
TAS				⇑*i*S	Sn	10 54 00.7	+2.9
	baz=2.0						
CHMS	Chumysh	3.67	15	⇑*e*P	Pn	10 53 14.9	+0.4
	baz=14						
CHMS				⇑*i*S	Sn	10 53 59.4	+1.5
	baz=14						
TKM2	Tokmak 2	3.82	25	⇓Pn	Pn	10 53 17.1	+0.3
	12nm,0.9s						
TKM2				⇓Lg	Lg	10 54 16.2	
	42nm,0.7s						
TKM2	Tokmak 2	3.82	25	⇑*e*P	Pn	10 53 16.7	-0.1
	baz=23						
TKM2				⇑*i*S	Sn	10 54 02.9	+1.0
	baz=23						
USP	Ospenovka	3.89	12	⇑*e*P	Pn	10 53 18.2	+0.7
	baz=10.0						
USP				⇑*i*S	Sn	10 54 04.7	+1.5
	baz=10.0						
KDJ	Kajisay	3.90	46	⇑*e*P	Pn	10 53 17.2	-0.6
	baz=44						
KDJ				⇑*i*S	Sn	10 54 03.8	+0.1
	baz=44						
KST	Kastek	4.05	27	Pg	Pb	10 53 30.8	+1.6
	12nm,0.2s						
KST				Lg	Lg	10 54 24.3	
	61nm,0.6s						
DGS	Degeres	4.17	24	Pg	Pb	10 53 32.7	+1.5
	10nm,0.6s						
DGS				Lg	Lg	10 54 28.4	
	61nm,0.7s						
KK08	Karatay Array	4.26	330	⇑Pn	Pn	10 53 24.3	+1.6
	6.5nm,0.6s,baz=148,slow=15						
KK08				⇑Sn	Sn	10 54 13.9	+1.4
	9.7nm,0.6s						
KK08				⇓Lg	Lg	10 54 30.1	
	19nm,0.7s,baz=144,slow=31						
TNSS	Tian-Shan	4.45	35	Pg	Pb	10 53 37.5	+1.4
	12nm,0.6s						
TNSS				Lg	Lg	10 54 35.8	
	14nm,0.6s						
KRBS	Karabastau	4.55	21	Pg	Pb	10 53 39.5	+1.8
	11nm,0.5s						
KRBS				Lg	Lg	10 54 39.2	
	45nm,0.8s						
MDOK	Medeo	4.59	35	Pg	Pb	10 53 40.0	+1.6
	15nm,0.6s						
MDOK				Lg	Lg	10 54 40.0	
	35nm,1.1s						
ANVS	Anan'yevo	4.61	43	⇑*i*P	Pn	10 53 27.3	-0.2
	baz=41						
ANVS				⇑*i*S	Sn	10 54 20.9	-0.3
	baz=41						
KTBS	Karatobe	4.90	29	Pg	Pb	10 53 45.5	+1.9
	6.1nm,0.9s						
KTBS				Lg	Lg	10 54 49.4	
	35nm,0.4s						
KUU	Kurty	4.93	25	Pg	Pb	10 53 46.4	+2.3
	6.2nm,0.2s						
KUU				Lg	Lg	10 54 51.1	
	40nm,0.6s						
UZB	Uzynbulak	5.59	47	Pg	Pb	10 53 58.0	+2.6
	7.5nm,0.5s						
UZB				Lg	Lg	10 55 10.7	
	14nm,0.8s						

FUNV ***07*** *10:57:22.5, 8°.42N×71°.40W, h5^{km}, MW3.8*

ISC 07 10:57:21.2±1.2**, 8°.58N**±0°.02×**71°.39W**±0°.02**, h5**^{km}±10^{km}**, n40, σ1**^{s}**54**/75**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.61	119	*e*P	Pg	10 57 32.3	-0.5
SOCV				*e*S	Sg	10 57 39.9	-0.8
SOCV	Socops	0.61	119	*e*S	Sg	10 57 40.1	-0.7
SDV	Santo Domingo	0.81	68	*e*P	Pb	10 57 37.9	0.0
SDV				*e*S	Sb	10 57 49.8	+0.5
CAPV	Capacho	1.15	232	*e*P	Pb	10 57 41.5	-2.3

CAPV				eS	Sg	10 57 57.8	-0.6
PAMC	Pamplona, Colo	1.79	227	eP	Pb	10 57 53.5	-1.2
PAMC				eS	Sb	10 58 17.0	-0.6
MCQV	Machiques	1.85	322	eP	Pb	10 57 55.1	-0.4
MCQV				eS	Sg	10 58 20.7	+0.1
OCAC	Ocana	1.94	260	eP	Pn	10 57 55.2	+0.3
OCAC				eS	Sb	10 58 20.7	-0.9
SANV	Sanarito	2.05	63	eS	Sb	10 58 25.0	+0.1
TAMC	Tame, Arauca	2.16	191	eP	Pb	10 57 59.3	-1.7
TAMC				eS	Sb	10 58 28.6	+0.5
LL6C	La Loma 6 Bece	2.18	302	eP	Pn	10 57 59.0	+0.8
LL6C				eS	Sb	10 58 28.0	-0.6
LL1C	La Loma 1 Cana	2.34	294	eP	Pb	10 58 04.0	0.0
LL1C				eS	Sb	10 58 31.3	-1.9
LL1C				i		10 58 51.4	
	comp=Z,803nm,0.6s						
DABV	Dabajuro	2.45	18	eP	Pg	10 58 12.1	+4.0
DABV				eS	Sb	10 58 34.7	-1.6
DABV	Dabajuro	2.45	18	eP	Pb	10 58 04.3	-1.4
DABV				eS	Sb	10 58 35.7	-0.6
LL5C	La Loma 5 El P	2.58	297	eP	Pg	10 58 17.3	+6.7
LL5C				eS	Sg	10 58 42.5	-1.5
SIQV	Siquisique	2.58	37	eP	Pb	10 58 05.9	-2.2
SIQV				eS	Sb	10 58 38.1	-2.2
BARC	Barichara	2.65	222	eP	Pn	10 58 05.7	+0.8
BARC				eS	Sb	10 58 40.8	-1.7
BARC				i		10 58 46.6	
	comp=Z,156nm,0.3s						
SMLC	San Martn de	2.66	275	eP	Pn	10 58 04.8	0.0
SMLC				eS	Sb	10 58 42.1	-0.3
BRRC	Barranca, Sant	2.72	238	eP	Pn	10 58 06.5	+0.8
BRRC				eS	Sb	10 58 45.6	+1.4
BRRC				i		10 58 55.9	
	comp=Z,79nm,0.4s						
CRJC	Cerrejon, Guaj	2.84	329	eP	Pn	10 58 08.3	+1.0
CRJC				eS	Sb	10 58 43.9	-3.7
ARGC	Ariguani, Magd	3.09	295	eP	Pn	10 58 11.7	+0.9
ARGC				eS	Sn	10 58 49.0	+0.8
RUSC	La Rusia	3.15	212	eP	Pn	10 58 12.6	+0.6
RUSC				eS	Sb	10 58 58.8	+1.8
MAPV	Macapo	3.15	67	eP	Pn	10 58 13.5	+1.9
MAPV				eS	Sn	10 58 50.2	+0.5
URIC	Uribia, Colomb	3.16	349	eP	Pn	10 58 11.1	-0.6
URIC				eS	Sn	10 58 49.9	0.0
BAUV	El Baul	3.33	83	eP	Pn	10 58 15.1	+1.0
BAUV				eS	Sn	10 58 53.9	-0.2
MONV	Montecano	3.64	23	eP	Pn	10 58 20.1	+1.8
MONV				eS	Sn	10 59 02.3	+0.7
PTBC	PUERTO BERRIO,	3.65	237	eP	Pn	10 58 17.5	-0.9
PTBC				eS	Sb	10 59 06.3	-4.6
SMRC	Santa Marta, M	3.79	313	eP	Pn	10 58 19.8	-0.6
SMRC				eS	Sn	10 59 01.6	-3.9
SPBC	San Pablo de B	3.94	223	eP	Pn	10 58 23.1	+0.7
SPBC				eS	Sn	10 59 10.2	+1.0
SJCC	San Jacinto, C	3.96	290	eP	Pn	10 58 24.7	+1.9
SJCC				eS	Sn	10 59 11.9	+2.2
BENV	Beln	3.99	70	eP	Pn	10 58 24.2	+1.0
BENV				eS	Sn	10 59 09.9	-0.6
UREC	San Jos de Ur	4.18	259	eP	Pn	10 58 27.2	+1.5
UREC				eS	Sn	10 59 16.4	+1.3
MOTC	Monteria, Cord	4.23	273	eP	Pn	10 58 27.2	+0.8
MOTC				eS	Sn	10 59 16.2	0.0
MOTC				eP	Sn	10 59 18.8	+2.6
PTGC	Puerto Gaitan,	4.41	190	eP	Pn	10 58 28.1	-0.8
PTGC				eS	Sb	10 59 36.7	+3.8
NORC	Norcasia	4.57	229	eP	Pn	10 58 31.6	+0.5
NORC				eS	Sn	10 59 25.0	+0.3
HELC	Santa Helena	4.74	240	eP	Pn	10 58 33.0	-0.7
VILC	Villavicencio,	4.99	207	eP	Pn	10 58 37.0	0.0
GUY2C	Guyana, Caldas	5.16	230	eP	Pn	10 58 40.4	+0.7
ANIL	Santa Ana	5.69	225	eP	Pn	10 58 47.6	+0.9
ANIL				eS	Sn	10 59 53.3	+0.6
ORTC	Ortega, Tolima	6.01	220	eP	Pn	10 58 50.6	-0.4
ORTC				eS	Sn	10 59 59.5	-0.9
PLMC	San Jos del P	6.07	233	eP	Pn	10 58 53.6	+1.7
PLMC				eS	Sn	11 00 03.0	+1.1

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*IDC **07** 11:19:23.2±0.8, 38°52N×73°18E, h0^{km}, mb3.9/17, mb1 4.1/23, mb1mx3.9/52, mbtmp4.0/23, ML3.6/6, Error ellipse: s-maj=15.2km s-min=13.3km az=28.0*

*BJI **07** 11:19:26.1±0.0, 38°69N×73°20E, h8^{km}, mb4.4/9, ML4.1/3*

*NEIC **07** 11:19:26±2.3, 38°70N±0°05×73°12E±0°08, h10^{km}±1^{km}, mb4.3/11, Error ellipse: s-maj=10.6km s-min=8.1km az=100.0*

*KRNET **07** 11:19:26.1±0.1, 38°82N×72°99E, h14^{km}, mb4.6*

*NNC **07** 11:19:36.1±2.7, 39°12N×73°09E, h0^{km}, mb4.6, mpv4.2, Error ellipse: s-maj=22.0km s-min=15.4km az=177.0*

ISC 07 11:19:26.2±1.4, **38°64N**±0°03×**73°13E**±0°03, **h14**^{km}±9^{km}, **n107**, σ**2^{s}01**/122, **mb4.1**/20, **22C-21D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.33	309	Pn	Pn	11 19 48.7	-2.0
DRK	Karamyk	1.33	309	⇑iP	Pn	11 19 47.8	-2.9
	baz=6.0						
DRK				⇑iS	Sb	11 20 03.3	-4.9
	baz=6.0						
SFK	Sufi-Kurgan	1.40	12	⇑eP	Pn	11 19 49.9	-1.7
	baz=18						
SFK				⇑eS	Sn	11 20 07.7	-2.3
	baz=18						
OHH	Osh	1.90	352	⇑iP	Pn	11 19 57.9	-0.4
	baz=55						
OHH				⇑iS	Sn	11 20 21.5	-0.6
	baz=55						
GAR	Garm	2.23	280		Pn	11 20 04.5	+1.7
GAR	Garm	2.23	280	⇓iP	Pn	11 20 04.5	+1.7
	baz=76						
GAR				⇓iS	Sn	11 20 32.3	+2.1
	baz=76						
BTK	Batken	2.28	309		Pn	11 20 04.9	+1.4
BTK	Batken	2.28	309	⇑iP	Pn	11 20 04.3	+0.7
	baz=7.0						
BTK				⇑iS	Sn	11 20 31.9	+0.3
	baz=7.0						
KSH	Kashi	2.38	68	Pg	Pn	11 20 01.1	-3.9
KSH				Sg	Sn	11 20 26.1	-7.9
KSH				smax	smax		
	comp=N,2μm,0.7s						
KSH				smax	smax		
	comp=E,1μm,0.7s						
CHGR	Chuyangaron	3.11	272		Pn	11 20 16.4	+1.4
CHGR	Chuyangaron	3.11	272	⇓eP	Pn	11 20 16.9	+1.9
	baz=68						
CHGR				⇓eS	Sn	11 20 54.1	+2.1
	baz=68						
TRKS	Terek-Say	3.26	333	⇑iP	Pn	11 20 16.8	-0.3
	baz=33						
TRKS				⇑iS	Sn	11 20 53.8	-2.1
	baz=33						
AML	Almayashu	3.51	7	P	Pn	11 20 23.2	+2.4
	SNR=22						
AML	Almayashu	3.51	7	⇑iP	Pn	11 20 21.8	+1.0
	baz=9.0						
AML				⇑iS	Sn	11 21 02.9	+0.6
	baz=9.0						
UCH	Uchtor	3.73	16	P	Pn	11 20 26.8	+2.9
	SNR=26						
UCH	Uchtor	3.73	16	⇑eP	Pn	11 20 25.2	+1.3
	baz=18						
UCH				⇑eS	Sn	11 21 08.8	+0.9
	baz=18						
MNAS	Manas	3.87	353	⇓iP	Pn	11 20 26.5	+1.0
	baz=54						
MNAS				⇓iS	Sn	11 21 10.6	-0.2
	baz=54						
TAS	Tashkent	3.98	314		Pn	11 20 27.8	+1.0
TAS	Tashkent	3.98	314	⇓eP	Pn	11 20 27.9	+1.0
	baz=13						
TAS				⇓iS	Sn	11 21 12.7	-0.7
	baz=13						
EKS2	Erkin-Say	4.05	7	P	Pn	11 20 32.6	+4.8
	SNR=19						
EKS2	Erkin-Say	4.05	7	⇓iP	Pn	11 20 29.2	+1.3
	baz=9.0						
EKS2				⇓eS	Sn	11 21 15.3	+0.2
	baz=9.0						
AAK	Ala-Archa	4.12	14	Pn	Pn	11 20 32.0	+3.0
	8.7nm,0.3s,baz=174,slow=7.7,SNR=28						
AAK				Sn	Sn	11 21 23.3	+6.2
	9.3nm,0.3s,baz=344,slow=23,SNR=1.7						
AAK	Ala-Archa	4.12	14	P	Pn	11 20 32.1	+3.1
	SNR=7.3						
AAK	Ala-Archa	4.12	14	Pn	Pn	11 20 31.7	+2.7
	87nm,0.8s						
AAK				Lg	Lg	11 21 33.5	
	119nm,0.8s						
AAK	Ala-Archa	4.12	14	Pn	Pn	11 20 30.4	+1.5
AAK	Ala-Archa	4.12	14	⇓eP	Pn	11 20 30.5	+1.5
	baz=16						
AAK				⇓iS	Sn	11 21 17.7	+0.6
	baz=16						
KBK	Karagaybulak	4.24	18	⇑eP	Pn	11 20 32.3	+1.7
	baz=21						
KBK				⇑eS	Sn	11 21 20.8	+0.8
	baz=21						
FRU1	Bishkek	4.32	15		Pn	11 20 31.4	-0.2
FRU1	Bishkek	4.32	15	⇓iP	Pn	11 20 33.5	+2.0
	baz=17						
FRU1				⇓eS	Sn	11 21 22.7	+1.0
	baz=17						
BOOM	Boomskoye usch	4.40	28		Pn	11 20 33.4	+0.6
CHMS	Chumysh	4.52	15	P	Pn	11 20 39.4	+5.0
	SNR=11						
KDJ	Kajisay	4.66	40	Pn	Pn	11 20 36.1	-0.2
TKM2	Tokmak 2	4.67	23	P	Pn	11 20 42.6	+6.2
	SNR=6.4						
TKM2	Tokmak 2	4.67	23	⇑Pn	Pn	11 20 42.2	+5.7
	39nm,0.7s						
TKM2				⇓Lg	Lg	11 21 49.7	
	49nm,0.8s						
USP	Ospenovka	4.74	12	⇓iP	Pn	11 20 39.0	+1.7
	baz=14						
USP				⇓iS	Sn	11 21 31.9	-0.1
	baz=14						
KK07	Karatay Array	4.87	337	⇓Pn	Pn	11 20 43.5	+4.4
	34nm,0.5s,baz=145,slow=12						
KK07				⇑Sn	Sn	11 21 37.8	+2.5
	62nm,0.6s,baz=148,slow=21						
KKAR	Karatay Array	4.88	337		Pn	11 20 39.8	+0.6
KST	Kastek	4.89	25	Pg	Pg	11 21 00.1	+0.2
	38nm,0.7s						
KST				Lg	Lg	11 21 57.5	
	60nm,0.8s						
CEP	Cherat	4.91	192	P	Pn	11 20 45.6	+5.9
CEP				S	Sg	11 22 02.0	-1.8
CHCP	Chirah Chowk	4.97	179	P	Pn	11 20 45.6	+5.0
NIL	Nilore	4.98	179		Pn	11 20 44.3	+3.6
DGS	Degeres	5.01	23	Pg	Pg	11 21 03.8	+1.6
DGS				Lg	Lg	11 22 04.1	
KBL	Kabul	5.25	220		Pn	11 20 47.1	+2.6
TNSS	Tian-Shan	5.26	32	Pg	Pg	11 21 06.8	-0.2
	23nm,0.5s						
TNSS				Lg	Lg	11 22 08.7	
	21nm,0.6s						
MDOK	Medeo	5.41	32	⇑Pn	Pn	11 20 52.8	+6.2
	23nm,0.6s						
MDOK				⇓Lg	Lg	11 22 15.7	
	87nm,1.1s						
MDOK	Medeo	5.41	32	Pg	Pg	11 21 10.2	+0.5
	22nm,0.5s						
MDOK				Lg	Lg	11 22 14.7	
	46nm,1.2s						
KNDC	Almaty	5.42	31	⇓Pn	Pn	11 20 53.2	+6.6
	58nm,0.6s						
KNDC				⇑Lg	Lg	11 22 14.3	
	302nm,1.1s						
KTBS	Karatobe	5.73	27	Pg	Pg	11 21 14.7	-1.2
	15nm,0.7s						
KTBS				Lg	Lg	11 22 22.8	
	60nm,0.7s						
KUU	Kurty	5.78	24	Pg	Pg	11 21 15.8	-1.0
	17nm,0.8s						
KUU				Lg	Lg	11 22 24.6	
	62nm,0.8s						
SATY	Saty	5.96	41	Pg	Pg	11 21 21.7	+1.4
	17nm,0.7s						
SATY				Lg	Lg	11 22 34.2	
	31nm,0.8s						
BTLS	Baital	6.43	6	Pg	Pg	11 21 28.8	-0.5
	12nm,0.4s						
BTLS				Lg	Lg	11 22 46.7	
	17nm,0.5s						
PDGK	Podgornoye	6.71	44	⇑Pn	Pn	11 21 10.6	+6.1
	5.3nm,0.8s						
DHRM	DHARAMSHALA	6.88	157	eP	Pn	11 21 09.9	+2.9
DHRM				eS	Sn	11 22 27.7	+2.5
DHRM				IAML		11 22 37.9	
	comp=N,97nm,0.4s						
BHK	Bhakra	7.70	159	eS	Sn	11 22 50.4	+5.5
SMLA	Simla	8.20	155	eP	Pn	11 21 26.3	+1.6
SMLA				eS	Sn	11 22 55.2	-1.9
SMLA				IAML		11 23 01.0	
	comp=E,715nm,0.5s						
OTUK	Ortayu	9.62	357	⇓Pn	Pn	11 21 46.0	+1.8
	comp=E,5.5nm,0.7s						
MK31	Makanchi Array	10.57	37		Pn	11 21 57.1	-0.1
MKAR	Makanchi Array	10.57	37	Pn	Pn	11 21 59.6	+2.4
	comp=E,0.1nm,0.3s,baz=216,slow=12,SNR=11						
MKAR	Makanchi Array	10.57	37		Pn	11 21 55.8	-1.4
KUDL	Kundal	10.84	164	eP	Pn	11 22 01.6	+0.6
KUDL				eS	Sn	11 23 56.5	-5.6
GEYT	Alibeck	11.82	271	Pn	Pn	11 22 16.5	+2.1
	comp=E,0.6nm,0.3s,baz=260,slow=41,SNR=2.3						
GEYT				Sn	Sn	11 24 24.7	-1.5
	comp=E,0.4nm,0.3s,baz=52,slow=49,SNR=2.0						
WMQ	Urumqi	12.12	60	eP	Pn	11 22 21.2	+2.7
KURBB	Kurchatov Arra	12.58	16	Pn	Pn	11 22 23.1	-1.5
	comp=E,0.1nm,0.3s,baz=211,slow=10,SNR=1.8						
KURBB				Lg	Lg	11 25 59.1	
	comp=E,0.0nm,0.3s,baz=206,slow=30,SNR=5.9						
ABKAR	Akbulak array	14.22	323		Pn	11 22 44.9	-2.1
ABKAR	Akbulak array	14.22	323	Pn	Pn	11 22 45.3	-1.7
BVAR	Borovoye Array	14.51	353	Pn	Pn	11 22 50.3	-0.7
	comp=E,0.2nm,0.3s,baz=184,slow=15,SNR=4.2						
BRVK	Borovoye	14.55	353	Pn	Pn	11 22 51.7	0.0
AKTO	Aktyubinsk	15.93	323	Pn	Pn	11 23 08.9	-1.0
	comp=E,1.5nm,0.3s,baz=128,slow=14,SNR=15						
AKTO				Sn	Sn	11 25 59.6	-6.7
	comp=E,0.2nm,0.3s,baz=193,slow=22,SNR=5.3						
ZAA0	Zalesovo Array	17.27	24	Pn	Pn	11 23 26.2	-0.7
ZALV	Zalesovo Beam	17.27	24	P	Pn	11 23 26.2	-0.6
	comp=E,0.9nm,0.3s,baz=214,slow=12,SNR=14						
ZALV	Zalesovo Beam	17.27	24		Pn	11 23 26.6	-0.2
ARU	Arti	20.25	336	P	P	11 24 00.6	-0.4
	comp=E,2.3nm,0.2s,baz=281,slow=12,SNR=1.2						
ARU	Arti	20.25	336	P	P	11 23 59.5	-1.5
ARU				IAmb	IAmb	11 24 25.4	
	comp=Z,5.7nm,0.7s						
GTA	Gaotai	20.73	79	⇑P	P	11 24 07.8	+1.4
GTA				pP	sP	11 24 14.6	+0.7
GTA				sP	pP	11 24 18.8	+7.4
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BELG	Belogornoye	22.40	316	P	P	11 24 22.9	-1.2
	comp=Z,13nm,0.6s,baz=360,slow=4.6,SNR=3.8						
KBZ	Khabaz	23.24	292	P	P	11 24 33.9	+1.0
	comp=Z,0.7nm,0.4s,baz=292,slow=22,SNR=1.7						
LZH	Lanzhou	24.49	86	eP	P	11 24 46.1	+0.9
LZH				pP	pP	11 24 52.2	+1.5
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
SONM	Songino Array	25.75	58	P	P	11 24 57.2	+0.8
	comp=Z,3.1nm,0.8s,baz=256,slow=9.8,SNR=12						
SONM	Songino Array	25.75	58	P	P	11 24 57.0	+0.6
SONM				IAmb	IAmb	11 25 00.6	
	comp=Z,4.2nm,1.0s						
FINES	FINESS Array B	36.70	324	P	P	11 26 32.5	+0.1
	comp=Z,3.5nm,0.7s,baz=112,slow=9.1,SNR=11						
FINES	FINESS Array B	36.70	324	P	P	11 26 31.6	-0.9
ARCES	ARCESS Array B	39.84	336	P	P	11 26 58.6	-0.2
	comp=Z,6.4nm,1.0s,baz=104,slow=8.1,SNR=8.2						
ARCES	ARCESS Array B	39.84	336	P	P	11 26 59.0	+0.1
ARCES				IAmb	IAmb	11 27 08.1	
	comp=Z,14nm,1.1s						
KLR	Kul'dur	42.53	56	P	P	11 27 20.6	-0.6
	comp=Z,0.9nm,0.6s,baz=90,slow=8.9,SNR=1.9						
KSRS	Korea Array	42.62	74	P	P	11 27 21.7	-0.3
	comp=Z,0.7nm,0.5s,baz=284,slow=9.9,SNR=2.2						
GERES	GERESS Array B	43.11	304	P	P	11 27 26.9	+0.8
	comp=Z,0.5nm,0.7s,baz=36,slow=12,SNR=2.3						
NB2	NORSAR Subarra	43.72	322	P	P	11 27 30.9	+0.2
	comp=Z,0.4nm,0.4s,baz=92,slow=8.6						
NOA	NORSAR Array B	43.72	322	P	P	11 27 30.3	-0.4
	comp=Z,0.6nm,0.5s,baz=107,slow=7.8,SNR=3.3						
NC204	NORSAR Array S	43.95	322	P	P	11 27 31.6	-1.0
ESDC	Sonseca Array	57.96	297	P	P	11 29 18.6	+0.3
	comp=Z,0.2nm,0.4s,baz=58,slow=7.2,SNR=1.9						
TORD	Torodi Ar. Bea	67.45	269	P	P	11 30 20.6	-1.2
	comp=Z,2.0nm,0.7s,baz=46,slow=5.8,SNR=10						
TORD	Torodi Ar. Bea	67.45	269	P	P	11 30 21.1	-0.7
TORD				IAmb	IAmb	11 30 25.7	
	comp=Z,1.4nm,0.8s						
TOLK	Toolik Lake Re	68.42	15	P	P	11 30 27.4	+0.2
TOLK				IAmb	IAmb	11 30 27.8	
	comp=Z,4.6nm,1.0s						
IMAR	Indian Mountai	69.61	19	P	P	11 30 34.4	-0.2
BMAR	Burnt Mountain	70.46	15	P	P	11 30 39.3	-0.5
INK	Inuvik	71.51	10	P	P	11 30 46.2	+0.1
	comp=Z,1.4nm,0.7s,baz=344,slow=7.6,SNR=9.4						
INK	Inuvik	71.51	10	P	P	11 30 45.7	-0.4
MDM	Murphy Dome	71.78	17	P	P	11 30 47.6	-0.3
ILAR	Eielson Array	72.25	17	P	P	11 30 49.2	-1.4
	comp=Z,0.7nm,0.8s,baz=324,slow=5.4,SNR=8.4						
BCAR	Beaver Creek A	74.86	16	P	P	11 31 05.7	-0.3
YKA	Yellowknife Ar	79.02	4	P	P	11 31 29.2	-0.2
	comp=Z,1.5nm,0.7s,baz=349,slow=5.4,SNR=6.5						
WB0	Warramunga Arr	81.63	123	P	P	11 31 43.8	-0.3
WB0				IAmb	IAmb	11 32 07.8	
	comp=Z,5.4nm,1.4s						
WRA	Warramunga Arr	81.72	124	P	P	11 31 43.1	-1.4
	comp=Z,1.0nm,0.6s,baz=325,slow=4.6,SNR=18						
WRA	Warramunga Arr	81.72	124	P	P	11 31 43.8	-0.7
WB2	Warramunga Arr	81.73	124	P	P	11 31 43.4	-1.1
WB2				IAmb	IAmb	11 31 43.8	
	comp=Z,2.2nm,0.7s						
ASAR	Alice Springs	84.13	126	P	P	11 31 55.3	-1.7
	comp=Z,0.3nm,0.6s,baz=325,slow=4.7,SNR=9.7						
ASAR	Alice Springs	84.13	126	P	P	11 31 56.4	-0.5

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*IDC **07** 11:30:30.1±1.1, 38°31N×73°19E, h0^{km}, mb3.9/13, mb1 4.1/20, mb1mx3.8/64, mbtmp4.0/20, ML3.6/7, Error ellipse: s-maj=18.6km s-min=16.0km az=156.0*

*NNC **07** 11:30:30.0±3.0, 37°89N×71°66E, h0^{km}, mb4.8, mpv4.7, Error ellipse: s-maj=24.1km s-min=17.5km az=170.0*

*SOME **07** 11:30:33.6, 38°60N×73°37E, h0^{km}*

*BJI **07** 11:30:34.0±0.0, 38°55N×73°17E, h8^{km}, mb4.2/10, ML4.4/1*

*NEIC **07** 11:30:34.3±2.6, 38°52N±0°04×72°99E±0°05, h10^{km}±2^{km}, mb4.3/7, Error ellipse: s-maj=9.7km s-min=3.0km az=226.0*

ISC 07 11:30:32.6±0.5, **38°54N**±0°04×**73°32E**±0°03, **h10**^{km}, **n87**, σ**2^{s}54**/109, **mb4.0**/15, **7C-6D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.51	309	Pn	Pn	11 30 55.5	-4.4
KSH	Kashi	2.29	64	Pn	Pn	11 31 08.2	-2.3
KSH				Sn	Sn	11 31 36.3	-2.5
KSH				smax	smax		
	comp=N,3μm,0.7s						
KSH				smax	smax		
	comp=E,4μm,0.7s						
GAR	Garm	2.39	282		Pn	11 31 10.8	-1.1
BTK	Batken	2.46	309	Pn	Pn	11 31 13.4	+0.7
CHGR	Chuyangaron	3.26	273		Pn	11 31 23.0	-0.8
AAK	Ala-Archa	4.19	12	Pn	Pb	11 31 41.9	-4.5
	10nm,0.3s,baz=196,slow=7.7,SNR=19						
AAK				Sn	Sb	11 32 36.5	-0.6
	4.1nm,0.3s,baz=357,slow=20,SNR=1.4						
AAK	Ala-Archa	4.19	12	Pn	Pb	11 31 47.6	+1.2
	102nm,0.7s						
AAK				⇑Sn	Sg	11 32 54.1	+7.1
	181nm,0.9s						
AAK	Ala-Archa	4.19	12		Pn	11 31 40.2	+3.6
MRKS	Merke	4.20	359	eP	Pb	11 31 49.5	+3.0
	84nm,0.5s						
MRKS				eS	Sg	11 32 44.3	-3.0
	118nm,0.5s						
BOOM	Boomskoye usch	4.42	26		Pn	11 31 43.4	+3.5
DZA	Taraz	4.60	341	eP	Pg	11 31 58.8	-1.8
	176nm,0.6s						
DZA				eS	Sg	11 33 00.3	+0.2
	315nm,0.7s						
KDJ	Kajisay	4.64	38		Pn	11 31 48.2	+5.3
TKM2	Tokmak 2	4.70	21	⇓Pn	Pg	11 31 59.0	-3.7
	18nm,0.9s						
TKM2				⇓Sn	Sg	11 33 05.2	+1.7
	69nm,0.7s						
CHM	Chimkent	4.72	324	eP	Pg	11 32 03.2	+0.3
	131nm,0.3s						
CHM				eS	Sg	11 33 07.9	+4.0
	468nm,1.0s						
NIL	Nilore	4.88	181	Pn	Pn	11 31 48.8	+2.7
KST	Kastek	4.92	23	eP	Pg	11 32 04.8	-2.0
	20nm,1.1s						
KST				eS	Sg	11 33 10.5	-0.1
	100nm,0.6s						
KKAR	Karatay Array	5.03	336		Pn	11 31 49.4	+1.4
KK09	Karatay Array	5.05	336	⇑Pn	Pn	11 31 50.2	+1.9
	38nm,0.5s						
KK09				⇑Sn	Sn	11 32 53.4	+6.7
	53nm,0.6s						
KK09				⇓Lg	Lg	11 33 18.3	
	50nm,0.6s						
DGS	Degeres	5.05	21	eP	Pg	11 32 07.5	-1.8
	42nm,0.5s						
DGS				eS	Sg	11 33 15.4	+0.7
	84nm,1.1s						
MTBS	Maitube	5.15	26	eP	Pg	11 32 09.9	-1.4
	27nm,0.8s						
MTBS				eS	Sg	11 33 18.9	+0.9
	54nm,0.8s						
TNSS	Tian-Shan	5.27	30	eP	Pg	11 32 11.6	-1.8
	33nm,0.6s						
TNSS				eS	Sg	11 33 22.2	+0.5
	51nm,1.0s						
KBL	Kabul	5.27	222		Pn	11 31 51.1	-0.5
AAA	Alma-Ata	5.40	29	eP	Pg	11 32 15.1	-0.9
	51nm,0.5s						
AAA				eS	Sg	11 33 28.1	+2.2
	129nm,0.5s						
MDOK	Medeo	5.41	30	eP	Pg	11 32 14.5	-1.7
	24nm,0.5s						
MDOK				eS	Sg	11 33 27.1	+0.8
	89nm,1.1s						
MDOK	Medeo	5.41	30	⇑Pn	Pb	11 32 10.7	+3.4
	35nm,0.8s						
MDOK				⇑Sn	Sg	11 33 26.9	+0.6
	152nm,1.0s						
KNDC	Almaty	5.43	29	⇓Pn	Pb	11 32 11.0	+3.5
	143nm,0.8s						
KNDC				⇑Sn	Sg	11 33 27.6	+0.9
	347nm,0.9s						
KRBS	Karabastau	5.45	18	eP	Pg	11 32 13.4	-3.5
	17nm,0.5s						
KRBS				eS	Sg	11 33 25.2	-2.2
	51nm,0.8s						
KOTS	Kotyrbulak	5.50	30	eP	Pg	11 32 16.3	-1.5
	31nm,0.4s						
KOTS				eS	Sg	11 33 30.2	+1.2
	200nm,1.1s						
PRZ	Przheval'sk	5.52	43	Pn	Pn	11 31 59.7	+4.7
KTBS	Karatobe	5.75	25	eP	Pg	11 32 19.8	-3.0
	14nm,0.5s						
KTBS				eS	Sg	11 33 36.1	-1.1
	98nm,0.8s						
KUU	Kurty	5.81	22	eP	Pg	11 32 20.9	-2.9
	22nm,0.8s						
KUU				eS	Sg	11 33 38.0	-1.0
	59nm,0.6s						
SATY	Saty	5.94	39	eP	Pg	11 32 23.0	-3.2
	20nm,0.7s						
SATY				eS	Sg	11 33 41.7	-1.4
	72nm,1.7s						
KURS	Kuram	6.15	35	eP	Pg	11 32 27.0	-3.4
	19nm,0.7s						
KURS				eS	Sg	11 33 48.8	-1.3
	36nm,1.5s						
KPKS	Kokpek	6.38	38	eP	Pg	11 32 30.3	-4.3
	27nm,0.9s						
KPKS				eS	Sg	11 33 54.1	-3.0
	41nm,0.9s						
BTLS	Baital	6.51	5	eP	Pg	11 32 32.9	-4.4
	8.3nm,0.6s						
BTLS				eS	Sg	11 33 59.2	-2.4
	35nm,0.4s						
DHRM	DHARAMSHALA	6.74	158	eP	Pn	11 32 13.1	+1.3
DHRM				eS	Sn	11 33 31.3	+2.7
DHRM				IAML		11 33 36.8	

	comp=E,124nm,0.7s						
DJR	Jarkent	7.55	38	eP	Pg	11 32 53.3	-3.9
	comp=E,6.8nm,0.8s						
DJR				eS	Sg	11 34 33.6	-1.3
	comp=E,11nm,0.6s						
SMLA	Simla	8.05	156	eP	Pn	11 32 32.1	+2.6
SMLA				eS	Sn	11 34 00.4	-0.1
SMLA				IAML		11 34 02.5	
	comp=N,82nm,0.6s						
OTUK	Ortayu	9.72	356	⇓Pn	Pn	11 32 59.6	+7.2
	comp=N,7.0nm,1.0s						
MAKZ	Makanchi	10.43	35	Pn	Pn	11 33 06.8	+4.7
MK31	Makanchi Array	10.56	36		Pn	11 33 08.1	+4.2
MKAR	Makanchi Array	10.56	36	Pn	Pn	11 33 07.5	+3.6
	comp=N,0.1nm,0.3s,baz=218,slow=9.0,SNR=15						
MKAR	Makanchi Array	10.56	36		Pn	11 33 07.7	+3.8
KUDL	Kundal	10.71	165	eP	Pn	11 33 02.2	-3.7
KUDL				eS	Sn	11 35 01.0	-4.8
GEYT	Alibeck	11.97	272	Pn	Pn	11 33 19.9	-3.4
	comp=N,0.6nm,0.3s,baz=70,slow=27,SNR=2.4						
GEYT				Sn	Sn	11 35 31.4	-5.4
	comp=N,0.4nm,0.3s,baz=80,slow=28,SNR=3.4						
GYA0B	ALIBECK ARRAY	11.97	272	Pn	Pn	11 33 21.2	-2.0
WMQ	Urumqi	12.04	59	eP	Pn	11 33 31.6	+7.3
KURBB	Kurchatov Arra	12.63	15	Pn	Pn	11 33 33.1	+0.9
	comp=N,0.1nm,0.3s,baz=204,slow=12,SNR=6.0						
KURBB				Lg	Lg	11 37 12.6	
	comp=N,0.1nm,0.3s,baz=206,slow=27,SNR=5.4						
KURK	Kurchatov	12.74	15		Pn	11 33 38.5	+4.9
AB31	Akbulak array	14.38	322	Pn	Pn	11 33 53.0	-3.1
	comp=N,3.3nm,0.5s,baz=129,slow=13,SNR=53						
AB31				⇓Sn	Sn	11 36 32.2	-3.4
	comp=N,4.8nm,0.8s,baz=134,slow=26,SNR=2.7						
ABKAR	Akbulak array	14.38	322	Pn	Pn	11 33 53.0	-3.1
ABKAR	Akbulak array	14.38	322	Pn	Pn	11 33 53.3	-2.8
BVAR	Borovoye Array	14.62	353	Pn	Pn	11 34 00.4	+1.0
	comp=N,0.6nm,0.3s,baz=188,slow=19,SNR=9.0						
BRVK	Borovoye	14.67	353		Pn	11 34 01.9	+1.9
BHPL	Bhopal	15.65	166	eP	P	11 34 17.5	+0.1
BHPL				IAmb	IAmb	11 34 18.7	
	comp=Z,5.4nm,0.6s						
AKTO	Aktyubinsk	16.10	323	Pn	Pn	11 34 18.5	-0.3
	comp=Z,0.5nm,0.3s,baz=118,slow=16,SNR=10						
AKTO				Sn	Sn	11 37 12.2	-5.2
	comp=Z,0.1nm,0.3s,baz=46,slow=8.3,SNR=4.9						
AKTO	Aktyubinsk	16.10	323	⇑Pn	Pn	11 34 11.7	-7.2
	comp=Z,8.8nm,0.6s						
ZAA0	Zalesovo Array	17.30	23		P	11 34 37.2	+1.7
ZALV	Zalesovo Beam	17.30	23	P	P	11 34 35.6	+0.1
	comp=Z,0.7nm,0.3s,baz=215,slow=11,SNR=15						
ZALV	Zalesovo Beam	17.30	23		P	11 34 37.5	+2.0
ARU	Arti	20.40	336	P	P	11 35 10.3	+0.8
	comp=Z,2.5nm,0.2s,baz=158,slow=5.8,SNR=8.4						
ARU	Arti	20.40	336		P	11 35 09.8	+0.4
ARU				IAmb	IAmb	11 35 12.7	
	comp=Z,11nm,1.0s						
GTA	Gaotai	20.60	79	eP	Pn	11 35 16.1	+1.9
GTA				pP	sP	11 35 23.3	+5.2
GTA				sP	pP	11 35 27.8	+12
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BELG	Belogornoye	22.57	316	P	P	11 35 31.9	-0.9
	comp=Z,22nm,1.0s,baz=84,slow=5.3,SNR=5.5						
LZH	Lanzhou	24.35	86	eP	P	11 35 50.4	-0.4
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
SONM	Songino Array	25.68	58	P	P	11 36 05.5	+2.8
	comp=Z,1.8nm,0.7s,baz=261,slow=8.8,SNR=4.9						
FINES	FINESS Array B	36.87	324	P	P	11 37 40.9	+0.1
	comp=Z,4.2nm,1.0s,baz=125,slow=7.3,SNR=1.3						
FINES	FINESS Array B	36.87	324	P	P	11 37 40.2	-0.6
ARCES	ARCESS Array B	39.99	336	P	P	11 38 07.2	+0.2
	comp=Z,2.3nm,0.7s,baz=113,slow=8.9,SNR=10						
ARCES	ARCESS Array B	39.99	336	P	P	11 38 07.0	0.0
ARCES				IAmb	IAmb	11 38 27.4	
	comp=Z,13nm,1.5s						
HFS	Hagfors	42.63	320	P	P	11 38 28.3	-0.4
	comp=Z,2.5nm,0.5s,baz=103,slow=9.5,SNR=8.5						
NB2	NORSAR Subarra	43.89	322	P	P	11 38 41.3	+2.3
	comp=Z,0.8nm,0.6s,baz=92,slow=8.6						
NOA	NORSAR Array B	43.89	322	P	P	11 38 37.8	-1.1
	comp=Z,1.7nm,0.9s,baz=91,slow=8.0,SNR=4.0						
ESDC	Sonseca Array	58.14	298	P	P	11 40 25.8	-0.7
	comp=Z,0.5nm,0.8s,baz=61,slow=7.5,SNR=2.2						
TORD	Torodi Ar. Bea	67.60	269	P	P	11 41 28.6	-1.1
	comp=Z,0.6nm,0.6s,baz=38,slow=4.9,SNR=4.3						
TOLK	Toolik Lake Re	68.47	16	P	P	11 41 36.2	+1.7
A36M	Sachs Harbour	68.99	6	P	P	11 41 39.1	+1.6
A36M				IAmb	IAmb	11 41 40.0	
	comp=Z,2.7nm,0.8s						
IMAR	Indian Mountai	69.66	19	P	P	11 41 42.8	+1.0
BMAR	Burnt Mountain	70.51	15	P	P	11 41 49.4	+2.3
INK	Inuvik	71.58	10	P	P	11 41 54.4	+0.9
	comp=Z,1.0nm,0.5s,baz=340,slow=5.9,SNR=15						
INK	Inuvik	71.58	10	P	P	11 41 54.6	+1.2
INK				IAmb	IAmb	11 42 12.7	
	comp=Z,4.3nm,1.4s						
ILAR	Eielson Array	72.30	17	P	P	11 41 58.2	+0.3
	comp=Z,0.9nm,0.8s,baz=322,slow=3.1,SNR=4.5						
ILAR	Eielson Array	72.30	17	P	P	11 41 59.8	+1.9
SCRK	Sand Creek	73.64	16	P	P	11 42 06.3	+0.4
SCRK				IAmb	IAmb	11 42 18.2	
	comp=Z,1.2nm,1.0s						
BCAR	Beaver Creek A	74.91	16	P	P	11 42 15.0	+1.7
YKA	Yellowknife Ar	79.11	4	P	P	11 42 36.3	-0.5
	comp=Z,0.6nm,0.6s,baz=352,slow=5.5,SNR=5.6						
WRA	Warramunga Arr	81.55	124	P	P	11 42 50.0	-0.6
	comp=Z,0.4nm,0.8s,baz=324,slow=5.1,SNR=1.9						

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*IDC **07** 11:44:49.4±1.1, 38.°40N×73.°52E, h0^{km}, mb3.7/9, mb1 3.8/14, mb1mx3.6/52, mbtmp3.7/14, ML3.2/5, Error ellipse: s-maj=25.9km s-min=17.6km az=82.0*

*KRNET **07** 11:44:50.5±0.1, 38.°91N×73.°34E, h15^{km}, mb4.1*

*BJI **07** 11:44:53.1±0.0, 38.°64N×73.°25E, h7^{km}, mb4.1/4, ML4.1/1*

*NNC **07** 11:44:59.8±4.6, 39.°09N×73.°00E, h0^{km}, mb4.5, mpv4.1, Error ellipse: s-maj=39.6km s-min=27.6km az=9.0*

*SOME **07** 11:45:00.9, 39.°20N×73.°12E, h10^{km}*

ISC 07 11:44:53.2±1.5**, 38.°91N**±0.°05×**73.°32E**±0.°03**, h1**^{km}±9^{km}**, n56,** σ**2^{s}.45**/78**, mb3.7**/10**, 21C-9D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.11	7	⇑eP	Pg	11 45 11.8	-2.8
	baz=6.0						
SFK				⇑eS	Sg	11 45 27.6	-1.5
	baz=6.0						
DRK	Karamyk	1.31	296	⇑iP	Pg	11 45 15.7	-2.7
	baz=96						
DRK				⇑iS	Sg	11 45 34.3	-1.1
	baz=96						
OHH	Osh	1.67	346	⇓iP	Pn	11 45 22.0	-1.6
	baz=45						
OHH				⇓iS	Sn	11 45 44.6	-1.1
	baz=45						
KSH	Kashi	2.15	73	Pg	Pn	11 45 26.8	-3.4
KSH				Sg	Sn	11 45 53.0	-4.6
KSH				smax	smax		
	comp=N,2µm,0.8s						
KSH				smax	smax		
	comp=E,2µm,0.8s						
BTK	Batken	2.25	302	⇑iP	Pn	11 45 31.3	-0.3
	baz=1.0						
BTK				⇑iS	Sn	11 46 00.7	+0.6
	baz=1.0						
GAR	Garm	2.34	273	⇑iP	Pn	11 45 32.5	-0.4
	baz=73						
GAR				⇑iS	Sn	11 46 03.1	+0.7
	baz=73						
TRKS	Terek-Say	3.11	328	⇓iP	Pn	11 45 42.1	-1.4
	baz=28						
TRKS				⇓iS	Sn	11 46 19.8	-1.5
	baz=28						
AML	Almayashu	3.23	5	P	Pb	11 45 49.9	-1.8
	SNR=21						
AML	Almayashu	3.23	5	⇑iP	Pn	11 45 44.7	-0.7
	baz=5.0						
AML				⇑iS	Sn	11 46 24.3	-0.5
	baz=5.0						
CHGR	Chuyangaron	3.26	267	⇑iP	Pn	11 45 45.1	-0.4
	baz=67						
CHGR				⇑iS	Sn	11 46 26.0	+1.0
	baz=67						
UCH	Uchtor	3.44	15	P	Pb	11 45 53.1	-2.1
	SNR=13						
UCH	Uchtor	3.44	15	⇑eP	Pn	11 45 47.5	-0.8
	baz=15						
UCH				⇑iS	Sn	11 46 29.1	-0.8
	baz=15						
MNAS	Manas	3.63	350	⇑eP	Pn	11 45 50.4	-0.3
	baz=50						
MNAS				⇑iS	Sn	11 46 33.9	-0.3
	baz=50						
EKS2	Erkin-Say	3.77	5	P	Pb	11 45 58.0	-2.6
	SNR=15						
EKS2	Erkin-Say	3.77	5	⇑iP	Pn	11 45 52.1	-0.4
	baz=5.0						
EKS2				⇑iS	Sn	11 46 37.2	-0.3
	baz=5.0						
AAK	Ala-Archa	3.83	13	Pn	Pb	11 45 58.9	-2.8
	4.3nm,0.3s,baz=185,slow=6.4,SNR=21						
AAK				Sn	Sb	11 46 52.0	+3.4
	baz=174,slow=17,SNR=2.3						
AAK	Ala-Archa	3.83	13	P	Pb	11 45 59.1	-2.6
	SNR=26						
AAK	Ala-Archa	3.83	13	⇓Pn	Pb	11 45 58.6	-3.0
	50nm,0.7s						
AAK				⇓Lg	Lg	11 46 56.9	
	97nm,0.8s						
AAK	Ala-Archa	3.83	13	⇓iP	Pn	11 45 53.0	-0.4
	baz=13						
AAK				⇓iS	Sn	11 46 38.8	-0.4
	baz=13						
MRKS	Merke	3.84	359	eP	Pg	11 46 06.3	-0.4
	24nm,0.5s						
MRKS				eS	Sg	11 46 53.7	-2.8
	84nm,0.6s						
KBK	Karagaybulak	3.95	18	P	Pg	11 46 09.7	+0.8
	SNR=9.5						
ULHL	Ulahol	4.01	33	P	Pg	11 46 10.2	+0.1
	SNR=11						
CHMS	Chumysh	4.23	14	P	Pb	11 46 06.2	-2.2
	SNR=5.1						
DZA	Taraz	4.26	340	eP	Pb	11 46 10.7	+1.8
	119nm,0.5s						
DZA				eS	Sb	11 47 00.7	-0.1
	264nm,0.7s						
TKM2	Tokmak 2	4.37	23	P	Pb	11 46 06.5	-4.2
	SNR=7.3						
TKM2	Tokmak 2	4.37	23	⇓Pn	Pb	11 46 06.2	-4.6
	41nm,0.8s						
TKM2				⇑Lg	Lg	11 47 14.6	
	38nm,0.6s						
CHM	Chimkent	4.43	321	eP	Pg	11 46 19.9	+1.8
	149nm,0.3s						
CHM				eS	Sg	11 47 16.9	+1.4
	363nm,0.4s						
USP	Ospenovka	4.45	11	P	Pb	11 46 09.8	-2.3
	SNR=12						
KST	Kastek	4.59	25	eP	Pg	11 46 23.9	+2.8
	26nm,0.5s						
KST				eS	Sg	11 47 23.7	+3.0
	40nm,0.5s						
DGS	Degeres	4.71	22	eP	Pg	11 46 22.1	-1.4
	26nm,0.6s						
DGS				eS	Sg	11 47 20.7	-3.9
	49nm,0.5s						
KK09	Karatay Array	4.72	334	⇑Pn	Pn	11 46 09.3	+3.8
	12nm,0.5s,baz=152,slow=13						
KK09				⇑Sn	Sn	11 47 02.3	+1.4
	117nm,1.1s,baz=159,slow=22						
KRBS	Karabastau	5.10	20	eP	Pg	11 46 28.9	-2.1
	8.9nm,1.2s						
KRBS				eS	Sg	11 47 32.1	-5.0
	28nm,0.4s						
KOTS	Kotyrbulak	5.19	32	eP	Pg	11 46 36.1	+3.5
	22nm,0.6s						
KOTS				eS	Sg	11 47 44.3	+4.5
	74nm,0.6s						
KTBS	Karatobe	5.43	27	eP	Pg	11 46 39.9	+2.7
	22nm,1.2s						
KTBS				eS	Sg	11 47 51.4	+3.9
	48nm,0.4s						
KUU	Kurty	5.47	24	eP	Pg	11 46 41.3	+3.2
	19nm,0.6s						
KUU				eS	Sg	11 47 53.8	+4.8
	58nm,0.7s						
KUU	Kurty	5.47	24	Lg	Lg	11 47 26.9	
	32nm,0.6s						
KUU	Kurty	5.47	24	Pg	Pg	11 46 41.0	+2.9
	20nm,0.9s						
SATY	Saty	5.66	41	eP	Pg	11 46 43.7	+2.1
	28nm,1.1s						
SATY				eS	Sg	11 47 57.5	+2.6
	55nm,1.6s						
BTLS	Baital	6.16	5	eP	Pg	11 46 49.4	-1.7
	3.7nm,1.0s						
BTLS				eS	Sg	11 48 07.5	-3.3
	10.0nm,0.7s						
MKAR	Makanchi Array	10.27	37	Pn	Pn	11 47 15.8	-5.8
	0.1nm,0.3s,baz=205,slow=13,SNR=6.1						
WMQ	Urumqi	11.86	61	eP	Pn	11 47 46.3	+2.9
WMQ				pP		11 47 49.8	
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
KURBB	Kurchatov Arra	12.28	16	Pn	Pn	11 47 50.3	+1.2
	0.0nm,0.3s,baz=202,slow=12,SNR=2.6						
BVAR	Borovoye Array	14.27	353	Pn	Pn	11 48 18.6	+2.4
	0.1nm,0.3s,baz=194,slow=17,SNR=4.2						
AKTO	Aktyubinsk	15.82	322	Pn	Pn	11 48 37.4	+0.4
	0.6nm,0.3s,baz=127,slow=16,SNR=8.4						
AKTO				Sn	Sn	11 51 28.2	-4.5
	0.1nm,0.3s,baz=33,slow=22,SNR=3.0						
ZALV	Zalesovo Beam	16.97	24	P	P	11 48 52.9	-0.7
	0.1nm,0.3s,baz=238,slow=14,SNR=2.8						
ARU	Arti	20.08	336	P	Pn	11 49 31.4	+1.9
	2.0nm,0.2s,baz=283,slow=9.7,SNR=1.1						
KBZ	Khabaz	23.28	292	P	P	11 50 06.1	+3.9
	0.6nm,0.5s,baz=32,slow=20,SNR=1.7						
SONM	Songino Array	25.48	59	P	P	11 50 23.5	+0.6
	0.9nm,0.7s,baz=268,slow=10.0,SNR=5.8						
FINES	FINESS Array B	36.58	324	P	P	11 51 59.1	-1.1
	4.4nm,1.0s,baz=96,slow=9.9,SNR=1.4						
ARCES	ARCESS Array B	39.66	336	P	P	11 52 26.7	+0.5
	1.7nm,0.6s,baz=112,slow=9.8,SNR=3.5						
NOA	NORSAR Array B	43.61	321	P	P	11 52 58.8	+0.1
	1.5nm,1.0s,baz=90,slow=7.7,SNR=2.1						
TORD	Torodi Ar. Bea	67.61	269	P	P	11 55 48.9	-2.9
	0.4nm,0.6s,baz=34,slow=5.4,SNR=2.0						
INK	Inuvik	71.23	10	P	P	11 56 13.5	+0.2
	0.6nm,0.7s,baz=218,slow=4.8,SNR=2.4						
ILAR	Eielson Array	71.96	17	P	P	11 56 18.4	+0.6
	0.2nm,0.9s,baz=309,slow=4.3,SNR=1.4						
WRA	Warramunga Arr	81.74	124	P	P	11 57 07.6	-6.0
	0.4nm,0.8s,baz=302,slow=6.6,SNR=4.7						
ASAR	Alice Springs	84.16	127	P	P	11 57 20.2	-6.0
	0.2nm,0.9s,baz=345,slow=6.9,SNR=2.1						

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*KRNET **07** 11:45:37.6±0.1, 40.°92N×78.°85E, h25^{km}, mb3.5*

*NNC **07** 11:45:38.8±1.3, 40.°90N×78.°66E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=8.6km s-min=6.8km az=174.0*

ISC 07 11:45:39.6±3.0**, 41.°0N**±0.°2×**78.°69E**±0.°08**, h1**^{km}±15^{km}**, n15,** σ**0^{s}.78**/22**, 10C-8D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.00	319	⇓iP	Pg	11 45 58.6	-0.3
	baz=16						
TARG				⇓iS	Sb	11 46 14.0	+0.1
	baz=16						
PRZ	Przheval'sk	1.52	352	⇑iP	Pn	11 46 07.0	-1.1
	baz=48						
PRZ				⇑iS	Sb	11 46 28.3	-0.2
	baz=48						
KDJ	Kajisay	1.61	316	⇑iP	Pn	11 46 08.6	-0.9
	baz=15						
KDJ				⇑iS	Sb	11 46 31.4	+0.1
	baz=15						
ANVS	Anan'yevo	1.96	337	⇑iP	Pn	11 46 13.3	-0.9
	baz=35						
ANVS				⇑iS	Sn	11 46 39.5	0.0
	baz=35						
SATY	Saty	2.09	354	Pg	Pb	11 46 19.1	+0.7
	58nm,0.9s						
SATY				Lg	Lg	11 46 48.9	
	94nm,0.8s						
UZB	Uzynbulak	2.18	6	Pg	Pb	11 46 20.5	+0.6
	13nm,0.2s						
UZB				Lg	Lg	11 46 51.6	
	60nm,0.7s						
ULHL	Ulahol	2.23	305	⇓iP	Pn	11 46 17.7	-0.2
	baz=5.0						
ULHL				⇓eS	Sn	11 46 46.5	+0.3
	baz=5.0						
PDGK	Podgornoye	2.42	14	⇑Pg	Pb	11 46 23.6	-0.4
	8.9nm,0.4s						
PDGK				⇓Lg	Lg	11 46 57.9	
	60nm,0.5s						
TNSS	Tian-Shan	2.43	328	Pg	Pb	11 46 24.7	+0.3
	27nm,0.4s						
TNSS				Lg	Lg	11 46 58.2	
	40nm,0.6s						
MDOK	Medeo	2.50	331	⇓Pg	Pb	11 46 25.3	-0.1
	30nm,0.4s						
MDOK				⇑Lg	Lg	11 47 00.1	
	112nm,0.8s						
BOOM	Boomskoye usch	2.55	307	⇑iP	Pn	11 46 21.9	-0.4
	baz=7.0						
BOOM				⇑iS	Sn	11 46 54.8	+0.7
	baz=7.0						
KTMS	Ketmen	2.76	26	Pg	Pb	11 46 30.9	+1.1
	12nm,0.4s						
KTMS				Lg	Lg	11 47 08.8	
	115nm,0.9s						
TKM2	Tokmak 2	3.01	311	⇓eP	Pn	11 46 28.5	-0.2
	baz=11						
TKM2				⇓eS	Sn	11 47 05.4	-0.2
	baz=11						
BLB	Baldybastay	3.12	357	Pg	Pb	11 46 37.5	+1.5
	36nm,0.5s						
BLB				Lg	Lg	11 47 19.9	
	51nm,0.5s						
ARXS	Arharly	3.29	349	Pg	Pb	11 46 40.5	+1.6
	14nm,0.3s						
ARXS				Lg	Lg	11 47 25.3	
	82nm,0.6s						

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*BGR **07** 11:47:54.0±0.0, 37.°49N×74.°15E, h33^{km}, mb5.0*

*SOME **07** 11:47:53.9, 38.°72N×72.°55E, h5^{km}*

*IDC **07** 11:47:56.8±0.4, 38.°38N×73.°22E, h0^{km}, mb4.7/36, mb1 4.7/44, mb1mx4.6/54, mbtmp4.7/44, ML4.3/7, MS3.8/2, Ms1 3.9/2, ms1mx3.4/63, Error ellipse: s-maj=9.9km s-min=8.9km az=26.0*

*KRNET **07** 11:47:57.2±0.1, 38.°33N×72.°62E, mb5.2*

*NEIC **07** 11:47:58.7±2.6, 38.°51N±0.°05×73.°13E±0.°07, h6^{km}±4^{km}, mb4.9/88, Mwr4.6/19, Error ellipse: s-maj=7.5km s-min=7.2km az=107.0*

*BJI **07** 11:47:58.1±0.0, 38.°54N×73.°11E, h6^{km}, mB5.0/18, mb4.6/51, ML4.9/6, Ms4.6/20, Ms7 4.4/21*

*NEIC **07** 11:47:59.6, 38.°53N×73.°09E, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.27; $M_{\theta\theta}$-3.55; $M_{\phi\phi}$4.82; $M_{r\theta}$3.80; $M_{\theta\phi}$-5.72; $M_{\phi r}$2.49; Fault plane solution: $M_0$8.49000×10^{15} NP1:ϕ_s292.45000°, δ66.32000°, λ-160.36000°. NP2:ϕ_s194.29000°, δ72.07000°, λ-24.97000°. Principal axes: T 7.7521, Plg4.0000°, Azm244.0000°; N 1.3208, Plg60.0000°, Azm341.0000°; P -9.0728, Plg30.0000°, Azm152.0000°;*

*MOS **07** 11:48:00.4±1.1, 38.°53N×73.°19E, h27^{km}, mb5.0/45 Error ellipse: s-maj=4.9km s-min=3.2km az=89.8*

*NNC **07** 11:48:00.3±1.7, 38.°61N×73.°05E, h0^{km}, mb5.5, mpv5.0, Error ellipse: s-maj=15.0km s-min=9.6km az=156.0*

ISC 07 11:47:58.7±0.2**, 38.°53N**±0.°02×**73.°15E**±0.°02**, h10**^{km}**, n614,** σ**2^{s}.14**/653**, mb4.9**/142**, MS4.2**/6**, 85C-27D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.42	313	Pn	Pn	11 48 21.6	-3.2
DRK	Karamyk	1.42	313	⇑eP	Pn	11 48 21.7	-3.2
	baz=31						
DRK				⇑iS	Sb	11 48 39.7	-4.0
	baz=31						
OHH	Osh	2.01	352	⇑eP	Pb	11 48 36.0	+0.5
	baz=3.0						
OHH				⇑iS	Sg	11 49 04.2	+0.8
	baz=3.0						
GAR	Garm	2.26	283	Pn	Pn	11 48 37.4	+1.1
BTK	Batken	2.37	311	PN	Pb	11 48 40.7	-0.8
BTK	Batken	2.37	311	Pn	Pb	11 48 40.7	-0.8
BTK	Batken	2.37	311	⇑eP	Pn	11 48 36.3	-1.4
	baz=22						
BTK				⇑iS	Sn	11 49 05.3	-1.6
	baz=22						
KSH	Kashi	2.41	65	Pn	Pn	11 48 33.6	-4.8
KSH				Sn	Sn	11 49 02.2	-5.8
KSH				smax	smax		
	comp=N,29µm,0.7s						
KSH				smax	smax		
	comp=E,30µm,0.8s						
CHGR	Chuyangaron	3.13	274	Pn	Pn	11 48 50.4	+2.2
TRKS	Terek-Say	3.37	333	⇑eP	Pn	11 48 51.9	+0.3
	baz=41						
TRKS				⇑iS	Sn	11 49 31.6	-0.1
	baz=41						
AML	Almayashu	3.62	6	P	Pb	11 49 02.4	-0.7
	SNR=40						
AML	Almayashu	3.62	6	P	Pn	11 48 59.4	+4.1
AML	Almayashu	3.62	6	⇑eP	Pb	11 48 59.7	-3.4
	baz=12						
AML				⇑iS	Sb	11 49 45.2	-2.1
	baz=12						
UCH	Uchtor	3.84	15	P	Pn	11 49 01.9	+3.7
	SNR=61						
UCH	Uchtor	3.84	15	⇓eP	Pb	11 49 03.4	-3.4
	baz=20						
UCH				⇓iS	Sb	11 49 51.6	-1.9
	baz=20						
MNAS	Manas	3.98	353	⇑eP	Pn	11 49 03.2	+3.2
	baz=59						
MNAS				⇑eS	Sn	11 49 51.4	+4.6
	baz=59						
TAS	Tashkent	4.07	315	PN	Pn	11 49 03.6	+2.5
TAS	Tashkent	4.07	315		Pn	11 49 03.6	+2.5
TAS	Tashkent	4.07	315	⇑eP	Pn	11 49 00.1	-1.0
	baz=21						
TAS				⇑iS	Sn	11 49 46.1	-2.7
	baz=21						
EKS2	Erkin-Say	4.16	6	P	Pb	11 49 09.9	-2.2
	SNR=17						
EKS2	Erkin-Say	4.16	6	⇑eP	Pn	11 49 06.8	+4.5
	baz=11						
EKS2				⇑iS	Sb	11 49 57.5	-4.8
	baz=11						
MRKS	Merke	4.21	1	eP	Pb	11 49 12.0	-0.9
	110nm,0.7s						
MRKS				eS	Sb	11 50 08.7	+4.8
	321nm,0.7s						
MRKS	Merke	4.21	1	Pg	Pb	11 49 13.6	+0.6
	229nm,0.4s						
MRKS				Lg	Lg	11 50 11.1	
	463nm,0.7s						
AAK	Ala-Archa	4.23	14	Pn	Pn	11 49 07.6	+4.2
	29nm,0.3s,baz=210,slow=13,SNR=25						
AAK				Sn	Sb	11 50 02.8	-1.7
	baz=325,slow=21,SNR=1.2						
AAK	Ala-Archa	4.23	14	P	Pn	11 49 07.3	+3.9
	SNR=68						
AAK	Ala-Archa	4.23	14	P	Pn	11 49 07.5	+4.1
AAK	Ala-Archa	4.23	14	c iPN	Pn	11 49 07.0	+3.6
AAK				pmax	pmax		
	comp=Z,2µm,1.0s						
AAK	Ala-Archa	4.23	14	⇓Pn	Pn	11 49 06.6	+3.2
	comp=Z,370nm,0.7s						
AAK				⇓Lg	Lg	11 50 14.6	
	comp=Z,742nm,0.9s						
AAK	Ala-Archa	4.23	14	Pn	Pn	11 49 06.8	+3.4
AAK	Ala-Archa	4.23	14	⇑eP	Pn	11 49 08.5	+5.1
	baz=18						
AAK				⇑iS	Sb	11 50 00.6	-3.9
	baz=18						
IUG	Iuzhnay	4.33	328	ePn	Pn	11 49 07.0	+2.3
	baz=327						
IUG	Iuzhnay	4.33	328	ePN	Pn	11 49 07.0	+2.3
KBK	Karagaybulak	4.34	18	P	Pn	11 49 09.5	+4.5
	SNR=23						
KBK	Karagaybulak	4.34	18	⇓eP	Pb	11 49 10.5	-4.8
	baz=22						
KBK				⇓iS	Sb	11 50 03.9	-3.9
	baz=22						
ULHL	Ulahol	4.40	31	P	Pb	11 49 19.5	+3.3
	SNR=13						
ULHL	Ulahol	4.40	31	⇑eP	Pb	11 49 11.9	-4.3
	baz=34						

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ULHL                               ⇑iS     Sb     11 50 06.9 -2.5
       baz=34
FRU1   Bishkek            4.42  14  PN     Pn     11 49 10.4 +4.4
FRU1   Bishkek            4.42  14  Pn     Pn     11 49 10.4 +4.4
FRU1   Bishkek            4.42  14⇑eP      Pn     11 49 11.5 +5.5
       baz=18
FRU1                               ⇑iS     Sb     11 50 05.5 -4.4
       baz=18
BOOM   Boomskoye usch     4.49  27  PN     Pn     11 49 09.7 +2.7
BOOM   Boomskoye usch     4.49  27  Pn     Pn     11 49 09.7 +2.7
BOOM   Boomskoye usch     4.49  27⇓eP      Pb     11 49 13.1 -4.7
       baz=30
BOOM                               ⇓eS     Sb     11 50 08.5 -3.6
       baz=30
DZA    Taraz              4.57 343 eP      Pn     11 49 12.8 +4.8
       comp=Z,312nm,0.2s
DZA                                eS      Sb     11 50 10.1 -4.2
       comp=Z,2µm,2.2s
DZA    Taraz              4.57 343 ePn     Pn     11 49 11.2 +3.2
       baz=343
DZA    Taraz              4.57 343 ePN     Pn     11 49 11.1 +3.2
CHMS   Chumysh            4.63  15  P      Pn     11 49 12.4 +3.6
       SNR=19
CHMS   Chumysh            4.63  15⇑eP      Pn     11 49 13.8 +5.1
       baz=18
CHMS                               ⇑eS     Sb     11 50 10.1 -5.7
       baz=18
CHM    Chimkent           4.65 326 eP      Pn     11 49 14.4 +5.4
       comp=Z,184nm,0.3s
CHM                                eS      Sb     11 50 12.6 -3.9
       comp=Z,683nm,0.7s
KDJ    Kajisay            4.74  39  PN     Pn     11 49 13.8 +3.4
KDJ    Kajisay            4.74  39  Pn     Pn     11 49 13.8 +3.4
KDJ    Kajisay            4.74  39⇓eP      Pb     11 49 17.2 -4.7
       baz=41
KDJ                                ⇓iS     Sb     11 50 15.6 -3.5
       baz=41
TKM2   Tokmak 2           4.77  22  P      Pn     11 49 14.3 +3.5
       SNR=12
TKM2   Tokmak 2           4.77  22 i PN    Pn     11 49 13.5 +2.7
TKM2                                pmax   pmax
       comp=Z,29nm,0.6s
TKM2   Tokmak 2           4.77  22 ⇑Pn     Pn     11 49 13.7 +2.9
       comp=Z,47nm,0.7s
TKM2                               ⇑Pg     Pg     11 49 27.1 -2.9
       comp=Z,322nm,0.7s
TKM2                               ⇑Lg     Lg     11 50 31.0
       comp=Z,580nm,1.1s
TARG   Taragay, Kyrgy     4.79  47  Pn     Pn     11 49 14.9 +3.6
CEP    Cherat             4.80 192  P      Pn     11 49 16.2 +5.0
CEP                                 S      Sb     11 50 16.0 -4.9
USP    Ospenovka          4.84  12  P      Pn     11 49 15.7 +4.0
       SNR=15
USP    Ospenovka          4.84  12⇓eP      Pn     11 49 16.6 +4.9
       baz=16
USP                                ⇓iS     Sn     11 50 14.7 +6.8
       baz=16
CHCP   Chirah Chowk       4.86 179  P      Pn     11 49 17.1 +5.1
NIL    Nilore             4.87 179  PN     Pn     11 49 15.8 +3.8
NIL    Nilore             4.87 179         Pn     11 49 15.8 +3.8
KK07   Karatay Array      4.98 337 ⇓Pn     Pn     11 49 16.4 +2.8
       comp=Z,179nm,0.8s
KK07                               ⇑Sn     Sn     11 50 13.9 +2.8
       comp=Z,305nm,0.7s
KK31   Karatay Array      4.99 337  PN     Pn     11 49 16.8 +3.1
KKAR   Karatay Array      4.99 337  PN     Pn     11 49 15.1 +1.4
KKAR   Karatay Array      4.99 337  Pn     Pn     11 49 15.1 +1.4
KST    Kastek             4.99  24 eP      Pb     11 49 28.6 +2.3
       comp=Z,110nm,0.7s
KST                                eS      Sg     11 50 37.2 -1.7
       comp=Z,392nm,0.8s
KST    Kastek             4.99  24  Pg     Pb     11 49 29.1 +2.8
       comp=Z,208nm,0.8s
KST                                 Lg     Lg     11 50 37.9
       comp=Z,392nm,0.8s
SGDS   Sogindy            5.04  12 ePn     Pn     11 49 18.4 +3.9
       baz=12
DGS    Degeres            5.11  22 eP      Pb     11 49 30.8 +2.5
       comp=Z,137nm,0.9s
DGS                                eS      Sg     11 50 40.8 -2.0
       comp=Z,194nm,0.5s
DGS    Degeres            5.11  22  Pg     Pb     11 49 30.8 +2.5
       comp=Z,352nm,0.8s
DGS                                 Lg     Lg     11 50 41.3
       comp=Z,289nm,1.3s
KBL    Kabul              5.17 221  PN     Pn     11 49 21.6 +5.2
KBL    Kabul              5.17 221  Pn     Pn     11 49 21.6 +5.2
MTBS   Maitube            5.23  27 eP      Pb     11 49 33.4 +3.1
       comp=Z,154nm,0.6s
MTBS                               eS      Sg     11 50 44.5 -2.0
       comp=Z,183nm,1.3s
TNSS   Tian-Shan          5.35  31 eP      Pb     11 49 34.8 +2.3
       comp=Z,140nm,0.6s
TNSS                               eS      Sg     11 50 47.4 -3.1
       comp=Z,192nm,0.9s
TNSS   Tian-Shan          5.35  31 ePn     Pn     11 49 21.7 +2.7
       baz=31
AAA    Alma-Ata           5.48  30 ePn     Pn     11 49 22.9 +2.5
       baz=30
AAA                                ePg     Pg     11 49 41.3 -2.3
       baz=30
AAA    Alma-Ata           5.48  30 ePN     Pn     11 49 22.9 +2.5
AAA                                e              11 49 41.2
MDOK   Medeo              5.49  31 eP      Pb     11 49 38.7 +3.9
       comp=Z,236nm,0.7s
MDOK                               eS      Sg     11 50 54.2 -0.8
       comp=Z,371nm,1.5s
MDOK   Medeo              5.49  31 ePn     Pn     11 49 23.3 +2.5
       baz=31
MDOK   Medeo              5.49  31 ePN     Pn     11 49 23.2 +2.5
MDOK   Medeo              5.49  31 ⇓Pn     Pn     11 49 26.1 +5.3
       comp=Z,26nm,0.6s
MDOK                               ⇑Pg     Pb     11 49 38.5 +3.7
       comp=Z,270nm,0.8s
MDOK                               ⇑Lg     Lg     11 50 55.0
       comp=Z,885nm,1.4s
MDOK   Medeo              5.49  31  Pg     Pb     11 49 38.7 +3.9
       comp=Z,236nm,0.7s
MDOK                                Lg     Lg     11 50 54.2
       comp=Z,371nm,1.5s
KRBS   Karabastau         5.50  19 eP      Pb     11 49 36.8 +1.9
       comp=Z,100nm,1.4s
KRBS                               eS      Sg     11 50 51.0 -4.4
       comp=Z,221nm,0.9s
KRBS   Karabastau         5.50  19  Pg     Pb     11 49 36.8 +1.9
       comp=Z,157nm,1.0s
KRBS                                Lg     Lg     11 50 51.7
       comp=Z,221nm,0.9s
KNDC   Almaty             5.50  30 ⇓Pg     Pg     11 49 42.2 -1.9
       comp=Z,547nm,0.8s
KNDC                               ⇓Lg     Lg     11 50 56.0
       comp=Z,2µm,1.1s
KOTS   Kotyrbulak         5.58  31 eP      Pb     11 49 39.3 +3.0
       comp=Z,192nm,0.5s
KOTS                               eS      Sg     11 50 55.5 -2.3
       comp=Z,702nm,0.7s
KOTS   Kotyrbulak         5.58  31  Pg     Pb     11 49 39.3 +3.0
       comp=Z,192nm,0.5s
KOTS                                Lg     Lg     11 50 55.5
       comp=Z,702nm,0.7s
PRZ    Przheval'sk        5.62  44  PN     Pn     11 49 26.6 +4.1
PRZ    Przheval'sk        5.62  44  Pn     Pn     11 49 26.6 +4.1
KTBS   Karatobe           5.83  26 eP      Pb     11 49 45.2 +4.8
       comp=Z,163nm,0.6s
KTBS                               eS      Sg     11 51 05.5 -0.2
       comp=Z,425nm,1.1s
KTBS   Karatobe           5.83  26  Pg     Pb     11 49 45.2 +4.8
       comp=Z,163nm,0.6s
KTBS                                Lg     Lg     11 51 05.5
       comp=Z,425nm,1.1s
THW    Thamme Wali        5.83 192  P      Pn     11 49 30.7 +5.4
KUU    Kurty              5.87  23 eP      Pb     11 49 43.6 +2.4
       comp=Z,101nm,1.1s
KUU                                eS      Sg     11 51 02.8 -4.4
       comp=Z,491nm,1.3s
KUU    Kurty              5.87  23 ePn     Pn     11 49 28.6 +2.8
       baz=23
KUU    Kurty              5.87  23 ePN     Pn     11 49 28.6 +2.8
KUU    Kurty              5.87  23  Pg     Pb     11 49 43.6 +2.4
       comp=Z,101nm,1.1s
KUU                                 Lg     Lg     11 51 02.8
       comp=Z,491nm,1.3s
SATY   Saty               6.03  40 eP      Pb     11 49 46.5 +2.5
       comp=Z,115nm,0.6s
SATY                               eS      Sg     11 51 07.7 -4.7
       comp=Z,363nm,2.2s
SATY   Saty               6.03  40 ePn     Pn     11 49 30.7 +2.6
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       baz=39
SATY   Saty               6.03  40 ePN     Pn     11 49 30.7 +2.6
UZB    Uzynbulak          6.41  42 ePn     Pn     11 49 35.4 +2.1
       baz=42
UZB    Uzynbulak          6.41  42 ePN     Pn     11 49 35.4 +2.1
KPKS   Kokpek             6.47  39 ePn     Pn     11 49 36.1 +2.0
       comp=Z,9.0nm,0.6s,baz=38
KPKS   Kokpek             6.47  39 ePN     Pn     11 49 36.1 +2.0
KPKS                                pmax   pmax
       comp=Z,9.0nm,0.6s
BTLS   Baital             6.54   6 eP      Pb     11 49 54.6 +2.1
       comp=Z,14nm,0.9s
BTLS                               eS      Sg     11 51 21.5 -7.1
       comp=Z,90nm,1.1s
BTLS   Baital             6.54   6 ePn     Pn     11 49 37.1 +2.1
       comp=Z,10nm,0.9s,baz=5.3
BTLS   Baital             6.54   6 ePN     Pn     11 49 37.0 +2.1
BTLS                                pmax   pmax
       comp=Z,10.0nm,0.9s
SARP   Sargodha           6.60 184  P      Pn     11 49 38.0 +2.1
SHLS   Shalkode           6.65  44 ePn     Pn     11 49 42.1 +5.4
       comp=Z,21nm,0.8s,baz=45
SHLS   Shalkode           6.65  44 ePN     Pn     11 49 42.0 +5.4
SHLS                                pmax   pmax
       comp=Z,21nm,0.8s
ARXS   Arharly            6.68  30 eP      Pb     11 49 57.8 +2.8
       comp=Z,58nm,1.4s
ARXS                               eS      Sg     11 51 27.1 -6.0
       comp=Z,233nm,0.9s
ARXS   Arharly            6.68  30 ePN     Pn     11 49 38.2 +1.2
ARXS   Arharly            6.68  30  Pg     Pb     11 49 57.4 +2.4
ARXS                                Lg     Lg     11 51 27.1
DHRM   DHARAMSHALA        6.77 157 eP      Pn     11 49 40.4 +2.1
DHRM                               eS      Sn     11 50 52.2 -3.4
DHRM                                IAML          11 51 01.0
       comp=E,556nm,0.6s
PDGK   Podgornoye         6.79  43  PN     Pn     11 49 41.2 +2.8
PDGK                                              11 50 01.1
PDGK   Podgornoye         6.79  43 ⇓Pn     Pn     11 49 41.3 +2.8
       comp=E,55nm,0.8s
TDK    Taldyqorghan       7.57  30 ePn     Pn     11 49 52.3 +3.3
       baz=29
TDK                                eP      Pn     11 49 52.3 +3.3
       comp=E,8.9nm,0.6s,baz=29
TDK    Taldyqorghan       7.57  30 eP      Pn     11 49 52.3 +3.3
TDK                                 pmax   pmax
       comp=Z,9.0nm,0.6s
SMLA   Simla              8.09 155 eP      Pn     11 49 56.1 -0.1
SMLA                               eS      Sn     11 51 25.9 -1.7
SMLA                                IAML          11 51 32.2
       comp=E,485nm,0.6s
HRA    Herat              9.71 248  Pn     Pn     11 50 20.4 +1.8
MAKZ   Makanchi          10.52  35  P      Pn     11 50 32.4 +2.9
MAKZ   Makanchi          10.52  35         Pn     11 50 32.4 +2.9
MK31   Makanchi Array    10.65  36d iP     Pn     11 50 34.8 +3.5
MK31   Makanchi Array    10.65  36         Pn     11 50 34.1 +2.8
MKAR   Makanchi Array    10.65  36  Pn     Pn     11 50 33.6 +2.3
       comp=E,0.8nm,0.3s,baz=204,slow=14,SNR=26
MKAR   Makanchi Array    10.65  36         Pn     11 50 33.7 +2.4
BRZS   Berezniki         11.46 358 ePn     Pn     11 50 43.7 +1.4
       comp=E,5.4nm,0.9s,baz=358
BRZS   Berezniki         11.46 358 eP      Pn     11 50 43.7 +1.4
BRZS                                pmax   pmax
       comp=Z,5.0nm,0.9s
GEYT   Alibeck           11.84 272  Pn     Pn     11 50 46.2 -1.4
       comp=Z,3.7nm,0.3s,baz=102,slow=12,SNR=10
GEYT                                Sn     Sn     11 52 54.8 -5.1
       comp=Z,1.4nm,0.3s,baz=74,slow=16,SNR=2.0
GEYT   Alibeck           11.84 272         Pn     11 50 45.6 -2.1
GYA0B  ALIBECK ARRAY     11.84 272 ⇑Pn     Pn     11 50 48.0 +0.4
GYA0B                              ⇓Sn     Sn     11 52 59.0 -0.9
GYA0B  ALIBECK ARRAY     11.84 272  Pn     Pn     11 50 46.6 -1.1
WMQ    Urumqi            12.16  60 eP      Pn     11 50 53.0 +0.9
WMQ                                 S      Sn     11 53 12.2 +4.4
WMQ                                 pmax   pmax
       comp=Z,61nm,0.9s
WMQ                                 pmax   pmax
       comp=Z,930nm,11.3s
WMQ                                 LR     LR
       comp=Z,1µm,8.3s
WMQ                                 LR     LR
       comp=Z,1µm,9.5s
WMQ                                 LR     LR
       comp=Z,1µm,12.9s
ZSN    Zaisan            12.36  40 ePn     Pn     11 50 55.8 +1.1
       comp=Z,5.2nm,1.2s,baz=40
ZSN    Zaisan            12.36  40 eP      Pn     11 50 55.8 +1.1
ZSN                                 pmax   pmax
       comp=Z,5.0nm,1.2s
KURBB  Kurchatov Arra    12.68  16  Pn     Pn     11 50 59.1 +0.1
       comp=Z,0.2nm,0.3s,baz=206,slow=12,SNR=10
KURBB                               Lg     Lg     11 54 39.5
       comp=Z,0.1nm,0.3s,baz=209,slow=32,SNR=8.1
KURK   Kurchatov         12.79  16ceP      Pn     11 51 00.8 +0.3
KURK                                pmax   pmax
       comp=Z,15nm,0.8s
KURK   Kurchatov         12.79  16  Pn     Pn     11 51 00.5  0.0
SEM    Semipalatinsk     12.91  21 ePn     Pn     11 51 03.4 +1.1
       comp=Z,3.5nm,0.8s,baz=21
SEM    Semipalatinsk     12.91  21 eP      Pn     11 51 03.4 +1.1
SEM                                 pmax   pmax
       comp=Z,3.0nm,0.8s
PYUN   Piuthan           13.25 139 eP      Pn     11 51 02.7 -4.4
       comp=Z,83nm,0.4s
DANN   Dangsing          13.46 136 eP      Pn     11 51 05.3 -4.8
       comp=Z,88nm,0.4s
KOLN   Koldanda          13.84 138 eP      Pn     11 51 10.7 -4.4
GKN    Gorkha            14.22 134 eP      Pn     11 51 15.2 -5.1
       comp=Z,56nm,0.4s
AB31   Akbulak array     14.32 323  P      Pn     11 51 21.4 +0.1
AB31                               i S     Sn     11 54 01.5 +1.4
AB31   Akbulak array     14.32 323  Pn     Pn     11 51 21.4 +0.1
       comp=Z,17nm,0.6s,baz=131,slow=13,SNR=65
AB31                               ⇑Sn     Sn     11 54 01.5 +1.4
       comp=Z,33nm,0.8s,baz=134,slow=22,SNR=6.2
ABKAR  Akbulak array     14.32 323  Pn     Pn     11 51 18.3 -3.0
BVAR   Borovoye Array    14.62 353  Pn     Pn     11 51 25.6  0.0
       comp=Z,0.8nm,0.3s,baz=188,slow=18,SNR=12
BVAR                                Lg     Lg     11 55 45.7
       comp=Z,0.3nm,0.3s,baz=145,slow=24,SNR=2.0
BRVK   Borovoye          14.67 353⇑eP      Pn     11 51 26.3 +0.2
BRVK                                pmax   pmax
       comp=Z,12nm,0.8s
BRVK   Borovoye          14.67 353  Pn     Pn     11 51 25.2 -1.0
KKN    Kakani            14.75 133 eP      Pn     11 51 21.8 -5.8
       comp=Z,38nm,0.5s
DMN    Daman             14.79 134 eP      Pn     11 51 22.5 -5.6
       comp=Z,48nm,0.5s
PKIN   Phulchoki         14.97 133 eP      Pn     11 51 24.5 -6.2
       comp=Z,41nm,0.5s
PKI    Pulchoki          14.99 133 eP      Pn     11 51 24.8 -6.1
GUN    Gumba             15.00 131 eP      Pn     11 51 25.4 -5.8
       comp=Z,50nm,0.5s
DGZ    Jazzator, Alta    15.13  38ceP      Pn     11 51 33.6 +1.0
BHUJ   Bhuj              15.52 192 eP      Pn     11 51 34.8 -2.8
BHUJ                                IAmb   IAmb   11 51 37.1
       comp=Z,61nm,0.5s
BHPL   Bhopal            15.67 165 eP      Pn     11 51 36.1 -3.5
BHPL                                IAmb   IAmb   11 51 39.9
       comp=Z,37nm,0.5s
AKTO   Aktyubinsk        16.03 323  Pn     Pn     11 51 44.4 +0.2
       comp=Z,7.1nm,0.3s,baz=117,slow=12,SNR=44
AKTO                                Sn     Sn     11 54 36.6 -5.3
       comp=Z,0.5nm,0.3s,baz=52,slow=24,SNR=3.1
AKTO   Aktyubinsk        16.03 323 ⇑Pn     P      11 51 46.6 -1.1
       comp=Z,107nm,0.8s
RAMN   Ramite            16.15 132 eP      Pn     11 51 40.4 -5.6
       comp=Z,61nm,0.5s
JBP    Jabalpur          16.39 157 eP      Pn     11 51 45.0 -3.8
JBP                                 IAmb   IAmb   11 51 56.1
       comp=Z,44nm,0.6s
JBP                                eS      Sn     11 54 36.7  -14
TAPN   Taplejung         16.52 128 eP      Pn     11 51 44.9 -5.9
       comp=Z,28nm,0.4s
ODAN   Odare             16.68 130 eP      Pn     11 51 47.6 -5.2
       comp=Z,125nm,0.6s
LSA    Lhasa             17.29 115  P      Pn     11 51 58.4 -2.3
LSA                                 pmax   pmax
       comp=Z,22nm,0.9s
LSA    Lhasa             17.29 115  P      Pn     11 51 58.6 -2.1
LSA                                 pmax   pmax
       comp=Z,12nm,0.7s
LSA    Lhasa             17.29 115  Pn     Pn     11 51 58.6 -2.1
ZAA0   Zalesovo Array    17.37  24         Pn     11 52 01.4 +0.4
ZALV   Zalesovo Beam     17.37  24  P      P      11 52 02.5 +0.1
       comp=Z,3.3nm,0.3s,baz=210,slow=11,SNR=38
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ZALV   Zalesovo Beam     17.37  24         Pn     11 52 01.2 +0.1
BOK    Bokaro            18.26 140 eP      Pn     11 52 10.9 -1.4
BOK                                 IAmb   IAmb   11 52 16.5
       comp=Z,44nm,0.8s
BANOM  Banah             18.96 233  P      Pn     11 52 22.2 +1.4
MSFE   Esma-Masafi       19.46 233  P      P      11 52 24.9 -0.7
WSAR   Wadi Sarin        19.64 223  P      P      11 52 27.9 +0.3
       baz=58,slow=12,SNR=2.5
UOSS   Minazif           19.73 232  P      P      11 52 28.1 -0.4
HATD   Hatta, Dubai      19.86 232  P      Pn     11 52 30.8 -0.9
MAK    Makhachkala       19.90 291 eP      P      11 52 30.4 +0.2
MAK                                eS      S      11 56 14.0 -0.1
MAK                                 pmax   pmax
       comp=Z,98nm,1.0s
MAK                                 MLR    MLR
       comp=Z,1µm,18.0s
POO    Poona             19.94 178 eP      P      11 52 31.2 +0.4
POO                                 IAmb   IAmb   11 52 33.8
       comp=Z,38nm,1.0s
ASHO   Ashiyiah          20.01 231  P      P      11 52 31.4 -0.3
SVE    Sverdlovsk        20.09 340 eP      P      11 52 32.7 +0.4
SVE                                eS      S      11 56 09.7 -8.1
SVE                                 pmax   pmax
       comp=Z,26nm,1.0s
SVE                                 MLR    MLR
       comp=Z,1µm,11.0s
ARU    Arti              20.37 336  P      Pn     11 52 37.0 -0.2
       comp=Z,7.5nm,0.5s,baz=150,slow=7.2,SNR=29
ARU    Arti              20.37 336c iP     P      11 52 36.2 +1.0
ARU                                               11 52 53.0
ARU                                 S      S      11 56 23.2  0.0
ARU                                 pmax   pmax
       comp=Z,52nm,1.0s
ARU    Arti              20.37 336  P      P      11 52 36.3 +1.0
ARU                                 IAmb   IAmb   11 52 40.5
       comp=Z,48nm,0.9s
SHL    Shillong          20.42 124  P      P      11 52 33.2 -3.1
SHL                                 pmax   pmax
       comp=Z,25nm,0.8s
SHL    Shillong          20.42 124 eP      Pn     11 52 38.8 +0.4
SHL                                 IAmb   IAmb   11 52 40.2
       comp=Z,18nm,0.8s
SHL    Shillong          20.42 124  P      P      11 52 33.2 -3.1
ALNE   Al Ain            20.66 231  P      P      11 52 38.5 -0.2
GTA    Gaotai            20.73  79 eP      Pn     11 52 40.8 -1.1
GTA                                 pP     sP     11 52 47.8 +2.3
GTA                                 sP     pP     11 52 52.6 +9.0
GTA                                 pmax   pmax
       comp=Z,18nm,1.0s
GROC   Groznyy           21.16 291 eP      P      11 52 46.7 +2.7
GROC                               e              11 53 06.4
GROC                               eS      S      11 56 42.4 +3.2
GROC                                pmax   pmax
       comp=Z,89nm,0.8s
HYB    Hyderabad         21.56 166 i P     P      11 52 47.0 -1.4
       comp=Z,170nm,1.0s
GNI    Garni             22.00 283  P      P      11 52 57.7 +4.6
       comp=Z,77nm,1.0s,baz=24,slow=2.8,SNR=7.7
GNI    Garni             22.00 283c iP     P      11 52 56.1 +3.0
GNI                                 pmax   pmax
       comp=Z,63nm,1.8s
GNI    Garni             22.00 283  P      P      11 52 56.6 +3.5
GNI                                 IAmb   IAmb   11 53 05.8
       comp=Z,82nm,0.9s
BELG   Belogornoye       22.49 316  P      P      11 52 58.0 -0.1
       comp=Z,135nm,0.7s,baz=300,slow=1.5,SNR=40
BELG   Belogornoye       22.49 316d iP     P      11 52 58.9 +0.8
BELG                                pmax   pmax
       comp=Z,19nm,0.9s
ZEI    Tsey              22.54 290 eP      P      11 53 01.0 +2.0
ZEI                                 pmax   pmax
       comp=Z,14nm,1.6s
NCK    Nalchik           22.78 292⇑eP      P      11 53 02.7 +1.4
NCK                                 pmax   pmax
       comp=Z,18nm,0.7s
AKH    Akhalkalaki       22.86 287 ⇑P      P      11 53 08.2 +5.8
ONI    Oni               22.86 290  P      P      11 53 02.2 -0.1
ONI                                 pmax   pmax
       comp=Z,64nm,1.0s
ONI    Oni               22.86 290  P      P      11 53 02.2 -0.1
ONI                                 IAmb   IAmb   11 53 15.2
       comp=Z,64nm,1.0s
KARS   Kars              23.22 285  P      P      11 53 06.0  0.0
KARS                                pmax   pmax
       comp=Z,90nm,0.8s
KARS   Kars              23.22 285  P      P      11 53 06.0  0.0
KBZ    Khabaz            23.30 293  P      P      11 53 08.6 +2.0
       comp=Z,7.6nm,0.9s,baz=136,slow=6.5,SNR=5.6
KBZ    Khabaz            23.30 293⇑eP      P      11 53 06.7 +0.1
KBZ                                 pmax   pmax
       comp=Z,6.0nm,0.9s
NEY    Neytrino          23.41 291⇑eP      P      11 53 09.5 +1.5
NEY                                 pmax   pmax
       comp=Z,4.0nm,0.7s
KVAR   Kislovodsk Arr    23.45 293  P      P      11 53 10.7 +2.3
       comp=Z,1.7nm,0.3s,baz=258,slow=22,SNR=1.5
KIV    Kislovodsk        23.46 293 ⇑P      P      11 53 10.8 +2.4
KIV    Kislovodsk        23.46 293 eP      P      11 53 11.8 +3.4
KIV                                eS      S      11 57 24.0 +2.1
KIV                                 pmax   pmax
       comp=Z,29nm,1.1s
KIV    Kislovodsk        23.46 293  P      P      11 53 08.0 -0.3
KIV                                 IAmb   IAmb   11 53 32.2
       comp=Z,27nm,0.7s
MOY    Mondy             23.47  47 eP      P      11 53 11.4 +3.0
MOY                                 pmax   pmax
       comp=Z,45nm,1.3s
CHVG   Ch'k'valeri       23.87 290 ⇑P      P      11 53 17.5 +5.2
CHVG   Ch'k'valeri       23.87 290 ⇑P      P      11 53 17.5 +5.2
BATM   Batumi            24.20 287 ⇑P      P      11 53 19.9 +4.6
BATM   Batumi            24.20 287 ⇑P      P      11 53 19.9 +4.6
BCA    Borcka            24.26 287 ⇑P      P      11 53 21.0 +5.0
ZAK    Zakamensk         24.38  51 eP      P      11 53 18.5 +1.4
ZAK                                 pmax   pmax
       comp=Z,25nm,1.2s
LZH    Lanzhou           24.48  86 eP      P      11 53 19.5 +1.3
LZH                                 pmax   pmax
       comp=Z,20nm,1.4s
TLY    Talaya            25.01  48  P      P      11 53 23.0 +0.3
       comp=Z,14nm,0.7s,baz=264,slow=7.6,SNR=10.0
TLY    Talaya            25.01  48deP      P      11 53 24.4 +1.7
TLY                                 pmax   pmax
       comp=Z,18nm,0.9s
TLY    Talaya            25.01  48  P      P      11 53 24.1 +1.4
TLY                                 IAmb   IAmb   11 53 27.8
       comp=Z,18nm,0.7s
KIRV   Kirov             25.24 330  P      P      11 53 26.0 +1.4
       comp=Z,51nm,0.6s,baz=133,slow=2.8,SNR=14
KIRV   Kirov             25.24 330deP      P      11 53 25.4 +0.8
VRH    Novokhopyorsk     25.41 310 eP      P      11 53 27.6 +1.4
VRH                                 pmax   pmax
       comp=Z,60nm,1.3s
SOC    Sochi             25.60 292 eP      P      11 53 29.5 +1.5
SOC                                e              11 54 03.6
SOC                                eS      S      11 57 57.8 +1.8
SOC                                eSS     SnSn   11 58 51.0 +1.6
SOC                                 MLR    MLR
       comp=Z,498nm,17.0s
SONM   Songino Array     25.80  58  P      P      11 53 31.1 +1.2
       comp=Z,24nm,1.0s,baz=254,slow=11,SNR=37
SONM   Songino Array     25.80  58  P      P      11 53 31.6 +1.7
SONM                                pmax   pmax
       comp=Z,27nm,1.0s
SONM   Songino Array     25.80  58  P      P      11 53 31.6 +1.7
SONM                                IAmb   IAmb   11 53 36.5
       comp=Z,26nm,1.0s
ULN    Ulaanbaatar       26.24  58deP      P      11 53 35.1 +1.1
ULN                                 pmax   pmax
       comp=Z,19nm,1.3s
ULN    Ulaanbaatar       26.24  58  P      P      11 53 35.1 +1.1
VORD   Divnogorie        26.82 309 eP      P      11 53 40.0 +1.1
VORD                                pmax   pmax
       comp=Z,50nm,0.5s
VSR    Storozhevoye      26.96 309 eP      P      11 53 41.3 +1.1
VSR                                 pmax   pmax
       comp=Z,20nm,0.8s
ANN    Anapa             27.25 295 eP      P      11 53 37.5 -5.4
ANN                                eS      S      11 58 12.1  -10
ANN                                 pmax   pmax
       comp=Z,215nm,1.5s
LPSR   Galich'ya Gora    27.48 312 eP      P      11 53 46.7 +1.8
LPSR                                pmax   pmax
       comp=Z,30nm,0.8s
RAYN   Ar Rayn           27.88 246  P      P      11 53 49.5 +0.7
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RAYN	Ar Rayn	27.88	246	P	P	11 53 48.9	+0.1
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RAYN	Ar Rayn	27.88	246	P	P	11 53 48.9	+0.1
KMI	Kunming	28.34	109	⇑P	P	11 53 57.9	+4.8
KMI				pP	sP	11 54 05.3	+6.1
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BTO	Baotou	28.37	74	*e*P	P	11 53 53.1	0.0
PRGR	Permogore	28.69	333	*e*P	P	11 53 55.3	-0.3
PRGR				pmax	pmax		
	comp=Z,18nm,0.6s						
XAN	Xi'an	29.07	88	P	P	11 54 02.3	+3.0
XAN				pP	sP	11 54 06.1	+0.6
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC	Hu-ho-hao-te	29.50	73	*e*P	P	11 54 05.4	+2.3
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,72nm,4.6s						
HHC				LR	LR		
	comp=Z,480nm,12.4s						
HHC				LR	LR		
	comp=Z,470nm,14.1s						
HHC				LR	LR		
	comp=Z,670nm,16.7s						
OBN	Obninsk	29.59	316	LR	LR	12 07 00.4	
	comp=Z,193nm,19.5s,baz=4.0,slow=38						
OBN	Obninsk	29.59	316	*i* P	P	11 54 04.3	+0.7
OBN				*i*		11 54 10.8	
OBN				*e*		11 55 03.7	
OBN				*i*		11 57 09.5	
OBN				pmax	pmax		
	comp=Z,12nm,0.8s						
CHTO	Chiang Mai	29.80	124	P	P	11 54 07.7	+1.8
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CHTO	Chiang Mai	29.80	124	P	P	11 54 07.7	+1.8
CMAR	Chiang Mai Arr	30.06	124	P	P	11 54 07.4	-0.8
	comp=Z,2.3nm,0.8s,baz=299,slow=9.5,SNR=13						
CMAR				LR	LR	12 08 50.3	
	comp=Z,179nm,19.2s,baz=290,slow=42						
CMAR	Chiang Mai Arr	30.06	124	*i* P	P	11 54 09.5	+1.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR	Chiang Mai Arr	30.06	124	P	P	11 54 07.8	-0.3
BR131	Keskin Array S	30.51	285	P	P	11 54 13.9	+1.8
BR131				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BR131	Keskin Array S	30.51	285	P	P	11 54 13.9	+1.8
BRTR	Keskin Array B	30.51	285	P	P	11 54 14.3	+2.2
	comp=Z,3.5nm,0.7s,baz=90,slow=7.2,SNR=8.4						
BRTR	Keskin Array B	30.51	285	P	P	11 54 14.2	+2.0
KLMR	Klimovskoe	30.61	328	*e*P	P	11 54 11.8	-0.8
KLMR				pmax	pmax		
	comp=Z,21nm,1.0s						
KLMR	Klimovskoe	30.61	328	*e*P	P	11 54 11.8	-0.8
KLMR				AMP		11 54 16.0	
	comp=Z,21nm,1.0s						
NRIK	Noril'sk	31.84	10	P	P	11 54 23.3	0.0
	comp=Z,16nm,0.9s,baz=202,slow=8.3,SNR=15						
NRIK	Noril'sk	31.84	10	*ce*P	P	11 54 23.8	+0.5
NRIK				pmax	pmax		
	comp=Z,28nm,1.1s						
NRIK	Noril'sk	31.84	10	P	P	11 54 23.9	+0.6
NRIK				IAmb	IAmb	11 54 27.3	
	comp=Z,24nm,1.1s						
PALK	Pallekele	31.86	166	P	P	11 54 23.2	-0.8
	comp=Z,13nm,0.6s,baz=99,slow=9.7,SNR=8.4						
PALK	Pallekele	31.86	166	P	P	11 54 23.7	-0.4
PALK				pmax	pmax		
	comp=Z,18nm,0.9s						
PALK	Pallekele	31.86	166	P	P	11 54 23.6	-0.4
PALK				IAmb	IAmb	11 54 25.1	
	comp=Z,18nm,0.8s						
BOD	Bodaibo	32.70	40	*e*P	P	11 54 31.4	+0.4
BOD				pmax	pmax		
	comp=Z,23nm,1.0s						
AKASG	Malin Array Be	33.07	306	P	P	11 54 34.6	+0.2
	comp=Z,7.8nm,0.5s,baz=78,slow=7.5,SNR=27						
AKASG	Malin Array Be	33.07	306	*ce*P	P	11 54 36.5	+2.2
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.5s						
AKASG	Malin Array Be	33.07	306	P	P	11 54 34.7	+0.4
AKBB	Malin Array Si	33.07	306	P	P	11 54 35.9	+1.6
AKBB				pmax	pmax		
	comp=Z,16nm,0.7s						
AKBB	Malin Array Si	33.07	306	P	P	11 54 35.9	+1.6
AKBB				IAmb	IAmb	11 54 38.2	
	comp=Z,16nm,0.7s						
BJI	Beijing	33.10	74	P	P	11 54 36.0	+1.3
BJI				pmax	pmax		
	comp=Z,12nm,0.7s						
SORM	Soroca	33.55	301	⇑P	P	11 54 39.3	+0.8
SORM	Soroca	33.55	301	⇑P	P	11 54 39.3	+0.8
TPGR	Topolog	33.66	295	⇑P	P	11 54 41.6	+2.1
CFR	Carcaliu	33.83	296	⇑P	P	11 54 42.3	+1.3
CFR	Carcaliu	33.83	296	⇑P	P	11 54 42.3	+1.3
VRI	Vrincioaia	34.76	297	⇑P	P	11 54 51.9	+2.8
VRI	Vrincioaia	34.76	297	⇑P	P	11 54 51.9	+2.8
TESR	Tescani	34.76	299	⇑P	P	11 54 52.5	+3.4
PLOR	Plostina	34.81	297	⇑P	P	11 54 51.3	+1.7
PLOR	Plostina	34.81	297	⇑P	P	11 54 51.3	+1.7
ISR	Istrita	34.95	296	⇑P	P	11 54 54.6	+3.7
ISR	Istrita	34.95	296	⇑P	P	11 54 54.6	+3.7
NACGM	Naroch	35.02	313	*i* P	P	11 54 53.6	+2.5
COVR	Voineasa-Covas	35.12	297	⇑P	P	11 54 54.9	+2.6
MLR	Muntele Rosu	35.34	297	⇑P	P	11 54 57.0	+2.7
MLR	Muntele Rosu	35.34	297	P	P	11 54 56.0	+1.8
MLR				pmax	pmax		
	comp=Z,33nm,1.1s						
MLR	Muntele Rosu	35.34	297	P	P	11 54 56.0	+1.8
MLR				IAmb	IAmb	11 55 00.1	
	comp=Z,33nm,1.1s						
BURAR	Bucovina Array	35.67	301	⇑P	P	11 54 59.1	+2.0
BURAR	Bucovina Array	35.67	301	⇑P	P	11 54 59.1	+2.0
DOPR	Dopca	35.68	298	⇑P	P	11 54 58.2	+1.2
BUR08	Bucovina Ar. S	35.68	301	P	P	11 54 57.7	+0.6
VOIR		35.97	297	⇑P	P	11 55 01.7	+2.1
VOIR		35.97	297	⇑P	P	11 55 01.7	+2.1
LVZ	Lovozero	36.24	337	P	P	11 55 02.1	+0.5
LVZ				pmax	pmax		
	comp=Z,55nm,1.2s						
LVZ	Lovozero	36.24	337	P	P	11 55 02.1	+0.5
LVV	L'vov	36.38	304	*e*P	P	11 55 05.5	+2.6
UBPT	Khong Chiam	36.66	120	P	P	11 55 04.1	-1.6
UBPT				IAmb	IAmb	11 55 22.8	
	comp=Z,34nm,1.4s						
FIA1	FINESS Array S	36.80	324	P	P	11 55 06.3	-0.1
FIA1				IAmb	IAmb	11 55 24.9	
	comp=Z,43nm,1.3s						
FINES	FINESS Array B	36.80	324	P	P	11 55 06.8	+0.4
	comp=Z,8.3nm,0.6s,baz=107,slow=11,SNR=18						
FINES	FINESS Array B	36.80	324	P	P	11 55 07.2	+0.8
FINES	FINESS Array B	36.80	324	P	P	11 55 07.2	+0.8
KWP	Kalwaria Pacla	37.24	304	*e*P	P	11 55 09.5	-0.8
TRPA	Tarpa	37.44	302	⇑P	P	11 55 14.6	+2.6
TRPA	Tarpa	37.44	302	*e*P	P	11 55 13.8	+1.9
DRGR		37.44	299	⇑P	P	11 55 14.5	+2.4
DRGR		37.44	299	⇑P	P	11 55 14.5	+2.4
DL2	Dalian	37.47	74	P	P	11 55 14.0	+1.7
DL2				pmax	pmax		
	comp=Z,27nm,1.0s						
NJ2	Nanjing	37.56	86	*e*P	P	11 55 15.1	+1.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KOLS	Kolonicke sedl	37.56	303	*e*P	P	11 55 16.4	+3.4
KOLS	Kolonicke sedl	37.56	303	*e*P	P	11 55 16.4	+3.4
GZR	Gura Zlata	37.56	297	⇑P	P	11 55 16.7	+3.5
GZR	Gura Zlata	37.56	297	⇑P	P	11 55 16.7	+3.5
CRVS	Cervenica-Dubn	38.10	303	*e*P	P	11 55 21.9	+4.3
CRVS	Cervenica-Dubn	38.10	303	*e*P	P	11 55 21.9	+4.3
MDVR	Moldovita	38.40	296	⇑P	P	11 55 23.3	+3.1
BOVS	Bovan	38.60	294	⇓P	P	11 55 23.0	+1.2
NIE	Niedzica	38.82	304	*e*P	P	11 55 26.5	+2.8
OJC	Ojcow	39.09	305	*e*P	P	11 55 27.1	+1.2
OJC	Ojcow	39.09	305	P	P	11 55 27.5	+1.6
OJC				pmax	pmax		
	comp=Z,17nm,0.9s						
OJC	Ojcow	39.09	305	P	P	11 55 27.5	+1.6
OJC				IAmb	IAmb	11 55 29.2	
	comp=Z,17nm,0.9s						
ZEA	Zeya	39.45	49	*e*P	P	11 55 31.2	+2.4
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
KEV	Kevo	39.58	337	P	P	11 55 29.8	+0.1
KEV				pmax	pmax		
	comp=Z,41nm,1.2s						
KEV	Kevo	39.58	337	P	P	11 55 29.8	+0.1
KEV				IAmb	IAmb	11 55 54.9	
	comp=Z,41nm,1.2s						
DIVS	Divibare	39.73	296	P	P	11 55 32.2	+0.8
DIVS				IAmb	IAmb	11 55 35.4	
	comp=Z,23nm,1.2s						
VYHS	Vyhne	39.87	303	*e*P	P	11 55 35.1	+2.7
VYHS	Vyhne	39.87	303	*e*P	P	11 55 35.1	+2.7
ARA0	ARCESS Array S	39.95	336	*e*P	P	11 55 33.8	+1.0
ARCES	ARCESS Array B	39.95	336	P	P	11 55 33.4	+0.6
	comp=Z,7.2nm,0.5s,baz=100,slow=6.3,SNR=33						
ARCES	ARCESS Array B	39.95	336	P	P	11 55 34.6	+1.8
ARCES				pmax	pmax		
	comp=Z,19nm,1.0s						
ARCES	ARCESS Array B	39.95	336	P	P	11 55 34.6	+1.8
ARCES				IAmb	IAmb	11 55 41.9	
	comp=Z,19nm,1.0s						
ITM	Ithomi	40.04	285	P	P	11 55 33.3	-0.7
MORH	Mrgy, Hungar	40.30	299	⇑P	P	11 55 37.4	+1.4
MORH	Mrgy, Hungar	40.30	299	*e*P	P	11 55 36.6	+0.6
KTK1	Kautokeino	40.48	335	*e*P	P	11 55 38.5	+1.3
MORC	Moravsky Berou	40.58	305	⇑P	P	11 55 39.5	+1.2
MORC	Moravsky Berou	40.58	305	*e*P	P	11 55 40.7	+2.4
MORC	Moravsky Berou	40.58	305	⇑P	P	11 55 39.5	+1.2
MORC	Moravsky Berou	40.58	305	P	P	11 55 39.1	+0.8
JAVC	Velka Javorina	40.59	303	*e*P	P	11 55 41.9	+3.4
KOVH	Kovagotottos	40.70	299	*e*P	P	11 55 40.3	+1.0
MPLH	Magyarpolny	40.91	301	*e*P	P	11 55 41.7	+0.7
HAMF	Hammerfest	40.99	337	*e*P	P	11 55 41.8	+0.5
KRLC	Kraliky	41.03	305	*e*P	P	11 55 43.5	+1.4
KRLC	Kraliky	41.03	305	*e*P	P	11 55 43.5	+1.4
VRAC	Vranov	41.24	304	*e*P	P	11 55 45.0	+1.3
KSP	Ksiaz	41.27	306	*e*P	P	11 55 46.1	+2.2
DPC	Dobruska-Polom	41.30	306	*e*P	P	11 55 45.7	+1.4
DPC	Dobruska-Polom	41.30	306	*e*P	P	11 55 45.7	+1.4
YAK	Yakutsk	41.32	37	P	P	11 55 45.4	+1.3
	comp=Z,12nm,0.4s,baz=174,slow=1.1,SNR=5.7						
YAK	Yakutsk	41.32	37	*e*P	P	11 55 44.7	+0.5
YAK				pmax	pmax		
	comp=Z,27nm,0.9s						
YAK				pmax	pmax		
	comp=E,12nm,1.0s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
TPTI		41.39	142	P	P	11 55 42.0	-3.2
	comp=N,6.8nm,1.0s						
KRUC	Moravsky	41.40	304	*e*P	P	11 55 46.3	+1.3
CHVC	Chvalec	41.45	306	*e*P	P	11 55 48.1	+2.7
KULM	Kulim	41.45	136	P	P	11 55 45.0	-0.7
KULM				IAmb	IAmb	11 56 03.6	
	comp=Z,39nm,1.5s						
KCSI	Kotacane, Aceh	41.45	141	P	P	11 55 45.9	+0.1
	comp=Z,22nm,0.9s						
JETT	Jettan, Norway	41.61	335	*e*P	P	11 55 48.1	+1.6
CONA	Conrad Observa	41.91	302	*i* P	P	11 55 50.7	+1.3
	comp=Z,16nm,1.0s,SNR=6.1						
MDJ	Mudanjiang	41.94	63	P	P	11 55 50.5	+1.0
MDJ				pP	sP	11 55 59.1	+3.2
MDJ				sP	pP	11 56 02.4	+8.3
MDJ				ScP	ScP	12 01 35.5	+0.3
MDJ				PcS	PcS	12 01 37.4	+1.1
MDJ				S	S	12 02 06.4	-1.4
MDJ				sS	sS	12 02 19.0	+3.5
MDJ				SS	SS	12 05 12.7	-1.5
MDJ				ScS	ScS	12 05 52.5	+0.2
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,350nm,5.3s						
MDJ				LR	LR		
	comp=Z,850nm,15.4s						
MDJ				LR	LR		
	comp=Z,900nm,17.9s						
TRO	Tromso	42.13	335	*e*P	P	11 55 51.9	+1.2
ARSA	Arzberg	42.25	301	*e*P	P	11 55 52.7	+0.6
	comp=Z,8.2nm,1.1s						
IPM	Ipoh	42.32	136	P	P	11 55 51.7	-1.2
IPM				IAmb	IAmb	11 55 52.5	
	comp=Z,24nm,0.7s						
KLR	Kul'dur	42.58	56	P	P	11 55 55.3	+0.7
	comp=Z,4.9nm,0.5s,baz=276,slow=8.8,SNR=20						
KLR	Kul'dur	42.58	56	*ce*P	P	11 55 55.5	+0.8
KLR				pmax	pmax		
	comp=Z,21nm,1.5s						
KSAR	Wonju Array Be	42.61	74	P	P	11 55 55.4	+0.3
KSAR	Wonju Array Be	42.61	74	P	P	11 55 55.4	+0.3
PERS	Pernice	42.63	300	*i* P	P	11 55 56.1	+0.9
KSRS	Korea Array	42.64	74	P	P	11 55 55.1	-0.1
	comp=Z,7.2nm,1.0s,baz=279,slow=8.0,SNR=16						
KSRS				PcP	PcP	11 57 47.0	-0.2
	comp=Z,3.8nm,0.9s,baz=290,slow=4.1,SNR=5.8						
PSI	Prapat	42.64	140	P	P	11 55 53.9	-1.8
	comp=Z,8.8nm,0.6s,baz=332,slow=8.5,SNR=13						
SOKA	Soboth	42.68	300	*i* P	P	11 55 56.8	+1.2
	comp=Z,14nm,0.9s,SNR=6.2						
BRG	Berggiesshubel	42.75	307	*e*P	P	11 55 57.1	+1.1
BRG				Amp		11 55 57.8	
	comp=Z,4.5nm,0.8s						
BRG	Berggiesshubel	42.75	307	P	P	11 55 59.1	+3.1
BRG				Amp		11 56 00.6	
	comp=Z,12nm,0.8s						
FAUS	Fauske	42.82	331	*e*P	P	11 55 57.2	+0.9
MOA	Molln	42.98	302	*e*P	P	11 55 59.8	+1.8
	comp=Z,8.4nm,1.0s						
OBKA	Obir	43.04	300	*i* P	P	11 56 00.3	+1.7
	comp=Z,10nm,0.9s,SNR=5.3						
GEC2	GERESS Array S	43.19	304	P	P	11 56 00.3	+0.5
GERES	GERESS Array B	43.19	304	P	P	11 56 00.8	+1.1
	comp=Z,2.1nm,0.6s,baz=65,slow=7.5,SNR=16						
GERES	GERESS Array B	43.19	304	P	P	11 56 00.9	+1.1
KHC	Kasperske Hory	43.22	304	*e*P	P	11 56 01.3	+1.4
KHC	Kasperske Hory	43.22	304	⇑*e*P	P	11 56 00.9	+1.0
KHC				pmax	pmax		
	comp=Z,21nm,0.9s						
TIXI	Tiksi	43.25	22	P	P	11 55 59.6	-0.2
	comp=Z,19nm,0.6s,baz=277,slow=6.1,SNR=30						
TIXI	Tiksi	43.25	22	⇑*e*P	P	11 55 59.7	-0.1
TIXI				pmax	pmax		
	comp=Z,16nm,0.6s						
TIXI	Tiksi	43.25	22	P	P	11 55 59.5	-0.2
TIXI				pP	pP	11 56 02.0	-2.4
TIXI				IAmb	IAmb	11 56 02.5	
	comp=Z,19nm,0.6s						
CLL	Collm	43.28	307	*i* P	P	11 56 00.9	+0.6
CLL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CLL	Collm	43.28	307	*i* P	P	11 56 00.9	+0.6
	comp=Z,9.0nm,1.0s						
CLL	Collm	43.28	307	P	P	11 56 00.6	+0.3
CLL				IAmb	IAmb	11 56 03.5	
	comp=Z,10nm,0.7s						
GSI	Gunungsitoli	43.28	143	P	P	11 56 00.0	-0.7
	comp=Z,56nm,0.8s						
KONS	Konsvik	43.50	330	*e*P	P	11 56 03.4	+1.5
NC405	NORSAR Array S	43.58	322	P	P	11 56 02.7	+0.1
NC405				IAmb	IAmb	11 56 21.4	
	comp=Z,19nm,0.9s						
MYKA	Terra Mystica	43.63	301	*e*P	P	11 56 06.0	+2.7
	comp=Z,13nm,1.7s						
CADS	Cadrg	43.65	300	*i* P	P	11 56 03.9	+0.4
NC602	NORSAR Array S	43.65	321	*e*P	P	11 56 04.6	+1.4
USRK	Ussuriysk Ar.	43.71	63	P	P	11 56 04.1	+0.3
	comp=Z,2.6nm,0.6s,baz=270,slow=7.8,SNR=7.1						
PRED	Cave del Predi	43.72	300	P	P	11 56 02.8	-1.3
KBA	Koelnbreinsper	43.74	301	*e*P	P	11 56 05.2	+0.9
	comp=Z,2.5nm,0.7s						
NB2	NORSAR Subarra	43.82	322	P	P	11 56 04.1	-0.5
	comp=Z,18nm,0.8s,baz=92,slow=8.6						
NB2	NORSAR Subarra	43.82	322	P	P	11 56 04.1	-0.5
	baz=92,slow=8.6						
NOA	NORSAR Array B	43.82	322	P	P	11 56 04.7	+0.1
	comp=Z,4.9nm,0.7s,baz=92,slow=7.7,SNR=16						
BJO1	Bjornoya	43.86	342	*e*P	P	11 56 05.3	+0.6
ABTA	Abfaltersbach	44.37	301	*e*P	P	11 56 10.3	+1.1
	comp=Z,4.4nm,0.8s						
CIMO	Cimolais	44.51	300	P	P	11 56 11.2	+0.9
KONO	Kongsberg	44.62	320	*e*P	P	11 56 13.1	+2.1
GRF	Grafenberg Arr	44.65	305	*e*P	P	11 56 12.5	+1.2
	comp=Z,19nm,1.1s,baz=86,slow=6.8						
MNSI	Mandailing Nat	44.70	141	P	P	11 56 11.3	-0.7
	comp=Z,39nm,0.8s						
WTTA	Wattenberg	44.84	302	*e*P	P	11 56 15.3	+2.1
	comp=Z,14nm,1.1s						
WATA	Walderalm	44.87	302	*e*P	P	11 56 15.1	+1.8
	comp=Z,6.5nm,1.1s						
DOMB	Dombas	44.87	323	*e*P	P	11 56 14.2	+1.2
NRCA	Norcia	44.90	295	P	P	11 56 13.8	+0.3
NRCA				IAmb	IAmb	11 56 17.9	
	comp=Z,12nm,0.9s						
SQTA	Sankt Quirin	45.14	302	*e*P	P	11 56 14.0	-1.4
	comp=Z,5.9nm,0.7s						
MOTA	Moosalm	45.18	302	*e*P	P	11 56 16.0	+0.2
	comp=Z,11nm,1.0s						
SKAR	Skarslia	45.24	321	*e*P	P	11 56 16.7	+0.7
RETA	Reutte	45.38	302	*e*P	P	11 56 19.2	+1.9
	comp=Z,4.3nm,0.9s						
FETA	Feichten	45.50	302	*e*P	P	11 56 17.0	-1.4
	comp=Z,3.9nm,0.8s						
MOL	Molde	45.58	324	*e*P	P	11 56 20.6	+2.0
HSPB	Hornsund (broa	45.63	344	*e*P	P	11 56 19.5	+0.8
SPB2	Spitsbergen Ar	45.92	346	P	P	11 56 22.3	+1.3
SPA0	Spitsbergen Ar	45.92	346	*e*P	P	11 56 21.9	+0.8
SPITS	Spitsbergen Ar	45.92	346	P	P	11 56 22.2	+1.1
	comp=Z,13nm,0.8s,baz=120,slow=14,SNR=7.2						
SPITS	Spitsbergen Ar	45.92	346	P	P	11 56 22.2	+1.1
DAVA	Damuels	46.01	302	*e*P	P	11 56 22.6	+0.2
	comp=Z,14nm,0.6s						
PPI	Padang Panjang	46.18	141	P	P	11 56 21.7	-2.1
	comp=Z,8.7nm,0.9s						
SISI	Saibi	46.30	143	P	P	11 56 23.6	-1.1
	comp=Z,23nm,1.0s						
PDSI	Padang	46.61	141	P	P	11 56 23.5	-3.7
	comp=Z,19nm,1.0s						
KBS	Kingsbay	47.03	347	*e*P	P	11 56 30.8	+1.1
MEM	Membach	47.76	308	*d*P	P	11 56 35.5	-0.2
SENIN	Lac Senin/Sane	47.95	302	P	P	11 56 37.6	0.0
SENIN				IAmb	IAmb	11 56 41.8	
	comp=Z,9.8nm,0.7s						
RCHB	Rochefort	48.35	307	*d*P	P	11 56 39.7	-0.6
DSRI	Dabo	48.39	136	P	P	11 56 40.9	-0.1
	comp=Z,7.1nm,0.5s						
BMRD	Maredsous	48.60	307	*d*P	P	11 56 42.4	+0.1
JWT	Wachi	49.05	73	P	P	11 56 46.8	+0.8
MASI	Maura Aman, Be	49.41	140	P	P	11 56 47.0	-1.9
	comp=Z,66nm,0.9s						
KEST	Kesra	50.03	288	P	P	11 56 55.5	+1.9
	comp=Z,5.9nm,0.8s,baz=19,slow=2.5,SNR=3.1						
KSM	Kuching	50.16	128	P	P	11 56 54.4	-0.1
KSM				IAmb	IAmb	11 56 55.4	
	comp=Z,11nm,0.9s						
MAJO	Matsushiro	50.65	71	P	P	11 56 58.2	+0.1
MAJO				pmax	pmax		
	comp=Z,12nm,0.8s						
MAJO	Matsushiro	50.65	71	P	P	11 56 58.2	+0.1
MAJO				IAmb	IAmb	11 56 59.2	
	comp=Z,12nm,0.8s						
MAT	Matsushiro	50.65	71	P	P	11 56 57.5	-0.6
MJAR	Matsushiro Arr	50.65	71	P	P	11 56 58.5	+0.4
	comp=Z,11nm,0.9s,baz=292,slow=8.9,SNR=16						
KMBO	Kilima Mbogo	51.45	229	*i* P	P	11 57 05.6	+1.0
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
STKI	Sintang	51.98	128	P	P	11 57 08.1	-0.1
JYT	Yasato	52.24	70	P	P	11 57 10.2	+0.2
DAG	Danmarks Havn	53.27	343	*i* P	P	11 57 17.0	-0.1
DAG				IAmb	IAmb	11 57 20.0	
	comp=Z,22nm,0.8s						
BILL	Bilibino	56.03	27	*i* P	P	11 57 35.4	-1.8
BILL				*i*		11 58 37.1	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BILL	Bilibino	56.03	27	P	P	11 57 39.2	+2.0
BILL				IAmb	IAmb	11 57 40.4	
	comp=Z,9.2nm,1.1s						
PETK	Petropavlovsk-	57.33	45	P	P	11 57 46.2	-0.4
	comp=Z,1.4nm,0.5s,baz=268,slow=4.3,SNR=5.5						
ESDC	Sonseca Array	58.03	298	P	P	11 57 51.4	-0.5
	comp=Z,3.8nm,0.8s,baz=55,slow=6.6,SNR=18						
ESDC	Sonseca Array	58.03	298	P	P	11 57 52.4	+0.5
NEEM	North Greenlan	59.41	348	*i* P	P	11 58 01.6	+0.4
NEEM				IAmb	IAmb	11 58 04.3	
	comp=Z,24nm,0.8s						
MVO	Moncorvo	59.48	300	*e*P	P	11 58 04.7	+2.7
	comp=Z,54nm,1.8s						
SUMG	Summit	59.70	341	P	P	11 58 04.1	+0.7
SUMG				pmax	pmax		
	comp=Z,24nm,0.8s						
SUMG	Summit	59.70	341	*i* P	P	11 58 04.0	+0.7
SUMG				IAmb	IAmb	11 58 07.0	
	comp=Z,28nm,0.9s						
SUMG	Summit	59.70	341	P	P	11 58 04.1	+0.7
SUMG				pP	pP	11 58 06.7	-1.2
PESTR	Estremoz	60.91	298	*e*P	P	11 58 14.2	+2.5
	comp=Z,18nm,2.0s						
EUNU	Eureka	61.11	356	P	P	11 58 13.6	+1.1
EUNU				IAmb	IAmb	11 58 17.1	
	comp=Z,11nm,1.0s						
MESJ	Messejana	61.83	297	*e*P	P	11 58 21.2	+3.3
	comp=Z,36nm,1.7s						
ICESG	Greenland Ices	61.97	338	*i* P	P	11 58 19.9	+1.1
ICESG				IAmb	IAmb	11 58 22.9	
	comp=Z,42nm,1.1s						
TULEG	Thule	62.72	351	P	P	11 58 22.9	-0.4
TULEG				IAmb	IAmb	11 58 26.1	
	comp=Z,15nm,1.1s						
A21K	Barrow	64.91	16	P	P	11 58 38.1	+0.4
	baz=319						
DY2G	Dye2	65.57	337	*i* P	P	11 58 42.3	-0.1
DY2G				IAmb	IAmb	11 58 46.4	
	comp=Z,39nm,1.1s						
RES	Resolute Bay	66.79	357	P	P	11 58 51.4	+1.6
RES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RES	Resolute Bay	66.79	357	P	P	11 58 51.4	+1.6
TORD	Torodi Ar. Bea	67.47	269	P	P	11 58 54.2	-0.8
	comp=Z,4.4nm,0.6s,baz=45,slow=5.6,SNR=29						
TORD	Torodi Ar. Bea	67.47	269	P	P	11 58 53.9	-1.1
ANM	Nome	67.50	23	P	P	11 58 54.8	+0.3
	baz=314						
TOLK	Toolik Lake Re	68.52	15	P	P	11 59 00.7	-0.2
TOLK				pP	pP	11 59 03.8	-1.7
TOLK	Toolik Lake Re	68.52	15	P	P	11 59 01.0	0.0
	baz=325						
A36M	Sachs Harbour	69.02	6	P	P	11 59 04.1	+0.2
A36M				pP	pP	11 59 06.7	-1.7
A36M	Sachs Harbour	69.02	6	P	P	11 59 04.0	+0.1
	baz=345						
COLD	Coldfoot	69.55	17	P	P	11 59 07.4	+0.1
COLD				pP	pP	11 59 10.1	-1.7
COLD	Coldfoot	69.55	17	P	P	11 59 07.6	+0.3
	baz=325						
IMAR	Indian Mountai	69.72	19	P	P	11 59 08.2	-0.2
IMAR				pP	pP	11 59 10.5	-2.4
GCSA	Galena City Sc	69.87	20	P	P	11 59 09.7	+0.5
	baz=320						
H21K	Melozitna Rive	70.21	18	P	P	11 59 12.2	+0.8
H21K				IAmb	IAmb	11 59 14.4	
	comp=Z,13nm,1.0s						
H21K	Melozitna Rive	70.21	18	P	P	11 59 11.4	0.0
	baz=323						
BMAR	Burnt Mountain	70.56	15	P	P	11 59 14.5	+0.9
I21K	Tanana	70.80	18	P	P	11 59 15.1	+0.1
	baz=324						
J20K	Nowinta River	71.05	20	P	P	11 59 17.3	+0.8
	baz=323						
KOWA	Kowa	71.15	274	P	P	11 59 17.3	-0.6
KOWA				pP	pP	11 59 20.3	-2.2
KOWA				IAmb	IAmb	11 59 20.5	
	comp=Z,22nm,1.4s						
H24K	Noodor Dome	71.23	17	P	P	11 59 17.7	+0.1
	baz=327						
MLY	Manley	71.23	18	P	P	11 59 17.8	+0.1
	baz=325,SNR=7.6						
I23K	Minto, Yukon-K	71.47	18	P	P	11 59 19.4	+0.5
I23K				IAmb	IAmb	11 59 22.5	
	comp=Z,14nm,0.8s						
I23K	Minto, Yukon-K	71.47	18	P	P	11 59 18.9	0.0
	baz=326,SNR=7.6						
TTA	Tatalina	71.52	21	P	P	11 59 19.6	+0.2
	baz=321						
INK	Inuvik	71.62	10	P	P	11 59 20.3	+0.4

	comp=Z,26nm,0.6s,baz=348,slow=6.8,SNR=70						
INK	Inuvik	71.62	10	P	P	11 59 20.0	+0.2
INK				pP	pP	11 59 22.7	-1.7
INK	Inuvik	71.62	10	P	P	11 59 20.2	+0.4
	baz=338						
K20K	Telida	71.73	20	P	P	11 59 21.3	+0.7
	baz=323						
CHUM	Lake Minchumin	71.77	19	P	P	11 59 21.3	+0.5
	baz=324,SNR=5.9						
MDM	Murphy Dome	71.89	17	P	P	11 59 21.5	-0.1
BPAW	Bear Paw Mtn.	71.94	19	P	P	11 59 22.1	+0.2
BPAW	Bear Paw Mtn.	71.94	19	P	P	11 59 21.8	-0.1
	baz=325						
POKR	Poker Plat Res	71.94	17	P	P	11 59 22.5	+0.6
POKR				pP	pP	11 59 24.8	-1.6
POKR	Poker Plat Res	71.94	17	P	P	11 59 22.3	+0.5
	baz=328,SNR=8.3						
NEA2	Nenana	72.00	18	P	P	11 59 21.8	-0.4
	baz=326,SNR=24						
TCOL	CIGO, UAF Yank	72.05	17	P	P	11 59 22.9	+0.4
TCOL	CIGO, UAF Yank	72.05	17	P	P	11 59 22.6	+0.2
	baz=327,SNR=11						
COLA	College	72.05	17	*c i*P	P	11 59 22.6	+0.2
COLA				pmax	pmax		
	comp=Z,27nm,0.8s						
COLA	College	72.05	17	P	P	11 59 22.8	+0.4
COLA					pP	11 59 25.1	-1.9
COLA	College	72.05	17	P	P	11 59 22.6	+0.2
	baz=327						
CAST	Castle Rocks	72.21	20	P	P	11 59 23.8	+0.2
	baz=324						
IL31		72.36	17	P	P	11 59 23.8	-0.5
IL31				IAmb	IAmb	11 59 27.2	
	comp=Z,14nm,0.8s						
ILAR	Eielson Array	72.36	17	P	P	11 59 23.6	-0.8
	comp=Z,11nm,0.8s,baz=334,slow=3.6,SNR=50						
ILAR	Eielson Array	72.36	17	P	P	11 59 23.7	-0.7
ILAR	Eielson Array	72.36	17	P	P	11 59 23.7	-0.7
L19K	White Mountain	72.44	21	P	P	11 59 24.9	0.0
	baz=322						
L20K	Farewell, AK	72.48	21	P	P	11 59 25.0	-0.1
	baz=323						
PPLA	Purkeypile	72.61	20	P	P	11 59 25.9	-0.2
	baz=324,SNR=6.3						
TRF	Thorofare Moun	72.65	19	P	P	11 59 27.8	+1.4
TRF				IAmb	IAmb	11 59 31.3	
	comp=Z,8.1nm,0.6s						
TRF	Thorofare Moun	72.65	19	P	P	11 59 27.0	+0.7
	baz=326						
HDA	Harding Lake	72.65	17	P	P	11 59 25.7	-0.4
	baz=328,SNR=6.9						
MCK	McKinley	72.75	18	P	P	11 59 25.9	-0.8
	baz=327						
M19K	Big River Lodg	72.80	21	P	P	11 59 27.4	+0.4
	baz=323						
EPYK	Eagle Plains	72.93	12	P	P	11 59 27.4	-0.4
	baz=336						
J26L	Joseph Creek	73.32	16	P	P	11 59 30.3	+0.1
	baz=331,SNR=19						
CUT	Chulitna	73.52	19	P	P	11 59 30.6	-0.6
	baz=326						
EGAK	Eagle	73.57	15	P	P	11 59 32.5	+1.0
EGAK				IAmb	IAmb	11 59 34.6	
	comp=Z,15nm,1.1s						
EGAK	Eagle	73.57	15	P	P	11 59 31.5	0.0
	baz=333,SNR=5.5						
I29M	Ogilvie Camp,	73.58	13	P	P	11 59 30.9	-0.7
	baz=335,SNR=22						
WAT1	Susitna Watana	73.60	19	P	P	11 59 30.7	-1.1
	baz=327						
N19K	Bonanza Creek	73.64	22	P	P	11 59 32.4	+0.2
	baz=323						
DHY	Denali Highway	73.69	18	P	P	11 59 32.4	0.0
	baz=328						
SCRK	Sand Creek	73.69	16	P	P	11 59 32.3	-0.1
	baz=330,SNR=18						
RIDG	Independent Ri	73.70	17	P	P	11 59 32.4	0.0
RIDG	Independent Ri	73.70	17	P	P	11 59 31.8	-0.6
	baz=330,SNR=14						
WAT6	Susitna Watana	74.02	18	P	P	11 59 33.9	-0.5
	baz=328						
M22K	Willow	74.10	20	P	P	11 59 34.3	-0.3
	baz=326						
PSA00	Pilbara Seismi	74.10	135	P	P	11 59 34.2	-0.9
O18K	Koktuh Hills	74.19	23	P	P	11 59 35.4	+0.1
	baz=323						
PAX	Paxson	74.23	17	P	P	11 59 36.2	+0.7
PAX				pmax	pmax		
	comp=Z,20nm,0.8s						
PAX	Paxson	74.23	17	P	P	11 59 36.2	+0.7
PAX	Paxson	74.23	17	P	P	11 59 35.1	-0.5
	baz=330,SNR=9.3						
PMR	Palmer	74.50	20	P	P	11 59 36.7	-0.3
	baz=327						
SML	Sawmill	74.52	19	P	P	11 59 37.5	+0.3
	baz=328,SNR=9.5						
DAWY	Dawson	74.55	14	P	P	11 59 37.5	+0.1
DAWY				IAmb	IAmb	11 59 40.3	
	comp=Z,15nm,0.8s						
DAWY	Dawson	74.55	14	P	P	11 59 37.4	+0.1
	baz=334,SNR=8.7						
P18K	Big Mountain,	74.55	23	P	P	11 59 38.1	+0.7
	baz=323						
L26K	Log Cabin Wild	74.66	16	P	P	11 59 38.1	+0.1
	baz=331						
SCM	Sheep Creek Mo	74.75	19	P	P	11 59 39.6	+1.0
SCM				pmax	pmax		
	comp=Z,43nm,0.6s						
SCM	Sheep Creek Mo	74.75	19	P	P	11 59 39.6	+1.0
SCM	Sheep Creek Mo	74.75	19	P	P	11 59 38.7	+0.1
	baz=328,SNR=6.4						
RC01	Rabbit Creek A	74.76	20	P	P	11 59 39.5	+1.0
	baz=326,SNR=6.8						
HARP	HAARP	74.80	17	P	P	11 59 39.5	+0.7
	baz=330,SNR=33						
M24K	Tolsona, Glenn	74.80	18	P	P	11 59 39.5	+0.6
	baz=329,SNR=10.0						
KNK	Knik Glacier	74.82	19	P	P	11 59 39.3	+0.3
	baz=327,SNR=6.2						
KNRA	Kununurra	74.92	125	P	P	11 59 39.3	-0.8
KNRA				IAmb	IAmb	11 59 39.4	
	comp=Z,7.4nm,0.7s						
L27K	Beaver Creek,	74.96	16	P	P	11 59 40.5	+0.8
L27K				IAmb	IAmb	11 59 43.3	
	comp=Z,12nm,0.7s						
L27K	Beaver Creek,	74.96	16	P	P	11 59 40.3	+0.6
	baz=332						
BCAR	Beaver Creek A	74.96	16	P	P	11 59 40.7	+0.9
O22K	Cooper Landing	75.27	20	P	P	11 59 42.1	+0.7
	baz=327						
M26K	Nabesna, AK	75.29	16	P	P	11 59 42.0	+0.4
	baz=332						
PWL	Port Wells	75.32	20	P	P	11 59 41.9	+0.1
	baz=328						
KLU	Klutina	75.39	18	P	P	11 59 44.1	+1.8
KLU				IAmb	IAmb	11 59 45.6	
	comp=Z,16nm,0.8s						
KLU	Klutina	75.39	18	P	P	11 59 42.4	+0.1
	baz=329						
M27K	Edge Creek, AK	75.57	16	P	P	11 59 43.8	+0.4
	baz=332						
BRSE	Bradley Lake S	75.60	21	P	P	11 59 43.1	-0.3
	baz=326						
N25K	Chitina, Valde	75.62	18	P	P	11 59 45.0	+1.5
N25K				IAmb	IAmb	11 59 48.1	
	comp=Z,11nm,0.8s						
N25K	Chitina, Valde	75.62	18	P	P	11 59 44.4	+0.8
	baz=330,SNR=5.2						
MAYO	Mayo, Yukon	75.62	13	P	P	11 59 43.6	+0.2
	baz=337						
GLI	Glacier Island	75.63	19	P	P	11 59 43.6	0.0
	baz=329						
SEW	Seward	75.66	20	P	P	11 59 43.8	+0.1
	baz=327						
BVCY	Beaver Creek	75.74	16	P	P	11 59 44.8	+0.6
	baz=333,SNR=7.7						
BMRM	Bremner River	76.17	18	P	P	11 59 46.2	-0.5
	baz=330						
MCARA	McCarthy VSAT	76.18	17	P	P	11 59 47.6	+0.9
MCARA	McCarthy VSAT	76.18	17	P	P	11 59 47.5	+0.8
	baz=332,SNR=7.8						
EYAK	Cordova Ski Ar	76.25	19	P	P	11 59 48.0	+0.9
	baz=330						
YUK3	Moose Creek	76.40	16	P	P	11 59 48.6	+0.4
	baz=334,SNR=11						
M30M	Minto, Yukon	76.40	14	P	P	11 59 48.5	+0.5
	baz=336,SNR=6.7						
DBIC	Dimbokro	76.50	268	P	P	11 59 49.0	-0.2
	comp=Z,2.9nm,0.8s,baz=26,slow=5.6,SNR=4.3						
DBIC	Dimbokro	76.50	268	P	P	11 59 49.0	-0.2
KIC	Kosan Boka	76.60	267	*e*P	P	11 59 49.2	-0.6
	comp=Z,11nm,0.9s						
CHNA	Chernabura Isl	76.63	28	P	P	11 59 48.7	-0.6
	baz=320						
TIC	Toumodi	76.64	268	*e*P	P	11 59 49.4	-0.7
KDAK	Kodiak Island	76.67	23	P	P	11 59 50.6	+1.1
KDAK				pmax	pmax		
	comp=Z,21nm,0.7s						
KDAK	Kodiak Island	76.67	23	P	P	11 59 50.6	+1.1
KDAK	Kodiak Island	76.67	23	P	P	11 59 49.3	-0.2
	baz=325						
CRQE	Cirque	76.72	17	P	P	11 59 50.5	+0.6
	baz=332						
LIC	Lamto	76.90	268	*e*P	P	11 59 46.3	-5.2
	comp=Z,25nm,1.2s						
CTG	Chitna Glacier	76.93	16	P	P	11 59 51.5	+0.3
	baz=333,SNR=5.4						
YUK4	Talbot Arm	77.16	15	P	P	11 59 52.7	+0.2
	baz=335,SNR=10						
M31M	Drury Creek, Y	77.18	13	P	P	11 59 52.4	+0.1
	baz=338,SNR=8.7						
FARO	Faro, Yukon	77.33	12	P	P	11 59 53.5	+0.2
	baz=339,SNR=6.0						
MESA	MESA	77.49	17	P	P	11 59 55.4	+1.0
	baz=333						
YUK6	Outpost Mounta	77.59	15	P	P	11 59 55.6	+0.6
	baz=335						
N31M	Braeburn, Yuko	77.59	14	P	P	11 59 55.1	+0.4
	baz=337,SNR=5.7						
WRGLY	Wrigley	77.72	8	P	P	11 59 55.9	+0.6
	baz=347,SNR=19						
HYT	Haines Junctio	77.87	15	P	P	11 59 56.9	+0.5
	baz=336,SNR=14						
PINM	Pinnacle	77.95	16	P	P	11 59 57.4	+0.7
	baz=334						
PNL	Peninsula	78.53	16	P	P	11 59 60.0	+0.1
	baz=335						
WHY	Whitehorse	78.53	14	P	P	11 59 59.9	-0.2
WHY				IAmb	IAmb	12 00 02.1	
	comp=Z,5.0nm,0.7s						
WHY	Whitehorse	78.53	14	P	P	11 59 59.8	-0.2
	baz=338,SNR=6.0						
YKA	Yellowknife Ar	79.13	4	P	P	12 00 03.0	-0.1
	comp=Z,13nm,0.6s,baz=349,slow=5.6,SNR=36						
YKA	Yellowknife Ar	79.13	4	P	P	12 00 03.3	+0.2
YKA	Yellowknife Ar	79.13	4	P	P	12 00 03.2	+0.2
P33M	Teslin, Yukon	79.32	13	P	P	12 00 04.2	-0.1
	baz=340,SNR=7.7						
SKAG	Skagway	79.56	14	P	P	12 00 05.5	+0.1
	baz=338						
SCHQ	Schefferville	80.88	338	P	P	12 00 12.5	-0.2
	comp=Z,11nm,0.9s,baz=38,slow=5.9,SNR=8.8						
SCHQ	Schefferville	80.88	338	P	P	12 00 12.5	-0.2
SCHQ				IAmb	IAmb	12 00 16.0	
	comp=Z,16nm,0.9s						
DLBC	Dease Lake	81.47	12	P	P	12 00 17.7	+1.8
DLBC				IAmb	IAmb	12 00 19.6	
	comp=Z,9.7nm,0.8s						
WB0	Warramunga Arr	81.56	123	P	P	12 00 15.2	-1.6
WRA	Warramunga Arr	81.65	124	P	P	12 00 15.4	-1.8
	comp=Z,4.2nm,0.6s,baz=326,slow=4.7,SNR=57						
WRA	Warramunga Arr	81.65	124	*i* P	P	12 00 15.3	-1.9
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WRA	Warramunga Arr	81.65	124	P	P	12 00 15.6	-1.6
WRAB	Tennant Creek	81.65	124	⇑*e*P	P	12 00 16.0	-1.2
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WB2	Warramunga Arr	81.66	124	P	P	12 00 15.0	-2.3
WB2				IAmb	IAmb	12 00 16.3	
	comp=Z,6.9nm,0.7s						
WR0	Warramunga Arr	81.79	123	P	P	12 00 16.4	-1.6
AS31	Alice Springs	84.05	126	P	P	12 00 28.9	-0.8
ASAR	Alice Springs	84.05	126	P	P	12 00 27.8	-1.9
	comp=Z,1.5nm,0.7s,baz=324,slow=4.6,SNR=33						
ASAR	Alice Springs	84.05	126	P	P	12 00 28.7	-1.0
ASAR	Alice Springs	84.05	126	P	P	12 00 28.7	-1.0
EDM	Edmonton	88.45	4	P	P	12 00 50.8	-0.2
EDM				pmax	pmax		
	comp=Z,16nm,0.7s						
EDM	Edmonton	88.45	4	P	P	12 00 50.8	-0.2
LONY	Lake Ozonia	92.26	338	P	P	12 01 07.9	-1.0
	baz=25						
B05A	Bryant	92.53	10	P	P	12 01 09.7	-0.3
	baz=348						
PDAR	Pinedale Array	99.05	2	P	Pdif	12 01 41.7	+1.6
	comp=Z,0.3nm,0.6s,baz=40,slow=2.5,SNR=3.8						
NVAR	Mina Array Bea	102.69	9	P	Pdif	12 01 57.1	+0.6
	comp=Z,0.6nm,0.7s,baz=355,slow=2.9,SNR=4.9						
TXAR	Lajitas Array	112.42	357	PKiKP	PKiKP	12 06 36.3	+0.9
	comp=Z,0.1nm,0.5s,baz=176,slow=2.0,SNR=4.5						
VNA2	Neumayer--Watz	122.92	203	PKPdf	PKiKP	12 06 56.4	+2.2
VNA3	Neumayer Olymp	123.73	203	PKPdf	PKiKP	12 06 55.9	+0.1
CPUP	Villa Florida	136.94	271	PKP	PKPdf	12 07 21.9	0.0
	comp=Z,3.3nm,1.0s,baz=2.1,slow=7.0,SNR=2.8						
PLCA	Paso Flores	152.08	254	PKPbc	PKPbc	12 07 53.6	-0.5
	comp=Z,5.7nm,0.9s,baz=290,slow=1.3,SNR=13						

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*IDC **07** 11:52:33.6±1.3, 38°.21N×72°.94E, h0^{km}, mb3.8/8, mb1 4.0/10, mb1mx3.7/47, mbtmp3.8/10, ML3.2/2, Error ellipse: s-maj=28.4km s-min=24.4km az=119.0*

*KRNET **07** 11:52:34.1±0.1, 38°.37N×72°.79E, mb4.2*

ISC 07 11:52:35.5±1.0**, 38°.40N**±0°.08×**72°.92E**±0°.06**, h10^{km}, n15, σ1^{s}83**/20**, mb3.7**/8**, 6C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.39	321	⇓*e*P	Pn	11 52 59.7	-1.5
	baz=26						
DRK				⇓*e*S	Sn	11 53 18.9	-0.8
	baz=26						
OHH	Osh	2.12	357	⇑*e*P	Pn	11 53 13.4	+2.3
	baz=60						
OHH				⇑*i*S	Sb	11 53 42.6	+2.1
	baz=60						
GAR	Garm	2.12	287	⇑*e*P	Pb	11 53 12.1	-2.0
	baz=89						
GAR				⇑*e*S	Sb	11 53 39.4	-1.2
	baz=89						
BTK	Batken	2.32	316	⇑*e*P	Pn	11 53 15.2	+1.3
	baz=18						
BTK				⇑*i*S	Sn	11 53 45.1	+2.5
	baz=18						
AAK	Ala-Archa	4.40	15	Pn	Pb	11 53 49.6	-3.3
	2.6nm,0.3s,baz=34,slow=23,SNR=1.5						
AAK				Sn	Sb	11 54 43.0	-3.1
	1.3nm,0.3s,baz=22,slow=22,SNR=0.9						
AKTO	Aktyubinsk	16.03	323	Pn	P	11 56 23.7	-0.6
	0.6nm,0.3s,baz=183,slow=23,SNR=1.3						
ZALV	Zalesovo Beam	17.56	24	P	P	11 56 42.2	+1.0
	0.2nm,0.3s,baz=220,slow=15,SNR=2.2						
SONM	Songino Array	26.01	58	P	P	11 58 10.6	+1.9
	1.1nm,0.9s,baz=248,slow=12,SNR=2.8						
FINES	FINESS Array B	36.80	324	P	P	11 59 43.9	+0.8
	4.4nm,0.9s,baz=115,slow=11,SNR=1.8						
ARCES	ARCESS Array B	40.00	336	P	P	12 00 11.0	+1.0
	2.1nm,0.7s,baz=114,slow=9.0,SNR=6.2						
NOA	NORSAR Array B	43.81	322	P	P	12 00 41.7	+0.4
	0.6nm,0.4s,baz=115,slow=7.3,SNR=2.0						
TORD	Torodi Ar. Bea	67.29	269	P	P	12 03 31.3	+0.7
	0.2nm,0.4s,baz=50,slow=6.9,SNR=1.5						
ILAR	Eielson Array	72.53	17	P	P	12 04 02.2	0.0
	0.5nm,0.8s,baz=323,slow=4.5,SNR=4.0						
YKA	Yellowknife Ar	79.27	4	P	P	12 04 41.1	+0.5
	0.8nm,0.8s,baz=348,slow=5.2,SNR=3.1						
WRA	Warramunga Arr	81.73	123	P	P	12 04 52.8	-1.7
	0.2nm,0.5s,baz=327,slow=4.8,SNR=1.7						

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*IDC **07** 12:10:10.5±1.2, 38°.66N×73°.38E, h0^{km}, mb3.9/7, mb1 4.0/11, mb1mx3.7/60, mbtmp3.9/11, ML3.5/4, MS4.2/1, Ms1 4.2/1, ms1mx3.2/63, Error ellipse: s-maj=20.5km s-min=20.1km az=8.0*

*NNC **07** 12:10:17.5±2.9, 38°.98N×73°.43E, h0^{km}, mb4.3, mpv3.9, Error ellipse: s-maj=22.2km s-min=13.5km az=168.0*

ISC 07 12:10:14.8±1.6**, 38°.9N**±0°.1×**73°.23E**±0°.09**, h10^{km}, n33, σ3^{s}00**/31**, mb3.8**/7**, 4C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	3.24	6	P	Pn	12 11 09.2	+3.1
	SNR=18						
UCH	Uchtor	3.45	16	P	Pn	12 11 12.6	+3.5
	SNR=8.7						
EKS2	Erkin-Say	3.77	6	P	Pn	12 11 18.4	+5.3
	SNR=12						
AAK	Ala-Archa	3.84	14	Pn	Pn	12 11 17.3	+3.1
	6.0nm,0.3s,baz=182,slow=7.6,SNR=24						
AAK				Sn	Sb	12 12 06.5	-3.0
	3.1nm,0.3s,baz=168,slow=18,SNR=1.5						
AAK	Ala-Archa	3.84	14	P	Pb	12 11 19.9	-2.9
	SNR=34						
AAK	Ala-Archa	3.84	14	⇑Pn	Pn	12 11 17.8	+3.6
	34nm,0.6s						
AAK				⇑Lg	Lg	12 12 16.1	
	63nm,0.9s						
KBK	Karagaybulak	3.96	19	P	Pb	12 11 27.5	+2.7
	SNR=7.3						
ULHL	Ulahol	4.04	34	P	Pb	12 11 27.5	+1.3
	SNR=10						
TKM2	Tokmak 2	4.39	23	⇓Pg	Pb	12 11 35.2	+3.1
	24nm,1.1s						
TKM2				⇓Lg	Lg	12 12 31.7	
	28nm,0.8s						
USP	Ospenovka	4.46	12	P	Pn	12 11 24.4	+1.9
	SNR=9.1						
KST	Kastek	4.62	26	Pg	Pb	12 11 38.6	+2.6
	19nm,0.4s						
KST				Lg	Lg	12 12 43.6	
	42nm,0.6s						
KK07	Karatay Array	4.66	335	⇑Pn	Pn	12 11 28.2	+2.9
	18nm,0.6s,baz=144,slow=14						
KK07				⇑Sn	Sn	12 12 24.8	+5.4
	20nm,0.6s						
KK07				⇓Lg	Lg	12 12 43.7	
	19nm,0.7s,baz=146,slow=27						
DGS	Degeres	4.73	23	Pg	Pg	12 11 42.7	-2.8
	18nm,0.5s						
DGS				Lg	Lg	12 12 49.4	
	20nm,0.7s						
TNSS	Tian-Shan	4.99	33	Pg	Pb	12 11 45.5	+3.0
	12nm,0.4s						
TNSS				Lg	Lg	12 12 56.6	
	9.7nm,0.8s						
KRBS	Karabastau	5.12	20	Pg	Pb	12 11 47.5	+3.0
	7.6nm,0.7s						
KRBS				Lg	Lg	12 12 59.6	
	23nm,0.8s						
MDOK	Medeo	5.13	33	⇓Pg	Pb	12 11 48.2	+3.3
	12nm,0.7s						
MDOK				⇓Lg	Lg	12 12 53.1	
	39nm,1.1s						
MDOK	Medeo	5.13	33	Pg	Pb	12 11 46.8	+2.0
	7.1nm,0.5s						
MDOK				Lg	Lg	12 12 58.2	
	19nm,0.7s						
KOTS	Kotyrbulak	5.22	33	Pg	Pg	12 11 50.9	-3.9
	11nm,0.5s						
KOTS				Lg	Lg	12 13 02.4	
	48nm,0.7s						
KTBS	Karatobe	5.46	27	Pg	Pb	12 11 52.2	+2.0
	6.0nm,0.9s						
KTBS				Lg	Lg	12 13 06.9	
	16nm,0.7s						
KUU	Kurty	5.50	24	Pg	Pb	12 11 55.2	+4.3
	9.4nm,0.8s						
KUU				Lg	Lg	12 13 11.1	
	27nm,1.0s						
ARXS	Arharly	6.32	32	Pg	Pb	12 12 09.2	+4.3
	7.5nm,0.6s						
ARXS				Lg	Lg	12 13 34.8	
	20nm,0.9s						
MKAR	Makanchi Array	10.30	37	Pn	Pn	12 12 43.4	+0.7
	0.1nm,0.3s,baz=223,slow=14,SNR=7.8						
KURBB	Kurchatov Arra	12.30	16	Pn	Pn	12 13 11.5	+1.6
	0.0nm,0.3s,baz=198,slow=12,SNR=3.1						
KURBB				Lg	Lg	12 16 45.8	
	0.1nm,0.3s,baz=206,slow=32,SNR=5.3						
AKTO	Aktyubinsk	15.77	322	Pn	Pn	12 13 56.8	-0.1
	0.7nm,0.3s,baz=134,slow=12,SNR=6.5						
AKTO				Sn	Sn	12 16 47.6	-4.1
	0.1nm,0.3s,baz=314,slow=13,SNR=1.8						
ZALV	Zalesovo Beam	16.99	24	P	Pn	12 14 11.5	-0.9
	0.4nm,0.3s,baz=209,slow=14,SNR=6.7						
SONM	Songino Array	25.54	59	P	P	12 15 42.2	-1.5
	2.0nm,0.6s,baz=264,slow=8.3,SNR=15						
FINES	FINESS Array B	36.53	324	P	P	12 17 17.8	-2.3
	4.2nm,1.0s,baz=357,slow=36,SNR=1.6						
ARCES	ARCESS Array B	39.63	336	P	P	12 17 44.5	-1.8
	8.3nm,1.1s,baz=106,slow=9.5,SNR=2.5						
KMBO	Kilima Mbogo	51.76	228	LR	LR	12 43 48.8	
	comp=Z,210nm,18.5s,baz=110,slow=39						
TORD	Torodi Ar. Bea	67.54	269	P	P	12 21 09.7	-1.9
	0.2nm,0.4s,baz=57,slow=6.6,SNR=1.8						
INK	Inuvik	71.23	10	P	P	12 21 32.7	-0.9
	0.4nm,0.6s,baz=337,slow=7.7						
YKA	Yellowknife Ar	78.75	4	P	P	12 22 17.4	+0.3
	0.7nm,0.8s,baz=348,slow=5.8,SNR=2.5						
WRA	Warramunga Arr	81.81	124	P	P	12 22 28.7	-5.5
	0.4nm,0.9s,baz=315,slow=4.3,SNR=2.6						

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*SOME **07** 12:14:59.2, 38°.83N×72°.43E, h5^{km}*

*IDC **07** 12:15:00.2±0.9, 38°.33N×73°.13E, h0^{km}, mb4.0/14, mb1 4.1/21, mb1mx3.9/56, mbtmp4.0/21, ML3.6/6, MS4.0/1, Ms1 4.0/1, ms1mx3.2/62, Error ellipse: s-maj=16.3km s-min=14.2km az=6.0*

*BJI **07** 12:15:03.2±0.0, 38°.56N×73°.15E, h6^{km}, mb4.1/10, ML4.1/5*

*NNC **07** 12:15:03.4±2.4, 38°.48N×73°.29E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=18.1km s-min=12.6km az=163.0*

*NEIC **07** 12:15:03.6±2.4, 38°.52N±0°.05×73°.03E±0°.08, h10^{km}±1^{km}, mb4.5/13, Error ellipse: s-maj=10.4km s-min=8.4km az=106.0*

*KRNET **07** 12:15:04.6±0.1, 38°.68N×72°.94E, h16^{km}, mb4.3*

ISC 07 12:15:02.9±0.5**, 38°.55N**±0°.04×**73°.03E**±0°.03**, h10^{km}, n101, σ2^{s}64**/119**, mb4.1**/17**, 16C-7D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.34	315		Pn	12 15 28.2	+0.3
DRK	Karamyk	1.34	315	⇑*i*P	Pn	12 15 27.1	-0.8
	baz=13						
DRK				⇑*i*S	Sb	12 15 43.9	-1.7
	baz=13						
SFK	Sufi-Kurgan	1.51	14	⇑*e*P	Pn	12 15 31.1	+0.8
	baz=18						
SFK				⇑*e*S	Sn	12 15 50.4	+0.2
	baz=18						
OHH	Osh	1.99	355	⇑*i*P	Pb	12 15 39.0	-0.2
	baz=56						
OHH				⇑*e*S	Sn	12 16 03.8	+2.2
	baz=56						
GAR	Garm	2.17	283		Pb	12 15 42.5	+0.1
GAR	Garm	2.17	283	⇑*i*P	Pb	12 15 42.6	+0.3
	baz=80						
GAR				⇑*i*S	Sb	12 16 10.1	+0.8
	baz=80						
KSH	Kashi	2.49	66	Pn	Pn	12 15 38.4	-5.2
KSH				Sn	Sn	12 16 05.1	-9.0
KSH				smax	smax		
	comp=N,5µm,0.6s						
KSH				smax	smax		
	comp=E,6µm,0.8s						
CHGR	Chuyangaron	3.04	273	Pn	Pn	12 15 52.5	+1.4
AML	Almayashu	3.62	8	⇑*i*P	Pn	12 16 02.6	+3.2
	baz=9.0						
AML				⇑*i*S	Sn	12 16 45.2	+2.8
	baz=9.0						
MRKS	Merke	4.20	2	*e*P	Pb	12 16 14.2	-2.7
	12nm,0.3s						
MRKS				*e*S	Sb	12 17 08.3	+0.6
	75nm,0.8s						
AAK	Ala-Archa	4.24	15	Pn	Pn	12 16 11.7	+4.1
	4.5nm,0.3s,baz=154,slow=6.1,SNR=14						
AAK				Sn	Sb	12 17 06.3	-2.6
	3.9nm,0.3s,baz=8.9,slow=18,SNR=1.7						
AAK	Ala-Archa	4.24	15	⇓Pn	Pn	12 16 11.2	+3.6
	56nm,0.8s						
AAK				⇓Sn	Sn	12 17 03.7	+6.4
	82nm,0.8s						
AAK	Ala-Archa	4.24	15	Pn	Pn	12 16 08.8	+1.1
BOOM	Boomskoye usch	4.52	28	Pn	Pn	12 16 13.2	+1.6
DZA	Taraz	4.53	344	*e*P	Pn	12 16 16.6	+5.0
	88nm,0.1s						
DZA				*e*S	Sn	12 17 11.7	+7.4
	268nm,0.2s						

CHM	Chimkent	4.59	326	*e*P	Pn	12 16 18.4	+6.0
	219nm,0.3s						
CHM				*e*S	Sb	12 17 14.9	-3.9
	202nm,0.2s						
KDJ	Kajisay	4.78	40	Pn	Pn	12 16 16.9	+1.7
TKM2	Tokmak 2	4.79	23	⇓Pg	Pb	12 16 29.6	+2.6
	59nm,0.8s						
TKM2				⇑Lg	Lg	12 17 37.4	
	152nm,1.4s						
TARG	Taragay, Kyrgy	4.85	47		Pn	12 16 18.4	+2.1
NIL	Nilore	4.89	178	Pn	Pn	12 16 18.2	+1.7
KKAR	Karatay Array	4.94	338	Pn	Pn	12 16 18.0	+0.8
KK08	Karatay Array	4.95	338	⇑Pn	Pn	12 16 19.7	+2.4
	20nm,0.6s,baz=147,slow=13						
KK08				⇓Sn	Sn	12 17 20.3	+5.7
	174nm,1.0s						
KK08				⇓Lg	Lg	12 17 46.8	
	57nm,0.8s,baz=152,slow=29						
KST	Kastek	5.01	25	*e*P	Pb	12 16 32.3	+1.5
	24nm,1.5s						
KST				*e*S	Sg	12 17 39.1	-4.8
	73nm,0.9s						
KST	Kastek	5.01	25	Pg	Pb	12 16 33.5	+2.6
	34nm,0.6s						
KST				Lg	Lg	12 17 39.1	
	73nm,0.9s						
KBL	Kabul	5.12	220	Pn	Pn	12 16 21.4	+1.5
DGS	Degeres	5.13	23	*e*P	Pb	12 16 36.0	+3.2
	52nm,0.6s						
DGS				*e*S	Sg	12 17 45.1	-2.6
	50nm,0.6s						
DGS	Degeres	5.13	23	Pg	Pb	12 16 37.0	+4.2
	52nm,0.6s						
DGS				Lg	Lg	12 17 45.1	
	50nm,0.6s						
TNSS	Tian-Shan	5.38	32	*e*P	Pb	12 16 40.0	+2.7
	30nm,0.5s						
TNSS				*e*S	Sg	12 17 52.6	-3.1
	30nm,0.9s						
TNSS	Tian-Shan	5.38	32	Pg	Pb	12 16 40.4	+3.1
	39nm,0.5s						
TNSS				Lg	Lg	12 17 51.8	
	30nm,0.9s						
KRBS	Karabastau	5.52	20	*e*P	Pb	12 16 42.2	+2.8
	21nm,0.3s						
KRBS				*e*S	Sg	12 17 56.3	-3.8
	49nm,0.6s						
KRBS	Karabastau	5.52	20	Pg	Pb	12 16 42.4	+3.0
	21nm,0.3s						
KRBS				Lg	Lg	12 17 56.2	
	49nm,0.6s						
MDOK	Medeo	5.53	32	*e*P	Pb	12 16 42.1	+2.5
	24nm,0.5s						
MDOK				*e*S	Sg	12 17 55.8	-4.6
	38nm,0.9s						
MDOK	Medeo	5.53	32	⇑Pg	Pb	12 16 42.2	+2.6
	36nm,0.7s						
MDOK				⇓Lg	Lg	12 17 59.0	
	68nm,0.9s						
MDOK	Medeo	5.53	32	Pg	Pb	12 16 42.4	+2.8
	24nm,0.5s						
MDOK				Lg	Lg	12 17 55.2	
	38nm,0.9s						
KNDC	Almaty	5.54	31	⇑Pg	Pb	12 16 43.2	+3.5
	93nm,0.7s						
KNDC				⇓Lg	Lg	12 17 56.9	
	253nm,0.8s						
KOTS	Kotyrbulak	5.61	32	*e*P	Pb	12 16 43.7	+2.7
	38nm,0.5s						
KOTS				*e*S	Sg	12 17 58.5	-4.6
	126nm,0.7s						
KOTS	Kotyrbulak	5.61	32	Pg	Pb	12 16 44.1	+3.0
	38nm,0.5s						
KOTS				Lg	Lg	12 17 58.5	
	126nm,0.7s						
PRZ	Przheval'sk	5.68	44	Pn	Pn	12 16 29.5	+2.0
KTBS	Karatobe	5.85	27	*e*P	Pb	12 16 47.7	+2.7
	21nm,0.5s						
KTBS				*e*S	Sg	12 18 05.1	-5.7
	78nm,0.6s						
KTBS	Karatobe	5.85	27	Pg	Pb	12 16 48.3	+3.3
	21nm,0.5s						
KTBS				Lg	Lg	12 18 05.1	
	78nm,0.6s						
KUU	Kurty	5.90	24	*e*P	Pb	12 16 49.0	+3.2
	4.7nm,0.2s						
KUU				*e*S	Sg	12 18 07.6	-4.5
	44nm,0.7s						
KUU	Kurty	5.90	24	Pg	Pb	12 16 49.9	+4.2
	19nm,0.7s						
KUU				Lg	Lg	12 18 07.6	
	44nm,0.7s						
ARXS	Arharly	6.71	31	*e*P	Pb	12 17 02.9	+3.1
	9.8nm,0.8s						
ARXS				*e*S	Sg	12 18 31.5	-6.9
	34nm,0.6s						
ARXS	Arharly	6.71	31	Pg	Pb	12 17 03.6	+3.9
	13nm,0.3s						
ARXS				Lg	Lg	12 18 31.5	
	34nm,0.6s						
PDGK	Podgornoye	6.84	44	⇑Pn	Pn	12 16 45.2	+1.9
	13nm,0.6s						
HRA	Herat	9.62	248	Pn	Pn	12 17 23.4	+1.7
MAKZ	Makanchi	10.56	36	Pn	Pn	12 17 35.1	+0.8
MK31	Makanchi Array	10.69	37		Pn	12 17 36.7	+0.6
MKAR	Makanchi Array	10.69	37	Pn	Pn	12 17 38.3	+2.2
	0.1nm,0.3s,baz=197,slow=14,SNR=7.0						
MKAR	Makanchi Array	10.69	37	Pn	Pn	12 17 36.0	-0.1
GEYT	Alibeck	11.75	272	Pn	Pn	12 17 49.4	-1.2
	0.8nm,0.3s,baz=116,slow=6.8,SNR=2.8						
GEYT				Sn	Sn	12 20 06.4	+4.7
	0.9nm,0.3s,baz=67,slow=31,SNR=3.8						
WMQ	Urumqi	12.24	60	*e*P	Pn	12 18 00.6	+3.3
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
KURBB	Kurchatov Arra	12.69	16	Pn	Pn	12 18 02.2	-1.2
	baz=204,slow=12,SNR=1.9						
KURBB				Lg	Lg	12 21 43.8	
	0.1nm,0.3s,baz=208,slow=34,SNR=4.4						
DANN	Dangsing	13.54	135	*e*P	Pn	12 18 12.6	-2.7
	12nm,0.4s						
AB31	Akbulak array	14.25	323	Pn	Pn	12 18 25.5	+0.9
	1.6nm,0.4s,baz=128,slow=13,SNR=45						
ABKAR	Akbulak array	14.25	323	Pn	Pn	12 18 22.9	-1.7
ABKAR	Akbulak array	14.25	323		Pn	12 18 23.0	-1.6
GKN	Gorkha	14.30	134	*e*P	Pn	12 18 21.7	-3.9
	9.4nm,0.4s						
BVAR	Borovoye Array	14.60	354	Pn	Pn	12 18 30.3	+0.9
	0.3nm,0.3s,baz=165,slow=13,SNR=2.4						
BRVK	Borovoye	14.64	353		P	12 18 36.7	+0.4
PKIN	Phulchoki	15.05	133	*e*P	Pn	12 18 32.8	-3.2
	12nm,0.6s						
PKI	Pulchoki	15.07	133	*e*P	Pn	12 18 32.8	-3.4
	5.8nm,0.4s						
AKTO	Aktyubinsk	15.96	323	Pn	Pn	12 18 47.6	+0.1
	1.0nm,0.3s,baz=116,slow=11,SNR=17						
AKTO				Sn	Sn	12 21 39.6	-4.8
	0.1nm,0.3s,baz=179,slow=24,SNR=1.7						
AKTO	Aktyubinsk	15.96	323	⇑Pn	P	12 18 50.2	-0.9
	18nm,0.9s						
RAMN	Ramite	16.23	131	*e*P	Pn	12 18 46.4	-4.8
	7.3nm,0.4s						
ZAA0	Zalesovo Array	17.39	24		Pn	12 19 05.9	+0.4
ZALV	Zalesovo Beam	17.39	24	P	Pn	12 19 06.2	+0.7
	0.7nm,0.3s,baz=213,slow=12,SNR=9.6						
ZALV	Zalesovo Beam	17.39	24		Pn	12 19 05.7	+0.1
ARU	Arti	20.31	336	P	P	12 19 40.7	+1.9
	1.8nm,0.6s,baz=138,slow=4.9,SNR=6.5						
ARU	Arti	20.31	336		P	12 19 40.4	+1.5
ARU				IAmb	IAmb	12 19 41.5	
	comp=Z,12nm,1.1s						
GTA	Gaotai	20.82	79	*e*P	P	12 19 46.1	+1.5
GTA				pP	sP	12 19 51.5	+1.0
GTA				sP	pP	12 19 55.0	+6.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TLY	Talaya	25.07	48	P	P	12 20 27.6	+0.2
	comp=Z,2.6nm,0.7s,baz=261,slow=14,SNR=4.0						
SONM	Songino Array	25.87	58	P	P	12 20 35.7	+0.9
	comp=Z,3.3nm,0.8s,baz=268,slow=10,SNR=18						
SONM	Songino Array	25.87	58	P	P	12 20 35.9	+1.2
AKASG	Malin Array Be	32.99	306	P	P	12 21 37.9	+0.1
	comp=Z,0.3nm,0.4s,baz=77,slow=7.9,SNR=4.2						
FIA1	FINESS Array S	36.73	324	P	P	12 22 10.4	+0.5
FINES	FINESS Array B	36.73	324	P	P	12 22 10.6	+0.6
	comp=Z,2.6nm,0.4s,baz=108,slow=9.9,SNR=10.0						
FINES	FINESS Array B	36.73	324	P	P	12 22 09.8	-0.2
ARCES	ARCESS Array B	39.90	336	P	P	12 22 36.8	+0.2
	comp=Z,1.4nm,0.5s,baz=111,slow=7.3,SNR=14						
ARCES	ARCESS Array B	39.90	336	P	P	12 22 37.5	+0.9
ARCES				IAmb	IAmb	12 23 03.0	
	comp=Z,22nm,1.4s						
PSI	Prapat	42.72	140	LR	LR	12 42 33.9	
	comp=Z,209nm,20.9s,baz=88,slow=39						
NC303	NORSAR Array S	43.68	322	P	P	12 23 07.7	+0.1
NC303				IAmb	IAmb	12 23 31.4	
	comp=Z,29nm,1.3s						
NOA	NORSAR Array B	43.75	322	P	P	12 23 08.1	-0.1
	comp=Z,0.6nm,0.5s,baz=92,slow=7.7,SNR=4.0						
MJAR	Matsushiro Arr	50.73	71	P	P	12 24 01.7	-1.2
	comp=Z,4.6nm,0.9s,baz=302,slow=7.0,SNR=6.0						
TOLI2	Tolitoli	57.38	119	P	P	12 24 52.4	+0.8
SUMG	Summit	59.66	341	P	P	12 25 08.4	+1.2
SUMG				IAmb	IAmb	12 25 19.0	
	comp=Z,3.8nm,1.0s						
TORD	Torodi Ar. Bea	67.37	269	P	P	12 25 58.3	-0.3
	comp=Z,1.2nm,0.7s,baz=49,slow=5.7,SNR=9.5						
TORD	Torodi Ar. Bea	67.37	269	P	P	12 25 58.1	-0.5
TOLK	Toolik Lake Re	68.53	15	P	P	12 26 05.3	+0.1
TOLK				IAmb	IAmb	12 26 24.3	
	comp=Z,6.9nm,1.4s						
IMAR	Indian Mountai	69.73	19	P	P	12 26 12.3	-0.3
BMAR	Burnt Mountain	70.57	14	P	P	12 26 18.3	+0.5
INK	Inuvik	71.62	10	P	P	12 26 24.4	+0.4
	comp=Z,1.9nm,0.5s,baz=344,slow=6.4,SNR=20						
INK	Inuvik	71.62	10	P	P	12 26 24.4	+0.4
INK				IAmb	IAmb	12 26 25.0	
	comp=Z,9.8nm,1.4s						
ILAR	Eielson Array	72.37	17	P	P	12 26 27.6	-1.0
	comp=Z,0.9nm,0.8s,baz=326,slow=5.2,SNR=12						
ILAR	Eielson Array	72.37	17	P	P	12 26 28.1	-0.5
PPLA	Purkeypile	72.62	20	P	P	12 26 29.9	-0.5
SCRK	Sand Creek	73.70	16	P	P	12 26 36.8	+0.2
SCRK				IAmb	IAmb	12 27 03.7	
	comp=Z,2.4nm,1.2s						
BCAR	Beaver Creek A	74.97	16	P	P	12 26 44.4	+0.4
YKA	Yellowknife Ar	79.12	4	P	P	12 27 07.6	+0.4
	comp=Z,1.2nm,0.7s,baz=349,slow=5.4,SNR=6.2						
WRA	Warramunga Arr	81.73	123	P	P	12 27 19.1	-2.8
	comp=Z,0.3nm,0.5s,baz=325,slow=5.2,SNR=3.0						
ASAR	Alice Springs	84.13	126	P	P	12 27 32.6	-1.6
	comp=Z,0.2nm,0.9s,baz=320,slow=4.7,SNR=1.3						

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*IDC **07** 12:19:39.4±2.3, 38°.62N×73°.39E, h0^{km}, mb3.3/2, mb1 3.7/6, mb1mx3.4/57, mbtmp3.6/6, ML3.2/4, Error ellipse: s-maj=45.8km s-min=26.0km az=60.0*

ISC 07 12:19:41.0±1.6, 38°.7N±0°.1×73°.2E±0°.2, h10^{km}, n6, σ2^{s}.40/7, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	4.04	13	Pn	Pn	12 20 46.3	+3.4
	1.2nm,0.3s,baz=191,slow=16,SNR=4.1						
AAK				Sn	Sb	12 21 38.8	-2.3
	1.0nm,0.3s,baz=302,slow=21,SNR=1.7						
BVAR	Borovoye Array	14.45	353	Pn	Pn	12 23 04.4	-1.1
	0.2nm,0.3s,baz=347,slow=32,SNR=2.7						
AKTO	Aktyubinsk	15.93	322	Pn	Pn	12 23 24.9	-0.1
	0.1nm,0.3s,baz=53,slow=18,SNR=2.2						
ZALV	Zalesovo Beam	17.17	24	P	P	12 23 41.5	-0.9
	0.1nm,0.3s,baz=226,slow=12,SNR=2.5						
SONM	Songino Array	25.64	58	P	P	12 25 12.1	+1.3
	0.5nm,0.7s,baz=258,slow=10,SNR=2.8						
WRA	Warramunga Arr	81.69	124	P	P	12 31 58.2	-1.5
	0.2nm,0.6s,baz=324,slow=5.4,SNR=1.6						

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*KRNET **07** 12:21:17.1±0.1, 38°.32N×72°.87E, mb4.2*

*IDC **07** 12:21:22.6±1.5, 38°.12N×73°.30E, h0^{km}, mb3.6/6, mb1 3.8/10, mb1mx3.6/55, mbtmp3.7/10, ML3.5/4, Error ellipse: s-maj=35.7km s-min=22.6km az=59.0*

*NNC **07** 12:21:24.4±6.4, 38°.52N×72°.69E, h0^{km}, mb4.3, mpv3.9, Error ellipse: s-maj=47.2km s-min=32.5km az=172.0*

ISC 07 12:21:23.4±3.6, 38°.39N±0°.08×72°.77E±0°.06, h8^{km}±23^{km}, n18, σ2^{s}.27/24, mb3.4/6, 10C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.32	326	⇑*i*P	Pn	12 21 43.3	-5.1
	baz=25						
DRK				⇑*i*S	Sb	12 22 03.2	-2.7
	baz=25						
SFK	Sufi-Kurgan	1.72	19	⇓*e*P	Pn	12 21 50.2	-3.6
	baz=16						
SFK				⇓*e*S	Sn	12 22 13.9	-2.1
	baz=16						
GAR	Garm	2.01	288	⇑*i*P	Pn	12 21 55.2	-2.5
	baz=89						
GAR				⇑*i*S	Sn	12 22 23.5	+0.4
	baz=89						
OHH	Osh	2.13	0	⇑*i*P	Pn	12 21 55.9	-3.4
	baz=58						
OHH				⇑*i*S	Sn	12 22 24.7	-1.3
	baz=58						
BTK	Batken	2.25	318	⇓*e*P	Pn	12 21 58.5	-2.5
	baz=18						
BTK				⇓*i*S	Sn	12 22 28.9	-0.1
	baz=18						
AAK	Ala-Archa	4.44	17	⇓Pn	Pn	12 22 32.6	+1.4
	23nm,0.7s						
AAK				Sn	Sn	12 23 25.3	+2.2
	46nm,0.8s						
TKM2	Tokmak 2	5.01	25	⇑Pg	Pb	12 22 51.3	-0.2
	9.6nm,0.7s						
TKM2				⇑Lg	Lg	12 23 59.5	
	52nm,1.1s						
KK08	Karatay Array	5.02	341	⇑Pn	Pn	12 22 38.4	-0.6
	10nm,0.6s,baz=151,slow=12						
KK08				⇑Sn	Sn	12 23 36.2	-0.9
	20nm,0.6s						
KK08				⇓Lg	Lg	12 24 02.0	
	20nm,0.7s,baz=158,slow=28						
MKAR	Makanchi Array	10.94	37	Pn	Pn	12 24 03.1	+3.0
	0.1nm,0.3s,baz=221,slow=15,SNR=2.1						
BVAR	Borovoye Array	14.73	354	Pn	Pn	12 24 54.0	+2.2
	0.6nm,0.3s,baz=185,slow=16,SNR=5.9						
AKTO	Aktyubinsk	15.96	324	Pn	P	12 25 12.7	+0.9
	0.4nm,0.3s,baz=139,slow=11,SNR=4.5						
ZALV	Zalesovo Beam	17.62	24	P	Pn	12 25 28.7	-0.3
	0.6nm,0.3s,baz=206,slow=14,SNR=2.0						
SONM	Songino Array	26.12	58	P	P	12 26 54.7	-3.1
	0.3nm,0.6s,baz=262,slow=10.0,SNR=1.7						
ARCES	ARCESS Array B	39.96	336	P	P	12 29 00.0	+2.2
	4.7nm,0.9s,baz=110,slow=10.0,SNR=3.8						
INK	Inuvik	71.81	10	P	P	12 32 48.4	+2.5
	0.6nm,0.5s,baz=331,slow=5.2,SNR=6.1						
ILAR	Eielson Array	72.57	17	P	P	12 32 52.4	+1.9
	0.3nm,0.9s,baz=318,slow=4.3,SNR=2.3						
WRA	Warramunga Arr	81.82	123	P	P	12 33 41.0	-2.1
	0.2nm,0.8s,baz=329,slow=4.7,SNR=1.4						
ASAR	Alice Springs	84.21	126	P	P	12 33 54.3	-1.1
	0.2nm,0.8s,baz=316,slow=5.2,SNR=1.5						

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*IDC **07** 12:24:55.6±0.8, 55°.13S×28°.13W, h0^{km}, mb4.2/5, mb1 4.3/6, mb1mx4.0/22, mbtmp4.2/6, ML4.1/1, Error ellipse: s-maj=30.2km s-min=21.0km az=61.0*

*NEIC **07** 12:24:57.6±1.0, 55°.1S±0°.1×28°.06W±0°.06, h10^{km}±1^{km}, mb4.6/17, Error ellipse: s-maj=22.6km s-min=5.0km az=186.0*

ISC 07 12:24:57.1±0.6, 55°.1S±0°.1×28°.1W±0°.1, h10^{km}, n31, σ0^{s}.70/31, mb4.5/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	4.96	276		Pn	12 26 12.0	+0.5
VNA3	Neumayer Olymp	18.05	161	P	Pn	12 29 06.9	-0.7
SNAA	Sanae	19.80	157	P	P	12 29 26.4	-0.9
SNAA	Sanae	19.80	157	P	P	12 29 26.4	-0.9
	0.5nm,0.3s,baz=303,slow=12,SNR=27						
SNAA	Sanae	19.80	157	P	P	12 29 26.9	-0.5
PMSA	Palmer Station	20.17	227		P	12 29 31.5	+0.3
TRQA	Tornquist	28.50	293	P	P	12 30 51.9	-0.5
TRQA				IAmb	IAmb	12 31 07.6	
	comp=Z,12nm,1.4s						
QSPA	South Pole Qui	35.15	180	P	P	12 31 50.9	+0.3
	comp=Z,4.5nm,0.6s,baz=188,slow=3.1,SNR=42						
QSPA	South Pole Qui	35.15	180	P	P	12 31 51.0	+0.3
QSPA				IAmb	IAmb	12 31 52.0	
	comp=Z,6.5nm,0.9s						
CPUP	Villa Florida	35.82	311	P	P	12 31 54.8	-1.7
	comp=Z,3.3nm,0.7s,baz=159,slow=9.6,SNR=4.9						
CPUP	Villa Florida	35.82	311	P	P	12 31 56.3	-0.3
MT09	Talagante	36.55	288	P	P	12 32 02.5	-0.5
MT09				IAmb	IAmb	12 32 06.0	
	comp=Z,14nm,1.1s						
VA05	Santo Domingo	36.99	287	P	P	12 32 06.4	-0.1
PB01	IPOC Station P	46.01	301	P	P	12 33 21.0	+0.4
PB01				IAmb	IAmb	12 33 36.7	
	comp=Z,6.1nm,0.8s						
BOSA	Boshof	46.23	78	P	P	12 33 22.6	+0.2
	comp=Z,2.5nm,0.8s,baz=237,slow=10,SNR=4.1						
BOSA	Boshof	46.23	78	P	P	12 33 22.8	+0.4
BOSA				IAmb	IAmb	12 33 43.6	
	comp=Z,11nm,1.2s						
PTLB	Pontes e Lacer	46.27	316	P	P	12 33 22.6	-0.1
PB08	IPOC Station P	46.61	302	P	P	12 33 27.0	+1.3
PB08				IAmb	IAmb	12 33 42.5	
	comp=Z,5.9nm,0.9s						
VNDA	Vanda	47.49	183	P	P	12 33 32.3	+0.8
VNDA				IAmb	IAmb	12 33 33.5	
	comp=Z,4.3nm,0.9s						
VILB	Vilhena	48.96	317	P	P	12 33 42.1	-1.4
LPAZ	La Paz	49.43	306	P	P	12 33 48.2	+0.4
	comp=Z,2.1nm,0.6s,baz=146,slow=7.1,SNR=9.6						
LPAZ	La Paz	49.43	306	P	P	12 33 48.2	+0.4
LPAZ				IAmb	IAmb	12 34 01.6	
	comp=Z,4.3nm,0.9s						
SAML	Samuel	53.79	315	P	P	12 34 19.3	-0.4
ETMB	Extrema	54.27	311	P	P	12 34 23.4	+0.2
ETMB				IAmb	IAmb	12 34 39.0	
	comp=Z,7.7nm,1.3s						
TORD	Torodi Ar. Bea	72.48	30	P	P	12 36 24.3	+0.6
	comp=Z,1.0nm,0.6s,baz=204,slow=6.8,SNR=8.3						
TORD	Torodi Ar. Bea	72.48	30	P	P	12 36 24.4	+0.7
ASAR	Alice Springs	100.04	163	P	Pdif	12 38 41.7	-0.9
	comp=Z,0.6nm,1.0s,baz=174,slow=2.8,SNR=2.9						
CMAR	Chiang Mai Arr	125.86	111	PKP	PKPdf	12 43 59.0	0.0
	comp=Z,0.9nm,0.5s,baz=256,slow=3.6,SNR=2.2						
ILAR	Eielson Array	149.12	313	PKPbc	PKPbc	12 44 44.1	0.0
	comp=Z,3.5nm,0.9s,baz=125,slow=1.5,SNR=23						
ILAR	Eielson Array	149.12	313		PKPbc	12 44 43.8	-0.3
SONM	Songino Array	151.15	85	PKPbc	PKPbc	12 44 49.6	-0.1
	comp=Z,0.8nm,0.7s,baz=236,slow=1.7,SNR=6.0						

NNC 07 12:33:52.3±12.0, 36°.67N×69°.26E, h0^{km}, mb4.5, mpv4.2, 3C-2D, Error ellipse: s-maj=100.7km s-min=94.3km az=70.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	6.45	31	P	Pn	12 35 29.8	+1.0
	SNR=46						
KK09	Karatay Array	6.51	8	⇑Pn	Pn	12 35 31.2	+1.8
	4.7nm,0.6s,baz=188,slow=13						
KK09				⇑Sn	Sn	12 36 46.8	+2.3
	2.5nm,0.4s,baz=195,slow=24						
UCH	Uchtor	6.88	35	P	Pn	12 35 34.8	0.0
	SNR=22						
EKS2	Erkin-Say	6.92	29	P	Pn	12 35 36.4	+1.3
	SNR=8.2						
AAK	Ala-Archa	7.20	33	P	Pn	12 35 39.2	+0.3
	SNR=7.3						
AAK	Ala-Archa	7.20	33	⇑Pn	Pn	12 35 38.9	-0.1
	8.3nm,0.6s						
AAK				⇓Sn	Sn	12 37 00.7	-0.8
	2.8nm,0.3s						
KBK	Karagaybulak	7.42	35	P	Pn	12 35 42.4	+0.5
	SNR=5.9						
CHMS	Chumysh	7.60	32	P	Pn	12 35 44.6	+0.2
	SNR=5.2						
USP	Ospenovka	7.72	30	P	Pn	12 35 45.9	-0.1
	SNR=15						
TKM2	Tokmak 2	7.92	36	P	Pn	12 35 47.9	-1.0
	SNR=10						
TKM2	Tokmak 2	7.92	36	⇓Pn	Pn	12 35 47.4	-1.5
	14nm,0.5s						

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*KRNET **07** 12:36:19.9±0.1, 38°.47N×73°.17E, mb3.6*

*NNC **07** 12:36:27.6±4.7, 38°.72N×72°.97E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=36.5km s-min=27.4km az=170.0*

ISC 07 12:36:17.8±2.9, 38°.4N±0°.1×73°.29E±0°.09, h10^{km}, n8, σ2^{s}.68/14, 12C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.59	314	⇑*e*P	Pn	12 36 46.8	+0.5
	baz=14						
DRK				⇑*i*S	Sb	12 37 06.4	-1.4
	baz=14						
SFK	Sufi-Kurgan	1.63	6	⇑*e*P	Pn	12 36 48.5	+1.7
	baz=9.0						
SFK				⇑*e*S	Sb	12 37 09.5	+0.7
	baz=9.0						
OHH	Osh	2.17	350	⇑*e*P	Pn	12 36 55.8	+1.8
	baz=52						
OHH				⇑*e*S	Sb	12 37 22.3	-1.8
	baz=52						
GAR	Garm	2.41	286	⇓*e*P	Pb	12 36 59.7	-1.6
	baz=84						
GAR				⇓*e*S	Sb	12 37 28.7	-2.3
	baz=84						
BTK	Batken	2.54	312	⇑*e*P	Pn	12 37 00.9	+1.7
	baz=12						
BTK				⇑*i*S	Sn	12 37 31.3	+1.0
	baz=12						
AAK	Ala-Archa	4.34	12	⇓Pn	Pb	12 37 32.3	-2.0
	4.2nm,0.5s						
AAK				⇑Sn	Sb	12 38 21.8	-5.0
	9.3nm,0.8s						
TKM2	Tokmak 2	4.85	20	⇓Pn	Pb	12 37 38.8	-4.3
	1.0nm,0.5s						
TKM2				⇑Lg	Lg	12 38 54.6	
	4.8nm,0.6s						
KK09	Karatay Array	5.18	337	⇑Pn	Pn	12 37 39.8	+4.4
	2.0nm,0.4s,baz=152,slow=14						
KK09				⇑Sn	Sn	12 38 37.9	+2.6
	6.5nm,0.6s,baz=153,slow=23						

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*NEIC **07** 12:37:03.1±1.4, 2°.79N±0°.09×128°.5E±0°.1, h219^{km}±8^{km}, mb4.5/21, Error ellipse: s-maj=20.4km s-min=12.7km az=79.0*

*IDC **07** 12:37:03.0±1.7, 2°.86N×128°.69E, h231^{km}±18^{km}, mb3.7/11, mb1 3.8/14, mb1mx3.3/43, mbtmp4.3/14, Error ellipse: s-maj=16.4km s-min=10.4km az=70.0*

*DJA **07** 12:37:03.4±0.4, 3°N±4°×12°8E±°, h204^{km}±3^{km}, M4.3/26, mB4.7/8, mb4.4/26, MLv4.6/12, Mw(mB)3.9/8*

ISC 07 12:37:00.8±0.5, 2°.92N±0°.07×128°.57E±0°.07, h200^{km}, n79, σ1^{s}.56/81, mb4.4/25, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.45	209	P	Pn	12 37 46.8	+2.7
TNTI	Ternate	2.45	209	Pn	Pn	12 37 46.0	+1.9
SGSI	Sangihe	3.13	284	P	Pn	12 37 53.9	+2.0
LBMI	Labuha	3.69	197	P	Pn	12 38 01.2	+2.4
SIJI	Sorong	4.63	144	P	Pn	12 38 13.9	+3.3
	1.7nm,0.3s,baz=135,slow=22,SNR=4.7						
KMSI	Cibinong	5.14	243	P	Pn	12 38 18.9	+1.9
	3.0nm4µm347nm,0.8s						
SANI	Sanana	5.57	208	P	Pn	12 38 22.2	-0.3
	0.8nm2µm86nm,0.6s						
GTOI	Gorontalo	6.00	248	P	Pn	12 38 30.1	+2.0
	0.1nm317nm25nm,0.6s						
FAKI	Fak Fak	6.87	148	P	Pn	12 38 42.5	+3.1
	0.4nm9.2nm,0.7s						
MRSI	Marisa	7.05	250	P	Pn	12 38 43.2	+1.4
	0.2nm52nm,0.6s						
APSI	Ampana	7.89	241	P	Pn	12 38 55.0	+2.3
	0.4nm714nm74nm,0.6s						
TOLI2	Tolitoli	7.99	257	Pn	Pn	12 38 54.3	+0.4
MPSI	Mapaga	9.04	254	P	Pn	12 39 08.0	+0.4
	445nm12nm,0.9s						
TTSI	Tana Toraja	10.56	236	P	Pn	12 39 28.3	+0.9
	472nm20nm,0.7s						
SPSI	Sidrap Palu	11.14	232	P	Pn	12 39 36.1	+1.3
	1µm12nm,0.6s						
BNSI	Bone	11.15	229	P	Pn	12 39 37.2	+2.3
	29nm,0.8s						
BKSI	Bulukumba	11.76	226	P	Pn	12 39 43.6	+0.9
	546nm53nm,0.6s						
KAPI	Kappang	11.82	228	P	P	12 39 49.3	+0.8
	3.6nm,0.3s,baz=69,slow=7.3,SNR=6.4						
BSSI	Bau Bau, Buton	12.09	222	P	Pn	12 39 49.0	+2.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	22nm,0.8s						
GENI	Genyem	12.82	115	P	Pn	12 39 59.3	+3.1
	120nm,1.0s						
MMRI	Maumere	13.10	209	P	Pn	12 40 02.0	+2.4
	32nm,0.7s						
MMRI	Maumere	13.10	209		P	12 40 03.9	+1.2
JAY	Jayapura	13.28	114	P	Pn	12 40 03.1	+1.2
	2.6nm,0.3s,baz=254,slow=7.7,SNR=15						
JAY	Jayapura	13.28	114	P	P	12 40 05.8	+1.0
	14nm,0.9s						
SOEI	Soe	13.30	199	P	Pn	12 40 04.0	+1.7
	59nm,0.8s						
SOEI	Soe	13.30	199		Pn	12 40 03.6	+1.4
EDFI	Ende, Flores	13.47	211	P	Pn	12 40 05.9	+1.6
	21nm,1.0s						
BATI	Baumata	13.93	200	P	Pn	12 40 10.5	+0.6
	9.8nm,0.3s,baz=21,slow=3.1,SNR=9.5						
BATI	Baumata	13.93	200	P	Pn	12 40 10.5	+0.6
	22nm,0.5s						
BASI	Baing, Sumba	15.29	211	P	Pn	12 40 26.8	+0.2
WBSI	Waikabubak, Su	15.47	216	P	P	12 40 30.3	+1.3
	37nm,0.6s						
MTN	Manton Dam	15.87	171		P	12 40 31.9	-1.5
MTN				IAmb	IAmb	12 40 35.5	
	comp=Z,12nm,0.4s						
PLAI	Plampang	15.87	223	P	Pn	12 40 34.8	+1.1
	comp=Z,35nm,0.7s						
SBUM	Sibu	16.34	269	P	P	12 40 38.3	-0.3
TWSI	Taliwang, Sumb	16.43	225	P	Pn	12 40 41.1	+0.7
	comp=Z,14nm,0.5s						
KMMI	Kalianget	17.62	236	P	P	12 40 54.4	+1.8
	comp=Z,53nm,0.9s						
IGBI	Denpasar	17.75	229	P	P	12 40 55.2	+1.2
	comp=Z,30nm,0.5s						
JAGI	Jajag, Banyuwa	18.30	232	P	P	12 41 01.4	+1.4
	comp=Z,32nm,0.7s						
JAGI	Jajag, Banyuwa	18.30	232	P	P	12 41 01.6	+1.6
JAGI				IAmb	IAmb	12 41 03.0	
	comp=Z,20nm,0.7s						
KSM	Kuching	18.30	266	P	P	12 41 00.6	+0.6
KSM				IAmb	IAmb	12 41 02.7	
	comp=Z,20nm,1.1s						
KNRA	Kununurra	18.48	179	P	P	12 41 01.1	-0.8
GMJI	Gumukmas	18.74	233	P	P	12 41 06.5	+1.7
FITZ	Fitzroy Crossi	21.09	188	P	P	12 41 27.8	-1.9
	comp=Z,4.3nm,0.5s,baz=8.6,slow=8.7,SNR=31						
PMG	Port Moresby	22.21	124	P	P	12 41 38.3	-2.8
	comp=Z,5.1nm,0.4s,baz=284,slow=16,SNR=1.9						
LEM	Lembang	23.05	245	P	P	12 41 50.2	+1.3
	comp=Z,55nm,0.8s,baz=158,slow=21,SNR=9.1						
WB0	Warramunga Arr	23.26	166	P	P	12 41 49.8	-0.8
WRAB	Tennant Creek	23.41	166	P	P	12 41 51.7	-0.3
WRAB				IAmb	IAmb	12 41 53.6	
	comp=Z,5.5nm,0.5s						
WRA	Warramunga Arr	23.42	166	P	P	12 41 50.9	-1.1
	comp=Z,3.4nm,0.3s,baz=344,slow=10.0,SNR=116						
WRA	Warramunga Arr	23.42	166	P	P	12 41 51.1	-1.0
WB2	Warramunga Arr	23.42	166	P	P	12 41 51.7	-0.3
WB2				IAmb	IAmb	12 41 53.7	
	comp=Z,6.0nm,0.4s						
WR0	Warramunga Arr	23.48	166	P	P	12 41 52.1	-0.5
PSA00	Pilbara Seismi	25.80	199	P	P	12 42 12.1	-1.5
PSA00				IAmb	IAmb	12 42 12.4	
	comp=Z,9.2nm,0.6s						
PSA00	Pilbara Seismi	25.80	199	P	P	12 42 11.2	-2.4
PSA00				IAmb	IAmb	12 42 12.9	
	comp=Z,3.7nm,0.7s						
AS31	Alice Springs	26.93	169	P	P	12 42 22.6	-1.2
ASAR	Alice Springs	26.93	169	P	P	12 42 22.9	-0.9
	comp=Z,2.0nm,0.4s,baz=352,slow=7.7,SNR=123						
ASAR				PcP	PcP	12 45 39.2	-1.3
	comp=Z,0.3nm,0.3s,baz=350,slow=1.9,SNR=2.6						
ASAR				ScP	ScP	12 48 57.4	-4.5
	comp=Z,0.9nm,0.6s,baz=343,slow=2.6,SNR=8.9						
ASAR	Alice Springs	26.93	169	P	P	12 42 22.4	-1.3
GIRL	Giralia	29.01	208	P	P	12 42 41.2	-0.9
PSI	Prapat	29.61	271	P	P	12 42 47.5	-0.3
	comp=Z,2.9nm,0.7s,baz=140,slow=7.4,SNR=4.8						
CMAR	Chiang Mai Arr	32.86	300	P	P	12 43 17.4	+1.3
	comp=Z,1.3nm,0.4s,baz=112,slow=7.1,SNR=9.0						
FORT	Forrest	33.52	181	P	P	12 43 19.6	-1.9
MORW	Morawa	34.00	200	P	P	12 43 23.7	-2.0
KSRS	Korea Array	34.37	359	P	P	12 43 28.9	+0.2
	comp=Z,0.5nm,0.5s,baz=177,slow=9.5,SNR=2.2						
MJAR	Matsushiro Arr	34.62	14	P	P	12 43 29.8	-1.2
	comp=Z,2.0nm,0.5s,baz=185,slow=9.2,SNR=8.4						
BBOO	Buckleboo	36.24	169	P	P	12 43 43.1	-1.7
BBOO				IAmb	IAmb	12 43 46.4	
	comp=Z,13nm,1.2s						
STKA	Stephens Creek	36.76	161	P	P	12 43 48.4	-0.7
	comp=Z,1.5nm,0.4s,baz=349,slow=10,SNR=8.5						
STKA	Stephens Creek	36.76	161	P	P	12 43 48.5	-0.7
RAMN	Ramite	46.71	305	eP	P	12 45 10.8	+0.5
	comp=Z,24nm,0.4s						
GUN	Gumba	47.68	306	eP	P	12 45 17.8	-0.1
	comp=Z,17nm,0.5s						
PKI	Pulchoki	47.93	305	eP	P	12 45 19.4	-0.4
	comp=Z,3.7nm,0.3s						
PKIN	Phulchoki	47.94	305	eP	P	12 45 19.4	-0.4
	comp=Z,6.6nm,0.3s						
KOLN	Koldanda	49.49	305	eP	P	12 45 31.6	+0.1
	comp=Z,22nm,0.5s						
DANN	Dangsing	49.58	305	eP	P	12 45 32.0	-0.2
	comp=Z,29nm,0.5s						
PYUN	Piuthan	50.11	305	eP	P	12 45 36.4	+0.2
	comp=Z,12nm,0.4s						
MKAR	Makanchi Array	59.27	325	P	P	12 46 41.1	-0.3
	comp=Z,0.5nm,0.4s,baz=113,slow=7.8,SNR=14						
MKAR	Makanchi Array	59.27	325	P	P	12 46 41.3	-0.1
MAKZ	Makanchi	59.45	325	P	P	12 46 42.6	0.0
MAKZ				IAmb	IAmb	12 47 03.5	
	comp=Z,8.3nm,1.2s						
BOOM	Boomskoye usch	61.15	318	P	P	12 46 55.3	+0.9
BOOM				IAmb	IAmb	12 47 15.4	
	comp=Z,6.8nm,1.4s						
GSTR	Great Sitkin T	67.05	33	P	P	12 47 33.8	+1.4
VOI	Vohitsoka	83.46	248	P	P	12 49 04.9	-1.8
VOI				IAmb	IAmb	12 49 29.1	
	comp=Z,13nm,1.2s						

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*KRNET **07** 12:39:01.1±0.1, 38°.46N×72°.86E, mb3.5*
*NNC **07** 12:39:17.0±18.0, 38°.80N×72°.85E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=143.8km s-min=95.0km az=168.0*
ISC 07 12:39:03.7±2.9, **38°.6N**±0°.1×**72°.70E**±0°.06, **h9**^{km}±16^{km}, **n8**, σ**1s.36**/16, **8C-8D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	1.11	321	⇓iP	Pb	12 39 25.6	+0.3
	baz=21						
DRK				⇓iS	Sn	12 39 43.4	+2.0
	baz=21						
SFK	Sufi-Kurgan	1.53	24	⇑eP	Pn	12 39 31.3	-0.1
	baz=18						
SFK				⇑eS	Sg	12 39 53.4	+0.6
	baz=18						
GAR	Garm	1.90	282	⇓iP	Pb	12 39 38.3	-0.4
	baz=86						
GAR				⇓iS	Sg	12 40 05.4	+0.6
	baz=86						
OHH	Osh	1.91	2	⇑iP	Pb	12 39 38.4	-0.3
	baz=58						
OHH				⇑iS	Sg	12 40 05.4	+0.5
	baz=58						
BTK	Batken	2.05	315	⇓iP	Pb	12 39 40.8	-0.4
	baz=16						
BTK				⇓iS	Sg	12 40 10.2	+0.6
	baz=16						
AAK	Ala-Archa	4.24	18	⇑Pn	Pb	12 40 20.0	+1.4
	4.2nm,0.6s						
AAK				⇓Sn	Sb	12 41 10.7	+0.8
	16nm,0.9s						
KK09	Karatay Array	4.80	340	⇑Pn	Pb	12 40 27.0	-1.0
	3.4nm,0.5s,baz=138,slow=13						
KK09				⇑Sn	Sb	12 41 22.8	-3.1
	6.2nm,0.6s,baz=141,slow=23						
TKM2	Tokmak 2	4.83	26	⇑Pn	Pb	12 40 27.0	-1.6
	4.2nm,0.7s						
TKM2				⇓Sn	Sb	12 41 26.3	-0.6
	11nm,0.8s						

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*MOS **07** 12:41:29.3±1.0, 43°.83N×148°.10E, h62^{km}, mb4.9/27, Error ellipse: s-maj=7.6km s-min=6.1km az=100.6*
*JMA **07** 12:41:29.9±0.3, 43°.65N×147°.85E, h5^{km}, M4.6*
*SKHL **07** 12:41:30.9±0.3, 43°.80N×148°.10E, h71^{km}±4^{km}, mb5.2/7*
*BJI **07** 12:41:32.0±0.0, 44°.00N×148°.01E, h82^{km}, mB5.1/23, mb4.7/38, Ms4.0/3, Ms7 3.8/3*
*IDC **07** 12:41:32.0±0.6, 43°.92N×148°.05E, h68^{km}±5^{km}, mb4.0/21, mb1 4.2/27, mb1mx4.0/47, mbtmp4.3/27, MS3.5/1, Ms1 3.5/1, ms1mx2.9/58, Error ellipse: s-maj=15.9km s-min=11.1km az=158.0*
*NEIC **07** 12:41:34.0±1.1, 44°.0N±0°.1×148°.0E±0°.1, h76^{km}±9^{km}, mb4.7/77, Error ellipse: s-maj=15.3km s-min=12.2km az=163.0*
ISC 07 12:41:31.6±0.5, **43°.89N**±0°.05×**148°.05E**±0°.05, **h65**^{km}±4^{km}, **h65**^{km}**:pP-P, n409,** σ**1s.12**/444, **mb4.6**/101, **7C-17D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	Shikotan	0.88	269	ePN	Pn	12 41 47.3	-1.0
SHO				eS	Sn	12 41 59.4	-1.2
SHO				pmax	pmax		
	comp=Z,507nm,0.3s						
SHO				smax	smax		
	comp=N,8µm,0.5s						
SHO				smax	smax		
	comp=E,9µm,0.3s						
SHO	Shikotan	0.88	269	eP	Pn	12 41 47.2	-1.0
SHO				AMB	AMB	12 41 50.7	
	comp=E,520nm,0.2s						
SHO				eS	Sn	12 41 59.7	-0.9
SHO				A	A	12 42 00.0	
	comp=E,8µm,0.5s						
SHO				A	A	12 42 00.0	
	comp=E,9µm,0.5s						
KUR	Kuril'sk	1.35	355	d iPN	Pn	12 41 54.1	-0.2
KUR				i S	Sn	12 42 11.5	+0.1
KUR				pmax	pmax		
	comp=Z,2µm,0.4s						
KUR				pmax	pmax		
	comp=E,429nm,0.5s						
KUR				pmax	pmax		
	comp=N,264nm,0.4s						
KUR				smax	smax		
	comp=N,3µm,0.4s						
KUR				smax	smax		
	comp=E,2µm,0.2s						
KUR	Kuril'sk	1.35	355	i P	Pn	12 41 54.1	-0.2
KUR				AMB	AMB	12 41 54.6	
	comp=E,2µm,0.4s						
KUR				i S	Sn	12 42 11.4	+0.1
KUR				A	A	12 42 16.0	
	comp=E,3µm,0.4s						
KUR				A	A	12 42 16.0	
	comp=E,2µm,0.4s						
YUK	Yuzh-Kuril'sk	1.58	276	ePN	Pn	12 41 56.8	-0.6
YUK				eS	Sn	12 42 16.0	-0.9
YUK				pmax	pmax		
	comp=Z,571nm,0.2s						
YUK				smax	smax		
	comp=N,4µm,0.4s						
YUK				smax	smax		
	comp=E,7µm,0.4s						
YUK	Yuzh-Kuril'sk	1.58	276	eP	Pn	12 41 56.8	-0.6
YUK				AMB	AMB	12 41 58.0	
	comp=E,570nm,0.2s						
YUK				eS	Sn	12 42 16.1	-0.9
YUK				A	A	12 42 17.0	
	comp=E,4µm,0.4s						
YUK				A	A	12 42 17.0	
	comp=E,7µm,0.4s						
NEM2	Nemuro 2	1.75	253	P	Pn	12 41 58.5	-1.2
NEM2				eS	Sn	12 42 19.0	-2.1
NMR	Nemuro--Hokkai	1.76	254	eP	Pn	12 41 59.0	-0.8
NMR				eS	Sn	12 42 20.2	-1.1
GLVR	Golovnino	1.83	266	ePN	Pn	12 42 00.7	-0.1
GLVR				eS	Sn	12 42 22.4	-0.7
GLVR				pmax	pmax		
	comp=Z,294nm,0.1s						
GLVR				smax	smax		
	comp=N,2µm,0.3s						
GLVR				smax	smax		
	comp=E,3µm,0.4s						
GLVR	Golovnino	1.83	266	eP	Pn	12 42 00.7	-0.1
GLVR				AMB	AMB	12 42 01.0	
	comp=E,290nm,0.1s						
GLVR				eS	Sn	12 42 22.4	-0.7
GLVR				A	A	12 42 24.0	
	comp=E,2µm,0.4s						
GLVR				A	A	12 42 24.0	
	comp=E,3µm,0.4s						
RUSJ	Misakicho	2.03	277	ePN	Pn	12 42 03.9	+0.4
RUSJ				eS	Sn	12 42 25.9	-1.9
JRA	Rausu	2.11	272	P	Pn	12 42 04.7	+0.1
JNSB	Nemuroshibetsu	2.20	268	P	Pn	12 42 06.0	+0.2
JNSB				eS	Sn	12 42 32.2	+0.2
JKHN	Kushirohamanak	2.25	250	P	Pn	12 42 05.7	-0.7
JKHN				eS	Sn	12 42 31.9	-1.2
JNK	Nakash	2.43	264	P	Pn	12 42 08.7	-0.2
JNK				eS	Sn	12 42 37.0	-0.5
AKK	Akkeshi	2.49	251	eP	Pn	12 42 08.8	-0.9
AKK				eS	Sn	12 42 37.0	-2.0
JAK	Akkeshi	2.60	251	P	Pn	12 42 10.1	-1.1
JTKR	Abashiri--Toko	2.99	273	P	Pn	12 42 17.3	+0.8
JAR	Ashorobuto	3.16	261	P	Pn	12 42 19.1	+0.2
JAR				eS	Sn	12 42 55.8	+0.4
JOB	Onbets	3.23	254	P	Pn	12 42 19.2	-0.5
JMP	Maruseppu	3.39	274	P	Pn	12 42 23.1	+1.1
JCH	Churui	3.65	251	P	Pn	12 42 24.7	-0.9
JCH				eS	Sn	12 43 04.5	-2.9
JKA	Kamikawa-asahi	3.94	275	eP	Pn	12 42 29.5	+0.1
JKA	Kamikawa-asahi	3.94	275		Pn	12 42 31.7	+2.3
ASAJ	Asahikawa	3.94	275	P	Pn	12 42 29.5	+0.1
	comp=E,2.4nm,0.3s,baz=135,slow=9.1,SNR=8.7						
ASAJ				S	Sn	12 43 19.2	+4.8
	comp=E,3.3nm,0.3s,baz=132,slow=3.2,SNR=2.7						
JFR	Furan	4.03	261	P	Pn	12 42 32.3	+1.5
JEM	Erimo	4.05	244		Pn	12 42 31.9	+0.9
ERM	Erimo	4.05	244	d iPN	Pn	12 42 31.8	+0.8
ERM	Erimo	4.05	244	Pn	Pn	12 42 32.0	+1.0
JNBK	Urakawa-nobuka	4.20	249	P	Pn	12 42 32.3	-0.7
YSS	Yuzh-Sakhalins	4.82	311	⇓ePN	Pn	12 42 43.0	+1.5
YSS				eS	Sn	12 43 36.1	+0.1
YSS				pmax	pmax		
	comp=Z,50nm,0.5s						
YSS				smax	smax		
	comp=E,40nm,0.5s						
YSS	Yuzh-Sakhalins	4.82	311	eP	Pn	12 42 43.0	+1.5
YSS				AMB	AMB	12 42 43.4	
	comp=E,50nm,0.5s						
YSS				eS	Sn	12 43 36.1	+0.1
YSS				A	A	12 43 43.3	
	comp=E,30nm,0.6s						
YSS				A	A	12 43 43.3	
	comp=E,20nm,0.6s						
YSS	Yuzh-Sakhalins	4.82	311	Pn	Pn	12 42 42.3	+0.8
JEW	Eniwo	4.92	260	P	Pn	12 42 44.5	+1.6
JEW	Eniwo	4.92	260	Pn	Pn	12 42 45.3	+2.4
TYV	Tymovskoe	7.87	334	ePN	Pn	12 43 34.1	+11
TYV				pmax	pmax		
	comp=Z,11nm,1.1s						
TYV				pmax	pmax		
	comp=Z,100nm,2.5s						
TYV	Tymovskoe	7.87	334	eP	Pn	12 43 24.9	+1.7
TYV				AMB	AMB	12 43 26.8	
	comp=Z,40nm,0.6s						
TYV				AMB	AMB	12 43 35.5	
	comp=Z,100nm,3.0s						
TYV				eS	Sn	12 44 50.0	-0.7
TYV				A	A	12 44 54.4	
	comp=Z,5.0nm,0.6s						
TYV				A	A	12 44 54.4	
	comp=Z,5.0nm,0.6s						
TYV				A	A	12 45 07.2	
	comp=Z,700nm,4.0s						
TYV				A	A	12 45 07.2	
	comp=Z,300nm,4.0s						
SKR	Severo-Kuril's	8.73	36	ePN	Pn	12 43 30.9	-4.0
SKR				pmax	pmax		
	comp=Z,125nm,0.8s						
SKR				pmax	pmax		
	comp=Z,400nm,7.1s						
SKR				MLR	MLR		
	comp=Z,1µm,14.0s						
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
SKR	Severo-Kuril's	8.73	36	eP	Pn	12 43 35.7	+0.8
SKR				AMB	AMB	12 43 36.0	
	comp=Z,130nm,0.8s						
SKR				AMB	AMB	12 43 38.4	
	comp=Z,400nm,7.0s						
SKR				eS	Sn	12 45 07.4	-4.2
SKR				A	A	12 45 13.0	
	comp=Z,220nm,0.7s						
SKR				A	A	12 45 13.0	
	comp=Z,180nm,0.7s						
SKR				AMS	AMS	12 46 18.1	
	comp=Z,1µm,14.0s						
PAU	Pauzhetka	9.60	35	eP	Pn	12 43 47.1	+0.2
PAU				AMB	AMB	12 43 49.3	
	comp=Z,20nm,0.5s						
PAU				eS	Sn	12 45 30.7	-2.4
PAU				A	A	12 45 32.8	
	comp=Z,50nm,0.3s						
PAU				A	A	12 45 32.8	
	comp=Z,30nm,0.3s						
MAJO	Matsushiro	10.51	229	dePN	Pn	12 43 57.6	-1.7
MAJO				pmax	pmax		
	comp=Z,11nm,0.7s						
MAJO	Matsushiro	10.51	229	Pn	Pn	12 43 57.8	-1.5
MAT	Matsushiro	10.51	229	P	Pn	12 43 57.1	-2.2
MAT				eS	Sn	12 45 51.5	-3.8
MJAR	Matsushiro Arr	10.51	229	P	Pn	12 43 58.0	-1.3
	comp=Z,0.3nm,0.3s,baz=29,slow=14,SNR=26						
MJAR	Matsushiro Arr	10.51	229	PN	Pn	12 43 58.0	-1.3
PEA0B	Petropavlovsk-	11.21	31	⇑ePN	Pn	12 44 08.1	-0.8
PEA0B	Petropavlovsk-	11.21	31	Pn	Pn	12 44 08.0	-0.8
PETK	Petropavlovsk-	11.21	31	P	Pn	12 44 08.0	-0.9
	comp=Z,0.4nm,0.3s,baz=212,slow=14,SNR=11						
PETK	Petropavlovsk-	11.21	31	PN	Pn	12 44 08.3	-0.6
PETK	Petropavlovsk-	11.21	31	Pn	Pn	12 44 08.3	-0.6
USRK	Ussuriysk Ar.	11.56	277	P	Pn	12 44 14.1	+0.4
	baz=79,slow=15,SNR=5.0						
KLR	Kul'dur	12.41	301	P	Pn	12 44 27.2	+1.9
	comp=Z,0.2nm,0.3s,baz=9.5,slow=3.9,SNR=2.4						
KLR				LR	LR	12 49 06.1	
	comp=Z,241nm,21.9s,baz=48,slow=37						
KLR	Kul'dur	12.41	301	⇑ePN	Pn	12 44 27.1	+1.9
KLR				pmax	pmax		
	comp=Z,25nm,5.3s						
MA2	Magadan	15.79	5	P	Pn	12 45 09.6	0.0
MA2				pmax	pmax		
	comp=Z,14nm,0.9s						
MA2	Magadan	15.79	5	eP	Pn	12 45 09.6	0.0
MA2	Magadan	15.79	5	Pn	Pn	12 45 09.6	0.0
ZEA	Zeya	16.81	313	eP	Pn	12 45 22.5	+0.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA	Zeya	16.81	313	eP	Pn	12 45 20.3	-2.1
ZEA				AMB	AMB	12 45 24.1	
	comp=Z,10.0nm,1.0s						
SEY	Seymchan	19.24	6	P	P	12 45 49.3	-0.9
	comp=Z,0.4nm,0.3s,baz=174,slow=10,SNR=11						
HIA	Hailar	20.12	295	⇑eP	P	12 45 58.3	-1.6
HIA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK	Yakutsk	21.13	336	P	P	12 46 07.8	-2.9
	comp=Z,24nm,0.5s,baz=183,slow=0.7,SNR=21						
YAK	Yakutsk	21.13	336	eP	P	12 46 06.9	-3.7
YAK				e		12 46 32.4	
YAK				eS	S	12 49 55.1	-6.7
YAK				e	Sn	12 50 14.0	+2.1
YAK				e*SS	Sn	12 50 14.0	+2.1
YAK				pmax	pmax		
	comp=Z,56nm,0.8s						
YAK				pmax	pmax		
	comp=E,11nm,1.4s						
YAK				pmax	pmax		
	comp=Z,137nm,2.8s						
YAK				pmax	pmax		
	comp=E,41nm,2.0s						
YAK				pmax	pmax		
	comp=N,225nm,3.5s						
YAK				smax	smax		
	comp=E,285nm,3.0s						
YAK	Yakutsk	21.13	336	P	P	12 46 08.0	-2.6
NJ2	Nanjing	25.73	253	eP	P	12 46 57.0	+1.2
NJ2				pmax	pmax		
	comp=E,10.0nm,0.5s						
BILL	Bilibino	26.05	16	i P	P	12 46 56.0	-2.3
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC	Hu-ho-hao-te	26.98	276	eP	P	12 47 07.1	-0.1
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,4.8s						
ULN	Ulaanbaatar	28.57	293	d iP	P	12 47 22.2	+0.9
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ULN	Ulaanbaatar	28.57	293	eP	P	12 47 22.2	+0.9
ULN	Ulaanbaatar	28.57	293	P	P	12 47 20.9	-0.4
ULN				IAmb	IAmb	12 47 22.8	
	comp=Z,9.1nm,0.8s						
H11N2	WAKE ISLAND Hy	28.79	141	T	T	13 18 07.0	
	baz=332,slow=75,SNR=118						
H11N1	WAKE ISLAND Hy	28.81	141	T	T	13 18 10.0	
	baz=332,slow=75,SNR=143						
H11N3	WAKE ISLAND Hy	28.81	141	T	T	13 18 11.2	
	baz=332,slow=75,SNR=177						
SONM	Songino Array	29.01	293	P	P	12 47 25.9	+0.7
	comp=Z,5.9nm,0.7s,baz=79,slow=8.1,SNR=37						
SONM	Songino Array	29.01	293	P	P	12 47 25.3	+0.1
SONM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM	Songino Array	29.01	293	P	P	12 47 25.3	+0.1
H11S1	WAKE ISLAND Hy	29.77	142	T	T	13 19 27.0	
	baz=333,slow=76,SNR=672						
H11S3	WAKE ISLAND Hy	29.78	142	T	T	13 19 23.1	
	baz=333,slow=76,SNR=430						
H11S2	WAKE ISLAND Hy	29.79	142	T	T	13 19 24.0	
	baz=333,slow=76,SNR=451						
ANM	Nome	33.10	35	P	P	12 48 02.1	+1.3
ANM				pmax	pmax		
	comp=Z,28nm,1.2s						
ANM	Nome	33.10	35	P	P	12 48 02.0	+1.3
ANM	Nome	33.10	35	P	P	12 48 02.1	+1.3
	baz=254						
LZH	Lanzhou	34.41	272	eP	P	12 48 13.7	+0.9
LZH				pP	pP	12 48 29.6	+1.0
LZH				pmax	pmax		
	comp=Z,30nm,1.3s						
GTA	Gaotai	35.91	280	⇓P	P	12 48 26.6	+1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,4.7s						
GTA				LR	LR		
	comp=Z,220nm,17.4s						
GTA				LR	LR		
	comp=Z,180nm,16.0s						
GTA				LR	LR		
	comp=Z,260nm,17.8s						
GCSA	Galena City Sc	36.71	36	P	P	12 48 32.3	+0.4
	baz=263						
TTA	Tatalina	36.91	39	P	P	12 48 34.7	+1.0
	baz=266						
SVW2	Sparrevohn	37.02	42	P	P	12 48 35.6	+1.0
SVW2				IAmb	IAmb	12 48 36.8	
	comp=Z,8.1nm,1.0s						
CD2	Chengdu	37.06	265	⇓iP	P	12 48 35.9	+0.6
CD2				pmax	pmax		
	comp=Z,40nm,0.5s						
M19K	Big River Lodg	37.61	41	P	P	12 48 40.0	+0.5
	baz=269						
K20K	Telida	37.82	39	P	P	12 48 42.1	+0.9
	baz=267						
J20K	Nowinta River	37.83	37	P	P	12 48 42.7	+1.3
	baz=266						
L20K	Farewell, AK	37.87	40	P	P	12 48 42.3	+0.6
	baz=268						
A21K	Barrow	38.14	25	P	P	12 48 43.9	+0.1
	baz=254						
IMAR	Indian Mountai	38.16	34	P	P	12 48 44.7	+0.6
O20K	Slope Mountain	38.49	44	P	P	12 48 48.0	+1.0
	baz=273						
H21K	Melozitna Rive	38.52	35	P	P	12 48 48.1	+1.0
H21K				IAmb	IAmb	12 48 49.8	
	comp=Z,8.2nm,1.1s						
H21K	Melozitna Rive	38.52	35	P	P	12 48 47.7	+0.6
	baz=265						
PPLA	Purkeypile	38.66	39	P	P	12 48 50.0	+1.5
PPLA				IAmb	IAmb	12 49 14.1	

	comp=Z,18nm,1.4s						
PPLA	Purkeypile	38.66	39	P	P	12 48 49.7	+1.3
	baz=270						
KDAK	Kodiak Island	38.67	48	P	P	12 48 48.9	+0.4
KDAK				pmax	pmax		
	comp=Z,15nm,1.0s						
KDAK	Kodiak Island	38.67	48	P	P	12 48 48.9	+0.4
I21K	Tanana	38.83	36	P	P	12 48 51.0	+1.3
	baz=267						
KTH	Kantishna Hill	39.24	38	P	P	12 48 54.7	+1.5
KTH				IAmb	IAmb	12 48 55.4	
	comp=Z,14nm,1.0s						
MLY	Manley	39.35	36	P	P	12 48 55.7	+1.6
MLY				IAmb	IAmb	12 48 56.2	
	comp=Z,5.2nm,0.7s						
MLY	Manley	39.35	36	P	P	12 48 54.9	+0.8
	baz=268,SNR=6.1						
BRSE	Bradley Lake S	39.46	44	P	P	12 48 56.0	+0.9
	baz=275						
COLD	Coldfoot	39.68	32	P	P	12 48 57.4	+0.6
	baz=266,SNR=12						
RC01	Rabbit Creek A	39.86	42	P	P	12 48 58.7	+0.3
	baz=274						
I23K	Minto, Yukon-K	39.93	36	P	P	12 48 59.4	+0.6
I23K				IAmb	IAmb	12 49 01.7	
	comp=Z,13nm,1.4s						
I23K	Minto, Yukon-K	39.93	36	P	P	12 49 00.4	+1.5
	baz=269						
TOLK	Toolik Lake Re	40.04	30	P	P	12 49 00.7	+0.9
TOLK				IAmb	IAmb	12 49 01.5	
	comp=Z,6.6nm,0.7s						
TOLK	Toolik Lake Re	40.04	30	P	P	12 49 00.2	+0.5
	baz=265,SNR=11						
NEA2	Nenana	40.05	37	P	P	12 49 00.9	+1.0
NEA2				IAmb	IAmb	12 49 01.6	
	comp=Z,6.8nm,0.7s						
NEA2	Nenana	40.05	37	P	P	12 49 00.9	+1.0
	baz=270,SNR=8.4						
MCK	McKinley	40.12	38	P	P	12 49 00.4	-0.1
	baz=271						
PMR	Palmer	40.12	41	P	P	12 49 01.2	+0.8
	baz=274						
WAT1	Susitna Watana	40.33	39	P	P	12 49 02.3	0.0
	baz=273						
MDM	Murphy Dome	40.41	36	P	P	12 49 04.2	+1.3
MDM				IAmb	IAmb	12 49 04.4	
	comp=Z,6.4nm,0.7s						
KNK	Knik Glacier	40.46	42	P	P	12 49 03.5	+0.1
	baz=274						
WRH	Wood River Hil	40.48	37	P	P	12 49 04.6	+1.1
SML	Sawmill	40.49	41	P	P	12 49 03.9	+0.3
	baz=274						
H24K	Noodor Dome	40.56	35	P	P	12 49 04.6	+0.5
H24K				IAmb	IAmb	12 49 06.5	
	comp=Z,7.8nm,1.1s						
H24K	Noodor Dome	40.56	35	P	P	12 49 05.5	+1.4
	baz=270						
TCOL	CIGO, UAF Yank	40.57	36	P	P	12 49 05.4	+1.2
	baz=271						
COLA	College	40.57	36*d*	*i*P	P	12 49 05.4	+1.2
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
COLA	College	40.57	36	P	P	12 49 05.6	+1.4
	baz=271						
CCB	Clear Creek Bu	40.60	37	P	P	12 49 05.2	+0.8
WAT6	Susitna Watana	40.71	40	P	P	12 49 06.4	+0.8
	baz=274						
POKR	Poker Plat Res	40.75	36	P	P	12 49 07.3	+1.7
POKR	Poker Plat Res	40.75	36	P	P	12 49 06.6	+0.9
	baz=271,SNR=11						
DHY	Denali Highway	40.85	39	P	P	12 49 07.5	+0.8
	baz=274						
DGZ	Jazzator, Alta	40.91	300⇑	*i*P	P	12 49 08.4	+1.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SCM	Sheep Creek Mo	40.96	41	P	P	12 49 07.9	+0.4
	baz=275						
HDA	Harding Lake	40.98	37	P	P	12 49 07.8	+0.3
HDA				IAmb	IAmb	12 49 09.3	
	comp=Z,4.6nm,0.6s						
HDA	Harding Lake	40.98	37	P	P	12 49 07.3	-0.3
	baz=272,SNR=5.4						
IL31		40.99	36	P	P	12 49 08.2	+0.6
ILAR	Eielson Array	40.99	36	P	P	12 49 08.0	+0.3
	comp=Z,2.8nm,0.8s,baz=269,slow=7.9,SNR=44						
ILAR	Eielson Array	40.99	36	P	P	12 49 08.0	+0.3
ILAR	Eielson Array	40.99	36	P	P	12 49 08.8	+1.2
GLI	Glacier Island	41.16	42	P	P	12 49 09.7	+0.6
	baz=276						
ZALV	Zalesovo Beam	41.43	307	P	P	12 49 11.2	-0.1
	comp=Z,1.5nm,0.5s,baz=87,slow=7.1,SNR=8.4						
ZALV				PcP	PcP	12 51 08.3	+0.2
	comp=Z,2.4nm,0.6s,baz=88,slow=3.3,SNR=10						
ZALV	Zalesovo Beam	41.43	307	*i* P	P	12 49 10.8	-0.6
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV	Zalesovo Beam	41.43	307	P	P	12 49 11.6	+0.2
M24K	Tolsona, Glenn	41.48	40	P	P	12 49 12.8	+1.0
M24K				IAmb	IAmb	12 49 22.9	
	comp=Z,16nm,1.1s						
KLU	Klutina	41.66	41	P	P	12 49 13.9	+0.7
	baz=276						
BMAR	Burnt Mountain	41.87	32	P	P	12 49 16.4	+1.6
HARP	HAARP	41.92	40	P	P	12 49 16.2	+0.8
	baz=276						
RIDG	Independent Ri	41.94	38	P	P	12 49 15.9	+0.4
RIDG				IAmb	IAmb	12 49 31.3	
	comp=Z,13nm,1.4s						
RIDG	Independent Ri	41.94	38	P	P	12 49 16.2	+0.7
	baz=275						
DOT	Dot Lake	42.29	38	P	P	12 49 17.9	-0.4
SCRK	Sand Creek	42.30	37	P	P	12 49 18.8	+0.3
SCRK	Sand Creek	42.30	37	P	P	12 49 18.7	+0.3
	baz=275						
RAGM	Ragged Mountai	42.41	43	P	P	12 49 19.9	+0.6
J26L	Joseph Creek	42.43	37	P	P	12 49 20.0	+0.5
	baz=275						
WMQ	Urumqi	42.64	292	*e*P	P	12 49 22.5	+1.0
WMQ				sP	sP	12 49 48.1	+2.8
WMQ				pmax	pmax		
	comp=Z,24nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,220nm,4.9s						
L26K	Log Cabin Wild	42.68	39	P	P	12 49 22.6	+1.2
L26K	Log Cabin Wild	42.68	39	P	P	12 49 22.7	+1.2
	baz=277						
M26K	Nabesna, AK	42.92	40	P	P	12 49 25.0	+1.5
M26K				IAmb	IAmb	12 49 49.3	
	comp=Z,9.4nm,1.1s						
M26K	Nabesna, AK	42.92	40	P	P	12 49 25.2	+1.7
	baz=278						
MCARA	McCarthy VSAT	43.06	41	P	P	12 49 25.4	+0.9
	baz=279						
CRQM	Cirque	43.10	42	P	P	12 49 26.2	+1.1
CRQE	Cirque	43.12	42	P	P	12 49 26.3	+1.1
	baz=280						
TGL	Tana Glacier	43.25	42	P	P	12 49 27.7	+1.5
WAX	Waxell Ridge	43.29	42	P	P	12 49 28.0	+1.5
L27K	Beaver Creek,	43.36	39	P	P	12 49 28.7	+1.7
L27K	Beaver Creek,	43.36	39	P	P	12 49 28.3	+1.3
	baz=278						
BCAR	Beaver Creek A	43.38	39	P	P	12 49 29.2	+2.0
EGAK	Eagle	43.44	36	P	P	12 49 28.4	+0.9
EGAK				IAmb	IAmb	12 49 28.7	
	comp=Z,6.8nm,0.8s						
EGAK	Eagle	43.44	36	P	P	12 49 27.9	+0.5
	baz=277,SNR=5.3						
M27K	Edge Creek, AK	43.44	40	P	P	12 49 28.3	+0.5
	baz=279						
ISLE	Juniper Island	43.52	42	P	P	12 49 29.4	+1.1
ISLE				IAmb	IAmb	12 49 56.5	
	comp=Z,9.4nm,1.0s						
MESA	MESA	43.78	43	P	P	12 49 31.5	+1.0
	baz=281						
BVCY	Beaver Creek	43.90	39	P	P	12 49 32.3	+1.0
	baz=280						
CTG	Chitna Glacier	43.93	42	P	P	12 49 32.9	+1.2
	baz=281						
CTGM	Chitina Glacie	43.94	42	P	P	12 49 32.8	+1.0
CTGM				IAmb	IAmb	12 49 33.5	
	comp=Z,12nm,1.0s						
LOGN	Logan Glacier	44.12	42	P	P	12 49 34.0	+0.8
LOGN				IAmb	IAmb	12 49 56.3	
	comp=Z,16nm,1.4s						
YUK3	Moose Creek	44.20	40	P	P	12 49 34.8	+0.8
	baz=281						
DAWY	Dawson	44.29	37	P	P	12 49 35.3	+0.8
	baz=279						
I29M	Ogilvie Camp,	44.55	35	P	P	12 49 37.4	+0.9
	baz=279,SNR=8.3						
EPYK	Eagle Plains	45.05	33	P	P	12 49 41.7	+1.3
	baz=279						
MK31	Makanchi Array	45.09	298*c*	*i*P	P	12 49 41.3	+0.3
MK31	Makanchi Array	45.09	298	P	P	12 49 41.4	+0.4
MK31				IAmb	IAmb	12 49 42.4	
	comp=Z,16nm,1.2s						
MKAR	Makanchi Array	45.09	298	P	P	12 49 41.5	+0.4
	comp=Z,5.2nm,0.6s,baz=78,slow=9.5,SNR=58						
MKAR				PcP	PcP	12 51 20.7	+0.1
	comp=Z,0.7nm,0.6s,baz=54,slow=2.1,SNR=3.1						
MKAR	Makanchi Array	45.09	298	P	P	12 49 41.3	+0.3
MKAR	Makanchi Array	45.09	298	P	P	12 49 41.3	+0.3
YUK4	Talbot Arm	45.14	41	P	P	12 49 42.3	+0.9
	baz=282						
MAKZ	Makanchi	45.29	298	P	P	12 49 43.3	+0.7
MAKZ				pmax	pmax		
	comp=Z,14nm,1.2s						
MAKZ	Makanchi	45.29	298	P	P	12 49 43.3	+0.7
MAKZ				IAmb	IAmb	12 49 43.9	
	comp=Z,14nm,1.1s						
HYT	Haines Junctio	45.79	41	P	P	12 49 48.4	+1.9
HYT	Haines Junctio	45.79	41	P	P	12 49 48.2	+1.7
	baz=284,SNR=8.5						
INK	Inuvik	45.95	30	P	P	12 49 49.0	+1.6
INK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
INK	Inuvik	45.95	30	P	P	12 49 49.0	+1.6
INK				IAmb	IAmb	12 49 49.4	
	comp=Z,10nm,0.8s						
INK	Inuvik	45.95	30	P	P	12 49 48.1	+0.7
	baz=280,SNR=14						
KURK	Kurchatov	45.99	304*c*	*e*P	P	12 49 47.8	-0.2
KURK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KURK	Kurchatov	45.99	304	*e*P	P	12 49 47.8	-0.2
KURK	Kurchatov	45.99	304	P	P	12 49 47.8	-0.2
KURK				IAmb	IAmb	12 49 48.8	
	comp=Z,9.3nm,0.8s						
N31M	Braeburn, Yuko	46.45	40	P	P	12 49 52.7	+1.3
	baz=284						
M31M	Drury Creek, Y	46.90	39	P	P	12 49 55.9	+0.9
	baz=285						
WHY	Whitehorse	47.08	41	P	P	12 49 57.6	+1.1
	baz=286						
FARO	Faro, Yukon	47.37	39	P	P	12 49 59.2	+0.5
	baz=286						
A36M	Sachs Harbour	47.97	25	P	P	12 50 04.2	+1.1
A36M				IAmb	IAmb	12 50 05.2	
	comp=Z,4.3nm,0.6s						
A36M	Sachs Harbour	47.97	25	P	P	12 50 03.5	+0.4
	baz=284,SNR=6.2						
CMAR	Chiang Mai Arr	48.19	254	P	P	12 50 06.1	+0.6
	comp=Z,0.4nm,0.4s,baz=40,slow=8.5,SNR=1.9						
P33M	Teslin, Yukon	48.19	41	P	P	12 50 06.5	+1.4
	baz=288						
WRAK	Wrangell Islan	49.69	46	P	P	12 50 17.4	+0.9
	baz=291						
BRVK	Borovoye	49.96	310⇑	*e*P	P	12 50 18.7	+0.1
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRVK	Borovoye	49.96	310	*e*P	P	12 50 18.7	+0.1
BRVK	Borovoye	49.96	310	P	P	12 50 19.1	+0.5
BRVK				IAmb	IAmb	12 50 20.3	
	comp=Z,7.7nm,0.8s						
KDJ	Kajisay	50.35	294	P	P	12 50 22.7	+0.7
KDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KDJ	Kajisay	50.35	294	P	P	12 50 22.7	+0.7
KDJ				IAmb	IAmb	12 50 24.7	
	comp=Z,7.8nm,0.9s						
BOOM	Boomskoye usch	51.00	295	P	P	12 50 27.8	+0.9
BOOM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BOOM	Boomskoye usch	51.00	295	P	P	12 50 27.8	+0.9
BOOM				IAmb	IAmb	12 50 28.8	
	comp=Z,8.1nm,0.9s						
AAK	Ala-Archa	51.88	296⇓	*e*P	P	12 50 35.3	+1.9
AAK				pmax	pmax		
	comp=Z,12nm,0.7s						
AAK	Ala-Archa	51.88	296	*e*P	P	12 50 35.3	+1.9
KKAR	Karatay Array	54.22	298	P	P	12 50 50.1	-0.3
KKAR	Karatay Array	54.22	298	P	P	12 50 50.0	-0.3
NOR	Nord	54.49	357	*i* P	P	12 50 49.6	-2.2
RES	Resolute Bay	54.64	17	P	P	12 50 53.3	+0.4
RES				pmax	pmax		
	comp=Z,8.0nm,1.1s						
RES	Resolute Bay	54.64	17	P	P	12 50 53.3	+0.4
RES				IAmb	IAmb	12 50 53.8	
	comp=Z,8.2nm,1.1s						
ARU	Arti	54.68	317*d*	*i*P	P	12 50 52.5	-1.0
ARU				S	S	12 58 27.9	-0.6
ARU				SS	SS	13 02 15.5	+4.0
ARU				pmax	pmax		
	comp=Z,62nm,4.3s						
ARU	Arti	54.68	317	P	P	12 50 53.8	+0.2
ARU				IAmb	IAmb	12 50 54.0	
	comp=Z,5.3nm,0.8s						
SPA0	Spitsbergen Ar	54.77	349	*e*P	P	12 50 54.0	+0.2
YKA	Yellowknife Ar	55.32	34	P	P	12 50 58.5	+0.5
	comp=Z,2.0nm,0.6s,baz=302,slow=7.6,SNR=12						
YKA				pP	pP	12 51 16.3	+1.8
	comp=Z,0.8nm,0.7s,baz=304,slow=7.4,SNR=2.6						
YKA	Yellowknife Ar	55.32	34	P	P	12 50 58.3	+0.3
ABKAR	Akbulak array	57.48	309	P	P	12 51 13.8	+0.2
ABKAR	Akbulak array	57.48	309	P	P	12 51 14.0	+0.4
ABKAR				IAmb	IAmb	12 51 14.8	
	comp=Z,18nm,1.2s						
NEEM	North Greenlan	58.35	5	*i* P	P	12 51 17.9	-1.8
NEEM				IAmb	IAmb	12 51 19.6	
	comp=Z,28nm,1.3s						
KEV	Kevo	58.81	340	P	P	12 51 21.9	-0.6
KEV				pmax	pmax		
	comp=Z,66nm,1.4s						
KEV	Kevo	58.81	340	P	P	12 51 21.9	-0.6
HAMF	Hammerfest	58.98	341	*e*P	P	12 51 22.6	-1.1
DAG	Danmarks Havn	59.32	356	*i* P	P	12 51 24.6	-1.4
DAG				IAmb	IAmb	12 51 26.4	
	comp=Z,5.1nm,0.5s						
ARA0	ARCESS Array S	59.34	340	*e*P	P	12 51 26.0	-0.2
ARCES	ARCESS Array B	59.34	340	P	P	12 51 25.6	-0.7
	comp=Z,2.1nm,0.5s,baz=46,slow=7.9,SNR=26						
ARCES	ARCESS Array B	59.34	340	P	P	12 51 26.0	-0.2
ARCES				pmax	pmax		
	comp=Z,11nm,1.3s						
ARCES	ARCESS Array B	59.34	340	P	P	12 51 26.0	-0.2
ARCES				IAmb	IAmb	12 51 46.3	
	comp=Z,11nm,1.2s						
KTK1	Kautokeino	60.28	340	*e*P	P	12 51 32.5	-0.2
JETT	Jettan, Norway	60.55	341	*e*P	P	12 51 34.6	0.0
TRO	Tromso	60.83	342	*e*P	P	12 51 35.4	-0.9
L02E	Cave Junction	61.48	58	P	P	12 51 42.4	+1.1
	baz=305						
NEW	Newport	61.75	49	P	P	12 51 43.7	+0.7
	baz=305						
J04D	Umpqua Nationa	61.77	56	P	P	12 51 45.3	+1.9
	baz=305						
L04D	Klamath Falls	62.24	57	P	P	12 51 47.8	+1.2
	baz=305						
N02D	Trinity Center	62.71	58	P	P	12 51 50.4	+0.7
	baz=306						
LOF	Lofoten	63.21	343	*e*P	P	12 51 52.9	+0.6
FAUS	Fauske	63.43	341	*e*P	P	12 51 53.7	-0.1
O03E	Paynes Creek	63.67	59	P	P	12 51 56.4	+0.5
	baz=306						
SUMG	Summit	63.74	2	P	P	12 51 57.1	+0.8
SUMG				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SUMG	Summit	63.74	2	*i* P	P	12 51 56.0	-0.3
SUMG				IAmb	IAmb	12 51 57.9	
	comp=Z,8.5nm,0.7s						
SUMG	Summit	63.74	2	P	P	12 51 57.1	+0.8
MSO	Missoula	64.34	49	P	P	12 52 00.7	+0.5
	baz=308						
KONS	Konsvik	64.65	342	*e*P	P	12 52 02.4	+0.6
WRA	Warramunga Arr	64.75	194	P	P	12 52 01.4	-1.6
	comp=Z,0.6nm,0.8s,baz=14,slow=7.0,SNR=2.1						
GEYT	Alibeck	64.94	299	P	P	12 52 04.8	+0.5
	comp=Z,2.4nm,0.7s,baz=233,slow=12,SNR=3.8						
FIA1	FINESS Array S	65.04	333	P	P	12 52 04.8	+0.4
FINES	FINESS Array B	65.04	333	P	P	12 52 03.6	-0.8
	comp=Z,5.7nm,0.5s,baz=54,slow=5.8,SNR=30						
FINES	FINESS Array B	65.04	333	P	P	12 52 04.4	0.0
FINES	FINESS Array B	65.04	333	P	P	12 52 04.4	0.0
FFC	Flin Flon	65.20	37	P	P	12 52 06.3	+0.7
FFC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FFC	Flin Flon	65.20	37	P	P	12 52 06.3	+0.7
OBN	Obninsk	65.58	324	*i* P	P	12 52 05.9	-2.1
OBN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
OBN	Obninsk	65.58	324	*e*P	P	12 52 08.4	+0.4
EGMT	Eagleton	65.83	46	P	P	12 52 10.1	+0.2
	baz=309						
YERR	Yerington	66.03	58	P	P	12 52 11.2	-0.3
YERR				IAmb	IAmb	12 52 12.7	
	comp=Z,9.4nm,1.2s						
HLID	Hailey	66.08	52	P	P	12 52 12.1	+0.4
	baz=309						
BOZ	Bozeman (W)	66.36	49	P	P	12 52 14.1	+0.7
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOZ	Bozeman (W)	66.36	49	P	P	12 52 14.1	+0.7
BOZ	Bozeman (W)	66.36	49	P	P	12 52 14.1	+0.7
	baz=309						
NSS	Namsos	66.56	341	*e*P	P	12 52 14.4	+0.2
KVN	Kaiserville	66.69	58	P	P	12 52 16.8	+1.1
KVN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KVN	Kaiserville	66.69	58	P	P	12 52 16.8	+1.1
LHV	Little Huntoon	66.94	59	P	P	12 52 18.9	+1.9
LHV				IAmb	IAmb	12 52 19.4	
	comp=Z,6.7nm,1.0s						
NVAR	Mina Array Bea	66.95	58	P	P	12 52 18.4	+1.0
	comp=Z,2.5nm,0.6s,baz=296,slow=7.3,SNR=18						
NVAR				pP	pP	12 52 35.4	+1.5
	comp=Z,1.1nm,0.7s,baz=274,slow=7.3,SNR=4.7						
ICESG	Greenland Ices	67.19	3	*i* P	P	12 52 19.0	+0.4
H17A	Grant Village	67.70	49	P	P	12 52 24.0	+1.9
H17A				IAmb	IAmb	12 52 25.3	
	comp=Z,7.0nm,0.9s						
H17A	Grant Village	67.70	49	P	P	12 52 23.9	+1.9
	baz=310						
CWC	Cottonwood Cre	68.33	60	P	P	12 52 26.4	+0.4
	baz=309						
ASAR	Alice Springs	68.47	194	P	P	12 52 27.2	+0.6
	comp=Z,0.3nm,0.6s,baz=11,slow=6.8,SNR=6.1						
ASAR				pP	pP	12 52 46.2	+2.9
	comp=Z,0.5nm,0.6s,baz=0.7,slow=5.1,SNR=4.8						
ISA	Isabella, Lake	68.58	61	P	P	12 52 28.2	+0.8
	baz=309						
R11A	Troy Canyon, C	68.66	57	P	P	12 52 28.4	+0.3
	baz=310						
ARVC	Arvin	68.69	61	P	P	12 52 29.2	+1.1
	baz=309						
SCZ2	Santa Cruz Isl	68.89	63	P	P	12 52 30.3	+0.9
	baz=310						
MPMC	Manual Prospec	68.94	60	P	P	12 52 29.7	-0.2
	baz=310						
FURC	Furnace Creek,	69.08	59	P	P	12 52 31.5	+1.1
	baz=310						
DUG	Dugway, Tooele	69.14	54	P	P	12 52 31.6	+0.6
DUG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
DUG	Dugway, Tooele	69.14	54	P	P	12 52 31.6	+0.6
DUG	Dugway, Tooele	69.14	54	P	P	12 52 31.5	+0.6
	baz=310						
LRMC	Laurel Mtn Rad	69.19	61	P	P	12 52 31.8	+0.5
	baz=310						
BW06	Boulder Array	69.32	50	P	P	12 52 32.6	+0.4
BW06	Boulder Array	69.32	50	P	P	12 52 32.3	+0.1
	baz=311						
PD31	Pinedale Array	69.32	50	P	P	12 52 32.6	+0.4
PDAR	Pinedale Array	69.32	50	P	P	12 52 32.4	+0.2
	comp=Z,2.5nm,0.8s,baz=262,slow=1.6,SNR=17						
PDAR				pP	pP	12 52 50.0	+1.0
	comp=Z,0.9nm,0.8s,baz=305,slow=1.0,SNR=4.2						
PDAR	Pinedale Array	69.32	50	P	P	12 52 32.7	+0.5
DOMB	Dombas	69.37	341	*e*P	P	12 52 31.8	-0.1
EDW2	Edwards Air Fo	69.37	61	P	P	12 52 33.1	+0.7
	baz=310						
NC405	NORSAR Array S	69.51	339	P	P	12 52 31.9	-0.8
MNK	Minsk	69.55	327	*i* P	P	12 52 32.1	-1.0
MNK				*i* *PP	pP	12 52 48.5	-2.0
MNK				*i*		12 52 55.1	
MNK				*i* *SP	PcP	12 52 55.5	-0.3
MNK				*i*		12 55 05.8	
MNK				*i* PPP	PPP	12 56 47.0	
MNK				*i* S	S	13 01 34.8	-0.8
MNK				*i* *SS	pS	13 01 57.4	+0.7
MNK				*i* SSS	SSS	13 09 16.6	
MNK				pmax	pmax		
	comp=N,16nm,1.0s						
MNK				pmax	pmax		
	comp=Z,24nm,1.0s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,2µm,18.0s						
MNK				MLR	MLR		
	comp=E,332nm,18.0s						
MNK				MLR	MLR		
	comp=Z,314nm,18.0s						
MNK	Minsk	69.55	327	*i* P	P	12 52 32.2	-0.9
	comp=E,4.0nm,1.0s						
MNK				*i* P	P	12 52 32.2	-0.9
	comp=N,16nm,1.0s						
MNK				*i* P	P	12 52 32.2	-0.9
	comp=Z,24nm,1.0s,baz=42						
MNK				*i* pP	pP	12 52 48.6	-1.9
MNK				*i* sP	PcP	12 52 55.5	-0.2
MNK				*i* PP	PP	12 55 05.8	-1.1
MNK				*i* PPP	PPP	12 56 47.0	
MNK				*i* S	S	13 01 34.9	-0.8
MNK				*i* sS	pS	13 01 57.4	+0.7
MNK				*i* SS	SS	13 06 31.5	+28
MNK				*i* SSS	SSS	13 09 16.6	
MNK				*i* LQ	LQ	13 18 14.0	
MNK				*i* LR	LR	13 20 53.0	
MNK				*i* LRM	MLR	13 27 13.8	
	comp=N,2µm,18.1s						
MNK				*i* LRM	MLR	13 27 15.6	
	comp=E,332nm,18.1s						
MNK				*i* LRM	MLR	13 27 16.1	
	comp=Z,314nm,18.1s						
NB2	NORSAR Subarra	69.70	339	P	P	12 52 33.8	-0.1
	comp=Z,4.2nm,0.5s,baz=31,slow=6.5						
NB2	NORSAR Subarra	69.70	339	P	P	12 52 33.8	-0.1
	baz=31,slow=6.5						
NOA	NORSAR Array B	69.70	339	P	P	12 52 34.0	0.0
	comp=Z,7.2nm,0.7s,baz=31,slow=6.6,SNR=32						
NOA	NORSAR Array B	69.70	339	P	P	12 52 34.0	0.0
AKN	Aaknes	69.74	342	*e*P	P	12 52 36.9	+2.8
NC602	NORSAR Array S	69.88	339	*e*P	P	12 52 35.3	+0.3
BFSC	Mount Baldy Ra	70.00	62	P	P	12 52 35.9	-0.4
	baz=310						
KIV	Kislovodsk	70.15	312	*i* P	P	12 52 38.5	+1.4
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KIV	Kislovodsk	70.15	312	*e*P	P	12 52 38.5	+1.4
KIV	Kislovodsk	70.15	312	P	P	12 52 38.0	+0.9
KBZ	Khabaz	70.19	312	P	P	12 52 38.0	+0.9
	comp=Z,10.0nm,0.9s,baz=60,slow=4.7,SNR=14						
SCI2	San Clemente I	70.23	63	P	P	12 52 38.6	+1.0
	baz=310						
TUQ	Turquoise Moun	70.32	60	P	P	12 52 38.8	+0.5
	baz=310						
SKAR	Skarslia	70.74	340	*e*P	P	12 52 40.0	-0.3
RDMU	Red Mountain	70.76	52	P	P	12 52 41.4	+0.3
RDMU				IAmb	IAmb	12 52 42.5	
	comp=Z,9.5nm,0.8s						
GMRC	Granite Mounta	70.91	60	P	P	12 52 41.8	0.0
	baz=311						
LCMT	Little Creek M	70.94	57	P	P	12 52 42.9	+0.8
ULM	Lac du Bonnet	70.99	38	P	P	12 52 40.5	-1.4
	comp=Z,2.1nm,0.6s,baz=344,slow=3.2,SNR=3.1						
BELC	Belle Mtn. Jos	71.20	61	P	P	12 52 43.5	-0.1
	baz=311						
KONO	Kongsberg	71.31	339	*e*P	P	12 52 44.1	+0.4
RSSD	Black Hills	71.39	46	P	P	12 52 44.5	-0.3
	baz=314						
IRM	Iron Mountain	71.64	60	P	P	12 52 46.4	+0.2
	baz=311						
BC3	Big Chuckawall	71.77	61	P	P	12 52 47.3	+0.2
	baz=311						
O20A	White River Ci	71.81	52	P	P	12 52 46.7	-0.6
	baz=312						

AKASG	**Malin Array Be**	**71.85**	**324**	P	**P**	**12 52 47.0**	**-0.1**
	comp=Z,8.3nm,0.7s,baz=38,slow=5.8,SNR=21						
AKBB	**Malin Array Si**	**71.85**	**324**	P	**P**	**12 52 47.0**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKBB	**Malin Array Si**	**71.85**	**324**	P	**P**	**12 52 47.0**	**-0.1**
AKBB				IAmb	IAmb	12 52 47.8	
	comp=Z,8.5nm,0.8s						
PDMCI	**Parker Dam,Lak**	**72.17**	**59**	P	**P**	**12 52 50.0**	**+0.7**
	baz=311						
ANN	**Anapa**	**72.30**	**316**	*e*P	**P**	**12 52 46.9**	**-3.0**
ANN				pmax	pmax		
	comp=Z,118nm,0.9s						
WUAZ	**Wupatki**	**73.06**	**57**	P	**P**	**12 52 54.7**	**-0.1**
	baz=312						
ISCO	**Idaho Springs**	**73.51**	**50**	P	**P**	**12 52 57.3**	**-0.3**
	baz=314						
MVCO	**Mesa Verde**	**73.64**	**54**	P	**P**	**12 52 58.7**	**+0.5**
	baz=313						
X16A	**Lo Mia Camp, P**	**73.76**	**58**	P	**P**	**12 52 59.5**	**+0.5**
S22A	**4UR Ranch, Cre**	**74.24**	**53**	P	**P**	**12 53 02.7**	**+0.8**
	baz=314						
SDCO	**Great Sand Dun**	**75.00**	**52**	P	**P**	**12 53 06.4**	**+0.1**
	baz=314						
KWP	**Kalwaria Pacla**	**75.34**	**327**	*e*P	**P**	**12 53 08.9**	**+1.2**
KWP	**Kalwaria Pacla**	**75.34**	**327**	P	**P**	**12 53 08.3**	**+0.7**
KWP				pmax	pmax		
	comp=Z,549nm,1.5s						
KWP	**Kalwaria Pacla**	**75.34**	**327**	P	**P**	**12 53 08.3**	**+0.7**
ECSD	**EROS Data Cent**	**75.42**	**43**	P	**P**	**12 53 07.9**	**-0.4**
	baz=318						
BUR08	**Bucovina Ar. S**	**75.89**	**324**	P	**P**	**12 53 11.4**	**+0.5**
BURAR	**Bucovina Array**	**75.90**	**324**	P	**P**	**12 53 11.0**	**0.0**
BURAR				IAmb	IAmb	12 53 12.1	
	comp=Z,3.9nm,0.7s						
OJC	**Ojcow**	**76.00**	**329**	*e*P	**P**	**12 53 12.1**	**+0.7**
OJC	**Ojcow**	**76.00**	**329**	P	**P**	**12 53 12.0**	**+0.7**
OJC				pmax	pmax		
	comp=Z,11nm,1.0s						
OJC	**Ojcow**	**76.00**	**329**	P	**P**	**12 53 12.0**	**+0.7**
OJC				IAmb	IAmb	12 53 12.9	
	comp=Z,11nm,1.0s						
T25A	**Trinidad**	**76.04**	**52**	P	**P**	**12 53 11.9**	**-0.3**
	baz=315						
ANMO	**Albuquerque**	**76.39**	**55**	⇓*e*P	**P**	**12 53 15.0**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.7s						
ANMO	**Albuquerque**	**76.39**	**55**	P	**P**	**12 53 14.7**	**+0.6**
	baz=314						
CRVS	**Cervenica-Dubn**	**76.42**	**327**	*e*P	**P**	**12 53 14.1**	**+0.3**
CRVS	**Cervenica-Dubn**	**76.42**	**327**	*e*P	**P**	**12 53 14.1**	**+0.3**
NIE	**Niedzica**	**76.45**	**328**	*e*P	**P**	**12 53 15.8**	**+1.8**
I37A	**Lemond, Waseca**	**76.76**	**41**	P	**P**	**12 53 16.1**	**+0.3**
KSP	**Ksiaz**	**76.76**	**331**	*e*P	**P**	**12 53 16.5**	**+0.8**
OSTC	**Ostas**	**77.02**	**331**	*e*P	**P**	**12 53 19.2**	**+2.0**
DPC	**Dobruska-Polom**	**77.16**	**331**	*e*P	**P**	**12 53 18.9**	**+0.9**
DPC	**Dobruska-Polom**	**77.16**	**331**	*e*P	**P**	**12 53 18.9**	**+0.9**
MORC	**Moravsky Berou**	**77.19**	**330**	*e*P	**P**	**12 53 18.6**	**+0.4**
SCHQ	**Schefferville**	**77.27**	**20**	P	**P**	**12 53 18.7**	**+0.3**
	comp=Z,2.4nm,0.6s,baz=290,slow=12,SNR=2.1						
121A	**Cookes Peak, D**	**77.27**	**57**	P	**P**	**12 53 20.2**	**+1.1**
	baz=314						
CLL	**Collm**	**77.48**	**333**	P	**P**	**12 53 20.0**	**+0.3**
CLL				pmax	pmax		
	comp=Z,11nm,0.8s						
CLL	**Collm**	**77.48**	**333**	*i* P	**P**	**12 53 19.8**	**+0.1**
	comp=Z,19nm,1.2s						
CLL	**Collm**	**77.48**	**333**	P	**P**	**12 53 19.9**	**+0.3**
E43A	**Lone Tree Farm**	**77.78**	**35**	P	**P**	**12 53 20.9**	**-0.6**
E43A				IAmb	IAmb	12 53 24.1	
	comp=Z,10nm,1.1s						
JAVC	**Velka Javorina**	**77.91**	**329**	*e*P	**P**	**12 53 23.3**	**+1.1**
BRTR	**Keskin Array B**	**77.91**	**314**	P	**P**	**12 53 22.8**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=101,slow=2.9,SNR=3.4						
VRAC	**Vranov**	**77.93**	**330**	*e*P	**P**	**12 53 22.7**	**+0.5**
PRU	**Pruhonice**	**78.09**	**331**	*e*P	**P**	**12 53 23.8**	**+0.7**
PRU	**Pruhonice**	**78.09**	**331**	*e*P	**P**	**12 53 23.8**	**+0.7**
KSU1	**Kansas State U**	**78.86**	**46**	P	**P**	**12 53 27.5**	**-0.1**
	baz=318						
KHC	**Kasperske Hory**	**79.15**	**331**	*e*P	**P**	**12 53 29.6**	**+0.6**
KHC	**Kasperske Hory**	**79.15**	**331**	*de*P	**P**	**12 53 29.7**	**+0.7**
KHC				pmax	pmax		
	comp=Z,11nm,0.7s						
KHC	**Kasperske Hory**	**79.15**	**331**	P	**P**	**12 53 28.9**	**-0.1**
CKRC	**Cesky Krumlov**	**79.16**	**331**	*e*P	**P**	**12 53 30.4**	**+1.4**
AMTX	**Amarillo**	**79.20**	**52**	P	**P**	**12 53 30.6**	**+1.0**
	baz=317						
MNTX	**Cornudas Mount**	**79.31**	**56**	P	**P**	**12 53 30.6**	**+0.5**
	baz=315						
GERES	**GERESS Array B**	**79.35**	**331**	P	**P**	**12 53 30.3**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=36,slow=5.5,SNR=14						
CONA	**Conrad Observa**	**79.35**	**330**	*i* P	**P**	**12 53 31.1**	**+1.0**
	comp=Z,4.2nm,0.8s						
MOA	**Molln**	**79.99**	**330**	*i* P	**P**	**12 53 34.7**	**+1.1**
	comp=Z,3.2nm,0.8s						
BTNL	**Ternell**	**80.24**	**336**	*d*P	**P**	**12 53 35.1**	**+0.3**
MEM	**Membach**	**80.25**	**337**	*d*P	**P**	**12 53 35.1**	**+0.2**
	comp=Z,6.7nm,0.9s						
BCLA	**Clavier**	**80.62**	**337**	*d*P	**P**	**12 53 37.1**	**+0.3**
SOKA	**Soboth**	**80.71**	**329**	*i* P	**P**	**12 53 37.9**	**+0.4**
	comp=Z,4.7nm,0.6s						
BGES	**Gesves**	**80.72**	**337**	*d*P	**P**	**12 53 36.7**	**-0.7**
BMRD	**Maredsous**	**80.88**	**337**	*d*P	**P**	**12 53 38.5**	**+0.3**
KBA	**Koelnbreinsper**	**80.98**	**331**	*e*P	**P**	**12 53 39.9**	**+0.9**
	comp=Z,4.2nm,0.4s						
OBKA	**Obir**	**81.03**	**330**	*i* P	**P**	**12 53 39.3**	**0.0**
	comp=Z,3.4nm,0.8s						
WATA	**Walderalm**	**81.38**	**332**	*i* P	**P**	**12 53 41.6**	**+0.5**
	comp=Z,5.3nm,0.6s						
WTTA	**Wattenberg**	**81.42**	**332**	*i* P	**P**	**12 53 42.1**	**+0.7**
	comp=Z,7.6nm,0.5s						
RETA	**Reutte**	**81.52**	**332**	*i* P	**P**	**12 53 42.4**	**+0.6**
	comp=Z,3.2nm,0.6s						
MOTA	**Moosalm**	**81.53**	**332**	*i* P	**P**	**12 53 42.5**	**+0.5**
	comp=Z,6.7nm,0.7s						
SQTA	**Sankt Quirin**	**81.60**	**332**	*i* P	**P**	**12 53 42.8**	**+0.6**
	comp=Z,4.3nm,0.6s						
TUL1	**Leonard**	**81.68**	**47**	P	**P**	**12 53 42.8**	**+0.1**
	baz=319						
FETA	**Feichten**	**81.94**	**332**	*i* P	**P**	**12 53 44.3**	**+0.2**
	comp=Z,3.5nm,1.1s						
DAVA	**Damuels**	**81.99**	**333**	*i* P	**P**	**12 53 44.8**	**+0.4**
	comp=Z,3.5nm,0.6s						
TX31	**Lajitas Ar. Si**	**82.03**	**57**	P	**P**	**12 53 45.1**	**+0.3**
TX32	**Lajitas Array**	**82.03**	**57**	P	**P**	**12 53 45.2**	**+0.4**
TXAR	**Lajitas Array**	**82.03**	**57**	P	**P**	**12 53 45.1**	**+0.3**
	comp=Z,3.7nm,0.7s,baz=300,slow=4.2,SNR=51						
TXAR				pP	**pP**	**12 54 02.5**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=299,slow=3.5,SNR=8.0						
TXAR	**Lajitas Array**	**82.03**	**57**	P	**P**	**12 53 45.3**	**+0.5**
CCM	**Cathedral Cave**	**82.38**	**43**	P	**P**	**12 53 46.0**	**-0.3**
	baz=321						
SFIN	**Lafayette**	**82.52**	**39**	P	**P**	**12 53 46.4**	**-0.6**
	baz=323						
U40A	**Yellville**	**82.88**	**45**	P	**P**	**12 53 48.6**	**-0.5**
	baz=321						
W39A	**Magazine**	**83.29**	**47**	P	**P**	**12 53 51.0**	**-0.1**
	baz=320						
MIAR	**Mount Ida**	**83.89**	**47**	P	**P**	**12 53 54.2**	**-0.1**
	baz=320						
W41B	**Gary Mavity, V**	**84.11**	**46**	P	**P**	**12 53 55.4**	**+0.1**
	baz=321						
NRCA	**Norcia**	**84.70**	**328**	P	**P**	**12 53 58.7**	**+0.4**
NRCA				IAmb	IAmb	12 53 59.5	
	comp=Z,7.7nm,0.8s						
LBNH	**Lisbon**	**85.29**	**28**	P	**P**	**12 54 00.1**	**-1.0**
	baz=332						
WVT	**Waverly**	**85.57**	**42**	P	**P**	**12 54 01.7**	**-0.9**
	baz=323						
SSPA	**Standing Stone**	**86.24**	**33**	P	**P**	**12 54 06.0**	**+0.2**
	baz=329						
O56A	**Blue Knob Stat**	**86.28**	**34**	P	**P**	**12 54 06.4**	**+0.2**
	baz=328						
L61B	**Northampton**	**86.61**	**29**	P	**P**	**12 54 06.9**	**-0.7**
	baz=332						
GOGA	**Godfrey**	**89.87**	**41**	P	**P**	**12 54 23.1**	**-0.2**
	baz=326						
H03N2	**Juan Fernandez**	**142.31**	**90**	T	T	15 40 06.4	
	baz=304,slow=77,SNR=32						
H03N3	**Juan Fernandez**	**142.33**	**90**	T	T	15 40 10.2	
	baz=304,slow=77,SNR=39						
H03N1	**Juan Fernandez**	**142.33**	**90**	T	T	15 40 07.7	
	baz=304,slow=77,SNR=31						

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*IDC **07** 12:52:23.7±1.5, 0°.39N×99°.79E, h97^{km}±12^{km}, mb4.1/17, mb1 4.2/19, mb1mx3.7/60, mbtmp4.4/19, Error ellipse: s-maj=22.6km s-min=9.7km az=54.0*

*NEIC **07** 12:52:24.7±1.7, 0°.30N±0°.09×99°.53E±0°.06, h109^{km}±6^{km}, mb4.5/31, Error ellipse: s-maj=13.7km s-min=8.5km az=194.0*

*DJA **07** 12:52:24.6±0.2, 0°N±2°×9°9E±°, h94^{km}±3^{km}, M4.4/25, mB5.0/11, mb4.7/25, MLv4.5/20, Mw(mB)4.3/11*

*KLM **07** 12:52:26, 0°.49N×99°.35E, h124^{km}, mb4.5*

ISC 07 12:52:23.4±0.4, **0°.33N**±0°.04×**99°.47E**±0°.05, **h100**^{km}**, n113,** σ**1**^{s}**55**/114, **mb4.5**/42, **1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.48**	**13**	P	**Pn**	**12 52 40.4**	**+1.3**
BKNI	**Bangkinang**	**1.57**	**90**	P	**Pn**	**12 52 51.6**	**+1.0**
BKNI	**Bangkinang**	**1.57**	**90**		**Pn**	**12 52 51.6**	**+1.0**
BKNI	**Bangkinang**	**1.57**	**90**	P	**Pn**	**12 52 51.8**	**+1.2**
PDSI	**Padang**	**1.58**	**141**	P	**Pn**	**12 52 52.8**	**+2.0**
SISI	**Saibi**	**1.69**	**193**	P	**Pn**	**12 52 53.7**	**+1.6**
GSI	**Gunungsitoli**	**2.13**	**297**	P	**Pn**	**12 53 00.3**	**+2.6**
GSI	**Gunungsitoli**	**2.13**	**297**	Pn	**Pn**	**12 53 00.0**	**+2.3**
GSI	**Gunungsitoli**	**2.13**	**297**	P	**Pn**	**12 53 00.6**	**+2.9**
PSI	**Prapat**	**2.52**	**347**	P	**Pn**	**12 53 03.3**	**+0.4**
	73nm,0.3s,baz=155,slow=11,SNR=432						
PSI				S	**Sn**	**12 53 31.7**	**-1.5**
	11nm,0.3s,baz=162,slow=12,SNR=10						
RGRI	**Rengat**	**2.94**	**103**	P	**Pn**	**12 53 09.7**	**+1.3**
PPSI	**Pulau Pagai**	**3.12**	**170**	P	**Pn**	**12 53 10.9**	**+0.1**
KRJI	**Kerinci**	**3.12**	**140**	P	**Pn**	**12 53 13.7**	**+2.8**
TSI	**Tuntungan**	**3.28**	**344**	P	**Pn**	**12 53 14.1**	**+1.1**
KCSI	**Kotacane, Aceh**	**3.60**	**332**	P	**Pn**	**12 53 18.3**	**+1.0**
TPTI		**3.71**	**322**	P	**Pn**	**12 53 19.8**	**+1.1**
IPM	**Ipoh**	**4.41**	**21**	P	**Pn**	**12 53 31.0**	**+2.8**
IPM	**Ipoh**	**4.41**	**21**	Pn	**Pn**	**12 53 30.2**	**+2.0**
IPM	**Ipoh**	**4.41**	**21**	P	**Pn**	**12 53 30.7**	**+2.5**
MASI	**Maura Aman, Be**	**4.42**	**141**	P	**Pn**	**12 53 28.6**	**+0.2**
MYKOM	**Kota Tinggi**	**4.61**	**72**		**Pn**	**12 53 31.1**	**+0.1**
KSI	**Kapahiang**	**5.04**	**142**	P	**Pn**	**12 53 37.7**	**+0.9**
	125nm,0.8s						
KULM	**Kulim**	**5.07**	**13**	Pn	**Pn**	**12 53 38.4**	**+1.2**
DSRI	**Dabo**	**5.17**	**99**	P	**Pn**	**12 53 39.7**	**+1.2**
	0.2nm888nm60nm,0.8s						
LHSI	**Lahat**	**5.78**	**136**	P	**Pn**	**12 53 46.3**	**-0.5**
	0.3nm2μm86nm,0.8s						
MDSI	**Maura Dua**	**6.71**	**136**	P	**Pn**	**12 54 00.3**	**+0.9**
	0.1nm420nm26nm,0.8s						
KLSI		**7.24**	**134**	P	**Pn**	**12 54 07.9**	**+1.2**
	0.1nm15nm,0.8s						
XMIS	**Christmas Isla**	**12.37**	**150**	P	**Pn**	**12 55 13.0**	**-3.2**
	78nm,1.3s						
SBUM	**Sibu**	**12.92**	**80**	P	**P**	**12 55 33.0**	**+2.8**
UGM	**Wanagama**	**13.73**	**127**	P	**Pn**	**12 55 32.8**	**-1.2**
	111nm,1.5s						
BBKI	**Banjar Baru**	**15.82**	**104**	P	**P**	**12 56 04.5**	**+2.1**
KMMI	**Kalianget**	**16.21**	**117**	P	**Pn**	**12 56 06.8**	**+1.3**
	34nm,0.7s						
SPMM	**Sapulut**	**17.52**	**75**	P	**Pn**	**12 56 25.0**	**+3.4**
KKM	**Kota Kinabalu**	**17.65**	**71**	P	**Pn**	**12 56 26.8**	**+3.6**
	42nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.02**	**358**	P	**P**	**12 56 25.2**	**-1.5**
	0.5nm,0.3s,baz=6.2,slow=28,SNR=2.1						
MYLDM	**Lahad Datu**	**19.60**	**75**	P	**P**	**12 56 45.5**	**+1.5**
MYLDM				IAmb	IAmb	12 56 57.6	
	comp=Z,24nm,1.0s						
PALK	**Pallekele**	**19.95**	**291**	P	**Pn**	**12 56 51.7**	**+1.3**
	comp=Z,17nm,0.7s,baz=212,slow=10,SNR=9.6						
PALK	**Pallekele**	**19.95**	**291**	P	**Pn**	**12 56 50.9**	**+0.5**
PALK				IAmb	IAmb	12 56 52.4	
	comp=Z,16nm,0.8s						
PLAI	**Plampang**	**20.38**	**117**	P	**P**	**12 56 54.1**	**+1.7**
	comp=Z,19nm,1.0s						
MPSI	**Mapaga**	**20.43**	**90**	P	**P**	**12 56 54.7**	**+1.8**
	comp=Z,40nm,1.0s						
TTSI	**Tana Toraja**	**20.61**	**99**	P	Pn	12 56 58.1	0.0
	comp=Z,2μmcomp=Z,20nm,0.9s						
SPSI	**Sidrap Palu**	**20.73**	**102**	P	Pn	12 57 00.5	+1.1
	comp=Z,15nm,0.9s						
KAPI	**Kappang**	**20.94**	**105**	P	**P**	**12 56 57.7**	**-0.8**
	comp=Z,4.2nm,0.5s,baz=12,slow=3.5,SNR=2.5						
KAPI	**Kappang**	**20.94**	**105**	P	**P**	**12 56 58.8**	**+0.4**
BNSI	**Bone**	**21.14**	**103**	P	**P**	**12 57 03.1**	**+2.5**
	comp=Z,484nmcomp=Z,28nm,1.1s						
TOLI2	**Tolitoli**	**21.32**	**88**	P	**P**	**12 57 02.6**	**+0.1**
TOLI2				IAmb	IAmb	12 57 03.9	
	comp=Z,32nm,1.2s						
TOLI2	**Tolitoli**	**21.32**	**88**	P	**P**	**12 57 04.2**	**+1.6**
	comp=Z,21nm,0.8s						
BKSI	**Bulukumba**	**21.37**	**106**	P	**P**	**12 57 04.9**	**+1.8**
	comp=Z,360nmcomp=Z,19nm,1.0s						
BSSI	**Bau Bau, Buton**	**21.94**	**107**	P	**P**	**12 57 11.6**	**+2.4**
	comp=Z,15nm,1.2s						
APSI	**Ampana**	**22.21**	**93**	P	**P**	**12 57 14.1**	**+2.1**
	comp=Z,540nmcomp=Z,31nm,0.8s						
MRSI	**Marisa**	**22.47**	**90**	P	**P**	**12 57 14.7**	**0.0**
	comp=Z,838nmcomp=Z,93nm,0.7s						
GTOI	**Gorontalo**	**23.54**	**89**	P	**P**	**12 57 24.9**	**-0.1**
	comp=Z,29nm,1.0s						
EDFI	**Ende, Flores**	**23.90**	**113**	P	**P**	**12 57 27.3**	**-1.1**
	comp=Z,6.7nm,0.5s						
KMSI	**Cibinong**	**24.51**	**89**	P	P	12 57 45.0	+11
KMI	**Kunming**	**24.85**	**7**	⇑P	P	12 57 44.6	+7.6
KMI				pP	sP	12 58 09.4	-1.7
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BATI	**Baumata**	**26.25**	**114**	P	**P**	**12 57 46.5**	**-3.1**
	comp=Z,7.2nm,0.4s,baz=275,slow=7.6,SNR=2.1						
SANI	**Sanana**	**26.62**	**95**	P	**P**	**12 57 52.5**	**-0.4**
	comp=Z,12nm,0.7s						
SOEI	**Soe**	**26.64**	**113**	P	**P**	**12 57 55.2**	**+2.1**
	comp=Z,25nm,0.8s						
SOEI	**Soe**	**26.64**	**113**	P	**P**	**12 57 52.0**	**-1.2**
SOEI				IAmb	IAmb	12 58 16.5	
	comp=Z,16nm,0.8s						
PSA00	**Pilbara Seismi**	**29.49**	**139**	P	**P**	**12 58 17.5**	**-0.8**
PSA00				IAmb	IAmb	12 58 42.0	
	comp=Z,14nm,1.3s						
FITZ	**Fitzroy Crossi**	**31.58**	**127**	P	**P**	**12 58 34.2**	**-2.7**
	comp=Z,1.6nm,0.5s,baz=270,slow=5.9						
SWI	**Sorong**	**31.81**	**92**	P	**P**	**12 58 39.5**	**+0.6**
	comp=Z,15nm,0.6s						
SIJI	**Sorong**	**31.82**	**92**	P	**P**	**12 58 36.6**	**-2.4**
	comp=Z,5.6nm,0.6s,baz=354,slow=9.8,SNR=4.2						
FAKI	**Fak Fak**	**32.92**	**96**	P	**P**	**12 58 47.9**	**-0.8**
KNRA	**Kununurra**	**33.01**	**120**	P	**P**	**12 58 47.6**	**-1.7**
KNRA				IAmb	IAmb	12 58 53.4	
	comp=Z,13nm,1.4s						
MORW	**Morawa**	**33.25**	**153**	P	**P**	**12 58 50.9**	**-0.3**
MTN	**Manton Dam**	**34.02**	**114**	P	**P**	**12 58 58.1**	**0.0**
NJ2	**Nanjing**	**36.48**	**28**	*e*P	**P**	**12 59 21.3**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WB0	**Warramunga Arr**	**39.62**	**122**	P	**P**	**12 59 43.5**	**-2.1**
WB0				IAmb	IAmb	12 59 43.9	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**39.65**	**123**	P	**P**	**12 59 43.9**	**-2.0**
	comp=Z,5.9nm,0.8s,baz=303,slow=8.8,SNR=30						
WRA				PcP	**PcP**	**13 01 50.9**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=308,slow=2.5,SNR=7.9						
WRA	**Warramunga Arr**	**39.65**	**123**	P	**P**	**12 59 43.9**	**-2.0**
WRAB	**Tennant Creek**	**39.66**	**123**	P	**P**	**12 59 44.0**	**-1.9**
WRAB				IAmb	IAmb	12 59 44.7	
	comp=Z,7.0nm,0.8s						
WB2	**Warramunga Arr**	**39.66**	**123**	P	**P**	**12 59 44.1**	**-1.9**
WB2				IAmb	IAmb	12 59 44.7	
	comp=Z,6.5nm,0.7s						
WR0	**Warramunga Arr**	**39.83**	**122**	P	**P**	**12 59 45.8**	**-1.6**
WR0				IAmb	IAmb	12 59 46.2	
	comp=Z,7.9nm,0.7s						
AS31	**Alice Springs**	**41.07**	**128**	P	**P**	**12 59 55.3**	**-2.2**
ASAR	**Alice Springs**	**41.07**	**128**	P	**P**	**12 59 55.8**	**-1.8**
	comp=Z,5.3nm,0.6s,baz=300,slow=7.7,SNR=94						
ASAR				PcP	**PcP**	**13 01 55.6**	**0.0**
	comp=Z,1.9nm,0.7s,baz=307,slow=2.8,SNR=14						
FORT	**Forrest**	**41.16**	**141**	P	**P**	**12 59 57.8**	**-0.3**
JAY	**Jayapura**	**41.32**	**94**	P	**P**	**12 59 59.0**	**-0.8**
	comp=Z,5.1nm,0.7s,baz=310,slow=13,SNR=2.0						
HHC	**Hu-ho-hao-te**	**41.80**	**14**	*e*P	**P**	**13 00 05.2**	**+1.8**
HHC				sP	sP	13 00 37.3	-1.1
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,4.1s						
WMQ	**Urumqi**	**44.56**	**348**	*e*P	**P**	**13 00 27.9**	**+2.4**
KSRS	**Korea Array**	**45.32**	**32**	P	**P**	**13 00 30.1**	**-1.4**
	comp=Z,1.8nm,0.8s,baz=222,slow=8.5,SNR=5.6						
JHS	**Saijyo**	**46.63**	**39**	P	**P**	**13 00 40.7**	**-1.2**
BBOO	**Buckleboo**	**47.69**	**137**	P	**P**	**13 00 49.0**	**-1.2**
BBOO				IAmb	IAmb	13 00 50.2	
	comp=Z,8.4nm,0.8s						
SONM	**Songino Array**	**47.70**	**6**	P	**P**	**13 00 50.4**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=188,slow=9.4,SNR=14						
SONM				PcP	**PcP**	**13 02 17.8**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=184,slow=5.2,SNR=6.5						
SONM				ScP	**ScP**	**13 06 00.8**	**-2.5**
	comp=Z,0.5nm,0.8s,baz=191,slow=4.1,SNR=4.6						
SONM	**Songino Array**	**47.70**	**6**	P	**P**	**13 00 50.1**	**0.0**
MK31	**Makanchi Array**	**48.66**	**344**	P	**P**	**13 00 57.4**	**0.0**
MKAR	**Makanchi Array**	**48.66**	**344**	P	**P**	**13 00 57.8**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=154,slow=9.0,SNR=24						
MKAR	**Makanchi Array**	**48.66**	**344**	P	**P**	**13 00 57.2**	**-0.2**
MAKZ	**Makanchi**	**48.76**	**344**	P	**P**	**13 00 58.6**	**+0.5**
MAKZ				IAmb	IAmb	13 01 23.8	
	comp=Z,4.5nm,0.8s						
CTAO	**Charters Tower**	**50.08**	**117**	P	**P**	**13 01 06.8**	**-1.8**
STKA	**Stephens Creek**	**51.10**	**133**	P	**P**	**13 01 15.3**	**-0.8**
	comp=Z,5.0nm,0.6s,baz=312,slow=7.7,SNR=17						
STKA	**Stephens Creek**	**51.10**	**133**	P	**P**	**13 01 15.4**	**-0.8**
USRK	**Ussuriysk Ar.**	**52.38**	**29**	P	**P**	**13 01 24.5**	**-0.8**
	comp=Z,4.3nm,0.8s,baz=219,slow=5.0,SNR=6.5						
USRK	**Ussuriysk Ar.**	**52.38**	**29**	P	**P**	**13 01 25.1**	**-0.3**
KURK	**Kurchatov**	**53.24**	**344**	P	**P**	**13 01 31.1**	**-0.5**
KURK				IAmb	IAmb	13 01 31.8	
	comp=Z,4.6nm,1.1s						
ZAA0	**Zalesovo Array**	**54.80**	**349**	P	**P**	**13 01 43.2**	**+0.3**
ZAA0				IAmb	IAmb	13 01 44.9	
	comp=Z,7.4nm,1.0s						
ZALV	**Zalesovo Beam**	**54.80**	**349**	P	**P**	**13 01 42.8**	**0.0**
	comp=Z,5.2nm,0.6s,baz=176,slow=6.5,SNR=21						
ZALV	**Zalesovo Beam**	**54.80**	**349**	P	**P**	**13 01 43.0**	**+0.2**
EIDS	**Eidsvold**	**55.99**	**121**	P	**P**	**13 01 51.0**	**-0.9**
EIDS				IAmb	IAmb	13 01 51.7	
	comp=Z,5.9nm,0.8s						
KLR	**Kul'dur**	**56.05**	**25**	P	**P**	**13 01 51.5**	**-0.4**
	comp=Z,4.4nm,0.7s,baz=243,slow=7.4,SNR=13						
ARMA	**Armidale**	**58.19**	**127**	P	**P**	**13 02 08.3**	**+0.7**
ABKAR	**Akbulak array**	**59.36**	**331**	P	**P**	**13 02 14.5**	**-0.6**
OUENC	**Ouen Island, N**	**69.28**	**114**	P	**P**	**13 03 20.2**	**-0.1**
OUENC				IAmb	IAmb	13 03 25.4	
	comp=Z,8.5nm,0.7s						
FINES	**FINESS Array B**	**81.82**	**332**	P	**P**	**13 04 31.8**	**+0.6**
	comp=Z,11nm,1.1s,baz=125,slow=7.0,SNR=1.9						
ARCES	**ARCESS Array B**	**84.12**	**340**	P	**P**	**13 04 44.4**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=91,slow=5.3,SNR=5.7						
VNDA	**Vanda**	**84.53**	**169**	P	**P**	**13 04 46.1**	**+1.2**
VNDA				IAmb	IAmb	13 05 11.0	
	comp=Z,6.7nm,1.5s						
QSPA	**South Pole Qui**	**90.28**	**180**	P	**P**	**13 05 12.5**	**-0.4**
VNA2	**Neumayer--Watz**	**95.78**	**198**	P	**P**	**13 05 37.9**	**-0.2**
NVAR	**Mina Array Bea**	**128.12**	**38**	PKP	**PKPdf**	**13 11 19.6**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=311,slow=2.0,SNR=3.9						
PDAR	**Pinedale Array**	**129.79**	**28**	PKP	**PKPdf**	**13 11 21.1**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=87,slow=2.1,SNR=4.1						
ANMO	**Albuquerque**	**137.35**	**32**	PKP	**PKPdf**	**13 11 36.8**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=156,slow=1.2,SNR=3.7						
TXAR	**Lajitas Array**	**143.15**	**35**	PKhKP	PKPpre	13 11 43.4	
	comp=Z,0.7nm,0.5s,baz=269,slow=0.8,SNR=12						
TXAR				SKPbc	**SKPbc**	**13 15 14.1**	**-2.1**
	comp=Z,0.5nm,0.6s,baz=252,slow=0.3,SNR=6.3						
CPUP	**Villa Florida**	**145.83**	**219**	PKPbc	**PKPab**	**13 11 53.0**	**+0.6**
	comp=Z,6.2nm,0.8s,baz=138,slow=1.5,SNR=8.3						

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*KRNET **07** 12:54:39.7±0.1, 38°.55N×73°.04E, mb3.8*

*NNC **07** 12:54:53.3±4.5, 39°.20N×72°.96E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=32.5km s-min=20.4km az=170.0*

ISC 07 12:54:49.4±2.3, **38°.8N**±0°.1×**72°.84E**±0°.06, **h26**^{km}±16^{km}, **n17,** σ**1**^{s}**96**/25, **13C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.06**	**311**	⇑*e*P	**Pn**	**12 55 05.3**	**-3.6**
	baz=14						
DRK				⇑*i*S	**Sn**	**12 55 24.0**	**+1.0**
	baz=14						
SFK	**Sufi-Kurgan**	**1.33**	**23**	⇑*e*P	**Pn**	**12 55 08.3**	**-4.2**
	baz=14						
SFK				⇑*e*S	**Sb**	**12 55 29.5**	**-1.0**
	baz=14						
OHH	**Osh**	**1.74**	**359**	⇑*i*P	**Pn**	**12 55 16.2**	**-1.7**
	baz=54						
OHH				⇑*i*S	**Sb**	**12 55 43.1**	**+1.1**
	baz=54						
GAR	**Garm**	**1.98**	**277**	⇑*i*P	**Pn**	**12 55 19.1**	**-2.2**
	baz=83						
GAR				⇑*i*S	**Sn**	**12 55 48.5**	**+3.2**
	baz=83						
BTK	**Batken**	**2.02**	**310**	⇑*i*P	**Pn**	**12 55 20.9**	**-0.9**
	baz=12						
BTK				⇑*i*S	**Sb**	**12 55 51.0**	**+1.0**
	baz=12						
AML	**Almayashu**	**3.41**	**11**	⇓*i*P	**Pn**	**12 55 39.5**	**-1.7**
	baz=8.0						
AML				⇓*i*S	**Sn**	**12 56 22.6**	**+1.7**
	baz=8.0						
MRKS	**Merke**	**3.97**	**4**	Pg	**Pb**	**12 55 56.8**	**-1.8**
	13nm,0.3s						
MRKS				Lg	Lg	12 56 49.3	
	29nm,0.5s						
AAK	**Ala-Archa**	**4.05**	**18**	Pn	**Pn**	**12 55 52.5**	**+2.8**
	11nm,0.8s						
AAK				⇓Sn	**Sn**	**12 56 36.0**	**-0.4**
	23nm,0.8s						
TKM2	**Tokmak 2**	**4.63**	**26**	⇑Pg	**Pb**	**12 56 10.6**	**+0.6**
	10nm,0.9s						
TKM2				⇑Lg	Lg	12 57 08.1	
	7.8nm,0.7s						
KK09	**Karatay Array**	**4.68**	**339**	⇓Pn	**Pn**	**12 55 59.1**	**+0.7**
	baz=142,slow=13						
KK09				⇑Sn	**Sn**	**12 56 51.1**	**-0.6**
	14nm,0.7s						
KK09				⇓Lg	Lg	12 57 13.2	
	11nm,0.6s,baz=145,slow=28						
KST	**Kastek**	**4.87**	**28**	Pg	**Pb**	**12 56 14.2**	**+0.3**
	6.2nm,0.8s						
KST				Lg	Lg	12 57 19.6	
	18nm,0.7s						
DGS	**Degeres**	**4.97**	**26**	Pg	**Pb**	**12 56 15.0**	**-0.8**
	8.6nm,0.5s						
DGS				Lg	Lg	12 57 19.5	
	10nm,0.7s						
TNSS	**Tian-Shan**	**5.26**	**35**	Pg	**Pb**	**12 56 21.1**	**+0.2**
	4.2nm,0.5s						
TNSS				Lg	Lg	12 57 30.4	
	4.5nm,0.6s						
KRBS	**Karabastau**	**5.35**	**23**	Pg	**Pb**	**12 56 22.5**	**+0.4**
	2.7nm,0.6s						
KRBS				Lg	Lg	12 57 33.9	
	7.2nm,0.9s						
KOTS	**Kotyrbulak**	**5.50**	**35**	Pg	**Pb**	**12 56 25.6**	**+0.9**
	3.8nm,0.7s						
KOTS				Lg	Lg	12 57 38.5	
	16nm,0.7s						
KTBS	**Karatobe**	**5.71**	**29**	Pg	**Pb**	**12 56 29.7**	**+1.4**
	3.5nm,0.6s						
KTBS				Lg	Lg	12 57 45.2	
	7.2nm,0.8s						
KUU	**Kurty**	**5.74**	**26**	Pg	**Pb**	**12 56 31.1**	**+2.4**
	1.8nm,0.2s						
KUU				Lg	Lg	12 57 47.6	
	9.7nm,1.1s						

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*INET **07** 12:56:02.5, 12°.04N×88°.10W, h15^{km}, MW3.4*

IDC 07 12:56:12.8±4.0, **14°.15N**×**87°.36W, h0**^{km}**, mb3.9**/4, **mb1 4.1**/4, **mb1mx3.4**/44, **mbtmp3.9**/4, **Error ellipse: s-maj=84.5km s-min=50.4km az=5.0, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**21.36**	**318**	P	P	13 01 01.0	-0.9
	1.6nm,0.8s,baz=136,slow=10,SNR=18						
NVAR	**Mina Array Bea**	**36.51**	**317**	P	P	13 03 21.8	+1.5
	0.4nm,0.8s,baz=135,slow=9.0,SNR=2.3						
ULM	**Lac du Bonnet**	**36.67**	**351**	P	P	13 03 20.4	-0.8
	2.7nm,0.5s,baz=158,slow=14,SNR=3.8						
SCHQ	**Schefferville**	**43.64**	**17**	P	P	13 04 19.4	+0.4
	2.7nm,0.6s,baz=231,slow=6.5,SNR=4.7						
CMAR	**Chiang Mai Arr**	**147.01**	**349**	PKPbc	PKPdf	13 15 57.2	+0.7
	0.6nm,0.6s,baz=356,slow=3.6,SNR=4.8						

*NNC **07** 12:57:25.1±1.1, 40°.95N×74°.30E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=7.5km s-min=5.5km az=2.0*
*SOME **07** 12:57:25.0, 40°.97N×74°.33E, h10^{km}*
*KRNET **07** 12:57:26.9±0.1, 41°.05N×74°.19E, h23^{km}, mb3.0*
*KNET **07** 12:57:26.8±0.8, 41°.11N×74°.36E, h0^{km}, ml2.4, Error ellipse: s-maj=5.4km s-min=2.8km az=19.0*
ISC 07 12:57:25.6±1.1**, 41°.01N**±0°.03×**74°.28E**±0°.02**, h10**^{km}±10^{km}**, n58, σ1^{s}38**/102**, 29C-28D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALK	**Salom-Alik**	**0.38**	**249**	⇑eP	**Pg**	**12 57 33.7**	**+0.6**
	baz=39						
SALK				⇑eS	**Sg**	**12 57 38.5**	**+0.5**
	baz=39						
SFK	**Sufi-Kurgan**	**1.16**	**211**	⇓eP	**Pb**	**12 57 48.2**	**+0.3**
	baz=7.0						
SFK				⇓eS	**Sn**	**12 58 04.8**	**+0.6**
	baz=7.0						
AML	**Almayashu**	**1.20**	**339**	⇓P	**Pg**	**12 57 48.6**	**-0.1**
	14nm,0.2s,SNR=21						
AML				⇑S	**Sn**	**12 58 05.5**	**+0.1**
	59nm,0.3s						
AML	**Almayashu**	**1.20**	**339**	⇓eP	**Pg**	**12 57 48.2**	**-0.5**
	baz=41						
AML				⇓iS	**Sg**	**12 58 03.8**	**-0.5**
	baz=41						
UCH	**Uchtor**	**1.23**	**8**	⇑P	**Pb**	**12 57 49.1**	**+0.1**
	15nm,0.2s,SNR=37						
UCH				⇓S	**Sn**	**12 58 06.9**	**+0.8**
	25nm,0.2s						
UCH	**Uchtor**	**1.23**	**8**	⇓eP	**Pb**	**12 57 49.2**	**+0.1**
	baz=12						
UCH				⇓iS	**Sb**	**12 58 05.4**	**+0.2**
	baz=12						
OHH	**Osh**	**1.24**	**247**	⇓iP	**Pn**	**12 57 48.5**	**-0.6**
	baz=44						
OHH				⇓eS	**Sb**	**12 58 04.5**	**-0.7**
	baz=44						
AAK	**Ala-Archa**	**1.63**	**5**	⇑P	**Pg**	**12 57 56.6**	**-0.2**
	14nm,0.2s,SNR=29						
AAK				⇑S	**Sg**	**12 58 19.2**	**+1.2**
	22nm,0.3s						
AAK	**Ala-Archa**	**1.63**	**5**	⇓P	**Pb**	**12 57 56.3**	**+0.5**
	8.6nm,0.5s						
AAK				⇑S	**Sg**	**12 58 18.7**	**+0.7**
	9.9nm,0.3s						
AAK	**Ala-Archa**	**1.63**	**5**	⇑iP	**Pb**	**12 57 56.1**	**+0.2**
	baz=8.0						
AAK				⇑iS	**Sg**	**12 58 17.3**	**-0.7**
	baz=8.0						
EKS2	**Erkin-Say**	**1.69**	**347**	⇑P	**Pg**	**12 57 57.6**	**-0.4**
	4.6nm,0.2s,SNR=9.6						
EKS2				⇓S	**Sg**	**12 58 20.8**	**+0.9**
	6.9nm,0.2s						
EKS2	**Erkin-Say**	**1.69**	**347**	⇑eP	**Pb**	**12 57 56.8**	**0.0**
	baz=49						
EKS2				⇑eS	**Sb**	**12 58 18.3**	**+0.1**
	baz=49						
KBK	**Karagaybulak**	**1.71**	**17**	⇓P	**Pg**	**12 57 58.3**	**-0.2**
	16nm,0.1s,SNR=44						
KBK				⇑S	**Sg**	**12 58 22.2**	**+1.5**
	47nm,0.2s						
KBK	**Karagaybulak**	**1.71**	**17**	⇑iP	**Pb**	**12 57 58.0**	**+0.7**
	baz=19						
KBK				⇑iS	**Sg**	**12 58 20.2**	**-0.5**
	baz=19						
MRKS	**Merke**	**1.90**	**336**	eP	**Pb**	**12 58 01.1**	**+0.7**
	6.2nm,0.4s						
MRKS				eS	**Sg**	**12 58 27.1**	**+0.4**
	26nm,0.2s						
MRKS	**Merke**	**1.90**	**336**	P	**Pg**	**12 58 01.4**	**-0.6**
	10nm,0.2s						
MRKS				S	**Sg**	**12 58 27.0**	**+0.3**
	26nm,0.2s						
ULHL	**Ulahol**	**1.92**	**49**	⇑P	**Pb**	**12 58 00.8**	**0.0**
	7.4nm,0.2s,SNR=33						
ULHL				⇑S	**Sg**	**12 58 26.9**	**-0.2**
	29nm,0.2s						
ULHL	**Ulahol**	**1.92**	**49**	⇓iP	**Pb**	**12 58 01.3**	**+0.6**
	baz=52						
ULHL				⇓iS	**Sg**	**12 58 26.5**	**-0.6**
	baz=52						
BOOM	**Boomskoye usch**	**1.93**	**39**	⇓iP	**Pb**	**12 58 01.4**	**+0.5**
	baz=42						
BOOM				⇓iS	**Sg**	**12 58 26.7**	**-0.8**
	baz=42						
MNAS	**Manas**	**1.98**	**318**	⇓eP	**Pb**	**12 58 01.1**	**-0.8**
	baz=19						
MNAS				⇓iS	**Sb**	**12 58 25.8**	**-0.9**
	baz=19						
CHMS	**Chumysh**	**2.01**	**10**	⇑P	**Pb**	**12 58 03.2**	**+0.9**
	4.9nm,0.1s,SNR=9.2						
CHMS				⇑S	**Sg**	**12 58 31.4**	**+1.1**
	11nm,0.2s						
CHMS	**Chumysh**	**2.01**	**10**	⇑iP	**Pb**	**12 58 02.1**	**-0.2**
	baz=12						
CHMS				⇑iS	**Sb**	**12 58 27.7**	**+0.2**
	baz=12						
TKM2	**Tokmak 2**	**2.14**	**27**	⇑P	**Pb**	**12 58 05.4**	**+0.8**
	3.9nm,0.1s,SNR=13						
TKM2				⇑S	**Sg**	**12 58 34.9**	**+0.5**
	17nm,0.2s						
TKM2	**Tokmak 2**	**2.14**	**27**	⇑Pg	**Pb**	**12 58 05.1**	**+0.5**
	4.6nm,0.6s						
TKM2				⇑Lg	Lg	12 58 36.4	
	15nm,0.6s						
TKM2	**Tokmak 2**	**2.14**	**27**	⇓iP	**Pb**	**12 58 04.3**	**-0.3**
	baz=29						
TKM2				⇓iS	**Sb**	**12 58 31.3**	**0.0**
	baz=29						
USP	**Ospenovka**	**2.26**	**4**	⇓eP	**Pb**	**12 58 05.4**	**-1.1**
	baz=6.0						
USP				⇓iS	**Sb**	**12 58 33.4**	**-1.1**
	baz=6.0						
KST	**Kastek**	**2.38**	**31**	eP	**Pb**	**12 58 10.0**	**+1.4**
	5.4nm,0.3s						
KST				eS	**Sg**	**12 58 42.9**	**+0.8**
	31nm,0.3s						
KST	**Kastek**	**2.38**	**31**	Pg	**Pb**	**12 58 09.7**	**+1.1**
	4.8nm,0.1s						
KST				Lg	Lg	12 58 43.6	
	31nm,0.3s						
TRKS	**Terek-Say**	**2.42**	**283**	⇑iP	**Pn**	**12 58 06.7**	**+1.2**
	baz=81						
TRKS				⇑iS	**Sn**	**12 58 35.6**	**+0.3**
	baz=81						
KDJ	**Kajisay**	**2.44**	**62**	⇓eP	**Pb**	**12 58 09.1**	**-0.6**
	baz=64						
KDJ				⇓iS	**Sb**	**12 58 39.9**	**0.0**
	baz=64						
DGS	**Degeres**	**2.49**	**26**	eP	**Pg**	**12 58 12.4**	**-0.8**
	17nm,0.4s						
DGS				eS	**Sg**	**12 58 46.4**	**+0.9**
	35nm,0.6s						
DGS	**Degeres**	**2.49**	**26**	Pg	**Pg**	**12 58 12.4**	**-0.8**
	17nm,0.4s						
DGS				Lg	Lg	12 58 46.9	
	27nm,0.3s						
MTBS	**Maitube**	**2.65**	**36**	eP	**Pb**	**12 58 15.0**	**+1.8**
	11nm,0.3s						
MTBS				eS	**Sg**	**12 58 50.6**	**-0.1**
	42nm,0.4s						
TARG	**Taragay, Kyrgy**	**2.74**	**74**	⇓iP	**Pb**	**12 58 13.4**	**-1.6**
	baz=75						
TARG				⇓iS	**Sb**	**12 58 47.3**	**-1.6**
	baz=75						
TNSS	**Tian-Shan**	**2.83**	**44**	eP	**Pb**	**12 58 17.7**	**+1.2**
	6.1nm,0.3s						
TNSS				eS	**Sg**	**12 58 55.8**	**-0.7**
	18nm,0.3s						
TNSS	**Tian-Shan**	**2.83**	**44**	Pg	**Pb**	**12 58 17.9**	**+1.4**
	7.6nm,0.3s						
TNSS				Lg	Lg	12 58 56.0	
	18nm,0.3s						
KRBS	**Karabastau**	**2.87**	**21**	⇑eP	**Pb**	**12 58 18.8**	**+1.8**
	6.6nm,0.2s						
KRBS				eS	**Sg**	**12 58 57.3**	**-0.5**
	18nm,0.3s						
KRBS	**Karabastau**	**2.87**	**21**	Pg	**Pb**	**12 58 18.8**	**+1.8**
	6.6nm,0.2s						
KRBS				Lg	Lg	12 58 57.3	
	18nm,0.3s						
MDOK	**Medeo**	**2.97**	**43**	eP	**Pb**	**12 58 20.3**	**+1.5**
	6.2nm,0.6s						
MDOK				eS	**Sg**	**12 58 59.9**	**-1.2**
	20nm,0.5s						
MDOK	**Medeo**	**2.97**	**43**	Pg	**Pb**	**12 58 20.1**	**+1.4**
	6.2nm,0.6s						
MDOK				Lg	Lg	12 58 59.1	
	20nm,0.5s						
KOTS	**Kotyrbulak**	**3.06**	**43**	eP	**Pb**	**12 58 21.9**	**+1.7**
	4.4nm,0.2s						
KOTS				eS	**Sg**	**12 59 03.1**	**-0.6**
	37nm,0.4s						
KOTS	**Kotyrbulak**	**3.06**	**43**	Pg	**Pb**	**12 58 21.9**	**+1.7**
	4.4nm,0.2s						
KOTS				Lg	Lg	12 59 03.1	
	37nm,0.4s						
KTBS	**Karatobe**	**3.23**	**33**	eP	**Pb**	**12 58 24.8**	**+1.8**
	2.2nm,0.2s						
KTBS				eS	**Sg**	**12 59 07.6**	**-1.6**
	29nm,0.5s						
KTBS	**Karatobe**	**3.23**	**33**	Pg	**Pb**	**12 58 24.8**	**+1.8**
	2.2nm,0.2s						
KTBS				Lg	Lg	12 59 07.6	
	29nm,0.5s						
KUU	**Kurty**	**3.25**	**27**	eP	**Pb**	**12 58 25.2**	**+1.7**
	2.3nm,0.1s						
KUU				eS	**Sg**	**12 59 08.8**	**-1.3**
	15nm,0.5s						
KUU	**Kurty**	**3.25**	**27**	Pg	**Pb**	**12 58 25.2**	**+1.7**
	2.3nm,0.1s						
KUU				Lg	Lg	12 59 08.8	
	15nm,0.5s						
KK09	**Karatay Array**	**3.52**	**308**	⇓Pg	**Pb**	**12 58 26.5**	**-1.4**
	5.3nm,0.8s,baz=128,slow=15						
KK09				⇑Lg	Lg	12 59 14.7	
	9.1nm,0.6s,baz=127,slow=29						
SATY	**Saty**	**3.69**	**55**	eP	**Pb**	**12 58 33.2**	**+2.3**
	1.4nm,0.2s						
SATY				eS	**Sg**	**12 59 22.1**	**-1.9**
	11nm,0.3s						
SATY	**Saty**	**3.69**	**55**	Pg	**Pb**	**12 58 33.2**	**+2.3**
	1.4nm,0.2s						
SATY				Lg	Lg	12 59 22.1	
	11nm,0.3s						
KURS	**Kuram**	**3.80**	**48**	eP	**Pb**	**12 58 34.6**	**+1.9**
	1.1nm,0.4s						
KURS				eS	**Sg**	**12 59 24.3**	**-3.2**
	5.0nm,0.8s						
KURS	**Kuram**	**3.80**	**48**	Pg	**Pb**	**12 58 35.0**	**+2.2**
	1.1nm,0.3s						
KURS				Lg	Lg	12 59 24.3	
	5.0nm,0.8s						
BTLS	**Baital**	**4.03**	**358**	eP	**Pg**	**12 58 40.3**	**-2.4**
	0.8nm,0.3s						
BTLS				eS	**Sg**	**12 59 34.3**	**-0.6**
	4.8nm,0.6s						
KPKS	**Kokpek**	**4.08**	**52**	eP	**Pb**	**12 58 40.0**	**+2.4**
	1.9nm,0.2s						
KPKS				eS	**Sg**	**12 59 33.7**	**-3.0**
	10nm,0.4s						
UZB	**Uzynbulak**	**4.12**	**57**	eP	**Pb**	**12 58 40.5**	**+2.2**
	5.1nm,0.5s						
UZB				eS	**Sg**	**12 59 34.5**	**-3.3**
	8.2nm,0.6s						
UZB	**Uzynbulak**	**4.12**	**57**	Pg	**Pb**	**12 58 40.5**	**+2.2**
	5.1nm,0.5s						
UZB				Lg	Lg	12 59 34.5	
	8.2nm,0.6s						
ARXS	**Arharly**	**4.13**	**38**	eP	**Pb**	**12 58 40.5**	**+2.2**
	1.3nm,0.3s						
ARXS				eS	**Sg**	**12 59 35.2**	**-3.0**
	15nm,0.7s						
ARXS	**Arharly**	**4.13**	**38**	Pg	**Pb**	**12 58 40.6**	**+2.2**
	1.3nm,0.3s						
ARXS				Lg	Lg	12 59 35.2	
	15nm,0.7s						
SHLS	**Shalkode**	**4.41**	**59**	eP	**Pg**	**12 58 50.2**	**+0.2**
	2.9nm,0.5s						
SHLS				eS	**Sg**	**12 59 51.2**	**+4.1**
	10nm,0.4s						

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*KRNET **07** 12:58:24.0±0.1, 38°.48N×72°.94E, mb4.2*
*NNC **07** 12:58:29.2±12.0, 38°.57N×72°.87E, h0^{km}, mb4.2, mpv3.7, Error ellipse: s-maj=96.2km s-min=64.7km az=166.0*
ISC 07 12:58:23.4±2.4**, 38°.5N**±0°.1×**73°.01E**±0°.06**, h10**^{km}**, n9, σ2^{s}48**/17**, 11C-6D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**1.40**	**318**	⇑eP	**Pb**	**12 58 49.2**	**-0.6**
	baz=19						
DRK				⇑iS	**Sg**	**12 59 07.7**	**-0.7**
	baz=19						
SFK	**Sufi-Kurgan**	**1.61**	**14**	⇑eP	**Pb**	**12 58 53.4**	**0.0**
	baz=16						
SFK				⇑eS	**Sg**	**12 59 15.9**	**+0.7**
	baz=16						
OHH	**Osh**	**2.08**	**355**	⇓iP	**Pb**	**12 59 01.3**	**0.0**
	baz=57						
OHH				⇓eS	**Sg**	**12 59 28.5**	**-1.8**
	baz=57						
GAR	**Garm**	**2.18**	**285**	⇓iP	**Pb**	**12 59 02.6**	**-0.4**
	baz=85						
GAR				⇓iS	**Sg**	**12 59 30.7**	**-2.7**
	baz=85						
BTK	**Batken**	**2.34**	**314**	⇑eP	**Pb**	**12 59 04.7**	**-1.1**
	baz=14						
BTK				⇑iS	**Sb**	**12 59 34.1**	**-0.7**
	baz=14						
AML	**Almayashu**	**3.71**	**8**	⇓eP	**Pn**	**12 59 24.5**	**+3.3**
	baz=9.0						
AML				⇓eS	**Sn**	**13 00 08.6**	**+3.3**
	baz=9.0						
AAK	**Ala-Archa**	**4.33**	**15**	Pn	**Pb**	**12 59 37.3**	**-2.5**
	7.1nm,0.5s						
AAK				⇑Sn	**Sb**	**13 00 28.4**	**-3.8**
	38nm,0.9s						
TKM2	**Tokmak 2**	**4.88**	**23**	⇑Pg	**Pg**	**12 59 54.6**	**-2.3**
	17nm,1.4s						
TKM2				⇑Lg	Lg	13 01 02.0	
	9.9nm,0.6s						
KK09	**Karatay Array**	**5.04**	**339**	⇑Pn	**Pn**	**12 59 41.3**	**+2.2**
	8.8nm,0.6s,baz=145,slow=12						
KK09				⇑Sn	**Sn**	**13 00 41.9**	**+4.4**
	14nm,0.6s,baz=152,slow=25						

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*NEIC **07** 12:59:14.9±2.4, 3°.63N±0°.08×124°.58E±0°.05, h314^{km}±6^{km}, mb4.5/51, Error ellipse: s-maj=11.4km s-min=7.8km az=180.0*
*DJA **07** 12:59:14.5±0.2, 4°N±3°×12°5E±°, h311^{km}±3^{km}, M4.4/31, mB4.9/13, mb4.5/31, MLv4.8/14, Mw(mB)4.2/13*
*IDC **07** 12:59:15.1±1.1, 3°.62N×124°.51E, h324^{km}±11^{km}, mb3.9/24, mb1 4.0/29, mb1mx3.7/49, mbtmp4.7/29, Error ellipse: s-maj=14.7km s-min=6.9km az=75.0*
ISC 07 12:59:15.6±0.3**, 3°.63N**±0°.04×**124°.61E**±0°.06**, h331**^{km}**, n154, σ1^{s}24**/166**, mb4.3**/65**, 4C-4D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**0.92**	**87**	P	**Pn**	**12 59 56.2**	**-2.8**
DDMP	**Don Marcelino,**	**2.69**	**24**	⇑eP	**Pn**	**13 00 08.8**	**-2.0**
KMSI	**Cibinong**	**3.10**	**192**	P	**Pn**	**13 00 13.2**	**-1.4**
GTOI	**Gorontalo**	**3.38**	**208**	P	**Pn**	**13 00 14.6**	**-2.6**
DMPH	**Davao City--Mi**	**3.54**	**15**	⇑eP	**Pn**	**13 00 17.7**	**-1.1**
DMPH				eS	**S**	**13 01 05.0**	**-4.6**
MATI	**Mati**	**3.68**	**26**	⇓iP	**Pn**	**13 00 18.8**	**-1.4**
TNTI	**Ternate**	**3.96**	**136**	P	**Pn**	**13 00 20.7**	**-2.4**
TNTI	**Ternate**	**3.96**	**136**	Pn	**Pn**	**13 00 20.8**	**-2.4**
MRSI	**Marisa**	**4.11**	**220**	P	**Pn**	**13 00 23.5**	**-1.3**
PAGZ	**Pagadian**	**4.36**	**344**	⇓eP	Pn	13 00 17.1	-10
TOLI2	**Tolitoli**	**4.57**	**237**	Pn	**Pn**	**13 00 27.3**	**-2.4**
LBMI	**Labuha**	**5.13**	**146**	P	**Pn**	**13 00 33.8**	**-2.2**
	4.8nm19μm1μm,0.6s						
APSI	**Ampana**	**5.40**	**213**	P	**Pn**	**13 00 37.3**	**-1.6**
	0.3nm901nm57nm,0.6s						
MPSI	**Mapaga**	**5.73**	**235**	P	**Pn**	**13 00 41.4**	**-1.4**
	0.3nm787nm88nm,0.8s						
SANI	**Sanana**	**5.81**	**166**	P	**Pn**	**13 00 39.6**	**-4.1**
	2.8nm14μm340nm,0.5s						
MYLDM	**Lahad Datu**	**6.28**	**284**		**Pn**	**13 00 49.3**	**+0.1**
SWI	**Sorong**	**8.01**	**124**	P	**Pn**	**13 01 08.1**	**-1.6**
	0.1nm33nm,0.6s						
SIJI	**Sorong**	**8.02**	**124**	P	**Pn**	**13 01 10.5**	**+0.6**
	3.1nm,0.3s,baz=332,slow=19,SNR=8.6						
MSAI	**Masohi**	**8.17**	**148**	P	**Pn**	**13 01 11.7**	**+0.1**
	624nm42nm,0.5s						
TTSI	**Tana Toraja**	**8.18**	**216**	P	**Pn**	**13 01 11.4**	**-0.3**
	458nm20nm,0.6s						
KKM	**Kota Kinabalu**	**8.70**	**286**	Pn	**Pn**	**13 01 17.6**	**-0.5**
SPSI	**Sidrap Palu**	**8.96**	**213**	P	**Pn**	**13 01 18.2**	**-3.0**
	19nm,0.8s						
BNSI	**Bone**	**9.16**	**209**	P	**Pn**	**13 01 24.7**	**+1.2**
	1μm40nm,0.7s						
SJMP	**San Jose**	**9.43**	**339**	⇓iP	**Pn**	**13 01 27.3**	**+0.6**
KAPI	**Kappang**	**9.86**	**209**	P	**Pn**	**13 01 30.2**	**-1.9**
	1.8nm,0.3s,baz=184,slow=19,SNR=1.7						
BKSI	**Bulukumba**	**9.96**	**207**	P	**Pn**	**13 01 32.4**	**-0.8**
	13nm,1.0s						
FAKI	**Fak Fak**	**10.03**	**130**	P	**Pn**	**13 01 33.2**	**-0.9**
	515nm44nm,0.8s						
FAKI	**Fak Fak**	**10.03**	**130**		**Pn**	**13 01 33.9**	**-0.2**
JCNP	**Jose Panganiba**	**10.76**	**350**	⇓iP	**P**	**13 01 43.9**	**-0.4**
LQP	**Lukban**	**10.84**	**344**	⇑eP	**Pn**	**13 01 44.4**	**+0.3**
LUBP	**Lubang**	**10.92**	**337**	⇑iP	**Pn**	**13 01 45.0**	**+0.3**
TGY	**Tagaytay City**	**11.02**	**341**	P	**Pn**	**13 01 43.7**	**-2.3**
	25nm,0.3s,baz=268,slow=16,SNR=1.3						
SBUM	**Sibu**	**12.43**	**265**	P	**P**	**13 02 03.4**	**+0.5**
EDFI	**Ende, Flores**	**12.64**	**193**	P	**Pn**	**13 02 05.7**	**+0.2**
	7.6nm,1.1s						
SOEI	**Soe**	**13.30**	**181**	P	**P**	**13 02 12.6**	**-0.1**
	30nm,0.8s						
SOEI	**Soe**	**13.30**	**181**		**Pn**	**13 02 14.4**	**+1.0**
STKI	**Sintang**	**13.59**	**255**	P	**P**	**13 02 15.5**	**-0.3**
BATI	**Baumata**	**13.78**	**184**	P	**Pn**	**13 02 19.2**	**+0.3**
	11nm,0.3s,baz=253,slow=2.1,SNR=15						
BATI				S	**S**	**13 04 50.5**	**+1.5**
	3.7nm,0.3s,baz=120,slow=18,SNR=2.4						
BATI	**Baumata**	**13.78**	**184**	P	**Pn**	**13 02 19.8**	**+0.9**
	38nm,0.7s						
KSM	**Kuching**	**14.44**	**262**		**Pn**	**13 02 26.2**	**-0.6**
TWSI	**Taliwang, Sumb**	**14.50**	**212**	P	**Pn**	**13 02 26.8**	**-0.6**
	9.0nm,1.1s						
JAGI	**Jajag, Banyuwa**	**15.91**	**221**	P	**P**	**13 02 41.4**	**+0.2**
	16nm,0.7s						
JAGI	**Jajag, Banyuwa**	**15.91**	**221**	P	**Pn**	**13 02 42.9**	**-0.9**
JAGI				IAmb	IAmb	13 03 00.0	
	comp=Z,48nm,1.5s						
GENI	**Genyem**	**16.74**	**111**	P	**P**	**13 02 49.0**	**-1.2**
	comp=Z,64nm,0.6s						
JAY	**Jayapura**	**17.21**	**111**	P	**P**	**13 02 56.7**	**+1.4**
	comp=Z,1.7nm,0.3s,baz=229,slow=12,SNR=7.7						
MTN	**Manton Dam**	**17.61**	**159**	P	**P**	**13 03 00.1**	**+0.7**
TWG	**Pinlang**	**19.38**	**350**	P	**P**	**13 03 18.3**	**0.0**
KNRA	**Kununurra**	**19.62**	**168**	P	**P**	**13 03 19.7**	**-1.3**
KNRA				IAmb	IAmb	13 03 23.2	
	comp=Z,17nm,0.5s						
YULB	**Yu-li**	**19.90**	**351**	P	**P**	**13 03 21.8**	**-2.1**
YULB				IAmb	IAmb	13 03 30.8	
	comp=Z,37nm,1.1s						
TPUB	**Ta-pu**	**19.93**	**349**	P	**P**	**13 03 23.5**	**-0.6**
SSLB	**Suanglung**	**20.35**	**350**	P	**P**	**13 03 27.7**	**-0.5**
SSLB				IAmb	IAmb	13 03 29.8	
	comp=Z,38nm,0.9s						
YHNB	**Yeheng**	**21.15**	**352**	P	**P**	**13 03 35.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**21.62**	**177**	P	**P**	**13 03 39.7**	**-0.2**
	comp=Z,6.7nm,0.4s,baz=90,slow=20						
MDSI	**Maura Dua**	**21.95**	**249**	P	**P**	**13 03 43.0**	**0.0**
	comp=Z,220nmcomp=Z,12nm,0.9s						
UBPT	**Khong Chiam**	**22.11**	**303**	P	**P**	**13 03 44.8**	**+0.3**
UBPT				IAmb	IAmb	13 03 49.3	
	comp=Z,30nm,1.3s						
WB0	**Warramunga Arr**	**25.16**	**158**	P	**P**	**13 04 11.5**	**-0.5**
WRAB	**Tennant Creek**	**25.30**	**158**	P	**P**	**13 04 12.9**	**-0.3**
WRA	**Warramunga Arr**	**25.30**	**158**	P	**P**	**13 04 12.8**	**-0.5**
	comp=Z,14nm,0.4s,baz=335,slow=10,SNR=280						
WRA				S	**S**	**13 08 12.2**	**-2.2**
	comp=Z,1.4nm,0.8s,baz=316,slow=20,SNR=5.7						
WRA				ScP	**ScP**	**13 10 45.5**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=335,slow=3.0,SNR=2.8						
WRA	**Warramunga Arr**	**25.30**	**158**	P	**P**	**13 04 11.9**	**-1.3**
WB2	**Warramunga Arr**	**25.31**	**158**	P	**P**	**13 04 12.8**	**-0.4**
COEN	**Coen**	**25.39**	**134**	P	**P**	**13 04 13.4**	**-0.6**
COEN				IAmb	IAmb	13 04 19.6	
	comp=Z,16nm,1.4s						
WR0	**Warramunga Arr**	**25.39**	**158**	P	**P**	**13 04 13.8**	**-0.3**
WR0				IAmb	IAmb	13 04 14.4	
	comp=Z,8.0nm,0.7s						
PSA00	**Pilbara Seismi**	**25.48**	**190**	P	**P**	**13 04 14.2**	**-0.6**
PSA00				IAmb	IAmb	13 04 21.3	
	comp=Z,16nm,1.3s						
AS31	**Alice Springs**	**28.61**	**162**	P	**P**	**13 04 42.6**	**+0.1**
AS31				IAmb	IAmb	13 04 43.4	
	comp=Z,6.0nm,0.2s						
ASAR	**Alice Springs**	**28.61**	**162**	P	**P**	**13 04 42.6**	**+0.1**
	comp=Z,4.1nm,0.4s,baz=341,slow=7.6,SNR=176						
ASAR				S	**S**	**13 09 06.5**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=354,slow=16,SNR=5.4						
ASAR				ScP	**ScP**	**13 10 55.0**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=342,slow=2.4,SNR=6.5						
ASAR	**Alice Springs**	**28.61**	**162**	P	**P**	**13 04 42.4**	**-0.1**
RABL	**Rabaul**	**28.61**	**106**	P	**P**	**13 04 44.0**	**+1.3**
JCJ	**Chichijima**	**28.75**	**34**	P	**P**	**13 04 44.1**	**+0.4**
	comp=Z,45nm,0.6s,baz=106,slow=23,SNR=5.6						
NJ2	**Nanjing**	**28.78**	**350**	eP	**P**	**13 04 46.0**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CM31	**Chiang Mai Arr**	**29.11**	**302**	P	**P**	**13 04 47.2**	**+0.1**
CMAR	**Chiang Mai Arr**	**29.11**	**302**	P	**P**	**13 04 47.9**	**+0.8**
	comp=Z,3.9nm,0.8s,baz=118,slow=6.7,SNR=24						
CMAR				ScP	**ScP**	**13 10 57.5**	**+2.0**
	comp=Z,0.6nm,0.5s,baz=164,slow=2.1,SNR=5.9						
CMAR	**Chiang Mai Arr**	**29.11**	**302**	P	**P**	**13 04 47.1**	**0.0**
CHTO	**Chiang Mai**	**29.28**	**303**	P	**P**	**13 04 49.0**	**+0.5**
CHTO				IAmb	IAmb	13 04 49.8	
	comp=Z,11nm,0.7s						
CTAO	**Charters Tower**	**31.75**	**139**	P	**P**	**13 05 09.0**	**-1.0**
XAN	**Xi'an**	**33.60**	**336**	P	**P**	**13 05 26.0**	**+0.1**
XAN				pmax	pmax		
	comp=Z,16nm,0.9s						
KSRS	**Korea Array**	**33.80**	**5**	P	**P**	**13 05 27.6**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=181,slow=9.2,SNR=3.2						
FORT	**Forrest**	**34.38**	**175**	P	**P**	**13 05 32.2**	**-0.3**
FORT				IAmb	IAmb	13 05 49.5	
	comp=Z,21nm,0.9s						
MAT	**Matsushiro**	**35.06**	**19**	P	**P**	**13 05 38.5**	**+0.2**
MJAR	**Matsushiro Arr**	**35.06**	**19**	P	**P**	**13 05 38.1**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=191,slow=9.9,SNR=5.7						
JMM	**Marumori**	**37.15**	**21**	P	**P**	**13 05 56.7**	**+0.9**
JMM				IAmb	IAmb	13 06 09.2	
	comp=Z,25nm,1.2s						
BBOO	**Buckleboo**	**37.84**	**164**	P	**P**	**13 06 01.7**	**+0.2**
BBOO				IAmb	IAmb	13 06 02.8	
	comp=Z,12nm,0.3s						
SHL	**Shillong**	**38.25**	**308**	P	**P**	**13 06 05.4**	**+0.1**
SHL				IAmb	IAmb	13 06 07.5	
	comp=Z,17nm,0.5s						
EIDS	**Eidsvold**	**38.61**	**140**	P	**P**	**13 06 08.5**	**+0.4**
EIDS				IAmb	IAmb	13 06 09.2	
	comp=Z,14nm,1.1s						
STKA	**Stephens Creek**	**38.84**	**157**	P	**P**	**13 06 11.1**	**+1.3**
	comp=Z,10nm,0.3s,baz=341,slow=7.5,SNR=48						
STKA	**Stephens Creek**	**38.84**	**157**	P	**P**	**13 06 11.1**	**+1.3**
HHC	**Hu-ho-hao-te**	**38.87**	**344**	eP	**P**	**13 06 09.0**	**-1.1**
HHC				S	**S**	**13 11 47.3**	**+4.3**
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,4.5s						
LSA	**Lhasa**	**40.93**	**313**	P	**P**	**13 06 29.6**	**+2.0**
LSA				IAmb	IAmb	13 06 30.5	
	comp=Z,12nm,0.4s						
GTA	**Gaotai**	**42.12**	**331**	eP	**P**	**13 06 37.3**	**+0.7**
GTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TAPN	**Taplejung**	**42.38**	**308**	eP	**P**	**13 06 39.4**	**+0.3**
	comp=Z,9.2nm,0.4s						
ODAN	**Odare**	**42.41**	**307**	eP	**P**	**13 06 39.5**	**+0.2**
ARMA	**Armidale**	**42.58**	**145**	P	**P**	**13 06 41.4**	**+1.1**
RAMN	**Ramite**	**43.09**	**306**	eP	**P**	**13 06 45.2**	**+0.6**
	comp=Z,18nm,0.6s						
ASAJ	**Asahikawa**	**43.34**	**19**	P	**P**	**13 06 47.4**	**+1.4**
	comp=Z,9.1nm,0.7s,baz=244,slow=14,SNR=8.6						
GUN	**Gumba**	**44.08**	**307**	eP	**P**	**13 06 53.4**	**+0.8**
	comp=Z,66nm,0.5s						
PKI	**Pulchoki**	**44.31**	**307**	eP	**P**	**13 06 54.6**	**+0.2**
	comp=Z,16nm,0.6s						
PKIN	**Phulchoki**	**44.32**	**307**	eP	**P**	**13 06 54.5**	**+0.1**
	comp=Z,10.0nm,0.4s						
KKN	**Kakani**	**44.51**	**307**	eP	**P**	**13 06 56.2**	**+0.4**
	comp=Z,21nm,0.5s						
DMN	**Daman**	**44.57**	**306**	eP	**P**	**13 06 57.2**	**+0.9**
	comp=Z,13nm,0.4s						
CAN	**Canberra**	**45.00**	**151**	P	**P**	**13 07 01.6**	**+2.3**
CAN				IAmb	IAmb	13 07 02.4	
	comp=Z,13nm,0.6s						

GKN	Gorkha	45.11	307	eP	P	13 07 00.7	+0.2
	comp=Z,14nm,0.4s						
TOO	Toolangi	45.36	157	P	P	13 07 03.9	+1.9
KLR	Kul'dur	45.84	7	P	P	13 07 05.3	-0.2
	comp=Z,1.9nm,0.5s,baz=194,slow=8.1,SNR=7.8						
KOLN	Koldanda	45.85	306	eP	P	13 07 06.8	+0.6
	comp=Z,61nm,0.4s						
DANN	Dangsing	45.96	307	eP	P	13 07 07.7	+0.5
	comp=Z,61nm,0.5s						
PYUN	Piuthan	46.48	306	eP	P	13 07 11.7	+0.6
	comp=Z,52nm,0.5s						
SONM	Songino Array	46.75	343	P	P	13 07 12.9	+0.2
	comp=Z,3.0nm,0.6s,baz=159,slow=8.6,SNR=21						
SONM				PcP	PcP	13 08 40.7	+0.6
	comp=Z,0.7nm,0.8s,baz=144,slow=5.2,SNR=3.4						
SONM				ScP	ScP	13 12 01.6	0.0
	comp=Z,0.5nm,0.8s,baz=154,slow=4.1,SNR=3.8						
SONM	Songino Array	46.75	343	P	P	13 07 12.9	+0.2
DZM	Mont Dzumac	48.22	124	P	P	13 07 26.0	+1.6
OUENC	Ouen Island, N	48.71	124	P	P	13 07 28.8	+0.9
TLY	Talaya	50.99	343	P	P	13 07 44.8	+0.3
	comp=Z,1.8nm,0.5s,baz=345,slow=8.1,SNR=3.1						
WMQ	Urumqi	51.61	326	eP	P	13 07 49.9	+0.7
WMQ				pP	pP	13 08 56.8	-0.1
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.1s						
PETK	Petropavlovsk-	56.34	23	P	P	13 08 24.4	+1.5
	comp=Z,1.1nm,0.7s,baz=189,slow=4.5,SNR=9.1						
PETK	Petropavlovsk-	56.34	23	P	P	13 08 24.8	+1.9
TARG	Taragay, Kyrgy	56.42	319	P	P	13 08 25.0	+0.8
MK31	Makanchi Array	56.44	326	P	P	13 08 23.5	-0.3
MK31				IAmb	IAmb	13 08 24.8	
	comp=Z,6.3nm,0.6s						
MKAR	Makanchi Array	56.44	326	P	P	13 08 23.8	0.0
	comp=Z,9.5nm,0.4s,baz=120,slow=7.5,SNR=138						
MKAR				PcP	PcP	13 09 16.1	-0.4
	comp=Z,2.1nm,0.7s,baz=128,slow=4.1,SNR=5.7						
MKAR				ScP	ScP	13 12 44.1	+0.6
	comp=Z,1.2nm,0.6s,baz=114,slow=5.9,SNR=7.0						
MKAR	Makanchi Array	56.44	326	P	P	13 08 24.2	+0.4
MAKZ	Makanchi	56.63	326	P	P	13 08 25.4	+0.4
MAKZ				IAmb	IAmb	13 08 25.9	
	comp=Z,9.4nm,0.5s						
KDJ	Kajisay	57.02	319	P	P	13 08 28.8	+0.6
KDJ				IAmb	IAmb	13 08 29.6	
	comp=Z,13nm,0.9s						
YAK	Yakutsk	58.39	3	P	P	13 08 36.9	+0.1
	comp=Z,4.6nm,0.3s,baz=91,slow=1.6,SNR=5.3						
MA2	Magadan	59.33	15	P	P	13 08 45.2	+1.9
ZAA0	Zalesovo Array	59.73	334	P	P	13 08 45.9	-0.3
ZALV	Zalesovo Beam	59.73	334	P	P	13 08 45.3	-0.8
	comp=Z,3.8nm,0.6s,baz=134,slow=6.2,SNR=14						
ZALV	Zalesovo Beam	59.73	334	P	P	13 08 45.6	-0.6
KURBB	Kurchatov Arra	60.69	328	P	P	13 08 52.4	-0.3
	comp=Z,9.1nm,0.6s,baz=129,slow=6.3,SNR=80						
KURK	Kurchatov	60.70	328	P	P	13 08 52.5	-0.2
KURK				IAmb	IAmb	13 08 54.5	
	comp=Z,18nm,0.7s						
KKAR	Karatay Array	61.87	318	P	P	13 09 00.8	+0.1
SEY	Seymchan	62.62	14	P	P	13 09 04.9	-0.3
	comp=Z,1.0nm,0.4s,baz=25,slow=16,SNR=7.2						
TUWZ	Tuamarina	63.41	140	P	P	13 09 11.8	+0.9
BKZ	Black Stump Fm	63.94	137	P	P	13 09 15.8	+1.4
BRVK	Borovoye	66.33	328	P	P	13 09 29.1	-0.2
BRVK				IAmb	IAmb	13 09 31.2	
	comp=Z,4.2nm,0.6s						
TIXI	Tiksi	67.98	1	P	P	13 09 39.3	0.0
	comp=Z,3.9nm,0.3s,baz=179,slow=4.7,SNR=8.7						
NRIK	Noril'sk	70.03	347	P	P	13 09 52.1	+0.3
	comp=Z,12nm,0.7s,baz=125,slow=4.8,SNR=15						
NRIK	Noril'sk	70.03	347	P	P	13 09 52.4	+0.6
ABKAR	Akbulak array	70.89	321	P	P	13 09 56.9	-0.5
ABKAR	Akbulak array	70.89	321	P	P	13 09 56.8	-0.5
ABKAR				IAmb	IAmb	13 09 57.8	
	comp=Z,3.3nm,0.7s						
ARU	Arti	73.89	328	P	P	13 10 14.6	-0.2
ARU				IAmb	IAmb	13 10 15.5	
	comp=Z,6.4nm,0.8s						
VNDA	Vanda	83.60	172	P	P	13 11 05.9	-1.0
KLMR	Klimovskoe	84.45	331	eP	P	13 11 09.9	-1.5
KLMR				AMP		13 11 12.3	
	comp=Z,15nm,0.6s						
ILAR	Eielson Array	86.10	25	P	P	13 11 18.4	-1.0
	comp=Z,0.3nm,0.7s,baz=245,slow=4.6,SNR=5.3						
ILAR	Eielson Array	86.10	25	P	P	13 11 17.8	-1.7
ARCES	ARCESS Array B	89.81	340	P	P	13 11 36.0	-0.9
	comp=Z,3.8nm,0.8s,baz=45,slow=2.7,SNR=7.2						
ARCES	ARCESS Array B	89.81	340	P	P	13 11 36.6	-0.2
AKASG	Malin Array Be	90.63	321	P	P	13 11 39.2	-1.8
	comp=Z,1.0nm,0.5s,baz=69,slow=4.9,SNR=3.0						
FINES	FINESS Array B	90.91	332	P	P	13 11 41.0	-1.1
	comp=Z,2.2nm,0.5s,baz=70,slow=4.7,SNR=13						
FINES	FINESS Array B	90.91	332	P	P	13 11 40.8	-1.3
QSPA	South Pole Qui	93.54	180	P	P	13 11 48.2	-6.0
QSPA				IAmb	IAmb	13 12 15.0	
	comp=Z,4.1nm,1.5s						
BURAR	Bucovina Array	93.66	318	P	P	13 11 54.4	-0.8
BURAR				IAmb	IAmb	13 11 56.6	
	comp=Z,3.6nm,0.7s						
BUR08	Bucovina Ar. S	93.67	318	P	P	13 11 55.0	-0.3
BUR08				IAmb	IAmb	13 11 56.6	
	comp=Z,3.4nm,0.8s						
HFS	Hagfors	97.11	332	P	P	13 12 08.9	-1.5
	comp=Z,1.7nm,0.5s,baz=102,slow=6.2,SNR=8.1						
TORD	Torodi Ar. Bea	120.93	288	PKP	PKPdf	13 17 29.5	-0.5
	comp=Z,0.6nm,0.4s,baz=84,slow=1.9,SNR=6.8						
TORD	Torodi Ar. Bea	120.93	288		PKPdf	13 17 29.3	-0.7
TXAR	Lajitas Array	123.32	51	PKP	PKiKP	13 17 35.5	+0.9
	comp=Z,0.2nm,0.7s,baz=34,slow=2.3,SNR=3.7						
CVTR	Volcan Turrial	148.66	64		PKPdf	13 18 18.8	-2.6
CVTR				PKPbc	PKPbc	13 18 24.6	-1.0
CVTR				PKPab	PKPab	13 18 29.3	-1.1

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*IDC **07** 13:11:35.5±0.9, 7°.65S×155°.16E, h0^{km}, mb3.9/10, mb1 4.0/11, mb1mx3.8/45, mbtmp3.9/11, ML2.1/1, Error ellipse: s-maj=31.1km s-min=18.5km az=143.0*

*NEIC **07** 13:11:37.2±1.9, 7°.6S±0°.1×155°.2E±0°.1, h10^{km}±2^{km}, mb4.2/10, Error ellipse: s-maj=19.3km s-min=17.8km az=123.0*

ISC 07 13:11:39.9±0.6**, 7°.60S**±0°.09×**155°.17E**±0°.08**, h31^{km}, n28, σ1.s23**/29**, mb4.0**/14**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	4.52	318	Pn	Pn	13 12 43.0	-3.3
PMG	Port Moresby	8.12	257	Pn	Pn	13 13 35.5	-0.3
	1.4nm,0.3s,baz=69,slow=8.6,SNR=2.6						
PMG				Sn	Sn	13 15 07.4	+0.8
	1.4nm,0.3s,baz=121,slow=17,SNR=2.1						
PMG	Port Moresby	8.12	257		Pn	13 13 33.0	-2.7
EIDS	Eidsvold	18.09	192		Pn	13 15 47.9	-1.1
EIDS				IAmb	IAmb	13 15 52.6	
	comp=Z,9.7nm,1.2s						
MARNC	Mare, Loyalty	18.56	139	P	Pn	13 15 54.7	0.0
WB0	Warramunga Arr	23.49	237	P	P	13 16 46.8	-0.4
WB0				IAmb	IAmb	13 17 04.9	
	comp=Z,6.2nm,1.4s						
WB2	Warramunga Arr	23.61	237	P	P	13 16 47.8	-0.6
WB2				IAmb	IAmb	13 17 13.5	
	comp=Z,9.1nm,1.4s						
WRA	Warramunga Arr	23.62	237	P	P	13 16 47.6	-0.9
	comp=Z,1.7nm,0.7s,baz=58,slow=9.2,SNR=17						
WRA				PcP	PcP	13 20 34.4	+1.4
	comp=Z,0.3nm,0.9s,baz=55,slow=2.1,SNR=1.2						
FUNA	Funafuti	23.81	94	P	P	13 16 48.2	-2.1
AS31	Alice Springs	25.90	230	P	P	13 17 09.6	+0.1
ASAR	Alice Springs	25.91	230	P	P	13 17 09.9	+0.5
	comp=Z,0.5nm,0.7s,baz=63,slow=8.7,SNR=8.8						
ASAR	Alice Springs	25.91	230	P	P	13 17 08.8	-0.7
KNRA	Kununurra	27.05	250	P	P	13 17 21.2	+1.4
KNRA				IAmb	IAmb	13 17 39.3	
	comp=Z,5.6nm,1.2s						
FITZ	Fitzroy Crossi	30.57	247	P	P	13 17 49.9	-1.2
	comp=Z,1.1nm,0.8s,baz=118,slow=8.5,SNR=2.1						
AFI	Afiamalu	33.05	104	P	P	13 18 12.3	-0.7
	comp=Z,33nm,1.0s,baz=264,slow=10,SNR=2.1						
PETK	Petropavlovsk-	60.51	2	P	P	13 21 47.5	+0.6
	comp=Z,1.2nm,0.8s,baz=169,slow=8.8,SNR=2.5						
PETK	Petropavlovsk-	60.51	2	P	P	13 21 47.3	+0.4
CMAR	Chiang Mai Arr	61.20	296	P	P	13 21 52.6	+0.4
	comp=Z,0.3nm,0.3s,baz=116,slow=8.4,SNR=1.6						
SONM	Songino Array	69.94	327	P	P	13 22 49.3	+1.0
	comp=Z,0.4nm,0.6s,baz=134,slow=3.6,SNR=4.5						
SONM	Songino Array	69.94	327	P	P	13 22 48.8	+0.5
SONM				IAmb	IAmb	13 22 53.8	
	comp=Z,4.0nm,1.5s						
SDPT	Sand Point	72.72	25	P	P	13 23 05.6	+0.8
ILAR	Eielson Array	83.87	21	P	P	13 24 07.5	+1.2
	comp=Z,0.9nm,0.8s,baz=246,slow=5.1,SNR=9.2						
ILAR	Eielson Array	83.87	21	P	P	13 24 07.3	+1.1
MKAR	Makanchi Array	83.97	319	P	P	13 24 07.3	+0.1
	comp=Z,1.2nm,0.7s,baz=92,slow=6.6,SNR=5.2						
ZALV	Zalesovo Beam	84.78	326	P	P	13 24 11.3	+0.2
	comp=Z,0.9nm,0.6s,baz=137,slow=5.3,SNR=3.2						
INK	Inuvik	90.22	21	P	P	13 24 38.1	+1.1
	comp=Z,0.7nm,0.7s,baz=262,slow=4.7,SNR=4.1						
INK	Inuvik	90.22	21	IAmb	IAmb	13 24 40.7	
	comp=Z,4.4nm,1.4s						
TORD	Torodi Ar. Bea	153.34	284	PKPbc	PKiKP	13 31 37.0	+0.8
	comp=Z,0.5nm,0.5s,baz=63,slow=2.6,SNR=4.3						

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*IDC **07** 13:14:50.1±1.2, 38°.34N×72°.73E, h0^{km}, mb3.6/12, mb1 3.7/18, mb1mx3.6/65, mbtmp3.6/18, ML2.9/5, Error ellipse: s-maj=22.9km s-min=14.9km az=142.0*

*NNC **07** 13:14:57.5±2.8, 38°.49N×73°.00E, h0^{km}, mb4.5, mpv4.0, Error ellipse: s-maj=21.2km s-min=13.7km az=163.0*

ISC 07 13:14:52.4±0.9**, 38°.52N**±0°.07×**72°.67E**±0°.07**, h10^{km}, n32, σ2.s39**/35**, mb3.5**/11**, 5C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	Merke	4.24	6	Pg	Pb	13 16 08.0	+0.9
	12nm,0.3s						
MRKS				Lg	Lg	13 16 59.9	
	27nm,1.0s						
AAK	Ala-Archa	4.34	18	Pn	Pn	13 16 03.0	+4.5
	1.9nm,0.3s,baz=199,slow=9.2,SNR=9.5						
AAK				Sn	Sb	13 17 00.1	-1.2
	2.3nm,0.3s,baz=202,slow=19,SNR=6.2						
AAK	Ala-Archa	4.34	18	⇑Pn	Pb	13 16 06.3	-2.5
	27nm,0.8s						
AAK				⇓Sn	Sn	13 16 56.9	+7.6
	73nm,1.1s						
KK09	Karatay Array	4.88	341	⇑Pn	Pn	13 16 11.2	+5.3
	12nm,0.6s,baz=152,slow=12						
KK09				⇓Sn	Sb	13 17 14.0	-2.8
	27nm,0.6s,baz=157,slow=25						
TKM2	Tokmak 2	4.92	26	⇑Pg	Pg	13 16 26.8	+0.1
	12nm,0.7s						
TKM2				⇑Lg	Lg	13 17 32.7	
	27nm,0.7s						
KST	Kastek	5.16	28	Pg	Pg	13 16 30.1	-1.1
	17nm,0.5s						
KST				Lg	Lg	13 17 38.4	
	41nm,0.6s						
DGS	Degeres	5.27	25	Pg	Pg	13 16 30.6	-2.6
	13nm,0.4s						
DGS				Lg	Lg	13 17 40.6	
	24nm,0.4s						
TNSS	Tian-Shan	5.55	34	Pg	Pg	13 16 36.4	-2.4
	7.9nm,0.6s						
TNSS				Lg	Lg	13 17 49.6	
	12nm,0.5s						
KRBS	Karabastau	5.64	23	Pg	Pg	13 16 37.1	-3.3
	5.8nm,0.3s						
KRBS				Lg	Lg	13 17 51.0	
	18nm,0.7s						
MDOK	Medeo	5.70	34	⇓Pg	Pg	13 16 41.2	-0.3
	11nm,0.6s						
MDOK				⇑Lg	Lg	13 17 54.6	
	40nm,1.0s						
MDOK	Medeo	5.70	34	Pg	Pg	13 16 39.8	-1.8
	13nm,0.5s						
MDOK				Lg	Lg	13 17 55.2	
	29nm,1.2s						
KOTS	Kotyrbulak	5.78	34	Pg	Pg	13 16 39.9	-3.3
	10nm,0.4s						
KOTS				Lg	Lg	13 17 55.0	
	49nm,0.7s						
KTBS	Karatobe	6.00	29	Pg	Pg	13 16 46.1	-1.2
	6.9nm,0.5s						
KTBS				Lg	Lg	13 18 06.0	
	42nm,1.0s						
KUU	Kurty	6.04	26	Pg	Pg	13 16 44.3	-3.6
	6.3nm,0.4s						
KUU				Lg	Lg	13 18 05.4	
	23nm,1.1s						
MKAR	Makanchi Array	10.88	37	Pn	Pn	13 17 30.3	+2.2
	0.1nm,0.3s,baz=192,slow=16,SNR=1.8						
GEYT	Alibeck	11.47	272	Pn	Pn	13 17 36.2	-0.1
	1.3nm,0.3s,baz=102,slow=12,SNR=12						
GEYT				Sn	Sn	13 19 47.2	+2.8
	0.3nm,0.3s,baz=75,slow=14,SNR=1.4						
KURBB	Kurchatov Arra	12.79	17	Pn	Pn	13 17 54.0	-0.2
	0.0nm,0.3s,baz=198,slow=12,SNR=1.5						
KURBB				Lg	Lg	13 21 40.0	
	0.0nm,0.3s,baz=202,slow=29,SNR=4.4						
BVAR	Borovoye Array	14.59	355	Pn	Pn	13 18 18.8	0.0
	0.1nm,0.3s,baz=235,slow=7.0,SNR=2.2						
AKTO	Aktyubinsk	15.81	324	Pn	P	13 18 37.2	-1.7
	0.3nm,0.3s,baz=122,slow=10,SNR=6.3						
AKTO				Sn	Sn	13 21 27.7	-2.6
	baz=218,slow=18,SNR=1.3						
ZALV	Zalesovo Beam	17.53	24	P	Pn	13 18 55.9	-0.8
	0.1nm,0.3s,baz=207,slow=9.3,SNR=2.9						
ARU	Arti	20.22	337	P	Pn	13 19 30.2	+0.9
	0.6nm,0.3s,baz=120,slow=20,SNR=1.4						
SONM	Songino Array	26.11	58	P	P	13 20 27.4	+0.9
	0.1nm,0.4s,baz=243,slow=9.5,SNR=3.3						
BRTR	Keskin Array B	30.15	285	P	P	13 21 01.6	-1.0
	0.4nm,0.4s,baz=125,slow=2.3,SNR=1.9						
AKASG	Malin Array Be	32.77	306	P	P	13 21 27.4	+2.0
	0.3nm,0.4s,baz=84,slow=7.2,SNR=1.5						
FINES	FINESS Array B	36.59	324	P	P	13 21 58.0	-0.3
	3.5nm,0.9s,baz=193,slow=18,SNR=1.5						
ARCES	ARCESS Array B	39.81	336	P	P	13 22 26.3	+1.0
	4.9nm,1.0s,baz=52,slow=16,SNR=1.7						
NOA	NORSAR Array B	43.59	322	P	P	13 22 55.2	-1.3
	0.3nm,0.5s,baz=101,slow=7.3,SNR=1.9						
ESDC	Sonseca Array	57.70	297	P	P	13 24 43.3	0.0
	0.3nm,0.6s,baz=51,slow=7.7,SNR=1.0						
TORD	Torodi Ar. Bea	67.09	269	P	P	13 25 46.4	0.0
	0.2nm,0.4s,baz=49,slow=6.8,SNR=1.9						
INK	Inuvik	71.69	10	P	P	13 26 13.5	-0.5
	0.5nm,0.8s,baz=319,slow=4.8,SNR=1.6						
ILAR	Eielson Array	72.47	17	P	P	13 26 19.4	+0.7
	0.4nm,0.9s,baz=312,slow=5.6,SNR=5.0						
WRA	Warramunga Arr	81.96	123	P	P	13 27 11.1	-1.5
	0.3nm,0.7s,baz=316,slow=4.1,SNR=1.8						

NNC 07 13:42:11.6±9.8**, 38°.65N**×**72°.90E, h0^{km}, mb3.9, mpv3.6, 2C-6D, Error ellipse: s-maj=74.6km s-min=50.9km az=167.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.16	16	⇓Pn	Pn	13 43 16.3	-0.3
	8.0nm,0.6s						
AAK				⇑Sn	Sn	13 44 07.8	+1.8
	25nm,0.9s						
TKM2	Tokmak 2	4.73	25	⇓Pn	Pn	13 43 23.9	-0.5
	6.9nm,0.9s						
TKM2				⇓Sn	Sn	13 44 23.5	+3.5
	9.1nm,0.7s						
KK07	Karatay Array	4.79	339	⇓Pn	Pn	13 43 23.0	-2.1
	6.0nm,0.5s,baz=143,slow=12						
KK07				⇓Sn	Sn	13 44 21.1	-0.2
	35nm,0.9s,baz=147,slow=24						
KK07				⇓Lg	Lg	13 44 43.1	
	23nm,1.1s						
AB31	Akbulak array	14.10	323	⇑Pn	Pn	13 45 33.5	+1.1
	0.6nm,0.5s,baz=133,slow=14,SNR=14						

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*KRNET **07** 13:50:30.6±0.1, 38°.76N×74°.23E, mb4.2*

*IDC **07** 13:50:37.9±2.9, 38°.90N×73°.61E, h0^{km}, mb3.9/2, mb1 3.6/7, mb1mx3.4/60, mbtmp3.6/7, ML2.9/5, MS3.8/1, Ms1 3.7/1, ms1mx2.8/48, Error ellipse: s-maj=47.6km s-min=24.2km az=140.0*

*NEIC **07** 13:50:43.7±2.3, 39°.16N±0°.05×73°.38E±0°.06, h10^{km}±2^{km}, ML4.5/22, Error ellipse: s-maj=9.5km s-min=8.0km az=28.0*

ISC 07 13:50:41.4±0.7**, 39°.28N**±0°.05×**73°.44E**±0°.04**, h10^{km}, n42, σ1.s83**/46**, mb4.4**/4**, MS4.1**/3**, 14C, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.28	279		Pg	13 51 06.4	+0.3
DRK					Sn	13 51 25.3	+2.2
DRK	Karamyk	1.28	279	⇑iP	Pg	13 51 06.8	+0.7
	baz=92						
DRK				⇑iS	Sn	13 51 33.3	+10
	baz=92						
OHH	Osh	1.34	338	⇑eP	Pg	13 51 07.8	+0.7
	baz=28						
OHH				⇑iS	Sg	13 51 34.9	+10
	baz=28						
BTK	Batken	2.17	292	Pn	Pb	13 51 19.9	-0.8
BTK				IAML		13 52 30.6	
	comp=E,2μm,1.0s						
BTK	Batken	2.17	292	⇑iP	Pb	13 51 19.6	-1.1
	baz=97						
GAR	Garm	2.44	264		Pb	13 51 23.2	-2.3
GAR				IAML		13 52 48.6	
	comp=E,2μm,1.5s						
GAR	Garm	2.44	264	⇑iP	Pn	13 51 21.3	-0.2
	baz=76						
TRKS	Terek-Say	2.85	323	⇑iP	Pn	13 51 28.6	+1.5
	baz=20						
TRKS				⇑iS	Sg	13 52 11.0	-2.0
	baz=20						
AML	Almayashu	2.85	4	P	Pb	13 51 32.3	-0.4
	SNR=44						
AML	Almayashu	2.85	4	⇑iP	Pn	13 51 26.1	-1.3
	baz=53						
AML				⇑iS	Sb	13 52 06.1	-1.7
	baz=53						
UCH	Uchtor	3.06	15	P	Pb	13 51 35.8	-0.4
	SNR=21						
MNAS	Manas	3.28	348	⇑eP	Pn	13 51 34.1	+1.1
	baz=41						
MNAS				⇑iS	Sb	13 52 20.1	+0.3
	baz=41						
EKS2	Erkin-Say	3.39	4	P	Pb	13 51 40.3	-1.3
	SNR=16						
CHGR	Chuyangaron	3.39	261	Pn	Pn	13 51 36.6	+2.1
CHGR				IAML		13 53 26.4	
	comp=E,1μm,0.9s						
CHGR	Chuyangaron	3.39	261	⇑eP	Pn	13 51 34.1	-0.4
	baz=70						
CHGR				⇑iS	Sb	13 52 20.1	-2.9
	baz=70						
AAK	Ala-Archa	3.45	13	Pn	Pb	13 51 41.4	-1.2
	comp=E,3.6nm,0.3s,baz=173,slow=6.4,SNR=31						
AAK	Ala-Archa	3.45	13	P	Pb	13 51 41.0	-1.6
	SNR=18						
AAK	Ala-Archa	3.45	13	Pn	Pb	13 51 40.5	-2.1
AAK				IAML		13 53 06.1	
	comp=E,655nm,1.2s						
AAK				IAML		13 53 07.2	
	comp=E,778nm,1.1s						
KBK	Karagaybulak	3.56	18	P	Pb	13 51 43.0	-1.6
	SNR=8.8						
ULHL	Ulahol	3.65	35	P	Pg	13 51 49.1	-2.2
	SNR=13						
BOOM	Boomskoye usch	3.73	30		Pb	13 51 43.3	-4.0
BOOM				IAML		13 53 17.5	
	comp=E,773nm,1.2s						
BOOM				IAML		13 53 18.8	
	comp=N,649nm,1.1s						
CHMS	Chumysh	3.84	15	P	Pb	13 51 46.7	-2.7
	SNR=9.3						
KDJ	Kajisay	4.02	44		Pn	13 51 47.1	+3.8
USP	Ospenovka	4.06	11	P	Pb	13 51 49.4	-3.6
	SNR=10.0						
KKAR	Karatay Array	4.41	331		Pn	13 51 53.1	+4.7
NIL	Nilore	5.62	182	Pn	Pn	13 52 05.2	+0.1
KBL	Kabul	5.90	218	Pn	Pn	13 52 08.1	-0.9
MKAR	Makanchi Array	9.91	38	Pn	Pn	13 53 06.8	+2.9
	comp=N,0.0nm,0.3s,baz=225,slow=8.0,SNR=2.0						
WMQ	Urumqi	11.60	62	eP	Pn	13 53 34.1	+7.0
WMQ				LR	LR		
	comp=N,390nm,7.9s						
WMQ				LR	LR		
	comp=E,570nm,6.3s						
WMQ				LR	LR		
	comp=Z,310nm,7.9s						
ABKAR	Akbulak array	13.87	320		Pn	13 53 58.0	+0.1
BVAR	Borovoye Array	13.91	352	Pn	Pn	13 53 59.2	+0.8
	comp=Z,0.1nm,0.3s,baz=192,slow=12,SNR=3.6						
BVAR	Borovoye Array	13.91	352		Pn	13 53 59.2	+0.8
AKTO	Aktyubinsk	15.58	321	Pn	P	13 54 22.5	-2.8
	comp=Z,0.1nm,0.3s,baz=216,slow=11,SNR=1.9						
ZALV	Zalesovo Beam	16.59	24	Pn	P	13 54 35.2	-1.3
	comp=Z,0.1nm,0.3s,baz=209,slow=15,SNR=2.3						
KBZ	Khabaz	23.23	291	LR	LR	14 07 25.7	
	comp=Z,208nm,18.6s,baz=99,slow=43						
CD2	Chengdu	26.08	99	P	P	13 56 17.3	+2.1
CD2				LR	LR		
	comp=N,540nm,19.8s						
CD2				LR	LR		
	comp=E,440nm,9.0s						
CD2				LR	LR		
	comp=Z,290nm,6.7s						
HHC	Hu-ho-hao-te	29.07	75	eP	P	13 56 43.7	+1.7
HHC				PP	PnPn	13 57 36.1	+2.1
HHC				S	S	14 01 34.0	+0.4
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,4.3s						
HHC				LR	LR		
	comp=N,290nm,12.1s						
HHC				LR	LR		
	comp=E,190nm,12.7s						
HHC				LR	LR		
	comp=Z,260nm,16.3s						
ENH	Enshi	30.78	96	P	P	13 56 58.2	+1.0
FINES	FINESS Array B	36.33	323	P	P	13 57 45.4	+0.4
	comp=Z,4.9nm,1.0s,baz=130,slow=18,SNR=1.9						
FINES	FINESS Array B	36.33	323	P	P	13 57 45.8	+0.8
NJ2	Nanjing	37.28	87	eP	P	13 57 55.1	+1.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TORD	Torodi Ar. Bea	67.71	269	P	P	14 01 38.2	-1.0
	comp=Z,0.2nm,0.3s,baz=57,slow=5.3,SNR=2.2						

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*BJI **07** 13:51:09.3±0.0, 39°.14N×73°.22E, h6^{km}, mB4.9/14, mb4.4/30, ML4.4/6, Ms4.2/11, Ms7 3.9/12*

*IDC **07** 13:51:11.9±0.7, 39°.05N×73°.50E, h0^{km}, mb4.0/23, mb1 4.2/30, mb1mx4.1/63, mbtmp4.1/30, ML3.7/7, MS3.7/2, Ms1 3.8/2, ms1mx3.0/47, Error ellipse: s-maj=13.9km s-min=10.7km az=145.0*

*KRNET **07** 13:51:13.6±0.1, 39°.24N×73°.76E, h16^{km}, mb4.6*

*MOS **07** 13:51:13.2±1.8, 39°.15N×73°.64E, h15^{km}, mb4.4/13, Error ellipse: s-maj=6.5km s-min=4.5km az=87.5*

*NEIC **07** 13:51:13.5±1.4, 39°.06N±0°.06×73°.65E±0°.06, h12^{km}±4^{km}, mb4.5/37, Error ellipse: s-maj=9.6km s-min=5.3km az=155.0*

*SOME **07** 13:51:14.7, 39°.48N×73°.10E, h0^{km}, MS4.2*

*NNC **07** 13:51:16.2±3.0, 39°.23N×73°.52E, h0^{km}, mb4.9, mpv4.8, Error ellipse: s-maj=25.2km s-min=14.8km az=0.0*

ISC 07 13:51:12.3±1.1**, 39°.13N**±0°.03×**73°.68E**±0°.02**, h5^{km}**±7^{km}**, n249, σ1.s79**/281**, mb4.3**/51**, MS3.8**/6**, 62C-11D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.89	351	⇑eP	Pg	13 51 28.5	-0.9
	baz=46						
SFK				⇑eS	Sg	13 51 40.0	-1.0
	baz=46						
DRK	Karamyk	1.50	284	Pn	Pg	13 51 40.6	-0.5
DRK	Karamyk	1.50	284	⇑eP	Pg	13 51 41.2	+0.1
	baz=80						
DRK				⇑iS	Sg	13 52 03.0	+2.4
	baz=80						
OHH	Osh	1.55	334	i PG	Pg	13 51 46.6	+4.6
OHH				i S	Sg	13 52 03.3	+1.1
OHH	Osh	1.55	334	⇑iP	Pn	13 51 40.5	-0.2
	baz=30						
OHH				⇑iS	Sn	13 52 00.9	-0.3
	baz=30						
SALK	Salom-Alik	1.75	3	⇑eP	Pn	13 51 43.0	-0.4
	baz=2.0						
SALK				⇑eS	Sn	13 52 06.0	-0.2
	baz=2.0						

KSH	Kashi	1.82	77	Pg	Pb	13 51 44.8	-1.3
KSH				Sg	Sb	13 52 07.9	-1.3
KSH				smax	smax		
	comp=N,11µm,0.8s						
KSH				smax	smax		
	comp=E,7µm,0.6s						
BTK	Batken	2.40	294	PN	Pb	13 51 53.7	-2.3
BTK	Batken	2.40	294	Pn	Pb	13 51 53.7	-2.3
BTK	Batken	2.40	294	⇑*i*P	Pb	13 51 54.7	-1.3
	baz=91						
BTK				⇑*e*S	Sb	13 52 24.9	-1.0
	baz=91						
BTK	Batken	2.40	294	⇑*i*S	Pb	13 51 55.2	-0.8
	baz=97						
GAR	Garm	2.62	268	Pn	Pb	13 51 58.2	-1.6
GAR	Garm	2.62	268	⇑*i*S	Pb	13 51 58.2	-1.6
	baz=76						
AML	Almayashu	3.00	0	*i* PN	Pg	13 52 09.1	-0.6
AML				*i* S	Sb	13 52 42.1	-1.3
AML	Almayashu	3.00	0	⇑*i*P	Pn	13 52 02.1	+1.3
	baz=59						
AML				⇑*i*S	Sn	13 52 37.1	-0.1
	baz=59						
TRKS	Terek-Say	3.08	322	⇑*i*P	Pn	13 52 02.6	+0.8
	baz=19						
TRKS				⇑*e*S	Sn	13 52 38.7	-0.4
	baz=19						
UCH	Uchtor	3.15	11	*i* PN	Pg	13 52 11.9	-0.9
UCH				*i* S	Sb	13 52 47.0	-1.0
UCH	Uchtor	3.15	11	⇑*i*P	Pn	13 52 03.9	+0.9
	baz=11						
UCH				⇑*i*S	Sn	13 52 40.6	-0.7
	baz=11						
MNAS	Manas	3.47	345	*i* PN	Pb	13 52 15.0	+0.7
MNAS				*i* S	Sn	13 52 52.5	+3.9
MNAS	Manas	3.47	345	⇑*i*P	Pn	13 52 08.8	+1.8
	baz=44						
MNAS				⇑*i*S	Sn	13 52 48.5	-0.1
	baz=44						
EKS2	Erkin-Say	3.52	1	*i* PN	Pb	13 52 16.6	+1.4
EKS2				*i* S	Sb	13 52 54.5	-3.9
EKS2	Erkin-Say	3.52	1	⇑*i*P	Pn	13 52 09.3	+1.5
	baz=0.0						
EKS2				⇑*i*S	Sn	13 52 49.2	-0.8
	baz=0.0						
AAK	Ala-Archa	3.55	10	Pn	Pb	13 52 14.0	-1.7
	22nm,0.3s,baz=184,slow=9.2,SNR=30						
AAK				Sn	Sb	13 52 59.1	-0.1
	20nm,0.3s,baz=260,slow=20,SNR=12						
AAK	Ala-Archa	3.55	10*c*	*i*PN	Pb	13 52 13.8	-1.9
AAK				pmax	pmax		
	comp=Z,347nm,0.9s						
AAK	Ala-Archa	3.55	10	⇑Pn	Pb	13 52 13.8	-1.9
	comp=Z,239nm,0.8s						
AAK				⇑Lg	Lg	13 53 04.8	
	comp=Z,723nm,0.7s						
AAK	Ala-Archa	3.55	10	Pn	Pn	13 52 09.4	+1.2
AAK	Ala-Archa	3.55	10		Sb	13 52 59.1	-0.1
AAK	Ala-Archa	3.55	10	⇓*i*P	Pn	13 52 09.5	+1.2
	baz=9.0						
AAK				⇓*i*S	Sn	13 52 49.9	-0.8
	baz=9.0						
CHGR	Chuyangaron	3.56	264	PN	Pn	13 52 08.2	-0.1
CHGR	Chuyangaron	3.56	264	Pn	Pn	13 52 08.2	-0.1
MRKS	Merke	3.62	355	*e*P	Pb	13 52 16.4	-0.5
	comp=Z,60nm,0.7s						
MRKS				*e*S	Sb	13 53 01.1	-0.1
	comp=Z,624nm,0.5s						
KBK	Karagaybulak	3.65	15	*i* PN	Pb	13 52 19.0	+1.7
KBK				*i* S	Sb	13 52 58.6	-3.3
KBK	Karagaybulak	3.65	15	⇑*i*P	Pn	13 52 11.0	+1.4
	baz=14						
KBK				⇑*i*S	Sn	13 52 52.1	-0.9
	baz=14						
ULHL	Ulahol	3.67	31	*i* PN	Pg	13 52 20.2	-2.4
ULHL				*i* S	Sb	13 53 01.3	-1.2
ULHL	Ulahol	3.67	31	⇑*i*P	Pn	13 52 11.2	+1.3
	baz=31						
ULHL				⇑*i*S	Sn	13 52 52.5	-1.1
	baz=31						
FRU1	Bishkek	3.74	11	PN	Pn	13 52 11.7	+0.9
FRU1	Bishkek	3.74	11		Pn	13 52 11.7	+0.9
FRU1	Bishkek	3.74	11	⇑*i*P	Pn	13 52 12.1	+1.3
	baz=10.0						
FRU1				⇑*i*S	Sn	13 52 54.8	-0.4
	baz=10.0						
BOOM	Boomskoye usch	3.77	26	*i* PN	Pb	13 52 21.3	+2.0
BOOM				*i* S	Sb	13 53 02.8	-2.5
BOOM	Boomskoye usch	3.77	26	⇑*i*P	Pn	13 52 12.1	+0.9
	baz=26						
BOOM				⇑*i*S	Sn	13 52 54.8	-1.1
	baz=26						
CHMS	Chumysh	3.94	11	*i* PN	Pb	13 52 22.7	+0.4
CHMS				*i* S	Sb	13 53 05.6	-4.8
CHMS	Chumysh	3.94	11	⇑*i*P	Pn	13 52 14.9	+1.4
	baz=11						
CHMS				⇑*i*S	Sn	13 52 58.8	-1.4
	baz=11						
KDJ	Kajisay	4.00	41	PN	Pn	13 52 15.1	+0.7
KDJ	Kajisay	4.00	41	Pn	Pn	13 52 15.1	+0.7
KDJ	Kajisay	4.00	41	⇓*i*P	Pn	13 52 15.7	+1.2
	baz=41						
KDJ				⇓*i*S	Sn	13 53 00.8	-1.1
	baz=41						
TAS	Tashkent	4.01	304	PN	Pn	13 52 14.5	+0.1
TAS	Tashkent	4.01	304		Pn	13 52 14.5	+0.1
TKM2	Tokmak 2	4.05	20	*i* PN	Pb	13 52 24.6	+0.4
TKM2				*i* S	Sb	13 53 09.3	-4.3
TKM2	Tokmak 2	4.05	20	⇓Pg	Pb	13 52 27.0	+2.8
	comp=Z,133nm,0.8s						
TKM2				⇓Lg	Lg	13 53 23.4	
	comp=Z,471nm,0.8s						
TKM2	Tokmak 2	4.05	20	⇑*i*P	Pn	13 52 16.2	+1.1
	baz=20						
TKM2				⇑*i*S	Sn	13 53 01.8	-1.2
	baz=20						
DZA	Taraz	4.16	335	*e*P	Pn	13 52 20.4	+4.0
	comp=Z,233nm,0.2s						
DZA				*e*S	Sn	13 53 07.8	+2.5
	comp=Z,744nm,0.7s						
DZA	Taraz	4.16	335	*e*Pn	Pn	13 52 16.9	+0.5
	baz=335						
DZA				*e*Pg	Pg	13 52 31.0	-0.9
	baz=335						
DZA	Taraz	4.16	335	*e*PN	Pn	13 52 16.9	+0.5
DZA				*e*		13 52 31.0	
USP	Ospenovka	4.17	8	*i* PN	Pb	13 52 26.0	-0.2
USP				*i* S	Sn	13 53 10.7	+4.8
USP	Ospenovka	4.17	8	⇑*i*P	Pn	13 52 18.1	+1.4
	baz=8.0						
USP				⇑*i*S	Sn	13 53 04.7	-1.2
	baz=8.0						
KST	Kastek	4.27	23	*e*P	Pg	13 52 33.8	-0.2
	comp=Z,73nm,0.5s						
KST				*e*S	Sg	13 53 30.4	+1.0
	comp=Z,387nm,0.5s						
SGDS	Sogindy	4.37	9	*e*Pg	Pg	13 52 35.1	-1.0
	baz=8.8						
DGS	Degeres	4.40	20	*e*P	Pg	13 52 35.8	-0.7
	comp=Z,144nm,0.4s						
DGS				*e*S	Sg	13 53 34.2	+0.7
	comp=Z,394nm,0.8s						
MTBS	Maitube	4.50	27	*e*P	Pg	13 52 36.8	-1.7
	comp=Z,57nm,0.7s						
MTBS				*e*S	Sg	13 53 35.6	-1.1
	comp=Z,240nm,0.6s						
TNSS	Tian-Shan	4.61	31	*e*P	Pg	13 52 39.7	-1.0
	comp=Z,87nm,0.6s						
TNSS				*e*S	Sg	13 53 41.2	+0.7
	comp=Z,171nm,0.8s						
TNSS	Tian-Shan	4.61	31	*e*Pg	Pg	13 52 39.3	-1.4
	baz=31						
KK02	Karatay Array	4.63	330	⇓Pn	Pn	13 52 25.6	+2.7
	comp=Z,171nm,1.1s,baz=156,slow=14						
KK02				⇓Sn	Sn	13 53 20.5	+3.4
	comp=Z,1µm,1.2s,baz=152,slow=24						
KK31	Karatay Array	4.63	330	PN	Pn	13 52 25.5	+2.6
KKAR	Karatay Array	4.63	330	PN	Pn	13 52 23.2	+0.3
KKAR	Karatay Array	4.63	330	Pn	Pn	13 52 23.2	+0.3
ANVS	Anan'yevo	4.73	38	⇑*i*P	Pn	13 52 25.5	+1.0
	baz=39						
ANVS				⇑*i*S	Sn	13 53 18.1	-1.7
	baz=39						
AAA	Alma-Ata	4.75	30	*e*Pg	Pg	13 52 41.8	-1.4
	baz=30						
MDOK	Medeo	4.76	31	*e*P	Pg	13 52 42.4	-1.1
	comp=Z,101nm,0.6s						
MDOK				*e*S	Sg	13 53 45.6	+0.5
	comp=Z,436nm,1.1s						
MDOK	Medeo	4.76	31	*e*Pg	Pg	13 52 41.7	-1.8
	baz=31						
MDOK	Medeo	4.76	31	Pg	Pg	13 52 41.8	-1.6
	comp=Z,121nm,0.7s						
MDOK				Lg	Lg	13 53 45.1	
	comp=Z,960nm,1.2s						
KNDC	Almaty	4.77	30	⇑Pg	Pg	13 52 42.1	-1.6
	comp=Z,475nm,0.8s						
KNDC				⇓Lg	Lg	13 53 45.9	
	comp=Z,4µm,1.1s						
KRBS	Karabastau	4.80	18	*e*P	Pg	13 52 42.3	-1.9
	comp=Z,41nm,0.5s						
KRBS				*e*S	Sg	13 53 45.6	-0.7
	comp=Z,103nm,0.3s						
KOTS	Kotyrbulak	4.84	31	*e*P	Pg	13 52 44.9	-0.2
	comp=Z,124nm,0.6s						
KOTS				*e*S	Sg	13 53 49.4	+1.6
	comp=Z,1µm,0.8s						
PRZ	Przheval'sk	4.90	45	⇑*i*P	Pn	13 52 27.7	+0.9
	baz=46						
PRZ				⇑*i*S	Sn	13 53 22.3	-1.6
	baz=46						
KTBS	Karatobe	5.10	25	*e*P	Pg	13 52 48.1	-1.9
	comp=Z,62nm,0.7s						
KTBS				*e*S	Sg	13 53 54.5	-1.5
	comp=Z,494nm,0.9s						
KUU	Kurty	5.16	22	*e*P	Pg	13 52 48.6	-2.4
	comp=Z,77nm,0.9s						
KUU				*e*S	Sg	13 53 56.1	-1.7
	comp=Z,295nm,1.1s						
KUU	Kurty	5.16	22	*e*Pg	Pg	13 52 49.1	-2.0
	baz=22						
SATY	Saty	5.30	41	*e*P	Pg	13 52 52.5	-1.4
	comp=Z,135nm,0.6s						
SATY				*e*S	Sg	13 54 02.1	-0.4
	comp=Z,508nm,1.1s						
SATY	Saty	5.30	41	*e*Pg	Pg	13 52 51.8	-2.0
	baz=40						
CHCP	Chirah Chowk	5.47	184	P	Pb	13 52 42.2	-6.2
CEP	Cherat	5.49	196	P	Pb	13 52 42.5	-6.2
CEP				S	Sb	13 53 50.0	-4.9
KURS	Kuram	5.51	36	*e*P	Pg	13 52 56.1	-1.6
	comp=Z,92nm,1.2s						
KURS				*e*S	Sg	13 54 08.5	-0.6
	comp=Z,213nm,1.2s						
UZB	Uzynbulak	5.68	43	*e*P	Pg	13 53 01.0	-0.2
	comp=Z,50nm,0.8s						
UZB				*e*S	Sg	13 54 17.4	+2.6
	comp=Z,177nm,0.9s						
UZB	Uzynbulak	5.68	43	*e*Pg	Pg	13 52 58.8	-2.4
	baz=43						
UZB	Uzynbulak	5.68	43	*e*PN	Pn	13 52 43.0	+5.5
KPKS	Kokpek	5.74	39	*e*P	Pg	13 53 00.3	-1.9
	comp=Z,93nm,1.1s						
KPKS				*e*S	Sg	13 54 16.2	-0.3
	comp=Z,342nm,1.0s						
KPKS	Kokpek	5.74	39	*e*Pg	Pg	13 52 59.1	-3.0
	baz=39						
KPKS	Kokpek	5.74	39	*e*PN	Pn	13 52 43.0	+4.8
BTLS	Baital	5.91	2	*e*PN	Pn	13 52 45.3	+4.9
SHLS	Shalkode	5.93	45	*e*P	Pg	13 53 11.8	+5.9
	comp=Z,89nm,0.7s						
SHLS				*e*S	Sg	13 54 35.4	+13
	comp=Z,352nm,2.5s						
SHLS	Shalkode	5.93	45	*e*Pg	Pg	13 53 06.9	+1.0
	baz=47						
SHLS	Shalkode	5.93	45	*e*PN	Pb	13 52 49.0	-7.2
ARXS	Arharly	5.95	30	*e*P	Pg	13 53 03.8	-2.4
	comp=Z,55nm,0.6s						
ARXS				*e*S	Sg	13 54 21.7	-1.5
	comp=Z,189nm,0.9s						
ARXS	Arharly	5.95	30	*e*PN	Pb	13 52 57.8	+1.3
PDGK	Podgornoye	6.06	44	PN	Pn	13 52 47.4	+4.8
PDGK						13 53 05.9	
PDGK	Podgornoye	6.06	44	⇑Pn	Pn	13 52 46.9	+4.2
	comp=Z,18nm,0.6s						
THW	Thamme Wali	6.52	195	P	Pn	13 52 54.6	+5.7
TDK	Taldyqorghan	6.83	29	*e*Pg	Pg	13 53 20.2	-2.9
	baz=29						
DHRM	DHARAMSHALA	7.19	162	*e*P	Pn	13 53 02.9	+4.6
DHRM				*e*S	Sn	13 54 24.9	+4.5
DHRM				IAML		13 54 35.2	
	comp=E,456nm,0.7s						
DHRM				IAML		13 54 36.5	
	comp=N,557nm,0.5s						
BHK	Bhakra	8.02	163	*e*P	Pn	13 53 15.8	+6.4
SMLA	Simla	8.48	159	*e*P	Pn	13 53 20.4	+4.7
SMLA				*e*S	Sn	13 54 52.3	+0.5
SMLA				IAML		13 55 03.3	
	comp=N,196nm,0.5s						
SMLA				IAML		13 55 03.3	
	comp=E,207nm,0.6s						
MAKZ	Makanchi	9.78	36	P	Pn	13 53 39.2	+5.6
MAKZ	Makanchi	9.78	36	⇑Pn	Pn	13 53 39.2	+5.6
	comp=E,18nm,1.5s						
MK31	Makanchi Array	9.91	37	⇑*e*P	Pn	13 53 36.5	+1.1
MK31	Makanchi Array	9.91	37	⇓Pn	Pn	13 53 41.4	+5.9
	comp=E,5.3nm,0.8s,baz=220,slow=15,SNR=7.7						
MK31	Makanchi Array	9.91	37		Pn	13 53 34.4	-1.0
MKAR	Makanchi Array	9.91	37	Pn	Pn	13 53 39.1	+3.7
	comp=E,0.2nm,0.3s,baz=217,slow=12,SNR=15						
MKAR				Lg	Lg	13 56 27.8	
	comp=E,0.4nm,0.3s,baz=242,slow=26,SNR=1.7						
HRA	Herat	10.32	246	Pn	Pn	13 53 39.8	-1.4
BRZS	Berezniki	10.87	357	*e*Pn	Pn	13 53 49.1	+0.6
	comp=E,3.9nm,1.0s,baz=356						
BRZS	Berezniki	10.87	357	*e*P	Pn	13 53 49.0	+0.6
BRZS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AYAN	Aya Nagar	11.00	164	*e*P	Pn	13 53 53.7	+3.4
KUDL	Kundal	11.21	167	*e*P	Pn	13 53 55.9	+2.8
KUDL				*e*S	Sn	13 55 58.9	+0.2
SONA	Sohna	11.22	164	*e*P	Pn	13 53 57.0	+3.8
SONA				*e*S	Sn	13 55 57.5	-1.5
WMQ	Urumqi	11.50	61	*e*P	Pn	13 54 00.6	+3.4
WMQ				pP		13 54 08.4	
WMQ				pmax	pmax		
	comp=Z,28nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.3s						
WMQ				LR	LR		
	comp=Z,750nm,9.1s						
WMQ				LR	LR		
	comp=Z,510nm,6.3s						
WMQ				LR	LR		
	comp=Z,310nm,7.1s						
KURBB	Kurchatov Arra	11.99	15	Pn	Pn	13 54 05.2	+1.5
	comp=Z,0.1nm,0.3s,baz=207,slow=12,SNR=5.9						
KURBB				Sn	Sn	13 56 17.6	-0.1
	comp=Z,0.1nm,0.3s,baz=194,slow=31,SNR=1.9						
KURBB				Lg	Lg	13 57 29.8	
	comp=Z,0.1nm,0.3s,baz=209,slow=26,SNR=4.0						
KURK	Kurchatov	12.09	15	⇑*e*P	Pn	13 54 05.8	+0.7
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SEM	Semipalatinsk	12.19	20	*e*Pn	Pn	13 54 07.3	+0.6
	comp=Z,2.0nm,0.9s,baz=20						
SEM	Semipalatinsk	12.19	20	*e*P	Pn	13 54 07.3	+0.6
SEM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GEYT	Alibeck	12.25	269	Pn	Pn	13 54 03.8	-3.6
	comp=Z,0.6nm,0.3s,baz=98,slow=11,SNR=4.1						
GEYT				Sn	Sn	13 56 16.0	-8.4
	comp=Z,0.5nm,0.3s,baz=71,slow=19,SNR=2.3						
GEYT				Lg	Lg	13 57 33.4	
	baz=64,slow=9.8,SNR=1.4						
GEYT	Alibeck	12.25	269	Pn	Pn	13 54 03.4	-4.1
GYA0B	ALIBECK ARRAY	12.25	269	Pn	Pn	13 54 04.2	-3.3
PYUN	Piuthan	13.45	142	*e*P	Pn	13 54 23.7	-0.3
	comp=Z,83nm,0.5s						
DANN	Dangsing	13.62	139	*e*P	Pn	13 54 24.8	-1.7
	comp=Z,82nm,0.7s						
KOLN	Koldanda	14.02	141	*e*P	Pn	13 54 30.4	-1.4
	comp=Z,35nm,0.5s						
BVAR	Borovoye Array	14.08	352	Pn	Pn	13 54 31.3	-0.9
	comp=Z,0.5nm,0.3s,baz=188,slow=18,SNR=18						
BVAR				Sn	Sn	13 57 01.3	-7.5
	comp=Z,0.2nm,0.3s,baz=134,slow=27,SNR=1.7						
BVAR				Lg	Lg	13 58 38.3	
	comp=Z,0.3nm,0.3s,baz=177,slow=30,SNR=5.0						
AB31	Akbulak array	14.10	320	⇑Pn	Pn	13 54 33.9	+1.3
	comp=Z,4.8nm,0.6s,baz=132,slow=13,SNR=20						
AB31				Sn	Sn	13 57 11.8	+2.4
	comp=Z,8.8nm,0.7s,baz=134,slow=26,SNR=8.2						
ABKAR	Akbulak array	14.10	320	Pn	Pn	13 54 31.0	-1.6
BRVK	Borovoye	14.12	352	⇑*e*P	Pn	13 54 32.3	-0.6
BRVK				pmax	pmax		
	comp=Z,21nm,1.3s						
BRVK	Borovoye	14.12	352	Pn	Pn	13 54 31.8	-1.1
JHNI	Jhansi	14.23	162	*e*P	Pn	13 54 33.8	-0.6
GKN	Gorkha	14.36	137	*e*P	Pn	13 54 34.4	-2.0
	comp=Z,18nm,0.4s						
DGZ	Jazzator, Alta	14.40	38	⇑*e*P	Pn	13 54 38.8	+1.9
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKTO	Aktyubinsk	15.82	321	Pn	Pn	13 54 53.7	-1.9
	comp=Z,0.4nm,0.3s,baz=127,slow=13,SNR=12						
AKTO				Sn	Sn	13 57 39.8	-11
	comp=Z,0.1nm,0.3s,baz=200,slow=17,SNR=2.5						
AKTO	Aktyubinsk	15.82	321	⇑Pn	Pn	13 54 55.5	0.0
	comp=Z,26nm,1.2s						
AKTO				⇑Sn	Sn	13 57 51.5	+0.4
	comp=Z,23nm,1.2s						
AKTO	Aktyubinsk	15.82	321		Pn	13 54 53.7	-1.9
BHPL	Bhopal	16.16	168	*e*P	Pn	13 54 59.0	-1.2
BHPL				IAmb	IAmb	13 55 13.9	
	comp=Z,8.0nm,0.7s						
RAMN	Ramite	16.25	135	*e*P	Pn	13 54 59.4	-2.2
	comp=Z,35nm,0.5s						
TAPN	Taplejung	16.58	131	*e*P	Pn	13 55 03.7	-2.1
	comp=Z,18nm,0.5s						
ZAA0	Zalesovo Array	16.65	23	Pn	P	13 55 06.7	-1.9
ZAA0				IAmb	IAmb	13 55 16.3	
	comp=Z,24nm,1.2s						
ZALV	Zalesovo Beam	16.65	23	Pn	P	13 55 07.6	-1.1
	comp=Z,1.5nm,0.3s,baz=214,slow=12,SNR=33						
ZALV				Sn	Sn	13 58 11.9	+0.7
	comp=Z,0.1nm,0.3s,baz=225,slow=14,SNR=2.4						
ZALV				Lg	Lg	14 00 04.4	
	comp=Z,0.1nm,0.3s,baz=213,slow=21,SNR=8.9						
ZALV	Zalesovo Beam	16.65	23	Pn	P	13 55 06.9	-1.8
ODAN	Odare	16.77	133	*e*P	Pn	13 55 06.4	-1.7
	comp=Z,35nm,0.5s						
LSA	Lhasa	17.19	118	P	P	13 55 17.4	+2.1
LSA				pmax	pmax		
	comp=Z,12nm,1.4s						
BOK	Bokaro	18.47	142	*e*P	Pn	13 55 32.8	+3.7
BOK				IAmb	IAmb	13 55 33.3	
	comp=Z,15nm,0.7s						
LKRN	Lenkeran, Azer	19.37	277	P	Pn	13 55 42.8	+3.0
SVE	Sverdlovsk	19.68	338	*e*P	Pn	13 55 44.1	+0.7
SVE				pmax	pmax		
	comp=Z,24nm,1.6s						
ARU	Arti	19.99	335	P	Pn	13 55 47.2	+0.2
	comp=Z,2.8nm,0.8s,baz=164,slow=4.7,SNR=10						
ARU				Lg	Lg	14 01 37.0	
	comp=Z,0.4nm,0.2s,baz=167,slow=17,SNR=3.6						
ARU	Arti	19.99	335*c*	*i*P	Pn	13 55 47.4	+0.4
ARU				S	Sn	13 59 34.3	+2.4
ARU				pmax	pmax		
	comp=Z,12nm,1.0s						
ARU	Arti	19.99	335		Pn	13 55 46.5	-0.6
ARU				IAmb	IAmb	13 55 56.5	
	comp=Z,14nm,1.0s						
GTA	Gaotai	20.21	81	*e*P	Pn	13 55 53.3	+3.3
GTA				pP	sP	13 56 00.8	+8.5
GTA				sP	pP	13 56 04.6	+14
GTA				pmax	pmax		
	comp=Z,5.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,100nm,5.5s						
GTA				LR	LR		
	comp=Z,310nm,14.5s						
GTA				LR	LR		
	comp=Z,190nm,14.5s						
GTA				LR	LR		
	comp=Z,200nm,17.4s						
SEKA	Sheki	20.32	284	P	Pn	13 55 53.6	+2.4
WSAR	Wadi Sarin	20.37	223	P	Pn	13 55 49.8	-2.1
	comp=Z,6.3nm,0.8s,baz=69,slow=8.6,SNR=2.4						
SHL	Shillong	20.43	126	P	Pn	13 55 50.0	-2.7
SHL				pmax	pmax		
	comp=Z,16nm,0.4s						
SHL	Shillong	20.43	126	*e*P	Pn	13 55 50.3	-2.4
SHL	Shillong	20.43	126	P	Pn	13 55 50.0	-2.6
SHL				IAmb	IAmb	13 56 13.2	
	comp=Z,16nm,0.4s						
MNGR	Mingechevir, A	20.43	283	P	Pn	13 55 55.4	+3.0
GANJ	Ganja	21.02	283	P	P	13 56 01.7	+4.9
GROC	Groznyy	21.34	290	*e*P	P	13 56 02.9	+2.8
GROC				*e*		13 56 23.6	
GROC				*e*S	Sn	14 00 03.1	-1.6
GROC				pmax	pmax		
	comp=Z,14nm,0.5s						
MOKO	MOKOCHONG	21.63	120	*e*P	P	13 56 07.6	+4.1
MOKO				IAmb	IAmb	13 56 09.4	
	comp=Z,91nm,1.1s						
KOHI	KOHIMA	21.76	122	*e*P	P	13 56 08.5	+3.7
KOHI				IAmb	IAmb	13 56 10.7	
	comp=Z,61nm,1.0s						
NAX	Nakhchivan	21.83	279	P	P	13 56 09.8	+4.3
HYB	Hyderabad	22.05	168	*i* P	P	13 56 09.0	+1.1
GNI	Garni	22.27	282	P	P	13 56 10.3	-0.1
	comp=Z,5.0nm,0.6s,baz=178,slow=17,SNR=3.0						
BELG	Belogornoye	22.35	315	P	P	13 56 11.7	+0.8
	comp=Z,16nm,0.8s,baz=74,slow=8.9,SNR=3.4						
BELG				LR	LR	14 06 03.3	
	comp=Z,203nm,21.5s,baz=165,slow=40						
BELG	Belogornoye	22.35	315	⇑*e*P	P	13 56 10.7	-0.1
BELG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	23.46	291	P	P	13 56 22.7	+0.2
	comp=Z,0.8nm,0.3s,baz=180,slow=5.1,SNR=2.6						
KBZ	Khabaz	23.46	291	⇑*e*P	P	13 56 23.9	+1.4
KBZ				pmax	pmax		
	comp=Z,12nm,2.3s						
KVAR	Kislovodsk Arr	23.61	292	P	P	13 56 22.5	-1.6
	comp=Z,2.1nm,0.4s,baz=29,slow=13,SNR=1.4						
KIV	Kislovodsk	23.61	292	*e*P	P	13 56 23.3	-0.9
KIV				*e*S	S	14 00 36.5	-2.6
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,83nm,14.0s						
ZAK	Zakamensk	23.68	52	*e*P	P	13 56 23.1	-1.6
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
LZH	Lanzhou	24.03	88	*e*P	P	13 56 37.2	+8.8
LZH				pP	sP	13 56 41.2	+8.5
LZH				sP	pP	13 56 44.7	+13
LZH				pmax	pmax		
	comp=Z,9.0nm,1.5s						
LZH				pmax	pmax		
	comp=Z,160nm,5.4s						
LZH				LR	LR		
	comp=N,580nm,15.1s						
LZH				LR	LR		
	comp=E,330nm,15.5s						
LZH				LR	LR		
	comp=Z,240nm,15.7s						
TLY	Talaya	24.30	49	P	P	13 56 31.1	+0.6
	comp=Z,1.6nm,0.5s,baz=280,slow=11,SNR=2.1						
TLY	Talaya	24.30	49	⇑*e*P	P	13 56 30.9	+0.4
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIRV	Kirov	24.93	329	P	P	13 56 38.1	+2.1
	comp=Z,6.1nm,0.5s,baz=96,slow=18,SNR=1.9						
SONM	Songino Array	25.12	59	P	P	13 56 41.1	+2.9
	comp=Z,6.6nm,1.1s,baz=267,slow=9.7,SNR=13						
SONM	Songino Array	25.12	59	P	P	13 56 39.3	+1.2
SONM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	25.12	59	P	P	13 56 39.3	+1.2
ULN	Ulaanbaatar	25.57	59	⇑*e*P	P	13 56 43.2	+1.0
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMI	Kunming	28.15	111	⇑P	P	13 57 11.6	+5.8
KMI				sP	sP	13 57 18.5	+8.4
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN	Xi'an	28.63	89	P	P	13 57 17.3	+7.6
XAN				pP	sP	13 57 20.4	+6.3
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC	Hu-ho-hao-te	28.93	74	*e*P	P	13 57 12.5	+0.1
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.0s						
HHC				LR	LR		

	comp=Z,190nm,13.7s						
HHC				LR	LR		
	comp=Z,240nm,12.4s						
HHC				LR	LR		
	comp=Z,240nm,13.4s						
CMAR	Chiang Mai Arr	30.07	126	P	P	13 57 24.6	+2.1
	comp=Z,0.4nm,0.3s,baz=327,slow=7.8,SNR=2.0						
BRTR	Keskin Array B	30.76	284	P	P	13 57 28.9	+0.3
	comp=Z,1.8nm,0.8s,baz=69,slow=6.8,SNR=4.5						
BRTR	Keskin Array B	30.76	284	P	P	13 57 29.0	+0.3
BRTR	Keskin Array B	30.76	284	P	P	13 57 28.9	+0.3
NRIK	Noril'sk	31.17	9	P	P	13 57 32.8	+1.0
	comp=Z,2.3nm,0.7s,baz=138,slow=9.0,SNR=1.7						
NRIK	Noril'sk	31.17	9	⇑*e*P	P	13 57 33.1	+1.3
NRIK				pmax	pmax		
	comp=Z,12nm,2.0s						
AKASG	Malin Array Be	33.06	305	P	P	13 57 48.8	+0.2
	comp=Z,0.9nm,0.4s,baz=73,slow=7.5,SNR=2.2						
FIA1	FINESS Array S	36.56	323	P	P	13 58 19.7	+1.0
FINES	FINESS Array B	36.56	323	P	P	13 58 19.0	+0.3
	comp=Z,1.5nm,0.4s,baz=119,slow=8.6,SNR=11						
FINES	FINESS Array B	36.56	323	*ce*P	P	13 58 19.5	+0.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	FINESS Array B	36.56	323	P	P	13 58 19.1	+0.5
UBPT	Khong Chiam	36.62	122	P	P	13 58 18.6	-1.0
NJ2	Nanjing	37.10	87	*e*P	P	13 58 23.2	-0.4
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ARCES	ARCESS Array B	39.57	336	P	P	13 58 44.2	+0.2
	comp=Z,2.6nm,0.7s,baz=110,slow=6.8,SNR=8.8						
YAK	Yakutsk	40.59	37	⇑*e*P	P	13 58 51.9	-0.6
YAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KLR	Kul'dur	41.90	56	P	P	13 59 05.8	+2.4
	comp=Z,2.9nm,0.7s,baz=290,slow=13,SNR=3.8						
TIXI	Tiksi	42.53	23	⇓*e*P	P	13 59 09.3	+1.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TIXI	Tiksi	42.53	23	P	P	13 59 09.2	+0.9
TIXI				IAmb	IAmb	13 59 14.4	
	comp=Z,17nm,1.5s						
GERES	GERESS Array B	43.20	303	P	P	13 59 12.8	-1.4
	comp=Z,0.4nm,0.3s,baz=72,slow=6.3,SNR=2.5						
KHC	Kasperske Hory	43.23	304	*e*P	P	13 59 14.5	+0.2
KHC	Kasperske Hory	43.23	304	*e*P	P	13 59 14.5	+0.2
NC303	NORSAR Array S	43.54	322	P	P	13 59 17.1	+0.5
NB201	NORSAR Array S	43.57	321	P	P	13 59 17.1	+0.3
NB201				IAmb	IAmb	13 59 26.6	
	comp=Z,6.4nm,0.8s						
NB2	NORSAR Subarra	43.61	321	P	P	13 59 17.0	-0.2
	comp=Z,0.4nm,0.3s,baz=91,slow=8.6						
NOA	NORSAR Array B	43.61	321	P	P	13 59 17.1	-0.1
	comp=Z,2.0nm,0.7s,baz=91,slow=7.9,SNR=5.9						
NBO00	NORSAR Array S	43.82	321	P	P	13 59 19.8	+0.9
NC204	NORSAR Array S	43.83	322	P	P	13 59 19.3	+0.3
ZOU	Zoufplan	44.15	300	P	P	13 59 20.8	-1.2
MSEY	Mahe Island	46.72	205	P	P	13 59 42.2	-0.2
MSEY				pmax	pmax		
	comp=Z,54nm,1.5s						
MSEY	Mahe Island	46.72	205	P	P	13 59 42.2	-0.2
BILL	Bilibino	55.30	27	*i* P	P	14 00 48.0	+1.7
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ESDC	Sonseca Array	58.12	297	P	P	14 01 06.5	-0.3
	comp=Z,0.3nm,0.4s,baz=65,slow=8.4,SNR=2.2						
TOLK	Toolik Lake Re	67.83	16	P	P	14 02 11.7	+0.8
TOLK				IAmb	IAmb	14 02 14.6	
	comp=Z,3.1nm,0.8s						
TORD	Torodi Ar. Bea	67.89	269	P	P	14 02 10.4	-1.7
	comp=Z,1.3nm,0.6s,baz=44,slow=5.7,SNR=7.6						
TORD	Torodi Ar. Bea	67.89	269	P	P	14 02 10.7	-1.4
A36M	Sachs Harbour	68.38	6	P	P	14 02 15.0	+0.8
A36M				IAmb	IAmb	14 02 17.3	
	comp=Z,3.1nm,0.8s						
COLD	Coldfoot	68.85	17	P	P	14 02 18.2	+0.9
COLD				IAmb	IAmb	14 02 30.7	
	comp=Z,4.1nm,1.1s						
IMAR	Indian Mountai	69.01	19	P	P	14 02 18.6	+0.3
BMAR	Burnt Mountain	69.87	15	P	P	14 02 22.8	-0.8
MLY	Manley	70.53	18	P	P	14 02 26.9	-0.9
MLY				IAmb	IAmb	14 02 40.0	
	comp=Z,3.1nm,1.2s						
H24K	Noodor Dome	70.53	17	P	P	14 02 26.7	-1.0
INK	Inuvik	70.95	10	P	P	14 02 29.9	-0.2
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
INK	Inuvik	70.95	10	P	P	14 02 29.9	-0.2
INK				IAmb	IAmb	14 02 37.4	
	comp=Z,2.2nm,0.7s						
MDM	Murphy Dome	71.19	17	P	P	14 02 32.3	+0.6
WRH	Wood River Hil	71.63	18	P	P	14 02 35.5	+1.2
IL31		71.66	17	P	P	14 02 35.1	+0.6
IL31				IAmb	IAmb	14 03 01.1	
	comp=Z,3.1nm,1.1s						
ILAR	Eielson Array	71.66	17	P	P	14 02 34.9	+0.4
	comp=Z,1.0nm,0.7s,baz=323,slow=4.8,SNR=14						
ILAR				LR	LR	14 37 18.7	
	comp=Z,53nm,19.2s,baz=258,slow=38						
ILAR	Eielson Array	71.66	17	P	P	14 02 34.9	+0.4
PPLA	Purkeypile	71.90	20	P	P	14 02 35.4	-0.7
RND	Reindeer	72.34	19	P	P	14 02 38.7	0.0
RND				pmax	pmax		
	comp=Z,9.0nm,1.5s						
RND	Reindeer	72.34	19	P	P	14 02 38.7	0.0
RND				IAmb	IAmb	14 03 01.9	
	comp=Z,8.6nm,1.5s						
SCRK	Sand Creek	72.99	16	P	P	14 02 42.8	+0.1
SCRK				IAmb	IAmb	14 02 55.4	
	comp=Z,6.7nm,1.4s						
RIDG	Independent Ri	73.00	17	P	P	14 02 43.1	+0.5
RIDG				IAmb	IAmb	14 02 58.2	
	comp=Z,10nm,1.3s						
DOT	Dot Lake	73.26	17	P	P	14 02 44.7	+0.6
GHO	Glory Hole Cre	73.69	20	P	P	14 02 47.3	+0.5
GHO				IAmb	IAmb	14 03 08.2	
	comp=Z,4.8nm,0.9s						
SML	Sawmill	73.81	19	P	P	14 02 47.5	0.0
RC01	Rabbit Creek A	74.05	20	P	P	14 02 49.0	+0.2
RC01				IAmb	IAmb	14 02 59.8	
	comp=Z,11nm,1.3s						
SCM	Sheep Creek Mo	74.05	19	P	P	14 02 49.0	+0.1
SCM				pmax	pmax		
	comp=Z,14nm,1.2s						
SCM	Sheep Creek Mo	74.05	19	P	P	14 02 49.0	+0.1
M24K	Tolsona, Glenn	74.10	18	P	P	14 02 49.3	+0.2
L27K	Beaver Creek,	74.26	16	P	P	14 02 50.7	+0.7
BCAR	Beaver Creek A	74.27	16	P	P	14 02 50.8	+0.7
M27K	Edge Creek, AK	74.87	16	P	P	14 02 52.9	-0.9
M27K				IAmb	IAmb	14 02 56.0	
	comp=Z,8.6nm,1.4s						
HYT	Haines Junctio	77.18	15	P	P	14 03 08.5	+1.6
HYT				IAmb	IAmb	14 03 12.5	
	comp=Z,5.6nm,1.1s						
YKA	Yellowknife Ar	78.50	4	P	P	14 03 14.7	+0.7
	comp=Z,1.6nm,0.8s,baz=350,slow=5.4,SNR=6.3						
YKA	Yellowknife Ar	78.50	4	P	P	14 03 14.7	+0.7
WRA	Warramunga Arr	81.64	124	P	P	14 03 32.4	+0.9
	comp=Z,1.2nm,0.4s,baz=314,slow=3.9,SNR=6.3						
WRA	Warramunga Arr	81.64	124	P	P	14 03 32.5	+0.9

*NOU **07** 13:52:30.1, 20°.53S×169°.67E, h0^{km}, MLv4.2/15, Vanuatu Islands*

ISC 07 13:52:33.3±3.2, **20°.57S**±0°.10×**169°.7E**±0°.2, **h55**^{km}, **n12**, σ**0^{s}.63**/13, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.83	240	P	Pn	13 53 01.6	-0.9
LIFNC	LIFOU	2.34	264	P	Pn	13 53 08.5	-0.9
PINNC	Pines Island,	2.95	226	P	Pn	13 53 16.9	-0.8
RTV	Rentapao	3.02	336	P	Pn	13 53 18.6	-0.1
YATNC	Mamie plateau,	3.04	240	P	Pn	13 53 18.6	-0.4
DVP	Devils Point	3.18	332	P	Pn	13 53 20.9	0.0
OUENC	Ouen Island, N	3.26	235	P	Pn	13 53 22.7	+0.7
DZM	Mont Dzumac	3.41	243	*e*Pn	Pn	13 53 24.3	+0.1
	18nm,0.3s						
DZM				*e*Sn	Sn	13 54 04.2	+0.7
	15nm,0.2s						
DZM	Mont Dzumac	3.41	243	P	Pn	13 53 23.9	-0.3
ONTNC	Ouen Toro	3.51	240	P	Pn	13 53 26.1	+0.7
NOUC	Port Laguerre	3.54	244	P	Pn	13 53 26.1	+0.2
KOUNC	Koumac, New Ca	5.11	269	P	Pn	13 53 47.0	-0.3

*TAP **07** 13:55:11.4, 24°.61N×122°.61E, h98^{km}, ML3.0, C*
*JMA **07** 13:55:11.3±0.2, 24°.54N×122°.58E, h105^{km}±2^{km}, M2.0*

ISC 07 13:55:12.2±1.5, **24°.61N**±0°.05×**122°.59E**±0°.03, **h96**^{km}±9^{km}, **n69**, σ**0^{s}.44**/130, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.36	116	P	Pn	13 55 26.8	+0.1
JYNG				*e*S	Sn	13 55 38.2	+0.8
YOJ	Yonaguni jima	0.41	111	*e*P	Pn	13 55 26.4	-0.5
	baz=111						
YOJ				*e*S	Sn	13 55 37.4	-0.6
	baz=111						
YOJ	Yonaguni jima	0.41	111	P	Pn	13 55 27.1	+0.1
YOJ				*e*S	Sn	13 55 38.8	+0.8
TWC	Suao	0.68	270	*e*P	Pn	13 55 28.6	-0.4
	baz=269						
TWC				*e*S	Sn	13 55 41.5	-0.2
	baz=269						
NTC	Toucheng	0.73	290	*e*P	Pn	13 55 29.4	-0.1
	baz=288						
NTC				*e*S	Sn	13 55 42.8	+0.2
	baz=288						
EWUT	Wuta	0.76	258	*e*P	Pn	13 55 29.9	+0.1
	baz=257						
EWUT				*e*S	Sn	13 55 43.6	+0.6
	baz=257						
TIPB	Shuangxi	0.79	298	P	Pn	13 55 29.8	-0.3
	baz=296						
TIPB				S	Sn	13 55 43.2	-0.4
	baz=296						
ENA	Nanau	0.80	257	*e*P	Pn	13 55 29.9	-0.2
	baz=256						
ENA				*e*S	Sn	13 55 43.8	+0.1
	baz=256						
NDS	Dongshan	0.80	272	*e*P	Pn	13 55 30.1	-0.1
	baz=271						
NDS				*e*S	Sn	13 55 43.9	+0.2
	baz=271						
TWE	Neicheng	0.85	278	P	Pn	13 55 30.6	-0.1
	baz=277						
TWE				S	Sn	13 55 44.7	0.0
	baz=277						
NWF	Wu-fen Shan	0.87	302	*e*P	Pn	13 55 30.8	-0.3
	baz=301						
NWF				*e*S	Sn	13 55 45.1	0.0
	baz=301						
ENTT	Nioudou	0.93	272	*e*P	Pn	13 55 31.6	-0.1
	baz=271						
ENTT				*e*S	Sn	13 55 46.4	+0.1
	baz=271						
NDT	Datong Townshi	0.98	270	*e*P	Pn	13 55 32.4	+0.3
	baz=269						
NDT				*e*S	Sn	13 55 47.7	+0.5
	baz=269						
ETL	Fush Village	0.99	243	*e*P	Pn	13 55 32.5	+0.2
	baz=243						
ETL				*e*S	Sn	13 55 47.6	+0.2
	baz=243						
NWLT	Wulai	1.00	280	*e*P	Pn	13 55 32.3	-0.1
	baz=279						
NWLT				*e*S	Sn	13 55 47.8	+0.1
	baz=279						
NWLT	Wulai	1.00	280	*e*S	Pn	13 55 32.5	+0.1
	baz=332						
NACB	Ninganchiao	1.01	245	*e*P	Pn	13 55 32.6	+0.2
	baz=244						
NACB				*e*S	Sn	13 55 47.5	-0.1
	baz=244						
TWD	Chiawan	1.05	240	*e*P	Pn	13 55 32.4	-0.5
	baz=240						
TWD				*e*S	Sn	13 55 48.1	-0.4
	baz=240						
IRIF	Iriomote-Funau	1.07	104	P	Pn	13 55 33.1	0.0
IRIF				S	Sn	13 55 49.3	+0.4
YM01	YM01	1.07	300	*e*P	Pn	13 55 33.5	+0.3
	baz=299						
YM01				*e*S	Sn	13 55 48.6	-0.4
	baz=299						
ETLH	Xiulin Townshi	1.09	249	*e*P	Pn	13 55 33.2	-0.3
	baz=248						
ETLH				*e*S	Sn	13 55 49.2	-0.2
	baz=248						
YHNB	Yeheng	1.11	273	P	Pn	13 55 33.7	0.0
	baz=273						
YHNB				S	Sn	13 55 49.7	-0.1
	baz=273						
NNSB	Datong	1.11	261	*e*P	Pn	13 55 33.7	-0.1
	baz=260						
NNSB				*e*S	Sn	13 55 50.2	+0.2
	baz=260						
NNS	Nan Shan	1.12	262	*e*P	Pn	13 55 33.8	0.0
	baz=261						
NNS				S	Sn	13 55 50.3	+0.1
	baz=261						
NSK	Sanguang	1.12	274	P	Pn	13 55 33.7	-0.1
	baz=273						
NSK				S	Sn	13 55 49.7	-0.4
	baz=273						
HATJ	Hateruma jima	1.23	116	*e*S	Sn	13 55 53.9	+1.6
FUSS	Fushou	1.28	254	*e*P	Pn	13 55 35.8	0.0
	baz=253						
FUSS				*e*S	Sn	13 55 53.5	-0.1
	baz=253						
WHF	Hehuan Shan	1.29	249	*e*P	Pn	13 55 36.0	-0.2
	baz=249						
WHF				*e*S	Sn	13 55 53.8	-0.5
	baz=249						
ESL	Shilin	1.32	233	*e*P	Pn	13 55 36.1	0.0
	baz=233						
ESL				*e*S	Sn	13 55 54.5	+0.4
	baz=233						
NCUH	Zhongli	1.33	286	*e*S	Sn	13 55 54.3	0.0
	baz=285						
TWT	Tachien	1.34	255	*e*P	Pn	13 55 36.6	+0.1
	baz=254						
TWT				*e*S	Sn	13 55 55.0	+0.2
	baz=254						
JKRS	Kuro-shima	1.34	106	P	Pn	13 55 36.4	+0.1
JKRS				S	Sn	13 55 55.1	+0.5
TDCB	Techi	1.35	255	*e*P	Pn	13 55 36.7	+0.1
	baz=254						
TDCB				*e*S	Sn	13 55 55.0	-0.1
	baz=254						
CHGB	Renai	1.40	247	*e*P	Pn	13 55 37.1	-0.2
	baz=247						
CHGB				*e*S	Sn	13 55 55.9	-0.3
	baz=247						
JIJ	Ishigaki jima	1.43	99	P	Pn	13 55 37.1	-0.3
JIJ				S	Sn	13 55 55.5	-1.1
LIOB	Emei	1.44	272	P	Pn	13 55 37.5	0.0
	baz=271						
LIOB				*e*S	Sn	13 55 56.4	-0.2
	baz=271						
OWD	Renai	1.45	244	*e*P	Pn	13 55 37.2	-0.6
	baz=243						
OWD				*e*S	Sn	13 55 56.1	-1.0
	baz=243						
NSTT	Nanjuang	1.45	271	*e*P	Pn	13 55 37.7	+0.1
	baz=270						
NSTT				*e*S	Sn	13 55 57.0	+0.1
	baz=270						
WHP	Taichung City	1.54	258	*e*P	Pn	13 55 39.4	+0.6
	baz=257						
WHP				S	Sn	13 55 59.7	+0.7
	baz=257						
HGSD	Ruisui	1.54	224	P	Pn	13 55 38.3	-0.4
	baz=224						
HGSD				S	Sn	13 55 58.4	-0.5
	baz=224						
JISG	Ishigakijimahi	1.56	90	P	Pn	13 55 38.7	-0.3
JISG				S	Sn	13 55 58.8	-0.6
VWDT	VWDT	1.57	238	P	Pn	13 55 39.0	-0.2
	baz=237						
VWDT				S	Sn	13 55 58.6	-1.1
	baz=237						
EHY	Hungye	1.60	227	P	Pn	13 55 38.4	-1.1
	baz=226						
EHY				*e*S	Sn	13 56 00.6	+0.4
	baz=226						
WCS	Beigang Elemen	1.63	251	*e*P	Pn	13 55 40.3	+0.4
	baz=250						
WCS				*e*S	Sn	13 56 01.0	+0.2
	baz=250						
YULB	Yu-li	1.69	225	*e*P	Pn	13 55 39.6	-1.1
	baz=224						
YULB				*e*S	Sn	13 56 01.1	-1.3
	baz=224						
SMLT	Sun Moon Lake	1.70	245	*e*P	Pn	13 55 41.3	+0.4
	baz=245						
SMLT				*e*S	Sn	13 56 02.9	+0.2
	baz=245						
SSLB	Suanglung	1.70	242	*e*P	Pn	13 55 40.7	-0.2
	baz=241						
SSLB				*e*S	Sn	13 56 01.8	-0.8
	baz=241						
EYUL	Yuli	1.71	223	*e*P	Pn	13 55 41.1	+0.2
	baz=223						
EYUL				*e*S	Sn	13 56 03.0	+0.2
	baz=223						
TYC	Yuchr	1.73	246	*e*P	Pn	13 55 41.7	+0.5
	baz=246						
TYC				*e*S	Sn	13 56 03.5	+0.3
	baz=246						
FULB	Fuli	1.84	221	*e*P	Pn	13 55 42.0	-0.6
	baz=220						
FULB				*e*S	Sn	13 56 05.6	-0.1
	baz=220						
YUS	Yu-Shan	1.87	234	P	Pn	13 55 43.5	+0.1
	baz=233						
YUS				*e*S	Sn	13 56 06.0	-1.1
	baz=233						
WJS	Zhushan	1.87	246	*e*P	Pn	13 55 43.2	+0.3
	baz=245						
WJS				*e*S	Sn	13 56 06.8	+0.4
	baz=245						
CHKT	Chengkung	1.88	217	*e*P	Pn	13 55 43.3	+0.2
	baz=217						
CHKT				*e*S	Sn	13 56 06.7	+0.2
	baz=217						
WNT	Mingjian	1.89	248	*e*P	Pn	13 55 43.4	+0.3
	baz=247						
WNT				*e*S	Sn	13 56 06.8	+0.1
	baz=247						
JTJ	Tarama	1.92	89	S	Sn	13 56 07.4	-0.1
ALS	Alishan	1.96	237	P	Pn	13 55 44.9	+0.5
	baz=236						
ALS				S	Sn	13 56 09.1	0.0
	baz=236						
EDH	Donghe	2.01	216	*e*P	Pn	13 55 45.1	+0.3
	baz=216						
EDH				*e*S	Sn	13 56 09.5	-0.1
	baz=216						
CHN5	Tsauling	2.02	240	*e*P	Pn	13 55 45.3	+0.4
	baz=240						
CHN5				*e*S	Sn	13 56 10.0	+0.1
	baz=240						
ELDTW	Lidau	2.02	226	*e*P	Pn	13 55 45.1	+0.1
	baz=225						
ELDTW				*e*S	Sn	13 56 09.3	-0.7
	baz=225						
WDLH	Douliu	2.09	244	*e*S	Sn	13 56 11.7	+0.3
	baz=244						
WRL	Guolierlin Hig	2.14	251	*e*S	Sn	13 56 12.3	-0.4
	baz=250						
STYH	Taoyuan	2.19	230	*e*P	Pn	13 55 47.5	+0.3
	baz=229						
STYH				*e*S	Sn	13 56 13.8	-0.1
	baz=229						
CHN4	Tsaushan	2.21	236	*e*P	Pn	13 55 47.9	+0.4
	baz=235						
CHN4				*e*S	Sn	13 56 14.5	+0.1
	baz=235						
TPUB	Ta-pu	2.22	234	*e*P	Pn	13 55 48.1	+0.6
	baz=234						
TPUB				*e*S	Sn	13 56 14.7	+0.2
	baz=234						
WTP	Ta-pu	2.26	234	*e*P	Pn	13 55 48.3	+0.2
	baz=233						
WTP				*e*S	Sn	13 56 15.6	0.0
	baz=233						
TWK	Hsinying	2.34	236	*e*S	Sn	13 56 17.3	-0.2
	baz=235						
CHN1	Nanshi	2.36	234	*e*P	Pn	13 55 49.7	+0.3
	baz=233						
CHN1				*e*S	Sn	13 56 17.9	0.0
	baz=233						
SGST	Jiashian	2.38	231	*e*S	Sn	13 56 18.4	0.0
	baz=230						
SLGT	Liugui	2.40	228	*e*P	Pn	13 55 50.4	+0.5
	baz=228						
SLGT				*e*S	Sn	13 56 19.2	+0.4
	baz=228						

TAP 07 13:55:12.0, 24°.29N×121°.78E, h8^{km}, ML1.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.15	345	P	Pg	13 55 16.1	+0.9
	baz=347						
ENA				S	Sg	13 55 18.8	+1.4
	baz=347						
EWUT	Wuta	0.16	358	P	Pg	13 55 16.3	+0.9
	baz=358						
EWUT				*e*S	Sg	13 55 19.0	+1.3
	baz=358						
ETL	Fush Village	0.19	229	*e*P	Pg	13 55 16.9	+0.9
	baz=229						
ETL				*e*S	Sg	13 55 20.5	+1.8
	baz=229						
NACB	Ninganchiao	0.21	237	P	Pg	13 55 17.2	+1.0
	baz=237						
NACB				S	Sg	13 55 20.7	+1.7
	baz=237						
TWD	Chiawan	0.27	220	*e*P	Pb	13 55 18.3	-0.8
	baz=218						
TWD				*e*S	Sb	13 55 22.7	-1.1
	baz=218						
ETLH	Xiulin Townshi	0.29	254	P	Pb	13 55 18.7	-0.8
	baz=254						
ETLH				S	Sb	13 55 23.7	-0.7
	baz=254						
TWC	Suao	0.33	10	*e*P	Pb	13 55 19.4	-0.7
	baz=12						
TWC				*e*S	Sb	13 55 25.1	-0.5
	baz=12						
NDS	Dongshan	0.35	350	*e*P	Pb	13 55 19.9	-0.7
	baz=349						
NDS				*e*S	Sb	13 55 25.5	-0.8
	baz=349						
NNSB	Datong	0.39	291	P	Pb	13 55 21.1	-0.3
	baz=291						
NNSB				*e*S	Sb	13 55 27.1	-0.4
	baz=291						
NDT	Datong Townshi	0.40	322	*e*P	Pb	13 55 20.9	-0.5
	baz=321						
NDT				*e*S	Sb	13 55 27.5	-0.1
	baz=321						
ENTT	Nioudou	0.41	331	*e*P	Pb	13 55 20.9	-0.6
	baz=331						
ENTT				*e*S	Sb	13 55 27.4	-0.4
	baz=331						
NNS	Nan Shan	0.41	292	*e*P	Pb	13 55 20.8	-0.8
	baz=292						
NNS				*e*S	Sb	13 55 27.2	-0.7
	baz=292						
TWE	Neicheng	0.45	346	*e*P	Pb	13 55 21.5	-0.6
	baz=347						
TWE				*e*S	Sb	13 55 28.8	-0.2
	baz=347						
ILA	Ilan	0.48	356	*e*P	Pb	13 55 22.4	-0.3
	baz=357						
ILA				*e*S	Sb	13 55 29.8	-0.1
	baz=357						
WHF	Hehuan Shan	0.49	254	*e*P	Pb	13 55 22.5	-0.7
	baz=253						
WHF				*e*S	Sb	13 55 30.4	-0.3
	baz=253						
FUSS	Fushou	0.49	266	*e*P	Pb	13 55 22.8	-0.3
	baz=265						
FUSS				*e*S	Sb	13 55 30.3	-0.3
	baz=265						
YHNB	Yeheng	0.53	316	*e*P	Pb	13 55 23.5	-0.2
	baz=315						
YHNB				*e*S	Sb	13 55 31.8	+0.2
	baz=315						
CHGB	Renai	0.60	248	*e*P	Pb	13 55 24.7	-0.2
	baz=248						

*IDC **07** 13:58:14.4±1.4, 1°.36S×134°.22E, h0^{km}, mb4.0/4, mb1 4.3/7, mb1mx3.7/40, mbtmp4.1/7, ML4.3/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/36, Error ellipse: s-maj=30.9km s-min=16.3km az=77.0*

DJA ***07*** *13:58:17.2±0.5, 1°S±3°×13°4E±°, h10^{km}, M4.5/6, mb4.8/3, mB5.0/1, MLv4.4/6, Mw(mB)4.4/1*
NEIC ***07*** *13:58:19.6±1.8, 1°.30S±0°.08×134°.1E±0°.2, h33^{km}±8^{km}, mb4.0/12, Error ellipse: s-maj=23.4km s-min=8.1km az=65.0*
ISC 07 13:58:18.6±0.9**, 1°.39S**±0°.08×**134°.10E**±0°.06**, h24^{km}, n27,** σ**1^s.44**/30**, mb4.0**/6**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	2.19	103	P	Pn	13 58 55.0	+1.4
FAKI	Fak Fak	2.40	231	P	Pn	13 58 57.0	+0.6
FAKI	Fak Fak	2.40	231	Pn	Pn	13 58 56.8	+0.4
SIJI	Sorong	2.88	280	Pn	Pn	13 59 02.3	-0.8
	26nm,0.3s,baz=65,slow=18,SNR=82						
SIJI				Sn	Sn	13 59 39.5	+2.5
	35nm,0.3s,baz=96,slow=20,SNR=6.6						
SWI	Sorong	2.89	280	P	Pn	13 59 02.4	-0.7
AAI	Ambon	6.33	249	P	Pn	13 59 52.2	+1.7
	0.3nm74nm,0.6s						
MTN	Manton Dam	11.76	194	Pn	Pn	14 01 05.1	+0.2
KNRA	Kununurra	15.14	200	Pn	Pn	14 01 49.7	-1.4
KNRA				IAmb	IAmb	14 02 17.5	
	comp=Z,10nm,0.6s						
WB0	Warramunga Arr	18.27	179		Pn	14 02 30.0	-0.7
WB0				IAmb	IAmb	14 02 34.0	
	comp=Z,9.3nm,1.1s						
WRAB	Tennant Creek	18.43	179		Pn	14 02 32.8	+0.1
WRAB				IAmb	IAmb	14 02 36.6	
	comp=Z,6.7nm,0.7s						
WRA	Warramunga Arr	18.44	179	P	P	14 02 32.3	-0.3
	comp=Z,1.7nm,0.3s,baz=360,slow=11,SNR=66						
WRA				S	Sn	14 05 53.0	-5.4
	comp=Z,0.1nm,0.3s,baz=5.3,slow=22,SNR=1.9						
WRA				LR	LR	14 10 29.6	
	comp=Z,77nm,18.7s,baz=200,slow=40						
WRA	Warramunga Arr	18.44	179		P	14 02 32.2	-0.4
WB2	Warramunga Arr	18.44	179		P	14 02 32.3	-0.3
WR0	Warramunga Arr	18.46	179		Pn	14 02 33.1	+0.1
WR0				IAmb	IAmb	14 02 35.7	
	comp=Z,6.4nm,0.6s						
FITZ	Fitzroy Crossi	18.57	206	P	Pn	14 02 34.9	+0.6
	comp=Z,0.5nm,0.3s,baz=36,slow=11,SNR=18						
AS31	Alice Springs	22.15	180		P	14 03 13.0	+0.1
AS31				IAmb	IAmb	14 03 17.1	
	comp=Z,2.8nm,0.7s						
ASAR	Alice Springs	22.15	180	P	P	14 03 13.6	+0.7
	comp=Z,5.7nm,0.5s,baz=4.1,slow=10,SNR=86						
ASAR				S	S	14 07 17.3	+1.4
	comp=Z,1.3nm,0.9s,baz=6.5,slow=24,SNR=4.3						
ASAR	Alice Springs	22.15	180		P	14 03 12.4	-0.4
PSA00	Pilbara Seismi	24.40	214	P	P	14 03 36.3	+0.9
PSA00				IAmb	IAmb	14 03 38.2	
	comp=Z,7.8nm,1.0s						
PSA00	Pilbara Seismi	24.40	214	P	P	14 03 36.3	+0.9
FORT	Forrest	29.79	191	P	P	14 04 25.1	+1.5
STKA	Stephens Creek	31.14	168	P	P	14 04 36.0	+0.4
	comp=Z,1.8nm,0.6s,baz=334,slow=9.8,SNR=4.7						
STKA	Stephens Creek	31.14	168	P	P	14 04 36.0	+0.4
BBOO	Buckleboo	31.31	177	P	P	14 04 37.2	+0.1
MKAR	Makanchi Array	65.97	324	P	P	14 09 03.5	+0.4
	comp=Z,0.8nm,0.6s,baz=113,slow=7.4,SNR=2.4						
MKAR	Makanchi Array	65.97	324	P	P	14 09 02.0	-1.0
ILAR	Eielson Array	86.56	25	P	P	14 10 57.9	-1.7
	comp=Z,0.4nm,0.7s,baz=269,slow=4.7,SNR=3.2						

IDC 07 14:03:02.3±2.6**, 6°.18S**×**130°.13E, h127^{km}**±38^{km}**, mb3.0**/1**, mb1 3.1**/5**, mb1mx2.7**/41**, mbtmp3.4**/5**, Error ellipse: s-maj=72.9km s-min=17.6km az=92.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.40	12	P	Pn	14 04 22.8	+2.0
	baz=204,slow=20,SNR=12						
SIJI				S	Sn	14 05 21.3	-0.6
	1.2nm,0.3s,baz=201,slow=22,SNR=8.3						
FITZ	Fitzroy Crossi	12.63	200	P	Pn	14 05 56.7	-0.8
	baz=18,slow=20						
FITZ				S	Sn	14 08 07.7	-9.2
	0.1nm,0.3s,baz=144,slow=21,SNR=1.2						
WRA	Warramunga Arr	14.28	164	P	Pn	14 06 18.1	-0.7
	0.2nm,0.3s,baz=349,slow=12,SNR=1.8						
WRA				S	Sn	14 08 42.9	-14
	0.1nm,0.3s,baz=258,slow=24,SNR=1.3						
ASAR	Alice Springs	17.76	169	P	P	14 07 01.1	+0.4
	0.1nm,0.3s,baz=345,slow=9.5,SNR=2.8						
MKAR	Makanchi Array	67.62	327	P	P	14 13 45.5	0.0
	0.2nm,0.7s,baz=116,slow=8.2,SNR=1.3						

ANF ***07*** *14:06:08.6±0.1, 34°.06N×116°.67W, h14^{km}±1^{km}, ML3.2/29, Error ellipse: s-maj=1.0km s-min=0.9km az=64.0*
NEIC ***07*** *14:06:09.2±1.0, 34°.06N±0°.02×116°.67W±0°.02, h17^{km}±3^{km}, Error ellipse: s-maj=3.2km s-min=1.1km az=140.0*
PAS ***07*** *14:06:09.6±1.0, 34°.072N±0°.009×116°.67W±0°.03, h10^{km}±4^{km}, ML3.3/231, ML3.1/64(NEIC), Error ellipse: s-maj=3.0km s-min=1.2km az=81.0*
ISC 07 14:06:08.9±0.9**, 34°.06N**±0°.02×**116°.66W**±0°.02**, h15^{km}**±8^{km}**, n63,** σ**0^s.60**/96**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBRC	Big Bear Solar	0.29	313	P	Pg	14 06 15.2	0.0
	baz=133,SNR=1000						
BBRC				S	Sg	14 06 19.5	-0.1
	baz=133						
GVDA	Garner Valley	0.39	181		Pg	14 06 17.1	+0.2
GVDA					Sg	14 06 22.5	+0.1
PFO	Pinyon Flats O	0.48	159	Pg	Pg	14 06 18.7	+0.1
PFO				Sg	Sg	14 06 25.0	0.0
PFO				IAML		14 06 25.9	
	2µm,0.1s						
PFO	Pinyon Flats O	0.48	159	P	Pg	14 06 18.7	+0.1
	baz=339,SNR=173						
PFO				S	Sg	14 06 25.2	+0.1
	baz=339						
CFSC	Central Fire S	0.52	275		Pg	14 06 19.4	+0.2
CFSC					Sb	14 06 27.0	0.0
BELC	Belle Mtn. Jos	0.56	96	P	Pg	14 06 20.2	+0.2
	baz=278,SNR=309						
BELC				S	Sg	14 06 27.5	+0.1
	baz=278						
RSBC	Riverside Bore	0.56	261		Pg	14 06 19.8	-0.2
RSBC					Sg	14 06 27.4	0.0
MURC	Murrieta	0.64	224	P	Pg	14 06 21.4	-0.1
	baz=42,SNR=195						
MURC				S	Sg	14 06 29.9	-0.1
	baz=42						
HEC	Hector,Ludlow	0.81	19	P	Pb	14 06 24.4	-0.4
	baz=200,SNR=91						
HEC				S	Sb	14 06 35.3	-0.4
	baz=200						
BFSC	Mount Baldy Ra	0.84	282	P	Pb	14 06 24.9	-0.5
	baz=101,SNR=162						
BFSC				S	Sb	14 06 35.9	-0.7
	baz=101						
RRX	Edison Barstow	0.86	341	P	Pb	14 06 25.3	-0.3
	baz=161						
RRX				S	Sb	14 06 37.0	+0.1
	baz=161						
BC3	Big Chuckawall	1.09	112	P	Pb	14 06 29.3	-0.3
	baz=293,SNR=42						
BC3				S	Sb	14 06 44.1	+0.5
	baz=293						
GMRC	Granite Mounta	1.10	49	P	Pb	14 06 29.5	-0.3
	baz=230,SNR=194						
GMRC				S	Sb	14 06 44.4	+0.4
	baz=230						
MWC	Mount Wilson	1.17	278		Pn	14 06 30.3	-0.7
MWC				Sg	Sb	14 06 46.1	+0.1
MWC				IAML		14 06 48.8	
	comp=N,518nm,0.4s						
MWC				IAML		14 06 49.8	
	comp=E,613nm,0.5s						
MONP2	Monument Peak	1.19	170	P	Pn	14 06 31.3	0.0
	baz=350,SNR=38						
MONP2				S	Sn	14 06 47.0	-0.2
	baz=350						
109C	Camp Elliot, M	1.23	198		Pn	14 06 31.1	-0.5
109C	Camp Elliot, M	1.23	198	P	Pn	14 06 31.3	-0.3
	baz=17						
109C				S	Sb	14 06 47.2	-0.4
	baz=17						
GSC	Goldstone, Bar	1.24	355		Pn	14 06 31.8	-0.1
GSC				IAML		14 06 53.6	
	comp=E,292nm,0.4s						
GSC	Goldstone, Bar	1.24	355	P	Pn	14 06 31.2	-0.7
	baz=175						
GSC				S	Sn	14 06 48.6	+0.1
	baz=175						
IRM	Iron Mountain	1.26	85	P	Pn	14 06 31.5	-0.7
	baz=267,SNR=465						
IRM				S	Sg	14 06 49.8	0.0
	baz=267						
PASC	Pasadena Art C	1.27	275	Pn	Pn	14 06 31.7	-0.4
PASC				IAML		14 06 51.1	
	comp=E,386nm,0.4s						
PASC				IAML		14 06 51.5	
	comp=N,258nm,0.3s						
SWSC	Sam W. Stewart	1.33	147	P	Pn	14 06 32.1	-0.9
	baz=327,SNR=53						
SWSC				S	Sg	14 06 51.3	-0.5
	baz=327						
EDW2	Edwards Air Fo	1.37	307	P	Pn	14 06 33.3	-0.4
	baz=126,SNR=32						
EDW2				Sb	Sb	14 06 52.2	+0.5
	baz=126						
BAR	Barrett	1.38	180		Pn	14 06 33.8	0.0
DECC	Green Verdugo	1.40	278	Pb	Pb	14 06 34.6	-0.2
	baz=97						
DECC				Sb	Sb	14 06 53.2	+0.7
	baz=97						
FMP	Fort Macarthur	1.40	256	P	Pn	14 06 33.8	-0.2
	baz=75						
FMP				S	Sb	14 06 52.2	-0.3
	baz=75						
IKP	In-Ko-Pah, Jac	1.48	162	P	Pn	14 06 35.0	-0.2
	baz=342,SNR=32						
IKP				Sb	Sg	14 06 56.4	-0.4
	baz=342						
TKX	Tecate	1.49	178		Pn	14 06 35.4	+0.1
TUQ	Turquoise Moun	1.50	24	P	Pn	14 06 35.5	0.0
	baz=204,SNR=42						
TUQ				Sb	Sb	14 06 56.6	+1.1
	baz=204						
RMX	La Rumorosa	1.54	161		Pn	14 06 36.4	+0.4
RMX				IAML		14 07 00.8	
	comp=E,157nm,0.3s						
TJX	Tijuana	1.58	192	Pn	Pn	14 06 37.2	+0.7
CIS	Catalina Islan	1.60	246	P	Pn	14 06 36.5	-0.3
	baz=65						
CIS				Sb	Sb	14 06 58.7	+0.3
	baz=65						
LRMC	Laurel Mtn Rad	1.64	330	P	Pn	14 06 37.2	-0.3
	baz=149,SNR=106						
LRMC				Sb	Sg	14 07 01.1	-0.8
	baz=149						
CBX	Cerro Bola	1.75	180	Pn	Pn	14 06 39.1	+0.2
CBX				IAML		14 07 05.2	
	comp=E,163nm,0.3s						
CBX				IAML		14 07 06.1	
	comp=N,167nm,0.6s						
OSI	Osito Audit: C	1.79	288	Pb	Pb	14 06 41.7	+0.1
	baz=107						
OSI				Sb	Sg	14 07 05.3	-1.3
	baz=107						
NEE2	Needles Airpor	1.83	67	P	Pn	14 06 39.5	-0.4
	baz=248						
NEE2				Sb	Sg	14 07 06.8	-1.1
	baz=248						
GLA	Glamis	1.84	123		Pn	14 06 40.1	+0.1
GLA				IAML		14 07 11.0	
	comp=E,212nm,0.5s						
GLA				IAML		14 07 18.7	
	comp=N,118nm,0.6s						
GLA	Glamis	1.84	123	P	Pn	14 06 40.0	0.0
	baz=304						
GLA				Sb	Sg	14 07 07.0	-1.0
	baz=304						
SHOC	Shoshone, Teco	1.86	10	P	Pn	14 06 40.7	+0.3
	baz=190,SNR=31						
SHOC				Sb	Sg	14 07 07.7	-1.1
	baz=190						
QSM	Queen of Sheba	1.91	355	Pn	Pn	14 06 41.0	0.0
QSM				IAML		14 07 11.6	
	comp=E,133nm,0.2s						
QSM				IAML		14 07 11.9	
	comp=N,141nm,0.2s						
ARVC	Arvin	2.08	301	Pb	Pb	14 06 46.6	+0.2
	baz=120						
ARVC				Sb	Sb	14 07 13.7	+1.7
	baz=120						
MPMC	Manual Prospec	2.10	341	P	Pn	14 06 44.0	+0.1
	baz=161						
MPMC				Sb	Sg	14 07 15.2	-1.5
	baz=161						
PDMCI	Parker Dam,Lak	2.10	83	P	Pn	14 06 43.7	0.0
	baz=264,SNR=19						
PDMCI				Sb	Sg	14 07 15.1	-1.5
	baz=264						
GWY	Greenwater Val	2.12	360	Pn	Pn	14 06 44.0	-0.1
GWY				IAML		14 07 16.8	
	comp=E,204nm,0.4s						
GWY				IAML		14 07 20.1	
	comp=N,196nm,0.6s						
ISA	Isabella, Lake	2.18	318		Pn	14 06 44.7	-0.1
ISA	Isabella, Lake	2.18	318	Pb	Pb	14 06 48.7	+0.5
	baz=137						
CCX	Cicese	2.19	180		Pn	14 06 45.2	+0.4
CCX				IAML		14 07 18.4	
	comp=N,81nm,0.5s						
CCX				IAML		14 07 19.6	
	comp=E,91nm,0.3s						
SHPR	Sheep Range	2.73	26	Pn	Pn	14 06 52.9	+0.4
SHPR				IAML		14 07 38.0	
	comp=E,60nm,0.5s						
LCH	Last Change Ra	3.26	346		Pn	14 07 00.3	+0.6
PMPB	Monarch Peak	4.01	304	Pn	Pn	14 07 11.0	+1.0
TPH	Tonopah	4.03	354	Pn	Pn	14 07 11.3	+1.0
LCMT	Little Creek M	4.05	42		Pn	14 07 11.6	+1.0
KNB	Kanab	4.30	46	Pn	Pn	14 07 15.2	+1.1
KNB				IAML		14 08 32.9	
	comp=N,21nm,1.6s						
KNB				IAML		14 08 43.8	
	comp=E,18nm,3.0s						
R11A	Troy Canyon, C	4.37	11	Pn	Pn	14 07 16.0	+1.1
CCUT	Cedar City	4.39	37	Pn	Pn	14 07 16.3	+1.0
LHV	Little Huntoon	4.44	341	Pn	Pn	14 07 16.4	+0.7
LHV				IAML		14 09 07.9	
	comp=E,22nm,4.9s						
LHV				IAML		14 09 08.8	
	comp=N,14nm,3.4s						
NV11	Mina Array Sit	4.52	345	Pn	Pn	14 07 18.2	+1.1
NV11				IAML		14 09 48.3	
	comp=E,13nm,3.8s						
SZCU	Shurtz Canyon	4.57	38	Pn	Pn	14 07 18.0	+0.2
SZCU				IAML		14 08 41.5	
	comp=E,13nm,0.4s						
SZCU				IAML		14 08 53.6	
	comp=N,11nm,4.1s						
CMB	Columbia Colle	4.98	324	Pn	Pn	14 07 24.3	+1.0
CMB				IAML		14 09 08.6	
	comp=N,12nm,4.8s						
PSUT	Pine Spring	5.00	26	Pn	Pn	14 07 24.4	+0.6
PSUT				IAML		14 08 56.7	
	comp=N,12nm,1.2s						
KVN	Kaiserville	5.11	347	Pn	Pn	14 07 26.2	+1.0
KVN				IAML		14 08 20.3	
	comp=E,7.8nm,4.6s						
SPR3	Spring Creek 3	5.27	20	Pn	Pn	14 07 27.8	+0.2
SPR3				IAML		14 08 58.6	
	comp=N,10nm,4.0s						
SPR3				IAML		14 09 02.2	
	comp=E,12nm,4.0s						
BMN	Battle Mountai	6.37	356	Pn	Pn	14 07 42.8	+0.3

NEIC ***07*** *14:08:41.9±1.4, 6°.09N±0°.09×125°.9E±0°.1, h141^{km}±8^{km}, mb4.2/17, Error ellipse: s-maj=21.5km s-min=10.9km az=69.0*
IDC ***07*** *14:08:42.8±0.7, 5°.92N×125°.70E, h150^{km}±12^{km}, mb3.3/5, mb1 3.6/7, mb1mx3.0/47, mbtmp3.9/7, Error ellipse: s-maj=58.7km s-min=12.7km az=65.0*
DJA ***07*** *14:08:56.5±0.8, 5°N±5°×12°6E±°, h118^{km}±15^{km}, M4.0/3, mb4.4/1, mB4.6/1, MLv3.9/3, Mw(mB)3.9/1*
MAN ***07*** *14:08:56.7, 6°.45N×125°.62E, h1^{km}, mb4.6, ML3.4, MS3.3*
ISC 07 14:08:42.5±0.6**, 6°.00N**±0°.05×**125°.92E**±0°.08**, h150^{km}, n40,** σ**1^s.25**/46**, mb4.0**/13**, 4C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.23	297	⇓iP	Pn	14 09 03.5	+0.7
GSPH	General Santos	0.97	275	⇑eP	Pn	14 09 07.2	+0.1
GSPH				i S	Sn	14 09 25.9	+0.1
MATI	Mati	1.00	20	⇑eP	Pn	14 09 08.8	+1.6
DAV	Davao City (W)	1.11	342	P	Pn	14 09 09.5	+1.2
	53nm,0.3s,baz=236,slow=15,SNR=4.5						
DAV				S	Sn	14 09 29.2	+1.1
	262nm,0.3s,baz=288,slow=20,SNR=14						
DAV	Davao City (W)	1.11	342		Pn	14 09 05.8	-2.5
DMPH	Davao City--Mi	1.15	339	⇑eP	Pn	14 09 09.6	+1.0
DMPH				eS	Sn	14 09 28.5	-0.1
BUKP	Musuan	2.05	336	⇓eP	Pn	14 09 20.4	+2.1
BUKP				i S	Sn	14 09 48.4	+2.6
SGSI	Sangihe	2.33	190	P	Pn	14 09 22.7	+1.1
PAGZ	Pagadian	3.12	306	⇑eP	Pn	14 09 32.9	+1.6
GLSP	General Luna,	3.77	3	⇓iP	Pn	14 09 41.5	+1.8
TNTI	Ternate	5.39	164	P	Pn	14 10 02.0	+0.9
TNTI	Ternate	5.39	164	Pn	Pn	14 10 00.4	-0.7
KMSI	Cibinong	5.72	200	P	Pn	14 10 07.0	+1.4
LBMI	Labuha	6.78	166	P	Pn	14 10 20.5	+0.9
TOLI2	Tolitoli	7.06	227	Pn	Pn	14 10 23.3	-0.1
SIJI	Sorong	8.66	142	P	Pn	14 10 45.6	+0.8
	1.5nm,0.3s,baz=333,slow=16,SNR=6.5						
SIJI				S	Sn	14 12 20.5	-0.6
	0.6nm,0.3s,baz=163,slow=22,SNR=1.7						
BATI	Baumata	16.25	188	P	Pn	14 12 21.0	-1.4
	1.2nm,0.3s,baz=80,slow=11,SNR=1.7						
MTN	Manton Dam	19.42	165	P	P	14 12 58.0	+0.7
MTN				IAmb	IAmb	14 13 21.3	
	comp=Z,9.3nm,1.1s						
KNRA	Kununurra	21.72	173	P	P	14 13 22.2	+0.3
KNRA				IAmb	IAmb	14 13 23.6	
	comp=Z,3.5nm,0.8s						
FITZ	Fitzroy Crossi	23.95	181	P	P	14 13 43.4	+0.5
	comp=Z,0.7nm,0.4s,baz=5.2,slow=7.8,SNR=7.3						
COEN	Coen	26.20	139	P	P	14 14 04.0	+0.6
COEN				IAmb	IAmb	14 14 14.1	
	comp=Z,6.3nm,1.1s						
WB0	Warramunga Arr	26.93	162	P	P	14 14 09.5	-0.4
WB0				IAmb	IAmb	14 14 10.3	
	comp=Z,5.7nm,1.3s						
WRAB	Tennant Creek	27.07	162	P	P	14 14 10.9	-0.2
WRAB				IAmb	IAmb	14 14 13.1	
	comp=Z,3.1nm,0.8s						
WRA	Warramunga Arr	27.08	162	P	P	14 14 11.0	-0.3
	comp=Z,0.4nm,0.3s,baz=334,slow=11,SNR=19						
WRA	Warramunga Arr	27.08	162	P	P	14 14 10.1	-1.1
WB2	Warramunga Arr	27.08	162	P	P	14 14 10.8	-0.5
WB2				IAmb	IAmb	14 14 11.9	
	comp=Z,5.8nm,1.3s						
WR0	Warramunga Arr	27.16	162	P	P	14 14 11.5	-0.4
AS31	Alice Springs	30.50	165	P	P	14 14 42.2	+0.7
ASAR	Alice Springs	30.50	165	P	P	14 14 41.7	+0.2
	comp=Z,0.7nm,0.4s,baz=338,slow=7.2,SNR=45						
ASAR				PcP	PcP	14 17 37.1	-0.1
	comp=Z,0.4nm,0.4s,baz=348,slow=2.3,SNR=9.6						
MJB9	Matsu-Tunnel	32.42	19	P	P	14 14 54.9	-3.4
CTAO	Charters Tower	32.74	143	P	P	14 15 01.6	+0.3
JSD	Sado	33.81	18	P	P	14 15 07.4	-2.9
FORT	Forrest	36.63	177	P	P	14 15 34.9	+0.5
BBOO	Buckleboo	39.78	167	P	P	14 16 01.6	+0.8
BBOO				IAmb	IAmb	14 16 04.1	
	comp=Z,13nm,1.2s						
STKA	Stephens Creek	40.52	159	P	P	14 16 07.8	+0.9
	comp=Z,1.9nm,0.5s,baz=336,slow=10,SNR=7.6						
STKA	Stephens Creek	40.52	159	P	P	14 16 07.6	+0.6
DZM	Mont Dzumac	48.51	126	P	P	14 17 11.7	+1.1
DZM				IAmb	IAmb	14 17 25.3	
	comp=Z,4.9nm,1.1s						
MKAR	Makanchi Array	55.24	325	P	P	14 17 59.4	-0.7
	comp=Z,0.2nm,0.3s,baz=115,slow=6.7,SNR=8.3						
MAKZ	Makanchi	55.43	325	P	P	14 18 00.5	-0.9
MAKZ				IAmb	IAmb	14 18 18.6	
	comp=Z,11nm,1.4s						
TORD	Torodi Ar. Bea	121.43	289	PKP	PKPdf	14 27 18.2	-0.8
	comp=Z,0.3nm,0.5s,baz=81,slow=1.6,SNR=2.5						

SOME ***07*** *14:27:15.2, 38°.40N×72°.98E, h5^{km}, MS3.8*
IDC ***07*** *14:27:15.3±0.8, 38°.34N×72°.94E, h0^{km}, mb3.9/19, mb1 4.1/26, mb1mx3.9/67, mbtmp4.0/26, ML3.9/7, MS3.2/2, Ms1 3.2/2, ms1mx2.8/42, Error ellipse: s-maj=14.3km s-min=13.4km az=22.0*
KRNET ***07*** *14:27:16.0±0.1, 38°.38N×73°.07E, mb4.8*
NNC ***07*** *14:27:17.8±1.8, 38°.41N×72°.93E, h0^{km}, mb5.0, mpv4.6, Error ellipse: s-maj=15.3km s-min=10.2km az=157.0*
BJI ***07*** *14:27:17.9±0.0, 38°.47N×73°.12E, h9^{km}, mB4.8/14, mb4.4/27, ML4.3/4, Ms3.9/5, Ms7 3.7/5*
NEIC ***07*** *14:27:17.4±2.5, 38°.36N±0°.05×72°.91E±0°.08, h10^{km}±1^{km}, mb4.5/29, Error ellipse: s-maj=11.4km s-min=8.4km az=99.0*
ISC 07 14:27:16.9±1.3**, 38°.24N**±0°.03×**72°.77E**±0°.02**, h8^{km}**±8^{km}**, n173,** σ**2^s.55**/202**, mb4.4**/35**, MS3.6**/3**, 22C-10D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.45	329		Pn	14 27 41.5	-2.2
DRK	Karamyk	1.45	329	⇑iP	Pn	14 27 44.0	+0.3
	baz=19						
DRK				⇑iS	Sb	14 28 04.1	+1.1
	baz=19						
SFK	Sufi-Kurgan	1.86	18	⇑eP	Pn	14 27 47.0	-2.3
	baz=12						
SFK				⇑eS	Sn	14 28 10.1	-3.0
	baz=12						
GAR	Garm	2.06	292		Pb	14 27 53.5	-1.1
GAR	Garm	2.06	292	⇑iP	Pg	14 27 56.4	0.0
	baz=87						
GAR				⇑iS	Sg	14 28 25.5	+2.4
	baz=87						
OHH	Osh	2.28	0	⇑iP	Pn	14 27 55.5	+0.6
	baz=54						
OHH				⇑iS	Sn	14 28 23.9	+0.7
	baz=54						
BTK	Batken	2.36	321		Pn	14 27 57.9	+1.8
BTK	Batken	2.36	321	⇑iP	Pb	14 27 59.1	-0.6
	baz=14						
BTK				⇑iS	Sb	14 28 29.9	+0.8
	baz=14						
KSH	Kashi	2.81	62	Pn	Pn	14 27 55.5	-6.7
KSH				Sn	Sn	14 28 23.7	-13
KSH				smax	smax		
	comp=N,2µm,0.8s						
KSH				smax	smax		
	comp=E,5µm,0.8s						
CHGR	Chuyangaron	2.86	279		Pb	14 28 07.8	-0.4
CHGR	Chuyangaron	2.86	279	⇑iP	Pb	14 28 07.9	-0.4
	baz=76						
CHGR				⇑iS	Sb	14 28 45.8	+2.3
	baz=76						
TRKS	Terek-Say	3.51	340	⇓eP	Pn	14 28 12.7	+0.8
	baz=35						
TRKS				⇓iS	Sn	14 28 53.8	0.0
	baz=35						
AML	Almayashu	3.95	10	P	Pn	14 28 18.8	+0.6
	SNR=81						
TAS	Tashkent	4.08	320	Pn	Pn	14 28 21.3	+1.7
UCH	Uchtor	4.20	18	P	Pn	14 28 22.4	+0.8
	SNR=66						
EKS2	Erkin-Say	4.48	10	P	Pn	14 28 26.2	+1.0
	SNR=18						
MRKS	Merke	4.51	4	eP	Pb	14 28 35.6	-0.7
	105nm,0.4s						
MRKS				eS	Sb	14 29 33.5	+2.5
	137nm,0.6s						
MRKS	Merke	4.51	4	Pg	Pb	14 28 35.6	-0.7
	105nm,0.4s						
MRKS				Lg	Lg	14 29 30.9	
	137nm,0.6s						
AAK	Ala-Archa	4.58	16	Pn	Pn	14 28 27.6	+0.9
	15nm,0.3s,baz=184,slow=6.2,SNR=108						
AAK				Sn	Sn	14 29 21.5	+1.4
	9.8nm,0.3s,baz=27,slow=23,SNR=1.3						
AAK				LR	LR	14 30 23.2	
	comp=Z,324nm,21.8s,baz=201,slow=42						
AAK	Ala-Archa	4.58	16	P	Pn	14 28 27.9	+1.2
	SNR=53						
AAK	Ala-Archa	4.58	16	⇑Pn	Pn	14 28 27.5	+0.9
	132nm,0.9s						
AAK				Lg	Lg	14 29 38.7	
AAK	Ala-Archa	4.58	16	Pn	Pn	14 28 27.4	+0.8
NIL	Nilore	4.60	175	Pn	Pn	14 28 28.1	+1.4

KBK	**Karagaybulak**	**4.71**	**20**	P	**Pn**	**14 28 29.6**	**+1.2**
	SNR=21						
CHM	**Chimkent**	**4.74**	**330**	*e*P	**Pb**	**14 28 42.9**	**+2.7**
	87nm,0.1s						
CHM				*e*S	**Sg**	**14 29 45.7**	**-3.2**
	673nm,0.6s						
KBL	**Kabul**	**4.76**	**220**	Pn	Pb	14 28 34.3	-6.4
DZA	**Taraz**	**4.77**	**347**	*e*P	**Pb**	**14 28 40.6**	**-0.1**
	117nm,0.2s						
DZA				*e*S	**Sb**	**14 29 41.7**	**+3.4**
	319nm,0.5s						
DZA	**Taraz**	**4.77**	**347**	*e*Pn	**Pn**	**14 28 29.4**	**+0.3**
	baz=343						
FRU1	**Bishkek**	**4.78**	**17**		**Pn**	**14 28 29.9**	**+0.7**
ULHL	**Ulahol**	**4.80**	**33**	P	**Pn**	**14 28 30.7**	**+1.0**
	SNR=9.6						
BOOM	**Boomskoye usch**	**4.88**	**29**	Pn	**Pn**	**14 28 30.8**	**0.0**
CHMS	**Chumysh**	**4.98**	**17**	P	**Pn**	**14 28 33.0**	**+0.9**
	SNR=31						
TKM2	**Tokmak 2**	**5.14**	**24**	P	**Pn**	**14 28 35.0**	**+0.6**
	SNR=18						
TKM2	**Tokmak 2**	**5.14**	**24**	⇓Pn	**Pn**	**14 28 34.7**	**+0.3**
	45nm,0.6s						
TKM2				Lg	Lg	14 29 55.4	
KDJ	**Kajisay**	**5.15**	**40**	Pn	**Pn**	**14 28 33.8**	**-0.6**
KKAR	**Karatay Array**	**5.15**	**341**	Pn	**Pn**	**14 28 34.0**	**-0.3**
KK08	**Karatay Array**	**5.16**	**341**	⇓Pn	**Pn**	**14 28 35.7**	**+1.4**
	28nm,0.5s						
KK08				⇓Sn	**Sn**	**14 29 36.4**	**+2.3**
	102nm,0.7s						
KK08				⇑Lg	Lg	14 30 02.4	
	102nm,0.7s						
USP	**Ospenovka**	**5.19**	**14**	P	**Pn**	**14 28 35.4**	**+0.5**
	SNR=6.4						
KST	**Kastek**	**5.38**	**26**	*e*P	**Pb**	**14 28 52.4**	**+1.3**
	63nm,0.8s						
KST				*e*S	**Sb**	**14 30 02.5**	**+6.7**
	154nm,0.9s						
KST	**Kastek**	**5.38**	**26**	Pg	**Pb**	**14 28 52.4**	**+1.3**
	63nm,0.8s						
KST				Lg	Lg	14 30 00.4	
	154nm,0.9s						
SGDS	**Sogindy**	**5.39**	**15**	*e*Pn	**Pn**	**14 28 36.4**	**-1.2**
	baz=14						
DGS	**Degeres**	**5.49**	**24**	*e*P	**Pb**	**14 28 53.0**	**-0.1**
	78nm,0.5s						
DGS				*e*S	**Sb**	**14 30 03.6**	**+4.5**
	88nm,0.6s						
DGS	**Degeres**	**5.49**	**24**	Pg	**Pb**	**14 28 53.0**	**-0.1**
	82nm,0.5s						
DGS				Lg	Lg	14 30 01.8	
	88nm,0.6s						
MTBS	**Maitube**	**5.62**	**29**	*e*P	**Pb**	**14 28 55.3**	**0.0**
	44nm,1.0s						
MTBS				*e*S	**Sb**	**14 30 07.1**	**+4.3**
	77nm,1.2s						
TNSS	**Tian-Shan**	**5.75**	**32**	*e*P	**Pb**	**14 28 58.0**	**+0.4**
	38nm,1.0s						
TNSS				*e*S	**Sb**	**14 30 12.3**	**+5.5**
	49nm,0.9s						
TNSS	**Tian-Shan**	**5.75**	**32**	*e*Pn	**Pn**	**14 28 42.0**	**-0.9**
	baz=34						
TNSS	**Tian-Shan**	**5.75**	**32**	Pg	**Pb**	**14 28 58.0**	**+0.4**
	59nm,0.5s						
TNSS				Lg	Lg	14 30 09.8	
	46nm,1.1s						
KRBS	**Karabastau**	**5.88**	**21**	*e*P	**Pb**	**14 28 59.8**	**+0.2**
	46nm,0.3s						
KRBS				*e*S	**Sb**	**14 30 15.2**	**+5.1**
	33nm,0.6s						
KRBS	**Karabastau**	**5.88**	**21**	Pg	**Pb**	**14 28 59.8**	**+0.2**
	46nm,0.5s						
KRBS				Lg	Lg	14 30 12.6	
	33nm,0.6s						
AAA	**Alma-Ata**	**5.88**	**31**	*e*P	**Pb**	**14 29 00.3**	**+0.7**
	29nm,0.4s						
AAA				*e*S	**Sb**	**14 30 15.7**	**+5.5**
	175nm,0.9s						
AAA	**Alma-Ata**	**5.88**	**31**	*e*Pn	**Pn**	**14 28 44.6**	**+0.3**
	baz=33						
MDOK	**Medeo**	**5.89**	**32**	*e*P	**Pb**	**14 29 01.3**	**+1.3**
	42nm,0.4s						
MDOK				*e*S	**Sb**	**14 30 17.4**	**+6.7**
	76nm,0.9s						
MDOK	**Medeo**	**5.89**	**32**	*e*Pn	**Pn**	**14 28 43.6**	**-1.1**
	baz=34						
MDOK	**Medeo**	**5.89**	**32**	⇑Pn	**Pn**	**14 28 46.2**	**+1.6**
	7.4nm,0.6s						
MDOK				⇑Pg	**Pb**	**14 29 00.1**	**+0.1**
	69nm,0.9s						
MDOK				⇑Lg	Lg	14 30 20.1	
	173nm,1.2s						
MDOK	**Medeo**	**5.89**	**32**	Pg	**Pb**	**14 28 59.8**	**-0.1**
	42nm,0.4s						
MDOK				Lg	Lg	14 30 13.9	
	76nm,0.9s						
KNDC	**Almaty**	**5.90**	**31**	⇑Pg	**Pb**	**14 29 01.1**	**+1.0**
	184nm,0.7s						
KNDC				⇓Lg	Lg	14 30 21.2	
	699nm,1.1s						
KOTS	**Kotyrbulak**	**5.98**	**32**	*e*P	**Pb**	**14 29 04.1**	**+2.7**
	62nm,0.6s						
KOTS				*e*S	**Sg**	**14 30 22.6**	**-6.1**
	222nm,0.6s						
KOTS	**Kotyrbulak**	**5.98**	**32**	Pg	**Pb**	**14 29 04.5**	**+3.1**
	62nm,0.6s						
KOTS				Lg	Lg	14 30 21.5	
	222nm,0.6s						
PRZ	**Przheval'sk**	**6.04**	**44**	Pn	**Pn**	**14 28 46.0**	**-0.7**
KTBS	**Karatobe**	**6.21**	**27**	*e*P	**Pb**	**14 29 06.1**	**+0.7**
	38nm,0.6s						
KTBS				*e*S	**Sb**	**14 30 25.5**	**+5.7**
	62nm,0.6s						
KTBS	**Karatobe**	**6.21**	**27**	Pg	**Pb**	**14 29 06.1**	**+0.7**
	38nm,0.6s						
KTBS				Lg	Lg	14 30 25.5	
	62nm,0.6s						
KUU	**Kurty**	**6.26**	**24**	*e*P	**Pb**	**14 29 06.7**	**+0.7**
	36nm,0.3s						
KUU				*e*S	**Sb**	**14 30 26.6**	**+5.6**
	101nm,0.6s						
KUU	**Kurty**	**6.26**	**24**	*e*Pn	**Pn**	**14 28 48.2**	**-1.3**
	baz=25						
KUU	**Kurty**	**6.26**	**24**	Pg	**Pb**	**14 29 06.8**	**+0.8**
	31nm,0.5s						
KUU				Lg	Lg	14 30 24.9	
	101nm,0.6s						
SATY	**Saty**	**6.44**	**40**	*e*P	**Pb**	**14 29 09.7**	**+0.4**
	48nm,0.5s						
SATY				*e*S	**Sb**	**14 30 32.2**	**+5.6**
	110nm,1.1s						
SATY	**Saty**	**6.44**	**40**	*i* Pn	**Pn**	**14 28 50.2**	**-1.9**
	baz=42						
DHRM	**DHARAMSHALA**	**6.64**	**153**	*e*P	**Pn**	**14 28 56.9**	**+1.8**
DHRM				*e*S	**Sn**	**14 30 15.2**	**+4.2**
DHRM				IAML		14 30 30.1	
	comp=N,116nm,0.9s						
DHRM				IAML		14 30 30.4	
	comp=E,156nm,0.6s						
KURS	**Kuram**	**6.65**	**36**	*e*P	**Pb**	**14 29 14.2**	**+1.4**
	comp=E,19nm,0.8s						
KURS				*e*S	**Sb**	**14 30 39.3**	**+6.9**
	comp=E,47nm,0.3s						
UZB	**Uzynbulak**	**6.82**	**42**	*e*P	**Pb**	**14 29 17.7**	**+1.9**
	comp=E,7.3nm,0.5s						
UZB				*e*S	**Sb**	**14 30 45.2**	**+7.7**
	comp=E,78nm,1.2s						
UZB	**Uzynbulak**	**6.82**	**42**	*e*Pn	**Pn**	**14 28 56.9**	**-0.5**
	baz=45						
BTLS	**Baital**	**6.86**	**8**	*e*P	Pb	14 29 21.5	+5.2
	comp=E,13nm,0.6s						
BTLS				*e*S	**Sg**	**14 30 52.5**	**-4.5**
	comp=E,30nm,1.1s						
BTLS	**Baital**	**6.86**	**8**	*e*Pn	**Pn**	**14 28 57.1**	**-0.7**
	baz=6.6						
KPKS	**Kokpek**	**6.88**	**39**	*e*P	**Pb**	**14 29 18.3**	**+1.6**
	comp=E,21nm,0.5s						
KPKS				*e*S	**Sb**	**14 30 46.3**	**+7.3**
	comp=E,84nm,0.6s						
KPKS	**Kokpek**	**6.88**	**39**	*e*Pn	**Pn**	**14 28 57.5**	**-0.6**
	comp=E,5.6nm,0.8s,baz=41						
SHLS	**Shalkode**	**7.07**	**44**	*e*P	Pg	14 29 26.5	-5.7
	comp=E,26nm,0.3s						
SHLS				*e*S	**Sg**	**14 31 01.1**	**-2.6**
	comp=E,101nm,1.1s						
SHLS	**Shalkode**	**7.07**	**44**	*e*Pn	**Pn**	**14 29 02.3**	**+1.5**
	baz=48						
ARXS	**Arharly**	**7.08**	**31**	*e*P	**Pb**	**14 29 22.2**	**+2.1**
	comp=E,27nm,0.8s						
ARXS				*e*S	Sb	14 30 53.7	+9.0
	comp=E,43nm,1.4s						
PDGK	**Podgornoye**	**7.20**	**43**	⇓Pn	**Pn**	**14 29 01.3**	**-1.2**
	comp=E,19nm,1.0s						
TDK	**Taldyqorghan**	**7.96**	**30**	*e*Pn	**Pn**	**14 29 11.9**	**-1.0**
	baz=31						
SMLA	**Simla**	**7.97**	**152**	*e*P	**Pn**	**14 29 15.4**	**+2.4**
SMLA				*e*S	**Sn**	**14 30 40.9**	**-2.4**
SMLA				IAML		14 30 45.9	
	comp=N,92nm,0.6s						
SMLA				IAML		14 30 53.7	
	comp=E,88nm,0.5s						
HRA	**Herat**	**9.32**	**249**		Pn	14 29 36.3	+4.5
OTUK	**Ortayu**	**10.00**	**358**	⇑Pn	**Pn**	**14 29 38.7**	**-2.1**
	comp=E,7.8nm,0.7s						
OTUK				⇓Lg	Lg	14 32 33.3	
	comp=E,84nm,1.2s						
KUDL	**Kundal**	**10.54**	**162**	*e*P	**Pn**	**14 29 50.0**	**+1.7**
MAKZ	**Makanchi**	**10.92**	**35**	Pn	**Pn**	**14 29 53.0**	**-0.5**
MK31	**Makanchi Array**	**11.05**	**36**	Pn	**Pn**	**14 29 54.1**	**-1.2**
MKAR	**Makanchi Array**	**11.05**	**36**	Pn	**Pn**	**14 29 54.6**	**-0.7**
	comp=E,0.3nm,0.3s,baz=228,slow=13,SNR=14						
MKAR				Lg	Lg	14 32 47.4	
	comp=E,0.1nm,0.3s,baz=215,slow=26,SNR=2.9						
GEYT	**Alibeck**	**11.55**	**273**	Pn	**Pn**	**14 30 03.2**	**+1.1**
	comp=E,2.7nm,0.3s,baz=102,slow=12,SNR=22						
GEYT				Sn	**Sn**	**14 32 11.4**	**+0.1**
	comp=E,0.4nm,0.3s,baz=63,slow=44,SNR=2.1						
GYA0B	**ALIBECK ARRAY**	**11.55**	**273**	⇑Pn	**Pn**	**14 30 02.7**	**+0.6**
GYA0B				⇑Sn	**Sn**	**14 32 13.0**	**+1.7**
GYA0B	**ALIBECK ARRAY**	**11.55**	**273**	Pn	**Pn**	**14 30 03.2**	**+1.1**
BRZS	**Berezniki**	**11.74**	**360**	*e*Pn	**Pn**	**14 30 02.3**	**-2.2**
	comp=E,2.7nm,0.9s,baz=359						
WMQ	**Urumqi**	**12.57**	**59**	*e*P	**Pn**	**14 30 14.7**	**-1.3**
WMQ				pP		14 30 19.2	
WMQ				pmax	pmax		
	comp=E,12nm,0.9s						
WMQ				pmax	pmax		
	comp=E,260nm,4.5s						
KURBB	**Kurchatov Arra**	**13.04**	**16**	Pn	**Pn**	**14 30 18.6**	**-3.7**
	comp=E,0.2nm,0.3s,baz=205,slow=12,SNR=5.6						
KURK	**Kurchatov**	**13.14**	**17**	Pn	**Pn**	**14 30 20.3**	**-3.5**
PYUN	**Piuthan**	**13.24**	**137**	*e*P	**Pn**	**14 30 22.4**	**-3.0**
	comp=E,25nm,0.4s						
SEM	**Semipalatinsk**	**13.28**	**21**	*e*Pn	**Pn**	**14 30 22.7**	**-3.1**
	comp=E,2.6nm,0.8s,baz=22						
DANN	**Dangsing**	**13.47**	**134**	*e*P	**Pn**	**14 30 25.7**	**-3.0**
	comp=E,14nm,0.3s						
JHNI	**Jhansi**	**13.65**	**157**	*e*P	**Pn**	**14 30 33.2**	**+2.5**
KOLN	**Koldanda**	**13.83**	**136**	*e*P	**Pn**	**14 30 30.1**	**-3.4**
	comp=E,11nm,0.4s						
GKN	**Gorkha**	**14.24**	**132**	*e*P	**Pn**	**14 30 36.1**	**-2.9**
AB31	**Akbulak array**	**14.37**	**324**	Pn	**Pn**	**14 30 42.0**	**+1.5**
	comp=E,4.4nm,0.6s,baz=132,slow=13,SNR=87						
AB31				⇑Sn	**Sn**	**14 33 21.2**	**+1.3**
	comp=E,5.1nm,0.7s,baz=132,slow=25,SNR=4.0						
ABKAR	**Akbulak array**	**14.37**	**324**		**Pn**	**14 30 37.6**	**-2.8**
BVAR	**Borovoye Array**	**14.88**	**354**	Pn	**Pn**	**14 30 43.7**	**-3.7**
	comp=E,0.4nm,0.3s,baz=180,slow=19,SNR=12						
BRVK	**Borovoye**	**14.92**	**354**	Pn	**Pn**	**14 30 43.3**	**-4.6**
PKIN	**Phulchoki**	**15.01**	**131**	*e*P	**Pn**	**14 30 44.9**	**-4.6**
	comp=E,13nm,0.5s						
PKI	**Pulchoki**	**15.02**	**131**	*e*P	**Pn**	**14 30 45.6**	**-4.1**
	comp=E,13nm,0.6s						
BHUJ	**Bhuj**	**15.18**	**191**	*e*P	**P**	**14 30 53.5**	**-3.2**
BHUJ				IAmb	IAmb	14 31 04.0	
	comp=Z,24nm,0.5s						
BHPL	**Bhopal**	**15.48**	**164**	*e*P	**P**	**14 30 57.2**	**-2.9**
BHPL				IAmb	IAmb	14 30 59.7	
	comp=Z,5.5nm,0.6s						
BHPL				*e*S	**Sn**	**14 33 42.5**	**-4.8**
AKTO	**Aktyubinsk**	**16.08**	**324**	Pn	**Pn**	**14 31 01.2**	**-2.0**
	comp=Z,0.8nm,0.3s,baz=132,slow=11,SNR=26						
AKTO				Sn	**Sn**	**14 33 53.3**	**-8.4**
	comp=Z,0.3nm,0.3s,baz=185,slow=23,SNR=2.2						
AKTO	**Aktyubinsk**	**16.08**	**324**	⇓Pn	**P**	**14 31 05.7**	**-0.9**
	comp=Z,15nm,0.8s						
AKTO				⇓Sn	**Sn**	**14 34 05.3**	**+3.6**
	comp=Z,14nm,1.1s						
RAMN	**Ramite**	**16.19**	**130**	*e*P	**Pn**	**14 31 00.2**	**-4.8**
	comp=Z,19nm,0.4s						
ZAA0	**Zalesovo Array**	**17.75**	**24**		**Pn**	**14 31 19.4**	**-4.8**
ZALV	**Zalesovo Beam**	**17.75**	**24**	Pn	**Pn**	**14 31 21.3**	**-2.9**
	comp=Z,0.9nm,0.3s,baz=212,slow=12,SNR=16						
ZALV	**Zalesovo Beam**	**17.75**	**24**		**Pn**	**14 31 19.2**	**-5.0**
BOK	**Bokaro**	**18.24**	**138**	*e*P	**P**	**14 31 30.9**	**+0.2**
BOK				IAmb	IAmb	14 31 40.9	
	comp=Z,9.0nm,0.7s						
ARU	**Arti**	**20.51**	**337**	P	**P**	**14 31 55.1**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=151,slow=13,SNR=2.4						
ARU	**Arti**	**20.51**	**337**		**P**	**14 31 54.8**	**-0.4**
GTA	**Gaotai**	**21.08**	**78**	*e*P	**P**	**14 32 03.2**	**+1.5**
GTA				pP	sP	14 32 08.6	+1.9
GTA				sP	pP	14 32 12.0	+6.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,58nm,5.5s						
GTA				LR	LR		
	comp=Z,130nm,17.8s						
GTA				LR	LR		
	comp=Z,160nm,15.3s						
GTA				LR	LR		
	comp=Z,190nm,16.7s						
HYB	**Hyderabad**	**21.36**	**165**	*i* P	**P**	**14 32 09.0**	**+4.3**
GNI	**Garni**	**21.77**	**284**	P	**P**	**14 32 15.0**	**+5.8**
	comp=Z,14nm,0.9s,baz=142,slow=12,SNR=8.3						
GNI	**Garni**	**21.77**	**284**	P	**P**	**14 32 10.5**	**+1.3**
GNI				IAmb	IAmb	14 32 18.2	
	comp=Z,21nm,1.0s						
BELG	**Belogornoye**	**22.49**	**317**	P	**P**	**14 32 17.2**	**+0.7**
	comp=Z,12nm,0.9s,baz=158,slow=11,SNR=3.9						
ONI	**Oni**	**22.68**	**290**	P	**P**	**14 32 21.0**	**+2.2**
ONI				IAmb	IAmb	14 32 34.4	
	comp=Z,14nm,0.9s						
KBZ	**Khabaz**	**23.13**	**293**	P	**P**	**14 32 29.6**	**+6.2**
	comp=Z,1.6nm,0.7s,baz=114,slow=16,SNR=2.2						
KIRV	**Kirov**	**25.34**	**331**	P	**P**	**14 32 44.1**	**+0.2**
	comp=Z,5.8nm,0.5s,baz=90,slow=2.0,SNR=2.0						
SONM	**Songino Array**	**26.20**	**58**	P	**P**	**14 32 51.4**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=266,slow=9.1,SNR=13						
SONM	**Songino Array**	**26.20**	**58**	P	**P**	**14 32 50.4**	**-1.7**
SNOP	**Sinop**	**28.81**	**290**	P	**P**	**14 33 17.6**	**+2.2**
OBN	**Obninsk**	**29.59**	**317**	LR	LR	14 46 01.7	
	comp=Z,42nm,19.1s,baz=255,slow=38						
HHC	**Hu-ho-hao-te**	**29.87**	**73**	*e*P	**P**	**14 33 23.3**	**-1.6**
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.4s						
HHC				LR	LR		
	comp=Z,200nm,13.5s						
HHC				LR	LR		
	comp=Z,200nm,14.2s						
HHC				LR	LR		
	comp=Z,220nm,13.6s						
CMAR	**Chiang Mai Arr**	**30.15**	**124**	P	**P**	**14 33 28.4**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=314,slow=11,SNR=1.4						
BRTR	**Keskin Array B**	**30.29**	**285**	P	**P**	**14 33 28.5**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=80,slow=9.9,SNR=1.8						
NRIK	**Noril'sk**	**32.17**	**10**	P	**P**	**14 33 44.1**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=177,slow=6.8,SNR=2.4						
NRIK	**Noril'sk**	**32.17**	**10**	IAmb	IAmb	14 33 46.4	
	comp=Z,6.2nm,1.1s						
AKASG	**Malin Array Be**	**33.00**	**306**	P	**P**	**14 33 52.4**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=82,slow=7.6,SNR=7.5						
AKASG	**Malin Array Be**	**33.00**	**306**	P	**P**	**14 33 53.2**	**+1.0**
AKBB	**Malin Array Si**	**33.00**	**306**	P	**P**	**14 33 52.5**	**+0.3**
AKBB				IAmb	IAmb	14 34 21.1	
	comp=Z,13nm,1.4s						
FIA1	**FINESS Array S**	**36.85**	**324**	P	**P**	**14 34 25.5**	**+0.1**
FINES	**FINESS Array B**	**36.86**	**324**	P	**P**	**14 34 24.8**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=123,slow=7.4,SNR=8.6						
FINES	**FINESS Array B**	**36.86**	**324**	P	**P**	**14 34 25.7**	**+0.4**
NJ2	**Nanjing**	**37.88**	**85**	*e*P	**P**	**14 34 33.1**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
FNA	**Florina**	**39.27**	**290**	P	**P**	**14 34 47.1**	**+1.1**
ARCES	**ARCESS Array B**	**40.09**	**336**	P	**P**	**14 34 52.2**	**-0.3**
	comp=Z,2.2nm,0.5s,baz=106,slow=7.7,SNR=12						
ARCES	**ARCESS Array B**	**40.09**	**336**	P	**P**	**14 34 52.5**	**0.0**
KHC	**Kasperske Hory**	**43.14**	**304**	*e*P	**P**	**14 35 19.0**	**+1.3**
TIXI	**Tiksi**	**43.63**	**22**	P	**P**	**14 35 18.7**	**-2.6**
	comp=Z,0.8nm,0.2s,baz=285,slow=7.2,SNR=2.3						
NB2	**NORSAR Subarra**	**43.86**	**322**	P	**P**	**14 35 23.0**	**-0.4**
	comp=Z,6.9nm,0.8s,baz=92,slow=8.6						
NOA	**NORSAR Array B**	**43.86**	**322**	P	**P**	**14 35 23.1**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=92,slow=7.8,SNR=2.1						
CIMO	**Cimolais**	**44.40**	**301**	P	**P**	**14 35 30.1**	**+2.2**
CIMO				IAmb	IAmb	14 35 30.9	
	comp=Z,8.9nm,1.5s						
VLC	**Villacollemand**	**46.31**	**298**	P	**P**	**14 35 45.3**	**+2.1**
MSSA	**Maissana**	**46.88**	**299**	P	**P**	**14 35 48.5**	**+0.9**
ESDC	**Sonseca Array**	**57.89**	**298**	P	**P**	**14 37 10.1**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=53,slow=6.5,SNR=3.0						
SFS	**San Fernando**	**60.91**	**295**	P	**P**	**14 37 31.4**	**+1.2**
EUNU	**Eureka**	**61.37**	**356**	P	**P**	**14 37 33.2**	**+0.4**
EUNU				IAmb	IAmb	14 37 52.2	
	comp=Z,3.2nm,1.1s						
TORD	**Torodi Ar. Bea**	**67.16**	**269**	P	**P**	**14 38 11.4**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=40,slow=5.4,SNR=8.2						
TORD	**Torodi Ar. Bea**	**67.16**	**269**	IAmb	IAmb	14 38 12.6	
	comp=Z,2.7nm,1.3s						
TOLK	**Toolik Lake Re**	**68.88**	**15**	P	**P**	**14 38 20.9**	**-0.8**
TOLK				IAmb	IAmb	14 38 26.7	
	comp=Z,3.9nm,0.8s						
A36M	**Sachs Harbour**	**69.34**	**6**	P	**P**	**14 38 23.7**	**-0.7**
A36M				IAmb	IAmb	14 38 34.4	
	comp=Z,5.7nm,1.0s						
IMAR	**Indian Mountai**	**70.08**	**18**	P	**P**	**14 38 27.4**	**-1.7**
BMAR	**Burnt Mountain**	**70.91**	**14**	P	**P**	**14 38 33.5**	**-0.7**
J20K	**Nowinta River**	**71.42**	**20**	P	**P**	**14 38 36.4**	**-0.9**
J20K				IAmb	IAmb	14 38 41.5	
	comp=Z,6.2nm,1.3s						
H24K	**Noodor Dome**	**71.59**	**16**	P	**P**	**14 38 37.2**	**-1.1**
H24K				IAmb	IAmb	14 38 37.8	
	comp=Z,5.7nm,1.5s						
INK	**Inuvik**	**71.95**	**10**	P	**P**	**14 38 38.5**	**-1.9**
	comp=Z,0.5nm,0.4s,baz=357,slow=4.8,SNR=6.6						
INK	**Inuvik**	**71.95**	**10**	P	**P**	**14 38 38.6**	**-1.8**
INK				IAmb	IAmb	14 38 55.6	
	comp=Z,4.0nm,1.1s						
MDM	**Murphy Dome**	**72.25**	**17**	P	**P**	**14 38 40.9**	**-1.4**
MDM				IAmb	IAmb	14 38 41.1	
	comp=Z,7.1nm,1.4s						
ILAR	**Eielson Array**	**72.71**	**17**	P	**P**	**14 38 43.2**	**-1.8**
	comp=Z,1.0nm,0.8s,baz=309,slow=5.1,SNR=9.2						
KTH	**Kantishna Hill**	**72.77**	**19**	P	**P**	**14 38 43.9**	**-1.5**
PPLA	**Purkeypile**	**72.98**	**20**	P	**P**	**14 38 44.8**	**-1.9**
PPLA				IAmb	IAmb	14 38 49.2	
	comp=Z,8.6nm,1.3s						
RND	**Reindeer**	**73.41**	**18**	P	**P**	**14 38 47.1**	**-2.2**
RND				IAmb	IAmb	14 39 06.7	
	comp=Z,6.6nm,1.5s						
DHY	**Denali Highway**	**74.05**	**18**	P	**P**	**14 38 52.1**	**-1.0**
DHY				IAmb	IAmb	14 38 59.1	
	comp=Z,3.5nm,0.7s						
BCAR	**Beaver Creek A**	**75.32**	**15**	P	**P**	**14 38 58.8**	**-1.5**
YKA	**Yellowknife Ar**	**79.43**	**3**	P	**P**	**14 39 22.4**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=348,slow=5.7,SNR=2.6						
WRA	**Warramunga Arr**	**81.74**	**123**	P	**P**	**14 39 34.9**	**-1.3**
	comp=Z,0.6nm,0.8s,baz=320,slow=4.2,SNR=5.1						
ASAR	**Alice Springs**	**84.12**	**126**	P	**P**	**14 39 48.5**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=306,slow=4.9,SNR=4.3						

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*NEIC **07** 14:35:26.3±0.5, 36°.99N±0°.01×97°.62W±0°.02, h1^{km}±6^{km},*
Error ellipse: s-maj=2.2km s-min=1.7km az=125.0

NEIC 07 14:35:25.9±0.5**, 37°.00N**±0°.01×**97°.61W**±0°.02**, h6**^{km}±6^{km}**,**
mb_Lg2.6/28**, ML2.7**/20**, Error ellipse: s-maj=2.8km**
s-min=1.6km az=80.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN13	**South Haven SW**	**0.11**	**82**		Pg	14 35 28.4	+0.2
KAN17	**Caldwell West**	**0.13**	**290**	Pg	Pg	14 35 28.7	+0.1
KAN09	**Caldwell North**	**0.14**	**358**	Pg	Pg	14 35 28.9	+0.1
KAN01	**Argonia South**	**0.19**	**323**	Pg	Pg	14 35 29.9	+0.2
GC02	**Grant County #**	**0.25**	**233**	Pg	Pg	14 35 30.9	+0.2
KAN14	**Manchester OK**	**0.28**	**262**		Pg	14 35 31.5	+0.1
KAN14				Sg	Sg	14 35 35.6	+0.4
KAN06	**Argonia West S**	**0.32**	**322**		Pg	14 35 32.0	0.0
KAN06				Sg	Sg	14 35 36.6	+0.3
KAN08	**Anthony NE Sta**	**0.37**	**309**		Pg	14 35 33.1	+0.1
KAN08				Sg	Sg	14 35 38.2	+0.4
BLOK	**Blackwell**	**0.40**	**127**		Pg	14 35 33.6	0.0
KAN10	**Anthony SW Sta**	**0.41**	**288**	Pg	Pg	14 35 33.8	+0.1
KAN10					Sg	14 35 39.5	+0.4
KAN16	**Harper SW Stat**	**0.43**	**302**	Pg	Pg	14 35 34.2	+0.1
KAN16				Sg	Sg	14 35 40.0	+0.2
KAN12	**Harper NE Stat**	**0.43**	**314**	Pg	Pg	14 35 34.2	+0.1
KAN12				Sg	Sg	14 35 39.4	-0.3
OK032	**Salt Plains WL**	**0.52**	**248**	Pg	Pg	14 35 35.8	0.0
OK032					Sg	14 35 43.2	+0.6
CROK	**Carrier**	**0.58**	**211**	Pg	Pg	14 35 36.9	-0.1
CROK				Sg	Sg	14 35 43.2	-1.2
T35A	**Sooner Cattle**	**0.89**	**95**	Pg	Pg	14 35 42.4	-0.5
OK031	**S. Brethren Rd**	**1.22**	**149**	Pg	Pg	14 35 48.4	-0.7
OK034	**N. Norfolk Rd.**	**1.22**	**143**	Pg	Pg	14 35 49.0	-0.4
OK030	**Cody Creek RV**	**1.26**	**148**		Pg	14 35 49.2	-0.8
U32A	**Winter Ranch,**	**1.28**	**241**	Pg	Pn	14 35 49.3	-1.0
BCOK	**Bluff Creek, N**	**1.34**	**180**		Pn	14 35 50.7	-0.4
OK025	**Westminster Rd**	**1.43**	**171**		Pn	14 35 52.3	-0.2
R32A	**Long Quarter,**	**1.67**	**329**		Pb	14 35 56.4	-0.6
FNO	**Franklin**	**1.75**	**174**		Pn	14 35 56.8	0.0
TUL1	**Leonard**	**1.83**	**126**		Pn	14 35 57.9	+0.1
TUL1				IAmb_Lg		14 36 25.7	
	comp=Z,37nm,0.8s						
KSU1	**Kansas State U**	**2.24**	**20**		Pn	14 36 04.6	+1.0
U38A	**Gravette**	**2.65**	**101**		Pn	14 36 09.6	+0.3
HHAR	**Hobbs**	**3.04**	**103**		Pn	14 36 14.9	+0.3
S39A	**Bolivar**	**3.49**	**77**	Pn	Pn	14 36 21.4	+0.7
S39A				IAmb_Lg		14 37 20.1	
	comp=Z,15nm,0.8s						
Z35A	**Perchaven, San**	**3.67**	**175**	Pn	Pn	14 36 23.4	+0.2
N33A	**J Bar K, Exete**	**3.74**	**2**	Pn	Pn	14 36 24.3	+0.2
U40A	**Yellville**	**3.88**	**98**	Pn	Pn	14 36 26.9	+0.8
AMTX	**Amarillo**	**3.92**	**239**	IAmb_Lg		14 37 40.8	
	comp=Z,18nm,0.8s						
MIAR	**Mount Ida**	**4.09**	**126**	IAmb_Lg		14 37 39.1	
	comp=Z,17nm,0.7s						
P38A	**Dawn**	**4.14**	**50**	IAmb_Lg		14 37 42.2	
	comp=Z,15nm,0.7s						
Z38A	**Mt. Pleasant**	**4.31**	**149**	IAmb_Lg		14 37 50.8	
	comp=Z,14nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.44**	**298**	IAmb_Lg		14 37 56.4	
	comp=Z,18nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.56**	**102**	IAmb_Lg		14 37 47.4	
	comp=Z,10nm,0.8s						
P40A	**Paris**	**5.06**	**58**	IAmb_Lg		14 38 10.1	
	comp=Z,14nm,0.7s						
N38A	**Joes South For**	**5.10**	**41**	IAmb_Lg		14 38 13.6	
	comp=Z,10nm,0.7s						
MSTX	**Muleshoe**	**5.18**	**236**	IAmb_Lg		14 38 16.2	
	comp=Z,9.6nm,1.0s						
T25A	**Trinidad**	**5.44**	**274**	IAmb_Lg		14 38 33.4	
	comp=Z,8.5nm,0.9s						
FVM	**French Village**	**5.80**	**78**	IAmb_Lg		14 38 39.9	
	comp=Z,9.0nm,1.0s						
K22A	**Casper**	**8.88**	**312**	IAmb_Lg		14 40 24.4	
	comp=Z,5.6nm,0.9s						

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*KRNET **07** 14:36:39.2±0.1, 38°.90N×73°.23E, h13^{km}, mb3.9*
*NNC **07** 14:36:46.7±3.3, 39°.11N×73°.35E, h0^{km}, mb4.0, mpv3.7,*
Error ellipse: s-maj=26.5km s-min=16.7km az=166.0

ISC 07 14:36:36.6±2.0**, 38°.84N**±0°.08×**73°.29E**±0°.06**, h16**^{km}±13^{km}**,**
n24, σ**1ˢ.87**/29**, 16C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**1.19**	**8**	⇑*e*P	**Pb**	**14 37 00.9**	**+2.0**
	baz=11						
SFK				⇑*e*S	**Sn**	**14 37 17.4**	**+2.7**
	baz=11						
DRK	**Karamyk**	**1.33**	**299**	⇑*e*P	**Pb**	**14 37 03.1**	**+1.8**
	baz=98						
DRK				⇑*i*S	**Sg**	**14 37 20.9**	**+1.4**
	baz=98						
OHH	**Osh**	**1.73**	**347**	⇑*i*P	**Pg**	**14 37 10.6**	**+0.8**
	baz=48						
OHH				⇑*i*S	**Sg**	**14 37 33.3**	**+1.0**
	baz=48						
BTK	**Batken**	**2.27**	**303**	⇓*i*P	**Pb**	**14 37 19.4**	**+2.1**
	baz=3.0						
BTK				⇓*i*S	**Sg**	**14 37 48.4**	**-1.2**
	baz=3.0						
GAR	**Garm**	**2.33**	**275**	⇑*i*P	**Pb**	**14 37 20.5**	**+2.2**
	baz=74						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
GAR	baz=74			⇑iS	**Sg**	**14 37 50.4**	**-1.0**
CHGR	**Chuyangaron** baz=67	**3.24**	**268**	⇑eP	**Pb**	**14 37 33.1**	**-0.7**
CHGR	baz=67			⇑iS	**Sb**	**14 38 12.3**	**-0.7**
AML	**Almayashu** SNR=7.2	**3.30**	**5**	P	**Pb**	**14 37 37.7**	**+2.6**
UCH	**Uchtor** SNR=11	**3.51**	**15**	P	**Pb**	**14 37 41.3**	**+2.6**
EKS2	**Erkin-Say** SNR=6.1	**3.84**	**5**	P	**Pb**	**14 37 44.7**	**+0.7**
MRKS	**Merke** 8.3nm,0.3s	**3.90**	**359**	Pg	**Pb**	**14 37 45.5**	**+0.4**
MRKS	19nm,0.3s			Lg	Lg	14 38 35.9	
AAK	**Ala-Archa** SNR=17	**3.90**	**13**	P	**Pb**	**14 37 46.5**	**+1.3**
AAK	**Ala-Archa** 19nm,0.8s	**3.90**	**13**	⇑Pn	**Pb**	**14 37 45.5**	**+0.3**
AAK	23nm,0.8s			⇑Lg	Lg	14 38 41.4	
KBK	**Karagaybulak** SNR=8.3	**4.02**	**18**	P	**Pg**	**14 37 53.7**	**+0.2**
TKM2	**Tokmak 2** 11nm,0.8s	**4.44**	**22**	⇓Pn	**Pb**	**14 37 54.2**	**-0.1**
TKM2	20nm,0.9s			⇑Lg	Lg	14 38 58.5	
USP	**Ospenovka** SNR=6.0	**4.52**	**11**	P	**Pb**	**14 37 54.9**	**-0.7**
KST	**Kastek** 12nm,0.8s	**4.66**	**25**	Pg	Pb	14 38 03.9	+5.8
KST	11nm,0.4s			Lg	Lg	14 39 07.1	
KK09	**Karatay Array** 3.2nm,0.4s,baz=152,slow=15	**4.77**	**335**	⇑Pn	Pn	14 37 55.3	+7.4
KK09	23nm,0.8s,baz=146,slow=24			⇓Sn	**Sb**	**14 38 51.5**	**-5.6**
DGS	**Degeres** 6.3nm,0.5s	**4.78**	**22**	Pg	**Pg**	**14 38 07.0**	**-1.2**
DGS	11nm,0.6s			Lg	Lg	14 39 12.2	
MDOK	**Medeo** 7.9nm,0.8s	**5.17**	**32**	⇑Pg	**Pg**	**14 38 15.6**	**0.0**
MDOK	22nm,1.0s			⇑Lg	Lg	14 39 25.7	
MDOK	**Medeo** 4.4nm,0.7s	**5.17**	**32**	Pg	**Pg**	**14 38 15.0**	**-0.6**
MDOK	9.0nm,0.9s			Lg	Lg	14 39 25.9	
KRBS	**Karabastau** 7.3nm,0.4s	**5.17**	**20**	Pg	**Pg**	**14 38 13.4**	**-2.2**
KRBS	9.8nm,0.7s			Lg	Lg	14 39 24.2	
KOTS	**Kotyrbulak** 5.0nm,0.4s	**5.25**	**32**	Pg	**Pg**	**14 38 17.3**	**+0.1**
KOTS	27nm,0.6s			Lg	Lg	14 39 29.7	
KTBS	**Karatobe** 7.3nm,0.6s	**5.50**	**27**	Pg	**Pg**	**14 38 21.2**	**-0.6**
KTBS	18nm,0.7s			Lg	Lg	14 39 38.6	
KUU	**Kurty** 3.8nm,0.5s	**5.54**	**23**	Pg	**Pg**	**14 38 21.4**	**-1.3**
KUU	14nm,0.9s			Lg	Lg	14 39 36.9	

*ISK **07** 14:45:58.6, 35°.74N×29°.42E, h58^{km}±1^{km}, ML2.3/9*
*NIC **07** 14:46:00.4±0.0, 35°.80N×29°.62E, h47^{km}±3^{km}, Ml3.1/3*
ISC 07 14:45:59.9±1.3**, 35°.76N**±0°.06×**29°.45E**±0°.05**, h48**^{km}±16^{km}**, n22, σ0^{s}.81**/31**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.41**	**15**	P	**Pn**	**14 46 08.7**	**-1.3**
KSL				S	**Sn**	**14 46 17.0**	**-0.1**
AKAS	**Kas**	**0.49**	**14**	PG	**Pn**	**14 46 10.6**	**-0.5**
AKAS				SG	**Sn**	**14 46 20.5**	**+1.4**
DEMR	**Demre-Antalya**	**0.60**	**37**	PG	**Pn**	**14 46 12.5**	**+0.2**
DEMR				SG	**Sn**	**14 46 22.6**	**+1.3**
FETY	**Fethiye**	**0.93**	**341**	PG	**Pn**	**14 46 16.4**	**-0.2**
FETY				SG	**Sn**	**14 46 29.2**	**+0.3**
ELL	**Elmali**	**1.05**	**20**	PG	**Pn**	**14 46 18.4**	**-0.1**
ARG	**Arkhangelos**	**1.17**	**293**	PN	**Pn**	**14 46 19.4**	**-0.5**
CAME	**Cameli-Denizli**	**1.19**	**354**	PN	**Pn**	**14 46 20.2**	**-0.1**
DALY	**Dalyan (Mula)**	**1.24**	**329**	PN	**Pn**	**14 46 20.6**	**-0.2**
TURN	**Turunc**	**1.41**	**316**	PN	**Pn**	**14 46 23.0**	**-0.1**
KORT	**Korkueli**	**1.44**	**30**	PN	**Pn**	**14 46 23.8**	**+0.1**
DAT	**Datca**	**1.80**	**303**	PN	**Pn**	**14 46 28.3**	**-0.3**
DAT				SN	**Sn**	**14 46 49.9**	**-0.4**
MLSB	**Milas**	**2.05**	**319**	PN	**Pn**	**14 46 31.8**	**-0.1**
BODT	**Bodrum**	**2.17**	**308**	PN	**Pn**	**14 46 33.4**	**-0.1**
GAZI	**Gazipasa**	**2.37**	**78**	PN	**Pn**	**14 46 36.8**	**+0.5**
AKMS	**Akamas**	**2.47**	**107**	P	**Pn**	**14 46 37.0**	**-0.6**
AKMS				S	**Sn**	**14 47 04.4**	**-2.2**
AKMS	0.2nm,0.7s			AML	AML	14 47 05.9	
AKMS	0.2nm,0.7s			AML	AML	14 47 05.9	
AKMS	0.3nm,0.7s			AML	AML	14 47 06.4	
AKMS	0.3nm,0.7s			AML	AML	14 47 06.4	
SEYD	**Seydisehir-KON**	**2.53**	**49**	PN	**Pn**	**14 46 39.1**	**+0.5**
ALFC	**Alefka**	**2.64**	**102**	P	**Pn**	**14 46 39.1**	**-0.9**
ALFC				S	**Sn**	**14 47 09.8**	**-0.9**
ALFC	0.3nm,0.2s			AML	AML	14 47 10.4	
ALFC	0.3nm,0.2s			AML	AML	14 47 10.4	
ALFC	0.2nm,0.2s			AML	AML	14 47 10.7	
ALFC	0.2nm,0.2s			AML	AML	14 47 10.7	
OSC1	**CSNet OBS 1**	**2.71**	**146**	P	**Pn**	**14 46 42.0**	**+1.1**
OSC1				S	**Sn**	**14 47 13.4**	**+1.0**
NATA	**Nata**	**2.73**	**110**	P	**Pn**	**14 46 40.6**	**-0.7**
ASGA	**Asgata**	**3.25**	**106**	P	**Pn**	**14 46 47.7**	**-0.7**
ASGA	0.1nm,0.2s			AML	AML	14 47 26.6	
ASGA	0.1nm,0.4s			AML	AML	14 47 29.1	
CSS	**Mathiatis**	**3.27**	**103**	P	**Pn**	**14 46 48.3**	**-0.3**
OSC2	**CSNet OBS 4**	**3.54**	**138**	P	**Pn**	**14 46 52.8**	**+0.4**
OSC2				S	**Sn**	**14 47 33.7**	**+0.7**

NNC 07 14:47:32.8±3.7**, 38°.89N**×**73°.15E, h0**^{km}**, mb4.0, mpv3.6, 5C-1D, Error ellipse: s-maj=27.9km s-min=18.0km az=167.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	**Merke** 16nm,0.4s	**3.85**	**1**	Pg	Pb	14 48 42.1	+0.3
MRKS	20nm,0.8s			Lg	Lg	14 49 36.8	
AAK	**Ala-Archa** 14nm,0.9s	**3.88**	**15**	⇑Pn	Pn	14 48 34.8	+0.8
AAK	27nm,0.8s			Lg	Lg	14 49 31.8	
TKM2	**Tokmak 2** 5.0nm,0.6s	**4.43**	**24**	⇑Pg	Pg	14 48 54.8	-3.0
TKM2	12nm,0.7s			⇑Lg	Lg	14 49 53.4	
KK07	**Karatay Array** 3.7nm,0.5s,baz=145,slow=13	**4.65**	**335**	⇓Pn	Pn	14 48 42.8	-1.6
KK07	6.3nm,0.5s,baz=146,slow=25			⇑Sn	Sn	14 49 39.8	+0.7
KST	**Kastek** 9.2nm,0.5s	**4.66**	**26**	Pg	Pb	14 48 58.7	+3.1
KST	25nm,0.8s			Lg	Lg	14 50 05.9	
DGS	**Degeres** 8.4nm,0.6s	**4.78**	**24**	Pg	Pg	14 49 02.0	-2.4
DGS	15nm,0.5s			Lg	Lg	14 50 10.7	
TNSS	**Tian-Shan** 5.2nm,0.4s	**5.04**	**33**	Pg	Pb	14 49 05.1	+3.0
TNSS	5.4nm,0.7s			Lg	Lg	14 50 15.8	
KRBS	**Karabastau** 4.7nm,0.5s	**5.17**	**21**	Pg	Pb	14 49 05.9	+1.9
KRBS	4.7nm,0.7s			Lg	Lg	14 50 18.9	
MDOK	**Medeo** 3.5nm,0.6s	**5.19**	**33**	Pg	Pb	14 49 04.9	+0.4
MDOK	24nm,0.9s			⇑Lg	Lg	14 50 16.8	
MDOK	**Medeo** 2.7nm,0.4s	**5.19**	**33**	Pg	Pb	14 49 07.7	+3.2
MDOK	13nm,0.6s			Lg	Lg	14 50 20.8	
KOTS	**Kotyrbulak** 4.3nm,0.4s	**5.27**	**33**	Pg	Pb	14 49 09.2	+3.2
KOTS	24nm,0.8s			Lg	Lg	14 50 24.6	
KTBS	**Karatobe** 3.4nm,0.4s	**5.50**	**28**	Pg	Pb	14 49 12.5	+2.6
KTBS	9.3nm,0.7s			Lg	Lg	14 50 29.2	
KUU	**Kurty** 2.1nm,0.6s	**5.54**	**25**	Pg	Pb	14 49 13.0	+2.5
KUU	9.2nm,0.9s			Lg	Lg	14 50 31.8	

*KRNET **07** 14:57:53.0±0.1, 39°.03N×74°.01E, h18^{km}, mb3.8*
*NNC **07** 14:58:09.2±2.8, 39°.60N×73°.46E, h0^{km}, mb3.9, mpv3.7, Error ellipse: s-maj=21.9km s-min=11.3km az=172.0*
ISC 07 14:58:02.9±2.0**, 39°.45N**±0°.08×**73°.41E**±0°.05**, h1**^{km}±12^{km}**, n24, σ2^{s}.27**/32**, 16C-6D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** baz=39	**0.57**	**7**	⇓eP	**Pg**	**14 58 12.7**	**-1.2**
SFK	baz=39			⇓eS	**Sn**	**14 58 27.3**	**-1.3**
OHH	**Osh** baz=28	**1.18**	**336**	⇑iP	**Pn**	**14 58 25.4**	**-1.3**
OHH	baz=28			⇑iS	**Sn**	**14 58 48.7**	**+5.3**
DRK	**Karamyk** baz=86	**1.25**	**272**	⇑iP	**Pn**	**14 58 25.4**	**-2.4**
DRK	baz=86			⇑iS	**Sn**	**14 58 48.8**	**+3.4**
SALK	**Salom-Alik** baz=56	**1.47**	**12**	⇑eP	**Pn**	**14 58 26.9**	**-3.8**
SALK	baz=56			⇑eS	**Sg**	**14 58 51.5**	**+1.5**
BTK	**Batken** baz=94	**2.09**	**288**	⇑iP	**Pn**	**14 58 37.7**	**-1.5**
BTK	baz=94			⇑iS	**Sg**	**14 59 11.2**	**+1.0**
TRKS	**Terek-Say** baz=19	**2.71**	**321**	⇑iP	**Pn**	**14 58 45.9**	**-1.9**
TRKS	baz=19			⇑iS	**Sb**	**14 59 24.3**	**-1.8**
MNAS	**Manas** baz=42	**3.11**	**348**	⇑iP	**Pn**	**14 58 51.1**	**-2.2**
MNAS	baz=42			⇑iS	**Sn**	**14 59 34.0**	**+2.8**
AAK	**Ala-Archa** 18nm,0.6s	**3.29**	**14**	⇓Pn	**Pn**	**14 58 56.3**	**+0.5**
AAK	38nm,0.9s			⇑Lg	Lg	14 59 46.6	
DZA	**Taraz** 29nm,0.1s	**3.78**	**336**	Pg	**Pg**	**14 59 15.6**	**+0.1**
DZA	103nm,0.3s			Lg	Lg	15 00 00.3	
TKM2	**Tokmak 2** 6.6nm,0.7s	**3.84**	**25**	⇑Pg	**Pg**	**14 59 15.2**	**-1.4**
TKM2	27nm,0.9s			⇓Lg	Lg	15 00 07.1	
KST	**Kastek** 10nm,0.5s	**4.07**	**27**	Pg	**Pg**	**14 59 22.4**	**+1.4**
KST	19nm,0.7s			Lg	Lg	15 00 13.0	
DGS	**Degeres** 6.6nm,0.1s	**4.19**	**24**	Pg	**Pg**	**14 59 26.0**	**+2.9**
DGS	29nm,0.5s			Lg	Lg	15 00 18.8	
KK09	**Karatay Array** 4.7nm,0.5s,baz=146,slow=16	**4.28**	**330**	⇑Pn	**Pn**	**14 59 11.7**	**+2.5**
KK09	36nm,1.1s,baz=144,slow=24			⇓Sn	**Sb**	**15 00 06.0**	**-5.1**
TNSS	**Tian-Shan** 6.2nm,0.1s	**4.47**	**35**	Pg	**Pg**	**14 59 29.9**	**+1.4**
TNSS	7.4nm,0.6s			Lg	Lg	15 00 25.7	
KRBS	**Karabastau** 3.9nm,0.5s	**4.57**	**21**	Pg	**Pg**	**14 59 30.8**	**+0.3**
KRBS	10nm,0.6s			Lg	Lg	15 00 27.0	
MDOK	**Medeo** 7.9nm,0.8s	**4.61**	**35**	⇑Pg	**Pg**	**14 59 31.0**	**-0.4**
MDOK	33nm,1.2s			⇓Lg	Lg	15 00 29.9	
MDOK	**Medeo** 6.7nm,0.9s	**4.61**	**35**	Pg	**Pg**	**14 59 32.4**	**+1.1**
MDOK	15nm,1.0s			Lg	Lg	15 00 29.7	
KOTS	**Kotyrbulak** 7.2nm,0.4s	**4.70**	**35**	Pg	**Pg**	**14 59 34.6**	**+1.7**
KOTS	36nm,0.1s			Lg	Lg	15 00 33.5	
KTBS	**Karatobe** 2.4nm,0.5s	**4.92**	**29**	Pg	**Pg**	**14 59 38.5**	**+1.3**
KTBS	26nm,1.2s			Lg	Lg	15 00 40.1	
KUU	**Kurty** 2.5nm,1.0s	**4.95**	**25**	Pg	**Pg**	**14 59 38.4**	**+0.5**
KUU	23nm,0.8s			Lg	Lg	15 00 40.3	
SATY	**Saty** 4.3nm,0.6s	**5.21**	**45**	Pg	**Pg**	**14 59 42.9**	**+0.1**
SATY	23nm,0.1s			Lg	Lg	15 00 47.8	
KURS	**Kuram** 3.1nm,0.5s	**5.39**	**40**	Pg	**Pg**	**14 59 46.5**	**+0.3**
KURS	9.5nm,1.0s			Lg	Lg	15 00 54.1	
BTLS	**Baital** 2.2nm,0.4s	**5.61**	**5**	Pg	**Pg**	**14 59 51.5**	**+1.1**
BTLS	4.9nm,1.0s			Lg	Lg	15 01 02.9	
BLB	**Baldybastay** 4.7nm,0.3s	**5.99**	**38**	Pg	**Pg**	**14 59 59.0**	**+1.3**
BLB	18nm,0.1s			Lg	Lg	15 01 15.2	

VIE 07 15:05:36.6±0.2**, 47°.51N**×**12°.83E, h0**^{km}**, mb1.7**/2**, ml1.8**/6**, Error ellipse: s-maj=5.4km s-min=1.1km az=138.0 9 km N of Saalfelden Suspected Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WTTA	**Wattenberg** 2.7nm,0.1s	**0.85**	**254**	iPg	Pg	15 05 53.0	+0.1
MOA	**Molln** 0.8nm,0.2s	**1.03**	**70**	Pg	Pg	15 05 56.7	+0.4
SQTA	**Sankt Quirin** 2.0nm,0.2s	**1.14**	**256**	Pg	Pb	15 05 59.2	-0.1
SQTA	0.9nm,0.1s			Sg	Sn	15 06 15.7	-0.7
MOTA	**Moosalm** 3.9nm,0.1s	**1.19**	**263**	ePg	Pb	15 05 59.8	-0.3
MOTA	1.1nm,0.2s			Sg	Sb	15 06 16.0	0.0

LJU 07 15:05:53.6, 45°.99N×**14°.62E, h7**^{km}**, ML0.9, 1C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LJU	**Ljubljana**	**0.08**	**312**	iPg	Pg	15 05 55.9	+0.3
LJU				iSg	Sg	15 05 57.2	+0.1
LJU	comp=Z,26nm,0.1s			IAML		15 05 57.5	
VNDS	**Vrh nad Dolski**	**0.13**	**28**	⇓iPg	Pg	15 05 56.6	+0.2
VNDS				iSg	Sg	15 05 58.3	0.0
VNDS	comp=Z,19nm,0.1s			IAML		15 05 58.5	
GBAS	**Gorenja Brezov**	**0.13**	**246**	iPg	Pg	15 05 56.8	+0.4
GBAS				iSg	Sg	15 05 58.7	+0.3
GBAS	comp=Z,16nm,0.1s			IAML		15 05 59.0	
VISS	**Visnje**	**0.24**	**140**	iPg	Pg	15 05 58.6	+0.2
VISS				iSg	Sg	15 06 02.1	+0.4
VISS	comp=Z,5.6nm,0.1s			IAML		15 06 02.3	
CRNS	**Crni Vrh**	**0.26**	**291**	⇑iPg	Pg	15 05 59.2	+0.4
CRNS				iSg	Sg	15 06 03.0	+0.6
CRNS	comp=Z,15nm,0.2s			IAML		15 06 04.1	
PDKS	**Podkum**	**0.28**	**75**	iPg	Pg	15 05 59.4	+0.3
PDKS				iSg	Sg	15 06 02.9	+0.1
PDKS	comp=Z,6.7nm,0.1s			IAML		15 06 03.8	
CEY	**Cerknica**	**0.28**	**208**	iPg	Pg	15 05 59.5	+0.3
CEY				iSg	Sg	15 06 03.3	+0.4
CEY	comp=Z,5.5nm,0.1s			IAML		15 06 03.6	
MOZS	**Mozjanca**	**0.33**	**339**	⇓iPg	Pg	15 06 00.5	+0.5
MOZS				iSg	Sg	15 06 04.3	-0.2
MOZS	comp=Z,1.4nm,0.1s			IAML		15 06 05.9	
JAVS	**Javornik**	**0.40**	**256**	iPg	Pg	15 06 01.4	+0.1
JAVS				iSg	Sg	15 06 06.4	-0.1
JAVS	comp=Z,1.7nm,0.1s			IAML		15 06 09.3	
GBRS	**Gornja Briga**	**0.48**	**163**	iPg	Pg	15 06 03.0	+0.2
GBRS	comp=Z,2.5nm,0.1s			IAML		15 06 12.9	
KNDS	**Knezji Dol**	**0.49**	**200**	iPg	Pg	15 06 03.2	+0.2
SKDS	**Skadanscina**	**0.61**	**224**	iPg	Pg	15 06 05.3	-0.1
SKDS	comp=Z,3.0nm,0.1s			IAML		15 06 15.7	
SMRN	**Sveta Marina**	**1.00**	**199**	ePg	Pb	15 06 13.4	+0.1
SMRN				Sg	Sg	15 06 25.0	-1.0
BRJN	**Brijuni**	**1.24**	**210**	ePg	Pg	15 06 19.5	+2.1
BRJN				Sg	Sg	15 06 33.2	-0.2

*EAF **07** 15:08:48.4, 26°.23S×29°.16E, h10^{km}, MD3.9*
BUL 07 15:08:47.7±0.4**, 26°.19S**×**29°.21E, h10**^{km}**, MD3.9, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	**Changalane**	**2.68**	**93**	iP	Pn	15 09 30.6	-0.2
CNG	**Changalane**	**2.68**	**93**	iP	Pn	15 09 30.6	-0.2
MOPA	**Mopani**	**3.32**	**37**	iS	Sn	15 10 14.4	-4.8
MOPA	**Mopani**	**3.32**	**37**	iS	Sn	15 10 14.4	-4.8
MSNA	**Messina**	**3.89**	**11**	iP	Pn	15 09 46.9	-0.8
MSNA	**Messina**	**3.89**	**11**	iP	Pn	15 09 46.9	-0.8
MATP	**Matopo**	**5.77**	**353**	iP	Pn	15 10 12.7	-0.8
MATP				iS	Sn	15 11 15.0	-4.9
MATP	**Matopo**	**5.77**	**353**	iP	Pn	15 10 12.7	-0.8
MATP				iS	Sn	15 11 15.0	-4.9

IDC 07 15:10:13.2±12.0**, 38°.49N**×**71°.67E, h0**^{km}**, mb3.8**/1**, mb1 3.6**/3**, mb1mx3.2**/30**, mbtmp3.6**/3**, ML2.7**/2**, Error ellipse: s-maj=211.0km s-min=87.7km az=91.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.0nm,0.3s,baz=224,slow=14,SNR=3.8	**11.39**	**40**	Pn	Pn	15 12 58.6	+1.4
ZALV	**Zalesovo Beam** 0.2nm,0.3s,baz=210,slow=11,SNR=2.1	**17.89**	**26**	P	Pn	15 14 23.1	-0.2
SONM	**Songino Array** 0.8nm,0.5s,baz=269,slow=11,SNR=4.0	**26.80**	**58**	P	P	15 15 55.1	+0.1

*IDC **07** 15:17:51.0±1.5, 37°.86N×72°.67E, h0^{km}, mb3.7/7, mb1 3.8/13, mb1mx3.6/48, mbtmp3.7/13, ML3.1/6, Error ellipse: s-maj=23.5km s-min=20.2km az=61.0*
*NNC **07** 15:17:52.1±5.6, 37°.71N×73°.34E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=41.4km s-min=29.1km az=159.0*
*KRNET **07** 15:17:55.8±0.1, 38°.22N×72°.43E, mb4.3*
ISC 07 15:17:54.1±2.0**, 38°.16N**±0°.07×**72°.66E**±0°.05**, h12**^{km}±11^{km}**, n31, σ2^{s}.35**/40**, mb3.6**/6**, 15C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk** baz=39	**1.48**	**333**	⇑iP	**Pb**	**15 18 21.3**	**-0.4**
DRK	baz=39			⇑eS	**Sn**	**15 18 40.6**	**+0.3**
SFK	**Sufi-Kurgan** baz=24	**1.96**	**19**	⇑eP	**Pg**	**15 18 32.4**	**+0.6**
SFK	baz=24			⇑eS	**Sg**	**15 19 00.3**	**+3.1**
GAR	**Garm** baz=96	**2.02**	**295**	⇓eP	**Pb**	**15 18 30.6**	**-0.3**
GAR	baz=96			⇓eS	**Sn**	**15 18 55.1**	**+1.7**
OHH	**Osh** baz=7.0	**2.36**	**2**	⇑iP	**Pg**	**15 18 37.7**	**-1.7**
OHH	baz=7.0			⇑iS	**Sg**	**15 19 07.4**	**-2.6**
BTK	**Batken** baz=26	**2.37**	**323**	⇑eP	**Pb**	**15 18 36.5**	**-0.4**
BTK	baz=26			⇑iS	**Sb**	**15 19 05.3**	**-0.9**
TRKS	**Terek-Say** baz=44	**3.56**	**341**	⇑eP	**Pn**	**15 18 52.1**	**+2.7**
TRKS	baz=44			⇑iS	**Sn**	**15 19 33.5**	**+2.0**
AAK	**Ala-Archa** 1.6nm,0.3s,baz=165,slow=12,SNR=7.7	**4.68**	**17**	Pn	Pb	15 19 09.6	-6.7
AAK	3.8nm,0.3s,baz=172,slow=9.7,SNR=13			Pg	**Pg**	**15 19 20.8**	**-3.0**
AAK	1.1nm,0.3s,baz=166,slow=16,SNR=1.4			Sn	**Sb**	**15 20 10.1**	**-2.6**
AAK	**Ala-Archa** 13nm,0.5s	**4.68**	**17**	⇑Pn	Pn	15 19 09.1	+4.2
AAK	21nm,0.7s			⇑Sn	**Sb**	**15 20 11.1**	**-1.6**
KK09	**Karatay Array** 7.4nm,0.6s,baz=151,slow=15	**5.22**	**342**	⇓Pn	**Pn**	**15 19 16.1**	**+4.0**
KK09	8.7nm,0.5s			⇓Pg	**Pg**	**15 19 35.7**	**+1.6**
KK09	15nm,0.6s			⇑Sn	**Sb**	**15 20 27.5**	**-0.5**
KK09	13nm,0.6s,baz=151,slow=28			⇓Lg	Lg	15 20 57.5	
TKM2	**Tokmak 2** 7.6nm,0.5s	**5.25**	**24**	⇓Pg	**Pg**	**15 19 30.1**	**-4.6**
TKM2	38nm,1.4s			⇑Lg	Lg	15 20 49.1	
KST	**Kastek** 12nm,0.3s	**5.48**	**26**	Pg	**Pg**	**15 19 38.2**	**-0.9**
KST	21nm,0.1s			Lg	Lg	15 20 50.9	
DGS	**Degeres** 12nm,0.9s	**5.60**	**24**	Pg	**Pg**	**15 19 38.7**	**-2.6**
DGS	19nm,0.8s			Lg	Lg	15 20 51.6	
KRBS	**Karabastau** 3.7nm,0.6s	**5.98**	**21**	Pg	**Pg**	**15 19 46.6**	**-2.0**
KRBS	11nm,0.6s			Lg	Lg	15 21 05.2	
MDOK	**Medeo** 6.5nm,0.7s	**6.00**	**32**	⇑Pg	Pg	15 19 44.1	-5.0
MDOK	28nm,0.9s			Lg	Lg	15 21 09.3	
MDOK	**Medeo** 4.0nm,0.3s	**6.00**	**32**	Pg	**Pg**	**15 19 48.0**	**-1.2**
MDOK	17nm,0.1s			Lg	Lg	15 21 07.7	
KOTS	**Kotyrbulak** 6.6nm,0.5s	**6.09**	**32**	Pg	**Pg**	**15 19 48.8**	**-1.9**
KOTS	42nm,0.9s			Lg	Lg	15 21 09.3	
KUU	**Kurty** 5.9nm,0.5s	**6.36**	**25**	Pg	**Pg**	**15 19 52.4**	**-3.6**
KUU	25nm,0.4s			Lg	Lg	15 21 15.6	
BTLS	**Baital** 3.2nm,0.0s	**6.95**	**8**	Pg	**Pg**	**15 20 04.7**	**-2.4**
BTLS	4.1nm,1.1s			Lg	Lg	15 21 36.2	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=212,slow=13,SNR=2.1	**11.17**	**36**	Pn	**Pn**	**15 20 37.4**	**+3.7**
GEYT	**Alibeck** 0.2nm,0.3s,baz=230,slow=33,SNR=1.9	**11.47**	**273**	Sn	**Sn**	**15 22 41.1**	**-4.9**
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=206,slow=12,SNR=4.2	**13.14**	**17**	Pn	**Pn**	**15 21 02.0**	**+1.5**
BVAR	**Borovoye Array** 0.2nm,0.3s,baz=185,slow=16,SNR=8.5	**14.95**	**355**	Pn	**Pn**	**15 21 24.9**	**-0.3**
AKTO	**Aktyubinsk**	**16.10**	**324**	Pn	**Pn**	**15 21 40.2**	**-0.1**

	0.1nm,0.3s,baz=117,slow=14,SNR=4.9						
AKTO				Sn	Sn	15 24 34.2	-4.4
	0.1nm,0.3s,baz=90,slow=23,SNR=1.6						
ZALV	Zalesovo Beam	17.86	24	P	P	15 22 03.0	0.0
	0.3nm,0.3s,baz=218,slow=11,SNR=5.6						
ARU	Arti	20.55	337	P	P	15 22 33.5	+1.1
	0.5nm,0.4s,baz=128,slow=18,SNR=3.3						
SONM	Songino Array	26.32	58	P	P	15 23 31.4	+1.5
	0.3nm,0.4s,baz=246,slow=8.4,SNR=2.5						
FINES	FINESS Array B	36.87	324	P	P	15 25 02.5	+0.3
	13nm,1.1s,baz=115,slow=9.8,SNR=5.2						
ARCES	ARCESS Array B	40.13	336	P	P	15 25 30.6	+1.1
	4.2nm,1.0s,baz=122,slow=8.6,SNR=4.2						
ILAR	Eielson Array	72.81	17	P	P	15 29 21.9	-0.3
	0.4nm,0.8s,baz=323,slow=3.7,SNR=3.3						
YKA	Yellowknife Ar	79.52	3	P	P	15 30 00.1	-0.3
	0.3nm,0.4s,baz=347,slow=5.5,SNR=2.0						
WRA	Warramunga Arr	81.77	123	P	P	15 30 10.8	-2.2
	0.3nm,0.5s,baz=327,slow=4.8,SNR=2.0						

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*KRNET **07** 15:20:53.4±0.1, 38°.57N×73°.11E, mb3.8*

*IDC **07** 15:20:59.1±7.7, 38°.87N×73°.30E, h0^{km}, mb3.5/1, mb1 3.4/4, mb1mx3.1/47, mbtmp3.4/4, ML2.8/3, Error ellipse: s-maj=120.3km s-min=40.1km az=78.0*

ISC 07 15:20:56.4±1.6**, 38°.65N**±0°.09×**73°.03E**±0°.06**, h10^{km}, n10,** σ**2^{s}.00**/16**, 6C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	1.27	311	⇑*i*P	Pb	15 21 19.1	-1.5
	baz=12						
DRK				⇑*i*S	Sg	15 21 37.7	+0.4
	baz=12						
OHH	Osh	1.88	354	⇓*i*P	Pb	15 21 29.5	-1.4
	baz=53						
OHH				⇓*e*S	Sg	15 21 56.1	-0.8
	baz=53						
GAR	Garm	2.15	280	⇓*i*P	Pb	15 21 33.2	-2.3
	baz=82						
GAR				⇓*i*S	Sb	15 22 02.3	0.0
	baz=82						
BTK	Batken	2.22	310	⇑*i*P	Pb	15 21 34.5	-2.2
	baz=11						
BTK				⇑*i*S	Sb	15 22 04.2	0.0
	baz=11						
TRKS	Terek-Say	3.22	334	⇑*i*P	Pn	15 21 47.4	+0.2
	baz=33						
TRKS				⇑*e*S	Sn	15 22 27.2	+1.5
	baz=33						
AAK	Ala-Archa	4.14	15	Pn	Pb	15 22 04.9	-4.4
	1.2nm,0.3s,baz=168,slow=8.1,SNR=2.1						
AAK				Sn	Sn	15 22 51.5	+3.3
	1.8nm,0.3s,baz=231,slow=14,SNR=1.6						
MKAR	Makanchi Array	10.61	37	Pn	Pn	15 23 29.9	+1.6
	0.1nm,0.3s,baz=225,slow=15,SNR=2.7						
BVAR	Borovoye Array	14.49	354	Pn	P	15 24 28.0	-0.2
	1.0nm,0.3s,baz=190,slow=13,SNR=13						
ZALV	Zalesovo Beam	17.30	24	P	P	15 24 58.5	-0.7
	0.2nm,0.3s,baz=210,slow=11,SNR=2.8						
SONM	Songino Array	25.81	58	P	P	15 26 29.0	+1.3
	0.6nm,0.7s,baz=261,slow=11,SNR=3.3						

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*IDC **07** 15:22:23.6±3.6, 38°.90N×73°.31E, h0^{km}, mb3.4/1, mb1 3.6/6, mb1mx3.3/49, mbtmp3.6/6, ML3.2/5, MS3.9/2, Ms1 4.1/2, ms1mx3.4/18, Error ellipse: s-maj=41.0km s-min=31.2km az=17.0*

ISC 07 15:22:25.6±2.4**, 39°.0N**±0°.2×**73°.1E**±0°.2**, h10^{km}, n8,** σ**2^{s}.61**/7**, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	3.75	15	Pn	Pn	15 23 27.2	+3.5
	5.4nm,0.3s,baz=187,slow=13,SNR=5.8						
AAK				Sn	Sb	15 24 16.7	-0.8
	1.2nm,0.3s,baz=64,slow=19,SNR=1.0						
MKAR	Makanchi Array	10.25	38	Pn	Pn	15 24 55.1	+2.3
	0.1nm,0.3s,baz=220,slow=30,SNR=3.0						
BVAR	Borovoye Array	14.13	353	Pn	Pn	15 25 43.8	-1.9
	0.1nm,0.3s,baz=193,slow=19,SNR=1.5						
AKTO	Aktyubinsk	15.63	322	Pn	Pn	15 26 06.1	+0.2
	0.2nm,0.3s,baz=122,slow=13,SNR=2.6						
ZALV	Zalesovo Beam	16.91	24	Pn	P	15 26 22.3	-1.9
	0.2nm,0.3s,baz=211,slow=13,SNR=2.8						
SONM	Songino Array	25.54	59	P	P	15 27 53.3	-1.2
	0.5nm,0.6s,baz=251,slow=9.0,SNR=2.3						
CMAR	Chiang Mai Arr	30.35	125	LR	LR	15 42 12.3	
	comp=Z,433nm,20.4s,baz=355,slow=39						
WRA	Warramunga Arr	81.93	124	LR	LR	16 16 16.7	
	comp=Z,38nm,19.8s,baz=235,slow=40						

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*IDC **07** 15:23:55.0±0.4, 38°.59N×73°.26E, h0^{km}, mb4.6/35, mb1 4.7/43, mb1mx4.6/51, mbtmp4.6/43, ML4.1/8, MS4.0/22, Ms1 4.0/22, ms1mx3.9/32, Error ellipse: s-maj=9.7km s-min=8.7km az=6.0*

*NNC **07** 15:23:55.1±1.3, 38°.40N×73°.25E, h0^{km}, mb5.6, mpv5.3, Error ellipse: s-maj=11.1km s-min=8.0km az=165.0*

*KRNET **07** 15:23:55.9±0.1, 38°.68N×73°.07E, h20^{km}, mb5.4*

*SOME **07** 15:23:56.9, 38°.82N×73°.10E, h5^{km}, MS4.5*

*NEIC **07** 15:23:56.7±1.9, 38°.59N±0°.07×73°.23E±0°.07, h10^{km}±1^{km}, mb4.8/109, Error ellipse: s-maj=11.9km s-min=8.1km az=155.0*

*MOS **07** 15:23:57.6±1.4, 38°.59N×73°.36E, h24^{km}, mb5.0/50, MS4.2/12, Error ellipse: s-maj=4.6km s-min=3.0km az=88.7*

*BJI **07** 15:23:57.2±0.0, 38°.72N×73°.29E, h8^{km}, mB5.0/34, mb4.7/50, ML4.7/7, Ms4.7/47, Ms7 4.4/45*

*BGR **07** 15:24:02.1±0.0, 38°.15N×73°.26E, h33^{km}, mb4.7*

ISC 07 15:23:56.6±0.3**, 38°.58N**±0°.02×**73°.23E**±0°.02**, h10^{km}, n544,** σ**2^{s}.29**/598**, mb4.8**/130**, MS4.2**/38**, 75C-38D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	1.43	309	Pn	Pn	15 24 20.2	-2.7
DRK	Karamyk	1.43	309	⇑*i*P	Pn	15 24 20.1	-2.8
	baz=10.0						
DRK				⇑*i*S	Sn	15 24 38.0	-3.9
	baz=10.0						
SFK	Sufi-Kurgan	1.44	8	⇑*e*P	Pn	15 24 21.0	-2.0
	baz=14						
SFK				⇑*e*S	Sn	15 24 41.5	-0.7
	baz=14						
OHH	Osh	1.97	350	*i* PN	Pn	15 24 30.1	0.0
OHH				*i* S	Sn	15 24 55.3	+0.4
OHH	Osh	1.97	350	⇑*i*P	Pn	15 24 30.1	0.0
	baz=53						
OHH				⇑*i*S	Sn	15 24 55.3	+0.4
	baz=53						
GAR	Garm	2.32	281		Pb	15 24 37.0	-1.6
KSH	Kashi	2.33	66	Pg	Pn	15 24 29.8	-5.3
KSH				Sg	Sn	15 24 55.3	-8.6
KSH				smax	smax		
	comp=N,14μm,0.6s						
KSH				smax	smax		
	comp=E,10μm,0.7s						
BTK	Batken	2.38	309	PN	Pn	15 24 36.0	+0.2
BTK	Batken	2.38	309	Pn	Pn	15 24 36.0	+0.2
BTK	Batken	2.38	309	⇓*i*P	Pn	15 24 36.2	+0.4
	baz=9.0						
BTK				⇓*i*S	Sn	15 25 05.2	+0.1
	baz=9.0						
CHGR	Chuyangaron	3.19	273	PN	Pn	15 24 49.7	+2.8
CHGR	Chuyangaron	3.19	273	Pn	Pn	15 24 49.7	+2.8
TRKS	Terek-Say	3.35	332	⇓*i*P	Pn	15 24 48.5	-0.7
	baz=33						
TRKS				⇓*i*S	Sn	15 25 27.1	-2.1
	baz=33						
AML	Almayashu	3.56	6	P	Pn	15 24 55.8	+3.5
	SNR=38						
AML	Almayashu	3.56	6	P	Pn	15 24 55.1	+2.8
AML	Almayashu	3.56	6	*i* PN	Pn	15 24 53.9	+1.6
AML				*i* S	Sn	15 25 35.8	+1.2
AML	Almayashu	3.56	6	P	Pn	15 24 54.1	+1.8
AML	Almayashu	3.56	6	⇓*i*P	Pn	15 24 53.9	+1.6
	baz=8.0						
AML				⇓*i*S	Sn	15 25 35.8	+1.2
	baz=8.0						
UCH	Uchtor	3.77	15	P	Pn	15 24 57.6	+2.4
	SNR=43						
UCH	Uchtor	3.77	15	*i* PN	Pn	15 24 57.0	+1.8
UCH				*i* S	Sn	15 25 41.4	+1.6
UCH	Uchtor	3.77	15	⇓*i*P	Pn	15 24 57.0	+1.8
	baz=17						
UCH				⇓*i*S	Sn	15 25 41.4	+1.6
	baz=17						
MNAS	Manas	3.94	352	*i* PN	Pn	15 24 58.5	+1.2
MNAS				*i* S	Sn	15 25 44.0	+0.4
MNAS	Manas	3.94	352	⇑*i*P	Pn	15 24 58.5	+1.2
	baz=54						
MNAS				⇑*i*S	Sn	15 25 44.0	+0.4
	baz=54						
TAS	Tashkent	4.08	313	PN	Pn	15 24 59.4	+0.3
TAS	Tashkent	4.08	313	Pn	Pn	15 24 59.4	+0.3
TAS	Tashkent	4.08	313	⇑*i*P	Pn	15 24 59.3	+0.2
	baz=14						
TAS				⇑*i*S	Sn	15 25 45.8	-1.1
	baz=14						
EKS2	Erkin-Say	4.09	6	P	Pn	15 25 03.2	+3.8
	SNR=37						
EKS2	Erkin-Say	4.09	6	*i* PN	Pn	15 25 01.0	+1.6
EKS2				*i* S	Sn	15 25 48.0	+0.6
EKS2	Erkin-Say	4.09	6	⇓*i*P	Pn	15 25 01.0	+1.6
	baz=8.0						
EKS2				⇓*i*S	Sn	15 25 48.0	+0.6
	baz=8.0						
MRKS	Merke	4.16	360	*e*P	Pb	15 25 10.3	+0.4
	298nm,0.3s						
MRKS				*e*S	Sb	15 26 03.3	+3.1
	1μm,0.5s						
AAK	Ala-Archa	4.16	13	Pn	Pn	15 25 02.5	+2.2
	66nm,0.3s,baz=192,slow=8.8,SNR=54						
AAK				Sn	Sb	15 25 55.0	-5.4
	29nm,0.3s,baz=339,slow=21,SNR=1.4						
AAK				LR	LR	15 26 16.6	
	comp=Z,304nm,18.6s,baz=206,slow=34						
AAK	Ala-Archa	4.16	13	P	Pn	15 25 02.9	+2.5
	SNR=92						
AAK	Ala-Archa	4.16	13	P	Pn	15 25 03.7	+3.3
AAK	Ala-Archa	4.16	13	P	Pn	15 25 02.7	+2.4
AAK				S	Sn	15 25 52.9	+3.8
AAK	Ala-Archa	4.16	13	⇑Pn	Pn	15 25 02.7	+2.4
	1μm,0.8s						
AAK				Sn	Sb	15 25 54.9	-5.5
	1μm,0.8s						
AAK	Ala-Archa	4.16	13	Pn	Pn	15 25 02.4	+2.0
AAK	Ala-Archa	4.16	13	⇑*i*P	Pn	15 25 02.1	+1.8
	baz=15						
AAK				⇑*i*S	Sn	15 25 50.2	+1.1
	baz=15						
KBK	Karagaybulak	4.27	17	P	Pn	15 25 05.3	+3.4
	SNR=14						
KBK	Karagaybulak	4.27	17	*i* PN	Pn	15 25 04.0	+2.1
KBK				*i* S	Sn	15 25 53.5	+1.6
KBK	Karagaybulak	4.27	17	⇓*i*P	Pn	15 25 04.0	+2.1
	baz=19						
KBK				⇓*i*S	Sn	15 25 53.5	+1.6
	baz=19						
ULHL	Ulahol	4.32	31	P	Pb	15 25 13.7	+1.0
	SNR=13						
ULHL	Ulahol	4.32	31	*i* PN	Pn	15 25 04.9	+2.3
ULHL				*i* S	Sn	15 25 55.5	+2.4
ULHL	Ulahol	4.32	31	⇓*i*P	Pn	15 25 04.9	+2.3
	baz=33						
ULHL				⇓*i*S	Sn	15 25 55.4	+2.4
	baz=33						
FRU1	Bishkek	4.35	14	PN	Pn	15 25 05.6	+2.7
FRU1	Bishkek	4.35	14		Pn	15 25 05.6	+2.7
FRU1	Bishkek	4.35	14	⇓*i*P	Pn	15 25 05.0	+2.1
	baz=15						
FRU1				⇓*i*S	Sn	15 25 55.5	+1.8
	baz=15						
BOOM	Boomskoye usch	4.41	27	PN	Pn	15 25 05.7	+1.9
BOOM	Boomskoye usch	4.41	27	Pn	Pn	15 25 05.7	+1.9
BOOM	Boomskoye usch	4.41	27	⇑*i*P	Pn	15 25 05.9	+2.1
	baz=29						
BOOM				⇑*i*S	Sn	15 25 57.4	+2.1
	baz=29						
DZA	Taraz	4.54	342	*e*P	Pb	15 25 12.6	-3.8
	372nm,0.1s						
DZA				*e*S	Sb	15 26 06.8	-4.3
	3μm,0.7s						
DZA	Taraz	4.54	342	*e*Pn	Pn	15 25 06.9	+1.5
	baz=340						
DZA	Taraz	4.54	342	*e*PN	Pn	15 25 06.9	+1.5
CHMS	Chumysh	4.56	14	P	Pn	15 25 08.1	+2.4
	SNR=38						
CHMS	Chumysh	4.56	14	*i* PN	Pn	15 25 07.5	+1.8
CHMS				*i* S	Sn	15 26 00.0	+1.3
CHMS	Chumysh	4.56	14	⇓*i*P	Pn	15 25 07.5	+1.8
	baz=16						
CHMS				⇓*i*S	Sn	15 26 00.0	+1.3
	baz=16						
CHM	Chimkent	4.64	325	*e*P	Pg	15 25 22.5	-3.1
	687nm,0.5s						
CHM				*e*S	Sg	15 26 23.7	-2.0
	3μm,0.9s						
KDJ	Kajisay	4.65	39	PN	Pn	15 25 09.1	+2.0
KDJ	Kajisay	4.65	39	Pn	Pn	15 25 09.1	+2.0
KDJ	Kajisay	4.65	39	⇑*i*P	Pn	15 25 10.2	+3.1
	baz=41						
KDJ				⇑*i*S	Sn	15 26 04.1	+2.9
	baz=41						
TKM2	Tokmak 2	4.69	22	P	Pn	15 25 10.1	+2.5
	SNR=7.9						
TKM2	Tokmak 2	4.69	22	*i* PN	Pn	15 25 09.9	+2.3
TKM2				*i* S	Sn	15 26 03.6	+1.4
TKM2	Tokmak 2	4.69	22	⇓Pn	Pn	15 25 10.1	+2.5
	578nm,0.8s						
TKM2				⇓Lg	Lg	15 26 27.5	
	730nm,0.9s						
TKM2	Tokmak 2	4.69	22	⇑*i*P	Pn	15 25 09.9	+2.3
	baz=24						
TKM2				⇑*i*S	Sn	15 26 03.6	+1.4
	baz=24						
USP	Ospenovka	4.78	11	P	Pn	15 25 11.6	+2.9
	SNR=15						
USP	Ospenovka	4.78	11	*i* PN	Pn	15 25 10.5	+1.8
USP				*i* S	Sn	15 26 04.7	+0.6
USP	Ospenovka	4.78	11	⇓*i*P	Pn	15 25 10.5	+1.8
	baz=13						
USP				⇓*i*S	Sn	15 26 04.7	+0.6
	baz=13						
CEP	Cherat	4.87	193	P	Pn	15 25 15.9	+5.8
CEP				S	Sb	15 26 15.0	-5.8
KST	Kastek	4.91	24	*e*P	Pb	15 25 26.6	+3.8
	188nm,0.5s						
KST				*e*S	Sg	15 26 31.5	-2.8
	721nm,0.1s						
CHCP	Chirah Chowk	4.92	180	⇓P	Pn	15 25 16.8	+6.2
NIL	Nilore	4.92	180	PN	Pn	15 25 15.5	+4.8
NIL	Nilore	4.92	180	P	Pn	15 25 16.5	+5.8
NIL	Nilore	4.92	180	Pn	Pn	15 25 15.5	+4.8
KK07	Karatay Array	4.95	336	⇑Pn	Pn	15 25 14.0	+2.9
	523nm,0.8s						
KK07				⇑Sn	Sn	15 26 14.9	+6.5
	827nm,0.8s						
KK07				⇑Lg	Lg	15 26 39.0	
	613nm,0.7s						
KKAR	Karatay Array	4.96	336	PN	Pn	15 25 13.1	+1.9
KKAR	Karatay Array	4.96	336	Pn	Pn	15 25 13.1	+1.9
SGDS	Sogindy	4.98	12	*e*Pn	Pn	15 25 12.1	+0.7
	baz=11						
DGS	Degeres	5.04	22	*e*P	Pb	15 25 27.9	+3.0
	304nm,0.6s						
DGS				*e*S	Sg	15 26 33.9	-4.4
	607nm,0.5s						
KBL	Kabul	5.26	221	P	Pb	15 25 22.4	-6.3
	SNR=8.0						
KBL				S	Sb	15 26 29.3	-2.8
TNSS	Tian-Shan	5.26	31	*e*P	Pb	15 25 32.1	+3.2
	284nm,0.8s						
TNSS				*e*S	Sg	15 26 40.5	-5.2
	293nm,0.9s						
TNSS	Tian-Shan	5.26	31	*e*Pn	Pn	15 25 16.4	+0.7
	baz=32						
ANVS	Anan'yevo	5.38	37	*i* PN	Pn	15 25 19.7	+2.6
ANVS				*i* S	Sn	15 26 21.1	+1.9
ANVS	Anan'yevo	5.38	37	⇑*i*P	Pn	15 25 19.7	+2.6
	baz=39						
ANVS				⇑*i*S	Sn	15 26 21.1	+1.9
	baz=39						
AAA	Alma-Ata	5.40	30	*e*P	Pb	15 25 33.8	+2.7
	258nm,1.1s						
AAA				*e*S	Sg	15 26 43.8	-6.1
	1μm,1.1s						
AAA	Alma-Ata	5.40	30	*e*Pn	Pn	15 25 17.3	0.0
	baz=30						
AAA	Alma-Ata	5.40	30	*e*PN	Pn	15 25 17.2	0.0
MDOK	Medeo	5.41	31	*e*P	Pb	15 25 34.3	+3.0
	193nm,0.4s						
MDOK				*e*S	Sg	15 26 44.3	-6.1
	535nm,0.6s						
MDOK	Medeo	5.41	31	*e*Pn	Pn	15 25 16.8	-0.7
	baz=31						
MDOK	Medeo	5.41	31	*e*PN	Pn	15 25 16.8	-0.7
MDOK	Medeo	5.41	31	⇓Pn	Pn	15 25 21.3	+3.8
	45nm,0.6s						
MDOK				⇑Pg	Pb	15 25 34.0	+2.6
	227nm,0.7s						
MDOK				Lg	Lg	15 26 51.4	
KNDC	Almaty	5.42	30	⇑Pg	Pb	15 25 34.6	+3.1
	741nm,0.7s						
KNDC				⇑Lg	Lg	15 26 51.1	
	3μm,1.2s						
KRBS	Karabastau	5.43	19	*e*P	Pb	15 25 35.6	+4.1
	242nm,0.5s						
KRBS				*e*S	Sg	15 26 46.9	-4.0
	587nm,0.5s						
KOTS	Kotyrbulak	5.50	31	*e*P	Pb	15 25 36.8	+4.0
	260nm,0.5s						
KOTS				*e*S	Sg	15 26 48.3	-4.7
	2μm,0.9s						
PRZ	Przheval'sk	5.54	44	PN	Pn	15 25 21.5	+2.2
PRZ	Przheval'sk	5.54	44	Pn	Pn	15 25 21.5	+2.2
KTBS	Karatobe	5.75	26	*e*P	Pb	15 25 40.3	+3.3
	165nm,1.1s						
KTBS				*e*S	Sg	15 26 54.6	-6.4
	476nm,0.7s						
KUU	Kurty	5.80	23	*e*P	Pg	15 25 43.2	-4.4
	177nm,0.4s						
KUU				*e*S	Sg	15 26 59.6	-3.1
	657nm,0.9s						
KUU	Kurty	5.80	23	*e*Pn	Pn	15 25 22.5	-0.2
	baz=23						
KUU	Kurty	5.80	23	*e*PN	Pn	15 25 22.5	-0.2
THW	Thamme Wali	5.90	192	P	Pn	15 25 28.4	+4.2
SATY	Saty	5.95	40	*e*P	Pb	15 25 45.4	+5.0
	261nm,0.6s						
SATY				*e*S	Sg	15 27 03.8	-3.7
	492nm,0.1s						
SATY	Saty	5.95	40	*e*Pn	Pn	15 25 25.6	+0.7
	baz=40						
SATY	Saty	5.95	40	*e*PN	Pn	15 25 25.5	+0.7
KURS	Kuram	6.16	36	*e*P	Pb	15 25 49.2	+5.2
	185nm,1.0s						
KURS				*e*S	Sg	15 27 09.8	-4.5
	238nm,0.7s						
UZB	Uzynbulak	6.33	42	*e*Pn	Pn	15 25 30.2	+0.1
	baz=43						
UZB	Uzynbulak	6.33	42	*e*PN	Pn	15 25 30.2	+0.1
KPKS	Kokpek	6.38	38	*e*P	Pb	15 25 51.2	+3.3
	142nm,0.7s						
KPKS				*e*S	Sg	15 27 13.3	-8.2
	540nm,0.5s						
KPKS	Kokpek	6.38	38	*e*Pn	Pn	15 25 31.2	+0.3
	baz=39						
KPKS	Kokpek	6.38	38	*e*PN	Pn	15 25 31.1	+0.3
BTLS	Baital	6.48	5	*e*P	Pb	15 25 54.4	+4.9
	59nm,1.0s						
BTLS				*e*S	Sg	15 27 18.9	-5.6
	112nm,0.8s						
BTLS	Baital	6.48	5	*e*PN	Pn	15 25 35.0	+3.0
SHLS	Shalkode	6.57	44	*e*Pn	Pn	15 25 37.2	+3.8
	baz=47						
SHLS	Shalkode	6.57	44	*e*PN	Pn	15 25 37.2	+3.8
ARXS	Arharly	6.60	30	*e*P	Pg	15 25 58.2	-4.8
	186nm,0.8s						
ARXS				*e*S	Sg	15 27 25.3	-3.1
	247nm,0.7s						
ARXS	Arharly	6.60	30	*e*PN	Pn	15 25 35.0	+1.3
SARP	Sargodha	6.66	184	P	Pn	15 25 38.0	+3.4
PDGK	Podgornoye	6.70	43	⇓Pn	Pn	15 25 36.2	+1.0
	69nm,0.7s						
PDGK				⇑Pg	Pg	15 26 01.7	-3.2
	172nm,0.7s						
DHRM	DHARAMSHALA	6.80	157	*e*P	Pn	15 25 40.0	+3.4
DHRM				*e*S	Sn	15 26 53.3	-0.9
DHRM				IAML		15 27 11.2	
	comp=E,686nm,0.7s						
DHRM				IAML		15 27 11.3	
	comp=N,740nm,0.8s						
SMLA	Simla	8.11	155	*e*P	Pn	15 25 56.9	+2.5
SMLA				*e*S	Sn	15 27 20.3	-5.8
SMLA				IAML		15 27 33.9	
	comp=N,348nm,0.4s						
OTUK	Ortayu	9.68	356	P	Pn	15 26 16.9	+1.0
OTUK	Ortayu	9.68	356	⇓Pn	Pn	15 26 17.0	+1.0
	comp=N,57nm,0.8s						
OTUK				⇑Lg	Lg	15 29 09.5	
	comp=N,249nm,1.1s						
HRA	Herat	9.79	248	Pn	Pn	15 26 20.5	+2.9
MAKZ	Makanchi	10.43	35	P	Pn	15 26 28.6	+2.4
MAKZ	Makanchi	10.43	35	⇑Pn	Pn	15 26 28.2	+1.9
	comp=N,43nm,0.8s						
MAKZ	Makanchi	10.43	35	Pn	Pn	15 26 28.6	+2.4
MK31	Makanchi Array	10.56	36	*c i*P	Pn	15 26 29.8	+1.7
MK31	Makanchi Array	10.56	36	⇑Pn	Pn	15 26 30.1	+2.0
	comp=N,38nm,0.7s,baz=205,slow=11,SNR=172						
MK31	Makanchi Array	10.56	36	Pn	Pn	15 26 29.4	+1.3
MKAR	Makanchi Array	10.56	36	Pn	Pn	15 26 29.1	+1.1
	comp=N,1.4nm,0.3s,baz=211,slow=11,SNR=121						
MKAR				LR	LR	15 30 53.8	
	comp=N,2μm,20.4s,baz=223,slow=40						
MKAR	Makanchi Array	10.56	36	Pn	Pn	15 26 29.0	+1.0
AYAN	Aya Nagar	10.59	161	*e*P	Pn	15 26 30.9	+2.6
KUDL	Kundal	10.76	164	*e*P	Pn	15 26 32.2	+1.4
SONA	Sohna	10.80	162	*e*P	Pn	15 26 33.3	+2.1
BRZS	Berezniki	11.40	358	*e*Pn	Pn	15 26 41.0	+1.5
	comp=N,14nm,0.8s,baz=358						
BRZS	Berezniki	11.40	358	*e*P	Pn	15 26 41.0	+1.5
BRZS				pmax	pmax		
	comp=Z,14nm,0.8s						
JASL	Jaisalmer	11.79	190	*e*P	Pn	15 26 46.4	+1.5
GEYT	Alibeck	11.90	272	Pn	Pn	15 26 45.3	-1.1
	comp=Z,2.4nm,0.3s,baz=97,slow=12,SNR=9.6						
GEYT				Sn	Sn	15 28 55.7	-3.6
	comp=Z,1.2nm,0.3s,baz=78,slow=21,SNR=4.0						
GEYT				LR	LR	15 32 43.5	
	comp=Z,614nm,18.9s,baz=210,slow=44						
GYA0B	ALIBECK ARRAY	11.90	272	⇑Pn	Pn	15 26 44.8	-1.6
GYA0B				⇑Sn	Sn	15 29 01.9	+2.6
GYA0B	ALIBECK ARRAY	11.90	272	Pn	Pn	15 26 45.3	-1.2
WMQ	Urumqi	12.08	60	*e*P	Pn	15 26 48.9	+0.1
WMQ				pP		15 26 54.2	
WMQ				pmax	pmax		
	comp=Z,95nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,280nm,3.7s						
WMQ				LR	LR		
	comp=Z,3μm,13.9s						
WMQ				LR	LR		
	comp=Z,1μm,11.1s						
WMQ				LR	LR		
	comp=Z,2μm,10.3s						
AJM	Ajmer	12.13	174	*e*P	Pn	15 26 49.8	+0.3
ZSN	Zaisan	12.28	40	*e*Pn	Pn	15 26 51.6	+0.1
	comp=Z,7.6nm,1.3s,baz=40						
ZSN	Zaisan	12.28	40	*e*P	Pn	15 26 51.5	+0.1
ZSN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KURBB	Kurchatov Arra	12.61	16	Pn	Pn	15 26 54.0	-1.9
	comp=Z,0.2nm,0.3s,baz=205,slow=12,SNR=27						
KURK	Kurchatov	12.72	16	*c i*P	Pn	15 26 55.1	-2.3
KURK				pmax	pmax		
	comp=Z,18nm,0.8s						
KURK	Kurchatov	12.72	16	Pn	Pn	15 26 55.8	-1.6
SEM	Semipalatinsk	12.83	21	*e*Pn	Pn	15 26 58.8	-0.4
	comp=Z,5.1nm,0.7s,baz=21						
SEM	Semipalatinsk	12.83	21	*e*P	Pn	15 26 58.7	-0.4
SEM				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PYUN	Piuthan	13.25	139	*e*P	Pn	15 27 01.7	-3.3
	comp=Z,235nm,0.7s						
JHNI	Jhansi	13.83	160	*e*P	Pn	15 27 08.6	-4.2
KOLN	Koldanda	13.83	138	*e*P	Pn	15 27 09.3	-3.7
	comp=Z,87nm,0.6s						
GKN	Gorkha	14.21	135	*e*P	Pn	15 27 13.4	-4.7
	comp=Z,55nm,0.5s						
AB31	Akbulak array	14.31	322	P	Pn	15 27 19.3	+0.1
AB31				S	Sn	15 30 01.5	+3.6
AB31	Akbulak array	14.31	322	Pn	Pn	15 27 19.3	+0.1
	comp=Z,28nm,0.6s,baz=130,slow=14,SNR=113						
AB31				⇑Sn	Sn	15 30 01.5	+3.6

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            comp=Z,34nm,0.7s,baz=130,slow=24,SNR=6.3
ABKAR Akbulak array     14.31 322   Pn     Pn      15 27 16.2  -3.0
BVAR  Borovoye Array    14.58 353   Pn     Pn      15 27 20.4  -2.4
            comp=Z,1.3nm,0.3s,baz=188,slow=19,SNR=40
BRVK  Borovoye          14.62 353ceP       Pn      15 27 21.6  -1.8
BRVK                                pmax   pmax
            comp=Z,24nm,0.8s
BRVK  Borovoye          14.62 353   Pn     Pn      15 27 23.1  -0.2
KKN   Kakani            14.74 133  eP      Pn      15 27 20.0  -5.3
            comp=Z,87nm,0.8s
DMN   Daman             14.78 134  eP      Pn      15 27 21.2  -4.7
            comp=Z,15nm,0.4s
PKI   Pulchoki          14.98 134  eP      Pn      15 27 23.2  -5.5
            comp=Z,71nm,0.8s
DGZ   Jazzator, Alta    15.05  38d iP      Pn      15 27 29.3  -0.1
DGZ                                 pmax   pmax
            comp=Z,21nm,0.7s
BHUJ  Bhuj              15.59 192  eP      Pn      15 27 35.5  -0.9
BHUJ                                IAmb   IAmb    15 27 38.3
            comp=Z,128nm,0.9s
BHPL  Bhopal            15.71 166  eP      Pn      15 27 36.4  -1.7
BHPL                                IAmb   IAmb    15 27 45.7
            comp=Z,34nm,0.7s
BHPL                               eS      Sn      15 30 20.9   -11
BHPL                                IAML           15 30 30.2
            comp=N,30nm,0.8s
BHPL                                IAML           15 30 36.5
            comp=E,33nm,0.8s
AKTO  Aktyubinsk        16.03 323   Pn     Pn      15 27 40.4  -1.6
            comp=E,0.9nm,0.3s,baz=140,slow=13,SNR=32
AKTO                                Sn     Sn      15 30 31.3  -8.4
            comp=E,0.7nm,0.3s,baz=349,slow=21,SNR=2.5
AKTO                                LR     LR      15 33 44.8
            comp=E,594nm,21.6s,baz=140,slow=37
AKTO  Aktyubinsk        16.03 323   P      Pn      15 27 43.1  +1.1
AKTO                                S      Sn      15 30 45.8  +6.1
AKTO  Aktyubinsk        16.03 323 ⇑Pn      Pn      15 27 43.1  +1.1
            comp=E,123nm,0.8s
AKTO                              ⇓Sn      Sn      15 30 45.8  +6.1
            comp=E,32nm,0.7s
RAMN  Ramite            16.13 132  eP      Pn      15 27 38.2  -5.6
            comp=E,50nm,0.6s
JBP   Jabalpur          16.42 157  eP      Pn      15 27 43.1  -4.0
JBP                                 IAmb   IAmb    15 27 51.4
            comp=Z,51nm,0.8s
TAPN  Taplejung         16.50 128  eP      Pn      15 27 43.0  -5.5
            comp=Z,20nm,0.4s
ODAN  Odare             16.67 130  eP      Pn      15 27 45.1  -5.4
            comp=Z,51nm,0.7s
LSA   Lhasa             17.26 116   P      Pn      15 27 57.5  -0.7
LSA                                 pmax   pmax
            comp=Z,13nm,0.8s
LSA   Lhasa             17.26 116   Pn     Pn      15 27 57.5  -0.7
ZAA0  Zalesovo Array    17.29  24          Pn      15 27 56.1  -1.8
ZAA0                                IAmb   IAmb    15 28 00.3
            comp=Z,54nm,1.1s
ZALV  Zalesovo Beam     17.29  24   Pn     Pn      15 27 56.2  -1.8
            comp=Z,1.7nm,0.3s,baz=220,slow=12,SNR=42
ZALV  Zalesovo Beam     17.29  24          Pn      15 27 55.8  -2.2
BLSP  Bilaspur          18.09 152  eP      Pn      15 28 06.7  -1.4
BOK   Bokaro            18.26 140  eP      Pn      15 28 05.7  -4.5
BOK                                 IAmb   IAmb    15 28 24.9
            comp=Z,34nm,0.6s
BANOM Banah             19.05 233   P      Pn      15 28 21.0  +1.2
BANOM Banah             19.05 233   P      Pn      15 28 21.4  +1.6
SHME  Shamm             19.06 234   P      Pn      15 28 22.7  +2.8
LKRN  Lenkeran, Azer    19.09 278   P      Pn      15 28 24.8  +4.7
MDH   Madha             19.50 232   P      Pn      15 28 26.8  +1.6
MSFE  Esma-Masafi       19.54 233   P      Pn      15 28 26.3  +0.6
WSAR  Wadi Sarin        19.73 223   P      Pn      15 28 28.4  +0.4
            comp=Z,0.4nm,0.3s,baz=62,slow=11,SNR=7.3
WSAR  Wadi Sarin        19.73 223   P      Pn      15 28 28.3  +0.4
UOSS  Minazif           19.82 232   P      P       15 28 26.8  -0.6
UOSS  Minazif           19.82 232   P      P       15 28 26.3  -1.1
UOSS  Minazif           19.82 232   P      P       15 28 27.6  +0.2
MAK   Makhachkala       19.94 291  eP      Pn      15 28 29.7  -0.5
MAK                                eS      Sn      15 32 14.0  -0.3
MAK                                 pmax   pmax
            comp=Z,75nm,0.8s
MAK                                 MLR    MLR
            comp=Z,1µm,15.0s
SVE   Sverdlovsk        20.06 340  eP      P       15 28 29.9  +0.1
SVE                                eS      S       15 32 13.8  -1.3
SVE                                 pmax   pmax
            comp=Z,27nm,0.9s
SVE                                 MLR    MLR
            comp=Z,1µm,11.0s
WBK   Wadi Bani Khal    20.06 222   P      Pn      15 28 35.5  +3.6
WBK                                 P      Pn      15 28 35.5  +3.6
ASHO  Ashiyiah          20.10 231   P      P       15 28 31.3  +0.8
ASHO  Ashiyiah          20.10 231   P      Pn      15 28 31.6  -0.7
            SNR=8.2
SEKA  Sheki             20.12 286   P      Pn      15 28 34.5  +2.0
MNGR  Mingechevir, A    20.22 284   P      Pn      15 28 36.9  +3.3
ARU   Arti              20.34 336   P      P       15 28 34.0  +1.1
            comp=Z,9.6nm,0.7s,baz=150,slow=10,SNR=23
ARU                                 LR     LR      15 36 58.6
            comp=Z,521nm,19.6s,baz=132,slow=38
ARU   Arti              20.34 336d iP      P       15 28 32.9  +0.1
ARU                                                15 28 50.9
ARU                                 S      S       15 32 18.9  -1.7
ARU                                 pmax   pmax
            comp=Z,24nm,0.8s
ARU                                 MLR    MLR
            comp=Z,1µm,18.0s
ARU   Arti              20.34 336   P      P       15 28 32.8  -0.1
ARU                                 IAmb   IAmb    15 28 43.1
            comp=Z,41nm,0.8s
SHL   Shillong          20.40 124   P      P       15 28 33.3  -0.6
SHL                                 pmax   pmax
            comp=Z,18nm,0.6s
SHL   Shillong          20.40 124  eP      P       15 28 33.7  -0.3
SHL                                 IAmb   IAmb    15 28 44.1
            comp=Z,16nm,0.9s
SHL   Shillong          20.40 124   P      P       15 28 33.3  -0.6
GTA   Gaotai            20.66  79 ⇑P       Pn      15 28 38.1  -0.8
GTA                                 pP     sP      15 28 42.5  -0.1
GTA                                 sP     pP      15 28 45.4  +4.7
GTA                                 S      Sn      15 32 32.1  +0.2
GTA                                 pmax   pmax
            comp=Z,53nm,0.9s
GTA                                 pmax   pmax
            comp=Z,290nm,6.2s
GTA                                 LR     LR
            comp=Z,830nm,17.1s
GTA                                 LR     LR
            comp=Z,870nm,18.9s
GTA                                 LR     LR
            comp=Z,1µm,17.1s
JMDO  Jabal Madar       20.72 223   P      Pn      15 28 39.3  -0.2
JMDO                                P      Pn      15 28 39.3  -0.2
ALNE  Al Ain            20.75 231   P      P       15 28 38.3  +0.7
ALNE  Al Ain            20.75 231   P      P       15 28 38.2  +0.7
            SNR=6.0
GANJ  Ganja             20.81 284   P      Pn      15 28 43.4  +2.9
AJN   Ajban             20.85 233   P      P       15 28 39.0  +0.4
DDFL  Dedoflistskaro    20.93 286   P      Pn      15 28 44.7  +2.7
GROC  Groznyy           21.20 291  eP      P       15 28 42.5  +0.2
GROC                               e               15 29 03.2
GROC                               e               15 32 46.8
GROC                                pmax   pmax
            comp=Z,97nm,1.0s
NAX   Nakhchivan        21.57 280   P      P       15 28 52.7  +6.3
HYB   Hyderabad         21.60 166  i P     P       15 28 47.0  +0.3
            comp=Z,75nm,1.0s
HYB                                eS      S       15 32 47.0  +1.0
GNI   Garni             22.05 283   P      P       15 28 53.6  +2.0
            comp=Z,42nm,0.8s,baz=52,slow=1.8,SNR=18
GNI   Garni             22.05 283   P      P       15 28 55.4  +3.8
GNI   Garni             22.05 283ceP       P       15 28 55.1  +3.6
GNI                                 pmax   pmax
            comp=Z,75nm,1.3s
GNI   Garni             22.05 283   P      P       15 28 55.2  +3.6
GNI   Garni             22.05 283   P      P       15 28 53.4  +1.8
GUDG  Gudauri           22.15 289   P      P       15 28 58.5  +5.8
KZRT  Kazreti           22.23 286   P      P       15 28 54.1  +0.7
BELG  Belogornoye       22.49 316   P      P       15 28 55.1  -0.9
            comp=Z,77nm,0.7s,baz=138,slow=2.2,SNR=14
BELG  Belogornoye       22.49 316d iP      P       15 28 55.0  -1.0
BELG                                pmax   pmax
            comp=Z,11nm,0.7s
ZEI   Tsey              22.58 290  eP      P       15 29 01.3  +4.0
ZEI                                 pmax   pmax
            comp=Z,8.0nm,0.7s
NCK   Nalchik           22.82 292⇑eP       P       15 29 04.4  +4.7
NCK                                 pmax   pmax
            comp=Z,50nm,0.6s
ONI   Oni               22.91 290   P      P       15 29 02.1  +1.5
ONI                                 pmax   pmax
            comp=Z,61nm,0.9s
ONI   Oni               22.91 290   P      P       15 29 02.1  +1.5
GOF   Gofitskoye        23.32 296⇑eP       P       15 29 08.1  +3.3
KBZ   Khabaz            23.34 292   P      P       15 29 03.9  -1.0
            comp=Z,10nm,1.0s,baz=110,slow=5.9,SNR=4.3
KBZ   Khabaz            23.34 292deP       P       15 29 09.0  +4.1
KBZ                                 pmax   pmax
            comp=Z,13nm,1.3s
MOY   Mondy             23.38  47  eP      P       15 29 05.8  +0.3
MOY                                 pmax   pmax
            comp=Z,67nm,2.3s
NEY   Neytrino          23.45 291⇑eP       P       15 29 08.8  +2.5
NEY                                 pmax   pmax
            comp=Z,8.0nm,0.8s
KVAR  Kislovodsk Arr    23.49 293   P      P       15 29 06.7   0.0
            comp=Z,3.1nm,0.6s,baz=75,slow=20,SNR=2.5
KIV   Kislovodsk        23.50 293   P      P       15 29 09.1  +2.4
KIV   Kislovodsk        23.50 293  eP      P       15 29 09.0  +2.4
KIV                                eS      S       15 33 21.3  +0.9
KIV                                 pmax   pmax
            comp=Z,25nm,1.1s
KIV                                 MLR    MLR
            comp=Z,331nm,14.0s
KIV   Kislovodsk        23.50 293   P      P       15 29 09.3  +2.6
KIV                                 P      P       15 29 09.3  +2.6
KIV   Kislovodsk        23.50 293   P      P       15 29 07.1  +0.5
KIV                                 IAmb   IAmb    15 29 35.9
            comp=Z,31nm,0.7s
SIRT  Sirnak            24.22 277   P      P       15 29 15.1  +1.4
ZAK   Zakamensk         24.29  51  eP      P       15 29 14.8  +0.6
ZAK                                 pmax   pmax
            comp=Z,42nm,0.8s
LZH   Lanzhou           24.41  86 ⇓P       P       15 29 17.5  +2.0
LZH                                 pP     sP      15 29 21.8   0.0
LZH                                 sP     pP      15 29 25.8  +5.9
LZH                                 pmax   pmax
            comp=Z,23nm,1.3s
LZH                                 pmax   pmax
            comp=Z,140nm,5.9s
LZH                                 LR     LR
            comp=Z,1µm,15.5s
LZH                                 LR     LR
            comp=Z,1µm,16.6s
LZH                                 LR     LR
            comp=Z,1µm,17.7s
TLY   Talaya            24.93  48   P      P       15 29 21.2  +1.4
            comp=Z,13nm,0.7s,baz=241,slow=11,SNR=14
TLY                                 LR     LR      15 39 05.2
            comp=Z,422nm,21.0s,baz=254,slow=36
TLY   Talaya            24.93  48c iP      P       15 29 21.4  +1.6
TLY                                 pmax   pmax
            comp=Z,35nm,0.7s
TLY                                 MLR    MLR
            comp=Z,1µm,9.0s
TLY   Talaya            24.93  48   P      P       15 29 20.6  +0.8
TLY                                 IAmb   IAmb    15 29 25.4
            comp=Z,15nm,0.7s
KIRV  Kirov             25.23 330   P      P       15 29 20.7  -1.7
            comp=Z,9.7nm,0.6s,baz=180,slow=2.0,SNR=2.2
KIRV                                LR     LR      15 40 05.4
            comp=Z,500nm,18.7s,baz=132,slow=38
KIRV  Kirov             25.23 330⇑eP       P       15 29 24.4  +2.1
VRH   Novokhopyorsk     25.43 310  eP      P       15 29 26.2  +2.0
VRH                                 pmax   pmax
            comp=Z,20nm,0.6s
IRK   Irkutsk           25.48  47  eP      P       15 29 11.4   -13
IRK                                 pmax   pmax
            comp=Z,43nm,1.9s
SHAO  Shalim            25.60 222   P      P       15 29 27.0  +0.8
SOC   Sochi             25.64 292  eP      P       15 29 27.5  +1.2
SOC                                eS      S       15 33 55.2  +0.7
SOC                                eSSS    SSS     15 35 12.3
SOC                                 MLR    MLR
            comp=Z,359nm,18.0s
SONM  Songino Array     25.71  58   P      P       15 29 28.1  +1.1
            comp=Z,59nm,0.8s,baz=260,slow=10.0,SNR=76
SONM                                LR     LR      15 41 34.0
            comp=Z,685nm,21.4s,baz=254,slow=41
SONM  Songino Array     25.71  58   P      P       15 29 28.0  +0.9
SONM                                pmax   pmax
            comp=Z,61nm,0.8s
SONM  Songino Array     25.71  58   P      P       15 29 28.0  +0.9
DOK   Doka              25.92 225   P      P       15 29 29.8  +0.8
            SNR=16
DOK                                 P      P       15 29 29.8  +0.8
            SNR=16
CD2   Chengdu           26.14  98   P      P       15 29 30.8  -0.2
CD2                                 S      S       15 34 02.6  -0.1
CD2                                 pmax   pmax
            comp=Z,10.0nm,0.5s
CD2                                 pmax   pmax
            comp=Z,170nm,5.0s
CD2                                 LR     LR
            comp=Z,1µm,23.0s
CD2                                 LR     LR
            comp=Z,1µm,12.8s
CD2                                 LR     LR
            comp=Z,960nm,13.8s
ULN   Ulaanbaatar       26.15  58c iP      P       15 29 32.1  +1.0
ULN                                 pmax   pmax
            comp=Z,31nm,0.8s
ULN   Ulaanbaatar       26.15  58   P      P       15 29 31.6  +0.5
ULN                                 IAmb   IAmb    15 29 33.5
            comp=Z,28nm,0.8s
WHFO  Wadi Hawf         26.68 225   P      P       15 29 36.4  +0.4
            SNR=5.2
WHFO                                P      P       15 29 36.4  +0.4
            SNR=5.2
RBK   Rabkut            26.79 224   P      P       15 29 37.4  +0.5
            SNR=7.3
RBK                                 P      P       15 29 37.4  +0.5
            SNR=7.3
VORD  Divnogorie        26.83 309  eP      P       15 29 39.3  +2.3
VORD                                pmax   pmax
            comp=Z,20nm,0.7s
VSR   Storozhevoye      26.97 309  eP      P       15 29 40.1  +1.8
VSR                                 pmax   pmax
            comp=Z,20nm,0.8s
ANN   Anapa             27.29 295  eP      P       15 29 42.1  +1.0
ANN                                 pmax   pmax
            comp=Z,104nm,0.8s
LPSR  Galich'ya Gora    27.49 312  eP      P       15 29 45.2  +2.3
LPSR                                pmax   pmax
            comp=Z,30nm,0.8s
RAYN  Ar Rayn           27.96 246   P      P       15 29 51.7  +4.2
BTO   Baotou            28.29  74  eP      P       15 29 50.5  +0.2
BTO                                 S      S       15 34 42.0  +5.4
BTO                                 LR     LR
            comp=Z,3µm,18.0s
BTO                                 LR     LR
            comp=Z,1µm,14.6s
PRGR  Permogore         28.67 333  eP      P       15 29 52.3  -1.0
PRGR                                pmax   pmax
            comp=Z,9.0nm,1.2s
XAN   Xi'an             29.00  88   P      P       15 30 00.7  +4.1
XAN                                 pP     sP      15 30 08.2  +5.3
XAN                                 pmax   pmax
            comp=Z,8.0nm,0.8s
XAN                                 pmax   pmax
            comp=Z,71nm,5.5s
XAN                                 LR     LR
            comp=Z,610nm,13.3s
XAN                                 LR     LR
            comp=Z,1µm,16.4s
XAN                                 LR     LR
            comp=Z,1µm,19.3s
HHC   Hu-ho-hao-te      29.42  73  eP      P       15 30 01.4  +1.1
HHC                                 pmax   pmax
            comp=Z,13nm,0.9s
HHC                                 pmax   pmax
            comp=Z,170nm,5.3s
HHC                                 LR     LR
            comp=Z,910nm,14.2s
HHC                                 LR     LR
            comp=Z,470nm,14.8s
HHC                                 LR     LR
            comp=Z,490nm,15.0s
OBN   Obninsk           29.59 316   LR     LR      15 43 05.1
            comp=Z,141nm,20.1s,baz=269,slow=39
OBN   Obninsk           29.59 316  i P     P       15 30 01.6  +0.1
OBN                                i               15 30 05.8
OBN                                i               15 30 58.7
OBN                                 pmax   pmax
            comp=Z,6.0nm,0.8s
OBN                                 MLR    MLR
            comp=Z,509nm,17.0s
CMAR  Chiang Mai Arr    30.04 125   P      P       15 30 06.4  +0.6
            comp=Z,1.3nm,0.9s,baz=312,slow=9.5,SNR=1.6
BRTR  Keskin Array B    30.55 285   P      P       15 30 10.9  +0.5
            comp=Z,4.8nm,0.9s,baz=86,slow=8.1,SNR=9.6
BRTR                                LR     LR      15 44 23.1
            comp=Z,316nm,21.7s,baz=96,slow=40
BRTR  Keskin Array B    30.55 285  i P     P       15 30 12.8  +2.3
BRTR                                pmax   pmax
            comp=Z,5.0nm,0.9s
BRTR  Keskin Array B    30.55 285   P      P       15 30 11.6  +1.1
KLMR  Klimovskoe        30.60 328  eP      P       15 30 12.0  +1.6
KLMR                               e               15 31 11.7
KLMR                                pmax   pmax
            comp=Z,16nm,1.0s
KLMR  Klimovskoe        30.60 328  eP      P       15 30 12.1  +1.6
KLMR                                AMP            15 30 20.9
            comp=Z,16nm,1.0s
KLMR                               ePP     PnPn    15 31 11.8  +2.3
ENH   Enshi             30.88  94   P      P       15 30 14.6  +1.4
ENH                                 IAmb   IAmb    15 30 27.1
            comp=Z,10nm,0.8s
NRIK  Noril'sk          31.77  10   P      P       15 30 20.7   0.0
            comp=Z,18nm,0.8s,baz=190,slow=5.1,SNR=11
NRIK  Noril'sk          31.77  10d iP      P       15 30 20.6   0.0
NRIK                                pmax   pmax
            comp=Z,17nm,0.8s
NRIK  Noril'sk          31.77  10   P      P       15 30 19.7  -0.9
NRIK                                IAmb   IAmb    15 30 24.8
            comp=Z,16nm,0.8s
PALK  Pallekele         31.89 166   P      P       15 30 21.9  -0.4
            comp=Z,6.5nm,0.8s,baz=79,slow=8.8,SNR=4.7
PALK  Pallekele         31.89 166   IAmb   IAmb    15 30 24.2
            comp=Z,8.7nm,0.8s
PURM  Purcari           32.57 298 ⇓P       P       15 30 31.5  +3.6
BOD   Bodaibo           32.62  40  eP      P       15 30 27.8  -0.4
BOD                                 pmax   pmax
            comp=Z,17nm,1.2s
BJI   Beijing           33.02  74   P      P       15 30 33.4  +1.5
BJI                                 S      S       15 35 50.0  -0.4
BJI                                 pmax   pmax
            comp=Z,9.0nm,0.8s
BJI                                 pmax   pmax
            comp=Z,110nm,4.8s
BJI                                 LR     LR
            comp=Z,740nm,17.1s
BJI                                 LR     LR
            comp=Z,430nm,14.1s
BJI                                 LR     LR
            comp=Z,670nm,18.1s
BJT   Baijiatuau        33.02  74   P      P       15 30 32.4  +0.4
BJT                                 pmax   pmax
            comp=Z,5.0nm,0.7s
BJT   Baijiatuau        33.02  74   P      P       15 30 32.4  +0.4
AKASG Malin Array Be    33.09 306   P      P       15 30 32.5  +0.1
            comp=Z,2.0nm,0.5s,baz=78,slow=7.6,SNR=17
AKASG                               LR     LR      15 46 44.2
            comp=Z,315nm,18.3s,baz=80,slow=41
AKASG Malin Array Be    33.09 306  i P     P       15 30 36.4  +4.0
AKASG                               pmax   pmax
            comp=Z,5.0nm,0.5s
AKASG Malin Array Be    33.09 306   P      P       15 30 33.1  +0.7
AKBB  Malin Array Si    33.09 306   P      P       15 30 33.1  +0.7
AKBB                                pmax   pmax
            comp=Z,17nm,1.0s
AKBB  Malin Array Si    33.09 306   P      P       15 30 33.1  +0.7
AKBB                                IAmb   IAmb    15 30 42.2
            comp=Z,17nm,0.9s
SORM  Soroca            33.58 301 ⇑P       P       15 30 37.2  +0.5
SORM  Soroca            33.58 301 ⇑P       P       15 30 37.2  +0.5
TPGR  Topolog           33.69 295   P      P       15 30 40.8  +3.0
CFR   Carcaliu          33.86 296 ⇑P       P       15 30 40.5  +1.3
CFR   Carcaliu          33.86 296 ⇑P       P       15 30 40.5  +1.3
MNK   Minsk             34.33 313  i P     P       15 30 42.7  -0.5
MNK                                i S     S       15 36 08.3  -2.1
MNK                                 pmax   pmax
            comp=N,11nm,0.7s
MNK                                 pmax   pmax
            comp=E,2.0nm,0.7s
MNK                                 pmax   pmax
            comp=Z,16nm,0.7s
MNK                                 MLR    MLR
            comp=E,75nm,17.0s
MNK                                 MLR    MLR
            comp=Z,270nm,17.0s
MNK                                 MLR    MLR
            comp=N,623nm,18.0s
MNK   Minsk             34.33 313  i P     P       15 30 42.8  -0.4
            comp=E,2.0nm,0.7s
MNK                                i P     P       15 30 42.8  -0.4
            comp=N,11nm,0.7s
MNK                                i P     P       15 30 42.8  -0.4
            comp=Z,16nm,0.7s,baz=98
MNK                                i PP    PnPn    15 31 46.8   -11
MNK                                i PPP   PPP     15 32 10.0
MNK                                i S     S       15 36 08.3  -2.1
MNK                                i SS    SnSn    15 37 56.9   -23
MNK                                i SSS   SSS     15 39 22.7
MNK                                i LQ    LQ      15 42 08.4
MNK                                i LR    LR      15 43 58.5
MNK                                i LRM   MLR     15 46 21.7
            comp=E,75nm,17.3s
MNK                                i LRM   MLR     15 46 42.8
            comp=Z,270nm,17.2s
MNK                                i LRM   MLR     15 47 10.7
            comp=N,623nm,17.6s
HIA   Hailar            34.65  57⇑eP       P       15 30 46.7  +0.6
HIA                                 pmax   pmax
            comp=Z,7.0nm,0.9s
TIA   Tai'an            34.71  80 ⇓P       P       15 30 48.5  +1.9
TIA                                 pmax   pmax
            comp=Z,13nm,0.9s
TIA                                 LR     LR
            comp=Z,480nm,14.5s
TIA                                 LR     LR
            comp=Z,520nm,16.0s
TIA                                 LR     LR
            comp=Z,760nm,17.8s
VRI   Vrincioaia        34.79 297 ⇑P       P       15 30 49.7  +2.4
VRI   Vrincioaia        34.79 297 ⇑P       P       15 30 49.7  +2.4
TESR  Tescani           34.80 298 ⇑P       P       15 30 50.8  +3.5
PLOR  Plostina          34.84 297 ⇑P       P       15 30 50.4  +2.6
PLOR  Plostina          34.84 297 ⇑P       P       15 30 50.4  +2.6
NACGM Naroch            35.02 313  i P     P       15 30 52.6  +3.4
MLR   Muntele Rosu      35.37 297 ⇑P       P       15 30 55.5  +3.1
MLR   Muntele Rosu      35.37 297 ⇑P       P       15 30 55.5  +3.1
MLR   Muntele Rosu      35.37 297   P      P       15 30 53.5  +1.1
MLR                                 IAmb   IAmb    15 31 24.4
            comp=Z,20nm,0.8s
BURAR Bucovina Array    35.70 300 ⇑P       P       15 30 57.6  +2.4
BURAR Bucovina Array    35.70 300 ⇑P       P       15 30 57.6  +2.4
BURAR Bucovina Array    35.70 300   P      P       15 30 56.5  +1.3
BUR08 Bucovina Ar. S    35.71 301   P      P       15 30 56.8  +1.5
VOIR                    36.00 297 ⇑P       P       15 31 01.6  +3.8
VOIR                    36.00 297 ⇑P       P       15 31 01.6  +3.8
LVZ   Lovozero          36.22 336   P      P       15 30 59.0  -0.3
LVZ                                 pmax   pmax
            comp=Z,27nm,0.9s
LVZ   Lovozero          36.22 336   P      P       15 30 59.0  -0.3
ARR   Arges             36.30 297 ⇑P       P       15 31 03.6  +3.2
LVV   L'vov             36.40 304  eP      P       15 31 03.4  +2.4
UBPT  Khong Chiam       36.64 120   P      P       15 31 03.1  -0.3
UBPT                                IAmb   IAmb    15 31 08.4
            comp=Z,19nm,1.1s
FIA1  FINESS Array S    36.79 324   P      P       15 31 03.6  -0.6
FIA1                                IAmb   IAmb    15 31 21.8
            comp=Z,36nm,1.2s
FINES FINESS Array B    36.79 324   P      P       15 31 03.6  -0.6
            comp=Z,8.1nm,0.5s,baz=114,slow=9.4,SNR=20
FINES                               LR     LR      15 47 58.8
            comp=Z,221nm,19.1s,baz=100,slow=39
FINES FINESS Array B    36.79 324  i P     P       15 31 04.5  +0.3
FINES                               pmax   pmax
            comp=Z,8.0nm,0.5s
FINES FINESS Array B    36.79 324   P      P       15 31 03.5  -0.8
LOT   Lotru             36.90 297 ⇑P       P       15 31 08.3  +2.8
SUW   Suwalki           37.02 311  eP      P       15 31 08.7  +2.4
QIZ   Qiongzhong        37.21 111   P      P       15 31 08.8  +0.6
QIZ                                 LR     LR
            comp=Z,530nm,17.7s
QIZ                                 LR     LR
            comp=Z,400nm,27.5s
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KWP	**Kalwaria Pacla**	37.26	304	*e*P	P	15 31 13.7	+5.3
DL2	**Dalian**	37.39	74	P	P	15 31 11.3	+1.7
DL2				pmax	pmax		
	comp=Z,16nm,1.0s						
DL2				LR	LR		
	comp=Z,540nm,20.7s						
DL2				LR	LR		
	comp=Z,270nm,23.0s						
DL2				LR	LR		
	comp=Z,380nm,23.5s						
TRPA	**Tarpa**	37.47	302	⇑P	P	15 31 12.4	+2.4
TRPA	**Tarpa**	37.47	302	*e*P	P	15 31 12.0	+1.9
NJ2	**Nanjing**	37.49	86	*e*P	P	15 31 10.3	-0.2
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KOLS	**Kolonicke sedl**	37.59	303	*e*P	P	15 31 15.5	+4.4
KOLS	**Kolonicke sedl**	37.59	303	*e*P	P	15 31 15.5	+4.4
UZH	**Uzhgorod**	37.59	302	*e*P	P	15 31 09.8	-1.4
UZH				*e*		15 31 15.0	
GZR	**Gura Zlata**	37.60	297	⇑P	P	15 31 15.5	+4.2
GZR	**Gura Zlata**	37.60	297	⇑P	P	15 31 15.5	+4.2
VTS	**Vitosha**	37.73	292	⇑P	P	15 31 17.8	+5.2
VTS	**Vitosha**	37.73	292	⇑P	P	15 31 17.8	+5.2
ZAPS	**Zavoj**	38.04	294	*e*P	P	15 31 20.6	+5.5
CRVS	**Cervenica-Dubn**	38.12	303	*e*P	P	15 31 22.0	+6.3
CRVS				*e*		15 32 48.7	
CRVS	**Cervenica-Dubn**	38.12	303	*e*P	P	15 31 22.0	+6.3
CRVS				*e*PP	PnPn	15 32 48.7	+4.6
BOSS	**Bosilegrad**	38.30	292	*e*P	P	15 31 21.3	+4.0
MDVR	**Moldovita**	38.43	296	⇑P	P	15 31 19.5	+1.1
BOVS	**Bovan**	38.64	294	*e*P	P	15 31 23.0	+3.0
BARS	**Barje**	38.72	293	*e*P	P	15 31 14.6	-6.2
BARS	**Barje**	38.72	293	*e*P	P	15 31 24.4	+3.6
NIE	**Niedzica**	38.84	304	*e*P	P	15 31 25.6	+3.8
OJC	**Ojcow**	39.11	305	*e*P	P	15 31 26.8	+2.8
OJC	**Ojcow**	39.11	305	P	P	15 31 24.3	+0.4
OJC				pmax	pmax		
	comp=Z,12nm,0.9s						
OJC	**Ojcow**	39.11	305	P	P	15 31 24.3	+0.4
ZEA	**Zeya**	39.36	49	*e*P	P	15 31 27.6	+1.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=E,200nm,19.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,19.0s						
FRGS	**Fruska Gora**	39.70	297	*e*P	P	15 31 32.5	+3.5
DIVS	**Divibare**	39.77	296	P	P	15 31 30.5	+0.9
DIVS	**Divibare**	39.77	296	*e*P	P	15 31 32.1	+2.5
ARA0	**ARCESS Array S**	39.93	336	*e*P	P	15 31 31.9	+1.4
ARCES	**ARCESS Array B**	39.93	336	P	P	15 31 28.8	-1.8
	comp=Z,7.7nm,0.6s,baz=114,slow=9.0,SNR=32						
ARCES				LR	LR	15 48 40.2	
	comp=Z,702nm,20.7s,baz=125,slow=37						
ARCES	**ARCESS Array B**	39.93	336	P	P	15 31 30.9	+0.4
ARCES				pmax	pmax		
	comp=Z,16nm,1.1s						
ARCES	**ARCESS Array B**	39.93	336	P	P	15 31 30.9	+0.4
ARCES				IAmb	IAmb	15 31 35.9	
	comp=Z,16nm,1.1s						
MORH	**Mrgy, Hungar**	40.33	299	⇑P	P	15 31 37.9	+3.8
MORH	**Mrgy, Hungar**	40.33	299	*e*P	P	15 31 36.9	+2.7
KTK1	**Kautokeino**	40.45	335	*e*P	P	15 31 35.9	+1.0
GKP	**Gorka Klasztor**	40.55	310	*e*P	P	15 31 38.4	+2.6
MORC	**Moravsky Berou**	40.60	305	*e*P	P	15 31 39.1	+2.7
JAVC	**Velka Javorina**	40.62	303	*e*P	P	15 31 40.6	+4.0
KOVH	**Kovagotottos**	40.73	299	*e*P	P	15 31 39.2	+1.8
HAMF	**Hammerfest**	40.97	337	*e*P	P	15 31 39.9	+0.9
KRLC	**Kraliky**	41.06	305	*e*P	P	15 31 43.4	+3.2
KRLC	**Kraliky**	41.06	305	*e*P	P	15 31 43.4	+3.2
YAK	**Yakutsk**	41.24	37	P	P	15 31 40.7	-0.7
	comp=Z,10nm,0.6s,baz=248,slow=4.5,SNR=14						
YAK	**Yakutsk**	41.24	37	*e*P	P	15 31 40.3	-1.1
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,674nm,13.0s						
YAK				MLR	MLR		
	comp=E,240nm,9.0s						
YAK				MLR	MLR		
	comp=N,166nm,10.0s						
YAK	**Yakutsk**	41.24	37	P	P	15 31 40.4	-1.1
VRAC	**Vranov**	41.26	304	*e*P	P	15 31 45.8	+4.0
KSP	**Ksiaz**	41.29	306	*e*P	P	15 31 43.5	+1.5
DPC	**Dobruska-Polom**	41.32	306	*e*P	P	15 31 45.5	+3.2
DPC	**Dobruska-Polom**	41.32	306	*e*P	P	15 31 45.5	+3.2
KRUC	**Moravsky**	41.42	304	*e*P	P	15 31 46.5	+3.4
CHVC	**Chvalec**	41.47	306	*e*P	P	15 31 46.8	+3.3
JETT	**Jettan, Norway**	41.59	335	*e*P	P	15 31 46.2	+2.0
MDJ	**Mudanjiang**	41.86	63	P	P	15 31 48.2	+1.5
MDJ				pP	sP	15 31 56.6	+3.5
MDJ				ScP	ScP	15 37 33.9	+1.1
MDJ				S	S	15 38 01.0	-3.5
MDJ				sS	sS	15 38 14.3	+2.2
MDJ				SS	SS	15 41 06.6	-3.9
MDJ				ScS	ScS	15 41 48.9	-0.8
MDJ				pmax	pmax		
	comp=N,170nm,4.7s						
MDJ				LR	LR		
	comp=N,340nm,8.0s						
MDJ				LR	LR		
	comp=N,330nm,11.8s						
MDJ				LR	LR		
	comp=N,360nm,12.8s						
CONA	**Conrad Observa**	41.94	302	*e*P	P	15 31 49.0	+1.5
	comp=N,13nm,1.3s						
TRO	**Tromso**	42.11	335	*e*P	P	15 31 50.0	+1.6
ARSA	**Arzberg**	42.28	301	*e*P	P	15 31 51.4	+1.2
	comp=N,2.4nm,0.7s						
KLR	**Kul'dur**	42.49	56	P	P	15 31 52.4	+0.5
	comp=N,6.3nm,0.7s,baz=282,slow=12,SNR=20						
KLR	**Kul'dur**	42.49	56	*de*P	P	15 31 52.6	+0.7
KLR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSRS	**Korea Array**	42.56	74	P	P	15 31 51.6	-0.9
	comp=Z,5.0nm,0.8s,baz=276,slow=6.8,SNR=13						
KSRS				PcP	PcP	15 33 47.3	+2.4
	comp=Z,3.5nm,0.9s,baz=293,slow=3.9,SNR=5.3						
PSI	**Prapat**	42.65	140	P	P	15 31 52.5	-1.0
	comp=Z,5.4nm,0.6s,baz=338,slow=7.5,SNR=8.5						
SOKA	**Soboth**	42.71	300	*e*P	P	15 31 56.1	+2.3
	comp=Z,8.0nm,1.0s						
RPSI	**Rantau Prapat**	42.74	140	P	P	15 31 52.5	-1.6
BRG	**Berggiesshubel**	42.77	307	*e*P	P	15 31 57.3	+3.3
BRG				Amp		15 31 58.6	
	comp=Z,8.6nm,0.7s						
FAUS	**Fauske**	42.81	331	*e*P	P	15 31 56.3	+2.1
MOR8	**Moi Rana**	42.90	329	*e*P	P	15 31 54.6	-0.4
TIXI	**Tiksi**	43.18	22	⇑*e*P	P	15 31 56.2	-0.9
TIXI				pmax	pmax		
	comp=Z,15nm,0.8s						
TIXI	**Tiksi**	43.18	22	P	P	15 31 56.6	-0.5
TIXI				IAmb	IAmb	15 31 57.5	
	comp=Z,14nm,0.6s						
GERES	**GERESS Array B**	43.21	304	P	P	15 31 59.5	+1.6
	comp=Z,2.5nm,0.5s,baz=67,slow=8.6,SNR=16						
KHC	**Kasperske Hory**	43.25	304	*e*P	P	15 31 59.2	+1.2
KHC				*e*x	x	15 32 16.0	
KHC	**Kasperske Hory**	43.25	304	*e*P	P	15 31 59.2	+1.2
KHC	**Kasperske Hory**	43.25	304	P	P	15 31 59.4	+1.4
GSI	**Gunungsitoli**	43.29	143	P	P	15 32 00.8	+2.2
GSI	**Gunungsitoli**	43.29	143	P	P	15 31 59.5	+0.9
GSI				IAmb	IAmb	15 32 15.1	
	comp=Z,20nm,0.9s						
CLL	**Collm**	43.30	307	⇑*i*P	P	15 32 01.2	+2.8
CLL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CLL				MLR	MLR		
	comp=Z,200nm,25.4s						
CLL	**Collm**	43.30	307	⇑*i*P	P	15 32 01.2	+2.8
	comp=Z,9.0nm,0.7s						
CLL	**Collm**	43.30	307	P	P	15 32 00.2	+1.8
CLL				IAmb	IAmb	15 32 05.7	
	comp=Z,18nm,1.2s						
KONS	**Konsvik**	43.48	330	*e*P	P	15 32 01.3	+1.7
NC405	**NORSAR Array S**	43.58	322	P	P	15 31 59.6	-0.9
USRK	**Ussuriysk Ar.**	43.62	63	P	P	15 32 01.0	-0.1
	comp=Z,3.4nm,0.9s,baz=288,slow=7.2,SNR=2.8						
USRK				LR	LR	15 52 02.8	
	comp=Z,276nm,18.4s,baz=276,slow=39						
USRK	**Ussuriysk Ar.**	43.62	63	P	P	15 32 01.0	-0.1
NC602	**NORSAR Array S**	43.65	321	*e*P	P	15 32 02.6	+1.6
NC602	**NORSAR Array S**	43.65	321	P	P	15 32 01.2	+0.2
NSS	**Namsos**	43.70	327	*e*P	P	15 32 02.7	+1.3
NC303	**NORSAR Array S**	43.75	322	P	P	15 32 01.7	-0.2
NB201	**NORSAR Array S**	43.78	322	P	P	15 32 01.7	-0.5
NB2	**NORSAR Subarra**	43.82	322	P	P	15 32 01.6	-0.9
	comp=Z,9.8nm,0.7s,baz=90,slow=7.9						
NB2	**NORSAR Subarra**	43.82	322	P	P	15 32 01.6	-0.9
	baz=90,slow=7.9						
NOA	**NORSAR Array B**	43.82	322	P	P	15 32 01.7	-0.7
	comp=Z,6.1nm,0.6s,baz=92,slow=7.9,SNR=25						
NAO01	**NORSAR Array S**	43.97	321	P	P	15 32 03.5	-0.1
NBO00	**NORSAR Array S**	44.03	322	P	P	15 32 03.0	-1.1
NC204	**NORSAR Array S**	44.04	322	P	P	15 32 03.1	-1.2
NC204				IAmb	IAmb	15 32 29.0	
	comp=Z,13nm,0.9s						
TBLU	**Trondheim**	44.35	325	*e*P	P	15 32 07.8	+1.1
KONO	**Kongsberg**	44.62	320	P	P	15 32 08.4	-0.4
KONO				pmax	pmax		
	comp=Z,49nm,1.5s						
KONO	**Kongsberg**	44.62	320	*e*P	P	15 32 10.6	+1.8
KONO	**Kongsberg**	44.62	320	P	P	15 32 08.4	-0.4
GRF	**Grafenberg Arr**	44.67	305	*e*P	P	15 32 13.1	+3.6
	comp=Z,8.1nm,0.8s,baz=85,slow=7.0						
DOMB	**Dombas**	44.87	323	*e*P	P	15 32 11.9	+1.1
WTTA	**Wattenberg**	44.87	302	*e*P	P	15 32 13.4	+2.2
	comp=Z,5.3nm,0.6s						
MOTA	**Moosalm**	45.21	302	*e*P	P	15 32 15.1	+1.2
	comp=Z,3.5nm,0.6s						
SKAR	**Skarslia**	45.24	321	*e*P	P	15 32 15.0	+1.2
FETA	**Feichten**	45.53	302	*e*P	P	15 32 17.1	+0.7
	comp=Z,5.9nm,1.2s						
SPA0	**Spitsbergen Ar**	45.88	346	*e*P	P	15 32 20.1	+1.5
SPITS	**Spitsbergen Ar**	45.88	346	P	P	15 32 18.6	-0.1
SPITS				pmax	pmax		
	comp=Z,44nm,1.2s						
DAVA	**Damuels**	46.03	302	*e*P	P	15 32 22.0	+1.6
	comp=Z,8.2nm,0.5s						
JNU	**Nakatsue**	46.39	78	P	P	15 32 22.6	-0.7
	comp=Z,18nm,0.9s,baz=308,slow=5.6,SNR=5.4						
KBS	**Kingsbay**	46.99	347	*e*P	P	15 32 28.5	+1.2
JHS	**Saijyo**	47.35	75	P	P	15 32 30.7	-0.1
SENIN	**Lac Senin/Sane**	47.98	302	P	P	15 32 37.0	+1.2
SENIN				IAmb	IAmb	15 32 42.7	
	comp=Z,7.7nm,0.8s						
JWT	**Wachi**	48.97	74	P	P	15 32 43.4	+0.2
LODK	**Lodwar**	49.12	234	P	P	15 32 45.9	+1.2
	SNR=12						
LODK	**Lodwar**	49.12	234	P	P	15 32 45.1	+0.5
KEST	**Kesra**	50.08	288	P	P	15 32 52.5	+0.7
	comp=Z,5.4nm,0.8s,baz=45,slow=2.9,SNR=4.2						
KEST	**Kesra**	50.08	288	IAmb	IAmb	15 33 10.9	
	comp=Z,6.8nm,0.8s						
JGF	**Kuroka**	50.31	72	P	P	15 32 53.6	+0.1
JGF				IAmb	IAmb	15 32 56.4	
	comp=Z,14nm,0.9s						
MAJO	**Matsushiro**	50.56	71	*d i*P	P	15 32 55.2	-0.2
MAJO				pmax	pmax		
	comp=Z,14nm,0.9s						
MAJO	**Matsushiro**	50.56	71	P	P	15 32 55.0	-0.4
MAT	**Matsushiro**	50.56	71	P	P	15 32 54.6	-0.8
MJAR	**Matsushiro Arr**	50.57	71	P	P	15 32 55.9	+0.5
	comp=Z,14nm,0.9s,baz=292,slow=7.8,SNR=14						
MJAR				LR	LR	15 56 06.7	
	comp=Z,132nm,21.0s,baz=295,slow=38						
SBUM	**Sibu**	50.58	126	P	P	15 32 56.2	+0.6
KMBO	**Kilima Mbogo**	51.54	229	P	P	15 33 02.9	-0.2
	comp=Z,3.0nm,0.8s,baz=34,slow=12,SNR=3.3						
JMM	**Marumori**	51.95	68	P	P	15 33 06.1	+0.4
KIBK	**Kibwezi**	52.06	227	P	P	15 33 06.5	-0.3
JYT	**Yasato**	52.16	70	P	P	15 33 06.5	-0.8
DAG	**Danmarks Havn**	53.24	343	*i* P	P	15 33 14.0	-0.7
DAG				IAmb	IAmb	15 33 19.4	
	comp=Z,9.1nm,0.6s						
MBAR	**Mbarara**	55.15	235	P	P	15 33 29.4	-0.3
MBAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MBAR	**Mbarara**	55.15	235	P	P	15 33 29.4	-0.3
MBAR				IAmb	IAmb	15 33 33.7	
	comp=Z,5.7nm,0.8s						
BILL	**Bilibino**	55.95	27	*i* P	P	15 33 34.0	-0.5
BILL				*i*		15 34 32.0	
BILL				*i*		15 35 38.1	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,268nm,18.0s						
BILL	**Bilibino**	55.95	27	P	P	15 33 34.7	+0.2
PETK	**Petropavlovsk-**	57.24	46	LR	LR	15 58 51.5	
	comp=Z,210nm,18.6s,baz=295,slow=37						
ESBB	**Sonseca Array**	58.06	298	P	P	15 33 50.0	0.0
ESBB				IAmb	IAmb	15 34 18.8	
	comp=Z,11nm,1.3s						
ESDC	**Sonseca Array**	58.06	298	P	P	15 33 50.2	+0.2
	comp=Z,3.0nm,0.9s,baz=54,slow=7.0,SNR=16						
NEEM	**North Greenlan**	59.37	348	*i* P	P	15 33 58.9	+0.1
SUMG	**Summit**	59.67	341	P	P	15 34 01.8	+0.7
SUMG				pmax	pmax		
	comp=Z,15nm,0.8s						
SUMG	**Summit**	59.67	341	*i* P	P	15 34 00.0	-1.1
SUMG				IAmb	IAmb	15 34 07.4	
	comp=Z,16nm,0.7s						
SUMG	**Summit**	59.67	341	P	P	15 34 01.8	+0.7
EUNU	**Eureka**	61.06	356	P	P	15 34 11.1	+1.0
EUNU				IAmb	IAmb	15 34 40.1	
	comp=Z,8.8nm,1.1s						
ICESG	**Greenland Ices**	61.95	338	*i* P	P	15 34 15.3	-1.3
TORD	**Torodi Ar. Bea**	67.53	269	P	P	15 34 52.8	-0.6
	comp=Z,9.7nm,0.6s,baz=44,slow=5.5,SNR=23						
TORD	**Torodi Ar. Bea**	67.53	269	P	P	15 34 52.8	-0.6
TOLK	**Toolik Lake Re**	68.45	16	P	P	15 34 58.1	-0.3
A36M	**Sachs Harbour**	68.96	6	P	P	15 35 01.5	+0.1
COLD	**Coldfoot**	69.48	17	P	P	15 35 04.5	-0.3
COLD				IAmb	IAmb	15 35 16.2	
	comp=Z,10nm,0.8s						
IMAR	**Indian Mountai**	69.64	19	P	P	15 35 04.8	-1.0
H21K	**Melozitna Rive**	70.14	18	P	P	15 35 08.3	-0.5
H21K				IAmb	IAmb	15 35 35.9	
	comp=Z,5.3nm,1.0s						
BMAR	**Burnt Mountain**	70.49	15	P	P	15 35 11.2	+0.2
J20K	**Nowinta River**	70.98	20	P	P	15 35 14.0	+0.1
J20K				IAmb	IAmb	15 35 16.9	
	comp=Z,9.6nm,1.1s						
H24K	**Noodor Dome**	71.16	17	P	P	15 35 15.1	0.0
H24K				IAmb	IAmb	15 35 27.6	
	comp=Z,4.5nm,0.8s						
MLY	**Manley**	71.16	18	P	P	15 35 14.9	-0.2
KOWA	**Kowa**	71.21	274	P	P	15 35 16.2	0.0
KOWA				IAmb	IAmb	15 35 28.9	
	comp=Z,6.1nm,0.7s						
I23K	**Minto, Yukon-K**	71.39	18	P	P	15 35 16.2	-0.2
I23K				IAmb	IAmb	15 35 26.9	
	comp=Z,16nm,1.3s						
INK	**Inuvik**	71.55	10	P	P	15 35 17.3	0.0
INK				pmax	pmax		
	comp=Z,11nm,1.2s						
INK	**Inuvik**	71.55	10	P	P	15 35 17.3	0.0
INK				IAmb	IAmb	15 35 46.3	
	comp=Z,11nm,1.2s						
MDM	**Murphy Dome**	71.82	17	P	P	15 35 18.6	-0.5
MDM				IAmb	IAmb	15 35 21.2	
	comp=Z,7.2nm,1.2s						
NEA2	**Nenana**	71.92	18	P	P	15 35 19.1	-0.6
NEA2				IAmb	IAmb	15 35 30.4	
	comp=Z,7.5nm,0.8s						
TCOL	**CIGO, UAF Yank**	71.97	17	P	P	15 35 19.8	-0.1
COLA	**College**	71.97	17	⇓*e*P	P	15 35 19.9	0.0
COLA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BWN	**Browne**	72.18	18	P	P	15 35 21.1	-0.1
WRH	**Wood River Hil**	72.26	17	P	P	15 35 20.5	-1.1
IL31		72.28	17	P	P	15 35 20.5	-1.3
IL31				IAmb	IAmb	15 35 32.5	
	comp=Z,5.8nm,0.8s						
ILAR	**Eielson Array**	72.28	17	P	P	15 35 20.9	-0.9
	comp=Z,3.6nm,0.8s,baz=316,slow=5.1,SNR=33						
ILAR	**Eielson Array**	72.28	17	P	P	15 35 20.7	-1.1
KTH	**Kantishna Hill**	72.33	19	P	P	15 35 21.1	-1.1
KTH				IAmb	IAmb	15 35 33.4	
	comp=Z,8.3nm,0.8s						
PPLA	**Purkeypile**	72.53	20	P	P	15 35 23.0	-0.5
TRF	**Thorofare Moun**	72.57	19	P	P	15 35 23.2	-0.6
TRF				IAmb	IAmb	15 35 50.7	
	comp=Z,9.1nm,1.3s						
RND	**Reindeer**	72.97	18	P	P	15 35 25.1	-0.9
RND				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RND	**Reindeer**	72.97	18	P	P	15 35 25.1	-0.9
DHY	**Denali Highway**	73.61	18	P	P	15 35 28.8	-1.1
DHY				IAmb	IAmb	15 35 41.7	
	comp=Z,7.8nm,0.8s						
SCRK	**Sand Creek**	73.61	16	P	P	15 35 29.1	-0.7
SCRK				IAmb	IAmb	15 35 40.3	
	comp=Z,12nm,1.3s						
RIDG	**Independent Ri**	73.63	17	P	P	15 35 28.5	-1.4
RIDG				IAmb	IAmb	15 35 38.4	
	comp=Z,7.2nm,0.7s						
DOT	**Dot Lake**	73.88	16	P	P	15 35 31.3	-0.1
PAX	**Paxson**	74.15	17	P	P	15 35 32.1	-0.9
PAX				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PAX	**Paxson**	74.15	17	P	P	15 35 32.1	-0.9
PAX				IAmb	IAmb	15 35 43.2	
	comp=Z,5.6nm,0.8s						
GHO	**Glory Hole Cre**	74.33	19	P	P	15 35 33.3	-0.7
GHO				IAmb	IAmb	15 36 02.2	
	comp=Z,9.6nm,0.8s						
SML	**Sawmill**	74.45	19	P	P	15 35 34.0	-0.7
DAWY	**Dawson**	74.48	14	P	P	15 35 34.4	-0.4
SCM	**Sheep Creek Mo**	74.68	19	P	P	15 35 35.5	-0.6
SCM				pmax	pmax		
	comp=Z,14nm,0.8s						
SCM	**Sheep Creek Mo**	74.68	19	P	P	15 35 35.5	-0.6
M24K	**Tolsona, Glenn**	74.73	18	P	P	15 35 36.6	+0.3
L27K	**Beaver Creek,**	74.89	16	P	P	15 35 37.2	0.0
BCAR	**Beaver Creek A**	74.89	16	P	P	15 35 37.4	+0.1
KNRA	**Kununurra**	74.90	125	P	P	15 35 37.7	-0.1
KNRA				IAmb	IAmb	15 35 56.3	
	comp=Z,8.7nm,0.8s						
PWL	**Port Wells**	75.25	20	P	P	15 35 38.7	-0.6
PWL				IAmb	IAmb	15 36 07.0	
	comp=Z,12nm,0.9s						
M27K	**Edge Creek, AK**	75.50	16	P	P	15 35 41.2	+0.3
M27K				IAmb	IAmb	15 35 47.2	
	comp=Z,9.4nm,1.1s						
N25K	**Chitina, Valde**	75.54	18	P	P	15 35 41.3	+0.3
MCARA	**McCarthy VSAT**	76.11	17	P	P	15 35 44.7	+0.5
MCARA				IAmb	IAmb	15 36 13.0	
	comp=Z,8.0nm,0.9s						
DBIC	**Dimbokro**	76.56	268	P	P	15 35 47.6	+0.1
	comp=Z,5.4nm,0.8s,baz=37,slow=5.7,SNR=7.7						
DBIC				LR	LR	16 13 47.1	
	comp=Z,130nm,18.6s,baz=60,slow=39						
CRQM	**Cirque**	76.63	17	P	P	15 35 47.4	0.0
CRQM				IAmb	IAmb	15 36 10.5	
	comp=Z,21nm,1.4s						
KIC	**Kosan Boka**	76.66	268	*e*P	P	15 35 51.8	+3.7
	comp=Z,11nm,0.8s						
TGL	**Tana Glacier**	76.70	17	P	P	15 35 47.6	-0.1
TGL				IAmb	IAmb	15 36 11.0	
	comp=Z,13nm,1.2s						
TIC	**Toumodi**	76.71	268	*e*P	P	15 35 52.0	+3.6
CTGM	**Chitina Glacie**	76.86	17	P	P	15 35 48.5	-0.1
CTGM				IAmb	IAmb	15 36 02.6	
	comp=Z,6.0nm,0.8s						
WAX	**Waxell Ridge**	76.97	17	P	P	15 35 49.5	+0.4
WAX				IAmb	IAmb	15 35 59.8	
	comp=Z,9.0nm,0.7s						
LIC	**Lamto**	76.97	268	*e*P	P	15 35 53.4	+3.6
	comp=Z,16nm,0.8s						
LBTB	**Lobatse**	77.41	223	P	P	15 35 51.7	-0.4
LBTB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LBTB	**Lobatse**	77.41	223	P	P	15 35 51.7	-0.4
LBTB				IAmb	IAmb	15 36 03.7	
	comp=Z,5.4nm,0.8s						
HYT	**Haines Junctio**	77.80	15	P	P	15 35 54.1	+0.2
HYT				IAmb	IAmb	15 35 55.2	
	comp=Z,8.7nm,0.8s						
WHY	**Whitehorse**	78.46	14	P	P	15 35 56.6	-0.9
YKA	**Yellowknife Ar**	79.07	4	P	P	15 36 00.4	-0.3
	comp=Z,7.0nm,0.7s,baz=349,slow=5.5,SNR=26						
YKA	**Yellowknife Ar**	79.07	4	P	P	15 36 00.3	-0.4
SKAG	**Skagway**	79.48	14	P	P	15 36 03.1	+0.1
SKAG				IAmb	IAmb	15 36 17.2	
	comp=Z,9.0nm,1.2s						
BOSA	**Boshof**	80.48	221	P	P	15 36 08.1	-0.8
	comp=Z,2.0nm,0.9s,baz=41,slow=7.4,SNR=1.8						
BOSA				LR	LR	16 11 16.4	
	comp=Z,50nm,21.9s,baz=14,slow=35						
SCHQ	**Schefferville**	80.86	338	P	P	15 36 10.8	+0.2
	comp=Z,9.2nm,0.8s,baz=38,slow=6.8,SNR=7.8						
SCHQ				LR	LR	16 12 21.6	
	comp=Z,98nm,18.1s,baz=104,slow=36						
SCHQ	**Schefferville**	80.86	338	P	P	15 36 11.4	+0.9
SCHQ				IAmb	IAmb	15 36 14.2	
	comp=Z,11nm,0.9s						
WB0	**Warramunga Arr**	81.53	123	P	P	15 36 13.5	-1.1
WRA	**Warramunga Arr**	81.62	124	P	P	15 36 14.1	-0.9
	comp=Z,5.5nm,0.8s,baz=324,slow=5.2,SNR=40						
WRA	**Warramunga Arr**	81.62	124	P	P	15 36 14.0	-1.1
WRAB	**Tennant Creek**	81.62	124	*ce*P	P	15 36 14.6	-0.4
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WRAB	**Tennant Creek**	81.62	124	P	P	15 36 13.8	-1.2
WRAB				IAmb	IAmb	15 36 15.5	
	comp=Z,8.1nm,0.8s						
WB2	**Warramunga Arr**	81.63	124	P	P	15 36 13.7	-1.3
WB2				IAmb	IAmb	15 36 15.5	
	comp=Z,8.3nm,0.8s						
WR0	**Warramunga Arr**	81.77	124	P	P	15 36 14.7	-1.0
ASAR	**Alice Springs**	84.03	127	P	P	15 36 26.5	-0.9
	comp=Z,2.4nm,0.8s,baz=316,slow=5.2,SNR=23						
ASAR				LR	LR	16 18 10.6	
	comp=Z,56nm,19.2s,baz=316,slow=39						
FFC	**Flin Flon**	86.97	357	P	P	15 36 41.4	-0.3
FFC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FFC	**Flin Flon**	86.97	357	P	P	15 36 41.4	-0.3
ULM	**Lac du Bonnet**	91.02	353	LR	LR	16 20 11.3	
	comp=Z,61nm,19.7s,baz=322,slow=37						
PDAR	**Pinedale Array**	98.99	2	LR	LR	16 26 48.9	
	comp=Z,91nm,18.9s,baz=29,slow=38						
VNA2	**Neumayer--Watz**	123.00	203	PKPdf	PKiKP	15 42 52.9	+0.7
VNA3	**Neumayer Olymp**	123.81	203	PKPdf	PKiKP	15 42 54.7	+0.8
PLCA	**Paso Flores**	152.16	254	PKPbc	PKiKP	15 43 53.3	+0.8
	comp=Z,2.8nm,0.8s,baz=100,slow=4.6,SNR=6.3						
PLCA	**Paso Flores**	152.16	254	PKIKP	PKPbc	15 43 51.8	-0.5
PLCA	**Paso Flores**	152.16	254		PKPbc	15 43 51.8	-0.5

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*IDC **07** 15:43:07.9±2.9, 38.̊60N×73.̊39E, h0^{km}, mb3.5/2, mb1 3.5/8, mb1mx3.3/41, mbtmp3.5/8, ML2.8/6, Error ellipse: s-maj=36.2km s-min=31.6km az=26.0*

ISC 07 15:43:11.2±2.0**, 38.̊9N**±0.̊2×**73.̊3E**±0.̊2**, h10^{km}, n8, σ2.^{s}45**/9**,**
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	3.90	13	Pn	Pn	15 44 15.4	+4.1
	1.5nm,0.3s,baz=185,slow=7.4,SNR=8.0						
AAK				Sn	Sb	15 45 05.4	-2.0
	0.5nm,0.3s,baz=15,slow=20,SNR=1.0						
MKAR	**Makanchi Array**	10.34	37	Pn	Pn	15 45 42.5	+3.0
	0.1nm,0.3s,baz=225,slow=15,SNR=5.2						
KURBB	**Kurchatov Arra**	12.35	16	Pn	Pn	15 46 06.9	-0.1
	0.0nm,0.3s,baz=205,slow=10,SNR=2.6						
BVAR	**Borovoye Array**	14.32	353	Pn	Pn	15 46 34.3	+0.5
	0.1nm,0.3s,baz=176,slow=29,SNR=1.4						
AKTO	**Aktyubinsk**	15.84	322	Pn	Pn	15 46 54.0	-0.1
	0.1nm,0.3s,baz=126,slow=14,SNR=2.2						
ZALV	**Zalesovo Beam**	17.04	24	P	Pn	15 47 08.7	-0.7
	0.2nm,0.3s,baz=222,slow=9.7,SNR=5.2						
SONM	**Songino Array**	25.55	59	P	P	15 48 39.6	-0.5
	0.7nm,0.8s,baz=254,slow=9.0,SNR=4.4						
INK	**Inuvik**	71.29	10	P	P	15 54 28.1	-2.2
	0.3nm,0.4s,baz=326,slow=3.6,SNR=1.3						

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*IDC **07** 15:45:45.8±3.6, 38.̊78N×73.̊41E, h0^{km}, mb3.4/1, mb1 3.5/6, mb1mx3.3/41, mbtmp3.5/6, ML3.0/5, MS3.4/1, Ms1 3.4/1, ms1mx2.5/49, Error ellipse: s-maj=41.7km s-min=30.7km az=21.0*

ISC 07 15:45:48.4±2.5**, 39.̊0N**±0.̊2×**73.̊2E**±0.̊2**, h10^{km}, n7, σ2.^{s}68**/7**,**
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	3.80	15	Pn	Pn	15 46 50.2	+3.1
	1.5nm,0.3s,baz=196,slow=18,SNR=3.5						

AAK				Sn	Sb	15 47 39.5	-2.3
	1.1nm,0.3s,baz=15,slow=22,SNR=1.3						
MKAR	Makanchi Array	10.28	37	Pn	Pn	15 48 17.9	+2.0
	0.1nm,0.3s,baz=224,slow=14,SNR=6.8						
BVAR	Borovoye Array	14.20	353	Pn	Pn	15 49 10.2	+0.8
	0.0nm,0.3s,baz=181,slow=12,SNR=1.5						
AKTO	Aktyubinsk	15.71	322	Pn	Pn	15 49 28.7	-1.0
	0.1nm,0.3s,baz=102,slow=15,SNR=2.0						
ZALV	Zalesovo Beam	16.96	24	P	Pn	15 49 43.5	-2.0
	0.2nm,0.3s,baz=215,slow=12,SNR=4.2						
SONM	Songino Array	25.54	59	P	P	15 51 15.1	-2.1
	0.4nm,0.5s,baz=262,slow=10.0,SNR=4.3						
ATD	Arta Tunnel	38.39	233	LR	LR	16 11 43.2	
	comp=Z,49nm,18.2s,baz=356,slow=40						

*IDC **07** 15:53:20.5±1.1, 39.°06N×73.°33E, h0^{km}, mb3.6/6, mb1 3.7/10, mb1mx3.5/54, mbtmp3.6/10, ML3.0/4, Error ellipse: s-maj=23.2km s-min=17.6km az=91.0*

*KRNET **07** 15:53:24.0±0.1, 39.°21N×73.°55E, h11^{km}, mb4.0*

ISC 07 15:53:21.0±1.9, **39.°10N**±0.°06×**73.°72E**±0.°05, **h2**^{km}±11^{km}, **n33**, σ**2^{s}51**/46, **mb3.5**/6, **20C-8D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.93	350	⇑eP	Pg	15 53 39.7	+0.8
	baz=58						
SFK				⇑eS	Sg	15 53 51.0	0.0
	baz=58						
DRK	Karamyk	1.54	285	⇓iP	Pn	15 53 50.3	+0.5
	baz=82						
DRK				⇓iS	Sn	15 54 09.8	-0.7
	baz=82						
OHH	Osh	1.60	334	⇑iP	Pn	15 53 51.1	+0.7
	baz=36						
OHH				⇑iS	Sn	15 54 11.1	-0.6
	baz=36						
SALK	Salom-Alik	1.78	3	⇑eP	Pb	15 53 55.1	+0.5
	baz=7.0						
SALK				⇑eS	Sg	15 54 19.1	+0.7
	baz=7.0						
BTK	Batken	2.44	294	⇑iP	Pn	15 54 04.6	+2.6
	baz=93						
BTK				⇑iS	Sn	15 54 34.6	+2.2
	baz=93						
GAR	Garm	2.65	269	⇓eP	Pn	15 54 08.5	+3.6
	baz=66						
GAR				⇓eS	Sn	15 54 41.2	+3.5
	baz=66						
AML	Almayashu	3.03	360	P	Pb	15 54 15.1	-0.9
	SNR=11						
AML	Almayashu	3.03	360	⇑eP	Pb	15 54 14.0	-2.0
	baz=2.0						
AML				⇑iS	Sn	15 54 50.6	+3.1
	baz=2.0						
TRKS	Terek-Say	3.13	322	⇑iP	Pn	15 54 13.3	+1.7
	baz=22						
TRKS				⇑iS	Sn	15 54 49.4	-0.2
	baz=22						
UCH	Uchtor	3.19	11	P	Pb	15 54 18.3	-0.4
	SNR=8.6						
UCH	Uchtor	3.19	11	⇑eP	Pb	15 54 16.5	-2.2
	baz=13						
UCH				⇑iS	Sn	15 54 54.6	+3.2
	baz=13						
MNAS	Manas	3.51	345	⇑iP	Pn	15 54 20.1	+3.3
	baz=47						
MNAS				⇑iS	Sn	15 55 01.0	+2.0
	baz=47						
EKS2	Erkin-Say	3.56	1	P	Pb	15 54 23.6	-1.3
	SNR=7.6						
EKS2	Erkin-Say	3.56	1	⇓eP	Pn	15 54 21.2	+3.7
	baz=3.0						
EKS2				⇓iS	Sn	15 55 03.1	+2.9
	baz=3.0						
AAK	Ala-Archa	3.59	9	Pn	Pb	15 54 23.2	-2.1
	5.3nm,0.3s,baz=169,slow=16,SNR=40						
AAK				Sn	Sb	15 55 07.0	-2.4
	2.3nm,0.3s,baz=260,slow=21,SNR=1.3						
AAK	Ala-Archa	3.59	9	P	Pb	15 54 23.5	-1.8
	SNR=13						
AAK	Ala-Archa	3.59	9	⇓iP	Pn	15 54 21.8	+3.9
	baz=12						
AAK				⇓iS	Sn	15 55 04.0	+3.1
	baz=12						
ULHL	Ulahol	3.69	31	P	Pg	15 54 33.2	+1.5
	SNR=9.0						
CHMS	Chumysh	3.98	11	P	Pb	15 54 28.6	-3.3
	SNR=9.3						
KDJ	Kajisay	4.02	40	⇑iP	Pb	15 54 29.2	-3.4
	baz=42						
KDJ				⇑iS	Sb	15 55 17.5	-4.2
	baz=42						
TAS	Tashkent	4.05	305	⇑eP	Pn	15 54 27.0	+2.9
	baz=4.0						
TAS				⇑eS	Sn	15 55 13.2	+1.0
	baz=4.0						
USP	Ospenovka	4.21	8	P	Pb	15 54 32.1	-3.7
	SNR=6.3						
MKAR	Makanchi Array	9.93	36	Pn	Pn	15 55 53.6	+8.8
	0.0nm,0.3s,baz=226,slow=14,SNR=2.6						
WMQ	Urumqi	11.50	61	eP	Pn	15 56 14.6	+8.3
KURBB	Kurchatov Arra	12.02	15	Pn	Pn	15 56 12.4	-0.8
	0.0nm,0.3s,baz=204,slow=12,SNR=3.6						
AKTO	Aktyubinsk	15.86	321	Pn	Pn	15 57 01.6	-3.7
	0.1nm,0.3s,baz=173,slow=8.1,SNR=2.1						
ZALV	Zalesovo Beam	16.67	23	Pn	Pn	15 57 16.7	+1.1
	0.2nm,0.3s,baz=212,slow=13,SNR=6.2						
SONM	Songino Array	25.12	59	P	P	15 58 51.5	+4.2
	0.5nm,0.8s,baz=243,slow=9.5,SNR=3.1						
FINES	FINESS Array B	36.61	323	P	P	16 00 27.5	-0.8
	4.3nm,1.0s,baz=104,slow=8.7,SNR=4.1						
NOA	NORSAR Array B	43.65	321	P	P	16 01 26.3	-0.6
	0.3nm,0.4s,baz=110,slow=7.6,SNR=1.8						
TORD	Torodi Ar. Bea	67.92	269	P	P	16 04 17.7	-3.8
	0.2nm,0.5s,baz=51,slow=4.6,SNR=1.9						
WRA	Warramunga Arr	81.59	124	P	P	16 05 41.6	+1.0
	0.4nm,0.6s,baz=324,slow=4.7,SNR=7.8						
ASAR	Alice Springs	84.03	127	P	P	16 05 53.7	+0.5
	0.2nm,0.8s,baz=314,slow=5.0,SNR=1.8						

*ROM **07** 16:08:22.9±0.5, 42.°38N±0.°04×15.°15E±0.°03, h10^{km}, ML2.6/7, Error ellipse: s-maj=4.7km s-min=1.5km az=28.0*

ISC 07 16:08:24.2±1.2, **42.°29N**±0.°03×**15.°17E**±0.°03, **h35**^{km}±4^{km}, **n38**, σ**1^{s}61**/55, **1C, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TREM	Isole Tremiti	0.30	124	P	Pb	16 08 31.0	-1.1
FRES	Fresagrandinar	0.49	229	P	Pb	16 08 32.5	-2.3
FRES				AML	AML		
	comp=E,102µm,0.7s						
FRES				AML	AML		
	comp=N,66µm,0.6s						
FRES				AML	AML		
	comp=N,66µm,1.0s						
FRES				AML	AML		
	comp=E,102µm,0.7s						
CIGN	Sant’Elia a Pi	0.67	197	P	Pb	16 08 37.5	-0.2
SGRT	San Giovanni R	0.69	141	P	Pb	16 08 36.5	-1.4
SGRT				S	Sn	16 08 49.1	+2.0
SGRT				AML	AML		
	comp=E,1150µm,0.5s						
SGRT				AML	AML		
	comp=N,676µm,1.2s						
TRIV	Trivento	0.70	221	P	Pb	16 08 37.6	-0.5
LPEL	Lama dei Pelig	0.77	252	P	Pb	16 08 37.4	-2.0
LPEL				AML	AML		
	comp=E,248µm,0.2s						
LPEL				AML	AML		
	comp=N,268µm,0.9s						
MSAG	Monte S. Angel	0.80	136	P	Pb	16 08 38.7	-1.1
MSAG				S	Sn	16 08 51.7	+1.8
MSAG				AML	AML		
	comp=N,2360µm,0.3s						
MSAG				AML	AML		
	comp=E,1340µm,0.4s						
MSAG				AML	AML		
	comp=E,1470µm,0.4s						
MSAG				AML	AML		
	comp=N,2365µm,0.3s						
MSAG				AML	AML		
	comp=N,2390µm,0.3s						
GATE	Gambatesa	0.80	194	P	Pn	16 08 40.4	+1.3
VCEL	Villa Celiera	0.99	276	P	Pn	16 08 42.0	+0.2
T0110	Collepietro	1.03	267	P	Pb	16 08 41.8	-2.0
T0110				AML	AML		
	comp=E,214µm,1.3s						
T0110				AML	AML		
	comp=N,220µm,1.3s						
VAGA	Valle Agricola	1.12	219	P	Pb	16 08 44.9	-0.4
VAGA				AML	AML		
	comp=N,138µm,0.4s						
VAGA				AML	AML		
	comp=E,106µm,0.6s						
TERO	Teramo	1.21	286	P	Pn	16 08 44.8	+0.1
HVAR	Hvar	1.29	46	ePn	Pn	16 08 45.6	-0.2
HVAR				Sg	Sn	16 09 02.3	+0.5
LSTV	Lastovo	1.36	69	ePn	Pn	16 08 47.0	+0.3
LSTV				Sn	Sb	16 09 05.4	-0.8
ZIRJ	Zirje	1.40	14	ePn	Pn	16 08 46.0	-1.3
ZIRJ				Sn	Sn	16 09 04.5	-0.2
MORI	Morici	1.62	14	i Pn	Pn	16 08 49.6	-0.7
MORI				Sn	Sn	16 09 10.1	+0.1
MAKA	Makarska	1.69	53	ePn	Pn	16 08 50.6	-0.6
MAKA				Sn	Sn	16 09 11.8	+0.2
DUGI	Dugi Otok	1.70	357	ePn	Pn	16 08 51.1	-0.3
DUGI				Sn	Sn	16 09 12.1	+0.2
AMUR	Altamura	1.75	142	⇑P	Pn	16 08 53.4	+1.2
AMUR				S	Sb	16 09 17.2	-0.3
AMUR				AML	AML		
	comp=N,153µm,0.6s						
AMUR				AML	AML		
	comp=E,90µm,0.4s						
RICI	Ricice	1.88	50	ePn	Pn	16 08 53.2	-0.6
RICI				Sn	Sn	16 09 17.8	+1.5
STON	Ston	1.96	72	ePn	Pn	16 08 55.8	+0.9
STON				Sn	Sn	16 09 19.5	+1.3
AG11	Viggiano (PZ)	2.05	163	S	Sn	16 09 17.0	-3.6
DBRK	Dubrovnik	2.23	79	ePn	Pn	16 09 00.4	+1.6
DBRK				Sn	Sn	16 09 26.8	+1.7
UDBI	Udbina	2.27	11	ePn	Pn	16 08 59.6	+0.3
UDBI				Sn	Sn	16 09 25.9	-0.3
NVLJ	Novalja	2.28	355	ePn	Pn	16 08 58.6	-0.8
NVLJ				Sn	Sn	16 09 25.5	-0.7
PE3	Peglio	2.41	306	P	Pn	16 09 02.6	+1.4
PE3				S	Sb	16 09 43.0	+6.7
RABC	Rab	2.47	354	ePn	Pn	16 09 01.6	-0.4
RABC				Sn	Sn	16 09 30.1	-0.8
BRJN	Brijuni	2.81	339	ePn	Pn	16 09 05.9	-0.7
BRJN				Sn	Sn	16 09 38.4	-0.8
SMRN	Sveta Marina	2.84	345	ePn	Pn	16 09 06.0	-1.0
SMRN				Sn	Sn	16 09 39.1	-0.9
BRSN	Barisano	3.01	312	S	Sb	16 09 56.0	+2.6
SPS2	Spezzano della	3.12	163	P	Pn	16 09 15.0	+3.9
OZLJ	Ozalj	3.33	4	ePn	Pn	16 09 13.3	-0.4
OZLJ				Sn	Sn	16 09 50.9	-1.1
MOSL	Moslavina	3.51	18	ePn	Pn	16 09 16.0	-0.3
MOSL				Sn	Sn	16 09 55.6	-1.0
VLO	Vlora	3.73	118	S	Sn	16 10 01.0	-1.0
MCSR	Castroreale	4.23	179	S	Sn	16 10 12.0	-2.4
PLLN	Pollina	4.37	191	S	Sn	16 10 15.0	-2.9
ZONE	Zone	5.03	315	P	Pb	16 09 44.4	-7.1
CAPR	Capriolo	5.04	313	P	Pn	16 09 42.2	+4.9

*HEL **07** 16:09:35.8±0.0, 67.°19N×20.°66E, h1^{km}, ML2.0, ML2.6(UPP), Confirmed Induced event*

*IDC **07** 16:09:36.0±1.0, 67.°12N×21.°00E, h0^{km}, mb1 3.1/4, mb1mx2.9/46, mbtmp3.1/4, ML2.3/4, Error ellipse: s-maj=16.6km s-min=8.0km az=113.0*

ISC 07 16:09:33.8±0.8, **67.°16N**±0.°03×**20.°70E**±0.°03, **h0**^{km}, **n25**, σ**0^{s}97**/36, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.59	59	i P	Pb	16 09 46.5	-0.5
MASU				i S	Sb	16 09 54.5	-1.3
RATU	Laukkuluspa	0.79	328	i P	Pg	16 09 49.4	+0.4
ERTU	Ertsjaerv	0.85	135	eP	Pb	16 09 51.3	0.0
ERTU				eS	Sb	16 10 03.0	-0.2
SALU	Saltoluokta	0.88	286	i P	Pb	16 09 51.4	-0.6
PAJU	Pajala	0.96	97	eP	Pb	16 09 53.2	0.0
NIKU	Nikkaluokta	0.96	319	eP	Pg	16 09 52.4	+0.3
HARU	Harads	1.00	174	eP	Pb	16 09 54.2	+0.2
LANU	Lannavaara	1.02	28	eP	Pb	16 09 53.8	-0.6
KLF	Kolari	1.28	85	eP	Pn	16 09 58.7	-0.1
KLF				eS	Sn	16 10 16.3	-0.3
KALU	Kalix	1.68	139	eP	Pg	16 10 06.2	+0.2
HEF	Hetta	1.69	41	eP	Pb	16 10 05.3	-0.4
HEF	Hetta	1.69	41	eP	Pb	16 10 05.4	-0.3
HEF				eS	Sb	16 10 27.1	-0.3
HEF				MSG		16 10 30.9	
	comp=Z,12nm,0.2s						
SJUU	Sjulsmark	1.70	167	eP	Pg	16 10 06.4	+0.2
TOF	Tornio	1.81	125	ePN	Pg	16 10 08.4	0.0
TOF				eSG	Sg	16 10 32.4	+0.6
TOF				MSG		16 10 34.8	
	comp=Z,16nm,0.2s						
KIF	Kilpisjarvi	1.86	1	eP	Pb	16 10 08.0	-0.5
KIF	Kilpisjarvi	1.86	1	eP	Pb	16 10 08.4	-0.1
KIF				eSN	Sg	16 10 33.0	-0.4
KIF				MSG		16 10 35.8	
	comp=Z,12nm,0.1s						
RNF	Rovaniemi	2.17	102	ePB	Pb	16 10 13.8	-0.1
STEI	Steigen	2.23	293	ePG	Pb	16 10 15.1	+0.1
STEI				eSG	Sg	16 10 44.5	-1.0
SGF	Sodankyl	2.28	80	eP	Pb	16 10 14.9	-0.9
SGF				eSG	Sg	16 10 45.8	-1.1
SGF				MSG		16 10 47.7	
	comp=Z,4.3nm,0.2s						
TRO	Tromso	2.57	346	ePB	Pb	16 10 20.5	-0.2
BURU	Burvik	2.60	174	eP	Pb	16 10 19.7	-1.5
ARCES	ARCESS Array B	2.98	35	Pn	Pn	16 10 24.1	+1.9
	baz=216,slow=13,SNR=64						
ARCES				Sn	Sn	16 11 00.2	+1.5
	baz=213,slow=26,SNR=8.5						
FINES	FINESS Array B	6.19	155	Pn	Pn	16 11 09.1	+2.7
	comp=Z,0.3nm,0.3s,baz=345,slow=13,SNR=12						
FINES				Sn	Sn	16 12 16.4	-1.3
	comp=Z,0.2nm,0.3s,baz=347,slow=22,SNR=1.8						
FINES				Lg	Lg	16 12 46.2	
	comp=Z,0.3nm,0.3s,baz=347,slow=24,SNR=2.0						
NOA	NORSAR Array B	7.40	218	Pn	Pn	16 11 24.0	+1.0
	comp=Z,0.0nm,0.3s,baz=28,slow=11,SNR=1.8						
NOA				Lg	Lg	16 13 27.4	
	comp=Z,0.0nm,0.3s,baz=43,slow=21,SNR=2.2						
HFS	Hagfors	7.70	207	Pn	Pn	16 11 27.6	+0.5
	comp=Z,0.3nm,0.3s,baz=21,slow=13,SNR=7.9						
HFS				Sn	Sn	16 12 52.6	-2.2
	comp=Z,0.3nm,0.3s,baz=31,slow=21,SNR=5.3						

*ROM **07** 16:19:58.7±0.3, 42.°09N±0.°02×16.°72E±0.°02, h10^{km}, ML2.8/9, Error ellipse: s-maj=2.2km s-min=1.8km az=331.0*

*BEO **07** 16:20:02.7±1.0, 42.°07N×16.°93E, h0^{km}, ML2.2/6*

ISC 07 16:19:57.7±1.0, **42.°09N**±0.°02×**16.°73E**±0.°02, **h16**^{km}±9^{km}, **n64**, σ**1^{s}25**/68, **Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSTV	Lastovo	0.69	10	ePg	Pn	16 20 13.3	+0.6
LSTV				Sg	Sb	16 20 22.4	+1.8
MSAG	Monte S. Angel	0.72	239	P	Pg	16 20 12.4	+0.5
MSAG				S	Sg	16 20 22.9	+1.5
MSAG				AML	AML		
	comp=E,1250µm,0.7s						
MSAG				AML	AML		
	comp=N,2290µm,0.2s						
MSAG				AML	AML		
	comp=E,1255µm,0.7s						
MSAG				AML	AML		
	comp=N,2365µm,0.2s						
MSAG				AML	AML		
	comp=E,1375µm,0.7s						
SGRT	San Giovanni R	0.81	246	P	Pg	16 20 13.4	-0.2
SGRT				S	Sg	16 20 24.4	+0.2
SGRT				AML	AML		
	comp=E,1450µm,0.5s						
SGRT				AML	AML		
	comp=N,1560µm,0.3s						
STON	Ston	1.06	42	ePn	Pn	16 20 19.0	+1.1
STON	Ston	1.06	42	ePn	Pn	16 20 19.9	+2.0
STON				Sn	Sn	16 20 34.3	+2.1
STON	Ston	1.06	42	P	Pn	16 20 19.3	+1.5
STON				AML	AML		
	comp=E,104µm,0.2s						
STON				AML	AML		
	comp=N,117µm,0.2s						
STON				AML	AML		
	comp=E,104µm,0.2s						
STON	Ston	1.06	42	ePg	Pn	16 20 19.8	+1.9
STON				eSg	Sn	16 20 34.3	+2.1
MRVN	Minervino Murg	1.10	202	P	Pn	16 20 19.4	+0.9
MRVN				S	Sn	16 20 34.7	+1.3
MRVN				AML	AML		
	comp=E,219µm,0.7s						
MRVN				AML	AML		
	comp=N,212µm,1.3s						
HVAR	Hvar	1.11	349	ePn	Pb	16 20 18.9	+0.5
HVAR				Sn	Sb	16 20 33.1	+0.4
CAPA	Cerignola FG	1.16	217	P	Pb	16 20 19.6	+0.3
CAPA				AML	AML		
	comp=E,352µm,1.6s						
CAPA				AML	AML		
	comp=N,298µm,0.8s						
AMUR	Altamura	1.19	185	P	Pn	16 20 19.7	+0.1
AMUR				AML	AML		
	comp=E,319µm,0.2s						
AMUR				AML	AML		
	comp=N,286µm,0.8s						
DBRK	Dubrovnik	1.20	61	ePn	Pn	16 20 21.1	+1.3
DBRK				Sn	Sn	16 20 38.6	+2.9
MAKA	Makarska	1.22	10	ePn	Pg	16 20 21.6	+0.4
MAKA				Sn	Sn	16 20 37.8	+1.6
PALZ	Palazzo San Ge	1.28	207	P	Pb	16 20 21.8	+0.3
PALZ				S	Sg	16 20 40.2	+1.0
PALZ				AML	AML		
	comp=N,270µm,1.1s						
PALZ				AML	AML		
	comp=E,270µm,1.0s						
NOCI	Noci	1.32	169	P	Pg	16 20 22.1	-1.1
NOCI				AML	AML		
	comp=N,453µm,0.3s						
NOCI				AML	AML		
	comp=E,364µm,1.3s						
TREB	Trebinje	1.35	62	ePn	Pg	16 20 23.8	0.0
TREB	Trebinje	1.35	62	ePg	Pg	16 20 24.2	+0.4
TREB				eSg	Sg	16 20 42.0	+0.6
HCY	Herceg Novi	1.35	74	ePn	Pg	16 20 23.5	-0.3
VULT	Monte Vulture	1.41	217	AML	AML		
	comp=E,287µm,0.8s						
VULT				AML	AML		
	comp=N,378µm,1.2s						
ACER	Acerenza	1.43	205	AML	AML		
	comp=E,454µm,0.9s						
ACER				AML	AML		
	comp=E,454µm,0.9s						
ACER				AML	AML		
	comp=E,438µm,0.9s						
ACER				AML	AML		
	comp=N,374µm,0.6s						
ACER				AML	AML		
	comp=N,374µm,0.6s						
ACER				AML	AML		
	comp=N,322µm,0.6s						
RICI	Ricice	1.44	12	ePn	Pb	16 20 24.4	+0.3
RICI				Sn	Sn	16 20 42.5	+0.9
MATE	Matera	1.44	181	P	Pg	16 20 24.8	-0.6
MATE				S	Sg	16 20 44.7	+0.6
MATE				AML	AML		
	comp=E,296µm,0.6s						
MATE				AML	AML		
	comp=N,284µm,1.6s						
MIGL	Miglionico	1.50	189	AML	AML		
	comp=E,648µm,0.6s						
MIGL				AML	AML		
	comp=N,832µm,0.5s						
MIGL				AML	AML		
	comp=N,831µm,0.5s						
BRY	Bratogost	1.56	58	ePn	Pg	16 20 27.0	-0.8
MRLC	Muro Lucano	1.63	215	AML	AML		
	comp=N,130µm,0.5s						
MRLC				AML	AML		
	comp=E,110µm,0.4s						
SNAL	S. Angelo Dei	1.63	225	AML	AML		
	comp=N,152µm,1.0s						
SNAL				AML	AML		
	comp=E,136µm,0.4s						
SACR	S. Croce Del S	1.67	246	AML	AML		
	comp=N,79µm,1.4s						
SACR				AML	AML		
	comp=E,99µm,0.7s						
SACR				AML	AML		
	comp=N,79µm,1.4s						
ZIRJ	Zirje	1.76	333	ePn	Pn	16 20 27.5	0.0
ZIRJ				Sn	Sn	16 20 48.5	-1.0
DRME	Dracevica, Mon	1.83	86	ePn	Pg	16 20 30.8	-2.0
SGG	Gregorio Mates	1.90	249	AML	AML		
	comp=N,90µm,0.4s						
SGG				AML	AML		
	comp=E,90µm,0.5s						
LPEL	Lama dei Pelig	1.90	270	AML	AML		
	comp=E,154µm,0.3s						
LPEL				AML	AML		
	comp=N,117µm,0.3s						
PDG	Podgorica	1.90	79	ePn	Pg	16 20 32.6	-1.7
PDG	Podgorica	1.90	79	ePg	Pg	16 20 35.0	+0.7
PDG				eSg	Sg	16 20 58.3	-0.7
MORI	Morici	1.93	337	ePn	Pn	16 20 30.3	+0.5
MORI				Sn	Sn	16 20 52.9	-0.9
UPM	Unac-Piva	1.95	54	ePn	Pg	16 20 34.9	-0.3
CMPR	Campora	2.07	212	AML	AML		
	comp=N,43µm,1.2s						
CMPR				AML	AML		
	comp=E,49µm,0.4s						
PIGN	Pignataro Magg	2.11	246	AML	AML		
	comp=N,53µm,0.6s						
PIGN				AML	AML		
	comp=E,45µm,0.8s						
MGR	Morigerati	2.14	205	AML	AML		
	comp=E,43µm,1.4s						
MGR				AML	AML		
	comp=N,59µm,0.4s						
T0110	Collepietro	2.20	275	AML	AML		
	comp=N,109µm,0.3s						
T0110				AML	AML		
	comp=E,140µm,0.4s						
DUGI	Dugi Otok	2.26	328	ePn	Pn	16 20 34.5	0.0
DUGI				Sn	Sn	16 21 00.2	-1.8
MODR	Mondragone	2.34	247	AML	AML		
	comp=E,44µm,0.9s						
MODR				AML	AML		
	comp=N,56µm,0.7s						
MGRS	Mrkonjic Grad	2.34	6	ePn	Pb	16 20 40.2	+0.7
SCTE	Santa Cesarea	2.40	146	P	Pb	16 20 37.9	-2.7
RUDO	Rudo	2.47	51	ePn	Pg	16 20 42.5	-2.6
UDBI	Udbina	2.54	344	ePn	Pn	16 20 39.4	+1.1
UDBI				Sn	Sn	16 21 08.5	-0.4
SMA1	SAN MARTINO	2.58	283	AML	AML		
	comp=E,240µm,0.3s						
SMA1				AML	AML		
	comp=N,136µm,0.3s						
VLO	Vlora	2.64	127	AML	AML		
	comp=N,870µm,0.2s						
VLO				AML	AML		
	comp=E,508µm,0.4s						
BBLS	Lazići	2.65	47	ePn	Pb	16 20 44.8	+0.1
BBLS	Lazići	2.65	47	ePn	Pg	16 20 46.2	-2.3
BBLS				eSn	Sb	16 21 16.6	-0.4
SJES	Sjenica	2.66	63	ePn	Pb	16 20 44.8	-0.2
SJES				eSn	Sb	16 21 18.2	+0.7
BLY	Banja Luka	2.68	7	ePn	Pb	16 20 44.6	-0.7
LNSS	Leonessa	2.79	282	AML	AML		
	comp=E,138µm,0.2s						
LNSS				AML	AML		
	comp=N,147µm,0.4s						
NVLJ	Novalja	2.82	332	ePn	Pn	16 20 42.9	+0.9
NVLJ				Sn	Sn	16 21 15.2	-0.5
EL6	Elcito	2.95	296	AML	AML		
	comp=E,75µm,1.6s						
EL6				AML	AML		
	comp=N,106µm,1.6s						
RABC	Rab	3.02	333	ePn	Pn	16 20 45.3	+0.5
RABC				Sn	Sn	16 21 19.8	-0.7
DIVS	Divibare	3.12	49	ePn	Pb	16 20 51.9	-0.9
DIVS	Divibare	3.12	49	ePn	Pb	16 20 51.6	-1.2
DIVS				eSn	Sb	16 21 28.9	-1.7
ASSB	Assisi San Ben	3.16	289	AML	AML		
	comp=E,23µm,1.4s						
ASSB				AML	AML		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=N,24µm,1.5s						
SSFR	Montelago di S	3.21	296	AML	AML		
	comp=E,42µm,0.2s						
SSFR				AML	AML		
	comp=N,44µm,0.3s						
SMRN	Sveta Marina	3.49	328	*e*Pn	Pn	16 20 51.4	+0.1
SMRN				Sn	Sn	16 21 30.6	-1.6
APEC	Apecchio	3.50	296	AML	AML		
	comp=E,67µm,1.5s						
APEC				AML	AML		
	comp=N,102µm,1.0s						
BRJN	Brijuni	3.55	323	*e*Pn	Pn	16 20 52.0	-0.2
BRJN				Sn	Sn	16 21 31.7	-2.1
CPGN	Carpegna, Ital	3.66	299	AML	AML		
	comp=N,340µm,1.6s						
CPGN				AML	AML		
	comp=E,2020µm,1.6s						
CPGN				AML	AML		
	comp=N,2418µm,1.6s						
CPGN				AML	AML		
	comp=E,205µm,1.6s						
CRES	Cresnjev	3.85	347	*e*Pn	Pb	16 21 03.4	-1.8

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*AEIC **07** 16:22:09±1.4, 51°.9N±0°.2×175°.30W±0°.08, h72^{km}±5^{km}, Error ellipse: s-maj=22.4km s-min=5.3km az=168.0*

NEIC 07 16:22:09.5±0.8**, 52°.0N**±0°.2×**175°.31W**±0°.08**, h77**^{km}±7^{km}**, mb3.6**/12**, ML3.4**(AEIC)**, Error ellipse: s-maj=26.8km s-min=2.1km az=164.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSIG	Igitkin Island	0.38	273		Pn	16 22 22.1	+0.1
GSMY	Great Sitkin M	0.47	280		Pn	16 22 22.7	0.0
GSTR	Great Sitkin T	0.48	286		Pn	16 22 22.8	0.0
GSTD	Great Sitkin T	0.52	280		Pn	16 22 23.3	+0.1
ETKA	Kagalaska Isla	0.69	262		Pn	16 22 25.1	+0.3
ATKA	Atka Island	0.73	71		Pn	16 22 25.0	-0.2
KOKL	Mount Kliuchef	0.77	62		Pn	16 22 26.0	+0.2
KOFP	Korovin Flat P	0.81	67		Pn	16 22 26.3	+0.1
ADK	Adak	0.85	265		Pn	16 22 26.4	-0.1
ADK	Adak	0.85	265	Sn	Sn	16 22 39.3	-0.1
KIWB	Kanaga Island	1.15	265	Pn	Pn	16 22 29.9	-0.2
KIKV	Kanaga Island	1.16	266		Pn	16 22 30.5	+0.3
KIMD	Kanaga Island	1.21	261		Pn	16 22 31.0	+0.1
TASE	Tanaga Southea	1.69	267		Pn	16 22 37.1	-0.1
AMKA	Amchitka	3.41	262	Pn	Pn	16 22 59.9	-0.3
OKTU	Okmok Mt. Tuli	4.65	69		Pn	16 23 18.0	+0.9
MAPS	Pakushin South	5.39	67		Pn	16 23 29.0	+1.8
UNV	Unalaska Valle	5.65	67	Pn	Pn	16 23 31.0	+0.2
BRLK	Bradley Lake	15.70	51	Pn	Pn	16 25 44.0	-1.8
MLY	Manley	18.16	34	P	P	16 26 15.6	+0.1
BILL	Bilibino	18.43	338	P	P	16 26 18.1	-0.1
BILL				IAmb	IAmb	16 26 18.6	
	comp=Z,5.8nm,1.4s						
DHY	Denali Highway	18.50	42	P	P	16 26 19.1	-0.2
DHY				IAmb	IAmb	16 26 26.9	
	comp=Z,4.8nm,1.3s						
MDM	Murphy Dome	19.02	36	P	P	16 26 24.4	-0.5
MDM				IAmb	IAmb	16 26 34.1	
	comp=Z,5.9nm,1.3s						
IL31		19.43	38	P	P	16 26 29.5	+0.2
GLB	Gilahina Butte	19.53	49	Pn	Pn	16 26 32.6	+0.2
GLB				IAmb	IAmb	16 26 32.8	
	comp=Z,4.3nm,1.3s						
H24K	Noodor Dome	19.61	34	P	P	16 26 31.0	-0.2
H24K				IAmb	IAmb	16 26 35.7	
	comp=Z,5.1nm,1.4s						
RIDG	Independent Ri	19.80	42	P	P	16 26 32.6	-0.9
DOT	Dot Lake	20.10	42	P	P	16 26 35.2	-1.4
SCRK	Sand Creek	20.25	42	P	P	16 26 36.8	-1.5
TOLK	Toolik Lake Re	20.74	27	P	P	16 26 42.8	-0.7
TOLK				IAmb	IAmb	16 26 46.0	
	comp=Z,3.8nm,1.2s						
BMAR	Burnt Mountain	21.56	32	P	P	16 26 53.0	+0.8
PDAR	Pinedale Array	44.06	75	P	P	16 30 08.3	-1.4

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*BJI **07** 16:22:32.1±0.0, 36°.01N×140°.75E, h50^{km}, mB4.9/31, mb4.5/52, Ms4.7/43, Ms7 4.5/41*

*MOS **07** 16:22:32.1±1.2, 36°.13N×140°.89E, h40^{km}, mb5.0/11, Error ellipse: s-maj=8.6km s-min=5.0km az=93.8*

*NEIC **07** 16:22:35.4±1.2, 36°.15N±0°.06×140°.74E±0°.07, h51^{km}±2^{km}, mb4.7/45, Error ellipse: s-maj=8.9km s-min=7.4km az=133.0*

*JMA **07** 16:22:36.8±0.1, 36°.18N×140°.64E, h53^{km}±1^{km}, M4.4 Broadband fault plane solution: P waves. NP1: ϕ_s71.00000°, δ16.00000°, λ-156.00000°. NP2: ϕ_s319.00000°, δ84.00000°, λ-76.00000°. Principal axes: T Plg37.0000°, Azm36.0000°; N Plg14.0000°, Azm137.0000°; P Plg49.0000°, Azm244.0000°;*

JMA Felt III J1.

*NIED **07** 16:22:36.8, 36°.18N×140°.64E, h53^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.00; $M_{\theta\theta}$2.39; $M_{\phi\phi}$0.61; $M_{r\theta}$2.50; $M_{\theta\phi}$-1.45; $M_{\phi r}$-2.45; Fault plane solution: $M_0$4.68000×10^{15} NP1: ϕ_s311.00000°, δ70.00000°, λ-81.00000°. NP2: ϕ_s107.00000°, δ22.00000°, λ-112.00000°.*

*IDC **07** 16:22:37.1±0.7, 36°.09N×140°.53E, h60^{km}±6^{km}, mb4.1/31, mb1 4.2/35, mb1mx3.9/68, mbtmp4.4/35, MS3.6/3, Ms1 3.6/3, ms1mx3.1/49 Error ellipse: s-maj=12.4km s-min=6.9km az=98.0*

ISC 07 16:22:35.9±0.5**, 36°.16N**±0°.04×**140°.70E**±0°.04**, h56**^{km}±4^{km}**, n220, σ1^{s}41**/232**, mb4.5**/68**, MS4.6**/13**, 18C-13D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.20	332	⇓P	Pn	16 22 45.2	+0.3
JHYU				S	Sn	16 22 51.6	+0.2
JIHU	Itakohorinouch	0.24	217	⇑P	Pn	16 22 46.3	+1.1
JYT	Yasato	0.42	279	⇑P	Pn	16 22 46.9	+0.2
JYT				S	Sn	16 22 54.4	-0.1
JYT	Yasato	0.42	279		Pn	16 22 46.8	+0.2
JYT				Sn	Sn	16 22 53.3	-1.1
JHO	Hitachi	0.46	346	⇓P	Pn	16 22 47.5	+0.3
JHO				S	Sn	16 22 55.5	+0.2
JSMT	Sammumatsuo	0.56	202	⇑P	Pn	16 22 49.5	+1.3
JAG	Ashikaga	1.04	285	⇑P	Pn	16 22 54.7	+0.3
JAG				S	Sn	16 23 07.9	-0.2
JFK	Kawauchi	1.21	6	⇑P	Pn	16 22 56.7	0.0
JFK				S	Sn	16 23 12.2	0.0
JKT	Katashina	1.32	298	⇓P	Pn	16 22 58.9	+0.7
JKT				*e*S	Sn	16 23 15.0	+0.2
JFT	Otama	1.39	348	⇑P	Pn	16 22 59.8	+0.8
JFT				S	Sn	16 23 17.2	+0.8
JRY	Ryogami san	1.47	265	⇑P	Pn	16 23 00.4	+0.3
JRY				S	Sn	16 23 18.5	+0.2
JFY	Yanaizu	1.48	328	P	Pn	16 23 01.1	+0.8
JMM	Marumori	1.71	2		Pn	16 23 04.0	+0.6
MJAR	Matsushiro Arr	2.05	281	P	Pn	16 23 08.6	+0.5
	15nm,0.3s,baz=85,slow=21,SNR=322						
MJAR	Matsushiro Arr	2.05	281		Pn	16 23 08.4	+0.3
MAJO	Matsushiro	2.05	281	*ce*P	Pn	16 23 09.4	+1.3
MAJO	Matsushiro	2.05	281		Pn	16 23 09.3	+1.3
MAT	Matsushiro	2.05	281	P	Pn	16 23 08.8	+0.7
MAT				S	Sn	16 23 33.7	+1.2
MJB9	Matsu-Tunnel	2.05	282		Pn	16 23 09.4	+1.3
JSG	Sagara	2.54	235		Pn	16 23 17.3	+2.6
JSD	Sado	2.71	315		Pn	16 23 17.8	+0.8
JGF	Kuroka	2.77	259	Pn	Pn	16 23 20.1	+2.1
INU	Inuyama	3.11	256	Pn	Pn	16 23 24.0	+1.6
JHJ	Hachijo jima 2	3.13	194	P	Pn	16 23 23.4	+0.6
	95nm,0.3s,baz=114,slow=22,SNR=16						
JHJ				S	Sn	16 23 58.7	-0.2
	298nm,0.3s,baz=100,slow=23,SNR=13						
JHJ				LR	LR	16 24 50.4	
	comp=Z,617nm,21.7s,baz=35,slow=44						
JHJ2	Mitsune	3.13	194	Pn	Pn	16 23 22.8	+0.1
JWT	Wachi	4.40	260	Pn	Pn	16 23 41.9	+1.7
JTM	Tenmabayashi	4.63	3	Pn	Pn	16 23 44.2	+0.9
JMN	Monobe	6.11	249	Pn	Pn	16 24 03.6	0.0
ERM	Erimo	6.15	17	*de*P	Pn	16 24 02.9	-1.2
ERM				pmax	pmax		
	comp=Z,144nm,0.6s						
ERM	Erimo	6.15	17	Pn	Pn	16 24 03.0	-1.2
JEW	Eniwo	6.70	5		Pn	16 24 10.8	-0.9
ASAJ	Asahikawa	8.08	10	P	Pn	16 24 29.1	-1.4
	comp=Z,17nm,0.3s,baz=214,slow=12,SNR=68						
ASAJ				S	Sn	16 25 57.1	-3.3
	comp=Z,3.5nm,0.3s,baz=95,slow=28,SNR=2.2						
ASAJ	Asahikawa	8.08	10	P	Pn	16 24 28.6	-1.9
ASAJ						16 25 57.1	
JKA	Kamikawa-asahi	8.08	10		Pn	16 24 28.6	-2.0
JKA	Kamikawa-asahi	8.08	10		Sn	16 25 57.1	-3.3
NMR	Nemuro--Hokkai	8.17	27	*e*P	Pn	16 24 28.8	-3.0
NMR				*e*S	Sn	16 25 53.6	-9.1
GLVR	Golovnino	8.42	25	*e*P	Pn	16 24 33.3	-1.9
GLVR				*e*S	Sn	16 26 00.6	-8.2
GLVR				pmax	pmax		
	comp=Z,145nm,0.3s						
RUSJ	Misakicho	8.66	22	*e*P	Pn	16 24 36.6	-1.9
RUSJ				*e*S	Sn	16 26 06.5	-8.2
YUK	Yuzh-Kuril'sk	8.80	25	*e*P	Pn	16 24 38.0	-2.4
YUK				*e*S	Sn	16 26 08.9	-9.1
YUK				pmax	pmax		
	comp=Z,233nm,0.3s						
YUK				pmax	pmax		
	comp=N,184nm,0.5s						
YUK				pmax	pmax		
	comp=E,150nm,0.4s						
SHO	Shikotan	9.02	29	*e*P	Pn	16 24 41.2	-2.2
SHO				*e*S	Sn	16 26 14.8	-8.6
SHO				pmax	pmax		
	comp=Z,20nm,0.2s						
SHO				pmax	pmax		
	comp=N,17nm,0.3s						
SHO				pmax	pmax		
	comp=E,16nm,0.2s						
JCJ	Chichijima	9.12	172	P	Pn	16 24 41.9	-3.1
	comp=E,19nm,0.3s,baz=109,slow=21,SNR=26						
JCJ				S	Sn	16 26 16.4	-10
	comp=E,18nm,0.3s,baz=272,slow=22,SNR=8.1						
JCJ	Chichijima	9.12	172	Pn	Pn	16 24 41.7	-3.2
KSRS	Korea Array	10.33	281	P	Pn	16 25 02.9	+1.5
	comp=E,0.4nm,0.3s,baz=90,slow=14,SNR=4.5						
USA0B	Ussuriysk Arra	10.43	323	P	Pn	16 25 03.8	+1.1
USA0B	Ussuriysk Arra	10.43	323		Pn	16 25 03.8	+1.1
USRK	Ussuriysk Ar.	10.43	323	P	Pn	16 25 04.8	+2.1
	baz=136,slow=13,SNR=18						
KUR	Kuril'sk	10.56	29	*e*P	Pn	16 25 06.0	+1.5
KUR				*e*S	Sn	16 26 53.2	-8.0
KUR				smax	smax		
	comp=N,138nm,0.6s						
KUR				smax	smax		
	comp=E,67nm,0.4s						
YSS	Yuzh-Sakhalins	10.89	7	*ce*P	Pn	16 25 08.5	-0.5
YSS				pmax	pmax		
	comp=Z,19nm,0.7s						
YSS	Yuzh-Sakhalins	10.89	7		Pn	16 25 05.8	-3.1
MDJ	Mudanjiang	11.95	318	P	Pn	16 25 23.9	+0.4
MDJ				S	Sn	16 27 31.8	-3.4
MDJ				pmax	pmax		
	comp=Z,120nm,4.4s						
MDJ				LR	LR		
	comp=Z,550nm,8.1s						
MDJ				LR	LR		
	comp=Z,1µm,12.1s						
MDJ				LR	LR		
	comp=Z,1µm,8.1s						
KLR	Kul'dur	14.61	336	P	Pn	16 25 58.8	-0.6
	comp=Z,0.2nm,0.3s,baz=154,slow=9.0,SNR=4.9						
KLR	Kul'dur	14.61	336	⇑*e*P	Pn	16 25 57.7	-1.7
KLR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TYV	Tymovskoe	14.77	5	*e*P	Pn	16 25 59.6	-1.7
TYV				*e*S	Sn	16 28 41.6	-1.9
TYV				pmax	pmax		
	comp=Z,11nm,0.8s						
TYV				pmax	pmax		
	comp=Z,400nm,4.8s						
TYV				smax	smax		
	comp=E,8.0nm,1.7s						
TYV				smax	smax		
	comp=E,400nm,5.1s						
DL2	Dalian	15.38	286	*e*P	P	16 26 12.4	-0.6
DL2				sP	pP	16 26 26.2	+1.0
DL2				S	Sn	16 29 02.3	+3.7
DL2				pmax	pmax		
	comp=E,11nm,0.9s						
DL2				LR	LR		
	comp=E,1µm,15.2s						
DL2				LR	LR		
	comp=E,1µm,13.5s						
DL2				LR	LR		
	comp=E,2µm,16.4s						
NJ2	Nanjing	18.54	264	*e*P	P	16 26 47.3	-0.7
NJ2				pmax	pmax		
	comp=E,10.0nm,0.5s						
NJ2				LR	LR		
	comp=E,1µm,6.9s						
NJ2				LR	LR		
	comp=E,730nm,7.6s						
NJ2				LR	LR		
	comp=E,760nm,9.5s						
TIA	Tai'an	19.03	277	⇑P	P	16 26 52.1	-1.2
TIA				pmax	pmax		
	comp=E,9.0nm,0.8s						
TIA				LR	LR		
	comp=E,1µm,12.1s						
TIA				LR	LR		
	comp=E,1µm,11.5s						
TIA				LR	LR		
	comp=E,1µm,12.6s						
BJI	Beijing	19.67	289	P	P	16 26 58.4	-1.8
BJI				S	S	16 30 27.7	-11
BJI				pmax	pmax		
	comp=E,12nm,1.0s						
BJI				pmax	pmax		
	comp=E,69nm,4.1s						
BJI				LR	LR		
	comp=E,1µm,13.6s						
BJI				LR	LR		
	comp=E,1µm,14.7s						
BJI				LR	LR		
	comp=E,2µm,13.5s						
BJT	Baijiatuau	19.67	289	P	P	16 26 57.9	-2.4
BJT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BJT	Baijiatuau	19.67	289	P	P	16 26 57.9	-2.4
ZEA	Zeya	19.93	336	*e*P	Pn	16 27 08.1	+3.1
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEA				MLR	MLR		
	comp=N,500nm,7.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,7.0s						
HIA	Hailar	20.13	317	⇓*e*P	P	16 27 04.8	-0.5
HIA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PEA0B	Petropavlovsk-	20.73	30	P	P	16 27 09.1	-2.5
PEA0B				pmax	pmax		
	comp=Z,48nm,1.5s						
PEA0B	Petropavlovsk-	20.73	30	P	P	16 27 09.1	-2.5
PEA0B				IAmb	IAmb	16 27 11.7	
	comp=Z,48nm,1.5s						
PETK	Petropavlovsk-	20.73	30	P	P	16 27 13.4	+1.8
	comp=Z,2.9nm,0.8s,baz=201,slow=6.3,SNR=6.0						
PETK	Petropavlovsk-	20.73	30	P	P	16 27 09.1	-2.5
WHN	Wuhan	22.68	263	⇑P	P	16 27 33.8	+1.1
HHC	Hu-ho-hao-te	23.23	290	*e*P	P	16 27 35.0	-3.3
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,4.9s						
HHC				LR	LR		
	comp=Z,900nm,13.4s						
HHC				LR	LR		
	comp=Z,1µm,13.2s						
HHC				LR	LR		
	comp=Z,1µm,12.8s						
BTO	Baotou	24.39	290	*e*P	P	16 27 50.3	+1.2
BTO				S	S	16 32 05.9	+1.0
BTO				LR	LR		
	comp=Z,2µm,11.7s						
BTO				LR	LR		
	comp=Z,3µm,15.9s						
XAN	Xi'an	26.03	275	P	P	16 28 02.8	-1.1
XAN				pmax	pmax		
	comp=Z,9.0nm,1.8s						
XAN				pmax	pmax		
	comp=Z,43nm,3.5s						
XAN				LR	LR		
	comp=Z,2µm,14.2s						
XAN				LR	LR		
	comp=Z,880nm,14.6s						
XAN				LR	LR		
	comp=Z,1µm,15.8s						
ENH	Enshi	26.70	266	P	P	16 28 08.7	-1.3
ENH				IAmb	IAmb	16 28 10.0	
	comp=Z,32nm,1.1s						
YAK	Yakutsk	26.80	348	*e*P	P	16 28 11.8	+1.3
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULN	Ulaanbaatar	27.39	306	⇑*e*P	P	16 28 15.6	-0.5
ULN				pmax	pmax		
	comp=Z,18nm,1.3s						
ULN	Ulaanbaatar	27.39	306	P	P	16 28 15.5	-0.6
ULN				IAmb	IAmb	16 28 18.8	
	comp=Z,10nm,0.8s						
SEY	Seymchan	27.76	11	P	P	16 28 21.5	+2.4
	comp=Z,2.1nm,0.5s,baz=200,slow=14,SNR=6.9						
SEY				LR	LR	16 40 07.3	
	comp=Z,82nm,18.8s,baz=202,slow=38						
SONM	Songino Array	27.81	306	P	P	16 28 19.6	-0.3
	comp=Z,3.5nm,0.7s,baz=109,slow=9.0,SNR=16						
SONM	Songino Array	27.81	306	P	P	16 28 19.6	-0.3
H11N2	WAKE ISLAND Hy	28.21	118	T	T	16 58 05.4	
	baz=312,slow=75,SNR=54						
H11N1	WAKE ISLAND Hy	28.22	118	T	T	16 57 57.1	
	baz=312,slow=75,SNR=95						
H11N3	WAKE ISLAND Hy	28.23	118	T	T	16 57 57.9	
	baz=312,slow=75,SNR=57						
H11S1	WAKE ISLAND Hy	28.89	121	T	T	16 58 45.7	
	baz=314,slow=74,SNR=257						
H11S3	WAKE ISLAND Hy	28.89	121	T	T	16 58 45.8	
	baz=132,slow=74,SNR=141						
H11S2	WAKE ISLAND Hy	28.90	121	T	T	16 58 41.6	
	SNR=166						
LZH	Lanzhou	29.66	281	*e*P	P	16 28 35.4	-1.1
LZH				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LZH				pmax	pmax		
	comp=Z,230nm,5.4s						
LZH				LR	LR		
	comp=Z,980nm,16.3s						
LZH				LR	LR		
	comp=Z,940nm,15.2s						
LZH				LR	LR		
	comp=Z,820nm,15.7s						
GYA	Guiyang	30.52	261	⇓P	P	16 28 42.3	-1.8
GYA				pP	pP	16 28 56.4	-1.7
GYA				S	S	16 33 34.3	-7.5
GYA				sS	sS	16 34 01.3	-4.3
GYA				pmax	pmax		
	comp=Z,12nm,1.1s						
CD2	Chengdu	31.11	271	P	P	16 28 48.1	-1.1
CD2				LR	LR		
	comp=Z,1µm,16.3s						
CD2				LR	LR		
	comp=Z,1µm,12.7s						
CD2				LR	LR		
	comp=Z,1µm,14.5s						
QIZ	Qiongzhong	32.05	246	P	P	16 28 57.6	+0.1
QIZ				S	S	16 34 07.2	+1.6
QIZ				LR	LR		
	comp=Z,740nm,14.7s						
QIZ				LR	LR		
	comp=Z,570nm,11.2s						
QIZ				LR	LR		
	comp=Z,400nm,14.1s						
GTA	Gaotai	32.28	288	*e*P	P	16 28 59.1	-0.4
GTA				S	S	16 34 11.1	+1.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,93nm,5.1s						
GTA				LR	LR		
	comp=Z,670nm,14.9s						
GTA				LR	LR		
	comp=Z,500nm,15.3s						
GTA				LR	LR		
	comp=Z,610nm,15.6s						
KMI	Kunming	34.27	262	⇑P	P	16 29 16.2	-0.8
KMI				sP	pP	16 29 33.6	+2.4
KMI				S	S	16 34 37.7	-2.7
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KMI				LR	LR		
	comp=Z,580nm,12.8s						
KMI				LR	LR		
	comp=Z,420nm,14.4s						
KMI				LR	LR		
	comp=Z,330nm,8.8s						
BILL	Bilibino	35.02	16	*i* P	P	16 29 19.9	-2.9
BILL				*i*		16 30 39.3	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
FAKI	Fak Fak	39.67	193	P	P	16 30 02.6	-0.1
FAKI				IAmb	IAmb	16 30 04.3	
	comp=Z,12nm,0.9s						
DGZ	Jazzator, Alta	40.45	307	*de*P	P	16 30 09.9	+0.9
DGZ				pmax	pmax		
	comp=Z,16nm,0.7s						
CMAR	Chiang Mai Arr	40.73	256	P	P	16 30 11.8	+0.4
	comp=Z,0.7nm,0.6s,baz=45,slow=8.6,SNR=6.3						
WMQ	Urumqi	40.73	298	*e*P	P	16 30 12.5	+1.2
WMQ				pP	pP	16 30 26.0	+0.3
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,240nm,6.1s						
WMQ				LR	LR		
	comp=Z,650nm,16.5s						
WMQ				LR	LR		
	comp=Z,300nm,16.3s						
ZAA0	Zalesovo Array	42.09	313	P	P	16 30 22.4	+0.2
ZAA0				IAmb	IAmb	16 30 23.9	
	comp=Z,7.8nm,0.8s						
ZALV	Zalesovo Beam	42.09	313	P	P	16 30 22.5	+0.3
	comp=Z,5.9nm,0.6s,baz=91,slow=6.9,SNR=23						
ZALV	Zalesovo Beam	42.09	313	P	P	16 30 22.3	+0.2
ZALV	Zalesovo Beam	42.09	313	P	P	16 30 22.3	+0.2
NRIK	Noril'sk	43.82	336	P	P	16 30 37.1	+1.1
	comp=Z,1.1nm,0.5s,baz=112,slow=9.4,SNR=3.7						
NRIK				pP	pP	16 30 51.0	+0.5
	comp=Z,2.6nm,0.6s,baz=126,slow=8.0,SNR=3.3						
MK31	Makanchi Array	44.10	303	*d i*P	P	16 30 38.7	+0.1
MK31	Makanchi Array	44.10	303	P	P	16 30 37.9	-0.7
MK31				IAmb	IAmb	16 30 39.9	
	comp=Z,9.0nm,0.8s						
MKAR	Makanchi Array	44.10	303	P	P	16 30 38.5	-0.1
	comp=Z,6.6nm,0.7s,baz=233,slow=12,SNR=12						
MKAR	Makanchi Array	44.10	303		P	16 30 38.3	-0.3
MAKZ	Makanchi	44.31	303	P	P	16 30 40.0	-0.3
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAKZ	Makanchi	44.31	303	P	P	16 30 40.0	-0.3
MAKZ				IAmb	IAmb	16 30 41.8	
	comp=Z,10nm,0.8s						
KSM	Kuching	44.54	226	P	P	16 30 41.5	-0.8
KSM				IAmb	IAmb	16 30 43.3	
	comp=Z,15nm,1.2s						
KAPI	Kappang	45.42	210	P	P	16 30 48.6	-0.6
	comp=Z,4.6nm,0.7s,baz=296,slow=11,SNR=7.8						
KAPI	Kappang	45.42	210	P	P	16 30 48.8	-0.5
KAPI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KAPI	Kappang	45.42	210	P	P	16 30 48.8	-0.5
KAPI				IAmb	IAmb	16 30 50.6	
	comp=Z,8.3nm,0.9s						
KURK	Kurchatov	46.03	309	*de*P	P	16 30 53.4	-0.3
KURK				pmax	pmax		
	comp=Z,29nm,1.0s						
KURK	Kurchatov	46.03	309	P	P	16 30 53.5	-0.3
KURBB	Kurchatov Arra	46.09	309	P	P	16 30 54.1	-0.1
	comp=Z,9.5nm,0.6s,baz=84,slow=8.0,SNR=93						
PKI	Pulchoki	47.20	276	*e*P	P	16 31 02.4	-1.2
	comp=Z,9.7nm,0.4s						
PKIN	Phulchoki	47.20	276	*e*P	P	16 31 02.5	-1.1
KKN	Kakani	47.21	276	*e*P	P	16 31 00.7	-2.9
GKN	Gorkha	47.64	277	*e*P	P	16 30 55.6	-11
IPM	Ipoh	48.20	239	P	P	16 31 09.9	-1.2
IPM				IAmb	IAmb	16 31 31.5	
	comp=Z,8.1nm,0.9s						
SOEI	Soe	48.22	202	P	P	16 31 10.1	-1.2
BATI	Baumata	48.84	203	P	P	16 31 14.2	-1.7
	comp=Z,38nm,1.1s,baz=204,slow=3.4,SNR=9.2						
BRLK	Bradley Lake	48.90	39	P	P	16 31 14.9	-1.0

PWL	Port Wells	50.10	37	P	P	16 31 24.8	-0.2
PWL				IAmb	IAmb	16 31 45.7	
	comp=Z,19nm,1.3s						
ILAR	Eielson Array	50.54	32	P	P	16 31 29.9	+1.7
	comp=Z,1.8nm,0.7s,baz=267,slow=5.6,SNR=15						
ILAR				pP	pP	16 31 45.2	+2.2
	comp=Z,2.6nm,0.6s,baz=270,slow=6.1,SNR=8.2						
KNRA	Kununurra	52.78	194	P	P	16 31 45.9	+0.5
LEM	Lembang	52.85	223	P	P	16 31 45.1	-1.1
	comp=Z,15nm,0.5s,baz=322,slow=20,SNR=4.6						
INK	Inuvik	55.42	27	P	P	16 32 06.1	+1.9
	comp=Z,2.4nm,0.7s,baz=302,slow=5.2,SNR=10						
INK				pP	pP	16 32 21.0	+2.0
	comp=Z,3.1nm,0.6s,baz=318,slow=5.0,SNR=8.3						
INK	Inuvik	55.42	27	P	P	16 32 05.7	+1.5
INK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
INK	Inuvik	55.42	27	P	P	16 32 05.7	+1.5
INK				IAmb	IAmb	16 32 22.7	
	comp=Z,3.8nm,0.7s						
FITZ	Fitzroy Crossi	55.81	197	P	P	16 32 07.3	-0.2
	comp=Z,3.5nm,0.8s,baz=0.1,slow=24,SNR=63						
WB0	Warramunga Arr	55.94	187	P	P	16 32 07.7	-0.7
WB0				IAmb	IAmb	16 32 35.8	
	comp=Z,17nm,1.4s						
WRAB	Tennant Creek	56.11	187	*ce*P	P	16 32 09.3	-0.3
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.7s						
WRAB	Tennant Creek	56.11	187	P	P	16 32 08.8	-0.8
WRAB				IAmb	IAmb	16 32 26.6	
	comp=Z,9.8nm,1.2s						
WR0	Warramunga Arr	56.12	187	P	P	16 32 09.2	-0.4
WR0				IAmb	IAmb	16 32 10.4	
	comp=Z,14nm,1.3s						
WB2	Warramunga Arr	56.12	187	P	P	16 32 09.1	-0.6
WB2				IAmb	IAmb	16 32 35.0	
	comp=Z,20nm,1.5s						
WRA	Warramunga Arr	56.12	187	P	P	16 32 09.3	-0.4
	comp=Z,3.6nm,0.9s,baz=1.2,slow=7.6,SNR=27						
WRA	Warramunga Arr	56.12	187	P	P	16 32 09.0	-0.7
WRA	Warramunga Arr	56.12	187	P	P	16 32 08.9	-0.7
ARU	Arti	56.64	319	P	P	16 32 13.4	+0.4
	comp=Z,5.3nm,0.6s,baz=97,slow=4.1,SNR=22						
ARU	Arti	56.64	319	*d i*P	P	16 32 12.7	-0.3
ARU				S	S	16 40 02.3	+1.4
ARU				SS	SS	16 43 49.4	+0.9
ARU				pmax	pmax		
	comp=Z,13nm,0.7s						
ARU				MLR	MLR		
	comp=Z,636nm,17.0s						
ARU	Arti	56.64	319	P	P	16 32 13.0	-0.1
HYB	Hyderabad	57.61	269	*i* P	P	16 32 20.5	0.0
ABKAR	Akbulak array	58.07	310	P	P	16 32 23.2	0.0
ABKAR				IAmb	IAmb	16 32 24.2	
	comp=Z,9.8nm,0.8s						
DLBC	Dease Lake	59.66	38	P	P	16 32 36.9	+2.6
	comp=Z,2.6nm,0.8s,baz=274,slow=9.0,SNR=3.1						
DLBC	Dease Lake	59.66	38	IAmb	IAmb	16 33 04.6	
	comp=Z,8.1nm,1.2s						
AS31	Alice Springs	59.85	187	P	P	16 32 34.9	-0.8
ASAR	Alice Springs	59.85	187	P	P	16 32 36.0	+0.3
	comp=Z,2.4nm,0.8s,baz=8.0,slow=7.0,SNR=21						
ASAR	Alice Springs	59.85	187	P	P	16 32 34.6	-1.1
KIRV	Kirov	60.60	323	P	P	16 32 41.2	+0.7
	comp=Z,17nm,0.5s,baz=84,slow=2.8,SNR=5.7						
EUNU	Eureka	61.13	8	P	P	16 32 43.9	0.0
RES	Resolute Bay	63.59	14	P	P	16 33 01.1	+0.8
	comp=Z,1.0nm,0.5s,baz=291,slow=8.1,SNR=5.1						
RES	Resolute Bay	63.59	14	P	P	16 33 00.2	-0.1
RES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
RES	Resolute Bay	63.59	14	P	P	16 33 00.2	-0.1
GEYT	Alibeck	63.76	299	P	P	16 33 02.0	0.0
	comp=Z,11nm,0.8s,baz=76,slow=12,SNR=4.3						
GEYT	Alibeck	63.76	299	IAmb	IAmb	16 33 05.6	
	comp=Z,18nm,1.1s						
ARCES	ARCESS Array B	64.61	339	P	P	16 33 07.7	+0.5
	comp=Z,3.6nm,0.8s,baz=39,slow=7.8,SNR=4.0						
ARCES				LR	LR	17 05 33.2	
	comp=Z,104nm,18.8s,baz=50,slow=40						
YKA	Yellowknife Ar	64.85	30	P	P	16 33 11.6	+2.8
	comp=Z,1.2nm,0.8s,baz=305,slow=6.8,SNR=4.9						
STKA	Stephens Creek	67.69	179	P	P	16 33 27.1	0.0
	comp=Z,1.9nm,0.8s,baz=335,slow=9.4,SNR=4.7						
FIA1	FINESS Array S	69.32	332	P	P	16 33 36.7	-0.4
FINES	FINESS Array B	69.32	332	P	P	16 33 37.5	+0.4
	comp=Z,2.5nm,0.6s,baz=63,slow=5.4,SNR=13						
FINES	FINESS Array B	69.32	332	P	P	16 33 36.9	-0.1
FINES	FINESS Array B	69.32	332	P	P	16 33 36.9	-0.1
KBZ	Khabaz	71.04	311	P	P	16 33 48.5	+0.6
	comp=Z,8.8nm,0.9s,baz=3.9,slow=4.6,SNR=4.5						
KIV	Kislovodsk	71.05	311	*e*P	P	16 33 49.2	+1.1
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KIV				MLR	MLR		
	comp=Z,131nm,17.0s						
KIV	Kislovodsk	71.05	311	P	P	16 33 47.6	-0.5
KIV				IAmb	IAmb	16 33 50.6	
	comp=Z,16nm,0.9s						
GNI	Garni	71.77	307	*de*P	P	16 33 53.6	+1.0
GNI				pmax	pmax		
	comp=Z,19nm,1.3s						
NC405	NORSAR Array S	74.56	337	P	P	16 34 07.3	-1.1
AKASG	Malin Array Be	74.64	322	P	P	16 34 09.0	-0.1
	comp=Z,3.1nm,0.7s,baz=47,slow=6.0,SNR=17						
AKASG	Malin Array Be	74.64	322	P	P	16 34 08.5	-0.6
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
AKASG	Malin Array Be	74.64	322	P	P	16 34 08.5	-0.6
AKBB	Malin Array Si	74.64	322	P	P	16 34 08.7	-0.4
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AKBB	Malin Array Si	74.64	322	P	P	16 34 08.7	-0.4
AKBB				IAmb	IAmb	16 34 09.9	
	comp=Z,6.9nm,0.9s						
NC204	NORSAR Array S	74.73	337	P	P	16 34 09.9	+0.4
NB201	NORSAR Array S	74.74	337	P	P	16 34 08.8	-0.8
NB2	NORSAR Subarra	74.77	337	P	P	16 34 10.4	+0.7
	comp=Z,2.9nm,0.6s,baz=41,slow=5.9						
NOA	NORSAR Array B	74.77	337	P	P	16 34 10.5	+0.7
	comp=Z,4.3nm,0.7s,baz=39,slow=5.8,SNR=15						
NBO00	NORSAR Array S	74.91	337	P	P	16 34 09.6	-0.9
NBO00				IAmb	IAmb	16 34 32.4	
	comp=Z,11nm,1.1s						
NVAR	Mina Array Bea	75.97	53	P	P	16 34 19.6	+2.4
	comp=Z,0.8nm,0.7s,baz=298,slow=3.8,SNR=3.9						
BUR08	Bucovina Ar. S	78.63	321	P	P	16 34 31.2	-0.6
BURAR	Bucovina Array	78.64	321	⇓P	P	16 34 32.7	+0.8
BURAR	Bucovina Array	78.64	321	P	P	16 34 31.9	0.0
BRTR	Keskin Array B	79.00	311	P	P	16 34 33.4	-0.7
BRTR	Keskin Array B	79.00	311	P	P	16 34 33.4	-0.7
TRPA	Tarpa	79.61	323	⇑P	P	16 34 38.3	+1.3
RAYN	Ar Rayn	80.46	292	P	P	16 34 42.0	-0.1
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RAYN	Ar Rayn	80.46	292	P	P	16 34 42.0	-0.1
RAYN				IAmb	IAmb	16 34 43.0	
	comp=Z,5.3nm,0.9s						
MORC	Moravsky Berou	80.78	327	⇑P	P	16 34 44.2	+0.9
MORC	Moravsky Berou	80.78	327	*e*P	P	16 34 44.0	+0.6
DPC	Dobruska-Polom	80.89	328	*e*P	P	16 34 44.9	+0.9
DPC	Dobruska-Polom	80.89	328	*e*P	P	16 34 44.9	+0.9
KRLC	Kraliky	80.89	327	*e*P	P	16 34 45.0	+1.0
KRLC	Kraliky	80.89	327	*e*P	P	16 34 45.0	+1.0
JAVC	Velka Javorina	81.39	326	*e*P	P	16 34 48.7	+2.1
CLL	Collm	81.57	330	*i* P	P	16 34 47.5	+0.1
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CLL	Collm	81.57	330	*i* P	P	16 34 47.5	+0.1
	comp=Z,7.0nm,0.8s						
KRUC	Moravsky	81.81	327	*e*P	P	16 34 49.6	+0.8
PRU	Pruhonice	81.92	328	*e*P	P	16 34 50.4	+1.0
PRU	Pruhonice	81.92	328	*e*P	P	16 34 50.4	+1.0
CKRC	Cesky Krumlov	82.91	328	*e*P	P	16 34 56.3	+1.7
KHC	Kasperske Hory	82.98	328	*e*P	P	16 34 55.9	+0.9
KHC	Kasperske Hory	82.98	328	⇑*i*P	P	16 34 55.8	+0.8
KHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VTS	Vitosha	83.06	319	P	P	16 34 57.0	+1.3
VTS				pmax	pmax		
	comp=Z,5.0nm,1.2s						
VTS	Vitosha	83.06	319	IAmb	IAmb	16 35 01.4	
	comp=Z,5.2nm,1.2s						
VTS	Vitosha	83.06	319	P	P	16 34 57.0	+1.3
GERES	GERESS Array B	83.15	328	P	P	16 34 56.2	+0.3
	comp=Z,1.1nm,0.5s,baz=39,slow=5.8,SNR=12						
SOKA	Soboth	84.20	326	*i* P	P	16 35 02.1	+0.8
	comp=Z,6.4nm,0.9s						
PDG	Podgorica	85.28	321	P	P	16 35 06.5	-0.1
RETA	Reutte	85.45	329	*i* P	P	16 35 08.4	+0.9
	comp=Z,4.9nm,0.9s						
BFO	Black Forest	85.78	330	P	P	16 35 09.2	0.0
BFO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BFO	Black Forest	85.78	330	P	P	16 35 09.2	0.0
BFO				IAmb	IAmb	16 35 10.2	
	comp=Z,8.5nm,0.9s						
DAVA	Damuels	85.98	329	*e*P	P	16 35 11.7	+1.4
	comp=Z,7.5nm,0.9s						
AGG	Agios Georgios	86.06	317	P	P	16 35 11.3	+0.6
AGG				pmax	pmax		
	comp=Z,9.0nm,1.3s						
AGG	Agios Georgios	86.06	317	IAmb	IAmb	16 35 29.1	
	comp=Z,9.0nm,1.3s						
AGG	Agios Georgios	86.06	317	P	P	16 35 11.3	+0.6
NRCA	Norcia	88.00	324	P	P	16 35 20.1	0.0
TXAR	Lajitas Array	91.11	52	P	P	16 35 36.7	+1.8
	comp=Z,0.6nm,0.7s,baz=311,slow=3.8,SNR=6.2						
N53A	Lisbon	94.44	30	P	P	16 35 49.1	-0.8
SNAA	Sanae	139.75	197	⇓*i*PKIKP	PKiKP	16 42 00.2	+1.3
SNAA				pmax	pmax		
	comp=Z,7.0nm,1.7s						
H03N2	Juan Fernandez	147.49	97	T	T	19 26 58.6	
	baz=291,slow=76,SNR=29						
H03N3	Juan Fernandez	147.50	97	T	T	19 26 58.6	
	baz=291,slow=76,SNR=37						
H03N1	Juan Fernandez	147.51	97	T	T	19 26 58.6	
	baz=291,slow=76,SNR=36						
LPAZ	La Paz	147.63	60	PKPbc	PKPbc	16 42 16.6	+1.2
	comp=Z,2.2nm,0.7s,baz=318,slow=3.3,SNR=10.0						
PLCA	Paso Flores	155.17	110	PKP	PKPdf	16 42 20.6	-2.1
	comp=Z,2.1nm,0.9s,baz=204,slow=4.4,SNR=3.3						

KMA ***07*** *16:24:13.4, 30°.79N×129°.16E, h15*^{km}

JMA ***07*** *16:24:20.4±0.2, 31°.34N×128°.61E, h6*^{km}*±2*^{km}*, M4.5*

NIED ***07*** *16:24:20.5, 31°.34N×128°.61E, h6*^{km}*, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10*^{15}*Nm;* M_{rr}*-5.15;* $M_{\theta\theta}$*2.36;* $M_{\phi\phi}$*2.79;* $M_{r\theta}$*0.78;* $M_{\theta\phi}$*5.20;* $M_{\phi r}$*4.26; Fault plane solution:* M_0*8.00000×10*^{15} *NP1:* ϕ_s*201.00000°, δ64.00000°, λ-118.00000°. NP2:* ϕ_s*71.00000°, δ37.00000°, λ-46.00000°.*

IDC ***07*** *16:24:22.6±0.6, 31°.30N×128°.74E, h0*^{km}*, mb4.4/22, mb1 4.5/26, mb1mx4.2/73, mbtmp4.4/26, ML3.7/4, MS3.9/5, Ms1 3.9/5, ms1mx3.3/41 Error ellipse: s-maj=19.8km s-min=13.1km az=83.0*

NEIC ***07*** *16:24:24.7±1.2, 31°.34N±0°.08×128°.77E±0°.09, h11*^{km}*±4*^{km}*, mb4.8/54, Error ellipse: s-maj=13.6km s-min=9.4km az=218.0*

ISC 07 16:24:23.5±0.4**, 31°.36N**±0°.04×**128°.70E**±0°.04**, h10**^{km}**, n135,** σ1^{s}**23**/123**, mb4.8**/47**, MS4.1**/4**, 1C, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.93	69	P	Pg	16 24 39.2	-2.1
JSJ				*e*S	Sg	16 24 52.2	-1.2
JFU	Fukue jima 2	1.30	2	P	Pn	16 24 45.0	-2.7
JFU				*e*S	Sn	16 25 02.4	-2.7
JSU	Suzuyama	1.51	84	⇑P	Pb	16 24 49.4	-2.2
JSU	Suzuyama	1.51	84	Pn	Pb	16 24 49.2	-2.4
JNN	Nakanoshima	1.82	146	P	Pn	16 24 52.8	-2.0
JYAK	Yakushimahirau	1.92	125	P	Pn	16 24 54.1	-2.1
JTN	Tanegashima 3	2.08	109	P	Pn	16 24 56.9	-1.5
JTZ	Takazaki	2.11	74	P	Pn	16 24 57.9	-0.9
JMTN	Minamitane	2.12	116	P	Pn	16 24 57.5	-1.5
JNU	Nakatsue	2.55	46	Pn	Pb	16 25 06.4	-3.0
	26nm,0.3s,baz=292,slow=6.3,SNR=24						
JNU	Nakatsue	2.55	46		Pb	16 25 05.6	-3.8
KSSGP	Seogwipo	2.66	316	P	Pn	16 25 04.8	-1.6
	SNR=22						
KSSGP	Seogwipo	2.66	316	P	Pn	16 25 04.8	-1.6
	SNR=22						
KSSGP				S	Sg	16 25 45.5	-3.4
KSJJU	Jeju	2.76	319	P	Pn	16 25 06.3	-1.5
	SNR=18						
KSJJU	Jeju	2.76	319	P	Pn	16 25 06.3	-1.5
	SNR=18						
GOS1	Gosan-ri	2.86	313	P	Pn	16 25 07.7	-1.5
	SNR=10						
GOS1	Gosan-ri	2.86	313	P	Pn	16 25 07.7	-1.5
	SNR=10						
GOS2	Gosang-Q330s	2.87	313	P	Pn	16 25 07.6	-1.7
	SNR=10						
GOS2	Gosang-Q330s	2.87	313	P	Pn	16 25 07.6	-1.7
	SNR=10						
HALB	Hallimjungang-	2.89	315	P	Pn	16 25 08.2	-1.4
	SNR=23						
HALB	Hallimjungang-	2.89	315	P	Pn	16 25 08.2	-1.4
	SNR=23						
GMDB	Geomundo	2.93	336	P	Pn	16 25 09.0	-1.2
	SNR=13						
GMDB	Geomundo	2.93	336	P	Pn	16 25 09.0	-1.2
	SNR=13						
JTU	Tsushima	3.21	10	Pn	Pn	16 25 14.7	+0.7
CJD	Chujado	3.29	323	P	Pn	16 25 13.5	-1.6
	SNR=30						
KOHB	KOHEUNG	3.47	340	P	Pn	16 25 15.9	-1.5
	SNR=19						
BOSB	Boseong-gun	3.62	340	P	Pn	16 25 18.1	-1.5
	SNR=24						
HANB	Haenam	3.66	331	P	Pn	16 25 19.0	-1.1
	SNR=11						
KSJDO	Jindo	3.70	328	P	Pn	16 25 19.9	-0.8
	SNR=21						
GGDB	Gageodo	4.04	313	P	Pn	16 25 24.0	-1.3
	SNR=8.6						
JOW	Kunigami	4.52	185	LR	LR	16 26 55.9	
	comp=Z,292nm,18.4s,baz=80,slow=34						
JMN	Monobe	4.97	60	Pn	Pn	16 25 38.9	+0.7
KSAR	Wonju Array Be	6.11	354		Pn	16 25 54.5	+0.7
KSRS	Korea Array	6.12	354	Pn	Pn	16 25 54.1	+0.2
	3.2nm,0.3s,baz=174,slow=14,SNR=22						
KSRS				Sn	Sn	16 27 04.0	+0.1
	2.2nm,0.3s,baz=185,slow=27,SNR=5.8						
KSRS				Lg	Lg	16 27 31.6	
	3.9nm,0.3s,baz=180,slow=29,SNR=5.3						
KS19	Wonju Array Si	6.17	354		Pn	16 25 55.0	+0.4
INCN	Inchon	6.35	345		Pn	16 25 57.4	+0.3
SSE	Sheshan	6.44	270	Pn	Pn	16 25 57.1	-1.2
SSE				Sn	Sb	16 27 32.2	-0.5
SSE				smax	smax		
	comp=N,310nm,0.9s						
SSE				smax	smax		
	comp=E,180nm,0.9s						
SSE				LR	LR		
	comp=N,2µm,14.5s						
SSE				LR	LR		
	comp=E,750nm,14.5s						
JWT	Wachi	6.84	53	Pn	Pn	16 26 05.1	+1.3
INU	Inuyama	8.02	58	Pn	Pn	16 26 20.1	+0.1
CN2	Changchun	12.69	349	*e*P	Pn	16 27 34.9	+11
CN2				pmax	pmax		
	comp=E,10.0nm,1.1s						
ASAJ	Asahikawa	16.80	37	Pn	P	16 28 20.9	0.0
	comp=E,0.5nm,0.3s,baz=218,slow=9.2,SNR=3.5						
JKA	Kamikawa-asahi	16.80	37	P	P	16 28 20.9	0.0
JKA	Kamikawa-asahi	16.80	37	IAmb	IAmb	16 28 23.9	
	comp=Z,29nm,0.9s						
KLR	Kul'dur	18.00	6	P	P	16 28 36.4	+2.2
	comp=Z,0.1nm,0.3s,baz=230,slow=8.1,SNR=6.9						
HIA	Hailar	19.12	342	P	Pn	16 28 48.5	+1.1
GUMO	Guam	23.10	136	LR	LR	16 37 14.3	
	comp=Z,172nm,19.0s,baz=344,slow=34						
ULN	Ulaanbaatar	23.33	321	P	P	16 29 31.3	-0.6
SONM	Songino Array	23.67	320	P	P	16 29 35.0	-0.2
	comp=Z,6.4nm,0.9s,baz=143,slow=9.5,SNR=4.7						
SONM	Songino Array	23.67	320	P	P	16 29 34.6	-0.6
ZAA0	Zalesovo Array	38.54	319	P	P	16 31 45.5	-0.5
ZALV	Zalesovo Beam	38.54	319	P	P	16 31 45.4	-0.7
NRIK	Noril'sk	44.54	341	P	P	16 32 37.8	+2.7
	comp=Z,16nm,0.9s,baz=123,slow=8.1,SNR=14						
NRIK				LR	LR	16 52 46.0	
	comp=Z,232nm,18.6s,baz=132,slow=38						
KNRA	Kununurra	46.76	180	P	P	16 32 53.0	-0.1
KNRA				IAmb	IAmb	16 32 54.0	
	comp=Z,11nm,0.8s						
BVAR	Borovoye Array	46.83	315	P	P	16 32 56.4	+3.0
	comp=Z,3.8nm,0.6s,baz=144,slow=5.3,SNR=5.7						
BRVK	Borovoye	46.90	315	P	P	16 32 53.4	-0.5
FITZ	Fitzroy Crossi	49.26	184	P	P	16 33 13.2	+0.8
	comp=Z,4.8nm,0.4s,baz=151,slow=0.2,SNR=17						
WRA	Warramunga Arr	51.29	173	P	P	16 33 27.2	-0.6
	comp=Z,2.7nm,0.8s,baz=352,slow=7.9,SNR=5.4						
WRA	Warramunga Arr	51.29	173	IAmb	IAmb	16 33 32.2	
	comp=Z,0.3nm,0.9s						
WR0	Warramunga Arr	51.33	173	P	P	16 33 27.7	-0.4
PSA00	Pilbara Seismi	53.31	190	P	P	16 33 42.8	0.0
PSA00				IAmb	IAmb	16 33 43.3	
	comp=Z,13nm,1.0s						
ABKAR	Akbulak array	53.54	311	P	P	16 33 44.3	+0.1
ARU	Arti	53.70	320	P	P	16 33 45.4	+0.1
	comp=Z,2.5nm,0.5s,baz=90,slow=5.2,SNR=5.6						
ARU	Arti	53.70	320	P	P	16 33 44.8	-0.5
ARU				IAmb	IAmb	16 33 50.2	
	comp=Z,16nm,0.9s						
CTAO	Charters Tower	53.85	159	P	P	16 33 46.7	-0.1
CTAO				IAmb	IAmb	16 33 51.6	
	comp=Z,6.5nm,0.9s						
ASAR	Alice Springs	54.94	174	P	P	16 33 55.3	+0.6
	comp=Z,2.8nm,0.8s,baz=3.5,slow=14,SNR=11						
J20K	Nowinta River	56.72	31	P	P	16 34 08.5	+1.6
J20K				IAmb	IAmb	16 34 14.5	
	comp=Z,17nm,1.3s						
IMAR	Indian Mountai	56.78	29	P	P	16 34 08.5	+1.2
I21K	Tanana	57.57	29	P	P	16 34 14.6	+1.6
I21K				IAmb	IAmb	16 34 19.0	
	comp=Z,9.6nm,1.0s						
PPLA	Purkeypile	57.70	32	P	P	16 34 15.7	+1.5
PPLA				IAmb	IAmb	16 34 37.0	
	comp=Z,17nm,1.2s						
COLD	Coldfoot	58.10	27	P	P	16 34 18.3	+1.6
BPAW	Bear Paw Mtn.	58.10	31	P	P	16 34 17.6	+0.8
MLY	Manley	58.10	30	P	P	16 34 18.2	+1.4
MLY				IAmb	IAmb	16 34 24.1	
	comp=Z,18nm,1.5s						
NEA2	Nenana	58.87	30	P	P	16 34 22.5	+0.4
NEA2				IAmb	IAmb	16 34 29.1	
	comp=Z,13nm,1.2s						
RND	Reindeer	59.14	31	P	P	16 34 24.6	+0.5
MDM	Murphy Dome	59.17	29	P	P	16 34 25.0	+0.8
H24K	Noodor Dome	59.19	28	P	P	16 34 25.8	+1.4
H24K				IAmb	IAmb	16 34 32.1	
	comp=Z,17nm,1.4s						
WRH	Wood River Hil	59.30	30	P	P	16 34 26.3	+1.2
WRH				IAmb	IAmb	16 34 32.6	
	comp=Z,9.6nm,1.4s						
ILAR	Eielson Array	59.77	30	P	P	16 34 28.1	-0.2
	comp=Z,0.6nm,0.8s,baz=280,slow=5.4,SNR=3.8						
ILAR	Eielson Array	59.77	30	P	P	16 34 27.9	-0.4
HDA	Harding Lake	59.80	30	P	P	16 34 29.7	+1.1
HDA				IAmb	IAmb	16 34 34.9	
	comp=Z,16nm,1.3s						
BMAR	Burnt Mountain	60.23	26	P	P	16 34 33.2	+1.7
M26K	Nabesna, AK	61.97	32	P	P	16 34 44.1	+0.7
VRDI	Verde Repeater	62.05	33	P	P	16 34 44.5	+0.4
VRDI				IAmb	IAmb	16 35 01.4	
	comp=Z,7.4nm,1.0s						
L27K	Beaver Creek,	62.32	31	P	P	16 34 46.2	+0.5
L27K				IAmb	IAmb	16 34 53.6	
	comp=Z,11nm,1.4s						
BCAR	Beaver Creek A	62.34	31	P	P	16 34 46.9	+1.1
M27K	Edge Creek, AK	62.48	32	P	P	16 34 47.4	+0.4
BARN	Barnard Glacie	62.93	33	P	P	16 34 50.9	+0.8
BARN				IAmb	IAmb	16 34 54.7	
	comp=Z,16nm,1.4s						
CTGM	Chitina Glacie	63.11	33	P	P	16 34 51.6	+0.4
CTGM				IAmb	IAmb	16 34 56.5	
	comp=Z,6.4nm,0.8s						
INK	Inuvik	64.05	24	P	P	16 34 58.3	+1.3
	comp=Z,2.6nm,0.9s,baz=286,slow=11,SNR=5.3						
INK	Inuvik	64.05	24	IAmb	IAmb	16 35 01.5	
	comp=Z,8.1nm,1.4s						
STKA	Stephens Creek	64.06	168	P	P	16 34 58.1	+0.6
	comp=Z,3.3nm,0.8s,baz=14,slow=8.3,SNR=3.8						
STKA	Stephens Creek	64.06	168	IAmb	IAmb	16 35 02.3	
	comp=Z,2.2nm,1.1s						
HYT	Haines Junctio	64.94	33	P	P	16 35 04.0	+0.9
HYT				IAmb	IAmb	16 35 11.8	
	comp=Z,15nm,1.3s						
A36M	Sachs Harbour	65.26	19	P	P	16 35 06.3	+1.4
ARCES	ARCESS Array B	65.42	338	P	P	16 35 07.3	+1.4
	comp=Z,6.3nm,1.0s,baz=65,slow=9.5,SNR=4.0						
KBZ	Khabaz	66.29	308	P	P	16 35 14.0	+2.0
	comp=Z,11nm,0.9s,baz=71,slow=1.1,SNR=6.1						
FIA1	FINESS Array S	68.64	330	P	P	16 35 26.3	-0.2
FINES	FINESS Array B	68.64	330	P	P	16 35 26.6	+0.1
	comp=Z,3.4nm,0.5s,baz=80,slow=4.6,SNR=8.0						
RES	Resolute Bay	70.46	11	P	P	16 35 38.2	+0.7
	comp=Z,4.4nm,1.0s,baz=305,slow=6.6,SNR=6.7						
RES	Resolute Bay	70.46	11	IAmb	IAmb	16 35 42.5	
	comp=Z,5.9nm,1.0s						
AKASG	Malin Array Be	71.94	319	P	P	16 35 47.5	+0.6
	comp=Z,1.5nm,0.7s,baz=52,slow=6.6,SNR=7.6						
AKASG	Malin Array Be	71.94	319	P	P	16 35 48.6	+1.7
RAYN	Ar Rayn	72.63	287	P	P	16 35 51.7	+0.1
RAYN				IAmb	IAmb	16 35 56.3	
	comp=Z,6.7nm,1.1s						
YKA	Yellowknife Ar	73.73	26	P	P	16 35 58.5	+1.1
	comp=Z,1.5nm,0.8s,baz=306,slow=6.0,SNR=6.3						
YKA	Yellowknife Ar	73.73	26	P	P	16 35 57.7	+0.3
BRTR	Keskin Array B	74.25	307	P	P	16 36 02.8	+1.7
	comp=Z,5.4nm,0.9s,baz=104,slow=5.2,SNR=9.5						
NC405	NORSAR Array S	74.68	333	P	P	16 36 04.6	+1.6
NC405				IAmb	IAmb	16 36 23.1	
	comp=Z,6.2nm,0.8s						
NOA	NORSAR Array B	74.92	333	P	P	16 36 05.7	+1.3
	comp=Z,1.8nm,0.8s,baz=51,slow=5.9,SNR=5.2						
ASF	Jabal al Asfar	75.43	299	P	P	16 36 09.1	+1.2
	comp=Z,3.5nm,0.9s,baz=137,slow=3.7,SNR=4.3						
BUR08	Bucovina Ar. S	75.73	317	P	P	16 36 10.8	+1.4
BURAR	Bucovina Array	75.74	317	P	P	16 36 09.2	-0.2
RAO	Raoul Island	78.80	134	LR	LR	17 07 50.6	
	comp=Z,148nm,18.7s,baz=281,slow=33						
CLL	Collm	80.20	325	*i* (P)	P	16 36 38.1	+4.1
	comp=Z,4.0nm,0.7s						
MFID	Camas Ranch	85.04	41	P	P	16 36 59.7	+0.2
MFID				IAmb	IAmb	16 37 05.5	
	comp=Z,7.6nm,1.2s						
LRM	Limekiln Ridge	85.33	38	P	P	16 37 01.5	+0.4
DLMT	Dillon	85.55	38	P	P	16 37 02.5	+0.4
DLMT				IAmb	IAmb	16 37 08.0	
	comp=Z,9.8nm,0.9s						
HLID	Hailey	85.74	41	P	P	16 37 03.6	+0.5
HLID				IAmb	IAmb	16 37 11.1	
	comp=Z,5.9nm,1.1s						
RAR	Rarotonga	86.18	118	LR	LR	17 07 47.4	
	comp=Z,83nm,21.9s,baz=256,slow=30						
KVN	Kaiserville	86.42	46	P	P	16 37 07.3	+0.7
KVN				IAmb	IAmb	16 37 08.2	
	comp=Z,6.0nm,1.1s						
NVAR	Mina Array Bea	86.68	46	P	P	16 37 09.2	+1.3
	comp=Z,2.4nm,0.9s,baz=299,slow=4.4,SNR=3.9						
NVAR	Mina Array Bea	86.68	46	P	P	16 37 08.2	+0.3
H17A	Grant Village	87.27	38	P	P	16 37 10.9	+0.2
HWUT	Hardware Ranch	88.61	41	P	P	16 37 17.7	+0.7
BW06	Boulder Array	88.92	39	P	P	16 37 18.6	+0.1
BW06				IAmb	IAmb	16 37 23.8	
	comp=Z,5.6nm,0.9s						
PD31	Pinedale Array	88.92	39	P	P	16 37 18.6	0.0
PD31				IAmb	IAmb	16 37 23.8	
	comp=Z,5.1nm,0.9s						
PDAR	Pinedale Array	88.92	39	P	P	16 37 18.9	+0.3
	comp=Z,2.9nm,0.8s,baz=259,slow=1.5,SNR=6.2						
PDAR	Pinedale Array	88.92	39	P	P	16 37 19.2	+0.6
ULM	Lac du Bonnet	89.67	27	P	P	16 37 23.0	+1.4
	comp=Z,5.2nm,0.7s,baz=8.8,slow=9.0,SNR=3.9						
ULM	Lac du Bonnet	89.67	27	IAmb	IAmb	16 37 27.5	
	comp=Z,19nm,1.3s						
MVU	Marysvale	90.30	43	P	P	16 37 25.2	+0.1
MSU	Marysvale	90.32	43	P	P	16 37 25.5	+0.3
P17A	Butcher Ranch,	90.51	42	P	P	16 37 26.6	+0.6
P18A	Preston Nutter	90.68	41	P	P	16 37 27.3	+0.4
U15A	North Rim	91.63	45	P	P	16 37 31.5	+0.1
U15A				IAmb	IAmb	16 37 47.4	
	comp=Z,7.5nm,1.4s						
QSPA	South Pole Qui	121.11	180	PKP	PKiKP	16 43 15.0	-0.8
	comp=Z,1.9nm,0.9s,baz=217,slow=2.3,SNR=3.4						

IDC ***07*** *16:26:55.9±0.5, 2°.43N×99°.07E, h158*^{km}*±2*^{km}*, mb3.9/16, mb1 3.9/17, mb1mx3.5/63, mbtmp4.3/17, Error ellipse: s-maj=20.4km s-min=11.4km az=61.0*

DJA ***07*** *16:26:56.6±0.3, 2°N±3°×9°9E±°, h161km±5km, M4.4/18, mb4.5/7, mB6.2/1, MLv4.3/18, Mw(mB)5.8/1*
NEIC ***07*** *16:26:57.1±1.6, 2.°55N±0.°06×99.°12E±0.°07, h162km±2km, mb4.3/33, Error ellipse: s-maj=9.6km s-min=8.9km az=91.0*
ISC 07 16:26:55.4±0.4**, 2.°49N**±0.°05×**99.°14E**±0.°05**, h150km, n96, σ1.s62**/101**, mb4.2**/28**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPSI	Rantau Prapat	0.29	314		Pn	16 27 18.9	+2.9
PSI	Prapat	0.38	326	P	Pn	16 27 18.9	+2.4
	64nm,0.3s,baz=173,slow=3.7,SNR=414						
PSI				S	Sn	16 27 35.3	+3.0
	169nm,0.3s,baz=35,slow=22,SNR=115						
SBSI	Sibolga	0.96	195	P	Pn	16 27 24.3	+4.4
TSI	Tuntungan	1.16	331	P	Pn	16 27 24.2	+2.6
TSI				S	Sn	16 27 45.8	+4.2
KCSI	Kotacane, Aceh	1.71	307	P	Pn	16 27 28.6	+1.3
KCSI				S	Sn	16 27 53.4	+1.8
MNSI	Mandailing Nat	1.74	165	P	Pn	16 27 30.5	+2.9
GSI	Gunungsitoli	1.95	233	P	Pn	16 27 31.7	+1.6
GSI	Gunungsitoli	1.95	233		Pn	16 27 31.6	+1.6
GSI	Gunungsitoli	1.95	233	P	Pn	16 27 32.0	+2.0
TPTI		2.10	292	P	Pn	16 27 32.7	+1.0
TPTI				S	Sn	16 28 01.3	+1.7
IPM	Ipoh	2.73	44	Pn	Pn	16 27 41.9	+2.4
IPM	Ipoh	2.73	44	P	Pn	16 27 42.2	+2.7
SNSI	Sinabang, Aceh	2.81	268	P	Pn	16 27 42.0	+1.6
BKNI	Bangkinang	2.87	138	P	Pn	16 27 44.3	+3.1
BKNI	Bangkinang	2.87	138		Pn	16 27 44.0	+2.9
BKNI	Bangkinang	2.87	138	P	Pn	16 27 43.5	+2.3
KULM	Kulim	3.17	28	Pn	Pn	16 27 46.3	+1.3
PPI	Padang Panjang	3.19	157	P	Pn	16 27 48.2	+3.0
LHMI	Lhok Sumawe	3.49	321	P	Pn	16 27 51.1	+2.0
LHMI	Lhok Sumawe	3.49	321		Pn	16 27 50.6	+1.5
LHMI	Lhok Sumawe	3.49	321	P	Pn	16 27 51.0	+2.0
PDSI	Padang	3.63	159	P	Pn	16 27 53.1	+2.2
SISI	Saibi	3.79	181	P	Pn	16 27 52.8	-0.2
MYKOM	Kota Tinggi	4.76	98	Pn	Pn	16 28 07.6	+1.9
KRJI	Kerinci	5.11	153	P	Pn	16 28 13.2	+2.8
	1.0nm116nm,0.8s						
PPSI	Pulau Pagai	5.29	170	P	Pn	16 28 11.5	-1.2
	1.1nm124nm,0.9s						
SRIT	Nakonsritamara	6.09	4		Pn	16 28 23.3	0.0
MASI	Maura Aman, Be	6.39	151	P	Pn	16 28 28.5	+1.0
	0.7nm124nm,0.7s						
LHSI	Lahat	7.65	145	P	Pn	16 28 46.0	+1.7
MDSI	Maura Dua	8.57	144	P	Pn	16 28 56.9	+0.5
KLSI		9.06	142	P	Pn	16 29 03.9	+0.9
KASI	Kota Agung	9.59	146	P	Pn	16 29 10.4	+0.3
TNG	Tangerang	11.41	139	P	Pn	16 29 35.2	+1.1
SBUM	Sibu	13.07	90		P	16 29 58.4	-2.0
DLV	T Lat	13.20	44		P	16 30 03.2	+1.3
DLV	T Lat	13.20	44	P	P	16 30 01.8	-0.1
UBPT	Khong Chiam	14.16	26	P	P	16 30 12.2	-0.2
UGM	Wanagama	15.36	132	Pn	Pn	16 30 23.6	-0.8
CM31	Chiang Mai Arr	15.87	359	Pn	Pn	16 30 29.1	-1.6
CM31				IAmb	IAmb	16 30 33.8	
	comp=Z,12nm,0.8s						
CMAR	Chiang Mai Arr	15.87	359	P	P	16 30 32.4	+1.0
	comp=Z,1.5nm,0.3s,baz=191,slow=11,SNR=65						
CMAR	Chiang Mai Arr	15.87	359		Pn	16 30 30.1	-0.6
CHTO	Chiang Mai	16.23	359		Pn	16 30 33.6	-1.5
CHTO				IAmb	IAmb	16 30 37.5	
	comp=Z,6.0nm,0.7s						
CHTO	Chiang Mai	16.23	359	P	P	16 30 36.8	+1.5
MYLDM	Lahad Datu	19.50	82	P	Pn	16 31 13.7	-0.3
TOLI2	Tolitoli	21.68	93	P	P	16 31 35.2	+0.6
TOLI2				IAmb	IAmb	16 31 37.2	
	comp=Z,15nm,0.8s						
KAPI	Kappang	21.90	110	P	P	16 31 38.7	+1.8
	comp=Z,8.6nm,0.6s,baz=329,slow=7.7,SNR=8.4						
KAPI	Kappang	21.90	110	P	P	16 31 38.6	+1.8
KAPI				IAmb	IAmb	16 31 40.2	
	comp=Z,13nm,0.8s						
KAPI	Kappang	21.90	110	P	P	16 31 40.5	+3.6
ENH	Enshi	29.32	19	P	P	16 32 42.6	-1.5
BJT	Baijiatuau	40.43	20	P	P	16 34 18.5	-0.5
BJT				IAmb	IAmb	16 34 20.4	
	comp=Z,5.5nm,0.5s						
WB0	Warramunga Arr	41.08	124	P	P	16 34 24.0	-0.7
WB0				IAmb	IAmb	16 34 27.0	
	comp=Z,3.3nm,0.8s						
WRA	Warramunga Arr	41.12	124	P	P	16 34 24.2	-0.8
	comp=Z,2.4nm,0.4s,baz=301,slow=9.0,SNR=18						
WRA				ScP	ScP	16 39 54.0	-3.7
	comp=Z,0.6nm,0.9s,baz=312,slow=3.0,SNR=4.8						
WRA	Warramunga Arr	41.12	124	P	P	16 34 24.6	-0.4
WRAB	Tennant Creek	41.12	124	P	P	16 34 24.5	-0.6
WRAB				IAmb	IAmb	16 34 27.4	
	comp=Z,4.8nm,0.5s						
WB2	Warramunga Arr	41.13	124	P	P	16 34 24.9	-0.2
WB2				IAmb	IAmb	16 34 27.4	
	comp=Z,5.3nm,0.5s						
WR0	Warramunga Arr	41.29	124	P	P	16 34 26.2	-0.2
WR0				IAmb	IAmb	16 34 29.2	
	comp=Z,4.3nm,0.6s						
AS31	Alice Springs	42.67	130	P	P	16 34 37.8	+0.1
ASAR	Alice Springs	42.67	130	P	P	16 34 37.5	-0.1
	comp=Z,1.1nm,0.6s,baz=302,slow=7.9,SNR=9.1						
ASAR				ScP	ScP	16 40 00.7	-3.3
	comp=Z,0.6nm,0.7s,baz=305,slow=4.4,SNR=6.2						
ASAR	Alice Springs	42.67	130	P	P	16 34 37.2	-0.4
FORT	Forrest	43.06	142	P	P	16 34 40.6	0.0
KSRS	Korea Array	43.70	34	P	P	16 34 45.1	-0.5
	comp=Z,0.8nm,0.5s,baz=222,slow=8.7,SNR=4.8						
SONM	Songino Array	45.61	7	P	P	16 35 01.2	+0.5
	comp=Z,2.9nm,0.5s,baz=191,slow=9.6,SNR=18						
SONM				ScP	ScP	16 40 13.9	-1.6
	comp=Z,0.9nm,0.7s,baz=205,slow=3.1,SNR=6.2						
SONM	Songino Array	45.61	7	P	P	16 35 00.8	+0.1
ULN	Ulaanbaatar	45.72	7	P	P	16 35 01.7	0.0
ULN				IAmb	IAmb	16 35 02.8	
	comp=Z,3.3nm,0.7s						
MK31	Makanchi Array	46.51	344	P	P	16 35 07.5	-0.2
MKAR	Makanchi Array	46.51	344	P	P	16 35 07.8	+0.2
	comp=Z,1.6nm,0.4s,baz=152,slow=9.1,SNR=20						
MKAR	Makanchi Array	46.51	344	P	P	16 35 07.4	-0.3
MAKZ	Makanchi	46.60	344	P	P	16 35 08.4	0.0
BBOO	Buckleboo	49.51	138	P	P	16 35 30.3	-0.6
USRK	Ussuriysk Ar.	50.68	30	P	P	16 35 39.9	+0.3
KURBB	Kurchatov Arra	51.03	343	P	P	16 35 41.5	-0.6
	comp=Z,1.0nm,0.6s,baz=259,slow=14,SNR=6.2						
KURK	Kurchatov	51.09	343	P	P	16 35 41.5	-1.0
KURK	Kurchatov	51.09	343	IAmb	IAmb	16 35 44.5	
	comp=Z,7.4nm,0.9s						
ZAA0	Zalesovo Array	52.63	349		P	16 35 53.6	-0.3
ZAA0				IAmb	IAmb	16 35 55.0	
	comp=Z,3.6nm,0.6s						
ZALV	Zalesovo Beam	52.63	349	P	P	16 35 53.9	+0.1
	comp=Z,2.7nm,0.4s,baz=164,slow=7.0,SNR=16						
ZALV	Zalesovo Beam	52.63	349		P	16 35 53.0	-0.8
STKA	Stephens Creek	52.81	134	P	P	16 35 55.1	-0.4
	comp=Z,2.3nm,0.7s,baz=331,slow=10,SNR=3.7						
STKA	Stephens Creek	52.81	134	P	P	16 35 55.2	-0.4
KLR	Kul'dur	54.25	26	P	P	16 36 05.8	+0.1
	comp=Z,2.1nm,0.6s,baz=224,slow=7.2,SNR=6.9						
VOI	Vohitsoka	56.58	242	P	P	16 36 24.4	+1.4
ABKAR	Akbulak array	57.32	331	P	P	16 36 27.0	-0.7
ABKAR				IAmb	IAmb	16 36 30.9	
	comp=Z,6.0nm,1.0s						
NRIK	Noril'sk	67.19	356	P	P	16 37 32.4	-0.6
	comp=Z,1.6nm,0.4s,baz=155,slow=8.2,SNR=3.2						
NRIK	Noril'sk	67.19	356	IAmb	IAmb	16 37 33.0	
	comp=Z,8.2nm,1.4s						
PEA0B	Petropavlovsk-	69.60	33	P	P	16 37 48.2	0.0
PETK	Petropavlovsk-	69.60	33	P	P	16 37 48.3	0.0
	comp=Z,2.2nm,0.8s,baz=165,slow=6.2,SNR=4.0						
PET	Petropavlovsk	70.09	34	P	P	16 37 51.5	+0.2
TIXI	Tiksi	71.60	10	P	P	16 37 59.1	-0.9
TIXI				IAmb	IAmb	16 38 00.5	
	comp=Z,15nm,1.3s						
SEY	Seymchan	71.83	23	P	P	16 38 01.9	+0.4
	comp=Z,7.5nm,1.0s,baz=259,slow=10,SNR=6.2						
MAW	Mawson	74.40	194	P	P	16 38 18.1	+1.7
BOSA	Boshof	77.09	240	P	P	16 38 33.1	+0.3
	comp=Z,2.1nm,0.6s,baz=80,slow=4.7,SNR=6.5						
BOSA	Boshof	77.09	240	P	P	16 38 32.7	-0.1
BOSA				IAmb	IAmb	16 38 50.5	
	comp=Z,8.1nm,1.2s						
BURAR	Bucovina Array	77.35	318	P	P	16 38 34.0	+0.2
BUR08	Bucovina Ar. S	77.37	318	P	P	16 38 32.7	-1.2
BUR08				IAmb	IAmb	16 38 35.3	
	comp=Z,4.3nm,1.2s						
FINES	FINESS Array B	79.77	332	P	P	16 38 46.9	+0.3
	comp=Z,3.8nm,0.9s,baz=112,slow=5.2,SNR=5.8						
ARCES	ARCESS Array B	81.99	340	P	P	16 38 57.8	-0.5
	comp=Z,6.6nm,1.1s,baz=354,slow=2.4,SNR=3.8						
CPUP	Villa Florida	147.25	221	PKPbc	PKPdf	16 46 18.2	-1.3
	comp=Z,2.0nm,0.6s,baz=292,slow=3.7,SNR=3.9						

KRNET 07 16:27:09.1±0.1**, 39.°23N**×**73.°61E, h12km, mb3.4, 12C-8D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.79	354	⇑eP	Pg	16 27 24.4	0.0
	baz=54						
SFK				⇑eS	Sb	16 27 35.7	0.0
	baz=54						
DRK	Karamyk	1.43	281	⇑eP	Pg	16 27 36.3	-0.3
	baz=81						
DRK				⇑eS	Sg	16 27 56.1	+0.9
	baz=81						
OHH	Osh	1.44	334	⇑iP	Pb	16 27 36.4	+0.4
	baz=34						
OHH				⇑iS	Sg	16 27 56.5	+0.9
	baz=34						
SALK	Salom-Alik	1.66	5	⇑eP	Pg	16 27 40.4	-0.6
	baz=5.0						
SALK				⇑eS	Sg	16 28 03.1	+0.6
	baz=5.0						
BTK	Batken	2.31	292	⇓eP	Pb	16 27 50.6	-0.2
	baz=92						
BTK				⇓eS	Sb	16 28 21.0	+1.6
	baz=92						
GAR	Garm	2.58	266	⇓eP	Pb	16 27 54.3	-1.0
	baz=66						
GAR				⇓iS	Sb	16 28 27.2	+0.2
	baz=66						
AML	Almayashu	2.90	1	⇑eP	Pb	16 27 58.9	-2.1
	baz=1.0						
AML				⇑eS	Sb	16 28 35.2	-1.4
	baz=1.0						
TRKS	Terek-Say	2.98	321	⇓eP	Pn	16 27 59.1	+2.8
	baz=21						
TRKS				⇓iS	Sb	16 28 35.5	-3.1
	baz=21						
UCH	Uchtor	3.07	13	⇓iP	Pb	16 28 01.4	-2.6
	baz=13						
UCH				⇓iS	Sb	16 28 39.4	-2.2
	baz=13						
MNAS	Manas	3.36	346	⇑iP	Pb	16 28 05.4	-3.4
	baz=46						
MNAS				⇑iS	Sb	16 28 46.5	-3.2
	baz=46						

IDC ***07*** *16:27:38.0±1.1, 37.°89N×73.°38E, h0km, mb4.0/11, mb1 4.2/16, mb1mx3.7/66, mbtmp4.1/16, ML3.6/5, MS3.4/9, Ms1 3.4/9, ms1mx3.1/53, Error ellipse: s-maj=20.4km s-min=16.5km az=154.0*
NEIC ***07*** *16:27:45.5±2.2, 38.°28N±0.°05×72.°72E±0.°07, h10km±1km, mb4.3/11, Error ellipse: s-maj=10.1km s-min=8.0km az=289.0*
BJI ***07*** *16:27:47.3±0.0, 38.°34N×73.°23E, h7km, mb4.5/3, ML4.0/3*
NNC ***07*** *16:27:50.9±5.2, 38.°44N×73.°18E, h0km, mb4.6, mpv4.2, Error ellipse: s-maj=37.6km s-min=25.0km az=167.0*
ISC 07 16:27:44.2±0.5**, 38.°19N**±0.°03×**72.°75E**±0.°04**, h10km, n76, σ2.s37**/71**, mb4.0**/14**, MS3.4**/7**, 7C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.48	330	Pn	Pn	16 28 10.8	-0.5
GAR	Garm	2.07	294	Pn	Pg	16 28 23.4	-0.6
BTK	Batken	2.39	322	Pn	Pn	16 28 25.5	+1.9
CHGR	Chuyangaron	2.86	280	Pn	Pb	16 28 34.5	-1.0
CEP	Cherat	4.41	189	P	Pn	16 28 58.4	+7.0
CEP				S	Sb	16 29 54.0	-1.3
CHCP	Chirah Chowk	4.54	175	P	Pn	16 28 59.1	+6.0
NIL	Nilore	4.55	175		Pn	16 28 56.6	+3.4
AAK	Ala-Archa	4.63	16	Pn	Pn	16 28 56.1	+1.6
	3.6nm,0.3s,baz=219,slow=23,SNR=7.6						
AAK				Sn	Sb	16 29 54.6	-7.0
	2.8nm,0.3s,baz=101,slow=18,SNR=5.4						
AAK	Ala-Archa	4.63	16	Pn	Pn	16 28 58.5	+4.0
	37nm,0.8s						
AAK				⇓Sn	Sn	16 29 53.2	+4.8
	116nm,0.9s						
AAK	Ala-Archa	4.63	16	Pn	Pn	16 28 55.2	+0.7
KBL	Kabul	4.71	221	Pn	Pn	16 28 58.9	+3.3
FRU1	Bishkek	4.83	17		Pn	16 28 58.5	+1.5
BOOM	Boomskoye usch	4.94	29	Pn	Pn	16 28 59.1	+0.5
KK07	Karatay Array	5.18	341	⇑Pn	Pn	16 29 06.0	+4.1
	24nm,0.5s,baz=152,slow=13						
KK07				⇓Sn	Sn	16 30 07.2	+5.5
	96nm,0.8s						
KK07				⇑Lg	Lg	16 30 30.0	
	46nm,0.6s,baz=148,slow=27						
KDJ	Kajisay	5.19	39	Pn	Pn	16 29 03.1	+0.9
KKAR	Karatay Array	5.19	342	Pn	Pn	16 29 03.0	+1.0
TKM2	Tokmak 2	5.20	24	⇑Pg	Pb	16 29 19.2	+3.9
	26nm,0.9s						
TKM2				⇑Lg	Lg	16 30 26.6	
	108nm,0.9s						
TARG	Taragay, Kyrgy	5.25	46	Pn	Pn	16 29 03.7	+0.6
THW	Thamme Wali	5.45	189	P	Pn	16 29 11.3	+5.7
DGS	Degeres	5.54	24	Pg	Pb	16 29 24.4	+3.3
	31nm,0.7s						
DGS				Lg	Lg	16 30 32.7	
	52nm,1.1s						
TNSS	Tian-Shan	5.80	32	Pg	Pb	16 29 28.7	+3.0
	16nm,0.4s						
TNSS				Lg	Lg	16 30 41.0	
	17nm,1.0s						
KRBS	Karabastau	5.93	21	Pg	Pb	16 29 28.8	+1.1
	8.5nm,0.6s						
KRBS				Lg	Lg	16 30 42.7	
	11nm,0.5s						
MDOK	Medeo	5.94	32	⇑Pg	Pg	16 29 34.6	-3.4
	21nm,0.8s						
MDOK				⇑Lg	Lg	16 30 49.7	
	121nm,1.3s						
KOTS	Kotyrbulak	6.03	32	Pg	Pb	16 29 32.8	+3.3
	13nm,0.6s						
KOTS				Lg	Lg	16 30 47.0	
	99nm,0.7s						
PRZ	Przheval'sk	6.08	43		Pn	16 29 15.6	+1.3
KTBS	Karatobe	6.26	27	Pg	Pg	16 29 39.3	-4.9
	14nm,0.5s						
KTBS				Lg	Lg	16 30 57.4	
	55nm,1.3s						
KUU	Kurty	6.31	24	Pg	Pb	16 29 36.4	+2.3
	11nm,0.7s						
KUU				Lg	Lg	16 30 53.7	
	31nm,1.2s						
DHRM	DHARAMSHALA	6.60	153	eP	Pn	16 29 22.4	+0.8
DHRM				eS	Sn	16 30 40.4	+3.4
DHRM				IAML		16 30 54.0	
	comp=N,90nm,0.4s						
SMLA	Simla	7.93	151	eP	Pn	16 29 42.5	+2.9
SMLA				eS	Sn	16 31 06.7	-2.6
SMLA				IAML		16 31 21.8	
	comp=E,62nm,0.4s						
SMLA				IAML		16 31 21.8	
	comp=N,116nm,0.9s						
HRA	Herat	9.29	249	Pn	Pn	16 30 01.9	+3.4
MAKZ	Makanchi	10.97	35		Pn	16 30 22.4	+1.2
MK31	Makanchi Array	11.10	36		Pn	16 30 23.8	+0.8
MKAR	Makanchi Array	11.10	36	Pn	Pn	16 30 19.6	-3.5
	comp=N,0.1nm,0.3s,baz=219,slow=11,SNR=3.0						
MKAR				LR	LR	16 34 49.6	
	comp=N,136nm,19.9s,baz=216,slow=39						
MKAR	Makanchi Array	11.10	36		Pn	16 30 23.6	+0.5
GEYT	Alibeck	11.54	273	Pn	Pn	16 30 30.8	+1.7
	comp=N,1.2nm,0.3s,baz=119,slow=11,SNR=17						
GEYT	Alibeck	11.54	273		Pn	16 30 30.0	+0.9
GYA0B	ALIBECK ARRAY	11.54	273	Pn	Pn	16 30 30.3	+1.2
WMQ	Urumqi	12.61	59	eP	Pn	16 30 44.6	+1.0
WMQ				pmax	pmax		
	comp=N,11nm,0.9s						
ABKAR	Akbulak array	14.40	324		Pn	16 31 05.4	-2.6
BVAR	Borovoye Array	14.93	354	Pn	Pn	16 31 13.4	-1.8
	comp=N,0.2nm,0.3s,baz=192,slow=13,SNR=6.9						
BHPL	Bhopal	15.43	164	eP	Pn	16 31 19.6	-2.5
BHPL				IAmb	IAmb	16 31 27.6	
	comp=Z,4.0nm,0.4s						
BHPL				eS	Sn	16 33 58.1	-15
AKTO	Aktyubinsk	16.12	324	Pn	Pn	16 31 31.8	+1.0
	comp=Z,0.4nm,0.3s,baz=124,slow=15,SNR=8.1						
AKTO				LR	LR	16 38 35.5	
	comp=Z,78nm,21.7s,baz=136,slow=40						
ZAA0	Zalesovo Array	17.80	24	P	Pn	16 31 52.2	+0.2
ZAA0				IAmb	IAmb	16 31 54.9	
	comp=Z,7.7nm,1.0s						
ZALV	Zalesovo Beam	17.80	24	P	Pn	16 31 47.2	-4.7
	baz=210,slow=11,SNR=2.1						
UOSS	Minazif	19.28	232	P	P	16 32 09.0	-0.2
UOSS				IAmb	IAmb	16 32 28.9	
	comp=Z,32nm,1.2s						
ARU	Arti	20.55	337	LR	LR	16 41 02.3	
	comp=Z,96nm,19.9s,baz=148,slow=38						
GNI	Garni	21.77	284	LR	LR	16 42 29.7	
	comp=Z,75nm,18.4s,baz=60,slow=40						
BELG	Belogornoye	22.52	317	P	P	16 32 43.9	0.0
	comp=Z,26nm,0.9s,baz=22,slow=2.7,SNR=5.3						
KBZ	Khabaz	23.14	293	P	P	16 32 50.2	-0.3
	comp=Z,1.6nm,0.8s,baz=135,slow=4.3,SNR=2.9						
KBZ				LR	LR	16 43 56.6	
	comp=Z,136nm,18.3s,baz=98,slow=41						
KIRV	Kirov	25.38	331	LR	LR	16 44 05.8	
	comp=Z,82nm,21.2s,baz=101,slow=38						
SONM	Songino Array	26.24	58	P	P	16 33 10.9	-8.6
	comp=Z,0.1nm,0.3s,baz=252,slow=9.5,SNR=2.0						
CMAR	Chiang Mai Arr	30.13	123	P	P	16 33 45.5	-8.8
	comp=Z,0.4nm,0.3s,baz=305,slow=9.6,SNR=2.2						
BRTR	Keskin Array B	30.29	285	P	P	16 33 56.6	+0.8
	comp=Z,2.0nm,0.7s,baz=92,slow=10.0,SNR=5.2						
AKASG	Malin Array Be	33.02	307	LR	LR	16 50 06.8	
	comp=Z,68nm,19.3s,baz=150,slow=40						
VRI	Vrincioaia	34.64	298	⇓P	P	16 34 35.8	+2.3
PLOR	Plostina	34.69	298	⇑P	P	16 34 36.5	+2.4
ISR	Istrita	34.82	296	P	P	16 34 37.7	+2.4
FINES	FINESS Array B	36.89	324	P	P	16 34 51.4	-1.2
	comp=Z,11nm,1.1s,baz=117,slow=11,SNR=2.3						
ITM	Ithomi	39.82	285	P	P	16 35 17.0	-0.7
ITM				IAmb	IAmb	16 35 35.8	
	comp=Z,11nm,1.0s						
ARCES	ARCESS Array B	40.13	336	P	P	16 35 18.1	-1.7
	comp=Z,3.4nm,1.0s,baz=118,slow=9.6,SNR=1.6						
HFS	Hagfors	42.62	321	P	P	16 35 39.8	-0.6
	baz=92,slow=12						
GERES	GERESS Array B	43.12	304	P	P	16 35 44.9	+0.2
	comp=Z,0.5nm,0.5s,baz=46,slow=7.6,SNR=3.4						
TIP	Timpagrande	43.12	289	P	P	16 35 44.2	-0.5
NC303	NORSAR Array S	43.82	322	P	P	16 35 50.4	+0.3
NB2	NORSAR Subarra	43.89	322	P	P	16 35 50.1	-0.6
	comp=Z,1.5nm,0.7s,baz=91,slow=8.6						
NOA	NORSAR Array B	43.89	322	P	P	16 35 50.4	-0.3
	comp=Z,2.4nm,0.7s,baz=92,slow=7.9,SNR=7.5						
NOA				LR	LR	16 55 05.3	
	comp=Z,76nm,19.1s,baz=295,slow=37						
NC204	NORSAR Array S	44.12	322	P	P	16 35 51.5	-1.0
SENIN	Lac Senin/Sane	47.86	302	P	P	16 36 23.3	+0.8
EKA	Eskdalemuir Ar	52.05	315	P	P	16 36 53.5	-0.4
	comp=Z,2.2nm,0.8s,baz=92,slow=7.5,SNR=4.0						
TORD	Torodi Ar. Bea	67.15	269	P	P	16 38 37.0	-1.6
	comp=Z,1.2nm,0.8s,baz=38,slow=5.8,SNR=10						
TORD	Torodi Ar. Bea	67.15	269	P	P	16 38 37.7	-0.9
TORD				IAmb	IAmb	16 38 40.4	
	comp=Z,2.6nm,1.3s						
TOLK	Toolik Lake Re	68.93	15	P	P	16 38 47.5	-1.5
TOLK				IAmb	IAmb	16 38 54.0	
	comp=Z,2.5nm,0.9s						
ILAR	Eielson Array	72.77	17	P	P	16 39 08.8	-3.5
	comp=Z,0.7nm,0.9s,baz=335,slow=4.0,SNR=3.5						
ILAR	Eielson Array	72.77	17	P	P	16 39 12.8	+0.4
BCAR	Beaver Creek A	75.37	15	P	P	16 39 26.8	-0.8
SCHQ	Schefferville	81.08	338	LR	LR	17 15 54.3	
	comp=Z,54nm,18.9s,baz=138,slow=36						

NEIC ***07*** *16:35:15.8±1.8, 4.°81N±0.°05×96.°13E±0.°04, h10km±4km, mb4.7/54, Error ellipse: s-maj=9.2km s-min=2.2km az=139.0*
DJA ***07*** *16:35:15.2±1.0, 5°N±2°×9°6E±°, h15km±7km, M4.9/32, mB5.3/6, mb4.8/32, MLv5.0/11, Mw(mB)4.7/6*
KLM ***07*** *16:35:16, 4.°61N×96.°10E, h10km, mb4.9*
IDC ***07*** *16:35:19.1±2.4, 4.°87N×96.°12E, h36km±19km, mb4.1/19, mb1 4.2/22, mb1mx3.9/54, mbtmp4.3/22, ML4.2/3, MS3.7/10, Ms1 3.7/10, ms1mx3.3/60, Error ellipse: s-maj=21.9km s-min=11.5km az=46.0*
ISC 07 16:35:17.9±0.4**, 4.°81N**±0.°04×**96.°14E**±0.°05**, h29km, n146, σ0.s95**/145**, mb4.6**/55**, MS3.7**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	0.91	62	P	Pn	16 35 34.8	+0.1
LHMI				S	Sb	16 35 48.5	+1.6
LHMI	Lhok Sumawe	0.91	62		Pn	16 35 34.6	-0.1
LHMI				Sg	Sn	16 35 45.4	-1.5
LHMI	Lhok Sumawe	0.91	62	P	Pn	16 35 34.9	+0.2
TPTI		1.85	146	P	Pn	16 35 48.2	+0.5
TPTI				S	Sb	16 36 14.3	+0.4
KCSI	Kotacane, Aceh	2.07	128	P	Pn	16 35 52.7	+2.0
TSI	Tuntungan	2.75	118	P	Pn	16 36 01.1	+1.1
PSI	Prapat	3.42	125	Pn	Pn	16 36 12.9	+3.5
	29nm,0.3s,baz=314,slow=13,SNR=141						
PSI				Sn	Sb	16 36 56.6	-2.5
	44nm,0.3s,baz=313,slow=20,SNR=4.1						
PSI				LR	LR	16 37 49.0	
	comp=Z,1μm,20.7s,baz=274,slow=42						
GSI	Gunungsitoli	3.76	157	P	Pn	16 36 15.1	+1.1
GSI	Gunungsitoli	3.76	157	Pn	Pn	16 36 13.8	-0.2
GSI	Gunungsitoli	3.76	157	P	Pn	16 36 15.9	+1.9
KULM	Kulim	4.52	84	P	Pn	16 36 25.0	+0.6
KULM	Kulim	4.52	84	Pn	Pn	16 36 24.6	+0.2
IPM	Ipoh	4.88	94	P	Pn	16 36 30.0	+0.6
IPM	Ipoh	4.88	94		Pn	16 36 29.4	-0.1
IPM	Ipoh	4.88	94	P	Pn	16 36 29.8	+0.4
SRIT	Nakonsritamara	5.10	42		Pn	16 36 32.8	+0.4
MNSI	Mandailing Nat	5.26	139	P	Pn	16 36 36.9	+2.3
	1.6nm3μm159nm,0.4s						
JRMM	Jerantut	6.39	98	P	Pn	16 36 51.0	+0.9
BKNI	Bangkinang	6.62	132	P	Pn	16 36 54.2	+1.0
	1.7nm2μm141nm,0.7s						
BKNI	Bangkinang	6.62	132	Pn	Pn	16 36 53.6	+0.3
PPI	Padang Panjang	6.74	141	P	Pn	16 36 56.8	+1.9
	527nm36nm,0.7s						
SISI	Saibi	6.77	154	P	Pn	16 36 56.3	+1.0
	0.2nm23nm,1.5s						
PDSI	Padang	7.14	143	P	Pn	16 37 01.4	+1.0
	0.2nm28nm,0.5s						
MYKOM	Kota Tinggi	8.26	111	P	Pn	16 37 16.0	+0.2
MYKOM	Kota Tinggi	8.26	111		Pn	16 37 15.4	-0.4
PPSI	Pulau Pagai	8.46	153	P	Pn	16 37 19.2	+0.7
	86nm,1.2s						
KRJI	Kerinci	8.67	142	P	Pn	16 37 22.4	+0.8
	213nm,0.9s						
MASI	Maura Aman, Be	9.97	142	P	Pn	16 37 40.4	+1.0
	88nm,0.6s						
KSI	Kapahiang	10.59	142	P	Pn	16 37 47.8	-0.1
	66nm,1.1s						
LHSI	Lahat	11.31	139	P	Pn	16 37 58.8	+1.1
	79nm,0.9s						
MDSI	Maura Dua	12.24	139	P	Pn	16 38 09.9	-0.4
	25nm,0.9s						
LWLI	Liwa	12.56	141	P	Pn	16 38 15.3	+0.4
	56nm,0.6s						
KLSI		12.75	138	P	Pn	16 38 17.4	0.0
	21nm,0.9s						
KASI	Kota Agung	13.23	141	P	Pn	16 38 21.5	-2.4
	34nm,0.5s						
CMAR	Chiang Mai Arr	13.84	11	Pn	Pn	16 38 34.0	+1.7
	0.6nm,0.3s,baz=199,slow=14,SNR=21						
CMAR				LR	LR	16 43 41.5	
	comp=Z,162nm,19.2s,baz=346,slow=36						
DLV	T Lat	14.12	59	Pn	Pn	16 38 37.0	+0.7
CHTO	Chiang Mai	14.19	11	Pn	Pn	16 38 37.6	+0.6
KSM	Kuching	14.53	103	Pn	Pn	16 38 40.8	-0.9
KSM	Kuching	14.53	103	P	Pn	16 38 41.0	-0.7
PALK	Pallekele	15.54	280	Pn	Pn	16 38 56.5	+1.3
	0.3nm,0.3s,baz=155,slow=13,SNR=2.0						
PALK	Pallekele	15.54	280	Pn	Pn	16 38 55.3	+0.2
PALK				IAmb	IAmb	16 39 03.7	
	comp=Z,33nm,0.9s						
STKI	Sintang	16.03	107	P	P	16 39 03.3	-1.3
	comp=Z,27nm,1.3s						
BBKI	Banjar Baru	20.41	113	P	Pn	16 39 54.5	-0.6
	comp=Z,99nm,0.9s						
KOHI	KOHIMA	20.89	355	eP	P	16 39 58.6	+0.5

KOHI				IAmb	IAmb	16 40 07.4	
	comp=Z,78nm,0.9s						
SHL	**Shillong**	**21.04**	**349**	*e*P	**P**	**16 39 59.9**	**+0.1**
SHL				IAmb	IAmb	16 40 06.3	
	comp=Z,43nm,0.6s						
SHL	**Shillong**	**21.04**	**349**	P	**P**	**16 39 59.8**	**0.0**
HYB	**Hyderabad**	**21.30**	**307**	*i* P	**P**	**16 40 04.0**	**+1.6**
	comp=Z,50nm,1.0s						
KMMI	**Kalianget**	**21.34**	**123**	P	**P**	**16 40 03.4**	**+0.5**
	comp=Z,68nm,0.8s						
MOKO	**MOKOCHONG**	**21.45**	**356**	*e*P	**P**	**16 40 05.5**	**+1.4**
MOKO				IAmb	IAmb	16 40 13.2	
	comp=Z,34nm,0.8s						
BKB	**Balikpapan**	**21.60**	**106**	P	**P**	**16 40 05.2**	**-0.5**
ABJI	**Asem Bagus**	**21.97**	**125**	P	**P**	**16 40 11.0**	**+1.4**
	comp=Z,106nm,0.8s						
MYLDM	**Lahad Datu**	**22.28**	**88**	P	**P**	**16 40 13.9**	**+0.8**
MYLDM				IAmb	IAmb	16 40 29.7	
	comp=Z,19nm,0.8s						
JAGI	**Jajag, Banyuwa**	**22.29**	**126**	P	**P**	**16 40 13.7**	**+0.6**
JAGI				IAmb	IAmb	16 40 24.5	
	comp=Z,32nm,1.2s						
JAGI	**Jajag, Banyuwa**	**22.29**	**126**	P	**P**	**16 40 14.7**	**+1.6**
LKP	**Lekhapani**	**22.41**	**359**	*e*P	**P**	**16 40 15.5**	**+1.3**
SRBI	**Singaraja**	**22.94**	**124**	P	**P**	**16 40 20.3**	**+0.4**
	comp=Z,866nmcomp=Z,71nm,1.1s						
MPSI	**Mapaga**	**24.14**	**100**	P	**P**	**16 40 31.7**	**0.0**
	comp=Z,638nmcomp=Z,45nm,1.0s						
TWSI	**Taliwang, Sumb**	**24.68**	**123**	P	**P**	**16 40 37.0**	**+0.5**
	comp=Z,28nm,0.8s						
TOLI2	**Tolitoli**	**24.88**	**98**	P	**P**	**16 40 39.3**	**+0.9**
TOLI2				IAmb	IAmb	16 40 49.5	
	comp=Z,14nm,0.9s						
TTSI	**Tana Toraja**	**24.91**	**108**	P	**P**	**16 40 39.9**	**+1.2**
	comp=Z,14nm,1.0s						
LSA	**Lhasa**	**25.21**	**350**	P	**P**	**16 40 42.2**	**+0.5**
LSA				IAmb	IAmb	16 40 59.0	
	comp=Z,7.8nm,0.8s						
KAPI	**Kappang**	**25.52**	**112**	P	**P**	**16 40 45.2**	**+1.0**
	comp=Z,4.7nm,0.6s,baz=282,slow=11,SNR=5.9						
KAPI	**Kappang**	**25.52**	**112**	P	**P**	**16 40 45.1**	**+0.8**
KAPI				IAmb	IAmb	16 41 07.8	
	comp=Z,23nm,1.1s						
BNSI	**Bone**	**25.63**	**111**	P	**P**	**16 40 46.2**	**+1.0**
	comp=Z,15nm,0.9s						
BKSI	**Bulukumba**	**25.98**	**112**	P	**P**	**16 40 49.3**	**+0.9**
	comp=Z,45nm,0.8s						
APSI	**Ampana**	**26.11**	**102**	P	**P**	**16 40 50.1**	**+0.5**
	comp=Z,403nmcomp=Z,26nm,1.2s						
MRSI	**Marisa**	**26.13**	**99**	P	**P**	**16 40 49.9**	**+0.2**
	comp=Z,22nm,0.9s						
XAN	**Xi'an**	**31.42**	**21**	P	P	16 41 41.8	+5.1
XAN				pP	pP	16 41 45.6	0.0
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
SOEI	**Soe**	**31.54**	**117**	P	**P**	**16 41 38.4**	**+0.3**
	comp=Z,12nm,0.8s						
GIRL	**Giralia**	**32.52**	**148**	P	**P**	**16 41 46.9**	**+0.5**
GTA	**Gaotai**	**34.61**	**5**	*e*P	P	16 42 09.5	+4.9
GTA				pP	sP	16 42 18.3	+1.0
GTA				sP	pP	16 42 22.3	+8.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
PSA00	**Pilbara Seismi**	**35.03**	**139**	P	**P**	**16 42 09.2**	**+0.9**
PSA00				IAmb	IAmb	16 42 36.7	
	comp=Z,21nm,1.4s						
SWI	**Sorong**	**35.54**	**98**	P	**P**	**16 42 12.4**	**-0.4**
NIL	**Nilore**	**35.73**	**326**	P	**P**	**16 42 13.2**	**-1.0**
FAKI	**Fak Fak**	**36.89**	**101**	P	**P**	**16 42 24.3**	**0.0**
FAKI				IAmb	IAmb	16 42 25.1	
	comp=Z,9.2nm,0.9s						
FITZ	**Fitzroy Crossi**	**36.94**	**129**	LR	LR	16 57 29.7	
	comp=Z,110nm,21.3s,baz=0.0,slow=36						
JOW	**Kunigami**	**37.69**	**51**	P	**P**	**16 42 30.2**	**-0.7**
KNRA	**Kununurra**	**38.18**	**123**	P	**P**	**16 42 33.8**	**-1.3**
KNRA				IAmb	IAmb	16 42 54.3	
	comp=Z,7.7nm,0.9s						
MORW	**Morawa**	**38.73**	**152**	P	**P**	**16 42 38.8**	**-0.9**
MORW				IAmb	IAmb	16 43 03.8	
	comp=Z,28nm,1.3s						
MTN	**Manton Dam**	**38.94**	**117**	P	**P**	**16 42 40.3**	**-1.4**
TARG	**Taragay, Kyrgy**	**40.25**	**339**	P	**P**	**16 42 52.7**	**0.0**
WSAR	**Wadi Sarin**	**40.55**	**301**	P	**P**	**16 42 56.0**	**+1.0**
	comp=Z,6.0nm,0.6s,baz=157,slow=5.2,SNR=11						
KDJ	**Kajisay**	**40.83**	**338**	P	**P**	**16 42 57.1**	**-0.1**
GAR	**Garm**	**41.31**	**329**	P	**P**	**16 43 00.4**	**-0.8**
CHGR	**Chuyangaron**	**41.66**	**328**	P	**P**	**16 43 02.9**	**-1.1**
CHGR				IAmb	IAmb	16 43 04.4	
	comp=Z,16nm,0.8s						
BTK	**Batken**	**41.86**	**331**	P	**P**	**16 43 05.3**	**-0.3**
BTK				IAmb	IAmb	16 43 27.9	
	comp=Z,12nm,0.6s						
MK31	**Makanchi Array**	**43.51**	**346**	P	**P**	**16 43 18.2**	**-0.6**
MKAR	**Makanchi Array**	**43.51**	**346**	P	**P**	**16 43 18.1**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=152,slow=7.7,SNR=12						
MKAR	**Makanchi Array**	**43.51**	**346**	P	**P**	**16 43 17.8**	**-1.0**
KSRS	**Korea Array**	**43.57**	**37**	P	**P**	**16 43 19.0**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=221,slow=8.8,SNR=4.4						
KSRS				LR	LR	17 02 21.0	
	comp=Z,34nm,18.0s,baz=145,slow=37						
MAKZ	**Makanchi**	**43.60**	**346**	P	**P**	**16 43 18.3**	**-1.2**
SONM	**Songino Array**	**43.77**	**10**	P	**P**	**16 43 21.9**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=190,slow=9.2,SNR=13						
SONM				PcP	**PcP**	**16 45 08.0**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=190,slow=4.9,SNR=1.2						
SONM	**Songino Array**	**43.77**	**10**	P	**P**	**16 43 21.2**	**+0.2**
ULN	**Ulaanbaatar**	**43.91**	**11**	P	**P**	**16 43 22.5**	**+0.3**
KKAR	**Karatay Array**	**44.38**	**333**	P	**P**	**16 43 25.3**	**-0.5**
WB0	**Warramunga Arr**	**44.85**	**124**	P	**P**	**16 43 28.7**	**-1.2**
WB0				IAmb	IAmb	16 43 44.7	
	comp=Z,7.2nm,0.7s						
WRA	**Warramunga Arr**	**44.89**	**124**	P	**P**	**16 43 30.0**	**-0.2**
	comp=Z,3.3nm,0.6s,baz=302,slow=9.2,SNR=87						
WRA				ScP	**ScP**	**16 49 02.5**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=316,slow=3.4,SNR=7.1						
WRA				LR	LR	17 02 36.1	
	comp=Z,103nm,21.7s,baz=165,slow=36						
WRA	**Warramunga Arr**	**44.89**	**124**	P	**P**	**16 43 29.8**	**-0.4**
WRAB	**Tennant Creek**	**44.89**	**124**	P	**P**	**16 43 30.0**	**-0.3**
WRAB				IAmb	IAmb	16 43 48.9	
	comp=Z,9.0nm,0.7s						
WB2	**Warramunga Arr**	**44.90**	**124**	P	**P**	**16 43 30.0**	**-0.3**
WB2				IAmb	IAmb	16 43 48.3	
	comp=Z,13nm,1.1s						
WR0	**Warramunga Arr**	**45.06**	**124**	P	**P**	**16 43 31.3**	**-0.3**
WR0				IAmb	IAmb	16 44 00.1	
	comp=Z,9.5nm,0.9s						
AS31	**Alice Springs**	**46.44**	**129**	P	**P**	**16 43 42.6**	**+0.1**
AS31				IAmb	IAmb	16 43 43.5	
	comp=Z,3.8nm,0.5s						
ASAR	**Alice Springs**	**46.44**	**129**	P	**P**	**16 43 42.8**	**+0.3**
	comp=Z,13nm,0.8s,baz=300,slow=7.4,SNR=237						
ASAR				ScP	**ScP**	**16 49 08.2**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=310,slow=4.2,SNR=5.0						
ASAR				LR	LR	17 03 06.3	
	comp=Z,106nm,21.7s,baz=310,slow=36						
ASAR	**Alice Springs**	**46.44**	**129**	P	**P**	**16 43 42.6**	**+0.1**
FORT	**Forrest**	**46.72**	**141**	P	**P**	**16 43 45.5**	**+1.0**
TLY	**Talaya**	**47.14**	**6**	LR	LR	17 04 12.4	
	comp=Z,89nm,20.0s,baz=176,slow=37						
GEYT	**Alibeck**	**47.80**	**319**	P	**P**	**16 43 53.6**	**+0.7**
	comp=Z,8.0nm,0.8s,baz=160,slow=9.5,SNR=9.8						
GEYT	**Alibeck**	**47.80**	**319**	P	**P**	**16 43 53.2**	**+0.3**
GEYT				IAmb	IAmb	16 43 54.6	
	comp=Z,6.8nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**47.80**	**319**	P	**P**	**16 43 53.2**	**+0.3**
MJAR	**Matsushiro Arr**	**49.83**	**45**	LR	LR	17 05 36.1	
	comp=Z,61nm,20.8s,baz=255,slow=36						
ZAA0	**Zalesovo Array**	**49.86**	**351**	P	**P**	**16 44 07.5**	**-0.8**
ZAA0				IAmb	IAmb	16 44 32.4	
	comp=Z,5.4nm,1.1s						
ZALV	**Zalesovo Beam**	**49.86**	**351**	P	**P**	**16 44 07.8**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=171,slow=8.2,SNR=9.5						
ZALV				LR	LR	17 09 37.5	
	comp=Z,69nm,18.5s,baz=348,slow=41						
ZALV	**Zalesovo Beam**	**49.86**	**351**	P	**P**	**16 44 07.2**	**-1.1**
COEN	**Coen**	**50.25**	**112**	P	**P**	**16 44 11.2**	**-0.7**
RAYN	**Ar Rayn**	**52.18**	**296**	P	**P**	**16 44 26.7**	**+0.3**
BBOO	**Buckleboo**	**53.22**	**138**	P	**P**	**16 44 34.0**	**+0.2**
ABKAR	**Akbulak array**	**53.86**	**331**	P	**P**	**16 44 37.0**	**-1.2**
ABKAR	**Akbulak array**	**53.86**	**331**	P	**P**	**16 44 37.3**	**-0.9**
CTAO	**Charters Tower**	**55.10**	**118**	P	**P**	**16 44 47.8**	**0.0**
STKA	**Stephens Creek**	**56.57**	**133**	P	**P**	**16 44 58.5**	**+0.4**
	comp=Z,6.6nm,0.6s,baz=305,slow=5.3,SNR=20						
STKA	**Stephens Creek**	**56.57**	**133**	P	**P**	**16 44 58.2**	**+0.1**
ARU	**Arti**	**59.47**	**337**	LR	LR	17 13 10.0	
	comp=Z,191nm,18.1s,baz=166,slow=38						
EIDS	**Eidsvold**	**61.16**	**122**	P	**P**	**16 45 30.1**	**-0.1**
EIDS				IAmb	IAmb	16 45 30.7	
	comp=Z,13nm,1.4s						
ARMA	**Armidale**	**63.53**	**127**	P	**P**	**16 45 47.3**	**+1.3**
ARMA				IAmb	IAmb	16 45 52.4	
	comp=Z,5.5nm,1.0s						
CAN	**Canberra**	**63.63**	**133**	P	**P**	**16 45 47.5**	**+0.9**
BR131	**Keskin Array S**	**65.93**	**311**	P	**P**	**16 46 00.4**	**-1.2**
BR131				IAmb	IAmb	16 46 10.2	
	comp=Z,9.4nm,1.2s						
BRTR	**Keskin Array B**	**65.93**	**311**	P	**P**	**16 46 00.7**	**-1.0**
	comp=Z,2.1nm,0.6s,baz=124,slow=7.7,SNR=5.1						
BRTR	**Keskin Array B**	**65.93**	**311**	P	**P**	**16 46 00.9**	**-0.7**
TIRR	**Tirgusor**	**70.82**	**315**	P	**P**	**16 46 31.3**	**-0.6**
AKASG	**Malin Array Be**	**71.78**	**322**	P	**P**	**16 46 35.6**	**-1.9**
	comp=Z,0.2nm,0.4s,baz=91,slow=4.8,SNR=4.9						
MLR	**Muntele Rosu**	**72.74**	**316**	P	**P**	**16 46 43.3**	**-0.3**
	comp=Z,2.3nm,0.6s,baz=132,slow=4.6,SNR=4.3						
MLR	**Muntele Rosu**	**72.74**	**316**	IAmb	IAmb	16 47 04.6	
	comp=Z,10nm,1.5s						
BURAR	**Bucovina Array**	**73.64**	**318**	P	**P**	**16 46 48.8**	**-0.1**
BUR08	**Bucovina Ar. S**	**73.66**	**318**	P	**P**	**16 46 48.8**	**-0.2**
BOSA	**Boshof**	**75.68**	**239**	P	**P**	**16 47 01.4**	**+0.2**
	comp=Z,3.8nm,1.0s,baz=158,slow=5.8,SNR=3.6						
ARCES	**ARCESS Array B**	**78.81**	**340**	P	**P**	**16 47 15.8**	**-1.9**
	comp=Z,2.4nm,0.9s,baz=76,slow=7.5,SNR=1.6						
PRED	**Cave del Predi**	**81.42**	**316**	P	**P**	**16 47 31.9**	**-0.4**
PRED				IAmb	IAmb	16 47 34.3	
	comp=Z,3.7nm,0.8s						
GERES	**GERESS Array B**	**81.42**	**319**	P	**P**	**16 47 31.6**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=105,slow=4.6,SNR=7.3						
CIMO	**Cimolais**	**82.19**	**316**	P	**P**	**16 47 35.9**	**-0.5**
CIMO				IAmb	IAmb	16 48 03.1	
	comp=Z,11nm,1.3s						
DAVOX	**Davos/Dischmat**	**83.96**	**316**	P	**P**	**16 47 45.5**	**-0.3**
	comp=Z,3.8nm,0.6s,baz=245,slow=5.8,SNR=11						
TORD	**Torodi Ar. Bea**	**93.23**	**283**	P	**P**	**16 48 30.9**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=90,slow=4.8,SNR=14						
TORD	**Torodi Ar. Bea**	**93.23**	**283**	P	**P**	**16 48 31.4**	**+0.9**
TORD				IAmb	IAmb	16 48 32.2	
	comp=Z,1.7nm,0.7s						
QSPA	**South Pole Qui**	**94.72**	**180**	P	**P**	**16 48 37.3**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=222,slow=0.5,SNR=1.8						
TXAR	**Lajitas Array**	**141.09**	**28**	PKP	**PKPdf**	**16 54 47.2**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=151,slow=2.9,SNR=3.9						
TXAR	**Lajitas Array**	**141.09**	**28**		**PKPdf**	**16 54 45.2**	**-1.2**
CPUP	**Villa Florida**	**146.81**	**227**	PKPbc	**PKPab**	**16 54 59.0**	**-0.3**
	comp=Z,3.3nm,0.9s,baz=239,slow=2.6,SNR=2.5						

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*NEIC **07** 16:37:60.0±1.6, 43.°81N±0.°06×105.°21W±0.°05, h0^{km}±1^{km}, ML3.4/36, Error ellipse: s-maj=10.2km s-min=5.6km az=341.0*

*IDC **07** 16:37:59.3±1.7, 43.°62N×105.°33W, h0^{km}, mb1 3.5/5, mb1mx3.3/57, mbtmp3.3/5, ML2.7/4, Error ellipse: s-maj=41.0km s-min=10.7km az=151.0*

ISC 07 16:37:59.8±1.1**, 43.°78N**±0.°06×**105.°19W**±0.°07**, h0^{km}, n35, σ0.ˢ74**/34**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.90**	**68**	Pg	**Pb**	**16 38 18.1**	**-0.4**
K22A	**Casper**	**1.49**	**221**	Pn	**Pn**	**16 38 26.5**	**-1.5**
K22A				IAML		16 38 49.9	
	comp=N,496nm,0.9s						
K22A				IAML		16 38 50.4	
	comp=E,332nm,1.0s						
PHWY	**Pilot Hill**	**2.49**	**185**	Pn	**Pn**	**16 38 42.6**	**+0.8**
PHWY				IAML		16 39 21.4	
	comp=E,116nm,0.9s						
RWWY	**Rawlins**	**2.57**	**216**	Pn	**Pn**	**16 38 41.6**	**-1.3**
RWWY				IAML		16 39 21.4	
	comp=E,221nm,0.9s						
RWWY				IAML		16 39 22.6	
	comp=E,315nm,0.9s						
LAO	**LASA Array**	**3.00**	**346**	Pn	**Pn**	**16 38 47.6**	**-1.0**
RLMT	**Red Lodge**	**3.21**	**296**	Pn	**Pn**	**16 38 50.6**	**-1.1**
RLMT				IAML		16 39 49.8	
	comp=E,119nm,1.3s						
RLMT				IAML		16 39 50.1	
	comp=E,79nm,0.9s						
BW06	**Boulder Array**	**3.35**	**254**	Pn	**Pn**	**16 38 53.6**	**0.0**
BW06				IAML		16 39 52.8	
	comp=E,60nm,0.8s						
PD31	**Pinedale Array**	**3.35**	**254**	Pn	**Pn**	**16 38 52.9**	**-0.7**
PDAR	**Pinedale Array**	**3.35**	**254**	Pn	**Pn**	**16 38 53.8**	**+0.2**
	comp=E,4.4nm,0.3s,baz=76,slow=18,SNR=32						
PDAR				Lg	Lg	16 39 39.4	
	comp=E,7.1nm,0.3s,baz=75,slow=35,SNR=16						
PDAR	**Pinedale Array**	**3.35**	**254**	Pn	**Pn**	**16 38 53.5**	**-0.1**
OGNE	**Ogallala**	**3.68**	**139**	Pn	**Pn**	**16 38 57.8**	**-0.3**
GCMT	**Greycliff**	**3.77**	**304**	Pn	**Pn**	**16 38 59.3**	**0.0**
H17A	**Grant Village**	**3.93**	**281**	Pn	**Pn**	**16 39 02.2**	**+0.6**
H17A				IAML		16 40 04.0	
	comp=N,36nm,1.3s						
H17A				IAML		16 40 14.2	
	comp=E,40nm,1.2s						
ISCO	**Idaho Springs**	**3.99**	**185**	Pn	**Pn**	**16 39 02.7**	**+0.1**
ISCO				IAML		16 40 07.4	
	comp=E,35nm,0.9s						
MOOW	**Moose Ponds**	**4.02**	**271**	Pn	**Pn**	**16 39 02.8**	**-0.1**
REDW	**Red Top Meadow**	**4.13**	**266**		**Pn**	**16 39 05.5**	**+1.1**
REDW				IAML		16 40 14.8	
	comp=E,80nm,1.2s						
TPAW	**Teton Pass**	**4.19**	**268**		**Pn**	**16 39 04.3**	**-0.9**
TPAW				IAML		16 40 22.1	
	comp=E,55nm,1.0s						
FXWY	**Fox Creek**	**4.23**	**270**		**Pn**	**16 39 05.8**	**0.0**
AHID	**Auburn Hatcher**	**4.43**	**259**		**Pn**	**16 39 08.9**	**+0.4**
AHID				IAML		16 40 27.1	
	comp=E,58nm,1.0s						
AHID				IAML		16 40 31.3	
	comp=E,53nm,1.0s						
RDMU	**Red Mountain**	**4.57**	**227**	Pn	**Pn**	**16 39 11.2**	**+0.8**
RDMU				IAML		16 40 27.8	
	comp=N,44nm,1.1s						
RDMU				IAML		16 40 52.0	
	comp=E,43nm,0.9s						
DGMT	**Dagmar**	**4.74**	**8**		**Pn**	**16 39 14.2**	**+1.6**
HWUT	**Hardware Ranch**	**5.17**	**247**	Pn	**Pn**	**16 39 19.0**	**+0.3**
HWUT				IAML		16 40 53.3	
	comp=E,40nm,1.1s						
P18A	**Preston Nutter**	**5.62**	**224**	Pn	**Pn**	**16 39 24.8**	**0.0**
MDND	**Maddock**	**5.64**	**42**	Pn	**Pn**	**16 39 24.7**	**-0.1**
P17A	**Butcher Ranch,**	**5.98**	**226**	Pn	**Pn**	**16 39 30.5**	**+0.7**
TMUT	**Trail Mountain**	**6.36**	**227**	Pn	**Pn**	**16 39 35.4**	**+0.3**
Q16A	**Castle Valley**	**6.62**	**225**	Pn	**Pn**	**16 39 38.4**	**-0.2**
JTMT	**Jette**	**7.49**	**305**	Pn	**Pn**	**16 39 51.2**	**+0.8**
TCRU	**Three Creeks R**	**7.52**	**229**		**Pn**	**16 39 51.7**	**+0.7**
ELK	**Elko**	**8.04**	**251**	Pn	**Pn**	**16 39 58.3**	**+0.1**
	comp=E,0.1nm,0.3s,baz=70,slow=11,SNR=4.2						
PSUT	**Pine Spring**	**8.38**	**234**	Pn	**Pn**	**16 40 04.0**	**+1.3**
I10CA	**LAC DU BONNET**	**8.96**	**41**	*i*		17 32 20.0	
	baz=222,slow=326,SNR=9.4						
ULM	**Lac du Bonnet**	**9.07**	**41**	Pn	**Pn**	**16 40 11.8**	**-0.1**
	comp=E,0.3nm,0.3s,baz=233,slow=10,SNR=3.3						
ULM				Pg		16 40 44.6	
	comp=E,0.2nm,0.3s,baz=222,slow=15,SNR=3.4						
ULM				Lg	Lg	16 42 40.6	
	comp=E,0.3nm,0.3s,baz=320,slow=20,SNR=3.8						
NVAR	**Mina Array Bea**	**11.24**	**246**	Pn	**Pn**	**16 40 41.9**	**0.0**
	comp=E,0.1nm,0.3s,baz=53,slow=14,SNR=4.2						
YKA	**Yellowknife Ar**	**19.54**	**347**	P	**Pn**	**16 42 29.6**	**-0.3**
	comp=E,0.1nm,0.3s,baz=159,slow=9.3,SNR=3.6						

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*IDC **07** 16:49:11.7±2.0, 2.°38N×128.°31E, h184^{km}±25^{km}, mb3.0/6, mb1 3.0/7, mb1mx2.9/40, mbtmp3.4/7, Error ellipse: s-maj=50.5km s-min=9.4km az=72.0*

*DJA **07** 16:49:12.0±0.9, 3°N±4°×12°8E±°, h134^{km}±10^{km}, M3.5/8, mb3.5/3, MLv3.5/8*

ISC 07 16:49:08.7±1.1**, 2.°5N**±0.°1×**128.°3E**±0.°1**, h150^{km}, n11, σ1.ˢ63**/11**, mb3.6**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.97**	**207**	P	**Pn**	**16 49 45.2**	**+1.7**
SGSI	**Sangihe**	**2.95**	**293**	P	**Pn**	**16 49 56.5**	**+1.1**
LBMI	**Labuha**	**3.25**	**193**	P	**Pn**	**16 50 00.9**	**+1.6**
SIJI	**Sorong**	**4.53**	**138**	P	**Pn**	**16 50 17.8**	**+1.9**
	0.5nm,0.3s,baz=307,slow=20,SNR=1.7						
GTOI	**Gorontalo**	**5.58**	**250**	P	**Pn**	**16 50 31.0**	**+1.2**
	0.0nm2.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**20.67**	**187**	P	**P**	**16 53 35.4**	**-1.6**
	0.4nm,0.7s,baz=15,slow=11,SNR=1.2						
WRA	**Warramunga Arr**	**23.13**	**165**	P	**P**	**16 53 59.9**	**-1.9**
	0.4nm,0.7s,baz=351,slow=9.8,SNR=7.1						
ASAR	**Alice Springs**	**26.63**	**168**	P	**P**	**16 54 31.8**	**-1.7**
	0.2nm,0.9s,baz=356,slow=11,SNR=1.4						
STKA	**Stephens Creek**	**36.50**	**161**	P	**P**	**16 55 59.0**	**-0.6**
	2.6nm,1.0s,baz=350,slow=12,SNR=2.8						
MKAR	**Makanchi Array**	**59.39**	**325**	P	**P**	**16 58 56.0**	**+0.7**
	0.5nm,0.4s,baz=120,slow=8.2,SNR=11						
KURBB	**Kurchatov Arra**	**63.55**	**327**	P	**P**	**16 59 23.2**	**+0.1**
	0.4nm,0.5s,baz=126,slow=6.1						

GUC 07 16:52:27.0±0.8**, 31.°66S**×**72.°21W, h31**^{km}±5^{km}**, ML3.6, 5C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**1.10**	**27**	⇓*i*P	Pb	16 52 47.5	+0.1
CO06				*e*S	Sb	16 53 02.6	+1.2
VA06	**Catapilco**	**1.19**	**140**	*e*P	Pb	16 52 48.8	-0.2
VA06				*i* S	Sb	16 53 05.5	+1.6
VA06				IAML		16 53 13.2	
	comp=E,3µm,0.6s						
CO03	**El Pedregal**	**1.54**	**58**	⇓*i*P	Pb	16 52 55.2	+0.3
CO03				*i* S	Sb	16 53 15.9	+1.8
CO03				IAML		16 53 26.7	
	comp=E,923nm,0.5s						
ROCH	**El Roble**	**1.66**	**143**	⇑*i*P	Pn	16 52 56.6	+2.5
ROCH				⇑*i*P	Pb	16 52 56.4	-0.6
ROCH				*i* S	Sb	16 53 17.7	+0.1
ROCH				*i* S	Sn	16 53 19.5	+5.1
ROCH				IAML		16 53 24.5	
	comp=N,856nm,0.3s						
VA03	**San Esteban**	**1.79**	**129**	⇑*i*P	Pb	16 52 58.7	-0.5
VA03				*i* S	Sb	16 53 22.1	+1.0
VA03				IAML		16 53 36.3	
	comp=N,1µm,0.4s						
MT02	**Curacav**	**1.83**	**151**	⇑*i*P	Pb	16 52 58.8	-1.2
MT02				*i* S	Sb	16 53 23.7	+1.2
MT02				IAML		16 53 32.5	
	comp=E,697nm,0.9s						
CO05	**La Serena**	**1.93**	**26**	IAML		16 53 42.0	
	comp=N,367nm,0.4s						
PEL	**Peldehue**	**1.96**	**139**	⇓*i*P	Pb	16 53 00.6	-1.6
PEL				*i* S	Sb	16 53 26.8	+0.6
PEL				IAML		16 53 38.8	
	comp=E,516nm,0.8s						
VA05	**Santo Domingo**	**2.06**	**166**	*e*P	Pb	16 53 01.8	-1.9
VA05				*i* S	Sb	16 53 39.9	+11
VA05				IAML		16 53 51.4	
	comp=E,713nm,0.5s						
MT05	**Renca**	**2.13**	**145**	*e*P	Pb	16 53 02.8	-2.2
MT05				*e*S	Sb	16 53 30.6	-0.4
MT05				IAML		16 53 40.0	
	comp=E,742nm,0.3s						
FCH	**Farellones**	**2.32**	**136**	⇑*i*P	Pb	16 53 06.5	-1.9
FCH				*i* S	Sb	16 53 36.6	-0.2
FCH				IAML		16 53 48.2	
	comp=E,300nm,0.7s						
MT01	**Popeta**	**2.34**	**160**	*e*P	Pn	16 53 05.7	+2.3
MT01				IAML		16 53 55.2	
	comp=N,243nm,0.8s						
MT09	**Talagante**	**2.35**	**154**	⇓*i*P	Pb	16 53 07.0	-1.8
MT09				*e*S	Sb	16 53 37.1	-0.2
BO04	**La Punta**	**2.69**	**150**	*e*P	Pb	16 53 11.3	-3.1
BO04				IAML		16 54 02.3	
	comp=E,270nm,0.5s						
LMEL	**Las Melosas**	**2.76**	**143**	*e*P	Pb	16 53 12.9	-2.8
LMEL				*i* S	Sb	16 53 47.4	-1.8
LMEL				IAML		16 54 05.7	
	comp=N,520nm,0.9s						
BO01	**Tunca**	**2.88**	**161**	*e*P	Pn	16 53 13.7	+2.9
BO01				*i* S	Sb	16 53 49.9	-2.7
BO01				IAML		16 54 08.5	
	comp=N,71nm,0.2s						
LCO	**Las Campanas**	**2.94**	**27**	*e*P	Pn	16 53 13.9	+2.0
LCO				*i* S	Sn	16 53 49.4	+3.1
BO02	**Sierra Bellavi**	**3.35**	**159**	*e*P	Pn	16 53 20.4	+3.2
BO02				IAML		16 54 23.1	
	comp=E,175nm,0.7s						
AC04	**Llanos de Chal**	**3.58**	**16**	*e*P	Pn	16 53 21.9	+1.5
AC04				IAML		16 54 31.9	
	comp=E,66nm,0.6s						
AC02	**Maricunga**	**5.51**	**30**	*e*P	Pn	16 53 51.0	+3.7
AC02				*e*S	Sn	16 54 55.3	+5.4

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*NCEDC **07** 16:56:44.4±1.5, 35.°99N±0.°02×120.°56W±0.°01, h4^{km}±7^{km}, ML3.0/23, ML2.8/36(NEIC), Error ellipse: s-maj=2.6km s-min=1.1km az=179.0*

NEIC 07 16:56:44.9±1.4**, 36.°00N**±0.°03×**120.°57W**±0.°03**, h11**^{km}±7^{km}**, Error ellipse: s-maj=4.4km s-min=2.5km az=220.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKD	**Bear Valley Ra**	**0.06**	**161**		Pg	16 56 45.9	-1.4
PMPB	**Monarch Peak**	**0.29**	**318**		Pg	16 56 50.8	0.0
PMPB				IAML		16 56 59.2	
	comp=N,2µm,0.6s						
PMPB				IAML		16 56 59.3	
	comp=E,1µm,0.6s						
TCHL	**Shandon**	**0.34**	**157**		Pg	16 56 51.9	+0.1
TCHL					Sb	16 56 57.8	-0.6
PDRM	**Domengine Ranc**	**0.37**	**26**		Pb	16 56 53.4	-0.1
PAGB	**Antelope Grade**	**0.37**	**136**		Pg	16 56 52.0	-0.4
PAGB				IAML		16 56 59.5	
	comp=E,2µm,0.6s						
PAGB				IAML		16 57 00.9	
	comp=N,1µm,0.6s						
THIS	**South End of C**	**0.39**	**135**		Pg	16 56 52.5	-0.2
THIS					Sb	16 56 59.3	-0.6
TRAM	**Private Proper**	**0.40**	**143**		Pg	16 56 52.7	-0.2
TRAM					Sg	16 56 59.2	+0.9
RAMR	**Ramage Ranch**	**0.44**	**214**		Pg	16 56 53.4	-0.2
RAMR					Sg	16 57 00.3	+0.9
TSCN	**Private Proper**	**0.49**	**159**		Pg	16 56 54.5	0.0
PAPM	**Alder Peak**	**0.65**	**262**		Pg	16 56 57.2	-0.4
BBNM	**San Benito**	**0.65**	**321**		Pg	16 56 57.9	+0.3
BSMM	**Soledad Missio**	**0.79**	**299**		Pg	16 56 59.8	-0.6
BJCM	**Johnson Can.**	**0.86**	**309**		Pg	16 57 00.8	-0.7
HAST	**Hastings Reser**	**0.89**	**296**		Pg	16 57 01.2	-0.8
SCZ	**Santa Cruz**	**0.90**	**312**		Pg	16 57 01.6	-0.7
SAO	**San Andreas Ge**	**1.04**	**317**		Pb	16 57 04.5	-0.4
SAO	**San Andreas Ge**	**1.04**	**317**	Pg	Pb	16 57 04.1	-0.8
HSFM	**Saint Francis**	**1.10**	**317**		Pb	16 57 05.4	-0.6
PACP	**Pacheco Peak**	**1.16**	**330**		Pg	16 57 07.9	+0.7
HCOM	**Corn Cob Canyo**	**1.28**	**314**		Pn	16 57 06.2	-2.4
GHS	**Gilroy Hot Spr**	**1.30**	**327**		Pn	16 57 09.0	-0.1
HELL	**Mitchell Peak,**	**1.42**	**61**		Pn	16 57 10.1	-0.6
MHC	**Mount Hamilton**	**1.59**	**327**		Pn	16 57 13.4	+0.3
KCC	**Kaiser Creek**	**1.66**	**37**		Pn	16 57 14.4	+0.5
ISA	**Isabella, Lake**	**1.73**	**101**		Pn	16 57 14.3	-0.7
CMB	**Columbia Colle**	**2.03**	**4**		Pn	16 57 19.1	0.0
OSI	**Osito Audit: C**	**2.05**	**132**	Pn	Pn	16 57 18.9	-0.4
OSI				IAML		16 57 53.6	
	comp=E,102nm,0.8s						
OSI				IAML		16 57 56.7	
	comp=N,80nm,0.7s						
MDCM	**Deadman Creek**	**2.10**	**35**		Pn	16 57 21.6	+1.4
MTUM	**Tungsten Hills**	**2.10**	**49**		Pn	16 57 21.6	+1.5
LCH	**Last Change Ra**	**2.65**	**62**	Pn	Pn	16 57 27.1	-0.6
LCH				IAML		16 58 19.6	
	comp=E,48nm,1.2s						
LCH				IAML		16 58 20.7	
	comp=N,41nm,2.0s						
LHV	**Little Huntoon**	**2.79**	**36**	Pn	Pn	16 57 29.6	+0.2
EMB	**Emerald Bay**	**2.99**	**7**	Pn	Pn	16 57 31.8	-0.6
QSM	**Queen of Sheba**	**3.00**	**90**	Pn	Pn	16 57 33.0	+0.6
QSM				IAML		16 58 28.5	
	comp=E,25nm,0.8s						
QSM				IAML		16 58 29.9	
	comp=N,24nm,0.9s						
NVAR	**Mina Array Bea**	**3.02**	**36**	Pn	Pn	16 57 33.1	+0.3
NV11	**Mina Array Sit**	**3.10**	**38**	Pn	Pn	16 57 33.9	+0.1
GSC	**Goldstone, Bar**	**3.14**	**102**		Pn	16 57 34.0	-0.4
GSC				IAML		16 58 34.9	
	comp=E,30nm,2.7s						
GSC				IAML		16 58 43.8	
	comp=N,27nm,1.7s						
YERR	**Yerington**	**3.16**	**19**	Pn	Pn	16 57 35.0	+0.2

YERR				IAML		16 58 29.9	
	comp=N,36nm,1.3s						
GWY	**Greenwater Val**	**3.16**	**86**	Pn	Pn	16 57 34.4	-0.4
GWY				IAML		16 58 36.0	
	comp=E,26nm,0.9s						
GWY				IAML		16 59 06.6	
	comp=N,23nm,4.5s						
PNTR	**Pine Nut**	**3.18**	**14**	Pn	Pn	16 57 35.1	+0.1
ORV	**Oroville**	**3.62**	**348**		Pn	16 57 41.1	+0.2
ORV				IAML		16 58 39.0	
	comp=E,15nm,4.1s						
PFO	**Pinyon Flats O**	**4.13**	**124**	Pn	Pn	16 57 48.0	-0.1
PFO				IAML		16 58 33.8	
	comp=E,9.8nm,3.2s						
R11A	**Troy Canyon, C**	**4.62**	**58**	Pn	Pn	16 57 54.6	-0.2
R11A				IAML		16 59 10.8	
	comp=E,6.4nm,4.6s						
TKX	**Tecate**	**4.74**	**135**		Pn	16 57 56.7	+0.3

NNC 07 16:57:41.6±5.2,38°.80N×73°.12E,h0^{km},mb3.9,mpv3.5, 3C-3D,Error ellipse: s-maj=38.8km s-min=20.7km az=171.0,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TKM2	**Tokmak 2**	**4.52**	**24**	⇓Pg	Pg	16 59 06.3	-1.9
	9.3nm,0.9s						
TKM2				⇓Lg	Lg	17 00 04.3	
	14nm,0.8s						
KK09	**Karatay Array**	**4.75**	**336**	⇓Pn	Pn	16 58 52.4	-2.0
	3.0nm,0.4s,baz=148,slow=12						
KK09				⇑Sn	Sn	16 59 51.0	+0.9
	5.8nm,0.6s,baz=145,slow=22						
DGS	**Degeres**	**4.87**	**24**	Pg	Pb	16 59 10.5	+2.7
	6.9nm,0.7s						
DGS				Lg	Lg	17 00 18.0	
	6.5nm,1.0s						
TNSS	**Tian-Shan**	**5.13**	**33**	Pg	Pg	16 59 16.4	-3.5
	2.3nm,0.3s						
TNSS				Lg	Lg	17 00 28.8	
	3.2nm,0.8s						
KRBS	**Karabastau**	**5.25**	**21**	Pg	Pb	16 59 17.4	+3.0
	3.1nm,0.7s						
KRBS				Lg	Lg	17 00 31.0	
	8.0nm,0.9s						
MDOK	**Medeo**	**5.28**	**33**	⇑Pg	Pb	16 59 17.5	+2.8
	4.4nm,0.6s						
MDOK				⇑Lg	Lg	17 00 30.2	
	14nm,1.0s						
KOTS	**Kotyrbulak**	**5.36**	**33**	Pg	Pb	16 59 19.4	+3.2
	5.6nm,0.5s						
KOTS				Lg	Lg	17 00 34.2	
	10.0nm,0.6s						
KTBS	**Karatobe**	**5.59**	**28**	Pg	Pb	16 59 22.0	+2.0
	3.0nm,0.8s						
KTBS				Lg	Lg	17 00 38.0	
	6.5nm,0.6s						
KUU	**Kurty**	**5.63**	**24**	Pg	Pb	16 59 25.0	+4.2
	3.8nm,0.7s						
KUU				Lg	Lg	17 00 43.2	
	5.2nm,1.1s						

NEIC ***07*** *16:58:43.1±1.6,43°.15N±0°.08×126°.6W±0°.2,h10^{km}±1^{km}, ML3.5/41,Error ellipse: s-maj=21.4km s-min=12.6km az=247.0*

IDC ***07*** *16:58:44.6±1.2,43°.54N×126°.16W,h0^{km},mb3.7/7, mb1 3.9/11,mb1mx3.7/56,mbtmp3.6/11,ML3.6/4,MS3.3/5, Ms1 3.3/5,ms1mx2.9/61,Error ellipse: s-maj=24.8km s-min=12.8km az=44.0*

ISC 07 16:58:45.4±1.0,43°.32N±0°.08×126°.5W±0°.1,h10^{km},n63, σ1^{s}.48/53,mb4.0/9,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**1.65**	**105**		**Pn**	**16 59 11.9**	**-2.5**
KBO	**Bosley Butte**	**2.01**	**123**	Pn	Pn	16 59 13.9	-5.6
KBO				IAML		16 59 36.0	
	comp=N,283nm,2.2s						
DBO	**Dodson Butte**	**2.38**	**94**	Pn	**Pn**	**16 59 23.3**	**-1.4**
COR	**Corvallis**	**2.63**	**60**	Pn	**Pn**	**16 59 26.8**	**-1.0**
COR				IAML		17 00 07.7	
	comp=N,136nm,3.4s						
COR				IAML		17 00 09.1	
	comp=N,140nm,2.0s						
BUCK	**Buck Mountain**	**2.69**	**70**		**Pn**	**16 59 28.2**	**-0.6**
BUCK				IAML		17 00 27.8	
	comp=E,121nm,2.8s						
BUCK				IAML		17 01 06.3	
	comp=N,181nm,4.8s						
HUMO	**Hull Mountain**	**2.69**	**104**	Pn	**Pn**	**16 59 27.0**	**-1.8**
HEBO	**Mount Hebo**	**2.73**	**45**	Pn	**Pn**	**16 59 28.1**	**-1.2**
HEBO				IAML		17 00 31.6	
	comp=E,283nm,1.7s						
YBH	**Yreka Blue Hor**	**3.22**	**118**	Pn	**Pn**	**16 59 35.5**	**-0.6**
	comp=E,1.2nm,0.3s,baz=283,slow=13,SNR=30						
YBH				Sn	**Sn**	**17 00 17.4**	**+2.8**
	comp=E,0.9nm,0.3s,baz=242,slow=7.4,SNR=4.0						
YBH	**Yreka Blue Hor**	**3.22**	**118**	Pn	**Pn**	**16 59 35.0**	**-1.1**
E03A	**Lebam**	**3.83**	**32**	Pn	**Pn**	**16 59 43.5**	**-0.9**
E03A				IAML		17 00 38.4	
	comp=N,103nm,3.8s						
E03A				IAML		17 01 28.4	
	comp=E,121nm,2.8s						
F04A	**Amboy**	**3.91**	**47**	Pn	**Pn**	**16 59 45.4**	**0.0**
F04A				IAML		17 00 38.5	
	comp=E,71nm,0.8s						
F04A				IAML		17 00 56.5	
	comp=N,57nm,3.5s						
HOOD	**Mount Hood Mea**	**4.01**	**58**	Pn	**Pn**	**16 59 47.4**	**+0.4**
HOOD				IAML		17 00 40.8	
	comp=E,102nm,1.7s						
HOOD				IAML		17 00 47.7	
	comp=N,80nm,1.4s						
PINE	**Pine Mountain**	**4.06**	**81**		**Pn**	**16 59 47.7**	**-0.1**
PINE				IAML		17 00 35.4	
	comp=E,47nm,4.4s						
PINE				IAML		17 00 55.2	
	comp=N,53nm,4.7s						
K05A	**Summer Lake**	**4.15**	**96**	Pn	**Pn**	**16 59 48.8**	**-0.2**
K05A				IAML		17 01 39.8	
	comp=E,64nm,4.4s						
K05A				IAML		17 02 07.0	
	comp=N,55nm,4.7s						
WISH	**Wishkah**	**4.25**	**26**	Pn	**Pn**	**16 59 48.9**	**-1.2**
NLWA	**Neilton Lookou**	**4.47**	**24**	Pn	**Pn**	**16 59 51.6**	**-1.6**
C03A	**Quillayute Air**	**4.82**	**16**	Pn	**Pn**	**16 59 56.2**	**-1.7**
D05A	**Enumclaw**	**5.00**	**38**	Pn	**Pn**	**17 00 00.3**	**-0.2**
I07A	**Izee**	**5.12**	**79**		**Pn**	**17 00 01.9**	**-0.4**
I07A				IAML		17 01 10.4	
	comp=E,21nm,4.7s						
I07A				IAML		17 02 07.2	
	comp=N,20nm,4.8s						
B04A	**Port Angeles**	**5.18**	**23**	Pn	**Pn**	**17 00 01.8**	**-1.1**
F07A	**Phinny Hill Vi**	**5.35**	**59**		**Pn**	**17 00 05.0**	**-0.2**
LTY	**Liberty**	**5.69**	**44**		**Pn**	**17 00 10.2**	**+0.2**
E07A	**Sunnyside**	**5.71**	**53**	Pn	**Pn**	**17 00 10.1**	**-0.2**
PGC	**Sidney**	**5.73**	**21**	Pn	**Pn**	**17 00 08.8**	**-1.7**
CLRS	**Cowichan Lake**	**5.74**	**16**	Pn	**Pn**	**17 00 08.6**	**-2.0**
G08A	**Pilot Rock**	**5.75**	**67**	Pn	**Pn**	**17 00 09.9**	**-1.1**
HAWA	**Hanford**	**5.82**	**56**	Pn	**Pn**	**17 00 10.4**	**-1.4**
WVOR	**Wild Horse Val**	**5.84**	**96**	Pn	**Pn**	**17 00 10.5**	**-1.7**
E08A	**Dider Farm, El**	**6.16**	**56**		**Pn**	**17 00 16.4**	**+0.1**
BMO	**Blue Mountains**	**6.79**	**74**		**Pn**	**17 00 25.2**	**0.0**
B08A	**Colville Reser**	**7.09**	**42**	Pn	**Pn**	**17 00 29.0**	**-0.3**
F10A	**Beach Ranch, E**	**7.12**	**65**		**Pn**	**17 00 29.5**	**-0.2**
C09A	**Chrisman Ranch**	**7.30**	**49**	Pn	**Pn**	**17 00 32.1**	**0.0**
PLID	**Pearl Lake**	**7.74**	**73**	Pn	**Pn**	**17 00 38.2**	**-0.1**
NVAR	**Mina Array Bea**	**7.90**	**125**	Pn	**Pn**	**17 00 41.9**	**+1.4**
	comp=N,0.2nm,0.3s,baz=297,slow=14,SNR=3.0						
LLLB	**Lillooet**	**7.94**	**22**	Pn	**Pn**	**17 00 39.6**	**-1.2**
NEW	**Newport**	**8.20**	**50**	Pn	**Pn**	**17 00 42.3**	**-2.1**
	comp=N,0.4nm,0.3s,baz=252,slow=4.6,SNR=2.3						
ELK	**Elko**	**8.76**	**103**	LR	LR	17 04 26.4	
	comp=N,252nm,19.6s,baz=264,slow=40						
BCYI	**Bear Canyon**	**9.52**	**80**	Pn	**Pn**	**17 01 02.6**	**-0.1**
LRM	**Limekiln Ridge**	**10.33**	**71**	Pn	**Pn**	**17 01 14.3**	**+0.5**
PDAR	**Pinedale Array**	**12.41**	**87**	Pn	**Pn**	**17 01 42.7**	**+0.5**
	comp=N,0.1nm,0.3s,baz=277,slow=12,SNR=5.5						
PDAR				LR	LR	17 06 57.3	
	comp=N,122nm,21.3s,baz=252,slow=40						
PFO	**Pinyon Flats O**	**12.47**	**138**	LR	LR	17 06 55.9	
	comp=N,131nm,18.6s,baz=316,slow=39						
DLBC	**Dease Lake**	**15.29**	**353**	Pn	**Pn**	**17 02 23.7**	**+2.5**
	comp=N,0.1nm,0.3s,baz=176,slow=19,SNR=2.1						
DLBC	**Dease Lake**	**15.29**	**353**	P	**Pn**	**17 02 26.5**	**+5.2**
ANMO	**Albuquerque**	**17.62**	**112**	LR	LR	17 08 55.8	
	comp=N,71nm,18.7s,baz=302,slow=35						
YKA	**Yellowknife Ar**	**20.43**	**16**	P	**P**	**17 03 21.1**	**-1.4**
	comp=N,4.9nm,0.8s,baz=203,slow=10,SNR=12						
YKA	**Yellowknife Ar**	**20.43**	**16**	P	**P**	**17 03 22.2**	**-0.3**
KDAK	**Kodiak Island**	**21.81**	**321**	LR	LR	17 09 37.1	
	comp=N,106nm,21.6s,baz=109,slow=30						
ULM	**Lac du Bonnet**	**21.97**	**61**	P	**P**	**17 03 37.5**	**-1.8**
	comp=N,5.2nm,0.8s,baz=275,slow=11,SNR=5.8						
TXAR	**Lajitas Array**	**22.99**	**120**	P	**P**	**17 03 50.1**	**-0.2**
	comp=N,0.6nm,0.8s,baz=304,slow=6.4,SNR=4.4						
ILAR	**Eielson Array**	**24.37**	**339**	P	**P**	**17 04 01.4**	**-2.0**
	comp=N,1.4nm,1.0s,baz=159,slow=8.1,SNR=9.9						
NEEM	**North Greenlan**	**44.98**	**17**	*i* P	**P**	**17 06 60.0**	**-0.7**
NEEM				IAmb	IAmb	17 07 01.5	
	comp=Z,7.2nm,0.8s						
SUMG	**Summit**	**48.74**	**24**	*i* P	**P**	**17 07 28.6**	**-1.5**
SUMG				IAmb	IAmb	17 07 30.5	
	comp=Z,5.8nm,0.8s						
PETK	**Petropavlovsk-**	**49.21**	**309**	P	**P**	**17 07 34.7**	**+1.2**
	comp=Z,2.9nm,0.9s,baz=81,slow=9.6,SNR=4.7						
DAG	**Danmarks Havn**	**52.13**	**16**	*i* P	**P**	**17 07 53.6**	**-1.6**
DAG				IAmb	IAmb	17 07 54.7	
	comp=Z,3.0nm,0.7s						
H11N3	**WAKE ISLAND Hy**	**59.84**	**269**	T	T	18 13 15.3	
	baz=50,slow=75,SNR=44						
H11N2	**WAKE ISLAND Hy**	**59.84**	**269**	T	T	18 13 15.2	
	baz=50,slow=75,SNR=26						
H11N1	**WAKE ISLAND Hy**	**59.86**	**269**	T	T	18 13 16.6	
	baz=50,slow=75,SNR=28						
H11S1	**WAKE ISLAND Hy**	**60.76**	**268**	T	T	18 14 21.7	
	baz=50,slow=75,SNR=259						
H11S2	**WAKE ISLAND Hy**	**60.77**	**268**	T	T	18 14 25.1	
	baz=50,slow=75,SNR=166						
H11S3	**WAKE ISLAND Hy**	**60.78**	**268**	T	T	18 14 24.9	
	baz=50,slow=75,SNR=153						
SONM	**Songino Array**	**77.96**	**327**	P	**P**	**17 10 45.6**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=14,slow=7.8,SNR=3.9						
GERES	**GERESS Array B**	**81.78**	**25**	P	**P**	**17 11 03.0**	**-1.3**
	comp=Z,0.6nm,0.8s,baz=356,slow=4.0,SNR=4.0						

IDC ***07*** *17:02:07.6±1.0,38°.51N×73°.38E,h0^{km},mb3.7/11, mb1 3.9/17,mb1mx3.7/53,mbtmp3.8/17,ML3.3/6,MS3.4/2, Ms1 3.4/2,ms1mx2.6/65,Error ellipse: s-maj=18.9km s-min=18.3km az=164.0*

KRNET ***07*** *17:02:10.9±0.1,38°.85N×73°.27E,h18^{km},mb2.8*

BJI ***07*** *17:02:10.9±0.0,38°.69N×73°.28E,h6^{km},mb4.1/4,ML3.8/4, Ms3.6/2,Ms7 3.4/1*

NNC ***07*** *17:02:13.8±2.6,38°.86N×73°.47E,h0^{km},mb4.8,mpv4.3, Error ellipse: s-maj=20.0km s-min=12.9km az=164.0*

ISC 07 17:02:11.0±1.0,38°.73N±0°.07×73°.35E±0°.05,h10^{km},n49, σ2^{s}.77/49,mb3.9/10,8C-9D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**1.29**	**5**	⇑*e*P	**Pb**	**17 02 33.3**	**-2.2**
	baz=9.0						
SFK				⇑*e*S	**Sg**	**17 02 49.8**	**-2.7**
	baz=9.0						
DRK	**Karamyk**	**1.42**	**302**	⇓*i*P	**Pn**	**17 02 35.7**	**-1.5**
	baz=99						
DRK				⇓*i*S	**Sn**	**17 02 53.6**	**-2.5**
	baz=99						
OHH	**Osh**	**1.84**	**347**	⇑*i*P	**Pn**	**17 02 42.8**	**0.0**
	baz=48						
OHH				⇑*i*S	**Sn**	**17 03 06.2**	**-0.1**
	baz=48						
KSH	**Kashi**	**2.19**	**68**	Pg	Pn	17 02 42.8	-4.8
KSH				Sg	**Sn**	**17 03 07.5**	**-7.3**
KSH				smax	smax		
	comp=N,1μm,0.6s						
KSH				smax	smax		
	comp=E,920nm,0.6s						
BTK	**Batken**	**2.37**	**305**	⇓*i*P	**Pn**	**17 02 51.5**	**+1.5**
	baz=3.0						
BTK				⇓*i*S	**Sn**	**17 03 20.9**	**+1.7**
	baz=3.0						
AML	**Almayashu**	**3.41**	**4**	P	**Pn**	**17 03 07.0**	**+2.4**
	SNR=147						
UCH	**Uchtor**	**3.60**	**14**	P	**Pn**	**17 03 10.4**	**+3.0**
	SNR=34						
EKS2	**Erkin-Say**	**3.94**	**5**	P	**Pn**	**17 03 15.4**	**+3.7**
	SNR=18						
AAK	**Ala-Archa**	**4.00**	**12**	Pn	**Pn**	**17 03 16.0**	**+3.4**
	5.7nm,0.3s,baz=173,slow=6.3,SNR=35						
AAK				Sn	**Sb**	**17 04 10.4**	**+0.2**
	3.4nm,0.3s,baz=352,slow=13,SNR=6.5						
AAK	**Ala-Archa**	**4.00**	**12**	P	**Pn**	**17 03 15.9**	**+3.4**
	SNR=80						
AAK	**Ala-Archa**	**4.00**	**12**	⇓Pn	**Pn**	**17 03 15.8**	**+3.3**
	48nm,0.6s						
AAK				⇓Lg	Lg	17 04 15.9	
	77nm,0.7s						
MRKS	**Merke**	**4.01**	**359**	Pg	**Pb**	**17 03 20.0**	**-1.9**
	32nm,0.6s						
MRKS				Lg	Lg	17 04 12.4	
	35nm,0.4s						
KBK	**Karagaybulak**	**4.11**	**17**	P	**Pn**	**17 03 17.7**	**+3.6**
	SNR=12						
ULHL	**Ulahol**	**4.15**	**31**	P	**Pb**	**17 03 26.0**	**+1.7**
	SNR=13						
CHMS	**Chumysh**	**4.40**	**14**	P	Pn	17 03 23.0	+5.1
	SNR=7.1						
DZA	**Taraz**	**4.43**	**340**	Pg	**Pn**	**17 03 22.4**	**+4.1**
	138nm,0.4s						
DZA				Lg	Lg	17 04 16.3	
	125nm,0.3s						
TKM2	**Tokmak 2**	**4.52**	**21**	⇑Pg	**Pg**	**17 03 34.9**	**-2.7**
	24nm,0.7s						
TKM2				⇑Lg	Lg	17 04 33.6	
	51nm,0.9s						
USP	**Ospenovka**	**4.62**	**10**	P	Pn	17 03 26.0	+5.1
	SNR=10.0						
KST	**Kastek**	**4.74**	**24**	Pg	**Pb**	**17 03 37.7**	**+3.3**
	16nm,0.5s						
KST				Lg	Lg	17 04 43.0	
	49nm,0.6s						
DGS	**Degeres**	**4.87**	**21**	Pg	**Pb**	**17 03 39.3**	**+2.8**
	49nm,0.4s						
DGS				Lg	Lg	17 04 45.6	
	34nm,0.8s						
KK09	**Karatay Array**	**4.89**	**335**	⇑Pn	**Pn**	**17 03 26.9**	**+2.2**
	19nm,0.6s,baz=150,slow=13						
KK09				⇓Sn	**Sn**	**17 04 26.5**	**+5.2**
	50nm,0.7s,baz=149,slow=24						
TNSS	**Tian-Shan**	**5.09**	**31**	Pg	**Pb**	**17 03 43.5**	**+3.1**
	48nm,0.5s						
TNSS				Lg	Lg	17 04 52.7	
	21nm,0.4s						
MDOK	**Medeo**	**5.24**	**31**	⇓Pg	**Pb**	**17 03 45.8**	**+3.0**
	34nm,0.8s						
MDOK				⇓Lg	Lg	17 04 56.8	
	71nm,1.1s						
MDOK	**Medeo**	**5.24**	**31**	Pg	**Pb**	**17 03 46.5**	**+3.7**
	22nm,0.4s						
MDOK				Lg	Lg	17 04 58.0	
	43nm,1.0s						
KNDC	**Almaty**	**5.25**	**30**	⇑Pg	**Pg**	**17 03 47.6**	**-4.0**
	56nm,0.7s						
KNDC				Lg	Lg	17 04 54.0	
KRBS	**Karabastau**	**5.26**	**19**	Pg	**Pb**	**17 03 45.8**	**+2.6**
	26nm,0.4s						
KRBS				Lg	Lg	17 04 57.9	
	36nm,0.5s						
KOTS	**Kotyrbulak**	**5.33**	**31**	Pg	**Pb**	**17 03 47.9**	**+3.6**
	26nm,0.8s						
KOTS				Lg	Lg	17 05 01.5	
	90nm,0.6s						
KTBS	**Karatobe**	**5.58**	**26**	Pg	**Pb**	**17 03 51.3**	**+2.8**
	15nm,0.6s						
KTBS				Lg	Lg	17 05 04.6	
	29nm,0.7s						
KUU	**Kurty**	**5.63**	**23**	Pg	**Pb**	**17 03 52.9**	**+3.5**
	15nm,0.7s						
KUU				Lg	Lg	17 05 08.7	
	50nm,0.7s						
MKAR	**Makanchi Array**	**10.39**	**36**	Pn	**Pn**	**17 04 41.1**	**+1.0**
	0.1nm,0.3s,baz=222,slow=13,SNR=15						
WMQ	**Urumqi**	**11.93**	**60**	*e*P	**Pn**	**17 05 04.9**	**+3.7**
KURBB	**Kurchatov Arra**	**12.45**	**15**	Pn	**Pn**	**17 05 06.8**	**-1.4**
	0.0nm,0.3s,baz=203,slow=12,SNR=5.5						
KURBB				Lg	Lg	17 08 44.3	
	0.0nm,0.3s,baz=206,slow=23,SNR=4.6						
BVAR	**Borovoye Array**	**14.44**	**353**	Pn	**Pn**	**17 05 35.2**	**-0.2**
	0.1nm,0.3s,baz=145,slow=9.7,SNR=2.6						
AKTO	**Aktyubinsk**	**15.97**	**322**	Pn	**Pn**	**17 05 55.1**	**-0.5**
	0.2nm,0.3s,baz=114,slow=15,SNR=4.8						
ZALV	**Zalesovo Beam**	**17.12**	**24**	P	**Pn**	**17 06 09.3**	**-0.9**
	0.4nm,0.3s,baz=214,slow=11,SNR=14						
ARU	**Arti**	**20.25**	**336**	P	**P**	**17 06 46.4**	**+0.2**
	0.4nm,0.3s,baz=126,slow=15,SNR=3.5						
GTA	**Gaotai**	**20.54**	**80**	*e*P	**P**	**17 06 51.6**	**+1.9**
GTA				pP	sP	17 06 56.5	+0.7
GTA				sP	pP	17 07 00.6	+6.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**25.56**	**58**	P	**P**	**17 07 40.9**	**+0.8**
	3.0nm,0.7s,baz=265,slow=7.7,SNR=17						
SONM				LR	LR	17 19 33.5	
	comp=Z,80nm,18.1s,baz=136,slow=41						
AKASG	**Malin Array Be**	**33.08**	**306**	P	**P**	**17 08 46.5**	**-0.3**
	0.9nm,0.6s,baz=77,slow=8.7,SNR=5.1						
FINES	**FINESS Array B**	**36.73**	**324**	P	**P**	**17 09 17.1**	**-1.0**
	3.2nm,0.9s,baz=116,slow=8.7,SNR=6.3						
ARCES	**ARCESS Array B**	**39.83**	**336**	P	**P**	**17 09 44.4**	**+0.2**
	1.8nm,0.7s,baz=110,slow=9.3,SNR=6.1						
PSI	**Prapat**	**42.70**	**141**	LR	LR	17 30 29.3	
	comp=Z,46nm,18.4s,baz=147,slow=40						
NB2	**NORSAR Subarra**	**43.76**	**322**	P	**P**	**17 10 14.8**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**43.76**	**322**	P	**P**	**17 10 15.0**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=94,slow=7.9,SNR=3.8						
TORD	**Torodi Ar. Bea**	**67.63**	**269**	P	P	17 13 06.1	-2.2
	comp=Z,0.5nm,0.5s,baz=46,slow=4.9,SNR=4.9						
INK	**Inuvik**	**71.40**	**10**	P	**P**	**17 13 30.6**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=342,slow=5.9,SNR=4.1						
YKA	**Yellowknife Ar**	**78.92**	**4**	P	**P**	**17 14 14.4**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=348,slow=5.4,SNR=6.3						
WRA	**Warramunga Arr**	**81.63**	**124**	P	P	17 14 26.4	-3.0
	comp=Z,0.5nm,0.8s,baz=324,slow=4.8,SNR=3.0						
ASAR	**Alice Springs**	**84.04**	**127**	P	P	17 14 38.8	-3.2
	comp=Z,0.3nm,0.9s,baz=312,slow=4.1,SNR=2.2						

RSNC 07 17:10:13.7±1.1,3°.82N×71°.31W,h2^{km}±8^{km},ML4.0,Mw4.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTGC	**Puerto Gaitan,**	**0.91**	**295**	*e*P	Pg	17 10 29.2	-1.9
PTGC				*e*S	Sg	17 10 41.8	-1.1
PTGC				*i*		17 10 48.6	
	comp=Z,2μm,0.3s						
GUVC	**San Jose del G**	**1.83**	**226**	*e*P	Pn	17 10 44.2	-2.0
GUVC				*e*S	Sn	17 11 08.6	-1.4
GUVC				*i*		17 11 09.8	
	comp=Z,2μm,0.3s						
VILC	**Villavicencio,**	**2.40**	**277**	*e*P	Pn	17 10 53.5	-0.6
VILC				*e*S	Sn	17 11 24.1	-0.1
TAMC	**Tame, Arauca**	**2.64**	**350**	*e*P	Pn	17 10 56.7	-0.7
TAMC				*e*S	Sn	17 11 30.4	+0.3
TAMC				*i*		17 11 47.5	
	comp=Z,527nm,0.6s						
RUSC	**La Rusia**	**2.71**	**319**	*e*P	Pn	17 10 57.9	-0.9
RUSC				*e*S	Sn	17 11 32.3	-0.2
MACC	**Macarena, Meta**	**3.03**	**237**	*e*P	Pn	17 11 03.9	+1.1
MACC				*e*S	Sb	17 11 43.7	-2.4
MACC				*i*		17 11 57.5	
	comp=Z,727nm,0.6s						
ROSC	**El Rosal**	**3.17**	**289**	*e*P	Pg	17 11 16.5	+1.9
ROSC				*e*S	Sn	17 11 44.6	+1.0
ROSC				*i*		17 12 02.6	
	comp=Z,422nm,0.5s						
SPBC	**San Pablo de B**	**3.30**	**304**	*e*P	Pb	17 11 14.4	+1.3
SPBC				*e*S	Sn	17 11 44.2	-2.3
SPBC				*i*		17 12 04.3	
	comp=Z,300nm,0.4s						
BARC	**Barichara**	**3.33**	**326**	*e*P	Pn	17 11 05.6	-1.4
BARC				*e*S	Sg	17 11 58.6	-2.2
PRAC	**Prado**	**3.57**	**268**	*e*P	Pn	17 11 09.8	-0.5
PRAC				*e*S	Sn	17 11 52.8	-0.3
PRAC				*i*		17 12 16.7	
	comp=Z,295nm,0.5s						
PAMC	**Pamplona, Colo**	**3.76**	**338**	*e*P	Pn	17 11 12.2	-1.0
PAMC				*e*S	Sn	17 11 55.2	-3.2
PAMC				*i*		17 12 15.7	
	comp=Z,184nm,0.7s						
ORTC	**Ortega, Tolima**	**3.93**	**271**	*e*P	Pn	17 11 14.8	-0.4
ORTC				*e*S	Sb	17 12 15.3	+3.4
ORTC				*i*		17 12 26.0	
	comp=Z,623nm,0.7s						
NORC	**Norcasia**	**3.95**	**296**	*e*P	Pn	17 11 14.3	-1.1
NORC				*e*S	Sn	17 12 01.0	-1.4
NORC				*i*		17 12 24.3	
	comp=Z,245nm,0.6s						
BRRC	**Barranca, Sant**	**4.05**	**324**	*e*P	Pb	17 11 26.0	+0.2
BRRC				*e*S	Sn	17 12 03.3	-1.5
ANIL	**Santa Ana**	**4.14**	**279**	*e*P	Pn	17 11 20.3	+2.0
ANIL				*e*S	Sb	17 12 19.6	+1.5
PTBC	**PUERTO BERRIO,**	**4.14**	**311**	*e*P	Pn	17 11 14.9	-3.1
PTBC				*e*S	Sb	17 12 17.5	-0.4
GUY2C	**Guyana, Caldas**	**4.28**	**289**	*e*P	Pn	17 11 17.0	-3.3
GUY2C				*e*S	Sn	17 12 09.4	-1.7
BETC	**Betania**	**4.28**	**255**	*e*P	Pb	17 11 27.3	-2.4
BETC				*e*S	Sb	17 12 21.5	-0.4
BETC				*i*		17 12 30.8	
	comp=Z,226nm,0.6s						
SOCV	**Socops**	**4.46**	**6**	*e*P	Pn	17 11 19.7	-2.7
SOCV				*e*S	Sn	17 12 12.2	-2.7
GARC	**Garzon, Huila**	**4.48**	**249**	*e*P	Pn	17 11 21.6	-1.3
GARC				*e*S	Sb	17 12 25.2	-2.8
GARC				*i*		17 12 32.4	
	comp=Z,703nm,0.3s						
MARP	**Paez Belalcaza**	**4.74**	**258**	*e*P	Pb	17 11 36.6	-1.1
MARP				*e*S	Sb	17 12 38.3	+2.9
HELC	**Santa Helena**	**4.82**	**299**	*e*S	Sn	17 12 22.7	-1.6
OCAC	**Ocana**	**4.82**	**336**	*e*P	Pb	17 11 40.8	+1.7
OCAC				*e*S	Sn	17 12 22.4	-1.8
OCAC				*i*		17 12 53.0	
	comp=Z,252nm,0.5s						
YOTC	**Yotoco, Valle**	**5.03**	**272**	*e*P	Pn	17 11 28.3	-2.0
YOTC				*e*S	Sn	17 12 23.9	-5.3
YOTC				*i*		17 12 53.6	
	comp=Z,52nm,0.6s						
PTLC	**Puerto Leguiza**	**5.03**	**224**	*e*P	Pg	17 11 48.4	-1.8
PTLC				*e*S	Sg	17 12 55.3	-0.1
PTLC				*i*		17 13 04.5	
	comp=Z,316nm,0.6s						
PLMC	**San Jos del P**	**5.08**	**282**	*e*P	Pn	17 11 31.7	+0.7
PLMC				*e*S	Sn	17 12 31.2	+0.9
SDV	**Santo Domingo**	**5.08**	**8**	*e*P	Pn	17 11 27.8	-3.3
SDV				*e*S	Sn	17 12 24.6	-5.8
ZARC	**Zaragoza, Cauc**	**5.08**	**316**	*e*P	Pn	17 11 31.5	+0.6
ZARC				*e*S	Sn	17 12 26.7	-3.5
ZARC				*i*		17 12 32.1	
	comp=Z,76nm,0.5s						
PCON	**Cinco Dias**	**5.29**	**254**	*e*P	Pb	17 11 48.0	+0.6
PCON				*e*S	Sb	17 12 56.0	+4.3
POPC	**Popayan, Colom**	**5.51**	**257**	*e*P	Pn	17 11 37.6	+0.5
POPC				*e*S	Sb	17 13 00.2	+2.7
SOTA	**Rioblanco**	**5.55**	**253**	*e*P	Pb	17 11 47.2	-4.5
SOTA				*e*S	Sb	17 13 05.0	+6.0
UREC	**San Jos de Ur**	**5.74**	**313**	*e*P	Pn	17 11 39.2	-0.8
UREC				*e*S	Sn	17 12 44.1	-2.4
DBBC	**Dabeiba**	**5.82**	**303**	*e*P	Pn	17 11 41.1	-0.2
DBBC				*e*S	Sn	17 12 50.7	+2.0
DBBC				*i*		17 12 53.0	
	comp=Z,278nm,0.7s						
SJCC	**San Jacinto, C**	**7.16**	**328**	*e*P	Pn	17 11 57.9	-1.6
SJCC				*e*S	Sn	17 13 17.9	-3.6
SJCC				*i*		17 13 29.1	
	comp=Z,21nm,0.8s						
CRJC	**Cerrejon, Guaj**	**7.32**	**348**	*e*P	Pn	17 12 00.2	-1.7
CRJC				*e*S	Sn	17 13 17.7	-8.0
CRJC				*i*		17 13 21.2	
	comp=Z,46nm,0.3s						
OTAV	**Otavalo**	**7.98**	**244**	*e*P	Pb	17 12 35.9	+2.9
OTAV				*e*S	Sb	17 14 17.9	+9.2
OTAV				*i*		17 14 29.4	
	comp=Z,8.3nm,0.7s						

NNC 07 17:15:43.0±3.8,38°.84N×73°.13E,h0^{km},mb4.0,mpv3.6, 7C-2D,Error ellipse: s-maj=27.7km s-min=18.4km az=175.0,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	**Merke**	**3.90**	**1**	Pg	Pb	17 16 53.0	+0.4
	11nm,0.3s						
MRKS				Lg	Lg	17 17 49.1	
	22nm,0.6s						
AAK	**Ala-Archa**	**3.93**	**15**	⇑Pn	Pn	17 16 48.2	+3.5
	14nm,0.8s						
AAK				⇑Lg	Lg	17 17 49.1	
	15nm,0.8s						
TKM2	**Tokmak 2**	**4.48**	**24**	⇑Pg	Pb	17 17 03.1	+0.5
	3.5nm,0.5s						
TKM2				⇑Lg	Lg	17 18 08.0	
	5.3nm,0.7s						
KK09	**Karatay Array**	**4.72**	**336**	⇓Pn	Pn	17 16 53.6	-1.7
	1.9nm,0.5s,baz=154,slow=14						
KK09				⇑Sn	Sn	17 17 51.7	+0.9
	7.9nm,0.6s,baz=148,slow=22						
KK09				⇑Lg	Lg	17 18 11.2	
	7.9nm,0.7s						
TNSS	**Tian-Shan**	**5.09**	**33**	Pg	Pb	17 17 14.5	+1.4
	3.6nm,0.6s						
TNSS				Lg	Lg	17 18 26.7	
	2.5nm,0.7s						
KRBS	**Karabastau**	**5.21**	**21**	Pg	Pb	17 17 16.7	+1.7
	3.3nm,0.5s						
KRBS				Lg	Lg	17 18 30.7	
	4.6nm,0.9s						
MDOK	**Medeo**	**5.23**	**33**	⇓Pg	Pb	17 17 17.3	+1.9
	6.7nm,0.8s						
MDOK				⇑Lg	Lg	17 18 30.8	
	7.5nm,0.7s						
KOTS	**Kotyrbulak**	**5.32**	**33**	Pg	Pb	17 17 19.0	+2.2
	5.0nm,0.6s						
KOTS				Lg	Lg	17 18 34.0	
	6.9nm,0.8s						
KTBS	**Karatobe**	**5.55**	**28**	Pg	Pb	17 17 22.4	+1.6
	4.3nm,0.5s						
KTBS				Lg	Lg	17 18 38.4	
	6.8nm,0.6s						

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*IDC **07** 17:18:46.3±1.2, 38°.42N×72°.98E, h0^{km}, mb3.7/8, mb1 3.8/15, mb1mx3.5/80, mbtmp3.8/15, ML3.4/6, MS3.1/1, Ms1 3.1/1, ms1mx2.4/49, Error ellipse: s-maj=19.4km s-min=17.8km az=53.0*

*NNC **07** 17:18:47.5±6.2, 38°.22N×72°.79E, h0^{km}, mb4.4, mpv4.1, Error ellipse: s-maj=48.1km s-min=38.0km az=3.0*

ISC 07 17:18:48.1±0.9**, 38°.43N**±0°.07×**73°.10E**±0°.08**, h10^{km}, n23, σ2^{s}19**/22**, mb3.8**/8**, 9C-1D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**4.34**	**14**	Pn	**Pn**	**17 19 57.3**	**+3.0**
	2.7nm,0.3s,baz=194,slow=6.0,SNR=8.0						
AAK				Sn	**Sb**	**17 20 53.4**	**-3.6**
	3.9nm,0.3s,baz=16,slow=16,SNR=3.7						
AAK	**Ala-Archa**	**4.34**	**14**	⇑Pn	Pn	17 19 57.8	+3.5
	16nm,0.5s						
AAK				⇑Sn	**Sb**	**17 20 56.5**	**-0.5**
	90nm,0.8s						
TKM2	**Tokmak 2**	**4.88**	**22**	⇑Pn	Pb	17 20 06.7	-7.1
	9.8nm,0.5s						
TKM2				⇑Lg	Lg	17 21 28.2	
	58nm,1.1s						
KK08	**Karatay Array**	**5.08**	**338**	⇑Pn	**Pn**	**17 20 05.3**	**+1.0**
	9.1nm,0.4s,baz=153,slow=13						
KK08				⇑Sn	**Sn**	**17 21 06.1**	**+3.1**
	21nm,0.5s,baz=150,slow=21						
KK08				⇓Lg	Lg	17 21 31.5	
	17nm,0.6s,baz=158,slow=26						
MDOK	**Medeo**	**5.60**	**31**	⇑Pn	Pn	17 20 15.8	+4.1
	17nm,0.6s						
MDOK				⇑Lg	Lg	17 21 53.6	
	89nm,1.0s						
MKAR	**Makanchi Array**	**10.76**	**36**	Pn	**Pn**	**17 21 24.5**	**+2.3**
	0.1nm,0.3s,baz=206,slow=11,SNR=7.2						
GEYT	**Alibeck**	**11.80**	**272**	Pn	**Pn**	**17 21 33.7**	**-2.8**
	0.5nm,0.3s,baz=335,slow=40,SNR=2.0						
KURBB	**Kurchatov Arra**	**12.79**	**16**	Pn	**Pn**	**17 21 48.1**	**-1.8**
	0.0nm,0.3s,baz=206,slow=12,SNR=5.2						
AB31	**Akbulak array**	**14.37**	**323**	Pn	**Pn**	**17 22 11.4**	**-0.1**
	1.6nm,0.6s,baz=138,slow=17,SNR=31						
AB31				⇑Sn	**Sn**	**17 24 54.1**	**+3.2**
	3.8nm,0.8s						
BVAR	**Borovoye Array**	**14.72**	**354**	Pn	**Pn**	**17 22 14.0**	**-2.3**
	0.2nm,0.3s,baz=194,slow=17,SNR=3.6						
AKTO	**Aktyubinsk**	**16.09**	**323**	Pn	**Pn**	**17 22 32.1**	**-2.2**
	0.5nm,0.3s,baz=131,slow=12,SNR=8.1						
ZALV	**Zalesovo Beam**	**17.48**	**24**	P	**P**	**17 22 52.7**	**-0.3**
	0.2nm,0.3s,baz=213,slow=11,SNR=8.2						
ARU	**Arti**	**20.44**	**336**	P	Pn	17 23 25.6	-2.0
	0.3nm,0.3s,baz=284,slow=24,SNR=1.6						
GNI	**Garni**	**21.98**	**283**	P	**P**	**17 23 44.8**	**+2.5**
	3.4nm,0.5s,baz=18,slow=17,SNR=3.9						
SONM	**Songino Array**	**25.89**	**58**	P	**P**	**17 24 19.0**	**-1.2**
	0.2nm,0.5s,baz=250,slow=10,SNR=1.2						
OBN	**Obninsk**	**29.63**	**316**	LR	LR	17 38 33.3	
	comp=Z,36nm,19.7s,baz=238,slow=40						
CMAR	**Chiang Mai Arr**	**30.04**	**124**	P	**P**	**17 24 59.5**	**+2.1**
	0.2nm,0.3s,baz=308,slow=10,SNR=2.3						
FINES	**FINESS Array B**	**36.86**	**324**	P	**P**	**17 25 55.7**	**-0.6**
	3.1nm,0.9s,baz=116,slow=13,SNR=3.8						
ARCES	**ARCESS Array B**	**40.03**	**336**	P	**P**	**17 26 21.1**	**-1.7**
	3.9nm,1.0s,baz=97,slow=6.6,SNR=4.5						
HFS	**Hagfors**	**42.61**	**320**	P	**P**	**17 26 42.8**	**-1.4**
	1.1nm,0.5s,baz=81,slow=8.9,SNR=1.5						
NB2	**NORSAR Subarra**	**43.87**	**322**	P	**P**	**17 26 52.9**	**-1.5**
	comp=Z,0.8nm,0.6s,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**43.87**	**322**	P	**P**	**17 26 53.0**	**-1.5**
	comp=Z,1.7nm,0.8s,baz=116,slow=5.7,SNR=2.0						
WRA	**Warramunga Arr**	**81.63**	**124**	P	**P**	**17 31 06.6**	**0.0**
	comp=Z,0.4nm,0.7s,baz=321,slow=4.0,SNR=2.3						

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*SJA **07** 17:41:10.6±0.7, 30°.29S×72°.58W, h8^{km}±6^{km}, ML4.8, MW4.5*

*NEIC **07** 17:41:15.7±2.5, 30°.32S±0°.05×72°.17W±0°.06, h13^{km}±4^{km}, mb4.9/39, Mwr4.6/45, ML4.7(GUC), Error ellipse: s-maj=7.1km s-min=6.7km az=140.0*

*NEIC **07** 17:41:15, 30°.32S×72°.24W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.80; M$_{\theta\theta}$0.24; M$_{\phi\phi}$-1.04; M$_{r\theta}$0.35; M$_{\theta\phi}$-0.03; M$_{\phi r}$-0.20; Fault plane solution: M$_{0}$1.03000×10^{16} NP1:ϕ_s158.54000°, δ55.74000°, λ59.41000°. NP2:ϕ_s24.93000°, δ44.64000°, λ126.76000°. Principal axes: T 0.9881, Plg64.0000°, Azm12.0000°; N 0.0740, Plg25.0000°, Azm177.0000°; P -1.0621, Plg6.0000°, Azm270.0000°;*

*IDC **07** 17:41:16.6±0.7, 30°.46S×71°.47W, h0^{km}, mb4.3/8, mb1 4.4/13, mb1mx4.3/26, mbtmp4.3/13, ML4.2/5, MS4.1/10, Ms1 4.1/10, ms1mx3.7/30 Error ellipse: s-maj=25.1km s-min=20.0km az=98.0*

*GUC **07** 17:41:16.9±0.6, 30°.38S×72°.13W, h38^{km}±4^{km}, ML4.7*

*VAO **07** 17:41:32.0±0.7, 29°.98S×71°.50W, h109^{km}±5^{km}, mb4.6*

ISC 07 17:41:14.1±1.7**, 30°.32S**±0°.03×**72°.26W**±0°.05**, h3^{km}**±10^{km}**, n228, σ1^{s}71**/240**, mb4.9**/25**, MS4.2**/10**, 7C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.65**	**124**	⇓*i*P	**Pg**	**17 41 27.1**	**+0.5**
CO06				IAML		17 41 39.0	
	comp=E,38μm,0.4s						
CO06	**Fray Jorge**	**0.65**	**124**		**Pg**	**17 41 26.9**	**+0.3**
CO05	**La Serena**	**0.97**	**66**	⇓*i*P	**Pb**	**17 41 33.3**	**-0.3**
CO05				*i* S	**Sb**	**17 41 45.4**	**-1.5**
CO05				IAML		17 41 48.6	
	comp=N,126μm,1.1s						
CO05	**La Serena**	**0.97**	**66**		**Pb**	**17 41 33.3**	**-0.3**
CO03	**El Pedregal**	**1.46**	**111**	⇓*i*P	**Pn**	**17 41 39.9**	**-1.5**
CO03				*i* S	**Sn**	**17 41 57.6**	**-3.5**
CO03				IAML		17 42 01.2	
	comp=E,14μm,0.5s						
CO03	**El Pedregal**	**1.46**	**111**		**Pn**	**17 41 39.9**	**-1.5**
LCO	**Las Campanas**	**1.88**	**47**	⇑*i*P	**Pn**	**17 41 47.8**	**+0.4**
LCO				*i* S	**Sn**	**17 42 10.9**	**-0.9**
LCO	**Las Campanas**	**1.88**	**47**	Pn	**Pn**	**17 41 47.8**	**+0.4**
LCO	**Las Campanas**	**1.88**	**47**	*e*P	**Pn**	**17 41 47.0**	**-0.4**
AC04	**Llanos de Chal**	**2.35**	**27**	⇑*i*P	**Pn**	**17 41 53.6**	**+0.1**
AC04				IAML		17 42 38.9	
	comp=N,2μm,0.8s						
AC04	**Llanos de Chal**	**2.35**	**27**	Pn	**Pn**	**17 41 53.5**	**-0.1**
AC04	**Llanos de Chal**	**2.35**	**27**	*e*P	**Pn**	**17 41 54.0**	**+0.4**
VA06	**Catapilco**	**2.39**	**160**	*e*P	**Pn**	**17 41 53.9**	**-0.2**
VA06				*i* S	**Sn**	**17 42 20.2**	**-3.7**
AROD	**Rodeo**	**2.42**	**87**	*e*P	**Pn**	**17 41 57.0**	**+2.1**
AROD				*e*P		17 41 57.3	
AROD				*e*S	**Sg**	**17 42 33.4**	**+1.5**
VA01	**Torpederas**	**2.75**	**169**	IAML		17 42 46.5	
	comp=E,2μm,0.7s						
VA01	**Torpederas**	**2.75**	**169**	Pn	**Pn**	**17 41 58.6**	**-0.6**
VA01	**Torpederas**	**2.75**	**169**	*e*P	**Pn**	**17 41 58.9**	**-0.2**
ACCO	**Cerro Coronel**	**2.78**	**96**	*e*P	**Pb**	**17 42 02.9**	**-1.7**
ACCO				*e*S	**Sb**	**17 42 40.8**	**+1.6**
VA03	**San Esteban**	**2.85**	**150**	⇑*i*P	**Pn**	**17 42 01.1**	**+0.6**
VA03				IAML		17 42 44.0	
	comp=E,4μm,0.6s						
VA03	**San Esteban**	**2.85**	**150**		**Pn**	**17 42 00.8**	**+0.2**
VA03	**San Esteban**	**2.85**	**150**	*e*P	**Pn**	**17 42 01.0**	**+0.4**
VA03				*e*P		17 42 01.3	
VA03				*e*S	**Sn**	**17 42 36.4**	**+1.0**
VA03				IAML		17 42 45.3	
	comp=Z,3μm,0.6s						
ROCH	**El Roble**	**2.86**	**158**	⇑*i*P		17 42 01.0	
ROCH				⇑*i*P	**Pn**	**17 42 00.8**	**-0.1**
ROCH				*i* S	**Sn**	**17 42 33.2**	**-2.6**
ROCH				IAML		17 42 52.2	
	comp=E,7μm,0.8s						
ROCH				IAML		17 42 52.6	
	comp=E,5μm,0.7s						
ROC1	**El Roble**	**2.86**	**158**	*e*P	**Pn**	**17 42 01.0**	**+0.1**
ROC1				*e*S	**Sn**	**17 42 33.3**	**-2.6**
MT02	**Curacav**	**3.09**	**162**	*e*P	**Pn**	**17 42 03.5**	**-0.3**
MT02				*i* S	**Sn**	**17 42 36.8**	**-4.4**
MT02				IAML		17 43 01.4	
	comp=N,1μm,0.5s						
MT02	**Curacav**	**3.09**	**162**		**Pn**	**17 42 03.5**	**-0.3**
MT02	**Curacav**	**3.09**	**162**	*e*P	**Pn**	**17 42 04.0**	**+0.2**
MT02				*e*S	Sn	17 42 30.6	-11
MT02				*e*S		17 42 43.3	
MT02				IAML		17 42 56.2	
	comp=Z,2μm,0.7s						
AUSP	**Uspallata**	**3.11**	**128**	*e*P	**Pn**	**17 42 07.0**	**+2.6**
AUSP				*e*P		17 42 07.4	
AUSP				*e*S	**Sb**	**17 42 46.6**	**-2.2**
PEL	**Peldehue**	**3.12**	**155**	⇑*i*P	**Pn**	**17 42 04.8**	**+0.5**
PEL				*i* S	**Sn**	**17 42 39.8**	**-2.5**
PEL				IAML		17 42 55.7	
	comp=N,3μm,0.6s						
PEL	**Peldehue**	**3.12**	**155**	Pn	**Pn**	**17 42 04.8**	**+0.5**
PEL	**Peldehue**	**3.12**	**155**	*e*P	**Pn**	**17 42 05.0**	**+0.6**
PEL				*e*S	**Sb**	**17 42 46.6**	**-2.4**
ZON	**Zonda**	**3.32**	**113**	Pn	**Pn**	**17 42 08.4**	**+1.4**
MT05	**Renca**	**3.33**	**157**	*e*P	**Pn**	**17 42 07.5**	**+0.3**
MT05				*i* S	**Sn**	**17 42 45.1**	**-2.3**
MT05				IAML		17 43 00.2	
	comp=E,4μm,0.4s						
MT05	**Renca**	**3.33**	**157**		**Pn**	**17 42 07.5**	**+0.3**
MT05	**Renca**	**3.33**	**157**	*e*P	**Pn**	**17 42 08.0**	**+0.8**
MT05				*e*S	**Sn**	**17 42 47.6**	**+0.2**
MT05				IAML		17 43 04.4	
	comp=Z,3μm,1.2s						
VA05	**Santo Domingo**	**3.38**	**171**	*e*P	**Pn**	**17 42 07.3**	**-0.4**
VA05				*i* S	**Sn**	**17 42 43.6**	**-4.8**
VA05	**Santo Domingo**	**3.38**	**171**		**Pn**	**17 42 06.9**	**-0.9**
RTCV	**Cerro Valdivia**	**3.55**	**117**	*e*P	**Pn**	**17 42 13.0**	**+2.8**
MT09	**Talagante**	**3.62**	**163**	⇑*i*P	**Pn**	**17 42 11.8**	**+0.6**
MT09	**Talagante**	**3.62**	**163**	Pn	**Pn**	**17 42 11.8**	**+0.6**
MT01	**Popeta**	**3.64**	**167**	*e*P	**Pn**	**17 42 11.1**	**-0.3**
MT01				IAML		17 43 10.5	
	comp=E,1μm,0.4s						
MT01	**Popeta**	**3.64**	**167**		**Pn**	**17 42 11.2**	**-0.2**
MT01	**Popeta**	**3.64**	**167**	*e*P	Pn	17 42 05.6	-5.9
MT01				*e*P		17 42 11.3	
MT01				*e*S	**Sn**	**17 42 53.8**	**-1.1**
MT01				IAML		17 43 20.4	
	comp=Z,1μm,0.6s						
ASAL	**Salagasta**	**3.71**	**129**	*e*P	**Pn**	**17 42 15.8**	**+3.4**
ASAL				*e*S	**Sb**	**17 43 05.6**	**-0.1**
ARCO	**CERRO ARCO**	**3.80**	**132**	*e*P	**Pn**	**17 42 17.8**	**+4.1**
ARCO				*e*P		17 42 18.0	
ARCO				*e*S	**Sb**	**17 43 08.6**	**+0.1**
ARCO				IAML		17 43 19.0	
	comp=Z,1μm,1.6s						
VCA	**Vinchina**	**3.87**	**67**	*e*P	**Pn**	**17 42 18.0**	**+3.3**
VCA				*e*P		17 42 19.0	
VCA				*e*S	**Sb**	**17 43 10.1**	**-0.4**
VCA				IAML		17 43 18.8	
	comp=Z,2μm,1.6s						
BO04	**La Punta**	**3.92**	**159**	*e*P	**Pn**	**17 42 15.8**	**+0.5**
BO04				*i* S	**Sn**	**17 42 58.8**	**-3.2**
BO04				IAML		17 43 19.3	
	comp=N,2μm,0.8s						
LMEL	**Las Melosas**	**3.93**	**154**	*e*P	**Pn**	**17 42 16.6**	**+1.0**
LMEL				*i* S	**Sn**	**17 42 59.6**	**-2.7**
AAGR	**Agrelo**	**4.03**	**134**	*e*P	**Pn**	**17 42 20.0**	**+3.2**
AAGR				*e*P	Pb	17 42 20.8	-4.9
AAGR				*e*S	**Sb**	**17 43 17.1**	**+2.2**
AVFE	**Valle Fertil**	**4.17**	**96**	*e*P	Pn	17 42 14.6	-4.1
AVFE				*e*P	**Pn**	**17 42 20.0**	**+1.3**
AVFE				*e*P	**Pn**	**17 42 20.8**	**+2.1**
AVFE				*e*S	**Sb**	**17 43 14.6**	**-4.3**
AVFE				IAML		17 43 24.8	
	comp=Z,674nm,2.5s						
BO01	**Tunca**	**4.19**	**167**		**Pn**	**17 42 18.8**	**-0.1**
BO01	**Tunca**	**4.19**	**167**	*e*P	**Pn**	**17 42 19.0**	**+0.1**
BO01				*e*P	**Pn**	**17 42 19.2**	**+0.3**
BO01				*e*S	**Sn**	**17 43 05.6**	**-2.8**
BO01				*e*S		17 43 15.6	
AC02	**Maricunga**	**4.43**	**39**	Pn	**Pn**	**17 42 23.7**	**+1.0**
AC02	**Maricunga**	**4.43**	**39**	*e*P	**Pn**	**17 42 24.0**	**+1.3**
AC02				*e*S	**Sb**	**17 43 21.6**	**-5.3**
AC02				IAML		17 43 53.3	
	comp=Z,739nm,1.1s						
BO02	**Sierra Bellavi**	**4.64**	**165**	Pn	**Pn**	**17 42 25.4**	**+0.2**
BO02	**Sierra Bellavi**	**4.64**	**165**	*e*P	**Pn**	**17 42 26.0**	**+0.8**
BO02				*e*S	**Sb**	**17 43 35.1**	**+2.6**
BO02				IAML		17 43 45.0	
	comp=Z,934nm,0.8s						
ACLC	**CERRO LA CRUZ**	**4.70**	**80**	*e*P	**Pn**	**17 42 28.2**	**+2.1**
ACLC				*e*S	**Sb**	**17 43 30.6**	**-3.8**
ACLC				IAML		17 43 41.8	
	comp=Z,673nm,0.6s						
ACHE	**Chepes**	**4.89**	**101**	*e*P	**Pn**	**17 42 30.5**	**+1.7**
APLL	**PUNTA DE LOS L**	**4.96**	**92**	*e*P	**Pn**	**17 42 31.6**	**+2.0**
APLL				*e*S	**Sb**	**17 43 35.1**	**-6.7**
APLL				IAML		17 43 55.8	
	comp=Z,644nm,2.4s						
RFA	**San Rafael**	**5.48**	**145**	*e*P	**Pn**	**17 42 38.0**	**+1.3**
RFA				IAML		17 44 31.9	
	comp=Z,320nm,1.0s						
PB14	**IPOC Station P**	**5.90**	**17**	Pn	**Pn**	**17 42 41.2**	**-1.6**
CYA	**Choya**	**5.94**	**73**	*e*P	**Pn**	**17 42 44.0**	**+1.0**
CYA				IAML		17 44 30.7	
	comp=Z,308nm,1.6s						
H03N1	**Juan Fernandez**	**6.46**	**239**	T	T	17 49 57.1	
	baz=70,slow=72,SNR=1055						
H03N2	**Juan Fernandez**	**6.47**	**239**	T	T	17 49 59.4	
	baz=70,slow=72,SNR=1192						
H03N3	**Juan Fernandez**	**6.47**	**239**	T	T	17 49 58.1	
	baz=70,slow=72,SNR=1054						
VA04	**Juan Fernndez**	**6.49**	**238**	Pn	**Pn**	**17 42 50.9**	**+0.4**
PB10	**IPOC Station P**	**6.94**	**13**	Pn	**Pn**	**17 42 55.9**	**-0.9**
PB10	**IPOC Station P**	**6.94**	**13**	*e*P	**Pn**	**17 42 57.0**	**+0.2**
PB10				*e*S	**Sn**	**17 44 15.8**	**-0.6**
PB15	**IPOC Station P**	**7.50**	**20**		**Pn**	**17 43 04.1**	**-0.6**
PB05	**IPOC Station P**	**7.66**	**14**	*e*P	**Pn**	**17 43 04.0**	**-2.7**
PB05				*e*P	**Pn**	**17 43 06.4**	**-0.4**
PB06	**IPOC Station P**	**7.95**	**18**	Pn	**Pn**	**17 43 09.5**	**-1.3**
PB04	**IPOC Station P**	**8.17**	**14**	Pn	**Pn**	**17 43 10.8**	**-3.1**
LVC	**Limon Verde**	**8.24**	**22**	Pn	**Pn**	**17 43 14.1**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=171,slow=4.6,SNR=6.6						
LVC				Sn	**Sn**	**17 44 53.0**	**+4.2**
	comp=Z,2.2nm,0.3s,baz=180,slow=6.6,SNR=4.0						
LVC				LR	LR	17 46 55.7	
	comp=Z,482nm,18.1s,baz=203,slow=42						
LVC	**Limon Verde**	**8.24**	**22**	*e*P	Pn	17 43 22.1	+7.1
LC01	**Cunco**	**8.57**	**178**		**Pn**	**17 43 17.9**	**-1.2**
LC01	**Cunco**	**8.57**	**178**	*e*P	**Pn**	**17 43 19.0**	**-0.1**
PB07	**IPOC Station P**	**8.81**	**15**		**Pn**	**17 43 20.0**	**-2.6**
PB09	**IPOC Station P**	**8.91**	**18**	Pn	**Pn**	**17 43 22.6**	**-1.3**
PB01	**IPOC Station P**	**9.56**	**16**		**Pn**	**17 43 30.1**	**-2.8**
PLCA	**Paso Flores**	**10.49**	**173**	Pn	**Pn**	**17 43 45.6**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=336,slow=12,SNR=18						
PLCA	**Paso Flores**	**10.49**	**173**	*e*P	Pn	17 44 02.7	+17
LL04	**Puerto Octay**	**10.57**	**181**	Pn	**Pn**	**17 43 46.6**	**+0.1**
PB11	**IPOC Station P**	**10.77**	**13**		**Pn**	**17 43 46.6**	**-2.8**
PSGCX	**Pisagua**	**10.85**	**11**	Pn	**Pn**	**17 43 48.2**	**-2.3**
TRQA	**Tornquist**	**11.49**	**135**	*e*P	Pn	17 44 10.1	+11
TRQA	**Tornquist**	**11.49**	**135**	Pn	**Pn**	**17 43 58.2**	**-1.0**
PB12	**IPOC Station P**	**11.78**	**9**	Pn	**Pn**	**17 44 03.1**	**-0.2**
PB16	**IPOC Station P**	**12.19**	**12**		**Pn**	**17 44 08.2**	**-1.0**
ITQB	**Itaqui**	**13.57**	**91**	*e*P	**Pn**	**17 44 32.1**	**+4.5**
ITQB	**Itaqui**	**13.57**	**91**		**Pn**	**17 44 25.1**	**-2.5**
CPUP	**Villa Florida**	**13.74**	**77**	Pn	Pn	17 44 22.6	-7.3
	comp=Z,0.2nm,0.3s,baz=289,slow=19,SNR=0.8						
CPUP				LR	LR	17 50 04.5	
	comp=Z,1μm,18.2s,baz=253,slow=40						
CPUP	**Villa Florida**	**13.74**	**77**	*e*P	**Pn**	**17 44 33.2**	**+3.4**
LPAZ	**La Paz**	**14.47**	**16**	Pn	**Pn**	**17 44 42.6**	**+2.2**
	comp=Z,0.6nm,0.3s,baz=189,slow=7.5,SNR=23						
LPAZ	**La Paz**	**14.47**	**16**	*e*P	**Pn**	**17 44 43.8**	**+3.4**
LPAZ	**La Paz**	**14.47**	**16**	Pn	**Pn**	**17 44 40.2**	**-0.3**
PLTB	**Pedras Altas**	**16.06**	**100**	*e*P	**P**	**17 45 04.0**	**-0.5**
PLTB	**Pedras Altas**	**16.06**	**100**	Pn	**Pn**	**17 44 58.1**	**-2.9**
CPSB	**Cacapava Do Su**	**16.25**	**95**	*e*P	**P**	**17 45 07.1**	**+0.5**
SIV	**San Ignacio**	**17.56**	**38**	P	**Pn**	**17 45 18.4**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=217,slow=10,SNR=74						
AQDB	**Aquidauana**	**17.87**	**61**	*e*P	**P**	**17 45 24.4**	**-0.2**
AQDB	**Aquidauana**	**17.87**	**61**		**Pn**	**17 45 21.9**	**-1.9**
ITAB	**Concordia**	**17.91**	**85**	*e*P	**P**	**17 45 25.2**	**+0.2**
ITAB	**Concordia**	**17.91**	**85**		**Pn**	**17 45 22.6**	**-1.7**
CNLB	**Canela**	**18.61**	**92**	*e*P	**Pn**	**17 45 33.9**	**+1.0**
PTGB	**Pitanga**	**18.76**	**78**	*e*P	**Pn**	**17 45 34.9**	**+0.1**
PTLB	**Pontes e Lacer**	**19.08**	**42**	*e*P	**P**	**17 45 38.2**	**+0.3**
PTLB	**Pontes e Lacer**	**19.08**	**42**		**P**	**17 45 37.7**	**-0.2**
TER01	**Tubaro-SC**	**20.23**	**91**	*e*P	Pn	17 45 51.5	-0.8
PP1B	**Ponte de Pedra**	**20.28**	**55**	*e*P	**P**	**17 45 51.2**	**+0.1**
VILB	**Vilhena**	**20.57**	**35**	*e*P	**P**	**17 45 55.1**	**+0.9**
VILB	**Vilhena**	**20.57**	**35**		**P**	**17 45 51.6**	**-2.6**
VILB				IAmb	IAmb	17 46 00.4	
	comp=Z,50nm,1.0s						
PCMB	**Pacaembu**	**20.75**	**70**	*e*P	**P**	**17 45 55.7**	**-0.5**
SALV	**Santo Antonio**	**20.89**	**50**	*e*P	**P**	**17 45 57.5**	**-0.2**
ETMB	**Extrema**	**21.16**	**17**	*e*P	**P**	**17 46 02.9**	**+2.3**
ETMB	**Extrema**	**21.16**	**17**		**P**	**17 46 00.8**	**+0.2**
ITRB	**Iturama**	**22.45**	**67**	*e*P	**P**	**17 46 13.4**	**-1.0**
CZSB	**Cruzeiro do Su**	**22.47**	**359**	*e*P	**P**	**17 46 19.4**	**+4.8**
SAML	**Samuel**	**22.89**	**24**	P	**P**	**17 46 18.8**	**-0.3**
PET01	**Itanhaem-SP**	**22.98**	**81**	*e*P	**P**	**17 46 19.9**	**-0.1**
BB19B	**Bebedouro**	**23.25**	**72**	*e*P	**P**	**17 46 22.9**	**0.0**
RCLB	**Rio Claro- Sao**	**23.48**	**76**	*e*P	**P**	**17 46 24.5**	**-0.7**
PDRB	**Porto dos Gac**	**23.54**	**41**	*e*P	**P**	**17 46 27.0**	**+1.2**
VAO	**Valinhos**	**23.72**	**78**	*e*P	**P**	**17 46 26.6**	**-1.0**
ARAG	**Araguaiana, MT**	**23.73**	**57**	*e*P	**P**	**17 46 28.2**	**+0.6**
USHA	**Ushuaia**	**24.66**	**175**	P	**P**	**17 46 37.5**	**+1.6**
	comp=Z,8.5nm,0.8s,baz=57,slow=3.1,SNR=3.6						
CLDB	**Colider**	**24.67**	**42**	*e*P	**P**	**17 46 35.9**	**-0.5**
PARB	**Paraibuna**	**24.73**	**80**	*e*P	**P**	**17 46 36.5**	**-0.5**
IPMB	**Ipameri, GO**	**25.09**	**66**	*e*P	**P**	**17 46 39.2**	**-1.0**
TBTG	**Tabatinga, AM**	**26.08**	**5**	*e*P	**P**	**17 46 51.8**	**+2.6**
BDFB	**Brasilia**	**26.60**	**62**	P	**P**	**17 46 52.1**	**-1.8**
	comp=Z,12nm,0.6s,baz=224,slow=9.1,SNR=12						
BDFB				LR	LR	17 58 04.5	
	comp=Z,369nm,19.2s,baz=197,slow=39						
BDFB	**Brasilia**	**26.60**	**62**	P	**P**	**17 46 53.5**	**-0.5**
BDFB				IAmb	IAmb	17 46 54.5	
	comp=Z,41nm,1.4s						
SNDB	**Serra Nova Dou**	**26.66**	**51**	*e*P	**P**	**17 46 55.9**	**+1.5**
VAS01	**Vassouras-RJ**	**27.00**	**80**	*e*P	**P**	**17 46 57.0**	**-0.5**
DUB01	**Friburgo-RJ**	**27.98**	**80**	*e*P	**P**	**17 47 06.4**	**+0.1**
NPGB	**Novo Progresso**	**28.07**	**38**	*e*P	**P**	**17 47 06.7**	**-0.4**
DIAM	**Diamantina, MG**	**28.59**	**72**	*e*P	**P**	**17 47 11.8**	**0.0**
PEXB	**Peixe**	**28.66**	**56**	*e*P	**P**	**17 47 12.7**	**+0.3**
MC01	**Montes Claros**	**29.19**	**69**	*e*P	**P**	**17 47 16.2**	**-0.9**
JANB	**Januaria**	**29.82**	**66**	*e*P	**P**	**17 47 22.4**	**-0.3**
ITTB	**Itaituba**	**30.16**	**34**	*e*P	**P**	**17 47 26.0**	**+0.4**
SJMB	**Sao Joao De Ma**	**30.45**	**75**	*e*P	**P**	**17 47 27.9**	**-0.3**
BSFB	**Barra de Sao F**	**30.68**	**75**	*e*P	**P**	**17 47 29.7**	**-0.5**
SDBA	**SAO DESIDERIO**	**30.96**	**61**	*e*P	**P**	**17 47 32.3**	**-0.5**
SMTB	**Santa Maria do**	**31.42**	**52**	*e*P	**P**	**17 47 37.3**	**+0.6**
PRPB	**Parauapebas**	**31.98**	**46**	*e*P	**P**	**17 47 41.5**	**-0.1**
MALB	**Monte Alegre**	**33.06**	**34**	*e*P	**P**	**17 47 52.4**	**+1.3**
CMC01	**Camacan, BA**	**33.50**	**71**	*e*P	**P**	**17 47 55.3**	**+0.3**
NBIT	**Itapeh - BA**	**33.80**	**70**	*e*P	**P**	**17 47 58.1**	**+0.5**
GDU01	**Guandu, BA**	**34.35**	**68**	*e*P	**P**	**17 48 02.3**	**-0.1**
BOAV	**Boa Vista**	**34.41**	**21**	*e*P	**P**	**17 48 04.1**	**+1.3**
BOAV	**Boa Vista**	**34.41**	**21**		**P**	**17 48 03.5**	**+0.7**
BOAV				IAmb	IAmb	17 48 04.5	
	comp=Z,9.1nm,0.9s						
ROSC	**El Rosal**	**35.01**	**356**	LR	LR	18 03 27.1	
	comp=Z,222nm,18.4s,baz=228,slow=38						
MCPB	**Macapa, AP**	**35.45**	**37**	*e*P	**P**	**17 48 13.1**	**+1.3**
NBPN	**Ponto Novo - B**	**35.53**	**64**	*e*P	**P**	**17 48 12.0**	**-0.6**
TMAB	**Tom-Au,PA,Br**	**36.01**	**44**	*e*P	**P**	**17 48 17.4**	**+0.8**
NBLA	**Lagarto - SE**	**37.34**	**66**	*e*P	**P**	**17 48 27.5**	**-0.5**
ZARC	**Zaragoza, Cauc**	**37.67**	**356**		**P**	**17 48 31.2**	**+0.4**
NBMA	**Muriti-CE**	**38.81**	**61**	*e*P	**P**	**17 48 40.5**	**-0.1**
NBPS	**Pedro II - PI**	**38.86**	**55**	*e*P	**P**	**17 48 40.5**	**-0.5**
BAUV	**El Baul**	**39.24**	**7**		**P**	**17 48 45.0**	**+1.0**
NBPB	**Pedra_Branca-C**	**39.41**	**58**	*e*P	**P**	**17 48 46.4**	**+0.9**
NBLV	**Livramento - P**	**40.22**	**63**	*e*P	**P**	**17 48 51.6**	**-0.7**
NBPA	**Parau_RN**	**41.10**	**61**	*e*P	**P**	**17 49 00.0**	**+0.5**
VNA3	**Neumayer Olymp**	**52.84**	**159**	P	**P**	**17 50 31.5**	**+0.9**
VNA2	**Neumayer--Watz**	**53.48**	**158**	P	**P**	**17 50 36.2**	**+0.8**
	baz=288,slow=8.5						
SNAA	**Sanae**	**55.07**	**159**	P	**P**	**17 50 47.6**	**+0.6**
SNAA	**Sanae**	**55.07**	**159**	P	**P**	**17 50 47.4**	**+0.4**
SNAA				IAmb	IAmb	17 50 48.8	
	comp=Z,15nm,1.0s						
QSPA	**South Pole Qui**	**59.91**	**180**	P	**P**	**17 51 21.9**	**+0.6**
QSPA				IAmb	IAmb	17 51 24.0	
	comp=Z,7.0nm,0.9s						
143A	**Socs Landing,**	**65.25**	**342**	P	**P**	**17 51 57.0**	**0.0**
TXAR	**Lajitas Array**	**66.44**	**330**	P	P	17 52 12.2	+7.3
	comp=Z,0.9nm,0.7s,baz=152,slow=8.0,SNR=3.3						
WVT	**Waverly**	**67.69**	**346**		**P**	**17 52 13.7**	**+1.1**
WVT				IAmb	IAmb	17 52 24.1	
	comp=Z,12nm,1.1s						
W39A	**Magazine**	**68.24**	**341**	P	**P**	**17 52 14.4**	**-1.6**
U40A	**Yellville**	**69.08**	**342**		**P**	**17 52 22.3**	**+0.9**
U40A				IAmb	IAmb	17 52 33.4	
	comp=Z,10.0nm,1.1s						
HHAR	**Hobbs**	**69.30**	**341**	P	**P**	**17 52 20.5**	**-2.2**
HHAR				IAmb	IAmb	17 52 35.1	
	comp=Z,9.9nm,0.7s						
CCM	**Cathedral Cave**	**70.29**	**344**	P	**P**	**17 52 28.3**	**-0.4**
CCM				IAmb	IAmb	17 52 40.8	
	comp=Z,8.4nm,0.8s						
S39A	**Bolivar**	**70.46**	**342**	P	**P**	**17 52 29.6**	**-0.2**
S39A				IAmb	IAmb	17 52 41.9	
	comp=Z,11nm,1.1s						
PPT2	**Papeete2**	**70.61**	**261**	*e*S	**S**	**18 01 48.3**	**+2.0**
	comp=Z,94nm,26.8s						
PPT2	**Papeete2**	**70.61**	**261**	*e*LR	LR	18 14 17.5	
	comp=Z,152nm,25.2s						
R40A	**Maddies Statio**	**70.76**	**343**	P	**P**	**17 52 32.6**	**+1.0**
P40A	**Paris**	**71.89**	**344**	P	**P**	**17 52 39.5**	**+1.2**
L56A	**Greenwood**	**72.26**	**356**		**P**	**17 52 38.3**	**-2.3**
L56A				IAmb	IAmb	17 52 56.3	
	comp=Z,17nm,1.1s						
ANMO	**Albuquerque**	**72.47**	**331**	LR	LR	18 20 14.1	
	comp=Z,70nm,20.7s,baz=237,slow=32						
N41A	**Harden Midland**	**72.73**	**345**	P	**P**	**17 52 41.6**	**-1.8**
T25A	**Trinidad**	**73.55**	**334**	P	**P**	**17 52 46.5**	**-2.1**
T25A				IAmb	IAmb	17 53 07.9	
	comp=Z,20nm,1.4s						
L40A	**Anamosa**	**74.11**	**345**	P	**P**	**17 52 52.7**	**+1.2**
L40A				IAmb	IAmb	17 53 03.0	
	comp=Z,15nm,0.9s						
DBIC	**Dimbokro**	**74.22**	**72**	P	**P**	**17 52 53.4**	**+0.6**
	comp=Z,5.5nm,0.8s,baz=212,slow=7.3,SNR=9.2						
DBIC				LR	LR	18 23 14.5	
	comp=Z,266nm,19.3s,baz=229,slow=34						
DBIC	**Dimbokro**	**74.22**	**72**	P	**P**	**17 52 52.3**	**-0.5**
DBIC				IAmb	IAmb	17 53 02.6	
	comp=Z,15nm,1.1s						
SDCO	**Great Sand Dun**	**74.50**	**333**	P	**P**	**17 52 54.0**	**-0.2**
K31A	**O'Neill**	**76.56**	**340**	P	**P**	**17 53 06.0**	**+0.3**
MAW	**Mawson**	**76.76**	**164**	LR	LR	18 26 00.9	
	comp=Z,156nm,20.9s,baz=238,slow=35						
MAW	**Mawson**	**76.76**	**164**	P	**P**	**17 53 06.8**	**+0.3**
ECSD	**EROS Data Cent**	**76.99**	**342**		**P**	**17 53 08.8**	**+0.8**
ECSD				IAmb	IAmb	17 53 20.0	
	comp=Z,10.0nm,1.0s						
O20A	**White River Ci**	**77.64**	**333**	P	**P**	**17 53 11.1**	**-0.9**
O20A				IAmb	IAmb	17 53 25.2	

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      comp=Z,9.6nm,1.1s
CCUT  Cedar City          77.69 328 P       P       17 53 11.2 -1.1
CCUT                                IAmb    IAmb    17 53 32.2
      comp=Z,7.7nm,1.1s
SHPR  Sheep Range         77.70 326 P       P       17 53 12.1 -0.3
SHPR                                IAmb    IAmb    17 53 31.8
      comp=Z,7.8nm,1.2s
K22A  Casper              79.15 335 P       P       17 53 20.4 +0.2
K22A                                IAmb    IAmb    17 53 33.8
      comp=Z,19nm,1.2s
KOWA  Kowa                79.31  66 P       P       17 53 21.5  0.0
PDAR  Pinedale Array      80.40 333 P       P       17 53 32.1 +5.1
      comp=Z,0.3nm,0.6s,baz=132,slow=2.2,SNR=4.1
PDAR  Pinedale Array      80.40 333 P       P       17 53 26.6 -0.5
NVAR  Mina Array Bea      80.76 325 P       P       17 53 35.3 +6.2
      comp=Z,0.6nm,0.8s,baz=139,slow=5.6,SNR=1.5
BOSA  Boshof              81.97 118 P       P       17 53 34.2 -1.6
      comp=Z,2.5nm,0.8s,baz=222,slow=4.5,SNR=3.7
BOSA                                LR      LR      18 25 03.1
      comp=Z,96nm,19.6s,baz=185,slow=32
TORD  Torodi Ar. Bea      83.15  71 P       P       17 53 42.4 +0.4
      comp=Z,7.7nm,0.9s,baz=259,slow=4.7,SNR=38
TORD                                LR      LR      18 29 07.6
      comp=Z,283nm,18.8s,baz=235,slow=35
TORD  Torodi Ar. Bea      83.15  71 P       P       17 53 41.9  0.0
TORD                                IAmb    IAmb    17 53 43.6
      comp=Z,7.6nm,0.9s
BOZ   Bozeman (W)         83.58 333 P       P       17 53 41.4 -2.2
BOZ                                 IAmb    IAmb    17 53 47.7
      comp=Z,8.0nm,1.1s
ESDC  Sonseca Array       94.16  46 LR      LR      18 36 35.5
      comp=Z,96nm,18.4s,baz=255,slow=35
DZM   Mont Dzumac        103.24 235 eLR     LR      18 29 15.7
      comp=Z,106nm,25.2s
ASAR  Alice Springs      120.74 208 PKP     PKiKP   18 00 10.2 +1.8
      comp=Z,0.5nm,0.9s,baz=151,slow=2.1,SNR=3.3
WRA   Warramunga Arr     123.86 210 PKP     PKiKP   18 00 16.6 +2.0
      comp=Z,0.4nm,0.6s,baz=162,slow=1.5,SNR=5.4
H11S2 WAKE ISLAND Hy     125.55 272 T       T       20 19 01.1
      baz=114,slow=75,SNR=64
H11S1 WAKE ISLAND Hy     125.56 272 T       T       20 19 00.3
      baz=114,slow=75,SNR=48
H11S3 WAKE ISLAND Hy     125.56 272 T       T       20 19 00.7
      baz=114,slow=75,SNR=54
KURBB Kurchatov Arra     150.22  39 PKPbc   PKiKP   18 01 07.8 +0.7
      comp=Z,5.0nm,0.8s,baz=298,slow=3.1,SNR=9.8
EKS2  Erkin-Say          150.25  56 P       PKiKP   18 01 08.8 +1.2
      SNR=7.5
HYB   Hyderabad          150.48 109 i PKP   PKPbc   18 01 07.0 -0.9
USP   Ospenovka          150.61  55 P       PKiKP   18 01 09.3 +1.1
      SNR=9.0
AAK   Ala-Archa          150.77  56 PKPbc   PKiKP   18 01 10.2 +1.5
      comp=Z,12nm,0.8s,baz=91,slow=2.0,SNR=12
AAK   Ala-Archa          150.77  56 P       PKiKP   18 01 10.2 +1.5
      SNR=7.2
AAK   Ala-Archa          150.77  56         PKiKP   18 01 09.6 +0.9
CHMS  Chumysh            150.86  55 P       PKiKP   18 01 09.9 +1.2
      SNR=5.8
UCH   Uchtor             150.88  57 P       PKiKP   18 01 11.0 +1.7
      SNR=8.3
ZALV  Zalesovo Beam      151.15  28 PKPbc   PKiKP   18 01 09.8 +1.0
      comp=Z,24nm,0.7s,baz=299,slow=3.2,SNR=63
ZALV  Zalesovo Beam      151.15  28         PKiKP   18 01 09.6 +0.8
TKM2  Tokmak 2           151.48  55 P       PKiKP   18 01 11.7 +1.5
      SNR=5.8
MKAR  Makanchi Array     154.34  43 PKPbc   PKiKP   18 01 16.9 +1.2
      comp=Z,1.2nm,0.8s,baz=311,slow=2.6,SNR=3.6
MKAR  Makanchi Array     154.34  43 PKPdf   PKPdf   18 01 07.7 +0.2
WMQ   Urumqi             159.16  44 eP      PKPdf   18 01 13.2 -0.6
SONM  Songino Array      162.47   3 PKPab   PKPab   18 02 07.7 +2.8
      comp=Z,0.8nm,0.9s,baz=320,slow=3.8,SNR=4.0
HHC   Hu-ho-hao-te       169.04 345 eP      PKPdf   18 01 17.8 -5.1
NJ2   Nanjing            170.32 283 eP      PKPdf   18 01 25.1 +1.4
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SOME ***07*** *17:51:44.8, 38°.58N×72°.23E, h0^{km}, MS3.6*
IDC ***07*** *17:51:45.3±0.6, 38°.13N×73°.07E, h0^{km}, mb4.2/30, mb1 4.3/36, mb1mx4.1/69, mbtmp4.3/36, ML3.7/6, MS3.2/7, Ms1 3.2/7, ms1mx2.9/45, Error ellipse: s-maj=13.3km s-min=10.8km az=21.0*
MOS ***07*** *17:51:47.4±1.2, 38°.34N×73°.01E, h15^{km}, mb4.6/13, Error ellipse: s-maj=6.8km s-min=4.2km az=85.8*
NEIC ***07*** *17:51:47.6±1.5, 38°.22N±0°.05×72°.97E±0°.07, h10^{km}±1^{km}, mb4.6/41, Error ellipse: s-maj=10.5km s-min=7.4km az=128.0*
BJI ***07*** *17:51:50.1±0.0, 38°.24N×73°.18E, h6^{km}, mB4.6/12, mb4.5/27, ML4.2/6, Ms4.1/10, Ms7 3.8/8*
NNC ***07*** *17:51:51.0±3.2, 38°.39N×73°.01E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=27.9km s-min=17.2km az=154.0*
ISC 07 17:51:46.9±0.2, **38°.19N**±0°.02×**73°.08E**±0°.02, **h10**^{km}**, n230,** σ**2**^{s}**.29**/230**, mb4.5**/52**, MS3.5**/4**, 16C-15D,**
Tajikistan-Xinjiang border region

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Code  Station Name        Δ°   AZ°  Phase ID            Time      Res
                                    Op      ISC      h  m  s      ISC
DRK   Karamyk              1.63 323 Pn      Pn      17 52 13.7 -2.2
GAR   Garm                 2.31 291 Pn      Pn      17 52 24.1 -1.0
BTK   Batken               2.56 317 PN      Pn      17 52 27.3 -1.3
BTK                                                 17 52 32.3
BTK   Batken               2.56 317 Pn      Pn      17 52 27.3 -1.3
BTK                                 Pg      Pb      17 52 32.3 -0.7
KSH   Kashi                2.62  59 Pn      Pn      17 52 27.5 -1.9
KSH                                 Sn      Sn      17 52 56.1 -5.2
KSH                                 smax    smax
      comp=N,3µm,0.9s
KSH                                 smax    smax
      comp=E,3µm,0.9s
CHGR  Chuyangaron          3.11 280 PN      Pn      17 52 35.6 -0.6
CHGR  Chuyangaron          3.11 280 Pn      Pn      17 52 35.6 -0.6
TAS   Tashkent             4.28 318 PN      Pn      17 52 50.5 -1.6
TAS   Tashkent             4.28 318 Pn      Pn      17 52 50.5 -1.6
NIL   Nilore               4.53 178 PN      Pb      17 53 03.4 -3.1
NIL   Nilore               4.53 178         Pb      17 53 03.4 -3.1
MRKS  Merke                4.55   1 eP      Pb      17 53 05.2 -1.8
      29nm,0.3s
MRKS                                eS      Sb      17 54 03.1 +1.3
      120nm,0.3s
AAK   Ala-Archa            4.57  13 Pn      Pn      17 53 00.1 +3.9
      5.8nm,0.3s,baz=192,slow=6.2,SNR=19
AAK                                 Sn      Sb      17 53 58.0 -4.5
      5.0nm,0.3s,baz=19,slow=16,SNR=4.3
AAK                                 LR      LR      17 55 06.0
      comp=Z,156nm,20.5s,baz=204,slow=43
AAK   Ala-Archa            4.57  13 d iPN   Pn      17 52 59.1 +2.9
AAK                                 pmax    pmax
      comp=Z,101nm,1.0s
AAK   Ala-Archa            4.57  13 ⇑Pn     Pn      17 52 59.8 +3.6
      comp=Z,86nm,0.8s
AAK                                 ⇓Sn     Sn      17 53 54.2 +4.7
      comp=Z,152nm,0.9s
AAK   Ala-Archa            4.57  13 Pn      Pn      17 52 56.6 +0.4
FRU1  Bishkek              4.76  14 PN      Pn      17 52 59.6 +0.8
FRU1  Bishkek              4.76  14         Pn      17 52 59.6 +0.8
BOOM  Boomskoye usch       4.82  26 PN      Pn      17 53 01.4 +1.7
BOOM  Boomskoye usch       4.82  26 Pn      Pn      17 53 01.4 +1.7
DZA   Taraz                4.88 345 eP      Pn      17 53 05.0 +4.6
      comp=Z,47nm,0.3s
DZA                                 eS      Sn      17 54 02.8 +5.8
      comp=Z,328nm,0.7s
KBL   Kabul                4.88 223 PN      Pn      17 53 02.3 +1.7
KBL   Kabul                4.88 223         Pn      17 53 02.3 +1.7
CHM   Chimkent             4.91 328 eP      Pn      17 53 05.4 +4.7
      comp=Z,52nm,0.2s
CHM                                 eS      Sn      17 54 03.2 +5.6
      comp=Z,250nm,0.4s
KDJ   Kajisay              5.04  37 PN      Pn      17 53 03.6 +1.0
KDJ   Kajisay              5.04  37 Pn      Pn      17 53 03.6 +1.0
TKM2  Tokmak 2             5.10  21 PN      Pn      17 53 08.5 +5.0
TKM2  Tokmak 2             5.10  21 ⇓Pn     Pn      17 53 08.6 +5.0
      comp=Z,42nm,1.1s
TKM2                                ⇑Lg     Lg      17 54 29.7
      comp=Z,46nm,0.7s
KKAR  Karatay Array        5.28 339 PN      Pn      17 53 06.6 +0.7
KKAR  Karatay Array        5.28 339         Pn      17 53 06.5 +0.7
KK09  Karatay Array        5.30 339 ⇓Pn     Pn      17 53 08.0 +1.9
      comp=Z,14nm,0.5s,baz=153,slow=13
KK09                                ⇑Sn     Sn      17 54 07.8 +0.5
      comp=Z,30nm,0.6s
KK09                                ⇑Lg     Lg      17 54 33.7
      comp=Z,47nm,0.6s,baz=147,slow=28
KST   Kastek               5.32  23 eP      Pb      17 53 23.8 +3.7
      comp=Z,31nm,0.4s
KST                                 eS      Sg      17 54 35.1 -2.6
      comp=Z,112nm,0.1s
SGDS  Sogindy              5.39  12 ePg     Pb      17 53 24.8 +3.7
      baz=14
DGS   Degeres              5.45  21 eP      Pb      17 53 25.6 +3.4
      comp=Z,34nm,0.7s
DGS                                 eS      Sg      17 54 38.1 -3.6
      comp=Z,88nm,0.7s
DGS   Degeres              5.45  21 Pg      Pb      17 53 26.3 +4.2
      comp=Z,60nm,0.5s
DGS                                 Lg      Lg      17 54 38.0
      comp=Z,88nm,0.7s
TNSS  Tian-Shan            5.67  30 eP      Pb      17 53 30.6 +4.6
      comp=Z,18nm,0.4s
TNSS                                eS      Sg      17 54 46.4 -2.4
      comp=Z,50nm,0.9s
TNSS  Tian-Shan            5.67  30 ePg     Pb      17 53 31.1 +5.1
      baz=33
AAA   Alma-Ata             5.80  29 eP      Pb      17 53 32.4 +4.3
      comp=Z,10nm,0.1s
AAA                                 eS      Sg      17 54 49.7 -3.3
      comp=Z,114nm,1.1s
AAA   Alma-Ata             5.80  29 ePg     Pb      17 53 33.4 +5.3
      baz=32
MDOK  Medeo                5.81  30 eP      Pb      17 53 32.9 +4.5
      comp=Z,15nm,0.5s
MDOK                                eS      Sg      17 54 50.6 -2.8
      comp=Z,69nm,1.4s
MDOK  Medeo                5.81  30 ePn     Pn      17 53 13.7 +0.4
      baz=33
MDOK                                ePg     Pb      17 53 33.8 +5.4
      baz=33
MDOK  Medeo                5.81  30 ePN     Pn      17 53 13.7 +0.4
MDOK                                e               17 53 33.7
MDOK  Medeo                5.81  30 ⇓Pg     Pg      17 53 35.6 -2.6
      comp=Z,28nm,0.5s
MDOK                                ⇑Lg     Lg      17 54 54.5
      comp=Z,113nm,1.0s
MDOK  Medeo                5.81  30 Pg      Pb      17 53 32.8 +4.4
      comp=Z,37nm,0.5s
MDOK                                Lg      Lg      17 54 50.6
      comp=Z,69nm,1.4s
KNDC  Almaty               5.83  29 ⇓Pg     Pb      17 53 33.6 +5.0
      comp=Z,190nm,0.9s
KNDC                                ⇑Lg     Lg      17 54 51.5
      comp=Z,484nm,1.1s
KRBS  Karabastau           5.84  19 eP      Pb      17 53 31.2 +2.4
      comp=Z,23nm,0.3s
KRBS                                eS      Sg      17 54 48.4 -6.0
      comp=Z,85nm,0.8s
KRBS  Karabastau           5.84  19 Pg      Pb      17 53 30.6 +1.7
      comp=Z,23nm,0.3s
KRBS                                Lg      Lg      17 54 48.4
      comp=Z,85nm,0.8s
KOTS  Kotyrbulak           5.90  30 eP      Pb      17 53 34.6 +4.8
      comp=Z,34nm,1.1s
KOTS                                eS      Sg      17 54 53.9 -2.2
      comp=Z,156nm,0.7s
PRZ   Przheval'sk          5.91  42 PN      Pn      17 53 16.7 +2.1
PRZ   Przheval'sk          5.91  42 Pn      Pn      17 53 16.7 +2.1
KTBS  Karatobe             6.15  25 eP      Pb      17 53 39.3 +5.2
      comp=Z,23nm,0.7s
KTBS                                eS      Sg      17 55 02.0 -2.3
      comp=Z,126nm,0.7s
KTBS  Karatobe             6.15  25 Pg      Pb      17 53 39.3 +5.2
      comp=Z,23nm,0.7s
KTBS                                Lg      Lg      17 55 02.0
      comp=Z,126nm,0.7s
KUU   Kurty                6.21  22 eP      Pb      17 53 39.4 +4.3
      comp=Z,11nm,0.7s
KUU                                 eS      Sg      17 55 01.5 -4.6
      comp=Z,74nm,0.7s
KUU   Kurty                6.21  22 ePg     Pb      17 53 40.3 +5.3
      baz=24
KUU   Kurty                6.21  22 Pg      Pb      17 53 37.0 +1.9
      comp=Z,29nm,0.9s
KUU                                 Lg      Lg      17 54 59.1
      comp=Z,74nm,0.7s
SATY  Saty                 6.33  38 ePn     Pn      17 53 21.9 +1.6
      baz=41
SATY                                ePg     Pg      17 53 44.0 -4.1
      baz=41
SATY  Saty                 6.33  38 ePN     Pn      17 53 21.9 +1.6
SATY                                e               17 53 43.9
DHRM  DHARAMSHALA          6.49 155 eP      Pn      17 53 28.3 +5.7
DHRM                                eS      Sn      17 54 45.4 +8.6
DHRM                                IAML            17 54 57.6
      comp=N,137nm,0.7s
DHRM                                IAML            17 54 58.1
      comp=E,157nm,0.6s
UZB   Uzynbulak            6.70  40 ePn     Pn      17 53 26.1 +0.5
      baz=44
UZB                                 ePg     Pg      17 53 50.9 -4.3
      baz=44
UZB   Uzynbulak            6.70  40 ePN     Pn      17 53 26.0 +0.5
UZB                                 e               17 53 50.8
KPKS  Kokpek               6.77  37 ePg     Pb      17 53 51.8 +7.1
      baz=40
SHLS  Shalkode             6.94  42 ePg     Pg      17 53 59.5 -0.2
      baz=47
PDGK  Podgornoye           7.07  41 PN      Pn      17 53 34.1 +3.6
PDGK  Podgornoye           7.07  41 ⇓Pn     Pn      17 53 34.1 +3.6
      comp=E,23nm,0.6s
SMLA  Simla                7.81 153 eP      Pn      17 53 46.0 +5.5
SMLA                                eS      Sn      17 55 13.6 +4.6
SMLA                                IAML            17 55 16.6
      comp=E,155nm,0.7s
SMLA                                IAML            17 55 23.6
      comp=N,147nm,0.6s
HRA   Herat                9.53 250         Pn      17 54 05.1 +0.7
OTUK  Ortayu              10.06 357 P       Pn      17 54 16.9 +5.4
OTUK  Ortayu              10.06 357 ⇑Pn     Pn      17 54 16.9 +5.5
      comp=N,5.8nm,0.8s
KUDL  Kundal              10.42 163 eP      Pn      17 54 18.5 +2.2
KUDL                                eS      Sn      17 56 11.4 -1.6
MAKZ  Makanchi            10.82  34 P       Pn      17 54 21.6 -0.2
MAKZ  Makanchi            10.82  34         Pn      17 54 21.6 -0.2
MK31  Makanchi Array      10.96  35 ⇑eP     Pn      17 54 26.3 +2.7
MK31  Makanchi Array      10.96  35 Pn      Pn      17 54 25.5 +1.9
MKAR  Makanchi Array      10.96  35 Pn      Pn      17 54 25.6 +2.0
      comp=N,0.4nm,0.3s,baz=206,slow=13,SNR=18
MKAR                                LR      LR      17 59 11.3
      comp=N,76nm,20.9s,baz=214,slow=40
MKAR  Makanchi Array      10.96  35 P       Pn      17 54 24.8 +1.2
MKAR  Makanchi Array      10.96  35 Pn      Pn      17 54 24.8 +1.2
BRZS  Berezniki           11.79 359 ePn     Pn      17 54 34.2 -0.9
      comp=N,1.7nm,1.0s,baz=359
BRZS  Berezniki           11.79 359 eP      Pn      17 54 34.2 -0.9
BRZS                                pmax    pmax
      comp=Z,2.0nm,1.0s
GEYT  Alibeck             11.80 273 Pn      Pn      17 54 34.3 -0.9
      comp=Z,2.2nm,0.3s,baz=109,slow=11,SNR=14
GEYT                                LR      LR      18 00 04.2
      comp=Z,74nm,21.5s,baz=35,slow=42
GEYT  Alibeck             11.80 273 Pn      Pn      17 54 31.6 -3.6
GYA0B ALIBECK ARRAY       11.80 273 ⇓Pn     Pn      17 54 37.2 +2.0
GYA0B                               ⇓Sn     Sn      17 56 51.0 +4.0
GYA0B ALIBECK ARRAY       11.80 273 Pn      Pn      17 54 31.6 -3.6
WMQ   Urumqi              12.39  58 eP      Pn      17 54 49.9 +6.6
WMQ                                 sP              17 54 53.7
WMQ                                 pmax    pmax
      comp=Z,13nm,0.9s
WMQ                                 pmax    pmax
      comp=Z,190nm,3.9s
WMQ                                 LR      LR
      comp=Z,500nm,6.1s
ZSN   Zaisan              12.66  39 ePn     Pn      17 54 48.7 +1.7
      comp=Z,2.0nm,1.1s,baz=41
ZSN   Zaisan              12.66  39 eP      Pn      17 54 48.6 +1.7
ZSN                                 pmax    pmax
      comp=Z,2.0nm,1.1s
KURBB Kurchatov Arra      13.02  16 Pn      Pn      17 54 50.7 -1.1
      comp=Z,0.1nm,0.3s,baz=206,slow=12,SNR=15
PYUN  Piuthan             13.04 138 eP      Pn      17 54 52.3  0.0
      comp=Z,43nm,0.5s
KURK  Kurchatov           13.13  16 ⇑eP     Pn      17 54 53.4 +0.1
KURK                                pmax    pmax
      comp=Z,7.0nm,1.3s
KURK  Kurchatov           13.13  16 Pn      Pn      17 54 52.0 -1.3
SEM   Semipalatinsk       13.24  20 ePn     Pn      17 54 54.4 -0.7
      comp=Z,3.2nm,1.3s,baz=21
SEM   Semipalatinsk       13.24  20 eP      Pn      17 54 54.3 -0.7
SEM                                 pmax    pmax
      comp=Z,3.0nm,1.3s
DANN  Dangsing            13.26 135 eP      Pn      17 54 55.9 +0.4
      comp=Z,41nm,0.4s
KOLN  Koldanda            13.62 137 eP      Pn      17 54 59.6 -0.8
      comp=Z,16nm,0.4s
GKN   Gorkha              14.02 133 eP      Pn      17 55 05.1 -0.7
      comp=Z,24nm,0.3s
AB31  Akbulak array       14.55 324 P       Pn      17 55 12.9 +0.2
AB31                                S       Sn      17 57 54.4 +0.4
AB31  Akbulak array       14.55 324 Pn      Pn      17 55 13.0 +0.2
      comp=Z,3.3nm,0.5s,baz=135,slow=12,SNR=25
AB31                                Sn      Sn      17 57 54.5 +0.4
      comp=Z,5.7nm,0.7s,baz=150,slow=20,SNR=7.2
ABKAR Akbulak array       14.55 324 Pn      Pn      17 55 10.0 -2.8
ABKAR Akbulak array       14.55 324 Pn      Pn      17 55 09.8 -2.9
KKN   Kakani              14.56 132 eP      Pn      17 55 11.7 -1.5
      comp=Z,20nm,0.5s
PKIN  Phulchoki           14.79 132 eP      Pn      17 55 15.4 -0.9
      comp=Z,22nm,0.4s
PKI   Pulchoki            14.80 132 eP      Pn      17 55 15.6 -0.9
      comp=Z,14nm,0.4s
BRVK  Borovoye            15.00 353 ⇓eP     Pn      17 55 16.6 -2.1
BRVK                                pmax    pmax
      comp=Z,6.0nm,1.3s
BRVK  Borovoye            15.00 353         Pn      17 55 15.9 -2.9
BHPL  Bhopal              15.36 165 eP      P       17 55 36.8 +8.3
BHPL                                eS      Sn      17 58 08.5 -5.5
DGZ   Jazzator, Alta      15.44  37 deP     Pn      17 55 25.8 +1.1
DGZ                                 pmax    pmax
      comp=Z,5.0nm,0.6s
RAMN  Ramite              15.96 131 eP      Pn      17 55 29.8 -2.0
      comp=Z,31nm,0.4s
AKTO  Aktyubinsk          16.27 324 Pn      Pn      17 55 34.8 -0.6
      comp=Z,0.6nm,0.3s,baz=135,slow=9.9,SNR=11
AKTO  Aktyubinsk          16.27 324 ⇑Pn     P       17 55 37.7 -0.7
      comp=Z,32nm,1.2s
AKTO                                ⇓Sn     Sn      17 58 38.6 +2.8
      comp=Z,15nm,1.1s
TAPN  Taplejung           16.36 127 eP      Pn      17 55 35.1 -1.8
      comp=Z,12nm,0.5s
ODAN  Odare               16.51 129 eP      Pn      17 55 36.8 -2.0
      comp=Z,25nm,0.6s
LSA   Lhasa               17.20 114 P       Pn      17 55 48.3 +0.6
LSA                                 pmax    pmax
      comp=Z,5.0nm,0.7s
LSA   Lhasa               17.20 114 P       Pn      17 55 48.3 +0.6
ZAA0  Zalesovo Array      17.70  23 P       Pn      17 55 52.1 -1.2
ZALV  Zalesovo Beam       17.70  23 P       Pn      17 55 53.4 +0.1
      comp=Z,1.4nm,0.3s,baz=212,slow=11,SNR=19
ZALV  Zalesovo Beam       17.70  23 P       Pn      17 55 53.1 -0.3
WSAR  Wadi Sarin          19.36 224 LR      LR      18 05 56.4
      comp=Z,30nm,19.7s,baz=4.0,slow=44
SHL   Shillong            20.28 123 P       P       17 56 24.4 +1.5
SHL                                 pmax    pmax
      comp=Z,18nm,0.5s
SHL   Shillong            20.28 123 P       P       17 56 24.4 +1.5
SHL                                 IAmb    IAmb    17 56 29.7
      comp=Z,18nm,0.5s
SVE   Sverdlovsk          20.39 340 eP      P       17 56 23.4 -0.3
ARU   Arti                20.65 337 P       P       17 56 26.3 -0.2
      comp=Z,2.3nm,0.6s,baz=154,slow=5.4,SNR=10
ARU   Arti                20.65 337 P       P       17 56 22.9 -3.6
ARU                                 S       S       18 00 07.3  -10
ARU   Arti                20.65 337 P       P       17 56 26.0 -0.5
GTA   Gaotai              20.85  78 eP      P       17 56 31.4 +2.5
GTA                                 pP      sP      17 56 39.1 +4.1
GTA                                 sP      pP      17 56 42.8  +10
GTA                                 pmax    pmax
      comp=Z,3.0nm,0.9s
GTA                                 pmax    pmax
      comp=Z,74nm,5.5s
GTA                                 LR      LR
      comp=Z,150nm,16.0s
GTA                                 LR      LR
      comp=Z,140nm,16.7s
GTA                                 LR      LR
      comp=Z,160nm,14.2s
GROC  Groznyy             21.24 292 eP      P       17 56 29.1 -3.8
GROC                                eS      S       18 00 24.2 -4.7
GROC                                pmax    pmax
      comp=Z,70nm,1.0s
HYB   Hyderabad           21.24 165 i P     P       17 56 38.5 +5.3
HYB                                 e               17 56 47.0
GNI   Garni               22.02 284 P       P       17 56 44.1 +2.5
      comp=Z,14nm,0.9s,baz=156,slow=4.0,SNR=9.0
GNI   Garni               22.02 284 d iP    P       17 56 48.1 +6.5
GNI                                 pmax    pmax
      comp=Z,66nm,1.7s
GNI   Garni               22.02 284 P       P       17 56 41.1 -0.5
GNI                                 IAmb    IAmb    17 56 53.5
      comp=Z,34nm,0.9s
BELG  Belogornoye         22.70 317 P       P       17 56 48.3 -0.1
      comp=Z,30nm,1.0s,baz=82,slow=3.8,SNR=4.2
NCK   Nalchik             22.86 293 ⇑eP     P       17 56 54.3 +4.0
NCK                                 pmax    pmax
      comp=Z,11nm,0.7s
ONI   Oni                 22.93 290 P       P       17 56 51.5 +0.4
ONI                                 pmax    pmax
      comp=Z,19nm,0.8s
ONI   Oni                 22.93 290 P       P       17 56 51.5 +0.4
ONI                                 IAmb    IAmb    17 57 05.7
      comp=Z,19nm,0.8s
KBZ   Khabaz              23.38 293 P       P       17 56 54.7 -0.9
      comp=Z,1.8nm,0.7s,baz=184,slow=6.0,SNR=3.2
KBZ   Khabaz              23.38 293 ⇑eP     P       17 56 57.0 +1.4
KBZ                                 pmax    pmax
      comp=Z,4.0nm,1.1s
KIV   Kislovodsk          23.55 294 eP      P       17 57 01.0 +3.6
KIV                                 pmax    pmax
      comp=Z,12nm,1.1s
KIV   Kislovodsk          23.55 294 P       P       17 56 57.9 +0.6
KIV                                 IAmb    IAmb    17 57 18.5
      comp=Z,13nm,0.7s
SIRT  Sirnak              24.16 278 P       P       17 57 03.0 -0.2
SIRT                                IAmb    IAmb    17 57 30.4
      comp=Z,25nm,1.0s
GURO  Guroymak-BITLI      24.29 281 P       P       17 57 03.2 -1.3
ZAK   Zakamensk           24.64  51 eP      P       17 57 08.8 +1.3
ZAK                                 pmax    pmax
      comp=Z,10.0nm,1.1s
KIRV  Kirov               25.51 331 P       P       17 57 15.9 +0.7
      comp=Z,8.4nm,0.5s,baz=167,slow=2.2,SNR=5.2
KIRV  Kirov               25.51 331 ceP     P       17 57 16.1 +1.0
SONM  Songino Array       26.02  58 P       P       17 57 20.7 +0.5
      comp=Z,3.6nm,0.8s,baz=254,slow=10,SNR=26
SONM                                LR      LR      18 08 28.8
      comp=Z,110nm,18.9s,baz=162,slow=38
SONM  Songino Array       26.02  58 P       P       17 57 22.5 +2.3
SONM                                pmax    pmax
      comp=Z,10.0nm,1.4s
SONM  Songino Array       26.02  58 P       P       17 57 22.4 +2.3
ULN   Ulaanbaatar         26.46  58 deP     P       17 57 26.0 +1.8
ULN                                 pmax    pmax
      comp=Z,4.0nm,0.8s
ULN   Ulaanbaatar         26.46  58 P       P       17 57 26.3 +2.1
HHC   Hu-ho-hao-te        29.65  73 eP      P       17 57 55.1 +2.5
HHC                                 pmax    pmax
      comp=Z,8.0nm,0.9s
HHC                                 pmax    pmax
      comp=Z,210nm,4.7s
OBN   Obninsk             29.80 317 i P     P       17 57 54.4 +0.8
OBN                                 pmax    pmax
      comp=Z,5.0nm,0.7s
CMAR  Chiang Mai Arr      29.91 124 P       P       17 57 54.0 -1.0
      comp=Z,0.5nm,0.7s,baz=314,slow=7.5,SNR=5.0
CMAR  Chiang Mai Arr      29.91 124 i P     P       17 58 00.4 +5.4
CMAR                                pmax    pmax
      comp=Z,1.0nm,0.7s
PALK  Pallekele           31.54 165 P       P       17 58 08.6 -0.9
      comp=Z,7.2nm,1.1s,baz=96,slow=9.8,SNR=4.2
NRIK  Noril'sk            32.18  10 P       P       17 58 14.1 -0.3
      comp=Z,7.4nm,0.9s,baz=180,slow=6.4,SNR=7.3
NRIK  Noril'sk            32.18  10 ⇑eP     P       17 58 15.4 +0.9
NRIK                                pmax    pmax
      comp=Z,10.0nm,1.0s
NRIK  Noril'sk            32.18  10 P       P       17 58 14.9 +0.4
NRIK                                IAmb    IAmb    17 58 16.7
      comp=Z,9.1nm,1.0s
AKASG Malin Array Be      33.23 306 P       P       17 58 24.2 +0.3
      comp=Z,1.3nm,0.4s,baz=78,slow=8.3,SNR=8.7
AKASG Malin Array Be      33.23 306 IAmb    IAmb    17 58 31.3
      comp=Z,2.8nm,1.3s
AKBB  Malin Array Si      33.23 306 ⇓eP     P       17 58 24.7 +0.8
MLR   Muntele Rosu        35.44 297 P       P       17 58 43.6 +0.3
      comp=Z,2.2nm,0.6s,baz=91,slow=12,SNR=4.3
MLR   Muntele Rosu        35.44 297 IAmb    IAmb    17 59 10.0
      comp=Z,9.1nm,1.2s
FINES FINESS Array B      37.04 324 P       P       17 58 56.6 +0.1
      comp=Z,2.4nm,0.7s,baz=101,slow=8.1,SNR=10
FINES FINESS Array B      37.04 324 i P     P       17 58 59.5 +2.9
FINES                               pmax    pmax
```

```
       comp=Z,4.0nm,0.6s
NJ2    Nanjing           37.64  85 eP    P     17 59 03.1 +1.1
NJ2                                  pmax  pmax
       comp=Z,10.0nm,0.5s
ARCES  ARCESS Array B    40.24 336  P    P     17 59 23.9 +0.6
       comp=Z,5.1nm,0.7s,baz=112,slow=9.5,SNR=14
ARCES  ARCESS Array B    40.24 336  P    P     17 59 24.0 +0.6
ARCES  ARCESS Array B    40.24 336  IAmb IAmb  17 59 38.2
       comp=Z,14nm,1.1s
KRLC   Kraliky           41.19 306 epP   P     17 59 37.2 +5.7
KRLC   Kraliky           41.19 306 eP    P     17 59 37.2 +5.7
DPC    Dobruska-Polom    41.45 306 eP    P     17 59 35.3 +1.6
DPC    Dobruska-Polom    41.45 306 eP    P     17 59 35.3 +1.6
MDJ    Mudanjiang        42.14  63  P    P     17 59 38.4 -0.9
MDJ                                 pmax pmax
       comp=Z,7.0nm,4.0s
MDJ                                 pmax pmax
       comp=Z,250nm,4.1s
KSRS   Korea Array       42.78  73  LR   LR    18 20 01.4
       comp=Z,54nm,18.1s,baz=300,slow=40
HFS    Hagfors           42.79 321  P    P     17 59 44.6 +0.3
       comp=Z,6.0nm,0.5s,baz=98,slow=11,SNR=32
KLR    Kul'dur           42.82  55  P    P     17 59 45.6 +0.8
       comp=Z,1.0nm,0.5s,baz=281,slow=6.2,SNR=7.1
GERES  GERESS Array B    43.33 304  P    P     17 59 50.1 +1.1
       comp=Z,0.7nm,0.6s,baz=66,slow=7.9,SNR=6.2
KHC    Kasperske Hory    43.37 304 eP    P     17 59 50.8 +1.5
KHC                                epP   sP    17 59 55.1 -0.5
KHC    Kasperske Hory    43.37 304⇑eP    P     17 59 50.8 +1.5
KHC                                 pmax pmax
       comp=Z,6.0nm,0.9s
CLL    Collm             43.45 308 eP    P     17 59 51.0 +1.2
CLL    Collm             43.45 308 eP    P     17 59 51.0 +1.2
TIXI   Tiksi             43.59  22  P    P     17 59 50.6  0.0
       comp=Z,2.8nm,0.4s,baz=260,slow=4.0,SNR=11
TIXI   Tiksi             43.59  22⇑eP    P     17 59 51.0 +0.4
TIXI                                pmax pmax
       comp=Z,6.0nm,0.8s
TIXI   Tiksi             43.59  22  P    P     17 59 50.8 +0.1
TIXI                                IAmb IAmb  17 59 51.7
       comp=Z,5.4nm,0.8s
NC303  NORSAR Array S    43.98 322  P    P     17 59 54.8 +0.7
NOA    NORSAR Array B    44.05 322  P    P     17 59 54.6  0.0
       comp=Z,3.7nm,0.7s,baz=92,slow=7.7,SNR=14
NC204  NORSAR Array S    44.28 322  P    P     17 59 56.1 -0.3
DAVOX  Davos/Dischmat    46.26 302  P    P     18 00 12.2 -0.3
       comp=Z,5.3nm,0.6s,baz=85,slow=7.6,SNR=14
MJAR   Matsushiro Arr    50.81  71  P    P     18 00 47.7 +0.2
       comp=Z,4.0nm,1.0s,baz=285,slow=8.1,SNR=5.0
EKA    Eskdalemuir Ar    52.24 315  P    P     18 00 58.1 +0.2
       comp=Z,3.0nm,0.7s,baz=99,slow=7.7,SNR=4.2
DAG    Danmarks Havn     53.58 343  P    P     18 01 08.4 +0.9
BILL   Bilibino          56.36  27 i P   P     18 01 28.5 +0.8
BILL                               i           18 02 24.4
BILL                               i           18 03 31.7
BILL                                pmax pmax
       comp=Z,4.0nm,1.1s
PETK   Petropavlovsk-    57.60  45  LR   LR    18 26 44.0
       comp=Z,65nm,19.9s,baz=86,slow=36
ESDC   Sonseca Array     58.14 298  P    P     18 01 40.5 -0.3
       comp=Z,1.3nm,0.9s,baz=55,slow=6.9,SNR=3.3
TORD   Torodi Ar. Bea    67.41 269  P    P     18 02 41.9 -1.0
       comp=Z,1.1nm,0.7s,baz=50,slow=5.7,SNR=10
TORD   Torodi Ar. Bea    67.41 269  IAmb IAmb  18 02 47.0
       comp=Z,1.9nm,1.1s
TOLK   Toolik Lake Re    68.86  15  P    P     18 02 51.5 +0.3
A36M   Sachs Harbour     69.36   6  P    P     18 02 54.4 +0.3
COLD   Coldfoot          69.89  17  P    P     18 02 58.1 +0.6
IMAR   Indian Mountai    70.06  19  P    P     18 02 58.7 +0.1
BMAR   Burnt Mountain    70.90  14  P    P     18 03 05.0 +1.2
J20K   Nowinta River     71.39  20  P    P     18 03 07.6 +0.9
J20K                                IAmb IAmb  18 03 08.2
       comp=Z,7.7nm,1.1s
H24K   Noodor Dome       71.57  17  P    P     18 03 08.1 +0.3
H24K                                IAmb IAmb  18 03 09.7
       comp=Z,2.5nm,0.8s
MLY    Manley            71.57  18  P    P     18 03 08.4 +0.6
MLY                                 IAmb IAmb  18 03 09.3
       comp=Z,5.2nm,1.2s
I23K   Minto, Yukon-K    71.81  17  P    P     18 03 10.1 +1.0
I23K                                IAmb IAmb  18 03 11.6
       comp=Z,8.8nm,1.2s
INK    Inuvik            71.96  10  P    P     18 03 10.9 +0.8
       comp=Z,5.6nm,0.6s,baz=345,slow=6.7,SNR=32
INK    Inuvik            71.96  10  P    P     18 03 10.7 +0.6
INK                                 pmax pmax
       comp=Z,6.0nm,0.7s
INK    Inuvik            71.96  10       P     18 03 10.7 +0.6
INK                                 IAmb IAmb  18 03 11.7
       comp=Z,5.8nm,0.7s
MDM    Murphy Dome       72.23  17  P    P     18 03 11.9 +0.2
MDM                                 IAmb IAmb  18 03 13.3
       comp=Z,12nm,1.4s
POKR   Poker Plat Res    72.28  17  P    P     18 03 12.7 +0.6
NEA2   Nenana            72.34  18  P    P     18 03 12.8 +0.4
NEA2                                IAmb IAmb  18 03 13.7
       comp=Z,6.1nm,0.9s
IL31                     72.70  17  P    P     18 03 14.3 -0.1
IL31                                IAmb IAmb  18 03 15.5
       comp=Z,4.0nm,1.0s
ILAR   Eielson Array     72.70  17  P    P     18 03 14.3 -0.2
       comp=Z,3.3nm,0.9s,baz=316,slow=5.0,SNR=33
ILAR   Eielson Array     72.70  17  P    P     18 03 14.5 -0.1
KTH    Kantishna Hill    72.74  19  P    P     18 03 15.3 +0.4
SCRK   Sand Creek        74.03  16  P    P     18 03 23.0 +0.5
SCRK                                IAmb IAmb  18 03 24.0
       comp=Z,4.7nm,0.8s
JAY    Jayapura          74.17 106  P    P     18 03 24.4 +0.4
       comp=Z,10nm,0.8s,baz=144,slow=11,SNR=3.0
PAX    Paxson            74.57  17  P    P     18 03 25.6 -0.1
PAX                                 pmax pmax
       comp=Z,15nm,1.2s
PAX    Paxson            74.57  17  P    P     18 03 25.6 -0.1
DAWY   Dawson            74.89  14       P     18 03 27.5  0.0
DAWY                                IAmb IAmb  18 03 28.8
       comp=Z,3.8nm,0.8s
L27K   Beaver Creek,     75.30  16  P    P     18 03 30.5 +0.7
BCAR   Beaver Creek A    75.30  16  P    P     18 03 30.6 +0.7
M27K   Edge Creek, AK    75.91  16  P    P     18 03 34.7 +1.3
DBIC   Dimbokro          76.43 268  P    P     18 03 38.0 +1.0
       comp=Z,1.8nm,0.6s,baz=198,slow=4.8,SNR=3.5
DBIC   Dimbokro          76.43 268  P    P     18 03 38.2 +1.2
DBIC                                pmax pmax
       comp=Z,13nm,1.4s
DBIC   Dimbokro          76.43 268  P    P     18 03 38.2 +1.2
DBIC                                IAmb IAmb  18 03 56.8
       comp=Z,12nm,1.4s
HYT    Haines Junctio    78.21  15       P     18 03 47.7 +1.3
YKA    Yellowknife Ar    79.47   4  P    P     18 03 53.6 +0.5
       comp=Z,2.5nm,0.6s,baz=348,slow=5.6,SNR=22
YKA    Yellowknife Ar    79.47   4  P    P     18 03 53.4 +0.2
SCHQ   Schefferville     81.18 338  P    P     18 04 02.6 +0.1
       comp=Z,2.6nm,0.7s,baz=46,slow=8.1,SNR=4.0
SCHQ   Schefferville     81.18 338  IAmb IAmb  18 04 10.0
       comp=Z,20nm,1.4s
WRA    Warramunga Arr    81.51 123  P    P     18 04 04.6 -0.1
       comp=Z,1.1nm,0.6s,baz=330,slow=5.0,SNR=13
ASAR   Alice Springs     83.89 126  P    P     18 04 17.6 +0.6
       comp=Z,0.4nm,0.6s,baz=324,slow=4.3,SNR=6.8
```

DJA ***07*** *17:53:43.8±0.4, 8°S±4°×11°9E±°, h260^{km}±5^{km}, M3.7/13, mb4.0/7, MLv3.6/13*

IDC ***07*** *17:53:44.2±3.8, 7°.45S×119°.74E, h265^{km}±36^{km}, mb2.8/2, mb1 3.0/5, mb1mx2.6/62, mbtmp3.6/5, Error ellipse: s-maj=92.2km s-min=23.5km az=59.0*

ISC 07 17:53:43.3±0.9**, 7°.67S**±0°.08×**119°.53E**±0°.06**, h250**^{km}**, n25, σ1**^{s}**25**/29**, Flores Sea**

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Code   Station Name         Δ°  AZ°  Phase ID        Time      Res
                                    Op    ISC      h  m  s    ISC
BSSI   Bau Bau, Buton     1.79  32  P     Pn     17 54 26.2 +2.2
WBSI   Waikabubak, Su     1.97 184  P     Pn     17 54 26.4 +0.8
WBSI                                S     S      17 54 58.7 -0.3
PLAI   Plampang           2.08 236  P     Pn     17 54 28.3 +1.7
PLAI                                S     S      17 55 02.3 +1.6
PLAI   Plampang           2.08 236  P     Pn     17 54 28.4 +1.8
EDFI   Ende, Flores       2.40 117  P     Pn     17 54 31.5 +1.8
BASI   Baing, Sumba       2.74 158  P     Pn     17 54 34.6 +1.5
TWSI   Taliwang, Sumb     2.83 248  P     Pn     17 54 35.0 +1.0
IGBI   Denpasar           4.49 255  P     Pn     17 54 53.0 +0.1
BATI   Baumata            4.80 122  P     Pn     17 54 58.5 +1.8
       6.8nm,0.3s,baz=295,slow=1.8,SNR=12
BATI                                S     S      17 55 55.1 -0.2
       5.7nm,0.3s,baz=119,slow=16,SNR=2.8
BATI   Baumata            4.80 122  P     Pn     17 54 57.4 +0.6
SOEI   Soe                5.12 114  P     Pn     17 55 01.4 +0.6
       0.2nm54nm,0.7s
SOEI   Soe                5.12 114  P     Pn     17 55 02.7 +1.9
JAGI   Jajag, Banyuwa     5.38 261  P     Pn     17 55 03.3 -0.6
       0.1nm14nm,1.2s
JAGI   Jajag, Banyuwa     5.38 261  P     Pn     17 55 03.5 -0.4
GMJI   Gumukmas           6.05 264  P     Pn     17 55 12.3 +0.1
       0.1nm19nm,1.1s
BKB    Balikpapan         6.88 337  P     Pn     17 55 24.8 +2.2
       0.5nm51nm,1.1s
PCJI   Pacitan            8.29 266  P     Pn     17 55 40.1 -0.2
       59nm,1.5s
UGM    Wanagama           8.93 268  P     Pn     17 55 47.7 -0.8
FITZ   Fitzroy Crossi    11.96 151  P     P      17 56 29.6 +0.1
       0.3nm,0.3s,baz=333,slow=8.4,SNR=14
FITZ                                S     S      17 58 40.6 +0.7
       0.1nm,0.3s,baz=243,slow=5.3,SNR=2.8
KNRA   Kununurra         12.04 132  P     P      17 56 29.4 -1.1
MTN    Manton Dam        12.52 115  P     P      17 56 34.9 -0.9
FAKI   Fak Fak           13.51  70  P     Pn     17 56 45.6 -0.1
WRA    Warramunga Arr    18.84 132  P     P      17 57 45.0 -0.1
       0.2nm,0.3s,baz=302,slow=12,SNR=21
ASAR   Alice Springs     21.06 141  P     P      17 58 08.8 +0.1
       0.5nm,0.4s,baz=315,slow=8.8,SNR=32
MKAR   Makanchi Array    63.52 332  P     P      18 03 45.4 -1.8
       0.4nm,0.7s,baz=151,slow=5.2,SNR=1.5
```

SJA ***07*** *18:03:08.1±0.7, 18°.70S×70°.05W, h110^{km}±3^{km}, ML4.6, MW4.5*

NEIC ***07*** *18:03:09.0±2.1, 18°.68S±0°.04×69°.76W±0°.07, h92^{km}±4^{km}, Error ellipse: s-maj=10.4km s-min=5.8km az=92.0*

IDC ***07*** *18:03:09.4±0.5, 18°.62S×69°.70W, h100^{km}±4^{km}, mb4.3/14, mb1 4.3/19, mb1mx4.2/33, mbtmp4.6/19, MS3.3/6, Ms1 3.3/6, ms1mx3.1/31, Error ellipse: s-maj=14.8km s-min=9.4km az=75.0*

GUC ***07*** *18:03:10.7±0.7, 18°.74S×70°.00W, h100^{km}±6^{km}, ML4.5*

VAO ***07*** *18:03:11.1±0.4, 18°.54S×69°.60W, h106^{km}, mb4.7*

ISC 07 18:03:08.9±0.4**, 18°.66S**±0°.03×**69°.82W**±0°.05**, h97**^{km}±4^{km}**, n246, σ1**^{s}**22**/278**, mb4.9**/52**, 1C-9D, Northern Chile**

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Code   Station Name         Δ°  AZ°  Phase ID        Time      Res
                                    Op    ISC      h  m  s    ISC
PB16   IPOC Station P     0.44  43        Pn     18 03 24.5 -0.2
PB16                                Sn    Sn     18 03 37.5 +1.1
PB12   IPOC Station P     0.48 275  Pn    Pn     18 03 24.6 +0.3
PB12                                Sn    Sn     18 03 35.1 -0.9
PB12   IPOC Station P     0.48 275 eP     Pn     18 03 24.7 +0.3
PB12                               eS     Sn     18 03 36.8 +0.8
PB12                                IAML         18 03 37.1
       comp=Z,17µm,0.2s
AP01   Chacalluta         0.57 300        Pn     18 03 25.5 +0.6
PSGCX  Pisagua            0.98 197        Pn     18 03 29.5 +0.4
PSGCX                               Sn    Sn     18 03 43.9 -0.2
PB11   IPOC Station P     1.11 172⇑iP     Pn     18 03 31.3 +0.7
PB11                               i S    Sn     18 03 47.7 +0.8
PB11                                IAML         18 03 50.2
       comp=N,12µm,0.3s
PB11   IPOC Station P     1.11 172  Pn    Pn     18 03 31.1 +0.6
PB11   IPOC Station P     1.11 172 eP     Pn     18 03 31.0 +0.4
PB11                               eP     Pn     18 03 31.6 +1.0
PB11                               eS     Sn     18 03 48.6 +1.8
PB11                                IAML         18 03 51.3
       comp=Z,5µm,0.3s
PB08   IPOC Station P     1.61 157⇓iP     Pn     18 03 38.5 +1.7
PB08                               i S    Sn     18 03 59.8 +2.0
PB08                                IAML         18 04 03.2
       comp=N,5µm,0.3s
PB08   IPOC Station P     1.61 157        Pn     18 03 37.9 +1.1
TA02   Huaiquique         1.63 190 eP     Pn     18 03 37.0 +0.2
TA02                               i S    Sn     18 03 56.4 -1.3
TA02                                IAML         18 04 03.7
       comp=N,6µm,0.2s
TA02   Huaiquique         1.63 190        Pn     18 03 36.9 +0.2
TA02   Huaiquique         1.63 190 eP     Pn     18 03 37.0 +0.2
TA02                               eS     Sn     18 03 57.2 -0.5
TA02                                IAML         18 04 11.5
       comp=Z,3µm,0.4s
TA01   Diego Aracena      1.93 190⇓iP     Pn     18 03 40.4 -0.1
TA01                                IAML         18 04 13.3
       comp=E,3µm,0.4s
TA01   Diego Aracena      1.93 190  Pn    Pn     18 03 40.4 -0.1
TA01   Diego Aracena      1.93 190 eP     Pn     18 03 40.0 -0.5
TA01                               eP     Pn     18 03 40.5 -0.1
TA01                               eS     Sn     18 04 05.7 +1.1
PB01   IPOC Station P     2.40 172⇓iP     Pn     18 03 47.2 +0.5
PB01                                IAML         18 04 15.9
       comp=N,3µm,0.2s
PB01   IPOC Station P     2.40 172        Pn     18 03 47.1 +0.4
PB01   IPOC Station P     2.40 172 eP     Pn     18 03 47.4 +0.7
PB01                               eS     Sn     18 04 18.6 +3.0
PB01                                IAML         18 04 34.5
       comp=Z,2µm,0.9s
PB02   IPOC Station P     2.65 181⇓iP     Pn     18 03 50.5 +0.4
PB02   IPOC Station P     2.65 181 eP     Pn     18 03 50.0 -0.1
PB02                               eS     Sn     18 04 09.7  -12
PB02                                IAML         18 04 39.9
       comp=Z,3µm,0.4s
LPAZ   La Paz             2.86  35  P     Pn     18 03 55.6 +2.3
       comp=Z,28nm,0.3s,baz=272,slow=3.3,SNR=615
LPAZ                                S     Sn     18 04 26.3 -1.0
       comp=Z,43nm,0.3s,baz=228,slow=16,SNR=4.9
LPAZ                                LR    LR     18 04 59.2
       comp=Z,368nm,20.0s,baz=167,slow=40
LPAZ   La Paz             2.86  35        Pn     18 03 56.3 +3.0
LPAZ   La Paz             2.86  35 eP     Pn     18 03 56.0 +2.7
PB07   IPOC Station P     3.06 181 eP     Pn     18 03 56.2 +0.6
PB07                               i S    Sn     18 04 30.2 -1.3
PB07                                IAML         18 04 41.6
       comp=E,2µm,0.6s
PB07   IPOC Station P     3.06 181        Pn     18 03 55.3 -0.2
PB07   IPOC Station P     3.06 181 eP     Pn     18 03 55.7 +0.2
PB07                               eP     Pn     18 03 56.0 +0.5
PB07                               eS     Sn     18 04 33.4 +1.9
PB07                                IAML         18 04 49.6
       comp=Z,2µm,0.6s
PB09   IPOC Station P     3.17 170⇓iP     Pn     18 03 58.2 +1.1
PB09                                IAML         18 04 59.7
       comp=E,1µm,0.4s
PB09   IPOC Station P     3.17 170        Pn     18 03 57.9 +0.9
PB09   IPOC Station P     3.17 170 eP     Pn     18 03 58.0 +0.9
PB09                               eS     Sn     18 04 35.2 +1.0
PB09                                IAML         18 05 02.2
       comp=Z,2µm,0.8s
PB04   IPOC Station P     3.67 185⇓iP     Pn     18 04 03.2 -0.6
PB04                               i S    Sn     18 04 42.2 -4.1
PB04   IPOC Station P     3.67 185        Pn     18 04 03.7 -0.1
PB04   IPOC Station P     3.67 185 eP     Pn     18 04 03.6 -0.1
PB04                               eS     Sn     18 04 46.0 -0.2
PB04                                IAML         18 04 58.8
       comp=Z,884nm,1.0s
LVC    Limon Verde        4.03 168  P     Pn     18 04 10.4 +1.6
       comp=Z,28nm,0.3s,baz=352,slow=9.2,SNR=190
LVC                                 S     Sn     18 04 54.6 -0.5
       comp=Z,126nm,0.3s,baz=226,slow=22,SNR=16
LVC    Limon Verde        4.03 168 eP     Pn     18 04 10.8 +2.0
LVC    Limon Verde        4.03 168        Pn     18 04 09.7 +1.0
LVC    Limon Verde        4.03 168 eP     Pn     18 04 10.0 +1.2
LVC                                eS     Sn     18 04 55.2 +0.1
PB06   IPOC Station P     4.04 177⇓iP     Pn     18 04 08.5 -0.2
PB06                               i S    Sn     18 04 51.5 -3.6
PB06   IPOC Station P     4.04 177        Pn     18 04 08.5 -0.2
PB06   IPOC Station P     4.04 177 eP     Pn     18 04 09.0 +0.3
PB06                               eS     Sn     18 04 54.8 -0.3
PB06                                IAML         18 05 42.1
       comp=Z,943nm,0.9s
PB15   IPOC Station P     4.54 176⇓iP     Pn     18 04 15.4 -0.3
PB15   IPOC Station P     4.54 176        Pn     18 04 15.2 -0.4
PB15   IPOC Station P     4.54 176 eP     Pn     18 04 16.0 +0.4
PB15                               eS     Sn     18 05 05.4 -2.0
PB15                                IAML         18 05 09.1
       comp=Z,1µm,0.3s
PB10   IPOC Station P     4.88 188⇓iP     Pn     18 04 18.7 -1.4
PB10   IPOC Station P     4.88 188        Pn     18 04 18.8 -1.2
PB10   IPOC Station P     4.88 188 eP     Pn     18 04 19.1 -1.0
PB10                               eS     Sn     18 05 14.0 -1.3
YJA    Yavi               5.35 132 eP     Pn     18 04 31.0 +4.2
PB14   IPOC Station P     5.97 185  Pn    Pn     18 04 32.1 -2.9
PB14   IPOC Station P     5.97 185 eP     Pn     18 04 34.0 -1.0
PB14                               eS     Sn     18 05 38.2 -3.9
PB14                                IAML         18 06 12.4
       comp=Z,155nm,0.6s
HJA    Humahuaca          6.13 138 eP     Pn     18 04 35.1 -2.1
HJA                                eP     Pn     18 04 40.0 +2.7
ASTB   Santa Barbara      7.27 137 eP     Pn     18 04 54.4 +1.8
ASTB                               eS     Sn     18 06 02.5  -11
AC02   Maricunga          8.17 176  Pn    Pn     18 05 03.7 -1.4
AC02   Maricunga          8.17 176 eP     Pn     18 05 04.5 -0.6
AC02                               eS     Sn     18 06 35.1 -0.9
AC02                                IAML         18 07 27.0
       comp=Z,79nm,1.2s
SIV    San Ignacio        8.77  74  P     Pn     18 05 11.8 -1.1
       comp=Z,3.7nm,0.3s,baz=247,slow=12,SNR=88
ETMB   Extrema            9.46  22 eP     Pn     18 05 21.5 -0.8
ETMB   Extrema            9.46  22  Pn    Pn     18 05 20.6 -1.7
NNA    Nana               9.47 313  P     Pn     18 05 24.0 +1.4
       comp=Z,4.4nm,0.3s,baz=168,slow=15,SNR=4.8
NNA                                 LR    LR     18 08 40.7
       comp=Z,46nm,21.9s,baz=161,slow=35
LCO    Las Campanas      10.34 184 eP     Pn     18 05 30.0 -4.5
PTLB   Pontes e Lacer    10.71  74 eP     Pn     18 05 37.4 -2.0
PTLB   Pontes e Lacer    10.71  74  Pn    Pn     18 05 36.7 -2.6
VILB   Vilhena           10.86  60 eP     Pn     18 05 40.2 -1.2
VILB   Vilhena           10.86  60  Pn    Pn     18 05 39.6 -1.8
ACLC   CERRO LA CRUZ     11.04 167 eP     Pn     18 05 42.1 -1.8
CZSB   Cruzeiro do Su    11.22 345 eP     Pn     18 05 46.5 +0.2
CZSB   Cruzeiro do Su    11.22 345        Pn     18 05 45.6 -0.7
CO03   El Pedregal       12.16 184        Pn     18 05 59.3 +0.5
AQDB   Aquidauana        13.44 100 eP     Pn     18 06 14.7 -1.0
SALV   Santo Antonio     13.77  81 eP     Pn     18 06 19.1 -1.0
CPUP   Villa Florida     13.84 126  P     Pn     18 06 20.5 -0.4
       comp=Z,0.4nm,0.3s,baz=291,slow=12,SNR=5.3
CPUP   Villa Florida     13.84 126 eP     Pn     18 06 20.9 +0.1
VA03   San Esteban       14.06 183  P     Pn     18 06 24.7 +0.8
ATAH   Atahualpa         14.17 323  P     Pn     18 06 26.2 +0.6
       comp=Z,0.2nm,0.3s,baz=60,slow=6.3,SNR=3.7
PP1B   Ponte de Pedra    14.25  88 eP     Pn     18 06 24.5 -1.8
PDRB   Porto dos Gac     14.45  63 eP     Pn     18 06 25.1 -3.7
MT02   Curacav           14.59 184        Pn     18 06 30.9 +0.3
MT05   Renca             14.70 183        Pn     18 06 32.8 +0.8
VA05   Santo Domingo     15.03 186  P     Pn     18 06 36.2 +0.2
MT09   Talagante         15.10 184        Pn     18 06 36.5 -0.6
MT09                                IAmb  IAmb   18 06 43.3
       comp=Z,84nm,1.1s
MT01   Popeta            15.20 185  P     Pn     18 06 38.6 +0.3
MT01                                IAmb  IAmb   18 06 45.3
       comp=Z,71nm,0.9s
CLDB   Colider           15.61  62 eP     Pn     18 06 42.4 -1.1
BO01   Tunca             15.71 184  P     Pn     18 06 44.9 +0.1
BO02   Sierra Bellavi    16.10 183  P     Pn     18 06 49.8 +0.2
BO02                                IAmb  IAmb   18 06 55.1
       comp=Z,51nm,1.1s
ITQB   Itaqui            16.27 135 eP     P      18 06 52.7 -0.2
TRCB   Terra Rica        16.60 107  P     Pn     18 06 54.8 -1.1
TRCB                                IAmb  IAmb   18 06 59.4
       comp=Z,59nm,0.5s
ARAG   Araguaiana, MT    17.46  83 eP     P      18 07 06.0 -0.2
PTGB   Pitanga           17.57 113 eP     Pn     18 07 08.7 +1.0
PCMB   Pacaembu          17.68 103 eP     Pn     18 07 09.2 +0.2
MACA   Manacapuru-AM     17.81  31 eP     P      18 07 09.8 -0.2
MACA   Manacapuru-AM     17.81  31  P     P      18 07 08.4 -1.6
MACA                                IAmb  IAmb   18 07 11.4
       comp=Z,80nm,1.0s
NPGB   Novo Progresso    18.20  53 eP     P      18 07 12.7 -1.7
ITAB   Concordia         18.38 121 eP     Pn     18 07 17.2 -0.2
ITAB   Concordia         18.38 121        Pn     18 07 16.9 -0.5
ITRB   Iturama           18.42  96 eP     P      18 07 16.5 -0.2
CPSB   Cacapava Do Su    18.92 131 eP     P      18 07 22.8 +0.7
SNDB   Serra Nova Dou    19.06  72 eP     P      18 07 23.1 -0.7
PLTB   Pedras Altas      19.61 135 eP     P      18 07 30.1 +0.5
PLTB   Pedras Altas      19.61 135  P     P      18 07 29.5 -0.1
ITTB   Itaituba          19.78  46 eP     P      18 07 30.7 -0.9
BB19B  Bebedouro         20.17 100 eP     P      18 07 35.0 -0.9
LC01   Cunco             20.25 185  P     P      18 07 37.4 +0.9
LC01                                IAmb  IAmb   18 07 42.7
       comp=Z,60nm,1.2s
PTGA   Pitinga           20.27  30  P     P      18 07 35.6 -1.2
       comp=Z,21nm,0.3s,baz=324,slow=23,SNR=34
PTGA                                LR    LR     18 16 18.2
       comp=Z,118nm,20.0s,baz=82,slow=39
CNLB   Canela            20.30 125 eP     P      18 07 37.8 +0.7
TRQA   Tornquist         20.51 162  P     P      18 07 39.8 +0.6
TRQA                                IAmb  IAmb   18 07 41.5
       comp=Z,49nm,0.9s
IPMB   Ipameri, GO       20.53  92 eP     P      18 07 38.5 -1.2
OTAV   Otavalo           20.60 335 eP     P      18 07 42.2 +1.3
OTAV   Otavalo           20.60 335  P     P      18 07 40.6 -0.2
BDFB   Brasilia          21.05  85  P     P      18 07 43.6 -1.8
       comp=Z,12nm,0.4s,baz=252,slow=11,SNR=12
BDFB   Brasilia          21.05  85  P     P      18 07 44.6 -0.8
RCLB   Rio Claro- Sao    21.20 104 eP     P      18 07 45.6 -1.3
TER01  Tubaro-SC         21.33 121 eP     P      18 07 48.0 -0.2
PET01  Itanhaem-SP       21.71 109 eP     P      18 07 50.4 -1.8
VAO    Valinhos          21.79 105 eP     P      18 07 52.2 -1.0
PLCA   Paso Flores       22.01 181  P     P      18 07 56.0 +0.7
       comp=Z,26nm,1.0s,baz=359,slow=10,SNR=34
PLCA   Paso Flores       22.01 181 eP     P      18 07 58.0 +2.7
PLCA   Paso Flores       22.01 181  P     P      18 07 56.5 +1.1
MALB   Monte Alegre      22.62  44 eP     P      18 08 00.0 -1.8
BOAV   Boa Vista         22.83  25 eP     P      18 08 03.6 -0.4
BOAV   Boa Vista         22.83  25  P     P      18 08 02.3 -1.7
BOAV                                IAmb  IAmb   18 08 05.9
       comp=Z,31nm,0.8s
PARB   Paraibuna         23.06 106 eP     P      18 08 05.2 -1.1
PRPB   Parauapebas       23.11  60 eP     P      18 08 05.3 -1.5
SMTB   Santa Maria do    23.66  69 eP     P      18 08 11.5 -0.3
BSCB   Bom Sucesso       23.68 100 eP     P      18 08 11.3 -0.7
ROSC   El Rosal          23.76 349  LR    LR     18 19 22.0
       comp=Z,101nm,19.4s,baz=90,slow=41
LL02   Futaleuf          24.52 184  P     P      18 08 20.0 +0.8
JANB   Januaria          24.67  86 eP     P      18 08 21.1 +0.2
MC01   Montes Claros     24.73  90 eP     P      18 08 21.2 -0.3
SDBA   SAO DESIDERIO     24.79  79 eP     P      18 08 22.0  0.0
DIAM   Diamantina, MG    24.80  93 eP     P      18 08 21.4 -0.9
VAS01  Vassouras-RJ      24.97 103 eP     P      18 08 23.4 -0.1
MCPB   Macapa, AP        25.20  46 eP     P      18 08 25.2 -0.5
DUB01  Friburgo-RJ       25.94 102 eP     P      18 08 32.6 +0.2
ZARC   Zaragoza, Cauc    26.45 349  P     P      18 08 35.6 -1.4
SJMB   Sao Joao De Ma    27.12  95 eP     P      18 08 43.0  0.0
SDV    Santo Domingo     27.38 358  P     P      18 08 42.8 -2.7
BSFB   Barra de Sao F    27.43  95 eP     P      18 08 45.0 -0.7
BAUV   El Baul           27.48   4  P     P      18 08 45.7 -0.4
GUA01  Guaratinga, BA    28.67  91 eP     P      18 08 57.2 +0.4
SJCC   San Jacinto, C    28.86 349  P     P      18 08 58.1 -0.4
SJCC                                IAmb  IAmb   18 09 05.7
       comp=Z,36nm,1.5s
MDP    Montagnes des     29.05  37  P     P      18 08 59.3 -0.9
       comp=Z,6.7nm,0.7s,baz=194,slow=8.5,SNR=3.9
MDP                                 LR    LR     18 21 29.4
       comp=Z,147nm,19.3s,baz=250,slow=38
PCRV   Puerto La Cruz    29.10  11  P     P      18 08 60.0 -0.6
       comp=Z,5.3nm,0.6s,baz=27,slow=2.3,SNR=2.8
CMC01  Camacan, BA       29.15  88 eP     P      18 09 00.9 -0.2
BIRV   Birongo           29.16   7  P     P      18 09 00.5 -0.6
BIRV                                IAmb  IAmb   18 09 11.4
       comp=Z,27nm,1.2s
NBIT   Itapeh - BA       29.31  87 eP     P      18 09 02.6 +0.1
GDU01  Guandu, BA        29.44  85 eP     P      18 09 03.3 -0.3
ROSB   Rosrio            29.63  61 eP     P      18 09 05.5 +0.2
NBPN   Ponto Novo - B    29.65  79 eP     P      18 09 05.4 -0.1
NBPS   Pedro II - PI     31.14  66 eP     P      18 09 18.4 -0.3
NBLA   Lagarto - SE      31.85  81 eP     P      18 09 24.3 -0.6
JTS    Las Juntas de     32.41 331  P     P      18 09 36.6 +6.9
JTS    Las Juntas de     32.41 331        P      18 09 36.6 +6.9
DUNO   Dulce Nombre,     32.47 330  P     P      18 09 31.1 +0.9
DUNO   Dulce Nombre,     32.47 330        P      18 09 31.1 +0.9
NBAN   Anadia - AL       33.68  79 eP     P      18 09 40.3 -0.6
NBLV   Livramento - P    33.90  75 eP     P      18 09 41.6 -1.2
NBCL   Cascavel-CE       33.98  69 eP     P      18 09 43.1 -0.4
NBPA   Parau_RN          34.37  72 eP     P      18 09 45.9 -0.9
NBPV   Pedro Velho       35.76  75 eP     P      18 09 58.6 -0.2
MLPR   Magueyes Islan    36.50   4  P     P      18 10 03.8 -1.1
OBIP   Obispado Ponce    36.61   5  P     P      18 10 04.2 -1.7
PDPR   Patillas Dam,     36.64   6  P     P      18 10 04.4 -1.7
CELP   Cerrillos         36.64   5  P     P      18 10 04.6 -1.5
SJG    San Juan          36.72   6  P     P      18 10 04.3 -2.5
CBYP   Canovanas         36.90   6  P     P      18 10 06.5 -1.9
GCPR   Guaynabo City     36.92   6  P     P      18 10 07.0 -1.5
CMIG   Matias Romero     43.24 324  P     P      18 10 59.7 -1.1
       comp=Z,15nm,0.6s,baz=102,slow=9.2,SNR=4.1
U54A   Nelsons Funny     56.04 348  P     P      18 12 38.8 +1.0
U49A   Red Boiling Sp    56.91 345  P     P      18 12 43.5 -0.3
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U49A				IAmb	IAmb	18 13 01.2	
	comp=Z,19nm,1.2s						
WVT	**Waverly**	57.09	343	P	P	18 12 45.0	-0.1
WVT				IAmb	IAmb	18 12 46.0	
	comp=Z,8.1nm,0.8s						
T50A	**Nancy**	57.16	346	P	P	18 12 45.8	+0.2
S54A	**Dingess, Beckl**	57.18	349	P	P	18 12 46.5	+0.7
S54A				IAmb	IAmb	18 12 47.8	
	comp=Z,15nm,0.8s						
R55A	**Marlinton**	57.45	350	P	P	18 12 49.2	+1.5
R55A				IAmb	IAmb	18 12 51.3	
	comp=Z,16nm,1.1s						
TX31	**Lajitas Ar. Si**	57.82	325	P	P	18 12 48.7	-1.8
TX31				IAmb	IAmb	18 12 52.1	
	comp=Z,20nm,1.4s						
TX32	**Lajitas Array**	57.82	325	P	P	18 12 49.5	-1.0
TXAR	**Lajitas Array**	57.82	325	P	P	18 12 49.1	-1.4
	comp=Z,0.8nm,0.6s,baz=146,slow=11,SNR=12						
TXAR	**Lajitas Array**	57.82	325	P	P	18 12 48.7	-1.8
FCAR	**Ozark Folk Cen**	58.22	339	P	P	18 12 52.5	-0.5
R50A	**Paris**	58.25	347	P	P	18 12 54.4	+1.2
R50A				IAmb	IAmb	18 13 17.7	
	comp=Z,14nm,1.2s						
Q54A	**Coxs Mills**	58.26	350	P	P	18 12 53.9	+0.6
Q54A				IAmb	IAmb	18 12 55.1	
	comp=Z,14nm,0.9s						
ABTX	**Abilene, Hawle**	58.43	330	P	P	18 12 55.5	+0.9
ABTX				IAmb	IAmb	18 13 20.9	
	comp=Z,6.9nm,0.6s						
MVL	**Millersville**	58.67	354	P	P	18 12 56.5	+0.5
MVL				IAmb	IAmb	18 12 57.8	
	comp=Z,8.4nm,0.8s						
P53A	**Whipple**	58.84	350	P	P	18 12 58.2	+0.9
N59A	**State Game Lan**	59.52	355	P	P	18 13 02.3	+0.3
N59A				IAmb	IAmb	18 13 04.9	
	comp=Z,13nm,1.2s						
O52A	**Adamsville**	59.53	349	P	P	18 13 02.4	+0.4
O52A				IAmb	IAmb	18 13 03.6	
	comp=Z,8.8nm,0.7s						
N58A	**Sunbury**	59.53	354	P	P	18 13 02.0	-0.1
N58A				IAmb	IAmb	18 13 04.0	
	comp=Z,15nm,0.9s						
FVM	**French Village**	59.58	341	P	P	18 13 02.5	+0.2
M57A	**Sunshine Farm,**	60.07	354	P	P	18 13 06.2	+0.5
M57A				IAmb	IAmb	18 13 07.9	
	comp=Z,16nm,1.0s						
BRYW	**Bryant College**	60.29	359	P	P	18 13 07.9	+0.7
M54A	**Oil Creek Stat**	60.55	352	P	P	18 13 09.2	+0.2
M53A	**WI Miller and**	60.63	351	P	P	18 13 10.3	+0.8
M53A				IAmb	IAmb	18 13 11.5	
	comp=Z,17nm,0.9s						
L59A	**Walton**	60.73	356	P	P	18 13 10.1	-0.1
L59A				IAmb	IAmb	18 13 12.3	
	comp=Z,11nm,0.8s						
N49A	**Columbus Grove**	60.76	348	P	P	18 13 10.5	+0.2
BINY	**Binghamton**	60.81	355	P	P	18 13 11.6	+0.8
BINY				IAmb	IAmb	18 13 12.9	
	comp=Z,15nm,0.9s						
P43A	**Skaggs, Pawnee**	60.84	343	P	P	18 13 10.8	-0.2
P43A				IAmb	IAmb	18 13 12.0	
	comp=Z,13nm,0.8s						
HRV	**Adam Dziewonsk**	60.88	359	P	P	18 13 11.9	+0.7
BLOK	**Blackwell**	60.88	335	P	P	18 13 12.0	+0.7
BLOK				IAmb	IAmb	18 13 13.7	
	comp=Z,12nm,0.9s						
SFIN	**Lafayette**	60.89	345	P	P	18 13 10.5	-0.8
SFIN				IAmb	IAmb	18 13 12.1	
	comp=Z,5.9nm,0.7s						
L56A	**Greenwood**	60.91	353	P	P	18 13 12.0	+0.6
L56A				IAmb	IAmb	18 13 13.3	
	comp=Z,12nm,0.8s						
TRY	**Troy**	61.18	357	P	P	18 13 13.2	0.0
TRY				IAmb	IAmb	18 13 15.3	
	comp=Z,14nm,0.9s						
ERPA	**Erie**	61.19	351	P	P	18 13 14.4	+1.1
WVNY	**West Valley, N**	61.29	353	P	P	18 13 13.4	-0.6
WVNY				IAmb	IAmb	18 13 16.2	
	comp=Z,12nm,0.9s						
J59A	**Piesco**	61.96	356	P	P	18 13 19.1	+0.6
J59A				IAmb	IAmb	18 13 20.7	
	comp=Z,12nm,0.9s						
NCB	**Newcomb**	62.45	356	P	P	18 13 22.2	+0.5
VNA3	**Neumayer Olymp**	63.03	162	P	P	18 13 27.2	+1.9
J47A	**Sunmer**	63.11	348	P	P	18 13 26.0	-0.1
LONY	**Lake Ozonia**	63.12	356	P	P	18 13 27.1	+0.9
VNA1	**Neumayer--Stat**	63.24	161	P	P	18 13 28.9	+2.3
FRNY	**Flat Rock**	63.27	357	P	P	18 13 27.5	+0.4
FRNY				IAmb	IAmb	18 13 29.3	
	comp=Z,13nm,1.1s						
G62A	**West of Eustis**	63.57	359	P	P	18 13 30.6	+1.5
G62A				IAmb	IAmb	18 13 31.6	
	comp=Z,18nm,0.8s						
G65A	**Princeton**	63.58	2	P	P	18 13 30.5	+1.3
VNA2	**Neumayer--Watz**	63.61	161	P	P	18 13 31.3	+2.2
	baz=289,slow=7.9						
MNTQ	**Montreal, Queb**	63.94	357	P	P	18 13 32.2	+0.7
F64A	**Sherman**	64.22	1	P	P	18 13 34.0	+0.7
F64A				IAmb	IAmb	18 13 35.9	
	comp=Z,11nm,0.9s						
TRQ	**Mont Tremblant**	64.71	356	P	P	18 13 37.1	+0.5
TRQ				IAmb	IAmb	18 13 38.4	
	comp=Z,10nm,0.8s						
SNAA	**Sanae**	65.23	161	P	P	18 13 41.5	+1.8
SNAA	**Sanae**	65.23	161	P	P	18 13 41.3	+1.6
SNAA				IAmb	IAmb	18 13 42.7	
	comp=Z,11nm,1.2s						
BGNE	**Belgrade**	65.27	337	P	P	18 13 40.3	0.0
E46A	**Sault Ste Mari**	66.03	349	P	P	18 13 45.1	+0.1
E46A				IAmb	IAmb	18 13 47.5	
	comp=Z,8.7nm,0.8s						
VLDQ	**Val d'Or**	66.81	354	P	P	18 13 50.9	+1.0
VLDQ				IAmb	IAmb	18 13 52.1	
	comp=Z,8.5nm,0.9s						
F36A	**Milaca**	67.72	342	P	P	18 13 55.8	+0.1
LIC	**Lamto**	68.46	75	*e*P	P	18 14 00.3	-0.8
	comp=Z,5.1nm,0.3s						
TIC	**Toumodi**	68.63	75	*e*P	P	18 14 01.6	-0.6
KIC	**Kosan Boka**	68.78	75	*e*P	P	18 14 02.4	-0.7
	comp=Z,8.5nm,0.3s						
DBIC	**Dimbokro**	68.79	75	P	P	18 14 02.0	-1.2
	comp=Z,6.3nm,0.6s,baz=250,slow=5.4,SNR=12						
DBIC				pP	PcP	18 14 27.8	+0.6
	comp=Z,19nm,0.8s,baz=234,slow=4.8,SNR=11						
DBIC	**Dimbokro**	68.79	75	P	P	18 14 02.4	-0.7
DBIC				IAmb	IAmb	18 14 29.4	
	comp=Z,20nm,0.8s						
PDAR	**Pinedale Array**	71.23	330	P	P	18 14 17.3	-0.5
	comp=Z,0.2nm,0.4s,baz=47,slow=31,SNR=4.4						
PDAR				pP	pP	18 14 43.7	+0.8
	comp=Z,0.9nm,0.8s,baz=116,slow=6.8,SNR=4.3						
QSPA	**South Pole Qui**	71.52	180	P	P	18 14 21.3	+2.2
ULM	**Lac du Bonnet**	72.36	343	P	P	18 14 24.2	+0.2
	comp=Z,4.6nm,0.6s,baz=179,slow=6.8,SNR=6.9						
ULM	**Lac du Bonnet**	72.36	343	P	P	18 14 24.5	+0.5
KOWA	**Kowa**	72.71	68	P	P	18 14 26.7	-0.1
KOWA				IAmb	IAmb	18 14 29.0	
	comp=Z,11nm,0.8s						
NVAR	**Mina Array Bea**	72.73	322	pP	pP	18 14 53.8	+1.7
	comp=Z,1.4nm,0.7s,baz=152,slow=6.3,SNR=7.1						
SCHQ	**Schefferville**	73.23	2	P	P	18 14 29.0	-0.1
	comp=Z,4.7nm,0.8s,baz=253,slow=8.8,SNR=4.5						
TORD	**Torodi Ar. Bea**	77.24	71	P	P	18 14 52.0	-1.0
	comp=Z,11nm,0.6s,baz=256,slow=5.2,SNR=38						
TORD				pP	pP	18 15 18.2	-1.2
	comp=Z,12nm,0.8s,baz=256,slow=5.3,SNR=9.4						
TORD	**Torodi Ar. Bea**	77.24	71	P	P	18 14 51.9	-1.0
PAB	**San Pablo**	84.11	45	P	P	18 15 30.3	+1.1
PAB				IAmb	IAmb	18 15 31.4	
	comp=Z,11nm,0.9s						
ESDC	**Sonseca Array**	84.43	45	P	P	18 15 31.4	+0.6
	comp=Z,4.6nm,0.9s,baz=252,slow=5.2,SNR=21						
ESDC				pP	pP	18 15 56.6	-0.7
	comp=Z,2.4nm,1.0s,baz=242,slow=6.1,SNR=3.7						
ESDC	**Sonseca Array**	84.43	45	P	P	18 15 32.0	+1.1
MAW	**Mawson**	87.29	164	P	P	18 15 45.5	+1.1
	comp=Z,3.2nm,1.0s,baz=177,slow=6.5,SNR=3.7						
MAW				LR	LR	18 56 05.0	
	comp=Z,22nm,18.2s,baz=231,slow=36						
YKA	**Yellowknife Ar**	88.23	341	P	P	18 15 50.4	+1.6
	comp=Z,2.3nm,0.6s,baz=135,slow=4.6,SNR=18						
YKA				pP	pP	18 16 14.7	-0.2
	comp=Z,3.8nm,0.7s,baz=136,slow=4.8,SNR=7.8						
RAO	**Raoul Island**	95.90	237	LR	LR	18 49 49.9	
	comp=Z,208nm,19.9s,baz=281,slow=29						
ASAR	**Alice Springs**	131.98	210	PKP	PKiKP	18 22 13.3	+0.4
	comp=Z,1.2nm,0.9s,baz=137,slow=2.4,SNR=6.5						
ASAR				pPKP	pPKPdf	18 22 39.1	-0.2
	comp=Z,1.1nm,0.9s,baz=121,slow=1.6,SNR=4.2						
WRA	**Warramunga Arr**	134.91	213	PKP	PKiKP	18 22 19.1	+0.1
	comp=Z,0.4nm,0.4s,baz=166,slow=3.9,SNR=11						
WRA				pPKP	pPKPdf	18 22 44.6	-0.3
	comp=Z,1.3nm,0.9s,baz=142,slow=1.7,SNR=4.1						
WRA	**Warramunga Arr**	134.91	213		PKPdf	18 22 16.8	-0.7
ZALV	**Zalesovo Beam**	139.72	23	PKP	PKPdf	18 22 25.9	+0.7
	comp=Z,0.7nm,0.5s,baz=280,slow=3.0,SNR=4.3						
ZALV				pPKP	pPKPdf	18 22 52.2	-0.6
	comp=Z,2.3nm,0.7s,baz=299,slow=3.1,SNR=4.7						
MKAR	**Makanchi Array**	143.78	33	PKP	PKPdf	18 22 31.9	-0.8
	comp=Z,0.5nm,0.7s,baz=199,slow=10,SNR=6.0						
MJAR	**Matsushiro Arr**	149.59	312	pPKPbc	pPKPbc	18 23 16.2	+1.6
	comp=Z,3.5nm,0.9s,baz=116,slow=0.6,SNR=4.8						
SONM	**Songino Array**	150.73	5	PKPbc	PKiKP	18 22 51.9	+1.3
	comp=Z,2.0nm,0.7s,baz=319,slow=1.5,SNR=9.5						
SONM				pPKPbc	pPKPbc	18 23 18.2	+0.7
	comp=Z,2.4nm,0.6s,baz=309,slow=1.9,SNR=4.8						

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*IDC **07** 18:08:09.4±5.4, 12°.82N×90°.18W, h48^{km}±38^{km}, mb3.8/5, mb1 4.1/7, mb1mx3.6/43, mbtmp4.1/7, ML3.9/2, Error ellipse: s-maj=52.2km s-min=33.3km az=120.0*
*SNET **07** 18:08:10.7±1.0, 12°.96N×90°.22W, h24^{km}±3^{km}, ML4.3*
*NEIC **07** 18:08:11.3±2.5, 13°.13N±0°.08×90°.31W±0°.08, h43^{km}±10^{km}, mb4.4/5, Md4.3(SNET), Error ellipse: s-maj=12.4km s-min=10.7km az=196.0*
*INET **07** 18:08:11.2, 13°.38N×90°.20W, h31^{km}, ML4.0, MW3.4*
*UCR **07** 18:08:11.3±1.1, 12°.99N×90°.21W, h24^{km}±3^{km}, ML4.2, MW3.8*
*GCG **07** 18:08:12.0±0.5, 13°.01N×90°.46W, h75^{km}±46^{km}, MD4.2*
ISC 07 18:08:11.9±1.6, **13°.00N**±0°.08×**90°.23W**±0°.08, **h62**^{km}±13^{km}, **n96**, σ1^{s}.**03**/119, **mb4.2**/6, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	1.00	49	*e*P	Pn	18 08 29.6	-0.6
JAYA				*e*S	Sn	18 08 43.8	0.0
JAYA				IAML		18 08 45.9	
	comp=Z,12µm,0.2s						
JAYA	**Jayaque - finc**	1.00	49	*e*P	Pn	18 08 29.6	-0.6
JAYA				*e*S	Sn	18 08 43.8	0.0
JAYA				IAML		18 08 45.9	
	comp=Z,12µm,0.2s						
LALI	**Alcalda de L**	1.01	61	*e*P	Pn	18 08 29.5	-0.7
LALI				*e*S	Sn	18 08 43.1	-0.5
LALI	**Alcalda de L**	1.01	61	*e*P	Pn	18 08 29.5	-0.7
LALI				*e*S	Sn	18 08 43.1	-0.5
CEVE	**Cerro Verde**	1.01	35	*e*P	Pn	18 08 29.8	-0.6
CEVE				IAML		18 08 47.0	
	comp=Z,13µm,0.3s						
CEVE	**Cerro Verde**	1.01	35	*e*P	Pn	18 08 29.8	-0.6
CEVE				IAML		18 08 47.0	
	comp=Z,13µm,0.3s						
SBLS	**San Blas**	1.02	35	*e*P	Pn	18 08 29.9	-0.7
SBLS	**San Blas**	1.02	35	*e*P	Pn	18 08 29.9	-0.7
SNJE	**San Jose**	1.05	35	*e*P	Pn	18 08 30.3	-0.7
SNJE	**San Jose**	1.05	35	*e*P	Pn	18 08 30.3	-0.7
RTR	**El Retiro**	1.05	32	*e*P	Pn	18 08 30.6	-0.4
RTR	**El Retiro**	1.05	32	*e*P	Pn	18 08 30.6	-0.4
SLOZ	**Alcaldia de Sa**	1.11	23	*e*P	Pn	18 08 31.1	-0.5
SLOZ				*e*S	Sn	18 08 47.0	+0.9
SLOZ				IAML		18 08 51.1	
	comp=Z,3µm,0.5s						
CEDA	**San Andres**	1.14	45	*e*P	Pn	18 08 31.6	-0.4
CEDA				*e*S	Sn	18 08 48.0	+1.2
CEDA	**San Andres**	1.14	45	*e*P	Pn	18 08 31.6	-0.4
CEDA				*e*S	Sn	18 08 48.0	+1.2
BOQS	**Boqueron**	1.18	52	*e*P	Pn	18 08 32.3	-0.3
BOQS	**Boqueron**	1.18	52	*e*P	Pn	18 08 32.3	-0.3
SNET	**Serv Nac Est T**	1.19	55	*e*P	Pn	18 08 32.2	-0.3
SNET				IAML		18 08 54.2	
	comp=Z,3µm,0.2s						
SNET	**Serv Nac Est T**	1.19	55	*e*P	Pn	18 08 32.2	-0.3
SNET				IAML		18 08 54.2	
	comp=Z,3µm,0.2s						
SNET	**Serv Nac Est T**	1.19	55	Pn	Pn	18 08 31.3	-1.3
SNET				Sn	Sn	18 08 46.6	-1.4
OPAM	**Oficina de Pla**	1.23	55	*e*P	Pn	18 08 33.5	+0.4
OPAM	**Oficina de Pla**	1.23	55	*e*P	Pn	18 08 33.5	+0.4
TACO	**Tacachico**	1.28	41	*e*P	Pn	18 08 33.6	-0.3
TACO				*e*S	Sn	18 08 51.6	+1.3
TACO	**Tacachico**	1.28	41	*e*P	Pn	18 08 33.6	-0.3
TACO				*e*S	Sn	18 08 51.6	+1.3
LFRS	**El Faro**	1.29	61	*e*P	Pn	18 08 33.6	-0.4
LFRS	**El Faro**	1.29	61	*e*P	Pn	18 08 33.6	-0.4
LFU	**La Fuente**	1.31	55	*e*P	Pn	18 08 34.0	-0.3
LFU	**La Fuente**	1.31	55	*e*P	Pn	18 08 34.0	-0.3
SJTE	**Alcalda de S**	1.33	63	*e*P	Pn	18 08 34.3	-0.3
SJTE				*e*S	Sn	18 08 52.7	+1.2
SJTE	**Alcalda de S**	1.33	63	*e*P	Pn	18 08 34.3	-0.3
SJTE				*e*S	Sn	18 08 52.7	+1.2
LBRS	**Las Brisas**	1.36	57	*e*P	Pn	18 08 35.0	0.0
LBRS	**Las Brisas**	1.36	57	*e*P	Pn	18 08 35.0	0.0
PCG	**Pacaya**	1.43	345	*e*P	Pn	18 08 36.6	+0.5
PAVA	**Las Pavas**	1.44	60	*e*P	Pn	18 08 36.5	+0.5
PAVA	**Las Pavas**	1.44	60	*e*P	Pn	18 08 36.5	+0.5
COEG	**Centro de Oper**	1.45	65	*e*P	Pn	18 08 35.9	-0.1
COEG				*e*S	Sn	18 08 55.4	+1.1
COEG				IAML		18 08 57.2	
	comp=Z,3µm,0.3s						
COEG	**Centro de Oper**	1.45	65	*e*P	Pn	18 08 35.9	-0.1
COEG				*e*S	Sn	18 08 55.4	+1.1
COEG				IAML		18 08 57.2	
	comp=Z,3µm,0.3s						
FUG	**Fuego 3**	1.56	338	*e*P	Pn	18 08 37.2	-0.5
NBG	**Las Nubes**	1.58	356	*e*P	Pn	18 08 39.4	+1.4
NBG				*e*S	Sn	18 09 00.3	+2.6
SCLA	**Alcaldia de Sa**	1.62	64	*e*P	Pn	18 08 38.8	+0.5
SCLA				*e*S	Sn	18 09 00.2	+2.0
SCLA	**Alcaldia de Sa**	1.62	64	*e*P	Pn	18 08 38.8	+0.5
SCLA				*e*S	Sn	18 09 00.2	+2.0
MTO3	**Montecristo**	1.62	31	*e*P	Pn	18 08 38.9	+0.3
MTO3	**Montecristo**	1.62	31	*e*P	Pn	18 08 38.9	+0.3
MTO3	**Montecristo**	1.62	31	Pn	Pn	18 08 38.6	+0.1
ALJI	**Alcalda de J**	1.65	78	*e*P	Pn	18 08 37.8	-0.9
ALJI				*e*S	Sn	18 08 59.5	+0.6
ALJI	**Alcalda de J**	1.65	78	*e*P	Pn	18 08 37.8	-0.9
ALJI				*e*S	Sn	18 08 59.5	+0.6
COEB	**Comit de Eme**	1.72	73	*e*P	Pn	18 08 39.4	-0.4
COEB	**Comit de Eme**	1.72	73	*e*P	Pn	18 08 39.4	-0.4
PQSS	**Presa 15 de Se**	1.74	69	*e*P	Pn	18 08 40.0	+0.2
PACA	**Pacayal**	1.91	76	*e*P	Pn	18 08 42.9	+0.5
PACA	**Pacayal**	1.91	76	*e*P	Pn	18 08 42.9	+0.5
JUCU	**Jucuar¡n**	1.94	82	*e*P	Pn	18 08 42.2	-0.5
JUCU				*e*S	Sn	18 09 06.9	+0.7
JUCU				IAML		18 09 12.1	
	comp=Z,2µm,0.3s						
JUCU	**Jucuar¡n**	1.94	82	*e*P	Pn	18 08 42.2	-0.5
JUCU				*e*S	Sn	18 09 06.9	+0.7
JUCU				IAML		18 09 12.1	
	comp=Z,2µm,0.3s						
APG	**El Apazote**	2.00	353	P	Pn	18 08 44.5	+0.7
	comp=Z,59nm,0.3s,baz=154,slow=7.2,SNR=157						
APG				S	Sn	18 09 10.2	+2.3
	comp=Z,92nm,0.3s,baz=223,slow=14,SNR=14						
MRL	**Marmol**	2.13	14	*e*P	Pn	18 08 47.2	+1.7
STG3	**Santiaguito 3,**	2.14	323	*e*P	Pn	18 08 44.8	-0.8
LCND	**La Caada**	2.30	82	*e*P	Pn	18 08 47.4	-0.1
LCND				*e*S	Sn	18 09 14.8	+0.1
LCND	**La Caada**	2.30	82	*e*P	Pn	18 08 47.4	-0.1
LCND				*e*S	Sn	18 09 14.8	+0.1
CNCH	**Conchagua**	2.35	83	*e*P	Pn	18 08 48.1	-0.2
CNCH	**Conchagua**	2.35	83	*e*P	Pn	18 08 48.1	-0.2
TGUH	**Tegucigalpa,Un**	3.06	70	Pn	Pn	18 08 56.4	-1.6
CRIN	**San Cristobal**	3.11	95	Pn	Pn	18 08 58.3	-0.4
CCIG	**Comitan**	3.75	331	Pn	Pn	18 09 03.9	-3.6
MATN	**Matagalpa**	4.19	90	Pn	Pn	18 09 12.3	-1.2
BOAB	**BOACO BROADBAN**	4.48	97	Pn	Pn	18 09 16.6	-0.8
ACON	**Acoyapa**	5.04	101	Pn	Pn	18 09 23.6	-1.4
HZTE	**Horizontes, Gu**	5.07	116	Pn	Pn	18 09 26.2	+0.8
LAPC	**Finca la Perla**	5.19	115	*i* P	Pn	18 09 28.0	+0.9
BUEV	**Buena Vista**	5.20	114	*i* P	Pn	18 09 28.8	+1.5
BUAI	**Buenos Aires**	5.24	113	*i* P	Pn	18 09 29.1	+1.3
GUAI	**GUAI**	5.36	120	*i* P	Pn	18 09 30.1	+0.7
COLC	**Colonia**	5.44	115	*i* P	Pn	18 09 31.9	+1.4
HORNC	**Hornillas**	5.44	114	*i* P	Pn	18 09 31.1	+0.5
CUI	**Cuipilapa**	5.48	115	*i* P	Pn	18 09 31.4	+0.4
ACAL	**Aguas Claras**	5.60	114	*i* P	Pn	18 09 33.4	+0.6
CAO2	**Cobano, Puntar**	6.00	123	Pn	Pn	18 09 37.9	-0.3
CMIG	**Matias Romero**	6.06	313	P	Pn	18 09 38.7	-0.3
	comp=Z,1.5nm,0.3s,baz=155,slow=12,SNR=19						
JACO	**JACO, Garabito**	6.39	121	Pn	Pn	18 09 44.7	+1.2
CVTR	**Volcan Turrial**	7.00	114	Pn	Pn	18 09 54.0	+1.8
RIMA	**Rio Macho**	7.02	117	Pn	Pn	18 09 52.6	+0.3
PEZE	**Perez Zeledon,**	7.36	119	Pn	Pn	18 09 58.3	+1.4
SRBA	**San Rafael, Bu**	7.71	118	Pn	Pn	18 10 03.0	+1.4
CDITO	**Canoas**	8.46	121	Pn	Pn	18 10 14.3	+2.4
BRU2	**Volcan**	8.50	119	Pn	Pn	18 10 14.3	+1.8
152A	**Waverly Hall**	20.22	14	P	P	18 12 39.6	-2.2
152A				IAmb	IAmb	18 12 44.9	
	comp=Z,15nm,1.1s						
TKL	**Tuckaleechee C**	23.30	13	P	P	18 13 14.8	+0.3
	comp=Z,3.7nm,0.7s,baz=188,slow=11,SNR=4.5						
TKL	**Tuckaleechee C**	23.30	13	IAmb	IAmb	18 13 28.2	
	comp=Z,36nm,1.4s						
121A	**Cookes Peak, D**	25.23	323	P	P	18 13 33.2	+0.9
ANMO	**Albuquerque**	26.33	329	P	P	18 13 42.1	-0.2
	comp=Z,1.4nm,0.7s,baz=149,slow=9.8,SNR=3.9						
SCHQ	**Schefferville**	45.58	19	P	P	18 16 25.4	-0.2
	comp=Z,6.8nm,0.5s,baz=224,slow=11,SNR=12						
YKA	**Yellowknife Ar**	52.40	346	P	P	18 17 18.4	+0.8
	comp=Z,0.9nm,0.3s,baz=149,slow=7.8,SNR=9.9						
RES	**Resolute Bay**	61.73	359		P	18 18 23.6	+0.3
RES				IAmb	IAmb	18 18 24.2	
	comp=Z,2.4nm,0.8s						
ILAR	**Eielson Array**	64.43	337	P	P	18 18 42.4	+0.9
	comp=Z,0.3nm,0.8s,baz=160,slow=3.1,SNR=4.5						
WRA	**Warramunga Arr**	136.81	255	PKP	PKPdf	18 27 25.9	-2.4
	comp=Z,0.7nm,1.2s,baz=89,slow=2.4,SNR=1.7						
ASAR	**Alice Springs**	136.94	249	PKP	PKPdf	18 27 26.1	-2.4
	comp=Z,0.2nm,0.7s,baz=134,slow=4.0,SNR=1.5						
CMAR	**Chiang Mai Arr**	147.46	344	PKPbc	PKPbc	18 27 49.0	-0.9
	comp=Z,0.6nm,0.6s,baz=347,slow=4.2,SNR=4.2						

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*IDC **07** 18:09:06.7±1.0, 38°.26N×73°.31E, h0^{km}, mb3.9/2, mb1 3.6/7, mb1mx3.4/48, mbtmp3.5/7, ML2.9/5, Error ellipse: s-maj=13.4km s-min=10.7km az=91.0*
ISC 07 18:09:06.7±2.3, **38°.2N**±0°.2×**73°.4E**±0°.2, **h10**^{km}, **n12**, σ**0**^{s}.**55**/13, **Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AML	**Almayashu**	3.95	4	P	Pn	18 10 07.7	-0.2
	SNR=24						
UCH	**Uchtor**	4.14	12	P	Pn	18 10 10.6	+0.1
	SNR=27						
EKS2	**Erkin-Say**	4.49	4	P	Pn	18 10 15.3	+0.4
	SNR=12						
AAK	**Ala-Archa**	4.54	11	Pn	Pn	18 10 15.9	+0.3
	3.3nm,0.3s,baz=155,slow=1.4,SNR=39						
AAK				Sn	Sn	18 11 08.5	0.0
	1.1nm,0.3s,baz=41,slow=16,SNR=5.8						
AAK	**Ala-Archa**	4.54	11	P	Pn	18 10 16.1	+0.5
	SNR=26						
CHMS	**Chumysh**	4.93	12	P	Pn	18 10 21.0	+0.1
	SNR=14						
MKAR	**Makanchi Array**	10.84	35	Pn	Pn	18 11 41.2	-0.8
	0.0nm,0.3s,baz=216,slow=15,SNR=2.3						
KURBB	**Kurchatov Arra**	12.97	15	Pn	Pn	18 12 10.4	-0.6
	0.0nm,0.3s,baz=193,slow=12,SNR=2.2						
AKTO	**Aktyubinsk**	16.41	323	Pn	Pn	18 12 56.1	-0.8
	0.2nm,0.3s,baz=110,slow=17,SNR=4.7						
ZALV	**Zalesovo Beam**	17.62	23	P	Pn	18 13 11.8	-0.4
	0.1nm,0.3s,baz=224,slow=12,SNR=1.8						
SONM	**Songino Array**	25.84	57	P	P	18 14 39.2	+0.8
	1.2nm,0.9s,baz=258,slow=9.3,SNR=7.3						
FINES	**FINESS Array B**	37.18	324	P	P	18 16 17.6	0.0
	3.4nm,0.9s,baz=124,slow=12,SNR=1.0						

IDC 07 18:10:03.9±22.0, **38°.31S**×**93°.50W**, **h0**^{km}, **mb3.5**/3, **mb1 4.0**/3, **mb1mx3.8**/34, **mbtmp3.5**/3, **MS3.8**/6, **Ms1 3.8**/6, **ms1mx3.5**/15, **Error ellipse: s-maj=772.9km s-min=357.4km az=118.0**, **West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	12.60	74	T	T	18 25 21.7	
	baz=241,SNR=58						
H03S1	**Juan Fernandez**	12.61	74	T	T	18 25 20.3	
	baz=241,SNR=45						
H03S3	**Juan Fernandez**	12.62	74	T	T	18 25 20.2	
	baz=241,SNR=62						
PLCA	**Paso Flores**	17.86	105	LR	LR	18 18 41.5	
	comp=Z,311nm,18.8s,baz=266,slow=29						
NNA	**Nana**	30.13	34	LR	LR	18 25 20.7	
	comp=Z,40nm,20.7s,baz=208,slow=30						
LPAZ	**La Paz**	31.27	52	LR	LR	18 26 56.3	
	comp=Z,98nm,19.2s,baz=238,slow=32						
CPUP	**Villa Florida**	32.62	79	LR	LR	18 27 57.3	
	comp=Z,134nm,19.5s,baz=222,slow=33						
BDFB	**Brasilia**	45.83	73	LR	LR	18 36 27.8	
	comp=Z,101nm,19.4s,baz=252,slow=35						
TXAR	**Lajitas Array**	67.96	350	P	P	18 21 04.5	0.0
	0.5nm,0.9s,baz=178,slow=11,SNR=4.3						
NVAR	**Mina Array Bea**	79.70	340	P	P	18 22 13.7	+0.3
	0.2nm,0.4s,baz=170,slow=5.9,SNR=2.2						
PDAR	**Pinedale Array**	82.00	348	P	P	18 22 25.5	-0.1
	0.4nm,0.9s,baz=163,slow=6.5,SNR=3.0						
DZM	**Mont Dzumac**	84.08	247	LR	LR	18 52 00.6	
	comp=Z,229nm,19.1s,baz=84,slow=30						

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*BUL **07** 18:11:42.7±13.0, 25°.68S×29°.71E, h10^{km}, MD3.7*
EAF 07 18:11:43.0±2.6, **25°.92S**×**30°.36E**, **h10**^{km}, **MD3.6**, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CNG	**Changalane**	1.68	103	*i* P	Pn	18 12 12.1	-0.4
CNG	**Changalane**	1.68	103	*i* P	Pn	18 12 12.1	-0.4
MOPA	**Mopani**	2.57	22	*i* P	Pg	18 12 34.1	+1.8
MOPA				*i* S	Sn	18 12 54.4	-1.8
MOPA	**Mopani**	2.57	22	*i* P	Pg	18 12 34.1	+1.8
MOPA				*i* S	Sn	18 12 54.4	-1.8
MSNA	**Messina**	3.57	355	*i* P	Pn	18 12 40.6	+2.0
MSNA				*i* S	Sn	18 13 03.5	-17
MSNA	**Messina**	3.57	355	*i* P	Pn	18 12 40.6	+2.0
MSNA				*i* S	Sn	18 13 03.5	-17
MATP	**Matopo**	5.73	342	*i* P	Pn	18 13 05.4	-3.0
MATP				*i* S	Sn	18 13 56.3	-18
MATP	**Matopo**	5.73	342	*i* P	Pn	18 13 05.4	-3.0
MATP				*i* S	Sn	18 13 56.3	-18

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*RSNC **07** 18:12:08.6±1.2, 6°.81N×73°.12W, h147^{km}±4^{km}, ML3.3, Mw3.5*
*IDC **07** 18:12:09.6±0.6, 6°.67N×75°.89W, h128^{km}±11^{km}, mb3.3/1, mb1 3.6/2, mb1mx3.0/36, mbtmp3.7/2, Error ellipse: s-maj=49.7km s-min=8.4km az=52.0*
ISC 07 18:12:07.9±1.0, **6°.83N**±0°.03×**73°.12W**±0°.04, **h149**^{km}±6^{km}, **n30**, σ**1**^{s}.**35**/56, **1C-2D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BARC	**Barichara**	0.25	194	⇓*i*P	Pn	18 12 28.5	0.0
BARC				*e*S	Sn	18 12 43.0	-1.2
BARC				*i*		18 12 44.6	
	comp=Z,410nm,0.3s						
BRRC	**Barranca, Sant**	0.65	295	⇑*e*P	Pn	18 12 30.4	+0.4
BRRC				*e*S	Sn	18 12 47.2	+0.4
BRRC				*i*		18 12 51.3	
	comp=Z,382nm,0.5s						
PAMC	**Pamplona, Colo**	0.65	40	*e*P	Pn	18 12 31.4	+0.7
PAMC				*e*S	Sn	18 12 48.5	+0.6
PAMC				*i*		18 12 50.6	
	comp=Z,607nm,0.5s						
RUSC	**La Rusia**	0.94	178	*e*P	Pn	18 12 32.5	-0.1
RUSC				*e*S	Sn	18 12 51.3	-0.2
RUSC				*i*		18 12 52.3	
	comp=Z,166nm,0.3s						
PTBC	**PUERTO BERRIO,**	1.36	258	*e*P	Pn	18 12 35.1	-0.9
PTBC				*e*S	Sn	18 12 56.4	-1.0
PTBC				*i*		18 13 03.4	
	comp=Z,114nm,0.1s						
TAMC	**Tame, Arauca**	1.38	107	⇓*i*P	Pn	18 12 37.0	+0.8
TAMC				*e*S	Sn	18 12 57.8	0.0
OCAC	**Ocana**	1.41	352	*e*P	Pn	18 12 36.6	-0.1
OCAC				*e*S	Sn	18 12 58.6	-0.1
OCAC				*i*		18 13 08.0	
	comp=Z,279nm,0.4s						
SPBC	**San Pablo de B**	1.51	219	*e*P	Pn	18 12 37.4	-0.2

SPBC				eS	Sn	18 12 59.2	-1.1
SPBC				i		18 13 02.1	
	comp=Z,201nm,0.4s						
ZARC	Zaragoza, Cauc	1.84	291	eP	Pn	18 12 41.2	0.0
ZARC				eS	Sn	18 13 07.0	+0.2
ZARC				i		18 13 12.6	
	comp=Z,204nm,0.3s						
NORC	Norcasia	2.15	234	eP	Pn	18 12 44.8	0.0
NORC				eS	Sn	18 13 12.8	-0.4
NORC				i		18 13 18.4	
	comp=Z,86nm,0.2s						
SMLC	San Martn de	2.17	334	eP	Pn	18 12 44.8	-0.2
SMLC				eS	Sn	18 13 14.7	+1.1
SMLC				i		18 13 16.7	
	comp=Z,224nm,0.3s						
ROSC	El Rosal	2.31	211	P	Pn	18 12 48.8	+1.6
	comp=Z,22nm,0.3s,baz=327,slow=16,SNR=17						
ROSC				S	Sn	18 13 19.3	+2.1
	comp=Z,77nm,0.3s,baz=116,slow=18,SNR=20						
ROSC	El Rosal	2.31	211	eP	Pn	18 12 48.7	+1.6
ROSC				eS	Sn	18 13 15.0	-2.2
ROSC				i		18 13 22.1	
	comp=Z,205nm,0.3s						
UREC	San Jos de Ur	2.56	291	eP	Pn	18 12 48.5	-1.3
UREC				eS	Sn	18 13 19.7	-2.4
SOCV	Socops	2.67	57	eP	Pn	18 12 50.6	-0.5
SOCV				eS	Sn	18 13 22.1	-2.4
LL1C	La Loma 1 Cana	2.73	351	eP	Pn	18 12 54.0	+2.2
LL1C				eS	Sn	18 13 28.9	+3.2
GUY2C	Guyana, Caldas	2.75	235	eP	Pn	18 12 52.9	+0.4
GUY2C				eS	Sn	18 13 30.4	+3.5
GUY2C				i		18 13 34.4	
	comp=Z,53nm,0.3s						
VILC	Villavicencio,	2.76	192	eP	Pn	18 12 52.3	-0.1
VILC				eS	Sn	18 13 25.6	-1.1
PTGC	Puerto Gaitan,	2.79	159	eP	Pn	18 12 51.7	-1.0
PTGC				eS	Sn	18 13 25.2	-2.1
PTGC				i		18 13 30.0	
	comp=Z,126nm,0.6s						
LL6C	La Loma 6 Bece	2.89	357	eP	Pn	18 12 53.0	-0.8
LL6C				eS	Sn	18 13 28.5	-0.9
CBOC	Ciudad Bolivar	3.03	252	eP	Pn	18 12 56.9	+1.1
CBOC				eS	Sn	18 13 33.1	+0.3
DBBC	Dabeiba	3.07	274	eP	Pn	18 12 56.0	-0.3
DBBC				eS	Sn	18 13 31.0	-2.6
DBBC				i		18 13 37.9	
	comp=Z,126nm,0.3s						
MOTC	Monteria, Cord	3.18	308	eP	Pn	18 12 56.0	-1.5
MOTC				eS	Sn	18 13 34.0	-1.9
MOTC				i		18 13 47.8	
	comp=Z,46nm,0.5s						
SDV	Santo Domingo	3.20	50	eS	Sn	18 13 36.9	+0.2
ANIL	Santa Ana	3.25	224	eP	Pn	18 12 59.8	+1.0
ANIL				eS	Sn	18 13 39.0	+0.9
ANIL				i		18 13 43.1	
	comp=Z,214nm,0.4s						
PRAC	Prado	3.56	210	eP	Pn	18 13 02.4	-0.2
PRAC				eS	Sn	18 13 44.3	-0.6
PRAC				i		18 13 49.4	
	comp=Z,82nm,0.5s						
ORTC	Ortega, Tolima	3.59	216	eP	Pn	18 13 03.0	+0.1
ORTC				eS	Sn	18 13 45.8	+0.1
ORTC				i		18 13 49.8	
	comp=Z,47nm,0.3s						
MARP	Paez Belalcaza	4.87	216	eP	Pn	18 13 19.9	+0.1
MARP				eS	Sn	18 14 05.9	-10
YKA	Yellowknife Ar	63.25	340	P	P	18 22 19.1	-1.1
	comp=Z,0.4nm,0.6s,baz=135,slow=6.5,SNR=5.0						
WRA	Warramunga Arr	150.34	241	PKPbc	PKPdf	18 31 39.8	+2.6
	comp=Z,0.2nm,0.7s,baz=108,slow=2.9,SNR=5.6						

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*IDC **07** 18:29:22.4±10.0, 38°.99S×92°.35W, h0^{km}, mb4.0/5, mb1 4.3/5, mb1mx4.0/23, mbtmp4.0/5, MS3.7/10, Ms1 3.7/10, ms1mx3.5/21, Error ellipse: s-maj=269.2km s-min=39.2km az=3.0*

ISC 07 18:29:24.1±1.2**, 39°.0S**±0°.2×**92°.3W**±0°.3**, h10**^{km}**, n20, σ0^s.50**/8**, mb4.0**/5**, MS3.7**/11**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	16.80	103	LR	LR	18 38 45.5	
	comp=Z,121nm,18.7s,baz=287,slow=34						
RPN	Rapa Nui	18.49	305	LR	LR	18 38 43.8	
	comp=Z,292nm,21.1s,baz=28,slow=30						
USHA	Ushuaia	22.59	142	LR	LR	18 40 47.0	
	comp=Z,234nm,18.2s,baz=40,slow=30						
NNA	Nana	30.19	31	LR	LR	18 44 23.0	
	comp=Z,100nm,20.2s,baz=194,slow=30						
LPAZ	La Paz	30.96	50	P	P	18 35 42.4	+0.2
	1.6nm,0.8s,baz=232,slow=10,SNR=4.5						
LPAZ				LR	LR	18 44 02.0	
	comp=Z,10nm,21.0s,baz=224,slow=28						
CPUP	Villa Florida	31.84	77	LR	LR	18 46 47.5	
	comp=Z,96nm,20.4s,baz=222,slow=33						
SIV	San Ignacio	35.66	59	P	P	18 36 22.4	-0.1
	0.5nm,0.3s,baz=225,slow=15,SNR=3.7						
QSPA	South Pole Qui	51.26	180	LR	LR	18 58 54.0	
	comp=Z,38nm,18.6s,baz=146,slow=35						
VNA3	Neumayer Olymp	51.32	156	P	P	18 38 28.4	+0.3
VNA2	Neumayer--Watz	52.10	155	P	P	18 38 34.3	+0.4
	baz=250,slow=6.6						
TAOE	Nuku Hiva Isla	52.20	292	eLR	LR	18 53 21.8	
	comp=Z,96nm,25.8s						
SNAA	Sanae	53.38	157	P	P	18 38 42.8	-0.6
PPT	Papeete	53.84	276	LR	LR	18 54 37.5	
	comp=Z,88nm,21.6s,baz=356,slow=28						
RAR	Rarotonga	59.73	266	LR	LR	18 56 50.3	
	comp=Z,190nm,21.7s,baz=224,slow=28						
URZ	Urewera	67.66	238	LR	LR	19 01 26.9	
	comp=Z,83nm,20.5s,baz=211,slow=28						
TXAR	Lajitas Array	68.78	349	P	P	18 40 28.3	0.0
	0.9nm,0.7s,baz=165,slow=8.4,SNR=7.1						
NVAR	Mina Array Bea	80.64	340	P	P	18 41 37.5	+0.5
	1.4nm,0.9s,baz=168,slow=5.7,SNR=5.5						
PDAR	Pinedale Array	82.85	347	P	P	18 41 48.1	-0.6
	1.9nm,1.1s,baz=161,slow=6.7,SNR=6.9						
DZM	Mont Dzumac	84.66	246	eLR	LR	19 08 11.2	
	comp=Z,93nm,31.6s						
BOSA	Boshof	91.08	129	LR	LR	19 17 23.9	
	comp=Z,33nm,20.1s,baz=183,slow=32						

IDC 07 18:34:00.1±4.0**, 11°.54S**×**167°.07E, h0**^{km}**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.5**/22**, mbtmp3.4**/3**, Error ellipse: s-maj=204.7km s-min=17.0km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.55	251	P	P	18 40 33.0	-0.3
	0.3nm,0.6s,baz=84,slow=9.2,SNR=6.1						
ASAR	Alice Springs	33.75	245	P	P	18 40 44.1	+0.4
	0.5nm,1.1s,baz=66,slow=10,SNR=4.2						
ILAR	Eielson Array	83.57	18	P	P	18 46 29.9	0.0
	0.3nm,0.5s,baz=232,slow=4.4,SNR=5.8						

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*INET **07** 18:37:09.2, 9°.55N×83°.75W, h11^{km}, ML2.4, MW2.5*

UPA 07 18:37:09.9±0.4**, 9°.55N**×**83°.75W, h10**^{km}±2^{km}**, MW4.2, 1C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HDC	Heredia	0.57	322	⇑iP	Pg	18 37 21.4	+0.3
HDC				eS	Sb	18 37 30.9	+0.4
BATAN	Batan	0.66	34	eP	Pg	18 37 22.9	+0.3
BATAN				eS	Sb	18 37 33.0	+0.3
PIRO	Carate, Puerto	1.21	160	eP	Pn	18 37 31.7	-1.2
PIRO				eS	Sg	18 37 48.8	-0.1
BRU2	Volcan	1.29	126	eP	Pn	18 37 33.3	-0.9
BRU2				eS	Sb	18 37 50.8	-0.2
BC3P	Paso Ancho	1.34	123	eP	Pn	18 37 33.7	-1.2
BC3P				eS	Sb	18 37 52.5	-0.1
JTS	Las Juntas de	1.40	302	eP	Pn	18 37 34.5	-1.0
JTS				eS	Sb	18 37 52.9	-1.0
BCO2	Palmira	1.46	124	eP	Pn	18 37 35.7	-0.8
BCO2				eS	Sn	18 37 55.4	-0.5
PTPM	Petroterminale	1.59	147	eP	Pn	18 37 38.0	-0.1
PTPM				eS	Sn	18 37 58.2	-0.6

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*IDC **07** 18:42:38.8±2.4, 10°.04N×124°.79E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.2/41, mbtmp3.2/3, Error ellipse: s-maj=109.2km s-min=29.2km az=59.0*

*MAN **07** 18:42:41.9, 10°.44N×125°.99E, h2^{km}, mb4.7, ML3.6, MS3.5*

ISC 07 18:42:43.0±1.5**, 10°.41N**±0°.08×**126°.20E**±0°.09**, h51**^{km}**, n13, σ1^s.42**/16**, mb3.2**/3**, 4C-4D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.63	187	⇑eP	Pn	18 42 54.1	-1.7
SCPH	Surigao	0.94	229	⇑eP	Pn	18 42 58.3	-1.7
SCPH				eS	Sn	18 43 10.6	-1.8
LLP	Lapu-Lapu	2.20	268	eP	Pn	18 43 16.8	-0.4
LLP				i S		19 43 42.6	
BIPH	Bislig	2.22	176	⇓iP	Sn	18 43 42.2	-1.4
TBP	Tagbilaran	2.42	253	eP	Pn	18 43 20.9	+0.8
TBP				eS	Sn	18 43 48.7	+0.2
BUKP	Musuan	2.76	204	⇓iP	Pn	18 43 27.4	+2.6
DCPH	Dipolog City	3.35	237	⇓eP	Pn	18 43 32.6	-0.3
CNOP	Candoni, Negro	3.56	261	⇑iP	Pn	18 43 35.6	-0.1
CNOP				i S	Sn	18 44 16.1	-0.5
RCP	Roxas	3.58	289	⇓eP	Pn	18 43 36.6	+0.5
PAGZ	Pagadian	3.77	228	⇑eP	Pn	18 43 39.6	+0.9
PAGZ				eS	Sn	18 44 21.8	-0.1
CMAR	Chiang Mai Arr	27.56	290	P	P	18 48 17.2	-8.1
	0.2nm,0.8s,baz=94,slow=7.1,SNR=1.4						
ASAR	Alice Springs	34.69	168	P	P	18 49 30.2	+2.1
	0.1nm,0.3s,baz=342,slow=7.3,SNR=4.8						
MKAR	Makanchi Array	51.88	323	P	P	18 51 45.0	-1.4
	0.3nm,0.5s,baz=121,slow=7.6,SNR=8.4						

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*NOU **07** 18:48:54.0, 29°.46S×178°.22W, h309^{km}, mb4.6/37, Kermadec Islands, New Zealand*

*NEIC **07** 18:48:55.6±1.8, 29°.44S±0°.10×178°.8W±0°.1, h282^{km}±5^{km}, mb4.6/64, Error ellipse: s-maj=18.0km s-min=12.1km az=123.0*

*IDC **07** 18:48:56.1±0.8, 29°.09S×178°.86W, h286^{km}±7^{km}, mb4.0/15, mb1 4.2/19, mb1mx4.1/30, mbtmp4.7/19, Error ellipse: s-maj=15.0km s-min=12.3km az=161.0*

ISC 07 18:48:56.1±0.3**, 29°.46S**±0°.05×**178°.69W**±0°.07**, h300**^{km}**, n373, σ1^s.68**/384**, mb4.6**/46**, 18C-6D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	0.70	72	P	Pn	18 49 34.9	-0.4
RIZ				S	S	18 50 01.9	-4.5
GLKZ	Green Lake	0.70	73	P	Pn	18 49 34.6	-0.7
GLKZ				S	S	18 50 02.7	-3.8
RAO	Raoul Island	0.70	73	P	Pn	18 49 34.5	-0.9
	2μm,0.3s,baz=115,slow=2.6,SNR=71						
RAO				S	S	18 50 03.0	-3.5
	1μm,0.3s,baz=239,slow=23,SNR=14						
RAO	Raoul Island	0.70	73		Pn	18 49 34.5	-0.9
RAO				Sn	S	18 50 01.6	-4.9
RAO	Raoul Island	0.70	73	P	Pn	18 49 34.7	-0.6
GRZ	Great Barrier	8.37	215	P	Pn	18 50 56.8	+2.6
MXZ	Matakaoa Point	8.46	196	P	Pn	18 50 53.4	-1.8
MXZ				S	S	18 52 30.1	-1.8
MXZ	Matakaoa Point	8.46	196	Pn	Pn	18 50 53.3	-1.9
WMGZ	Waiomatatini S	8.68	195	S	S	18 52 34.6	-2.3
OUZ	Omahuta	8.69	227	Pn	Pn	18 50 57.5	-0.6
WCZ	Waipu Caves	8.72	220	P	P	18 51 03.2	-0.4
HAZ	Te Kaha	8.78	199	P	Pn	18 50 57.9	-1.2
HAZ				S	S	18 52 36.8	-2.3
PKGZ	Pakihiroa	8.82	197	P	Pn	18 50 55.0	-4.8
PKGZ				S	S	18 52 34.3	-5.9
PUZ	Puketiti	8.95	196	P	Pn	18 50 58.8	-2.6
PUZ				S	S	18 52 39.7	-3.5
RUGZ	Raukumara Rang	9.00	199	P	Pn	18 51 00.3	-1.7
WHRZ	Whale Island	9.12	202	P	P	18 51 08.8	+0.9
WHRZ				S	S	18 52 47.6	+0.8
TWGZ	Tauwhareparae	9.12	197	P	Pn	18 51 02.5	-0.9
TWGZ				S	S	18 52 43.9	-3.1
MWZ	Matawai	9.39	199	P	Pn	18 51 04.3	-2.4
MWZ				S	S	18 52 50.3	-2.8
TKGZ	Te Karaka	9.40	197	P	P	18 51 08.4	-2.7
URZ	Urewera	9.44	201	P	Pn	18 51 07.0	-0.2
	15nm,0.3s,baz=302,slow=23,SNR=48						
URZ				S	S	18 52 52.0	-2.1
	30nm,0.3s,baz=204,slow=22,SNR=8.2						
URZ	Urewera	9.44	201	P	Pn	18 51 04.9	-2.4
URZ	Urewera	9.44	201	Pn	Pn	18 51 06.3	-0.9
URZ	Urewera	9.44	201	P	Pn	18 51 06.5	-0.8
RAGZ	Rawiri	9.57	199	P	Pn	18 51 08.0	-1.0
MUGZ	Murupara	9.75	202	P	Pn	18 51 08.2	-2.9
PRGZ	Paritu Road	9.85	196	P	Pn	18 51 11.2	-1.1
SNGZ	Shannon Statio	9.86	198	P	Pn	18 51 10.1	-2.3
ALRZ	Allen Road	9.97	203	P	P	18 51 15.8	-1.5
KNZ	Kokohu	10.00	197	P	Pn	18 51 13.2	-0.9
TLZ	Tolley Road	10.06	207	P	P	18 51 19.1	+0.7
MHGZ	Mahia Peninsul	10.06	195	P	Pn	18 51 15.9	+0.9
KUTZ	Kaahu Road	10.09	205	P	P	18 51 18.4	-0.3
NMHZ	Naumai	10.30	200	P	Pn	18 51 17.0	-0.9
WATZ	Wairara	10.31	205	P	P	18 51 20.9	-0.3
ARHZ	Aropaoanui	10.40	199	P	Pn	18 51 18.5	-0.5
BKZ	Black Stump Fm	10.46	201	P	Pn	18 51 17.2	-2.6
BKZ	Black Stump Fm	10.46	201	Pn	Pn	18 51 16.7	-3.2
BKZ	Black Stump Fm	10.46	201	P	Pn	18 51 18.5	-1.4
HIZ	Hauiti	10.49	209	P	P	18 51 24.7	+1.5
HIZ	Hauiti	10.49	209	P	P	18 51 21.9	-1.3
HIZ	Hauiti	10.49	209	P	Pn	18 51 20.2	0.0
MCHZ	McNeill Hill	10.66	200	P	P	18 51 23.0	-2.0
NTVZ	North Tongarir	10.68	204	P	P	18 51 24.0	-1.4
TMVZ	Te Maari	10.68	204	P	P	18 51 23.2	-2.2
ETVZ	East Tongariro	10.70	204	P	Pn	18 51 23.2	+0.4
KWHZ	Kaweka Forest	10.72	201	P	Pn	18 51 23.2	+0.1
WTVZ	West Tongariro	10.72	205	P	P	18 51 24.8	-1.1
NNVZ	North Ngauruho	10.73	205	P	P	18 51 24.8	-1.2
TWVZ	Taurewa	10.74	205	P	P	18 51 25.3	-0.8
CKHZ	Cape Kidnapper	10.75	198	P	Pn	18 51 22.5	-0.8
SNVZ	South Ngauruho	10.77	204	P	P	18 51 25.3	-1.1
NGZ	Ngauruhoe	10.77	204	P	P	18 51 25.2	-1.3
TUVZ	Tukino	10.84	204	P	Pn	18 51 24.8	+0.2
FWVZ	Far West T-bar	10.86	204	P	Pn	18 51 25.2	+0.3
WHVZ	Whangaehu Hut	10.87	204	P	P	18 51 25.8	-1.8
WNVZ	Wahianoa	10.91	204	P	P	18 51 25.9	-2.1
MOVZ	Moawhango	10.93	203	P	Pn	18 51 24.9	-0.7
KAHZ	Kahuranaki	10.93	198	P	Pn	18 51 22.2	-3.4
PKVZ	Pokaka	10.97	205	P	Pn	18 51 26.0	0.0
VRZ	Vera Road	11.05	208	P	P	18 51 27.7	-1.7
PXZ	Pawanui	11.16	198	P	Pn	18 51 25.6	-2.7
PRHZ	Porangahau	11.44	198	P	Pn	18 51 27.4	-4.3
TSZ	Takapari Road	11.45	201	P	Pn	18 51 30.6	-1.3
NEZ	North Egmont	11.45	209	P	P	18 51 36.1	+2.1
WAZ	Wanganui	11.51	205	P	P	18 51 32.9	-1.6
DVHZ	Dannevirke	11.60	200	P	Pn	18 51 32.4	-1.3
POWZ	Post Office Ro	11.81	201	P	Pn	18 51 34.7	-1.6
PRWZ	Pori Road	11.90	200	P	Pn	18 51 35.6	-1.7
BFZ	Birch Farm	11.93	199	P	Pn	18 51 34.2	-3.5
BFZ	Birch Farm	11.93	199		Pn	18 51 34.1	-3.6
BFZ	Birch Farm	11.93	199	P	Pn	18 51 36.9	-0.8
MSVF	Nonsavu	12.05	345	P	Pn	18 51 36.4	-3.1
	25nm,0.3s,baz=186,slow=6.1,SNR=107						
MSVF	Nonsavu	12.05	345		Pn	18 51 35.9	-3.6
MSVF	Nonsavu	12.05	345	P	Pn	18 51 37.4	-2.1
TIWZ	Tintock	12.12	200	P	Pn	18 51 38.5	-1.6
CPWZ	Castlepoint	12.16	199	P	P	18 51 40.7	-1.0
MSWZ	Moikau Station	12.90	201	P	Pn	18 51 45.2	-4.2
BHW	Baring Head	13.02	202	P	Pn	18 51 45.4	-5.4
PLWZ	Palliser	13.04	201	Pn	Pn	18 51 47.2	-3.9
TUWZ	Tuamarina	13.36	205		Pn	18 51 50.1	-4.8
NNZ	Nelson	13.39	207	Pn	Pn	18 51 52.5	-2.8
QRZ	Quartz Range	13.41	210		P	18 51 54.9	-0.7
QRZ	Quartz Range	13.41	210	P	P	18 51 55.7	+0.1
CMWZ	Cape Campbell	13.54	203	P	P	18 51 55.0	-2.0
BSWZ	Blackbirch Sta	13.63	204	P	Pn	18 51 57.3	-0.9
THZ	Tophouse	14.04	207	P	P	18 52 00.6	-1.9
PINNC	Pines Island,	14.20	295	P	Pn	18 52 04.4	-0.8
KHZ	Kahutara	14.37	204	P	P	18 52 04.4	-1.7
KHZ	Kahutara	14.37	204	P	P	18 52 05.1	-1.0
OUENC	Ouen Island, N	14.78	295	P	Pn	18 52 11.4	-0.7
OUENC	Ouen Island, N	14.78	295	P	Pn	18 52 12.6	+0.5
YATNC	Mamie plateau,	14.93	296	P	Pn	18 52 13.9	0.0
ONTNC	Ouen Toro	15.15	295	P	Pn	18 52 15.8	-0.6
LTZ	Lake Taylor	15.15	206	P	P	18 52 13.6	-1.1
LTZ				IAmb	IAmb	18 52 34.5	
	comp=Z,24nm,1.1s						
DZM	Mont Dzumac	15.28	295	P	Pn	18 52 15.9	-2.1
	baz=139,slow=15						
DZM	Mont Dzumac	15.28	295	P	Pn	18 52 17.2	-0.8
DZM	Mont Dzumac	15.28	295	P	Pn	18 52 18.0	0.0
NOUC	Port Laguerre	15.37	295	P	Pn	18 52 19.1	+0.1
LIFNC	LIFOU	15.39	301	P	P	18 52 16.2	-1.4
LIFNC	LIFOU	15.39	301	P	Pn	18 52 19.1	-0.1
OXZ	Oxford	15.71	206	P	P	18 52 19.6	-1.2
OXZ				IAmb	IAmb	18 52 22.9	
	comp=Z,30nm,1.1s						
MQZ	McQueen's Vall	15.81	204	P	P	18 52 19.4	-2.5
RPZ	Rata Peaks	16.42	207	P	P	18 52 28.3	-0.3
RPZ				IAmb	IAmb	18 52 52.6	
	comp=Z,24nm,1.1s						
RPZ	Rata Peaks	16.42	207	P	P	18 52 28.1	-0.4
RTV	Rentapao	16.55	312	P	Pn	18 52 30.3	-2.4
	comp=Z,421μm,0.8s						
AFI	Afiamalu	16.75	24	P	P	18 52 29.2	-3.3
	comp=Z,33nm,0.3s,baz=341,slow=3.4,SNR=20						
AFI				S	S	18 55 16.2	-16
	comp=Z,3.4nm,0.3s,baz=36,slow=23,SNR=3.8						
DVP	Devils Point	16.75	311	P	Pn	18 52 32.2	-2.9
FOZ	Fox Glacier	16.79	210	P	P	18 52 32.0	-0.5
ODZ	Otahua Downs	17.69	206	P	P	18 52 41.5	-0.8
RAR	Rarotonga	18.95	69	P	P	18 52 56.6	+0.6
	comp=Z,0.8nm,0.3s,baz=233,slow=5.0,SNR=4.5						
RAR	Rarotonga	18.95	69	IAmb	IAmb	18 52 58.3	
	comp=Z,32nm,1.0s						
SANVU	Saraoutou	19.07	314	P	P	18 52 58.3	+0.9
CMSA	Cobar Meteorol	30.68	257	P	P	18 54 44.4	+0.8
CTAO	Charters Tower	33.07	278	P	P	18 55 04.5	+0.1
CTAO				IAmb	IAmb	18 55 06.5	
	comp=Z,8.2nm,0.7s						
CTAO	Charters Tower	33.07	278	P	P	18 55 04.5	+0.1
STKA	Stephens Creek	34.12	256	P	P	18 55 15.2	+1.9
	comp=Z,2.6nm,0.5s,baz=103,slow=9.8,SNR=11						
STKA	Stephens Creek	34.12	256	P	P	18 55 14.2	+0.8
STKA	Stephens Creek	34.12	256	P	P	18 55 14.1	+0.8
INKA	Innaminka	35.53	263	P	P	18 55 26.1	+0.7
HTT	Hallett	36.20	253	P	P	18 55 32.0	+1.0
	comp=Z,15nm,2.2s						
LCRK	Leigh Creek	37.19	257	P	P	18 55 40.4	+1.1
BBOO	Buckleboo	38.66	253	P	P	18 55 51.4	-0.1
OOD	Oodnadatta	39.89	261	P	P	18 56 02.2	+0.6
MULG	Mulgathing	40.75	257	P	P	18 56 09.1	+0.5
AS31	Alice Springs	42.57	266	P	P	18 56 22.5	-1.0
ASAR	Alice Springs	42.57	266	P	P	18 56 22.9	-0.5
	comp=Z,1.5nm,0.3s,baz=100,slow=6.9,SNR=38						
ASAR				ScP	ScP	19 01 35.4	+3.9
	comp=Z,1.2nm,0.9s,baz=116,slow=4.0,SNR=5.8						
ASAR	Alice Springs	42.57	266	P	P	18 56 22.6	-0.8
WR0	Warramunga Arr	43.29	272	P	P	18 56 28.2	-1.0
WB2	Warramunga Arr	43.46	272	P	P	18 56 29.9	-0.6
WRAB	Tennant Creek	43.47	272	P	P	18 56 29.5	-1.0
WRAB	Tennant Creek	43.47	272	P	P	18 56 30.9	+0.3
WRA	Warramunga Arr	43.47	272	P	P	18 56 29.4	-1.2
	comp=Z,2.3nm,0.4s,baz=110,slow=8.0,SNR=69						
WRA				ScP	ScP	19 01 37.9	+2.7
	comp=Z,1.0nm,0.7s,baz=100,slow=3.9,SNR=6.4						
WRA				S	S	19 02 32.7	-3.6
	comp=Z,2.8nm,1.1s,baz=107,slow=14,SNR=6.0						
WRA	Warramunga Arr	43.47	272	P	P	18 56 29.7	-0.9
WB0	Warramunga Arr	43.49	272	P	P	18 56 29.6	-1.2
FORT	Forrest	45.72	254	P	P	18 56 48.3	+0.2
WRKA	Warakurna	47.01	262	P	P	18 56 57.7	-0.5
KDU	Kakadu	48.17	280	P	P	18 57 06.3	-0.8
	comp=Z,6.4nm,1.4s						
KNRA	Kununurra	50.04	274	P	P	18 57 21.5	+0.3
POHA	Pohakuloa	53.79	27	P	P	18 57 44.3	-4.5
SIJI	Sorong	55.44	291	P	P	18 57 59.7	-0.8
	comp=Z,10.0nm,0.8s,baz=86,slow=6.0,SNR=11						
SANI	Sanana	59.12	287	P	P	18 58 25.7	-0.4
QSPA	South Pole Qui	60.64	180	P	P	18 58 39.7	+4.0
	comp=Z,3.5nm,0.9s,baz=49,slow=2.2,SNR=8.7						
KSM	Kuching	74.26	281	P	P	19 00 01.1	-0.1
KSM				IAmb	IAmb	19 00 12.6	
	comp=Z,14nm,1.3s						
JGF	Kuroka	76.82	324	P	P	19 00 14.4	-0.8
JGF				IAmb	IAmb	19 00 16.3	
	comp=Z,13nm,0.9s						
MJAR	Matsushiro Arr	77.14	326	P	P	19 00 15.1	-1.8
	comp=Z,8.4nm,0.8s,baz=168,slow=4.4,SNR=14						
MJAR	Matsushiro Arr	77.14	326	P	P	19 00 16.2	-0.7
MJAR				IAmb	IAmb	19 00 16.8	
	comp=Z,12nm,1.0s						
MAJO	Matsushiro	77.14	326	P	P	19 00 16.2	-0.7
MAT	Matsushiro	77.14	326	P	P	19 00 15.9	-1.0
JWT	Wachi	77.58	323	P	P	19 00 18.9	-0.5
JHS	Saijyo	78.59	321	P	P	19 00 24.5	-0.4
SNAA	Sanae	79.10	179	P	P	19 00 29.8	+2.5
SNAA	Sanae	79.10	179	P	P	19 00 30.5	+3.3
VNA3	Neumayer Olymp	79.27	176	P	P	19 00 31.1	+3.0
VNA3	Neumayer Olymp	79.27	176	pP	pP	19 01 37.8	+0.5
VNA2	Neumayer--Watz	79.70	177	P	P	19 00 33.9	+3.5
	baz=185,slow=4.4						
VNA2	Neumayer--Watz	79.70	177	pP	pP	19 01 40.6	+0.9
VNA1	Neumayer--Stat	79.94	177	P	P	19 00 35.2	+3.6
KSRS	Korea Array	83.25	320	P	P	19 00 49.0	-0.3
	comp=Z,5.7nm,0.7s,baz=132,slow=5.3,SNR=19						
KSAR	Wonju Array Be	83.26	320	P	P	19 00 49.9	+0.5
YSS	Yuzh-Sakhalins	83.65	335	P	P	19 00 51.6	+0.6
PEA0B	Petropavlovsk-	84.76	346	P	P	19 00 57.1	+0.6
PETK	Petropavlovsk-	84.76	346	P	P	19 00 56.1	-0.4
	comp=Z,25nm,0.7s,baz=123,slow=7.6,SNR=54						
PETK	Petropavlovsk-	84.76	346	P	P	19 00 56.2	-0.3
NJ2	Nanjing	85.18	311	eP	P	19 01 02.0	+2.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MURC	Murrieta	85.53	47	P	P	19 01 03.2	+2.3
	baz=230						
MONP2	Monument Peak	85.58	48	P	P	19 01 03.3	+1.9
	baz=231						
IKP	In-Ko-Pah, Jac	85.64	49	P	P	19 01 03.6	+2.2
	baz=231						
BFSC	Mount Baldy Ra	85.65	47	P	P	19 01 03.4	+1.9
	baz=230						
EDW2	Edwards Air Fo	85.85	46	P	P	19 01 04.6	+2.2
	baz=230,SNR=6.6						
PFO	Pinyon Flats O	86.02	48	P	P	19 01 04.2	+0.9
	baz=231						
TPFO	Pinon Flats	86.02	48	P	P	19 01 04.2	+0.9
	baz=231						
SWSC	Sam W. Stewart	86.03	49	P	P	19 01 05.5	+2.3
	baz=231						
USA0B	Ussuriysk Arra	86.05	327	P	P	19 01 03.8	+0.8
USRK	Ussuriysk Ar.	86.05	327	P	P	19 01 02.9	-0.2
	comp=Z,9.6nm,0.8s,baz=133,slow=3.7,SNR=15						
USRK	Ussuriysk Ar.	86.05	327	P	P	19 01 03.6	+0.6
ISA	Isabella, Lake	86.06	45	P	P	19 01 05.4	+2.0
ISA				IAmb	IAmb	19 01 06.6	
	comp=Z,12nm,0.8s						
ISA	Isabella, Lake	86.06	45	P	P	19 01 04.5	+1.1
	baz=229,SNR=11						
LRMC	Laurel Mtn Rad	86.43	46	P	P	19 01 07.5	+2.3
	baz=230,SNR=10						
CMB	Columbia Colle	86.47	42	P	P	19 01 06.9	+1.6
CMB				IAmb	IAmb	19 01 07.8	
	comp=Z,6.2nm,0.8s						
O02D	Mt. Diablo Mer	86.55	39	P	P	19 01 06.8	+1.2
	baz=226						
BELC	Belle Mtn. Jos	86.56	48	P	P	19 01 08.3	+2.4
	baz=231,SNR=6.9						
BC3	Big Chuckawall	86.69	48	P	P	19 01 09.0	+2.4
	baz=231,SNR=5.1						
GLA	Glamis	86.73	49	P	P	19 01 09.7	+3.1
GLA				IAmb	IAmb	19 01 10.8	
	comp=Z,13nm,0.9s						
GLA	Glamis	86.73	49	P	P	19 01 09.7	+3.1
	baz=232,SNR=5.1						
CWC	Cottonwood Cre	86.81	45	P	P	19 01 09.4	+2.3
	baz=230						
HEC	Hector,Ludlow	86.87	47	P	P	19 01 09.3	+2.0
	baz=231,SNR=6.1						
GSC	Goldstone, Bar	86.87	46	P	P	19 01 09.3	+2.0
GSC				IAmb	IAmb	19 01 10.5	
	comp=Z,11nm,0.9s						
GSC	Goldstone, Bar	86.87	46	P	P	19 01 09.1	+1.8
	baz=230,SNR=8.8						
MPMC	Manual Prospec	86.92	45	P	P	19 01 09.5	+1.8
	baz=230,SNR=6.0						
TIN	Tinemaha, Big	87.11	44	P	P	19 01 11.2	+2.7
	baz=229						
N02D	Trinity Center	87.15	39	P	P	19 01 10.9	+2.4
	baz=226						
O03E	Paynes Creek	87.18	40	P	P	19 01 10.8	+2.1
	baz=227						
IRM	Iron Mountain	87.21	48	P	P	19 01 11.4	+2.5
	baz=231,SNR=9.4						
QSM	Queen of Sheba	87.25	46	P	P	19 01 09.8	+0.8

QSM				IAmb	IAmb	19 01 12.0	
	comp=Z,13nm,1.4s						
GMRC	Granite Mounta	87.27	47	P	P	19 01 11.6	+2.3
	baz=231,SNR=5.1						
M02C	Callahan	87.36	39	P	P	19 01 11.7	+2.2
	baz=226						
TUQ	Turquoise Moun	87.51	47	P	P	19 01 12.2	+1.8
	baz=231						
GWY	Greenwater Val	87.52	46	P	P	19 01 11.3	+0.8
MDJ	Mudanjiang	87.52	326	P	P	19 01 11.0	+0.9
MDJ				IAmb	IAmb	19 01 11.8	
	comp=Z,12nm,0.9s						
FURC	Furnace Creek,	87.57	45	P	P	19 01 12.9	+2.5
	baz=230						
SHOC	Shoshone, Teco	87.58	46	P	P	19 01 12.9	+2.3
	baz=231						
LCH	Last Change Ra	87.58	44	P	P	19 01 11.6	+0.9
PNTR	Pine Nut	87.63	42	P	P	19 01 12.8	+1.8
LHV	Little Huntoon	87.73	43	P	P	19 01 12.6	+1.4
LHV				IAmb	IAmb	19 01 14.8	
	comp=Z,9.2nm,0.9s						
NEE2	Needles Airpor	87.93	48	P	P	19 01 14.7	+2.4
	baz=232						
PDMCI	Parker Dam,Lak	87.95	48	P	P	19 01 15.1	+2.8
	baz=232						
RYN	Ryan	87.96	43	P	P	19 01 13.8	+1.3
NVAR	Mina Array Bea	87.96	43	P	P	19 01 13.7	+1.1
	comp=Z,7.6nm,0.8s,baz=222,slow=8.5,SNR=45						
NV11	Mina Array Sit	88.05	43	P	P	19 01 14.2	+1.3
NV11				IAmb	IAmb	19 01 16.1	
	comp=Z,6.5nm,0.9s						
TPH	Tonopah	88.38	44	P	P	19 01 15.3	+0.8
KVN	Kaiserville	88.49	43		P	19 01 16.4	+1.4
KVN				IAmb	IAmb	19 01 17.6	
	comp=Z,7.4nm,1.0s						
TUC	Tucson	89.00	52	P	P	19 01 19.6	+2.2
TUC				IAmb	IAmb	19 01 21.7	
	comp=Z,9.8nm,0.9s						
TUC	Tucson	89.00	52	P	P	19 01 19.8	+2.4
	baz=234						
CN2	Changchun	89.04	323	*e*P	P	19 01 17.3	+0.1
CN2				pmax	pmax		
	comp=Z,40nm,1.1s						
MOD	Modoc Plateau	89.10	39	P	P	19 01 19.0	+1.3
MOD				IAmb	IAmb	19 01 20.4	
	comp=Z,11nm,0.9s						
PRN	Pahroc Range	89.29	46	P	P	19 01 21.3	+2.6
PRN				IAmb	IAmb	19 01 22.5	
	comp=Z,8.9nm,1.0s						
J05D	Fort Rock, OR	89.53	38	P	P	19 01 21.3	+1.6
	baz=227						
R11A	Troy Canyon, C	89.55	45	P	P	19 01 21.2	+1.3
	baz=231						
KLR	Kul'dur	89.93	330	P	P	19 01 21.5	+0.3
	comp=Z,7.7nm,0.7s,baz=121,slow=3.1,SNR=29						
I05D	Terrebonne, OR	90.18	37	P	P	19 01 24.6	+2.0
	baz=227						
LCMT	Little Creek M	90.18	47	P	P	19 01 25.3	+2.4
CCUT	Cedar City	90.44	46		P	19 01 26.4	+2.2
CCUT				IAmb	IAmb	19 01 27.8	
	comp=Z,6.7nm,1.1s						
KNB	Kanab	90.45	47	P	P	19 01 26.8	+2.6
KNB				IAmb	IAmb	19 01 27.9	
	comp=Z,9.5nm,1.1s						
WUAZ	Wupatki	90.50	49	P	P	19 01 26.6	+2.1
WUAZ				IAmb	IAmb	19 01 28.0	
	comp=Z,5.3nm,0.8s						
WUAZ	Wupatki	90.50	49	P	P	19 01 26.3	+1.9
	baz=234						
ENH	Enshi	90.58	305	P	P	19 01 25.1	+0.3
SPR3	Spring Creek 3	90.72	45	P	P	19 01 26.8	+1.2
PSUT	Pine Spring	90.73	45	P	P	19 01 27.2	+1.7
PSUT				IAmb	IAmb	19 01 28.5	
	comp=Z,4.1nm,0.7s						
MTPU	Mount Pierson	91.48	46	P	P	19 01 31.6	+2.5
MTPU				IAmb	IAmb	19 01 33.2	
	comp=Z,6.5nm,1.1s						
MVU	Marysvale	91.74	46	P	P	19 01 32.6	+2.4
MVU				IAmb	IAmb	19 01 34.3	
	comp=Z,11nm,0.9s						
BJT	Baijiatuau	91.83	316	P	P	19 01 30.7	+0.4
BJT				IAmb	IAmb	19 01 31.9	
	comp=Z,9.8nm,1.0s						
TXAR	Lajitas Array	92.39	58	P	P	19 01 34.2	+1.0
	comp=Z,0.6nm,0.7s,baz=212,slow=4.4,SNR=6.9						
MNTX	Cornudas Mount	92.43	55	P	P	19 01 35.5	+2.3
MNTX	Cornudas Mount	92.43	55	P	P	19 01 35.5	+2.3
	baz=237						
CMAR	Chiang Mai Arr	92.53	290	P	P	19 01 33.5	-0.4
	comp=Z,1.0nm,0.8s,baz=158,slow=5.3,SNR=6.6						
MFID	Camas Ranch	92.59	40	P	P	19 01 35.3	+1.4
MFID				IAmb	IAmb	19 01 36.4	
	comp=Z,5.0nm,0.8s						
TMUT	Trail Mountain	92.84	46	P	P	19 01 37.4	+2.0
TMUT				IAmb	IAmb	19 01 40.1	
	comp=Z,15nm,1.4s						
SPUT	South Promonto	93.27	44	P	P	19 01 38.8	+1.7
SPUT				IAmb	IAmb	19 01 40.0	
	comp=Z,6.4nm,0.9s						
HVU	Hansel Valley	93.36	43	P	P	19 01 39.0	+1.5
HVU				IAmb	IAmb	19 01 40.1	
	comp=Z,7.2nm,0.8s						
HLID	Hailey	93.49	41	P	P	19 01 38.3	+0.3
HLID	Hailey	93.49	41	P	P	19 01 40.2	+2.1
	baz=232						
BARN	Barnard Glacie	95.10	17	P	P	19 01 44.3	-0.7
BARN				IAmb	IAmb	19 01 45.7	
	comp=Z,5.1nm,0.8s						
HHC	Hu-ho-hao-te	95.16	314	*e*P	P	19 01 47.4	+1.8
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,76nm,6.9s						
PDAR	Pinedale Array	95.87	44	P	P	19 01 50.2	+1.2
	comp=Z,0.5nm,0.6s,baz=232,slow=1.8,SNR=5.9						
YUK3	Moose Creek	96.02	17	P	P	19 01 50.7	+1.5
	baz=213						
YMR	Madison River	96.14	42	P	P	19 01 49.6	-0.6
ILAR	Eielson Array	97.15	13	P	Pdif	19 01 55.0	+1.0
	comp=Z,0.5nm,0.7s,baz=229,slow=5.2,SNR=4.2						
J26L	Joseph Creek	97.61	15	P	Pdif	19 01 57.3	+1.2
	baz=210						
RSSD	Black Hills	99.98	45	P	Pdif	19 02 09.1	+1.8
	baz=239						
INK	Inuvik	103.04	16	P	Pdif	19 02 23.1	+3.1
	baz=219						
MKAR	Makanchi Array	116.72	311	PKP	PKiKP	19 07 04.5	-0.1
	comp=Z,1.7nm,0.7s,baz=117,slow=1.1,SNR=19						
ZALV	Zalesovo Beam	116.94	319	PKP	PKiKP	19 07 04.5	-0.3
	comp=Z,1.3nm,0.6s,baz=146,slow=1.2,SNR=5.8						
BOSA	Boshof	117.88	204	PKP	PKiKP	19 07 09.2	+1.5
	comp=Z,3.7nm,1.1s,baz=222,slow=2.3,SNR=4.1						
NRIK	Noril'sk	118.54	336	PKP	PKiKP	19 07 07.2	-0.2
	comp=Z,1.7nm,0.4s,baz=85,slow=4.4,SNR=4.1						
KURK	Kurchatov	119.97	314	PKPdf	PKiKP	19 07 10.1	-0.6
KURBB	Kurchatov Arra	120.01	314	PKP	PKiKP	19 07 10.9	+0.1
	comp=Z,4.6nm,0.6s,baz=109,slow=1.9,SNR=26						
BVAR	Borovoye Array	125.32	316	PKP	PKiKP	19 07 21.5	+0.2
	comp=Z,7.8nm,0.6s,baz=215,slow=7.2,SNR=22						
ARU	Arti	131.99	321	PKP	PKiKP	19 07 35.0	+0.4
	comp=Z,3.2nm,0.5s,baz=94,slow=2.1,SNR=17						
GEYT	Alibeck	132.62	296	PKP	PKiKP	19 07 37.3	+0.8
	comp=Z,3.1nm,0.8s,baz=308,slow=5.5,SNR=3.8						
AKTO	Aktyubinsk	133.03	313	PKP	PKiKP	19 07 36.5	-0.4
	comp=Z,3.6nm,0.6s,baz=57,slow=0.7,SNR=7.4						
KIRV	Kirov	136.21	326	PKP	PKiKP	19 07 42.8	-0.2
	comp=Z,10.0nm,0.5s,baz=332,slow=0.5,SNR=5.0						
ARCES	ARCESS Array B	137.55	348	PKhKP	PKPpre	19 07 37.0	
	comp=Z,8.7nm,1.0s,baz=53,slow=1.1,SNR=13						
ARCES				PKP	PKiKP	19 07 45.2	-0.3
	comp=Z,3.3nm,0.5s,baz=103,slow=2.6,SNR=14						
KLMR	Klimovskoe	139.66	332	*e*PKPdf	PKPdf	19 07 47.0	-0.5
KLMR				AMP		19 07 47.9	
	comp=Z,27nm,1.4s						
GNI	Garni	143.11	299	PKP	PKPdf	19 07 55.3	+0.6
	comp=Z,4.2nm,0.7s,baz=34,slow=5.3,SNR=3.8						
AKH	Akhalkalaki	143.96	301	⇑P	PKPdf	19 07 56.2	+0.1
FINES	FINESS Array B	144.06	340	PKP	PKPbc	19 07 54.0	-0.3
	comp=Z,34nm,0.5s,baz=58,slow=3.5,SNR=241						
FINES	FINESS Array B	144.06	340	PKPdf	PKPbc	19 07 53.8	-0.5
KBZ	Khabaz	144.09	305	PKP	PKPdf	19 07 55.5	-0.4
	comp=Z,8.8nm,0.9s,baz=97,slow=1.8,SNR=17						
KIV	Kislovodsk	144.21	305	⇑P	PKPdf	19 07 55.7	-0.7
CHVG	Ch'k'valeri	144.84	303	⇑P	PKiKP	19 07 58.6	-2.6
BCA	Borcka	145.35	301	⇓P	PKPab	19 07 59.9	+0.4
UPP	Uppsala	147.66	345	*e*P	PKPbc	19 08 04.4	-0.3
NB2	NORSAR Subarra	147.74	351	PKP	PKPbc	19 08 04.9	-0.1
	comp=Z,9.6nm,0.8s,baz=17,slow=2.6						
NOA	NORSAR Array B	147.74	351	PKPbc	PKPbc	19 08 04.7	-0.3
	comp=Z,3.3nm,0.7s,baz=51,slow=2.0,SNR=33						
MNK	Minsk	148.48	330	*i* PKP	PKPbc	19 08 06.0	-1.0
	comp=E,2.0nm,1.0s						
MNK				*i* PKP	PKPbc	19 08 06.0	-1.0
	comp=N,20nm,1.0s						
MNK				*i* PKP	PKPbc	19 08 06.0	-1.0
	comp=Z,60nm,1.0s,baz=49						
MNK				*i* pPKP	pPKPab	19 09 23.6	+0.3
MNK				*i* sPKP		19 09 50.6	
MNK				*i* SKP		19 11 35.7	
MNK				*i* PP	PP	19 11 42.6	+3.6
MNK				*i* PKS	PKSdf	19 11 54.7	+17
MNK				*i* SKS	SKSdf	19 15 13.7	+32
MNK				*i* PPP	PPP	19 15 54.9	
MNK				*i* SKKS	SKKSac	19 17 26.5	-33
MNK				*i* SPP	SPP	19 27 58.5	
MNK				*i* SS	SS	19 30 47.6	+26
MNK				*i* SSS	SSS	19 36 09.5	
NACGM	Naroch	148.67	331	*i* PKP	PKiKP	19 08 08.6	-0.2
ASF	Jabal al Asfar	149.41	284	PKPbc	PKiKP	19 08 11.8	+0.7
	comp=Z,13nm,0.8s,baz=148,slow=1.6,SNR=20						
STRU	Stroemstad	149.67	350	*i* P	PKiKP	19 08 09.6	-1.0
AKASG	Malin Array Be	150.20	323	PKPbc	PKiKP	19 08 11.7	-0.3
	comp=Z,22nm,0.6s,baz=47,slow=2.8,SNR=136						
MMAI	Mount Meron Ar	150.71	286	PKPbc	PKiKP	19 08 14.9	+1.2
	comp=Z,21nm,0.6s,baz=73,slow=5.6,SNR=56						
BORU	Boraas	150.72	347	*i* P	PKiKP	19 08 12.6	-0.2
HOMB	Homborsund	150.77	352	*i* P	PKPbc	19 08 12.0	-0.4
SNART	Snartemo	150.85	354	*i* P	PKiKP	19 08 12.5	-0.6
ONAU	Onsala	151.11	348	*i* P	PKPbc	19 08 11.3	-1.9
BLEU	Blekinge	151.27	343	*i* P	PKiKP	19 08 13.7	-0.3
FABU	Falkenberg	151.33	347	*i* P	PKPbc	19 08 13.2	-0.5
DEL	Delary	151.58	345	*i* P	PKiKP	19 08 14.9	+0.3
BRTR	Keskin Array B	151.62	300	PKPbc	PKiKP	19 08 15.8	+0.3
	comp=Z,4.7nm,0.9s,baz=104,slow=4.0,SNR=10						
SORM	Soroca	152.09	319	⇓P	PKiKP	19 08 15.7	-0.3
BJUU	Bjuv	152.13	346	*i* P	PKiKP	19 08 15.1	-0.7
MILM	Milestii Mici	152.44	317	⇑P	PKiKP	19 08 16.1	-0.7
BSD	Bornholm Skovb	152.56	343	*e*P	PKiKP	19 08 17.2	+0.4
BSD	Bornholm Skovb	152.56	343	*i* P	PKiKP	19 08 17.1	+0.4
TLCR		153.26	313	⇓P	PKiKP	19 08 19.5	+1.0
VLDR	Vladesti	153.41	315	⇑P	PKPbc	19 08 16.3	-2.4
TPGR	Topolog	153.66	313	⇑P	PKiKP	19 08 21.2	+1.8
CFR	Carcaliu	153.69	314	⇑P	PKiKP	19 08 20.5	+1.1
TESR	Tescani	153.93	318	⇑P	PKiKP	19 08 20.2	+0.3
HARR	Harsova	154.04	313	⇑P	PKiKP	19 08 21.6	+1.5
BURAR	Bucovina Array	154.13	321	⇑P	PKiKP	19 08 22.6	+2.2
VRI	Vrincioaia	154.22	316	⇑P	PKPab	19 08 36.4	+0.7
PLOR	Plostina	154.28	316	⇑P	PKPab	19 08 36.8	+0.7
BSEG	Bad Segeberg	154.68	348	*e*PKPbc	PKPab	19 08 37.5	+0.1
	baz=24,slow=4.5						
KOLS	Kolonicke sedl	154.81	326	*e*PKP	PKPab	19 08 38.3	+0.1
DOPR	Dopca	154.96	318	⇑P	PKiKP	19 08 23.5	+1.4
TRPA	Tarpa	155.22	325	⇓P	PKPdf	19 08 22.9	+10
CRVS	Cervenica-Dubn	155.22	327	*e*PKP	PKPab	19 08 40.4	+0.5
FLTG	Flechtingen	156.00	345	*e*PKPbc	PKPab	19 08 42.8	-0.3
	baz=24,slow=4.5						
CHVC	Chvalec	156.16	336	*e*PKPAB	PKPab	19 08 44.5	+0.6
UPC	Upice	156.24	336	*e*PKPAB	PKPab	19 08 44.8	+0.6
DPC	Dobruska-Polom	156.26	336	*e*PKPAB	PKPab	19 08 45.0	+0.6
KRLC	Kraliky	156.32	335	*e*PKPAB	PKPab	19 08 44.9	+0.3
CLL	Collm	156.49	341	*e*PKPdiff	PKPdf	19 08 29.0	+14
CLL				⇑*i*PKPab	PKPab	19 08 45.3	+0.1
	comp=Z,22nm,0.7s						
CLL	Collm	156.49	341	*e*PKPbc	PKPab	19 08 45.2	0.0
	baz=24,slow=4.5						
VLAD	Vladila	156.59	315	⇑P	PKPab	19 08 47.0	+1.0
BRG	Berggiesshubel	156.60	340	*e*PKPbc	PKPab	19 08 45.8	0.0
	baz=24,slow=4.5						
BRG	Berggiesshubel	156.60	340	*i* P	PKPab	19 08 46.1	+0.4
BRG				Amp		19 08 47.9	
	comp=Z,12nm,0.7s						
CLZ	Clausthal	156.65	346	*e*PKPbc	PKPab	19 08 45.7	-0.3
	baz=24,slow=4.5						
IBBN	Ibbenburen	156.68	350	*e*PKPbc	PKPab	19 08 46.2	+0.2
	baz=24,slow=4.5						
PVCC	Panska Ves	156.71	338	*e*PKPAB	PKPab	19 08 46.9	+0.7
VYHS	Vyhne	156.72	330	*e*PKP	PKPab	19 08 46.6	+0.2
FBE	Freiberg	156.74	340	*e*PKPbc	PKPab	19 08 46.7	+0.4
	baz=24,slow=4.5						
NEUB	Neuenburg	156.91	343	*e*PKPbc	PKPab	19 08 47.1	+0.1
	baz=24,slow=4.5						
JAVC	Velka Javorina	156.94	332	*e*PKP	PKPab	19 08 48.6	+1.2
VRAC	Vranov	157.01	334	⇓P	PKPab	19 08 48.2	+0.6
VRAC	Vranov	157.01	334	*e*PKP	PKPab	19 08 47.7	+0.1
GTTG	Gottingen	157.01	346	*e*PKPbc	PKPab	19 08 47.9	+0.4
	baz=24,slow=4.5						
PRU	Pruhonice	157.18	338	*e*PKPAB	PKPab	19 08 48.7	+0.4
KRUC	Moravsky	157.29	334	*e*PKP	PKPab	19 08 48.8	0.0
HERR	Herculane	157.31	318	⇓P	PKPab	19 08 34.7	-14
TANN	Tannenbergstha	157.44	341	*e*PKPbc	PKPab	19 08 49.5	0.0
	baz=24,slow=4.5						
MOX	Moxa	157.47	343	*e*PKPbc	PKPab	19 08 49.6	+0.2
	baz=24,slow=4.5						
PLN	Plauen	157.47	342	*e*PKPbc	PKPab	19 08 49.7	+0.2
	baz=24,slow=4.5						
GUNZ	Gunzen	157.53	341	*e*PKPbc	PKPab	19 08 50.4	+0.6
	baz=24,slow=4.5						
WERN	Wernitzgruen	157.58	341	*e*PKPbc	PKPab	19 08 50.7	+0.7
	baz=24,slow=4.5						
NKC	Novy Kostel	157.61	341	*e*PKPAB	PKPab	19 08 50.6	+0.4
MDVR	Moldovita	157.77	319	⇑P	PKPab	19 08 51.5	+0.3
VTS	Vitosha	158.02	313	⇑P	PKPab	19 08 53.7	+1.3
ZAPS	Zavoj	158.07	315	*e*P	PKPab	19 08 54.0	+1.5
ROTZ	Rotzenmuhle	158.10	341	*e*PKPbc	PKPab	19 08 52.8	+0.5
	baz=24,slow=4.5						
KHC	Kasperske Hory	158.24	338	*e*PKPAB	PKPab	19 08 53.5	+0.6
CKRC	Cesky Krumlov	158.26	336	*e*PKPAB	PKPab	19 08 54.3	+1.3
CONA	Conrad Observa	158.41	333	*e*P	PKPab	19 08 54.5	+0.7
	comp=Z,13nm,1.5s						
GRF	Grafenberg Arr	158.44	342	*e*PKPbc	PKPab	19 08 54.4	+0.6
	baz=24,slow=4.5						
GEC2	GERESS Array S	158.45	337	*e*PKPbc	PKPab	19 08 54.1	+0.2
	baz=24,slow=4.5						
GERES	GERESS Array B	158.45	337	PKP	PKPdf	19 08 18.4	+0.8
	comp=Z,0.2nm,0.3s,baz=106,slow=4.3,SNR=4.0						
GERES				PKPab	PKPab	19 08 53.6	-0.3
	comp=Z,2.8nm,0.6s,baz=41,slow=5.0,SNR=19						
GERES	GERESS Array B	158.45	337	PKPab	PKPab	19 08 53.9	0.0
WET	Wettzell	158.45	339	*e*PKPbc	PKPab	19 08 54.6	+0.8
	baz=24,slow=4.5						
MORH	Mrgy, Hungar	158.47	326	⇑P	PKPab	19 08 53.4	-0.6
BOSS	Bosilegrad	158.57	313	*e*P	PKPab	19 08 55.9	+1.3
FRGS	Fruska Gora	158.59	322	*e*P	PKPab	19 08 54.8	+0.2
PRVS	Prvonek	158.82	313	*e*P	PKPab	19 08 56.3	+0.6
BARS	Barje	158.82	315	*e*P	PKPab	19 08 56.3	+0.6
GRUS	Gruza	158.87	318	*e*P	PKPab	19 08 56.3	+0.4
MOA	Molln	159.09	335	*e*P	PKPab	19 08 57.2	+0.5
	comp=Z,6.9nm,1.1s,SNR=11						
ARSA	Arzberg	159.09	332	*e*P	PKPab	19 08 56.0	-0.7
	comp=Z,7.7nm,1.7s						
DIVS	Divibare	159.16	320	*e*P	PKPab	19 08 57.2	0.0
RJOB	Jochberg	159.71	337	*e*PKPbc	PKPab	19 09 00.1	+0.7
	baz=24,slow=4.5						
SOKA	Soboth	159.75	332	*e*P	PKPab	19 08 58.9	-0.7
	comp=Z,9.0nm,1.2s						
FUR	Furstenfeldbru	159.81	340	*e*PKPbc	PKPab	19 09 00.5	+0.7
	baz=24,slow=4.5						
KBA	Koelnbreinsper	160.08	335	*e*P	PKPab	19 09 01.8	+0.6
	comp=Z,3.8nm,0.6s						
MYKA	Terra Mystica	160.35	334	*e*P	PKPab	19 09 01.6	-0.6
	comp=Z,5.5nm,0.9s						
WATA	Walderalm	160.46	339	*i* P	PKPab	19 09 03.2	+0.4
	comp=Z,6.0nm,0.6s,SNR=5.6						
WTTA	Wattenberg	160.50	339	*i* P	PKPab	19 09 03.5	+0.5
	comp=Z,10nm,0.8s,SNR=7.2						
RETA	Reutte	160.57	340	*i* P	PKPab	19 09 03.7	+0.5
	comp=Z,17nm,0.9s						
MOTA	Moosalm	160.60	340	*i* P	PKPab	19 09 03.7	+0.3
	comp=Z,15nm,0.8s,SNR=7.5						
ABTA	Abfaltersbach	160.66	336	*i* P	PKPab	19 09 03.0	-0.6
	comp=Z,7.1nm,0.7s,SNR=8.0						
SQTA	Sankt Quirin	160.68	339	*i* P	PKPab	19 09 04.2	+0.4
	comp=Z,10nm,0.7s,SNR=5.4						
FETA	Feichten	161.00	340	*i* P	PKPab	19 09 05.7	+0.5
	comp=Z,8.9nm,0.9s						
DAVA	Damuels	161.00	342	*i* P	PKPab	19 09 05.5	+0.4
	comp=Z,12nm,0.7s,SNR=9.0						
TORD	Torodi Ar. Bea	163.76	181	PKP	PKPdf	19 08 25.4	+1.4
	comp=Z,2.0nm,0.9s,baz=329,slow=1.2,SNR=8.0						
TORD				PKPab	PKPab	19 09 20.4	+2.6
	comp=Z,1.4nm,0.6s,baz=181,slow=3.4,SNR=14						
TORD	Torodi Ar. Bea	163.76	181		PKPdf	19 08 25.0	+1.0
ESDC	Sonseca Array	168.93	22	PKP	PKPdf	19 08 28.5	+1.2
	comp=Z,1.3nm,1.0s,baz=343,slow=4.6,SNR=4.7						

IDC ***07*** *18:54:29.8±0.7, 38.°49N×73.°17E, h0^{km}, mb4.1/21, mb1 4.2/28, mb1mx4.0/63, mbtmp4.1/28, ML3.8/7, MS3.4/2, Ms1 3.3/2, ms1mx2.8/37, Error ellipse: s-maj=14.4km s-min=12.2km az=12.0*

BJI ***07*** *18:54:32.8±0.0, 38.°65N×73.°17E, h6^{km}, mB4.8/16, mb4.3/25, ML4.1/6, Ms4.0/7, Ms7 3.7/6*

NEIC ***07*** *18:54:33.2±1.7, 38.°75N±0.°06×73.°2E±0.°1, h10^{km}±1^{km}, mb4.5/33, Error ellipse: s-maj=13.6km s-min=9.9km az=90.0*

MOS ***07*** *18:54:34.0±2.4, 38.°68N×73.°15E, h33^{km}, mb4.4/14, Error ellipse: s-maj=7.8km s-min=4.6km az=85.3*

NNC ***07*** *18:54:35.0±2.8, 38.°76N×73.°07E, h0^{km}, mb5.0, mpv4.6, Error ellipse: s-maj=23.7km s-min=14.9km az=157.0*

SOME ***07*** *18:54:37.8, 39.°05N×72.°90E, h10^{km}, MS3.6*

ISC 07 18:54:32.4±0.4**, 38.°73N**±0.°03×**73.°22E**±0.°03**, h10^{km}, n213,** σ**2.ˢ46**/220**, mb4.4**/43**, MS3.3**/4**, 21C-15D,**
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DRK	Karamyk	1.33	304	Pn	Pn	18 54 55.8	-1.5
KSH	Kashi	2.28	69	Pg	Pn	18 55 07.0	-3.2
KSH				Sg	Sn	18 55 31.0	-7.4
KSH				smax	smax		
	comp=N,2μm,0.8s						
KSH				smax	smax		
	comp=E,2μm,0.9s						
GAR	Garm	2.28	278		Pn	18 55 12.3	+2.1
BTK	Batken	2.28	306	PN	Pn	18 55 10.3	+0.1
BTK	Batken	2.28	306		Pn	18 55 10.3	+0.1
CHGR	Chuyangaron	3.18	270	Pn	Pn	18 55 25.0	+2.5
AML	Almayashu	3.41	6	P	Pn	18 55 30.0	+4.0
	SNR=73						
UCH	Uchtor	3.63	15	P	Pb	18 55 33.6	-3.3
	SNR=21						
EKS2	Erkin-Say	3.95	6	P	Pb	18 55 38.2	-3.9
	SNR=22						
TAS	Tashkent	3.97	312	PN	Pn	18 55 36.8	+3.4
TAS	Tashkent	3.97	312		Pn	18 55 36.8	+3.4
MRKS	Merke	4.01	0	*e*P	Pg	18 55 48.9	-0.3
	85nm,0.6s						
MRKS				*e*S	Sg	18 56 40.0	-1.0
	202nm,0.6s						
AAK	Ala-Archa	4.02	14	Pn	Pn	18 55 39.1	+5.0
	8.1nm,0.3s,baz=188,slow=8.8,SNR=49						
AAK				Sn	Sb	18 56 33.1	+1.0
	5.6nm,0.3s,baz=331,slow=12,SNR=6.9						
AAK	Ala-Archa	4.02	14	P	Pn	18 55 38.9	+4.8
	SNR=60						
AAK	Ala-Archa	4.02	14	PN	Pn	18 55 38.9	+4.8
AAK	Ala-Archa	4.02	14	⇑Pn	Pn	18 55 38.5	+4.4
	137nm,0.7s						
AAK				⇑Sn	Sb	18 56 29.9	-2.1
	197nm,0.8s						
AAK	Ala-Archa	4.02	14	Pn	Pn	18 55 38.9	+4.8
KBK	Karagaybulak	4.13	18	P	Pn	18 55 40.7	+5.0
	SNR=23						
ULHL	Ulahol	4.20	32	P	Pb	18 55 43.0	-3.5
	SNR=6.2						
FRU1	Bishkek	4.21	14	PN	Pn	18 55 40.9	+4.2
FRU1	Bishkek	4.21	14		Pn	18 55 40.9	+4.2
BOOM	Boomskoye usch	4.29	28	PN	Pn	18 55 41.9	+4.1
BOOM	Boomskoye usch	4.29	28	Pn	Pn	18 55 41.9	+4.1
DZA	Taraz	4.39	342	*e*P	Pb	18 55 48.8	-0.9
	384nm,0.3s						
DZA				*e*S	Sb	18 56 39.4	-3.3
	698nm,0.0s						
DZA	Taraz	4.39	342	*e*Pg	Pg	18 55 54.2	-2.3
	baz=341						
DZA	Taraz	4.39	342	*e*PN	Pg	18 55 54.2	-2.3
CHMS	Chumysh	4.42	15	P	Pn	18 55 44.2	+4.7
	SNR=36						
CHM	Chimkent	4.52	324	*e*P	Pg	18 55 58.4	-0.5
	308nm,0.4s						
CHM				*e*S	Sg	18 56 56.2	-1.2
	876nm,0.3s						
KDJ	Kajisay	4.54	40	PN	Pn	18 55 46.0	+4.7
KDJ	Kajisay	4.54	40	Pn	Pn	18 55 46.0	+4.7
TKM2	Tokmak 2	4.55	23	P	Pn	18 55 46.0	+4.5
	SNR=19						
TKM2	Tokmak 2	4.55	23	PN	Pn	18 55 46.2	+4.7
TKM2	Tokmak 2	4.55	23	⇓Pn	Pn	18 55 46.2	+4.7
	84nm,0.7s						
TKM2				⇓Lg	Lg	18 57 02.2	
	125nm,1.1s						
USP	Ospenovka	4.63	12	P	Pn	18 55 47.0	+4.5
	SNR=12						
KST	Kastek	4.78	25	*e*P	Pg	18 56 03.2	-0.7
	37nm,0.8s						
KST				*e*S	Sg	18 57 05.0	-0.9
	93nm,0.9s						
KST	Kastek	4.78	25	Pg	Pg	18 56 02.5	-1.4
	61nm,0.7s						
KST				Lg	Lg	18 57 05.0	
	93nm,0.9s						
KKAR	Karatay Array	4.82	336	PN	Pn	18 55 48.2	+3.2
KKAR	Karatay Array	4.82	336	Pn	Pn	18 55 48.2	+3.2
KK08	Karatay Array	4.83	336	⇓Pn	Pn	18 55 48.5	+3.3
	61nm,0.6s,baz=142,slow=12						
KK08				⇓Sn	Sn	18 56 43.4	+2.2
	149nm,0.6s,baz=144,slow=24						
KK08				⇓Lg	Lg	18 57 06.5	
	147nm,0.7s						
SGDS	Sogindy	4.83	12	*e*Pg	Pg	18 56 01.7	-3.2
	baz=12						
DGS	Degeres	4.90	22	*e*P	Pg	18 56 06.8	+0.6
	90nm,0.7s						
DGS				*e*S	Sg	18 57 11.2	+1.6
	71nm,1.6s						
MTBS	Maitube	5.02	28	*e*P	Pg	18 56 09.1	+0.6
	30nm,0.0s						
MTBS				*e*S	Sg	18 57 14.7	+1.2
	78nm,1.6s						
NIL	Nilore	5.07	180	PN	Pn	18 55 52.5	+4.0
NIL	Nilore	5.07	180	Pn	Pn	18 55 52.5	+4.0
TNSS	Tian-Shan	5.14	32	*e*P	Pg	18 56 10.5	-0.4
	32nm,0.3s						
TNSS				*e*S	Sg	18 57 17.5	-0.1
	33nm,0.5s						
TNSS	Tian-Shan	5.14	32	*e*Pg	Pb	18 56 07.1	+4.5
	baz=32						
TNSS	Tian-Shan	5.14	32	Pg	Pg	18 56 09.4	-1.5
	29nm,0.5s						
TNSS				Lg	Lg	18 57 17.4	
	33nm,0.5s						
AAA	Alma-Ata	5.27	31	*e*P	Pg	18 56 13.7	+0.4
	38nm,0.2s						
AAA				*e*S	Sg	18 57 22.8	+1.2
	150nm,1.2s						
AAA	Alma-Ata	5.27	31	*e*Pg	Pg	18 56 09.7	-3.7
	baz=30						
AAA	Alma-Ata	5.27	31	*e*PN	Pg	18 56 09.6	-3.7
MDOK	Medeo	5.29	32	*e*P	Pg	18 56 12.6	-1.0
	28nm,0.5s						
MDOK				*e*S	Sg	18 57 20.9	-1.3
	50nm,0.7s						
MDOK	Medeo	5.29	32	*e*Pg	Pb	18 56 09.2	+4.2
	baz=31						
MDOK	Medeo	5.29	32	*e*PN	Pb	18 56 09.2	+4.2
MDOK	Medeo	5.29	32	⇑Pn	Pn	18 55 56.8	+5.3
	49nm,0.7s						
MDOK				⇑Lg	Lg	18 57 27.5	
	68nm,0.8s						
MDOK	Medeo	5.29	32	Pg	Pg	18 56 10.6	-3.0
	34nm,0.5s						
MDOK				Lg	Lg	18 57 20.2	
	50nm,0.7s						
KRBS	Karabastau	5.29	20	*e*P	Pg	18 56 12.6	-1.1
	35nm,0.3s						
KRBS				*e*S	Sg	18 57 20.8	-1.4
	84nm,0.5s						
KRBS	Karabastau	5.29	20	Pg	Pg	18 56 10.1	-3.6
	35nm,0.3s						
KRBS				Lg	Lg	18 57 20.7	
	84nm,0.5s						
KNDC	Almaty	5.30	31	⇓Pg	Pg	18 56 10.9	-3.0
	93nm,0.6s						
KNDC				⇓Lg	Lg	18 57 26.2	
	249nm,0.8s						

KBL	Kabul	5.37	220	PN	Pn	18 55 55.7	+3.0
KBL	Kabul	5.37	220	Pn	Pn	18 55 55.7	+3.0
KOTS	Kotyrbulak	5.37	32	eP	Pg	18 56 14.0	-1.2
	24nm,0.5s						
KOTS				eS	Sg	18 57 23.2	-1.7
	139nm,0.7s						
KOTS	Kotyrbulak	5.37	32	Pg	Pg	18 56 12.4	-2.9
	42nm,0.5s						
KOTS				Lg	Lg	18 57 23.2	
	139nm,0.7s						
PRZ	Przheval'sk	5.44	45	PN	Pn	18 55 58.6	+5.0
PRZ	Przheval'sk	5.44	45	Pn	Pn	18 55 58.6	+5.0
KTBS	Karatobe	5.62	27	eP	Pg	18 56 19.8	-0.1
	24nm,0.8s						
KTBS				eS	Sg	18 57 33.7	+1.1
	88nm,0.8s						
KTBS	Karatobe	5.62	27	Pg	Pg	18 56 18.1	-1.9
	35nm,0.7s						
KTBS				Lg	Lg	18 57 31.5	
	88nm,0.8s						
KUU	Kurty	5.66	23	eP	Pg	18 56 19.4	-1.4
	32nm,0.6s						
KUU				eS	Sg	18 57 32.8	-1.3
	90nm,0.7s						
KUU	Kurty	5.66	23	ePg	Pg	18 56 17.4	-3.4
	baz=23						
KUU	Kurty	5.66	23	Pg	Pg	18 56 17.8	-3.0
	32nm,0.6s						
KUU				Lg	Lg	18 57 31.8	
	90nm,0.7s						
SATY	Saty	5.84	41	eP	Pg	18 56 24.2	0.0
	29nm,0.7s						
SATY				eS	Sg	18 57 40.8	+1.0
	80nm,1.3s						
KURS	Kuram	6.04	37	eP	Pg	18 56 28.6	+0.5
	21nm,0.6s						
KURS				eS	Sg	18 57 48.6	+2.3
	36nm,1.2s						
UZB	Uzynbulak	6.22	43	eP	Pg	18 56 30.5	-1.0
	24nm,0.4s						
UZB				eS	Sg	18 57 51.5	-0.6
	38nm,0.7s						
KPKS	Kokpek	6.28	39	eP	Pg	18 56 31.0	-1.5
	14nm,0.4s						
KPKS				eS	Sg	18 57 52.0	-1.8
	57nm,1.1s						
KPKS	Kokpek	6.28	39	ePg	Pb	18 56 27.6	+5.8
	baz=39						
BTLS	Baital	6.33	5	ePg	Pg	18 56 29.0	-4.6
	baz=4.9						
SHLS	Shalkode	6.47	45	ePg	Pg	18 56 35.2	-1.0
	baz=46						
PDGK	Podgornoye	6.60	44	PN	Pn	18 56 13.6	+4.1
PDGK	Podgornoye	6.60	44	⇑Pn	Pn	18 56 13.6	+4.1
	9.7nm,0.7s						
DHRM	DHARAMSHALA	6.94	158	eP	Pn	18 56 16.2	+1.9
DHRM				eS	Sn	18 57 35.3	+1.9
DHRM				IAML		18 57 38.2	
	comp=E,204nm,0.7s						
DHRM				IAML		18 57 39.3	
	comp=N,220nm,0.5s						
TDK	Taldyqorghan	7.36	30	ePg	Pb	18 56 46.9	+6.7
	baz=30						
SMLA	Simla	8.25	156	eP	Pn	18 56 32.6	+0.5
SMLA				eS	Sn	18 58 03.5	-1.8
SMLA				IAML		18 58 06.5	
	comp=N,109nm,0.6s						
SMLA				IAML		18 58 06.7	
	comp=E,111nm,0.4s						
HRA	Herat	9.84	247	Pn	Pn	18 56 54.7	+0.7
MAKZ	Makanchi	10.32	36	P	Pn	18 57 05.9	+5.5
MAKZ	Makanchi	10.32	36	Pn	Pn	18 57 05.9	+5.5
MK31	Makanchi Array	10.45	37	P	Pn	18 57 07.0	+4.8
MK31	Makanchi Array	10.45	37	Pn	Pn	18 57 07.0	+4.8
MKAR	Makanchi Array	10.45	37	Pn	Pn	18 57 06.0	+3.8
	comp=E,0.2nm,0.3s,baz=221,slow=14,SNR=12						
MKAR	Makanchi Array	10.45	37	P	Pn	18 57 06.4	+4.1
MKAR	Makanchi Array	10.45	37		Pn	18 57 06.3	+4.1
KUDL	Kundal	10.91	165	eP	Pn	18 57 07.0	-1.5
KUDL				eS	Sn	18 59 04.0	-6.6
GEYT	Alibeck	11.89	271	Pn	Pn	18 57 20.2	-1.8
	comp=E,1.7nm,0.3s,baz=106,slow=9.9,SNR=19						
GEYT				Sn	Sn	18 59 34.1	-0.7
	comp=E,0.9nm,0.3s,baz=75,slow=23,SNR=4.3						
GEYT	Alibeck	11.89	271		Pn	18 57 20.4	-1.6
GYA0B	ALIBECK ARRAY	11.89	271	⇓Pn	Pn	18 57 21.3	-0.6
GYA0B				⇑Sn	Sn	18 59 37.0	+2.3
GYA0B	ALIBECK ARRAY	11.89	271	Pn	Pn	18 57 20.4	-1.6
WMQ	Urumqi	12.01	60	eP	Pn	18 57 27.3	+3.6
WMQ				pP		18 57 31.2	
WMQ				pmax	pmax		
	comp=E,13nm,0.7s						
WMQ				pmax	pmax		
	comp=E,120nm,4.5s						
WMQ				LR	LR		
	comp=E,400nm,7.3s						
KURBB	Kurchatov Arra	12.47	16	Pn	Pn	18 57 31.0	+1.2
	comp=E,0.1nm,0.3s,baz=207,slow=12,SNR=8.4						
KURK	Kurchatov	12.58	16	⇑eP	Pn	18 57 30.2	-1.0
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	12.58	16	Pn	Pn	18 57 30.9	-0.3
SEM	Semipalatinsk	12.70	21	ePn	Pn	18 57 31.4	-1.7
	baz=21						
SEM	Semipalatinsk	12.70	21	eP	Pn	18 57 31.4	-1.7
PYUN	Piuthan	13.37	140	eP	Pn	18 57 38.3	-4.1
	comp=Z,18nm,0.4s						
DANN	Dangsing	13.57	137	eP	Pn	18 57 41.1	-4.1
	comp=Z,20nm,0.4s						
AB31	Akbulak array	14.19	322	Pn	Pn	18 57 54.7	+1.4
	comp=Z,19nm,0.7s,baz=131,slow=13,SNR=323						
AB31				Sn	Sn	19 00 31.5	+0.9
	comp=Z,11nm,0.6s,baz=131,slow=25,SNR=7.2						
ABKAR	Akbulak array	14.19	322	Pn	Pn	18 57 51.6	-1.7
GKN	Gorkha	14.32	135	eP	Pn	18 57 50.7	-4.7
	comp=Z,8.4nm,0.3s						
BVAR	Borovoye Array	14.43	353	Pn	Pn	18 57 57.8	+1.2
	comp=Z,0.4nm,0.3s,baz=181,slow=21,SNR=7.8						
BRVK	Borovoye	14.47	353	⇓eP	Pn	18 57 58.5	+1.4
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.9s						
BRVK	Borovoye	14.47	353	Pn	Pn	18 57 58.0	+0.9
KKN	Kakani	14.85	134	eP	Pn	18 57 57.0	-5.6
	comp=Z,26nm,0.6s						
DGZ	Jazzator, Alta	14.94	38	⇑eP	Pn	18 58 01.9	-1.7
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BHPL	Bhopal	15.86	166	eP	Pn	18 58 10.7	-5.0
BHPL				eS	Sn	19 01 02.5	-9.1
AKTO	Aktyubinsk	15.90	322	Pn	Pn	18 58 16.4	+0.3
	comp=Z,2.9nm,0.3s,baz=117,slow=14,SNR=37						
AKTO				Sn	Sn	19 01 08.4	-4.0
	comp=Z,0.7nm,0.3s,baz=331,slow=13,SNR=6.5						
AKTO	Aktyubinsk	15.90	322	⇑Pn	P	18 58 19.9	0.0
	comp=Z,23nm,0.6s						
AKTO				⇑Sn	Sn	19 01 13.5	+1.1
	comp=Z,10nm,0.6s						
RAMN	Ramite	16.24	132	eP	Pn	18 58 14.0	-6.9
	comp=Z,13nm,0.4s						
TAPN	Taplejung	16.60	129	eP	Pn	18 58 19.2	-6.3
	comp=Z,6.5nm,0.4s						
ZAA0	Zalesovo Array	17.16	24		Pn	18 58 32.9	+0.8
ZALV	Zalesovo Beam	17.16	24	P	Pn	18 58 33.4	+1.3
	comp=Z,1.1nm,0.3s,baz=213,slow=12,SNR=21						
ZALV	Zalesovo Beam	17.16	24	P	Pn	18 58 32.7	+0.7
ZALV	Zalesovo Beam	17.16	24		Pn	18 58 32.7	+0.7
SVE	Sverdlovsk	19.92	339	eP	Pn	18 59 10.1	+4.4
ARU	Arti	20.20	336	P	P	18 59 07.7	+0.6
	comp=Z,0.9nm,0.5s,baz=155,slow=8.2,SNR=6.2						
ARU				LR	LR	19 07 18.0	
	comp=Z,146nm,18.1s,baz=202,slow=38						
ARU	Arti	20.20	336	d iP	P	18 59 06.6	-0.5
ARU						18 59 21.5	
ARU				S	S	19 02 54.0	+0.4
ARU				SS	SnSn	19 03 12.7	+2.0
ARU				pmax	pmax		
	comp=Z,35nm,4.5s						
ARU	Arti	20.20	336		Pn	18 59 08.7	-0.3
GTA	Gaotai	20.64	80	eP	Pn	18 59 15.0	+0.6
GTA				pP	sP	18 59 18.0	-0.2
GTA				sP	pP	18 59 21.4	+5.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,82nm,5.8s						
GTA				LR	LR		
	comp=Z,140nm,13.1s						
GTA				LR	LR		
	comp=Z,140nm,12.7s						
GTA				LR	LR		
	comp=Z,160nm,15.3s						
GROC	Groznyy	21.14	291	eP	P	18 59 15.7	-1.7
GROC				e		18 59 35.7	
GROC				pmax	pmax		
	comp=Z,18nm,0.7s						
HYB	Hyderabad	21.74	166	i P	P	18 59 26.0	+2.0
GNI	Garni	22.00	283	P	P	18 59 25.1	-1.8
	comp=Z,3.2nm,0.6s,baz=146,slow=18,SNR=3.2						
GNI	Garni	22.00	283	deP	P	18 59 23.2	-3.7
GNI				pmax	pmax		
	comp=Z,43nm,1.6s						
GNI	Garni	22.00	283	P	P	18 59 28.0	+1.1
BELG	Belogornoye	22.38	316	P	P	18 59 30.2	-0.3
	comp=Z,25nm,0.7s,baz=333,slow=23,SNR=8.7						
BELG	Belogornoye	22.38	316	deP	P	18 59 30.1	-0.5
BELG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ONI	Oni	22.85	289	P	P	18 59 36.2	+0.5
ONI				pmax	pmax		
	comp=Z,12nm,0.7s						
ONI	Oni	22.85	289	P	P	18 59 36.2	+0.5
ONI				IAmb	IAmb	18 59 42.9	
	comp=Z,12nm,0.7s						
KBZ	Khabaz	23.27	292	P	P	18 59 39.2	-0.8
	comp=Z,1.2nm,0.7s,baz=3.0,slow=10,SNR=2.6						
KBZ				LR	LR	19 10 23.0	
	comp=Z,63nm,18.8s,baz=154,slow=41						
KBZ	Khabaz	23.27	292	⇑eP	P	18 59 36.3	-3.7
KBZ				pmax	pmax		
	comp=Z,14nm,2.5s						
KIV	Kislovodsk	23.43	293	eP	P	18 59 48.4	+6.7
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,62nm,15.0s						
ZAK	Zakamensk	24.21	51	eP	P	18 59 50.3	+1.2
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TLY	Talaya	24.84	49	⇑eP	P	18 59 51.9	-2.8
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIRV	Kirov	25.09	330	P	P	18 59 56.9	0.0
	comp=Z,8.0nm,0.5s,baz=108,slow=5.9,SNR=4.2						
KIRV	Kirov	25.09	330	⇓iP	P	18 59 52.8	-4.0
SONM	Songino Array	25.64	58	P	P	19 00 02.6	+0.4
	comp=Z,1.9nm,0.7s,baz=266,slow=9.1,SNR=13						
SONM	Songino Array	25.64	58	P	P	19 00 03.6	+1.4
SONM				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SONM	Songino Array	25.64	58	P	P	19 00 03.6	+1.4
SONM				IAmb	IAmb	19 00 10.1	
	comp=Z,7.4nm,0.9s						
ULN	Ulaanbaatar	26.08	59	⇑eP	P	19 00 03.8	-2.4
ULN				pmax	pmax		
	comp=Z,8.0nm,2.3s						
ULN	Ulaanbaatar	26.08	59	P	P	19 00 07.9	+1.7
HHC	Hu-ho-hao-te	29.39	74	eP	P	19 00 35.8	0.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,4.8s						
CMAR	Chiang Mai Arr	30.13	125	P	P	19 00 41.6	-0.8
	comp=Z,0.2nm,0.3s,baz=308,slow=10,SNR=2.1						
NRIK	Noril'sk	31.62	10	P	P	19 00 57.1	+2.0
	comp=Z,1.4nm,0.3s,baz=157,slow=2.9,SNR=4.6						
NRIK	Noril'sk	31.62	10	⇑eP	P	19 00 52.6	-2.5
NRIK				pmax	pmax		
	comp=Z,14nm,2.8s						
NRIK	Noril'sk	31.62	10	IAmb	IAmb	19 01 02.7	
	comp=Z,6.3nm,1.1s						
AKASG	Malin Array Be	33.00	306	P	P	19 01 07.5	+0.1
	comp=Z,0.6nm,0.4s,baz=79,slow=7.3,SNR=8.4						
AKASG	Malin Array Be	33.00	306	P	P	19 01 08.5	+1.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,1.3s						
AKASG	Malin Array Be	33.00	306	P	P	19 01 08.5	+1.2
AKBB	Malin Array Si	33.00	306	P	P	19 01 07.5	+0.2
AKBB				pmax	pmax		
	comp=Z,11nm,1.5s						
AKBB	Malin Array Si	33.00	306	P	P	19 01 07.5	+0.2
AKBB				IAmb	IAmb	19 01 12.8	
	comp=Z,11nm,1.5s						
VRI	Vrincioaia	34.71	297	⇑P	P	19 01 24.8	+2.4
PLOR	Plostina	34.77	297	⇑P	P	19 01 24.8	+1.9
MLR	Muntele Rosu	35.30	297	⇑P	P	19 01 30.1	+2.6
MLR	Muntele Rosu	35.30	297	P	P	19 01 29.0	+1.5
MLR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MLR	Muntele Rosu	35.30	297	P	P	19 01 29.0	+1.5
MLR				IAmb	IAmb	19 01 32.4	
	comp=Z,8.1nm,1.1s						
BURAR	Bucovina Array	35.62	300	⇑P	P	19 01 31.6	+1.3
BURAR	Bucovina Array	35.62	300	P	P	19 01 31.9	+1.6
BUR08	Bucovina Ar. S	35.63	300	P	P	19 01 31.5	+1.2
BUR08				IAmb	IAmb	19 01 37.8	
	comp=Z,7.1nm,1.4s						
VOIR		35.93	297	⇓P	P	19 01 33.8	+0.9
FIA1	FINESS Array S	36.67	324	P	P	19 01 38.8	-0.1
FINES	FINESS Array B	36.67	324	P	P	19 01 39.2	+0.4
	comp=Z,2.9nm,0.4s,baz=115,slow=9.2,SNR=26						
TRPA	Tarpa	37.38	301	⇓P	P	19 01 47.3	+2.2
NJ2	Nanjing	37.49	86	eP	P	19 01 46.1	-0.1
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ARCES	ARCESS Array B	39.79	336	P	P	19 02 05.8	+0.7
	comp=Z,3.2nm,0.5s,baz=109,slow=8.3,SNR=23						
ARCES	ARCESS Array B	39.79	336	P	P	19 02 06.1	+1.0
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	39.79	336	P	P	19 02 06.0	+1.0
DPC	Dobruska-Polom	41.23	305	eP	P	19 02 19.0	+1.7
DPC				ex	x	19 02 24.3	
DPC	Dobruska-Polom	41.23	305	eP	P	19 02 19.0	+1.7
DPC				e		19 02 24.3	
TIXI	Tiksi	43.04	23	ceP	P	19 02 27.5	-4.2
TIXI				pmax	pmax		
	comp=Z,8.0nm,2.7s						
GERES	GERESS Array B	43.12	304	P	P	19 02 32.4	-0.4
	comp=Z,0.3nm,0.3s,baz=74,slow=11,SNR=4.8						
KHC	Kasperske Hory	43.16	304	eP	P	19 02 34.5	+1.5
KHC				ex	x	19 02 40.2	
KHC	Kasperske Hory	43.16	304	eP	P	19 02 34.5	+1.5
KHC				e		19 02 40.2	
NC303	NORSAR Array S	43.62	322	P	P	19 02 36.9	+0.3
NB2	NORSAR Subarra	43.69	322	P	P	19 02 37.2	0.0
	comp=Z,1.2nm,0.5s,baz=92,slow=8.6						
NOA	NORSAR Array B	43.69	322	P	P	19 02 37.1	0.0
	comp=Z,1.7nm,0.5s,baz=92,slow=7.9,SNR=8.8						
NC204	NORSAR Array S	43.92	322	P	P	19 02 38.7	-0.3
YSS	Yuzh-Sakhalins	50.11	57	⇑eP	P	19 03 22.9	-4.6
YSS				pmax	pmax		
	comp=Z,22nm,1.3s						
MJAR	Matsushiro Arr	50.53	71	P	P	19 03 31.2	+0.4
	comp=Z,2.9nm,0.7s,baz=292,slow=12,SNR=4.1						
MJAR	Matsushiro Arr	50.53	71	IAmb	IAmb	19 03 45.0	
	comp=Z,8.9nm,1.5s						
BILL	Bilibino	55.83	27	i P	P	19 04 06.1	-3.3
BILL				i		19 04 16.0	
BILL				i		19 05 03.9	
BILL				i		19 06 17.1	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ESDC	Sonseca Array	57.98	297	P	P	19 04 24.9	-0.3
	comp=Z,0.3nm,0.4s,baz=57,slow=6.9,SNR=6.5						
TORD	Torodi Ar. Bea	67.53	269	P	P	19 05 28.1	-0.9
	comp=Z,4.6nm,0.7s,baz=49,slow=5.8,SNR=38						
TORD	Torodi Ar. Bea	67.53	269	P	P	19 05 28.0	-1.1
TORD				IAmb	IAmb	19 05 28.8	
	comp=Z,2.6nm,0.8s						
TOLK	Toolik Lake Re	68.31	16	P	P	19 05 34.2	+1.0
TOLK				IAmb	IAmb	19 05 44.6	
	comp=Z,3.1nm,0.6s						
COLD	Coldfoot	69.34	17	P	P	19 05 39.8	+0.2
COLD				IAmb	IAmb	19 05 46.8	
	comp=Z,4.0nm,1.2s						
IMAR	Indian Mountai	69.51	19	P	P	19 05 40.9	+0.2
BMAR	Burnt Mountain	70.35	15	P	P	19 05 47.3	+1.4
J20K	Nowinta River	70.84	20	P	P	19 05 49.9	+1.1
H24K	Noodor Dome	71.02	17	P	P	19 05 51.2	+1.2
H24K				IAmb	IAmb	19 06 05.6	
	comp=Z,7.0nm,1.4s						
KOWA	Kowa	71.19	274	P	P	19 05 51.7	-0.1
INK	Inuvik	71.41	10	P	P	19 05 53.0	+0.8
	comp=Z,1.8nm,0.6s,baz=328,slow=3.8,SNR=9.6						
INK	Inuvik	71.41	10	P	P	19 05 53.0	+0.8
COLA	College	71.84	17	⇑eP	P	19 05 52.2	-2.6
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ILAR	Eielson Array	72.14	17	P	P	19 05 56.0	-0.8
	comp=Z,1.0nm,0.9s,baz=316,slow=5.4,SNR=11						
ILAR	Eielson Array	72.14	17	P	P	19 05 56.5	-0.2
ILAR	Eielson Array	72.14	17	P	P	19 05 56.5	-0.2
KTH	Kantishna Hill	72.19	19	P	P	19 05 57.5	+0.4
KTH				IAmb	IAmb	19 05 58.2	
	comp=Z,4.9nm,1.2s						
PPLA	Purkeypile	72.40	20	P	P	19 05 58.8	+0.4
SCRK	Sand Creek	73.47	16	P	P	19 06 05.0	+0.2
SCRK				IAmb	IAmb	19 06 22.7	
	comp=Z,4.0nm,1.2s						
M24K	Tolsona, Glenn	74.59	18	P	P	19 06 12.4	+1.1
BCAR	Beaver Creek A	74.75	16	P	P	19 06 12.8	+0.7
M27K	Edge Creek, AK	75.36	16	P	P	19 06 16.3	+0.5
M27K				IAmb	IAmb	19 06 16.7	
	comp=Z,8.2nm,1.4s						
CTGM	Chitina Glacie	76.72	17	P	P	19 06 24.3	+0.7
CTGM				IAmb	IAmb	19 06 38.4	
	comp=Z,5.1nm,1.1s						
HYT	Haines Junctio	77.66	15	P	P	19 06 30.0	+1.1
HYT				IAmb	IAmb	19 06 30.8	
	comp=Z,5.4nm,1.0s						
YKA	Yellowknife Ar	78.92	4	P	P	19 06 36.0	+0.4
	comp=Z,1.7nm,0.7s,baz=350,slow=5.7,SNR=9.0						
YKA	Yellowknife Ar	78.92	4	P	P	19 06 36.0	+0.4
WRA	Warramunga Arr	81.72	124	P	P	19 06 49.4	-1.9
	comp=Z,1.1nm,0.5s,baz=326,slow=4.6,SNR=15						
ASAR	Alice Springs	84.12	127	P	P	19 07 02.8	-0.9
	comp=Z,0.5nm,0.7s,baz=326,slow=4.5,SNR=10						

IDC 07 18:55:14.8±1.8**, 38°.37N×73°.23E, h0^{km}, mb3.9**/4**,
mb1 4.2**/7**, mb1mx3.7**/59**, mbtmp4.1**/7**, ML3.5**/3**, MS3.9**/1**,
Ms1 3.9**/1**, ms1mx2.7**/36**, Error ellipse: s-maj=45.2km
s-min=26.5km az=62.0, Tajikistan-Xinjiang border
region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	12.82	15	Pn	Pn	18 58 18.1	-0.1
	0.1nm,0.3s,baz=204,slow=12,SNR=5.2						
AKTO	Aktyubinsk	16.20	323	Pn	Pn	18 59 02.4	-1.4
	1.2nm,0.3s,baz=109,slow=10,SNR=6.6						
ZALV	Zalesovo Beam	17.49	23	P	Pn	18 59 20.2	+0.2
	0.6nm,0.3s,baz=217,slow=11,SNR=4.0						
ARU	Arti	20.54	336	P	P	18 59 54.0	-0.6
	2.6nm,0.6s,baz=127,slow=8.8,SNR=4.5						
FINES	FINESS Array B	36.97	324	LR	LR	19 17 18.8	
	comp=Z,166nm,19.9s,baz=54,slow=36						
INK	Inuvik	71.77	10	P	P	19 06 37.8	-0.7
	1.9nm,0.7s,baz=1.1,slow=12,SNR=3.0						
ILAR	Eielson Array	72.49	17	P	P	19 06 41.4	-1.5
	1.0nm,0.8s,baz=324,slow=5.2,SNR=4.6						
WRA	Warramunga Arr	81.51	124	P	P	19 07 35.3	+1.0
	0.6nm,0.6s,baz=324,slow=5.0,SNR=4.8						

**MAN 07 18:58:36.0, 6°.57N×126°.62E, h14^{km}, mb4.5, ML3.4, MS3.2,
4C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.52	316	⇓iP	Pb	18 58 46.7	-0.2
DDMP	Don Marcelino,	1.01	243	⇑eP	Pb	18 58 54.9	-0.5
DMPH	Davao City--Mi	1.22	295	⇑eP	Pg	18 58 59.5	0.0
DMPH				eS	Sb	18 59 00.2	-14
BIPH	Bislig	1.63	351	⇑iP	Pn	18 59 02.4	-1.9
BIPH				i S	Sn	18 59 24.2	-0.8
BUKP	Musuan	2.02	310	⇑eP	Pn	18 59 09.5	-0.2

IDC ***07*** *19:09:56.2±1.2, 37°.77N×72°.46E, h0^{km}, mb3.8/9,
mb1 3.8/15, mb1mx3.6/48, mbtmp3.7/15, ML2.8/5, MS3.2/3,
Ms1 3.2/3, ms1mx2.7/44, Error ellipse: s-maj=22.9km
s-min=18.8km az=152.0*

NNC ***07*** *19:10:05.0±4.0, 38°.38N×72°.74E, h0^{km}, mb4.2, mpv3.8,
Error ellipse: s-maj=30.9km s-min=20.6km az=165.0*

ISC 07 19:09:57.1±0.8**, 37°.78N**±0°.07×**72°.46E**±0°.08**, h10^{km}, n41,
σ2^{s}.30**/44**, mb3.7**/8**, 6C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.10	17	Pn	Pn	19 11 17.5	+3.9
	1.2nm,0.3s,baz=195,slow=9.9,SNR=14						
AAK				Sn	Sn	19 12 16.2	+3.6
	1.7nm,0.3s,baz=17,slow=24,SNR=3.9						
AAK	Ala-Archa	5.10	17	⇓Pn	Pn	19 11 17.8	+4.1
	15nm,0.7s						
AAK				⇓Sn	Sn	19 12 09.1	-3.5
	32nm,0.9s						
KK09	Karatay Array	5.55	345	⇑Pn	Pn	19 11 20.9	+1.3
	7.5nm,0.7s,baz=157,slow=12						
KK09				⇓Sn	Sn	19 12 20.4	-3.1
	28nm,0.8s						
KK09				⇑Lg	Lg	19 12 45.8	
	29nm,0.7s,baz=151,slow=27						
TKM2	Tokmak 2	5.67	24	⇑Pn	Pn	19 11 21.5	0.0
	7.7nm,0.7s						
TKM2				⇓Lg	Lg	19 12 48.5	
	19nm,0.8s						
KST	Kastek	5.90	26	Pg	Pb	19 11 38.9	-1.1
	9.7nm,0.6s						
KST				Lg	Lg	19 12 54.0	
	21nm,0.8s						
DGS	Degeres	6.01	24	Pg	Pb	19 11 41.5	-0.5
	15nm,0.6s						
DGS				Lg	Lg	19 12 57.5	
	25nm,0.8s						
TNSS	Tian-Shan	6.27	32	Pg	Pb	19 11 46.5	0.0
	4.9nm,0.7s						
TNSS				Lg	Lg	19 13 08.1	
	9.7nm,1.2s						
KRBS	Karabastau	6.40	21	Pg	Pb	19 11 47.6	-0.9
	6.0nm,0.6s						
KRBS				Lg	Lg	19 13 09.9	
	9.3nm,0.7s						
MDOK	Medeo	6.42	32	⇑Pg	Pb	19 11 53.4	+4.5
	9.2nm,0.9s						
MDOK				Lg	Lg	19 13 09.4	
	29nm,0.9s						
MDOK	Medeo	6.42	32	Pg	Pb	19 11 48.2	-0.7
	6.6nm,0.7s						
MDOK				Lg	Lg	19 13 08.4	
	18nm,1.2s						
KOTS	Kotyrbulak	6.50	32	Pg	Pb	19 11 49.7	-0.6
	6.6nm,0.8s						
KOTS				Lg	Lg	19 13 13.4	
	40nm,0.8s						
KTBS	Karatobe	6.74	27	Pg	Pb	19 11 54.1	-0.2
	3.5nm,0.6s						
KTBS				Lg	Lg	19 13 19.4	
	16nm,0.7s						
KUU	Kurty	6.78	24	Pg	Pb	19 11 54.8	-0.2
	6.3nm,0.8s						
KUU				Lg	Lg	19 13 20.8	
	15nm,1.4s						
GEYT	Alibeck	11.35	275	LR	LR	19 17 47.7	
	comp=Z,50nm,21.4s,baz=10.0,slow=42						
MKAR	Makanchi Array	11.57	36	Pn	Pn	19 12 44.9	+2.6
	0.1nm,0.3s,baz=223,slow=16,SNR=3.6						
PYUN	Piuthan	13.08	134	eP	Pn	19 13 01.4	-1.7
	14nm,0.6s						
DANN	Dangsing	13.33	132	eP	Pn	19 13 04.3	-2.4
	11nm,0.5s						
KURBB	Kurchatov Arra	13.55	17	Pn	Pn	19 13 08.2	-1.1
	0.0nm,0.3s,baz=208,slow=12,SNR=4.7						
KOLN	Koldanda	13.68	134	eP	Pn	19 13 09.9	-1.3
GKN	Gorkha	14.11	130	eP	Pn	19 13 15.1	-2.1
AB31	Akbulak array	14.61	326	⇑Pn	Pn	19 13 25.5	+1.8
	1.2nm,0.5s,baz=138,slow=12,SNR=5.1						
AB31				⇑Sn	Sn	19 16 06.1	+0.5
	7.2nm,1.1s,baz=140,slow=22,SNR=6.5						
KKN	Kakani	14.66	129	eP	Pn	19 13 22.0	-2.7
	7.4nm,0.5s						
DMN	Daman	14.69	130	eP	Pn	19 13 22.4	-2.7
PKIN	Phulchoki	14.88	129	eP	Pn	19 13 25.4	-2.4
PKI	Pulchoki	14.90	129	eP	Pn	19 13 25.6	-2.5
	12nm,0.5s						
BVAR	Borovoye Array	15.32	355	Pn	Pn	19 13 31.6	-1.6

	0.1nm,0.3s,baz=206,slow=13,SNR=1.7						
RAMN	Ramite	16.08	128	eP	Pn	19 13 41.1	-2.4
	12nm,0.4s						
AKTO	Aktyubinsk	16.33	325	Pn	Pn	19 13 45.4	-0.8
	0.7nm,0.3s,baz=124,slow=10,SNR=23						
AKTO				Sn	Sn	19 16 39.4	-7.9
	0.3nm,0.3s,baz=89,slow=13,SNR=4.1						
AKTO				LR	LR	19 20 29.7	
	comp=Z,114nm,18.3s,baz=120,slow=39						
AKTO	Aktyubinsk	16.33	325	⇓Pn	P	19 13 48.6	-0.6
	18nm,1.0s						
TAPN	Taplejung	16.51	125	eP	Pn	19 13 47.5	-1.5
ODAN	Odare	16.64	127	eP	Pn	19 13 48.9	-1.7
ZALV	Zalesovo Beam	18.27	24	P	Pn	19 14 09.1	-1.4
	0.1nm,0.3s,baz=216,slow=9.0,SNR=2.3						
ARU	Arti	20.85	338	P	P	19 14 37.6	-1.2
	1.0nm,0.6s,baz=138,slow=11,SNR=3.7						
ARU				LR	LR	19 22 10.1	
	comp=Z,80nm,19.3s,baz=173,slow=35						
BELG	Belogornoye	22.67	318	P	P	19 14 57.6	-0.7
	8.6nm,0.6s,baz=192,slow=20,SNR=2.2						
SONM	Songino Array	26.66	57	P	P	19 15 38.0	+1.9
	1.3nm,0.9s,baz=247,slow=8.2,SNR=7.8						
FINES	FINESS Array B	37.10	325	P	P	19 17 07.1	-0.2
	5.0nm,1.0s,baz=105,slow=10,SNR=2.2						
NOA	NORSAR Array B	44.08	322	P	P	19 18 05.3	+0.3
	0.6nm,0.7s,baz=92,slow=7.7,SNR=1.8						
ESDC	Sonseca Array	57.90	298	P	P	19 19 50.8	+1.5
	0.5nm,0.7s,baz=49,slow=8.6,SNR=4.2						
TORD	Torodi Ar. Bea	66.91	269	P	P	19 20 50.6	+0.8
	0.3nm,0.5s,baz=50,slow=5.7,SNR=6.1						
YKA	Yellowknife Ar	79.91	3	P	P	19 22 07.9	+2.2
	0.3nm,0.7s,baz=352,slow=5.7,SNR=1.9						
WRA	Warramunga Arr	81.69	123	P	P	19 22 15.5	-0.3
	0.7nm,0.9s,baz=321,slow=4.3,SNR=2.0						

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*NEIC **07** 19:10:20.9±1.3, 4°.17N±0°.05×122°.6E±0°.1, h583^{km}±7^{km}, mb4.3/27, Error ellipse: s-maj=17.4km s-min=7.0km az=82.0*

*DJA **07** 19:10:20.8±0.6, 4°N±7°×12°3E±°, h574^{km}±4^{km}, M4.1/12, mB4.6/7, mb4.1/12, MLv4.5/12, Mw(mB)3.7/7*

*IDC **07** 19:10:21.5±1.2, 4°.11N×122°.58E, h602^{km}±16^{km}, mb3.4/18, mb1 3.5/20, mb1mx3.2/50, mbtmp4.4/20, Error ellipse: s-maj=20.6km s-min=8.2km az=64.0*

ISC 07 19:10:21.4±0.4**, 4°.02N**±0°.06×**122°.54E**±0°.09**, h604**^{km}**, n92, σ1s.44**/99**, mb4.1**/33**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	Tolitoli	3.38	211	P	P	19 11 41.8	-1.3
TOLI2				S	S	19 12 42.8	-6.9
TOLI2	Tolitoli	3.38	211	P	P	19 11 42.0	-1.2
GTOI	Gorontalo	3.39	172	P	P	19 11 40.5	-2.8
MRSI	Marisa	3.57	190	P	P	19 11 43.4	-1.0
MRSI				S	S	19 12 49.2	-2.6
KMSI	Cibinong	3.71	157	P	P	19 11 42.9	-2.4
MYLDM	Lahad Datu	4.18	286	P	P	19 11 47.2	-1.2
MPSI	Mapaga	4.51	216	P	P	19 11 49.7	-1.1
APSI	Ampana	4.98	190	P	P	19 11 53.7	-0.7
	0.2nm712nm54nm,0.6s						
TNTI	Ternate	5.81	124	P	P	19 11 58.8	-2.4
	0.4nm1µm118nm,0.9s						
TNTI	Ternate	5.81	124	P	P	19 11 58.5	-2.7
TNTI	Ternate	5.81	124	P	P	19 11 58.6	-2.6
KKM	Kota Kinabalu	6.61	288	P	P	19 12 06.9	-1.4
KKM	Kota Kinabalu	6.61	288	P	P	19 12 07.2	-1.0
LBMI	Labuha	6.78	133	P	P	19 12 07.9	-1.8
	0.4nm712nm39nm,0.5s						
SANI	Sanana	6.95	150	P	P	19 12 08.2	-3.0
	0.4nm2µm30nm,0.4s						
SANI	Sanana	6.95	150	P	P	19 12 08.2	-3.0
SWI	Sorong	9.98	119	P	P	19 12 38.6	-1.5
	9.3nm,1.0s						
SIJI	Sorong	9.99	119	P	P	19 12 39.3	-0.9
	1.3nm,0.3s,baz=186,slow=20,SNR=13						
SBUM	Sibu	10.41	262	P	P	19 12 45.6	+1.1
FAKI	Fak Fak	11.91	125	P	P	19 12 58.3	-1.0
	24nm,0.7s						
FAKI	Fak Fak	11.91	125	P	P	19 12 58.6	-0.7
FAKI	Fak Fak	11.91	125	P	P	19 12 58.6	-0.7
KSM	Kuching	12.47	259	P	P	19 13 05.4	+0.5
EDFI	Ende, Flores	12.71	184	P	P	19 13 07.0	-0.5
	5.5nm,0.6s						
SOEI	Soe	13.79	173	P	P	19 13 18.7	+0.3
	12nm,0.6s						
SOEI	Soe	13.79	173	P	P	19 13 18.2	-0.1
BATI	Baumata	14.18	175	P	P	19 13 22.4	+0.4
	24nm,0.3s,baz=8.2,slow=1.9,SNR=41						
BATI	Baumata	14.18	175	P	P	19 13 22.5	+0.5
SAUI	Saumlaki	14.79	144	P	P	19 13 27.2	-0.3
JAGI	Jajag, Banyuwa	14.96	214	P	P	19 13 31.6	+2.4
JAGI				IAmb	IAmb	19 13 52.1	
	comp=Z,30nm,1.2s						
DRS	Darwin Rock St	18.34	153	P	P	19 14 01.0	+1.0
MTN	Manton Dam	18.80	153	P	P	19 14 04.7	+0.5
MTN	Manton Dam	18.80	153	P	P	19 14 04.7	+0.5
JAY	Jayapura	19.28	109	P	P	19 14 09.4	+0.7
	comp=Z,1.2nm,0.3s,baz=242,slow=10,SNR=6.3						
KDU	Kakadu	19.31	149	P	P	19 14 09.2	+0.4
KNRA	Kununurra	20.52	163	P	P	19 14 20.6	+1.0
KNRA				IAmb	IAmb	19 14 22.1	
	comp=Z,9.5nm,0.8s						
KNRA	Kununurra	20.52	163	P	P	19 14 20.7	+1.0
FITZ	Fitzroy Crossi	22.19	172	P	P	19 14 35.4	+0.8
	comp=Z,1.8nm,0.4s,baz=355,slow=6.6,SNR=31						
WB0	Warramunga Arr	26.36	154	P	P	19 15 11.5	+0.1
WRAB	Tennant Creek	26.48	154	P	P	19 15 12.7	+0.1
WRAB	Tennant Creek	26.48	154	P	P	19 15 12.9	+0.3
WRA	Warramunga Arr	26.49	154	P	P	19 15 12.7	+0.1
	comp=Z,10nm,0.4s,baz=334,slow=9.7,SNR=973						
WRA				S	S	19 19 03.0	-2.8
	comp=Z,0.5nm,0.6s,baz=332,slow=15,SNR=4.7						
WRA				ScP	ScP	19 21 01.1	+0.7
	comp=Z,1.3nm,0.6s,baz=338,slow=3.1,SNR=15						
WRA	Warramunga Arr	26.49	154	P	P	19 15 11.5	-1.1
WB2	Warramunga Arr	26.49	154	P	P	19 15 12.8	+0.1
WR0	Warramunga Arr	26.59	154	P	P	19 15 13.5	0.0
WR0				IAmb	IAmb	19 15 14.4	
	comp=Z,10nm,1.0s						
CMAR	Chiang Mai Arr	27.17	304	P	P	19 15 19.5	+0.9
	comp=Z,0.6nm,0.3s,baz=124,slow=6.6,SNR=8.2						
COEN	Coen	27.17	131	P	P	19 15 18.3	-0.4
COEN				IAmb	IAmb	19 15 31.3	
	comp=Z,19nm,1.4s						
CHTO	Chiang Mai	27.34	304	P	P	19 15 19.2	-0.9
CHTO				IAmb	IAmb	19 15 21.6	
	comp=Z,3.1nm,0.8s						
PMG	Port Moresby	27.93	119	P	P	19 15 24.5	-0.7
	comp=Z,14nm,0.9s,baz=282,slow=9.3,SNR=3.2						
PMG	Port Moresby	27.93	119	IAmb	IAmb	19 15 25.9	
	comp=Z,14nm,0.9s						
WRKA	Warakurna	29.42	169	P	P	19 15 39.5	+1.5
AS31	Alice Springs	29.67	159	P	P	19 15 41.1	+0.9
AS31				IAmb	IAmb	19 15 42.1	
	comp=Z,4.5nm,0.4s						
ASAR	Alice Springs	29.67	159	P	P	19 15 41.2	+1.0
	comp=Z,4.5nm,0.3s,baz=335,slow=8.1,SNR=330						
ASAR				S	S	19 19 54.1	-0.9
	comp=Z,1.8nm,0.8s,baz=339,slow=15,SNR=14						
ASAR				ScP	ScP	19 21 11.6	+1.2
	comp=Z,1.7nm,0.7s,baz=341,slow=2.3,SNR=14						
ASAR	Alice Springs	29.67	159	P	P	19 15 41.0	+0.8
CTAO	Charters Tower	33.42	137	P	P	19 16 12.5	+0.5
CTAO				IAmb	IAmb	19 16 37.7	
	comp=Z,12nm,1.2s						
CTAO	Charters Tower	33.42	137	P	P	19 16 13.1	+1.0
KSRS	Korea Array	33.64	8	P	P	19 16 13.3	-0.2
	comp=Z,1.0nm,0.6s,baz=187,slow=9.8,SNR=4.3						
FORT	Forrest	35.00	172	P	P	19 16 26.6	+1.6
LZH	Lanzhou	36.27	334	eP	P	19 16 36.9	+1.3
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
SHL	Shillong	36.39	309	P	P	19 16 36.4	-0.4
SHL				IAmb	IAmb	19 16 37.7	
	comp=Z,7.2nm,0.8s						
HHC	Hu-ho-hao-te	37.97	346	eP	P	19 16 49.2	-0.2
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,69nm,4.4s						
LSA	Lhasa	39.17	314	P	P	19 17 01.1	+1.5
LSA				IAmb	IAmb	19 17 02.0	
	comp=Z,5.2nm,0.7s						
STKA	Stephens Creek	40.04	154	P	P	19 17 07.5	+1.6
	comp=Z,5.1nm,0.5s,baz=330,slow=8.7,SNR=18						
STKA	Stephens Creek	40.04	154	P	P	19 17 07.4	+1.5
EIDS	Eidsvold	40.26	138	P	P	19 17 08.4	+0.6
EIDS				IAmb	IAmb	19 17 09.2	
	comp=Z,7.4nm,1.1s						
GTA	Gaotai	40.81	333	eP	P	19 17 12.9	+0.8
GTA				pP	PcP	19 18 59.2	+1.1
GTA				sP	sP	19 19 50.1	-13
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
USRK	Ussuriysk Ar.	40.88	10	P	P	19 17 11.7	-0.6
	comp=Z,2.5nm,0.5s,baz=194,slow=5.3,SNR=5.4						
USRK	Ussuriysk Ar.	40.88	10	P	P	19 17 11.5	-0.8
ARMA	Armidale	44.12	143	P	P	19 17 40.8	+2.9
ARMA				IAmb	IAmb	19 17 41.6	
	comp=Z,8.8nm,0.9s						
SONM	Songino Array	45.81	345	P	P	19 17 50.4	-0.2
	comp=Z,1.9nm,0.8s,baz=160,slow=8.7,SNR=14						
SONM				PcP	PcP	19 19 15.1	0.0
	comp=Z,0.4nm,0.7s,baz=126,slow=2.5,SNR=2.9						
SONM	Songino Array	45.81	345	P	P	19 17 50.6	0.0
CAN	Canberra	46.35	150	P	P	19 17 57.5	+2.7
CAN	Canberra	46.35	150	P	P	19 17 57.2	+2.4
WMQ	Urumqi	50.16	327	eP	P	19 18 24.6	+1.7
MK31	Makanchi Array	54.99	327	P	P	19 18 57.6	+0.5
MKAR	Makanchi Array	54.99	327	P	P	19 18 57.5	+0.4
	comp=Z,3.1nm,0.4s,baz=125,slow=7.7,SNR=88						
MKAR				PcP	PcP	19 19 49.2	-0.2
	comp=Z,1.5nm,0.6s,baz=138,slow=3.6,SNR=9.6						
MAKZ	Makanchi	55.17	327	P	P	19 18 58.7	+0.3
MAKZ				IAmb	IAmb	19 18 59.4	
	comp=Z,11nm,1.4s						
KDJ	Kajisay	55.39	320	P	P	19 18 59.9	-0.3
YAK	Yakutsk	58.13	4		P	19 19 17.5	-0.7
YAK				IAmb	IAmb	19 19 18.6	
	comp=Z,9.2nm,0.7s						
ZALV	Zalesovo Beam	58.49	335	P	P	19 19 19.5	-1.3
	comp=Z,1.1nm,0.5s,baz=129,slow=5.9,SNR=6.1						
KURBB	Kurchatov Arra	59.29	329	P	P	19 19 26.3	+0.1
	comp=Z,4.0nm,0.7s,baz=130,slow=6.2,SNR=17						
KURK	Kurchatov	59.30	329	P	P	19 19 26.4	+0.1
KURK				IAmb	IAmb	19 19 26.9	
	comp=Z,8.3nm,0.8s						
KKAR	Karatay Array	60.20	318	P	P	19 19 32.6	+0.1
NRIK	Noril'sk	69.20	347	P	P	19 20 27.9	-0.4
	comp=Z,2.0nm,0.6s,baz=154,slow=5.3,SNR=4.1						
ABKAR	Akbulak array	69.30	322	P	P	19 20 29.3	0.0
AKTO	Aktyubinsk	70.85	322	P	P	19 20 38.8	+0.2
	comp=Z,2.9nm,0.6s,baz=112,slow=8.2,SNR=7.4						
BELG	Belogornoye	77.63	323	P	P	19 21 15.5	-1.0
	comp=Z,6.0nm,0.6s,baz=180,slow=6.1,SNR=2.3						
KBZ	Khabaz	79.74	314	P	P	19 21 27.2	-0.7
	comp=Z,2.3nm,0.9s,baz=96,slow=6.7,SNR=3.2						
ASF	Jabal al Asfar	84.19	302	P	P	19 21 51.5	+0.7
	comp=Z,2.2nm,0.7s,baz=24,slow=4.4,SNR=4.0						
FINES	FINESS Array B	89.59	331	P	P	19 22 14.6	-0.9
	comp=Z,3.0nm,0.7s,baz=72,slow=6.2,SNR=6.0						
TORD	Torodi Ar. Bea	118.84	287	PKP	PKPdf	19 28 02.4	-0.8
	comp=Z,0.7nm,0.7s,baz=107,slow=1.5,SNR=6.3						
I37A	Lemond, Waseca	122.31	30		PKiKP	19 28 09.9	+0.6

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*VAO **07** 19:23:37.3±1.4, 6°.70S×76°.45W, h50^{km}±9^{km}, mb4.2*

*IDC **07** 19:24:03.7±1.9, 7°.86S×74°.67W, h155^{km}±24^{km}, mb3.6/5, mb1 3.8/11, mb1mx3.5/31, mbtmp4.2/11, Error ellipse: s-maj=25.7km s-min=12.4km az=51.0*

*NEIC **07** 19:24:03.7±1.8, 7°.91S±0°.06×74°.64W±0°.10, h151^{km}±11^{km}, mb4.3/1, Error ellipse: s-maj=14.3km s-min=8.7km az=88.0*

ISC 07 19:24:03.2±0.6**, 7°.80S**±0°.07×**74°.60W**±0°.06**, h151**^{km}**, n33, σ1s.51**/36**, mb3.8**/5**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	Cruzeiro do Su	1.88	88	eP	Pn	19 24 38.9	+1.9
CZSB	Cruzeiro do Su	1.88	88	Pn	Pn	19 24 38.6	+1.5
ATAH	Atahualpa	3.82	280	P	Pn	19 25 01.6	+0.1
	13nm,0.3s,baz=48,slow=2.8,SNR=313						
ATAH				S	Sn	19 25 46.5	-0.3
	45nm,0.3s,baz=117,slow=8.9,SNR=19						
NNA	Nana	4.71	208	P	Pn	19 25 13.5	+0.6
	8.3nm,0.3s,baz=356,slow=3.9,SNR=13						
NNA				S	Sn	19 26 05.6	-1.6
	42nm,0.3s,baz=180,slow=17,SNR=20						
NNA	Nana	4.71	208	Pn	Pn	19 25 11.5	-1.4
NNA					Sn	19 26 05.2	-2.1
TBTG	Tabatinga, AM	5.89	53	Pn	Pn	19 25 29.3	+0.8
ETMB	Extrema	8.53	104	eP	Pn	19 26 02.6	-1.1
ETMB	Extrema	8.53	104		Pn	19 26 02.2	-1.5
LPAZ	La Paz	10.54	144	P	Pn	19 26 31.7	+0.7
	0.4nm,0.3s,baz=336,slow=10.0,SNR=5.2						
LPAZ	La Paz	10.54	144	eP	Pn	19 26 32.6	+1.6
SAML	Samuel	11.36	97	Pn	Pn	19 26 40.2	-0.9
MACA	Manacapuru-AM	14.60	72	eP	Pn	19 27 21.8	-1.0
VILB	Vilhena	15.06	111	eP	P	19 27 30.4	+0.2
SIV	San Ignacio	15.53	123	P	P	19 27 36.0	+0.6
	0.5nm,0.3s,baz=313,slow=12,SNR=6.6						
LVC	Limon Verde	15.71	160	P	P	19 27 38.1	+0.4
	7.9nm,0.3s,baz=12,slow=14,SNR=45						
LVC	Limon Verde	15.71	160	eP	P	19 27 39.1	+1.4
PTGA	Pitinga	16.19	65	P	P	19 27 43.6	+0.9
	1.4nm,0.3s,baz=322,slow=20,SNR=4.8						
BOAV	Boa Vista	17.32	55	eP	P	19 27 48.8	-6.3
PDRB	Porto dos Gac	18.02	104	eP	Pn	19 28 06.1	+1.8
CLDB	Colider	18.80	101	eP	P	19 28 11.8	+0.5
ITTB	Itaituba	19.07	81	eP	P	19 28 15.1	+0.9
NPGB	Novo Progresso	19.10	89	eP	P	19 28 15.2	+0.7
MALB	Monte Alegre	21.10	75	eP	P	19 28 35.8	-0.3
SNDB	Serra Nova Dou	23.33	102	eP	P	19 28 58.5	+0.3
MCPB	Macapa, AP	23.66	73	eP	P	19 29 00.5	-0.6
CPUP	Villa Florida	24.68	140	P	P	19 29 10.3	0.0
	3.0nm,0.9s,baz=328,slow=7.3,SNR=2.8						
NBPS	Pedro II - PI	33.13	86	eP	P	19 30 25.3	-0.3
DBIC	Dimbokro	71.02	80	P	P	19 35 05.5	+0.1
	4.3nm,0.6s,baz=247,slow=4.2,SNR=7.9						
DBIC	Dimbokro	71.02	80	P	P	19 35 04.9	-0.4
DBIC				IAmb	IAmb	19 35 06.0	
	comp=Z,4.6nm,0.8s						
YKA	Yellowknife Ar	76.53	342	P	P	19 35 37.0	+0.6
	comp=Z,0.3nm,0.4s,baz=141,slow=5.5,SNR=4.5						
TORD	Torodi Ar. Bea	78.57	75	P	P	19 35 48.6	-0.1
	comp=Z,0.6nm,0.3s,baz=267,slow=5.3,SNR=15						
ILAR	Eielson Array	89.58	336	P	P	19 36 44.2	+0.9
	comp=Z,0.2nm,0.5s,baz=138,slow=6.9,SNR=2.4						
WRA	Warramunga Arr	140.36	226	PKP	PKPdf	19 43 16.3	+1.0
	comp=Z,0.7nm,1.1s,baz=116,slow=2.1,SNR=5.5						

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*IDC **07** 19:26:31.6±6.1, 6°.64N×76°.28W, h94^{km}±64^{km}, mb3.6/1, mb1 4.0/2, mb1mx3.2/29, mbtmp4.2/2, ML3.1/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/33, Error ellipse: s-maj=84.4km s-min=33.0km az=79.0*

*RSNC **07** 19:26:33.1±1.2, 6°.85N×73°.12W, h154^{km}±4^{km}, ML3.4, Mw3.9*

ISC 07 19:26:32.1±0.9**, 6°.85N**±0°.03×**73°.11W**±0°.03**, h159**^{km}±6^{km}**, n37, σ1s.22**/67**, 6C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.27	196	⇑iP	Pn	19 26 53.8	-0.1
BARC				eS	Sn	19 27 09.8	-0.9
BARC				i		19 27 11.7	
	comp=Z,357nm,0.5s						
PAMC	Pamplona, Colo	0.63	40	⇑eP	Pn	19 26 56.6	+0.9
PAMC				eS	Sn	19 27 13.7	-0.1
PAMC				i		19 27 15.9	
	comp=Z,338nm,0.5s						
BRRC	Barranca, Sant	0.65	293	⇑eP	Pn	19 26 55.7	+0.5
BRRC				eS	Sn	19 27 13.1	+0.1
BRRC				i		19 27 18.0	
	comp=Z,240nm,0.1s						
RUSC	La Rusia	0.95	179	⇑iP	Pn	19 26 57.8	-0.2
RUSC				eS	Sn	19 27 17.1	-0.6
TAMC	Tame, Arauca	1.37	108	⇑eP	Pn	19 27 02.0	+0.9
TAMC				i		19 27 22.7	
	comp=Z,251nm,0.4s						
TAMC				eS	Sn	19 27 23.6	+0.2
PTBC	PUERTO BERRIO,	1.38	257	eP	Pn	19 27 00.4	-0.7
PTBC				eS	Sn	19 27 22.0	-1.4
PTBC				i		19 27 29.2	
	comp=Z,479nm,0.4s						
OCAC	Ocana	1.39	351	eP	Pn	19 27 02.0	+0.6
OCAC				eS	Sn	19 27 23.3	-0.8
OCAC				i		19 27 28.4	
	comp=Z,460nm,0.5s						
SPBC	San Pablo de B	1.53	219	eP	Pn	19 27 02.7	-0.1
SPBC				eS	Sn	19 27 25.7	-0.7
SPBC				i		19 27 32.9	
	comp=Z,505nm,0.3s						
ZARC	Zaragoza, Cauc	1.85	290	eP	Pn	19 27 06.5	+0.4
ZARC				eS	Sn	19 27 32.1	-0.2
ZARC				i		19 27 38.4	
	comp=Z,449nm,0.4s						
SMLC	San Martn de	2.16	334	eP	Pn	19 27 10.0	+0.4
SMLC				eS	Sn	19 27 39.6	+1.0
SMLC				i		19 27 41.8	
	comp=Z,232nm,0.2s						
NORC	Norcasia	2.17	234	eP	Pn	19 27 09.7	-0.1
NORC				eS	Sn	19 27 38.3	-0.6
NORC				i		19 27 43.5	
	comp=Z,284nm,0.2s						
ROSC	El Rosal	2.34	211	P	Pn	19 27 13.7	+1.6
	comp=Z,74nm,0.3s,baz=308,slow=22,SNR=56						
ROSC				S	Sn	19 27 44.8	+1.8
	comp=Z,54nm,0.3s,baz=130,slow=18,SNR=8.9						
ROSC	El Rosal	2.34	211	eP	Pn	19 27 13.6	+1.4
ROSC				eS	Sn	19 27 44.4	+1.4
ROSC				i		19 27 51.6	
	comp=Z,442nm,0.5s						
HELC	Santa Helena	2.50	255	eP	Pn	19 27 14.6	+0.7
HELC				eS	Sn	19 27 45.0	-1.2
HELC				i		19 27 52.5	
	comp=Z,199nm,0.3s						
UREC	San Jos de Ur	2.57	290	eP	Pn	19 27 13.8	-0.7
UREC				eS	Sn	19 27 45.7	-1.6
UREC				i		19 27 57.9	
	comp=Z,182nm,0.2s						
SOCV	Socops	2.65	57	eP	Pn	19 27 15.4	-0.1
SOCV				eS	Sn	19 27 47.5	-1.5
LL1C	La Loma 1 Cana	2.71	351	eP	Pn	19 27 19.2	+3.0
LL1C				eS	Sn	19 27 54.2	+3.8
GUY2C	Guyana, Caldas	2.77	234	eP	Pn	19 27 18.1	+0.6
GUY2C				eS	Sn	19 27 53.2	+0.8
GUY2C				i		19 28 00.5	
	comp=Z,250nm,0.6s						
VILC	Villavicencio,	2.79	192	eP	Pn	19 27 17.6	+0.3
VILC				eS	Sn	19 27 53.0	+0.7
PTGC	Puerto Gaitan,	2.81	160	⇑eP	Pn	19 27 16.8	-0.7
PTGC				eS	Sn	19 27 50.0	-2.7
PTGC				i		19 27 51.2	
	comp=Z,108nm,0.3s						
CBOC	Ciudad Bolivar	3.05	251	eP	Pn	19 27 21.6	+0.9
CBOC				eS	Sn	19 27 58.5	+0.3
CBOC				i		19 28 06.2	
	comp=Z,68nm,0.4s						
DBBC	Dabeiba	3.08	273	eP	Pn	19 27 21.4	+0.4
DBBC				eS	Sn	19 27 57.5	-1.3
DBBC				i		19 28 01.9	
	comp=Z,385nm,0.4s						
MOTC	Monteria, Cord	3.17	307	eP	Pn	19 27 21.2	-0.9
MOTC				eS	Sn	19 27 59.7	-1.1
MOTC				i		19 28 02.0	
	comp=Z,44nm,0.2s						
SDV	Santo Domingo	3.17	50	eP	Pn	19 27 23.2	+1.0
SDV				eS	Sn	19 28 00.1	-1.0
SDV				i		19 28 02.7	
	comp=Z,43nm,0.5s						
SDV	Santo Domingo	3.17	50	eP	Pn	19 27 23.4	+1.2
ARGC	Ariguani, Magd	3.19	339	eP	Pn	19 27 24.1	+1.8
ARGC				eS	Sn	19 28 02.1	+0.9
ARGC				i		19 28 10.6	
	comp=Z,37nm,0.3s						
ANIL	Santa Ana	3.28	224	eP	Pn	19 27 25.2	+1.5
ANIL				eS	Sn	19 28 05.1	+1.5
PRAC	Prado	3.59	210	eP	Pn	19 27 27.2	-0.1
PRAC				eS	Sn	19 28 09.9	-0.4
PRAC				i		19 28 16.4	
	comp=Z,135nm,0.3s						
ORTC	Ortega, Tolima	3.62	216	eP	Pn	19 27 28.0	+0.2
ORTC				eS	Sn	19 28 11.7	+0.6
ORTC				i		19 28 17.5	
	comp=Z,107nm,0.6s						
SJCC	San Jacinto, C	3.65	326	eP	Pn	19 27 27.7	-0.5
SJCC				eS	Sn	19 28 09.0	-2.8
SJCC				i		19 28 13.2	
	comp=Z,30nm,0.4s						
PLMC	San Jos del P	3.71	239	eP	Pn	19 27 29.5	+0.6
PLMC				eS	Sn	19 28 12.4	-0.6
PLMC				i		19 28 22.7	
	comp=Z,56nm,0.3s						
CRJC	Cerrejon, Guaj	4.15	3	eP	Pn	19 27 34.0	-0.6
CRJC				eS	Sn	19 28 20.7	-2.7
CRJC				i		19 28 28.3	
	comp=Z,38nm,0.4s						
YOTC	Yotoco, Valle	4.30	229	eP	Pn	19 27 36.4	-0.3
YOTC				i		19 29 00.1	
	comp=Z,15nm,0.3s						
MDP	Montagnes des	20.43	94	LR	LR	19 41 56.6	
	comp=Z,29nm,20.1s,baz=64,slow=39						
YKA	Yellowknife Ar	63.24	340	P	P	19 36 43.8	+0.5
	comp=Z,0.9nm,0.5s,baz=135,slow=6.5,SNR=9.5						
ASAR	Alice Springs	149.14	234	PKPbc	PKPbc	19 46 02.1	-0.5
	comp=Z,0.3nm,0.5s,baz=115,slow=3.7,SNR=5.3						
WRA	Warramunga Arr	150.36	241	PKPbc	PKPbc	19 46 05.1	-0.5
	comp=Z,0.3nm,0.4s,baz=108,slow=2.8,SNR=14						

KRSC 07 19:42:26.6±0.5**, 55°.18N**×**163°.33E, h50**^{km}±14^{km}**, ML3.7, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	1.07	345	eP	Pn	19 42 46.1	+0.8
KBTR				eS	Sn	19 42 59.7	+0.6
MKZ	Mys Kozlova	1.11	237	eP	Pn	19 42 47.2	+1.4
MKZ				eS	Sn	19 43 02.1	+2.1
KBG	Krutoberegovo	1.14	342	eP	Pn	19 42 47.1	+1.0
KBG				eS	Sn	19 43 01.8	+1.2
BKI	Bering	1.52	88	eP	Pn	19 42 52.9	+1.6
BKI				eS	Sn	19 43 12.2	+2.4
TUMD	Tumrok D	1.68	272	eP	Pn	19 42 55.6	+2.1
TUMD				eS	Sn	19 43 16.1	+2.2
SMKR	Semkarok	1.75	324	eP	Pn	19 42 56.6	+2.0
BDR	Baidarnaya	1.83	320	eP	Pn	19 42 57.9	+2.2
KMNR	Kamenistaya	1.85	290	eP	Pn	19 42 58.9	+3.0
KIRR	Kirishev	1.86	296	eP	Pn	19 42 58.9	+2.7
KLY	Klyuchi	1.89	308	eP	Pn	19 42 57.6	+1.2
SRKR	Sorokina	1.92	322	eP	Pn	19 42 59.0	+2.2
KII	Karymskiy	2.53	245	eP	Pn	19 43 08.1	+2.9
ESO	Esso	2.73	288	eP	Pn	19 43 10.7	+2.8
SPN	Mys Shipunski	2.85	224	eP	Pn	19 43 12.0	+2.5
SPN				eS	Sn	19 43 45.7	+3.2
NLC	Nalytchevo	3.08	231	eP	Pn	19 43 16.0	+3.3
NLC				eS	Sn	19 43 51.3	+3.0
SDLR	Sedlovina	3.23	236	eP	Pn	19 43 18.2	+3.4
KRER	Koryakskii	3.28	237	eP	Pn	19 43 19.9	+4.4
SMAR	Somma	3.28	236	eP	Pn	19 43 19.1	+3.6
UGLR	Uglovaya	3.30	235	eP	Pn	19 43 19.3	+3.5
AVH	Avacha	3.31	236	eP	Pn	19 43 19.9	+4.1
KOK	Koryaka	3.34	237	eP	Pn	19 43 20.5	+4.2
DALK	Dalny	3.44	233	eP	Pn	19 43 21.3	+3.7
GNL	Ganaly	3.48	247	eP	Pn	19 43 21.7	+3.5
KRMR	Karymshinskiy	3.86	235	eP	Pn	19 43 27.0	+3.6
RUS	Russkaya	3.96	228	P	Pn	19 43 28.3	+3.6
MTVR	Mutnovka	4.07	231	eP	Pn	19 43 29.0	+2.6
ASAK	Asacha	4.26	231	eP	Pn	19 43 32.9	+3.9

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*IDC **07** 19:50:49.0±7.0, 35°.24N×136°.17E, h159^{km}±162^{km}, mb3.0/2, mb1 3.2/3, mb1mx2.5/50, mbtmp3.3/3, ML2.1/1, Error ellipse: s-maj=256.5km s-min=119.9km az=171.0*

*JMA **07** 19:50:51.9±0.2, 36°.23N×137°.43E, h256^{km}±2^{km}, M2.2*

ISC 07 19:50:51.7±1.4**, 36°.2N**±0°.1×**137°.4E**±0°.1**, h256**^{km}±9^{km}**, n13, σ0s.90**/17**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGN	Niukaw	0.07	261	P	Pn	19 51 25.0	+0.3
JGN				S	S	19 51 50.4	-0.2
MAT	Matsushiro	0.72	64	P	Pn	19 51 26.5	+0.4
MAT				eS	S	19 51 51.1	-2.0
MAT	Matsushiro	0.72	64	P	Pn	19 51 26.5	+0.4
MJAR	Matsushiro Arr	0.72	65	P	Pn	19 51 26.1	0.0
	0.7nm,0.3s,baz=240,slow=5.1,SNR=38						
MJAR				S	S	19 51 55.1	+2.0

	0.0nm,0.3s,baz=34,slow=32,SNR=4.8						
JYTA	Yamagatataniai	0.83	220	P	Pn	19 51 26.6	0.0
JYTA				S	S	19 51 53.2	-0.8
JKG	Kaga	0.86	273	P	Pn	19 51 27.2	+0.6
JAG	Ashikaga	1.67	83	P	Pn	19 51 32.0	+0.1
JWT	Wachi	1.88	240	P	Pn	19 51 33.7	0.0
JIE	Ise	1.92	197	P	Pn	19 51 34.8	+0.7
JSD	Sado	1.93	21	P	Pn	19 51 34.3	+0.3
JWY	Kouya	2.49	217	P	Pn	19 51 40.0	+0.5
WRA	Warramunga Arr	55.95	183	P	P	20 00 03.3	-0.3
	0.4nm,0.5s,baz=359,slow=7.6,SNR=14						
ASAR	Alice Springs	59.67	184	P	P	20 00 29.2	-0.1
	0.5nm,1.1s,baz=3.7,slow=6.7,SNR=4.2						

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*IDC **07** 19:54:06.8±1.2, 37°.58N×21°.96E, h0^{km}, mb3.9/8, mb1 3.8/11, mb1mx3.4/57, mbtmp3.7/11, ML3.5/3, Error ellipse: s-maj=25.0km s-min=18.5km az=67.0*

*ISK **07** 19:54:07.6, 37°.59N×22°.09E, h5^{km}, ML3.5/30*

*THE **07** 19:54:09.4, 37°.57N×22°.08E, h0^{km}±1^{km}, ML3.5/32, Error ellipse: s-maj=1.5km s-min=0.6km az=225.0*

*ATH **07** 19:54:09.2, 37°.56N×22°.04E, h7^{km}±4^{km}, ML3.6/11, Error ellipse: s-maj=4.8km s-min=0.8km az=278.0*

ISC 07 19:54:09.3±0.9**, 37°.57N**±0°.02×**22°.05E**±0°.02**, h16**^{km}±6^{km}**,** **n144, σ1§83**/211**, mb3.7**/8**, 5C-2D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	0.40	194	P	Pg	19 54 16.7	-0.8
ITM				S	Sg	19 54 22.4	-0.6
	7µm,0.2s						
ITM	Ithomi	0.40	194	P	Pg	19 54 16.6	-0.8
ITM				S	Sg	19 54 22.4	-0.6
ITM				AML	AML	19 54 23.0	
	comp=E,16517µm,0.3s						
ITM				AML	AML	19 54 24.1	
	comp=N,17298µm,0.2s						
ITM	Ithomi	0.40	194	PG	Pg	19 54 16.6	-0.8
ITM				SG	Sg	19 54 22.6	-0.4
GUR	Goura	0.43	32	P	Pg	19 54 17.3	-0.7
GUR				S	Sg	19 54 24.1	+0.2
	comp=N,22µm,0.3s						
GUR	Goura	0.43	32	P	Pg	19 54 17.3	-0.7
GUR				S	Sg	19 54 24.2	+0.2
GUR				AML	AML	19 54 26.7	
	comp=N,47032µm,0.3s						
GUR				AML	AML	19 54 26.9	
	comp=E,36828µm,0.3s						
DRO	Drossia	0.47	325	P	Pg	19 54 18.0	-0.6
DRO				S	Sg	19 54 25.0	0.0
	comp=E,10µm,0.4s						
DRO	Drossia	0.47	325	P	Pg	19 54 18.1	-0.6
DRO				S	Sg	19 54 25.3	+0.3
DRO				AML	AML	19 54 28.2	
	comp=N,18863µm,0.4s						
DRO				AML	AML	19 54 28.7	
	comp=E,21314µm,0.4s						
KLV	Kalavryta, Ach	0.48	9	P	Pg	19 54 18.0	-0.9
KLV				S	Sg	19 54 25.5	+0.1
	comp=E,6µm,0.5s						
KLV	Kalavryta, Ach	0.48	9	P	Pg	19 54 18.1	-0.7
KLV				S	Sg	19 54 25.5	+0.1
KLV				AML	AML	19 54 27.7	
	comp=E,10502µm,0.3s						
KLV				AML	AML	19 54 29.9	
	comp=N,14122µm,0.7s						
LAKA	Lakka	0.67	355	P	Pg	19 54 21.5	-0.9
LAKA				S	Sb	19 54 32.1	+0.3
	comp=N,19µm,0.3s						
LAKA	Lakka	0.67	355	P	Pg	19 54 21.5	-0.9
LAKA				S	Sg	19 54 31.9	+0.5
LAKA				AML	AML	19 54 33.7	
	comp=N,47569µm,0.3s						
LAKA				AML	AML	19 54 33.9	
	comp=E,34242µm,0.3s						
RLS	Riolos of Patr	0.67	317	P	Pg	19 54 21.1	-1.3
RLS				S	Sg	19 54 32.0	+0.6
	comp=E,3µm,0.2s						
RLS	Riolos of Patr	0.67	317	P	Pg	19 54 21.2	-1.3
RLS				S	Sg	19 54 31.8	+0.4
RLS				AML	AML	19 54 34.7	
	comp=N,6844µm,0.5s						
RLS				AML	AML	19 54 35.0	
	comp=E,5330µm,0.3s						
THAL	Thalero	0.67	46	P	Pg	19 54 21.9	-0.6
THAL				S	Sb	19 54 32.7	+0.9
	comp=E,2µm,0.4s						
THAL	Thalero	0.67	46	P	Pg	19 54 21.9	-0.6
THAL				S	Sb	19 54 31.9	+0.1
THAL				AML	AML	19 54 37.7	
	comp=N,39382µm,0.4s						
THAL				AML	AML	19 54 42.0	
	comp=E,38864µm,0.4s						
ALIK	Aliki, Aigiali	0.69	4	P	Pg	19 54 22.2	-0.6
ALIK				S	Sb	19 54 33.9	+1.6
PYL	PYLOS	0.72	200	P	Pg	19 54 22.1	-1.2
PYL				S	Sg	19 54 33.0	+0.2
PYL	PYLOS	0.72	200	P	Pg	19 54 22.2	-1.1
PYL				S	Sg	19 54 32.7	-0.1
UPR	University Cam	0.74	344	P	Pg	19 54 23.5	-0.3
UPR				S	Sb	19 54 36.2	+2.4
VTN	Vitineika	0.77	297	P	Pg	19 54 24.2	-0.1
TRIZ	Trizonia	0.79	1	P	Pg	19 54 23.7	-1.0
TRIZ				S	Sb	19 54 36.6	+1.3
TRIZ	Trizonia	0.79	1	P	Pg	19 54 23.5	-1.2
TRIZ				S	Sb	19 54 35.7	+0.5
SERG	Sergoula	0.84	0	P	Pg	19 54 24.6	-1.1
SERG				S	Sb	19 54 37.9	+1.2
	comp=E,6µm,0.4s						
EPID	Epidavros	0.85	87	P	Pg	19 54 25.1	-0.7
EPID				S	Sb	19 54 37.3	+0.4
EPID	Epidavros	0.85	87	P	Pg	19 54 25.0	-0.8
LTK	Loutraki	0.85	58	P	Pg	19 54 25.2	-0.7
LTK				S	Sg	19 54 36.2	-0.9
	comp=E,4µm,0.4s						
LTK	Loutraki	0.85	58	P	Pg	19 54 25.0	-0.9
LTK				S	Sb	19 54 37.3	+0.2
LTK				AML	AML	19 54 42.1	
	comp=N,9038µm,0.4s						
LTK				AML	AML	19 54 43.0	
	comp=E,8337µm,0.5s						
EFP	Efpalio	0.86	352	P	Pg	19 54 25.2	-0.8
EFP				S	Sb	19 54 38.0	+0.7
KRND	KRANIDI	0.89	102	P	Pb	19 54 26.6	+0.2
KRND				S	Sg	19 54 37.7	-0.7
	comp=E,3µm,0.5s						
KRND	KRANIDI	0.89	102	P	Pb	19 54 26.7	+0.2
KRND				S	Sb	19 54 38.8	+0.7
KRND				AML	AML	19 54 42.4	
	comp=N,4346µm,0.3s						
KRND				AML	AML	19 54 43.8	
	comp=E,5634µm,0.4s						
LTHK	Lithakia	0.97	279	P	Pg	19 54 27.5	-0.6
LTHK				S	Sg	19 54 41.3	+0.4
	comp=E,3µm,0.5s						
LTHK	Lithakia	0.97	279	P	Pg	19 54 27.5	-0.6
LTHK				S	Sg	19 54 41.1	+0.2
LTHK				AML	AML	19 54 50.1	
	comp=N,6260µm,0.6s						
LTHK				AML	AML	19 54 50.8	
	comp=E,5756µm,0.3s						
ANX	Ano Chora	1.03	354	P	Pg	19 54 28.1	-1.1
ANX				S	Sn	19 54 44.5	+1.2
	comp=E,6µm,0.5s						
VLI	Veliai	1.11	140	P	Pb	19 54 30.6	+0.5
VLI				S	Sg	19 54 44.3	-0.8
	comp=E,2µm,1.0s						
VLI	Veliai	1.11	140	P	Pb	19 54 30.6	+0.5
VILL	Villia	1.16	59	P	Pb	19 54 31.6	+0.6
VILL				S	Sn	19 54 47.3	+0.8
	comp=E,502nm,0.7s						
PSDA	Pessada-Kefalo	1.28	295	P	Pn	19 54 33.1	+0.5
PSDA				S	Sn	19 54 54.2	+4.8
VLS	Valsamata	1.31	298	P	Pn	19 54 33.2	+0.3
VLS				S	Sn	19 54 55.8	+5.7
LKR	Lokris	1.31	34	P	Pn	19 54 32.9	-0.1
LKR				S	Sn	19 54 52.6	+2.4
	comp=E,2µm,0.2s						
ATAL	Atalanti	1.36	34	P	Pb	19 54 34.8	+0.5
ATAL				S	Sn	19 54 53.6	+2.3
	comp=E,1µm,0.4s						
EVR	Evrytania	1.36	352	P	Pn	19 54 34.0	+0.3
EVR				S	Sn	19 54 54.3	+2.8
	comp=E,3µm,0.6s						
ATH	Athens Observa	1.38	73	P	Pg	19 54 35.2	-0.6
ATH				S	Sn	19 54 53.7	+1.9
	comp=E,2µm,0.3s						
ATH	Athens Observa	1.38	73	P	Pn	19 54 34.8	+0.9
ATH				S	Sn	19 54 53.9	+2.0
ATH				AML	AML	19 54 57.8	
	comp=E,4221µm,0.4s						
ATH				AML	AML	19 54 58.7	
	comp=N,3416µm,0.3s						
ATHU	Athens Univers	1.43	73	P	Pn	19 54 35.5	+0.9
ATHU				S	Sg	19 54 55.4	0.0
	comp=N,440nm,0.5s						
MAKR	Makrakomi, Fth	1.44	2	P	Pb	19 54 36.3	+0.5
MAKR				S	Sg	19 54 58.2	+2.4
	comp=N,3µm,0.4s						
KEF4	Livadi, Kephal	1.46	299	P	Pn	19 54 35.7	+0.7
KEF4				S	Sg	19 54 59.7	+3.4
	comp=N,5µm,0.3s						
AGG	Agios Georgios	1.47	9	P	Pn	19 54 35.4	+0.2
AGG				S	Sg	19 54 57.4	+0.8
	comp=N,1µm,0.5s						
AGG	Agios Georgios	1.47	9	PN	Pn	19 54 35.1	-0.1
FSK	Fiskardo	1.47	307	P	Pn	19 54 36.1	+0.9
FSK				S	Sg	19 54 59.2	+2.4
	comp=N,708nm,0.1s						
KEF3	Kipouria, Keph	1.49	296	P	Pn	19 54 36.0	+0.6
KEF3				S	Sg	19 54 59.4	+2.1
	comp=N,2µm,0.4s						
PTL	Penteli	1.51	71	P	Pn	19 54 36.7	+0.9
PTL				S	Sg	19 54 57.2	-0.9
	comp=N,1µm,0.5s						
KTHR	Kythira	1.51	149	P	Pg	19 54 38.2	-0.2
KTHR				S	Sg	19 54 59.7	+1.6
	comp=N,1µm,0.5s						
KTHA	Kythira Island	1.54	148	P	Pg	19 54 39.0	+0.1
KTHA				S	Sg	19 55 01.3	+2.3
	comp=N,1µm,0.6s						
DION	Dionisos Attik	1.57	71	P	Pn	19 54 37.7	+1.1
DION				S	Sg	19 54 59.1	-0.9
	comp=N,3µm,0.4s						
KYMI	Kymi, Euboea I	1.93	56	P	Pn	19 54 42.5	+1.0
KYMI				S	Sn	19 55 07.4	+1.9
	comp=N,750nm,0.7s						
KARY	Karystos	1.94	76	P	Pn	19 54 42.9	+1.2
KARY				S	Sn	19 55 07.3	+1.5
NEO	Neokhori	1.96	28	P	Pn	19 54 42.6	+0.6
THL	Klokotos Trika	1.99	359	P	Pn	19 54 43.4	+1.1
THL				S	Sb	19 55 10.8	+1.1
	comp=N,340nm,0.8s						
IGT	Igoumenitsa	2.38	326	P	Pn	19 54 48.8	+1.1
RODP	Rodopos	2.43	145	PN	Pn	19 54 49.4	+1.0
KPRO	Kipourio	2.44	347	P	Pn	19 54 49.9	+1.3
IMMV	Iera Moni Meta	2.62	143	P	Pn	19 54 53.6	+2.7
IMMV				S	Sb	19 55 26.9	-0.9
	comp=N,358nm,0.6s						
IMMV	Iera Moni Meta	2.62	143	PN	Pn	19 54 51.7	+0.8
PAIG	Paliouri	2.67	28	P	Pn	19 54 51.9	+0.2
KNDR	Palaiochora Ch	2.68	150	PN	Pn	19 54 52.2	+0.4
LSK	Leskovik	2.81	337	P	Pn	19 54 55.5	+1.8
APE	Apeiranthos	2.82	99	⇑P	Pn	19 54 55.2	+1.4
APE	Apeiranthos	2.82	99	PN	Pn	19 54 54.3	+0.5
THR5	Thira Island,	2.88	113	P	Pn	19 54 56.9	+2.4
THR3	Thira Island,	2.92	112	P	Pn	19 54 57.9	+2.8
THR6	Thira Island,	2.94	113	P	Pn	19 54 57.6	+2.2
OUR	Ouranopolis	3.14	28	P	Pn	19 54 58.4	+0.2
OUR	Ouranopolis	3.14	28	PN	Pn	19 54 58.7	+0.5
GVDS	Gavdos	3.18	148	PN	Pn	19 54 59.9	+1.2
GVD	Gavdhos	3.18	148	PN	Pn	19 54 59.9	+1.2
IDI	Anoyia	3.23	134	Pn	Pn	19 55 00.3	+0.9
	comp=N,1.1nm,0.3s,baz=321,slow=13,SNR=1.9						
IDI				Sn	Sn	19 55 40.8	+3.2
	comp=N,8.7nm,0.3s,baz=10,slow=13,SNR=4.5						
FNA	Florina	3.25	351	P	Pn	19 55 01.4	+1.7
FNA	Florina	3.25	351	PN	Pn	19 55 00.5	+0.8
CHOS	Chios island	3.27	74	PN	Pn	19 55 00.4	+0.5
HRKL	Herakleio	3.34	132	PN	Pn	19 55 01.9	+1.1
GRG	Griva	3.39	4	P	Pn	19 55 02.4	+0.8
GRG	Griva	3.39	4	PN	Pn	19 55 02.3	+0.7
SOH	Sokhos	3.40	17	P	Pn	19 55 03.2	+1.4
SOH				S	Sn	19 55 44.7	+2.9
	comp=N,92nm,0.5s						
SIGR	SIGRI	3.41	60	PN	Pn	19 55 02.3	+0.5
KNT	Kendrikon	3.65	10	P	Pn	19 55 06.5	+1.4
KNT	Kendrikon	3.65	10	PN	Pn	19 55 06.1	+1.0
OHR	Ohrid	3.67	345	*i* Pn	Pg	19 55 17.5	-2.0
URLA	Izmir	3.68	76	PN	Pn	19 55 06.7	+1.2
SRS	Serrai	3.74	18	P	Pn	19 55 07.4	+1.0
VAY	Valandovo	3.77	6	*i* Pn	Pn	19 55 09.4	+2.6
BOZC	Bozcaada	3.87	53	PN	Pn	19 55 08.5	+0.4
GADA	Gvkgeada	3.98	48	PN	Pn	19 55 10.5	+0.8
BLCB	Balcova	4.03	77	PN	Pn	19 55 11.3	+1.0
EZN	Ezine	4.03	55	PN	Pn	19 55 10.9	+0.6
DKL	Dikili	4.10	67	PN	Pn	19 55 11.9	+0.6
GCAM	G?zelcaml?	4.12	87	PN	Pn	19 55 12.7	+1.2
STIP	Stip	4.12	1	*i* Pn	Pn	19 55 13.6	+2.0
ZKR	Zakros	4.16	125	PN	Pn	19 55 13.5	+1.3
BODT	Bodrum	4.22	95	PN	Pn	19 55 14.6	+1.6
GELI	Tayfur-Gelibol	4.46	49	PN	Pn	19 55 17.1	+0.9
TIP	Timpagrande	4.46	293	⇑P	Pn	19 55 18.7	+2.3
RDO	Rodhopi	4.48	36	PN	Pn	19 55 17.4	+0.9
ENEZ	Enez	4.49	44	PN	Pn	19 55 17.7	+1.0
ALN	Alexandroupoli	4.54	42	PN	Pn	19 55 17.7	+0.3
LPK	Lapseki	4.61	51	PN	Pn	19 55 19.5	+1.1
ERIK	Erikli-Kesan	4.65	47	PN	Pn	19 55 19.3	+0.5
BOSS	Bosilegrad	4.93	4	*e*Pn	Pn	19 55 24.9	+2.1
PRVS	Prvonek	4.93	0	*e*Pn	Pn	19 55 25.7	+2.9
TURN	Turunc	5.01	97	PN	Pn	19 55 25.1	+1.3
ARG	Arkhangelos	5.05	104	PN	Pn	19 55 26.2	+1.8
VTS	Vitosha	5.12	10	⇑P	Pn	19 55 27.5	+1.9
BARS	Barje	5.24	358	*e*Pn	Pn	19 55 30.3	+3.3
SELS	Selova	5.69	353	*e*Pn	Pn	19 55 34.8	+1.6
ZAPS	Zavoj	5.71	4	*e*Pn	Pn	19 55 38.7	+5.2
DBRK	Dubrovnik	5.91	331	*e*Pn	Pn	19 55 35.1	-1.0
DBRK				Sn	Sn	19 56 39.8	-3.7
STON	Ston	6.25	329	*e*Pn	Pn	19 55 39.9	-1.0
STON				Sn	Sn	19 56 47.5	-4.5
GRUS	Gruza	6.39	351	*e*Pn	Pn	19 55 44.2	+1.4
LSTV	Lastovo	6.52	324	*e*Pn	Pn	19 55 42.2	-2.3
LSTV				Sn	Sn	19 56 53.5	-5.2
BBLS	Lazići	6.60	343	*e*Pn	Pn	19 55 47.9	+2.1
DIVS	Divibare	6.71	347	*e*Pn	Pn	19 55 46.3	-0.9
MAKA	Makarska	6.88	328	*e*Pn	Pn	19 55 47.9	-1.5
MAKA				Sn	Sn	19 57 02.3	-5.1
HVAR	Hvar	7.05	324	*e*Pn	Pn	19 55 51.1	-0.6
HVAR				Sn	Sn	19 57 05.6	-5.9
ZIRJ	Zirje	7.79	323	*e*Pn	Pn	19 55 59.8	-2.1
ZIRJ				Sn	Sn	19 57 24.0	-5.7
MORI	Morici	7.92	325	*e*Pn	Pn	19 56 02.6	-1.1
MORI				Sn	Sn	19 57 28.1	-4.9
VOIR		8.17	15	⇑P	Pn	19 56 09.6	+2.2
DUGI	Dugi Otok	8.32	323	*e*Pn	Pn	19 56 07.5	-1.7
DUGI				Sn	Sn	19 57 37.6	-5.3
UDBI	Udbina	8.42	328	*e*Pn	Pn	19 56 10.4	-0.3
UDBI				Sn	Sn	19 57 41.0	-4.3
MLR	Muntele Rosu	8.43	19	⇓P	Pn	19 56 13.3	+2.4
MLR	Muntele Rosu	8.43	19	Pn	Pn	19 56 13.0	+2.0
	comp=N,0.4nm,0.3s,baz=292,slow=8.2,SNR=7.0						
PLIT	Plitvice	8.76	328	*e*Pn	Pn	19 56 13.3	-2.0
PLIT				Sn	Sn	19 57 48.4	-5.3
NVLJ	Novalja	8.84	324	*e*Pn	Pn	19 56 15.4	-1.0
NVLJ				Sn	Sn	19 57 49.9	-5.7
PLOR	Plostina	8.96	21	⇑P	Pn	19 56 19.5	+1.4
VRI	Vrincioaia	8.99	21	⇓P	Pn	19 56 19.8	+1.3
BRJN	Brijuni	9.63	322	*e*Pn	Pn	19 56 25.6	-1.5
BRJN				Sn	Sn	19 58 09.5	-5.4
GERES	GERESS Array B	12.80	334	Pn	Pn	19 57 11.0	+0.4
	comp=N,0.1nm,0.3s,baz=152,slow=11,SNR=1.9						
HFS	Hagfors	23.20	349	P	P	19 59 15.0	-0.2
	comp=N,2.9nm,0.4s,baz=156,slow=11,SNR=30						
FINES	FINESS Array B	24.03	5	P	P	19 59 22.0	-1.3
	comp=N,1.8nm,0.7s,baz=176,slow=8.7,SNR=8.4						
NB2	NORSAR Subarra	24.46	347	P	P	19 59 28.0	+0.7
	comp=Z,2.6nm,0.6s,baz=150,slow=10						
NOA	NORSAR Array B	24.46	347	P	P	19 59 27.8	+0.4
	comp=Z,0.5nm,0.5s,baz=153,slow=8.9,SNR=12						
TORD	Torodi Ar. Bea	30.36	222	P	P	20 00 19.9	-0.5
	comp=Z,0.6nm,0.7s,baz=28,slow=8.3,SNR=3.8						
ARCES	ARCESS Array B	32.08	2	P	P	20 00 35.2	+0.1
	comp=Z,1.7nm,0.5s,baz=189,slow=9.8,SNR=22						
KURBB	Kurchatov Arra	41.62	53	P	P	20 01 56.8	+0.3
	comp=Z,0.8nm,0.5s,baz=279,slow=8.6,SNR=7.4						
MKAR	Makanchi Array	44.59	58	P	P	20 02 20.5	-0.2
	comp=Z,0.4nm,0.4s,baz=271,slow=7.4,SNR=12						
ZALV	Zalesovo Beam	45.20	48	P	P	20 02 25.8	+0.5
	comp=Z,0.8nm,0.4s,baz=277,slow=9.3,SNR=4.8						

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*DJA **07** 20:08:17.3±0.2, 0°N±2°×12°5E±°, h10^{km}, M4.2/19, mb4.4/8, mB4.7/4, MLv4.2/19, Mw(mB)3.9/4*

*IDC **07** 20:08:21.7±3.6, 0°.44N×125°.34E, h102^{km}±37^{km}, mb3.5/8, mb1 3.6/10, mb1mx3.4/43, mbtmp3.9/10, MS3.0/3, Ms1 3.0/3, ms1mx2.5/37, Error ellipse: s-maj=40.9km s-min=15.8km az=75.0*

ISC 07 20:08:19.2±0.8**, 0°.40N**±0°.08×**125°.29E**±0°.07**, h73**^{km}**, n28,** **σ1§18**/26**, mb3.9**/8**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.32	278	P	Pn	20 08 41.0	-1.0
TNTI	Ternate	2.11	80	P	Pn	20 08 52.3	-0.1
LBMI	Labuha	2.43	115	P	Pn	20 08 56.2	-0.6
SANI	Sanana	2.52	164	P	Pn	20 08 55.8	-2.2
SGSI	Sangihe	3.28	4	P	Pn	20 09 09.3	+1.0
MRSI	Marisa	3.35	271	P	Pn	20 09 08.5	-0.8
APSI	Ampana	3.87	250	P	Pn	20 09 17.9	+1.6
AAI	Ambon	4.98	144	P	Pn	20 09 31.7	+0.1
MSAI	Masohi	5.20	136	P	Pn	20 09 35.6	+1.1
	0.1nm384nm22nm,0.5s						
MPSI	Mapaga	5.40	269	P	Pn	20 09 37.9	+0.7
	0.1nm528nm17nm,0.6s						
SWI	Sorong	6.09	102	P	Pn	20 09 48.2	+1.5
	0.1nm18nm,0.9s						
SIJI	Sorong	6.10	102	P	Pn	20 09 47.8	+0.9
	1.4nm,0.3s,baz=313,slow=8.4,SNR=12						
TTSI	Tana Toraja	6.45	238	P	Pn	20 09 52.5	+0.9
	0.2nm708nm44nm,0.7s						
DAV	Davao City (W)	6.64	2	LR	LR	20 12 55.6	
	comp=Z,89nm,19.1s,baz=210,slow=42						
SPSI	Sidrap Palu	7.02	232	P	Pn	20 10 00.3	+1.0
	0.1nm586nm27nm,0.5s						
BNSI	Bone	7.04	227	P	Pn	20 09 59.7	+0.1
	0.1nm16nm,0.7s						
PAGZ	Pagadian	7.64	346	⇑*e*P	Pn	20 10 09.5	+1.5
BKSI	Bulukumba	7.68	222	P	Pn	20 10 09.3	+0.9
	0.1nm12nm,0.7s						
BSSI	Bau Bau, Buton	8.07	216	P	Pn	20 10 15.5	+1.7
	6.3nm,0.5s						
BATI	Baumata	10.66	189	P	Pn	20 10 53.7	+4.6
	1.6nm,0.3s,baz=14,slow=3.0,SNR=5.6						
BATI				LR	LR	20 17 04.8	
	comp=Z,66nm,18.2s,baz=4.0,slow=49						
WRA	Warramunga Arr	22.07	157	P	P	20 13 07.5	-0.8
	3.3nm,0.6s,baz=339,slow=10,SNR=30						
ASAR	Alice Springs	25.34	161	P	P	20 13 39.7	+0.2
	3.8nm,0.9s,baz=342,slow=7.6,SNR=38						
STKA	Stephens Creek	35.62	156	P	P	20 15 10.8	+0.8
	1.1nm,0.5s,baz=322,slow=10.0,SNR=4.0						
STKA				LR	LR	20 30 53.5	
	comp=Z,30nm,18.4s,baz=25,slow=38						
KSRS	Korea Array	36.96	3	P	P	20 15 22.2	+0.9
	0.9nm,0.5s,baz=180,slow=10,SNR=4.8						
SONM	Songino Array	50.02	343	P	P	20 17 05.9	-0.5
	0.3nm,0.5s,baz=152,slow=13,SNR=2.5						
MKAR	Makanchi Array	59.51	327	P	P	20 18 14.1	-0.8
	0.4nm,0.3s,baz=124,slow=7.8,SNR=20						
ZALV	Zalesovo Beam	62.92	334	P	P	20 18 35.8	-1.9
	0.3nm,0.3s,baz=151,slow=3.3,SNR=2.4						
KURBB	Kurchatov Arra	63.79	329	P	P	20 18 42.2	-1.4
	0.3nm,0.4s,baz=135,slow=6.8,SNR=7.7						

KRSC 07 20:09:01.5±2.1**, 49°.77N**×**156°.96E, h51**^{km}±31^{km}**, ML3.8,** **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.06	330	*e*P	Pn	20 09 19.9	-0.2
SKR				*e*S	Sn	20 09 33.9	+0.1
PAU	Pauzhetka	1.71	357	*e*P	Pn	20 09 30.9	+2.1
PAU				*e*S	Sn	20 09 52.9	+3.5
KDTR	Khodutka, Kamc	2.17	19	*e*P	Pn	20 09 37.8	+2.7
KDTR				*e*S	Sn	20 10 05.3	+4.6
ASAK	Asacha	2.69	12	*e*P	Pn	20 09 45.8	+3.5
MTVR	Mutnovka	2.83	15	*e*P	Pn	20 09 47.9	+3.6
MTVR				*e*S	Sn	20 10 21.7	+4.5
RUS	Russkaya	2.84	20	*e*P	Pn	20 09 47.0	+2.6
RUS				*e*S	Sn	20 10 21.5	+4.1
UGLR	Uglovaya	3.64	18	*e*P	Pn	20 09 59.7	+4.3
AVH	Avacha	3.68	17	*e*P	Pn	20 10 01.4	+5.5
KOK	Koryaka	3.68	16	*e*P	Pn	20 10 00.6	+4.6
SMAR	Somma	3.69	18	*e*P	Pn	20 10 01.0	+4.9
KRER	Koryakskii	3.71	17	*e*P	Pn	20 10 00.8	+4.3
SDLR	Sedlovina	3.72	18	*e*P	Pn	20 10 00.0	+3.5
SPN	Mys Shipunski	3.85	29	*e*P	Pn	20 10 01.3	+3.1
SPN				*e*S	Sn	20 10 46.0	+3.9
MKZ	Mys Kozlova	5.62	30	*e*P	Pn	20 10 24.8	+2.3
MKZ				*e*S	Sn	20 11 27.6	+2.0

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*NEIC **07** 20:14:32.7±2.0, 21°.5S±0°.2×170°.1E±0°.2, h39^{km}±12^{km}, mb4.5/5, Error ellipse: s-maj=22.0km s-min=21.0km az=153.0*

*NOU **07** 20:14:37.2, 21°.44S×169°.71E, h20^{km}, MLv4.5/11, Southeast of Loyalty Islands*

*IDC **07** 20:14:39.6±6.9, 20°.69S×169°.34E, h69^{km}±53^{km}, mb3.6/3, mb1 3.9/5, mb1mx3.5/32, mbtmp4.0/5, ML4.1/2, Error ellipse: s-maj=61.9km s-min=29.2km az=18.0*

ISC 07 20:14:33.5±1.4**, 21°.6S**±0°.1×**170°.0E**±0°.1**, h36**^{km}**, n27,** **σ1§98**/28**, mb4.2**/6**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	2.59	246	Pn	Pn	20 15 13.9	+1.1
PINNC	Pines Island,	2.59	246	P	Pn	20 15 14.9	+2.1
LIFNC	LIFOU	2.69	286	Pn	Pn	20 15 14.3	0.0
LIFNC	LIFOU	2.69	286	P	Pn	20 15 14.8	+0.5
YATNC	Mamie plateau,	2.93	260	P	Pn	20 15 18.7	+1.1
OUENC	Ouen Island, N	3.05	253	Pn	Pn	20 15 21.1	+1.8
OUENC	Ouen Island, N	3.05	253	P	Pn	20 15 21.6	+2.4
DZM	Mont Dzumac	3.34	261	*e*Pn	Pn	20 15 25.5	+2.1
	43nm,0.2s						
DZM				*e*Sn	Sn	20 16 01.6	-0.2
	517nm,0.3s						
DZM	Mont Dzumac	3.34	261	P	Pn	20 15 25.4	+2.1
	13nm,0.3s,baz=100,slow=15,SNR=364						
DZM				S	Sn	20 16 01.0	-0.9
	145nm,0.3s,baz=296,slow=23,SNR=50						
DZM	Mont Dzumac	3.34	261		Pn	20 15 24.6	+1.2
DZM	Mont Dzumac	3.34	261	P	Pn	20 15 25.7	+2.4
ONTNC	Ouen Toro	3.37	257	Pn	Pn	20 15 25.0	+1.3
ONTNC	Ouen Toro	3.37	257	P	Pn	20 15 25.9	+2.2
NOUC	Port Laguerre	3.48	261	P	Pn	20 15 27.4	+2.3
RTV	Rentapao	4.04	338	P	Pn	20 15 35.0	+2.2
DVP	Devils Point	4.19	336	P	Pn	20 15 38.1	+3.2
URZ	Urewera	17.73	161	P	P	20 18 53.2	+15
	1.1nm,0.3s,baz=122,slow=24,SNR=10						
WR0	Warramunga Arr	33.15	266	P	P	20 21 04.1	-2.7
WR0				IAmb	IAmb	20 21 05.9	
	comp=Z,10nm,1.4s						
WB0	Warramunga Arr	33.32	267	P	P	20 21 06.4	-1.9
WB0				IAmb	IAmb	20 21 11.7	
	comp=Z,9.9nm,1.4s						
WB2	Warramunga Arr	33.33	266	P	P	20 21 06.5	-1.8
WB2				IAmb	IAmb	20 21 17.2	
	comp=Z,6.3nm,1.4s						
ASAR	Alice Springs	33.33	259	P	P	20 21 06.3	-2.0
	comp=Z,1.2nm,0.8s,baz=84,slow=9.2,SNR=16						
ASAR				pP	pwP	20 21 25.7	+3.7
	comp=Z,2.1nm,0.5s,baz=88,slow=8.1,SNR=29						
ASAR	Alice Springs	33.33	259	P	P	20 21 05.5	-2.8
WRA	Warramunga Arr	33.34	266	P	P	20 21 06.5	-1.9
	comp=Z,0.5nm,0.5s,baz=98,slow=8.2,SNR=15						
WRA	Warramunga Arr	33.34	266	P	P	20 21 06.6	-1.9
FITZ	Fitzroy Crossi	41.77	267	P	P	20 22 19.1	-0.6
	comp=Z,2.5nm,0.7s,baz=110,slow=12						
CASY	Casey	58.29	204	P	P	20 24 23.3	-1.1
GERES	GERESS Array B	146.87	331	PKPbc	PKPdf	20 34 09.8	-0.4
	comp=Z,0.7nm,0.6s,baz=31,slow=3.1,SNR=4.0						

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*GUC **07** 20:14:35.5±0.8, 30°.69S×71°.68W, h43^{km}±2^{km}, ML4.0*

*IDC **07** 20:14:37.2±2.6, 30°.73S×71°.71W, h49^{km}±23^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.4/31, mbtmp3.6/4, ML3.5/1, MS3.3/2, Ms1 3.2/2, ms1mx2.8/9, Error ellipse: s-maj=28.2km* *s-min=22.7km az=86.0*

ISC 07 20:14:35.5±1.1**,30°.77S**±0°.04×**71°.68W**±0°.08**,h33**^{km}±3^{km}**, n24,**σ**1**^{s}**.76**/29**,mb3.9**/3**,4C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.10	24	⇑iP	Pb	20 14 42.0	+0.6
CO06				iS	Sb	20 14 46.0	+0.6
CO03	El Pedregal	0.86	95	⇓iP	Pb	20 14 52.0	-0.1
CO03				iS	Sb	20 15 03.7	+0.3
CO03				IAML		20 15 04.9	
	comp=E,7μm,0.3s						
CO05	La Serena	0.93	25	eP	Pn	20 14 51.4	-0.9
CO05				iS	Sn	20 15 03.1	-1.3
CO05				IAML		20 15 05.2	
	comp=N,4μm,0.4s						
VA06	Catapilco	1.82	170	⇑iP	Pb	20 15 06.8	-1.5
VA06				iS	Sb	20 15 30.1	-0.5
VA06				IAML		20 15 39.4	
	comp=E,2μm,0.3s						
LCO	Las Campanas	1.95	26	⇑iP	Pn	20 15 05.9	-0.6
LCO				iS	Sn	20 15 29.0	-0.9
VA03	San Esteban	2.21	154	eP	Pb	20 15 13.2	-1.7
VA03				IAML		20 15 52.3	
	comp=E,1μm,0.4s						
ROCH	El Roble	2.27	166	⇑iP	Pn	20 15 13.5	+2.5
ROCH				eP	Pn	20 15 13.3	+2.4
ROCH				iS	Sb	20 15 42.1	-1.8
ROCH				IAML		20 15 53.3	
	comp=E,630nm,0.5s						
ROCH				IAML		20 15 53.4	
	comp=N,1μm,0.6s						
PEL	Peldehue	2.52	161	eP	Pn	20 15 17.0	+2.9
PEL				iS	Sb	20 15 48.4	-2.2
PEL				IAML		20 15 59.6	
	comp=E,800nm,0.4s						
MT02	Curacav	2.53	170	⇓eP	Pn	20 15 16.4	+2.1
MT02				IAML		20 16 03.8	
	comp=E,421nm,0.7s						
AC04	Llanos de Chal	2.61	12	eP	Pn	20 15 14.1	-1.3
MT05	Renca	2.74	163	IAML		20 16 07.7	
	comp=E,1μm,0.5s						
MT09	Talagante	3.06	169	eP	Pn	20 15 24.6	+2.9
MT09				IAML		20 16 21.7	
	comp=E,998nm,0.9s						
MT01	Popeta	3.11	173	eP	Pn	20 15 24.3	+2.0
MT01				IAML		20 16 16.2	
	comp=E,308nm,0.4s						
LMEL	Las Melosas	3.32	158	eP	Pn	20 15 29.0	+3.8
LMEL				IAML		20 16 24.6	
	comp=N,305nm,0.6s						
PLCA	Paso Flores	9.99	175	P	Pn	20 16 58.6	+1.9
	comp=N,0.1nm,0.3s,baz=340,slow=11,SNR=1.7						
PLCA				LR	LR	20 21 41.8	
	comp=N,73nm,20.7s,baz=304,slow=42						
USHA	Ushuaia	24.16	175	LR	LR	20 31 12.9	
	comp=N,145nm,18.3s,baz=102,slow=41						
SNAA	Sanae	54.47	159	P	P	20 24 00.5	+1.1
	comp=N,0.9nm,0.7s,baz=325,slow=12,SNR=2.1						
TXAR	Lajitas Array	67.08	330	P	P	20 25 25.5	-0.3
	comp=N,0.2nm,0.7s,baz=148,slow=6.8,SNR=4.0						
TORD	Torodi Ar. Bea	82.83	70	P	P	20 26 56.4	-0.6
	comp=N,0.4nm,0.4s,baz=278,slow=6.1,SNR=6.3						
ASAR	Alice Springs	120.57	207	PKP	PKPdf	20 33 23.6	-0.8
	comp=N,0.1nm,0.4s,baz=126,slow=1.1,SNR=1.6						
WRA	Warramunga Arr	123.72	210	PKP	PKPdf	20 33 29.6	-0.8
	comp=N,0.3nm,0.5s,baz=153,slow=1.6,SNR=7.4						
BVAR	Borovoye Array	144.66	40	PKP	PKPbc	20 34 07.4	+0.2
	comp=N,0.7nm,0.5s,baz=12,slow=7.4,SNR=4.0						
KURBB	Kurchatov Arra	150.25	40	PKPbc	PKPbc	20 34 22.9	+0.1
	comp=N,0.3nm,0.4s,baz=314,slow=2.8,SNR=3.0						
ZALV	Zalesovo Beam	151.30	29	PKPbc	PKPbc	20 34 25.1	-0.1
	comp=N,1.0nm,0.5s,baz=305,slow=5.2,SNR=5.4						

IDC 07 20:25:47.5±1.8**,3°.19N**×**128°.10E,h0**^{km}**,mb3.2**/3**, mb1 3.4**/3**,mb1mx3.2**/42**,mbtmp3.2**/3**,Error ellipse: s-maj=158.0km s-min=13.8km az=67.0,North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.79	165	P	P	20 31 02.0	-0.1
	0.2nm,0.3s,baz=345,slow=11,SNR=10						
ASAR	Alice Springs	27.28	168	P	P	20 31 34.3	+0.4
	0.2nm,0.8s,baz=350,slow=9.4,SNR=1.4						
MKAR	Makanchi Array	58.78	325	P	P	20 35 47.6	0.0
	0.2nm,0.5s,baz=116,slow=7.7,SNR=4.4						

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*IDC **07** 20:29:04.4±2.0, 37°.86N×73°.11E, h0^{km}, mb3.4/2, mb1 3.5/6, mb1mx3.3/41, mbtmp3.4/6, ML2.9/4, Error ellipse: s-maj=43.0km s-min=25.3km az=69.0*

ISC 07 20:29:04.8±2.0**,37°.8N**±0°.2×**72°.9E**±0°.2**,h10**^{km}**,n6,**σ**2**^{s}**.19**/6**, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	4.98	14	Pn	Pn	20 30 22.4	+2.7
	0.4nm,0.3s,baz=156,slow=6.8,SNR=2.7						
KURBB	Kurchatov Arra	13.43	16	Pn	Pn	20 32 13.5	-1.7
	0.0nm,0.3s,baz=200,slow=9.9,SNR=2.6						
AKTO	Aktyubinsk	16.47	325	Pn	Pn	20 32 55.8	0.0
	0.3nm,0.3s,baz=112,slow=14,SNR=5.2						
ZALV	Zalesovo Beam	18.12	23	P	P	20 33 14.8	-1.8
	0.2nm,0.3s,baz=227,slow=11,SNR=4.0						
SONM	Songino Array	26.38	57	P	P	20 34 42.2	+0.9
	0.2nm,0.5s,baz=251,slow=9.0,SNR=3.5						
WRA	Warramunga Arr	81.45	123	P	P	20 41 22.2	0.0
	0.7nm,0.9s,baz=323,slow=4.5,SNR=7.2						

IDC 07 20:41:10.5±52.0**,24°.32S**×**176°.75W,h0**^{km}**,mb3.5**/3**, mb1 3.7**/3**,mb1mx3.6**/23**,mbtmp3.5**/3**,Error ellipse: s-maj=955.4km s-min=182.1km az=89.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	37.33	249	P	P	20 48 23.7	-1.0
	0.6nm,0.4s,baz=93,slow=6.0,SNR=3.3						
ASAR	Alice Springs	44.90	260	P	P	20 49 27.2	0.0
	0.2nm,0.5s,baz=91,slow=7.9,SNR=4.9						
WRA	Warramunga Arr	45.34	265	P	P	20 49 31.2	+0.5
	0.2nm,0.4s,baz=103,slow=7.7,SNR=5.7						

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*NNC **07** 20:47:18.7±4.3, 38°.78N×73°.44E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=33.3km s-min=22.7km az=161.0*

*KRNET **07** 20:47:18.9±0.1, 39°.09N×73°.27E, h13^{km}, mb3.2*

ISC 07 20:47:23.8±2.1**,39°.28N**±0°.10×**73°.02E**±0°.05**,h2**^{km}±13^{km}**, n26,**σ**1**^{s}**.79**/35**,13C-9D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.82	27	⇑eP	Pg	20 47 37.4	-2.2
	baz=11						
SFK				⇑eS	Sg	20 47 50.1	-0.1
	baz=11						
DRK	Karamyk	0.96	282	⇓iP	Pg	20 47 41.6	-0.7
	baz=90						
DRK				⇓iS	Sn	20 47 58.6	-0.6
	baz=90						
OHH	Osh	1.25	352	⇑iP	Pn	20 47 46.6	-1.9
	baz=46						
OHH				⇑iS	Sg	20 48 07.4	+3.3
	baz=46						
SALK	Salom-Alik	1.71	21	⇑eP	Pn	20 47 52.8	-2.1
	baz=13						
SALK				⇑eS	Sb	20 48 18.6	+0.4
	baz=13						
BTK	Batken	1.87	295	⇑iP	Pn	20 47 57.4	+0.5
	baz=98						
BTK				⇑iS	Sg	20 48 25.1	+1.3
	baz=98						
TRKS	Terek-Say	2.66	328	⇑iP	Pn	20 48 07.4	-0.6
	baz=27						
TRKS				⇑iS	Sb	20 48 44.0	-1.6
	baz=27						
AML	Almayashu	2.89	10	P	Pn	20 48 13.2	+1.9
	SNR=22						
UCH	Uchtor	3.15	21	P	Pn	20 48 16.3	+1.4
	SNR=17						
MNAS	Manas	3.23	353	⇓iP	Pn	20 48 15.7	0.0
	baz=51						
MNAS				⇓iS	Sb	20 48 58.3	-3.4
	baz=51						
EKS2	Erkin-Say	3.42	9	P	Pn	20 48 21.7	+3.3
	SNR=12						
AAK	Ala-Archa	3.53	18	P	Pn	20 48 21.7	+1.8
	SNR=32						
AAK	Ala-Archa	3.53	18	⇓Pn	Pn	20 48 21.6	+1.8
	17nm,0.8s						
AAK				⇓Sn	Sb	20 49 12.1	+1.5
	41nm,1.0s						
KBK	Karagaybulak	3.67	23	P	Pb	20 48 29.8	+0.2
	SNR=6.0						
ULHL	Ulahol	3.84	39	P	Pb	20 48 30.4	-2.0
	SNR=10						
CHMS	Chumysh	3.94	19	P	Pn	20 48 27.0	+1.7
	SNR=16						
TKM2	Tokmak 2	4.12	27	⇓Pn	Pn	20 48 30.2	+2.1
	13nm,1.1s						
TKM2				⇓Lg	Lg	20 49 41.7	
	11nm,0.6s						
KK09	Karatay Array	4.28	334	⇑Pn	Pn	20 48 33.1	+3.0
	3.8nm,0.4s,baz=155,slow=14						
KK09				⇓Sn	Sb	20 49 30.1	-1.8
	12nm,0.7s,baz=152,slow=26						
KST	Kastek	4.37	30	Pg	Pb	20 48 41.1	-0.3
	8.9nm,0.7s						
KST				Lg	Lg	20 49 42.8	
	18nm,0.6s						
DGS	Degeres	4.47	27	Pg	Pb	20 48 44.0	+1.0
	9.3nm,0.4s						
DGS				Lg	Lg	20 49 47.7	
	15nm,0.6s						
TNSS	Tian-Shan	4.78	37	Pg	Pb	20 48 48.1	-0.5
	7.0nm,0.3s						
TNSS				Lg	Lg	20 49 54.8	
	5.7nm,0.6s						
KRBS	Karabastau	4.84	23	Pg	Pb	20 48 50.4	+1.0
	4.7nm,0.5s						
KRBS				Lg	Lg	20 49 59.8	
	10nm,0.5s						
MDOK	Medeo	4.93	37	⇑Pg	Pb	20 48 53.4	+2.5
	16nm,1.3s						
MDOK				⇑Lg	Lg	20 50 06.4	
	30nm,1.2s						
MDOK	Medeo	4.93	37	Pg	Pb	20 48 51.1	+0.2
	4.7nm,0.5s						
MDOK				Lg	Lg	20 49 58.2	
	8.6nm,0.6s						
KOTS	Kotyrbulak	5.01	37	Pg	Pb	20 48 51.7	-0.6
	5.1nm,0.6s						
KOTS				Lg	Lg	20 50 01.3	
	30nm,0.5s						
KTBS	Karatobe	5.21	31	Pg	Pb	20 48 56.2	+0.5
	4.0nm,0.5s						
KTBS				Lg	Lg	20 50 08.5	
	12nm,0.8s						
KUU	Kurty	5.24	27	Pg	Pb	20 48 56.6	+0.5
	2.7nm,0.5s						
KUU				Lg	Lg	20 50 08.7	
	21nm,0.9s						

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*SOF **07** 20:57:48.5, 40°.59N×27°.60E, h15^{km}, MD3.5*

*IDC **07** 20:57:50.9±0.4, 40°.55N×27°.28E, h0^{km}, mb3.4/2, mb1 3.6/6, mb1mx3.3/49, mbtmp3.4/6, ML3.1/4, MS2.7/2, Ms1 2.7/2, ms1mx2.3/41, Error ellipse: s-maj=7.2km s-min=4.1km az=65.0*

*CFUSG **07** 20:57:51.2, 40°.71N×27°.43E, h5^{km}, mb3.0/1, MD3.1/1, Sea of Marmara Magtype MSH 2.5 from 1 stations*

*IASPEI **07** 20:57:51.4±0.8, 40°.71N±0°.02×27°.43E±0°.02, h12^{km}±5^{km}, Error ellipse: s-maj=3.0km s-min=2.6km az=3.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ISK **07** 20:57:51.1, 40°.71N×27°.43E, h10^{km}, ML3.7/48*

*DDA **07** 20:57:51.3, 40°.68N×27°.42E, h8^{km}±1^{km}, ML3.7*

*THE **07** 20:57:53.0, 40°.73N×27°.40E, h12^{km}±2^{km}, ML3.5/11, Error ellipse: s-maj=2.9km s-min=1.1km az=71.0*

*ATH **07** 20:57:53.1, 40°.68N×27°.25E, h27^{km}±2^{km}, ML3.5/11, Error ellipse: s-maj=5.8km s-min=1.8km az=238.0*

ISC 07 20:57:52.0±0.8**,40°.69N**±0°.02×**27°.41E**±0°.02**,h12**^{km}±5^{km}**, n164,**σ**1**^{s}**.05**/197**,12C-4D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAR2	Marsite Statio	0.08	291	PG	Pg	20 57 53.9	-0.6
MAR3	Marsite Statio	0.10	302	PG	Pg	20 57 54.3	-0.5
MAR6	Marsite Statio	0.11	278	PG	Pg	20 57 54.8	-0.1
MAR4	Marsite Statio	0.13	320	PG	Pg	20 57 54.6	-0.7
MRMT	Marmara Adasi	0.16	121	PG	Pg	20 57 54.8	-0.9
MRMT				SG	Sg	20 57 57.6	-0.8
SART	Tekirdag	0.17	270	iP	Pg	20 57 55.7	-0.2
SART				iS	Sg	20 57 58.6	-0.1
SART				IAML		20 57 59.0	
	comp=N,27μm,0.3s						
RKY	Sarkoy-Tekirda	0.18	270	PG	Pg	20 57 55.8	-0.1
RKY				SG	Sg	20 57 58.9	+0.2
KRBG	Karabiga-Canak	0.31	196	PG	Pb	20 57 58.5	-0.9
KRBG				SG	Sb	20 58 03.4	-1.0
TKR	Tekirdag	0.32	17	PG	Pg	20 57 57.7	-0.7
EDC	Edincik	0.48	134	PG	Pg	20 58 01.2	-0.3
EDC				SG	Sb	20 58 08.4	-1.1
CRLT	Corlu	0.51	29	PG	Pb	20 58 01.8	-1.0
KESN	Edirne-Kesan	0.57	284	iP	Pb	20 58 02.7	-1.4
LPK	Lapseki	0.59	238	PG	Pb	20 58 03.2	-1.0
GONE	Gonen-Balikesi	0.68	162	PG	Pb	20 58 05.0	-0.7
ERIK	Erikli-Kesan	0.68	269	PG	Pb	20 58 04.8	-1.0
UKOP	Uzunkopru-Edir	0.74	307	PG	Pb	20 58 06.0	-0.7
GELI	Tayfur-Gelibol	0.77	248	PG	Pg	20 58 05.9	-0.9
SLVT	Silivri	0.81	48	PG	Pb	20 58 07.1	-0.9
KCTX	Karacabey (Bur	0.84	120	PG	Pg	20 58 06.9	-1.2
ELBA	Catalca	0.90	59	iP	Pg	20 58 08.2	-1.0
CAVK	Edirne/Enez-Ca	0.94	271	iP	Pb	20 58 09.7	-0.6
CAVK				IAML		20 58 23.0	
	comp=E,2μm,0.3s						
PHSR	Pinarhisar	0.95	5	PG	Pb	20 58 09.8	-0.5
VIZE	Kirklareli, Vi	0.95	20	iP	Pg	20 58 09.1	-1.1
ENEZ	Enez	0.96	273	P	Pn	20 58 10.5	-0.7
ENEZ	Enez	0.96	273	PG	Pb	20 58 09.9	-0.6
BALY	Balya	0.96	170	iP	Pb	20 58 10.0	-0.6
BALY				iS	Sb	20 58 23.5	+0.3
BALY				IAML		20 58 27.0	
	comp=N,2μm,0.9s						
BALY				IAML		20 58 27.0	
	comp=E,2μm,0.6s						
ENZZ	Sultanice-Enez	0.97	266	PG	Pb	20 58 10.5	-0.2
CTKS	Kestanelik-??a	0.99	56	PG	Pg	20 58 09.9	-1.2
CTYL	Yalikoy Yolu	1.03	40	PG	Pg	20 58 10.6	-1.2
AVCI	Avcilar-stanb	1.04	72	PG	Pb	20 58 11.2	-0.7
ALN	Alexandroupoli	1.06	282	P	Pn	20 58 12.0	-0.6
ALN	Alexandroupoli	1.06	282	P	Pb	20 58 11.5	-0.7
ALN				S	Sg	20 58 23.7	-2.4
ALN				AML	AML	20 58 27.9	
	comp=E,7238μm,0.5s						
ALN				AML	AML	20 58 28.3	
	comp=N,3960μm,0.4s						
ALN	Alexandroupoli	1.06	282	PG	Pb	20 58 11.7	-0.5
BALB	Balikesir	1.11	161	PN	Pb	20 58 12.8	-0.2
KIRK	Kırklareli	1.12	348	iP	Pg	20 58 12.2	-1.3
ECEA	Canakkale, Ece	1.14	236	iP	Pg	20 58 12.8	-1.1
ECEA				iS	Sn	20 58 30.1	+0.7
ECEA				IAML		20 58 33.0	
	comp=E,2μm,0.6s						
ECEA				IAML		20 58 34.0	
	comp=N,2μm,0.3s						
BGKT	Bogazkoy	1.14	64	PN	Pg	20 58 12.2	-1.7
MDNY	Mudanya-Bursa	1.17	105	PN	Pg	20 58 13.4	-1.0
ARMN	Kirklareli, Me	1.18	1	iP	Pb	20 58 13.5	-0.7
EZN	Ezine	1.20	224	P	Pb	20 58 14.1	-0.5
EZN	Ezine	1.20	224	PN	Pg	20 58 13.9	-1.0
BUHA	Balikesir, Bur	1.21	192	iP	Pn	20 58 14.7	0.0
BUHA				iS	Sb	20 58 31.2	+0.7
BUHA				IAML		20 58 35.0	
	comp=N,2μm,0.6s						
BUHA				IAML		20 58 35.0	
	comp=E,2μm,0.5s						
GOKA	anakkale-Gk	1.25	247	iP	Pg	20 58 14.9	-1.1
GOKA				iS	Sn	20 58 33.1	+1.1
GOKA				IAML		20 58 38.0	
	comp=E,3μm,0.5s						
GADA	Gvkgeada	1.26	247	P	Pn	20 58 15.8	+0.5
GADA	Gvkgeada	1.26	247	PN	Pg	20 58 14.7	-1.4
EDRB	Edirne	1.26	337	P	Pg	20 58 14.6	-1.6
EDRB	Edirne	1.26	337	PN	Pg	20 58 14.7	-1.5
ORLT	Orhaneli	1.30	119	PN	Pg	20 58 15.6	-1.4
KAVV	Kandilli-Istan	1.31	73	PN	Pg	20 58 14.9	-2.1
STEP	BALIKESIR_Sava	1.33	170	iP	Pb	20 58 16.9	0.0
STEP				iS	Sn	20 58 35.4	+1.3
STEP				IAML		20 58 38.0	
	comp=N,3μm,0.7s						
STEP				IAML		20 58 38.0	
	comp=E,2μm,0.7s						
BOZC	Bozcaada	1.34	231	iP	Pn	20 58 16.2	-0.3
BOZC				iS	Sn	20 58 35.5	+1.3
BOZC				IAML		20 58 38.0	
	comp=N,1μm,0.4s						
BOZC				IAML		20 58 41.0	
	comp=E,1μm,0.5s						
BOZC	Bozcaada	1.34	231	PN	Pn	20 58 16.3	-0.2
TRML	Termal-Yalova	1.34	93	PN	Pn	20 58 16.2	-0.4
DURS	Dursunbey	1.36	143	iP	Pb	20 58 17.0	-0.4
DURS				iS	Sn	20 58 35.4	+0.6
DURS				IAML		20 58 38.0	
	comp=N,2μm,0.3s						
DURS				IAML		20 58 39.0	
	comp=E,2μm,0.3s						
KLYT	Kilyos	1.36	65	PN	Pn	20 58 16.0	-0.7
KURT	Yalova, Merkez	1.37	93	iP	Pn	20 58 16.7	-0.2
GEMT	Gemlik	1.38	100	PN	Pn	20 58 16.6	-0.4
DST	Dursunbey	1.43	139	PN	Pn	20 58 17.9	+0.2
ULDT	Uludag	1.43	112	iP	Pn	20 58 17.6	-0.2
ULDT				IAML		20 58 40.0	
	comp=E,1μm,0.4s						
IGD	Bursa	1.43	107	iP	Pn	20 58 17.8	+0.1
SMTH	Samothraki Isl	1.45	262	P	Pn	20 58 17.9	-0.1
SMTH				S	Sb	20 58 37.0	-0.3
	comp=E,2μm,0.4s						
SMTH	Samothraki Isl	1.45	262	P	Pn	20 58 17.7	-0.3
SMTH				S	Sb	20 58 36.7	-0.6
SMTH				AML	AML	20 58 39.4	
	comp=E,4226μm,0.5s						
SMTH				AML	AML	20 58 41.7	
	comp=N,3229μm,0.5s						
RDO	Rodhopi	1.49	288	P	Pb	20 58 18.9	-0.7
RDO	Rodhopi	1.49	288	P	Pb	20 58 18.7	-0.8
RDO				AML	AML	20 58 41.2	
	comp=E,4612μm,0.2s						
RDO				AML	AML	20 58 42.5	
	comp=N,4608μm,0.4s						
RDO	Rodhopi	1.49	288	PN	Pb	20 58 18.8	-0.8
YLV	Yalova	1.50	94	PN	Pn	20 58 18.3	-0.5
KOCA	Canakkale, Ayv	1.54	220	iP	Pb	20 58 20.1	-0.2
KOCA				iS	Sg	20 58 41.6	+0.3
KOCA				IAML		20 58 43.0	
	comp=N,2μm,0.4s						
KOCA				IAML		20 58 46.0	
	comp=E,2μm,0.6s						
GPNR	Gulpinar-Canak	1.57	219	PN	Pb	20 58 20.3	-0.7
IZI	Iznik	1.61	102	PN	Pn	20 58 20.2	-0.1
DKL	Dikili	1.66	194	PN	Pn	20 58 21.4	+0.5
PRK	Paraskevi	1.69	212	P	Pb	20 58 22.7	-0.2
PRK				S	Sg	20 58 45.0	-1.1
	comp=E,2μm,0.5s						
PRK	Paraskevi	1.69	212	P	Pb	20 58 22.5	-0.4
PRK				AML	AML	20 58 50.3	
	comp=N,3973μm,0.5s						
PRK				AML	AML	20 58 53.0	
	comp=E,3856μm,0.5s						
HRT	Hereke	1.72	85	PN	Pn	20 58 21.4	-0.4
ZEDA	zmir-Bergama	1.74	189	iP	Pn	20 58 22.4	+0.4
SILT	Sile	1.75	74	PN	Pn	20 58 21.8	-0.4
KDZ	Kurdzhali	1.79	303	P	Pg	20 58 25.2	-1.0
ADVT	Abdulvahap	1.79	97	PN	Pn	20 58 22.7	0.0
CAND	Candarli	1.79	195	PN	Pn	20 58 23.2	+0.5
AKS	Akhisar	1.83	170	PN	Pn	20 58 23.8	+0.5
AKHS	Akhisar	1.83	170	iP	Pb	20 58 24.6	-0.8
LIA	Limnos Island	1.88	246	P	Pn	20 58 23.9	0.0
LIA				S	Sn	20 58 47.8	+0.3
	comp=E,610nm,0.5s						
LIA	Limnos Island	1.88	246	P	Pn	20 58 23.9	0.0
LIA				AML	AML	20 58 57.1	
	comp=E,1326μm,0.5s						
LIA				AML	AML	20 58 59.0	
	comp=N,1047μm,0.5s						
JMB	Yambol	1.88	341	P	Pg	20 58 26.7	-1.4
SIGR	SIGRI	1.90	220	P	Pn	20 58 25.0	+0.8
SIGR				S	Sn	20 58 48.7	+0.7
	comp=N,1μm,0.5s						
SIGR	SIGRI	1.90	220	P	Pn	20 58 24.4	+0.2
SIGR				AML	AML	20 58 56.4	
	comp=N,3315μm,0.5s						
SIGR				AML	AML	20 58 58.2	
	comp=E,1846μm,0.7s						
SIGR	SIGRI	1.90	220	PN	Pn	20 58 24.8	+0.6
CAVI	Cavuskoy	1.92	104	PN	Pn	20 58 24.6	+0.1
DEMI	Demirci	1.93	148	iP	Pn	20 58 25.1	+0.5
DEMI				iS	Sg	20 58 54.2	+0.4
DEMI				IAML		20 58 56.0	
	comp=E,517nm,0.3s						
BILE	Bilecik/Merkez	1.95	105	iP	Pn	20 58 25.5	+0.5
DIM	Dimitrovgrad	1.96	315	P	Pn	20 58 24.8	-0.3
TVSB	Tavsanli	2.00	128	PN	Pn	20 58 26.1	+0.4
SIMA	Simav-Kutahya	2.01	142	PN	Pn	20 58 26.1	+0.3
GOMA	Golmarmara-Man	2.02	169	PN	Pn	20 58 26.4	+0.6
FOCM	Foa	2.04	195	PN	Pn	20 58 26.7	+0.6
THAS	Thassos island	2.05	269	P	Pn	20 58 26.2	0.0
THAS				S	Sn	20 58 49.9	-1.8
	comp=E,415nm,0.5s						
THAS	Thassos island	2.05	269	P	Pn	20 58 25.8	-0.4
THAS				AML	AML	20 58 52.0	
	comp=E,815μm,0.3s						
THAS				AML	AML	20 59 04.0	
	comp=N,880μm,0.4s						
KAND	Kocaeli-Kandir	2.15	78	iP	Pn	20 58 27.9	+0.3
AUBOZ	BOZOYUK	2.15	110	iP	Pb	20 58 31.3	+0.4
AUBOZ				IAML		20 59 03.0	
	comp=N,496nm,0.3s						
AUBOZ	BOZOYUK	2.15	110	PN	Pn	20 58 27.7	0.0
SHAP	Saphane-Kutahy	2.17	139	PN	Pn	20 58 28.3	+0.3
EFSA	Agios Efstrati	2.18	239	P	Pn	20 58 29.1	+1.0
GEYV	SAKARYA_Geyve	2.21	94	iP	Pn	20 58 29.5	+1.0
RZN	Rozhen	2.27	297	P	Pn	20 58 29.5	+0.1
KVLA	Kavala	2.31	277	P	Pn	20 58 30.1	+0.3
BLCB	Balcova	2.32	187	P	Pn	20 58 30.5	+0.6
KULA	Kula-Manisa	2.38	156	P	Pn	20 58 31.6	+0.8
URLA	Izmir	2.41	195	iP	Pn	20 58 31.9	+0.7
URLA				IAML		20 59 17.0	
	comp=E,324nm,0.7s						
PLD	Plovdiv	2.48	306	P	Pn	20 58 32.1	-0.1
CHOS	Chios island	2.53	205	P	Pn	20 58 33.2	+0.3
CHOS	Chios island	2.53	205	P	Pn	20 58 33.2	+0.3
CHOS				AML	AML	20 59 16.9	
	comp=N,1176μm,0.7s						
CHOS				AML	AML	20 59 22.9	
	comp=E,1344μm,0.7s						
PSRA	Psara	2.58	214	P	Pn	20 58 34.9	+1.4
OUR	Ouranopolis	2.64	263	P	Pn	20 58 34.0	-0.3
OUR				S	Sn	20 59 05.5	-0.8
	comp=E,352nm,0.4s						
OUR	Ouranopolis	2.64	263	P	Pn	20 58 33.9	-0.5
OUR				AML	AML	20 59 24.5	
	comp=E,728μm,0.4s						
OUR				AML	AML	20 59 25.9	
	comp=N,781μm,0.5s						
NVR	Nevrokopi	2.77	285	P	Pn	20 58 36.7	+0.5
NVR				S	Sn	20 59 08.5	-1.0
	comp=N,362nm,0.5s						
NVR	Nevrokopi	2.77	285	P	Pn	20 58 36.7	+0.5
NVR				AML	AML	20 59 22.8	
	comp=E,689μm,0.3s						
NVR				AML	AML	20 59 24.3	
	comp=N,716μm,0.7s						
MMB	Musomiste	2.92	289	P	Pn	20 58 38.8	+0.5
SRS	Serrai	2.93	280	P	Pn	20 58 38.6	+0.3
SRS				S	Sn	20 59 12.7	-0.7
	comp=N,612nm,0.6s						
SRS	Serrai	2.93	280	P	Pn	20 58 38.4	0.0
SRS				AML	AML	20 59 27.3	
	comp=E,1326μm,0.6s						
SRS				AML	AML	20 59 27.3	
	comp=N,1151μm,0.6s						
PAIG	Paliouri	2.95	256	P	Pn	20 58 37.7	-1.0
PAIG				S	Sn	20 59 16.8	+2.8
	comp=N,110nm,0.5s						

PAIG	**Paliouri**	2.95	256	P	Pn	20 58 37.9	-0.7
PLG	**Polygyros**	3.04	265	P	Pn	20 58 40.2	+0.3
PLG				S	Sn	20 59 17.2	+1.0
	comp=N,168nm,0.6s						
SOH	**Sokhos**	3.08	274	P	Pn	20 58 40.8	+0.2
SOH				S	Sn	20 59 17.8	+0.4
	comp=N,298nm,0.5s						
SOH	**Sokhos**	3.08	274	P	Pn	20 58 40.7	+0.2
KDZE	**Karadeniz Ereo**	3.12	77	⇑P	Pn	20 58 42.8	+1.8
KNT	**Kendrikon**	3.45	279	P	Pn	20 58 46.5	+0.9
KNT	**Kendrikon**	3.45	279	P	Pn	20 58 46.3	+0.8
KKB	**Krupnik**	3.47	291	P	Pn	20 58 47.0	+1.2
VTS	**Vitosha**	3.67	303	⇓P	Pn	20 58 49.8	+1.1
VTS	**Vitosha**	3.67	303	P	Pn	20 58 49.9	+1.1
VAY	**Valandovo**	3.72	281	*i* Pn	Pn	20 58 50.2	+1.0
VAY				*i* Sn	Sg	20 59 49.0	-2.3
COPA	**Copaceanca**	3.81	335	⇑P	Pn	20 58 52.2	+1.8
VLAD	**Vladila**	3.99	327	⇑P	Pn	20 58 52.6	-0.3
STIP	**Stip**	4.07	286	*i* Pn	Pn	20 58 52.4	-1.6
STIP				*i* Sn	Sb	20 59 56.6	+3.9
BOSS	**Bosilegrad**	4.12	298	*e*Pn	Pb	20 59 05.3	+1.0
PRVS	**Prvonek**	4.39	296	*e*Pn	Pn	20 58 59.3	+0.8
ZAPS	**Zavoj**	4.40	308	*e*Pn	Pn	20 58 59.4	+0.8
TLCR		4.61	12	⇑P	Pn	20 59 04.5	+3.1
BARS	**Barje**	4.69	299	*e*Pn	Pn	20 59 03.7	+1.1
NEHR	**Nehoiu**	4.81	351	⇑P	Pn	20 59 05.4	+1.2
BRTR	**Keskin Array B**	4.87	99	Pn	Pn	20 59 05.0	-0.1
	comp=N,0.4nm,0.3s,baz=264,slow=13,SNR=2.5						
BRTR				Pg	Pg	20 59 21.7	-3.4
	comp=N,0.6nm,0.3s,baz=276,slow=15,SNR=6.9						
BRTR				Lg	Lg	21 00 33.9	
	comp=N,0.4nm,0.3s,baz=272,slow=23,SNR=5.7						
MLR	**Muntele Rosu**	4.92	348	⇓P	Pn	20 59 07.8	+1.9
MLR	**Muntele Rosu**	4.92	348	Pn	Pn	20 59 07.8	+1.9
	comp=N,1.3nm,0.3s,baz=48,slow=0.3,SNR=27						
MLR				Lg	Lg	21 00 37.5	
	comp=N,1.0nm,0.3s,baz=253,slow=24,SNR=4.7						
ZAGS	**Zajecar**	4.95	311	*e*Pn	Pn	20 59 06.0	-0.1
VOIR		5.05	341	⇑P	Pn	20 59 08.1	+0.5
PLOR	**Plostina**	5.19	354	⇓P	Pn	20 59 11.0	+1.5
VRI	**Vrincioaia**	5.20	355	⇑P	Pn	20 59 10.6	+1.0
SELS	**Selova**	5.33	300	*e*Pn	Pn	20 59 11.8	+0.4
DOPR	**Dopca**	5.48	345	⇑P	Pn	20 59 14.2	+0.8
OZUR		5.53	348	⇓P	Pn	20 59 14.8	+0.6
HERR	**Herculane**	5.57	320	⇑P	Pn	20 59 13.8	-0.9
IDI	**Anoyia**	5.75	201	Pn	Pn	20 59 14.8	-2.3
	comp=N,0.4nm,0.3s,baz=349,slow=16,SNR=1.4						
IDI				Sn	Sn	21 00 21.2	-1.9
	comp=N,0.2nm,0.3s,baz=257,slow=22,SNR=2.0						
TESR	**Tescani**	5.85	355	⇑P	Pn	20 59 18.9	+0.5
MDVR	**Moldovita**	5.86	316	⇑P	Pn	20 59 17.9	-0.8
GRUS	**Gruza**	5.91	305	*e*Pn	Pn	20 59 19.1	-0.2
SEV	**Sevastopol'**	6.01	48	*e*P	Pn	20 59 22.5	+1.8
SEV				Pm		20 59 22.9	
	comp=Z,6.0nm,0.5s						
SEV				*e*S	Sn	21 00 32.5	+3.0
SEV				Sm		21 00 38.0	
	comp=N,6.0nm,0.6s						
SEV				Sm		21 00 38.0	
	comp=E,4.0nm,0.4s						
BURAR	**Bucovina Array**	7.10	348	⇑P	Pn	20 59 36.9	+1.1
DBRK	**Dubrovnik**	7.21	289	*e*Pn	Pn	20 59 39.0	+1.8
DBRK				Sn	Sn	21 01 00.4	+1.4
STON	**Ston**	7.58	290	*e*Pn	Pn	20 59 41.7	-0.5
STON				Sn	Sn	21 01 05.4	-2.6
RICI	**Ricice**	8.14	294	*e*Pn	Pn	20 59 50.3	+0.4
RICI				Sn	Sn	21 01 20.8	-1.1
MMAI	**Mount Meron Ar**	9.98	138	Pn	Pn	21 00 15.6	+0.4
	comp=E,0.1nm,0.3s,baz=320,slow=13,SNR=2.5						
EIL	**Elat**	12.60	148	LR	LR	21 06 02.1	
	comp=E,25nm,18.8s,baz=360,slow=39						
KEST	**Kesra**	15.03	257	LR	LR	21 08 27.1	
	comp=E,40nm,21.3s,baz=296,slow=43						
ESDC	**Sonseca Array**	23.93	278	P	P	21 03 06.8	+0.9
	comp=E,0.8nm,1.0s,baz=75,slow=8.2,SNR=3.2						
ZALV	**Zalesovo Beam**	40.01	51	P	P	21 05 28.0	+1.6
	comp=E,0.5nm,0.4s,baz=280,slow=8.2,SNR=2.4						

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*TAP **07** 20:58:15.3, 24°.29N×122°.51E, h15^{km}, ML3.1, D*

*JMA **07** 20:58:15.0±0.2, 24°.16N×122°.53E, h8^{km}±4^{km}, M2.9*

ISC 07 20:58:14.3±1.1**, 24°.25N**±0°.02×**122°.55E**±0°.02**, h7**^{km}±9^{km}**, n93, σ0^{s}.60**/181**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.42	61	P	Pb	20 58 24.2	+0.1
JYNG				S	Sb	20 58 31.5	+0.9
YOJ	**Yonaguni jima**	0.48	63	P	Pb	20 58 25.3	+0.3
	baz=68						
YOJ				*e*S	Sb	20 58 33.0	+0.7
	baz=68						
YOJ	**Yonaguni jima**	0.48	63	P	Pb	20 58 25.4	+0.3
YOJ				S	Sb	20 58 33.0	+0.7
EWUT	**Wuta**	0.73	286	P	Pg	20 58 28.6	+0.2
	baz=283						
EWUT				S	Sg	20 58 38.8	+1.0
	baz=283						
TWC	**Suao**	0.73	300	*e*P	Pg	20 58 28.7	+0.3
	baz=298						
TWC				S	Sg	20 58 38.4	+0.5
	baz=298						
ENA	**Nanau**	0.76	284	P	Pg	20 58 29.3	+0.5
	baz=281						
ENA				S	Sg	20 58 39.1	+0.4
	baz=281						
ETL	**Fush Village**	0.85	264	*e*P	Pb	20 58 31.7	+0.3
	baz=260						
ETL				*e*S	Sb	20 58 43.3	+0.3
	baz=260						
NDS	**Dongshan**	0.85	297	P	Pg	20 58 31.1	+0.5
	baz=295						
NDS				S	Sg	20 58 42.1	+0.4
	baz=295						
NACB	**Ninganchiao**	0.87	266	P	Pb	20 58 31.8	+0.1
	baz=262						
NACB				*e*S	Sb	20 58 44.1	+0.5
	baz=262						
TWD	**Chiawan**	0.88	259	*e*P	Pb	20 58 32.2	+0.2
	baz=255						
TWD				*e*S	Sb	20 58 44.4	+0.4
	baz=255						
NTC	**Toucheng**	0.89	313	*e*P	Pg	20 58 31.7	+0.3
	baz=312						
NTC				*e*S	Sb	20 58 44.5	+0.3
	baz=312						
ILA	**Ilan**	0.89	306	*e*P	Pg	20 58 31.9	+0.4
	baz=304						
ILA				*e*S	Sg	20 58 43.7	+0.6
	baz=304						
TWB1	**Santiao Chiao**	0.91	326	*e*P	Pg	20 58 32.0	+0.2
	baz=326						
TWB1				*e*S	Sg	20 58 44.2	+0.5
	baz=326						
TWE	**Neicheng**	0.93	301	P	Pg	20 58 32.4	+0.2
	baz=299						
TWE				S	Sg	20 58 44.5	+0.2
	baz=299						
ETLH	**Xiulin Townshi**	0.97	268	P	Pb	20 58 33.7	+0.1
	baz=264						
ETLH				*e*S	Sb	20 58 47.1	+0.5
	baz=264						
ENTT	**Nioudou**	0.97	294	P	Pg	20 58 33.4	+0.3
	baz=292						
ENTT				*e*S	Sg	20 58 46.2	+0.5
	baz=292						
TIPB	**Shuangxi**	0.98	318	*e*P	Pg	20 58 33.2	+0.1
	baz=317						
TIPB				*e*S	Sg	20 58 45.5	-0.2
	baz=317						
NDT	**Datong Townshi**	1.01	291	P	Pb	20 58 34.6	+0.5
	baz=288						
NDT				S	Sg	20 58 46.8	+0.1
	baz=288						
NNSB	**Datong**	1.08	280	P	Pb	20 58 35.4	+0.1
	baz=277						
NNSB				*e*S	Sg	20 58 49.4	+0.4
	baz=277						
NWF	**Wu-fen Shan**	1.08	320	*e*P	Pg	20 58 35.0	-0.1
	baz=319						
NWF				*e*S	Sg	20 58 49.4	+0.4
	baz=319						
IRIF	**Iriomote-Funau**	1.08	85	P	Pn	20 58 36.2	+0.2
IRIF				S	Sn	20 58 50.8	-0.4
NNS	**Nan Shan**	1.09	281	P	Pb	20 58 35.9	+0.4
	baz=278						
NNS				S	Sg	20 58 49.2	-0.1
	baz=278						
NWLT	**Wulai**	1.09	299	*e*P	Pg	20 58 35.3	+0.1
	baz=297						
NWLT				*e*S	Sg	20 58 49.6	+0.3
	baz=297						
ESL	**Shilin**	1.10	247	P	Pg	20 58 35.3	-0.2
	baz=243						
ESL				*e*S	Sb	20 58 51.1	+0.7
	baz=243						
TWA	**Mucha**	1.14	310	*e*P	Pg	20 58 36.1	-0.1
	baz=309						
TWA				*e*S	Sg	20 58 51.3	+0.3
	baz=309						
YHNB	**Yeheng**	1.15	292	P	Pn	20 58 37.2	+0.3
	baz=290						
YHNB				*e*S	Sg	20 58 50.4	-0.8
	baz=290						
NSK	**Sanguang**	1.16	292	P	Pn	20 58 37.4	+0.2
	baz=290						
NSK				S	Sg	20 58 51.9	+0.1
	baz=290						
HATJ	**Hateruma jima**	1.17	99	P	Pn	20 58 37.3	+0.2
HATJ				S	Sn	20 58 52.6	-0.6
NHDH	**Xindian Distri**	1.17	308	*e*P	Pg	20 58 36.5	-0.3
	baz=306						
NHDH				*e*S	Sg	20 58 52.2	+0.2
	baz=306						
WHF	**Hehuan Shan**	1.17	265	P	Pn	20 58 37.6	0.0
	baz=262						
WHF				*e*S	Sg	20 58 52.6	+0.4
	baz=262						
FUSS	**Fushou**	1.19	270	*e*P	Pb	20 58 37.7	+0.4
	baz=267						
FUSS				*e*S	Sb	20 58 53.2	+0.1
	baz=267						
TAP	**Taipei**	1.23	310	*e*P	Pg	20 58 37.4	-0.6
	baz=309						
TAP				*e*S	Sg	20 58 53.5	-0.5
	baz=309						
TWT	**Tachien**	1.25	271	*e*P	Pn	20 58 39.5	+1.1
	baz=268						
TWT				*e*S	Sg	20 58 55.0	+0.4
	baz=268						
YM01	**YM01**	1.26	316	*e*P	Pg	20 58 37.9	-0.7
	baz=314						
YM01				*e*S	Sg	20 58 54.3	-0.7
	baz=314						
CHGB	**Renai**	1.27	262	P	Pn	20 58 39.1	+0.4
	baz=259						
CHGB				*e*S	Sg	20 58 54.9	-0.2
	baz=259						
TDCB	**Techi**	1.27	271	*e*P	Pn	20 58 39.3	+0.7
	baz=268						
TDCB				*e*S	Sg	20 58 55.1	0.0
	baz=268						
HGSD	**Ruisui**	1.27	234	*e*P	Pg	20 58 38.2	-0.5
	baz=231						
HGSD				*e*S	Sb	20 58 55.5	+0.3
	baz=231						
OWD	**Renai**	1.28	257	*e*P	Pn	20 58 39.1	+0.2
	baz=254						
OWD				*e*S	Sg	20 58 55.7	0.0
	baz=254						
ANP	**Anpu**	1.32	315	*e*P	Pg	20 58 38.5	-1.2
	baz=314						
ANP				*e*S	Sg	20 58 55.6	-1.3
	baz=314						
TWS1	**Kuangyinshan**	1.33	310	*e*P	Pn	20 58 39.0	-0.4
	baz=309						
TWS1				*e*S	Sg	20 58 56.0	-1.2
	baz=309						
JKRS	**Kuro-shima**	1.34	90	P	Pb	20 58 40.4	+0.7
JKRS				S	Sn	20 58 58.0	+0.5
EHY	**Hungye**	1.34	237	*e*P	Pg	20 58 39.0	-1.0
	baz=233						
EHY				*e*S	Sg	20 58 57.0	-0.4
	baz=233						
NTST	**Danshui**	1.35	313	*e*P	Pn	20 58 39.3	-0.4
	baz=312						
NTST				*e*S	Sg	20 58 56.4	-1.4
	baz=312						
VWDT	**VWDT**	1.37	249	P	Pg	20 58 40.2	-0.5
	baz=246						
VWDT				*e*S	Sg	20 58 58.0	-0.5
	baz=246						
YULB	**Yu-li**	1.42	234	*e*P	Pn	20 58 40.7	+0.1
	baz=231						
YULB				*e*S	Sg	20 58 59.5	-0.6
	baz=231						
EYUL	**Yuli**	1.44	232	P	Pn	20 58 41.0	+0.2
	baz=229						
EYUL				*e*S	Sg	20 58 60.0	-0.5
	baz=229						
LIOB	**Emei**	1.45	286	*e*P	Pn	20 58 40.8	-0.3
	baz=284						
NSTT	**Nanjuang**	1.46	286	*e*P	Pn	20 58 41.0	-0.1
	baz=283						
NSTT				*e*S	Sb	20 58 59.4	-1.3
	baz=283						
WHP	**Taichung City**	1.46	272	*e*P	Pn	20 58 41.1	-0.1
	baz=269						
WHP				*e*S	Sg	20 58 59.7	-1.6
	baz=269						
JIJ	**Ishigaki jima**	1.46	85	P	Pb	20 58 41.3	-0.6
JIJ				S	Sg	20 58 59.9	-1.5
WCS	**Beigang Elemen**	1.50	263	*e*P	Pg	20 58 42.9	-0.3
	baz=260						
WCS				*e*S	Sn	20 59 00.4	-1.3
	baz=260						
SSLB	**Suanglung**	1.52	253	*e*P	Pn	20 58 42.4	+0.3
	baz=250						
SSLB				*e*S	Sn	20 59 01.7	-0.5
	baz=250						
SMLT	**Sun Moon Lake**	1.55	257	*e*P	Pn	20 58 42.6	+0.1
	baz=254						
SMLT				*e*S	Sn	20 59 01.9	-0.9
	baz=254						
FULB	**Fuli**	1.55	228	*e*P	Pn	20 58 41.8	-0.6
	baz=225						
FULB				*e*S	Sn	20 59 02.1	-0.7
	baz=225						
CHKT	**Chengkung**	1.57	224	*e*P	Pb	20 58 43.2	-0.5
	baz=221						
CHKT				*e*S	Sn	20 59 03.5	+0.2
	baz=221						
TYC	**Yuchr**	1.58	258	*e*P	Pn	20 58 42.8	0.0
	baz=255						
TYC				*e*S	Sn	20 59 02.5	-1.0
	baz=255						
TWQ1	**Liyutan**	1.62	274	*e*P	Pn	20 58 43.3	0.0
	baz=271						
TWQ1				*e*S	Sn	20 59 03.3	-1.3
	baz=271						
YUS	**Yu-Shan**	1.64	243	*e*P	Pn	20 58 44.4	+0.3
	baz=240						
YUS				*e*S	Sn	20 59 04.9	-0.8
	baz=240						
JISG	**Ishigakijimahi**	1.65	78	P	Pn	20 58 43.8	+0.1
JISG				S	Sn	20 59 04.1	-1.0
EDH	**Donghe**	1.70	222	*e*P	Pn	20 58 44.0	-0.5
	baz=220						
EDH				*e*S	Sn	20 59 06.8	+0.3
	baz=220						
WJS	**Zhushan**	1.71	256	*e*P	Pn	20 58 44.9	+0.2
	baz=253						
WJS				*e*S	Sn	20 59 06.5	-0.3
	baz=253						
WNT	**Mingjian**	1.74	258	*e*P	Pn	20 58 45.2	+0.2
	baz=256						
WNT				*e*S	Sn	20 59 06.9	-0.6
	baz=256						
ELDTW	**Lidau**	1.75	233	*e*P	Pn	20 58 44.9	-0.4
	baz=230						
ELDTW				*e*S	Sn	20 59 07.6	-0.3
	baz=230						
ALS	**Alishan**	1.75	246	*e*P	Pn	20 58 45.7	+0.2
	baz=243						
ALS				*e*S	Sn	20 59 07.2	-1.0
	baz=243						
CHN5	**Tsauling**	1.83	250	*e*P	Pn	20 58 46.7	+0.4
	baz=247						
CHN5				*e*S	Sn	20 59 09.7	0.0
	baz=247						
LDUT	**Ludao**	1.85	212	*e*S	Sn	20 59 10.7	+0.5
	baz=210						
LONT	**Longtian**	1.86	225	*e*P	Pn	20 58 46.3	-0.4
	baz=222						
LONT				*e*S	Sn	20 59 10.4	-0.1
	baz=222						
WDLH	**Douliu**	1.92	254	*e*P	Pn	20 58 47.8	+0.4
	baz=251						
WDLH				*e*S	Sn	20 59 11.6	-0.2
	baz=251						
STYH	**Taoyuan**	1.94	237	*e*P	Pn	20 58 48.4	+0.6
	baz=234						
STYH				*e*S	Sn	20 59 12.6	+0.2
	baz=234						
TWGBT	**Beinan**	1.96	224	*e*P	Pn	20 58 47.4	-0.6
	baz=221						
TWGBT				*e*S	Sn	20 59 12.4	-0.4
	baz=221						
TPUB	**Ta-pu**	1.99	242	*e*P	Pb	20 58 50.2	-0.7
	baz=240						
TPUB				*e*S	Sb	20 59 15.5	-0.4
	baz=240						
CHN4	**Tsaushan**	2.00	244	*e*P	Pn	20 58 49.1	+0.5
	baz=241						
CHN4				*e*S	Sn	20 59 14.1	+0.3
	baz=241						
JTJ	**Tarama**	2.00	78	S	Sn	20 59 13.7	-0.3
WRL	**Guolierlin Hig**	2.01	261	*e*P	Pn	20 58 49.1	+0.4
	baz=258						
WRL				*e*S	Sn	20 59 13.7	-0.4
	baz=258						
WTP	**Ta-pu**	2.03	241	*e*P	Pn	20 58 49.8	+0.7
	baz=238						
WTP				*e*S	Sn	20 59 15.0	+0.3
	baz=238						
WTK	**Tuku**	2.05	255	*e*P	Pn	20 58 49.6	+0.3
	baz=252						
WTK				*e*S	Sn	20 59 14.7	-0.4
	baz=252						
TWK	**Hsinying**	2.12	243	*e*P	Pn	20 58 50.9	+0.6
	baz=240						
TWK				*e*S	Sn	20 59 16.6	-0.3
	baz=240						
CHN1	**Nanshi**	2.13	241	*e*P	Pb	20 58 52.8	-0.5
	baz=238						
CHN1				*e*S	Sn	20 59 18.8	+1.7
	baz=238						
SNST	**Tainan City**	2.14	242	*e*P	Pn	20 58 51.1	+0.7
	baz=239						
SNST				*e*S	Sn	20 59 17.2	0.0
	baz=239						
SGST	**Jiashian**	2.14	238	*e*P	Pn	20 58 51.1	+0.6
	baz=235						
SGST				*e*S	Sn	20 59 17.2	-0.1
	baz=235						
SLGT	**Liugui**	2.14	235	*e*P	Pn	20 58 51.4	+0.9
	baz=232						
SLGT				*e*S	Sn	20 59 18.0	+0.6
	baz=232						
ECL	**Taimali**	2.20	222	*e*P	Pn	20 58 52.1	+0.8
	baz=220						
ECL				*e*S	Sn	20 59 18.4	-0.3
	baz=220						
WSF	**Szhu**	2.21	255	*e*S	Sn	20 59 19.2	+0.2
	baz=252						
SSD	**Sandimen**	2.31	230	*e*P	Pn	20 58 53.7	+1.0
	baz=228						
SSD				*e*S	Sn	20 59 21.6	+0.2
	baz=228						
TSMG	**Majia**	2.32	229	*e*P	Pn	20 58 54.1	+1.1
	baz=227						
TSMG				*e*S	Sn	20 59 21.9	+0.1
	baz=227						
MASBT	**Mashibuluo**	2.39	228	*e*P	Pn	20 58 54.9	+0.9
	baz=225						
MASBT				*e*S	Sn	20 59 23.8	+0.2
	baz=225						
EAST	**Anshuo**	2.42	220	*e*P	Pn	20 58 55.2	+0.8
	baz=218						
EAST				*e*S	Sn	20 59 24.9	+0.5
	baz=218						
SSPT	**Xinbi**	2.52	226	*e*P	Pn	20 58 56.2	+0.5
	baz=224						
SSPT				*e*S	Sn	20 59 27.5	+0.7
	baz=224						
SCZT	**Fangliau**	2.57	224	*e*P	Pn	20 58 57.9	+1.5
	baz=222						
SCZT				*e*S	Sn	20 59 28.5	+0.5
	baz=222						
SLIU	**Shizi**	2.58	219	*e*P	Pn	20 58 57.7	+1.2
	baz=217						
SLIU				*e*S	Sn	20 59 28.8	+0.6
	baz=217						
TWKBT	**Hengchun**	2.79	215	*e*P	Pn	20 59 00.6	+1.1
	baz=213						
TWKBT				*e*S	Sn	20 59 34.2	+0.7
	baz=213						
PHUB	**P'eng-hu**	2.82	256	*e*P	Pn	20 59 00.4	+0.6
	baz=253						
PHUB				*e*S	Sn	20 59 34.1	0.0
	baz=253						
PTMZ	**Houxiangcun**	3.22	285	*e*S	Sn	20 59 43.1	-0.8
	baz=283						

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*IDC **07** 21:02:11.8±2.2, 38°.19N×72°.79E, h0^{km}, mb3.6/3, mb1 3.5/8, mb1mx3.3/57, mbtmp3.5/8, ML2.8/5, MS2.7/1, Ms1 2.7/1, ms1mx2.3/36, Error ellipse: s-maj=37.8km s-min=22.4km az=153.0*

ISC 07 21:02:13.1±2.0**, 38°.2N**±0°.2×**72°.7E**±0°.2**, h10**^{km}**, n8, σ1^{s}.67**/8**, mb3.6**/3**, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	4.66	17	Pn	Pn	21 03 26.3	+2.7
	1.0nm,0.3s,baz=158,slow=4.9,SNR=9.6						
MKAR	**Makanchi Array**	11.15	36	Pn	Pn	21 04 52.3	-0.2
	0.0nm,0.3s,baz=217,slow=14,SNR=2.0						
KURBB	**Kurchatov Arra**	13.12	17	Pn	Pn	21 05 18.4	-0.9
	0.0nm,0.3s,baz=205,slow=11,SNR=5.3						
AKTO	**Aktyubinsk**	16.08	324	Pn	Pn	21 05 58.4	-0.8
	0.4nm,0.3s,baz=133,slow=9.7,SNR=11						
AKTO				LR	LR	21 12 23.0	
	comp=Z,30nm,21.0s,baz=41,slow=38						
ZALV	**Zalesovo Beam**	17.83	24	P	P	21 06 19.8	-2.0
	0.2nm,0.3s,baz=209,slow=15,SNR=2.2						
SONM	**Songino Array**	26.30	58	P	P	21 07 49.8	+0.9
	0.6nm,0.7s,baz=267,slow=11,SNR=5.4						
FINES	**FINESS Array B**	36.86	324	P	P	21 09 21.6	+0.4
	3.0nm,1.0s,baz=94,slow=9.8,SNR=3.7						
TORD	**Torodi Ar. Bea**	67.08	269	P	P	21 13 07.0	0.0
	0.2nm,0.4s,baz=50,slow=6.5,SNR=1.9						

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*IDC **07** 21:02:59.6±2.4, 38°.29N×72°.56E, h0^{km}, mb3.8/4, mb1 3.7/11, mb1mx3.4/61, mbtmp3.7/11, ML3.2/7, Error ellipse: s-maj=37.4km s-min=18.7km az=157.0*

ISC 07 21:03:04.0±1.8**, 38°.7N**±0°.2×**72°.4E**±0°.1**, h10**^{km}**, n11, σ1^{s}.53**/11**, mb3.8**/4**, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	4.27	21	Pn	Pn	21 04 14.7	+5.5
	1.9nm,0.3s,baz=176,slow=6.9,SNR=4.0						
AAK				Sn	Sb	21 05 10.2	-0.6
	0.3nm,0.3s,baz=120,slow=12,SNR=3.7						
MKAR	**Makanchi Array**	10.89	39	Pn	Pn	21 05 42.1	+2.3
	0.1nm,0.3s,baz=223,slow=18,SNR=3.6						
GEYT	**Alibeck**	11.25	271	Pn	Pn	21 05 45.2	+0.4
	1.0nm,0.3s,baz=96,slow=13,SNR=7.7						
KURBB	**Kurchatov Arra**	12.71	18	Pn	Pn	21 06 06.1	+1.4
	0.0nm,0.3s,baz=208,slow=12,SNR=2.2						
BVAR	**Borovoye Array**	14.42	355	Pn	Pn	21 06 26.5	-1.5
	0.1nm,0.3s,baz=188,slow=19,SNR=2.9						
AKTO	**Aktyubinsk**	15.56	324	Pn	Pn	21 06 42.9	-0.5
	0.1nm,0.3s,baz=108,slow=14,SNR=1.1						
ZALV	**Zalesovo Beam**	17.48	25	P	P	21 07 09.7	+0.9
	0.3nm,0.3s,baz=219,slow=11,SNR=4.0						
GNI	**Garni**	21.39	283	P	P	21 07 51.7	-0.2
	1.5nm,0.5s,baz=190,slow=14,SNR=1.5						
BELG	**Belogornoye**	21.98	317	P	P	21 07 58.7	+0.9
	7.6nm,0.9s,baz=180,slow=9.1,SNR=2.2						
SONM	**Songino Array**	26.22	59	P	P	21 08 36.4	-2.6
	0.8nm,0.9s,baz=258,slow=11,SNR=4.1						
HFS	**Hagfors**	42.07	320	P	P	21 10 55.1	-0.6
	2.7nm,0.8s,baz=96,slow=12,SNR=5.5						

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*IDC **07** 21:13:39.0±1.3, 38°.16N×73°.00E, h0^{km}, mb3.8/8, mb1 3.8/14, mb1mx3.5/59, mbtmp3.6/14, ML3.1/6, Error*

ellipse: s-maj=23.4km s-min=18.6km az=146.0

*NNC **07** 21:13:45.9±3.5,38°.45N×72°.75E,h0^{km},mb4.0,mpv3.6, Error ellipse: s-maj=25.8km s-min=18.2km az=168.0*

ISC 07 21:13:41.3±1.0,38°.32N±0°.08×73°.00E±0°.09,h10^{km},n29, σ2^{s}.11/31,mb3.7/8,5C-4D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	Merke	4.42	2	Pg	Pb	21 15 00.7	+1.6
	7.7nm,0.3s						
MRKS				Lg	Lg	21 15 54.1	
	14nm,0.5s						
AAK	Ala-Archa	4.46	14	Pn	Pn	21 14 53.4	+4.3
	0.7nm,0.3s,baz=172,slow=6.9,SNR=9.5						
AAK				Sn	Sb	21 15 50.1	-3.5
	0.4nm,0.3s,baz=253,slow=20,SNR=1.3						
AAK	Ala-Archa	4.46	14	⇑Pn	Pn	21 14 53.3	+4.2
	8.2nm,0.7s						
AAK				⇓Sn	Sb	21 15 50.2	-3.4
	14nm,0.8s						
TKM2	Tokmak 2	5.00	22	⇑Pn	Pn	21 15 02.8	+6.2
	9.2nm,1.0s						
TKM2				⇓Lg	Lg	21 16 26.6	
	7.8nm,0.7s						
KK09	Karatay Array	5.16	339	⇑Pn	Pn	21 15 00.9	+2.3
	7.7nm,0.7s,baz=148,slow=13						
KK09				⇓Sn	Sn	21 15 59.5	+1.4
	7.5nm,0.6s						
KK09				⇓Lg	Lg	21 16 24.9	
	9.1nm,0.7s,baz=156,slow=31						
KST	Kastek	5.23	25	Pg	Pg	21 15 19.3	-2.1
	7.4nm,0.7s						
KST				Lg	Lg	21 16 28.6	
	13nm,0.5s						
DGS	Degeres	5.35	22	Pg	Pg	21 15 23.2	-0.5
	7.1nm,0.6s						
DGS				Lg	Lg	21 16 33.0	
	9.8nm,0.5s						
TNSS	Tian-Shan	5.58	31	Pg	Pg	21 15 26.2	-2.0
	2.9nm,0.4s						
TNSS				Lg	Lg	21 16 39.3	
	4.5nm,0.5s						
MDOK	Medeo	5.73	31	⇑Pg	Pg	21 15 31.4	+0.3
	3.3nm,0.6s						
MDOK				⇑Lg	Lg	21 16 53.1	
	6.2nm,0.8s						
MDOK	Medeo	5.73	31	Pg	Pg	21 15 28.9	-2.1
	2.8nm,0.4s						
MDOK				Lg	Lg	21 16 44.7	
	7.4nm,1.1s						
KRBS	Karabastau	5.74	20	Pg	Pg	21 15 28.7	-2.5
	3.9nm,0.5s						
KRBS				Lg	Lg	21 16 41.8	
	2.8nm,0.5s						
KOTS	Kotyrbulak	5.82	31	Pg	Pg	21 15 32.1	-0.6
	3.9nm,0.6s						
KOTS				Lg	Lg	21 16 49.2	
	8.6nm,0.5s						
KTBS	Karatobe	6.06	26	Pg	Pg	21 15 37.5	+0.1
	2.3nm,0.4s						
KTBS				Lg	Lg	21 16 56.5	
	6.7nm,0.7s						
KUU	Kurty	6.11	23	Pg	Pg	21 15 35.4	-2.8
	3.1nm,0.6s						
KUU				Lg	Lg	21 16 56.2	
	8.9nm,0.5s						
ARXS	Arharly	6.92	30	Pg	Pg	21 15 50.5	-3.2
	2.8nm,0.4s						
ARXS				Lg	Lg	21 17 19.8	
	3.3nm,0.6s						
MKAR	Makanchi Array	10.88	36	Pn	Pn	21 16 19.0	+1.9
	0.1nm,0.3s,baz=209,slow=16,SNR=1.6						
GEYT	Alibeck	11.73	273	Pn	Pn	21 16 27.0	-1.6
	0.4nm,0.3s,baz=80,slow=13,SNR=1.9						
BVAR	Borovoye Array	14.81	354	Pn	Pn	21 17 10.7	0.0
	0.2nm,0.3s,baz=172,slow=15,SNR=2.0						
AKTO	Aktyubinsk	16.13	323	Pn	Pn	21 17 26.7	-1.2
	0.1nm,0.3s,baz=111,slow=14,SNR=1.7						
ZALV	Zalesovo Beam	17.61	24	P	P	21 17 47.9	+0.3
	0.1nm,0.3s,baz=195,slow=9.2,SNR=3.7						
SONM	Songino Array	26.01	58	P	P	21 19 15.7	+1.3
	0.6nm,0.9s,baz=254,slow=10,SNR=4.0						
FINES	FINESS Array B	36.90	324	P	P	21 20 50.9	+1.1
	3.1nm,0.9s,baz=147,slow=11,SNR=4.9						
ARCES	ARCESS Array B	40.09	336	P	P	21 21 16.0	-0.6
	11nm,1.3s,baz=115,slow=7.9,SNR=1.9						
HFS	Hagfors	42.64	321	P	P	21 21 37.5	-0.1
	2.5nm,0.8s,baz=99,slow=9.2,SNR=8.8						
NB2	NORSAR Subarra	43.91	322	P	P	21 21 47.7	-0.1
	comp=Z,2.1nm,0.7s,baz=92,slow=8.6						
NOA	NORSAR Array B	43.91	322	P	P	21 21 47.1	-0.7
	comp=Z,0.9nm,0.7s,baz=90,slow=7.7,SNR=4.2						
ESDC	Sonseca Array	58.02	298	P	P	21 23 35.4	+1.1
	comp=Z,0.2nm,0.5s,baz=58,slow=7.9,SNR=4.2						
TORD	Torodi Ar. Bea	67.34	269	P	P	21 24 35.5	-1.3
	comp=Z,0.2nm,0.6s,baz=57,slow=6.2,SNR=1.6						
WRA	Warramunga Arr	81.64	123	P	P	21 25 58.5	-1.2
	comp=Z,0.4nm,0.8s,baz=330,slow=5.0,SNR=2.4						

IDC 07 21:18:17.6±4.3,22°.49S×174°.35W,h0^{km},mb4.0/3, mb1 4.2/5,mb1mx3.9/27,mbtmp4.0/5,ML4.1/2,MS3.2/3, Ms1 3.2/3,ms1mx2.8/31,Error ellipse: s-maj=83.0km s-min=70.7km az=58.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	8.57	302	Pn	Pn	21 20 23.8	+0.7
	0.2nm,0.3s,baz=131,slow=16,SNR=6.9						
MSVF				LR	LR	21 23 01.7	
	comp=Z,211nm,19.9s,baz=32,slow=33						
RAR	Rarotonga	13.60	87	LR	LR	21 26 46.7	
	comp=Z,58nm,18.3s,baz=260,slow=37						
DZM	Mont Dzumac	17.78	268	P	P	21 22 28.4	+0.7
	0.1nm,0.3s,baz=83,slow=18,SNR=4.4						
PPT	Papeete	23.77	83	LR	LR	21 31 28.3	
	comp=Z,82nm,18.0s,baz=348,slow=33						
ASAR	Alice Springs	47.40	258	P	P	21 26 54.3	+0.2
	2.2nm,0.9s,baz=93,slow=8.2,SNR=17						
WRA	Warramunga Arr	47.72	263	P	P	21 26 55.1	-1.4
	1.5nm,0.9s,baz=96,slow=8.3,SNR=9.8						
CMAR	Chiang Mai Arr	93.97	288	P	P	21 31 38.5	+0.5
	0.6nm,0.8s,baz=131,slow=2.9,SNR=5.1						

NNC 07 21:24:31.7±10.0,39°.13N×72°.56E,h0^{km},mb3.8,mpv3.4, 5C-2D,Error ellipse: s-maj=79.7km s-min=55.6km az=179.0,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	3.80	22	⇑Pn	Pn	21 25 30.5	-1.2
	5.1nm,0.5s						
AAK				⇑Sn	Sn	21 26 20.7	+3.5
	24nm,1.1s						
KK09	Karatay Array	4.29	339	⇓Pn	Pn	21 25 34.9	-3.3
	1.2nm,0.3s,baz=142,slow=12						
KK09				⇑Sn	Sn	21 26 29.4	+0.5
	8.4nm,0.7s,baz=148,slow=26						
TKM2	Tokmak 2	4.43	30	⇓Pn	Pn	21 25 40.3	-0.1
	6.1nm,0.7s						
TKM2				⇑Lg	Lg	21 26 51.4	
	8.1nm,0.8s						
MDOK	Medeo	5.27	39	⇑Pn	Pn	21 25 54.4	+2.6
	5.0nm,1.0s						
MDOK				Lg	Lg	21 27 16.6	
	12nm,0.9s						

IDC 07 21:29:30.7±3.9,5°.34S×131°.30E,h0^{km},mb3.6/1, mb1 3.3/3,mb1mx3.2/26,mbtmp3.2/3,ML2.9/2,Error ellipse: s-maj=266.5km s-min=34.0km az=72.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.81	169	Pn	Pn	21 33 01.8	+0.1
	0.1nm,0.3s,baz=349,slow=11,SNR=5.1						
WRA				Sn	Sn	21 35 34.1	-13
	0.1nm,0.3s,baz=331,slow=22,SNR=1.5						
ASAR	Alice Springs	18.39	172	P	Pn	21 33 47.0	-0.4
	0.1nm,0.3s,baz=355,slow=10,SNR=1.8						
MKAR	Makanchi Array	67.57	326	P	P	21 40 29.2	+0.1
	0.7nm,1.1s,baz=120,slow=8.2,SNR=1.6						

IDC 07 21:29:56.0±3.3,1°.59S×134°.05E,h0^{km},mb3.2/2, mb1 3.4/3,mb1mx3.2/27,mbtmp3.2/3,ML3.0/1,Error ellipse: s-maj=157.1km s-min=30.1km az=77.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.25	179	P	Pn	21 34 10.0	-0.9
	0.1nm,0.3s,baz=359,slow=11,SNR=5.4						
ASAR	Alice Springs	21.95	180	P	P	21 34 52.0	+0.5
	0.4nm,0.6s,baz=3.2,slow=10.0,SNR=7.9						
MKAR	Makanchi Array	66.10	324	P	P	21 40 45.1	0.0
	0.4nm,0.7s,baz=108,slow=4.7,SNR=2.4						

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*PLV **07** 21:38:40.7±0.8,23°.65N×100°.19E,h33^{km},ML4.2*

*IDC **07** 21:38:41.8±1.3,22°.64N×100°.80E,h0^{km},mb3.6/4, mb1 3.6/5,mb1mx3.4/42,mbtmp3.5/5,ML3.8/1,MS3.0/3, Ms1 3.1/3,ms1mx2.7/50,Error ellipse: s-maj=37.2km s-min=16.7km az=96.0*

ISC 07 21:38:44.2±0.9,22°.60N±0°.06×100°.50E±0°.06,h10^{km},n12, σ2^{s}.28/15,mb3.5/4,1C,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLAV	Muong La stati	2.52	102	*e*Pn	Pn	21 39 23.6	-1.7
MLAV				*e*Pg	Pb	21 39 31.2	+1.6
MLAV				*e*Sg	Sg	21 40 05.7	+0.4
MLAV				IAML		21 40 07.3	
	comp=N,309nm,0.9s						
MLAV				IAML		21 40 08.8	
	comp=E,296nm,0.4s						
TGV	Tuan Giao	2.89	110	*e*Pn	Pn	21 39 29.0	-1.3
TGV				*e*Sg	Sg	21 40 18.2	+1.1
TGV				IAML		21 40 21.1	
	comp=E,658nm,0.7s						
TGV				IAML		21 40 26.9	
	comp=N,887nm,0.9s						
KMI	Kunming	3.24	39	⇑Pg	Pb	21 39 44.6	+2.6
KMI				Sg	Sb	21 40 25.6	+3.9
KMI				smax	smax		
	comp=N,120nm,1.3s						
KMI				smax	smax		
	comp=E,100nm,1.3s						
KMI				LR	LR		
	comp=N,1µm,7.7s						
KMI				LR	LR		
	comp=E,960nm,7.4s						
KMI				LR	LR		
	comp=Z,450nm,7.8s						
CMAR	Chiang Mai Arr	4.37	200	Pn	Pn	21 39 50.5	-0.3
	comp=Z,1.1nm,0.3s,baz=12,slow=12,SNR=11						
CMAR				Pg	Pb	21 40 04.5	+3.3
	comp=Z,13nm,0.3s,baz=17,slow=16,SNR=30						
CMAR				Lg	Lg	21 41 06.2	
	comp=Z,14nm,0.3s,baz=190,slow=1.0,SNR=4.6						
CMAR				LR	LR	21 41 58.0	
	comp=Z,86nm,20.0s,baz=104,slow=44						
HBVN	Hoa-Binh	4.85	110	*e*Pn	Pn	21 39 55.8	-1.4
WMQ	Urumqi	23.66	336	*e*P	P	21 43 52.7	-3.2
SONM	Songino Array	25.62	9	P	P	21 44 11.9	-2.0
	comp=Z,0.4nm,0.6s,baz=190,slow=8.6,SNR=3.3						
KSRS	Korea Array	27.85	52	LR	LR	21 56 28.3	
	comp=Z,24nm,18.5s,baz=0.0,slow=39						
MKAR	Makanchi Array	28.26	333	P	P	21 44 36.9	-0.7
	comp=Z,0.4nm,0.6s,baz=137,slow=10.0,SNR=8.1						
ZALV	Zalesovo Beam	33.47	343	P	P	21 45 24.2	+0.8
	comp=Z,1.0nm,0.8s,baz=161,slow=10,SNR=4.4						
PMG	Port Moresby	55.68	120	LR	LR	22 14 57.4	
	comp=Z,36nm,19.5s,baz=11,slow=39						
ASAR	Alice Springs	56.30	143	P	P	21 48 23.4	-2.0
	comp=Z,0.4nm,0.5s,baz=324,slow=6.2,SNR=1.8						

IDC 07 21:39:29.5±6.2,4°.10S×133°.60E,h0^{km},mb3.9/1, mb1 3.9/3,mb1mx3.5/29,mbtmp3.8/3,ML3.8/2,Error ellipse: s-maj=361.3km s-min=30.4km az=77.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.76	177	Pn	Pn	21 43 10.8	-2.2
	0.3nm,0.3s,baz=356,slow=13,SNR=11						
WRA				Sn	Sn	21 45 55.9	-13
	0.3nm,0.3s,baz=359,slow=23,SNR=8.0						
ASAR	Alice Springs	19.45	179	P	Pn	21 43 58.9	-0.2
	0.4nm,0.3s,baz=4.2,slow=12,SNR=25						
ASAR				S	Sn	21 47 27.8	-10
	0.1nm,0.3s,baz=359,slow=28,SNR=4.3						
MKAR	Makanchi Array	67.87	325	P	P	21 50 29.8	0.0
	1.0nm,0.8s,baz=128,slow=5.9,SNR=6.2						

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*IDC **07** 21:50:08.6±2.1,37°.84N×73°.22E,h0^{km},mb3.6/1, mb1 3.6/6,mb1mx3.3/58,mbtmp3.5/6,ML3.1/5,Error ellipse: s-maj=38.3km s-min=25.4km az=77.0*

ISC 07 21:50:11.0±1.7,38°.0N±0°.1×73°.1E±0°.2,h10^{km},n6,σ3^{s}.16/7, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	4.73	13	Pn	Pn	21 51 26.8	+4.3
	0.6nm,0.3s,baz=194,slow=1.4,SNR=2.7						
AAK				Sn	Sb	21 52 27.5	-3.6
	0.8nm,0.3s,baz=359,slow=22,SNR=2.2						
MKAR	Makanchi Array	11.08	35	Pn	Pn	21 52 51.3	+1.8
	0.0nm,0.3s,baz=197,slow=14,SNR=1.8						
BVAR	Borovoye Array	15.12	354	Pn	Pn	21 53 43.7	-0.8
	0.2nm,0.3s,baz=165,slow=12,SNR=2.6						
AKTO	Aktyubinsk	16.41	324	Pn	Pn	21 54 00.1	-1.2
	0.5nm,0.3s,baz=127,slow=8.5,SNR=13						
ZALV	Zalesovo Beam	17.85	23	P	P	21 54 20.8	+0.8
	0.1nm,0.3s,baz=226,slow=14,SNR=2.1						
WRA	Warramunga Arr	81.41	123	P	P	22 02 26.6	-1.7
	0.4nm,0.7s,baz=323,slow=5.3,SNR=2.7						

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*IDC **07** 21:54:38.3±1.9,38°.16N×72°.86E,h0^{km},mb3.7/8, mb1 3.8/15,mb1mx3.6/62,mbtmp3.7/15,ML3.2/7,MS3.1/1, Ms1 3.1/1,ms1mx2.4/55,Error ellipse: s-maj=31.9km s-min=18.9km az=159.0*

ISC 07 21:54:39.1±0.8,38°.17N±0°.08×72°.97E±0°.09,h10^{km},n24, σ1^{s}.94/25,mb3.9/7,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	4.61	14	Pn	Pn	21 55 52.7	+3.7
	1.3nm,0.3s,baz=186,slow=10,SNR=7.6						
AAK				Sn	Sb	21 56 51.2	-4.7
	1.5nm,0.3s,baz=167,slow=14,SNR=2.2						
MKAR	Makanchi Array	11.02	36	Pn	Pn	21 57 20.0	+3.2
	0.1nm,0.3s,baz=208,slow=15,SNR=3.9						
GEYT	Alibeck	11.72	273	Pn	Pn	21 57 25.6	-0.7
	0.4nm,0.3s,baz=91,slow=13,SNR=2.1						
KURBB	Kurchatov Arra	13.06	16	Pn	Pn	21 57 44.6	0.0
	0.2nm,0.3s,baz=203,slow=12,SNR=4.9						
PYUN	Piuthan	13.08	137	*e*Pg	Pn	21 57 43.7	-1.4
	7.9nm,0.3s						
DANN	Dangsing	13.31	134	*e*Pg	Pn	21 57 47.4	-0.9
	9.1nm,0.4s						
GKN	Gorkha	14.07	133	*e*Pg	Pn	21 57 57.4	-1.3
	4.3nm,0.3s						
KKN	Kakani	14.61	132	*e*Pg	Pn	21 58 04.1	-2.0
PKIN	Phulchoki	14.84	132	*e*Pg	Pn	21 58 07.2	-2.0
PKI	Pulchoki	14.85	132	*e*Pg	Pn	21 58 06.9	-2.5
BVAR	Borovoye Array	14.96	354	Pn	Pn	21 58 09.5	-1.1
	0.1nm,0.3s,baz=165,slow=18,SNR=4.2						
RAMN	Ramite	16.02	130	*e*Pg	Pn	21 58 23.1	-1.6
	4.4nm,0.4s						
AKTO	Aktyubinsk	16.24	324	Pn	Pn	21 58 25.6	-1.6
	0.1nm,0.3s,baz=136,slow=16,SNR=2.0						
AKTO				LR	LR	22 05 30.7	
	comp=Z,63nm,18.8s,baz=101,slow=40						
TAPN	Taplejung	16.41	127	*e*Pg	Pn	21 58 27.9	-1.9
	1.8nm,0.3s						
ZALV	Zalesovo Beam	17.75	23	P	Pn	21 58 46.2	0.0
	0.1nm,0.3s,baz=210,slow=11,SNR=2.7						
ARU	Arti	20.64	337	P	P	21 59 18.5	-0.1
	0.4nm,0.4s,baz=174,slow=6.6,SNR=3.6						
KBZ	Khabaz	23.31	293	P	P	21 59 47.4	+0.3
	1.2nm,0.8s,baz=164,slow=7.4,SNR=1.5						
SONM	Songino Array	26.11	58	P	P	22 00 15.5	+2.3
	1.0nm,0.9s,baz=254,slow=11,SNR=6.2						
FINES	FINESS Array B	37.01	324	P	P	22 01 47.9	-0.7
	2.9nm,0.9s,baz=111,slow=7.6,SNR=3.5						
ARCES	ARCESS Array B	40.23	336	P	P	22 02 15.7	+0.2
	3.5nm,0.9s,baz=64,slow=2.8,SNR=5.4						
NB2	NORSAR Subarra	44.02	322	P	P	22 02 46.9	+0.4
	comp=Z,2.8nm,0.8s,baz=91,slow=7.9						
NOA	NORSAR Array B	44.02	322	P	P	22 02 47.0	+0.4
	comp=Z,0.6nm,0.5s,baz=91,slow=7.6,SNR=5.2						
INK	Inuvik	72.00	10	P	P	22 06 03.1	+0.6
	comp=Z,1.2nm,0.9s,baz=33,slow=11,SNR=2.9						
ILAR	Eielson Array	72.74	17	P	P	22 06 08.2	+1.2
	comp=Z,0.8nm,0.9s,baz=314,slow=4.6,SNR=4.3						

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*SOME **07** 22:01:14.0,38°.42N×72°.53E,h5^{km}*

*IDC **07** 22:01:18.5±0.8,38°.27N×73°.08E,h0^{km},mb4.0/20, mb1 4.1/27,mb1mx4.0/61,mbtmp4.0/27,ML3.6/7,MS3.3/4, Ms1 3.3/4,ms1mx2.8/54,Error ellipse: s-maj=16.3km s-min=13.2km az=179.0*

*BJI **07** 22:01:20.1±0.0,38°.48N×73°.03E,h5^{km},mB4.8/15, mb4.2/24,ML4.0/6,Ms4.2/5,Ms7 4.1/6*

*MOS **07** 22:01:21.4±1.2,38°.58N×72°.98E,h12^{km},mb4.5/10,Error ellipse: s-maj=7.5km s-min=4.3km az=80.5*

*NEIC **07** 22:01:22.9±2.9,38°.59N±0°.04×72°.91E±0°.07,h10^{km}±1^{km}, mb4.6/30,Error ellipse: s-maj=11.0km s-min=3.1km az=122.0*

*NNC **07** 22:01:22.0±3.6,38°.41N×73°.19E,h0^{km},mb4.8,mpv4.5, Error ellipse: s-maj=30.9km s-min=20.6km az=150.0*

ISC 07 22:01:19.7±0.4,38°.30N±0°.03×73°.15E±0°.03,h10^{km},n210, σ2^{s}.44/223,mb4.2/42,MS3.2/4,13C-16D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.58	319		Pn	22 01 45.3	-2.8
GAR	Garm	2.32	288	Pn	Pb	22 02 00.1	-1.7
KSH	Kashi	2.52	60	Pn	Pn	22 01 57.5	-3.3
KSH				Sn	Sn	22 02 24.4	-7.3
KSH				smax	smax		
	comp=N,1µm,0.8s						
KSH				smax	smax		
	comp=E,1µm,0.9s						
BTK	Batken	2.52	315	PN	Pb	22 02 03.1	-2.0
BTK	Batken	2.52	315		Pb	22 02 03.1	-2.0
CHGR	Chuyangaron	3.15	278	Pn	Pb	22 02 11.7	-4.1
AML	Almayashu	3.85	6	P	Pn	22 02 22.2	+2.8
	SNR=23						
UCH	Uchtor	4.06	14	P	Pn	22 02 25.6	+3.2
	SNR=16						
TAS	Tashkent	4.24	317	PN	Pn	22 02 23.9	-0.4
TAS	Tashkent	4.24	317	Pn	Pn	22 02 23.9	-0.4
EKS2	Erkin-Say	4.39	6	P	Pn	22 02 30.1	+3.6
	SNR=13						
MRKS	Merke	4.44	1	*e*P	Pb	22 02 36.9	-1.0
	27nm,0.3s						
MRKS				*e*S	Sg	22 03 37.4	-5.0
	84nm,0.8s						
MRKS	Merke	4.44	1	Pg	Pb	22 02 36.8	-1.1
	41nm,0.3s						
MRKS				Lg	Lg	22 03 38.0	
	71nm,0.5s						
AAK	Ala-Archa	4.46	13	Pn	Pn	22 02 31.3	+3.8
	4.5nm,0.3s,baz=172,slow=6.7,SNR=29						
AAK				Sn	Sn	22 03 23.3	+3.8
	baz=302,slow=22,SNR=1.4						
AAK				LR	LR	22 03 36.7	
	comp=Z,17nm,18.8s,baz=52,slow=31						
AAK	Ala-Archa	4.46	13	P	Pn	22 02 30.8	+3.3
	SNR=20						
AAK	Ala-Archa	4.46	13	*ce*PN	Pn	22 02 30.3	+2.8
AAK				pmax	pmax		
	comp=Z,43nm,0.8s						
AAK	Ala-Archa	4.46	13	⇓Pn	Pn	22 02 30.7	+3.3
	comp=Z,65nm,0.8s						
AAK				Sn	Sn	22 03 24.4	+5.0
	comp=Z,100nm,1.0s						
AAK	Ala-Archa	4.46	13	Pn	Pn	22 02 29.4	+1.9
KBK	Karagaybulak	4.57	17	P	Pn	22 02 33.1	+4.1
	SNR=17						
ULHL	Ulahol	4.60	30	P	Pn	22 02 34.3	+4.8
	SNR=8.9						
NIL	Nilore	4.64	179	PN	Pb	22 02 37.6	-3.6
NIL	Nilore	4.64	179		Pb	22 02 37.6	-3.6
FRU1	Bishkek	4.65	14	PN	Pn	22 02 32.2	+2.2
FRU1	Bishkek	4.65	14		Pn	22 02 32.2	+2.2
BOOM	Boomskoye usch	4.70	26	PN	Pn	22 02 33.5	+2.6
BOOM	Boomskoye usch	4.70	26		Pn	22 02 33.5	+2.6
DZA	Taraz	4.79	344	*e*P	Pn	22 02 35.7	+3.7
	comp=Z,84nm,0.5s						
DZA				*e*S	Sb	22 03 34.5	-7.1
	comp=Z,349nm,0.6s						
DZA	Taraz	4.79	344	*e*Pg	Pb	22 02 45.8	+1.9
	baz=343						
DZA	Taraz	4.79	344	*e*PN	Pb	22 02 45.7	+1.9
CHM	Chimkent	4.84	327	*e*P	Pb	22 02 38.0	-6.7
	comp=Z,50nm,0.5s						
CHM				*e*S	Sb	22 03 38.6	-4.5
	comp=Z,185nm,0.7s						
CHMS	Chumysh	4.85	14	P	Pn	22 02 33.6	+0.8
	SNR=14						
KDJ	Kajisay	4.92	38	PN	Pn	22 02 36.7	+2.9
KDJ	Kajisay	4.92	38	Pn	Pn	22 02 36.7	+2.9
TARG	Taragay, Kyrgy	4.95	45	Pn	Pn	22 02 38.6	+4.1
TKM2	Tokmak 2	4.98	21	P	Pn	22 02 38.9	+4.2
	SNR=8.2						
TKM2	Tokmak 2	4.98	21	⇓Pn	Pn	22 02 39.2	+4.5
	comp=Z,30nm,0.6s						
TKM2				⇓Lg	Lg	22 03 58.3	
	comp=Z,37nm,0.6s						
KBL	Kabul	5.00	223	PN	Pb	22 02 41.3	-6.2
KBL	Kabul	5.00	223	Pn	Pb	22 02 41.3	-6.2
KK07	Karatay Array	5.19	338	⇑Pn	Pn	22 02 39.0	+1.5
	comp=Z,20nm,0.5s,baz=145,slow=12						
KK07				⇑Sn	Sn	22 03 40.5	+3.1
	comp=Z,74nm,0.6s,baz=142,slow=24						
KK07				⇑Lg	Lg	22 04 02.2	
	comp=Z,69nm,0.6s						
KKAR	Karatay Array	5.20	338	PN	Pn	22 02 38.6	+1.0
KKAR	Karatay Array	5.20	338		Pn	22 02 38.6	+1.0
KST	Kastek	5.20	23	*e*P	Pb	22 02 50.9	0.0
	comp=Z,25nm,0.8s						
KST				*e*S	Sg	22 04 01.1	-5.6
	comp=Z,76nm,0.4s						
KST	Kastek	5.20	23	Pg	Pb	22 02 50.7	-0.1
	comp=Z,44nm,0.5s						
KST				Lg	Lg	22 04 01.1	
	comp=Z,76nm,0.4s						
SGDS	Sogindy	5.27	12	*e*Pg	Pb	22 02 55.4	+3.4
	baz=14						
DGS	Degeres	5.33	21	*e*P	Pb	22 02 55.4	+2.4
	comp=Z,27nm,0.5s						
DGS				*e*S	Sg	22 04 08.8	-1.9
	comp=Z,70nm,0.9s						
DGS	Degeres	5.33	21	Pg	Pb	22 02 54.8	+1.9
	comp=Z,27nm,0.5s						
DGS				Lg	Lg	22 04 08.8	
	comp=Z,70nm,0.9s						
MTBS	Maitube	5.43	26	*e*P	Pb	22 02 57.4	+2.6
	comp=Z,23nm,0.5s						
MTBS				*e*S	Sg	22 04 11.4	-2.7
	comp=Z,48nm,1.2s						
TNSS	Tian-Shan	5.55	30	*e*Pn	Pn	22 02 43.4	+0.8
	baz=34						
TNSS				*e*Pg	Pg	22 03 01.9	-4.1
	baz=34						
AAA	Alma-Ata	5.68	29	*e*P	Pg	22 03 04.9	-3.5
	comp=Z,30nm,0.3s						
AAA				*e*S	Sg	22 04 25.2	+3.2
	comp=Z,59nm,0.7s						
AAA	Alma-Ata	5.68	29	*e*Pg	Pg	22 03 04.5	-3.9
	baz=33						
MDOK	Medeo	5.69	30	*e*P	Pb	22 03 02.4	+3.2
	comp=Z,14nm,0.8s						
MDOK				*e*S	Sg	22 04 20.9	-1.5
	comp=Z,55nm,0.7s						
MDOK	Medeo	5.69	30	⇓Pn	Pn	22 02 48.7	+4.3
	comp=Z,30nm,0.6s						
MDOK				⇓Lg	Lg	22 04 21.6	
	comp=Z,77nm,0.8s						
MDOK	Medeo	5.69	30	Pg	Pb	22 03 01.6	+2.4
	comp=Z,21nm,0.6s						
MDOK				Lg	Lg	22 04 21.1	
	comp=Z,55nm,0.7s						
KNDC	Almaty	5.71	29	⇓Pg	Pg	22 03 04.9	-4.1
	comp=Z,129nm,0.8s						
KNDC				⇓Lg	Lg	22 04 22.4	
	comp=Z,335nm,1.1s						
KRBS	Karabastau	5.72	19	*e*P	Pb	22 03 02.3	+2.6
	comp=Z,15nm,0.9s						

KRBS				eS	Sg	22 04 20.2	-3.2
	comp=Z,28nm,0.7s						
KRBS	Karabastau	5.72	19	Pg	Pb	22 03 01.6	+1.9
	comp=Z,37nm,0.4s						
KRBS				Lg	Lg	22 04 20.2	
	comp=Z,28nm,0.7s						
KOTS	Kotyrbulak	5.78	30	eP	Pb	22 03 04.7	+4.1
	comp=Z,34nm,0.9s						
KOTS				eS	Sg	22 04 24.6	-0.6
	comp=Z,90nm,0.5s						
PRZ	Przheval'sk	5.79	42	PN	Pn	22 02 50.0	+4.1
PRZ	Przheval'sk	5.79	42	Pn	Pn	22 02 50.0	+4.1
KTBS	Karatobe	6.03	25	eP	Pb	22 03 07.2	+2.2
	comp=Z,28nm,0.5s						
KTBS				eS	Sg	22 04 29.2	-4.1
	comp=Z,78nm,0.6s						
KTBS	Karatobe	6.03	25	Pg	Pb	22 03 07.2	+2.2
	comp=Z,28nm,0.5s						
KTBS				Lg	Lg	22 04 29.2	
	comp=Z,78nm,0.6s						
KUU	Kurty	6.09	22	eP	Pb	22 03 08.5	+2.6
	comp=Z,8.5nm,0.9s						
KUU				eS	Sg	22 04 30.7	-4.4
	comp=Z,75nm,0.7s						
KUU	Kurty	6.09	22	ePn	Pn	22 02 49.5	-0.2
	baz=25						
KUU				ePg	Pg	22 03 11.2	-5.0
	baz=25						
KUU	Kurty	6.09	22	ePN	Pn	22 02 49.5	-0.2
KUU				e		22 03 11.2	
KUU	Kurty	6.09	22	Pg	Pb	22 03 08.1	+2.2
	comp=Z,9.1nm,0.7s						
KUU				Lg	Lg	22 04 29.1	
	comp=Z,75nm,0.7s						
SATY	Saty	6.21	38	eP	Pg	22 03 14.6	-4.0
	comp=Z,33nm,0.7s						
SATY				eS	Sg	22 04 41.2	+2.1
	comp=Z,44nm,1.9s						
SATY	Saty	6.21	38	ePn	Pn	22 02 53.4	+1.8
	baz=42						
SATY	Saty	6.21	38	ePN	Pn	22 02 53.3	+1.8
KURS	Kuram	6.43	35	eP	Pb	22 03 15.8	+4.1
	comp=Z,13nm,1.8s						
KURS				eS	Sg	22 04 43.5	-2.6
	comp=Z,28nm,1.2s						
DHRM	DHARAMSHALA	6.56	156	eP	Pn	22 03 01.8	+5.3
DHRM				eS	Sn	22 04 18.6	+7.2
DHRM				IAML		22 04 30.4	
	comp=E,124nm,0.4s						
DHRM				IAML		22 04 33.7	
	comp=N,106nm,0.6s						
UZB	Uzynbulak	6.59	41	ePn	Pn	22 02 58.7	+2.0
	baz=45						
UZB	Uzynbulak	6.59	41	ePN	Pn	22 02 58.7	+2.0
KPKS	Kokpek	6.65	37	eP	Pb	22 03 20.6	+5.1
	comp=N,16nm,0.9s						
KPKS				eS	Sg	22 04 51.4	-1.8
	comp=N,41nm,0.8s						
KPKS	Kokpek	6.65	37	ePn	Pn	22 02 58.8	+1.2
	baz=41						
KPKS	Kokpek	6.65	37	ePN	Pn	22 02 58.8	+1.2
BTLS	Baital	6.77	5	ePg	Pb	22 03 21.9	+4.4
	baz=6.7						
SHLS	Shalkode	6.82	43	ePn	Pn	22 03 05.4	+5.4
	comp=N,6.4nm,1.0s,baz=48						
SHLS	Shalkode	6.82	43	ePN	Pn	22 03 05.3	+5.3
SHLS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARXS	Arharly	6.88	29	eP	Pb	22 03 24.0	+4.6
	comp=Z,15nm,0.4s						
ARXS				eS	Sg	22 04 57.8	-2.7
	comp=Z,26nm,0.5s						
PDGK	Podgornoye	6.96	42	⇑Pn	Pn	22 03 04.0	+2.3
	comp=Z,15nm,0.7s						
BHK	Bhakra	7.37	158	eP	Pn	22 03 15.5	+8.1
TDK	Taldyqorghan	7.77	29	ePn	Pn	22 03 13.2	+0.4
	baz=32						
TDK	Taldyqorghan	7.77	29	eP	Pn	22 03 13.2	+0.4
SMLA	Simla	7.88	154	eP	Pn	22 03 19.1	+4.8
SMLA				eS	Sn	22 04 48.5	+5.0
SMLA				IAML		22 04 56.4	
	comp=N,94nm,0.4s						
SMLA				IAML		22 04 56.5	
	comp=E,99nm,0.5s						
HRA	Herat	9.62	249	Pn	Pn	22 03 41.5	+3.0
KUDL	Kundal	10.50	164	eP	Pn	22 03 53.5	+3.2
MAKZ	Makanchi	10.71	35	P	Pn	22 03 55.9	+2.8
MAKZ	Makanchi	10.71	35	Pn	Pn	22 03 55.9	+2.8
MK31	Makanchi Array	10.84	36	d iP	Pn	22 03 58.1	+3.2
MK31	Makanchi Array	10.84	36	Pn	Pn	22 03 56.5	+1.6
MKAR	Makanchi Array	10.84	36	Pn	Pn	22 03 57.5	+2.6
	comp=E,0.2nm,0.3s,baz=217,slow=12,SNR=9.6						
MKAR				LR	LR	22 08 27.2	
	comp=E,107nm,19.4s,baz=226,slow=39						
MKAR	Makanchi Array	10.84	36	P	Pn	22 03 56.2	+1.3
MKAR	Makanchi Array	10.84	36		Pn	22 03 56.2	+1.3
GEYT	Alibeck	11.85	273	Pn	Pn	22 04 07.9	-0.8
	comp=E,1.0nm,0.3s,baz=105,slow=9.9,SNR=7.2						
GEYT				Sn	Sn	22 06 15.9	-5.1
	comp=E,0.3nm,0.3s,baz=66,slow=32,SNR=2.3						
GEYT	Alibeck	11.85	273	Pn	Pn	22 04 08.6	-0.1
GYA0B	ALIBECK ARRAY	11.85	273	⇑Pn	Pn	22 04 10.5	+1.8
GYA0B				⇑Sn	Sn	22 06 23.6	+2.6
GYA0B	ALIBECK ARRAY	11.85	273	Pn	Pn	22 04 08.5	-0.3
WMQ	Urumqi	12.29	59	eP	Pn	22 04 18.6	+3.9
WMQ				pP		22 04 21.5	
WMQ				sP		22 04 25.8	
WMQ				pmax	pmax		
	comp=E,17nm,0.7s						
WMQ				pmax	pmax		
	comp=E,120nm,4.3s						
KURBB	Kurchatov Arra	12.90	16	Pn	Pn	22 04 21.2	-1.9
	comp=E,0.1nm,0.3s,baz=202,slow=17,SNR=1.9						
KURK	Kurchatov	13.01	16	P	Pn	22 04 23.3	-1.2
KURK	Kurchatov	13.01	16		Pn	22 04 23.3	-1.2
PYUN	Piuthan	13.08	138	eP	Pn	22 04 24.5	-1.3
	comp=E,25nm,0.4s						
PYUN				eS	Sn	22 06 48.4	-3.1
SEM	Semipalatinsk	13.12	20	ePn	Pn	22 04 26.1	-0.1
	baz=22						
SEM	Semipalatinsk	13.12	20	eP	Pn	22 04 26.1	-0.1
DANN	Dangsing	13.30	135	eP	Pn	22 04 27.6	-1.2
	comp=E,27nm,0.5s						
DANN				eS	Sn	22 06 54.6	-2.3
KOLN	Koldanda	13.67	137	eP	Pn	22 04 32.4	-1.4
	comp=E,16nm,0.5s						
KOLN				eS	Sn	22 07 02.7	-3.1
GKN	Gorkha	14.06	134	eP	Pn	22 04 37.3	-1.8
	comp=E,12nm,0.3s						
GKN				eS	Sn	22 07 11.9	-3.4
AB31	Akbulak array	14.50	323	Pn	Pn	22 04 45.2	+0.3
	comp=E,4.1nm,0.6s,baz=131,slow=13,SNR=76						
AB31				⇓Sn	Sn	22 07 28.2	+2.6
	comp=E,4.0nm,0.7s,baz=131,slow=25,SNR=3.5						
ABKAR	Akbulak array	14.50	323	Pn	Pn	22 04 41.3	-3.6
KKN	Kakani	14.59	132	eP	Pn	22 04 44.4	-2.0
	comp=E,11nm,0.5s						
DMN	Daman	14.63	133	eP	Pn	22 04 45.2	-1.8
PKIN	Phulchoki	14.82	133	eP	Pn	22 04 47.3	-2.3
	comp=E,12nm,0.5s						
PKIN				eS	Sn	22 07 30.4	-3.6
PKI	Pulchoki	14.83	133	eP	Pn	22 04 47.6	-2.2
	comp=E,7.5nm,0.4s						
PKI				eS	Sn	22 07 30.7	-3.6
BVAR	Borovoye Array	14.85	353	Pn	Pn	22 04 48.5	-1.2
	comp=E,0.3nm,0.3s,baz=182,slow=14,SNR=4.0						
BRVK	Borovoye	14.90	353	⇓eP	Pn	22 04 50.4	+0.2
BRVK				pmax	pmax		
	comp=Z,19nm,1.3s						
BRVK	Borovoye	14.90	353	Pn	Pn	22 04 49.6	-0.7
BRVK				P	P	22 04 56.2	+0.2
DGZ	Jazzator, Alta	15.32	37	⇑eP	Pn	22 04 56.3	+0.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BHPL	Bhopal	15.45	165	eP	P	22 05 08.3	+6.0
BHPL				eS	Sn	22 07 46.7	-2.3
RAMN	Ramite	15.99	131	eP	Pn	22 05 02.9	-2.1
	comp=Z,16nm,0.4s						
AKTO	Aktyubinsk	16.22	323	Pn	Pn	22 05 06.4	-1.1
	comp=Z,1.3nm,0.3s,baz=118,slow=11,SNR=11						
AKTO				Sn	Sn	22 07 53.4	-14
	comp=Z,0.1nm,0.3s,baz=98,slow=15,SNR=1.4						
AKTO	Aktyubinsk	16.22	323	⇓Pn	P	22 05 09.5	-1.2
	comp=Z,19nm,0.8s						
ODAN	Odare	16.54	129	eP	Pn	22 05 09.5	-2.5
	comp=Z,26nm,0.6s						
ZAA0	Zalesovo Array	17.58	23		P	22 05 25.1	-0.6
ZALV	Zalesovo Beam	17.58	23	P	P	22 05 24.5	-1.2
	comp=Z,0.5nm,0.3s,baz=211,slow=12,SNR=11						
ZALV	Zalesovo Beam	17.58	23		P	22 05 25.1	-0.6
ARU	Arti	20.58	337	P	P	22 05 58.1	-0.4
	comp=Z,1.9nm,0.7s,baz=144,slow=9.8,SNR=5.7						
ARU	Arti	20.58	337	d iP	Pn	22 05 58.6	-2.1
ARU						22 06 13.0	
ARU				S	S	22 09 45.6	-2.8
ARU				SS	SnSn	22 10 04.2	-3.0
ARU				pmax	pmax		
	comp=Z,24nm,2.1s						
ARU	Arti	20.58	337	P	P	22 05 58.4	-0.1
ARU				IAmb	IAmb	22 06 00.4	
	comp=Z,15nm,1.3s						
GTA	Gaotai	20.78	79	⇓P	Pn	22 06 03.4	0.0
GTA				pP	sP	22 06 09.0	+2.0
GTA				sP	pP	22 06 12.5	+7.4
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GROC	Groznyy	21.25	292	eP	P	22 06 05.1	-0.8
GROC				e		22 06 24.0	
GROC				pmax	pmax		
	comp=Z,30nm,0.7s						
GNI	Garni	22.05	284	P	P	22 06 15.8	+1.2
	comp=Z,3.5nm,0.8s,baz=88,slow=23,SNR=2.2						
GNI	Garni	22.05	284	ceP	P	22 06 21.2	+6.5
GNI				pmax	pmax		
	comp=Z,25nm,1.3s						
GNI	Garni	22.05	284	P	P	22 06 16.0	+1.3
GNI				IAmb	IAmb	22 06 22.0	
	comp=Z,20nm,0.9s						
ZEI	Tsey	22.61	291	eP	P	22 06 22.6	+1.8
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BELG	Belogornoye	22.66	317	P	P	22 06 20.1	-0.8
	comp=Z,32nm,0.7s,baz=38,slow=1.6,SNR=11						
BELG	Belogornoye	22.66	317	i P	P	22 06 19.8	-1.0
NCK	Nalchik	22.87	293	⇓eP	P	22 06 28.3	+5.1
NCK				pmax	pmax		
	comp=Z,12nm,0.8s						
ONI	Oni	22.94	290	P	P	22 06 25.1	+1.0
ONI				pmax	pmax		
	comp=Z,23nm,0.7s						
ONI	Oni	22.94	290	P	P	22 06 25.1	+1.0
ONI				IAmb	IAmb	22 06 31.8	
	comp=Z,23nm,0.7s						
KARS	Kars	23.28	285	P	P	22 06 28.7	+1.1
KARS				pmax	pmax		
	comp=Z,32nm,1.0s						
KARS	Kars	23.28	285	P	P	22 06 28.7	+1.1
KARS				IAmb	IAmb	22 06 35.4	
	comp=Z,32nm,1.0s						
KBZ	Khabaz	23.39	293	P	P	22 06 28.8	+0.4
	comp=Z,1.6nm,0.7s,baz=316,slow=23,SNR=3.1						
KIV	Kislovodsk	23.55	294	eP	P	22 06 31.4	+1.1
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,40nm,14.0s						
TLY	Talaya	25.17	48	P	P	22 06 46.8	+1.8
	comp=Z,2.7nm,0.6s,baz=237,slow=12,SNR=2.5						
TLY	Talaya	25.17	48	P	P	22 06 48.6	+3.5
KIRV	Kirov	25.44	331	⇑eP	P	22 06 47.5	+0.1
SONM	Songino Array	25.92	58	P	P	22 06 54.5	+2.5
	comp=Z,4.0nm,0.9s,baz=262,slow=9.6,SNR=16						
SONM				LR	LR	22 18 28.3	
	comp=Z,85nm,20.9s,baz=280,slow=40						
SONM	Songino Array	25.92	58	P	P	22 06 54.7	+2.6
SONM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SONM	Songino Array	25.92	58	P	P	22 06 54.7	+2.6
ULN	Ulaanbaatar	26.36	58	deP	P	22 07 00.2	+4.1
ULN				pmax	pmax		
	comp=Z,7.0nm,2.5s						
ULN	Ulaanbaatar	26.36	58	P	P	22 06 57.3	+1.2
HHC	Hu-ho-hao-te	29.57	73	eP	P	22 07 26.8	+2.1
HHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,4.5s						
CMAR	Chiang Mai Arr	29.93	124	P	P	22 07 28.6	+0.6
	comp=Z,1.0nm,0.3s,baz=315,slow=11,SNR=2.1						
NRIK	Noril'sk	32.06	10	P	P	22 07 46.8	+0.5
	comp=Z,2.1nm,0.3s,baz=197,slow=5.5,SNR=4.2						
NRIK	Noril'sk	32.06	10	⇑eP	P	22 07 47.0	+0.7
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NRIK	Noril'sk	32.06	10	P	P	22 07 46.0	-0.3
NRIK				IAmb	IAmb	22 07 48.1	
	comp=Z,5.0nm,1.1s						
AKASG	Malin Array Be	33.21	306	P	P	22 07 56.5	0.0
	comp=Z,0.7nm,0.4s,baz=77,slow=7.5,SNR=6.5						
MLR	Muntele Rosu	35.44	297	P	P	22 08 16.8	+0.7
MLR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MLR	Muntele Rosu	35.44	297	P	P	22 08 16.8	+0.7
MLR				IAmb	IAmb	22 08 31.1	
	comp=Z,7.3nm,1.2s						
BURAR	Bucovina Array	35.79	301	P	P	22 08 20.1	+1.0
FIA1	FINESS Array S	36.99	324	P	P	22 08 28.8	-0.1
FINES	FINESS Array B	36.99	324	P	P	22 08 28.9	-0.1
	comp=Z,3.4nm,0.8s,baz=114,slow=10.0,SNR=20						
KWP	Kalwaria Pacla	37.37	304	P	P	22 08 33.3	+0.9
KWP				pmax	pmax		
	comp=Z,37nm,1.0s						
KWP	Kalwaria Pacla	37.37	304	P	P	22 08 33.3	+0.9
NJ2	Nanjing	37.58	85	eP	P	22 08 38.5	+4.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VTS	Vitosha	37.78	293	P	P	22 08 36.2	+0.1
VTS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
VTS	Vitosha	37.78	293	P	P	22 08 36.2	+0.1
DIVS	Divibare	39.83	296	P	P	22 08 54.2	+0.9
DIVS				IAmb	IAmb	22 08 55.7	
	comp=Z,7.2nm,1.3s						
ARCES	ARCESS Array B	40.16	336	P	P	22 08 55.4	-0.2
	comp=Z,2.9nm,0.5s,baz=107,slow=8.2,SNR=20						
ARCES	ARCESS Array B	40.16	336	P	P	22 08 55.4	-0.2
ARCES				IAmb	IAmb	22 09 00.7	
	comp=Z,47nm,1.5s						
YAK	Yakutsk	41.51	36	⇓eP	P	22 09 10.1	+3.4
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PSI	Prapat	42.47	140	LR	LR	22 28 10.6	
	comp=Z,26nm,18.9s,baz=262,slow=38						
KSRS	Korea Array	42.70	73	LR	LR	22 29 31.1	
	comp=Z,40nm,19.2s,baz=258,slow=40						
GERES	GERESS Array B	43.32	304	P	P	22 09 23.2	+1.5
	comp=Z,0.3nm,0.5s,baz=34,slow=25,SNR=4.0						
TIXI	Tiksi	43.47	22	⇑eP	P	22 09 25.5	+3.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NC405	NORSAR Array S	43.76	322	P	P	22 09 23.9	-1.2
NB2	NORSAR Subarra	44.00	322	P	P	22 09 26.7	-0.3
	comp=Z,2.0nm,0.6s,baz=92,slow=8.6						
NOA	NORSAR Array B	44.00	322	P	P	22 09 26.7	-0.3
	comp=Z,3.3nm,0.7s,baz=92,slow=7.9,SNR=14						
NC204	NORSAR Array S	44.23	322	P	P	22 09 28.8	-0.1
NC204				IAmb	IAmb	22 09 34.9	
	comp=Z,25nm,1.2s						
KONO	Kongsberg	44.79	320	P	P	22 09 33.3	0.0
KONO				pmax	pmax		
	comp=Z,28nm,1.4s						
KONO	Kongsberg	44.79	320	P	P	22 09 33.3	0.0
KONO				IAmb	IAmb	22 09 51.8	
	comp=Z,28nm,1.4s						
SENIN	Lac Senin/Sane	48.07	302	P	P	22 10 01.1	+1.5
SENIN				IAmb	IAmb	22 10 09.9	
	comp=Z,9.3nm,1.4s						
ESDC	Sonseca Array	58.13	298	P	P	22 11 14.1	+0.4
	comp=Z,0.6nm,0.7s,baz=56,slow=7.0,SNR=6.0						
ESDC	Sonseca Array	58.13	298	P	P	22 11 14.2	+0.6
SUMG	Summit	59.92	341	P	P	22 11 27.2	+1.3
SUMG	Summit	59.92	341	P	P	22 11 27.2	+1.3
TORD	Torodi Ar. Bea	67.46	269	P	P	22 12 15.0	-1.0
	comp=Z,1.0nm,0.6s,baz=47,slow=5.6,SNR=9.2						
TORD	Torodi Ar. Bea	67.46	269	P	P	22 12 15.8	-0.2
TORD				IAmb	IAmb	22 12 25.8	
	comp=Z,2.1nm,1.2s						
TOLK	Toolik Lake Re	68.75	15	P	P	22 12 23.8	+0.5
TOLK				IAmb	IAmb	22 12 27.6	
	comp=Z,5.2nm,0.6s						
IMAR	Indian Mountai	69.94	19	P	P	22 12 30.8	+0.1
BMAR	Burnt Mountain	70.79	14	P	P	22 12 37.1	+1.2
INK	Inuvik	71.85	10	P	P	22 12 43.2	+1.0
INK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
INK	Inuvik	71.85	10	P	P	22 12 43.2	+1.0
INK				IAmb	IAmb	22 12 46.3	
	comp=Z,4.3nm,1.0s						
COLA	College	72.27	17	⇑eP	P	22 12 48.4	+3.6
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	72.58	17	P	P	22 12 46.4	-0.3
	comp=Z,1.6nm,0.9s,baz=318,slow=5.8,SNR=13						
ILAR	Eielson Array	72.58	17	P	P	22 12 45.6	-1.1
PPLA	Purkeypile	72.83	20	P	P	22 12 48.5	+0.2
SCRK	Sand Creek	73.91	16	P	P	22 12 55.6	+0.9
SCRK				IAmb	IAmb	22 12 58.4	
	comp=Z,2.6nm,0.8s						
DOT	Dot Lake	74.18	16	P	P	22 12 57.6	+1.4
GHO	Glory Hole Cre	74.62	19	P	P	22 12 59.1	+0.3
SML	Sawmill	74.74	19	P	P	22 12 59.5	0.0
SCM	Sheep Creek Mo	74.97	19	P	P	22 13 01.1	+0.2
SCM				pmax	pmax		
	comp=Z,29nm,1.5s						
SCM	Sheep Creek Mo	74.97	19	P	P	22 13 01.1	+0.2
RC01	Rabbit Creek A	74.97	20	P	P	22 13 01.4	+0.6
BCAR	Beaver Creek A	75.19	16	P	P	22 13 03.2	+1.2
HYT	Haines Junctio	78.09	15	P	P	22 13 19.7	+1.1
HYT				IAmb	IAmb	22 13 23.5	
	comp=Z,4.7nm,0.8s						
YKA	Yellowknife Ar	79.36	4	P	P	22 13 25.9	+0.5
	comp=Z,1.0nm,0.8s,baz=344,slow=5.5,SNR=5.8						
WRA	Warramunga Arr	81.52	124	P	P	22 13 37.4	-0.2
	comp=Z,0.4nm,0.7s,baz=326,slow=4.9,SNR=2.1						
ASAR	Alice Springs	83.91	126	P	P	22 13 50.8	+0.9
	comp=Z,0.1nm,0.3s,baz=330,slow=4.7,SNR=1.5						
PDAR	Pinedale Array	99.28	2	P	Pdif	22 15 02.9	+0.7
	comp=Z,0.1nm,0.5s,baz=334,slow=6.0,SNR=1.8						

IDC ***07*** *22:10:38.0±3.4, 18°.39S×169°.11E, h231^{km}±36^{km}, mb3.5/8, mb1 3.6/9, mb1mx3.2/41, mbtmp4.1/9, Error ellipse: s-maj=41.3km s-min=21.9km az=159.0*

NEIC ***07*** *22:10:38.9±1.4, 18°.57S±0°.04×169°.1E±0°.2, h234^{km}±12^{km}, mb4.0/8, Error ellipse: s-maj=23.1km s-min=5.9km az=85.0*

NOU ***07*** *22:10:38.0, 18°.67S×169°.46E, h228^{km}, MLv4.4/13, Vanuatu Islands*

ISC 07 22:10:38.3±0.8**, 18°.62S**±0°.06×**169°.1E**±0°.1**, h234^{km}, n39, σ1ˢ.23**/40**, mb3.9**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.05	321	P	Pn	22 11 13.7	+1.8
DVP	Devils Point	1.25	315	P	Pn	22 11 14.5	+1.3
LIFNC	LIFOU	2.79	219		Pn	22 11 27.6	+0.2
LIFNC	LIFOU	2.79	219	P	Pn	22 11 28.0	+0.6
MARNC	Mare, Loyalty	3.03	200	Pn	Pn	22 11 29.9	-0.2
MARNC	Mare, Loyalty	3.03	200	P	Pn	22 11 30.3	+0.2
SANVU	Saraoutou	3.64	330	Pn	Pn	22 11 37.5	+0.3
SANVU	Saraoutou	3.64	330	P	Pn	22 11 39.3	+2.1
YATNC	Mamie plateau,	4.01	211	P	Pn	22 11 41.7	+0.2
DZM	Mont Dzumac	4.26	216	ePn	Pn	22 11 46.0	+1.5
	58nm,1.4s						
DZM	Mont Dzumac	4.26	216	P	Pn	22 11 46.3	+1.8
	4.0nm,0.3s,baz=304,slow=21,SNR=24						
DZM				S	S	22 12 34.9	-2.0
	3.0nm,0.3s,baz=120,slow=23,SNR=1.6						
DZM	Mont Dzumac	4.26	216	Pn	Pn	22 11 45.7	+1.2
DZM	Mont Dzumac	4.26	216	P	Pn	22 11 46.3	+1.8
PINNC	Pines Island,	4.28	201		Pn	22 11 45.5	+0.8
OUENC	Ouen Island, N	4.34	209		Pn	22 11 47.0	+1.5
OUENC	Ouen Island, N	4.34	209	P	Pn	22 11 47.0	+1.5
NOUC	Port Laguerre	4.36	217	P	Pn	22 11 47.7	+2.0
ONTNC	Ouen Toro	4.44	214	Pn	Pn	22 11 47.8	+1.1
ONTNC	Ouen Toro	4.44	214	P	Pn	22 11 47.9	+1.2
RAO	Raoul Island	15.88	134	P	Pn	22 14 10.8	+1.2
	80nm,0.3s,baz=256,slow=20,SNR=2.6						
OUZ	Omahuta	17.01	167		P	22 14 22.2	+1.1
OUZ				IAmb	IAmb	22 14 22.9	
	comp=Z,12nm,0.9s						
BKZ	Black Stump Fm	21.45	164	P	P	22 15 08.5	+0.1
BKZ				IAmb	IAmb	22 15 13.9	
	comp=Z,4.9nm,0.7s						
CTA	Charters Tower	21.62	262	P	P	22 15 09.4	-0.8
	comp=Z,3.9nm,0.8s,baz=73,slow=6.0,SNR=1.6						
TUWZ	Tuamarina	23.11	171	P	P	22 15 25.0	+1.4
STKA	Stephens Creek	28.09	237	P	P	22 16 09.5	+1.1
	comp=Z,2.8nm,0.7s,baz=56,slow=11,SNR=5.6						
STKA	Stephens Creek	28.09	237	P	P	22 16 10.0	+1.5
WB0	Warramunga Arr	32.78	262	P	P	22 16 49.4	-0.4
WB0				IAmb	IAmb	22 16 51.9	
	comp=Z,2.7nm,0.9s						
WB2	Warramunga Arr	32.81	262	P	P	22 16 49.6	-0.5
WB2				IAmb	IAmb	22 17 17.8	
	comp=Z,3.3nm,1.1s						
WRA	Warramunga Arr	32.82	262	P	P	22 16 49.7	-0.5
	comp=Z,0.4nm,0.4s,baz=97,slow=8.6,SNR=17						
WRA	Warramunga Arr	32.82	262	P	P	22 16 48.9	-1.3
AS31	Alice Springs	33.17	255	P	P	22 16 53.5	+0.3
ASAR	Alice Springs	33.17	255	P	P	22 16 53.5	+0.3
	comp=Z,4.6nm,0.5s,baz=83,slow=8.9,SNR=73						
ASAR	Alice Springs	33.17	255	P	P	22 16 53.2	0.0
FITZ	Fitzroy Crossi	41.19	264	P	P	22 18 01.2	+0.7
	comp=Z,1.4nm,0.5s,baz=70,slow=7.7,SNR=10						
PEA0B	Petropavlovsk-	72.11	353	P	P	22 21 36.7	-0.2
PETK	Petropavlovsk-	72.11	353	P	P	22 21 36.5	-0.3
	comp=Z,2.2nm,0.7s,baz=179,slow=13,SNR=3.6						
PETK	Petropavlovsk-	72.11	353	P	P	22 21 37.2	+0.3
SONM	Songino Array	86.66	323	P	P	22 22 54.7	-0.8
	comp=Z,0.7nm,0.8s,baz=146,slow=11,SNR=4.7						
ILAR	Eielson Array	89.67	17	P	P	22 23 06.5	-2.7
	comp=Z,0.3nm,0.8s,baz=228,slow=4.9,SNR=1.7						

IDC ***07*** *22:13:03.0±16.0, 48°.64S×126°.93E, h0^{km}, mb4.1/3, mb1 4.4/3, mb1mx3.8/28, mbtmp4.1/3, MS3.3/4, Ms1 3.2/4, ms1mx3.0/20, Error ellipse: s-maj=377.6km s-min=71.6km az=149.0*

NEIC ***07*** *22:13:04.0±0.6, 48°.8S±0°.1×126°.6E±0°.5, h10^{km}±2^{km}, mb4.2/8, Error ellipse: s-maj=54.6km s-min=10.6km az=73.0*

ISC 07 22:13:03.9±1.0**, 48°.7S**±0°.1×**126°.7E**±0°.4**, h10^{km}, n18, σ0ˢ.71**/13**, mb4.2**/7**, MS3.1**/4**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	16.64	322	T	T	22 33 51.1	
	baz=148,slow=74,SNR=5.3						
H01W2	Cape Leeuwin H	16.65	322	T	T	22 33 54.5	
	baz=148,slow=74,SNR=6.2						
H01W3	Cape Leeuwin H	16.66	322	T	T	22 33 52.8	
	baz=148,slow=74,SNR=4.2						
STKA	Stephens Creek	20.26	39	LR	LR	22 24 18.7	
	comp=Z,117nm,19.4s,baz=205,slow=34						
ASAR	Alice Springs	25.66	15	P	P	22 18 33.6	-0.2
	4.4nm,0.8s,baz=188,slow=9.7,SNR=28						
ASAR				LR	LR	22 27 50.9	
	comp=Z,48nm,20.4s,baz=192,slow=35						
ASAR	Alice Springs	25.66	15	P	P	22 18 33.8	0.0
AS31	Alice Springs	25.66	15	P	P	22 18 33.6	-0.3
WRA	Warramunga Arr	29.38	15	P	P	22 19 06.0	-1.2
	0.7nm,0.9s,baz=190,slow=9.4,SNR=4.0						
WRA				LR	LR	22 30 24.3	
	comp=Z,80nm,18.5s,baz=215,slow=36						
WRA	Warramunga Arr	29.38	15	P	P	22 19 06.4	-0.7
WB2	Warramunga Arr	29.38	15	P	P	22 19 08.5	+1.3
WB2				IAmb	IAmb	22 19 12.8	
	comp=Z,6.6nm,1.1s						
WRAB	Tennant Creek	29.39	15	P	P	22 19 07.1	-0.1
WRAB				IAmb	IAmb	22 19 10.1	
	comp=Z,4.9nm,1.1s						
WB0	Warramunga Arr	29.56	15	P	P	22 19 08.5	-0.3
WB0				IAmb	IAmb	22 19 13.5	
	comp=Z,6.1nm,1.2s						
VNDA	Vanda	31.88	166	P	P	22 19 29.1	+0.4
VNDA				IAmb	IAmb	22 19 38.7	
	comp=Z,3.3nm,1.1s						
MAW	Mawson	36.46	215	LR	LR	22 32 41.0	
	comp=Z,20nm,19.7s,baz=61,slow=32						
MYLDM	Lahad Datu	54.16	350	P	P	22 22 29.2	0.0
SNAA	Sanae	54.71	197	P	P	22 22 32.3	-0.5
CMAR	Chiang Mai Arr	71.31	332	P	P	22 24 24.4	+0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,1.0nm,0.3s,baz=177,slow=6.0,SNR=2.3						
CMAR	**Chiang Mai Arr**	71.31	332	P	P	22 24 23.4	-0.1

DSN ***07*** *22:14:59.9±2.2, 28°.67N×56°.50E, h10km, ML3.2/8, Error ellipse: s-maj=77.7km s-min=19.7km az=89.0*
TEH ***07*** *22:15:02.6, 28°.26N×57°.41E, h8km, ML3.3*
THR ***07*** *22:15:03.5±0.6, 28°.26N×57°.41E, h14km±9km, ML3.0*
OMAN ***07*** *22:15:09.3±1.2, 27°.85N×57°.47E, h118km±29km, mb4.0/1, ml3.3/6, Error ellipse: s-maj=16.3km s-min=10.3km az=28.0*
ISC 07 22:15:05.4±1.0**, 28°.13N**±0°.03×**57°.50E**±0°.04**, h27**km±9km**, n48, σ1ˢ.29**/61**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	0.25	135	*e*Pg	Pb	22 15 11.1	-0.8
KHNJ				*e*Sg	Sb	22 15 16.8	+0.4
IBND	**Bandar-abas**	1.09	232	*e*Pg	Pn	22 15 25.2	+0.4
IBND				*e*Sg	Sb	22 15 40.9	+1.6
IBND				*e*		22 15 54.3	
	comp=Z,12µm,0.5s						
KBAM	**BAM**	1.31	39	*e*Pg	Pn	22 15 26.3	-1.6
KBAM				*e*		22 15 47.5	
	comp=Z,2µm,0.4s						
GENO	**Geno**	1.38	239	*e*Pg	Pn	22 15 29.3	+0.3
GENO				*e*Sg	Sn	22 15 47.8	+1.3
NGRK	**Negar Kerman**	1.66	336	*e*Pg	Pn	22 15 31.4	-1.6
NGRK				*e*		22 15 59.5	
	comp=Z,6µm,0.3s						
CHMN	**Cheshme madani**	1.73	1	*e*Pg	Pn	22 15 32.6	-1.4
CHMN				*e*		22 15 37.3	
	comp=Z,3µm,0.5s						
KRBR	**Kerman**	1.96	341	*e*Pg	Pn	22 15 36.5	-0.6
KRBR				*e*Sg	Sn	22 16 01.1	+0.1
KRBR				IAML		22 16 09.4	
	comp=E,211nm,0.4s						
KRBR				IAML		22 16 09.6	
	comp=N,174nm,0.3s						
KRBR	**Kerman**	1.96	341	*e*Pg	Pn	22 15 36.5	-0.6
TVBK	**TV Kerman**	1.96	341	*e*Pn	Pn	22 15 36.5	-0.7
TVBK				*e*		22 15 41.4	
	comp=Z,5µm,0.3s						
SHME	**Shamm**	2.40	211	P	Pn	22 15 42.8	0.0
	SNR=6.9						
KHGB	**Koh Gabri**	2.42	338	*e*Pn	Pn	22 15 43.3	0.0
KHGB				*e*		22 15 49.2	
	comp=Z,2µm,0.6s						
BANOM	**Banah**	2.44	206	P	Pn	22 15 43.7	+0.3
BANOM				S	Sb	22 16 18.5	+0.2
BANOM	**Banah**	2.44	206	P	Pn	22 15 44.0	+0.5
	SNR=27						
BANOM				S	Sn	22 16 13.2	+0.8
MSFE	**Esma-Masafi**	3.00	204	P	Pn	22 15 53.7	+2.5
MDH	**Madha**	3.01	201	P	Pn	22 15 50.9	-0.4
MDH	**Madha**	3.01	201	P	Pn	22 15 50.9	-0.4
MDH				S	Sn	22 16 25.6	-1.0
ZHDN	**Zahedan**	3.17	66	*e*Pn	Pn	22 15 55.2	+1.6
ZHDN				*e*		22 16 55.6	
	comp=Z,317nm,1.3s						
ZHSF	**Zahedan**	3.23	62	*e*Pn	Pn	22 15 55.9	+1.5
ZHSF	**Zahedan**	3.23	62	*e*Pn	Pn	22 15 55.9	+1.5
UOSS	**Minazif**	3.37	200	P	Pn	22 15 58.6	+2.4
HATD	**Hatta, Dubai**	3.51	201	P	Pn	22 15 58.9	+0.8
ASHO	**Ashiyiah**	3.66	201	P	Pn	22 16 01.5	+1.2
ASHO	**Ashiyiah**	3.66	201	P	Pn	22 16 01.5	+1.2
FAQ	**Al Faqa, Dubai**	3.78	207	P	Pn	22 16 02.7	+0.9
FAQ				S	Sn	22 16 43.6	-1.8
NHDN	**Nehbandan**	3.94	34	*e*Pn	Pn	22 16 04.8	+0.7
GHIR	**Ghir-Karzin**	3.99	273	*e*Pn	Pn	22 16 05.3	+0.5
GHIR				IAML		22 16 54.2	
	comp=N,27nm,0.2s						
GHIR				IAML		22 16 55.0	
	comp=E,18nm,0.3s						
GHIR	**Ghir-Karzin**	3.99	273	*e*Pn	Pn	22 16 05.3	+0.5
ASUD	**Al Ashush, Dub**	3.99	210	P	Pn	22 16 03.6	-1.2
ASUD	**Al Ashush, Dub**	3.99	210	P	Pn	22 16 06.5	+1.7
	SNR=9.7						
BSRN	**Basiran**	4.08	20	*e*Pn	Pn	22 16 06.8	+0.7
BSRN				*e*Sg	Sb	22 17 07.3	+1.9
BSRN				IAML		22 17 34.7	
	comp=E,9.0nm,0.6s						
BSRN	**Basiran**	4.08	20	*e*Pn	Pn	22 16 06.8	+0.7
IMEH	**Mehriz**	4.11	323	*e*Pn	Pn	22 16 06.5	-0.1
AJN	**Ajban**	4.21	213	P	Pn	22 16 08.2	+0.5
	SNR=8.9						
AJN				S	Sn	22 16 55.1	-0.8
ALNE	**Al Ain**	4.35	202	P	Pn	22 16 11.4	+1.8
IKOO	**Kooshah**	4.48	16	*e*Pn	Pn	22 16 12.8	+1.1
ARQ	**Araqi**	4.85	191	P	Pn	22 16 16.9	+0.3
	SNR=30						
ITEG	**Tejag**	4.88	12	*e*Pn	Pn	22 16 18.3	+1.2
YZKH	**Yazd**	4.94	330	*e*Pn	Pn	22 16 17.6	-0.3
YZKH				IAML		22 17 50.0	
	comp=N,3.7nm,0.5s						
YZKH				IAML		22 17 51.2	
	comp=E,5.2nm,0.5s						
YZKH	**Yazd**	4.94	330	*e*Pn	Pn	22 16 17.6	-0.3
WSAR	**Wadi Sarin**	4.97	168	P	Pn	22 16 18.3	+0.1
WSAR				S	Sn	22 17 13.7	-1.2
SMDO	**Samad**	5.07	174	P	Pn	22 16 20.1	+0.4
SMDO				S	Sn	22 17 15.3	-2.1
AFRZ	**Afriz**	5.44	13	*e*Pn	Pn	22 16 26.0	+1.2
WBK	**Wadi Bani Khal**	5.65	166	P	Pn	22 16 27.6	0.0
	SNR=5.2						
IRAM	**Ramesheh**	5.76	311	*e*Pn	Pn	22 16 28.9	-0.4
KLNJ	**Kolanjah**	5.90	301	*e*Pn	Pn	22 16 30.8	-0.5
SHRT	**Shahrakht**	6.00	23	*e*Pn	Pn	22 16 36.0	+3.5
ANAR	**Anarak**	6.00	328	*e*Pn	Pn	22 16 32.2	-0.3
JLN	**Jalan Bani Buh**	6.19	163	P	Pn	22 16 35.1	+0.1
JLN				S	Sn	22 17 41.1	-3.9

DSN ***07*** *22:17:56.2±3.4, 28°.51N×57°.79E, h10km, ML3.6/13, Error ellipse: s-maj=90.2km s-min=25.9km az=130.0*
IDC ***07*** *22:17:59.0±1.1, 28°.20N×57°.39E, h0km, mb3.8/10, mb1 3.9/12, mb1mx3.7/45, mbtmp3.8/12, ML3.6/2, MS3.1/4, Ms1 3.1/4, ms1mx2.7/58, Error ellipse: s-maj=23.6km s-min=21.2km az=151.0*
TEH ***07*** *22:18:01.7, 28°.28N×57°.40E, h8km, ML3.9*
THR ***07*** *22:18:02.7±0.6, 28°.26N×57°.38E, h14km±8km, ML3.5*
OMAN ***07*** *22:18:04.4±1.7, 28°.04N×57°.12E, h10km, mb4.7/2, ml3.8/11, Error ellipse: s-maj=16.5km s-min=11.7km az=15.0*
ISC 07 22:18:00.9±0.6**, 28°.23N**±0°.03×**57°.38E**±0°.04**, h10**km**, n97, σ2ˢ.49**/102**, mb3.8**/10**, MS3.7**/3**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	0.40	134	*e*Pg	Pg	22 18 10.3	+1.5
IBND	**Bandar-abas**	1.08	224	*e*Pg	Pn	22 18 24.0	+2.0
IBND				*e*		22 18 51.0	
	comp=Z,43µm,0.4s						
KBAM	**BAM**	1.30	46	*e*Pg	Pn	22 18 25.5	+0.2
GENO	**Geno**	1.35	233	*e*Pg	Pb	22 18 28.1	+1.7
GENO				*e*		22 18 50.7	
	comp=Z,34µm,0.3s						
NGRK	**Negar Kerman**	1.52	338	*e*Pg	Pg	22 18 29.9	-0.2
NGRK				*e*		22 18 58.5	
	comp=Z,17µm,0.3s						
CHMN	**Cheshme madani**	1.63	5	*e*Pn	Pg	22 18 31.7	-0.5
CHMN				*e*		22 18 36.4	
	comp=Z,7µm,0.5s						
KRBR	**Kerman**	1.83	343	*e*Pg	Pg	22 18 35.4	-0.6
KRBR				*e*Sg	Sg	22 19 00.1	+0.4
KRBR				IAML		22 19 08.5	
	comp=E,832nm,0.3s						
KRBR				IAML		22 19 10.3	
	comp=N,691nm,0.3s						
KRBR	**Kerman**	1.83	343	*e*Pg	Pg	22 18 35.4	-0.6
TVBK	**TV Kerman**	1.83	343	*e*Pn	Pg	22 18 35.5	-0.6
TVBK				*e*		22 18 40.2	
	comp=Z,15µm,0.5s						
KHGB	**Koh Gabri**	2.28	340	*e*Pn	Pb	22 18 41.8	-0.5
KHGB				*e*		22 18 48.3	
	comp=Z,7µm,0.5s						
SHME	**Shamm**	2.44	207	*e*P	Pn	22 18 43.1	+2.3
	SNR=17						
SHME				S	Sb	22 19 17.4	+2.5
SHME	**Shamm**	2.44	207	P	Pn	22 18 41.9	+1.2
	SNR=9.4						
BANOM	**Banah**	2.49	203	*e*P	Pn	22 18 42.7	+1.2
	SNR=16						
BANOM	**Banah**	2.49	203	P	Pn	22 18 43.1	+1.5
	SNR=26						
BANOM				S	Sn	22 19 11.6	-0.5
	SNR=34						
LAR1	**LAR**	2.72	259	*e*Pn	Pb	22 18 48.6	-1.1
LAR1				*e*		22 19 55.2	
	comp=Z,6µm,0.6s						
MASF	**Masafi**	3.05	201	P	Pn	22 18 50.6	+1.3
MASF				S	Sn	22 19 26.3	+0.4
MSFE	**Esma-Masafi**	3.06	201	P	Pn	22 18 51.0	+1.6
MDH	**Madha**	3.08	199	P	Pn	22 18 49.3	-0.2
MDH	**Madha**	3.08	199	P	Pn	22 18 49.4	-0.2
MDH				S	Sn	22 19 24.7	-1.7
ZHDN	**Zahedan**	3.23	68	*e*Pn	Pn	22 18 54.2	+2.4
ZHSF	**Zahedan**	3.28	64	*e*Pn	Pn	22 18 55.5	+3.0
ZHSF	**Zahedan**	3.28	64	*e*Pn	Pn	22 18 55.5	+3.0
JHRM	**Jahrom**	3.36	276	*e*Pn	Pn	22 18 56.7	+3.1
UOSS	**Minazif**	3.44	198	P	Pn	22 18 56.1	+1.6
HATD	**Hatta, Dubai**	3.57	199	P	Pn	22 18 56.5	+0.2
NAZ	**Nazwa, Dubai**	3.58	206	P	Pn	22 18 53.7	-2.7
ASHO	**Ashiyiah**	3.73	199	*i* P	Pn	22 19 01.0	+2.5
	SNR=14						
ASHO	**Ashiyiah**	3.73	199	P	Pn	22 19 01.0	+2.5
	SNR=14						
FAQ	**Al Faqa, Dubai**	3.82	205	P	Pn	22 19 02.2	+2.4
LMD1	**Lamerd**	3.84	258	*e*Pn	Pn	22 19 03.8	+3.7
GHIR	**Ghir-Karzin**	3.88	272	*e*Pn	Pn	22 19 04.0	+3.3
GHIR				IAML		22 19 53.3	
	comp=N,86nm,0.3s						
GHIR				IAML		22 19 57.3	
	comp=E,77nm,0.3s						
GHIR	**Ghir-Karzin**	3.88	272	*e*Pn	Pn	22 19 04.0	+3.3
NHDN	**Nehbandan**	3.91	36	*e*Pn	Pn	22 19 04.2	+3.0
IMEH	**Mehriz**	3.96	323	*e*Pn	Pn	22 19 04.9	+2.9
BSRN	**Basiran**	4.02	22	*e*Pn	Pn	22 19 06.1	+3.4
BSRN				*e*Sg	Sg	22 20 06.5	-3.5
BSRN				IAML		22 20 24.8	
	comp=E,23nm,0.6s						
BSRN	**Basiran**	4.02	22	*e*Pn	Pn	22 19 06.1	+3.4
ASUD	**Al Ashush, Dub**	4.03	208	*i* P	Pn	22 19 04.9	+2.2
	SNR=16						
ASUD	**Al Ashush, Dub**	4.03	208	P	Pn	22 19 05.4	+2.7
	SNR=16						
ASUD				S	Sn	22 19 49.0	-1.1
SOHO	**SOHO**	4.15	191	*i* P	Pn	22 19 03.3	-1.0
	SNR=17						
AJN	**Ajban**	4.24	211	*i* P	Pn	22 19 07.2	+1.7
	SNR=16						
AJN	**Ajban**	4.24	211	P	Pn	22 19 07.2	+1.7
	SNR=16						
AJN				S	Sn	22 19 53.8	-1.2
ALNE	**Al Ain**	4.41	200	P	Pn	22 19 10.0	+2.1
ALNE	**Al Ain**	4.41	200	P	Pn	22 19 07.3	-0.6
	SNR=6.1						
IKOO	**Kooshah**	4.41	18	*e*Pn	Pn	22 19 11.9	+3.8
SRVN	**Saravan**	4.52	99	*e*Pn	Pn	22 19 12.9	+3.4
HOQ	**Hoqain**	4.63	181	P	Pn	22 19 10.4	-0.6
	SNR=15						
YZKH	**Yazd**	4.80	330	*e*Pn	Pn	22 19 16.7	+3.4
YZKH				IAML		22 20 46.1	
	comp=E,16nm,0.4s						
YZKH				IAML		22 20 46.5	
	comp=N,12nm,0.5s						
YZKH	**Yazd**	4.80	330	*e*Pn	Pn	22 19 16.7	+3.4
ITEG	**Tejag**	4.80	14	*e*Pn	Pn	22 19 17.5	+4.1
ISAD	**Sadrabad**	4.87	320	*e*Pn	Pn	22 19 18.7	+4.2
ARQ	**Araqi**	4.94	189	P	Pn	22 19 17.5	+2.4
	SNR=42						
ARQ				S	Sn	22 20 12.9	+0.6
WSAR	**Wadi Sarin**	5.10	167	Pn	Pn	22 19 17.6	+0.3
	comp=N,1.8nm,0.3s,baz=332,slow=5.6,SNR=25						
WSAR				Sn	Sn	22 20 10.7	-5.6
	comp=N,4.2nm,0.3s,baz=220,slow=17,SNR=9.4						
WSAR				LR	LR	22 21 38.7	
	comp=N,52nm,20.1s,baz=22,slow=43						
AFRZ	**Afriz**	5.37	15	*e*Pn	Pn	22 19 24.9	+3.7
TKDS	**Koohdasht(Taba**	5.37	358	*e*Pn	Pn	22 19 25.0	+3.8
AHBU	**AHRAM**	5.39	278	*e*Pn	Pn	22 19 24.5	+3.1
MZWR	**Madinat Zayed**	5.45	216	S	Sn	22 20 21.4	-3.7
IRAM	**Ramesheh**	5.61	311	*e*Pn	Pn	22 19 27.6	+3.0
KLNJ	**Kolanjah**	5.75	300	*e*Pn	Pn	22 19 29.8	+3.2
WBK	**Wadi Bani Khal**	5.78	165	P	Pn	22 19 26.4	-0.3
	SNR=13						
ANAR	**Anarak**	5.86	328	*e*Pn	Pn	22 19 31.8	+3.9
SHRT	**Shahrakht**	5.95	24	*e*Pn	Pn	22 19 34.2	+5.1
SHRT	**Shahrakht**	5.95	24	*e*Pn	Pn	22 19 34.2	+5.1
NASN	**Na'in**	6.03	320	*e*Pn	Pn	22 19 33.6	+3.3
NASN	**Na'in**	6.03	320	*e*Pn	Pn	22 19 33.7	+3.3
IGAR	**Gharneh**	6.21	313	*e*Pn	Pn	22 19 35.9	+3.0
JLN	**Jalan Bani Buh**	6.33	163	P	Pn	22 19 34.0	-0.2
	SNR=9.6						
IZEF	**Zefreh**	6.37	318	*e*Pn	Pn	22 19 37.8	+2.7
IBRJ	**Brojen**	6.45	306	*e*Pn	Pn	22 19 39.8	+3.7
TRNA	**Turayna**	6.53	239	P	Pn	22 19 37.8	+0.8
TRNA				S	Sn	22 20 47.4	-4.2
SHK1	**Shahrekord**	6.95	308	*e*Pn	Pn	22 19 45.7	+2.8
IPIR	**Pirpir**	7.15	310	*e*Pn	Pn	22 19 49.2	+3.4
TBJM	**Torbat-e-JAM**	7.45	19	*e*Pn	Pn	22 19 54.3	+4.5
ISFB	**Sefidab**	7.52	326	*e*Pn	Pn	22 19 54.2	+3.5
AMIS	**Naft Sefid**	7.81	298	*e*Pn	Pn	22 19 57.0	+2.3
JRKH	**Jarkhoshk**	8.06	17	*e*Pn	Pn	22 20 02.5	+4.4
QRN	**Al-Qurain**	8.34	276	*e*P	Pn	22 20 02.6	+0.7
IMYA	**Miami**	8.41	15	*e*Pn	Pn	22 20 07.5	+4.5
IAKL	**Akhelmad**	8.43	8	*e*Pn	Pn	22 20 07.8	+4.5
KBD	**Kabd**	8.56	279	*e*P	Pn	22 20 05.1	+0.2
UMR	**Umm Al-Rimmam**	8.57	281	*e*P	Pn	22 20 05.5	+0.4
RDF	**Al-Radifah**	8.67	277	*e*P	Pn	22 20 06.8	+0.4
MIB	**Mutribah**	8.93	283	*e*P	Pn	22 20 10.6	+0.6
MRVT	**Maraveh tapeh**	9.46	354	*e*Pn	Pn	22 20 23.4	+6.1
ASF	**Jabal al Asfar**	18.13	288	P	Pn	22 22 12.5	-0.5
	comp=N,0.2nm,0.3s,baz=223,slow=22,SNR=2.0						
AAK	**Ala-Archa**	19.97	39	LR	LR	22 31 18.3	
	comp=N,67nm,18.2s,baz=238,slow=40						
AKTO	**Aktyubinsk**	22.18	1	P	P	22 22 57.6	+0.5
	comp=N,3.7nm,0.8s,baz=180,slow=7.9,SNR=7.1						
AKTO				LR	LR	22 32 20.9	
	comp=N,54nm,19.0s,baz=240,slow=39						
BRTR	**Keskin Array B**	22.71	306	P	P	22 23 03.9	+0.8
	comp=N,2.4nm,0.8s,baz=80,slow=14,SNR=6.7						
BVAR	**Borovoye Array**	26.58	18	P	P	22 23 39.4	+0.3
	comp=N,1.3nm,0.6s,baz=215,slow=12,SNR=5.1						
MKAR	**Makanchi Array**	26.91	40	P	P	22 23 42.2	+0.1
	comp=N,0.7nm,0.8s,baz=242,slow=10,SNR=4.0						
KURBB	**Kurchatov Arra**	27.51	30	P	P	22 23 47.3	-0.1
	comp=N,0.7nm,0.2s,baz=222,slow=9.8,SNR=4.2						
ZALV	**Zalesovo Beam**	32.60	30	P	P	22 24 31.7	-0.7
	comp=N,1.3nm,0.3s,baz=246,slow=9.6,SNR=10						
FINES	**FINESS Array B**	39.20	337	P	P	22 25 28.2	-0.6
	comp=N,1.5nm,0.8s,baz=112,slow=11,SNR=3.4						
SONM	**Songino Array**	42.47	49	P	P	22 25 55.7	-0.5
	comp=N,0.4nm,0.7s,baz=236,slow=1.1,SNR=4.5						
TORD	**Torodi Ar. Bea**	53.78	266	P	P	22 27 22.8	-1.2
	comp=N,0.7nm,0.6s,baz=56,slow=6.9,SNR=4.0						
SEY	**Seymchan**	67.47	30	LR	LR	22 59 10.9	
	comp=N,42nm,18.5s,baz=21,slow=37						
JCJ	**Chichijima**	73.47	68	LR	LR	23 05 40.6	
	comp=N,580nm,20.8s,baz=92,slow=39						
WRA	**Warramunga Arr**	88.41	114	P	P	22 30 52.9	-0.7
	comp=N,0.4nm,0.7s,baz=240,slow=2.6,SNR=4.9						

JMA ***07*** *22:21:12.2, 24°.05N×122°.14E, h43km±2km, M2.4*
TAP ***07*** *22:21:13.1, 24°.12N×122°.12E, h44km, ML2.9, D*
ISC 07 22:21:12.6±1.0**, 24°.06N**±0°.03×**122°.17E**±0°.02**, h33**km±9km**, n68, σ1ˢ.04**/118**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	0.47	303	*e*P	Pb	22 21 23.1	+0.4
	baz=299						
ETL	**Fush Village**	0.51	281	*e*P	Pb	22 21 23.3	-0.1
	baz=266						
ETL				*e*S	Sb	22 21 31.1	+0.3
	baz=266						
HWA	**Hwalien**	0.53	261	P	Pb	22 21 24.0	+0.5
	baz=253						
HWA				*e*S	Sn	22 21 33.0	+1.4
	baz=253						
EWUT	**Wuta**	0.53	317	P	Pb	22 21 23.6	0.0
	baz=327						
EWUT				S	Sb	22 21 31.3	+0.2
	baz=327						
TWD	**Chiawan**	0.53	272	*e*P	Pb	22 21 23.3	-0.3
	baz=257						
TWD				S	Sb	22 21 31.3	+0.1
	baz=257						
ENA	**Nanau**	0.54	313	*e*P	Pb	22 21 22.6	-1.2
	baz=322						
ENA				S	Sb	22 21 31.8	+0.3
	baz=322						
NACB	**Ninganchiao**	0.54	282	*e*P	Pb	22 21 23.4	-0.5
	baz=268						
NACB				*e*S	Sb	22 21 32.0	+0.4
	baz=268						
TEYL	**Yanliau Villag**	0.56	250	P	Pb	22 21 24.3	+0.2
	baz=240						
TEYL				*e*S	Sn	22 21 33.4	+1.0
	baz=240						
TWC	**Suao**	0.62	332	S	Sb	22 21 32.7	-1.1
	baz=341						
ETM	**Tongmen**	0.63	262	*e*P	Pb	22 21 24.8	-0.5
	baz=255						
ETLH	**Xiulin Townshi**	0.65	283	*e*P	Pb	22 21 25.0	-0.7
	baz=278						
ETLH				*e*S	Sb	22 21 34.2	-0.4
	baz=278						
TEGC	**Jichi Village**	0.68	239	P	Pb	22 21 26.1	0.0
	baz=226						
NDS	**Dongshan**	0.71	324	*e*P	Pb	22 21 26.5	-0.1
	baz=329						
NDS				S	Sb	22 21 35.4	-0.7
	baz=329						
ESL	**Shilin**	0.72	250	*e*P	Pb	22 21 25.9	-0.9
	baz=244						
ESL				*e*S	Sb	22 21 36.0	-0.5
	baz=244						
EGFH	**Guangfu**	0.78	241	*e*P	Pb	22 21 27.2	-0.7
	baz=227						
EGFH				*e*S	Sb	22 21 38.8	+0.5
	baz=227						
ENTT	**Nioudou**	0.80	316	*e*P	Pb	22 21 27.6	-0.6
	baz=308						
ENTT				*e*S	Sb	22 21 38.1	-0.6
	baz=308						
TWE	**Neicheng**	0.80	325	P	Pb	22 21 27.7	-0.5
	baz=326						
TWE				S	Sb	22 21 38.1	-0.7
	baz=326						
NDT	**Datong Townshi**	0.81	312	*e*S	Sb	22 21 38.5	-0.5
	baz=311						
NNSB	**Datong**	0.81	297	P	Pb	22 21 27.5	-0.9
	baz=295						
NNSB				S	Sb	22 21 38.0	-1.0
	baz=295						
NNS	**Nan Shan**	0.82	298	P	Pb	22 21 27.8	-0.8
	baz=295						
NNS				S	Sb	22 21 38.3	-1.1
	baz=295						
WHF	**Hehuan Shan**	0.83	276	*e*P	Pb	22 21 27.9	-1.1
	baz=262						
WHF				S	Sb	22 21 39.1	-1.0
	baz=262						
YOJ	**Yonaguni jima**	0.86	62	P	Pb	22 21 28.9	-0.3
YOJ				*e*S	Sb	22 21 40.4	-0.1
FUSS	**Fushou**	0.87	283	P	Pb	22 21 28.6	-0.9
	baz=271						
FUSS				*e*S	Sb	22 21 39.6	-1.2
	baz=271						
HGSD	**Ruisui**	0.89	231	*e*P	Pb	22 21 28.6	-1.0
	baz=220						
HGSD				*e*S	Sb	22 21 41.3	+0.1
	baz=220						
CHGB	**Renai**	0.91	270	P	Pb	22 21 29.2	-0.9
	baz=257						
CHGB				S	Sb	22 21 41.4	-0.7
	baz=257						
OWD	**Renai**	0.92	264	*e*P	Pb	22 21 29.2	-1.0
	baz=259						
OWD				*e*S	Sb	22 21 41.1	-1.0
	baz=259						
TWT	**Tachien**	0.93	282	P	Pb	22 21 29.8	-0.6
	baz=269						
TWT				*e*S	Sb	22 21 41.7	-0.9
	baz=269						
NWLT	**Wulai**	0.94	320	P	Pn	22 21 29.4	-0.2
	baz=319						
NWLT				*e*S	Sb	22 21 41.0	-1.7
	baz=319						
TDCB	**Techi**	0.95	282	P	Pn	22 21 29.7	0.0
	baz=269						
TDCB				S	Sb	22 21 41.5	-1.5
	baz=269						
YHNB	**Yeheng**	0.95	310	*e*P	Pn	22 21 29.5	-0.2
	baz=309						
YHNB				*e*S	Sb	22 21 40.9	-2.1
	baz=309						
TIPB	**Shuangxi**	0.96	341	*e*P	Pn	22 21 30.1	+0.2
	baz=342						
TIPB				*e*S	Sb	22 21 42.8	-0.5
	baz=342						
NSK	**Sanguang**	0.96	310	*e*P	Pn	22 21 29.5	-0.4
	baz=300						
NSK				*e*S	Sb	22 21 41.4	-2.0
	baz=300						
ECBN	**Changbin**	0.99	222	*e*S	Sb	22 21 43.2	-0.9
	baz=208						
VWDT	**VWDT**	0.99	252	*e*P	Pn	22 21 30.6	+0.4
	baz=248						
VWDT				*e*S	Sb	22 21 43.2	-0.9
	baz=248						
YULB	**Yu-li**	1.04	231	*e*P	Pn	22 21 30.7	-0.2
	baz=237						
YULB				*e*S	Sb	22 21 43.7	-1.8
	baz=237						
EYUL	**Yuli**	1.05	228	*e*P	Pn	22 21 31.2	+0.1
	baz=236						
EYUL				*e*S	Sn	22 21 45.0	+0.3
	baz=236						
WHP	**Taichung City**	1.14	281	*e*P	Pn	22 21 33.4	+1.0
	baz=272						
WHP				*e*S	Sn	22 21 47.3	+0.4
	baz=272						
SSLB	**Suanglung**	1.15	257	*e*P	Pn	22 21 31.6	-0.8
	baz=259						
SSLB				*e*S	Sn	22 21 46.4	-0.7
	baz=259						
WCS	**Beigang Elemen**	1.15	270	*e*P	Pn	22 21 33.2	+0.8
	baz=267						
FULB	**Fuli**	1.18	223	*e*S	Sn	22 21 48.0	+0.2
	baz=210						
SMLT	**Sun Moon Lake**	1.18	262	*e*P	Pn	22 21 32.9	0.0
	baz=258						
SMLT				*e*S	Sn	22 21 48.0	+0.2
	baz=258						
LIOB	**Emei**	1.21	299	*e*P	Pn	22 21 34.0	+0.7
	baz=298						
LIOB				*e*S	Sn	22 21 49.4	+1.0
	baz=298						
CHKT	**Chengkung**	1.21	218	*e*S	Sn	22 21 47.0	-1.5
	baz=205						
NSTT	**Nanjuang**	1.21	298	*e*P	Pn	22 21 33.9	+0.6
	baz=297						
NSTT				*e*S	Sn	22 21 48.9	+0.4
	baz=297						
TYC	**Yuchr**	1.21	263	*e*P	Pn	22 21 33.6	+0.4
	baz=252						
TYC				*e*S	Sn	22 21 48.6	0.0
	baz=252						
YUS	**Yu-Shan**	1.25	243	*e*S	Sn	22 21 50.1	-0.2
	baz=229						
WJS	**Zhushan**	1.34	260	*e*S	Sb	22 21 54.5	+0.4
	baz=257						
EDH	**Donghe**	1.34	217	*e*P	Pn	22 21 34.3	-0.8
	baz=205						
EDH				*e*S	Sn	22 21 50.9	-0.9
	baz=205						
ALS	**Alishan**	1.37	247	*e*P	Pn	22 21 36.6	+1.0
	baz=234						
ALS				*e*S	Sn	22 21 53.9	+1.1
	baz=234						
ELDTW	**Lidau**	1.37	231	*e*P	Pn	22 21 35.3	-0.2
	baz=227						
ELDTW				*e*S	Sn	22 21 51.6	-1.0
	baz=227						
CHN5	**Tsauling**	1.44	252	*e*P	Pn	22 21 38.1	+1.5
	baz=249						
CHN5				*e*S	Sn	22 21 56.3	+1.9
	baz=249						
IRIF	**Iriomote-Funau**	1.45	79	P	Pn	22 21 36.7	+0.2
IRIF				S	Sn	22 21 55.8	+1.4
HATJ	**Hateruma jima**	1.49	90	S	Sn	22 21 56.8	+1.3
WDLH	**Douliu**	1.54	257	*e*S	Sn	22 21 59.3	+2.6

	baz=242						
STYH	Taoyuan baz=226	1.56	236	eP	Pn	22 21 38.3	+0.3
STYH	baz=226			eS	Sn	22 21 59.1	+2.0
TWGBT	Beinan baz=216	1.59	219	eP	Pn	22 21 38.2	-0.3
TWGBT	baz=216			eS	Sn	22 21 57.5	-0.5
TWG	Pinlang baz=216	1.59	220	eP	Pn	22 21 38.4	-0.1
TWG	baz=216			eS	Sn	22 21 57.2	-0.8
TPUB	Ta-pu baz=239	1.60	242	eP	Pn	22 21 40.6	+1.9
TPUB	baz=239			eS	Sn	22 22 00.6	+2.3
CHN4	Tsaushan baz=231	1.61	244	eP	Pn	22 21 39.2	+0.4
CHN4	baz=231			eS	Sn	22 21 59.5	+1.0
WTP	Ta-pu baz=237	1.64	241	eS	Sn	22 22 01.9	+2.6
WRL	Guolierlin Hig baz=262	1.65	265	eS	Sn	22 22 01.4	+2.0
WTK	Tuku baz=244	1.67	258	eS	Sn	22 22 02.8	+2.9
JKRS	Kuro-shima	1.69	84	P	Pn	22 21 41.4	+1.6
JKRS				eS	Sn	22 22 01.4	+1.1
TWK	Hsinying baz=240	1.73	243	eS	Sn	22 22 04.3	+2.8
CHN1	Nanshi baz=237	1.74	240	eP	Pn	22 21 42.5	+1.9
CHN1	baz=237			eS	Sb	22 22 05.1	-0.4
JIJ	Ishigaki jima	1.82	80	P	Pn	22 21 42.2	+0.5
JIJ				S	Sn	22 22 02.8	-0.9
JISG	Ishigakijimahi	2.02	74	P	Pn	22 21 44.8	+0.4
JISG				eS	Sn	22 22 08.0	-0.5
JTJ	Tarama	2.38	75	S	Sn	22 22 17.8	+0.4

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*IDC **07** 22:35:56.9±2.1, 22°.11N×121°.98E, h0^{km}, mb3.5/5, mb1 3.6/5, mb1mx3.2/50, mbtmp3.5/5, Error ellipse: s-maj=166.2km s-min=27.6km az=65.0*

*TAP **07** 22:36:14.2, 22°.38N×121°.54E, h116^{km}, ML3.5, C*

ISC 07 22:36:14.4±1.1, **22°.39N**±0°.04×**121°.47E**±0°.05, **h121**^{km}±6^{km}, **n93**, σ**0^{s}.91**/155, **mb3.3**/5, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LDUT	Ludao baz=352	0.28	1	eP	Pn	22 36 31.3	-0.2
LDUT	baz=352			S	Sn	22 36 43.9	-0.3
LAY	Lan-yu baz=186	0.36	167	iP	Pn	22 36 31.0	-0.8
LAY	baz=186			iS	Sn	22 36 43.5	-1.3
ECL	Taimali baz=297	0.52	294	eP	Pn	22 36 32.0	-0.6
ECL	baz=297			S	Sn	22 36 45.6	-0.6
TAW	Tawu baz=263	0.53	267	iP	Pn	22 36 32.7	+0.1
TAW	baz=263			iS	Sn	22 36 46.0	-0.3
TWGBT	Beinan baz=312	0.56	320	eP	Pn	22 36 32.4	-0.5
TWGBT	baz=312			eS	Sn	22 36 45.5	-1.2
TWG	Pinlang baz=312	0.56	320	eP	Pn	22 36 32.4	-0.5
TWG	baz=312			eS	Sn	22 36 45.6	-1.2
EAST	Anshuo baz=270	0.57	270	P	Pn	22 36 33.2	+0.2
EAST	baz=270			eS	Sn	22 36 47.7	+0.8
EDH	Donghe baz=336	0.60	346	iP	Pn	22 36 33.1	0.0
EDH	baz=336			iS	Sn	22 36 47.1	-0.1
LONT	Longtian baz=317	0.60	329	eP	Pn	22 36 32.4	-0.8
LONT	baz=317			eS	Sn	22 36 46.6	-0.7
SLIU	Shizi baz=252	0.64	255	P	Pn	22 36 33.7	+0.3
SLIU	baz=252			S	Sn	22 36 47.5	-0.2
CHKT	Chengkung baz=345	0.71	353	eP	Pn	22 36 34.5	+0.5
CHKT	baz=345			S	Sn	22 36 49.1	+0.3
ECS	Chishang baz=330	0.74	342	iP	Pn	22 36 34.5	+0.3
ECS	baz=330			eS	Sn	22 36 49.8	+0.7
TWKBT	Hengchun baz=244	0.75	234	iP	Pn	22 36 34.7	+0.4
TWKBT	baz=244			iS	Sn	22 36 49.5	+0.3
TWK1	Hengchun baz=243	0.76	234	iP	Pn	22 36 34.7	+0.4
TWK1	baz=243			iS	Sn	22 36 49.6	+0.4
HEN	Hengchun baz=250	0.77	241	eS	Sn	22 36 50.0	+0.5
SCZT	Fangliau baz=263	0.78	269	eP	Pn	22 36 34.5	0.0
SCZT	baz=263			eS	Sn	22 36 49.0	-0.7
MASBT	Mashibuluo baz=278	0.80	286	P	Pn	22 36 35.2	+0.5
MASBT	baz=278			eS	Sn	22 36 49.5	-0.5
FULB	Fuli baz=336	0.82	349	P	Pn	22 36 35.0	+0.1
FULB	baz=336			eS	Sn	22 36 51.7	+1.3
TSMG	Majia baz=284	0.82	293	P	Pn	22 36 35.5	+0.7
TSMG	baz=284			eS	Sn	22 36 50.2	-0.1
SSPT	Xinbi baz=277	0.84	277	eP	Pn	22 36 35.8	+0.9
SSPT	baz=277			eS	Sn	22 36 51.6	+1.2
SSD	Sandimen baz=294	0.85	295	P	Pn	22 36 35.5	+0.4
SSD	baz=294			eS	Sn	22 36 50.4	-0.3
ELDTW	Lidau baz=323	0.90	333	eP	Pn	22 36 35.9	+0.2
ELDTW	baz=323			eS	Sn	22 36 51.4	-0.4
EYUL	Yuli baz=340	0.96	352	eP	Pn	22 36 37.0	+0.8
EYUL	baz=340			eS	Sn	22 36 52.7	0.0
SLGT	Liugui baz=300	0.97	309	eP	Pn	22 36 39.2	+3.0
STYH	Taoyuan baz=319	1.01	321	eP	Pn	22 36 37.5	+0.9
STYH	baz=319			S	Sn	22 36 53.5	+0.2
WLCH	Liuqiu baz=268	1.01	268	eP	Pn	22 36 38.7	+2.2
WLCH	baz=268			eS	Sn	22 36 56.2	+2.9
YULB	Yu-li baz=341	1.01	351	eP	Pn	22 36 36.1	-0.5
YULB	baz=341			eS	Sn	22 36 52.0	-1.5
SGST	Jiashian baz=318	1.07	310	eS	Sn	22 36 54.8	+0.3
HGSD	Ruisui baz=349	1.10	358	eP	Pn	22 36 37.5	-0.1
HGSD	baz=349			eS	Sn	22 36 56.3	+1.3
WTP	Ta-pu baz=316	1.16	318	P	Pn	22 36 38.6	+0.4
WTP	baz=316			eS	Sn	22 36 55.9	-0.3
CHN1	Nanshi baz=319	1.17	313	eP	Pn	22 36 39.0	+0.7
CHN1	baz=319			eS	Sn	22 36 56.1	-0.4
TPUB	Ta-pu baz=318	1.19	320	eP	Pn	22 36 38.7	+0.2
TPUB	baz=318			eS	Sn	22 36 56.2	-0.6
YUS	Yu-Shan baz=324	1.19	337	eP	Pn	22 36 40.2	+1.2
YUS	baz=324			eS	Sn	22 36 58.4	+0.7
SNST	Tainan City baz=318	1.22	313	eP	Pn	22 36 39.1	+0.3
SNST	baz=318			eS	Sn	22 36 57.2	0.0
CHN4	Tsaushan baz=318	1.25	320	eS	Sn	22 36 56.5	-1.4
TWK	Hsinying baz=313	1.26	314	eP	Pn	22 36 40.0	+0.8
TWK	baz=313			eS	Sn	22 36 57.8	-0.3
ALS	Alishan baz=321	1.27	332	eP	Pn	22 36 40.1	+0.5
ALS	baz=321			eS	Sn	22 36 58.7	-0.1
EGFH	Guangfu baz=351	1.28	358	eS	Sn	22 36 57.4	-1.0
VWDT	VWDT baz=339	1.39	348	eP	Pn	22 36 41.4	+0.8
VWDT	baz=339			eS	Sn	22 37 01.3	+0.6
CHN5	Tsauling baz=320	1.41	329	eP	Pn	22 36 41.2	+0.2
CHN5	baz=320			eS	Sn	22 37 00.5	-0.6
ESL	Shilin baz=353	1.42	359	eS	Sn	22 36 59.4	-1.9
ICHU	Yijhu baz=310	1.46	312	eP	Pn	22 36 41.9	+0.4
ICHU	baz=310			eS	Sn	22 37 02.5	+0.5
SSLB	Suanglung baz=331	1.47	341	eP	Pn	22 36 41.8	+0.2
SSLB	baz=331			eS	Sn	22 37 01.8	-0.5
WDLH	Douliu baz=318	1.55	327	eS	Sn	22 37 03.8	-0.1
WJS	Zhushan baz=333	1.58	335	eS	Sn	22 37 04.6	+0.1
OWD	Renai baz=339	1.58	350	eP	Pn	22 36 43.9	+0.8
OWD	baz=339			eS	Sn	22 37 04.8	-0.1
HWA	Hwalien baz=8.0	1.59	5	eS	Sn	22 37 05.2	+0.5
TYC	Yuchr baz=331	1.61	340	eP	Pn	22 36 43.7	+0.5
TYC	baz=331			eS	Sn	22 37 05.0	-0.1
WTK	Tuku baz=321	1.63	323	eP	Pn	22 36 43.6	+0.2
WTK	baz=321			eS	Sn	22 37 05.2	-0.4
WNT	Mingjian baz=325	1.65	334	eP	Pn	22 36 44.7	+1.0
WNT	baz=325			eS	Sn	22 37 06.0	+0.1
CHGB	Renai baz=340	1.69	351	eP	Pn	22 36 45.1	+0.8
CHGB	baz=340			eS	Sn	22 37 08.0	+0.8
TWD	Chiawan baz=355	1.69	4	eP	Pn	22 36 44.3	+0.1
TWD	baz=355			eS	Sn	22 37 06.2	-0.6
WCS	Beigang Elemen baz=334	1.74	343	eP	Pn	22 36 45.3	+0.5
WCS	baz=334			eS	Sn	22 37 08.3	+0.4
WHF	Hehuan Shan baz=359	1.76	354	eP	Pn	22 36 46.1	+0.7
WHF	baz=359			eS	Sn	22 37 08.6	-0.4
NACB	Ninganchiao baz=356	1.78	4	eP	Pn	22 36 45.4	+0.2
NACB	baz=356			eS	Sn	22 37 07.1	-1.7
WRL	Guolierlin Hig baz=320	1.81	327	eP	Pn	22 36 45.5	0.0
WRL	baz=320			eS	Sn	22 37 09.2	-0.2
ETLH	Xiulin Townshi baz=359	1.81	0	eP	Pn	22 36 45.5	-0.2
ETLH	baz=359			eS	Sn	22 37 07.9	-1.7
FUSS	Fushou baz=342	1.86	354	eP	Pn	22 36 47.8	+1.3
FUSS	baz=342			eS	Sn	22 37 11.0	0.0
TWT	Tachien baz=344	1.88	352	eP	Pn	22 36 48.2	+1.6
TWT	baz=344			eS	Sn	22 37 12.1	+1.0
TDCB	Techi baz=338	1.88	351	eP	Pn	22 36 47.3	+0.8
TDCB	baz=338			eS	Sn	22 37 11.9	+0.8
WCHH	Zhanghua baz=327	1.88	334	eP	Pn	22 36 46.8	+0.4
WCHH	baz=327			eS	Sn	22 37 11.3	+0.4
TCU	Taichung baz=329	1.90	338	eS	Sn	22 37 11.6	+0.4
WHP	Taichung City baz=336	1.94	346	eP	Pn	22 36 47.6	+0.4
WHP	baz=336			eS	Sn	22 37 13.4	+1.0
NNSB	Datong baz=1.0	2.03	358	eP	Pn	22 36 49.1	+0.6
NNSB	baz=1.0			eS	Sn	22 37 14.8	+0.3
NNS	Nan Shan baz=1.0	2.04	358	eS	Sn	22 37 15.2	+0.4
ENA	Nanau baz=13	2.05	7	eP	Pn	22 36 50.3	+1.8
ENA	baz=13			eS	Sn	22 37 14.5	-0.1
TWQ1	Liyutan baz=340	2.05	342	eS	Sn	22 37 15.5	+0.7
EWUT	Wuta baz=13	2.07	8	eS	Sn	22 37 14.3	-0.7
PHUB	P'eng-hu baz=302	2.07	303	eP	Pn	22 36 48.3	-0.5
PHUB	baz=302			eS	Sn	22 37 13.4	-1.7
WDJ	Dajia District baz=329	2.09	339	eS	Sn	22 37 15.6	0.0
PNG	Penghu baz=303	2.12	304	eP	Pn	22 36 49.1	-0.2
PNG	baz=303			eS	Sn	22 37 15.7	-0.4
NDT	Datong Townshi baz=360	2.21	1	eP	Pn	22 36 50.6	+0.1
NDT	baz=360			eS	Sn	22 37 18.8	+0.6
TWC	Suao baz=15	2.24	9	eP	Pn	22 36 51.7	+0.8
ENTT	Nioudou baz=355	2.24	2	eS	Sn	22 37 19.2	+0.1
NDS	Dongshan baz=355	2.25	6	eP	Pn	22 36 52.4	+1.3
NSTT	Nanjuang baz=338	2.27	349	eS	Sn	22 37 18.7	-1.0
YHNB	Yeheng baz=356	2.27	358	eP	Pn	22 36 52.7	+1.2
YHNB	baz=356			eS	Sn	22 37 20.4	+0.5
NSK	Sanguang baz=356	2.28	358	eP	Pn	22 36 52.7	+1.1
NSK	baz=356			eS	Sn	22 37 20.7	+0.7
LIOB	Emei baz=338	2.29	350	eS	Sn	22 37 19.7	-0.3
NWLT	Wulai baz=359	2.38	1	eP	Pn	22 36 53.5	+0.8
NWLT	baz=359			eS	Sn	22 37 21.8	-0.4
TIPB	Shuangxi baz=356	2.59	7	eP	Pn	22 36 57.4	+1.9
TIPB	baz=356			eS	Sn	22 37 28.2	+1.1
NWF	Wu-fen Shan baz=353	2.69	6	eP	Pn	22 36 57.4	+0.7
NWF	baz=353			eS	Sn	22 37 29.9	+0.6
PTMZ	Houxiangcun baz=320	3.40	321	eS	Sn	22 37 44.4	-1.5
KNMB	Chin-men Tao baz=306	3.50	307	eS	Sn	22 37 46.5	-1.8
ZPLA	Ao Xicun baz=294	3.75	295	eS	Sn	22 37 53.9	-0.3
MATB	Ma-tsu baz=338	4.00	340	eS	Sn	22 37 57.2	-2.9
MHZQ	Yeshan baz=328	4.31	329	eS	Sn	22 38 05.9	-1.7
XPSS	Dashiqiu baz=344	4.67	346	eS	Sn	22 38 13.4	-2.7
SONM	Songino Array 0.2nm,0.4s,baz=138,slow=9.7,SNR=1.6	28.12	338	P	P	22 41 55.0	-0.1
MKAR	Makanchi Array 0.2nm,0.4s,baz=110,slow=8.5,SNR=6.9	39.81	317	P	P	22 43 36.6	+0.8
ZALV	Zalesovo Beam 0.6nm,0.4s,baz=111,slow=6.8,SNR=4.1	41.89	328	P	P	22 43 52.5	-0.2
KURBB	Kurchatov Arra 0.2nm,0.3s,baz=111,slow=7.8,SNR=2.0	43.65	321	P	P	22 44 06.1	-0.8
WRA	Warramunga Arr 0.7nm,1.1s,baz=348,slow=13,SNR=2.5	43.91	162	P	P	22 44 02.2	-7.1

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*IDC **07** 22:41:25.6±4.8, 37°.47N×73°.49E, h0^{km}, mb4.6/1, mb1 3.8/6, mb1mx3.2/65, mbtmp3.7/6, ML3.2/5, Error ellipse: s-maj=64.6km s-min=34.8km az=150.0*

ISC 07 22:41:24.7±2.9, **37°.2N**±0°.2×**73°.3E**±0°.2, **h10**^{km}, **n6**, σ**1^{s}.11**/7, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa 1.0nm,0.3s,baz=149,slow=4.7,SNR=14	5.49	10	Pn	Pn	22 42 47.7	+1.0
AAK	baz=344,slow=22,SNR=1.6			Sn	Sn	22 43 50.2	+0.2
MKAR	Makanchi Array 0.0nm,0.3s,baz=222,slow=15,SNR=2.9	11.68	32	Pn	Pn	22 44 11.7	+0.4
BVAR	Borovoye Array 0.1nm,0.3s,baz=170,slow=12,SNR=1.8	15.93	354	Pn	Pn	22 45 06.9	-1.9
AKTO	Aktyubinsk 0.3nm,0.3s,baz=127,slow=6.4,SNR=7.4	17.14	325	Pn	Pn	22 45 24.0	-0.2
ZALV	Zalesovo Beam 0.2nm,0.3s,baz=221,slow=10,SNR=5.4	18.54	22	P	P	22 45 41.0	-0.2
FINES	FINESS Array B 8.9nm,1.0s,baz=117,slow=9.2,SNR=3.9	37.92	325	P	P	22 48 42.1	+0.3

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*IDC **07** 22:45:33.4±1.0, 41°.70N×144°.77E, h0^{km}, mb3.8/9, mb1 4.1/11, mb1mx3.7/59, mbtmp3.9/11, ML3.3/3, MS4.3/1, Ms1 4.3/1, ms1mx2.7/58, Error ellipse: s-maj=24.4km s-min=19.3km az=150.0*

*MOS **07** 22:45:37.1±1.1, 41°.75N×144°.89E, h42^{km}, mb4.5/6, Error ellipse: s-maj=15.7km s-min=6.9km az=73.9*

*NIED **07** 22:45:37.8, 41°.85N×144°.79E, h52^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.68; $M_{\theta\theta}$4.42; $M_{\phi\phi}$0.26; $M_{r\theta}$-0.57; $M_{\theta\phi}$-2.48; $M_{\phi r}$2.26; Fault plane solution: $M_0$5.68000×10^{14} NP1: ϕ_s135.00000°, δ57.00000°, λ-65.00000°. NP2: ϕ_s275.00000°, δ41.00000°, λ-122.00000°.*

*JMA **07** 22:45:37.7±0.1, 41°.85N×144°.79E, h52^{km}±2^{km}, M3.9*

*NEIC **07** 22:45:39.4±2.2, 41°.76N±0°.07×144°.8E±0°.1, h31^{km}±6^{km}, mb4.4/25, Error ellipse: s-maj=13.5km s-min=8.2km az=126.0*

ISC 07 22:45:37.8±3.4, **41°.84N**±0°.06×**144°.84E**±0°.05, **h23**^{km}±26^{km}, **n89**, σ**1^{s}.30**/93, **mb4.2**/23, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAK	Akkeshi	1.17	355	P	Pn	22 45 57.7	-0.9
JAK				eS	Sn	22 46 12.6	-1.2
JTHR	Tokachihiroo	1.23	292	P	Pn	22 45 58.7	-0.9
JTHR				eS	Sn	22 46 13.4	-2.1
ERM	Erimo	1.27	279	P	Pn	22 45 59.8	-0.2
ERM	Erimo	1.27	279		Pn	22 45 59.8	-0.2
JEM	Erimo	1.27	279	P	Pn	22 45 59.3	-0.7
JKHN	Kushirohamanak	1.27	11	P	Pn	22 45 59.9	-0.2
JKHN				eS	Sn	22 46 16.1	-0.3
JOB	Onbets	1.30	325	P	Pn	22 45 59.6	-0.9
JCH	Churui	1.34	306	P	Pn	22 46 00.0	-1.1
JCH				eS	Sn	22 46 15.7	-2.6
NMR	Nemuro--Hokkai	1.67	23	eP	Pn	22 46 04.9	-0.7
NMR				eS	Sn	22 46 23.4	-2.8
GLVR	Golovnino	1.97	15	eP	Pn	22 46 08.9	-0.8
GLVR				eS	Sn	22 46 31.1	-2.5
GLVR	comp=Z,425nm,0.1s			pmax	pmax		
GLVR	comp=E,4μm,0.3s			smax	smax		
GLVR	comp=N,3μm,0.5s			smax	smax		
RUSJ	Misakicho	2.29	7	eP	Pn	22 46 14.5	+0.4
RUSJ				eS	Sn	22 46 40.5	-1.0
YUK	Yuzh-Kuril'sk	2.32	19	eP	Pn	22 46 14.5	-0.1
YUK				eS	Sn	22 46 40.6	-1.8
YUK	comp=Z,336nm,0.1s			pmax	pmax		
YUK	comp=E,1μm,0.6s			smax	smax		
YUK	comp=N,1μm,0.3s			smax	smax		
SHO	Shikotan	2.51	35	eP	Pn	22 46 16.7	-0.4
SHO				eS	Sn	22 46 44.7	-2.2
SHO	comp=N,20nm,0.2s			pmax	pmax		
SHO	comp=E,21nm,0.2s			pmax	pmax		
SHO	comp=Z,41nm,0.2s			pmax	pmax		
SHO	comp=N,325nm,0.2s			smax	smax		
SHO	comp=E,333nm,0.2s			smax	smax		
JEW	Eniwo	2.71	293	Pn	Pn	22 46 20.2	+0.4
JKA	Kamikawa-asahi	2.81	325		Pn	22 46 22.1	+0.8
ASAJ	Asahikawa comp=E,6.0nm,0.3s,baz=171,slow=9.8,SNR=11	2.81	325	Pn	Pn	22 46 21.1	-0.1
ASAJ	comp=E,9.6nm,0.3s,baz=104,slow=33,SNR=2.4			Sn	Sn	22 46 53.7	-0.8
ASAJ	comp=E,122nm,18.1s,baz=140,slow=47			LR	LR	22 47 50.8	
ASAJ	Asahikawa	2.81	325	P	Pn	22 46 22.1	+0.8
KUR	Kuril'sk	4.05	32	eP	Pn	22 46 39.9	+1.6
KUR				iS	Sn	22 47 25.3	+0.4
KUR	comp=N,44nm,0.5s			pmax	pmax		
KUR	comp=E,26nm,0.5s			pmax	pmax		
KUR	comp=Z,101nm,0.5s			pmax	pmax		
KUR	comp=N,329nm,0.3s			smax	smax		
KUR	comp=E,244nm,0.4s			smax	smax		
JMM	Marumori	5.04	219		Pn	22 46 50.0	-1.9
JSD	Sado	6.32	235		Pn	22 47 09.3	-0.2
MJB9	Matsu-Tunnel	7.38	226	Pn	Pn	22 47 24.1	+0.1
MAJO	Matsushiro	7.38	226	P	Pn	22 47 24.0	0.0
MAJO	Matsushiro	7.38	226	Pn	Pn	22 47 24.0	0.0
MAT	Matsushiro	7.38	226	P	Pn	22 47 23.4	-0.7
MJAR	Matsushiro Arr comp=E,0.5nm,0.3s,baz=26,slow=14,SNR=15	7.38	226	Pn	Pn	22 47 20.4	-3.7
MJAR	comp=E,28nm,19.2s,baz=5.0,slow=38			LR	LR	22 50 10.6	
MJAR	Matsushiro Arr	7.38	226	P	Pn	22 47 22.7	-1.3
MJAR	Matsushiro Arr	7.38	226	Pn	Pn	22 47 22.7	-1.3
JGF	Kuroka	8.54	226	Pn	Pn	22 47 41.5	+1.5
INU	Inuyama	8.91	226	Pn	Pn	22 47 44.5	-0.5
JWT	Wachi	9.87	232	Pn	Pn	22 47 59.3	+1.2
JHS	Saijyo	11.44	237	Pn	Pn	22 48 20.5	+0.7
PEA0B	Petropavlovsk-	14.21	33	P	Pn	22 48 56.6	-0.9
PEA0B	Petropavlovsk-	14.21	33	Pn	Pn	22 48 56.6	-0.9
PETK	Petropavlovsk- comp=E,0.1nm,0.3s,baz=204,slow=9.0,SNR=3.2	14.21	33	Pn	Pn	22 48 55.8	-1.7
SONM	Songino Array comp=E,0.6nm,0.6s,baz=102,slow=8.8,SNR=4.4	27.70	296	P	P	22 51 24.2	0.0
H11N2	WAKE ISLAND Hy baz=327,slow=75,SNR=100	28.91	133	T	T	23 22 14.8	
H11N1	WAKE ISLAND Hy	28.92	133	T	T	23 22 14.2	

	baz=327,slow=75,SNR=81						
H11N3	WAKE ISLAND Hy	28.92	133	T	T	23 22 15.9	
	baz=327,slow=75,SNR=64						
H11S1	WAKE ISLAND Hy	29.80	135	T	T	23 23 22.9	
	baz=328,slow=76,SNR=80						
H11S3	WAKE ISLAND Hy	29.80	135	T	T	23 23 24.0	
	baz=328,slow=76,SNR=61						
H11S2	WAKE ISLAND Hy	29.82	135	T	T	23 23 21.8	
	baz=328,slow=76,SNR=63						
ZAA0	Zalesovo Array	40.82	308	P	P	22 53 18.3	+1.0
ZALV	Zalesovo Beam	40.82	308	P	P	22 53 17.5	+0.3
	comp=E,0.8nm,0.6s,baz=91,slow=7.6,SNR=4.0						
ZALV	Zalesovo Beam	40.82	308	P	P	22 53 19.0	+1.7
IMAR	Indian Mountai	41.18	33	P	P	22 53 21.1	+1.1
PPLA	Purkeypile	41.73	38	P	P	22 53 25.3	+0.5
PPLA				IAmb	IAmb	22 53 52.3	
	comp=Z,20nm,1.5s						
MLY	Manley	42.39	35	P	P	22 53 32.2	+2.2
MLY				IAmb	IAmb	22 53 54.7	
	comp=Z,6.4nm,1.4s						
TRF	Thorofare Moun	42.59	37	P	P	22 53 32.6	+0.7
TRF				IAmb	IAmb	22 53 33.2	
	comp=Z,10nm,1.4s						
NEA2	Nenana	43.10	35	P	P	22 53 37.1	+1.4
NEA2				IAmb	IAmb	22 53 37.6	
	comp=Z,3.0nm,0.6s						
RND	Reindeer	43.24	37	P	P	22 53 37.6	+0.6
RND				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RND	Reindeer	43.24	37	P	P	22 53 37.5	+0.6
GHO	Glory Hole Cre	43.30	39	P	P	22 53 38.4	+0.9
MDM	Murphy Dome	43.45	35	P	P	22 53 39.8	+1.1
MDM				IAmb	IAmb	22 54 07.4	
	comp=Z,4.8nm,1.2s						
SML	Sawmill	43.58	39	P	P	22 53 40.8	+1.1
SML				IAmb	IAmb	22 53 41.8	
	comp=Z,10.0nm,1.0s						
DHY	Denali Highway	43.92	37	P	P	22 53 43.4	+0.8
MK31	Makanchi Array	43.98	299	P	P	22 53 45.6	+2.5
MK31				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MK31	Makanchi Array	43.98	299	P	P	22 53 45.6	+2.5
MKAR	Makanchi Array	43.98	299	P	P	22 53 42.7	-0.4
	comp=Z,0.3nm,0.6s,baz=82,slow=12,SNR=5.2						
MKAR	Makanchi Array	43.98	299	P	P	22 53 44.7	+1.6
MKAR	Makanchi Array	43.98	299	P	P	22 53 44.7	+1.6
IL31		44.03	35	P	P	22 53 44.4	+1.2
ILAR	Eielson Array	44.03	35	P	P	22 53 43.4	+0.1
	comp=Z,1.4nm,0.7s,baz=262,slow=6.3,SNR=17						
ILAR	Eielson Array	44.03	35	P	P	22 53 43.0	-0.3
BMAR	Burnt Mountain	44.85	31	P	P	22 53 51.4	+1.5
SCRK	Sand Creek	45.35	36	P	P	22 53 54.2	+0.3
SCRK				IAmb	IAmb	22 53 57.6	
	comp=Z,2.8nm,1.0s						
DOT	Dot Lake	45.36	36	P	P	22 53 53.8	0.0
VRDI	Verde Repeater	45.97	40	P	P	22 53 58.9	0.0
VRDI				IAmb	IAmb	22 54 02.7	
	comp=Z,5.3nm,1.1s						
BCAR	Beaver Creek A	46.45	37	P	P	22 54 04.3	+1.8
EPYK	Eagle Plains	48.05	32	P	P	22 54 16.5	+1.6
EPYK				IAmb	IAmb	22 54 19.7	
	comp=Z,5.7nm,1.1s						
HYT	Haines Junctio	48.89	39	P	P	22 54 23.9	+2.4
INK	Inuvik	48.91	29	P	P	22 54 22.1	+0.8
	comp=Z,3.4nm,0.6s,baz=290,slow=6.0,SNR=20						
INK	Inuvik	48.91	29	P	P	22 54 22.3	+0.9
INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
INK	Inuvik	48.91	29	P	P	22 54 22.2	+0.9
INK				IAmb	IAmb	22 54 23.0	
	comp=Z,3.7nm,0.8s						
RES	Resolute Bay	57.28	16	P	P	22 55 23.9	+0.9
RES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RES	Resolute Bay	57.28	16	P	P	22 55 23.9	+0.9
RES				IAmb	IAmb	22 55 24.4	
	comp=Z,2.5nm,0.8s						
WB0	Warramunga Arr	62.05	191	P	P	22 55 54.8	-1.6
WRAB	Tennant Creek	62.22	191	P	P	22 55 57.1	-0.4
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.3s						
WRAB	Tennant Creek	62.22	191	P	P	22 55 57.1	-0.4
WRAB				IAmb	IAmb	22 56 19.1	
	comp=Z,5.3nm,1.3s						
WRA	Warramunga Arr	62.23	191	P	P	22 55 55.6	-2.0
	comp=Z,0.6nm,1.1s,baz=11,slow=7.3,SNR=5.5						
WRA	Warramunga Arr	62.23	191	P	P	22 55 55.3	-2.3
FINES	FINESS Array B	65.80	332	P	P	22 56 18.8	-1.8
	comp=Z,4.3nm,1.0s,baz=44,slow=8.5,SNR=8.6						
FINES	FINESS Array B	65.80	332	P	P	22 56 19.4	-1.2
FINES	FINESS Array B	65.80	332	P	P	22 56 19.4	-1.2
FFC	Flin Flon	68.25	35	P	P	22 56 36.2	-0.1
FFC				pmax	pmax		
	comp=Z,6.0nm,1.3s						
FFC	Flin Flon	68.25	35	P	P	22 56 36.2	-0.1
FFC				IAmb	IAmb	22 56 55.6	
	comp=Z,6.0nm,1.2s						
NVAR	Mina Array Bea	70.05	56	P	P	22 56 49.1	+1.1
	comp=Z,0.8nm,0.7s,baz=285,slow=6.9,SNR=4.1						
PDAR	Pinedale Array	72.45	48	P	P	22 57 02.5	0.0
	comp=Z,0.4nm,0.5s,baz=230,slow=1.6,SNR=5.5						
PDAR	Pinedale Array	72.45	48	P	P	22 57 03.0	+0.5
PPT	Papeete	84.53	119	LR	LR	23 26 27.4	
	comp=Z,160nm,21.9s,baz=58,slow=29						

*INET **07** 22:53:32.6, 14°.26N×91°.16W, h15^{km}, MW5.5*

*GCG **07** 22:53:33.6±0.3, 13°.87N×91°.17W, h71^{km}±16^{km}, MD5.1*

*UCR **07** 22:53:33.8±1.2, 14°.20N×91°.05W, h97^{km}±11^{km}, ML5.3, mb5.7(NEIC)*

*NEIC **07** 22:53:35.1±3.0, 14°.22N±0°.07×90°.89W±0°.06, h84^{km}±1^{km}, mb5.8/507, Mwb5.7/46, Mww5.7, Md5.7(SNET), Error ellipse: s-maj=14.0km s-min=8.5km az=215.0*

*NEIC **07** 22:53:36.3, 14°.26N×90°.84W, h84^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.98; M$_{\theta\theta}$0.04; M$_{\phi\phi}$-2.02; M$_{r\theta}$3.02; M$_{\theta\phi}$0.93; M$_{\phi r}$-2.06; Fault plane solution: M$_0$4.27000×10^{17} NP1:φ$_s$130.49000°, δ76.30000°, λ73.39000°. NP2:φ$_s$2.05000°, δ21.41000°, λ139.55000°. Principal axes: T 4.3956, Plg56.0000°, Azm19.0000°; N -0.2611, Plg16.0000°, Azm135.0000°; P -4.1346, Plg29.0000°, Azm234.0000°;*

*GCMT **07** 22:53:36.1±0.1, 14°.20N±0°.01×91°.15W±0°.01, h99^{km}±1^{km}, MW5.7/150, Moment Tensor Solution. s140,c273; s150,c283; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.92±.05; M$_{\theta\theta}$-0.31±.06; M$_{\phi\phi}$-0.61±.06; M$_{r\theta}$3.55±.03; M$_{\theta\phi}$-0.06±.05; M$_{\phi r}$-2.39±.03; Best double couple: M$_0$4.32800×10^{17} NP1:φ$_s$325.00000°, δ5.00000°, λ111.00000°. NP2:φ$_s$124.00000°, δ86.00000°, λ88.00000°. Principal axes: T 4.6120, Plg49.0000°, Azm33.0000°; N -0.5670, Plg2.0000°, Azm125.0000°; P -4.0450, Plg41.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **07** 22:53:36.5±1.1, 14°.34N×90°.71W, h119^{km}, mb5.5/14 Error ellipse: s-maj=8.5km s-min=5.0km az=112.8*

*IDC **07** 22:53:37.4±0.5, 14°.32N×90°.57W, h115^{km}±3^{km}, mb4.7/25, mb1 4.9/26, mb1mx4.8/32, mbtmp5.1/26, MS4.7/32, Ms1 4.7/32, ms1mx4.6/38, Error ellipse: s-maj=15.2km s-min=8.3km az=64.0*

*NEIC **07** 22:53:37, 14°.11N×90°.96W, h100^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.67; M$_{\theta\theta}$0.36; M$_{\phi\phi}$-1.03; M$_{r\theta}$3.71; M$_{\theta\phi}$-0.18; M$_{\phi r}$-2.75; Fault plane solution: M$_0$4.71000×10^{17} NP1:φ$_s$23.00000°, δ8.00000°, λ165.00000°. NP2:φ$_s$128.00000°, δ88.00000°, λ82.00000°. Principal axes: T 5.0164, Plg47.0000°, Azm30.0000°; N -0.6895, Plg8.0000°, Azm129.0000°; P -4.3269, Plg42.0000°, Azm226.0000°;*

*BGR **07** 22:53:39.3±0.0, 14°.15N×89°.19W, h101^{km}±2^{km}, mb5.6*

ISC 07 22:53:35.5±0.4, **14°.21N**±0°.04×**90°.92W**±0°.04, **h106**^{km}±2^{km}, **h106**^{km}**:pP-P, n1234,** σ**1^{s}58**/1193, **mb5.7**/352, **260C-133D, Fault plane solution: NP1:**φ$_s$294.64087°, δ61.10421°, λ-91.20085°. **NP2:**φ$_s$117.12480°, δ28.91858°, λ-87.82549°. **Principal axes:** T Plg16.0961°, Azm25.5246°; N Plg1.0513°, Azm295.2212°; P Plg73.8677°, Azm201.5836°; **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.24	18	⇓iP	Pn	22 53 48.7	-2.2
PCG	Pacaya	0.35	59	⇓iP	Pn	22 53 50.1	-1.3
NBG	Las Nubes	0.67	56	⇓iP	Pn	22 53 54.0	+0.4
STG3	Santiaguito 3,	0.80	308	⇓eP	Pn	22 53 51.9	-2.7
RTAL	Retalhuleu	0.81	293	Pn	Pn	22 53 50.5	-4.0
APG	El Apazote	0.90	29	P	Pn	22 53 55.7	+0.1
	6µm,0.3s,baz=164,slow=4.0						
APG				S	Sn	22 54 12.4	+1.6
	2µm,0.3s,baz=53,slow=14,SNR=20						
APG				LR	LR	22 54 20.4	
	comp=Z,52µm,19.1s,baz=282,slow=62						
SLOZ	Alcaldia de Sa	1.12	99	eP	Pn	22 53 57.0	-0.7
SLOZ				eS	Sn	22 54 15.3	+0.8
HUEH	Huehuetenango	1.23	333	Pn	Pn	22 53 58.7	-0.6
RTR	El Retiro	1.27	104	⇓iP	Pn	22 53 59.1	-0.6
RTR	El Retiro	1.27	104	⇓iP	Pn	22 53 59.1	-0.6
SBLS	San Blas	1.31	106	⇓iP	Pn	22 53 59.2	-0.9
SBLS	San Blas	1.31	106	⇓iP	Pn	22 53 59.2	-0.9
CEVE	Cerro Verde	1.31	107	eP	Pn	22 54 00.2	0.0
CEVE				eS	Sn	22 54 20.7	+1.9
CEVE				IAML		22 54 22.9	
	comp=Z,168µm,0.2s						
CEVE	Cerro Verde	1.31	107	eP	Pn	22 54 00.2	0.0
CEVE				eS	Sn	22 54 20.7	+1.9
CEVE				IAML		22 54 22.9	
	comp=Z,168µm,0.2s						
SNJE	San Jose	1.32	105	⇓iP	Pn	22 53 59.5	-0.7
SNJE	San Jose	1.32	105	⇓iP	Pn	22 53 59.5	-0.7
UNIC	Universidad Ca	1.35	100	⇓iP	Pn	22 53 59.7	-0.7
UNIC				eS	Sn	22 54 19.8	+0.6
UNIC	Universidad Ca	1.35	100	⇓iP	Pn	22 53 59.7	-0.7
UNIC				eS	Sn	22 54 19.8	+0.6
MTO3	Montecristo	1.52	83	⇓iP	Pn	22 54 02.4	-0.2
MTO3				eS	Sn	22 54 25.6	+2.5
MTO3	Montecristo	1.52	83	⇓iP	Pn	22 54 02.4	-0.2
MTO3				eS	Sn	22 54 25.6	+2.5
MTO3	Montecristo	1.52	83		Pn	22 54 02.4	-0.2
JAYA	Jayaque - finc	1.53	111	eP	Pn	22 54 01.9	-0.8
JAYA				eS	Sn	22 54 23.3	+0.1
JAYA				eS	Sn	22 54 23.7	+0.4
JAYA	Jayaque - finc	1.53	111	eP	Pn	22 54 01.9	-0.8
JAYA				eS	Sn	22 54 23.3	+0.1
JAYA				eS	Sn	22 54 23.7	+0.4
CEDA	San Andres	1.54	105	i P	Pn	22 54 02.0	-0.5
CEDA				IAML		22 54 36.6	
	comp=Z,44µm,0.6s						
CEDA	San Andres	1.54	105	i P	Pn	22 54 02.0	-0.5
CEDA				IAML		22 54 36.6	
	comp=Z,44µm,0.6s						
TACO	Tacachico	1.54	99	⇓iP	Pn	22 54 02.0	-0.6
TACO				eS	Sn	22 54 24.9	+1.7
TACO	Tacachico	1.54	99	⇓iP	Pn	22 54 02.0	-0.6
TACO				eS	Sn	22 54 24.9	+1.7
ESQI	Esquipulas	1.57	77		Pn	22 54 03.4	+0.4
PMON	Piamonte	1.64	108	eP	Pn	22 54 03.5	-0.3
PMON				eS	Sn	22 54 26.4	+1.0
PMON	Piamonte	1.64	108	eP	Pn	22 54 03.5	-0.3
PMON				eS	Sn	22 54 26.4	+1.0
BOQS	Boqueron	1.66	106	i P	Pn	22 54 03.9	-0.4
BOQS	Boqueron	1.66	106	i P	Pn	22 54 03.9	-0.4
ITCA	Escuela Especi	1.68	108	eP	Pn	22 54 03.7	-0.7
ITCA				eS	Sn	22 54 28.0	+1.6
ITCA	Escuela Especi	1.68	108	eP	Pn	22 54 03.7	-0.7
ITCA				eS	Sn	22 54 28.0	+1.6
LALI	Alcalda de L	1.71	115	eP	Pn	22 54 04.2	-0.5
LALI				eS	Sn	22 54 27.7	+0.8
LALI	Alcalda de L	1.71	115	eP	Pn	22 54 04.2	-0.5
LALI				eS	Sn	22 54 27.7	+0.8
SNET	Serv Nac Est T	1.72	107	eP	Pn	22 54 04.4	-0.5
SNET				eS	Sn	22 54 29.0	+1.8
SNET				IAML		22 54 31.9	
	comp=Z,35µm,0.3s						
SNET	Serv Nac Est T	1.72	107	eP	Pn	22 54 04.4	-0.5
SNET				eS	Sn	22 54 29.0	+1.8
SNET				IAML		22 54 31.9	
	comp=Z,35µm,0.3s						
SNET	Serv Nac Est T	1.72	107		Pn	22 54 04.2	-0.7
SEMO	Seminario San	1.72	107	eP	Pn	22 54 04.5	-0.4
UESS	Universidad de	1.74	106	eP	Pn	22 54 04.5	-0.6
UESS				IAML		22 54 34.4	
	comp=Z,37µm,0.6s						
UESS	Universidad de	1.74	106	eP	Pn	22 54 04.5	-0.6
UESS				IAML		22 54 34.4	
	comp=Z,37µm,0.6s						
OPAM	Oficina de Pla	1.74	106	eS	Sn	22 54 28.9	+1.1
OPAM				IAML		22 54 34.7	
	comp=Z,33µm,0.7s						
OPAM	Oficina de Pla	1.74	106	eS	Sn	22 54 28.9	+1.1
OPAM				IAML		22 54 34.7	
	comp=Z,33µm,0.7s						
UTEC	Universidad Te	1.74	107	IAML		22 54 38.0	
	comp=Z,34µm,0.3s						
UTEC	Universidad Te	1.74	107	IAML		22 54 38.0	
	comp=Z,34µm,0.3s						
IGN	Direccin Gen	1.77	106	eP	Pn	22 54 05.2	-0.2
IGN	Direccin Gen	1.77	106	eP	Pn	22 54 05.2	-0.2
UDBS	Universidad Do	1.78	106	i P	Pn	22 54 05.3	-0.3
UDBS	Universidad Do	1.78	106	i P	Pn	22 54 05.3	-0.3
AEIL	Aeropuerto Ilo	1.82	106	eP	Pn	22 54 05.9	-0.3
AEIL	Aeropuerto Ilo	1.82	106	eP	Pn	22 54 05.9	-0.3
LBRS	Las Brisas	1.88	104	i P	Pn	22 54 06.8	-0.1
LBRS	Las Brisas	1.88	104	i P	Pn	22 54 06.8	-0.1
LFRS	El Faro	1.90	108	eP	Pn	22 54 06.6	-0.6
LFRS	El Faro	1.90	108	eP	Pn	22 54 06.6	-0.6
LLGN	La Laguna	1.92	91	eP	Pn	22 54 07.2	-0.1
LLGN	La Laguna	1.92	91	eP	Pn	22 54 07.2	-0.1
SJTE	Alcalda de S	1.95	108	eP	Pn	22 54 08.0	+0.2
SJTE				eS	Sn	22 54 33.8	+1.4
SJTE	Alcalda de S	1.95	108	eP	Pn	22 54 08.0	+0.2
SJTE				eS	Sn	22 54 33.8	+1.4
PAVA	Las Pavas	1.99	104	i P	Pn	22 54 08.3	0.0
PAVA	Las Pavas	1.99	104	i P	Pn	22 54 08.3	0.0
COEG	Centro de Oper	2.06	106	eP	Pn	22 54 09.4	+0.2
COEG	Centro de Oper	2.06	106	eP	Pn	22 54 09.4	+0.2
SNVI	San Vicente	2.11	106	eP	Pn	22 54 10.0	+0.2
SNVI	San Vicente	2.11	106	eP	Pn	22 54 10.0	+0.2
UESV	Universidad de	2.15	105	eP	Pn	22 54 10.0	-0.3
UESV	Universidad de	2.15	105	eP	Pn	22 54 10.0	-0.3
SCLA	Alcaldia de Sa	2.19	103	i P	Pn	22 54 11.1	+0.3
SCLA	Alcaldia de Sa	2.19	103	i P	Pn	22 54 11.1	+0.3
PQSS	Presa 15 de Se	2.36	104	eP	Pn	22 54 13.7	+0.6
CCIG	Comitan	2.37	330		Pn	22 54 14.2	+0.9
COEB	Comit de Eme	2.43	107	i P	Pn	22 54 14.3	+0.3
COEB	Comit de Eme	2.43	107	i P	Pn	22 54 14.3	+0.3
ALJI	Alcalda de J	2.45	111	eP	Pn	22 54 14.6	+0.5
ALJI	Alcalda de J	2.45	111	eP	Pn	22 54 14.6	+0.5
PACA	Pacayal	2.63	106	eP	Pn	22 54 17.8	+1.2
PACA	Pacayal	2.63	106	eP	Pn	22 54 17.8	+1.2
JUCU	Jucuar¡n	2.77	110	eP	Pn	22 54 19.3	+0.9
JUCU	Jucuar¡n	2.77	110	eP	Pn	22 54 19.3	+0.9
PETF	Flores	2.87	21		Pn	22 54 22.2	+2.4
LCND	La Caada	3.08	107	eP	Pn	22 54 22.7	+0.2
LCND	La Caada	3.08	107	eP	Pn	22 54 22.7	+0.2
CNCH	Conchagua	3.14	107	eP	Pn	22 54 23.5	+0.1
CNCH	Conchagua	3.14	107	eP	Pn	22 54 23.5	+0.1
TGUH	Tegucigalpa,Un	3.54	92	eP	Pn	22 54 29.4	+0.7
TGUH	Tegucigalpa,Un	3.54	92	eP	Pn	22 54 29.4	+0.7
TGUH	Tegucigalpa,Un	3.54	92	Pn	Pn	22 54 28.9	+0.1
CRIN	San Cristobal	4.05	111	Pn	Pn	22 54 36.4	+0.8
CMIG	Matias Romero	4.77	307	P	Pn	22 54 43.6	-1.6
	comp=Z,98nm,0.3s,baz=112,slow=8.8,SNR=244						
CMIG				S	Sn	22 55 36.1	-3.4
	comp=Z,119nm,0.3s,baz=108,slow=6.3,SNR=5.0						
MATN	Matagalpa	5.02	104	Pn	Pn	22 54 48.0	-0.7
BOAB	BOACO BROADBAN	5.41	108	Pn	Pn	22 54 53.4	-0.4
CONN	Concepcion	5.79	116	eP	Pn	22 54 59.5	+0.4
ACON	Acoyapa	6.03	111	eP	Pn	22 55 01.9	-0.4
ACON	Acoyapa	6.03	111		Pn	22 55 02.3	0.0
HZTE	Horizontes, Gu	6.25	123	eP	Pn	22 55 06.5	+1.2
HZTE	Horizontes, Gu	6.25	123	Pn	Pn	22 55 06.7	+1.3
GBS3	Finca Las Img	6.33	122	eP	Pn	22 55 07.2	+0.7
LAPC	Finca la Perla	6.36	122	eP	Pn	22 55 07.7	+0.9
BUEV	Buena Vista	6.36	122	eP	Pn	22 55 08.3	+1.4
BUAI	Buenos Aires	6.38	121	eP	Pn	22 55 07.9	+0.8
VRLE	La Escondida,	6.40	121	eP	Pn	22 55 08.2	+0.7
LIM1	Limonal	6.54	122	eP	Pn	22 55 11.1	+1.8
SAJU	San Juanillo,	6.55	128	eP	Pn	22 55 10.0	+0.6
GUAB	Guayabo de Bag	6.56	121	eP	Pn	22 55 11.0	+1.5
GUAI	GUAI	6.58	126	eP	Pn	22 55 11.0	+1.2
HORNC	Hornillas	6.60	121	eP	Pn	22 55 11.4	+1.3
COLC	Colonia	6.60	122	eP	Pn	22 55 11.8	+1.7
CUI	Cuipilapa	6.64	122	eP	Pn	22 55 12.0	+1.3
PLVR	Palo Verde	6.66	125	eP	Pn	22 55 11.9	+0.9
GRZA	Playa Garza	6.70	129	eP	Pn	22 55 12.1	+0.7
DUNO	Dulce Nombre,	6.71	127	Pn	Pn	22 55 12.4	+0.9
ESPN	Las Esperanzas	6.75	107	⇑iP	Pn	22 55 12.0	0.0
ESPN	Las Esperanzas	6.75	107		Pn	22 55 13.2	+1.1
PTEN	Parque Tenorio	6.76	120	eP	Pn	22 55 12.6	+0.4
ACAL	Aguas Claras	6.76	121	eP	Pn	22 55 13.4	+1.1
INDI	Punta indio, G	6.84	129	eP	Pn	22 55 14.2	+1.0
JTS	Las Juntas de	7.01	123	eP	Pn	22 55 16.9	+1.2
JTS	Las Juntas de	7.01	123	c iP	Pn	22 55 16.6	+0.9
JTS				pmax	pmax		
	comp=Z,193nm,0.7s						
JTS	Las Juntas de	7.01	123	eP	Pn	22 55 14.2	-1.5
JTS	Las Juntas de	7.01	123	Pn	Pn	22 55 16.5	+0.9
CEDE	Laguna Cedeo	7.11	121	eP	Pn	22 55 18.3	+1.3
ARE1	Arenal 1	7.11	121	eP	Pn	22 55 18.4	+1.3
CASO	Castillo	7.12	121	eP	Pn	22 55 18.0	+0.9
CAO2	Cobano, Puntar	7.25	128		Pn	22 55 19.5	+0.6
COVE	Coope Vega, Sa	7.25	118	⇑iP	Pn	22 55 18.7	-0.2
COVE	Coope Vega, Sa	7.25	118		Pn	22 55 18.9	+0.1
LAFE	Finca La Fe, P	7.33	126	eP	Pn	22 55 19.9	0.0
SRA1	San Ramn	7.51	122	eP	Pn	22 55 25.4	+2.8
JACO	JACO, Garabito	7.61	126	eP	Pn	22 55 24.4	+0.6
JACO	JACO, Garabito	7.61	126	Pn	Pn	22 55 25.0	+1.2
CRPO	Crater poas	7.66	121	eP	Pn	22 55 25.4	+0.6
RIFO	Rio Frio, Sara	7.86	119	eP	Pn	22 55 26.9	-0.2
HDC	Heredia	7.86	121	eP	Pn	22 55 28.2	+0.9
HDC	Heredia	7.86	121	Pn	Pn	22 55 27.1	-0.2
HDC3	Heredia 3	7.86	121	eP	Pn	22 55 27.4	+0.1
OCM	Ochomogo	8.04	121	eP	Pn	22 55 30.6	+0.8
TLIG	Tlapa	8.08	295	Pn	Pn	22 55 29.9	-0.3
LCR2	La Lucha 2	8.09	123	eP	Pn	22 55 31.1	+0.6
RAFA	San Farael, Vo	8.14	121	eP	Pn	22 55 34.1	+2.9
CVTR	Volcan Turrial	8.15	120	Pn	Pn	22 55 30.6	-0.8
RIMA	Rio Macho	8.20	122	eP	Pn	22 55 32.3	+0.4
RIMA	Rio Macho	8.20	122	Pn	Pn	22 55 32.6	+0.7
CDM	Cerro de Muert	8.39	123	⇑iP	Pn	22 55 35.8	+0.9
BATAN	Batan	8.43	118	Pn	Pn	22 55 35.3	+0.4
EDDO	Dominical	8.49	125	eP	Pn	22 55 35.9	+0.3
PEZE	Perez Zeledon,	8.56	123	Pn	Pn	22 55 37.5	+0.7
SRBA	San Rafael, Bu	8.90	123	eP	Pn	22 55 42.1	+0.7
SRBA	San Rafael, Bu	8.90	123	Pn	Pn	22 55 41.9	+0.4
EDPN	Palmar Norte	8.98	125	eP	Pn	22 55 44.7	+2.3
EDBA	Buenos Aires	9.01	123	eP	Pn	22 55 44.5	+1.7
POTG	Potrero Grande	9.20	123	eP	Pn	22 55 46.3	+0.8
PRVC	Isla de Provid	9.32	94	eP	Pn	22 55 45.8	-1.2
PRVC	Isla de Provid	9.32	94	Pn	Pn	22 55 45.9	-1.1
UNM	Universidad Na	9.40	304	P	Pn	22 55 49.0	+0.6
UNM	Universidad Na	9.40	304	Pn	Pn	22 55 49.0	+0.6
CDITO	Canoas	9.68	125	Pn	Pn	22 55 52.7	+0.9
BRU2	Volcan	9.70	123	eP	Pn	22 55 48.3	-4.0
MOIG	Morelia	11.23	300	Pn	Pn	22 56 13.9	+0.9
SOR	Soroa	11.36	40	P	Pn	22 56 16.0	+1.4
SOR	Soroa	11.36	40	Pn	Pn	22 56 16.0	+1.4
LCCY	Blossom Villag	11.70	61	Pn	Pn	22 56 20.7	+1.6
BCIP	Isla Barro Col	11.95	114	P	Pn	22 56 22.6	+0.1
BCIP	Isla Barro Col	11.95	114	eP	Pn	22 56 19.4	-3.1
BCIP	Isla Barro Col	11.95	114	Pn	Pn	22 56 22.6	+0.1
MCJ	Malvern	13.24	72	i P	P	22 56 42.9	-2.6
MTDJ	Mount Denham	13.46	71	eP	Pn	22 56 39.2	-3.1
MTDJ	Mount Denham	13.46	71	Pn	Pn	22 56 43.1	+0.7
ZAIG	Zacatecas	13.94	309	Pn	Pn	22 56 49.0	+0.2
STH	Stony Hill	14.09	72	i P	P	22 56 53.2	-1.7
GWJ	Greenwich	14.16	72	i P	P	22 57 01.8	+6.0
PTAC	Punta Ardita,	14.67	117	eP	Pn	22 56 58.7	+0.8
KVTX	Kingsville	14.77	335		P	22 57 01.6	-0.7
PAYG	Puerto Ayora	14.80	178	eP	Pn	22 56 53.9	-5.7
PAYG	Puerto Ayora	14.80	178	Pn	Pn	22 56 59.1	-0.5
MOTC	Monteria, Cord	15.89	108	eP	Pn	22 57 11.6	-1.7
MOTC	Monteria, Cord	15.89	108	Pn	Pn	22 57 12.6	-0.7
SJCC	San Jacinto, C	15.98	104	eP	Pn	22 57 10.4	-4.0
SJCC	San Jacinto, C	15.98	104	Pn	Pn	22 57 13.4	-1.0
SJCC					PcP	23 02 07.5	+1.9
833A	Chaparral WMA,	16.10	332	P	Pn	22 57 15.9	+0.2
	baz=149,SNR=69						
DBBC	Dabeiba	16.12	115	eP	Pn	22 57 12.8	-3.5
GTBY	Guantanamo Bay	16.14	67	eP	Pn	22 57 14.8	-1.6
GTBY	Guantanamo Bay	16.14	67		P	22 57 18.0	+0.4
GTBY				IAmb	IAmb	22 57 23.6	
	comp=Z,1µm,2.0s						
PIZC	Pizarro, Choco	16.21	123	eP	Pn	22 57 16.3	-1.0
HKT	Hockley	16.31	345	c iP	P	22 57 19.2	0.0
HKT				pmax	pmax		
	comp=Z,391nm,1.4s						
HKT	Hockley	16.31	345	P	P	22 57 19.6	+0.4
DWPF	Disney Wildern	16.40	31		P	22 57 21.6	+1.3
UREC	San Jos de Ur	16.41	111	eP	Pn	22 57 16.3	-3.4
SMRC	Santa Marta, M	16.57	99	eP	Pn	22 57 16.3	-5.4
CBOC	Ciudad Bolivar	16.85	118	eP	Pn	22 57 24.5	-0.8
ARGC	Ariguani, Magd	16.87	103	eP	Pn	22 57 21.8	-3.6
HELC	Santa Helena	17.11	116	eP	Pn	22 57 26.9	-1.7
ZARC	Zaragoza, Cauc	17.12	111	eP	Pn	22 57 25.7	-2.8
ZARC	Zaragoza, Cauc	17.12	111	P	Pn	22 57 26.5	-1.9
ZARC					PcP	23 02 08.8	+1.6
PLMC	San Jos del P	17.13	121	eP	Pn	22 57 25.7	-2.9
TUMC	Tumaco	17.23	135	eP	P	22 57 28.0	-1.6
BRAL	Brewton	17.25	11	P	Pn	22 57 32.6	+2.8
SMLC	San Martn de	17.36	106	eP	P	22 57 26.9	-4.2
435B	Jarrell	17.59	341	P	Pn	22 57 34.8	+0.8
	baz=158,SNR=12						
YOTC	Yotoco, Valle	17.60	124	eP	P	22 57 31.6	-2.3
LL1C	La Loma 1 Cana	17.61	103	eP	P	22 57 30.3	-3.6
GUY2C	Guyana, Caldas	17.73	119	eP	P	22 57 35.1	-0.6
LL6C	La Loma 6 Bece	17.83	103	eP	P	22 57 34.0	-2.2
CRJC	Cerrejon, Guaj	17.89	98	eP	P	22 57 35.3	-1.7
PTBC	PUERTO BERRIO,	17.89	114	eP	P	22 57 32.7	-4.2
VBMS	Vicksburg	17.93	1	P	Pn	22 57 39.6	+1.6
NORC	Norcasia	17.98	117	eP	P	22 57 37.4	-0.6
LGNH	Logne	18.08	74	IAmb	IAmb	22 57 44.4	
	comp=Z,822nm,1.9s						
ANIL	Santa Ana	18.09	121	eP	Pn	22 57 40.7	+0.3
JAKH	Jacmel	18.11	75	P	Pn	22 57 41.4	+1.0
JAKH				IAmb	IAmb	22 58 04.7	
	comp=Z,616nm,1.5s						
JCT	Junction City	18.14	335	P	Pn	22 57 40.5	-0.1
JCT				PcP	PcP	23 02 10.1	+1.5
POPC	Popayan, Colom	18.23	128	eP	P	22 57 41.0	0.0
OCAC	Ocana	18.25	107	eP	P	22 57 37.4	-3.6
OCAC	Ocana	18.25	107	P	P	22 57 39.4	-1.6
OCAC					PcP	23 02 11.6	+2.4
BRRC	Barranca, Sant	18.32	111	eP	P	22 57 38.0	-3.6
PAC1	Pacto, Paraso	18.33	138	eP	Pn	22 57 45.1	+2.0
TIGA	Tifton	18.42	20	P	Pn	22 57 45.7	+1.8
	baz=203,SNR=31						
ORTC	Ortega, Tolima	18.54	122	eP	Pn	22 57 45.7	+0.1
SOTA	Rioblanco	18.55	129	eP	P	22 57 44.9	+0.3
CUSE	Cuicocha Este	18.56	137	eP	Pn	22 57 47.0	+0.9
OTAV	Otavalo	18.57	137	P	P	22 57 45.1	+0.2
OTAV				pmax	pmax		
	comp=Z,157nm,1.9s						
OTAV	Otavalo	18.57	137	eP	P	22 57 44.9	0.0
OTAV	Otavalo	18.57	137	eP	Pn	22 57 46.0	-0.4
OTAV	Otavalo	18.57	137	P	P	22 57 45.1	+0.2
OTAV				PcP	PcP	23 02 12.3	+2.1
PCON	Cinco Dias	18.58	128	eP	P	22 57 42.9	-2.2
MARP	Paez Belalcaza	18.60	126	eP	Pn	22 57 47.0	+0.6
URIC	Uribia, Colomb	18.61	96	eP	P	22 57 41.0	-3.9
GCUF	Volcan Galeras	18.62	133	eP	Pn	22 57 47.5	+0.5
SPBC	San Pablo de B	18.64	115	eP	P	22 57 43.3	-1.9
TULM	Tulcn-Chalpat	18.67	135	eP	Pn	22 57 48.1	+0.6
WHTX	Lake Whitney,	18.68	342	P	Pn	22 57 46.5	-0.5
	baz=160						
HPIG		18.71	315	P	Pn	22 57 47.2	-0.3
HPIG				IAmb	IAmb	22 57 51.5	
	comp=Z,642nm,1.2s						
HPIG				PcP	PcP	23 02 10.2	+0.2
ROSC	El Rosal	18.82	118	P	Pn	22 57 49.6	+0.5
	comp=Z,15nm,0.3s,baz=91,slow=1.2,SNR=40						
ROSC				PcP	PcP	23 02 11.5	+1.0
	comp=Z,1.4nm,0.3s,baz=257,slow=14,SNR=2.6						
ROSC	El Rosal	18.82	118	eP	Pn	22 57 49.1	-0.1
PRAC	Prado	18.95	122	eP	P	22 57 46.8	-1.7
BARC	Barichara	19.01	112	eP	P	22 57 48.9	-0.5
Z41A	Richland Creek	19.04	355	P	Pn	22 57 51.0	-0.1
	baz=174,SNR=28						
Z47A	Carrollton	19.08	7	P	Pn	22 57 52.3	+0.7
BETC	Betania	19.10	125	eP	P	22 57 50.2	0.0
TXAR	Lajitas Array	19.12	324	P	Pn	22 57 52.5	+0.2
	comp=Z,3.0nm,0.3s,baz=152,slow=11,SNR=195						
TXAR				PcP	PcP	23 02 12.1	+1.6

	comp=Z,2.0nm,0.3s,baz=159,slow=4.1,SNR=18						
TXAR				ScP	ScP	23 05 39.2	+2.4
	comp=Z,0.1nm,0.3s,baz=134,slow=3.8,SNR=14						
TXAR	Lajitas Array	19.12	324	P	Pn	22 57 52.1	-0.2
TXAR				PcP	PcP	23 02 11.7	+1.2
TX32	Lajitas Array	19.12	324	IAmb	IAmb	22 57 55.2	
	comp=Z,521nm,1.6s						
PAMC	Pamplona, Colo	19.15	109	*e*P	P	22 57 46.8	-4.4
GARC	Garzon, Huila	19.37	127	*e*P	Pn	22 57 55.1	-0.4
RUSC	La Rusia	19.40	113	*i* Pg	P	22 57 50.4	-3.6
SDDR	Presa de Saban	19.40	73	*e*P	Pn	22 57 56.4	+0.8
SDDR	Presa de Saban	19.40	73	P	P	22 57 54.1	+0.6
WLAR	White Oak Lake	19.49	355	P	P	22 57 55.1	+0.9
WLAR				IAmb	IAmb	22 57 57.7	
	comp=Z,1μm,1.3s						
FLOC	Florencia	19.63	128	*e*P	P	22 57 53.9	-2.0
FLOC	Florencia	19.63	128	P	Pn	22 57 58.1	-0.2
VILC	Villavicencio,	19.73	119	*e*P	P	22 57 56.2	-0.9
ABTX	Abilene, Hawle	19.98	338	P	P	22 58 00.2	+0.6
	baz=154						
SC01	Santiago de lo	20.00	72	P	Pn	22 58 02.5	-0.2
DABV	Dabajuro	20.06	97	*e*P	P	22 57 54.4	-6.2
GRTK	Grand Turk	20.17	66	P	Pn	22 58 03.9	-0.7
X40A	Basin Creek Fa	20.26	355	P	P	22 58 03.5	+1.0
	baz=174,SNR=119						
GOGA	Godfrey	20.28	18	P	Pn	22 58 04.6	-1.1
GOGA				pmax	pmax		
	comp=Z,697nm,1.3s						
GOGA	Godfrey	20.28	18	P	Pn	22 58 04.6	-1.1
GOGA				IAmb	IAmb	22 58 06.9	
	comp=Z,697nm,1.3s						
SLBS	Sierra La Lagu	20.29	300	P	Pn	22 58 05.0	-1.0
TAMC	Tame, Arauca	20.33	110	*e*P	P	22 57 58.6	-5.0
MIAR	Mount Ida	20.39	354	P	P	22 58 04.4	+0.5
MIAR				pmax	pmax		
	comp=Z,719nm,1.7s						
MIAR	Mount Ida	20.39	354	P	P	22 58 04.4	+0.5
MIAR				IAmb	IAmb	22 58 06.5	
	comp=Z,718nm,1.6s						
LOOK	Love County	20.49	345	P	P	22 58 05.0	-0.1
LOOK				IAmb	IAmb	22 58 27.6	
	comp=Z,379nm,1.1s						
LOOK					PcP	23 02 13.2	+0.4
SOCV	Socops	20.53	105	*e*P	P	22 57 59.9	-5.9
SDV	Santo Domingo	20.56	103	*e*P	P	22 58 02.9	-3.3
SDV	Santo Domingo	20.56	103	*e*P	P	22 58 05.0	-1.2
SDV	Santo Domingo	20.56	103	P	P	22 58 04.2	-1.9
X37A	Clayton	20.68	350	IAmb	IAmb	22 58 19.6	
	comp=Z,772nm,1.5s						
MACC	Macarena, Meta	20.69	124	*e*P	P	22 58 07.8	+0.4
FPAL	Fort Paine	20.80	12	P	Pn	22 58 10.4	-1.4
FPAL				IAmb	IAmb	22 58 12.4	
	comp=Z,821nm,1.3s						
FPAL				PcP	PcP	23 02 13.5	+0.2
PLAL	Pickwick Lake	20.84	7	P	P	22 58 09.0	+0.2
PLAL				IAmb	IAmb	22 58 18.5	
	comp=Z,374nm,1.1s						
W41B	Gary Mavity, V	20.91	357	P	P	22 58 10.4	+1.0
	baz=176,SNR=80						
PTGC	Puerto Gaitan,	21.02	116	*e*P	P	22 58 06.8	-4.1
WHAR	Wooly Hollow	21.02	357	IAmb	IAmb	22 58 21.8	
	comp=Z,1μm,1.6s						
W39A	Magazine	21.05	353	P	P	22 58 12.3	+1.2
	baz=172,SNR=122						
PTLC	Puerto Leguiza	21.19	130	*e*P	P	22 58 16.2	+3.4
X34A	Smith Ranch, M	21.24	344	IAmb	IAmb	22 58 42.4	
	comp=Z,378nm,1.1s						
HBAR	Harrisburg	21.25	1	P	P	22 58 13.6	+0.4
SWET	Sewanee	21.39	11	IAmb	IAmb	22 58 17.6	
	comp=Z,613nm,1.5s						
HODGE	Hodges	21.42	20	IAmb	IAmb	22 58 34.5	
	comp=Z,399nm,1.2s						
FCAR	Ozark Folk Cen	21.61	357	IAmb	IAmb	22 58 38.5	
	comp=Z,304nm,1.0s						
GNAR	Gosnell	21.68	2	P	P	22 58 18.1	+0.4
FNO	Franklin	21.75	346	IAmb	IAmb	22 58 53.1	
	comp=Z,410nm,1.1s						
LCAR	Lake Charles	21.77	359	P	P	22 58 18.8	+0.1
LCAR				IAmb	IAmb	22 58 30.8	
	comp=Z,552nm,1.3s						
BG3	Lake Jocassee	21.91	18	P	P	22 58 21.1	+0.9
BG3				IAmb	IAmb	22 58 24.5	
	comp=Z,633nm,1.4s						
OKCFA	Oklahoma City	21.92	346		P	22 58 19.3	-1.0
OKCFA				IAmb	IAmb	22 58 33.0	
	comp=Z,559nm,1.3s						
WVT	Waverly	22.00	7	P	P	22 58 21.5	+0.4
WVT				IAmb	IAmb	22 58 32.4	
	comp=Z,1μm,1.9s						
WVT				PcP	PcP	23 02 15.6	0.0
TUL1	Leonard	22.05	349	P	P	22 58 20.3	-1.3
	baz=167						
PAULI	Pauline	22.10	20	IAmb	IAmb	22 58 26.2	
	comp=Z,1μm,1.7s						
U40A	Yellville	22.12	356	P	P	22 58 22.9	+0.5
	baz=175						
PVMO	Portageville	22.14	3	P	P	22 58 23.0	+0.5
PVMO				IAmb	IAmb	22 58 59.9	
	comp=Z,662nm,1.3s						
HHAR	Hobbs	22.14	354	P	P	22 58 22.5	-0.2
HHAR				IAmb	IAmb	22 58 46.0	
	comp=Z,392nm,1.4s						
HHAR				PcP	PcP	23 02 16.0	+0.1
CLTN	Cedars of Leba	22.17	10	IAmb	IAmb	22 58 26.3	
	comp=Z,821nm,1.5s						
PENMO	Penman	22.18	3	P	P	22 58 23.6	+0.6
BCOK	Bluff Creek, N	22.18	345	IAmb	IAmb	22 58 45.2	
	comp=Z,839nm,1.4s						
ELOV	Elorza	22.24	107	*e*P	P	22 58 22.6	-1.3
OK030	Cody Creek RV	22.25	347	IAmb	IAmb	22 58 49.4	
	comp=Z,1μm,1.9s						
OK029	Liberty Lake	22.28	346	IAmb	IAmb	22 58 46.5	
	comp=Z,1μm,1.8s						
HICK	Hickman	22.29	4	IAmb	IAmb	22 58 26.8	
	comp=Z,751nm,1.3s						
OK031	S. Brethren Rd	22.29	347	P	P	22 58 22.3	-1.9
OK031				IAmb	IAmb	22 58 50.7	
	comp=Z,828nm,1.8s						
TKL	Tuckaleechee C	22.30	15	P	P	22 58 26.8	+2.5
	comp=Z,273nm,0.6s,baz=187,slow=9.4,SNR=232						
TKL				LR	LR	23 08 01.3	
	comp=Z,3μm,20.1s,baz=196,slow=39						
OK034	N. Norfolk Rd.	22.32	348	IAmb	IAmb	22 58 51.2	
	comp=Z,401nm,1.5s						
PARMO	Parma	22.38	2	IAmb	IAmb	22 58 27.7	
	comp=Z,274nm,0.8s						
MSTX	Muleshoe	22.41	333	P	P	22 58 24.4	-1.2
	baz=148						
BIRD	Birdtown, Kers	22.43	23	P	P	22 58 26.6	+1.0
BIRD				IAmb	IAmb	22 58 29.0	
	comp=Z,953nm,1.7s						
HENM	Henderson Moun	22.45	3	IAmb	IAmb	22 59 01.7	
	comp=Z,543nm,1.1s						
PBMO	Poplar Bluff	22.48	1	P	P	22 58 25.9	-0.2
PBMO				IAmb	IAmb	22 58 51.1	
	comp=Z,265nm,1.0s						
KMSC	Kings Mountain	22.56	21	P	P	22 58 28.6	+1.7
	baz=205,SNR=85						
MGMO	Mountain Grove	22.88	357	P	P	22 58 30.7	+0.5
MGMO				PcP	PcP	23 02 17.3	-0.1
CROK	Carrier	23.08	345	P	P	22 58 30.5	-1.6
CROK				IAmb	IAmb	22 58 59.9	
	comp=Z,833nm,1.8s						
CRPR	Cabo Rojo, PR	23.18	77	P	P	22 58 32.0	-1.2
CRPR				IAmb	IAmb	22 59 16.8	
	comp=Z,440nm,2.0s						
TZTN	Tazewell	23.20	15	IAmb	IAmb	22 58 37.0	
	comp=Z,666nm,1.3s						
U32A	Winter Ranch,	23.23	343	P	P	22 58 32.5	-1.0
U32A				IAmb	IAmb	22 59 02.9	
	comp=Z,301nm,1.4s						
OK032	Salt Plains WL	23.42	345	P	P	22 58 33.4	-1.8
OK032				IAmb	IAmb	22 59 06.6	
	comp=Z,282nm,1.3s						
OK032				PcP	PcP	23 02 20.2	+1.7
KAN13	South Haven SW	23.45	347	IAmb	IAmb	22 58 37.8	
	comp=Z,496nm,1.5s						
SIUC	Southern Illin	23.46	3	IAmb	IAmb	22 58 46.7	
	comp=Z,462nm,1.2s						
KAN09	Caldwell North	23.60	347	IAmb	IAmb	22 58 39.2	
	comp=Z,459nm,1.4s						
KAN01	Argonia South	23.65	346	P	P	22 58 35.8	-1.5
KAN01				IAmb	IAmb	22 58 39.7	
	comp=Z,513nm,1.5s						
CELP	Cerrillos	23.69	77	P	P	22 58 36.6	-1.2
CELP				PcP	PcP	23 02 20.3	+0.9
HSIG		23.69	312	P	P	22 58 38.4	+0.6
HSIG				PcP	PcP	23 02 19.7	+0.4
CCM	Cathedral Cave	23.75	359	P	P	22 58 38.0	-0.1
CCM				pmax	pmax		
	comp=Z,712nm,1.4s						
CCM	Cathedral Cave	23.75	359	P	P	22 58 38.0	-0.1
CCM				IAmb	IAmb	22 58 41.1	
	comp=Z,712nm,1.4s						
KAN06	Argonia West S	23.76	346	IAmb	IAmb	22 58 41.0	
	comp=Z,693nm,1.5s						
KAN08	Anthony NE Sta	23.77	346	IAmb	IAmb	22 58 41.0	
	comp=Z,732nm,1.7s						
SRIG	Santa Rosalia	23.77	307	IAmb	IAmb	22 58 41.8	
	comp=Z,272nm,1.0s						
KAN16	Harper SW Stat	23.79	346		P	22 58 37.0	-1.5
KAN16				IAmb	IAmb	22 58 41.4	
	comp=Z,573nm,1.9s						
KAN16					PcP	23 02 21.1	+1.8
KAN12	Harper NE Stat	23.84	346	IAmb	IAmb	22 58 41.8	
	comp=Z,765nm,1.6s						
121A	Cookes Peak, D	23.86	323	P	P	22 58 41.8	+2.4
	baz=136						
319A	Douglas	23.99	318	P	P	22 58 42.7	+2.2
CNNC	Cliffs of the	24.00	27	IAmb	IAmb	22 58 43.1	
	comp=Z,399nm,1.4s						
SJG	San Juan	24.10	77	P	P	22 58 39.3	-2.2
SJG				pmax	pmax		
	comp=Z,96nm,1.4s						
SJG	San Juan	24.10	77	*e*P	P	22 58 34.5	-7.0
SJG	San Juan	24.10	77	P	P	22 58 39.3	-2.2
PDPR	Patillas Dam,	24.21	78	P	P	22 58 40.2	-2.2
PDPR				PcP	PcP	23 02 21.5	+1.0
WCI	Wyandotte Cave	24.27	9	P	P	22 58 43.2	+0.4
WCI				pmax	pmax		
	comp=Z,436nm,1.0s						
WCI	Wyandotte Cave	24.27	9	P	P	22 58 43.2	+0.4
WCI				IAmb	IAmb	22 59 14.6	
	comp=Z,436nm,0.9s						
SLM	Saint Louis	24.34	1	IAmb	IAmb	22 58 47.4	
	comp=Z,298nm,1.4s						
BIRV	Birongo	24.36	96	P	P	22 58 43.8	-0.1
HUMP	Col San Antoni	24.38	77	P	P	22 58 41.9	-2.2
HUMP					PcP	23 02 22.1	+1.2
Y22D	IRIS PASSCAL I	24.52	327	P	P	22 58 47.6	+2.3
	baz=140,SNR=15						
OLIL	Olney	24.55	5	P	P	22 58 45.6	+0.3
OLIL				IAmb	IAmb	22 59 10.7	
	comp=Z,914nm,1.6s						
ATAH	Atahualpa	24.58	149	P	P	22 58 48.2	+1.9
	comp=Z,58nm,0.8s,baz=340,slow=6.1,SNR=30						
ATAH				PcP	PcP	23 02 22.9	+1.0
	comp=Z,11nm,0.7s,baz=218,slow=1.5,SNR=5.3						
LENM	Lemitar	24.61	327	P	P	22 58 47.6	+1.4
LENM					PcP	23 02 23.2	+1.8
BLA	Blacksburg	24.74	20	IAmb	IAmb	22 59 19.6	
	comp=Z,380nm,1.3s						
ANMO	Albuquerque	24.95	329	P	P	22 58 51.6	+2.3
	comp=Z,41nm,0.9s,baz=144,slow=12,SNR=78						
ANMO				PcP	PcP	23 02 23.6	+1.5
	comp=Z,28nm,1.0s,baz=158,slow=5.2,SNR=6.4						
ANMO				ScP	ScP	23 05 53.6	+2.0
	comp=Z,19nm,1.2s,baz=161,slow=4.5,SNR=3.6						
ANMO	Albuquerque	24.95	329	*ce*P	P	22 58 50.2	+0.9
ANMO				pmax	pmax		
	comp=Z,101nm,1.3s						
ANMO	Albuquerque	24.95	329	P	P	22 58 49.8	+0.5
ANMO				PcP	PcP	23 02 23.6	+1.5
BLO	Bloomington	25.16	8	IAmb	IAmb	22 59 25.0	
	comp=Z,623nm,1.2s						
KSU1	Kansas State U	25.30	350	IAmb	IAmb	22 58 55.5	
	comp=Z,205nm,1.1s						
TUC	Tucson	25.56	318	P	P	22 58 56.5	+1.8
TUC						23 02 26.0	
TUC				pmax	pmax		
	comp=Z,168nm,1.1s						
TUC	Tucson	25.56	318	P	P	22 58 56.5	+1.8
TUC				PcP	PcP	23 02 26.0	+2.6
P49A	Miami Univ. Ec	25.81	11	P	P	22 58 57.0	+0.2
	baz=194						
T25A	Trinidad	25.81	335	P	P	22 58 57.9	+0.8
	baz=149,SNR=30						
PCRV	Puerto La Cruz	25.99	96	P	P	22 58 58.0	-0.8
	comp=Z,12nm,0.4s,baz=36,slow=23,SNR=1.5						
PCRV				PcP	PcP	23 02 24.9	+0.2
	comp=Z,5.5nm,0.5s,baz=299,slow=9.0,SNR=1.7						
PLCV	Puerto La Cruz	26.04	96	P	P	22 58 58.0	-1.2
SFIN	Lafayette	26.28	7	P	P	22 59 01.1	+0.1
	baz=188						
HDIL	Hopedale	26.28	3	IAmb	IAmb	22 59 53.9	
	comp=Z,632nm,1.4s						
P52A	Corning	26.48	15	P	P	22 59 03.7	+0.9
	baz=199						
X18A	Snowflake	26.55	323	IAmb	IAmb	22 59 07.7	
	comp=Z,378nm,1.4s						
214A	Organ Pipe Nat	26.69	315	P	P	22 59 06.9	+2.0
	baz=126,SNR=107						
CBN	Corbin Frederi	26.74	24	IAmb	IAmb	22 59 08.5	
	comp=Z,452nm,1.4s						
KSCO	Kaye Shedlock'	26.78	339	P	P	22 59 05.3	-0.3
	baz=154						
SDCO	Great Sand Dun	26.78	334	P	P	22 59 05.5	-0.4
SDCO				PcP	PcP	23 02 27.8	+1.3
W18A	Petrified Fore	26.84	324	P	P	22 59 08.6	+2.2
	baz=136						
MCWV	Mont Chateau	27.15	19	IAmb	IAmb	22 59 11.9	
	comp=Z,528nm,1.7s						
O53A	New Philadelph	27.30	16	P	P	22 59 11.2	+1.0
	baz=201,SNR=34						
X16A	Lo Mia Camp, P	27.36	321	P	P	22 59 13.2	+2.1
X16A				IAmb	IAmb	22 59 14.8	
	comp=Z,172nm,1.0s						
X16A				PcP	PcP	23 02 28.7	+0.9
S22A	4UR Ranch, Cre	27.37	332	P	P	22 59 12.3	+1.1
	baz=145,SNR=45						
HQIL	Hanson Quary C	27.62	5	IAmb	IAmb	22 59 14.6	
	comp=Z,413nm,1.5s						
SFX	San Felipe	27.62	311	P	P	22 59 15.2	+2.0
SCIA	State Center	27.67	356	IAmb	IAmb	23 00 09.1	
	comp=Z,281nm,1.4s						
TBTG	Tabatinga, AM	27.72	130	*e*P	P	22 59 14.3	+0.1
MVCO	Mesa Verde	27.75	329	P	P	22 59 15.9	+1.4
	baz=141,SNR=83						
BGNE	Belgrade	27.82	348	P	P	22 59 14.2	-0.6
	baz=165						
113A	Mohawk Valley,	27.83	316	IAmb	IAmb	22 59 18.5	
	comp=Z,349nm,1.3s						
L44A	Lake County Fo	27.99	5	P	P	22 59 16.2	-0.1
	baz=186,SNR=6.5						
SDMD	Soldier's Deli	27.99	24	IAmb	IAmb	22 59 19.2	
	comp=Z,232nm,1.8s						
Y14A	Wickenburg	28.03	318	P	P	22 59 18.7	+1.8
Y14A				IAmb	IAmb	22 59 20.3	
	comp=Z,183nm,1.1s						
WUAZ	Wupatki	28.07	323	IAmb	IAmb	22 59 21.2	
	comp=Z,379nm,1.1s						
O56A	Blue Knob Stat	28.12	20	P	P	22 59 18.9	+1.3
	baz=206,SNR=33						
Q61A	Milford	28.16	26	P	P	22 59 19.6	+1.7
	baz=213						
N54A	Moraine State	28.30	18	P	P	22 59 20.2	+1.1
	baz=203						
CZSB	Cruzeiro do Su	28.32	139	*e*P	P	22 59 21.9	+2.4
CZSB	Cruzeiro do Su	28.32	139	P	P	22 59 21.7	+2.2
OGNE	Ogallala	28.34	342	IAmb	IAmb	23 00 12.6	
	comp=Z,295nm,1.8s						
M53A	WI Miller and	28.55	16	P	P	22 59 22.1	+0.8
	baz=201,SNR=25						
JFWS	Jewell Farm	28.61	1	IAmb	IAmb	23 00 13.0	
	comp=Z,176nm,1.1s						
SSPA	Standing Stone	28.68	21	P	P	22 59 23.3	+0.8
AAM	Ann Arbor	28.68	11	IAmb	IAmb	23 00 23.0	
	comp=Z,336nm,1.6s						
CPBX	Cerro Prieto	28.69	313	IAmb	IAmb	22 59 44.5	
	comp=Z,457nm,1.4s						
GLA	Glamis	28.71	315	P	P	22 59 24.8	+1.9
GLA						23 02 31.9	
GLA				pmax	pmax		
	comp=Z,442nm,1.3s						
GLA	Glamis	28.71	315	P	P	22 59 24.8	+1.9
GLA				IAmb	IAmb	22 59 26.7	
	comp=Z,442nm,1.2s						
GLA				PcP	PcP	23 02 31.9	+1.0
GLA	Glamis	28.71	315	P	P	22 59 25.2	+2.3
	baz=125,SNR=82						
P60A	Greenville	28.82	25	P	P	22 59 24.6	+1.0
	baz=212						
ALLY	Alegheny Colle	28.89	17	IAmb	IAmb	22 59 26.8	
	comp=Z,244nm,1.3s						
M54A	Oil Creek Stat	28.90	18	P	P	22 59 25.4	+1.0
	baz=203,SNR=23						
PDMCI	Parker Dam,Lak	29.00	318	P	P	22 59 27.7	+2.3
	baz=128,SNR=101						
U15A	North Rim	29.24	323	IAmb	IAmb	22 59 31.9	
	comp=Z,292nm,1.1s						
SWSC	Sam W. Stewart	29.33	314	P	P	22 59 30.8	+2.5
	baz=124,SNR=60						
W13A	Hualapai Mount	29.33	319	IAmb	IAmb	22 59 32.6	
	comp=Z,276nm,1.2s						
RMX	La Rumorosa	29.34	313	P	P	22 59 30.3	+1.7
RMX				IAmb	IAmb	22 59 32.1	
	comp=Z,473nm,1.6s						
ERPA	Erie	29.37	17	IAmb	IAmb	22 59 30.9	
	comp=Z,96nm,0.7s						
IKP	In-Ko-Pah, Jac	29.39	313	P	P	22 59 31.5	+2.6
	baz=123,SNR=40						
BC3	Big Chuckawall	29.49	315	P	P	22 59 32.2	+2.3
	baz=125,SNR=227						
IRM	Iron Mountain	29.57	316	P	P	22 59 32.9	+2.3
	baz=126,SNR=122						
LUPA	Lehigh Univers	29.59	24	P	P	22 59 31.8	+1.3
LUPA				IAmb	IAmb	22 59 33.6	
	comp=Z,123nm,0.8s						
NEE2	Needles Airpor	29.59	318	P	P	22 59 33.1	+2.4
	baz=128,SNR=11						
CBX	Cerro Bola	29.61	312	P	P	22 59 32.9	+2.0
N23A	Red Feather La	29.64	337	P	P	22 59 31.6	+0.3
	baz=150						
TKX	Tecate	29.70	312	IAmb	IAmb	22 59 35.5	
	comp=Z,186nm,1.2s						
N59A	State Game Lan	29.71	24	P	P	22 59 32.7	+1.2
	baz=211						
MONP2	Monument Peak	29.74	313	P	P	22 59 34.5	+2.3
	baz=123,SNR=19						
BAR	Barrett	29.80	313	IAmb	IAmb	22 59 38.4	
	comp=Z,163nm,1.6s						
ECSD	EROS Data Cent	29.82	352	P	P	22 59 31.8	-0.7
ECSD				PcP	PcP	23 02 33.3	-0.2
KNB	Kanab	29.95	323	P	P	22 59 36.5	+2.5
KNB				pmax	pmax		
	comp=Z,400nm,1.1s						
KNB	Kanab	29.95	323	P	P	22 59 36.5	+2.5
O20A	White River Ci	29.95	333	P	P	22 59 35.1	+1.1
	baz=145,SNR=13						
PKCU	Pink Cliffs	29.96	324	P	P	22 59 36.9	+2.6
PKCU				PcP	PcP	23 02 35.3	+1.0
BBSR	BB Station	29.98	48	P	P	22 59 33.5	-0.6
BBSR				IAmb	IAmb	22 59 36.8	
	comp=Z,486nm,1.8s						
BRNJ	Basking Ridge	29.99	25	IAmb	IAmb	22 59 37.0	
	comp=Z,441nm,1.7s						
WVNY	West Valley, N	30.04	18	IAmb	IAmb	22 59 37.1	
	comp=Z,192nm,1.1s						
BELC	Belle Mtn. Jos	30.06	315	P	P	22 59 37.1	+2.2
	baz=125,SNR=83						
TPFO	Pinon Flats	30.15	314	P	P	22 59 38.2	+2.4
	baz=124,SNR=38						
PFO	Pinyon Flats O	30.16	314	LR	LR	23 12 02.1	
	comp=Z,1μm,20.8s,baz=132,slow=36						
PFO	Pinyon Flats O	30.16	314	P	P	22 59 37.7	+1.9
PFO				IAmb	IAmb	22 59 39.7	
	comp=Z,252nm,1.4s						
PFO					PcP	23 02 36.5	+1.8
PFO	Pinyon Flats O	30.16	314	P	P	22 59 38.1	+2.3
	baz=124,SNR=41						
LCMT	Little Creek M	30.20	323	IAmb	IAmb	22 59 40.0	
	comp=Z,210nm,1.1s						
109C	Camp Elliot, M	30.22	312	P	P	22 59 38.1	+1.9
	baz=122						
SRU	San Rafael Swe	30.23	329	IAmb	IAmb	22 59 40.6	
	comp=Z,200nm,1.4s						
KSPA	Keystone Colle	30.26	23	IAmb	IAmb	22 59 38.1	
	comp=Z,257nm,1.7s						
GMRC	Granite Mounta	30.29	317	P	P	22 59 39.3	+2.3
	baz=126,SNR=116						
ODNJ	Ogdensburg	30.31	25	IAmb	IAmb	22 59 39.5	
	comp=Z,333nm,1.7s						
MTPU	Mount Pierson	30.31	325	P	P	22 59 39.9	+2.5
MTPU				IAmb	IAmb	22 59 42.2	
	comp=Z,258nm,1.0s						
MTPU				PcP	PcP	23 02 36.8	+1.5
CPNY	Central Park	30.34	26	IAmb	IAmb	22 59 38.6	
	comp=Z,258nm,1.8s						
Q16A	Castle Valley	30.41	328	IAmb	IAmb	22 59 42.0	
	comp=Z,216nm,1.2s						
SZCU	Shurtz Canyon	30.50	324	P	P	22 59 40.9	+2.0
SZCU				PcP	PcP	23 02 36.8	+1.1
MMNY	Mt. Morris Dam	30.55	19	IAmb	IAmb	22 59 41.5	
	comp=Z,258nm,1.1s						
P17A	Butcher Ranch,	30.61	329	IAmb	IAmb	22 59 44.0	
	comp=Z,221nm,1.2s						
CCUT	Cedar City	30.63	323	IAmb	IAmb	22 59 44.5	
	comp=Z,340nm,1.1s						
MVU	Marysvale	30.66	326	P	P	22 59 42.2	+1.9
MVU					PcP	23 02 37.9	+1.8
MVU				ScP	ScP	23 06 12.8	+3.6
MURC	Murrieta	30.67	314	P	P	22 59 42.4	+2.3
	baz=123,SNR=27						
BINY	Binghamton	30.73	22	IAmb	IAmb	22 59 43.3	
	comp=Z,253nm,1.1s						
HEC	Hector,Ludlow	30.76	316	P	P	22 59 43.7	+2.6
	baz=126,SNR=81						
MEDO	Medina	30.78	18	IAmb	IAmb	22 59 42.3	
	comp=Z,400nm,1.5s						
BBRC	Big Bear Solar	30.84	315	P	P	22 59 44.8	+2.9
	baz=124,SNR=14						
TUQ	Turquoise Moun	30.85	318	P	P	22 59 44.0	+2.1
	baz=127,SNR=110						
TCRU	Three Creeks R	30.86	326	P	P	22 59 44.4	+2.3
TCRU				IAmb	IAmb	22 59 45.9	
	comp=Z,238nm,1.0s						
SUSD	Miller	30.90	349	P	P	22 59 41.4	-0.6
	baz=165						
RDMU	Red Mountain	30.91	332	P	P	22 59 42.7	+0.3
RDMU				ScP	ScP	23 06 12.9	+3.0
WSPT	Westport, CT	30.92	26	IAmb	IAmb	22 59 44.5	
	comp=Z,84nm,0.8s						
SPMN	Marine on St.	30.95	357	P	P	22 59 42.3	-0.1
	baz=176,SNR=15						
GLMI	Grayling	30.98	9	IAmb	IAmb	22 59 43.9	
	comp=Z,341nm,1.1s						
SHPR	Sheep Range	31.02	320	P	P	22 59 45.7	+2.2
SHPR				IAmb	IAmb	22 59 47.4	
	comp=Z,237nm,1.2s						
SHPR				PcP	PcP	23 02 39.0	+2.1
YLE	Yale	31.21	27	IAmb	IAmb	22 59 47.2	
	comp=Z,499nm,1.7s						
RRX	Edison Barstow	31.23	316	P	P	22 59 47.7	+2.5
	baz=125						
SCI2	San Clemente I	31.31	311	P	P	22 59 48.1	+2.3
	baz=120						
BFSC	Mount Baldy Ra	31.34	314	P	P	22 59 48.4	+2.3
	baz=123,SNR=36						
GSC	Goldstone, Bar	31.35	317	P	P	22 59 48.4	+2.1
GSC				IAmb	IAmb	22 59 50.2	
	comp=Z,160nm,1.2s						
GSC					PcP	23 02 39.6	+1.9
GSC	Goldstone, Bar	31.35	317	P	P	22 59 48.7	+2.5
	baz=126,SNR=46						
SHOC	Shoshone, Teco	31.36	318	P	P	22 59 48.3	+2.1
	baz=127,SNR=14						
K22A	Casper	31.37	338	P	P	22 59 49.6	+3.1
	baz=150						
CIS	Catalina Islan	31.43	312	P	P	22 59 49.1	+2.2
	baz=121,SNR=14						
MPU	Maple Canyon	31.47	329	P	P	22 59 48.5	+1.1
MPU				IAmb	IAmb	22 59 51.5	
	comp=Z,135nm,1.0s						
FMP	Fort Macarthur	31.50	313	P	P	22 59 49.4	+2.0
	baz=122						
PRN	Pahroc Range	31.53	322	IAmb	IAmb	22 59 52.2	
	comp=Z,503nm,1.9s						
PSUT	Pine Spring	31.59	324	IAmb	IAmb	22 59 52.5	
	comp=Z,219nm,1.1s						
MWC	Mount Wilson	31.61	314	P	P	22 59 50.7	+2.1
MWC				pmax	pmax		
	comp=Z,292nm,1.3s						
MWC	Mount Wilson	31.61	314	P	P	22 59 50.6	+2.1
MWC				IAmb	IAmb	22 59 52.5	
	comp=Z,292nm,1.2s						
PASC	Pasadena Art C	31.67	314	IAmb	IAmb	22 59 52.9	
	comp=Z,346nm,1.4s						
QSM	Queen of Sheba	31.78	318	IAmb	IAmb	22 59 53.7	

	comp=Z,250nm,1.1s						
GWY	Greenwater Val	31.78	318	IAmb	IAmb	22 59 53.9	
	comp=Z,273nm,1.3s						
DECC	Green Verdugo	31.81	314	P	P	22 59 52.9	+2.6
	baz=122,SNR=5.5						
RSSD	Black Hills	31.84	342	P	P	22 59 50.8	+0.1
	baz=155						
UCCT	U. Connecticut	31.91	27	IAmb	IAmb	22 59 53.7	
	comp=Z,189nm,0.9s						
EDW2	Edwards Air Fo	31.92	315	P	P	22 59 53.1	+1.9
	baz=124,SNR=49						
LRMC	Laurel Mtn Rad	32.04	316	P	P	22 59 54.8	+2.5
	baz=125,SNR=108						
CTU	Camp Tracy	32.04	329	P	P	22 59 53.1	+0.7
CTU				IAmb	IAmb	22 59 56.5	
	comp=Z,153nm,1.0s						
SADO	Sadowa	32.06	16	P	P	22 59 52.6	+0.4
	comp=Z,55nm,0.3s,baz=249,slow=6.3,SNR=135						
SADO				ScP	ScP	23 06 14.2	+0.9
	comp=Z,10nm,1.0s,baz=230,slow=2.4,SNR=3.6						
SADO				LR	LR	23 13 44.9	
	comp=Z,3µm,21.3s,baz=185,slow=38						
SADO	Sadowa	32.06	16	IAmb	IAmb	22 59 54.2	
	comp=Z,230nm,1.1s						
FURC	Furnace Creek,	32.08	318	P	P	22 59 54.9	+2.4
	baz=127,SNR=52						
SNCC	San Nicolas Is	32.16	311	P	P	22 59 55.1	+1.9
	baz=119						
DUG	Dugway, Tooele	32.21	328	IAmb	IAmb	22 59 57.6	
	comp=Z,135nm,1.2s						
BOAV	Boa Vista	32.23	109	*e*P	P	22 59 51.7	-2.4
BOAV	Boa Vista	32.23	109	P	P	22 59 51.8	-2.4
MPMC	Manual Prospec	32.24	317	P	P	22 59 56.5	+2.3
	baz=126,SNR=163						
L61B	Northampton	32.25	26	P	P	22 59 54.1	+0.2
	baz=214,SNR=9.8						
QUA2	Belchertown	32.25	26	IAmb	IAmb	22 59 56.1	
	comp=Z,88nm,1.0s						
OSI	Osito Audit: C	32.28	314	P	P	22 59 56.6	+2.2
OSI				IAmb	IAmb	22 59 58.0	
	comp=Z,291nm,1.2s						
OSI	Osito Audit: C	32.28	314	P	P	22 59 56.6	+2.2
	baz=122,SNR=13						
BRYW	Bryant College	32.31	28	IAmb	IAmb	22 59 56.9	
	comp=Z,214nm,1.7s						
M65A	Busby, Falmout	32.44	29	P	P	22 59 56.1	+0.6
	baz=219						
R11A	Troy Canyon, C	32.47	322	P	P	22 59 58.9	+2.8
	baz=131,SNR=295						
SCZ2	Santa Cruz Isl	32.60	312	P	P	22 59 59.4	+2.2
	baz=120						
ACCN	Adirondack Com	32.62	24	IAmb	IAmb	22 59 59.6	
	comp=Z,79nm,0.9s						
ARVC	Arvin	32.63	315	P	P	23 00 00.1	+2.7
	baz=123,SNR=24						
HWUT	Hardware Ranch	32.65	331	IAmb	IAmb	23 00 01.7	
	comp=Z,159nm,1.1s						
BW06	Boulder Array	32.67	334	P	P	22 59 58.2	+0.3
BW06				PcP	PcP	23 02 41.9	+0.4
PDAR	Pinedale Array	32.67	334	P	P	22 59 58.4	+0.4
	comp=Z,4.7nm,0.6s,baz=148,slow=8.7,SNR=22						
PDAR				PcP	PcP	23 02 42.1	+0.7
	comp=Z,8.1nm,0.5s,baz=102,slow=5.7,SNR=45						
PDAR				ScP	ScP	23 06 17.4	+1.5
	comp=Z,11nm,1.0s,baz=143,slow=5.2,SNR=15						
PDAR				PKiKP	PKiKP	23 10 08.4	+0.2
	comp=Z,1.3nm,0.5s,baz=102,slow=3.2,SNR=5.0						
PDAR				LR	LR	23 16 33.0	
	comp=Z,667nm,20.3s,baz=147,slow=42						
ISA	Isabella, Lake	32.68	316	P	P	22 59 59.6	+1.7
ISA				pmax	pmax		
	comp=Z,261nm,1.3s						
ISA	Isabella, Lake	32.68	316	P	P	22 59 59.6	+1.7
ISA				IAmb	IAmb	23 00 02.0	
	comp=Z,261nm,1.3s						
ISA	Isabella, Lake	32.68	316	P	P	23 00 00.5	+2.7
	baz=124,SNR=70						
HRV	Adam Dziewonsk	32.77	27	P	P	22 59 59.0	+0.5
HRV				pmax	pmax		
	comp=Z,181nm,1.5s						
HRV	Adam Dziewonsk	32.77	27	P	P	22 59 59.0	+0.5
HRV				IAmb	IAmb	23 00 00.9	
	comp=Z,181nm,1.4s						
WES	Weston	32.78	27	IAmb	IAmb	23 00 00.1	
	comp=Z,222nm,1.5s						
BCX	Boston College	32.81	28	IAmb	IAmb	23 00 00.6	
	comp=Z,271nm,1.6s						
CWC	Cottonwood Cre	32.85	317	P	P	23 00 01.8	+2.3
	baz=125						
SPUT	South Promonto	32.85	329	IAmb	IAmb	23 00 03.0	
	comp=Z,190nm,1.3s						
BGU	Big Grassy Mou	32.86	328	P	P	23 00 00.7	+1.3
BGU				IAmb	IAmb	23 00 03.0	
	comp=Z,178nm,1.2s						
BGU					ScP	23 06 18.4	+1.9
SBC	Santa Barbara	32.89	313	P	P	23 00 01.8	+2.3
	baz=121						
NCB	Newcomb	32.91	22	IAmb	IAmb	23 00 01.9	
	comp=Z,93nm,0.9s						
LCH	Last Change Ra	33.04	319	IAmb	IAmb	23 00 05.0	
	comp=Z,314nm,1.4s						
PKM	Mcpherson Peak	33.19	313	P	P	23 00 04.9	+2.5
	baz=121,SNR=34						
VES	Vestal, Richgr	33.19	316	P	P	23 00 04.9	+2.8
	baz=123,SNR=55						
TPH	Tonopah	33.28	320	P	P	23 00 05.4	+2.1
TPH				pmax	pmax		
	comp=Z,1µm,1.3s						
TPH	Tonopah	33.28	320	P	P	23 00 05.4	+2.1
TIN	Tinemaha, Big	33.31	318	P	P	23 00 06.2	+2.9
	baz=126,SNR=38						
AHID	Auburn Hatcher	33.35	332	P	P	23 00 03.5	-0.2
AHID				IAmb	IAmb	23 00 07.4	
	comp=Z,90nm,1.2s						
FFD	Franklin Falls	33.51	26	IAmb	IAmb	23 00 07.6	
	comp=Z,174nm,1.6s						
SMMC	Simmler	33.53	314	P	P	23 00 08.1	+2.9
	baz=122,SNR=24						
EYMN	Ely	33.64	359	IAmb	IAmb	23 00 07.9	
	comp=Z,237nm,1.7s						
VOG	Valley Oaks Go	33.65	316	P	P	23 00 08.5	+2.3
	baz=124						
REDW	Red Top Meadow	33.71	333	P	P	23 00 06.9	0.0
REDW				IAmb	IAmb	23 00 11.0	
	comp=Z,146nm,1.1s						
SNOW	Snow King Moun	33.75	334	IAmb	IAmb	23 00 11.4	
	comp=Z,126nm,1.0s						
VT1	Waterbury	33.78	24	IAmb	IAmb	23 00 09.2	
	comp=Z,231nm,1.6s						
LOHW	Long Hollow	33.81	334	IAmb	IAmb	23 00 11.8	
	comp=Z,132nm,1.5s						
TPAW	Teton Pass	33.86	333	IAmb	IAmb	23 00 12.5	
	comp=Z,209nm,1.4s						
FRNY	Flat Rock	33.89	22	IAmb	IAmb	23 00 10.4	
	comp=Z,273nm,1.4s						
ELK	Elko	33.89	326	ScP	ScP	23 06 22.4	+2.2
	comp=Z,15nm,1.0s,baz=162,slow=1.8,SNR=17						
ELK				LR	LR	23 16 02.0	
	comp=Z,815nm,19.8s,baz=140,slow=40						
ELK	Elko	33.89	326	IAmb	IAmb	23 00 13.5	
	comp=Z,96nm,0.9s						
PAGB	Antelope Grade	33.93	314	P	P	23 00 11.0	+2.3
MOOW	Moose Ponds	33.98	334	P	P	23 00 09.1	-0.1
FXWY	Fox Creek	34.01	333	P	P	23 00 09.4	-0.1
LBNH	Lisbon	34.03	25	IAmb	IAmb	23 00 11.1	
	comp=Z,156nm,1.6s						
MLAC	Mammoth, Mammo	34.04	318	P	P	23 00 12.5	+2.7
	baz=126,SNR=20						
NV11	Mina Array Sit	34.08	320	P	P	23 00 12.4	+2.3
NVAR	Mina Array Bea	34.17	320	P	P	23 00 14.1	+3.1
	comp=Z,311nm,1.0s,baz=135,slow=8.2,SNR=681						
NVAR				PcP	PcP	23 02 47.8	+2.1
	comp=Z,71nm,1.0s,baz=136,slow=3.2,SNR=16						
NVAR				ScP	ScP	23 06 22.3	+1.1
	comp=Z,8.6nm,0.6s,baz=136,slow=3.8,SNR=21						
NVAR				LR	LR	23 16 15.5	
	comp=Z,550nm,20.9s,baz=134,slow=40						
NVAR	Mina Array Bea	34.17	320	P	P	23 00 13.7	+2.7
NVAR					PcP	23 02 47.1	+1.3
ETMB	Extrema	34.21	133	*e*P	P	23 00 11.8	+0.5
ETMB	Extrema	34.21	133	IAmb	IAmb	23 00 13.3	
	comp=Z,119nm,1.0s						
MDND	Maddock	34.30	350	P	P	23 00 11.4	-0.3
	baz=165,SNR=13						
H17A	Grant Village	34.43	335	P	P	23 00 14.6	+1.4
	baz=145						
MNTQ	Montreal, Queb	34.45	22	P	P	23 00 13.3	+0.4
MACA	Manacapuru-AM	34.59	118	*e*P	P	23 00 14.6	+0.1
YNR	Norris Junctio	34.74	335	P	P	23 00 15.8	0.0
TRQ	Mont Tremblant	34.75	20	IAmb	IAmb	23 00 18.1	
	comp=Z,203nm,1.2s						
YMR	Madison River	34.82	335	P	P	23 00 16.9	+0.5
YMR				IAmb	IAmb	23 00 21.1	
	comp=Z,119nm,1.8s						
YHH	Holmes Hill	34.87	335	P	P	23 00 17.2	+0.3
YERR	Yerington	35.09	320	P	P	23 00 20.7	+1.8
QLMT	Earthquake Lak	35.14	334	P	P	23 00 20.2	+1.0
GCMT	Greycliff	35.23	337	P	P	23 00 19.5	-0.4
CMB	Columbia Colle	35.27	318	P	P	23 00 21.8	+1.5
CMB				pmax	pmax		
	comp=Z,185nm,1.2s						
CMB	Columbia Colle	35.27	318	P	P	23 00 21.8	+1.5
CMB				IAmb	IAmb	23 00 23.6	
	comp=Z,185nm,1.1s						
SAO	San Andreas Ge	35.29	315	IAmb	IAmb	23 00 23.7	
	comp=Z,250nm,1.4s						
HLID	Hailey	35.51	330	IAmb	IAmb	23 00 26.4	
	comp=Z,158nm,1.2s						
VCNR	Virginia City	35.53	320	IAmb	IAmb	23 00 26.8	
	comp=Z,208nm,1.3s						
BCYI	Bear Canyon	35.60	332	P	P	23 00 24.8	+1.6
BCYI				PcP	PcP	23 02 51.5	+1.8
VLDQ	Val d'Or	35.60	16	P	P	23 00 22.3	-0.5
VLDQ				IAmb	IAmb	23 00 23.8	
	comp=Z,162nm,1.6s						
MPK	Martis Peak	35.77	320	P	P	23 00 27.1	+2.3
SAML	Samuel	35.87	128	P	P	23 00 24.3	-1.2
SAML				pmax	pmax		
	comp=Z,6µm,2.0s						
SAML	Samuel	35.87	128	P	P	23 00 24.3	-1.2
DGMT	Dagmar	35.88	345	IAmb	IAmb	23 00 27.5	
	comp=Z,160nm,1.7s						
PKME	Peaks-Kenny Pk	35.96	26	IAmb	IAmb	23 00 28.3	
	comp=Z,87nm,0.9s						
DLMT	Dillon	36.06	334	P	P	23 00 27.9	+0.9
DLMT				IAmb	IAmb	23 00 31.6	
	comp=Z,80nm,1.3s						
MFID	Camas Ranch	36.10	329	P	P	23 00 28.6	+1.3
MFID				IAmb	IAmb	23 00 32.5	
	comp=Z,163nm,1.3s						
MFID				ScP	ScP	23 06 31.2	+3.3
ULM	Lac du Bonnet	36.17	355	P	P	23 00 26.7	-0.9
	comp=Z,38nm,0.7s,baz=174,slow=8.6,SNR=50						
ULM				PcP	PcP	23 02 50.0	-1.0
	comp=Z,8.7nm,0.3s,baz=208,slow=3.1,SNR=8.2						
ULM				ScP	ScP	23 06 27.7	-0.1
	comp=Z,20nm,1.1s,baz=165,slow=2.3,SNR=5.6						
ULM				LR	LR	23 18 48.3	
	comp=Z,901nm,20.2s,baz=170,slow=42						
ULM	Lac du Bonnet	36.17	355	IAmb	IAmb	23 00 28.2	
	comp=Z,91nm,0.9s						
EMMW	East Machias	36.35	29	IAmb	IAmb	23 00 31.0	
	comp=Z,243nm,1.7s						
ORV	Oroville	36.85	319	P	P	23 00 35.6	+2.0
ORV				pmax	pmax		
	comp=Z,479nm,1.6s						
ORV	Oroville	36.85	319	P	P	23 00 35.6	+2.0
GGN	Saint George	36.95	29	IAmb	IAmb	23 00 35.9	
	comp=Z,166nm,1.6s						
GDXM	Geysers	37.28	317	IAmb	IAmb	23 00 41.3	
	comp=Z,120nm,1.2s						
PLID	Pearl Lake	37.40	330	IAmb	IAmb	23 00 41.1	
	comp=Z,169nm,1.2s						
O03E	Paynes Creek	37.46	320	P	P	23 00 40.2	+1.4
	baz=125						
PQI	Presque Isle	37.62	26	IAmb	IAmb	23 00 41.3	
	comp=Z,262nm,1.8s						
LPAZ	La Paz	37.75	143	P	P	23 00 41.5	-0.6
	comp=Z,6.7nm,0.7s,baz=319,slow=6.2,SNR=24						
LPAZ				PcP	PcP	23 02 58.3	+1.1
	comp=Z,4.0nm,0.4s,baz=30,slow=6.8,SNR=8.1						
LPAZ				ScP	ScP	23 06 35.6	+0.5
	comp=Z,4.1nm,1.1s,baz=83,slow=2.3,SNR=3.6						
LPAZ	La Paz	37.75	143	*e*P	P	23 00 43.1	+1.0
LPAZ	La Paz	37.75	143	*e*P	P	23 00 43.3	+1.2
LPAZ	La Paz	37.75	143	P	P	23 00 42.7	+0.5
MSO	Missoula	37.80	334	IAmb	IAmb	23 00 45.4	
	comp=Z,105nm,1.4s						
BMO	Blue Mountains	37.87	329	IAmb	IAmb	23 00 44.4	
	comp=Z,126nm,1.2s						
O02D	Mt. Diablo Mer	38.02	319	P	P	23 00 44.2	+0.6
	baz=124						
WDC	Whiskeytown Da	38.09	320	P	P	23 00 43.1	-0.9
WDC				pmax	pmax		
	comp=Z,102nm,1.1s						
WDC	Whiskeytown Da	38.09	320	P	P	23 00 43.1	-0.9
WDC				IAmb	IAmb	23 00 45.1	
	comp=Z,102nm,1.1s						
M04C	Macdoel	38.36	322	P	P	23 00 48.0	+1.5
	baz=127,SNR=60						
N02D	Trinity Center	38.41	320	P	P	23 00 46.4	-0.5
	baz=125,SNR=9.7						
PB12	IPOC Station P	38.42	148	P	P	23 00 46.7	-0.3
LMN	Caledonia Moun	38.45	30	IAmb	IAmb	23 00 48.8	
	comp=Z,247nm,1.6s						
I07A	Izee	38.48	326	IAmb	IAmb	23 00 50.0	
	comp=Z,210nm,1.1s						
F10A	Beach Ranch, E	38.64	330	IAmb	IAmb	23 00 51.7	
	comp=Z,179nm,0.9s						
M02C	Callahan	38.74	321	P	P	23 00 48.6	-1.0
	baz=125,SNR=15						
K04D	Chiloquin, OR	38.81	323	P	P	23 00 51.2	+1.0
	baz=128,SNR=11						
YBH	Yreka Blue Hor	38.85	321	ScP	ScP	23 06 39.0	+0.7
	comp=Z,8.4nm,1.0s,baz=190,slow=5.0,SNR=5.5						
YBH				LR	LR	23 18 18.3	
	comp=Z,803nm,21.5s,baz=142,slow=38						
YBH	Yreka Blue Hor	38.85	321	P	P	23 00 49.7	-0.9
YBH				pmax	pmax		
	comp=Z,40nm,0.9s						
YBH	Yreka Blue Hor	38.85	321	P	P	23 00 49.7	-0.9
L04D	Klamath Falls	38.89	322	P	P	23 00 52.1	+1.2
	baz=126						
J05D	Fort Rock, OR	38.92	324	P	P	23 00 51.6	+0.4
	baz=129,SNR=21						
BATG	Bathurst New B	38.94	27	IAmb	IAmb	23 00 52.4	
	comp=Z,145nm,1.5s						
KHMM	Horse Mountain	39.00	319	P	P	23 00 53.5	+1.6
G08A	Pilot Rock	39.01	328	IAmb	IAmb	23 00 55.0	
	comp=Z,153nm,1.5s						
J04D	Umpqua Nationa	39.39	323	P	P	23 00 56.4	+1.2
	baz=128,SNR=19						
ITTB	Itaituba	39.48	115	*e*P	P	23 00 53.7	-2.2
L02E	Cave Junction	39.64	321	P	P	23 00 57.9	+0.8
	baz=125						
I05D	Terrebonne, OR	39.65	325	P	P	23 00 57.1	+0.1
	baz=130,SNR=18						
MALB	Monte Alegre	39.67	111	*e*P	P	23 00 56.0	-1.6
PB11	IPOC Station P	39.72	148	P	P	23 00 58.5	+0.5
I04A	Tendick Farm,	39.91	324	P	P	23 01 00.1	+0.9
	baz=128						
DBO	Dodson Butte	39.98	322	P	P	23 01 00.7	+0.8
K02D	Willamette Mer	39.99	322	P	P	23 01 01.1	+1.1
	baz=125,SNR=8.8						
G05D	Wamic, OR	40.22	326	P	P	23 01 03.5	+1.8
	baz=131						
D08A	Wollman Farm,	40.23	330	P	P	23 01 01.9	+0.1
D08A				IAmb	IAmb	23 01 04.3	
	comp=Z,164nm,1.3s						
NEW	Newport	40.28	333	ScP	ScP	23 06 45.0	+1.4
	comp=Z,7.5nm,0.9s,baz=176,slow=2.9,SNR=6.2						
NEW	Newport	40.28	333	P	P	23 01 01.6	-0.6
NEW						23 03 03.9	
NEW				pmax	pmax		
	comp=Z,126nm,1.7s						
NEW	Newport	40.28	333	P	P	23 01 01.6	-0.6
NEW				IAmb	IAmb	23 01 04.5	
	comp=Z,126nm,1.7s						
NEW				PcP	PcP	23 03 03.9	0.0
E07A	Sunnyside	40.34	329	IAmb	IAmb	23 01 05.3	
	comp=Z,176nm,1.2s						
I03D	Drain, OR	40.39	323	P	P	23 01 04.1	+1.0
	baz=127						
J01E	Myrtle Point	40.42	322	P	P	23 01 05.6	+2.3
	baz=126,SNR=26						
C09A	Chrisman Ranch	40.46	331	IAmb	IAmb	23 01 06.5	
	comp=Z,217nm,1.4s						
H04D	Lebanon	40.54	325	P	P	23 01 04.8	+0.5
	baz=128,SNR=15						
VILB	Vilhena	40.67	130	*e*P	P	23 01 06.1	+0.3
VILB	Vilhena	40.67	130	P	P	23 01 05.6	-0.2
F05D	White Salmon	40.71	327	P	P	23 01 07.6	+1.8
	baz=131,SNR=35						
COR	Corvallis	40.90	324	P	P	23 01 09.0	+1.7
COR				pmax	pmax		
	comp=Z,812nm,1.3s						
COR	Corvallis	40.90	324	P	P	23 01 09.0	+1.7
I02E	Swisshome, OR	40.92	323	P	P	23 01 09.0	+1.5
	baz=126,SNR=10						
MCPB	Macapa, AP	41.10	107	*e*P	P	23 01 06.8	-2.6
NPGB	Novo Progresso	41.12	119	*e*P	P	23 01 07.4	-2.2
LTY	Liberty	41.23	329	IAmb	IAmb	23 01 12.8	
	comp=Z,329nm,1.6s						
PB07	IPOC Station P	41.25	150	P	P	23 01 11.4	+0.8
F04A	Amboy	41.25	326	IAmb	IAmb	23 01 15.5	
	comp=Z,325nm,1.5s						
G03D	McMinnville, O	41.26	325	P	P	23 01 11.7	+1.5
	baz=128,SNR=13						
FFC	Flin Flon	41.34	350	P	P	23 01 10.7	0.0
FFC				pmax	pmax		
	comp=Z,392nm,1.9s						
FFC	Flin Flon	41.34	350	P	P	23 01 10.7	0.0
FFC				IAmb	IAmb	23 01 12.9	
	comp=Z,392nm,1.9s						
F04D	Rainier, OR	41.67	326	P	P	23 01 14.5	+0.9
	baz=129,SNR=23						
E04D	Cinebar	41.73	327	P	P	23 01 15.3	+1.2
	baz=130,SNR=12						
PB06	IPOC Station P	42.23	150	P	P	23 01 19.4	+0.8
D04E	Lakebay	42.24	328	P	P	23 01 19.2	+1.0
	baz=130,SNR=7.6						
LVC	Limon Verde	42.48	149	*e*P	P	23 01 22.1	+1.3
LVC	Limon Verde	42.48	149	*e*P	P	23 01 22.2	+1.4
LVC	Limon Verde	42.48	149	P	P	23 01 22.1	+1.3
B06A	Marblemount	42.49	330	IAmb	IAmb	23 01 22.4	
	comp=Z,148nm,0.9s						
PDRB	Porto dos Gac	42.51	125	*e*P	P	23 01 19.5	-1.3
B05A	Bryant	42.62	329	P	P	23 01 21.3	+0.1
	baz=132,SNR=17						
D03D	Eldon	42.64	328	P	P	23 01 22.2	+0.8
	baz=130,SNR=15						
EDM	Edmonton	42.78	340	IAmb	IAmb	23 01 25.1	
	comp=Z,175nm,1.0s						
CLDB	Colider	42.83	124	*e*P	P	23 01 22.0	-1.4
PTLB	Pontes e Lacer	43.08	132	*e*P	P	23 01 25.3	-0.1
PTLB	Pontes e Lacer	43.08	132	P	P	23 01 24.5	-0.8
PTLB				IAmb	IAmb	23 01 26.8	
	comp=Z,186nm,1.9s						
B04A	Port Angeles	43.19	328	IAmb	IAmb	23 01 28.9	
	comp=Z,241nm,1.1s						
A04D	Lummi Island	43.22	329	P	P	23 01 27.6	+1.6
	baz=132,SNR=9.9						
CLRS	Cowichan Lake	44.00	329	IAmb	IAmb	23 01 35.4	
	comp=Z,220nm,1.4s						
LLLB	Lillooet	44.12	332	IAmb	IAmb	23 01 36.2	
	comp=Z,103nm,1.2s						
DRLN	Deer Lake	44.38	31	P	P	23 01 34.5	-0.8
DRLN				IAmb	IAmb	23 01 36.5	
	comp=Z,92nm,0.9s						
FCC	Fort Churchill	44.53	358	IAmb	IAmb	23 01 36.9	
	comp=Z,137nm,1.3s						
SCHQ	Schefferville	44.66	20	P	P	23 01 37.6	0.0
	comp=Z,106nm,0.7s,baz=221,slow=6.8,SNR=120						
SCHQ				PcP	PcP	23 03 17.7	-0.7
	comp=Z,16nm,0.5s,baz=234,slow=5.4,SNR=2.2						
SCHQ				LR	LR	23 21 45.1	
	comp=Z,3µm,19.9s,baz=220,slow=38						
SCHQ	Schefferville	44.66	20	P	P	23 01 37.0	-0.6
RPN	Rapa Nui	44.81	204	P	P	23 01 40.6	+1.5
	comp=Z,109nm,0.9s,baz=335,slow=4.3,SNR=7.3						
RPN	Rapa Nui	44.81	204	P	P	23 01 40.2	+1.1
RPN				pmax	pmax		
	comp=Z,687nm,1.5s						
RPN	Rapa Nui	44.81	204	P	P	23 01 40.2	+1.1
VA02	Isla de Pascua	44.88	204	P	P	23 01 39.9	+0.3
CBB	Campbell River	45.40	329	IAmb	IAmb	23 01 46.8	
	comp=Z,181nm,1.1s						
TMAB	Tom-Au,PA,Br	45.52	108	*e*P	P	23 01 43.0	-1.9
PRPB	Parauapebas	45.53	114	*e*P	P	23 01 42.7	-2.3
SALV	Santo Antonio	45.91	129	*e*P	P	23 01 47.5	-0.4
SNDB	Serra Nova Dou	47.11	122	*e*P	P	23 01 56.8	-0.5
HOLB	Holberg	47.16	328	P	P	23 01 58.9	+1.6
LCO	Las Campanas	47.20	156	*e*P	P	23 01 58.9	+0.8
PP1B	Ponte de Pedra	47.58	131	*e*P	P	23 02 00.9	0.0
BBB	Bella Bella	48.10	330	LR	LR	23 24 36.1	
	comp=Z,758nm,19.3s,baz=130,slow=39						
BBB	Bella Bella	48.10	330	IAmb	IAmb	23 02 08.1	
	comp=Z,246nm,1.3s						
SMTB	Santa Maria do	48.72	116	*e*P	P	23 02 08.6	-1.1
H03N2	Juan Fernandez	48.75	167	T	T	23 53 58.8	
	baz=347,slow=76,SNR=8.2						
H03N1	Juan Fernandez	48.75	167	T	T	23 54 00.6	
	baz=347,slow=76,SNR=10						
H03N3	Juan Fernandez	48.76	167	T	T	23 54 02.0	
	baz=347,slow=76,SNR=11						
ARAG	Araguaiana, MT	48.77	126	*e*P	P	23 02 09.4	-0.6
AQDB	Aquidauana	48.85	134	*e*P	P	23 02 10.7	0.0
AQDB	Aquidauana	48.85	134	IAmb	IAmb	23 02 12.0	
	comp=Z,125nm,1.6s						
ROSB	Rosrio	49.40	106	*e*P	P	23 02 12.7	-2.2
PEXB	Peixe	49.67	120	*e*P	P	23 02 15.7	-1.3
VA03	San Esteban	50.61	158	IAmb	IAmb	23 02 26.9	
	comp=Z,97nm,1.2s						
YKA	Yellowknife Ar	51.07	346	P	P	23 02 27.1	+0.3
	comp=Z,39nm,0.8s,baz=148,slow=7.7,SNR=78						
YKA				PcP	PcP	23 03 41.1	-0.1
	comp=Z,7.4nm,0.5s,baz=153,slow=3.8,SNR=6.3						
YKA				ScP	ScP	23 07 28.4	+0.5
	comp=Z,5.6nm,0.9s,baz=150,slow=4.5,SNR=7.0						
YKA				PKiKP	PKiKP	23 10 23.6	-0.2
	comp=Z,0.7nm,0.7s,baz=124,slow=2.1,SNR=4.3						
YKA	Yellowknife Ar	51.07	346	P	P	23 02 26.1	-0.7
MT05	Renca	51.11	158	IAmb	IAmb	23 02 30.5	
	comp=Z,110nm,1.1s						
MT09	Talagante	51.36	159	IAmb	IAmb	23 02 32.4	
	comp=Z,120nm,1.5s						
BDFB	Brasilia	51.76	123	P	P	23 02 32.4	-0.3
	comp=Z,10nm,0.5s,baz=293,slow=7.5,SNR=20						
BDFB				PcP	PcP	23 03 45.4	+0.7
	comp=Z,19nm,0.9s,baz=310,slow=4.0,SNR=5.7						
BDFB				LR	LR	23 26 33.2	
	comp=Z,582nm,19.2s,baz=306,slow=38						
BDFB	Brasilia	51.76	123	P	P	23 02 32.1	-0.7
BDFB				IAmb	IAmb	23 02 34.1	
	comp=Z,226nm,1.8s						
BDFB				PcP	PcP	23 03 45.4	+0.7
CPUP	Villa Florida	51.88	141	P	P	23 02 31.6	-1.6
	comp=Z,7.2nm,0.8s,baz=327,slow=8.9,SNR=8.3						
CPUP				PcP	PcP	23 03 45.5	+0.7
	comp=Z,8.6nm,1.0s,baz=354,slow=5.2,SNR=2.1						
CPUP				LR	LR	23 23 06.2	
	comp=Z,350nm,20.5s,baz=316,slow=34						
CPUP	Villa Florida	51.88	141	*e*P	P	23 02 34.9	+1.5
CPUP	Villa Florida	51.88	141	P	P	23 02 31.7	-1.6
CPUP				IAmb	IAmb	23 02 57.3	
	comp=Z,87nm,1.7s						
CPUP				ScP	ScP	23 07 38.1	+6.0
BO01	Tunca	51.89	159	IAmb	IAmb	23 02 36.2	
	comp=Z,82nm,1.3s						
ITRB	Iturama	52.24	129	*e*P	P	23 02 36.1	-0.1
BO02	Sierra Bellavi	52.35	159	IAmb	IAmb	23 02 39.8	
	comp=Z,79nm,1.4s						
NBPS	Pedro II - PI	52.43	107	*e*P	P	23 02 35.5	-2.3
CRAG	Craig	52.44	331	IAmb	IAmb	23 02 41.8	
	comp=Z,117nm,1.1s						
SDBA	SAO DESIDERIO	52.71	118	*e*P	P	23 02 38.5	-1.2
PCMB	Pacaembu	52.74	132	*e*P	P	23 02 39.4	-0.5
IPMB	Ipameri, GO	52.89	126	*e*P	P	23 02 40.2	-0.9
DLBC	Dease Lake	52.89	335	ScP	ScP	23 07 38.7	+2.6
	comp=Z,4.8nm,0.9s,baz=34,slow=1.2,SNR=3.2						
DLBC				LR	LR	23 30 50.3	
	comp=Z,488nm,18.9s,baz=136,slow=42						
NBMO	Morrinhos-CE	53.35	105	*e*P	P	23 02 43.8	-0.6
WTLY	Watson Lake, Y	53.52	338	P	P	23 02 45.6	+0.6
	baz=132						
TAOE	Nuku Hiva Isla	53.95	248	*e*S	S	23 10 14.2	-2.6
	comp=Z,535nm,32.4s						
TAOE				*e*LR	LR	23 18 12.7	
	comp=Z,3µm,30.7s,baz=71						
TAOE	Nuku Hiva Isla	53.95	248	*e*T	T	23 59 57.4	
	comp=Z,47nm,0.2s						
WRGLY	Wrigley	54.00	342	P	P	23 02 48.7	+0.3
	baz=140						
PTGB	Pitanga	54.17	135	*e*P	P	23 02 49.8	-0.5
BB19B	Bebedouro	54.42	129	*e*P	P	23 02 53.0	+0.8
JANB	Januaria	54.50	120	*e*P	P	23 02 52.2	-0.7
NBPB	Pedra_Branca-C	54.57	107	*e*P	P	23 02 52.7	-0.6
ITQB	Itaqui	54.75	143	*e*P	P	23 02 54.4	+0.1
ITQB	Itaqui	54.75	143	IAmb	IAmb	23 03 18.3	

	comp=Z,144nm,1.5s						
FRTB	Fartura	55.05	132	*e*P	P	23 02 56.2	-0.4
P33M	Teslin, Yukon	55.12	336	P	P	23 02 57.5	+0.8
	baz=128						
MC01	Montes Claros	55.64	122	*e*P	P	23 03 00.7	-0.3
LC01	Cunco	55.75	162	P	P	23 03 00.8	-0.5
LC01				IAmb	IAmb	23 03 26.9	
	comp=Z,43nm,0.8s						
ITAB	Concordia	55.81	138	*e*P	P	23 03 01.7	-0.2
ITAB	Concordia	55.81	138	IAmb	IAmb	23 03 03.1	
	comp=Z,49nm,1.0s						
RCLB	Rio Claro- Sao	55.97	130	*e*P	P	23 03 03.4	+0.1
NBMA	Muriti-CE	56.01	109	*e*P	P	23 03 03.4	-0.3
IVI	Ivigtut	56.06	23	*i* P	P	23 03 02.9	-0.3
NBPN	Ponto Novo - B	56.12	114	*e*P	P	23 03 04.2	-0.2
WHY	Whitehorse	56.21	336	P	P	23 03 05.3	+0.8
	baz=126,SNR=7.4						
FARO	Faro, Yukon	56.58	338	P	P	23 03 07.5	+0.5
	baz=128						
DIAM	Diamantina, MG	56.68	123	*e*P	P	23 03 08.9	+0.4
TIJ01	Guaruva-PR	56.68	134	*e*P	P	23 03 09.2	+0.8
NUUK	Nuuk	56.74	19	*i* P	P	23 03 11.6	+3.6
VAO	Valinhos	56.74	130	*e*P	P	23 03 08.7	-0.1
NBPA	Parau_RN	56.94	107	*e*P	P	23 03 09.9	-0.4
M31M	Drury Creek, Y	56.95	337	P	P	23 03 10.3	+0.8
	baz=127						
N31M	Braeburn, Yuko	57.05	336	P	P	23 03 11.0	+0.6
	baz=125						
NRS	Narsarsuaq	57.12	24	P	P	23 03 09.3	-1.4
NRS				pmax	pmax		
	comp=Z,253nm,1.7s						
NRS	Narsarsuaq	57.12	24	*i* P	P	23 03 09.5	-1.2
NRS				IAmb	IAmb	23 03 12.0	
	comp=Z,422nm,2.0s						
NRS	Narsarsuaq	57.12	24	P	P	23 03 09.3	-1.4
CPSB	Cacapava Do Su	57.18	141	*e*P	P	23 03 12.3	+0.7
BSCB	Bom Sucesso	57.26	127	*e*P	P	23 03 13.1	+0.7
PET01	Itanhaem-SP	57.28	132	*e*P	P	23 03 12.1	-0.3
HYT	Haines Junctio	57.37	335	IAmb	IAmb	23 04 09.2	
	comp=Z,66nm,1.4s						
HYT	Haines Junctio	57.37	335	P	P	23 03 13.9	+1.2
	baz=123,SNR=15						
NBLV	Livramento - P	57.70	108	*e*P	P	23 03 14.6	-1.1
YUK6	Outpost Mounta	57.78	335	P	P	23 03 17.1	+1.4
	baz=122,SNR=15						
PLCA	Paso Flores	57.84	162	P	P	23 03 16.8	+0.6
	comp=Z,15nm,1.1s,baz=339,slow=9.6,SNR=10						
PLCA				LR	LR	23 22 16.9	
	comp=Z,669nm,21.3s,baz=338,slow=30						
PLCA	Paso Flores	57.84	162	*e*P	P	23 03 17.8	+1.7
PLCA	Paso Flores	57.84	162	IAmb	IAmb	23 03 19.1	
	comp=Z,60nm,1.4s						
GDU01	Guandu, BA	57.91	116	*e*P	P	23 03 16.8	-0.3
PARB	Paraibuna	57.93	130	*e*P	P	23 03 17.8	+0.7
PLTB	Pedras Altas	58.05	143	*e*P	P	23 03 17.3	-0.4
PLTB	Pedras Altas	58.05	143	P	P	23 03 16.5	-1.2
YUK4	Talbot Arm	58.12	335	P	P	23 03 19.0	+1.0
	baz=122,SNR=11						
PCA	Pinnacle	58.15	333	P	P	23 03 19.4	+1.3
PCA				PcP	PcP	23 04 10.0	+1.4
PCA				IAmb	IAmb	23 04 11.7	
	comp=Z,81nm,1.0s						
NBLA	Lagarto - SE	58.32	113	*e*P	P	23 03 19.4	-0.5
MAYO	Mayo, Yukon	58.33	338	P	P	23 03 19.6	+0.3
	baz=126						
NBIT	Itapeh - BA	58.58	118	*e*P	P	23 03 22.3	+0.6
TER01	Tubaro-SC	58.65	137	*e*P	P	23 03 21.3	-0.7
TRQA	Tornquist	58.66	153	P	P	23 03 21.9	+0.1
TRQA				pmax	pmax		
	comp=Z,45nm,1.4s						
TRQA	Tornquist	58.66	153	P	P	23 03 21.9	+0.1
TABL	Table Mountain	58.70	334	IAmb	IAmb	23 03 46.5	
	comp=Z,59nm,0.6s						
CMC01	Camacan, BA	58.70	118	*e*P	P	23 03 22.7	+0.2
LOGN	Logan Glacier	58.83	334	IAmb	IAmb	23 03 25.9	
	comp=Z,107nm,1.7s						
NBPV	Pedro Velho	58.87	107	*e*P	P	23 03 22.1	-1.7
SJMB	Sao Joao De Ma	58.91	122	*e*P	P	23 03 23.9	0.0
MAN01	Angra dos Reis	58.92	128	*e*P	P	23 03 24.7	+0.8
YAH	Yahtse	58.92	333	IAmb	IAmb	23 03 47.6	
	comp=Z,73nm,1.1s						
VAS01	Vassouras-RJ	58.99	127	*e*P	P	23 03 24.9	+0.5
SFJD	Kangerlussuaq	59.00	17	LR	LR	23 29 34.9	
	comp=Z,2µm,20.7s,baz=226,slow=37						
GUA01	Guaratinga, BA	59.03	119	*e*P	P	23 03 24.7	0.0
CTGM	Chitina Glacie	59.04	334	IAmb	IAmb	23 03 27.5	
	comp=Z,99nm,1.6s						
YUK3	Moose Creek	59.08	335	P	P	23 03 25.2	+0.4
	baz=121,SNR=11						
NBAN	Anadia - AL	59.16	111	*e*P	P	23 03 24.3	-1.5
BARN	Barnard Glacie	59.23	334	IAmb	IAmb	23 04 16.0	
	comp=Z,61nm,1.2s						
BSFB	Barra de Sao F	59.25	122	*e*P	P	23 03 27.0	+0.7
ISLE	Juniper Island	59.30	333	IAmb	IAmb	23 04 15.9	
	comp=Z,70nm,1.2s						
NAN01	Guarapari, ES	59.36	121	*e*P	P	23 03 27.4	+0.3
WAX	Waxell Ridge	59.45	333	IAmb	IAmb	23 03 30.5	
	comp=Z,160nm,1.6s						
BVCY	Beaver Creek	59.57	336	P	P	23 03 28.5	+0.7
	baz=121						
TGL	Tana Glacier	59.58	333	IAmb	IAmb	23 04 16.9	
	comp=Z,52nm,1.0s						
DUB01	Friburgo-RJ	59.71	126	*e*P	P	23 03 30.0	+0.6
BERG	Berg Lake	59.80	333	P	P	23 03 31.1	+1.6
BERG				IAmb	IAmb	23 03 32.8	
	comp=Z,132nm,1.5s						
NBRF	Rio Formoso -	59.84	109	*e*P	P	23 03 28.9	-1.5
RIB01	Linhares ES	59.86	123	*e*P	P	23 03 30.4	0.0
DAWY	Dawson	59.88	338	P	P	23 03 29.3	-0.7
	baz=123,SNR=12						
MCARA	McCarthy VSAT	59.96	334	IAmb	IAmb	23 03 35.6	
	comp=Z,53nm,1.0s						
DY2G	Dye2	59.98	19	*i* P	P	23 03 30.2	-0.6
VRDI	Verde Repeater	60.07	334	IAmb	IAmb	23 03 34.3	
	comp=Z,233nm,2.0s						
CAM01	Campos-RJ	60.14	126	*e*P	P	23 03 32.9	+0.6
I29M	Ogilvie Camp,	60.22	339	P	P	23 03 32.1	-0.1
	baz=125						
RAGM	Ragged Mountai	60.23	333	IAmb	IAmb	23 03 36.9	
	comp=Z,73nm,1.0s						
ALF01	Guarapari-ES	60.25	124	*e*P	P	23 03 33.7	+0.6
EPYK	Eagle Plains	60.28	341	P	P	23 03 32.7	0.0
	baz=127,SNR=6.4						
GLB	Gilahina Butte	60.32	334	IAmb	IAmb	23 03 35.8	
	comp=Z,157nm,1.8s						
BMRM	Bremner River	60.45	333	P	P	23 03 35.0	+1.0
BMRM				IAmb	IAmb	23 03 37.0	
	comp=Z,204nm,1.7s						
RES	Resolute Bay	60.51	359	LR	LR	23 32 57.5	
	comp=Z,2µm,19.4s,baz=148,slow=39						
RES	Resolute Bay	60.51	359	IAmb	IAmb	23 03 36.4	
	comp=Z,67nm,1.3s						
INK	Inuvik	60.54	343	ScP	ScP	23 08 10.7	+1.2
	comp=Z,4.8nm,1.1s,baz=197,slow=4.1,SNR=3.7						
INK				PKP2bc		23 32 59.5	
	comp=Z,1.3nm,0.7s,baz=213,slow=3.1,SNR=3.6						
INK				LR	LR	23 33 49.8	
	comp=Z,447nm,18.6s,baz=125,slow=40						
INK	Inuvik	60.54	343	P	P	23 03 33.8	-0.4
INK				pmax	pmax		
	comp=Z,40nm,1.1s						
INK	Inuvik	60.54	343	P	P	23 03 33.8	-0.4
INK	Inuvik	60.54	343	P	P	23 03 34.0	-0.3
	baz=131,SNR=30						
Q23K	Middleton Isla	60.60	331	P	P	23 03 35.9	+1.1
	baz=114						
N25K	Chitina, Valde	60.73	334	P	P	23 03 36.8	+0.9
	baz=116,SNR=24						
L26K	Log Cabin Wild	60.87	336	P	P	23 03 37.0	+0.3
	baz=118,SNR=8.2						
EGAK	Eagle	60.91	338	P	P	23 03 36.6	-0.3
DIV	Divide	61.04	333	P	P	23 03 39.2	+1.3
DIV				IAmb	IAmb	23 03 40.6	
	comp=Z,246nm,1.9s						
DIV				PcP	PcP	23 04 20.7	+0.6
FID	Port Fidalgo	61.19	332	IAmb	IAmb	23 03 41.8	
	comp=Z,176nm,1.5s						
A36M	Sachs Harbour	61.25	348	P	P	23 03 38.2	-0.9
	baz=141,SNR=32						
KLU	Klutina	61.26	333	P	P	23 03 40.1	+0.7
KLU				PcP	PcP	23 04 21.2	+0.2
KLU				IAmb	IAmb	23 04 23.6	
	comp=Z,75nm,1.0s						
HARP	HAARP	61.32	334	P	P	23 03 42.1	+2.3
	baz=116						
DOT	Dot Lake	61.45	336	IAmb	IAmb	23 03 42.9	
	comp=Z,165nm,1.8s						
GLI	Glacier Island	61.52	332	IAmb	IAmb	23 04 24.1	
	comp=Z,39nm,0.9s						
NUUG	Nuugaatsiaq	61.60	13	*i* P	P	23 03 41.1	-0.3
NUUG				IAmb	IAmb	23 03 42.5	
	comp=Z,94nm,1.3s						
M24K	Tolsona, Glenn	61.62	334	P	P	23 03 42.8	+0.9
	baz=115						
PAX	Paxson	61.71	335	IAmb	IAmb	23 03 44.5	
	comp=Z,160nm,1.8s						
COYC	Coyhaique	61.90	165	P	P	23 03 43.3	-0.5
SCM	Sheep Creek Mo	62.01	333	IAmb	IAmb	23 03 47.5	
	comp=Z,52nm,0.9s						
SEW	Seward	62.31	331	IAmb	IAmb	23 03 48.4	
	comp=Z,71nm,1.1s						
KNK	Knik Glacier	62.34	333	IAmb	IAmb	23 03 49.6	
	comp=Z,80nm,1.1s						
O22K	Cooper Landing	62.57	331	P	P	23 03 48.6	+0.5
	baz=111						
GHO	Glory Hole Cre	62.68	333	IAmb	IAmb	23 03 52.3	
	comp=Z,110nm,1.0s						
PMR	Palmer	62.70	333	IAmb	IAmb	23 03 51.1	
	comp=Z,168nm,1.6s						
BRLK	Bradley Lake	62.87	331	P	P	23 03 51.0	+0.9
HDA	Harding Lake	62.93	336	IAmb	IAmb	23 03 53.1	
	comp=Z,237nm,1.9s						
CNPM	China Poot	62.96	330	IAmb	IAmb	23 03 53.7	
	comp=Z,172nm,1.2s						
IL31		63.06	337	IAmb	IAmb	23 03 54.7	
	comp=Z,54nm,1.0s						
ILAR	Eielson Array	63.06	337	P	P	23 03 51.3	0.0
	comp=Z,34nm,0.9s,baz=162,slow=5.4,SNR=96						
ILAR				PKP2bc		23 32 53.4	
	comp=Z,1.2nm,1.1s,baz=314,slow=2.2,SNR=4.6						
ILAR				LR	LR	23 34 48.7	
	comp=Z,426nm,18.4s,baz=125,slow=39						
KDAK	Kodiak Island	63.09	328	P	P	23 03 52.4	+0.8
KDAK				pmax	pmax		
	comp=Z,160nm,1.1s						
KDAK	Kodiak Island	63.09	328	P	P	23 03 52.4	+0.8
KDAK				IAmb	IAmb	23 03 54.0	
	comp=Z,160nm,1.1s						
M22K	Willow	63.20	333	P	P	23 03 52.5	+0.3
	baz=111						
RND	Reindeer	63.28	335	IAmb	IAmb	23 03 56.7	
	comp=Z,150nm,1.2s						
PMOR	Pomariorio Ree	63.38	245	*e*T	T	00 11 49.2	
	comp=Z,5.1nm,0.2s						
TULEG	Thule	63.40	6	*i* P	P	23 03 52.4	-0.9
TULEG				IAmb	IAmb	23 03 54.1	
	comp=Z,204nm,1.7s						
WRH	Wood River Hil	63.40	336	P	P	23 03 52.9	-0.7
WRH				PcP	PcP	23 04 29.6	0.0
POKR	Poker Plat Res	63.42	337	P	P	23 03 53.3	-0.4
	baz=115						
COLA	College	63.48	336	*ce*P	P	23 03 52.9	-1.1
COLA				pmax	pmax		
	comp=Z,32nm,1.0s						
COLA	College	63.48	336	P	P	23 03 53.1	-0.9
COLA				IAmb	IAmb	23 04 32.2	
	comp=Z,103nm,1.1s						
TCOL	CIGO, UAF Yank	63.48	336	P	P	23 03 53.6	-0.5
	baz=115						
CUT	Chulitna	63.50	333	P	P	23 03 54.2	0.0
ICESG	Greenland Ices	63.54	18	*i* P	P	23 03 53.6	-1.2
ICESG				IAmb	IAmb	23 03 55.3	
	comp=Z,277nm,1.6s						
MDM	Murphy Dome	63.66	336	IAmb	IAmb	23 04 33.1	
	comp=Z,69nm,1.1s						
O20K	Slope Mountain	63.80	331	P	P	23 03 56.9	+0.6
	baz=108,SNR=7.3						
KIP	Kipapa	63.88	287	⇓*e*P	P	23 03 59.1	+1.7
KIP				pmax	pmax		
	comp=Z,46nm,1.0s						
TRF	Thorofare Moun	63.90	334	IAmb	IAmb	23 03 59.8	
	comp=Z,209nm,1.3s						
Q19K	Cape Douglas,	63.95	329	P	P	23 03 57.9	+0.6
	baz=106						
I23K	Minto, Yukon-K	64.17	336	P	P	23 03 58.8	+0.2
	baz=113,SNR=43						
KTH	Kantishna Hill	64.20	334	IAmb	IAmb	23 04 01.3	
	comp=Z,64nm,1.0s						
PPLA	Purkeypile	64.51	334	P	P	23 04 00.8	-0.2
PPLA				IAmb	IAmb	23 04 03.5	
	comp=Z,100nm,1.2s						
CAST	Castle Rocks	64.64	334	IAmb	IAmb	23 04 03.8	
	comp=Z,86nm,1.2s						
O19K	Port Alsworth	64.64	330	P	P	23 04 01.7	0.0
	baz=106						
MLY	Manley	64.67	336	IAmb	IAmb	23 04 04.7	
	comp=Z,68nm,1.0s						
P18K	Big Mountain,	64.87	329	P	P	23 04 03.0	-0.2
	baz=105						
L19K	White Mountain	65.46	332	P	P	23 04 06.6	-0.4
	baz=107,SNR=15						
TOLK	Toolik Lake Re	65.68	340	P	P	23 04 08.7	+0.3
	baz=115						
SUMG	Summit	65.75	15	P	P	23 04 08.0	-1.2
SUMG				pmax	pmax		
	comp=Z,487nm,1.8s						
SUMG	Summit	65.75	15	*i* P	P	23 04 08.0	-1.2
SUMG				IAmb	IAmb	23 04 10.3	
	comp=Z,503nm,1.8s						
SUMG	Summit	65.75	15	P	P	23 04 08.0	-1.2
CHGN	Chignik	65.83	326	P	P	23 04 09.5	0.0
	baz=101						
EUNU	Eureka	65.90	1	P	P	23 04 09.0	-0.7
EUNU				IAmb	IAmb	23 04 11.0	
	comp=Z,56nm,0.8s						
PPT2	Papeete2	65.93	243	*e*S	S	23 12 47.6	-2.7
	comp=Z,301nm,25.2s						
PPT2	Papeete2	65.93	243	*e*LR	LR	23 23 47.8	
	comp=Z,4µm,30.2s,baz=59						
TTA	Tatalina	66.18	333	P	P	23 04 10.9	-0.8
	baz=106,SNR=15						
CNBA	Chernabura Isl	66.23	324	IAmb	IAmb	23 04 13.9	
	comp=Z,168nm,1.3s						
NEEM	North Greenlan	66.36	9	*i* P	P	23 04 12.7	-0.2
NEEM				IAmb	IAmb	23 04 13.8	
	comp=Z,168nm,1.2s						
SDPT	Sand Point	66.81	324	P	P	23 04 16.5	+0.8
	baz=99						
A21K	Barrow	68.93	342	P	P	23 04 28.6	-0.1
	baz=109						
FUL	Funchal	69.14	60	*e*P	P	23 04 30.7	0.0
	comp=Z,111nm,1.4s						
SCO	Scoresbysund	69.71	20	*i* P	P	23 04 33.0	-0.5
DBG	Daneborg	71.22	16	*i* P	P	23 04 41.8	-0.9
DBG				IAmb	IAmb	23 04 43.6	
	comp=Z,12nm,1.0s						
DAG	Danmarks Havn	72.22	13	*i* P	P	23 04 47.0	-1.6
DAG				*i* P	P	23 04 47.0	-1.6
DAG				IAmb	IAmb	23 04 48.4	
	comp=Z,36nm,0.9s						
NOR	Nord	73.74	8	*i* P	P	23 04 52.1	-5.4
NOR				IAmb	IAmb	23 04 57.4	
	comp=Z,144nm,1.9s						
JMIC	Jan Mayen	74.19	20	LR	LR	23 38 53.0	
	comp=Z,644nm,19.2s,baz=254,slow=37						
PCAS	Casmilo, Conde	75.25	52	*e*P	P	23 05 05.6	-1.5
	comp=Z,118nm,1.8s						
PCAS				*i* LQ	LQ	23 06 08.3	
PTEO	Sao Teotonio	75.36	54	*e*P	P	23 05 08.3	+0.6
	comp=Z,105nm,1.5s						
MORF	Marmelete	75.45	55	*e*P	P	23 05 08.0	-0.3
	comp=Z,59nm,1.6s						
PMTG	Montargil	75.57	53	*e*P	P	23 05 08.0	-0.9
	comp=Z,78nm,1.7s						
PMTG				*i* LQ	LQ	23 06 09.5	
KPL	Plockton	75.62	34	*e*P	P	23 05 07.1	-1.6
PVIS	Viseu	75.64	51	*e*P	P	23 05 00.8	-8.5
	comp=Z,47nm,1.8s						
PVIS				*i* LQ	LQ	23 06 11.0	
POLO	Lamas de Olo	75.64	50	*e*P	P	23 05 06.7	-2.7
	comp=Z,31nm,1.8s						
POLO				*i* LQ	LQ	23 06 10.0	
MESJ	Messejana	75.72	54	*e*P	P	23 05 09.1	-0.7
	comp=Z,43nm,1.9s						
KAC	Achnashellach	75.80	34	*e*P	P	23 05 09.2	-0.6
EVO	Evora	75.80	53	*e*P	P	23 05 09.5	-0.7
	comp=Z,25nm,1.9s						
MTE	Manteigas	75.94	51	*e*P	P	23 05 07.9	-3.2
	comp=Z,59nm,1.6s						
MTE				*i* LQ	LQ	23 06 11.7	
MTE				*e*S	ScS	23 15 15.8	-0.5
PBDV	Barranco-do-Ve	76.03	55	*e*P	P	23 05 11.5	-0.1
	comp=Z,53nm,1.5s						
PCBR	Castelo Branco	76.06	52	*e*P	P	23 05 11.4	-0.2
	comp=Z,50nm,1.7s						
PCBR				*i* LQ	LQ	23 06 12.7	
PESTR	Estremoz	76.09	53	*e*P	P	23 05 11.1	-0.8
	comp=Z,56nm,1.6s						
PESTR				*i* LQ	LQ	23 06 12.7	
PMRV	Marv??o	76.17	52	*e*P	P	23 05 10.0	-2.3
	comp=Z,53nm,1.6s						
PVAQ	Vaqueiros	76.17	55	*e*S	ScS	23 15 16.8	-1.4
MVO	Moncorvo	76.24	51	*e*P	P	23 05 11.6	-1.1
	comp=Z,32nm,1.8s						
MVO				*i* LQ	LQ	23 06 13.6	
MVO				*e*S	ScS	23 15 17.0	-1.7
MDO	Dochfour	76.31	34	*e*P	P	23 05 11.0	-1.7
ADK	Adak	76.36	320	P	P	23 05 13.4	+0.3
ADK				pmax	pmax		
	comp=Z,932nm,1.3s						
ADK	Adak	76.36	320	P	P	23 05 13.4	+0.3
PBRG	Braganca	76.37	50	*i* LQ	LQ	23 06 13.4	
IOMK	Kirk Michael	76.48	37	*e*P	P	23 05 12.8	-0.9
INVG	Invergeldie, C	76.57	35	*e*P	P	23 05 12.9	-1.3
ESK	Eskdalemuir	77.16	36	*e*P	P	23 05 15.5	-2.0
ESK	Eskdalemuir	77.16	36	P	P	23 05 16.2	-1.3
ESK				pmax	pmax		
	comp=Z,44nm,0.8s						
ESK	Eskdalemuir	77.16	36	P	P	23 05 16.2	-1.3
DRUM	Mains of Drumt	77.38	34	*e*P	P	23 05 17.4	-1.3
HLM1	Long Mynd	77.68	39	*e*P	P	23 05 19.3	-1.2
PAB	San Pablo	78.49	52	P	P	23 05 23.2	-2.1
PAB				pmax	pmax		
	comp=Z,50nm,1.6s						
PAB	San Pablo	78.49	52	P	P	23 05 23.2	-2.1
KBS	Kingsbay	78.60	11	⇓*e*P	P	23 05 26.6	+1.5
KBS				*i* *PP	pP	23 05 52.8	-0.1
KBS				pmax	pmax		
	comp=Z,75nm,1.3s						
ESDC	Sonseca Array	78.76	52	P	P	23 05 25.1	-1.7
	comp=Z,5.0nm,0.7s,baz=287,slow=4.8,SNR=79						
ESDC				LR	LR	23 38 19.9	
	comp=Z,307nm,18.2s,baz=265,slow=34						
SPA0	Spitsbergen Ar	79.67	12	*e*P	P	23 05 31.0	+0.1
SPITS	Spitsbergen Ar	79.67	12	LR	LR	23 42 30.0	
	comp=Z,2µm,20.6s,baz=250,slow=37						
ASK	Askoy	80.75	30	*e*P	P	23 05 37.2	+0.2
AKN	Aaknes	81.21	28	*e*P	P	23 05 39.4	-0.1
ODD1	Odda	81.57	30	*e*P	P	23 05 41.2	-0.2
BJO1	Bjornoya	81.59	15	*e*P	P	23 05 40.4	-0.8
BLS5	Blasjo	81.60	31	*e*P	P	23 05 43.0	+1.4
BILL	Bilibino	81.65	338	*d* *i*P	P	23 05 41.7	0.0
BILL				pmax	pmax		
	comp=Z,73nm,1.0s						
BILL	Bilibino	81.65	338	P	P	23 05 40.9	-0.8
BILL				IAmb	IAmb	23 05 43.3	
	comp=Z,166nm,1.5s						
CLF	Chambon-Foret	81.68	43	IAmb	IAmb	23 06 14.6	
	comp=Z,237nm,2.0s						
DOMB	Dombas	82.19	28	*e*P	P	23 05 44.6	0.0
TBLU	Trondheim	82.39	27	*e*P	P	23 05 45.8	+0.2
KONS	Konsvik	82.58	23	*e*P	P	23 05 46.4	-0.1
DOU	Dourbes	82.72	40	*d*P	P	23 05 46.4	-1.2
	comp=Z,11nm,0.8s						
NSS	Namsos	82.73	25	*e*P	P	23 05 47.0	-0.3
BMRD	Maredsous	82.78	40	*d*P	P	23 05 47.5	-0.5
BGES	Gesves	82.97	40	*d*P	P	23 05 47.4	-1.5
	comp=Z,14nm,0.7s						
BGES				*d*pP	pP	23 06 14.5	-2.2
BCLA	Clavier	83.09	40	*d*P	P	23 05 48.3	-1.2
	comp=Z,12nm,1.0s						
FAUS	Fauske	83.09	22	*e*P	P	23 05 49.5	+0.4
KONO	Kongsberg	83.09	30	⇓*e*P	P	23 05 49.2	-0.1
KONO				pmax	pmax		
	comp=Z,85nm,1.9s						
RCHB	Rochefort	83.11	40	*d*P	P	23 05 48.7	-0.9
RCHB				*d*pP	pP	23 06 15.9	-1.5
RCHB				*d*sP	sP	23 06 29.4	+0.4
MOR8	Moi Rana	83.19	23	*e*P	P	23 05 50.6	+0.9
NBO00	NORSAR Array S	83.26	29	IAmb	IAmb	23 07 13.0	
	comp=Z,346nm,2.0s						
NB2	NORSAR Subarra	83.46	29	P	P	23 05 50.9	-0.3
	comp=Z,34nm,1.1s,baz=288,slow=5.3						
NB2	NORSAR Subarra	83.46	29	P	P	23 05 50.9	-0.3
	baz=288,slow=5.3						
NOA	NORSAR Array B	83.46	29	P	P	23 05 51.2	0.0
	comp=Z,7.4nm,0.8s,baz=289,slow=5.1,SNR=24						
NOA				LR	LR	23 42 26.3	
	comp=Z,336nm,20.4s,baz=285,slow=35						
MEM	Membach	83.48	40	*d*P	P	23 05 51.2	-0.3
TRO	Tromso	83.50	19	*e*P	P	23 05 51.3	+0.1
BHOU	Houvegnez	83.54	40	*d*P	P	23 05 51.2	-0.6
BTNL	Ternell	83.56	40	*d*P	P	23 05 51.6	-0.3
KOWA	Kowa	83.60	77	P	P	23 05 50.6	-2.2
WLF	Walferdange	83.81	40	*d*P	P	23 05 52.2	-1.0
WLF				*d*pP	pP	23 06 17.7	-3.4
WLF	Walferdange	83.81	40	*e*P	P	23 05 51.6	-1.6
	comp=Z,132nm,1.8s,baz=287,slow=5.0						
WLF	Walferdange	83.81	40	IAmb	IAmb	23 05 53.8	
	comp=Z,127nm,1.8s						
JETT	Jettan, Norway	84.00	19	*e*P	P	23 05 54.3	+0.4
BUG	Bochum--Univer	84.04	39	*e*P	P	23 05 52.5	-1.8
	baz=287,slow=5.0						
IBBN	Ibbenburen	84.10	38	*e*P	P	23 05 53.2	-1.4
	comp=Z,28nm,1.0s,baz=287,slow=5.0						
AHRW	Bad Neuenahr-A	84.16	39	*e*P	P	23 05 53.7	-1.2
	comp=Z,33nm,1.1s,baz=287,slow=5.0						
TIC	Toumodi	84.44	85	*e*PKP1	P	23 05 56.5	-0.6
HAMF	Hammerfest	84.53	18	*e*P	P	23 05 56.5	+0.2
LIC	Lamto	84.53	85	*e*PKP1	P	23 05 57.2	-0.3
	comp=Z,79nm,1.0s						
DBIC	Dimbokro	84.59	85	P	P	23 05 56.2	-1.6
	comp=Z,12nm,0.7s,baz=306,slow=3.8,SNR=20						
DBIC				LR	LR	23 41 43.2	
	comp=Z,234nm,19.2s,baz=296,slow=34						
DBIC	Dimbokro	84.59	85	P	P	23 05 55.4	-2.4
DBIC	Dimbokro	84.59	85	P	P	23 05 55.4	-2.4
KIC	Kosan Boka	84.77	85	*e*PKP1	P	23 05 57.4	-1.4
	comp=Z,30nm,0.7s						
HFS	Hagfors	84.91	29	LR	LR	23 42 55.9	
	comp=Z,397nm,21.2s,baz=282,slow=35						
RETH	Rethem/Aller,	84.92	37	*e*P	P	23 05 57.9	-0.8
	comp=Z,127nm,1.6s,baz=287,slow=5.0						
RETH				*e*pP	pP	23 06 23.9	-2.8
TNS	Taunus Mts	85.09	40	*e*P	P	23 05 58.0	-1.7
	comp=Z,91nm,1.8s,baz=287,slow=5.0						
TNS				*e*pP	pP	23 06 24.5	-3.2
BSEG	Bad Segeberg	85.12	36	*e*P	P	23 05 58.8	-0.8
	comp=Z,164nm,1.9s,baz=287,slow=5.0						
BSEG				*e*pP	pP	23 06 25.4	-2.2
KTK1	Kautokeino	85.15	19	*e*P	P	23 05 59.4	-0.2
NRDL	Niedersach Rie	85.43	37	*e*P	P	23 06 00.3	-0.9
	comp=Z,70nm,1.5s,baz=287,slow=5.0						
NRDL				*e*pP	pP	23 06 26.7	-2.5
BFO	Black Forest	85.54	41	*e*P	P	23 05 59.9	-2.1
	comp=Z,64nm,1.6s,baz=287,slow=5.0						
ARA0	ARCESS Array S	85.61	18	*e*P	P	23 06 01.4	-0.5
ARCES	ARCESS Array B	85.61	18	P	P	23 06 00.9	-0.9
	comp=Z,11nm,0.6s,baz=284,slow=2.4,SNR=71						
ARCES				PP	PP	23 09 20.5	-1.0
	comp=Z,8.7nm,1.0s,baz=298,slow=5.4,SNR=3.5						
ARCES				PKKPbc	PKKPbc	23 24 07.6	+1.0
	comp=Z,1.8nm,0.8s,baz=140,slow=2.6,SNR=8.0						
ARCES				LR	LR	23 43 36.4	
	comp=Z,671nm,22.0s,baz=295,slow=35						
GTTG	Gottingen	85.63	38	*e*P	P	23 06 01.2	-1.1
	comp=Z,39nm,1.0s,baz=287,slow=5.0						
GTTG				*e*pP	pP	23 06 27.2	-3.1
CLZ	Clausthal	85.78	38	*e*P	P	23 06 02.2	-0.9
	comp=Z,46nm,1.1s,baz=287,slow=5.0						
UBBA	Unterbreizbach	85.87	39	*e*P	P	23 06 02.2	-1.1
	comp=Z,51nm,1.4s,baz=287,slow=5.0						
ASSE	Asse, Remlinge	85.87	37	*e*P	P	23 06 02.8	-0.6
	comp=Z,105nm,1.8s,baz=287,slow=5.0						
ASSE				*e*pP	pP	23 06 28.8	-2.6
STU	Stuttgart	85.97	41	*e*P	P	23 06 02.3	-1.7
	comp=Z,69nm,1.0s,baz=287,slow=5.0						
FLTG	Flechtingen	86.14	37	*e*P	P	23 06 03.3	-1.5
	comp=Z,74nm,1.5s,baz=287,slow=5.0						
FLTG				*e*pP	pP	23 06 29.7	-3.1
NEUB	Neuenburg	86.81	38	*e*P	P	23 06 06.8	-1.3
	comp=Z,55nm,1.4s,baz=287,slow=5.0						
NEUB				*e*pP	pP	23 06 33.3	-2.8
DAVA	Damuels	86.85	42	*i* P	P	23 06 07.6	-1.0
	comp=Z,41nm,1.1s,SNR=14						
DAVA				*e*P	pP	23 06 34.5	-2.2
	comp=Z,32nm,1.8s						

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UBR   Ueberruh          86.88  42   eP      P        23 06 07.1 -1.5
      comp=Z,94nm,1.8s,baz=287,slow=5.0
MOX   Moxa              86.90  38   eP      P        23 06 07.2 -1.4
      comp=Z,76nm,1.8s,baz=287,slow=5.0
MOX                                 epP     pP       23 06 33.6 -3.1
GRFO  Grafenberg        86.96  39    P      P        23 06 08.7 -0.2
GRFO                                 pmax   pmax
      comp=Z,170nm,2.0s
GRFO  Grafenberg        86.96  39    P      P        23 06 08.7 -0.2
GRFO                                 IAmb   IAmb     23 06 10.8
      comp=Z,170nm,2.0s
GRA1  Grafenberg Arr    86.96  39    IAmb   IAmb     23 06 10.9
      comp=Z,176nm,2.0s
GRF   Grafenberg Arr    86.96  39   eP      P        23 06 07.8 -1.1
      comp=Z,140nm,2.0s,baz=287,slow=5.0
DAVOX Davos/Dischmat    87.00  43    LR     LR       23 41 39.0
      comp=Z,274nm,19.5s,baz=292,slow=33
PLN   Plauen            87.28  39   eP      P        23 06 09.3 -1.1
      comp=Z,69nm,1.5s,baz=287,slow=5.0
PLN                                 epP     pP       23 06 35.3 -3.2
RETA  Reutte            87.36  42   i P     P        23 06 09.9 -1.0
      comp=Z,29nm,0.8s,SNR=9.3
RETA                                i P     pP       23 06 36.3 -2.8
      comp=Z,14nm,0.7s
WERD  Werda             87.38  39   eP      P        23 06 09.7 -1.2
      comp=Z,52nm,1.5s,baz=287,slow=5.0
WERD                                epP     pP       23 06 36.1 -3.0
GUNZ  Gunzen            87.42  39   eP      P        23 06 10.1 -1.0
      comp=Z,46nm,1.4s,baz=287,slow=5.0
GUNZ                                epP     pP       23 06 36.3 -2.9
WERN  Wernitzgruen      87.47  39   eP      P        23 06 10.5 -0.9
      comp=Z,58nm,1.4s,baz=287,slow=5.0
WERN                                epP     pP       23 06 36.5 -3.0
FUR   Furstenfeldbru    87.47  41   eP      P        23 06 10.0 -1.4
      comp=Z,58nm,1.7s,baz=287,slow=5.0
FETA  Feichten          87.48  42   eP      P        23 06 10.7 -1.0
      comp=Z,16nm,0.7s
FETA                                eP      pP       23 06 37.0 -2.8
      comp=Z,8.5nm,0.7s
TANN  Tannenbergstha    87.48  39   eP      P        23 06 10.2 -1.3
      comp=Z,57nm,1.5s,baz=287,slow=5.0
TANN                                epP     pP       23 06 36.7 -2.9
CLL   Collm             87.51  38   i P     P        23 06 10.4 -1.1
CLL                                 i *PP   pP       23 06 36.9 -2.7
CLL                                 e                23 16 41.0
CLL                                  pmax   pmax
      comp=Z,23nm,1.0s
CLL                                  MLR    MLR
      comp=Z,900nm,24.8s
CLL   Collm             87.51  38   i P     P        23 06 10.4 -1.1
      comp=Z,23nm,1.0s
CLL                                 i pP    pP       23 06 36.9 -2.7
      comp=Z,59nm,1.9s
CLL                                 ePP     PP       23 09 41.0 +3.7
CLL                                 eSKSac  S        23 16 41.0 -2.9
CLL                                 ePS     PS       23 18 06.0 +6.8
CLL                                 e                23 19 52.0
CLL                                 eSS     SS       23 22 34.0 +3.1
CLL   Collm             87.51  38   eP      P        23 06 10.2 -1.3
      comp=Z,23nm,1.0s,baz=287,slow=5.0
CLL                                 epP     pP       23 06 36.9 -2.7
NKC   Novy Kostel       87.53  39   eP      P        23 06 11.4 -0.3
NKC                                 epP     pP       23 06 36.8 -3.0
NKC   Novy Kostel       87.53  39   eP      P        23 06 11.4 -0.3
ROTZ  Rotzenmuhle       87.54  39   eP      P        23 06 10.6 -1.1
      comp=Z,15nm,1.6s,baz=287,slow=5.0
ROTZ                                epP     pP       23 06 36.9 -3.0
RUE   Ruedersdorf       87.56  36   eP      P        23 06 10.8 -0.8
      baz=287,slow=5.0
MOTA  Moosalm           87.62  42   eP      P        23 06 11.1 -1.2
      comp=Z,23nm,1.0s,SNR=8.3
MOTA                                eP      pP       23 06 37.3 -3.2
      comp=Z,14nm,0.8s,SNR=5.4
SQTA  Sankt Quirin      87.73  42   eP      P        23 06 11.5 -1.2
      comp=Z,24nm,1.3s,SNR=8.2
SQTA                                eP      pP       23 06 37.2 -3.7
      comp=Z,8.8nm,0.8s
SALO  Salr              87.78  44    IAmb   IAmb     23 06 13.0
      comp=Z,30nm,0.7s
FBE   Freiberg          87.85  38   eP      P        23 06 12.0 -1.1
      comp=Z,46nm,1.3s,baz=287,slow=5.0
FBE                                 epP     pP       23 06 38.8 -2.5
WATA  Walderalm         87.93  42   eP      P        23 06 13.7 -0.1
      comp=Z,16nm,1.4s
WTTA  Wattenberg        87.99  42   i P     P        23 06 12.9 -1.2
      comp=Z,7.8nm,0.8s
WTTA                                eP      pP       23 06 39.1 -3.2
      comp=Z,16nm,1.7s
WET   Wettzell          88.16  40   eP      P        23 06 13.5 -1.2
      comp=Z,50nm,1.4s,baz=287,slow=5.0
WET                                 epP     pP       23 06 40.4 -2.4
BRG   Berggiesshubel    88.21  38   eP      P        23 06 13.6 -1.3
      comp=Z,46nm,1.7s,baz=287,slow=5.0
BRG                                 epP     pP       23 06 40.3 -2.7
BRG   Berggiesshubel    88.21  38   eP      P        23 06 14.7 -0.1
BRG                                  Amp             23 06 17.4
      comp=Z,12nm,1.1s
BRG                                  pP     pP       23 06 40.6 -2.4
BRG                                  Amp             23 06 45.2
      comp=Z,9.3nm,1.1s
ZCCA  Zocca             88.48  45    IAmb   IAmb     23 06 37.0
      comp=Z,148nm,1.8s
RJOB  Jochberg          88.58  41   eP      P        23 06 15.1 -1.7
      comp=Z,65nm,2.0s,baz=287,slow=5.0
KHC   Kasperske Hory    88.60  40   eP      P        23 06 16.1 -0.6
KHC                                 epP     pP       23 06 41.1 -3.9
KHC   Kasperske Hory    88.60  40⇓iP      P        23 06 16.4 -0.3
KHC                                  pmax   pmax
      comp=Z,43nm,1.7s
ABTA  Abfaltersbach     88.73  42   eP      P        23 06 16.4 -1.1
      comp=Z,21nm,1.1s,SNR=8.8
ABTA                                eP      pP       23 06 42.6 -3.1
      comp=Z,14nm,1.0s,SNR=5.7
GEC2  GERESS Array S    88.77  40   eP      P        23 06 16.1 -1.6
      comp=Z,26nm,1.7s,baz=287,slow=5.0
GEC2                                epP     pP       23 06 42.8 -3.1
GERES GERESS Array B    88.77  40    P      P        23 06 16.5 -1.2
      comp=Z,2.2nm,0.7s,baz=298,slow=2.9,SNR=22
GERES                                PP     PP       23 09 48.1 +0.5
      comp=Z,0.4nm,0.4s,baz=308,slow=4.4,SNR=3.8
GERES                                LR     LR       23 40 26.1
      comp=Z,438nm,21.3s,baz=287,slow=32
GERES GERESS Array B    88.77  40    P      P        23 06 16.8 -0.8
GERES GERESS Array B    88.77  40    P      P        23 06 16.8 -0.8
PRU   Pruhonice         88.88  38   eP      P        23 06 17.6 -0.4
PRU                                 epP     pP       23 06 43.4 -2.8
PRU   Pruhonice         88.88  38   eP      P        23 06 17.6 -0.4
APA   Apatity           89.11  18⇓iP      P        23 06 16.9 -1.8
APA                                 i *PP   pP       23 06 48.2 +1.2
APA                                  pmax   pmax
      comp=Z,18nm,1.3s
KBA   Koelnbreinsper    89.15  41   eP      P        23 06 17.8 -1.7
      comp=Z,28nm,1.6s,SNR=7.8
KBA                                 eP      pP       23 06 44.7 -3.1
      comp=Z,19nm,1.8s
TORD  Torodi Ar. Bea    89.31  77    P      P        23 06 18.0 -2.6
      comp=Z,1.5nm,0.5s,baz=296,slow=4.7,SNR=30
TORD                                 LR     LR       23 43 22.2
      comp=Z,448nm,21.4s,baz=280,slow=34
MOA   Molln             89.47  41   i P     P        23 06 19.2 -1.6
      comp=Z,7.1nm,0.9s
MOA                                 eP      pP       23 06 45.9 -3.2
      comp=Z,11nm,1.6s
MYKA  Terra Mystica     89.50  42   eP      P        23 06 19.4 -1.6
      comp=Z,12nm,1.0s
CHVC  Chvalec           89.57  38   eP      P        23 06 20.9 -0.3
CADS  Cadrg             89.70  42   i P     P        23 06 20.5 -1.5
TREC  Trest             89.71  39   eP      P        23 06 23.3 +1.4
TREC  Trest             89.71  39   eP      P        23 06 23.3 +1.4
DPC   Dobruska-Polom    89.82  38   eP      P        23 06 21.9 -0.5
DPC                                 epP     pP       23 06 47.1 -3.6
DPC   Dobruska-Polom    89.82  38   eP      P        23 06 21.9 -0.5
FINES FINESS Array B    89.86  25    P      P        23 06 21.4 -0.9
      comp=Z,21nm,1.1s,baz=278,slow=2.3,SNR=17
FINES                                PKiKP  PKiKP    23 11 16.9 -1.3
      comp=Z,3.2nm,1.0s,baz=270,slow=0.1,SNR=5.6
KEST  Kesra             89.93  53    P      P        23 06 22.9 -0.4
      comp=Z,3.6nm,0.5s,baz=142,slow=4.6,SNR=12
OBKA  Obir              90.13  42   eP      P        23 06 22.0 -2.1
      comp=Z,17nm,1.8s
OBKA                                eP      pP       23 06 49.6 -2.7
      comp=Z,15nm,1.8s
KRLC  Kraliky           90.19  38   eP      P        23 06 23.5 -0.7
KRLC  Kraliky           90.19  38   eP      P        23 06 23.5 -0.7
TIXI  Tiksi             90.27 348⇓eP      P        23 06 23.2 -0.8
TIXI                                 pmax   pmax
      comp=Z,28nm,0.9s
TIXI  Tiksi             90.27 348    P      P        23 06 23.5 -0.4
CEY   Cerknica          90.32  42   i P     P        23 06 24.2 -0.7
KRUC  Moravsky          90.35  39   eP      P        23 06 24.3 -0.6
VRAC  Vranov            90.38  39   eP      P        23 06 24.9 -0.1
SOKA  Soboth            90.38  41   eP      P        23 06 24.7 -0.5
      comp=Z,17nm,1.3s
CONA  Conrad Observa    90.44  40   eP      P        23 06 25.9 +0.4
      comp=Z,19nm,1.8s
CONA                                eP      pP       23 06 50.8 -2.9
      comp=Z,6.4nm,1.0s,SNR=4.3
ARSA  Arzberg           90.48  41   eP      P        23 06 25.3 -0.2
      comp=Z,11nm,1.7s
ARSA                                eP      pP       23 06 50.4 -3.4
      comp=Z,5.1nm,1.2s
PET   Petropavlovsk     90.58 326   eP      P        23 06 27.1 +1.3
PET                                 e*PP    pP       23 06 56.2 +2.5
PET                                 eS      S        23 17 13.8 +1.4
PET                                 ePS     PnS      23 18 33.8  0.0
PET                                 eSS     SS       23 23 15.9 +0.8
PET                                  pmax   pmax
      comp=Z,96nm,1.5s
PET                                  pmax   pmax
      comp=Z,200nm,13.1s
MORC  Moravsky Berou    90.76  38   eP      P        23 06 26.5 -0.4
GOLS  Golise            91.00  42   eP      P        23 06 27.5 -0.5
PEA0B Petropavlovsk-    91.06 326deP      P        23 06 29.6 +1.5
PETK  Petropavlovsk-    91.06 326    P      P        23 06 29.6 +1.5
      comp=Z,49nm,1.1s,baz=74,slow=11,SNR=24
MODS  Modra-Piesok      91.15  39   eP      P        23 06 28.0 -0.6
MODS  Modra-Piesok      91.15  39   eP      P        23 06 28.0 -0.6
JAVC  Velka Javorina    91.20  39   eP      P        23 06 29.2 +0.3
OJC   Ojcow             91.91  37   eP      P        23 06 31.6 -0.5
OJC                                 ePP     PP       23 10 11.9 -0.4
OJC   Ojcow             91.91  37    IAmb   IAmb     23 06 33.7
      comp=Z,38nm,1.6s
VYHS  Vyhne             92.06  39   eP      P        23 06 33.2 +0.4
VYHS  Vyhne             92.06  39   eP      P        23 06 33.2 +0.4
SUW   Suwalki           92.11  33   eP      P        23 06 31.9 -0.9
LANS  Liptovska Anna    92.17  38   eP      P        23 06 34.6 +1.2
LANS  Liptovska Anna    92.17  38   eP      P        23 06 34.6 +1.2
NIE   Niedzica          92.55  38   eP      P        23 06 33.3 -1.8
KOVH  Kovagotottos      92.56  41   eP      P        23 06 32.7 -2.5
PSZ   Piszkesteto       92.94  39   eP      P        23 06 35.4 -1.6
PSZ   Piszkesteto       92.94  39    IAmb   IAmb     23 06 39.3
      comp=Z,48nm,1.5s
CRVS  Cervenica-Dubn    93.46  38   eP      P        23 06 39.9 +0.6
CRVS  Cervenica-Dubn    93.46  38   eP      P        23 06 39.9 +0.6
NACGM Naroch            93.51  31   i P     P        23 06 37.5 -1.8
KWP   Kalwaria Pacla    93.86  37   eP      P        23 06 41.1  0.0
UZH   Uzhgorod          94.07  38⇑iP      P        23 06 41.2 -0.9
MNK   Minsk             94.26  31   i P     P        23 06 40.3 -2.5
MNK                                 i *PP   pP       23 07 09.1 -1.9
MNK                                 i *SP   sP       23 07 27.4 +5.0
MNK                                 i                23 10 35.2
MNK                                 i S     SKSac    23 17 04.6 -3.5
MNK                                 i PS    SP       23 18 57.2 -2.8
MNK                                 i SS    SS       23 24 06.7 -1.1
MNK                                  pmax   pmax
      comp=Z,11nm,1.0s
MNK                                  pmax   pmax
      comp=E,3.0nm,1.0s
MNK                                  pmax   pmax
      comp=N,15nm,1.0s
MNK   Minsk             94.26  31   i P     P        23 06 40.4 -2.4
      comp=E,3.0nm,1.0s
MNK                                 i P     P        23 06 40.4 -2.4
      comp=N,15nm,1.0s
MNK                                 i P     P        23 06 40.4 -2.4
      comp=Z,11nm,1.0s,baz=302
MNK                                 i pP    pP       23 07 09.1 -1.9
MNK                                 i sP    sP       23 07 27.4 +5.1
MNK                                 i PP    PP       23 10 35.2 +4.8
MNK                                 i PPP   PPP      23 13 08.0
MNK                                 i S     SKSac    23 17 04.6 -3.5
MNK                                 i sS    ScS      23 17 56.9 +10
MNK                                 i PS    SP       23 18 57.3 -2.7
MNK                                 i SS    SS       23 24 06.8 -1.1
MNK                                 i SSS   SSS      23 28 02.2
MNK                                 i LRM   MLR      23 43 39.4
      comp=Z,490nm,19.5s
MNK                                 i LRM   MLR      23 43 43.6
      comp=E,52nm,19.5s
MNK                                 i LRM   MLR      23 43 44.0
      comp=N,762nm,19.5s
TRPA  Tarpa             94.44  38   eP      P        23 06 42.0 -1.8
LVV   L'vov             94.54  36   eP      P        23 06 42.3 -1.9
DIVS  Divibare          94.60  42    P      P        23 06 43.7 -1.0
KLMR  Klimovskoe        95.46  22   eP      P        23 06 45.6 -2.5
KLMR                                e                23 10 35.9
KLMR                                 pmax   pmax
      comp=Z,39nm,1.3s
KLMR  Klimovskoe        95.46  22   eP      P        23 06 45.6 -2.5
KLMR                                 AMP             23 06 48.8
      comp=Z,39nm,1.3s
KLMR                                ePP     PP       23 10 36.0 -3.5
NRIK  Noril'sk          96.66   1    P      P        23 06 52.0 -1.4
      comp=Z,3.3nm,0.7s,baz=335,slow=2.4,SNR=5.1
NRIK                                 LR     LR       23 54 41.3
      comp=Z,1µm,20.1s,baz=352,slow=38
NRIK  Noril'sk          96.66   1⇓eP      P        23 06 52.4 -1.0
NRIK                                 pmax   pmax
      comp=Z,13nm,1.5s
AKASG Malin Array Be    96.97  34    P      P        23 06 53.3 -1.9
      comp=Z,0.5nm,0.5s,baz=288,slow=3.6,SNR=6.9
AKASG                                PP     PP       23 10 49.3 -2.2
      comp=Z,0.6nm,0.5s,baz=310,slow=6.8,SNR=7.9
AKASG                                LR     LR       23 50 35.4
      comp=Z,237nm,20.0s,baz=295,slow=35
AKBB  Malin Array Si    96.97  34⇑eP      P        23 06 52.8 -2.4
YAK   Yakutsk           97.58 342   eP      Pdif     23 06 58.4 +0.7
YAK                                 e                23 10 55.5
YAK                                 eS      SKSac    23 17 22.9 -2.4
YAK                                  pmax   pmax
      comp=Z,26nm,0.9s
YAK                                  pmax   pmax
      comp=N,6.0nm,1.0s
YAK                                  pmax   pmax
      comp=E,3.0nm,0.9s
YAK                                  pmax   pmax
      comp=Z,220nm,3.0s
YAK                                  pmax   pmax
      comp=N,102nm,2.4s
YAK                                  pmax   pmax
      comp=E,106nm,2.9s
YAK                                  smax   smax
      comp=N,217nm,3.0s
YAK                                  smax   smax
      comp=E,84nm,2.3s
MLR   Muntele Rosu      97.75  39    LR     LR       23 49 02.6
      comp=E,352nm,20.1s,baz=330,slow=34
MLR   Muntele Rosu      97.75  39    IAmb   IAmb     23 07 01.0
      comp=Z,43nm,1.6s
OBN   Obninsk           98.01  27    LR     LR       23 51 55.7
      comp=Z,115nm,19.0s,baz=340,slow=36
OBN   Obninsk           98.01  27   i P     P        23 06 59.5 -0.3
OBN                                  pmax   pmax
      comp=Z,66nm,1.9s
MOS   Moscow            98.08  27   eP      Pdif     23 07 00.7 +0.6
VNA3  Neumayer Olymp   100.55 161    P      PKKPdf   23 23 24.1 -9.2
KIRV  Kirov            100.56  20⇓eP      Pdif     23 07 10.2 -0.8
VNA1  Neumayer--Stat   100.88 160    P      PKKPdf   23 23 24.4 -8.2
DZM   Mont Dzumac      106.73 251   ePS     PS       23 21 18.0  -10
      comp=Z,526nm,31.5s
DZM   Mont Dzumac      106.73 251   eLR     LR       23 43 05.0
      comp=Z,1µm,27.3s
KBZ   Khabaz           108.58  33    PKKP            23 23 15.9
      comp=Z,2.5nm,0.9s,baz=88,slow=4.3,SNR=4.0
USRK  Ussuriysk Ar.    109.96 329    PKiKP  PKiKP    23 11 53.6 -1.1
      comp=Z,1.9nm,0.7s,baz=0.0,slow=2.3,SNR=4.9
BRVK  Borovoye         111.08  12⇑iPKIKP  PKiKP    23 11 57.8 +1.2
BRVK                                 pmax   pmax
      comp=Z,11nm,2.5s
MAJO  Matsushiro       111.50 319⇑iPKIKP  PKiKP    23 11 57.8 -0.1
MAK   Makhachkala      111.52  32   i P     Pdif     23 07 57.6 -2.6
MAK                                 i                23 11 54.6
MAK                                 e                23 12 24.4
MAK                                 e                23 12 35.8
MAK                                  pmax   pmax
      comp=Z,237nm,1.3s
ABKAR Akbulak array    111.76  20    PKiKP  PKiKP    23 11 57.2 -0.7
ZALV  Zalesovo Beam    112.02   3    PKiKP  PKiKP    23 11 57.5 -0.8
      comp=Z,3.1nm,0.3s,baz=278,slow=1.9,SNR=25
ZALV                                 PP     PP       23 12 39.9 -2.5
      comp=Z,3.6nm,0.8s,baz=356,slow=4.5,SNR=5.2
ZALV  Zalesovo Beam    112.02   3    PKiKP  PKiKP    23 11 56.9 -1.4
KURK  Kurchatov        114.70   7c iPKIKP  PKiKP    23 12 03.0 -0.6
KURK                                 pmax   pmax
      comp=Z,10.0nm,1.0s
KURK  Kurchatov        114.70   7    PKPdf  PKiKP    23 12 02.7 -0.8
SEM   Semipalatinsk    115.19   6   ePKP    PKiKP    23 12 04.2 -0.6
      baz=6.3
SEM   Semipalatinsk    115.19   6   ePKIKP  PKiKP    23 12 04.2 -0.6
SUR   Sutherland       115.71 119    PKP    PKPdf    23 12 05.9 -0.3
      comp=Z,7.6nm,0.7s,baz=214,slow=5.9,SNR=9.6
ULN   Ulaanbaatar      116.15 347d iPKIKP  PKPdf    23 12 07.3 +0.6
ULN                                  pmax   pmax
      comp=Z,11nm,1.7s
ULN   Ulaanbaatar      116.15 347           PKiKP    23 12 06.3 -0.4
SONM  Songino Array    116.33 347    PKP    PKPdf    23 12 06.5 -0.5
      comp=Z,2.9nm,0.5s,baz=254,slow=0.7,SNR=40
SONM                                 PKKPbc PKKPbc   23 22 35.6 -2.1
      comp=Z,0.8nm,0.6s,baz=193,slow=3.7,SNR=6.5
SONM                                 PKKP   PKKPdf   23 22 59.3 -3.1
      comp=Z,1.5nm,0.7s,baz=198,slow=3.8,SNR=7.1
SONM  Songino Array    116.33 347           PKPdf    23 12 06.2 -0.8
DGZ   Jazzator, Alta   116.35   1⇓iPKIKP  PKPdf    23 12 06.7 -0.3
KSRS  Korea Array      116.96 326    PKP    PKiKP    23 12 09.1 +0.8
      comp=Z,19nm,0.8s,baz=12,slow=1.6,SNR=49
KSRS                                 PP     PP       23 13 19.4 +1.4
      comp=Z,7.9nm,1.1s,baz=55,slow=6.0,SNR=6.3
SYO   Syowa Base       117.04 162⇑ePdiff  Pdif     23 08 23.0 -1.0
SYO   Syowa Base       117.04 162⇑epPdiff pPdif    23 08 46.2 -5.6
TJN   Taejon           118.05 325d iPKIKP  PKiKP    23 12 10.6 +0.1
ZSN   Zaisan           118.50   3   ePKP    PKPdf    23 12 10.5 -0.6
      baz=3.3
ZSN   Zaisan           118.50   3   ePKIKP  PKPdf    23 12 10.4 -0.6
MAKZ  Makanchi         118.93   6    PKIKP  PKPdf    23 12 10.2 -1.7
MAKZ  Makanchi         118.93   6    PKPdf  PKPdf    23 12 10.2 -1.7
MK31  Makanchi Array   118.97   5c iPKIKP  PKPdf    23 12 11.0 -1.0
MKAR  Makanchi Array   118.97   5    PKP    PKPdf    23 12 10.8 -1.2
      comp=Z,2.4nm,0.3s,baz=347,slow=3.1,SNR=85
BOSA  Boshof           119.50 115    PKP    PKPdf    23 12 13.5 -0.1
      comp=Z,21nm,0.8s,baz=290,slow=3.1,SNR=29
JSU   Suzuyama         119.65 319    PKPdf  PKPdf    23 12 13.4 -0.3
LBTB  Lobatse          119.70 111    PKP    PKPdf    23 12 13.9 -0.1
      comp=Z,14nm,1.0s,baz=265,slow=3.6,SNR=11
TDK   Taldyqorghan     120.28   9   ePKP    PKPdf    23 12 14.3 -0.3
      baz=8.8
TDK   Taldyqorghan     120.28   9   ePKIKP  PKPdf    23 12 14.2 -0.3
MBAR  Mbarara          120.76  82   i PKIKP PKiKP    23 12 17.0 +0.4
MBAR  Mbarara          120.76  82    PKiKP  PKiKP    23 12 17.7 +1.1
DZA   Taraz            120.89  15   ePKP    PKPdf    23 12 15.5 -0.3
      baz=15
DZA   Taraz            120.89  15   ePKIKP  PKPdf    23 12 15.4 -0.3
KUU   Kurty            121.02  11   ePKP    PKPdf    23 12 14.6 -1.4
      baz=11
KUU   Kurty            121.02  11   ePKIKP  PKPdf    23 12 14.5 -1.4
SGDS  Sogindy          121.11  12   ePKP    PKPdf    23 12 16.0 -0.3
      baz=12
USP   Ospenovka        121.26  12    P      PKiKP    23 12 17.4 +0.8
      SNR=15
LSZ   Lusaka           121.28  99    PKP    PKiKP    23 12 18.3 +0.9
      comp=Z,6.9nm,0.6s,baz=261,slow=1.4,SNR=32
HHC   Hu-ho-hao-te     121.39 340   ePKP    PKiKP    23 12 17.9 +0.9
HHC                                  PP     PP       23 13 49.4 +1.3
HHC                                  AMB    AMB
      comp=Z,220nm,10.9s
HHC                                  LR     LR
      comp=Z,480nm,20.5s
HHC                                  LR     LR
      comp=Z,270nm,20.4s
HHC                                  LR     LR
      comp=Z,690nm,20.7s
CHMS  Chumysh          121.57  12    P      PKiKP    23 12 17.5 +0.2
      SNR=5.9
AAA   Alma-Ata         121.78  10   ePKP    PKiKP    23 12 17.7  0.0
      baz=10
AAA   Alma-Ata         121.78  10   ePKIKP  PKiKP    23 12 17.7  0.0
TKM2  Tokmak 2         121.82  12    P      PKPdf    23 12 17.8 -0.1
      SNR=12
KPKS  Kokpek           121.82   9   ePKP    PKPdf    23 12 16.9 -0.7
      baz=9.0
KPKS  Kokpek           121.82   9   ePKIKP  PKPdf    23 12 16.9 -0.7
MDOK  Medeo            121.85  10   ePKP    PKPdf    23 12 17.6 -0.3
      baz=10
MDOK  Medeo            121.85  10   ePKIKP  PKPdf    23 12 17.5 -0.3
AAK   Ala-Archa        121.86  13   i PKiKP PKPdf    23 12 17.4 -0.4
      SNR=6.0
AAK   Ala-Archa        121.86  13d iPKIKP  PKiKP    23 12 18.3 +0.3
AAK                                  pmax   pmax
      comp=Z,47nm,1.3s
AAK   Ala-Archa        121.86  13    PKiKP  PKiKP    23 12 18.0  0.0
KBK   Karagaybulak     121.94  12    P      PKiKP    23 12 18.4 +0.2
      SNR=7.4
TNSS  Tian-Shan        121.95  10   ePKP    PKPdf    23 12 17.9 -0.4
      baz=10
MATP  Matopo           122.10 105    PKP    PKiKP    23 12 19.3 +0.4
      comp=Z,7.0nm,0.6s,baz=242,slow=3.5,SNR=12
BTO   Baotou           122.10 341   ePKP    PKiKP    23 12 19.2 +0.8
BTO                                  SS     SS       23 30 23.7 +1.0
BTO                                  LR     LR
      comp=Z,1µm,20.8s
BTO                                  LR     LR
      comp=Z,1µm,22.5s
SATY  Saty             122.17   9   ePKP    PKPdf    23 12 17.9 -0.5
      baz=9.3
SATY  Saty             122.17   9   ePKIKP  PKPdf    23 12 17.9 -0.5
UZB   Uzynbulak        122.18   9   ePKP    PKPdf    23 12 18.2 -0.3
      baz=8.8
UZB   Uzynbulak        122.18   9   ePKIKP  PKPdf    23 12 18.1 -0.3
SHLS  Shalkode         122.23   8   ePKP    PKPdf    23 12 18.4 -0.2
      baz=8.0
SHLS  Shalkode         122.23   8   ePKIKP  PKPdf    23 12 18.3 -0.2
WMQ   Urumqi           122.24   1   ePKP    PKiKP    23 12 19.1 +0.5
WMQ                                  LR     LR
      comp=Z,770nm,18.9s
WMQ                                  LR     LR
      comp=Z,1µm,21.9s
UCH   Uchtor           122.26  13    P      PKiKP    23 12 20.2 +1.0
      SNR=6.2
BOOM  Boomskoye usch   122.30  11    PKIKP  PKPdf    23 12 18.2 -0.5
BOOM  Boomskoye usch   122.30  11    PKPdf  PKPdf    23 12 18.2 -0.5
ULHL  Ulahol           122.59  11    P      PKiKP    23 12 19.9 +0.4
      SNR=11
RAYN  Ar Rayn          123.23  49   i PKiKP PKPdf    23 12 20.2 -0.6
      SNR=6.6
RAYN  Ar Rayn          123.23  49    PKIKP  PKPdf    23 12 19.4 -1.4
RAYN  Ar Rayn          123.23  49    PKPdf  PKPdf    23 12 17.6 -3.2
RAYN  Ar Rayn          123.23  49    PKPdf  PKPdf    23 12 19.4 -1.4
LODK  Lodwar           123.94  76    PKiKP  PKiKP    23 12 24.1 +1.3
      SNR=6.4
MAW   Mawson           123.97 168    PKP    PKiKP    23 12 21.5 +0.4
      comp=Z,4.1nm,0.5s,baz=205,slow=3.4,SNR=10
MAW   Mawson           123.97 168    PKIKP  PKPdf    23 12 20.7 -0.1
MAW   Mawson           123.97 168    PKPdf  PKPdf    23 12 20.7 -0.1
KSH   Kashi            125.17  12    PKP    PKiKP    23 12 25.6 +1.0
CTA   Charters Tower   125.27 255    PKP    PKiKP    23 12 26.1 +1.0
      comp=Z,4.9nm,0.5s,baz=94,slow=3.4,SNR=6.1
CTAO  Charters Tower   125.27 255    PKIKP  PKiKP    23 12 25.7 +0.6
CTAO  Charters Tower   125.27 255    PKPdf  PKiKP    23 12 25.6 +0.6
GTA   Gaotai           125.72 350  ⇓PKP    PKiKP    23 12 25.9 +0.2
GTA                                  AMB    AMB
      comp=Z,130nm,6.2s
GTA                                  LR     LR
      comp=Z,340nm,19.6s
GTA                                  LR     LR
      comp=Z,350nm,18.2s
GTA                                  LR     LR
      comp=Z,590nm,21.4s
NJ2   Nanjing          125.87 329    PKP    PKPdf    23 12 25.4 -0.2
KMBO  Kilima Mbogo     127.16  80    PKP    PKiKP    23 12 30.1 +0.8
      comp=Z,4.1nm,0.8s,baz=285,slow=2.8,SNR=16
KMBO  Kilima Mbogo     127.16  80    PKIKP  PKiKP    23 12 30.8 +1.5
KMBO  Kilima Mbogo     127.16  80           PKiKP    23 12 30.8 +1.5
KBL   Kabul            127.91  21    PKIKP  PKPdf    23 12 28.6 -1.1
KBL   Kabul            127.91  21    PKPdf  PKPdf    23 12 29.1 -0.6
      SNR=6.1
KBL   Kabul            127.91  21    PKPdf  PKPdf    23 12 28.6 -1.1
LZH   Lanzhou          128.06 345  ⇓PKP    PKiKP    23 12 31.4 +0.9
LZH                                  LR     LR
      comp=Z,400nm,20.6s
LZH                                  LR     LR
      comp=Z,290nm,20.1s
LZH                                  LR     LR
      comp=Z,510nm,20.1s
KIBK  Kibwezi          128.26  82    PKiKP  PKiKP    23 12 32.4 +1.1
      SNR=6.5
XAN   Xi'an            128.43 339    PKP    PKiKP    23 12 31.4 +0.3
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STKA	Stephens Creek	129.07	240	PKP	PKiKP	23 12 34.5	+2.2
	comp=Z,9.2nm,0.8s,baz=61,slow=2.8,SNR=13						
STKA	Stephens Creek	129.07	240	PKPdf	PKiKP	23 12 32.3	-0.1
NAZ	Nazwa, Dubai	129.20	40	PKiKP	PKiKP	23 12 32.6	-0.3
MASF	Masafi	129.23	39	PKPdf	PKPdf	23 12 30.9	-1.3
MSFE	Esma-Masafi	129.24	39	PKPdf	PKPdf	23 12 30.6	-1.7
WHN	Wuhan	129.29	332	*i* PKP	PKiKP	23 12 33.2	+0.3
UOSS	Minazif	129.57	40	PKiKP	PKPdf	23 12 32.2	-0.7
HATD	Hatta, Dubai	129.61	40	*i* PKiKP	PKPdf	23 12 33.1	+0.1
	SNR=7.3						
NIL	Nilore	130.07	17	PKIKP	PKPdf	23 12 32.3	-1.3
NIL	Nilore	130.07	17	PKPdf	PKPdf	23 12 32.7	-1.0
NIL	Nilore	130.07	17	PKPdf	PKPdf	23 12 32.3	-1.3
SOHO	SOHO	130.37	40	PKiKP	PKPdf	23 12 33.6	-0.7
SOHO	SOHO	130.37	40	PKPdf	PKPdf	23 12 33.4	-0.9
UMZA	Um Al Zommool	130.50	43	PKPdf	PKPdf	23 12 34.2	-0.4
BSY	Bisya	131.79	41	PKPdf	PKPdf	23 12 34.4	-2.8
SMDO	Samad	132.09	40	PKiKP	PKPdf	23 12 38.3	+0.5
	SNR=5.9						
WHFO	Wadi Hawf	132.75	49	PKPdf	PKPpre	23 12 29.0	
CD2	Chengdu	132.97	343	⇓PKP	PKiKP	23 12 40.6	+0.2
CD2				sPKP		23 13 18.3	
CD2				SKS	SKSdf	23 19 38.3	-2.9
CD2				LR	LR		
	comp=Z,610nm,26.9s						
CD2				LR	LR		
	comp=Z,630nm,31.4s						
CD2				LR	LR		
	comp=Z,1µm,26.3s						
GYA	Guiyang	136.11	337	⇓*i*PKP	PKiKP	23 12 46.2	-0.7
GYA				sPKP		23 13 28.4	
GYA				PP	PP	23 15 25.9	+1.4
GYA				AMB	AMB		
	comp=Z,320nm,10.2s						
LSA	Lhasa	136.30	357	PKiKP	PKiKP	23 12 47.1	-0.6
WRAB	Tennant Creek	136.45	256	*d i*PKIKP	PKiKP	23 12 47.5	-0.1
WRAB				pmax	pmax		
	comp=Z,65nm,1.7s						
WRA	Warramunga Arr	136.46	256	PKhKP	PKPpre	23 12 39.6	
	comp=Z,0.9nm,0.3s,baz=90,slow=3.6,SNR=30						
WRA				PKP	PKiKP	23 12 47.0	-0.6
	comp=Z,19nm,0.8s,baz=84,slow=1.6,SNR=38						
WRA				SKPbc	SKPbc	23 16 10.4	+1.6
	comp=Z,3.1nm,1.2s,baz=86,slow=2.1,SNR=3.3						
WRA				SKKPbc	SKKPbc	23 25 09.6	+5.2
	comp=Z,3.0nm,1.3s,baz=284,slow=2.8,SNR=4.9						
WRA	Warramunga Arr	136.46	256		PKPdf	23 12 46.5	+0.6
ASAR	Alice Springs	136.72	251	PKhKP	PKPpre	23 12 37.8	
	comp=Z,4.5nm,1.0s,baz=104,slow=3.6,SNR=12						
ASAR				PKP	PKiKP	23 12 47.6	-0.5
	comp=Z,14nm,1.0s,baz=97,slow=2.2,SNR=25						
ASAR				SKPbc	SKPbc	23 16 10.7	+1.2
	comp=Z,1.2nm,0.8s,baz=98,slow=2.8,SNR=1.4						
ASAR				PKKP	PKKPdf	23 22 22.1	-1.5
	comp=Z,0.3nm,0.4s,baz=274,slow=0.8,SNR=4.7						
DANN	Dangsing	137.38	7	*e*P	PKPpre	23 12 36.3	
	comp=Z,36nm,0.3s						
PYUN	Piuthan	137.53	8	*e*P	PKPpre	23 12 35.5	
	comp=Z,13nm,0.4s						
GKN	Gorkha	137.81	6	*e*P	PKPpre	23 12 37.3	
	comp=Z,11nm,0.3s						
KOLN	Koldanda	137.93	7	*e*P	PKPpre	23 12 36.0	
KKN	Kakani	138.09	5	*e*P	PKPpre	23 12 37.3	
DMN	Daman	138.25	5	*e*P	PKPpre	23 12 36.7	
PKIN	Phulchoki	138.31	5	*e*P	PKPpre	23 12 37.2	
PKI	Pulchoki	138.31	5	*e*P	PKPpre	23 12 37.2	
TAPN	Taplejung	138.66	2	*e*P	PKPpre	23 12 37.8	
	comp=Z,25nm,0.5s						
KMI	Kunming	138.70	341	⇑PKP	PKPdf	23 12 51.1	+0.9
KMI				PP	PP	23 15 41.6	+1.0
KMI				PKS	PKSdf	23 16 26.1	-0.6
KMI				SS	SS	23 33 50.3	+3.9
KMI				AMB	AMB		
	comp=Z,210nm,10.2s						
KMI				LR	LR		
	comp=Z,450nm,27.4s						
KMI				LR	LR		
	comp=Z,230nm,28.7s						
KMI				LR	LR		
	comp=Z,580nm,26.1s						
RAMN	Ramite	139.01	3	*e*P	PKPpre	23 12 37.6	
	comp=Z,21nm,0.5s						
ODAN	Odare	139.14	2	*e*P	PKPpre	23 12 38.1	
	comp=Z,21nm,0.6s						
VOI	Vohitsoka	139.18	107	PKP	PKiKP	23 12 55.8	+2.5
OPO	Ambohidratompo	139.64	102	PKhKP	PKPpre	23 12 44.0	
	comp=Z,1.9nm,0.7s,baz=255,slow=12,SNR=2.1						
OPO				PKP	PKPdf	23 12 52.4	+0.5
	comp=Z,15nm,0.8s,baz=288,slow=2.6,SNR=14						
OPO				SKPbc	SKPbc	23 16 18.7	+0.5
	comp=Z,6.8nm,1.0s,baz=338,slow=3.2,SNR=1.6						
SHL	Shillong	140.37	356	PKHKP	PKPpre	23 12 45.1	
SHL	Shillong	140.37	356	PKPdf	PKPdf	23 12 46.8	-6.4
	SNR=9.0						
SHL	Shillong	140.37	356		PKPpre	23 12 45.1	
FORT	Forrest	140.63	239		PKPpre	23 12 46.5	
SBV	Sambava	142.00	94	PKPdf	PKPdf	23 12 52.9	-3.1
SBV	Sambava	142.00	94	PKP	PKiKP	23 13 00.9	+1.9
POO	Poona	144.17	25	*e*P	PKPbc	23 12 58.0	-0.2
SOEI	Soe	145.32	273		PKPab	23 13 03.6	+1.3
MSEY	Mahe Island	145.57	77	*i* PKiKP	PKPab	23 13 03.3	0.0
	SNR=6.5						
MSEY	Mahe Island	145.57	77	PKP2	PKPab	23 13 03.2	0.0
MSEY	Mahe Island	145.57	77	PKPab	PKPdf	23 13 02.4	0.0
MSEY	Mahe Island	145.57	77		PKPab	23 13 03.2	0.0
CHTO	Chiang Mai	145.77	343	PKIKP	PKPdf	23 13 02.3	-0.3
CHTO	Chiang Mai	145.77	343	PKPbc	PKPdf	23 13 02.0	-0.7
CHTO	Chiang Mai	145.77	343		PKPdf	23 13 02.3	-0.3
CM31	Chiang Mai Arr	146.11	343	PKPab	PKPbc	23 13 04.2	0.0
	SNR=43						
CMAR	Chiang Mai Arr	146.11	343	PKPbc	PKPbc	23 13 04.2	-0.1
	comp=Z,72nm,0.7s,baz=339,slow=3.9,SNR=206						
CMAR				SKPbc	SKiKP	23 16 34.4	+0.2
	comp=Z,1.8nm,0.6s,baz=321,slow=2.3,SNR=2.0						
HYB	Hyderabad	146.90	19	*i* PKP	PKPdf	23 13 04.5	-0.1
MMRI	Maumere	147.06	276		PKPdf	23 13 04.2	-0.7
RER	Riviere de l'E	147.54	107	PKPab	PKiKP	23 13 09.8	-0.6
RER	Riviere de l'E	147.54	107		PKPbc	23 13 09.3	+0.9
NWAO	Narrogin (SRO)	148.33	229	PKPbc	PKPbc	23 13 10.6	+0.5
KAPI	Kappang	148.45	284	PKIKP	PKPdf	23 13 07.8	+0.6
KAPI	Kappang	148.45	284	PKPbc	PKPdf	23 13 08.9	+1.7
KAPI	Kappang	148.45	284		PKPdf	23 13 07.8	+0.6
BKB	Balikpapan	149.64	293		PKPbc	23 13 12.6	-1.2
PSA00	Pilbara Seismi	149.86	251		PKPdf	23 13 08.9	-0.3
MBWA	Marble Bar	150.03	252	PKPdf	PKPdf	23 13 10.7	+1.2
MORW	Morawa	151.00	235	PKPbc	PKPbc	23 13 15.5	-1.2
PBA	Port Blair	154.04	352	PKiKP	PKiKP	23 13 24.1	+0.3
PALK	Pallekele	157.09	22	PKIKP	PKPdf	23 13 20.0	+0.1
PALK	Pallekele	157.09	22	PKPdf	PKPdf	23 13 20.6	+0.7
PALK	Pallekele	157.09	22	PKPdf	PKPdf	23 13 20.0	+0.1
LEM	Lembang	160.36	290	PKP	PKPdf	23 13 24.3	+0.4
	comp=Z,12nm,0.6s,baz=145,slow=3.8,SNR=10						
LEM				PKPab	PKPab	23 14 05.6	+0.4
	comp=Z,16nm,0.3s,baz=302,slow=6.2,SNR=3.9						

IDC ***07*** *23:01:38.6±0.9, 49°.67S×126°.67E, h0^{km}, mb4.3/6, mb1 4.4/6, mb1mx4.1/32, mbtmp4.3/6 Error ellipse: s-maj=59.8km s-min=20.4km az=111.0*
NEIC ***07*** *23:01:40.6±1.6, 49°.7S±0°.1×127°.3E±0°.2, h10^{km}±1^{km}, mb4.6/14, Error ellipse: s-maj=23.3km s-min=18.4km az=101.0*
ISC 07 23:01:40.1±0.6**, 49°.67S**±0°.08×**127°.2E**±0°.1**, h10^{km}, n36, σ1^{s}18**/33**, mb4.5**/11**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	17.62	322	T	T	23 23 47.4	
	baz=150,slow=75,SNR=14						
H01W2	Cape Leeuwin H	17.62	322	T	T	23 23 48.5	
	baz=150,slow=75,SNR=16						
H01W3	Cape Leeuwin H	17.64	322	T	T	23 23 47.8	
	baz=150,slow=75,SNR=14						
FORT	Forrest	18.88	2	P	P	23 06 00.6	+0.1
FORT				IAmb	IAmb	23 06 11.4	
	comp=Z,31nm,0.9s						
MCQ	Macquarie Isla	19.97	116	P	P	23 06 11.4	-0.9
STKA	Stephens Creek	20.77	36	P	Pn	23 06 23.0	-0.5
	comp=Z,8.2nm,0.9s,baz=200,slow=12,SNR=11						
STKA	Stephens Creek	20.77	36	P	P	23 06 22.2	+1.1
CAN	Canberra	21.41	56	P	P	23 06 27.1	-0.9
CAN				IAmb	IAmb	23 06 34.8	
	comp=Z,31nm,1.5s						
ASAR	Alice Springs	26.48	14	P	P	23 07 18.6	+1.1
	comp=Z,5.9nm,0.9s,baz=185,slow=9.1,SNR=26						
ASAR				PcP	PcP	23 10 43.2	+0.9
	comp=Z,0.4nm,0.7s,baz=200,slow=4.3,SNR=2.6						
AS31	Alice Springs	26.48	14	P	P	23 07 17.8	+0.3
WRA	Warramunga Arr	30.20	13	P	P	23 07 51.2	+0.6
	comp=Z,1.2nm,1.1s,baz=191,slow=8.6,SNR=3.3						
WRA				PcP	PcP	23 10 50.8	-0.7
	comp=Z,0.8nm,0.9s,baz=200,slow=2.6,SNR=3.5						
WRAB	Tennant Creek	30.21	13		S	23 12 47.0	-3.0
WR0	Warramunga Arr	30.21	14		S	23 12 47.0	-3.1
VNDA	Vanda	30.87	166	P	P	23 07 55.9	-0.2
VNDA				IAmb	IAmb	23 07 56.5	
	comp=Z,6.0nm,0.8s						
TUWZ	Tuamarina	33.26	94	P	P	23 08 16.4	-1.0
CMWZ	Cape Campbell	33.27	94	P	P	23 08 17.6	0.0
SNZO	South Karori	33.81	94	P	P	23 08 22.7	+0.5
SNZO				IAmb	IAmb	23 08 40.9	
	comp=Z,49nm,1.2s						
COEN	Coen	37.93	26	P	P	23 08 57.6	-0.1
COEN				IAmb	IAmb	23 09 03.4	
	comp=Z,28nm,1.5s						
QSPA	South Pole Qui	40.45	180	P	P	23 09 18.1	-0.4
QSPA				IAmb	IAmb	23 09 19.9	
	comp=Z,11nm,1.1s						
DZM	Mont Dzumac	41.32	63	P	P	23 09 29.3	+3.3
	comp=Z,2.6nm,0.7s,baz=253,slow=22,SNR=3.0						
DZM	Mont Dzumac	41.32	63	P	P	23 09 27.0	+1.0
KAPI	Kappang	44.95	349	P	P	23 09 55.7	+0.4
KAPI				IAmb	IAmb	23 10 00.1	
	comp=Z,8.3nm,1.1s						
CRZF	Crozet Islands	48.52	243	P	P	23 10 23.2	+0.2
SNAA	Sanae	53.93	197	P	P	23 11 02.8	-0.5
SNAA	Sanae	53.93	197	P	P	23 11 02.8	-0.5
	comp=Z,8.3nm,0.8s,baz=150,slow=9.0,SNR=22						
SNAA	Sanae	53.93	197	P	P	23 11 02.9	-0.5
SNAA				IAmb	IAmb	23 11 04.0	
	comp=Z,7.9nm,0.8s						
VNA2	Neumayer--Watz	55.40	197	P	P	23 11 13.6	-0.3
	baz=148,slow=6.9						
VNA3	Neumayer Olymp	55.54	196	P	P	23 11 13.4	-1.5
VNA1	Neumayer--Stat	55.79	196	P	P	23 11 16.5	-0.1
LHMI	Lhok Sumawe	60.67	325	P	P	23 11 51.7	+0.3
PLCA	Paso Flores	88.62	167	P	P	23 14 33.2	-0.1
	comp=Z,2.4nm,0.9s,baz=278,slow=4.4,SNR=3.6						
TXAR	Lajitas Array	136.74	99	PKP	PKPdf	23 21 03.4	+0.8
	comp=Z,0.9nm,1.0s,baz=190,slow=6.0,SNR=4.2						
ESDC	Sonseca Array	144.46	273	PKP	PKPbc	23 21 14.6	-0.1
	comp=Z,1.7nm,1.0s,baz=115,slow=2.1,SNR=7.9						
YKA	Yellowknife Ar	144.65	45	PKP	PKPdf	23 21 15.7	+0.1
	comp=Z,4.2nm,1.0s,baz=265,slow=3.6,SNR=22						
RES	Resolute Bay	149.41	21	PKPbc	PKPbc	23 21 27.9	+0.1
	comp=Z,2.5nm,0.8s,baz=309,slow=6.5,SNR=4.0						
ULM	Lac du Bonnet	152.54	72	PKPbc	PKiKP	23 21 35.9	-0.2
	comp=Z,1.5nm,0.6s,baz=298,slow=5.9,SNR=3.4						

TRN ***07*** *23:10:01.4, 19°.64N×65°.56W, h120^{km}*
NEIC ***07*** *23:10:03.5±1.3, 19°.5N±0°.1×65°.55W±0°.04, h15^{km}±15^{km}, Error ellipse: s-maj=17.9km s-min=4.7km az=185.0*
RSPR ***07*** *23:10:04.3, 19°.68N×65°.49W, h34^{km}±14^{km}, MD3.4/12*
ISC 07 23:10:02.5±2.6**, 19°.56N**±0°.09×**65°.50W**±0°.03**, h14**^{km}±15^{km}**, n60, σ0^{s}62**/68**, 11C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	1.26	171	⇓*e*P	Pn	23 10 25.5	-0.2
CUPR	Culebra, Puert	1.26	171	*e*S	Sb	23 10 42.5	+0.4
CUPR	Culebra, Puert	1.26	171		Pn	23 10 25.3	-0.4
CUPR				Sn	Sb	23 10 42.6	+0.4
CUPR				IAML		23 10 46.0	
	comp=E,521nm,0.6s						
CUPR				IAML		23 10 46.2	
	comp=N,569nm,0.6s						
STVI	Saint Thomas	1.31	157	⇓*e*P	Pn	23 10 26.5	+0.1
STVI	Saint Thomas	1.31	157	*e*S	Sn	23 10 44.0	+0.4
STVI	Saint Thomas	1.31	157		Pn	23 10 26.3	0.0
STVI				Sn	Sg	23 10 44.8	+0.1
STVI				IAML		23 10 53.3	
	comp=N,507nm,0.6s						
CBYP	Canovanas	1.32	195		Pn	23 10 25.0	-1.6
CBYP				Sn	Sn	23 10 43.3	-0.8
CBYP				IAML		23 10 44.1	
	comp=E,2µm,0.2s						
GCPR	Guaynabo City	1.36	204	⇑*e*P	Pn	23 10 27.1	0.0
GCPR	Guaynabo City	1.36	204	*e*S	Sn	23 10 44.9	0.0
GCPR	Guaynabo City	1.36	204		Pn	23 10 25.8	-1.3
GCPR				IAML		23 10 47.4	
	comp=N,492nm,0.6s						
GCPR	Guaynabo City	1.36	204		Sn	23 10 44.9	0.0
HUMP	Col San Antoni	1.45	193	⇑*e*P	Pb	23 10 28.9	-0.3
HUMP	Col San Antoni	1.45	193	*e*S	Sn	23 10 47.3	+0.2
HUMP	Col San Antoni	1.45	193		Pn	23 10 27.3	-0.9
HUMP					Sn	23 10 46.5	-0.6
EMPR	Esperanza - Ma	1.45	222	⇑*e*P	Pn	23 10 28.3	0.0
EMPR	Esperanza - Ma	1.45	222	*e*S	Sn	23 10 47.0	-0.2
EMPR	Esperanza - Ma	1.45	222		Pn	23 10 28.4	0.0
EMPR	Esperanza - Ma	1.45	222		Sn	23 10 47.0	-0.2
EMPR	Esperanza - Ma	1.45	222	IAML		23 10 56.3	
	comp=E,1µm,0.7s						
EMPR				IAML		23 10 59.3	
	comp=N,708nm,0.5s						
SJG	San Juan	1.57	203		Pn	23 10 29.5	-0.4
SJG				IAML		23 10 56.8	
	comp=N,387nm,0.4s						
SJG				IAML		23 10 58.4	
	comp=N,381nm,0.5s						
PDPR	Patillas Dam,	1.61	198		Pn	23 10 29.8	-0.7
PDPR				IAML		23 11 04.5	
	comp=E,348nm,0.7s						
IGPR	InterUniversit	1.69	200	⇑*e*P	Pn	23 10 32.1	+0.5
IGPR	InterUniversit	1.69	200	*e*S	Sn	23 10 53.4	+0.4
IGPR	InterUniversit	1.69	200		Sn	23 10 53.4	+0.4
AOPR	Arecibo Observ	1.69	225	⇑*e*P	Pn	23 10 31.4	-0.2
AOPR	Arecibo Observ	1.69	225	*e*S	Sn	23 10 52.9	-0.3
AOPR	Arecibo Observ	1.69	225	*e*P	Pb	23 10 33.5	0.0
AOPR				*e*S	Sb	23 10 54.5	-0.1
AOPR	Arecibo Observ	1.69	225		Sn	23 10 52.9	-0.3
AOPR	Arecibo Observ	1.69	225		Pn	23 10 31.1	-0.5
AOPR	Arecibo Observ	1.69	225	IAML		23 10 55.8	
	comp=N,2µm,0.4s						
AOPR				IAML		23 10 56.2	
	comp=E,3µm,0.4s						
CELP	Cerrillos	1.80	215	⇑*e*P	Pn	23 10 32.9	-0.2
CELP	Cerrillos	1.80	215	*e*S	Sn	23 10 55.9	+0.2
CELP	Cerrillos	1.80	215		Pn	23 10 32.9	-0.2
CELP					Sn	23 10 55.3	-0.4
CELP				IAML		23 11 04.8	
	comp=E,280nm,0.7s						
OBIP	Obispado Ponce	1.84	215	⇑*e*P	Pn	23 10 33.7	0.0
OBIP				*e*S	Sn	23 10 56.7	+0.1
OBIP	Obispado Ponce	1.84	215		Pn	23 10 33.7	0.0
OBIP	Obispado Ponce	1.84	215		Sn	23 10 56.7	+0.1
OBIP	Obispado Ponce	1.84	215	IAML		23 11 07.7	
	comp=N,281nm,0.7s						
AGPR	Aguadilla, PR	1.87	235	Pn	Pn	23 10 33.8	-0.3
CDVI	St. Croix	1.93	159	⇑*e*P	Pn	23 10 35.0	+0.2
CDVI	St. Croix	1.93	159	*e*S	Sn	23 10 59.5	+0.5
CDVI	St. Croix	1.93	159	*e*P	Pb	23 10 37.1	-0.3
CDVI				*e*S	Sb	23 11 02.5	+1.2
CDVI	St. Croix	1.93	159		Pb	23 10 36.6	-0.8
CDVI					Pn	23 10 36.8	+2.0
GBPR	Guanica, Bosqu	2.05	220	⇑*e*P	Pn	23 10 37.1	+0.6
GBPR	Guanica, Bosqu	2.05	220	*e*S	Sn	23 11 02.1	+0.2
PRSN	Puerto Rico Se	2.05	230		Pn	23 10 37.0	+0.5
PRSN				IAML		23 11 10.9	
	comp=N,807nm,0.3s						
PRSN				IAML		23 11 22.6	
	comp=E,586nm,0.3s						
MLPR	Magueyes Islan	2.15	223	⇑*e*P	Pn	23 10 38.3	+0.3
MLPR	Magueyes Islan	2.15	223	*e*S	Sn	23 11 04.8	+0.3
MLPR	Magueyes Islan	2.15	223		Pn	23 10 38.2	+0.2
MLPR	Magueyes Islan	2.15	223		Sn	23 11 04.8	+0.3
CRPR	Cabo Rojo, PR	2.17	225	⇑*e*P	Pn	23 10 38.5	+0.3
CRPR	Cabo Rojo, PR	2.17	225	*e*S	Sn	23 11 05.2	+0.3
CRPR	Cabo Rojo, PR	2.17	225		Pn	23 10 38.5	+0.3
CRPR					Sn	23 11 05.2	+0.3
SMRT	St. Maarten	2.75	123	*e*P	Pn	23 10 46.9	+0.8
SMRT	St. Maarten	2.75	123		Pn	23 10 46.9	+0.8
SMRT				IAML		23 11 32.6	
	comp=N,231nm,0.8s						
SMRT				IAML		23 11 39.7	
	comp=E,241nm,0.5s						
SABA	Saba	2.88	132	Pn	Pn	23 10 48.8	+0.7
SABA				IAML		23 12 06.2	
	comp=N,280nm,0.8s						
SKI	Saint Kitts	3.43	130	*e*P	Pn	23 10 55.3	-0.3
ANWB	Willy Bob	3.99	118	*e*P	Pn	23 11 03.9	+0.6
ANWB				*e*S	Sn	23 11 47.9	-2.0
ANBD	Bethesda, Anti	4.34	125	*e*P	Pn	23 11 07.9	-0.2
ANBD	Bethesda, Anti	4.34	125	*e*S	Sn	23 11 57.5	-1.0
SDDR	Presa de Saban	5.50	265		Pn	23 11 24.0	0.0

IDC ***07*** *23:27:04.2±1.9, 38°.66N×73°.43E, h0^{km}, mb3.8/3, mb1 3.7/9, mb1mx3.4/77, mbtmp3.7/9, ML3.1/6, Error ellipse: s-maj=30.1km s-min=20.9km az=141.0*
KRNET ***07*** *23:27:05.8±0.1, 38°.86N×73°.19E, h1^{km}, mb3.6*
NEIC ***07*** *23:27:06.9±1.8, 38°.74N±0°.03×73°.10E±0°.06, h10^{km}±2^{km}, mb4.3/3, Error ellipse: s-maj=9.1km s-min=3.0km az=61.0*
ISC 07 23:27:03.2±2.8**, 38°.70N**±0°.04×**73°.30E**±0°.04**, h2**^{km}±19^{km}**, n51, σ2^{s}67**/67**, mb3.9**/5**, 8C-16D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.32	7	⇑*e*P	Pn	23 27 27.5	-1.5
	baz=12						
SFK				⇑*e*S	Sb	23 27 44.6	-1.8
	baz=12						
DRK	Karamyk	1.40	304		Pb	23 27 29.9	-0.5
DRK				Sn	Sb	23 27 47.2	-1.6
DRK	Karamyk	1.40	304	⇑*i*P	Pb	23 27 29.8	-0.5
	baz=0.0						
DRK				⇑*i*S	Sb	23 27 46.6	-2.2
	baz=0.0						
OHH	Osh	1.86	348	⇓*i*P	Pb	23 27 38.1	0.0
	baz=50						
OHH				⇓*i*S	Sb	23 28 01.3	-0.6
	baz=50						
KSH	Kashi	2.23	68	Pg	Pn	23 27 37.6	-3.8
KSH				Sg	Sn	23 28 01.9	-7.8
KSH				pmax	pmax		
	comp=Z,110nm,0.7s						
KSH				smax	smax		
	comp=N,500nm,0.6s						
KSH				smax	smax		
	comp=E,160nm,0.9s						
GAR	Garm	2.35	278		Pn	23 27 42.4	-0.6
GAR	Garm	2.35	278	⇓*i*P	Pb	23 27 46.6	+0.3
	baz=74						
GAR				⇓*i*S	Sb	23 28 15.8	0.0
	baz=74						
BTK	Batken	2.35	306	Pn	Pn	23 27 44.0	+1.0
BTK	Batken	2.35	306	⇑*e*P	Pb	23 27 45.7	-0.7
	baz=4.0						
BTK				⇑*i*S	Sb	23 28 14.1	-1.8
	baz=4.0						
CHGR	Chuyangaron	3.24	271		Pn	23 27 56.4	+1.2
CHGR	Chuyangaron	3.24	271	⇓*e*P	Pb	23 27 59.3	-2.2
	baz=68						
CHGR				⇓*e*S	Sb	23 28 37.8	-3.7
	baz=68						
TRKS	Terek-Say	3.28	330	⇑*i*P	Pn	23 27 57.2	+1.4
	baz=30						
TRKS				⇑*i*S	Sn	23 28 34.6	-0.8
	baz=30						
AML	Almayashu	3.44	5	P	Pb	23 28 01.9	-3.3
	SNR=19						
AML	Almayashu	3.44	5	⇓*i*P	Pn	23 28 00.8	+2.6
	baz=7.0						
AML				⇓*i*S	Sn	23 28 41.4	+1.6
	baz=7.0						
UCH	Uchtor	3.64	14	P	Pn	23 28 04.9	+3.9
	SNR=10						
UCH	Uchtor	3.64	14	⇓*e*P	Pn	23 28 03.9	+2.8
	baz=16						
UCH				⇓*i*S	Sn	23 28 47.2	+2.3
	baz=16						
MNAS	Manas	3.83	351	⇓*e*P	Pn	23 28 06.0	+2.6
	baz=52						
MNAS				⇓*i*S	Sn	23 28 49.9	+0.8
	baz=52						
EKS2	Erkin-Say	3.98	5	P	Pb	23 28 11.0	-3.1
	SNR=6.5						
EKS2	Erkin-Say	3.98	5	⇓*e*P	Pn	23 28 08.2	+2.9
	baz=7.0						
EKS2				⇓*i*S	Sn	23 28 53.7	+1.1
	baz=7.0						
AAK	Ala-Archa	4.04	13	Pn	Pn	23 28 10.4	+4.2
	comp=E,2.3nm,0.3s,baz=191,slow=11,SNR=29						
AAK				Sn	Sb	23 29 00.8	-3.7
	comp=E,1.4nm,0.3s,baz=346,slow=20,SNR=8.3						
AAK	Ala-Archa	4.04	13	P	Pn	23 28 09.9	+3.6
	SNR=23						
AAK	Ala-Archa	4.04	13	Pn	Pn	23 28 09.3	+3.1
AAK	Ala-Archa	4.04	13	⇓*i*P	Pn	23 28 09.3	+3.1
	baz=14						
AAK				⇓*i*S	Sn	23 28 55.7	+1.5
	baz=14						
ULHL	Ulahol	4.19	31	P	Pb	23 28 20.6	+2.7
	SNR=6.5						
FRU1	Bishkek	4.23	13		Pn	23 28 11.5	+2.7
BOOM	Boomskoye usch	4.29	27		Pn	23 28 13.1	+3.4
KDJ	Kajisay	4.53	40	Pn	Pn	23 28 16.5	+3.5
TARG	Taragay, Kyrgy	4.59	47		Pn	23 28 17.8	+3.8
KKAR	Karatay Array	4.88	335	Pn	Pn	23 28 21.7	+4.0
NIL	Nilore	5.04	180	Pn	Pn	23 28 25.1	+5.2
PRZ	Przheval'sk	5.42	44	Pn	Pn	23 28 29.6	+4.4
DHRM	DHARAMSHALA	6.88	158	*e*P	Pn	23 28 48.2	+2.8
DHRM				*e*S	Sn	23 30 04.0	-0.5
DHRM				IAML		23 30 12.3	
	comp=N,24nm,0.5s						
DHRM				IAML		23 30 12.4	
	comp=E,24nm,0.5s						
SMLA	Simla	8.19	156	*e*P	Pn	23 29 05.3	+2.2
SMLA				*e*S	Sn	23 30 34.0	-2.3
SMLA				IAML		23 30 38.5	
	comp=E,28nm,0.8s						
SMLA				IAML		23 30 39.5	
	comp=N,14nm,0.5s						
MAKZ	Makanchi	10.31	35	Pn	Pn	23 29 36.6	+4.5
MK31	Makanchi Array	10.44	36	Pn	Pn	23 29 37.2	+3.3
MKAR	Makanchi Array	10.44	36	Pn	Pn	23 29 36.8	+2.8
	comp=N,0.1nm,0.3s,baz=223,slow=12,SNR=8.0						
MKAR	Makanchi Array	10.44	36	Pn	Pn	23 29 37.2	+3.2
KURBB	Kurchatov Arra	12.48	16	Pn	Pn	23 30 03.9	+2.1
	comp=N,0.0nm,0.3s,baz=202,slow=11,SNR=2.5						
ABKAR	Akbulak array	14.25	322	Pn	Pn	23 30 26.6	+0.6
ABKAR	Akbulak array	14.25	322	Pn	Pn	23 30 27.6	+1.6
BVAR	Borovoye Array	14.47	353	Pn	Pn	23 30 29.6	+0.7
	comp=N,0.2nm,0.3s,baz=173,slow=14,SNR=1.4						
BRVK	Borovoye	14.51	353	Pn	Pn	23 30 31.3	+1.7
AKTO	Aktyubinsk	15.97	322	Pn	P	23 30 50.8	-1.7
	comp=N,0.2nm,0.3s,baz=128,slow=13,SNR=2.7						
ZAA0	Zalesovo Array	17.17	24	Pn	P	23 31 05.0	-0.8
ZAA0				IAmb	IAmb	23 31 07.4	
	comp=Z,2.6nm,0.9s						
ZALV	Zalesovo Beam	17.17	24	P	Pn	23 31 03.7	-0.4
	comp=Z,0.3nm,0.3s,baz=211,slow=14,SNR=7.5						
ZALV	Zalesovo Beam	17.17	24		P	23 31 04.9	-0.8
SONM	Songino Array	25.61	58	P	P	23 32 34.9	+0.9
	comp=Z,2.1nm,0.8s,baz=262,slow=9.9,SNR=8.2						
SNOP	Sinop	29.05	289	P	P	23 33 03.8	-1.0
SNOP				IAmb	IAmb	23 33 11.5	
	comp=Z,29nm,1.1s						
CSS	Mathiatis	32.03	276	P	P	23 33 27.3	-3.9
CSS				IAmb	IAmb	23 33 28.4	
	comp=Z,5.0nm,1.0s						
FINES	FINESS Array B	36.73	324	P	P	23 34 11.6	+0.1
	comp=Z,1.8nm,0.7s,baz=108,slow=9.1,SNR=1.5						
TORD	Torodi Ar. Bea	67.59	269	P	P	23 38 03.6	+2.0
	comp=Z,0.4nm,0.7s,baz=43,slow=5.4,SNR=1.6						

ISK ***07*** *23:27:16.7, 39°.28N×40°.23E, h5^{km}, ML4.3/25*
IDC ***07*** *23:27:17.4±0.6, 39°.25N×40°.31E, h0^{km}, mb4.0/18, mb1 4.0/28, mb1mx3.8/73, mbtmp4.0/28, ML3.4/9, MS3.5/6, Ms1 3.4/6, ms1mx3.1/66, Error ellipse: s-maj=10.5km s-min=7.0km az=160.0*
DDA ***07*** *23:27:17.3, 39°.29N×40°.19E, h10^{km}±4^{km}, MW4.5*
CFUSG ***07*** *23:27:18.8, 39°.15N×40°.23E, h5^{km}, mb3.6/2, MD3.4/1, Eastern Turkey Magtype MSH 3.3 from 1 stations*
NEIC ***07*** *23:27:19.4±1.4, 39°.20N±0°.04×40°.29E±0°.05, h10^{km}±1^{km}, mb4.2/46, Mwr4.5/23, ML4.6(ISK), Error ellipse: s-maj=9.0km s-min=3.9km az=139.0*
NEIC ***07*** *23:27:20.2, 39°.16N×40°.31E, h11^{km}, Moment Tensor*

Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.20; $M_{\theta\theta}$5.62; $M_{\phi\phi}$-2.42; $M_{r\theta}$-4.95; $M_{\theta\phi}$0.91; $M_{\phi r}$-2.90; Fault plane solution: $M_0$7.58000×10^{15} NP1:ϕ_s59.75000°, δ74.03000°,λ-113.14000°. NP2:ϕ_s296.96000°, δ27.87000°,λ-36.07000°. Principal axes: T 8.2296, Plg25.0000°, Azm168.0000°; N -1.5229, Plg22.0000°, Azm66.0000°; P -6.7067, Plg55.0000°, Azm301.0000°;

ISC 07 23:27:18.1±1.0**, $39\overset{\circ}{.}24$N**±$0\overset{\circ}{.}02$×**$40\overset{\circ}{.}22$E**±$0\overset{\circ}{.}01$**, h3**^{km}±7^{km}**, n237, σ$1\overset{s}{.}$45**/269**, mb4.1**/38**, 30C-14D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YEDI	Yedisu-Bingol	0.32	52	PG	Pg	23 27 23.6	-0.7
YEDI				SG	Sg	23 27 28.7	+0.3
BNGB	Bingl	0.43	125	PG	Pg	23 27 26.6	+0.1
BNGB				SG	Sg	23 27 33.9	+1.8
ERZN	Erzincan	0.52	312	PG	Pg	23 27 27.2	-0.9
ERZN				SG	Sg	23 27 35.6	+0.8
TNCL	Tunceli-Merkez	0.54	257	⇑iP	Pg	23 27 27.8	-0.8
TNCL				iS	Sg	23 27 35.9	+0.2
EUZM	Uzumlu	0.62	319	⇑iP	Pg	23 27 28.8	-1.1
EUZM				iS	Sg	23 27 39.4	+1.5
KOVA	Elazig, Kovanc	0.62	211	⇓iP	Pg	23 27 30.1	+0.1
KOVA				iS	Sb	23 27 40.2	-0.7
KARO	Karliova-Bingo	0.65	84	PG	Pg	23 27 30.0	-0.5
SLHN	Bingol, Solhan	0.69	114	⇑iP	Pg	23 27 30.8	-0.4
SLHN				iS	Sb	23 27 42.9	+0.1
ECAT	Cat-ERZURUM	0.69	58	⇑iP	Pg	23 27 30.2	-1.1
ECAT				iS	Sg	23 27 39.9	-0.3
KOPT	Kop Dagi	0.80	15	⇓iP	Pg	23 27 32.6	-0.9
KOPT				iS	Sg	23 27 43.9	-0.1
HANI	Diyarbakir_Han	0.84	170	⇓iP	Pg	23 27 33.8	-0.3
HANI				iS	Sn	23 27 48.2	-1.6
VRTB	Varto-Mus	0.96	95	⇑iP	Pg	23 27 35.6	-0.9
VRTB				iS	Sn	23 27 53.5	+0.6
VRTB	Varto-Mus	0.96	95	PG	Pg	23 27 35.7	-0.9
EMRE	Erzurum,Aziziy	0.98	36	⇑iP	Pg	23 27 36.0	-0.9
EMRE				iS	Sg	23 27 48.8	-0.8
BAYB	BAYBURT	1.01	2	⇓iP	Pg	23 27 34.9	-2.7
BAYB				iS	Sg	23 27 47.1	-3.6
EJDE	Erzurum, Palan	1.02	54	⇑iP	Pg	23 27 35.8	-1.9
EJDE				iS	Sg	23 27 51.5	+0.5
ERZM	Erzurum	1.10	53	⇑iP	Pg	23 27 38.2	-1.1
ERZM				iS	Sg	23 27 55.1	+1.5
SVRC	Sivrice-ELAZID	1.12	220	PN	Pb	23 27 39.9	-0.4
MUSM	Mu-Merkez	1.13	117	⇑iP	Pg	23 27 38.3	-1.5
MUSM				iS	Sb	23 27 56.1	+0.6
BAYT	Aydıntepe-Bayb	1.15	357	PN	Pg	23 27 38.5	-1.7
KELT	Kelkit	1.17	321	⇓iP	Pg	23 27 39.2	-1.4
KELT				iS	Sg	23 27 57.1	+1.2
ELZG	Elazig	1.22	233	⇑iP	Pg	23 27 40.2	-1.2
ELZG				iS	Sn	23 27 59.1	-0.3
KRIK	Erzurum-spir	1.22	26	⇓iP	Pg	23 27 40.5	-1.0
KRIK				iS	Sg	23 27 58.5	+1.2
DYBB	Diyarbakir	1.29	183	PN	Pn	23 27 43.2	+0.1
REFA	Refahiye_ERZN	1.31	301	⇑iP	Pg	23 27 41.0	-2.1
REFA				iS	Sg	23 27 59.7	-0.4
DIYA	Diyarbakir	1.32	184	⇓iP	Pn	23 27 43.8	+0.3
DIYA				iS	Sn	23 28 04.3	+2.7
SVAN	Silvan-Diyarba	1.33	145	⇓iP	Pg	23 27 43.3	-0.2
SVAN				iS	Sn	23 28 04.9	+2.9
SVAN	Silvan-Diyarba	1.33	145	PN	Pg	23 27 43.4	-0.2
KEMA	Kemaliye	1.34	272	⇑iP	Pg	23 27 41.8	-2.1
KEMA				iS	Sb	23 28 01.1	-0.5
EKAR	Karacoban	1.43	89	iP	Pn	23 27 45.6	+0.4
KOPR	Koprukoy-ERZUR	1.47	59	PN	Pn	23 27 44.8	-0.8
ARPR	Arapgir-MALATY	1.48	265	PN	Pn	23 27 45.6	-0.1
HOMI	Horasan	1.53	58	iP	Pn	23 27 45.5	-1.1
HOMI				iS	Sg	23 28 10.4	+3.2
ALUC	Giresun/Alucra	1.57	315	⇑iP	Pn	23 27 46.3	-0.8
ALUC				iS	Sg	23 28 10.1	+1.5
GURO	Guroymak-BITLI	1.57	116	PN	Pn	23 27 46.9	-0.2
GURO	Guroymak-BITLI	1.57	116	Pn	Pn	23 27 45.7	-1.4
BTMN	Batman	1.58	148	⇓iP	Pb	23 27 47.7	-0.3
BTMN				iS	Sg	23 28 11.9	+3.0
MALT	Malatya	1.68	237	PN	Pb	23 27 48.8	-1.0
MACK	Trabzon	1.73	349	⇓iP	Pn	23 27 48.8	-0.4
MACK				iS	Sb	23 28 13.8	+1.0
KTUT	Trabzon	1.78	349	PN	Pn	23 27 49.8	0.0
MAZI	Mazidag	1.79	174	PN	Pn	23 27 50.4	+0.4
HEKM	Malatya_Hekimh	1.80	259	⇑iP	Pn	23 27 50.1	-0.1
HEKM				iS	Sg	23 28 16.7	+0.7
MLAZ	Malazgirt-MUS	1.81	92	PN	Pn	23 27 50.2	-0.2
SUSE	Susehri	1.83	302	⇑iP	Pb	23 27 51.9	-0.5
SUSE				iS	Sg	23 28 18.7	+1.7
EATA	Eleskirt	1.86	70	iP	Pn	23 27 51.9	+0.7
CHOM	Cayeli-Rize	1.90	12	PN	Pn	23 27 51.2	-0.2
MARD	Mardin	1.98	167	iP	Pn	23 27 52.9	+0.3
MARD				iS	Sb	23 28 19.7	-0.1
ADCV	BITLIS_Adilcev	2.00	102	iP	Pn	23 27 53.5	+0.5
CUZAR	Zara_SIVAS	2.00	290	⇑iP	Pn	23 27 53.2	+0.2
CUZAR				iS	Sg	23 28 23.1	+0.7
DDEM	Demirkent	2.02	35	iP	Pn	23 27 52.5	-0.7
AKCD	Akcadag	2.03	243	⇑iP	Pn	23 27 53.5	+0.1
AKCD				iS	Sg	23 28 23.9	+0.5
MIDY	Mardin/Midyat-	2.05	153	iP	Pb	23 27 54.8	-1.4
SENK	Senkaya-Erzuru	2.10	50	PN	Pn	23 27 54.0	-0.4
DBAD	Bademkaya	2.10	32	iP	Pn	23 27 54.6	+0.3
URFA	Urfa	2.11	212	PN	Pb	23 27 55.2	-1.9
CUKAN	kangal_SIVAS	2.14	273	⇑iP	Pn	23 27 55.2	+0.3
CUKAN				iS	Sg	23 28 28.2	+1.3
AGRB	Hanur-Agry	2.17	80	PN	Pn	23 27 55.2	-0.2
PERV	Siirt/Pervari-	2.23	125	iP	Pb	23 27 57.8	-1.4
DARE	Darende-Malaty	2.24	253	PN	Pn	23 27 56.9	+0.7
SANL	SANLIURFA_Merk	2.29	206	iP	Pn	23 27 57.8	+1.1
SANL				iS	Sg	23 28 29.8	-1.7
ATAB	Bozova	2.33	221	iP	Pn	23 27 57.7	+0.3
ATAB				iS	Sg	23 28 33.0	0.0
AKDM	Akdamar-Van	2.34	112	PN	Pn	23 27 57.9	+0.2
CUGUR	Gurin_SVAS	2.36	258	iP	Pn	23 27 58.3	+0.5
CUGUR				iS	Sg	23 28 33.9	0.0
KOTA	Agri, Merkez-K	2.37	75	iP	Pb	23 28 01.3	-0.3
ERCV	ERCIS-VAN	2.43	94	PN	Pn	23 27 59.1	+0.2
BCA	Borcka	2.45	25	PN	Pn	23 27 58.9	-0.1
SIRN	Sırnak	2.45	135	iP	Pn	23 27 59.5	+0.5
SIRT	Sirnak	2.46	134	PN	Pn	23 27 59.9	+0.6
SIRT	Sirnak	2.46	134		Pn	23 27 58.6	-0.7
SCER	sogukcermik	2.47	285	iP	Pn	23 27 59.1	-0.3
SCER				iS	Sg	23 28 40.2	+2.8
RSDY	Resadiye-TOKAT	2.51	298	PN	Pn	23 28 00.1	+0.2
VANB	Van	2.55	104	PN	Pn	23 28 01.4	+0.9
ELBS	KAHRAMANMARAS_	2.58	250	iP	Pb	23 28 03.4	-1.7
ELBS				iS	Sg	23 28 40.7	-0.4
TVAN	Van	2.58	105	iP	Pb	23 28 04.3	-0.9
KARS	Kars	2.59	57	PN	Pn	23 28 01.2	+0.1
KARS	Kars	2.59	57	Pn	Pn	23 28 01.3	+0.1
VMUR	Van-Muradiye	2.62	94	iP	Pb	23 28 04.2	-1.5
VMUR				iS	Sg	23 28 41.8	-0.4
SURC	SANLIURFA_SURC	2.68	209	iP	Pn	23 28 02.9	+0.7
CUAYA	Sivas-Altinyay	2.70	272	iP	Pn	23 28 03.6	+1.0
CUAYA				iS	Sg	23 28 43.8	-1.0
DYDN	Diyadin	2.70	83	iP	Pb	23 28 06.6	-0.6
CLDR	Caldiran	2.87	91	eP	Pn	23 28 06.4	+1.4
CLDR	Caldiran	2.87	91	PN	Pn	23 28 05.3	+0.3
EPOS	Posof	2.96	39	iP	Pn	23 28 06.3	+0.2
OZAP	Van, Ozalp-Mer	3.00	100	iP	Pn	23 28 09.5	+2.8
OZAP				iS	Sg	23 28 59.5	+5.2
IGDI	IGDIR	3.04	77	iP	Pb	23 28 11.2	-1.8
GAZ	Gaziantep	3.15	230	Pn	Pn	23 28 09.3	+0.6
ABS	Abastumani	3.19	37	P	Pn	23 28 09.7	+0.3
HAKT	HAKKARI	3.21	120	iP	Pn	23 28 12.6	+2.9
BGD	Bogdanovka	3.28	51	P	Pn	23 28 11.0	+0.4
AKH	Akhalkalaki	3.31	48	P	Pn	23 28 12.4	+1.4
AKH	Akhalkalaki	3.31	48	⇓P	Pn	23 28 11.1	+0.2
CUKT	Cukurca	3.33	126	iP	Pn	23 28 12.6	+1.4
BNN	Bunyan	3.43	265	Pn	Pn	23 28 13.5	+0.9
GNI	Garni	3.60	74	Pn	Pn	23 28 14.3	-0.7
	0.8nm,0.3s,baz=274,slow=3.2,SNR=18						
GNI				Pg	Pb	23 28 23.2	+0.7
	11nm,0.3s,baz=295,slow=5.2,SNR=48						
GNI	Garni	3.60	74	Pn	Pn	23 28 15.9	+0.9
DMNI	Dmanisi	3.68	54	P	Pn	23 28 16.7	+0.6
TRLG	Trialeti	3.75	51	P	Pn	23 28 18.7	+1.7
CHVG	Ch'k'valeri	3.75	21	P	Pn	23 28 19.0	+2.2
CHVG	Ch'k'valeri	3.75	21	⇑P	Pn	23 28 19.5	+2.6
TKB	Tkibuli	3.75	33	P	Pn	23 28 18.8	+1.9
ONI	Oni	4.14	35	P	Pn	23 28 22.4	+0.1
ONI	Oni	4.14	35		Pn	23 28 23.4	+1.0
DIKM	Dikmen	4.49	304	⇑P	Pb	23 28 38.8	+1.3
DGRG	David-gareji	4.51	59	P	Pn	23 28 33.1	+5.7
GUDG	Gudauri	4.56	44	P	Pn	23 28 30.4	+2.2
SNOP	Sinop	4.72	308		Pn	23 28 31.2	+1.0
KBZ	Khabaz	4.91	23	Pn	Pn	23 28 34.0	+1.3
	0.6nm,0.3s,baz=179,slow=6.4,SNR=12						
KBZ				LR	LR	23 30 39.0	
	comp=Z,320nm,18.7s,baz=205,slow=41						
KIV	Kislovodsk	5.06	21	⇑P	Pn	23 28 36.8	+1.9
KIV	Kislovodsk	5.06	21	Pn	Pn	23 28 35.5	+0.6
KVAR	Kislovodsk Arr	5.06	21	Pn	Pn	23 28 35.0	0.0
	baz=262,slow=18,SNR=6.8						
BR131	Keskin Array S	5.12	277	Pn	Pn	23 28 36.3	+0.5
BRTR	Keskin Array B	5.12	277	Pn	Pn	23 28 36.6	+0.8
	2.5nm,0.3s,baz=106,slow=15,SNR=26						
BRTR				Lg	Lg	23 30 00.9	
	baz=114,slow=24,SNR=1.7						
BRTR				LR	LR	23 30 40.1	
	comp=Z,546nm,18.2s,baz=130,slow=39						
BRTR	Keskin Array B	5.12	277	Pn	Pn	23 28 36.5	+0.7
BZK	Bozkurt	5.46	302		Pn	23 28 41.4	+1.1
ANTO	Ankara	5.78	279		Pb	23 29 03.0	+3.4
BR231	Keskin MP Arra	5.79	278		Pb	23 29 03.7	+3.9
HWQ	Hawqa	6.03	216	eP	Pn	23 28 49.8	+1.5
BHL	Bhannes	6.47	216	eP	Pn	23 28 56.5	+2.1
SUDU	Sudak	6.85	327	eP	Pn	23 29 03.3	+3.9
SUDU				Pm		23 29 09.7	
	comp=Z,28nm,0.6s						
SUDU				eS	Sn	23 30 23.3	+5.4
SUDU				Sm		23 30 29.0	
	comp=N,65nm,0.9s						
SUDU				Sm		23 30 29.0	
	comp=E,29nm,1.0s						
SHBL	Chebaa	6.90	213	eP	Pn	23 29 03.1	+2.8
ALU	Alushta	6.95	323	eP	Pn	23 29 06.8	+6.0
ALU				Pm		23 29 15.2	
	comp=Z,12nm,0.9s						
CSS	Mathiatis	6.97	234	Pn	Pn	23 29 01.4	+0.3
MDUB	Mudurnu	7.05	283	Pn	Pn	23 29 04.3	+2.0
MMAI	Mount Meron Ar	7.33	214	Pn	Pn	23 29 08.2	+2.0
	comp=Z,1.3nm,0.3s,baz=56,slow=13,SNR=12						
MMAI				Lg	Lg	23 31 12.9	
	comp=Z,1.6nm,0.3s,baz=54,slow=32,SNR=2.4						
MMAI				LR	LR	23 32 34.2	
	comp=Z,178nm,18.7s,baz=140,slow=43						
ASF	Jabal al Asfar	7.55	202	Pn	Pn	23 29 11.0	+1.8
	comp=Z,0.7nm,0.3s,baz=30,slow=13,SNR=22						
ASF				Lg	Lg	23 31 19.8	
	comp=Z,0.9nm,0.3s,baz=17,slow=19,SNR=2.4						
ELL	Elmali	8.52	256	Pn	Pn	23 29 23.4	+1.0
GHAJ	Ghor Haditha	8.79	207	Pn	Pn	23 29 26.2	+0.1
BALB	Balikesir	9.56	276	Pn	Pn	23 29 37.6	+1.0
EIL	Elat	10.49	206	Pn	Pn	23 29 50.5	+1.1
	comp=Z,0.1nm,0.3s,baz=49,slow=19,SNR=1.7						
EIL				Lg	Lg	23 32 51.5	
	comp=Z,0.1nm,0.3s,baz=50,slow=16,SNR=1.4						
EIL				LR	LR	23 33 46.4	
	comp=Z,309nm,19.7s,baz=308,slow=37						
CFR	Carcaliu	10.74	307	⇑P	Pn	23 29 56.3	+3.6
MILM	Milestii Mici	11.32	316	⇑P	Pn	23 30 11.0	+10
VRI	Vrincioaia	11.94	308	⇓P	Pn	23 30 16.8	+7.5
PLOR	Plostina	11.98	308	⇑P	Pn	23 30 14.7	+4.8
MLR	Muntele Rosu	12.26	305	⇓P	Pn	23 30 18.4	+4.7
MLR	Muntele Rosu	12.26	305	Pn	Pn	23 30 15.4	+1.7
	comp=Z,0.0nm,0.3s,baz=131,slow=20,SNR=1.8						
MLR				LR	LR	23 35 08.8	
	comp=Z,237nm,20.4s,baz=100,slow=38						
TESR	Tescani	12.31	311	⇑P	Pn	23 30 21.3	+7.0
SORM	Soroca	12.35	320	⇓P	Pn	23 30 19.6	+4.8
VOIR		12.81	304	⇑P	Pn	23 30 28.7	+7.5
VTS	Vitosha	13.28	290	Pn	Pn	23 30 28.6	+0.9
BURAR	Bucovina Array	13.73	312	⇑P	P	23 30 41.0	-1.6
BURAR	Bucovina Array	13.73	312	Pn	Pn	23 30 35.0	+1.3
BUR08	Bucovina Ar. S	13.75	313	Pn	Pn	23 30 32.4	-1.6
AKASG	Malin Array Be	13.83	330	Pn	Pn	23 30 35.6	+0.6
	comp=Z,0.8nm,0.3s,baz=134,slow=14,SNR=15						
AKASG	Malin Array Be	13.83	330	Pn	Pn	23 30 36.0	+1.0
AKBB	Malin Array Si	13.83	330		Pn	23 30 35.2	+0.2
HERR	Herculane	14.37	299	⇑P	P	23 30 49.5	-0.1
MDVR	Moldovita	14.82	298	⇑P	P	23 30 57.2	+2.5
KBN	Korca	14.98	281	Pn	Pn	23 30 51.0	+0.3
KBN				IAmb	IAmb	23 31 06.1	
	comp=Z,15nm,1.3s						
SIRR	Siria	15.32	303	⇑P	P	23 31 02.1	+2.0
DIVS	Divibare	15.87	294	Pn	Pn	23 31 02.4	-0.1
VLO	Vlora	15.97	281	Pn	Pn	23 31 04.3	+0.7
VLO				IAmb	IAmb	23 31 06.5	
	comp=Z,27nm,0.7s						
OBN	Obninsk	16.07	352	Pn	Pn	23 31 03.0	-1.8
	comp=Z,0.4nm,0.3s,baz=204,slow=20,SNR=4.6						
OBN	Obninsk	16.07	352		Pn	23 31 04.7	-0.2
OBN				IAmb	IAmb	23 31 06.0	
	comp=Z,14nm,0.6s						
RAYN	Ar Rayn	16.30	162	Pn	Pn	23 31 06.7	-1.4
AKTO	Aktyubinsk	16.82	42	Pn	Pn	23 31 15.1	+0.6
	comp=Z,0.6nm,0.3s,baz=244,slow=12,SNR=23						
AKTO				LR	LR	23 40 06.5	
	comp=Z,229nm,21.2s,baz=188,slow=46						
ABKAR	Akbulak array	17.27	48	Pn	Pn	23 31 19.5	-0.6
ABKAR	Akbulak array	17.27	48		Pn	23 31 20.3	+0.2
ABKAR				IAmb	IAmb	23 31 40.3	
	comp=Z,2.6nm,0.9s						
NACGM	Naroch	18.09	334	iP	P	23 31 33.9	+3.1
TIP	Timpagrande	18.18	277	P	Pn	23 31 31.5	-0.1
HRA	Herat	18.27	99		Pn	23 31 31.8	-1.1
SUW	Suwalki	18.77	327	P	P	23 31 37.5	-0.8
SUW				IAmb	IAmb	23 31 46.8	
	comp=Z,27nm,1.0s						
CONA	Conrad Observa	19.60	304	eP	Pn	23 31 50.1	+1.3
	comp=Z,7.2nm,1.1s						
UOSS	Minazif	19.62	132		Pn	23 31 48.5	-0.5
UOSS				IAmb	IAmb	23 32 03.0	
	comp=Z,23nm,0.9s						
PAOL	Paolisi	19.68	283	P	P	23 31 48.5	+0.1
PAOL				IAmb	IAmb	23 31 54.8	
	comp=Z,11nm,1.2s						
KIRV	Kirov	20.24	14	P	P	23 31 53.8	-0.5
	comp=Z,14nm,0.6s,baz=116,slow=6.7,SNR=3.8						
RAFF	Raffo Rosso	20.40	272	P	P	23 31 52.7	-3.4
RAFF				IAmb	IAmb	23 32 06.3	
	comp=Z,20nm,0.9s						
MOA	Molln	20.61	303	eP	Pn	23 32 01.6	+1.0
	comp=Z,5.5nm,0.9s						
NRCA	Norcia	20.73	289	P	P	23 32 00.7	+0.9
NRCA				IAmb	IAmb	23 32 08.8	
	comp=Z,6.1nm,1.0s						
PRED	Cave del Predi	20.77	299	P	P	23 32 00.5	+0.4
PRED				IAmb	IAmb	23 32 14.0	
	comp=Z,7.9nm,1.1s						
ARU	Arti	21.03	29	P	P	23 32 02.8	-0.1
	comp=Z,2.5nm,0.7s,baz=215,slow=8.5,SNR=14						
ARU	Arti	21.03	29	P	P	23 32 03.1	+0.3
ARU				IAmb	IAmb	23 32 08.3	
	comp=Z,15nm,0.9s						
KBA	Koelnbreinsper	21.04	301	eP	P	23 32 06.4	+3.2
	comp=Z,13nm,0.9s						
ZOU	Zoufplan	21.19	299	P	P	23 32 05.5	+0.6
ZOU				IAmb	IAmb	23 32 23.3	
	comp=Z,15nm,1.3s						
GEC2	GERESS Array S	21.25	306	P	P	23 32 05.7	+0.3
GERES	GERESS Array B	21.25	306	P	P	23 32 06.7	+1.3
	comp=Z,2.0nm,0.9s,baz=113,slow=10,SNR=9.7						
GERES	GERESS Array B	21.25	306	P	P	23 32 06.1	+0.7
PVCC	Panska Ves	21.28	310	eP	P	23 32 08.2	+2.6
STAL	STALIGIAL	21.32	298	P	P	23 32 06.9	+0.8
STAL				IAmb	IAmb	23 32 18.4	
	comp=Z,11nm,1.1s						
KHC	Kasperske Hory	21.41	306	eP	P	23 32 09.8	+2.8
ABTA	Abfaltersbach	21.53	299	eP	P	23 32 12.3	+3.8
	comp=Z,5.4nm,1.0s						
KLMR	Klimovskoe	21.64	359	eP	P	23 32 09.8	+0.5
KLMR				AMP		23 32 15.6	
	comp=Z,41nm,1.2s						
TEOL	Teolo	21.92	295	P	P	23 32 12.9	+0.4
CTI	Castel Tesino	22.01	297	P	P	23 32 14.4	+0.7
CTI				IAmb	IAmb	23 32 19.1	
	comp=Z,5.6nm,1.0s						
WTTA	Wattenberg	22.22	300	eP	P	23 32 19.6	+3.8
	comp=Z,4.2nm,0.7s						
WSAR	Wadi Sarin	22.34	130	P	P	23 32 17.7	+0.5
	comp=Z,9.2nm,1.1s,baz=57,slow=7.0,SNR=2.5						
NKC	Novy Kostel	22.45	308	eP	P	23 32 20.2	+2.0
CLL	Collm	22.49	311	P	P	23 32 19.6	+1.0
CLL				IAmb	IAmb	23 32 23.6	
	comp=Z,9.7nm,1.1s						
MOTA	Moosalm	22.59	301	eP	P	23 32 22.0	+2.2
	comp=Z,6.8nm,0.9s						
SALO	Salr	22.75	296	P	P	23 32 21.7	+0.4
SALO				IAmb	IAmb	23 32 29.0	
	comp=Z,11nm,0.8s						
FETA	Feichten	22.79	300	eP	P	23 32 24.0	+2.0
	comp=Z,3.8nm,0.8s						
RETA	Reutte	22.84	301	eP	P	23 32 26.2	+3.8
	comp=Z,2.8nm,0.8s						
GRA1	Grafenberg Arr	23.05	306	P	P	23 32 25.0	+0.6
GRFO	Grafenberg	23.05	306	P	P	23 32 24.5	0.0
KKAR	Karatay Array	23.06	71	P	P	23 32 23.8	-0.9
GAR	Garm	23.30	81	P	P	23 32 27.6	+0.3
GAR				IAmb	IAmb	23 32 35.8	
	comp=Z,12nm,0.8s						
DAVOX	Davos/Dischmat	23.33	299	P	P	23 32 28.0	+0.4
	comp=Z,1.4nm,0.5s,baz=79,slow=9.2,SNR=7.6						
DAVA	Damuels	23.40	300	eP	P	23 32 30.2	+1.9
	comp=Z,5.8nm,0.8s						
KBL	Kabul	23.47	93	P	P	23 32 29.1	0.0
FIA1	FINESS Array S	23.88	343	P	P	23 32 34.2	+1.5
FINES	FINESS Array B	23.88	343	P	P	23 32 32.5	-0.1
	comp=Z,7.1nm,0.6s,baz=146,slow=8.8,SNR=19						
FINES	FINESS Array B	23.88	343	P	P	23 32 33.3	+0.7
KEST	Kesra	24.69	272	P	P	23 32 41.1	+0.6
	comp=Z,6.5nm,0.9s,baz=38,slow=3.4,SNR=8.8						
KEST	Kesra	24.69	272	P	P	23 32 41.5	+1.1
SENIN	Lac Senin/Sane	25.05	297	P	P	23 32 45.0	+1.2
SENIN				IAmb	IAmb	23 32 46.4	
	comp=Z,4.1nm,0.7s						
BNI	Bardonecchia	25.42	294	P	P	23 32 48.2	+1.2
BNI				IAmb	IAmb	23 32 55.3	
	comp=Z,5.1nm,0.8s						
HFS	Hagfors	26.72	330	P	P	23 32 59.2	+0.7
	comp=Z,4.3nm,1.1s,baz=163,slow=10,SNR=3.9						
KDJ	Kajisay	28.03	72	P	P	23 33 10.4	-0.3
KDJ				IAmb	IAmb	23 33 12.3	
	comp=Z,2.4nm,0.9s						
NC204	NORSAR Array S	28.56	330	P	P	23 33 16.0	+0.9
KURBB	Kurchatov Arra	29.09	54	P	P	23 33 19.6	-0.2
	comp=Z,0.5nm,0.2s,baz=266,slow=9.2,SNR=8.3						
KURK	Kurchatov	29.16	54	P	P	23 33 19.6	-0.8
KURK	Kurchatov	29.16	54	IAmb	IAmb	23 33 28.7	
	comp=Z,2.0nm,0.9s						
ARCES	ARCESS Array B	31.36	350	P	P	23 33 39.6	0.0
	comp=Z,2.5nm,0.8s,baz=161,slow=9.5,SNR=5.0						
MK31	Makanchi Array	31.36	62	P	P	23 33 39.3	-0.6
MK31				IAmb	IAmb	23 33 54.5	
	comp=Z,1.9nm,1.1s						
MKAR	Makanchi Array	31.36	62	P	P	23 33 39.8	-0.2
	comp=Z,0.7nm,0.7s,baz=279,slow=8.5,SNR=4.4						
MKAR	Makanchi Array	31.36	62	P	P	23 33 39.4	-0.6
ESK	Eskdalemuir	32.93	314	P	P	23 33 53.6	0.0
ZAA0	Zalesovo Array	33.38	49	P	P	23 33 57.5	+0.1
ZAA0				IAmb	IAmb	23 34 03.4	
	comp=Z,1.5nm,0.9s						
ZALV	Zalesovo Beam	33.38	49	P	P	23 33 57.1	-0.4
	comp=Z,0.4nm,0.4s,baz=280,slow=4.0,SNR=2.2						
ZALV	Zalesovo Beam	33.38	49	P	P	23 33 57.6	+0.1
ESBB	Sonseca Array	33.86	285	P	P	23 34 01.4	-0.5
ESDC	Sonseca Array	33.86	285	P	P	23 34 02.5	+0.6
	comp=Z,1.1nm,0.8s,baz=67,slow=7.3,SNR=13						
WMQ	Urumqi	35.45	67	eP	P	23 34 18.0	+2.4
LODK	Lodwar	35.93	188	P	P	23 34 19.4	-0.5
NRIK	Noril'sk	39.12	24	P	P	23 34 46.9	+0.6
	comp=Z,1.4nm,0.5s,baz=223,slow=3.3,SNR=3.7						
NRIK	Noril'sk	39.12	24	IAmb	IAmb	23 34 54.1	
	comp=Z,2.9nm,0.8s						
KBS	Kingsbay	41.38	352	P	P	23 35 04.1	-0.9
TORD	Torodi Ar. Bea	42.76	243	P	P	23 35 15.7	-1.3
	comp=Z,0.7nm,0.9s,baz=51,slow=5.9,SNR=4.5						
KOWA	Kowa	45.93	250	P	P	23 35 42.3	0.0
KOWA				IAmb	IAmb	23 35 58.5	
	comp=Z,3.3nm,1.1s						
MACI	Morro de la Ar	47.74	275	P	P	23 35 55.2	-1.5
ULN	Ulaanbaatar	47.81	57	P	P	23 35 56.4	-0.6
ULN				IAmb	IAmb	23 36 00.6	
	comp=Z,1.8nm,0.6s						
KAAM	Kaadhehdhoo	48.83	134		P	23 36 02.5	-2.4
DBIC	Dimbokro	51.88	243	P	P	23 36 29.2	+1.2
	comp=Z,1.1nm,0.6s,baz=29,slow=7.9,SNR=3.1						
HHC	Hu-ho-hao-te	53.20	64	eP	P	23 36 38.0	+0.3
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,5.1s						
HHC				LR	LR		
	comp=N,470nm,19.8s						
HHC				LR	LR		
	comp=E,270nm,15.0s						
HHC				LR	LR		
	comp=Z,690nm,19.2s						
PBA	Port Blair	53.89	106	P	P	23 36 40.8	-2.1
RER	Riviere de l'E	61.82	164	P	P	23 37 38.3	-0.2
KSRS	Korea Array	66.03	60	P	P	23 38 04.8	-1.3
	comp=Z,1.9nm,0.7s,baz=283,slow=5.8,SNR=6.0						
BOSA	Boshof	68.94	194	P	P	23 38 23.9	-0.6
	comp=Z,2.2nm,0.8s,baz=6.9,slow=7.6,SNR=4.4						

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*NEIC **07** 23:31:23.8±1.4, $18\overset{\circ}{.}7$S±$0\overset{\circ}{.}1$×$177\overset{\circ}{.}7$W±$0\overset{\circ}{.}1$, h470^{km}±11^{km}, mb4.5/23, Error ellipse: s-maj=21.7km s-min=17.3km az=186.0*

*IDC **07** 23:31:25.7±2.6, $18\overset{\circ}{.}61$S×$177\overset{\circ}{.}99$W, h483^{km}±21^{km}, mb3.5/6, mb1 3.6/8, mb1mx3.2/53, mbtmp4.3/8, Error ellipse: s-maj=47.3km s-min=23.5km az=145.0*

ISC 07 23:31:24.5±0.7**, $18\overset{\circ}{.}7$S**±$0\overset{\circ}{.}1$×**$177\overset{\circ}{.}68$W**±$0\overset{\circ}{.}09$**, h500**^{km}**, n39, σ$1\overset{s}{.}$32**/40**, mb4.4**/20**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.16	282	P	P	23 32 42.5	-1.9
	10.0nm,0.3s,baz=126,slow=17,SNR=69						
MSVF	Nonsavu	4.16	282	P	P	23 32 41.6	-2.8
NIUE	Niue	7.35	94	P	P	23 33 11.9	-2.3
DZM	Mont Dzumac	15.27	255	P	P	23 34 34.4	-3.2
	0.2nm,0.3s,baz=59,slow=20,SNR=1.9						
RAR	Rarotonga	17.03	102	P	P	23 34 54.5	-1.3
PLWZ	Palliser	23.61	193	P	P	23 35 56.1	+0.6
BSWZ	Blackbirch Sta	24.08	196	P	P	23 36 00.6	+1.0
FOZ	Fox Glacier	26.94	200	P	P	23 36 27.4	+2.5
ARMA	Armidale	30.17	241	P	P	23 36 54.6	+1.1
CAN	Canberra	33.80	234	P	P	23 37 23.6	-0.8
CAN				IAmb	IAmb	23 38 12.7	
	comp=Z,56nm,1.7s						
CTAO	Charters Tower	34.01	262	P	P	23 37 26.3	0.0
CTAO				IAmb	IAmb	23 37 29.0	
	comp=Z,31nm,1.5s						
PATS	Pohnpei	34.68	315	P	P	23 37 32.4	+0.5
TOO	Toolangi	37.24	232	P	P	23 37 54.1	+1.1
TOO				IAmb	IAmb	23 39 05.0	
	comp=Z,108nm,2.0s						
COEN	Coen	37.81	271	P	P	23 37 57.7	-0.2
COEN				IAmb	IAmb	23 38 18.1	
	comp=Z,36nm,1.6s						
STKA	Stephens Creek	38.88	242	P	P	23 38 07.1	+0.7
	comp=Z,3.6nm,0.7s,baz=87,slow=8.8,SNR=6.7						
STKA	Stephens Creek	38.88	242	P	P	23 38 07.3	+0.9
BBOO	Buckleboo	43.65	242	P	P	23 38 45.0	+0.6
BBOO				IAmb	IAmb	23 40 18.7	
	comp=Z,50nm,1.6s						
WR0	Warramunga Arr	44.99	260	P	P	23 38 55.0	0.0
WR0				IAmb	IAmb	23 39 47.6	
	comp=Z,22nm,1.9s						
WB0	Warramunga Arr	45.15	260	P	P	23 38 56.0	-0.2
WB0				IAmb	IAmb	23 40 41.0	
	comp=Z,32nm,2.0s						
WB2	Warramunga Arr	45.17	260	P	P	23 38 55.9	-0.4
WB2				IAmb	IAmb	23 40 37.2	
	comp=Z,20nm,1.8s						
WRAB	Tennant Creek	45.17	260	P	P	23 38 55.9	-0.4
WRA	Warramunga Arr	45.18	260	P	P	23 38 55.9	-0.4
	comp=Z,1.4nm,0.5s,baz=98,slow=6.3,SNR=79						
WRA				PcP	pP	23 40 27.3	-2.0
	comp=Z,0.4nm,0.6s,baz=91,slow=3.4,SNR=2.3						
WRA	Warramunga Arr	45.18	260	P	P	23 38 56.0	-0.4
AS31	Alice Springs	45.26	255	P	P	23 38 57.4	+0.4
ASAR	Alice Springs	45.26	255	P	P	23 38 57.3	+0.3
	comp=Z,15nm,0.7s,baz=89,slow=8.6,SNR=168						
ASAR				PcP	pP	23 40 28.2	-1.0
	comp=Z,0.4nm,0.4s,baz=101,slow=2.9,SNR=2.6						
ASAR	Alice Springs	45.26	255	P	P	23 38 57.0	0.0
MTN	Manton Dam	49.47	269	P	P	23 39 29.0	+0.2
MTN				IAmb	IAmb	23 41 22.3	
	comp=Z,21nm,1.2s						
FORT	Forrest	50.31	245	P	P	23 39 35.2	+0.5

FORT				IAmb	IAmb	23 40 50.7	
	comp=Z,40nm,1.0s						
KNRA	**Kununurra**	**51.10**	**265**	P	**P**	**23 39 41.3**	**+0.6**
KNRA				IAmb	IAmb	23 39 41.7	
	comp=Z,12nm,0.8s						
FAKI	**Fak Fak**	**51.41**	**282**	P	**P**	**23 39 43.4**	**+0.4**
FAKI				IAmb	IAmb	23 40 10.2	
	comp=Z,11nm,1.0s						
SIJI	**Sorong**	**53.08**	**283**	P	**P**	**23 39 55.2**	**+0.1**
	comp=Z,11nm,0.8s,baz=163,slow=19,SNR=5.0						
FITZ	**Fitzroy Crossi**	**53.59**	**261**	P	**P**	**23 39 59.5**	**+1.0**
	comp=Z,1.1nm,0.5s,baz=96,slow=6.2,SNR=7.8						
PSA00	**Pilbara Seismi**	**58.39**	**256**	P	**P**	**23 40 32.6**	**+0.7**
PSA00				IAmb	IAmb	23 40 35.7	
	comp=Z,18nm,1.9s						
JCJ	**Chichijima**	**59.87**	**318**	P	**P**	**23 40 42.3**	**+0.7**
GIRL	**Giralia**	**63.34**	**254**	P	**P**	**23 41 06.1**	**+1.5**
JHJ	**Hachijo jima 2**	**65.59**	**321**	P	**P**	**23 41 19.4**	**+0.9**
	comp=Z,192nm,0.6s,baz=49,slow=19,SNR=1.8						
CAST	**Castle Rocks**	**84.23**	**11**		pwP	23 44 51.8	-2.4
TXAR	**Lajitas Array**	**85.82**	**57**	P	**P**	**23 43 14.2**	**+3.2**
	comp=Z,0.3nm,0.7s,baz=211,slow=6.7,SNR=5.3						
MMAI	**Mount Meron Ar**	**147.13**	**302**	PKPbc	**PKPab**	**23 50 13.9**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=76,slow=6.1,SNR=3.3						

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*IDC **07** 23:41:08.8±2.1, 6°.75S×129°.90E, h147^{km}±24^{km}, mb3.6/2, mb1 3.8/7, mb1mx3.3/43, mbtmp4.2/7, Error ellipse: s-maj=33.3km s-min=17.6km az=85.0*

*NEIC **07** 23:41:09.6±2.0, 6°.73S±0°.06×129°.87E±0°.09, h161^{km}±9^{km}, mb4.6/7, Error ellipse: s-maj=12.3km s-min=9.3km az=83.0*

ISC 07 23:41:08.1±0.7**, 6°.74S**±0°.05×**129°.82E**±0°.08**, h150**^{km}**, n33,** σ**2^{s}04**/37**, mb4.7**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.92**	**130**	Pn	**Pn**	**23 41 46.2**	**+4.0**
SAUI				Sn	**Sn**	**23 42 10.8**	**+2.3**
SAUI	**Saumlaki**	**1.92**	**130**	P	Pn	23 41 47.2	+4.9
FAKI	**Fak Fak**	**4.50**	**33**		**Pn**	**23 42 16.3**	**+1.2**
FAKI				Sn	**Sn**	**23 43 07.1**	**-0.1**
FAKI	**Fak Fak**	**4.50**	**33**	P	**Pn**	**23 42 16.6**	**+1.5**
DRS	**Darwin Rock St**	**5.75**	**169**	P	**Pn**	**23 42 34.0**	**+2.4**
SIJI	**Sorong**	**6.01**	**14**	P	**Pn**	**23 42 35.9**	**+0.8**
	6.6nm,0.3s,baz=99,slow=6.2,SNR=43						
SIJI				S	**Sn**	**23 43 39.4**	**-3.7**
	7.2nm,0.3s,baz=243,slow=23,SNR=12						
MTN	**Manton Dam**	**6.20**	**168**	Pn	**Pn**	**23 42 38.9**	**+1.4**
MTN	**Manton Dam**	**6.20**	**168**	P	**Pn**	**23 42 39.6**	**+2.1**
SOEI	**Soe**	**6.26**	**241**	Pn	**Pn**	**23 42 41.0**	**+2.6**
KDU	**Kakadu**	**6.46**	**156**	P	**Pn**	**23 42 43.1**	**+2.1**
BATI	**Baumata**	**6.99**	**240**	P	**Pn**	**23 42 50.8**	**+2.6**
	7.9nm,0.3s,baz=119,slow=1.9,SNR=4.3						
KNRA	**Kununurra**	**8.94**	**187**		**Pn**	**23 43 14.7**	**+0.6**
KNRA	**Kununurra**	**8.94**	**187**	P	**Pn**	**23 43 14.6**	**+0.5**
FITZ	**Fitzroy Crossi**	**12.00**	**199**	P	**Pn**	**23 43 53.9**	**-0.6**
	0.8nm,0.3s,baz=29,slow=12,SNR=180						
FITZ				S	Sn	23 45 59.6	-7.6
PLAI	**Plampang**	**12.11**	**259**	P	**Pn**	**23 43 56.5**	**+0.5**
WB0	**Warramunga Arr**	**13.69**	**161**	P	**Pn**	**23 44 15.8**	**-0.3**
WRAB	**Tennant Creek**	**13.83**	**162**	Pn	**Pn**	**23 44 17.8**	**-0.2**
WRA	**Warramunga Arr**	**13.83**	**162**	P	**Pn**	**23 44 16.8**	**-1.3**
	0.8nm,0.3s,baz=345,slow=13,SNR=47						
WRA				S	**Sn**	**23 46 45.3**	**-6.1**
	1.1nm,0.3s,baz=335,slow=22,SNR=6.2						
WB2	**Warramunga Arr**	**13.84**	**162**		**Pn**	**23 44 17.1**	**-0.9**
WR0	**Warramunga Arr**	**13.91**	**161**	P	**Pn**	**23 44 18.0**	**-1.1**
QIS	**Mount Isa**	**16.69**	**146**	P	**Pn**	**23 44 54.8**	**+1.4**
AS31	**Alice Springs**	**17.28**	**167**	P	**P**	**23 45 00.7**	**+1.1**
AS31				IAmb	IAmb	23 45 03.8	
	comp=Z,1.6nm,0.5s						
ASAR	**Alice Springs**	**17.28**	**167**	P	**Pn**	**23 45 01.9**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=346,slow=11,SNR=40						
ASAR				S	**S**	**23 48 08.0**	**-4.1**
	comp=Z,0.2nm,0.3s,baz=354,slow=25,SNR=3.2						
STKA	**Stephens Creek**	**27.32**	**158**	P	**P**	**23 46 40.1**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=330,slow=14,SNR=1.6						
STKA	**Stephens Creek**	**27.32**	**158**	P	**P**	**23 46 39.2**	**+0.3**
JSD	**Sado**	**45.24**	**9**	P	**P**	**23 49 10.3**	**-0.1**
JSD				IAmb	IAmb	23 49 19.9	
	comp=Z,26nm,1.1s						
OUZ	**Omahuta**	**49.15**	**132**	P	**P**	**23 49 39.2**	**-1.6**
OUZ				IAmb	IAmb	23 49 51.0	
	comp=Z,16nm,1.1s						
MLZ	**Mavora Lakes**	**50.79**	**146**	P	**P**	**23 49 53.1**	**0.0**
MLZ				IAmb	IAmb	23 50 10.7	
	comp=Z,25nm,1.2s						
LBZ	**Lake Benmore**	**51.40**	**144**	P	**P**	**23 49 56.9**	**-0.8**
LBZ				IAmb	IAmb	23 50 00.2	
	comp=Z,22nm,1.1s						
BHW	**Baring Head**	**52.80**	**138**	P	**P**	**23 50 07.2**	**-0.8**
MXZ	**Matakaoa Point**	**53.56**	**132**	P	**P**	**23 50 13.5**	**-0.2**
MKAR	**Makanchi Array**	**67.92**	**327**	P	**P**	**23 51 51.8**	**+1.2**
	comp=Z,0.7nm,0.4s,baz=116,slow=7.5,SNR=10						
MKAR	**Makanchi Array**	**67.92**	**327**	P	**P**	**23 51 51.6**	**+0.9**

IDC 07 23:47:13.1±13.0**, 38°.76N**×**72°.75E, h0**^{km}**, mb3.4**/1**, mb1 3.5**/3**, mb1mx3.2**/45**, mbtmp3.5**/3**, ML2.8**/2**, Error ellipse: s-maj=231.7km s-min=80.5km az=89.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**10.65**	**38**	Pn	Pn	23 49 48.4	+1.5
	0.1nm,0.3s,baz=218,slow=14,SNR=8.6						
ZALV	**Zalesovo Beam**	**17.28**	**25**	P	Pn	23 51 14.6	-1.0
	0.2nm,0.3s,baz=207,slow=14,SNR=2.9						
SONM	**Songino Array**	**25.94**	**59**	P	P	23 52 47.2	+0.1
	0.4nm,0.5s,baz=247,slow=11,SNR=4.3						

IDC 08 00:05:12.2±2.2**, 6°.82S**×**129°.24E, h0**^{km}**, mb3.4**/1**, mb1 3.6**/4**, mb1mx3.2**/50**, mbtmp3.4**/4**, ML3.3**/3**, Error ellipse: s-maj=91.0km s-min=28.6km az=75.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.75**	**197**	Pn	Pn	00 08 00.1	-1.1
	0.1nm,0.3s,baz=19,slow=13,SNR=1.8						
FITZ				Sn	Sn	00 09 56.1	-17
	baz=90,slow=20						
WRA	**Warramunga Arr**	**13.96**	**160**	Pn	Pn	00 08 31.6	+0.2
	0.2nm,0.3s,baz=344,slow=13,SNR=15						
WRA				Sn	Sn	00 10 54.0	-13
	0.7nm,0.3s,baz=327,slow=19,SNR=12						
ASAR	**Alice Springs**	**17.34**	**166**	P	P	00 09 16.6	-0.7
	0.3nm,0.3s,baz=339,slow=10.0,SNR=17						
ASAR				S	Sn	00 12 14.7	-15
	0.2nm,0.3s,baz=347,slow=25,SNR=3.5						
MKAR	**Makanchi Array**	**67.66**	**327**	P	P	00 16 11.2	0.0
	0.2nm,0.5s,baz=124,slow=7.3,SNR=5.2						

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*IDC **08** 00:06:24.3±2.9, 37°.55N×72°.94E, h0^{km}, mb3.4/1, mb1 3.5/7, mb1mx3.2/68, mbtmp3.5/7, ML2.9/6, MS3.5/2, Ms1 3.5/2, ms1mx2.9/38, Error ellipse: s-maj=51.1km s-min=20.5km az=133.0*

*NNC **08** 00:06:33.9±1.2, 38°.23N×72°.30E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=11.0km s-min=7.6km az=169.0*

ISC 08 00:06:28.5±1.9**, 37°.6N**±0°.2×**72°.5E**±0°.1**, h10**^{km}**, n16,** σ**1^{s}99**/14**, 8C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**5.27**	**17**	Pn	**Pn**	**00 07 48.0**	**+0.6**
	0.7nm,0.3s,baz=195,slow=6.5,SNR=11						
AAK				Pg	Pb	00 07 58.8	-2.0
	3.0nm,0.3s,baz=212,slow=17,SNR=19						
AAK				Sn	**Sn**	**00 08 51.2**	**+2.9**
	0.2nm,0.3s,baz=215,slow=22,SNR=1.6						
AAK	**Ala-Archa**	**5.27**	**17**	⇑Pn	**Pn**	**00 07 46.3**	**-1.1**
	1.5nm,0.4s						
AAK				⇓Pg	**Pb**	**00 07 59.4**	**-1.4**
	8.8nm,0.5s						
AAK				⇓Lg	Lg	00 09 03.6	
	16nm,0.9s						
KK02	**Karatay Array**	**5.70**	**346**	⇑Pn	Pn	00 07 51.6	-1.6
	1.9nm,0.4s						
KK02				⇓Pg	Pb	00 08 06.2	-1.8
	6.1nm,0.5s						
KK02				⇑Lg	Lg	00 09 14.2	
	13nm,0.6s						
TKM2	**Tokmak 2**	**5.83**	**23**	⇑Pn	**Pn**	**00 07 55.6**	**+0.4**
	3.6nm,0.8s						
TKM2				⇓Pg	**Pb**	**00 08 10.8**	**+0.4**
	5.7nm,0.8s						
TKM2				⇑Lg	Lg	00 09 23.5	
	7.6nm,0.8s						
MDOK	**Medeo**	**6.57**	**31**	Pn	**Pn**	**00 08 06.0**	**+0.7**
	2.8nm,0.8s						
MDOK				Pg	**Pb**	**00 08 24.5**	**+1.6**
	7.2nm,0.7s						
MDOK				⇑Lg	Lg	00 09 48.7	
	14nm,1.2s						
PDGK	**Podgornoye**	**7.84**	**41**	⇓Pn	**Pn**	**00 08 23.3**	**+0.5**
PDGK				⇓Lg	Lg	00 10 30.8	
	9.7nm,1.2s						
GEYT	**Alibeck**	**11.36**	**276**	Pn	**Pn**	**00 09 13.6**	**+2.8**
	0.4nm,0.3s,baz=81,slow=24,SNR=2.3						
MKAR	**Makanchi Array**	**11.72**	**35**	Pn	Pn	00 09 10.6	-5.1
	0.0nm,0.3s,baz=224,slow=14,SNR=1.5						
KURBB	**Kurchatov Arra**	**13.72**	**17**	Pn	Pn	00 09 39.0	-4.0
	0.1nm,0.3s,baz=205,slow=11,SNR=2.5						
AB31	**Akbulak array**	**14.75**	**326**	⇑Pn	Pn	00 09 54.3	-2.8
	0.7nm,0.5s,baz=132,slow=14,SNR=15						
AKTO	**Aktyubinsk**	**16.47**	**326**	Pn	**Pn**	**00 10 17.8**	**-1.7**
	0.1nm,0.3s,baz=137,slow=15,SNR=3.6						
AKTO	**Aktyubinsk**	**16.47**	**326**	⇑Pn	**Pn**	**00 10 18.2**	**-1.3**
	5.1nm,0.9s						
ZALV	**Zalesovo Beam**	**18.44**	**24**	P	**P**	**00 10 40.1**	**-3.8**
	0.1nm,0.3s,baz=211,slow=11,SNR=4.3						
KSRS	**Korea Array**	**43.43**	**72**	LR	LR	00 33 48.9	
	comp=Z,50nm,21.7s,baz=305,slow=38						
DAV	**Davao City (W)**	**56.82**	**108**	LR	LR	00 42 49.3	
	comp=Z,63nm,21.7s,baz=280,slow=39						
TORD	**Torodi Ar. Bea**	**66.90**	**269**	P	**P**	**00 17 20.4**	**-0.9**
	0.5nm,1.0s,baz=56,slow=6.2,SNR=2.1						

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*IDC **08** 00:08:29.9±0.6, 37°.05N×97°.84W, h0^{km}, mb4.1/11, mb1 4.2/18, mb1mx4.0/55, mbtmp4.0/18, ML3.7/7, Error ellipse: s-maj=10.0km s-min=7.9km az=149.0*

*ANF **08** 00:08:30.3±0.4, 36°.94N×97°.82W, h2^{km}±3^{km}, ML4.9/31, Error ellipse: s-maj=1.7km s-min=1.6km az=102.0*

*TUL **08** 00:08:30.6±0.8, 36°.95N±0°.03×97°.82W±0°.05, h4^{km}±7^{km}, ML4.1, mb_Lg4.0/118(NEIC), Mwr3.5/28(NEIC), Error ellipse: s-maj=6.0km s-min=3.5km az=68.0*

*NEIC **08** 00:08:30.6, 36°.95N×97°.82W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.30; $M_{\theta\theta}$1.94; $M_{\phi\phi}$-0.64; $M_{r\theta}$-0.06; $M_{\theta\phi}$1.09; $M_{\phi r}$0.83; Fault plane solution: $M_0$2.19000×10^{14} NP1:ϕ_s217.43000°, δ60.47000°, λ-137.66000°. NP2:ϕ_s103.25000°, δ54.13000°, λ-37.47000°. Principal axes: T 2.3529, Plg4.0000°, Azm339.0000°; N -0.3683, Plg40.0000°, Azm246.0000°; P -1.9846, Plg50.0000°, Azm73.0000°;*

*NEIC **08** 00:08:31.3±0.7, 36°.94N±0°.02×97°.81W±0°.07, h1^{km}±7^{km} Error ellipse: s-maj=8.4km s-min=0.9km az=68.0*

ISC 08 00:08:30.5±0.7**, 36°.93N**±0°.02×**97°.79W**±0°.02**, h9**^{km}±5^{km}**, n244,** σ**0^{s}99**/280**, mb4.0**/11**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	**0.10**	**213**	Pg	**Pg**	**00 08 33.1**	**+0.2**
GC02				Sg	**Sg**	**00 08 34.7**	**-0.1**
KAN17	**Caldwell West**	**0.11**	**12**	Pg	**Pg**	**00 08 33.3**	**+0.1**
KAN17				Sg	**Sg**	**00 08 35.1**	**0.0**
KAN14	**Manchester OK**	**0.14**	**280**		**Pg**	**00 08 33.5**	**-0.1**
KAN14				Sg	**Sg**	**00 08 35.4**	**-0.4**
KAN01	**Argonia South**	**0.22**	**7**		**Pg**	**00 08 35.2**	**+0.2**
KAN01				Sg	**Sg**	**00 08 38.5**	**+0.4**
KAN09	**Caldwell North**	**0.25**	**35**	Pg	**Pg**	**00 08 35.9**	**+0.4**
KAN09				Sg	**Sg**	**00 08 39.4**	**+0.5**
KAN13	**South Haven SW**	**0.27**	**73**	Pg	**Pg**	**00 08 36.5**	**+0.7**
KAN13					**Sg**	**00 08 40.4**	**+1.0**
KAN10	**Anthony SW Sta**	**0.31**	**308**	Pg	**Pg**	**00 08 36.6**	**0.0**
KAN10				Sg	**Sg**	**00 08 40.8**	**+0.1**
KAN06	**Argonia West S**	**0.32**	**351**		**Pg**	**00 08 37.0**	**+0.1**
KAN06				Sg	**Sg**	**00 08 41.5**	**+0.4**
KAN08	**Anthony NE Sta**	**0.33**	**334**		**Pg**	**00 08 37.1**	**+0.1**
KAN08				Sg	**Sg**	**00 08 42.3**	**+1.0**
OK032	**Salt Plains WL**	**0.36**	**249**	Pg	**Pg**	**00 08 37.7**	**+0.1**
OK032				Sg	**Sg**	**00 08 42.8**	**+0.4**
KAN16	**Harper SW Stat**	**0.36**	**323**	Pg	**Pg**	**00 08 37.7**	**0.0**
KAN12	**Harper NE Stat**	**0.40**	**336**	Pg	**Pg**	**00 08 38.4**	**+0.1**
CROK	**Carrier**	**0.46**	**200**	Pg	**Pg**	**00 08 39.8**	**+0.5**
T35A	**Sooner Cattle**	**1.03**	**91**		**Pg**	**00 08 50.4**	**+0.2**
T35B	**Sooner Cattle**	**1.03**	**91**	P	**Pg**	**00 08 50.3**	**+0.1**
	baz=272,SNR=632						
T35B				S	**Sb**	**00 09 04.1**	**+0.1**
	baz=272						
U32A	**Winter Ranch,**	**1.12**	**241**	Pg	**Pb**	**00 08 51.5**	**-0.5**
U32A	**Winter Ranch,**	**1.12**	**241**	P	**Pb**	**00 08 51.5**	**-0.5**
	baz=59,SNR=51						
U32A				S	**Sg**	**00 09 06.8**	**+0.3**
	baz=59						
OK029	**Liberty Lake**	**1.17**	**166**	Pg	**Pb**	**00 08 52.8**	**0.0**
OK031	**S. Brethren Rd**	**1.25**	**142**	Pg	**Pb**	**00 08 54.1**	**0.0**
OK034	**N. Norfolk Rd.**	**1.27**	**136**	Pg	**Pb**	**00 08 54.6**	**+0.1**
BCOK	**Bluff Creek, N**	**1.28**	**173**		**Pb**	**00 08 54.8**	**0.0**
OK030	**Cody Creek RV**	**1.29**	**141**		**Pb**	**00 08 55.0**	**+0.1**
OK005	**Luther M Schoo**	**1.37**	**159**		**Pg**	**00 08 56.6**	**-0.1**
OK025	**Westminster Rd**	**1.40**	**165**		**Pb**	**00 08 56.9**	**+0.2**
OK001	**Jones High Sch**	**1.43**	**163**		**Pb**	**00 08 57.6**	**+0.4**
OKCFA	**Oklahoma City**	**1.54**	**170**		**Pb**	**00 08 59.1**	**-0.1**
OKCSW	**OKLAHOMA CITY**	**1.55**	**169**		**Pb**	**00 08 59.2**	**-0.1**
R32A	**Long Quarter,**	**1.66**	**334**		**Pb**	**00 09 00.8**	**-0.3**
R32A	**Long Quarter,**	**1.66**	**334**	P	**Pb**	**00 09 00.7**	**-0.5**
	baz=154,SNR=65						
R32A				S	**Sb**	**00 09 22.1**	**0.0**
	baz=154						
FNO	**Franklin**	**1.70**	**169**	Pn	**Pb**	**00 09 01.3**	**-0.6**
TUL1	**Leonard**	**1.91**	**122**	Pn	**Pn**	**00 09 04.3**	**+1.2**
TUL1	**Leonard**	**1.91**	**122**	P	**Pn**	**00 09 04.1**	**+0.9**
	baz=303						
TUL1				S	**Sb**	**00 09 30.1**	**+0.7**
	baz=303						
TUL1	**Leonard**	**1.91**	**122**	P	**Pn**	**00 09 04.1**	**+0.9**
	baz=303						
TUL1				Sb	**Sb**	**00 09 30.7**	**+1.3**
	baz=303						
X34A	**Smith Ranch, M**	**2.33**	**181**	Pn	**Pb**	**00 09 10.8**	**-1.7**
X34A				IAmb_Lg		00 09 45.8	
	comp=Z,810nm,0.7s						
KSU1	**Kansas State U**	**2.36**	**23**	Pn	**Pn**	**00 09 10.5**	**+1.2**
KSU1	**Kansas State U**	**2.36**	**23**	P	**Pn**	**00 09 10.5**	**+1.2**
	baz=204,SNR=49						
KSU1				S	**Sn**	**00 09 39.5**	**+1.2**
	baz=204						
KSU1	**Kansas State U**	**2.36**	**23**	P	**Pn**	**00 09 10.4**	**+1.1**
	baz=204,SNR=57						
KSU1				S	**Sn**	**00 09 39.5**	**+1.2**
	baz=204						
CBKS	**Cedar Bluff**	**2.43**	**321**	Pn	**Pn**	**00 09 11.7**	**+1.4**
CBKS				IAmb_Lg		00 09 49.1	
	comp=Z,480nm,1.0s						
CBKS	**Cedar Bluff**	**2.43**	**321**	P	**Pn**	**00 09 11.6**	**+1.4**
	baz=140,SNR=49						
CBKS	**Cedar Bluff**	**2.43**	**321**	P	**Pn**	**00 09 11.3**	**+1.0**
	baz=140,SNR=69						
CBKS				Sb	**Sb**	**00 09 44.9**	**+0.6**
	baz=140						
U38A	**Gravette**	**2.78**	**99**	Pn	**Pn**	**00 09 16.7**	**+1.6**
U38A				IAmb_Lg		00 10 01.0	
	comp=Z,352nm,0.7s						
U38A	**Gravette**	**2.78**	**99**	P	**Pn**	**00 09 16.8**	**+1.6**
	baz=281,SNR=196						
U38A				S	**Sn**	**00 09 51.2**	**+2.3**
	baz=281						
LOOK	**Love County**	**2.98**	**170**	Pn	**Pn**	**00 09 19.2**	**+1.4**
LOOK				IAmb_Lg		00 10 11.7	
	comp=Z,410nm,0.9s						
X37A	**Clayton**	**3.06**	**139**	Pn	**Pn**	**00 09 20.6**	**+1.6**
X37A				IAmb_Lg		00 10 16.2	
	comp=Z,601nm,0.9s						
X37A	**Clayton**	**3.06**	**139**	P	**Pn**	**00 09 20.4**	**+1.5**
	baz=321,SNR=46						
HHAR	**Hobbs**	**3.17**	**101**		**Pn**	**00 09 22.0**	**+1.6**
HHAR				IAmb_Lg		00 10 18.5	
	comp=Z,514nm,0.7s						
Z35A	**Perchaven, San**	**3.62**	**173**		**Pn**	**00 09 28.0**	**+1.2**
Z35A				IAmb_Lg		00 10 34.7	
	comp=Z,316nm,1.1s						
Z35A	**Perchaven, San**	**3.62**	**173**	P	**Pn**	**00 09 27.9**	**+1.2**
	baz=353,SNR=24						
Z35A				S	**Sn**	**00 10 11.7**	**+2.1**
	baz=353						
S39A	**Bolivar**	**3.64**	**77**	Pn	**Pn**	**00 09 27.6**	**+0.6**
S39A				IAmb_Lg		00 10 28.6	
	comp=Z,300nm,0.8s						
S39A	**Bolivar**	**3.64**	**77**	P	**Pn**	**00 09 27.8**	**+0.8**
	baz=260,SNR=87						
S39A				S	**Sn**	**00 10 10.4**	**+0.3**
	baz=260						
W39A	**Magazine**	**3.68**	**117**	Pn	**Pn**	**00 09 28.6**	**+1.1**
W39A				IAmb_Lg		00 10 36.9	
	comp=Z,590nm,0.8s						
W39A	**Magazine**	**3.68**	**117**	P	**Pn**	**00 09 29.0**	**+1.5**
	baz=299,SNR=59						
W39A				S	**Sn**	**00 10 12.7**	**+1.7**
	baz=299						
W39A	**Magazine**	**3.68**	**117**	P	**Pn**	**00 09 28.4**	**+0.9**
	baz=299,SNR=8.9						
W39A				S	**Sn**	**00 10 11.8**	**+0.8**
	baz=299						
AMTX	**Amarillo**	**3.76**	**238**	IAmb_Lg		00 10 36.8	
	comp=Z,416nm,0.8s						
AMTX	**Amarillo**	**3.76**	**238**	S	**Sn**	**00 10 14.6**	**+1.5**
	baz=56						
AMTX	**Amarillo**	**3.76**	**238**	S	**Sn**	**00 10 14.4**	**+1.3**
	baz=56						
N33B	**J Bar K, Exete**	**3.81**	**4**	P	**Pn**	**00 09 29.5**	**+0.2**
	baz=184,SNR=11						
N33B				S	**Sn**	**00 10 14.8**	**+0.7**
	baz=184						
N33A	**J Bar K, Exete**	**3.81**	**4**		**Pn**	**00 09 29.6**	**+0.3**
N33A				IAmb_Lg		00 10 37.8	
	comp=Z,361nm,0.8s						
U40A	**Yellville**	**4.01**	**97**	Pn	**Pn**	**00 09 33.0**	**+1.0**
U40A	**Yellville**	**4.01**	**97**	P	**Pn**	**00 09 33.3**	**+1.3**
	baz=280,SNR=32						
U40A				P	**Pn**	**00 09 33.3**	**+1.3**
	baz=280,SNR=32						
U40A				S	**Sn**	**00 10 20.0**	**+0.8**
	baz=280						
U40A				S	**Sn**	**00 10 20.0**	**+0.8**
	baz=280						
U40A	**Yellville**	**4.01**	**97**	P	**Pn**	**00 09 33.1**	**+1.0**
	baz=280,SNR=23						
U40A				S	**Sn**	**00 10 19.8**	**+0.6**
	baz=280						
MIAR	**Mount Ida**	**4.18**	**124**	Pn	**Pn**	**00 09 35.0**	**+0.7**
MIAR				IAmb_Lg		00 10 45.9	
	comp=Z,323nm,0.9s						
MIAR	**Mount Ida**	**4.18**	**124**	P	**Pn**	**00 09 35.5**	**+1.2**
	baz=306,SNR=76						
MIAR				S	**Sn**	**00 10 24.3**	**+1.2**
	baz=306						
MIAR	**Mount Ida**	**4.18**	**124**	P	**Pn**	**00 09 35.1**	**+0.7**
	baz=306,SNR=16						
MIAR				S	**Sn**	**00 10 24.4**	**+1.2**
	baz=306						
N35A	**Tabor**	**4.26**	**23**		**Pn**	**00 09 36.4**	**+0.9**
N35A	**Tabor**	**4.26**	**23**	P	**Pn**	**00 09 36.4**	**+0.9**
	baz=204						
P38A	**Dawn**	**4.30**	**50**	Pn	**Pn**	**00 09 36.7**	**+0.7**
P38A				IAmb_Lg		00 10 45.5	
	comp=Z,423nm,0.8s						
P38A	**Dawn**	**4.30**	**50**	P	**Pn**	**00 09 36.8**	**+0.9**
	baz=233,SNR=45						
Z38A	**Mt. Pleasant**	**4.33**	**147**	Pn	**Pn**	**00 09 37.3**	**+1.0**
Z38A				IAmb_Lg		00 10 56.1	
	comp=Z,491nm,1.0s						
Z38A	**Mt. Pleasant**	**4.33**	**147**	P	**Pn**	**00 09 37.2**	**+0.8**
	baz=329						
KSCO	**Kaye Shedlock'**	**4.35**	**300**		**Pn**	**00 09 37.1**	**+0.3**
KSCO				IAmb_Lg		00 10 55.6	
	comp=Z,309nm,1.1s						
KSCO	**Kaye Shedlock'**	**4.35**	**300**	P	**Pn**	**00 09 37.4**	**+0.6**
	baz=117						
KSCO	**Kaye Shedlock'**	**4.35**	**300**	P	**Pn**	**00 09 37.4**	**+0.6**
	baz=117						
KSCO				S	**Sn**	**00 10 27.6**	**0.0**
	baz=117						
MGMO	**Mountain Grove**	**4.42**	**86**		**Pn**	**00 09 39.0**	**+1.2**
MGMO				IAmb_Lg		00 10 49.9	
	comp=Z,236nm,0.7s						
BGNE	**Belgrade**	**4.48**	**357**	Pn	**Pn**	**00 09 39.2**	**+0.7**
BGNE	**Belgrade**	**4.48**	**357**	P	**Pn**	**00 09 39.1**	**+0.7**
	baz=177,SNR=39						
BGNE	**Belgrade**	**4.48**	**357**	P	**Pn**	**00 09 39.1**	**+0.7**
	baz=177,SNR=19						
BGNE				S	**Sn**	**00 10 30.8**	**+0.1**
	baz=177						
ABTX	**Abilene, Hawle**	**4.56**	**200**		**Pn**	**00 09 40.5**	**+0.9**
ABTX	**Abilene, Hawle**	**4.56**	**200**	P	**Pn**	**00 09 40.5**	**+0.9**
	baz=19						
ABTX	**Abilene, Hawle**	**4.56**	**200**	P	**Pn**	**00 09 39.9**	**+0.2**
	baz=19						
ABTX				S	**Sn**	**00 10 32.5**	**-0.3**
	baz=19						
R40A	**Maddies Statio**	**4.59**	**71**		**Pn**	**00 09 40.7**	**+0.7**
R40A				IAmb_Lg		00 11 04.1	
	comp=Z,450nm,1.2s						
R40A	**Maddies Statio**	**4.59**	**71**	P	**Pn**	**00 09 40.9**	**+0.9**
	baz=255,SNR=78						
FCAR	**Ozark Folk Cen**	**4.69**	**101**		**Pn**	**00 09 42.7**	**+1.4**
FCAR				IAmb_Lg		00 11 00.7	
	comp=Z,435nm,0.8s						
X40A	**Basin Creek Fa**	**4.72**	**120**		**Pn**	**00 09 43.0**	**+1.3**
X40A				IAmb_Lg		00 11 10.9	
	comp=Z,300nm,0.7s						
X40A	**Basin Creek Fa**	**4.72**	**120**	P	**Pn**	**00 09 43.0**	**+1.3**
	baz=303,SNR=56						
X40A				P	**Pn**	**00 09 43.0**	**+1.3**
	baz=303,SNR=56						
X40A	**Basin Creek Fa**	**4.72**	**120**	P	**Pn**	**00 09 42.8**	**+1.1**
	baz=303,SNR=13						
X40A				S	**Sn**	**00 10 37.2**	**+0.7**
	baz=303						
WHAR	**Wooly Hollow**	**4.75**	**109**	Pn	**Pn**	**00 09 43.3**	**+1.1**
WHAR				IAmb_Lg		00 11 11.3	
	comp=Z,434nm,0.9s						
W41B	**Gary Mavity, V**	**4.82**	**110**	P	**Pn**	**00 09 44.4**	**+1.2**
	baz=293,SNR=45						
W41B	**Gary Mavity, V**	**4.82**	**110**	P	**Pn**	**00 09 44.1**	**+0.9**
	baz=293						
W41B				S	**Sn**	**00 10 38.9**	**-0.2**
	baz=293						
WHTX	**Lake Whitney,**	**4.94**	**177**	Pn	**Pn**	**00 09 45.5**	**+0.7**
WHTX				IAmb_Lg		00 11 16.5	
	comp=Z,196nm,1.0s						
WHTX	**Lake Whitney,**	**4.94**	**177**	P	**Pn**	**00 09 45.5**	**+0.7**
	baz=357,SNR=45						
WHTX	**Lake Whitney,**	**4.94**	**177**	P	**Pn**	**00 09 45.4**	**+0.6**
	baz=357,SNR=8.7						
WHTX				S	**Sn**	**00 10 41.2**	**-0.8**
	baz=357						
WLAR	**White Oak Lake**	**5.01**	**129**	Pn	**Pn**	**00 09 47.0**	**+1.2**
WLAR				IAmb_Lg		00 11 20.6	
	comp=Z,402nm,0.8s						
MSTX	**Muleshoe**	**5.03**	**235**	Pn	**Pn**	**00 09 46.6**	**+0.5**
MSTX	**Muleshoe**	**5.03**	**235**	P	**Pn**	**00 09 46.8**	**+0.7**
	baz=52						
MSTX	**Muleshoe**	**5.03**	**235**	P	**Pn**	**00 09 46.2**	**+0.1**
	baz=52						
MSTX				S	**Sn**	**00 10 44.1**	**-0.3**
	baz=52						
L34A	**Svendsen Farm,**	**5.14**	**12**	Pn	**Pn**	**00 09 47.3**	**-0.3**
L34A	**Svendsen Farm,**	**5.14**	**12**	P	**Pn**	**00 09 47.6**	**0.0**
	baz=193						
237A	**Washetta, Mont**	**5.19**	**161**	Pn	**Pn**	**00 09 48.4**	**+0.3**
237A				IAmb_Lg		00 11 28.9	
	comp=Z,277nm,1.0s						
237A	**Washetta, Mont**	**5.19**	**161**	P	**Pn**	**00 09 48.5**	**+0.3**
	baz=342,SNR=14						
OGNE	**Ogallala**	**5.19**	**322**	Pn	**Pn**	**00 09 49.9**	**+1.5**
OGNE				IAmb_Lg		00 11 25.1	
	comp=Z,347nm,0.8s						
OGNE	**Ogallala**	**5.19**	**322**	P	**Pn**	**00 09 50.0**	**+1.7**
	baz=139,SNR=6.5						
OGNE				S	**Sn**	**00 10 49.6**	**+1.2**
	baz=139						
P40A	**Paris**	**5.21**	**58**		**Pn**	**00 09 49.5**	**+1.0**
P40A				IAmb_Lg		00 11 23.9	
	comp=Z,211nm,0.7s						
P40A	**Paris**	**5.21**	**58**	P	**Pn**	**00 09 49.5**	**+1.0**
	baz=242,SNR=6.9						
N38A	**Joes South For**	**5.24**	**41**		**Pn**	**00 09 49.6**	**+0.6**
N38A				IAmb_Lg		00 11 26.6	
	comp=Z,362nm,0.8s						
N38A	**Joes South For**	**5.24**	**41**	P	**Pn**	**00 09 49.5**	**+0.6**

	baz=224,SNR=16						
T25A	Trinidad	5.30	274	Pn	Pn	00 09 50.4	+0.6
T25A				IAmb_Lg		00 11 32.0	
	comp=Z,193nm,1.1s						
T25A	Trinidad	5.30	274	P	Pn	00 09 50.5	+0.6
	baz=90,SNR=6.1						
CCM	Cathedral Cave	5.33	76	Pn	Pn	00 09 50.4	+0.3
CCM				IAmb_Lg		00 11 25.4	
	comp=Z,347nm,1.1s						
CCM	Cathedral Cave	5.33	76	P	Pn	00 09 50.4	+0.3
	baz=260,SNR=7.5						
CCM	Cathedral Cave	5.33	76	P	Pn	00 09 50.3	+0.3
	baz=260						
CCM				S	Sn	00 10 51.0	-0.5
	baz=260						
LCAR	Lake Charles	5.42	97		Pn	00 09 52.0	+0.6
LCAR				IAmb_Lg		00 11 25.0	
	comp=Z,293nm,1.0s						
Z41A	Richland Creek	5.49	130	S	Sn	00 10 54.8	-0.9
	baz=313						
K31A	O'Neill	5.73	353	Pn	Pn	00 09 56.6	+1.0
K31A	O'Neill	5.73	353	P	Pn	00 09 56.6	+1.0
	baz=172						
CCAR	Cane Creek	5.76	120	IAmb_Lg		00 11 37.5	
	comp=Z,295nm,0.8s						
CCAR	Cane Creek	5.76	120	P	Pn	00 09 57.1	+0.9
	baz=303						
NATX	Nacogdoches	5.78	152	Pn	Pn	00 09 57.1	+0.8
NATX	Nacogdoches	5.78	152	P	Pn	00 09 56.4	+0.2
	baz=334						
NATX				S	Sn	00 11 00.9	-1.7
	baz=334						
PBMO	Poplar Bluff	5.91	89	IAmb_Lg		00 11 51.4	
	comp=Z,195nm,0.7s						
HBAR	Harrisburg	5.93	101		Pn	00 09 59.6	+1.3
FVM	French Village	5.95	78		Pn	00 09 59.0	+0.2
FVM	French Village	5.95	78	P	Pn	00 09 58.7	0.0
	baz=262						
SCIA	State Center	6.10	34	Pn	Pn	00 10 02.0	+1.3
SCIA				IAmb_Lg		00 11 55.0	
	comp=Z,287nm,0.7s						
SCIA	State Center	6.10	34	P	Pn	00 10 01.7	+1.0
	baz=217						
SCIA	State Center	6.10	34	P	Pn	00 10 01.7	+1.0
	baz=217						
SCIA				S	Sn	00 11 10.0	-0.6
	baz=217						
435B	Jarrell	6.14	178		Pn	00 10 01.4	+0.1
435B				IAmb_Lg		00 11 49.1	
	comp=Z,274nm,0.7s						
435B	Jarrell	6.14	178	P	Pn	00 10 01.3	+0.1
	baz=358,SNR=6.5						
435B	Jarrell	6.14	178	P	Pn	00 10 01.0	-0.2
	baz=358,SNR=8.5						
435B				S	Sn	00 11 10.0	-1.6
	baz=358						
SDCO	Great Sand Dun	6.20	280		Pn	00 10 03.1	+0.8
SDCO	Great Sand Dun	6.20	280	P	Pn	00 10 03.2	+0.9
	baz=95						
SLM	Saint Louis	6.22	72	IAmb_Lg		00 11 45.5	
	comp=Z,257nm,1.0s						
N41A	Harden Midland	6.60	53		Pn	00 10 08.5	+0.9
N41A	Harden Midland	6.60	53	P	Pn	00 10 08.9	+1.3
	baz=238,SNR=6.0						
JCT	Junction City	6.65	195	Pn	Pn	00 10 08.3	-0.1
JCT				IAmb_Lg		00 12 04.1	
	comp=Z,281nm,1.0s						
JCT	Junction City	6.65	195	P	Pn	00 10 08.4	-0.1
	baz=14						
JCT	Junction City	6.65	195	P	Pn	00 10 08.2	-0.1
	baz=14,SNR=5.9						
143A	Socs Landing,	6.74	127	Pn	Pn	00 10 11.5	+2.0
143A				IAmb_Lg		00 12 24.5	
	comp=Z,143nm,0.8s						
ISCO	Idaho Springs	6.78	297	P	Pn	00 10 10.2	-0.1
	baz=113						
ISCO	Idaho Springs	6.78	297	P	Pn	00 10 10.0	-0.4
	baz=113						
S44A	Carbondale	6.85	81	Pn	Pn	00 10 11.7	+0.7
S44A				IAmb_Lg		00 12 05.0	
	comp=Z,249nm,0.7s						
S44A	Carbondale	6.85	81	P	Pn	00 10 12.0	+1.0
	baz=266,SNR=8.7						
ECSD	EROS Data Cent	6.85	7	Pn	Pn	00 10 10.5	-0.6
ECSD				IAmb_Lg		00 12 17.7	
	comp=Z,152nm,1.0s						
ECSD	EROS Data Cent	6.85	7	P	Pn	00 10 10.8	-0.3
	baz=188,SNR=20						
ECSD	EROS Data Cent	6.85	7	P	Pn	00 10 10.4	-0.6
	baz=188,SNR=20						
ECSD				S	Sn	00 11 27.4	-1.7
	baz=188						
SIUC	Southern Illin	6.88	81	Pn	Pn	00 10 11.8	+0.4
SIUC				IAmb_Lg		00 12 05.4	
	comp=Z,214nm,0.9s						
K38A	Parkersburg	6.89	33		Pn	00 10 11.6	0.0
K38A	Parkersburg	6.89	33	P	Pn	00 10 12.0	+0.4
	baz=216						
P43A	Skaggs, Pawnee	7.04	65	Pn	Pn	00 10 14.1	+0.4
P43A				IAmb_Lg		00 12 14.3	
	comp=Z,227nm,0.9s						
P43A	Skaggs, Pawnee	7.04	65	P	Pn	00 10 14.3	+0.6
	baz=250,SNR=8.7						
W45A	Hickory Valley	7.20	102	Pn	Pn	00 10 16.5	+0.8
W45A				IAmb_Lg		00 12 33.9	
	comp=Z,231nm,0.8s						
Q44A	Meyer Farm, Va	7.21	72	Pn	Pn	00 10 16.7	+0.7
Q44A				IAmb_Lg		00 12 24.2	
	comp=Z,276nm,0.9s						
L40A	Anamosa	7.21	43		Pn	00 10 16.0	0.0
L40A				IAmb_Lg		00 12 36.3	
	comp=Z,182nm,0.7s						
L40A	Anamosa	7.21	43	P	Pn	00 10 16.4	+0.4
	baz=227						
441A	DeRidder	7.26	147	Pn	Pn	00 10 17.7	+1.0
ANMO	Albuquerque	7.30	257	Pn	Pn	00 10 17.1	-0.3
	comp=Z,0.1nm,0.3s,baz=287,slow=13,SNR=1.7						
ANMO				Pg	Pb	00 10 39.5	+2.0
	comp=Z,0.4nm,0.3s,baz=83,slow=15,SNR=8.4						
ANMO				Lg	Lg	00 12 18.4	
	comp=Z,2.9nm,0.3s,baz=337,slow=12,SNR=12						
T45A	Paducah	7.32	87	IAmb_Lg		00 12 26.4	
	comp=Z,236nm,0.7s						
PHWY	Pilot Hill	7.38	309	IAmb_Lg		00 12 27.6	
	comp=Z,126nm,0.9s						
Y45A	Yeager Farm, C	7.40	112	Pn	Pn	00 10 20.8	+2.3
Y45A				IAmb_Lg		00 12 34.8	
	comp=Z,167nm,0.8s						
N23A	Red Feather La	7.48	304	P	Pn	00 10 20.9	+0.9
	baz=119						
SUSD	Miller	7.55	354	Pn	Pn	00 10 20.7	0.0
SUSD				IAmb_Lg		00 12 37.5	
	comp=Z,212nm,0.9s						
SUSD	Miller	7.55	354	P	Pn	00 10 20.5	-0.1
	baz=173						
HDIL	Hopedale	7.56	59		Pn	00 10 21.6	+0.8
HDIL	Hopedale	7.56	59	P	Pn	00 10 21.6	+0.8
	baz=244,SNR=16						
HDIL	Hopedale	7.56	59	P	Pn	00 10 21.6	+0.8
	baz=244,SNR=23						
BNM	Barren Site	7.72	252	Pn	Pn	00 10 24.1	+0.9
I37A	Lemond, Waseca	7.82	24	Pn	Pn	00 10 24.1	-0.3
I37A				IAmb_Lg		00 12 36.5	
	comp=Z,152nm,0.9s						
OLIL	Olney	7.88	74	IAmb_Lg		00 12 56.1	
	comp=Z,116nm,0.8s						
Y22D	IRIS PASSCAL I	7.97	252	IAmb_Lg		00 13 00.2	
	comp=Z,218nm,1.0s						
O44A	Mansfield	7.98	63	Pn	Pn	00 10 26.8	+0.3
O44A				IAmb_Lg		00 12 45.2	
	comp=Z,161nm,0.7s						
735A	Kenedy	8.06	180	Pn	Pn	00 10 29.0	+1.4
735A				IAmb_Lg		00 13 03.8	
	comp=Z,108nm,0.8s						
WVT	Waverly	8.06	93	Pn	Pn	00 10 28.2	+0.6
WVT	Waverly	8.06	93	P	Pn	00 10 28.2	+0.6
	baz=279						
WVT	Waverly	8.06	93	P	Pn	00 10 27.6	-0.1
	baz=279						
L42A	Oliver, Polo	8.07	49		Pn	00 10 27.7	0.0
L42A	Oliver, Polo	8.07	49	P	Pn	00 10 28.1	+0.4
	baz=234						
PLAL	Pickwick Lake	8.12	101	Pn	Pn	00 10 29.5	+1.0
MNTX	Cornudas Mount	8.16	232	Pn	Pn	00 10 29.6	+0.5
MNTX	Cornudas Mount	8.16	232	P	Pn	00 10 29.7	+0.6
	baz=48,SNR=6.0						
MNTX	Cornudas Mount	8.16	232	P	Pn	00 10 28.9	-0.3
	baz=48,SNR=12						
JFWS	Jewell Farm	8.32	42	Pn	Pn	00 10 31.0	-0.3
JFWS				IAmb_Lg		00 12 53.4	
	comp=Z,171nm,0.9s						
JFWS	Jewell Farm	8.32	42	P	Pn	00 10 30.9	-0.3
	baz=227,SNR=7.9						
JFWS	Jewell Farm	8.32	42	P	Pn	00 10 30.6	-0.6
	baz=227,SNR=23						
T47A	Sharon Grove	8.56	86		Pn	00 10 36.2	+1.8
RSSD	Black Hills	8.61	328		Pn	00 10 36.3	+0.9
RSSD				IAmb_Lg		00 13 12.8	
	comp=Z,110nm,1.1s						
RWWY	Rawlins	8.71	306	Pn	Pn	00 10 36.7	0.0
M44A	Midewin, Midew	8.78	57	Pn	Pn	00 10 37.9	+0.4
M44A	Midewin, Midew	8.78	57	P	Pn	00 10 38.2	+0.7
	baz=243						
K22A	Casper	8.81	313	IAmb_Lg		00 13 26.2	
	comp=Z,149nm,1.0s						
I40A	Norwalk	8.84	36		Pn	00 10 38.3	0.0
I40A	Norwalk	8.84	36	P	Pn	00 10 38.3	0.0
	baz=221,SNR=5.2						
F33A	5 Mile Ranch,	8.97	7	Pn	Pn	00 10 40.0	-0.1
F33A				IAmb_Lg		00 13 14.9	
	comp=Z,141nm,1.1s						
TX31	Lajitas Ar. Si	9.04	215		Pn	00 10 40.6	-0.6
TX31	Lajitas Ar. Si	9.04	215	P	Pn	00 10 40.7	-0.4
	baz=31						
TX32	Lajitas Array	9.04	215		Pn	00 10 40.7	-0.5
TXAR	Lajitas Array	9.04	215	Pn	Pn	00 10 41.1	0.0
	comp=Z,0.7nm,0.3s,baz=41,slow=11,SNR=30						
TXAR				Pg		00 11 11.0	
	comp=Z,0.9nm,0.3s,baz=46,slow=14,SNR=3.8						
TXAR				Sn	Sn	00 12 20.4	-2.6
	comp=Z,0.7nm,0.3s,baz=38,slow=27,SNR=1.8						
TXAR				Lg	Lg	00 13 12.3	
	comp=Z,1.5nm,0.3s,baz=32,slow=29,SNR=5.3						
TXAR	Lajitas Array	9.04	215	Pn	Pn	00 10 40.8	-0.4
SPMN	Marine on St.	9.10	23	Pn	Pn	00 10 42.1	+0.3
SPMN	Marine on St.	9.10	23	P	Pn	00 10 42.0	+0.1
	baz=206						
BLO	Bloomington	9.17	72		Pn	00 10 42.6	-0.2
L44A	Lake County Fo	9.25	52	IAmb_Lg		00 13 28.7	
	comp=Z,180nm,0.9s						
L44A	Lake County Fo	9.25	52	P	Pn	00 10 43.8	-0.2
	baz=239						
K43A	Burlington	9.28	49		Pn	00 10 44.5	+0.1
K43A	Burlington	9.28	49	P	Pn	00 10 44.3	-0.1
	baz=235						
F36A	Milaca	9.48	18	Pn	Pn	00 10 45.7	-1.4
U49A	Red Boiling Sp	9.65	89	Pn	Pn	00 10 50.5	+1.0
I42A	Draeger Farm,	9.70	41		Pn	00 10 49.9	-0.2
I42A	Draeger Farm,	9.70	41	P	Pn	00 10 49.5	-0.6
	baz=227,SNR=13						
E28A	Huff	9.87	348	Pn	Pn	00 10 52.1	-0.4
E28A				IAmb_Lg		00 13 58.7	
	comp=Z,110nm,0.8s						
P48A	Milroy	10.06	72		Pn	00 10 54.8	-0.2
G40A	Rib Lake	10.10	32	Pn	Pn	00 10 54.9	-0.7
R49A	Shelbyville	10.11	78	Pn	Pn	00 10 56.1	+0.4
P18A	Preston Nutter	10.15	289	Pn	Pn	00 10 56.1	-0.5
N47A	Urbana	10.22	64	Pn	Pn	00 10 56.1	-1.1
L46A	Eue Claire	10.23	57	Pn	Pn	00 10 57.5	+0.1
250A	Grady	10.72	114	Pn	Pn	00 11 04.3	+0.2
BW06	Boulder Array	10.75	306	Pn	Pn	00 11 04.1	-0.7
PD31	Pinedale Array	10.75	306		Pn	00 11 04.5	-0.3
PDAR	Pinedale Array	10.75	306	Pn	Pn	00 11 04.3	-0.5
	comp=Z,0.3nm,0.3s,baz=114,slow=15,SNR=13						
PDAR				Lg	Lg	00 14 00.7	
	comp=Z,0.5nm,0.3s,baz=110,slow=33,SNR=2.4						
R50A	Paris	10.77	79	Pn	Pn	00 11 05.9	+1.1
S51A	Beattyville	11.34	82	Pn	Pn	00 11 12.4	-0.1
TKL	Tuckaleechee C	11.39	92	Pn	Pn	00 11 13.7	+0.5
	comp=Z,1.0nm,0.3s,baz=248,slow=7.7,SNR=14						
TKL				Sn	Sn	00 13 17.3	-3.2
	comp=Z,0.9nm,0.3s,baz=315,slow=19,SNR=1.9						
TKL				Lg	Lg	00 14 23.5	
	comp=Z,2.9nm,0.3s,baz=168,slow=20,SNR=12						
AGMN	Agassiz Nation	11.45	7	P	Pn	00 11 11.0	-2.9
	baz=188,SNR=6.5						
EYMN	Ely	11.94	21	P	Pn	00 11 17.7	-3.1
	baz=205						
DGMT	Dagmar	12.45	340	P	Pn	00 11 25.9	-1.8
	baz=156						
P52A	Corning	12.60	73	P	Pn	00 11 27.6	-2.2
	baz=263						
GLMI	Grayling	12.70	48	P	Pn	00 11 28.6	-2.5
	baz=236,SNR=7.5						
ULM	Lac du Bonnet	13.38	5	Pn	Pn	00 11 35.2	-5.2
	comp=Z,0.6nm,0.3s,baz=193,slow=13,SNR=5.5						
ULM				Sn	Sn	00 13 55.2	-14
	comp=Z,0.4nm,0.3s,baz=153,slow=20,SNR=1.4						
ULM				Lg	Lg	00 15 19.6	
	comp=Z,0.6nm,0.3s,baz=220,slow=5.7,SNR=3.6						
M53A	WI Miller and	14.02	66	P	Pn	00 11 47.1	-2.0
	baz=257						
M54A	Oil Creek Stat	14.77	66	P	Pn	00 11 57.0	-2.5
	baz=258						
SADO	Sadowa	16.11	55	Pn	Pn	00 12 12.4	-4.7
	comp=Z,0.4nm,0.3s,baz=270,slow=12,SNR=3.6						
SADO				Sn	Sn	00 15 00.5	-15
	comp=Z,0.7nm,0.3s,baz=270,slow=19,SNR=1.6						
SADO				Lg	Lg	00 16 46.6	
	comp=Z,0.4nm,0.3s,baz=274,slow=19,SNR=3.4						
NVAR	Mina Array Bea	16.31	281	Pn	Pn	00 12 20.6	+0.8
	comp=Z,0.1nm,0.3s,baz=95,slow=9.1,SNR=1.9						
NEW	Newport	18.13	315	P	Pn	00 12 42.4	0.0
	comp=Z,0.1nm,0.3s,baz=109,slow=11,SNR=3.7						
YKA	Yellowknife Ar	27.62	343	P	P	00 14 18.1	+0.2
	comp=Z,2.2nm,0.9s,baz=146,slow=8.7,SNR=7.3						
SCHQ	Schefferville	27.68	40	P	P	00 14 18.7	+0.1
	comp=Z,6.4nm,0.9s,baz=243,slow=10,SNR=5.0						
INK	Inuvik	37.13	339	P	P	00 15 40.5	-0.4
	comp=Z,0.4nm,0.3s,baz=189,slow=8.7,SNR=3.3						
ILAR	Eielson Array	40.05	330	P	P	00 16 06.8	+1.3
	comp=Z,6.1nm,0.7s,baz=108,slow=7.1,SNR=71						
ARCES	ARCESS Array B	66.08	19	P	P	00 19 17.6	+0.3
	comp=Z,3.4nm,0.9s,baz=316,slow=6.4,SNR=6.5						
NOA	NORSAR Array B	66.69	30	P	P	00 19 20.7	-0.6
	comp=Z,0.6nm,0.8s,baz=304,slow=6.4,SNR=2.4						
ESDC	Sonseca Array	70.17	55	P	P	00 19 44.1	+0.5
	comp=Z,0.5nm,0.5s,baz=305,slow=6.5,SNR=7.5						
FINES	FINESS Array B	71.93	25	P	P	00 19 54.2	+0.5
	comp=Z,2.8nm,0.8s,baz=297,slow=6.1,SNR=4.9						
GERES	GERESS Array B	75.21	39	P	P	00 20 14.2	+0.9
	comp=Z,0.5nm,0.7s,baz=336,slow=5.9,SNR=4.5						
AKASG	Malin Array Be	81.08	31	P	P	00 20 46.2	+0.5
	comp=Z,1.6nm,0.6s,baz=323,slow=4.5,SNR=7.5						
ZALV	Zalesovo Beam	89.46	358	P	P	00 21 28.1	+0.6
	comp=Z,0.5nm,0.6s,baz=345,slow=5.1,SNR=3.9						

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*IDC **08** 00:09:30.6±3.0, 10°.99S×162°.63E, h75^{km}±23^{km}, mb3.7/7, mb1 3.9/9, mb1mx3.6/45, mbtmp4.1/9, MS3.2/4, Ms1 3.2/4, ms1mx2.9/42, Error ellipse: s-maj=27.0km s-min=19.0km az=72.0*

*NEIC **08** 00:09:30.1±1.4, 10°.9S±0°.1×162°.8E±0°.1, h69^{km}±9^{km}, mb4.6/25, Error ellipse: s-maj=17.3km s-min=14.5km az=61.0*

ISC 08 00:09:26.5±0.7**, 10°.95S**±0°.07×**162°.75E**±0°.08**, h34^{km}, n48, σ1^{s}.89**/42**, mb4.3**/19**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.15	298	P	Pn	00 10 16.8	+3.1
	129nm,0.3s,baz=173,slow=5.6,SNR=10						
HNR				S	Sn	00 10 52.8	+2.7
	140nm,0.3s,baz=0.0,slow=20,SNR=2.6						
HNR				LR	LR	00 11 37.6	
	comp=Z,366nm,21.1s,baz=160,slow=42						
SANVU	Saraoutou	6.23	136	Pn	Pn	00 10 59.2	+3.2
LIFNC	LIFOU	10.68	157	Pn	Pn	00 11 59.2	+2.0
DZM	Mont Dzumac	11.61	163	P	Pn	00 12 13.8	+3.8
	0.9nm,0.3s,baz=60,slow=7.7,SNR=17						
DZM				S	Sn	00 14 16.0	-2.6
	0.2nm,0.3s,baz=203,slow=20,SNR=2.1						
DZM				LR	LR	00 15 56.1	
	comp=Z,87nm,21.6s,baz=54,slow=33						
ONTNC	Ouen Toro	11.84	163	Pn	Pn	00 12 17.3	+4.2
OUENC	Ouen Island, N	12.06	162	Pn	Pn	00 12 20.1	+4.0
PINNC	Pines Island,	12.44	159	Pn	Pn	00 12 24.8	+3.6
PMG	Port Moresby	15.43	274	LR	LR	00 18 30.9	
	comp=Z,123nm,19.9s,baz=86,slow=35						
MSVF	Nonsavu	16.28	116	LR	LR	00 17 55.6	
	comp=Z,88nm,20.1s,baz=11,slow=31						
MANU	Manus Island	17.65	299		S	00 16 53.2	+0.8
EIDS	Eidsvold	18.11	216	P	Pn	00 13 33.9	-1.7
PATS	Pohnpei	18.21	346	P	Pn	00 13 37.8	+1.0
CTAO	Charters Tower	18.30	238	P	P	00 13 37.3	-0.5
COEN	Coen	19.35	259	P	Pn	00 13 50.9	+0.3
COEN				IAmb	IAmb	00 13 58.7	
	comp=Z,24nm,1.5s						
ARMA	Armidale	21.96	206	P	P	00 14 19.2	+1.6
ARMA				IAmb	IAmb	00 14 20.4	
	comp=Z,15nm,1.0s						
KNTN	Kanton	26.59	74	P	P	00 15 00.9	-1.0
KNTN				IAmb	IAmb	00 15 14.3	
	comp=Z,61nm,1.1s						
STKA	Stephens Creek	28.56	220	P	P	00 15 19.0	-0.3
	comp=Z,2.0nm,0.8s,baz=10,slow=11,SNR=1.8						
STKA	Stephens Creek	28.56	220	P	P	00 15 19.0	-0.3
WR0	Warramunga Arr	28.59	248	P	P	00 15 18.9	-0.9
WB0	Warramunga Arr	28.68	249	P	P	00 15 18.9	-1.8
WB0				IAmb	IAmb	00 15 33.7	
	comp=Z,11nm,1.5s						
WB2	Warramunga Arr	28.76	248	P	P	00 15 20.7	-0.6
WB2				IAmb	IAmb	00 15 36.6	
	comp=Z,7.3nm,1.3s						
WRA	Warramunga Arr	28.77	248	P	P	00 15 20.4	-1.0
	comp=Z,0.4nm,0.4s,baz=80,slow=9.1,SNR=5.1						
H11S2	WAKE ISLAND Hy	29.51	8	T	T	00 46 33.0	
	baz=188,slow=76,SNR=55						
H11S3	WAKE ISLAND Hy	29.51	8	T	T	00 46 30.0	
	baz=188,slow=76,SNR=36						
H11S1	WAKE ISLAND Hy	29.53	8	T	T	00 46 28.9	
	baz=188,slow=76,SNR=32						
AS31	Alice Springs	30.23	241	P	P	00 15 33.8	-0.6
ASAR	Alice Springs	30.23	241	P	P	00 15 33.1	-1.3
	comp=Z,1.5nm,0.7s,baz=72,slow=9.8,SNR=14						
BKZ	Black Stump Fm	30.65	159	P	P	00 15 39.7	+1.9
BKZ				IAmb	IAmb	00 15 46.4	
	comp=Z,17nm,1.5s						
TOO	Toolangi	30.72	207	P	P	00 15 39.2	+0.8
TOO				IAmb	IAmb	00 15 48.1	
	comp=Z,17nm,1.1s						
H11N1	WAKE ISLAND Hy	30.74	8	T	T	00 47 59.8	
	baz=188,slow=76,SNR=24						
H11N3	WAKE ISLAND Hy	30.75	8	T	T	00 48 05.2	
	baz=188,slow=76,SNR=26						
H11N2	WAKE ISLAND Hy	30.76	8	T	T	00 48 05.6	
	baz=188,slow=76,SNR=27						
BFZ	Birch Farm	31.92	160	P	P	00 15 49.1	+0.1
BFZ				IAmb	IAmb	00 15 57.5	
	comp=Z,40nm,1.4s						
BBOO	Buckleboo	32.80	224	P	P	00 15 56.6	-0.2
BBOO				IAmb	IAmb	00 16 13.8	
	comp=Z,14nm,1.2s						
KNRA	Kununurra	33.39	258	P	P	00 16 01.1	-0.9
KNRA				IAmb	IAmb	00 16 19.4	
	comp=Z,20nm,1.2s						
LBZ	Lake Benmore	33.93	170	P	P	00 16 07.4	+0.9
WKZ	Wanaka	34.19	172	P	P	00 16 08.7	-0.1
DCZ	Deep Cove	34.60	175	P	P	00 16 13.6	+1.4
FITZ	Fitzroy Crossi	36.57	254	P	P	00 16 28.0	-1.5
	comp=Z,2.0nm,0.6s,baz=79,slow=8.2,SNR=3.6						
FORT	Forrest	37.72	233	P	P	00 16 37.0	-2.1
FORT				IAmb	IAmb	00 16 56.2	
	comp=Z,28nm,1.0s						
PSA00	Pilbara Seismi	42.40	250	P	P	00 17 17.0	-1.2
PSA00				IAmb	IAmb	00 17 27.2	
	comp=Z,6.3nm,1.1s						
MORW	Morawa	47.11	240	P	P	00 17 54.7	-0.9
MORW				IAmb	IAmb	00 18 01.9	
	comp=Z,11nm,1.1s						
KNMB	Chin-men Tao	55.80	310	P	P	00 18 59.8	-0.9
DLV	T Lat	58.50	291	P	P	00 19 18.1	-2.1
SONM	Songino Array	76.87	325	P	P	00 21 15.4	0.0
	comp=Z,1.4nm,0.8s,baz=142,slow=6.2,SNR=8.8						
SONM	Songino Array	76.87	325	P	P	00 21 14.7	-0.7
ILAR	Eielson Array	84.37	19	P	P	00 21 54.0	-1.0
	comp=Z,0.5nm,0.6s,baz=230,slow=4.8,SNR=5.7						
MKAR	Makanchi Array	91.45	317	P	P	00 22 28.5	-1.0
	comp=Z,0.4nm,0.7s,baz=111,slow=6.6,SNR=3.8						

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*SOME **08** 00:13:42.3, 38°.80N×72°.75E, h0^{km}*

*NNC **08** 00:13:42.9±2.6, 38°.61N×72°.76E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=20.7km s-min=14.8km az=5.0*

ISC 08 00:13:46.9±2.4**, 38°.8N**±0°.1×**72°.69E**±0°.07**, h10^{km}, n13, σ2^{s}.84**/18**, 8C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	3.94	330	*e*P	Pb	00 14 55.5	-1.0
	300nm,0.6s						
IUG				*e*S	Sb	00 15 49.4	+5.1
	47nm,0.8s						
IUG	Iuzhnay	3.94	330	Pg	Pb	00 14 55.5	-1.0
	300nm,0.6s						
IUG				Lg	Lg	00 15 49.4	
	47nm,0.8s						
MRKS	Merke	4.00	6	*e*P	Pb	00 14 56.5	-1.0
	14nm,0.5s						
MRKS				*e*S	Sg	00 15 51.4	-3.8
	16nm,0.4s						
MRKS	Merke	4.00	6	Pg	Pb	00 14 56.5	-1.0
	14nm,0.5s						
MRKS				Lg	Lg	00 15 51.4	
	16nm,0.4s						
AAK	Ala-Archa	4.10	19	⇑Pn	Pn	00 14 49.6	-0.2
	3.4nm,0.7s						
AAK				⇑Pg	Pb	00 15 00.6	+1.4
	6.3nm,0.6s						
AAK				⇑Lg	Lg	00 15 58.0	
	22nm,0.8s						
KK02	Karatay Array	4.64	340	⇑Pn	Pn	00 14 56.8	-0.2
	3.4nm,0.4s						
KK02				⇑Sn	Sn	00 15 56.7	+5.8
	5.6nm,0.6s						
KK02				⇓Lg	Lg	00 16 18.1	
	4.9nm,0.5s						
TKM2	Tokmak 2	4.70	27	⇓Pn	Pn	00 14 57.3	-0.7
	2.8nm,1.1s						
TKM2				⇑Pg	Pb	00 15 10.9	+1.4
	4.4nm,0.9s						
TKM2				⇑Lg	Lg	00 16 17.3	
	13nm,1.4s						
MDOK	Medeo	5.49	35	Pg	Pb	00 15 25.1	+2.2
	5.1nm,0.9s						
MDOK				Lg	Lg	00 16 40.8	
	9.5nm,0.9s						
KUU	Kurty	5.81	27	*e*P	Pb	00 15 29.4	+1.1
	2.3nm,1.1s						
KUU				*e*S	Sg	00 16 48.4	-4.9
	5.1nm,0.9s						
KUU	Kurty	5.81	27	Pg	Pb	00 15 29.4	+1.1
	2.3nm,1.1s						
KUU				Lg	Lg	00 16 48.4	
	5.1nm,0.9s						
PDGK	Podgornoye	6.87	46	⇑Lg	Lg	00 17 21.5	
	7.2nm,1.1s						
AB31	Akbulak array	13.91	323	Pn	Pn	00 17 01.2	-2.8
	0.3nm,0.3s,baz=133,slow=13,SNR=14						
AKTO	Aktyubinsk	15.63	323	⇓Pn	Pn	00 17 26.8	-0.3
	2.4nm,0.7s						

IDC 08 00:17:45.0±2.9**, 6°.27S**×**130°.16E, h112^{km}**±39^{km}**, mb3.5**/1**, mb1 3.4**/5**, mb1mx3.0**/30**, mbtmp3.7**/5**, Error ellipse: s-maj=78.3km s-min=21.7km az=89.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.48	12	P	Pn	00 19 04.5	+0.1
	2.9nm,0.3s,baz=129,slow=23,SNR=11						
SIJI				S	Sn	00 20 02.0	-4.2
	4.0nm,0.3s,baz=189,slow=23,SNR=10						
FITZ	Fitzroy Crossi	12.56	200	P	Pn	00 20 39.8	0.0
	0.2nm,0.3s,baz=31,slow=12,SNR=8.0						
FITZ				S	Sn	00 22 52.3	-5.7
	baz=99,slow=18						
WRA	Warramunga Arr	14.19	164	P	Pn	00 21 00.2	-0.7
	0.2nm,0.3s,baz=344,slow=11,SNR=2.3						
WRA				S	Sn	00 23 23.5	-14
	0.1nm,0.3s,baz=352,slow=23,SNR=1.8						
ASAR	Alice Springs	17.67	169	P	Pn	00 21 44.0	-0.2
	0.2nm,0.3s,baz=349,slow=10,SNR=8.5						
MKAR	Makanchi Array	67.70	327	P	P	00 28 30.3	0.0
	0.6nm,0.5s,baz=132,slow=7.7,SNR=6.7						

*IDC **08** 00:20:34.1±1.0, 7°.85S×128°.34E, h0km, mb3.9/5, mb1 4.2/11, mb1mx3.9/30, mbtmp4.0/11, ML3.9/5, MS3.6/3, Ms1 3.6/3, ms1mx2.9/36, Error ellipse: s-maj=27.3km s-min=18.6km az=75.0*

*NEIC **08** 00:20:38.8±2.2, 7°.97S±0°.02×128°.29E±0°.06, h35km±2km, mb4.2/8, Error ellipse: s-maj=11.0km s-min=3.2km az=255.0*

*DJA **08** 00:20:41.6±0.4, 7°S±4°×12°8E±°, h97km±39km, M4.2/12, mB4.6/6, mb4.5/9, MLv4.4/12, Mw(mB)3.8/6*

ISC 08 00:20:38.6±0.6**, 7°.98S**±0°.06×**128°.33E**±0°.06**, h44**km**, n48, σ1s.73**/49**, mb3.9**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.94	90	P	Pn	00 21 33.1	+10
SAUI	Saumlaki	2.94	90	Pn	Pn	00 21 24.6	+1.8
AAI	Ambon	4.26	358	P	Pn	00 21 37.4	-3.6
SOEI	Soe	4.38	246	P	Pn	00 21 44.7	+1.9
SOEI	Soe	4.38	246	Pn	Pn	00 21 42.8	0.0
BATI	Baumata	5.11	244	Pn	Pn	00 21 53.4	+0.7
	19nm,0.3s,baz=124,slow=4.1,SNR=16						
BATI				Sn	Sn	00 22 53.5	+3.0
	17nm,0.3s,baz=130,slow=23,SNR=8.6						
BATI	Baumata	5.11	244	P	Pn	00 21 53.9	+1.2
	0.3nm814nm86nm,0.8s						
MTN	Manton Dam	5.57	151	Pn	Pn	00 21 59.6	+0.6
MMRI	Maumere	6.06	263	P	Pn	00 22 05.0	-0.7
	0.3nm89nm,0.9s						
MMRI	Maumere	6.06	263	Pn	Pn	00 22 05.8	+0.1
SANI	Sanana	6.33	338	P	Pn	00 22 03.4	-6.0
	0.2nm655nm39nm,0.7s						
FAKI	Fak Fak	6.36	38	P	Pn	00 22 11.3	+1.5
	0.1nm526nm42nm,0.7s						
FAKI	Fak Fak	6.36	38		Pn	00 22 11.3	+1.5
EDFI	Ende, Flores	6.61	263	P	Pn	00 22 12.8	-0.6
	0.1nm287nm30nm,0.9s						
SIJI	Sorong	7.64	23	Pn	Pn	00 22 25.8	-1.6
	1.4nm,0.3s,baz=195,slow=20,SNR=2.2						
SWI	Sorong	7.64	23	P	Pn	00 22 26.2	-1.3
	0.2nm38nm,0.9s						
KNRA	Kununurra	7.67	177	Pn	Pn	00 22 29.0	+1.2
BSSI	Bau Bau, Buton	7.99	283	P	Pn	00 22 28.3	-3.9
	0.1nm30nm,0.7s						
BKSI	Bulukumba	8.57	287	P	Pn	00 22 35.6	-4.5
	399nm33nm,1.0s						
BNSI	Bone	8.91	293	P	Pn	00 22 41.6	-3.2
KAPI	Kappang	9.02	289	Pn	Pn	00 22 46.0	-0.2
	0.1nm,0.3s,baz=113,slow=13,SNR=1.3						
KAPI	Kappang	9.02	289		Pn	00 22 46.5	+0.3
FITZ	Fitzroy Crossi	10.40	194	Pn	Pn	00 23 06.4	+1.2
	baz=346,slow=17						
FITZ				Sn	Sn	00 25 00.1	-0.2
	1.2nm,0.3s,baz=127,slow=20,SNR=1.3						
TOLI2	Tolitoli	11.75	320	Pn	Pn	00 23 24.1	+0.4
WB0	Warramunga Arr	13.11	154	Pn	Pn	00 23 42.1	-0.2
WRAB	Tennant Creek	13.24	154	Pn	Pn	00 23 43.9	-0.2
WRA	Warramunga Arr	13.25	155	Pn	Pn	00 23 44.2	0.0
	0.8nm,0.3s,baz=323,slow=14,SNR=11						
WRA				Sn	Sn	00 26 07.8	-2.3
	1.7nm,0.3s,baz=335,slow=22,SNR=9.1						
WRA				LR	LR	00 29 34.6	
	comp=Z,137nm,20.4s,baz=325,slow=40						
WRA	Warramunga Arr	13.25	155		Pn	00 23 43.8	-0.3
WB2	Warramunga Arr	13.25	154	Pn	Pn	00 23 44.4	+0.2
WR0	Warramunga Arr	13.35	154	Pn	Pn	00 23 45.4	-0.1
COEN	Coen	15.74	113	Pn	Pn	00 24 17.9	+0.5
COEN				IAmb	IAmb	00 24 29.5	
	comp=Z,15nm,1.0s						
PSA00	Pilbara Seismi	15.80	210	Pn	Pn	00 24 16.2	-1.9
PSA00				IAmb	IAmb	00 24 31.7	
	comp=Z,20nm,1.0s						
PSA00	Pilbara Seismi	15.80	210		Pn	00 24 16.3	-1.9
PSA00				IAmb	IAmb	00 24 31.0	
	comp=Z,10nm,1.1s						
AS31	Alice Springs	16.49	162	Pn	Pn	00 24 26.9	-0.1
ASAR	Alice Springs	16.49	162	Pn	Pn	00 24 27.4	+0.4
	comp=Z,0.7nm,0.3s,baz=335,slow=11,SNR=25						
ASAR				Sn	Sn	00 27 28.5	-0.6
	comp=Z,0.6nm,0.3s,baz=325,slow=19,SNR=5.2						
ASAR	Alice Springs	16.49	162		P	00 24 28.9	-0.2
PMG	Port Moresby	18.67	96	P	P	00 24 51.5	-1.6
PMG				IAmb	IAmb	00 25 10.3	
	comp=Z,19nm,0.9s						
FORT	Forrest	22.69	181	P	P	00 25 36.6	+0.1
MORW	Morawa	23.96	207	P	P	00 25 46.1	-2.9
MORW				IAmb	IAmb	00 25 55.5	
	comp=Z,11nm,1.0s						
BBOO	Buckleboo	25.73	165	P	P	00 26 03.7	-1.3
STKA	Stephens Creek	26.80	154	P	P	00 26 16.9	+2.2
	comp=Z,2.6nm,0.7s,baz=330,slow=11,SNR=2.5						
CMAR	Chiang Mai Arr	39.12	312	P	P	00 28 02.9	+0.8
	comp=Z,0.8nm,0.3s,baz=128,slow=7.2,SNR=1.6						
SONM	Songino Array	58.86	343	P	P	00 30 33.7	+0.8
	comp=Z,0.8nm,1.0s,baz=156,slow=7.4,SNR=2.8						
MKAR	Makanchi Array	68.15	328	P	P	00 31 35.1	+0.9
	comp=Z,0.6nm,0.7s,baz=132,slow=8.2,SNR=4.3						
ZALV	Zalesovo Beam	71.73	335	P	P	00 31 56.5	+0.5
	comp=Z,0.3nm,0.3s,baz=148,slow=8.4,SNR=1.9						
ZALV				LR	LR	01 06 09.6	
	comp=Z,43nm,18.4s,baz=338,slow=38						
NRIK	Noril'sk	82.11	346	LR	LR	01 13 27.9	
	comp=Z,40nm,19.8s,baz=182,slow=39						
TORD	Torodi Ar. Bea	127.36	280	PKP	PKiKP	00 39 42.6	+2.5
	comp=Z,0.7nm,1.1s,baz=355,slow=1.7,SNR=3.6						
LPAZ	La Paz	150.90	146	PKPbc	PKiKP	00 40 31.7	+2.8
	comp=Z,0.6nm,0.5s,baz=208,slow=3.4,SNR=2.5						

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*IDC **08** 00:25:41.8±1.0, 36°.96N×97°.89W, h0km, mb3.5/1, mb1 3.8/5, mb1mx3.5/43, mbtmp3.5/5, ML3.3/4, Error ellipse: s-maj=13.5km s-min=11.2km az=123.0*

*ANF **08** 00:25:41.3±0.4, 36°.93N×97°.81W, h8km, ML3.9/10, Error ellipse: s-maj=5.5km s-min=3.7km az=50.0*

*TUL **08** 00:25:42.5±1.4, 36°.94N±0°.04×97°.83W±0°.06, h8km±5km, ML3.4, mb_Lg3.2/73(NEIC), Error ellipse: s-maj=6.9km s-min=4.9km az=70.0*

*NEIC **08** 00:25:42.3±1.2, 36°.95N±0°.04×97°.81W±0°.06, h9km±5km, Error ellipse: s-maj=6.6km s-min=5.4km az=99.0*

ISC 08 00:25:41.6±0.8**, 36°.98N**±0°.02×**97°.78W**±0°.03**, h12**km±5km**, n99, σ1s.42**/87**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN17	Caldwell West	0.07	10	Pg	Pg	00 25 44.4	+0.3
GC02	Grant County #	0.14	207	Pg	Pg	00 25 44.2	-0.9
GC02				Sg	Sg	00 25 46.5	-1.0
KAN14	Manchester OK	0.15	261	Pg	Pg	00 25 45.0	-0.2
KAN14				Sg	Sg	00 25 47.3	-0.5
KAN01	Argonia South	0.17	5	Pg	Pb	00 25 47.0	+0.2
KAN13	South Haven SW	0.24	82	Pg	Pb	00 25 49.0	+1.0
KAN06	Argonia West S	0.28	347	Pg	Pb	00 25 48.7	+0.1
KAN08	Anthony NE Sta	0.29	328	Pg	Pb	00 25 48.8	0.0
KAN10	Anthony SW Sta	0.29	300	Pg	Pb	00 25 48.4	-0.4
KAN16	Harper SW Stat	0.34	317	Pg	Pb	00 25 49.5	-0.1
KAN12	Harper NE Stat	0.36	331	Pg	Pb	00 25 50.9	+0.9
OK032	Salt Plains WL	0.39	243	Pg	Pb	00 25 49.7	-0.7
CROK	Carrier	0.50	199	Pg	Pg	00 25 51.5	+0.1
T35A	Sooner Cattle	1.02	93	Pg	Pn	00 26 01.9	+0.2
T35B	Sooner Cattle	1.02	93	P	Pg	00 25 59.9	-1.4
	baz=272,SNR=48						
U32A	Winter Ranch,	1.15	239	Pg	Pn	00 26 03.6	+0.1
OK029	Liberty Lake	1.21	167	Pn	Pg	00 26 04.6	-0.2
OK031	S. Brethren Rd	1.27	143		Pg	00 26 06.0	-0.1
OK034	N. Norfolk Rd.	1.29	138		Pg	00 26 06.5	0.0
OK030	Cody Creek RV	1.32	142		Pb	00 26 06.6	+0.2
BCOK	Bluff Creek, N	1.33	174		Pb	00 26 06.3	-0.1
OK009	Oakdale Elemen	1.43	168	Pn	Pg	00 26 08.4	-0.6
OK025	Westminster Rd	1.44	166	Pn	Pg	00 26 08.7	-0.6
OKCFA	Oklahoma City	1.58	170	Pn	Pb	00 26 11.2	+0.3
OKCFA	Oklahoma City	1.58	170	P	Pn	00 26 08.8	-0.6
	baz=349						
OKCSW	OKLAHOMA CITY	1.59	170	Pn	Pn	00 26 09.2	-0.4
R32A	Long Quarter,	1.62	333	Pn	Pn	00 26 10.9	+0.8
R32A	Long Quarter,	1.62	333	P	Pn	00 26 10.3	+0.2
	baz=154,SNR=37						
FNO	Franklin	1.75	170	Pn	Pn	00 26 11.3	-0.4
TUL1	Leonard	1.93	123		Pn	00 26 14.6	+0.4
TUL1	Leonard	1.93	123	P	Pn	00 26 14.5	+0.4
	baz=303,SNR=60						
TUL1				S	Sb	00 26 40.8	+0.2
	baz=303						
KSU1	Kansas State U	2.31	23	Pn	Pn	00 26 20.2	+0.7
KSU1	Kansas State U	2.31	23	P	Pn	00 26 20.2	+0.7
	baz=204,SNR=11						
KSU1				S	Sb	00 26 52.3	+0.6
	baz=204						
X34A	Smith Ranch, M	2.37	181	Pn	Pn	00 26 21.0	+0.6
X34A				IAmb_Lg		00 27 00.4	
	comp=Z,63nm,0.7s						
CBKS	Cedar Bluff	2.40	320		Pn	00 26 22.0	+1.3
CBKS	Cedar Bluff	2.40	320	P	Pn	00 26 21.2	+0.5
	baz=141,SNR=17						
CBKS				S	Sb	00 26 54.7	+0.3
	baz=141						
U38A	Gravette	2.78	100	Pn	Pn	00 26 27.4	+1.4
U38A	Gravette	2.78	100	P	Pn	00 26 26.5	+0.5
	baz=281,SNR=41						
LOOK	Love County	3.02	171	Pn	Pn	00 26 30.9	+1.7
X37A	Clayton	3.09	140	Pn	Pn	00 26 31.5	+1.4
X37A				IAmb_Lg		00 27 27.8	
	comp=Z,55nm,0.8s						
HHAR	Hobbs	3.17	102	Pn	Pn	00 26 32.3	+1.0
S39A	Bolivar	3.62	77	Pn	Pn	00 26 38.1	+0.6
S39A	Bolivar	3.62	77	P	Pn	00 26 37.6	+0.1
	baz=260,SNR=29						
S39A				S	Sn	00 27 22.6	+2.4
	baz=260						
Z35A	Perchaven, San	3.67	173	Pn	Pn	00 26 38.1	0.0
Z35A	Perchaven, San	3.67	173	P	Pn	00 26 38.1	0.0
	baz=353						
W39A	Magazine	3.69	118	Pn	Pn	00 26 39.7	+1.2
W39A				IAmb_Lg		00 27 48.5	
	comp=Z,52nm,0.8s						
W39A	Magazine	3.69	118	P	Pn	00 26 39.2	+0.7
	baz=299,SNR=11						
N33A	J Bar K, Exete	3.76	4	Pn	Pn	00 26 40.3	+0.8
N33A				IAmb_Lg		00 27 48.5	
	comp=Z,58nm,0.8s						
AMTX	Amarillo	3.79	238	Pn	Pn	00 26 40.5	+0.5
AMTX				IAmb_Lg		00 27 45.7	
	comp=Z,64nm,0.9s						
U40A	Yellville	4.01	97	Pn	Pn	00 26 44.0	+1.1
U40A				IAmb_Lg		00 27 51.7	
	comp=Z,69nm,0.8s						
MIAR	Mount Ida	4.19	124	Pn	Pn	00 26 47.3	+2.0
MIAR				IAmb_Lg		00 27 54.8	
	comp=Z,33nm,0.7s						
N35A	Tabor	4.22	23	Pn	Pn	00 26 47.4	+1.6
P38A	Dawn	4.26	50	Pn	Pn	00 26 47.3	+1.0
P38A				IAmb_Lg		00 27 58.4	
	comp=Z,42nm,0.8s						
KSCO	Kaye Shedlock'	4.33	299	Pn	Pn	00 26 48.1	+0.6
Z38A	Mt. Pleasant	4.36	148	Pn	Pn	00 26 48.6	+1.0
Z38A				IAmb_Lg		00 28 02.3	
	comp=Z,57nm,0.9s						
MGMO	Mountain Grove	4.41	86	Pn	Pn	00 26 48.7	+0.3
BGNE	Belgrade	4.43	356	Pn	Pn	00 26 48.9	+0.3
BGNE	Belgrade	4.43	356	P	Pn	00 26 49.0	+0.3
	baz=177,SNR=18						
R40A	Maddies Statio	4.57	72	Pn	Pn	00 26 51.8	+1.3
FCAR	Ozark Folk Cen	4.69	102	Pn	Pn	00 26 54.5	+2.3
FCAR				IAmb_Lg		00 28 11.7	
	comp=Z,34nm,0.7s						
X40A	Basin Creek Fa	4.73	120	Pn	Pn	00 26 54.2	+1.5
X40A				IAmb_Lg		00 28 18.2	
	comp=Z,30nm,1.0s						
WHAR	Wooly Hollow	4.75	109	Pn	Pn	00 26 53.7	+0.6
WHTX	Lake Whitney,	4.98	177	Pn	Pn	00 26 55.2	-1.1
WLAR	White Oak Lake	5.03	129	Pn	Pn	00 26 57.2	+0.3
WLAR				IAmb_Lg		00 28 30.3	
	comp=Z,44nm,0.8s						
OGNE	Ogallala	5.16	321	Pn	Pn	00 27 01.0	+2.2
OGNE				IAmb_Lg		00 28 33.9	
	comp=Z,44nm,0.7s						
N38A	Joes South For	5.20	42	Pn	Pn	00 27 00.9	+1.7
N38A				IAmb_Lg		00 28 43.7	
	comp=Z,37nm,0.8s						
237A	Washetta, Mont	5.23	161	Pn	Pn	00 26 59.4	-0.2
237A				IAmb_Lg		00 28 40.4	
	comp=Z,38nm,1.2s						
CCM	Cathedral Cave	5.30	76	IAmb_Lg		00 28 35.2	
	comp=Z,26nm,1.0s						
T25A	Trinidad	5.31	274	Pn	Pn	00 27 02.0	+1.1
T25A				IAmb_Lg		00 28 42.9	
	comp=Z,36nm,1.2s						
LCAR	Lake Charles	5.41	98	Pn	Pn	00 27 03.8	+1.7
K31A	O'Neill	5.69	353	Pn	Pn	00 27 07.6	+1.7
CCAR	Cane Creek	5.78	120	IAmb_Lg		00 28 56.7	
	comp=Z,27nm,0.8s						
PBMO	Poplar Bluff	5.89	90	IAmb_Lg		00 28 58.9	
	comp=Z,26nm,0.7s						
SCIA	State Center	6.06	34	IAmb_Lg		00 28 58.7	
	comp=Z,31nm,0.9s						
435B	Jarrell	6.18	178	IAmb_Lg		00 29 09.4	
	comp=Z,26nm,0.7s						
LPAR	Lepanto	6.20	101	IAmb_Lg		00 29 08.8	
	comp=Z,44nm,0.9s						
JCT	Junction City	6.70	195	IAmb_Lg		00 29 15.1	
	comp=Z,28nm,1.1s						
ECSD	EROS Data Cent	6.80	7	Pn	Pn	00 27 22.1	+0.9
S44A	Carbondale	6.83	81	Pn	Pn	00 27 22.9	+1.3
S44A				IAmb_Lg		00 29 16.0	
	comp=Z,25nm,0.8s						
SIUC	Southern Illin	6.86	81	IAmb_Lg		00 29 16.9	
	comp=Z,21nm,0.8s						
P43A	Skaggs, Pawnee	7.01	65	IAmb_Lg		00 29 28.4	
	comp=Z,33nm,1.2s						
L40A	Anamosa	7.17	43	IAmb_Lg		00 29 47.4	
	comp=Z,23nm,0.8s						
Q44A	Meyer Farm, Va	7.19	72	IAmb_Lg		00 29 37.5	
	comp=Z,34nm,1.2s						
T45A	Paducah	7.31	87	IAmb_Lg		00 29 33.2	
	comp=Z,33nm,0.7s						
ANMO	Albuquerque	7.32	256	Pg	Pb	00 27 52.2	+3.5
	comp=Z,0.2nm,0.3s,baz=66,slow=16,SNR=5.3						
ANMO				Lg	Lg	00 29 31.0	
	comp=Z,0.7nm,0.3s,baz=329,slow=16,SNR=10						
SUSD	Miller	7.51	354	IAmb_Lg		00 29 56.1	
	comp=Z,26nm,0.9s						
HDIL	Hopedale	7.53	59	IAmb_Lg		00 29 47.4	
	comp=Z,35nm,0.7s						
O44A	Mansfield	7.95	64	IAmb_Lg		00 30 04.2	
	comp=Z,20nm,0.8s						
L42A	Oliver, Polo	8.03	49	IAmb_Lg		00 30 08.9	
	comp=Z,25nm,0.9s						
MNTX	Cornudas Mount	8.20	232	Pn	Pn	00 27 40.6	+0.1
JFWS	Jewell Farm	8.28	42	Pn	Pn	00 27 42.5	+1.0
JFWS				IAmb_Lg		00 30 06.5	
	comp=Z,16nm,0.9s						
M44A	Midewin, Midew	8.75	57	IAmb_Lg		00 30 19.8	
	comp=Z,20nm,1.0s						
K22A	Casper	8.79	313	IAmb_Lg		00 30 37.7	
	comp=Z,16nm,0.9s						
F33A	5 Mile Ranch,	8.92	7	IAmb_Lg		00 30 25.7	
	comp=Z,20nm,1.1s						
TX31	Lajitas Ar. Si	9.08	215	Pn	Pn	00 27 51.5	-1.1
TXAR	Lajitas Array	9.08	215	Pn	Pn	00 27 51.9	-0.7
	comp=Z,0.2nm,0.3s,baz=45,slow=11,SNR=14						
TXAR				Lg	Lg	00 30 20.3	
	comp=Z,0.2nm,0.3s,baz=42,slow=30,SNR=2.8						
PDAR	Pinedale Array	10.73	306	Pn	Pn	00 28 16.5	+1.2
	comp=Z,0.1nm,0.3s,baz=123,slow=18,SNR=2.7						
PDAR				Lg	Lg	00 31 13.7	
	comp=Z,0.2nm,0.3s,baz=108,slow=29,SNR=3.9						
TKL	Tuckaleechee C	11.38	92	Pn	Pn	00 28 25.4	+1.4
	comp=Z,0.2nm,0.3s,baz=280,slow=17,SNR=2.3						
TKL				Lg	Lg	00 31 35.4	
	comp=Z,0.4nm,0.3s,baz=16,slow=20,SNR=4.3						
ULM	Lac du Bonnet	13.34	5	Pn	Pn	00 28 47.8	-2.8
	comp=Z,0.3nm,0.3s,baz=184,slow=13,SNR=1.5						
ULM				Sn	Sn	00 31 10.6	-8.1
	comp=Z,0.3nm,0.3s,baz=198,slow=16,SNR=1.5						
ULM				Lg	Lg	00 32 34.7	
	comp=Z,0.2nm,0.3s,baz=285,slow=20,SNR=2.3						
ILAR	Eielson Array	40.02	330	P	P	00 33 18.4	+2.3
	comp=Z,0.5nm,0.7s,baz=109,slow=6.6,SNR=7.2						

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*SOME **08** 00:29:23.5, 38°.03N×72°.20E, h0km*

*NNC **08** 00:29:31.1±2.9, 38°.23N×72°.41E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=23.3km s-min=16.0km az=21.0*

ISC 08 00:29:25.5±2.3**, 37°.8N**±0°.1×**72°.01E**±0°.07**, h10**km**, n13, σ2s.08**/22**, 7C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.63	341	eP	Pb	00 30 45.5	-1.2
	178nm,0.4s						
IUG				eS	Sb	00 31 43.5	+0.9
	135nm,0.5s						
IUG	Iuzhnay	4.63	341	Pg	Pb	00 30 45.5	-1.2
	178nm,0.4s						
IUG				Lg	Lg	00 31 43.6	
	135nm,0.5s						
MRKS	Merke	5.05	10	eP	Pb	00 30 50.8	-3.3
	30nm,0.5s						
MRKS				eS	Sb	00 31 51.4	-3.4
	13nm,0.8s						
MRKS	Merke	5.05	10	Pg	Pb	00 30 50.8	-3.3
	30nm,0.5s						
MRKS				Lg	Lg	00 31 51.4	
	13nm,0.8s						
AAK	Ala-Archa	5.22	21	⇑Pn	Pn	00 30 44.1	+0.4
	5.4nm,1.1s						
AAK				⇓Pg	Pb	00 30 57.0	+0.1
	8.9nm,0.5s						
AAK				Lg	Lg	00 32 01.5	
	14nm,0.7s						
KK02	Karatay Array	5.45	348	⇓Pn	Pn	00 30 49.4	+2.7
	3.9nm,0.5s						
KK02				⇑Pg	Pb	00 31 03.7	+3.0
	8.7nm,0.6s						
KK02				⇓Sn	Sn	00 31 51.2	+1.8
	5.8nm,0.5s						
KK02				⇑Lg	Lg	00 32 15.6	
	17nm,0.7s						
TKM2	Tokmak 2	5.83	27	⇓Pn	Pn	00 30 53.0	+0.9
	2.6nm,0.7s						
TKM2				⇓Pg	Pb	00 31 06.6	-0.6
	1.9nm,0.4s						
TKM2				⇑Lg	Lg	00 32 19.7	
	9.8nm,0.8s						
MDOK	Medeo	6.61	34	Pn	Pn	00 31 00.7	-2.1
	3.3nm,1.0s						
MDOK				Pg	Pb	00 31 20.8	+0.2
	6.4nm,0.8s						
MDOK				Lg	Lg	00 32 45.4	
	16nm,1.0s						
KUU	Kurty	6.94	27	eP	Pb	00 31 25.9	-0.2
	3.6nm,0.5s						
KUU				eS	Sb	00 32 51.8	+2.9
	5.8nm,1.1s						
KUU	Kurty	6.94	27	Pg	Pb	00 31 25.9	-0.2
	3.6nm,0.5s						
KUU				Lg	Lg	00 32 51.8	
	5.8nm,1.1s						
PDGK	Podgornoye	7.95	43	⇑Pn	Pn	00 31 20.7	-0.5
	4.1nm,1.1s						
PDGK				⇑Pg	Pb	00 31 46.2	+2.9
	4.6nm,0.9s						
PDGK				⇓Lg	Lg	00 33 25.5	
	7.5nm,0.8s						
AB31	Akbulak array	14.41	327	⇑Pn	P	00 32 54.6	-1.8
	0.8nm,0.7s,baz=134,slow=13,SNR=13						
AKTO	Aktyubinsk	16.13	326	⇓Pn	P	00 33 15.0	-0.4
	4.1nm,1.1s						

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*TUL **08** 00:29:49.8±0.9, 36°.943N±0°.009×97°.81W±0°.02, h4km±6km, ML3.0, mb_Lg2.9/47(NEIC), Error ellipse: s-maj=2.4km s-min=1.0km az=111.0*

*IASPEI **08** 00:29:50.0±1.0, 36°.93N±0°.03×97°.82W±0°.03, h9km±7km, Error ellipse: s-maj=4.5km s-min=3.6km az=139.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **08** 00:29:50.1±0.5, 36°.90N×97°.81W, h4km, ML3.5/6, Error ellipse: s-maj=4.7km s-min=3.4km az=3.0*

*NEIC **08** 00:29:50.2±0.4, 36°.93N±0°.01×97°.82W±0°.02, h7km±5km, Error ellipse: s-maj=3.4km s-min=0.9km az=120.0*

ISC 08 00:29:50.3±0.9**, 36°.93N**±0°.02×**97°.81W**±0°.02**, h7**km±6km**, n61, σ0s.54**/51**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	205	Pg	Pg	00 29 52.4	-0.1
GC02				Sg	Sg	00 29 54.0	+0.1
KAN17	Caldwell West	0.12	19	Pg	Pg	00 29 52.8	-0.2
KAN17				Sg	Sg	00 29 54.7	-0.2
KAN14	Manchester OK	0.12	283	Pg	Pg	00 29 52.8	-0.2
KAN14				Sg	Sg	00 29 54.6	-0.3
KAN01	Argonia South	0.23	11		Pg	00 29 54.7	-0.2
KAN01				Sg	Sg	00 29 57.9	-0.1
KAN09	Caldwell North	0.26	37	Pg	Pg	00 29 55.3	-0.2
KAN09				Sg	Sg	00 29 58.9	0.0
KAN13	South Haven SW	0.28	73	Pg	Pg	00 29 55.9	0.0
KAN13				Sg	Sg	00 29 59.5	-0.1
KAN10	Anthony SW Sta	0.30	311	Pg	Pg	00 29 56.0	-0.2
KAN06	Argonia West S	0.32	354	Pg	Pg	00 29 56.4	-0.2
KAN08	Anthony NE Sta	0.32	337		Pg	00 29 56.4	-0.2
OK032	Salt Plains WL	0.34	249	Pg	Pg	00 29 56.9	-0.2
KAN16	Harper SW Stat	0.36	326	Pg	Pg	00 29 57.1	-0.2
KAN12	Harper NE Stat	0.40	338	Pg	Pg	00 29 57.8	-0.3
CROK	Carrier	0.45	198	Pg	Pg	00 29 59.0	0.0
T35A	Sooner Cattle	1.04	90	Pg	Pg	00 30 09.7	-0.6
T35B	Sooner Cattle	1.04	90	P	Pg	00 30 09.8	-0.6
	baz=272						
T35B				S	Sg	00 30 23.9	0.0
	baz=272						
U32A	Winter Ranch,	1.10	240	Pg	Pg	00 30 10.7	-0.8
U32A	Winter Ranch,	1.10	240	P	Pg	00 30 10.6	-0.8
	baz=59						
U32A				S	Sb	00 30 26.5	+0.2
	baz=59						
OK029	Liberty Lake	1.17	166		Pg	00 30 12.1	-0.6
OK031	S. Brethren Rd	1.25	141		Pg	00 30 13.4	-0.9
OK034	N. Norfolk Rd.	1.28	136		Pg	00 30 13.9	-0.9
BCOK	Bluff Creek, N	1.28	173		Pg	00 30 13.9	-1.0
OK030	Cody Creek RV	1.30	140		Pg	00 30 14.3	-1.0
OK025	Westminster Rd	1.40	164		Pn	00 30 16.1	-0.2
OKCFA	Oklahoma City	1.54	169		Pn	00 30 18.2	0.0
OKCFA				IAmb_Lg		00 30 41.6	
	comp=Z,59nm,0.7s						
OKCSW	OKLAHOMA CITY	1.55	169	Pn	Pn	00 30 18.5	+0.2
R32A	Long Quarter,	1.65	335	Pn	Pn	00 30 20.0	+0.3
R32A	Long Quarter,	1.65	335	P	Pn	00 30 20.4	+0.6
	baz=154						
R32A				S	Sn	00 30 41.7	+0.4
	baz=154						
FNO	Franklin	1.70	169	Pn	Pn	00 30 20.7	+0.3
FNO				IAmb_Lg		00 30 46.4	
	comp=Z,61nm,0.8s						
TUL1	Leonard	1.92	121		Pn	00 30 24.2	+0.8
TUL1	Leonard	1.92	121	P	Pn	00 30 24.3	+0.8
	baz=303						
TUL1				S	Sn	00 30 48.8	+1.0
	baz=303						
X34A	Smith Ranch, M	2.32	180		Pn	00 30 30.5	+1.5
X34A				IAmb_Lg		00 31 06.2	
	comp=Z,45nm,0.8s						
KSU1	Kansas State U	2.37	23	Pn	Pn	00 30 29.3	-0.3
KSU1	Kansas State U	2.37	23	P	Pn	00 30 29.6	0.0
	baz=204						
KSU1				S	Sb	00 31 02.4	-0.3
	baz=204						
CBKS	Cedar Bluff	2.42	322		Pn	00 30 29.9	-0.4
CBKS	Cedar Bluff	2.42	322	S	Sb	00 31 04.3	+0.1
	baz=140						
U38A	Gravette	2.80	99	Pn	Pn	00 30 36.1	+0.6
LOOK	Love County	2.98	170	Pn	Pn	00 30 37.8	-0.1
X37A	Clayton	3.07	139		Pn	00 30 39.5	+0.4
HHAR	Hobbs	3.18	101	Pn	Pn	00 30 41.4	+0.6
HHAR				IAmb_Lg		00 31 37.3	
	comp=Z,33nm,0.9s						
W39A	Magazine	3.69	117	IAmb_Lg		00 31 48.8	
	comp=Z,34nm,0.8s						
AMTX	Amarillo	3.74	238	IAmb_Lg		00 31 55.7	
	comp=Z,28nm,0.8s						
N33A	J Bar K, Exete	3.81	4	Pn	Pn	00 30 48.8	-0.7
U40A	Yellville	4.03	97	IAmb_Lg		00 32 00.2	
	comp=Z,30nm,0.8s						
MIAR	Mount Ida	4.19	123	IAmb_Lg		00 32 04.3	
	comp=Z,19nm,0.7s						
P38A	Dawn	4.31	50	IAmb_Lg		00 32 05.8	
	comp=Z,18nm,0.7s						
KSCO	Kaye Shedlock'	4.33	300	IAmb_Lg		00 32 15.2	
	comp=Z,28nm,0.9s						
Z38A	Mt. Pleasant	4.33	147	IAmb_Lg		00 32 10.5	
	comp=Z,23nm,0.7s						
FCAR	Ozark Folk Cen	4.71	101	IAmb_Lg		00 32 17.8	
	comp=Z,20nm,0.7s						

X40A	Basin Creek Fa comp=Z,28nm,1.1s	4.73	120	IAmb_Lg		00 32 26.6	
WHAR	Wooly Hollow comp=Z,24nm,0.8s	4.76	108	IAmb_Lg		00 32 23.5	
MSTX	Muleshoe comp=Z,14nm,0.8s	5.01	235	IAmb_Lg		00 32 39.7	
WLAR	White Oak Lake comp=Z,18nm,0.9s	5.02	129	IAmb_Lg		00 32 38.1	
OGNE	Ogallala comp=Z,24nm,0.7s	5.18	322	IAmb_Lg		00 32 34.9	
237A	Washetta, Mont comp=Z,15nm,0.8s	5.19	161	IAmb_Lg		00 32 48.4	
P40A	Paris comp=Z,15nm,0.8s	5.23	58	IAmb_Lg		00 32 42.2	
N38A	Joes South For comp=Z,23nm,0.7s	5.26	41	IAmb_Lg		00 32 35.7	
T25A	Trinidad comp=Z,16nm,0.8s	5.28	274	IAmb_Lg		00 32 48.6	
PBMO	Poplar Bluff comp=Z,14nm,0.8s	5.92	89	IAmb_Lg		00 33 05.2	
435B	Jarrell comp=Z,17nm,0.8s	6.13	178	IAmb_Lg		00 33 15.1	
JCT	Junction City comp=Z,19nm,0.9s	6.64	195	IAmb_Lg		00 33 24.6	
RSSD	Black Hills comp=Z,7.0nm,0.8s	8.60	329	IAmb_Lg		00 34 24.5	

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*TUL **08** 00:30:30.3±1.1, 36°.95N±0°.02×97°.82W±0°.02, h5^{km}±6^{km}, ML3.4, mb_Lg3.3/94(NEIC), Error ellipse: s-maj=2.9km s-min=2.5km az=45.0*

*NEIC **08** 00:30:30.4±0.8, 36°.92N±0°.02×97°.79W±0°.03, h4^{km}±6^{km}, Error ellipse: s-maj=3.4km s-min=2.4km az=67.0*

*IDC **08** 00:30:32.2±1.8, 37°.08N×98°.06W, h0^{km}, mb3.7/1, mb1 3.9/4, mb1mx3.3/52, mbtmp3.6/4, ML3.5/3, Error ellipse: s-maj=25.5km s-min=14.0km az=105.0*

ISC 08 00:30:30.4±0.8**, 36°.94N**±0°.02×**97°.78W**±0°.03**, h9**^{km}±6^{km}**, n80,** σ1^{s}.**13**/48**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN17	Caldwell West	0.11	8	Pg	Pg	00 30 33.1	0.0
KAN17				Sg	Sg	00 30 34.8	0.0
GC02	Grant County #	0.11	215	Pg	Pg	00 30 32.8	-0.3
GC02				Sg	Sg	00 30 34.2	-0.6
KAN14	Manchester OK	0.14	277	Pg	Pg	00 30 33.2	-0.4
KAN14				Sg	Sg	00 30 34.7	-1.2
KAN01	Argonia South	0.21	5	Pg	Pg	00 30 34.7	-0.1
KAN01				Sg	Sg	00 30 38.0	+0.2
KAN09	Caldwell North	0.24	34	Pg	Pg	00 30 36.1	+0.8
KAN13	South Haven SW	0.26	73	Pg	Pg	00 30 36.1	+0.6
KAN10	Anthony SW Sta	0.31	306	Pg	Pg	00 30 36.4	-0.3
KAN06	Argonia West S	0.31	349	Pg	Pg	00 30 36.6	-0.1
KAN08	Anthony NE Sta	0.32	332	Pg	Pg	00 30 36.7	-0.2
KAN16	Harper SW Stat	0.36	322	Pg	Pg	00 30 37.4	-0.3
OK032	Salt Plains WL	0.37	249	Pg	Pg	00 30 37.7	0.0
KAN12	Harper NE Stat	0.40	334	Pg	Pg	00 30 38.0	-0.2
CROK	Carrier	0.46	200	Pg	Pg	00 30 39.4	-0.1
T35A	Sooner Cattle	1.02	91	Pg	Pg	00 30 50.1	+0.1
U32A	Winter Ranch,	1.13	241	Pg	Pb	00 30 51.8	-0.3
OK029	Liberty Lake	1.17	167	Pg	Pg	00 30 52.4	-0.5
OK031	S. Brethren Rd	1.24	142		Pg	00 30 53.9	-0.5
OK034	N. Norfolk Rd.	1.27	137		Pg	00 30 54.2	-0.5
BCOK	Bluff Creek, N	1.29	174		Pg	00 30 54.3	-0.9
OK030	Cody Creek RV	1.29	141		Pn	00 30 54.7	0.0
OK009	Oakdale Elemen	1.39	168	Pn	Pn	00 30 56.0	0.0
OK025	Westminster Rd	1.40	165	Pn	Pn	00 30 56.7	+0.5
OKCFA	Oklahoma City	1.54	170	Pn	Pn	00 30 58.5	+0.4
OKCSW	OKLAHOMA CITY	1.56	170	Pn	Pn	00 30 59.1	+0.8
R32A	Long Quarter,	1.65	334	Pn	Pn	00 31 00.2	+0.5
R32A	comp=Z,188nm,1.0s			IAmb_Lg		00 31 25.7	
FNO	Franklin	1.71	169	Pn	Pn	00 31 01.0	+0.6
FNO	comp=Z,243nm,0.8s			IAmb_Lg		00 31 28.9	
X34A	Smith Ranch, M comp=Z,161nm,1.0s	2.33	181	IAmb_Lg		00 31 48.4	
LOOK	Love County	2.98	170	Pn	Pn	00 31 18.3	+0.4
LOOK	comp=Z,80nm,0.9s			IAmb_Lg		00 32 09.0	
X37A	Clayton	3.06	139	Pn	Pn	00 31 19.6	+0.7
X37A	comp=Z,75nm,0.8s			IAmb_Lg		00 32 14.4	
HHAR	Hobbs	3.16	101	Pn	Pn	00 31 20.6	+0.1
HHAR	comp=Z,79nm,0.9s			IAmb_Lg		00 32 19.8	
Z35A	Perchaven, San	3.63	173	Pn	Pn	00 31 26.6	-0.2
S39A	Bolivar	3.63	77	Pn	Pn	00 31 27.3	+0.4
W39A	Magazine	3.68	117		Pn	00 31 28.9	+1.4
W39A	comp=Z,84nm,0.9s			IAmb_Lg		00 32 36.7	
AMTX	Amarillo	3.77	238		Pn	00 31 30.5	+1.6
AMTX	comp=Z,90nm,0.8s			IAmb_Lg		00 32 36.1	
N33A	J Bar K, Exete	3.80	4	Pn	Pn	00 31 30.8	+1.6
N33A	comp=Z,67nm,0.7s			IAmb_Lg		00 32 38.3	
U40A	Yellville comp=Z,62nm,0.7s	4.01	97	IAmb_Lg		00 32 40.7	
P38A	Dawn	4.29	50	Pg	Pg	00 31 50.5	-2.0
P38A	comp=Z,66nm,1.0s			IAmb_Lg		00 32 47.8	
Z38A	Mt. Pleasant	4.33	147	Pn	Pn	00 31 35.9	-0.6
Z38A	comp=Z,73nm,0.8s			IAmb_Lg		00 32 55.7	
KSCO	Kaye Shedlock’	4.35	300	Pg	Pg	00 31 51.3	-2.5
KSCO	comp=Z,49nm,0.8s			IAmb_Lg		00 32 55.1	
MGMO	Mountain Grove	4.42	86	Pn	Pn	00 31 38.0	+0.3
BGNE	Belgrade	4.47	356	Pn	Pn	00 31 38.7	+0.3
ABTX	Abilene, Hawle comp=Z,46nm,0.9s	4.57	200	IAmb_Lg		00 32 53.5	
FCAR	Ozark Folk Cen comp=Z,53nm,0.7s	4.68	101	IAmb_Lg		00 32 58.2	
X40A	Basin Creek Fa comp=Z,40nm,0.8s	4.71	120	IAmb_Lg		00 33 09.7	
WHAR	Wooly Hollow comp=Z,64nm,1.0s	4.74	109	IAmb_Lg		00 33 02.5	
WLAR	White Oak Lake comp=Z,41nm,0.8s	5.01	129	IAmb_Lg		00 33 18.4	
237A	Washetta, Mont comp=Z,49nm,1.1s	5.19	161	IAmb_Lg		00 33 25.5	
P40A	Paris comp=Z,43nm,0.8s	5.20	58	IAmb_Lg		00 33 15.1	
N38A	Joes South For comp=Z,63nm,0.9s	5.23	41	IAmb_Lg		00 33 26.3	
T25A	Trinidad comp=Z,51nm,0.9s	5.31	274	IAmb_Lg		00 33 31.8	
CCM	Cathedral Cave comp=Z,41nm,1.0s	5.32	76	IAmb_Lg		00 33 25.1	
CCAR	Cane Creek comp=Z,35nm,0.8s	5.76	120	IAmb_Lg		00 33 38.6	
NATX	Nacogdoches comp=Z,32nm,1.0s	5.78	153	IAmb_Lg		00 33 44.7	
PBMO	Poplar Bluff comp=Z,37nm,0.7s	5.90	89	IAmb_Lg		00 33 44.3	
HBAR	Harrisburg comp=Z,62nm,0.8s	5.92	101	IAmb_Lg		00 33 43.5	
SCIA	State Center comp=Z,57nm,0.7s	6.09	34	IAmb_Lg		00 33 49.1	
PARMO	Parma comp=Z,46nm,0.8s	6.45	90	IAmb_Lg		00 34 03.6	
ISCO	Idaho Springs comp=Z,26nm,0.8s	6.78	297	IAmb_Lg		00 34 06.7	
ECSD	EROS Data Cent comp=Z,26nm,0.7s	6.84	7	IAmb_Lg		00 34 09.7	
P43A	Skaggs, Pawnee comp=Z,29nm,0.8s	7.04	65	IAmb_Lg		00 34 20.6	
W45A	Hickory Valley comp=Z,31nm,0.8s	7.19	102	IAmb_Lg		00 34 33.6	
Q44A	Meyer Farm, Va comp=Z,39nm,0.9s	7.20	72	IAmb_Lg		00 34 26.2	
L40A	Anamosa comp=Z,30nm,0.9s	7.20	43	IAmb_Lg		00 34 26.0	
ANMO	Albuquerque comp=Z,0.3nm,0.3s,baz=80,slow=16,SNR=2.2	7.31	257	Pg	Pb	00 32 40.8	+3.1
ANMO	comp=Z,1.7nm,0.3s,baz=343,slow=14,SNR=9.4			Lg	Lg	00 34 18.4	
T45A	Paducah comp=Z,38nm,0.7s	7.32	87	IAmb_Lg		00 34 31.3	
Y45A	Yeager Farm, C comp=Z,25nm,1.0s	7.39	112	IAmb_Lg		00 34 36.4	
SUSD	Miller comp=Z,44nm,0.7s	7.55	354	IAmb_Lg		00 34 43.4	
I37A	Lemond, Waseca comp=Z,37nm,0.8s	7.82	24	IAmb_Lg		00 34 55.1	
O44A	Mansfield comp=Z,28nm,0.7s	7.97	63	IAmb_Lg		00 34 47.8	
JFWS	Jewell Farm comp=Z,20nm,0.8s	8.31	42	IAmb_Lg		00 35 13.1	
RSSD	Black Hills comp=Z,28nm,1.1s	8.61	328	IAmb_Lg		00 35 12.5	
RWWY	Rawlins comp=Z,30nm,1.1s	8.71	306	IAmb_Lg		00 35 20.7	
M44A	Midewin, Midew comp=Z,27nm,0.8s	8.77	57	IAmb_Lg		00 35 16.0	
K22A	Casper comp=Z,36nm,1.1s	8.82	313	IAmb_Lg		00 35 24.0	
TXAR	Lajitas Array comp=Z,0.3nm,0.3s,baz=42,slow=11,SNR=3.4	9.04	215	Pn	Pn	00 32 42.4	+1.1
TXAR	comp=Z,0.3nm,0.3s,baz=32,slow=14,SNR=2.7			Pg		00 33 12.1	
TXAR	comp=Z,0.3nm,0.3s,baz=112,slow=42,SNR=3.5			Lg	Lg	00 35 11.0	
E28A	Huff comp=Z,26nm,0.9s	9.87	348	IAmb_Lg		00 35 55.4	
PDAR	Pinedale Array comp=Z,0.2nm,0.3s,baz=116,slow=16,SNR=3.1	10.76	306	Pn	Pn	00 33 05.6	+0.8
PDAR	comp=Z,0.2nm,0.3s,baz=112,slow=16,SNR=1.9			Pg		00 33 47.0	
PDAR	comp=Z,0.2nm,0.3s,baz=102,slow=33,SNR=1.8			Lg	Lg	00 35 59.7	
TKL	Tuckaleechee C comp=Z,0.5nm,0.3s,baz=191,slow=23,SNR=4.6	11.38	92	Lg	Lg	00 36 28.9	
ULM	Lac du Bonnet comp=Z,0.5nm,0.3s,baz=182,slow=7.9,SNR=1.5	13.38	5	Pn	Pn	00 33 36.1	-4.3
ULM	comp=Z,0.2nm,0.3s,baz=115,slow=14,SNR=2.7			Lg	Lg	00 37 22.9	
ILAR	Eielson Array comp=Z,1.0nm,0.7s,baz=105,slow=6.9,SNR=11	40.05	330	P	P	00 38 06.7	+1.0

NNC 08 00:56:14.2±3.9**, 38°.23N**×**73°.46E, h9**^{km}±15^{km}**, mb4.1, mpv3.8, 4C-4D, Error ellipse: s-maj=28.0km s-min=20.3km az=160.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa 9.4nm,0.8s	4.47	10	⇑Pg	Pb	00 57 34.6	+1.6
AAK	16nm,0.8s			⇑Lg	Lg	00 58 34.1	
MRKS	Merke 4.0nm,0.6s	4.51	358	Pg	Pb	00 57 34.6	+1.0
MRKS	12nm,0.6s			Lg	Lg	00 58 38.1	
IUG	Iuzhnay 941nm,0.5s	4.71	327	Pg	Pb	00 57 40.0	+3.0
IUG	69nm,0.9s			Lg	Lg	00 58 48.0	
TKM2	Tokmak 2 4.4nm,0.8s	4.96	19	⇑Pg	Pg	00 57 46.2	-3.0
TKM2	12nm,1.1s			⇓Lg	Lg	00 58 51.0	
KST	Kastek 1.6nm,0.2s	5.17	21	Pg	Pb	00 57 47.2	+2.4
KST	9.7nm,0.7s			Lg	Lg	00 58 60.0	
KK02	Karatay Array 1.6nm,0.3s,baz=146,slow=13	5.35	336	⇓Pn	Pn	00 57 37.5	+3.2
KK02	5.8nm,0.6s,baz=164,slow=25			⇓Sn	Sn	00 58 37.1	+1.0
MDOK	Medeo 2.5nm,0.5s	5.63	28	Pg	Pg	00 58 00.1	-1.9
MDOK	14nm,1.2s			Lg	Lg	00 59 13.1	
PDGK	Podgornoye 8.1nm,1.0s	6.84	40	⇓Lg	Lg	00 59 52.7	
AB31	Akbulak array 1.0nm,0.8s,baz=133,slow=13,SNR=7.3	14.70	323	⇑Pn	Pn	00 59 42.1	-0.1

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*IDC **08** 00:58:16.2±1.3, 37°.77N×72°.82E, h0^{km}, mb3.8/6, mb1 3.8/12, mb1mx3.6/41, mbtmp3.6/12, ML3.2/6, Error ellipse: s-maj=25.6km s-min=19.1km az=130.0*

*SOME **08** 00:58:22.9, 38°.20N×72°.33E, h0^{km}*

*NNC **08** 00:58:22.0±2.7, 38°.09N×72°.54E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=19.4km s-min=14.1km az=173.0*

ISC 08 00:58:20.2±1.1**, 38°.05N**±0°.07×**72°.61E**±0°.07**, h10**^{km}**, n24,** σ**2**^{s}.**66**/27**, mb3.8**/6**, 6C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay 574nm,0.5s	4.54	335	*e*P	Pb	00 59 44.1	+4.0
IUG	55nm,1.1s			*e*S	Sg	01 00 43.0	-3.0
IUG	Iuzhnay 574nm,0.5s	4.54	335	Pg	Pb	00 59 44.1	+4.0
IUG	55nm,1.1s			Lg	Lg	01 00 43.0	
MRKS	Merke 9.4nm,0.4s	4.71	6	*e*P	Pg	00 59 48.5	-1.9
MRKS	21nm,0.6s			*e*S	Sg	01 00 50.1	-1.3
MRKS	Merke 9.4nm,0.4s	4.71	6	Pg	Pg	00 59 48.5	-1.9
MRKS	21nm,0.6s			Lg	Lg	01 00 50.1	
AAK	Ala-Archa 1.6nm,0.3s,baz=152,slow=5.9,SNR=6.6	4.80	17	Pn	Pn	00 59 36.5	+3.7
AAK	1.0nm,0.3s,baz=338,slow=19,SNR=1.8			Sn	Sb	01 00 37.5	-4.9
AAK	Ala-Archa 16nm,1.1s	4.80	17	⇓Pg	Pb	00 59 47.8	+3.2
AAK	25nm,0.9s			⇓Lg	Lg	01 00 52.6	
KK02	Karatay Array 5.0nm,0.3s	5.29	343	⇓Pn	Pn	00 59 42.2	+2.9
KK02	8.5nm,0.7s			⇓Sn	Sn	01 00 44.2	+3.9
KK02	14nm,0.8s			⇑Lg	Lg	01 01 09.6	
TKM2	Tokmak 2 7.1nm,0.8s	5.37	24	⇑Pg	Pg	01 00 00.3	-2.7
TKM2	21nm,1.1s			⇑Lg	Lg	01 01 11.6	
KST	Kastek 3.0nm,0.2s	5.60	26	*e*P	Pg	01 00 06.6	-0.9
KST	15nm,0.9s			*e*S	Sg	01 01 20.8	+0.8
KST	Kastek 3.0nm,0.2s	5.60	26	Pg	Pg	01 00 06.6	-0.9
KST	15nm,0.9s			Lg	Lg	01 01 20.8	
MDOK	Medeo 5.1nm,0.7s	6.12	32	Pg	Pb	01 00 11.5	+4.5
MDOK	28nm,1.0s			⇑Lg	Lg	01 01 35.2	
PDGK	Podgornoye 15nm,1.2s	7.42	43	⇑Lg	Lg	01 02 15.1	
MKAR	Makanchi Array 0.1nm,0.3s,baz=204,slow=13,SNR=1.8	11.28	36	Pn	Pn	01 01 02.7	+1.2
GEYT	Alibeck 0.3nm,0.3s,baz=103,slow=11,SNR=1.7	11.44	274	Pn	Pn	01 01 04.0	+0.3
KURBB	Kurchatov Arra 0.0nm,0.3s,baz=207,slow=12,SNR=3.6	13.26	17	Pn	Pn	01 01 27.6	-0.7
AB31	Akbulak array 1.1nm,0.5s,baz=133,slow=13,SNR=25	14.45	325	⇑Pn	Pn	01 01 43.4	-1.3
BVAR	Borovoye Array 0.2nm,0.3s,baz=182,slow=14,SNR=2.9	15.05	355	Pn	Pn	01 01 51.7	-1.1
ZALV	Zalesovo Beam 0.4nm,0.3s,baz=215,slow=9.6,SNR=11	17.98	24	P	Pn	01 02 28.6	-1.4
SONM	Songino Array 0.7nm,0.9s,baz=269,slow=12,SNR=5.3	26.41	57	P	P	01 03 54.6	-2.4
FINES	FINESS Array B 2.1nm,0.7s,baz=119,slow=8.6,SNR=8.5	36.94	325	P	P	01 05 29.4	+0.3
ARCES	ARCESS Array B 2.9nm,0.9s,baz=112,slow=9.2,SNR=8.3	40.22	336	P	P	01 05 56.6	0.0
TORD	Torodi Ar. Bea 0.3nm,0.5s,baz=40,slow=4.3,SNR=4.0	67.03	269	P	P	01 09 12.3	-1.5
YKA	Yellowknife Ar 0.8nm,0.8s,baz=352,slow=5.4,SNR=4.6	79.63	3	P	P	01 10 25.9	-1.4
WRA	Warramunga Arr 0.4nm,0.8s,baz=327,slow=4.8,SNR=1.9	81.74	123	P	P	01 10 35.6	-3.7

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*SOME **08** 01:15:45.1, 38°.27N×73°.72E, h0^{km}*

*NNC **08** 01:15:49.2±3.2, 38°.38N×73°.65E, h4^{km}±14^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=23.5km s-min=17.6km az=157.0*

ISC 08 01:15:49.8±2.6**, 38°.5N**±0°.1×**73°.78E**±0°.07**, h10**^{km}**, n13,** σ**3**^{s}.**08**/18**, 7C-1D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa 5.5nm,0.8s	4.22	7	⇑Pg	Pb	01 17 07.6	+3.3
AAK	12nm,0.9s			⇑Lg	Lg	01 18 05.3	
MRKS	Merke 2.2nm,0.4s	4.31	355	*e*P	Pb	01 17 09.5	+3.7
MRKS	6.8nm,0.5s			*e*S	Sg	01 18 08.1	-0.2
MRKS	Merke 2.2nm,0.4s	4.31	355	Pg	Pb	01 17 09.5	+3.7
MRKS	6.8nm,0.5s			Lg	Lg	01 18 08.1	
IUG	Iuzhnay 895nm,0.7s	4.68	323	*e*P	Pb	01 17 14.7	+2.7
IUG	36nm,0.8s			*e*S	Sg	01 18 17.4	-2.5
IUG	Iuzhnay 895nm,0.7s	4.68	323	Pg	Pb	01 17 14.7	+2.7
IUG	36nm,0.8s			Lg	Lg	01 18 17.4	
TKM2	Tokmak 2 3.8nm,0.8s	4.68	17	⇑Pg	Pg	01 17 17.4	-2.0
TKM2	7.1nm,0.8s			⇑Lg	Lg	01 18 21.2	
KST	Kastek 2.5nm,0.6s	4.88	19	*e*P	Pb	01 17 18.5	+3.0
KST	3.9nm,0.7s			*e*S	Sg	01 18 24.3	-2.2
KST	Kastek 2.5nm,0.6s	4.88	19	Pg	Pb	01 17 18.5	+3.0
KST	3.9nm,0.7s			Lg	Lg	01 18 24.3	
KK02	Karatay Array 1.4nm,0.4s	5.27	333	⇑Pn	Pn	01 17 11.3	+2.6
KK02	5.1nm,0.5s			⇑Sn	Sn	01 18 12.2	+2.7
MDOK	Medeo 4.8nm,0.9s	5.32	27	Pg	Pg	01 17 30.4	-1.4
MDOK	8.7nm,1.1s			⇓Lg	Lg	01 18 41.3	
KUU	Kurty 0.6nm,0.4s	5.77	19	*e*P	Pg	01 17 37.0	-3.3
KUU	4.2nm,0.7s			*e*S	Sg	01 18 55.1	-0.1
KUU	Kurty 0.6nm,0.4s	5.77	19	Pg	Pg	01 17 37.0	-3.3
KUU	4.2nm,0.7s			Lg	Lg	01 18 55.1	
AB31	Akbulak array 0.3nm,0.5s,baz=134,slow=13,SNR=7.0	14.68	322	⇑Pn	Pn	01 19 13.3	-4.2

NNC 08 01:19:49.4±2.4**, 39°.59N**×**73°.17E, h0**^{km}**, mb3.6, mpv3.2, 3C-2D, Error ellipse: s-maj=32.1km s-min=15.2km az=137.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa 14nm,1.1s	3.21	18	⇓Pn	Pn	01 20 40.6	-0.6
AAK	16nm,1.0s			⇑Lg	Lg	01 21 37.9	
TKM2	Tokmak 2 3.0nm,0.6s	3.80	28	⇑Pg	Pb	01 20 58.7	+1.3
TKM2	8.8nm,1.1s			⇑Lg	Lg	01 21 54.3	
MDOK	Medeo 3.0nm,0.8s	4.61	38	Pg	Pb	01 21 12.2	+0.9
MDOK	5.8nm,1.0s			Lg	Lg	01 22 15.7	
AB31	Akbulak array 0.8nm,0.8s,baz=138,slow=13,SNR=4.1	13.50	320	⇓Pn	Pn	01 23 03.1	+1.0

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*IDC **08** 01:22:20.7±4.4, 47°.23N×151°.91E, h82^{km}±28^{km}, mb3.5/6, mb1 3.6/8, mb1mx3.3/46, mbtmp3.8/8, Error ellipse: s-maj=106.1km s-min=24.5km az=136.0*

ISC 08 01:22:19.8±4.4**, 46°.9N**±0°.6×**152°.1E**±0°.5**, h100**^{km}**, n16,** σ**1**^{s}.**15**/10**, mb3.5**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	Petropavlovsk- 0.2nm,0.3s,baz=176,slow=9.0,SNR=5.1	7.18	28	P	Pn	01 24 00.2	-1.8
ASAJ	Asahikawa 0.7nm,0.3s,baz=45,slow=20,SNR=2.2	7.24	251	P	Pn	01 24 02.0	-0.8
USRK	Ussuriysk Ar. baz=74,slow=11,SNR=5.4	14.35	267	P	P	01 25 41.0	-1.1
KSRS	Korea Array 1.5nm,0.7s,baz=53,slow=11,SNR=4.5	20.19	251	P	Pn	01 26 50.6	+1.6
H11N2	WAKE ISLAND Hy baz=340,slow=76,SNR=107	29.68	151	T	T	01 59 38.1	
H11N1	WAKE ISLAND Hy baz=340,slow=76,SNR=87	29.69	151	T	T	01 59 40.6	
H11N3	WAKE ISLAND Hy baz=340,slow=76,SNR=76	29.69	151	T	T	01 59 37.3	
H11S1	WAKE ISLAND Hy baz=341,slow=76,SNR=15	30.75	152	T	T	02 00 51.2	
H11S3	WAKE ISLAND Hy baz=341,slow=76,SNR=21	30.76	152	T	T	02 00 50.7	
H11S2	WAKE ISLAND Hy baz=341,slow=76,SNR=11	30.77	152	T	T	02 00 58.9	
MKAR	Makanchi Array 0.3nm,0.5s,baz=72,slow=7.7,SNR=5.8	46.26	297	P	P	01 30 35.1	+0.3
MKAR	0.3nm,0.7s,baz=50,slow=2.3,SNR=1.8			PcP	PcP	01 32 09.7	+1.0
FINES	FINESS Array B 3.3nm,1.0s,baz=28,slow=8.6,SNR=12	63.61	334	P	P	01 32 40.2	+0.8
NB2	NORSAR Subarra comp=Z,0.2nm,0.5s,baz=24,slow=6.5	67.86	341	P	P	01 33 07.5	+0.7
NOA	NORSAR Array B comp=Z,0.5nm,0.5s,baz=30,slow=6.7,SNR=5.4	67.86	341	P	P	01 33 07.5	+0.7
AKASG	Malin Array Be comp=Z,0.9nm,0.5s,baz=35,slow=6.1,SNR=3.8	71.04	326	P	P	01 33 27.3	+0.8
GERES	GERESS Array B comp=Z,0.5nm,0.6s,baz=29,slow=6.7,SNR=4.0	78.02	333	P	P	01 34 08.0	+0.9

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*IDC **08** 01:24:23.6±0.9, 4°.98S×153°.46E, h0^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.8/31, mbtmp3.8/8, MS2.9/3, Ms1 2.9/3, ms1mx2.5/38, Error ellipse: s-maj=35.3km s-min=22.7km az=90.0*

*NEIC **08** 01:24:33.5±0.8, 5°.0S±0°.1×153°.6E±0°.1, h75^{km}±7^{km}, mb4.1/12, Error ellipse: s-maj=27.7km s-min=10.2km az=46.0*

ISC 08 01:24:31.1±0.8**, 5°.1S**±0°.1×**153°.7E**±0°.1**, h56**^{km}**, n25,** σ**1**^{s}.**27**/26**, mb4.0**/12**, MS2.8**/3**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.76	301	Pn	Pn	01 24 59.8	+0.6
RABL				Sn	Sn	01 25 23.9	+3.3
DZM	Mont Dzumac 3.3nm,0.5s,baz=222,slow=13,SNR=9.5	20.92	145	P	P	01 29 10.6	+1.4
DZM	Mont Dzumac	20.92	145	P	P	01 29 10.8	+1.5
DZM	comp=Z,9.4nm,1.3s			IAmb	IAmb	01 29 13.6	
MTN	Manton Dam	23.55	249	P	P	01 29 35.3	-1.4
MTN	comp=Z,17nm,1.2s			IAmb	IAmb	01 29 45.4	
WB0	Warramunga Arr	23.78	230	P	P	01 29 38.0	-0.8
WB0	comp=Z,10nm,1.4s			IAmb	IAmb	01 29 57.1	
WB2	Warramunga Arr	23.91	230	P	P	01 29 39.0	-1.0
WB2	comp=Z,12nm,1.5s			IAmb	IAmb	01 29 44.8	
WRA	Warramunga Arr comp=Z,1.7nm,0.7s,baz=53,slow=9.9,SNR=8.5	23.92	230	P	P	01 29 39.4	-0.7
WRA	comp=Z,1.0nm,0.7s,baz=60,slow=2.4,SNR=5.1			PcP	PcP	01 33 22.2	+0.6
WRA	comp=Z,34nm,21.2s,baz=70,slow=34			LR	LR	01 37 51.4	
ASAR	Alice Springs comp=Z,0.3nm,0.6s,baz=56,slow=8.8,SNR=6.1	26.54	224	P	P	01 30 03.0	-0.8
ASAR	comp=Z,0.8nm,0.6s,baz=64,slow=2.2,SNR=5.7			PcP	PcP	01 33 27.8	+0.3
STKA	Stephens Creek comp=Z,37nm,18.8s,baz=26,slow=34	28.95	202	LR	LR	01 40 54.7	
KAPI	Kappang comp=Z,15nm,20.9s,baz=356,slow=38	33.80	269	LR	LR	01 45 42.9	
QIZ	Qiongzhong	49.38	300	P	P	01 33 14.2	-1.2

SONM	**Songino Array**	**67.04**	**327**	P	**P**	**01 35 18.1**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=147,slow=5.3,SNR=4.7						
SONM	**Songino Array**	**67.04**	**327**	P	**P**	**01 35 17.1**	**-1.4**
VNDA	**Vanda**	**72.51**	**178**	P	**P**	**01 35 52.4**	**+0.9**
MK31	**Makanchi Array**	**81.12**	**319**	P	**P**	**01 36 39.3**	**-1.3**
MK31				IAmb	IAmb	01 36 48.4	
	comp=Z,3.0nm,1.3s						
MKAR	**Makanchi Array**	**81.12**	**319**	P	**P**	**01 36 40.1**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=94,slow=7.5,SNR=12						
MKAR	**Makanchi Array**	**81.12**	**319**	P	**P**	**01 36 39.7**	**-0.9**
MAKZ	**Makanchi**	**81.33**	**319**	P	**P**	**01 36 41.0**	**-0.7**
MAKZ				IAmb	IAmb	01 36 50.5	
	comp=Z,5.4nm,1.2s						
ZALV	**Zalesovo Beam**	**81.89**	**326**	P	**P**	**01 36 42.2**	**-2.1**
	comp=Z,0.6nm,0.4s,baz=95,slow=5.3,SNR=2.5						
ILAR	**Eielson Array**	**82.10**	**22**	P	**P**	**01 36 46.8**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=251,slow=4.7,SNR=1.5						
QSPA	**South Pole Qui**	**84.87**	**180**	P	**P**	**01 37 00.3**	**+0.6**
MAW	**Mawson**	**85.64**	**203**	P	**P**	**01 37 03.4**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=106,slow=6.1,SNR=6.3						
MAW	**Mawson**	**85.64**	**203**	P	**P**	**01 37 02.9**	**-0.4**
TORD	**Torodi Ar. Bea**	**151.23**	**288**	PKPbc	**PKPbc**	**01 44 18.5**	**-0.9**
	comp=Z,1.9nm,0.4s,baz=60,slow=2.1,SNR=34						
TORD	**Torodi Ar. Bea**	**151.23**	**288**		**PKPbc**	**01 44 18.3**	**-1.1**

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*SOME **08** 01:40:15.9, 38°.50N×72°.68E, h0^{km}*

*NNC **08** 01:40:24.6±2.1, 38°.42N×72°.99E, h5^{km}±9^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=13.6km s-min=11.9km az=43.0*

ISC 08 01:40:26.8±2.9**, 38°.5N**±0°.2×**72°.71E**±0°.08**, h10**^{km}**, n12,** σ**3**^{s}**.05**/13**, 5C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.17**	**331**	*e*P	**Pn**	**01 41 33.7**	**+3.2**
	494nm,0.6s						
IUG				*e*S	**Sb**	**01 42 29.6**	**-1.0**
	28nm,0.7s						
IUG	**Iuzhnay**	**4.17**	**331**	Pg	**Pb**	**01 41 37.2**	**-3.0**
	494nm,0.6s						
IUG				Lg	Lg	01 42 45.4	
	28nm,0.7s						
MRKS	**Merke**	**4.25**	**5**	*e*P	**Pn**	**01 41 32.9**	**+1.3**
	4.4nm,0.5s						
MRKS				*e*S	**Sb**	**01 42 28.4**	**-4.6**
	17nm,0.6s						
MRKS	**Merke**	**4.25**	**5**	Pg	Pn	01 41 35.6	+4.0
	4.4nm,0.5s						
MRKS				Lg	Lg	01 42 42.6	
	17nm,0.6s						
AAK	**Ala-Archa**	**4.34**	**18**	⇑Pg	**Pb**	**01 41 43.6**	**+0.4**
	4.4nm,0.6s						
AAK				⇓Lg	Lg	01 42 41.6	
	18nm,0.8s						
KK02	**Karatay Array**	**4.88**	**341**	⇓Pn	**Pn**	**01 41 40.7**	**+0.5**
	2.2nm,0.5s						
KK02				⇑Sn	**Sn**	**01 42 40.7**	**+4.0**
	18nm,1.1s						
TKM2	**Tokmak 2**	**4.92**	**26**	⇑Pn	**Pn**	**01 41 40.2**	**-0.7**
	1.8nm,0.9s						
TKM2				⇓Pg	**Pb**	**01 41 54.8**	**+1.7**
	7.1nm,1.0s						
TKM2				⇑Lg	Lg	01 43 00.8	
	9.2nm,0.8s						
KST	**Kastek**	**5.16**	**28**	*e*P	**Pb**	**01 41 52.3**	**-4.8**
	3.5nm,0.6s						
KST				*e*S	**Sb**	**01 43 01.9**	**+2.7**
	10nm,1.0s						
KST	**Kastek**	**5.16**	**28**	Pg	Pb	01 41 51.4	-5.7
	3.5nm,0.6s						
KST				Lg	Lg	01 43 09.1	
	10nm,1.0s						
MDOK	**Medeo**	**5.69**	**34**	Pg	Pg	01 42 08.2	-7.6
	5.0nm,0.8s						
MDOK				⇓Lg	Lg	01 43 23.4	
	16nm,1.2s						
PDGK	**Podgornoye**	**7.04**	**45**	⇑Lg	Lg	01 44 04.8	
	11nm,1.2s						
AB31	**Akbulak array**	**14.12**	**324**	⇓Pn	**Pn**	**01 43 46.3**	**-0.4**
	0.4nm,0.5s,baz=134,slow=13,SNR=14						

IDC 08 01:42:48.5±1.6**, 0°.61N**×**126°.74E, h0**^{km}**, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/34**, mbtmp3.8**/4**, Error ellipse: s-maj=172.3km s-min=21.3km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.74**	**160**	P	P	01 47 40.9	-0.8
	1.9nm,0.5s,baz=340,slow=9.9,SNR=27						
ASAR	**Alice Springs**	**25.12**	**164**	P	P	01 48 15.9	+0.7
	1.0nm,0.4s,baz=344,slow=12,SNR=17						
MKAR	**Makanchi Array**	**60.12**	**326**	P	P	01 52 57.7	-0.1
	0.5nm,0.5s,baz=122,slow=8.1,SNR=11						
ZALV	**Zalesovo Beam**	**63.36**	**334**	P	P	01 53 19.4	-0.1
	0.2nm,0.3s,baz=130,slow=5.8,SNR=1.8						

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*GUC **08** 01:47:48.4±0.7, 21°.17S×68°.93W, h119^{km}±3^{km}, ML3.3*

*IDC **08** 01:48:18.9±7.5, 18°.26S×66°.84W, h189^{km}±42^{km}, mb3.4/2, mb1 3.4/3, mb1mx3.0/27, mbtmp3.9/3, Error ellipse: s-maj=150.0km s-min=51.6km az=28.0*

ISC 08 01:47:47.9±1.3**, 21°.18S**±0°.03×**69°.00W**±0°.08**, h122**^{km}±10^{km}**, n19,** σ**0**^{s}**.51**/32**, 8C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.48**	**286**	⇑*e*P	**Pn**	**01 48 06.0**	**-0.1**
PB01				*e*S	**Sn**	**01 48 19.4**	**-0.4**
PB01				IAML		01 48 20.4	
	comp=E,2μm,0.4s						
PB09	**IPOC Station P**	**0.66**	**200**	⇑*e*P	**Pn**	**01 48 07.3**	**-0.1**
PB09				*e*S	**Sn**	**01 48 22.5**	**+0.4**
PB02	**IPOC Station P**	**0.85**	**260**	⇑*e*P	**Pn**	**01 48 09.4**	**+0.5**
PB02				*e*S	**Sn**	**01 48 25.1**	**+0.4**
PB02				IAML		01 48 26.2	
	comp=N,1μm,0.5s						
PB07	**IPOC Station P**	**0.99**	**236**	⇑*e*P	**Pn**	**01 48 10.7**	**+0.4**
PB07				*i* S	**Sn**	**01 48 27.8**	**+0.6**
PB07				IAML		01 48 28.4	
	comp=N,604nm,0.1s						
PB08	**IPOC Station P**	**1.04**	**352**	*e*P	**Pn**	**01 48 11.2**	**+0.2**
PB08				*e*S	**Sn**	**01 48 28.4**	**0.0**
PB08				IAML		01 48 29.9	
	comp=E,566nm,0.2s						
PB03	**IPOC Station P**	**1.12**	**219**	⇑*e*P	**Pn**	**01 48 11.3**	**-0.2**
PB03				*e*S	**Sn**	**01 48 29.3**	**-0.1**
PB03				IAML		01 48 30.3	
	comp=E,791nm,0.2s						
TA01	**Diego Aracena**	**1.26**	**299**	⇑*e*P	**Pn**	**01 48 12.9**	**+0.1**
TA01				*e*S	**Sn**	**01 48 31.9**	**+0.1**
TA01				IAML		01 48 33.5	
	comp=E,575nm,0.1s						
LVC	**Limon Verde**	**1.43**	**177**	⇓*e*P	**Pn**	**01 48 15.4**	**+0.3**
LVC				*e*S	**Sn**	**01 48 34.4**	**-1.3**
PB11	**IPOC Station P**	**1.54**	**336**	⇑*e*P	**Pn**	**01 48 16.3**	**+0.2**
PB11				*e*S	**Sn**	**01 48 37.8**	**+0.3**
PB11				IAML		01 48 38.5	
	comp=N,697nm,0.1s						
PB04	**IPOC Station P**	**1.57**	**223**	*e*P	**Pn**	**01 48 16.9**	**+0.3**
PB04				*e*S	**Sn**	**01 48 38.3**	**-0.1**
PB04				IAML		01 48 41.3	
	comp=N,327nm,0.3s						
PB06	**IPOC Station P**	**1.61**	**199**	*e*P	**Pn**	**01 48 17.5**	**+0.5**
PB06				*e*S	**Sn**	**01 48 39.3**	**+0.1**
PB06				IAML		01 48 41.1	
	comp=E,261nm,0.1s						
PSGC	**Pisagua**	**1.89**	**326**	*e*P	**Pn**	**01 48 20.0**	**-0.3**
PSGC				*e*S	**Sn**	**01 48 44.0**	**-1.0**
PSGC				IAML		01 48 50.2	
	comp=N,187nm,0.2s						
PB05	**IPOC Station P**	**2.01**	**214**	*e*P	**Pn**	**01 48 22.1**	**+0.4**
PB05				*e*S	**Sn**	**01 48 47.4**	**-0.2**
PB05				IAML		01 48 47.8	
	comp=E,165nm,0.3s						
PB12	**IPOC Station P**	**2.84**	**334**	*e*P	**Pn**	**01 48 31.8**	**-0.6**
PB12				*e*S	**Sn**	**01 49 05.8**	**-0.7**
PB12				IAML		01 49 15.3	
	comp=E,79nm,0.3s						
PB16	**IPOC Station P**	**2.87**	**350**	⇑*e*P	**Pn**	**01 48 33.9**	**+0.7**
PB16				*e*S	**Sn**	**01 49 08.6**	**+0.7**
PB16				IAML		01 49 12.5	
	comp=E,34nm,0.8s						
LPAZ	**La Paz**	**4.93**	**10**	P	**Pn**	**01 49 01.2**	**+0.7**
	comp=E,0.1nm,0.3s,baz=170,slow=6.1,SNR=2.5						
LPAZ				S	Sn	01 49 33.6	-23
	comp=E,0.6nm,0.3s,baz=140,slow=3.6,SNR=8.9						
BDFB	**Brasilia**	**20.65**	**78**	P	**P**	**01 52 17.8**	**-0.4**
	comp=E,0.4nm,0.3s,baz=243,slow=14,SNR=4.3						
KOWA	**Kowa**	**72.96**	**67**	P	P	01 59 11.5	+6.9
	comp=E,0.7nm,0.5s,baz=242,slow=3.7,SNR=2.4						
TORD	**Torodi Ar. Bea**	**77.32**	**70**	P	P	01 59 36.2	+6.7
	comp=E,0.6nm,0.5s,baz=258,slow=5.9,SNR=7.5						

NNC 08 01:54:49.1±3.3**, 38°.05N**×**72°.47E, h0**^{km}±16^{km}**, mb3.6, mpv3.2, 3C-3D, Error ellipse: s-maj=24.2km s-min=18.4km az=171.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.84**	**18**	Pg	Pb	01 56 16.5	+1.6
	5.7nm,1.0s						
AAK				⇑Lg	Lg	01 57 22.9	
	9.5nm,1.3s						
KK02	**Karatay Array**	**5.26**	**344**	⇓Pn	Pn	01 56 09.0	-0.1
	1.1nm,0.4s						
KK02				⇓Pg	Pb	01 56 25.3	+3.2
	2.4nm,0.6s						
KK02				⇑Lg	Lg	01 57 36.5	
	3.7nm,0.6s						
TKM2	**Tokmak 2**	**5.42**	**25**	⇓Pg	Pb	01 56 28.9	+4.1
	2.3nm,0.8s						
TKM2				⇑Lg	Lg	01 57 41.7	
	2.6nm,0.8s						
AB31	**Akbulak array**	**14.39**	**325**	Pn	Pn	01 58 14.4	+0.3
	0.2nm,0.5s,baz=145,slow=11,SNR=4.8						

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*THE **08** 01:56:10.1, 38°.83N×20°.63E, h7^{km}, ML2.7/6, Error ellipse: s-maj=1.7km s-min=0.7km az=95.0*

*ATH **08** 01:56:10.1, 38°.82N×20°.63E, h8^{km}±1^{km}, ML2.6/4, Error ellipse: s-maj=2.3km s-min=1.0km az=296.0*

ISC 08 01:56:08.4±0.8**, 38°.84N**±0°.03×**20°.53E**±0°.04**, h13**^{km}±5^{km}**, n45,** σ**1**^{s}**.19**/68**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSLK	**Tsoukalades, L**	**0.10**	**99**	P	**Pg**	**01 56 11.4**	**0.0**
TSLK				S	**Sg**	**01 56 12.6**	**-0.9**
	48μm,0.2s						
TSLK	**Tsoukalades, L**	**0.10**	**99**	P	**Pg**	**01 56 11.4**	**0.0**
TSLK				S	**Sg**	**01 56 12.5**	**-0.9**
TSLK				AML	AML	01 56 12.7	
TSLK				AML	AML	01 56 12.8	
	comp=N,63099μm,0.2s						
LKD2	**Lefkada island**	**0.11**	**117**	P	**Pg**	**01 56 11.7**	**+0.1**
LKD2				S	**Sg**	**01 56 12.4**	**-1.4**
	comp=N,19μm,0.2s						
LKD2	**Lefkada island**	**0.11**	**117**	P	**Pg**	**01 56 11.6**	**+0.1**
LKD2				S	**Sg**	**01 56 12.9**	**-0.9**
LKD2				AML	AML	01 56 13.1	
	comp=E,31798μm,0.2s						
LKD2				AML	AML	01 56 13.2	
	comp=N,45855μm,0.3s						
EVGI	**Lefkada island**	**0.24**	**156**	P	**Pg**	**01 56 14.3**	**+0.8**
EVGI				S	**Sg**	**01 56 17.8**	**+0.8**
	comp=N,2μm,0.2s						
EVGI	**Lefkada island**	**0.24**	**156**	P	**Pg**	**01 56 14.3**	**+0.8**
EVGI				S	**Sg**	**01 56 17.7**	**+0.7**
FSK	**Fiskardo**	**0.38**	**176**	P	**Pb**	**01 56 17.2**	**+0.2**
FSK				S	**Sb**	**01 56 23.2**	**+0.4**
	comp=N,515nm,0.2s						
FSK	**Fiskardo**	**0.38**	**176**	P	**Pb**	**01 56 17.2**	**+0.2**
FSK				S	**Sb**	**01 56 23.3**	**+0.5**
FSK				AML	AML	01 56 23.7	
	comp=E,1032μm,0.2s						
FSK				AML	AML	01 56 23.8	
	comp=N,698μm,0.3s						
KEF4	**Livadi, Kephal**	**0.59**	**188**	P	**Pb**	**01 56 20.8**	**+0.2**
KEF4				S	**Sb**	**01 56 30.4**	**+1.6**
	comp=N,2μm,0.2s						
KEF4	**Livadi, Kephal**	**0.59**	**188**	P	**Pb**	**01 56 20.7**	**+0.2**
KEF4				S	**Sb**	**01 56 28.8**	**+0.1**
KEF3	**Kipouria, Keph**	**0.65**	**193**	P	**Pb**	**01 56 21.5**	**-0.1**
VLS	**Valsamata**	**0.66**	**176**	P	**Pb**	**01 56 21.7**	**-0.2**
VLS				S	**Sb**	**01 56 31.9**	**+0.9**
	comp=N,208nm,0.2s						
VLS	**Valsamata**	**0.66**	**176**	P	**Pb**	**01 56 21.7**	**-0.2**
VLS				S	**Sb**	**01 56 30.9**	**-0.1**
VLS				AML	AML	01 56 34.5	
	comp=N,355μm,0.2s						
VLS				AML	AML	01 56 34.7	
	comp=E,438μm,0.2s						
IGT	**Igoumenitsa**	**0.71**	**347**	P	**Pn**	**01 56 24.2**	**0.0**
PSDA	**Pessada-Kefalo**	**0.73**	**177**	P	**Pb**	**01 56 23.0**	**+0.1**
PSDA				S	**Sb**	**01 56 33.8**	**+1.1**
PSDA	**Pessada-Kefalo**	**0.73**	**177**	P	**Pb**	**01 56 22.7**	**-0.2**
JAN	**Janina**	**0.85**	**17**	P	**Pn**	**01 56 27.0**	**+0.8**
EVR	**Evrytania**	**1.00**	**85**	P	**Pg**	**01 56 27.9**	**+0.2**
KEK	**Kerkira**	**1.04**	**327**	P	**Pn**	**01 56 31.7**	**+2.9**
VTN	**Vitineika**	**1.05**	**151**	P	**Pb**	**01 56 29.4**	**+0.8**
RLS	**Riolos of Patr**	**1.07**	**136**	P	**Pg**	**01 56 29.0**	**-0.1**
RLS	**Riolos of Patr**	**1.07**	**136**	P	**Pg**	**01 56 28.8**	**-0.3**
ANX	**Ano Chora**	**1.11**	**102**	P	**Pg**	**01 56 29.5**	**-0.4**
EFP	**Efpalio**	**1.15**	**111**	P	**Pg**	**01 56 30.5**	**-0.1**
EFP	**Efpalio**	**1.15**	**111**	P	**Pg**	**01 56 30.4**	**-0.2**
LTHK	**Lithakia**	**1.15**	**168**	P	**Pg**	**01 56 30.3**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.26**	**82**	P	**Pn**	**01 56 32.9**	**+1.1**
SERG	**Sergoula**	**1.27**	**109**	P	**Pn**	**01 56 32.1**	**+0.2**
DRO	**Drossia**	**1.28**	**133**	P	**Pn**	**01 56 31.9**	**-0.1**
LAKA	**Lakka**	**1.28**	**117**	P	**Pn**	**01 56 32.4**	**+0.3**
TRIZ	**Trizonia**	**1.30**	**111**	P	**Pn**	**01 56 32.9**	**+0.7**
THL	**Klokotos Trika**	**1.36**	**57**	P	**Pb**	**01 56 35.1**	**+1.4**
AGG	**Agios Georgios**	**1.41**	**82**	P	**Pn**	**01 56 35.3**	**+1.4**
KLV	**Kalavryta, Ach**	**1.50**	**122**	P	**Pn**	**01 56 35.4**	**+0.4**
GUR	**Goura**	**1.68**	**122**	P	**Pn**	**01 56 38.8**	**+1.1**
DBRK	**Dubrovnik**	**4.23**	**335**	*e*Pn	**Pn**	**01 57 13.8**	**+1.2**
DBRK				Sn	**Sn**	**01 58 02.1**	**+0.2**
STON	**Ston**	**4.56**	**333**	*e*Pn	**Pn**	**01 57 18.2**	**+1.1**
STON				Sn	**Sn**	**01 58 08.9**	**-1.1**
LSTV	**Lastovo**	**4.80**	**326**	*e*Pn	**Pn**	**01 57 20.7**	**+0.3**
LSTV				Sn	**Sn**	**01 58 13.6**	**-2.2**
MAKA	**Makarska**	**5.18**	**330**	*e*Pn	**Pn**	**01 57 27.2**	**+1.6**
MAKA				Sn	**Sn**	**01 58 24.0**	**-1.1**
RICI	**Ricice**	**5.31**	**332**	*e*Pn	**Pn**	**01 57 29.0**	**+1.6**
RICI				Sn	**Sn**	**01 58 27.1**	**-1.4**
HVAR	**Hvar**	**5.32**	**326**	*e*Pn	**Pn**	**01 57 28.8**	**+1.2**
HVAR				Sn	**Sn**	**01 58 25.8**	**-2.9**
ZIRJ	**Zirje**	**6.06**	**324**	*e*Pn	**Pn**	**01 57 39.0**	**+1.3**
ZIRJ				Sn	**Sn**	**01 58 43.9**	**-3.0**
MORI	**Morici**	**6.20**	**326**	*e*Pn	**Pn**	**01 57 41.0**	**+1.4**
MORI				Sn	**Sn**	**01 58 48.3**	**-1.9**
DUGI	**Dugi Otok**	**6.59**	**323**	*e*Pn	**Pn**	**01 57 45.0**	**0.0**
DUGI				Sn	**Sn**	**01 58 56.8**	**-3.1**
UDBI	**Udbina**	**6.71**	**329**	*e*Pn	**Pn**	**01 57 48.1**	**+1.4**
UDBI				Sn	**Sn**	**01 59 00.6**	**-2.4**

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*THE **08** 01:59:24.0, 38°.83N×20°.61E, h6^{km}±1^{km}, ML2.5/6, Error ellipse: s-maj=2.0km s-min=0.7km az=101.0*

*ATH **08** 01:59:24.1, 38°.82N×20°.61E, h8^{km}±1^{km}, ML2.4/6, Error ellipse: s-maj=2.0km s-min=1.0km az=117.0*

ISC 08 01:59:23.0±0.8**, 38°.84N**±0°.02×**20°.60E**±0°.03**, h12**^{km}±4^{km}**, n43,** σ**1**^{s}**.18**/67**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSLK	**Tsoukalades, L**	**0.05**	**110**	P	**Pg**	**01 59 25.4**	**+0.1**
TSLK				S	**Sg**	**01 59 26.5**	**-0.4**
	52μm,0.2s						
TSLK	**Tsoukalades, L**	**0.05**	**110**	P	**Pg**	**01 59 25.3**	**+0.1**
TSLK				S	**Sg**	**01 59 26.6**	**-0.3**
TSLK				AML	AML	01 59 26.7	
TSLK				AML	AML	01 59 26.7	
	comp=N,59382μm,0.2s						
LKD2	**Lefkada island**	**0.07**	**139**	P	**Pg**	**01 59 25.6**	**+0.1**
LKD2				S	**Sg**	**01 59 26.3**	**-1.0**
	comp=N,14μm,0.2s						
LKD2	**Lefkada island**	**0.07**	**139**	P	**Pg**	**01 59 25.6**	**+0.1**
LKD2				S	**Sg**	**01 59 26.9**	**-0.5**
LKD2				AML	AML	01 59 26.9	
	comp=E,14626μm,0.3s						
LKD2				AML	AML	01 59 27.1	
	comp=N,34933μm,0.3s						
DRAG	**Dragano-Lefkad**	**0.16**	**187**	P	**Pg**	**01 59 27.1**	**+0.4**
EVGI	**Lefkada island**	**0.22**	**169**	P	**Pg**	**01 59 28.2**	**+0.5**
EVGI				S	**Sg**	**01 59 31.9**	**+0.9**
	comp=N,2μm,0.2s						
EVGI	**Lefkada island**	**0.22**	**169**	P	**Pg**	**01 59 28.2**	**+0.5**
EVGI				S	**Sg**	**01 59 32.0**	**+1.1**
FSK	**Fiskardo**	**0.38**	**184**	P	**Pg**	**01 59 31.2**	**+0.6**
FSK				S	**Sg**	**01 59 37.0**	**+1.3**
	comp=N,430nm,0.2s						
FSK	**Fiskardo**	**0.38**	**184**	P	**Pg**	**01 59 31.2**	**+0.6**
FSK				S	**Sg**	**01 59 37.1**	**+1.4**
FSK				AML	AML	01 59 37.8	
	comp=N,621μm,0.3s						
FSK				AML	AML	01 59 41.8	
	comp=E,1050μm,0.4s						
KEF4	**Livadi, Kephal**	**0.60**	**193**	P	**Pg**	**01 59 34.9**	**+0.2**
KEF4				S	**Sb**	**01 59 44.5**	**+0.7**
	comp=E,2μm,0.2s						
KEF4	**Livadi, Kephal**	**0.60**	**193**	P	**Pg**	**01 59 34.6**	**0.0**
KEF4				S	**Sg**	**01 59 43.5**	**+1.0**
VLS	**Valsamata**	**0.66**	**181**	P	**Pg**	**01 59 35.8**	**-0.1**
VLS				S	**Sg**	**01 59 45.7**	**+1.1**
	comp=E,202nm,0.3s						
VLS	**Valsamata**	**0.66**	**181**	P	**Pg**	**01 59 35.6**	**-0.3**
VLS				S	**Sg**	**01 59 45.2**	**+0.6**
VLS				AML	AML	01 59 48.5	
	comp=E,407μm,0.3s						
VLS				AML	AML	01 59 53.2	
	comp=N,404μm,0.3s						
KEF3	**Kipouria, Keph**	**0.67**	**197**	P	**Pg**	**01 59 35.7**	**-0.3**
KEF3				S	**Sg**	**01 59 46.3**	**+1.6**
KEF3	**Kipouria, Keph**	**0.67**	**197**	P	**Pg**	**01 59 35.5**	**-0.5**
KEF3				S	**Sg**	**01 59 43.8**	**-1.0**
IGT	**Igoumenitsa**	**0.72**	**343**	P	**Pg**	**01 59 38.1**	**+1.1**
IGT	**Igoumenitsa**	**0.72**	**343**	P	**Pg**	**01 59 38.0**	**+1.0**
IGT				AML	AML	01 59 56.0	
	comp=N,225μm,0.3s						
IGT				AML	AML	01 59 56.3	
	comp=E,296μm,0.3s						
PSDA	**Pessada-Kefalo**	**0.73**	**181**	P	**Pg**	**01 59 36.9**	**-0.2**
PSDA				S	**Sb**	**01 59 48.4**	**+0.9**
PSDA	**Pessada-Kefalo**	**0.73**	**181**	P	**Pg**	**01 59 36.8**	**-0.2**
JAN	**Janina**	**0.84**	**13**	P	**Pg**	**01 59 40.4**	**+1.2**
EVR	**Evrytania**	**0.95**	**85**	P	**Pg**	**01 59 42.0**	**+0.7**
EVR	**Evrytania**	**0.95**	**85**	P	**Pg**	**01 59 42.0**	**+0.7**
RLS	**Riolos of Patr**	**1.04**	**139**	P	**Pg**	**01 59 42.9**	**-0.1**
ANX	**Ano Chora**	**1.06**	**103**	P	**Pg**	**01 59 43.4**	**-0.1**
KEK	**Kerkira**	**1.07**	**325**	P	**Pn**	**01 59 45.7**	**+1.8**
EFP	**Efpalio**	**1.10**	**112**	P	**Pg**	**01 59 44.2**	**-0.1**
EFP	**Efpalio**	**1.10**	**112**	P	**Pg**	**01 59 44.4**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.21**	**81**	P	**Pb**	**01 59 47.1**	**+1.2**
LAKA	**Lakka**	**1.24**	**119**	P	**Pg**	**01 59 46.4**	**-0.4**
DRO	**Drossia**	**1.25**	**135**	P	**Pg**	**01 59 46.1**	**-0.9**
DRO				AML	AML	02 00 08.5	
	comp=E,288μm,0.2s						
DRO				AML	AML	02 00 12.3	
	comp=N,228μm,0.3s						
TRIZ	**Trizonia**	**1.25**	**112**	P	**Pb**	**01 59 47.0**	**+0.5**
KLV	**Kalavryta, Ach**	**1.46**	**123**	P	**Pn**	**01 59 49.6**	**+0.3**
DBRK	**Dubrovnik**	**4.25**	**335**	*e*Pn	**Pn**	**02 00 28.4**	**+0.8**
DBRK				Sn	**Sn**	**02 01 16.3**	**-0.9**
STON	**Ston**	**4.59**	**332**	*e*Pn	**Pn**	**02 00 32.4**	**+0.2**
STON				Sn	**Sn**	**02 01 22.7**	**-2.7**
LSTV	**Lastovo**	**4.83**	**326**	*e*Pn	**Pn**	**02 00 35.8**	**+0.3**
LSTV				Sn	**Sn**	**02 01 28.5**	**-2.9**
MAKA	**Makarska**	**5.20**	**330**	*e*Pn	**Pn**	**02 00 41.0**	**+0.3**
MAKA				Sn	**Sn**	**02 01 38.9**	**-1.6**
RICI	**Ricice**	**5.33**	**332**	*e*Pn	**Pn**	**02 00 42.3**	**-0.2**
RICI				Sn	**Sn**	**02 01 42.0**	**-1.9**
HVAR	**Hvar**	**5.35**	**325**	Sn	**Sn**	**02 01 42.3**	**-2.0**
HVAR	**Hvar**	**5.35**	**325**	*e*Pn	**Pn**	**02 00 43.1**	**+0.4**
ZIRJ	**Zirje**	**6.09**	**324**	*e*Pn	**Pn**	**02 00 52.4**	**-0.4**
ZIRJ				Sn	**Sn**	**02 01 58.8**	**-3.6**
MORI	**Morici**	**6.22**	**325**	*e*Pn	**Pn**	**02 00 55.1**	**+0.5**
MORI				Sn	**Sn**	**02 02 03.4**	**-2.4**
DUGI	**Dugi Otok**	**6.62**	**323**	*e*Pn	**Pn**	**02 00 59.6**	**-0.5**
DUGI				Sn	**Sn**	**02 02 12.8**	**-2.8**
UDBI	**Udbina**	**6.74**	**329**	*e*Pn	**Pn**	**02 01 01.7**	**-0.1**
UDBI				Sn	**Sn**	**02 02 15.8**	**-2.6**

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*VIE **08** 01:59:23.5±0.2, 47°.30N×11°.43E, h10^{km}±2^{km}, mb1.3/4, ml1.9/13, Error ellipse: s-maj=1.4km s-min=0.8km az=3.0 4 km NNE of Innsbruck felt 3 ems98 NE of Innsbruck / Tyrol*

*ROM **08** 01:59:24.3±0.5, 47°.27N±0°.03×11°.47E±0°.03, h10^{km}, ML1.4/3, Error ellipse: s-maj=3.3km s-min=1.3km az=325.0*

*PRU **08** 01:59:26.9±0.0, 47°.32N×11°.57E, h0^{km}, Innsbruck*

ISC 08 01:59:24.2±1.0**, 47°.32N**±0°.03×**11°.43E**±0°.02**, h7**^{km}±7^{km}**, n16,** σ**0**^{s}**.66**/30**, 1D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WATA	**Walderalm**	**0.10**	**82**	*i* Pg	**Pg**	**01 59 26.5**	**0.0**
	12nm,0.1s,SNR=285						
WATA				*i* Sg	**Sg**	**01 59 28.4**	**+0.2**
	308nm,0.2s						
WTTA	**Wattenberg**	**0.15**	**113**	*i* Pg	**Pg**	**01 59 27.4**	**0.0**
	8.6nm,0.1s,SNR=68						
WTTA				*e*Sg	**Sg**	**01 59 29.7**	**+0.1**
	26nm,0.1s,SNR=60						
WTTA	**Wattenberg**	**0.15**	**113**	⇓P	**Pg**	**01 59 27.4**	**0.0**
WTTA				S	**Sg**	**01 59 29.7**	**+0.1**
WTTA				AML	AML		
	comp=N,164μm,1.5s						
WTTA				AML	AML		
	comp=E,210μm,0.5s						
SQTA	**Sankt Quirin**	**0.18**	**236**	*i* Pg	**Pg**	**01 59 27.5**	**-0.5**
	comp=E,6.4nm,0.1s,SNR=134						
SQTA				*i* Sg	**Sg**	**01 59 30.1**	**-0.4**
	comp=E,49nm,0.2s						
MOTA	**Moosalm**	**0.23**	**276**	*i* Pg	**Pg**	**01 59 28.3**	**-0.4**
	comp=E,4.5nm,0.1s,SNR=40						
MOTA				*i* Sg	**Sg**	**01 59 31.9**	**+0.1**
	comp=E,19nm,0.1s						
ROSI	**Rosskopf**	**0.40**	**182**	P	**Pg**	**01 59 31.5**	**-0.4**
ROSI				S	**Sg**	**01 59 37.0**	**-0.1**
ROSI				AML	AML		
	comp=E,71μm,1.3s						
ROSI				AML	AML		
	comp=N,152μm,0.4s						
RETA	**Reutte**	**0.48**	**290**	*i* Pg	**Pg**	**01 59 32.9**	**-0.7**
	comp=N,0.5nm,0.1s						
RETA				*e*Sg	**Sg**	**01 59 40.0**	**+0.1**
	comp=N,4.1nm,0.2s,SNR=9.0						
FETA	**Feichten**	**0.57**	**238**	*e*Pg	**Pg**	**01 59 34.7**	**-0.5**
	comp=N,0.4nm,0.1s,SNR=6.5						
FETA				*i* Sg	**Sg**	**01 59 41.8**	**-0.8**
	comp=N,0.8nm,0.1s,SNR=5.2						
RISI	**Rein**	**0.58**	**130**	P	**Pg**	**01 59 35.1**	**-0.2**
RISI				S	**Sg**	**01 59 42.6**	**-0.4**
RISI				AML	AML		
	comp=E,68μm,1.4s						
RISI				AML	AML		
	comp=N,92μm,1.4s						
BRES	**Bressanone**	**0.66**	**162**	P	**Pg**	**01 59 36.8**	**-0.1**
ABTA	**Abfaltersbach**	**0.94**	**128**	*e*Pg	**Pg**	**01 59 41.6**	**-0.5**
	comp=N,0.3nm,0.1s,SNR=5.7						
ABTA				*i* Sg	**Sg**	**01 59 53.4**	**-0.8**
	comp=N,1.3nm,0.1s						
DAVA	**Damuels**	**1.06**	**269**	*e*Pg	**Pn**	**01 59 47.0**	**+1.4**
	comp=N,3.6nm,0.1s						
DAVA				*e*Sg	**Sn**	**02 00 01.6**	**+1.0**
	comp=N,16nm,0.3s						
KBA	**Koelnbreinsper**	**1.32**	**100**	*e*Pg	**Pb**	**01 59 48.9**	**-0.5**
	comp=N,1.9nm,0.2s						
KBA				*e*Sg	**Sn**	**02 00 06.3**	**-0.9**
	comp=N,3.6nm,0.2s						
MOA	**Molln**	**1.99**	**74**	*e*Pg	**Pg**	**02 00 01.3**	**-1.0**
	comp=N,0.4nm,0.2s						
MOA				Sg	**Sg**	**02 00 29.3**	**+1.3**
	comp=N,1.5nm,0.1s						
KHC	**Kasperske Hory**	**2.31**	**38**	*e*PG	**Pg**	**02 00 07.4**	**-1.0**
KHC				*e*SG	**Sg**	**02 00 38.4**	**+0.1**
CKRC	**Cesky Krumlov**	**2.44**	**51**	*e*SG	**Sg**	**02 00 42.2**	**-0.4**

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*IDC **08** 02:04:39.3±1.1, 37°.03N×97°.85W, h0^{km}, mb3.5/1, mb1 3.7/4, mb1mx3.5/36, mbtmp3.3/4, ML3.7/3, Error ellipse: s-maj=15.3km s-min=13.9km az=172.0*

*TUL **08** 02:04:39.4±1.1, 36°.95N±0°.02×97°.80W±0°.05, h4^{km}±7^{km},* *ML3.5, mb_Lg3.1/75(NEIC), Error ellipse: s-maj=6.2km s-min=1.4km az=121.0*

*ANF **08** 02:04:40.0±0.3, 36.°93N×97.°80W, h6^{km}, ML3.9/14, Error ellipse: s-maj=3.3km s-min=3.1km az=60.0*

*NEIC **08** 02:04:39.8±0.8, 36.°94N±0.°04×97.°79W±0.°06, h6^{km}±7^{km}, Error ellipse: s-maj=7.6km s-min=5.3km az=76.0*

ISC 08 02:04:39.8±0.9**, 36.°94N**±0.°02×**97.°81W**±0.°02**, h7**^{km}±6^{km}**, n106,** $\sigma 0.^{s}53$/97**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.10	205	Pg	Pg	02 04 42.0	-0.1
GC02				Sg	Sg	02 04 43.6	-0.1
KAN17	Caldwell West	0.11	18	Pg	Pg	02 04 42.2	0.0
KAN17				Sg	Sg	02 04 44.0	0.0
KAN14	Manchester OK	0.13	278		Pg	02 04 42.5	-0.1
KAN14				Sg	Sg	02 04 44.4	0.0
KAN01	Argonia South	0.22	10	Pg	Pg	02 04 44.2	0.0
KAN01				Sg	Sg	02 04 47.2	+0.1
KAN09	Caldwell North	0.25	38	Pg	Pg	02 04 44.7	0.0
KAN09				Sg	Sg	02 04 48.2	+0.1
KAN13	South Haven SW	0.27	75	Pg	Pg	02 04 45.4	+0.2
KAN13				Sg	Sg	02 04 48.9	+0.1
KAN10	Anthony SW Sta	0.29	309	Pg	Pg	02 04 45.6	0.0
KAN10				Sg	Sg	02 04 49.7	+0.2
KAN06	Argonia West S	0.31	352		Pg	02 04 45.9	0.0
KAN08	Anthony NE Sta	0.31	335		Pg	02 04 46.0	0.0
KAN16	Harper SW Stat	0.35	324	Pg	Pg	02 04 46.7	0.0
OK032	Salt Plains WL	0.35	247	Pg	Pg	02 04 46.7	0.0
KAN12	Harper NE Stat	0.39	337	Pg	Pg	02 04 47.3	-0.1
CROK	Carrier	0.46	198	Pg	Pg	02 04 48.5	-0.2
BLOK	Blackwell	0.51	111	Pg	Pg	02 04 49.6	0.0
T35A	Sooner Cattle	1.04	91	Pg	Pg	02 04 59.0	-0.8
T35B	Sooner Cattle	1.04	91	P	Pg	02 04 59.2	-0.6
	baz=272,SNR=138						
T35B				S	Sg	02 05 12.8	-0.4
	baz=272						
U32A	Winter Ranch,	1.11	240		Pg	02 05 00.3	-0.8
U32A	Winter Ranch,	1.11	240	P	Pg	02 05 00.4	-0.8
	baz=59						
U32A				S	Sb	02 05 16.5	+0.5
	baz=59						
OK029	Liberty Lake	1.18	166		Pg	02 05 01.8	-0.6
OK031	S. Brethren Rd	1.26	141		Pn	02 05 03.1	-0.7
OK034	N. Norfolk Rd.	1.28	136		Pn	02 05 03.5	-0.6
BCOK	Bluff Creek, N	1.29	173		Pn	02 05 03.6	-0.6
OK030	Cody Creek RV	1.30	140		Pn	02 05 03.8	-0.6
OK025	Westminster Rd	1.41	164		Pn	02 05 05.8	-0.1
OKCFA	Oklahoma City	1.55	169		Pn	02 05 07.8	0.0
OKCFA	Oklahoma City	1.55	169	P	Pn	02 05 07.9	+0.1
	baz=349						
OKCFA				S	Sb	02 05 29.2	+0.7
	baz=349						
OKCSW	OKLAHOMA CITY	1.56	169		Pn	02 05 08.0	0.0
R32A	Long Quarter,	1.64	334		Pn	02 05 09.3	+0.2
R32A	Long Quarter,	1.64	334	P	Pn	02 05 09.8	+0.6
	baz=154,SNR=94						
R32A				S	Sb	02 05 31.1	-0.3
	baz=154						
FNO	Franklin	1.71	169		Pn	02 05 10.0	0.0
TUL1	Leonard	1.92	122		Pn	02 05 12.9	0.0
TUL1	Leonard	1.92	122	P	Pn	02 05 13.9	+1.0
	baz=303,SNR=76						
X34A	Smith Ranch, M	2.33	181	Pn	Pn	02 05 19.6	+1.0
KSU1	Kansas State U	2.35	23		Pn	02 05 18.7	-0.2
KSU1	Kansas State U	2.35	23	P	Pn	02 05 19.6	+0.7
	baz=204,SNR=15						
KSU1				S	Sb	02 05 51.7	-0.1
	baz=204						
CBKS	Cedar Bluff	2.42	321	Pn	Pn	02 05 20.0	+0.2
CBKS	Cedar Bluff	2.42	321	P	Pn	02 05 20.4	+0.7
	baz=140,SNR=22						
CBKS				S	Sb	02 05 53.7	+0.1
	baz=140						
U38A	Gravette	2.79	99		Pn	02 05 25.1	+0.1
U38A	Gravette	2.79	99	P	Pn	02 05 26.0	+1.1
	baz=281,SNR=20						
LOOK	Love County	2.99	170	Pn	Pn	02 05 27.8	+0.3
X37A	Clayton	3.07	139	Pn	Pn	02 05 29.3	+0.6
X37A				IAmb_Lg		02 06 21.4	
	comp=Z,68nm,0.8s						
X37A	Clayton	3.07	139	P	Pn	02 05 29.3	+0.6
	baz=321						
HHAR	Hobbs	3.18	101		Pn	02 05 30.8	+0.5
HHAR	Hobbs	3.18	101	P	Pn	02 05 31.2	+1.0
	baz=283						
Z35A	Perchaven, San	3.63	173		Pn	02 05 36.8	+0.4
Z35A	Perchaven, San	3.63	173	P	Pn	02 05 37.1	+0.7
	baz=353						
Z35A				S	Sn	02 06 20.6	+1.1
	baz=353						
S39A	Bolivar	3.65	77		Pn	02 05 36.6	-0.1
S39A	Bolivar	3.65	77	P	Pn	02 05 36.9	+0.1
	baz=260,SNR=22						
W39A	Magazine	3.69	117	Pn	Pn	02 05 37.7	+0.4
W39A				IAmb_Lg		02 06 40.5	
	comp=Z,57nm,0.7s						
AMTX	Amarillo	3.75	238	Pn	Pn	02 05 38.0	-0.2
AMTX				IAmb_Lg		02 06 43.8	
	comp=Z,42nm,0.7s						
N33B	J Bar K, Exete	3.80	4	P	Pn	02 05 38.4	-0.3
	baz=184,SNR=6.0						
N33A	J Bar K, Exete	3.80	4	Pn	Pn	02 05 38.4	-0.4
N33A				IAmb_Lg		02 06 42.3	
	comp=Z,44nm,0.7s						
U40A	Yellville	4.03	97		Pn	02 05 41.6	-0.2
U40A				IAmb_Lg		02 06 52.0	
	comp=Z,54nm,0.8s						
U40A	Yellville	4.03	97	P	Pn	02 05 41.7	-0.2
	baz=280,SNR=24						
U40A				P	Pn	02 05 41.7	-0.2
	baz=280,SNR=24						
MIAR	Mount Ida	4.19	124		Pn	02 05 44.1	0.0
MIAR				IAmb_Lg		02 06 54.6	
	comp=Z,35nm,0.8s						
N35A	Tabor	4.26	23	Pn	Pn	02 05 44.7	-0.4
P38A	Dawn	4.30	50	Pn	Pn	02 05 45.7	+0.1
P38A	Dawn	4.30	50	P	Pn	02 05 45.8	+0.2
	baz=233,SNR=15						
KSCO	Kaye Shedlock'	4.33	300	Pn	Pn	02 05 46.3	+0.1
KSCO				IAmb_Lg		02 07 04.3	
	comp=Z,36nm,0.9s						
Z38A	Mt. Pleasant	4.34	147	Pn	Pn	02 05 47.6	+1.5
MGMO	Mountain Grove	4.44	86	Pn	Pn	02 05 47.9	+0.5
BGNE	Belgrade	4.47	357	Pn	Pn	02 05 47.9	0.0
BGNE	Belgrade	4.47	357	P	Pn	02 05 48.3	+0.4
	baz=176,SNR=8.6						
ABTX	Abilene, Hawle	4.56	200	Pn	Pn	02 05 49.3	0.0
R40A	Maddies Statio	4.60	71		Pn	02 05 49.5	-0.2
FCAR	Ozark Folk Cen	4.70	101	Pn	Pn	02 05 51.9	+0.7
FCAR				IAmb_Lg		02 07 09.4	
	comp=Z,50nm,0.7s						
X40A	Basin Creek Fa	4.73	120	Pn	Pn	02 05 51.7	+0.2
X40A				IAmb_Lg		02 07 15.4	
	comp=Z,35nm,1.0s						
WHAR	Wooly Hollow	4.76	109	Pn	Pn	02 05 52.3	+0.3
WHAR				IAmb_Lg		02 07 19.9	
	comp=Z,42nm,0.9s						
WLAR	White Oak Lake	5.03	129	Pn	Pn	02 05 55.8	+0.2
WLAR				IAmb_Lg		02 07 29.2	
	comp=Z,44nm,0.9s						
L34A	Svendsen Farm,	5.14	12	Pn	Pn	02 05 56.8	-0.3
OGNE	Ogallala	5.18	322	Pn	Pn	02 05 59.5	+1.7
OGNE				IAmb_Lg		02 07 32.7	
	comp=Z,47nm,0.8s						
237A	Washetta, Mont	5.20	161	IAmb_Lg		02 07 38.1	
	comp=Z,29nm,1.0s						
P40A	Paris	5.22	59	Pn	Pn	02 05 58.0	-0.2
P40A				IAmb_Lg		02 07 32.5	
	comp=Z,26nm,0.7s						
N38A	Joes South For	5.25	41	IAmb_Lg		02 07 33.7	
	comp=Z,51nm,0.7s						
T25A	Trinidad	5.29	274	Pn	Pn	02 05 59.5	+0.1
CCM	Cathedral Cave	5.34	76	Pn	Pn	02 05 58.8	-1.0
CCM				IAmb_Lg		02 07 32.4	
	comp=Z,32nm,1.0s						
LCAR	Lake Charles	5.43	97	Pn	Pn	02 06 00.7	-0.4
LCAR				IAmb_Lg		02 07 33.7	
	comp=Z,24nm,1.0s						
PBMO	Poplar Bluff	5.92	89	IAmb_Lg		02 07 56.1	
	comp=Z,29nm,0.8s						
SCIA	State Center	6.10	34	IAmb_Lg		02 07 57.0	
	comp=Z,30nm,0.9s						
435B	Jarrell	6.14	178	IAmb_Lg		02 07 57.8	
	comp=Z,29nm,0.7s						
SLM	Saint Louis	6.23	72	IAmb_Lg		02 07 54.7	
	comp=Z,23nm,0.9s						
N41A	Harden Midland	6.60	53	IAmb_Lg		02 08 07.6	
	comp=Z,43nm,0.9s						
JCT	Junction City	6.66	195	IAmb_Lg		02 08 29.2	
	comp=Z,21nm,0.8s						
143A	Socs Landing,	6.75	127	IAmb_Lg		02 08 33.2	
	comp=Z,21nm,0.8s						
ECSD	EROS Data Cent	6.85	7	Pn	Pn	02 06 19.3	-1.3
ECSD				IAmb_Lg		02 08 25.4	
	comp=Z,18nm,1.1s						
ECSD	EROS Data Cent	6.85	7	P	Pn	02 06 19.5	-1.1
	baz=188,SNR=14						
S44A	Carbondale	6.86	81	IAmb_Lg		02 08 13.6	
	comp=Z,20nm,0.7s						
SIUC	Southern Illin	6.89	81	IAmb_Lg		02 08 19.0	
	comp=Z,22nm,0.8s						
K38A	Parkersburg	6.89	33	IAmb_Lg		02 08 21.5	
	comp=Z,36nm,0.8s						
P43A	Skaggs, Pawnee	7.05	65	IAmb_Lg		02 08 27.5	
	comp=Z,22nm,0.8s						
W45A	Hickory Valley	7.21	102	IAmb_Lg		02 08 30.8	
	comp=Z,27nm,0.8s						
L40A	Anamosa	7.22	43	IAmb_Lg		02 08 44.5	
	comp=Z,24nm,0.8s						
Q44A	Meyer Farm, Va	7.22	72	IAmb_Lg		02 08 33.3	
	comp=Z,26nm,1.0s						
ANMO	Albuquerque	7.29	257	Pn	Pn	02 06 32.7	+5.8
	comp=Z,0.1nm,0.3s,baz=73,slow=17,SNR=2.5						
ANMO				Lg	Lg	02 08 25.3	
	comp=Z,0.6nm,0.3s,baz=201,slow=8.8,SNR=2.9						
Y45A	Yeager Farm, C	7.41	112	IAmb_Lg		02 08 39.4	
	comp=Z,15nm,0.7s						
HDIL	Hopedale	7.57	59	IAmb_Lg		02 08 39.2	
	comp=Z,33nm,0.8s						
I37A	Lemond, Waseca	7.82	24	IAmb_Lg		02 08 55.9	
	comp=Z,16nm,0.8s						
O44A	Mansfield	7.99	63	IAmb_Lg		02 09 15.7	
	comp=Z,15nm,0.7s						
JFWS	Jewell Farm	8.32	42	IAmb_Lg		02 09 07.5	
	comp=Z,14nm,0.8s						
RSSD	Black Hills	8.60	328	IAmb_Lg		02 09 21.0	
	comp=Z,12nm,1.0s						
M44A	Midewin, Midew	8.79	57	IAmb_Lg		02 09 30.0	
	comp=Z,25nm,1.1s						
TXAR	Lajitas Array	9.04	215	Pn	Pn	02 06 50.0	-0.7
	comp=Z,0.2nm,0.3s,baz=46,slow=11,SNR=23						
TXAR				Lg	Lg	02 09 20.5	
	comp=Z,0.3nm,0.3s,baz=28,slow=28,SNR=4.8						
TXAR	Lajitas Array	9.04	215		Pn	02 06 49.8	-0.9
PDAR	Pinedale Array	10.74	306	Pn	Pn	02 07 13.8	-0.4
	comp=Z,0.1nm,0.3s,baz=113,slow=14,SNR=2.4						
PDAR				Lg	Lg	02 10 12.5	
	comp=Z,0.2nm,0.3s,baz=128,slow=31,SNR=2.4						
TKL	Tuckaleechee C	11.40	92	Pn	Pn	02 07 22.7	-0.2
	comp=Z,0.2nm,0.3s,baz=263,slow=17,SNR=1.7						
TKL				Lg	Lg	02 10 33.0	
	comp=Z,0.3nm,0.3s,baz=17,slow=19,SNR=2.6						
ILAR	Eielson Array	40.04	330	P	P	02 12 15.8	+0.6
	comp=Z,0.5nm,0.7s,baz=106,slow=6.8,SNR=8.2						

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*REN **08** 02:11:45.4±0.4, 35.°98N±0.°01×114.°83W±0.°04, h5^{km}±5^{km}, ML1.1, Error ellipse: s-maj=4.6km s-min=1.7km az=96.0*

NEIC 08 02:11:45.1±0.2**, 35.°98N**±0.°02×**114.°81W**±0.°02**, h5**^{km}±5^{km}**, Error ellipse: s-maj=3.2km s-min=1.2km az=51.0, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
V12A	Nelson	0.26	187		Pg	02 11 50.4	+0.2
SHPR	Sheep Range	0.59	332		Pg	02 11 56.5	-0.2
SHPR	Sheep Range	0.59	332	Sg	Sg	02 12 04.2	-0.2
W13A	Hualapai Mount	1.16	139	Pg	Pg	02 12 07.3	-0.1
W13A				Sg	Sg	02 12 22.4	0.0
PRN	Pahroc Range	1.44	352		Pg	02 12 13.5	+0.8
PRN	Pahroc Range	1.44	352	Pn	Pn	02 12 11.9	-0.1
PRN	Pahroc Range	1.44	352	Sn	Sg	02 12 31.5	+0.1
GWY	Greenwater Val	1.52	278	Pn	Pn	02 12 13.0	-0.1

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*SOME **08** 02:45:20.7, 38.°85N×73.°63E, h0^{km}*

*KRNET **08** 02:45:22.2±0.1, 38.°59N×73.°23E, h17^{km}, mb3.6*

*NNC **08** 02:45:26.7±5.2, 38.°77N×72.°84E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=43.7km s-min=26.0km az=168.0*

ISC 08 02:45:25.1±2.1**, 38.°7N**±0.°1×**73.°04E**±0.°05**, h10**^{km}**, n17,** $\sigma 2.^{s}67$/26**, 7C-12D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.21	308	⇑*i*P	Pn	02 45 48.7	+0.2
	baz=9.0						
DRK				⇑*i*S	Sn	02 46 08.8	+3.7
	baz=9.0						
SFK	Sufi-Kurgan	1.32	16	⇓*e*P	Pn	02 45 49.4	-0.4
	baz=8.0						
SFK				⇓*e*S	Sn	02 46 09.3	+1.7
	baz=8.0						
OHH	Osh	1.79	354	⇑*i*P	Pg	02 45 58.6	-0.9
	baz=50						
OHH				⇑*i*S	Sg	02 46 25.2	+2.5
	baz=50						
BTK	Batken	2.17	308	⇓*e*P	Pb	02 46 05.0	+0.5
	baz=9.0						
BTK				⇓*i*S	Sg	02 46 35.0	+0.3
	baz=9.0						
TRKS	Terek-Say	3.14	333	⇓*i*P	Pn	02 46 17.0	+2.2
	baz=32						
TRKS				⇓*i*S	Sb	02 46 56.9	-2.7
	baz=32						
MNAS	Manas	3.76	354	⇓*i*P	Pn	02 46 25.7	+2.4
	baz=52						
MNAS				⇓*i*S	Sb	02 47 12.8	-4.6
	baz=52						
MRKS	Merke	4.00	2	*e*P	Pb	02 46 34.4	-1.4
	3.5nm,0.4s						
MRKS				*e*S	Sb	02 47 26.5	+2.3
	13nm,0.8s						
MRKS	Merke	4.00	2	Pg	Pb	02 46 34.4	-1.4
	3.5nm,0.4s						
MRKS				Lg	Lg	02 47 19.6	
	8.4nm,0.5s						
AAK	Ala-Archa	4.04	15	Pn	Pn	02 46 31.0	+3.7
	4.4nm,0.5s						
AAK				Sn	Sb	02 47 20.4	-5.1
	19nm,0.9s						
IUG	Iuzhnay	4.10	327	*e*P	Pg	02 46 40.7	-3.0
	322nm,0.5s						
IUG				*e*S	Sg	02 47 36.9	+0.1
	50nm,0.6s						
IUG	Iuzhnay	4.10	327	Pg	Pb	02 46 37.7	+0.2
	322nm,0.5s						
IUG				Lg	Lg	02 47 25.8	
	48nm,0.6s						
TKM2	Tokmak 2	4.60	24	⇓Pn	Pn	02 46 39.8	+4.9
	1.2nm,0.6s						
TKM2				⇓Pg	Pg	02 46 52.2	-1.0
	7.9nm,1.0s						
TKM2				⇑Lg	Lg	02 47 53.6	
	13nm,0.9s						
KK02	Karatay Array	4.76	337	⇑Pn	Pn	02 46 40.4	+3.5
	1.5nm,0.3s						
KK02				⇓Sn	Sn	02 47 36.5	+4.3
	13nm,0.6s						
KST	Kastek	4.83	26	Pg	Pb	02 46 51.6	+1.6
	6.3nm,0.8s						
KST				Lg	Lg	02 47 49.0	
	7.9nm,0.8s						
MDOK	Medeo	5.36	33	Pg	Pg	02 47 05.6	-2.1
	5.5nm,0.6s						
MDOK				⇑Lg	Lg	02 48 19.4	
	19nm,1.0s						
PDGK	Podgornoye	6.69	45	⇓Lg	Lg	02 49 02.6	
	6.8nm,0.7s						
AB31	Akbulak array	14.10	322	Pn	Pn	02 48 42.8	-2.0
	1.8nm,1.1s,baz=126,slow=12,SNR=12						

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*NEIC **08** 02:48:24.9±1.4, 59.°89N±0.°03×153.°24W±0.°06, h125^{km}±4^{km}, Error ellipse: s-maj=5.2km s-min=4.4km az=217.0*

*ANF **08** 02:48:25.0±0.3, 59.°87N×153.°13W, h118^{km}±3^{km}, ML4.0/44, Error ellipse: s-maj=2.6km s-min=2.2km az=108.0*

*AEIC **08** 02:48:25±1.6, 59.°89N±0.°02×153.°23W±0.°07, h123^{km}±3^{km}, ML3.6, mb4.0/3(NEIC), ML3.8/96(NEIC), Error ellipse: s-maj=5.5km s-min=2.6km az=78.0*

*IDC **08** 02:48:28.9±7.4, 60.°36N×153.°23W, h128^{km}±72^{km}, mb3.5/3, mb1 3.7/6, mb1mx3.1/45, mbtmp4.0/6, Error ellipse: s-maj=65.5km s-min=34.1km az=51.0*

ISC 08 02:48:25.0±0.8**, 59.°88N**±0.°03×**153.°17W**±0.°03**, h130**^{km}±5^{km}**, n244,** $\sigma 1.^{s}14$/259**, mb4.0**/4**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILS	Iliamna Low So	0.10	32		Pn	02 48 42.1	-0.7
ILS					Sn	02 48 54.9	-1.5
ILSW	Iliamna Southw	0.11	7		Pn	02 48 41.8	-1.1
ILSW					Sn	02 48 54.5	-2.0
IVE	Iliamna Volcan	0.16	29		Pn	02 48 42.1	-0.9
IVE					Sn	02 48 55.0	-1.5
OPT	Oil Point	0.23	188		Pn	02 48 42.6	-0.4
O20K	Slope Mountain	0.34	53		Pn	02 48 43.0	-0.4
O20K					Sn	02 48 56.6	-0.8
O20K	Slope Mountain	0.34	53	P	Pn	02 48 43.0	-0.4
	baz=238,SNR=27						
O20K				S	Sn	02 48 56.4	-0.9
	baz=238						
AUL	Augustine Lava	0.52	195		Pn	02 48 44.0	-0.2
AUL					Sn	02 48 57.9	-0.8
AU22	Augustine Moun	0.52	191		Pn	02 48 43.9	-0.3
AUW	Augustine West	0.53	197		Pn	02 48 44.1	-0.2
AGU	Augustine-Summ	0.54	194		Pn	02 48 44.2	-0.3
AUQ	Augustine Qik'	0.54	193		Pn	02 48 44.1	-0.3
RED	Redoubt Volcan	0.58	20		Pn	02 48 44.0	-0.6
RED					Sn	02 48 58.0	-1.6
RSO	Redoubt South	0.62	19		Pn	02 48 44.6	-0.5
RDWB	Redoubt West	0.64	15		Pn	02 48 44.3	-0.8
RDWB					Sn	02 48 58.5	-1.9
O19K	Port Alsworth	0.66	299		Pn	02 48 44.3	-0.7
O19K					Sn	02 48 58.7	-1.6
O19K	Port Alsworth	0.66	299	P	Pn	02 48 44.4	-0.7
	baz=119,SNR=19						
O19K				S	Sn	02 48 58.3	-2.0
	baz=119						
NCT	North Crescent	0.70	10		Pn	02 48 44.9	-0.6
NCT					Sn	02 48 59.3	-1.7
DFR	Drift River	0.76	18		Pn	02 48 45.3	-0.6
DFR					Sn	02 49 00.3	-1.6
HOM	Homer	0.80	105		Pn	02 48 46.1	0.0
HOM					Sn	02 49 02.0	-0.2
HOM	Homer	0.80	105	IAML		02 49 03.2	
	comp=N,3μm,0.8s						
HOM				IAML		02 49 04.8	
	comp=E,2μm,0.5s						
HOM	Homer	0.80	105	P	Pn	02 48 46.2	0.0
	baz=287,SNR=9.0						
HOM				S	Sn	02 49 01.6	-0.6
	baz=287						
Q19K	Cape Douglas,	0.98	195		Pn	02 48 47.4	-0.4
Q19K	Cape Douglas,	0.98	195	IAML		02 49 09.8	
	comp=N,2μm,0.9s						
Q19K	Cape Douglas,	0.98	195	P	Pn	02 48 47.5	-0.4
	baz=12,SNR=32						
Q19K				S	Sn	02 49 03.5	-1.6
	baz=12						
CNPM	China Poot	1.04	109		Pn	02 48 48.1	-0.2
CNPM					Sn	02 49 04.8	-1.2
CNPM	China Poot	1.04	109	IAML		02 49 05.1	
	comp=N,2μm,0.8s						
CNPM				IAML		02 49 05.7	
	comp=E,2μm,0.4s						
P18K	Big Mountain,	1.15	246		Pn	02 48 48.7	-0.8
P18K					Sn	02 49 06.1	-1.9
P18K	Big Mountain,	1.15	246	P	Pn	02 48 48.7	-0.8
	baz=63,SNR=7.2						
P18K				S	Sn	02 49 06.1	-1.9
	baz=63						
BRLK	Bradley Lake	1.16	95		Pn	02 48 49.2	-0.3
BRLK	Bradley Lake	1.16	95	IAML		02 49 07.8	
	comp=N,1μm,0.3s						
BRSE	Bradley Lake S	1.23	95		Pn	02 48 49.9	-0.3
BRSE	Bradley Lake S	1.23	95	P	Pn	02 48 50.0	-0.2
	baz=278,SNR=37						
BRSE				S	Sn	02 49 07.9	-1.5
	baz=278						
CAPN	Captain Cook N	1.34	47		Pn	02 48 52.9	+1.6
CAPN					Sn	02 49 13.9	+2.6
CAPN	Captain Cook N	1.34	47	P	Pn	02 48 52.8	+1.5
	baz=230						
CAPN				S	Sn	02 49 13.6	+2.2
	baz=230						
SPCR	Spurr Chakacha	1.41	19		Pn	02 48 52.0	-0.2
SPCR					Sn	02 49 11.6	-1.3
SPCR	Spurr Chakacha	1.41	19	P	Pn	02 48 52.0	-0.2
	baz=202,SNR=43						
SPCR				S	Sn	02 49 11.5	-1.4
	baz=202						
SPU	Mount Spurr	1.42	22		Pn	02 48 52.1	-0.2
SPCN	Chakachatna No	1.44	19		Pn	02 48 52.5	0.0
SPBG	Spurr Blockage	1.44	16		Pn	02 48 52.7	+0.1
SPBG					Sn	02 49 12.9	-0.7
SPCG	Spurr Capps Gl	1.53	21		Pn	02 48 53.5	-0.1
SLKM	Skilak Lake	1.60	65		Pn	02 48 53.6	-0.7
SVW2	Sparrevohn	1.71	317		Pn	02 48 54.9	-0.6
SVW2					Sn	02 49 16.8	-2.0
STLK	Strandline Lak	1.75	21		Pn	02 48 56.0	-0.1
O22K	Cooper Landing	1.82	69		Pn	02 48 56.8	0.0
O22K					Sn	02 49 19.8	-1.4
O22K	Cooper Landing	1.82	69	P	Pn	02 48 56.8	0.0
	baz=253,SNR=21						
O22K				S	Sn	02 49 19.4	-1.8
	baz=253						
SEW	Seward	1.88	81		Pn	02 48 57.1	-0.4
SEW	Seward	1.88	81	P	Pn	02 48 57.3	-0.2
	baz=265,SNR=14						
SEW				S	Sn	02 49 20.3	-2.0
	baz=265						
FIS	Fire Island	1.94	48	Pn	Pn	02 48 59.3	+1.2
FIS					Sn	02 49 22.9	-0.6
FIS				IAML		02 49 25.7	
	comp=N,947nm,0.7s						
FIS				IAML		02 49 29.9	
	comp=E,1μm,0.3s						
RC01	Rabbit Creek A	2.09	53		Pn	02 48 59.7	-0.3
RC01	Rabbit Creek A	2.09	53	IAML		02 49 27.8	
	comp=N,965nm,0.4s						
RC01	Rabbit Creek A	2.09	53	P	Pn	02 48 59.7	-0.3
	baz=237,SNR=16						
RC01				S	Sn	02 49 24.7	-2.2
	baz=237						
M19K	Big River Lodg	2.12	344		Pn	02 48 59.9	-0.5
M19K	Big River Lodg	2.12	344	P	Pn	02 49 00.1	-0.3
	baz=164						
M19K				S	Sn	02 49 25.9	-1.7
	baz=164						
KDAK	Kodiak Island	2.12	171		Pn	02 48 59.4	-1.0
KDAK	Kodiak Island	2.12	171	IAML		02 49 27.7	
	comp=N,378nm,0.4s						
KDAK				IAML		02 49 27.9	
	comp=N,484nm,0.5s						
KDAK	Kodiak Island	2.12	171	P	Pn	02 48 59.4	-1.0
	baz=351						
KDAK				S	Sn	02 49 25.3	-2.3
	baz=351						
M22K	Willow	2.40	37		Pn	02 49 03.8	0.0
M22K	Willow	2.40	37	P	Pn	02 49 03.8	0.0
	baz=220,SNR=26						
M22K				S	Sn	02 49 33.2	-0.6
	baz=220						
L19K	White Mountain	2.45	341		Pn	02 49 04.1	-0.4
L19K	White Mountain	2.45	341	P	Pn	02 49 04.2	-0.4
	baz=160,SNR=49						
L19K				S	Sn	02 49 33.7	-1.3
	baz=160						
PWL	Port Wells	2.60	66		Pn	02 49 05.2	-1.1
PWL	Port Wells	2.60	66	IAML		02 49 39.1	
	comp=N,470nm,0.4s						
PWL				IAML		02 49 39.7	
	comp=E,433nm,0.5s						
PWL	Port Wells	2.60	66	P	Pn	02 49 05.3	-1.0
	baz=250,SNR=23						
PWL				S	Sn	02 49 35.5	-2.8
	baz=250						
PMR	Palmer	2.63	47		Pn	02 49 05.5	-1.2
PMR	Palmer	2.63	47	IAML		02 49 37.1	
	comp=N,215nm,0.2s						
PMR				IAML		02 49 42.6	
	comp=E,246nm,0.5s						
PMR	Palmer	2.63	47	P	Pn	02 49 05.4	-1.3

	baz=232						
PMR				S	Sn	02 49 35.7	-3.1
	baz=232						
OHAK	Old Harbor	2.66	181		Pn	02 49 05.9	-1.3
OHAK	Old Harbor	2.66	181	IAML		02 49 39.6	
	comp=N,160nm,0.3s						
OHAK	Old Harbor	2.66	181	P	Pn	02 49 05.9	-1.3
	baz=0.6						
OHAK				S	Sn	02 49 36.4	-3.3
	baz=0.6						
KNK	Knik Glacier	2.79	54		Pn	02 49 07.6	-1.2
KNK	Knik Glacier	2.79	54	IAML		02 49 43.5	
	comp=E,402nm,0.3s						
KNK				IAML		02 49 47.0	
	comp=N,438nm,0.4s						
KNK	Knik Glacier	2.79	54	P	Pn	02 49 07.8	-1.1
	baz=239,SNR=9.1						
KNK				S	Sn	02 49 39.6	-3.0
	baz=239						
GHO	Glory Hole Cre	2.82	46		Pn	02 49 08.1	-1.2
GHO	Glory Hole Cre	2.82	46	IAML		02 49 44.9	
	comp=E,374nm,0.3s						
GHO				IAML		02 49 46.5	
	comp=N,361nm,0.6s						
CUT	Chulitna	2.90	28		Pn	02 49 10.0	-0.3
CUT	Chulitna	2.90	28	IAML		02 49 47.0	
	comp=N,400nm,0.4s						
CUT				IAML		02 49 48.0	
	comp=E,497nm,0.3s						
CUT	Chulitna	2.90	28	P	Pn	02 49 10.0	-0.3
	baz=211,SNR=37						
CUT				S	Sn	02 49 43.9	-1.3
	baz=211						
SML	Sawmill	3.06	49		Pn	02 49 11.1	-1.2
SML	Sawmill	3.06	49	IAML		02 49 53.3	
	comp=N,270nm,0.5s						
SML				IAML		02 49 55.1	
	comp=E,298nm,0.9s						
SML	Sawmill	3.06	49	P	Pn	02 49 11.2	-1.2
	baz=233						
PPLA	Purkeypile	3.07	8		Pn	02 49 13.2	+0.6
PPLA	Purkeypile	3.07	8	P	Pn	02 49 13.2	+0.6
	baz=190,SNR=20						
GLI	Glacier Island	3.18	69		Pn	02 49 12.1	-1.8
GLI	Glacier Island	3.18	69	IAML		02 49 53.1	
	comp=E,190nm,0.4s						
GLI				IAML		02 49 58.3	
	comp=N,198nm,0.6s						
GLI	Glacier Island	3.18	69	P	Pn	02 49 13.6	-0.3
	baz=255						
TTA	Tatalina	3.35	337		Pn	02 49 15.6	-0.7
TTA	Tatalina	3.35	337	P	Pn	02 49 15.6	-0.7
	baz=155,SNR=32						
FID	Port Fidalgo	3.44	72		Pn	02 49 15.3	-2.0
FID	Port Fidalgo	3.44	72	IAML		02 49 54.7	
	comp=E,314nm,0.5s						
JPK	Jack Peak	3.46	67		Pn	02 49 17.5	-0.1
SCM	Sheep Creek Mo	3.47	53		Pn	02 49 16.8	-0.9
SCM	Sheep Creek Mo	3.47	53	IAML		02 50 00.6	
	comp=E,276nm,0.7s						
SCM	Sheep Creek Mo	3.47	53	P	Pn	02 49 16.9	-0.9
	baz=239,SNR=8.6						
CAST	Castle Rocks	3.59	8	P	Pn	02 49 19.2	-0.1
	baz=189,SNR=8.6						
WAT7	Susitna Watana	3.62	33		Pn	02 49 19.1	-0.7
WAT1	Susitna Watana	3.70	35		Pn	02 49 20.1	-0.6
WAT1	Susitna Watana	3.70	35	P	Pn	02 49 20.2	-0.6
	baz=219						
EYAK	Cordova Ski Ar	3.76	76		Pn	02 49 21.0	-0.5
EYAK	Cordova Ski Ar	3.76	76	P	Pn	02 49 21.0	-0.5
	baz=263,SNR=5.1						
EYAK				S	Sn	02 50 03.2	-2.1
	baz=263						
WAT6	Susitna Watana	3.77	42		Pn	02 49 20.8	-1.0
WAT6	Susitna Watana	3.77	42	P	Pn	02 49 20.9	-1.0
	baz=227,SNR=22						
TRF	Thorofare Moun	3.84	20		Pn	02 49 22.1	-0.6
TRF	Thorofare Moun	3.84	20	IAML		02 50 08.8	
	comp=E,82nm,0.4s						
TRF				IAML		02 50 08.9	
	comp=N,148nm,0.6s						
TRF	Thorofare Moun	3.84	20	P	Pn	02 49 22.2	-0.6
	baz=203,SNR=32						
KTH	Kantishna Hill	3.84	15		Pn	02 49 22.1	-0.6
KTH	Kantishna Hill	3.84	15	IAML		02 50 08.6	
	comp=N,60nm,0.9s						
DIV	Divide	3.87	68		Pn	02 49 22.1	-0.9
KLU	Klutina	3.91	62		Pn	02 49 22.4	-1.2
KLU	Klutina	3.91	62	IAML		02 50 07.8	
	comp=E,181nm,0.6s						
KLU	Klutina	3.91	62	P	Pn	02 49 22.7	-0.9
	baz=249,SNR=21						
ANNE	Aniakchak Nort	3.93	223		Pn	02 49 24.1	+0.2
CHUM	Lake Minchumin	4.04	5		Pn	02 49 25.1	0.0
CHUM	Lake Minchumin	4.04	5	P	Pn	02 49 25.2	0.0
	baz=187,SNR=21						
M24K	Tolsona, Glenn	4.07	54		Pn	02 49 25.3	-0.4
M24K	Tolsona, Glenn	4.07	54	P	Pn	02 49 25.4	-0.4
	baz=240,SNR=12						
RND	Reindeer	4.10	28		Pn	02 49 25.1	-0.9
DHY	Denali Highway	4.24	38		Pn	02 49 27.2	-0.8
DHY	Denali Highway	4.24	38	IAML		02 50 16.7	
	comp=N,74nm,0.6s						
DHY				IAML		02 50 17.2	
	comp=E,122nm,0.6s						
DHY	Denali Highway	4.24	38	P	Pn	02 49 27.3	-0.8
	baz=224						
GOAT	Goat Mountain	4.27	77		Pn	02 49 27.3	-1.0
RAGM	Ragged Mountai	4.28	79		Pn	02 49 28.2	-0.2
MCK	McKinley	4.36	26		Pn	02 49 28.8	-0.7
MCK	McKinley	4.36	26	IAML		02 50 19.9	
	comp=N,42nm,0.4s						
MCK				IAML		02 50 23.9	
	comp=E,44nm,0.8s						
MCK	McKinley	4.36	26	P	Pn	02 49 29.1	-0.3
	baz=210,SNR=25						
BPAW	Bear Paw Mtn.	4.36	13	P	Pn	02 49 29.1	-0.3
	baz=195						
BMRM	Bremner River	4.38	72		Pn	02 49 28.8	-1.0
BMRM	Bremner River	4.38	72	IAML		02 50 18.5	
	comp=E,125nm,0.5s						
BMRM				IAML		02 50 19.4	
	comp=N,128nm,0.4s						
BMRM	Bremner River	4.38	72	P	Pn	02 49 29.7	-0.1
	baz=260,SNR=7.1						
BMRM				S	Sn	02 50 17.3	-2.9
	baz=260						
KAIM	Kayak Island	4.41	86	Pn	Pn	02 49 30.2	+0.1
HMT	Hamilton	4.48	80		Pn	02 49 30.7	-0.5
CHGN	Chignik	4.54	220	P	Pn	02 49 31.7	-0.1
	baz=35						
N25K	Chitina, Valde	4.55	64		Pn	02 49 31.4	-0.7
N25K	Chitina, Valde	4.55	64	IAML		02 50 23.7	
	comp=N,97nm,0.4s						
N25K				IAML		02 50 24.9	
	comp=E,83nm,0.5s						
N25K	Chitina, Valde	4.55	64	P	Pn	02 49 32.9	+0.8
	baz=252,SNR=19						
NICHA	Nichawak Mount	4.63	82		Pn	02 49 31.8	-1.3
HARP	HAARP	4.63	53		Pn	02 49 32.6	-0.4
HARP	HAARP	4.63	53	P	Pn	02 49 32.7	-0.4
	baz=241						
BWN	Browne	4.65	20		Pn	02 49 33.2	0.0
BWN	Browne	4.65	20	IAML		02 50 56.3	
	comp=E,69nm,1.8s						
BWN				IAML		02 51 11.4	
	comp=N,50nm,1.1s						
BERG	Berg Lake	4.76	80		Pn	02 49 34.6	-0.3
PAX	Paxson	4.83	47		Pn	02 49 35.2	-0.5
PAX	Paxson	4.83	47	P	Pn	02 49 35.2	-0.5
	baz=234,SNR=10						
GLB	Gilahina Butte	4.86	67		Pn	02 49 35.6	-0.6
GLB	Gilahina Butte	4.86	67	IAML		02 50 31.5	
	comp=N,63nm,0.8s						
GLB				IAML		02 50 31.9	
	comp=E,61nm,0.6s						
GRIN	Grindle Hills	4.95	81		Pn	02 49 37.7	+0.3
VRDI	Verde Repeater	4.98	70		Pn	02 49 37.6	-0.4
VRDI	Verde Repeater	4.98	70	IAML		02 50 34.2	
	comp=E,58nm,0.7s						
VRDI				IAML		02 50 35.7	
	comp=N,46nm,0.5s						
KHIT	Khitrov Hills	4.99	79		Pn	02 49 37.5	-0.4
CRQM	Cirque	5.06	76		Pn	02 49 39.5	+0.5
CRQE	Cirque	5.09	76	P	Pn	02 49 39.0	-0.2
	baz=265						
NEA2	Nenana	5.11	20		Pn	02 49 38.3	-1.1
NEA2	Nenana	5.11	20	P	Pn	02 49 38.5	-0.9
	baz=204,SNR=56						
GCSA	Galena City Sc	5.18	342	P	Pn	02 49 40.1	-0.3
	baz=159						
WAX	Waxell Ridge	5.19	79		Pn	02 49 41.2	+0.6
WRH	Wood River Hil	5.19	25		Pn	02 49 39.4	-1.0
TGL	Tana Glacier	5.21	76		Pn	02 49 41.0	0.0
TGL	Tana Glacier	5.21	76	IAML		02 50 38.7	
	comp=E,82nm,0.4s						
TGL				IAML		02 50 39.3	
	comp=N,84nm,0.8s						
MCARA	McCarthy VSAT	5.22	69		Pn	02 49 40.9	0.0
MCARA	McCarthy VSAT	5.22	69	P	Pn	02 49 40.6	-0.3
	baz=258						
MLY	Manley	5.29	11		Pn	02 49 41.0	-0.9
MLY	Manley	5.29	11	P	Pn	02 49 41.0	-0.9
	baz=194,SNR=32						
CCB	Clear Creek Bu	5.40	25		Pn	02 49 42.2	-1.1
HDA	Harding Lake	5.40	30		Pn	02 49 42.5	-0.9
HDA	Harding Lake	5.40	30	P	Pn	02 49 42.4	-0.9
	baz=216,SNR=35						
ISLE	Juniper Island	5.45	78		Pn	02 49 43.4	-0.7
PTPK	Patty Peak	5.45	71		Pn	02 49 44.9	+0.7
KIAG	Kiagna River	5.46	74		Pn	02 49 43.7	-0.7
MENT	Mentasta	5.48	52		Pn	02 49 44.3	-0.1
BALM	Baldy	5.48	73		Pn	02 49 44.5	-0.1
RIDG	Independent Ri	5.53	42		Pn	02 49 45.1	0.0
RIDG	Independent Ri	5.53	42	P	Pn	02 49 44.6	-0.5
	baz=230,SNR=7.8						
PS08	TAPS Pump Stn8	5.54	30		Pn	02 49 44.2	-1.0
BAGL	Bagley Icefiel	5.56	79		Pn	02 49 46.3	+0.8
I23K	Minto, Yukon-K	5.58	17		Pn	02 49 44.7	-1.0
I23K	Minto, Yukon-K	5.58	17	P	Pn	02 49 44.9	-0.8
	baz=200,SNR=54						
TCOL	CIGO, UAF Yank	5.59	24		Pn	02 49 45.3	-0.6
TCOL	CIGO, UAF Yank	5.59	24	P	Pn	02 49 45.2	-0.6
	baz=209,SNR=12						
COLA	College	5.59	24		Pn	02 49 45.4	-0.5
COLA	College	5.59	24	P	Pn	02 49 45.2	-0.7
	baz=209						
MDM	Murphy Dome	5.59	22		Pn	02 49 44.6	-1.3
MESA	MESA	5.63	82		Pn	02 49 47.1	+0.4
MESA	MESA	5.63	82	P	Pn	02 49 47.2	+0.5
	baz=272,SNR=9.5						
L26K	Log Cabin Wild	5.67	52		Pn	02 49 48.8	+1.8
IL31		5.72	28		Pn	02 49 46.4	-1.1
ILAR	Eielson Array	5.72	28	P	Pn	02 49 46.6	-1.0
	comp=N,8.4nm,0.3s,baz=217,slow=14,SNR=404						
ILAR				S	Sn	02 50 46.1	-5.8
	comp=N,1.2nm,0.3s,baz=221,slow=16,SNR=4.9						
ILAR	Eielson Array	5.72	28	Pn	Pn	02 49 46.4	-1.1
YAH	Yahtse	5.73	80		Pn	02 49 48.7	+0.6
DOT	Dot Lake	5.74	45		Pn	02 49 49.6	+1.7
BARN	Barnard Glacie	5.82	73		Pn	02 49 49.5	+0.4
POKR	Poker Plat Res	5.89	24		Pn	02 49 49.1	-0.8
POKR	Poker Plat Res	5.89	24	P	Pn	02 49 49.0	-0.9
	baz=210,SNR=17						
RKAV	Rock Avalanche	5.93	81		Pn	02 49 51.6	+0.9
CTG	Chitna Glacier	5.96	74	P	Pn	02 49 51.6	+0.6
	baz=265,SNR=7.7						
CTGM	Chitina Glacie	5.96	74		Pn	02 49 51.5	+0.5
SCRK	Sand Creek	5.97	43		Pn	02 49 49.6	-1.6
SCRK	Sand Creek	5.97	43	P	Pn	02 49 49.9	-1.2
	baz=231,SNR=9.0						
J25K	Salcha River,	5.99	34		Pn	02 49 50.5	-0.8
J25K	Salcha River,	5.99	34	P	Pn	02 49 50.4	-0.8
	baz=221,SNR=60						
TABL	Table Mountain	6.03	79		Pn	02 49 52.3	+0.2
CHX	Chaix Hills	6.06	83		Pn	02 49 53.4	+1.1
LOGN	Logan Glacier	6.11	76		Pn	02 49 53.4	+0.3
IMAR	Indian Mountai	6.14	358		Pn	02 49 53.0	-0.2
SAMH	Samovar Hills	6.22	82		Pn	02 49 55.6	+1.1
YUK2	White River	6.32	67		Pn	02 49 56.6	+0.8
BVCY	Beaver Creek	6.48	62	P	Pn	02 49 58.7	+0.9
	baz=253,SNR=7.9						
PCA	Pinnacle	6.49	82		Pn	02 49 58.8	+0.9
PINM	Pinnacle	6.49	82	P	Pn	02 49 58.6	+0.6
	baz=274,SNR=8.7						
YUK3	Moose Creek	6.50	68		Pn	02 49 59.1	+0.7
YUK3	Moose Creek	6.50	68	P	Pn	02 49 59.0	+0.7
	baz=259,SNR=7.0						
YUK8	Steele Glacier	6.75	72		Pn	02 50 03.5	+1.7
PNL	Peninsula	6.96	86		Pn	02 50 04.4	+0.1
PNL	Peninsula	6.96	86	P	Pn	02 50 04.4	+0.1
	baz=278,SNR=12						
YUK4	Talbot Arm	7.30	72	P	Pn	02 50 09.9	+0.8
	baz=264						
YUK6	Outpost Mounta	7.41	75		Pn	02 50 12.0	+1.4
YUK6	Outpost Mounta	7.41	75	P	Pn	02 50 11.7	+1.1
	baz=268						
COLD	Coldfoot	7.50	9		Pn	02 50 11.1	-0.3
COLD	Coldfoot	7.50	9	P	Pn	02 50 11.1	-0.3
	baz=192,SNR=19						
YUK7	Dusty Glacier	7.52	79		Pn	02 50 12.8	+0.8
YUK5	Granite Creek	7.66	74		Pn	02 50 15.3	+1.4
DAWY	Dawson	7.72	51	Pn	Pn	02 50 14.8	+0.2
DAWY	Dawson	7.72	51	P	Pn	02 50 14.8	+0.2
	baz=244						
HYT	Haines Junctio	7.83	76	Pn	Pn	02 50 16.4	+0.3
HYT	Haines Junctio	7.83	76	P	Pn	02 50 17.0	+0.9
	baz=270						
BMAR	Burnt Mountain	8.48	23	Pn	Pn	02 50 22.8	-1.9
TOLK	Toolik Lake Re	8.94	9	Pn	Pn	02 50 30.6	-0.2
TOLK	Toolik Lake Re	8.94	9	P	Pn	02 50 30.9	+0.1
	baz=192						
SKAG	Skagway	9.04	85		Pn	02 50 33.4	+1.2
WHY	Whitehorse	9.12	77	Pn	Pn	02 50 34.3	+0.8
WHY	Whitehorse	9.12	77	P	Pn	02 50 34.2	+0.8
	baz=273						
EPYK	Eagle Plains	9.87	42		Pn	02 50 43.8	+0.5
P33M	Teslin, Yukon	10.18	79	P	Pn	02 50 49.3	+1.7
	baz=277						
DLBC	Dease Lake	11.95	87	P	Pn	02 51 14.6	+3.5
	comp=N,1.7nm,0.3s,baz=295,slow=9.0,SNR=16						
DLBC	Dease Lake	11.95	87	Pn	Pn	02 51 12.9	+1.9
INK	Inuvik	11.99	37	P	Pn	02 51 10.9	-0.4
	comp=N,0.3nm,0.3s,baz=240,slow=14,SNR=13						
INK	Inuvik	11.99	37	Pn	Pn	02 51 11.2	-0.2
INK	Inuvik	11.99	37	P	Pn	02 51 11.4	+0.1
	baz=235						
A36M	Sachs Harbour	16.41	31	Pn	Pn	02 52 06.6	-0.6
A36M				IAmb	IAmb	02 52 13.2	
	comp=Z,7.1nm,0.8s						
A36M	Sachs Harbour	16.41	31	P	Pn	02 52 06.5	-0.8
	baz=237						
SONM	Songino Array	54.79	306	P	P	02 57 43.3	+2.2
	comp=Z,1.0nm,0.7s,baz=54,slow=7.5,SNR=7.1						
SONM	Songino Array	54.79	306	P	P	02 57 43.2	+2.2
SONM				IAmb	IAmb	02 57 43.6	
	comp=Z,0.8nm,0.8s						
ZAA0	Zalesovo Array	57.42	324	P	P	02 58 01.1	+1.6
ZAA0				IAmb	IAmb	02 58 08.2	
	comp=Z,4.5nm,1.5s						
ZALV	Zalesovo Beam	57.42	324	P	P	02 58 00.9	+1.5
	comp=Z,1.7nm,0.5s,baz=40,slow=6.8,SNR=7.0						
ZALV	Zalesovo Beam	57.42	324	P	P	02 57 59.4	0.0
MKAR	Makanchi Array	64.47	321	P	P	02 58 47.5	+0.3
	comp=Z,0.3nm,0.6s,baz=37,slow=7.6,SNR=2.0						

IDC 08 02:48:27.7±1.5**, 37°.65N**×**72°.55E, h0**^{km}**, mb3.6**/4**,**
mb1 3.7/5**, mb1mx3.2**/41**, mbtmp3.6**/5**, ML2.8**/1**, Error**
ellipse: s-maj=45.4km s-min=33.2km az=148.0,
Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	18.37	23	P	Pn	02 52 43.2	-0.4
	0.2nm,0.3s,baz=213,slow=10,SNR=5.2						
SONM	Songino Array	26.67	57	P	P	02 54 08.9	+0.6
	0.7nm,0.8s,baz=251,slow=9.6,SNR=4.2						
TORD	Torodi Ar. Bea	66.98	269	P	P	02 59 22.7	+0.2
	0.3nm,0.7s,baz=37,slow=6.4,SNR=2.1						
INK	Inuvik	72.57	10	P	P	02 59 56.0	-0.2
	0.9nm,0.9s,baz=18,slow=4.7,SNR=3.0						
WRA	Warramunga Arr	81.56	123	P	P	03 00 47.2	-0.2
	0.4nm,0.7s,baz=328,slow=6.1,SNR=1.8						

IDC 08 02:49:38.6±14.0**, 36°.20N**×**71°.32E, h261**^{km}±145^{km}**,**
mb3.0/3**, mb1 3.0**/4**, mb1mx2.5**/40**, mbtmp3.6**/4**, Error**
ellipse: s-maj=83.6km s-min=38.4km az=6.0,
Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.39	34	P	Pn	02 52 38.6	-0.3
	0.3nm,0.3s,baz=211,slow=11,SNR=12						
ZALV	Zalesovo Beam	20.09	24	P	P	02 53 52.6	+0.1
	2.2nm,0.4s,baz=220,slow=11,SNR=10						
TORD	Torodi Ar. Bea	65.97	269	P	P	02 59 57.4	0.0
	0.5nm,0.9s,baz=42,slow=5.0,SNR=2.4						
WRA	Warramunga Arr	81.61	122	P	P	03 01 27.7	0.0
	0.2nm,0.6s,baz=322,slow=4.1,SNR=1.1						

KMA 08 02:56:28.9±0.3**, 36°.88N**×**127°.51E, h6**^{km}±1^{km}**, Error**
ellipse: s-maj=6.2km s-min=1.4km az=323.0, South
Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJB	Youngju	0.81	90	P	Pg	02 56 44.5	0.0
	SNR=20						
YOJB	Youngju	0.81	90	P	Pg	02 56 44.5	0.0
	SNR=20						
KSYOJ	YEONGJU	0.81	91	P	Pg	02 56 44.6	0.0
	SNR=28						
KSYOJ	YEONGJU	0.81	91	P	Pg	02 56 44.6	0.0
	SNR=28						
KSADO	Andong	1.25	112	P	Pb	02 56 53.0	0.0
	SNR=11						
KSADO	Andong	1.25	112	P	Pb	02 56 53.0	0.0
	SNR=11						
KSULJ	Uljin	1.54	96	P	Pn	02 56 57.0	0.0
	SNR=6.5						
KSULJ	Uljin	1.54	96	P	Pn	02 56 57.0	0.0
	SNR=6.5						
KSDAG	Daegu	1.58	134	P	Pg	02 57 03.0	+3.7
	SNR=6.1						
GOS1	Gosan-ri	3.73	197	P	Pn	02 57 27.2	+0.2
	SNR=23						
GOS2	Gosang-Q330s	3.73	197	P	Pn	02 57 27.3	+0.2
	SNR=22						

WEL 08 03:02:11.9±1.4**, 34°S**±14°×**18°0E**±3°4**, h33**^{km}**, M3.7**/5**,**
mB5.4/2**, ML4.0**/10**, MLv3.7**/5**, Mw(mB)4.8**/2**, Error ellipse:**
s-maj=0.0km s-min=0.0km az=109.1, South of
Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.66	196	P	Pn	03 03 05.6	-0.6
HAZ	Te Kaha	3.98	201	P	Pn	03 03 11.1	+0.6
HAZ				S	Sn	03 03 59.5	+3.5
PKGZ	Pakihiroa	4.02	197	P	Pn	03 03 11.9	+0.6
PUZ	Puketiti	4.16	195	P	Pn	03 03 13.0	0.0
PUZ				S	Sn	03 03 58.7	-1.8
RUGZ	Raukumara Rang	4.21	201	P	Pn	03 03 13.5	-0.3
RUGZ				S	Sn	03 04 01.9	+0.1
TWGZ	Tauwhareparae	4.32	197	P	Pn	03 03 16.2	+0.8
TWGZ				S	Sn	03 04 07.3	+2.8
MWZ	Matawai	4.59	201	P	Pn	03 03 18.8	-0.2
URZ	Urewera	4.66	205	P	Pn	03 03 18.9	-1.0
MUGZ	Murupara	4.97	207	P	Pn	03 03 23.6	-0.7
MUGZ				S	Sn	03 04 19.6	-1.0
SNGZ	Shannon Statio	5.06	200	P	Pn	03 03 24.7	-0.7
MTHZ	Maungataniwha	5.28	204	P	Pn	03 03 27.1	-1.5
MRHZ	Matea Rd	5.42	207	P	Pn	03 03 33.3	+2.9

IDC ***08*** *03:08:15.2±1.6, 43°.62N×126°.84W, h0*^{km}*, mb3.4/4,*
mb1 3.8/10, mb1mx3.6/63, mbtmp3.5/10, ML3.4/6, MS3.3/10,
Ms1 3.3/10, ms1mx3.1/25, Error ellipse: s-maj=27.5km
s-min=14.0km az=54.0

ANF ***08*** *03:08:15.2±1.5, 43°.39N×127°.01W, h10*^{km}*, ML3.9/6, Error*
ellipse: s-maj=16.8km s-min=5.9km az=69.0

NEIC ***08*** *03:08:16.3±1.9, 43°.43N±0°.07×126°.92W±0°.07, h10*^{km}*±2*^{km}*,*
ML3.5/32, Error ellipse: s-maj=12.9km s-min=8.4km
az=337.0

ISC 08 03:08:16.3±1.2**, 43°.42N**±0°.08×**127°.00W**±0°.10**, h14**^{km}**, n86,**
σ**0**^{s}**.96**/78**, mb3.4**/3**, MS3.3**/6**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	2.03	105	Pn	Pn	03 08 48.4	-1.7
KEBM				IAML		03 09 35.1	
	comp=E,288nm,1.8s						
J01E	Myrtle Point	2.26	96	P	Pn	03 08 51.5	-1.7
	baz=280,SNR=11						
J01E				S	Sn	03 09 21.1	+0.3
	baz=280						
I02E	Swisshome, OR	2.39	72	P	Pn	03 08 53.8	-1.1
	baz=256,SNR=70						
K02D	Willamette Mer	2.55	105	P	Pn	03 08 55.6	-1.7
	baz=290,SNR=23						
K02D				S	Sn	03 09 28.4	+0.1
	baz=290						
I03D	Drain, OR	2.67	83	P	Pn	03 08 57.8	-1.0
	baz=267,SNR=156						
I03D				S	Sn	03 09 31.6	+0.6
	baz=267						
DBO	Dodson Butte	2.76	95		Pn	03 08 59.2	-1.1
L02E	Cave Junction	2.80	116	P	Pn	03 09 00.4	-0.4
	baz=300,SNR=13						
COR	Corvallis	2.91	65		Pn	03 09 02.0	-0.2
COR				IAML		03 10 01.9	
	comp=E,144nm,2.8s						
COR				IAML		03 10 02.8	
	comp=E,141nm,2.2s						
BUCK	Buck Mountain	3.01	74		Pn	03 09 03.4	-0.2
BUCK				IAML		03 10 20.4	
	comp=E,148nm,3.8s						
BUCK				IAML		03 10 21.1	
	comp=N,134nm,2.6s						
HUMO	Hull Mountain	3.08	104		Pn	03 09 03.6	-0.9
G03D	McMinnville, O	3.23	55	P	Pn	03 09 05.8	-0.7
	baz=238,SNR=68						
G03D				S	Sn	03 09 46.0	+1.3
	baz=238						
H04D	Lebanon	3.27	69	P	Pn	03 09 07.3	+0.1
	baz=253,SNR=27						
I04A	Tendick Farm,	3.36	82	P	Pn	03 09 08.2	-0.1
	baz=267,SNR=13						
YBH	Yreka Blue Hor	3.59	117	Pn	Pn	03 09 12.4	+0.8
	comp=N,2.2nm,0.3s,baz=304,slow=13,SNR=29						
YBH				LR	LR	03 10 17.5	
	comp=N,71nm,19.2s,baz=310,slow=34						
YBH	Yreka Blue Hor	3.59	117		Pn	03 09 12.4	+0.8
L04D	Klamath Falls	3.66	108	P	Pn	03 09 12.8	+0.1
	baz=292,SNR=18						
F04D	Rainier, OR	3.90	46	P	Pn	03 09 15.4	-0.3
	baz=229,SNR=8.1						
E03A	Lebam	3.96	37		Pn	03 09 15.8	-0.8
F04A	Amboy	4.12	51		Pn	03 09 19.2	+0.4
F04A				IAML		03 10 13.7	
	comp=N,102nm,1.5s						
I05D	Terrebonne, OR	4.20	75	P	Pn	03 09 20.0	+0.1
	baz=260,SNR=10.0						
HOOD	Mount Hood Mea	4.28	62		Pn	03 09 22.2	+1.0
HOOD				IAML		03 10 20.4	
	comp=E,67nm,1.4s						
HOOD				IAML		03 10 35.1	
	comp=N,70nm,1.5s						
PINE	Pine Mountain	4.42	83		Pn	03 09 23.4	+0.3
PINE				IAML		03 09 57.7	
	comp=E,48nm,4.5s						
PINE				IAML		03 11 32.8	
	comp=N,45nm,4.3s						
E04D	Cinebar	4.44	44	P	Pn	03 09 23.1	-0.1
	baz=227,SNR=49						
G05D	Wamic, OR	4.47	64	P	Pn	03 09 24.1	+0.5
	baz=249,SNR=5.5						
K05A	Summer Lake	4.53	97		Pn	03 09 24.8	+0.2
K05A				IAML		03 11 15.1	
	comp=N,56nm,4.8s						
K05A				IAML		03 12 13.4	
	comp=E,55nm,4.4s						
NLWA	Neilton Lookou	4.54	28		Pn	03 09 24.1	-0.5
NLWA				IAML		03 10 35.0	
	comp=E,67nm,4.4s						
F05D	White Salmon	4.66	56	P	Pn	03 09 26.9	+0.7
	baz=240,SNR=19						
D04E	Lakebay	4.80	37	P	Pn	03 09 28.3	+0.2
	baz=220,SNR=16						
D03D	Eldon	4.95	32	P	Pn	03 09 29.6	-0.6
	baz=215						
D05A	Enumclaw	5.17	41		Pn	03 09 33.9	+0.7

B04A	**Port Angeles**	**5.24**	**27**		**Pn**	**03 09 33.8**	**-0.4**
I07A	**Izee**	**5.47**	**80**		**Pn**	**03 09 38.4**	**+0.9**
F07A	**Phinny Hill Vi**	**5.62**	**61**		**Pn**	**03 09 40.4**	**+1.0**
ORV	**Oroville**	**5.66**	**131**		**Pn**	**03 09 40.6**	**+0.7**
PGC	**Sidney**	**5.78**	**24**		**Pn**	**03 09 40.7**	**-0.9**
LTY	**Liberty**	**5.88**	**47**		**Pn**	**03 09 43.7**	**+0.6**
B05A	**Bryant** baz=217,SNR=10.0	**5.93**	**34**	P	**Pn**	**03 09 43.6**	**0.0**
E07A	**Sunnyside**	**5.96**	**56**		**Pn**	**03 09 44.9**	**+0.8**
HAWA	**Hanford**	**6.08**	**58**		**Pn**	**03 09 46.2**	**+0.5**
WVOR	**Wild Horse Val**	**6.22**	**96**		**Pn**	**03 09 47.6**	**-0.2**
B06A	**Marblemount**	**6.38**	**35**		**Pn**	**03 09 49.6**	**-0.3**
E08A	**Dider Farm, El**	**6.42**	**59**		**Pn**	**03 09 50.4**	**+0.1**
D08A	**Wollman Farm,**	**6.76**	**55**	Pn	**Pn**	**03 09 55.4**	**+0.3**
BMO	**Blue Mountains**	**7.12**	**75**		**Pn**	**03 10 00.5**	**+0.4**
B08A	**Colville Reser**	**7.28**	**45**	Pn	**Pn**	**03 10 01.6**	**-0.6**
YERR	**Yerington**	**7.34**	**125**		**Pn**	**03 10 02.5**	**-0.7**
CMB	**Columbia Colle**	**7.36**	**135**	Pn	**Pn**	**03 10 03.1**	**-0.3**
C09A	**Chrisman Ranch**	**7.52**	**51**	Pn	**Pn**	**03 10 05.0**	**-0.6**
LLLB	**Lillooet**	**8.00**	**24**	Pn	**Pn**	**03 10 12.5**	**+0.5**
PLID	**Pearl Lake**	**8.07**	**74**	Pn	**Pn**	**03 10 14.1**	**+0.8**
NVAR	**Mina Array Bea** comp=E,0.2nm,0.3s,baz=300,slow=14,SNR=5.0	**8.26**	**124**	Pn	**Pn**	**03 10 19.0**	**+3.2**
NEW	**Newport** comp=E,1.1nm,0.3s,baz=262,slow=12,SNR=11	**8.43**	**51**	Pn	**Pn**	**03 10 17.9**	**0.0**
NEW	comp=E,266nm,20.4s,baz=244,slow=40			LR	LR	03 13 46.8	
NEW	**Newport**	**8.43**	**51**		**Pn**	**03 10 18.1**	**+0.2**
NEW	**Newport** baz=239	**8.43**	**51**	P	**Pn**	**03 10 17.9**	**0.0**
BBB	**Bella Bella** comp=E,167nm,18.2s,baz=169,slow=34	**8.80**	**356**	LR	LR	03 13 06.6	
MSO	**Missoula**	**9.84**	**65**		**Pn**	**03 10 36.5**	**-1.0**
BCYI	**Bear Canyon**	**9.86**	**80**		**Pn**	**03 10 38.3**	**+0.5**
JTMT	**Jette**	**9.91**	**60**	Pn	**Pn**	**03 10 37.1**	**-1.2**
ISA	**Isabella, Lake**	**10.16**	**137**	Pn	**Pn**	**03 10 42.2**	**+0.4**
DLMT	**Dillon**	**10.49**	**74**	Pn	**Pn**	**03 10 45.4**	**-1.0**
WALA	**Waterton Lakes**	**10.67**	**54**		**Pn**	**03 10 47.5**	**-1.3**
GSC	**Goldstone, Bar**	**11.31**	**132**		**Pn**	**03 10 57.2**	**-0.3**
FXWY	**Fox Creek**	**11.61**	**83**		**Pn**	**03 11 00.6**	**-1.1**
YHH	**Holmes Hill**	**11.70**	**78**		**Pn**	**03 11 03.6**	**+0.6**
PD31	**Pinedale Array**	**12.77**	**87**		**Pn**	**03 11 16.8**	**-0.8**
PDAR	**Pinedale Array** comp=E,0.0nm,0.3s,baz=284,slow=12,SNR=8.6	**12.77**	**87**	Pn	**Pn**	**03 11 19.6**	**+1.9**
PDAR	comp=E,195nm,19.2s,baz=278,slow=38			LR	LR	03 16 15.9	
PDAR	**Pinedale Array**	**12.77**	**87**		**Pn**	**03 11 15.1**	**-2.5**
RLMT	**Red Lodge**	**12.83**	**76**		**Pn**	**03 11 16.7**	**-1.7**
DLBC	**Dease Lake** comp=E,0.0nm,0.3s,baz=270,slow=10,SNR=1.9	**15.15**	**354**	Pn	**Pn**	**03 11 49.0**	**-0.8**
ANMO	**Albuquerque** comp=E,0.1nm,0.3s,baz=288,slow=3.2,SNR=3.5	**18.00**	**111**	P	**P**	**03 12 28.2**	**+1.4**
YKA	**Yellowknife Ar** comp=E,0.7nm,0.6s,baz=215,slow=10.0,SNR=7.7	**20.44**	**17**	P	**P**	**03 12 52.5**	**-0.5**
ULM	**Lac du Bonnet** comp=E,148nm,18.3s,baz=258,slow=38	**22.25**	**61**	LR	LR	03 22 10.3	
TXAR	**Lajitas Array** comp=E,0.7nm,0.9s,baz=304,slow=8.7,SNR=5.5	**23.36**	**119**	P	**P**	**03 13 26.5**	**+2.0**
TXAR	**Lajitas Array**	**23.36**	**119**	P	**P**	**03 13 23.7**	**-0.8**
LPIG	**La Paz** comp=E,48nm,20.7s,baz=304,slow=34	**23.67**	**139**	LR	LR	03 21 41.9	
ILAR	**Eielson Array** comp=E,0.9nm,0.8s,baz=147,slow=8.5,SNR=8.6	**24.15**	**339**	P	**P**	**03 13 30.4**	**-1.3**
ILAR	comp=E,58nm,18.8s,baz=157,slow=33			LR	LR	03 21 30.6	
INK	**Inuvik** comp=E,78nm,19.0s,baz=240,slow=35	**25.18**	**354**	LR	LR	03 22 40.2	
SCHQ	**Schefferville** comp=E,56nm,20.7s,baz=102,slow=39	**39.80**	**52**	LR	LR	03 33 59.0	
H11N3	**WAKE ISLAND Hy** baz=50,slow=75,SNR=116	**59.47**	**269**	T	T	04 22 17.8	
H11N2	**WAKE ISLAND Hy** baz=50,slow=75,SNR=114	**59.47**	**269**	T	T	04 22 21.0	
H11N1	**WAKE ISLAND Hy** baz=50,slow=75,SNR=72	**59.49**	**269**	T	T	04 22 20.0	
H11S1	**WAKE ISLAND Hy** baz=50,slow=75,SNR=748	**60.39**	**268**	T	T	04 23 23.1	
H11S2	**WAKE ISLAND Hy** baz=50,slow=75,SNR=554	**60.40**	**268**	T	T	04 23 23.7	
H11S3	**WAKE ISLAND Hy** baz=50,slow=75,SNR=481	**60.41**	**268**	T	T	04 23 22.7	
ESDC	**Sonseca Array** comp=E,25nm,19.3s,baz=100,slow=34	**82.59**	**41**	LR	LR	03 54 23.2	
KURBB	**Kurchatov Arra** comp=E,0.8nm,0.7s,baz=19,slow=4.8,SNR=3.8	**83.73**	**344**	P	**P**	**03 20 45.0**	**+0.5**

KMA 08 03:09:49.5±0.5**, 35°.75N**×**125°.80E, h0**^{km}±169^{km}**, Error ellipse: s-maj=10.3km s-min=1.6km az=245.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECDB	**Euchungdo** SNR=8.5	**0.40**	**22**	P	Pg	03 09 57.1	0.0
ECDB	**Euchungdo** SNR=8.5	**0.40**	**22**	P	Pg	03 09 57.1	0.0
OYDB	**Oeyeondo** SNR=9.4	**0.53**	**25**	P	Pg	03 09 59.1	-0.5
OYDB	**Oeyeondo** SNR=9.4	**0.53**	**25**	P	Pg	03 09 59.1	-0.5
SMKB	**Mukjeong-gil** SNR=7.9	**0.62**	**95**	P	Pg	03 10 01.3	-0.1
SMKB	**Mukjeong-gil** SNR=7.9	**0.62**	**95**	P	Pg	03 10 01.3	-0.1
KSJEU	**Jeongeup** SNR=8.4	**0.96**	**105**	P	Pg	03 10 07.8	0.0
KSJEU	**Jeongeup** SNR=8.4	**0.96**	**105**	P	Pg	03 10 07.8	0.0
KSJEO	**Jeonju** SNR=8.2	**1.23**	**81**	P	Pg	03 10 13.0	-0.1
KSJEO	**Jeonju** SNR=8.2	**1.23**	**81**	P	Pg	03 10 13.0	-0.1
KSKCH	**Geochang** SNR=7.8	**1.73**	**94**	P	Pb	03 10 22.0	-0.2

IDC 08 03:10:13.7±4.5**, 5°.33S**×**151°.65E, h0**^{km}**, mb3.1**/2**, mb1 3.5**/2**, mb1mx3.2**/34**, mbtmp3.2**/2**, Error ellipse: s-maj=197.9km s-min=54.3km az=119.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.4nm,0.7s,baz=51,slow=10.0,SNR=4.1	**22.24**	**228**	P	P	03 15 13.2	+0.8
ASAR	**Alice Springs** 0.7nm,0.8s,baz=54,slow=8.6,SNR=6.6	**24.99**	**221**	P	P	03 15 38.7	-0.7
TORD	**Torodi Ar. Bea** 0.2nm,0.5s,baz=64,slow=2.2,SNR=2.2	**149.37**	**287**	PKPbc	PKPbc	03 30 05.5	-0.4

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*SOME **08** 03:11:28.1, 38°.12N×73°.72E, h0^{km}*
*IDC **08** 03:11:44.8±2.0, 38°.61N×73°.45E, h0^{km}, mb3.3/2, mb1 3.5/5, mb1mx3.3/55, mbtmp3.5/5, ML3.2/3, MS2.9/1, Ms1 3.1/1, ms1mx2.3/33, Error ellipse: s-maj=34.6km s-min=23.6km az=137.0*
*KRNET **08** 03:11:44.5±0.1, 38°.62N×73°.18E, h18^{km}, mb3.7*
*NNC **08** 03:11:49.0±3.8, 38°.73N×72°.99E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=30.3km s-min=20.5km az=8.0*
ISC 08 03:11:48.0±1.3**, 38°.74N**±0°.07×**73°.06E**±0°.05**, h10**^{km}**, n25, σ2^{s}.63**/36**, 11C-12D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk** baz=9.0	**1.22**	**307**	⇓*i*P	**Pb**	**03 12 10.5**	**-0.9**
DRK	baz=9.0			⇓*i*S	**Sn**	**03 12 29.1**	**+0.9**
SFK	**Sufi-Kurgan** baz=10.0	**1.31**	**15**	⇑*e*P	**Pn**	**03 12 10.8**	**-1.9**
SFK	baz=10.0			⇑*e*S	**Sb**	**03 12 30.4**	**+0.4**
OHH	**Osh** baz=51	**1.79**	**353**	⇓*i*P	**Pn**	**03 12 20.1**	**+1.0**
OHH	baz=51			⇓*i*S	**Sg**	**03 12 46.1**	**+0.5**
BTK	**Batken** baz=9.0	**2.17**	**308**	⇓*e*P	**Pn**	**03 12 25.6**	**+1.3**
BTK	baz=9.0			⇓*i*S	**Sb**	**03 12 55.0**	**+0.4**
TRKS	**Terek-Say** baz=32	**3.15**	**333**	⇓*i*P	**Pn**	**03 12 38.2**	**+0.4**
TRKS	baz=32			⇓*i*S	**Sn**	**03 13 17.1**	**+1.6**
MNAS	**Manas** baz=53	**3.76**	**354**	⇑*i*P	**Pn**	**03 12 47.5**	**+1.3**
MNAS	baz=53			⇑*i*S	**Sn**	**03 13 33.5**	**+2.8**
MRKS	**Merke** 4.5nm,0.4s	**4.00**	**2**	*e*P	**Pb**	**03 12 55.6**	**-3.0**
MRKS	17nm,0.7s			*e*S	**Sg**	**03 13 55.5**	**-0.9**
MRKS	**Merke** 4.5nm,0.4s	**4.00**	**2**	Pg	**Pb**	**03 12 55.6**	**-3.0**
MRKS	17nm,0.7s			Lg	Lg	03 13 55.5	
AAK	**Ala-Archa** 1.8nm,0.3s,baz=175,slow=7.1,SNR=16	**4.04**	**15**	Pn	**Pn**	**03 12 53.2**	**+3.1**
AAK	0.6nm,0.3s,baz=150,slow=20,SNR=3.7			Sn	**Sb**	**03 13 44.7**	**-3.6**
AAK	**Ala-Archa** 12nm,0.7s	**4.04**	**15**	⇓Pn	**Pn**	**03 12 53.1**	**+3.1**
AAK	15nm,0.8s			⇓Lg	Lg	03 13 55.4	
IUG	**Iuzhnay** 161nm,0.8s	**4.11**	**327**	*e*P	**Pb**	**03 12 59.0**	**-1.5**
IUG	37nm,0.9s			*e*S	**Sg**	**03 14 01.3**	**+1.3**
IUG	**Iuzhnay** 161nm,0.8s	**4.11**	**327**	Pg	**Pb**	**03 12 59.0**	**-1.5**
IUG	37nm,0.9s			Lg	Lg	03 14 01.3	
TKM2	**Tokmak 2** 2.0nm,0.8s	**4.60**	**24**	⇓Pn	**Pn**	**03 13 01.1**	**+3.3**
TKM2	7.8nm,0.8s			⇑Pg	**Pb**	**03 13 13.3**	**+4.4**
TKM2				Lg	Lg	03 14 13.2	
KK02	**Karatay Array** 2.3nm,0.3s	**4.76**	**337**	⇑Pn	**Pn**	**03 13 02.5**	**+2.6**
KK02	11nm,0.6s			⇑Sn	**Sn**	**03 14 01.2**	**+6.1**
KST	**Kastek** 2.1nm,0.4s	**4.83**	**26**	*e*P	**Pn**	**03 13 04.5**	**+3.6**
KST	8.0nm,1.0s			*e*S	**Sb**	**03 14 10.6**	**-0.3**
KST	**Kastek** 2.1nm,0.4s	**4.83**	**26**	Pg	**Pn**	**03 13 04.5**	**+3.6**
KST	8.0nm,1.0s			Lg	Lg	03 14 10.6	
MDOK	**Medeo** 7.4nm,0.7s	**5.35**	**33**	⇑Pg	**Pg**	**03 13 28.1**	**-2.3**
MDOK	24nm,1.2s			⇓Lg	Lg	03 14 37.7	
PDGK	**Podgornoye** 1.8nm,0.6s	**6.68**	**45**	⇑Pn	**Pn**	**03 13 30.5**	**+4.2**
PDGK	9.0nm,1.0s			⇑Lg	Lg	03 15 21.2	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=218,slow=8.2,SNR=2.0	**10.52**	**37**	Pn	**Pn**	**03 14 16.5**	**-2.3**
AB31	**Akbulak array** 0.3nm,0.4s,baz=129,slow=12,SNR=15	**14.10**	**322**	Pn	**Pn**	**03 15 05.1**	**-2.6**
AKTO	**Aktyubinsk** 0.1nm,0.3s,baz=122,slow=15,SNR=2.8	**15.82**	**323**	Pn	**Pn**	**03 15 30.3**	**-0.4**
AKTO	**Aktyubinsk** 4.3nm,0.9s	**15.82**	**323**	⇑Pn	**Pn**	**03 15 32.7**	**+2.0**
SONM	**Songino Array** 0.6nm,0.8s,baz=255,slow=10,SNR=5.7	**25.74**	**58**	P	**P**	**03 17 15.8**	**-2.9**
CMAR	**Chiang Mai Arr** comp=Z,25nm,20.4s,baz=191,slow=42	**30.24**	**125**	LR	LR	03 32 24.7	
TORD	**Torodi Ar. Bea** 0.1nm,0.5s,baz=38,slow=5.6,SNR=1.1	**67.40**	**269**	P	**P**	**03 22 44.2**	**+0.3**

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*IDC **08** 03:37:30.9±0.8, 39°.11N×141°.01E, h0^{km}, mb3.7/10, mb1 3.8/14, mb1mx3.5/43, mbtmp3.6/14, ML3.0/4, MS2.5/2, Ms1 2.5/2, ms1mx2.2/42, Error ellipse: s-maj=21.9km s-min=17.4km az=104.0*
*NIED **08** 03:37:32.7, 39°.06N×140°.87E, h7^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.72; $M_{\theta\theta}$-0.76; $M_{\phi\phi}$-1.96; $M_{r\theta}$-0.92; $M_{\theta\phi}$0.31; $M_{\phi r}$3.48; Fault plane solution: $M_0$4.31000×10^{14} NP1: ϕ_s345.00000°, δ73.00000°, λ90.00000°. NP2: ϕ_s167.00000°, δ17.00000°, λ91.00000°.*
*JMA **08** 03:37:32.7, 39°.06N×140°.87E, h7^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s137.00000°, δ19.00000°, λ57.00000°. NP2: ϕ_s352.00000°, δ74.00000°, λ101.00000°. Principal axes: T Plg60.0000°, Azm277.0000°; N Plg10.0000°, Azm169.0000°; P Plg28.0000°, Azm73.0000°;*
JMA Felt II J1.
ISC 08 03:37:32.0±1.2**, 39°.08N**±0°.03×**140°.94E**±0°.03**, h6**^{km}±8^{km}**, n30, σ1^{s}.29**/34**, mb3.7**/10**, 2C-6D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.25**	**120**	⇓P	**Pb**	**03 37 38.3**	**-0.7**
JMK				S	**Sb**	**03 37 42.4**	**-1.2**
JRG	**Rokugo**	**0.40**	**324**	⇑P	**Pg**	**03 37 40.3**	**+0.6**
JRG				S	**Sb**	**03 37 46.1**	**-1.7**
JYK	**Kaneyama**	**0.48**	**251**	⇓P	**Pg**	**03 37 41.0**	**-0.2**
JYK				S	**Sg**	**03 37 46.6**	**-0.8**
JOM	**Ohasama**	**0.48**	**35**	⇓P	**Pb**	**03 37 42.8**	**-0.1**
JOM				S	**Sb**	**03 37 49.9**	**-0.4**
JKMT	**Kesennumamotoy**	**0.50**	**122**	⇓P	**Pb**	**03 37 42.6**	**-0.5**
JKMT				S	**Sb**	**03 37 49.9**	**-0.7**
OFUJ	**Ofunato**	**0.57**	**89**	⇓P	**Pb**	**03 37 44.4**	**0.0**
OFUJ				*e*S	**Sb**	**03 37 53.0**	**+0.2**
JIO	**Ouri**	**0.70**	**153**	⇓P	**Pg**	**03 37 45.9**	**+0.5**
JIO				S	**Sg**	**03 37 55.4**	**+0.9**
JOU	**Okura**	**0.74**	**197**	⇑P	**Pg**	**03 37 46.3**	**+0.1**
JOU				S	**Sg**	**03 37 55.6**	**-0.3**
MAT	**Matsushiro**	**3.33**	**221**	P	**Pn**	**03 38 25.7**	**+1.1**
MAT				*e*S	**Sb**	**03 39 10.1**	**-2.1**
MJAR	**Matsushiro Arr** 0.4nm,0.3s,baz=319,slow=14,SNR=13	**3.33**	**221**	Pn	**Pn**	**03 38 26.1**	**+1.5**
MJAR	comp=Z,47nm,21.2s,baz=85,slow=48			LR	LR	03 40 11.7	
ASAJ	**Asahikawa** 0.6nm,0.3s,baz=210,slow=14,SNR=2.0	**5.19**	**13**	Pn	**Pn**	**03 38 51.2**	**+1.0**
USRK	**Ussuriysk Ar.** baz=126,slow=14,SNR=9.1	**8.43**	**310**	Pn	**Pn**	**03 39 34.4**	**-0.3**
KSRS	**Korea Array** 0.7nm,0.3s,baz=78,slow=15,SNR=4.5	**10.36**	**265**	Pn	**Pn**	**03 40 03.8**	**+2.6**
KSRS	0.5nm,0.3s,baz=69,slow=24,SNR=5.2			Sn	**Sn**	**03 42 01.6**	**+4.0**
KSRS	comp=Z,40nm,18.8s,baz=60,slow=35			LR	LR	03 43 34.5	
H11N2	**WAKE ISLAND Hy** baz=317,slow=75,SNR=118	**29.55**	**123**	T	T	04 14 07.3	
H11N1	**WAKE ISLAND Hy** baz=317,slow=75,SNR=53	**29.56**	**123**	T	T	04 14 12.4	
H11N3	**WAKE ISLAND Hy** baz=317,slow=75,SNR=69	**29.57**	**123**	T	T	04 14 07.5	
H11S1	**WAKE ISLAND Hy** baz=318,slow=76,SNR=13	**30.31**	**125**	T	T	04 15 04.5	
H11S3	**WAKE ISLAND Hy** baz=318,slow=76,SNR=24	**30.32**	**125**	T	T	04 15 01.0	
H11S2	**WAKE ISLAND Hy** baz=318,slow=76,SNR=13	**30.33**	**125**	T	T	04 15 04.3	
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=94,slow=9.8,SNR=3.5	**40.28**	**311**	P	**P**	**03 45 09.5**	**-0.1**
MKAR	**Makanchi Array** 0.9nm,0.7s,baz=84,slow=9.7,SNR=8.3	**42.74**	**300**	P	**P**	**03 45 29.9**	**-0.1**
ILAR	**Eielson Array** 0.4nm,0.9s,baz=274,slow=7.0,SNR=2.1	**47.98**	**33**	P	**P**	**03 46 08.9**	**-2.3**
INK	**Inuvik** 0.9nm,0.8s,baz=285,slow=6.4,SNR=1.6	**52.75**	**28**	P	**P**	**03 46 45.9**	**-1.3**
WRA	**Warramunga Arr** 1.0nm,0.6s,baz=5.0,slow=7.4,SNR=21	**59.03**	**187**	P	**P**	**03 47 32.4**	**-0.4**
ASAR	**Alice Springs** 0.4nm,0.7s,baz=1.7,slow=5.3,SNR=5.4	**62.76**	**187**	P	**P**	**03 47 57.8**	**-0.4**
FINES	**FINESS Array B** 2.1nm,0.8s,baz=43,slow=8.4,SNR=3.6	**66.84**	**332**	P	**P**	**03 48 23.3**	**-1.0**
NOA	**NORSAR Array B** 0.9nm,0.9s,baz=33,slow=3.2,SNR=1.8	**72.16**	**337**	P	**P**	**03 48 57.1**	**-0.1**
AKASG	**Malin Array Be** 0.2nm,0.4s,baz=46,slow=6.4,SNR=4.4	**72.46**	**322**	P	**P**	**03 48 58.6**	**-0.6**
PDAR	**Pinedale Array** 0.2nm,0.6s,baz=267,slow=6.1,SNR=1.2	**76.50**	**46**	P	**P**	**03 49 24.4**	**+1.2**
LPAZ	**La Paz** 0.7nm,0.8s,baz=263,slow=5.9,SNR=4.2	**145.93**	**56**	PKPbc	**PKPbc**	**03 57 14.0**	**+0.3**

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*SOME **08** 03:38:25.5, 38°.88N×72°.85E, h0^{km}*
*NNC **08** 03:38:25.3±2.0, 38°.70N×72°.96E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=15.8km s-min=10.4km az=177.0*
ISC 08 03:38:30.0±2.5**, 39°.0N**±0°.1×**73°.00E**±0°.06**, h10**^{km}**, n12, σ2^{s}.21**/17**, 5C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	**Merke** 4.7nm,0.6s	**3.79**	**2**	*e*P	**Pb**	**03 39 38.1**	**+1.0**
MRKS	7.6nm,0.5s			*e*S	**Sg**	**03 40 30.6**	**-1.0**
MRKS	**Merke** 4.7nm,0.6s	**3.79**	**2**	Pg	**Pb**	**03 39 37.9**	**+0.8**
MRKS	7.8nm,0.6s			Lg	Lg	03 40 35.6	
AAK	**Ala-Archa** 2.1nm,0.5s	**3.85**	**17**	⇓Pn	**Pn**	**03 39 29.4**	**0.0**
AAK	7.9nm,0.8s			⇑Pg	**Pg**	**03 39 41.0**	**-2.7**
AAK	20nm,0.9s			⇓Lg	Lg	03 40 35.2	
IUG	**Iuzhnay** 708nm,0.6s	**3.91**	**326**	*e*P	**Pb**	**03 39 39.6**	**+0.5**
IUG	73nm,0.8s			*e*S	**Sg**	**03 40 33.3**	**-2.3**
IUG	**Iuzhnay** 708nm,0.6s	**3.91**	**326**	Pg	**Pb**	**03 39 39.0**	**-0.1**
IUG	73nm,0.8s			Lg	Lg	03 40 37.6	
TKM2	**Tokmak 2** 1.8nm,0.7s	**4.42**	**26**	⇓Pn	**Pn**	**03 39 38.2**	**+0.8**
TKM2	3.3nm,0.5s			⇑Pg	**Pg**	**03 39 51.2**	**-3.5**
TKM2	11nm,0.9s			⇑Lg	Lg	03 40 52.6	
KK02	**Karatay Array** 1.5nm,0.3s	**4.55**	**336**	⇑Pn	**Pn**	**03 39 38.1**	**-0.9**
KK02	7.9nm,0.6s			⇑Sn	**Sn**	**03 40 36.0**	**+4.1**
KST	**Kastek** 4.4nm,0.8s	**4.66**	**28**	*e*P	**Pb**	**03 39 50.1**	**-1.8**
KST	6.5nm,0.7s			*e*S	**Sb**	**03 40 51.0**	**+3.0**
KST	**Kastek** 4.4nm,0.8s	**4.66**	**28**	Pg	**Pb**	**03 39 50.1**	**-1.8**
KST	6.5nm,0.7s			Lg	Lg	03 40 55.9	
MDOK	**Medeo** 6.2nm,0.8s	**5.20**	**35**	Pg	**Pb**	**03 40 03.6**	**+2.6**
MDOK	20nm,1.0s			Lg	Lg	03 41 17.1	
PDGK	**Podgornoye** 11nm,1.1s	**6.56**	**46**	⇓Lg	Lg	03 41 59.0	
AB31	**Akbulak array** 0.5nm,0.5s,baz=132,slow=12,SNR=8.9	**13.91**	**322**	Pn	**Pn**	**03 41 48.2**	**+1.2**

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*SOME **08** 03:42:19.9, 40°.20N×76°.97E, h0^{km}*
*KRNET **08** 03:42:22.2±0.1, 39°.91N×77°.27E, mb3.4*
*NNC **08** 03:42:22.6±0.8, 40°.22N×76°.99E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=5.7km s-min=4.2km az=172.0*
ISC 08 03:42:18.6±2.5**, 40°.13N**±0°.10×**76°.95E**±0°.03**, h11**^{km}±16^{km}**, n57, σ1^{s}.35**/83**, 25C-3D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy** baz=12	**1.73**	**22**	⇑*i*P	**Pg**	**03 42 53.1**	**+1.3**
TARG	baz=12			⇑*i*S	**Sg**	**03 43 15.4**	**+1.1**
KDJ	**Kajisay** baz=59	**2.01**	**5**	⇑*i*P	**Pg**	**03 42 58.0**	**+0.8**
KDJ	baz=59			⇑*i*S	**Sg**	**03 43 24.3**	**+1.0**
ULHL	**Ulahol** SNR=27	**2.18**	**346**	P	**Pg**	**03 43 01.2**	**+0.7**
ULHL	**Ulahol** baz=42	**2.18**	**346**	⇑*i*P	**Pg**	**03 43 01.2**	**+0.7**
ULHL	baz=42			⇑*i*S	**Sg**	**03 43 29.6**	**+0.8**
BOOM	**Boomskoye usch** baz=39	**2.48**	**343**	⇑*i*P	**Pg**	**03 43 05.5**	**-0.7**
BOOM	baz=39			⇑*i*S	**Sg**	**03 43 37.0**	**-1.4**
PRZ	**Przheval'sk** baz=18	**2.60**	**24**	⇑*i*P	**Pb**	**03 43 04.6**	**-0.7**
PRZ	baz=18			⇑*i*S	**Sb**	**03 43 35.5**	**-1.8**
ANVS	**Anan'yevo** baz=6.0	**2.71**	**11**	⇑*i*P	**Pb**	**03 43 07.2**	**0.0**
ANVS	baz=6.0			⇑*i*S	**Sb**	**03 43 40.0**	**-0.5**
UCH	**Uchtor** baz=19	**2.79**	**320**	⇑*e*P	**Pb**	**03 43 10.4**	**+1.7**
UCH	baz=19			⇑*i*S	**Sg**	**03 43 45.9**	**-2.4**
TNSS	**Tian-Shan** 13nm,0.3s	**2.91**	**0**	*e*P	**Pg**	**03 43 13.8**	**-0.6**
TNSS	21nm,0.5s			*e*S	**Sg**	**03 43 52.8**	**+0.7**
TNSS	**Tian-Shan** 13nm,0.3s	**2.91**	**0**	Pg	**Pg**	**03 43 13.8**	**-0.6**
TNSS	21nm,0.5s			Lg	Lg	03 43 53.1	
KBK	**Karagaybulak** SNR=5.6	**2.94**	**330**	P	**Pg**	**03 43 13.5**	**-1.5**
KBK	**Karagaybulak** baz=28	**2.94**	**330**	⇑*e*P	**Pb**	**03 43 12.1**	**+0.9**
KBK	baz=28			⇑*i*S	**Sb**	**03 43 48.7**	**+1.5**
TKM2	**Tokmak 2** SNR=18	**2.97**	**340**	P	**Pb**	**03 43 12.8**	**+1.1**
TKM2	**Tokmak 2** 6.0nm,0.3s	**2.97**	**340**	⇑Pn	**Pb**	**03 43 12.1**	**+0.4**
TKM2	22nm,0.5s			⇓Lg	Lg	03 43 55.3	
TKM2	**Tokmak 2** baz=38	**2.97**	**340**	⇑*i*P	**Pb**	**03 43 12.3**	**+0.6**
TKM2	baz=38			⇑*i*S	**Sb**	**03 43 49.0**	**+0.9**
KST	**Kastek** 13nm,0.5s	**3.01**	**346**	*e*P	**Pg**	**03 43 15.8**	**-0.5**
KST	58nm,0.6s			*e*S	**Sg**	**03 43 56.1**	**+0.9**
KST	**Kastek** 13nm,0.5s	**3.01**	**346**	Pg	**Pg**	**03 43 16.1**	**-0.1**
KST	58nm,0.6s			Lg	Lg	03 43 57.2	
MTBS	**Maitube** 6.4nm,0.5s	**3.03**	**353**	*e*P	**Pg**	**03 43 15.8**	**-0.7**
MTBS	31nm,0.4s			*e*S	**Sg**	**03 43 56.1**	**+0.2**
MTBS	**Maitube** 6.4nm,0.5s	**3.03**	**353**	Pg	**Pg**	**03 43 15.9**	**-0.7**
MTBS	31nm,0.4s			Lg	Lg	03 43 55.9	
MDOK	**Medeo** 13nm,0.5s	**3.04**	**1**	*e*P	**Pg**	**03 43 16.0**	**-0.8**
MDOK	54nm,0.7s			*e*S	**Sg**	**03 43 56.5**	**+0.3**
MDOK	**Medeo** 14nm,0.9s	**3.04**	**1**	⇑Pg	**Pg**	**03 43 15.7**	**-1.1**
MDOK	37nm,0.9s			Lg	Lg	03 43 56.6	
MDOK	**Medeo** 13nm,0.5s	**3.04**	**1**	Pg	**Pg**	**03 43 16.1**	**-0.8**
MDOK	54nm,0.7s			Lg	Lg	03 43 56.8	
KOTS	**Kotyrbulak** 16nm,0.3s	**3.11**	**2**	*e*P	**Pg**	**03 43 17.9**	**-0.3**
KOTS	72nm,0.6s			*e*S	**Sg**	**03 43 59.8**	**+1.4**
KOTS	**Kotyrbulak** 16nm,0.3s	**3.11**	**2**	Pg	**Pg**	**03 43 18.2**	**0.0**
KOTS	72nm,0.6s			Lg	Lg	03 43 59.7	
AAK	**Ala-Archa** SNR=6.8	**3.12**	**324**	P	**Pg**	**03 43 19.9**	**+1.6**
AAK	**Ala-Archa** 7.9nm,0.8s	**3.12**	**324**	Pg	**Pg**	**03 43 18.1**	**-0.2**
AAK				⇑Lg	Lg	03 43 59.3	
AAK	**Ala-Archa** baz=23	**3.12**	**324**	⇑*e*P	**Pb**	**03 43 14.6**	**+0.5**
AAK	baz=23			⇑*i*S	**Sb**	**03 43 52.9**	**+0.7**
SATY	**Saty** 5.2nm,0.5s	**3.13**	**20**	*e*P	**Pg**	**03 43 17.9**	**-0.7**
SATY	35nm,0.5s			*e*S	**Sg**	**03 43 59.8**	**+0.7**
SATY	**Saty**	**3.13**	**20**	Pg	**Pg**	**03 43 18.1**	**-0.5**

	5.2nm,0.5s						
SATY				Lg	Lg	03 43 59.9	
	35nm,0.5s						
AML	**Almayashu**	**3.17**	**310**	P	**Pb**	**03 43 15.5**	**+0.3**
	SNR=20						
AML	**Almayashu**	**3.17**	**310**	⇑*i*P	**Pb**	**03 43 15.8**	**+0.6**
	baz=10.0						
AML				⇑*i*S	**Sb**	**03 43 55.2**	**+1.2**
	baz=10.0						
DGS	**Degeres**	**3.24**	**345**	*e*P	**Pg**	**03 43 20.1**	**-0.5**
	17nm,0.5s						
DGS				*e*S	**Sg**	**03 44 03.4**	**+0.9**
	50nm,0.6s						
DGS	**Degeres**	**3.24**	**345**	Pg	**Pg**	**03 43 20.1**	**-0.5**
	17nm,0.5s						
DGS				Lg	Lg	03 44 03.5	
	50nm,0.6s						
UZB	**Uzynbulak**	**3.40**	**27**	*e*P	**Pg**	**03 43 22.0**	**-1.7**
	4.6nm,0.3s						
UZB				*e*S	**Sg**	**03 44 06.8**	**-0.9**
	13nm,0.6s						
UZB	**Uzynbulak**	**3.40**	**27**	Pg	**Pg**	**03 43 22.4**	**-1.2**
	4.6nm,0.3s						
UZB				Lg	Lg	03 44 07.6	
	13nm,0.6s						
EKS2	**Erkin-Say**	**3.48**	**318**	P	**Pb**	**03 43 20.4**	**+0.1**
	SNR=6.1						
KURS	**Kuram**	**3.48**	**15**	Pg	**Pg**	**03 43 25.2**	**-0.1**
	4.1nm,0.7s						
KURS				Lg	Lg	03 44 11.7	
	14nm,0.6s						
SHLS	**Shalkode**	**3.57**	**31**	*e*P	**Pg**	**03 43 28.9**	**+1.9**
	9.5nm,0.3s						
SHLS				*e*S	**Sg**	**03 44 18.6**	**+5.5**
	27nm,0.6s						
SHLS	**Shalkode**	**3.57**	**31**	Pg	**Pg**	**03 43 29.1**	**+2.1**
	9.5nm,0.3s						
SHLS				Lg	Lg	03 44 18.8	
	27nm,0.6s						
KPKS	**Kokpek**	**3.58**	**21**	*e*P	**Pg**	**03 43 25.8**	**-1.4**
	6.6nm,0.8s						
KPKS				*e*S	**Sg**	**03 44 13.4**	**-0.2**
	24nm,0.5s						
KTBS	**Karatobe**	**3.59**	**357**	*e*P	**Pg**	**03 43 25.5**	**-1.9**
	7.7nm,0.5s						
KTBS				*e*S	**Sg**	**03 44 12.8**	**-1.0**
	35nm,0.5s						
KTBS	**Karatobe**	**3.59**	**357**	Pg	**Pg**	**03 43 25.7**	**-1.7**
	7.7nm,0.5s						
KTBS				Lg	Lg	03 44 13.2	
	35nm,0.5s						
KRBS	**Karabastau**	**3.69**	**346**	*e*P	**Pg**	**03 43 28.2**	**-1.1**
	11nm,0.5s						
KRBS				*e*S	**Sg**	**03 44 17.1**	**0.0**
	56nm,0.7s						
KRBS	**Karabastau**	**3.69**	**346**	Pg	**Pg**	**03 43 28.3**	**-1.1**
	11nm,0.5s						
KRBS				Lg	Lg	03 44 17.3	
	56nm,0.7s						
PDGK	**Podgornoye**	**3.72**	**30**	Pg	**Pg**	**03 43 28.5**	**-1.4**
	2.5nm,0.6s						
PDGK				Lg	Lg	03 44 17.6	
	16nm,0.7s						
PDGK	**Podgornoye**	**3.72**	**30**	⇓Pg	**Pg**	**03 43 28.4**	**-1.6**
	5.1nm,0.7s						
PDGK				⇓Lg	Lg	03 44 17.0	
	35nm,0.7s						
SGDS	**Sogindy**	**3.75**	**333**	Pg	**Pg**	**03 43 28.7**	**-1.7**
SGDS				Lg	Lg	03 44 17.6	
KUU	**Kurty**	**3.79**	**353**	*e*P	**Pg**	**03 43 29.4**	**-1.8**
	5.3nm,0.8s						
KUU				*e*S	**Sg**	**03 44 19.4**	**-1.0**
	26nm,0.6s						
KUU	**Kurty**	**3.79**	**353**	Pg	**Pg**	**03 43 29.5**	**-1.7**
	5.3nm,0.8s						
KUU				Lg	Lg	03 44 19.2	
	26nm,0.6s						
MRKS	**Merke**	**3.83**	**314**	*e*P	**Pg**	**03 43 30.5**	**-1.5**
	5.1nm,0.6s						
MRKS				*e*S	**Sg**	**03 44 21.5**	**-0.1**
	11nm,0.7s						
MRKS	**Merke**	**3.83**	**314**	Pg	**Pg**	**03 43 30.8**	**-1.2**
	5.1nm,0.6s						
MRKS				Lg	Lg	03 44 21.5	
	11nm,0.7s						
BLB	**Baldybastay**	**4.13**	**16**	Pg	**Pg**	**03 43 35.6**	**-2.1**
	13nm,0.5s						
BLB				Lg	Lg	03 44 29.6	
	43nm,0.3s						
ARXS	**Arharly**	**4.14**	**9**	*e*P	**Pg**	**03 43 36.0**	**-1.8**
	5.8nm,0.5s						
ARXS				*e*S	**Sg**	**03 44 30.9**	**-0.5**
	14nm,0.6s						
ARXS	**Arharly**	**4.14**	**9**	Pg	**Pg**	**03 43 36.2**	**-1.6**
	5.8nm,0.5s						
ARXS				Lg	Lg	03 44 30.6	
	14nm,0.6s						
KTMS	**Ketmen**	**4.18**	**36**	Pg	**Pg**	**03 43 36.7**	**-2.0**
	3.2nm,0.3s						
KTMS				Lg	Lg	03 44 31.3	
	11nm,0.8s						
DJR	**Jarkent**	**4.70**	**26**	Pg	**Pg**	**03 43 45.8**	**-2.9**
	2.6nm,0.8s						
DJR				Lg	Lg	03 44 47.0	
	4.8nm,0.4s						
KAPS	**Kapalarasan**	**5.45**	**18**	Pg	**Pg**	**03 44 01.5**	**-1.5**
	2.3nm,0.8s						
KAPS				Lg	Lg	03 45 14.0	
	2.7nm,0.4s						

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*IDC **08** 03:43:16.8±1.8, 20°.61S×175°.83W, h0^{km}, mb4.0/3, mb1 4.3/4, mb1mx3.7/25, mbtmp4.0/4, ML5.1/1, MS3.4/4, Ms1 3.4/4, ms1mx2.9/41, Error ellipse: s-maj=77.8km s-min=30.5km az=160.0*

*NEIC **08** 03:43:20.2±1.3, 20°.5S±0°.1×175°.8W±0°.1, h13^{km}±6^{km}, mb4.4/9, Error ellipse: s-maj=25.2km s-min=8.9km az=139.0*

ISC 08 03:43:19.0±1.1**, 20°.5S**±0°.2×**175°.8W**±0°.1**, h10^{km}, n23, σ0^{s}.91**/19**, mb4.4**/6**, MS3.6**/3**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.41**	**294**	Pn	**Pn**	**03 44 54.2**	**+0.6**
	1.5nm,0.3s,baz=210,slow=18,SNR=10.0						
MSVF	**Nonsavu**	**6.41**	**294**		**Pn**	**03 44 53.5**	**-0.1**
RAO	**Raoul Island**	**8.95**	**192**	LR	LR	03 48 11.9	
	comp=Z,127nm,21.4s,baz=241,slow=34						
ONTNC	**Ouen Toro**	**16.62**	**260**	Pn	**Pn**	**03 47 12.6**	**+0.3**
ONTNC				IAmb	IAmb	03 47 16.0	
	comp=Z,32nm,1.4s						
BKZ	**Black Stump Fm**	**19.78**	**198**	P	**P**	**03 47 49.6**	**+0.1**
BKZ				IAmb	IAmb	03 47 54.1	
	comp=Z,25nm,1.4s						
CTAO	**Charters Tower**	**35.54**	**264**	P	**P**	**03 50 17.3**	**+0.7**
CTAO				IAmb	IAmb	03 50 17.9	
	comp=Z,8.8nm,0.8s						
AS31	**Alice Springs**	**46.52**	**256**	P	**P**	**03 51 47.1**	**0.0**
ASAR	**Alice Springs**	**46.52**	**256**	P	**P**	**03 51 46.3**	**-0.8**
	comp=Z,5.5nm,0.8s,baz=87,slow=8.3,SNR=49						
ASAR	**Alice Springs**	**46.52**	**256**	P	**P**	**03 51 46.6**	**-0.5**
WB0	**Warramunga Arr**	**46.62**	**262**	P	**P**	**03 51 46.6**	**-1.2**
WB0				IAmb	IAmb	03 51 53.4	
	comp=Z,2.8nm,1.1s						
WB2	**Warramunga Arr**	**46.63**	**262**	P	**P**	**03 51 46.9**	**-1.0**
WB2				IAmb	IAmb	03 51 47.5	
	comp=Z,5.0nm,0.9s						
WRA	**Warramunga Arr**	**46.64**	**262**	P	**P**	**03 51 46.2**	**-1.7**
	comp=Z,1.2nm,0.8s,baz=96,slow=7.9,SNR=8.1						
WRA	**Warramunga Arr**	**46.64**	**262**	P	**P**	**03 51 46.4**	**-1.6**
KNRA	**Kununurra**	**52.71**	**266**	P	**P**	**03 52 34.0**	**-0.3**
CASY	**Casey**	**64.87**	**205**	P	**P**	**03 53 58.5**	**+0.4**
ASAJ	**Asahikawa**	**74.70**	**330**	LR	LR	04 23 55.8	
	comp=Z,14nm,20.1s,baz=82,slow=33						
KSRS	**Korea Array**	**78.24**	**317**	LR	LR	04 24 09.1	
	comp=Z,31nm,21.7s,baz=192,slow=31						
NVAR	**Mina Array Bea**	**79.60**	**42**	P	**P**	**03 55 27.1**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=217,slow=8.8,SNR=1.3						
NVAR	**Mina Array Bea**	**79.60**	**42**	P	**P**	**03 55 26.8**	**-0.1**
TIXI	**Tiksi**	**99.25**	**345**	LR	LR	04 37 34.7	
	comp=Z,29nm,20.3s,baz=260,slow=33						
CLL	**Collm**	**148.45**	**349**	*e*PKPbc	**PKPbc**	**04 03 07.0**	**+1.2**
CLL				*i* (pPKiKP)		04 03 11.6	
GERES	**GERESS Array B**	**150.67**	**347**	PKPbc	**PKPbc**	**04 03 10.8**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=42,slow=2.2,SNR=6.7						
GERES	**GERESS Array B**	**150.67**	**347**		**PKPbc**	**04 03 10.4**	**-1.1**

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*IDC **08** 03:50:41.0±1.1, 47°.46S×165°.35E, h0^{km}, mb4.1/5, mb1 4.3/6, mb1mx3.9/21, mbtmp4.2/6, ML4.0/1, MS3.7/8, Ms1 3.7/8, ms1mx3.4/29, Error ellipse: s-maj=34.0km s-min=26.2km az=65.0*

*NEIC **08** 03:50:44.0±1.6, 47°.62S±0°.08×165°.6E±0°.2, h35^{km}±2^{km}, mb4.3/11, Error ellipse: s-maj=20.7km s-min=9.9km az=117.0*

ISC 08 03:50:42.2±0.6**, 47°.55S**±0°.08×**165°.45E**±0°.09**, h14^{km}, n66, σ1^{s}.37**/56**, mb4.3**/10**, MS3.6**/10**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**1.62**	**32**		**Pn**	**03 51 08.7**	**-1.7**
PYZ				Sn	**Sn**	**03 51 29.4**	**-1.7**
WHZ	**Wether Hill Ro**	**2.39**	**47**		**Pn**	**03 51 19.9**	**-1.0**
WHZ				Sn	**Sn**	**03 51 48.6**	**-1.3**
DCZ	**Deep Cove**	**2.40**	**30**	Pn	**Pn**	**03 51 19.6**	**-1.3**
MLZ	**Mavora Lakes**	**2.86**	**41**	Pn	**Pn**	**03 51 26.9**	**-0.5**
WKZ	**Wanaka**	**3.68**	**44**	Pn	**Pn**	**03 51 38.4**	**-0.3**
ODZ	**Otahua Downs**	**4.39**	**57**		**Pn**	**03 51 45.7**	**-2.6**
LBZ	**Lake Benmore**	**4.57**	**48**	Pn	**Pn**	**03 51 48.4**	**-2.6**
FOZ	**Fox Glacier**	**5.05**	**39**		**Pn**	**03 51 56.8**	**-0.7**
RPZ	**Rata Peaks**	**5.49**	**48**	Pn	**Pn**	**03 52 02.1**	**-1.4**
OXZ	**Oxford**	**6.27**	**50**		**Pn**	**03 52 11.7**	**-2.5**
MQZ	**McQueen's Vall**	**6.35**	**55**	Pn	**Pn**	**03 52 12.5**	**-2.7**
LTZ	**Lake Taylor**	**6.78**	**48**	Pn	**Pn**	**03 52 21.4**	**+0.1**
KHZ	**Kahutara**	**7.69**	**51**	Pn	**Pn**	**03 52 32.9**	**-0.8**
THZ	**Tophouse**	**7.86**	**45**		**Pn**	**03 52 36.0**	**0.0**
MCQ	**Macquarie Isla**	**8.07**	**208**	Pn	**Pn**	**03 52 37.4**	**-1.4**
BSWZ	**Blackbirch Sta**	**8.37**	**49**	Pn	**Pn**	**03 52 41.3**	**-1.7**
QRZ	**Quartz Range**	**8.43**	**40**	Pn	**Pn**	**03 52 41.9**	**-1.9**
NNZ	**Nelson**	**8.50**	**45**	Pn	**Pn**	**03 52 45.7**	**+0.9**
SNZO	**South Karori**	**9.09**	**50**	Pn	**Pn**	**03 52 51.5**	**-1.4**
HIZ	**Hauiti**	**11.35**	**41**	Pn	**Pn**	**03 53 24.5**	**+0.7**
URZ	**Urewera**	**12.61**	**47**	Pn	**Pn**	**03 53 40.8**	**-0.2**
	0.9nm,0.3s,baz=121,slow=19,SNR=3.6						
URZ				LR	LR	03 59 26.6	
	comp=Z,1µm,19.5s,baz=211,slow=42						
URZ	**Urewera**	**12.61**	**47**	Pn	**Pn**	**03 53 40.0**	**-1.0**
OUZ	**Omahuta**	**13.74**	**29**	Pn	**Pn**	**03 53 58.5**	**+1.9**
TOO	**Toolangi**	**17.72**	**297**		**P**	**03 54 49.2**	**-0.1**
TOO				IAmb	IAmb	03 55 01.9	
	comp=Z,20nm,1.1s						
STKA	**Stephens Creek**	**23.98**	**302**	P	**P**	**03 55 56.8**	**+0.5**
	comp=Z,2.7nm,0.8s,baz=131,slow=13,SNR=4.8						
STKA	**Stephens Creek**	**23.98**	**302**	P	**P**	**03 55 56.2**	**0.0**
DZM	**Mont Dzumac**	**25.44**	**2**	*e*P	**P**	**03 56 11.8**	**+2.2**
	comp=Z,40nm,1.4s						
DZM				*e*LR	LR	04 02 25.5	
	comp=Z,167nm,25.7s						
DZM	**Mont Dzumac**	**25.44**	**2**	P	**P**	**03 56 10.0**	**+0.4**
	comp=Z,5.3nm,0.8s,baz=184,slow=12,SNR=4.5						
DZM	**Mont Dzumac**	**25.44**	**2**	P	**P**	**03 56 09.1**	**-0.5**
DZM				IAmb	IAmb	03 56 21.0	
	comp=Z,9.5nm,0.9s						
AS31	**Alice Springs**	**34.62**	**302**	P	**P**	**03 57 31.1**	**+0.1**
AS31				IAmb	IAmb	03 57 31.8	
	comp=Z,2.4nm,0.6s						
ASAR	**Alice Springs**	**34.62**	**302**	P	**P**	**03 57 31.1**	**+0.2**
	comp=Z,5.2nm,0.7s,baz=132,slow=7.4,SNR=71						
ASAR	**Alice Springs**	**34.62**	**302**	P	**P**	**03 57 29.9**	**-1.0**
WR0	**Warramunga Arr**	**37.22**	**307**	P	**P**	**03 57 52.3**	**-0.8**
WR0				IAmb	IAmb	03 57 54.0	
	comp=Z,3.0nm,0.8s						
WB2	**Warramunga Arr**	**37.34**	**307**	P	**P**	**03 57 53.5**	**-0.6**
WB2				IAmb	IAmb	03 57 54.1	
	comp=Z,3.8nm,0.8s						
WRA	**Warramunga Arr**	**37.34**	**307**	P	**P**	**03 57 53.6**	**-0.6**
	comp=Z,2.3nm,0.6s,baz=136,slow=7.9,SNR=39						
WRA				LR	LR	04 10 51.9	
	comp=Z,129nm,20.0s,baz=185,slow=32						
WRA	**Warramunga Arr**	**37.34**	**307**	P	**P**	**03 57 53.6**	**-0.6**
WB0	**Warramunga Arr**	**37.46**	**307**	P	**P**	**03 57 54.5**	**-0.7**
WB0				IAmb	IAmb	03 58 08.9	
	comp=Z,6.5nm,1.2s						
COEN	**Coen**	**38.29**	**324**	P	**P**	**03 58 02.4**	**+0.2**
COEN				IAmb	IAmb	03 58 15.3	
	comp=Z,9.0nm,1.0s						
H01W1	**Cape Leeuwin H**	**39.91**	**269**	T	T	04 40 34.7	
	baz=125,slow=75,SNR=675						
H01W2	**Cape Leeuwin H**	**39.92**	**269**	T	T	04 40 33.1	
	baz=125,slow=75,SNR=622						
H01W3	**Cape Leeuwin H**	**39.93**	**269**	T	T	04 40 31.7	
	baz=125,slow=75,SNR=715						
PMG	**Port Moresby**	**41.06**	**332**	LR	LR	04 13 51.3	
	comp=Z,42nm,18.5s,baz=120,slow=34						
QSPA	**South Pole Qui**	**42.57**	**180**	P	**P**	**03 58 39.0**	**+1.7**
	comp=Z,1.2nm,0.9s,baz=353,slow=3.4,SNR=3.7						
MTN	**Manton Dam**	**44.92**	**309**	P	**P**	**03 58 56.4**	**-0.2**
PPT2	**Papeete2**	**47.31**	**67**	*e*S	**S**	**04 06 13.6**	**+5.0**
	comp=Z,75nm,26.5s						
PPT2				*e*LR	LR	04 12 33.3	
	comp=Z,276nm,32.2s						
PPT	**Papeete**	**47.33**	**66**	LR	LR	04 18 15.6	
	comp=Z,67nm,18.7s,baz=230,slow=35						
JAY	**Jayapura**	**49.71**	**327**	LR	LR	04 19 06.7	
	comp=Z,55nm,20.2s,baz=331,slow=34						
BATI	**Baumata**	**51.20**	**303**	LR	LR	04 20 45.7	
	comp=Z,114nm,19.8s,baz=206,slow=35						
KAPI	**Kappang**	**57.65**	**302**	LR	LR	04 25 53.0	
	comp=Z,51nm,18.2s,baz=171,slow=37						
TAOE	**Nuku Hiva Isla**	**59.85**	**68**	*e*LR	LR	04 18 23.7	
	comp=Z,135nm,31.5s						
SNAA	**Sanae**	**60.79**	**184**	P	**P**	**04 00 53.5**	**+0.4**
SNAA	**Sanae**	**60.79**	**184**	P	**P**	**04 00 52.0**	**-1.2**
VNA3	**Neumayer Olymp**	**61.46**	**182**	P	**P**	**04 00 58.0**	**+0.3**
VNA2	**Neumayer--Watz**	**61.72**	**183**	P	**P**	**04 00 59.8**	**+0.4**
	baz=178,slow=4.2						
VNA1	**Neumayer--Stat**	**62.02**	**182**	P	**P**	**04 01 01.6**	**+0.3**
RPN	**Rapa Nui**	**67.42**	**106**	LR	LR	04 25 39.3	
	comp=Z,42nm,21.6s,baz=39,slow=31						
H08S2	**Diego Garcia H**	**86.41**	**263**	T	T	05 38 27.2	
	baz=138,slow=76,SNR=410						
H08S1	**Diego Carcia H**	**86.43**	**263**	T	T	05 38 28.2	
	baz=138,slow=76,SNR=381						
H08S3	**Diego Garcia H**	**86.43**	**263**	T	T	05 38 27.5	
	baz=138,slow=76,SNR=369						
TORD	**Torodi Ar. Bea**	**143.11**	**207**	PKhKP	PKPpre	04 10 12.1	
	comp=Z,0.3nm,0.6s,baz=152,slow=2.2,SNR=2.2						
TORD				PKP	**PKiKP**	**04 10 18.5**	**-0.6**
	comp=Z,1.8nm,1.0s,baz=172,slow=1.0,SNR=6.9						
TORD	**Torodi Ar. Bea**	**143.11**	**207**		PKPbc	04 10 13.3	+0.6
BRTR	**Keskin Array B**	**144.74**	**275**	PKP	**PKPdf**	**04 10 19.1**	**+0.9**
	comp=Z,3.0nm,0.8s,baz=143,slow=4.3,SNR=6.9						
BRTR	**Keskin Array B**	**144.74**	**275**		**PKPdf**	**04 10 17.8**	**-0.5**
ARCES	**ARCESS Array B**	**150.57**	**333**	PKPbc	**PKiKP**	**04 10 33.3**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=72,slow=4.0,SNR=1.5						
AKASG	**Malin Array Be**	**151.50**	**293**	PKPbc	**PKiKP**	**04 10 35.4**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=79,slow=2.4,SNR=5.1						
AKASG				PKPab	**PKPab**	**04 10 42.7**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=81,slow=2.5,SNR=7.3						
FINES	**FINESS Array B**	**153.15**	**316**	PKPbc	**PKiKP**	**04 10 38.7**	**+0.4**
	comp=Z,3.0nm,0.9s,baz=76,slow=5.9,SNR=3.9						
FINES				PKPab	**PKPab**	**04 10 49.9**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=104,slow=8.0,SNR=4.7						

NNC 08 03:58:28.3±2.9**, 39°.06N×72°.28E, h0^{km}, mb3.8, mpv3.3, 6C-3D, Error ellipse: s-maj=28.4km s-min=17.5km az=165.0, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**3.95**	**25**	⇑Pn	Pn	03 59 30.8	+0.6
	6.9nm,0.6s						
AAK				⇑Lg	Lg	04 00 33.4	
	18nm,1.1s						
KK02	**Karatay Array**	**4.25**	**342**	⇓Pn	Pn	03 59 35.6	+1.3
	1.6nm,0.4s						
KK02				⇑Lg	Lg	04 00 43.1	
	8.0nm,0.6s						
TKM2	**Tokmak 2**	**4.60**	**32**	⇑Pn	Pn	03 59 39.2	-0.1
	1.8nm,0.6s						
TKM2				⇓Pg	Pb	03 59 51.5	+1.5
	6.9nm,0.9s						
TKM2				⇑Lg	Lg	04 00 54.8	
	8.9nm,0.9s						
MDOK	**Medeo**	**5.46**	**40**	⇓Pg	Pb	04 00 06.8	+2.2
	7.2nm,1.0s						
MDOK				⇑Lg	Lg	04 01 21.9	
	16nm,1.2s						
PDGK	**Podgornoye**	**6.91**	**50**	Lg	Lg	04 02 09.1	
	8.3nm,1.1s						
AB31	**Akbulak array**	**13.48**	**323**	Pn	Pn	04 01 36.7	-4.0
	1.1nm,0.7s,baz=133,slow=12,SNR=5.3						

NEIC 08 04:00:41.9±0.9**, 36°.12N**±0°.01×**97°.060W**±0°.008**, h6^{km}**±7^{km}**, ML2.0**/34**, Error ellipse: s-maj=1.8km s-min=0.9km az=162.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK031	**S. Brethren Rd**	**0.25**	**133**	Pg	Pg	04 00 46.9	+0.1
OK031				Sg	Sg	04 00 50.5	+0.5
OK031				IAML		04 00 50.7	
	335nm,0.3s						
OK031				IAML		04 00 50.8	
	330nm,0.2s						
OK030	**Cody Creek RV**	**0.30**	**131**		Pg	04 00 48.0	+0.3
OK030				Sg	Sg	04 00 51.8	+0.2
OK030				IAML		04 00 52.3	
	320nm,0.3s						
OK030				IAML		04 00 55.4	
	172nm,0.1s						
OK034	**N. Norfolk Rd.**	**0.30**	**112**	Pg	Pg	04 00 48.0	+0.2
OK034				Sg	Sg	04 00 52.3	+0.5
OK029	**Liberty Lake**	**0.46**	**225**	Pg	Pg	04 00 50.7	0.0
OK029				Sg	Sg	04 00 57.0	+0.4
OK029				IAML		04 01 01.1	
	86nm,0.6s						
OK029				IAML		04 01 01.1	
	87nm,0.3s						
BCOK	**Bluff Creek, N**	**0.64**	**224**	Pg	Pg	04 00 54.1	-0.2
BCOK				Sg	Sg	04 01 02.9	+0.3
BCOK				IAML		04 01 03.2	
	comp=E,78nm,0.2s						
BCOK				IAML		04 01 03.2	
	comp=N,74nm,0.4s						
BLOK	**Blackwell**	**0.65**	**349**	Pg	Pg	04 00 54.3	-0.1
BLOK				Sg	Sg	04 01 03.6	+0.7
BLOK				IAML		04 01 03.8	
	comp=E,157nm,0.2s						
OKCFA	**Oklahoma City**	**0.78**	**204**	Pg	Pg	04 00 56.3	-0.5
OKCSW	**OKLAHOMA CITY**	**0.78**	**203**	Pg	Pg	04 00 56.6	-0.3
T35A	**Sooner Cattle**	**0.91**	**29**	Pg	Pg	04 00 58.9	-0.4
T35A				Sg	Sb	04 01 11.8	-0.6
FNO	**Franklin**	**0.91**	**198**	Pg	Pg	04 00 58.7	-0.6
FNO				Sg	Sg	04 01 11.4	+0.3
FNO				IAML		04 01 13.6	
	comp=N,38nm,0.2s						
FNO				IAML		04 01 13.6	
	comp=E,35nm,0.4s						
GC02	**Grant County #**	**0.97**	**319**	Pg	Pg	04 01 00.1	-0.4
GC02				Sg	Sb	04 01 14.2	-0.1
TUL1	**Leonard**	**1.05**	**101**	Pg	Pg	04 01 01.1	-0.9
TUL1				Sg	Sg	04 01 15.3	-0.3
TUL1				IAML		04 01 15.7	
	comp=N,24nm,0.3s						
KAN17	**Caldwell West**	**1.08**	**329**	Pg	Pg	04 01 02.6	-0.1
KAN17				Sg	Sg	04 01 16.8	+0.2
KAN17				IAML		04 01 18.1	
	comp=E,75nm,0.1s						
KAN14	**Manchester OK**	**1.10**	**319**	Pg	Pg	04 01 02.6	-0.5
KAN14				Sg	Sb	04 01 18.0	-0.2
KAN09	**Caldwell North**	**1.11**	**336**	Pg	Pg	04 01 02.4	-0.7
KAN09				Sg	Sg	04 01 17.5	0.0
OK032	**Salt Plains WL**	**1.15**	**307**	Pg	Pg	04 01 03.3	-0.7
OK032				Sg	Sg	04 01 18.6	-0.2
KAN10	**Anthony SW Sta**	**1.30**	**320**	Pn	Pn	04 01 06.2	-0.5
KAN08	**Anthony NE Sta**	**1.32**	**327**	Pn	Pn	04 01 06.4	-0.6
KAN16	**Harper SW Stat**	**1.36**	**324**	Pn	Pn	04 01 07.2	-0.4
U32A	**Winter Ranch,**	**1.59**	**280**	Pn	Pn	04 01 10.8	+0.1
X34A	**Smith Ranch, M**	**1.65**	**203**	Pn	Pn	04 01 11.6	+0.2
X37A	**Clayton**	**2.06**	**137**	Pn	Pn	04 01 17.1	0.0
U38A	**Gravette**	**2.18**	**81**	Pn	Pn	04 01 19.6	+0.8
R32A	**Long Quarter,**	**2.65**	**331**	Pn	Pn	04 01 25.3	+0.1
W39A	**Magazine**	**2.82**	**108**	Pn	Pn	04 01 27.3	-0.3
MIAR	**Mount Ida**	**3.25**	**118**	Pn	Pn	04 01 33.1	-0.4

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*IDC **08** 04:12:35.3±0.7, 63°.17S×168°.84E, h0^{km}, mb4.4/6, mb1 4.5/6, mb1mx4.1/34, mbtmp4.4/6, MS4.6/13, Ms1 4.6/13, ms1mx4.6/13, Error ellipse: s-maj=38.8km s-min=23.7km az=56.0*

*NEIC **08** 04:12:36.8±1.5, 63°.4S±0°.1×168°.5E±0°.3, h10^{km}±1^{km}, mb4.8/20, Error ellipse: s-maj=25.4km s-min=18.1km az=83.0*

*GCMT **08** 04:12:37.8±0.2, 63°.16S±0°.01×169°.75E±0°.03, h12^{km}, MW5.3/108, Moment Tensor Solution. s73,c96; s108,c177; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.14±.02; $M_{\theta\theta}$0.96±.01; $M_{\phi\phi}$-0.81±.02; $M_{r\theta}$-0.47±.04; $M_{\theta\phi}$0.09±.02; $M_{\phi r}$-0.25±.04; Best double couple: $M_0$1.02700×10^{17} NP1:ϕ_s314.00000°, δ61.00000°, λ1.00000°. NP2:ϕ_s223.00000°, δ89.00000°, λ151.00000°. Principal axes: T 1.1490, Plg21.0000°, Azm175.0000°; N -0.2440, Plg61.0000°, Azm42.0000°; P -0.9050, Plg20.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 04:12:36.6±0.4**, 63°.30S**±0°.06×**169°.0E**±0°.1**, h10^{km}, n73, σ1^{s}.10**/52**, mb4.7**/12**, MS4.6**/16**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	**14.47**	**186**	Pn	**Pn**	**04 16 00.8**	**-0.2**
SBA	**Scott Base**	**14.64**	**182**	Pn	**Pn**	**04 16 02.6**	**-0.9**
WHZ	**Wether Hill Ro**	**17.45**	**358**	P	**Pn**	**04 16 39.4**	**-0.4**
DCZ	**Deep Cove**	**17.90**	**356**	P	**P**	**04 16 46.4**	**+0.4**
DCZ				IAmb	IAmb	04 16 52.7	
	comp=Z,68nm,0.9s						
MLZ	**Mavora Lakes**	**17.98**	**358**		**P**	**04 16 47.5**	**+0.6**
ODZ	**Otahua Downs**	**18.32**	**4**	P	**P**	**04 16 52.2**	**+1.6**
ODZ				IAmb	IAmb	04 16 55.6	
	comp=Z,55nm,1.0s						
LBZ	**Lake Benmore**	**18.96**	**3**	P	**Pn**	**04 16 59.0**	**+0.7**
RPZ	**Rata Peaks**	**19.66**	**4**	P	**Pn**	**04 17 07.8**	**+1.1**
RPZ				IAmb	IAmb	04 17 13.6	
	comp=Z,45nm,0.8s						
LTZ	**Lake Taylor**	**20.64**	**7**	P	Pn	04 17 18.5	+0.1
BKZ	**Black Stump Fm**	**24.58**	**14**		**P**	**04 17 57.5**	**+1.0**
BKZ				IAmb	IAmb	04 18 02.7	
	comp=Z,34nm,1.4s						
URZ	**Urewera**	**25.55**	**15**	LR	LR	04 26 29.5	
	comp=Z,2µm,21.5s,baz=211,slow=33						
URZ	**Urewera**	**25.55**	**15**		**P**	**04 18 05.1**	**-0.1**
QSPA	**South Pole Qui**	**26.79**	**180**	P	**P**	**04 18 16.2**	**-0.3**
	comp=Z,2.2nm,0.9s,baz=42,slow=2.8,SNR=6.5						
QSPA				LR	LR	04 27 21.7	
	comp=Z,2µm,19.7s,baz=30,slow=33						
QSPA	**South Pole Qui**	**26.79**	**180**	P	**P**	**04 18 16.6**	**+0.1**
STKA	**Stephens Creek**	**35.90**	**318**	LR	LR	04 32 11.2	
	comp=Z,1µm,18.9s,baz=152,slow=33						
MAW	**Mawson**	**39.11**	**216**	LR	LR	04 35 46.9	
	comp=Z,1µm,21.2s,baz=128,slow=36						
EIDS	**Eidsvold**	**39.73**	**334**	P	**P**	**04 20 08.5**	**-0.5**
DZM	**Mont Dzumac**	**41.24**	**356**	*e*P	**P**	**04 20 22.9**	**+1.3**
	comp=Z,35nm,1.8s						
DZM				*e*S	**S**	**04 26 34.8**	**-0.5**
	comp=Z,291nm,23.5s						
DZM				*e*LR	LR	04 31 38.4	
	comp=Z,2µm,24.2s						
H01W1	**Cape Leeuwin H**	**43.79**	**284**	T	T	05 08 03.9	
	baz=147,slow=76,SNR=1037						
H01W2	**Cape Leeuwin H**	**43.80**	**284**	T	T	05 08 04.2	
	baz=147,slow=76,SNR=1219						
H01W3	**Cape Leeuwin H**	**43.81**	**284**	T	T	05 08 05.1	
	baz=147,slow=76,SNR=885						
SNAA	**Sanae**	**45.19**	**184**	P	**P**	**04 20 51.4**	**-1.6**
SNAA	**Sanae**	**45.19**	**184**	P	**P**	**04 20 52.8**	**-0.2**
SNAA				IAmb	IAmb	04 21 07.2	
	comp=Z,11nm,1.1s						
VNA3	**Neumayer Olymp**	**45.73**	**181**	P	**P**	**04 20 56.1**	**-1.1**
ASAR	**Alice Springs**	**45.97**	**313**	P	**P**	**04 20 58.9**	**-0.8**
	comp=Z,3.3nm,0.8s,baz=157,slow=7.6,SNR=14						
ASAR				LR	LR	04 38 46.1	
	comp=Z,373nm,18.2s,baz=156,slow=34						
ASAR	**Alice Springs**	**45.97**	**313**	P	**P**	**04 20 58.4**	**-1.3**
VNA2	**Neumayer--Watz**	**46.03**	**182**	P	**P**	**04 20 58.5**	**-1.0**
VNA1	**Neumayer--Stat**	**46.31**	**181**	P	**P**	**04 21 01.1**	**-0.7**
WB2	**Warramunga Arr**	**49.30**	**315**	P	**P**	**04 21 24.1**	**-1.4**
WB2				IAmb	IAmb	04 21 37.0	
	comp=Z,8.3nm,0.9s						
WRA	**Warramunga Arr**	**49.30**	**315**	LR	LR	04 40 01.7	
	comp=Z,715nm,18.1s,baz=135,slow=34						

WRAB	**Tennant Creek**	**49.31**	**315**	P	**P**	**04 21 25.8**	**+0.2**
WRAB				IAmb	IAmb	04 21 42.4	
	comp=Z,6.6nm,0.8s						
PAE	**Paea**	**53.70**	**52**	*e*T	T	05 19 07.8	
	comp=Z,5.1nm,0.2s						
PPT2	**Papeete2**	**53.77**	**51**	*e*S	**S**	**04 29 30.9**	**-2.4**
	comp=Z,344nm,24.2s						
PPT2				*e*LQ	LQ	04 34 48.6	
	comp=Z,843nm,23.5s						
PPT2				*e*LR	LR	04 37 08.6	
	comp=Z,458nm,24.8s,baz=231						
PPT2	**Papeete2**	**53.77**	**51**	*e*T	T	05 19 13.5	
	comp=Z,9.2nm,0.3s						
PPT	**Papeete**	**53.78**	**51**	LR	LR	04 39 36.4	
	comp=Z,220nm,19.3s,baz=214,slow=30						
MEH	**Mehetia**	**54.04**	**53**	*e*T	T	05 19 34.2	
	comp=Z,26nm,0.2s						
VAH	**Vaihoa**	**56.63**	**53**	*e*T	T	05 22 47.8	
	comp=Z,166nm,0.2s						
TAOE	**Nuku Hiva Isla**	**65.27**	**58**	*e*S	**S**	**04 32 00.2**	**-1.7**
	comp=Z,249nm,26.0s						
TAOE	**Nuku Hiva Isla**	**65.27**	**58**	*e*LR	LR	04 42 43.6	
	comp=Z,372nm,23.4s						
PLCA	**Paso Flores**	**66.05**	**134**	P	**P**	**04 23 24.6**	**+1.4**
	comp=Z,4.2nm,0.9s,baz=240,slow=5.0,SNR=7.0						
PLCA				LR	LR	04 45 54.3	
	comp=Z,400nm,20.2s,baz=212,slow=30						
PLCA	**Paso Flores**	**66.05**	**134**	P	**P**	**04 23 24.3**	**+1.1**
BO02	**Sierra Bellavi**	**71.36**	**131**	P	**P**	**04 23 57.2**	**+0.8**
AC02	**Maricunga**	**79.19**	**129**	P	**P**	**04 24 42.0**	**-0.1**
AC02				IAmb	IAmb	04 24 46.2	
	comp=Z,8.4nm,1.0s						
CPUP	**Villa Florida**	**83.47**	**139**	P	**P**	**04 25 05.9**	**+1.7**
	comp=Z,7.8nm,1.0s,baz=208,slow=3.8,SNR=5.3						
CPUP				LR	LR	04 59 36.5	
	comp=Z,292nm,18.4s,baz=196,slow=34						
CPUP	**Villa Florida**	**83.47**	**139**	P	**P**	**04 25 05.1**	**+0.9**
BOSA	**Boshof**	**83.99**	**212**	P	**P**	**04 25 08.2**	**+1.2**
	comp=Z,2.6nm,0.9s,baz=149,slow=3.1,SNR=4.3						
BOSA				LR	LR	04 59 30.4	
	comp=Z,542nm,21.2s,baz=174,slow=34						
BOSA	**Boshof**	**83.99**	**212**	P	**P**	**04 25 05.0**	**-2.0**
BOSA				IAmb	IAmb	04 25 13.1	
	comp=Z,14nm,1.4s						
H08S2	**Diego Garcia H**	**86.15**	**261**	T	T	06 01 02.8	
	baz=153,slow=76,SNR=72						
H08S1	**Diego Carcia H**	**86.16**	**261**	T	T	06 01 03.4	
	baz=153,slow=76,SNR=80						
H08S3	**Diego Garcia H**	**86.17**	**261**	T	T	06 01 04.3	
	baz=153,slow=76,SNR=90						
LPAZ	**La Paz**	**89.24**	**126**	P	**P**	**04 25 34.9**	**+1.5**
	comp=Z,2.4nm,0.8s,baz=247,slow=2.5,SNR=6.7						
LPAZ				LR	LR	04 56 31.0	
	comp=Z,138nm,20.7s,baz=208,slow=30						
LPAZ	**La Paz**	**89.24**	**126**		**P**	**04 25 32.1**	**-1.3**
LPAZ				IAmb	IAmb	04 25 39.3	
	comp=Z,6.2nm,1.2s						
BDFB	**Brasilia**	**96.23**	**144**	LR	LR	05 08 05.8	
	comp=Z,185nm,18.1s,baz=157,slow=35						
CMAR	**Chiang Mai Arr**	**97.73**	**296**	LR	LR	05 07 28.7	
	comp=Z,212nm,20.5s,baz=199,slow=34						
PDAR	**Pinedale Array**	**123.64**	**61**	PKP	**PKiKP**	**04 31 34.0**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=148,slow=3.3,SNR=4.7						
PDAR	**Pinedale Array**	**123.64**	**61**		PKPpre	04 31 25.8	
TORD	**Torodi Ar. Bea**	**129.12**	**196**	PKP	**PKPdf**	**04 31 44.9**	**+0.3**
	comp=Z,1.0nm,1.0s,baz=125,slow=1.3,SNR=4.4						
TORD	**Torodi Ar. Bea**	**129.12**	**196**	PKPdf	**PKiKP**	**04 31 45.2**	**-0.1**
ILAR	**Eielson Array**	**131.84**	**24**	PKP	**PKPdf**	**04 31 48.1**	**-0.1**
	comp=Z,3.9nm,1.1s,baz=226,slow=3.2,SNR=4.6						
ILAR	**Eielson Array**	**131.84**	**24**		**PKPdf**	**04 31 47.9**	**-0.3**
INK	**Inuvik**	**137.55**	**28**	PKP	**PKPdf**	**04 31 58.8**	**0.0**
	comp=Z,1.9nm,1.0s,baz=210,slow=4.7,SNR=3.5						
INK	**Inuvik**	**137.55**	**28**		**PKiKP**	**04 32 00.8**	**+0.1**
KBZ	**Khabaz**	**143.85**	**263**	PKhKP	PKPpre	04 32 05.4	
	comp=Z,3.9nm,1.0s,baz=225,slow=2.9,SNR=3.4						
NRIK	**Noril'sk**	**144.12**	**323**	PKP	PKPbc	04 32 08.6	-0.2
	comp=Z,5.7nm,1.1s,baz=145,slow=5.3,SNR=2.4						
BRTR	**Keskin Array B**	**144.67**	**250**	PKP	**PKPab**	**04 32 10.7**	**-0.8**
	comp=Z,3.9nm,0.8s,baz=183,slow=7.3,SNR=8.2						
VAY	**Valandovo**	**150.50**	**238**	*i* P	**PKPbc**	**04 32 26.8**	**-0.6**
RES	**Resolute Bay**	**150.79**	**33**	PKPbc	**PKPbc**	**04 32 25.8**	**-1.3**
	comp=Z,17nm,1.1s,baz=297,slow=3.4,SNR=6.9						
RES	**Resolute Bay**	**150.79**	**33**		**PKiKP**	**04 32 27.6**	**-0.1**
STIP	**Stip**	**150.97**	**238**	*i* P	**PKiKP**	**04 32 31.5**	**+2.4**
OHR	**Ohrid**	**150.99**	**235**	*i* P	**PKiKP**	**04 32 30.7**	**+1.5**
SKO	**Skopje**	**151.49**	**237**	*i* P	**PKPab**	**04 32 37.3**	**-0.9**
AKASG	**Malin Array Be**	**155.21**	**258**	PKPab	**PKPab**	**04 32 54.1**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=134,slow=3.5,SNR=4.9						
ESDC	**Sonseca Array**	**155.97**	**193**	PKPab	**PKPab**	**04 32 59.0**	**+1.8**
	comp=Z,1.3nm,1.0s,baz=178,slow=4.8,SNR=4.3						

*IDC **08** 04:14:51.0±2.3, 7°.00S×129°.90E, h100^{km}±20^{km}, mb3.6/4, mb1 3.7/9, mb1mx3.2/59, mbtmp4.1/9, Error ellipse: s-maj=35.9km s-min=17.1km az=81.0*

*NEIC **08** 04:14:52.8±1.4, 6°.97S±0°.06×129°.88E±0°.08, h126^{km}±8^{km}, mb4.6/4, Error ellipse: s-maj=12.2km s-min=7.5km az=65.0*

ISC 08 04:14:50.7±0.7**, 6°.99S**±0°.06×**129°.83E**±0°.08**, h104^{km}, n28, σ2$\overset{s}{.}$44**/32**, mb3.9**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.76**	**124**	Pn	**Pn**	**04 15 23.6**	**+3.3**
SAUI				Sn	**Sn**	**04 15 47.5**	**+4.5**
FAKI	**Fak Fak**	**4.71**	**31**	Pn	**Pn**	**04 16 01.5**	**+2.0**
FAKI				Sn	**Sn**	**04 16 52.6**	**-0.4**
MTN	**Manton Dam**	**5.96**	**168**	Pn	**Pn**	**04 16 18.9**	**+2.5**
SOEI	**Soe**	**6.15**	**243**		**Pn**	**04 16 22.3**	**+3.1**
SIJI	**Sorong**	**6.25**	**13**	P	**Pn**	**04 16 21.7**	**+1.3**
	7.0nm,0.3s,baz=75,slow=9.7,SNR=7.3						
SIJI				S	**Sn**	**04 17 27.7**	**-2.8**
	3.9nm,0.3s,baz=240,slow=20,SNR=2.6						
BATI	**Baumata**	**6.89**	**242**	P	**Pn**	**04 16 31.8**	**+2.7**
	30nm,0.3s,baz=220,slow=0.9,SNR=9.7						
KNRA	**Kununurra**	**8.70**	**187**		**Pn**	**04 16 54.0**	**+0.3**
FITZ	**Fitzroy Crossi**	**11.77**	**200**	P	**Pn**	**04 17 34.5**	**-0.8**
	1.8nm,0.3s,baz=25,slow=8.5,SNR=49						
WB0	**Warramunga Arr**	**13.45**	**161**	Pn	**Pn**	**04 17 55.8**	**-1.6**
WRA	**Warramunga Arr**	**13.60**	**162**	P	**Pn**	**04 17 57.8**	**-1.6**
	0.5nm,0.3s,baz=347,slow=13,SNR=23						
WRA				S	Sn	04 20 19.3	-10
	1.3nm,0.3s,baz=339,slow=23,SNR=15						
WRA	**Warramunga Arr**	**13.60**	**162**	Pn	**Pn**	**04 17 58.2**	**-1.1**
WB2	**Warramunga Arr**	**13.60**	**162**	Pn	**Pn**	**04 17 58.2**	**-1.2**
COEN	**Coen**	**14.83**	**119**	Pn	**Pn**	**04 18 15.1**	**-0.1**
ASAR	**Alice Springs**	**17.04**	**167**	P	**Pn**	**04 18 42.2**	**-0.4**
	0.2nm,0.3s,baz=331,slow=9.3,SNR=8.1						
ASAR				S	**Sn**	**04 21 43.9**	**-8.3**
	0.2nm,0.3s,baz=338,slow=16,SNR=4.1						
ASAR	**Alice Springs**	**17.04**	**167**	P	**Pn**	**04 18 39.8**	**-2.8**
SANVU	**Saraoutou**	**37.55**	**106**	P	**P**	**04 21 53.3**	**-1.9**
PINNC	**Pines Island,**	**39.39**	**117**	P	**P**	**04 22 07.9**	**-2.6**
PINNC				IAmb	IAmb	04 22 10.6	
	comp=Z,15nm,0.8s						
MKAR	**Makanchi Array**	**68.13**	**327**	P	**P**	**04 25 41.1**	**+1.5**
	comp=Z,0.8nm,0.4s,baz=114,slow=8.1,SNR=14						
ZALV	**Zalesovo Beam**	**71.50**	**334**	P	**P**	**04 25 60.0**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=101,slow=7.5,SNR=3.0						
ZALV	**Zalesovo Beam**	**71.50**	**334**	P	**P**	**04 25 59.4**	**-0.7**
KURBB	**Kurchatov Arra**	**72.42**	**329**	P	**P**	**04 26 06.5**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=124,slow=4.6,SNR=4.5						
KURK	**Kurchatov**	**72.42**	**329**	P	**P**	**04 26 06.1**	**+0.5**
KURK				IAmb	IAmb	04 26 10.0	
	comp=Z,9.9nm,1.2s						
QSPA	**South Pole Qui**	**82.99**	**180**	P	**P**	**04 27 05.3**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=27,slow=4.5,SNR=5.0						
QSPA	**South Pole Qui**	**82.99**	**180**	P	**P**	**04 27 04.2**	**0.0**
TORD	**Torodi Ar. Bea**	**128.65**	**281**	PKP	**PKPdf**	**04 33 47.1**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=54,slow=1.8,SNR=2.9						
CPUP	**Villa Florida**	**146.16**	**168**	PKPbc	**PKPab**	**04 34 20.8**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=108,slow=6.4,SNR=2.6						
LPAZ	**La Paz**	**150.83**	**143**	PKPbc	**PKiKP**	**04 34 33.7**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=234,slow=3.2,SNR=6.2						
LPAZ	**La Paz**	**150.83**	**143**		**PKPdf**	**04 34 29.3**	**+2.1**

*IDC **08** 04:17:49.1±1.1, 38°.24N×73°.09E, h0^{km}, mb3.9/12, mb1 4.0/18, mb1mx3.7/66, mbtmp3.9/18, ML3.3/6, MS3.1/5, Ms1 3.1/5, ms1mx2.8/39, Error ellipse: s-maj=21.7km s-min=16.5km az=142.0*

*NEIC **08** 04:17:50.8, 38°.25N×73°.35E, h23^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.23; $M_{\theta\theta}$-1.40; $M_{\phi\phi}$1.63; $M_{r\theta}$-0.65; $M_{\theta\phi}$-0.62; $M_{\phi r}$0.52; Fault plane solution: $M_0$1.85000×10^{15} NP1:ϕ_s125.12000°, δ87.11000°, λ-152.40000°. NP2:ϕ_s33.60000°, δ62.44000°, λ-3.26000°. Principal axes: T 1.9442, Plg17.0000°, Azm256.0000°; N -0.2135, Plg62.0000°, Azm131.0000°; P -1.7307, Plg21.0000°, Azm353.0000°;*

*MOS **08** 04:17:50.9±2.1, 38°.47N×73°.10E, h17^{km}, mb4.4/8 Error ellipse: s-maj=8.7km s-min=5.6km az=91.9*

*NEIC **08** 04:17:51.2±1.8, 38°.26N±0°.07×73°.34E±0°.10, h19^{km}±6^{km}, mb4.5/12, Mwr4.1/13, Error ellipse: s-maj=13.6km s-min=7.0km az=130.0*

*SOME **08** 04:17:52.2, 38°.62N×72°.93E, h0^{km}*

*NNC **08** 04:17:52.8±2.5, 38°.50N×73°.07E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=19.9km s-min=13.1km az=9.0*

*BJI **08** 04:17:54.1±0.0, 38°.46N×73°.26E, h8^{km}, mb4.6/10, ML4.0/4*

ISC 08 04:17:51.0±0.3**, 38°.38N**±0°.03×**73°.23E**±0°.03**, h10^{km}, n151, σ2$\overset{s}{.}$20**/141**, mb4.3**/23**, 19C-8D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.56**	**315**		**Pn**	**04 18 17.2**	**-1.8**
GAR	**Garm**	**2.36**	**286**	Pn	**Pn**	**04 18 30.7**	**+0.8**
KSH	**Kashi**	**2.42**	**61**	Pn	**Pn**	**04 18 28.7**	**-2.0**
KSH				Sn	**Sn**	**04 18 58.7**	**-1.8**
KSH				smax	smax		
	comp=N,2µm,1.0s						
KSH				smax	smax		
	comp=E,2µm,0.9s						
BTK	**Batken**	**2.51**	**313**	PN	**Pn**	**04 18 32.9**	**+1.0**
BTK	**Batken**	**2.51**	**313**		**Pn**	**04 18 32.9**	**+1.0**
CHGR	**Chuyangaron**	**3.20**	**276**	PN	**Pn**	**04 18 42.9**	**+1.4**
CHGR	**Chuyangaron**	**3.20**	**276**		**Pn**	**04 18 42.9**	**+1.4**
TAS	**Tashkent**	**4.22**	**315**	PN	**Pn**	**04 18 56.4**	**+1.1**
TAS	**Tashkent**	**4.22**	**315**	Pn	**Pn**	**04 18 56.4**	**+1.1**
MRKS	**Merke**	**4.36**	**360**	*e*P	**Pb**	**04 19 09.3**	**+1.6**
	60nm,0.5s						
MRKS				*e*S	**Sb**	**04 20 05.8**	**+5.5**
	156nm,0.6s						
MRKS	**Merke**	**4.36**	**360**	Pg	**Pb**	**04 19 09.3**	**+1.6**
	60nm,0.5s						
MRKS				Lg	Lg	04 20 05.8	
	156nm,0.6s						
AAK	**Ala-Archa**	**4.36**	**12**	Pn	Pn	04 19 03.1	+5.7
	5.7nm,0.3s,baz=178,slow=5.2,SNR=8.5						
AAK				Sn	**Sb**	**04 19 58.5**	**-2.0**
	3.3nm,0.3s,baz=336,slow=15,SNR=5.0						
AAK	**Ala-Archa**	**4.36**	**12**	PN	Pn	04 19 03.1	+5.7
AAK						04 19 58.5	
AAK	**Ala-Archa**	**4.36**	**12**	⇑Pn	**Pn**	**04 19 00.2**	**+2.8**
	13nm,0.3s						
AAK				⇓Pg	**Pb**	**04 19 10.4**	**+2.7**
	62nm,0.7s						
AAK				⇓Lg	Lg	04 20 07.9	
	182nm,0.8s						
AAK	**Ala-Archa**	**4.36**	**12**	Pn	**Pn**	**04 18 58.0**	**+0.6**
IUG	**Iuzhnay**	**4.49**	**328**	*e*P	**Pb**	**04 19 08.4**	**-1.4**
	2µm,0.7s						
IUG				*e*S	**Sb**	**04 20 04.7**	**+0.7**
	207nm,0.8s						
IUG	**Iuzhnay**	**4.49**	**328**	*e*Pg	**Pb**	**04 19 12.6**	**+2.7**
	baz=326						
IUG	**Iuzhnay**	**4.49**	**328**	*e*PN	**Pb**	**04 19 12.5**	**+2.7**
IUG	**Iuzhnay**	**4.49**	**328**	Pg	**Pb**	**04 19 08.4**	**-1.4**
	2µm,0.7s						
IUG				Lg	Lg	04 20 04.7	
	207nm,0.8s						
FRU1	**Bishkek**	**4.55**	**13**	PN	**Pn**	**04 18 59.8**	**-0.2**
FRU1	**Bishkek**	**4.55**	**13**	Pn	**Pn**	**04 18 59.8**	**-0.2**
BOOM	**Boomskoye usch**	**4.60**	**26**	PN	**Pn**	**04 18 59.7**	**-1.0**
BOOM	**Boomskoye usch**	**4.60**	**26**	Pn	**Pn**	**04 18 59.7**	**-1.0**
NIL	**Nilore**	**4.72**	**180**	PN	**Pn**	**04 18 57.6**	**-4.7**
NIL	**Nilore**	**4.72**	**180**		**Pn**	**04 18 57.6**	**-4.7**
DZA	**Taraz**	**4.73**	**343**	*e*P	**Pb**	**04 19 15.2**	**+1.3**
	71nm,0.4s						
DZA				*e*S	**Sb**	**04 20 16.4**	**+5.4**
	296nm,0.6s						
DZA	**Taraz**	**4.73**	**343**	*e*Pg	**Pb**	**04 19 16.4**	**+2.4**
	baz=341						
DZA	**Taraz**	**4.73**	**343**	*e*PN	**Pb**	**04 19 16.4**	**+2.4**
DZA	**Taraz**	**4.73**	**343**	Pg	**Pb**	**04 19 15.2**	**+1.3**
	71nm,0.4s						
DZA				Lg	Lg	04 20 16.4	
	296nm,0.6s						
KDJ	**Kajisay**	**4.81**	**38**	PN	Pn	04 19 08.6	+4.9
KDJ	**Kajisay**	**4.81**	**38**	Pn	Pn	04 19 08.6	+4.9
TARG	**Taragay, Kyrgy**	**4.85**	**45**	Pn	**Pn**	**04 19 01.9**	**-2.5**
TKM2	**Tokmak 2**	**4.88**	**21**	PN	**Pb**	**04 19 20.6**	**+4.0**
TKM2	**Tokmak 2**	**4.88**	**21**	⇑Pg	**Pb**	**04 19 20.6**	**+4.0**
	26nm,0.7s						
TKM2				⇑Lg	Lg	04 20 26.8	
	136nm,0.9s						
KBL	**Kabul**	**5.11**	**223**	PN	**Pn**	**04 19 09.9**	**+2.2**
KBL	**Kabul**	**5.11**	**223**	Pn	**Pn**	**04 19 09.8**	**+2.2**
KK02	**Karatay Array**	**5.15**	**337**	⇑Pn	**Pn**	**04 19 10.0**	**+1.9**
	14nm,0.5s						
KK02				⇑Sn	**Sn**	**04 20 10.2**	**+2.7**
	31nm,0.5s						
KKAR	**Karatay Array**	**5.15**	**337**	PN	**Pn**	**04 19 10.0**	**+1.9**
KKAR	**Karatay Array**	**5.15**	**337**		**Pn**	**04 19 10.0**	**+1.9**
TNSS	**Tian-Shan**	**5.44**	**30**	*e*Pg	**Pb**	**04 19 27.1**	**+0.8**
	baz=29						
MDOK	**Medeo**	**5.59**	**30**	*e*Pg	**Pb**	**04 19 29.9**	**+1.2**
	baz=29						
MDOK	**Medeo**	**5.59**	**30**	*e*PN	**Pb**	**04 19 29.8**	**+1.2**
MDOK	**Medeo**	**5.59**	**30**	⇑Pg	Pb	04 19 33.4	+4.8
	41nm,0.7s						
MDOK				⇑Lg	Lg	04 20 49.1	
	162nm,1.1s						
KNDC	**Almaty**	**5.60**	**29**	⇓Pg	Pb	04 19 33.4	+4.6
	132nm,0.8s						
KNDC				⇑Lg	Lg	04 20 48.6	
	527nm,1.1s						
PRZ	**Przheval'sk**	**5.69**	**42**	PN	**Pn**	**04 19 14.0**	**-1.7**
PRZ	**Przheval'sk**	**5.69**	**42**		**Pn**	**04 19 14.0**	**-1.7**
DHRM	**DHARAMSHALA**	**6.61**	**157**	*e*P	Pn	04 19 32.4	+4.0
DHRM				*e*S	**Sn**	**04 20 47.6**	**+3.6**
DHRM				IAML		04 20 59.1	
	comp=E,100nm,0.5s						
BTLS	**Baital**	**6.68**	**5**	*e*Pg	**Pb**	**04 19 51.0**	**+3.9**
	baz=3.7						
SHLS	**Shalkode**	**6.72**	**43**	*e*Pg	Pb	04 19 54.2	+6.3
	baz=44						
PDGK	**Podgornoye**	**6.85**	**42**	PN	Pn	04 19 36.1	+4.5
PDGK	**Podgornoye**	**6.85**	**42**	⇑Pn	**Pn**	**04 19 35.1**	**+3.5**
	comp=E,11nm,1.0s						
PDGK				⇓Pg	**Pg**	**04 19 58.3**	**-3.8**
	comp=E,23nm,1.2s						
PDGK				⇑Lg	Lg	04 21 27.8	
	comp=E,64nm,1.0s						
TDK	**Taldyqorghan**	**7.66**	**29**	*e*Pg	**Pb**	**04 20 07.3**	**+3.4**
	baz=28						
SMLA	**Simla**	**7.93**	**155**	*e*P	Pn	04 19 49.7	+3.5
SMLA				*e*S	**Sn**	**04 21 16.3**	**+0.3**
SMLA				IAML		04 21 28.1	
	comp=E,74nm,0.5s						
KUDL	**Kundal**	**10.57**	**164**	*e*P	Pn	04 20 26.2	+3.8
KUDL				*e*S	Sn	04 22 08.3	-13
MK31	**Makanchi Array**	**10.73**	**36**	P	**Pn**	**04 20 27.8**	**+3.1**
MK31	**Makanchi Array**	**10.73**	**36**	Pn	**Pn**	**04 20 27.9**	**+3.3**
	comp=E,1.4nm,0.7s,baz=217,slow=15,SNR=12						
MK31	**Makanchi Array**	**10.73**	**36**	Pn	**Pn**	**04 20 27.8**	**+3.1**
MKAR	**Makanchi Array**	**10.73**	**36**	Pn	**Pn**	**04 20 28.8**	**+4.1**
	comp=E,0.1nm,0.3s,baz=221,slow=14,SNR=9.2						
MKAR				LR	LR	04 25 00.1	
	comp=E,84nm,20.7s,baz=208,slow=40						
MKAR	**Makanchi Array**	**10.73**	**36**	P	**Pn**	**04 20 28.8**	**+4.1**
MKAR	**Makanchi Array**	**10.73**	**36**	Pn	Pn	04 20 28.9	+4.3
GEYT	**Alibeck**	**11.91**	**273**	LR	LR	04 25 25.5	
	comp=E,90nm,18.7s,baz=55,slow=39						
WMQ	**Urumqi**	**12.19**	**59**	*e*P	Pn	04 20 52.1	+7.5
WMQ				pP		04 20 56.3	
WMQ				sP		04 20 59.5	
WMQ				pmax	pmax		
	comp=E,15nm,0.7s						
KURBB	**Kurchatov Arra**	**12.80**	**15**	Pn	**Pn**	**04 20 53.7**	**+0.7**
	comp=E,0.1nm,0.3s,baz=206,slow=12,SNR=8.3						
KURBB	**Kurchatov Arra**	**12.80**	**15**	⇑Pn	**Pn**	**04 20 54.7**	**+1.7**
	comp=E,5.0nm,0.9s						
KURK	**Kurchatov**	**12.91**	**16**	⇑*e*P	**Pn**	**04 20 52.0**	**-2.4**
KURK				pmax	pmax		
	comp=Z,15nm,2.5s						
SEM	**Semipalatinsk**	**13.02**	**20**	*e*Pn	Pn	04 20 51.3	-4.8
	baz=20						
SEM	**Semipalatinsk**	**13.02**	**20**	*e*P	Pn	04 20 51.3	-4.8
PYUN	**Piuthan**	**13.10**	**139**	*e*P	**Pn**	**04 20 55.4**	**-1.9**
	comp=Z,3.2nm,0.3s						
DANN	**Dangsing**	**13.31**	**136**	*e*P	P	04 21 04.8	-5.3
	comp=Z,15nm,0.4s						
KOLN	**Koldanda**	**13.69**	**138**	*e*P	**Pn**	**04 21 01.1**	**-4.2**
	comp=Z,8.8nm,0.4s						
AB31	**Akbulak array**	**14.47**	**323**	Pn	**Pn**	**04 21 13.3**	**-2.5**
	comp=Z,1.5nm,0.5s,baz=133,slow=12,SNR=27						
ABKAR	**Akbulak array**	**14.47**	**323**		Pn	04 21 13.2	-2.5
ABKAR	**Akbulak array**	**14.47**	**323**	Pn	**Pn**	**04 21 13.4**	**-2.3**
BVAR	**Borovoye Array**	**14.78**	**353**	Pn	**Pn**	**04 21 19.0**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=184,slow=19,SNR=7.3						
BVAR	**Borovoye Array**	**14.78**	**353**	P	**Pn**	**04 21 19.0**	**-0.9**
BVAR	**Borovoye Array**	**14.78**	**353**		**Pn**	**04 21 19.0**	**-0.9**
BRVK	**Borovoye**	**14.82**	**353**	⇓*e*P	**Pn**	**04 21 17.9**	**-2.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	**Borovoye**	**14.82**	**353**	⇑Pn	**Pn**	**04 21 19.6**	**-0.9**
	comp=Z,12nm,0.7s						
BRVK	**Borovoye**	**14.82**	**353**	Pn	**Pn**	**04 21 18.4**	**-2.1**
PKIN	**Phulchoki**	**14.83**	**133**	*e*P	**Pn**	**04 21 20.8**	**-0.2**
	comp=Z,3.8nm,0.3s						
PKI	**Pulchoki**	**14.84**	**133**	*e*P	**Pn**	**04 21 20.6**	**-0.6**
	comp=Z,9.0nm,0.6s						
DGZ	**Jazzator, Alta**	**15.21**	**37**	⇑*e*P	**Pn**	**04 21 20.8**	**-5.1**
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.3s						
BHPL	**Bhopal**	**15.51**	**165**	*e*P	**P**	**04 21 37.9**	**+3.6**
BHPL				*e*S	**Sn**	**04 24 14.9**	**-7.0**
RAMN	**Ramite**	**16.00**	**132**	*e*P	**Pn**	**04 21 32.3**	**-4.1**
	comp=Z,3.8nm,0.4s						
AKTO	**Aktyubinsk**	**16.19**	**323**	Pn	**Pn**	**04 21 36.2**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=113,slow=16,SNR=2.9						
AKTO				LR	LR	04 28 25.1	
	comp=Z,62nm,20.5s,baz=152,slow=39						
AKTO	**Aktyubinsk**	**16.19**	**323**	P	**Pn**	**04 21 36.2**	**-2.2**
AKTO	**Aktyubinsk**	**16.19**	**323**	⇑Pn	**Pn**	**04 21 38.7**	**+0.3**
	comp=Z,20nm,1.0s						
AKTO	**Aktyubinsk**	**16.19**	**323**		**Pn**	**04 21 36.2**	**-2.2**
TAPN	**Taplejung**	**16.38**	**128**	*e*P	**P**	**04 21 45.2**	**+1.0**
	comp=Z,7.0nm,0.5s						
ODAN	**Odare**	**16.54**	**130**	*e*P	**Pn**	**04 21 41.2**	**-2.1**
	comp=Z,5.5nm,0.5s						
ZAA0	**Zalesovo Array**	**17.48**	**23**	P	**Pn**	**04 21 55.4**	**+0.8**
ZALV	**Zalesovo Beam**	**17.48**	**23**	P	**Pn**	**04 21 55.8**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=214,slow=10.0,SNR=9.9						
ZALV	**Zalesovo Beam**	**17.48**	**23**	P	**Pn**	**04 21 55.8**	**+1.1**
ZALV	**Zalesovo Beam**	**17.48**	**23**		**Pn**	**04 21 54.6**	**0.0**
WSAR	**Wadi Sarin**	**19.58**	**224**	LR	LR	04 32 06.1	
	comp=Z,39nm,18.4s,baz=62,slow=44						
ARU	**Arti**	**20.52**	**336**	*d i*P	**P**	**04 22 27.4**	**-1.8**
ARU				S	**S**	**04 26 16.9**	**-1.7**
ARU				SS	**SnSn**	**04 26 37.3**	**+0.1**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GTA	**Gaotai**	**20.70**	**79**	*e*P	Pn	04 22 39.4	+5.7
GTA				pP	sP	04 22 44.8	+7.3
GTA				sP	pP	04 22 48.1	+13
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GROC	**Groznyy**	**21.27**	**292**	*e*P	**P**	**04 22 37.8**	**+0.4**
GROC				*e*		04 22 57.6	
GROC				pmax	pmax		
	comp=Z,21nm,1.0s						
HYB	**Hyderabad**	**21.40**	**166**	*i* P	P	04 22 47.0	+8.0
GNI	**Garni**	**22.09**	**284**	⇑*e*P	**P**	**04 22 44.2**	**-2.2**
GNI				pmax	pmax		
	comp=Z,13nm,1.6s						
NCK	**Nalchik**	**22.89**	**292**	⇓*e*P	**P**	**04 22 51.4**	**-3.3**
NCK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ONI	**Oni**	**22.97**	**290**	P	**P**	**04 22 55.4**	**-0.2**
ONI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ONI	**Oni**	**22.97**	**290**	P	**P**	**04 22 55.4**	**-0.2**
ONI				IAmb	IAmb	04 23 02.9	
	comp=Z,7.7nm,0.7s						
KBZ	**Khabaz**	**23.41**	**293**	P	**P**	**04 23 00.3**	**+0.3**
	comp=Z,1.7nm,1.0s,baz=140,slow=7.9,SNR=1.7						
KBZ				LR	LR	04 34 06.6	
	comp=Z,55nm,18.6s,baz=106,slow=42						
KBZ	**Khabaz**	**23.41**	**293**	P	**P**	**04 23 00.3**	**+0.3**
KBZ	**Khabaz**	**23.41**	**293**	P	**P**	**04 23 00.3**	**+0.3**
KIV	**Kislovodsk**	**23.57**	**293**	*e*P	**P**	**04 22 58.1**	**-3.6**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,35nm,14.0s						
KIRV	**Kirov**	**25.40**	**330**	⇑*e*P	**P**	**04 23 16.2**	**-2.0**
SONM	**Songino Array**	**25.82**	**58**	P	**P**	**04 23 25.4**	**+3.0**
	comp=Z,1.2nm,0.7s,baz=255,slow=10,SNR=3.9						
SONM	**Songino Array**	**25.82**	**58**	P	**P**	**04 23 25.4**	**+3.0**
HHC	**Hu-ho-hao-te**	**29.48**	**73**	*e*P	**P**	**04 23 52.3**	**-2.9**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,210nm,5.3s						
GYA	**Guiyang**	**30.46**	**103**	⇓P	**P**	**04 24 05.2**	**+1.1**
GYA				pmax	pmax		
	comp=Z,14nm,0.7s						
NRIK	**Noril'sk**	**31.97**	**10**	P	**P**	**04 24 18.0**	**+1.3**
	comp=Z,4.3nm,0.9s,baz=190,slow=4.5,SNR=5.8						
NRIK	**Noril'sk**	**31.97**	**10**	⇑*e*P	P	04 24 12.4	-4.3
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NRIK	**Noril'sk**	**31.97**	**10**	P	**P**	**04 24 16.5**	**-0.2**
NRIK				IAmb	IAmb	04 24 19.1	
	comp=Z,5.0nm,0.9s						
AKASG	**Malin Array Be**	**33.21**	**306**	P	**P**	**04 24 26.5**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=81,slow=7.0,SNR=4.5						
AKASG	**Malin Array Be**	**33.21**	**306**	*i* P	**P**	**04 24 27.7**	**-0.1**
AKASG	**Malin Array Be**	**33.21**	**306**	P	**P**	**04 24 26.9**	**-0.9**
NACGM	**Naroch**	**35.16**	**313**	*i* P	P	04 24 34.0	-11
FINES	**FINESS Array B**	**36.95**	**324**	P	**P**	**04 24 59.9**	**0.0**
	comp=Z,6.3nm,1.0s,baz=130,slow=13,SNR=4.0						
FINES	**FINESS Array B**	**36.95**	**324**	P	**P**	**04 24 59.8**	**-0.1**
FINES	**FINESS Array B**	**36.95**	**324**	P	**P**	**04 24 59.8**	**-0.1**
NJ2	**Nanjing**	**37.51**	**85**	*e*P	**P**	**04 25 04.0**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ARCES	**ARCESS Array B**	**40.11**	**336**	P	**P**	**04 25 26.3**	**-0.1**
	comp=Z,3.2nm,0.7s,baz=110,slow=7.8,SNR=7.3						
ARCES	**ARCESS Array B**	**40.11**	**336**	P	**P**	**04 25 25.8**	**-0.6**
ARCES				pmax	pmax		
	comp=Z,31nm,1.4s						
ARCES	**ARCESS Array B**	**40.11**	**336**	P	**P**	**04 25 25.8**	**-0.6**
TIXI	**Tiksi**	**43.37**	**22**	⇑*e*P	**P**	**04 25 49.2**	**-3.7**
TIXI				pmax	pmax		
	comp=Z,27nm,3.3s						
NB2	**NORSAR Subarra**	**43.97**	**322**	P	**P**	**04 25 57.4**	**-0.6**
	comp=Z,3.9nm,0.8s,baz=92,slow=8.6						
NOA	**NORSAR Array B**	**43.97**	**322**	P	**P**	**04 25 57.8**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=92,slow=8.0,SNR=5.5						
NOA	**NORSAR Array B**	**43.97**	**322**	P	**P**	**04 25 57.8**	**-0.2**
NOA	**NORSAR Array B**	**43.97**	**322**	P	**P**	**04 25 57.8**	**-0.2**
KONO	**Kongsberg**	**44.77**	**320**	P	**P**	**04 26 03.4**	**-0.9**
KONO				pmax	pmax		
	comp=Z,30nm,1.5s						
KONO	**Kongsberg**	**44.77**	**320**	P	**P**	**04 26 03.4**	**-0.9**
TORD	**Torodi Ar. Bea**	**67.53**	**269**	P	**P**	**04 28 47.7**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=47,slow=4.9,SNR=7.1						
TOLK	**Toolik Lake Re**	**68.65**	**16**	P	**P**	**04 28 53.3**	**-0.7**
TOLK				IAmb	IAmb	04 28 55.3	
	comp=Z,4.9nm,0.7s						
A36M	**Sachs Harbour**	**69.16**	**6**	P	**P**	**04 28 57.3**	**+0.3**
A36M				IAmb	IAmb	04 28 58.3	
	comp=Z,3.5nm,0.8s						
COLD	**Coldfoot**	**69.67**	**17**	P	**P**	**04 29 00.2**	**-0.1**
COLD				IAmb	IAmb	04 29 02.2	
	comp=Z,6.3nm,1.2s						
IMAR	**Indian Mountai**	**69.84**	**19**	P	**P**	**04 29 01.2**	**-0.1**
BMAR	**Burnt Mountain**	**70.69**	**15**	P	**P**	**04 29 06.7**	**+0.1**
INK	**Inuvik**	**71.75**	**10**	P	**P**	**04 29 13.7**	**+0.8**
	comp=Z,2.6nm,0.6s,baz=350,slow=7.1,SNR=23						
INK	**Inuvik**	**71.75**	**10**	P	**P**	**04 29 13.7**	**+0.8**
INK	**Inuvik**	**71.75**	**10**	P	**P**	**04 29 13.1**	**+0.2**
INK				IAmb	IAmb	04 29 14.2	
	comp=Z,2.8nm,0.7s						
MDM	**Murphy Dome**	**72.01**	**17**	P	**P**	**04 29 15.0**	**+0.4**
ILAR	**Eielson Array**	**72.48**	**17**	P	**P**	**04 29 17.1**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=316,slow=5.1,SNR=12						
ILAR	**Eielson Array**	**72.48**	**17**	P	**P**	**04 29 17.2**	**-0.1**
ILAR	**Eielson Array**	**72.48**	**17**	P	**P**	**04 29 16.9**	**-0.4**
RC01	**Rabbit Creek A**	**74.87**	**20**	P	**P**	**04 29 30.1**	**-1.4**
YKA	**Yellowknife Ar**	**79.27**	**4**	P	**P**	**04 29 56.5**	**+0.4**

	comp=Z,1.2nm,0.6s,baz=347,slow=5.5						
YKA	Yellowknife Ar	79.27	4	P	P	04 29 56.5	+0.4
WRA	Warramunga Arr	81.52	124	P	P	04 30 08.0	-0.8
	comp=Z,0.3nm,0.8s,baz=314,slow=5.9,SNR=1.6						
WRA	Warramunga Arr	81.52	124	P	P	04 30 08.0	-0.8

NIED ***08*** *04:19:32.1, 31°.34N×128°.55E, h12^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-5.19; $M_{\theta\theta}$4.08; $M_{\phi\phi}$1.10; $M_{r\theta}$0.92; $M_{\theta\phi}$2.58; $M_{\phi r}$-2.48; Fault plane solution: $M_0$5.97000×10^{14} NP1:ϕ_s38.00000°, δ52.00000°, λ-120.00000°. NP2:ϕ_s262.00000°, δ47.00000°, λ-57.00000°.*

JMA ***08*** *04:19:32.1±0.3, 31°.34N×128°.55E, h12^{km}±3^{km}, M3.7*

IDC ***08*** *04:19:33.6±0.9, 31°.34N×128°.55E, h0^{km}, mb3.8/7, mb1 4.0/10, mb1mx3.5/60, mbtmp3.8/10, ML3.0/3, MS2.8/2, Ms1 2.9/2, ms1mx2.4/39, Error ellipse: s-maj=33.6km s-min=20.7km az=87.0*

ISC 08 04:19:34.7±0.8**, 31°.35N**±0°.06×**128°.77E**±0°.06**, h10^{km}, n20,** σ**1^s.11**/20**, mb3.8**/7**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.88	68	P	Pg	04 19 51.3	-0.4
JSJ				eS	Sg	04 20 05.5	+2.4
JSU	Suzuyama	1.45	83	P	Pn	04 20 01.3	+0.2
JNN	Nakanoshima	1.78	147	P	Pn	04 20 05.2	-0.4
JYAK	Yakushimahirau	1.86	126	P	Pn	04 20 05.7	-1.0
JTN	Tanegashima 3	2.02	109	P	Pn	04 20 08.7	-0.2
JTZ	Takazaki	2.06	74	P	Pn	04 20 09.6	+0.2
JMTN	Minamitane	2.07	117	P	Pn	04 20 10.0	+0.5
JIU3	Izumi3	2.11	55	P	Pn	04 20 10.3	+0.1
JNU	Nakatsue	2.52	45	Pn	Pb	04 20 17.6	-2.5
	3.4nm,0.3s,baz=238,slow=9.5,SNR=4.8						
JNU				Sn	Sg	04 20 55.0	-0.7
	9.4nm,0.3s,baz=76,slow=7.0,SNR=4.6						
KSRS	Korea Array	6.13	354	Pn	Pn	04 21 05.5	+0.2
	0.5nm,0.3s,baz=172,slow=14,SNR=5.9						
KLR	Kul'dur	18.00	6	P	P	04 23 47.0	+1.5
	0.1nm,0.3s,baz=210,slow=8.1,SNR=2.7						
TLY	Talaya	27.45	325	LR	LR	04 37 15.2	
	comp=Z,39nm,18.3s,baz=8.5,slow=39						
CMAR	Chiang Mai Arr	29.83	252	LR	LR	04 38 37.3	
	comp=Z,8.0nm,19.7s,baz=115,slow=39						
WRA	Warramunga Arr	51.27	173	P	P	04 28 39.0	+0.1
	0.4nm,0.7s,baz=355,slow=8.4,SNR=2.6						
ASAR	Alice Springs	54.92	174	P	P	04 29 06.8	+1.0
	0.6nm,0.6s,baz=2.2,slow=15,SNR=8.6						
KBZ	Khabaz	66.34	308	P	P	04 30 24.0	+0.4
	2.5nm,0.8s,baz=156,slow=12,SNR=3.1						
FINES	FINESS Array B	68.67	330	P	P	04 30 37.3	-0.7
	3.2nm,0.9s,baz=101,slow=7.2,SNR=4.2						
AKASG	Malin Array Be	71.98	319	P	P	04 30 57.8	-0.7
	0.4nm,0.4s,baz=57,slow=6.8,SNR=2.1						
NVAR	Mina Array Bea	86.64	46	P	P	04 32 20.4	+1.4
	0.4nm,0.6s,baz=310,slow=5.6,SNR=2.6						
PDAR	Pinedale Array	88.89	39	P	P	04 32 30.4	+0.6
	0.4nm,0.6s,baz=243,slow=0.2,SNR=4.2						

SKHL ***08*** *04:27:15.7±0.5, 45°.40N×147°.50E, h172^{km}±7^{km}, mb5.0/3, msha5.6/3*

MOS ***08*** *04:27:15.1±1.1, 45°.61N×147°.38E, h188^{km}, mb4.3/5, Error ellipse: s-maj=18.0km s-min=8.6km az=62.9*

JMA ***08*** *04:27:17.8±0.5, 45°.16N×147°.59E, h183^{km}, M4.1*

NEIC ***08*** *04:27:17.2±0.9, 45°.7N±0°.1×147°.13E±0°.09, h192^{km}±8^{km}, mb4.2/23, Error ellipse: s-maj=16.5km s-min=7.6km az=198.0*

IDC ***08*** *04:27:18.3±1.8, 45°.80N×147°.14E, h198^{km}±17^{km}, mb3.5/15, mb1 3.7/18, mb1mx3.5/38, mbtmp4.0/18, MS3.3/2, Ms1 3.4/2, ms1mx2.4/36, Error ellipse: s-maj=15.6km s-min=11.6km az=135.0*

ISC 08 04:27:15.8±0.6**, 45°.40N**±0°.05×**147°.47E**±0°.05**, h188^{km}**±5^{km}**, n102,** σ**1^s.65**/112**, mb4.0**/28**, 2C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.32	121	d iPN	Pn	04 27 40.4	-0.6
KUR				pmax	pmax		
	comp=Z,763nm,0.5s						
KUR				pmax	pmax		
	comp=N,109nm,0.2s						
KUR				pmax	pmax		
	comp=E,104nm,0.3s						
KUR	Kuril'sk	0.32	121	iP	Pn	04 27 40.4	-0.6
KUR				AMB	AMB	04 27 41.1	
	comp=E,580nm,0.4s						
KUR				eS	Sn	04 27 58.2	-2.1
KUR				A	A	04 28 00.2	
	comp=E,2µm,2.0s						
KUR				A	A	04 28 00.2	
	comp=E,3µm,2.0s						
KUR				A	A	04 28 00.4	
	comp=E,4µm,0.6s						
KUR				A	A	04 28 00.4	
	comp=E,3µm,0.6s						
SHO	Shikotan	1.60	197	c iPN	Pn	04 27 49.2	-0.2
SHO				iS	Sn	04 28 13.8	-1.6
SHO				pmax	pmax		
	comp=N,151nm,0.2s						
SHO				pmax	pmax		
	comp=E,119nm,0.2s						
SHO				pmax	pmax		
	comp=Z,259nm,0.2s						
SHO				smax	smax		
	comp=N,977nm,0.2s						
SHO				smax	smax		
	comp=E,2µm,0.2s						
SHO	Shikotan	1.60	197	iP	Pn	04 27 49.2	-0.2
SHO				AMB	AMB	04 27 50.0	
	comp=E,150nm,0.2s						
SHO				AMB	AMB	04 27 50.0	
	comp=E,120nm,0.2s						
SHO				AMB	AMB	04 27 50.0	
	comp=E,190nm,0.2s						
SHO				iS	Sn	04 28 14.4	-1.0
SHO				A	A	04 28 15.5	
	comp=E,780nm,0.3s						
SHO				A	A	04 28 15.5	
	comp=E,1µm,0.3s						
YUK	Yuzh-Kuril'sk	1.79	221	⇓iPN	Pn	04 27 52.9	+1.7
YUK				iS	Sn	04 28 22.2	+3.5
YUK				pmax	pmax		
	comp=Z,225nm,0.2s						
YUK				smax	smax		
	comp=E,761nm,0.4s						
YUK				smax	smax		
	comp=N,514nm,0.5s						
YUK	Yuzh-Kuril'sk	1.79	221	iP	Pn	04 27 51.8	+0.6
YUK				AMB	AMB	04 27 53.0	
	comp=N,230nm,0.2s						
YUK				iS	Sn	04 28 19.2	+0.5
YUK				A	A	04 28 24.0	
	comp=N,510nm,0.5s						
YUK				A	A	04 28 24.0	
	comp=N,760nm,0.5s						
RUSJ	Misakicho	2.05	232	ePN	Pn	04 27 54.9	+0.9
GLVR	Golovnino	2.17	221	iS	Sn	04 28 28.0	+2.1
JRA	Rausu	2.23	230	P	Pn	04 27 57.2	+1.3
NEM2	Nemuro 2	2.38	212	P	Pn	04 27 57.8	+0.1
NEM2				eS	Sn	04 28 28.0	-2.2
NMR	Nemuro--Hokkai	2.39	212	c iPN	Pn	04 27 57.8	+0.1
NMR				iS	Sn	04 28 28.1	-2.1
NMR	Nemuro--Hokkai	2.39	212	iP	Pn	04 27 57.8	+0.1
NMR				iS	Sn	04 28 28.3	-1.9
JKHN	Kushirohamanak	2.85	216	P	Pn	04 28 03.7	+0.6
JTKR	Abashiri--Toko	2.92	242	P	Pn	04 28 05.1	+1.3
AKK	Akkeshi	3.04	219	eP	Pn	04 28 06.0	+0.6
AKK				eS	Sn	04 28 43.3	-0.7
JAK	Akkeshi	3.13	221	P	Pn	04 28 07.1	+0.8
JAK				eS	Sn	04 28 45.3	-0.5
JAR	Ashorobuto	3.39	233	P	Pn	04 28 12.1	+2.5
YSS	Yuzh-Sakhalins	3.63	297	ePN	Pn	04 28 12.2	-0.2
YSS				eS	Sn	04 28 56.9	+0.1
YSS				pmax	pmax		
	comp=Z,50nm,0.4s						
YSS				smax	smax		
	comp=N,30nm,0.8s						
YSS				smax	smax		
	comp=E,30nm,1.2s						
YSS	Yuzh-Sakhalins	3.63	297	eP	Pn	04 28 12.2	-0.2
YSS				AMB	AMB	04 28 12.9	
	comp=E,50nm,0.4s						
YSS				eS	Sn	04 28 56.6	-0.2
YSS				A	A	04 28 59.0	
	comp=E,30nm,0.8s						
YSS				A	A	04 28 59.0	
	comp=E,30nm,0.8s						
JKA	Kamikawa-asahi	3.70	251	eP	Pn	04 28 15.8	+2.4
JKA	Kamikawa-asahi	3.70	251		Pn	04 28 14.7	+1.3
JKK2	Kamakawa 2	3.70	247	P	Pn	04 28 15.7	+2.2
ASAJ	Asahikawa	3.70	251	P	Pn	04 28 15.8	+2.3
	comp=E,3.7nm,0.3s,baz=76,slow=15,SNR=15						
JWK2	Keihoku	3.93	271	P	Pn	04 28 19.1	+2.8
JCH	Churui	4.07	228	P	Pn	04 28 19.1	+1.1
JCH				eS	Sn	04 29 05.2	-1.6
ERM	Erimo	4.61	224	PN	Pn	04 28 27.0	+2.1
ERM	Erimo	4.61	224		Pn	04 28 27.0	+2.1
JNBK	Urakawa-nobuka	4.62	229	P	Pn	04 28 25.4	+0.3
JKB	Kayabe	5.84	235	P	Pn	04 28 41.0	+0.1
JOT	Ohata	6.17	232	P	Pn	04 28 44.6	-0.5
JOT				eS	Sn	04 29 50.8	-4.7
JANG	Nango	6.66	223	P	Pn	04 28 49.9	-1.7
JANG				eS	Sn	04 30 00.3	-6.9
PETK	Petropavlovsk-	10.20	37	P	Pn	04 29 37.4	-0.3
	comp=E,1.1nm,0.3s,baz=186,slow=13,SNR=5.3						
JHJ	Hachijo jima 2	13.63	208	LR	LR	04 34 48.8	
	comp=E,100nm,20.1s,baz=309,slow=32						
KSRS	Korea Array	16.65	248	P	Pn	04 31 00.6	+2.2
	comp=E,0.4nm,0.3s,baz=54,slow=11,SNR=7.3						
SMY	Shemya	18.85	58	P	P	04 31 23.3	+2.0
SMY				pmax	pmax		
	comp=Z,541nm,1.5s						
SMY	Shemya	18.85	58	P	P	04 31 23.3	+2.0
H11N2	WAKE ISLAND Hy	30.22	142	T	T	05 04 38.2	
	baz=332,slow=74,SNR=43						
H11N1	WAKE ISLAND Hy	30.24	142	T	T	05 04 42.7	
	baz=332,slow=74,SNR=26						
H11N3	WAKE ISLAND Hy	30.24	142	T	T	05 04 40.5	
	baz=332,slow=74,SNR=34						
H11S1	WAKE ISLAND Hy	31.22	143	T	T	05 05 54.7	
	baz=331,slow=76,SNR=64						
H11S3	WAKE ISLAND Hy	31.23	143	T	T	05 06 02.5	
	baz=331,slow=76,SNR=46						
H11S2	WAKE ISLAND Hy	31.24	143	T	T	05 05 56.7	
	baz=331,slow=76,SNR=43						
L19K	White Mountain	36.54	42	P	P	04 34 03.1	+0.1
L19K				IAmb	IAmb	04 34 03.3	
	comp=Z,11nm,1.2s						
A21K	Barrow	36.96	26	P	P	04 34 04.8	-1.5
A21K				IAmb	IAmb	04 34 15.0	
	comp=Z,8.6nm,1.4s						
IMAR	Indian Mountai	37.16	35	P	P	04 34 07.7	-0.4
PPLA	Purkeypile	37.76	41	P	P	04 34 14.6	+1.3
KTH	Kantishna Hill	38.32	39	P	P	04 34 18.6	+0.7
TRF	Thorofare Moun	38.60	40	P	P	04 34 19.4	-1.0
COLD	Coldfoot	38.64	34	P	P	04 34 19.7	-0.8
COLD				IAmb	IAmb	04 34 27.0	
	comp=Z,4.5nm,1.4s						
I23K	Minto, Yukon-K	38.96	37	P	P	04 34 23.1	0.0
I23K				IAmb	IAmb	04 34 33.8	
	comp=Z,6.5nm,1.2s						
RND	Reindeer	39.25	40	P	P	04 34 25.1	-0.6
RND				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RND	Reindeer	39.25	40	P	P	04 34 25.1	-0.6
RND				IAmb	IAmb	04 34 26.7	
	comp=Z,2.5nm,0.8s						
MDM	Murphy Dome	39.44	37	P	P	04 34 26.9	-0.3
IL31		40.03	37	P	P	04 34 31.9	0.0
ILAR	Eielson Array	40.03	37	P	P	04 34 31.4	-0.6
	comp=Z,1.2nm,0.7s,baz=279,slow=9.8,SNR=20						
ILAR				LR	LR	04 52 32.0	
	comp=Z,54nm,18.9s,baz=201,slow=38						
ILAR	Eielson Array	40.03	37	P	P	04 34 31.8	-0.2
ILAR	Eielson Array	40.03	37	P	P	04 34 31.8	-0.2
ZALV	Zalesovo Beam	40.21	306	PcP	PcP	04 36 34.8	+1.2
	comp=Z,0.8nm,0.5s,baz=113,slow=1.9,SNR=4.4						
MKAR	Makanchi Array	44.04	296	P	P	04 35 03.9	-0.8
	comp=Z,0.4nm,0.6s,baz=69,slow=6.8,SNR=3.3						
MKAR				PcP	PcP	04 36 47.5	+0.9
	comp=Z,0.6nm,0.6s,baz=72,slow=4.0,SNR=4.8						
MKAR	Makanchi Array	44.04	296	P	P	04 35 02.9	-1.8
RES	Resolute Bay	53.32	17	P	P	04 36 14.2	-0.6
	comp=Z,1.4nm,0.4s,baz=311,slow=8.6,SNR=5.3						
RES	Resolute Bay	53.32	17	P	P	04 36 14.3	-0.5
YKA	Yellowknife Ar	54.30	34	P	P	04 36 22.2	0.0
	comp=Z,0.7nm,0.5s,baz=304,slow=7.5,SNR=13						
YKA				PcP	PcP	04 37 24.4	+0.8
	comp=Z,0.2nm,0.3s,baz=306,slow=3.7,SNR=5.7						
ABKAR	Akbulak array	56.22	308	P	P	04 36 34.7	-1.3
ARCES	ARCESS Array B	57.78	339	P	P	04 36 44.7	-1.9
	comp=Z,3.0nm,0.8s,baz=41,slow=8.5,SNR=3.8						
FINES	FINESS Array B	63.51	333	P	P	04 37 23.3	-2.1
	comp=Z,1.7nm,0.6s,baz=46,slow=6.4,SNR=13						
FINES	FINESS Array B	63.51	333	P	P	04 37 23.1	-2.3
FFC	Flin Flon	64.24	37	P	P	04 37 30.9	+0.6
FFC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
FFC	Flin Flon	64.24	37	P	P	04 37 30.9	+0.6
FFC				IAmb	IAmb	04 37 32.0	
	comp=Z,6.5nm,1.2s						
HRY	Holter Researc	64.85	48	P	P	04 37 34.9	+0.3
BOZ	Bozeman (W)	65.68	49	P	P	04 37 40.7	+0.7
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BOZ	Bozeman (W)	65.68	49	P	P	04 37 40.7	+0.7
BMN	Battle Mountai	65.87	56	P	P	04 37 42.8	+1.5
BMN				pmax	pmax		
	comp=Z,5.0nm,1.5s						
BMN	Battle Mountai	65.87	56	P	P	04 37 42.8	+1.5
BMN				IAmb	IAmb	04 38 01.3	
	comp=Z,4.9nm,1.5s						
WB0	Warramunga Arr	65.94	194	P	P	04 37 43.6	+2.0
WB0				IAmb	IAmb	04 37 44.0	
	comp=Z,3.1nm,0.7s						
WR0	Warramunga Arr	66.10	193	P	P	04 37 44.5	+1.9
WR0				IAmb	IAmb	04 37 47.0	
	comp=Z,5.3nm,1.2s						
WB2	Warramunga Arr	66.12	194	P	P	04 37 44.9	+2.1
WB2				IAmb	IAmb	04 37 46.0	
	comp=Z,9.7nm,1.5s						
WRA	Warramunga Arr	66.12	194	P	P	04 37 45.0	+2.2
	comp=Z,1.9nm,0.3s,baz=12,slow=6.7,SNR=4.1						
WRA	Warramunga Arr	66.12	194	P	P	04 37 45.0	+2.2
KVN	Kaiserville	66.24	58	P	P	04 37 44.6	+0.9
KVN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KVN	Kaiserville	66.24	58	P	P	04 37 44.6	+0.9
KVN				IAmb	IAmb	04 37 46.3	
	comp=Z,3.9nm,1.2s						
LHV	Little Huntoon	66.51	59	P	P	04 37 46.9	+1.8
LHV				IAmb	IAmb	04 37 48.8	
	comp=Z,6.1nm,1.3s						
NVAR	Mina Array Bea	66.51	59	P	P	04 37 47.2	+1.7
	comp=Z,1.6nm,0.7s,baz=299,slow=7.5,SNR=12						
NVAR	Mina Array Bea	66.51	59	P	P	04 37 47.4	+2.0
NB2	NORSAR Subarra	68.15	339	P	P	04 37 53.2	-1.9
	comp=Z,0.1nm,0.3s,baz=30,slow=6.2						
NOA	NORSAR Array B	68.15	339	P	P	04 37 53.3	-1.9
	comp=Z,0.2nm,0.3s,baz=28,slow=6.6,SNR=19						
PD31	Pinedale Array	68.67	50	P	P	04 37 59.6	+0.7
PD31				IAmb	IAmb	04 38 00.4	
	comp=Z,2.0nm,0.6s						
PDAR	Pinedale Array	68.67	50	P	P	04 37 60.0	+1.0
	comp=Z,2.2nm,0.7s,baz=300,slow=0.8,SNR=18						
PDAR	Pinedale Array	68.67	50	P	P	04 37 59.4	+0.5
ASAR	Alice Springs	69.84	193	P	P	04 38 09.1	+3.2
	comp=Z,1.6nm,0.7s,baz=9.5,slow=5.8,SNR=18						
ULM	Lac du Bonnet	70.05	38	P	P	04 38 06.8	-0.1
	comp=Z,1.9nm,0.6s,baz=315,slow=7.8,SNR=2.0						
AKASG	Malin Array Be	70.39	324	P	P	04 38 07.6	-1.4
	comp=Z,0.4nm,0.3s,baz=41,slow=6.6,SNR=4.3						
GERES	GERESS Array B	77.83	331	P	P	04 38 49.4	-2.8
	comp=Z,0.4nm,0.6s,baz=47,slow=7.4,SNR=2.7						
GERES	GERESS Array B	77.83	331	P	P	04 38 50.4	-1.8
GERES	GERESS Array B	77.83	331	P	P	04 38 50.4	-1.8
TX31	Lajitas Ar. Si	81.54	57	P	P	04 39 13.5	+0.9
TX32	Lajitas Array	81.54	57	P	P	04 39 13.2	+0.7
TXAR	Lajitas Array	81.54	57	P	P	04 39 14.2	+1.7
	comp=Z,1.1nm,0.5s,baz=284,slow=3.9,SNR=29						
TORD	Torodi Ar. Bea	114.02	323	PKiKP	PKiKP	04 45 32.7	0.0
	comp=Z,0.1nm,0.4s,baz=7.9,slow=2.1,SNR=5.7						
PLCA	Paso Flores	152.01	94	PKPbc	PKiKP	04 46 50.4	+1.9
	comp=Z,1.4nm,0.6s,baz=254,slow=1.4,SNR=11						
PLCA	Paso Flores	152.01	94	PKIKP	PKiKP	04 46 49.8	+1.3
PLCA	Paso Flores	152.01	94		PKiKP	04 46 49.8	+1.3

ANF 08 04:33:03.6±1.1**, 43°.33N×127°.13W, h5^{km}, ML3.5**/2**, Error ellipse: s-maj=10.7km s-min=7.2km az=53.0, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
J01E	Myrtle Point	2.34	93	S	Sn	04 34 12.6	+0.8
	baz=275						
I02E	Swisshome, OR	2.50	71	P	Pn	04 33 44.4	-0.5
	baz=253,SNR=25						
I02E				S	Sn	04 34 16.6	+0.8
	baz=253						
K02D	Willamette Mer	2.62	103	P	Pn	04 33 46.0	-0.6
	baz=285,SNR=14						
K02D				S	Sn	04 34 19.0	+0.2
	baz=285						
I03D	Drain, OR	2.77	81	P	Pn	04 33 48.3	-0.4
	baz=264,SNR=80						
I03D				S	Sn	04 34 23.5	+1.0
	baz=264						
G03D	McMinnville, O	3.35	55	P	Pn	04 33 55.7	-0.9
	baz=237,SNR=19						
G03D				S	Sn	04 34 37.8	+1.0
	baz=237						
H04D	Lebanon	3.39	68	P	Pn	04 33 57.4	+0.3
	baz=251,SNR=19						
I04A	Tendick Farm,	3.46	81	P	Pn	04 33 58.8	+0.7
	baz=264						
F04D	Rainier, OR	4.02	45	P	Pn	04 34 05.2	-0.6
	baz=228						
I05D	Terrebonne, OR	4.31	75	P	Pn	04 34 10.2	+0.4
	baz=258						
E04D	Cinebar	4.57	44	P	Pn	04 34 12.5	-0.8
	baz=227,SNR=15						
F05D	White Salmon	4.78	56	P	Pn	04 34 16.8	+0.5
	baz=240						
D04E	Lakebay	4.92	37	P	Pn	04 34 17.7	-0.5
	baz=220						

VIE ***08*** *04:44:10.2±0.3, 50°.13N×18°.41E, h0^{km}, mb2.7/3, ml2.5/3, Error ellipse: s-maj=4.3km s-min=2.9km az=150.0 35 km NNE of Ostrava Suspected Mining induced.*

IPEC ***08*** *04:44:10.7±0.2, 50°.08N×18°.48E, h3^{km}±2^{km}, ML2.5/3, Error ellipse: s-maj=2.0km s-min=1.1km az=163.0*

PRU ***08*** *04:44:11.3±0.0, 50°.05N×18°.40E, h0^{km}*

ISC 08 04:44:10.3±0.8**, 50°.11N**±0°.03×**18°.42E**±0°.02**, h0^{km}, n32,** σ**1^s.01**/63**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.15	259	ePG	Pg	04 44 15.2	+2.1
RAC				eSG	Sg	04 44 18.4	+3.3
OKC	Ostrava-Krasne	0.33	213	ePG	Pg	04 44 17.3	+0.8
OKC				eSG	Sg	04 44 21.4	+0.6
	comp=Z,239nm,0.5s						
MORC	Moravsky Berou	0.66	240	ePg	Pg	04 44 23.4	+0.5
	baz=63						
MORC				eSg	Sg	04 44 32.3	+0.8
	95nm,0.6s,baz=63						
OJC	Ojcow	0.89	83	ePg	Pg	04 44 27.4	+0.1
OJC				eSg	Sb	04 44 40.4	-0.7
KRLC	Kraliky	1.06	269	ePG	Pg	04 44 30.3	-0.2
KRLC				eSG	Sg	04 44 44.4	+0.2
	comp=Z,75nm,0.6s						
LANS	Liptovska Anna	1.18	144	ePG	Pb	04 44 33.2	-0.3
LANS				eSG	Sb	04 44 49.0	-0.3
LANS				eLG	Lg	04 44 53.7	
JAVC	Velka Javorina	1.35	202	ePG	Pg	04 44 36.1	0.0
JAVC	Velka Javorina	1.35	202	ePg	Pg	04 44 36.0	0.0
	baz=23						
DPC	Dobruska-Polom	1.37	281	ePG	Pb	04 44 36.9	+0.1
DPC				eSG	Sn	04 44 55.9	+0.3
	comp=Z,74nm,0.5s						
NIE	Niedzica	1.40	119	ePg	Pb	04 44 37.7	+0.4
NIE				eSg	Sn	04 44 57.8	+1.4
VRAC	Vranov	1.44	237	ePg	Pn	04 44 37.1	-0.4
	baz=57						
VRAC				eSg	Sg	04 44 56.1	-0.2
	45nm,0.6s,baz=57						
OSTC	Ostas	1.48	288	ePG	Pn	04 44 38.4	+0.2
OSTC				eSG	Sn	04 44 59.3	+1.0
	comp=Z,33nm,0.4s						
KSP	Ksiaz	1.54	299	ePg	Pn	04 44 39.0	0.0
KSP				eSg	Sb	04 44 59.9	0.0
CHVC	Chvalec	1.59	288	ePG	Pb	04 44 40.3	-0.2
CHVC				eSG	Sg	04 45 02.8	+1.5
	comp=Z,24nm,0.5s						
UPC	Upice	1.59	285	ePG	Pg	04 44 40.8	0.0
UPC				eSG	Sg	04 45 02.5	+1.0
	comp=Z,31nm,0.3s						
VYHS	Vyhne	1.64	170	ePG	Pn	04 44 40.3	-0.1
VYHS				eSG	Sn	04 45 02.0	-0.2
VYHS				eLG	Lg	04 45 05.0	
KRUC	Moravsky	1.69	232	ePn	Pn	04 44 41.3	+0.3
	baz=52						
KRUC				eSg	Sb	04 45 03.8	-0.1
	47nm,0.7s,baz=52						
SMOL	Smolenice	1.73	202	ePG	Pn	04 44 41.1	-0.5
SMOL				eSG	Sg	04 45 05.4	-0.3
MODS	Modra-Piesok	1.90	204	ePG	Pn	04 44 42.6	-1.3
MODS				eSG	Sn	04 45 07.5	-1.0
TREC	Trest	2.07	248	ePG	Pb	04 44 48.0	-0.8
TREC				eSG	Sg	04 45 16.3	-0.6
CRVS	Cervenica-Dubn	2.32	120	ePG	Pb	04 44 53.6	+0.6
CRVS				eSG	Sg	04 45 24.2	-0.6
PRU	Pruhonice	2.50	269	ePN	Pn	04 44 51.2	-1.0
PRU				ePG	Pb	04 44 56.0	-0.1
PRU				eSG	Sb	04 45 28.6	+1.1
	comp=Z,13nm,0.5s						
PVCC	Panska Ves	2.50	281	ePG	Pg	04 44 57.5	-0.7
PVCC				eSG	Sg	04 45 31.9	+1.2
	comp=Z,26nm,0.3s						
CONA	Conrad Observa	2.76	219	ePn	Pn	04 44 55.3	-0.6
	0.6nm,0.2s						
CONA				Sn	Sn	04 45 29.8	-0.1
	5.1nm,0.4s						
KOLS	Kolonicke sedl	2.77	114	ePG	Pg	04 45 04.1	+0.7
BRG	Berggiesshubel	2.96	287	Pg	Pg	04 45 05.9	-1.1
BRG				Sg	Sg	04 45 44.9	-0.5
BRG				Amp		04 45 52.8	
	comp=Z,12nm,0.4s						
CKRC	Cesky Krumlov	2.98	246	ePN	Pn	04 45 01.0	+2.2
CKRC				ePG	Pg	04 45 06.4	-0.9
KHC	Kasperske Hory	3.30	255	ePN	Pn	04 45 02.8	-0.4
KHC				ePG	Pb	04 45 10.6	+0.9
KHC				eSN	Sn	04 45 41.5	-1.6
KHC				eSG	Sg	04 45 55.5	-0.7
	comp=Z,16nm,0.5s						
MOA	Molln	3.55	232	iPn	Pn	04 45 06.0	-0.6
	comp=Z,0.4nm,0.2s						
MOA				iSn	Sn	04 45 49.8	+0.5
	comp=Z,1.4nm,0.2s						
CLL	Collm	3.65	291	e(Pn)	Pb	04 45 12.0	-3.5
CLL				iPg	Pg	04 45 21.2	+1.1
CLL				iSg	Sg	04 46 06.6	-0.8
NKC	Novy Kostel	3.84	274	ePN	Pn	04 45 11.0	+0.4
OBKA	Obir	4.44	217	iPn	Pn	04 45 19.1	+0.2
	comp=Z,2.0nm,0.5s						

IDC 08 05:08:07.2±46.0**, 16°.32S×175°.08W, h0^{km}, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.8**/32**, mbtmp4.2**/3**, MS3.9**/2**, Ms1 3.9**/2**, ms1mx3.0**/32**, Error ellipse: s-maj=874.0km s-min=169.8km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	13.13	191	LR	LR	05 15 05.8	
	comp=Z,315nm,21.0s,baz=208,slow=32						
STKA	Stephens Creek	42.18	240	P	P	05 16 02.5	+0.7
	1.6nm,0.5s,baz=86,slow=10.0,SNR=5.1						
WRA	Warramunga Arr	48.06	258	P	P	05 16 48.3	-0.6
	0.7nm,0.5s,baz=96,slow=7.3,SNR=25						
ASAR	Alice Springs	48.29	253	P	P	05 16 50.4	-0.3
	6.3nm,0.6s,baz=88,slow=8.3,SNR=93						
FITZ	Fitzroy Crossi	56.44	259	LR	LR	05 39 48.9	
	comp=Z,183nm,21.8s,baz=104,slow=34						

IDC ***08*** *05:13:19.3±0.7, 19°.70N×69°.97W, h0^{km}, mb3.9/16, mb1 4.2/18, mb1mx4.0/47, mbtmp4.0/18, ML3.3/2, Error ellipse: s-maj=19.0km s-min=16.1km az=34.0*

*OSPL **08** 05:13:19.6±1.3, 19°.55N×69°.63W, h5^{km}±7^{km}, ML4.2*
*NEIC **08** 05:13:20.5±2.6, 19°.62N±0°.05×69°.88W±0°.04, h6^{km}±2^{km}, mb4.3/23, Error ellipse: s-maj=7.7km s-min=5.8km az=177.0*
ISC 08 05:13:21.7±1.0, 19°.52N±0°.04×69°.84W±0°.04, h20^{km}±4^{km}, n112, σ1^{s}.94/108, mb4.2/21, 1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LONA1	Toro Cenizo, N	0.14	191	⇓iP	Pg	05 13 24.5	-1.4
LONA1				eS	Sg	05 13 28.5	-0.3
LONA1				IAML		05 13 36.1	
	comp=Z,34μm,0.5s						
SC01	Santiago de lo	0.85	264		Pg	05 13 36.8	-1.5
LOSC1	San Cristbal	1.13	193	i P	Pb	05 13 41.7	-0.9
LOPP1	Punta Rusia, P	1.33	285	i P	Pn	05 13 44.7	-0.4
SDDR	Presa de Saban	1.47	249	eP	Pn	05 13 46.2	-0.9
SDDR	Presa de Saban	1.47	249	eP	Pn	05 13 46.4	-0.7
SDDR				eS	Sn	05 14 06.5	+0.6
SDDR	Presa de Saban	1.47	249	Pn	Pn	05 13 46.6	-0.6
SDDR	Presa de Saban	1.47	249	i P	Pn	05 13 46.6	-0.6
SDDR				eS	Sg	05 14 08.2	-1.1
SDDR				IAML		05 14 10.4	
	comp=Z,3μm,0.7s						
LONE2	Loma La Sidra	1.82	239	i P	Pn	05 13 52.5	+0.5
GRTK	Grand Turk	2.33	329		Pn	05 13 57.9	-1.0
GRTK	Grand Turk	2.33	329	i P	Pn	05 13 57.7	-1.1
GRTK				eS	Sn	05 14 26.7	-0.3
GRTK				IAML		05 14 30.5	
	comp=Z,1μm,0.3s						
NQUSE	US Embassy, Po	2.47	248		Pn	05 14 02.2	+1.4
AGPR	Aguadilla, PR	2.78	112		Pn	05 14 06.0	+0.8
LGNH	Logne	2.81	250		Pn	05 14 07.3	+1.9
JAKH	Jacmel	2.84	244	Pn	Pn	05 14 07.7	+1.8
PRSN	Puerto Rico Se	2.86	116		Pn	05 14 07.8	+1.6
CRPR	Cabo Rojo, PR	2.99	120	Pn	Pn	05 14 09.8	+1.8
AOPR	Arecibo Observ	3.14	111	eP	Pn	05 14 12.9	+2.8
AOPR				eS	Sb	05 14 54.4	-0.4
EMPR	Esperanza - Ma	3.29	108		Pn	05 14 12.5	+0.4
GCPR	Guaynabo City	3.75	108		Pn	05 14 18.1	-0.3
SJG	San Juan	3.76	111	eP	Pn	05 14 17.8	-0.7
SJG	San Juan	3.76	111	eP	Pn	05 14 17.9	-0.7
SJG	San Juan	3.76	111		Pn	05 14 18.3	-0.3
PDPR	Patillas Dam,	3.91	112		Pn	05 14 21.6	+1.0
CBYP	Canovanas	3.96	108		Pn	05 14 20.8	-0.6
HUMP	Col San Antoni	4.01	109		Pn	05 14 22.0	-0.1
CUPR	Culebra, Puert	4.47	105		Pn	05 14 28.0	-0.4
GTBY	Guantanamo Bay	4.99	276	Pn	Pn	05 14 32.7	-2.7
CDVI	St. Croix	5.12	109	eP	Pn	05 14 36.2	-1.1
CDVI	St. Croix	5.12	109	eS	Sn	05 15 35.4	-0.4
SMRT	St. Maarten	6.57	102	eP	Pn	05 15 01.4	+4.1
SMRT	St. Maarten	6.57	102	Pn	Pn	05 14 56.0	-1.2
GWJ	Greenwich	6.68	259	i P	Pn	05 14 59.7	+0.7
STH	Stony Hill	6.76	259	i P	Pn	05 15 01.0	+1.1
SKI	Saint Kitts	7.08	107	eP	Pn	05 15 04.0	-0.3
MTDJ	Mount Denham	7.40	261	Pn	Pn	05 15 08.0	-0.8
MCJ	Malvern	7.61	259	i P	Pn	05 15 14.1	+2.5
URIC	Uribia, Colomb	8.04	195	eP	Sn	05 16 40.6	-7.3
ANBD	Bethesda, Anti	8.05	106	eP	Pn	05 15 16.1	-1.5
ANBD	Bethesda, Anti	8.05	106	eS	Sn	05 16 42.4	-5.7
CRJC	Cerrejon, Guaj	8.94	200	eP	Sn	05 17 05.5	-4.7
DSLB	Salisbury	8.99	115	eP	Pn	05 15 28.1	-2.5
BIRV	Birongo	9.62	159	Pn	Pn	05 15 40.9	+1.7
PCRV	Puerto La Cruz	10.56	151	Pn	Pn	05 15 54.3	+2.3
	comp=Z,1.4nm,0.3s,baz=126,slow=5.4,SNR=8.4						
PCRV				Sn	Sn	05 17 46.3	-3.5
	comp=Z,0.5nm,0.3s,baz=31,slow=19,SNR=1.6						
PLCV	Puerto La Cruz	10.59	151		Pn	05 15 54.3	+1.8
BAUV	El Baul	10.65	170	Pn	Pn	05 15 55.1	+1.9
SOCV	Socops	11.21	185	eP	Pn	05 16 00.3	-0.6
OCAC	Ocana	11.71	197	eP	Pn	05 16 03.0	-4.9
PAMC	Pamplona, Colo	12.42	193	eP	Pn	05 16 18.6	+0.7
BRRC	Barranca, Sant	12.90	197	eP	Pn	05 16 20.3	-3.7
UREC	San Jos de Ur	12.94	206	eP	Pn	05 16 25.2	+0.7
BARC	Barichara	13.25	195	eP	Pn	05 16 27.7	-1.4
PTBC	PUERTO BERRIO,	13.66	200	eP	Pn	05 16 36.8	+2.3
DBBC	Dabeiba	13.88	207	eP	Pn	05 16 39.2	+1.7
RUSC	La Rusia	13.91	194	eP	Pn	05 16 40.0	+1.8
HELC	Santa Helena	14.36	203	eP	Pn	05 16 44.1	-0.1
SPBC	San Pablo de B	14.38	197	eP	Pn	05 16 44.4	0.0
NORC	Norcasia	14.71	200	eP	Pn	05 16 51.1	+2.3
CBOC	Ciudad Bolivar	14.84	205	eP	Pn	05 16 53.2	+2.5
SOLC	Bahia Solano	15.12	210	eP	P	05 17 01.6	+2.2
GUY2C	Guyana, Caldas	15.19	201	eP	Pn	05 16 57.3	+1.6
ROSC	El Rosal	15.23	197	Pn	Pn	05 16 56.5	+0.5
	comp=Z,0.8nm,0.3s,baz=288,slow=19,SNR=1.9						
ROSC	El Rosal	15.23	197	IAmb	IAmb	05 17 26.0	
	comp=Z,11nm,0.7s						
VILC	Villavicencio,	15.77	194	eP	Pn	05 17 03.5	+0.7
PLMC	San Jos del P	15.82	204	eP	Pn	05 17 05.5	+2.0
ANIL	Santa Ana	15.89	201	eP	Pn	05 17 04.6	0.0
Y60A	Bolivia	16.24	334	Pn	Pn	05 17 06.7	-2.1
ORTC	Ortega, Tolima	16.39	199	eP	Pn	05 17 10.5	-0.2
PRAC	Prado	16.46	198	eP	P	05 17 30.2	+16
MACC	Macarena, Meta	17.70	193	eP	Pn	05 17 27.5	+0.2
W57A	Gilead	17.98	332		Pn	05 17 30.2	-0.3
W57A				IAmb	IAmb	05 17 39.6	
	comp=Z,21nm,1.2s						
POPC	Popayan, Colom	18.15	202	eP	P	05 17 36.8	+3.6
V58A	Windy Hill, Pi	18.16	335		Pn	05 17 31.9	-0.8
V58A				IAmb	IAmb	05 17 44.0	
	comp=Z,22nm,1.2s						
PCON	Cinco Dias	18.25	201	eP	P	05 17 46.9	+12
SOTA	Rioblanco	18.50	202	eP	Pn	05 17 46.7	+9.2
T59A	Double "B" Far	18.66	340		P	05 17 37.2	-1.2
FLOC	Florencia	18.71	198	eP	Pn	05 17 45.9	+6.3
BOAV	Boa Vista	19.30	151	P	P	05 17 45.2	-0.3
R58B	Mineral	19.67	341	P	Pn	05 17 50.9	0.0
CBN	Corbin Frederi	19.74	342	P	Pn	05 17 51.4	-0.4
S57A	Dark Hollow, R	19.84	338	P	Pn	05 17 53.1	+0.1
S57A				IAmb	IAmb	05 18 00.1	
	comp=Z,10nm,1.0s						
APG	El Apazote	20.20	260	P	P	05 17 53.6	-2.1
	comp=Z,4.3nm,0.6s,baz=221,slow=19,SNR=2.2						
CUSE	Cuicocha Este	20.86	205	eP	Pn	05 18 05.4	-0.1
OTAV	Otavalo	20.94	205	eP	Pn	05 18 09.0	+2.5
OTAV	Otavalo	20.94	205	P	P	05 18 04.8	+0.9
SSPA	Standing Stone	22.15	344	P	P	05 18 17.8	+1.5
SSPA				IAmb	IAmb	05 18 43.9	
	comp=Z,16nm,1.2s						
Q52A	Bidwell	22.16	334	P	P	05 18 15.7	-0.7
Q52A				IAmb	IAmb	05 18 38.1	
	comp=Z,31nm,1.4s						
MACA	Manacapuru-AM	24.27	157	P	P	05 18 37.4	-0.4
MACA				IAmb	IAmb	05 18 59.6	
	comp=Z,7.9nm,0.9s						
TLIG	Tlapa	27.30	271	P	P	05 19 05.9	+0.6
SAML	Samuel	29.03	166	P	P	05 19 18.5	-2.1
SAML				IAmb	IAmb	05 19 28.5	
	comp=Z,5.4nm,1.2s						
ETMB	Extrema	29.36	173	P	P	05 19 22.1	-1.5
ETMB				IAmb	IAmb	05 19 27.0	
	comp=Z,2.8nm,0.9s						
TXAR	Lajitas Array	32.22	294	P	P	05 19 48.6	-0.2
	comp=Z,0.6nm,0.7s,baz=103,slow=9.4,SNR=8.2						
MNTX	Cornudas Mount	34.12	298	P	P	05 20 05.2	-0.2
LPAZ	La Paz	35.62	177	P	P	05 20 20.9	+1.9
	comp=Z,1.3nm,0.7s,baz=308,slow=4.4,SNR=3.7						
ANMO	Albuquerque	35.78	303	P	P	05 20 18.7	-1.1
	comp=Z,1.3nm,1.0s,baz=93,slow=11,SNR=4.0						
PDAR	Pinedale Array	40.63	314	P	P	05 20 58.6	-2.1
	comp=Z,1.3nm,1.2s,baz=90,slow=6.3,SNR=2.2						
PDAR				PcP	PcP	05 23 01.1	-1.4
	comp=Z,0.3nm,0.6s,baz=150,slow=4.2,SNR=2.5						
FRB	Frobisher Bay	44.21	1	P	P	05 21 27.9	-1.2
	comp=Z,2.2nm,0.8s,baz=158,slow=11,SNR=1.3						
NVAR	Mina Array Bea	45.83	305	P	P	05 21 42.5	-0.3
	comp=Z,0.9nm,0.9s,baz=92,slow=7.1,SNR=5.6						
NEW	Newport	47.58	318	P	P	05 21 55.3	-0.8
	comp=Z,1.2nm,0.7s,baz=45,slow=7.1,SNR=3.3						
NEW	Newport	47.58	318	IAmb	IAmb	05 21 56.1	
	comp=Z,3.1nm,1.0s						
YKA	Yellowknife Ar	52.77	336	P	P	05 22 34.0	-1.2
	comp=Z,1.4nm,0.8s,baz=113,slow=6.9,SNR=4.8						
ESDC	Sonseca Array	59.42	55	P	P	05 23 23.6	+0.4
	comp=Z,1.3nm,0.7s,baz=278,slow=6.9,SNR=13						
ESDC	Sonseca Array	59.42	55	IAmb	IAmb	05 23 46.2	
	comp=Z,2.5nm,1.3s						
PLCA	Paso Flores	59.94	181	P	P	05 23 29.5	+2.9
	comp=Z,1.6nm,0.9s,baz=324,slow=14,SNR=2.5						
PLCA	Paso Flores	59.94	181	IAmb	IAmb	05 23 52.0	
	comp=Z,5.2nm,1.3s						
ILAR	Eielson Array	67.01	333	P	P	05 24 13.4	+0.4
	comp=Z,0.7nm,0.8s,baz=77,slow=5.0,SNR=6.5						
TORD	Torodi Ar. Bea	68.52	83	P	P	05 24 26.1	+2.7
	comp=Z,1.3nm,0.8s,baz=292,slow=6.7,SNR=8.2						
TORD	Torodi Ar. Bea	68.52	83	IAmb	IAmb	05 24 50.0	
	comp=Z,3.1nm,1.3s						
KEST	Kesra	70.30	58	P	P	05 24 35.2	+1.1
	comp=Z,3.0nm,0.7s,baz=243,slow=1.6,SNR=5.9						
GERES	GERESS Array B	71.37	44	P	P	05 24 44.0	+3.6
	comp=Z,0.3nm,0.6s,baz=276,slow=3.9,SNR=4.3						
ARCES	ARCESS Array B	73.74	21	P	P	05 24 53.8	-0.3
	comp=Z,4.5nm,1.0s,baz=302,slow=3.3,SNR=11						
FINES	FINESS Array B	75.84	30	P	P	05 25 05.8	-0.5
	comp=Z,2.1nm,0.8s,baz=252,slow=3.8,SNR=5.6						

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*SOME **08** 05:27:16.0, 38°.83N×72°.92E, h0^{km}*
*IDC **08** 05:27:17.7±2.6, 38°.27N×73°.25E, h0^{km}, mb3.7/3, mb1 3.7/4, mb1mx3.4/41, mbtmp3.6/4, ML2.5/1, Error ellipse: s-maj=67.7km s-min=27.2km az=152.0*
*KRNET **08** 05:27:20.8±0.1, 38°.80N×73°.20E, h15^{km}, mb3.6*
*NNC **08** 05:27:23.1±4.7, 38°.97N×73°.52E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=36.4km s-min=24.3km az=4.0*
ISC 08 05:27:22.5±2.1, 38°.95N±0°.08×73°.01E±0°.04, h8^{km}±11^{km}, n22, σ2^{s}.51/32, mb3.4/3, 15C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.08	300	⇑iP	Pn	05 27 45.1	+0.9
	baz=2.0						
DRK				⇑iS	Sn	05 28 02.8	+3.3
	baz=2.0						
SFK	Sufi-Kurgan	1.13	20	⇑eP	Pg	05 27 44.0	-0.2
	baz=11						
SFK				⇑eS	Sn	05 28 01.6	+0.9
	baz=11						
OHH	Osh	1.58	354	⇑iP	Pg	05 27 53.5	+0.7
	baz=50						
OHH				⇑iS	Sg	05 28 17.1	+3.8
	baz=50						
BTK	Batken	2.02	304	⇓eP	Pg	05 28 01.0	-0.3
	baz=5.0						
BTK				⇓iS	Sg	05 28 30.3	+2.8
	baz=5.0						
TRKS	Terek-Say	2.94	332	⇓iP	Pn	05 28 12.5	+2.7
	baz=30						
TRKS				⇓iS	Sb	05 28 50.7	-0.9
	baz=30						
MNAS	Manas	3.55	354	⇑iP	Pn	05 28 21.9	+3.8
	baz=52						
MNAS				⇑iS	Sb	05 29 05.8	-3.2
	baz=52						
MRKS	Merke	3.79	2	eP	Pb	05 28 29.1	-0.7
	7.2nm,0.5s						
MRKS				eS	Sg	05 29 21.2	-3.1
	15nm,0.6s						
MRKS	Merke	3.79	2	Pg	Pb	05 28 29.1	-0.7
	7.2nm,0.5s						
MRKS				Lg	Lg	05 29 21.2	
	15nm,0.6s						
AAK	Ala-Archa	3.85	17	Pg	Pb	05 28 30.8	0.0
	11nm,0.6s						
AAK				⇓Lg	Lg	05 29 19.6	
	30nm,0.9s						
IUG	Iuzhnay	3.91	326	eP	Pb	05 28 31.3	-0.6
	175nm,0.6s						
IUG				eS	Sg	05 29 24.6	-3.6
	62nm,0.7s						
IUG	Iuzhnay	3.91	326	Pg	Pb	05 28 31.3	-0.6
	175nm,0.6s						
IUG				Lg	Lg	05 29 24.6	
	62nm,0.7s						
TKM2	Tokmak 2	4.42	25	⇑Pg	Pb	05 28 42.3	+1.8
	4.9nm,0.6s						
TKM2				⇑Lg	Lg	05 29 40.2	
	18nm,0.8s						
KK02	Karatay Array	4.56	336	⇑Pn	Pn	05 28 37.2	+5.4
	2.9nm,0.3s						
KK02				⇑Sn	Sb	05 29 33.9	-3.9
	13nm,0.6s						
KST	Kastek	4.66	28	eP	Pb	05 28 41.1	-3.5
	3.7nm,0.4s						
KST				eS	Sb	05 29 41.4	+0.5
	7.9nm,0.6s						
KST	Kastek	4.66	28	Pg	Pb	05 28 41.1	-3.5
	3.7nm,0.4s						
KST				Lg	Lg	05 29 41.4	
	7.9nm,0.6s						
MDOK	Medeo	5.20	35	⇑Pg	Pb	05 28 55.8	+2.1
	6.8nm,0.7s						
MDOK				Lg	Lg	05 30 02.5	
	25nm,1.3s						
PDGK	Podgornoye	6.56	46	⇑Pn	Pn	05 28 57.0	-2.4
	1.9nm,0.7s						
PDGK				⇑Pg	Pb	05 29 18.7	+1.8
	4.5nm,0.8s						
PDGK				⇓Lg	Lg	05 30 44.3	
	8.3nm,0.8s						
MKAR	Makanchi Array	10.38	38	Pn	Pn	05 29 54.0	+2.4
	0.0nm,0.3s,baz=218,slow=13,SNR=8.2						
AB31	Akbulak array	13.91	322	Pn	Pn	05 30 38.5	-1.5
	0.4nm,0.4s,baz=131,slow=14,SNR=20						
SONM	Songino Array	25.67	59	P	P	05 32 52.1	-0.8
	0.6nm,0.7s,baz=262,slow=9.8,SNR=2.5						
ARCES	ARCESS Array B	39.52	336	P	P	05 34 56.5	+3.1
	6.6nm,1.0s,baz=122,slow=9.7,SNR=3.8						
TORD	Torodi Ar. Bea	67.36	269	P	P	05 38 15.4	-3.2
	0.1nm,0.4s,baz=48,slow=6.4,SNR=1.4						

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*IDC **08** 05:27:46.2±1.4, 2°.63S×140°.00E, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.6/34, mbtmp3.8/4, ML4.0/1, MS3.3/2, Ms1 3.3/2, ms1mx2.7/35, Error ellipse: s-maj=30.3km s-min=15.4km az=157.0*
*DJA **08** 05:27:46.2±0.6, 2°S±5°×14°0E±°, h10^{km}, M3.8/2, MLv3.8/2*
ISC 08 05:27:47.4±1.0, 2°.37S±0°.09×140°.11E±0°.06, h25^{km}, n16, σ1^{s}.74/11, mb3.8/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	Genyem	0.23	165	P	Pn	05 27 54.5	-0.8
GENI				S	Sn	05 27 59.5	+1.9
JAY	Jayapura	0.61	104	Pg	Pn	05 27 59.9	-0.7
	baz=180,slow=20						
JAY				LR	LR	05 28 30.9	
	comp=Z,1μm,21.2s,baz=320,slow=63						
JAY	Jayapura	0.61	104	P	Pn	05 27 59.7	-0.9
JAY				S	Sn	05 28 08.5	-1.2
SMPI	Sarmi	1.45	285	P	Pb	05 28 12.4	-1.4
SMPI				S	Sn	05 28 29.6	-0.7
SIJI	Sorong	8.96	279	LR	LR	05 33 37.7	
	comp=Z,145nm,18.5s,baz=184,slow=40						
WRA	Warramunga Arr	18.35	197	P	P	05 31 58.8	-1.6
	0.5nm,0.3s,baz=18,slow=13,SNR=23						
FITZ	Fitzroy Crossi	21.11	221	P	P	05 32 30.3	-0.1
	1.8nm,0.7s,baz=37,slow=10,SNR=9.1						
ASAR	Alice Springs	22.01	195	P	P	05 32 39.3	-0.8
	2.4nm,0.7s,baz=28,slow=9.7,SNR=20						
STKA	Stephens Creek	29.38	177	LR	LR	05 45 54.3	
	comp=Z,87nm,20.8s,baz=19,slow=37						
H11S3	WAKE ISLAND Hy	33.38	51	T	T	06 09 38.3	
	baz=231,slow=75,SNR=5.9						
H11S2	WAKE ISLAND Hy	33.39	51	T	T	06 09 38.1	
	baz=231,slow=75,SNR=3.3						
H11S1	WAKE ISLAND Hy	33.40	51	T	T	06 09 39.7	
	baz=231,slow=75,SNR=3.6						
H11N1	WAKE ISLAND Hy	34.25	49	T	T	06 10 43.6	
	baz=233,slow=74,SNR=3.7						
H11N2	WAKE ISLAND Hy	34.27	49	T	T	06 10 43.6	
	baz=233,slow=74,SNR=4.3						
H11N3	WAKE ISLAND Hy	34.27	49	T	T	06 10 45.2	
	baz=233						
MKAR	Makanchi Array	70.38	322	P	P	05 39 02.9	+3.5
	0.6nm,0.7s,baz=99,slow=8.9,SNR=4.4						

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*SOME **08** 05:37:55.3, 38°.25N×73°.35E, h0^{km}*
*IDC **08** 05:38:10.0±1.8, 38°.57N×73°.75E, h0^{km}, mb3.7/3, mb1 3.7/7, mb1mx3.5/40, mbtmp3.6/7, ML3.3/4, MS3.9/3, Ms1 3.9/3, ms1mx3.0/58, Error ellipse: s-maj=34.8km s-min=23.2km az=66.0*
*KRNET **08** 05:38:10.4±0.1, 38°.80N×73°.13E, h17^{km}, mb3.7*
*NNC **08** 05:38:16.1±4.1, 38°.99N×73°.34E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=35.3km s-min=20.6km az=0.0*
ISC 08 05:38:12.9±1.5, 38°.85N±0°.08×73°.31E±0°.05, h10^{km}, n31, σ2^{s}.69/38, mb3.5/3, MS4.1/3, 17C-7D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	1.18	7	⇑eP	Pg	05 38 34.0	-1.6
	baz=13						
SFK				⇑eS	Sn	05 38 51.5	-0.4
	baz=13						
DRK	Karamyk	1.33	299	⇑iP	Pn	05 38 33.8	-4.1
	baz=4.0						
DRK				⇑iS	Sb	05 38 51.0	-4.5
	baz=4.0						
OHH	Osh	1.73	347	⇑iP	Pn	05 38 42.9	-0.2
	baz=51						
OHH				⇑iS	Sg	05 39 06.6	-1.8
	baz=51						
BTK	Batken	2.28	303	⇓eP	Pn	05 38 50.0	-0.7
	baz=6.0						
BTK				⇓iS	Sn	05 39 18.8	-0.1
	baz=6.0						
TRKS	Terek-Say	3.15	329	⇑eP	Pn	05 39 01.7	-1.1
	baz=31						
TRKS				⇑iS	Sn	05 39 39.2	-1.4
	baz=31						
MNAS	Manas	3.69	351	⇑iP	Pn	05 39 11.3	+1.1
	baz=53						
MNAS				⇑iS	Sn	05 39 55.6	+1.8
	baz=53						
AAK	Ala-Archa	3.89	13	Pn	Pn	05 39 16.9	+3.9
	2.9nm,0.3s,baz=197,slow=7.0,SNR=20						
AAK				Sn	Sb	05 40 10.1	+1.0
	1.8nm,0.3s,baz=325,slow=22,SNR=6.5						
AAK	Ala-Archa	3.89	13	⇑Pn	Pn	05 39 16.4	+3.4
	13nm,0.5s						
AAK				⇑Lg	Lg	05 40 11.3	
	52nm,0.8s						
MRKS	Merke	3.90	359	eP	Pn	05 39 17.0	+4.0
	16nm,0.4s						
MRKS				eS	Sg	05 40 16.8	-1.3
	24nm,0.4s						
MRKS	Merke	3.90	359	Pg	Pb	05 39 20.9	-0.9
	16nm,0.4s						
MRKS				Lg	Lg	05 39 59.5	
	16nm,0.7s						
IUG	Iuzhnay	4.14	324	eP	Pn	05 39 21.0	+4.7
	1μm,0.5s						
IUG				eS	Sg	05 40 23.3	-2.5
	46nm,0.4s						
IUG	Iuzhnay	4.14	324	Pg	Pb	05 39 29.3	+3.4
	1μm,0.5s						
IUG				Lg	Lg	05 40 13.4	
	78nm,0.5s						
TKM2	Tokmak 2	4.43	22	⇑Pn	Pn	05 39 23.7	+3.3
	2.6nm,0.6s						
TKM2				⇑Pg	Pb	05 39 34.4	+3.5
	12nm,0.6s						
TKM2				⇓Lg	Lg	05 40 33.6	
	50nm,1.4s						
KST	Kastek	4.65	25	eP	Pb	05 39 30.7	-3.9
	15nm,0.7s						
KST				eS	Sg	05 40 40.3	-1.9
	30nm,0.4s						
KST	Kastek	4.65	25	Pg	Pb	05 39 37.1	+2.5
	15nm,0.7s						
KST				Lg	Lg	05 40 26.7	
	12nm,0.5s						
KK02	Karatay Array	4.75	334	⇓Pn	Pn	05 39 27.5	+2.9
	3.5nm,0.3s						
KK02				⇓Sn	Sn	05 40 24.7	+4.9
	28nm,0.7s						
TNSS	Tian-Shan	5.01	32	eP	Pb	05 39 38.5	-2.5
	12nm,0.7s						
TNSS				eS	Sg	05 40 53.7	-0.2
	4.6nm,0.6s						
MDOK	Medeo	5.16	32	⇑Pg	Pg	05 39 48.4	-3.3
	20nm,1.0s						
MDOK				⇑Lg	Lg	05 40 57.0	
	19nm,0.8s						
MAKZ	Makanchi	10.19	36	⇑Pn	Pn	05 40 46.0	+6.8
	1.4nm,0.5s						
MK31	Makanchi Array	10.32	37	⇓Pn	Pn	05 40 42.5	+1.5
	0.1nm,0.1s,baz=106,slow=16,SNR=28						
AB31	Akbulak array	14.14	322	Pn	Pn	05 41 31.0	-2.3
	0.7nm,0.4s,baz=130,slow=14,SNR=38						
BVAR	Borovoye Array	14.33	353	Pn	Pn	05 41 37.3	+1.6
	0.2nm,0.3s,baz=185,slow=16,SNR=1.9						
AKTO	Aktyubinsk	15.86	322	Pn	Pn	05 41 56.4	+0.2
	0.1nm,0.3s,baz=104,slow=12,SNR=2.3						
AKTO	Aktyubinsk	15.86	322	⇓Pn	Pn	05 41 59.1	+2.9
	6.7nm,1.2s						
ZALV	Zalesovo Beam	17.03	24	P	Pn	05 42 09.4	-1.6
	0.3nm,0.3s,baz=210,slow=13,SNR=2.5						
SONM	Songino Array	25.52	59	P	P	05 43 39.9	-1.8
	0.2nm,0.4s,baz=260,slow=9.5,SNR=3.2						
FINES	FINESS Array B	36.62	324	P	P	05 45 22.1	+3.1
	3.3nm,0.9s,baz=119,slow=11,SNR=3.9						
MJAR	Matsushiro Arr	50.42	71	LR	LR	06 07 57.9	
	comp=Z,261nm,18.7s,baz=110,slow=36						
LEM	Lembang	55.48	137	LR	LR	06 12 10.4	
	comp=Z,168nm,21.7s,baz=213,slow=37						
OPO	Ambohidratompo	62.14	208	LR	LR	06 13 45.7	
	comp=Z,29nm,18.0s,baz=96,slow=34						
WRA	Warramunga Arr	81.72	124	P	P	05 50 27.8	-4.0
	0.3nm,0.7s,baz=324,slow=4.3,SNR=1.9						

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*SOF **08** 05:43:12.3, 40°.96N×22°.52E, h2^{km}, MD2.6*
*SKO **08** 05:43:12.7, 40°.99N×22°.51E, h14^{km}*
*ATH **08** 05:43:13.4, 40°.96N×22°.54E, h16^{km}±7^{km}, ML2.1/3, Error ellipse: s-maj=7.2km s-min=1.0km az=33.0*
*IASPEI **08** 05:43:13.1±0.9, 40°.97N±0°.03×22°.50E±0°.02, h10^{km}±6^{km}, Error ellipse: s-maj=3.9km s-min=3.1km az=165.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*THE **08** 05:43:13.3, 40°.96N×22°.53E, h2^{km}±2^{km}, ML2.1/6, Error ellipse: s-maj=2.5km s-min=0.5km az=348.0*
*BEO **08** 05:43:16.9±0.9, 41°.17N×22°.33E, h5^{km}±3^{km}, ML1.7/6*
ISC 08 05:43:13.3±0.9, 40°.97N±0°.02×22°.51E±0°.02, h9^{km}±6^{km}, n38, σ0^{s}.70/63, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRG	Griva	0.08	263	P	Pg	05 43 15.4	-0.1
GRG				S	Sg	05 43 16.5	-0.7
	4μm,0.1s						
GRG	Griva	0.08	263	i Pg	Pg	05 43 15.4	-0.1
GRG				i Sg	Sg	05 43 17.1	0.0
KNT	Kendrikon	0.35	57	P	Pg	05 43 20.5	+0.2
KNT				S	Sg	05 43 24.8	-0.2
	352nm,0.1s						
KNT	Kendrikon	0.35	57	P	Pg	05 43 20.4	+0.1
KNT				S	Sg	05 43 25.3	+0.3
KNT	Kendrikon	0.35	57	i Pg	Pg	05 43 20.5	+0.2
KNT				i Sg	Sg	05 43 25.5	+0.5
VAY	Valandovo	0.36	8	i Pg	Pg	05 43 20.2	-0.1
VAY				i Sg	Sg	05 43 26.4	+1.3
VAY				eLg	Lg	05 43 26.9	
	comp=E,86nm,0.3s						
VAY	Valandovo	0.36	8	ePg	Pg	05 43 20.2	-0.1
VAY				eSg	Sb	05 43 27.0	-0.5
THE	Thessaloniki	0.48	134	P	Pg	05 43 22.4	-0.2
THE				S	Sg	05 43 29.1	+0.1
THE	Thessaloniki	0.48	134	P	Pg	05 43 22.5	-0.2
THE				S	Sg	05 43 28.9	0.0
SOH	Sokhos	0.66	102	P	Pg	05 43 25.9	-0.1
SOH				S	Sg	05 43 34.2	-0.4
	comp=E,195nm,0.5s						
SOH	Sokhos	0.66	102	P	Pg	05 43 25.9	-0.1
SOH				S	Sg	05 43 34.8	+0.1
SOH				AML	AML	05 43 36.9	
	comp=E,543μm,0.5s						
SOH				AML	AML	05 43 38.0	
	comp=N,444μm,0.4s						
SOH	Sokhos	0.66	102	i Pg	Pg	05 43 25.9	-0.1
SOH				i Sg	Sg	05 43 35.3	+0.7
STIP	Stip	0.77	342	i Pg	Pg	05 43 27.5	-0.5
STIP				i Sg	Sg	05 43 36.4	-1.6
STIP				eLg	Lg	05 43 42.1	
	comp=E,18nm,0.4s						

SRS	Serrai	0.83	79	P	Pg	05 43 28.9	-0.5
SRS				S	Sg	05 43 40.1	-0.1
	comp=E,80nm,0.4s						
SRS	Serrai	0.83	79	P	Pg	05 43 28.9	-0.5
SRS				S	Sg	05 43 39.6	-0.6
SRS				AML	AML	05 43 43.1	
	comp=E,124µm,0.4s						
SRS				AML	AML	05 43 43.6	
	comp=N,195µm,0.5s						
SRS	Serrai	0.83	79	*i* Pg	Pg	05 43 28.9	-0.5
SRS				*i* Sg	Sg	05 43 40.1	-0.1
KZN	Kozani	0.86	221	P	Pg	05 43 29.2	-0.7
FNA	Florina	0.88	258	P	Pg	05 43 29.9	-0.2
FNA				S	Sg	05 43 42.2	+0.7
	comp=N,140nm,0.5s						
FNA	Florina	0.88	258	P	Pg	05 43 29.9	-0.2
FNA				S	Sb	05 43 43.5	+1.0
FNA				AML	AML	05 43 48.0	
	comp=N,311µm,0.6s						
FNA				AML	AML	05 43 48.7	
	comp=E,242µm,0.4s						
FNA	Florina	0.88	258	*i* Pg	Pg	05 43 29.9	-0.2
PLG	Polygyros	0.93	129	P	Pg	05 43 30.3	-0.8
KKB	Krupnik	1.00	26	P	Pg	05 43 31.8	-0.7
NVR	Nevrokopi	1.09	69	P	Pg	05 43 34.0	-0.3
NVR				S	Sg	05 43 48.5	0.0
NVR	Nevrokopi	1.09	69	P	Pg	05 43 33.9	-0.3
MMB	Musomiste	1.11	56	P	Pg	05 43 34.0	-0.6
NEST	Nestorio	1.24	244	P	Pg	05 43 36.8	-0.2
OUR	Ouranopolis	1.29	119	P	Pg	05 43 37.3	-0.7
PAIG	Paliouri	1.37	139	P	Pn	05 43 38.5	-0.1
PAIG				S	Sn	05 43 57.6	+0.8
	comp=E,68nm,0.4s						
PAIG	Paliouri	1.37	139	P	Pn	05 43 38.4	-0.1
BOSS	Bosilegrad	1.53	359	*e*Pg	Pn	05 43 41.3	+0.5
BOSS				*e*Sg	Sn	05 43 58.9	-1.9
PRVS	Prvonek	1.57	348	*e*Pg	Pn	05 43 41.9	+0.5
PRVS				*e*Sg	Sn	05 44 00.1	-1.8
VTS	Vitosha	1.74	18	P	Pb	05 43 45.5	+0.1
VTS	Vitosha	1.74	18	*i* Pn	Pn	05 43 44.0	+0.2
VTS	Vitosha	1.74	18	*e*Pg	Pn	05 43 44.9	+1.1
VTS				*e*Sg	Sn	05 44 04.9	-1.2
BARS	Barje	1.92	345	*i* Pn	Pn	05 43 46.6	+0.5
BARS	Barje	1.92	345	*e*Pg	Pn	05 43 46.3	+0.2
BARS				*e*Sg	Sn	05 44 11.1	+0.7
ZAPS	Zavoj	2.31	2	*e*Pn	Pn	05 43 53.6	+2.1
ZAPS				*e*Sn	Sn	05 44 20.9	+0.9
SELS	Selova	2.48	336	*e*Pn	Pn	05 43 54.0	+0.2

*IDC **08** 05:54:21.0±0.5, 17°.21N×147°.47E, h0^{km}, mb4.7/29, mb1 4.8/30, mb1mx4.5/55, mbtmp4.7/30, ML4.8/1, MS4.1/26, Ms1 4.1/26, ms1mx3.9/41, Error ellipse: s-maj=17.7km s-min=12.1km az=92.0*

*NEIC **08** 05:54:22.6±2.4, 17°.22N±0°.07×147°.6E±0°.1, h10^{km}±1^{km}, mb4.9/121, Error ellipse: s-maj=17.6km s-min=10.5km az=104.0*

*GCMT **08** 05:54:25.6±0.4, 17°.12N±0°.04×147°.85E±0°.03, h19^{km}±1^{km}, MW4.9/74, Moment Tensor Solution. s19,c21; s74,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.72±.23; M$_{\theta\theta}$-0.42±.12; M$_{\phi\phi}$-2.30±.15; M$_{r\theta}$0.33±.31; M$_{\theta\phi}$0.19±.08; M$_{\phi r}$1.61±.26; Best double couple: M$_0$3.00200×10^{16} NP1:ϕ_s169.00000°,δ29.00000°,λ77.00000°. NP2: ϕ_s3.00000°,δ61.00000°,λ97.00000°. Principal axes: T 3.2290, Plg73.0000°, Azm290.0000°; N -0.4580, Plg6.0000°, Azm180.0000°; P -2.7750, Plg16.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 05:54:22.3±0.3**, 17°.15N**±0°.05×**147°.53E**±0°.07**, h10**^{km}**, n207,** σ**1^{s}.61**/152**, mb4.8**/98**, MS4.2**/36**, 1D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.37	216	Pn	Pn	05 55 30.7	+1.8
	47nm,0.3s,baz=138,slow=6.1,SNR=10						
GUMO				Sn	Sn	05 56 18.8	-1.1
	20nm,0.3s,baz=18,slow=19,SNR=1.6						
GUMO				LR	LR	05 57 10.3	
	comp=Z,1µm,21.1s,baz=28,slow=39						
GUMO	Guam	4.37	216	Pn	Pn	05 55 30.0	+1.1
PATS	Pohnpei	14.70	133	Pn	Pn	05 57 46.2	-4.2
H11S3	WAKE ISLAND Hy	18.29	83	T	T	06 17 15.7	
	baz=269,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	18.30	83	T	T	06 17 17.8	
	baz=269,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	18.30	83	T	T	06 17 16.9	
	baz=269,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	18.54	79	T	T	06 17 38.9	
	baz=264,slow=74,SNR=39						
H11N2	WAKE ISLAND Hy	18.55	79	T	T	06 17 39.0	
	baz=264,slow=74,SNR=30						
H11N3	WAKE ISLAND Hy	18.56	79	T	T	06 17 37.0	
	baz=264,slow=74,SNR=26						
JYT	Yasato	20.09	342	P	P	05 58 52.5	-3.5
JOW	Kunigami	20.27	302	LR	LR	06 05 31.6	
	comp=Z,710nm,21.5s,baz=120,slow=33						
INU	Inuyama	20.41	335	P	P	05 58 60.0	+0.4
JGF	Kuroka	20.49	336	P	P	05 59 01.1	+0.7
JGF				IAmb	IAmb	05 59 18.0	
	comp=Z,64nm,1.1s						
JAY	Jayapura	20.67	200	P	P	05 59 04.2	+1.6
	comp=Z,29nm,0.8s,baz=44,slow=6.4,SNR=4.4						
JAY				LR	LR	06 08 09.0	
	comp=Z,449nm,18.4s,baz=9.0,slow=40						
MJAR	Matsushiro Arr	21.01	339	P	P	05 59 06.5	+0.4
	comp=Z,19nm,0.7s,baz=173,slow=11,SNR=18						
MJAR	Matsushiro Arr	21.01	339	P	P	05 59 05.3	-0.8
MJAR				IAmb	IAmb	05 59 10.8	
	comp=Z,48nm,1.2s						
MAJO	Matsushiro	21.01	339	P	P	05 59 05.6	-0.4
MAT	Matsushiro	21.01	339	P	P	05 59 05.9	-0.2
MAT				S	S	06 02 58.2	-1.9
MJB9	Matsu-Tunnel	21.01	339	P	P	05 59 05.2	-0.9
DAV	Davao City (W)	23.66	248	LR	LR	06 06 45.8	
	comp=Z,298nm,21.9s,baz=133,slow=32						
SIJI	Sorong	24.04	223	LR	LR	06 07 41.1	
	comp=Z,640nm,19.5s,baz=56,slow=33						
FAKI	Fak Fak	25.00	219	P	P	05 59 46.6	0.0
PMG	Port Moresby	26.39	181	P	P	06 00 00.3	+1.2
	comp=Z,9.0nm,0.3s,baz=2.6,slow=9.6,SNR=5.6						
PMG	Port Moresby	26.39	181	P	P	05 59 59.6	+0.5
PMG				IAmb	IAmb	06 00 02.2	
	comp=Z,34nm,0.9s						
KSRS	Korea Array	26.59	323	P	P	06 00 00.4	-0.4
	comp=Z,5.9nm,0.6s,baz=144,slow=9.6,SNR=17						
KSRS				LR	LR	06 09 52.9	
	comp=Z,467nm,18.1s,baz=126,slow=35						
KSAR	Wonju Array Be	26.61	323	P	P	05 59 59.3	-1.6
NJ2	Nanjing	29.88	305	*e*P	P	06 00 32.3	+2.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
USA0B	Ussuriysk Arra	29.99	337	P	P	06 00 26.1	-4.9
USA0B				IAmb	IAmb	06 00 33.8	
	comp=Z,10nm,0.8s						
USRK	Ussuriysk Ar.	29.99	337	P	P	06 00 32.3	+1.3
	comp=Z,7.4nm,0.7s,baz=133,slow=11,SNR=11						
USRK	Ussuriysk Ar.	29.99	337	P	P	06 00 26.1	-4.9
MYLDM	Lahad Datu	30.81	251	P	P	06 00 39.2	+0.6
MDJ	Mudanjiang	31.27	335	P	P	06 00 42.8	+0.5
MDJ				PP	PnPn	06 01 48.0	+3.6
MDJ				S	S	06 05 53.1	+4.2
MDJ				pmax	pmax		
	comp=Z,11nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,360nm,5.5s						
MDJ				LR	LR		
	comp=Z,570nm,13.3s						
MDJ				LR	LR		
	comp=Z,470nm,14.7s						
MDJ				LR	LR		
	comp=Z,500nm,13.1s						
KKM	Kota Kinabalu	32.55	254	P	P	06 00 55.3	+1.3
KLR	Kul'dur	34.47	342	P	P	06 01 10.4	+0.1
	comp=Z,21nm,0.6s,baz=141,slow=8.5,SNR=45						
KAPI	Kappang	35.19	234	LR	LR	06 13 32.1	
	comp=Z,116nm,21.9s,baz=56,slow=33						
KAPI	Kappang	35.19	234	P	P	06 01 16.0	-0.9
BATI	Baumata	35.99	223	LR	LR	06 14 47.0	
	comp=Z,222nm,21.3s,baz=6.0,slow=34						
PETK	Petropavlovsk-	36.76	10	LR	LR	06 17 54.0	
	comp=Z,272nm,18.2s,baz=193,slow=38						
KNRA	Kununurra	37.51	211	P	P	06 01 36.1	-0.4
KNRA				IAmb	IAmb	06 01 41.1	
	comp=Z,19nm,0.9s						
SBUM	Sibu	37.63	251	P	P	06 01 37.2	-0.6
WB0	Warramunga Arr	38.89	200	P	P	06 01 47.6	-0.6
GYA	Guiyang	38.92	291	⇓P	P	06 01 47.2	-1.5
GYA				sP	pwP	06 02 00.0	+2.7
GYA				S	S	06 07 45.7	-1.7
GYA				pmax	pmax		
	comp=Z,30nm,0.7s						
GYA				pmax	pmax		
	comp=Z,210nm,4.3s						
GYA				LR	LR		
	comp=Z,340nm,13.4s						
HHC	Hu-ho-hao-te	38.93	315	*e*P	P	06 01 48.5	0.0
HHC				S	S	06 07 41.2	-5.9
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,4.4s						
HHC				LR	LR		
	comp=Z,320nm,15.0s						
HHC				LR	LR		
	comp=Z,370nm,13.9s						
HHC				LR	LR		
	comp=Z,470nm,14.3s						
WR0	Warramunga Arr	39.02	200	P	P	06 01 48.5	-0.9
WRAB	Tennant Creek	39.06	200	P	P	06 01 48.9	-0.8
WRAB				IAmb	IAmb	06 01 59.2	
	comp=Z,20nm,0.8s						
WB2	Warramunga Arr	39.07	200	P	P	06 01 48.9	-0.9
WB2				IAmb	IAmb	06 01 59.3	
	comp=Z,24nm,0.8s						
WRA	Warramunga Arr	39.07	200	P	P	06 01 50.0	+0.3
	comp=Z,10.0nm,0.8s,baz=23,slow=9.1,SNR=59						
WRA	Warramunga Arr	39.07	200	P	P	06 01 48.5	-1.3
HIA	Hailar	39.15	331	P	P	06 01 49.6	-0.6
HIA				IAmb	IAmb	06 01 52.9	
	comp=Z,18nm,0.9s						
KSM	Kuching	39.78	251	P	P	06 01 54.4	-1.4
KSM				IAmb	IAmb	06 01 59.0	
	comp=Z,29nm,1.1s						
BTO	Baotou	39.88	314	*e*P	P	06 01 57.9	+1.4
BTO				S	S	06 08 03.9	+2.5
BTO				LR	LR		
	comp=Z,1µm,15.2s						
BTO				LR	LR		
	comp=Z,1µm,17.7s						
SLVN	Son La	41.31	283	P	P	06 02 08.1	-0.4
CD2	Chengdu	42.00	297	P	P	06 02 13.3	-0.7
CD2				LR	LR		
	comp=Z,870nm,12.9s						
CD2				LR	LR		
	comp=Z,550nm,13.3s						
CD2				LR	LR		
	comp=Z,610nm,14.9s						
AS31	Alice Springs	42.69	199	P	P	06 02 19.3	-0.4
ASAR	Alice Springs	42.70	199	P	P	06 02 19.8	+0.1
	comp=Z,2.8nm,0.7s,baz=10,slow=5.3,SNR=18						
ASAR	Alice Springs	42.70	199	P	P	06 02 18.9	-0.8
LZH	Lanzhou	42.96	305	*e*P	P	06 02 24.6	+2.7
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				pmax	pmax		
	comp=Z,260nm,4.9s						
LZH				LR	LR		
	comp=Z,380nm,16.3s						
LZH				LR	LR		
	comp=Z,480nm,16.3s						
LZH				LR	LR		
	comp=Z,420nm,18.4s						
DZM	Mont Dzumac	43.15	154	*e*P	P	06 02 24.3	+0.9
	comp=Z,38nm,1.2s						
DZM	Mont Dzumac	43.15	154	*e*LR	LR	06 14 31.8	
	comp=Z,708nm,23.6s						
DZM	Mont Dzumac	43.15	154	LR	LR	06 21 16.7	
	comp=Z,332nm,18.6s,baz=30,slow=37						
DZM	Mont Dzumac	43.15	154	P	P	06 02 23.9	+0.5
DZM				IAmb	IAmb	06 02 26.7	
	comp=Z,36nm,1.4s						
ULN	Ulaanbaatar	45.06	322	P	P	06 02 37.4	-1.2
SONM	Songino Array	45.44	322	P	P	06 02 41.0	-0.5
	comp=Z,7.6nm,0.8s,baz=136,slow=7.4,SNR=20						
SONM				LR	LR	06 21 47.3	
	comp=Z,330nm,18.5s,baz=112,slow=36						
SONM	Songino Array	45.44	322	P	P	06 02 40.1	-1.4
CM31	Chiang Mai Arr	46.17	279	P	P	06 02 47.8	+0.2
CMAR	Chiang Mai Arr	46.17	279	P	P	06 02 47.8	+0.1
	comp=Z,14nm,0.9s,baz=70,slow=6.3,SNR=24						
CMAR	Chiang Mai Arr	46.17	279	P	P	06 02 47.3	-0.3
YAK	Yakutsk	46.57	349	P	P	06 02 50.3	+0.3
	comp=Z,5.7nm,0.4s,baz=294,slow=4.3,SNR=6.9						
GTA	Gaotai	46.87	308	*e*P	P	06 02 53.2	+0.2
GTA				pP	pwP	06 03 01.6	+1.4
GTA				sP	sP	06 03 06.4	+11
GTA				PcP	PcP	06 04 27.0	+1.1
GTA				ScP	ScP	06 08 18.0	-1.8
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,120nm,5.1s						
GTA				LR	LR		
	comp=Z,250nm,14.9s						
GTA				LR	LR		
	comp=Z,320nm,15.6s						
GTA				LR	LR		
	comp=Z,400nm,16.7s						
STKA	Stephens Creek	49.08	187	LR	LR	06 23 46.4	
	comp=Z,156nm,20.2s,baz=10,slow=36						
PSI	Prapat	49.79	259	LR	LR	06 24 05.7	
	comp=Z,132nm,20.6s,baz=84,slow=36						
AFI	Afiamalu	50.66	125	LR	LR	06 19 16.4	
	comp=Z,105nm,20.6s,baz=258,slow=30						
BBOO	Buckleboo	50.88	192	P	P	06 03 23.4	-0.1
FORT	Forrest	51.20	202	P	P	06 03 28.1	+2.1
GSI	Gunungsitoli	51.57	258	P	P	06 03 29.7	+0.6
SHL	Shillong	52.19	289	P	P	06 03 32.3	-1.6
BILL	Bilibino	52.26	9	P	P	06 03 33.6	+0.2
BILL				IAmb	IAmb	06 03 40.1	
	comp=Z,20nm,1.2s						
LSA	Lhasa	52.77	294	P	P	06 03 41.4	+3.0
LSA				IAmb	IAmb	06 03 44.5	
	comp=Z,8.9nm,0.6s						
MORW	Morawa	55.11	214	P	P	06 03 55.2	+0.3
MORW				IAmb	IAmb	06 04 17.9	
	comp=Z,18nm,1.2s						
TIXI	Tiksi	55.61	353	P	P	06 03 58.1	+0.2
	comp=Z,8.8nm,0.8s,baz=128,slow=8.2,SNR=7.5						
TIXI	Tiksi	55.61	353	P	P	06 03 57.6	-0.2
TIXI				IAmb	IAmb	06 04 00.5	
	comp=Z,10nm,1.1s						
WMQ	Urumqi	56.64	311	*e*P	P	06 04 06.1	+0.3
WMQ				pP	pwP	06 04 13.5	+0.5
WMQ				pmax	pmax		
	comp=Z,31nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,320nm,5.1s						
WMQ				LR	LR		
	comp=Z,270nm,12.7s						
WMQ				LR	LR		
	comp=Z,170nm,20.5s						
ZSN	Zaisan	59.12	315	*e*P	P	06 04 22.2	-1.0
	baz=315						
ZAA0	Zalesovo Array	60.30	323	P	P	06 04 29.6	-1.5
ZAA0				IAmb	IAmb	06 04 37.4	
	comp=Z,6.9nm,0.8s						
ZALV	Zalesovo Beam	60.30	323	P	P	06 04 30.6	-0.5
	comp=Z,3.5nm,0.5s,baz=103,slow=6.7,SNR=14						
ZALV				PcP	PcP	06 05 16.1	-0.2
	comp=Z,4.4nm,0.6s,baz=124,slow=3.9,SNR=3.6						
ZALV				LR	LR	06 30 54.5	
	comp=Z,198nm,18.9s,baz=70,slow=36						
ZALV	Zalesovo Beam	60.30	323	P	P	06 04 29.5	-1.6
MK31	Makanchi Array	60.79	314	P	P	06 04 33.1	-1.5
MK31				IAmb	IAmb	06 04 36.0	
	comp=Z,11nm,1.3s						
MKAR	Makanchi Array	60.79	314	P	P	06 04 34.2	-0.4
	comp=Z,2.7nm,0.5s,baz=90,slow=7.8,SNR=24						
MKAR				ScP	ScP	06 09 19.6	-0.6
	comp=Z,1.4nm,0.9s,baz=126,slow=6.2,SNR=4.3						
MKAR				LR	LR	06 31 35.3	
	comp=Z,157nm,19.2s,baz=80,slow=37						
MKAR	Makanchi Array	60.79	314	P	P	06 04 33.1	-1.5
MAKZ	Makanchi	61.01	314	P	P	06 04 35.5	-0.6
MAKZ				IAmb	IAmb	06 04 40.3	
	comp=Z,7.4nm,0.8s						
IMAR	Indian Mountai	61.93	23	P	P	06 04 43.0	+1.1
RC01	Rabbit Creek A	62.03	29	P	P	06 04 42.9	+0.2
H21K	Melozitna Rive	62.17	24	IAmb	IAmb	06 05 03.1	
	comp=Z,13nm,1.1s						
BKZ	Black Stump Fm	62.23	155	P	P	06 04 44.3	0.0
SEM	Semipalatinsk	62.52	318	*e*P	P	06 04 45.1	-1.4
	comp=Z,4.8nm,1.1s,baz=318						
SHLS	Shalkode	62.55	310	*e*P	P	06 04 43.5	-3.2
	comp=Z,7.2nm,1.3s,baz=310						
UZB	Uzynbulak	62.87	310	*e*P	P	06 04 47.2	-1.6
	comp=Z,5.5nm,1.4s,baz=310						
RND	Reindeer	63.07	27	IAmb	IAmb	06 04 55.0	
	comp=Z,10nm,1.2s						
KPKS	Kokpek	63.12	310	*e*P	P	06 04 48.9	-1.6
	baz=310						
SATY	Saty	63.32	310	*e*P	P	06 04 50.4	-1.4
	comp=Z,10nm,1.5s,baz=310						
I23K	Minto, Yukon-K	63.36	25	P	P	06 04 51.1	-0.4
TDK	Taldyqorghan	63.37	312	*e*P	P	06 04 51.1	-0.9
	comp=Z,21nm,1.1s,baz=312						
KURK	Kurchatov	63.58	319	P	P	06 04 51.8	-1.4
KURBB	Kurchatov Arra	63.63	318	P	P	06 04 52.5	-1.1
	comp=Z,11nm,0.7s,baz=98,slow=6.8,SNR=34						
KURBB				PP	PP	06 07 12.3	-1.0
	comp=Z,0.9nm,0.4s,baz=95,slow=7.2,SNR=6.1						
NRIK	Noril'sk	63.66	340	P	P	06 04 53.5	+0.1
	comp=Z,13nm,0.9s,baz=111,slow=6.6,SNR=17						
NRIK				LR	LR	06 33 58.1	
	comp=Z,133nm,19.7s,baz=98,slow=37						
COLD	Coldfoot	63.70	23	IAmb	IAmb	06 04 56.4	
	comp=Z,13nm,1.4s						
H24K	Noodor Dome	64.15	24	IAmb	IAmb	06 05 03.4	
	comp=Z,14nm,1.2s						
IL31		64.27	26	P	P	06 04 56.2	-1.3
IL31				IAmb	IAmb	06 05 07.6	
	comp=Z,11nm,1.1s						
ILAR	Eielson Array	64.27	26	P	P	06 04 56.7	-0.8
	comp=Z,5.1nm,1.1s,baz=262,slow=4.9,SNR=17						
ILAR				LR	LR	06 33 24.6	
	comp=Z,85nm,18.9s,baz=284,slow=36						
ILAR	Eielson Array	64.27	26	P	P	06 04 56.9	-0.6
MDOK	Medeo	64.31	310	*e*P	P	06 04 57.0	-1.4
	baz=310						
TNSS	Tian-Shan	64.39	310	*e*P	P	06 04 57.7	-1.5
	baz=310						
AAA	Alma-Ata	64.41	310	*e*P	P	06 04 57.5	-1.5
	comp=Z,18nm,0.8s,baz=310						
KUU	Kurty	64.83	311	*e*P	P	06 04 60.0	-1.6
	comp=Z,24nm,1.3s,baz=311						
SCRK	Sand Creek	65.31	27	P	P	06 05 04.2	-0.3
SCRK				IAmb	IAmb	06 05 33.5	
	comp=Z,6.7nm,1.0s						
HYB	Hyderabad	65.51	282	*i* P	P	06 05 07.0	+0.6
SGDS	Sogindy	66.08	310	*e*P	P	06 05 08.5	-1.2
	baz=310						
BTLS	Baital	66.46	312	*e*P	P	06 05 10.3	-1.8
	baz=312						
EGAK	Eagle	66.67	26	IAmb	IAmb	06 05 19.0	
	comp=Z,8.9nm,1.1s						
BRZS	Berezniki	67.35	318	*e*P	P	06 05 17.0	-0.7
	baz=318						
NIL	Nilore	67.81	300	P	P	06 05 21.3	+0.3
DZA	Taraz	68.51	310	*e*P	P	06 05 24.4	-0.8
	baz=310						
BVAR	Borovoye Array	68.77	321	P	P	06 05 26.0	-0.6
	comp=Z,12nm,0.6s,baz=160,slow=6.0,SNR=36						
BRVK	Borovoye	68.84	321	P	P	06 05 26.8	-0.1
KKAR	Karatay Array	69.10	310	P	P	06 05 27.8	-1.0
IUG	Iuzhnay	69.53	309	*e*P	P	06 05 30.8	-0.8
	baz=309						
POO	Poona	69.67	284	*e*x	x	06 05 30.0	
INK	Inuvik	70.11	23	P	P	06 05 34.8	+0.4
	comp=Z,5.5nm,0.9s,baz=247,slow=4.0,SNR=10						
INK	Inuvik	70.11	23	IAmb	IAmb	06 05 37.2	
	comp=Z,7.6nm,1.1s						
PPT	Papeete	70.87	116	LR	LR	06 28 09.2	
	comp=Z,226nm,20.7s,baz=280,slow=29						
PPT2	Papeete2	70.88	116	*e*S	S	06 14 54.2	-1.8
	comp=Z,296nm,26.5s						
PPT2	Papeete2	70.88	116	*e*LR	LR	06 27 15.0	
	comp=Z,389nm,24.5s,baz=300						
DLBC	Dease Lake	71.61	33	P	P	06 05 44.7	+0.8
	comp=Z,3.1nm,0.4s,baz=323,slow=5.1,SNR=4.0						
A36M	Sachs Harbour	72.97	19	IAmb	IAmb	06 06 10.3	
	comp=Z,10nm,0.9s						
ARU	Arti	75.33	325	P	P	06 06 05.5	-0.2
ARU				IAmb	IAmb	06 06 14.4	
	comp=Z,12nm,0.9s						
ABKAR	Akbulak array	75.66	317	P	P	06 06 06.9	-0.9
ABKAR				IAmb	IAmb	06 06 25.6	
	comp=Z,13nm,1.5s						
TAOE	Nuku Hiva Isla	75.99	104	*e*S	S	06 15 52.0	-2.0
	comp=Z,219nm,29.0s						
TAOE	Nuku Hiva Isla	75.99	104	*e*LR	LR	06 29 20.3	
	comp=Z,298nm,29.1s,baz=307						
YKA	Yellowknife Ar	78.53	28	P	P	06 06 23.5	-0.1
	comp=Z,3.8nm,1.0s,baz=284,slow=5.6,SNR=8.7						
EUNU	Eureka	79.00	8	IAmb	IAmb	06 06 31.6	
	comp=Z,9.4nm,1.0s						
GEYT	Alibeck	79.22	306	LR	LR	06 45 45.5	
	comp=Z,79nm,18.4s,baz=25,slow=39						
B08A	Colville Reser	79.43	43	P	P	06 06 29.5	+0.6
KIRV	Kirov	79.69	328	P	P	06 06 31.1	+1.0
	comp=Z,12nm,0.5s,baz=135,slow=1.4,SNR=3.6						
NEW	Newport	80.88	42	P	P	06 06 35.7	-1.1
CMB	Columbia Colle	81.23	53	P	P	06 06 39.1	+0.2
BMO	Blue Mountains	81.67	46	IAmb	IAmb	06 06 53.3	
	comp=Z,11nm,1.2s						
EDM	Edmonton	81.77	37	IAmb	IAmb	06 06 43.1	
	comp=Z,22nm,1.4s						
YERR	Yerington	81.85	52	IAmb	IAmb	06 06 44.3	
	comp=Z,9.9nm,1.2s						
NVAR	Mina Array Bea	82.71	52	P	P	06 06 48.0	+1.1
	comp=Z,4.4nm,0.9s,baz=268,slow=6.6,SNR=18						
NVAR				LR	LR	06 38 13.5	
	comp=Z,98nm,19.0s,baz=267,slow=32						
JTMT	Jette	82.85	42	IAmb	IAmb	06 06 48.9	
	comp=Z,8.5nm,1.2s						
BMN	Battle Mountai	82.96	50	IAmb	IAmb	06 06 50.0	
	comp=Z,9.1nm,1.3s						
MFID	Camas Ranch	83.10	47	IAmb	IAmb	06 06 51.1	
	comp=Z,9.6nm,1.2s						
KLMR	Klimovskoe	83.64	332	*e*P	P	06 06 49.4	-1.5
KLMR				AMP		06 07 01.1	
	comp=Z,71nm,1.3s						
TULEG	Thule	84.00	8	*i* P	P	06 06 52.8	+0.3
ELK	Elko	84.31	49	P	P	06 06 55.4	+0.3
ELK				IAmb	IAmb	06 06 57.0	
	comp=Z,5.9nm,1.1s						
ARCES	ARCESS Array B	84.49	343	P	P	06 06 54.9	-0.2
	comp=Z,6.5nm,0.6s,baz=60,slow=6.2,SNR=16						
GWY	Greenwater Val	84.60	54	IAmb	IAmb	06 07 18.1	
	comp=Z,9.1nm,1.4s						
NEEM	North Greenlan	84.97	4	*i* P	P	06 06 58.2	+0.5
PRN	Pahroc Range	85.47	52	IAmb	IAmb	06 07 11.5	
	comp=Z,8.7nm,1.2s						
SPR3	Spring Creek 3	85.51	51	IAmb	IAmb	06 07 03.9	
	comp=Z,8.5nm,1.1s						
DAG	Danmarks Havn	85.91	357	*i* P	P	06 07 01.8	-0.3
PSUT	Pine Spring	86.01	51	IAmb	IAmb	06 07 05.3	
	comp=Z,7.5nm,1.0s						
YMR	Madison River	86.03	44	P	P	06 07 05.1	+1.5
YMR				IAmb	IAmb	06 07 06.1	
	comp=Z,7.9nm,0.8s						
YHH	Holmes Hill	86.06	44	IAmb	IAmb	06 07 07.5	
	comp=Z,10nm,1.3s						
SPUT	South Promonto	86.13	48	IAmb	IAmb	06 07 12.9	
	comp=Z,9.2nm,1.3s						
DUG	Dugway, Tooele	86.24	49	IAmb	IAmb	06 07 13.1	
	comp=Z,12nm,1.4s						
FLWY	Flagg Ranch	86.41	45	IAmb	IAmb	06 07 08.0	
	comp=Z,7.8nm,0.9s						
AHID	Auburn Hatcher	86.59	46	IAmb	IAmb	06 07 09.3	
	comp=Z,14nm,1.3s						
HWUT	Hardware Ranch	86.66	48	IAmb	IAmb	06 07 08.3	
	comp=Z,8.9nm,1.1s						
CCUT	Cedar City	86.70	52	IAmb	IAmb	06 07 11.0	
	comp=Z,9.0nm,1.4s						
JLU	Jordanelle	87.08	48	IAmb	IAmb	06 07 10.7	
	comp=Z,12nm,1.2s						
FFC	Flin Flon	87.44	33	P	P	06 07 09.5	-0.5
FFC				IAmb	IAmb	06 07 18.2	
	comp=Z,12nm,1.2s						
PDAR	Pinedale Array	87.65	46	P	P	06 07 11.6	0.0
	comp=Z,0.6nm,0.7s,baz=230,slow=3.1,SNR=5.2						
PDAR				LR	LR	06 47 18.4	

	comp=Z,47nm,18.0s,baz=310,slow=36						
TMUT	**Trail Mountain**	**87.71**	**50**	IAmb	IAmb	06 07 13.6	
	comp=Z,5.9nm,1.1s						
U15A	**North Rim**	**87.88**	**53**	IAmb	IAmb	06 07 25.5	
	comp=Z,9.2nm,1.2s						
P17A	**Butcher Ranch,**	**87.99**	**49**	IAmb	IAmb	06 07 38.8	
	comp=Z,7.6nm,1.4s						
Y14A	**Wickenburg**	**88.16**	**55**	IAmb	IAmb	06 07 15.2	
	comp=Z,4.5nm,0.9s						
SRU	**San Rafael Swe**	**88.27**	**50**	IAmb	IAmb	06 07 15.5	
	comp=Z,5.4nm,0.8s						
RDMU	**Red Mountain**	**88.44**	**48**	IAmb	IAmb	06 07 18.4	
	comp=Z,8.1nm,0.9s						
KBZ	**Khabaz**	**88.47**	**315**	LR	LR	06 52 00.6	
	comp=Z,78nm,18.0s,baz=61,slow=39						
WUAZ	**Wupatki**	**88.89**	**53**	IAmb	IAmb	06 07 19.8	
	comp=Z,7.7nm,0.9s						
FINES	**FINESS Array B**	**89.01**	**336**	P	**P**	**06 07 16.1**	**-1.2**
	comp=Z,3.9nm,0.7s,baz=70,slow=3.9,SNR=12						
O20A	**White River Ci**	**89.54**	**48**	IAmb	IAmb	06 07 28.8	
	comp=Z,7.8nm,1.1s						
MVCO	**Mesa Verde**	**90.45**	**51**	IAmb	IAmb	06 07 32.8	
	comp=Z,9.6nm,1.3s						
TUC	**Tucson**	**90.46**	**56**	P	**P**	**06 07 25.8**	**+1.0**
SMCO	**Snowmass**	**90.81**	**49**	IAmb	IAmb	06 07 52.7	
	comp=Z,6.1nm,0.8s						
MNK	**Minsk**	**92.17**	**330**	*i* P	P	06 07 40.4	+8.2
	comp=E,7.0nm,1.2s						
MNK				*i* P	P	06 07 40.4	+8.2
	comp=N,30nm,0.8s						
MNK				*i* P	P	06 07 40.4	+8.2
	comp=Z,25nm,0.7s,baz=236						
MNK				*i* PP	PP	06 10 30.1	-42
MNK				*i* PPP	PPP	06 12 42.3	
MNK				*i* SKS		06 17 03.3	
MNK				*i* S	**SKSac**	**06 18 12.6**	**+7.2**
MNK				*i* PS	PnS	06 20 02.5	+16
MNK				*i* SS	SS	06 25 18.5	+35
MNK				*i* SSS	SSS	06 29 18.6	
MNK				*i* LQ	LQ	06 44 35.1	
MNK				*i* LR	LR	06 47 49.3	
MNK				*i* LRM	MLR	06 53 02.7	
MNK				*i* LRM	MLR	06 53 02.7	
MNK				*i* LRM	MLR	06 53 03.3	
	comp=Z,233nm,18.3s						
ULM	**Lac du Bonnet**	**92.87**	**35**	LR	LR	06 50 09.3	
	comp=Z,85nm,19.5s,baz=302,slow=36						
AKASG	**Malin Array Be**	**93.56**	**326**	P	**P**	**06 07 36.7**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=55,slow=5.0,SNR=4.9						
NOA	**NORSAR Array B**	**94.62**	**340**	P	**P**	**06 07 43.2**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=57,slow=6.2,SNR=3.3						
BRTR	**Keskin Array B**	**96.44**	**315**	LR	LR	06 56 16.7	
	comp=Z,86nm,18.5s,baz=44,slow=39						
TXAR	**Lajitas Array**	**97.25**	**56**	P	**P**	**06 07 56.1**	**0.0**
	comp=Z,0.3nm,0.8s,baz=354,slow=3.8,SNR=3.7						
TXAR				LR	LR	06 49 46.5	
	comp=Z,92nm,18.1s,baz=0.0,slow=34						
SNAA	**Sanae**	**122.75**	**191**	PKPdf	**PKPdf**	**06 13 17.9**	**0.0**
VNA2	**Neumayer--Watz**	**124.16**	**190**	PKPdf	**PKPdf**	**06 13 21.2**	**+0.6**
	baz=141,slow=1.9						
VNA2	**Neumayer--Watz**	**124.16**	**190**	pPKPdf	pPKPdf	06 13 28.5	+6.4
VNA2	**Neumayer--Watz**	**124.16**	**190**	P	**Pdif**	**06 09 52.9**	**-1.7**
	baz=311,slow=15						
VNA3	**Neumayer Olymp**	**124.22**	**189**	PKPdf	**PKPdf**	**06 13 20.8**	**+0.1**
VNA3	**Neumayer Olymp**	**124.22**	**189**	pPKPdf	pPKPdf	06 13 28.3	+6.1
VNA3	**Neumayer Olymp**	**124.22**	**189**	P	**Pdif**	**06 09 52.3**	**-2.7**
VNA1	**Neumayer--Stat**	**124.54**	**190**	P	**Pdif**	**06 09 47.6**	**-8.7**
TORD	**Torodi Ar. Bea**	**134.78**	**310**	PKP	**PKPdf**	**06 13 43.1**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=54,slow=1.5,SNR=4.5						
TORD				SKPbc	**SKPbc**	**06 17 10.7**	**-2.2**
	comp=Z,1.8nm,1.0s,baz=68,slow=1.9,SNR=6.2						
PLCA	**Paso Flores**	**139.67**	**134**	PKP	**PKPdf**	**06 13 52.2**	**+1.4**
	comp=Z,3.3nm,1.0s,baz=222,slow=5.4,SNR=4.2						
DBIC	**Dimbokro**	**143.88**	**309**	PKP	PKPbc	06 13 56.8	+0.2
	comp=Z,2.2nm,0.5s,baz=57,slow=4.3,SNR=8.4						
KIC	**Kosan Boka**	**143.99**	**308**	*e*PKP1	PKPbc	06 13 57.8	+0.8
	comp=Z,20nm,1.2s						
TIC	**Toumodi**	**144.01**	**309**	*e*PKP1	**PKPdf**	**06 13 58.8**	**-0.5**
LIC	**Lamto**	**144.29**	**308**	*e*PKP1	**PKPab**	**06 13 57.2**	**-0.4**
	comp=Z,52nm,1.4s						
LPAZ	**La Paz**	**145.86**	**94**	PKPbc	**PKPab**	**06 14 04.3**	**+0.3**
	comp=Z,4.7nm,0.9s,baz=244,slow=2.2,SNR=14						

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*IDC **08** 05:58:01.2±1.0, 38.°68N×142.°29E, h0^{km}, mb3.8/7, mb1 4.0/8, mb1mx3.5/59, mbtmp3.8/8, ML3.1/1, Error ellipse: s-maj=33.2km s-min=23.8km az=78.0*

*NIED **08** 05:58:06.8, 38.°69N×142.°26E, h38^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$4.41; M$_{\theta\theta}$-1.55; M$_{\phi\phi}$-2.86; M$_{r\theta}$6.31; M$_{\theta\phi}$-2.52; M$_{\phi r}$1.82; Fault plane solution: M$_0$8.00000×10^{14} NP1:ϕ_s65.00000°, δ74.00000°, λ107.00000°. NP2:ϕ_s198.00000°, δ23.00000°, λ45.00000°.*

*JMA **08** 05:58:06.7±0.1, 38.°69N×142.°26E, h38^{km}±2^{km}, M4.1*

JMA Felt II J1.

ISC 08 05:58:06.9±1.3**, 38.°67N**±0.°06×**142.°3E**±0.°1**, h37**^{km}±3^{km}**, n26,** σ**0**^{s}**.54**/27**, mb3.8**/7**, 1C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.62**	**312**	⇓P	**Pn**	**05 58 18.9**	**-0.4**
OFUJ				S	**Sn**	**05 58 27.4**	**-0.6**
JKMT	**Kesennumamotoy**	**0.63**	**283**	⇓P	**Pn**	**05 58 19.2**	**-0.3**
JKMT				S	**Sn**	**05 58 27.7**	**-0.5**
JIKH	**Ishinomakikobu**	**0.72**	**240**	⇑P	**Pn**	**05 58 20.5**	**0.0**
JIKH				S	**Sn**	**05 58 30.0**	**-0.3**
JIO	**Ouri**	**0.74**	**254**	⇓P	**Pn**	**05 58 20.7**	**-0.2**
JIO				S	**Sn**	**05 58 30.3**	**-0.6**
JMK	**Ichinoseki**	**0.86**	**290**	⇓P	**Pn**	**05 58 22.5**	**0.0**
JMK				S	**Sn**	**05 58 33.6**	**-0.2**
JOM	**Ohasama**	**1.10**	**317**	⇓P	**Pn**	**05 58 26.0**	**+0.2**
JOM				S	**Sn**	**05 58 40.3**	**+0.6**
JOU	**Okura**	**1.29**	**257**	P	**Pn**	**05 58 28.8**	**+0.5**
JOU				S	**Sn**	**05 58 45.3**	**+1.0**
JTH	**Tanohata**	**1.30**	**347**	P	**Pn**	**05 58 28.3**	**-0.3**
JMM	**Marumori**	**1.40**	**236**	P	**Pn**	**05 58 30.1**	**+0.2**
JMM				S	**Sn**	**05 58 47.1**	**-0.1**
JRG	**Rokugo**	**1.46**	**300**	⇓P	**Pn**	**05 58 31.3**	**+0.6**
JYK	**Kaneyama**	**1.50**	**280**	P	**Pn**	**05 58 31.9**	**+0.6**
ASAJ	**Asahikawa**	**5.45**	**3**	Pn	Pn	05 59 21.3	-4.2
	0.6nm,0.3s,baz=245,slow=14,SNR=1.8						
USRK	**Ussuriysk Ar.**	**9.48**	**309**	Pn	**Pn**	**06 00 22.3**	**+1.5**
	baz=119,slow=15,SNR=4.5						
H11N2	**WAKE ISLAND Hy**	**28.46**	**125**	T	T	06 34 22.2	
	baz=316,slow=75,SNR=292						
H11N1	**WAKE ISLAND Hy**	**28.47**	**125**	T	T	06 34 26.6	
	baz=316,slow=75,SNR=245						
H11N3	**WAKE ISLAND Hy**	**28.48**	**125**	T	T	06 34 23.6	
	baz=316,slow=75,SNR=237						
H11S1	**WAKE ISLAND Hy**	**29.24**	**127**	T	T	06 35 23.3	
	baz=318,slow=76,SNR=55						
H11S3	**WAKE ISLAND Hy**	**29.24**	**127**	T	T	06 35 23.6	
	baz=318,slow=76,SNR=66						
H11S2	**WAKE ISLAND Hy**	**29.25**	**127**	T	T	06 35 25.3	
	baz=318,slow=76,SNR=39						
ZALV	**Zalesovo Beam**	**41.33**	**311**	P	**P**	**06 05 48.6**	**-0.1**
	1.4nm,0.5s,baz=85,slow=8.4,SNR=1.1						
MKAR	**Makanchi Array**	**43.84**	**301**	P	**P**	**06 06 09.4**	**+0.2**
	1.0nm,0.6s,baz=80,slow=11,SNR=1.9						
KURBB	**Kurchatov Arra**	**45.54**	**307**	P	**P**	**06 06 22.2**	**-0.5**
	3.3nm,0.6s,baz=81,slow=8.3,SNR=5.0						
WRA	**Warramunga Arr**	**58.77**	**189**	P	**P**	**06 08 00.6**	**-0.7**
	1.0nm,0.7s,baz=6.2,slow=7.2,SNR=5.8						
ASAR	**Alice Springs**	**62.50**	**189**	P	**P**	**06 08 26.8**	**+0.1**
	0.4nm,0.8s,baz=16,slow=5.0,SNR=2.6						
PDAR	**Pinedale Array**	**76.05**	**46**	P	**P**	**06 09 51.0**	**+0.4**
	0.3nm,0.5s,baz=283,slow=3.2,SNR=3.7						
TXAR	**Lajitas Array**	**88.60**	**53**	P	**P**	**06 10 56.5**	**+0.3**
	0.2nm,0.7s,baz=278,slow=2.5,SNR=2.6						

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*IDC **08** 05:59:08.2±3.5, 37.°89N×72.°91E, h0^{km}, mb3.5/3, mb1 3.6/7, mb1mx3.3/65, mbtmp3.5/7, ML2.9/4, MS2.8/1, Ms1 2.8/1, ms1mx2.5/34, Error ellipse: s-maj=75.7km s-min=21.4km az=139.0*

ISC 08 05:59:08.9±2.5**, 37.°8N**±0.°3×**73.°0E**±0.°2**, h10**^{km}**, n8,** σ**1**^{s}**.36**/8**,**
mb3.5/3**, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.01**	**13**	Pn	**Pn**	**06 00 26.1**	**+1.8**
	2.0nm,0.3s,baz=152,slow=6.9,SNR=6.4						
AAK				LR	LR	06 02 21.7	
	comp=Z,87nm,18.5s,baz=234,slow=40						
MKAR	**Makanchi Array**	**11.35**	**34**	Pn	**Pn**	**06 01 52.4**	**+1.3**
	0.1nm,0.3s,baz=222,slow=16,SNR=4.7						
KURBB	**Kurchatov Arra**	**13.46**	**15**	Pn	**Pn**	**06 02 18.6**	**-1.2**
	0.0nm,0.3s,baz=208,slow=12,SNR=4.6						
BVAR	**Borovoye Array**	**15.37**	**354**	Pn	**Pn**	**06 02 45.2**	**-0.6**
	0.2nm,0.3s,baz=194,slow=16,SNR=2.0						
ZALV	**Zalesovo Beam**	**18.12**	**23**	P	**P**	**06 03 19.6**	**-1.4**
	0.2nm,0.3s,baz=223,slow=10,SNR=6.6						
AKASG	**Malin Array Be**	**33.43**	**307**	P	**P**	**06 05 48.0**	**+0.3**
	0.2nm,0.3s,baz=79,slow=7.7,SNR=2.2						
NOA	**NORSAR Array B**	**44.35**	**322**	P	**P**	**06 07 18.4**	**-0.6**
	0.3nm,0.5s,baz=93,slow=8.0,SNR=3.0						
TORD	**Torodi Ar. Bea**	**67.33**	**269**	P	**P**	**06 10 04.7**	**+0.3**
	0.4nm,0.5s,baz=52,slow=6.0,SNR=5.6						

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*TUL **08** 06:01:05±1.1, 35.°86N±0.°02×96.°92W±0.°02, h5^{km}±6^{km}, ML2.8, mb_Lg2.2/10(NEIC), Error ellipse: s-maj=3.1km s-min=1.1km az=131.0*

NEIC 08 06:01:05.3±1.1**, 35.°87N**±0.°02×**96.°94W**±0.°02**, h6**^{km}±6^{km}**, Error ellipse: s-maj=3.2km s-min=1.2km az=134.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK031	**S. Brethren Rd**	**0.11**	**45**	Pg	Pg	06 01 07.8	0.0
OK031				Sg	Sg	06 01 09.7	+0.3
OK030	**Cody Creek RV**	**0.14**	**66**		Pg	06 01 08.1	0.0
OK030				Sg	Sg	06 01 10.1	+0.1
OK034	**N. Norfolk Rd.**	**0.23**	**53**	Pg	Pg	06 01 09.9	+0.1
OK034				Sg	Sg	06 01 13.3	+0.5
OK029	**Liberty Lake**	**0.43**	**260**	Pg	Pg	06 01 13.8	+0.2
OK029				Sg	Sg	06 01 19.9	+0.8
OK025	**Westminster Rd**	**0.44**	**228**	Pg	Pg	06 01 13.8	0.0
OK025				Sg	Sg	06 01 20.1	+0.6
BCOK	**Bluff Creek, N**	**0.59**	**249**	Pg	Pg	06 01 16.5	-0.1
BCOK				Sg	Sg	06 01 24.9	+0.7
OKCFA	**Oklahoma City**	**0.62**	**223**	Pg	Pg	06 01 16.7	-0.5
OKCSW	**OKLAHOMA CITY**	**0.62**	**221**	Pg	Pg	06 01 17.0	-0.2
OKCSW				Sg	Sg	06 01 25.6	+0.4
FNO	**Franklin**	**0.72**	**212**	Pg	Pg	06 01 18.4	-0.7
BLOK	**Blackwell**	**0.91**	**346**	Pg	Pg	06 01 22.6	-0.2
TUL1	**Leonard**	**0.93**	**87**	Pg	Pg	06 01 22.1	-1.1
CROK	**Carrier**	**1.05**	**307**	Pg	Pg	06 01 25.1	-0.4
T35A	**Sooner Cattle**	**1.10**	**18**		Pg	06 01 25.7	-0.6
GC02	**Grant County #**	**1.23**	**323**	Pg	Pg	06 01 28.3	-0.6
KAN14	**Manchester OK**	**1.36**	**323**	Pn	Pn	06 01 30.5	-0.4
OK032	**Salt Plains WL**	**1.39**	**312**	Pn	Pn	06 01 31.0	-0.2
X34A	**Smith Ranch, M**	**1.47**	**210**	Pn	Pn	06 01 32.1	-0.2
KAN10	**Anthony SW Sta**	**1.56**	**324**	Pn	Pn	06 01 33.9	+0.3
KAN16	**Harper SW Stat**	**1.63**	**326**	Pn	Pn	06 01 34.9	+0.4
KAN12	**Harper NE Stat**	**1.66**	**329**	Pn	Pn	06 01 35.5	+0.5
U32A	**Winter Ranch,**	**1.75**	**287**	Pn	Pn	06 01 36.7	+0.6
U32A				IAmb_Lg		06 01 59.9	
	comp=Z,6.3nm,1.0s						
X37A	**Clayton**	**1.81**	**135**	Pn	Pn	06 01 37.5	+0.4
LOOK	**Love County**	**1.89**	**186**	Pn	Pn	06 01 38.9	+0.8
U38A	**Gravette**	**2.14**	**74**	Pn	Pn	06 01 42.6	+1.1
W39A	**Magazine**	**2.66**	**104**	Pn	Pn	06 01 49.3	+0.7
W39A				IAmb_Lg		06 02 34.0	
	comp=Z,8.8nm,0.7s						
R32A	**Long Quarter,**	**2.91**	**331**	IAmb_Lg		06 02 36.0	
	comp=Z,4.0nm,0.7s						
S39A	**Bolivar**	**3.42**	**57**	Pn	Pn	06 01 59.1	-0.1
S39A				IAmb_Lg		06 03 00.4	
	comp=Z,4.8nm,0.8s						
X40A	**Basin Creek Fa**	**3.63**	**111**	Pn	Pn	06 02 02.0	-0.1
WHAR	**Wooly Hollow**	**3.83**	**97**	Pn	Pn	06 02 05.1	+0.3
FCAR	**Ozark Folk Cen**	**3.91**	**88**	Pn	Pn	06 02 07.3	+1.4
FCAR				IAmb_Lg		06 03 11.3	
	comp=Z,10.0nm,1.0s						
MGMO	**Mountain Grove**	**3.97**	**70**	IAmb_Lg		06 03 09.6	
	comp=Z,14nm,1.2s						

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*JMA **08** 06:07:35.3±0.1, 38.°69N×142.°27E, h39^{km}±1^{km}, M4.1*

JMA Felt II J1.

*NEIC **08** 06:07:36.6±1.7, 38.°73N±0.°07×142.°2E±0.°1, h44^{km}±9^{km}, mb4.2/10, Error ellipse: s-maj=15.0km s-min=8.6km az=111.0*

*IDC **08** 06:07:37.1±2.4, 38.°72N×142.°30E, h52^{km}±20^{km}, mb3.7/17, mb1 3.9/22, mb1mx3.6/62, mbtmp4.0/22, ML3.2/5, Error ellipse: s-maj=18.8km s-min=13.7km az=125.0*

ISC 08 06:07:34.0±0.6**, 38.°69N**±0.°04×**142.°32E**±0.°05**, h24**^{km}**, n65,** σ**1**^{s}**.23**/69**, mb4.0**/22**, 9D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.64**	**307**	⇓P	**Pn**	**06 07 47.5**	**0.0**
OFUJ				S	**Sn**	**06 07 55.9**	**-1.1**
JKMT	**Kesennumamotoy**	**0.67**	**280**	⇓P	**Pn**	**06 07 47.8**	**-0.2**
JKMT				S	**Sb**	**06 07 56.2**	**+0.2**
JIKH	**Ishinomakikobu**	**0.77**	**241**	⇓P	**Pb**	**06 07 49.1**	**+0.4**
JIKH				S	**Sb**	**06 07 58.7**	**-0.1**
JIO	**Ouri**	**0.80**	**253**	⇓P	**Pb**	**06 07 49.4**	**+0.2**
JIO				S	**Sb**	**06 07 59.1**	**-0.5**
JMK	**Ichinoseki**	**0.90**	**287**	⇓P	**Pn**	**06 07 51.1**	**0.0**
JMK				S	**Sn**	**06 08 02.4**	**-0.9**
JOM	**Ohasama**	**1.12**	**314**	⇓P	**Pb**	**06 07 54.6**	**0.0**
JOM				S	**Sn**	**06 08 08.5**	**-0.3**
JTH	**Tanohata**	**1.29**	**344**	P	**Pn**	**06 07 56.8**	**+0.3**
JTH				*e*S	**Sb**	**06 08 13.2**	**-0.6**
JOU	**Okura**	**1.34**	**256**	⇓P	**Pn**	**06 07 57.4**	**+0.2**
JOU				*e*S	**Sn**	**06 08 13.8**	**-0.5**
JMM	**Marumori**	**1.46**	**236**	P	**Pn**	**06 07 58.8**	**0.0**
JMM				S	**Sn**	**06 08 16.0**	**-1.2**
JMM	**Marumori**	**1.46**	**236**		**Pn**	**06 07 58.8**	**0.0**
JRG	**Rokugo**	**1.49**	**299**	⇓P	**Pn**	**06 07 59.8**	**+0.6**
JRG				S	**Sb**	**06 08 20.2**	**+0.7**
JYK	**Kaneyama**	**1.55**	**279**	⇓P	**Pn**	**06 08 00.5**	**+0.4**
JTM	**Tenmabayashi**	**2.30**	**336**		**Pn**	**06 08 12.1**	**+1.6**
JYT	**Yasato**	**2.99**	**215**		**Pn**	**06 08 21.1**	**+1.3**
JSD	**Sado**	**3.26**	**260**		**Pn**	**06 08 23.8**	**+0.2**
ERM	**Erimo**	**3.38**	**11**		**Pn**	**06 08 26.3**	**+1.1**
MAJO	**Matsushiro**	**3.91**	**238**		**Pn**	**06 08 34.8**	**+2.3**
MAT	**Matsushiro**	**3.91**	**238**	P	**Pn**	**06 08 35.0**	**+2.5**
MAT				*e*S	**Sn**	**06 09 20.7**	**+3.0**
MJAR	**Matsushiro Arr**	**3.91**	**238**	P	**Pn**	**06 08 34.9**	**+2.4**
	0.6nm,0.3s,baz=26,slow=11,SNR=16						
MJB9	**Matsu-Tunnel**	**3.91**	**238**	Pn	**Pn**	**06 08 34.5**	**+2.0**
JGF	**Kuroka**	**5.03**	**234**		**Pn**	**06 08 49.5**	**+1.6**
ASAJ	**Asahikawa**	**5.42**	**2**	P	**Pn**	**06 08 54.5**	**+1.2**
	1.0nm,0.3s,baz=183,slow=8.2,SNR=5.1						
ASAJ				S	**Sn**	**06 09 56.4**	**+1.5**
	1.6nm,0.3s,baz=210,slow=20,SNR=1.4						
JKA	**Kamikawa-asahi**	**5.42**	**2**		**Pn**	**06 08 54.9**	**+1.6**
JWT	**Wachi**	**6.50**	**241**		**Pn**	**06 09 11.7**	**+3.6**
USA0B	**Ussuriysk Arra**	**9.51**	**309**		**Pn**	**06 09 51.6**	**+2.3**
USRK	**Ussuriysk Ar.**	**9.51**	**309**	P	**Pn**	**06 09 51.8**	**+2.5**
	baz=115,slow=15,SNR=14						
KSRS	**Korea Array**	**11.42**	**268**	P	**Pn**	**06 10 18.2**	**+2.7**
	0.2nm,0.3s,baz=82,slow=14,SNR=5.0						
KLR	**Kul'dur**	**12.98**	**328**	P	**Pn**	**06 10 37.2**	**+0.4**
	0.1nm,0.3s,baz=162,slow=16,SNR=2.4						
SEY	**Seymchan**	**25.03**	**11**	P	**P**	**06 12 57.0**	**+1.2**
	4.1nm,0.7s,baz=192,slow=8.0,SNR=5.5						
SONM	**Songino Array**	**27.50**	**301**	P	**P**	**06 13 18.0**	**-0.6**
	0.6nm,0.4s,baz=94,slow=9.0,SNR=5.0						
H11N2	**WAKE ISLAND Hy**	**28.44**	**125**	T	T	06 43 49.8	
	baz=317,slow=75,SNR=796						
H11N1	**WAKE ISLAND Hy**	**28.45**	**125**	T	T	06 43 54.0	
	baz=317,slow=75,SNR=436						
H11N3	**WAKE ISLAND Hy**	**28.46**	**125**	T	T	06 43 53.1	
	baz=317,slow=75,SNR=426						
H11S1	**WAKE ISLAND Hy**	**29.21**	**127**	T	T	06 44 48.3	
	baz=318,slow=76,SNR=29						
H11S3	**WAKE ISLAND Hy**	**29.21**	**127**	T	T	06 44 52.3	
	baz=318,slow=76,SNR=36						
H11S2	**WAKE ISLAND Hy**	**29.23**	**127**	T	T	06 44 46.2	
	baz=318,slow=76,SNR=25						
ZAA0	**Zalesovo Array**	**41.35**	**311**	P	**P**	**06 15 17.0**	**-0.7**
ZAA0				IAmb	IAmb	06 15 17.8	
	comp=Z,3.0nm,0.7s						
ZALV	**Zalesovo Beam**	**41.35**	**311**	P	**P**	**06 15 17.5**	**-0.2**
	comp=Z,3.2nm,0.4s,baz=91,slow=8.2,SNR=13						
ZALV	**Zalesovo Beam**	**41.35**	**311**	P	**P**	**06 15 17.0**	**-0.7**
MK31	**Makanchi Array**	**43.87**	**301**	P	**P**	**06 15 37.3**	**-1.0**
MK31				IAmb	IAmb	06 15 40.5	
	comp=Z,1.9nm,0.8s						
MKAR	**Makanchi Array**	**43.87**	**301**	P	**P**	**06 15 37.7**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=80,slow=11,SNR=16						
MKAR	**Makanchi Array**	**43.87**	**301**	P	**P**	**06 15 37.9**	**-0.4**
MAKZ	**Makanchi**	**44.08**	**301**	P	**P**	**06 15 39.7**	**-0.3**
MAKZ				IAmb	IAmb	06 15 55.4	
	comp=Z,3.9nm,1.0s						
KURK	**Kurchatov**	**45.49**	**307**	P	**P**	**06 15 50.4**	**-0.7**
KURBB	**Kurchatov Arra**	**45.57**	**307**	P	**P**	**06 15 51.0**	**-0.7**
	comp=Z,6.1nm,0.6s,baz=82,slow=8.2,SNR=32						
ILAR	**Eielson Array**	**47.71**	**33**	P	**P**	**06 16 07.8**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=272,slow=6.5,SNR=9.0						
BMAR	**Burnt Mountain**	**48.53**	**30**	P	**P**	**06 16 16.7**	**+2.0**
SCRK	**Sand Creek**	**49.03**	**34**	P	**P**	**06 16 19.0**	**+0.4**
SCRK				IAmb	IAmb	06 16 40.8	
	comp=Z,4.5nm,1.3s						
INK	**Inuvik**	**52.58**	**28**	P	**P**	**06 16 44.1**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=285,slow=6.2,SNR=7.5						
INK	**Inuvik**	**52.58**	**28**	IAmb	IAmb	06 16 59.7	
	comp=Z,5.3nm,1.3s						
ABKAR	**Akbulak array**	**57.43**	**310**	P	**P**	**06 17 19.1**	**-1.4**
ABKAR				IAmb	IAmb	06 17 20.4	
	comp=Z,2.3nm,0.6s						
WRA	**Warramunga Arr**	**58.80**	**189**	P	**P**	**06 17 29.8**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=7.4,slow=6.7,SNR=3.4						
YKA	**Yellowknife Ar**	**62.02**	**31**	P	**P**	**06 17 52.2**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=298,slow=6.1,SNR=3.7						
ASAR	**Alice Springs**	**62.53**	**189**	P	**P**	**06 17 55.5**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=14,slow=9.1,SNR=4.2						
ARCES	**ARCESS Array B**	**62.70**	**339**	P	**P**	**06 17 55.5**	**-0.8**
	comp=Z,5.6nm,0.9s,baz=42,slow=8.5,SNR=4.0						
KBZ	**Khabaz**	**70.37**	**311**	P	**P**	**06 18 46.1**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=0.0,slow=1.0,SNR=3.6						
NB2	**NORSAR Subarra**	**72.93**	**337**	P	**P**	**06 19 00.2**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**72.93**	**337**	P	**P**	**06 19 00.4**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=36,slow=6.0,SNR=3.3						
AKASG	**Malin Array Be**	**73.42**	**322**	P	**P**	**06 19 03.1**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=42,slow=5.7,SNR=6.3						
AKASG	**Malin Array Be**	**73.42**	**322**	IAmb	IAmb	06 19 04.3	
	comp=Z,0.8nm,0.9s						
NVAR	**Mina Array Bea**	**73.42**	**54**	P	**P**	**06 19 03.5**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=285,slow=5.7,SNR=3.9						
PDAR	**Pinedale Array**	**76.00**	**46**	P	**P**	**06 19 18.9**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=221,slow=3.1,SNR=6.4						
CLL	**Collm**	**80.01**	**330**	*e*P	**P**	**06 19 41.0**	**-0.1**
TXAR	**Lajitas Array**	**88.54**	**53**	P	**P**	**06 20 25.5**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=310,slow=4.3,SNR=3.9						
LPAZ	**La Paz**	**145.22**	**59**	PKPbc	**PKPbc**	**06 27 09.9**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=344,slow=2.6,SNR=1.8						

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*NEIC **08** 06:07:50.6±2.9, 11.°94S±0.°08×104.°33E±0.°08, h10^{km}±1^{km}, mb4.8/19, Error ellipse: s-maj=15.2km s-min=11.4km az=145.0*

*IDC **08** 06:07:50.1±0.9, 11.°76S×104.°61E, h0^{km}, mb4.3/13, mb1 4.4/14, mb1mx3.9/53, mbtmp4.3/14, ML4.0/1, MS3.3/2, Ms1 3.4/2, ms1mx2.9/31, Error ellipse: s-maj=31.4km s-min=14.9km az=57.0*

*DJA **08** 06:07:54.6±0.7, 12°S±5°×10°4E±°, h42^{km}±7^{km}, M5.2/36, mb5.1/36, mB5.6/15, MLv5.5/15, Mw(mB)5.1/15, MwMwp5.3/1, Mwp5.5/1*

ISC 08 06:07:50.0±0.5**, 12.°06S**±0.°06×**104.°32E**±0.°07**, h10**^{km}**, n128,** σ**1**^{s}**.19**/116**, mb4.8**/32**, 3C, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**2.04**	**40**	Pn	**Pn**	**06 08 23.1**	**-1.3**
XMIS	**Christmas Isla**	**2.04**	**40**	P	**Pn**	**06 08 23.3**	**-1.1**
XMI	**Christmas Isla**	**2.09**	**40**	P	**Pn**	**06 08 23.9**	**-1.2**
CNJI	**Cibinong**	**5.47**	**31**	P	**Pn**	**06 09 10.3**	**-1.3**
	4.1nm6µm349nm,0.5s						
CGJI	**Cibinong**	**5.57**	**14**	P	**Pn**	**06 09 11.4**	**-1.6**
CMJI	**Cimerak**	**5.88**	**44**	P	**Pn**	**06 09 15.5**	**-1.7**
	1.4nm2µm139nm,0.7s						
DBJI	**Dramaga**	**5.97**	**24**	P	**Pn**	**06 09 15.7**	**-2.8**
	2.5nm45µm215nm,0.4s						
LEM	**Lembang**	**6.13**	**32**	Pn	**Pn**	**06 09 21.2**	**+0.3**
	85nm,0.3s,baz=23,slow=3.3,SNR=32						
LEM				Sn	**Sn**	**06 10 28.9**	**-2.3**
	70nm,0.3s,baz=138,slow=20,SNR=10						
LEM	**Lembang**	**6.13**	**32**	P	**Pn**	**06 09 20.6**	**-0.2**
	1.5nm3µm372nm,0.8s						
KASI	**Kota Agung**	**6.49**	**2**	P	**Pn**	**06 09 23.5**	**-2.2**
	7.7nm3µm155nm,0.6s						
BLSI	**Bandar Lampung**	**6.71**	**8**	P	**Pn**	**06 09 28.1**	**-0.5**
	1.9nm7µm329nm,0.4s						
LWLI	**Liwa**	**7.00**	**358**	P	**Pn**	**06 09 31.2**	**-1.5**
	8.1nm18µm209nm,0.6s						
YOGI	**Yogyakarta**	**7.24**	**55**	P	**Pn**	**06 09 35.4**	**-0.5**
	1.1nm134nm,0.8s						
COCO	**West Island**	**7.32**	**268**		**Pn**	**06 09 36.5**	**-0.5**
KLSI		**7.33**	**3**	P	**Pn**	**06 09 36.1**	**-1.1**
	0.4nm730nm29nm,0.5s						
UGM	**Wanagama**	**7.37**	**57**	P	**Pn**	**06 09 37.6**	**-0.1**
	3.1nm458nm,0.9s						
UGM	**Wanagama**	**7.37**	**57**		**Pn**	**06 09 37.7**	**-0.1**
UGM	**Wanagama**	**7.37**	**57**	P	**Pn**	**06 09 38.5**	**+0.8**
MDSI	**Maura Dua**	**7.52**	**359**	P	**Pn**	**06 09 38.3**	**-1.5**
	0.4nm1µm24nm,0.6s						
WOJI	**Wonogiri, Jawa**	**7.74**	**58**	P	**Pn**	**06 09 42.2**	**-0.6**
	1.6nm167nm,0.5s						
PCJI	**Pacitan**	**7.76**	**61**	P	**Pn**	**06 09 43.2**	**0.0**
	2.2nm4µm193nm,0.4s						
SMRI	**Semarang**	**7.82**	**51**	P	**Pn**	**06 09 45.1**	**+1.1**
	0.9nm166nm,0.7s						
SMRI	**Semarang**	**7.82**	**51**	Pn	**Pn**	**06 09 44.1**	**+0.2**
UWJI	**Ujung Watu**	**8.61**	**50**	P	**Pn**	**06 09 56.1**	**+1.3**
	129nm,1.0s						
MASI	**Maura Aman, Be**	**9.09**	**347**	P	**Pn**	**06 10 00.7**	**-0.7**
	62nm,1.3s						
GRJI	**Gresik**	**9.53**	**58**	P	**Pn**	**06 10 08.1**	**+0.7**
GMJI	**Gumukmas**	**9.74**	**68**	P	**Pn**	**06 10 11.6**	**+1.4**
	106nm,0.9s						
BLJI	**Banyuglugur**	**10.09**	**66**	P	**Pn**	**06 10 15.9**	**+0.8**
	65nm,0.5s						
PPSI	**Pulau Pagai**	**10.17**	**335**	P	**Pn**	**06 10 17.0**	**+0.8**
	132nm,1.3s						
BWJI	**Bawean**	**10.29**	**54**	P	**Pn**	**06 10 18.5**	**+0.7**
	80nm,0.8s						
JAGI	**Jajag, Banyuwa**	**10.31**	**71**	P	**Pn**	**06 10 18.8**	**+0.7**
	2µm100nm,0.5s						
JAGI	**Jajag, Banyuwa**	**10.31**	**71**	Pn	**Pn**	**06 10 18.9**	**+0.8**
JAGI	**Jajag, Banyuwa**	**10.31**	**71**	P	**Pn**	**06 10 19.0**	**+0.9**
ABJI	**Asem Bagus**	**10.64**	**67**	P	**Pn**	**06 10 23.5**	**+0.8**
	126nm,0.5s						
IGBI	**Denpasar**	**11.12**	**74**	P	**Pn**	**06 10 30.2**	**+1.0**
	10µm54nm,0.5s						
SRBI	**Singaraja**	**11.43**	**71**	P	**Pn**	**06 10 34.3**	**+0.9**
	2µm110nm,0.8s						
TWSI	**Taliwang, Sumb**	**12.79**	**76**	P	**Pn**	**06 10 53.0**	**+1.0**
	43nm,0.8s						
PLAI	**Plampang**	**13.62**	**78**	P	**Pn**	**06 11 04.8**	**+1.4**
	63nm,0.6s						
PLAI	**Plampang**	**13.62**	**78**	P	**Pn**	**06 11 03.0**	**-0.4**
STKI	**Sintang**	**13.98**	**31**	P	**Pn**	**06 11 08.6**	**+0.3**
GIRL	**Giralia**	**14.15**	**139**	Pn	**Pn**	**06 11 07.5**	**-3.1**
GIRL	**Giralia**	**14.15**	**139**	P	**Pn**	**06 11 08.5**	**-2.1**
KBKI	**Kotabaru**	**14.60**	**54**	P	**P**	**06 11 25.9**	**+2.6**
RPSI	**Rantau Prapat**	**15.60**	**340**	P	**P**	**06 11 35.9**	**+1.4**
PSI	**Prapat**	**15.70**	**340**	Pn	**P**	**06 11 35.9**	**+0.2**
	0.5nm,0.3s,baz=150,slow=16,SNR=5.2						
KAPI	**Kappang**	**16.78**	**67**	Pn	**Pn**	**06 11 42.2**	**-3.1**
	0.5nm,0.3s,baz=255,slow=20,SNR=2.1						
KAPI	**Kappang**	**16.78**	**67**		**Pn**	**06 11 44.9**	**-0.4**
TPTI		**16.79**	**335**	P	**Pn**	**06 11 44.0**	**-1.4**
	5.1nm,1.2s						
BKSI	**Bulukumba**	**16.99**	**68**	P	**Pn**	**06 11 48.3**	**+0.4**
MBWA	**Marble Bar**	**17.31**	**124**	P	**Pn**	**06 11 48.9**	**-3.0**
BNSI	**Bone**	**17.37**	**65**	P	**P**	**06 11 54.6**	**+0.6**
PSA00	**Pilbara Seismi**	**17.61**	**125**	P	**Pn**	**06 11 52.8**	**-2.8**
PSA00	**Pilbara Seismi**	**17.61**	**125**		**Pn**	**06 11 53.3**	**-2.3**
PSA00				IAmb	IAmb	06 11 55.3	
	comp=Z,6.7nm,0.9s						
PSA00	**Pilbara Seismi**	**17.61**	**125**	P	**Pn**	**06 11 53.1**	**-2.5**
SOEI	**Soe**	**19.72**	**85**	P	**P**	**06 12 20.7**	**+0.6**
	comp=Z,47nm,0.7s						
MPSI	**Mapaga**	**19.77**	**53**	P	**P**	**06 12 20.8**	**+0.4**
	comp=Z,30nm,1.0s						
MEEK	**Meekatharra**	**19.78**	**139**	P	**P**	**06 12 22.0**	**+1.5**
MORW	**Morawa**	**20.15**	**149**	P	**P**	**06 12 25.8**	**+1.3**
TOLI2	**Tolitoli**	**20.94**	**52**	P	**P**	**06 12 33.6**	**+0.5**
TOLI2				IAmb	IAmb	06 12 35.4	
	comp=Z,50nm,0.8s						
TOLI2	**Tolitoli**	**20.94**	**52**	P	**P**	**06 12 34.2**	**+1.0**
FITZ	**Fitzroy Crossi**	**21.44**	**109**	P	**P**	**06 12 39.9**	**+1.4**
	comp=Z,3.3nm,0.8s,baz=269,slow=7.9,SNR=5.9						

KKM	**Kota Kinabalu**	21.52	34	P	P	06 12 40.8	+1.3
KKM				IAmb	IAmb	06 12 43.7	
	comp=Z,49nm,0.9s						
KKM	**Kota Kinabalu**	21.52	34	P	P	06 12 41.6	+2.1
MYLDM	**Lahad Datu**	22.18	40	P	P	06 12 49.5	+3.0
GTOI	**Gorontalo**	22.44	57	P	P	06 12 48.0	-1.3
NWAO	**Narrogin (SRO)**	23.91	152	P	P	06 13 04.2	+0.1
KNRA	**Kununurra**	24.00	101	P	P	06 13 04.9	-0.2
KNRA				IAmb	IAmb	06 13 27.8	
	comp=Z,16nm,0.6s						
KNRA	**Kununurra**	24.00	101	P	P	06 13 05.1	0.0
H01W3	**Cape Leeuwin H**	24.41	160	T	T	06 39 26.6	
	baz=338,slow=76,SNR=9.2						
H01W2	**Cape Leeuwin H**	24.43	160	T	T	06 39 31.3	
	baz=338,slow=76,SNR=44						
H01W1	**Cape Leeuwin H**	24.43	160	T	T	06 39 27.5	
	baz=338,slow=76,SNR=9.1						
MSAI	**Masohi**	25.85	72	P	P	06 13 38.7	+17
FORT	**Forrest**	28.80	134	P	P	06 13 48.5	+0.2
WRA	**Warramunga Arr**	29.87	109	P	P	06 13 57.8	-0.2
	comp=Z,1.4nm,0.8s,baz=284,slow=10,SNR=19						
WRA	**Warramunga Arr**	29.87	109	P	P	06 13 57.2	-0.7
WRAB	**Tennant Creek**	29.87	109	P	P	06 13 58.1	+0.1
PALK	**Pallekele**	30.34	308	LR	LR	06 23 29.1	
	comp=Z,66nm,19.6s,baz=272,slow=31						
ASAR	**Alice Springs**	30.36	116	P	P	06 14 02.2	-0.2
	comp=Z,2.8nm,0.8s,baz=292,slow=8.1,SNR=27						
CMAR	**Chiang Mai Arr**	30.78	350	P	P	06 14 06.8	+0.8
	comp=Z,5.3nm,0.6s,baz=186,slow=8.3,SNR=25						
CMAR				LR	LR	06 26 17.5	
	comp=Z,50nm,21.9s,baz=75,slow=36						
H08S2	**Diego Garcia H**	31.65	275	T	T	06 47 30.6	
	baz=100,slow=75,SNR=12						
H08S3	**Diego Garcia H**	31.66	275	T	T	06 47 30.5	
	baz=100,slow=75,SNR=10						
H08S1	**Diego Carcia H**	31.67	275	T	T	06 47 32.3	
	baz=100,slow=75,SNR=11						
MULG	**Mulgathing**	32.98	128	P	P	06 14 25.4	+0.1
OOD	**Oodnadatta**	33.26	123	P	P	06 14 28.0	+0.3
QIS	**Mount Isa**	34.84	109	P	P	06 14 41.8	+0.2
BBOO	**Buckleboo**	35.66	131	P	P	06 14 48.4	-0.1
	comp=Z,18nm,1.2s						
LCRK	**Leigh Creek**	36.31	126	P	P	06 14 54.5	+0.4
SHL	**Shillong**	39.31	342	P	P	06 15 19.6	+0.1
SHL				IAmb	IAmb	06 15 20.4	
	comp=Z,17nm,0.7s						
STKA	**Stephens Creek**	39.53	126	P	P	06 15 21.6	+0.4
	comp=Z,8.5nm,0.7s,baz=300,slow=8.5,SNR=15						
STKA	**Stephens Creek**	39.53	126	P	P	06 15 21.4	+0.2
STKA	**Stephens Creek**	39.53	126	P	P	06 15 22.0	+0.7
ODAN	**Odare**	42.03	337	*e*P	P	06 15 42.4	+0.2
	comp=Z,31nm,0.8s						
TAPN	**Taplejung**	42.36	338	*e*P	P	06 15 45.6	+0.7
	comp=Z,54nm,0.9s						
RAMN	**Ramite**	42.42	336	*e*P	P	06 15 46.3	+1.0
	comp=Z,25nm,0.5s						
LSA	**Lhasa**	43.41	343	P	P	06 15 53.8	+0.2
LSA				IAmb	IAmb	06 15 55.3	
	comp=Z,16nm,0.6s						
PKI	**Pulchoki**	43.45	335	*e*P	P	06 15 53.5	-0.3
	comp=Z,30nm,1.0s						
PKIN	**Phulchoki**	43.46	335	*e*P	P	06 15 53.9	+0.1
	comp=Z,25nm,0.8s						
DMN	**Daman**	43.61	335	*e*P	P	06 15 55.1	+0.1
	comp=Z,30nm,0.9s						
KKN	**Kakani**	43.70	335	*e*P	P	06 15 55.9	+0.3
	comp=Z,39nm,0.7s						
KOLN	**Koldanda**	44.39	333	*e*P	P	06 16 01.5	+0.3
	comp=Z,39nm,0.8s						
DANN	**Dangsing**	44.83	334	*e*P	P	06 16 04.6	-0.2
	comp=Z,31nm,0.6s						
PYUN	**Piuthan**	44.95	333	*e*P	P	06 16 05.6	0.0
	comp=Z,26nm,0.9s						
LZH	**Lanzhou**	47.88	359	*e*P	P	06 16 29.8	+1.3
LZH				pP	sP	06 16 32.7	+2.0
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
GTA	**Gaotai**	51.37	356	⇑P	P	06 16 55.8	+0.8
GTA				pP	pwP	06 17 09.0	+5.7
GTA				sP	sP	06 17 13.9	+17
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSRS	**Korea Array**	54.01	23	P	P	06 17 13.8	-0.6
	comp=Z,1.5nm,0.7s,baz=203,slow=6.2,SNR=4.6						
KDJ	**Kajisay**	59.41	337	P	P	06 17 52.0	-1.0
SONM	**Songino Array**	59.65	2	P	P	06 17 55.4	+0.9
	comp=Z,3.3nm,0.7s,baz=177,slow=8.1,SNR=14						
SONM				PcP	PcP	06 18 40.9	-0.6
	comp=Z,1.0nm,0.6s,baz=160,slow=4.7,SNR=1.9						
SONM	**Songino Array**	59.65	2	IAmb	IAmb	06 17 56.2	
	comp=Z,6.4nm,1.2s						
ULN	**Ulaanbaatar**	59.70	2	P	P	06 17 55.7	+0.9
ULN				IAmb	IAmb	06 17 56.3	
	comp=Z,8.3nm,1.1s						
USA0B	**Ussuriysk Arra**	61.38	22	P	P	06 18 06.3	+0.1
USRK	**Ussuriysk Ar.**	61.38	22	P	P	06 18 06.0	-0.2
	comp=Z,8.9nm,0.7s,baz=191,slow=2.4,SNR=16						
USRK	**Ussuriysk Ar.**	61.38	22	P	P	06 18 05.4	-0.8
MAW	**Mawson**	61.79	197	P	P	06 18 14.3	+5.6
	comp=Z,2.2nm,0.7s,baz=36,slow=6.1,SNR=4.1						
MAW	**Mawson**	61.79	197	P	P	06 18 09.6	+1.0
MAW				IAmb	IAmb	06 18 24.9	
	comp=Z,2.5nm,1.4s						
MKAR	**Makanchi Array**	61.82	343	P	P	06 18 08.3	-0.8
	comp=Z,1.5nm,0.7s,baz=142,slow=8.6,SNR=7.9						
ZALV	**Zalesovo Beam**	67.81	348	P	P	06 18 47.2	-0.8
	comp=Z,1.6nm,0.7s,baz=145,slow=5.4,SNR=7.5						
ZALV	**Zalesovo Beam**	67.81	348	P	P	06 18 46.0	-2.0
SYO	**Syowa Base**	69.88	200	⇑*e*PcP	PcP	06 19 23.0	-0.2
SYO	**Syowa Base**	69.88	200	⇑*e*PP	PP	06 21 36.9	+1.8
ABKAR	**Akbulak array**	72.46	331	P	P	06 19 15.6	-1.0
ABKAR	**Akbulak array**	72.46	331	IAmb	IAmb	06 19 17.2	
	comp=Z,8.3nm,0.9s						
NRIK	**Noril'sk**	82.04	354	P	P	06 20 09.7	-0.3
	comp=Z,5.2nm,0.6s,baz=142,slow=3.4,SNR=9.7						
NRIK	**Noril'sk**	82.04	354	P	P	06 20 09.3	-0.7
NRIK				IAmb	IAmb	06 20 10.5	
	comp=Z,5.4nm,0.7s						
SNAA	**Sanae**	83.94	198	P	P	06 20 34.4	+14
TIXI	**Tiksi**	85.12	8	P	P	06 20 25.2	-0.5
	comp=Z,5.6nm,0.7s,baz=158,slow=2.0,SNR=10						
TIXI	**Tiksi**	85.12	8	P	P	06 20 25.3	-0.5
TIXI				IAmb	IAmb	06 20 25.7	
	comp=Z,8.5nm,1.0s						
VNA2	**Neumayer--Watz**	85.58	198	P	P	06 20 42.1	+14
TXAR	**Lajitas Array**	148.81	52	PKPbc	PKPbc	06 27 39.3	+0.6
	comp=Z,1.6nm,0.6s,baz=351,slow=2.8,SNR=31						

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*JMA **08** 06:15:54.6±0.1, 24.°16N×121.°91E, h62^{km}±1^{km}, M2.8*
*TAP **08** 06:15:55.3, 24.°22N×121.°92E, h58^{km}, ML3.7, B*
ISC 08 06:15:56.1±1.2**, 24.°19N**±0.°02×**121.°97E**±0.°02**, h51**^{km}±6^{km}**, n92, σ0.^{s}89**/161**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	0.24	301	*e*S	Sn	06 16 12.1	+0.9
	baz=293						
EWUT	**Wuta**	0.31	326	*i* P	Pn	06 16 05.2	-0.3
	baz=330						
EWUT				*e*S	Sn	06 16 12.8	+0.7
	baz=330						
ETL	**Fush Village**	0.32	265	*e*P	Pn	06 16 05.1	-0.4
	baz=253						
ETL				S	Sn	06 16 13.1	+0.8
	baz=253						
ENA	**Nanau**	0.32	319	*i* P	Pn	06 16 05.3	-0.3
	baz=328						
ENA				S	Sn	06 16 12.7	+0.4
	baz=328						
NACB	**Ninganchiao**	0.34	268	*e*P	Pn	06 16 05.2	-0.6
	baz=262						
NACB				*e*S	Sn	06 16 13.1	+0.5
	baz=262						
TWD	**Chiawan**	0.36	253	*e*P	Pn	06 16 05.3	-0.5
	baz=238						
TWD				S	Sn	06 16 13.4	+0.6
	baz=238						
HWA	**Hwalien**	0.39	238	*i* P	Pn	06 16 06.2	0.0
	baz=229						
HWA				*e*S	Sn	06 16 15.1	+1.7
	baz=229						
TWC	**Suao**	0.44	345	P	Pn	06 16 06.8	+0.1
	baz=358						
TWC				*e*S	Sn	06 16 14.9	+0.6
	baz=358						
ETLH	**Xiulin Townshi**	0.45	273	*e*P	Pn	06 16 06.3	-0.6
	baz=260						
ETLH				*e*S	Sn	06 16 14.7	0.0
	baz=260						
NDS	**Dongshan**	0.50	333	P	Pn	06 16 07.2	-0.3
	baz=336						
NDS				*e*S	Sn	06 16 15.7	0.0
	baz=336						
ENTT	**Nioudou**	0.58	321	*i* P	Pn	06 16 08.0	-0.4
	baz=318						
ENTT				*e*S	Sn	06 16 17.8	+0.4
	baz=318						
NNSB	**Datong**	0.59	294	*i* P	Pn	06 16 07.9	-0.7
	baz=286						
NNSB				*e*S	Sn	06 16 17.5	-0.1
	baz=286						
NDT	**Datong Townshi**	0.59	315	*i* P	Pn	06 16 08.0	-0.5
	baz=311						
NDT				*e*S	Sn	06 16 17.2	-0.3
	baz=311						
NNS	**Nan Shan**	0.60	295	P	Pn	06 16 08.1	-0.7
	baz=294						
NNS				*e*S	Sn	06 16 17.4	-0.5
	baz=294						
TWE	**Neicheng**	0.60	333	P	Pn	06 16 08.5	-0.1
	baz=339						
TWE				S	Sn	06 16 17.9	+0.2
	baz=339						
ILA	**Ilan**	0.61	341	*e*P	Pn	06 16 08.9	+0.1
	baz=348						
ILA				*e*S	Sn	06 16 19.5	+1.5
	baz=348						
ESL	**Shilin**	0.61	233	*e*P	Pn	06 16 08.0	-0.8
	baz=238						
ESL				S	Sn	06 16 17.6	-0.4
	baz=238						
WHF	**Hehuan Shan**	0.64	267	P	Pn	06 16 08.9	-0.7
	baz=256						
WHF				*e*S	Sn	06 16 18.6	-0.7
	baz=256						
FUSS	**Fushou**	0.67	275	P	Pn	06 16 09.2	-0.5
	baz=273						
FUSS				S	Sn	06 16 19.1	-0.4
	baz=273						
NTC	**Toucheng**	0.68	349	P	Pn	06 16 09.7	+0.1
	baz=1.0						
NTC				*e*S	Sn	06 16 19.8	+0.3
	baz=1.0						
EGFH	**Guangfu**	0.71	224	*e*P	Pn	06 16 09.0	-1.1
	baz=229						
EGFH				*e*S	Sn	06 16 20.0	-0.2
	baz=229						
YHNB	**Yeheng**	0.72	312	*e*P	Pn	06 16 09.8	-0.5
	baz=305						
YHNB				*e*S	Sn	06 16 20.5	-0.1
	baz=305						
NWLT	**Wulai**	0.73	324	P	Pn	06 16 09.7	-0.6
	baz=326						
NWLT				*e*S	Sn	06 16 19.7	-0.9
	baz=326						
TWT	**Tachien**	0.73	275	*e*P	Pn	06 16 10.3	-0.1
	baz=267						
TWT				*e*S	Sn	06 16 20.7	-0.1
	baz=267						
CHGB	**Renai**	0.74	260	*e*P	Pn	06 16 10.1	-0.4
	baz=251						
CHGB				*e*S	Sn	06 16 21.3	+0.2
	baz=251						
NSK	**Sanguang**	0.74	311	*e*P	Pn	06 16 09.8	-0.7
	baz=305						
NSK				*e*S	Sn	06 16 20.2	-0.8
	baz=305						
TDCB	**Techi**	0.74	275	*e*P	Pn	06 16 10.3	-0.3
	baz=267						
TDCB				*e*S	Sn	06 16 20.7	-0.4
	baz=267						
OWD	**Renai**	0.76	253	*e*P	Pn	06 16 10.2	-0.6
	baz=245						
OWD				*e*S	Sn	06 16 21.2	-0.4
	baz=245						
TIPB	**Shuangxi**	0.79	351	P	Pn	06 16 11.1	-0.1
	baz=358						
TIPB				*e*S	Sn	06 16 22.4	+0.3
	baz=358						
TWB1	**Santiao Chiao**	0.82	1	*e*P	Pn	06 16 10.7	-0.8
	baz=16						
TWB1				*e*S	Sn	06 16 22.0	-0.7
	baz=16						
HGSD	**Ruisui**	0.85	216	*e*P	Pn	06 16 11.2	-0.7
	baz=203						
HGSD				*e*S	Sn	06 16 24.3	+0.9
	baz=203						
TWA	**Mucha**	0.86	336	*e*P	Pn	06 16 12.0	-0.1
	baz=349						
TWA				*e*S	Sn	06 16 24.0	+0.2
	baz=349						
VWDT	**VWDT**	0.87	241	*e*P	Pn	06 16 11.9	-0.3
	baz=231						
VWDT				*e*S	Sn	06 16 24.0	+0.1
	baz=231						
NHDH	**Xindian Distri**	0.87	332	*e*P	Pn	06 16 12.1	-0.1
	baz=323						
NHDH				*e*S	Sn	06 16 24.1	+0.1
	baz=323						
NWF	**Wu-fen Shan**	0.90	349	*e*P	Pn	06 16 12.3	-0.3
	baz=352						
NWF				*e*S	Sn	06 16 24.5	-0.1
	baz=352						
EHY	**Hungye**	0.90	221	*e*P	Pn	06 16 10.9	-1.6
	baz=225						
JYNG	**Yonagunijimaku**	0.93	73	P	Pn	06 16 13.0	+0.1
JYNG				*e*S	Sn	06 16 26.1	+0.9
WHP	**Taichung City**	0.94	276	*e*P	Pn	06 16 13.4	+0.3
	baz=272						
WHP				*e*S	Sn	06 16 26.0	+0.4
	baz=272						
WCS	**Beigang Elemen**	0.97	263	*e*P	Pn	06 16 14.2	+0.7
	baz=258						
WCS				*e*S	Sn	06 16 26.9	+0.6
	baz=258						
LIOB	**Emei**	0.98	298	*e*P	Pn	06 16 13.6	0.0
	baz=298						
LIOB				*e*S	Sn	06 16 27.1	+0.5
	baz=298						
NSTT	**Nanjuang**	0.99	297	*e*P	Pn	06 16 13.7	0.0
	baz=297						
NSTT				*e*S	Sn	06 16 26.6	-0.1
	baz=297						
YOJ	**Yonaguni jima**	0.99	74	*e*P	Pn	06 16 13.7	0.0
	baz=76						
YOJ				*e*S	Sn	06 16 27.6	+0.9
	baz=76						
YOJ	**Yonaguni jima**	0.99	74	P	Pn	06 16 13.7	0.0
YOJ				S	Sn	06 16 27.2	+0.5
YULB	**Yu-li**	1.00	218	*e*P	Pn	06 16 12.5	-1.4
	baz=222						
YULB				*e*S	Sn	06 16 25.6	-1.4
	baz=222						
SSLB	**Suanglung**	1.01	247	*e*P	Pn	06 16 13.7	-0.3
	baz=240						
SSLB				*e*S	Sn	06 16 26.9	-0.3
	baz=240						
SMLT	**Sun Moon Lake**	1.02	253	*e*P	Pn	06 16 14.4	+0.2
	baz=245						
SMLT				*e*S	Sn	06 16 27.8	+0.1
	baz=245						
YM01	**YM01**	1.02	339	*e*P	Pn	06 16 13.4	-0.8
	baz=330						
YM01				*e*S	Sn	06 16 26.8	-0.8
	baz=330						
EYUL	**Yuli**	1.02	216	*e*P	Pn	06 16 13.7	-0.6
	baz=221						
TWS1	**Kuangyinshan**	1.04	331	*e*S	Sn	06 16 27.6	-0.3
	baz=334						
NCU	**National Centr**	1.06	318	*e*S	Sn	06 16 27.8	-0.6
	baz=319						
NTST	**Danshui**	1.08	334	*e*S	Sn	06 16 28.7	-0.2
	baz=337						
NSY	**Sanyi**	1.13	282	*e*S	Sn	06 16 30.4	+0.4
	baz=281						
NMLH	**Miaoli**	1.13	288	*e*P	Pn	06 16 15.3	-0.3
	baz=288						
NMLH				*e*S	Sn	06 16 29.0	-1.1
	baz=288						
TWY	**Chenhua**	1.14	343	*e*P	Pn	06 16 14.8	-0.9
	baz=345						
FULB	**Fuli**	1.16	212	*e*P	Pn	06 16 15.5	-0.6
	baz=218						
TCU	**Taichung**	1.18	268	*e*P	Pn	06 16 16.2	-0.1
	baz=267						
TCU				*e*S	Sn	06 16 32.2	+0.9
	baz=267						
WJS	**Zhushan**	1.19	253	*e*P	Pn	06 16 17.4	+0.9
	baz=249						
WJS				*e*S	Sn	06 16 33.6	+2.0
	baz=249						
WNT	**Mingjian**	1.21	256	*e*P	Pn	06 16 17.3	+0.6
	baz=253						
WNT				*e*S	Sn	06 16 33.6	+1.4
	baz=253						
CHKT	**Chengkung**	1.22	207	*e*P	Pn	06 16 14.8	-2.0
	baz=193						
CHKT				*e*S	Sn	06 16 30.3	-1.8
	baz=193						
WDJ	**Dajia District**	1.22	278	*e*S	Sn	06 16 32.4	+0.1
	baz=277						
ALS	**Alishan**	1.26	238	*e*P	Pn	06 16 17.8	+0.2
	baz=226						
ALS				*e*S	Sn	06 16 34.2	+0.5
	baz=226						
WCHH	**Zhanghua**	1.29	266	*e*S	Sn	06 16 34.5	+0.5
	baz=264						
CHN5	**Tsauling**	1.32	244	*e*P	Pn	06 16 18.5	+0.2
	baz=231						
CHN5				*e*S	Sn	06 16 36.5	+1.7
	baz=231						
ELDTW	**Lidau**	1.32	222	*e*P	Pn	06 16 17.6	-0.7
	baz=213						
EDH	**Donghe**	1.35	207	*e*P	Pn	06 16 17.4	-1.3
	baz=195						
EDH				*e*S	Sn	06 16 33.9	-1.6
	baz=195						
WDLH	**Douliu**	1.40	250	*e*P	Pn	06 16 19.7	+0.5
	baz=246						
WDLH				*e*S	Sn	06 16 38.3	+1.7
	baz=246						
WRL	**Guolierlin Hig**	1.48	259	*e*S	Sn	06 16 38.4	-0.3
	baz=257						
LONT	**Longtian**	1.49	211	*e*P	Pn	06 16 18.7	-1.7
	baz=206						
LONT				*e*S	Sn	06 16 37.4	-1.4
	baz=206						
STYH	**Taoyuan**	1.49	228	*e*P	Pn	06 16 21.0	+0.5
	baz=223						
STYH				*e*S	Sn	06 16 39.0	+0.2
	baz=223						
TPUB	**Ta-pu**	1.51	235	*e*P	Pn	06 16 20.9	+0.1
	baz=222						
TPUB				*e*S	Sn	06 16 41.3	+1.9
	baz=222						
CHN2	**Minshiung**	1.52	245	*e*S	Sn	06 16 42.7	+3.3
	baz=232						
WTK	**Tuku**	1.53	251	*e*S	Sn	06 16 40.5	+0.7
	baz=262						
WTP	**Ta-pu**	1.56	233	*e*P	Pn	06 16 21.6	+0.2
	baz=228						
WTP				*e*S	Sn	06 16 42.6	+2.1
	baz=228						
CHY	**Chiayi**	1.57	244	*e*P	Pn	06 16 22.5	+0.9
	baz=231						
CHY				*e*S	Sn	06 16 42.6	+1.8
	baz=231						
LDUT	**Ludao**	1.57	197	*e*S	Sn	06 16 39.0	-1.8
	baz=187						
TWGBT	**Beinan**	1.59	211	*e*P	Pn	06 16 20.8	-1.0
	baz=201						
IRIF	**Iriomote-Funau**	1.61	84	P	Pn	06 16 21.9	-0.3
IRIF				S	Sn	06 16 41.7	-0.1
TWK	**Hsinying**	1.64	236	*e*P	Pn	06 16 22.9	+0.3
	baz=232						
TWK				*e*S	Sn	06 16 43.8	+1.3
	baz=232						
CHN1	**Nanshi**	1.66	233	*e*P	Pn	06 16 23.2	+0.5
	baz=229						
CHN1				*e*S	Sn	06 16 44.6	+1.7
	baz=229						
SGST	**Jiashian**	1.68	229	*e*P	Pn	06 16 22.9	-0.2
	baz=217						
SGST				*e*S	Sn	06 16 45.2	+1.7
	baz=217						
HATJ	**Hateruma jima**	1.68	94	*e*S	Sn	06 16 44.7	+1.2
SLGT	**Liugui**	1.70	226	*e*P	Pn	06 16 24.3	+1.0
	baz=221						
SLGT				*e*S	Sn	06 16 45.8	+1.9
	baz=221						
ICHU	**Yijhu**	1.75	242	*e*P	Pn	06 16 24.3	+0.2
	baz=227						
ICHU				*e*S	Sn	06 16 46.6	+1.4
	baz=227						
JKRS	**Kuro-shima**	1.86	88	P	Pn	06 16 26.2	+0.6
JKRS				*e*S	Sn	06 16 49.0	+1.1
SSD	**Sandimen**	1.89	221	*e*P	Pn	06 16 26.8	+0.9
	baz=217						
TSMG	**Majia**	1.91	220	*e*P	Pn	06 16 26.8	+0.5
	baz=216						
MASBT	**Mashibuluo**	1.99	218	*e*P	Pn	06 16 28.2	+0.9
	baz=202						
MASBT				*e*S	Sn	06 16 52.4	+1.3
	baz=202						
JIJ	**Ishigaki jima**	1.99	84	P	Pn	06 16 27.0	-0.3
JIJ				S	Sn	06 16 50.4	-0.7
EAST	**Anshuo**	2.07	210	*e*P	Pn	06 16 27.8	-0.6
	baz=202						
JISG	**Ishigakijimahi**	2.17	79	P	Pn	06 16 29.4	-0.4
PHUB	**P'eng-hu**	2.29	254	*e*P	Pn	06 16 30.0	-1.5
	baz=253						
PHUB				*e*S	Sn	06 16 56.5	-2.1
	baz=253						
JTJ	**Tarama**	2.53	79	*e*S	Sn	06 17 04.1	-0.3

IDC 08 06:29:14.5±2.1**, 6.°68S×129.°41E, h0**^{km}**, mb4.1**/1**, mb1 4.2**/3**, mb1mx3.7**/26**, mbtmp4.1**/3**, ML4.3**/2**, Error ellipse: s-maj=123.7km s-min=31.0km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	14.03	161	Pn	Pn	06 32 34.1	-0.6
	1.6nm,0.3s,baz=339,slow=13,SNR=38						
WRA				Sn	Sn	06 34 59.0	-12
	1.9nm,0.3s,baz=332,slow=24,SNR=11						
ASAR	**Alice Springs**	17.44	166	P	Pn	06 33 19.9	+0.5
	0.6nm,0.3s,baz=343,slow=10,SNR=21						
ASAR				S	Sn	06 36 23.1	-11
	0.5nm,0.3s,baz=354,slow=24,SNR=6.2						
MKAR	**Makanchi Array**	67.63	327	P	P	06 40 13.3	0.0
	1.1nm,0.6s,baz=143,slow=6.2,SNR=7.7						

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*SOME **08** 06:47:36.2, 39.°18N×73.°12E, h0^{km}*
*KRNET **08** 06:47:40.1±0.1, 39.°15N×73.°59E, h13^{km}, mb3.2*
*NNC **08** 06:47:42.9±5.9, 39.°39N×73.°94E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=44.5km s-min=26.0km az=153.0*
ISC 08 06:47:43.7±1.5**, 39.°24N**±0.°07×**73.°51E**±0.°06**, h10**^{km}**, n23, σ2.^{s}07**/41**, 26C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	0.78	359	⇑*e*P	Pg	06 47 57.0	-1.8
	baz=56						
SFK				⇑*e*S	Sg	06 48 08.9	0.0
	baz=56						
DRK	**Karamyk**	1.35	281	⇑*i*P	Pn	06 48 07.1	-1.8
	baz=84						
DRK				⇑*i*S	Sb	06 48 27.1	+0.4
	baz=84						
OHH	**Osh**	1.40	337	⇑*i*P	Pn	06 48 08.5	-1.0
	baz=36						
OHH				⇑*i*S	Sb	06 48 29.1	+1.0
	baz=36						
SALK	**Salom-Alik**	1.66	8	⇑*e*P	Pn	06 48 12.4	-0.7
	baz=6.0						
SALK				⇑*e*S	Sb	06 48 36.3	+0.8
	baz=6.0						
BTK	**Batken**	2.24	292	⇑*i*P	Pn	06 48 21.7	+0.8
	baz=94						
BTK				⇑*i*S	Sb	06 48 52.2	+0.2
	baz=94						
GAR	**Garm**	2.50	266	⇑*i*P	Pn	06 48 24.9	+0.4
	baz=68						
GAR				⇑*i*S	Sb	06 48 57.5	-2.1
	baz=68						
AML	**Almayashu**	2.90	3	⇑*e*P	Pn	06 48 31.1	+0.8
	baz=2.0						

AML				⇑iS	Sn	06 49 08.2	+2.9
	baz=2.0						
TRKS	Terek-Say	2.92	322	⇓eP	Pn	06 48 30.5	+0.1
	baz=22						
TRKS				⇓iS	Sn	06 49 07.6	+2.0
	baz=22						
UCH	Uchtor	3.08	14	⇑iP	Pn	06 48 33.5	+0.6
	baz=13						
UCH				⇑iS	Sn	06 49 12.2	+2.1
	baz=13						
MNAS	Manas	3.34	347	⇑iP	Pn	06 48 37.0	+0.9
	baz=47						
MNAS				⇑iS	Sn	06 49 18.8	+2.9
	baz=47						
EKS2	Erkin-Say	3.43	3	⇑iP	Pn	06 48 38.1	+0.8
	baz=2.0						
EKS2				⇑iS	Sn	06 49 20.6	+2.5
	baz=2.0						
CHGR	Chuyangaron	3.44	262	⇑iP	Pn	06 48 38.0	+0.5
	baz=63						
CHGR				⇑iS	Sn	06 49 20.1	+1.7
	baz=63						
AAK	Ala-Archa	3.48	12	⇑Pg	Pb	06 48 41.7	-3.8
	4.5nm,0.9s						
AAK				Lg	Lg	06 49 28.2	
	8.8nm,0.8s						
AAK	Ala-Archa	3.48	12	⇑eP	Pn	06 48 38.9	+0.8
	baz=11						
AAK				⇑iS	Sn	06 49 21.6	+2.2
	baz=11						
MRKS	Merke	3.51	357	eP	Pn	06 48 40.9	+2.5
	5.3nm,0.4s						
MRKS				eS	Sb	06 49 26.3	-2.5
	5.9nm,0.6s						
MRKS	Merke	3.51	357	Pg	Pg	06 48 48.6	-2.4
	5.3nm,0.4s						
MRKS				Lg	Lg	06 49 26.3	
	5.9nm,0.6s						
IUG	Iuzhnay	3.93	319	eP	Pn	06 48 47.2	+3.0
	166nm,0.5s						
IUG				eS	Sb	06 49 37.4	-3.5
	11nm,0.7s						
IUG	Iuzhnay	3.93	319	Pg	Pb	06 48 54.5	+1.3
	166nm,0.5s						
IUG				Lg	Lg	06 49 36.7	
	11nm,0.7s						
TKM2	Tokmak 2	4.00	22	⇓Pg	Pb	06 48 50.8	-3.7
	1.3nm,0.5s						
TKM2				⇓Lg	Lg	06 49 41.9	
	3.9nm,0.6s						
KST	Kastek	4.23	25	eP	Pb	06 48 58.7	+0.4
	3.8nm,0.7s						
KST				eS	Sg	06 49 56.5	-3.0
	12nm,0.7s						
KST	Kastek	4.23	25	Pg	Pg	06 49 07.6	+2.9
	3.8nm,0.7s						
KST				Lg	Lg	06 49 58.8	
	12nm,0.7s						
DGS	Degeres	4.35	22	eP	Pb	06 49 01.6	+1.3
	1.9nm,0.5s						
DGS				eS	Sg	06 50 01.9	-1.5
	4.8nm,0.7s						
KK02	Karatay Array	4.48	331	⇓Pn	Pn	06 48 51.9	+0.2
	2.3nm,0.6s,baz=142,slow=13						
KK02				⇑Sn	Sn	06 49 47.7	+3.9
	3.6nm,0.6s,baz=143,slow=23						

IDC ***08*** *06:49:36.7±1.4, 45°.95N×155°.62E, h0^{km}, mb3.5/4, mb1 3.9/5, mb1mx3.5/28, mbtmp3.6/5, ML2.9/1, MS3.3/1, Ms1 3.4/1, ms1mx2.4/44, Error ellipse: s-maj=97.0km s-min=24.1km az=117.0*

SKHL ***08*** *06:49:49.6±0.3, 47°.00N×152°.90E, h148^{km}±7^{km}, mb5.0/6, mbv5.2/2, msh4.8/3, msha5.3/4*

MOS ***08*** *06:49:50.7±0.8, 47°.97N×151°.38E, h185^{km}, mb4.1/1, Error ellipse: s-maj=99.9km s-min=12.5km az=60.7*

JMA ***08*** *06:49:54.0±0.5, 46°.50N×152°.49E, h222^{km}, M3.9*

ISC 08 06:49:49.4±0.8**, 47°.1N**±0°.1×**152°.6E**±0°.1**, h150^{km}, n38, σ2^s.02**/49**, mb3.3**/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.80	242	ePN	Pn	06 50 48.9	+1.9
KUR				eS	Sn	06 51 33.0	+1.3
KUR				pmax	pmax		
	comp=Z,890nm,2.0s						
KUR	Kuril'sk	3.80	242	eP	Pn	06 50 48.9	+1.9
KUR				AMB	AMB	06 50 50.2	
	comp=Z,570nm,2.0s						
KUR				AMB	AMB	06 50 53.4	
	comp=Z,110nm,0.5s						
KUR				eS	Sn	06 51 33.5	+1.8
KUR				A	A	06 51 39.0	
	comp=Z,900nm,3.0s						
KUR				A	A	06 51 39.0	
	comp=Z,900nm,3.0s						
KUR				A	A	06 51 39.0	
	comp=Z,50nm,0.4s						
KUR				A	A	06 51 39.0	
	comp=Z,30nm,0.4s						
SKR	Severo-Kuril's	4.25	32	ePN	Pn	06 50 54.9	+2.2
SKR				eS	Sn	06 51 41.5	-0.6
SKR				pmax	pmax		
	comp=Z,265nm,0.9s						
SKR				smax	smax		
	comp=E,111nm,0.6s						
SKR				smax	smax		
	comp=N,113nm,0.5s						
SKR				MLR	MLR		
	comp=Z,2μm,19.0s						
SKR				MLR	MLR		
	comp=Z,800nm,18.0s						
SKR	Severo-Kuril's	4.25	32	eP	Pn	06 50 53.5	+0.8
SKR				AMB	AMB	06 50 55.0	
	comp=Z,270nm,0.9s						
SKR				AMB	AMB	06 50 56.0	
	comp=Z,300nm,3.0s						
SKR				eS	Sn	06 51 41.2	-0.8
SKR				A	A	06 51 43.0	
	comp=Z,110nm,0.6s						
SKR				A	A	06 51 43.0	
	comp=Z,110nm,0.6s						
SKR				A	A	06 51 43.2	
	comp=Z,300nm,4.0s						
SKR				A	A	06 51 43.2	
	comp=Z,300nm,4.0s						
SKR				AMS	AMS	06 52 21.6	
	comp=Z,2μm,19.0s						
PAU	Pauzhetka	5.14	31	ePN	Pn	06 51 04.6	+0.1
PAU				eS	Sn	06 52 00.5	-2.7
PAU				pmax	pmax		
	comp=Z,140nm,0.4s						
PAU	Pauzhetka	5.14	31	eP	Pn	06 51 04.6	+0.1
PAU				AMB	AMB	06 51 05.2	
	comp=Z,140nm,0.6s						
PAU				eS	Sn	06 52 01.4	-1.8
PAU				A	A	06 52 02.5	
	comp=Z,60nm,0.3s						
PAU				A	A	06 52 02.5	
	comp=Z,80nm,0.3s						
PAU				A	A	06 52 04.5	
	comp=Z,1μm,5.0s						
PAU				A	A	06 52 04.5	
	comp=Z,600nm,5.0s						
SHO	Shikotan	5.21	233	ePN	Pn	06 51 07.3	+1.8
SHO				eS	Sn	06 52 05.0	+0.1
SHO				smax	smax		
	comp=N,36nm,0.3s						
SHO				smax	smax		
	comp=E,56nm,0.2s						
SHO	Shikotan	5.21	233	eP	Pn	06 51 07.3	+1.8
SHO				AMB	AMB	06 51 07.8	
	comp=E,50nm,0.4s						
SHO				eS	Sn	06 52 05.7	+0.8
SHO				A	A	06 52 07.0	
	comp=E,60nm,0.3s						
SHO				A	A	06 52 07.0	
	comp=E,40nm,0.3s						
YUK	Yuzh-Kuril'sk	5.66	239	eP	Pn	06 51 13.6	+2.1
YUK				AMB	AMB	06 51 14.8	
	comp=E,40nm,0.4s						
NEM2	Nemuro 2	6.14	235	P	Pn	06 51 18.4	+0.5
NEM2				eS	Sn	06 52 24.5	-2.6
NMR	Nemuro--Hokkai	6.14	235	eP	Pn	06 51 18.4	+0.5
JRA	Rausu	6.15	242	P	Pn	06 51 19.8	+1.7
YSS	Yuzh-Sakhalins	6.74	272	eP	Pn	06 51 29.2	+3.3
YSS				AMB	AMB	06 51 29.9	
	comp=E,10.0nm,0.4s						
PETK	Petropavlovsk-	6.82	27	Pn	Pn	06 51 25.6	-1.3
	comp=E,1.0nm,0.3s,baz=186,slow=7.4,SNR=10						
PETK				Sn	Sn	06 52 54.9	+11
	comp=E,0.5nm,0.3s,baz=29,slow=46,SNR=1.2						
PETK	Petropavlovsk-	6.82	27	PN	Pn	06 51 25.6	-1.3
AKK	Akkeshi	6.87	236	eP	Pn	06 51 28.8	+1.2
JTKR	Abashiri--Toko	6.88	246	P	Pn	06 51 29.0	+1.3
JAK	Akkeshi	6.96	237	P	Pn	06 51 29.4	+0.5
JAK				eS	Sn	06 52 43.4	-3.4
PET	Petropavlovsk	7.07	31	ePN	Pn	06 51 29.4	-0.8
PET				pmax	pmax		
	comp=Z,31nm,2.6s						
PET	Petropavlovsk	7.07	31	eP	Pn	06 51 29.4	-0.8
PET				AMB	AMB	06 51 30.2	
	comp=Z,30nm,0.7s						
JAR	Ashorobuto	7.33	242	P	Pn	06 51 35.1	+1.4
JOB	Onbets	7.52	239	P	Pn	06 51 37.0	+0.7
JOB				eS	Sn	06 52 56.6	-3.6
ASAJ	Asahikawa	7.64	250	P	Pn	06 51 39.5	+1.6
JKK2	Kamakawa 2	7.66	248	P	Pn	06 51 39.5	+1.3
JCH	Churui	7.97	239	P	Pn	06 51 42.1	-0.2
JCH				eS	Sn	06 53 05.2	-5.9
JNBK	Urakawa-nobuka	8.53	239	P	Pn	06 51 48.7	-1.1
JKB	Kayabe	9.79	242	P	Pn	06 52 04.0	-2.5
JYM2	Yakumo 2	10.06	245	P	Pn	06 52 07.9	-2.2
JANG	Nango	10.48	234	P	Pn	06 52 13.6	-2.1
JANG				eS	Sn	06 54 00.6	-11
ILAR	Eielson Array	36.47	39	P	P	06 56 38.4	-1.1
	comp=Z,0.7nm,1.0s,baz=260,slow=6.2,SNR=3.0						
ILAR	Eielson Array	36.47	39	P	P	06 56 38.4	-1.1
ARCES	ARCESS Array B	57.39	341	LR	LR	07 27 07.1	
	comp=Z,25nm,18.4s,baz=300,slow=38						
WRA	Warramunga Arr	68.76	198	P	P	07 00 38.9	+1.9
	comp=Z,0.3nm,0.6s,baz=12,slow=6.7,SNR=1.6						
WRA	Warramunga Arr	68.76	198	P	P	07 00 38.9	+1.9
ASAR	Alice Springs	72.46	198	P	P	07 01 03.0	+3.7
	comp=Z,0.4nm,0.4s,baz=15,slow=5.3,SNR=9.0						
ASAR	Alice Springs	72.46	198	P	P	07 01 03.0	+3.7
TXAR	Lajitas Array	77.60	60	P	P	07 01 28.9	-0.2
	comp=Z,0.1nm,0.6s,baz=313,slow=6.8,SNR=2.0						
TXAR	Lajitas Array	77.60	60	P	P	07 01 28.9	-0.2

IDC ***08*** *07:09:56.7±1.5, 30°.73S×71°.75W, h0^{km}, mb3.5/2, mb1 3.6/4, mb1mx3.5/30, mbtmp3.4/4, ML3.1/2, MS3.3/4, Ms1 3.2/4, ms1mx3.0/20, Error ellipse: s-maj=56.2km s-min=42.7km az=97.0*

GUC ***08*** *07:10:02.2±0.8, 30°.74S×71°.73W, h30^{km}±3^{km}, ML3.9*

ISC 08 07:10:01.7±1.4**, 30°.71S**±0°.04×**71°.83W**±0°.10**, h34^{km}**±3^{km}**, n31, σ1^s.56**/26**, 3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.17	80	⇓iP	Pb	07 10 08.1	0.0
CO06				eS	Sb	07 10 11.8	-0.8
CO06				IAML		07 10 13.2	
	comp=N,29μm,0.4s						
CO05	La Serena	0.94	33	⇓iP	Pb	07 10 19.9	+0.4
CO05				i S	Sb	07 10 32.7	+1.1
CO05				IAML		07 10 35.6	
	comp=N,5μm,0.4s						
CO03	El Pedregal	0.99	98	⇓iP	Pb	07 10 20.2	-0.3
CO03				eS	Sb	07 10 33.0	-0.4
CO03				IAML		07 10 37.5	
	comp=E,4μm,0.5s						
VA06	Catapilco	1.91	166	eP	Pn	07 10 32.5	+0.7
VA06				eS	Sb	07 10 57.8	-1.5
VA06				IAML		07 11 02.1	
	comp=N,2μm,0.5s						
LCO	Las Campanas	1.95	30	i P	Pn	07 10 34.7	+1.9
VA03	San Esteban	2.32	152	eP	Pn	07 10 39.7	+2.0
VA03				IAML		07 11 17.2	
	comp=N,1μm,0.3s						
ROCH	El Roble	2.37	163	eP	Pn	07 10 39.3	+0.9
ROCH				eP	Pn	07 10 39.3	+0.9
ROCH				i S	Sb	07 11 11.9	-0.8
ROCH				IAML		07 11 19.1	
	comp=N,712nm,0.4s						
ROCH				IAML		07 11 19.3	
	comp=N,985nm,0.4s						
PEL	Peldehue	2.62	158	eP	Pn	07 10 43.6	+1.9
PEL				IAML		07 11 24.0	
	comp=E,598nm,0.4s						
MT05	Renca	2.83	161	eP	Pn	07 10 46.1	+1.4
FCH	Farellones	2.92	154	eP	Pn	07 10 48.2	+2.0
FCH				IAML		07 11 35.5	
	comp=E,326nm,0.2s						
MT09	Talagante	3.14	167	eP	Pn	07 10 50.3	+1.3
MT01	Popeta	3.19	171	eP	Pn	07 10 50.6	+1.1
MT01				IAML		07 11 42.4	
	comp=E,234nm,0.5s						
LMEL	Las Melosas	3.42	157	eP	Pn	07 10 55.6	+2.8
LMEL				IAML		07 11 49.8	
	comp=N,326nm,0.2s						
H03N1	Juan Fernandez	6.60	244	T	T	07 18 31.0	
	baz=68						
H03N2	Juan Fernandez	6.61	244	T	T	07 18 31.0	
	baz=68						
H03N3	Juan Fernandez	6.61	244	T	T	07 18 29.6	
	baz=68						
LVC	Limon Verde	8.47	19	Pn	Pn	07 12 01.1	-1.3
	comp=N,0.3nm,0.3s,baz=312,slow=13,SNR=1.2						
LVC				Sn	Sn	07 13 34.4	-2.7
	comp=N,0.3nm,0.3s,baz=175,slow=6.6,SNR=1.8						
LVC				LR	LR	07 15 22.5	
	comp=N,143nm,18.2s,baz=213,slow=38						
PLCA	Paso Flores	10.06	174	LR	LR	07 17 02.0	
	comp=N,95nm,18.5s,baz=239,slow=42						
CPUP	Villa Florida	13.47	75	LR	LR	07 18 52.9	
	comp=N,117nm,21.4s,baz=258,slow=40						
LPAZ	La Paz	14.74	14	Pn	Pn	07 13 26.3	-2.2
	comp=N,0.0nm,0.3s,baz=187,slow=9.0,SNR=1.4						
TXAR	Lajitas Array	66.97	330	P	P	07 20 52.5	+1.4
	comp=N,0.2nm,0.8s,baz=152,slow=4.1,SNR=2.3						
BOSA	Boshof	81.45	118	LR	LR	07 56 56.2	
	comp=N,29nm,18.8s,baz=25,slow=35						
TORD	Torodi Ar. Bea	82.93	70	P	P	07 22 24.5	+0.9
	comp=N,0.8nm,0.7s,baz=250,slow=4.2,SNR=5.9						
WRA	Warramunga Arr	123.71	210	PKP	PKPdf	07 28 57.0	+0.5
	comp=N,0.4nm,0.9s,baz=156,slow=1.7,SNR=1.6						
H11S2	WAKE ISLAND Hy	125.93	271	T	T	09 47 48.9	
	baz=115,slow=75,SNR=39						
H11S1	WAKE ISLAND Hy	125.94	271	T	T	09 47 51.0	
	baz=115,slow=75,SNR=62						
H11S3	WAKE ISLAND Hy	125.95	271	T	T	09 47 51.0	
	baz=115,slow=75,SNR=34						
H11N3	WAKE ISLAND Hy	126.26	273	T	T	09 48 12.4	
	baz=117,slow=74						
H11N1	WAKE ISLAND Hy	126.28	273	T	T	09 48 14.1	
	baz=117						
H11N2	WAKE ISLAND Hy	126.28	273	T	T	09 48 13.1	
	baz=117,slow=74						
ZALV	Zalesovo Beam	151.31	29	PKPbc	PKPbc	07 29 50.1	-1.2
	comp=N,1.9nm,0.7s,baz=298,slow=1.8,SNR=7.4						

IDC 08 07:28:14.4±2.1**, 55°.25S**×**27°.40W, h0^{km}, mb3.7**/1**, mb1 3.7**/1**, mb1mx3.4**/15**, mbtmp3.7**/1**, Error ellipse: s-maj=113.9km s-min=78.3km az=143.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N1	ASCENSION HYDR	48.38	17	T	T	08 29 44.3	
	baz=189						
H10N3	ASCENSION HYDR	48.38	17	T	T	08 29 37.9	
	baz=189						
H10N2	ASCENSION HYDR	48.40	17	T	T	08 29 41.4	
	baz=189						
TORD	Torodi Ar. Bea	72.41	30	P	P	07 39 42.3	0.0
	0.4nm,0.5s,baz=203,slow=6.8,SNR=4.4						
ILAR	Eielson Array	149.49	313	PKPbc	PKPbc	07 48 03.6	-0.5
	0.7nm,0.7s,baz=126,slow=4.0,SNR=8.6						
SONM	Songino Array	150.79	85	PKPbc	PKPbc	07 48 07.5	-0.3
	0.6nm,0.6s,baz=222,slow=3.4,SNR=4.1						

TUL ***08*** *07:29:32.7±1.1, 36°.95N±0°.01×97°.81W±0°.01, h3^{km}±3^{km}, ML2.5, mb_Lg2.2/10(NEIC), Error ellipse: s-maj=1.6km s-min=1.3km az=180.0*

NEIC 08 07:29:33.0±0.6**, 36°.938N**±0°.007×**97°.80W**±0°.01**, h6^{km}**±4^{km}**, Error ellipse: s-maj=1.4km s-min=0.9km az=54.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.10	208	Pg	Pg	07 29 35.2	+0.1
GC02				Sg	Sg	07 29 36.9	+0.3
KAN17	Caldwell West	0.11	16	Pg	Pg	07 29 35.4	+0.1
KAN17					Sg	07 29 37.2	+0.3
KAN14	Manchester OK	0.13	278		Pg	07 29 35.7	0.0
KAN14				Sg	Sg	07 29 37.5	0.0
KAN05	Bluff City Nor	0.18	342		Pg	07 29 36.6	0.0
KAN05				Sg	Sg	07 29 39.3	+0.3
KAN01	Argonia South	0.22	9		Pg	07 29 37.3	0.0
KAN01				Sg	Sg	07 29 40.3	+0.1
KAN09	Caldwell North	0.25	37	Pg	Pg	07 29 37.8	-0.1
KAN09				Sg	Sg	07 29 41.0	-0.1
KAN13	South Haven SW	0.27	74		Pg	07 29 38.3	0.0
KAN13				Sg	Sg	07 29 42.7	+0.9
KAN10	Anthony SW Sta	0.30	308	Pg	Pg	07 29 38.8	0.0
KAN10				Sg	Sg	07 29 42.6	-0.2
KAN06	Argonia West S	0.31	352		Pg	07 29 39.0	-0.1
KAN06				Sg	Sg	07 29 43.0	-0.2
KAN08	Anthony NE Sta	0.32	335		Pg	07 29 39.1	-0.1
KAN08				Sg	Sg	07 29 43.8	+0.4
OK032	Salt Plains WL	0.35	248	Pg	Pg	07 29 39.9	0.0
OK032				Sg	Sg	07 29 44.3	-0.2
KAN16	Harper SW Stat	0.36	324	Pg	Pg	07 29 39.9	-0.1
KAN16				Sg	Sg	07 29 43.9	-0.8
KAN12	Harper NE Stat	0.39	336	Pg	Pg	07 29 40.2	-0.4
KAN12				Sg	Sg	07 29 44.8	-1.0
CROK	Carrier	0.46	199	Pg	Pg	07 29 41.8	0.0
CROK				Sg	Sg	07 29 48.2	+0.4
BLOK	Blackwell	0.50	110	Pg	Pg	07 29 42.7	0.0
BLOK				Sg	Sg	07 29 49.4	+0.2
T35A	Sooner Cattle	1.03	91	Pg	Pg	07 29 52.3	-0.5
T35A				Sg	Sg	07 30 06.0	-0.2
U32A	Winter Ranch,	1.11	240	Pg	Pg	07 29 54.0	-0.4
U32A				Sg	Sg	07 30 08.6	-0.2
OK031	S. Brethren Rd	1.25	141		Pg	07 29 56.2	-0.8
OK031				Sg	Sg	07 30 12.9	-0.3
OK034	N. Norfolk Rd.	1.28	136	Pn	Pn	07 29 56.7	-0.7
BCOK	Bluff Creek, N	1.29	173	Pn	Pn	07 29 56.5	-1.0
OK030	Cody Creek RV	1.30	141		Pn	07 29 57.2	-0.5
OK025	Westminster Rd	1.41	164		Pn	07 29 59.3	+0.1
R32A	Long Quarter,	1.65	334		Pb	07 30 03.3	-0.5
FNO	Franklin	1.71	169		Pn	07 30 03.3	-0.1
FNO				IAmb_Lg		07 30 29.2	
	comp=Z,15nm,1.1s						
TUL1	Leonard	1.92	122		Pn	07 30 06.5	+0.2
TUL1				IAmb_Lg		07 30 36.2	
	comp=Z,16nm,0.8s						
X34A	Smith Ranch, M	2.33	181	Pn	Pn	07 30 13.0	+1.0
X34A				IAmb_Lg		07 30 49.1	
	comp=Z,11nm,1.0s						
KSU1	Kansas State U	2.35	23	Pn	Pn	07 30 12.8	+0.6
KSU1				IAmb_Lg		07 30 53.4	
	comp=Z,10nm,0.8s						
CBKS	Cedar Bluff	2.42	321		Pn	07 30 12.7	-0.5
CBKS				IAmb_Lg		07 30 48.9	
	comp=Z,7.9nm,0.9s						
HHAR	Hobbs	3.17	101	Pn	Pn	07 30 23.8	+0.3
S39A	Bolivar	3.65	77		Pn	07 30 29.7	-0.3
W39A	Magazine	3.69	117		Pn	07 30 30.6	0.0
U40A	Yellville	4.02	97	Pn	Pn	07 30 35.0	-0.2
MIAR	Mount Ida	4.18	124	Pn	Pn	07 30 36.1	-1.2
FCAR	Ozark Folk Cen	4.70	101	IAmb_Lg		07 32 08.8	
	comp=Z,4.9nm,1.3s						
WHAR	Wooly Hollow	4.76	109	Pn	Pn	07 30 45.2	-0.1

INET ***08*** *07:34:11.5, 11°.59N×86°.96W, h23^{km}, MW3.6*

SNET 08 07:34:10.4±0.7**, 11°.58N**×**86°.88W, h82^{km}**±503^{km}**, ML3.1, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	1.93	331	eP	Pn	07 34 41.7	+0.1
CNCH				eS	Sn	07 35 06.7	+1.4
LCND	La Caada	1.99	330	i P	Pn	07 34 42.6	+0.3
LCND				eS	Sn	07 35 07.7	+1.2
PACA	Pacayal	2.35	323	eP	Pn	07 34 48.4	+1.1
PACA				eS	Sn	07 35 16.8	+1.4
COEB	Comit de Eme	2.50	320	eP	Pn	07 34 49.7	+0.5
COEB				IAML		07 35 34.7	
	comp=Z,80nm,0.4s						
COEG	Centro de Oper	2.82	316	eP	Pn	07 34 53.9	+0.4
COEG				eS	Sn	07 35 28.1	+1.5
COEG				IAML		07 35 38.3	
	comp=Z,71nm,0.5s						

IDC ***08*** *07:39:30.2±1.2, 37°.90N×72°.92E, h0^{km}, mb3.7/9, mb1 3.8/15, mb1mx3.6/65, mbtmp3.6/15, ML3.2/6, MS3.2/2, Ms1 3.3/2, ms1mx2.5/68, Error ellipse: s-maj=22.5km s-min=18.7km az=125.0*

NNC ***08*** *07:39:39.7±1.8, 38°.40N×72°.47E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=15.0km s-min=11.2km az=3.0*

SOME ***08*** *07:39:40.3, 38°.55N×72°.30E, h0^{km}*

ISC 08 07:39:35.7±1.3**, 38°.22N**±0°.08×**72°.58E**±0°.08**, h10^{km}, n30, σ2^s.97**/26**, mb3.6**/9**, 6C-8D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.38	334	eP	Pb	07 40 53.6	+0.7
	442nm,0.6s						
IUG				eS	Sb	07 41 47.8	+1.9
	62nm,0.7s						
IUG	Iuzhnay	4.38	334	Pg	Pb	07 40 53.6	+0.7
	442nm,0.6s						
IUG				Lg	Lg	07 41 47.8	
	62nm,0.7s						
MRKS	Merke	4.55	6	eP	Pb	07 40 59.5	+3.8
	12nm,0.4s						
MRKS				eS	Sg	07 41 58.0	-3.8
	12nm,0.6s						
MRKS	Merke	4.55	6	Pg	Pb	07 40 59.5	+3.8
	12nm,0.4s						
MRKS				Lg	Lg	07 41 58.0	
	12nm,0.6s						
AAK	Ala-Archa	4.65	18	Pn	Pn	07 40 49.8	+3.6
	1.1nm,0.3s,baz=204,slow=9.9,SNR=13						
AAK				Sn	Sb	07 41 48.0	-5.6
	0.3nm,0.3s,baz=166,slow=13,SNR=1.5						
AAK	Ala-Archa	4.65	18	⇓Pn	Pn	07 40 50.0	+3.9
	3.3nm,0.6s						
AAK				⇓Pg	Pb	07 41 01.4	+4.0
	9.1nm,0.6s						
AAK				⇑Lg	Lg	07 42 02.1	
	31nm,0.9s						
KK02	Karatay Array	5.13	343	⇓Pn	Pn	07 40 56.0	+3.4
	3.2nm,0.4s						
KK02				⇑Sn	Sn	07 41 54.9	+3.0
	7.2nm,0.6s						
KK02				⇓Lg	Lg	07 42 17.8	
	14nm,0.8s						
TKM2	Tokmak 2	5.23	25	⇓Pn	Pn	07 40 58.2	+4.0
	2.5nm,0.6s						
TKM2				⇓Pg	Pb	07 41 12.7	+5.3
	8.0nm,1.1s						
TKM2				⇑Lg	Lg	07 42 21.1	
	25nm,1.3s						
MDOK	Medeo	5.99	33	⇑Pg	Pb	07 41 27.0	+6.6
	6.7nm,0.8s						
MDOK				⇑Lg	Lg	07 42 45.3	
	19nm,0.9s						
KUU	Kurty	6.34	25	eP	Pg	07 41 33.4	-3.8
	2.0nm,0.4s						
KUU				eS	Sg	07 42 57.0	-2.2
	12nm,0.8s						
KUU	Kurty	6.34	25	Pg	Pg	07 41 33.4	-3.8
	2.0nm,0.4s						
KUU				Lg	Lg	07 42 57.0	
	12nm,0.8s						
PDGK	Podgornoye	7.32	44	⇑Pn	Pn	07 41 26.1	+3.4
	9.0nm,1.6s						
PDGK				⇓Lg	Lg	07 43 28.3	
	7.7nm,0.8s						
MKAR	Makanchi Array	11.16	37	Pn	Pn	07 42 13.1	-2.2
	0.0nm,0.3s,baz=229,slow=13,SNR=1.7						
KURBB	Kurchatov Arra	13.11	17	Pn	Pn	07 42 39.0	-2.8
	0.1nm,0.3s,baz=206,slow=12,SNR=8.0						
AB31	Akbulak array	14.30	325	Pn	Pn	07 42 57.0	-1.2
	0.7nm,0.6s,baz=131,slow=14,SNR=17						
BVAR	Borovoye Array	14.89	355	Pn	Pn	07 43 04.5	-1.6
	0.4nm,0.3s,baz=191,slow=15,SNR=7.6						

AKTO	Aktyubinsk	16.02	324	Pn	Pn	07 43 20.9	-0.2
	0.1nm,0.3s,baz=23,slow=19,SNR=4.3						
AKTO	Aktyubinsk	16.02	324	⇓Pn	P	07 43 24.5	0.0
	7.1nm,1.2s						
ZALV	Zalesovo Beam	17.83	24	P	Pn	07 43 42.3	-1.5
	0.3nm,0.3s,baz=218,slow=11,SNR=5.6						
SONM	Songino Array	26.34	58	P	P	07 45 07.0	-4.9
	0.6nm,0.8s,baz=252,slow=8.9,SNR=1.7						
CMAR	Chiang Mai Arr	30.25	123	LR	LR	08 01 02.0	
	comp=Z,32nm,19.5s,baz=196,slow=43						
FINES	FINESS Array B	36.79	324	P	P	07 46 40.9	-2.5
	2.5nm,0.9s,baz=112,slow=11,SNR=4.3						
ARCES	ARCESS Array B	40.06	336	P	P	07 47 10.0	-0.8
	3.1nm,0.8s,baz=106,slow=9.5,SNR=1.9						
KSRS	Korea Array	43.15	73	LR	LR	08 07 54.3	
	comp=Z,36nm,18.8s,baz=118,slow=40						
NOA	NORSAR Array B	43.79	322	P	P	07 47 40.5	-0.8
	0.3nm,0.5s,baz=84,slow=8.0,SNR=1.2						
ESDC	Sonseca Array	57.78	297	P	P	07 49 25.6	-1.6
	0.4nm,0.6s,baz=51,slow=6.8,SNR=2.1						
TORD	Torodi Ar. Bea	67.02	269	P	P	07 50 26.9	-2.3
	0.4nm,0.8s,baz=64,slow=6.0,SNR=2.4						
ILAR	Eielson Array	72.78	17	P	P	07 51 00.5	-3.4
	0.5nm,0.8s,baz=320,slow=6.4,SNR=6.9						
YKA	Yellowknife Ar	79.47	3	P	P	07 51 40.4	-1.6
	0.5nm,0.8s,baz=348,slow=5.6,SNR=4.7						
WRA	Warramunga Arr	81.85	123	P	P	07 51 50.2	-5.1
	0.3nm,0.6s,baz=327,slow=5.1,SNR=4.6						

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*NAO **08** 07:49:36.5±4.0, 72°.49N×3°.20E, ML2.9*

*IDC **08** 07:49:38.0±2.1, 72°.42N×3°.63E, h0^{km}, mb3.3/2, mb1 3.6/7, mb1mx3.2/66, mbtmp3.6/7, ML3.0/5, MS3.1/1, Ms1 3.1/1, ms1mx2.3/51, Error ellipse: s-maj=28.0km s-min=23.5km az=106.0*

*BER **08** 07:49:38.8±2.4, 72°.57N×2°.99E, h10^{km}, ML2.2, ML2.9(NAO), Confirmed Earthquake*

ISC 08 07:49:36.5±1.0, **72°.60N**±0°.09×**3°.42E**±0°.07, **h10**^{km}, **n36**, σ**2**^{s}**10**/42, **Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOF	Lofoten	5.63	138	*e*P	Pn	07 51 01.2	+1.1
LOF				IAML		07 52 06.6	
	comp=Z,7.1nm,0.7s						
STEI	Steigen	6.16	134	*e*P	Pn	07 51 08.9	+1.6
STEI				IAML		07 52 18.9	
	comp=Z,3.2nm,0.8s						
JETT	Jettan, Norway	6.30	111	Pn	Pn	07 51 11.5	+2.2
JETT				Sn	Sn	07 52 19.0	-2.3
SPA0	Spitsbergen Ar	6.47	24	Pn	Pn	07 51 14.1	+2.5
	baz=215,slow=16						
SPA0	Spitsbergen Ar	6.47	24	Pn	Pn	07 51 14.1	+2.5
	baz=215,slow=16						
SPA0				IAML		07 52 32.7	
	comp=Z,4.7nm,1.0s						
SPITS	Spitsbergen Ar	6.47	24	Pn	Pn	07 51 14.0	+2.5
	baz=221,slow=21,SNR=18						
FAUS	Fauske	6.62	136	*e*P	Pn	07 51 14.2	+0.4
FAUS				IAML		07 52 31.5	
	comp=Z,3.8nm,0.4s						
KBS	Kingsbay	6.68	14	Pn	Pn	07 51 15.7	+1.2
KBS	Kingsbay	6.68	14	*e*P	Pn	07 51 15.4	+0.9
HAMF	Hammerfest	6.69	97	Pn	Pn	07 51 15.6	+1.0
HAMF	Hammerfest	6.69	97	*e*P	Pn	07 51 14.0	-0.6
KIF	Kilpisjarvi	6.76	114	Pn	Pn	07 51 17.1	+1.6
KIF				Sn	Sn	07 52 29.7	-2.7
KIF	Kilpisjarvi	6.76	114	Pn	Pn	07 51 17.1	+1.6
KIF				Sn	Sn	07 52 29.7	-2.7
DBG	Daneborg	6.94	295	*i* P	Pn	07 51 15.1	-2.9
DBG	Daneborg	6.94	295	*e*P	Pn	07 51 16.2	-1.8
DBG				*e*S	Sn	07 52 27.3	-9.4
KONS	Konsvik	7.00	146	*e*P	Pn	07 51 18.2	-0.6
STOK	Stokkvaagen	7.13	147	*e*P	Pn	07 51 22.8	+2.1
DAG	Danmarks Havn	7.14	316	*i* P	Pn	07 51 18.0	-2.7
SALU	Saltoluokta	7.34	128	*e*P	Pn	07 51 25.9	+2.3
KTK1	Kautokeino	7.43	109	*e*P	Pn	07 51 26.5	+1.7
KTK1				IAML		07 53 00.5	
	comp=Z,2.3nm,0.8s						
MOR8	Moi Rana	7.52	144	*e*P	Pn	07 51 26.3	+0.2
MOR8				IAML		07 52 50.2	
	comp=Z,3.0nm,0.5s						
ARA0	ARCESS Array S	7.78	102	Pn	Pn	07 51 30.9	+1.2
	baz=311,slow=12						
ARA0				Sn	Sn	07 52 52.4	-5.2
	baz=312,slow=22						
ARA0	ARCESS Array S	7.78	102	Pn	Pn	07 51 30.9	+1.2
	baz=311,slow=12						
ARA0				Sn	Sn	07 52 52.4	-5.2
	baz=312,slow=22						
ARCES	ARCESS Array B	7.78	102	Pn	Pn	07 51 31.1	+1.5
	baz=309,slow=12,SNR=12						
ARCES				Sn	Sn	07 52 55.0	-2.7
	baz=308,slow=19,SNR=1.2						
HEF	Hetta	7.94	112	*e*P	Pn	07 51 33.6	+1.9
KEV	Kevo	8.11	99	*e*P	Pn	07 51 35.1	+1.1
KEV				*e*P	Pn	07 51 35.4	+1.4
NOA	NORSAR Array B	11.99	161	Pn	Pn	07 52 28.2	+0.9
	comp=Z,0.0nm,0.3s,baz=347,slow=14,SNR=2.2						
HFS	Hagfors	13.15	157	Pn	Pn	07 52 43.9	+0.9
	comp=Z,0.4nm,0.3s,baz=348,slow=13,SNR=8.6						
HFS	Hagfors	13.15	157	Pn	Pn	07 52 44.1	+1.1
	baz=358,slow=14						
HFS	Hagfors	13.15	157	Pn	Pn	07 52 44.1	+1.1
	baz=358,slow=14						
FIA0	FINESS Array S	14.13	131	Pn	Pn	07 52 56.6	+0.3
	baz=330,slow=12						
FIA0	FINESS Array S	14.13	131	Pn	Pn	07 52 56.6	+0.3
	baz=330,slow=12						
FINES	FINESS Array B	14.13	131	Pn	Pn	07 52 56.4	+0.2
	comp=Z,0.2nm,0.3s,baz=335,slow=13,SNR=2.6						
AKASG	Malin Array Be	24.74	139	P	P	07 54 58.7	+1.1
	comp=Z,0.2nm,0.4s,baz=341,slow=10.0,SNR=1.5						
GNI	Garni	38.22	125	LR	LR	08 12 49.3	
	comp=Z,27nm,19.9s,baz=329,slow=37						
TORD	Torodi Ar. Bea	59.44	182	P	P	07 59 41.4	+2.3
	comp=Z,0.3nm,0.8s,baz=350,slow=7.3,SNR=2.5						

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*ROM **08** 07:51:54.4±0.2, 42°.39N±0°.01×15°.26E±0°.01, h12^{km}, ML2.9/29, Error ellipse: s-maj=1.4km s-min=0.8km az=19.0*

ISC 08 07:51:54.7±1.2, **42°.37N**±0°.03×**15°.20E**±0°.03, **h14**^{km}±10^{km}, **n59**, σ**1**^{s}**09**/72, **4C-1D**, **Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRES	Fresagrandinar	0.56	225	P	Pg	07 52 04.8	-0.9
FRES				AML	AML		
	comp=N,340µm,1.0s						
FRES				AML	AML		
	comp=E,547µm,0.5s						
SGRT	San Giovanni R	0.73	146	P	Pg	07 52 08.3	-0.7
SGRT				S	Sb	07 52 19.6	+0.5
SGRT				AML	AML		
	comp=N,1660µm,1.2s						
SGRT				AML	AML		
	comp=E,1975µm,0.8s						
CIGN	Sant'Elia a Pi	0.75	197	P	Pb	07 52 09.9	+0.4
CIGN				AML	AML		
	comp=E,422µm,0.6s						
CIGN				AML	AML		
	comp=E,422µm,0.6s						
CIGN				AML	AML		
	comp=N,488µm,0.6s						
TRIV	Trivento	0.77	219	P	Pg	07 52 09.8	+0.1
TRIV				S	Sn	07 52 22.9	+0.3
TRIV				AML	AML		
	comp=E,701µm,0.6s						
TRIV				AML	AML		
	comp=N,397µm,1.3s						
TRIV				AML	AML		
	comp=E,695µm,0.5s						
TRIV				AML	AML		
	comp=N,433µm,0.8s						
TRIV				AML	AML		
	comp=E,702µm,0.6s						
TRIV				AML	AML		
	comp=N,436µm,1.3s						
TRIV				AML	AML		
	comp=N,434µm,0.8s						
TRIV				AML	AML		
	comp=E,696µm,0.5s						
LPEL	Lama dei Pelig	0.82	247	P	Pg	07 52 09.6	-1.0
LPEL				S	Sn	07 52 24.8	+1.0
LPEL				AML	AML		
	comp=N,959µm,0.9s						
LPEL				AML	AML		
	comp=E,1265µm,0.3s						
MSAG	Monte S. Angel	0.84	141	P	Pb	07 52 10.9	-0.2
MSAG				AML	AML		
	comp=N,3315µm,0.7s						
MSAG				AML	AML		
	comp=N,3265µm,0.7s						
MSAG				AML	AML		
	comp=E,2085µm,0.7s						
MSAG				AML	AML		
	comp=E,2285µm,0.7s						
GATE	Gambatesa	0.88	194	AML	AML		
	comp=N,516µm,1.3s						
GATE				AML	AML		
	comp=E,555µm,1.3s						
GATE				AML	AML		
	comp=N,572µm,1.4s						
GATE				AML	AML		
	comp=E,555µm,1.3s						
GATE				AML	AML		
	comp=N,571µm,1.3s						
GATE				AML	AML		
	comp=E,282µm,0.6s						
BSSO	Busso	0.94	209	P	Pg	07 52 12.2	-0.6
BSSO				S	Sn	07 52 28.6	+1.9
BSSO				AML	AML		
	comp=E,412µm,1.2s						
BSSO				AML	AML		
	comp=N,572µm,0.4s						
BSSO				AML	AML		
	comp=N,230µm,0.4s						
BSSO				AML	AML		
	comp=E,171µm,0.7s						
MOCO	Biccari - m.te	1.00	182	P	Pb	07 52 13.8	0.0
MOCO				AML	AML		
	comp=E,360µm,0.6s						
MOCO				AML	AML		
	comp=N,205µm,0.7s						
MOCO				AML	AML		
	comp=E,360µm,0.6s						
VCEL	Villa Celiera	1.01	272	P	Pb	07 52 13.1	-0.9
VCEL				S	Sn	07 52 30.5	+2.0
VCEL				AML	AML		
	comp=E,965µm,0.6s						
VCEL				AML	AML		
	comp=N,822µm,1.5s						
VCEL				AML	AML		
	comp=E,963µm,0.6s						
MIDA	Miranda	1.01	225	AML	AML		
	comp=E,634µm,1.6s						
MIDA				AML	AML		
	comp=N,496µm,1.1s						
RNI2	Rionero Sannit	1.02	230	P	Pb	07 52 12.7	-1.6
SACR	S. Croce Del S	1.04	201	P	Pb	07 52 13.4	-1.1
TRTR	Tortoreto Alta	1.05	295	P	Pn	07 52 15.6	+0.6
TRTR				AML	AML		
	comp=N,1885µm,0.9s						
TRTR				AML	AML		
	comp=E,2310µm,1.2s						
T0110	Collepietro	1.06	263	AML	AML		
	comp=N,914µm,1.2s						
T0110				AML	AML		
	comp=E,986µm,0.4s						
T0110				AML	AML		
	comp=E,985µm,0.4s						
T0110				AML	AML		
	comp=E,984µm,0.4s						
CERA	Filignano	1.17	229	P	Pn	07 52 16.6	-0.1
CERA				AML	AML		
	comp=N,370µm,0.7s						
CERA				AML	AML		
	comp=E,381µm,0.5s						
VAGA	Valle Agricola	1.19	218	P	Pn	07 52 15.5	-1.5
VAGA				AML	AML		
	comp=E,392µm,0.6s						
VAGA				AML	AML		
	comp=N,670µm,0.9s						
VAGA				AML	AML		
	comp=N,689µm,0.9s						
VAGA				AML	AML		
	comp=E,392µm,0.6s						
VAGA				AML	AML		
	comp=E,402µm,0.6s						
FAGN	Fagnano	1.20	266	P	Pn	07 52 16.6	-0.5
FAGN				S	Sg	07 52 35.8	+2.2
FAGN				AML	AML		
	comp=E,1980µm,0.5s						
FAGN				AML	AML		
	comp=N,1335µm,1.5s						
TERO	Teramo	1.21	283	P	Pn	07 52 15.9	-1.3
TERO				S	Sg	07 52 35.3	+1.5
TERO				AML	AML		
	comp=E,263µm,0.5s						
TERO				AML	AML		
	comp=N,226µm,0.5s						
OFFI	Offida	1.25	297	AML	AML		
	comp=E,1485µm,0.6s						
OFFI				AML	AML		
	comp=N,1785µm,0.7s						
VITU	Vitulano (BN)	1.26	200	P	Pb	07 52 18.8	+0.6
VITU				AML	AML		
	comp=E,496µm,0.4s						
VITU				AML	AML		
	comp=N,2940µm,1.4s						
VITU				AML	AML		
	comp=N,449µm,0.5s						
VITU				AML	AML		
	comp=E,8725µm,1.6s						
VVLD	Villa Vallelon	1.27	248	P	Pn	07 52 16.8	-1.4
VVLD				S	Sg	07 52 37.2	+1.4
VVLD				AML	AML		
	comp=E,180µm,1.3s						
VVLD				AML	AML		
	comp=N,140µm,0.6s						
VVLD				AML	AML		
	comp=N,140µm,0.6s						
VVLD				AML	AML		
	comp=E,180µm,1.3s						
CAMP	Campotosto	1.34	278	AML	AML		
	comp=N,274µm,0.5s						
CAMP				AML	AML		
	comp=E,320µm,0.6s						
PAOL	Paolisi	1.42	200	P	Pn	07 52 20.5	+0.5
PAOL				AML	AML		
	comp=E,152µm,0.5s						
PAOL				AML	AML		
	comp=N,191µm,0.4s						
PAOL				AML	AML		
	comp=E,151µm,0.5s						
SNAL	S. Angelo Dei	1.44	180	P	Pn	07 52 20.3	-0.1
SNAL				AML	AML		
	comp=N,290µm,0.7s						
SNAL				AML	AML		
	comp=E,282µm,0.7s						
RM33	Pellescritta (	1.48	276	P	Pn	07 52 21.6	+0.7
RM33				S	Sg	07 52 43.2	+0.8
RM33				AML	AML		
	comp=N,374µm,0.9s						
RM33				AML	AML		
	comp=N,374µm,0.9s						
RM33				AML	AML		
	comp=E,318µm,0.6s						
PALZ	Palazzo San Ge	1.53	158	P	Pb	07 52 22.3	-0.5
LNSS	Leonessa	1.62	279	P	Pn	07 52 23.9	+1.0
LNSS				AML	AML		
	comp=E,469µm,0.5s						
LNSS				AML	AML		
	comp=N,301µm,1.0s						
CSP1	Cessapalombo	1.64	297	P	Pn	07 52 24.2	+1.1
FDMO	Fiordimonte	1.70	294	P	Pn	07 52 24.7	+0.8
CERT	Cerreto	1.70	257	P	Pn	07 52 25.1	+1.1
CERT				AML	AML		
	comp=E,160µm,0.7s						
CERT				AML	AML		
	comp=N,114µm,0.8s						
CING	Cingoli	1.79	305	P	Pn	07 52 25.5	+0.3
CING				AML	AML		
	comp=N,228µm,1.2s						
CING				AML	AML		
	comp=E,326µm,0.6s						
CESI	CESI - Serrava	1.81	291	P	Pb	07 52 27.0	-0.6
CESI				AML	AML		
	comp=E,59µm,0.4s						
CESI				AML	AML		
	comp=N,118µm,1.2s						
EL6	Elcito	1.82	303	P	Pn	07 52 25.9	+0.3
CDRU	Civita di Ruta	1.88	178	P	Pn	07 52 27.1	+0.7
CDRU				AML	AML		
	comp=E,88µm,0.5s						
CDRU				AML	AML		
	comp=N,59µm,0.7s						
SSFR	Montelago di S	2.07	302	P	Pn	07 52 29.4	+0.3
SSFR				AML	AML		
	comp=E,258µm,0.2s						
SSFR				AML	AML		
	comp=N,208µm,0.2s						
NOCI	Noci	2.11	138	⇑P	Pn	07 52 29.5	0.0
NOCI				AML	AML		
	comp=E,204µm,0.3s						
NOCI				AML	AML		
	comp=N,224µm,0.4s						
ATFO	Monte Foce - G	2.18	298	P	Pn	07 52 31.4	+0.9
ATFO				AML	AML		
	comp=E,180µm,0.9s						
ATFO				AML	AML		
	comp=N,133µm,0.8s						
BULG	Bulgheria - Ca	2.29	177	⇑P	Pn	07 52 32.5	+0.4
BULG				AML	AML		
	comp=E,71µm,0.6s						
BULG				AML	AML		
	comp=N,93µm,0.6s						
CPGN	Carpegna, Ital	2.55	305	P	Pn	07 52 37.1	+1.4
CPGN				AML	AML		
	comp=E,144µm,1.6s						
CPGN				AML	AML		
	comp=N,148µm,1.4s						
SFI	Santa Sofia	2.90	303	P	Pn	07 52 42.5	+2.2
SPS2	Spezzano della	3.19	164	P	Pb	07 52 48.8	-2.3
OBKA	Obir	4.17	354	*i* Pn	Pn	07 52 58.3	+0.4
	comp=N,2.1nm,0.2s						
SOKA	Soboth	4.31	358	*i* Pn	Pn	07 53 00.2	+0.3
	comp=N,1.1nm,0.2s						
ROVR	Rover Verones	4.43	319	⇑P	Pn	07 53 00.6	-1.0
SELS	Selova	4.44	77	*e*Pn	Pn	07 53 03.1	+1.5
CTI	Castel Tesino	4.48	326	P	Pn	07 53 01.4	-0.8
ABTA	Abfaltersbach	4.78	337	*i* Pn	Pn	07 53 06.0	-0.3
	comp=N,0.3nm,0.1s						
ABTA				*i* Sn	Sn	07 53 59.5	-2.1
	comp=N,1.2nm,0.2s						
BARS	Barje	4.90	83	*e*Pn	Pn	07 53 09.0	+1.1
CLTB	Caltabellotta	5.02	198	⇓P	Pg	07 53 28.4	-2.5
ABSI	Aberstueckl	5.17	329	⇑P	Pn	07 53 11.2	-0.5
WTTA	Wattenberg	5.51	334	*e*Pn	Pn	07 53 17.5	+1.0
	comp=N,1.8nm,0.2s						
WTTA				*i* Sn	Sn	07 54 20.0	+0.3
	comp=N,7.3nm,0.4s						
MOA	Molln	5.52	353	*i* Pn	Pn	07 53 16.8	+0.3
	comp=N,0.6nm,0.2s						
MOA				*i* Sn	Sn	07 54 19.3	-0.4
	comp=N,1.0nm,0.2s						
WATA	Walderalm	5.60	334	*i* Pn	Pn	07 53 18.5	+0.9
	comp=N,4.1nm,0.3s						
WATA				*i* Sn	Sn	07 54 22.1	+0.4
	comp=N,5.3nm,0.4s						
SQTA	Sankt Quirin	5.62	331	*e*Pn	Pn	07 53 18.6	+0.7
	comp=N,1.4nm,0.2s						
SQTA				*e*Sn	Sn	07 54 23.2	+0.9
	comp=N,8.4nm,0.4s						
FETA	Feichten	5.64	327	*e*Pn	Pn	07 53 18.4	+0.2
	comp=N,0.2nm,0.2s						
FETA				*e*Sn	Sn	07 54 23.2	+0.4
	comp=N,8.3nm,0.5s						
MOTA	Moosalm	5.77	331	*i* Pn	Pn	07 53 21.0	+1.1
	comp=N,0.6nm,0.2s						
MOTA				*e*Sn	Sn	07 54 25.9	0.0
	comp=N,4.2nm,0.3s						
RETA	Reutte	6.01	330	*i* Pn	Pn	07 53 23.6	+0.4
	comp=N,0.3nm,0.2s						
RETA				*e*Sn	Sn	07 54 31.0	-0.8
	comp=N,3.6nm,0.3s						
DAVA	Damuels	6.21	324	*i* Pn	Pn	07 53 27.8	+1.8
	comp=N,1.3nm,0.2s						
DAVA				*i* Sn	Sn	07 54 34.7	-2.0
	comp=N,12nm,0.5s						

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*SOME **08** 07:55:51.9, 39°.40N×75°.43E, h0^{km}*

*IDC **08** 07:55:58.0±1.4, 39°.34N×75°.45E, h0^{km}, mb3.9/7, mb1 3.9/13, mb1mx3.6/78, mbtmp3.8/13, ML3.3/5, MS3.1/4, Ms1 3.1/4, ms1mx2.6/60, Error ellipse: s-maj=23.3km s-min=20.7km az=33.0*

*KRNET **08** 07:56:02.8±0.1, 39°.69N×75°.52E, mb4.2*

*NNC **08** 07:56:06.8±1.3, 39°.90N×75°.38E, h0^{km}, mb4.4, mpv4.1, Error ellipse: s-maj=10.3km s-min=7.0km az=146.0*

ISC 08 07:56:02.1±1.4, **39°.79N**±0°.05×**75°.47E**±0°.03, **h14**^{km}±9^{km}, **n90**, σ**1**^{s}**53**/130, **mb3.9**/7, **38C-14D**, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.53	279	⇑*e*P	Pg	07 56 32.8	+1.3
	baz=83						
SFK				⇑*e*S	Sg	07 56 54.8	+3.4
	baz=83						
SALK	Salom-Alik	1.66	311	⇑*e*P	Pg	07 56 36.4	+2.3
	baz=13						
SALK				⇑*e*S	Sg	07 56 59.9	+4.2
	baz=13						
OHH	Osh	2.18	290	⇑*i*P	Pg	07 56 43.2	-0.8
	baz=93						
OHH				⇑*i*S	Sg	07 57 13.1	+0.8
	baz=93						
ULHL	Ulahol	2.52	13	P	Pg	07 56 48.4	-2.0
	SNR=51						
ULHL	Ulahol	2.52	13	⇑*i*P	Pg	07 56 48.8	-1.6
	baz=12						
ULHL				⇑*i*S	Sg	07 57 22.3	-0.8
	baz=12						
UCH	Uchtor	2.54	344	P	Pb	07 56 48.5	+0.7
	SNR=73						
UCH	Uchtor	2.54	344	⇑*e*P	Pb	07 56 48.8	+1.1
	baz=44						
UCH				⇑*i*S	Sg	07 57 23.4	-0.4
	baz=44						
KDJ	Kajisay	2.67	28	⇑*i*P	Pb	07 56 50.4	+0.6
	baz=27						
KDJ				⇑*i*S	Sg	07 57 25.2	-2.8
	baz=27						
AML	Almayashu	2.69	331	P	Pb	07 56 50.2	-0.2
	SNR=47						
AML	Almayashu	2.69	331	⇓*e*P	Pb	07 56 50.4	0.0
	baz=31						
AML				⇓*i*S	Sg	07 57 27.3	-1.5
	baz=31						
BOOM	Boomskoye usch	2.72	7	⇑*e*P	Pb	07 56 51.7	+1.1
	baz=6.0						
BOOM				⇑*i*S	Sg	07 57 27.4	-2.1
	baz=6.0						
DRK	Karamyk	2.85	265	⇓*i*P	Pb	07 56 52.6	-0.3
	baz=67						
DRK				⇓*i*S	Sb	07 57 28.5	+0.7
	baz=67						
KBK	Karagaybulak	2.89	352	P	Pb	07 56 53.8	+0.3
	SNR=58						
KBK	Karagaybulak	2.89	352	⇑*i*P	Pb	07 56 54.1	+0.6
	baz=52						
KBK				⇑*i*S	Sb	07 57 31.5	+2.7
	baz=52						
AAK	Ala-Archa	2.94	346	Pn	Pb	07 56 54.3	0.0
	23nm,0.3s,baz=153,slow=7.3,SNR=125						
AAK				Sn	Sb	07 57 32.4	+2.3
	12nm,0.3s,baz=278,slow=18,SNR=6.9						
AAK				LR	LR	07 58 19.2	
	comp=Z,213nm,19.1s,baz=161,slow=42						
AAK	Ala-Archa	2.94	346	P	Pb	07 56 54.2	-0.1
	SNR=57						
AAK	Ala-Archa	2.94	346	⇑Pn	Pb	07 56 53.9	-0.4
	134nm,0.8s						
AAK				⇑Sn	Sb	07 57 31.0	+0.9
	223nm,0.8s						
AAK	Ala-Archa	2.94	346	⇓*i*P	Pb	07 56 54.7	+0.4
	baz=46						
AAK				⇓*i*S	Sb	07 57 32.8	+2.7
	baz=46						
TKM2	Tokmak 2	3.13	2	P	Pb	07 56 57.1	-0.5
	SNR=64						
TKM2	Tokmak 2	3.13	2	⇑Pn	Pb	07 56 56.9	-0.7
	39nm,0.5s						
TKM2				⇓Lg	Lg	07 57 42.4	
	216nm,0.7s						
TKM2	Tokmak 2	3.13	2	⇑*e*P	Pb	07 56 57.4	-0.2
	baz=1.0						

TKM2	baz=1.0			⇑*i*S	Sb	07 57 37.0	+1.3
EKS2	Erkin-Say SNR=22	3.14	337	P	Pb	07 56 56.9	-0.8
EKS2	Erkin-Say baz=37	3.14	337	⇑*e*P	Pb	07 56 57.5	-0.2
EKS2	baz=37			⇑*i*S	Sb	07 57 37.5	+1.6
CHMS	Chumysh SNR=53	3.25	351	P	Pb	07 56 58.6	-1.0
CHMS	Chumysh baz=50	3.25	351	⇑*e*P	Pb	07 56 58.6	-1.0
CHMS	baz=50			⇑*i*S	Sb	07 57 40.1	+1.1
KST	Kastek 81nm,0.7s	3.27	6	*e*P	Pb	07 56 59.3	-0.7
KST	547nm,0.9s			*e*S	Sg	07 57 47.9	+0.8
KST	Kastek 81nm,0.7s	3.27	6	Pg	Pb	07 56 59.3	-0.7
KST	547nm,0.9s			Lg	Lg	07 57 48.5	
IZV	Izvestkoviy 82nm,0.6s	3.35	14	*e*P	Pb	07 57 00.7	-0.8
IZV	300nm,0.7s			*e*S	Sg	07 57 50.4	+0.6
IZV	Izvestkoviy 82nm,0.6s	3.35	14	Pg	Pb	07 57 00.7	-0.8
IZV	300nm,0.7s			Lg	Lg	07 57 50.7	
MRKS	Merke 61nm,0.6s	3.40	331	*e*P	Pb	07 57 00.0	-2.2
MRKS	117nm,0.6s			*e*S	Sg	07 57 49.3	-2.0
MRKS	Merke 61nm,0.6s	3.40	331	Pg	Pb	07 57 00.4	-1.8
MRKS	117nm,0.6s			Lg	Lg	07 57 50.8	
MTBS	Maitube 31nm,0.5s	3.41	12	*e*P	Pb	07 57 01.2	-1.1
MTBS	132nm,0.6s			*e*S	Sg	07 57 51.2	-0.5
MTBS	Maitube 31nm,0.5s	3.41	12	Pg	Pb	07 57 01.3	-1.1
MTBS	132nm,0.6s			Lg	Lg	07 57 52.0	
ANVS	Anan'yevo baz=27	3.42	28	⇑*i*P	Pb	07 57 01.0	-1.5
ANVS	baz=27			⇑*i*S	Sb	07 57 42.8	-1.2
TNSS	Tian-Shan 52nm,0.5s	3.43	18	*e*P	Pb	07 57 01.5	-1.3
TNSS	116nm,0.7s			*e*S	Sg	07 57 52.0	-0.2
TNSS	Tian-Shan 52nm,0.5s	3.43	18	Pg	Pb	07 57 01.5	-1.3
TNSS	116nm,0.7s			Lg	Lg	07 57 53.3	
DGS	Degeres 124nm,0.5s	3.45	4	*e*P	Pb	07 57 01.6	-1.6
DGS	203nm,0.7s			*e*S	Sg	07 57 51.9	-1.2
DGS	Degeres 124nm,0.5s	3.45	4	Pg	Pb	07 57 01.9	-1.2
DGS	203nm,0.7s			Lg	Lg	07 57 53.1	
PRZ	Przheval'sk baz=37	3.48	39	⇑*e*P	Pb	07 57 01.7	-1.9
PRZ	baz=37			⇑*i*S	Sb	07 57 44.8	-1.1
MNAS	Manas baz=22	3.50	321	⇑*e*P	Pb	07 57 02.3	-1.6
MNAS	baz=22			⇑*i*S	Sb	07 57 45.1	-1.3
USP	Ospenovka SNR=32	3.55	348	P	Pb	07 57 02.2	-2.5
USP	Ospenovka baz=48	3.55	348	⇑*i*P	Pb	07 57 02.9	-1.8
USP	baz=48			⇑*i*S	Sb	07 57 47.2	-0.4
MDOK	Medeo 29nm,0.6s	3.57	19	*e*P	Pb	07 57 04.4	-0.7
MDOK	287nm,0.8s			*e*S	Sg	07 57 56.6	-0.2
MDOK	Medeo 14nm,0.4s	3.57	19	⇓Pn	Pb	07 57 03.3	-1.9
MDOK	47nm,0.8s			Pg	Pg	07 57 09.9	-0.6
MDOK	349nm,0.8s			⇓Lg	Lg	07 57 57.4	
MDOK	Medeo 29nm,0.6s	3.57	19	Pg	Pb	07 57 04.4	-0.7
MDOK	287nm,0.8s			Lg	Lg	07 57 56.7	
BTK	Batken baz=77	3.59	276	⇓*e*P	Pb	07 57 03.2	-2.2
BTK	baz=77			⇓*i*S	Sb	07 57 46.9	-1.9
KNDC	Almaty	3.60	18	⇑Pn	Pb	07 57 02.6	-3.0
KNDC	126nm,0.6s			⇓Pg	Pg	07 57 10.7	-0.4
KNDC	1μm,0.7s			⇑Lg	Lg	07 57 58.9	
KOTS	Kotyrbulak 20nm,0.6s	3.65	19	*e*P	Pb	07 57 05.8	-0.7
KOTS	805nm,0.8s			*e*S	Sg	07 57 59.2	-0.2
KOTS	Kotyrbulak 20nm,0.6s	3.65	19	Pg	Pb	07 57 06.3	-0.2
KOTS	805nm,0.8s			Lg	Lg	07 58 00.4	
SGDS	Sogindy 27nm,0.5s	3.71	351	Pg	Pb	07 57 06.2	-1.3
SGDS	83nm,0.7s			Lg	Lg	07 57 59.6	
TRKS	Terek-Say baz=0.0	3.72	299	⇑*i*P	Pb	07 57 04.4	-3.3
TRKS	baz=0.0			⇑*i*S	Sb	07 57 49.3	-3.4
KRBS	Karabastau 44nm,0.5s	3.90	2	*e*P	Pb	07 57 10.3	-0.4
KRBS	97nm,1.0s			*e*S	Sg	07 58 06.7	-0.7
KRBS	Karabastau 44nm,0.5s	3.90	2	Pg	Pb	07 57 10.2	-0.6
KRBS	97nm,1.0s			Lg	Lg	07 58 06.8	
SATY	Saty 16nm,0.9s	3.94	33	*e*P	Pb	07 57 11.6	+0.2
SATY	76nm,1.1s			*e*S	Sg	07 58 08.6	0.0
SATY	Saty 16nm,0.9s	3.94	33	Pg	Pb	07 57 11.6	+0.2
SATY	76nm,1.1s			Lg	Lg	07 58 08.9	
KTBS	Karatobe 25nm,0.7s	4.02	13	*e*P	Pb	07 57 12.6	-0.2
KTBS	264nm,1.0s			*e*S	Sg	07 58 10.6	-0.6
KTBS	Karatobe 25nm,0.7s	4.02	13	Pg	Pb	07 57 12.5	-0.2
KTBS	264nm,1.0s			Lg	Lg	07 58 11.1	
KUU	Kurty 9.5nm,0.6s	4.15	9	*e*P	Pb	07 57 14.9	0.0
KUU	205nm,0.8s			*e*S	Sg	07 58 14.2	-1.1
KUU	Kurty 9.5nm,0.6s	4.15	9	Pg	Pb	07 57 14.6	-0.3
KUU	205nm,0.8s			Lg	Lg	07 58 14.2	
KURS	Kuram 30nm,1.0s	4.21	28	*e*P	Pb	07 57 16.8	+0.8
KURS	44nm,0.9s			*e*S	Sg	07 58 17.6	+0.3
KURS	Kuram 30nm,1.0s	4.21	28	Pg	Pb	07 57 16.7	+0.8
KURS	44nm,0.9s			Lg	Lg	07 58 17.8	
UZB	Uzynbulak 16nm,0.7s	4.28	37	*e*P	Pb	07 57 17.9	+0.6
UZB	42nm,1.0s			*e*S	Sg	07 58 19.9	+0.2
UZB	Uzynbulak 16nm,0.7s	4.28	37	Pg	Pb	07 57 18.1	+0.8
UZB	42nm,1.0s			Lg	Lg	07 58 20.0	
KPKS	Kokpek 12nm,0.7s	4.39	32	*e*P	Pb	07 57 18.9	-0.1
KPKS	147nm,0.6s			*e*S	Sg	07 58 21.8	-1.3
SHLS	Shalkode 18nm,0.5s	4.50	40	*e*P	Pg	07 57 26.8	-1.6
SHLS	35nm,0.6s			*e*S	Sg	07 58 35.0	+8.3
SHLS	Shalkode 18nm,0.5s	4.50	40	Pg	Pg	07 57 26.9	-1.4
SHLS	35nm,0.6s			Lg	Lg	07 58 35.2	
PDGK	Podgornoye 4.6nm,0.9s	4.64	39	Pg	Pb	07 57 24.5	+1.1
PDGK	19nm,1.0s			Lg	Lg	07 58 31.2	
IUG	Iuzhnay 199nm,0.3s	4.74	301	*e*P	Pb	07 57 25.0	0.0
IUG	85nm,0.4s			*e*S	Sg	07 58 32.1	-2.2
IUG	Iuzhnay 307nm,0.4s	4.74	301	Pg	Pb	07 57 21.0	-4.0
IUG	59nm,0.5s			Lg	Lg	07 58 26.5	
KK02	Karatay Array 3.5nm,0.6s,baz=127,slow=12	4.98	313	⇑Pn	Pn	07 57 19.2	+2.7
KK02	9.6nm,0.8s,baz=128,slow=14			⇓Pg	Pg	07 57 34.3	-3.2
KK02	23nm,0.6s,baz=128,slow=28			⇓Lg	Lg	07 58 42.7	
KTMS	Ketmen 6.1nm,0.7s	5.17	43	*e*P	Pb	07 57 33.5	+1.2
KTMS	18nm,0.6s			*e*S	Sg	07 58 46.5	-1.5
KTMS	Ketmen 6.1nm,0.7s	5.17	43	Pg	Pb	07 57 34.6	+2.2
KTMS	18nm,0.6s			Lg	Lg	07 58 48.6	
BTLS	Baital 6.7nm,0.9s	5.35	349	*e*P	Pb	07 57 35.8	+0.5
BTLS	30nm,0.7s			*e*S	Sg	07 58 50.8	-3.0
BTLS	Baital 6.7nm,0.9s	5.35	349	Pg	Pb	07 57 36.4	+1.0
BTLS	30nm,0.7s			Lg	Lg	07 58 51.4	
DJR	Jarkent	5.56	34	Pg	Pb	07 57 42.0	+3.1
DJR				Lg	Lg	07 59 01.0	
MKAR	Makanchi Array 0.1nm,0.3s,baz=211,slow=15,SNR=7.4	8.58	33	Pn	Pn	07 58 11.0	+5.1
MKAR	0.1nm,0.3s,baz=222,slow=23,SNR=2.3			Lg	Lg	08 00 30.2	
MKAR	comp=Z,83nm,19.2s,baz=196,slow=39			LR	LR	08 01 48.6	
KURBB	Kurchatov Arra baz=197,slow=12,SNR=1.1	11.04	10	Pn	Pn	07 58 42.1	+2.6
KURBB	baz=205,slow=24,SNR=1.9			Lg	Lg	08 01 49.3	
BVAR	Borovoye Array 0.1nm,0.3s,baz=180,slow=15,SNR=4.3	13.69	347	Pn	Pn	07 59 15.9	+0.2
BVAR	0.2nm,0.3s,baz=170,slow=30,SNR=3.6			Lg	Lg	08 03 07.3	
AB31	Akbulak array 0.7nm,0.5s,baz=123,slow=13,SNR=3.3	14.54	316	Pn	Pn	07 59 27.7	+0.4
ZALV	Zalesovo Beam 0.1nm,0.3s,baz=215,slow=12,SNR=4.6	15.52	21	Pn	P	07 59 42.4	-2.2
ZALV	0.1nm,0.3s,baz=216,slow=26,SNR=1.3			Lg	Lg	08 04 10.8	
AKTO	Aktyubinsk 0.2nm,0.3s,baz=126,slow=14,SNR=2.4	16.24	317	Pn	Pn	07 59 50.0	+0.3
ARU	Arti 3.4nm,0.2s,baz=208,slow=8.5,SNR=3.1	20.02	332	P	Pn	08 00 36.3	+0.3
SONM	Songino Array 0.5nm,0.6s,baz=251,slow=9.0,SNR=3.2	23.60	60	P	P	08 01 12.6	+0.1
SONM	comp=Z,28nm,18.5s,baz=164,slow=35			LR	LR	08 09 56.0	
KIRV	Kirov comp=Z,91nm,18.1s,baz=145,slow=39	25.10	327	LR	LR	08 12 20.7	
FINES	FINESS Array B 2.6nm,0.7s,baz=112,slow=15,SNR=4.1	36.87	323	P	P	08 03 11.0	+1.3
ARCES	ARCESS Array B 1.5nm,0.5s,baz=106,slow=9.1,SNR=14	39.55	335	P	P	08 03 33.6	+1.4
GUMO	Guam 154nm,1.1s,baz=16,slow=2.3,SNR=3.8	65.64	92	P	P	08 06 44.0	-2.0
TORD	Torodi Ar. Bea 0.5nm,0.6s,baz=43,slow=4.6,SNR=4.1	69.28	270	P	P	08 07 07.2	-1.9
INK	Inuvik 0.8nm,0.5s,baz=325,slow=2.0,SNR=3.2	70.05	11	P	P	08 07 14.0	+1.0
YKA	Yellowknife Ar 0.7nm,0.7s,baz=346,slow=5.4,SNR=4.6	77.74	5	P	P	08 07 58.5	+0.4

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*IDC **08** 07:59:20.4±3.5, 38°.71N×141°.96E, h61^{km}±30^{km}, mb3.3/3, mb1 3.4/5, mb1mx3.0/75, mbtmp3.5/5, ML2.6/2, Error ellipse: s-maj=48.8km s-min=25.8km az=89.0*

*JMA **08** 07:59:24.7±0.1, 38°.53N×141°.72E, h54^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s202.00000°, δ28.00000°, λ98.00000°. NP2:ϕ_s13.00000°, δ62.00000°, λ86.00000°. Principal axes: T Plg73.0000°, Azm273.0000°; N Plg4.0000°, Azm15.0000°; P Plg17.0000°, Azm106.0000°;*

JMA Felt I J1.

ISC 08 07:59:21.4±1.4, 38°.54N±0°.05×142°.0E±0°.1, h61^{km}±8^{km}, n24, σ2^{s}.07/26, mb3.7/3, 2C-8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.47	241	⇑P	Pn	07 59 34.2	+1.1
JIKH				S	Sn	07 59 40.7	-0.9
JKMT	Kesennumamotoy	0.48	304	⇓P	Pn	07 59 34.6	+1.4
JKMT				*i* S	Sn	07 59 41.3	-0.5
JIO	Ouri	0.51	260	⇓P	Pn	07 59 34.2	+0.7
JIO				S	Sn	07 59 40.6	-1.6
OFUJ	Ofunato	0.59	336	⇑P	Pn	07 59 36.7	+2.2
OFUJ				S	Sn	07 59 45.0	+1.0
JMK	Ichinoseki	0.72	305	⇓P	Pn	07 59 37.3	+1.3
JMK				S	Sn	07 59 46.0	-0.7
JOU	Okura	1.05	261	⇓P	Pn	07 59 40.4	+0.3
JOM	Ohasama	1.07	330	⇓P	Pn	07 59 42.5	+2.0
JMM	Marumori	1.15	235	⇓P	Pn	07 59 41.8	+0.3
JMM				S	Sn	07 59 54.7	-1.7
JYK	Kaneyama	1.32	287	⇓P	Pn	07 59 44.5	+0.7
JRG	Rokugo	1.35	310	⇓P	Pn	07 59 45.4	+1.2
JFK	Kawauchi	1.46	217	P	Pn	07 59 46.9	+1.2
JFK				S	Sn	08 00 03.2	-0.7
JYS	Shirataka	1.54	259	P	Pn	07 59 47.4	+0.7
MJAR	Matsushiro Arr 0.2nm,0.3s,baz=39,slow=16,SNR=8.1	3.60	238	P	Pn	08 00 14.9	+0.1
MAT	Matsushiro	3.60	238	P	Pn	08 00 18.9	+4.1
MAT				*e*S	Sn	08 01 02.4	+6.3
ASAJ	Asahikawa 0.2nm,0.3s,baz=216,slow=14,SNR=1.9	5.59	5	P	Pn	08 00 38.5	-3.4
ASAJ	0.2nm,0.3s,baz=39,slow=16,SNR=1.7			S	Sn	08 01 44.3	-0.5
H11N2	WAKE ISLAND Hy baz=316,slow=76,SNR=116	28.57	124	T	T	08 35 32.1	
H11N1	WAKE ISLAND Hy baz=316,slow=76,SNR=116	28.58	124	T	T	08 35 46.6	
H11N3	WAKE ISLAND Hy baz=316,slow=76,SNR=101	28.59	124	T	T	08 35 36.8	
H11S1	WAKE ISLAND Hy baz=318,slow=76,SNR=64	29.34	126	T	T	08 36 30.1	
H11S3	WAKE ISLAND Hy baz=318,slow=76,SNR=100	29.34	126	T	T	08 36 30.2	
H11S2	WAKE ISLAND Hy baz=318,slow=76,SNR=78	29.35	126	T	T	08 36 31.6	
MKAR	Makanchi Array 0.2nm,0.4s,baz=78,slow=9.7,SNR=2.2	43.72	301	P	P	08 07 17.7	-2.7
KURBB	Kurchatov Arra 1.5nm,0.5s,baz=78,slow=8.1,SNR=6.6	45.45	307	P	P	08 07 32.8	-1.3
WRA	Warramunga Arr 0.3nm,0.5s,baz=5.0,slow=7.5,SNR=5.3	58.61	188	P	P	08 09 12.1	0.0

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*SOME **08** 08:05:00.1, 38°.83N×72°.87E, h0^{km}*

*NNC **08** 08:05:03.7±4.0, 38°.88N×73°.14E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=29.7km s-min=17.4km az=170.0*

ISC 08 08:05:06.7±2.7, 38°.9N±0°.1×72°.90E±0°.07, h10^{km}, n12, σ2^{s}.21/13, 5C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	Merke 6.2nm,0.5s	3.83	4	*e*P	Pb	08 06 15.1	+0.7
MRKS	13nm,0.4s			*e*S	Sg	08 07 09.7	0.0
MRKS	Merke 6.2nm,0.5s	3.83	4	Pg	Pb	08 06 15.1	+0.7
MRKS	13nm,0.4s			Lg	Lg	08 07 09.6	
IUG	Iuzhnay 238nm,0.6s	3.90	327	*e*P	Pb	08 06 14.0	-1.5
IUG	39nm,0.6s			*e*S	Sg	08 07 08.7	-3.1
IUG	Iuzhnay 238nm,0.6s	3.90	327	Pg	Pb	08 06 14.0	-1.5
IUG	39nm,0.6s			Lg	Lg	08 07 08.7	
AAK	Ala-Archa 6.8nm,0.5s	3.91	18	⇓Pg	Pb	08 06 13.0	-2.7
AAK	11nm,0.7s			⇑Lg	Lg	08 07 05.5	
TKM2	Tokmak 2 5.2nm,0.8s	4.49	26	⇑Pg	Pb	08 06 24.6	-1.1
TKM2	12nm,1.2s			⇑Lg	Lg	08 07 22.8	
KK02	Karatay Array 1.8nm,0.4s	4.55	337	⇓Pn	Pn	08 06 16.9	+1.3
KK02	9.4nm,0.7s			⇓Sn	Sn	08 07 12.9	+4.2
MDOK	Medeo 5.3nm,0.7s	5.27	35	⇑Pg	Pb	08 06 39.0	-0.1
MDOK	8.9nm,1.0s			Lg	Lg	08 07 46.8	
KTBS	Karatobe 3.0nm,0.5s	5.57	30	*e*P	Pb	08 06 45.9	+1.9
KTBS	6.6nm,0.7s			*e*S	Sg	08 08 03.1	-2.3
KTBS	Karatobe 3.0nm,0.5s	5.57	30	Pg	Pb	08 06 45.9	+1.9
KTBS	6.6nm,0.7s			Lg	Lg	08 08 03.1	
PDGK	Podgornoye 6.9nm,1.1s	6.64	46	⇓Lg	Lg	08 08 29.4	
AB31	Akbulak array 0.5nm,0.5s,baz=133,slow=13,SNR=14	13.89	322	⇑Pn	Pn	08 08 23.2	-0.2

IDC 08 08:08:19.8±5.5, 50°.11S×118°.90E, h0^{km}, mb3.3/2, mb1 3.6/2, mb1mx3.4/36, mbtmp3.3/2, Error ellipse: s-maj=324.3km s-min=58.7km az=104.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	Cape Leeuwin H baz=165	15.60	345	T	T	08 28 10.8	
H01W1	Cape Leeuwin H baz=165	15.60	345	T	T	08 28 12.6	
H01W3	Cape Leeuwin H baz=165	15.61	345	T	T	08 28 14.7	
ASAR	Alice Springs 0.5nm,0.8s,baz=206,slow=8.8,SNR=4.5	28.88	29	P	P	08 14 20.7	+0.5
WRA	Warramunga Arr 0.2nm,0.8s,baz=194,slow=10,SNR=1.2	32.51	28	P	P	08 14 51.5	-0.7
PDAR	Pinedale Array 0.1nm,0.4s,baz=193,slow=3.7,SNR=2.4	146.32	84	PKPbc	PKPdf	08 28 00.7	-0.1
YKA	Yellowknife Ar 0.4nm,0.6s,baz=267,slow=3.0,SNR=2.6	148.81	46	PKPbc	PKPbc	08 28 07.8	-0.1

IDC 08 08:09:37.3±2.2, 49°.97S×120°.08E, h0^{km}, mb3.9/4, mb1 4.1/4, mb1mx3.8/36, mbtmp3.9/4, MS3.5/3, Ms1 3.5/3, ms1mx3.1/22, Error ellipse: s-maj=57.6km s-min=50.6km az=138.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	Cape Leeuwin H baz=165,slow=74,SNR=20	15.68	342	T	T	08 29 25.0	
H01W1	Cape Leeuwin H baz=165,slow=74,SNR=16	15.68	342	T	T	08 29 24.7	
H01W3	Cape Leeuwin H baz=165,slow=74,SNR=19	15.70	342	T	T	08 29 25.7	
STKA	Stephens Creek 1.2nm,0.3s,baz=186,slow=9.2,SNR=2.1	24.17	50	P	P	08 14 53.4	-1.7
ASAR	Alice Springs 1.5nm,0.9s,baz=208,slow=9.3,SNR=9.2	28.40	27	P	P	08 15 34.4	+1.0
WRA	Warramunga Arr 1.1nm,1.1s,baz=193,slow=9.2,SNR=3.3	32.05	26	P	P	08 16 06.0	+0.4
MAW	Mawson comp=Z,64nm,18.5s,baz=62,slow=33	32.93	216	LR	LR	08 27 58.5	
LEM	Lembang comp=Z,36nm,21.1s,baz=214,slow=30	44.26	342	LR	LR	08 32 08.7	
CMAR	Chiang Mai Arr 0.7nm,0.3s,baz=184,slow=6.3,SNR=4.7	70.65	339	P	P	08 20 54.0	-0.5
PLCA	Paso Flores comp=Z,39nm,18.3s,baz=185,slow=34	89.19	172	LR	LR	09 00 54.1	
PDAR	Pinedale Array 0.8nm,0.8s,baz=190,slow=4.5,SNR=5.4	145.54	83	PKPbc	PKPdf	08 29 16.7	-0.4
YKA	Yellowknife Ar 0.6nm,0.8s,baz=267,slow=1.9,SNR=4.1	148.17	46	PKPbc	PKPbc	08 29 23.4	-0.4

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*KRNET **08** 08:12:00.5±0.1, 38°.73N×73°.28E, mb4.1*

*IDC **08** 08:12:00.2±2.1, 38°.74N×73°.23E, h0^{km}, mb3.9/4, mb1 3.8/8, mb1mx3.5/60, mbtmp3.7/8, ML3.0/4, MS3.8/2, Ms1 3.8/2, ms1mx2.7/49, Error ellipse: s-maj=38.3km s-min=21.8km az=157.0*

ISC 08 08:12:01.7±1.1, 38°.79N±0°.07×73°.27E±0°.06, h10^{km}, n15, σ1^{s}.73/21, mb3.8/4, 8C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk baz=4.0	1.33	301	⇓*i*P	Pn	08 12 26.1	-0.6
DRK	baz=4.0			⇓*i*S	Sg	08 12 44.8	+0.1
OHH	Osh baz=48	1.77	348	⇑*i*P	Pb	08 12 34.2	-0.1
OHH	baz=48			⇑*e*S	Sg	08 12 58.9	+0.3
BTK	Batken baz=6.0	2.28	304	⇑*e*P	Pb	08 12 41.5	-1.5
BTK	baz=6.0			⇑*i*S	Sb	08 13 11.4	+0.1
GAR	Garm baz=78	2.32	276	⇓*i*P	Pb	08 12 41.6	-2.0
GAR	baz=78			⇓*i*S	Sb	08 13 11.1	-1.2
TRKS	Terek-Say baz=30	3.18	330	⇑*i*P	Pn	08 12 53.1	+1.1
TRKS	baz=30			⇑*i*S	Sn	08 13 31.6	+1.5
CHGR	Chuyangaron baz=70	3.22	269	⇑*i*P	Pn	08 12 53.7	+1.3
CHGR	baz=70			⇑*i*S	Sn	08 13 32.5	+1.6
AAK	Ala-Archa 1.1nm,0.3s,baz=187,slow=8.4,SNR=15	3.95	13	Pn	Pb	08 13 06.8	-4.7
AAK	2.0nm,0.3s,baz=338,slow=20,SNR=6.2			Sn	Sb	08 13 59.7	+0.3
MKAR	Makanchi Array 0.1nm,0.3s,baz=224,slow=14,SNR=6.1	10.38	37	Pn	Pn	08 14 33.8	+3.2
AKTO	Aktyubinsk 0.1nm,0.3s,baz=119,slow=13,SNR=2.5	15.88	322	Pn	Pn	08 15 43.8	-1.5
ZALV	Zalesovo Beam 0.2nm,0.3s,baz=214,slow=10.0,SNR=2.0	17.09	24	Pn	P	08 16 01.0	-1.2
SONM	Songino Array 0.7nm,0.5s,baz=264,slow=9.5,SNR=6.9	25.57	59	P	P	08 17 30.9	+0.1
FINES	FINESS Array B 2.8nm,0.8s,baz=106,slow=10,SNR=1.7	36.65	324	P	P	08 19 06.8	-1.2
ARCES	ARCESS Array B 2.9nm,0.9s,baz=106,slow=6.7,SNR=4.0	39.75	336	P	P	08 19 34.8	+0.7
ARCES	comp=Z,124nm,18.6s,baz=310,slow=38			LR	LR	08 37 20.8	
TORD	Torodi Ar. Bea 0.3nm,0.7s,baz=54,slow=5.8,SNR=2.1	67.57	269	P	P	08 22 58.9	+0.3
HNR	Honiara comp=Z,35nm,18.4s,baz=63,slow=37	93.26	99	LR	LR	09 10 08.4	

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*IDC **08** 08:13:14.0±2.0, 39°.76N×77°.19E, h0^{km}, mb3.8/5, mb1 3.9/11, mb1mx3.6/63, mbtmp3.8/11, ML3.5/6, Error ellipse: s-maj=28.9km s-min=23.2km az=166.0*

*MOS **08** 08:13:15.0±2.1, 39°.47N×77°.04E, h24^{km}, mb4.3/4, Error ellipse: s-maj=12.8km s-min=4.7km az=95.7*

*SOME **08** 08:13:16.1, 40°.12N×76°.95E, h0^{km}*

*NNC **08** 08:13:21.5±0.8, 40°.28N×77°.03E, h0^{km}, mb4.7, mpv4.3,*

Error ellipse: s-maj=6.1km s-min=5.1km az=176.0
*KRNET **08** 08:13:23.9±0.1, 40°.45N×77°.06E, mb4.3*
ISC 08 08:13:17.8±1.8**, 40°.07N**±0°.06×**77°.01E**±0°.03**, h1**^{km}±10^{km}**,**
n130, σ2^{s}12/171**, mb4.0**/7**, 32C-15D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	2.06	4	⇑iP	Pn	08 13 55.0	+1.2
	baz=3.0						
KDJ				⇑iS	Sn	08 14 17.5	-2.8
	baz=3.0						
ULHL	Ulahol	2.25	345	P	Pn	08 13 58.1	+1.7
	SNR=132						
ULHL	Ulahol	2.25	345	⇑eP	Pn	08 13 58.6	+2.2
	baz=41						
ULHL				⇑iS	Sn	08 14 24.3	-0.7
	baz=41						
BOOM	Boomskoye usch	2.55	342	i PN	Pn	08 14 03.2	+2.7
BOOM	Boomskoye usch	2.55	342	⇑iP	Pn	08 14 03.2	+2.7
	baz=38						
BOOM				⇑iS	Sn	08 14 31.6	-0.7
	baz=38						
PRZ	Przheval'sk	2.63	23	ePN	Pn	08 14 04.1	+2.5
PRZ	Przheval'sk	2.63	23	⇓eP	Pn	08 14 04.1	+2.5
	baz=26						
PRZ				⇓iS	Sn	08 14 33.6	-0.7
	baz=26						
ANVS	Anan'yevo	2.76	10	⇑eP	Pn	08 14 05.5	+2.1
	baz=11						
ANVS				⇑iS	Sn	08 14 35.7	-1.7
	baz=11						
UCH	Uchtor	2.86	320	P	Pn	08 14 07.3	+2.2
	SNR=12						
UCH	Uchtor	2.86	320	i PN	Pb	08 14 08.9	-1.1
UCH	Uchtor	2.86	320	⇓iP	Pb	08 14 08.9	-1.1
	baz=14						
UCH				⇓iS	Sn	08 14 41.8	+1.4
	baz=14						
TNSS	Tian-Shan	2.96	359	eP	Pb	08 14 11.3	-0.4
	188nm,0.4s						
TNSS				eS	Sb	08 14 50.0	+1.4
	276nm,0.5s						
TNSS	Tian-Shan	2.96	359	ePb	Pn	08 14 09.5	+3.1
	baz=360						
TNSS				ePg	Pb	08 14 11.2	-0.4
	baz=360						
TNSS	Tian-Shan	2.96	359	Pg	Pb	08 14 11.3	-0.4
	188nm,0.4s						
TNSS				Lg	Lg	08 14 50.0	
	276nm,0.5s						
IZV	Izvestkoviy	2.98	354	eP	Pb	08 14 11.5	-0.3
	130nm,0.5s						
IZV				eS	Sb	08 14 50.2	+1.5
	476nm,0.6s						
IZV	Izvestkoviy	2.98	354	Pg	Pb	08 14 11.5	-0.3
	130nm,0.5s						
IZV				Lg	Lg	08 14 50.6	
	476nm,0.6s						
KBK	Karagaybulak	3.01	330	P	Pn	08 14 09.8	+2.9
	SNR=11						
KBK	Karagaybulak	3.01	330	i PN	Pn	08 14 10.3	+3.4
KBK	Karagaybulak	3.01	330	⇓iP	Pn	08 14 10.3	+3.4
	baz=25						
KBK				⇓iS	Sn	08 14 43.8	0.0
	baz=25						
TKM2	Tokmak 2	3.04	340	P	Pn	08 14 10.2	+2.9
	SNR=81						
TKM2	Tokmak 2	3.04	340	i PN	Pn	08 14 10.1	+2.8
TKM2	Tokmak 2	3.04	340	⇑Pn	Pn	08 14 10.0	+2.8
	70nm,0.3s,baz=147,slow=11						
TKM2				⇑Lg	Lg	08 14 52.4	
	233nm,0.7s,baz=147,slow=11						
TKM2	Tokmak 2	3.04	340	⇓iP	Pn	08 14 10.1	+2.8
	baz=36						
TKM2				⇓iS	Sn	08 14 43.5	-0.9
	baz=36						
KST	Kastek	3.07	346	eP	Pb	08 14 13.5	+0.1
	128nm,0.5s						
KST				eS	Sb	08 14 53.6	+2.2
	392nm,0.7s						
KST	Kastek	3.07	346	Pg	Pb	08 14 13.5	+0.1
	128nm,0.5s						
KST				Lg	Lg	08 14 54.5	
	392nm,0.7s						
MTBS	Maitube	3.09	352	eP	Pb	08 14 13.5	-0.1
	79nm,0.3s						
MTBS				eS	Sb	08 14 53.7	+1.9
	362nm,0.4s						
MTBS	Maitube	3.09	352	Pg	Pb	08 14 13.5	-0.1
	79nm,0.3s						
MTBS				Lg	Lg	08 14 53.7	
	362nm,0.4s						
MDOK	Medeo	3.09	1	eP	Pb	08 14 13.3	-0.4
	133nm,0.6s						
MDOK				eS	Sb	08 14 53.3	+1.3
	624nm,0.6s						
MDOK	Medeo	3.09	1	ePg	Pb	08 14 13.4	-0.3
	baz=1.5						
MDOK	Medeo	3.09	1	Pn	Pn	08 14 09.5	+1.5
	9.0nm,0.4s,baz=147,slow=11						
MDOK				⇑Pg	Pb	08 14 13.3	-0.4
	106nm,0.6s,baz=147,slow=11						
MDOK				⇑Lg	Lg	08 14 53.8	
	332nm,0.8s,baz=147,slow=11						
MDOK	Medeo	3.09	1	Pg	Pb	08 14 13.3	-0.4
	133nm,0.6s						
MDOK				Lg	Lg	08 14 53.8	
	624nm,0.6s						
AAA	Alma-Ata	3.14	359	eP	Pb	08 14 15.2	+0.8
	182nm,0.2s						
AAA				eS	Sb	08 14 56.2	+3.0
	817nm,0.7s						
AAA	Alma-Ata	3.14	359	Pg	Pb	08 14 15.2	+0.8
	182nm,0.2s						
AAA				Lg	Lg	08 14 56.2	
	817nm,0.7s						
KNDC	Almaty	3.15	359	PN	Pb	08 14 14.5	-0.1
KNDC	Almaty	3.15	359	⇑Pg	Pb	08 14 14.5	-0.1
	134nm,0.6s,baz=147,slow=11						
KOTS	Kotyrbulak	3.16	1	eP	Pb	08 14 15.0	+0.1
	187nm,0.3s						
KOTS				eS	Sb	08 14 56.2	+2.1
	883nm,0.6s						
KOTS	Kotyrbulak	3.16	1	Pg	Pb	08 14 15.0	+0.1
	187nm,0.3s						
KOTS				Lg	Lg	08 14 56.7	
	883nm,0.6s						
SATY	Saty	3.17	19	eP	Pb	08 14 15.6	+0.6
	74nm,0.5s						
SATY				eS	Sg	08 14 57.1	-2.4
	353nm,0.5s						
SATY	Saty	3.17	19	ePg	Pb	08 14 15.6	+0.6
	baz=22						
SATY	Saty	3.17	19	ePN	Pb	08 14 15.5	+0.6
SATY	Saty	3.17	19	Pg	Pb	08 14 15.6	+0.6
	74nm,0.5s						
SATY				Lg	Lg	08 14 57.1	
	353nm,0.5s						
AAK	Ala-Archa	3.19	324	Pn	Pn	08 14 12.1	+2.8
	23nm,0.3s,baz=137,slow=11,SNR=14						
AAK				Sn	Sb	08 14 56.3	+1.6
	26nm,0.3s,baz=328,slow=16,SNR=11						
AAK	Ala-Archa	3.19	324	P	Pb	08 14 16.1	+0.8
	SNR=9.8						
AAK	Ala-Archa	3.19	324	⇓Pn	Pn	08 14 12.8	+3.5
	70nm,0.7s,baz=147,slow=11						
AAK				⇓Lg	Lg	08 14 56.9	
	610nm,1.1s,baz=147,slow=11						
AAK	Ala-Archa	3.19	324	⇑iP	Pn	08 14 13.0	+3.7
	baz=19						
AAK				⇑iS	Sn	08 14 48.5	+0.5
	baz=19						
AML	Almayashu	3.24	310	i PN	Pb	08 14 14.7	-1.7
AML	Almayashu	3.24	310	⇑iP	Pb	08 14 14.7	-1.7
	baz=5.0						
AML				⇑iS	Sn	08 14 52.2	+2.5
	baz=5.0						
FRU1	Bishkek	3.27	328	i PN	Pn	08 14 14.2	+3.9
FRU1				i S	Sb	08 14 57.7	+0.6
FRU1	Bishkek	3.27	328	⇓iP	Pn	08 14 14.2	+3.9
	baz=23						
FRU1				⇓iS	Sn	08 14 50.7	+0.8
	baz=23						
DGS	Degeres	3.30	344	eP	Pb	08 14 17.6	+0.3
	176nm,0.6s						
DGS				eS	Sb	08 15 00.9	+2.8
	357nm,0.7s						
DGS	Degeres	3.30	344	Pg	Pb	08 14 17.6	+0.3
	176nm,0.6s						
DGS				Lg	Lg	08 15 00.9	
	357nm,0.7s						
CHMS	Chumysh	3.38	331	P	Pn	08 14 14.7	+2.9
	SNR=25						
CHMS	Chumysh	3.38	331	i PN	Pn	08 14 14.7	+2.9
CHMS	Chumysh	3.38	331	⇑iP	Pn	08 14 14.7	+2.9
	baz=27						
CHMS				⇑iS	Sn	08 14 52.4	-0.2
	baz=27						
UZB	Uzynbulak	3.42	25	eP	Pb	08 14 19.9	+0.5
	59nm,0.4s						
UZB				eS	Sb	08 15 04.7	+3.1
	148nm,0.6s						
UZB	Uzynbulak	3.42	25	ePg	Pb	08 14 20.4	+1.0
	baz=30						
UZB	Uzynbulak	3.42	25	ePN	Pb	08 14 20.4	+1.0
UZB	Uzynbulak	3.42	25	Pg	Pb	08 14 19.9	+0.5
	59nm,0.4s						
UZB				Lg	Lg	08 15 04.7	
	148nm,0.6s						
KURS	Kuram	3.52	14	eP	Pb	08 14 21.4	+0.4
	56nm,0.8s						
KURS				eS	Sb	08 15 06.8	+2.5
	135nm,0.6s						
KURS	Kuram	3.52	14	Pg	Pb	08 14 21.4	+0.4
	56nm,0.8s						
KURS				Lg	Lg	08 15 06.8	
	135nm,0.6s						
EKS2	Erkin-Say	3.55	318	P	Pn	08 14 17.9	+3.7
	SNR=9.6						
EKS2	Erkin-Say	3.55	318	i PN	Pn	08 14 17.7	+3.5
EKS2	Erkin-Say	3.55	318	⇑iP	Pn	08 14 17.7	+3.5
	baz=13						
EKS2				⇑iS	Sn	08 14 58.3	+1.3
	baz=13						
SHLS	Shalkode	3.59	30	eP	Pg	08 14 26.9	+0.3
	108nm,0.4s						
SHLS				eS	Sg	08 15 16.6	+3.5
	403nm,0.5s						
SHLS	Shalkode	3.59	30	ePg	Pg	08 14 27.4	+0.8
	baz=38						
SHLS	Shalkode	3.59	30	ePN	Pg	08 14 27.4	+0.8
SHLS	Shalkode	3.59	30	Pg	Pg	08 14 26.9	+0.3
	108nm,0.4s						
SHLS				Lg	Lg	08 15 16.6	
	403nm,0.5s						
KPKS	Kokpek	3.62	20	eP	Pb	08 14 23.6	+1.0
	72nm,0.6s						
KPKS				eS	Sb	08 15 10.7	+3.6
	363nm,0.6s						
KPKS	Kokpek	3.62	20	ePg	Pb	08 14 23.7	+1.0
	baz=23						
KPKS	Kokpek	3.62	20	ePN	Pb	08 14 23.6	+1.0
KTBS	Karatobe	3.65	356	eP	Pb	08 14 22.9	-0.2
	92nm,0.3s						
KTBS				eS	Sb	08 15 09.7	+1.8
	318nm,0.5s						
KTBS	Karatobe	3.65	356	Pg	Pb	08 14 22.9	-0.2
	92nm,0.3s						
KTBS				Lg	Lg	08 15 10.2	
	318nm,0.5s						
USP	Ospenovka	3.71	330	P	Pn	08 14 18.8	+2.5
	SNR=5.8						
USP	Ospenovka	3.71	330	i PN	Pn	08 14 19.5	+3.2
USP	Ospenovka	3.71	330	⇑iP	Pn	08 14 19.5	+3.2
	baz=27						
USP				⇑iS	Sn	08 15 00.2	-0.4
	baz=27						
PDGK	Podgornoye	3.75	29	PN	Pn	08 14 18.6	+1.7
PDGK	Podgornoye	3.75	29	Pg	Pb	08 14 25.9	+1.1
	25nm,0.5s						
PDGK				Lg	Lg	08 15 14.9	
	218nm,0.7s						
PDGK	Podgornoye	3.75	29	⇑Pn	Pn	08 14 18.6	+1.7
	5.3nm,0.5s						
PDGK				⇑Pg	Pb	08 14 25.8	+0.9
	53nm,0.6s						
PDGK				⇑Lg	Lg	08 15 15.0	
	492nm,0.8s						
KRBS	Karabastau	3.76	345	eP	Pb	08 14 25.7	+0.7
	121nm,0.7s						
KRBS				eS	Sb	08 15 14.5	+3.4
	540nm,0.7s						
KRBS	Karabastau	3.76	345	Pg	Pb	08 14 25.7	+0.7
	121nm,0.7s						
KRBS				Lg	Lg	08 15 14.5	
	540nm,0.7s						
SGDS	Sogindy	3.82	333	Pg	Pb	08 14 26.0	-0.1
	45nm,0.6s						
SGDS				Lg	Lg	08 15 14.9	
	69nm,0.6s						
KUU	Kurty	3.85	353	eP	Pb	08 14 27.3	+0.7
	36nm,0.5s						
KUU				eS	Sb	08 15 17.0	+3.3
	242nm,0.6s						
KUU	Kurty	3.85	353	ePg	Pb	08 14 26.9	+0.2
	baz=353						
KUU	Kurty	3.85	353	ePN	Pb	08 14 26.8	+0.2
KUU	Kurty	3.85	353	Pg	Pb	08 14 27.3	+0.7
	36nm,0.5s						
KUU				Lg	Lg	08 15 17.0	
	242nm,0.6s						
MRKS	Merke	3.90	314	eP	Pb	08 14 28.3	+0.8
	55nm,0.6s						
MRKS				eS	Sb	08 15 18.9	+3.6
	97nm,0.6s						
MRKS	Merke	3.90	314	Pg	Pb	08 14 28.3	+0.8
	55nm,0.6s						
MRKS				Lg	Lg	08 15 18.9	
	97nm,0.6s						
MNAS	Manas	4.17	307	⇑eP	Pn	08 14 27.9	+5.2
	baz=2.0						
MNAS				⇑iS	Sn	08 15 14.4	+2.3
	baz=2.0						
BLB	Baldybastay	4.17	15	Pg	Pb	08 14 33.0	+1.0
	171nm,0.4s						
BLB				Lg	Lg	08 15 26.8	
	219nm,0.3s						
ARXS	Arharly	4.18	8	eP	Pb	08 14 33.6	+1.4
	54nm,0.6s						
ARXS				eS	Sb	08 15 27.8	+4.5
	166nm,0.6s						
ARXS	Arharly	4.18	8	ePN	Pn	08 14 24.7	+1.8
ARXS	Arharly	4.18	8	Pg	Pb	08 14 33.6	+1.4
	54nm,0.6s						
ARXS				Lg	Lg	08 15 27.8	
	166nm,0.6s						
KTMS	Ketmen	4.20	35	eP	Pb	08 14 34.3	+1.7
	38nm,0.4s						
KTMS				eS	Sg	08 15 28.9	-3.8
	169nm,0.5s						
KTMS	Ketmen	4.20	35	Pg	Pb	08 14 34.3	+1.7
	38nm,0.4s						
KTMS				Lg	Lg	08 15 28.9	
	169nm,0.5s						
DJR	Jarkent	4.73	25	eP	Pb	08 14 43.7	+2.0
	22nm,0.4s						
DJR				eS	Sg	08 15 45.0	-4.8
	39nm,0.6s						
DJR	Jarkent	4.73	25	Pg	Pb	08 14 43.7	+2.0
	22nm,0.4s						
DJR				Lg	Lg	08 15 45.0	
	39nm,0.6s						
TDK	Taldyqorghan	5.04	11	ePg	Pb	08 14 49.5	+2.7
	baz=13						
TDK	Taldyqorghan	5.04	11	ePN	Pb	08 14 49.4	+2.7
BTLS	Baital	5.43	337	eP	Pb	08 14 56.8	+3.4
	10.0nm,0.5s						
BTLS				eS	Sg	08 16 07.5	-4.6
	52nm,0.7s						
BTLS	Baital	5.43	337	ePn	Pn	08 14 37.9	-2.0
	baz=336						
BTLS				ePg	Pb	08 14 56.0	+2.6
	baz=336						
BTLS	Baital	5.43	337	ePN	Pn	08 14 41.4	+1.5
BTLS	Baital	5.43	337	Pg	Pb	08 14 56.8	+3.4
	10.0nm,0.5s						
BTLS				Lg	Lg	08 16 07.5	
	52nm,0.7s						
KAPS	Kapalarasan	5.49	18	eP	Pb	08 14 57.3	+2.8
	14nm,0.5s						
KAPS				eS	Sg	08 16 08.4	-5.8
	28nm,0.7s						
KAPS	Kapalarasan	5.49	18	Pg	Pb	08 14 57.3	+2.8
	14nm,0.5s						
KAPS				Lg	Lg	08 16 08.4	
	28nm,0.7s						
MAKZ	Makanchi	7.64	27	P	Pn	08 15 11.7	+1.4
MAKZ	Makanchi	7.64	27	⇓Pn	Pn	08 15 11.7	+1.4
	4.3nm,1.1s						
MAKZ				⇑Pg	Pb	08 15 36.8	+5.7
	4.1nm,0.8s						
MAKZ				⇓Lg	Lg	08 17 18.0	
	13nm,1.0s						
MK31	Makanchi Array	7.74	28	i P	Pn	08 15 12.3	+0.7
MK31	Makanchi Array	7.74	28	⇑Pn	Pn	08 15 12.6	+0.9
	1.5nm,0.5s,baz=205,slow=15,SNR=17						
MK31				⇓Lg	Lg	08 17 20.8	
	3.5nm,0.6s,baz=208,slow=30,SNR=4.7						
MKAR	Makanchi Array	7.74	28	Pn	Pn	08 15 11.7	+0.1
	0.7nm,0.3s,baz=205,slow=15,SNR=20						
MKAR				Lg	Lg	08 17 18.9	
	0.4nm,0.3s,baz=195,slow=27,SNR=2.0						
MKAR	Makanchi Array	7.74	28	i P	Pn	08 15 13.0	+1.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WMQ	Urumqi	8.80	61	eP	Pn	08 15 27.2	+1.0
WMQ				smax	smax		
	comp=N,16nm,0.7s						
WMQ				smax	smax		
	comp=E,18nm,0.7s						
OTUK	Ortayu	8.83	339	⇑Lg	Lg	08 17 54.0	
	comp=E,78nm,1.2s						
KURBB	Kurchatov Arra	10.61	5	Pn	Pn	08 15 50.5	-0.3
	comp=E,0.1nm,0.3s,baz=194,slow=12,SNR=2.0						
KURBB				Lg	Lg	08 18 43.6	
	comp=E,0.1nm,0.3s,baz=192,slow=30,SNR=7.6						
KURK	Kurchatov	10.71	6	i P	Pn	08 15 52.0	-0.2
BVAR	Borovoye Array	13.73	343	Pn	Pn	08 16 32.6	-0.9
	comp=E,0.6nm,0.3s,baz=175,slow=18,SNR=5.1						
BVAR				Lg	Lg	08 20 28.0	
	comp=E,0.2nm,0.3s,baz=169,slow=24,SNR=3.8						
BRVK	Borovoye	13.78	343	i P	Pn	08 16 33.0	-1.2
ZALV	Zalesovo Beam	14.86	18	Pn	Pn	08 16 46.8	-2.1
	comp=E,0.1nm,0.3s,baz=209,slow=12,SNR=1.6						
AKTO	Aktyubinsk	16.87	314	P	Pn	08 17 13.7	-1.4
	comp=E,0.3nm,0.3s,baz=129,slow=12,SNR=4.7						
ARU	Arti	20.36	330c	iP	P	08 17 56.7	+1.2
ARU						08 18 10.7	
ARU				S	S	08 21 40.6	-3.6
ARU				pmax	pmax		
	comp=Z,12nm,1.3s						
SONM	Songino Array	22.43	60	P	P	08 18 15.1	-3.0
	comp=Z,0.2nm,0.5s,baz=255,slow=11,SNR=1.5						
ULN	Ulaanbaatar	22.88	60	i P	P	08 18 24.5	+1.6
ULN				pmax	pmax		
	comp=Z,12nm,3.3s						
NRIK	Noril'sk	29.86	7	i P	P	08 19 24.8	-1.6
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KLMR	Klimovskoe	31.00	325	eP	P	08 19 40.6	+4.1
KLMR				pmax	pmax		
	comp=Z,41nm,1.5s						
KLMR	Klimovskoe	31.00	325	eP	P	08 19 40.6	+4.1
KLMR				AMP		08 19 44.1	
	comp=Z,41nm,1.5s						
NACGM	Naroch	36.20	311	i P	P	08 20 30.4	+8.6
FINES	FINESS Array B	37.37	322	P	P	08 20 30.8	-1.0
	comp=Z,4.4nm,0.9s,baz=151,slow=8.7,SNR=5.8						
FINES	FINESS Array B	37.37	322	i P	P	08 20 32.0	+0.3
FINES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARCES	ARCESS Array B	39.81	335	P	P	08 20 51.5	-0.6
	comp=Z,8.1nm,1.1s,baz=102,slow=8.3,SNR=16						
NOA	NORSAR Array B	44.50	321	P	P	08 21 28.8	-1.7
	comp=Z,0.9nm,0.8s,baz=93,slow=7.6,SNR=0.9						
TORD	Torodi Ar. Bea	70.46	271	P	P	08 24 31.6	-2.6
	comp=Z,0.3nm,0.7s,baz=53,slow=6.4,SNR=2.0						

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*SOME **08** 08:40:36.1, 38°.68N×72°.92E, h0^{km}*
*NNC **08** 08:40:36.1±5.3, 38°.45N×73°.91E, h0^{km}, mb4.0, mpv3.6,*
Error ellipse: s-maj=38.7km s-min=29.7km az=160.0
ISC 08 08:40:30.4±3.0**, 38°.4N**±0°.1×**73°.5E**±0°.1**, h10**^{km}**, n10,**
σ1^{s}01/13**, 4C-3D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.28	10	Pg	Pg	08 41 53.2	+0.7
	1.6nm,0.4s						
AAK				⇑Lg	Lg	08 42 46.9	
	11nm,0.7s						
MRKS	Merke	4.32	358	eP	Pg	08 41 53.6	+0.5
	2.7nm,0.3s						
MRKS				eS	Sg	08 42 49.0	-0.1
	9.8nm,0.4s						
MRKS	Merke	4.32	358	Pg	Pg	08 41 53.6	+0.5
	2.7nm,0.3s						
MRKS				Lg	Lg	08 42 49.0	
	9.8nm,0.4s						
IUG	Iuzhnay	4.54	326	eP	Pb	08 41 51.4	+1.0
	59nm,0.4s						
IUG				eS	Sb	08 42 45.5	+0.3
	25nm,0.3s						
IUG	Iuzhnay	4.54	326	Pg	Pb	08 41 51.4	+1.0
	59nm,0.4s						
IUG				Lg	Lg	08 42 45.5	
	25nm,0.3s						
TKM2	Tokmak 2	4.78	19	⇓Pg	Pg	08 42 00.7	-1.2
	2.8nm,0.7s						
TKM2				⇑Lg	Lg	08 43 05.2	
	3.2nm,0.6s						
KST	Kastek	4.99	22	eP	Pg	08 42 06.4	+0.4
	3.5nm,0.3s						
KST				eS	Sg	08 43 11.2	+0.5
	11nm,0.7s						
KST	Kastek	4.99	22	Pg	Pg	08 42 06.4	+0.4
	3.5nm,0.3s						
KST				Lg	Lg	08 43 11.2	
	11nm,0.7s						
KK02	Karatay Array	5.18	335	⇓Pn	Pb	08 41 55.5	-5.6
	2.6nm,0.4s,baz=176,slow=12						
KK02				⇑Sn	Sb	08 43 01.4	-1.9
	7.7nm,0.8s,baz=145,slow=22						
AB31	Akbulak array	14.54	322	⇑Pn	Pn	08 43 55.0	-1.1
	0.2nm,0.3s,baz=345,slow=14,SNR=16						
AB31				⇓Lg	Lg	08 44 36.8	
	0.7nm,0.2s,baz=4.1,slow=28,SNR=4.0						

RSNC 08 08:54:32.9±0.9**, 6°.82N**×**73°.11W, h152**^{km}±4^{km}**, ML3.0,**
Mw3.5, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	197	⇓iP	Pn	08 54 53.3	-0.6
BARC				eS	Sn	08 55 08.7	-1.1
BARC				i		08 55 09.4	
	comp=Z,296nm,0.2s						
PAMC	Pamplona, Colo	0.66	39	eP	Pn	08 54 56.2	+0.2
PAMC				eS	Sn	08 55 13.4	-0.1
PAMC				i		08 55 14.0	
	comp=Z,124nm,0.2s						
BRRC	Barranca, Sant	0.66	295	⇑iP	Pn	08 54 55.1	-0.3
BRRC				eS	Sn	08 55 12.3	-0.2
BRRC				i		08 55 15.2	
	comp=Z,155nm,0.3s						
OCAC	Ocana	1.42	352	eP	Pn	08 55 01.4	-0.6
OCAC				eS	Sn	08 55 24.1	-0.3
OCAC				i		08 55 31.8	
	comp=Z,263nm,0.3s						
NORC	Norcasia	2.15	234	eP	Pn	08 55 09.5	-0.5
NORC				eS	Sn	08 55 37.9	-0.6
NORC				i		08 55 47.0	
	comp=Z,50nm,0.2s						
HELC	Santa Helena	2.48	255	eP	Pn	08 55 14.6	+0.3
HELC				eS	Sn	08 55 45.4	-0.8
HELC				i		08 55 51.3	
	comp=Z,66nm,0.3s						
GUY2C	Guyana, Caldas	2.75	235	eP	Pn	08 55 17.3	-0.4
GUY2C				eS	Sn	08 55 55.3	+3.1
GUY2C				i		08 55 59.6	
	comp=Z,64nm,0.6s						
CBOC	Ciudad Bolivar	3.04	252	eP	Pn	08 55 20.9	-0.1
CBOC				eS	Sn	08 55 56.3	-1.9
CBOC				i		08 56 03.1	
	comp=Z,18nm,0.5s						
DBBC	Dabeiba	3.08	274	eP	Pn	08 55 20.7	-0.8
DBBC				eS	Sn	08 55 57.0	-2.1
MOTC	Monteria, Cord	3.19	308	eP	Pn	08 55 20.5	-2.3
MOTC				eS	Sn	08 55 59.2	-2.2
MOTC				i		08 56 00.9	

	comp=Z,20nm,0.4s						
ARGC	**Ariguani, Magd**	**3.22**	**340**	*e*P	Pn	08 55 23.4	+0.2
ARGC				*e*S	Sn	08 56 03.2	+1.1
ARGC				*i*		08 56 09.1	
	comp=Z,17nm,0.3s						
ANIL	**Santa Ana**	**3.25**	**225**	*e*P	Pn	08 55 24.6	+0.7
ANIL				*e*S	Sn	08 56 04.5	+1.2
ORTC	**Ortega, Tolima**	**3.59**	**216**	*e*P	Pn	08 55 27.8	-0.2
ORTC				*e*S	Sn	08 56 10.9	+0.2
ORTC				*i*		08 56 17.3	
	comp=Z,33nm,0.5s						
ELOV	**Elorza**	**3.61**	**87**	*e*P	Pn	08 55 27.5	-0.6
ELOV				*e*S	Sn	08 56 08.6	-2.4
PLMC	**San Jos del P**	**3.69**	**239**	*e*P	Pn	08 55 28.6	-0.6
PLMC				*e*S	Sn	08 56 13.8	+0.9
PLMC				*i*		08 56 16.9	
	comp=Z,12nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*e*P	Pn	08 55 33.6	-2.0
CRJC				*e*S	Sn	08 56 20.8	-3.7
CRJC				*i*		08 56 24.5	
	comp=Z,23nm,0.2s						
GUVC	**San Jose del G**	**4.28**	**174**	*e*P	Pn	08 55 36.6	-0.3
GUVC				*e*S	Sn	08 56 24.4	-2.4
GUVC				*i*		08 56 29.2	
	comp=Z,41nm,0.1s						
MACC	**Macarena, Meta**	**4.71**	**189**	*e*P	Pn	08 55 40.5	-2.1
MACC				*e*S	Sn	08 56 32.7	-4.2
MACC				*i*		08 56 56.0	
	comp=Z,11nm,0.5s						
MARP	**Paez Belalcaza**	**4.87**	**216**	*e*P	Pn	08 55 45.6	+0.7
MARP				*e*S	Sn	08 56 38.1	-2.9
GARC	**Garzon, Huila**	**5.18**	**207**	*e*P	Pn	08 55 47.4	-1.7
GARC				*e*S	Sn	08 56 44.5	-4.0
GARC				*i*		08 56 51.6	
	comp=Z,15nm,0.3s						
FLOC	**Florencia**	**5.79**	**206**	*e*P	Pn	08 55 55.6	-1.3
FLOC				*e*S	Sn	08 57 01.3	-1.3

IDC ***08*** *08:59:22.9±7.0, 19°.73S×169°.14E, h157*^{km}*±68*^{km}*, mb3.5/2, mb1 3.8/3, mb1mx3.1/36, mbtmp4.0/3, Error ellipse: s-maj=147.0km s-min=55.1km az=157.0*

NOU ***08*** *08:59:23.5, 19°.65S×169°.15E, h113*^{km}*, MLv4.0/15, Vanuatu Islands*

ISC 08 08:59:20.8±1.8**, 19°.67S**±0°.08×**169°.3E**±0°.2**, h150**^{km}**, n16,** σ**1**^{s}**.42**/18**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**2.03**	**337**	P	**Pn**	**08 59 56.5**	**+0.1**
MARNC	**Mare, Loyalty**	**2.14**	**213**	P	**Pn**	**08 59 56.8**	**-0.8**
DVP	**Devils Point**	**2.19**	**332**	P	**Pn**	**08 59 58.1**	**-0.1**
LIFNC	**LIFOU**	**2.20**	**240**	P	**Pn**	**08 59 56.8**	**-1.5**
YATNC	**Mamie plateau,**	**3.25**	**223**	P	**Pn**	**09 00 10.8**	**-0.6**
PINNC	**Pines Island,**	**3.38**	**210**	P	**Pn**	**09 00 13.9**	**+0.8**
OUENC	**Ouen Island, N**	**3.55**	**219**	P	**Pn**	**09 00 17.4**	**+2.2**
DZM	**Mont Dzumac**	**3.56**	**227**	*e*Pn	**Pn**	**09 00 16.0**	**+0.5**
	23nm,0.2s						
DZM				*e*Sn	**Sn**	**09 00 54.7**	**-3.1**
	24nm,0.3s						
DZM	**Mont Dzumac**	**3.56**	**227**	P	**Pn**	**09 00 16.1**	**+0.7**
	4.8nm,0.3s,baz=45,slow=20,SNR=220						
DZM				S	**Sn**	**09 00 57.6**	**-0.2**
	7.8nm,0.3s,baz=305,slow=23,SNR=14						
DZM	**Mont Dzumac**	**3.56**	**227**	P	**Pn**	**09 00 16.3**	**+0.8**
NOUC	**Port Laguerre**	**3.68**	**228**	P	**Pn**	**09 00 19.0**	**+2.1**
ONTNC	**Ouen Toro**	**3.71**	**225**	P	**Pn**	**09 00 18.5**	**+1.1**
KOUNC	**Koumac, New Ca**	**4.76**	**259**	P	**Pn**	**09 00 33.0**	**+1.9**
WRA	**Warramunga Arr**	**32.83**	**263**	P	**P**	**09 05 40.0**	**-0.5**
	0.3nm,0.4s,baz=96,slow=8.7,SNR=4.7						
ASAR	**Alice Springs**	**33.05**	**257**	P	**P**	**09 05 43.0**	**+0.7**
	3.6nm,0.6s,baz=85,slow=9.1,SNR=20						
GERES	**GERESS Array B**	**144.88**	**332**	PKP	**PKPdf**	**09 18 40.6**	**+0.5**
	0.2nm,0.3s,baz=33,slow=2.3,SNR=3.5						

KMA ***08*** *09:27:59.9, 30°.77N×130°.56E, h15*^{km}

NIED ***08*** *09:28:04.0, 30°.96N×130°.39E, h126*^{km}*, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10*^{16}*Nm; M*$_{rr}$*-0.21; M*$_{\theta\theta}$*0.99; M*$_{\phi\phi}$*-0.78; M*$_{r\theta}$*0.13; M*$_{\theta\phi}$*-0.31; M*$_{\phi r}$*0.51; Fault plane solution: M*$_0$*1.09000×10*^{16} *NP1: φ*$_s$*239.00000°, δ71.00000°, λ-157.00000°. NP2: φ*$_s$*141.00000°, δ68.00000°, λ-20.00000°.*

IDC ***08*** *09:28:03.1±1.0, 30°.99N×130°.22E, h134*^{km}*±8*^{km}*, mb3.9/26, mb1 4.1/33, mb1mx4.0/56, mbtmp4.4/33, MS3.2/7, Ms1 3.2/7, ms1mx2.9/54 Error ellipse: s-maj=12.6km s-min=8.6km az=95.0*

NEIC ***08*** *09:28:03.6±2.4, 30°.97N±0°.06×130°.41E±0°.10, h129*^{km}*±6*^{km}*, mb4.7/46, Error ellipse: s-maj=12.2km s-min=8.3km az=102.0*

JMA ***08*** *09:28:03.9±0.1, 30°.96N×130°.39E, h126*^{km}*±1*^{km}*, M4.4 Broadband fault plane solution: P waves. NP1: φ*$_s$*239.00000°, δ68.00000°, λ-173.00000°. NP2: φ*$_s$*147.00000°, δ84.00000°, λ-22.00000°. Principal axes: T Plg11.0000°, Azm195.0000°; N Plg67.0000°, Azm312.0000°; P Plg20.0000°, Azm101.0000°;*

JMA Felt II J1.

BJI ***08*** *09:28:03.0±0.0, 31°.00N×130°.40E, h126*^{km}*, mB4.8/29, mb4.6/50*

ISC 08 09:28:03.2±0.5**, 30°.95N**±0°.03×**130°.43E**±0°.04**, h134**^{km}±5^{km}**, n401,** σ**1**^{s}**.32**/418**, mb4.5**/67**, 10C-5D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTSR	**Tashiro 2**	**0.48**	**62**	⇑P	**Pn**	**09 28 22.4**	**-0.2**
JTSR				S	**Sn**	**09 28 36.4**	**-0.9**
JKC	**Kuchinoerabu**	**0.52**	**203**	⇓P	**Pn**	**09 28 22.8**	**0.0**
JKC				S	**Sn**	**09 28 37.1**	**-0.5**
JTN	**Tanegashima 3**	**0.56**	**121**	⇓P	**Pn**	**09 28 23.3**	**+0.3**
JTN				S	**Sn**	**09 28 38.4**	**+0.4**
JSU	**Suzuyama**	**0.56**	**2**	⇑P	**Pn**	**09 28 23.0**	**-0.1**
JSU				S	**Sn**	**09 28 37.4**	**-0.8**
JSU	**Suzuyama**	**0.56**	**2**	Pn	**Pn**	**09 28 23.1**	**0.0**
JMTN	**Minamitane**	**0.68**	**143**	⇑P	**Pn**	**09 28 24.1**	**+0.2**
JMTN				S	**Sn**	**09 28 39.7**	**+0.2**
JYAK	**Yakushimahirau**	**0.71**	**174**	⇑P	**Pn**	**09 28 24.1**	**0.0**
JYAK				S	**Sn**	**09 28 39.4**	**-0.4**
JNAR	**Kushima--Naru**	**0.93**	**51**	⇑P	**Pn**	**09 28 26.2**	**+0.4**
JNAR				S	**Sn**	**09 28 43.1**	**+0.2**
JSJ	**Shimokoshiki**	**0.95**	**320**	⇓P	**Pn**	**09 28 25.3**	**-0.7**
JSJ				*e*S	**Sn**	**09 28 41.8**	**-1.6**
JTZ	**Takazaki**	**1.11**	**30**	⇑P	**Pn**	**09 28 27.8**	**+0.4**
JTZ				S	**Sn**	**09 28 45.5**	**-0.4**
JNN	**Nakanoshima**	**1.20**	**204**	⇑P	**Pn**	**09 28 28.7**	**+0.3**
JNN				*e*S	**Sn**	**09 28 48.0**	**+0.4**
JZO	**Okuchi**	**1.20**	**7**	⇑P	**Pn**	**09 28 28.6**	**+0.2**
JZO				*e*S	**Sn**	**09 28 47.7**	**0.0**
JIU3	**Izumi3**	**1.63**	**11**	⇑P	**Pn**	**09 28 33.7**	**+0.7**
JIU3				S	**Sn**	**09 28 56.3**	**+0.4**
JTAJ	**Takarajima**	**2.08**	**211**	⇑P	**Pn**	**09 28 38.9**	**+0.6**
JNU	**Nakatsue**	**2.20**	**10**	P	**Pn**	**09 28 40.7**	**+0.8**
	1μm,0.3s,baz=170,slow=0.5,SNR=2789						
JNU				S	**Sn**	**09 29 08.3**	**+0.2**
	275nm,0.3s,baz=332,slow=22,SNR=8.5						
JTU	**Tsushima**	**3.67**	**347**	Pn	**Pn**	**09 28 59.0**	**+0.3**
GMDB	**Geomundo**	**4.07**	**320**	P	**Pn**	**09 29 04.0**	**+0.1**
	SNR=27						
GMDB	**Geomundo**	**4.07**	**320**	P	**Pn**	**09 29 04.0**	**+0.1**
	SNR=27						
GMDB	**Geomundo**	**4.07**	**320**	P	**Pn**	**09 29 04.0**	**+0.1**
	SNR=27						
YKDB	**Yokjido**	**4.09**	**334**	P	**Pn**	**09 29 05.0**	**+0.7**
	SNR=12						
YKDB	**Yokjido**	**4.09**	**334**	P	**Pn**	**09 29 04.5**	**+0.3**
	SNR=61						
YKDB	**Yokjido**	**4.09**	**334**	P	**Pn**	**09 29 05.0**	**+0.7**
	SNR=12						
KSJJU	**Jeju**	**4.12**	**308**	P	**Pn**	**09 29 04.8**	**+0.2**
	SNR=26						
KSJJU	**Jeju**	**4.12**	**308**	P	**Pn**	**09 29 04.8**	**+0.2**
	SNR=26						
KSJJU	**Jeju**	**4.12**	**308**	P	**Pn**	**09 29 04.8**	**+0.2**
	SNR=26						
YNDB	**Yeoundo**	**4.12**	**328**	P	**Pn**	**09 29 05.0**	**+0.4**
	SNR=30						
YNDB	**Yeoundo**	**4.12**	**328**	P	**Pn**	**09 29 05.0**	**+0.4**
	SNR=30						
YNDB	**Yeoundo**	**4.12**	**328**	P	**Pn**	**09 29 05.0**	**+0.4**
	SNR=30						
KUJA	**Jangpyeong**	**4.22**	**339**	P	**Pn**	**09 29 07.0**	**+1.1**
	SNR=59						
KUJA	**Jangpyeong**	**4.22**	**339**	P	**Pn**	**09 29 07.0**	**+1.1**
	SNR=59						
KUJA	**Jangpyeong**	**4.22**	**339**	P	**Pn**	**09 29 07.0**	**+1.1**
	SNR=59						
GOS1	**Gosan-ri**	**4.28**	**304**	P	**Pn**	**09 29 07.0**	**+0.3**
	SNR=11						
GOS1	**Gosan-ri**	**4.28**	**304**	P	**Pn**	**09 29 07.0**	**+0.3**
	SNR=11						
GOS1	**Gosan-ri**	**4.28**	**304**	P	**Pn**	**09 29 07.0**	**+0.3**
	SNR=11						
GOS2	**Gosang-Q330s**	**4.28**	**304**	P	**Pn**	**09 29 07.1**	**+0.3**
	SNR=9.6						
GOS2	**Gosang-Q330s**	**4.28**	**304**	P	**Pn**	**09 29 07.1**	**+0.3**
	SNR=9.6						
GOS2	**Gosang-Q330s**	**4.28**	**304**	P	**Pn**	**09 29 07.1**	**+0.3**
	SNR=9.6						
HALB	**Hallimjungang-**	**4.29**	**306**	P	**Pn**	**09 29 07.0**	**+0.1**
	SNR=15						
HALB	**Hallimjungang-**	**4.29**	**306**	P	**Pn**	**09 29 07.0**	**+0.1**
	SNR=15						
HALB	**Hallimjungang-**	**4.29**	**306**	P	**Pn**	**09 29 07.0**	**+0.1**
	SNR=15						
KSBSA	**Busan_acc**	**4.31**	**345**	P	**Pn**	**09 29 07.8**	**+0.7**
	SNR=22						
KSBSA	**Busan_acc**	**4.31**	**345**	P	**Pn**	**09 29 07.8**	**+0.7**
	SNR=22						
KSBSA	**Busan_acc**	**4.31**	**345**	P	**Pn**	**09 29 07.8**	**+0.7**
	SNR=22						
KSNAH	**Namhae**	**4.40**	**332**	P	**Pn**	**09 29 09.0**	**+0.7**
	SNR=75						
KSNAH	**Namhae**	**4.40**	**332**	P	**Pn**	**09 29 09.0**	**+0.7**
	SNR=75						
KSNAH	**Namhae**	**4.40**	**332**	P	**Pn**	**09 29 09.0**	**+0.7**
	SNR=75						
KSBUS	**Busan**	**4.43**	**346**	P	**Pn**	**09 29 09.5**	**+0.7**
	SNR=19						
KSBUS	**Busan**	**4.43**	**346**	P	**Pn**	**09 29 09.5**	**+0.7**
	SNR=19						
KSBUS	**Busan**	**4.43**	**346**	P	**Pn**	**09 29 09.5**	**+0.7**
	SNR=19						
KSMAS	**Masan**	**4.49**	**340**	P	**Pn**	**09 29 10.4**	**+0.9**
	SNR=53						
KSMAS	**Masan**	**4.49**	**340**	P	**Pn**	**09 29 10.4**	**+0.9**
	SNR=53						
KSMAS	**Masan**	**4.49**	**340**	P	**Pn**	**09 29 10.4**	**+0.9**
	SNR=53						
JOW	**Kunigami**	**4.51**	**205**	P	**Pn**	**09 29 09.2**	**-0.6**
	349nm,0.3s,baz=86,slow=16,SNR=668						
JOW				S	**Sn**	**09 29 58.0**	**-3.7**
	126nm,0.3s,baz=205,slow=30,SNR=6.5						
JOW	**Kunigami**	**4.51**	**205**	Pn	**Pn**	**09 29 09.1**	**-0.8**
KOHB	**KOHEUNG**	**4.53**	**325**	P	**Pn**	**09 29 10.5**	**+0.5**
	SNR=12						
KOHB	**KOHEUNG**	**4.53**	**325**	P	**Pn**	**09 29 10.5**	**+0.5**
	SNR=12						
KOHB	**KOHEUNG**	**4.53**	**325**	P	**Pn**	**09 29 10.5**	**+0.5**
	SNR=12						
GWYB	**Gwangyang**	**4.60**	**331**	P	**Pn**	**09 29 12.0**	**+1.0**
	SNR=18						
GWYB	**Gwangyang**	**4.60**	**331**	P	**Pn**	**09 29 12.0**	**+1.0**
	SNR=18						
GWYB	**Gwangyang**	**4.60**	**331**	P	**Pn**	**09 29 12.0**	**+1.0**
	SNR=18						
CJD	**Chujado**	**4.61**	**312**	P	**Pn**	**09 29 11.2**	**+0.1**
	SNR=9.3						
CJD	**Chujado**	**4.61**	**312**	P	**Pn**	**09 29 11.3**	**+0.1**
	SNR=20						
CJD	**Chujado**	**4.61**	**312**	P	**Pn**	**09 29 11.2**	**+0.1**
	SNR=9.3						
JHS	**Saijyo**	**4.63**	**28**	Pn	**Pn**	**09 29 10.3**	**-1.1**
BOSB	**Boseong-gun**	**4.67**	**325**	P	**Pn**	**09 29 12.4**	**+0.5**
	SNR=19						
BOSB	**Boseong-gun**	**4.67**	**325**	P	**Pn**	**09 29 12.4**	**+0.5**
	SNR=19						
BOSB	**Boseong-gun**	**4.67**	**325**	P	**Pn**	**09 29 12.4**	**+0.5**
	SNR=19						
EURB	**Uiryeong-eup**	**4.72**	**338**	P	**Pn**	**09 29 13.3**	**+0.8**
	SNR=23						
EURB	**Uiryeong-eup**	**4.72**	**338**	P	**Pn**	**09 29 13.3**	**+0.8**
	SNR=23						
EURB	**Uiryeong-eup**	**4.72**	**338**	P	**Pn**	**09 29 13.3**	**+0.8**
	SNR=23						
MIYA	**Miryang-si**	**4.75**	**343**	P	**Pn**	**09 29 14.0**	**+1.0**
	SNR=17						
MIYA	**Miryang-si**	**4.75**	**343**	P	**Pn**	**09 29 14.0**	**+1.0**
	SNR=17						
MIYA	**Miryang-si**	**4.75**	**343**	P	**Pn**	**09 29 14.0**	**+1.0**
	SNR=17						
HANB	**Haenam**	**4.85**	**319**	P	**Pn**	**09 29 15.0**	**+0.7**
	SNR=11						
HANB	**Haenam**	**4.85**	**319**	P	**Pn**	**09 29 15.0**	**+0.7**
	SNR=11						
HANB	**Haenam**	**4.85**	**319**	P	**Pn**	**09 29 15.0**	**+0.7**
	SNR=11						
KSUSN	**Ulsan**	**4.87**	**347**	P	**Pn**	**09 29 15.6**	**+1.1**
	SNR=157						
KSUSN	**Ulsan**	**4.87**	**347**	P	**Pn**	**09 29 15.6**	**+1.1**
	SNR=157						
KSUSN	**Ulsan**	**4.87**	**347**	P	**Pn**	**09 29 15.6**	**+1.1**
	SNR=157						
KSSCH	**SUNCHEON**	**4.91**	**328**	P	**Pn**	**09 29 15.6**	**+0.6**
	SNR=15						
KSSCH	**SUNCHEON**	**4.91**	**328**	P	**Pn**	**09 29 15.6**	**+0.6**
	SNR=15						
KSSCH	**SUNCHEON**	**4.91**	**328**	P	**Pn**	**09 29 15.6**	**+0.6**
	SNR=15						
KSJDO	**Jindo**	**4.94**	**316**	P	**Pn**	**09 29 15.7**	**+0.2**
	SNR=17						
KSJDO	**Jindo**	**4.94**	**316**	P	**Pn**	**09 29 15.7**	**+0.2**
	SNR=17						
KSJDO	**Jindo**	**4.94**	**316**	P	**Pn**	**09 29 15.7**	**+0.2**
	SNR=17						
KSDAG	**Daegu**	**4.98**	**345**	P	**Pn**	**09 29 17.0**	**+0.9**
	SNR=29						
KSDAG	**Daegu**	**4.98**	**345**	P	**Pn**	**09 29 17.0**	**+0.9**
	SNR=29						
KSDAG	**Daegu**	**4.98**	**345**	P	**Pn**	**09 29 17.0**	**+0.9**
	SNR=29						
HAMB	**Hamyang**	**5.08**	**334**	P	**Pn**	**09 29 18.0**	**+0.7**
	SNR=48						
HAMB	**Hamyang**	**5.08**	**334**	P	**Pn**	**09 29 18.0**	**+0.7**
	SNR=48						
HAMB	**Hamyang**	**5.08**	**334**	P	**Pn**	**09 29 18.0**	**+0.7**
	SNR=48						
KSKCH	**Geochang**	**5.11**	**336**	P	**Pn**	**09 29 18.9**	**+1.1**
	SNR=36						
KSKCH	**Geochang**	**5.11**	**336**	P	**Pn**	**09 29 18.9**	**+1.1**
	SNR=36						
KSKCH	**Geochang**	**5.11**	**336**	P	**Pn**	**09 29 18.9**	**+1.1**
	SNR=36						
NAWB	**Namwon**	**5.14**	**331**	P	**Pn**	**09 29 20.0**	**+1.8**
	SNR=12						
NAWB	**Namwon**	**5.14**	**331**	P	**Pn**	**09 29 20.0**	**+1.8**
	SNR=12						
NAWB	**Namwon**	**5.14**	**331**	P	**Pn**	**09 29 20.0**	**+1.8**
	SNR=12						
JMZ	**Minamidaito 2**	**5.15**	**172**	Pn	**Pn**	**09 29 18.2**	**-0.2**
KSYOC	**YEONGCHEON**	**5.16**	**347**	P	**Pn**	**09 29 19.6**	**+1.1**
	SNR=47						
KSYOC	**YEONGCHEON**	**5.16**	**347**	P	**Pn**	**09 29 19.6**	**+1.1**
	SNR=47						
YOCB	**Yeongcheon**	**5.17**	**347**	P	**Pn**	**09 29 20.0**	**+1.4**
	SNR=33						
YOCB	**Yeongcheon**	**5.17**	**347**	P	**Pn**	**09 29 20.0**	**+1.4**
	SNR=33						
YOCB	**Yeongcheon**	**5.17**	**347**	P	**Pn**	**09 29 20.0**	**+1.4**
	SNR=33						
SUCA	**Sunchang**	**5.21**	**329**	P	**Pn**	**09 29 21.0**	**+1.9**
	SNR=6.4						
SUCA	**Sunchang**	**5.21**	**329**	P	**Pn**	**09 29 21.0**	**+1.9**
	SNR=6.4						
SUCA	**Sunchang**	**5.21**	**329**	P	**Pn**	**09 29 21.0**	**+1.9**
	SNR=6.4						
KSPHA	**Pohang**	**5.31**	**351**	P	**Pn**	**09 29 21.3**	**+0.9**
	SNR=44						
KSPHA	**Pohang**	**5.31**	**351**	P	**Pn**	**09 29 21.3**	**+0.9**
	SNR=44						
KSPHA	**Pohang**	**5.31**	**351**	P	**Pn**	**09 29 21.3**	**+0.9**
	SNR=44						
KSJEU	**Jeongeup**	**5.40**	**328**	P	**Pn**	**09 29 22.3**	**+0.6**
	SNR=19						
KSJEU	**Jeongeup**	**5.40**	**328**	P	**Pn**	**09 29 22.3**	**+0.6**
	SNR=19						
GGDB	**Gageodo**	**5.45**	**306**	P	Pn	09 29 28.6	+6.3
	SNR=22						
KSGIC	**Gimchen**	**5.48**	**340**	P	**Pn**	**09 29 24.0**	**+1.3**
	SNR=7.7						
KSGIC	**Gimchen**	**5.48**	**340**	P	**Pn**	**09 29 24.0**	**+1.3**
	SNR=7.7						
KSEUS	**ULSEONG**	**5.58**	**345**	P	**Pn**	**09 29 25.2**	**+1.1**
	SNR=30						
KSEUS	**ULSEONG**	**5.58**	**345**	P	**Pn**	**09 29 25.2**	**+1.1**
	SNR=30						
KSEUS	**ULSEONG**	**5.58**	**345**	P	**Pn**	**09 29 25.2**	**+1.1**
	SNR=30						
EUSB	**Uiseong**	**5.59**	**345**	P	**Pn**	**09 29 25.3**	**+1.1**
	SNR=28						
EUSB	**Uiseong**	**5.59**	**345**	P	**Pn**	**09 29 25.3**	**+1.1**
	SNR=28						
EUSB	**Uiseong**	**5.59**	**345**	P	**Pn**	**09 29 25.3**	**+1.1**
	SNR=28						
EUSB	**Uiseong**	**5.59**	**345**	P	**Pn**	**09 29 25.3**	**+1.1**
	SNR=28						
KSADO	**Andong**	**5.59**	**348**	P	**Pn**	**09 29 25.2**	**+1.1**
	SNR=71						
KSADO	**Andong**	**5.59**	**348**	P	**Pn**	**09 29 25.2**	**+1.1**
	SNR=71						
KSADO	**Andong**	**5.59**	**348**	P	**Pn**	**09 29 25.2**	**+1.1**
	SNR=71						
KSADO	**Andong**	**5.59**	**348**	P	**Pn**	**09 29 25.2**	**+1.1**
	SNR=71						
KSJEO	**Jeonju**	**5.63**	**333**	P	**Pn**	**09 29 26.2**	**+1.5**
	SNR=43						
KSJEO	**Jeonju**	**5.63**	**333**	P	**Pn**	**09 29 26.0**	**+1.3**
	SNR=28						
KSJEO	**Jeonju**	**5.63**	**333**	P	**Pn**	**09 29 26.0**	**+1.3**
	SNR=28						
KSJEO	**Jeonju**	**5.63**	**333**	P	**Pn**	**09 29 26.0**	**+1.3**
	SNR=28						
YODB	**Yeongdeok**	**5.64**	**352**	P	**Pn**	**09 29 26.0**	**+1.1**
	SNR=10.0						
YODB	**Yeongdeok**	**5.64**	**352**	P	**Pn**	**09 29 26.0**	**+1.1**
	SNR=25						
YODB	**Yeongdeok**	**5.64**	**352**	P	**Pn**	**09 29 26.0**	**+1.1**
	SNR=25						
YODB	**Yeongdeok**	**5.64**	**352**	P	**Pn**	**09 29 26.0**	**+1.1**
	SNR=25						
KSCPR	**CHUPUNGNYEONG**	**5.65**	**339**	P	**Pn**	**09 29 26.2**	**+1.3**
	SNR=33						
KSCPR	**CHUPUNGNYEONG**	**5.65**	**339**	P	**Pn**	**09 29 26.2**	**+1.3**
	SNR=33						
KSCPR	**CHUPUNGNYEONG**	**5.65**	**339**	P	**Pn**	**09 29 26.2**	**+1.3**
	SNR=33						
KSSAJ	**Sangju**	**5.77**	**341**	P	**Pn**	**09 29 27.8**	**+1.2**
	SNR=14						
KSSAJ	**Sangju**	**5.77**	**341**	P	**Pn**	**09 29 27.8**	**+1.2**
	SNR=14						
KSSAJ	**Sangju**	**5.77**	**341**	P	**Pn**	**09 29 27.8**	**+1.2**
	SNR=14						
KSULJ	**Uljin**	**5.80**	**352**	P	**Pn**	**09 29 28.0**	**+0.9**
	SNR=18						
KSULJ	**Uljin**	**5.80**	**352**	P	**Pn**	**09 29 28.0**	**+0.9**
	SNR=18						
KSULJ	**Uljin**	**5.80**	**352**	P	**Pn**	**09 29 28.0**	**+0.9**
	SNR=18						
KSULJ	**Uljin**	**5.80**	**352**	P	**Pn**	**09 29 28.1**	**+1.1**
	SNR=18						
OKCB	**Cheongsan-myeo**	**5.82**	**339**	P	**Pn**	**09 29 28.4**	**+1.2**
	SNR=15						
OKCB	**Cheongsan-myeo**	**5.82**	**339**	P	**Pn**	**09 29 28.4**	**+1.2**
	SNR=15						
OKCB	**Cheongsan-myeo**	**5.82**	**339**	P	**Pn**	**09 29 28.4**	**+1.2**
	SNR=15						
KSBON	**Boeun**	**5.96**	**339**	P	**Pn**	**09 29 30.8**	**+1.7**
	SNR=16						
KSBON	**Boeun**	**5.96**	**339**	P	**Pn**	**09 29 30.8**	**+1.7**
	SNR=16						
KSBON	**Boeun**	**5.96**	**339**	P	**Pn**	**09 29 30.8**	**+1.7**
	SNR=16						
JWT	**Wachi**	**6.01**	**43**	Pn	**Pn**	**09 29 30.0**	**+0.2**
KSMGY	**Mungyeong**	**6.03**	**342**	P	**Pn**	**09 29 31.5**	**+1.4**
	SNR=9.2						
KSMGY	**Mungyeong**	**6.03**	**342**	P	**Pn**	**09 29 31.5**	**+1.4**
	SNR=9.2						
KSMGY	**Mungyeong**	**6.03**	**342**	P	**Pn**	**09 29 31.5**	**+1.4**
	SNR=9.2						
BUYB	**Buyeo**	**6.07**	**332**	P	**Pn**	**09 29 32.0**	**+1.5**
	SNR=7.2						
BUYB	**Buyeo**	**6.07**	**332**	P	**Pn**	**09 29 32.0**	**+1.5**
	SNR=7.2						
BUYB	**Buyeo**	**6.07**	**332**	P	**Pn**	**09 29 32.0**	**+1.5**
	SNR=7.2						
UJN	**ULJIN**	**6.09**	**352**	P	**Pn**	**09 29 32.1**	**+1.2**
	SNR=19						
UJN	**ULJIN**	**6.09**	**352**	P	**Pn**	**09 29 32.1**	**+1.2**
	SNR=19						
UJN	**ULJIN**	**6.09**	**352**	P	**Pn**	**09 29 32.1**	**+1.2**
	SNR=19						
CHYB	**Chungyang**	**6.12**	**349**	P	**Pn**	**09 29 32.4**	**+1.2**
	SNR=29						
CHYB	**Chungyang**	**6.12**	**349**	P	**Pn**	**09 29 32.4**	**+1.2**
	SNR=29						
CHYB	**Chungyang**	**6.12**	**349**	P	**Pn**	**09 29 32.4**	**+1.2**
	SNR=29						
YOJB	**Youngju**	**6.12**	**345**	P	**Pn**	**09 29 32.4**	**+1.1**
	SNR=24						
YOJB	**Youngju**	**6.12**	**345**	P	**Pn**	**09 29 32.4**	**+1.1**
	SNR=24						
YOJB	**Youngju**	**6.12**	**345**	P	**Pn**	**09 29 32.4**	**+1.1**
	SNR=24						
KOJ2	**Gongju-si**	**6.15**	**334**	P	**Pn**	**09 29 33.2**	**+1.4**
	SNR=12						
KOJ2	**Gongju-si**	**6.15**	**334**	P	**Pn**	**09 29 33.2**	**+1.4**
	SNR=12						
KOJ2	**Gongju-si**	**6.15**	**334**	P	**Pn**	**09 29 33.2**	**+1.4**
	SNR=12						
KSCHJ	**Chungju**	**6.25**	**342**	P	**Pn**	**09 29 34.2**	**+1.1**
	SNR=13						
KSCHJ	**Chungju**	**6.25**	**342**	P	**Pn**	**09 29 34.2**	**+1.1**
	SNR=13						
KSCHJ	**Chungju**	**6.25**	**342**	P	**Pn**	**09 29 34.2**	**+1.1**
	SNR=13						
KSTBA	**Taebaek**	**6.28**	**349**	P	**Pn**	**09 29 34.7**	**+1.2**
	SNR=38						
KSTBA	**Taebaek**	**6.28**	**349**	P	**Pn**	**09 29 34.7**	**+1.2**
	SNR=38						
KSTBA	**Taebaek**	**6.28**	**349**	P	**Pn**	**09 29 34.7**	**+1.2**
	SNR=38						
IMWB	**Imwonan-gil**	**6.34**	**352**	P	**Pn**	**09 29 36.0**	**+1.7**
	SNR=7.0						
IMWB	**Imwonan-gil**	**6.34**	**352**	P	**Pn**	**09 29 36.0**	**+1.7**
	SNR=7.0						
IMWB	**Imwonan-gil**	**6.34**	**352**	P	**Pn**	**09 29 36.0**	**+1.7**
	SNR=7.0						
KSGWL	**Sabuk**	**6.39**	**348**	P	**Pn**	**09 29 36.3**	**+1.4**
	SNR=6.2						
KSGWL	**Sabuk**	**6.39**	**348**	P	**Pn**	**09 29 36.3**	**+1.4**
	SNR=6.2						
KSGWL	**Sabuk**	**6.39**	**348**	P	**Pn**	**09 29 36.3**	**+1.4**
	SNR=6.2						
KSYOW	**Yeongwol**	**6.42**	**346**	P	**Pn**	**09 29 36.5**	**+1.1**
	SNR=39						
KSYOW	**Yeongwol**	**6.42**	**346**	P	**Pn**	**09 29 36.5**	**+1.1**
	SNR=39						
KSYOW	**Yeongwol**	**6.42**	**346**	P	**Pn**	**09 29 36.5**	**+1.1**
	SNR=39						
KSCEA	**Cheonan**	**6.43**	**337**	P	**Pn**	**09 29 37.0**	**+1.6**
	SNR=27						
KSCEA	**Cheonan**	**6.43**	**337**	P	**Pn**	**09 29 37.0**	**+1.6**
	SNR=27						
KSCEA	**Cheonan**	**6.43**	**337**	P	**Pn**	**09 29 37.0**	**+1.6**
	SNR=27						
JECH	**Jecheon**	**6.47**	**344**	P	**Pn**	**09 29 37.0**	**+1.0**
	SNR=21						
JECH	**Jecheon**	**6.47**	**344**	P	**Pn**	**09 29 37.0**	**+1.0**
	SNR=21						
JECH	**Jecheon**	**6.47**	**344**	P	**Pn**	**09 29 37.0**	**+1.0**
	SNR=21						
PYTK	**Pyeongtaek**	**6.63**	**336**	P	**Pn**	**09 29 40.4**	**+2.3**
	SNR=9.3						
PYTK	**Pyeongtaek**	**6.63**	**336**	P	**Pn**	**09 29 40.4**	**+2.3**
	SNR=9.3						
PYTK	**Pyeongtaek**	**6.63**	**336**	P	**Pn**	**09 29 40.4**	**+2.3**
	SNR=9.3						
KSSES	**Seosan**	**6.70**	**332**	P	**Pn**	**09 29 40.3**	**+1.2**
	SNR=14						
KSSES	**Seosan**	**6.70**	**332**	P	**Pn**	**09 29 40.3**	**+1.2**
	SNR=14						
KSSES	**Seosan**	**6.70**	**332**	P	**Pn**	**09 29 40.3**	**+1.2**
	SNR=14						
KSWJU	**Wonju**	**6.74**	**344**	P	**Pn**	**09 29 41.0**	**+1.4**
	SNR=19						
KSWJU	**Wonju**	**6.74**	**344**	P	**Pn**	**09 29 41.0**	**+1.4**
	SNR=19						
KSWJU	**Wonju**	**6.74**	**344**	P	**Pn**	**09 29 41.0**	**+1.4**

	SNR=19						
OKEB	Okgye-meyeon	6.77	350	P	Pn	09 29 41.5	+1.5
	SNR=12						
OKEB	Okgye-meyeon	6.77	350	P	Pn	09 29 41.5	+1.5
	SNR=12						
OKEB	Okgye-meyeon	6.77	350	P	Pn	09 29 41.5	+1.5
	SNR=12						
KSICN	Icheon	6.80	339	P	Pn	09 29 41.9	+1.4
	SNR=19						
KSICN	Icheon	6.80	339	P	Pn	09 29 41.9	+1.4
	SNR=19						
KSICN	Icheon	6.80	339	P	Pn	09 29 41.9	+1.4
	SNR=19						
KSAR	Wonju Array Be	6.81	343	Pn	Pn	09 29 41.3	+0.7
KSRS	Korea Array	6.82	343	P	Pn	09 29 41.4	+0.8
	3.8nm,0.3s,baz=159,slow=15,SNR=86						
KSRS				LR	LR	09 32 34.9	
	comp=Z,54nm,18.4s,baz=195,slow=40						
HAWB	Hwaseong-si	6.83	335	P	Pn	09 29 43.0	+2.1
	SNR=29						
HAWB	Hwaseong-si	6.83	335	P	Pn	09 29 43.0	+2.1
	SNR=29						
HAWB	Hwaseong-si	6.83	335	P	Pn	09 29 43.0	+2.1
	SNR=29						
KS19	Wonju Array Si	6.88	343		Pn	09 29 41.9	+0.5
KSDGY	Daegwallycong	6.88	348	P	Pn	09 29 43.0	+1.4
	SNR=13						
KSDGY	Daegwallycong	6.88	348	P	Pn	09 29 43.0	+1.4
	SNR=13						
KSDGY	Daegwallycong	6.88	348	P	Pn	09 29 43.0	+1.4
	SNR=13						
KSSWO	Suwon	6.93	336	P	Pn	09 29 44.1	+1.9
	SNR=35						
KSSWO	Suwon	6.93	336	P	Pn	09 29 44.1	+1.9
	SNR=35						
KSSWO	Suwon	6.93	336	P	Pn	09 29 44.1	+1.9
	SNR=35						
INU	Inuyama	7.06	50	Pn	Pn	09 29 45.6	+1.7
KSJMJ	Jumunjin	7.06	349	P	Pn	09 29 45.7	+1.8
	SNR=15						
KSJMJ	Jumunjin	7.06	349	P	Pn	09 29 45.7	+1.8
	SNR=15						
KSJMJ	Jumunjin	7.06	349	P	Pn	09 29 45.7	+1.8
	SNR=15						
SHHB	Siheung-si	7.09	335	P	Pn	09 29 47.0	+2.6
	SNR=11						
SHHB	Siheung-si	7.09	335	P	Pn	09 29 47.0	+2.6
	SNR=11						
SHHB	Siheung-si	7.09	335	P	Pn	09 29 47.0	+2.6
	SNR=11						
KSSEO	Seoul	7.14	337	P	Pn	09 29 46.7	+1.7
	SNR=25						
KSSEO	Seoul	7.14	337	P	Pn	09 29 47.0	+1.9
	SNR=25						
KSSEO	Seoul	7.14	337	P	Pn	09 29 46.7	+1.7
	SNR=25						
KSSEO	Seoul	7.14	337	P	Pn	09 29 47.0	+1.9
	SNR=25						
KSSEO	Seoul	7.14	337	P	Pn	09 29 46.7	+1.7
	SNR=25						
KSSEO	Seoul	7.14	337	P	Pn	09 29 47.0	+1.9
	SNR=25						
KSCHC	Chuncheon	7.15	343	P	Pn	09 29 47.0	+1.8
	SNR=28						
KSCHC	Chuncheon	7.15	343	P	Pn	09 29 47.0	+1.8
	SNR=28						
KSCHC	Chuncheon	7.15	343	P	Pn	09 29 47.0	+1.8
	SNR=28						
KSSOD	Songwoldong	7.20	337	P	Pn	09 29 48.4	+2.5
	SNR=8.3						
KSSOD	Songwoldong	7.20	337	P	Pn	09 29 48.4	+2.5
	SNR=8.3						
KSSOD	Songwoldong	7.20	337	P	Pn	09 29 48.4	+2.5
	SNR=8.3						
INCN	Inchon	7.24	335	Pn	Pn	09 29 47.6	+1.2
KSDEI	Deokjeokdo	7.24	331	P	Pn	09 29 47.6	+1.2
	SNR=16						
KSDEI	Deokjeokdo	7.24	331	P	Pn	09 29 48.0	+1.6
	SNR=5.6						
KSDEI	Deokjeokdo	7.24	331	P	Pn	09 29 48.0	+1.6
	SNR=5.6						
KSIJA	INJE	7.28	345	P	Pn	09 29 48.7	+1.8
	SNR=14						
KSIJA	INJE	7.28	345	P	Pn	09 29 48.7	+1.8
	SNR=14						
KSIJA	INJE	7.28	345	P	Pn	09 29 48.7	+1.8
	SNR=14						
GAPB	Gapyeong	7.30	341	P	Pn	09 29 49.0	+1.9
	SNR=21						
GAPB	Gapyeong	7.30	341	P	Pn	09 29 49.0	+1.9
	SNR=21						
GAPB	Gapyeong	7.30	341	P	Pn	09 29 49.0	+1.9
	SNR=21						
JGF	Kuroka	7.43	49	Pn	Pn	09 29 51.0	+2.1
KSSKC	Sokcho	7.49	348	P	Pn	09 29 52.0	+2.2
	SNR=25						
KSSKC	Sokcho	7.49	348	P	Pn	09 29 52.0	+2.2
	SNR=25						
KSGAH	Ganghwa	7.51	335	P	Pn	09 29 51.5	+1.6
	SNR=6.4						
KSGAH	Ganghwa	7.51	335	P	Pn	09 29 51.5	+1.6
	SNR=6.4						
KSCWO	Cheorwon	7.51	342	P	Pn	09 29 51.6	+1.5
	SNR=25						
KSCWO	Cheorwon	7.51	342	P	Pn	09 29 51.6	+1.5
	SNR=25						
KSCWO	Cheorwon	7.51	342	P	Pn	09 29 51.6	+1.5
	SNR=25						
SEHB	SEOHWA	7.52	347	P	Pn	09 29 52.4	+2.2
	SNR=8.6						
SEHB	SEOHWA	7.52	347	P	Pn	09 29 52.4	+2.2
	SNR=8.6						
KSMUS	Musan	7.56	337	P	Pn	09 29 52.0	+1.3
	SNR=21						
KSMUS	Musan	7.56	337	P	Pn	09 29 52.0	+1.3
	SNR=21						
HWCB	Hwacheon	7.61	343	P	Pn	09 29 53.0	+1.7
	SNR=31						
HWCB	Hwacheon	7.61	343	P	Pn	09 29 53.0	+1.7
	SNR=31						
HWCB	Hwacheon	7.61	343	P	Pn	09 29 53.0	+1.7
	SNR=31						
YNCB	YEONCHEON	7.64	339	P	Pn	09 29 53.1	+1.3
	SNR=21						
YNCB	YEONCHEON	7.64	339	P	Pn	09 29 53.1	+1.3
	SNR=21						
YPDB	Yeonpyeongdo	7.71	331	P	Pn	09 29 55.4	+2.8
	SNR=5.3						
YPDB	Yeonpyeongdo	7.71	331	P	Pn	09 29 55.4	+2.8
	SNR=5.3						
JHJ	Hachijo jima 2	8.23	72	P	Pn	09 30 01.2	+1.5
	18nm,0.3s,baz=66,slow=15,SNR=2.0						
JHJ				S	Sn	09 31 29.1	-2.0
	baz=66,slow=14,SNR=1.7						
MAJO	Matsushiro	8.55	47	Pn	Pn	09 30 05.4	+1.4
MAT	Matsushiro	8.55	47	P	Pn	09 30 05.4	+1.4
MAT				S	Sn	09 31 36.6	-2.2
MJB9	Matsu-Tunnel	8.55	47	Pn	Pn	09 30 05.9	+2.0
MJAR	Matsushiro Arr	8.55	47	P	Pn	09 30 05.3	+1.4
	5.0nm,0.3s,baz=236,slow=14,SNR=97						
MJAR				S	Sn	09 31 31.4	-7.4
	0.5nm,0.3s,baz=219,slow=14,SNR=8.0						
JSD	Sado	9.58	40		Pn	09 30 18.8	+1.1
TATO	Taipei	9.89	235	Pn	Pn	09 30 22.8	+0.7
NJ2	Nanjing	9.95	279	eP	Pn	09 30 24.1	+1.4
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
YHNB	Yeheng	10.16	234		Pn	09 30 25.9	+0.1
NACB	Ninganchiao	10.34	231	Pn	Pn	09 30 25.7	-2.3
JCJ	Chichijima	10.98	108	P	Pn	09 30 39.1	+2.6
	8.1nm,0.3s,baz=293,slow=21,SNR=5.3						
JCJ	Chichijima	10.98	108	Pn	Pn	09 30 35.3	-1.3
JMM	Marumori	10.99	48		Pn	09 30 38.0	+1.4
SSLB	Suanglung	11.03	232		Pn	09 30 34.6	-2.7
TPUB	Ta-pu	11.58	231	Pn	Pn	09 30 41.8	-2.7
KNMB	Chin-men Tao	12.46	242	Pn	Pn	09 30 58.0	+2.0
USRK	Ussuriysk Ar.	13.29	5	P	Pn	09 31 06.7	+0.2
	baz=216,slow=25,SNR=6.1						
USRK	Ussuriysk Ar.	13.29	5	P	Pn	09 31 08.2	+1.7
CN2	Changchun	13.43	344	eP	Pn	09 31 10.6	+2.3
CN2				S	Sn	09 33 37.5	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,100nm,10.0s						
CN2				LR	LR		
	comp=E,200nm,10.0s						
CN2				LR	LR		
	comp=Z,400nm,10.0s						
MDJ	Mudanjiang	13.66	357	P	Pn	09 31 12.1	+0.7
MDJ				pmax	pmax		
	comp=Z,13nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,310nm,4.0s						
MDJ	Mudanjiang	13.66	357	P	Pn	09 31 12.3	+0.9
WHN	Wuhan	13.84	272	⇓P	P	09 31 27.5	+10
BJT	Baijiatuau	14.71	312		P	09 31 29.1	+1.9
BJI	Beijing	14.72	312	P	P	09 31 28.8	+1.5
BJI				pmax	pmax		
	comp=Z,28nm,1.4s						
ASAJ	Asahikawa	16.28	33	P	Pn	09 31 43.0	-1.1
	7.1nm,0.3s,baz=234,slow=10,SNR=70						
ASAJ				LR	LR	09 37 03.2	
	comp=Z,58nm,21.1s,baz=246,slow=33						
JKA	Kamikawa-asahi	16.29	33	P	Pn	09 31 41.9	-2.2
JKA				IAmb	IAmb	09 31 43.6	
	comp=Z,46nm,0.6s						
ENH	Enshi	18.04	273		Pn	09 32 06.3	+0.8
ENH				IAmb	IAmb	09 32 08.4	
	comp=Z,18nm,0.5s						
HHC	Hu-ho-hao-te	18.17	308	eP	Pn	09 32 07.3	+0.3
HHC				sP	sP	09 32 47.5	+1.8
HHC				S	S	09 35 28.6	+1.9
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.8s						
KLR	Kul'dur	18.29	3	P	P	09 32 05.6	-1.0
	comp=Z,0.6nm,0.3s,baz=196,slow=7.1,SNR=28						
XAN	Xi'an	18.40	285	P	Pn	09 32 15.5	+5.8
XAN				pP	pP	09 32 23.2	-8.3
XAN				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YSS	Yuzh-Sakhalins	18.60	27	P	P	09 32 09.2	-0.8
YSS				IAmb	IAmb	09 32 14.5	
	comp=Z,30nm,0.7s						
LZH	Lanzhou	22.72	290	eP	P	09 32 54.5	+0.6
LZH				pP	pP	09 33 22.0	+3.1
LZH				sP	sP	09 33 35.1	-0.3
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
CD2	Chengdu	22.86	277	P	P	09 32 55.9	+0.7
CD2				pmax	pmax		
	comp=Z,30nm,1.4s						
ULN	Ulaanbaatar	24.59	320	P	P	09 33 10.9	0.0
SONM	Songino Array	24.93	319	P	P	09 33 13.0	-1.0
	comp=Z,7.2nm,0.7s,baz=138,slow=8.8,SNR=37						
SONM	Songino Array	24.93	319	P	P	09 33 13.9	-0.1
GTA	Gaotai	26.32	297	eP	P	09 33 26.2	-0.4
GTA				pP	pP	09 33 55.1	+0.4
GTA				sP	sP	09 34 12.9	+2.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TLY	Talaya	28.61	324	LR	LR	09 44 51.7	
	comp=Z,42nm,19.8s,baz=288,slow=35						
PETK	Petropavlovsk-	29.70	34	P	P	09 33 57.3	+1.0
	comp=Z,1.5nm,0.7s,baz=256,slow=6.0,SNR=4.2						
PETK	Petropavlovsk-	29.70	34	P	P	09 33 56.7	+0.4
CMAR	Chiang Mai Arr	31.08	254	P	P	09 34 07.9	-0.9
	comp=Z,0.9nm,0.3s,baz=45,slow=9.4,SNR=2.1						
FAKI	Fak Fak	33.72	177	P	P	09 34 32.5	+0.6
FAKI				IAmb	IAmb	09 35 03.7	
	comp=Z,17nm,1.0s						
SEY	Seymchan	34.96	17	P	P	09 34 43.0	+1.0
	comp=Z,7.0nm,0.4s,baz=207,slow=8.6,SNR=26						
WMQ	Urumqi	35.92	303	eP	P	09 34 51.7	+1.1
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,3.9s						
KAPI	Kappang	37.19	198	LR	LR	09 51 22.2	
	comp=Z,16nm,18.8s,baz=357,slow=38						
KULM	Kulim	37.87	234	P	P	09 35 08.5	+1.2
KULM				IAmb	IAmb	09 35 09.1	
	comp=Z,12nm,0.7s						
ZALV	Zalesovo Beam	39.83	319	P	P	09 35 22.2	-1.0
	comp=Z,0.7nm,0.3s,baz=96,slow=10,SNR=2.0						
ZALV				PcP	PcP	09 37 27.5	+1.0
	comp=Z,1.0nm,0.6s,baz=92,slow=4.3,SNR=2.3						
ZALV	Zalesovo Beam	39.83	319	P	P	09 35 22.8	-0.3
MKAR	Makanchi Array	40.03	307	P	P	09 35 23.5	-1.5
	comp=Z,1.0nm,0.6s,baz=88,slow=11,SNR=5.7						
MKAR				PcP	PcP	09 37 26.3	-1.0
	comp=Z,0.6nm,0.7s,baz=109,slow=2.0,SNR=2.1						
MKAR				ScP	ScP	09 41 02.7	-1.2
	comp=Z,0.5nm,0.9s,baz=82,slow=6.8,SNR=1.8						
MKAR	Makanchi Array	40.03	307	P	P	09 35 25.2	+0.2
TIXI	Tiksi	40.77	359	P	P	09 35 29.7	-1.0
	comp=Z,5.9nm,0.7s,baz=136,slow=6.1,SNR=15						
TIXI	Tiksi	40.77	359	P	P	09 35 29.4	-1.2
PSI	Prapat	40.84	233	P	P	09 35 31.2	-0.9
	comp=Z,7.7nm,0.7s,baz=134,slow=6.2,SNR=5.2						
PSI				LR	LR	09 53 47.3	
	comp=Z,43nm,18.4s,baz=272,slow=38						
BILL	Bilibino	42.60	19	P	P	09 35 45.9	+0.3
GSI	Gunungsitoli	42.85	233	P	P	09 35 47.6	-0.7
GSI				IAmb	IAmb	09 35 48.9	
	comp=Z,20nm,0.7s						
KURK	Kurchatov	42.89	313	P	P	09 35 47.7	-0.5
KURK				IAmb	IAmb	09 35 51.9	
	comp=Z,12nm,1.1s						
UGM	Wanagama	43.09	210	P	P	09 35 50.0	-0.2
PMG	Port Moresby	43.21	155	LR	LR	09 50 41.6	
	comp=Z,44nm,21.4s,baz=176,slow=31						
NRIK	Noril'sk	45.43	340	P	P	09 36 07.1	-1.0
	comp=Z,1.8nm,0.4s,baz=125,slow=7.1,SNR=5.7						
FITZ	Fitzroy Crossi	48.98	186	P	P	09 36 36.4	+0.2
	comp=Z,1.6nm,0.6s,baz=6.0,slow=11,SNR=2.4						
GAR	Garm	49.13	297	P	P	09 36 38.6	+1.1
WB0	Warramunga Arr	50.56	175	P	P	09 36 47.6	-0.6
WRAB	Tennant Creek	50.73	175	P	P	09 36 49.7	+0.3
WRAB				IAmb	IAmb	09 37 06.2	
	comp=Z,17nm,1.7s						
WRA	Warramunga Arr	50.73	175	P	P	09 36 49.8	+0.3
	comp=Z,1.0nm,0.7s,baz=355,slow=7.9,SNR=13						
WRA	Warramunga Arr	50.73	175	P	P	09 36 49.2	-0.3
WB2	Warramunga Arr	50.73	175	P	P	09 36 50.2	+0.7
WB2				IAmb	IAmb	09 38 19.0	
	comp=Z,10.0nm,1.2s						
WR0	Warramunga Arr	50.77	175	P	P	09 36 50.2	+0.5
WR0				IAmb	IAmb	09 37 23.0	
	comp=Z,18nm,1.7s						
CTAO	Charters Tower	52.97	161	P	P	09 37 06.2	+0.1
CTAO				IAmb	IAmb	09 37 08.3	
	comp=Z,8.8nm,0.9s						
AS31	Alice Springs	54.40	176	P	P	09 37 17.0	+0.5
ASAR	Alice Springs	54.40	176	P	P	09 37 16.9	+0.5
	comp=Z,1.9nm,0.7s,baz=7.1,slow=13,SNR=25						
ASAR	Alice Springs	54.40	176	P	P	09 37 17.0	+0.5
ABKAR	Akbulak array	54.93	311	P	P	09 37 20.7	+0.7
J20K	Nowinta River	56.31	31	P	P	09 37 30.8	+1.2
J20K				IAmb	IAmb	09 39 19.6	
	comp=Z,22nm,1.6s						
PPLA	Purkeypile	57.26	32	P	P	09 37 37.7	+1.2
KDAK	Kodiak Island	57.61	38	P	P	09 37 38.8	0.0
COLD	Coldfoot	57.79	27	P	P	09 37 41.5	+1.5
COLD				IAmb	IAmb	09 39 20.3	
	comp=Z,13nm,1.8s						
TOLK	Toolik Lake Re	57.94	25	P	P	09 37 41.5	+0.4
TOLK				IAmb	IAmb	09 38 35.6	
	comp=Z,18nm,1.6s						
RND	Reindeer	58.72	31	P	P	09 37 47.6	+1.0
RND				IAmb	IAmb	09 38 38.3	
	comp=Z,14nm,1.3s						
IL31		59.39	30	P	P	09 37 51.8	+0.8
IL31				IAmb	IAmb	09 37 58.1	
	comp=Z,14nm,1.7s						
ILAR	Eielson Array	59.39	30	P	P	09 37 51.3	+0.2
	comp=Z,1.0nm,0.6s,baz=272,slow=6.7,SNR=20						
ILAR	Eielson Array	59.39	30	P	P	09 37 51.0	-0.1
M26K	Nabesna, AK	61.53	32	P	P	09 38 07.5	+1.8
M26K				IAmb	IAmb	09 38 08.6	
	comp=Z,5.2nm,0.9s						
VRDI	Verde Repeater	61.58	33	P	P	09 38 07.6	+1.3
DZM	Mont Dzumac	63.03	142	P	P	09 38 17.8	+1.6
DZM				IAmb	IAmb	09 38 18.6	
	comp=Z,16nm,1.1s						
EPYK	Eagle Plains	63.19	27	P	P	09 38 17.5	+0.8
STKA	Stephens Creek	63.37	169	P	P	09 38 18.0	-0.1
	comp=Z,2.3nm,0.6s,baz=359,slow=4.1,SNR=6.3						
STKA	Stephens Creek	63.37	169	P	P	09 38 18.5	+0.3
INK	Inuvik	63.81	24	P	P	09 38 21.0	+0.4
	comp=Z,1.6nm,0.4s,baz=298,slow=6.7,SNR=24						
A36M	Sachs Harbour	65.16	19	P	P	09 38 29.6	+0.3
A36M				IAmb	IAmb	09 38 33.3	
	comp=Z,8.8nm,0.8s						
ARCES	ARCESS Array B	66.35	338	P	P	09 38 36.3	-0.8
	comp=Z,1.3nm,0.5s,baz=58,slow=9.1,SNR=7.0						
ARCES				LR	LR	10 14 34.0	
	comp=Z,74nm,18.8s,baz=285,slow=42						
NOR	Nord	66.42	355	iP	P	09 38 35.9	-1.4
NOR				IAmb	IAmb	09 38 36.7	
	comp=Z,2.4nm,0.5s						
KBZ	Khabaz	67.71	308	P	P	09 38 45.5	-0.6
	comp=Z,5.7nm,0.9s,baz=52,slow=1.8,SNR=7.7						
FINES	FINESS Array B	69.73	330	P	P	09 38 57.3	-1.0
	comp=Z,6.5nm,0.5s,baz=73,slow=6.2,SNR=33						
RES	Resolute Bay	70.56	12	P	P	09 39 03.4	+0.3
DAG	Danmarks Havn	70.84	353	iP	P	09 39 03.6	-1.2
DAG				IAmb	IAmb	09 39 04.6	
	comp=Z,5.7nm,0.6s						
NEEM	North Greenlan	71.86	0	eP	P	09 39 10.8	-0.5
TULEG	Thule	72.10	5	eP	P	09 39 11.2	-1.1
NACGM	Naroch	72.50	324	iP	P	09 39 14.2	-0.9
AKASG	Malin Array Be	73.22	319	P	P	09 39 17.3	-2.1
	comp=Z,2.5nm,0.5s,baz=58,slow=6.4,SNR=8.0						
AKASG	Malin Array Be	73.22	319	P	P	09 39 18.5	-0.9
DBG	Daneborg	73.23	352	iP	P	09 39 17.5	-1.5
DBG				IAmb	IAmb	09 39 18.8	
	comp=Z,2.7nm,0.7s						
YKA	Yellowknife Ar	73.45	26	P	P	09 39 21.3	+0.7
	comp=Z,1.2nm,0.6s,baz=305,slow=5.7,SNR=13						
YKA	Yellowknife Ar	73.45	26	P	P	09 39 20.4	-0.1
BRTR	Keskin Array B	75.68	308	P	P	09 39 33.2	-0.8
	comp=Z,4.3nm,0.8s,baz=117,slow=4.3,SNR=9.5						
BRTR	Keskin Array B	75.68	308	P	P	09 39 33.7	-0.4
NB2	NORSAR Subarra	75.94	334	P	P	09 39 33.6	-1.4
	comp=Z,2.1nm,0.6s,baz=47,slow=5.6						
NOA	NORSAR Array B	75.94	334	P	P	09 39 32.4	-2.6
	comp=Z,2.5nm,0.6s,baz=49,slow=5.7,SNR=12						
NC204	NORSAR Array S	75.96	334	P	P	09 39 34.6	-0.5
SUMG	Summit	76.47	357	iP	P	09 39 37.0	-1.2
SUMG				IAmb	IAmb	09 39 39.2	
	comp=Z,18nm,0.7s						
SUMG	Summit	76.47	357	P	P	09 39 38.9	+0.6
ASF	Jabal al Asfar	76.92	300	P	P	09 39 40.8	-0.3
	comp=Z,1.1nm,0.4s,baz=79,slow=2.1,SNR=3.8						
BUR08	Bucovina Ar. S	77.04	318	P	P	09 39 41.4	-0.1
BUR08				IAmb	IAmb	09 41 54.5	
	comp=Z,19nm,1.7s						
BURAR	Bucovina Array	77.04	318	P	P	09 39 41.1	-0.5
OJC	Ojcow	78.60	322	eP	P	09 39 50.5	+0.5
NIE	Niedzica	78.79	321	eP	P	09 39 52.7	+1.6
KSP	Ksiaz	80.04	324	eP	P	09 39 58.2	+0.4
CLL	Collm	81.38	326	⇓iP	P	09 40 04.9	0.0
	comp=Z,13nm,0.6s						
CONA	Conrad Observa	82.04	322	eP	P	09 40 09.7	+1.1
	comp=Z,7.4nm,0.7s,SNR=8.2						
GERES	GERESS Array B	82.60	323	P	P	09 40 11.1	-0.4
	comp=Z,1.5nm,0.6s,baz=49,slow=6.2,SNR=9.2						
ARSA	Arzberg	82.64	321	eP	P	09 40 12.2	+0.6
	comp=Z,1.9nm,0.7s						
MOA	Molln	82.93	322	iP	P	09 40 14.2	+1.1
	comp=Z,7.7nm,1.4s						
SOKA	Soboth	83.26	321	eP	P	09 40 15.3	+0.5
	comp=Z,10nm,1.1s,SNR=5.8						
OBKA	Obir	83.63	321	eP	P	09 40 17.2	+0.4
	comp=Z,7.6nm,0.8s,SNR=7.8						
KBA	Koelnbreinsper	83.91	322	eP	P	09 40 17.9	-0.4
	comp=Z,4.6nm,0.6s						
MYKA	Terra Mystica	84.03	322	iP	P	09 40 18.6	-0.3
	comp=Z,6.6nm,0.7s						
PRED	Cave del Predi	84.19	322	P	P	09 40 19.2	-0.4
PRED				IAmb	IAmb	09 41 47.0	
	comp=Z,34nm,1.9s						
ZOU	Zoufplan	84.44	322	P	P	09 40 20.4	-0.6
ZOU				IAmb	IAmb	09 40 23.8	
	comp=Z,13nm,1.3s						
ABTA	Abfaltersbach	84.56	322	iP	P	09 40 20.8	-0.7
	comp=Z,5.2nm,0.6s						
WTTA	Wattenberg	84.67	323	iP	P	09 40 21.6	-0.6
	comp=Z,4.5nm,1.0s						
STAL	STALIGIAL	84.77	322	P	P	09 40 21.1	-1.3
STAL				IAmb	IAmb	09 40 22.5	
	comp=Z,8.4nm,0.8s						
ITM	Ithomi	84.83	310	P	P	09 40 22.2	-0.7
CIMO	Cimolais	84.88	322	P	P	09 40 21.4	-1.6
CIMO				IAmb	IAmb	09 40 25.9	
	comp=Z,6.5nm,0.9s						
MOTA	Moosalm	84.89	323	iP	P	09 40 22.9	-0.3
	comp=Z,3.4nm,0.7s						
SQTA	Sankt Quirin	84.92	323	iP	P	09 40 22.9	-0.4
	comp=Z,3.9nm,0.9s						
NVAR	Mina Array Bea	85.87	47	P	P	09 40 28.7	+0.3
	comp=Z,1.4nm,0.6s,baz=298,slow=5.6,SNR=14						
PDAR	Pinedale Array	88.30	40	P	P	09 40 40.5	+0.6
	comp=Z,0.9nm,0.8s,baz=166,slow=0.6,SNR=8.6						
TXAR	Lajitas Array	100.98	46	P	Pdif	09 41 37.2	-0.8
	comp=Z,0.2nm,0.7s,baz=283,slow=5.1,SNR=2.1						

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*SOME **08** 09:28:48.2, 38.°67N×72.°87E, h0^{km}*
*IDC **08** 09:28:53.3±1.2, 38.°32N×72.°90E, h0^{km}, mb3.9/13, mb1 4.0/18, mb1mx3.8/63, mbtmp3.9/18, ML3.5/5, MS2.9/1, Ms1 2.9/1, ms1mx2.4/53, Error ellipse: s-maj=23.6km s-min=15.3km az=140.0*
*NNC **08** 09:28:54.8±5.2, 38.°21N×72.°81E, h0^{km}, mb4.7, mpv4.3, Error ellipse: s-maj=41.5km s-min=30.2km az=4.0*
*NEIC **08** 09:28:55.3±2.9, 38.°25N±0.°06×72.°93E±0.°09, h10^{km}±1^{km}, mb4.6/8, Error ellipse: s-maj=13.6km s-min=6.4km az=126.0*

ISC 08 09:28:55.2±0.5**, 38.°30N**±0.°04×**72.°94E**±0.°05**, h10^{km}, n67, σ2.s54**/74**, mb4.1**/15**, 5C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.48	323	Pn	Pn	09 29 19.3	-2.8
GAR	Garm	2.17	290		Pn	09 29 32.9	+1.4
BTK	Batken	2.41	318		Pn	09 29 36.6	+1.9
CHGR	Chuyangaron	2.99	278	Pn	Pn	09 29 45.4	+2.7
AML	Almayashu	3.87	8	P	Pn	09 29 57.5	+2.3
	SNR=62						
UCH	Uchtor	4.11	17	P	Pn	09 30 01.2	+2.8
	SNR=18						
EKS2	Erkin-Say	4.40	8	P	Pn	09 30 05.7	+3.5
	SNR=5.5						
IUG	Iuzhnay	4.44	331	eP	Pn	09 30 04.9	+2.2
	1µm,0.7s						
IUG				eS	Sn	09 31 00.7	+6.2
	187nm,0.4s						
IUG	Iuzhnay	4.44	331	Pg	Pb	09 30 15.3	+2.0
	1µm,0.7s						
IUG				Lg	Lg	09 31 03.5	
	187nm,0.4s						
MRKS	Merke	4.45	3	eP	Pn	09 30 05.0	+2.2
	23nm,0.4s						
MRKS				eS	Sn	09 31 00.6	+5.9
	62nm,0.5s						
MRKS	Merke	4.45	3	Pg	Pb	09 30 10.8	-2.7
	23nm,0.4s						
MRKS				Lg	Lg	09 30 54.9	
	62nm,0.5s						
AAK	Ala-Archa	4.49	15	Pn	Pn	09 30 06.6	+3.1
	3.6nm,0.3s,baz=186,slow=4.7,SNR=23						
AAK				Sn	Sn	09 31 03.1	+7.2
	4.3nm,0.3s,baz=2.7,slow=17,SNR=8.8						
AAK				LR	LR	09 31 56.3	
	comp=Z,136nm,20.3s,baz=194,slow=41						
AAK	Ala-Archa	4.49	15	P	Pn	09 30 06.4	+2.9
	SNR=16						
AAK	Ala-Archa	4.49	15	⇓Pn	Pn	09 30 06.1	+2.6
	34nm,0.6s						
AAK				⇑Sn	Sn	09 31 02.5	+6.6
	123nm,0.8s						
AAK	Ala-Archa	4.49	15	Pn	Pn	09 30 06.3	+2.9
KBK	Karagaybulak	4.61	19	P	Pb	09 30 18.1	+1.7
	SNR=7.0						
NIL	Nilore	4.65	177	Pn	Pb	09 30 10.7	-6.1
ULHL	Ulahol	4.68	32	P	Pb	09 30 19.1	+1.6
	SNR=13						
BOOM	Boomskoye usch	4.77	28	Pn	Pn	09 30 10.1	+2.8
KBL	Kabul	4.89	221		Pn	09 30 11.4	+2.4
TKM2	Tokmak 2	5.04	23	P	Pb	09 30 18.9	-4.7
	SNR=6.8						
TKM2	Tokmak 2	5.04	23	⇓Pn	Pn	09 30 14.5	+3.5

	4.7nm,0.5s						
TKM2				⇑Pg	**Pg**	**09 30 29.2**	**-2.5**
	37nm,0.9s						
TKM2				⇓Lg	Lg	09 31 39.1	
	39nm,0.7s						
TARG	**Taragay, Kyrgy**	**5.07**	**46**		**Pn**	**09 30 12.8**	**+1.1**
KK02	**Karatay Array**	**5.14**	**340**	⇑Pn	**Pn**	**09 30 13.9**	**+1.6**
	10nm,0.3s,baz=152,slow=12						
KK02				Sn	**Sn**	**09 31 16.7**	**+5.1**
KKAR	**Karatay Array**	**5.14**	**340**	Pn	**Pn**	**09 30 13.8**	**+1.6**
KST	**Kastek**	**5.27**	**25**	*e*P	Pn	09 30 20.7	+6.6
	28nm,0.5s						
KST				*e*S	**Sb**	**09 31 27.8**	**-2.9**
	22nm,0.6s						
KST	**Kastek**	**5.27**	**25**	Pg	**Pb**	**09 30 27.8**	**+0.4**
	28nm,0.5s						
KST				Lg	Lg	09 31 24.5	
	22nm,0.6s						
MDOK	**Medeo**	**5.78**	**31**	Pg	**Pg**	**09 30 42.7**	**-3.1**
	13nm,0.6s						
MDOK				Lg	Lg	09 32 02.4	
	50nm,1.0s						
DHRM	**DHARAMSHALA**	**6.63**	**155**	*e*P	**Pn**	**09 30 35.3**	**+2.4**
DHRM				*e*S	**Sn**	**09 31 50.4**	**+1.7**
DHRM				IAML		09 31 55.8	
	comp=E,59nm,0.3s						
PDGK	**Podgornoye**	**7.07**	**43**	⇑Pn	**Pn**	**09 30 43.0**	**+4.2**
	comp=E,4.5nm,0.7s						
PDGK				⇓Pg	**Pg**	**09 31 07.0**	**-3.5**
	comp=E,7.0nm,0.7s						
PDGK				⇓Lg	Lg	09 32 44.0	
	comp=E,28nm,1.0s						
SMLA	**Simla**	**7.96**	**153**	*e*P	**Pn**	**09 30 53.3**	**+2.5**
SMLA				*e*S	**Sn**	**09 32 21.6**	**+0.6**
SMLA				IAML		09 32 28.6	
	comp=E,59nm,0.5s						
SMLA				IAML		09 32 28.8	
	comp=N,58nm,0.3s						
MKAR	**Makanchi Array**	**10.93**	**36**	Pn	**Pn**	**09 31 34.0**	**+2.3**
	comp=N,0.1nm,0.3s,baz=225,slow=15,SNR=2.5						
MKAR				Sn	**Sn**	**09 33 32.4**	**-1.6**
	comp=N,0.1nm,0.3s,baz=222,slow=21,SNR=1.0						
MKAR				Lg	Lg	09 34 28.3	
	comp=N,0.1nm,0.3s,baz=232,slow=26,SNR=1.8						
MKAR	**Makanchi Array**	**10.93**	**36**		**Pn**	**09 31 34.0**	**+2.3**
GEYT	**Alibeck**	**11.68**	**273**	Pn	**Pn**	**09 31 40.4**	**-1.6**
	comp=N,1.5nm,0.3s,baz=104,slow=11,SNR=6.3						
GEYT	**Alibeck**	**11.68**	**273**		**Pn**	**09 31 40.8**	**-1.2**
GYA0B	**ALIBECK ARRAY**	**11.68**	**273**	Pn	**Pn**	**09 31 40.5**	**-1.5**
KURBB	**Kurchatov Arra**	**12.95**	**16**	Lg	Lg	09 35 32.0	
	comp=N,0.1nm,0.3s,baz=204,slow=29,SNR=1.2						
AB31	**Akbulak array**	**14.40**	**324**	P	Pn	09 32 13.4	-5.6
	comp=N,3.1nm,0.6s,baz=235,slow=17,SNR=32						
AB31				⇑S	**P**	**09 32 26.2**	**+0.2**
	comp=N,3.8nm,0.6s,baz=130,slow=16,SNR=7.8						
BVAR	**Borovoye Array**	**14.83**	**354**	Pn	**Pn**	**09 32 21.6**	**-3.3**
	comp=N,0.6nm,0.3s,baz=121,slow=26,SNR=5.6						
BRVK	**Borovoye**	**14.88**	**354**	Pn	**Pn**	**09 32 24.7**	**-0.7**
BHPL	**Bhopal**	**15.49**	**164**	*e*P	**Pn**	**09 32 30.5**	**-3.4**
ZALV	**Zalesovo Beam**	**17.64**	**24**	P	**Pn**	**09 32 59.1**	**-1.8**
	comp=N,0.2nm,0.3s,baz=216,slow=12,SNR=3.4						
ZALV	**Zalesovo Beam**	**17.64**	**24**	Pn	**Pn**	**09 33 00.6**	**-0.3**
ARU	**Arti**	**20.51**	**337**	P	**P**	**09 33 32.4**	**-0.8**
	comp=N,0.9nm,0.3s,baz=148,slow=9.5,SNR=1.5						
BELG	**Belogornoye**	**22.54**	**317**	P	**P**	**09 33 53.9**	**-1.2**
	comp=N,28nm,0.8s,baz=347,slow=0.8,SNR=7.9						
ANTO	**Ankara**	**31.02**	**286**	P	**P**	**09 35 12.1**	**-1.0**
ANTO				IAmb	IAmb	09 35 29.0	
	comp=Z,6.1nm,0.6s						
AKASG	**Malin Array Be**	**33.07**	**306**	P	**P**	**09 35 30.3**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=75,slow=7.6,SNR=5.6						
FINES	**FINESS Array B**	**36.89**	**324**	P	**P**	**09 36 03.3**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=118,slow=9.6,SNR=12						
FINES	**FINESS Array B**	**36.89**	**324**	P	**P**	**09 36 04.0**	**+0.4**
ARCES	**ARCESS Array B**	**40.10**	**336**	P	**P**	**09 36 30.3**	**-0.2**
	comp=Z,2.4nm,0.5s,baz=110,slow=7.1,SNR=22						
ARCES	**ARCESS Array B**	**40.10**	**336**	P	**P**	**09 36 30.5**	**0.0**
GERES	**GERESS Array B**	**43.18**	**304**	P	**P**	**09 36 55.5**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=49,slow=11,SNR=3.7						
TIP	**Timpagrande**	**43.22**	**289**	P	**P**	**09 36 57.4**	**+0.9**
TIP				IAmb	IAmb	09 37 10.1	
	comp=Z,17nm,1.3s						
NC303	**NORSAR Array S**	**43.83**	**322**	P	**P**	**09 37 01.7**	**+0.6**
NB2	**NORSAR Subarra**	**43.90**	**322**	P	**P**	**09 37 01.0**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**43.90**	**322**	P	**P**	**09 37 01.1**	**-0.6**
	comp=Z,2.4nm,0.6s,baz=92,slow=7.7,SNR=9.2						
NC204	**NORSAR Array S**	**44.12**	**322**	P	**P**	**09 37 03.5**	**0.0**
ESDC	**Sonseca Array**	**57.99**	**298**	P	**P**	**09 38 47.6**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=46,slow=7.5,SNR=4.6						
TORD	**Torodi Ar. Bea**	**67.30**	**269**	P	**P**	**09 39 49.7**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=52,slow=5.4,SNR=4.2						
TORD	**Torodi Ar. Bea**	**67.30**	**269**	P	**P**	**09 39 49.5**	**-0.9**
TOLK	**Toolik Lake Re**	**68.79**	**15**	P	**P**	**09 39 59.5**	**+0.4**
TOLK				IAmb	IAmb	09 40 00.1	
	comp=Z,2.3nm,0.8s						
INK	**Inuvik**	**71.88**	**10**	P	**P**	**09 40 17.4**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=341,slow=6.6,SNR=3.9						
INK	**Inuvik**	**71.88**	**10**	P	**P**	**09 40 17.7**	**-0.2**
INK				IAmb	IAmb	09 40 21.7	
	comp=Z,6.5nm,1.4s						
ILAR	**Eielson Array**	**72.62**	**17**	P	**P**	**09 40 21.4**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=322,slow=4.5,SNR=5.4						
BCAR	**Beaver Creek A**	**75.23**	**16**	P	**P**	**09 40 37.3**	**-0.5**
YKA	**Yellowknife Ar**	**79.37**	**4**	P	**P**	**09 41 00.4**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=346,slow=5.2,SNR=2.4						
WRA	**Warramunga Arr**	**81.66**	**123**	P	**P**	**09 41 14.3**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=326,slow=4.4,SNR=3.3						

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*IDC **08** 09:41:40.9±2.5,38.°49N×73.°35E,h0^{km},mb3.7/4, mb1 3.8/6,mb1mx3.5/52,mbtmp3.6/6,ML2.8/2,Error ellipse: s-maj=64.5km s-min=26.8km az=151.0*

*KRNET **08** 09:41:41.8±0.1,38.°69N×73.°15E,h26^{km},mb3.8*

*SOME **08** 09:41:48.7,39.°15N×72.°87E,h0^{km}*

*NNC **08** 09:41:50.9±1.7,39.°28N×72.°84E,h0^{km},mb4.0,mpv3.6, Error ellipse: s-maj=20.3km s-min=12.4km az=140.0*

ISC 08 09:41:43.9±1.1,**38.°70N**±0.°07×**73.°17E**±0.°05,**h10**^{km}**,n27,** σ**2.^{s}43**/36,**mb3.7**/4,**15C-9D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**1.32**	**307**	⇓*e*P	**Pn**	**09 42 06.9**	**-1.8**
	baz=7.0						
DRK				⇓*i*S	**Sn**	**09 42 25.3**	**-1.2**
	baz=7.0						
SFK	**Sufi-Kurgan**	**1.33**	**11**	⇓*e*P	**Pn**	**09 42 07.8**	**-1.1**
	baz=12						
SFK				⇓*e*S	**Sn**	**09 42 26.7**	**-0.1**
	baz=12						
OHH	**Osh**	**1.84**	**351**	⇑*e*P	**Pn**	**09 42 15.9**	**+0.2**
	baz=51						
OHH				⇑*e*S	**Sn**	**09 42 41.1**	**+1.9**
	baz=51						
GAR	**Garm**	**2.25**	**279**	⇓*i*P	**Pn**	**09 42 22.0**	**+0.7**
	baz=79						
GAR				⇓*i*S	**Sn**	**09 42 51.7**	**+2.5**
	baz=79						
BTK	**Batken**	**2.27**	**307**	⇑*i*P	**Pn**	**09 42 22.6**	**+1.0**
	baz=8.0						
BTK				⇑*i*S	**Sn**	**09 42 52.5**	**+2.8**
	baz=8.0						
CHGR	**Chuyangaron**	**3.14**	**270**	⇑*e*P	**Pn**	**09 42 34.6**	**+1.0**
	baz=71						
CHGR				⇑*e*S	**Sn**	**09 43 13.2**	**+2.0**
	baz=71						
TRKS	**Terek-Say**	**3.23**	**332**	⇑*i*P	**Pn**	**09 42 34.9**	**+0.1**
	baz=32						
TRKS				⇑*i*S	**Sn**	**09 43 13.6**	**+0.2**
	baz=32						
AML	**Almayashu**	**3.45**	**6**	P	**Pn**	**09 42 41.1**	**+3.0**
	SNR=13						
UCH	**Uchtor**	**3.67**	**16**	P	**Pn**	**09 42 43.5**	**+2.3**
	SNR=16						
UCH	**Uchtor**	**3.67**	**16**	⇑*e*P	**Pn**	**09 42 42.2**	**+1.0**
	baz=16						
UCH				⇑*i*S	**Sn**	**09 43 26.6**	**+1.9**
	baz=16						
EKS2	**Erkin-Say**	**3.98**	**6**	P	**Pb**	**09 42 50.0**	**-4.2**
	SNR=14						
MRKS	**Merke**	**4.04**	**1**	*e*P	**Pb**	**09 42 56.5**	**+1.3**
	11nm,0.6s						
MRKS				*e*S	**Sb**	**09 43 43.7**	**-0.5**
	15nm,0.5s						
AAK	**Ala-Archa**	**4.06**	**14**	P	**Pb**	**09 42 51.8**	**-3.8**
	SNR=18						
AAK	**Ala-Archa**	**4.06**	**14**	⇑Pn	**Pn**	**09 42 48.2**	**+2.0**
	14nm,0.6s						
AAK				⇓Lg	Lg	09 43 45.1	
	29nm,0.9s						
IUG	**Iuzhnay**	**4.19**	**326**	*e*P	**Pb**	**09 42 56.5**	**-1.4**
	698nm,0.6s						
IUG				*e*S	**Sn**	**09 43 43.3**	**+6.2**
	46nm,0.9s						
ULHL	**Ulahol**	**4.25**	**33**	P	**Pb**	**09 43 00.5**	**+1.7**
	SNR=5.9						
TKM2	**Tokmak 2**	**4.60**	**23**	⇑Pg	**Pb**	**09 43 07.4**	**+2.5**
	6.9nm,0.7s						
TKM2				⇓Lg	Lg	09 44 04.7	
	9.9nm,0.8s						
USP	**Ospenovka**	**4.67**	**12**	P	Pn	09 42 59.8	+5.3
	SNR=5.3						
MDOK	**Medeo**	**5.34**	**32**	Pg	**Pb**	**09 43 19.9**	**+2.6**
	7.0nm,0.6s						
MDOK				⇑Lg	Lg	09 44 30.0	
	21nm,1.2s						
KUU	**Kurty**	**5.71**	**24**	*e*P	Pg	09 43 28.2	-5.1
	6.5nm,0.7s						
KUU				*e*S	**Sb**	**09 44 37.5**	**+5.4**
	14nm,1.2s						
PDGK	**Podgornoye**	**6.65**	**44**	⇓Pn	Pn	09 43 27.5	+5.7
	2.2nm,0.8s						
PDGK				⇑Pg	**Pg**	**09 43 47.1**	**-4.1**
	6.0nm,0.8s						
PDGK				⇑Lg	Lg	09 45 13.6	
	11nm,1.2s						
MKAR	**Makanchi Array**	**10.50**	**37**	Pn	**Pn**	**09 44 15.5**	**+1.0**
	0.1nm,0.3s,baz=222,slow=15,SNR=4.3						
ZALV	**Zalesovo Beam**	**17.20**	**24**	P	**Pn**	**09 45 43.3**	**-0.9**
	0.2nm,0.3s,baz=212,slow=14,SNR=3.0						
SONM	**Songino Array**	**25.69**	**58**	P	**P**	**09 47 12.2**	**-1.9**
	0.3nm,0.4s,baz=266,slow=11,SNR=2.4						
ARCES	**ARCESS Array B**	**39.80**	**336**	P	**P**	**09 49 17.0**	**+0.2**
	4.6nm,1.0s,baz=110,slow=7.8,SNR=4.4						
TORD	**Torodi Ar. Bea**	**67.49**	**269**	P	**P**	**09 52 39.7**	**-0.7**
	0.4nm,0.7s,baz=44,slow=7.4,SNR=2.4						
YKA	**Yellowknife Ar**	**78.96**	**4**	P	**P**	**09 53 47.6**	**+0.2**
	0.9nm,0.9s,baz=350,slow=6.0,SNR=2.1						

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*IDC **08** 09:50:28.9±1.9,24.°68N×141.°29E,h197^{km}±19^{km},mb3.0/4, mb1 3.2/6,mb1mx2.9/54,mbtmp3.6/6,MS2.9/1,Ms1 2.9/1, ms1mx2.3/23,Error ellipse: s-maj=31.3km s-min=16.2km az=91.0*

ISC 08 09:50:29.0±1.1,**24.°8N**±0.°1×**141.°3E**±0.°2,**h200**^{km}**,n8,** σ**1.^{s}23**/8,**mb3.2**/5,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**2.45**	**18**	P	**Pn**	**09 51 12.9**	**+0.5**
	baz=245,slow=14						
JCJ				S	**Sn**	**09 51 44.2**	**-2.1**
	84nm,0.3s,baz=324,slow=22,SNR=24						
KSRS	**Korea Array**	**17.07**	**321**	P	**Pn**	**09 54 16.1**	**+0.1**
	baz=132,slow=12,SNR=2.5						
SEY	**Seymchan**	**38.88**	**8**	LR	LR	10 16 33.2	
	comp=Z,16nm,20.0s,baz=266,slow=40						
WRA	**Warramunga Arr**	**44.95**	**189**	P	**P**	**09 58 24.3**	**-0.1**
	7.7nm,0.5s,baz=9.1,slow=8.6,SNR=92						
ASAR	**Alice Springs**	**48.67**	**189**	P	**P**	**09 58 51.8**	**-1.3**
	0.3nm,0.6s,baz=15,slow=13,SNR=6.6						
MKAR	**Makanchi Array**	**51.40**	**311**	P	**P**	**09 59 13.4**	**0.0**
	0.8nm,0.4s,baz=93,slow=8.1,SNR=13						
ILAR	**Eielson Array**	**60.12**	**28**	P	**P**	**10 00 16.0**	**+0.9**
	0.2nm,0.4s,baz=248,slow=5.9,SNR=4.6						
YKA	**Yellowknife Ar**	**74.56**	**28**	P	**P**	**10 01 46.1**	**+0.5**
	0.3nm,0.8s,baz=291,slow=6.2,SNR=1.3						

ISK 08 09:50:33.8,37.°43N×36.°89E,h2^{km}**,ML1.7**/7**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMRS	**Kahramanmaras**	**0.07**	**4**	PG	Pg	09 50 35.3	0.0
KHMN	**Narli-Kahraman**	**0.21**	**100**	PG	Pg	09 50 39.3	+1.4
KHMN				SG	Sg	09 50 43.4	+2.7
GAZ	**Gaziantep**	**0.36**	**135**	PG	Pb	09 50 41.9	-1.1
GAZ				SG	Sb	09 50 47.4	-1.8
KOZT	**Kozan**	**0.85**	**274**	PG	Pb	09 50 51.3	0.0
KOZT				SG	Sb	09 51 03.9	+0.7
SARI	**SarD1z-Kayseri**	**1.04**	**339**	PG	Pb	09 50 54.9	+0.2
TAHT	**Tahtakopru-Hat**	**1.20**	**209**	PN	Pn	09 50 57.6	0.0
DARE	**Darende-Malaty**	**1.23**	**22**	PN	Pn	09 50 58.5	+0.3
CMRD	**Camardi-Nigde**	**1.53**	**279**	PN	Pg	09 51 03.1	0.0

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*ISK **08** 09:51:32.1,39.°29N×40.°24E,h2^{km},ML3.9/11*

*DDA **08** 09:51:32.7,39.°28N×40.°18E,h9^{km}±3^{km},MW3.9*

*IDC **08** 09:51:33.4±0.9,39.°23N×40.°20E,h0^{km},mb3.5/7, mb1 3.6/15,mb1mx3.5/57,mbtmp3.5/15,ML3.3/7,MS3.2/11, Ms1 3.1/11,ms1mx2.9/44,Error ellipse: s-maj=16.0km s-min=9.1km az=151.0*

ISC 08 09:51:34.1±0.5,**39.°28N**±0.°02×**40.°20E**±0.°01,**h10**^{km}**,n80,** σ**1.^{s}75**/106,**mb3.5**/7,**MS3.2**/5,**14C-7D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNGB	**Bingl**	**0.47**	**128**	PG	**Pg**	**09 51 41.7**	**-1.6**
BNGB				SG	**Sg**	**09 51 48.8**	**-0.7**
ERZN	**Erzincan**	**0.48**	**309**	PG	**Pb**	**09 51 42.8**	**-1.9**
ERZN				SG	**Sb**	**09 51 50.6**	**-1.3**
TNCL	**Tunceli-Merkez**	**0.54**	**252**	⇑*i*P	**Pg**	**09 51 43.2**	**-1.4**
TNCL				*i* S	**Sb**	**09 51 50.9**	**-2.7**
EUZM	**Uzumlu**	**0.58**	**317**	*i* P	**Pb**	**09 51 44.3**	**-2.0**
EUZM				*i* S	**Sb**	**09 51 54.0**	**-0.7**
EUZM				IAML		09 51 58.0	
	comp=N,2µm,0.9s						
EUZM				IAML		09 51 59.0	
	comp=E,5µm,0.9s						
KOVA	**Elazig, Kovanc**	**0.65**	**208**	⇓*i*P	**Pg**	**09 51 45.5**	**-1.2**
KOVA				*i* S	**Sb**	**09 51 55.5**	**-1.2**
KOVA				IAML		09 51 59.0	
	comp=E,3µm,0.4s						
KOVA				IAML		09 52 01.0	
	comp=N,3µm,0.6s						
ECAT	**Cat-ERZURUM**	**0.68**	**61**	⇑*i*P	**Pg**	**09 51 45.7**	**-1.6**
ECAT				*i* S	**Sg**	**09 51 55.4**	**-0.8**
ECAT				IAML		09 51 57.0	
	comp=N,3µm,0.5s						
ECAT				IAML		09 52 06.0	
	comp=E,3µm,0.5s						
SLHN	**Bingol, Solhan**	**0.72**	**117**	⇑*i*P	**Pg**	**09 51 46.3**	**-1.7**
SLHN				*i* S	**Sb**	**09 51 58.9**	**+0.2**
SLHN				IAML		09 52 01.0	
	comp=E,7µm,0.4s						
SLHN				IAML		09 52 03.0	
	comp=N,6µm,0.6s						
KOPT	**Kop Dagi**	**0.77**	**17**	⇓*i*P	**Pb**	**09 51 48.1**	**-1.7**
KOPT				*i* S	**Sb**	**09 51 59.6**	**-0.7**
KOPT				IAML		09 52 04.0	
	comp=E,2µm,0.5s						
KOPT				IAML		09 52 04.0	
	comp=N,3µm,0.5s						
HANI	**Diyarbakir_Han**	**0.88**	**170**	⇓*i*P	**Pg**	**09 51 49.4**	**-1.7**
HANI				*i* S	**Sn**	**09 52 05.2**	**-0.3**
HANI				IAML		09 52 14.0	
	comp=N,768nm,0.5s						
HANI				IAML		09 52 15.0	
	comp=E,1µm,0.6s						
EMRE	**Erzurum,Aziziy**	**0.96**	**38**	⇑*i*P	**Pg**	**09 51 51.4**	**-1.1**
EMRE				*i* S	**Sb**	**09 52 04.9**	**-0.8**
BAYB	**BAYBURT**	**0.98**	**2**	⇓*i*P	**Pg**	**09 51 50.4**	**-2.5**
BAYB				*i* S	**Sb**	**09 52 05.2**	**-1.0**
VRTB	**Varto-Mus**	**0.98**	**97**	⇑*i*P	**Pg**	**09 51 50.9**	**-2.0**
VRTB				*i* S	**Sn**	**09 52 09.5**	**+1.4**
VRTB	**Varto-Mus**	**0.98**	**97**	PG	**Pg**	**09 51 51.2**	**-1.8**
EJDE	**Erzurum, Palan**	**1.01**	**57**	⇑*i*P	**Pg**	**09 51 51.3**	**-2.3**
EJDE				*i* S	**Sb**	**09 52 06.7**	**-0.8**
ERZM	**Erzurum**	**1.09**	**55**	⇑*i*P	**Pg**	**09 51 53.6**	**-1.5**
ERZM				*i* S	**Sn**	**09 52 10.5**	**-0.5**
BAYT	**Aydıntepe-Bayb**	**1.11**	**358**	PN	**Pg**	**09 51 53.9**	**-1.6**
KELT	**Kelkit**	**1.13**	**320**	⇓*i*P	**Pg**	**09 51 54.2**	**-1.7**
KELT				*i* S	**Sn**	**09 52 13.6**	**+1.7**
SVRC	**Sivrice-ELAZID**	**1.14**	**218**	PN	**Pn**	**09 51 55.3**	**-1.0**
SVRC				SN	**Sn**	**09 52 12.1**	**0.0**
KRIK	**Erzurum-spir**	**1.19**	**28**	*i* P	**Pb**	**09 51 55.1**	**-1.8**
KRIK				*i* S	**Sn**	**09 52 14.1**	**+0.7**
KRIK				IAML		09 52 22.0	
	comp=E,1µm,0.8s						
KRIK				IAML		09 52 25.0	
	comp=N,630nm,0.8s						
ELZG	**Elazig**	**1.23**	**231**	⇑*i*P	**Pb**	**09 51 55.3**	**-2.2**
ELZG				*i* S	**Sn**	**09 52 14.0**	**-0.3**
REFA	**Refahiye_ERZN**	**1.27**	**300**	⇑*i*P	**Pn**	**09 51 56.4**	**-1.7**
REFA				*i* S	**Sn**	**09 52 18.4**	**+3.0**
REFA				IAML		09 52 24.0	
	comp=E,558nm,0.6s						
REFA				IAML		09 52 30.0	
	comp=N,576nm,1.2s						
ILIC	**ilic-Erzincan**	**1.28**	**278**	PN	**Pg**	**09 51 57.9**	**-0.7**
KEMA	**Kemaliye**	**1.33**	**270**	⇑*i*P	**Pn**	**09 51 56.8**	**-1.9**
KEMA				*i* S	**Sg**	**09 52 15.9**	**-0.9**
DYBB	**Diyarbakir**	**1.33**	**182**	PN	**Pg**	**09 51 58.7**	**-0.9**
DIYA	**Diyarbakir**	**1.36**	**183**	⇓*i*P	**Pg**	**09 51 59.2**	**-0.9**
DIYA				*i* S	**Sg**	**09 52 20.2**	**+2.5**
SVAN	**Silvan-Diyarba**	**1.37**	**145**	⇓*i*P	**Pb**	**09 51 58.7**	**-1.2**
SVAN				*i* S	**Sg**	**09 52 18.7**	**+0.5**
SVAN				IAML		09 52 24.0	
	comp=E,728nm,0.6s						
SVAN				IAML		09 52 29.0	
	comp=N,640nm,0.8s						
SVAN	**Silvan-Diyarba**	**1.37**	**145**	PN	**Pb**	**09 51 58.9**	**-1.0**
ARPR	**Arapgir-MALATY**	**1.46**	**263**	PN	**Pg**	**09 52 00.7**	**-1.5**
ALUC	**Giresun/Alucra**	**1.53**	**314**	⇑*i*P	**Pg**	**09 52 01.8**	**-1.7**
ALUC				*i* S	**Sg**	**09 52 25.8**	**+2.4**
KTUT	**Trabzon**	**1.73**	**349**	PN	**Pb**	**09 52 04.8**	**-1.2**
HEKM	**Malatya_Hekimh**	**1.79**	**258**	⇑*i*P	**Pb**	**09 52 05.4**	**-1.7**
HEKM				*i* S	**Sg**	**09 52 31.8**	**0.0**
SUSE	**Susehri**	**1.80**	**302**	⇑*i*P	**Pg**	**09 52 07.5**	**-1.1**
SUSE				*i* S	**Sg**	**09 52 34.6**	**+2.7**
MAZI	**Mazidag**	**1.83**	**174**	PN	**Pb**	**09 52 05.6**	**-2.1**
CHAY	**Cayeli-Rize**	**1.85**	**12**	PN	**Pb**	**09 52 05.9**	**-2.0**
EATA	**Eleskirt**	**1.86**	**71**	*i* P	**Pb**	**09 52 07.2**	**-1.2**
CUZAR	**Zara_SIVAS**	**1.98**	**289**	*i* P	**Pg**	**09 52 09.4**	**-2.5**
CUZAR				*i* S	**Sg**	**09 52 38.9**	**+1.4**
ADCV	**BITLIS_Adilcev**	**2.02**	**103**	*i* P	**Pb**	**09 52 09.8**	**-1.2**
ADCV				IAML		09 52 46.0	
	comp=E,250nm,0.9s						
ADCV				IAML		09 52 54.0	
	comp=N,193nm,1.1s						
AKCD	**Akcadag**	**2.04**	**242**	⇑*i*P	**Pb**	**09 52 09.0**	**-2.3**
AKCD				*i* S	**Sg**	**09 52 39.1**	**-0.5**
MIDY	**Mardin/Midyat-**	**2.10**	**153**	*i* P	**Pn**	**09 52 09.2**	**-0.1**
MIDY				*i* S	**Sg**	**09 52 39.2**	**-2.2**
CUKAN	**kangal_SIVAS**	**2.12**	**272**	*i* P	**Pb**	**09 52 10.6**	**-2.2**
CUKAN				*i* S	**Sg**	**09 52 42.9**	**+0.6**
PERV	**Siirt/Pervari-**	**2.27**	**125**	*i* P	**Pb**	**09 52 13.2**	**-2.0**
PERV				*i* S	**Sg**	**09 52 44.8**	**-2.1**
PERV				IAML		09 52 55.0	
	comp=N,1µm,0.7s						
PERV				IAML		09 52 59.0	
	comp=E,1µm,1.1s						
SANL	**SANLIURFA_Merk**	**2.31**	**205**	*i* P	**Pb**	**09 52 12.9**	**-3.1**
SANL				IAML		09 52 56.0	
	comp=N,498nm,0.9s						
SANL				IAML		09 52 59.0	
	comp=E,619nm,0.7s						
KOTA	**Agri, Merkez-K**	**2.38**	**76**	*i* P	**Pb**	**09 52 16.1**	**-1.1**
KOTA				*i* S	**Sg**	**09 52 52.7**	**+2.1**
KOTA				IAML		09 53 01.0	
	comp=N,216nm,1.0s						
KOTA				IAML		09 53 06.0	
	comp=E,199nm,1.5s						
BCA	**Borcka**	**2.42**	**26**	PN	**Pn**	**09 52 13.9**	**+0.2**
BATM	**Batumi**	**2.58**	**26**	P	**Pb**	**09 52 17.0**	**-3.5**
BATM				S	**Sg**	**09 52 55.0**	**-2.0**
ELBS	**KAHRAMANMARAS_**	**2.58**	**249**	*i* P	**Pb**	**09 52 17.8**	**-2.8**
ELBS				*i* S	**Sg**	**09 52 56.6**	**-0.4**
ELBS				IAML		09 53 07.0	
	comp=E,370nm,0.7s						
ELBS				IAML		09 53 16.0	
	comp=N,373nm,1.1s						
CUAYA	**Sivas-Altinyay**	**2.68**	**271**	*i* P	**Pb**	**09 52 18.4**	**-3.9**
SURC	**SANLIURFA_SURC**	**2.71**	**208**	*i* P	**Pn**	**09 52 17.9**	**+0.2**
GZT	**Gaziantep**	**2.83**	**228**	*i* P	**Pg**	**09 52 26.7**	**-1.6**
GZT				*i* S	**Sg**	**09 53 04.7**	**-0.3**
CLDR	**Caldiran**	**2.89**	**92**	*i* P	**Pb**	**09 52 25.4**	**-0.4**
OZAP	**Van, Ozalp-Mer**	**3.02**	**101**	*i* P	**Pb**	**09 52 28.3**	**+0.3**
IGDI	**IGDIR**	**3.05**	**78**	*i* P	**Pb**	**09 52 27.9**	**-0.6**
CUSAR	**Sarkisla-SIVAS**	**3.07**	**274**	*i* P	**Pb**	**09 52 27.7**	**-1.2**
ABS	**Abastumani**	**3.17**	**38**	P	**Pb**	**09 52 26.9**	**-3.7**
BGD	**Bogdanovka**	**3.27**	**52**	P	**Pg**	**09 52 35.0**	**-1.6**
AKH	**Akhalkalaki**	**3.29**	**49**	P	**Pb**	**09 52 28.5**	**-4.1**
GNI	**Garni**	**3.61**	**75**	Pn	**Pn**	**09 52 32.3**	**+2.2**
	comp=N,2.8nm,0.3s,baz=137,slow=18,SNR=1.6						
GNI				Lg	Lg	09 53 29.2	
	comp=N,3.5nm,0.3s,baz=148,slow=23,SNR=0.9						
CKRK	**Yozgat, Cekere**	**3.71**	**284**	*i* P	**Pn**	**09 52 32.2**	**+0.6**
TKB	**Tkibuli**	**3.73**	**34**	P	**Pb**	**09 52 36.1**	**-3.9**
KBZ	**Khabaz**	**4.88**	**24**	Pn	Pn	09 52 51.0	+3.5
	comp=N,0.2nm,0.3s,baz=8.7,slow=10,SNR=2.6						
KBZ				Lg	Lg	09 54 09.0	
	baz=290,slow=4.2,SNR=1.5						
KBZ				LR	LR	09 54 54.9	
	comp=N,189nm,18.2s,baz=198,slow=41						
KVAR	**Kislovodsk Arr**	**5.03**	**21**	Pn	**Pn**	**09 52 51.9**	**+2.3**
	baz=250,slow=19,SNR=1.7						
KVAR				Lg	Lg	09 54 16.0	
	baz=308,slow=20,SNR=1.6						
BRTR	**Keskin Array B**	**5.10**	**277**	Pn	**Pn**	**09 52 52.2**	**+1.6**
	comp=N,0.7nm,0.3s,baz=102,slow=14,SNR=11						
BRTR				Lg	Lg	09 54 18.6	
	comp=N,0.2nm,0.3s,baz=96,slow=30,SNR=1.8						
BRTR				LR	LR	09 55 05.7	
	comp=N,198nm,21.2s,baz=118,slow=42						
MMAI	**Mount Meron Ar**	**7.36**	**213**	Pn	**Pn**	**09 53 22.8**	**+1.1**
	comp=N,0.9nm,0.3s,baz=59,slow=17,SNR=2.2						
MMAI				LR	LR	09 56 33.8	
	comp=N,40nm,20.8s,baz=5.0,slow=41						
ASF	**Jabal al Asfar**	**7.59**	**202**	Pn	**Pn**	**09 53 24.6**	**-0.2**
	comp=N,0.4nm,0.3s,baz=37,slow=10,SNR=2.3						
ASF				Lg	Lg	09 55 30.9	
	comp=N,0.6nm,0.3s,baz=23,slow=12,SNR=1.9						
EIL	**Elat**	**10.52**	**206**	Lg	Lg	09 57 14.7	
	comp=N,0.2nm,0.3s,baz=113,slow=15,SNR=1.5						
EIL				LR	LR	09 58 01.3	
	comp=N,104nm,20.5s,baz=266,slow=37						
MLR	**Muntele Rosu**	**12.22**	**305**	LR	LR	09 59 10.2	
	comp=N,104nm,20.0s,baz=138,slow=37						
IDI	**Anoyia**	**12.83**	**257**	LR	LR	10 00 55.5	
	comp=N,42nm,19.3s,baz=35,slow=44						
AKASG	**Malin Array Be**	**13.79**	**329**	Pn	**Pn**	**09 54 50.0**	**+0.5**
	comp=N,0.3nm,0.3s,baz=134,slow=13,SNR=4.7						
AKTO	**Aktyubinsk**	**16.80**	**43**	Pn	**P**	**09 55 29.4**	**-2.0**
	comp=N,0.2nm,0.3s,baz=247,slow=10,SNR=16						
KIRV	**Kirov**	**20.21**	**14**	LR	LR	10 04 57.4	
	comp=N,91nm,19.7s,baz=132,slow=40						
ARU	**Arti**	**21.00**	**29**	P	**P**	**09 56 17.7**	**+0.2**
	comp=N,0.7nm,0.3s,baz=251,slow=18,SNR=1.8						
GERES	**GERESS Array B**	**21.21**	**305**	P	**P**	**09 56 21.6**	**+1.7**
	comp=N,0.2nm,0.3s,baz=105,slow=7.2,SNR=1.9						
DAVOX	**Davos/Dischmat**	**23.29**	**299**	LR	LR	10 08 31.5	
	comp=N,74nm,18.1s,baz=297,slow=44						
FINES	**FINESS Array B**	**23.84**	**343**	P	**P**	**09 56 48.9**	**+1.8**
	comp=N,2.8nm,0.7s,baz=141,slow=12,SNR=5.0						
KEST	**Kesra**	**24.67**	**271**	P	**P**	**09 56 56.1**	**+0.9**
	comp=N,3.0nm,0.7s,baz=328,slow=12,SNR=2.2						
AAK	**Ala-Archa**	**26.01**	**71**	LR	LR	10 08 23.0	
	comp=N,32nm,19.6s,baz=290,slow=39						
MKAR	**Makanchi Array**	**31.36**	**62**	P	**P**	**09 57 56.9**	**+2.1**
	comp=N,0.4nm,0.8s,baz=270,slow=11,SNR=1.5						
MKAR				LR	LR	10 12 35.7	
	comp=N,69nm,18.8s,baz=304,slow=40						
ESDC	**Sonseca Array**	**33.83**	**285**	P	**P**	**09 58 16.9**	**+0.4**
	comp=N,0.4nm,0.6s,baz=59,slow=9.1,SNR=2.0						
TORD	**Torodi Ar. Bea**	**42.77**	**243**	P	**P**	**09 59 33.0**	**+1.2**
	comp=N,0.3nm,0.6s,baz=31,slow=9.0,SNR=2.1						
SONM	**Songino Array**	**47.38**	**57**	LR	LR	10 22 29.2	
	comp=N,94nm,18.7s,baz=286,slow=39						

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*SOME **08** 10:24:18.5,38.°80N×72.°60E,h0^{km}*

*KRNET **08** 10:24:21.7±0.1,38.°84N×73.°22E,h12^{km},mb4.6*

*IDC **08** 10:24:21.8±1.1,38.°78N×73.°21E,h0^{km},mb3.9/15, mb1 4.0/22,mb1mx3.8/49,mbtmp3.9/22,ML3.4/7,MS3.3/12, Ms1 3.3/12,ms1mx3.0/55,Error ellipse: s-maj=20.9km s-min=14.2km az=156.0*

*MOS **08** 10:24:23.2±1.1,38.°82N×73.°20E,h15^{km},mb4.2/9,Error ellipse: s-maj=7.3km s-min=4.0km az=83.0*

*BJI **08** 10:24:23.7±0.0,38.°80N×73.°30E,h7^{km},mB4.6/8, mb4.3/20,ML4.3/5,Ms3.9/5,Ms7 3.7/4*

*NNC **08** 10:24:24.2±1.9,38.°87N×72.°86E,h0^{km},mb4.8,mpv4.6, Error ellipse: s-maj=15.9km s-min=10.8km az=163.0*

*NEIC **08** 10:24:24.6±3.3, 38°.76N±0°.05×73°.27E±0°.08, h10^{km}±1^{km}, mb4.4/9, Error ellipse: s-maj=13.1km s-min=3.7km az=127.0*

ISC 08 10:24:23.2±1.1**, 38°.76N**±0°.02×**73°.10E**±0°.02**, h10**^{km}±7^{km}**,**
n183, σ1^{s}.84/217**, mb4.1**/21**, MS3.3**/10**, 38C-25D,**
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.24	306		Pn	10 24 46.4	-0.5
DRK	Karamyk	1.24	306	⇑iP	Pn	10 24 46.3	-0.7
	baz=1.0						
DRK				⇑iS	Sn	10 25 04.3	+0.3
	baz=1.0						
SFK	Sufi-Kurgan	1.28	14	⇑eP	Pn	10 24 44.7	-2.8
	baz=10.0						
SFK				⇑eS	Sb	10 25 00.5	-3.9
	baz=10.0						
OHH	Osh	1.77	352	ePN	Pn	10 24 54.0	-0.1
OHH				i S	Sb	10 25 17.5	-0.8
OHH	Osh	1.77	352	⇑eP	Pn	10 24 54.0	-0.1
	baz=49						
OHH				⇑iS	Sb	10 25 17.5	-0.8
	baz=49						
GAR	Garm	2.19	277	ePN	Pb	10 25 02.7	-0.3
GAR				i S	Sb	10 25 32.6	+2.3
GAR	Garm	2.19	277		Pb	10 25 03.7	+0.7
GAR	Garm	2.19	277	⇑eP	Pb	10 25 02.7	-0.3
	baz=75						
GAR				⇑iS	Sb	10 25 32.6	+2.3
	baz=75						
BTK	Batken	2.19	307	i PN	Pn	10 25 02.0	+2.1
BTK				i S	Sb	10 25 31.5	+1.2
BTK	Batken	2.19	307		Pb	10 25 03.8	+0.8
BTK	Batken	2.19	307	⇑iP	Pn	10 25 02.0	+2.1
	baz=4.0						
BTK				⇑iS	Sb	10 25 31.5	+1.2
	baz=4.0						
KSH	Kashi	2.35	70	Pg	Pn	10 24 56.1	-6.0
KSH				Sg	Sn	10 25 20.0	-11
KSH				smax	smax		
	comp=N,3µm,0.7s						
KSH				smax	smax		
	comp=E,2µm,0.8s						
CHGR	Chuyangaron	3.09	269	ePN	Pn	10 25 15.2	+3.0
CHGR				i S	Sb	10 25 54.5	-1.6
CHGR	Chuyangaron	3.09	269	Pn	Pb	10 25 16.6	-1.8
CHGR	Chuyangaron	3.09	269	⇓eP	Pn	10 25 15.2	+3.0
	baz=68						
CHGR				⇓iS	Sb	10 25 54.5	-1.6
	baz=68						
TRKS	Terek-Say	3.15	332	i PN	Pn	10 25 13.7	+0.6
TRKS				i S	Sn	10 25 51.7	+0.9
TRKS	Terek-Say	3.15	332	⇑iP	Pn	10 25 13.7	+0.6
	baz=30						
TRKS				⇑iS	Sn	10 25 51.7	+0.9
	baz=30						
AML	Almayashu	3.39	7	P	Pn	10 25 18.7	+2.1
	SNR=79						
AML	Almayashu	3.39	7	ePN	Pn	10 25 17.3	+0.6
AML				i S	Sn	10 25 58.1	+0.9
AML	Almayashu	3.39	7	⇓eP	Pn	10 25 17.3	+0.6
	baz=6.0						
AML				⇓iS	Sn	10 25 58.1	+0.9
	baz=6.0						
UCH	Uchtor	3.62	17	P	Pn	10 25 22.3	+2.4
	SNR=75						
UCH	Uchtor	3.62	17	ePN	Pn	10 25 20.5	+0.6
UCH				i S	Sn	10 26 03.3	+0.4
UCH	Uchtor	3.62	17	⇑eP	Pn	10 25 20.5	+0.6
	baz=16						
UCH				⇑iS	Sn	10 26 03.3	+0.4
	baz=16						
MNAS	Manas	3.75	353	i PN	Pn	10 25 22.5	+1.2
MNAS				i S	Sn	10 26 06.5	+0.9
MNAS	Manas	3.75	353	⇑iP	Pn	10 25 22.5	+1.2
	baz=52						
MNAS				⇑iS	Sn	10 26 06.5	+0.9
	baz=52						
TAS	Tashkent	3.88	312	PN	Pn	10 25 25.7	+2.6
TAS	Tashkent	3.88	312		Pn	10 25 25.7	+2.6
TAS	Tashkent	3.88	312	⇓eP	Pn	10 25 25.3	+2.2
	baz=11						
TAS				⇓iS	Sn	10 26 11.9	+3.1
	baz=11						
EKS2	Erkin-Say	3.93	7	P	Pb	10 25 28.5	-4.2
	SNR=11						
EKS2	Erkin-Say	3.93	7	ePN	Pn	10 25 24.6	+0.9
EKS2				i S	Sn	10 26 10.6	+0.6
EKS2	Erkin-Say	3.93	7	⇓eP	Pn	10 25 24.6	+0.9
	baz=6.0						
EKS2				⇓iS	Sn	10 26 10.6	+0.6
	baz=6.0						
MRKS	Merke	3.98	1	eP	Pb	10 25 31.5	-2.0
	80nm,0.4s						
MRKS				eS	Sb	10 26 21.7	-0.1
	105nm,0.7s						
MRKS	Merke	3.98	1	Pg	Pb	10 25 31.5	-2.0
	80nm,0.4s						
MRKS				Lg	Lg	10 26 21.7	
	105nm,0.7s						
AAK	Ala-Archa	4.01	15	Pn	Pn	10 25 27.6	+2.7
	9.6nm,0.3s,baz=201,slow=12,SNR=102						
AAK				Lg	Lg	10 26 19.1	
	7.7nm,0.3s,baz=320,slow=21,SNR=9.3						
AAK				LR	LR	10 27 12.5	
	comp=Z,158nm,19.1s,baz=357,slow=43						
AAK	Ala-Archa	4.01	15	P	Pn	10 25 27.7	+2.7
	SNR=81						
AAK	Ala-Archa	4.01	15	cePN	Pn	10 25 24.6	-0.3
AAK				pmax	pmax		
	comp=Z,249nm,0.8s						
AAK	Ala-Archa	4.01	15	⇓Pn	Pn	10 25 26.9	+1.9
	comp=Z,90nm,0.6s						
AAK				⇑Sn	Sb	10 26 17.0	-5.7
	comp=Z,365nm,1.2s						
AAK	Ala-Archa	4.01	15		Pn	10 25 27.4	+2.4
AAK	Ala-Archa	4.01	15	⇓eP	Pn	10 25 25.5	+0.6
	baz=14						
AAK				⇓iS	Sn	10 26 12.3	+0.2
	baz=14						
KBK	Karagaybulak	4.13	19	P	Pn	10 25 29.4	+2.8
	SNR=23						
KBK	Karagaybulak	4.13	19	ePN	Pn	10 25 27.3	+0.7
KBK				i S	Sn	10 26 15.1	0.0
KBK	Karagaybulak	4.13	19	⇑eP	Pn	10 25 27.3	+0.7
	baz=18						
KBK				⇑iS	Sn	10 26 15.1	0.0
	baz=18						
FRU1	Bishkek	4.21	16	PN	Pn	10 25 32.4	+4.9
FRU1	Bishkek	4.21	16		Pn	10 25 32.4	+4.9
ULHL	Ulahol	4.22	34	P	Pb	10 25 38.2	+0.5
	SNR=22						
ULHL	Ulahol	4.22	34	ePN	Pn	10 25 28.3	+0.4
ULHL				i S	Sn	10 26 16.7	-0.6
ULHL	Ulahol	4.22	34	⇓eP	Pn	10 25 28.3	+0.4
	baz=33						
ULHL				⇓iS	Sn	10 26 16.7	-0.6
	baz=33						
BOOM	Boomskoye usch	4.30	29	PN	Pn	10 25 30.3	+1.4
BOOM	Boomskoye usch	4.30	29	Pn	Pn	10 25 30.3	+1.4
DZA	Taraz	4.34	343	eP	Pb	10 25 34.9	-4.7
	comp=Z,199nm,0.3s						
DZA				eS	Sb	10 26 28.0	-4.0
	comp=Z,370nm,0.6s						
DZA	Taraz	4.34	343	ePg	Pb	10 25 41.4	+1.7
	baz=343						
DZA	Taraz	4.34	343	ePN	Pb	10 25 41.3	+1.7
DZA	Taraz	4.34	343	Pg	Pb	10 25 34.9	-4.7
	comp=Z,199nm,0.3s						
DZA				Lg	Lg	10 26 28.0	
	comp=Z,370nm,0.6s						
CHMS	Chumysh	4.41	16	P	Pn	10 25 34.9	+4.5
	SNR=5.6						
CHMS	Chumysh	4.41	16	ePN	Pn	10 25 30.9	+0.6
CHMS				i S	Sn	10 26 21.4	-0.4
CHMS	Chumysh	4.41	16	⇑eP	Pn	10 25 30.9	+0.6
	baz=15						
CHMS				⇑iS	Sn	10 26 21.4	-0.4
	baz=15						
TKM2	Tokmak 2	4.56	24	P	Pn	10 25 35.2	+2.7
	SNR=7.8						
TKM2	Tokmak 2	4.56	24	⇑Pn	Pn	10 25 35.7	+3.2
	comp=Z,80nm,0.7s						
TKM2				⇓Lg	Lg	10 26 49.3	
	comp=Z,183nm,0.9s						
KDJ	Kajisay	4.58	41	PN	Pn	10 25 34.8	+2.0
KDJ	Kajisay	4.58	41	Pn	Pn	10 25 34.8	+2.0
USP	Ospenovka	4.62	13	P	Pn	10 25 37.7	+4.5
	SNR=22						
USP	Ospenovka	4.62	13	ePN	Pn	10 25 33.9	+0.7
USP				i S	Sn	10 26 26.6	-0.4
USP	Ospenovka	4.62	13	⇑eP	Pn	10 25 33.9	+0.7
	baz=12						
USP				⇑iS	Sn	10 26 26.6	-0.4
	baz=12						
TARG	Taragay, Kyrgy	4.66	49	ePN	Pn	10 25 34.3	+0.2
TARG				eS	Sn	10 26 27.2	-1.2
TARG	Taragay, Kyrgy	4.66	49		Pn	10 25 35.1	+1.1
TARG	Taragay, Kyrgy	4.66	49	⇑eP	Pn	10 25 34.3	+0.2
	baz=49						
TARG				⇑eS	Sn	10 26 27.2	-1.2
	baz=49						
KK02	Karatay Array	4.76	336	⇑Pn	Pn	10 25 35.9	+0.8
	comp=Z,68nm,0.8s						
KK02				⇓Sn	Sn	10 26 32.0	+1.7
	comp=Z,93nm,0.6s						
KK31	Karatay Array	4.76	336	PN	Pn	10 25 37.4	+2.3
KKAR	Karatay Array	4.76	336	PN	Pn	10 25 37.4	+2.3
KKAR	Karatay Array	4.76	336		Pn	10 25 37.4	+2.3
KST	Kastek	4.79	26	eP	Pb	10 25 48.9	+1.5
	comp=Z,51nm,0.9s						
KST				eS	Sg	10 26 51.2	-5.9
	comp=Z,161nm,0.8s						
KST	Kastek	4.79	26	Pg	Pb	10 25 48.9	+1.5
	comp=Z,51nm,0.9s						
KST				Lg	Lg	10 26 51.2	
	comp=Z,161nm,0.8s						
SGDS	Sogindy	4.82	13	ePg	Pb	10 25 49.9	+2.0
	baz=13						
SGDS	Sogindy	4.82	13	Pg	Pb	10 25 48.2	+0.3
	comp=Z,33nm,0.8s						
SGDS				Lg	Lg	10 26 50.2	
	comp=Z,112nm,0.9s						
CEP	Cherat	5.02	191	P	Pn	10 25 44.6	+5.8
CEP				S	Sb	10 26 48.0	-3.9
CHCP	Chirah Chowk	5.10	178	P	Pn	10 25 45.7	+6.0
NIL	Nilore	5.11	179	PN	Pn	10 25 44.9	+5.1
NIL	Nilore	5.11	179	Pn	Pn	10 25 44.9	+5.1
TNSS	Tian-Shan	5.17	33	ePg	Pb	10 25 56.8	+2.9
	baz=33						
MDOK	Medeo	5.31	33	ePg	Pb	10 25 58.6	+2.3
	baz=33						
MDOK	Medeo	5.31	33	⇓Pn	Pn	10 25 45.4	+2.6
	comp=Z,6.3nm,0.7s						
MDOK				⇓Pg	Pb	10 26 00.9	+4.6
	comp=Z,79nm,1.1s						
MDOK				⇑Lg	Lg	10 27 13.4	
	comp=Z,243nm,1.2s						
KNDC	Almaty	5.32	32	⇑Pg	Pg	10 26 01.5	-3.6
	comp=Z,228nm,0.9s						
KNDC				⇑Lg	Lg	10 27 14.4	
	comp=Z,746nm,1.2s						
KBL	Kabul	5.33	219	PN	Pn	10 25 43.7	+0.6
KBL	Kabul	5.33	219		Pn	10 25 43.7	+0.6
PRZ	Przheval'sk	5.48	46	PN	Pn	10 25 46.8	+1.7
PRZ	Przheval'sk	5.48	46	Pn	Pn	10 25 46.8	+1.7
KUU	Kurty	5.67	24	ePg	Pb	10 26 04.6	+2.2
	baz=24						
SATY	Saty	5.88	41	ePg	Pb	10 26 07.9	+2.1
	baz=41						
THW	Thamme Wali	6.06	191	P	Pn	10 25 57.5	+4.5
UZB	Uzynbulak	6.26	44	ePg	Pb	10 26 15.1	+2.6
	baz=44						
BTLS	Baital	6.31	6	ePn	Pn	10 25 55.1	-1.2
	baz=6.1						
BTLS				ePg	Pb	10 26 17.0	+3.8
	baz=6.1						
BTLS	Baital	6.31	6	ePN	Pn	10 25 55.1	-1.2
BTLS				e		10 26 16.9	
SHLS	Shalkode	6.51	46	ePn	Pn	10 26 01.3	+2.1
	baz=47						
SHLS				ePg	Pg	10 26 23.3	-4.6
	baz=47						
SHLS	Shalkode	6.51	46	ePN	Pn	10 26 01.3	+2.1
SHLS				e		10 26 23.3	
PDGK	Podgornoye	6.64	45	PN	Pn	10 26 00.9	-0.1
PDGK						10 26 22.3	
PDGK	Podgornoye	6.64	45	⇓Pg	Pg	10 26 26.5	-3.9
	comp=Z,46nm,0.9s						
PDGK				⇓Lg	Lg	10 27 57.8	
	comp=Z,74nm,1.1s						
DHRM	DHARAMSHALA	7.00	157	eP	Pn	10 26 07.5	+1.4
DHRM				eS	Sn	10 27 27.4	+1.5
DHRM				IAML		10 27 41.7	
	comp=E,128nm,0.6s						
SMLA	Simla	8.31	155	eP	Pn	10 26 25.0	+1.1
SMLA				eS	Sn	10 27 54.4	-3.4
SMLA				IAML		10 28 04.6	
	comp=E,73nm,0.3s						
HRA	Herat	9.76	247	Pn	Pn	10 26 47.0	+3.0
MAKZ	Makanchi	10.35	36	P	Pn	10 26 52.5	+0.8
MAKZ	Makanchi	10.35	36	⇓Pn	Pn	10 26 54.1	+2.5
	comp=E,4.9nm,1.2s						
MAKZ				⇑Lg	Lg	10 29 54.1	
	comp=E,12nm,1.3s						
MAKZ	Makanchi	10.35	36	Pn	Pn	10 26 52.3	+0.6
MK31	Makanchi Array	10.48	37	P	Pn	10 26 54.8	+1.2
MK31	Makanchi Array	10.48	37	⇓Pn	Pn	10 26 55.1	+1.6
	comp=E,5.8nm,1.0s,baz=214,slow=14,SNR=16						
MK31				⇓Lg	Lg	10 29 59.0	
	comp=E,10nm,1.1s,baz=231,slow=28,SNR=3.6						
MK31	Makanchi Array	10.48	37	Pn	Pn	10 26 54.8	+1.2
MKAR	Makanchi Array	10.48	37	Pn	Pn	10 26 54.8	+1.3
	comp=E,0.1nm,0.3s,baz=214,slow=13,SNR=15						
MKAR				Lg	Lg	10 29 50.9	
	comp=E,0.1nm,0.3s,baz=260,slow=28,SNR=1.1						
MKAR				LR	LR	10 30 32.9	
	comp=E,97nm,18.8s,baz=216,slow=36						
MKAR	Makanchi Array	10.48	37	P	Pn	10 26 52.8	-0.7
MKAR	Makanchi Array	10.48	37	Pn	Pn	10 26 52.8	-0.7
NDI	New Delhi	10.62	160	eP	Pn	10 26 57.2	+1.7
NDI				eS	Sn	10 28 51.4	-3.1
KUDL	Kundal	10.96	164	eP	Pn	10 26 59.7	-0.4
KUDL				eS	Sn	10 28 59.3	-3.5
GEYT	Alibeck	11.80	271	Pn	Pn	10 27 11.7	0.0
	comp=E,0.9nm,0.3s,baz=89,slow=12,SNR=3.4						
GEYT				Sn	Sn	10 29 20.8	-2.6
	comp=E,0.3nm,0.3s,baz=331,slow=39,SNR=3.1						
GEYT	Alibeck	11.80	271		Pn	10 27 12.0	+0.3
GYA0	ALIBECK ARRAY	11.80	271	P	Pn	10 27 11.4	-0.3
GYA0						10 29 20.8	
GYA0B	ALIBECK ARRAY	11.80	271	⇑Pn	Pn	10 27 11.4	-0.2
GYA0B				⇓Sn	Sn	10 29 20.8	-2.6
GYA0B	ALIBECK ARRAY	11.80	271	Pn	Pn	10 27 12.5	+0.9
WMQ	Urumqi	12.08	61	eP	Pn	10 27 16.5	+1.0
WMQ				pP		10 27 19.1	
WMQ				PP	PnPn	10 27 26.2	+3.1
WMQ				pmax	pmax		
	comp=E,21nm,0.9s						
KURBB	Kurchatov Arra	12.46	16	Pn	Pn	10 27 18.6	-2.0
	comp=E,0.1nm,0.3s,baz=207,slow=12,SNR=4.7						
KURBB				Lg	Lg	10 30 48.8	
	comp=E,0.0nm,0.3s,baz=99,slow=29,SNR=3.1						
KURK	Kurchatov	12.57	16	i P	Pn	10 27 21.7	-0.4
PYUN	Piuthan	13.45	139	eP	Pn	10 27 30.0	-4.4
	comp=E,19nm,0.4s						
KOLN	Koldanda	14.03	138	eP	Pn	10 27 36.9	-5.5
	comp=E,9.5nm,0.5s						
AB31	Akbulak array	14.11	322	eP	Pn	10 27 41.1	-1.9
AB31	Akbulak array	14.11	322	Pn	Pn	10 27 41.2	-1.9
	comp=E,7.4nm,0.8s,baz=131,slow=13,SNR=79						
AB31				⇑Sn	Sn	10 30 15.6	-4.0
	comp=E,5.0nm,0.7s,baz=132,slow=23,SNR=4.6						
ABKAR	Akbulak array	14.11	322	Pn	Pn	10 27 41.4	-1.7
BVAR	Borovoye Array	14.39	353	Pn	Pn	10 27 44.2	-2.7
	comp=E,0.2nm,0.3s,baz=189,slow=18,SNR=8.1						
BRVK	Borovoye	14.43	353	i P	Pn	10 27 47.2	-0.3
BRVK	Borovoye	14.43	353	⇓Pn	Pn	10 27 48.0	+0.6
	comp=E,16nm,1.2s						
BRVK	Borovoye	14.43	353	Pn	Pn	10 27 47.5	0.0
DGZ	Jazzator, Alta	14.97	38	i P	Pn	10 27 54.3	-0.7
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PKIN	Phulchoki	15.16	134	eP	Pn	10 27 58.5	+0.7
	comp=Z,14nm,0.5s						
PKI	Pulchoki	15.17	134	eP	Pn	10 27 58.8	+0.8
AKTO	Aktyubinsk	15.83	322	Pn	Pn	10 28 05.3	-0.8
	comp=Z,0.4nm,0.3s,baz=126,slow=11,SNR=11						
AKTO				Sn	Sn	10 30 57.1	-4.3
	comp=Z,0.2nm,0.3s,baz=65,slow=23,SNR=2.2						
AKTO				LR	LR	10 34 23.5	
	comp=Z,75nm,18.8s,baz=154,slow=38						
AKTO	Aktyubinsk	15.83	322	P	Pn	10 28 07.3	+1.3
AKTO				S	Sn	10 30 57.2	-4.3
AKTO	Aktyubinsk	15.83	322	⇑Pn	Pn	10 28 07.3	+1.3
	comp=Z,19nm,0.9s						
AKTO				⇑Sn	Sn	10 31 01.0	-0.5
	comp=Z,11nm,1.1s						
BHPL	Bhopal	15.91	165	eP	Pn	10 28 09.5	+2.2
BHPL				eS	Sn	10 30 51.9	-12
RAMN	Ramite	16.33	132	eP	Pn	10 28 12.4	-0.5
	comp=Z,8.9nm,0.5s						
ZAA0	Zalesovo Array	17.17	24		Pn	10 28 22.7	-0.4
ZALV	Zalesovo Beam	17.17	24	P	Pn	10 28 21.9	-1.2
	comp=Z,0.4nm,0.3s,baz=229,slow=13,SNR=7.8						
ZALV				Lg	Lg	10 33 21.2	
	comp=Z,0.2nm,0.3s,baz=149,slow=30,SNR=1.2						
ZALV				LR	LR	10 35 26.2	
	comp=Z,43nm,21.2s,baz=266,slow=39						
ZALV	Zalesovo Beam	17.17	24	i P	Pn	10 28 22.2	-0.9
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	17.17	24		Pn	10 28 20.9	-2.2
ARU	Arti	20.14	336	P	P	10 28 58.1	+0.8
	comp=Z,0.9nm,0.3s,baz=205,slow=10.0,SNR=1.6						
ARU				LR	LR	10 37 50.9	
	comp=Z,82nm,18.6s,baz=191,slow=40						
ARU	Arti	20.14	336	d iP	P	10 28 57.7	+0.4
ARU						10 29 11.6	
ARU				S	Sn	10 32 47.6	+2.0
ARU				SS	SnSn	10 33 04.1	+4.1
ARU				pmax	pmax		
	comp=Z,26nm,3.2s						
GTA	Gaotai	20.72	80	⇑P	P	10 29 04.1	+0.1
GTA				pP	pP	10 29 09.1	+1.2
GTA				sP	sP	10 29 12.2	+2.5
GTA				pmax	pmax		
	comp=Z,12nm,0.9s						
GTA				pmax	pmax		
	comp=Z,110nm,5.5s						
GTA				LR	LR		
	comp=Z,150nm,16.4s						
GTA				LR	LR		
	comp=Z,150nm,16.0s						
GTA				LR	LR		
	comp=Z,150nm,15.3s						
GNI	Garni	21.91	283	P	P	10 29 18.6	+1.8
	comp=Z,3.6nm,0.3s,baz=185,slow=21,SNR=1.2						
BELG	Belogornoye	22.30	316	P	P	10 29 21.6	+1.0
	comp=Z,23nm,0.7s,baz=194,slow=4.6,SNR=3.5						
BELG				LR	LR	10 39 59.8	
	comp=Z,54nm,18.3s,baz=144,slow=42						
ONI	Oni	22.75	289	P	P	10 29 28.1	+2.5
ONI				pmax	pmax		
	comp=Z,11nm,0.9s						
ONI	Oni	22.75	289	P	P	10 29 28.1	+2.5
ONI				IAmb	IAmb	10 29 39.8	
	comp=Z,11nm,0.9s						
KBZ	Khabaz	23.18	292	i P	P	10 29 30.1	+0.2
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV	Kislovodsk	23.34	293	eP	P	10 29 29.9	-1.8
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,35nm,14.0s						
ZAK	Zakamensk	24.26	52	eP	P	10 29 39.9	-0.6
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KIRV	Kirov	25.02	330	LR	LR	10 40 12.9	
	comp=Z,149nm,19.9s,baz=132,slow=38						
SONM	Songino Array	25.70	59	P	P	10 29 53.2	-0.4
	comp=Z,4.5nm,0.8s,baz=264,slow=9.3,SNR=25						
SONM				LR	LR	10 40 09.7	
	comp=Z,70nm,19.1s,baz=228,slow=37						
SONM	Songino Array	25.70	59	P	P	10 29 53.3	-0.4
SONM				IAmb	IAmb	10 29 56.2	
	comp=Z,5.2nm,1.0s						
ULN	Ulaanbaatar	26.14	59	i P	P	10 29 58.0	+0.3
ULN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ULN	Ulaanbaatar	26.14	59	P	P	10 29 57.1	-0.6
ULN				IAmb	IAmb	10 29 58.5	
	comp=Z,4.3nm,0.7s						
NRIK	Noril'sk	31.61	10	P	P	10 30 44.6	-1.2
	comp=Z,0.8nm,0.3s,baz=195,slow=10,SNR=1.5						
NRIK	Noril'sk	31.61	10	i P	P	10 30 45.1	-0.8
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	Malin Array Be	32.91	306	P	P	10 30 56.7	-0.8
	comp=Z,0.2nm,0.3s,baz=80,slow=7.7,SNR=1.8						
FIA1	FINESS Array S	36.59	324	P	P	10 31 29.8	+0.7
FINES	FINESS Array B	36.59	324	P	P	10 31 29.1	0.0
	comp=Z,2.9nm,0.6s,baz=117,slow=8.0,SNR=6.5						
FINES	FINESS Array B	36.59	324	P	P	10 31 29.4	+0.2
FINES	FINESS Array B	36.59	324	P	P	10 31 29.4	+0.2
ARCES	ARCESS Array B	39.73	336	P	P	10 31 55.4	-0.1
	comp=Z,4.0nm,0.9s,baz=120,slow=8.9,SNR=5.2						
ARCES	ARCESS Array B	39.73	336	P	P	10 31 55.0	-0.5
KSRS	Korea Array	42.60	74	LR	LR	10 52 38.7	
	comp=Z,22nm,18.1s,baz=355,slow=40						
GERES	GERESS Array B	43.03	304	P	P	10 32 22.3	-0.7
	comp=Z,0.1nm,0.3s,baz=57,slow=11,SNR=1.6						
NB2	NORSAR Subarra	43.62	322	P	P	10 32 27.2	-0.3
	comp=Z,0.7nm,0.5s,baz=90,slow=7.9						
NOA	NORSAR Array B	43.62	322	P	P	10 32 28.4	+0.9
	comp=Z,1.4nm,0.7s,baz=92,slow=7.7,SNR=4.4						
NOA				LR	LR	10 51 21.9	
	comp=Z,51nm,19.4s,baz=295,slow=37						
DGAR	Diego Garcia	45.94	181	ceP	P	10 32 44.6	-1.8
DGAR				pmax	pmax		
	comp=Z,197nm,1.7s						
KAPI	Kappang	61.28	124	LR	LR	11 03 28.3	
	comp=Z,99nm,21.6s,baz=227,slow=38						
TORD	Torodi Ar. Bea	67.44	269	P	P	10 35 20.4	+1.0
	comp=Z,0.4nm,0.4s,baz=54,slow=6.2,SNR=2.5						
TORD	Torodi Ar. Bea	67.44	269	P	P	10 35 20.9	+1.5
TOLK	Toolik Lake Re	68.31	16	P	P	10 35 23.8	-0.4
TOLK				IAmb	IAmb	10 35 50.8	
	comp=Z,5.3nm,1.2s						
IMAR	Indian Mountai	69.51	19	P	P	10 35 30.4	-1.2
BMAR	Burnt Mountain	70.34	15	P	P	10 35 38.5	+1.7
INK	Inuvik	71.40	10	P	P	10 35 43.1	+0.1
	comp=Z,0.4nm,0.6s,baz=339,slow=4.9,SNR=3.5						
INK	Inuvik	71.40	10	P	P	10 35 43.3	+0.3
INK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
INK	Inuvik	71.40	10	P	P	10 35 43.3	+0.3
INK				IAmb	IAmb	10 36 03.9	
	comp=Z,3.3nm,1.1s						
ILAR	Eielson Array	72.14	17	P	P	10 35 48.4	+0.8
	comp=Z,0.4nm,0.9s,baz=310,slow=4.6,SNR=2.8						
ILAR	Eielson Array	72.14	17	P	P	10 35 48.7	+1.1
ILAR	Eielson Array	72.14	17	P	P	10 35 48.7	+1.1
YKA	Yellowknife Ar	78.90	4	P	P	10 36 25.7	-0.7
	comp=Z,1.0nm,0.9s,baz=354,slow=7.1,SNR=2.7						
BOSA	Boshof	80.55	221	LR	LR	11 16 10.4	
	comp=Z,17nm,18.2s,baz=192,slow=39						
WRA	Warramunga Arr	81.81	124	P	P	10 36 42.4	-0.2
	comp=Z,0.6nm,0.9s,baz=333,slow=4.9,SNR=3.1						

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*IDC **08** 10:48:40.1±4.1, 8°.68S×124°.61E, h76^{km}±40^{km}, mb3.5/4, mb1 4.0/7, mb1mx3.2/44, mbtmp4.1/7, ML4.4/3, MS2.5/2, Ms1 2.5/2, ms1mx2.3/28, Error ellipse: s-maj=37.1km s-min=20.8km az=44.0*

*DJA **08** 10:48:42.5±0.4, 9°S±4°×12°4E±°, h110^{km}±5^{km}, M4.2/13, mb4.5/7, mB4.8/6, MLv4.3/13, Mw(mB)4.0/6*

ISC 08 10:48:43.3±1.0**, 8°.97S**±0°.08×**124°.25E**±0°.10**, h127**^{km}±9^{km}**,**
n25, σ1^{s}.67/28**, mb3.7**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.78	179	P	Pn	10 49 04.5	+0.4
SOEI				S	Sn	10 49 19.2	-0.7
BATI	Baumata	1.36	205	P	Pn	10 49 10.7	+1.1
	174nm,0.3s,baz=344,slow=1.5,SNR=82						
BATI				S	Sn	10 49 31.0	+1.4
	171nm,0.3s,baz=209,slow=4.6,SNR=17						
BATI				LR	LR	10 50 13.4	
	comp=Z,147nm,18.1s,baz=36,slow=52						
BATI	Baumata	1.36	205	P	Pn	10 49 10.9	+1.3
BATI				S	Sn	10 49 31.4	+1.8
MMRI	Maumere	2.02	279	P	Pn	10 49 16.4	-0.9
MMRI				S	Sn	10 49 43.0	-0.3

EDFI	Ende, Flores	2.54	275	P	Pn	10 49 24.0	+0.1
EDFI				S	Sn	10 49 54.7	-0.5
BASI	Baing, Sumba	3.83	251	P	Pn	10 49 41.2	+0.5
BSSI	Bau Bau, Buton	4.67	307	P	Pn	10 49 51.5	-0.4
WBSI	Waikabubak, Su	4.84	262	P	Pn	10 49 53.5	-0.8
BKSI	Bulukumba	5.47	311	P	Pn	10 50 01.6	-1.1
	0.2nm759nm50nm,0.6s						
KAPI	Kappang	5.95	311	LR	LR	10 52 40.5	
	comp=Z,27nm,18.1s,baz=159,slow=40						
BNSI	Bone	6.13	318	P	Pn	10 50 10.9	-0.6
	0.2nm560nm47nm,0.9s						
PLAI	Plampang	6.40	271	P	Pn	10 50 14.8	-0.4
	0.3nm1μm55nm,0.9s						
SPSI	Sidrap Palu	6.67	318	P	Pn	10 50 28.1	+9.2
TWSI	Taliwang, Sumb	7.28	271	P	Pn	10 50 26.8	-0.3
	0.1nm718nm25nm,0.5s						
TTSI	Tana Toraja	7.35	323	P	Pn	10 50 37.5	+9.4
FITZ	Fitzroy Crossi	9.17	172	P	Pn	10 50 51.6	-0.9
	2.4nm,0.3s,baz=20,slow=10,SNR=14						
FITZ				S	Sn	10 52 28.2	-5.9
	9.0nm,0.3s,baz=15,slow=13,SNR=10						
MRSI	Marisa	9.66	346	P	Pn	10 50 58.0	-1.2
PCJI	Pacitan	12.95	272	P	Pn	10 51 42.2	-0.6
WRA	Warramunga Arr	14.63	139	P	Pn	10 52 02.6	-1.7
	1.9nm,0.3s,baz=314,slow=13,SNR=62						
WRA				S	Sn	10 54 36.5	-10
	4.7nm,0.3s,baz=307,slow=22,SNR=13						
WRA				LR	LR	10 58 43.4	
	comp=Z,29nm,18.8s,baz=30,slow=41						
ASAR	Alice Springs	17.29	149	P	Pn	10 52 38.7	+1.7
	1.1nm,0.3s,baz=324,slow=12,SNR=58						
ASAR				S	Sn	10 55 37.4	-13
	0.3nm,0.3s,baz=322,slow=24,SNR=5.3						
STKA	Stephens Creek	27.91	147	P	P	10 54 23.0	+1.4
	2.1nm,0.7s,baz=336,slow=10.0,SNR=2.2						
CMAR	Chiang Mai Arr	36.97	318	P	P	10 55 42.7	+2.1
	0.5nm,0.3s,baz=139,slow=7.1,SNR=5.1						
MKAR	Makanchi Array	66.91	330	P	P	10 59 24.1	+2.1
	0.4nm,0.4s,baz=130,slow=5.8,SNR=3.0						
KURBB	Kurchatov Arra	71.34	331	P	P	10 59 49.8	+0.6
	0.3nm,0.3s,baz=123,slow=4.5,SNR=1.2						
CPUP	Villa Florida	144.88	178	PKPbc	PKiKP	11 08 09.5	-0.5
	2.8nm,0.7s,baz=281,slow=5.2,SNR=4.4						

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*IDC **08** 10:57:30.1±1.9, 6°.26S×130°.59E, h0^{km}, mb3.8/1, mb1 3.7/4, mb1mx3.0/42, mbtmp3.6/4, ML3.6/3, Error ellipse: s-maj=84.4km s-min=28.0km az=80.0*
*DJA **08** 10:57:40.2±1.6, 4°S±14°×13°5E±1°0, h10^{km}, M3.7/3, MLv3.7/3*
ISC 08 10:57:32.3±0.9**, 6°.28S**±0°.06×**131°.1E**±0°.2**, h35^{km}, n7, σ3^{s}.77**/11**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	3.54	19	P	Pn	10 58 26.1	+1.3
FAKI				S	Sn	10 59 03.1	-2.4
SIJI	Sorong	5.38	2	Pn	Pn	10 58 51.1	+0.9
	1.9nm,0.3s,baz=15,slow=17,SNR=17						
SIJI				Sn	Sn	10 59 45.0	-5.9
	3.5nm,0.3s,baz=211,slow=23,SNR=13						
SWI	Sorong	5.39	2	P	Pn	10 58 52.0	+1.8
FITZ	Fitzroy Crossi	12.89	204	Sn	Sn	11 02 52.3	-3.0
	0.8nm,0.3s,baz=139,slow=21,SNR=6.8						
WRA	Warramunga Arr	13.95	167	Pn	Pn	11 00 50.1	+2.6
	0.3nm,0.3s,baz=347,slow=12,SNR=8.7						
WRA				Sn	Sn	11 03 17.0	-4.3
	0.6nm,0.3s,baz=338,slow=24,SNR=4.6						
ASAR	Alice Springs	17.50	171	P	P	11 01 37.2	+2.6
	0.1nm,0.3s,baz=341,slow=8.2,SNR=6.9						
ASAR				S	Sn	11 04 42.8	-4.9
	0.1nm,0.3s,baz=140,slow=33,SNR=3.6						
MKAR	Makanchi Array	68.22	326	P	P	11 08 31.1	+1.7
	1.0nm,0.9s,baz=124,slow=7.8,SNR=4.6						

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*IDC **08** 10:58:00.2±7.5, 36°.24N×71°.20E, h134^{km}±70^{km}, mb3.2/4, mb1 3.4/7, mb1mx2.9/54, mbtmp3.8/7, Error ellipse: s-maj=55.1km s-min=29.4km az=15.0*
*NNC **08** 10:58:12.6±4.3, 37°.20N×71°.32E, h188^{km}±48^{km}, mb2.9, mpv3.8, Error ellipse: s-maj=42.2km s-min=29.4km az=43.0*
ISC 08 10:58:07.4±1.2**, 36°.89N**±0°.09×**71°.3E**±0°.1**, h200^{km}, n11, σ1^{s}.89**/16**, mb3.5**/3**, 5C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK02	Karatay Array	6.24	355	⇑P	Pn	10 59 38.7	+1.0
	4.0nm,0.3s						
KK02				⇑S	Sn	11 00 47.8	-1.3
	17nm,0.6s						
AAK	Ala-Archa	6.24	22	P	Pn	10 59 38.8	+0.9
	0.5nm,0.3s,baz=12,slow=16,SNR=3.8						
AAK				S	Sn	11 00 47.7	-1.8
	1.3nm,0.3s,baz=200,slow=17,SNR=10						
AAK	Ala-Archa	6.24	22	⇑P	Pn	10 59 39.8	+1.9
	6.2nm,0.8s						
AAK				⇓S	Sn	11 00 47.4	-2.1
	16nm,0.7s						
AB31	Akbulak array	14.87	330	⇑P	P	11 01 29.0	+0.3
	0.3nm,0.3s,baz=144,slow=12,SNR=18						
AB31				S	S	11 04 10.2	-2.6
	0.8nm,0.5s,baz=156,slow=22,SNR=5.9						
BVAR	Borovoye Array	16.15	358	P	Pn	11 01 46.0	+2.7
	0.2nm,0.3s,baz=185,slow=16,SNR=3.8						
AKTO	Aktyubinsk	16.57	329	P	Pn	11 01 51.1	+2.7
	0.7nm,0.3s,baz=138,slow=12,SNR=10						
AKTO	Aktyubinsk	16.57	329	⇑P	Pn	11 01 50.8	+2.4
	6.1nm,0.8s						
AKTO				⇓S	Sn	11 04 54.2	-0.4
	2.2nm,0.8s						
ZALV	Zalesovo Beam	19.46	24	P	Pn	11 02 23.0	+0.6
	0.7nm,0.3s,baz=224,slow=12,SNR=3.9						
TORD	Torodi Ar. Bea	65.97	269	P	P	11 08 31.7	-0.9
	0.4nm,0.4s,baz=41,slow=6.5,SNR=4.5						
WRA	Warramunga Arr	81.99	122	P	P	11 10 03.9	-1.3
	0.3nm,0.3s,baz=313,slow=5.6,SNR=3.8						
ASAR	Alice Springs	84.28	125	P	P	11 10 15.7	-1.1
	0.2nm,0.8s,baz=330,slow=5.4,SNR=4.1						

IDC 08 11:02:04.8±1.6**, 3°.31S×143°.81E, h0^{km}, mb3.6**/3**, mb1 3.8**/5**, mb1mx3.3**/28**, mbtmp3.6**/5**, ML3.3**/2**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.3**/32**, Error ellipse: s-maj=46.3km s-min=27.1km az=110.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	3.20	284	Pn	Pn	11 02 55.3	-1.1
	0.9nm,0.3s,baz=332,slow=9.3,SNR=2.0						
JAY				Sn	Sn	11 03 29.6	-5.6
	1.7nm,0.3s,baz=191,slow=21,SNR=2.5						
WRA	Warramunga Arr	18.94	208	P	P	11 06 27.3	-0.2
	0.2nm,0.3s,baz=35,slow=11,SNR=6.0						
WRA				LR	LR	11 13 09.8	
	comp=Z,31nm,21.1s,baz=15,slow=35						
ASAR	Alice Springs	22.39	204	P	P	11 07 05.2	+0.3
	0.3nm,0.6s,baz=27,slow=12,SNR=4.6						
H11S3	WAKE ISLAND Hy	31.26	45	T	T	11 41 25.7	
	baz=228,slow=76,SNR=571						
H11S2	WAKE ISLAND Hy	31.27	45	T	T	11 41 26.5	
	baz=228,slow=76,SNR=498						
H11S1	WAKE ISLAND Hy	31.28	45	T	T	11 41 27.2	
	baz=228,slow=76,SNR=603						
H11N1	WAKE ISLAND Hy	32.22	44	T	T	11 42 38.6	
	baz=227,slow=76,SNR=484						
H11N2	WAKE ISLAND Hy	32.23	44	T	T	11 42 38.9	
	baz=227,slow=76,SNR=517						
H11N3	WAKE ISLAND Hy	32.23	44	T	T	11 42 39.8	
	baz=227,slow=76,SNR=214						
ZALV	Zalesovo Beam	75.06	328	P	P	11 13 48.1	-0.2
	0.6nm,0.3s,baz=113,slow=5.5,SNR=2.3						
ILAR	Eielson Array	84.30	24	P	P	11 14 38.7	+0.4
	0.8nm,0.7s,baz=255,slow=4.8,SNR=7.8						

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*IDC **08** 11:15:23.2±2.5, 13°.59N×91°.57W, h0^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.7/31, mbtmp3.7/6, ML3.3/1, Error ellipse: s-maj=44.5km s-min=16.1km az=145.0*
*UCR **08** 11:15:27.4±1.1, 13°.52N×91°.51W, h13^{km}±19^{km}, ML3.5*
*SNET **08** 11:15:27.3±1.0, 13°.52N×91°.51W, h13^{km}±14^{km}, ML3.7*
*GCG **08** 11:15:30.4±0.3, 13°.85N×91°.52W, h3^{km}±9^{km}, MD3.9*
ISC 08 11:15:25.6±3.3**, 13°.5N**±0°.1×**91°.58W**±0°.05**, h13^{km}**±17^{km}**, n44, σ1^{s}.11**/50**, mb3.6**/5**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	0.98	353	*e*P	Pb	11 15 45.3	+0.8
FUG	Fuego 3	1.15	38	*e*P	Pb	11 15 47.9	+0.5
STG3	Santiaguito 3,	1.16	0	*e*P	Pb	11 15 47.4	-0.2
NBG	Las Nubes	1.58	49	*e*P	Pb	11 15 55.8	+0.9
NBG				*e*S	Sg	11 16 15.7	-0.9
HUEH	Huehuetenango	1.77	2	*e*P	Pn	11 15 58.0	+1.9
HUEH				*e*S	Sg	11 16 22.7	+0.1
SLOZ	Alcaldia de Sa	1.81	74	*e*P	Pn	11 15 57.0	+0.6
SLOZ				IAML		11 16 27.7	
	comp=Z,422nm,0.4s						
APG	El Apazote	1.81	36	Pg	Pn	11 15 57.5	+0.8
	comp=Z,26nm,0.3s,baz=245,slow=9.6,SNR=67						
APG				Lg	Lg	11 16 18.6	
	comp=Z,53nm,0.3s,baz=167,slow=18,SNR=11						
RTR	El Retiro	1.91	79	*e*P	Pn	11 15 58.8	+0.8
RTR	El Retiro	1.91	79	*e*P	Pn	11 15 58.8	+0.8
CEVE	Cerro Verde	1.92	81	*e*P	Pn	11 15 58.9	+0.8
CEVE				*e*S	Sb	11 16 24.0	-0.5
CEVE				IAML		11 16 28.4	
	comp=Z,1μm,0.3s						
CEVE	Cerro Verde	1.92	81	*e*P	Pn	11 15 58.9	+0.8
CEVE				*e*S	Sb	11 16 24.0	-0.5
CEVE				IAML		11 16 28.4	
	comp=Z,1μm,0.3s						
SBLS	San Blas	1.92	81	*e*P	Pn	11 15 58.7	+0.5
SBLS	San Blas	1.92	81	*e*P	Pn	11 15 58.7	+0.5
UNIC	Universidad Ca	2.02	77	*e*P	Pn	11 16 00.2	+0.8
UNIC	Universidad Ca	2.02	77	*e*P	Pn	11 16 00.2	+0.8
JAYA	Jayaque - finc	2.07	87	*e*P	Pn	11 16 00.2	0.0
JAYA	Jayaque - finc	2.07	87	*e*P	Pn	11 16 00.2	0.0
LALI	Alcalda de L	2.19	91	*e*P	Pn	11 16 02.9	+1.2
LALI	Alcalda de L	2.19	91	*e*P	Pn	11 16 02.9	+1.2
TACO	Tacachico	2.20	79	*e*S	Sn	11 16 30.0	+1.0
TACO	Tacachico	2.20	79	*e*S	Sn	11 16 30.0	+1.0
BOQS	Boqueron	2.24	85	*e*P	Pn	11 16 03.9	+1.3
BOQS	Boqueron	2.24	85	*e*P	Pn	11 16 03.9	+1.3
MTO3	Montecristo	2.31	68	*e*P	Pn	11 16 04.8	+1.2
MTO3	Montecristo	2.31	68	*e*P	Pn	11 16 04.8	+1.2
MRL	Marmol	2.39	50	*e*P	Pb	11 16 07.6	-0.9
ESQI	Esquipulas	2.39	65	*e*P	Pn	11 16 06.1	+1.5
ESQI				*e*S	Sb	11 16 36.1	-1.9
LFRS	El Faro	2.44	88	*e*P	Pn	11 16 07.0	+1.6
LFRS	El Faro	2.44	88	*e*P	Pn	11 16 07.0	+1.6
SJTE	Alcalda de S	2.50	88	*e*P	Pn	11 16 07.0	+1.0
SJTE				*e*S	Sn	11 16 37.1	+0.7
SJTE	Alcalda de S	2.50	88	*e*P	Pn	11 16 07.0	+1.0
SJTE				*e*S	Sn	11 16 37.1	+0.7
COEG	Centro de Oper	2.62	88	IAML		11 16 53.2	
	comp=Z,228nm,0.5s						
COEG	Centro de Oper	2.62	88	IAML		11 16 53.2	
	comp=Z,228nm,0.5s						
SCLA	Alcaldia de Sa	2.77	86	*e*P	Pn	11 16 11.0	+1.3
SCLA	Alcaldia de Sa	2.77	86	*e*P	Pn	11 16 11.0	+1.3
PQSS	Presa 15 de Se	2.93	88	*e*P	Pn	11 16 12.5	+0.6
CMIG	Matias Romero	4.76	318	Pn	Pn	11 16 37.0	0.0
	comp=Z,1.3nm,0.3s,baz=132,slow=11,SNR=14						
CMIG				Sn	Sn	11 17 32.5	+0.4
	comp=Z,4.6nm,0.3s,baz=77,slow=20,SNR=2.6						
CMIG				Lg	Lg	11 17 46.9	
	comp=Z,5.4nm,0.3s,baz=200,slow=4.9,SNR=7.4						
TXAR	Lajitas Array	19.30	326	P	Pn	11 19 53.7	+2.2
	comp=Z,0.1nm,0.3s,baz=153,slow=12,SNR=18						
TKL	Tuckaleechee C	23.11	16	P	P	11 20 30.6	-0.8
	comp=Z,2.3nm,0.6s,baz=182,slow=13,SNR=5.5						
ANMO	Albuquerque	25.20	330	P	P	11 20 51.2	-0.1
	comp=Z,0.8nm,0.5s,baz=130,slow=9.2,SNR=4.0						
NVAR	Mina Array Bea	34.28	321	P	P	11 22 12.4	+0.6
	comp=Z,0.4nm,0.7s,baz=129,slow=8.7,SNR=3.1						
YKA	Yellowknife Ar	51.56	347	P	P	11 24 29.3	-1.8
	comp=Z,0.5nm,0.5s,baz=141,slow=9.4,SNR=4.9						
ILAR	Eielson Array	63.42	337	P	P	11 25 52.7	-2.0
	comp=Z,0.2nm,0.5s,baz=116,slow=6.9,SNR=8.9						
CMAR	Chiang Mai Arr	146.55	342	PKPbc	PKPdf	11 35 07.4	+1.1
	comp=Z,0.9nm,0.4s,baz=359,slow=3.6,SNR=5.6						

NNC 08 11:25:33.5±8.2**, 36°.98N×70°.74E, h0^{km}, mb4.2, mpv3.9, 2C-3D, Error ellipse: s-maj=75.2km s-min=66.5km az=79.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.63	23	P	Pn	11 26 59.6	+0.9
	SNR=26						
UCH	Uchtor	6.00	28	P	Pn	11 27 04.5	+0.6
	SNR=17						
KK02	Karatay Array	6.12	358	⇓P	Pn	11 27 05.2	+0.1
	2.3nm,0.3s,baz=172,slow=12						
KK02				⇑S	Sn	11 28 16.2	+0.4
	5.9nm,0.5s						
EKS2	Erkin-Say	6.14	21	P	Pn	11 27 06.9	+1.4
	SNR=6.8						
AAK	Ala-Archa	6.35	26	P	Pn	11 27 08.9	+0.5
	SNR=6.4						
AAK	Ala-Archa	6.35	26	⇓P	Pn	11 27 08.6	+0.2
	2.6nm,0.5s						
AAK				⇓S	Sn	11 28 23.8	+2.1
	4.1nm,0.7s						
TKM2	Tokmak 2	7.01	31	P	Pn	11 27 17.6	+0.1
	SNR=8.3						
TKM2	Tokmak 2	7.01	31	⇑P	Pn	11 27 17.1	-0.5
	7.5nm,0.4s						

IDC 08 11:47:10.8±2.1**, 2°.07S×152°.02E, h0^{km}, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/20**, mbtmp3.4**/3**, Error ellipse: s-maj=168.3km s-min=27.8km az=122.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.78	223	P	P	11 52 36.1	+1.5
	0.3nm,0.8s,baz=52,slow=9.6,SNR=4.8						
ASAR	Alice Springs	27.72	218	P	P	11 53 00.9	-0.3
	0.2nm,0.4s,baz=50,slow=8.3,SNR=8.7						
ILAR	Eielson Array	79.94	22	P	P	11 59 22.4	+0.8
	0.5nm,0.7s,baz=246,slow=5.3,SNR=7.4						
TORD	Torodi Ar. Bea	148.64	292	PKPbc	PKPdf	12 06 58.5	+1.1
	0.9nm,0.7s,baz=67,slow=2.7,SNR=5.6						

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*ECX **08** 11:52:49.4±0.4, 32°.29N×115°.33W, h13^{km}±2^{km}, MD2.6, ML2.7*
*MEX **08** 11:52:51.8±1.0, 32°.26N×115°.39W, h2^{km}, MD3.8*
ISC 08 11:52:50.0±0.9**, 32°.26N**±0°.03×**115°.38W**±0°.03**, h17^{km}**±8^{km}**, n21, σ0^{s}.86**/37**, 4C-2D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	Cerro Prieto	0.17	20	⇓*e*P	Pg	11 52 54.4	-0.1
CPBX				*e*S	Sg	11 52 57.9	+0.3
CPBX				*e*		11 52 59.1	
CPBX				IAML		11 52 59.1	
	comp=E,5μm,0.3s						
CPBX				IAML		11 53 00.1	
	comp=N,5μm,0.2s						
CPBX				*e*		11 53 00.1	
MBIG	Mexicali	0.21	45	*e*P	Pg	11 52 54.3	-0.8
MBIG				*e*P		11 52 55.3	
MBIG				*i* S	Sg	11 52 57.9	-0.6
MBIG				*i* S		11 52 59.6	
CTLX	Tlaxcala, TLX	0.29	42	⇑*i*P	Pg	11 52 56.6	+0.3
CTLX				*e*S	Sg	11 53 01.9	+1.2
RITX	Riito Sonora	0.36	104	*e*P	Pb	11 52 57.9	0.0
CEA0	Mexicali	0.47	328	*e*P	Pb	11 52 59.9	+0.1
CEA0				*e*S	Sb	11 53 07.1	+0.8
EMSC	East Mesa	0.58	34	*e*P	Pb	11 53 01.2	-0.5
WESC	Westside Schoo	0.59	329	*e*P	Pb	11 53 02.2	+0.4
WESC				*e*S	Sb	11 53 11.1	+1.3
YUH2	Yuha Desert	0.61	310	⇑*i*P	Pb	11 53 02.2	+0.1
RMX	La Rumorosa	0.69	300	⇑*i*P	Pg	11 53 02.9	-0.7
RMX				*e*S	Sg	11 53 11.4	-1.3
IKP	In-Ko-Pah, Jac	0.73	303	⇑*i*P	Pb	11 53 04.6	+0.2
IKP				*e*S	Sb	11 53 14.7	+0.5
YMD	Yuma Desert	0.76	67	*e*P	Pg	11 53 03.6	-1.3
SWSC	Sam W. Stewart	0.78	333	*e*P	Pb	11 53 04.7	-0.3
ECBX	El Chinero	0.83	160	*e*P	Pg	11 53 05.5	-0.6
ECBX				*e*S	Sg	11 53 17.9	+0.9
MONP2	Monument Peak	1.09	306	*e*P	Pb	11 53 10.9	+0.4
MONP2				*e*S	Sb	11 53 25.0	+0.5
CBX	Cerro Bola	1.09	273	*i* P	Pg	11 53 10.7	-0.4
CBX				*i* S	Sg	11 53 23.9	-1.6
CBX	Cerro Bola	1.09	273	*e*P	Pg	11 53 10.8	-0.4
CBX				*i* S	Sb	11 53 26.4	+1.9
TJIG	Tijuana	1.11	280	*e*P	Pg	11 53 10.8	-0.8
TJIG				*e*S	Sg	11 53 25.7	-0.5
CCX	Cicese	1.16	251	*e*P	Pb	11 53 12.3	+0.7
CCX				*e*S	Sb	11 53 27.9	+1.6
BAR	Barrett	1.18	291	*e*P	Pb	11 53 11.9	+0.1
BAR				*e*S	Sg	11 53 27.4	-0.7
SPIG	San Pedro Mart	1.21	184	*i* P	Pn	11 53 12.2	-0.2
SPIG				⇓*i*S	Sg	11 53 28.0	-1.2
EML	El Monte Cty P	1.39	297	*e*P	Pb	11 53 15.8	+0.2
EML				*e*S	Sb	11 53 33.9	+0.9

IDC 08 12:02:38.6±2.3**, 0°.73N×126°.89E, h0^{km}, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.2**/34**, mbtmp3.5**/3**, Error ellipse: s-maj=201.1km s-min=27.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.80	161	P	P	12 07 32.0	-0.5
	0.8nm,0.5s,baz=340,slow=9.9,SNR=7.4						
ASAR	Alice Springs	25.19	165	P	P	12 08 06.7	+0.7
	0.4nm,0.4s,baz=346,slow=12,SNR=1.4						
MKAR	Makanchi Array	60.11	326	P	P	12 12 47.6	-0.2
	0.3nm,0.4s,baz=109,slow=6.6,SNR=4.2						

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*NNC **08** 12:05:53.7±0.6, 43°.02N×79°.94E, h4^{km}±2^{km}, mb3.4, mpv3.3, Error ellipse: s-maj=4.3km s-min=2.5km az=158.0*
*SOME **08** 12:05:55.0, 43°.00N×79°.80E, h5^{km}*
*KRNET **08** 12:05:58.0±0.1, 42°.99N×79°.86E, h35^{km}, mb2.2*
ISC 08 12:05:53.7±1.3**, 43°.05N**±0°.03×**79°.87E**±0°.03**, h1^{km}**±10^{km}**, n46, σ1^{s}.12**/81**, 11C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	0.32	290	⇑*e*P	Pg	12 05 58.6	-1.3
	190nm,0.1s						
SHLS				*e*S	Sg	12 06 01.7	-2.4
	2μm,0.3s						
SHLS	Shalkode	0.32	290	P	Pg	12 05 58.6	-1.3
	189nm,0.1s						
SHLS				S	Sg	12 06 01.7	-2.4
	2μm,0.3s						
PDGK	Podgornoye	0.40	315	P	Pb	12 06 03.2	-0.5
	11nm,0.1s						
PDGK				S	Sb	12 06 09.8	-0.5
	97nm,0.1s						
PDGK	Podgornoye	0.40	315	⇓P	Pb	12 06 03.2	-0.5
	10nm,0.4s						
PDGK				⇓S	Sb	12 06 09.7	-0.6
	31nm,0.2s						
KTMS	Ketmen	0.53	41	*e*P	Pg	12 06 03.6	-0.2
	16nm,0.1s						
KTMS				*e*S	Sg	12 06 10.8	0.0
	67nm,0.1s						
KTMS	Ketmen	0.53	41	P	Pg	12 06 04.1	+0.2
	16nm,0.1s						
KTMS				S	Sg	12 06 11.2	+0.5
	67nm,0.1s						
UZB	Uzynbulak	0.63	279	*e*P	Pb	12 06 07.3	-0.4
	8.3nm,0.1s						
UZB				*e*S	Sb	12 06 16.9	-0.1
	97nm,0.1s						
UZB	Uzynbulak	0.63	279	P	Pb	12 06 07.4	-0.2
	8.3nm,0.1s						
UZB				S	Sb	12 06 16.9	-0.1
	97nm,0.1s						
ZHN	Zhinishke	1.06	277	*e*P	Pb	12 06 15.0	+0.1
	19nm,0.1s						
ZHN				*e*S	Sb	12 06 29.8	+0.4
	124nm,0.1s						
ZHN	Zhinishke	1.06	277	P	Pb	12 06 15.0	+0.1
	19nm,0.1s						
ZHN				S	Sb	12 06 29.8	+0.4
	124nm,0.1s						
SATY	Saty	1.08	271	*e*P	Pn	12 06 15.2	-0.8
	5.6nm,0.1s						
SATY				*e*S	Sn	12 06 30.6	-1.1
	50nm,0.1s						
SATY	Saty	1.08	271	P	Pn	12 06 15.2	-0.8
	5.6nm,0.1s						
SATY				S	Sn	12 06 30.6	-1.1
	50nm,0.1s						
PRZ	Przheval'sk	1.22	243	⇓*i*P	Pg	12 06 19.8	+2.7
	baz=46						
PRZ				⇓*i*S	Sn	12 06 35.6	+0.2
	baz=46						
DJR	Jarkent	1.28	357	*e*P	Pn	12 06 17.9	-1.0
	6.1nm,0.2s						
DJR				*e*S	Sb	12 06 35.4	-0.4
	16nm,0.2s						
DJR	Jarkent	1.28	357	P	Pn	12 06 18.4	-0.5
	7.0nm,0.1s						
DJR				S	Sb	12 06 35.8	0.0
KURS	Kuram	1.32	290	*e*P	Pg	12 06 20.2	+1.2
	7.1nm,0.4s						
KURS				*e*S	Sg	12 06 38.8	+2.7
	10nm,0.3s						
KURS	Kuram	1.32	290	P	Pg	12 06 20.2	+1.2
	7.1nm,0.4s						
KURS				S	Sg	12 06 38.8	+2.7
	10nm,0.3s						
BLB	Baldybastay	1.46	316	P	Pg	12 06 22.3	+0.6
	36nm,0.1s						
BLB				S	Sg	12 06 42.3	+1.7
	39nm,0.2s						
ANVS	Anan'yevo	1.64	261	⇑*i*P	Pg	12 06 27.0	+1.8
	baz=64						
ANVS				⇑*i*S	Sg	12 06 48.1	+1.6
	baz=64						
ARXS	Arharly	1.89	309	*e*P	Pg	12 06 30.1	+0.2
	3.7nm,0.2s						
ARXS				*e*S	Sg	12 06 55.7	+1.3
	21nm,0.3s						
ARXS	Arharly	1.89	309	P	Pg	12 06 30.1	+0.2
	3.7nm,0.2s						
ARXS				S	Sg	12 06 55.7	+1.3
	21nm,0.3s						
TARG	Taragay, Kyrgy	2.02	230	⇓*i*P	Pg	12 06 31.8	-0.6
	baz=31						
TARG				⇓*i*S	Sb	12 06 56.7	-0.6
	baz=31						
KOTS	Kotyrbulak	2.03	276	*e*P	Pb	12 06 31.9	+0.4
	8.6nm,0.3s						
KOTS				*e*S	Sg	12 06 59.0	0.0
	33nm,0.3s						
KOTS	Kotyrbulak	2.03	276	Pg	Pb	12 06 31.9	+0.4
	8.6nm,0.3s						
KOTS				Lg	Lg	12 06 58.9	
	33nm,0.3s						
MDOK	Medeo	2.07	274	*e*P	Pb	12 06 32.9	+0.7
	3.2nm,0.2s						
MDOK				*e*S	Sg	12 07 00.3	0.0
	8.9nm,0.3s						
MDOK	Medeo	2.07	274	⇓Pg	Pb	12 06 31.9	-0.3
	2.4nm,0.6s						
MDOK				⇓Lg	Lg	12 07 01.4	
	7.4nm,0.5s						
MDOK	Medeo	2.07	274	Pg	Pb	12 06 32.9	+0.7
	3.2nm,0.2s						
MDOK				Lg	Lg	12 07 00.3	
	8.9nm,0.3s						
TNSS	Tian-Shan	2.15	271	*e*P	Pb	12 06 34.3	+0.7
	4.8nm,0.2s						
TNSS				*e*S	Sg	12 07 03.0	+0.3
	6.3nm,0.2s						
TNSS	Tian-Shan	2.15	271	Pg	Pb	12 06 34.3	+0.7
	4.8nm,0.2s						
TNSS				Lg	Lg	12 07 03.0	
	6.3nm,0.2s						
KDJ	Kajisay	2.19	246	⇑*i*P	Pb	12 06 34.2	0.0
	baz=47						
KDJ				⇑*i*S	Sb	12 07 00.8	-1.1
	baz=47						
KAPS	Kapalarasan	2.27	351	*e*P	Pb	12 06 35.2	-0.3
	3.8nm,0.2s						
KAPS				*e*S	Sb	12 07 04.3	+0.3
	15nm,0.1s						
KAPS	Kapalarasan	2.27	351	Pg	Pb	12 06 35.2	-0.3
	3.8nm,0.2s						

KAPS				Lg	Lg	12 07 04.3	
	15nm,0.1s						
KTBS	**Karatobe**	**2.42**	**287**	*e*P	**Pb**	**12 06 39.3**	**+1.2**
	2.1nm,0.4s						
KTBS				*e*S	**Sg**	**12 07 11.3**	**-0.1**
	17nm,0.2s						
KTBS	**Karatobe**	**2.42**	**287**	Pg	**Pb**	**12 06 39.3**	**+1.2**
	2.1nm,0.4s						
KTBS				Lg	Lg	12 07 11.3	
	17nm,0.2s						
MTBS	**Maitube**	**2.52**	**273**	*e*P	**Pb**	**12 06 40.7**	**+0.8**
	1.9nm,0.1s						
MTBS				*e*S	**Sg**	**12 07 13.6**	**-1.3**
	10nm,0.2s						
MTBS	**Maitube**	**2.52**	**273**	Pg	**Pb**	**12 06 40.7**	**+0.8**
	1.9nm,0.1s						
MTBS				Lg	Lg	12 07 13.6	
	10nm,0.2s						
KUU	**Kurty**	**2.71**	**289**	*e*P	**Pg**	**12 06 44.7**	**-0.9**
	1.9nm,0.2s						
KUU				*e*S	**Sg**	**12 07 20.6**	**-0.1**
	8.1nm,0.3s						
KUU	**Kurty**	**2.71**	**289**	Pg	**Pg**	**12 06 44.7**	**-0.9**
	1.9nm,0.2s						
KUU				Lg	Lg	12 07 20.6	
	8.1nm,0.3s						
ULHL	**Ulahol**	**2.80**	**255**	⇑*i*P	**Pb**	**12 06 42.8**	**-1.8**
	baz=56						
ULHL				⇑*i*S	**Sn**	**12 07 15.8**	**+1.5**
	baz=56						
BOOM	**Boomskoye usch**	**2.95**	**260**	⇓*i*P	**Pb**	**12 06 45.0**	**-2.2**
	baz=62						
BOOM				⇓*i*S	**Sn**	**12 07 19.5**	**+1.5**
	baz=62						
DGS	**Degeres**	**3.01**	**275**	*e*P	**Pb**	**12 06 49.7**	**+1.6**
	2.3nm,0.3s						
DGS				*e*S	**Sg**	**12 07 29.2**	**-1.2**
	11nm,0.4s						
DGS	**Degeres**	**3.01**	**275**	Pg	**Pb**	**12 06 49.7**	**+1.6**
	2.3nm,0.3s						
DGS				Lg	Lg	12 07 29.2	
	11nm,0.4s						
KRBS	**Karabastau**	**3.13**	**283**	*e*P	**Pb**	**12 06 51.8**	**+1.6**
	1.5nm,0.2s						
KRBS				*e*S	**Sg**	**12 07 32.9**	**-1.4**
	5.5nm,0.2s						
KRBS	**Karabastau**	**3.13**	**283**	Pg	**Pb**	**12 06 51.8**	**+1.6**
	1.5nm,0.2s						
KRBS				Lg	Lg	12 07 32.9	
	5.5nm,0.2s						
MAKZ	**Makanchi**	**4.05**	**21**	⇑Pn	**Pn**	**12 06 57.3**	**+0.6**
	0.3nm,0.2s						
MK31	**Makanchi Array**	**4.12**	**24**	⇑Pn	**Pn**	**12 06 58.0**	**+0.3**
	baz=204,slow=14,SNR=6.0						
MK31				⇑Sn	**Sn**	**12 07 46.1**	**-0.5**
	0.5nm,0.3s,baz=210,slow=27,SNR=5.3						
MK31				⇑Lg	Lg	12 08 02.5	
	3.0nm,0.8s,baz=205,slow=28,SNR=4.1						

MAN 08 12:25:05.2, 11°.19N×125°.72E, h26^{km}, mb4.7, ML3.6, MS3.4, 1C-3D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**1.10**	**263**	⇓*e*P	Pn	12 25 24.6	-0.2
SCPH	**Surigao**	**1.42**	**189**	⇓*e*P	Pn	12 25 28.8	-0.5
SCPH				*e*S	Sn	12 25 44.9	-2.3
GLSP	**General Luna,**	**1.46**	**164**	⇑*i*P	Pn	12 25 30.0	+0.2
RCP	**Roxas**	**2.94**	**277**	⇓*e*P	Pn	12 25 51.1	+0.9

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*TUL **08** 12:25:14.9±1.2, 35°.85N±0°.02×96°.64W±0°.02, h5^{km}±6^{km}, ML2.6, mb_Lg2.4/9(NEIC), Error ellipse: s-maj=2.4km s-min=1.9km az=137.0*

NEIC 08 12:25:15.2±1.2**, 35°.862N**±0°.010×**96°.63W**±0°.02**, h5**^{km}±2^{km}**, Error ellipse: s-maj=3.0km s-min=2.6km az=297.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK030	**Cody Creek RV**	**0.14**	**298**		Pg	12 25 18.0	0.0
OK030				Sg	Sg	12 25 20.3	+0.4
OK034	**N. Norfolk Rd.**	**0.16**	**336**	Pg	Pg	12 25 18.7	+0.2
OK034				Sg	Sg	12 25 21.2	+0.6
OK031	**S. Brethren Rd**	**0.19**	**299**	Pg	Pg	12 25 19.1	+0.1
OK031				Sg	Sg	12 25 21.9	+0.4
OK025	**Westminster Rd**	**0.64**	**244**	Pg	Pg	12 25 27.1	-0.4
OK025				Sg	Sg	12 25 36.0	+0.2
OK029	**Liberty Lake**	**0.67**	**265**	Pg	Pg	12 25 27.8	-0.3
OK029				Sg	Sg	12 25 36.8	0.0
TUL1	**Leonard**	**0.69**	**86**	Pg	Pg	12 25 28.4	0.0
TUL1				Sg	Sg	12 25 37.5	+0.2
OKCFA	**Oklahoma City**	**0.80**	**236**	Pg	Pg	12 25 30.1	-0.5
OKCFA				Sg	Sg	12 25 40.4	-0.7
BCOK	**Bluff Creek, N**	**0.82**	**256**	Pg	Pg	12 25 30.6	-0.3
BCOK				Sg	Sg	12 25 41.6	0.0
FNO	**Franklin**	**0.87**	**226**	Pg	Pg	12 25 31.4	-0.6
FNO				Sg	Sg	12 25 42.7	-0.5
BLOK	**Blackwell**	**1.01**	**333**	Pg	Pg	12 25 34.6	-0.1
BLOK				Sg	Sg	12 25 47.5	-0.3
T35A	**Sooner Cattle**	**1.06**	**5**	Pg	Pg	12 25 35.0	-0.5
T35A				Sg	Sg	12 25 49.3	0.0
CROK	**Carrier**	**1.27**	**301**	Pg	Pg	12 25 38.5	-1.0
CROK				Sg	Sg	12 25 55.5	-0.5
KAN13	**South Haven SW**	**1.33**	**330**		Pn	12 25 39.4	-1.2
GC02	**Grant County #**	**1.40**	**315**	Pn	Pn	12 25 40.8	-0.6
KAN17	**Caldwell West**	**1.49**	**323**		Pn	12 25 41.7	-1.0
KAN09	**Caldwell North**	**1.50**	**328**	Pn	Pn	12 25 42.5	-0.3
KAN14	**Manchester OK**	**1.53**	**316**	Pn	Pn	12 25 42.9	-0.4
KAN01	**Argonia South**	**1.58**	**325**		Pn	12 25 43.9	+0.1
KAN01				IAmb_Lg		12 26 06.9	
	comp=Z,9.9nm,0.7s						
OK032	**Salt Plains WL**	**1.58**	**307**	Pn	Pn	12 25 43.6	-0.4
X34A	**Smith Ranch, M**	**1.60**	**218**	Pn	Pn	12 25 43.6	-0.5
X37A	**Clayton**	**1.64**	**141**	Pn	Pn	12 25 45.1	+0.5
KAN06	**Argonia West S**	**1.70**	**325**	Pn	Pn	12 25 44.8	-0.8
KAN10	**Anthony SW Sta**	**1.72**	**317**	Pn	Pn	12 25 45.1	-0.8
U38A	**Gravette**	**1.91**	**72**		Pn	12 25 49.5	+1.0
LOOK	**Love County**	**1.92**	**194**	Pn	Pn	12 25 48.7	+0.1
U32A	**Winter Ranch,**	**1.99**	**286**		Pn	12 25 50.5	+1.0
HHAR	**Hobbs**	**2.22**	**78**	Pn	Pn	12 25 54.0	+1.2
W39A	**Magazine**	**2.42**	**105**		Pn	12 25 55.8	+0.3
MIAR	**Mount Ida**	**2.83**	**117**	Pn	Pn	12 26 01.1	+0.1
U40A	**Yellville**	**3.10**	**80**		Pn	12 26 04.3	-0.5
S39A	**Bolivar**	**3.22**	**55**	Pn	Pn	12 26 07.6	+1.0
X40A	**Basin Creek Fa**	**3.40**	**113**	IAmb_Lg		12 27 09.0	
	comp=Z,7.0nm,1.2s						
WHAR	**Wooly Hollow**	**3.59**	**98**	Pn	Pn	12 26 10.3	-1.2
FCAR	**Ozark Folk Cen**	**3.66**	**88**		Pn	12 26 13.1	+0.6
MGMO	**Mountain Grove**	**3.75**	**69**		Pn	12 26 14.9	+1.2
MGMO				IAmb_Lg		12 27 15.6	
	comp=Z,11nm,0.7s						
CBKS	**Cedar Bluff**	**3.85**	**321**		Pn	12 26 16.4	+1.3
R40A	**Maddies Statio**	**4.25**	**54**	Pn	Pn	12 26 22.1	+1.5
LCAR	**Lake Charles**	**4.45**	**86**	Pn	Pn	12 26 23.1	-0.2
P38A	**Dawn**	**4.49**	**32**		Pn	12 26 25.6	+1.7
T42A	**Van Buren**	**4.62**	**74**	Pn	Pn	12 26 25.8	+0.2
CCM	**Cathedral Cave**	**4.84**	**62**	Pn	Pn	12 26 30.4	+1.7
N33A	**J Bar K, Exete**	**4.91**	**353**	IAmb_Lg		12 27 49.2	
	comp=Z,8.6nm,0.7s						
PBMO	**Poplar Bluff**	**5.09**	**78**	Pn	Pn	12 26 31.9	-0.2
PBMO				IAmb_Lg		12 27 59.5	
	comp=Z,8.5nm,0.8s						
P40A	**Paris**	**5.16**	**43**	Pn	Pn	12 26 33.3	+0.2
FVM	**French Village**	**5.41**	**65**	Pn	Pn	12 26 36.0	-0.5

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*IDC **08** 12:26:58.9±0.8, 23°.64S×179°.96W, h521^{km}±8^{km}, mb3.5/15, mb1 3.7/18, mb1mx3.6/25, mbtmp4.4/18, Error ellipse: s-maj=14.5km s-min=13.4km az=111.0*

*NEIC **08** 12:26:59.1±1.5, 23°.7S±0°.1×179°.9W±0°.1, h523^{km}±9^{km}, mb4.5/19, Error ellipse: s-maj=18.0km s-min=17.2km az=92.0*

ISC 08 12:26:59.2±0.5**, 23°.68S**±0°.06×**179°.95W**±0°.08**, h532**^{km}**, n81, σ1^{s}.30**/86**, mb4.4**/26**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.85**	**162**	P	**P**	**12 28 36.9**	**+1.5**
	127nm,0.3s,baz=252,slow=14,SNR=5.0						
RAO	**Raoul Island**	**5.85**	**162**	P	**P**	**12 28 36.5**	**+1.1**
MSVF	**Nonsavu**	**6.20**	**342**	P	**P**	**12 28 39.0**	**0.0**
	1.8nm,0.3s,baz=238,slow=24,SNR=12						
MSVF				S	**S**	**12 29 59.7**	**-0.8**
	baz=129,slow=23,SNR=6.0						
MSVF	**Nonsavu**	**6.20**	**342**	P	**P**	**12 28 38.5**	**-0.5**
NIUE	**Niue**	**10.40**	**66**	P	**P**	**12 29 19.5**	**-1.6**
MARNC	**Mare, Loyalty**	**11.31**	**279**	P	**P**	**12 29 30.8**	**+0.2**
PINNC	**Pines Island,**	**11.64**	**273**	P	**P**	**12 29 34.8**	**+0.8**
AFI	**Afiamalu**	**12.42**	**40**	P	P	12 29 37.3	-5.0
	1.6nm,0.3s,baz=17,slow=22,SNR=1.7						
AFI				S	S	12 31 45.2	-11
	1.3nm,0.3s,baz=277,slow=17,SNR=2.1						
DZM	**Mont Dzumac**	**12.64**	**275**	P	**P**	**12 29 45.6**	**+1.1**
	0.6nm,0.3s,baz=64,slow=19,SNR=7.1						
DZM	**Mont Dzumac**	**12.64**	**275**	P	**P**	**12 29 44.8**	**+0.3**
KUZ	**Kuaotunu**	**13.55**	**195**	P	P	12 29 60.0	+6.4
MXZ	**Matakaoa Point**	**13.92**	**186**	P	**P**	**12 29 58.9**	**+1.4**
WMGZ	**Waiomatatini S**	**14.17**	**185**	P	**P**	**12 30 01.5**	**+1.4**
HAZ	**Te Kaha**	**14.17**	**187**	P	**P**	**12 30 00.3**	**+0.2**
PKGZ	**Pakihiroa**	**14.27**	**186**	P	**P**	**12 30 04.6**	**+3.4**
RUGZ	**Raukumara Rang**	**14.39**	**188**	P	**P**	**12 30 02.7**	**+0.2**
TWGZ	**Tauwhareparae**	**14.56**	**186**	P	**P**	**12 30 04.9**	**+0.6**
URZ	**Urewera**	**14.75**	**189**	P	**P**	**12 30 05.4**	**-0.7**
	2.7nm,0.3s,baz=120,slow=24,SNR=22						
URZ				S	**S**	**12 32 37.7**	**-2.7**
	0.9nm,0.3s,baz=125,slow=23,SNR=2.8						
URZ	**Urewera**	**14.75**	**189**	P	**P**	**12 30 05.4**	**-0.7**
URZ	**Urewera**	**14.75**	**189**	P	**P**	**12 30 05.7**	**-0.4**
MWZ	**Matawai**	**14.77**	**188**	P	**P**	**12 30 05.6**	**-0.8**
RAGZ	**Rawiri**	**14.94**	**188**	P	**P**	**12 30 07.7**	**-0.5**
MUGZ	**Murupara**	**15.02**	**190**	P	**P**	**12 30 08.1**	**-0.8**
NMHZ	**Naumai**	**15.62**	**189**	P	**P**	**12 30 15.5**	**+0.3**
BKZ	**Black Stump Fm**	**15.74**	**190**	P	**P**	**12 30 14.3**	**-2.1**
OTVZ	**Oturere**	**15.88**	**193**	P	**P**	**12 30 17.3**	**-0.7**
MCHZ	**McNeill Hill**	**15.98**	**189**	P	**P**	**12 30 18.4**	**-0.4**
FWVZ	**Far West T-bar**	**15.99**	**193**	P	**P**	**12 30 19.1**	**-0.1**
VRZ	**Vera Road**	**16.04**	**195**	P	**P**	**12 30 20.0**	**+0.5**
WNVZ	**Wahianoa**	**16.05**	**193**	P	**P**	**12 30 19.0**	**-0.7**
BHHZ	**Black Hill Sta**	**16.12**	**191**	P	**P**	**12 30 18.3**	**-2.0**
PXZ	**Pawanui**	**16.53**	**189**	P	**P**	**12 30 22.5**	**-1.6**
QRZ	**Quartz Range**	**18.23**	**198**	P	**P**	**12 30 39.6**	**-0.3**
EIDS	**Eidsvold**	**26.39**	**260**	P	**P**	**12 31 53.7**	**+0.5**
EIDS				IAmb	IAmb	12 31 54.6	
	comp=Z,16nm,1.4s						
CTA	**Charters Tower**	**31.52**	**270**	P	**P**	**12 32 38.5**	**+0.7**
	comp=Z,20nm,0.4s,baz=92,slow=11,SNR=29						
CTAO	**Charters Tower**	**31.52**	**270**	P	**P**	**12 32 38.6**	**+0.7**
PMG	**Port Moresby**	**34.46**	**289**	P	**P**	**12 33 02.8**	**0.0**
	comp=Z,26nm,0.7s,baz=97,slow=7.7,SNR=7.4						
PMG	**Port Moresby**	**34.46**	**289**	P	**P**	**12 33 02.1**	**-0.6**
STKA	**Stephens Creek**	**34.84**	**248**	P	**P**	**12 33 06.4**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=95,slow=11,SNR=3.7						
STKA	**Stephens Creek**	**34.84**	**248**	P	**P**	**12 33 06.5**	**+0.7**
COEN	**Coen**	**36.12**	**279**	P	**P**	**12 33 17.6**	**+1.0**
COEN				IAmb	IAmb	12 33 18.1	
	comp=Z,12nm,1.0s						
BBOO	**Buckleboo**	**39.57**	**247**	P	**P**	**12 33 44.6**	**+0.1**
BBOO				IAmb	IAmb	12 34 11.6	
	comp=Z,44nm,1.4s						
AS31	**Alice Springs**	**42.11**	**260**		**P**	**12 34 04.7**	**-0.2**
ASAR	**Alice Springs**	**42.11**	**260**	P	**P**	**12 34 04.8**	**-0.1**
	comp=Z,8.5nm,0.8s,baz=95,slow=7.3,SNR=73						
ASAR				pP	**pP**	**12 35 40.2**	**+1.1**
	comp=Z,2.0nm,1.0s,baz=84,slow=9.0,SNR=4.6						
ASAR				ScP	**ScP**	**12 38 49.9**	**+2.7**
	comp=Z,1.4nm,0.8s,baz=108,slow=4.1,SNR=8.5						
ASAR				S	**S**	**12 39 44.5**	**-1.7**
	comp=Z,1.0nm,0.9s,baz=105,slow=14,SNR=5.8						
WR0	**Warramunga Arr**	**42.27**	**266**	P	**P**	**12 34 05.7**	**-0.5**
WR0				IAmb	IAmb	12 34 05.9	
	comp=Z,7.1nm,0.6s						
WB2	**Warramunga Arr**	**42.45**	**266**		**P**	**12 34 07.0**	**-0.6**
WB2				IAmb	IAmb	12 34 07.8	
	comp=Z,14nm,0.8s						
WB0	**Warramunga Arr**	**42.45**	**266**	P	**P**	**12 34 06.8**	**-0.8**
WB0				IAmb	IAmb	12 34 07.7	
	comp=Z,16nm,0.7s						
WRAB	**Tennant Creek**	**42.46**	**266**	P	**P**	**12 34 07.0**	**-0.6**
WRAB				IAmb	IAmb	12 34 07.7	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	**42.46**	**266**	P	**P**	**12 34 07.0**	**-0.7**
	comp=Z,9.1nm,0.5s,baz=103,slow=8.1,SNR=118						
WRA				ScP	**ScP**	**12 38 51.3**	**+2.7**
	comp=Z,1.1nm,0.9s,baz=103,slow=4.8,SNR=4.8						
WRA				S	**S**	**12 39 46.6**	**-4.7**
	comp=Z,1.7nm,0.8s,baz=96,slow=13,SNR=7.3						
WRA	**Warramunga Arr**	**42.46**	**266**		**P**	**12 34 06.5**	**-1.1**
WAKE	**Wake Island**	**44.65**	**342**	P	**P**	**12 34 26.3**	**+1.7**
FORT	**Forrest**	**46.43**	**249**	P	**P**	**12 34 37.7**	**-0.4**
FORT				IAmb	IAmb	12 34 38.2	
	comp=Z,14nm,0.6s						
MTN	**Manton Dam**	**47.48**	**274**	P	**P**	**12 34 46.0**	**-0.2**
MTN				IAmb	IAmb	12 34 46.9	
	comp=Z,5.5nm,0.8s						
KNRA	**Kununurra**	**48.73**	**270**	P	**P**	**12 34 55.4**	**-0.1**
KNRA				IAmb	IAmb	12 34 55.8	
	comp=Z,14nm,0.8s						
TOLI2	**Tolitoli**	**62.56**	**284**	P	**P**	**12 36 31.4**	**-0.2**
TOLI2				IAmb	IAmb	12 36 32.7	
	comp=Z,11nm,0.7s						
QSPA	**South Pole Qui**	**66.41**	**180**	P	**P**	**12 36 55.7**	**+0.5**
	comp=Z,1.4nm,0.9s,baz=26,slow=1.1,SNR=7.1						
QSPA				pP	**pP**	**12 38 43.1**	**+0.2**
	comp=Z,1.3nm,1.0s,baz=335,slow=0.8,SNR=3.2						
QSPA	**South Pole Qui**	**66.41**	**180**	P	**P**	**12 36 56.9**	**+1.7**
MJAR	**Matsushiro Arr**	**71.74**	**326**	P	**P**	**12 37 27.4**	**-0.1**
	comp=Z,3.6nm,0.8s,baz=164,slow=6.3,SNR=7.9						
KSRS	**Korea Array**	**78.10**	**320**	P	**P**	**12 38 03.8**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=140,slow=5.4,SNR=9.1						
PETK	**Petropavlovsk-**	**78.89**	**346**	P	**P**	**12 38 06.8**	**-0.2**
	comp=Z,7.6nm,0.9s,baz=152,slow=4.3,SNR=5.2						
USRK	**Ussuriysk Ar.**	**80.60**	**327**	P	**P**	**12 38 16.9**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=112,slow=2.1,SNR=6.1						
NVAR	**Mina Array Bea**	**84.56**	**44**	P	**P**	**12 38 37.8**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=236,slow=6.4,SNR=2.6						
CMAR	**Chiang Mai Arr**	**89.49**	**290**	P	**P**	**12 39 01.8**	**+1.8**
	comp=Z,2.5nm,0.9s,baz=133,slow=3.0,SNR=16						
TXAR	**Lajitas Array**	**90.28**	**58**	P	**P**	**12 39 05.0**	**+1.4**
	comp=Z,1.1nm,0.9s,baz=208,slow=6.5,SNR=9.4						
TXAR				pP	**pP**	**12 40 57.9**	**-2.2**
	comp=Z,0.3nm,0.8s,baz=191,slow=3.7,SNR=1.9						
ILAR	**Eielson Array**	**91.80**	**14**	P	**P**	**12 39 08.5**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=236,slow=5.6,SNR=4.3						
SONM	**Songino Array**	**96.96**	**319**	P	**P**	**12 39 34.0**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=75,slow=1.6,SNR=1.8						
NB2	**NORSAR Subarra**	**141.87**	**351**	PKP	**PKPdf**	**12 45 25.2**	**-4.7**
	comp=Z,1.0nm,0.7s,baz=9.7,slow=3.0						
NOA	**NORSAR Array B**	**141.87**	**351**	PKhKP	PKPpre	12 45 25.4	
	comp=Z,0.4nm,0.5s,baz=10.0,slow=4.1,SNR=4.0						
PABE	**Paberze**	**143.63**	**337**		PKPab	12 45 31.3	-0.4
AKASG	**Malin Array Be**	**144.81**	**327**	PKP	**PKPdf**	**12 45 34.7**	**-0.5**
	comp=Z,2.2nm,0.4s,baz=44,slow=4.3,SNR=21						
AKASG	**Malin Array Be**	**144.81**	**327**	PKPdf	**PKPdf**	**12 45 34.4**	**-0.8**
AKBB	**Malin Array Si**	**144.81**	**327**		**PKPdf**	**12 45 34.2**	**-1.0**
BRTR	**Keskin Array B**	**147.47**	**307**	PKPbc	**PKPbc**	**12 45 43.6**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=297,slow=1.0,SNR=2.8						
BRTR				PKPab	**PKPab**	**12 45 47.7**	**+0.1**
	comp=Z,2.7nm,0.7s,baz=141,slow=2.4,SNR=6.7						
BRTR	**Keskin Array B**	**147.47**	**307**		**PKPab**	**12 45 47.9**	**+0.3**
CLL	**Collm**	**150.65**	**343**	*e*PKPab	**PKPab**	**12 46 00.0**	**-0.1**
CLL	**Collm**	**150.65**	**343**	*i* PKPbc	**PKPbc**	**12 45 50.8**	**0.0**
	comp=Z,7.0nm,0.9s						
BRG	**Berggiesshubel**	**150.79**	**342**	Amp		12 45 52.7	
	comp=Z,6.2nm,0.8s						
BRG	**Berggiesshubel**	**150.79**	**342**	Amp		12 46 02.3	
	comp=Z,3.3nm,0.8s						
BRG	**Berggiesshubel**	**150.79**	**342**	*i* P	**PKiKP**	**12 45 51.5**	**-0.1**
BRG	**Berggiesshubel**	**150.79**	**342**	P	**PKPab**	**12 46 01.1**	**+0.4**
VTS	**Vitosha**	**153.06**	**320**	PKPdf	**PKPdf**	**12 45 48.0**	**-0.9**
VTS					**PKPab**	**12 46 10.4**	**-0.4**

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*TUL **08** 12:27:58.4±0.9, 35°.85N±0°.02×96°.64W±0°.02, h5^{km}±6^{km}, ML2.9, mb_Lg2.3/19(NEIC), Error ellipse: s-maj=2.4km s-min=1.9km az=135.0*

NEIC 08 12:27:58.8±0.8**, 35°.86N**±0°.01×**96°.64W**±0°.02**, h5**^{km}±2^{km}**, Error ellipse: s-maj=3.0km s-min=2.5km az=309.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK030	**Cody Creek RV**	**0.13**	**301**		Pg	12 28 01.5	-0.1
OK030				Sg	Sg	12 28 03.8	+0.5
OK034	**N. Norfolk Rd.**	**0.16**	**339**	Pg	Pg	12 28 02.1	+0.1
OK034				Sg	Sg	12 28 04.8	+0.6
OK031	**S. Brethren Rd**	**0.18**	**301**		Pg	12 28 02.5	+0.1
OK031				Sg	Sg	12 28 05.5	+0.6
OK025	**Westminster Rd**	**0.63**	**244**		Pg	12 28 10.4	-0.5
OK025				Sg	Sg	12 28 19.4	+0.4
OK029	**Liberty Lake**	**0.66**	**265**	Pg	Pg	12 28 11.2	-0.3
OK029				Sg	Sg	12 28 20.1	0.0
OK029				IAmb_Lg		12 28 20.2	
	comp=Z,28nm,0.8s						
TUL1	**Leonard**	**0.69**	**86**	Pg	Pg	12 28 11.8	-0.3
TUL1				Sg	Sg	12 28 20.9	-0.2
BCOK	**Bluff Creek, N**	**0.81**	**256**	Pg	Pg	12 28 13.5	-0.8
BCOK				Sg	Sg	12 28 23.1	-1.7
FNO	**Franklin**	**0.86**	**226**	Pg	Pg	12 28 15.5	+0.2
FNO				Sg	Sg	12 28 26.0	-0.5
BLOK	**Blackwell**	**1.01**	**333**		Pg	12 28 18.1	-0.1
BLOK				Sg	Sg	12 28 31.2	-0.1
T35A	**Sooner Cattle**	**1.06**	**6**		Pg	12 28 18.2	-0.9
T35A				Sg	Sg	12 28 32.6	-0.3
CROK	**Carrier**	**1.26**	**301**		Pg	12 28 21.9	-1.1
CROK				Sg	Sb	12 28 39.6	0.0
KAN13	**South Haven SW**	**1.33**	**330**		Pn	12 28 23.5	-0.6
GC02	**Grant County #**	**1.40**	**316**		Pn	12 28 24.5	-0.5
KAN17	**Caldwell West**	**1.49**	**323**		Pn	12 28 25.9	-0.4
KAN09	**Caldwell North**	**1.50**	**329**		Pn	12 28 25.8	-0.6
KAN09				IAmb_Lg		12 28 45.5	
	comp=Z,11nm,1.0s						
OK032	**Salt Plains WL**	**1.58**	**307**		Pn	12 28 27.3	-0.2
X34A	**Smith Ranch, M**	**1.59**	**218**	Pn	Pn	12 28 27.7	+0.1
X37A	**Clayton**	**1.64**	**140**		Pn	12 28 28.4	+0.1
KAN10	**Anthony SW Sta**	**1.72**	**318**	Pn	Pn	12 28 29.5	0.0
KAN10				IAmb_Lg		12 28 53.3	
	comp=Z,16nm,1.1s						
LOOK	**Love County**	**1.91**	**193**	Pn	Pn	12 28 32.8	+0.8
LOOK				IAmb_Lg		12 29 01.7	
	comp=Z,15nm,0.9s						
U38A	**Gravette**	**1.92**	**72**		Pn	12 28 32.8	+0.7
U32A	**Winter Ranch,**	**1.98**	**286**		Pn	12 28 33.0	0.0
HHAR	**Hobbs**	**2.23**	**78**	Pn	Pn	12 28 36.9	+0.4
W39A	**Magazine**	**2.42**	**105**		Pn	12 28 39.9	+0.8
MIAR	**Mount Ida**	**2.83**	**117**	Pn	Pn	12 28 45.1	+0.4
R32A	**Long Quarter,**	**3.05**	**328**		Pn	12 28 47.7	0.0
U40A	**Yellville**	**3.11**	**80**		Pn	12 28 48.9	+0.4
S39A	**Bolivar**	**3.23**	**55**	Pn	Pn	12 28 50.7	+0.5
S39A				IAmb_Lg		12 29 46.5	
	comp=Z,8.4nm,0.7s						
X40A	**Basin Creek Fa**	**3.41**	**113**		Pn	12 28 52.6	0.0
WHAR	**Wooly Hollow**	**3.59**	**98**		Pn	12 28 55.0	-0.2
WLAR	**White Oak Lake**	**3.62**	**126**	Pn	Pn	12 28 55.5	0.0
FCAR	**Ozark Folk Cen**	**3.67**	**88**		Pn	12 28 56.0	-0.2
MGMO	**Mountain Grove**	**3.75**	**69**	Pn	Pn	12 28 58.0	+0.7
CBKS	**Cedar Bluff**	**3.84**	**321**	Pn	Pn	12 28 58.2	-0.4
CBKS				IAmb_Lg		12 30 07.1	
	comp=Z,6.4nm,0.8s						
AMTX	**Amarillo**	**4.23**	**258**	Pn	Pn	12 29 04.1	+0.1
R40A	**Maddies Statio**	**4.26**	**54**	Pn	Pn	12 29 04.1	-0.2
P38A	**Dawn**	**4.50**	**32**	IAmb_Lg		12 30 22.1	
	comp=Z,6.8nm,0.9s						
T42A	**Van Buren**	**4.62**	**74**	IAmb_Lg		12 30 23.5	
	comp=Z,7.1nm,0.8s						
PBMO	**Poplar Bluff**	**5.10**	**78**	Pn	Pn	12 29 15.7	-0.2
PBMO				IAmb_Lg		12 30 43.0	
	comp=Z,11nm,0.8s						
P40A	**Paris**	**5.17**	**43**	IAmb_Lg		12 30 42.8	
	comp=Z,7.3nm,0.8s						

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*LDG **08** 12:31:50.5±0.0, 45°.89N×7°.04E, h4^{km}, Md1.4/1, Ml1.3/2, Error ellipse: s-maj=0.9km s-min=0.6km az=92.0*

ZUR 08 12:31:50.5, 45°.90N×7°.04E, h4^{km}±1^{km}**, MLh0.6**/6**, 8C-2D, Error ellipse: s-maj=3.5km s-min=0.7km az=160.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
REMY	**Saint-Rhmy-en**	**0.10**	**124**	⇑Pg	Pg	12 31 52.9	+0.2
REMY				⇑Pg	Pg	12 31 52.9	+0.2
	0.2nm,SNR=61						
REMY				Sg	Sg	12 31 54.7	+0.5
MRGE	**Morge**	**0.13**	**172**	⇑Pg	Pg	12 31 53.2	+0.2
	0.3nm,SNR=108						
MRGE				⇑Pg	Pg	12 31 53.2	+0.2
MRGE				Sg	Sg	12 31 55.2	+0.4
SALAN	**Lac Salanfe**	**0.25**	**350**	⇑Pg	Pg	12 31 55.7	+0.3
SALAN				⇑Pg	Pg	12 31 55.7	+0.3
	SNR=11						
SALAN				Sg	Sg	12 31 59.2	+0.4
DIX	**Grande Dixence**	**0.32**	**54**	Sg	Sg	12 32 01.1	+0.1
DIX				Sg	Sg	12 32 01.1	+0.1
	SNR=5.8						
RSL	**Roselend**	**0.35**	**234**	⇓Pg	Pg	12 31 57.5	+0.1
RSL				⇓Pg	Pg	12 31 57.5	+0.1
	SNR=12						
RSL				Sg	Sg	12 32 02.1	0.0
GRYON	**Gryon**	**0.36**	**8**	⇑Pg	Pg	12 31 57.7	+0.3
GRYON				⇑Pg	Pg	12 31 57.7	+0.3
	SNR=11						
GRYON				Sg	Sg	12 32 02.4	+0.2
LPL	**La Plagne**	**0.43**	**209**	*e*Pg	Pg	12 31 59.1	+0.2
LPL				*e*Sg	Sg	12 32 04.8	+0.2
	1.4nm,0.3s						
LSD	**Lago del Serru**	**0.44**	**171**	Pg	Pg	12 31 59.1	+0.1
	SNR=11						
LSD				Pg	Pg	12 31 59.1	+0.1
LSD				Sg	Sg	12 32 04.6	-0.2
CIRO	**Champorcher**	**0.47**	**128**	Sg	Sg	12 32 05.8	-0.1
CIRO				Sg	Sg	12 32 05.8	-0.1
	SNR=9.4						
CABF	**La Chapelle**	**0.97**	**318**	*e*Sg	Sg	12 32 21.5	-0.2
	0.9nm,0.2s						

BEO 08 12:33:43.2±0.8**, 42°.83N×23°.87E, h0**^{km}**, ML1.8**/4**, Mining explosion., Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	**0.51**	**246**	*e*Pg	Pg	12 33 52.4	-0.6
VTS				*e*Sg	Sg	12 33 59.6	-0.1
ZAPS	**Zavoj**	**1.01**	**296**	*e*Pg	Pg	12 34 02.8	+0.3
BOSS	**Bosilegrad**	**1.08**	**252**	*e*Pg	Pg	12 34 02.7	-1.2
BOSS				*e*Sg	Sg	12 34 16.4	-1.4
PRVS	**Prvonek**	**1.36**	**257**	*e*Pg	Pg	12 34 07.7	-1.6
PRVS				*e*Sg	Sn	12 34 28.0	-0.3
BARS	**Barje**	**1.51**	**270**	*e*Pg	Pn	12 34 11.4	-0.1
BARS	**Barje**	**1.51**	**270**	*e*Pn	Pg	12 34 15.5	+3.3
BARS				*e*Sg	Sn	12 34 32.2	+0.3
BARS				*e*Sg	Sb	12 34 40.5	+8.6
ZAGS	**Zajecar**	**1.55**	**310**	*e*Pn	Pn	12 34 11.9	-0.1
STIP	**Stip**	**1.69**	**228**	*i* Pn	Pn	12 34 09.6	-4.4
STIP				*i* Sn	Sn	12 34 31.8	-4.5
STIP	**Stip**	**1.69**	**228**	*i* Pn	Pn	12 34 09.7	-4.3
STIP				*i* Sn	Sn	12 34 32.2	-4.0
BOVS	**Bovan**	**1.77**	**298**	*e*Pn	Pn	12 34 15.4	+0.3
VAY	**Valandovo**	**1.79**	**213**	*i* Pn	Pn	12 34 15.9	+0.5
SELS	**Selova**	**2.06**	**282**	*e*Pn	Pn	12 34 18.0	-1.0
GRUS	**Gruza**	**2.53**	**296**	*e*Pn	Pn	12 34 25.6	0.0

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*IDC **08** 12:37:52.9±2.8, 37°.89N×72°.69E, h0^{km}, mb3.4/2, mb1 3.4/4, mb1mx3.1/45, mbtmp3.4/4, ML2.8/2, Error ellipse: s-maj=96.9km s-min=28.4km az=146.0*

*SOME **08** 12:37:54.3, 38°.45N×72°.32E, h0^{km}*

*NNC **08** 12:38:03.1±3.9, 38°.79N×72°.36E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=31.2km s-min=21.1km az=166.0*

ISC 08 12:38:01.5±1.9**, 38°.7N**±0°.1×**72°.32E**±0°.06**, h10**^{km}**, n20, σ2^{s}.71**/25**, 7C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.87**	**334**	*e*P	**Pb**	**12 39 08.5**	**-1.4**
	1µm,0.5s						
IUG				*e*S	**Sg**	**12 40 04.7**	**-1.0**
	50nm,0.5s						
IUG	**Iuzhnay**	**3.87**	**334**	Pg	**Pb**	**12 39 08.5**	**-1.4**
	1µm,0.5s						
IUG				Lg	Lg	12 40 04.7	
	50nm,0.5s						
MRKS	**Merke**	**4.11**	**9**	*e*P	**Pb**	**12 39 13.1**	**-0.9**
	7.5nm,0.6s						
MRKS				*e*S	**Sg**	**12 40 12.4**	**-1.0**
	18nm,0.4s						
MRKS	**Merke**	**4.11**	**9**	Pg	**Pb**	**12 39 13.1**	**-0.9**
	7.5nm,0.6s						
MRKS				Lg	Lg	12 40 12.4	

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                                    18nm,0.4s
AAK   Ala-Archa          4.27  22 ⇑Pn    Pn     12 39 09.4 +2.6
      3.1nm,0.8s
AAK                               ⇑Pg    Pb     12 39 19.8 +3.0
      6.7nm,0.5s
AAK                               ⇑Lg    Lg     12 40 13.2
      12nm,0.6s
KK02  Karatay Array      4.62 343 ⇓Pn    Pn     12 39 15.1 +3.8
      3.6nm,0.4s,baz=150,slow=12
KK02                              ⇑Pg    Pg     12 39 26.7 -3.2
      7.6nm,0.6s
KK03  Karatay Array      4.62 343 ⇑Lg    Lg     12 40 24.5
      7.2nm,0.6s
TKM2  Tokmak 2           4.90  29 ⇓Pg    Pg     12 39 32.2 -3.2
      7.4nm,1.0s
TKM2                              ⇑Lg    Lg     12 40 35.5
      4.0nm,0.6s
SGDS  Sogindy            5.07  19  Pg    Pb     12 39 32.9 +2.7
      6.2nm,0.9s
SGDS                               Lg    Lg     12 40 46.7
      7.7nm,0.6s
DGS   Degeres            5.24  29 eP     Pb     12 39 36.0 +2.7
      7.1nm,0.3s
DGS                               eS     Sg     12 40 51.8 +2.1
      10nm,0.6s
DGS   Degeres            5.24  29  Pg    Pb     12 39 36.0 +2.7
      7.1nm,0.3s
DGS                                Lg    Lg     12 40 51.8
      10nm,0.6s
TNSS  Tian-Shan          5.58  37 eP     Pb     12 39 38.8 -0.4
      2.6nm,0.4s
TNSS                              eS     Sg     12 40 56.7 -3.9
      3.3nm,0.6s
TNSS  Tian-Shan          5.58  37  Pg    Pb     12 39 38.8 -0.4
      2.6nm,0.4s
TNSS                               Lg    Lg     12 40 56.7
      3.3nm,0.6s
KRBS  Karabastau         5.60  26 eP     Pb     12 39 41.2 +1.8
      2.9nm,0.5s
KRBS                              eS     Sg     12 41 01.1 -0.2
      4.6nm,0.5s
KRBS  Karabastau         5.60  26  Pg    Pb     12 39 41.2 +1.8
      2.9nm,0.5s
KRBS                               Lg    Lg     12 41 01.1
      4.6nm,0.5s
MKAR  Makanchi Array    10.91  39  Pn    Pn     12 40 38.8 +1.1
      0.0nm,0.3s,baz=223,slow=14,SNR=1.3
AB31  Akbulak array     13.80 324 ⇑Pn    Pn     12 41 21.7 +4.6
      0.4nm,0.4s,baz=144,slow=12,SNR=16
ZALV  Zalesovo Beam     17.49  25  P     Pn     12 42 04.2 -1.1
      0.2nm,0.3s,baz=222,slow=10,SNR=5.2
SONM  Songino Array     26.26  59  P     P      12 43 31.3 -5.7
      0.6nm,0.9s,baz=243,slow=9.5,SNR=3.0
TORD  Torodi Ar. Bea    66.82 268  P     P      12 48 48.6 -5.2
      0.2nm,0.4s,baz=44,slow=6.9,SNR=1.4
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*IDC **08** 12:55:51.5±0.6, 15°.27S×174°.84W, h248^{km}±4^{km}, mb4.4/28, mb1 4.5/31, mb1mx4.2/51, mbtmp5.0/31, Error ellipse: s-maj=12.7km s-min=8.1km az=151.0*

*NOU **08** 12:55:52.9, 15°.19S×174°.63W, h276^{km}, mb5.0/63, Tonga Islands*

*NEIC **08** 12:55:52.2±1.5, 15°.15S±0°.10×174°.93W±0°.10, h245^{km}±6^{km}, mb4.9/72, Error ellipse: s-maj=14.3km s-min=13.0km az=151.0*

*GCMT **08** 12:55:55.2±0.2, 15°.16S±0°.02×174°.60W±0°.01, h263^{km}±1^{km}, MW5.3/90, Moment Tensor Solution. s56,c73; s90,c124; Duration: 1s.0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.18±.03; M$_{\theta\theta}$-0.07±.03; M$_{\phi\phi}$0.25±.03; M$_{r\theta}$-0.24±.03; M$_{\theta\phi}$-0.07±.03; M$_{\phi r}$-0.93±.02; Best double couple: M$_0$0.99100×10^{17} NP1:ϕ_s140.00000°, δ10.00000°, λ-144.00000°. NP2:ϕ_s14.00000°, δ84.00000°, λ-82.00000°. Principal axes: T 1.0010, Plg39.0000°, Azm97.0000°; N -0.0200, Plg8.0000°, Azm193.0000°; P -0.9810, Plg50.0000°, Azm292.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **08** 12:55:56.2±0.0, 14°.96S×174°.11W, h275^{km}±9^{km}*

ISC 08 12:55:52.2±0.4**, 15°.27S**±0°.06×**174°.78W**±0°.05**, h253**^{km}±4^{km}**, h253**^{km}**:pP-P, n507,** σ1s.17/504**, mb4.8**/85**, 39C-73D, Fault plane solution: NP1:**ϕ_s179.44591°, δ31.90866°, λ-96.91911°. **NP2:**ϕ_s7.58140°, δ58.35080°, λ-85.71028°. **Principal axes:** T Plg13.2515°, Azm94.4665°; N Plg3.6508°, Azm185.3275°; P Plg76.2370°, Azm290.4268°; **Tonga Islands**

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Code  Station Name        Δ°   AZ°  Phase ID          Time      Res
                                    Op     ISC     h  m  s     ISC
AFI   Afiamalu           3.21  65  P     Pn     12 56 46.5 -0.8
      705nm,0.3s,baz=158,slow=0.9,SNR=1083
AFI                                S     S      12 57 26.2 -4.8
      baz=207,slow=22,SNR=0.8
TAVE  Taveuni            5.13 253  P     Pn     12 57 12.8 +3.1
DGTI  Dogotuki           5.38 258  P     Pn     12 57 15.3 +2.5
NIUE  Niue               5.99 130  P     Pn     12 57 20.6 +0.2
      baz=6.0,SNR=201
NIUE  Niue               5.99 130        Pn     12 57 20.5 +0.2
NIUE  Niue               5.99 130  P     Pn     12 57 21.0 +0.7
MSVF  Nonsavu            7.30 249  P     Pn     12 57 39.9 +3.1
      2.9nm,0.3s,baz=93,slow=10,SNR=58
MSVF  Nonsavu            7.30 249        Pn     12 57 39.2 +2.4
MSVF  Nonsavu            7.30 249  P     Pn     12 57 40.2 +3.4
KNTN  Kanton            12.78  14        Pn     12 58 44.2 -1.3
RAR   Rarotonga         15.43 115  P     P      12 59 18.1 +1.4
      1.1nm,0.3s,baz=270,slow=1.6,SNR=5.8
RAR   Rarotonga         15.43 115  P     P      12 59 18.6 +1.9
RAR                                IAmb  IAmb   12 59 20.8
      comp=Z,62nm,1.1s
RAR   Rarotonga         15.43 115  P     P      12 59 15.7 -1.0
RTV   Rentapao          16.30 259  P     Pn     12 59 27.9 +0.1
DVP   Devils Point      16.51 259  P     Pn     12 59 30.5 +0.2
SANVU Saraoutou         17.37 267  P     Pn     12 59 39.2 -1.2
SANVU Saraoutou         17.37 267  P     Pn     12 59 39.3 -1.2
MARNC Mare, Loyalty     17.43 247  P     P      12 59 37.5 -1.1
MARNC Mare, Loyalty     17.43 247  P     P      12 59 38.2 -0.4
LIFNC LIFOU             17.95 250  P     P      12 59 43.2 -0.9
PINNC Pines Island,     18.32 244  P     P      12 59 46.7 -1.5
YATNC Mamie plateau,    18.62 246  P     P      12 59 51.8 +0.4
OUENC Ouen Island, N    18.78 245  P     P      12 59 52.0 -1.1
OUENC                              IAmb  IAmb   12 59 57.4
      comp=Z,45nm,1.0s
OUENC Ouen Island, N    18.78 245  P     Pn     12 59 55.1 -1.8
DZM   Mont Dzumac       19.02 246 eP     P      12 59 54.4 -1.4
      comp=Z,150nm,1.4s
DZM   Mont Dzumac       19.02 246  P     P      12 59 54.8 -1.0
      comp=Z,2.6nm,0.3s,baz=95,slow=20,SNR=10
DZM   Mont Dzumac       19.02 246        P      12 59 54.6 -1.2
DZM                                IAmb  IAmb   13 00 00.1
      comp=Z,43nm,1.0s
ONTNC Ouen Toro         19.08 246        P      12 59 55.3 -1.1
ONTNC Ouen Toro         19.08 246  P     P      12 59 57.1 +0.7
      comp=Z,76nm,1.3s
NOUC  Port Laguerre     19.15 246  P     P      12 59 58.0 +0.9
TARA  Tarawa            20.51 323  P     P      13 00 11.0 -0.6
URZ   Urewera           23.99 196  P     P      13 00 42.1 -1.9
      comp=Z,44nm,0.8s,baz=302,slow=24,SNR=65
PPT   Papeete           24.28  99  P     P      13 00 48.1 +1.2
      comp=Z,67nm,1.1s,baz=288,slow=20,SNR=3.6
PPT2  Papeete2          24.28  99 eP     P      13 00 47.3 +0.3
      comp=Z,72nm,1.2s
HNR   Honiara           25.34 280  P     P      13 00 55.8 -0.7
      comp=Z,92nm,0.7s,baz=214,slow=3.8,SNR=6.4
HNR                                PcP   PcP    13 04 20.2 -1.9
      comp=Z,26nm,0.4s,baz=202,slow=7.8,SNR=4.2
PMOR  Pomariorio Ree    25.95  93 eP     P      13 01 02.2 +0.3
      comp=Z,233nm,1.2s
VAH   Vaihoa            26.19  94 eP     P      13 01 04.0 -0.1
      comp=Z,65nm,1.0s
EIDS  Eidsvold          33.46 247  P     P      13 02 06.0 -1.9
      baz=34,SNR=10.0
EIDS  Eidsvold          33.46 247  P     P      13 02 05.8 -2.1
EIDS                               IAmb  IAmb   13 02 07.7
      comp=Z,29nm,1.0s
EIDS  Eidsvold          33.46 247  P     P      13 02 06.6 -1.3
RK1H  Rockhampton Ha    33.68 251  P     P      13 02 09.3 -0.5
ARMA  Armidale          34.27 238  P     P      13 02 14.3 -0.7
TAOE  Nuku Hiva Isla    34.43  83 eP     P      13 02 15.9 -0.5
      comp=Z,179nm,1.0s
MGCD  Mangrove Creek    35.65 234  P     P      13 02 26.2 -0.2
      baz=36,SNR=12
RMQ   Roma              35.73 246  P     P      13 02 26.1 -1.2
      baz=36,SNR=20
RMQ   Roma              35.73 246  P     P      13 02 26.6 -0.7
CTA   Charters Tower    37.37 257  P     P      13 02 40.7 -0.4
      comp=Z,16nm,0.5s,baz=79,slow=8.5,SNR=14
CTA   Charters Tower    37.37 257  P     P      13 02 40.7 -0.4
CTAO  Charters Tower    37.37 257  P     P      13 02 40.3 -0.9
CTAO                               IAmb  IAmb   13 02 41.5
      comp=Z,48nm,0.9s
CTAO  Charters Tower    37.37 257  P     P      13 02 40.8 -0.4
PMG   Port Moresby      37.59 274  P     P      13 02 42.1 -0.9
      comp=Z,64nm,1.1s,baz=123,slow=5.5,SNR=12
PMG   Port Moresby      37.59 274  P     P      13 02 42.9 -0.2
PMG   Port Moresby      37.59 274  P     P      13 02 42.9 -0.2
PMG   Port Moresby      37.59 274  P     P      13 02 43.1  0.0
CNB   Canberra Magne    37.78 231  P     P      13 02 43.9 -0.6
      baz=38,SNR=16
CNB   Canberra Magne    37.78 231  P     P      13 02 44.2 -0.3
CAN   Canberra          38.06 232  P     P      13 02 45.4 -1.4
CAN                                IAmb  IAmb   13 02 47.0
      comp=Z,30nm,0.9s
CAN   Canberra          38.06 232  P     P      13 02 46.5 -0.3
H11S2 WAKE ISLAND Hy    38.18 331  T     T      13 44 57.5
      baz=143,slow=74,SNR=8.7
H11S3 WAKE ISLAND Hy    38.20 331  T     T      13 44 40.8
      baz=143,slow=74,SNR=7.4
H11S1 WAKE ISLAND Hy    38.20 331  T     T      13 44 08.5
      baz=143,SNR=5.1
WAKE  Wake Island       38.89 331  P     P      13 02 52.9 -0.8
H11N3 WAKE ISLAND Hy    39.16 332  T     T      13 46 06.1
      baz=149,slow=76,SNR=7.1
H11N1 WAKE ISLAND Hy    39.16 332  T     T      13 45 59.9
      baz=149,slow=76,SNR=6.5
H11N2 WAKE ISLAND Hy    39.17 332  T     T      13 46 07.5
      baz=149,slow=76,SNR=6.5
MTSU  Mount Surprise    39.22 260  P     P      13 02 56.2 -0.4
      baz=39,SNR=82
MTSU  Mount Surprise    39.22 260  P     P      13 02 56.6  0.0
CMSA  Cobar Meteorol    39.48 239  P     P      13 02 57.3 -1.2
      baz=40,SNR=28
CMSA  Cobar Meteorol    39.48 239  P     P      13 02 57.6 -0.9
QLP   Quilpie           39.74 247  P     P      13 02 59.3 -1.4
      baz=40,SNR=45
QLP   Quilpie           39.74 247  P     P      13 02 59.5 -1.2
COEN  Coen              40.66 266  P     P      13 03 08.8 +0.4
COEN                               IAmb  IAmb   13 03 10.0
      comp=Z,104nm,1.4s
COEN  Coen              40.66 266  P     P      13 03 08.9 +0.5
TOO   Toolangi          41.52 230  P     P      13 03 14.5 -0.6
      baz=42,SNR=17
TOO   Toolangi          41.52 230  P     P      13 03 14.9 -0.2
TOO                                IAmb  IAmb   13 03 15.7
      comp=Z,73nm,1.1s
TOO   Toolangi          41.52 230  P     P      13 03 15.1  0.0
CORO  Coronation Par    41.95 224  P     P      13 03 18.6 +0.2
BRAT  Ballarat          42.67 231  P     P      13 03 25.0 +0.7
STKA  Stephens Creek    42.95 239  P     P      13 03 26.5 -0.2
      comp=Z,42nm,0.9s,baz=62,slow=7.5,SNR=33
STKA  Stephens Creek    42.95 239  P     P      13 03 26.1 -0.5
      baz=43,SNR=22
STKA  Stephens Creek    42.95 239  P     P      13 03 25.3 -1.4
STKA  Stephens Creek    42.95 239  P     P      13 03 26.4 -0.2
INKA  Innaminka         42.98 246  P     P      13 03 27.0 +0.1
QIS   Mount Isa         43.61 256  P     P      13 03 30.9 -1.2
      baz=44,SNR=20
QIS   Mount Isa         43.61 256  P     P      13 03 31.7 -0.4
ARPS  Mount Arapiles    44.01 233  P     P      13 03 34.6 -0.3
      baz=44,SNR=5.9
HTT   Hallett           45.48 238  P     P      13 03 46.2 -0.5
      baz=46,SNR=46
HTT   Hallett           45.48 238  P     P      13 03 46.8 +0.1
LCRK  Leigh Creek       45.54 242  P     P      13 03 46.6 -0.6
JAY   Jayapura          45.65 282  P     P      13 03 48.1 -0.2
      comp=Z,42nm,0.9s,baz=114,slow=3.9,SNR=19
JAY   Jayapura          45.65 282  P     P      13 03 47.5 -0.8
      comp=Z,658nmcomp=Z,47nm,1.3s
NAPP  Napperby          46.06 239  P     P      13 03 51.3 +0.1
GENI  Genyem            46.14 281  P     P      13 03 52.2 +0.2
      comp=Z,113nm,1.2s
GENI  Genyem            46.14 281  P     P      13 03 52.5 +0.5
WHYH  Whyalla           46.51 239  P     P      13 03 54.4 -0.2
OOD   Oodnadatta        47.44 246  P     P      13 04 02.1 +0.2
SMPI  Sarmi             47.71 281  P     P      13 04 03.7 -0.4
      comp=Z,43nm,1.5s
BBOO  Buckleboo         47.73 239  P     P      13 04 03.4 -0.6
      baz=48,SNR=95
BBOO  Buckleboo         47.73 239  P     P      13 04 03.5 -0.6
BBOO                               IAmb  IAmb   13 04 03.8
      comp=Z,51nm,0.9s
BBOO  Buckleboo         47.73 239  P     P      13 04 03.5 -0.5
WR0   Warramunga Arr    48.38 257  P     P      13 04 08.0 -1.3
WB0   Warramunga Arr    48.53 257  P     P      13 04 08.9 -1.4
WB0                                IAmb  IAmb   13 04 10.8
      comp=Z,48nm,0.8s
WB2   Warramunga Arr    48.56 257  P     P      13 04 09.0 -1.6
WB2                                IAmb  IAmb   13 04 11.6
      comp=Z,70nm,1.0s
WRAB  Tennant Creek     48.56 257  P     P      13 04 09.5 -1.1
WRAB                               IAmb  IAmb   13 04 11.5
      comp=Z,64nm,1.1s
WRAB  Tennant Creek     48.56 257  P     P      13 04 09.3 -1.3
WRA   Warramunga Arr    48.57 257  P     P      13 04 09.1 -1.6
      comp=Z,36nm,0.9s,baz=99,slow=6.0,SNR=161
WRA                                S     S      13 10 50.1 -2.8
      comp=Z,0.1nm,0.4s,baz=101,slow=14,SNR=3.6
WRA   Warramunga Arr    48.57 257  P     P      13 04 08.9 -1.8
AS31  Alice Springs     48.88 252  P     P      13 04 12.3 -0.8
ASAR  Alice Springs     48.88 252  P     P      13 04 12.0 -1.0
      comp=Z,126nm,0.4s,baz=91,slow=7.5,SNR=1305
ASAR                               ScP   ScP    13 09 06.3 +2.3
      comp=Z,2.9nm,1.1s,baz=97,slow=2.7,SNR=6.9
ASAR                               S     S      13 10 53.5 -3.7
      comp=Z,4.0nm,1.1s,baz=84,slow=16,SNR=12
ASAR  Alice Springs     48.88 252  P     P      13 04 12.1 -0.9
MULG  Mulgathing        49.09 243  P     P      13 04 13.9 -0.5
KDU   Kakadu            51.15 266  P     P      13 04 29.1 -0.9
      baz=51,SNR=13
KDU   Kakadu            51.15 266  P     P      13 04 29.6 -0.4
MTN   Manton Dam        52.41 265  P     P      13 04 38.3 -1.1
MTN                                IAmb  IAmb   13 04 39.4
      comp=Z,78nm,1.1s
MTN   Manton Dam        52.41 265  P     P      13 04 38.6 -0.8
DRS   Darwin Rock St    52.71 266  P     P      13 04 40.7 -0.8
FAKI  Fak Fak           53.58 278  P     P      13 04 46.7 -1.2
FAKI                               IAmb  IAmb   13 04 47.8
      comp=Z,26nm,0.9s
FAKI  Fak Fak           53.58 278  P     P      13 04 47.2 -0.7
WRKA  Warakurna         53.98 250  P     P      13 04 49.8 -0.9
      baz=54,SNR=399
WRKA  Warakurna         53.98 250  P     P      13 04 50.2 -0.5
KNRA  Kununurra         54.27 262  P     P      13 04 51.4 -1.4
      baz=54,SNR=18
KNRA  Kununurra         54.27 262  P     P      13 04 52.0 -0.8
KNRA                               IAmb  IAmb   13 04 52.4
      comp=Z,32nm,0.9s
KNRA  Kununurra         54.27 262  P     P      13 04 52.4 -0.4
FORT  Forrest           54.28 243  P     P      13 04 52.2 -0.5
      baz=54,SNR=5.9
FORT  Forrest           54.28 243  P     P      13 04 51.5 -1.3
FORT  Forrest           54.28 243  P     P      13 04 51.9 -0.8
FITZ  Fitzroy Crossi    56.93 258  P     P      13 05 11.0 -0.7
      comp=Z,4.0nm,0.5s,baz=54,slow=9.9,SNR=15
FITZ  Fitzroy Crossi    56.93 258  P     P      13 05 11.1 -0.7
      baz=57,SNR=11
TNTI  Ternate           59.33 280  P     P      13 05 27.3 -1.1
SOEI  Soe               59.60 268  P     P      13 05 30.3 -0.1
SOEI  Soe               59.60 268  P     P      13 05 31.1 +0.8
SANI  Sanana            59.82 277  P     P      13 05 31.1 -0.5
MMRI  Maumere           61.80 268  P     P      13 05 44.7 -0.3
PSA00 Pilbara Seismi    61.96 253  P     P      13 05 45.7 -0.3
PSA00 Pilbara Seismi    61.96 253  P     P      13 05 44.5 -1.4
PSA00                              IAmb  IAmb   13 05 46.2
      comp=Z,44nm,1.0s
PSA00 Pilbara Seismi    61.96 253  P     P      13 05 45.2 -0.8
EDFI  Ende, Flores      62.30 268  P     P      13 05 46.7 -1.7
      comp=Z,709nmcomp=Z,92nm,0.8s
KMSI  Cibinong          62.50 279  P     P      13 05 49.5 -0.1
      comp=Z,45nm,0.5s
MEEK  Meekatharra       62.63 248  P     P      13 05 49.2 -1.1
      baz=63,SNR=11
KLBR  Kellerberrin      63.12 242  P     P      13 05 52.6 -0.9
      baz=63,SNR=14
VNDA  Vanda             63.37 186  P     P      13 05 56.7 +2.4
GTOI  Gorontalo         63.44 279  P     P      13 05 55.7 -0.1
      comp=Z,172nmcomp=Z,12nm,1.1s
BSSI  Bau Bau, Buton    64.05 271  P     P      13 05 58.3 -1.5
      comp=Z,398nmcomp=Z,28nm,1.6s
BLDU  Ballidu           64.06 243  P     P      13 05 58.9 -0.7
      baz=64,SNR=5.2
APSI  Ampana            64.30 276  P     P      13 06 01.9 +0.5
      comp=Z,1μmcomp=Z,73nm,1.6s
WBSI  Waikabubak, Su    64.32 267  P     P      13 06 00.3 -1.3
      comp=Z,74nm,1.7s
MRSI  Marisa            64.42 278  P     P      13 06 01.6 -0.5
      comp=Z,36nm,1.1s
MUN   Mundaring         64.42 242  P     P      13 06 01.5 -0.4
      baz=64,SNR=6.4
BKSI  Bulukumba         64.61 271  P     P      13 06 02.4 -1.0
      comp=Z,286nmcomp=Z,16nm,1.1s
MORW  Morawa            64.73 245  P     P      13 06 03.4 -0.6
      baz=65,SNR=4.0
MORW  Morawa            64.73 245  P     P      13 06 02.8 -1.2
MORW                               IAmb  IAmb   13 06 04.2
      comp=Z,43nm,1.3s
KAPI  Kappang           65.04 272  P     P      13 06 05.4 -0.7
KAPI                               IAmb  IAmb   13 06 06.3
      comp=Z,22nm,0.9s
TOLI2 Tolitoli          65.71 278  P     P      13 06 09.4 -1.1
TOLI2                              IAmb  IAmb   13 06 10.9
      comp=Z,38nm,1.3s
GIRL  Giralia           67.00 252  P     P      13 06 15.8 -2.7
      baz=67,SNR=3.9
MJAR  Matsushiro Arr    67.98 321  P     P      13 06 23.2 -1.1
      comp=Z,3.4nm,0.7s,baz=110,slow=9.4,SNR=12
MJAR  Matsushiro Arr    67.98 321  P     P      13 06 22.8 -1.5
MAJO  Matsushiro        67.99 321  P     P      13 06 23.4 -0.9
MAJO                               IAmb  IAmb   13 06 26.7
      comp=Z,32nm,1.4s
MAT   Matsushiro        67.99 321  P     P      13 06 21.8 -2.5
JAGI  Jajag, Banyuwa    69.63 267  P     P      13 06 32.9 -2.0
JHS   Saijyo            70.29 317  P     P      13 06 37.5 -0.9
ASAJ  Asahikawa         70.73 329  P     P      13 06 41.2 +0.4
      comp=Z,19nm,0.7s,baz=202,slow=6.8,SNR=13
JNU   Nakatsue          70.74 314  P     P      13 06 40.5 -0.8
      comp=Z,98nm,1.0s,baz=185,slow=0.4,SNR=6.8
SNCC  San Nicolas Is    71.45  47  P     P      13 06 46.2 +0.7
      baz=237
SCI2  San Clemente I    72.00  47  P     P      13 06 49.5 +0.8
      baz=238
PEA0B Petropavlovsk-    72.11 343  P     P      13 06 48.0 -0.8
PETK  Petropavlovsk-    72.11 343  P     P      13 06 47.6 -1.2
      comp=Z,28nm,0.7s,baz=109,slow=8.7,SNR=67
PETK  Petropavlovsk-    72.11 343  P     P      13 06 47.8 -1.1
PKM   Mcpherson Peak    72.16  45  P     P      13 06 50.0 +0.2
      baz=236
SMMC  Simmler           72.27  45  P     P      13 06 51.0 +0.7
      baz=236
SPIA  Saint Paul Isl    72.27   3  P     P      13 06 50.4 +0.6
      baz=185
YSS   Yuzh-Sakhalins    72.72 331  P     P      13 06 52.2 -0.3
ARVC  Arvin             72.96  45  P     P      13 06 55.2 +0.8
      baz=237
109C  Camp Elliot, M    72.98  48  P     P      13 06 55.1 +0.7
      baz=239
CBX   Cerro Bola        73.00  49  P     P      13 06 56.0 +1.2
VES   Vestal, Richgr    73.18  45  P     P      13 06 56.0 +0.4
      baz=236,SNR=5.1
MURC  Murrieta          73.28  47  P     P      13 06 56.8 +0.5
      baz=238,SNR=5.1
BFSC  Mount Baldy Ra    73.30  47  P     P      13 06 56.8 +0.3
      baz=238
O02D  Mt. Diablo Mer    73.31  39  P     P      13 06 57.4 +1.0
      baz=233
EDW2  Edwards Air Fo    73.41  46  P     P      13 06 57.8 +0.7
      baz=238,SNR=11
MONP2 Monument Peak     73.47  48  P     P      13 06 58.2 +0.6
      baz=239,SNR=10
ISA   Isabella, Lake    73.50  45  P     P      13 06 58.4 +0.9
      baz=237,SNR=6.7
CMB   Columbia Colle    73.56  42  P     P      13 06 58.3 +0.5
IKP   In-Ko-Pah, Jac    73.57  49  P     P      13 06 58.6 +0.5
      baz=239,SNR=6.1
PFO   Pinyon Flats O    73.81  48  P     P      13 06 60.0 +0.5
      baz=239,SNR=6.6
TPFO  Pinon Flats       73.82  48  P     P      13 07 00.0 +0.5
      baz=239,SNR=6.0
BBRC  Big Bear Solar    73.83  47  P     P      13 07 00.4 +0.7
      baz=238
N02D  Trinity Center    73.85  38  P     P      13 07 00.5 +1.0
      baz=232
LRMC  Laurel Mtn Rad    73.94  45  P     P      13 07 00.7 +0.5
      baz=238,SNR=9.0
SWSC  Sam W. Stewart    73.95  49  P     P      13 07 00.9 +0.8
      baz=239,SNR=7.9
O03E  Paynes Creek      73.99  39  P     P      13 07 01.4 +1.1
      baz=233
M02C  Callahan          74.02  38  P     P      13 07 01.5 +1.1
      baz=232
L02E  Cave Junction     74.05  37  P     P      13 07 01.4 +0.9
      baz=232
RRX   Edison Barstow    74.09  46  P     P      13 07 01.5 +0.6
      baz=238
CWC   Cottonwood Cre    74.19  44  P     P      13 07 02.2 +0.5
      baz=237
SBUM  Sibu              74.28 277  P     P      13 07 03.0 +0.5
YBH   Yreka Blue Hor    74.31  38  P     P      13 07 02.7 +0.5
YBH                                IAmb  IAmb   13 07 04.1
      comp=Z,14nm,0.8s
MLAC  Mammoth, Mammo74.34  43  P     P      13 07 03.3 +0.7
      baz=236
BELC  Belle Mtn. Jos    74.34  48  P     P      13 07 02.9 +0.4
      baz=239,SNR=12
MPMC  Manual Prospec    74.38  45  P     P      13 07 03.7 +0.9
      baz=238,SNR=11
TIN   Tinemaha, Big     74.42  44  P     P      13 07 03.5 +0.6
      baz=237
GSC   Goldstone, Bar    74.45  46  P     P      13 07 04.0 +1.0
GSC                                IAmb  IAmb   13 07 04.9
      comp=Z,20nm,1.1s
GSC   Goldstone, Bar    74.45  46  P     P      13 07 03.6 +0.5
      baz=238,SNR=9.7
MPK   Martis Peak       74.51  41  P     P      13 07 04.0 +0.5
MPK                                IAmb  IAmb   13 07 05.4
      comp=Z,30nm,1.3s
HEC   Hector,Ludlow     74.53  47  P     P      13 07 04.1 +0.6
      baz=239,SNR=7.3
BC3   Big Chuckawall    74.56  48  P     P      13 07 04.6 +0.9
      baz=240,SNR=8.0
PNTR  Pine Nut          74.66  41  P     P      13 07 05.2 +0.8
PNTR                               IAmb  IAmb   13 07 06.2
      comp=Z,18nm,0.9s
GLA   Glamis            74.71  49  P     P      13 07 05.3 +0.8
      baz=240,SNR=6.6
L04D  Klamath Falls     74.84  38  P     P      13 07 06.1 +0.8
      baz=233
M04C  Macdoel           74.86  38  P     P      13 07 06.0 +0.7
      baz=233
GMRC  Granite Mounta    74.99  47  P     P      13 07 06.9 +0.7
      baz=239,SNR=12
FURC  Furnace Creek,    75.03  45  P     P      13 07 06.5 +0.3
      baz=238
IRM   Iron Mountain     75.03  48  P     P      13 07 07.1 +0.7
      baz=240,SNR=21
KDAK  Kodiak Island     75.07  12  P     P      13 07 05.5 -0.4
      comp=Z,8.5nm,0.5s,baz=253,slow=6.1,SNR=8.9
KDAK  Kodiak Island     75.07  12  P     P      13 07 05.9  0.0
NVAR  Mina Array Bea    75.13  43  P     P      13 07 07.8 +0.7
      comp=Z,7.2nm,0.8s,baz=228,slow=8.9,SNR=52
NVAR                               pP    pP     13 08 04.9 +0.4
      comp=Z,1.2nm,0.8s,baz=223,slow=8.7,SNR=1.9
NVAR  Mina Array Bea    75.13  43  P     P      13 07 08.0 +0.9
SHOC  Shoshone, Teco    75.13  46  P     P      13 07 07.0 +0.1
      baz=238
KSRS  Korea Array       75.14 316  P     P      13 07 07.5 +0.7
      comp=Z,5.8nm,0.8s,baz=130,slow=6.4,SNR=24
TUQ   Turquoise Moun    75.14  46  P     P      13 07 07.7 +0.6
      baz=239,SNR=8.3
KSAR  Wonju Array Be    75.16 316  P     P      13 07 06.6 -0.3
NV11  Mina Array Sit    75.23  43  P     P      13 07 07.7 +0.2
113A  Mohawk Valley,    75.34  50  P     P      13 07 08.7 +0.6
113A                               IAmb  IAmb   13 07 10.0
      comp=Z,17nm,1.0s
K04D  Chiloquin, OR     75.42  38  P     P      13 07 09.6 +1.2
      baz=233
J04D  Umpqua Nationa    75.58  37  P     P      13 07 10.5 +1.0
      baz=232
214A  Organ Pipe Nat    75.66  51  P     P      13 07 11.0 +1.0
      baz=242
PDMCI Parker Dam,Lak    75.83  48  P     P      13 07 11.9 +1.1
      baz=240
KSM   Kuching           75.85 275  P     P      13 07 12.0 +0.6
K05A  Summer Lake       75.98  38  P     P      13 07 13.2 +1.4
K05A                               IAmb  IAmb   13 07 14.3
      comp=Z,26nm,1.2s
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J05D	Fort Rock, OR	76.12	37	P	P	13 07 13.1	+0.7
	baz=233						
SHPR	Sheep Range	76.22	46	P	P	13 07 13.8	+0.7
W13A	Hualapai Mount	76.40	47	P	P	13 07 15.0	+0.7
USRK	Ussuriysk Ar.	76.48	324	P	P	13 07 14.7	+0.5
	comp=Z,3.7nm,0.6s,baz=103,slow=4.1,SNR=9.5						
USRK	Ussuriysk Ar.	76.48	324	P	P	13 07 14.2	-0.1
O18K	Koktuh Hills	76.52	10	P	P	13 07 15.1	+0.9
	baz=200						
R11A	Troy Canyon, C	76.89	44	P	P	13 07 17.6	+0.7
	baz=238						
BMN	Battle Mountai	76.93	41	P	P	13 07 17.3	+0.2
G05D	Wamic, OR	77.25	36	P	P	13 07 19.4	+0.9
	baz=233						
TUC	Tucson	77.35	51	P	P	13 07 20.2	+0.8
TUC				IAmb	IAmb	13 07 21.8	
	comp=Z,25nm,0.9s						
TUC	Tucson	77.35	51	P	P	13 07 20.7	+1.2
	baz=243						
X16A	Lo Mia Camp, P	77.83	49	P	P	13 07 23.0	+0.7
X16A				IAmb	IAmb	13 07 24.7	
	comp=Z,36nm,1.0s						
MDJ	Mudanjiang	78.11	323	P	P	13 07 23.7	+0.4
MDJ				pmax	pmax		
	comp=Z,16nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,230nm,5.8s						
WUAZ	Wupatki	78.40	48	P	P	13 07 26.3	+1.0
	baz=242						
E07A	Sunnyside	78.86	35	P	P	13 07 27.7	+0.4
NJ2	Nanjing	79.03	308	*e*P	P	13 07 30.1	+1.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TTA	Tatalina	79.32	9	P	P	13 07 30.2	+0.7
	baz=199						
W18A	Petrified Fore	79.40	49	P	P	13 07 31.8	+1.0
	baz=243						
MFID	Camas Ranch	79.43	39	P	P	13 07 30.8	+0.2
DUG	Dugway, Tooele	79.68	43	P	P	13 07 32.4	+0.3
	baz=240						
KLR	Kul'dur	79.69	328	P	P	13 07 31.0	-0.7
	comp=Z,3.5nm,0.8s,baz=93,slow=7.0						
MESA	MESA	79.71	16	P	P	13 07 32.6	+0.7
	baz=212						
CUT	Chulitna	79.79	11	P	P	13 07 31.6	-0.3
	baz=204						
SCM	Sheep Creek Mo	79.86	13	P	P	13 07 32.5	0.0
	baz=207						
CRQE	Cirque	79.90	15	P	P	13 07 32.9	+0.1
	baz=211						
CN2	Changchun	80.14	321	*e*P	P	13 07 34.1	-0.1
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
N25K	Chitina, Valde	80.28	14	P	P	13 07 34.1	-0.5
N25K				IAmb	IAmb	13 07 35.8	
	comp=Z,14nm,0.7s						
N25K	Chitina, Valde	80.28	14	P	P	13 07 34.8	+0.1
	baz=210						
SNY	Shenyang	80.28	318	⇑P	P	13 07 35.4	+0.4
SNY				S	S	13 17 26.9	+7.9
SNY				pmax	pmax		
	comp=Z,18nm,1.4s						
SNY				pmax	pmax		
	comp=Z,230nm,5.3s						
SNY				LR	LR		
	comp=N,620nm,19.1s						
SNY				LR	LR		
	comp=E,450nm,21.1s						
SNY				LR	LR		
	comp=Z,590nm,18.6s						
HLID	Hailey	80.38	40	P	P	13 07 36.2	+0.4
	baz=238						
WAT1	Susitna Watana	80.51	12	P	P	13 07 35.3	-0.5
	baz=206						
CTG	Chitna Glacier	80.54	16	P	P	13 07 36.1	0.0
	baz=213						
TRF	Thorofare Moun	80.74	11	P	P	13 07 37.1	-0.1
	baz=204						
TNA	Tin City	80.75	3	P	P	13 07 37.4	+0.4
	baz=187						
CHUM	Lake Minchumin	80.79	10	P	P	13 07 37.2	0.0
	baz=202						
GCSA	Galena City Sc	80.94	8	P	P	13 07 38.5	+0.6
	baz=198						
DHY	Denali Highway	80.97	12	P	P	13 07 38.1	-0.3
	baz=207						
Y22D	IRIS PASSCAL I	81.03	51	P	P	13 07 40.6	+1.2
	baz=245						
SKAG	Skagway	81.05	19	P	P	13 07 40.3	+1.7
	baz=218						
MCK	McKinley	81.25	11	P	P	13 07 39.7	0.0
	baz=205						
NEW	Newport	81.36	35	P	P	13 07 40.3	-0.4
	baz=236						
YUK3	Moose Creek	81.45	16	P	P	13 07 40.9	-0.1
	baz=214						
HYT	Haines Junctio	81.48	17	P	P	13 07 41.2	+0.1
	baz=216						
YUK4	Talbot Arm	81.58	17	P	P	13 07 41.9	+0.2
	baz=215						
TXAR	Lajitas Array	81.65	57	P	P	13 07 44.0	+1.3
	comp=Z,9.6nm,0.9s,baz=238,slow=2.4,SNR=8.9						
L26K	Log Cabin Wild	81.80	14	P	P	13 07 43.0	+0.3
	baz=211						
BVCY	Beaver Creek	81.88	15	P	P	13 07 42.9	-0.1
	baz=213						
SEY	Seymchan	82.05	345	P	P	13 07 42.9	-0.9
	comp=Z,20nm,0.8s,baz=140,slow=5.7,SNR=36						
MLY	Manley	82.12	10	P	P	13 07 43.4	-0.8
	baz=204						
MYKOM	Kota Tinggi	82.14	274	P	P	13 07 46.0	+0.5
HDA	Harding Lake	82.25	12	P	P	13 07 44.3	-0.5
	baz=207						
MSO	Missoula	82.38	37	P	P	13 07 45.6	-0.5
	baz=238						
P33M	Teslin, Yukon	82.44	20	P	P	13 07 45.8	-0.2
	baz=221						
I23K	Minto, Yukon-K	82.46	11	P	P	13 07 45.7	-0.2
	baz=205						
SCRK	Sand Creek	82.48	13	P	P	13 07 46.0	-0.3
	baz=210						
TCOL	CIGO, UAF Yank	82.49	11	P	P	13 07 46.0	-0.1
	baz=206						
COLA	College	82.49	11	P	P	13 07 44.8	-1.2
COLA				IAmb	IAmb	13 07 47.2	
	comp=Z,16nm,0.8s						
COLA	College	82.49	11	P	P	13 07 46.1	+0.1
	baz=206						
N31M	Braeburn, Yuko	82.52	18	P	P	13 07 46.9	+0.5
	baz=218						
IMAR	Indian Mountai	82.54	9	P	P	13 07 47.0	+0.7
IL31		82.58	12	P	P	13 07 46.0	-0.5
IL31				IAmb	IAmb	13 07 47.9	
	comp=Z,22nm,1.2s						
ILAR	Eielson Array	82.58	12	P	P	13 07 45.7	-0.9
	comp=Z,5.9nm,0.5s,baz=219,slow=5.3,SNR=213						
ILAR				pP	pP	13 08 45.1	-0.1
	comp=Z,3.9nm,1.1s,baz=216,slow=6.6,SNR=4.2						
ILAR	Eielson Array	82.58	12	P	P	13 07 46.2	-0.4
O20A	White River Ci	82.73	45	P	P	13 07 48.8	+0.7
	baz=243						
POKR	Poker Plat Res	82.79	11	P	P	13 07 47.4	-0.2
	baz=207						
BW06	Boulder Array	83.06	42	P	P	13 07 49.5	-0.3
BW06				IAmb	IAmb	13 07 50.8	
	comp=Z,15nm,0.8s						
BW06	Boulder Array	83.06	42	P	P	13 07 49.9	0.0
	baz=242						
PD31	Pinedale Array	83.06	42	P	P	13 07 49.3	-0.5
PDAR	Pinedale Array	83.06	42	P	P	13 07 49.7	-0.2
	comp=Z,13nm,0.8s,baz=213,slow=3.1,SNR=114						
PDAR				PKKP	PKKPbc	13 26 10.5	-1.5
	comp=Z,0.4nm,0.8s,baz=50,slow=2.3,SNR=3.8						
BOZ	Bozeman (W)	83.13	39	P	P	13 07 50.4	+0.4
	baz=240						
DAWY	Dawson	83.63	15	P	P	13 07 51.8	-0.3
DAWY	Dawson	83.63	15	P	P	13 07 51.7	-0.3
	baz=214						
EGAK	Eagle	83.81	14	P	P	13 07 52.7	-0.1
FARO	Faro, Yukon	83.82	18	P	P	13 07 52.8	-0.2
	baz=220						
JRMM	Jerantut	84.03	276	P	P	13 07 56.0	+0.9
MAYO	Mayo, Yukon	84.16	16	P	P	13 07 55.0	+0.4
	baz=218						
BILL	Bilibino	84.21	353	P	P	13 07 53.5	-1.3
BILL				IAmb	IAmb	13 07 55.4	
	comp=Z,14nm,0.9s						
COLD	Coldfoot	84.23	9	P	P	13 07 55.5	+0.7
	baz=204						
J29M	Klondike Camp	84.25	15	P	P	13 07 56.1	+1.0
	baz=215						
RLMT	Red Lodge	84.36	40	P	P	13 07 56.9	+0.6
	baz=242						
BJI	Beijing	84.42	314	P	P	13 07 56.8	+0.4
BJI				pmax	pmax		
	comp=Z,26nm,1.4s						
N23A	Red Feather La	84.64	45	P	P	13 07 58.2	+0.3
	baz=245						
K22A	Casper	85.00	43	P	P	13 08 00.1	+0.6
	baz=244						
BMAR	Burnt Mountain	85.38	11	P	P	13 08 01.3	+0.7
IPM	Ipoh	85.58	276	P	P	13 08 03.0	+0.2
TOLK	Toolik Lake Re	85.62	9	P	P	13 08 01.2	-0.6
TOLK				IAmb	IAmb	13 08 03.9	
	comp=Z,28nm,1.5s						
TOLK	Toolik Lake Re	85.62	9	P	P	13 08 02.0	+0.2
	baz=204						
KULM	Kulim	86.16	277	P	P	13 08 07.0	+1.4
H03S2	Juan Fernandez	86.38	124	T	T	14 42 31.0	
	baz=247,SNR=3.2						
H03S1	Juan Fernandez	86.40	124	T	T	14 42 30.1	
	baz=247,SNR=2.9						
H03S3	Juan Fernandez	86.40	124	T	T	14 42 31.2	
	baz=247,SNR=2.3						
GYA	Guiyang	86.81	298	⇑P	P	13 08 09.6	+0.9
GYA				pmax	pmax		
	comp=Z,28nm,1.1s						
LAO	LASA Array	86.96	40	P	P	13 08 09.8	+0.9
	baz=244						
RSSD	Black Hills	87.27	43	P	P	13 08 10.6	0.0
RSSD				IAmb	IAmb	13 08 17.7	
	comp=Z,28nm,0.9s						
RSSD	Black Hills	87.27	43	P	P	13 08 10.5	-0.1
	baz=246						
XAN	Xi'an	87.48	306	P	P	13 08 11.6	0.0
XAN				pP	PcP	13 08 16.8	+3.5
XAN				pmax	pmax		
	comp=Z,24nm,1.2s						
HHC	Hu-ho-hao-te	87.96	313	*e*P	P	13 08 14.2	+0.4
HHC	Hu-ho-hao-te	87.96	313	S	S	13 18 41.1	+5.7
HHC	Hu-ho-hao-te	87.96	313	sS	sS	13 20 17.9	-3.5
HHC	Hu-ho-hao-te	87.96	313	SS	SS	13 24 39.4	+9.4
HHC				pmax	pmax		
	comp=Z,28nm,1.2s						
HHC				pmax	pmax		
	comp=Z,150nm,5.9s						
INK	Inuvik	88.47	14	P	P	13 08 13.5	-1.8
	comp=Z,1.3nm,0.6s,baz=254,slow=7.0,SNR=8.3						
INK	Inuvik	88.47	14	P	P	13 08 14.0	-1.4
YAK	Yakutsk	88.47	337	P	P	13 08 13.8	-1.7
	comp=Z,6.3nm,0.5s,baz=283,slow=1.4,SNR=8.5						
YAK	Yakutsk	88.47	337	P	P	13 08 13.1	-2.4
YAK				IAmb	IAmb	13 08 14.4	
	comp=Z,28nm,0.9s						
DGMT	Dagmar	88.96	39	P	P	13 08 19.3	+1.1
	baz=246						
BTO	Baotou	88.97	313	*e*P	P	13 08 20.1	+1.6
BTO	Baotou	88.97	313	S	S	13 18 41.8	-2.9
BTO				LR	LR		
	comp=N,980nm,13.9s						
BTO				LR	LR		
	comp=E,740nm,15.5s						
KMI	Kunming	89.77	296	⇓P	P	13 08 24.1	+1.3
KMI				pmax	pmax		
	comp=Z,24nm,1.8s						
YKA	Yellowknife Ar	90.51	24	P	P	13 08 25.1	+0.1
	comp=Z,0.6nm,0.6s,baz=234,slow=4.6,SNR=13						
YKA				pP	pP	13 09 24.6	-0.4
	comp=Z,2.0nm,1.1s,baz=239,slow=4.3,SNR=3.5						
YKA	Yellowknife Ar	90.51	24	P	P	13 08 25.7	+0.7
CMAR	Chiang Mai Arr	91.31	289	P	P	13 08 30.6	+0.9
	comp=Z,11nm,0.9s,baz=97,slow=2.7,SNR=59						
CMAR				PP	PP	13 12 14.7	+3.5
	comp=Z,0.5nm,0.3s,baz=109,slow=4.7,SNR=4.5						
CMAR				PKKP	PKKPbc	13 25 51.7	+1.3
	comp=Z,0.5nm,0.4s,baz=307,slow=1.5,SNR=4.7						
CMAR	Chiang Mai Arr	91.31	289	P	P	13 08 29.1	-0.6
CHTO	Chiang Mai	91.40	289	P	P	13 08 30.4	+0.2
LZH	Lanzhou	92.08	307	⇑P	P	13 08 33.9	+0.8
LZH				sP	sP	13 10 04.8	+4.7
LZH				pmax	pmax		
	comp=Z,30nm,1.2s						
LZH				pmax	pmax		
	comp=Z,190nm,6.5s						
SYO	Syowa Base	92.46	192	⇓*e*P	P	13 08 35.0	+1.0
A36M	Sachs Harbour	93.09	14	P	P	13 08 36.7	0.0
	baz=228						
VNA3	Neumayer Olymp	93.10	175	P	P	13 08 38.5	+1.5
VNA2	Neumayer--Watz	93.58	176	P	P	13 08 40.3	+1.0
	baz=193,slow=4.1						
SONM	Songino Array	93.86	319	P	P	13 08 40.1	-1.0
	comp=Z,0.9nm,0.7s,baz=130,slow=3.4,SNR=5.7						
SONM				PP	PP	13 12 35.7	+5.1
	comp=Z,0.4nm,0.8s,baz=115,slow=7.0,SNR=3.5						
TIXI	Tiksi	94.52	345	P	P	13 08 42.1	-1.2
	comp=Z,5.0nm,0.8s,baz=108,slow=5.9,SNR=8.8						
GTA	Gaotai	96.06	309	⇑P	P	13 08 51.2	-0.1
GTA				pP	pP	13 09 51.2	-1.0
GTA				sP	sP	13 10 21.5	+3.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,170nm,5.1s						
GTA				LR	LR		
	comp=N,200nm,15.3s						
GTA				LR	LR		
	comp=E,150nm,16.7s						
GTA				LR	LR		
	comp=Z,150nm,16.7s						
ZALV	Zalesovo Beam	108.31	322	PKiKP	PKiKP	13 13 48.7	-1.4
	comp=Z,0.4nm,0.4s,baz=2.7,slow=1.2,SNR=4.1						
MKAR	Makanchi Array	109.79	315	PKiKP	PKiKP	13 13 52.0	-1.2
	comp=Z,1.9nm,0.6s,baz=221,slow=0.6,SNR=17						
MKAR	Makanchi Array	109.79	315		PKiKP	13 13 52.5	-0.7
KURBB	Kurchatov Arra	112.23	319	PKiKP	PKiKP	13 13 56.5	-1.1
	comp=Z,1.6nm,0.6s,baz=84,slow=1.8,SNR=6.7						
GRGR	Grenville	115.18	84	*e*	PKiKP	13 14 08.4	+4.1
MPOM	Morne Pois Mar	116.36	81	*e*	PKiKP	13 14 09.2	+2.6
SPITS	Spitsbergen Ar	116.83	357	PKP	PKPdf	13 14 05.3	-0.4
	comp=Z,13nm,1.0s,baz=96,slow=14,SNR=2.0						
BVAR	Borovoye Array	116.96	322	PKP	PKPdf	13 14 05.9	-0.8
	comp=Z,3.8nm,0.6s,baz=213,slow=7.1,SNR=21						
ARU	Arti	122.53	328	PKP	PKPdf	13 14 16.8	-0.4
	comp=Z,2.6nm,0.6s,baz=234,slow=1.5,SNR=11						
ARCES	ARCESS Array B	124.29	352	PKP	PKPdf	13 14 19.6	-0.7
	comp=Z,4.8nm,0.6s,baz=11,slow=1.4,SNR=19						
ARCES	ARCESS Array B	124.29	352		PKPdf	13 14 20.1	-0.2
KLMR	Klimovskoe	128.21	339	*e*PKPdf	PKPdf	13 14 25.2	-2.8
KLMR				AMP		13 14 28.6	
	comp=Z,14nm,1.0s						
BELG	Belogornoye	130.06	327	PKP	PKPdf	13 14 31.5	-0.2
	comp=Z,10nm,0.6s,baz=348,slow=4.7,SNR=4.4						
FINES	FINESS Array B	131.52	347	PKP	PKPdf	13 14 34.1	-0.2
	comp=Z,2.3nm,0.6s,baz=48,slow=2.8,SNR=9.6						
FINES	FINESS Array B	131.52	347		PKPdf	13 14 34.3	+0.1
AKASG	Malin Array Be	139.70	336	PKP	PKPdf	13 14 47.7	-2.1
	comp=Z,1.1nm,0.6s,baz=27,slow=2.2,SNR=5.2						
AKASG	Malin Array Be	139.70	336		PKPdf	13 14 48.6	-1.1
FLTG	Flechtingen	142.72	354	*e*PKPbc	PKPdf	13 14 50.8	-4.4
	baz=9.0,slow=3.3						
CLZ	Clausthal	143.28	355	*e*PKPbc	PKPab	13 14 52.5	-0.3
	baz=9.0,slow=3.3						
KSP	Ksiaz	143.41	348	*e*PKPdf	PKPab	13 14 53.8	+0.6
KSP	Ksiaz	143.41	348	*e*PKPdf	PKPab	13 14 54.1	+0.9
CLL	Collm	143.51	352	*e*PKPdf	PKPab	13 14 54.0	+0.4
	comp=Z,6.0nm,0.7s						
GTTG	Gottingen	143.62	355	*e*PKPbc	PKPab	13 14 53.5	-0.5
	baz=9.0,slow=3.3						
KOLS	Kolonicke sedl	143.63	341	*e*PKP	PKPdf	13 14 56.7	-0.2
KOLS				*e*PP	PP	13 18 15.7	+4.5
OSTC	Ostas	143.70	348	*e*PKP	PKPab	13 14 54.8	+0.4
NEUB	Neuenburg	143.76	353	*e*PKPbc	PKPab	13 14 53.8	-0.8
	baz=9.0,slow=3.3						
NIE	Niedzica	143.78	343	*e*PKPdf	PKPab	13 14 55.4	+0.7
NIE	Niedzica	143.78	343	*e*PKPdf	PKPab	13 14 55.5	+0.7
UPC	Upice	143.78	348	*e*PKP	PKPab	13 14 55.2	+0.5
DPC	Dobruska-Polom	143.87	348	*e*PKP	PKPab	13 14 55.5	+0.4
KRLC	Kraliky	144.04	347	*e*PKP	PKPab	13 14 55.9	+0.1
MORC	Moravsky Berou	144.15	346	⇓P	PKPab	13 14 56.3	+0.1
MORC	Moravsky Berou	144.15	346	*e*PKP	PKPab	13 14 56.1	-0.1
BMR	Baia Mare	144.32	339	⇓P	PKPab	13 14 56.7	-0.1
UBBA	Unterbreizbach	144.33	355	*e*PKPbc	PKPab	13 14 55.7	-1.0
	baz=9.0,slow=3.3						
MOX	Moxa	144.34	353	*e*PKPbc	PKPab	13 14 56.0	-0.8
	baz=9.0,slow=3.3						
KMBO	Kilima Mbogo	144.38	246	PKP	PKPbc	13 14 59.4	+0.7
	comp=Z,14nm,0.9s,baz=75,slow=4.9,SNR=26						
PLN	Plauen	144.43	352	*e*PKPbc	PKPab	13 14 56.3	-0.9
	baz=9.0,slow=3.3						
WERD	Werda	144.45	352	*e*PKPbc	PKPab	13 14 56.5	-0.8
	baz=9.0,slow=3.3						
TANN	Tannenbergstha	144.46	352	*e*PKPbc	PKPab	13 14 56.5	-0.9
	baz=9.0,slow=3.3						
ARCR	ARCALIA	144.51	337	⇓P	PKPab	13 14 57.5	-0.1
GUNZ	Gunzen	144.53	352	*e*PKPbc	PKPab	13 14 56.8	-0.8
	baz=9.0,slow=3.3						
PRU	Pruhonice	144.55	350	*e*PKP	PKPab	13 14 57.6	0.0
PRU				AMS	AMS	14 03 20.0	
KECS	Kecovo	144.57	342	*e*PKP	PKPab	13 14 57.7	-0.1
WERN	Wernitzgruen	144.59	352	*e*PKPbc	PKPab	13 14 57.1	-0.8
	baz=9.0,slow=3.3						
NKC	Novy Kostel	144.64	352	*e*PKP	PKPab	13 14 57.8	-0.2
NKC				AMS	AMS	13 57 10.0	
	comp=Z,2µm,22.6s						
MEM	Membach	144.75	359	*d*PKP	PKPab	13 14 58.4	0.0
OZUR		144.76	335	⇑P	PKPab	13 14 58.9	+0.3
BTNL	Ternell	144.77	359	*d*PKP	PKPab	13 14 58.2	-0.3
VRAC	Vranov	144.80	347	⇑P	PKPab	13 14 58.0	-0.6
VRAC	Vranov	144.80	347	PKP	PKPab	13 14 58.5	-0.2
	comp=Z,29nm,1.0s,baz=6.5,slow=2.3,SNR=21						
VRAC	Vranov	144.80	347	*e*PKP	PKPab	13 14 58.4	-0.2
SNF	Seneffe	144.84	1	*d*PKP	PKPbc	13 14 58.2	-0.4
MANZ	Manzenberg	144.93	352	*e*PKPbc	PKPbc	13 14 58.2	-0.8
	baz=9.0,slow=3.3						
BCLA	Clavier	144.94	360	*d*PKP	PKPbc	13 14 58.3	-0.6
BGES	Gesves	144.98	0	*d*PKP	PKPbc	13 14 58.7	-0.3
JAVC	Velka Javorina	144.98	346	*e*PKP	PKPdf	13 14 59.9	+0.6
BHOU	Houvegnez	145.00	359	*d*PKP	PKPbc	13 14 59.3	+0.1
DOPR	Dopca	145.03	335	⇑P	PKPdf	13 15 00.1	+0.7
TNS	Taunus Mts	145.04	356	*e*PKPbc	PKPbc	13 14 58.6	-0.7
	baz=9.0,slow=3.3						
TREC	Trest	145.04	348	*e*PKP	PKPbc	13 14 59.1	-0.2
TREC				AMS	AMS	14 02 00.0	
	comp=Z,1µm,20.3s						
BMRD	Maredsous	145.06	1	*d*PKP	PKPbc	13 14 58.8	-0.5
KOLL	Kolacno	145.06	345	*e*PKP	PKPbc	13 14 59.6	+0.2
KRUC	Moravsky	145.08	347	*e*PKP	PKPbc	13 14 59.0	-0.4
NEHR	Nehoiu	145.09	334	⇑P	PKPbc	13 14 59.3	-0.3
ROTZ	Rotzenmuhle	145.13	352	*e*PKPbc	PKPbc	13 14 59.0	-0.6
	baz=9.0,slow=3.3						
MLR	Muntele Rosu	145.18	334	⇑P	PKPbc	13 14 59.6	-0.4
MLR	Muntele Rosu	145.18	334	PKPbc	PKPbc	13 14 59.5	-0.4
	comp=Z,26nm,0.6s,baz=187,slow=3.9,SNR=43						
RCHB	Rochefort	145.21	360	*d*PKP	PKPbc	13 14 59.0	-0.7
BRTR	Keskin Array B	145.21	320	PKPbc	PKPbc	13 14 59.9	-0.5
	comp=Z,13nm,0.8s,baz=112,slow=1.3,SNR=26						
BRTR				pPKPbc	pPKPdf	13 16 05.5	+1.4
	comp=Z,9.1nm,1.1s,baz=130,slow=1.9,SNR=2.7						
ISR	Istrita	145.22	333	⇓P	PKPbc	13 15 00.0	0.0
PSZ	Piszkesteto	145.25	343	⇓P	PKPdf	13 14 60.0	+0.1
PSZ	Piszkesteto	145.25	343	*e*P	PKPdf	13 15 00.3	+0.5
DOU	Dourbes	145.26	1	*d*PKP	PKPdf	13 14 59.6	0.0
GRF	Grafenberg Arr	145.32	353	*e*PKPbc	PKPdf	13 14 59.8	0.0
	baz=9.0,slow=3.3						
GRF				*e*pPKPbc	pPKPdf	13 16 06.0	+2.2
	baz=13,slow=4.4						
DRGR		145.35	339	⇑P	PKPdf	13 15 00.3	+0.3
SMOL	Smolenice	145.36	346	*e*PKP	PKPbc	13 15 00.9	+0.6
SECR		145.49	334	⇑P	PKPdf	13 14 59.7	-0.5
MODS	Modra-Piesok	145.53	346	*e*PKP	PKPdf	13 14 59.8	-0.4
KHC	Kasperske Hory	145.54	350	*e*PKP	PKPdf	13 15 00.3	+0.1
KHC				*e*x	x	13 16 05.5	
KHC				AMS	AMS	14 01 40.0	
	comp=Z,900nm,21.0s						
VOIR		145.60	335	⇑P	PKPdf	13 14 59.9	-0.6
WET	Wettzell	145.64	351	*e*PKPbc	PKPdf	13 15 00.9	+0.5
	baz=9.0,slow=3.3						
KALB	Balgarevo	145.66	329	⇓P	PKPab	13 15 02.6	+0.5
WLF	Walferdange	145.69	359	*d*PKP	PKPdf	13 15 01.1	+0.7
WLF	Walferdange	145.69	359	*e*PKPbc	PKPdf	13 15 01.0	+0.6
	baz=9.0,slow=3.3						
CKRC	Cesky Krumlov	145.72	349	*e*PKP	PKPab	13 15 02.3	+0.1
ZST	Bratislava	145.73	346	*e*PKP	PKPab	13 15 02.5	+0.3
GEC2	GERESS Array S	145.80	350	*e*PKPbc	PKPdf	13 15 01.3	+0.5
	baz=9.0,slow=3.3						
GERES	GERESS Array B	145.80	350	PKPbc	PKPdf	13 15 01.2	+0.5
	comp=Z,7.3nm,0.9s,baz=45,slow=2.1,SNR=25						
GERES				pPKPbc	pPKPdf	13 16 06.5	+1.8
	comp=Z,1.0nm,0.7s,baz=4.8,slow=3.2,SNR=2.2						
ARR	Arges	145.82	335	⇓P	PKPbc	13 15 02.4	+0.5
SIRR	Siria	146.17	339	⇓P	PKPdf	13 15 01.8	+0.5
CONA	Conrad Observa	146.26	347	*i* P	PKPbc	13 15 03.0	-0.2
	comp=Z,19nm,0.7s,SNR=9.9						
CONA				*e*P	pPKPab	13 16 08.7	+2.2
	comp=Z,9.1nm,1.1s						
SOP	Sopron	146.34	346	*e*P	PKPab	13 15 04.7	+0.2
EGYH	Egyhazaskeszo	146.40	345	*e*P	PKPbc	13 15 04.1	+0.7
MPLH	Magyarpolny	146.58	345	*e*P	PKPbc	13 15 04.1	+0.2
ASF	Jabal al Asfar	146.64	306	PKPbc	PKPbc	13 15 04.7	0.0
	comp=Z,6.6nm,0.6s,baz=104,slow=2.5,SNR=12						
MOA	Molln	146.66	349	*e*P	PKPbc	13 15 04.1	-0.1
	comp=Z,38nm,1.7s						
MOA				*e*P	pPKPab	13 16 09.7	+1.9
	comp=Z,14nm,1.5s						
BZS	Buzias	146.75	339	⇓P	PKPbc	13 15 04.2	-0.2
FUR	Furstenfeldbru	146.82	353	*e*PKPbc	PKPbc	13 15 04.3	-0.3
	baz=9.0,slow=3.3						
BFO	Black Forest	146.93	356	*e*PKPbc	PKPdf	13 15 04.4	+1.8
	baz=9.0,slow=3.3						
BFO				*e*pPKPbc	pPKPbc	13 16 13.5	+5.4
	baz=13,slow=4.4						
ARSA	Arzberg	146.98	347	*i* P	PKPdf	13 15 04.3	+1.6
	comp=Z,22nm,1.5s,SNR=7.2						
ARSA				*e*P	pPKPab	13 16 10.2	+1.1
	comp=Z,6.5nm,1.2s						
RJOB	Jochberg	147.02	351	*e*PKPbc	PKPdf	13 15 04.5	+1.7
	baz=9.0,slow=3.3						
HERR	Herculane	147.09	337	⇑P	PKPbc	13 15 04.8	-0.6
KOVH	Kovagotottos	147.43	343	*e*P	PKPbc	13 15 05.8	-0.5
UBR	Ueberruh	147.43	354	*e*PKPbc	PKPbc	13 15 05.8	-0.6
	baz=9.0,slow=3.3						
UBR				*e*pPKPbc	pPKPab	13 16 15.2	+4.4
	baz=13,slow=4.4						
MDVR	Moldovita	147.44	338	⇑P	PKPdf	13 15 05.3	+1.7
MMAI	Mount Meron Ar	147.44	308	PKPbc	PKPbc	13 15 07.0	+0.1
	comp=Z,19nm,0.6s,baz=69,slow=4.9,SNR=25						
MMAI				PKPab	PKPab	13 15 09.9	+0.3
	comp=Z,18nm,0.6s,baz=58,slow=7.9,SNR=11						
RETA	Reutte	147.55	353	*e*P	PKPbc	13 15 06.4	-0.3
	comp=Z,20nm,1.4s						
RETA				*e*P	pPKPab	13 16 11.8	+0.6
	comp=Z,11nm,1.3s						
KBA	Koelnbreinsper	147.57	350	*e*P	PKPbc	13 15 06.2	-0.7
	comp=Z,8.9nm,0.6s						
KBA				*e*P	pPKPab	13 16 11.7	+0.2
	comp=Z,11nm,1.4s						
WATA	Walderalm	147.59	352	*i* P	PKPbc	13 15 06.5	-0.5
	comp=Z,10nm,0.7s,SNR=5.2						
WATA				*e*P	pPKPab	13 16 12.6	+1.1
	comp=Z,16nm,1.5s						
SOKA	Soboth	147.63	347	*i* P	PKPbc	13 15 06.1	-0.8
	comp=Z,20nm,1.5s,SNR=6.9						
SOKA				*e*P	pPKPab	13 16 12.2	+0.6
	comp=Z,8.4nm,1.3s						
MOTA	Moosalm	147.65	353	*i* P	PKPbc	13 15 06.8	-0.3
	comp=Z,22nm,1.2s,SNR=5.8						
MOTA				*e*P	pPKPab	13 16 12.9	+1.1
	comp=Z,16nm,1.5s						
WTTA	Wattenberg	147.66	352	*i* P	PKPbc	13 15 06.9	-0.2
	comp=Z,26nm,0.6s,SNR=8.5						
WTTA				*e*P	pPKPab	13 16 12.0	+0.2
	comp=Z,12nm,1.4s						
SQTA	Sankt Quirin	147.76	352	*e*P	PKPbc	13 15 07.0	-0.3
	comp=Z,13nm,0.7s						
SQTA				*e*P	pPKPab	13 16 12.1	0.0
	comp=Z,8.5nm,1.2s						
FRGS	Fruska Gora	147.76	340	*e*P	PKPbc	13 15 06.6	-0.6
DAVA	Damuels	147.84	354	*e*P	PKPbc	13 15 07.3	-0.2
	comp=Z,17nm,0.8s						
DAVA				*e*P	pPKPab	13 16 13.7	+1.1
	comp=Z,7.4nm,1.0s						
OBKA	Obir	147.89	348	*e*P	PKPbc	13 15 08.0	+0.3
	comp=Z,15nm,1.0s						
OBKA				*e*P	pPKPab	13 16 13.8	+1.2
	comp=Z,8.9nm,1.6s						
MYKA	Terra Mystica	147.95	349	*e*P	PKPbc	13 15 06.7	-1.0
	comp=Z,12nm,0.7s						
MYKA				*e*P	pPKPab	13 16 13.7	+0.9
	comp=Z,2.8nm,0.5s						

FETA	Feichten	148.01	353	eP	PKPdf	13 15 04.6	0.0
	comp=Z,13nm,1.0s						
FETA				eP	pPKPab	13 16 12.8	-0.4
	comp=Z,9.8nm,1.5s						
ABTA	Abfaltersbach	148.03	351	i P	PKPdf	13 15 06.9	+2.3
	comp=Z,26nm,0.9s,SNR=7.3						
ABTA				eP	pPKPab	13 16 10.9	-2.2
	comp=Z,14nm,1.3s						
ZAGS	Zajecar	148.07	336	eP	PKPdf	13 15 05.3	+0.7
GCIS	Gornji Cirnik	148.27	346	i PKPbc	PKPbc	13 15 08.2	-0.4
LJU	Ljubljana	148.34	348	i PKPbc	PKPbc	13 15 08.2	-0.6
DAVOX	Davos/Dischmat	148.34	354	PKPbc	PKPbc	13 15 08.9	0.0
	comp=Z,20nm,0.6s,baz=327,slow=2.9,SNR=35						
ZAPS	Zavoj	148.36	335	eP	PKPbc	13 15 08.5	-0.4
TRUS	Trudelj	148.38	339	eP	PKPbc	13 15 07.8	-1.1
BOVS	Bovan	148.42	337	⇑P	PKPdf	13 15 04.0	-1.1
BOVS	Bovan	148.42	337	eP	PKPbc	13 15 07.8	-1.2
GRUS	Gruza	148.57	338	eP	PKPbc	13 15 09.3	0.0
DIVS	Divibare	148.64	339	eP	PKPbc	13 15 08.9	-0.7
VTS	Vitosha	148.66	334	⇑P	PKPdf	13 15 04.4	-1.3
BOJS	Bojanci	148.70	346	i PKPbc	PKPbc	13 15 09.3	-0.3
SELS	Selova	149.00	337	eP	PKPdf	13 15 08.7	+2.5
IVAS	Ivanjica	149.04	339	eP	PKPbc	13 15 09.9	-0.7
BARS	Barje	149.07	336	eP	PKPdf	13 15 05.4	-0.9
BARS	Barje	149.07	336	eP	PKPbc	13 15 10.4	-0.3
BOSS	Bosilegrad	149.07	335	eP	PKPdf	13 15 09.0	+2.7
EIL	Elat	149.12	303	PKPbc	PKPbc	13 15 11.2	0.0
	comp=Z,9.4nm,0.7s,baz=142,slow=1.5,SNR=6.5						
EIL				PKPab	PKPab	13 15 15.9	-0.4
	comp=Z,12nm,0.9s,baz=101,slow=9.2,SNR=5.7						
PRVS	Prvonek	149.23	335	eP	PKPbc	13 15 10.2	-0.9
SJES	Sjenica	149.38	339	eP	PKPbc	13 15 11.7	+0.2
STIP	Stip	149.86	334	i P	PKPbc	13 15 11.6	-1.0
SKO	Skopje	149.93	335	i P	PKPbc	13 15 12.5	-0.3
VAY	Valandovo	150.00	333	i P	PKPbc	13 15 11.3	-1.6
PDG	Podgorica	150.36	339	⇑P	PKPbc	13 15 12.6	-1.1
OHR	Ohrid	150.92	335	i P	PKPbc	13 15 14.3	-0.9
PCAB	Cabril	151.27	21	ePKPbc	PKPbc	13 15 16.2	+0.2
PBRG	Braganca	151.61	19	ePKPbc	PKPbc	13 15 16.6	-0.2
POLO	Lamas de Olo	151.65	21	ePKPbc	PKPbc	13 15 17.2	+0.3
PVRL	Vila Real	151.76	21	ePKPbc	PKPbc	13 15 17.4	+0.3
MVO	Moncorvo	152.10	20	ePKPbc	PKPbc	13 15 18.2	+0.3
PVIS	Viseu	152.20	22	ePKPbc	PKPbc	13 15 18.2	+0.1
MTE	Manteigas	152.60	22	ePKPbc	PKPbc	13 15 19.0	0.0
ESDC	Sonseca Array	154.39	17	PKPbc	PKPbc	13 15 22.0	-0.9
	comp=Z,0.7nm,0.7s,baz=328,slow=2.6,SNR=6.4						
ESDC				PKPab	PKPab	13 15 37.5	-0.6
	comp=Z,1.2nm,0.8s,baz=323,slow=4.7,SNR=4.8						
ESDC	Sonseca Array	154.39	17	PKPbc	PKPbc	13 15 22.7	-0.2
ESDC				PKPab	PKPab	13 15 38.6	+0.5
KEST	Kesra	159.29	350	PKPab	PKPab	13 15 58.3	-1.0
	comp=Z,2.1nm,0.7s,baz=90,slow=1.0,SNR=3.7						
DBIC	Dimbokro	166.94	130	PKPab	PKPab	13 16 32.4	-1.1
	comp=Z,4.7nm,0.8s,baz=237,slow=4.6,SNR=5.6						
TORD	Torodi Ar. Bea	175.99	121	PKPab	PKPab	13 17 13.3	-0.3
	comp=Z,4.0nm,0.8s,baz=259,slow=4.5,SNR=11						
TORD	Torodi Ar. Bea	175.99	121	PKPdf	PKPdf	13 15 33.9	+1.0
TORD					PKPab	13 17 13.2	-0.5

SJA ***08*** *12:56:01.3±0.7, 30.°76S×72.°17W, h12^{km}±4^{km}, ML5.7, MW5.3*

IDC ***08*** *12:56:03.1±0.4, 30.°85S×71.°56W, h0^{km}, mb5.3/16, mb1 5.3/21, mb1mx5.2/30, mbtmp5.1/21, ML4.7/5, MS5.1/20, Ms1 5.1/20, ms1mx5.0/26, Error ellipse: s-maj=18.1km s-min=13.7km az=76.0*

VAO ***08*** *12:56:05.7±0.3, 30.°76S×71.°50W, h10^{km}, mb5.6*

MOS ***08*** *12:56:05.9±1.1, 30.°82S×71.°69W, h27^{km}, mb5.7/26, MS5.3/7, Error ellipse: s-maj=15.9km s-min=6.6km az=94.9*

NEIC ***08*** *12:56:07.4, 30.°80S×71.°73W, h25^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.02; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-2.15; $M_{r\theta}$0.34; $M_{\theta\phi}$0.36; $M_{\phi r}$-1.06; Fault plane solution: $M_0$2.40000×10^{17} NP1:ϕ_s166.70000°, δ58.93000°, λ85.01000°. NP2:ϕ_s356.30000°, δ31.43000°, λ98.21000°. Principal axes: T 2.3062, Plg76.0000°, Azm62.0000°; N 0.1734, Plg4.0000°, Azm169.0000°; P -2.4796, Plg14.0000°, Azm260.0000°;*

GUC ***08*** *12:56:07.3±0.8, 30.°84S×71.°71W, h40^{km}±2^{km}, MW5.6*

NEIC ***08*** *12:56:07.4±1.5, 30.°81S±0.°04×71.°75W±0.°03, h25^{km}±1^{km}, mb5.6/130, Ms_20 5.4/102, Mwb5.5/45, Mwr5.4/59, Mww5.6, Mwc5.6(GCMT), Mwr5.6(GUC), Error ellipse: s-maj=7.4km s-min=2.8km az=32.0*

NEIC ***08*** *12:56:07.3, 30.°79S×71.°72W, h34^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.04; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-1.18; $M_{r\theta}$0.36; $M_{\theta\phi}$-0.00; $M_{\phi r}$-1.06; Fault plane solution: $M_0$1.58000×10^{17} NP1:ϕ_s166.26000°, δ68.11000°, λ78.29000°. NP2:ϕ_s15.34000°, δ24.69000°, λ116.81000°. Principal axes: T 1.5519, Plg65.0000°, Azm56.0000°; N 0.0631, Plg11.0000°, Azm171.0000°; P -1.6150, Plg22.0000°, Azm265.0000°;*

BJI ***08*** *12:56:08.0±0.0, 30.°80S×71.°60W, h30^{km}, mB5.5/37, Ms5.6/34, Ms7 5.5/35*

NEIC ***08*** *12:56:12, 30.°89S×71.°74W, h40^{km}, Moment Tensor Solution. Duration: 10.^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}2.98; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-2.97; $M_{r\theta}$0.17; $M_{\theta\phi}$0.62; $M_{\phi r}$-1.38; Fault plane solution: $M_0$3.34000×10^{17} NP1: ϕ_s347.00000°, δ33.00000°, λ87.00000°. NP2: ϕ_s170.00000°, δ57.00000°, λ92.00000°. Principal axes: T 3.2821, Plg78.0000°, Azm87.0000°; N 0.1162, Plg2.0000°, Azm349.0000°; P -3.3983, Plg12.0000°, Azm259.0000°;*

GCMT ***08*** *12:56:12.4±0.1, 30.°92S±0.°01×71.°89W±0.°01, h35^{km}, MW5.6/133, Moment Tensor Solution. s121, c196; s133, c230; Duration: 1.^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}2.44±.04; $M_{\theta\theta}$0.09±.03; $M_{\phi\phi}$-2.52±.03; $M_{r\theta}$0.28±.03; $M_{\theta\phi}$0.30±.02; $M_{\phi r}$-2.18±.05; Best double couple: $M_0$3.32700×10^{17} NP1:ϕ_s354.00000°, δ24.00000°, λ91.00000°. NP2:ϕ_s173.00000°, δ66.00000°, λ89.00000°. Principal axes: T 3.2700, Plg69.0000°, Azm82.0000°; N 0.1180, Plg0.0000°, Azm173.0000°; P -3.3830, Plg21.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***08*** *12:56:13, 30.°87S×72.°00W, h38^{km}, Moment Tensor Solution. Duration: 3.^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}2.26; $M_{\theta\theta}$0.37; $M_{\phi\phi}$-2.63; $M_{r\theta}$0.34; $M_{\theta\phi}$0.30; $M_{\phi r}$-1.90; Fault plane solution: $M_0$3.15000×10^{17} NP1: ϕ_s358.00000°, δ26.00000°, λ96.00000°. NP2: ϕ_s171.00000°, δ64.00000°, λ87.00000°. Principal axes: T 2.9295, Plg71.0000°, Azm75.0000°; N 0.3953, Plg3.0000°, Azm173.0000°; P -3.3249, Plg19.0000°, Azm263.0000°;*

ISC 08 12:56:06.1±0.2**, 30.°85S**±0.°02×**71.°83W**±0.°03**, h21**^{km}±1^{km}**, h21**^{km}**:pP-P, n836, σ1.^{s}76**/889**, mb5.6**/101**, MS5.4**/82**, 179C-33D, Fault plane solution: NP1:**ϕ_s342.31897°**,** δ45.64565°**,** λ68.80166°. **NP2:**ϕ_s191.33948°**,** δ48.19120°**,** λ110.29643°. **Principal axes:** T Plg74.9555°**,** Azm172.2393°**;** N Plg14.9842°**,** Azm357.4893°**;** P Plg1.3147°**,** Azm267.1373°**; Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.24	44	⇑iP	Pn	12 56 14.1	+2.2
CO06				i S	Sb	12 56 18.5	+2.1
CO06	Fray Jorge	0.24	44		Pn	12 56 14.3	+2.3
CO06				Sg	Sb	12 56 18.6	+2.1
CO03	El Pedregal	0.98	90	⇓iP	Pb	12 56 23.7	-0.7
CO03				i S	Sb	12 56 35.6	-1.4
CO03	El Pedregal	0.98	90		Pb	12 56 23.7	-0.7
CO03	El Pedregal	0.98	90	eP	Pb	12 56 23.8	-0.7
CO03				eS	Sb	12 56 36.9	-0.1
CO03				IAML		12 56 37.4	
	comp=Z,90µm,1.0s						
CO05	La Serena	1.06	29	⇓iP	Pb	12 56 25.9	+0.2
CO05				i S	Sb	12 56 38.9	-0.2
CO05	La Serena	1.06	29		Pb	12 56 25.8	+0.2
GO04	Tololo Observa	1.11	53	⇓iP	Pn	12 56 26.4	-0.3
GO04				i S	Sb	12 56 40.4	-0.6
GO04	Tololo Observa	1.11	53		Pn	12 56 26.7	0.0
GO04	Tololo Observa	1.11	53	eP	Pn	12 56 26.4	-0.3
GO04				eS	Sn	12 56 42.9	+1.4
VA06	Catapilco	1.77	165	eP	Pb	12 56 36.6	-1.1
VA06				i S	Sb	12 56 59.1	-0.4
LCO	Las Campanas	2.08	28	P	Pn	12 56 41.0	+1.1
LCO	Las Campanas	2.08	28	⇑iP	Pn	12 56 40.8	+0.9
LCO				i S	Sn	12 57 06.3	+1.0
LCO	Las Campanas	2.08	28	Pn	Pn	12 56 41.0	+1.1
LCO	Las Campanas	2.08	28	eP	Pn	12 56 41.0	+1.1
LCO				eS	Sb	12 57 09.8	+1.1
AROD	Rodeo	2.14	72	eP	Pb	12 56 43.7	-0.7
AROD				eS	Sb	12 57 13.8	+3.2
VA01	Torpederas	2.17	176	eP	Pn	12 56 42.3	+1.3
VA01	Torpederas	2.17	176	Pn	Pn	12 56 41.9	+0.9
VA03	San Esteban	2.20	151	eP	Pn	12 56 42.9	+1.4
VA03				i S	Sb	12 57 10.0	-2.0
VA03	San Esteban	2.20	151		Pb	12 56 43.6	-1.6
VA03	San Esteban	2.20	151	eP	Pb	12 56 43.3	-1.9
VA03				eS	Sb	12 57 11.9	-0.1
VA03				IAML		12 57 19.9	
	comp=Z,45µm,0.8s						
ROCH	El Roble	2.23	162	⇑iP	Pb	12 56 43.4	-2.4
ROCH				⇑iP	Pn	12 56 43.2	+1.2
ROCH				i S	Sn	12 57 10.4	+1.4
ROCH				i S	Sb	12 57 10.7	-2.3
ROC1	El Roble	2.23	162	eP	Pn	12 56 43.4	+1.3
ROC1				eS	Sb	12 57 14.7	+1.6
RTLS	Leoncito	2.36	114	eP	Pb	12 56 47.4	-0.8
RTLS				IAML		12 57 30.3	
	comp=Z,31µm,0.9s						
ACCO	Cerro Coronel	2.39	84	eP	Pb	12 56 47.7	-1.0
ACDV	Cuesta del Vie	2.43	75	eP	Pb	12 56 48.2	-1.0
ACDV				eS	Sb	12 57 25.8	+6.9
ACDV				IAML		12 57 29.5	
	comp=Z,19µm,1.5s						
MT02	Curacav	2.47	166	eP	Pn	12 56 46.0	+0.9
MT02				i S	Sn	12 57 16.2	+1.5
MT02	Curacav	2.47	166		Pn	12 56 46.9	+1.7
MT02	Curacav	2.47	166	eP	Pn	12 56 46.1	+0.9
MT02				IAML		12 57 28.9	
	comp=Z,29µm,0.9s						
PEL	Peldehue	2.49	157	P	Pn	12 56 47.3	+1.9
PEL	Peldehue	2.49	157	⇑iP	Pn	12 56 47.2	+1.8
PEL				i S	Sn	12 57 16.9	+1.8
PEL	Peldehue	2.49	157	Pn	Pn	12 56 47.3	+1.9
PEL	Peldehue	2.49	157	eP	Pn	12 56 47.3	+1.9
PEL				eS	Sn	12 57 14.3	-0.8
AUSP	Uspallata	2.49	124	eP	Pb	12 56 49.1	-1.3
MT05	Renca	2.70	160	⇑iP	Pn	12 56 49.9	+1.6
MT05				i S	Sn	12 57 21.3	+0.9
MT05	Renca	2.70	160		Pn	12 56 50.0	+1.6
MT05	Renca	2.70	160	eP	Pn	12 56 49.9	+1.6
MT05				eS	Sn	12 57 22.8	+2.4
MT05				IAML		12 57 32.4	
	comp=Z,33µm,1.5s						
AC04	Llanos de Chal	2.71	14	⇑iP	Pn	12 56 49.1	+0.6
AC04	Llanos de Chal	2.71	14	Pn	Pn	12 56 49.2	+0.6
AC04	Llanos de Chal	2.71	14	eP	Pn	12 56 43.3	-5.2
AC04				eS	Sn	12 57 21.3	+0.6
AC04				eS	Sb	12 57 22.8	-4.0
AC04				IAML		12 57 38.8	
	comp=Z,16µm,1.0s						
ZON	Zonda	2.79	105	eP	Pb	12 56 53.0	-2.2
ZON				IAML		12 57 46.9	
	comp=Z,21µm,0.8s						
VA05	Santo Domingo	2.81	176	eP	Pn	12 56 50.4	+0.7
RTLL	Cerro Villicun	2.92	100	eP	Pn	12 56 53.9	+2.6
RTCV	Cerro Valdivia	2.99	111	eP	Pb	12 56 55.7	-3.0
MT09	Talagante	3.00	167	⇑iP	Pn	12 56 54.3	+1.7
MT09				i S	Sn	12 57 29.9	+1.9
MT01	Popeta	3.05	171	⇑iP	Pn	12 56 54.2	+1.2
MT01	Popeta	3.05	171	eP	Pn	12 56 54.3	+1.2
MT01				eS	Sb	12 57 38.8	+2.4
MT01				IAML		12 57 43.3	
	comp=Z,15µm,0.6s						
ASAL	Salagasta	3.09	125	eP	Pb	12 56 57.9	-2.5
ASAL				eS	Sb	12 57 44.0	+6.4
ARCO	CERRO ARCO	3.17	130	eP	Pb	12 56 59.4	-2.3
ARCO				eS	Sb	12 57 46.1	+6.2
ARCO				IAML		12 57 50.7	
	comp=Z,25µm,0.5s						
LMEL	Las Melosas	3.29	156	⇑iP	Pn	12 56 58.9	+2.4
LMEL				i S	Sn	12 57 36.7	+1.6
BO04	La Punta	3.30	162	⇑iP	Pn	12 56 58.2	+1.7
BO04				i S	Sn	12 57 36.0	+0.9
GO03	Copiap	3.53	24	⇑iP	Pn	12 57 00.2	+0.5
GO03				i S	Sn	12 57 41.7	+0.9
GO03	Copiap	3.53	24	eP	Pn	12 56 54.8	-5.0
GO03				eS	Sn	12 57 44.3	+3.4
BO01	Tunca	3.59	170	⇑iP	Pn	12 57 01.6	+1.1
BO01				i S	Sn	12 57 43.3	+1.1
BO01	Tunca	3.59	170		Pn	12 57 01.8	+1.3
BO01	Tunca	3.59	170	eP	Pn	12 57 01.6	+1.1
BO01				eS	Sb	12 57 49.8	-2.2
BO01				IAML		12 57 59.4	
	comp=Z,14µm,1.2s						
BO02	Sierra Bellavi	4.03	168	eP	Pn	12 57 08.2	+1.5
BO02				i S	Sn	12 57 54.5	+1.3
BO02	Sierra Bellavi	4.03	168	Pn	Pn	12 57 07.8	+1.2
BO02	Sierra Bellavi	4.03	168	eP	Pn	12 57 08.4	+1.8
BO02				eS	Sb	12 58 02.3	-2.5
BO02				IAML		12 58 10.6	
	comp=Z,15µm,0.8s						
GO05	Huala	4.15	181	eP	Pn	12 57 02.8	-5.5
GO05				eP	Pn	12 57 08.4	+0.1
GO05				eS	Sb	12 58 02.8	-5.4
AC02	Maricunga	4.65	31	⇑iP	Pn	12 57 16.6	+1.1
RFA	San Rafael	4.83	145	eP	Pn	12 57 14.3	-3.3
RFA				eP	Pb	12 57 20.8	-9.2
RFA				eS	Sb	12 58 23.8	-3.9
RFA				IAML		12 58 43.4	
	comp=Z,4µm,1.2s						
PB14	IPOC Station P	6.33	12		Pn	12 57 35.9	-2.5
PB14	IPOC Station P	6.33	12	eS	Sb	12 59 04.8	-6.3
H03N1	Juan Fernandez	6.54	245	Pn	Pn	12 57 42.5	+1.7
	baz=118,slow=19,SNR=4139						
H03N1				T	T	13 04 32.4	
	baz=62						
VA04	Juan Fernndez	6.55	243	Pn	Pn	12 57 41.7	+0.5
H03N3	Juan Fernandez	6.55	245	Pn	Pn	12 57 42.1	+1.1
	baz=118,slow=19,SNR=2534						
H03N3				T	T	13 04 32.3	
	baz=62						
H03N2	Juan Fernandez	6.56	245	Pn	Pn	12 57 42.4	+1.4
	baz=118,slow=19,SNR=3291						
H03N2				T	T	13 04 33.7	
	baz=62						
H03S3	Juan Fernandez	6.69	242	Pn	Pn	12 57 43.7	+0.8
	SNR=150						
H03S3				T	T	13 05 02.5	
	baz=83,SNR=51						
H03S1	Juan Fernandez	6.69	242	Pn	Pn	12 57 43.3	+0.4
	SNR=108						
H03S1				T	T	13 04 56.1	
	baz=83,SNR=68						
H03S2	Juan Fernandez	6.71	242	Pn	Pn	12 57 44.0	+1.0
	SNR=204						
H03S2				T	T	13 04 54.9	
	baz=83,SNR=72						
FSA	Cafayete	6.98	49	eP	Pn	12 57 49.5	+2.1
AHML	Horco Molle	6.99	56	eS	Sn	12 59 08.8	+2.7
AHML				eS	Sn	12 59 10.3	+4.2
PB15	IPOC Station P	7.89	16	eP	Pn	12 57 57.8	-2.1
LC01	Cunco	8.03	180		Pn	12 58 01.5	0.0
PB05	IPOC Station P	8.10	11	eP	Pn	12 57 59.0	-3.5
PB06	IPOC Station P	8.36	14	eP	Pn	12 57 58.8	-7.4
PB06				eS	Sn	12 59 36.0	-4.0
LVC	Limon Verde	8.61	18	Pn	Pn	12 58 07.4	-2.4
	comp=Z,3.9nm,0.3s,baz=164,slow=7.3,SNR=29						
LVC				Sn	Sn	12 59 49.2	+2.7
	comp=Z,23nm,0.3s,baz=177,slow=17,SNR=3.6						
LVC				LR	LR	13 01 19.0	
	comp=Z,16µm,19.4s,baz=212,slow=37						
LVC	Limon Verde	8.61	18	eP	Pn	12 58 07.3	-2.5
PB03	IPOC Station P	8.96	12	eP	Pn	12 58 08.8	-5.6
PB03				eS	Sn	12 59 49.6	-5.2
PLCA	Paso Flores	9.92	174	Pn	Pn	12 58 28.6	+1.2
	comp=Z,1.9nm,0.3s,baz=340,slow=10,SNR=37						
PLCA				Sn	Sn	13 00 22.2	+4.1
	comp=Z,1.0nm,0.3s,baz=9.2,slow=17,SNR=1.6						
PLCA				LR	LR	13 02 47.3	
	comp=Z,10µm,19.1s,baz=350,slow=41						
PLCA	Paso Flores	9.92	174	P	Pn	12 58 28.3	+0.9
PLCA	Paso Flores	9.92	174	eP	Pn	12 58 28.8	+1.4
PLCA	Paso Flores	9.92	174		Pn	12 58 28.3	+0.9
LL04	Puerto Octay	10.05	183	Pn	Pn	12 58 29.2	0.0
TRQA	Tornquist	10.85	134	P	Pn	12 58 40.0	-0.1
TRQA	Tornquist	10.85	134	eP	Pn	12 58 40.0	-0.1
TRQA	Tornquist	10.85	134	Pn	Pn	12 58 40.0	-0.1
PSGCX	Pisagua	11.31	8		Pn	12 58 46.5	-0.1
LPA	La Plata	12.36	113	d iP	Pn	12 59 03.1	+2.3
LPA				S	Sn	13 01 16.4	-1.5
LPA				PCP	PcP	13 04 44.8	+3.3
ITQB	Itaqui	13.20	89	eP	Pn	12 59 09.9	-2.4
ITQB	Itaqui	13.20	89	Pn	Pn	12 59 09.8	-2.4
CPUP	Villa Florida	13.51	74	Pn	Pn	12 59 11.8	-4.7
	comp=Z,0.9nm,0.3s,baz=252,slow=12,SNR=29						
CPUP				Sn	Sn	13 01 47.6	+1.6
	comp=Z,1.3nm,0.3s,baz=251,slow=15,SNR=4.3						
CPUP				Lg	Lg	13 02 45.8	
	comp=Z,6.6nm,0.3s,baz=165,slow=19,SNR=3.5						
CPUP	Villa Florida	13.51	74	eP	Pn	12 59 12.3	-4.2
CPUP	Villa Florida	13.51	74		Pn	12 59 12.0	-4.5
COYC	Coyhaique	14.70	181		Pn	12 59 32.6	-0.1
LPAZ	La Paz	14.88	14	Pn	Pn	12 59 37.2	+1.4
	comp=Z,3.9nm,0.3s,baz=187,slow=7.7,SNR=210						
LPAZ				Sn	Sn	13 02 28.6	+8.1
	baz=195,slow=20,SNR=1.0						
LPAZ	La Paz	14.88	14	P	Pn	12 59 35.6	-0.3
LPAZ	La Paz	14.88	14	eP	Pn	12 59 33.2	-2.7
LPAZ	La Paz	14.88	14		Pn	12 59 35.6	-0.3
CPSB	Cacapava Do Su	15.84	93	eP	Pn	12 59 45.3	-2.5
ITAB	Concordia	17.59	83	P	Pn	13 00 08.4	-1.6
ITAB				IAmb	IAmb	13 00 13.6	
	comp=Z,725nm,1.3s						
SIV	San Ignacio	17.76	36	P	Pn	13 00 10.5	-1.6
	comp=Z,3.1nm,0.3s,baz=220,slow=11,SNR=82						
SIV				S	Sn	13 03 32.0	+2.4
	comp=Z,0.7nm,0.3s,baz=180,slow=16,SNR=1.1						
SIV				LR	LR	13 08 18.6	
	comp=Z,12µm,21.0s,baz=214,slow=42						
AQDB	Aquidauana	17.81	58	eP	Pn	13 00 09.8	-2.9
AQDB	Aquidauana	17.81	58		Pn	13 00 10.1	-2.7
CNLB	Canela	18.22	91	eP	Pn	13 00 13.9	-3.9
PTGB	Pitanga	18.51	76	eP	P	13 00 19.7	-1.5
TRCB	Terra Rica	18.90	70	P	P	13 00 24.9	-0.5
TRCB				IAmb	IAmb	13 00 39.7	
	comp=Z,351nm,1.1s						
PTLB	Pontes e Lacer	19.24	40	eP	P	13 00 28.5	-0.5
PTLB	Pontes e Lacer	19.24	40	P	P	13 00 27.8	-1.3
NNA	Nana	19.34	345	P	Pn	13 00 32.1	+0.8
	comp=Z,1.6nm,0.3s,baz=187,slow=13,SNR=10						
NNA				S	Sn	13 04 01.6	-6.1
	baz=224,slow=21,SNR=0.8						
NNA				Lg	Lg	13 06 07.4	
	comp=Z,0.7nm,0.3s,baz=57,slow=22,SNR=6.0						
NNA				LR	LR	13 06 27.6	
	comp=Z,3µm,19.2s,baz=170,slow=32						
NNA	Nana	19.34	345	P	P	13 00 28.6	-1.6
NNA				pmax	pmax		
	comp=Z,46nm,1.0s						
NNA	Nana	19.34	345	P	P	13 00 28.6	-1.6
TER01	Tubaro-SC	19.85	89	eP	P	13 00 34.8	-0.9
PP1B	Ponte de Pedra	20.28	53	eP	P	13 00 39.4	-1.1
GO09	Cerro Castillo	20.41	181	P	P	13 00 40.8	-0.7
GO09				IAmb	IAmb	13 00 59.4	
	comp=Z,244nm,1.1s						
PCMB	Pacaembu	20.59	68	eP	P	13 00 42.4	-1.4
VILB	Vilhena	20.79	34	eP	P	13 00 45.4	-0.6
VILB	Vilhena	20.79	34	P	P	13 00 45.2	-0.8
VILB				IAmb	IAmb	13 00 58.6	
	comp=Z,456nm,1.1s						
MG05	Puerto Natales	20.82	181	P	P	13 00 45.9	0.0
MG05				IAmb	IAmb	13 01 05.6	
	comp=Z,260nm,1.1s						
SALV	Santo Antonio	20.95	48	eP	P	13 00 46.1	-1.6
FRTB	Fartura	21.16	75	eP	P	13 00 48.5	-1.5
ETMB	Extrema	21.57	15	eP	P	13 00 54.8	+0.5
ETMB	Extrema	21.57	15	P	P	13 00 53.7	-0.6
ETMB				IAmb	IAmb	13 00 59.0	
	comp=Z,174nm,0.9s						
MG04	Isla Riesco	21.99	180	P	P	13 00 59.0	+0.4
MG04				IAmb	IAmb	13 01 19.3	
	comp=Z,556nm,1.4s						
MG02	Cerro Sombrero	22.00	176	P	P	13 00 59.4	+0.7
MG02				IAmb	IAmb	13 01 06.3	
	comp=Z,470nm,1.1s						
GO10	Punta Arenas	22.30	179	P	P	13 01 02.6	+0.7
GO10				IAmb	IAmb	13 01 19.8	
	comp=Z,303nm,1.0s						
ITRB	Iturama	22.32	65	eP	P	13 01 00.3	-2.1
PET01	Itanhaem-SP	22.70	79	eP	P	13 01 04.4	-2.0
CZSB	Cruzeiro do Su	23.02	358	eP	P	13 01 11.2	+1.5
CZSB	Cruzeiro do Su	23.02	358	P	P	13 01 10.5	+0.8
BB19B	Bebedouro	23.06	71	eP	P	13 01 08.3	-2.0
EFI	East Falkland	23.16	158	eP	P	13 01 10.0	-0.9
EFI				pmax	pmax		
	comp=Z,203nm,0.9s						
EFI	East Falkland	23.16	158	P	P	13 01 10.7	-0.2
EFI				IAmb	IAmb	13 01 26.5	
	comp=Z,193nm,0.9s						
SAML	Samuel	23.23	22	P	P	13 01 11.5	-0.4
SAML				pmax	pmax		
	comp=Z,4µm,1.3s						
SAML				MLR	MLR		
	comp=Z,106µm,22.0s						
SAML	Samuel	23.23	22	P	P	13 01 11.5	-0.4
RCLB	Rio Claro- Sao	23.25	75	eP	P	13 01 10.1	-2.1
VAO	Valinhos	23.47	77	eP	P	13 01 12.3	-2.1
PDRB	Porto dos Gac	23.71	39	eP	P	13 01 15.0	-1.7
ARAG	Araguaiana, MT	23.71	55	eP	P	13 01 13.9	-2.8
USHA	Ushuaia	24.09	175	P	P	13 01 20.8	+0.8
	comp=Z,200nm,1.0s,baz=351,slow=4.4,SNR=38						
USHA				LR	LR	13 12 03.6	
	comp=Z,7µm,18.5s,baz=356,slow=40						
MG01	Puerto William	24.26	174	P	P	13 01 22.3	+0.8
MG01				IAmb	IAmb	13 01 46.2	
	comp=Z,178nm,0.9s						
ATAH	Atahualpa	24.38	344	P	P	13 01 26.6	+3.2
	comp=Z,28nm,1.0s,baz=168,slow=8.0,SNR=12						
ATAH				S	S	13 05 37.6	-4.6
	comp=Z,7.8nm,1.0s,baz=198,slow=3.5,SNR=1.7						
ATAH				LR	LR	13 09 43.3	
	comp=Z,2µm,19.1s,baz=173,slow=34						
PARB	Paraibuna	24.46	79	eP	P	13 01 21.9	-1.9
CLDB	Colider	24.83	40	eP	P	13 01 26.4	-0.7
IPMB	Ipameri, GO	24.96	65	eP	P	13 01 26.4	-2.0
MAN01	Angra dos Reis	26.05	79	eP	P	13 01 36.7	-1.4
BSCB	Bom Sucesso	26.18	74	eP	P	13 01 38.0	-1.3
BDFB	Brasilia	26.52	61	P	P	13 01 41.2	-1.2
	comp=Z,100nm,0.8s,baz=229,slow=9.1,SNR=107						
BDFB				S	S	13 06 20.6	+4.8
	comp=Z,19nm,1.1s,baz=158,slow=15,SNR=1.7						
BDFB				LR	LR	13 13 13.1	
	comp=Z,14µm,20.1s,baz=232,slow=39						
BDFB	Brasilia	26.52	61	P	P	13 01 40.8	-1.7
BDFB				pmax	pmax		
	comp=Z,114nm,0.8s						
BDFB	Brasilia	26.52	61	P	P	13 01 40.8	-1.7
BDFB				IAmb	IAmb	13 01 54.1	
	comp=Z,114nm,0.8s						
TBTG	Tabatinga, AM	26.58	4	eP	P	13 01 40.9	-2.0
TBTG	Tabatinga, AM	26.58	4	eP	P	13 01 43.8	+1.0
TBTG	Tabatinga, AM	26.58	4	P	P	13 01 42.4	-0.5
SNDB	Serra Nova Dou	26.71	50	eP	P	13 01 43.1	-1.0
VAS01	Vassouras-RJ	26.73	78	eP	P	13 01 43.2	-1.0
DUB01	Friburgo-RJ	27.71	79	eP	P	13 01 51.8	-1.3
NPGB	Novo Progresso	28.26	36	eP	P	13 01 56.2	-1.7
DIAM	Diamantina, MG	28.40	70	eP	P	13 01 58.3	-1.1
CAM01	Campos-RJ	28.42	79	eP	P	13 01 58.3	-1.0
PEXB	Peixe	28.65	55	eP	P	13 02 00.6	-0.9
MC01	Montes Claros	29.04	67	eP	P	13 02 03.4	-1.6
MACA	Manacapuru-AM	29.48	23	eP	P	13 02 08.6	-0.1
MACA	Manacapuru-AM	29.48	23	P	P	13 02 08.2	-0.6
MACA				IAmb	IAmb	13 02 24.9	
	comp=Z,92nm,0.6s						
JANB	Januaria	29.70	64	eP	P	13 02 09.5	-1.3
ALF01	Guarapari-ES	29.73	77	eP	P	13 02 09.2	-1.7
ITTB	Itaituba	30.39	33	eP	P	13 02 15.4	-1.4
BSFB	Barra de Sao F	30.45	74	eP	P	13 02 15.9	-1.5
RIB01	Linhares ES	30.60	75	eP	P	13 02 16.9	-1.7
SDBA	SAO DESIDERIO	30.90	59	eP	P	13 02 19.3	-2.1
PTLC	Puerto Leguiza	30.98	354	eP	P	13 02 20.0	-2.0
SMTB	Santa Maria do	31.45	51	eP	P	13 02 25.3	-0.9
OTAV	Otavalo	31.55	347	eP	P	13 02 28.5	+0.9
PAC1	Pacto, Paraso	31.64	347	eP	P	13 02 31.2	+3.1
GCUF	Volcan Galeras	32.33	350	eP	P	13 02 38.1	+3.7
GUA01	Guaratinga, BA	32.44	71	eP	P	13 02 33.9	-1.0
FLOC	Florencia	32.46	353	⇑eP	P	13 02 35.1	+0.1
MACC	Macarena, Meta	32.87	356	eP	P	13 02 36.5	-2.1
RPN	Rapa Nui	32.92	267	IAMs_20	IAMs_20	13 12 13.2	

	comp=Z,5µm,19.0s						
SOTA	**Rioblanco**	**33.12**	**351**	*e*P	**P**	**13 02 42.3**	**+1.0**
PCON	**Cinco Dias**	**33.28**	**352**	*e*P	**P**	**13 02 44.5**	**+1.7**
MALB	**Monte Alegre**	**33.29**	**33**	*e*P	**P**	**13 02 41.1**	**-1.2**
CMC01	**Camacan, BA**	**33.33**	**70**	*e*P	**P**	**13 02 41.7**	**-1.0**
BETC	**Betania**	**33.52**	**353**	*e*P	**P**	**13 02 42.2**	**-2.2**
POPC	**Popayan, Colom**	**33.52**	**351**	*e*P	**P**	**13 02 47.9**	**+3.3**
NBIT	**Itapeh - BA**	**33.63**	**69**	*e*P	**P**	**13 02 44.5**	**-0.8**
MARP	**Paez Belalcaza**	**33.73**	**353**	*e*P	**P**	**13 02 44.5**	**-1.9**
GDU01	**Guandu, BA**	**34.20**	**67**	*e*P	**P**	**13 02 48.8**	**-1.4**
PMSA	**Palmer Station**	**34.29**	**174**	*e*P	**P**	**13 02 52.9**	**+2.4**
PMSA	**Palmer Station**	**34.29**	**174**	IAMs_20	IAMs_20	13 16 24.5	
	comp=Z,6µm,18.0s						
HOPE	**Hope Point**	**34.44**	**143**	IAMs_20	IAMs_20	13 16 19.4	
	comp=Z,5µm,21.0s						
PRAC	**Prado**	**34.49**	**355**	*e*P	**P**	**13 02 53.4**	**+0.7**
ORTC	**Ortega, Tolima**	**34.72**	**354**	*e*P	**P**	**13 02 56.6**	**+1.8**
PAYG	**Puerto Ayora**	**34.74**	**326**	IAMs_20	IAMs_20	13 14 07.4	
	comp=Z,4µm,18.0s						
BOAV	**Boa Vista**	**34.77**	**20**	*e*P	**P**	**13 02 54.5**	**-0.7**
BOAV	**Boa Vista**	**34.77**	**20**	P	**P**	**13 02 54.5**	**-0.7**
VILC	**Villavicencio,**	**34.81**	**357**⇑	*e*P	**P**	**13 02 56.6**	**+1.0**
PTGC	**Puerto Gaitan,**	**34.85**	**359**	*e*P	**P**	**13 02 53.4**	**-2.4**
YOTC	**Yotoco, Valle**	**34.90**	**352**	*e*P	**P**	**13 02 56.6**	**+0.2**
ANIL	**Santa Ana**	**35.31**	**354**	*e*P	**P**	**13 02 58.7**	**-1.4**
NBPN	**Ponto Novo - B**	**35.44**	**63**	*e*P	**P**	**13 02 59.8**	**-1.2**
ROSC	**El Rosal**	**35.57**	**356**	P	**P**	**13 03 05.4**	**+2.9**
	comp=Z,18nm,0.4s,baz=275,slow=3.3,SNR=8.0						
ROSC	**El Rosal**	**35.57**	**356**	P	**P**	**13 03 03.1**	**+0.7**
ROSC				pmax	pmax		
	comp=Z,78nm,1.2s						
ROSC	**El Rosal**	**35.57**	**356**⇑	*e*P	**P**	**13 03 03.2**	**+0.7**
ROSC	**El Rosal**	**35.57**	**356**	P	**P**	**13 03 03.1**	**+0.7**
ROSC				IAmb	IAmb	13 03 19.9	
	comp=Z,78nm,1.1s						
MCPB	**Macapa, AP**	**35.66**	**35**	*e*P	**P**	**13 03 02.0**	**-0.8**
PLMC	**San Jos del P**	**35.81**	**352**	*e*P	P	13 02 59.2	-4.9
GUY2C	**Guyana, Caldas**	**36.03**	**354**	*e*P	**P**	**13 03 06.3**	**-0.2**
TMAB	**Tom-Au,PA,Br**	**36.14**	**43**	*e*P	**P**	**13 03 06.0**	**-0.9**
NORC	**Norcasia**	**36.32**	**355**	*e*P	**P**	**13 03 05.9**	**-2.6**
SPBC	**San Pablo de B**	**36.36**	**356**	*e*P	**P**	**13 03 06.2**	**-2.6**
RUSC	**La Rusia**	**36.55**	**358**	*e*P	**P**	**13 03 14.3**	**+3.3**
CBOC	**Ciudad Bolivar**	**36.72**	**353**	*e*P	**P**	**13 03 11.6**	**-0.5**
HELC	**Santa Helena**	**37.00**	**354**	*e*P	**P**	**13 03 13.7**	**-1.0**
NBLA	**Lagarto - SE**	**37.21**	**65**	*e*P	**P**	**13 03 13.9**	**-2.2**
BARC	**Barichara**	**37.25**	**358**	*e*P	P	13 03 10.8	-5.9
BRRC	**Barranca, Sant**	**37.78**	**357**	*e*P	P	13 03 10.5	-10
DBBC	**Dabeiba**	**37.88**	**353**	*e*P	**P**	**13 03 24.1**	**+2.2**
PAMC	**Pamplona, Colo**	**37.98**	**359**	*e*P	**P**	**13 03 22.0**	**-1.1**
ROSB	**Rosrio**	**38.18**	**49**	*e*P	**P**	**13 03 23.4**	**-0.9**
PTAC	**Punta Ardita,**	**38.21**	**350**⇑	*e*P	P	13 03 17.1	-7.4
ZARC	**Zaragoza, Cauc**	**38.23**	**355**	*e*P	**P**	**13 03 26.9**	**+2.2**
ZARC	**Zaragoza, Cauc**	**38.23**	**355**	P	**P**	**13 03 24.2**	**-0.5**
ZARC				IAmb	IAmb	13 03 34.9	
	comp=Z,125nm,1.4s						
NBMA	**Muriti-CE**	**38.75**	**60**	*e*P	**P**	**13 03 28.1**	**-1.0**
NBPS	**Pedro II - PI**	**38.87**	**53**	*e*P	**P**	**13 03 28.9**	**-1.3**
OCAC	**Ocana**	**38.89**	**358**	*e*P	**P**	**13 03 31.3**	**+1.0**
SMLC	**San Martn de**	**39.48**	**357**	*e*P	**P**	**13 03 31.0**	**-4.1**
SDV	**Santo Domingo**	**39.52**	**2**	*e*P	**P**	**13 03 33.8**	**-1.9**
SDV	**Santo Domingo**	**39.52**	**2**	*e*P	**P**	**13 03 36.1**	**+0.4**
SDV	**Santo Domingo**	**39.52**	**2**	P	**P**	**13 03 35.4**	**-0.3**
SDV	**Santo Domingo**	**39.52**	**2**	IAMs_20	IAMs_20	13 22 08.4	
	comp=Z,3µm,18.0s						
BAUV	**El Baul**	**39.73**	**6**	P	**P**	**13 03 36.5**	**-0.7**
SJCC	**San Jacinto, C**	**40.64**	**355**	*e*P	**P**	**13 03 45.0**	**+0.2**
SJCC	**San Jacinto, C**	**40.64**	**355**	P	**P**	**13 03 45.9**	**+1.1**
NBPA	**Parau_RN**	**41.04**	**60**	*e*P	**P**	**13 03 47.6**	**-0.5**
NBCL	**Cascavel-CE**	**41.21**	**57**	*e*P	**P**	**13 03 48.9**	**-0.7**
BIRV	**Birongo**	**41.43**	**8**	P	**P**	**13 03 50.5**	**-0.8**
BIRV				IAmb	IAmb	13 03 52.9	
	comp=Z,109nm,0.9s						
NBPV	**Pedro Velho**	**41.98**	**62**	*e*P	**P**	**13 03 55.1**	**-0.7**
URIC	**Uribia, Colomb**	**42.30**	**360**	P	**P**	**13 03 56.3**	**-2.1**
JTS	**Las Juntas de**	**42.80**	**341**	*i* P	**P**	**13 04 04.0**	**+1.5**
JTS				pmax	pmax		
	comp=Z,15nm,1.0s						
TOSP	**Speyside**	**43.29**	**16**	P	**P**	**13 04 06.3**	**0.0**
GRGR	**Grenville**	**43.84**	**14**	*e*P	**P**	**13 04 11.4**	**+0.6**
GCMP	**Grenada, Carri**	**44.23**	**15**	*e*P	**P**	**13 04 14.7**	**+0.7**
SVB	**Belmont**	**45.03**	**15**	*e*P	**P**	**13 04 17.8**	**-2.5**
SVB	**Belmont**	**45.03**	**15**	P	**P**	**13 04 19.6**	**-0.7**
SLBI	**Saint Lucia, B**	**45.82**	**15**	*e*P	**P**	**13 04 22.4**	**-4.1**
H05S1	**Guadeloupe/Mar**	**46.24**	**15**	P	**P**	**13 04 28.5**	**-1.4**
	SNR=8.9						
MPOM	**Morne Pois Mar**	**46.25**	**15**	*e*	**P**	**13 04 27.5**	**-2.5**
MPOM	**Morne Pois Mar**	**46.25**	**15**	P	**P**	**13 04 28.1**	**-1.8**
BIM	**Bigot**	**46.27**	**14**	*e*P	**P**	**13 04 29.0**	**-1.2**
BIM	**Bigot**	**46.27**	**14**	P	**P**	**13 04 29.4**	**-0.8**
FDF	**Fort de France**	**46.47**	**14**	P	**P**	**13 04 30.4**	**-1.3**
FDF				pmax	pmax		
	comp=Z,127nm,0.7s						
FDF				MLR	MLR		
	comp=Z,3µm,21.0s						
FDF	**Fort de France**	**46.47**	**14**	*e*P	**P**	**13 04 28.4**	**-3.4**
FDF	**Fort de France**	**46.47**	**14**	P	**P**	**13 04 30.4**	**-1.3**
FDF				IAMs_20	IAMs_20	13 27 31.1	
	comp=Z,3µm,21.0s						
ILAM	**Ilet Lapin Mar**	**46.57**	**15**	*e*P	P	13 04 26.4	-6.1
SVN	**Savane Anatole**	**46.57**	**14**	IAMs_20	IAMs_20	13 27 33.7	
	comp=Z,3µm,20.0s						
H05N1	**Guadeloupe/Mar**	**48.02**	**14**	P	**P**	**13 04 41.2**	**-2.6**
	SNR=10.0						
MTO3	**Montecristo**	**48.04**	**337**	P	**P**	**13 04 41.3**	**-2.9**
ANBD	**Bethesda, Anti**	**48.59**	**13**	*e*	P	13 04 42.9	-5.2
CRPR	**Cabo Rojo, PR**	**48.78**	**6**	P	**P**	**13 04 49.6**	**0.0**
SABA	**Saba**	**48.89**	**11**	*e*	**P**	**13 04 50.3**	**-0.2**
SABA	**Saba**	**48.89**	**11**	IAMs_20	IAMs_20	13 28 45.2	
	comp=Z,3µm,20.0s						
PDPR	**Patillas Dam,**	**48.90**	**7**	P	**P**	**13 04 49.3**	**-1.3**
SJG	**San Juan**	**48.98**	**7**	P	**P**	**13 04 50.2**	**-0.9**
SJG				pmax	pmax		
	comp=Z,167nm,1.0s						
SJG	**San Juan**	**48.98**	**7**	P	**P**	**13 04 50.2**	**-0.9**
ANWB	**Willy Bob**	**49.20**	**13**	*e*	**P**	**13 04 55.0**	**+2.3**
ANWB	**Willy Bob**	**49.20**	**13**	P	**P**	**13 04 50.7**	**-2.0**
SMRT	**St. Maarten**	**49.34**	**11**	*e*	**P**	**13 04 52.9**	**-1.1**
SMRT	**St. Maarten**	**49.34**	**11**	P	**P**	**13 04 52.4**	**-1.5**
SDDR	**Presa de Saban**	**49.55**	**1**	P	**P**	**13 04 56.2**	**+0.7**
VNA3	**Neumayer Olymp**	**52.21**	**159**	P	**P**	**13 05 15.6**	**+0.6**
VNA1	**Neumayer--Stat**	**52.51**	**158**	P	**P**	**13 05 18.0**	**+0.8**
VNA2	**Neumayer--Watz**	**52.85**	**158**	P	**P**	**13 05 20.3**	**+0.6**
	baz=289,slow=8.3						
SOR	**Soroa**	**54.40**	**347**	P	**P**	**13 05 31.1**	**-0.5**
SOR				pmax	pmax		
	comp=Z,51nm,1.0s						
SOR	**Soroa**	**54.40**	**347**	P	**P**	**13 05 31.1**	**-0.5**
SOR				IAmb	IAmb	13 05 39.5	
	comp=Z,51nm,1.0s						
SNAA	**Sanae**	**54.44**	**159**	P	**P**	**13 05 31.9**	**+0.5**
SNAA	**Sanae**	**54.44**	**159**	P	**P**	**13 05 31.4**	**0.0**
SNAA				pmax	pmax		
	comp=Z,84nm,0.8s						
SNAA	**Sanae**	**54.44**	**159**	P	**P**	**13 05 31.4**	**0.0**
UNM	**Universidad Na**	**56.39**	**329**	IAMs_20	IAMs_20	13 25 00.8	
	comp=Z,3µm,19.0s						
NVL	**N'lazarevskaya**	**59.15**	**157**	*e*P	P	13 06 09.9	+5.2
NVL				pmax	pmax		
	comp=Z,78nm,1.2s						
QSPA	**South Pole Qui**	**59.38**	**180**	P	**P**	**13 06 07.8**	**+1.1**
QSPA				IAmb	IAmb	13 06 10.5	
	comp=Z,54nm,0.8s						
656A	**Willston**	**60.75**	**349**	P	**P**	**13 06 14.8**	**-1.3**
H06S1	**SOCORRO T**	**62.01**	**317**	T	T	14 13 44.6	
	SNR=9.9						
H06E1	**SOCORRO T-PHAS**	**62.03**	**317**	T	T	14 13 47.4	
	SNR=23						
TIGA	**Tifton**	**62.95**	**349**	P	**P**	**13 06 31.3**	**+0.4**
	baz=169						
352A	**Blakely**	**63.22**	**347**	P	**P**	**13 06 32.4**	**-0.3**
352A				IAmb	IAmb	13 06 34.5	
	comp=Z,73nm,0.9s						
BRAL	**Brewton**	**63.35**	**345**	P	**P**	**13 06 34.5**	**+0.9**
	baz=165						
NHSC	**New Hope**	**64.10**	**352**	P	**P**	**13 06 38.8**	**+0.3**
NHSC	**New Hope**	**64.10**	**352**	P	**P**	**13 06 39.4**	**+0.9**
	baz=172						
152A	**Waverly Hall**	**64.34**	**348**	P	**P**	**13 06 40.0**	**-0.1**
833A	**Chaparral WMA,**	**64.45**	**333**	P	**P**	**13 06 43.0**	**+2.1**
	baz=154,SNR=18						
833A				S	**S**	**13 15 20.5**	**+1.9**
	baz=154						
HKT	**Hockley**	**64.63**	**337**	*i* P	**P**	**13 06 44.1**	**+2.1**
HKT				pmax	pmax		
	comp=Z,18nm,1.1s						
GOGA	**Godfrey**	**64.85**	**349**	P	**P**	**13 06 42.9**	**-0.5**
GOGA				pmax	pmax		
	comp=Z,19nm,0.9s						
GOGA	**Godfrey**	**64.85**	**349**	P	**P**	**13 06 42.9**	**-0.5**
GOGA	**Godfrey**	**64.85**	**349**	P	**P**	**13 06 43.8**	**+0.4**
	baz=169,SNR=6.1						
GOGA				S	**S**	**13 15 24.8**	**+1.5**
	baz=169						
SACV	**Santiago Islan**	**64.98**	**53**	P	**P**	**13 06 43.3**	**-1.4**
SACV				IAmb	IAmb	13 06 46.1	
	comp=Z,65nm,0.9s						
Z51A	**Franklin**	**65.06**	**348**	P	**P**	**13 06 44.7**	**-0.1**
VBMS	**Vicksburg**	**65.18**	**343**	P	**P**	**13 06 47.2**	**+1.7**
	baz=162,SNR=5.1						
VBMS				S	**S**	**13 15 30.4**	**+3.0**
	baz=162						
JSC	**Jenkinsville**	**65.39**	**351**	P	**P**	**13 06 46.5**	**-0.4**
JSC				pmax	pmax		
	comp=Z,23nm,0.9s						
JSC	**Jenkinsville**	**65.39**	**351**	P	**P**	**13 06 46.5**	**-0.4**
Y52A	**Lilburn**	**65.39**	**349**	P	**P**	**13 06 47.3**	**+0.3**
Y52A				IAmb	IAmb	13 06 48.7	
	comp=Z,82nm,1.3s						
HODGE	**Hodges**	**65.48**	**351**	P	**P**	**13 06 47.2**	**-0.3**
Z47A	**Carrollton**	**65.53**	**345**	P	**P**	**13 06 48.2**	**+0.4**
Z47A				IAmb	IAmb	13 06 49.8	
	comp=Z,44nm,0.9s						
BIRD	**Birdtown, Kers**	**65.65**	**352**	P	**P**	**13 06 48.6**	**0.0**
Y49A	**Blount Mountai**	**65.82**	**347**	P	**P**	**13 06 48.7**	**-1.0**
NATX	**Nacogdoches**	**65.92**	**339**	P	**P**	**13 06 52.1**	**+1.7**
	baz=159						
CNNC	**Cliffs of the**	**65.98**	**355**	P	**P**	**13 06 51.7**	**+1.0**
	baz=174						
PAULI	**Pauline**	**65.99**	**351**	P	**P**	**13 06 50.3**	**-0.5**
PAULI				IAmb	IAmb	13 06 52.9	
	comp=Z,53nm,1.2s						
435B	**Jarrell**	**66.00**	**336**	P	**P**	**13 06 52.5**	**+1.6**
	baz=156						
KMSC	**Kings Mountain**	**66.25**	**351**	P	**P**	**13 06 52.9**	**+0.4**
KMSC				IAmb	IAmb	13 06 54.4	
	comp=Z,57nm,1.2s						
KMSC	**Kings Mountain**	**66.25**	**351**	P	**P**	**13 06 53.1**	**+0.6**
	baz=171,SNR=7.7						
FPAL	**Fort Paine**	**66.33**	**348**	P	**P**	**13 06 53.0**	**0.0**
JCT	**Junction City**	**66.53**	**334**	P	**P**	**13 06 55.9**	**+1.5**
JCT				pmax	pmax		
	comp=Z,56nm,1.0s						
JCT	**Junction City**	**66.53**	**334**	P	**P**	**13 06 55.9**	**+1.5**
JCT				IAmb	IAmb	13 07 03.9	
	comp=Z,56nm,0.9s						
JCT	**Junction City**	**66.53**	**334**	P	**P**	**13 06 56.2**	**+1.7**
	baz=154,SNR=19						
JCT				S	**S**	**13 15 47.2**	**+3.0**
	baz=154						
V58A	**Windy Hill, Pi**	**66.64**	**354**	P	**P**	**13 06 55.2**	**+0.2**
V58A				IAmb	IAmb	13 06 56.2	
	comp=Z,38nm,0.8s						
Z41A	**Richland Creek**	**66.77**	**341**	P	**P**	**13 06 57.4**	**+1.6**
	baz=160						
TAOE	**Nuku Hiva Isla**	**66.92**	**273**	*e*S	**S**	**13 15 49.0**	**-0.7**
	comp=Z,1µm,28.4s						
TAOE	**Nuku Hiva Isla**	**66.92**	**273**	*e*LR	LR	13 27 09.7	
	comp=Z,2µm,23.0s,baz=129						
CPCT	**Cooper Cave**	**67.02**	**349**	P	**P**	**13 06 57.8**	**+0.5**
CPCT				IAmb	IAmb	13 06 59.3	
	comp=Z,98nm,1.3s						
WHTX	**Lake Whitney,**	**67.05**	**336**	P	**P**	**13 06 58.0**	**+0.4**
WHTX				IAmb	IAmb	13 07 06.8	
	comp=Z,58nm,1.0s						
WHTX	**Lake Whitney,**	**67.05**	**336**	P	**P**	**13 06 59.2**	**+1.6**
	baz=156,SNR=5.4						
WHTX				S	**S**	**13 15 52.1**	**+1.8**
	baz=156						
TX32	**Lajitas Array**	**67.09**	**330**	P	**P**	**13 06 59.0**	**+1.0**
TXAR	**Lajitas Array**	**67.09**	**330**	P	**P**	**13 06 59.7**	**+1.7**
	comp=Z,7.4nm,1.0s,baz=151,slow=8.4,SNR=48						
TXAR				LR	LR	13 32 13.7	
	comp=Z,1µm,18.3s,baz=0.0,slow=32						
TXAR				PKP2bc	**P'P'ab**	**13 35 27.2**	**+2.7**
	comp=Z,1.2nm,1.0s,baz=315,slow=0.5,SNR=7.9						
TXAR	**Lajitas Array**	**67.09**	**330**	P	**P**	**13 06 58.6**	**+0.5**
TXAR	**Lajitas Array**	**67.09**	**330**	P	**P**	**13 06 58.6**	**+0.5**
TX31	**Lajitas Ar. Si**	**67.09**	**330**	P	**P**	**13 06 58.8**	**+0.7**
TX31				IAmb	IAmb	13 07 45.1	
	comp=Z,78nm,1.1s						
TKL	**Tuckaleechee C**	**67.10**	**349**	P	**P**	**13 06 57.8**	**-0.1**
TKL				pmax	pmax		
	comp=Z,89nm,1.3s						
TKL	**Tuckaleechee C**	**67.10**	**349**	P	**P**	**13 06 57.8**	**-0.1**
TKL				IAmb	IAmb	13 06 59.5	
	comp=Z,89nm,1.2s						
VNDA	**Vanda**	**67.22**	**191**	P	**P**	**13 06 57.9**	**-0.3**
VNDA				pmax	pmax		
	comp=Z,36nm,1.5s						
VNDA	**Vanda**	**67.22**	**191**		**P**	**13 06 57.9**	**-0.3**
PLAL	**Pickwick Lake**	**67.25**	**346**	P	**P**	**13 06 58.8**	**+0.1**
V51A	**Loudon**	**67.34**	**349**	P	**P**	**13 06 58.9**	**-0.5**
V51A				IAmb	IAmb	13 07 01.1	
	comp=Z,48nm,1.0s						
Z38A	**Mt. Pleasant**	**67.42**	**339**	P	**P**	**13 07 01.1**	**+1.2**
Z38A				IAmb	IAmb	13 07 09.2	
	comp=Z,65nm,1.1s						
W45A	**Hickory Valley**	**67.66**	**345**	P	**P**	**13 07 01.4**	**+0.1**
TZTN	**Tazewell**	**67.94**	**350**	P	**P**	**13 07 03.1**	**0.0**
TZTN				IAmb	IAmb	13 07 04.8	
	comp=Z,105nm,1.4s						
TZTN	**Tazewell**	**67.94**	**350**	P	**P**	**13 07 03.4**	**+0.2**
	baz=169,SNR=10						
TZTN				S	**S**	**13 15 58.1**	**-2.7**
	baz=169						
X40A	**Basin Creek Fa**	**67.94**	**341**	P	**P**	**13 07 04.0**	**+0.8**
	baz=161						
X40A				S	**S**	**13 15 59.3**	**-1.5**
	baz=161						
CLTN	**Cedars of Leba**	**67.97**	**347**	P	**P**	**13 07 03.4**	**+0.1**
CLTN				IAmb	IAmb	13 07 04.8	
	comp=Z,41nm,0.9s						
BLA	**Blacksburg**	**68.18**	**353**	P	**P**	**13 07 05.8**	**+1.1**
	baz=172						
BLA				S	**S**	**13 16 03.4**	**-0.3**
	baz=172						
MIAR	**Mount Ida**	**68.20**	**341**	P	**P**	**13 07 06.0**	**+1.1**
	baz=160,SNR=16						
WVT	**Waverly**	**68.30**	**346**	P	**P**	**13 07 05.5**	**+0.1**
WVT				pmax	pmax		
	comp=Z,113nm,1.3s						
WVT	**Waverly**	**68.30**	**346**	P	**P**	**13 07 05.5**	**+0.1**
WVT	**Waverly**	**68.30**	**346**	P	**P**	**13 07 06.1**	**+0.7**
	baz=165						
WVT				S	**S**	**13 16 04.1**	**-0.9**
	baz=165						
ABTX	**Abilene, Hawle**	**68.40**	**335**	P	**P**	**13 07 07.7**	**+1.5**
	baz=154,SNR=7.7						
ABTX				S	**S**	**13 16 07.8**	**+1.3**
	baz=154						
W41B	**Gary Mavity, V**	**68.43**	**342**	P	**P**	**13 07 07.2**	**+1.0**
	baz=161,SNR=9.2						
WHAR	**Wooly Hollow**	**68.55**	**342**	P	**P**	**13 07 07.7**	**+0.7**
SYO	**Syowa Base**	**68.73**	**159**⇑	*i*P	**P**	**13 07 07.8**	**0.0**
SYO	**Syowa Base**	**68.73**	**159**⇑	*e*pP	pP	13 07 13.8	-0.6
W39A	**Magazine**	**68.87**	**341**	P	**P**	**13 07 10.1**	**+1.2**
W39A	**Magazine**	**68.87**	**341**	P	**P**	**13 07 10.6**	**+1.7**
	baz=160,SNR=43						
W39A				S	**S**	**13 16 13.3**	**+1.5**
	baz=160						
CBN	**Corbin Frederi**	**68.89**	**355**	P	**P**	**13 07 10.2**	**+1.2**
	baz=175						
FCAR	**Ozark Folk Cen**	**69.07**	**342**	P	**P**	**13 07 09.9**	**-0.3**
MBO	**M'Bour**	**69.30**	**58**	IAMs_20	IAMs_20	13 37 52.0	
	comp=Z,2µm,18.0s						
Q61A	**Milford**	**69.45**	**357**	P	**P**	**13 07 14.2**	**+1.8**
	baz=177						
MEH	**Mehetia**	**69.48**	**261**	*e*T	T	14 23 14.0	
	comp=Z,78nm,0.2s						
X34A	**Smith Ranch, M**	**69.56**	**337**		**P**	**13 07 14.3**	**+0.9**
X34A				IAmb	IAmb	13 07 22.4	
	comp=Z,71nm,0.9s						
U40A	**Yellville**	**69.70**	**342**	P	**P**	**13 07 15.2**	**+1.0**
	baz=161,SNR=37						
U40A				S	**S**	**13 16 22.5**	**+0.8**
	baz=161						
MNTX	**Cornudas Mount**	**69.87**	**330**	P	**P**	**13 07 15.6**	**+0.2**
MNTX				IAMs_20	IAMs_20	13 33 42.7	
	comp=Z,2µm,20.0s						
MNTX	**Cornudas Mount**	**69.87**	**330**	P	**P**	**13 07 16.1**	**+0.7**
	baz=150,SNR=27						
MNTX				S	**S**	**13 16 24.7**	**+0.8**
	baz=150						
T42A	**Van Buren**	**69.89**	**344**	P	**P**	**13 07 15.6**	**+0.3**
HHAR	**Hobbs**	**69.93**	**341**	P	**P**	**13 07 15.4**	**-0.1**
HHAR				IAmb	IAmb	13 07 24.0	
	comp=Z,66nm,0.9s						
Q54A	**Coxs Mills**	**69.98**	**353**	P	**P**	**13 07 15.4**	**-0.4**
FNO	**Franklin**	**70.02**	**338**		**P**	**13 07 16.9**	**+0.8**
FNO				IAmb	IAmb	13 07 25.3	
	comp=Z,36nm,1.0s						
WCI	**Wyandotte Cave**	**70.04**	**348**	P	**P**	**13 07 15.8**	**-0.4**
WCI				pmax	pmax		
	comp=Z,57nm,1.1s						
WCI	**Wyandotte Cave**	**70.04**	**348**	P	**P**	**13 07 15.8**	**-0.4**
WCI				IAmb	IAmb	13 09 17.4	
	comp=Z,57nm,1.1s						
WCI	**Wyandotte Cave**	**70.04**	**348**	P	**P**	**13 07 16.0**	**-0.1**
	baz=167						
TUL1	**Leonard**	**70.12**	**339**	P	**P**	**13 07 17.6**	**+0.9**
	baz=158,SNR=14						
TUL1				S	**S**	**13 16 27.6**	**+1.0**
	baz=158						
P60A	**Greenville**	**70.39**	**357**	P	**P**	**13 07 19.6**	**+1.3**
	baz=176,SNR=5.2						
EPT	**El Paso**	**70.42**	**329**	IAMs_20	IAMs_20	13 34 18.3	
	comp=Z,2µm,19.0s						
MCWV	**Mont Chateau**	**70.54**	**353**	P	**P**	**13 07 20.1**	**+0.9**
	baz=173						
TIAR	**Tiarei**	**70.71**	**261**	*e*T	T	14 24 45.2	
	comp=Z,3.0nm,0.2s						
P52A	**Corning**	**70.78**	**352**	P	**P**	**13 07 20.8**	**+0.2**
	baz=171,SNR=15						
MSTX	**Muleshoe**	**70.78**	**333**	P	**P**	**13 07 22.0**	**+1.1**
	baz=152,SNR=17						
MSTX				S	**S**	**13 16 36.2**	**+1.7**
	baz=152						
PAE	**Paea**	**70.86**	**260**	*e*T	T	14 24 50.8	
	comp=Z,1.3nm,0.3s						
PPT2	**Papeete2**	**70.89**	**261**	*e*S	**S**	**13 16 37.5**	**+0.8**
	comp=Z,1µm,26.0s						
PPT2	**Papeete2**	**70.89**	**261**	*e*LR	LR	13 29 02.0	
	comp=Z,2µm,24.2s,baz=120						
PPT2	**Papeete2**	**70.89**	**261**	*e*T	T	14 24 57.3	
	comp=Z,3.2nm,0.3s						
PPT	**Papeete**	**70.90**	**261**	LR	LR	13 30 13.4	
	comp=Z,1µm,18.1s,baz=102,slow=29						
CCM	**Cathedral Cave**	**70.91**	**344**	P	**P**	**13 07 22.1**	**+0.6**
CCM				pmax	pmax		
	comp=Z,106nm,1.1s						
CCM	**Cathedral Cave**	**70.91**	**344**	P	**P**	**13 07 22.1**	**+0.6**
CCM	**Cathedral Cave**	**70.91**	**344**	P	**P**	**13 07 22.6**	**+1.1**
	baz=162						
CCM				S	**S**	**13 16 35.2**	**-0.4**
	baz=162						
BLO	**Bloomington**	**70.99**	**348**	P	**P**	**13 07 22.2**	**+0.3**
BLO				pmax	pmax		
	comp=Z,39nm,0.7s						
BLO	**Bloomington**	**70.99**	**348**	P	**P**	**13 07 22.2**	**+0.3**
BLO				IAmb	IAmb	13 08 33.8	
	comp=Z,39nm,0.7s						
O56A	**Blue Knob Stat**	**71.03**	**355**	P	**P**	**13 07 23.1**	**+0.8**
O56A				IAmb	IAmb	13 07 24.2	
	comp=Z,34nm,0.9s						
O56A	**Blue Knob Stat**	**71.03**	**355**	P	**P**	**13 07 23.5**	**+1.3**
	baz=174,SNR=10.0						
P49A	**Miami Univ. Ec**	**71.04**	**349**	P	**P**	**13 07 21.7**	**-0.6**
P49A				IAmb	IAmb	13 07 23.0	
	comp=Z,43nm,0.9s						
P49A	**Miami Univ. Ec**	**71.04**	**349**	P	**P**	**13 07 22.4**	**+0.2**
	baz=168,SNR=7.2						
AMTX	**Amarillo**	**71.17**	**334**	P	**P**	**13 07 24.7**	**+1.4**
	baz=153						
T35A	**Sooner Cattle**	**71.27**	**339**		**P**	**13 07 24.4**	**+0.7**
T35A				IAmb	IAmb	13 07 33.2	
	comp=Z,66nm,1.1s						
O53A	**New Philadelph**	**71.27**	**352**	P	**P**	**13 07 24.1**	**+0.5**
	baz=171,SNR=5.7						
SSPA	**Standing Stone**	**71.35**	**355**	P	**P**	**13 07 24.9**	**+0.9**
SSPA				IAmb	IAmb	13 07 25.9	
	comp=Z,38nm,0.9s						
SSPA	**Standing Stone**	**71.35**	**355**	P	**P**	**13 07 25.2**	**+1.2**
	baz=174						
SSPA				S	**S**	**13 16 42.3**	**+1.6**
	baz=174						
319A	**Douglas**	**71.36**	**327**	P	**P**	**13 07 24.4**	**-0.1**
319A				IAmb	IAmb	13 07 25.8	
	comp=Z,37nm,0.9s						
R40A	**Maddies Statio**	**71.38**	**343**	P	**P**	**13 07 24.8**	**+0.5**
ACSO	**Alum Creek Sta**	**71.47**	**351**	P	**P**	**13 07 24.4**	**-0.4**
ACSO	**Alum Creek Sta**	**71.47**	**351**	P	**P**	**13 07 25.4**	**+0.5**
	baz=170,SNR=20						
N59A	**State Game Lan**	**71.50**	**357**	P	**P**	**13 07 25.4**	**+0.4**
N59A				IAmb	IAmb	13 07 28.1	
	comp=Z,80nm,1.1s						
N59A	**State Game Lan**	**71.50**	**357**	P	**P**	**13 07 26.8**	**+1.8**
	baz=176,SNR=15						
N59A				S	**S**	**13 16 46.7**	**+4.2**
	baz=176						
PAL	**Palisades**	**71.52**	**358**	P	**P**	**13 07 26.2**	**+1.2**
	baz=178						
121A	**Cookes Peak, D**	**71.64**	**328**	P	**P**	**13 07 28.8**	**+2.6**
	baz=148,SNR=16						
N54A	**Moraine State**	**71.85**	**354**	P	**P**	**13 07 28.0**	**+0.9**
	baz=173,SNR=8.4						
SFIN	**Lafayette**	**72.27**	**348**	P	**P**	**13 07 29.3**	**-0.3**
	baz=166,SNR=6.6						
SFIN				S	**S**	**13 16 47.8**	**-3.4**
	baz=166						
M54A	**Oil Creek Stat**	**72.36**	**354**	P	**P**	**13 07 30.8**	**+0.7**
	baz=173,SNR=11						
M53A	**WI Miller and**	**72.39**	**353**	P	**P**	**13 07 30.9**	**+0.6**
	baz=172,SNR=12						
Y22D	**IRIS PASSCAL I**	**72.57**	**330**	IAMs_20	IAMs_20	13 35 30.0	
	comp=Z,2µm,19.0s						
Y22D	**IRIS PASSCAL I**	**72.57**	**330**	P	**P**	**13 07 34.1**	**+2.4**
	baz=149						
BINY	**Binghamton**	**72.79**	**357**	P	**P**	**13 07 33.9**	**+1.2**
	baz=176,SNR=8.5						
TUC	**Tucson**	**72.85**	**326**	P	**P**	**13 07 34.2**	**+0.9**
	baz=146						
HDIL	**Hopedale**	**72.87**	**346**	P	**P**	**13 07 33.9**	**+0.7**
HDIL				IAmb	IAmb	13 07 34.2	
	comp=Z,40nm,0.7s						
HDIL	**Hopedale**	**72.87**	**346**	P	**P**	**13 07 33.5**	**+0.3**
	baz=164						
HDIL				S	**S**	**13 16 55.8**	**-2.3**
	baz=164						
L61B	**Northampton**	**72.94**	**359**	P	**P**	**13 07 35.0**	**+1.4**
	baz=179,SNR=13						
ERPA	**Erie**	**72.99**	**354**	P	**P**	**13 07 34.6**	**+0.7**
	baz=173,SNR=10						
HRV	**Adam Dziewonsk**	**72.99**	**0**	P	**P**	**13 07 35.5**	**+1.6**
	baz=180						
ANMO	**Albuquerque**	**73.12**	**331**	*ce*P	**P**	**13 07 36.5**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,21nm,1.3s						
ANMO	**Albuquerque**	**73.12**	**331**	P	**P**	**13 07 36.2**	**+1.2**
ANMO	**Albuquerque**	**73.12**	**331**	IAMs_20	IAMs_20	13 35 11.6	
	comp=Z,2µm,20.0s						
ANMO	**Albuquerque**	**73.12**	**331**	P	**P**	**13 07 37.4**	**+2.3**
	baz=149						
ANMO				S	**SKiKP**	**13 17 04.0**	**-2.2**
	baz=149						
KSU1	**Kansas State U**	**73.32**	**340**	P	**P**	**13 07 36.4**	**+0.5**
	baz=158						
214A	**Organ Pipe Nat**	**73.55**	**324**	P	**P**	**13 07 40.0**	**+2.5**
	baz=144						
AAM	**Ann Arbor**	**73.60**	**351**	P	**P**	**13 07 38.2**	**+0.7**
	baz=169						
LIC	**Lamto**	**73.63**	**72**	*e*P	**P**	**13 07 37.6**	**-0.7**
	comp=Z,290nm,1.1s						
TIC	**Toumodi**	**73.87**	**72**	*e*P	**P**	**13 07 39.1**	**-0.7**
KIC	**Kosan Boka**	**73.94**	**72**	*e*P	**P**	**13 07 39.5**	**-0.6**
	comp=Z,215nm,0.8s						
N38A	**Joes South For**	**73.99**	**343**	P	**P**	**13 07 39.9**	**+0.1**
J59A	**Piesco**	**73.99**	**358**	P	**P**	**13 07 40.2**	**+0.5**
J59A				IAmb	IAmb	13 07 42.2	
	comp=Z,62nm,1.1s						
J57A	**Williamstown**	**74.00**	**357**	P	**P**	**13 07 39.6**	**-0.1**
J57A				IAmb	IAmb	13 07 41.9	
	comp=Z,65nm,0.9s						
DBIC	**Dimbokro**	**74.02**	**72**	P	**P**	**13 07 40.1**	**-0.5**
	comp=Z,92nm,0.7s,baz=232,slow=5.5,SNR=146						
DBIC				LR	LR	13 37 36.2	
	comp=Z,4µm,19.8s,baz=241,slow=34						

DBIC	Dimbokro	74.02	72	P	P	13 07 39.5	-1.1
DBIC				pmax	pmax		
	comp=Z,105nm,0.8s						
DBIC	Dimbokro	74.02	72	P	P	13 07 39.5	-1.1
CBKS	Cedar Bluff	74.02	338	P	P	13 07 41.7	+1.6
	baz=155,SNR=8.9						
J54A	Appleton	74.02	355	P	P	13 07 40.7	+0.8
J54A				IAmb	IAmb	13 07 41.9	
	comp=Z,72nm,1.0s						
L44A	Lake County Fo	74.16	348	P	P	13 07 40.9	+0.1
	baz=166						
T25A	Trinidad	74.19	333	P	P	13 07 43.5	+2.2
	baz=151,SNR=32						
T25A				S	S	13 17 15.1	+1.3
	baz=151						
NCB	Newcomb	74.49	358	P	P	13 07 43.1	+0.4
W18A	Petrified Fore	74.69	329	P	P	13 07 46.5	+2.3
	baz=147						
LBNH	Lisbon	74.73	360	P	P	13 07 45.8	+1.8
	baz=180,SNR=11						
SCIA	State Center	75.03	344	P	P	13 07 46.5	+0.7
	baz=161,SNR=5.9						
SCIA				S	S	13 17 21.3	-1.2
	baz=161						
SDCO	Great Sand Dun	75.15	333	P	P	13 07 49.0	+2.1
	baz=150,SNR=20						
LONY	Lake Ozonia	75.15	358	P	P	13 07 47.0	+0.6
LONY				IAmb	IAmb	13 07 48.8	
	comp=Z,52nm,1.0s						
LONY	Lake Ozonia	75.15	358	P	P	13 07 47.7	+1.3
	baz=178,SNR=14						
LONY				S	S	13 17 24.8	+1.1
	baz=178						
KSCO	Kaye Shedlock’	75.19	336	P	P	13 07 49.0	+2.0
	baz=153,SNR=6.6						
JFWS	Jewell Farm	75.33	346	P	P	13 07 48.3	+0.8
	baz=164,SNR=13						
JFWS				S	S	13 17 23.6	-2.1
	baz=164						
GLA	Glamis	75.44	324	P	P	13 07 50.7	+2.2
	baz=143						
S22A	4UR Ranch, Cre	75.67	332	P	P	13 07 48.9	-1.2
	baz=149,SNR=34						
S22A				S	S	13 17 34.0	+3.6
	baz=149						
WUAZ	Wupatki	75.76	328	P	P	13 07 53.0	+2.6
	baz=146,SNR=10						
G65A	Princeton	75.79	3	P	P	13 07 51.5	+1.5
G65A				IAmb	IAmb	13 07 52.4	
	comp=Z,51nm,1.1s						
PKME	Peaks-Kenny Pk	75.79	2	P	P	13 07 50.4	+0.4
PKME				IAmb	IAmb	13 07 52.2	
	comp=Z,38nm,0.8s						
PKME	Peaks-Kenny Pk	75.79	2	P	P	13 07 51.4	+1.4
	baz=182						
MOQ	Mont Orford	75.80	360	P	P	13 07 50.9	+0.7
SWSC	Sam W. Stewart	75.86	323	P	P	13 07 51.2	+0.5
	baz=142						
BGNE	Belgrade	75.90	340	P	P	13 07 51.2	+0.3
BGNE	Belgrade	75.90	340	P	P	13 07 52.0	+1.2
	baz=157,SNR=6.3						
BGNE				S	S	13 17 32.5	+0.4
	baz=157						
MVCO	Mesa Verde	75.91	331	IAMs_20	IAMs_20	13 37 12.5	
	comp=Z,1µm,20.0s						
MVCO	Mesa Verde	75.91	331	P	P	13 07 53.7	+2.4
	baz=148,SNR=12						
MVCO				S	S	13 17 35.3	+2.4
	baz=148						
Q24A	Divide	76.07	334	P	P	13 07 54.3	+2.0
	baz=151,SNR=27						
Q24A				S	S	13 17 38.1	+3.4
	baz=151						
PDMCI	Parker Dam,Lak	76.10	325	P	P	13 07 54.2	+2.1
	baz=143						
MAW	Mawson	76.14	164	P	P	13 07 52.7	+0.7
	comp=Z,58nm,0.8s,baz=214,slow=7.3,SNR=81						
MAW				LR	LR	13 40 16.5	
	comp=Z,2µm,21.7s,baz=230,slow=35						
MAW	Mawson	76.14	164	P	P	13 07 52.6	+0.7
	baz=87,SNR=54						
MAW	Mawson	76.14	164	P	P	13 07 52.3	+0.3
MAW				pmax	pmax		
	comp=Z,13nm,0.8s						
MAW	Mawson	76.14	164	P	P	13 07 52.3	+0.3
SUR	Sutherland	76.21	120	P	P	13 07 52.7	-0.6
SUR				IAmb	IAmb	13 08 07.6	
	comp=Z,46nm,0.9s						
SUR	Sutherland	76.21	120	IAMs_20	IAMs_20	13 39 07.2	
	comp=Z,2µm,18.0s						
GLMI	Grayling	76.21	351	P	P	13 07 53.4	+0.9
	baz=169						
F63A	Nahmakanta, Br	76.23	2	P	P	13 07 53.5	+0.9
F63A				IAmb	IAmb	13 07 55.7	
	comp=Z,134nm,1.6s						
BC3	Big Chuckawall	76.24	324	P	P	13 07 55.3	+2.2
	baz=142,SNR=8.0						
IRM	Iron Mountain	76.48	324	P	P	13 07 56.7	+2.4
	baz=143,SNR=6.6						
LMN	Caledonia Moun	76.60	5	P	P	13 07 55.6	+0.8
OGNE	Ogallala	76.71	337	P	P	13 07 57.3	+1.8
	baz=154						
TPFO	Pinon Flats	76.72	323	P	P	13 07 58.3	+2.5
	baz=142,SNR=5.6						
PFO	Pinyon Flats O	76.72	323	P	P	13 07 58.4	+2.6
	baz=142,SNR=6.3						
TRQ	Mont Tremblant	76.75	358	P	P	13 07 55.6	0.0
TRQ				IAmb	IAmb	13 07 57.5	
	comp=Z,78nm,0.9s						
BELC	Belle Mtn. Jos	76.79	324	P	P	13 07 58.5	+2.2
	baz=142						
ISCO	Idaho Springs	76.97	334	P	P	13 07 59.1	+1.7
	baz=151,SNR=18						
MURC	Murrieta	77.10	322	P	P	13 07 59.1	+1.3
	baz=141						
PQI	Presque Isle	77.23	3	P	P	13 07 58.4	+0.2
PQI				IAmb	IAmb	13 08 00.9	
	comp=Z,84nm,1.0s						
GMRC	Granite Mounta	77.24	324	P	P	13 08 01.2	+2.5
	baz=142,SNR=10						
SCI2	San Clemente I	77.34	321	P	P	13 08 00.7	+1.5
	baz=140						
BBRC	Big Bear Solar	77.47	323	P	P	13 08 02.8	+2.6
	baz=141						
G40A	Rib Lake	77.58	347	P	P	13 08 00.6	+0.4
G40A				IAmb	IAmb	13 08 02.2	
	comp=Z,47nm,1.1s						
CIS	Catalina Islan	77.59	322	P	P	13 08 03.1	+2.5
	baz=140						
D62A	Allapoint, All	77.61	2	P	P	13 08 01.3	+1.0
ECSD	EROS Data Cent	77.61	342	P	P	13 08 00.5	+0.1
ECSD				IAmb	IAmb	13 08 09.0	
	comp=Z,104nm,1.0s						
ECSD	EROS Data Cent	77.61	342	P	P	13 08 01.4	+0.9
	baz=158,SNR=62						
ECSD				S	S	13 17 49.4	-1.4
	baz=158						
HEC	Hector,Ludlow	77.61	324	P	P	13 08 03.4	+2.7
	baz=142,SNR=8.6						
RAR	Rarotonga	77.74	253	LR	LR	13 33 48.5	
	comp=Z,1µm,21.0s,baz=126,slow=29						
BFSC	Mount Baldy Ra	77.84	323	P	P	13 08 04.3	+2.2
	baz=141						
TUQ	Turquoise Moun	77.89	324	P	P	13 08 04.7	+2.4
	baz=142,SNR=9.3						
WIN	Windhoek	77.90	109	P	P	13 08 01.9	-1.1
WIN				pmax	pmax		
	comp=Z,102nm,1.2s						
WIN	Windhoek	77.90	109	P	P	13 08 01.9	-1.1
WIN				IAmb	IAmb	13 08 04.4	
	comp=Z,102nm,1.2s						
BATG	Bathurst New B	77.94	4	P	P	13 08 03.4	+1.3
BATG				IAmb	IAmb	13 08 04.9	
	comp=Z,68nm,0.9s						
RRX	Edison Barstow	77.99	323	P	P	13 08 05.5	+2.7
	baz=141						
N23A	Red Feather La	78.05	334	P	P	13 08 05.4	+2.1
	baz=150,SNR=5.5						
N23A				S	S	13 17 59.6	+3.4
	baz=150						
SNCC	San Nicolas Is	78.07	321	P	P	13 08 04.5	+1.3
	baz=140						
SPMN	Marine on St.	78.08	345	P	P	13 08 03.2	+0.2
	baz=162						
DECC	Green Verdugo	78.20	322	P	P	13 08 05.9	+2.0
	baz=140						
GSC	Goldstone, Bar	78.22	324	P	P	13 08 06.5	+2.4
	baz=142,SNR=8.2						
O20A	White River Ci	78.29	332	P	P	13 08 06.4	+1.9
	baz=149						
SHOC	Shoshone, Teco	78.43	325	P	P	13 08 07.4	+2.3
	baz=142						
EDW2	Edwards Air Fo	78.51	323	P	P	13 08 08.2	+2.5
	baz=141						
VLDQ	Val d'Or	78.76	356	P	P	13 08 07.1	+0.4
VLDQ				IAmb	IAmb	13 08 08.9	
	comp=Z,90nm,1.0s						
LRMC	Laurel Mtn Rad	78.81	323	P	P	13 08 09.7	+2.2
	baz=141,SNR=8.1						
SUSD	Miller	78.92	341	P	P	13 08 08.5	+0.8
	baz=156						
SUSD				S	S	13 18 04.7	0.0
	baz=156						
E38A	The Farm, Brul	79.13	346	P	P	13 08 09.0	+0.2
FURC	Furnace Creek,	79.17	324	P	P	13 08 11.7	+2.6
	baz=142,SNR=6.8						
KOWA	Kowa	79.18	66	P	P	13 08 08.6	-1.1
KOWA				IAmb	IAmb	13 08 10.8	
	comp=Z,54nm,0.7s						
ISA	Isabella, Lake	79.36	323	P	P	13 08 13.0	+2.6
	baz=140,SNR=10.0						
PKM	Mcpherson Peak	79.47	322	P	P	13 08 13.8	+2.6
	baz=140						
CWC	Cottonwood Cre	79.76	324	P	P	13 08 15.3	+2.6
	baz=141						
K22A	Casper	79.79	335	P	P	13 08 14.4	+1.8
	baz=150,SNR=7.1						
VES	Vestal, Richgr	79.81	323	P	P	13 08 15.2	+2.4
	baz=140,SNR=5.1						
SMMC	Simmler	79.89	322	P	P	13 08 14.2	+1.0
	baz=139						
TSUM	Tsumeb	79.91	106	P	P	13 08 13.3	-0.7
SPR3	Spring Creek 3	79.96	328	P	P	13 08 14.5	+0.6
JLU	Jordanelle	80.00	330	P	P	13 08 14.5	+0.5
R11A	Troy Canyon, C	80.03	326	P	P	13 08 16.3	+2.2
	baz=143,SNR=16						
RSSD	Black Hills	80.21	337	P	P	13 08 16.4	+1.5
	baz=152						
RSSD				S	S	13 18 20.1	+1.3
	baz=152						
DUG	Dugway, Tooele	80.25	329	IAMs_20	IAMs_20	13 38 56.6	
	comp=Z,2µm,19.0s						
DUG	Dugway, Tooele	80.25	329	P	P	13 08 17.1	+1.9
	baz=145,SNR=15						
TIN	Tinemaha, Big	80.31	324	P	P	13 08 18.2	+2.7
	baz=141						
VOG	Valley Oaks Go	80.34	323	P	P	13 08 16.9	+1.3
	baz=140						
EYMN	Ely	80.40	347	P	P	13 08 15.8	+0.2
	baz=163,SNR=7.9						
HWUT	Hardware Ranch	80.88	331	IAMs_20	IAMs_20	13 40 37.2	
	comp=Z,2µm,18.0s						
PDAR	Pinedale Array	81.04	333	P	P	13 08 20.4	+1.0
	comp=Z,8.1nm,1.0s,baz=162,slow=5.8,SNR=12						
PDAR				PKKPbc	PKKPbc	13 26 55.9	-2.4
	comp=Z,1.1nm,0.7s,baz=181,slow=1.0,SNR=9.0						
PDAR				LR	LR	13 41 04.5	
	comp=Z,846nm,20.4s,baz=152,slow=33						
BW06	Boulder Array	81.04	333	P	P	13 08 20.5	+1.0
	baz=148,SNR=5.5						
BW06				S	S	13 18 29.3	+1.6
	baz=148						
MLAC	Mammoth, Mammo	81.06	324	P	P	13 08 21.9	+2.2
	baz=140,SNR=7.6						
E28A	Huff	81.36	340	P	P	13 08 21.3	+0.4
BOSA	Boshof	81.38	118	P	P	13 08 21.4	-0.3
	comp=Z,56nm,0.8s,baz=246,slow=5.2,SNR=89						
BOSA				LR	LR	13 40 07.9	
	comp=Z,2µm,19.9s,baz=246,slow=33						
BOSA	Boshof	81.38	118	P	P	13 08 21.1	-0.6
BOSA				pmax	pmax		
	comp=Z,72nm,0.9s						
BOSA	Boshof	81.38	118	P	P	13 08 21.1	-0.6
BOSA				IAmb	IAmb	13 08 22.6	
	comp=Z,72nm,0.9s						
NVAR	Mina Array Bea	81.41	325	P	P	13 08 23.5	+1.9
	comp=Z,7.4nm,0.9s,baz=143,slow=5.9,SNR=14						
NVAR				PKKPbc	PKKPbc	13 26 58.0	+0.9
	comp=Z,0.1nm,0.3s,baz=232,slow=3.6,SNR=4.2						
NVAR				LR	LR	13 38 19.8	
	comp=Z,635nm,19.4s,baz=140,slow=31						
AGMN	Agassiz Nation	81.68	344	P	P	13 08 22.4	0.0
AGMN				IAmb	IAmb	13 08 23.8	
	comp=Z,37nm,0.8s						
AGMN	Agassiz Nation	81.68	344	P	P	13 08 23.2	+0.7
	baz=159,SNR=21						
PMAR	Madeira	81.83	44	eP	P	13 08 24.0	+0.2
	comp=Z,178nm,1.6s						
MDND	Maddock	82.22	342	P	P	13 08 26.6	+1.3
	baz=156,SNR=21						
MDND				S	S	13 18 38.9	-0.2
	baz=156						
RLMT	Red Lodge	82.93	334	P	P	13 08 30.8	+1.4
	baz=148,SNR=5.3						
TORD	Torodi Ar. Bea	82.97	70	P	P	13 08 29.3	-0.7
	comp=Z,32nm,0.5s,baz=277,slow=5.4,SNR=133						
TORD				LR	LR	13 43 20.5	
	comp=Z,3µm,19.4s,baz=230,slow=34						
CASY	Casey	83.17	181	IAMs_20	IAMs_20	13 48 18.3	
	comp=Z,2µm,20.0s						
LAO	LASA Array	83.20	337	P	P	13 08 31.6	+1.1
	baz=151,SNR=8.4						
LAO				S	S	13 18 49.9	+0.6
	baz=151						
ULM	Lac du Bonnet	83.51	345	P	P	13 08 32.3	+0.4
	comp=Z,62nm,1.1s,baz=154,slow=5.0,SNR=36						
HLID	Hailey	83.69	330	P	P	13 08 35.2	+2.0
	baz=144,SNR=16						
DGMT	Dagmar	84.11	339	P	P	13 08 36.6	+1.5
	baz=152,SNR=12						
BOZ	Bozeman (W)	84.23	333	P	P	13 08 37.1	+1.2
	baz=146,SNR=6.6						
O03E	Paynes Creek	84.58	324	P	P	13 08 38.8	+1.0
	baz=139						
O02D	Mt. Diablo Mer	85.00	323	P	P	13 08 41.1	+1.2
	baz=138						
MQZ	McQueen’s Vall	85.26	221	IAMs_20	IAMs_20	13 36 08.5	
	comp=Z,2µm,20.0s						
SCHQ	Schefferville	85.44	3	P	P	13 08 41.9	+0.3
	comp=Z,56nm,1.1s,baz=164,slow=3.9,SNR=17						
SCHQ				LR	LR	13 50 54.6	
	comp=Z,155nm,18.1s,baz=194,slow=38						
N02D	Trinity Center	85.55	324	P	P	13 08 43.7	+1.1
	baz=138						
EGMT	Eagleton	85.57	336	P	P	13 08 42.9	+0.4
	baz=148						
M04C	Macdoel	85.72	325	P	P	13 08 45.2	+1.7
	baz=139,SNR=5.4						
URZ	Urewera	85.91	227	LR	LR	13 37 46.6	
	comp=Z,1µm,21.3s,baz=211,slow=29						
M02C	Callahan	85.93	324	P	P	13 08 46.0	+1.5
	baz=138						
BMO	Blue Mountains	85.97	329	IAMs_20	IAMs_20	13 42 28.7	
	comp=Z,1µm,18.0s						
MSO	Missoula	86.15	333	IAMs_20	IAMs_20	13 44 30.3	
	comp=Z,1µm,20.0s						
MSO	Missoula	86.15	333	P	P	13 08 47.1	+1.6
	baz=145						
L04D	Klamath Falls	86.27	325	P	P	13 08 47.4	+1.2
	baz=138						
K04D	Chiloquin, OR	86.31	326	P	P	13 08 47.9	+1.6
	baz=139						
J05D	Fort Rock, OR	86.56	326	P	P	13 08 49.4	+1.8
	baz=139,SNR=7.6						
L02E	Cave Junction	86.88	324	P	P	13 08 51.7	+2.7
	baz=137						
J04D	Umpqua Nationa	86.94	326	P	P	13 08 51.7	+2.1
	baz=138						
K02D	Willamette Mer	87.30	325	P	P	13 08 53.4	+2.3
	baz=137						
I05D	Terrebonne, OR	87.40	327	P	P	13 08 53.4	+1.9
	baz=139,SNR=7.3						
I04A	Tendick Farm,	87.50	326	P	P	13 08 53.8	+1.8
	baz=138						
I03D	Drain, OR	87.89	325	P	P	13 08 54.5	+0.7
	baz=138						
G05D	Wamic, OR	88.07	327	P	P	13 08 56.2	+1.5
	baz=139						
NEW	Newport	88.59	332	P	P	13 08 57.1	0.0
	comp=Z,4.5nm,1.0s,baz=76,slow=2.6,SNR=4.2						
NEW	Newport	88.59	332	P	P	13 08 58.5	+1.4
	baz=142						
F05D	White Salmon	88.63	328	P	P	13 08 59.1	+1.8
	baz=139						
G03D	McMinnville, O	88.97	326	P	P	13 09 00.9	+2.1
	baz=138						
FFC	Flin Flon	89.09	343	eP	P	13 09 01.4	+2.2
FFC	Flin Flon	89.09	343	P	P	13 08 59.7	+0.5
FFC				IAmb	IAmb	13 09 00.8	
	comp=Z,30nm,1.1s						
LTY	Liberty	89.31	329	P	P	13 09 01.4	+0.9
B08A	Colville Reser	89.58	331	P	P	13 09 02.2	+0.5
E04D	Cinebar	89.64	328	P	P	13 09 03.3	+1.3
	baz=138						
MDT	Midelt	89.70	51	P	P	13 09 02.4	-0.4
	comp=Z,6.6nm,1.0s,baz=270,slow=1.0						
MORF	Marmelete	89.91	45	eP	P	13 09 03.5	-0.1
MORF				IAMs_20	IAMs_20	13 48 16.8	
	comp=Z,2µm,16.7s						
MORF	Marmelete	89.91	45	eP	P	13 09 02.6	-1.0
	comp=Z,61nm,1.7s						
MORF	Marmelete	89.91	45	eP	P	13 09 03.5	-0.1
PTEO	Sao Teotonio	90.02	45	eP	P	13 09 04.3	+0.3
	comp=Z,67nm,1.7s						
D04E	Lakebay	90.20	328	P	P	13 09 06.6	+2.1
	baz=138						
PBDV	Barranco-do-Ve	90.31	46	eP	P	13 09 06.0	+0.6
	comp=Z,43nm,1.4s						
PCVE	Castro Verde	90.50	45	eP	P	13 09 06.7	+0.5
	comp=Z,34nm,1.2s						
MESJ	Messejana	90.52	45	eP	P	13 09 06.4	+0.1
MESJ				IAMs_20	IAMs_20	13 48 06.0	
	comp=Z,2µm,21.1s						
MESJ	Messejana	90.52	45	eP	P	13 09 06.7	+0.4
	comp=Z,34nm,1.6s						
MESJ	Messejana	90.52	45	eP	P	13 09 06.4	+0.1
PVAQ	Vaqueiros	90.55	46	eP	P	13 09 08.1	+1.6
	comp=Z,49nm,1.5s						
PVAQ	Vaqueiros	90.55	46	eLR	LR	13 42 00.0	
	comp=Z,2µm,20.0s						
D03D	Eldon	90.61	328	P	P	13 09 07.5	+1.1
	baz=138						
B05A	Bryant	90.70	329	P	P	13 09 07.5	+0.6
	baz=139						
PBEJ	Beja	90.85	45	eP	P	13 09 08.2	+0.3
	comp=Z,26nm,2.1s						
EVO	Evora	91.08	45	eP	P	13 09 08.8	-0.1
	comp=Z,18nm,1.7s						
PSBE	So Bento	91.24	44	eP	P	13 09 09.8	+0.1
	comp=Z,72nm,1.9s						
PMTG	Montargil	91.30	44	eP	P	13 09 10.0	+0.1
	comp=Z,38nm,1.2s						
PESTR	Estremoz	91.55	45	eP	P	13 09 11.3	+0.2
	comp=Z,24nm,2.4s						
PCAS	Casmilo, Conde	91.76	43	eP	P	13 09 12.0	-0.1
	comp=Z,63nm,2.2s						
PMRV	Marv??o	92.02	44	eP	P	13 09 13.1	-0.2
	comp=Z,31nm,1.8s						
PMRV	Marv??o	92.02	44	eLR	LR	13 42 16.3	
	comp=Z,1µm,22.0s						
PCBR	Castelo Branco	92.23	44	eP	P	13 09 13.9	-0.3
	comp=Z,23nm,1.4s						
MTE	Manteigas	92.55	44	eP	P	13 09 15.3	-0.5
	comp=Z,45nm,1.7s						
MTE	Manteigas	92.55	44	eLR	LR	13 42 59.3	
	comp=Z,2µm,22.0s						
PGAV	Gavieira, Arco	93.11	42	eLR	LR	13 46 57.8	
	comp=Z,2µm,20.0s						
MVO	Moncorvo	93.33	43	eP	P	13 09 18.9	-0.5
	comp=Z,28nm,2.3s						
MVO	Moncorvo	93.33	43	eLR	LR	13 42 16.9	
	comp=Z,2µm,20.0s						
ESDC	Sonseca Array	94.26	46	P	P	13 09 23.8	+0.1
	comp=Z,3.6nm,0.8s,baz=245,slow=4.4,SNR=20						
ESDC				LR	LR	13 51 34.3	
	comp=Z,1µm,18.5s,baz=245,slow=35						
FRB	Frobisher Bay	94.31	1	P	P	13 09 22.9	-0.3
	comp=Z,3.7nm,1.0s,baz=190,slow=9.8,SNR=3.0						
MSVF	Nonsavu	97.33	244	LR	LR	13 46 58.8	
	comp=Z,310nm,18.4s,baz=130,slow=31						
YKA	Yellowknife Ar	99.14	341	P	Pdif	13 09 44.9	-0.2
	comp=Z,2.8nm,0.7s,baz=144,slow=4.4,SNR=14						
YKA				PKKPbc	PKKPbc	13 26 09.5	-2.9
	comp=Z,0.5nm,0.7s,baz=319,slow=3.8,SNR=4.8						
VOI	Vohitsoka	101.15	124	IAMs_20	IAMs_20	13 55 52.9	
	comp=Z,878nm,18.0s						
WRGLY	Wrigley	102.31	339	P	Pdif	13 10 00.6	+1.4
	baz=136						
DZM	Mont Dzumac	103.23	234	ePS	PS	13 23 31.6	+2.9
	comp=Z,318nm,27.7s						
DZM				eSS	SS	13 29 02.7	+1.5
	comp=Z,1µm,27.2s						
DZM	Mont Dzumac	103.23	234	eLR	LR	13 44 02.6	
	comp=Z,2µm,23.9s,baz=132						
P33M	Teslin, Yukon	103.52	333	P	Pdif	13 10 06.0	+1.2
	baz=129						
WHY	Whitehorse	104.60	333	P	Pdif	13 10 10.6	+1.0
	baz=128						
RES	Resolute Bay	106.36	354	PKKPbc	PKKPbc	13 25 48.1	-2.9
	comp=Z,2.2nm,0.8s,baz=19,slow=3.9,SNR=5.9						
LODK	Lodwar	106.50	96	IAMs_20	IAMs_20	13 56 56.4	
	comp=Z,1µm,20.0s						
CTG	Chitna Glacier	107.37	331	P	PKiKP	13 14 32.4	+1.9
	baz=122						
BGLC	Bering Glacier	107.74	330	P	PKiKP	13 14 33.2	+2.3
	baz=121						
INK	Inuvik	108.79	340	PKKPbc	PKKPbc	13 25 42.7	-0.5
	comp=Z,1.1nm,0.7s,baz=49,slow=3.4,SNR=5.2						
A36M	Sachs Harbour	108.99	345	IAMs_20	IAMs_20	14 01 19.3	
	comp=Z,737nm,19.0s						
GERES	GERESS Array B	109.80	44	PKiKP	PKiKP	13 14 34.7	-0.6
	comp=Z,0.7nm,0.7s,baz=194,slow=3.4,SNR=5.5						
GERES	GERESS Array B	109.80	44		PKiKP	13 14 33.9	-1.4
PAX	Paxson	110.07	332	P	PKiKP	13 14 35.9	+0.6
	baz=118						
CLL	Collm	110.40	42	ePP	PP	13 15 14.0	+1.9
CLL				ePS	PS	13 24 49.0	+7.2
CLL				eSS	SS	13 30 36.0	-2.8
CLL				Lm	MLR	14 00 00.0	
	comp=N,400nm,21.5s						
CLL				Lm	MLR	14 00 00.0	
	comp=E,1µm,18.9s						
CLL				Lm	MLR	14 00 00.0	
	comp=Z,2µm,19.5s						
PDG	Podgorica	110.80	52	IAMs_20	IAMs_20	14 04 30.7	
	comp=Z,757nm,19.0s						
WAT1	Susitna Watana	111.26	331	P	PKiKP	13 14 38.4	+0.8
	baz=116						
ILAR	Eielson Array	111.47	334	PKiKP	PKiKP	13 14 36.0	-1.8
	comp=Z,0.7nm,1.0s,baz=199,slow=3.9,SNR=4.5						
ILAR				PKKPbc	PKKPbc	13 25 30.6	-3.8
	comp=Z,0.8nm,0.8s,baz=257,slow=4.3,SNR=5.9						
CAPN	Captain Cook N	111.49	329	P	PKiKP	13 14 39.3	+1.4
	baz=115						
DIVS	Divibare	111.93	51	IAMs_20	IAMs_20	14 08 52.6	
	comp=Z,1µm,18.0s						
SANT	Santorini	112.91	60	IAMs_20	IAMs_20	14 04 55.9	
	comp=Z,747nm,20.0s						
SDPT	Sand Point	114.03	321	P	PKiKP	13 14 44.4	+1.4
	baz=110						
TOLK	Toolik Lake Re	114.07	337	P	PKiKP	13 14 43.3	+0.5
	baz=113						
CRVS	Cervenica-Dubn	114.58	46	ePKP	PKiKP	13 14 55.4	+11
UZH	Uzhgorod	115.01	47	ePKIKP	PKiKP	13 14 51.7	+6.6
LVV	L'vov	116.46	46	ePKIKP	PKiKP	13 14 55.8	+7.9
BURAR	Bucovina Array	116.56	49	⇓P	PKiKP	13 14 55.3	+7.0
BURAR	Bucovina Array	116.56	49	⇓PKIKP	PKiKP	13 14 55.3	+7.0
PLOR	Plostina	116.97	51	⇓P	PKiKP	13 14 57.7	+8.7
PLOR	Plostina	116.97	51	⇓PKIKP	PKiKP	13 14 57.7	+8.7
VRI	Vrincioaia	117.03	51	⇑P	PKiKP	13 14 54.2	+5.1
VRI	Vrincioaia	117.03	51	⇑PKIKP	PKiKP	13 14 54.2	+5.1
ISP	Isparta	117.21	60	IAMs_20	IAMs_20	14 06 30.7	
	comp=Z,876nm,22.0s						
ODBI	Odobesti	117.22	51	⇑P	PKiKP	13 14 57.8	+8.4
MFTR	Murfatlar	117.67	53	⇑P	PKiKP	13 14 59.7	+9.4
TIRR	Tirgusor	117.75	53	⇓P	PKiKP	13 14 56.7	+6.2
TIRR	Tirgusor	117.75	53	⇓PKIKP	PKiKP	13 14 56.7	+6.2
CFR	Carcaliu	117.77	52	⇑P	PKiKP	13 14 58.6	+8.1
CFR	Carcaliu	117.77	52	⇑PKIKP	PKiKP	13 14 58.6	+8.1
TPGR	Topolog	117.87	52	⇓P	PKiKP	13 14 57.8	+7.0
JURR	Jurilovca	118.16	53	⇑P	PKiKP	13 14 58.1	+6.8
CSS	Mathiatis	118.41	64	IAMs_20	IAMs_20	14 04 24.7	
	comp=Z,826nm,22.0s						
ANTO	Ankara	119.53	59	IAMs_20	IAMs_20	14 08 14.1	
	comp=Z,1µm,22.0s						
BRTR	Keskin Array B	120.11	59	PKP	PKPdf	13 14 54.8	-0.6
	comp=Z,12nm,1.0s,baz=256,slow=9.7,SNR=4.0						
BRTR	Keskin Array B	120.11	59	PKIKP	PKPdf	13 14 54.7	-0.7
BRTR	Keskin Array B	120.11	59	PKPdf	PKPdf	13 14 54.7	-0.7
ASAR	Alice Springs	120.44	207	PKP	PKPdf	13 14 55.9	-0.7
	comp=Z,2.7nm,0.7s,baz=142,slow=2.1,SNR=23						
ASAR				PKKPbc	PKKPbc	13 25 02.2	+0.1

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         comp=Z,1.6nm,0.8s,baz=335,slow=3.2,SNR=16
ASAR                                   SKKPbc  SKKPbc  13 28 56.7  +10
         comp=Z,0.8nm,0.9s,baz=321,slow=3.2,SNR=5.1
ASAR  Alice Springs     120.44 207     PKIKP   PKPdf   13 14 55.3 -1.2
ASAR  Alice Springs     120.44 207             PKPdf   13 14 55.3 -1.2
BNN   Bunyan            121.51  61     PKPdf   PKPdf   13 14 57.0 -1.1
GAZ   Gaziantep         122.08  63     PKPdf   PKPdf   13 14 56.7 -2.4
WR0   Warramunga Arr    123.48 210     PKPdf   PKPdf   13 15 01.9 -0.5
WB2   Warramunga Arr    123.58 210     PKPdf   PKPdf   13 15 01.7 -0.9
WRA   Warramunga Arr    123.58 210     PKP     PKPdf   13 15 02.1 -0.5
         comp=Z,7.2nm,0.8s,baz=159,slow=1.7,SNR=51
WRA                                    PKKPbc  PKKPbc  13 24 50.4 +0.3
         comp=Z,1.7nm,0.8s,baz=337,slow=4.4,SNR=15
WRA   Warramunga Arr    123.58 210     PKIKP   PKPdf   13 15 01.1 -1.5
WRA   Warramunga Arr    123.58 210     PKPdf   PKPdf   13 15 01.1 -1.5
WRAB  Tennant Creek     123.59 210     IAMs_20 IAMs_20 13 59 19.1
         comp=Z,732nm,19.0s
WB0   Warramunga Arr    123.72 210             PKPdf   13 15 02.0 -0.9
APA   Apatity           123.91  26⇓iPKIKP      PKPdf   13 14 59.7 -1.9
APA                                    pmax    pmax
         comp=Z,11nm,1.2s
ANN   Anapa             124.08  54  ePKIKP     PKPdf   13 14 52.9  -10
ANN                                    MLR     MLR
         comp=Z,765nm,19.0s
RAYN  Ar Rayn           124.40  81     IAMs_20 IAMs_20 14 15 41.8
         comp=Z,704nm,19.0s
OBN   Obninsk           125.00  42cePKIKP      PKPdf   13 15 02.2 -1.8
OBN                                 i                  13 15 13.4
OBN                                    pmax    pmax
         comp=Z,4.0nm,0.4s
OBN                                    pmax    pmax
         comp=Z,7.0nm,0.4s
OBN                                    MLR     MLR
         comp=Z,631nm,20.0s
PMG   Port Moresby      125.22 229     IAMs_20 IAMs_20 13 58 05.9
         comp=Z,1µm,21.0s
SOC   Sochi             125.45  56  i PKIKP    PKPdf   13 15 05.2 -0.1
SOC                                 e                  13 16 55.5
SOC                                 ePS        PS      13 26 50.7 -7.3
H11S2 WAKE ISLAND Hy    125.94 271     T       T       15 33 50.8
         baz=115,slow=75,SNR=1273
H11S1 WAKE ISLAND Hy    125.95 271     T       T       15 33 52.2
         baz=115,slow=75,SNR=1580
H11S3 WAKE ISLAND Hy    125.95 271     T       T       15 33 52.1
         baz=115,slow=75,SNR=1110
H11N3 WAKE ISLAND Hy    126.27 273     T       T       15 34 15.1
         baz=116,slow=75,SNR=123
H11N1 WAKE ISLAND Hy    126.28 273     T       T       15 34 23.8
         baz=116,slow=75,SNR=53
H11N2 WAKE ISLAND Hy    126.29 273     T       T       15 34 21.2
         baz=116,slow=75,SNR=318
PSA00 Pilbara Seismi    126.69 194     PKPdf   PKPdf   13 15 07.8 -0.7
KLMR  Klimovskoe        126.74  35  ePKIKP     PKPdf   13 15 06.5 -0.7
KLMR                                   pmax    pmax
         comp=Z,39nm,1.5s
KLMR  Klimovskoe        126.74  35  ePKPdf     PKPdf   13 15 06.6 -0.7
KLMR                                   AMP             13 15 08.8
         comp=Z,39nm,1.5s
KIV   Kislovodsk        127.64  56  i PKIKP    PKPdf   13 15 08.9 -0.7
KIV                                 e                  13 17 08.7
KIV                                 ePS        PS      13 27 14.6 -2.8
KIV                                 eSS        SS      13 34 17.6 -4.4
KIV                                    pmax    pmax
         comp=Z,6.0nm,1.0s
KBZ   Khabaz            127.75  56     PKP     PKiKP   13 15 10.3 +0.1
         comp=Z,2.1nm,0.9s,baz=260,slow=11,SNR=1.9
KBZ   Khabaz            127.75  56  i PKIKP    PKiKP   13 15 11.2 +1.0
GOF   Gofitskoye        128.05  55⇑ePKIKP      PKiKP   13 15 18.1 +7.3
GNI   Garni             128.50  61     IAMs_20 IAMs_20 14 14 48.7
         comp=Z,612nm,21.0s
FITZ  Fitzroy Crossi    128.52 201     PKP     PKPdf   13 15 12.2 +0.2
         comp=Z,12nm,0.8s,baz=188,slow=3.5,SNR=20
PRGR  Permogore         129.62  33  ePKIKP     PKiKP   13 15 13.2 -0.2
PRGR                                   pmax    pmax
         comp=Z,13nm,0.9s
BILL  Bilibino          130.07 335 dePKIKP     PKiKP   13 15 14.0 -0.2
BILL                                e                  13 15 20.7
BILL                                e                  13 15 24.1
BILL                                e                  13 17 26.4
BILL                                   PPP     PPP     13 20 13.0
BILL                                                   13 22 15.0
BILL                                   pmax    pmax
         comp=Z,16nm,1.3s
BILL                                   MLR     MLR
         comp=Z,376nm,18.0s
BILL  Bilibino          130.07 335     PKPdf   PKiKP   13 15 14.0 -0.2
MAK   Makhachkala       130.98  58  eP         Pdif    13 12 04.9 -2.3
MAK                                 i                  13 15 14.6
MAK                                 e                  13 17 28.8
MAK                                 e                  13 22 18.1
MAK                                    pmax    pmax
         comp=Z,161nm,1.0s
MTN   Manton Dam        131.27 210             PKPdf   13 15 16.8 -0.5
UOSS  Minazif           134.03  84     IAMs_20 IAMs_20 14 18 27.0
         comp=Z,757nm,18.0s
SOEI  Soe               136.77 204     IAMs_20 IAMs_20 14 18 58.9
         comp=Z,830nm,20.0s
ARU   Arti              137.21  39     PKP     PKPdf   13 15 27.2 +0.1
         comp=Z,1.8nm,0.7s,baz=219,slow=3.0,SNR=6.0
ARU   Arti              137.21  39  i PKIKP    PKPdf   13 15 27.2 +0.1
ARU                                                    13 18 11.2
ARU                                    SS      SS      13 36 09.2 -8.0
ARU                                    MLR     MLR
         comp=Z,1µm,18.0s
ARU   Arti              137.21  39             PKPdf   13 15 26.3 -0.8
SEY   Seymchan          137.37 332     PKhKP   PKPpre  13 15 23.3
         comp=Z,8.3nm,0.8s,baz=149,slow=5.9,SNR=5.4
TIXI  Tiksi             137.63 350     PKhKP   PKPpre  13 15 16.0
         comp=Z,1.2nm,0.4s,baz=360,slow=4.6,SNR=4.0
TIXI  Tiksi             137.63 350     PKIKP   PKPdf   13 15 27.2 -0.2
TIXI  Tiksi             137.63 350     PKPdf   PKPdf   13 15 27.2 -0.2
PETK  Petropavlovsk-    138.04 317     PKP     PKPdf   13 15 27.7 -1.1
         comp=Z,10.0nm,1.0s,baz=75,slow=6.3,SNR=5.2
AKTO  Aktyubinsk        138.13  47     PKP     PKPdf   13 15 27.0 -2.0
         comp=Z,2.8nm,0.8s,baz=250,slow=2.2,SNR=5.8
AKTO  Aktyubinsk        138.13  47     PKIKP   PKPdf   13 15 29.8 +0.8
FAKI  Fak Fak           139.32 219     IAMs_20 IAMs_20 14 08 33.2
         comp=Z,558nm,21.0s
ABKAR Akbulak array     139.54  49             PKPdf   13 15 31.0 -0.6
ABKAR Akbulak array     139.54  49             PKPdf   13 15 31.7  0.0
NRIK  Noril'sk          139.70  11     PKP     PKPdf   13 15 32.0 +0.7
         comp=Z,1.9nm,0.6s,baz=57,slow=2.6,SNR=2.4
NRIK  Noril'sk          139.70  11     PKIKP   PKPdf   13 15 32.0 +0.7
KAPI  Kappang           142.66 199     IAMs_20 IAMs_20 14 17 37.5
         comp=Z,465nm,21.0s
BRVK  Borovoye          144.73  40     PKIKP   PKPdf   13 15 40.2 -0.6
BRVK                                   MLR     MLR
         comp=Z,1µm,20.0s
BRVK  Borovoye          144.73  40     PKPdf   PKPbc   13 15 40.2 +0.4
BVAR  Borovoye Array    144.81  40     PKP     PKPdf   13 15 40.5 -0.5
         comp=Z,41nm,0.8s,baz=237,slow=10,SNR=100
TNTI  Ternate           144.98 215             PKPab   13 15 40.6 -1.1
PALK  Pallekele         145.20 127     PKPbc   PKPbc   13 15 41.6 -0.8
         comp=Z,41nm,1.0s,baz=20,slow=3.2,SNR=7.9
YAK   Yakutsk           145.81 342     PKPbc   PKPab   13 15 43.3  0.0
         comp=Z,128nm,0.7s,baz=143,slow=0.3,SNR=84
YAK   Yakutsk           145.81 342  ePKP2      PKPdf   13 15 41.9 -0.4
YAK                                 e                  13 19 03.4
YAK                                    pmax    pmax
         comp=Z,202nm,0.8s
YAK                                    pmax    pmax
         comp=N,16nm,0.9s
YAK                                    pmax    pmax
         comp=E,8.0nm,0.9s
YAK                                    pmax    pmax
         comp=Z,120nm,2.5s
YAK   Yakutsk           145.81 342     PKPdf   PKPbc   13 15 42.7 -0.2
KUR   Kuril'sk          145.96 306  ePKIKP     PKPdf   13 15 41.4 -1.7
KUR                                 i                  13 15 46.5
KUR                                    pmax    pmax
         comp=Z,1396µm,4.7s
PMBI  Palembang         146.26 174     IAMs_20 IAMs_20 14 18 16.8
         comp=Z,737nm,19.0s
POO   Poona             146.62 103  eP         PKPdf   13 15 43.0 -2.1
BRZS  Berezniki         147.32  44  ePKPab     PKPbc   13 15 47.6 -0.1
         baz=44
BRZS  Berezniki         147.32  44  ePKP2      PKPbc   13 15 47.6 -0.1
TYV   Tymovskoe         147.56 318  ePKP2      PKPbc   13 15 49.3 +1.0
TYV                                    pmax    pmax
         comp=Z,300nm,4.0s
TYV                                    pmax    pmax
         comp=Z,52nm,1.1s
IUG   Iuzhnay           147.58  59  ePKPbc     PKPdf   13 15 47.3 +1.2
         baz=59
IUG   Iuzhnay           147.58  59  ePKP2      PKPdf   13 15 47.3 +1.2
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YUK   Yuzh-Kuril'sk     147.60 305  ePKHKP     PKPpre  13 15 37.6
YUK                                 e                  13 19 20.5
YUK                                 eSSS       SSS     13 43 49.6
YUK                                    MLR     MLR
         comp=Z,564nm,18.0s
KKAR  Karatay Array     147.78  57     PKIKP   PKPdf   13 15 45.2 -1.1
KKAR  Karatay Array     147.78  57     PKPdf   PKPdf   13 15 45.2 -1.1
TOLI2 Tolitoli          148.10 204     PKPdf   PKPdf   13 15 48.0 +0.2
TOLI2                                  IAMs_20 IAMs_20 14 20 01.2
         comp=Z,431nm,22.0s
DZA   Taraz             148.41  57  ePKPbc     PKPbc   13 15 49.5 -1.4
         baz=57
DZA   Taraz             148.41  57  ePKP2      PKPbc   13 15 49.5 -1.4
BKNI  Bangkinang        148.90 166     IAMs_20 IAMs_20 14 16 53.2
         comp=Z,565nm,22.0s
YSS   Yuzh-Sakhalins    148.96 311  ePKP2      PKPbc   13 15 52.6 +0.5
YSS                                 e                  13 19 30.9
YSS                                    pmax    pmax
         comp=Z,40nm,0.8s
BTLS  Baital            149.84  52  ePKPbc     PKPbc   13 15 53.8 -0.6
         baz=52
BTLS                                ePKPab     sPKPdf  13 15 59.0 +0.1
         baz=52
BTLS  Baital            149.84  52  ePKP2      PKPbc   13 15 53.7 -0.6
JKA   Kamikawa-asahi    149.87 306     PKPdf   PKPdf   13 15 49.0 -0.6
JKA                                    PKPbc   PKiKP   13 15 55.4  0.0
ASAJ  Asahikawa         149.87 306     PKPbc   PKPbc   13 15 54.9 +0.4
         comp=Z,37nm,1.1s,baz=253,slow=5.1,SNR=7.3
HYB   Hyderabad         149.95 110  i PKP      PKPbc   13 15 55.0 -0.5
EKS2  Erkin-Say         150.22  57     P       PKiKP   13 15 56.0 -0.3
         SNR=14
AML   Almayashu         150.27  58     P       PKPbc   13 15 56.3 +0.3
         SNR=6.0
KURBB Kurchatov Arra    150.40  40     PKP     PKPdf   13 15 48.5 -1.8
         comp=Z,1.8nm,1.0s,baz=300,slow=3.1,SNR=6.1
KURBB                                  PKPbc   PKPbc   13 15 55.5 +0.1
         comp=Z,14nm,0.8s,baz=298,slow=3.1,SNR=33
KURBB Kurchatov Arra    150.40  40     PKIKP   PKPbc   13 15 55.3 -0.2
KURK  Kurchatov         150.40  39     PKIKP   PKPdf   13 15 48.5 -1.7
KURK                                                   13 15 55.6
KURK  Kurchatov         150.40  39             PKiKP   13 15 56.0 -0.3
NIL   Nilore            150.42  75     PKIKP   PKPdf   13 15 49.3 -1.6
NIL   Nilore            150.42  75     PKPdf   PKPdf   13 15 49.3 -1.6
NIL   Nilore            150.42  75     IAMs_20 IAMs_20 14 31 08.0
         comp=Z,689nm,20.0s
USP   Ospenovka         150.61  56     P       PKPbc   13 15 56.5 +0.2
         SNR=19
SGDS  Sogindy           150.66  55  ePKP       PKPdf   13 15 49.9 -1.1
         baz=55
SGDS                                ePKPbc     PKPbc   13 15 55.4 -1.1
         baz=55
KSM   Kuching           150.71 184     IAMs_20 IAMs_20 14 19 56.8
         comp=Z,569nm,20.0s
AAK   Ala-Archa         150.75  57     PKPbc   PKPbc   13 15 56.7 -0.1
         comp=Z,18nm,0.9s,baz=249,slow=3.4,SNR=3.9
AAK   Ala-Archa         150.75  57     P       PKiKP   13 15 57.4 -0.1
         SNR=21
AAK   Ala-Archa         150.75  57     PKIKP   PKPdf   13 15 51.8 +0.5
AAK                                                    13 15 57.8
AAK                                                    13 16 04.2
AAK   Ala-Archa         150.75  57     PKPdf   PKPdf   13 15 51.8 +0.5
AAK                                            PKiKP   13 15 57.8 +0.3
AAK                                    PKPab   pPKPbc  13 16 04.2 +0.4
AAK                                    IAMs_20 IAMs_20 14 26 53.1
         comp=Z,642nm,20.0s
PSI   Prapat            150.76 161     PKP     PKPdf   13 15 52.0 -0.2
         comp=Z,42nm,1.2s,baz=259,slow=15,SNR=3.8
PSI                                    PKPbc   PKPbc   13 15 56.8 -0.9
         comp=Z,52nm,0.8s,baz=214,slow=2.8,SNR=40
MYKOM Kota Tinggi       150.81 171     IAMs_20 IAMs_20 14 20 54.0
         comp=Z,645nm,20.0s
UCH   Uchtor            150.85  58     P       PKiKP   13 15 58.0 -0.1
         SNR=14
CHMS  Chumysh           150.85  56     P       PKiKP   13 15 57.2 -0.3
         SNR=10
KBK   Karagaybulak      151.07  57     P       PKiKP   13 15 58.0 -0.2
         SNR=8.0
GRNR  Gornyy            151.07 322⇑iPKIKP      PKiKP   13 15 58.0 +0.3
GRNR                                   pmax    pmax
         comp=Z,20nm,1.1s
ZAA0  Zalesovo Array    151.44  29             PKPdf   13 15 51.3 -0.4
ZALV  Zalesovo Beam     151.44  29     PKP     PKPdf   13 15 51.8 +0.1
         comp=Z,5.7nm,0.8s,baz=318,slow=2.0,SNR=17
ZALV                                   PKPbc   PKPbc   13 15 57.9  0.0
         comp=Z,39nm,0.7s,baz=294,slow=3.3,SNR=73
ZALV  Zalesovo Beam     151.44  29     PKPdf   PKPdf   13 15 50.9 -0.8
SEM   Semipalatinsk     151.44  39  ePKP       PKPdf   13 15 50.5 -1.6
         baz=39
SEM                                 ePKPbc     PKPbc   13 15 56.9 -1.4
         baz=39
SEM                                 ePKPab     pPKPbc  13 16 04.8 -0.5
         baz=39
SEM   Semipalatinsk     151.44  39  ePKIKP     PKPdf   13 15 50.5 -1.6
TKM2  Tokmak 2          151.47  56     PKIKP   PKPbc   13 15 57.9 -0.7
SBUM  Sibu              151.50 188     PKPdf   PKPdf   13 15 50.7 -2.4
SBUM                                           PKPbc   13 15 59.1 -0.1
KUU   Kurty             151.74  54  ePKPbc     PKPbc   13 15 58.2 -0.8
         baz=54
KUU                                 ePKPab     pPKPbc  13 16 05.9  0.0
         baz=54
KUU   Kurty             151.74  54  ePKIKP     PKPbc   13 15 58.1 -0.8
AAA   Alma-Ata          152.33  55  ePKPbc     PKPbc   13 15 59.4 -0.9
         baz=55
AAA                                 ePKPab     sPKPbc  13 16 09.1 -0.5
         baz=55
AAA   Alma-Ata          152.33  55  ePKIKP     PKPbc   13 15 59.4 -0.9
TNSS  Tian-Shan         152.40  55  ePKPbc     PKPbc   13 16 00.4 -0.6
         baz=55
KSH   Kashi             152.41  63     PKPbc   PKPdf   13 15 53.8 -0.1
KSH                                    pPKP    sPKPdf  13 16 04.0 +0.8
KSH                                    sPKP            13 16 07.0
MDOK  Medeo             152.44  55  ePKP       PKPdf   13 15 52.7 -1.1
         baz=55
MDOK                                ePKPbc     PKPbc   13 15 59.7 -1.0
         baz=55
MDOK  Medeo             152.44  55  ePKIKP     PKPdf   13 15 52.7 -1.1
MYLDM Lahad Datu        152.68 203     PKPdf   PKPdf   13 15 52.1 -2.8
MYLDM                                  PKPbc   pPKPdf  13 16 02.4 +0.9
MYLDM                                  PKPab   PKPab   13 16 12.4 +0.1
BOD   Bodaibo           152.74 353  ePKIKP     PKPbc   13 16 00.0 -0.6
BOD                                    pmax    pmax
         comp=Z,73nm,0.9s
TDK   Taldyqorghan      152.78  50  ePKPbc     PKPbc   13 16 00.2 -1.1
         baz=50
TDK   Taldyqorghan      152.78  50  ePKIKP     PKPbc   13 16 00.1 -1.1
KDJ   Kajisay           152.80  57     PKIKP   PKPdf   13 15 52.8 -1.6
KDJ                                                    13 16 02.2
KDJ   Kajisay           152.80  57     PKPdf   PKPdf   13 15 52.8 -1.6
KDJ                                            pPKPdf  13 16 02.2 +0.7
KDJ                                    PKPab   PKPab   13 16 12.7 +0.1
IPM   Ipoh              152.92 164     PKPdf   PKPdf   13 15 52.6 -2.7
IPM                                            PKPbc   13 16 01.4 -1.1
IPM                                    PKPab   sPKPbc  13 16 11.6 -0.2
IPM                                    IAMs_20 IAMs_20 14 19 14.8
         comp=Z,620nm,19.0s
ZEA   Zeya              153.29 334  ePKIKP     PKPdf   13 15 54.3 -0.2
ZEA                                    pmax    pmax
         comp=E,10.0nm,1.3s
ZEA                                    pmax    pmax
         comp=Z,20nm,1.3s
SATY  Saty              153.42  54  ePKP       PKPdf   13 15 53.8 -1.5
         baz=54
SATY                                ePKPbc     pPKPdf  13 16 01.6 -0.7
         baz=54
SATY  Saty              153.42  54  ePKIKP     PKPdf   13 15 53.7 -1.5
KULM  Kulim             153.61 163     PKPdf   PKPdf   13 15 54.2 -2.0
KULM                                           pPKPdf  13 16 02.6 -0.7
KULM                                   PKPab   PKPab   13 16 15.4 -0.9
KULM                                   IAMs_20 IAMs_20 14 23 25.1
         comp=Z,486nm,20.0s
PDGK  Podgornoye        154.09  53     PKP2    PKPab   13 16 16.4 -1.5
SHLS  Shalkode          154.12  54  ePKPbc     PKiKP   13 16 04.6 +0.1
         baz=54
SHLS                                ePKPab     PKPab   13 16 18.4 +0.3
         baz=54
SHLS  Shalkode          154.12  54  ePKIKP     PKiKP   13 16 04.5 +0.1
KKM   Kota Kinabalu     154.19 199     IAMs_20 IAMs_20 14 28 08.2
         comp=Z,428nm,21.0s
MAKZ  Makanchi          154.28  44     PKIKP   PKPbc   13 16 04.0 -0.4
MAKZ                                                   13 16 17.3
MAKZ  Makanchi          154.28  44     PKPdf   PKPdf   13 15 54.8 -1.4
MAKZ                                           PKPbc   13 16 04.0 -0.4
MAKZ                                   PKPab   PKPab   13 16 17.3 -1.2
KLR   Kul'dur           154.43 323     PKP     PKPdf   13 15 56.2  0.0
         comp=Z,4.4nm,0.9s,baz=343,slow=1.5,SNR=9.6
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MJAR  Matsushiro Arr    154.43 291     PKP     PKPdf   13 15 56.5 -0.2
         comp=Z,4.3nm,1.1s,baz=124,slow=0.4,SNR=6.0
MJAR                                   PKPab   PKPab   13 16 21.0 +1.6
         comp=Z,6.5nm,0.9s,baz=95,slow=1.6,SNR=7.8
MJAR  Matsushiro Arr    154.43 291             PKPdf   13 15 55.9 -0.8
MJAR                                           PKPab   13 16 20.7 +1.3
MAT   Matsushiro        154.43 291  ePKP       PKPdf   13 15 56.0 -0.7
MK31  Makanchi Array    154.47  44     PKP2    PKPab   13 16 19.3  0.0
MK31                                                   14 15 55.7
MK31                                                   14 16 03.9
MK31  Makanchi Array    154.47  44     PKPdf   PKPdf   13 15 55.7 -0.7
MK31                                           pPKPdf  13 16 03.9 +0.4
MK31                                   PKPab   PKPab   13 16 19.3  0.0
MKAR  Makanchi Array    154.47  44     PKP     PKPdf   13 15 56.9 +0.5
         comp=Z,1.3nm,0.9s,baz=11,slow=2.6,SNR=4.6
MKAR                                   PKPbc   PKPbc   13 16 04.6 -0.2
         comp=Z,4.3nm,0.8s,baz=330,slow=1.6,SNR=18
MKAR                                   PKPab   PKPab   13 16 18.9 -0.4
         comp=Z,23nm,0.8s,baz=321,slow=1.7,SNR=30
MKAR  Makanchi Array    154.47  44     PKPdf   PKPdf   13 15 54.9 -1.6
MKAR                                           pPKPdf  13 16 03.9 +0.4
MKAR                                   PKPab   PKPab   13 16 19.3  0.0
ZSN   Zaisan            155.62  41  ePKPab     PKPab   13 16 22.8 -1.4
         baz=41
ZSN   Zaisan            155.62  41  ePKP2      PKPab   13 16 22.7 -1.4
MDJ   Mudanjiang        158.27 315     PKP     PKPdf   13 15 59.9 -1.5
MDJ   Mudanjiang        158.27 315     IAMs_20 IAMs_20 14 44 34.8
         comp=Z,404nm,21.0s
MOY   Mondy             158.53  12  ePKP2      PKPab   13 16 37.5 +0.9
TLY   Talaya            158.92   8     PKPab   PKPab   13 16 39.0 +0.9
         comp=Z,6.2nm,0.7s,baz=263,slow=2.7,SNR=4.4
TLY   Talaya            158.92   8  ePKP2      PKPab   13 16 40.1 +2.0
TLY                                 e                  13 20 20.1
TLY                                 ePPS       PPS     13 33 44.0
TLY                                    pmax    pmax
         comp=Z,44nm,0.9s
TLY   Talaya            158.92   8     IAMs_20 IAMs_20 14 36 21.7
         comp=Z,692nm,20.0s
WMQ   Urumqi            159.27  46  ePKP       PKPdf   13 16 03.9 +1.2
WMQ                                    LR      LR
         comp=Z,900nm,18.3s
WMQ                                    LR      LR
         comp=Z,700nm,16.7s
WMQ                                    LR      LR
         comp=Z,770nm,22.7s
HIA   Hailar            159.63 338     IAMs_20 IAMs_20 14 40 10.5
         comp=Z,532nm,20.0s
ZAK   Zakamensk         160.15   9  ePKP2      PKPab   13 16 43.5 -0.1
ZAK                                    pmax    pmax
         comp=Z,16nm,1.3s
CN2   Changchun         161.18 318     PKP     PKPdf   13 16 04.3 -0.4
CN2                                    PP      PP      13 20 34.8 +3.4
CN2                                    SS      SS      13 40 44.4 -0.9
CN2                                    AMB     AMB
         comp=Z,200nm,5.3s
CN2                                    LR      LR
         comp=Z,300nm,17.0s
CN2                                    LR      LR
         comp=Z,300nm,17.0s
CN2                                    LR      LR
         comp=Z,400nm,19.0s
KSRS  Korea Array       162.39 297     PKP     PKPdf   13 16 05.8 -0.4
         comp=Z,0.9nm,0.7s,baz=297,slow=1.1,SNR=4.5
KSRS                                   PKPab   PKPab   13 16 56.2 +2.4
         comp=Z,5.0nm,0.9s,baz=76,slow=3.4,SNR=9.2
KSAR  Wonju Array Be    162.42 297     PKP2    PKPab   13 16 55.1 +1.1
KSAR                                                   14 16 05.5
KSAR  Wonju Array Be    162.42 297             PKPdf   13 16 05.5 -0.7
KSAR                                   PKPab   PKPab   13 16 55.1 +1.1
SONM  Songino Array     162.98   4     PKP     PKPdf   13 16 06.1 -0.6
         comp=Z,2.0nm,1.0s,baz=254,slow=1.2,SNR=6.2
SONM                                   PKPab   PKPab   13 16 57.2 +1.1
         comp=Z,9.5nm,1.0s,baz=330,slow=3.1,SNR=20
SONM                                   PP      PP      13 20 41.7 +1.4
         comp=Z,4.1nm,1.0s,baz=336,slow=3.2,SNR=8.6
ULN   Ulaanbaatar       162.98   3     PKIKP   PKPdf   13 16 05.7 -1.0
ULN                                                    13 16 56.2
ULN   Ulaanbaatar       162.98   3     PKPdf   PKPdf   13 16 05.7 -1.0
ULN                                    PKPab   PKPab   13 16 56.2 +0.1
SNY   Shenyang          163.47 316 ⇓PKP        PKPdf   13 16 09.3 +2.2
SNY                                    SS      SS      13 41 15.2 +6.0
SNY                                    AMB     AMB
         comp=Z,120nm,4.5s
SNY                                    LR      LR
         comp=Z,620nm,16.7s
SNY                                    LR      LR
         comp=Z,440nm,20.6s
SNY                                    LR      LR
         comp=Z,590nm,19.1s
CM31  Chiang Mai Arr    165.09 144     PKPdf   PKPdf   13 16 09.5 +0.3
CM31                                           PKPab   13 17 05.4 -0.6
CMAR  Chiang Mai Arr    165.09 144     PKP     PKPdf   13 16 09.7 +0.4
         comp=Z,1.0nm,0.7s,baz=254,slow=2.6,SNR=9.7
CMAR                                   PKPab   PKPab   13 17 05.5 -0.5
         comp=Z,13nm,0.9s,baz=229,slow=5.2,SNR=34
CMAR                                   PP      PP      13 20 58.5 +6.7
         comp=Z,1.4nm,0.9s,baz=228,slow=6.4,SNR=4.4
CMAR  Chiang Mai Arr    165.09 144             PKPdf   13 16 07.6 -1.7
CMAR                                   PKPab   PKPab   13 17 05.0 -1.0
CHTO  Chiang Mai        165.39 143     PKP2    PKPab   13 17 06.3 -1.0
CHTO                                                   14 16 08.3
CHTO  Chiang Mai        165.39 143     PKPdf   PKPdf   13 16 08.3 -1.2
CHTO                                   PKPab   PKPab   13 17 06.3 -1.0
DL2   Dalian            166.35 310     PKP     PKPdf   13 16 08.7 -1.0
DL2                                    AMB     AMB
         comp=Z,190nm,5.0s
DL2                                    LR      LR
         comp=Z,320nm,23.4s
DL2                                    LR      LR
         comp=Z,350nm,21.1s
DL2                                    LR      LR
         comp=Z,640nm,19.0s
GTA   Gaotai            169.06  36 ⇑PKP        PKPdf   13 16 11.8  0.0
GTA                                    pPKP    sPKPdf  13 16 22.2 +0.9
GTA                                    sPKP            13 16 28.6
GTA                                    PKPab   PKPab   13 17 23.7 +0.4
GTA                                    AMB     AMB
         comp=Z,220nm,5.5s
GTA                                    LR      LR
         comp=Z,410nm,19.3s
GTA                                    LR      LR
         comp=Z,570nm,20.4s
GTA                                    LR      LR
         comp=Z,540nm,20.7s
HHC   Hu-ho-hao-te      169.65 346  ePKP       PKPdf   13 16 12.0 -0.1
HHC                                    AMB     AMB
         comp=Z,180nm,7.9s
HHC                                    LR      LR
         comp=Z,660nm,17.6s
HHC                                    LR      LR
         comp=Z,510nm,19.3s
HHC                                    LR      LR
         comp=Z,1µm,20.0s
SLVN  Son La            169.78 157     PKPdf   PKPdf   13 16 10.6 -2.1
SLVN                                   PKPab   PKPab   13 17 25.3 -1.4
NJ2   Nanjing           170.80 280  ePKP       PKPdf   13 16 14.2 +1.4
TIA   Tai'an            170.81 308     PKP     PKPdf   13 16 12.8 +0.1
TIA                                    PP      PP      13 21 21.1 -0.5
TIA                                    SS      SS      13 42 21.2 -2.7
TIA                                    AMB     AMB
         comp=Z,190nm,5.8s
TIA                                    LR      LR
         comp=Z,240nm,20.3s
TIA                                    LR      LR
         comp=Z,470nm,18.9s
TIA                                    LR      LR
         comp=Z,1µm,20.1s
KMI   Kunming           172.55 139 ⇑PKP        PKPdf   13 16 12.3 -1.9
LZH   Lanzhou           173.65  34 ⇓PKP        PKPdf   13 16 15.5 +1.3
LZH                                    pPKP    sPKPdf  13 16 24.8 +1.1
LZH                                    sPKP            13 16 31.2
LZH                                    PKPab   PKPab   13 17 44.0 +0.3
LZH                                    AMB     AMB
         comp=Z,390nm,6.5s
LZH                                    LR      LR
         comp=Z,550nm,19.0s
LZH                                    LR      LR
         comp=Z,400nm,17.9s
LZH                                    LR      LR
         comp=Z,450nm,20.6s
GYA   Guiyang           175.43 163 ⇓PKP        PKPdf   13 16 16.1 +1.1
GYA                                    PKPab   PKPab   13 17 51.2 -0.5
GYA                                    SKKS            13 28 25.2
GYA                                    SS      SS      13 43 06.0 -1.1
GYA                                    AMB     AMB
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	comp=Z,320nm,5.4s						
GYA				LR	LR		
	comp=Z,230nm,5.0s						
GYA				LR	LR		
	comp=Z,170nm,4.2s						
GYA				LR	LR		
	comp=Z,180nm,8.7s						
CD2	Chengdu	176.21	88	PKP	PKPdf	13 16 14.0	-1.0
CD2				PP	PP	13 21 49.6	+0.9
CD2				SKS	SKSdf	13 23 12.7	-4.2
CD2				SKKS	SKKSac	13 28 32.1	-1.5
CD2				SS	SS	13 43 14.0	-3.7
CD2				AMB	AMB		
	comp=Z,900nm,14.9s						
CD2				LR	LR		
	comp=Z,810nm,21.2s						
CD2				LR	LR		
	comp=Z,630nm,19.0s						
CD2				LR	LR		
	comp=Z,1µm,21.0s						
XAN	Xi'an	176.76	349	PKP	PKPdf	13 16 15.0	0.0
XAN				pPKP	sPKPdf	13 16 25.1	+0.6

IDC ***08*** *12:57:37.0±4.6, 39°.29N×73°.39E, h0^{km}, mb3.7/2, mb1 3.6/4, mb1mx3.1/62, mbtmp3.5/4, ML2.8/2, MS3.5/4, Ms1 3.5/4, ms1mx2.9/61 Error ellipse: s-maj=83.3km s-min=36.6km az=172.0*

ISU ***08*** *12:57:36, 39°.40N×73°.50E, h5^{km}*

KRNET ***08*** *12:57:38.0±0.1, 39°.45N×73°.39E, h4^{km}, mb3.8*

SOME ***08*** *12:57:39.8, 39°.60N×73°.42E, h0^{km}*

NNC ***08*** *12:57:43.5±1.3, 39°.68N×73°.41E, h0^{km}, mb4.3, mpv4.1, Error ellipse: s-maj=10.8km s-min=5.9km az=172.0*

ISC 08 12:57:38.5±1.2**, 39°.51N**±0°.03×**73°.38E**±0°.02**, h1**^{km}±9^{km}**, n84,** σ**2^{s}52**/126**, MS4.0**/3**, 38C-19D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.51	11	⇓*e*P	Pg	12 57 48.8	+0.5
	baz=9.0						
SFK				⇓*e*S	Sg	12 57 57.1	+2.2
	baz=9.0						
OHH	Osh	1.11	336	*e*P	Pg	12 58 00.0	+0.2
OHH				*e*S	Sn	12 58 18.0	+0.7
OHH	Osh	1.11	336	⇑*i*P	Pb	12 58 00.8	+0.2
	baz=37						
OHH				⇑*i*S	Sb	12 58 16.9	+1.3
	baz=37						
DRK	Karamyk	1.22	269	⇑*i*P	Pg	12 58 01.6	-0.4
	baz=72						
DRK				⇑*i*S	Sb	12 58 18.3	-0.8
	baz=72						
SALK	Salom-Alik	1.41	14	⇑*e*P	Pg	12 58 06.1	+0.6
	baz=13						
SALK				⇑*e*S	Sn	12 58 26.0	+1.2
	baz=13						
FRG	Fergana	1.50	305	*e*P	Pg	12 58 08.0	+0.7
FRG				*e*S	Sg	12 58 29.0	+2.3
BTK	Batken	2.05	286	*e*P	Pb	12 58 17.0	+0.4
BTK				*e*S	Sg	12 58 47.0	+2.6
BTK	Batken	2.05	286	⇓*i*P	Pb	12 58 16.5	-0.1
	baz=88						
BTK				⇓*i*S	Sg	12 58 44.2	-0.2
	baz=88						
GAR	Garm	2.43	259	⇑*i*P	Pb	12 58 21.5	-1.7
	baz=60						
GAR				⇑*i*S	Sb	12 58 52.7	-1.0
	baz=60						
AML	Almayashu	2.62	5	P	Pb	12 58 25.1	-1.5
	SNR=70						
AML	Almayashu	2.62	5	⇓*e*P	Pb	12 58 25.0	-1.6
	baz=5.0						
AML				⇓*i*S	Sb	12 58 59.2	-0.3
	baz=5.0						
TRKS	Terek-Say	2.64	320	⇓*i*P	Pn	12 58 24.3	+1.8
	baz=21						
TRKS				⇓*i*S	Sn	12 58 57.4	+2.2
	baz=21						
UCH	Uchtor	2.84	17	P	Pb	12 58 28.3	-2.1
	SNR=110						
UCH	Uchtor	2.84	17	⇑*i*P	Pn	12 58 27.9	+2.4
	baz=17						
UCH				⇑*i*S	Sb	12 59 04.1	-1.8
	baz=17						
MNAS	Manas	3.04	348	⇑*i*P	Pn	12 58 30.6	+2.6
	baz=48						
MNAS				⇑*i*S	Sb	12 59 09.1	-2.2
	baz=48						
EKS2	Erkin-Say	3.16	5	P	Pb	12 58 33.0	-2.6
	SNR=12						
EKS2	Erkin-Say	3.16	5	⇑*i*P	Pn	12 58 32.2	+2.7
	baz=5.0						
EKS2				⇑*i*S	Sn	12 59 11.8	+3.8
	baz=5.0						
MRKS	Merke	3.23	358	*e*P	Pg	12 58 39.2	-1.3
	21nm,0.4s						
MRKS				*e*S	Sg	12 59 21.9	-0.4
	74nm,0.5s						
MRKS	Merke	3.23	358	Pg	Pg	12 58 39.2	-1.3
	21nm,0.4s						
MRKS				Lg	Lg	12 59 21.9	
	74nm,0.5s						
AAK	Ala-Archa	3.23	15	P	Pb	12 58 34.1	-2.7
	SNR=84						
AAK	Ala-Archa	3.23	15	⇑Pn	Pn	12 58 33.7	+3.1
	41nm,0.6s						
AAK				⇑Lg	Lg	12 59 17.8	
	171nm,0.9s						
AAK	Ala-Archa	3.23	15	⇑*i*P	Pn	12 58 33.2	+2.6
	baz=14						
AAK				⇑*i*S	Sn	12 59 13.4	+3.6
	baz=14						
CHMG	Chimgan	3.28	309	*e*P	Pg	12 58 42.0	+0.7
KBK	Karagaybulak	3.35	20	P	Pb	12 58 36.8	-2.2
	SNR=9.0						
KBK	Karagaybulak	3.35	20	⇑*e*P	Pn	12 58 34.9	+2.6
	baz=20						
KBK				⇑*i*S	Sn	12 59 16.4	+3.5
	baz=20						
FRU1	Bishkek	3.42	16	⇑*e*P	Pn	12 58 35.9	+2.7
	baz=15						
FRU1				⇑*i*S	Sn	12 59 18.5	+4.1
	baz=15						
ULHL	Ulahol	3.49	38	P	Pb	12 58 38.6	-2.6
	SNR=5.1						
BOOM	Boomskoye usch	3.55	32	⇑*i*P	Pn	12 58 37.2	+2.3
	baz=32						
BOOM				⇑*i*S	Sn	12 59 20.9	+3.3
	baz=32						
TAS	Tashkent	3.60	301	*e*S	Sg	12 59 34.0	-0.4
TAS	Tashkent	3.60	301	⇓*i*P	Pn	12 58 37.9	+2.3
	baz=2.0						
TAS				⇓*i*S	Sn	12 59 22.0	+3.2
	baz=2.0						
CHMS	Chumysh	3.63	16	P	Pn	12 58 39.5	+3.5
	SNR=21						
IUG	Iuzhnay	3.66	317	*e*P	Pg	12 58 48.2	-0.4
	2µm,0.7s						
IUG				*e*S	Sg	12 59 37.9	+1.8
	458nm,0.5s						
IUG	Iuzhnay	3.66	317	Pg	Pg	12 58 48.2	-0.4
	2µm,0.7s						
IUG				Lg	Lg	12 59 37.9	
	458nm,0.5s						
DZA	Taraz	3.71	336	*e*P	Pg	12 58 48.3	-1.4
	194nm,0.1s						
DZA				*e*S	Sg	12 59 38.3	+0.5
	313nm,0.3s						
DZA	Taraz	3.71	336	Pg	Pg	12 58 48.3	-1.4
	194nm,0.1s						
DZA				Lg	Lg	12 59 38.3	
	313nm,0.3s						
TKM2	Tokmak 2	3.79	25	P	Pn	12 58 42.1	+3.8
	SNR=9.6						
TKM2	Tokmak 2	3.79	25	⇑Pn	Pn	12 58 42.0	+3.6
	6.3nm,0.6s						
TKM2				⇓Pg	Pg	12 58 51.2	0.0
	11nm,0.5s						
TKM2				⇑Lg	Lg	12 59 40.2	
	118nm,1.1s						
TKM2	Tokmak 2	3.79	25	⇑*i*P	Pn	12 58 41.1	+2.8
	baz=25						
TKM2				⇑*i*S	Sn	12 59 26.9	+3.2
	baz=25						
USP	Ospenovka	3.84	12	P	Pn	12 58 41.9	+3.0
	SNR=12						
USP	Ospenovka	3.84	12	⇑*e*P	Pn	12 58 41.6	+2.7
	baz=12						
USP				⇑*i*S	Sn	12 59 28.2	+3.5
	baz=12						
KDJ	Kajisay	3.89	47	⇓*i*P	Pn	12 58 41.9	+2.2
	baz=46						
KDJ				⇓*e*S	Sn	12 59 29.0	+2.9
	baz=46						
KST	Kastek	4.03	28	*e*P	Pb	12 58 52.9	+2.5
	27nm,0.4s						
KST				*e*S	Sg	12 59 45.7	-2.2
	45nm,0.4s						
KST	Kastek	4.03	28	Pg	Pb	12 58 52.9	+2.5
	27nm,0.4s						
KST				Lg	Lg	12 59 45.7	
	45nm,0.4s						
SGDS	Sogindy	4.04	13	Pg	Pg	12 58 54.3	-1.8
	15nm,0.5s						
SGDS				Lg	Lg	12 59 48.0	
	43nm,0.7s						
KK02	Karatay Array	4.19	330	⇓Pn	Pn	12 58 45.9	+2.3
	8.1nm,0.8s						
KK02				⇓Pg	Pg	12 58 57.4	-1.4
	30nm,0.7s						
KK02				⇑Lg	Lg	12 59 49.3	
	62nm,0.6s						
MTBS	Maitube	4.28	31	*e*P	Pg	12 58 57.8	-2.7
	18nm,0.4s						
MTBS				*e*S	Sg	12 59 54.3	-1.7
	38nm,0.4s						
MTBS	Maitube	4.28	31	Pg	Pg	12 58 57.8	-2.7
	18nm,0.4s						
MTBS				Lg	Lg	12 59 54.3	
	38nm,0.4s						
TNSS	Tian-Shan	4.43	36	*e*P	Pb	12 59 00.1	+2.8
	18nm,0.4s						
TNSS				*e*S	Sg	12 59 58.1	-2.7
	19nm,0.7s						
TNSS	Tian-Shan	4.43	36	Pg	Pb	12 59 00.1	+2.8
	18nm,0.4s						
TNSS				Lg	Lg	12 59 58.1	
	19nm,0.7s						
KRBS	Karabastau	4.52	22	*e*P	Pg	12 59 03.5	-1.6
	14nm,0.5s						
KRBS				*e*S	Sg	13 00 03.9	+0.2
	22nm,0.3s						
KRBS	Karabastau	4.52	22	Pg	Pg	12 59 03.5	-1.6
	14nm,0.5s						
KRBS				Lg	Lg	13 00 03.9	
	22nm,0.3s						
MDOK	Medeo	4.57	36	*e*P	Pb	12 59 02.8	+3.1
	7.9nm,0.5s						
MDOK				*e*S	Sg	13 00 02.7	-2.7
	39nm,0.6s						
MDOK	Medeo	4.57	36	Pn	Pn	12 58 53.1	+4.1
	5.5nm,0.7s						
MDOK				Pg	Pg	12 59 07.1	+0.9
	14nm,0.7s						
MDOK				Lg	Lg	13 00 03.8	
	81nm,1.2s						
MDOK	Medeo	4.57	36	Pg	Pb	12 59 02.8	+3.1
	7.9nm,0.5s						
MDOK				Lg	Lg	13 00 02.7	
	39nm,0.6s						
ANVS	Anan'yevo	4.60	43	⇑*i*P	Pn	12 58 52.0	+2.6
	baz=43						
ANVS				⇑*i*S	Sn	12 59 45.9	+2.4
	baz=43						
KOTS	Kotyrbulak	4.66	36	*e*P	Pb	12 59 03.9	+2.8
	20nm,0.3s						
KOTS				*e*S	Sg	13 00 04.4	-3.8
	68nm,0.5s						
KOTS	Kotyrbulak	4.66	36	Pg	Pb	12 59 03.9	+2.8
	20nm,0.3s						
KOTS				Lg	Lg	13 00 04.4	
	68nm,0.5s						
KTBS	Karatobe	4.87	29	*e*P	Pb	12 59 08.2	+3.6
	5.6nm,0.5s						
KTBS				*e*S	Sg	13 00 12.3	-2.6
	50nm,0.5s						
KTBS	Karatobe	4.87	29	Pg	Pb	12 59 08.2	+3.6
	5.6nm,0.5s						
KTBS				Lg	Lg	13 00 12.3	
	50nm,0.5s						
KUU	Kurty	4.90	26	⇑*i*P	Pg	12 59 09.3	-3.1
	10.0nm,0.5s						
KUU				⇓*i*S	Sg	13 00 13.9	-2.2
	76nm,0.8s						
KUU	Kurty	4.90	26	Pg	Pg	12 59 09.3	-3.1
	10.0nm,0.5s						
KUU				Lg	Lg	13 00 13.9	
	76nm,0.8s						
SATY	Saty	5.18	45	⇑*i*P	Pg	12 59 15.4	-2.5
	11nm,0.8s						
SATY				⇓*i*S	Sg	13 00 24.3	-0.7
	16nm,0.6s						
SATY	Saty	5.18	45	Pg	Pg	12 59 15.4	-2.5
	11nm,0.8s						
SATY				Lg	Lg	13 00 24.3	
	16nm,0.6s						
KURS	Kuram	5.36	41	*e*P	Pg	12 59 17.7	-3.4
	8.6nm,0.9s						
KURS				*e*S	Sg	13 00 28.2	-2.4
	24nm,1.4s						
KURS	Kuram	5.36	41	Pg	Pg	12 59 17.7	-3.4
	8.6nm,0.9s						
KURS				Lg	Lg	13 00 28.2	
	24nm,1.4s						
BTLS	Baital	5.54	5	*e*P	Pg	12 59 21.9	-2.9
	4.2nm,0.5s						
BTLS				*e*S	Sg	13 00 35.0	-1.6
	16nm,0.6s						
UZB	Uzynbulak	5.59	48	*e*P	Pg	12 59 24.0	-1.6
	6.7nm,0.3s						
UZB				*e*S	Sg	13 00 39.0	+1.0
	16nm,0.7s						
UZB	Uzynbulak	5.59	48	Pg	Pg	12 59 24.0	-1.6
	6.7nm,0.3s						
UZB				Lg	Lg	13 00 39.0	
	16nm,0.7s						
SHLS	Shalkode	5.85	50	*e*P	Pg	12 59 33.3	+2.7
	12nm,0.4s						
SHLS				*e*S	Sg	13 00 55.2	+8.9
	30nm,0.8s						
SHLS	Shalkode	5.85	50	Pg	Pg	12 59 33.3	+2.7
	12nm,0.4s						
SHLS				Lg	Lg	13 00 55.2	
	30nm,0.8s						
PDGK	Podgornoye	5.97	48	⇓Pn	Pn	12 59 12.8	+4.7
	7.9nm,0.7s						
PDGK				⇑Lg	Lg	13 00 51.1	
	24nm,1.0s						
TDK	Taldyqorghan	6.63	33	*e*P	Pg	12 59 42.3	-3.2
	30nm,0.3s						
TDK				*e*S	Sg	13 01 10.8	-0.6
	66nm,0.6s						
TDK	Taldyqorghan	6.63	33	Pg	Pg	12 59 42.3	-3.2
	30nm,0.3s						
TDK				Lg	Lg	13 01 10.8	
	66nm,0.6s						
DHRM	DHARAMSHALA	7.62	161	*e*P	Pn	12 59 30.6	-0.4
DHRM				*e*S	Sn	13 00 57.1	-1.1
DHRM				IAML		13 01 04.9	
	comp=E,47nm,0.9s						
SMLA	Simla	8.92	159	*e*P	Pn	12 59 47.7	-0.8
SMLA				*e*S	Sn	13 01 26.4	-3.3
SMLA				IAML		13 01 32.5	
	comp=E,20nm,0.5s						
MKAR	Makanchi Array	9.76	39	Pn	Pn	13 00 01.8	+1.7
	comp=E,0.1nm,0.3s,baz=213,slow=15,SNR=2.5						
MKAR				Lg	Lg	13 02 45.1	
	comp=E,0.0nm,0.3s,baz=218,slow=26,SNR=3.0						
AB31	Akbulak array	13.66	320	⇑Pn	Pn	13 00 51.7	-1.6
	comp=E,1.0nm,0.6s,baz=131,slow=12,SNR=16						
AB31				⇓Sn	Sn	13 03 20.0	-5.7
	comp=E,1.4nm,0.7s,baz=130,slow=25,SNR=3.1						
AKTO	Aktyubinsk	15.38	320	⇑Pn	Pn	13 01 17.6	+1.0
	comp=E,6.9nm,1.1s						
ZALV	Zalesovo Beam	16.40	25	Pn	P	13 01 32.2	-0.5
	comp=E,0.2nm,0.3s,baz=224,slow=10,SNR=6.5						
ZALV				LR	LR	13 08 01.1	
	comp=E,33nm,20.1s,baz=10,slow=38						
SONM	Songino Array	25.13	60	P	P	13 03 04.8	-0.3
	comp=E,0.8nm,1.0s,baz=248,slow=7.6,SNR=3.7						
OBN	Obninsk	29.01	315	LR	LR	13 17 25.1	
	comp=E,45nm,18.8s,baz=341,slow=41						
PALK	Pallekele	32.77	166	LR	LR	13 16 06.7	
	comp=E,324nm,18.8s,baz=212,slow=34						
FINES	FINESS Array B	36.12	323	P	P	13 04 41.7	0.0
	comp=E,2.5nm,0.8s,baz=131,slow=12,SNR=2.3						
RES	Resolute Bay	65.82	357	LR	LR	13 38 58.6	
	comp=E,118nm,19.3s,baz=311,slow=38						

RSPR ***08*** *13:16:38.6, 19°.63N×65°.38W, h60^{km}±8^{km}, MD3.5/7*

NEIC ***08*** *13:16:38.3±1.7, 19°.54N±0°.04×65°.60W±0°.03, h28^{km}±15^{km}, Error ellipse: s-maj=5.7km s-min=4.0km az=219.0*

ISC 08 13:16:33.6±3.4**, 19°.7N**±0°.1×**65°.52W**±0°.07**, h16**^{km}**, n34,** σ**0^{s}61**/35**, 8D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUPR	Culebra, Puert	1.35	170	⇓*e*P	Pg	13 16 59.8	+0.1
CUPR	Culebra, Puert	1.35	170	*e*S	Sg	13 17 17.1	-0.2
CUPR	Culebra, Puert	1.35	170		Pg	13 16 59.8	+0.1
CUPR					Sg	13 17 17.1	-0.2
STVI	Saint Thomas	1.40	157		Pg	13 17 00.1	-0.4
CBYP	Canovanas	1.40	193	⇓*e*P	Pg	13 17 00.6	-0.1
CBYP	Canovanas	1.40	193	*e*S	Sn	13 17 15.8	-1.0
CBYP	Canovanas	1.40	193	Pn	Pb	13 16 59.4	-0.1
CBYP				IAML		13 17 21.0	
	comp=N,161nm,0.2s						
CBYP				IAML		13 17 21.8	
	comp=E,190nm,0.2s						
GCPR	Guaynabo City	1.43	202		Pb	13 17 00.2	+0.3
EMPR	Esperanza - Ma	1.50	219	Pn	Pg	13 17 02.1	-0.5
EMPR				IAML		13 17 41.9	
	comp=N,144nm,0.8s						
HUMP	Col San Antoni	1.53	192		Pb	13 17 01.5	-0.1
MTP	Monte Pirata	1.54	181	⇓*e*P	Pg	13 17 02.9	-0.4
MTP	Monte Pirata	1.54	181	*e*S	Sb	13 17 21.9	+0.8
MTP	Monte Pirata	1.54	181		Pb	13 17 01.8	-0.1
MTP	Monte Pirata	1.54	181		Sb	13 17 21.9	+0.8
PDPR	Patillas Dam,	1.69	196		Pb	13 17 04.3	0.0
PDPR				IAML		13 17 33.0	
	comp=E,74nm,1.0s						
AOPR	Arecibo Observ	1.74	222	⇓*e*P	Pg	13 17 06.8	-0.3
AOPR	Arecibo Observ	1.74	222	*e*S	Sg	13 17 29.0	-0.7
AOPR	Arecibo Observ	1.74	222		Pb	13 17 05.9	+0.7
IGPR	InterUniversit	1.76	198	⇓*e*P	Pg	13 17 06.8	-0.7
IGPR	InterUniversit	1.76	198	*e*S	Sb	13 17 28.1	+0.7
IGPR	InterUniversit	1.76	198		Sb	13 17 28.1	+0.7
CELP	Cerrillos	1.85	213	⇓*e*P	Pb	13 17 08.3	+1.1
CELP	Cerrillos	1.85	213	*e*S	Sb	13 17 31.3	+1.2
CELP	Cerrillos	1.85	213		Pb	13 17 08.3	+1.1
CELP					Sb	13 17 31.3	+1.2
CELP	Cerrillos	1.85	213	IAML		13 17 39.0	
	comp=E,51nm,0.6s						
OBIP	Obispado Ponce	1.90	213		Pb	13 17 08.4	+0.5
MLPR	Magueyes Islan	2.20	221	⇓*e*P	Pb	13 17 13.3	+0.2
MLPR	Magueyes Islan	2.20	221	*e*S	Sb	13 17 40.5	+0.3
MLPR	Magueyes Islan	2.20	221		Pb	13 17 13.3	+0.2
MLPR					Sb	13 17 40.5	+0.3
MLPR	Magueyes Islan	2.20	221	IAML		13 17 59.0	
	comp=E,35nm,1.9s						
CRPR	Cabo Rojo, PR	2.22	223	⇓*e*P	Pb	13 17 13.6	+0.3
CRPR	Cabo Rojo, PR	2.22	223	*e*S	Sb	13 17 40.6	0.0
CRPR	Cabo Rojo, PR	2.22	223		Pb	13 17 13.6	+0.3
CRPR					Sb	13 17 40.6	0.0
CRPR	Cabo Rojo, PR	2.22	223	IAML		13 18 03.2	
	comp=E,48nm,2.7s						
CRPR				IAML		13 18 03.4	
	comp=N,56nm,2.2s						

IDC 08 13:24:07.9±14.0**, 25°.65S**×**70°.62E, h0**^{km}**, mb3.7**/5**, mb1 3.8**/5**, mb1mx3.6**/48**, mbtmp3.7**/5**, MS4.5**/3**, Ms1 4.5**/3**, ms1mx3.7**/38**, Error ellipse: s-maj=456.7km s-min=35.6km az=50.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	57.05	103	P	P	13 33 55.9	-0.3
	0.3nm,0.6s,baz=257,slow=6.5,SNR=9.3						
ASAR				LR	LR	13 58 19.9	
	comp=Z,266nm,18.4s,baz=166,slow=36						
WRA	Warramunga Arr	58.54	99	P	P	13 34 06.6	0.0
	0.4nm,0.7s,baz=260,slow=6.9,SNR=3.8						
JAY	Jayapura	70.98	83	LR	LR	14 04 53.6	
	comp=Z,410nm,21.5s,baz=122,slow=34						
MKAR	Makanchi Array	72.87	8	P	P	13 35 38.3	-0.2
	0.5nm,0.6s,baz=202,slow=8.4,SNR=2.4						
SONM	Songino Array	79.91	24	P	P	13 36 19.9	+1.3
	0.4nm,0.6s,baz=224,slow=8.1,SNR=3.9						
ZALV	Zalesovo Beam	80.22	8	P	P	13 36 19.1	-0.8
	0.7nm,0.5s,baz=221,slow=5.7,SNR=1.8						
MJAR	Matsushiro Arr	88.75	48	LR	LR	14 16 32.4	
	comp=Z,217nm,20.0s,baz=55,slow=35						

IDC ***08*** *13:32:45.0±0.9, 30°.83S×71°.64W, h0^{km}, mb4.3/7, mb1 4.2/11, mb1mx4.0/31, mbtmp4.1/11, ML3.9/4, MS3.9/2, Ms1 3.8/2, ms1mx3.3/27, Error ellipse: s-maj=34.5km s-min=18.6km az=97.0*

SJA ***08*** *13:32:44.3±1.2, 30°.75S×72°.20W, h26^{km}, ML4.6, MW4.6*

NEIC ***08*** *13:32:48.8±1.3, 30°.79S±0°.04×71°.92W±0°.08, h27^{km}±4^{km}, mb4.7/9, Mwr4.2/37, ML4.6(GUC), Error ellipse: s-maj=10.4km s-min=5.8km az=109.0*

NEIC ***08*** *13:32:48.5, 30°.78S×71°.98W, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.14; $M_{\theta\theta}$0.35; $M_{\phi\phi}$-2.50; $M_{r\theta}$-0.06; $M_{\theta\phi}$-0.89; $M_{\phi r}$0.45; Fault plane solution: $M_0$2.54000×10^{15} NP1:ϕ_s202.93000°, δ40.56000°, λ100.19000°. NP2:ϕ_s9.62000°, δ50.21000°, λ81.39000°. Principal axes: T 2.1990, Plg82.0000°, Azm232.0000°; N 0.5873, Plg7.0000°, Azm15.0000°; P -2.7863, Plg5.0000°, Azm106.0000°;*

GUC ***08*** *13:32:49.5±0.7, 30°.84S×71°.72W, h36^{km}±3^{km}, ML4.7*

VAO ***08*** *13:33:21.3±3.4, 29°.57S×71°.69W, h224^{km}, mb4.0*

ISC 08 13:32:48.8±0.9**, 30°.84S**±0°.02×**71°.88W**±0°.04**, h27**^{km}±6^{km}**, n135,** σ**2^{s}05**/157**, mb4.6**/10**, 9C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.27	52	⇑*i*P	Pb	13 32 55.8	+0.2
CO06				*i* S	Sb	13 32 59.8	-0.4
CO06				IAML		13 33 00.8	
	comp=E,91µm,0.2s						
CO06	Fray Jorge	0.27	52		Pb	13 32 55.8	+0.2
CO06				Sg	Sb	13 32 59.6	-0.5
CO03	El Pedregal	1.03	90	⇓*i*P	Pb	13 33 05.8	-2.2
CO03				*i* S	Sb	13 33 17.5	-3.6
CO03	El Pedregal	1.03	90		Pb	13 33 05.7	-2.2
CO05	La Serena	1.08	31	*e*P	Pn	13 33 07.5	-0.6
CO05				*i* S	Sn	13 33 21.2	-1.0
CO05	La Serena	1.08	31		Pn	13 33 07.5	-0.6
CO05				Sn	Sb	13 33 20.6	-1.8
GO04	Tololo Observa	1.15	55	*e*P	Pn	13 33 08.3	-1.1
GO04				*i* S	Sb	13 33 22.3	-2.5
GO04				IAML		13 33 29.6	
	comp=N,26µm,0.4s						
GO04	Tololo Observa	1.15	55	Pn	Pn	13 33 08.3	-1.1
GO04	Tololo Observa	1.15	55	*e*P	Pn	13 33 08.7	-0.7
GO04				*e*S	Sb	13 33 20.9	-3.8
VA06	Catapilco	1.78	164	*e*P	Pn	13 33 18.4	+0.6
VA06				*i* S	Sn	13 33 40.1	+0.5
VA06				IAML		13 33 46.5	
	comp=E,15µm,0.7s						
LCO	Las Campanas	2.10	30	*e*P	Pn	13 33 22.9	+0.5
LCO				*i* S	Sn	13 33 46.8	-0.9
LCO	Las Campanas	2.10	30		Pn	13 33 22.7	+0.3
VA01	Torpederas	2.18	175		Pn	13 33 23.4	+0.1
AROD	Rodeo	2.19	73	*e*P	Pb	13 33 25.9	-1.9
AROD				*e*S	Sb	13 33 53.9	-0.8
VA03	San Esteban	2.23	150	⇑*i*P	Pn	13 33 25.1	+1.1
VA03				*i* S	Sn	13 33 52.2	+1.5
VA03				IAML		13 33 58.8	
	comp=E,7µm,0.2s						
VA03	San Esteban	2.23	150		Pn	13 33 25.0	+1.1
VA03	San Esteban	2.23	150	*e*P	Pn	13 33 25.2	+1.1
VA03				*e*S	Sb	13 33 55.8	+0.3
VA03				IAML		13 33 59.2	
	comp=Z,4µm,0.5s						
ROCH	El Roble	2.25	161	⇑*i*P	Pb	13 33 25.2	-3.6
ROCH				*e*P	Pn	13 33 25.0	+0.6
ROCH				*i* S	Sn	13 33 52.9	+1.5
ROCH				*i* S	Sb	13 33 53.4	-2.9
ROCH				IAML		13 34 01.0	

	comp=E,7µm,0.6s						
ROCH				IAML		13 34 03.0	
	comp=E,7µm,0.6s						
ROC1	El Roble	2.25	161	eP	Pn	13 33 25.1	+0.6
ROC1				eS	Sb	13 33 54.7	-1.7
RTLS	Leoncito	2.41	114	eP	Pb	13 33 30.0	-1.6
RTLS				eS	Sb	13 34 01.0	-0.1
RTLS				IAML		13 34 02.9	
	comp=Z,3µm,0.7s						
ACCO	Cerro Coronel	2.44	85	eP	Pb	13 33 30.0	-2.2
ACCO				eS	Sb	13 34 04.9	+2.9
ACDV	Cuesta del Vie	2.48	75	eP	Pn	13 33 24.7	-2.9
ACDV				eP	Pb	13 33 30.0	-2.7
MT02	Curacav	2.49	165	eP	Pn	13 33 28.0	+0.4
MT02				iS	Sn	13 33 59.7	+2.6
MT02				IAML		13 34 10.2	
	comp=E,3µm,0.2s						
MT02	Curacav	2.49	165		Pn	13 33 28.3	+0.7
MT02	Curacav	2.49	165	eP	Pn	13 33 28.2	+0.7
MT02				eS	Sn	13 33 54.7	-2.4
MT02				eS	Sb	13 34 02.5	-0.5
MT02				IAML		13 34 12.6	
	comp=Z,2µm,0.5s						
PEL	Peldehue	2.51	156	⇑iP	Pn	13 33 28.9	+0.9
PEL				iS	Sn	13 33 59.9	+2.3
PEL				IAML		13 34 09.6	
	comp=E,5µm,0.8s						
PEL	Peldehue	2.51	156		Pn	13 33 28.8	+0.9
PEL	Peldehue	2.51	156	eP	Pn	13 33 29.1	+1.2
PEL				eS	Sn	13 33 57.7	+0.1
AUSP	Uspallata	2.54	123	eP	Pb	13 33 31.0	-2.8
AUSP				eP	Pn	13 33 31.3	+2.8
AUSP				eS	Sn	13 34 00.7	+2.0
MT05	Renca	2.72	159	⇑iP	Pn	13 33 31.8	+1.1
MT05				IAML		13 34 18.4	
	comp=E,8µm,0.5s						
MT05	Renca	2.72	159		Pn	13 33 31.7	+0.9
MT05	Renca	2.72	159	eP	Pn	13 33 32.0	+1.2
MT05				eS	Sn	13 34 05.7	+2.8
MT05				IAML		13 34 21.1	
	comp=Z,3µm,1.1s						
AC04	Llanos de Chal	2.72	15	eP	Pn	13 33 30.8	0.0
AC04				IAML		13 34 32.1	
	comp=E,485nm,0.5s						
AC04	Llanos de Chal	2.72	15		Pn	13 33 30.5	-0.3
AC04	Llanos de Chal	2.72	15	eP	Pn	13 33 30.7	0.0
AC04				eS	Sn	13 34 01.2	-1.7
VA05	Santo Domingo	2.81	175	eP	Pn	13 33 32.2	+0.2
VA05				iS	Sb	13 34 09.8	-2.6
VA05				IAML		13 34 20.3	
	comp=N,5µm,0.5s						
VA05	Santo Domingo	2.81	175		Pn	13 33 32.0	0.0
FCH	Farellones	2.82	152	⇑iP	Pn	13 33 33.8	+1.3
FCH				iS	Sn	13 34 08.4	+2.7
FCH				IAML		13 34 20.9	
	comp=E,2µm,0.5s						
ZON	Zonda	2.83	105		Pn	13 33 34.5	+2.1
ZON	Zonda	2.83	105	eP	Pn	13 33 35.0	+2.6
ZON				eS	Sb	13 34 12.2	-0.8
ZON				IAML		13 34 26.9	
	comp=Z,1µm,0.6s						
MT09	Talagante	3.02	166	⇑iP	Pn	13 33 36.1	+1.1
MT09				iS	Sn	13 34 11.7	+1.3
MT09				IAML		13 34 24.2	
	comp=E,3µm,0.2s						
MT09	Talagante	3.02	166	Pn	Pn	13 33 35.8	+0.8
RTCV	Cerro Valdivia	3.04	110	eP	Pb	13 33 38.7	-3.5
RTCV				eS	Sb	13 34 25.9	+7.2
MT01	Popeta	3.06	170	⇑iP	Pn	13 33 36.0	+0.6
MT01				IAML		13 34 24.1	
	comp=N,3µm,0.5s						
MT01	Popeta	3.06	170		Pn	13 33 35.7	+0.3
MT01	Popeta	3.06	170	eP	Pn	13 33 36.2	+0.8
MT01				eS	Sn	13 34 11.2	+0.1
MT01				IAML		13 34 22.4	
	comp=Z,2µm,0.6s						
ASAL	Salagasta	3.13	125	eP	Pb	13 33 40.0	-3.7
ASAL				eS	Sb	13 34 20.7	-0.8
ARCO	CERRO ARCO	3.21	129	eP	Pb	13 33 41.9	-3.2
ARCO				eS	Sb	13 34 22.1	-1.7
ARCO				IAML		13 34 35.6	
	comp=Z,1µm,1.6s						
BO04	La Punta	3.32	161	⇑iP	Pn	13 33 40.1	+1.2
BO04				iS	Sn	13 34 18.6	+1.1
BO04				IAML		13 34 35.1	
	comp=N,2µm,0.2s						
LMEL	Las Melosas	3.32	155	eP	Pn	13 33 40.8	+1.7
LMEL				iS	Sn	13 34 19.7	+2.0
AAGR	Agrelo	3.43	132	eP	Pb	13 33 44.7	-4.2
AAGR				eS	Sb	13 34 29.6	-0.4
GO03	Copiap	3.54	24	eP	Pn	13 33 42.5	+0.4
GO03				IAML		13 34 40.2	
	comp=N,820nm,0.3s						
GO03	Copiap	3.54	24		Pn	13 33 41.9	-0.2
GO03	Copiap	3.54	24	eP	Pn	13 33 42.9	+0.7
GO03				eS	Sb	13 34 35.6	+2.1
BO01	Tunca	3.60	169	eP	Pn	13 33 43.3	+0.5
BO01				IAML		13 34 43.5	
	comp=N,704nm,0.4s						
BO01	Tunca	3.60	169		Pn	13 33 43.2	+0.4
BO01	Tunca	3.60	169	eP	Pn	13 33 38.2	-4.6
BO01				eP	Pb	13 33 44.0	-7.7
BO01				eS	Sb	13 34 37.5	+2.5
BO01				IAML		13 34 41.1	
	comp=Z,1µm,1.1s						
AVFE	Valle Fertil	3.82	88	eP	Pn	13 33 47.6	+1.7
AVFE				eS	Sn	13 34 34.2	+4.2
AVFE				eS	Sb	13 34 35.7	-5.6
AVFE				IAML		13 34 42.0	
	comp=Z,699nm,0.7s						
VCA	Vinchina	3.83	58	eP	Pn	13 33 34.0	-12
VCA				eP	Pb	13 33 50.0	-5.7
VCA				eS	Sn	13 34 33.7	+3.4
VCA				eS	Sb	13 34 38.2	-3.4
VCA				IAML		13 34 54.9	
	comp=Z,816nm,1.6s						
BO02	Sierra Bellavi	4.04	167	eP	Pn	13 33 50.6	+1.5
BO02				iS	Sn	13 34 36.1	+0.5
BO02	Sierra Bellavi	4.04	167		Pn	13 33 49.7	+0.7
BO02	Sierra Bellavi	4.04	167	eP	Pn	13 33 50.0	+1.0
BO02				eP	Pb	13 33 50.5	-8.9
BO02				eS	Sn	13 34 41.2	+5.6
BO02				IAML		13 34 52.9	
	comp=Z,1µm,0.5s						
GO05	Huala	4.15	181		Pn	13 33 49.7	-0.7
GO05	Huala	4.15	181	eP	Pn	13 33 50.5	0.0
GO05				eS	Sn	13 34 38.2	0.0
ACHE	Chepes	4.49	95	eS	Sb	13 34 53.9	-6.9
APLL	PUNTA DE LOS L	4.64	86	eP	Pn	13 33 58.7	+1.5
AC02	Maricunga	4.67	32		Pn	13 33 57.5	-0.5
AC02	Maricunga	4.67	32	eS	Sb	13 35 03.2	-3.0
RFA	San Rafael	4.86	145	eS	Sb	13 35 05.7	-5.5
PB14	IPOC Station P	6.33	12	Pn	Pn	13 34 19.8	-0.9
H03N1	Juan Fernandez	6.50	245	Pn	Pn	13 34 23.7	+1.3
	baz=306,slow=77,SNR=23						
H03N1				T	T	13 41 19.7	
	baz=73,slow=72,SNR=3797						
H03N3	Juan Fernandez	6.51	245	Pn	Pn	13 34 23.5	+0.9
	baz=306,slow=77,SNR=28						
H03N3				T	T	13 41 16.4	
	baz=73,slow=72,SNR=3112						
VA04	Juan Fernndez	6.51	243	Pn	Pn	13 34 23.1	+0.2
H03N2	Juan Fernandez	6.51	245	Pn	Pn	13 34 24.2	+1.6
	baz=306,slow=77,SNR=24						
H03N2				T	T	13 41 17.7	
	baz=73,slow=72,SNR=3771						
H03S3	Juan Fernandez	6.65	242	T	T	13 41 25.9	
	baz=84,SNR=8.8						
H03S1	Juan Fernandez	6.65	241	T	T	13 41 23.5	
	baz=84,SNR=5.0						
H03S2	Juan Fernandez	6.66	242	T	T	13 41 33.9	
	baz=84,SNR=4.9						
PB10	IPOC Station P	7.40	10	Pn	Pn	13 34 34.4	-0.7
LC01	Cunco	8.04	180		Pn	13 34 43.0	-0.8
LVC	Limon Verde	8.62	19	Pn	Pn	13 34 51.7	-0.4
	comp=Z,0.4nm,0.3s,baz=279,slow=22,SNR=1.5						
LVC	Limon Verde	8.62	19	eP	Pn	13 35 05.6	+13
PLCA	Paso Flores	9.93	174	Pn	Pn	13 35 10.4	+0.7
	comp=Z,0.4nm,0.3s,baz=341,slow=10,SNR=16						
PLCA	Paso Flores	9.93	174	Pn	Pn	13 35 09.6	-0.1
LL04	Puerto Octay	10.05	182	Pn	Pn	13 35 11.1	-0.3
TRQA	Tornquist	10.89	134	Pn	Pn	13 35 23.5	+0.7
PB11	IPOC Station P	11.22	11	Pn	Pn	13 35 25.4	-2.2
PB12	IPOC Station P	12.26	7	Pn	Pn	13 35 40.2	-1.6
ITQB	Itaqui	13.24	89	Pn	Pn	13 35 54.9	-0.2
CPUP	Villa Florida	13.55	74	Pn	Pn	13 36 01.9	+2.5
	comp=Z,0.3nm,0.3s,baz=334,slow=3.0,SNR=3.5						
CPUP	Villa Florida	13.55	74	Pn	Pn	13 35 59.4	+0.1
LPAZ	La Paz	14.89	14	Pn	Pn	13 36 17.5	-0.7
	comp=Z,0.2nm,0.3s,baz=181,slow=8.6,SNR=7.4						
SIV	San Ignacio	17.79	36	P	Pn	13 36 53.3	-1.2
	comp=Z,0.3nm,0.3s,baz=227,slow=12,SNR=5.5						
PTLB	Pontes e Lacer	19.27	40	eP	Pn	13 37 16.9	+4.4
NNA	Nana	19.32	345	LR	LR	13 41 59.2	
	comp=Z,220nm,19.1s,baz=276,slow=29						
SALV	Santo Antonio	20.99	49	eP	Pn	13 37 38.0	+5.2
FRTB	Fartura	21.21	75	eP	P	13 37 45.1	+13
ETMB	Extrema	21.58	15	eP	P	13 37 39.8	+3.3
ITRB	Iturama	22.36	65	eP	P	13 37 54.7	+10
EFI	East Falkland	23.18	158	P	P	13 37 53.7	+0.5
ARAG	Araguaiana, MT	23.75	55	eP	P	13 38 04.7	+5.7
USHA	Ushuaia	24.10	175	P	P	13 38 02.9	+1.0
	comp=Z,18nm,0.8s,baz=4.9,slow=6.4,SNR=4.9						
BDFB	Brasilia	26.56	61	P	P	13 38 23.2	-1.6
	comp=Z,1.7nm,0.4s,baz=213,slow=11,SNR=4.0						
BDFB	Brasilia	26.56	61	IAmb	IAmb	13 38 37.5	
	comp=Z,14nm,0.7s						
PEXB	Peixe	28.69	55	eP	P	13 38 49.9	+6.2
SMTB	Santa Maria do	31.49	51	eP	P	13 39 14.2	+5.7
BOAV	Boa Vista	34.78	20	P	P	13 39 36.8	-0.4
NBPN	Ponto Novo - B	35.48	63	eP	P	13 39 50.1	+6.8
BIRV	Birongo	41.44	8	P	P	13 40 32.7	-0.6
VNA3	Neumayer Olymp	52.23	159	P	P	13 41 57.0	-0.1
VNA3	Neumayer Olymp	52.23	159	pP	pP	13 42 05.0	+0.2
VNA2	Neumayer--Watz	52.87	158	P	P	13 42 01.9	+0.1
	baz=286,slow=8.3						
VNA2	Neumayer--Watz	52.87	158	pP	pP	13 42 10.4	+0.9
SNAA	Sanae	54.46	159	P	P	13 42 13.6	+0.1
SNAA	Sanae	54.46	159	P	P	13 42 13.6	+0.1
	comp=Z,5.2nm,0.7s,baz=274,slow=9.0,SNR=26						
SNAA	Sanae	54.46	159	P	P	13 42 12.2	-1.3
SNAA				IAmb	IAmb	13 42 14.7	
	comp=Z,5.9nm,0.7s						
QSPA	South Pole Qui	59.38	180	P	P	13 42 49.0	+0.4
QSPA				IAmb	IAmb	13 42 50.7	
	comp=Z,4.1nm,0.8s						
H06E1	SOCORRO T-PHAS	61.99	317	T	T	14 50 29.5	
	SNR=3.9						
TXAR	Lajitas Array	67.06	330	P	P	13 43 41.5	+1.7
	comp=Z,0.3nm,0.8s,baz=148,slow=7.3,SNR=4.0						
LIC	Lamto	73.67	72	eP	P	13 44 28.6	+8.1
	comp=Z,33nm,1.4s						
TIC	Toumodi	73.92	72	eP	P	13 44 30.5	+8.6
KIC	Kosan Boka	73.98	72	eP	P	13 44 30.8	+8.5
	comp=Z,10nm,0.8s						
DBIC	Dimbokro	74.06	72	P	P	13 44 21.9	-0.8
	comp=Z,3.1nm,0.8s,baz=209,slow=4.6,SNR=4.7						
DBIC	Dimbokro	74.06	72	IAmb	IAmb	13 44 35.6	
	comp=Z,5.3nm,0.7s						
MAW	Mawson	76.16	164	LR	LR	14 17 47.0	
	comp=Z,86nm,18.6s,baz=238,slow=36						
BOSA	Boshof	81.43	118	P	P	13 45 03.3	-0.5
	comp=Z,4.1nm,0.9s,baz=234,slow=6.5,SNR=5.6						
BOSA	Boshof	81.43	118	IAmb	IAmb	13 45 04.4	
	comp=Z,5.9nm,0.9s						
TORD	Torodi Ar. Bea	83.02	70	P	P	13 45 10.9	-1.2
	comp=Z,1.5nm,0.8s,baz=268,slow=5.9,SNR=5.5						
TORD	Torodi Ar. Bea	83.02	70	P	P	13 45 11.2	-0.9
ASAR	Alice Springs	120.42	208	PKP	PKPdf	13 51 37.9	-0.5
	comp=Z,0.1nm,0.8s,baz=135,slow=2.2,SNR=1.2						
WRA	Warramunga Arr	123.56	210	PKP	PKPdf	13 51 44.1	-0.3
	comp=Z,0.7nm,1.0s,baz=177,slow=1.4,SNR=2.8						
H11S2	WAKE ISLAND Hy	125.89	271	T	T	16 10 36.6	
	baz=116,slow=75,SNR=142						
H11S1	WAKE ISLAND Hy	125.90	271	T	T	16 10 32.5	
	baz=116,slow=75,SNR=126						
H11S3	WAKE ISLAND Hy	125.91	271	T	T	16 10 32.1	
	baz=116,slow=75,SNR=100						
ZALV	Zalesovo Beam	151.46	29	PKPbc	PKPbc	13 52 39.5	-0.2
	comp=Z,0.7nm,0.4s,baz=270,slow=3.0,SNR=5.5						
ZALV	Zalesovo Beam	151.46	29		PKPbc	13 52 39.1	-0.6

*JMA **08** 13:39:15.4±0.4, 31°.29N×128°.73E, h9^{km}±3^{km}, M3.5*

*NIED **08** 13:39:15.4, 31°.29N×128°.73E, h9^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.88; $M_{\theta\theta}$-1.56; $M_{\phi\phi}$2.44; $M_{r\theta}$0.91; $M_{\theta\phi}$3.76; $M_{\phi r}$-0.86; Fault plane solution: $M_0$4.49000×10^{14} NP1: ϕ_s348.00000°, δ78.00000°, λ-164.00000°. NP2: ϕ_s254.00000°, δ74.00000°, λ-12.00000°.*

*IDC **08** 13:39:17.1±1.7, 31°.26N×128°.30E, h0^{km}, mb3.1/2, mb1 3.3/4, mb1mx3.2/41, mbtmp3.2/4, ML3.1/2 Error ellipse: s-maj=33.9km s-min=21.4km az=94.0*

ISC 08 13:39:17.0±1.1**, 31°.26N**±0°.05×**128°.84E**±0°.07**, h10**^{km}**, n14, σ1^{s}13**/17**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.85	61	P	Pg	13 39 32.7	-0.8
JSJ				S	Sg	13 39 45.0	+0.4
JFU	Fukue jima 2	1.39	357	P	Pn	13 39 40.4	-2.1
JSU	Suzuyama	1.40	80	P	Pb	13 39 42.8	-0.5
JKC	Kuchinoerabu	1.41	124	P	Pb	13 39 43.6	+0.2
JKC				S	Sn	13 40 02.3	+0.9
JNN	Nakanoshima	1.67	148	P	Pn	13 39 45.3	-1.1
JYAK	Yakushimahirau	1.76	125	P	Pn	13 39 46.4	-1.2
JTN	Tanegashima 3	1.93	108	P	Pn	13 39 49.6	-0.3
JMTN	Minamitane	1.97	115	P	Pn	13 39 50.0	-0.4
JTZ	Takazaki	2.02	71	P	Pn	13 39 51.3	+0.2
JIU3	Izumi3	2.11	52	P	Pn	13 39 52.8	+0.4
JNU	Nakatsue	2.53	42	Pn	Pg	13 40 04.5	-1.1
	6.3nm,0.3s,baz=236,slow=8.9,SNR=30						
JNU				Sn	Sg	13 40 38.6	+0.2
	16nm,0.3s,baz=164,slow=0.9,SNR=14						
KSRS	Korea Array	6.22	353	Pn	Pn	13 40 50.8	+1.9
	0.2nm,0.3s,baz=172,slow=15,SNR=3.2						
KSRS				Lg	Lg	13 42 31.6	
	0.5nm,0.3s,baz=182,slow=30,SNR=7.0						
SONM	Songino Array	23.82	320	P	P	13 44 29.2	-1.0
	0.3nm,0.7s,baz=127,slow=9.6,SNR=2.2						
ASAR	Alice Springs	54.83	174	P	P	13 48 49.1	+1.7
	0.4nm,1.0s,baz=4.7,slow=14,SNR=4.3						

*NEIC **08** 13:48:45.4±1.6, 12°.1S±0°.1×167°.1E±0°.2, h245^{km}±8^{km}, mb4.1/9, Error ellipse: s-maj=22.0km s-min=15.5km az=82.0*

*IDC **08** 13:48:50.2±11.0, 12°.05S×166°.86E, h287^{km}±126^{km}, mb3.3/6, mb1 3.5/7, mb1mx3.3/35, mbtmp3.9/7, Error ellipse: s-maj=116.1km s-min=24.5km az=161.0*

ISC 08 13:48:45.6±0.7**, 12°.15S**±0°.09×**167°.1E**±0°.1**, h250**^{km}**, n24, σ0^{s}76**/24**, mb4.0**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.28	178	Pn	Pn	13 49 41.9	+0.8
HNR	Honiara	7.52	290	Pn	Pn	13 50 32.9	0.0
LIFNC	LIFOU	8.58	179	Pn	Pn	13 50 45.5	-0.7
MARNC	Mare, Loyalty	9.32	175	Pn	Pn	13 50 54.7	-0.9
DZM	Mont Dzumac	9.88	183	P	P	13 51 09.0	+0.2
	0.3nm,0.3s,baz=302,slow=10,SNR=8.3						
DZM	Mont Dzumac	9.88	183		Pn	13 51 01.3	-1.5
OUENC	Ouen Island, N	10.21	181	Pn	Pn	13 51 08.1	+1.2
PINNC	Pines Island,	10.41	178	Pn	Pn	13 51 10.0	+0.7
EIDS	Eidsvold	20.04	227	P	P	13 53 00.9	+0.8
EIDS				IAmb	IAmb	13 53 16.5	
	comp=Z,9.4nm,1.2s						
WB0	Warramunga Arr	32.29	252	P	P	13 54 51.0	-0.6
WB0				IAmb	IAmb	13 54 57.2	
	comp=Z,2.7nm,1.1s						
WB2	Warramunga Arr	32.36	252	P	P	13 54 51.4	-0.7
WB2				IAmb	IAmb	13 55 17.7	
	comp=Z,10nm,1.5s						
WRA	Warramunga Arr	32.37	252	P	P	13 54 51.6	-0.6
	comp=Z,0.3nm,0.6s,baz=82,slow=8.7,SNR=5.1						
ASAR	Alice Springs	33.50	245	P	P	13 55 01.4	-0.6
	comp=Z,0.2nm,0.5s,baz=69,slow=10.0,SNR=8.7						
KNRA	Kununurra	37.33	260	P	P	13 55 34.7	+0.1
FORT	Forrest	40.51	237	P	P	13 56 00.8	+0.1
USA0B	Ussuriysk Arra	64.53	333	P	P	13 58 55.3	-0.7
USA0B				IAmb	IAmb	13 58 55.9	
	comp=Z,3.6nm,0.7s						
USRK	Ussuriysk Ar.	64.53	333	P	P	13 58 55.7	-0.3
VNDA	Vanda	65.42	181	P	P	13 59 01.1	-0.1
VNDA				IAmb	IAmb	13 59 07.3	
	comp=Z,6.9nm,1.4s						
QSPA	South Pole Qui	77.86	180	P	P	14 00 15.1	-0.4
ILAR	Eielson Array	84.14	18	P	P	14 00 48.5	+0.2
	comp=Z,2.8nm,0.6s,baz=246,slow=5.2,SNR=58						
NVAR	Mina Array Bea	85.73	49	P	P	14 00 57.9	+0.7
	comp=Z,0.3nm,0.7s,baz=214,slow=5.0,SNR=3.5						
MKAR	Makanchi Array	95.23	317	P	P	14 01 41.9	+0.9
	comp=Z,0.9nm,0.7s,baz=72,slow=4.4,SNR=5.4						
YKA	Yellowknife Ar	95.35	27	P	P	14 01 39.9	-1.2
	comp=Z,0.4nm,0.6s,baz=252,slow=4.7,SNR=2.5						
ESDC	Sonseca Array	151.47	345	PKPbc	PKiKP	14 08 11.1	+0.3
	comp=Z,0.5nm,0.8s,baz=347,slow=5.3,SNR=2.7						

*NEIC **08** 13:59:17.0±2.8, 14°.13N±0°.04×91°.39W±0°.05, h67^{km}±5^{km}, mb4.4/70, Md4.7(SNET), Error ellipse: s-maj=8.2km s-min=4.7km az=62.0*

*IDC **08** 13:59:20.5±1.4, 14°.41N×90°.89W, h101^{km}±10^{km}, mb3.7/11, mb1 3.9/12, mb1mx3.7/37, mbtmp4.0/12, MS3.8/9, Ms1 3.8/9, ms1mx3.6/31, Error ellipse: s-maj=29.9km s-min=18.6km az=59.0*

*GCG **08** 13:59:20.8±0.3, 14°.54N×91°.29W, h50^{km}, MD4.2*

ISC 08 13:59:17.3±0.8**, 14°.19N**±0°.06×**91°.36W**±0°.05**, h77**^{km}±7^{km}**, n137, σ1^{s}12**/149**, mb4.3**/44**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.47	316		Pn	13 59 28.5	-2.0
RTAL				Sn	Sn	13 59 37.8	-2.3
STG3	Santiaguito 3,	0.56	339	eP	Pn	13 59 30.8	-0.8
NBG	Las Nubes	1.06	68	eP	Pn	13 59 38.4	+1.1
HUEH	Huehuetenango	1.13	353	Pn	Pn	13 59 38.5	+0.4
APG	El Apazote	1.19	47	P	Pn	13 59 38.9	+0.1
	114nm,0.3s,baz=182,slow=2.6,SNR=480						
APG				S	Sn	13 59 57.0	+2.1
	217nm,0.3s,baz=203,slow=13,SNR=13						
CEVE	Cerro Verde	1.73	102	eP	Pn	13 59 45.4	-0.4
CEVE				eS	Sn	14 00 06.9	-0.3
CEVE	Cerro Verde	1.73	102	eP	Pn	13 59 45.4	-0.4
CEVE				eS	Sn	14 00 06.9	-0.3
MRL	Marmol	1.85	61	eP	Pn	13 59 48.2	+0.8
CEDA	San Andres	1.95	101	eP	Pn	13 59 49.0	+0.5
CEDA				eS	Sn	14 00 12.4	+0.2
CEDA				IAML		14 00 19.9	
	comp=Z,8µm,0.4s						
CEDA	San Andres	1.95	101	eP	Pn	13 59 49.0	+0.5
CEDA				eS	Sn	14 00 12.4	+0.2
CEDA				IAML		14 00 19.9	
	comp=Z,8µm,0.4s						
MTO3	Montecristo	1.95	84	Pn	Pn	13 59 47.5	-1.2
ESQI	Esquipulas	1.99	79	eP	Pn	13 59 48.8	-0.3
ESQI	Esquipulas	1.99	79	Pn	Pn	13 59 48.4	-0.7
BOQS	Boqueron	2.07	102	eP	Pn	13 59 50.1	-0.2
BOQS	Boqueron	2.07	102	eP	Pn	13 59 50.1	-0.2
SNET	Serv Nac Est T	2.13	103	Pn	Pn	13 59 49.8	-1.2
CCIG	Comitan	2.21	340	Pn	Pn	13 59 52.5	+0.3
COEG	Centro de Oper	2.48	103	eP	Pn	13 59 55.9	+0.3
COEG				eS	Sn	14 00 27.0	+2.1
COEG				IAML		14 00 38.0	
	comp=Z,5µm,0.3s						
COEG	Centro de Oper	2.48	103	eP	Pn	13 59 55.9	+0.3
COEG				eS	Sn	14 00 27.0	+2.1
COEG				IAML		14 00 38.0	
	comp=Z,5µm,0.3s						
ALJI	Alcalda de J	2.84	107	eP	Pn	14 00 00.8	+0.3
ALJI				eS	Sn	14 00 34.3	+0.5
ALJI	Alcalda de J	2.84	107	eP	Pn	14 00 00.8	+0.3
ALJI				eS	Sn	14 00 34.3	+0.5
PETF	Flores	3.07	28	Pn	Pn	14 00 04.0	+0.3
TGUH	Tegucigalpa,Un	3.97	91	Pn	Pn	14 00 14.4	-1.5
CRIN	San Cristobal	4.45	109	Pn	Pn	14 00 21.2	-1.2
CMIG	Matias Romero	4.46	311	P	Pn	14 00 23.4	+1.0
	comp=Z,10nm,0.3s,baz=156,slow=9.4,SNR=37						
CMIG				S	Sn	14 01 16.6	+3.5
	comp=Z,32nm,0.3s,baz=107,slow=20,SNR=8.7						
CMIG				LR	LR	14 02 26.0	
	comp=Z,683nm,21.2s,baz=106,slow=40						
CMIG	Matias Romero	4.46	311		Pn	14 00 22.5	0.0
MATN	Matagalpa	5.43	103	Pn	Pn	14 00 33.6	-2.3
BOAB	BOACO BROADBAN	5.81	107	Pn	Pn	14 00 38.7	-2.3
HZTE	Horizontes, Gu	6.61	121	Pn	Pn	14 00 52.3	+0.4
DUNO	Dulce Nombre,	7.04	125	Pn	Pn	14 00 58.2	+0.3
JTS	Las Juntas de	7.37	121	Pn	Pn	14 01 02.3	0.0
TLIG	Tlapa	7.70	297	Pn	Pn	14 01 07.9	+0.9
RIMA	Rio Macho	8.55	120		Pn	14 01 19.1	+0.5
SRBA	San Rafael, Bu	9.25	121	Pn	Pn	14 01 28.6	+0.5
SOR	Soroa	11.66	42	Pn	Pn	14 02 02.0	+1.2
MTDJ	Mount Denham	13.87	71	P	P	14 02 38.0	+1.6
TXAR	Lajitas Array	18.89	325	P	Pn	14 03 34.7	+1.5
	comp=Z,0.3nm,0.3s,baz=147,slow=12,SNR=20						
TXAR				PcP	PcP	14 07 56.4	+0.9
	comp=Z,0.1nm,0.3s,baz=120,slow=5.3,SNR=2.5						
TXAR	Lajitas Array	18.89	325	Pn	Pn	14 03 33.8	+0.5
TXAR					PcP	14 07 55.4	-0.1
TX31	Lajitas Ar. Si	18.89	325	P	P	14 03 31.4	-0.5
TX32	Lajitas Array	18.89	325	Pn	Pn	14 03 33.6	+0.4
FLOC	Florencia	19.95	128	P	P	14 03 44.4	+0.9
LPIG	La Paz	20.41	302	LR	LR	14 11 15.7	
	comp=Z,53nm,21.4s,baz=109,slow=35						
GOGA	Godfrey	20.44	19	P	P	14 03 50.2	+1.6
GOGA				IAmb	IAmb	14 04 18.1	
	comp=Z,26nm,1.5s						
WHAR	Wooly Hollow	21.03	358	P	P	14 03 57.0	+2.2
HODGE	Hodges	21.59	21	P	P	14 04 02.2	+1.3
FCAR	Ozark Folk Cen	21.62	358	P	P	14 04 01.1	-0.1
W50A	Signal Mountai	21.62	14	P	P	14 04 02.7	+1.4
W50A				IAmb	IAmb	14 04 19.7	
	comp=Z,10nm,0.8s						
MNTX	Cornudas Mount	21.65	326	P	P	14 04 02.8	+1.2
LCAR	Lake Charles	21.79	0	P	P	14 04 02.7	-0.2
LCAR				IAmb	IAmb	14 04 04.7	
	comp=Z,9.5nm,0.7s						
CPCT	Cooper Cave	22.05	15	P	P	14 04 06.3	+0.5
CPCT				IAmb	IAmb	14 04 35.4	
	comp=Z,18nm,1.5s						
U40A	Yellville	22.12	357	P	P	14 04 06.7	+0.1
U40A				IAmb	IAmb	14 04 08.9	
	comp=Z,6.5nm,0.7s						
TKL	Tuckaleechee C	22.44	16	P	P	14 04 08.7	-1.4
	comp=Z,6.4nm,0.6s,baz=176,slow=11,SNR=16						
TKL				LR	LR	14 13 51.4	
	comp=Z,190nm,19.8s,baz=194,slow=39						
TKL	Tuckaleechee C	22.44	16	P	P	14 04 10.8	+0.8
TKL				IAmb	IAmb	14 04 11.9	
	comp=Z,7.3nm,0.6s						
S39A	Bolivar	23.48	356	P	P	14 04 19.4	-0.8
S39A				IAmb	IAmb	14 04 21.0	
	comp=Z,15nm,0.6s						
T50A	Nancy	23.48	13	P	P	14 04 20.0	-0.2
T50A				IAmb	IAmb	14 04 21.2	
	comp=Z,7.1nm,0.7s						
121A	Cookes Peak, D	23.62	323	P	P	14 04 21.0	-0.9
CCM	Cathedral Cave	23.77	0	P	P	14 04 22.4	-0.5
CCM				IAmb	IAmb	14 04 23.4	
	comp=Z,13nm,0.6s						
U54A	Nelsons Funny	23.82	19	P	P	14 04 22.1	-1.3
U54A				IAmb	IAmb	14 04 25.5	
	comp=Z,12nm,0.6s						
R40A	Maddies Statio	24.02	358	P	P	14 04 24.0	-1.1
R40A				IAmb	IAmb	14 04 27.3	
	comp=Z,7.5nm,0.7s						
V58A	Windy Hill, Pi	24.17	25	P	P	14 04 25.6	-0.9
V58A				IAmb	IAmb	14 04 27.0	
	comp=Z,12nm,0.6s						
BNM	Barren Site	24.21	328	P	P	14 04 27.4	+0.2
OLIL	Olney	24.62	6	P	P	14 04 32.2	+1.7
OLIL				IAmb	IAmb	14 04 33.6	
	comp=Z,15nm,0.6s						
ANMO	Albuquerque	24.75	329	P	P	14 04 33.9	+1.9
	comp=Z,0.8nm,0.6s,baz=146,slow=11,SNR=4.3						
ATAH	Atahualpa	24.79	148	P	P	14 04 33.5	+0.8
	comp=Z,7.1nm,0.9s,baz=294,slow=11,SNR=3.8						
P40A	Paris	25.25	359	P	P	14 04 36.2	-0.1
P40A				IAmb	IAmb	14 04 37.3	
	comp=Z,8.7nm,0.6s						
X16A	Lo Mia Camp, P	27.11	321	P	P	14 04 54.6	+1.2
KNB	Kanab	29.72	324	P	P	14 05 18.4	+1.9
KNB				IAmb	IAmb	14 05 20.9	
	comp=Z,3.1nm,0.7s						
MTPU	Mount Pierson	30.09	326	P	P	14 05 21.9	+1.8
MTPU				IAmb	IAmb	14 05 24.6	
	comp=Z,4.2nm,0.7s						
MSU	Marysvale	30.43	327	P	P	14 05 24.3	+1.4
SADO	Sadowa	32.21	16	P	P	14 05 36.6	-1.5

	comp=Z,2.7nm,0.6s,baz=264,slow=6.7,SNR=4.1						
PDAR	Pinedale Array	32.51	335	P	P	14 05 41.5	+0.4
	comp=Z,0.3nm,0.3s,baz=130,slow=9.5,SNR=2.6						
PDAR				PcP	PcP	14 08 25.4	-1.0
	comp=Z,0.3nm,0.6s,baz=137,slow=4.6,SNR=1.8						
PDAR				LR	LR	14 21 56.9	
	comp=Z,131nm,18.6s,baz=115,slow=42						
BGU	Big Grassy Mou	32.66	329	P	P	14 05 44.0	+1.7
REDW	Red Top Meadow	33.55	334	P	P	14 05 51.4	+1.3
LOHW	Long Hollow	33.64	334	P	P	14 05 52.2	+1.3
ELK	Elko	33.68	326	P	P	14 05 52.5	+1.2
ELK				IAmb	IAmb	14 05 54.9	
	comp=Z,2.0nm,0.7s						
NVAR	Mina Array Bea	33.92	320	P	P	14 05 56.2	+2.8
	comp=Z,2.4nm,0.6s,baz=129,slow=8.5,SNR=27						
NVAR				PcP	PcP	14 08 31.4	+1.0
	comp=Z,0.8nm,0.6s,baz=122,slow=3.4,SNR=6.7						
NVAR				LR	LR	14 20 44.6	
	comp=Z,172nm,19.0s,baz=91,slow=38						
NVAR	Mina Array Bea	33.92	320	P	P	14 05 53.2	-0.2
KVN	Kaiserville	34.18	321	P	P	14 05 57.1	+1.5
BMN	Battle Mountai	34.56	324	P	P	14 06 00.5	+1.7
PNTR	Pine Nut	35.12	320	P	P	14 06 02.1	-1.7
PNTR				IAmb	IAmb	14 06 08.6	
	comp=Z,4.0nm,0.8s						
MCMT	McKenzie Canyo	35.58	333	P	P	14 06 08.8	+1.2
ULM	Lac du Bonnet	36.15	355	LR	LR	14 22 30.6	
	comp=Z,170nm,19.3s,baz=138,slow=39						
PLID	Pearl Lake	37.21	331	P	P	14 06 22.6	+1.0
J08A	Circle Bar Ran	37.22	327	P	P	14 06 22.8	+1.3
J08A				IAmb	IAmb	14 06 49.4	
	comp=Z,6.4nm,0.9s						
MOD	Modoc Plateau	37.28	323	P	P	14 06 23.5	+1.4
MOD				IAmb	IAmb	14 06 38.5	
	comp=Z,8.6nm,1.5s						
F10A	Beach Ranch, E	38.45	331	P	P	14 06 32.7	+0.9
F10A				IAmb	IAmb	14 06 34.0	
	comp=Z,5.9nm,0.7s						
PB11	IPOC Station P	39.93	147	P	P	14 06 44.3	-0.1
PB11				IAmb	IAmb	14 07 05.0	
	comp=Z,9.3nm,1.1s						
C09A	Chrisman Ranch	40.28	332	P	P	14 06 48.3	+1.4
C09A				IAmb	IAmb	14 06 49.7	
	comp=Z,4.7nm,0.8s						
PB01	IPOC Station P	41.08	148	P	P	14 06 54.4	+0.6
PB01				IAmb	IAmb	14 06 55.3	
	comp=Z,5.1nm,1.1s						
EDM	Edmonton	42.66	341	P	P	14 07 07.0	+0.6
EDM				IAmb	IAmb	14 07 07.5	
	comp=Z,2.8nm,0.8s						
SCHQ	Schefferville	44.84	20	P	P	14 07 21.6	-2.1
	comp=Z,2.5nm,0.6s,baz=232,slow=9.8,SNR=4.3						
SCHQ				LR	LR	14 27 26.3	
	comp=Z,191nm,18.7s,baz=214,slow=38						
SCHQ	Schefferville	44.84	20	P	P	14 07 22.2	-1.5
YKA	Yellowknife Ar	50.99	346	P	P	14 08 10.9	-0.2
	comp=Z,1.6nm,0.6s,baz=151,slow=7.9,SNR=20						
YKA				PcP	PcP	14 09 25.1	-1.1
	comp=Z,0.5nm,0.6s,baz=156,slow=3.7,SNR=6.2						
VRDI	Verde Repeater	59.90	334	P	P	14 09 17.3	+2.0
BCAR	Beaver Creek A	60.12	336	P	P	14 09 16.8	+0.2
INK	Inuvik	60.44	343	P	P	14 09 17.5	-1.1
	comp=Z,1.5nm,0.6s,baz=113,slow=9.3,SNR=8.7						
INK	Inuvik	60.44	343	P	P	14 09 17.2	-1.3
INK				IAmb	IAmb	14 09 42.7	
	comp=Z,1.6nm,0.8s						
RES	Resolute Bay	60.53	359	P	P	14 09 17.9	-1.2
RES				IAmb	IAmb	14 09 32.3	
	comp=Z,3.6nm,1.3s						
N25K	Chitina, Valde	60.57	334	P	P	14 09 20.4	+0.6
KLU	Klutina	61.09	333	P	P	14 09 23.6	+0.4
DOT	Dot Lake	61.30	336	P	P	14 09 24.9	+0.3
SCRK	Sand Creek	61.43	336	P	P	14 09 26.2	+0.7
PAX	Paxson	61.55	335	P	P	14 09 26.3	-0.1
PAX				IAmb	IAmb	14 09 45.8	
	comp=Z,8.2nm,1.4s						
GHO	Glory Hole Cre	62.51	333	P	P	14 09 32.9	+0.1
PMR	Palmer	62.53	333	P	P	14 09 33.0	+0.2
PMR				IAmb	IAmb	14 09 34.7	
	comp=Z,5.4nm,1.0s						
RC01	Rabbit Creek A	62.61	332	P	P	14 09 33.1	-0.3
BRLK	Bradley Lake	62.68	331	P	P	14 09 34.9	+1.0
CNPM	China Poot	62.77	330	P	P	14 09 35.3	+0.8
KDAK	Kodiak Island	62.88	328	P	P	14 09 35.8	+0.6
IL31		62.91	337	P	P	14 09 34.6	-0.7
ILAR	Eielson Array	62.91	337	P	P	14 09 34.5	-0.8
	comp=Z,0.4nm,0.6s,baz=166,slow=4.7,SNR=16						
OHAK	Old Harbor	63.09	327	P	P	14 09 36.9	+0.3
RND	Reindeer	63.12	335	P	P	14 09 36.9	+0.1
CCB	Clear Creek Bu	63.22	336	P	P	14 09 36.5	-0.8
CCB				IAmb	IAmb	14 09 53.3	
	comp=Z,6.2nm,1.4s						
BMAR	Burnt Mountain	63.33	340	P	P	14 09 37.8	-0.3
MDM	Murphy Dome	63.51	337	P	P	14 09 38.8	-0.5
MDM				IAmb	IAmb	14 10 04.9	
	comp=Z,4.3nm,1.1s						
SPU	Mount Spurr	63.70	332	P	P	14 09 41.3	+0.7
TRF	Thorofare Moun	63.74	335	P	P	14 09 41.4	+0.4
RSO	Redoubt South	63.79	331	P	P	14 09 42.0	+0.5
KTH	Kantishna Hill	64.04	335	P	P	14 09 42.6	-0.2
PPLA	Purkeypile	64.34	334	P	P	14 09 44.2	-0.7
MLY	Manley	64.52	336	P	P	14 09 45.4	-0.6
MLY				IAmb	IAmb	14 09 47.4	
	comp=Z,6.4nm,1.4s						
M19K	Big River Lodg	64.99	332	P	P	14 09 48.8	-0.2
COLD	Coldfoot	65.19	338	P	P	14 09 51.3	+1.1
COLD				IAmb	IAmb	14 10 04.2	
	comp=Z,4.9nm,1.5s						
SVW2	Sparrevohn	65.30	331	P	P	14 09 50.2	-0.8
SVW2				IAmb	IAmb	14 09 58.3	
	comp=Z,7.5nm,1.1s						
TOLK	Toolik Lake Re	65.56	340	P	P	14 09 52.0	-0.6
TOLK				IAmb	IAmb	14 09 57.5	
	comp=Z,5.3nm,1.4s						
SUMG	Summit	65.89	15	P	P	14 09 53.6	-1.5
SUMG				IAmb	IAmb	14 10 03.4	
	comp=Z,10nm,1.3s						
EUNU	Eureka	65.93	1	P	P	14 09 53.9	-1.0
IMAR	Indian Mountai	66.03	337	P	P	14 09 54.9	-0.7
RAR	Rarotonga	75.80	244	LR	LR	14 35 41.8	
	comp=Z,103nm,19.3s,baz=269,slow=29						
ESDC	Sonseca Array	79.12	52	P	P	14 11 11.1	-2.9
	comp=Z,0.4nm,0.8s,baz=294,slow=4.3,SNR=2.0						
NOA	NORSAR Array B	83.69	29	LR	LR	14 48 19.9	
	comp=Z,105nm,18.5s,baz=290,slow=35						
WRA	Warramunga Arr	136.04	256	PKP	PKPdf	14 18 30.6	+0.1
	comp=Z,0.3nm,0.6s,baz=67,slow=0.9,SNR=5.4						
ASAR	Alice Springs	136.31	251	PKhKP	PKPpre	14 18 23.8	
	comp=Z,0.4nm,1.0s,baz=102,slow=3.2,SNR=4.7						
ASAR				PKP	PKPdf	14 18 31.6	+0.7
	comp=Z,0.4nm,0.7s,baz=100,slow=1.8,SNR=3.4						
ASAR	Alice Springs	136.31	251	PKPdf	PKPdf	14 18 30.4	-0.6
CMAR	Chiang Mai Arr	146.01	342	PKPbc	PKPdf	14 18 48.7	+0.2
	comp=Z,4.1nm,0.6s,baz=342,slow=3.5,SNR=34						
CMAR	Chiang Mai Arr	146.01	342	PKPdf	PKPdf	14 18 48.2	-0.3

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*IDC **08** 14:01:24.4±1.3, 34.°06S×109.°07W, h0^{km}, mb3.9/3, mb1 4.3/3, mb1mx3.8/29, mbtmp3.9/3, MS3.7/6, Ms1 3.7/6, ms1mx3.5/27, Error ellipse: s-maj=60.6km s-min=35.7km az=45.0*

ISC 08 14:01:25.4±1.4, 34.°2S±0.°4×109.°3W±0.°4, h10^{km}, n14, σ1^{s}13/6, mb3.6/3, MS3.7/5, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	7.07	360	LR	LR	14 05 05.3	
	comp=Z,190nm,20.2s,baz=129,slow=32						
H03S2	Juan Fernandez	25.11	98	T	T	14 33 01.6	
	baz=254,SNR=66						
H03S1	Juan Fernandez	25.13	98	T	T	14 33 02.3	
	baz=254,SNR=80						
H03S3	Juan Fernandez	25.13	98	T	T	14 33 01.0	
	baz=254,SNR=67						
PLCA	Paso Flores	31.22	114	P	P	14 07 45.4	+0.3
	4.6nm,1.1s,baz=253,slow=12,SNR=4.2						
PLCA				LR	LR	14 16 07.3	
	comp=Z,63nm,19.3s,baz=336,slow=28						
PPT	Papeete	39.58	284	LR	LR	14 20 40.5	
	comp=Z,119nm,19.9s,baz=94,slow=29						
LPAZ	La Paz	40.95	75	LR	LR	14 21 22.2	
	comp=Z,110nm,20.1s,baz=280,slow=29						
URZ	Urewera	58.05	243	LR	LR	14 29 50.3	
	comp=Z,146nm,19.8s,baz=31,slow=29						
AFI	Afiamalu	59.65	274	LR	LR	14 30 11.6	

	comp=Z,132nm,18.5s,baz=92,slow=29						
NVAR	Mina Array Bea	72.77	353	P	P	14 12 54.3	+0.3
	0.4nm,0.7s,baz=177,slow=7.4,SNR=5.9						
PDAR	Pinedale Array	76.62	360	P	P	14 13 16.6	+0.4
	0.3nm,0.5s,baz=146,slow=5.5,SNR=3.0						
AKASG	Malin Array Be	145.76	48	PKPbc	PKPdf	14 21 01.9	-1.7
	0.2nm,0.3s,baz=285,slow=3.6,SNR=6.7						
SONM	Songino Array	150.14	308	PKPbc	PKPbc	14 21 16.1	-0.1
	1.3nm,0.8s,baz=48,slow=2.1,SNR=6.6						
CMAR	Chiang Mai Arr	150.37	245	PKPbc	PKiKP	14 21 19.0	+0.7
	0.3nm,0.3s,baz=146,slow=0.9,SNR=4.8						

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*IDC **08** 14:08:41.5±1.3, 38.°15N×73.°89E, h0^{km}, mb3.8/6, mb1 3.9/12, mb1mx3.6/47, mbtmp3.7/12, ML3.4/6, Error ellipse: s-maj=28.6km s-min=20.5km az=99.0*

*BJI **08** 14:08:41.5±0.0, 38.°50N×72.°60E, h15^{km}, mb4.5/13*

*NEIC **08** 14:08:44.3±1.2, 38.°51N±0.°04×72.°9E±0.°1, h10^{km}±1^{km}, mb4.6/7, Error ellipse: s-maj=15.7km s-min=6.0km az=107.0*

*SOME **08** 14:08:48.0, 38.°60N×72.°68E, h0^{km}*

*NNC **08** 14:08:48.6±1.9, 38.°46N×72.°88E, h10^{km}±7^{km}, mb4.6, mpv4.3, Error ellipse: s-maj=13.3km s-min=9.5km az=2.0*

ISC 08 14:08:43.4±0.9, 38.°46N±0.°06×72.°75E±0.°05, h10^{km}, n68, σ1^{s}49/67, mb4.1/12, 12C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.26	324	Pn	Pn	14 09 08.3	+0.9
KSH	Kashi	2.73	66	Pn	Pn	14 09 21.3	-6.1
KSH				Sn	Sn	14 09 49.2	-11
IUG	Iuzhnay	4.23	331	*e*P	Pg	14 10 04.9	+0.4
	7µm,0.9s						
IUG				*e*S	Sg	14 11 00.4	+1.0
	245nm,0.6s						
IUG	Iuzhnay	4.23	331	Pg	Pg	14 10 04.9	+0.4
	7µm,0.9s						
IUG				Lg	Lg	14 11 00.4	
	245nm,0.6s						
MRKS	Merke	4.30	5	*e*P	Pg	14 10 06.4	+0.6
	24nm,0.5s						
MRKS				*e*S	Sg	14 11 02.7	+1.2
	30nm,0.5s						
MRKS	Merke	4.30	5	Pg	Pg	14 10 06.4	+0.6
	24nm,0.5s						
MRKS				Lg	Lg	14 11 02.7	
	30nm,0.5s						
AAK	Ala-Archa	4.38	17	Pn	Pb	14 09 55.2	-5.5
	1.5nm,0.3s,baz=174,slow=6.4,SNR=14						
AAK				Sn	Sb	14 10 51.5	-2.2
	baz=318,slow=16,SNR=1.1						
AAK				Lg	Lg	14 11 01.4	
	4.0nm,0.3s,baz=353,slow=14,SNR=5.4						
AAK	Ala-Archa	4.38	17	⇑Pn	Pn	14 09 54.4	+4.1
	7.5nm,0.5s						
AAK				⇑Pg	Pg	14 10 07.4	0.0
	23nm,0.5s						
AAK				⇑Lg	Lg	14 11 05.4	
	125nm,1.2s						
AAK	Ala-Archa	4.38	17		Pn	14 09 50.2	0.0
DZA	Taraz	4.56	347	⇑*i*P	Pg	14 10 10.6	-0.3
	163nm,0.5s						
DZA				⇓*i*S	Sg	14 11 09.8	-0.1
	197nm,0.4s						
DZA	Taraz	4.56	347	Pg	Pg	14 10 10.6	-0.3
	163nm,0.5s						
DZA				Lg	Lg	14 11 09.8	
	197nm,0.4s						
BOOM	Boomskoye usch	4.71	30		Pn	14 09 53.9	-0.7
KK02	Karatay Array	4.95	341	⇑Pn	Pn	14 10 03.2	+5.4
	2.7nm,0.3s						
KK02				⇑Sn	Sb	14 11 03.5	-6.1
	19nm,0.5s						
TKM2	Tokmak 2	4.96	25	⇑Pn	Pn	14 10 02.0	+3.8
	18nm,1.4s						
TKM2				⇓Pg	Pg	14 10 18.8	+0.4
	15nm,0.5s						
TKM2				⇑Lg	Lg	14 11 24.9	
	36nm,0.9s						
KST	Kastek	5.19	27	*e*P	Pg	14 10 22.5	-0.4
	20nm,0.3s						
KST				*e*S	Sg	14 11 30.6	+0.5
	41nm,0.5s						
KST	Kastek	5.19	27	Pg	Pg	14 10 22.5	-0.4
	20nm,0.3s						
KST				Lg	Lg	14 11 30.6	
	41nm,0.5s						
MTBS	Maitube	5.44	30	*e*P	Pg	14 10 27.1	-0.5
	16nm,0.5s						
MTBS				*e*S	Sg	14 11 38.5	+0.5
	31nm,0.8s						
MTBS	Maitube	5.44	30	Pg	Pg	14 10 27.1	-0.5
	16nm,0.5s						
MTBS				Lg	Lg	14 11 38.5	
	31nm,0.8s						
KRBS	Karabastau	5.68	22	*e*P	Pg	14 10 32.0	-0.3
	14nm,0.5s						
KRBS				*e*S	Sg	14 11 46.6	+0.8
	23nm,0.6s						
KRBS	Karabastau	5.68	22	Pg	Pg	14 10 32.0	-0.3
	14nm,0.5s						
KRBS				Lg	Lg	14 11 46.6	
	23nm,0.6s						
MDOK	Medeo	5.72	33	*e*P	Pg	14 10 33.0	0.0
	19nm,0.8s						
MDOK				*e*S	Sg	14 11 48.6	+1.5
	24nm,0.7s						
MDOK	Medeo	5.72	33	⇑Pg	Pg	14 10 32.7	-0.3
	36nm,0.9s						
MDOK				⇓Lg	Lg	14 11 49.9	
	39nm,0.9s						
MDOK	Medeo	5.72	33	Pg	Pg	14 10 33.0	0.0
	19nm,0.8s						
MDOK				Lg	Lg	14 11 48.6	
	24nm,0.7s						
KNDC	Almaty	5.73	33	⇑Pg	Pg	14 10 32.2	-0.9
	47nm,0.6s						
KNDC				⇑Lg	Lg	14 11 47.7	
	166nm,0.9s						
KOTS	Kotyrbulak	5.81	33	*e*P	Pg	14 10 34.6	-0.1
	29nm,0.4s						
KOTS				*e*S	Sg	14 11 51.3	+1.4
	60nm,0.4s						
KOTS	Kotyrbulak	5.81	33	Pg	Pg	14 10 34.6	-0.1
	29nm,0.4s						
KOTS				Lg	Lg	14 11 51.3	
	60nm,0.4s						
KUU	Kurty	6.07	25	*e*P	Pg	14 10 40.2	+0.6
	6.7nm,0.5s						
KUU				*e*S	Sg	14 12 01.0	+2.8
	22nm,0.5s						
KUU	Kurty	6.07	25	Pg	Pg	14 10 40.2	+0.6
	6.7nm,0.5s						
KUU				Lg	Lg	14 12 01.0	
	22nm,0.5s						
MK31	Makanchi Array	10.89	37	Pn	Pn	14 11 19.4	0.0
MKAR	Makanchi Array	10.89	37	Pn	Pn	14 11 19.5	+0.1
	0.1nm,0.3s,baz=224,slow=14,SNR=4.0						
MKAR	Makanchi Array	10.89	37	Pn	Pn	14 11 20.4	+1.0
GEYT	Alibeck	11.53	272	Pn	Pn	14 11 38.8	+11
	0.1nm,0.3s,baz=89,slow=19,SNR=1.8						
GEYT				Sn	Sn	14 13 52.0	+15
	0.4nm,0.3s,baz=36,slow=48,SNR=2.2						
WMQ	Urumqi	12.47	60	*e*P	Pn	14 11 43.5	+2.5
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
KURBB	Kurchatov Arra	12.84	17	Pn	Pn	14 11 45.5	-0.4
	0.1nm,0.3s,baz=208,slow=11,SNR=3.0						
PYUN	Piuthan	13.40	137	*e*P	Pn	14 11 48.6	-5.3
	7.8nm,0.3s						
PYUN				*e*S	Sn	14 14 10.2	-13
DANN	Dangsing	13.63	134	*e*P	Pn	14 11 51.2	-5.9
	6.9nm,0.4s						
DANN				*e*S	Sn	14 14 15.6	-13
KOLN	Koldanda	13.99	136	*e*P	Pn	14 11 55.8	-6.2
AB31	Akbulak array	14.19	324	Pn	P	14 12 09.1	-2.7
	0.8nm,0.7s,baz=136,slow=13,SNR=21						
ABKAR	Akbulak array	14.19	324	Pn	Pn	14 12 05.7	+1.3
GKN	Gorkha	14.39	133	*e*P	Pn	14 12 00.3	-7.1
	3.1nm,0.3s						
BVAR	Borovoye Array	14.66	354	Pn	Pn	14 12 11.9	+1.0
	0.2nm,0.3s,baz=185,slow=28,SNR=3.6						
KKN	Kakani	14.93	132	*e*P	Pn	14 12 06.8	-7.9
PKIN	Phulchoki	15.15	132	*e*P	Pn	14 12 10.0	-7.8
PKI	Pulchoki	15.17	132	*e*P	Pn	14 12 09.8	-8.2
AKTO	Aktyubinsk	15.90	324	Pn	P	14 12 34.1	+3.2
	0.5nm,0.3s,baz=120,slow=9.9,SNR=9.1						
AKTO	Aktyubinsk	15.90	324	⇑Pn	P	14 12 32.3	+1.4
	1.9nm,0.5s						
ZALV	Zalesovo Beam	17.56	24	P	Pn	14 12 48.0	-0.1
	0.4nm,0.3s,baz=218,slow=9.4,SNR=4.0						
GTA	Gaotai	21.05	79	*e*P	P	14 13 25.6	-2.1
GTA				pP	sP	14 13 35.0	+1.4
GTA				sP	pP	14 13 39.4	+7.7
SONM	Songino Array	26.10	58	P	P	14 14 16.5	-0.9
	0.2nm,0.4s,baz=230,slow=12,SNR=3.3						
HHC	Hu-ho-hao-te	29.82	73	*e*P	P	14 14 48.6	-2.1
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
QIZ	Qiongzhong	37.52	110	P	P	14 15 57.3	-0.3
ARCES	ARCESS Array B	39.90	336	P	P	14 16 22.4	+5.4
	4.9nm,1.1s,baz=90,slow=8.3,SNR=1.3						
TORD	Torodi Ar. Bea	67.15	269	P	P	14 19 44.0	+6.2
	0.2nm,0.4s,baz=55,slow=5.9,SNR=1.5						
TOLK	Toolik Lake Re	68.68	15	P	P	14 19 47.4	+0.7
TOLK				IAmb	IAmb	14 20 11.0	
	comp=Z,4.4nm,1.2s						
COLD	Coldfoot	69.71	16	P	P	14 19 53.8	+0.8
COLD				IAmb	IAmb	14 20 19.7	
	comp=Z,6.3nm,1.3s						
IMAR	Indian Mountai	69.89	18	P	P	14 19 53.9	-0.1
BMAR	Burnt Mountain	70.71	14	P	P	14 19 59.8	+0.6
INK	Inuvik	71.75	10	P	P	14 20 06.0	+0.6
	comp=Z,0.8nm,0.6s,baz=334,slow=7.9,SNR=6.0						
INK	Inuvik	71.75	10	P	P	14 20 06.4	+1.1
INK				IAmb	IAmb	14 20 16.8	
	comp=Z,3.7nm,1.4s						
ILAR	Eielson Array	72.52	17	P	P	14 20 09.8	-0.2
	comp=Z,0.5nm,0.8s,baz=337,slow=4.4,SNR=4.4						
PPLA	Purkeypile	72.78	20	P	P	14 20 11.9	+0.1
RND	Reindeer	73.21	18	P	P	14 20 14.1	-0.2
RND				IAmb	IAmb	14 20 15.2	
	comp=Z,7.5nm,1.4s						
SCRK	Sand Creek	73.84	16	P	P	14 20 18.5	+0.4
RSO	Redoubt South	74.61	22	P	P	14 20 24.6	+1.9
RC01	Rabbit Creek A	74.93	20	P	P	14 20 24.4	+0.1
RC01				IAmb	IAmb	14 20 29.1	
	comp=Z,9.8nm,1.2s						
BCAR	Beaver Creek A	75.12	15	P	P	14 20 25.7	+0.3
YKA	Yellowknife Ar	79.22	3	P	P	14 20 49.1	+0.8
	comp=Z,0.9nm,0.8s,baz=350,slow=5.2,SNR=5.0						
WRA	Warramunga Arr	81.87	123	P	P	14 20 57.8	-5.4
	comp=Z,0.3nm,0.8s,baz=332,slow=4.3,SNR=1.9						

GUC 08 14:26:09.6±0.7, 30.°83S×71.°73W, h39^{km}±2^{km}, ML4.0, 3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.18	27	⇓*i*P	Pn	14 26 16.2	-2.0
CO06				*i* S	Sn	14 26 20.4	-5.1
CO06				IAML		14 26 21.1	
	comp=E,18µm,0.3s						
CO03	El Pedregal	0.90	91	⇓*i*P	Pn	14 26 26.0	+0.3
CO03				*i* S	Sn	14 26 38.0	+0.4
CO03				IAML		14 26 41.0	
	comp=E,4µm,0.7s						
CO05	La Serena	1.00	25	*e*P	Pn	14 26 27.9	+0.8
CO05				*i* S	Sn	14 26 41.3	+1.3
CO05				IAML		14 26 44.5	
	comp=N,4µm,0.3s						
GO04	Tololo Observa	1.04	51	*e*P	Pn	14 26 28.6	+0.7
GO04				*i* S	Sn	14 26 42.7	+1.5
GO04				IAML		14 26 46.5	
	comp=N,16µm,0.5s						
VA06	Catapilco	1.76	168	*e*P	Pn	14 26 39.0	+1.4
VA06				*i* S	Sn	14 27 00.3	+1.5
VA06				IAML		14 27 12.9	
	comp=N,3µm,0.4s						
LCO	Las Campanas	2.02	26	*e*P	Pn	14 26 42.8	+1.4
LCO				*i* S	Sn	14 27 07.9	+2.3
VA03	San Esteban	2.17	153	*e*P	Pn	14 26 45.6	+2.3
VA03				*i* S	Sn	14 27 12.4	+3.3
VA03				IAML		14 27 21.6	
	comp=E,2µm,0.2s						
ROCH	El Roble	2.22	164	*e*P		14 26 45.8	
ROCH				*e*P	Pn	14 26 45.5	+1.4
ROCH				*i* S	Sn	14 27 13.4	+3.0
ROCH				*i* S		14 27 13.8	
ROCH				IAML		14 27 23.6	
	comp=N,1µm,0.2s						
PEL	Peldehue	2.47	159	*e*P	Pn	14 26 49.2	+1.8
PEL				*i* S	Sn	14 27 19.7	+3.4
PEL				IAML		14 27 29.5	
	comp=E,1µm,0.3s						
MT02	Curacav	2.47	168	*e*P	Pn	14 26 48.7	+1.3
MT02				*i* S	Sn	14 27 19.5	+3.2
MT02				IAML		14 27 29.8	
	comp=E,358nm,0.3s						
AC04	Llanos de Chal	2.68	12	⇓*e*P	Pn	14 26 51.0	+0.8
AC04				IAML		14 27 39.7	
	comp=N,309nm,0.5s						
MT05	Renca	2.69	162	*e*P	Pn	14 26 52.5	+2.1
MT05				*i* S	Sn	14 27 24.8	+3.1
MT05				IAML		14 27 39.2	
	comp=E,2µm,0.1s						
VA05	Santo Domingo	2.82	178	*e*P	Pn	14 26 53.2	+1.1
VA05				*i* S	Sn	14 27 27.1	+2.3
VA05				IAML		14 27 46.6	
	comp=E,701nm,0.5s						
MT09	Talagante	3.00	168	*e*P	Pn	14 26 56.7	+1.9
MT09				*i* S	Sn	14 27 32.1	+2.5
MT09				IAML		14 27 50.9	
	comp=N,471nm,0.1s						
MT01	Popeta	3.05	173	*e*P	Pn	14 26 56.5	+1.2
MT01				*i* S	Sn	14 27 33.2	+2.6
MT01				IAML		14 27 46.7	
	comp=E,272nm,0.1s						
LMEL	Las Melosas	3.27	157	*i* S	Sn	14 27 39.0	+2.7
LMEL				IAML		14 27 54.9	
	comp=N,467nm,0.1s						
BO04	La Punta	3.29	164	*e*P	Pn	14 27 00.7	+2.1
BO04				*i* S	Sn	14 27 38.9	+2.4
BO04				IAML		14 27 53.2	
	comp=N,380nm,0.4s						
GO03	Copiap	3.48	22	*e*P	Pn	14 27 02.8	+1.5
GO03				*i* S	Sn	14 27 43.3	+2.1
GO03				IAML		14 28 01.2	
	comp=E,398nm,0.3s						
BO01	Tunca	3.59	171	*e*P	Pn	14 27 04.2	+1.5
BO01				*i* S	Sn	14 27 46.2	+2.3
BO02	Sierra Bellavi	4.03	169	*e*P	Pn	14 27 10.7	+1.8
BO02				*i* S	Sn	14 27 56.8	+1.9

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*NEIC **08** 14:53:39.0±1.8, 19.°64N±0.°10×65.°44W±0.°06, h39^{km}±46^{km}, Error ellipse: s-maj=16.0km s-min=4.6km az=207.0*

*RSPR **08** 14:53:39.3, 19.°61N×65.°43W, h73^{km}±12^{km}, MD3.9/14*

ISC 08 14:53:37.8±2.2, 19.°53N±0.°10×65.°41W±0.°08, h16^{km}, n49, σ0^{s}56/53, 14C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	1.23	174	⇑*e*P	Pg	14 54 01.3	-0.2
CUPR	Culebra, Puert	1.23	174	*e*S	Sg	14 54 18.2	+0.8
CUPR	Culebra, Puert	1.23	174		Pg	14 54 01.3	-0.2
CUPR					Sg	14 54 18.2	+0.8
STVI	Saint Thomas	1.25	160	⇑*e*P	Pg	14 54 02.2	+0.2
STVI	Saint Thomas	1.25	160	*e*S	Sg	14 54 19.1	+0.7
STVI	Saint Thomas	1.25	160		Pg	14 54 02.2	+0.2
STVI					Sg	14 54 19.1	+0.7
CBYP	Canovanas	1.32	199	⇑*e*P	Pn	14 54 01.7	0.0
CBYP	Canovanas	1.32	199	*e*S	Sn	14 54 17.5	-1.5
CBYP	Canovanas	1.32	199		Pn	14 54 01.7	0.0
CBYP					Sn	14 54 17.5	-1.5
GCPR	Guaynabo City	1.37	208	⇑*e*P	Pn	14 54 01.5	-0.8
GCPR	Guaynabo City	1.37	208	*e*S	Sn	14 54 19.4	-0.7
GCPR	Guaynabo City	1.37	208		Pn	14 54 01.5	-0.8
GCPR					Sn	14 54 19.4	-0.7
MTP	Monte Pirata	1.43	185	⇑*e*P	Pb	14 54 03.7	-0.5
MTP	Monte Pirata	1.43	185	*e*S	Sb	14 54 22.4	+0.3
MTP	Monte Pirata	1.43	185		Pb	14 54 03.7	-0.5
MTP					Sb	14 54 22.4	+0.3
HUMP	Col San Antoni	1.44	197		Pn	14 54 02.5	-0.8
EMPR	Esperanza - Ma	1.49	225	⇑*e*P	Pn	14 54 03.6	-0.3
EMPR	Esperanza - Ma	1.49	225	*e*S	Sb	14 54 23.3	-0.5
EMPR	Esperanza - Ma	1.49	225		Pn	14 54 03.6	-0.3
EMPR					Sb	14 54 23.3	-0.5
EMPR	Esperanza - Ma	1.49	225	IAML		14 54 31.5	

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      comp=E,1µm,1.1s
SJG   San Juan          1.58 206       Pn     14 54 04.6 -0.5
SJG                               IAML         14 54 30.0
      comp=E,438nm,0.6s
SJG                               IAML         14 54 33.4
      comp=E,454nm,0.9s
PDPR  Patillas Dam,     1.61 201       Pn     14 54 05.0 -0.6
PDPR                              IAML         14 54 35.8
      comp=E,367nm,0.6s
IGPR  InterUniversit    1.69 203⇑eP    Pn     14 54 06.7  0.0
IGPR  InterUniversit    1.69 203 eS    Sn     14 54 28.1 +0.1
IGPR  InterUniversit    1.69 203       Sn     14 54 28.1 +0.1
AOPR  Arecibo Observ    1.73 227⇑eP    Pn     14 54 06.9 -0.4
AOPR  Arecibo Observ    1.73 227 eS    Sn     14 54 29.6 +0.5
AOPR  Arecibo Observ    1.73 227       Pn     14 54 06.9 -0.4
AOPR                                   Sn     14 54 29.6 +0.5
AOPR  Arecibo Observ    1.73 227 IAML         14 54 36.2
      comp=N,1µm,0.4s
CELP  Cerrillos         1.82 217⇑eP    Pn     14 54 08.3 -0.2
CELP  Cerrillos         1.82 217 eS    Sn     14 54 31.9 +0.7
CELP  Cerrillos         1.82 217       Pn     14 54 08.3 -0.2
CELP                                   Sn     14 54 31.9 +0.7
CELP  Cerrillos         1.82 217 IAML         14 54 47.4
      comp=N,285nm,0.6s
OBIP  Obispado Ponce    1.86 218⇑eP    Pn     14 54 09.7 +0.6
OBIP  Obispado Ponce    1.86 218 eS    Sn     14 54 32.8 +0.6
OBIP  Obispado Ponce    1.86 218       Pn     14 54 09.7 +0.6
OBIP                                   Sn     14 54 32.8 +0.6
OBIP  Obispado Ponce    1.86 218 IAML         14 54 42.1
      comp=N,343nm,0.9s
CDVI  St. Croix         1.87 161 Pn    Pb     14 54 11.7  0.0
AGPR  Aguadilla, PR     1.92 237       Pn     14 54 10.4 +0.5
AGPR                             IAML         14 54 40.2
      comp=E,252nm,0.3s
GBPR  Guanica, Bosqu    2.08 222⇑eP    Pn     14 54 12.4 +0.3
MLPR  Magueyes Islan    2.19 225⇑eP    Pn     14 54 14.1 +0.5
MLPR  Magueyes Islan    2.19 225 eS    Sn     14 54 40.7 +0.3
MLPR  Magueyes Islan    2.19 225       Pn     14 54 13.1 -0.4
MLPR  Magueyes Islan    2.19 225       Sn     14 54 40.7 +0.3
CRPR  Cabo Rojo, PR     2.21 227⇑eP    Pn     14 54 14.1 +0.3
CRPR  Cabo Rojo, PR     2.21 227       Pn     14 54 14.1 +0.3
CRPR  Cabo Rojo, PR     2.21 227 IAML         14 55 00.7
      comp=N,223nm,0.9s
IDE   Isla Desecheo     2.26 240⇑eP    Pn     14 54 14.2 -0.3
SDDR  Presa de Saban    5.58 265 Pn    Pn     14 54 60.0 -0.2
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*VIE **08** 15:05:01.7±0.2, 46°.36N×12°.59E, h11^{km}±2^{km}, mb3.1/21, ml3.6/21, Error ellipse: s-maj=1.6km s-min=0.9km az=12.0*
17 km WSW of Ampezzo
*ROM **08** 15:05:01.3±0.1, 46°.327N±0°.005×12°.631E±0°.006, h6^{km}, ML3.3/70, Error ellipse: s-maj=0.6km s-min=0.3km az=163.0*
*LDG **08** 15:05:02.4±0.2, 46°.42N×12°.73E, h7^{km}, Md3.4/1, Ml3.4/21, Error ellipse: s-maj=5.5km s-min=3.6km az=26.0*
*PRU **08** 15:05:02.9±0.0, 46°.38N×12°.60E, h1^{km}*
*BGR **08** 15:05:04.5±0.4, 46°.34N×12°.65E, h10^{km}, ML3.4/17, Error ellipse: s-maj=10.0km s-min=4.4km az=8.0*
ISC 08 15:05:01.4±0.7, **46°.35N**±0°.01×**12°.62E**±0°.01, **h10**^{km}±3^{km}, **n262,** σ1s.50/381, **10C-20D, Northern Italy**

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Code  Station Name       Δ°  AZ°     Phase ID          Time     Res
                                  Op     ISC       h  m  s     ISC
STAL  STALIGIAL         0.11 145⇓P     Pg     15 05 04.1  0.0
STAL                             S     Sg     15 05 05.9 -0.3
STAL                             AML   AML
STAL                             AML   AML
STAL                             AML   AML
STAL                             AML   AML
STAL                             AML   AML
STAL                             AML   AML
CIMO  Cimolais          0.13 253⇓ePg   Pg     15 05 04.0 -0.5
CIMO                             eSg   Sg     15 05 06.0 -0.7
CIMO  Cimolais          0.13 253⇓P     Pg     15 05 04.0 -0.5
CIMO                             S     Sg     15 05 05.8 -1.0
CIMO                             AML   AML
      comp=N,20250µm,0.7s
CIMO                             AML   AML
      comp=E,34500µm,0.4s
CSMI  Casera Mimoias    0.17   7⇓ePg   Pg     15 05 05.9 +0.7
CSMI                             eSg   Sb     15 05 09.3 +1.5
MLNI  Malnisio          0.20 182⇓ePg   Pg     15 05 05.2 -0.5
MLNI                             eSg   Sg     15 05 08.5 -0.1
CLUD  Cludinico         0.21  59⇑ePg   Pg     15 05 06.3 +0.5
CLUD                             eSg   Sb     15 05 10.6 +1.7
CLUD  Cludinico         0.21  59⇑P     Pg     15 05 06.4 +0.5
CLUD                             S     Sb     15 05 10.4 +1.6
CLUD                             AML   AML
      comp=E,6245µm,0.7s
CLUD                             AML   AML
      comp=N,8710µm,0.5s
FUSE  Fusea             0.27  76⇓ePg   Pg     15 05 07.3 +0.4
FUSE                             eSg   Sb     15 05 12.4 -0.6
FVI   Forni Avoltri     0.27  24⇑P     Pb     15 05 07.6 -0.9
FVI                              S     Sb     15 05 12.4 -0.7
FVI                              AML   AML
      comp=N,6220µm,0.4s
FVI                              AML   AML
      comp=E,6375µm,0.5s
MPRI  Monte Prat        0.28 113⇓ePg   Pg     15 05 07.2 +0.1
MPRI                             eSg   Sg     15 05 11.9 +1.1
MPRI  Monte Prat        0.28 113⇓P     Pg     15 05 06.9 -0.1
MPRI                             S     Sg     15 05 11.8 +1.1
MPRI                             AML   AML
      comp=N,10090µm,0.6s
MPRI                             AML   AML
      comp=E,8160µm,0.3s
ZOU   Zoufplan          0.32  49⇑ePg   Pb     15 05 08.7 -0.7
ZOU                              eSg   Sb     15 05 14.1 -0.6
ZOU   Zoufplan          0.32  49 P     Pb     15 05 08.4 -0.9
ZOU                              S     Sb     15 05 14.3 -0.3
ZOU                              AML   AML
      comp=E,3640µm,0.7s
ZOU                              AML   AML
      comp=N,3495µm,0.6s
BOO   Bordano           0.33  95⇓ePg   Pg     15 05 07.9 -0.1
BOO                              eSg   Sb     15 05 13.8 -1.0
CAE   Caneva            0.37 201⇑ePg   Pg     15 05 08.1 -0.6
CAE                              eSg   Sg     15 05 13.6 +0.1
BUA   Buia              0.37 110⇑ePg   Pg     15 05 08.8 +0.1
BUA                              eSg   Sb     15 05 15.6 -0.3
AGOR  Agordo            0.40 261⇑ePg   Pg     15 05 09.2 -0.2
AGOR  Agordo            0.40 261 P     Pg     15 05 08.8 -0.6
AGOR                             S     Sg     15 05 15.1 +0.4
AGOR                             AML   AML
      comp=N,7120µm,1.2s
AGOR                             AML   AML
      comp=E,7915µm,0.4s
ABTA  Abfaltersbach     0.41 349 i Pg  Pb     15 05 10.1 -0.6
      comp=E,63nm,0.2s,SNR=154
ABTA                             eSg   Sb     15 05 16.2 -0.8
      comp=E,172nm,0.1s
PLRO  Paularo           0.41  61 ePg   Pb     15 05 10.3 -0.6
PLRO                             eSg   Sb     15 05 17.0 -0.3
BAD   Bernadia          0.45 104⇓ePg   Pg     15 05 10.0 -0.1
BAD                              eSg   Sb     15 05 17.5 -0.5
FAU   Forcella Aurin    0.46 255 ePg   Pg     15 05 09.6 -0.8
VINO  Villanova         0.47 101⇓ePg   Pg     15 05 10.3 -0.2
VINO                             eSg   Sb     15 05 18.2 -0.5
VARN  Col Varnada, M    0.51 226 ePg   Pg     15 05 10.1 -1.2
VARN  Col Varnada, M    0.51 226 P     Pg     15 05 09.9 -1.3
VARN                             AML   AML
      comp=E,3920µm,0.6s
VARN                             AML   AML
      comp=N,3135µm,0.4s
PTCC  Patocco-Chiusa    0.51  83 P     Pg     15 05 11.1 -0.2
PTCC                             S     Sb     15 05 19.9  0.0
PTCC                             AML   AML
      comp=N,2385µm,0.4s
PTCC                             AML   AML
      comp=E,1490µm,0.2s
TLI   Talmassons        0.54 142 ePg   Pg     15 05 11.6 -0.4
COLI  Coloredo          0.57 112 ePg   Pg     15 05 12.5  0.0
ED06  Collalto TV       0.57 210 ePg   Pg     15 05 11.9 -0.5
ROBS  Robic             0.62  99 i Pg  Pg     15 05 12.9 -0.5
ROBS                             i Sg  Sb     15 05 23.7 +0.5
ROBS                             IAML         15 05 26.7
      comp=Z,242nm,0.2s
CRND  Cornuda           0.64 217 P     Pg     15 05 14.5 +0.7
LSR   Lussari           0.64  78 ePg   Pg     15 05 13.8 -0.1
ACOM  Acomizza, Ital    0.65  72 ePg   Pb     15 05 14.3 -0.6
ACOM  Acomizza, Ital    0.65  72 P     Pb     15 05 14.3 -0.6
ACOM                             S     Sn     15 05 25.0 -2.2
ACOM                             AML   AML
      comp=E,3935µm,0.3s
ACOM                             AML   AML
      comp=N,4245µm,1.2s
MTLO  Montello          0.65 215 ePg   Pg     15 05 13.3 -0.6
PRED  Cave del Predi    0.66  81 ePg   Pg     15 05 14.4 +0.3
BRES  Bressanone        0.71 300 P     Pg     15 05 15.1 -0.1
BRES                             AML   AML
      comp=N,1660µm,1.3s
BRES                             AML   AML
      comp=E,1610µm,0.7s
BRES                             AML   AML
      comp=N,1655µm,1.3s
DRE   Drenchia          0.73 104 ePg   Pg     15 05 15.6 +0.1
CTI   Castel Tesino     0.74 246 P     Pg     15 05 15.1 -0.6
CGRP  Cima Grappa       0.74 231 ePg   Pg     15 05 14.8 -1.0
CGRP  Cima Grappa       0.74 231 P     Pg     15 05 15.1 -0.7
CGRP                             AML   AML
      comp=E,2240µm,0.6s
CGRP                             AML   AML
      comp=N,2270µm,0.5s
ASOL  Asolo             0.74 223 P     Pg     15 05 16.7 +1.0
MYKA  Terra Mystica     0.76  68 i Pg  Pb     15 05 16.3 -0.4
      comp=N,18nm,0.2s,SNR=18
MYKA                             eSg   Sn     15 05 27.6 -2.1
      comp=N,94nm,0.2s
SABO  M.te Sabotino     0.77 118 ePg   Pg     15 05 16.0 -0.3
SABO  M.te Sabotino     0.77 118 P     Pg     15 05 16.3  0.0
SABO                             AML   AML
      comp=N,4670µm,0.2s
SABO                             AML   AML
      comp=E,2565µm,0.2s
CADS  Cadrg             0.78  98 i Pg  Pg     15 05 15.6 -0.9
CADS                             eSg   Sn     15 05 28.6 -1.7
CADS                             IAML         15 05 29.9
      comp=Z,236nm,0.2s
KOSI  Kohlern           0.87 278 P     Pb     15 05 18.1 -0.5
KOSI                             AML   AML
      comp=N,2045µm,0.6s
KOSI                             AML   AML
      comp=E,1345µm,1.6s
KBA   Koelnbreinsper    0.88  34 ePg   Pn     15 05 19.1 -1.0
      SNR=42
KBA                              eSg   Sn     15 05 31.3 -1.7
      comp=E,57nm,0.1s
KBA   Koelnbreinsper    0.88  34 ePg   Pn     15 05 19.0 -1.0
KBA                              eSg   Sb     15 05 30.3 -0.5
BOSI  Bolzano           0.91 280 P     Pb     15 05 19.1 -0.2
BOSI                             AML   AML
      comp=E,2865µm,1.6s
BOSI                             AML   AML
      comp=N,4140µm,0.5s
VOJS  Vojsko            0.93 109 i Pg  Pb     15 05 18.6 -1.1
VOJS                             i Sg  Sn     15 05 34.1 +0.1
VOJS                             IAML         15 05 37.2
      comp=Z,845nm,0.2s
VENL  Venezia Lido      0.95 191 P     Pb     15 05 20.7 +0.8
GORS  Gorjuse           0.95  91 i Pg  Pb     15 05 18.7 -1.4
GORS                             i Sg  Sn     15 05 36.2 +1.6
GORS                             IAML         15 05 39.4
      comp=Z,416nm,0.2s
APPI  Appiano           0.97 278⇓P     Pb     15 05 19.9 -0.4
APPI                             AML   AML
      comp=E,1845µm,0.4s
APPI                             AML   AML
      comp=N,1720µm,1.0s
ABSI  Aberstueckl       0.98 293⇓P     Pb     15 05 20.0 -0.5
ABSI                             S     Sg     15 05 34.4 +1.5
ABSI                             AML   AML
      comp=E,2900µm,0.5s
ABSI                             AML   AML
      comp=N,3390µm,0.5s
SANR  Sandrigo          1.00 225 P     Pb     15 05 20.7  0.0
ROSI  Rosskopf          1.02 305⇓P     Pb     15 05 21.1  0.0
ROSI                             S     Sn     15 05 35.9 -0.4
ROSI                             AML   AML
      comp=N,1830µm,0.4s
ROSI                             AML   AML
      comp=E,2090µm,1.1s
JAVS  Javornik          1.10 114 i Pg  Pb     15 05 21.4 -1.2
JAVS                             eSg   Sn     15 05 40.1 +1.9
JAVS                             IAML         15 05 41.7
      comp=Z,1µm,0.4s
DOSS  Dosso del Somm    1.10 245 P     Pb     15 05 22.1 -0.5
DOSS                             S     Sb     15 05 37.7 +0.6
DOSS                             AML   AML
      comp=E,3045µm,0.6s
DOSS                             AML   AML
      comp=N,2250µm,0.4s
DOSS                             AML   AML
      comp=E,3050µm,0.6s
DOSS                             AML   AML
      comp=N,3125µm,0.6s
DOSS                             AML   AML
      comp=E,2405µm,0.4s
WTTA  Wattenberg        1.14 324 ePg   Pg     15 05 23.6 +0.3
      comp=E,22nm,0.3s,SNR=42
WTTA                             eSg   Sn     15 05 39.2 -0.1
      comp=E,136nm,0.2s
WTTA  Wattenberg        1.14 324⇓P     Pg     15 05 23.6 +0.3
WTTA                             AML   AML
      comp=E,848µm,0.4s
WTTA                             AML   AML
      comp=N,1117µm,0.9s
WTTA  Wattenberg        1.14 324 ePg   Pn     15 05 23.5 -0.1
WTTA                             eSg   Sn     15 05 39.5 +0.2
CRNS  Crni Vrh          1.17 103 i Pg  Pn     15 05 22.6 -1.2
CRNS                             eSg   Sg     15 05 41.4 +2.4
CRNS                             IAML         15 05 44.8
      comp=Z,1µm,0.3s
GAGG  Gaggia            1.19 258 P     Pn     15 05 23.6 -0.5
GAGG                             AML   AML
      comp=E,2125µm,1.1s
GAGG                             AML   AML
      comp=E,2005µm,0.9s
GAGG                             AML   AML
      comp=N,2055µm,0.9s
GAGG                             AML   AML
      comp=N,1960µm,1.1s
TEOL  Teolo             1.19 214 P     Pn     15 05 24.0 -0.1
TEOL                             S     Sn     15 05 40.8 +0.5
TEOL                             AML   AML
      comp=N,4775µm,0.5s
TEOL                             AML   AML
      comp=E,6385µm,1.0s
ZOVE  Zovencedo         1.20 222 P     Pn     15 05 24.2 +0.1
ZOVE                             S     Sn     15 05 41.0 +0.6
WATA  Walderalm         1.22 324 ePg   Pg     15 05 25.1 +0.3
      comp=E,32nm,0.2s,SNR=25
WATA                             eSg   Sg     15 05 41.8 +1.1
      comp=E,95nm,0.2s
SKDS  Skadanscina       1.26 129 i Pg  Pn     15 05 23.4 -1.6
SKDS                             eSg   Sg     15 05 43.5 +1.6
SKDS                             IAML         15 05 45.5
      comp=Z,397nm,0.2s
MOZS  Mozjanca          1.26  92 ePg   Pg     15 05 25.8 +0.2
MOZS                             i Sg  Sg     15 05 45.5 +3.5
MOZS                             IAML         15 05 47.9
      comp=Z,125nm,0.2s
ROVR  Rover Verones     1.29 238 P     Pn     15 05 25.4 -0.2
ROVR                             S     Sb     15 05 43.1 +0.7
ROVR                             AML   AML
      comp=E,1006µm,0.9s
ROVR                             AML   AML
      comp=N,1525µm,0.7s
SQTA  Sankt Quirin      1.31 312 ePg   Pb     15 05 26.4 +0.3
      comp=N,49nm,0.3s,SNR=62
SQTA                             eSg   Sg     15 05 45.2 +1.8
      comp=N,58nm,0.1s
VARA  Varagna           1.31 247 P     Pn     15 05 26.1 +0.3
TREG  Tregnago          1.31 232 P     Pn     15 05 26.2 +0.5
GBAS  Gorenja Brezov    1.33 107 i Pg  Pn     15 05 25.7 -0.3
GBAS                             i Sg  Sg     15 05 47.1 +2.9
GBAS                             IAML         15 05 49.9
      comp=Z,370nm,0.2s
CARE  Lago del Cares    1.34 274 P     Pn     15 05 26.7 +0.3
OBKA  Obir              1.34  82 ePg   Pg     15 05 27.4 +0.2
      comp=Z,40nm,0.4s,SNR=21
OBKA                             eSg   Sg     15 05 47.8 +3.2
      comp=Z,367nm,0.5s
OBKA  Obir              1.34  82 ePn   Pg     15 05 27.4 +0.2
OBKA                             eSg   Sg     15 05 47.7 +3.1
LJU   Ljubljana         1.36 102 i Pg  Pg     15 05 27.7 +0.3
LJU                              i Sg  Sg     15 05 47.4 +2.3
LJU                              IAML         15 05 50.2
      comp=Z,244nm,0.2s
LJU   Ljubljana         1.36 102 ePn   Pb     15 05 26.9  0.0
LJU   Ljubljana         1.36 102 P     Pb     15 05 26.9  0.0
LJU                              AML   AML
      comp=E,13150µm,0.3s
LJU                              AML   AML
      comp=N,23650µm,0.3s
LJU                              AML   AML
      comp=E,13200µm,0.3s
CEY   Cerknica          1.40 115 i Pg  Pb     15 05 27.6  0.0
CEY                              i Sg  Sg     15 05 48.1 +1.7
CEY                              IAML         15 05 50.5
      comp=Z,621nm,0.3s
CEY   Cerknica          1.40 115 ePn   Pn     15 05 26.8 -0.1
MOTA  Moosalm           1.44 314 ePg   Pb     15 05 28.8 +0.3
      comp=Z,35nm,0.5s,SNR=36
MOTA                             eSg   Sg     15 05 49.3 +1.5
      comp=Z,203nm,0.6s
OPPE  Oppeano           1.45 225 P     Pn     15 05 28.5 +0.9
OPPE                             AML   AML
      comp=E,4700µm,0.4s
OPPE                             AML   AML
      comp=E,4705µm,0.4s
OPPE                             AML   AML
      comp=N,4845µm,0.7s
MOSI  Grossmontoni      1.46 281⇓P     Pb     15 05 28.9 +0.2
MOSI                             S     Sg     15 05 49.0 +0.7
MOSI                             AML   AML
      comp=N,4830µm,1.2s
MOSI                             AML   AML
      comp=E,2720µm,0.4s
VNDS  Vrh nad Dolski    1.46  99 ePg   Pb     15 05 28.9 +0.1
FETA  Feichten          1.47 298 ePg   Pb     15 05 29.1 +0.3
      comp=E,80nm,0.3s,SNR=126
FETA                             eSg   Sg     15 05 48.8 +0.2
      comp=E,65nm,0.2s
KNDS  Knezji Dol        1.48 123 i Pg  Pb     15 05 28.6 -0.4
KNDS                             eSg   Sg     15 05 50.2 +1.4
KNDS                             IAML         15 05 51.3
      comp=Z,244nm,0.3s
MABI  Malga Bissina     1.49 259 P     Pn     15 05 29.3 +0.8
MABI                             S     Sb     15 05 49.5 +1.1
MABI                             AML   AML
      comp=N,829µm,1.5s
MABI                             AML   AML
      comp=E,620µm,1.0s
MAGA  Magasa            1.50 248⇑P     Pn     15 05 29.3 +0.9
MAGA                             S     Sb     15 05 49.9 +1.4
MAGA                             AML   AML
      comp=E,5275µm,0.3s
MAGA                             AML   AML
      comp=N,3290µm,0.3s
PART  Garmisch-Parte    1.55 319 ePn   Pg     15 05 31.6 +0.5
PART                             eSg   Sg     15 05 55.6 +4.5
ZUGS  Zugspitze, Sch    1.55 314 ePn   Pg     15 05 31.1 -0.1
ZUGS                             eSg   Sg     15 05 56.3 +4.9
BRMO  Bormio            1.56 275⇓P     Pb     15 05 30.5 +0.1
BRMO                             S     Sg     15 05 51.9 +0.3
BRMO                             AML   AML
      comp=N,764µm,1.6s
BRMO                             AML   AML
      comp=E,722µm,1.3s
SALO  Salr              1.64 244 P     Pn     15 05 31.0 +0.8
SALO                             AML   AML
      comp=E,1445µm,0.5s
SALO                             AML   AML
      comp=N,1570µm,0.7s
SALO                             AML   AML
      comp=N,1500µm,0.6s
SALO                             AML   AML
      comp=E,1515µm,0.5s
VISS  Visnje            1.64 109 i Pn  Pb     15 05 31.4 -0.3
VISS                             i Sn  Sg     15 05 55.1 +1.1
VISS                             IAML         15 05 56.7
      comp=Z,405nm,0.2s
BRJN  Brijuni           1.65 151 ePn   Pn     15 05 30.6 +0.3
BRJN                             Sg    Sn     15 05 51.9 +0.5
RIY   Rijeka            1.66 128 ePn   Pn     15 05 30.8 +0.4
RIY   Rijeka            1.66 128 ePn   Pn     15 05 30.7 +0.2
RIY                              Sg    Sb     15 05 52.8  0.0
PDKS  Podkum            1.68  99 i Pn  Pb     15 05 31.9 -0.4
PDKS                             eSn   Sg     15 05 55.6 +0.4
PDKS                             IAML         15 06 00.1
      comp=Z,166nm,0.2s
SMRN  Sveta Marina      1.70 140 ePn   Pn     15 05 31.6 +0.6
SMRN                             Sg    Sb     15 05 53.4 -0.6
SOKA  Soboth            1.70  78 ePg   Pb     15 05 32.7  0.0
      comp=Z,11nm,0.3s,SNR=31
SOKA                             eSg   Sg     15 05 56.1 +0.2
      comp=Z,35nm,0.4s
RETA  Reutte            1.71 312 ePg   Pb     15 05 33.7 +0.8
      comp=Z,6.8nm,0.1s,SNR=47
RETA                             eSg   Sg     15 05 57.0 +0.6
      comp=Z,85nm,0.2s
GBRS  Gornja Briga      1.73 117 i Pn  Pb     15 05 32.5 -0.8
GBRS                             i Sn  Sb     15 05 56.1 +1.0
GBRS                             IAML         15 06 00.2
      comp=Z,225nm,0.2s
PERS  Pernice           1.75  80 i Pn  Pb     15 05 33.4 -0.1
BERNI Berninapass       1.80 273 P     Pb     15 05 34.5  0.0
BERNI                            AML   AML
      comp=N,464µm,0.8s
BERNI                            AML   AML
      comp=E,290µm,1.0s
ZONE  Zone              1.84 252 P     Pn     15 05 33.4 +0.4
ZONE                             AML   AML
      comp=E,727µm,1.3s
ZONE                             AML   AML
      comp=N,1075µm,1.2s
MOA   Molln             1.88  36 ePg   Pg     15 05 36.4 -0.9
      comp=N,26nm,0.3s,SNR=22
MOA                              eSg   Sg     15 06 02.5 +0.8
      comp=N,71nm,0.3s
MOA   Molln             1.88  36 ePn   Pg     15 05 36.6 -0.7
MOA                              eSg   Sg     15 06 03.1 +1.5
OBER  Oberstdorf        1.92 304 ePg   Pg     15 05 38.2  0.0
OBER                             eSg   Sg     15 06 05.0 +2.0
DAVOX Davos/Dischmat    1.94 284 P     Pb     15 05 37.0 +0.1
DAVOX                            AML   AML
      comp=E,371µm,0.4s
DAVOX                            AML   AML
      comp=N,758µm,0.5s
BOJS  Bojanci           2.02 114 i Pn  Pn     15 05 36.7 +1.2
BOJS  Bojanci           2.02 114 P     Pn     15 05 36.5 +1.0
BOJS                             AML   AML
      comp=N,3245µm,0.3s
BOJS                             AML   AML
      comp=E,2760µm,0.2s
FUR   Furstenfeldbru    2.04 334 eSg   Sg     15 06 08.4 +1.6
CRES  Cresnjev          2.04 104 ePn   Pn     15 05 36.9 +1.1
DAVA  Damuels           2.10 297 ePg   Pb     15 05 40.3 +0.6
      comp=E,2.5nm,0.2s,SNR=54
DAVA                             eSg   Sg     15 06 11.0 +2.0
      comp=E,122nm,0.3s
DAVA  Damuels           2.10 297 ePn   Pb     15 05 40.5 +0.8
DAVA                             eSg   Sg     15 06 10.0 +1.0
MDI   Monti di Nese     2.11 255 P     Pn     15 05 37.8 +1.0
MDI                              AML   AML
      comp=E,562µm,0.4s
MDI                              AML   AML
      comp=N,552µm,0.8s
MDI                              AML   AML
      comp=E,570µm,0.5s
MDI                              AML   AML
      comp=N,518µm,0.8s
OZLJ  Ozalj             2.12 109 ePn   Pn     15 05 37.6 +0.8
OZLJ                             Sn    Sn     15 06 03.9 +0.9
UBR   Ueberruh          2.18 309 ePn   Pb     15 05 40.9 +0.1
ARSA  Arzberg           2.19  65 ePn   Pb     15 05 39.5 -1.5
      comp=N,3.9nm,0.2s,SNR=9.7
ARSA                             eSn   Sb     15 06 06.3 -1.9
      comp=N,6.6nm,0.2s
ARSA  Arzberg           2.19  65 P     Pb     15 05 39.1 -2.0
ARSA                             AML   AML
      comp=E,93µm,0.8s
ARSA                             AML   AML
      comp=N,128µm,0.9s
ARSA  Arzberg           2.19  65 ePn   Pb     15 05 39.6 -1.4
RABC  Rab               2.20 136 ePn   Pn     15 05 38.3 +0.3
RABC                             Sn    Sn     15 06 04.3 -0.9
BRIS  BRISIGHELLA       2.33 200 P     Pn     15 05 38.7 -1.1
BRIS                             AML   AML
      comp=N,1214µm,1.6s
BRIS                             AML   AML
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	comp=E,169µm,1.1s						
BRIS				AML	AML		
	comp=E,1333µm,1.6s						
BRIS				AML	AML		
	comp=N,397µm,0.4s						
PLONS	Plons/SG	2.34	289	P	Pb	15 05 43.4	-0.3
PTJ	Puntijarka	2.37	100	ePn	Pn	15 05 41.4	+1.0
PTJ				Sn	Sb	15 06 11.0	-2.4
NVLJ	Novalja	2.39	138	ePn	Pn	15 05 40.6	+0.1
NVLJ				Sn	Sn	15 06 10.1	+0.4
LOBO	Lobor	2.40	93	ePn	Pn	15 05 42.1	+1.4
LOBO				Sn	Sb	15 06 11.6	-2.7
ZAG	Zagreb	2.40	101	ePn	Pb	15 05 44.3	-0.3
PESA	Pesaro	2.41	176	P	Pn	15 05 41.1	+0.2
PESA				AML	AML		
	comp=N,484µm,0.4s						
PESA				AML	AML		
	comp=E,429µm,1.0s						
SEI	Scarperia	2.46	202	P	Pn	15 05 41.9	+0.3
SEI				AML	AML		
	comp=E,330µm,0.5s						
SEI				AML	AML		
	comp=N,398µm,0.4s						
SFI	Santa Sofia	2.50	193	P	Pn	15 05 41.7	-0.4
SFI				AML	AML		
	comp=N,282µm,0.5s						
SFI				AML	AML		
	comp=E,214µm,1.1s						
CPGN	Carpegna, Ital	2.56	185	P	Pn	15 05 43.4	+0.4
PLIT	Plitvice	2.57	124	ePn	Pn	15 05 43.6	+0.6
PLIT				Sn	Sn	15 06 14.6	+0.3
MTCR	Monte La Croce	2.59	207	P	Pn	15 05 43.4	0.0
GEC2	GERESS Array S	2.60	16	ePn	Pb	15 05 45.4	-2.7
GEC2				eSn	Sb	15 06 18.7	-1.5
ASQU	Asqua	2.62	193	P	Pn	15 05 43.6	-0.2
ASQU				AML	AML		
	comp=E,195µm,0.4s						
ASQU				AML	AML		
	comp=N,232µm,1.2s						
MPPT	Montemurlo	2.62	205	P	Pn	15 05 44.6	+0.8
KALN	Kalnik	2.67	93	ePn	Pn	15 05 45.0	+0.6
KALN				Sn	Sn	15 06 17.5	+0.7
PARC	Parchiule	2.71	186	P	Pn	15 05 44.8	-0.2
PARC				AML	AML		
	comp=E,126µm,0.5s						
PARC				AML	AML		
	comp=N,112µm,0.5s						
CONA	Conrad Observa	2.72	53	ePn	Pb	15 05 47.3	-2.8
CONA				eSn	Sb	15 06 19.9	-3.6
	comp=N,17nm,0.5s						
MPAG	Monte Paganucc	2.72	178	P	Pn	15 05 45.2	+0.1
MPAG				AML	AML		
	comp=E,237µm,0.5s						
MPAG				AML	AML		
	comp=N,271µm,0.4s						
VARE	Varese	2.72	261	⇓P	Pn	15 05 47.3	+2.1
VARE				AML	AML		
	comp=N,238µm,0.8s						
VARE				AML	AML		
	comp=E,226µm,0.6s						
CKRC	Cesky Krumlov	2.72	24	ePN	Pb	15 05 48.4	-1.8
CKRC				eSN	Sb	15 06 22.1	-1.5
NORI	Noerdlinger Ri	2.73	331	eSn	Sb	15 06 21.4	-2.5
NORI				eSg	Sg	15 06 29.8	+0.6
FUSIO	Fusio	2.74	274	⇑P	Pb	15 05 50.7	+0.1
CRE	Caprese Michel	2.77	190	P	Pn	15 05 46.5	+0.6
CRE				AML	AML		
	comp=E,152µm,0.4s						
CRE				AML	AML		
	comp=N,170µm,0.3s						
WET	Wettzell	2.80	3	ePn	Pn	15 05 48.1	+1.8
WET				eSn	Sb	15 06 21.9	-4.0
PIEI	Pieia	2.81	181	P	Pn	15 05 46.2	-0.3
PIEI				AML	AML		
	comp=N,128µm,0.3s						
PIEI				AML	AML		
	comp=E,220µm,0.4s						
CRMI	Carmignano	2.81	205	P	Pn	15 05 46.4	0.0
CRMI				AML	AML		
	comp=E,113µm,0.7s						
CRMI				AML	AML		
	comp=N,110µm,0.7s						
KHC	Kasperske Hory	2.86	13	ePN	Pn	15 05 48.9	+1.9
KHC				ePG	Pg	15 05 55.5	-0.6
KHC				eSN	Sb	15 06 24.0	-3.5
KHC				eSG	Sg	15 06 33.4	+0.2
	comp=N,58nm,0.5s						
ARVD	Arcevia	2.86	175	P	Pn	15 05 47.0	-0.1
ARVD				AML	AML		
	comp=N,101µm,1.6s						
ARVD				AML	AML		
	comp=E,130µm,0.8s						
UDBI	Udbina	2.87	128	ePn	Pn	15 05 48.0	+0.8
UDBI				Sn	Sn	15 06 22.4	+0.7
AOI	Ancona	2.88	166	P	Pn	15 05 47.8	+0.4
AOI				AML	AML		
	comp=E,146µm,0.4s						
AOI				AML	AML		
	comp=N,162µm,0.3s						
ATPI	Pietralunga -	2.90	183	P	Pn	15 05 47.7	+0.1
ATPI				AML	AML		
	comp=E,180µm,1.4s						
ATPI				AML	AML		
	comp=N,160µm,0.6s						
DUGI	Dugi Otok	2.92	143	ePn	Pn	15 05 48.2	+0.4
DUGI				Sn	Sn	15 06 23.4	+0.5
ATVO	AVT- Monte Val	2.97	183	P	Pn	15 05 48.9	+0.3
ATVO				AML	AML		
	comp=E,201µm,0.9s						
ATVO				AML	AML		
	comp=N,250µm,1.1s						
MOSL	Moslavina	2.97	103	ePn	Pn	15 05 49.0	+0.4
MOSL				Sn	Sn	15 06 24.5	+0.2
ATFO	Monte Foce - G	2.98	181	AML	AML		
	comp=E,270µm,0.6s						
ATFO				AML	AML		
	comp=N,184µm,0.4s						
OSSC	Osservatorio P	2.99	200	P	Pn	15 05 48.8	-0.1
OSSC				AML	AML		
	comp=E,102µm,0.5s						
OSSC				AML	AML		
	comp=N,103µm,0.6s						
CING	Cingoli	3.00	172	AML	AML		
	comp=N,106µm,0.5s						
CING				AML	AML		
	comp=E,128µm,0.6s						
SOP	Sopron	3.01	62	eS	Sn	15 06 26.2	+1.2
PLMA	Palmaria, Port	3.02	221	P	Pn	15 05 50.0	+0.8
ATMI	Monte Miggiano	3.02	185	P	Pn	15 05 50.0	+0.7
ATMI				AML	AML		
	comp=N,258µm,0.4s						
ATMI				AML	AML		
	comp=E,247µm,0.4s						
EL6	Elcito	3.04	173	P	Pn	15 05 49.7	+0.2
CAFI	Castiglion Fio	3.06	189	P	Pn	15 05 49.8	+0.1
CAFI				AML	AML		
	comp=N,103µm,0.4s						
CAFI				AML	AML		
	comp=E,96µm,1.6s						
SNTG	Esanatoglia	3.10	176	P	Pn	15 05 50.3	-0.1
SNTG				AML	AML		
	comp=E,134µm,1.0s						
SNTG				AML	AML		
	comp=N,179µm,1.3s						
ATTE	AVT- Monte Tez	3.16	184	P	Pn	15 05 51.4	+0.3
ATTE				AML	AML		
	comp=E,160µm,0.4s						
ATTE				AML	AML		
	comp=N,200µm,0.8s						
ATCC	AVT- Casa Cast	3.16	180	P	Pn	15 05 51.6	+0.4
ATCC				AML	AML		
	comp=N,419µm,0.3s						
ATCC				AML	AML		
	comp=E,420µm,0.9s						
CSP1	Cessapalombo	3.28	173	P	Pn	15 05 52.8	-0.1
ASSB	Assisi San Ben	3.31	180	P	Pn	15 05 53.5	+0.3
ASSB				AML	AML		
	comp=E,184µm,0.4s						
ASSB				AML	AML		
	comp=N,174µm,1.6s						
MORI	Morici	3.31	138	ePn	Pn	15 05 53.5	+0.4
MORI				Sn	Sn	15 06 31.7	-0.7
FDMO	Fiordimonte	3.33	174	P	Pn	15 05 53.5	0.0
FDMO				AML	AML		
	comp=E,98µm,0.9s						
FDMO				AML	AML		
	comp=N,108µm,0.7s						
CESI	CESI - Serrava	3.35	176	P	Pn	15 05 53.6	-0.2
CESI				AML	AML		
	comp=N,70µm,0.7s						
CESI				AML	AML		
	comp=E,31µm,0.6s						
EGYH	Egyhazaskeszo	3.40	70	eS	Sn	15 06 36.6	+1.8
ZIRJ	Zirje	3.44	140	ePn	Pn	15 05 55.1	+0.1
ZIRJ				Sn	Sn	15 06 34.9	-0.9
MGAB	Montegabbione	3.46	186	P	Pn	15 05 55.0	-0.2
MGAB				AML	AML		
	comp=N,213µm,0.4s						
MGAB				AML	AML		
	comp=E,196µm,0.4s						
GRF	Grafenberg Arr	3.48	345	ePn	Pn	15 05 57.1	+1.7
GRF				eSn	Sn	15 06 38.2	+1.6
MPLH	Magyarpolny	3.48	75	ePN	Pn	15 05 57.9	+2.4
BFO	Black Forest	3.53	306	ePn	Pn	15 05 58.2	+2.0
MONC	Moncucco Torin	3.53	251	⇓P	Pn	15 05 58.4	+2.2
MONC				AML	AML		
	comp=E,165µm,1.6s						
MONC				AML	AML		
	comp=N,203µm,1.1s						
NRCA	Norcia	3.53	174	AML	AML		
	comp=E,175µm,0.6s						
NRCA				AML	AML		
	comp=N,122µm,0.2s						
SACS	San Casciano d	3.54	189	AML	AML		
	comp=E,73µm,1.1s						
SACS				AML	AML		
	comp=N,65µm,0.7s						
BLY	Banja Luka	3.58	115	ePn	Pb	15 06 04.5	-0.3
MGRS	Mrkonjic Grad	3.69	120	ePn	Pb	15 06 04.8	-1.8
KRUC	Moravsky	3.72	42	ePN	Pn	15 06 00.1	+1.2
KRUC				ePG	Pg	15 06 12.6	-0.1
KRUC				eSN	Sn	15 06 44.9	+2.2
LNSS	Leonessa	3.76	175	AML	AML		
	comp=E,219µm,0.5s						
LNSS				AML	AML		
	comp=N,167µm,0.3s						
MODS	Modra-Piesok	3.76	56	ePN	Pn	15 06 00.9	+1.5
MODS				eSN	Sn	15 06 45.0	+1.4
MODS				eSG	Sg	15 07 02.4	+0.4
TERO	Teramo	3.79	169	AML	AML		
	comp=E,61µm,0.6s						
TERO				AML	AML		
	comp=N,39µm,0.6s						
KOVH	Kovagotottos	3.81	92	ePN	Pn	15 05 59.9	-0.2
KOVH	Kovagotottos	3.81	92	eS	Sn	15 06 43.1	-1.8
PRU	Pruhonice	3.86	19	eSN	Sn	15 06 47.0	+0.8
PRU				eSG	Sg	15 07 05.3	0.0
	comp=N,35nm,0.7s						
NKC	Novy Kostel	3.89	358	eSN	Sn	15 06 47.5	+0.6
NKC				eSG	Sg	15 07 05.0	-1.2
	comp=N,45nm,0.6s						
VRAC	Vranov	3.99	41	ePN	Pn	15 06 03.2	+0.6
VRAC				eSN	Sn	15 06 50.9	+1.5
CSKK	Cskako	4.00	73	eS	Sn	15 06 50.1	+0.6
AQU	L'Aquila	4.03	172	ePn	Pn	15 06 03.5	+0.3
MORH	Mrgy, Hungar	4.18	90	ePN	Pn	15 06 04.8	-0.3
MORH	Mrgy, Hungar	4.18	90	eS	Sn	15 06 52.8	-1.1
MORH	Mrgy, Hungar	4.18	90	ePn	Pn	15 06 04.2	-0.9
CDF	Champ du Feu	4.18	302	eP	Pn	15 06 07.6	+2.4
CDF				eSn	Sn	15 06 50.9	-3.2
	comp=N,77nm,0.8s						
HVAR	Hvar	4.18	138	ePn	Pn	15 06 05.1	0.0
HVAR				Sn	Sn	15 06 52.7	-1.3
LPG	La Plagne	4.18	260	ePn	Pn	15 06 05.1	-0.4
LPG				eSn	Sn	15 06 52.2	-2.3
	comp=N,30nm,0.7s						
LPL	La Plagne	4.19	261	eP	Pn	15 06 09.2	+3.7
LPL				eSn	Sn	15 06 52.7	-2.0
	comp=N,12nm,0.4s						
T0110	Collepietro	4.20	168	P	Pn	15 06 06.2	+0.7
T0110				AML	AML		
	comp=E,98µm,1.1s						
T0110				AML	AML		
	comp=N,85µm,1.5s						
HINF	Hinteralfeld	4.21	293	eP	Pn	15 06 07.8	+2.2
HINF				eSn	Sn	15 06 51.8	-2.9
	comp=N,60nm,0.5s						
RICI	Ricice	4.29	130	ePn	Pn	15 06 07.3	+0.6
RICI				Sn	Sn	15 06 56.6	-0.2
MOX	Moxa	4.35	352	ePn	Pn	15 06 08.9	+1.4
MOX				eSn	Sn	15 06 57.6	-0.6
MAKA	Makarska	4.38	133	ePn	Pn	15 06 07.8	-0.1
MAKA				Sn	Sn	15 06 57.3	-1.5
MBDF	Montbardon	4.42	251	ePn	Pn	15 06 08.2	-0.4
MBDF				eSn	Sn	15 06 57.9	-2.2
	comp=N,18nm,0.5s						
SBF	Sospel	4.43	238	eSn	Sn	15 06 58.7	-1.7
	comp=N,25nm,0.4s						
CABF	La Chapelle	4.52	276	eSn	Sn	15 07 00.7	-1.9
	comp=N,3.8nm,0.3s						
HAU	Haudompre	4.59	293	eP	Pn	15 06 12.9	+2.1
PGF	Pioggiola	4.60	216	ePn	Pn	15 06 11.0	0.0
PGF				eSn	Sn	15 07 03.0	-1.5
	comp=N,11nm,0.3s						
BRG	Berggiesshubel	4.61	10	Pn	Pn	15 06 13.4	+2.3
BRG				Amp		15 06 14.6	
	comp=Z,3.1nm,0.6s						
BRG	Berggiesshubel	4.61	10	Pg	Pg	15 06 31.6	+1.9
BRG				Amp		15 06 32.2	
	comp=Z,5.1nm,0.6s						
BRG	Berggiesshubel	4.61	10	Sn	Sn	15 07 05.2	+0.5
BRG				Amp		15 07 06.6	
	comp=Z,8.1nm,0.6s						
BRG	Berggiesshubel	4.61	10	Sg	Sg	15 07 28.8	-0.6
BRG				Amp		15 07 42.0	
	comp=Z,14nm,0.5s						
DPC	Dobruska-Polom	4.70	30	ePN	Pn	15 06 13.8	+1.4
DPC				eSN	Sn	15 07 07.6	+0.6
LSTV	Lastovo	4.70	138	ePn	Pn	15 06 12.3	0.0
LSTV				Sn	Sn	15 07 06.0	-0.9
VYHS	Vyhne	4.73	61	ePN	Pn	15 06 14.5	+1.7
VYHS				eSN	Sn	15 07 07.4	-0.2
UPC	Upice	4.73	27	ePN	Pn	15 06 14.2	+1.4
UPC				eSN	Sn	15 07 07.4	-0.3
TNS	Taunus Mts	4.77	326	ePn	Pn	15 06 15.7	+2.3
TNS				eSn	Sn	15 07 09.6	+0.9
CHVC	Chvalec	4.82	27	ePN	Pn	15 06 15.5	+1.6
ORIF	Oris-en-Rattie	4.94	256	ePn	Pn	15 06 19.0	+3.3
ORIF	Oris-en-Rattie	4.94	256	eP	Pn	15 06 19.2	+3.5
ORIF				eSn	Sn	15 07 10.6	-2.3
	comp=Z,17nm,0.4s						
CLL	Collm	4.97	3	i Pn	Pn	15 06 18.6	+2.6
CLL				i Sg	Sg	15 07 40.2	-0.7
	comp=Z,41nm,0.7s						
STON	Ston	5.02	132	ePn	Pn	15 06 16.4	-0.3
STON	Ston	5.02	132	ePn	Pn	15 06 16.3	-0.3
STON				Sn	Sn	15 07 13.3	-1.4
STON	Ston	5.02	132	⇓P	Pn	15 06 17.2	+0.5
SGRT	San Giovanni R	5.11	153	⇑P	Pn	15 06 16.6	-1.4
FRGS	Fruska Gora	5.17	101	ePn	Pn	15 06 19.2	+0.4
PAGF	Fort de Pagny	5.17	298	eP	Pn	15 06 22.8	+4.0
	baz=117						
PAGF				eSn	Sn	15 07 14.6	-3.9
	comp=Z,16nm,0.5s						
TEKS	Tekeris	5.18	108	ePn	Pb	15 06 29.0	-3.1
LMR	La Mourre	5.29	237	ePn	Pn	15 06 20.2	-0.2
LMR				eSn	Sn	15 07 18.6	-2.7
	comp=Z,14nm,0.5s						
BBLS	Lazići	5.40	115	ePn	Pn	15 06 22.9	+0.9
BBLS	Lazići	5.40	115	ePn	Pn	15 06 23.1	+1.1
UPM	Unac-Piva	5.47	123	ePn	Pn	15 06 26.3	+3.3
TREB	Trebinje	5.47	130	ePn	Pn	15 06 21.8	-1.1
SFTF	Sexfontaines	5.49	293	eP	Pn	15 06 27.0	+3.9
	baz=112						
SFTF				eSn	Sn	15 07 22.3	-3.9
	comp=Z,13nm,0.3s						
SMRF	Simiane la Rot	5.52	247	eP	Pn	15 06 27.5	+3.9
SMRF				eSn	Sn	15 07 23.5	-3.6
	comp=Z,7.4nm,0.5s						
DIVS	Divibare	5.67	111	ePn	Pn	15 06 22.9	-2.8
DIVS	Divibare	5.67	111	ePn	Pn	15 06 22.7	-3.0
VIVF	Saint-Julien-l	5.77	258	ePn	Pn	15 06 26.8	-0.3
VIVF				eSn	Sn	15 07 30.0	-3.4
	comp=Z,3.6nm,0.4s						
TRUS	Trudelj	5.89	108	ePn	Pn	15 06 30.0	+1.4
IVAS	Ivanjica	6.02	115	ePn	Pn	15 06 30.9	+0.4
SJES	Sjenica	6.07	118	ePn	Pn	15 06 36.7	+5.4
LOR	Lormes	6.09	282	eP	Pn	15 06 34.8	+3.4
	baz=101						
LOR				eSn	Sn	15 07 37.0	-4.0
	comp=Z,15nm,0.4s						
GRUS	Gruza	6.23	110	ePn	Pn	15 06 34.0	+0.7
DRME	Dracevica, Mon	6.28	129	ePn	Pn	15 06 34.0	-0.1
SSF	Saint Saulge	6.31	280	eP	Pn	15 06 37.9	+3.5
AVF	Avril sur Loir	6.41	277	eP	Pn	15 06 38.2	+2.5
GIVF	Givet	6.42	309	eP	Pn	15 06 39.4	+3.5
BULG	Bulgheria - Ca	6.58	161	P	Pb	15 06 56.0	0.0
LASF	Ste Croix	6.59	253	ePn	Pn	15 06 38.5	+0.1
LASF				eSn	Sn	15 07 49.9	-3.7
	comp=Z,3.5nm,0.4s						
BAIF	Baives	6.74	306	eP	Pn	15 06 43.6	+3.4
BGF	Bois d'Agland	6.76	275	eP	Pn	15 06 44.5	+3.9
BGF				eSn	Sn	15 07 53.2	-4.3
	comp=Z,13nm,0.3s						
SELS	Selova	6.81	114	ePn	Pn	15 06 43.2	+1.9
TCF	Toulx Ste Croi	7.21	273	eP	Pn	15 06 50.3	+3.5
TCF				eSn	Sn	15 08 04.3	-4.4
	comp=Z,4.3nm,0.4s						
ZAGS	Zajecar	7.26	107	ePn	Pn	15 06 48.1	+0.7
BARS	Barje	7.45	115	ePn	Pn	15 06 43.8	-6.3
BARS	Barje	7.45	115	ePn	Pn	15 06 50.8	+0.7
GRR	Gorron	9.38	287	eP	Pn	15 07 20.8	+4.4

KRNET ***08*** *15:05:49.0±0.1, 38.°64N×73.°21E, mb3.6*
SOME ***08*** *15:05:57.0, 38.°83N×73.°00E, h0km*
ISC 08 15:05:51.1±2.2**, 38.°7N**±0.°1×**73.°14E**±0.°07**, h10km, n8,**
σ**1.s31**/16**, 6C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.32	308	⇑eP	Pn	15 06 14.9	-1.0
	baz=8.0						
DRK				⇑eS	Sg	15 06 34.6	+1.0
	baz=8.0						
OHH	Osh	1.87	352	⇑eP	Pb	15 06 24.5	-0.9
	baz=50						
OHH				⇑eS	Sg	15 06 50.8	-0.4
	baz=50						
GAR	Garm	2.23	279	⇓iP	Pb	15 06 30.3	-1.3
	baz=80						
GAR				⇓eS	Sb	15 07 00.1	+0.8
	baz=80						
BTK	Batken	2.27	308	⇓iP	Pb	15 06 30.9	-1.4
	baz=8.0						
BTK				⇓eS	Sb	15 07 01.0	+0.6
	baz=8.0						
TRKS	Terek-Say	3.24	332	⇑eP	Pn	15 06 43.2	+1.0
	baz=32						
TRKS				⇑iS	Sn	15 07 22.7	+1.8
	baz=32						
MRKS	Merke	4.07	1	eP	Pg	15 07 09.4	+0.3
	20nm,0.6s						
MRKS				eS	Sg	15 07 59.2	-2.5
	23nm,0.5s						
IUG	Iuzhnay	4.20	327	eP	Pg	15 07 12.3	+0.7
	910nm,0.6s						
IUG				eS	Sg	15 08 04.7	-1.4
	60nm,0.7s						
KST	Kastek	4.86	25	eP	Pg	15 07 25.4	+1.2
	11nm,0.5s						
KST				eS	Sg	15 08 26.6	-0.6
	11nm,0.4s						

KRNET ***08*** *15:07:46.7±0.1, 39.°70N×73.°88E, h11km, mb3.6*
SOME ***08*** *15:07:47.7, 39.°93N×74.°13E, h0km*
NNC ***08*** *15:07:49.4±1.6, 39.°88N×74.°09E, h0km, mb4.4, mpv4.0,*
Error ellipse: s-maj=11.6km s-min=6.8km az=168.0
ISC 08 15:07:43.2±1.2**, 39.°68N**±0.°06×**74.°15E**±0.°03**, h10km, n27,**
σ**1.s80**/45**, 13C-28D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.60	304	⇓eP	Pb	15 07 55.4	-0.5
	baz=18						
SFK				⇓eS	Sg	15 08 01.6	-1.2
	baz=18						
SALK	Salom-Alik	1.22	348	⇑eP	Pn	15 08 09.3	+2.8
	baz=58						
SALK				⇑eS	Sn	15 08 25.9	+2.7
	baz=58						
OHH	Osh	1.34	309	⇓iP	Pg	15 08 09.2	+0.2
	baz=15						
OHH				⇓iS	Sg	15 08 25.5	-0.9
	baz=15						
DRK	Karamyk	1.83	264	⇓iP	Pb	15 08 17.2	+0.3
	baz=63						
DRK				⇓iS	Sb	15 08 39.6	-0.4
	baz=63						
AML	Almayashu	2.47	352	⇑iP	Pg	15 08 30.1	-0.5
	baz=57						
AML				⇑iS	Sg	15 09 01.7	-0.9
	baz=57						
UCH	Uchtor	2.56	6	⇓eP	Pg	15 08 31.9	-0.4
	baz=11						
UCH				⇓iS	Sg	15 09 05.0	-0.4
	baz=11						
BTK	Batken	2.59	279	⇓eP	Pb	15 08 29.1	-0.7
	baz=80						
BTK				⇓iS	Sb	15 09 00.1	-1.7
	baz=80						
TRKS	Terek-Say	2.94	310	⇑eP	Pb	15 08 33.8	-2.0
	baz=11						
TRKS				⇑iS	Sb	15 09 08.0	-3.9
	baz=11						
AAK	Ala-Archa	2.96	5	⇓Pg	Pg	15 08 39.6	-0.4
	16nm,0.5s						
AAK				⇑Lg	Lg	15 09 16.8	
	86nm,0.5s						
AAK	Ala-Archa	2.96	5	⇓eP	Pg	15 08 37.4	-2.6
	baz=9.0						
AAK				⇓iS	Sg	15 09 14.3	-4.1
	baz=9.0						
ULHL	Ulahol	3.01	31	⇓eP	Pg	15 08 39.2	-1.7
	baz=34						
ULHL				⇓eS	Sg	15 09 17.7	-2.2
	baz=34						
GAR	Garm	3.05	258	⇓eP	Pb	15 08 35.6	-2.0
	baz=57						
GAR				⇓iS	Sn	15 09 11.3	+3.1
	baz=57						
MNAS	Manas	3.07	337	⇓iP	Pb	15 08 37.4	-0.5
	baz=40						
MNAS				⇓iS	Sb	15 09 14.4	-1.1
	baz=40						
BOOM	Boomskoye usch	3.11	25	⇑eP	Pg	15 08 40.5	-2.4
	baz=29						
BOOM				⇑iS	Sg	15 09 19.7	-3.5
	baz=29						
MRKS	Merke	3.14	347	eP	Pg	15 08 43.0	-0.4
	30nm,0.4s						
MRKS				eS	Sg	15 09 23.6	-0.4
	161nm,0.6s						
MRKS	Merke	3.14	347	Pg	Pg	15 08 43.0	-0.4
	30nm,0.4s						
MRKS				Lg	Lg	15 09 23.6	
	161nm,0.6s						
FRU1	Bishkek	3.15	6	⇑iP	Pb	15 08 40.2	+0.9
	baz=10.0						
FRU1				⇑iS	Sb	15 09 19.2	+1.5
	baz=10.0						
KDJ	Kajisay	3.35	42	⇓iP	Pb	15 08 44.6	+1.7
	baz=45						
KDJ				⇓iS	Sg	15 09 26.8	-4.1
	baz=45						
TKM2	Tokmak 2	3.41	18	⇓Pg	Pg	15 08 48.1	-0.6
	14nm,0.8s						
TKM2				⇓Lg	Lg	15 09 34.2	
	75nm,0.6s						
KST	Kastek	3.62	22	eP	Pg	15 08 53.3	+0.6
	15nm,0.4s						
KST				eS	Sg	15 09 41.2	+1.6
	142nm,0.7s						
KST	Kastek	3.62	22	Pg	Pg	15 08 53.3	+0.6
	15nm,0.4s						
KST				Lg	Lg	15 09 41.2	
	142nm,0.7s						
IUG	Iuzhnay	3.98	310	eP	Pg	15 08 58.9	-0.5
	596nm,0.6s						
IUG				eS	Sg	15 09 51.2	+0.4
	82nm,0.5s						
IUG	Iuzhnay	3.98	310	Pg	Pg	15 08 58.9	-0.5
	596nm,0.6s						
IUG				Lg	Lg	15 09 51.2	
	82nm,0.5s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANVS	Anan'yevo	4.08	39	⇓*i*P	Pb	15 08 54.5	-0.7
	baz=42						
ANVS				⇓*i*S	Sb	15 09 43.9	-0.7
	baz=42						
MDOK	Medeo	4.10	31	⇓Pg	Pg	15 09 02.1	+0.3
	10nm,0.5s						
MDOK				⇑Lg	Lg	15 09 55.9	
	62nm,0.7s						
KK02	Karatay Array	4.38	322	⇓Lg	Lg	15 10 01.3	
	10nm,0.4s,baz=137,slow=27						
PDGK	Podgornoye	5.42	46	⇑Pg	Pg	15 09 26.4	-0.5
	10nm,0.8s						
PDGK				⇓Lg	Lg	15 10 37.2	
	44nm,1.2s						

*IDC **08** 15:13:33.7±2.6, 13°.27N×90°.38W, h0^{km}, mb3.5/2, mb1 4.2/3, mb1mx3.6/34, mbtmp3.8/3, ML4.2/1, Error ellipse: s-maj=59.8km s-min=19.6km az=94.0*

*UCR **08** 15:13:41.6±1.2, 13°.54N×90°.61W, h5^{km}±13^{km}, ML4.4, MW3.3*

*NEIC **08** 15:13:42.8±1.3, 13°.67N±0°.06×90°.73W±0°.06, h31^{km}±9^{km}, mb4.0/7, Md4.5(SNET), Error ellipse: s-maj=11.8km s-min=1.9km az=222.0*

*GCG **08** 15:13:42.7±0.4, 13°.60N×90°.81W, h27^{km}±2^{km}, MD3.9*

ISC 08 15:13:41.8±1.4, **13°.48N**±0°.08×**90°.78W**±0°.05, **h38**^{km}±2^{km}, **n53,** σ1^{s}.**29**/65, **mb4.1**/6, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.92	10	*e*P	Pn	15 13 58.4	-0.2
FUG	Fuego 3	0.97	356	*e*P	Pn	15 13 58.9	-0.2
CEVE	Cerro Verde	1.18	73	*e*P	Pn	15 14 01.0	-1.0
CEVE				*e*S	Sn	15 14 16.2	-0.7
CEVE				IAML		15 14 17.1	
	comp=Z,19µm,0.3s						
CEVE	Cerro Verde	1.18	73	*e*P	Pn	15 14 01.0	-1.0
CEVE				*e*S	Sn	15 14 16.2	-0.7
CEVE				IAML		15 14 17.1	
	comp=Z,19µm,0.3s						
NBG	Las Nubes	1.18	21	*e*P	Pn	15 14 02.9	+0.8
NBG				*e*S	Sn	15 14 18.5	+1.5
JAYA	Jayaque - finc	1.31	82	*e*P	Pn	15 14 02.8	-0.9
JAYA				*e*S	Sn	15 14 18.5	-1.5
JAYA				IAML		15 14 19.5	
	comp=Z,13µm,0.3s						
JAYA	Jayaque - finc	1.31	82	*e*P	Pn	15 14 02.8	-0.9
JAYA				*e*S	Sn	15 14 18.5	-1.5
JAYA				IAML		15 14 19.5	
	comp=Z,13µm,0.3s						
RTAL	Retalhuleu	1.37	320	Pn	Pn	15 14 03.4	-1.0
RTAL				Sn	Sn	15 14 19.9	-1.4
CEDA	San Andres	1.39	76	*e*P	Pn	15 14 03.3	-1.3
CEDA				*e*S	Sn	15 14 20.7	-1.0
CEDA	San Andres	1.39	76	*e*P	Pn	15 14 03.3	-1.3
CEDA				*e*S	Sn	15 14 20.7	-1.0
STG3	Santiaguito 3,	1.45	328	*e*P	Pn	15 14 05.9	+0.3
BOQS	Boqueron	1.48	80	*e*P	Pn	15 14 05.8	-0.4
BOQS	Boqueron	1.48	80	*e*P	Pn	15 14 05.8	-0.4
SNET	Serv Nac Est T	1.52	82	Pn	Pn	15 14 05.6	-0.9
APG	El Apazote	1.55	11	Pg	Pn	15 14 06.9	-0.2
	comp=Z,136nm,0.3s,baz=276,slow=6.4,SNR=1919						
APG				Lg	Lg	15 14 26.9	
	comp=Z,56nm,0.3s,baz=192,slow=15,SNR=7.2						
MTO3	Montecristo	1.66	56	Pn	Pn	15 14 08.0	-0.6
ESQI	Esquipulas	1.76	52	*e*P	Pn	15 14 09.7	-0.2
ESQI				*e*S	Sn	15 14 33.4	+2.2
ESQI	Esquipulas	1.76	52	Pn	Pn	15 14 09.7	-0.2
COEG	Centro de Oper	1.85	85	*e*P	Pn	15 14 11.0	-0.2
COEG				*e*S	Sn	15 14 34.2	+0.8
COEG				IAML		15 14 38.6	
	comp=Z,2µm,0.3s						
COEG	Centro de Oper	1.85	85	*e*P	Pn	15 14 11.0	-0.2
COEG				*e*S	Sn	15 14 34.2	+0.8
COEG				IAML		15 14 38.6	
	comp=Z,2µm,0.3s						
HUEH	Huehuetenango	1.96	339	Pn	Pn	15 14 12.1	-0.6
THIG		2.02	315		Pn	15 14 13.6	+0.2
CCIG	Comitan	3.08	335	Pn	Pn	15 14 27.6	-0.5
PCIG		3.24	313		Pn	15 14 29.9	-0.2
TGUH	Tegucigalpa,Un	3.46	80		Pn	15 14 33.1	-0.1
PETF	Flores	3.53	14	Pn	Pn	15 14 32.3	-1.8
CRIN	San Cristobal	3.72	102	Pn	Pn	15 14 37.2	+0.5
TGIG		3.98	326		Pn	15 14 42.7	+2.2
MATN	Matagalpa	4.76	96	Pn	Pn	15 14 48.4	-2.8
BOAB	BOACO BROADBAN	5.09	101		Pn	15 14 54.2	-1.4
CMIG	Matias Romero	5.35	313	Pn	Pn	15 14 59.7	+0.6
	comp=Z,6.4nm,0.3s,baz=148,slow=8.6,SNR=42						
CMIG				Sn	Sn	15 15 57.4	-2.0
	comp=Z,3.1nm,0.3s,baz=144,slow=7.6,SNR=1.6						
HZTE	Horizontes, Gu	5.77	118	Pn	Pn	15 15 06.6	+1.7
SAJU	San Juanillo,	6.01	124	*e*P	Pn	15 15 09.6	+1.4
DUNO	Dulce Nombre,	6.18	123	Pn	Pn	15 15 12.2	+1.6
INDI	Punta indio, G	6.29	124	*e*P	Pn	15 15 13.8	+1.7
JTS	Las Juntas de	6.53	118	Pn	Pn	15 15 16.8	+1.4
LAFE	Finca La Fe, P	6.81	122	*e*P	Pn	15 15 20.3	+1.1
JACO	JACO, Garabito	7.09	122	*e*P	Pn	15 15 25.9	+2.7
JACO	JACO, Garabito	7.09	122	Pn	Pn	15 15 26.0	+2.9
RIMA	Rio Macho	7.71	118	*e*P	Pn	15 15 35.0	+3.2
RIMA	Rio Macho	7.71	118		Pn	15 15 33.3	+1.5
TXAR	Lajitas Array	19.79	325	P	P	15 18 10.1	+1.0
	comp=Z,0.7nm,0.7s,baz=146,slow=12,SNR=9.0						
TXAR	Lajitas Array	19.79	325	P	P	15 18 08.7	-0.4
TX31	Lajitas Ar. Si	19.79	325	P	P	15 18 08.8	-0.4
Y49A	Blount Mountai	20.67	10	P	P	15 18 18.5	-0.1
X48A	Hartselle	21.15	9	P	P	15 18 23.8	+0.1
X48A				IAmb	IAmb	15 18 47.8	
	comp=Z,7.1nm,1.1s						
MNTX	Cornudas Mount	22.55	326	P	P	15 18 39.0	+0.3
MNTX				IAmb	IAmb	15 18 40.3	
	comp=Z,3.1nm,0.7s						
S39A	Bolivar	24.22	355	P	P	15 18 53.2	-1.8
S39A				IAmb	IAmb	15 18 54.0	
	comp=Z,4.3nm,0.7s						
121A	Cookes Peak, D	24.52	323	P	P	15 18 59.0	+0.9
121A				IAmb	IAmb	15 19 00.3	
	comp=Z,4.0nm,0.8s						
NVAR	Mina Array Bea	34.82	321	P	P	15 20 30.8	+1.3
	comp=Z,1.6nm,0.7s,baz=132,slow=8.8,SNR=6.6						
MCMT	McKenzie Canyo	36.46	333	P	P	15 20 43.6	+0.1
PLID	Pearl Lake	38.10	331	P	P	15 20 56.7	-0.7
PLID				IAmb	IAmb	15 21 20.0	
	comp=Z,4.5nm,1.5s						
CMAR	Chiang Mai Arr	146.85	343	PKPbc	PKPdf	15 33 18.2	-1.0
	comp=Z,1.3nm,0.6s,baz=345,slow=3.4,SNR=11						

*IDC **08** 15:26:46.5±1.1, 8°.55S×118°.22E, h0^{km}, mb4.0/5, mb1 4.2/10, mb1mx3.8/42, mbtmp4.1/10, ML4.4/4, MS3.1/2, Ms1 3.1/2, ms1mx2.6/35, Error ellipse: s-maj=35.1km s-min=16.9km az=62.0*

*DJA **08** 15:26:52.0±0.5, 8°S±3°×11°9E±°, h17^{km}±5^{km}, M4.3/20, mb4.4/7, mB4.8/3, MLv4.3/20, Mw(mB)4.0/3*

*NEIC **08** 15:26:53.7±1.9, 8°.32S±0°.08×118°.53E±0°.05, h55^{km}±7^{km}, mb4.0/9, Error ellipse: s-maj=11.4km s-min=6.8km az=195.0*

ISC 08 15:26:52.9±0.5, **8°.41S**±0°.04×**118°.56E**±0°.04, **h50**^{km}, **n56,** σ**1**^{s}.**59**/59, **mb4.0**/7, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.88	242	P	Pn	15 27 08.9	-0.1
PLAI				S	Sn	15 27 20.7	-0.1
WBSI	Waikabubak, Su	1.48	146	P	Pn	15 27 16.4	-0.8
TWSI	Taliwang, Sumb	1.69	259	P	Pn	15 27 21.6	+1.6
BASI	Baing, Sumba	2.68	132	P	Pn	15 27 34.2	+0.5
BSSI	Bau Bau, Buton	2.96	41	P	Pn	15 27 37.2	-0.2
EDFI	Ende, Flores	3.12	96	P	Pn	15 27 40.0	+0.3
DNP	Denpasar	3.32	265	P	Pn	15 27 57.5	+15
SRBI	Singaraja	3.33	275	P	Pn	15 27 43.1	+0.6
IGBI	Denpasar	3.40	263	P	Pn	15 27 44.9	+1.4
BKSI	Bulukumba	3.44	27	P	Pn	15 27 44.0	0.0
KAPI	Kappang	3.58	19	Pn	Pn	15 27 46.2	+0.2
	33nm,0.3s,baz=228,slow=10,SNR=66						
KAPI				Sn	Sn	15 28 24.9	-2.0
	103nm,0.3s,baz=117,slow=22,SNR=35						
KAPI				LR	LR	15 29 31.4	
	comp=Z,242nm,18.6s,baz=179,slow=43						
KAPI	Kappang	3.58	19	Pn	Pn	15 27 46.3	+0.4
MMRI	Maumere	3.65	94	P	Pn	15 27 46.7	-0.2
MMRI	Maumere	3.65	94	Pn	Pn	15 27 46.7	-0.2
BNSI	Bone	4.27	21	P	Pn	15 27 57.1	+1.6
JAGI	Jajag, Banyuwa	4.36	269	P	Pn	15 27 57.2	+0.5
JAGI	Jajag, Banyuwa	4.36	269	Pn	Pn	15 27 56.9	+0.3
SPSI	Sidrap Palu	4.58	15	P	Pn	15 28 00.1	+0.4
GMJI	Gumukmas	5.06	271	P	Pn	15 28 10.1	+3.8
	0.2nm37nm,1.1s						
BATI	Baumata	5.35	110	Pn	Pn	15 28 12.4	+2.2
	24nm,0.3s,baz=285,slow=19,SNR=18						
BATI				Sn	Sn	15 29 13.8	+3.2
	baz=189,slow=19,SNR=1.3						
BATI	Baumata	5.35	110	P	Pn	15 28 12.3	+2.0
	0.2nm664nm57nm,0.6s						
TTSI	Tana Toraja	5.48	13	P	Pn	15 28 13.8	+1.8
	0.6nm918nm38nm,0.4s						
KBKI	Kotabaru	5.61	335	P	Pn	15 28 15.1	+1.3
	0.2nm699nm14nm,0.6s						
SOEI	Soe	5.79	104	P	Pn	15 28 17.8	+1.3
	0.3nm74nm,0.9s						
SOEI	Soe	5.79	104	Pn	Pn	15 28 17.9	+1.4
LEM	Lembang	10.96	278	LR	LR	15 33 57.6	
	comp=Z,125nm,20.6s,baz=68,slow=40						
FITZ	Fitzroy Crossi	11.84	145	Pn	Pn	15 29 38.2	-1.0
	baz=7.5,slow=9.7						
FITZ				Sn	Sn	15 31 41.7	-8.2
	0.7nm,0.3s,baz=245,slow=19,SNR=2.0						
KNRA	Kununurra	12.32	127		Pn	15 29 44.7	-1.0
SAUI	Saumlaki	12.62	89	Pn	Pn	15 29 51.3	+1.5
MTN	Manton Dam	13.12	111	Pn	Pn	15 29 54.4	-2.3
PSA00	Pilbara Seismi	13.15	175	Pn	Pn	15 29 55.8	-1.3
FAKI	Fak Fak	14.67	69	P	Pn	15 30 19.3	+1.7
SIJI	Sorong	14.71	60	Pn	P	15 30 22.8	-0.4
	0.7nm,0.3s,baz=304,slow=12,SNR=4.7						
GIRL	Giralia	14.75	196	Pn	Pn	15 30 18.8	+0.2
WB0	Warramunga Arr	19.04	128	P	P	15 31 10.7	-0.4
WB0				IAmb	IAmb	15 31 12.8	
	comp=Z,8.7nm,1.2s						
WRA	Warramunga Arr	19.10	129	P	P	15 31 11.6	-0.1
	comp=Z,1.0nm,0.3s,baz=290,slow=11,SNR=8.4						
WRA				S	S	15 34 39.4	-6.5
	comp=Z,0.1nm,0.3s,baz=304,slow=22,SNR=3.5						
WRA	Warramunga Arr	19.10	129	P	P	15 31 11.8	0.0
WRAB	Tennant Creek	19.10	129	P	P	15 31 12.0	+0.3
WRAB				IAmb	IAmb	15 31 15.6	
	comp=Z,5.6nm,0.5s						
WB2	Warramunga Arr	19.11	129	P	P	15 31 11.7	-0.1
WB2				IAmb	IAmb	15 31 35.6	
	comp=Z,4.7nm,0.8s						
WR0	Warramunga Arr	19.26	128		P	15 31 13.7	+0.2
WR0				IAmb	IAmb	15 31 17.2	
	comp=Z,7.6nm,0.5s						
AS31	Alice Springs	21.12	138	P	P	15 31 34.3	+0.6
AS31				IAmb	IAmb	15 31 41.4	
	comp=Z,3.1nm,0.6s						
ASAR	Alice Springs	21.12	138	P	P	15 31 34.4	+0.7
	comp=Z,4.4nm,0.5s,baz=315,slow=10.0,SNR=122						
ASAR				S	S	15 35 26.7	+0.5
	comp=Z,0.7nm,0.6s,baz=313,slow=22,SNR=5.1						
ASAR	Alice Springs	21.12	138	P	P	15 31 34.8	+1.1
COEN	Coen	24.76	105	P	P	15 32 10.6	+0.4
BBOO	Buckleboo	29.19	149	P	P	15 32 49.7	-0.1
STKA	Stephens Creek	31.68	141	P	P	15 33 12.2	+0.3
	comp=Z,1.5nm,0.5s,baz=323,slow=8.8,SNR=6.1						
STKA	Stephens Creek	31.68	141	P	P	15 33 12.0	+0.2
CMAR	Chiang Mai Arr	32.98	324	P	P	15 33 18.9	-4.4
KSRS	Korea Array	46.46	10	P	P	15 35 16.8	+1.8
	comp=Z,2.9nm,0.9s,baz=195,slow=8.8,SNR=9.9						
HHC	Hu-ho-hao-te	49.44	353	*e*P	P	15 35 38.9	+0.8
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,4.9s						
SONM	Songino Array	57.03	350	P	P	15 36 34.6	+0.8
	comp=Z,0.5nm,0.5s,baz=160,slow=7.7,SNR=4.0						
WMQ	Urumqi	59.04	334	*e*P	P	15 36 46.7	-1.2
MKAR	Makanchi Array	63.74	333	P	P	15 37 19.6	+0.1
	comp=Z,0.7nm,0.7s,baz=157,slow=6.7,SNR=6.6						
TORD	Torodi Ar. Bea	117.93	280	PKP	PKPdf	15 45 35.1	0.0
	comp=Z,0.3nm,0.4s,baz=63,slow=1.3,SNR=2.1						
CPUP	Villa Florida	145.24	186	PKPbc	PKPdf	15 46 26.9	+1.0
	comp=Z,2.9nm,0.8s,baz=164,slow=2.7,SNR=4.3						
CPUP	Villa Florida	145.24	186		PKPbc	15 46 26.1	+0.5

*NEIC **08** 15:36:18.5±1.5, 81°.0N±0°.2×1°.2W±0°.5, h10^{km}±2^{km}, mb4.3/5, Error ellipse: s-maj=36.4km s-min=5.2km az=19.0*

*IDC **08** 15:36:20.6±1.9, 80°.55N×2°.31W, h0^{km}, mb3.7/4, mb1 4.0/6, mb1mx3.5/48, mbtmp3.9/6, ML4.6/2, MS3.4/1, Ms1 3.4/1, ms1mx2.6/45, Error ellipse: s-maj=71.9km s-min=21.0km az=32.0*

*BER **08** 15:36:21.2±2.9, 80°.59N×1°.78W, h10^{km}, ML2.8, ML2.6(DNK), Confirmed Earthquake*

*IEPN **08** 15:36:23.0, 80°.42N×1°.47W, h10^{km}*

*DNK **08** 15:36:27.9±2.7, 80°.55N×3°.89W, h36^{km}±51^{km}, ML2.6*

ISC 08 15:36:18.8±0.7, **80°.50N**±0°.06×**2°.08W**±0°.05, **h12**^{km}, **n55,** σ**2**^{s}.**44**/74, **mb3.9**/3, **3C, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	Nord	2.53	303	Pn	Pn	15 37 00.4	+0.9
NOR				Sn	Sn	15 37 28.1	-2.1
NOR	Nord	2.53	303	*i* P	Pn	15 37 00.3	+0.8
NOR				IAML		15 37 29.6	
	comp=Z,26nm,0.3s						
NOR	Nord	2.53	303	*i* P	Pn	15 37 00.3	+0.8
NOR				IAML		15 37 29.6	
	comp=Z,26nm,0.3s						
KBS	Kingsbay	2.97	115	Pn	Pn	15 37 06.9	+1.3
KBS				Sn	Sn	15 37 38.0	-3.0
KBS	Kingsbay	2.97	115	*i* P	Pn	15 37 06.6	+1.1
KBS	Kingsbay	2.97	115	*e*P	Pn	15 37 06.7	+1.1
KBS				*e*S	Sn	15 37 37.9	-3.0
KBS				IAML		15 37 38.7	
	comp=Z,64nm,0.2s						
KBS	Kingsbay	2.97	115	⇑*i*P	Pn	15 37 06.5	+1.1
KBS				*e*S	Sn	15 37 37.4	-3.5
KBS	Kingsbay	2.97	115	Pn	Pn	15 37 06.5	+1.1
BRBB	Barentsburg B	3.87	120	Pn	Pn	15 37 20.3	+2.4
BRBB				Sn	Sn	15 38 02.5	-0.6
BRBB	Barentsburg B	3.87	120	*e*P	Pn	15 37 20.3	+2.4
BRBB				*e*S	Sn	15 38 00.8	-2.4
BRBA	Barentsburg A	3.89	121	Pn	Pn	15 37 20.8	+2.5
BRBA				Sn	Sn	15 38 02.0	-1.8
BRBA	Barentsburg A	3.89	121	*e*P	Pn	15 37 20.8	+2.5
BRBA				*e*S	Sn	15 38 01.8	-2.0
BRBA				IAML		15 38 06.1	
	comp=Z,51nm,0.2s						
SPA0	Spitsbergen Ar	4.13	115	Pn	Pn	15 37 23.1	+1.6
	baz=323,slow=7.9						
SPA0				Sn	Sn	15 38 07.0	-2.6
	baz=327,slow=18						
SPA0	Spitsbergen Ar	4.13	115	Pn	Pn	15 37 23.1	+1.6
	baz=323,slow=7.9						
SPA0				Sn	Sn	15 38 07.0	-2.6
	baz=327,slow=18						
SPA0	Spitsbergen Ar	4.13	115	⇑*i*P	Pn	15 37 23.1	+1.6
SPA0				*i* S	Sn	15 38 06.8	-2.8
SPITS	Spitsbergen Ar	4.13	115	Pn	Pn	15 37 23.4	+1.9
	baz=322,slow=11,SNR=1672						
SPITS				Sn	Sn	15 38 06.6	-2.9
	baz=334,slow=22,SNR=0.8						
SPB2	Spitsbergen Ar	4.13	115		Pn	15 37 23.0	+1.5
HSPB	Hornsund (broa	4.90	127	Pn	Pn	15 37 34.2	+2.2
HSPB				Sn	Sn	15 38 28.4	-0.1
HSPB	Hornsund (broa	4.90	127	⇑*e*P	Pn	15 37 33.8	+1.8
HSPB				*e*S	Sn	15 38 25.9	-2.5
HSPB				IAML		15 38 30.0	
	comp=Z,22nm,0.3s						
HSPB	Hornsund (broa	4.90	127	*e*P	Pn	15 37 34.1	+2.1
HSPB				*e*S	Sn	15 38 27.7	-0.8
DAG	Danmarks Havn	4.95	230	*i* P	Pn	15 37 34.0	+1.2
DAG				IAML		15 38 31.0	
	comp=Z,69nm,0.3s						
DAG	Danmarks Havn	4.95	230	*e*P	Pn	15 37 34.7	+2.0
DAG				*e*S	Sn	15 38 28.2	-1.6
DAG				IAML		15 38 31.0	
	comp=Z,69nm,0.3s						
HOPEN	Hopen	6.65	113	Pn	Pn	15 37 57.0	+0.9
HOPEN				Sn	Sn	15 39 07.2	-4.4
HOPEN	Hopen	6.65	113	*e*P	Pn	15 37 56.5	+0.5
HOPEN				*e*S	Sn	15 39 07.2	-4.4
HOPEN				IAML		15 39 12.3	
	comp=Z,31nm,0.5s						
HOPEN	Hopen	6.65	113	*e*P	Pn	15 37 56.4	+0.3
HOPEN				*e*S	Sn	15 39 07.0	-4.6
DBG	Daneborg	7.32	222	Pn	Pn	15 38 07.6	+2.3
DBG				Sn	Sn	15 39 22.9	-5.3
DBG	Daneborg	7.32	222	*i* P	Pn	15 38 07.4	+2.2
DBG				*e*Sg	Sn	15 39 23.8	-4.3
DBG	Daneborg	7.32	222	*i* P	Pn	15 38 07.4	+2.2
DBG				*e*S	Sn	15 39 23.8	-4.3
ZFI	Zemlya Franca-	7.89	63	*e*P	Pn	15 38 13.1	0.0
ZFI				*e*S	Sn	15 39 34.5	-7.6
	comp=Z,33nm,2.7s						
NEEM	North Greenlan	9.57	277	*i* P	Pn	15 38 35.9	-0.5
NEEM	North Greenlan	9.57	277	*i* P	Pn	15 38 35.9	-0.5
SUMG	Summit	11.31	246	*i* P	Pn	15 39 00.0	-0.2
SUMG	Summit	11.31	246	*i* P	Pn	15 39 00.0	-0.2
SUMG	Summit	11.31	246	Pn	Pn	15 39 00.6	+0.4
KEV	Kevo	12.85	130	Pn	Pn	15 39 24.5	+3.7
ARA0	ARCESS Array S	12.87	133	Pn	Pn	15 39 24.1	+3.0
	baz=347,slow=10						
ARA0	ARCESS Array S	12.87	133	Pn	Pn	15 39 24.1	+3.0
	baz=347,slow=10						
ARCES	ARCESS Array B	12.87	133	Pn	Pn	15 39 24.2	+3.1
	baz=339,slow=12,SNR=27						
ARCES				Sn	Sn	15 41 40.0	-4.0
	baz=354,slow=27,SNR=2.2						
TULEG	Thule	13.09	288	*i* P	Pn	15 39 22.0	-2.0
TULEG	Thule	13.09	288	*i* P	Pn	15 39 22.0	-2.0
TULEG	Thule	13.09	288	Pn	Pn	15 39 23.1	-0.9
EUNU	Eureka	13.11	310	Pn	Pn	15 39 22.8	-1.6
UPNV	Upernavik	13.97	267	*e*P	Pn	15 39 33.1	-3.0
UPNV	Upernavik	13.97	267	*e*P	Pn	15 39 33.1	-3.0
LVZ	Lovozero	15.60	123	Pn	Pn	15 39 59.1	+1.0
SFJD	Kangerlussuaq	18.20	251	P	P	15 40 34.1	+3.2
SFJD				IAmb	IAmb	15 40 47.6	
	comp=Z,28nm,1.1s						
RES	Resolute Bay	18.47	303	P	P	15 40 32.3	-1.6
	comp=Z,0.4nm,0.3s,baz=24,slow=12,SNR=8.2						
RES				S	Sn	15 43 45.0	-15
	comp=Z,0.1nm,0.3s,baz=62,slow=13,SNR=1.7						
RES	Resolute Bay	18.47	303	P	P	15 40 31.9	-2.0
FINES	FINESS Array B	20.74	140	P	Pn	15 41 04.5	+3.3
	comp=Z,2.7nm,0.9s,baz=338,slow=10,SNR=2.3						
FINES				LR	LR	15 50 13.3	
	comp=Z,100nm,18.8s,baz=296,slow=40						
HFS	Hagfors	20.98	158	P	Pn	15 41 05.6	+1.7
	comp=Z,4.5nm,0.9s,baz=19,slow=9.2,SNR=3.5						
SCHQ	Schefferville	32.30	258	P	P	15 42 52.0	+5.2
SCHQ				IAmb	IAmb	15 43 10.2	
	comp=Z,13nm,1.3s						
TXAR	Lajitas Array	63.16	287	P	P	15 46 49.8	+3.7
	comp=Z,0.5nm,0.6s,baz=31,slow=5.0,SNR=7.6						
TXAR	Lajitas Array	63.16	287	P	P	15 46 46.0	-0.2
TORD	Torodi Ar. Bea	67.40	176	P	P	15 47 17.1	+3.5
	comp=Z,0.8nm,1.0s,baz=356,slow=6.9,SNR=3.6						
TORD	Torodi Ar. Bea	67.40	176	IAmb	IAmb	15 47 42.8	
	comp=Z,1.1nm,1.2s						

*SOME **08** 15:36:13.1, 38°.88N×72°.85E, h0^{km}*

*NNC **08** 15:36:19.9±3.2, 39°.05N×73°.03E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=24.4km s-min=14.0km az=176.0*

*KRNET **08** 15:36:21.7±0.1, 39°.16N×73°.16E, h19^{km}, mb3.2*

ISC 08 15:36:23.7±1.6, **39°.24N**±0°.08×**72°.95E**±0°.04, **h10**^{km}, **n32,** σ**1**^{s}.**94**/48, **12C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.89	29	⇑*e*P	Pg	15 36 38.9	-1.9
	baz=17						
SFK				⇑*e*S	Sg	15 36 51.4	-1.0
	baz=17						
DRK	Karamyk	0.92	286	⇑*i*P	Pn	15 36 42.2	-0.8
	baz=88						
DRK				⇑*i*S	Sn	15 36 57.6	+1.1
	baz=88						
OHH	Osh	1.29	354	⇑*i*P	Pb	15 36 47.4	-0.7
	baz=48						
OHH				⇑*i*S	Sg	15 37 06.4	+1.1
	baz=48						
SALK	Salom-Alik	1.77	22	⇑*e*P	Pb	15 36 54.8	-1.6
	baz=16						
SALK				⇑*e*S	Sb	15 37 18.8	+0.1
	baz=16						
BTK	Batken	1.84	297	⇓*i*P	Pg	15 36 58.0	-0.9
	baz=97						
BTK				⇓*e*S	Sg	15 37 24.6	+1.9
	baz=97						
TRKS	Terek-Say	2.67	329	⇑*i*P	Pn	15 37 08.3	+1.3
	baz=27						
TRKS				⇑*i*S	Sn	15 37 42.4	+2.9
	baz=27						
MRKS	Merke	3.51	3	*e*P	Pb	15 37 24.6	-1.4
	19nm,0.3s						
MRKS				*e*S	Sg	15 38 16.2	-0.2
	10nm,0.3s						
MRKS	Merke	3.51	3	Pg	Pb	15 37 24.6	-1.4
	19nm,0.3s						
MRKS				Lg	Lg	15 38 16.2	
	10nm,0.3s						
AAK	Ala-Archa	3.59	19	⇓Pn	Pn	15 37 21.4	+1.8
AAK				⇓Lg	Lg	15 38 20.2	
	13nm,0.8s						
IUG	Iuzhnay	3.66	324	*e*P	Pb	15 37 24.7	-3.8
	463nm,0.5s						
IUG				*e*S	Sb	15 38 16.2	+3.3
	92nm,0.6s						
IUG	Iuzhnay	3.66	324	Pg	Pb	15 37 24.7	-3.8
	463nm,0.5s						
IUG				Lg	Lg	15 38 16.2	
	92nm,0.6s						
CHM	Chimkent	3.99	322	*e*P	Pb	15 37 30.6	-3.5
	5.9nm,0.4s						
CHM				*e*S	Sb	15 38 26.9	+4.4
	83nm,0.1s						
TKM2	Tokmak 2	4.19	28	⇓Pg	Pg	15 37 41.5	-2.4
	4.9nm,0.5s						
TKM2				⇑Lg	Lg	15 38 37.3	
	9.3nm,0.8s						
KK02	Karatay Array	4.28	335	⇓Pn	Pn	15 37 31.0	+2.1
	1.5nm,0.3s						
KK02				⇓Sn	Sb	15 38 26.0	-4.6
	26nm,0.8s						
SGDS	Sogindy	4.40	16	Pg	Pb	15 37 41.0	0.0
	9.8nm,0.6s						
SGDS				Lg	Lg	15 38 44.4	
	5.6nm,0.6s						
DGS	Degeres	4.53	27	*e*P	Pb	15 37 42.7	-0.7
	14nm,0.3s						
DGS				*e*S	Sg	15 38 47.7	-1.5
	9.4nm,0.4s						
DGS	Degeres	4.53	27	Pg	Pb	15 37 42.7	-0.7
	14nm,0.3s						
DGS				Lg	Lg	15 38 47.7	
	9.4nm,0.4s						
MTBS	Maitube	4.69	33	*e*P	Pb	15 37 46.0	-0.1
	6.2nm,0.6s						
TNSS	Tian-Shan	4.85	37	*e*P	Pb	15 37 48.7	-0.3
	6.1nm,0.5s						
TNSS				*e*S	Sg	15 38 57.8	-1.7
	4.0nm,0.7s						
TNSS	Tian-Shan	4.85	37	Pg	Pb	15 37 48.7	-0.3
	6.1nm,0.5s						
TNSS				Lg	Lg	15 38 57.8	
	4.0nm,0.7s						
KRBS	Karabastau	4.90	24	*e*P	Pb	15 37 49.9	+0.2
	7.4nm,0.5s						
KRBS				*e*S	Sg	15 38 60.0	-1.1
	5.6nm,0.3s						
KRBS	Karabastau	4.90	24	Pg	Pb	15 37 49.9	+0.2
	7.4nm,0.5s						
KRBS				Lg	Lg	15 38 60.0	
	5.6nm,0.3s						
MDOK	Medeo	5.00	37	*e*P	Pb	15 37 52.0	+0.8
	4.4nm,0.4s						
MDOK				*e*S	Sg	15 39 03.6	-0.4
	6.9nm,0.6s						
MDOK	Medeo	5.00	37	Pg	Pb	15 37 53.4	+2.1
	4.7nm,0.6s						
MDOK				Lg	Lg	15 39 03.5	
	7.9nm,0.7s						
MDOK	Medeo	5.00	37	Pg	Pb	15 37 52.0	+0.8
	4.4nm,0.4s						
MDOK				Lg	Lg	15 39 03.6	
	6.9nm,0.6s						
KOTS	Kotyrbulak	5.08	37	*e*P	Pb	15 37 52.8	0.0
	10nm,0.7s						

KOTS	 10nm,0.5s			*e*S	**Sg**	**15 39 04.8**	**-2.0**
KOTS	**Kotyrbulak** 10nm,0.7s	**5.08**	**37**	Pg	**Pb**	**15 37 52.7**	**0.0**
KOTS	 10nm,0.5s			Lg	Lg	15 39 04.8	
KTBS	**Karatobe** 3.3nm,0.4s	**5.28**	**31**	*e*P	**Pb**	**15 37 56.8**	**+0.8**
KTBS	 8.2nm,0.3s			*e*S	**Sg**	**15 39 11.8**	**-1.2**
KTBS	**Karatobe** 3.3nm,0.4s	**5.28**	**31**	Pg	**Pb**	**15 37 56.8**	**+0.8**
KTBS	 8.2nm,0.3s			Lg	Lg	15 39 11.8	
SATY	**Saty** 2.9nm,0.4s	**5.62**	**45**	Pg	**Pb**	**15 38 03.5**	**+1.7**
SATY	 5.1nm,0.5s			Lg	Lg	15 39 23.3	
PDGK	**Podgornoye** 4.1nm,0.9s	**6.40**	**48**	⇓Pg	Pg	15 38 20.4	-5.9
PDGK	 10nm,1.4s			⇑Lg	Lg	15 39 47.7	
AB31	**Akbulak array** 0.4nm,0.6s,baz=127,slow=13,SNR=5.1	**13.66**	**321**	⇓Pn	**Pn**	**15 39 36.4**	**-0.9**
AB31	 1.0nm,0.6s,baz=158,slow=20,SNR=6.1			Sn	**Sn**	**15 42 12.3**	**+3.2**

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*SOME **08** 15:50:53.4, 38°.88N×72°.85E, h0^{km}*

*NNC **08** 15:50:54.8±2.5, 38°.99N×72°.72E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=18.1km s-min=10.4km az=171.0*

ISC 08 15:50:55.8±2.4**, 39°.1N**±0°.1×**72°.68E**±0°.05**, h10^{km}, n22, σ2^{s}90**/30**, 3C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay** 1μm,0.5s	**3.68**	**328**	*e*P	**Pb**	**15 52 02.5**	**+1.6**
IUG	 53nm,0.3s			*e*S	**Sg**	**15 52 51.7**	**-2.3**
IUG	**Iuzhnay** 1μm,0.5s	**3.68**	**328**	Pg	**Pb**	**15 52 02.5**	**+1.6**
IUG	 53nm,0.3s			Lg	Lg	15 52 51.7	
MRKS	**Merke** 7.6nm,0.4s	**3.70**	**6**	*e*P	**Pb**	**15 52 03.2**	**+1.9**
MRKS	 14nm,0.5s			*e*S	**Sg**	**15 52 52.6**	**-2.0**
MRKS	**Merke** 7.6nm,0.4s	**3.70**	**6**	Pg	**Pb**	**15 52 03.2**	**+1.9**
MRKS	 14nm,0.5s			Lg	Lg	15 52 52.6	
AAK	**Ala-Archa** 8.4nm,0.7s	**3.82**	**21**	⇑Pg	**Pb**	**15 52 03.8**	**+0.3**
AAK	 10nm,0.7s			⇓Lg	Lg	15 52 57.8	
KK02	**Karatay Array** 1.8nm,0.4s,baz=152,slow=11	**4.35**	**339**	⇑Pn	**Pn**	**15 52 03.6**	**+1.5**
KK02	 13nm,0.8s,baz=145,slow=23			⇓Sn	**Sn**	**15 52 58.7**	**+5.9**
TKM2	**Tokmak 2** 4.9nm,0.8s	**4.44**	**29**	⇓Pg	**Pb**	**15 52 15.1**	**+1.2**
TKM2	 4.6nm,0.6s			⇓Lg	Lg	15 53 17.0	
SGDS	**Sogindy** 3.6nm,0.5s	**4.62**	**18**	Pg	**Pg**	**15 52 21.9**	**-2.4**
SGDS	 3.7nm,0.5s			Lg	Lg	15 53 24.9	
KST	**Kastek** 5.8nm,0.6s	**4.69**	**31**	*e*P	**Pg**	**15 52 22.5**	**-3.0**
KST	 6.5nm,0.6s			*e*S	**Sg**	**15 53 26.1**	**-0.1**
KST	**Kastek** 5.8nm,0.6s	**4.69**	**31**	Pg	**Pg**	**15 52 22.5**	**-3.0**
KST	 6.5nm,0.6s			Lg	Lg	15 53 26.1	
DGS	**Degeres** 4.5nm,0.8s	**4.78**	**28**	*e*P	**Pg**	**15 52 24.0**	**-3.4**
DGS	 3.6nm,0.9s			*e*S	**Sg**	**15 53 28.6**	**-0.7**
DGS	**Degeres** 4.5nm,0.8s	**4.78**	**28**	Pg	**Pg**	**15 52 24.0**	**-3.4**
DGS	 3.6nm,0.9s			Lg	Lg	15 53 28.6	
MTBS	**Maitube** 5.5nm,0.6s	**4.95**	**34**	*e*P	**Pb**	**15 52 26.3**	**+3.7**
MTBS	 4.4nm,0.5s			*e*S	**Sg**	**15 53 32.5**	**-2.2**
MTBS	**Maitube** 5.5nm,0.6s	**4.95**	**34**	Pg	**Pb**	**15 52 26.3**	**+3.7**
MTBS	 4.4nm,0.5s			Lg	Lg	15 53 32.5	
TNSS	**Tian-Shan** 2.5nm,0.2s	**5.11**	**38**	*e*P	**Pg**	**15 52 29.9**	**-3.9**
TNSS	 4.0nm,0.4s			*e*S	**Sg**	**15 53 38.6**	**-1.4**
TNSS	**Tian-Shan** 2.5nm,0.2s	**5.11**	**38**	Pg	**Pg**	**15 52 29.9**	**-3.9**
TNSS	 4.0nm,0.4s			Lg	Lg	15 53 38.6	
KRBS	**Karabastau** 2.4nm,0.3s	**5.14**	**25**	*e*P	**Pb**	**15 52 30.0**	**+4.1**
KRBS	 3.0nm,0.3s			*e*S	**Sg**	**15 53 38.9**	**-2.0**
KRBS	**Karabastau** 2.4nm,0.3s	**5.14**	**25**	Pg	**Pb**	**15 52 30.0**	**+4.1**
KRBS	 3.0nm,0.3s			Lg	Lg	15 53 38.9	
MDOK	**Medeo** 7.1nm,0.8s	**5.26**	**37**	⇑Lg	Lg	15 53 41.3	
KTBS	**Karatobe** 1.7nm,0.5s	**5.53**	**32**	*e*P	**Pg**	**15 52 39.5**	**-2.2**
KTBS	 11nm,0.4s			*e*S	**Sg**	**15 53 55.1**	**+1.8**
KTBS	**Karatobe** 1.7nm,0.5s	**5.53**	**32**	Pg	**Pg**	**15 52 39.5**	**-2.2**
KTBS	 11nm,0.4s			Lg	Lg	15 53 55.1	
AB31	**Akbulak array** 0.7nm,0.7s,baz=162,slow=22,SNR=13	**13.67**	**322**	Pn	**Pn**	**15 54 07.4**	**-2.1**

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*SOME **08** 15:57:30.0, 39°.55N×74°.18E, h0^{km}*

*NNC **08** 15:57:32.2±2.0, 39°.58N×74°.12E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=14.1km s-min=9.2km az=162.0*

*KRNET **08** 15:57:39.8±0.1, 39°.84N×73°.85E, h13^{km}, mb2.8*

ISC 08 15:57:34.2±1.4**, 39°.69N**±0°.06×**74°.09E**±0°.04**, h10^{km}, n32, σ1^{s}59**/49**, 17C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan** baz=4.0	**0.56**	**306**	⇑*e*P	**Pb**	**15 57 45.8**	**-0.5**
SFK	 baz=4.0			⇑*e*S	**Sg**	**15 57 51.1**	**-1.5**
SALK	**Salom-Alik** baz=59	**1.21**	**350**	⇑*e*P	**Pg**	**15 57 59.3**	**+1.8**
SALK	 baz=59			⇑*e*S	**Sn**	**15 58 13.8**	**-0.1**
OHH	**Osh** baz=11	**1.31**	**310**	⇑*e*P	**Pg**	**15 58 00.2**	**+0.9**
OHH	 baz=11			⇑*e*S	**Sb**	**15 58 14.9**	**-0.9**
DRK	**Karamyk** baz=58	**1.79**	**264**	⇓*e*P	**Pg**	**15 58 09.7**	**+1.2**
DRK	 baz=58			⇓*i*S	**Sg**	**15 58 31.7**	**0.0**
AML	**Almayashu** baz=57	**2.46**	**353**	⇓*i*P	**Pg**	**15 58 20.4**	**-1.0**
AML	 baz=57			⇓*i*S	**Sb**	**15 58 49.8**	**+0.5**
UCH	**Uchtor** baz=12	**2.56**	**7**	⇓*i*P	**Pg**	**15 58 22.5**	**-0.8**
UCH	 baz=12			⇓*i*S	**Sb**	**15 58 53.6**	**+1.4**
TRKS	**Terek-Say** baz=9.0	**2.91**	**310**	⇑*i*P	**Pb**	**15 58 24.4**	**-1.9**
TRKS	 baz=9.0			⇑*i*S	**Sn**	**15 58 57.0**	**+1.2**
AAK	**Ala-Archa** 7.6nm,1.2s	**2.96**	**6**	⇑Pg	**Pg**	**15 58 29.9**	**-1.1**
AAK	 11nm,0.5s			Lg	Lg	15 59 10.0	
GAR	**Garm** baz=54	**3.01**	**258**	⇑*e*P	**Pb**	**15 58 28.0**	**0.0**
GAR	 baz=54			⇑*e*S	**Sb**	**15 59 03.0**	**-1.8**
MNAS	**Manas** baz=40	**3.04**	**337**	⇑*i*P	**Pb**	**15 58 27.8**	**-0.8**
MNAS	 baz=40			⇑*i*S	**Sb**	**15 59 02.5**	**-3.4**
MRKS	**Merke** 3.9nm,0.3s	**3.12**	**348**	*e*P	**Pb**	**15 58 30.7**	**+0.7**
MRKS	 21nm,0.3s			*e*S	**Sg**	**15 59 15.4**	**+0.8**
MRKS	**Merke** 3.9nm,0.3s	**3.12**	**348**	Pg	**Pb**	**15 58 30.7**	**+0.7**
MRKS	 21nm,0.3s			Lg	Lg	15 59 15.4	
TKM2	**Tokmak 2** 3.2nm,1.3s	**3.42**	**19**	⇑Pg	**Pb**	**15 58 37.4**	**+2.3**
TKM2	 8.3nm,0.6s			⇑Lg	Lg	15 59 25.0	
KST	**Kastek** 1.6nm,0.2s	**3.63**	**22**	*e*P	**Pb**	**15 58 39.9**	**+1.2**
KST	 15nm,0.4s			*e*S	**Sg**	**15 59 31.4**	**+0.4**
KST	**Kastek** 1.6nm,0.2s	**3.63**	**22**	Pg	**Pb**	**15 58 39.9**	**+1.2**
KST	 15nm,0.4s			Lg	Lg	15 59 31.4	
DGS	**Degeres** 2.9nm,0.3s	**3.77**	**19**	*e*P	**Pb**	**15 58 42.5**	**+1.5**
DGS	 6.6nm,0.3s			*e*S	**Sg**	**15 59 35.7**	**+0.4**
DGS	**Degeres** 2.9nm,0.3s	**3.77**	**19**	Pg	**Pb**	**15 58 42.5**	**+1.5**
DGS	 6.6nm,0.3s			Lg	Lg	15 59 35.7	
SGDS	**Sogindy** 2.2nm,0.3s	**3.78**	**6**	Pg	**Pb**	**15 58 42.2**	**+1.1**
SGDS	 7.3nm,0.4s			Lg	Lg	15 59 35.1	
IUG	**Iuzhnay** 142nm,0.4s	**3.94**	**310**	*e*P	**Pb**	**15 58 45.7**	**+1.9**
IUG	 10nm,0.3s			*e*S	**Sg**	**15 59 41.3**	**+0.6**
IUG	**Iuzhnay** 142nm,0.4s	**3.94**	**310**	Pg	**Pb**	**15 58 45.7**	**+1.9**
IUG	 10nm,0.3s			Lg	Lg	15 59 41.3	
TNSS	**Tian-Shan** 1.8nm,0.3s	**3.98**	**32**	*e*P	**Pb**	**15 58 45.0**	**+0.3**
TNSS	 3.3nm,0.5s			*e*S	**Sg**	**15 59 39.9**	**-2.0**
TNSS	**Tian-Shan** 1.8nm,0.3s	**3.98**	**32**	Pg	**Pb**	**15 58 45.0**	**+0.3**
TNSS	 3.3nm,0.5s			Lg	Lg	15 59 39.9	
MDOK	**Medeo** 2.0nm,0.3s	**4.12**	**32**	*e*P	**Pb**	**15 58 46.5**	**-0.4**
MDOK	 7.1nm,0.5s			*e*S	**Sg**	**15 59 42.6**	**-3.9**
MDOK	**Medeo** 1.2nm,0.5s	**4.12**	**32**	Pg	**Pg**	**15 58 51.8**	**-1.4**
MDOK	 7.5nm,0.7s			⇑Lg	Lg	15 59 46.8	
MDOK	**Medeo** 2.0nm,0.3s	**4.12**	**32**	Pg	**Pb**	**15 58 46.5**	**-0.4**
MDOK	 7.1nm,0.5s			Lg	Lg	15 59 42.6	
KRBS	**Karabastau** 1.1nm,0.2s	**4.18**	**16**	*e*P	**Pb**	**15 58 49.3**	**+1.5**
KRBS	 7.5nm,0.5s			*e*S	**Sg**	**15 59 47.5**	**-0.8**
KRBS	**Karabastau** 1.1nm,0.2s	**4.18**	**16**	Pg	**Pb**	**15 58 49.3**	**+1.5**
KRBS	 7.5nm,0.5s			Lg	Lg	15 59 47.6	
KK02	**Karatay Array** 1.4nm,0.4s,baz=142,slow=25	**4.35**	**323**	⇑Lg	Lg	15 59 51.6	
KUU	**Kurty** 1.3nm,0.4s	**4.52**	**21**	*e*P	**Pb**	**15 58 55.9**	**+2.2**
KUU	 6.5nm,0.5s			*e*S	**Sg**	**15 59 58.8**	**-0.6**
KUU	**Kurty** 1.3nm,0.4s	**4.52**	**21**	Pg	**Pb**	**15 58 55.9**	**+2.2**
KUU	 6.5nm,0.5s			Lg	Lg	15 59 58.8	
ARXS	**Arharly** 1.8nm,0.5s	**5.31**	**30**	*e*P	**Pb**	**15 59 10.3**	**+3.2**
ARXS	 4.2nm,0.4s			*e*S	**Sg**	**16 00 23.9**	**-0.7**
ARXS	**Arharly** 1.8nm,0.5s	**5.31**	**30**	Pg	**Pb**	**15 59 10.4**	**+3.2**
ARXS	 4.2nm,0.4s			Lg	Lg	16 00 23.9	

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*IDC **08** 15:58:11.3±4.1, 11°.62N×86°.23W, h0^{km}, mb3.3/3, mb1 3.8/3, mb1mx3.5/36, mbtmp3.4/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/19, Error ellipse: s-maj=140.4km s-min=75.4km az=63.0*

*INET **08** 15:58:16.8, 11°.26N×87°.00W, h14^{km}, MW3.7*

*UCR **08** 15:58:20.2±1.5, 11°.16N×86°.91W, h19^{km}±15^{km}, MW4.0*

ISC 08 15:58:18.7±1.1**, 11°.3N**±0°.2×**87°.1W**±0°.2**, h49^{km}, n13, σ1^{s}31**/13**, mb3.4**/3**, 1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HZTE	**Horizontes, Gu**	**1.56**	**111**	*e*P	**Pn**	**15 58 43.8**	**-0.2**
HZTE				*e*S	**Sn**	**15 59 02.1**	**-0.8**
SAJU	**San Juanillo,**	**1.80**	**132**	⇓*e*P	**Pn**	**15 58 46.5**	**-0.9**
CUI	**Cuipilapa**	**1.97**	**108**	*i* P	**Pn**	**15 58 50.1**	**+0.4**
JTS	**Las Juntas de**	**2.30**	**115**	*e*P	**Pn**	**15 58 55.0**	**+0.8**
ARE1	**Arenal 1**	**2.45**	**109**	*e*P	**Pn**	**15 58 55.1**	**-1.1**
LCR2	**La Lucha 2**	**3.38**	**117**	*e*P	**Pn**	**15 59 10.9**	**+1.7**
RIMA	**Rio Macho**	**3.50**	**115**	*e*P	**Pn**	**15 59 13.3**	**+2.5**
CMIG	**Matias Romero** comp=Z,99nm,20.2s,baz=70,slow=40	**9.52**	**308**	LR	LR	16 04 54.6	
TXAR	**Lajitas Array** 0.6nm,0.7s,baz=144,slow=11,SNR=8.6	**23.71**	**322**	P	**P**	**16 03 27.9**	**+1.6**
PDAR	**Pinedale Array** 0.2nm,0.4s,baz=131,slow=11,SNR=2.3	**36.97**	**332**	P	**P**	**16 05 23.3**	**-0.3**
YKA	**Yellowknife Ar** 0.4nm,0.7s,baz=137,slow=8.9,SNR=2.6	**54.83**	**345**	P	**P**	**16 07 42.4**	**-1.2**
ASAR	**Alice Springs** 0.4nm,1.0s,baz=104,slow=3.9,SNR=1.9	**139.17**	**247**	PKP	**PKiKP**	**16 17 42.8**	**-0.5**
WRA	**Warramunga Arr** 0.3nm,0.8s,baz=94,slow=2.0,SNR=1.6	**139.29**	**253**	PKP	**PKPdf**	**16 17 41.8**	**+0.5**

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*SNET **08** 16:19:37.9±0.6, 13°.55N×90°.62W, h20^{km}±3^{km}, ML3.5*

*GCG **08** 16:19:38.9±0.5, 13°.66N×90°.87W, h10^{km}±35^{km}, MD3.4*

ISC 08 16:19:36.7±2.7**, 13°.5N**±0°.1×**90°.75W**±0°.08**, h30^{km}**±16^{km}**, n14, σ0^{s}55**/22**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.92**	**8**	*e*P	**Pb**	**16 19 54.0**	**-0.3**
PCG				*e*S	**Sn**	**16 20 05.8**	**-0.4**
FUG	**Fuego 3**	**0.97**	**355**	*e*P	**Pb**	**16 19 54.2**	**-0.9**
CEVE	**Cerro Verde**	**1.15**	**72**	*e*P	**Pn**	**16 19 56.6**	**-0.4**
CEVE				*e*S	**Sn**	**16 20 11.4**	**-0.4**
CEVE	 comp=Z,2μm,0.2s			IAML		16 20 12.7	
RTR	**El Retiro**	**1.15**	**69**	*e*P	**Pn**	**16 19 56.9**	**-0.1**
SBLS	**San Blas**	**1.15**	**72**	*e*P	**Pn**	**16 19 56.6**	**-0.4**
NBG	**Las Nubes**	**1.17**	**19**	*e*P	**Pb**	**16 19 58.5**	**0.0**
NBG				*e*S	**Sb**	**16 20 14.4**	**+1.0**
SNJE	**San Jose**	**1.18**	**71**	*e*P	**Pn**	**16 19 56.8**	**-0.6**
JAYA	**Jayaque - finc**	**1.27**	**82**	*e*P	**Pn**	**16 19 58.2**	**-0.4**
JAYA				*e*S	**Sn**	**16 20 14.0**	**-0.8**
JAYA	 comp=Z,1μm,0.3s			IAML		16 20 14.8	
TACO	**Tacachico**	**1.44**	**70**	*e*P	**Pn**	**16 20 00.9**	**+0.1**
TACO				*e*S	**Sn**	**16 20 18.9**	**+0.2**
STG3	**Santiaguito 3,**	**1.46**	**327**	*e*P	**Pn**	**16 20 01.9**	**+0.5**
STG3				*e*S	**Sn**	**16 20 19.4**	**-0.2**
LFRS	**El Faro**	**1.65**	**85**	⇓*e*P	**Pn**	**16 20 04.0**	**+0.3**
LFRS				*e*S	**Sn**	**16 20 24.3**	**+0.4**
SJTE	**Alcalda de S**	**1.70**	**85**	*e*P	**Pn**	**16 20 04.9**	**+0.5**
SJTE				*e*S	**Sn**	**16 20 25.7**	**+0.5**
ESQI	**Esquipulas**	**1.74**	**52**	*e*P	**Pn**	**16 20 05.3**	**+0.3**
COEG	**Centro de Oper**	**1.82**	**85**	*e*P	**Pn**	**16 20 06.7**	**+0.6**
COEG	 comp=Z,242nm,0.3s			IAML		16 20 40.8	

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*IDC **08** 16:23:51.0±0.9, 33°.92S×109°.12W, h0^{km}, mb3.8/3, mb1 4.2/3, mb1mx3.8/27, mbtmp3.8/3, MS3.4/6, Ms1 3.4/6, ms1mx3.3/19, Error ellipse: s-maj=67.0km s-min=30.1km az=90.0*

ISC 08 16:23:52.4±0.9**, 33°.9S**±0°.2×**109°.0W**±0°.6**, h10^{km}, n20, σ0^{s}79**/8**, mb3.8**/3**, MS3.6**/5**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui** comp=Z,45nm,18.7s,baz=344,slow=27	**6.77**	**357**	LR	LR	16 26 56.7	
H03S2	**Juan Fernandez** baz=260	**24.92**	**98**	T	T	16 55 30.0	
H03S1	**Juan Fernandez** baz=260	**24.94**	**98**	T	T	16 55 32.2	
H03S3	**Juan Fernandez** baz=260	**24.94**	**98**	T	T	16 55 30.8	
H03N2	**Juan Fernandez** baz=266,slow=73,SNR=9.9	**24.98**	**97**	T	T	16 55 39.2	
H03N3	**Juan Fernandez** baz=266,slow=73,SNR=12	**24.98**	**97**	T	T	16 55 40.1	
H03N1	**Juan Fernandez** baz=266,slow=73,SNR=7.3	**25.00**	**97**	T	T	16 55 40.2	
PLCA	**Paso Flores** comp=Z,46nm,21.4s,baz=244,slow=28	**31.13**	**114**	LR	LR	16 38 38.2	
LPAZ	**La Paz** comp=Z,37nm,22.0s,baz=251,slow=30	**40.64**	**75**	LR	LR	16 44 23.6	
CPUP	**Villa Florida** comp=Z,77nm,20.3s,baz=218,slow=31	**44.93**	**95**	LR	LR	16 47 17.5	
RAR	**Rarotonga** comp=Z,122nm,21.2s,baz=153,slow=28	**46.34**	**272**	LR	LR	16 45 37.7	
ROSC	**El Rosal** comp=Z,105nm,19.1s,baz=232,slow=32	**50.58**	**47**	LR	LR	16 51 11.1	
QSPA	**South Pole Qui** 0.8nm,0.8s,baz=119,slow=2.1,SNR=5.7	**56.29**	**180**	P	**P**	**16 33 33.4**	**+0.5**
NVAR	**Mina Array Bea** 1.2nm,0.8s,baz=179,slow=7.3,SNR=7.7	**72.49**	**352**	P	**P**	**16 35 20.3**	**+1.0**
PDAR	**Pinedale Array** 1.0nm,1.0s,baz=198,slow=8.9,SNR=3.6	**76.31**	**360**	P	**P**	**16 35 41.5**	**0.0**
AKASG	**Malin Array Be** 1.2nm,0.7s,baz=272,slow=3.4,SNR=7.4	**145.38**	**48**	PKPbc	**PKPdf**	**16 43 29.1**	**-0.9**
BRTR	**Keskin Array B** 0.8nm,0.5s,baz=197,slow=4.5,SNR=1.4	**149.68**	**68**	PKPbc	**PKPbc**	**16 43 42.1**	**-0.3**
SONM	**Songino Array** 1.6nm,0.9s,baz=143,slow=1.4,SNR=7.9	**150.13**	**308**	PKPbc	**PKPbc**	**16 43 42.6**	**-0.7**
CMAR	**Chiang Mai Arr** 2.4nm,0.9s,baz=177,slow=1.2,SNR=16	**150.71**	**245**	PKPbc	**PKPbc**	**16 43 44.8**	**-0.5**
ASF	**Jabal al Asfar** 2.0nm,0.9s,baz=284,slow=5.5,SNR=3.1	**151.42**	**84**	PKPbc	**PKiKP**	**16 43 47.8**	**+0.6**

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*SNET **08** 16:31:42.5±0.9, 14°.10N×91°.16W, h5^{km}±10^{km}, ML3.5*

*GCG **08** 16:31:44.6±0.4, 14°.25N×91°.34W, h44^{km}±17^{km}, MD3.4*

ISC 08 16:31:40.1±2.4**, 13°.9N**±0°.1×**91°.3W**±0°.1**, h2^{km}**±14^{km}**, n8, σ0^{s}86**/16**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**0.66**	**40**	*e*P	**Pn**	**16 31 56.5**	**-0.1**
PCG	**Pacaya**	**0.79**	**55**	*e*P	**Pn**	**16 31 59.4**	**+0.9**
PCG				*e*S	**Sn**	**16 32 10.7**	**-0.2**
STG3	**Santiaguito 3,**	**0.82**	**339**	*e*P	**Pg**	**16 31 56.1**	**+0.3**
STG3				*e*S	**Sg**	**16 32 05.5**	**-0.9**
NBG	**Las Nubes**	**1.10**	**54**	*e*P	**Pn**	**16 32 03.5**	**+0.7**
NBG				*e*S	**Sn**	**16 32 20.2**	**+1.3**
CEVE	**Cerro Verde**	**1.61**	**94**	*e*P	**Pn**	**16 32 10.2**	**+0.5**
CEVE				*e*S	**Sg**	**16 32 31.9**	**+0.2**
CEVE	 comp=Z,647nm,0.3s			IAML		16 32 34.0	
SBLS	**San Blas**	**1.61**	**93**	*e*P	**Pn**	**16 32 10.5**	**+0.8**
SBLS				*e*S	**Sg**	**16 32 31.8**	**+0.1**
JAYA	**Jayaque - finc**	**1.80**	**99**	*e*P	**Pn**	**16 32 13.0**	**+0.8**
JAYA				*e*S	**Sn**	**16 32 35.2**	**-0.5**
JAYA				*e*S	**Sb**	**16 32 35.7**	**-1.2**
JAYA	 comp=Z,423nm,0.2s			IAML		16 32 44.8	
TACO	**Tacachico**	**1.86**	**89**	*e*P	**Pn**	**16 32 12.6**	**-0.5**
TACO				*e*S	**Sb**	**16 32 37.5**	**-1.2**

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*SOME **08** 16:32:32.4, 38°.32N×72°.98E, h0^{km}*

*BJI **08** 16:32:33.9±0.0, 38°.33N×72°.70E, h5^{km}, mB4.7/8, mb4.2/14, ML4.0/3, Ms3.8/5, Ms7 3.6/4*

*IDC **08** 16:32:34.4±0.8, 38°.25N×72°.84E, h0^{km}, mb3.7/16, mb1 3.9/23, mb1mx3.7/64, mbtmp3.7/23, ML3.4/7, MS3.3/3, Ms1 3.3/3, ms1mx2.8/55, Error ellipse: s-maj=15.1km s-min=13.9km az=29.0*

*NNC **08** 16:32:35.4±1.4, 38°.30N×73°.20E, h4^{km}±6^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=9.9km s-min=7.5km az=5.0*

*MOS **08** 16:32:36.8±1.0, 38°.30N×72°.66E, h22^{km}, mb4.2/6, Error ellipse: s-maj=10.2km s-min=5.6km az=79.8*

*NEIC **08** 16:32:38.1±1.5, 38°.36N±0°.05×72°.42E±0°.07, h10^{km}±1^{km}, mb4.4/4, Error ellipse: s-maj=10.8km s-min=6.3km az=131.0*

ISC 08 16:32:37.5±0.5**, 38°.34N**±0°.04×**72°.58E**±0°.03**, h10^{km}, n137, σ2^{s}23**/132**, mb3.8**/22**, MS3.4**/3**, 8C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**1.29**	**332**	Pn	**Pb**	**16 33 00.4**	**-1.8**
GAR	**Garm**	**1.89**	**291**	Pn	**Pn**	**16 33 08.1**	**-2.0**
KSH	**Kashi**	**2.90**	**65**	Pn	Pn	16 33 15.1	-8.7
KSH				Sn	Sn	16 33 42.4	-16
KSH	 comp=N,800nm,0.8s			smax	smax		
KSH	 comp=E,920nm,0.8s			smax	smax		
IUG	**Iuzhnay** 2μm,0.5s	**4.28**	**334**	*e*P	**Pg**	**16 33 56.6**	**-2.9**
IUG	 520nm,0.7s			*e*S	**Sg**	**16 34 57.1**	**+2.3**
IUG	**Iuzhnay** baz=333	**4.28**	**334**	*e*Pg	**Pg**	**16 33 58.8**	**-0.6**
IUG	**Iuzhnay** 2μm,0.5s	**4.28**	**334**	Pg	**Pg**	**16 33 56.6**	**-2.9**
IUG	 520nm,0.7s			Lg	Lg	16 34 57.1	
MRKS	**Merke** 33nm,0.3s	**4.43**	**6**	*e*P	**Pb**	**16 33 55.0**	**-0.5**
MRKS	 60nm,0.4s			*e*S	**Sg**	**16 34 54.7**	**-5.1**
MRKS	**Merke** 33nm,0.3s	**4.43**	**6**	Pg	**Pb**	**16 33 55.0**	**-0.5**
MRKS	 60nm,0.4s			Lg	Lg	16 34 54.7	
AAK	**Ala-Archa** 2.6nm,0.3s,baz=184,slow=6.6,SNR=14	**4.54**	**18**	Pn	**Pn**	**16 33 48.0**	**+1.6**
AAK	 2.6nm,0.3s,baz=180,slow=20,SNR=1.9			Sn	**Sn**	**16 34 43.8**	**+4.5**
AAK	**Ala-Archa** 15nm,0.6s	**4.54**	**18**	⇑Pn	**Pn**	**16 33 43.9**	**-2.5**
AAK	 60nm,0.8s			⇑Lg	Lg	16 34 55.3	
AAK	**Ala-Archa**	**4.54**	**18**		**Pn**	**16 33 47.3**	**+0.9**
CEP	**Cherat**	**4.54**	**187**	P	**Pn**	**16 33 50.9**	**+4.5**
CHM	**Chimkent** 4.7nm,0.5s	**4.58**	**331**	*e*P	**Pg**	**16 34 01.5**	**-3.8**
CHM	 284nm,0.3s			*e*S	**Sg**	**16 35 05.7**	**+1.0**
DZA	**Taraz** 56nm,0.1s	**4.65**	**349**	*e*P	**Pb**	**16 34 01.5**	**+2.3**
DZA	 165nm,0.4s			*e*S	**Sg**	**16 35 05.9**	**-0.9**
DZA	**Taraz** baz=348	**4.65**	**349**	*e*Pg	**Pg**	**16 34 05.3**	**-1.3**
DZA	**Taraz** 56nm,0.1s	**4.65**	**349**	Pg	**Pb**	**16 34 01.5**	**+2.3**
DZA	 165nm,0.4s			Lg	Lg	16 35 05.9	
CHCP	**Chirah Chowk**	**4.70**	**173**	P	**Pn**	**16 33 51.0**	**+2.4**
NIL	**Nilore**	**4.71**	**173**	PN	**Pn**	**16 33 48.9**	**+0.2**
NIL	**Nilore**	**4.71**	**173**		**Pn**	**16 33 48.9**	**+0.2**
KBL	**Kabul**	**4.74**	**218**	PN	**Pn**	**16 33 48.7**	**-0.6**
KBL	**Kabul**	**4.74**	**218**	Pn	**Pn**	**16 33 48.7**	**-0.6**
BOOM	**Boomskoye usch**	**4.88**	**31**	PN	**Pn**	**16 33 52.4**	**+1.3**
BOOM	**Boomskoye usch**	**4.88**	**31**	Pn	**Pn**	**16 33 52.4**	**+1.3**
KK02	**Karatay Array** 9.3nm,0.5s,baz=152,slow=12	**5.01**	**342**	⇑Pn	**Pn**	**16 33 55.0**	**+2.2**
KK02	 53nm,0.9s,baz=144,slow=23			⇓Sn	**Sn**	**16 34 56.2**	**+5.4**
KKAR	**Karatay Array**	**5.01**	**342**	PN	**Pn**	**16 33 52.7**	**-0.1**
KKAR	**Karatay Array**	**5.01**	**342**	Pn	**Pn**	**16 33 52.7**	**-0.1**
TKM2	**Tokmak 2** 4.5nm,0.7s	**5.12**	**26**	⇓Pn	Pn	16 33 50.1	-4.4
TKM2	 12nm,0.6s			⇑Pg	**Pb**	**16 34 05.1**	**-2.2**
TKM2	 59nm,1.4s			⇓Lg	Lg	16 35 12.2	
BRLS	**Borolday**	**5.13**	**337**	*e*Pg	**Pg**	**16 34 11.4**	**-4.3**

	baz=334						
KDJ	**Kajisay**	**5.17**	**41**	PN	**Pn**	**16 33 55.2**	**0.0**
KDJ	**Kajisay**	**5.17**	**41**	Pn	**Pn**	**16 33 55.2**	**0.0**
SGDS	**Sogindy**	**5.34**	**16**	Pg	**Pb**	**16 34 11.1**	**+0.2**
	22nm,0.5s						
SGDS				Lg	Lg	16 35 22.4	
	26nm,0.7s						
KST	**Kastek**	**5.36**	**28**	*e*P	**Pb**	**16 34 09.1**	**-2.2**
	24nm,0.5s						
KST				*e*S	**Sb**	**16 35 18.7**	**+3.0**
	40nm,0.7s						
KST	**Kastek**	**5.36**	**28**	Pg	**Pb**	**16 34 09.1**	**-2.2**
	24nm,0.5s						
KST				Lg	Lg	16 35 18.7	
	40nm,0.7s						
DGS	**Degeres**	**5.46**	**25**	*e*P	**Pb**	**16 34 13.1**	**0.0**
	29nm,0.4s						
DGS				*e*S	**Sb**	**16 35 25.7**	**+6.9**
	25nm,0.9s						
DGS	**Degeres**	**5.46**	**25**	Pg	**Pb**	**16 34 13.1**	**0.0**
	29nm,0.4s						
DGS				Lg	Lg	16 35 25.7	
	25nm,0.9s						
THW	**Thamme Wali**	**5.57**	**187**	P	**Pn**	**16 34 03.9**	**+3.4**
MTBS	**Maitube**	**5.61**	**30**	*e*P	**Pb**	**16 34 14.0**	**-1.6**
	11nm,0.6s						
MTBS				*e*S	**Sb**	**16 35 27.3**	**+4.5**
	17nm,0.6s						
MTBS	**Maitube**	**5.61**	**30**	Pg	**Pb**	**16 34 14.0**	**-1.6**
	11nm,0.6s						
MTBS				Lg	Lg	16 35 27.3	
	17nm,0.6s						
TNSS	**Tian-Shan**	**5.75**	**34**	*e*P	**Pb**	**16 34 16.4**	**-1.8**
	14nm,0.4s						
TNSS				*e*S	**Sb**	**16 35 31.2**	**+4.0**
	14nm,0.7s						
TNSS	**Tian-Shan**	**5.75**	**34**	*e*Pg	**Pg**	**16 34 25.1**	**-2.5**
	baz=33						
TNSS	**Tian-Shan**	**5.75**	**34**	Pg	**Pb**	**16 34 16.4**	**-1.8**
	14nm,0.4s						
TNSS				Lg	Lg	16 35 31.2	
	14nm,0.7s						
KRBS	**Karabastau**	**5.84**	**23**	Pg	**Pb**	**16 34 18.6**	**-0.9**
	9.7nm,0.4s						
KRBS				Lg	Lg	16 35 35.4	
	22nm,0.9s						
AAA	**Alma-Ata**	**5.87**	**33**	*e*Pg	**Pg**	**16 34 26.9**	**-3.1**
	baz=32						
AAA	**Alma-Ata**	**5.87**	**33**	Pg	**Pb**	**16 34 20.1**	**0.0**
	25nm,0.3s						
AAA				Lg	Lg	16 35 37.9	
	67nm,0.3s						
MDOK	**Medeo**	**5.89**	**34**	*e*Pn	**Pn**	**16 34 03.8**	**-1.3**
	baz=33						
MDOK	**Medeo**	**5.89**	**34**	*e*PN	**Pn**	**16 34 03.7**	**-1.3**
MDOK	**Medeo**	**5.89**	**34**	Pg	**Pb**	**16 34 17.7**	**-2.7**
	9.8nm,0.6s						
MDOK				⇑Lg	Lg	16 35 35.2	
	49nm,0.9s						
MDOK	**Medeo**	**5.89**	**34**	Pg	**Pb**	**16 34 18.7**	**-1.8**
	10nm,0.6s						
MDOK				Lg	Lg	16 35 35.5	
	28nm,0.3s						
KNDC	**Almaty**	**5.90**	**33**	⇑Lg	Lg	16 35 35.9	
	247nm,1.2s						
KOTS	**Kotyrbulak**	**5.98**	**34**	Pg	**Pb**	**16 34 20.5**	**-1.4**
	14nm,0.5s						
KOTS				Lg	Lg	16 35 38.6	
	38nm,0.7s						
KTBS	**Karatobe**	**6.20**	**29**	Pg	**Pb**	**16 34 25.1**	**-0.5**
	10.0nm,0.6s						
KTBS				Lg	Lg	16 35 46.6	
	40nm,0.6s						
KUU	**Kurty**	**6.23**	**26**	Pg	**Pb**	**16 34 26.6**	**+0.4**
	8.7nm,0.5s						
KUU				Lg	Lg	16 35 49.0	
	21nm,0.7s						
SATY	**Saty**	**6.47**	**41**	*e*Pg	Pg	16 34 37.5	-3.8
	baz=41						
SATY	**Saty**	**6.47**	**41**	Pg	**Pb**	**16 34 28.7**	**-1.5**
	17nm,0.5s						
SATY				Lg	Lg	16 35 52.7	
	38nm,1.2s						
KURS	**Kuram**	**6.66**	**38**	Pg	**Pb**	**16 34 32.5**	**-0.9**
	9.3nm,1.1s						
BTLS	**Baital**	**6.79**	**9**	Pg	**Pb**	**16 34 39.2**	**+3.6**
	4.1nm,0.5s						
DHRM	**DHARAMSHALA**	**6.79**	**152**	*e*P	**Pn**	**16 34 15.9**	**-1.5**
DHRM				*e*S	**Sn**	**16 35 33.8**	**-1.1**
DHRM				IAML		16 35 42.3	
	comp=N,60nm,0.5s						
DHRM				IAML		16 35 42.5	
	comp=E,68nm,0.4s						
UZB	**Uzynbulak**	**6.85**	**43**	*e*Pn	**Pn**	**16 34 18.4**	**+0.2**
	baz=43						
UZB				*e*Pg	Pb	16 34 44.5	+7.7
	baz=43						
UZB	**Uzynbulak**	**6.85**	**43**	*e*PN	**Pn**	**16 34 18.3**	**+0.1**
UZB				*e*		16 34 44.5	
UZB	**Uzynbulak**	**6.85**	**43**	Pg	**Pb**	**16 34 35.6**	**-1.2**
	comp=E,5.5nm,0.4s						
ARXS	**Arharly**	**7.07**	**32**	Pg	**Pb**	**16 34 40.9**	**+0.4**
	comp=E,8.9nm,0.8s						
SHLS	**Shalkode**	**7.10**	**45**	*e*Pn	**Pn**	**16 34 24.5**	**+2.9**
	baz=46						
SHLS				*e*Pg	**Pg**	**16 34 52.7**	**-0.8**
	baz=46						
SHLS	**Shalkode**	**7.10**	**45**	*e*P	**Pn**	**16 34 24.5**	**+2.9**
SHLS	**Shalkode**	**7.10**	**45**	Pg	**Pb**	**16 34 43.9**	**+2.9**
	comp=E,23nm,0.5s						
PDGK	**Podgornoye**	**7.23**	**44**	⇓Pn	Pn	16 34 17.7	-5.7
	comp=E,8.1nm,0.7s						
PDGK				⇓Lg	Lg	16 36 14.7	
	comp=E,36nm,0.9s						
TDK	**Taldyqorghan**	**7.96**	**31**	*e*Pg	Pg	16 35 04.1	-5.7
	baz=31						
DJR	**Jarkent**	**8.08**	**40**	Pg	**Pb**	**16 34 57.9**	**+0.3**
	comp=E,4.0nm,0.5s						
SMLA	**Simla**	**8.12**	**151**	*e*P	**Pn**	**16 34 33.2**	**-2.3**
SMLA				*e*S	Sn	16 36 00.8	-6.5
SMLA				IAML		16 36 07.6	
	comp=N,47nm,0.7s						
SMLA				IAML		16 36 08.3	
	comp=E,64nm,0.7s						
KAPS	**Kapalarasan**	**8.59**	**34**	Pg	Pg	16 35 08.7	-13
	comp=E,4.8nm,0.9s						
KUDL	**Kundal**	**10.68**	**161**	*e*P	Pn	16 35 05.9	-4.6
KUDL				*e*S	Sn	16 36 58.9	-11
MAKZ	**Makanchi**	**10.93**	**36**	P	**Pn**	**16 35 15.3**	**+1.3**
MAKZ	**Makanchi**	**10.93**	**36**	Pn	**Pn**	**16 35 15.2**	**+1.3**
MK31	**Makanchi Array**	**11.07**	**37**	*i* P	**Pn**	**16 35 17.3**	**+1.4**
MKAR	**Makanchi Array**	**11.07**	**37**	Pn	**Pn**	**16 35 15.2**	**-0.7**
	comp=E,0.1nm,0.3s,baz=224,slow=12,SNR=7.9						
MKAR	**Makanchi Array**	**11.07**	**37**	P	**Pn**	**16 35 16.8**	**+0.9**
MKAR	**Makanchi Array**	**11.07**	**37**	Pn	**Pn**	**16 35 16.8**	**+0.9**
GEYT	**Alibeck**	**11.40**	**272**	Pn	**Pn**	**16 35 21.8**	**+1.3**
	comp=E,0.8nm,0.3s,baz=97,slow=12,SNR=8.1						
GEYT				Sn	**Sn**	**16 37 30.2**	**+2.2**
	comp=E,0.5nm,0.3s,baz=112,slow=19,SNR=1.9						
WMQ	**Urumqi**	**12.64**	**60**	*e*P	**Pn**	**16 35 41.5**	**+4.0**
KURBB	**Kurchatov Arra**	**12.99**	**17**	Pn	**Pn**	**16 35 40.6**	**-1.5**
	comp=E,0.1nm,0.3s,baz=205,slow=11,SNR=5.7						
KURBB				Sn	**Sn**	**16 38 05.5**	**-1.1**
	comp=E,0.0nm,0.3s,baz=210,slow=25,SNR=1.5						
KURBB				Lg	Lg	16 39 19.4	
	comp=E,0.0nm,0.3s,baz=206,slow=29,SNR=5.1						
KURK	**Kurchatov**	**13.10**	**17**	P	**Pn**	**16 35 40.6**	**-2.9**
SEM	**Semipalatinsk**	**13.25**	**22**	*e*Pn	**Pn**	**16 35 45.6**	**-0.2**
	baz=22						
SEM	**Semipalatinsk**	**13.25**	**22**	*e*P	**Pn**	**16 35 45.5**	**-0.2**
PYUN	**Piuthan**	**13.41**	**137**	*e*P	Pn	16 35 39.6	-8.5
	comp=E,29nm,0.5s						
DANN	**Dangsing**	**13.64**	**134**	*e*P	Pn	16 35 44.0	-7.4
	comp=E,27nm,0.5s						
KOLN	**Koldanda**	**14.00**	**136**	*e*P	Pn	16 35 47.5	-8.7
	comp=E,21nm,0.6s						
AB31	**Akbulak array**	**14.21**	**324**	Pn	**Pn**	**16 35 56.8**	**-1.8**
	comp=E,1.6nm,0.6s,baz=132,slow=13,SNR=21						
AB31				⇓Sn	**Sn**	**16 38 33.7**	**-2.5**
	comp=E,5.8nm,1.1s,baz=135,slow=22,SNR=5.2						
ABKAR	**Akbulak array**	**14.21**	**324**	Pn	**Pn**	**16 35 56.9**	**-1.8**
GKN	**Gorkha**	**14.41**	**132**	*e*P	Pn	16 35 53.2	-8.6
	comp=E,23nm,0.5s						
BVAR	**Borovoye Array**	**14.77**	**355**	Pn	**Pn**	**16 36 03.5**	**-2.8**
	comp=E,0.1nm,0.3s,baz=86,slow=16,SNR=2.2						
BRVK	**Borovoye**	**14.81**	**355**	*i* P	**Pn**	**16 36 06.4**	**-0.5**
KKN	**Kakani**	**14.95**	**131**	*e*P	Pn	16 35 59.9	-9.2
	comp=E,7.8nm,0.5s						
PKIN	**Phulchoki**	**15.18**	**131**	*e*P	Pn	16 36 02.8	-9.4
	comp=E,3.7nm,0.3s						
PKI	**Pulchoki**	**15.19**	**131**	*e*P	Pn	16 36 02.3	-10
	comp=E,11nm,0.4s						
DGZ	**Jazzator, Alta**	**15.56**	**38**	*i* P	**Pn**	**16 36 16.0**	**-1.0**
BHPL	**Bhopal**	**15.61**	**163**	*e*S	Sn	16 38 56.9	-14
AKTO	**Aktyubinsk**	**15.92**	**324**	Pn	**Pn**	**16 36 20.8**	**-0.8**
	comp=E,0.2nm,0.3s,baz=130,slow=14,SNR=9.9						
AKTO				Sn	**Sn**	**16 39 08.3**	**-10**
	comp=E,0.1nm,0.3s,baz=228,slow=7.0,SNR=1.9						
AKTO				LR	LR	16 43 12.5	
	comp=E,68nm,18.7s,baz=130,slow=40						
AKTO	**Aktyubinsk**	**15.92**	**324**	⇑Pn	**P**	**16 36 25.8**	**+0.5**
	comp=E,9.5nm,1.2s						
RAMN	**Ramite**	**16.36**	**130**	*e*P	Pn	16 36 16.6	-11
	comp=E,14nm,0.4s						
TAPN	**Taplejung**	**16.76**	**126**	*e*P	Pn	16 36 21.8	-11
	comp=E,6.2nm,0.5s						
ODAN	**Odare**	**16.91**	**128**	*e*P	Pn	16 36 22.7	-12
	comp=E,13nm,0.7s						
ZALV	**Zalesovo Beam**	**17.73**	**24**	P	**Pn**	**16 36 43.4**	**-0.8**
	comp=E,0.6nm,0.3s,baz=229,slow=14,SNR=4.2						
ZALV	**Zalesovo Beam**	**17.73**	**24**	*i* P	**Pn**	**16 36 44.7**	**+0.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARU	**Arti**	**20.37**	**337**	P	**P**	**16 37 13.0**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=120,slow=20,SNR=1.6						
ARU	**Arti**	**20.37**	**337*c***	*i*P	Pn	16 37 15.8	-0.3
ARU						16 37 32.5	
ARU				S	Sn	16 41 03.5	-1.8
ARU				SS	**SnSn**	**16 41 20.9**	**+1.0**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GTA	**Gaotai**	**21.20**	**79**	*e*P	**P**	**16 37 23.8**	**+0.4**
GTA				pP	pP	16 37 27.2	-0.1
GTA				sP	sP	16 37 30.5	+1.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,57nm,5.1s						
GTA				LR	LR		
	comp=Z,110nm,15.3s						
GTA				LR	LR		
	comp=Z,130nm,15.6s						
GTA				LR	LR		
	comp=Z,130nm,16.0s						
HYB	**Hyderabad**	**21.49**	**164**	*i* P	**P**	**16 37 26.5**	**0.0**
GNI	**Garni**	**21.61**	**284**	P	**P**	**16 37 31.5**	**+3.7**
	comp=Z,7.2nm,0.8s,baz=145,slow=2.8,SNR=5.0						
GNI	**Garni**	**21.61**	**284**	*i* P	**P**	**16 37 30.4**	**+2.6**
GNI				pmax	pmax		
	comp=Z,20nm,1.2s						
BELG	**Belogornoye**	**22.32**	**317**	P	**P**	**16 37 34.5**	**-0.6**
	comp=Z,14nm,0.9s,baz=49,slow=9.2,SNR=4.7						
ONI	**Oni**	**22.51**	**290**	P	**P**	**16 37 35.7**	**-1.7**
ONI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ONI	**Oni**	**22.51**	**290**	P	**P**	**16 37 35.7**	**-1.7**
KBZ	**Khabaz**	**22.96**	**293**	P	**P**	**16 37 43.5**	**+1.5**
	comp=Z,2.6nm,0.9s,baz=104,slow=19,SNR=2.9						
KBZ	**Khabaz**	**22.96**	**293**	*i* P	**P**	**16 37 42.0**	**0.0**
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV	**Kislovodsk**	**23.13**	**294**	*e*P	**P**	**16 37 43.2**	**-0.6**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SONM	**Songino Array**	**26.27**	**58**	P	**P**	**16 38 11.0**	**-2.1**
	comp=Z,1.8nm,0.8s,baz=262,slow=9.4,SNR=8.8						
HHC	**Hu-ho-hao-te**	**29.98**	**73**	*e*P	**P**	**16 38 48.2**	**+2.0**
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,5.6s						
CMAR	**Chiang Mai Arr**	**30.32**	**123**	P	P	16 38 44.9	-4.4
	comp=Z,0.6nm,0.6s,baz=296,slow=9.6,SNR=5.7						
PALK	**Pallekele**	**31.79**	**165**	LR	LR	16 51 54.8	
	comp=Z,67nm,18.7s,baz=113,slow=37						
AKASG	**Malin Array Be**	**32.83**	**306**	P	**P**	**16 39 10.8**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=85,slow=7.2,SNR=1.8						
FINES	**FINESS Array B**	**36.70**	**324**	P	**P**	**16 39 44.0**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=174,slow=5.6,SNR=6.8						
FINES	**FINESS Array B**	**36.70**	**324**	*i* P	**P**	**16 39 45.9**	**+1.6**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**39.95**	**336**	P	**P**	**16 40 11.2**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=80,slow=3.0,SNR=5.3						
GERES	**GERESS Array B**	**42.93**	**304**	P	**P**	**16 40 37.0**	**+0.6**
	comp=Z,0.1nm,0.2s,baz=9.3,slow=13,SNR=4.1						
KLR	**Kul'dur**	**43.06**	**56**	*i* P	**P**	**16 40 39.7**	**+2.4**
KLR				pmax	pmax		
	comp=Z,12nm,2.3s						
KSRS	**Korea Array**	**43.12**	**73**	LR	LR	17 00 43.3	
	comp=Z,27nm,18.4s,baz=355,slow=39						
NC303	**NORSAR Array S**	**43.63**	**322**	P	**P**	**16 40 42.0**	**+0.2**
NB201	**NORSAR Array S**	**43.66**	**322**	P	**P**	**16 40 41.6**	**-0.5**
NB2	**NORSAR Subarra**	**43.70**	**322**	P	**P**	**16 40 41.8**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=106,slow=7.9						
NOA	**NORSAR Array B**	**43.70**	**322**	P	**P**	**16 40 42.0**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=101,slow=7.3,SNR=3.9						
NC204	**NORSAR Array S**	**43.92**	**322**	P	**P**	**16 40 43.8**	**-0.4**
NC204				IAmb	IAmb	16 41 11.0	
	comp=Z,6.6nm,0.9s						
ESDC	**Sonseca Array**	**57.72**	**297**	P	**P**	**16 42 27.5**	**-1.0**
	comp=Z,0.6nm,0.9s,baz=47,slow=8.0,SNR=2.7						
TORD	**Torodi Ar. Bea**	**67.02**	**269**	P	**P**	**16 43 31.1**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=52,slow=6.0,SNR=4.1						
IMAR	**Indian Mountai**	**70.04**	**18**	P	**P**	**16 43 50.7**	**+1.6**
ILAR	**Eielson Array**	**72.67**	**17**	P	**P**	**16 44 03.2**	**-1.8**
	comp=Z,0.1nm,0.6s,baz=270,slow=4.3,SNR=2.8						
YKA	**Yellowknife Ar**	**79.35**	**3**	P	**P**	**16 44 42.1**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=351,slow=5.5,SNR=2.8						
WRA	**Warramunga Arr**	**81.92**	**123**	P	**P**	**16 44 54.5**	**-3.0**
	comp=Z,0.8nm,0.7s,baz=325,slow=5.3,SNR=9.6						
ASAR	**Alice Springs**	**84.29**	**126**	P	**P**	**16 45 08.3**	**-1.4**
	comp=Z,0.2nm,0.8s,baz=320,slow=5.6,SNR=4.7						

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*IDC **08** 16:37:32.8±1.1, 37°.93N×72°.57E, h0^{km}, mb3.7/9, mb1 3.7/14, mb1mx3.5/61, mbtmp3.7/14, ML3.1/5, MS2.9/2, Ms1 2.9/2, ms1mx2.6/46, Error ellipse: s-maj=22.1km s-min=21.2km az=179.0*

ISC 08 16:37:34.6±1.0, 37°.9N±0°.1×72°.38E±0°.10, h10^{km}, n15, σ1^{s}83/15, mb3.7/8, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.96**	**18**	Pn	**Pn**	**16 38 51.3**	**+2.0**
	1.5nm,0.3s,baz=144,slow=5.0,SNR=9.6						
AAK				Sn	**Sn**	**16 39 49.0**	**+2.2**
	0.8nm,0.3s,baz=148,slow=19,SNR=1.3						
AAK				LR	LR	16 40 57.8	
	comp=Z,70nm,20.5s,baz=246,slow=42						
GEYT	**Alibeck**	**11.27**	**274**	Pn	**Pn**	**16 40 17.5**	**+1.8**
	0.3nm,0.3s,baz=94,slow=13,SNR=1.4						
MKAR	**Makanchi Array**	**11.48**	**36**	Pn	**Pn**	**16 40 18.3**	**-0.2**
	0.0nm,0.3s,baz=231,slow=20,SNR=1.1						
AKTO	**Aktyubinsk**	**16.15**	**325**	Pn	**Pn**	**16 41 20.2**	**-1.4**
	0.1nm,0.3s,baz=228,slow=20,SNR=2.9						
AKTO				Sn	**Sn**	**16 44 16.5**	**-4.2**
	baz=216,slow=19,SNR=2.1						
ZALV	**Zalesovo Beam**	**18.15**	**24**	P	**P**	**16 41 45.3**	**-1.6**
	0.5nm,0.3s,baz=218,slow=8.7,SNR=4.3						
ARU	**Arti**	**20.67**	**338**	P	Pn	16 42 14.6	-2.2
	0.5nm,0.4s,baz=156,slow=20,SNR=2.1						
SONM	**Songino Array**	**26.62**	**57**	P	**P**	**16 43 12.9**	**-0.4**
	0.3nm,0.8s,baz=236,slow=10.0,SNR=3.6						
NRIK	**Noril'sk**	**32.52**	**10**	P	**P**	**16 44 05.1**	**-0.1**
	1.1nm,0.3s,baz=186,slow=14,SNR=1.6						
AKASG	**Malin Array Be**	**32.94**	**307**	LR	LR	16 58 38.1	
	comp=Z,37nm,19.7s,baz=310,slow=38						
FINES	**FINESS Array B**	**36.93**	**325**	P	**P**	**16 44 43.8**	**+0.4**
	2.3nm,0.8s,baz=130,slow=13,SNR=1.3						
ARCES	**ARCESS Array B**	**40.25**	**337**	P	**P**	**16 45 11.0**	**-0.2**
	6.4nm,1.3s,baz=76,slow=7.5,SNR=1.0						
TORD	**Torodi Ar. Bea**	**66.85**	**269**	P	**P**	**16 48 27.2**	**+0.1**
	0.3nm,0.5s,baz=44,slow=5.7,SNR=2.5						
YKA	**Yellowknife Ar**	**79.75**	**3**	P	**P**	**16 49 43.4**	**+1.0**
	0.3nm,0.6s,baz=350,slow=5.4,SNR=2.0						
WRA	**Warramunga Arr**	**81.83**	**123**	P	**P**	**16 49 52.0**	**-2.1**
	0.5nm,0.8s,baz=332,slow=5.3,SNR=2.2						
ASAR	**Alice Springs**	**84.19**	**126**	P	**P**	**16 50 06.4**	**+0.1**
	0.3nm,0.9s,baz=312,slow=5.0,SNR=2.1						

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*IDC **08** 16:56:12.4±1.1, 30°.55N×140°.25E, h0^{km}, mb3.4/6, mb1 3.7/8, mb1mx3.3/46, mbtmp3.4/8, ML2.6/2, Error ellipse: s-maj=32.7km s-min=25.2km az=79.0*

ISC 08 16:56:13.8±1.0, 30°.6N±0°.1×140°.4E±0°.2, h10^{km}, n17, σ1^{s}66/8, mb3.4/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.16**	**344**	Pn	**Pn**	**16 57 43.2**	**-1.6**
	0.1nm,0.3s,baz=132,slow=13,SNR=1.7						
KSRS	**Korea Array**	**12.35**	**307**	Pn	**Pn**	**16 59 10.7**	**+1.1**
	0.1nm,0.3s,baz=96,slow=12,SNR=2.2						
H11N2	**WAKE ISLAND Hy**	**26.29**	**108**	T	T	17 29 22.2	
	baz=301,slow=75,SNR=28						
H11N1	**WAKE ISLAND Hy**	**26.29**	**108**	T	T	17 29 22.8	
	baz=301,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy**	**26.31**	**108**	T	T	17 29 24.8	
	baz=301,slow=75,SNR=24						
H11S3	**WAKE ISLAND Hy**	**26.75**	**111**	T	T	17 29 57.1	
	baz=303,slow=75,SNR=54						
H11S1	**WAKE ISLAND Hy**	**26.75**	**111**	T	T	17 29 57.1	
	baz=303,slow=75,SNR=74						
H11S2	**WAKE ISLAND Hy**	**26.76**	**111**	T	T	17 29 57.2	
	baz=303,slow=75,SNR=44						
CMAR	**Chiang Mai Arr**	**39.37**	**262**	P	**P**	**17 03 42.8**	**-0.9**
	0.2nm,0.6s,baz=45,slow=6.2,SNR=5.1						
MKAR	**Makanchi Array**	**47.03**	**307**	P	**P**	**17 04 45.5**	**+0.1**
	0.2nm,0.7s,baz=92,slow=10,SNR=1.4						
WRA	**Warramunga Arr**	**50.62**	**187**	P	**P**	**17 05 12.1**	**-1.0**
	0.6nm,0.9s,baz=6.6,slow=7.6,SNR=4.6						
ASAR	**Alice Springs**	**54.35**	**187**	P	**P**	**17 05 40.3**	**-0.4**
	0.2nm,0.8s,baz=14,slow=13,SNR=1.0						
PDAR	**Pinedale Array**	**82.81**	**44**	P	**P**	**17 08 41.4**	**+2.7**
	0.2nm,0.6s,baz=294,slow=6.6,SNR=1.5						
TXAR	**Lajitas Array**	**94.73**	**52**	P	**P**	**17 09 35.1**	**-0.7**
	0.3nm,0.8s,baz=294,slow=4.5,SNR=2.2						
H03N2	**Juan Fernandez**	**146.71**	**105**	T	T	19 59 53.6	
	baz=281,slow=75,SNR=9.6						
H03N3	**Juan Fernandez**	**146.71**	**105**	T	T	19 59 54.8	
	baz=281,slow=75,SNR=11						
H03N1	**Juan Fernandez**	**146.72**	**105**	T	T	19 59 55.0	
	baz=281,slow=75,SNR=9.6						

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*NEIC **08** 16:59:38.7±1.7, 44°.22N±0°.04×105°.40W±0°.03, h0^{km}±2^{km}, ML3.1/16, Error ellipse: s-maj=6.8km s-min=3.0km az=22.0*

*IDC **08** 16:59:40.8±1.1, 44°.30N×105°.52W, h0^{km}, mb1 3.6/3, mb1mx3.3/43, mbtmp3.3/3, ML3.3/3, Error ellipse: s-maj=27.6km s-min=10.1km az=142.0*

ISC 08 16:59:38.0±0.9, 44°.22N±0°.06×105°.43W±0°.05, h0^{km}, n19, σ1^{s}08/21, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.01**	**95**	Pg	**Pg**	**16 59 57.0**	**-0.2**
K22A	**Casper**	**1.76**	**207**		**Pn**	**17 00 08.8**	**-1.0**
K22A				IAML		17 00 32.9	
	comp=E,291nm,0.6s						
LAO	**LASA Array**	**2.53**	**348**	Pg	**Pg**	**17 00 25.5**	**-1.0**
LAO				IAML		17 01 12.6	
	comp=E,137nm,0.9s						
LAO				IAML		17 01 18.4	
	comp=E,121nm,0.9s						
RWWY	**Rawlins**	**2.85**	**208**		**Pn**	**17 00 26.2**	**+1.3**
RWWY				IAML		17 01 05.6	
	comp=E,67nm,0.8s						
BW06	**Boulder Array**	**3.34**	**246**	Pn	**Pn**	**17 00 32.6**	**+1.0**
BW06				IAML		17 01 25.6	
	comp=E,44nm,0.6s						
BW06				IAML		17 01 26.3	
	comp=E,37nm,0.7s						
PD31	**Pinedale Array**	**3.34**	**246**		**Pn**	**17 00 32.6**	**+1.0**
PDAR	**Pinedale Array**	**3.34**	**246**	Pn	**Pb**	**17 00 36.5**	**-1.6**
	comp=E,3.1nm,0.3s,baz=72,slow=17,SNR=29						
PDAR				Sn	**Sb**	**17 01 20.2**	**+0.9**
	comp=E,2.5nm,0.3s,baz=94,slow=17,SNR=5.4						
PDAR	**Pinedale Array**	**3.34**	**246**		**Pn**	**17 00 32.3**	**+0.7**
H17A	**Grant Village**	**3.70**	**275**	Pn	**Pn**	**17 00 37.3**	**+0.7**
H17A					**Pg**	**17 00 48.8**	**-0.1**
H17A				IAML		17 01 19.9	
	comp=N,14nm,4.7s						
H17A				IAML		17 01 45.5	
	comp=E,15nm,0.6s						
MOOW	**Moose Ponds**	**3.87**	**265**	Pn	**Pn**	**17 00 39.5**	**+0.6**
O20A	**White River Ci**	**4.58**	**208**		**Pn**	**17 00 50.2**	**+1.5**
P18A	**Preston Nutter**	**5.83**	**220**	Pn	**Pn**	**17 01 07.4**	**+1.6**
P17A	**Butcher Ranch,**	**6.18**	**222**	Pn	**Pn**	**17 01 11.7**	**+1.1**
SRU	**San Rafael Swe**	**6.37**	**219**	Pn	**Pn**	**17 01 13.3**	**+0.1**
ECSD	**EROS Data Cent**	**6.38**	**91**	Pn	**Pn**	**17 01 14.1**	**+0.9**
SDCO	**Great Sand Dun**	**6.47**	**181**	Pn	**Pn**	**17 01 14.5**	**-0.2**
NLU	**North Lily Min**	**6.53**	**232**	Pn	**Pn**	**17 01 16.5**	**+1.1**
ULM	**Lac du Bonnet**	**8.86**	**44**	Pn	**Pn**	**17 01 48.5**	**+1.3**
	comp=E,1.0nm,0.3s,baz=225,slow=14,SNR=11						
ULM				Lg	Lg	17 04 10.4	
	comp=E,0.2nm,0.3s,baz=274,slow=13,SNR=1.6						
TXAR	**Lajitas Array**	**14.92**	**174**	Pn	**P**	**17 03 15.2**	**-0.9**
	comp=E,0.0nm,0.3s,baz=352,slow=18,SNR=2.0						
TXAR				Lg	Lg	17 07 26.1	
	comp=E,0.1nm,0.3s,baz=346,slow=24,SNR=2.1						

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*IDC **08** 17:04:28.4±7.8, 36°.44N×70°.64E, h190^{km}±70^{km}, mb3.0/3, mb1 3.1/5, mb1mx2.8/50, mbtmp3.6/5, MS3.1/1, Ms1 3.1/1, ms1mx2.5/20, Error ellipse: s-maj=65.2km s-min=43.3km az=38.0*

*NNC **08** 17:04:34.9±3.1, 37°.03N×70°.27E, h186^{km}±49^{km}, mb3.0, mpv3.8, Error ellipse: s-maj=30.8km s-min=19.0km az=15.0*

ISC 08 17:04:29.0±0.9, 36°.58N±0°.06×70°.4E±0°.1, h204^{km}, n23, σ1^{s}57/27, 5C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.00**	**156**	P	**Pn**	**17 05 19.1**	**0.0**
CEP				S	**S**	**17 05 56.0**	**-1.6**
CHCP	**Chirah Chowk**	**3.73**	**141**	P	**Pn**	**17 05 28.2**	**+0.6**
THW	**Thamme Wali**	**3.93**	**164**	P	**Pn**	**17 05 29.7**	**-0.4**
AML	**Almayashu**	**6.10**	**24**	P	**Pn**	**17 05 58.8**	**+1.0**
	SNR=72						
UCH	**Uchtor**	**6.47**	**28**	P	**Pn**	**17 06 03.8**	**+1.1**
	SNR=8.0						
KK02	**Karatay Array**	**6.52**	**1**	⇓P	**Pn**	**17 06 03.4**	**+0.5**
	2.9nm,0.2s						
KK02				⇑S	**S**	**17 07 12.2**	**-5.1**
	10nm,0.8s						
EKS2	**Erkin-Say**	**6.60**	**22**	P	**Pn**	**17 06 05.5**	**+1.3**
	SNR=11						
AAK	**Ala-Archa**	**6.82**	**26**	P	**Pn**	**17 06 08.0**	**+1.2**
	baz=240,slow=18						
AAK				S	**S**	**17 07 23.7**	**-0.9**
	0.7nm,0.3s,baz=359,slow=21,SNR=3.6						
AAK	**Ala-Archa**	**6.82**	**26**	P	**Pn**	**17 06 08.3**	**+1.4**
	SNR=9.4						
AAK	**Ala-Archa**	**6.82**	**26**	⇑P	**Pn**	**17 06 08.1**	**+1.2**
	2.4nm,0.5s						
AAK				S	**S**	**17 07 22.7**	**-1.9**
	22nm,0.7s						
KBK	**Karagaybulak**	**7.00**	**28**	P	**Pn**	**17 06 10.7**	**+1.4**
	SNR=5.3						
CHMS	**Chumysh**	**7.22**	**26**	P	**Pn**	**17 06 13.3**	**+1.2**
	SNR=6.2						
USP	**Ospenovka**	**7.38**	**24**	P	**Pn**	**17 06 15.3**	**+1.2**
	SNR=8.1						
TKM2	**Tokmak 2**	**7.48**	**31**	P	**Pn**	**17 06 17.1**	**+1.5**
	SNR=14						
TKM2	**Tokmak 2**	**7.48**	**31**	⇓P	**Pn**	**17 06 16.6**	**+1.0**
	5.1nm,0.5s						
TKM2				⇑S	**S**	**17 07 38.9**	**-1.4**
	6.1nm,0.8s						
MKAR	**Makanchi Array**	**13.50**	**37**	P	**Pn**	**17 07 32.5**	**0.0**
	0.1nm,0.3s,baz=214,slow=12,SNR=2.7						
AB31	**Akbulak array**	**14.80**	**332**	⇑P	**P**	**17 07 48.9**	**-0.3**
	1.0nm,0.4s,baz=157,slow=12,SNR=37						
AKTO	**Aktyubinsk**	**16.49**	**331**	P	**Pn**	**17 08 09.6**	**+0.9**
	0.5nm,0.3s,baz=133,slow=14,SNR=10						
AKTO	**Aktyubinsk**	**16.49**	**331**	⇑P	**Pn**	**17 08 10.3**	**+1.6**
	4.2nm,0.8s						
ZALV	**Zalesovo Beam**	**20.04**	**25**	P	**P**	**17 08 48.2**	**+1.9**
	1.0nm,0.4s,baz=210,slow=8.3,SNR=1.7						
KSRS	**Korea Array**	**45.29**	**71**	LR	LR	17 32 16.6	
	comp=Z,24nm,20.4s,baz=5.0,slow=37						
WRA	**Warramunga Arr**	**82.42**	**122**	P	**P**	**17 16 28.1**	**-0.5**
	0.2nm,0.5s,baz=320,slow=5.0,SNR=5.1						
ASAR	**Alice Springs**	**84.68**	**125**	P	**P**	**17 16 39.9**	**-0.1**
	0.4nm,0.7s,baz=306,slow=4.9,SNR=7.0						

IDC 08 17:06:02.6±2.0**,0°.20N×125°.90E,h0^{km},mb3.4**/3**,**
mb1 3.6/3**,mb1mx3.3**/39**,mbtmp3.4**/3**,Error ellipse:**
s-maj=186.4km s-min=25.8km az=65.0,Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.66	158	P	P	17 10 53.5	-1.5
	0.5nm,0.4s,baz=336,slow=11,SNR=13						
ASAR	Alice Springs	24.97	162	P	P	17 11 29.1	+1.0
	0.5nm,0.6s,baz=343,slow=11,SNR=12						
MKAR	Makanchi Array	60.00	327	P	P	17 16 11.0	-0.1
	0.3nm,0.5s,baz=115,slow=7.5,SNR=5.6						

*SOME **08** 17:07:18.5,39°.47N×73°.05E,h0^{km}*
*ISU **08** 17:07:19,39°.40N×73°.50E,h5^{km}*
*KRNET **08** 17:07:22.8±0.1,39°.39N×73°.30E,h13^{km},mb3.5*
*NNC **08** 17:07:26.2±1.8,39°.59N×73°.43E,h0^{km},mb4.2,mpv3.8,*
Error ellipse: s-maj=14.0km s-min=8.3km az=174.0
ISC 08 17:07:25.5±1.0**,39°.51N**±0°.05×**73°.29E**±0°.03**,h10^{km},n57,**
σ2^s.21/91**,26C-17D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.53	18	⇓eP	Pg	17 07 35.0	-0.9
	baz=14						
SFK				⇓eS	Sb	17 07 44.2	-0.7
	baz=14						
OHH	Osh	1.09	339	eP	Pb	17 07 45.0	-1.5
OHH				eS	Sn	17 08 03.0	+0.9
OHH	Osh	1.09	339	⇑eP	Pb	17 07 45.5	-1.0
	baz=41						
OHH				⇑eS	Sn	17 08 02.0	-0.1
	baz=41						
DRK	Karamyk	1.16	269	⇑iP	Pb	17 07 45.1	-2.6
	baz=75						
DRK				⇑iS	Sg	17 08 00.8	-2.0
	baz=75						
SALK	Salom-Alik	1.43	16	⇓eP	Pb	17 07 51.5	-0.8
	baz=15						
SALK				⇓eS	Sg	17 08 12.5	+1.0
	baz=15						
FRG	Fergana	1.45	307	eP	Pb	17 07 52.0	-0.6
FRG				eS	Sg	17 08 18.0	+5.9
BTK	Batken	1.99	287	eP	Pb	17 08 02.0	+0.2
BTK				eS	Sg	17 08 34.0	+4.7
BTK	Batken	1.99	287	⇑iP	Pn	17 07 59.8	+0.6
	baz=90						
BTK				⇑iS	Sb	17 08 26.7	+0.1
	baz=90						
GAR	Garm	2.37	259	⇓eP	Pn	17 08 04.3	-0.2
	baz=61						
GAR				⇓eS	Sn	17 08 34.6	+1.0
	baz=61						
TRKS	Terek-Say	2.60	322	⇑iP	Pn	17 08 08.1	+0.3
	baz=23						
TRKS				⇑iS	Sn	17 08 41.3	+1.7
	baz=23						
AML	Almayashu	2.64	6	P	Pb	17 08 10.9	-2.2
	SNR=9.3						
AML	Almayashu	2.64	6	⇓iP	Pn	17 08 09.8	+1.3
	baz=6.0						
AML				⇓iS	Sb	17 08 44.6	-1.1
	baz=6.0						
UCH	Uchtor	2.87	18	P	Pb	17 08 14.5	-2.6
	SNR=8.5						
UCH	Uchtor	2.87	18	⇑eP	Pn	17 08 13.2	+1.5
	baz=18						
UCH				⇑iS	Sb	17 08 50.0	-2.4
	baz=18						
MNAS	Manas	3.04	349	⇑eP	Pn	17 08 15.4	+1.7
	baz=49						
MNAS				⇑iS	Sn	17 08 53.9	+3.7
	baz=49						
EKS2	Erkin-Say	3.17	6	⇑iP	Pn	17 08 17.2	+1.6
	baz=6.0						
EKS2				⇑iS	Sn	17 08 57.0	+3.4
	baz=6.0						
MRKS	Merke	3.24	359	eP	Pb	17 08 20.3	-2.7
	8.5nm,0.2s						
MRKS				eS	Sb	17 09 05.0	+2.4
	56nm,0.2s						
MRKS	Merke	3.24	359	Pg	Pb	17 08 20.3	-2.7
	8.5nm,0.2s						
MRKS				Lg	Lg	17 09 05.0	
	56nm,0.2s						
AAK	Ala-Archa	3.26	16	P	Pb	17 08 19.6	-3.9
	SNR=11						
AAK	Ala-Archa	3.26	16	Pn	Pn	17 08 18.5	+1.7
	14nm,0.5s						
AAK				⇑Lg	Lg	17 09 08.2	
	50nm,0.6s						
AAK	Ala-Archa	3.26	16	⇑iP	Pn	17 08 18.3	+1.5
	baz=15						
AAK				⇑iS	Sn	17 08 59.0	+3.3
	baz=15						
CHGR	Chuyangaron	3.33	257	⇓iP	Pn	17 08 17.6	-0.1
	baz=59						
CHGR				⇓iS	Sn	17 08 57.6	+0.3
	baz=59						
ULHL	Ulahol	3.53	38	P	Pb	17 08 27.3	-0.9
	SNR=7.9						
BOOM	Boomskoye usch	3.59	33	⇑iP	Pn	17 08 22.8	+1.4
	baz=32						
BOOM				⇑iS	Sn	17 09 06.7	+2.8
	baz=32						
IUG	Iuzhnay	3.62	318	eP	Pn	17 08 24.2	+2.6
	362nm,0.2s						
IUG				eS	Sb	17 09 11.9	-1.7
	67nm,0.5s						
IUG	Iuzhnay	3.62	318	Pg	Pn	17 08 24.2	+2.6
	362nm,0.2s						
IUG				Lg	Lg	17 09 11.9	
	67nm,0.5s						
CHMS	Chumysh	3.66	17	P	Pn	17 08 24.9	+2.7
	SNR=9.2						
TKM2	Tokmak 2	3.83	26	⇑Pn	Pn	17 08 26.5	+1.9
	3.3nm,0.8s						
TKM2				⇑Pg	Pg	17 08 35.8	-3.0
	5.6nm,0.5s						
TKM2				⇑Lg	Lg	17 09 25.6	
	17nm,0.6s						
KDJ	Kajisay	3.94	47	⇓iP	Pn	17 08 27.5	+1.3
	baz=46						
KDJ				⇓iS	Sn	17 09 15.1	+2.4
	baz=46						
KST	Kastek	4.07	29	eP	Pb	17 08 36.8	-0.5
	14nm,0.5s						
KST				eS	Sg	17 09 33.1	-2.9
	26nm,0.5s						
KST	Kastek	4.07	29	Pg	Pb	17 08 36.8	-0.5
	14nm,0.5s						
KST				Lg	Lg	17 09 33.1	
	26nm,0.5s						
SGDS	Sogindy	4.07	14	Pg	Pb	17 08 36.3	-1.0
	4.9nm,0.5s						
SGDS				Lg	Lg	17 09 32.5	
	19nm,0.6s						
KK02	Karatay Array	4.16	331	Pn	Pn	17 08 31.7	+2.7
	baz=166,slow=16						
KK02				⇓Pg	Pg	17 08 42.2	-3.0
	3.0nm,0.5s,baz=143,slow=16						
KK02				⇓Sn	Sn	17 09 20.8	+3.1
	7.2nm,0.7s,baz=142,slow=23						
KK02				⇓Lg	Lg	17 09 38.1	
	18nm,0.8s						
DGS	Degeres	4.17	26	eP	Pb	17 08 37.7	-1.3
	12nm,0.3s						
DGS				eS	Sg	17 09 34.9	-4.6
	32nm,0.6s						
DGS	Degeres	4.17	26	Pg	Pb	17 08 37.7	-1.3
	12nm,0.3s						
DGS				Lg	Lg	17 09 34.9	
	32nm,0.6s						
MTBS	Maitube	4.32	32	eP	Pb	17 08 41.3	-0.3
	9.9nm,0.3s						
MTBS				eS	Sg	17 09 41.2	-3.1
	13nm,0.2s						
MTBS	Maitube	4.32	32	Pg	Pb	17 08 41.3	-0.3
	9.9nm,0.3s						
MTBS				Lg	Lg	17 09 41.2	
	13nm,0.2s						
TNSS	Tian-Shan	4.47	37	eP	Pb	17 08 44.2	-0.1
	10nm,0.3s						
TNSS				eS	Sg	17 09 46.4	-2.7
	15nm,0.5s						
TNSS	Tian-Shan	4.47	37	Pg	Pb	17 08 44.2	-0.1
	10nm,0.3s						
TNSS				Lg	Lg	17 09 46.4	
	15nm,0.5s						
KRBS	Karabastau	4.55	22	eP	Pb	17 08 46.0	+0.5
	5.2nm,0.3s						
KRBS				eS	Sg	17 09 49.1	-2.4
	22nm,0.8s						
KRBS	Karabastau	4.55	22	Pg	Pb	17 08 46.0	+0.5
	5.2nm,0.3s						
KRBS				Lg	Lg	17 09 49.1	
	22nm,0.8s						
MDOK	Medeo	4.62	37	eP	Pb	17 08 46.8	+0.1
	7.7nm,0.6s						
MDOK				eS	Sg	17 09 50.6	-3.1
	28nm,0.5s						
MDOK	Medeo	4.62	37	⇑Pg	Pb	17 08 47.4	+0.7
	7.7nm,0.7s						
MDOK				⇑Lg	Lg	17 09 50.4	
	33nm,0.7s						
MDOK	Medeo	4.62	37	Pg	Pb	17 08 46.8	+0.1
	7.7nm,0.6s						
MDOK				Lg	Lg	17 09 50.6	
	28nm,0.5s						
KNDC	Almaty	4.62	36	⇑Pg	Pb	17 08 48.7	+2.0
	17nm,0.5s						
KNDC				⇓Lg	Lg	17 09 49.9	
	79nm,0.8s						
KOTS	Kotyrbulak	4.70	36	eP	Pb	17 08 48.7	+0.6
	9.5nm,0.3s						
KOTS				eS	Sg	17 09 54.0	-2.5
	56nm,0.6s						
KOTS	Kotyrbulak	4.70	36	Pg	Pb	17 08 48.7	+0.6
	9.5nm,0.3s						
KOTS				Lg	Lg	17 09 54.0	
	56nm,0.6s						
KTBS	Karatobe	4.91	30	eP	Pb	17 08 53.2	+1.6
	4.7nm,0.5s						
KTBS				eS	Sg	17 10 01.7	-1.4
	31nm,0.3s						
KTBS	Karatobe	4.91	30	Pg	Pb	17 08 53.2	+1.6
	4.7nm,0.5s						
KTBS				Lg	Lg	17 10 01.7	
	31nm,0.3s						
KUU	Kurty	4.94	26	eP	Pb	17 08 52.9	+0.8
	3.1nm,0.6s						
KUU				eS	Sg	17 10 01.2	-2.8
	18nm,0.4s						
KUU	Kurty	4.94	26	Pg	Pb	17 08 52.9	+0.8
	3.1nm,0.6s						
KUU				Lg	Lg	17 10 01.2	
	18nm,0.4s						
SATY	Saty	5.24	46	eP	Pb	17 08 59.0	+1.8
	6.3nm,0.5s						
SATY				eS	Sg	17 10 11.5	-2.0
	14nm,0.5s						
SATY	Saty	5.24	46	Pg	Pb	17 08 59.0	+1.8
	6.3nm,0.5s						
SATY				Lg	Lg	17 10 11.5	
	14nm,0.5s						
SHLS	Shalkode	5.90	50	eP	Pg	17 09 16.3	-2.2
	8.3nm,0.4s						
SHLS				eS	Sg	17 10 41.5	+6.5
	9.4nm,0.9s						
SHLS	Shalkode	5.90	50	Pg	Pg	17 09 16.3	-2.2
	8.3nm,0.4s						
SHLS				Lg	Lg	17 10 41.5	
	9.4nm,0.9s						
BLB	Baldybastay	6.00	38	Pg	Pb	17 09 12.6	+2.4
	12nm,0.5s						
BLB				Lg	Lg	17 10 35.1	
	11nm,0.5s						
PDGK	Podgornoye	6.02	49	⇓Pg	Pb	17 09 12.2	+1.6
	4.8nm,0.9s						
PDGK				⇑Lg	Lg	17 10 33.1	
	7.9nm,0.7s						

*MOS **08** 17:35:31.1±1.1,44°.30N×147°.85E,h101^{km},mb4.4/2,Error*
ellipse: s-maj=17.4km s-min=12.9km az=160.1
*JMA **08** 17:35:32.6±0.3,43°.93N×147°.91E,h81^{km},M3.7*
*SKHL **08** 17:35:32.5±0.2,44°.20N×147°.80E,h104^{km}±7^{km},mb4.6/5,*
msha5.6/4
*IDC **08** 17:35:33.0±4.2,44°.83N×147°.84E,h80^{km}±47^{km},mb3.6/8,*
mb1 3.8/9,mb1mx3.3/61,mbtmp3.9/9,ML3.2/1,Error
ellipse: s-maj=76.7km s-min=27.2km az=178.0
*NEIC **08** 17:35:34.0±1.1,44°.29N±0°.07×147°.7E±0°.2,h106^{km}±9^{km},*
mb4.2/7,Error ellipse: s-maj=16.1km s-min=9.7km
az=94.0
ISC 08 17:35:30.6±1.1**,44°.07N**±0°.06×**147°.99E**±0°.08**,h93^{km}**±7^{km}**,**
n61,σ1^s.60/77**,mb4.1**/12**,1C-2D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	Shikotan	0.86	257	d iPN	Pn	17 35 49.7	+0.9
SHO				i S	Sn	17 36 01.9	-0.7
SHO				pmax	pmax		
	comp=Z,395nm,0.5s						
SHO				pmax	pmax		
	comp=N,183nm,0.2s						
SHO				pmax	pmax		
	comp=E,160nm,0.2s						
SHO				smax	smax		
	comp=N,370nm,0.2s						
SHO				smax	smax		
	comp=E,666nm,0.4s						
SHO	Shikotan	0.86	257	i P	Pn	17 35 49.8	+0.9
SHO				AMB	AMB	17 35 50.4	
	comp=E,320nm,0.4s						
SHO				i S	Sn	17 36 02.4	-0.2
SHO				A	A	17 36 06.4	
	comp=E,620nm,0.6s						
SHO				A	A	17 36 06.4	
	comp=E,750nm,0.6s						
KUR	Kuril'sk	1.17	356	d iPN	Pn	17 35 52.4	+0.1
KUR				i S	Sn	17 36 07.4	-1.3
KUR				pmax	pmax		
	comp=Z,166nm,0.2s						
KUR				smax	smax		
	comp=E,2µm,0.5s						
KUR				smax	smax		
	comp=N,1µm,0.3s						
KUR	Kuril'sk	1.17	356	i P	Pn	17 35 52.5	+0.1
KUR				AMB	AMB	17 35 52.8	
	comp=N,170nm,0.3s						
KUR				i S	Sn	17 36 07.5	-1.3
KUR				A	A	17 36 08.1	
	comp=N,1µm,0.3s						
KUR				A	A	17 36 08.1	
	comp=N,960nm,0.3s						
YUK	Yuzh-Kuril'sk	1.54	270	ePN	Pn	17 35 57.4	+0.6
YUK				eS	Sn	17 36 15.5	-1.3
YUK				pmax	pmax		
	comp=N,48nm,0.2s						
YUK				pmax	pmax		
	comp=E,102nm,0.2s						
YUK				pmax	pmax		
	comp=Z,351nm,0.2s						
YUK				smax	smax		
	comp=E,1µm,0.3s						
YUK				smax	smax		
	comp=N,302nm,0.2s						
YUK	Yuzh-Kuril'sk	1.54	270	eP	Pn	17 35 57.4	+0.6
YUK				AMB	AMB	17 35 58.1	
	comp=N,330nm,0.2s						
YUK				eS	Sn	17 36 15.9	-0.9
YUK				A	A	17 36 17.8	
	comp=N,300nm,0.3s						
YUK				A	A	17 36 17.8	
	comp=N,1µm,0.3s						
NEM2	Nemuro 2	1.78	247	P	Pn	17 36 00.5	+0.6
NEM2				eS	Sn	17 36 21.5	-0.7
NMR	Nemuro--Hokkai	1.78	248	⇑iPN	Pn	17 36 00.6	+0.6
NMR				eS	Sn	17 36 21.6	-0.8
NMR	Nemuro--Hokkai	1.78	248	i P	Pn	17 36 00.7	+0.7
NMR				eS	Sn	17 36 22.0	-0.4
GLVR	Golovnino	1.82	260	ePN	Pn	17 36 01.3	+0.9
GLVR				eS	Sn	17 36 23.2	0.0
GLVR				pmax	pmax		
	comp=Z,103nm,0.3s						
GLVR				smax	smax		
	comp=N,1µm,0.2s						
GLVR				smax	smax		
	comp=E,564nm,0.3s						
GLVR	Golovnino	1.82	260	eP	Pn	17 36 01.3	+0.9
GLVR				AMB	AMB	17 36 01.9	
	comp=E,100nm,0.3s						
GLVR				eS	Sn	17 36 22.8	-0.4
GLVR				A	A	17 36 26.0	
	comp=E,1µm,0.4s						
GLVR				A	A	17 36 26.0	
	comp=E,560nm,0.4s						
RUSJ	Misakicho	1.98	272	ePN	Pn	17 36 03.6	+1.1
RUSJ				eS	Sn	17 36 28.1	+1.2
JRA	Rausu	2.08	267	P	Pn	17 36 05.1	+1.3
JRA				eS	Sn	17 36 29.6	+0.4
JNSB	Nemuroshibetsu	2.18	263	P	Pn	17 36 06.7	+1.6
JNSB				eS	Sn	17 36 32.3	+0.7
JKHN	Kushirohamanak	2.28	245	P	Pn	17 36 07.5	+1.0
JKHN				eS	Sn	17 36 33.9	-0.1
JNK	Nakash	2.42	260	P	Pn	17 36 09.2	+0.9
JNK				eS	Sn	17 36 36.9	-0.4
AKK	Akkeshi	2.52	246	i P	Pn	17 36 10.6	+0.9
AKK				eS	Sn	17 36 39.0	-0.7
JAK	Akkeshi	2.62	247	P	Pn	17 36 11.8	+0.7
JAK				eS	Sn	17 36 41.3	-0.9
JTKR	Abashiri--Toko	2.95	270	P	Pn	17 36 16.7	+1.3
JAR	Ashorobuto	3.16	257	P	Pn	17 36 20.0	+1.8
JAR				eS	Sn	17 36 55.2	+0.2
JCH	Churui	3.68	248	P	Pn	17 36 26.2	+1.0
JCH				eS	Sn	17 37 05.6	-1.9
JKA	Kamikawa-asahi	3.88	273	eP	Pn	17 36 29.4	+1.4
JKA	Kamikawa-asahi	3.88	273		Pn	17 36 29.4	+1.4
ASAJ	Asahikawa	3.89	273	P	Pn	17 36 29.5	+1.5
	comp=E,1.2nm,0.3s,baz=46,slow=2.9,SNR=16						
ASAJ				S	Sn	17 37 24.2	+12
	comp=E,0.8nm,0.3s,baz=181,slow=34,SNR=2.1						
ASAJ	Asahikawa	3.89	273	PN	Pn	17 36 29.4	+1.4
ERM	Erimo	4.09	242	PN	Pn	17 36 33.8	+3.0
ERM	Erimo	4.09	242	Pn	Pn	17 36 33.8	+3.0
JWK2	Keihoku	4.52	288	P	Pn	17 36 39.2	+2.6
YSS	Yuzh-Sakhalins	4.68	310	eP	Pn	17 36 38.6	-0.1
YSS				AMB	AMB	17 36 39.4	
	comp=E,10.0nm,0.5s						
YSS	Yuzh-Sakhalins	4.68	310	Pn	Pn	17 36 39.0	+0.3
JEW	Eniwo	4.92	258	Pn	Pn	17 36 43.6	+1.6
JKB	Kayabe	5.55	249	P	Pn	17 36 51.7	+1.1
JKB				eS	Sn	17 37 49.3	-3.7
JOT	Ohata	5.78	245	P	Pn	17 36 54.7	+1.0
JOT				eS	Sn	17 37 53.8	-4.7
JANG	Nango	6.06	235	P	Pn	17 36 57.5	-0.1
JANG				eS	Sn	17 38 00.9	-4.6
JTM	Tenmabayashi	6.08	240	Pn	Pn	17 37 02.1	+4.2
JTM				Sn	Sn	17 38 01.4	-4.6
YAK	Yakutsk	20.95	336	P	P	17 40 01.5	-4.2
YAK				IAmb	IAmb	17 40 03.3	
	comp=Z,8.9nm,0.7s						
SONM	Songino Array	28.91	292	P	P	17 41 21.2	+0.5
	comp=Z,0.3nm,0.4s,baz=74,slow=8.9,SNR=3.3						
H11N2	WAKE ISLAND Hy	28.95	141	T	T	18 12 26.2	
	baz=332,slow=76						
H11N1	WAKE ISLAND Hy	28.96	141	T	T	18 12 26.3	
	baz=332,slow=76						
H11N3	WAKE ISLAND Hy	28.97	141	T	T	18 12 27.6	
	baz=332,slow=76						
H11S1	WAKE ISLAND Hy	29.94	142	T	T	18 13 35.2	
	baz=333,slow=76						
H11S3	WAKE ISLAND Hy	29.94	142	T	T	18 13 30.7	
	baz=333,slow=76						
H11S2	WAKE ISLAND Hy	29.95	142	T	T	18 13 40.4	
	baz=333,slow=76						
ILAR	Eielson Array	40.87	36	P	P	17 43 02.6	-0.3
	comp=Z,0.5nm,0.9s,baz=278,slow=8.1,SNR=2.2						
RIDG	Independent Ri	41.82	38	P	P	17 43 11.9	+1.1
SCRK	Sand Creek	42.18	38	P	P	17 43 15.0	+1.2
L27K	Beaver Creek,	43.25	39	P	P	17 43 23.7	+1.4
L27K				IAmb	IAmb	17 43 30.9	
	comp=Z,6.4nm,1.4s						
BCAR	Beaver Creek A	43.27	39	P	P	17 43 23.8	+1.3
MK31	Makanchi Array	44.98	298	P	P	17 43 36.1	-0.2
MK31				pmax	pmax		
	comp=Z,6.0nm,1.5s						
MK31	Makanchi Array	44.98	298	P	P	17 43 36.0	-0.2
MK31				IAmb	IAmb	17 43 56.0	
	comp=Z,5.9nm,1.5s						
MKAR	Makanchi Array	44.98	298	P	P	17 43 36.1	-0.2
	comp=Z,0.9nm,0.6s,baz=79,slow=9.5,SNR=9.5						
MAKZ	Makanchi	45.17	298	P	P	17 43 38.1	+0.2
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MAKZ	Makanchi	45.17	298	P	P	17 43 38.1	+0.2
ABKAR	Akbulak array	57.34	309	P	P	17 45 08.4	-0.1
ABKAR	Akbulak array	57.34	309	P	P	17 45 08.6	-0.1
ABKAR				IAmb	IAmb	17 45 16.5	
	comp=Z,3.1nm,1.4s						
ARCES	ARCESS Array B	59.16	340	P	P	17 45 19.7	-1.3
	comp=Z,6.0nm,1.0s,baz=55,slow=7.8,SNR=1.4						
FINES	FINESS Array B	64.87	333	P	P	17 45 57.9	-1.4
	comp=Z,1.5nm,0.6s,baz=29,slow=8.7,SNR=8.6						
HFS	Hagfors	69.63	338	P	P	17 46 28.9	-0.5
	comp=Z,3.0nm,1.0s,baz=59,slow=6.9,SNR=7.1						
KBZ	Khabaz	70.04	312	P	P	17 46 34.1	+1.9
	comp=Z,2.2nm,0.8s,baz=16,slow=7.4,SNR=2.7						
U38A	Gravette	81.93	46		pP	17 48 08.8	+4.8
TXAR	Lajitas Array	81.97	57	P	P	17 47 42.4	+2.1
	comp=Z,0.5nm,0.6s,baz=303,slow=5.0,SNR=7.0						

*IDC **08** 17:36:29.5±1.1,8°.25S×115°.21E,h0^{km},mb3.8/6,*
mb1 3.9/9,mb1mx3.6/52,mbtmp3.8/9,ML3.5/3,Error
ellipse: s-maj=44.6km s-min=16.8km az=51.0
*DJA **08** 17:36:31.6±0.3,8°S±3°×11°5E±°,h11^{km}±3^{km},M4.0/17,*
mb4.2/4,mB4.6/1,MLv4.0/17,Mw(mB)3.8/1
*NEIC **08** 17:36:31.2±2.1,8°.29S±0°.10×115°.25E±0°.03,h7^{km}±6^{km},*
mb4.1/12,Error ellipse: s-maj=14.2km s-min=4.7km
az=178.0
ISC 08 17:36:31.4±1.2**,8°.27S**±0°.05×**115°.22E**±0°.05**,h12^{km}**±9^{km}**,**
n45,σ1^s.35/48**,mb4.0**/9**,Bali region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRBI	Singaraja	0.18	358	P	Pg	17 36 35.2	-0.2
DNP	Denpasar	0.41	181	P	Pb	17 36 41.7	+1.2
IGBI	Denpasar	0.55	187	P	Pb	17 36 43.6	+0.6
JAGI	Jajag, Banyuwa	1.07	259	P	Pg	17 36 51.4	-0.7
JAGI	Jajag, Banyuwa	1.07	259		Pg	17 36 51.5	-0.7
ABJI	Asem Bagus	1.08	296	P	Pg	17 36 51.5	-0.7
BLJI	Banyuglugur	1.69	288	P	Pn	17 37 01.0	+0.3
TWSI	Taliwang, Sumb	1.71	106	P	Pn	17 37 01.4	+0.4
KMMI	Kalianget	1.73	314	P	Pn	17 37 01.4	+0.1
GMJI	Gumukmas	1.76	270	P	Pn	17 37 02.2	+0.6
PLAI	Plampang	2.59	103	P	Pn	17 37 14.4	+1.3
BWJI	Bawean	3.49	313	P	Pn	17 37 25.9	+0.4
PCJI	Pacitan	4.00	271	P	Pn	17 37 33.2	+0.7
WBSI	Waikabubak, Su	4.34	109	P	Pn	17 37 38.6	+1.3
UGM	Wanagama	4.66	274	Pn	Pn	17 37 43.2	+1.6
KAPI	Kappang	5.54	55	Pn	Pn	17 37 53.1	-0.6
	1.0nm,0.3s,baz=243,slow=4.5,SNR=2.3						
KAPI				Sn	Sn	17 38 54.7	-2.6
	1.1nm,0.3s,baz=60,slow=20,SNR=1.8						
BSSI	Bau Bau, Buton	5.64	68	P	Pn	17 37 55.1	0.0
	0.1nm507nm20nm,0.5s						
BKSI	Bulukumba	5.68	59	P	Pn	17 37 56.3	+0.7
	0.1nm10nm,0.7s						
BNSI	Bone	6.19	52	P	Pn	17 38 08.1	+5.5
EDFI	Ende, Flores	6.42	95	P	Pn	17 38 07.0	+1.1
	0.0nm9.2nm,0.6s						
BATI	Baumata	8.56	104	Pn	Pn	17 38 35.7	+0.5
	0.8nm,0.3s,baz=315,slow=4.9,SNR=4.2						
BATI				Sn	Sn	17 40 16.7	+5.0
	0.6nm,0.3s,baz=29,slow=19,SNR=1.3						
SOEI	Soe	9.06	100	Pn	Pn	17 38 41.5	-0.6
PSA00	Pilbara Seismi	13.96	162	Pn	Pn	17 39 45.8	-3.3
FITZ	Fitzroy Crossi	14.08	135	Pn	Pn	17 39 50.1	-0.7
	0.2nm,0.3s,baz=317,slow=10.0,SNR=12						
FITZ				Sn	Sn	17 42 23.6	-3.5
	0.1nm,0.3s,baz=192,slow=19,SNR=1.8						
GIRL	Giralia	14.33	184	Pn	Pn	17 39 53.2	-0.9
KNRA	Kununurra	15.15	120	P	Pn	17 40 07.3	+1.9
MTN	Manton Dam	16.29	108	Pn	Pn	17 40 19.8	-0.4
MTN				IAmb	IAmb	17 40 46.9	
	comp=Z,8.7nm,0.9s						
KULM	Kulim	19.81	312	P	P	17 41 02.0	+0.1
KULM				IAmb	IAmb	17 41 26.3	
	comp=Z,20nm,1.3s						
GSI	Gunungsitoli	19.99	298	P	P	17 41 04.2	+0.3
GSI				IAmb	IAmb	17 41 48.5	
	comp=Z,9.8nm,0.9s						

WB0	Warramunga Arr	21.81	124	P	P	17 41 23.7	+0.1
WB0				IAmb	IAmb	17 41 28.7	
	comp=Z,6.7nm,0.6s						
WRA	Warramunga Arr	21.85	124	P	P	17 41 23.5	-0.5
	comp=Z,4.2nm,0.7s,baz=293,slow=10.0,SNR=21						
WRA	Warramunga Arr	21.85	124	P	P	17 41 23.4	-0.6
WRAB	Tennant Creek	21.85	124	P	P	17 41 24.2	+0.2
WRAB				IAmb	IAmb	17 41 29.4	
	comp=Z,6.1nm,0.8s						
WB2	Warramunga Arr	21.86	124	P	P	17 41 23.7	-0.4
WB2				IAmb	IAmb	17 41 35.0	
	comp=Z,5.5nm,0.8s						
WR0	Warramunga Arr	22.02	124	P	P	17 41 25.8	-0.1
AS31	Alice Springs	23.56	133	P	P	17 41 40.8	-1.1
ASAR	Alice Springs	23.56	133	P	P	17 41 42.2	+0.4
	comp=Z,3.5nm,0.7s,baz=306,slow=8.8,SNR=67						
ASAR				PcP	PcP	17 45 26.9	-0.4
	comp=Z,1.0nm,1.2s,baz=299,slow=2.2,SNR=1.5						
ASAR	Alice Springs	23.56	133	P	P	17 41 40.7	-1.2
CMAR	Chiang Mai Arr	31.03	329	P	P	17 42 49.8	+0.5
	comp=Z,0.3nm,0.8s,baz=153,slow=10,SNR=2.2						
STKA	Stephens Creek	33.96	137	P	P	17 43 15.5	+0.7
	comp=Z,2.0nm,0.6s,baz=310,slow=10,SNR=8.2						
STKA	Stephens Creek	33.96	137	P	P	17 43 15.2	+0.4
SHL	Shillong	40.58	327	P	P	17 44 12.4	+1.2
SONM	Songino Array	56.40	353	P	P	17 46 12.8	+0.1
	comp=Z,1.0nm,0.8s,baz=166,slow=8.7,SNR=8.5						
MKAR	Makanchi Array	62.16	335	P	P	17 46 52.1	-0.4
	comp=Z,0.8nm,0.7s,baz=145,slow=8.2,SNR=5.5						
CPUP	Villa Florida	144.86	192	PKP	PKPab	17 56 08.6	+0.6
	comp=Z,2.2nm,0.7s,baz=146,slow=4.1,SNR=4.2						

*IDC **08** 17:46:05.7±8.3, 7°.36S×129°.02E, h205^{km}±89^{km}, mb3.0/1, mb1 3.1/5, mb1mx2.7/43, mbtmp3.6/5, Error ellipse: s-maj=87.3km s-min=25.7km az=41.0*

ISC 08 17:46:05.1±1.6**, 7°.5S**±0°.1×**129°.1E**±0°.1**, h200**^{km}**, n5, σ1^{s}.82**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.05	243	P	Pn	17 47 33.7	+0.6
	2.0nm,0.3s,baz=62,slow=3.2,SNR=7.5						
BATI				S	Sn	17 48 42.8	+0.2
	1.1nm,0.3s,baz=84,slow=19,SNR=2.4						
FITZ	Fitzroy Crossi	11.10	197	P	Pn	17 48 39.5	+1.0
	0.1nm,0.3s,baz=3.9,slow=10,SNR=7.2						
FITZ				S	Sn	17 50 39.8	-2.7
	0.2nm,0.3s,baz=263,slow=19,SNR=2.3						
WRA	Warramunga Arr	13.39	158	P	Pn	17 49 08.0	+0.4
	0.3nm,0.3s,baz=330,slow=13,SNR=31						
WRA				S	S	17 51 31.4	-5.6
	0.1nm,0.3s,baz=331,slow=23,SNR=2.3						
ASAR	Alice Springs	16.75	165	P	Pn	17 49 50.5	+1.9
	0.1nm,0.3s,baz=345,slow=11,SNR=14						
MKAR	Makanchi Array	68.14	327	P	P	17 56 42.7	-1.0
	0.3nm,0.5s,baz=116,slow=7.9,SNR=2.2						

*PRU **08** 17:47:19.8±0.0, 51°.56N×16°.10E, h0^{km}*
*IDC **08** 17:47:20.4±1.2, 51°.50N×15°.98E, h0^{km}, mb1 3.5/6, mb1mx3.2/46, mbtmp3.3/6, ML2.9/6, Error ellipse: s-maj=16.3km s-min=10.8km az=123.0*
*VIE **08** 17:47:22.4, 51°.34N×15°.91E, h0^{km}, ML2.9/2 81 km WNW of Wroclaw Suspected Mining induced.*

ISC 08 17:47:18.1±0.8**, 51°.62N**±0°.04×**16°.11E**±0°.02**, h0**^{km}**, n44, σ1^{s}.29**/86**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.79	171	ePg	Pg	17 47 33.4	+0.3
KSP				eSg	Sg	17 47 43.4	+0.1
CHVC	Chvalec	1.03	182	ePG	Pg	17 47 38.2	+0.4
CHVC				eSG	Sg	17 47 51.3	+0.1
	comp=Z,54nm,0.4s						
OSTC	Ostas	1.07	176	ePG	Pg	17 47 38.8	+0.3
OSTC				eSG	Sg	17 47 52.2	-0.1
	comp=Z,56nm,0.5s						
UPC	Upice	1.11	183	ePG	Pg	17 47 39.5	+0.1
UPC				eSG	Sg	17 47 53.6	-0.2
	comp=Z,97nm,0.3s						
DPC	Dobruska-Polom	1.28	174	ePG	Pg	17 47 42.2	-0.3
DPC				eSG	Sg	17 47 57.9	-1.1
	comp=Z,118nm,0.8s						
PVCC	Panska Ves	1.46	222	ePG	Pg	17 47 46.1	0.0
PVCC				eSG	Sn	17 48 05.8	+0.3
	comp=Z,153nm,0.3s						
BRG	Berggiesshubel	1.55	242	Pg	Pg	17 47 48.3	+0.5
BRG				Sg	Sg	17 48 08.8	+0.8
BRG				Amp		17 48 10.2	
	comp=Z,96nm,0.4s						
KRLC	Kraliky	1.60	164	ePG	Pn	17 47 47.3	-0.4
KRLC				eSG	Sn	17 48 07.8	-1.3
	comp=Z,46nm,0.3s						
PRU	Pruhonice	1.91	212	ePN	Pn	17 47 51.3	-0.6
PRU				ePG	Pb	17 47 53.4	-0.4
PRU				eSG	Sb	17 48 18.0	-0.2
	comp=Z,46nm,0.6s						
CLL	Collm	1.97	262	i Pn	Pn	17 47 52.3	-0.3
	comp=Z,10.0nm,0.5s						
CLL				i Pg	Pg	17 47 56.0	+0.2
CLL				i		17 47 59.5	
CLL				e(Sn)	Sn	17 48 12.0	-6.0
CLL				eSg	Sg	17 48 22.0	+0.8
	comp=Z,39nm,0.8s						
MORC	Moravsky Berou	2.06	153	ePN	Pn	17 47 53.2	-0.7
MORC				eSG	Sb	17 48 21.5	-0.9
OKC	Ostrava-Krasne	2.20	143	ePG	Pb	17 47 59.4	+0.6
OKC				eSG	Sb	17 48 26.1	-0.5
VRAC	Vranov	2.33	172	Pn	Pn	17 47 58.0	+0.3
	comp=Z,1.7nm,0.3s,baz=353,slow=16,SNR=18						
VRAC				Lg	Lg	17 48 31.2	
	comp=Z,4.1nm,0.3s,baz=74,slow=20,SNR=4.2						
VRAC	Vranov	2.33	172	ePN	Pn	17 47 58.0	+0.3
VRAC				eSG	Sb	17 48 30.4	+0.1
KRUC	Moravsky	2.57	176	ePN	Pn	17 48 00.9	0.0
KRUC				eSG	Sb	17 48 37.6	+0.6
NKC	Novy Kostel	2.70	241	ePN	Pn	17 48 03.3	+0.6
NKC				ePG	Pg	17 48 09.6	-0.2
NKC				eSG	Sg	17 48 45.7	+0.9
	comp=Z,52nm,0.3s						
OJC	Ojcow	2.72	120	ePg	Pg	17 48 09.9	-0.3
OJC				eSg	Sg	17 48 45.9	+0.4
JAVC	Velka Javorina	2.94	159	ePN	Pn	17 48 06.4	+0.3
KHC	Kasperske Hory	2.97	214	ePN	Pn	17 48 06.4	-0.1
KHC				ePG	Pb	17 48 12.4	+0.5
KHC				eSN	Sn	17 48 42.1	-0.7
KHC				eSG	Sg	17 48 52.4	-1.1
	comp=Z,19nm,0.5s						
CKRC	Cesky Krumlov	3.03	203	ePG	Pg	17 48 14.9	-1.2
GERES	GERESS Array B	3.18	210	Pn	Pn	17 48 09.8	+0.5
	comp=Z,1.3nm,0.3s,baz=30,slow=13,SNR=30						
GERES				Lg	Lg	17 48 57.2	
	comp=Z,5.2nm,0.3s,baz=41,slow=27,SNR=13						
SMOL	Smolenice	3.22	164	ePN	Pn	17 48 11.0	+1.1
SMOL				ePG	Pg	17 48 19.2	-0.6
SMOL				eSG	Sg	17 49 01.9	+0.4
LANS	Liptovska Anna	3.27	138	ePN	Pn	17 48 10.9	+0.2
LANS				ePG	Pg	17 48 20.1	-0.7
LANS				eSG	Sg	17 49 03.5	+0.3
MODS	Modra-Piesok	3.33	166	ePN	Pn	17 48 12.5	+1.0
MODS				ePG	Pg	17 48 21.5	-0.4
MODS				eSG	Sg	17 49 03.0	-2.1
VYHS	Vyhne	3.59	150	ePN	Pn	17 48 15.0	+0.1
VYHS				ePG	Pg	17 48 28.0	+1.2
CONA	Conrad Observa	3.70	183	Pn	Pn	17 48 17.0	+0.5
	comp=Z,0.7nm,0.2s,SNR=7.3						
CONA				eSg	Sg	17 49 15.6	-1.2
	comp=Z,19nm,0.6s						
MOA	Molln	3.96	198	Pn	Pn	17 48 20.4	+0.3
	comp=Z,6.3nm,0.3s,SNR=24						
MOA				eSg	Sg	17 49 24.3	-0.8
	comp=Z,8.4nm,0.4s						
ARSA	Arzberg	4.39	185	i Pn	Pn	17 48 27.4	+1.5
	comp=Z,0.4nm,0.2s,SNR=5.1						
ARSA				eSg	Sg	17 49 40.5	+1.5
	comp=Z,14nm,0.7s						
KBA	Koelnbreinsper	4.89	203	ePn	Pn	17 48 33.8	+0.8
	comp=Z,4.9nm,0.3s						
KBA				eSg	Sg	17 49 54.1	-1.0
	comp=Z,4.6nm,0.4s						
SOKA	Soboth	5.00	189	ePn	Pn	17 48 35.8	+1.5
	comp=Z,1.0nm,0.5s						
SOKA				eSg	Sg	17 50 00.2	+1.7
	comp=Z,3.5nm,0.5s						
WATA	Walderalm	5.21	216	ePn	Pn	17 48 38.5	+1.2
OBKA	Obir	5.22	192	ePn	Pn	17 48 43.7	+6.3
WTTA	Wattenberg	5.24	216	ePn	Pn	17 48 39.2	+1.4
	comp=Z,1.2nm,0.3s						
WTTA				eSg	Sg	17 50 02.4	-4.0
	comp=Z,3.4nm,0.6s						
MYKA	Terra Mystica	5.25	199	eSg	Sg	17 50 05.8	-0.8
	comp=Z,2.4nm,0.5s						
MOTA	Moosalm	5.38	219	ePn	Pn	17 48 40.6	+1.0
	comp=Z,0.5nm,0.3s						
MOTA				eSg	Sg	17 50 09.8	-1.0
	comp=Z,3.9nm,0.6s						
RETA	Reutte	5.40	222	ePn	Pn	17 48 40.1	+0.1
	comp=Z,0.4nm,0.2s						
RETA				eSg	Sg	17 50 13.8	+2.2
	comp=Z,8.3nm,0.7s						
ABTA	Abfaltersbach	5.42	207	ePn	Pn	17 48 40.8	+0.7
	comp=Z,0.7nm,0.3s						
ABTA				eSg	Sg	17 50 12.4	+0.5
	comp=Z,3.3nm,0.4s						
SQTA	Sankt Quirin	5.44	218	ePn	Pn	17 48 42.0	+1.5
	comp=Z,1.2nm,0.2s						
SQTA				eSg	Sg	17 50 09.1	-3.6
	comp=Z,1.6nm,0.3s						
FETA	Feichten	5.79	219	ePn	Pn	17 48 46.7	+1.4
	comp=Z,0.6nm,0.5s						
FETA				eSg	Sg	17 50 23.5	-0.4
	comp=Z,0.9nm,0.4s						
DAVA	Damuels	5.94	226	ePn	Pn	17 48 50.1	+2.7
	comp=Z,0.9nm,0.3s						
DAVA				eSg	Sg	17 50 29.2	+0.5
	comp=Z,4.3nm,0.5s						
DAVOX	Davos/Dischmat	6.33	223	Pn	Pn	17 48 54.1	+1.3
	comp=Z,0.2nm,0.3s,baz=23,slow=7.7,SNR=2.1						
DAVOX				Sn	Sn	17 50 08.7	+2.8
	comp=Z,0.1nm,0.3s,baz=171,slow=18,SNR=1.9						
DAVOX				Lg	Lg	17 50 38.5	
	comp=Z,0.4nm,0.3s,baz=195,slow=20,SNR=3.6						
AKASG	Malin Array Be	8.30	91	Pn	Pn	17 49 19.8	+0.2
	comp=Z,0.6nm,0.3s,baz=279,slow=12,SNR=4.6						
FINES	FINESS Array B	11.27	25	Pn	Pn	17 49 59.5	-0.6
	comp=Z,0.1nm,0.3s,baz=219,slow=11,SNR=1.5						
EKA	Eskdalemuir Ar	12.06	296	Pn	Pn	17 50 11.9	+0.9
	baz=102,slow=13,SNR=1.4						

*NEIC **08** 18:06:41.0±1.8, 58°.71N±0°.05×154°.9W±0°.1, h145^{km}±4^{km}, Error ellipse: s-maj=8.4km s-min=7.1km az=89.0*
*AEIC **08** 18:06:42±2.1, 58°.71N±0°.05×154°.98W±0°.09, h142^{km}±4^{km}, ML3.0, ML3.4/64(NEIC), Error ellipse: s-maj=7.5km s-min=6.4km az=49.0*
*IDC **08** 18:06:43.5±9.4, 59°.07N×154°.87W, h138^{km}±80^{km}, mb3.0/1, mb1 3.2/3, mb1mx2.9/51, mbtmp3.5/3, Error ellipse: s-maj=79.1km s-min=38.4km az=10.0*

ISC 08 18:06:41.1±0.9**, 58°.75N**±0°.04×**154°.92W**±0°.05**, h151**^{km}±6^{km}**, n140, σ1^{s}.12**/155**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAHC	Katmai Hardscr	0.11	207		Pn	18 07 00.9	-0.6
KAHC	Katmai Hardscr	0.11	207	P	Pn	18 07 00.9	-0.6
	baz=16						
KAPH	Katmai Pasha	0.33	116		Pn	18 07 01.8	-0.1
KAPH					Sn	18 07 16.9	-0.9
KVTA	Katmai Vly 10	0.41	209		Pn	18 07 01.8	-0.4
P18K	Big Mountain,	0.67	346		Pn	18 07 02.9	-0.6
P18K	Big Mountain,	0.67	346		Sn	18 07 18.9	-1.9
P18K	Big Mountain,	0.67	346	P	Pn	18 07 02.9	-0.6
	baz=169						
P18K				S	Sn	18 07 18.9	-1.9
	baz=169						
Q19K	Cape Douglas,	0.69	74		Pn	18 07 03.4	-0.2
Q19K					Sn	18 07 20.0	-0.9
Q19K	Cape Douglas,	0.69	74	P	Pn	18 07 03.7	+0.1
	baz=253						
Q19K				S	Sn	18 07 20.2	-0.7
	baz=253						
AUW	Augustine West	0.97	49		Pn	18 07 06.5	+0.8
AUL	Augustine Lava	1.00	49		Pn	18 07 06.7	+0.8
PLK3	Peulik 3	1.28	215		Pn	18 07 08.2	-0.4
O19K	Port Alsworth	1.49	12		Pn	18 07 10.7	+0.2
O19K	Port Alsworth	1.49	12		Sn	18 07 32.6	-0.5
O19K	Port Alsworth	1.49	12	P	Pn	18 07 10.8	+0.3
	baz=193						
O19K				S	Sn	18 07 32.6	-0.5
	baz=193						
ILSW	Iliamna Southw	1.54	35		Pn	18 07 11.7	+0.5
ILSW					Sn	18 07 34.0	-0.3
ILS	Iliamna Low So	1.54	37		Pn	18 07 11.7	+0.5
KDAK	Kodiak Island	1.56	127		Pn	18 07 10.7	-0.6
KDAK				IAML		18 07 34.5	
	199nm,0.2s						
KDAK				IAML		18 07 34.8	
	218nm,0.2s						
KDAK	Kodiak Island	1.56	127		Sn	18 07 32.9	-1.7
KDAK	Kodiak Island	1.56	127	P	Pn	18 07 11.0	-0.4
	baz=307						
KDAK				S	Sn	18 07 32.9	-1.7
	baz=307						
IVE	Iliamna Volcan	1.60	36		Pn	18 07 12.8	+0.9
IVE					Sn	18 07 36.0	+0.4
OHAK	Old Harbor	1.76	150		Pn	18 07 12.7	-0.7
OHAK				IAML		18 07 36.5	
	comp=N,385nm,0.4s						
OHAK				IAML		18 07 36.5	
	comp=E,307nm,0.3s						
OHAK	Old Harbor	1.76	150	P	Pn	18 07 12.7	-0.7
	baz=330						
O20K	Slope Mountain	1.78	40		Pn	18 07 14.9	+1.1
O20K	Slope Mountain	1.78	40	P	Pn	18 07 14.9	+1.1
	baz=222						
HOM	Homer	1.92	60	Pn	Pn	18 07 15.5	+0.3
HOM				IAML		18 07 45.9	
	comp=N,474nm,2.1s						
HOM				IAML		18 07 59.2	
	comp=E,312nm,1.5s						
RED	Redoubt Volcan	2.00	32		Pn	18 07 17.1	+0.8
RDWB	Redoubt West	2.04	30		Pn	18 07 17.5	+0.7
RDWB					Sn	18 07 44.7	+0.3
RSO	Redoubt South	2.04	32		Pn	18 07 17.8	+0.9
CNPM	China Poot	2.05	66	Pn	Pn	18 07 17.5	+0.7
NCT	North Crescent	2.08	28		Pn	18 07 18.0	+0.8
NCT					Sn	18 07 45.0	-0.2
N19K	Bonanza Creek	2.09	6		Pn	18 07 18.2	+0.9
N19K	Bonanza Creek	2.09	6	P	Pn	18 07 18.2	+0.9
	baz=187						
DFR	Drift River	2.17	30		Pn	18 07 19.1	+0.8
DFR					Sn	18 07 47.3	+0.3
SII	Sitkinak Islan	2.23	170	Pn	Pn	18 07 18.2	-0.8
SII				IAML		18 07 45.7	
	comp=N,390nm,3.6s						
SII				IAML		18 07 47.5	
	comp=E,306nm,1.9s						
SII	Sitkinak Islan	2.23	170	P	Pn	18 07 18.3	-0.6
	baz=349						
BRLK	Bradley Lake	2.31	62		Pn	18 07 20.2	+0.3
BRLK				IAML		18 07 51.9	
	comp=N,101nm,0.2s						
BRLK				IAML		18 07 53.9	
	comp=E,97nm,0.1s						
BRSE	Bradley Lake S	2.37	63		Pn	18 07 21.1	+0.5
BRSE	Bradley Lake S	2.37	63	P	Pn	18 07 21.1	+0.5
	baz=246						
SVW2	Sparrevohn	2.38	352		Pn	18 07 21.1	+0.3
CHIR	Chirikof Islan	2.96	188	Pn	Pn	18 07 26.4	-1.5
CHIR	Chirikof Islan	2.96	188	P	Pn	18 07 26.6	-1.3
	baz=6.7						
SLKM	Skilak Lake	2.97	51		Pn	18 07 29.2	+1.1
CHGN	Chignik	3.09	219	Pn	Pn	18 07 27.7	-1.9
CHGN				IAML		18 08 06.5	
	comp=E,99nm,0.3s						
CHGN				IAML		18 09 11.4	
	comp=N,81nm,3.4s						
CHGN	Chignik	3.09	219	P	Pn	18 07 29.0	-0.5
	baz=36						
SEW	Seward	3.11	62	Pn	Pn	18 07 30.3	+0.6
SEW	Seward	3.11	62	P	Pn	18 07 30.5	+0.8
	baz=246						
O22K	Cooper Landing	3.16	54	Pn	Pn	18 07 30.2	-0.2
O22K				IAML		18 08 11.8	
	comp=E,126nm,0.7s						
O22K				IAML		18 08 16.3	
	comp=N,137nm,1.0s						
STLK	Strandline Lak	3.16	28		Pn	18 07 32.2	+1.6
M19K	Big River Lodg	3.18	4	Pn	Pn	18 07 30.9	+0.2
VNHG	Veniaminof 1	3.42	224		Pn	18 07 34.3	+0.5
SUA	Susitna One	3.43	36		Pn	18 07 34.5	+0.5
SUA	Susitna One	3.43	36	IAML		18 08 24.8	
	comp=E,58nm,3.8s						
SUA				IAML		18 09 23.1	
	comp=N,52nm,4.8s						
SUA	Susitna One	3.43	36	P	Pn	18 07 34.5	+0.5
	baz=219						
L19K	White Mountain	3.45	0		Pn	18 07 35.2	+1.1
L19K	White Mountain	3.45	0	P	Pn	18 07 35.2	+1.1
	baz=181						
RC01	Rabbit Creek A	3.51	46		Pn	18 07 35.2	+0.3
RC01				IAML		18 08 16.6	
	comp=N,86nm,0.4s						
RC01				IAML		18 08 17.8	
	comp=E,85nm,0.2s						
RC01	Rabbit Creek A	3.51	46	P	Pn	18 07 35.4	+0.5
	baz=230						
L20K	Farewell, AK	3.78	7		Pn	18 07 39.3	+0.8
L20K	Farewell, AK	3.78	7	P	Pn	18 07 39.3	+0.8
	baz=189						
PWL	Port Wells	3.94	55		Pn	18 07 40.5	0.0
PWL				IAML		18 08 26.6	
	comp=E,60nm,0.3s						
PWL				IAML		18 08 29.1	
	comp=N,73nm,0.5s						
PMR	Palmer	4.06	43	Pn	Pn	18 07 40.9	-1.1
PMR				IAML		18 08 43.9	
	comp=N,47nm,3.5s						
PMR				IAML		18 08 45.5	
	comp=E,34nm,4.8s						
KNK	Knik Glacier	4.20	48		Pn	18 07 43.7	-0.1
KNK				IAML		18 08 32.1	
	comp=E,58nm,0.4s						
KNK				IAML		18 08 32.9	
	comp=N,41nm,0.4s						
KNK	Knik Glacier	4.20	48	P	Pn	18 07 43.6	-0.3
	baz=233						
GHO	Glory Hole Cre	4.26	42		Pn	18 07 43.9	-0.8
GHO				IAML		18 08 33.5	
	comp=N,35nm,0.5s						
GHO				IAML		18 09 56.5	
	comp=E,40nm,4.6s						
PPLA	Purkeypile	4.37	17	Pn	Pn	18 07 47.0	+0.7
Q23K	Middleton Isla	4.47	78	Pn	Pn	18 07 47.0	-0.4
MID	Middleton Isla	4.48	78	Pn	Pn	18 07 47.1	-0.3
GLI	Glacier Island	4.49	58	Pn	Pn	18 07 47.2	-0.5
GLI				IAML		18 08 27.4	
	comp=N,55nm,2.7s						
GLI				IAML		18 08 41.6	
	comp=E,55nm,1.1s						
SML	Sawmill	4.49	44	Pn	Pn	18 07 46.8	-0.9
SML				IAML		18 08 44.0	
	comp=N,32nm,1.9s						
SML				IAML		18 10 36.0	
	comp=E,39nm,3.8s						
SDPT	Sand Point	4.56	224	Pn	Pn	18 07 47.6	-1.0
FID	Port Fidalgo	4.72	61	Pn	Pn	18 07 50.1	-0.6
SCM	Sheep Creek Mo	4.88	47	Pn	Pn	18 07 52.6	-0.3
SCM					Sn	18 08 48.6	-0.3
EYAK	Cordova Ski Ar	4.99	65	Pn	Pn	18 07 54.8	+0.5
WAT7	Susitna Watana	5.06	33		Pn	18 07 55.1	-0.2
WAT1	Susitna Watana	5.15	35		Pn	18 07 56.0	-0.3
WAT1	Susitna Watana	5.15	35	P	Pn	18 07 56.0	-0.3
	baz=220						
DIV	Divide	5.18	59	Pn	Pn	18 07 57.2	+0.3
DIV					Sn	18 08 52.4	-3.6
KTH	Kantishna Hill	5.20	20	Pn	Pn	18 07 57.1	+0.1
KTH				IAML		18 09 24.1	
	comp=E,21nm,4.8s						
KTH				IAML		18 10 49.7	
	comp=N,28nm,4.1s						
WAT6	Susitna Watana	5.22	39		Pn	18 07 56.5	-0.9
WAT6	Susitna Watana	5.22	39	P	Pn	18 07 56.5	-0.9
	baz=226						
TRF	Thorofare Moun	5.23	23	Pn	Pn	18 07 57.4	-0.2
TRF	Thorofare Moun	5.23	23	P	Pn	18 07 57.9	+0.3
	baz=208						
KLU	Klutina	5.27	55	Pn	Pn	18 07 57.1	-0.9
KLU					Sn	18 08 54.8	-3.4
KLU	Klutina	5.27	55	P	Pn	18 07 58.5	+0.5
	baz=242						
RAGM	Ragged Mountai	5.46	68	Pn	Pn	18 08 00.9	+0.4
M24K	Tolsona, Glenn	5.49	48	Pn	Pn	18 08 01.2	+0.3
RND	Reindeer	5.52	30	Pn	Pn	18 08 01.1	-0.3
HMT	Hamilton	5.65	69	Pn	Pn	18 08 03.1	+0.1
BMRM	Bremner River	5.65	62	Pn	Pn	18 08 02.6	-0.5
DHY	Denali Highway	5.69	37	Pn	Pn	18 08 03.3	-0.3
BPAW	Bear Paw Mtn.	5.69	18	Pn	Pn	18 08 03.7	+0.2
MCK	McKinley	5.78	27	Pn	Pn	18 08 04.4	-0.2
MCK	McKinley	5.78	27	P	Pn	18 08 04.8	+0.2
	baz=213						
N25K	Chitina, Valde	5.89	56	Pn	Pn	18 08 05.2	-1.1
N25K					Sn	18 09 10.2	-2.8
N25K	Chitina, Valde	5.89	56	P	Pn	18 08 07.2	+0.9
	baz=245						
BERG	Berg Lake	5.93	69	Pn	Pn	18 08 07.6	+0.8
FALS	False Pass	6.08	234	Pn	Pn	18 08 09.0	+0.3
GLB	Gilahina Butte	6.18	59	Pn	Pn	18 08 11.1	+1.0
PAX	Paxson	6.26	43	Pn	Pn	18 08 11.0	-0.2
PAX	Paxson	6.26	43	P	Pn	18 08 11.3	+0.1
	baz=232						
VRDI	Verde Repeater	6.27	62	Pn	Pn	18 08 12.2	+0.9
CRQM	Cirque	6.28	66	Pn	Pn	18 08 12.3	+0.7
SNH	Sunshine Point	6.32	72	Pn	Pn	18 08 13.7	+1.7
WAX	Waxell Ridge	6.36	69	Pn	Pn	18 08 12.4	0.0
TGL	Tana Glacier	6.43	67	Pn	Pn	18 08 14.0	+0.5
NEA2	Nenana	6.49	23	Pn	Pn	18 08 13.2	-1.0
MCARA	McCarthy VSAT	6.51	61	Pn	Pn	18 08 15.9	+1.4
WRH	Wood River Hil	6.60	27		Pn	18 08 14.7	-0.9
MLY	Manley	6.61	16	Pn	Pn	18 08 14.5	-1.2
ISLE	Juniper Island	6.64	68	Pn	Pn	18 08 17.9	+1.7
KIAG	Kiagna River	6.70	66		Pn	18 08 18.0	+1.0
PTPK	Patty Peak	6.71	63		Pn	18 08 18.5	+1.2
BALM	Baldy	6.73	65		Pn	18 08 18.6	+1.2
CCB	Clear Creek Bu	6.81	27		Pn	18 08 17.4	-1.0
HDA	Harding Lake	6.83	30		Pn	18 08 17.9	-0.9
YAH	Yahtse	6.89	71	Pn	Pn	18 08 21.5	+1.8
I23K	Minto, Yukon-K	6.94	20	Pn	Pn	18 08 19.4	-0.7
I23K	Minto, Yukon-K	6.94	20	P	Pn	18 08 19.8	-0.2
	baz=205						
MDM	Murphy Dome	6.99	24		Pn	18 08 20.1	-0.7
COLA	College	7.00	26	Pn	Pn	18 08 18.6	-2.3
BARN	Barnard Glacie	7.06	65	Pn	Pn	18 08 23.0	+1.1
RKAV	Rock Avalanche	7.08	72		Pn	18 08 23.7	+1.5
IL31		7.14	29		Pn	18 08 21.5	-1.3
ILAR	Eielson Array	7.14	29	P	Pn	18 08 22.3	-0.5
	comp=N,1.3nm,0.3s,baz=214,slow=13,SNR=64						
ILAR				S	Sn	18 09 36.7	-6.0
	comp=N,0.5nm,0.3s,baz=208,slow=15,SNR=8.2						
ILAR	Eielson Array	7.14	29	Pn	Pn	18 08 21.6	-1.2
CTGM	Chitina Glacie	7.19	66	Pn	Pn	18 08 25.6	+1.9
TABL	Table Mountain	7.20	70	Pn	Pn	18 08 25.5	+1.8
IMAR	Indian Mountai	7.29	4	Pn	Pn	18 08 24.6	-0.1
POKR	Poker Plat Res	7.30	26	Pn	Pn	18 08 24.0	-0.9
LOGN	Logan Glacier	7.32	68	Pn	Pn	18 08 27.3	+1.9
SCRK	Sand Creek	7.42	40	Pn	Pn	18 08 25.6	-1.0
PCA	Pinnacle	7.60	73	Pn	Pn	18 08 29.8	+0.8
BCAR	Beaver Creek A	7.72	50	Pn	Pn	18 08 31.7	+1.0
UNV	Unalaska Valle	8.10	238	Pn	Pn	18 08 34.6	-1.0
TOLK	Toolik Lake Re	10.21	11	Pn	Pn	18 09 03.0	-0.5
INK	Inuvik	13.43	36	Pn	Pn	18 09 45.5	+0.1
YKA	Yellowknife Ar	19.89	62	P	P	18 11 02.7	+2.4
	comp=N,0.1nm,0.3s,baz=274,slow=9.9,SNR=7.1						
YKA	Yellowknife Ar	19.89	62	P	P	18 11 00.9	+0.6
SONM	Songino Array	54.73	305	P	P	18 15 56.6	+2.1
	comp=N,0.2nm,0.4s,baz=46,slow=5.3,SNR=2.3						

DJA 08 18:18:51.1±0.2**, 2°S**±2°×**12°0E**±°**, h10**^{km}**, M4.2**/16**, mb5.1**/5**, mB6.2**/1**, MLv3.8**/16**, Mw(mB)5.9**/1**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	1.50	191	P	Pn	18 19 15.8	-2.3
APSI	Ampana	1.68	67	P	Pn	18 19 19.6	-0.9
MPSI	Mapaga	1.90	354	P	Pn	18 19 21.8	-1.7
SPSI	Sidrap Palu	2.41	188	P	Pn	18 19 30.5	-0.1
MRSI	Marisa	2.73	42	P	Pn	18 19 34.4	-0.7
BNSI	Bone	2.82	180	P	Pn	18 19 38.4	+2.1
GTOI	Gorontalo	3.64	53	P	Pn	18 19 47.9	+0.4
BKSI	Bulukumba	3.74	180	P	Pn	18 19 50.4	+1.5
KBKI	Kotabaru	4.29	246	P	Pn	18 19 54.6	-1.9

KMSI	Cibinong	4.42	61	P	Pn	18 19 58.4	+0.1
BSSI	Bau Bau, Buton	4.57	175	P	Pn	18 19 59.5	-0.8
MTKI	Muara Teweh, K	5.24	277	P	Pn	18 20 11.0	+1.4
	0.1nm20nm,0.5s						
TNG	Tangerang	14.18	251	P	Pn	18 22 12.5	+0.3
	9µm835nm,0.5s						
TNG				P	Pn	18 22 12.5	+0.3

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*IDC **08** 18:20:17.6±3.2, 6°.53S×154°.34E, h81km±28km, mb3.2/5, mb1 3.5/7, mb1mx3.3/32, mbtmp3.7/7, MS2.9/2, Ms1 2.9/2, ms1mx2.6/21, Error ellipse: s-maj=33.7km s-min=22.9km az=167.0*

ISC 08 18:20:19.2±0.8**, 6°.7S**±0°.1×**154°.37E**±0°.08**, h100**km**, n8, σ1s.01**/12**, mb3.4**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.16	117	P	Pn	18 21 47.7	+0.1
	1.8nm,0.3s,baz=176,slow=19,SNR=1.5						
HNR				S	Sn	18 22 56.2	-0.5
	5.0nm,0.3s,baz=129,slow=16,SNR=4.7						
HNR				LR	LR	18 24 20.6	
	comp=Z,70nm,18.4s,baz=228,slow=39						
PMG	Port Moresby	7.63	249	P	Pn	18 22 05.9	-1.8
	0.7nm,0.3s,baz=66,slow=18,SNR=3.1						
PMG				S	Sn	18 23 33.3	+0.7
	0.4nm,0.3s,baz=342,slow=20,SNR=1.7						
PMG				LR	LR	18 25 27.9	
	comp=Z,104nm,18.4s,baz=70,slow=40						
WRA	Warramunga Arr	23.48	234	P	P	18 25 21.4	+1.2
	1.4nm,0.8s,baz=57,slow=9.4,SNR=9.5						
WRA				PcP	PcP	18 29 03.9	+0.5
	0.4nm,0.6s,baz=69,slow=2.6,SNR=7.9						
ASAR	Alice Springs	25.91	227	P	P	18 25 42.9	+0.7
	0.5nm,0.8s,baz=56,slow=9.2,SNR=6.3						
ASAR				PcP	PcP	18 29 10.1	+1.4
	0.3nm,0.9s,baz=57,slow=3.4,SNR=1.7						
CMAR	Chiang Mai Arr	60.09	296	P	P	18 30 17.1	+0.7
	0.3nm,0.4s,baz=113,slow=5.3,SNR=3.2						
SONM	Songino Array	68.75	328	P	P	18 31 11.7	-0.7
	0.2nm,0.5s,baz=126,slow=7.3,SNR=2.0						
MKAR	Makanchi Array	82.77	319	P	P	18 32 32.4	+0.1
	0.4nm,0.7s,baz=109,slow=7.2,SNR=5.0						
TORD	Torodi Ar. Bea	152.35	286	PKPbc	PKPbc	18 40 04.0	-0.5
	0.3nm,0.5s,baz=70,slow=2.6,SNR=2.8						

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*BJI **08** 18:35:16.8±0.0, 0°.81N×127°.51E, h9km, mB5.2/20, mb4.5/35, Ms4.6/4, Ms7 4.2/4*

*NEIC **08** 18:35:19.4±1.7, 0°.99N±0°.05×127°.51E±0°.05, h10km±4km, mb5.0/80, Error ellipse: s-maj=8.6km s-min=6.3km az=124.0*

*MOS **08** 18:35:20.2±0.8, 0°.98N×127°.51E, h34km, mb5.0/4, Error ellipse: s-maj=13.1km s-min=7.0km az=115.9*

*DJA **08** 18:35:20.2±0.2, 1°N±2°×12°8E±°, h10km, M4.4/30, mB5.0/12, mb4.8/30, MLv4.5/17, Mw(mB)4.3/12*

*IDC **08** 18:35:23.8±2.0, 0°.96N×127°.54E, h44km±21km, mb4.1/14, mb1 4.2/19, mb1mx3.9/47, mbtmp4.4/19, ML4.2/5, MS3.6/13, Ms1 3.7/13, ms1mx3.4/42, Error ellipse: s-maj=20.3km s-min=12.0km az=81.0*

ISC 08 18:35:19.0±0.3**, 0°.96N**±0°.04×**127°.53E**±0°.04**, h10**km**, n243, σ1s.32**/226**, mb4.8**/67**, MS3.7**/10**, 1C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.25	221	P	Pg	18 35 24.3	+0.1
TNTI	Ternate	0.25	221	Pg	Pg	18 35 24.0	-0.2
TNTI				Sg	Sg	18 35 28.3	+0.6
LBMI	Labuha	1.59	181	P	Pn	18 35 47.9	+0.6
SANI	Sanana	3.37	207	P	Pn	18 36 11.5	-0.2
KMSI	Cibinong	3.57	264	P	Pn	18 36 16.4	+1.8
SWI	Sorong	4.14	116	P	Pn	18 36 25.1	+2.7
SIJI	Sorong	4.15	116	P	Pn	18 36 25.4	+2.8
	5.6nm,0.3s,baz=218,slow=13,SNR=28						
SIJI				S	Sn	18 37 07.4	-3.8
	5.1nm,0.3s,baz=336,slow=20,SNR=1.7						
SIJI				LR	LR	18 37 36.1	
	comp=Z,642nm,19.1s,baz=297,slow=32						
MSAI	Masohi	4.50	162	P	Pn	18 36 28.8	+1.4
GTOI	Gorontalo	4.53	266	P	Pn	18 36 30.6	+2.8
AAI	Ambon	4.67	172	P	Pn	18 36 31.7	+2.1
MRSI	Marisa	5.61	265	P	Pn	18 36 43.6	+1.0
	0.4nm1µm119nm,0.6s						
FAKI	Fak Fak	6.09	129	P	Pn	18 36 52.4	+3.1
	0.2nm622nm48nm,0.9s						
FAKI	Fak Fak	6.09	129	Pn	Pn	18 36 52.3	+3.1
APSI	Ampana	6.17	252	P	Pn	18 36 51.3	+1.0
	0.5nm1µm69nm,0.5s						
DAV	Davao City (W)	6.37	342	P	Pn	18 36 54.6	+1.5
	22nm,0.3s,baz=79,slow=10,SNR=1.5						
DAV	Davao City (W)	6.37	342	Pn	Pn	18 36 54.3	+1.2
KCP	Kidapawan	6.48	338	⇓eP	Pn	18 36 57.3	+2.6
TOLI2	Tolitoli	6.75	271	Pn	Pn	18 36 59.1	+0.8
MPSI	Mapaga	7.66	265	P	Pn	18 37 12.6	+1.8
	0.1nm644nm28nm,0.7s						
TTSI	Tana Toraja	8.68	243	P	Pn	18 37 24.8	0.0
	1µm100nm,0.6s						
BNSI	Bone	9.13	234	P	Pn	18 37 32.1	+1.1
	1µm96nm,0.7s						
SPSI	Sidrap Palu	9.17	238	P	Pn	18 37 32.5	+0.9
	2µm200nm,0.6s						
BKSI	Bulukumba	9.68	230	P	Pn	18 37 40.1	+1.6
	771nm87nm,0.8s						
KAPI	Kappang	9.78	233	P	Pn	18 37 42.0	+2.1
	4.1nm,0.3s,baz=60,slow=4.5,SNR=17						
KAPI				S	Sn	18 39 26.6	-3.3
	1.3nm,0.3s,baz=17,slow=19,SNR=2.2						
KAPI	Kappang	9.78	233	P	Pn	18 37 41.0	+1.1
KAPI	Kappang	9.78	233	Pn	Pn	18 37 41.0	+1.1
MYLDM	Lahad Datu	9.94	295	Pn	Pn	18 37 43.4	+1.3
BSSI	Bau Bau, Buton	9.96	225	P	Pn	18 37 44.3	+1.9
	461nm29nm,0.5s						
MMRI	Maumere	10.90	209	Pn	Pn	18 37 55.4	+0.2
SOEI	Soe	11.13	197	Pn	Pn	18 37 59.1	+0.5
EDFI	Ende, Flores	11.27	211	P	Pn	18 38 02.3	+1.9
	19nm,0.6s						
BATI	Baumata	11.74	199	P	Pn	18 38 08.6	+1.8
	0.7nm,0.3s,baz=3.2,slow=4.3,SNR=1.4						
BATI				LR	LR	18 43 21.7	
	comp=Z,176nm,18.9s,baz=360,slow=41						
BATI	Baumata	11.74	199	P	Pn	18 38 21.2	+14
KKM	Kota Kinabalu	12.37	294	Pn	Pn	18 38 14.3	-1.2
KKM	Kota Kinabalu	12.37	294	P	Pn	18 38 21.5	+6.0
MTKI	Muara Teweh, K	12.78	262	P	Pn	18 38 28.1	+7.2
BBKI	Banjar Baru	13.43	251	P	P	18 38 43.7	+4.4
JAY	Jayapura	13.62	105	LR	LR	18 43 27.7	
	comp=Z,607nm,19.5s,baz=276,slow=36						
PLAI	Plampang	13.75	225	P	Pn	18 38 35.8	+1.6
	30nm,0.8s						
MTN	Manton Dam	14.18	166	P	Pn	18 38 39.7	-0.3
	baz=14,SNR=11						
MTN	Manton Dam	14.18	166	Pn	Pn	18 38 40.7	+0.6
TWSI	Taliwang, Sumb	14.34	228	P	P	18 38 56.2	+6.8
KDU	Kakadu	14.42	160	P	Pn	18 38 44.1	+0.7
	baz=15,SNR=9.9						
SRBI	Singaraja	15.22	234	P	P	18 39 05.9	+6.7
SBUM	Sibu	15.38	276	P	Pn	18 38 56.4	+0.1
KMMI	Kalianget	15.70	239	P	Pn	18 39 02.3	+1.7
	76nm,1.2s						
STKI	Sintang	16.08	267	P	Pn	18 39 05.9	+0.5
	17nm,1.7s						
JAGI	Jajag, Banyuwa	16.30	235	P	Pn	18 39 09.5	+1.2
	43nm,0.9s						
JAGI	Jajag, Banyuwa	16.30	235	P	Pn	18 39 08.8	+0.5
JAGI				IAmb	IAmb	18 39 33.6	
	comp=Z,163nm,1.7s						
KNRA	Kununurra	16.58	176	P	Pn	18 39 11.3	-0.5
	baz=17,SNR=16						
KNRA	Kununurra	16.58	176	P	Pn	18 39 09.0	-2.8
KNRA	Kununurra	16.58	176	P	Pn	18 39 13.7	+1.9
GMJI	Gumukmas	16.78	237	P	Pn	18 39 13.3	-1.0
	comp=Z,29nm,0.8s						
KSM	Kuching	17.23	272	Pn	Pn	18 39 18.8	-1.3
WOJI	Wonogiri, Jawa	18.73	242	P	Pn	18 39 47.4	+8.9
SMRI	Semarang	18.82	245	P	P	18 39 36.6	-2.5
SMRI				IAmb	IAmb	18 40 02.6	
	comp=Z,116nm,1.5s						
FITZ	Fitzroy Crossi	19.03	186	P	P	18 39 40.5	-0.9
	comp=Z,0.4nm,0.3s,baz=357,slow=6.8,SNR=17						
FITZ	Fitzroy Crossi	19.03	186	P	P	18 39 40.6	-0.8
	baz=19,SNR=14						
UGM	Wanagama	19.12	242	P	P	18 39 41.3	-1.1
UGM				IAmb	IAmb	18 40 17.1	
	comp=Z,189nm,1.5s						
MANU	Manus Island	20.05	99	P	P	18 39 51.7	-1.0
LEM	Lembang	21.33	248	P	P	18 40 08.1	+1.5
	comp=Z,12nm,0.7s,baz=68,slow=16,SNR=3.9						
COEN	Coen	21.45	134	P	P	18 40 06.9	-0.8
COEN	Coen	21.45	134	P	P	18 40 11.2	+3.5
PPBI	Pangkal Pinang	21.62	262	P	P	18 40 11.6	+2.0
WB0	Warramunga Arr	21.67	162	P	P	18 40 09.5	-0.6
WB0				IAmb	IAmb	18 40 14.8	
	comp=Z,36nm,0.6s						
WRAB	Tennant Creek	21.82	163	i P	P	18 40 11.5	-0.1
WRAB	Tennant Creek	21.82	163	P	P	18 40 11.7	+0.1
WRAB				IAmb	IAmb	18 40 16.7	
	comp=Z,45nm,0.6s						
WRAB	Tennant Creek	21.82	163	P	P	18 40 12.5	+0.9
WRA	Warramunga Arr	21.82	163	P	P	18 40 12.2	+0.5
	comp=Z,41nm,0.6s,baz=340,slow=11,SNR=222						
WRA	Warramunga Arr	21.82	163	i P	P	18 40 12.1	+0.4
WRA				pmax	pmax		
	comp=Z,43nm,0.6s						
WRA	Warramunga Arr	21.82	163	P	P	18 40 10.4	-1.3
WB2	Warramunga Arr	21.83	163	P	P	18 40 12.1	+0.4
WB2				IAmb	IAmb	18 40 16.8	
	comp=Z,50nm,0.6s						
WR0	Warramunga Arr	21.90	162	P	P	18 40 12.9	+0.4
WR0				IAmb	IAmb	18 40 17.2	
	comp=Z,26nm,0.6s						
PMG	Port Moresby	22.09	118	LR	LR	18 51 20.3	
	comp=Z,444nm,18.9s,baz=318,slow=43						
TWG	Pinlang	22.62	344	P	P	18 40 19.1	-1.1
TWG				IAmb	IAmb	18 40 36.0	
	comp=Z,37nm,1.0s						
YULB	Yu-li	23.10	345	P	P	18 40 24.0	-1.3
YULB				IAmb	IAmb	18 40 29.9	
	comp=Z,50nm,1.3s						
TPUB	Ta-pu	23.19	344	P	P	18 40 25.5	-0.7
MBWA	Marble Bar	23.27	199	P	P	18 40 29.9	+2.9
	comp=Z,21nm,0.9s						
SSLB	Suanglung	23.57	345	P	P	18 40 28.9	-1.1
SSLB				IAmb	IAmb	18 40 40.9	
	comp=Z,56nm,1.4s						
PSA00	Pilbara Seismi	23.62	198	P	P	18 40 27.9	-2.6
PSA00	Pilbara Seismi	23.62	198	P	P	18 40 28.7	-1.8
PSA00				IAmb	IAmb	18 40 30.3	
	comp=Z,7.9nm,1.2s						
PSA00	Pilbara Seismi	23.62	198	P	P	18 40 33.1	+2.6
MYKOM	Kota Tinggi	23.69	272	P	P	18 40 29.4	-1.8
MYKOM				IAmb	IAmb	18 40 34.3	
	comp=Z,88nm,1.8s						
MDSI	Maura Dua	23.95	257	P	P	18 40 33.7	-0.1
	comp=Z,7.4nm,1.3s						
YHNB	Yeheng	24.31	346	P	P	18 40 35.8	-1.3
QIS	Mount Isa	24.44	152	P	P	18 40 39.3	+1.1
	baz=25,SNR=15						
QIS	Mount Isa	24.44	152	P	P	18 40 38.9	+0.7
AS31	Alice Springs	25.25	166	P	P	18 40 45.7	+0.1
ASAR	Alice Springs	25.25	166	P	P	18 40 45.8	+0.2
	comp=Z,22nm,0.8s,baz=352,slow=7.7,SNR=187						
ASAR	Alice Springs	25.25	166	P	P	18 40 45.4	-0.2
ASAR	Alice Springs	25.25	166	P	P	18 40 45.4	-0.2
MASI	Maura Aman, Be	25.61	261	P	P	18 40 50.0	+1.1
	comp=Z,60nm,1.0s						
WRKA	Warakurna	25.86	178	P	P	18 40 51.5	+0.5
	baz=26,SNR=62						
WRKA	Warakurna	25.86	178	P	P	18 40 51.7	+0.7
UBPT	Khong Chiam	26.02	304	P	P	18 40 51.2	-1.3
UBPT				IAmb	IAmb	18 40 54.3	
	comp=Z,62nm,1.6s						
KRJI	Kerinci	26.24	263	P	P	18 40 56.5	+1.7
	comp=Z,84nm,1.3s						
GIRL	Giralia	26.80	208	P	P	18 40 58.3	-1.3
GIRL	Giralia	26.80	208	P	P	18 41 00.9	+1.3
PDSI	Padang	27.13	266	P	P	18 41 10.1	+7.4
KULM	Kulim	27.18	280	P	P	18 41 02.4	-0.7
KULM				IAmb	IAmb	18 41 28.9	
	comp=Z,29nm,1.4s						
MEEK	Meekatharra	28.76	197	P	P	18 41 16.3	-0.8
	baz=29,SNR=7.2						
MEEK	Meekatharra	28.76	197	P	P	18 41 18.1	+1.0
	comp=Z,16nm,1.6s						
OOD	Oodnadatta	29.65	165	P	P	18 41 25.4	+0.5
GSI	Gunungsitoli	29.95	271	P	P	18 41 26.5	-1.3
INKA	Innaminka	31.24	157	P	P	18 41 39.4	+0.4
FORT	Forrest	31.57	179	P	P	18 41 41.0	-0.9
FORT				IAmb	IAmb	18 41 46.0	
	comp=Z,20nm,0.6s						
FORT	Forrest	31.57	179	P	P	18 41 42.9	+1.0
MULG	Mulgathing	31.69	169	P	P	18 41 43.2	+0.3
MORW	Morawa	31.82	199	P	P	18 41 42.9	-1.2
MORW				IAmb	IAmb	18 42 04.7	
	comp=Z,15nm,1.2s						
MORW	Morawa	31.82	199	P	P	18 41 45.4	+1.3
NJ2	Nanjing	31.99	346	eP	P	18 41 46.8	+1.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LCRK	Leigh Creek	32.85	163	P	P	18 41 54.5	+1.4
CMAR	Chiang Mai Arr	33.01	304	P	P	18 41 54.9	+0.2
	comp=Z,0.4nm,0.3s,baz=121,slow=8.5,SNR=6.1						
CMAR				PcP	PcP	18 44 39.4	+0.7
	comp=Z,0.5nm,0.3s,baz=129,slow=2.4,SNR=4.6						
CMAR				LR	LR	18 54 46.2	
	comp=Z,57nm,21.7s,baz=185,slow=35						
CMAR	Chiang Mai Arr	33.01	304	P	P	18 41 54.3	-0.4
CMAR	Chiang Mai Arr	33.01	304	P	P	18 41 54.2	-0.4
BLDU	Ballidu	33.05	197	P	P	18 41 54.6	-0.3
CHTO	Chiang Mai	33.18	304	P	P	18 41 55.2	-1.0
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHTO	Chiang Mai	33.18	304	P	P	18 41 55.2	-1.0
KLBR	Kellerberrin	33.68	195	P	P	18 42 00.8	+0.4
HNR	Honiara	33.89	108	LR	LR	18 55 27.8	
	comp=Z,139nm,20.3s,baz=268,slow=36						
MUN	Mundaring	34.47	197	P	P	18 42 07.3	0.0
	baz=35,SNR=6.4						
MUN	Mundaring	34.47	197	P	P	18 42 07.0	-0.3
BBOO	Buckleboo	34.54	167	P	P	18 42 07.8	0.0
	baz=35,SNR=55						
BBOO	Buckleboo	34.54	167	P	P	18 42 07.9	0.0
BBOO	Buckleboo	34.54	167	P	P	18 42 08.1	+0.2
EIDS	Eidsvold	34.70	141	P	P	18 42 10.3	+1.0
EIDS				IAmb	IAmb	18 42 11.7	
	comp=Z,18nm,1.1s						
JWT	Wachi	34.92	11	P	P	18 42 11.2	+0.1
JWT				IAmb	IAmb	18 42 18.8	
	comp=Z,16nm,1.0s						
NWAO	Narrogin (SRO)	35.08	195	P	P	18 42 13.2	+0.7
STKA	Stephens Creek	35.28	159	P	P	18 42 14.8	+0.6
	comp=Z,12nm,0.8s,baz=337,slow=9.1,SNR=23						
STKA				LR	LR	18 57 50.4	
	comp=Z,111nm,18.9s,baz=18,slow=38						
STKA	Stephens Creek	35.28	159	P	P	18 42 14.8	+0.6
	baz=36,SNR=23						
STKA	Stephens Creek	35.28	159	P	P	18 42 13.9	-0.3
STKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
STKA	Stephens Creek	35.28	159	P	P	18 42 13.9	-0.3
STKA	Stephens Creek	35.28	159	P	P	18 42 14.6	+0.4
HTT	Hallett	35.85	164	P	P	18 42 19.9	+0.8
	baz=36,SNR=14						
HTT	Hallett	35.85	164	P	P	18 42 20.0	+0.8
KSAR	Wonju Array Be	36.30	0	P	P	18 42 23.5	+0.6
KSAR	Wonju Array Be	36.30	0	P	P	18 42 23.5	+0.6
KSRS	Korea Array	36.31	1	P	P	18 42 23.4	+0.4
	comp=Z,1.4nm,0.7s,baz=179,slow=9.4,SNR=15						
KSRS				LR	LR	18 59 19.5	
	comp=Z,28nm,19.9s,baz=170,slow=40						
KS19	Wonju Array Si	36.36	0	P	P	18 42 23.1	-0.3
KS19				IAmb	IAmb	18 42 34.8	
	comp=Z,34nm,1.6s						
CMSA	Cobar Meteorol	36.63	154	P	P	18 42 27.2	+1.4
MJAR	Matsushiro Arr	36.76	14	P	P	18 42 26.6	-0.2
	comp=Z,6.0nm,0.9s,baz=183,slow=9.7,SNR=11						
MJAR				LR	LR	18 58 55.5	
	comp=Z,86nm,18.1s,baz=200,slow=38						
MAJO	Matsushiro	36.76	14	P	P	18 42 25.8	-1.0
MAJO				pmax	pmax		
	comp=Z,30nm,1.4s						
MAJO	Matsushiro	36.76	14	P	P	18 42 25.8	-1.0
MAJO				IAmb	IAmb	18 42 31.4	
	comp=Z,30nm,1.4s						
MAT	Matsushiro	36.76	14	P	P	18 42 27.2	+0.4
MJB9	Matsu-Tunnel	36.76	14	P	P	18 42 25.1	-1.7
JSD	Sado	38.19	14	P	P	18 42 39.6	+0.6
JSD				IAmb	IAmb	18 42 46.5	
	comp=Z,24nm,1.3s						
JMM	Marumori	38.70	17	P	P	18 42 43.2	0.0
JMM				IAmb	IAmb	18 42 46.6	
	comp=Z,34nm,1.0s						
ARMA	Armidale	38.74	146	P	P	18 42 43.0	-0.8
ARPS	Mount Arapiles	39.83	162	P	P	18 42 54.6	+2.0
	baz=40,SNR=7.0						
BJT	Baijiatuau	40.23	346	P	P	18 42 54.7	-1.2
BJT				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BJT	Baijiatuau	40.23	346	P	P	18 42 54.7	-1.3
BJI	Beijing	40.25	346	P	P	18 42 56.2	+0.1
BJI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KWAJ	Kwajalein Atol	40.65	78	P	P	18 42 57.7	-2.2
KWAJ				pmax	pmax		
	comp=Z,622nm,1.5s						
KWAJ	Kwajalein Atol	40.65	78	P	P	18 42 57.7	-2.1
LZH	Lanzhou	41.28	330	⇑P	P	18 43 06.2	+1.2
LZH				sP	sP	18 43 16.1	+6.7
LZH				pmax	pmax		
	comp=Z,12nm,1.5s						
CAN	Canberra	41.30	153	P	P	18 43 02.9	-2.0
CAN				pmax	pmax		
	comp=Z,58nm,1.8s						
CAN	Canberra	41.30	153	P	P	18 43 02.9	-2.0
CAN				IAmb	IAmb	18 43 33.8	
	comp=Z,58nm,1.8s						
JTM	Tenmabayashi	41.50	16	P	P	18 43 05.9	-0.5
TOO	Toolangi	41.79	158	P	P	18 43 09.1	+0.2
TOO				pmax	pmax		
	comp=Z,45nm,1.8s						
TOO	Toolangi	41.79	158	P	P	18 43 09.1	+0.2
TOO				IAmb	IAmb	18 43 46.4	
	comp=Z,45nm,1.8s						
SHL	Shillong	42.18	308	P	P	18 43 11.1	-1.4
SHL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SHL	Shillong	42.18	308	P	P	18 43 11.1	-1.4
HHC	Hu-ho-hao-te	42.26	342	eP	P	18 43 12.6	-0.2
HHC				S	S	18 49 33.9	+0.4
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,4.8s						
SANVU	Saraoutou	42.46	114	P	P	18 43 13.3	-1.3
SANVU				IAmb	IAmb	18 43 34.0	
	comp=Z,43nm,1.3s						
BTO	Baotou	42.54	340	eP	P	18 43 18.6	+3.5
USRK	Ussuriysk Ar.	43.23	5	P	P	18 43 21.1	+0.6
	comp=Z,2.2nm,0.7s,baz=191,slow=6.9,SNR=4.1						
USRK				LR	LR	19 04 22.0	
	comp=Z,41nm,18.0s,baz=267,slow=40						
USRK	Ussuriysk Ar.	43.23	5	P	P	18 43 20.2	-0.3
USRK	Ussuriysk Ar.	43.23	5	P	P	18 43 20.1	-0.3
MDJ	Mudanjiang	43.51	2	P	P	18 43 24.7	+2.0
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,230nm,5.0s						
OUENC	Ouen Island, N	44.80	124	P	P	18 43 32.7	-0.8
LSA	Lhasa	44.88	313	P	P	18 43 34.6	+0.1
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LSA	Lhasa	44.88	313	P	P	18 43 34.6	+0.1
ASAJ	Asahikawa	45.01	15	P	P	18 43 35.4	+0.6
	comp=Z,9.0nm,1.0s,baz=281,slow=19,SNR=2.1						
ASAJ	Asahikawa	45.01	15	P	P	18 43 35.4	+0.6
ASAJ				pmax	pmax		
	comp=Z,74nm,1.7s						
JKA	Kamikawa-asahi	45.01	15	P	P	18 43 35.4	+0.6
GTA	Gaotai	45.87	330	eP	P	18 43 42.8	+0.9
GTA				pP	sP	18 43 52.5	+6.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KLR	Kul'dur	48.22	4	P	P	18 43 59.0	-0.9
	comp=Z,1.6nm,0.8s,baz=284,slow=4.5,SNR=4.0						
KLR	Kul'dur	48.22	4	i P	P	18 43 59.4	-0.5
KLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HYB	Hyderabad	50.84	292	i P	P	18 44 20.0	-0.4
MSVF	Nonsavu	53.07	113	LR	LR	19 05 52.6	
	comp=Z,121nm,18.1s,baz=1.9,slow=34						
WMQ	Urumqi	55.44	326	eP	P	18 44 56.4	+2.4
WMQ				pP	pP	18 44 59.1	+1.8
WMQ				pmax	pmax		
	comp=Z,19nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,240nm,5.3s						
PETK	Petropavlovsk-	57.69	21	P	P	18 45 09.7	-0.1
PETK	Petropavlovsk-	57.69	21	P	P	18 45 09.7	-0.1
LBZ	Lake Benmore	58.96	145	P	P	18 45 19.0	+0.2
DGZ	Jazzator, Alta	59.38	331	i P	P	18 45 21.2	-0.6
TUWZ	Tuamarina	59.51	141	P	P	18 45 22.7	+0.1
KHZ	Kahutara	59.80	142	P	P	18 45 25.5	+0.9
URZ	Urewera	59.99	136	LR	LR	19 10 25.0	
	comp=Z,79nm,22.0s,baz=31,slow=35						
BKZ	Black Stump Fm	60.01	137	P	P	18 45 27.2	+1.0
NIL	Nilore	60.26	309	P	P	18 45 28.1	+0.1
NIL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NIL	Nilore	60.26	309	P	P	18 45 28.1	+0.1
NIL				IAmb	IAmb	18 45 34.4	
	comp=Z,9.8nm,1.1s						
MK31	Makanchi Array	60.27	326	P	P	18 45 28.3	+0.5
MK31				pmax	pmax		
	comp=Z,36nm,1.7s						
MK31	Makanchi Array	60.27	326	P	P	18 45 28.3	+0.5
MK31				IAmb	IAmb	18 45 33.9	
	comp=Z,36nm,1.7s						
MKAR	Makanchi Array	60.27	326	P	P	18 45 27.9	+0.1
	comp=Z,2.8nm,0.5s,baz=116,slow=7.2,SNR=10.0						
MKAR	Makanchi Array	60.27	326	P	P	18 45 27.0	-0.8
MKAR	Makanchi Array	60.27	326	P	P	18 45 27.0	-0.8
PRZ	Przheval'sk	60.32	320	P	P	18 45 28.6	+0.2
PRZ				pmax	pmax		
	comp=Z,22nm,1.3s						
PRZ	Przheval'sk	60.32	320	P	P	18 45 28.6	+0.2
PRZ				IAmb	IAmb	18 45 41.7	
	comp=Z,22nm,1.2s						
PLWZ	Palliser	60.42	140	P	P	18 45 28.3	-0.6
MAKZ	Makanchi	60.46	326	P	P	18 45 29.4	+0.3
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAKZ	Makanchi	60.46	326	P	P	18 45 29.4	+0.3
MAKZ				IAmb	IAmb	18 45 35.1	
	comp=Z,6.9nm,0.8s						
MXZ	Matakaoa Point	60.51	135	P	P	18 45 29.4	-0.1
KSH	Kashi	60.57	316	P	P	18 45 32.6	+2.5
KSH				sP	sP	18 45 40.0	+5.3
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YAK	Yakutsk	60.94	1	P	P	18 45 31.6	-0.4
	comp=Z,4.8nm,0.3s,baz=90,slow=2.0,SNR=4.6						
YAK	Yakutsk	60.94	1	i P	P	18 45 32.0	0.0
YAK				pmax	pmax		
	comp=Z,11nm,0.4s						
YAK	Yakutsk	60.94	1	IAmb	IAmb	18 45 33.5	
	comp=Z,15nm,0.8s						
KDJ	Kajisay	60.94	319	P	P	18 45 33.0	+0.3
KDJ				pmax	pmax		
	comp=Z,14nm,1.2s						
KDJ	Kajisay	60.94	319	P	P	18 45 33.0	+0.3
KDJ				IAmb	IAmb	18 45 43.4	
	comp=Z,14nm,1.1s						
MCQ	Macquarie Isla	61.05	160	P	P	18 45 34.0	+1.2
MCQ				pmax	pmax		
	comp=Z,205nm,1.6s						
MCQ	Macquarie Isla	61.05	160	P	P	18 45 34.0	+1.2
BOOM	Boomskoye usch	61.92	319	P	P	18 45 39.4	+0.1
BOOM				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BOOM	Boomskoye usch	61.92	319	P	P	18 45 39.4	+0.1
BOOM				IAmb	IAmb	18 45 52.5	
	comp=Z,9.5nm,1.2s						
AAK	Ala-Archa	62.94	319	P	P	18 45 47.6	+1.5
	comp=Z,0.5nm,0.4s,baz=136,slow=11,SNR=5.4						
AAK	Ala-Archa	62.94	319	P	P	18 45 45.9	-0.2
AAK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
AAK	Ala-Archa	62.94	319	P	P	18 45 45.9	-0.2
AAK				IAmb	IAmb	18 46 05.2	
	comp=Z,10nm,1.4s						
ZAA0	Zalesovo Array	63.40	333	P	P	18 45 49.6	+0.9
DRK	Karamyk	63.49	314	P	P	18 45 49.6	-0.5
KBL	Kabul	63.84	308	P	P	18 45 50.9	-1.4

KBL				pmax	pmax		
	comp=Z,12nm,1.1s						
KBL	Kabul	63.84	308	P	P	18 45 50.9	-1.4
KBL				IAmb	IAmb	18 46 01.8	
	comp=Z,12nm,1.1s						
GAR	Garm	64.39	313	P	P	18 45 54.2	-1.5
BTK	Batken	64.41	315	P	P	18 45 55.0	-0.8
BTK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BTK	Batken	64.41	315	P	P	18 45 55.0	-0.8
BTK				IAmb	IAmb	18 46 20.1	
	comp=Z,9.2nm,1.0s						
KURBB	Kurchatov Arra	64.49	328	P	P	18 45 55.2	-0.7
	comp=Z,5.8nm,0.9s,baz=129,slow=6.5,SNR=6.9						
KURK	Kurchatov	64.49	328	P	P	18 45 55.8	-0.1
KURK				pmax	pmax		
	comp=Z,15nm,0.9s						
KURK	Kurchatov	64.49	328	P	P	18 45 55.8	-0.1
KURK				IAmb	IAmb	18 46 02.4	
	comp=Z,15nm,0.9s						
NIUE	Niue	64.49	112	P	P	18 45 55.7	-0.8
CHGR	Chuyangaron	65.11	313	P	P	18 45 59.7	-0.7
CHGR	Chuyangaron	65.11	313	P	P	18 45 59.7	-0.7
KKAR	Karatay Array	65.80	318	P	P	18 46 03.3	-1.3
KKAR	Karatay Array	65.80	318	P	P	18 46 03.3	-1.3
HRA	Herat	69.20	307	P	P	18 46 26.6	0.0
BVAR	Borovoye Array	70.06	327	P	P	18 46 30.6	-0.7
	comp=Z,1.7nm,0.8s,baz=104,slow=6.1,SNR=3.6						
BRVK	Borovoye	70.14	327	*i* P	P	18 46 30.4	-1.3
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ABKAR	Akbulak array	74.79	321	P	P	18 46 58.9	-0.7
ABKAR	Akbulak array	74.79	321	P	P	18 46 58.3	-1.2
VNDA	Vanda	80.60	173	P	P	18 47 30.9	-0.5
VNDA				pmax	pmax		
	comp=Z,26nm,1.7s						
VNDA	Vanda	80.60	173	P	P	18 47 30.9	-0.5
VNDA				IAmb	IAmb	18 48 03.9	
	comp=Z,26nm,1.7s						
RAYN	Ar Rayn	82.31	293	P	P	18 47 40.5	-1.1
RAYN				pmax	pmax		
	comp=Z,17nm,1.5s						
RAYN	Ar Rayn	82.31	293	P	P	18 47 40.5	-1.1
RAYN				IAmb	IAmb	18 47 53.6	
	comp=Z,17nm,1.5s						
M19K	Big River Lodg	83.54	28	P	P	18 47 45.1	-2.0
KIV	Kislovodsk	85.62	314	*e*P	P	18 47 55.3	-2.9
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ILAR	Eielson Array	87.24	25	LR	LR	19 23 36.1	
	comp=Z,44nm,20.5s,baz=50,slow=33						
TORD	Torodi Ar. Bea	124.51	287	PKP	PKPdf	18 54 18.1	-1.6
	comp=Z,0.9nm,0.9s,baz=112,slow=1.7,SNR=4.7						

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*IDC **08** 18:36:57.6±0.5, 53°60N×99°02E, h0^{km}, mb3.8/16, mb1 3.9/25, mb1mx3.7/59, mbtmp3.8/25, ML3.3/8, MS3.1/5, Ms1 3.1/5, ms1mx2.8/54, Error ellipse: s-maj=12.0km s-min=7.9km az=24.0*

*MOS **08** 18:36:57.4±1.1, 53°45N×98°89E, h12^{km}, mb4.2/4, Error ellipse: s-maj=8.3km s-min=7.9km az=77.4*

MOS Felt (II-III) at Zima, Sayansk.

*BJI **08** 18:36:59.5±0.0, 53°76N×98°70E, h5^{km}, mB4.8/8, mb4.2/12, ML4.7/1*

*NEIC **08** 18:36:59.9±2.2, 53°67N±0°09×98°7E±0°1, h15^{km}±4^{km}, mb4.1/21, Error ellipse: s-maj=13.8km s-min=8.5km az=196.0*

ISC 08 18:36:58.9±0.4**, 53°64N**±0°05×**98°87E**±0°04**, h10**^{km}**, n97,** σ**1^{s}74**/107**, mb3.9**/22**, 3C-1D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORL	Orlik	1.24	152	⇑*i*PG	Pn	18 37 15.8	-6.6
ORL				*e*		18 37 29.2	
ORL				pmax	pmax		
	comp=Z,314nm,0.2s						
ORL				smax	smax		
	comp=N,2µm,0.5s						
MOY	Mondy	2.36	146	*e*PN	Pn	18 37 36.3	-1.6
MOY				*i*		18 37 39.3	
MOY				*i*		18 38 10.8	
ARS	Arshan	2.76	127	*e*PN	Pn	18 37 42.8	-0.5
ARS				*e*		18 38 17.6	
ARS				pmax	pmax		
	comp=Z,1µm,0.4s						
ARS				smax	smax		
	comp=E,4µm,0.4s						
TLY	Talaya	3.51	122	Pn	Pn	18 37 53.6	+0.1
	comp=E,0.7nm,0.3s,baz=298,slow=13,SNR=90						
TLY				Pg	Pb	18 37 58.5	-2.6
	comp=E,0.7nm,0.3s,baz=300,slow=14,SNR=79						
TLY				Lg	Lg	18 38 41.6	
	comp=E,1.1nm,0.3s,baz=175,slow=14,SNR=14						
TLY				LR	LR	18 39 19.8	
	comp=E,119nm,18.2s,baz=242,slow=42						
TLY	Talaya	3.51	122	*c i*PN	Pb	18 37 58.3	-2.8
TLY				*e*		18 38 41.2	
TLY				pmax	pmax		
	comp=Z,565nm,0.6s						
TLY				smax	smax		
	comp=N,1.0nm,0.4s						
TLY	Talaya	3.51	122		Pn	18 37 54.4	+0.9
TLY				Sn	Sn	18 38 40.0	+4.9
IRK	Irkutsk	3.56	111	*e*PN	Pb	18 38 00.5	-1.4
IRK				*e*		18 38 45.6	
IRK				pmax	pmax		
	comp=Z,177nm,0.5s						
IRK				smax	smax		
	comp=E,2µm,1.2s						
ZAK	Zakamensk	4.25	138	*e*PN	Pb	18 38 09.4	-4.4
ZAK				*e*		18 39 03.2	
ZAK				pmax	pmax		
	comp=Z,170nm,0.8s						
ZAK				smax	smax		
	comp=N,611nm,0.9s						
TRG	Tyrgan	4.58	98	*e*PN	Pn	18 38 07.4	-0.9
TRG				*e*		18 38 19.7	
TRG				*e*S	Sn	18 38 59.9	-1.7
TRG				*e*		18 39 18.4	
TRG				pmax	pmax		
	comp=Z,77nm,0.4s						
TRG				smax	smax		
	comp=E,361nm,0.8s						
OGRR	Ongureny	5.19	86	*e*PN	Pn	18 38 18.8	+2.2
OGRR				*e*		18 38 33.8	
OGRR				*e*S	Sn	18 39 17.9	+1.4
OGRR				pmax	pmax		
	comp=Z,79nm,0.7s						
OGRR				smax	smax		
	comp=N,762nm,0.8s						
NIZ	Nizh Angarsk	6.54	67	*e*PN	Pn	18 38 36.6	+1.4
NIZ				*e*		18 38 57.8	
NIZ				*e*S	Sn	18 39 50.6	+0.8
NIZ				pmax	pmax		
	comp=Z,107nm,0.7s						
NIZ				smax	smax		
	comp=N,434nm,1.8s						
SONM	Songino Array	7.52	138	Pn	Pn	18 38 47.7	-1.0
	comp=N,0.3nm,0.3s,baz=314,slow=14,SNR=12						
SONM				Pg	Pb	18 39 10.3	+0.9
	comp=N,3.1nm,0.3s,baz=315,slow=17,SNR=24						
SONM				Lg	Lg	18 40 46.8	
	comp=N,6.8nm,0.3s,baz=323,slow=27,SNR=12						
ULN	Ulaanbaatar	7.76	135	*i* P	Pn	18 38 51.9	-0.2
ULN	Ulaanbaatar	7.76	135	Pn	Pn	18 38 51.6	-0.5
DGZ	Jazzator, Alta	8.13	246	*i* P	Pn	18 38 57.9	+0.8
ZAA0	Zalesovo Array	8.33	278	Pn	Pn	18 38 58.2	-1.4
ZALV	Zalesovo Beam	8.33	278	Pn	Pn	18 39 01.5	+1.9
	comp=N,0.3nm,0.3s,baz=95,slow=13,SNR=1.1						
ZALV				Pg	Pg	18 39 30.9	-7.3
	comp=N,1.5nm,0.3s,baz=88,slow=14,SNR=5.6						
ZALV				Lg	Lg	18 41 15.8	
	comp=N,2.1nm,0.3s,baz=86,slow=24,SNR=7.6						
ZALV	Zalesovo Beam	8.33	278	Pn	Pn	18 38 56.7	-2.9
ZALV				LR	LR	18 41 14.8	
BOD	Bodaibo	9.50	58	*e*P	Pn	18 39 16.5	+0.8
BOD				pmax	pmax		
	comp=Z,40nm,0.8s						
WMQ	Urumqi	12.27	221	*e*P	Pn	18 39 57.4	+3.7
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.1s						
MK31	Makanchi Array	12.62	244	*i* P	Pn	18 39 59.9	+1.5
MK31	Makanchi Array	12.62	244	Pn	Pn	18 39 57.9	-0.5
MKAR	Makanchi Array	12.62	244	Pn	Pn	18 40 00.1	+1.7
	comp=Z,0.1nm,0.3s,baz=57,slow=14,SNR=2.2						
MKAR				Pg		18 40 50.1	
	comp=Z,0.2nm,0.3s,baz=52,slow=14,SNR=3.9						
MKAR				Lg	Lg	18 43 28.2	
	comp=Z,0.3nm,0.3s,baz=57,slow=31,SNR=3.1						
MKAR				LR	LR	18 44 55.8	
	comp=Z,102nm,20.2s,baz=5.5,slow=38						
MKAR	Makanchi Array	12.62	244	Pn	Pn	18 39 57.9	-0.5
KURK	Kurchatov	12.76	265	P	Pn	18 39 59.7	-0.6
KURK						18 42 20.6	
KURK	Kurchatov	12.76	265	Pn	Pn	18 39 59.7	-0.6
MAKZ	Makanchi	12.78	244	P	Pn	18 40 00.3	-0.3
MAKZ	Makanchi	12.78	244	Pn	Pn	18 40 00.3	-0.3
KURBB	Kurchatov Arra	12.85	265	Pn	Pn	18 40 03.5	+2.0
	comp=Z,0.1nm,0.3s,baz=64,slow=13,SNR=4.2						
KURBB				Sn	Sn	18 42 20.6	-3.8
	comp=Z,0.0nm,0.3s,baz=68,slow=27,SNR=2.4						
KURBB				Lg	Lg	18 43 38.2	
	comp=Z,0.1nm,0.3s,baz=70,slow=33,SNR=3.9						
HHC	Hu-ho-hao-te	15.39	141	*e*P	Pn	18 40 37.3	+1.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,96nm,4.8s						
NRIK	Noril'sk	16.60	346	Pn	P	18 40 53.8	-0.1
	comp=Z,0.1nm,0.3s,baz=191,slow=18,SNR=1.6						
NRIK				Sn	Sn	18 43 51.6	-3.9
	comp=Z,0.4nm,0.3s,baz=88,slow=15,SNR=4.7						
NRIK				Lg	Lg	18 45 46.9	
	comp=Z,0.1nm,0.3s,baz=186,slow=10,SNR=1.7						
NRIK	Noril'sk	16.60	346	*i* P	P	18 40 54.9	+1.0
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NRIK	Noril'sk	16.60	346	Pn	Pn	18 40 49.7	-1.7
BVAR	Borovoye Array	16.98	279	P	P	18 40 57.6	-0.6
	comp=Z,0.1nm,0.3s,baz=110,slow=7.8,SNR=6.6						
BRVK	Borovoye	17.03	280	*i* P	P	18 40 59.4	+0.6
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BRVK	Borovoye	17.03	280	Pn	Pn	18 40 55.3	-1.7
BRVK				IAmb	IAmb	18 41 01.7	
	comp=Z,15nm,1.5s						
LZH	Lanzhou	17.89	167	*e*P	P	18 41 16.9	+8.3
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
YAK	Yakutsk	18.27	50	P	Pn	18 41 10.5	-1.7
	comp=Z,0.1nm,0.3s,baz=166,slow=1.9,SNR=7.4						
YAK				Lg	Lg	18 46 29.6	
	comp=Z,0.1nm,0.3s,baz=299,slow=15,SNR=1.4						
YAK				LR	LR	18 47 41.5	
	comp=Z,35nm,21.6s,baz=128,slow=35						
YAK	Yakutsk	18.27	50	*e*P	P	18 41 13.8	+1.5
YAK				*e*S	S	18 44 39.6	-1.4
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,145nm,3.0s						
YAK				pmax	pmax		
	comp=E,121nm,2.8s						
YAK				pmax	pmax		
	comp=N,101nm,3.2s						
YAK				smax	smax		
	comp=E,406nm,4.4s						
YAK				smax	smax		
	comp=N,369nm,3.3s						
YAK				MLR	MLR		
	comp=Z,110nm,16.0s						
YAK	Yakutsk	18.27	50		Pn	18 41 09.7	-2.5
YAK				IAmb	IAmb	18 41 20.5	
	comp=Z,24nm,0.8s						
KDJ	Kajisay	18.47	240	P	P	18 41 13.0	-1.9
KDJ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KDJ	Kajisay	18.47	240	P	P	18 41 13.0	-1.9
BOOM	Boomskoye usch	18.86	243	P	P	18 41 18.4	-0.8
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOOM	Boomskoye usch	18.86	243	P	P	18 41 18.4	-0.8
AAK	Ala-Archa	19.54	246	P	Pn	18 41 27.3	-0.5
	comp=Z,0.1nm,0.3s,baz=52,slow=10,SNR=1.8						
AAK				LR	LR	18 49 08.5	
	comp=Z,73nm,19.8s,baz=14,slow=37						
KLR	Kul'dur	20.85	89	P	P	18 41 39.9	-0.8
	comp=Z,0.5nm,0.5s,baz=331,slow=10,SNR=1.7						
KLR				Lg	Lg	18 47 49.9	
	comp=Z,1.2nm,0.7s,baz=302,slow=11,SNR=2.6						
KLR	Kul'dur	20.85	89	*i* P	P	18 41 40.7	0.0
KLR				pmax	pmax		
	comp=Z,2µm,0.7s						
KSH	Kashi	21.02	237	P	P	18 41 47.8	+5.1
KSH				S	S	18 45 37.9	+1.2
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KKAR	Karatay Array	21.44	252	P	P	18 41 44.8	-2.3
KKAR	Karatay Array	21.44	252	P	P	18 41 44.8	-2.3
TIXI	Tiksi	22.28	25	P	P	18 41 56.4	+0.6
	comp=Z,5.4nm,0.4s,baz=230,slow=6.2,SNR=14						
TIXI				S	S	18 46 01.4	+1.0
	comp=Z,1.2nm,0.5s,baz=137,slow=19,SNR=1.9						
TIXI				Lg	Lg	18 48 39.2	
	comp=Z,2.4nm,0.2s,baz=174,slow=15,SNR=7.5						
TIXI				LR	LR	18 51 01.8	
	comp=Z,104nm,18.3s,baz=359,slow=38						
TIXI	Tiksi	22.28	25	*i* P	P	18 41 55.8	+0.1
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TIXI	Tiksi	22.28	25	P	P	18 41 54.5	-1.3
TIXI				IAmb	IAmb	18 42 01.4	
	comp=Z,8.0nm,0.6s						
ARU	Arti	23.03	293	P	P	18 42 04.6	+0.7
	comp=Z,0.3nm,0.3s,baz=108,slow=20,SNR=1.8						
ARU	Arti	23.03	293	*d i*P	P	18 42 04.0	+0.1
ARU				S	S	18 46 16.8	+2.4
ARU				SS	SnSn	18 46 49.3	+3.1
ARU				pmax	pmax		
	comp=Z,29nm,4.5s						
ARU	Arti	23.03	293	P	P	18 42 03.5	-0.4
ARU				IAmb	IAmb	18 42 15.7	
	comp=Z,7.2nm,0.9s						
BTK	Batken	23.32	246	P	P	18 42 06.3	-0.7
BTK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BTK	Batken	23.32	246	P	P	18 42 06.3	-0.7
BTK				IAmb	IAmb	18 42 10.4	
	comp=Z,6.1nm,1.1s						
USA0B	Ussuriysk Arra	23.53	100	P	P	18 42 07.0	-2.0
USA0B				pmax	pmax		
	comp=Z,7.0nm,0.8s						
USA0B	Ussuriysk Arra	23.53	100	P	P	18 42 07.0	-2.0
USA0B				IAmb	IAmb	18 42 12.5	
	comp=Z,6.5nm,0.8s						
USRK	Ussuriysk Ar.	23.53	100	P	P	18 42 06.7	-2.3
	comp=Z,1.8nm,0.7s,baz=345,slow=16,SNR=1.3						
ABKAR	Akbulak array	24.43	276	P	P	18 42 14.9	-2.6
ABKAR	Akbulak array	24.43	276	P	P	18 42 15.3	-2.2
ABKAR				IAmb	IAmb	18 42 21.5	
	comp=Z,3.7nm,1.1s						
AKTO	Aktyubinsk	25.09	279	P	P	18 42 23.3	-0.1
	comp=Z,4.1nm,0.6s,baz=75,slow=9.8,SNR=13						
AKTO				S	S	18 46 52.0	+4.3
	comp=Z,1.0nm,0.5s,baz=118,slow=12,SNR=3.6						
CHGR	Chuyangaron	25.22	246	P	P	18 42 23.6	-1.2
KMI	Kunming	28.63	173	⇑P	P	18 42 56.3	+0.6
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FIA1	FINESS Array S	37.89	312	P	P	18 44 15.3	-0.4
FINES	FINESS Array B	37.89	312	P	P	18 44 16.8	+1.1
	comp=Z,1.5nm,0.6s,baz=77,slow=9.2,SNR=11						
FINES	FINESS Array B	37.89	312	*e*P	P	18 44 17.4	+1.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	37.89	312	P	P	18 44 16.9	+1.3
AKASG	Malin Array Be	41.26	295	P	P	18 44 44.2	+0.3
	comp=Z,0.3nm,0.4s,baz=52,slow=9.0,SNR=4.9						
AKASG	Malin Array Be	41.26	295	*e*P	P	18 44 44.6	+0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NC405	NORSAR Array S	44.22	316	P	P	18 45 08.2	+0.4
NB2	NORSAR Subarra	44.46	316	P	P	18 45 10.9	+1.1
	comp=Z,4.9nm,0.9s,baz=79,slow=7.4						
NOA	NORSAR Array B	44.46	316	P	P	18 45 10.0	+0.3
	comp=Z,1.3nm,0.7s,baz=59,slow=7.9,SNR=4.3						
NOA	NORSAR Array B	44.46	316	*e*P	P	18 45 11.2	+1.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BURAR	Bucovina Array	45.17	294	P	P	18 45 16.6	+0.9
BURAR				IAmb	IAmb	18 45 17.9	
	comp=Z,1.0nm,0.8s						
IMAR	Indian Mountai	48.68	31	P	P	18 45 43.0	+0.3
RAYN	Ar Rayn	49.84	255	P	P	18 45 50.7	-1.4
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
RAYN	Ar Rayn	49.84	255	P	P	18 45 50.7	-1.4
BMAR	Burnt Mountain	50.33	27	P	P	18 45 57.5	+2.2
ILAR	Eielson Array	51.60	30	P	P	18 46 06.6	+1.7
	comp=Z,1.0nm,0.7s,baz=317,slow=3.9,SNR=8.7						
ILAR	Eielson Array	51.60	30	*e*P	P	18 46 07.9	+3.0
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	51.60	30	P	P	18 46 05.7	+0.8
BCAR	Beaver Creek A	54.38	29	P	P	18 46 26.7	+1.2
VRDI	Verde Repeater	55.30	31	P	P	18 46 32.6	+0.3
HYT	Haines Junctio	57.40	29	P	P	18 46 47.6	+0.4
YKA	Yellowknife Ar	61.25	17	P	P	18 47 14.7	+1.1
	comp=Z,0.6nm,0.7s,baz=334,slow=7.1,SNR=4.4						
YKA	Yellowknife Ar	61.25	17	*e*P	P	18 47 16.0	+2.4
ESDC	Sonseca Array	65.87	304	P	P	18 47 46.3	+1.7
	comp=Z,1.0nm,0.8s,baz=38,slow=5.7,SNR=5.6						
WRA	Warramunga Arr	79.41	146	P	P	18 49 03.2	-1.8
	comp=Z,1.3nm,0.9s,baz=345,slow=6.3,SNR=6.0						
WRA	Warramunga Arr	79.41	146	*e*P	P	18 49 04.5	-0.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PDAR	Pinedale Array	80.91	21	P	P	18 49 13.3	-0.1
	comp=Z,0.4nm,0.8s,baz=320,slow=4.0,SNR=2.1						
ASAR	Alice Springs	82.74	148	P	P	18 49 21.6	-1.2
	comp=Z,0.6nm,0.7s,baz=351,slow=4.6,SNR=4.6						
NVAR	Mina Array Bea	82.84	29	P	P	18 49 24.4	+0.8
	comp=Z,0.6nm,0.6s,baz=326,slow=4.7,SNR=5.9						
TORD	Torodi Ar. Bea	83.73	284	P	P	18 49 27.8	-0.4
	comp=Z,0.9nm,0.7s,baz=24,slow=5.4,SNR=6.5						
TORD	Torodi Ar. Bea	83.73	284	IAmb	IAmb	18 49 31.6	
	comp=Z,1.0nm,0.8s						

IDC 08 18:46:07.2±5.4**, 2°63S×146°42E, h0^{km}, mb3.3**/2**, mb1 3.7**/2**, mb1mx2.9**/34**, mbtmp3.4**/2**, Error ellipse: s-maj=297.5km s-min=71.8km az=113.0, Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.87	214	P	P	18 50 51.0	-0.1
	1.7nm,0.9s,baz=38,slow=12,SNR=7.2						
ASAR	Alice Springs	24.17	209	P	P	18 51 25.5	+0.1
	0.6nm,0.7s,baz=38,slow=7.3,SNR=7.2						
TORD	Torodi Ar. Bea	143.58	289	PKP	PKPdf	19 05 44.6	-0.6
	0.3nm,0.7s,baz=83,slow=3.1,SNR=1.9						

INET 08 18:57:19.7, 11°32N×87°03W, h24^{km}, MW3.6, Near coast of Nicaragua

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*NEIC **08** 19:10:56.7±2.0, 43°73N±0°05×105°29W±0°04, h0^{km}±2^{km}, ML3.4/66, Error ellipse: s-maj=9.7km s-min=3.1km az=150.0*

*IDC **08** 19:10:57.6±1.1, 43°88N×105°64W, h0^{km}, mb3.7/2, mb1 3.5/8, mb1mx3.4/41, mbtmp3.3/8, ML2.8/5, Error ellipse: s-maj=25.8km s-min=11.2km az=145.0*

ISC 08 19:10:56.1±0.8**, 43°70N**±0°05×**105°27W**±0°05**, h0^{km}, n62,** σ**1^{s}01**/63**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.98	64		Pb	19 11 16.2	+0.1
K22A	Casper	1.39	222		Pg	19 11 22.9	+0.1
K22A				IAML		19 11 46.0	
	comp=N,470nm,0.6s						
K22A				IAML		19 11 46.9	
	comp=E,682nm,0.6s						
RWWY	Rawlins	2.47	216		Pb	19 11 40.5	-0.9
RWWY				IAML		19 12 18.7	
	comp=E,250nm,0.9s						
LAO	LASA Array	3.07	348		Pn	19 11 46.2	+0.3
LAO				IAML		19 12 42.0	
	comp=E,165nm,1.0s						
LAO				IAML		19 12 51.6	
	comp=E,144nm,0.9s						
RLMT	Red Lodge	3.20	298		Pn	19 11 48.1	+0.2
RLMT				IAML		19 12 41.3	
	comp=E,60nm,0.8s						
RLMT				IAML		19 12 44.1	
	comp=E,89nm,0.7s						
BW06	Boulder Array	3.27	255		Pn	19 11 49.8	+0.9
BW06				IAML		19 12 38.7	
	comp=E,61nm,0.6s						
PD31	Pinedale Array	3.27	255		Pn	19 11 49.6	+0.8
PDAR	Pinedale Array	3.27	255	Pn	Pn	19 11 50.3	+1.5
	comp=E,4.1nm,0.3s,baz=70,slow=16,SNR=56						
PDAR				Sn	Sn	19 12 30.4	+1.8
	comp=E,3.1nm,0.3s,baz=67,slow=23,SNR=7.7						
PDAR				Lg	Lg	19 12 38.5	
	comp=E,14nm,0.3s,baz=65,slow=32,SNR=4.0						
PDAR	Pinedale Array	3.27	255		Pn	19 11 50.2	+1.3
OGNE	Ogallala	3.65	138		Pn	19 11 54.3	+0.5
YMP	Mirror Lake Pl	3.67	288		Pn	19 11 54.4	0.0
YMP				IAML		19 12 57.4	
	comp=E,100nm,1.2s						
YMP				IAML		19 12 58.6	
	comp=N,93nm,0.7s						
GCMT	Greycliff	3.77	305		Pn	19 11 54.7	-0.9
LKWY	Lake	3.80	285	Pn	Pn	19 11 56.4	+0.3
LKWY				IAML		19 12 21.6	
	comp=N,66nm,0.6s						
LKWY				IAML		19 12 39.0	
	comp=N,40nm,0.8s						
LOHW	Long Hollow	3.88	271		Pn	19 11 57.0	-0.1
H17A	Grant Village	3.89	282		Pn	19 11 57.2	-0.1
ISCO	Idaho Springs	3.90	184		Pn	19 11 57.6	+0.1
ISCO				IAML		19 13 05.1	
	comp=N,41nm,0.9s						
FLWY	Flagg Ranch	3.95	277		Pn	19 11 57.2	-0.8
FLWY				IAML		19 13 08.0	
	comp=N,49nm,1.0s						
FLWY				IAML		19 13 47.3	
	comp=N,43nm,1.2s						
MOOW	Moose Ponds	3.97	273		Pn	19 12 00.0	+1.6
SNOW	Snow King Moun	4.00	269		Pn	19 11 58.9	0.0
SNOW				IAML		19 13 08.9	
	comp=N,62nm,1.0s						
SNOW				IAML		19 13 21.7	
	comp=N,43nm,1.1s						
YNR	Norris Junctio	4.02	287		Pn	19 12 00.8	+1.6
REDW	Red Top Meadow	4.08	267		Pn	19 12 00.6	+0.7
REDW				IAML		19 13 19.2	
	comp=N,62nm,0.9s						
REDW				IAML		19 13 19.4	
	comp=N,44nm,0.7s						
TPAW	Teton Pass	4.13	269		Pn	19 12 01.2	+0.4
TPAW				IAML		19 13 28.7	
	comp=N,30nm,0.9s						
TPAW				IAML		19 13 40.5	
	comp=N,41nm,1.0s						
YHH	Holmes Hill	4.16	287		Pn	19 12 01.3	+0.2
YHH				IAML		19 13 13.7	
	comp=E,26nm,1.1s						
YHH				IAML		19 13 22.5	
	comp=N,29nm,1.0s						
FXWY	Fox Creek	4.18	271		Pn	19 12 03.1	+1.8
O20A	White River Ci	4.20	213		Pn	19 12 02.4	+0.9
O20A				IAML		19 13 22.1	
	comp=N,69nm,1.0s						
YMR	Madison River	4.21	285		Pn	19 12 01.8	0.0
YMR				IAML		19 13 35.4	
	comp=E,70nm,0.9s						
E28A	Huff	4.33	47		Pn	19 12 04.3	+1.1
AHID	Auburn Hatcher	4.36	260		Pn	19 12 04.4	+0.6
AHID				IAML		19 13 18.1	
	comp=E,41nm,1.2s						
AHID				IAML		19 13 24.0	
	comp=E,35nm,1.2s						
YHL	Hebgen Lake	4.40	287		Pn	19 12 05.1	+0.6

YHL				IAML		19 13 34.6	
	comp=N,46nm,1.0s						
YHL				IAML		19 13 47.9	
	comp=E,42nm,1.1s						
RDMU	Red Mountain	4.47	227		Pn	19 12 04.0	-1.3
ECR	Eagle Creek	4.50	264		Pn	19 12 04.5	-1.2
QLMT	Earthquake Lak	4.57	286		Pn	19 12 06.8	+0.1
SUSD	Miller	4.61	79	Pn	Pn	19 12 06.2	-0.8
SMCO	Snowmass	4.69	196		Pn	19 12 08.7	+0.2
SMCO				IAML		19 13 33.5	
	comp=E,37nm,1.1s						
SMCO				IAML		19 13 34.7	
	comp=E,33nm,1.1s						
DGMT	Dagmar	4.83	8		Pn	19 12 09.8	-0.3
K31A	O'Neill	4.88	100		Pn	19 12 12.0	+1.2
BOZ	Bozeman (W)	4.92	295		Pn	19 12 10.8	-0.6
BOZ				IAML		19 13 34.4	
	comp=E,28nm,0.8s						
KSCO	Kaye Shedlock’	5.08	156	Pn	Pn	19 12 13.8	+0.1
HWUT	Hardware Ranch	5.09	248		Pn	19 12 12.7	-1.2
HWUT				IAML		19 13 43.3	
	comp=E,33nm,1.1s						
HWUT				IAML		19 13 58.3	
	comp=E,28nm,1.0s						
EGMT	Eagleton	5.34	326		Pn	19 12 17.0	-0.2
DLMT	Dillon	5.50	290		Pn	19 12 18.6	-0.8
P18A	Preston Nutter	5.52	224		Pn	19 12 18.7	-1.1
HRY	Holter Researc	5.53	305		Pn	19 12 19.1	-0.7
JLU	Jordanelle	5.54	238	Pn	Pn	19 12 18.3	-1.8
LRM	Limekiln Ridge	5.54	295	Pn	Pn	19 12 18.6	-1.4
MCMT	McKenzie Canyo	5.56	284		Pn	19 12 18.3	-2.0
CTU	Camp Tracy	5.67	240	Pn	Pn	19 12 21.4	-0.4
BGNE	Belgrade	5.73	111		Pn	19 12 22.7	+0.3
SPUT	South Promonto	5.82	248		Pn	19 12 23.1	-0.6
HVU	Hansel Valley	5.85	253		Pn	19 12 23.1	-1.1
P17A	Butcher Ranch,	5.89	226	Pn	Pn	19 12 25.6	+0.9
BCYI	Bear Canyon	5.90	279	Pn	Pn	19 12 23.2	-1.8
SRU	San Rafael Swe	6.05	223		Pn	19 12 27.8	+0.9
TMUT	Trail Mountain	6.26	227		Pn	19 12 31.8	+1.8
BGU	Big Grassy Mou	6.39	247		Pn	19 12 31.2	-0.3
ELK	Elko	7.97	252	Pn	Pn	19 12 54.7	+1.3
	comp=E,0.2nm,0.3s,baz=68,slow=14,SNR=3.7						
ULM	Lac du Bonnet	9.17	41	Pn	Pn	19 13 09.3	-0.2
	comp=E,0.5nm,0.3s,baz=233,slow=13,SNR=2.4						
ULM				Pg		19 13 36.2	
	comp=E,0.3nm,0.3s,baz=176,slow=16,SNR=1.9						
ULM				Lg	Lg	19 15 39.0	
	comp=E,0.2nm,0.3s,baz=127,slow=20,SNR=2.2						
NVAR	Mina Array Bea	11.16	246	Pn	Pn	19 13 39.3	+2.2
	comp=E,0.1nm,0.3s,baz=68,slow=12,SNR=2.4						
TXAR	Lajitas Array	14.39	174	Pn	P	19 14 27.0	-1.4
	comp=E,0.0nm,0.3s,baz=353,slow=6.7,SNR=1.7						
TXAR				Lg	Lg	19 18 33.8	
	comp=E,0.0nm,0.3s,baz=360,slow=20,SNR=4.1						
YKA	Yellowknife Ar	19.61	347	P	P	19 15 25.7	+0.1
	comp=E,0.1nm,0.3s,baz=166,slow=12,SNR=3.9						
SONM	Songino Array	84.68	339	P	P	19 23 32.5	+0.8
	comp=E,0.2nm,0.6s,baz=31,slow=8.6,SNR=1.6						
MKAR	Makanchi Array	89.65	355	P	P	19 23 55.3	-0.4
	comp=E,0.5nm,0.8s,baz=35,slow=5.3,SNR=2.9						

IDC ***08*** *19:24:21.8±2.6, 3.°66S×130.°63E, h0^{km}, mb3.4/2, mb1 3.5/3, mb1mx3.3/22, mbtmp3.3/3, Error ellipse: s-maj=227.8km s-min=28.0km az=71.0*

DJA ***08*** *19:24:26.8±1.3, 4°S±6°×12°9E±°, h16^{km}±10^{km}, M3.3/7, MLv3.3/7*

ISC 08 19:24:28.0±1.0**, 4.°19S**±0.°08×**129.°39E**±0.°06**, h36^{km}, n9, σ0.^{s}78**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.95	331	P	Pn	19 24 44.2	-0.7
MSAI				S	Sn	19 24 56.1	-1.2
AAI	Ambon	1.29	293	P	Pn	19 24 49.1	-0.5
AAI				S	Sn	19 25 05.9	+0.2
FAKI	Fak Fak	3.12	66	P	Pn	19 25 14.5	-0.2
SWI	Sorong	3.79	30	P	Pn	19 25 23.5	-0.5
SWI				S	Sn	19 26 08.1	+0.7
LBMI	Labuha	4.00	332	P	Pn	19 25 26.9	0.0
SANI	Sanana	4.01	302	P	Pn	19 25 27.5	+0.6
WRA	Warramunga Arr	16.39	163	Pn	Pn	19 28 14.1	-1.3
	baz=351,slow=10,SNR=2.0						
ASAR	Alice Springs	19.85	168	P	Pn	19 28 57.9	+0.1
	0.7nm,0.6s,baz=345,slow=10,SNR=20						
ASAR				PcP	PcP	19 33 13.5	+0.5
	0.6nm,1.1s,baz=9.2,slow=1.4,SNR=1.9						
MKAR	Makanchi Array	65.56	326	P	P	19 35 08.8	+0.7
	0.3nm,0.4s,baz=112,slow=7.9,SNR=9.5						

IDC ***08*** *19:42:13.3±0.8, 18.°83N×145.°55E, h198^{km}±7^{km}, mb4.0/27, mb1 4.2/29, mb1mx4.0/42, mbtmp4.5/29, Error ellipse: s-maj=12.8km s-min=7.9km az=104.0*

NEIC ***08*** *19:42:14.3±1.4, 18.°83N±0.°06×145.°6E±0.°1, h199^{km}±5^{km}, mb4.7/187, Error ellipse: s-maj=15.3km s-min=8.8km az=82.0*

ISC 08 19:42:13.7±0.5**, 18.°86N**±0.°04×**145.°55E**±0.°07**, h201**^{km}±4^{km}**, h201^{km}:pP-P, n259, σ1.^{s}02**/279**, mb4.7**/112**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	2.51	177	Pn	Pn	19 42 57.2	-0.7
GUMO	Guam	5.28	187	P	Pn	19 43 34.8	+3.0
	5.3nm,0.3s,baz=49,slow=20,SNR=1.0						
GUMO				S	Sn	19 44 32.0	-1.5
	19nm,0.3s,baz=161,slow=21,SNR=2.1						
GUMO	Guam	5.28	187	Pn	Pn	19 43 32.8	+1.0
JCJ	Chichijima	8.76	340	P	Pn	19 44 18.3	+1.4
	9.5nm,0.3s,baz=179,slow=18,SNR=1.9						
JCJ				S	Sn	19 45 52.0	-3.2
	9.5nm,0.3s,baz=285,slow=20,SNR=1.7						
JCJ	Chichijima	8.76	340	Pn	Pn	19 44 17.5	+0.6
JCJ				Sn	Sn	19 45 51.1	-4.1
PATS	Pohnpei	17.23	132	P	P	19 46 01.2	-0.1
JOW	Kunigami	17.78	300	P	Pn	19 46 09.3	+0.2
	18nm,0.3s,baz=127,slow=13,SNR=21						
JOW	Kunigami	17.78	300	P	Pn	19 46 10.1	+0.9
JYT	Yasato	17.93	346	P	P	19 46 10.1	+1.4
JYT				IAmb	IAmb	19 46 25.8	
	comp=Z,38nm,1.1s						
INU	Inuyama	18.08	337	P	P	19 46 11.5	+1.2
INU				IAmb	IAmb	19 46 17.8	
	comp=Z,23nm,0.9s						
JMN	Monobe	18.11	327	P	P	19 46 10.2	-0.4
JMN				IAmb	IAmb	19 46 53.4	
	comp=Z,57nm,1.4s						
JGF	Kuroka	18.18	338	P	P	19 46 12.5	+1.0
JSU	Suzuyama	18.55	316	P	P	19 46 16.7	+1.2
JSU				IAmb	IAmb	19 46 35.4	
	comp=Z,62nm,1.3s						
JWT	Wachi	18.67	333	P	P	19 46 18.3	+1.7
MJAR	Matsushiro Arr	18.76	341	P	P	19 46 18.4	+0.6
	comp=Z,0.4nm,0.3s,baz=166,slow=10,SNR=39						
MJAR				S	S	19 49 35.5	-5.0
	comp=Z,0.1nm,0.3s,baz=178,slow=36,SNR=1.5						
MJAR	Matsushiro Arr	18.76	341	P	P	19 46 17.7	0.0
MAJO	Matsushiro	18.76	341	P	P	19 46 18.4	+0.7
MAJO				IAmb	IAmb	19 46 22.9	
	comp=Z,31nm,0.7s						
MAT	Matsushiro	18.76	341	P	Pn	19 46 21.7	+1.1
MAT				S	S	19 49 38.1	-2.5
MJB9	Matsu-Tunnel	18.77	341	P	P	19 46 17.7	-0.1
JMM	Marumori	19.39	349	P	P	19 46 25.2	+0.8
JMM				IAmb	IAmb	19 46 29.5	
	comp=Z,42nm,1.1s						
JHS	Saijyo	19.50	328	P	P	19 46 24.2	-1.5
JHS				IAmb	IAmb	19 46 45.2	
	comp=Z,39nm,1.4s						
H11S3	WAKE ISLAND Hy	20.03	88	T	T	20 07 54.3	
	baz=275,slow=75						
H11S1	WAKE ISLAND Hy	20.04	88	T	T	20 07 37.8	
	baz=275,slow=75						
H11S2	WAKE ISLAND Hy	20.04	88	T	T	20 07 38.3	
	baz=275,slow=75						
JSD	Sado	20.14	343	P	P	19 46 33.1	+0.7
H11N1	WAKE ISLAND Hy	20.16	84	T	T	20 08 04.4	
	baz=272						
H11N2	WAKE ISLAND Hy	20.16	84	T	T	20 08 01.7	
	baz=272						
H11N3	WAKE ISLAND Hy	20.18	84	T	T	20 08 03.4	
	baz=272						
MANU	Manus Island	20.85	175	P	P	19 46 39.0	-1.3
MANU				IAmb	IAmb	19 46 39.9	
	comp=Z,15nm,0.7s						
JTM	Tenmabayashi	22.19	351	P	P	19 46 54.3	+0.7
YULB	Yu-li	23.06	286	P	P	19 47 03.0	+1.3
YULB				IAmb	IAmb	19 47 45.0	
	comp=Z,57nm,1.4s						
ERM	Erimo	23.17	355	P	P	19 47 05.7	+3.3
YHNB	Yeheng	23.17	289	P	P	19 47 03.8	+1.1
SSLB	Suanglung	23.42	286	P	P	19 47 05.2	+0.3
KSRS	Korea Array	24.11	324	P	P	19 47 10.9	-0.1
	comp=Z,2.8nm,0.7s,baz=147,slow=8.5,SNR=11						
KSRS				pP	pwP	19 47 52.4	-0.6
	comp=Z,2.4nm,0.7s,baz=145,slow=8.4,SNR=3.7						
SIJI	Sorong	24.11	217	P	P	19 47 11.8	+0.4
	comp=Z,11nm,0.8s,baz=12,slow=15,SNR=7.6						
JEW	Eniwo	24.16	353	P	P	19 47 12.5	+1.1
FAKI	Fak Fak	25.30	213	P	P	19 47 21.4	-0.6
ASAJ	Asahikawa	25.30	355	P	P	19 47 23.6	+1.9
	comp=Z,13nm,0.8s,baz=215,slow=16,SNR=5.5						
JKA	Kamikawa-asahi	25.30	355	IAmb	IAmb	19 47 27.1	
	comp=Z,25nm,1.0s						
USRK	Ussuriysk Ar.	27.70	339	P	P	19 47 44.2	+1.0
	comp=Z,4.0nm,0.8s,baz=161,slow=8.6,SNR=5.7						
MYLDM	Lahad Datu	29.68	246	P	P	19 48 00.3	-0.8
MYLDM				IAmb	IAmb	19 48 20.2	
	comp=Z,23nm,1.3s						
TOLI2	Tolitoli	30.02	237	P	P	19 48 04.2	+0.2
TOLI2				IAmb	IAmb	19 48 05.7	
	comp=Z,9.9nm,0.8s						
KKM	Kota Kinabalu	31.29	250	P	P	19 48 16.6	+1.3
KKM				IAmb	IAmb	19 48 17.9	
	comp=Z,40nm,1.3s						
COEN	Coen	32.70	184	P	P	19 48 26.2	-1.1
COEN				IAmb	IAmb	19 48 44.2	
	comp=Z,31nm,1.7s						
QIZ	Qiongzhong	33.74	276	P	P	19 48 39.4	+2.9
MTN	Manton Dam	34.56	205	P	P	19 48 43.0	-0.5
MTN				IAmb	IAmb	19 48 44.9	
	comp=Z,19nm,1.1s						
ENH	Enshi	34.57	296	P	P	19 48 43.5	0.0
ENH				IAmb	IAmb	19 48 47.8	
	comp=Z,26nm,1.8s						
SOEI	Soe	35.34	218	P	P	19 48 48.9	-1.5
SOEI				IAmb	IAmb	19 48 56.8	
	comp=Z,18nm,1.0s						
PEA0B	Petropavlovsk-	35.46	13	P	P	19 48 50.3	-0.4
PETK	Petropavlovsk-	35.46	13	P	P	19 48 51.7	+0.9
	comp=Z,3.0nm,0.6s,baz=141,slow=7.2,SNR=6.5						
PETK	Petropavlovsk-	35.46	13	P	P	19 48 51.5	+0.7
BATI	Baumata	36.06	219	P	P	19 48 55.2	-1.2
	comp=Z,13nm,0.6s,baz=328,slow=3.0,SNR=10						
SBUM	Sibu	36.48	247	P	P	19 49 00.3	+0.4
KNRA	Kununurra	38.09	207	P	P	19 49 13.2	-0.2
KNRA				IAmb	IAmb	19 49 15.0	
	comp=Z,13nm,0.7s						
KSM	Kuching	38.62	248	P	P	19 49 18.1	+0.2
KSM				IAmb	IAmb	19 49 33.0	
	comp=Z,36nm,1.4s						
CTAO	Charters Tower	38.71	179	P	P	19 49 18.4	-0.1
CTAO				IAmb	IAmb	19 49 20.7	
	comp=Z,40nm,1.8s						
WB0	Warramunga Arr	39.92	197	P	P	19 49 28.3	-0.2
WB0				IAmb	IAmb	19 49 29.1	
	comp=Z,19nm,1.2s						
WR0	Warramunga Arr	40.06	196	P	P	19 49 29.3	-0.4
WRAB	Tennant Creek	40.09	196	P	P	19 49 29.9	0.0
WRAB				IAmb	IAmb	19 49 30.6	
	comp=Z,21nm,1.2s						
WB2	Warramunga Arr	40.10	196	P	P	19 49 30.1	+0.1
WRA	Warramunga Arr	40.10	197	P	P	19 49 29.6	-0.4
	comp=Z,4.6nm,0.6s,baz=18,slow=8.0,SNR=22						
WRA				PcP	PcP	19 51 29.4	-1.1
	comp=Z,2.0nm,0.6s,baz=12,slow=3.4,SNR=6.9						
WRA	Warramunga Arr	40.10	197	P	P	19 49 29.9	-0.1
SANVU	Saraoutou	40.21	147	P	P	19 49 31.7	+0.9
FITZ	Fitzroy Crossi	41.62	209	P	P	19 49 42.4	0.0
	comp=Z,7.3nm,0.7s,baz=15,slow=6.3,SNR=56						
SONM	Songino Array	42.93	321	P	P	19 49 53.0	+0.2
	comp=Z,2.2nm,0.5s,baz=138,slow=9.3,SNR=18						
AS31	Alice Springs	43.77	196	P	P	19 49 58.2	-1.4
ASAR	Alice Springs	43.77	196	P	P	19 49 59.0	-0.6
	comp=Z,2.8nm,0.8s,baz=13,slow=7.4,SNR=28						
ASAR				PcP	PcP	19 51 42.2	-0.5
	comp=Z,1.4nm,0.6s,baz=29,slow=3.2,SNR=10						
ASAR	Alice Springs	43.77	196	P	P	19 49 58.5	-1.2
ASAR				PcP	PcP	19 51 41.6	-1.1
CMAR	Chiang Mai Arr	44.06	277	P	P	19 50 03.2	+1.1
	comp=Z,1.5nm,0.6s,baz=73,slow=6.2,SNR=4.5						
CMAR				PcP	PcP	19 51 43.4	-0.4
	comp=Z,1.4nm,0.8s,baz=69,slow=2.0,SNR=6.2						
CMAR	Chiang Mai Arr	44.06	277	P	P	19 50 02.8	+0.6
CMAR				PcP	PcP	19 51 43.5	-0.4
YAK	Yakutsk	44.54	349	P	P	19 50 04.8	-0.4
DZM	Mont Dzumac	45.52	152	P	P	19 50 13.2	-0.4
KULM	Kulim	45.78	259	P	P	19 50 16.3	+0.6
OUENC	Ouen Island, N	46.00	152	P	P	19 50 16.7	-0.5
OUENC				IAmb	IAmb	19 50 17.9	
	comp=Z,13nm,0.7s						
PSA00	Pilbara Seismi	47.41	213	P	P	19 50 28.0	-0.1
PSA00	Pilbara Seismi	47.41	213	P	P	19 50 27.8	-0.4
PSA00				IAmb	IAmb	19 50 29.2	
	comp=Z,4.9nm,1.1s						
GSI	Gunungsitoli	50.13	255	P	P	19 50 49.0	0.0
GSI				IAmb	IAmb	19 50 51.4	
	comp=Z,30nm,1.3s						
GSI				PcP	PcP	19 52 05.1	-0.5
LSA	Lhasa	50.36	293	P	P	19 50 52.7	+1.5
BILL	Bilibino	50.88	10	P	P	19 50 54.5	+0.7
BILL				IAmb	IAmb	19 50 56.0	
	comp=Z,19nm,0.7s						
AKUT	Akutan	51.11	35	P	P	19 50 56.9	+1.1
FORT	Forrest	52.14	199	P	P	19 51 04.1	+0.4
FORT				IAmb	IAmb	19 51 05.1	
	comp=Z,46nm,1.6s						
BBOO	Buckleboo	52.18	190	P	P	19 51 02.5	-1.4
BBOO				IAmb	IAmb	19 51 20.7	
	comp=Z,40nm,1.6s						
TIXI	Tiksi	53.69	354	P	P	19 51 13.7	-0.7
SDPT	Sand Point	54.41	35	P	P	19 51 20.8	+0.9
MORW	Morawa	55.52	212	P	P	19 51 27.9	-0.3
MORW				IAmb	IAmb	19 51 29.2	
	comp=Z,16nm,0.7s						
ZALV	Zalesovo Beam	57.80	322	P	P	19 51 43.4	-0.5
	comp=Z,2.1nm,0.4s,baz=103,slow=7.1,SNR=8.4						
SII	Sitkinak Islan	58.15	34	P	P	19 51 47.4	+1.1
MK31	Makanchi Array	58.25	314	P	P	19 51 47.3	+0.1
MK31				PcP	pP	19 52 34.0	+2.3
MKAR	Makanchi Array	58.25	314	P	P	19 51 47.5	+0.2
	comp=Z,4.5nm,0.6s,baz=89,slow=7.8,SNR=42						
MKAR				pP	pwP	19 52 35.8	-0.6
	comp=Z,1.5nm,0.6s,baz=84,slow=7.3,SNR=3.4						
MKAR	Makanchi Array	58.25	314	P	P	19 51 47.2	-0.1
MKAR					pP	19 52 31.9	+0.2
P18K	Big Mountain,	58.40	31	P	P	19 51 48.2	+0.2
P18K				IAmb	IAmb	19 51 58.4	
	comp=Z,39nm,1.4s						
MAKZ	Makanchi	58.47	314		P	19 51 49.0	+0.3
MAKZ				IAmb	IAmb	19 51 50.1	
	comp=Z,6.9nm,0.7s						
O18K	Koktuh Hills	58.54	31	P	P	19 51 50.5	+1.5
O18K				IAmb	IAmb	19 51 51.3	
	comp=Z,19nm,0.7s						
SVW2	Sparrevohn	58.75	29	P	P	19 51 51.2	+0.8
SVW2				IAmb	IAmb	19 51 56.5	
	comp=Z,46nm,1.6s						
OHAK	Old Harbor	58.79	34	P	P	19 51 52.0	+1.3
TTA	Tatalina	59.17	27	P	P	19 51 54.1	+0.8
TTA				IAmb	IAmb	19 52 29.9	
	comp=Z,23nm,1.7s						
N19K	Bonanza Creek	59.17	30	P	P	19 51 55.0	+1.6
N19K				IAmb	IAmb	19 51 56.4	
	comp=Z,16nm,0.8s						
KDAK	Kodiak Island	59.30	33	P	P	19 51 54.7	+0.5
	comp=Z,14nm,1.0s,baz=306,slow=11,SNR=6.6						
KDAK	Kodiak Island	59.30	33	P	P	19 51 55.2	+1.1
L19K	White Mountain	59.43	28	P	P	19 51 56.1	+1.1
L19K				IAmb	IAmb	19 52 16.5	
	comp=Z,23nm,1.4s						
P19K	Oil Pt	59.45	31	P	P	19 51 56.4	+1.2
M19K	Big River Lodg	59.55	28	P	P	19 51 57.5	+1.6
M19K				IAmb	IAmb	19 51 57.9	
	comp=Z,30nm,1.6s						
RSO	Redoubt South	59.89	30	P	P	19 51 59.4	+0.9
SEM	Semipalatinsk	59.99	318	*e*P	P	19 51 57.5	-1.8
	baz=318						
SHLS	Shalkode	60.01	309	*e*P	P	19 51 56.9	-2.6
	baz=309						
J20K	Nowinta River	60.37	26	P	P	19 52 02.8	+1.4
J20K				IAmb	IAmb	19 52 04.3	
	comp=Z,42nm,1.6s						
CNPM	China Poot	60.40	32	P	P	19 52 02.1	+0.4
BRLK	Bradley Lake	60.62	31	P	P	19 52 03.1	-0.1
PRZ	Przheval'sk	60.78	309	P	P	19 52 06.0	+1.2
PRZ				IAmb	IAmb	19 52 07.6	
	comp=Z,9.9nm,0.8s						
SATY	Saty	60.78	309	*e*P	P	19 52 04.5	-0.2
	baz=309						
TDK	Taldyqorghan	60.83	312	*e*P	P	19 52 04.3	-0.6
	baz=312						
KURK	Kurchatov	61.06	318	P	P	19 52 05.8	-0.4
KURK				IAmb	IAmb	19 52 07.7	
	comp=Z,8.5nm,0.8s						
SUA	Susitna One	61.10	29	P	P	19 52 06.5	0.0
IMAR	Indian Mountai	61.13	24	P	P	19 52 06.9	+0.5
IMAR				PcP	PcP	19 52 48.0	+0.7
TARG	Taragay, Kyrgy	61.22	308	P	P	19 52 09.1	+1.1
O22K	Cooper Landing	61.35	31	P	P	19 52 08.4	+0.4
H21K	Melozitna Rive	61.39	25	P	P	19 52 08.9	+0.7
H21K				IAmb	IAmb	19 52 10.6	
	comp=Z,17nm,1.3s						
SEW	Seward	61.40	31	P	P	19 52 08.7	+0.4
NRIK	Noril'sk	61.41	340	P	P	19 52 07.5	-0.8
	comp=Z,2.8nm,0.5s,baz=98,slow=10,SNR=4.4						
NRIK	Noril'sk	61.41	340	P	P	19 52 08.1	-0.2
RC01	Rabbit Creek A	61.48	30	P	P	19 52 09.4	+0.5
RC01				IAmb	IAmb	19 52 10.0	
	comp=Z,15nm,0.5s						
KTH	Kantishna Hill	61.55	27	P	P	19 52 10.2	+0.8
KTH				IAmb	IAmb	19 52 11.5	
	comp=Z,22nm,1.2s						
I21K	Tanana	61.57	25	P	P	19 52 10.8	+1.4
I21K				IAmb	IAmb	19 52 11.4	
	comp=Z,8.8nm,0.6s						
KDJ	Kajisay	61.68	308	P	P	19 52 12.0	+1.1
MDOK	Medeo	61.78	309	*e*P	P	19 52 10.4	-1.0
	baz=309						
TRF	Thorofare Moun	61.80	27	P	P	19 52 11.6	+0.4
TRF				IAmb	IAmb	19 52 12.4	
	comp=Z,19nm,1.0s						
AAA	Alma-Ata	61.87	309	*e*P	P	19 52 11.7	-0.3
	comp=Z,5.9nm,0.5s,baz=309						
PMR	Palmer	61.88	30	P	P	19 52 11.3	-0.2
PMR				IAmb	IAmb	19 52 12.4	
	comp=Z,11nm,1.0s						
GHO	Glory Hole Cre	62.02	29	P	P	19 52 12.9	+0.4
MLY	Manley	62.03	26	P	P	19 52 13.7	+1.1
MLY				IAmb	IAmb	19 52 14.4	
	comp=Z,10nm,0.7s						
PWL	Port Wells	62.10	30	P	P	19 52 13.6	+0.6
PWL				PcP	PcP	19 52 51.6	+0.2
KNK	Knik Glacier	62.16	30	P	P	19 52 13.8	+0.4
KNK				IAmb	IAmb	19 52 14.9	
	comp=Z,15nm,0.7s						
KNK				PcP	PcP	19 52 52.0	+0.3
A21K	Barrow	62.18	18	P	P	19 52 14.3	+0.9
KUU	Kurty	62.29	310	*e*P	P	19 52 14.0	-0.7
	baz=310						
SML	Sawmill	62.30	29	P	P	19 52 15.1	+0.7
SML				PcP	PcP	19 52 51.7	-0.5
BWN	Browne	62.34	27	P	P	19 52 15.4	+0.9
BWN				IAmb	IAmb	19 52 16.4	
	comp=Z,20nm,1.0s						
RND	Reindeer	62.41	28	P	P	19 52 15.2	0.0
RND				IAmb	IAmb	19 52 16.6	
	comp=Z,9.1nm,0.9s						
RND				PcP	PcP	19 52 51.6	-1.1
MCK	McKinley	62.46	27	P	P	19 52 16.2	+0.8
MCK				IAmb	IAmb	19 52 28.9	
	comp=Z,12nm,1.3s						
BOOM	Boomskoye usch	62.60	309	P	P	19 52 16.7	-0.2
BOOM				IAmb	IAmb	19 52 18.8	
	comp=Z,5.1nm,0.6s						
NEA2	Nenana	62.61	26	P	P	19 52 17.2	+0.9
NEA2				IAmb	IAmb	19 52 18.1	
	comp=Z,7.6nm,0.8s						
KSH	Kashi	62.66	305	P	P	19 52 21.2	+3.9
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GLI	Glacier Island	62.70	31	P	P	19 52 17.7	+0.7
SCM	Sheep Creek Mo	62.77	29	P	P	19 52 18.0	+0.5
COLD	Coldfoot	62.86	23	P	P	19 52 19.3	+1.3
COLD				IAmb	IAmb	19 52 20.2	
	comp=Z,14nm,1.3s						
HIN	Hinchinbrook I	62.90	31	P	P	19 52 19.4	+1.0
FID	Port Fidalgo	62.98	31	P	P	19 52 19.4	+0.5
WRH	Wood River Hil	62.99	26	P	P	19 52 18.6	-0.3
WRH				IAmb	IAmb	19 52 19.6	
	comp=Z,8.2nm,0.7s						
MDM	Murphy Dome	63.04	26	P	P	19 52 19.5	+0.2
MDM				IAmb	IAmb	19 52 21.1	
	comp=Z,11nm,0.7s						
CCB	Clear Creek Bu	63.15	26	P	P	19 52 19.8	-0.1
CCB				PcP	PcP	19 52 55.0	-0.6
EYAK	Cordova Ski Ar	63.30	31	P	P	19 52 21.7	+0.8
M24K	Tolsona, Glenn	63.36	29	P	P	19 52 22.4	+1.0
KLU	Klutina	63.37	30	P	P	19 52 22.6	+1.1
KLU				IAmb	IAmb	19 52 23.9	
	comp=Z,12nm,1.1s						
H24K	Noodor Dome	63.39	25	P	P	19 52 22.6	+1.0
H24K				IAmb	IAmb	19 52 23.4	
	comp=Z,6.8nm,0.6s						
POKR	Poker Plat Res	63.41	26	P	P	19 52 21.6	0.0
HDA	Harding Lake	63.46	27	P	P	19 52 21.4	-0.6
TOLK	Toolik Lake Re	63.49	22	P	P	19 52 23.7	+1.6
TOLK				IAmb	IAmb	19 52 24.4	
	comp=Z,13nm,0.6s						
SGDS	Sogindy	63.54	310	*e*P	P	19 52 22.5	-0.4
	baz=310						
IL31		63.56	26	P	P	19 52 22.1	-0.4
IL31				IAmb	IAmb	19 52 22.8	
	comp=Z,9.5nm,0.9s						
ILAR	Eielson Array	63.56	26	P	P	19 52 21.9	-0.7
	comp=Z,6.7nm,0.8s,baz=255,slow=4.8,SNR=56						
AAK	Ala-Archa	63.66	309	P	P	19 52 23.5	-0.4
PAX	Paxson	63.83	28	P	P	19 52 25.3	+0.8
PAX				IAmb	IAmb	19 52 25.6	
	comp=Z,7.2nm,0.5s						
KAIM	Kayak Island	63.86	32	P	P	19 52 24.4	-0.2
BTLS	Baital	63.92	312	*e*P	P	19 52 25.2	-0.1
	baz=312						
HMT	Hamilton	64.00	31	P	P	19 52 26.7	+1.2
N25K	Chitina, Valde	64.01	30	P	P	19 52 26.1	+0.4
N25K				IAmb	IAmb	19 52 41.1	
	comp=Z,22nm,1.4s						
BERG	Berg Lake	64.28	31	P	P	19 52 28.1	+0.7
GLB	Gilahina Butte	64.36	30	P	P	19 52 28.9	+0.9
GLB				IAmb	IAmb	19 52 30.4	
	comp=Z,14nm,1.0s						
VRDI	Verde Repeater	64.50	30	P	P	19 52 29.9	+0.9
VRDI				IAmb	IAmb	19 52 30.7	
	comp=Z,13nm,0.9s						
DOT	Dot Lake	64.57	28	P	P	19 52 29.4	+0.2
DOT				IAmb	IAmb	19 52 30.4	
	comp=Z,11nm,0.8s						
CRQM	Cirque	64.60	31	P	P	19 52 30.6	+0.9
SCRK	Sand Creek	64.65	27	P	P	19 52 30.1	+0.2
SCRK				IAmb	IAmb	19 52 31.2	
	comp=Z,13nm,1.1s						
MCARA	McCarthy VSAT	64.73	30	P	P	19 52 31.4	+1.2
MCARA				IAmb	IAmb	19 52 32.2	
	comp=Z,12nm,0.8s						
TGL	Tana Glacier	64.75	31	P	P	19 52 31.6	+1.0
M26K	Nabesna, AK	64.87	29	P	P	19 52 32.4	+1.1
M26K				IAmb	IAmb	19 52 37.1	
	comp=Z,21nm,1.6s						
ISLE	Juniper Island	64.97	31	P	P	19 52 33.0	+1.0
ISLE				IAmb	IAmb	19 52 33.8	
	comp=Z,24nm,1.1s						
BMAR	Burnt Mountain	65.02	24	P	P	19 52 33.9	+1.8
BMAR					PcP	19 53 04.7	+1.4
MESA	MESA	65.12	32	P	P	19 52 34.7	+1.6
YAH	Yahtse	65.24	32	P	P	19 52 35.0	+1.1
NIL	Nilore	65.33	299	P	P	19 52 34.4	-0.3
NIL				IAmb	IAmb	19 52 36.7	
	comp=Z,14nm,1.0s						
BARN	Barnard Glacie	65.35	31	P	P	19 52 35.6	+1.1
BARN				IAmb	IAmb	19 53 15.8	
	comp=Z,42nm,1.8s						

M27K	**Edge Creek, AK**	**65.38**	**29**	P	**P**	**19 52 35.2**	**+0.6**
M27K				IAmb	IAmb	19 52 36.1	
	comp=Z,11nm,1.1s						
L27K	**Beaver Creek,**	**65.49**	**29**	P	**P**	**19 52 36.0**	**+0.8**
L27K				IAmb	IAmb	19 53 00.2	
	comp=Z,23nm,1.8s						
L27K				PcP	**PcP**	**19 53 06.3**	**+1.0**
BCAR	**Beaver Creek A**	**65.51**	**29**	P	**P**	**19 52 36.3**	**+1.0**
BCAR				PcP	**PcP**	**19 53 06.6**	**+1.2**
EGAK	**Eagle**	**65.98**	**27**	P	**P**	**19 52 39.4**	**+1.1**
EGAK				IAmb	IAmb	19 52 39.5	
	comp=Z,15nm,1.4s						
BRVK	**Borovoye**	**66.33**	**320**	P	**P**	**19 52 40.5**	**-0.1**
BRVK				IAmb	IAmb	19 52 42.6	
	comp=Z,12nm,0.7s						
KKAR	**Karatay Array**	**66.56**	**310**	P	**P**	**19 52 42.8**	**+0.5**
BTK	**Batken**	**66.59**	**306**	P	**P**	**19 52 43.3**	**+0.6**
DAWY	**Dawson**	**66.67**	**28**	P	**P**	**19 52 43.1**	**+0.4**
DAWY				IAmb	IAmb	19 53 00.8	
	comp=Z,16nm,1.7s						
DAWY				PcP	**PcP**	**19 53 10.9**	**+0.7**
IUG	**Iuzhnay**	**66.99**	**309**	*e*P	**P**	**19 52 44.8**	**-0.4**
	baz=308						
SKAG	**Skagway**	**68.43**	**33**	P	**P**	**19 52 54.9**	**+1.2**
KBL	**Kabul**	**68.67**	**300**	P	**P**	**19 52 55.8**	**-0.2**
INK	**Inuvik**	**69.28**	**23**	P	**P**	**19 52 59.0**	**+0.3**
	comp=Z,8.1nm,0.7s,baz=272,slow=4.5,SNR=26						
INK	**Inuvik**	**69.28**	**23**	P	**P**	**19 52 58.7**	**0.0**
INK				IAmb	IAmb	19 52 59.9	
	comp=Z,9.3nm,0.8s						
CRAG	**Craig**	**69.79**	**37**	P	**P**	**19 53 02.6**	**+0.5**
DIB	**Dawson Inlet,**	**70.35**	**39**	P	**P**	**19 53 06.8**	**+1.3**
A36M	**Sachs Harbour**	**71.97**	**19**	P	**P**	**19 53 15.7**	**+0.7**
A36M				IAmb	IAmb	19 53 16.4	
	comp=Z,16nm,0.9s						
ARU	**Arti**	**72.86**	**325**	P	**P**	**19 53 19.8**	**-0.6**
ARU				IAmb	IAmb	19 53 21.6	
	comp=Z,8.3nm,0.6s						
ABKAR	**Akbulak array**	**73.13**	**317**	P	**P**	**19 53 21.3**	**-0.9**
ABKAR	**Akbulak array**	**73.13**	**317**	P	**P**	**19 53 21.4**	**-0.9**
ABKAR				IAmb	IAmb	19 53 22.6	
	comp=Z,6.2nm,0.6s						
LLLB	**Lillooet**	**77.25**	**41**	P	**P**	**19 53 45.1**	**-0.7**
LLLB				IAmb	IAmb	19 54 06.9	
	comp=Z,32nm,1.6s						
EUNU	**Eureka**	**77.58**	**8**	P	**P**	**19 53 47.6**	**+0.4**
EUNU				IAmb	IAmb	19 53 48.4	
	comp=Z,11nm,0.7s						
YKA	**Yellowknife Ar**	**77.91**	**28**	P	**P**	**19 53 49.2**	**+0.1**
	comp=Z,7.0nm,0.6s,baz=289,slow=5.5,SNR=54						
YKA	**Yellowknife Ar**	**77.91**	**28**	P	**P**	**19 53 48.8**	**-0.3**
BUCK	**Buck Mountain**	**78.12**	**47**	P	**P**	**19 53 52.0**	**+1.3**
DBO	**Dodson Butte**	**78.21**	**48**	P	**P**	**19 53 52.3**	**+1.0**
DBO				IAmb	IAmb	19 54 05.9	
	comp=Z,56nm,1.7s						
KHMM	**Horse Mountain**	**78.43**	**51**	P	**P**	**19 53 52.4**	**-0.3**
KHMM				IAmb	IAmb	19 53 58.9	
	comp=Z,24nm,1.2s						
HUMO	**Hull Mountain**	**78.55**	**49**	P	**P**	**19 53 52.4**	**-0.7**
HUMO				IAmb	IAmb	19 54 14.7	
	comp=Z,17nm,1.4s						
LTY	**Liberty**	**78.89**	**44**	P	**P**	**19 53 55.3**	**+0.4**
LTY				IAmb	IAmb	19 54 17.8	
	comp=Z,34nm,1.6s						
YBH	**Yreka Blue Hor**	**78.95**	**50**	P	**P**	**19 53 56.7**	**+1.3**
YBH				IAmb	IAmb	19 54 06.0	
	comp=Z,21nm,1.8s						
SPB2	**Spitsbergen Ar**	**78.98**	**351**	P	**P**	**19 53 56.0**	**+1.3**
RES	**Resolute Bay**	**79.30**	**14**	P	**P**	**19 53 57.0**	**+0.5**
B08A	**Colville Reser**	**79.45**	**43**	P	**P**	**19 53 57.8**	**0.0**
B08A				IAmb	IAmb	19 53 59.6	
	comp=Z,18nm,1.3s						
K05A	**Summer Lake**	**79.98**	**48**	P	**P**	**19 54 02.4**	**+1.3**
K05A				IAmb	IAmb	19 54 02.7	
	comp=Z,12nm,0.7s						
NEW	**Newport**	**80.89**	**42**	P	**P**	**19 54 06.1**	**+0.6**
MPK	**Martis Peak**	**81.60**	**51**	P	**P**	**19 54 10.0**	**+0.2**
MPK				IAmb	IAmb	19 54 11.1	
	comp=Z,8.5nm,0.8s						
WVOR	**Wild Horse Val**	**81.66**	**48**	P	**P**	**19 54 09.6**	**-0.2**
CMB	**Columbia Colle**	**81.71**	**53**	P	**P**	**19 54 09.9**	**-0.2**
BMO	**Blue Mountains**	**81.83**	**45**	P	**P**	**19 54 11.0**	**+0.4**
PAHR	**Pah Rah Range**	**81.95**	**51**	P	**P**	**19 54 10.2**	**-1.3**
YERR	**Yerington**	**82.28**	**52**	P	**P**	**19 54 12.4**	**-0.8**
ARCES	**ARCESS Array B**	**82.30**	**342**	P	**P**	**19 54 12.1**	**-0.4**
	comp=Z,2.4nm,0.6s,baz=72,slow=7.9,SNR=12						
TULEG	**Thule**	**82.57**	**8**	P	**P**	**19 54 14.0**	**+0.3**
TULEG				IAmb	IAmb	19 54 14.7	
	comp=Z,10nm,0.6s						
RYN	**Ryan**	**82.92**	**52**	P	**P**	**19 54 17.0**	**+0.5**
LHV	**Little Huntoon**	**83.06**	**52**	P	**P**	**19 54 17.5**	**+0.6**
KVN	**Kaiserville**	**83.10**	**51**	P	**P**	**19 54 17.8**	**+0.3**
NVAR	**Mina Array Bea**	**83.15**	**52**	P	**P**	**19 54 18.6**	**+0.8**
	comp=Z,7.8nm,0.7s,baz=270,slow=5.8,SNR=52						
NVAR				pP	**pP**	**19 55 06.1**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=278,slow=6.1,SNR=2.4						
NVAR	**Mina Array Bea**	**83.15**	**52**	P	**P**	**19 54 18.1**	**+0.4**
NV11	**Mina Array Sit**	**83.26**	**52**	P	**P**	**19 54 18.7**	**+0.5**
MFID	**Camas Ranch**	**83.30**	**47**	P	**P**	**19 54 18.1**	**-0.2**
LCH	**Last Change Ra**	**84.03**	**53**	P	**P**	**19 54 22.0**	**-0.1**
TPH	**Tonopah**	**84.07**	**52**	P	**P**	**19 54 22.8**	**+0.4**
TPH				IAmb	IAmb	19 54 23.8	
	comp=Z,21nm,0.7s						
HLID	**Hailey**	**84.22**	**46**	P	**P**	**19 54 23.1**	**+0.1**
ELK	**Elko**	**84.62**	**49**	P	**P**	**19 54 24.9**	**-0.3**
LRM	**Limekiln Ridge**	**84.72**	**43**	P	**P**	**19 54 25.5**	**-0.1**
HRY	**Holter Researc**	**84.79**	**42**	P	**P**	**19 54 26.1**	**+0.3**
GWY	**Greenwater Val**	**85.11**	**54**	P	**P**	**19 54 28.0**	**+0.4**
SPR3	**Spring Creek 3**	**85.88**	**50**	P	**P**	**19 54 32.3**	**+0.7**
PRN	**Pahroc Range**	**85.91**	**52**	P	**P**	**19 54 31.4**	**-0.1**
KBZ	**Khabaz**	**85.93**	**315**	P	**P**	**19 54 31.1**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=79,slow=5.2,SNR=1.8						
HVU	**Hansel Valley**	**85.99**	**47**	P	**P**	**19 54 31.9**	**+0.1**
SPUT	**South Promonto**	**86.39**	**48**	P	**P**	**19 54 33.6**	**-0.2**
PSUT	**Pine Spring**	**86.40**	**51**	P	**P**	**19 54 33.9**	**-0.1**
DUG	**Dugway, Tooele**	**86.54**	**49**	P	**P**	**19 54 34.7**	**+0.2**
FINES	**FINESS Array B**	**86.68**	**335**	P	**P**	**19 54 32.8**	**-1.7**
	comp=Z,3.2nm,0.3s,baz=66,slow=4.6,SNR=48						
FINES				pP	**pP**	**19 55 21.9**	**-0.6**
	comp=Z,5.4nm,1.0s,baz=71,slow=6.1,SNR=2.5						
HWUT	**Hardware Ranch**	**86.89**	**47**	P	**P**	**19 54 35.3**	**-0.9**
FFC	**Flin Flon**	**87.03**	**32**	P	**P**	**19 54 35.9**	**-0.5**
FFC				IAmb	IAmb	19 54 37.6	
	comp=Z,11nm,0.9s						
PDAR	**Pinedale Array**	**87.81**	**45**	P	**P**	**19 54 40.0**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=205,slow=1.6,SNR=12						
PDAR				pP	**pP**	**19 55 29.1**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=218,slow=2.0,SNR=3.2						
NOA	**NORSAR Array B**	**92.37**	**340**	P	**P**	**19 55 00.4**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=37,slow=4.5,SNR=2.0						
ULM	**Lac du Bonnet**	**92.54**	**34**	P	**P**	**19 55 01.0**	**-1.2**
	comp=Z,4.6nm,0.9s,baz=37,slow=5.1,SNR=3.2						
ULM	**Lac du Bonnet**	**92.54**	**34**	IAmb	IAmb	19 55 02.7	
	comp=Z,11nm,1.2s						
BRTR	**Keskin Array B**	**93.90**	**314**	P	**P**	**19 55 07.3**	**-1.5**
	comp=Z,1.2nm,0.5s,baz=69,slow=7.9,SNR=2.9						
TXAR	**Lajitas Array**	**97.86**	**55**	P	**P**	**19 55 27.4**	**+0.4**
	comp=Z,0.6nm,1.1s,baz=284,slow=3.6,SNR=2.1						
TORD	**Torodi Ar. Bea**	**132.25**	**309**	PKP	**PKPdf**	**20 01 03.6**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=90,slow=1.6,SNR=2.9						
LVC	**Limon Verde**	**147.60**	**103**	PKPbc	**PKPbc**	**20 01 35.3**	**-0.2**
	comp=Z,7.8nm,0.7s,baz=250,slow=4.3,SNR=5.1						
LVC	**Limon Verde**	**147.60**	**103**		**PKPbc**	**20 01 35.9**	**+0.4**
LPAZ	**La Paz**	**147.81**	**91**	PKPbc	**PKPbc**	**20 01 36.7**	**+0.1**
	comp=Z,10nm,1.0s,baz=326,slow=3.2,SNR=9.9						
LPAZ	**La Paz**	**147.81**	**91**		**PKPdf**	**20 01 34.0**	**+0.7**
PTGA	**Pitinga**	**149.16**	**57**	PKPbc	**PKPbc**	**20 01 38.4**	**-0.9**
	comp=Z,9.6nm,0.6s,baz=312,slow=4.0,SNR=12						

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*ARE **08** 19:54:59±5.9, 15°.75S±0°.06×71°.8W±0°.1, h6^{km}±4^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=169.0*
*NEIC **08** 19:54:00.8±2.6, 15°.76S±0°.06×72°.1W±0°.1, h35^{km}±2^{km}, mb4.2/31, ML3.9(ARE), Error ellipse: s-maj=16.8km s-min=10.8km az=261.0*
*IDC **08** 19:54:09.4±0.6, 15°.59S×71°.39W, h64^{km}±5^{km}, mb3.6/4, mb1 3.9/7, mb1mx3.6/33, mbtmp3.9/7, MS4.0/11, Ms1 4.0/11, ms1mx3.8/25, Error ellipse: s-maj=23.7km s-min=17.3km az=61.0*
ISC 08 19:54:01.0±0.6, **15°.81S**±0°.06×**72°.18W**±0°.10, **h50^{km}, n75,** σ**1^{s}.40**/66, **mb4.2**/13, **MS4.2**/6, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**3.10**	**146**		**Pn**	**19 54 48.4**	**+0.9**
PB12	**IPOC Station P**	**3.31**	**148**	Pn	**Pn**	**19 54 52.0**	**+1.6**
PB16	**IPOC Station P**	**3.59**	**135**		**Pn**	**19 54 57.1**	**+2.4**
LPAZ	**La Paz**	**3.93**	**98**	P	**Pn**	**19 54 59.0**	**-0.4**
	0.3nm,0.3s,baz=271,slow=12,SNR=10						
LPAZ				LR	LR	19 56 31.1	
	comp=Z,391nm,20.9s,baz=298,slow=44						
LPAZ	**La Paz**	**3.93**	**98**	Pn	**Pn**	**19 54 58.5**	**-0.9**
PSGCX	**Pisagua**	**4.25**	**153**		**Pn**	**19 55 05.0**	**+1.6**
PB11	**IPOC Station P**	**4.61**	**149**	Pn	**Pn**	**19 55 08.8**	**+0.5**
TA02	**Huaiquique**	**4.85**	**157**		**Pn**	**19 55 11.2**	**-0.2**
TA01	**Diego Aracena**	**5.10**	**158**	Pn	**Pn**	**19 55 15.5**	**+0.5**
PB08	**IPOC Station P**	**5.19**	**147**		**Pn**	**19 55 17.6**	**+1.2**
PB01	**IPOC Station P**	**5.80**	**154**		**Pn**	**19 55 25.2**	**+0.5**
PB07	**IPOC Station P**	**6.28**	**160**		**Pn**	**19 55 32.1**	**+0.9**
PB09	**IPOC Station P**	**6.58**	**155**	Pn	**Pn**	**19 55 36.6**	**+1.3**
PB04	**IPOC Station P**	**6.77**	**164**		**Pn**	**19 55 38.2**	**+0.2**
PB06	**IPOC Station P**	**7.29**	**161**		**Pn**	**19 55 45.4**	**+0.2**
LVC	**Limon Verde**	**7.44**	**156**	P	**Pn**	**19 55 50.3**	**+3.0**
	1.4nm,0.3s,baz=338,slow=6.7,SNR=11						
LVC				S	**Sn**	**19 57 13.2**	**+2.6**
	1.6nm,0.3s,baz=166,slow=17,SNR=1.3						
LVC				LR	LR	19 58 54.1	
	comp=Z,1μm,19.7s,baz=329,slow=39						
LVC	**Limon Verde**	**7.44**	**156**	Pn	**Pn**	**19 55 48.4**	**+1.0**
PB15	**IPOC Station P**	**7.79**	**161**		**Pn**	**19 55 52.7**	**+0.7**
PB10	**IPOC Station P**	**7.82**	**169**	Pn	**Pn**	**19 55 53.1**	**+0.9**
CZSB	**Cruzeiro do Su**	**8.04**	**356**	Pn	**Pn**	**19 55 55.8**	**+0.5**
ETMB	**Extrema**	**8.32**	**45**	Pn	**Pn**	**19 55 58.4**	**-0.8**
PB14	**IPOC Station P**	**8.93**	**170**	Pn	**Pn**	**19 56 06.3**	**-1.5**
ATAH	**Atahualpa**	**10.55**	**324**	LR	LR	20 01 09.4	
	comp=Z,1μm,20.8s,baz=165,slow=39						
AC02	**Maricunga**	**11.34**	**166**	Pn	**Pn**	**19 56 39.4**	**-1.4**
GO03	**Copiap**	**11.87**	**172**	Pn	**Pn**	**19 56 45.1**	**-2.6**
VILB	**Vilhena**	**11.95**	**78**	Pn	**Pn**	**19 56 46.6**	**-2.2**
PTLB	**Pontes e Lacer**	**12.57**	**90**	Pn	**Pn**	**19 56 56.1**	**-1.2**
CO06	**Fray Jorge**	**14.81**	**178**	Pn	**Pn**	**19 57 26.6**	**-0.8**
CO03	**El Pedregal**	**15.03**	**175**	Pn	**Pn**	**19 57 31.7**	**+1.4**
ZON	**Zonda**	**15.99**	**169**	Pn	**Pn**	**19 57 42.6**	**-0.1**
AQDB	**Aquidauana**	**16.34**	**109**	Pn	**Pn**	**19 57 47.3**	**+0.2**
VA03	**San Esteban**	**16.95**	**175**	Pn	**Pn**	**19 57 53.8**	**-1.0**
VA03				IAmb	IAmb	19 58 07.5	
	comp=Z,23nm,1.2s						
OTAV	**Otavalo**	**17.10**	**338**	P	**Pn**	**19 57 56.7**	**-0.4**
CPUP	**Villa Florida**	**17.36**	**130**	LR	LR	20 05 46.9	
	comp=Z,344nm,19.0s,baz=318,slow=41						
MT05	**Renca**	**17.56**	**176**		**P**	**19 58 03.7**	**+0.9**
MT09	**Talagante**	**17.93**	**177**	P	**Pn**	**19 58 06.6**	**-0.3**
MT09				IAmb	IAmb	19 58 19.7	
	comp=Z,19nm,1.2s						
MT01	**Popeta**	**18.00**	**177**	P	**P**	**19 58 05.8**	**-1.8**
MT01				IAmb	IAmb	19 58 19.4	
	comp=Z,30nm,1.2s						
BO01	**Tunca**	**18.53**	**177**	P	**P**	**19 58 11.4**	**-2.1**
BO02	**Sierra Bellavi**	**18.95**	**176**	P	**P**	**19 58 16.6**	**-1.5**
BO02				IAmb	IAmb	19 58 30.2	
	comp=Z,32nm,1.6s						
PTGA	**Pitinga**	**19.23**	**40**	P	**Pn**	**19 58 23.4**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=231,slow=12,SNR=5.1						
PTGA	**Pitinga**	**19.23**	**40**	P	**Pn**	**19 58 23.4**	**+0.9**
ITQB	**Itaqui**	**19.88**	**137**	P	**P**	**19 58 27.5**	**-0.7**
ROSC	**El Rosal**	**20.62**	**354**	LR	LR	20 07 22.3	
	comp=Z,720nm,20.2s,baz=206,slow=39						
BOAV	**Boa Vista**	**21.45**	**34**	P	**P**	**19 58 44.2**	**-1.0**
ITAB	**Concordia**	**21.81**	**125**	P	**P**	**19 58 47.5**	**-1.5**
ITAB				IAmb	IAmb	19 59 02.5	
	comp=Z,13nm,1.1s						
LC01	**Cunco**	**23.01**	**179**	P	**P**	**19 59 00.1**	**-1.6**
LC01				IAmb	IAmb	19 59 11.3	
	comp=Z,13nm,1.1s						
BDFB	**Brasilia**	**23.27**	**93**	LR	LR	20 08 56.9	
	comp=Z,351nm,18.5s,baz=319,slow=39						
PLCA	**Paso Flores**	**24.88**	**177**	P	P	19 59 27.2	+8.1
	comp=Z,7.2nm,0.9s,baz=354,slow=14,SNR=8.4						
PLCA				pP	sP	19 59 43.3	+4.6
	comp=Z,27nm,1.0s,baz=358,slow=11,SNR=16						
PLCA	**Paso Flores**	**24.88**	**177**	P	**P**	**19 59 17.4**	**-1.7**
PLCA				IAmb	IAmb	19 59 29.4	
	comp=Z,9.5nm,1.0s						
BAUV	**El Baul**	**24.93**	**10**	P	**P**	**19 59 18.4**	**-1.3**
LL05	**Los Muermos**	**25.53**	**182**	P	**P**	**19 59 24.8**	**-0.1**
TXAR	**Lajitas Array**	**54.20**	**326**	P	P	20 03 30.1	+8.3
	comp=Z,0.6nm,1.0s,baz=160,slow=6.5,SNR=3.6						
TXAR				pP	sP	20 03 46.6	+4.0
	comp=Z,1.1nm,0.8s,baz=148,slow=8.6,SNR=7.0						
TX31	**Lajitas Ar. Si**	**54.20**	**326**	P	**P**	**20 03 21.3**	**-0.5**
MNTX	**Cornudas Mount**	**56.97**	**326**	P	**P**	**20 03 42.5**	**+1.0**
MNTX				IAmb	IAmb	20 03 49.9	
	comp=Z,2.7nm,1.1s						
LENM	**Lemitar**	**59.72**	**327**	P	**P**	**20 04 01.9**	**+0.9**
SDCO	**Great Sand Dun**	**61.79**	**330**	P	**P**	**20 04 16.2**	**+1.1**
SDCO				IAmb	IAmb	20 04 24.3	
	comp=Z,2.5nm,1.1s						
X16A	**Lo Mia Camp, P**	**62.36**	**324**	P	**P**	**20 04 19.1**	**+0.2**
X16A				IAmb	IAmb	20 04 32.6	
	comp=Z,3.0nm,1.4s						
WUAZ	**Wupatki**	**63.12**	**325**	P	**P**	**20 04 25.0**	**+1.1**
WUAZ				IAmb	IAmb	20 04 38.6	
	comp=Z,3.0nm,1.2s						
SMCO	**Snowmass**	**63.63**	**330**	P	**P**	**20 04 28.6**	**+1.2**
KNB	**Kanab**	**65.01**	**325**	P	**P**	**20 04 36.0**	**-0.2**
KNB				IAmb	IAmb	20 04 50.3	
	comp=Z,4.6nm,1.5s						
CCUT	**Cedar City**	**65.69**	**325**	P	**P**	**20 04 41.6**	**+0.9**
PSUT	**Pine Spring**	**66.67**	**325**	P	**P**	**20 04 47.4**	**+0.5**
R11A	**Troy Canyon, C**	**67.50**	**324**	P	**P**	**20 04 53.1**	**+0.9**
R11A				IAmb	IAmb	20 05 08.3	
	comp=Z,2.4nm,1.4s						
PDAR	**Pinedale Array**	**67.65**	**331**	LR	LR	20 36 48.6	
	comp=Z,132nm,19.2s,baz=50,slow=38						
FLWY	**Flagg Ranch**	**69.20**	**331**	P	**P**	**20 05 02.8**	**+0.1**
DBIC	**Dimbokro**	**70.28**	**77**	LR	LR	20 34 04.0	
	comp=Z,105nm,18.4s,baz=318,slow=34						
MFID	**Camas Ranch**	**71.20**	**328**	P	**P**	**20 05 14.8**	**0.0**
MFID				IAmb	IAmb	20 05 28.3	
	comp=Z,1.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.51**	**73**	P	**P**	**20 05 58.4**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=259,slow=7.7,SNR=6.0						
TORD				LR	LR	20 39 41.4	
	comp=Z,128nm,18.2s,baz=170,slow=35						
TORD	**Torodi Ar. Bea**	**78.51**	**73**	P	**P**	**20 05 55.2**	**-2.4**
YKA	**Yellowknife Ar**	**84.82**	**342**	P	P	20 06 36.0	+6.2
	comp=Z,1.1nm,0.8s,baz=136,slow=4.4,SNR=7.5						
BOSA	**Boshof**	**88.89**	**119**	LR	LR	20 45 08.9	
	comp=Z,86nm,18.2s,baz=211,slow=35						
SONM	**Songino Array**	**148.04**	**2**	PKPbc	**PKPab**	**20 13 47.7**	**+3.7**
	comp=Z,1.7nm,0.8s,baz=318,slow=2.3,SNR=9.9						
SONM	**Songino Array**	**148.04**	**2**		**PKPab**	**20 13 47.7**	**+3.7**
KSRS	**Korea Array**	**152.05**	**324**	PKPbc	**PKPab**	**20 13 59.8**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=96,slow=2.4,SNR=3.2						
KSRS	**Korea Array**	**152.05**	**324**		**PKPab**	**20 13 59.8**	**-0.8**

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*NEIC **08** 19:54:17.9±2.1, 15°.83S±0°.06×72°.2W±0°.1, h22^{km}±5^{km}, mb4.7/30, Error ellipse: s-maj=15.0km s-min=9.0km az=80.0*
*VAO **08** 19:54:18.8±1.2, 15°.87S×72°.29W, h10^{km}, mb4.1*
ISC 08 19:54:18.8±0.5, **15°.89S**±0°.06×**72°.38W**±0°.08, **h35^{km}, n84,** σ**2^{s}.07**/74, **mb4.7**/15, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**3.15**	**142**	Pn	**Pn**	**19 55 06.9**	**+1.0**
PB12	**IPOC Station P**	**3.35**	**144**	Pn	**Pn**	**19 55 09.1**	**+0.3**
PB16	**IPOC Station P**	**3.67**	**132**	Pn	**Pn**	**19 55 13.3**	**-0.4**
LPAZ	**La Paz**	**4.10**	**96**	Pn	**Pn**	**19 55 18.6**	**-1.1**
LPAZ	**La Paz**	**4.10**	**96**	S	Pn	19 55 26.4	+6.8
	3.4nm,0.3s,baz=276,slow=10,SNR=8.5						
PSGCX	**Pisagua**	**4.27**	**150**	Pn	**Pn**	**19 55 21.5**	**0.0**
PB11	**IPOC Station P**	**4.64**	**146**	Pn	**Pn**	**19 55 27.0**	**+0.3**
TA02	**Huaiquique**	**4.86**	**154**	Pn	**Pn**	**19 55 30.8**	**+1.4**
TA01	**Diego Aracena**	**5.10**	**156**	Pn	**Pn**	**19 55 33.7**	**+0.9**
PB08	**IPOC Station P**	**5.23**	**145**	Pn	**Pn**	**19 55 34.5**	**-0.4**
NNA	**Nana**	**5.81**	**311**	LR	LR	19 58 17.8	
	comp=Z,2μm,20.2s,baz=144,slow=39						
NNA	**Nana**	**5.81**	**311**	S	Sn	19 57 01.2	+13
	1.8nm,0.3s,baz=251,slow=22,SNR=0.9						
NNA	**Nana**	**5.81**	**311**	P	**Pn**	**19 55 39.2**	**-3.4**
	2.0nm,0.3s,baz=244,slow=8.3,SNR=1.8						
PB01	**IPOC Station P**	**5.82**	**152**	Pn	**Pn**	**19 55 43.3**	**+0.5**
PB07	**IPOC Station P**	**6.27**	**158**	Pn	**Pn**	**19 55 50.5**	**+1.5**
PB09	**IPOC Station P**	**6.59**	**154**	Pn	**Pn**	**19 55 53.2**	**-0.2**
PB04	**IPOC Station P**	**6.75**	**162**	Pn	**Pn**	**19 55 57.0**	**+1.3**
PB06	**IPOC Station P**	**7.28**	**159**	Pn	**Pn**	**19 56 02.6**	**-0.4**
LVC	**Limon Verde**	**7.45**	**154**	Pn	**Pn**	**19 56 05.4**	**0.0**
PB10	**IPOC Station P**	**7.78**	**168**	Pn	**Pn**	**19 56 10.1**	**+0.5**
PB15	**IPOC Station P**	**7.78**	**160**	Pn	**Pn**	**19 56 10.7**	**+0.8**
CZSB	**Cruzeiro do Su**	**8.11**	**358**	Pn	**Pn**	**19 56 12.5**	**-1.7**
ETMB	**Extrema**	**8.51**	**46**	Pn	**Pn**	**19 56 17.6**	**-2.1**
PB14	**IPOC Station P**	**8.89**	**168**	Pn	**Pn**	**19 56 24.9**	**-0.2**
AC02	**Maricunga**	**11.31**	**165**	Pn	**Pn**	**19 56 58.1**	**-0.3**
GO03	**Copiap**	**11.82**	**171**	Pn	**Pn**	**19 57 03.1**	**-1.9**
VILB	**Vilhena**	**12.15**	**78**	Pn	**Pn**	**19 57 05.2**	**-4.4**
PTLB	**Pontes e Lacer**	**12.76**	**90**	*e*P	**Pn**	**19 57 19.1**	**+1.2**
PTLB	**Pontes e Lacer**	**12.76**	**90**	Pn	Pn	19 57 11.3	-6.6
CO05	**La Serena**	**14.01**	**176**		**Pn**	**19 57 34.9**	**0.0**
CO06	**Fray Jorge**	**14.74**	**177**	Pn	**Pn**	**19 57 42.7**	**-2.1**
CO03	**El Pedregal**	**14.96**	**174**	Pn	**Pn**	**19 57 45.1**	**-2.8**
CO03				IAmb	IAmb	19 58 03.7	
	comp=Z,28nm,0.8s						
PDRB	**Porto dos Gac**	**15.78**	**76**	*e*P	**P**	**19 58 01.1**	**-1.0**
ZON	**Zonda**	**15.95**	**168**	P	**Pn**	**19 57 57.5**	**-3.2**
SALV	**Santo Antonio**	**16.05**	**92**	*e*P	**P**	**19 58 03.1**	**-2.0**
PP1B	**Ponte de Pedra**	**16.85**	**98**	*e*P	**P**	**19 58 13.8**	**-0.1**
CLDB	**Colider**	**16.88**	**75**	*e*P	**P**	**19 58 14.4**	**+0.1**
MACA	**Manacapuru-AM**	**17.10**	**44**	*e*P	**P**	**19 58 17.1**	**+0.4**
MT01	**Popeta**	**17.93**	**177**	P	**Pn**	**19 58 18.8**	**-6.6**
BO02	**Sierra Bellavi**	**18.88**	**176**	P	**P**	**19 58 29.3**	**-7.0**
ITQB	**Itaqui**	**19.95**	**136**	*e*P	**Pn**	**19 58 50.4**	**+0.6**
PCMB	**Pacaembu**	**20.78**	**109**	*e*P	Pn	19 58 59.1	-0.6
BOAV	**Boa Vista**	**21.62**	**34**	*e*P	**P**	**19 59 08.2**	**+2.1**
FRTB	**Fartura**	**22.72**	**113**	*e*P	**P**	**19 59 19.5**	**+1.7**
LC01	**Cunco**	**22.93**	**179**	P	**P**	**19 59 20.0**	**+0.1**
LC01				IAmb	IAmb	19 59 29.9	
	comp=Z,27nm,1.0s						
PLTB	**Pedras Altas**	**23.28**	**136**	*e*P	**P**	**19 59 26.9**	**+3.4**
PLCA	**Paso Flores**	**24.81**	**177**	P	**P**	**19 59 38.3**	**+0.6**
PLCA				IAmb	IAmb	19 59 48.0	
	comp=Z,26nm,0.9s						
BAUV	**El Baul**	**25.04**	**10**	P	**P**	**19 59 40.7**	**+0.7**
SMTB	**Santa Maria do**	**25.18**	**77**	*e*P	**P**	**19 59 44.5**	**+3.2**
JACO	**JACO, Garabito**	**28.15**	**334**	P	**P**	**20 00 07.5**	**-0.4**
JACO				IAmb	IAmb	20 00 10.2	
	comp=Z,12nm,0.8s						
CAO2	**Cobano, Puntar**	**28.36**	**333**	P	**P**	**20 00 09.4**	**-0.4**
CAO2				IAmb	IAmb	20 00 12.3	
	comp=Z,23nm,0.9s						
HOPE	**Hope Point**	**47.35**	**152**	P	**P**	**20 02 49.3**	**+0.1**
PMSA	**Palmer Station**	**49.17**	**175**	P	**P**	**20 03 03.8**	**+0.7**
NHSC	**New Hope**	**49.28**	**351**	P	**P**	**20 03 02.9**	**-1.3**
MIAR	**Mount Ida**	**54.05**	**338**	P	**P**	**20 03 40.2**	**+0.2**
MIAR				IAmb	IAmb	20 03 47.7	
	comp=Z,6.4nm,0.8s						
TXAR	**Lajitas Array**	**54.16**	**326**	P	**P**	**20 03 41.8**	**+0.8**
TX31	**Lajitas Ar. Si**	**54.16**	**326**	P	**P**	**20 03 40.7**	**-0.3**
TX31				IAmb	IAmb	20 03 56.8	
	comp=Z,15nm,1.6s						
TX32	**Lajitas Array**	**54.16**	**326**	P	**P**	**20 03 40.8**	**-0.2**
WHAR	**Wooly Hollow**	**54.29**	**340**	P	**P**	**20 03 41.5**	**-0.2**
WHAR				IAmb	IAmb	20 03 50.9	
	comp=Z,23nm,1.7s						
R55A	**Marlinton**	**54.37**	**353**	P	**P**	**20 03 42.5**	**+0.2**
Q52A	**Bidwell**	**55.34**	**351**	P	**P**	**20 03 49.5**	**+0.4**
BLOK	**Blackwell**	**57.37**	**336**	P	**P**	**20 04 03.8**	**+0.1**
ERPA	**Erie**	**58.14**	**353**	P	**P**	**20 04 08.4**	**-0.5**
SDCO	**Great Sand Dun**	**61.77**	**331**	P	**P**	**20 04 34.9**	**+0.5**
SDCO				IAmb	IAmb	20 04 43.4	
	comp=Z,5.3nm,1.0s						
X16A	**Lo Mia Camp, P**	**62.31**	**324**	P	**P**	**20 04 39.8**	**+1.8**
X16A				IAmb	IAmb	20 04 49.3	
	comp=Z,4.0nm,1.0s						
WUAZ	**Wupatki**	**63.08**	**325**	P	**P**	**20 04 45.1**	**+2.1**
WUAZ				IAmb	IAmb	20 04 54.7	
	comp=Z,4.6nm,0.9s						
PSUT	**Pine Spring**	**66.63**	**326**	P	**P**	**20 05 08.1**	**+1.9**
PSUT				IAmb	IAmb	20 05 17.8	
	comp=Z,3.8nm,1.0s						
R11A	**Troy Canyon, C**	**67.45**	**324**	P	**P**	**20 05 13.6**	**+2.3**
FLWY	**Flagg Ranch**	**69.18**	**331**	P	**P**	**20 05 24.5**	**+2.4**
FLWY				IAmb	IAmb	20 05 32.5	
	comp=Z,7.4nm,0.9s						
MFID	**Camas Ranch**	**71.17**	**328**	P	**P**	**20 05 36.1**	**+2.0**
MFID				IAmb	IAmb	20 05 45.1	
	comp=Z,9.3nm,1.1s						
TORD	**Torodi Ar. Bea**	**78.71**	**73**	P	**P**	**20 06 16.1**	**-2.1**
TORD	**Torodi Ar. Bea**	**78.71**	**73**	pP	**P**	**20 06 16.4**	**-1.8**
	comp=Z,1.8nm,0.9s,baz=266,slow=4.0,SNR=6.1						
YKA	**Yellowknife Ar**	**84.84**	**342**	pP	P	20 06 54.1	+4.7
	comp=Z,3.8nm,0.8s,baz=138,slow=5.1,SNR=14						
ASAR	**Alice Springs**	**133.04**	**214**	PKP	PKPpre	20 13 20.9	
	comp=Z,0.2nm,0.7s,baz=132,slow=1.4,SNR=2.0						
ASAR	**Alice Springs**	**133.04**	**214**		PKPpre	20 13 20.9	
WRA	**Warramunga Arr**	**135.76**	**217**	pPKP	**PKiKP**	**20 13 43.1**	**+4.8**
	comp=Z,1.3nm,1.0s,baz=149,slow=1.7,SNR=4.3						
WRA	**Warramunga Arr**	**135.76**	**217**		PKPpre	20 13 25.2	
WRA					**PKiKP**	**20 13 43.1**	**+4.8**
WRA	**Warramunga Arr**	**135.76**	**217**	PKP	PKPpre	20 13 25.2	
	comp=Z,0.9nm,1.0s,baz=148,slow=2.4,SNR=3.0						
ZALV	**Zalesovo Beam**	**138.05**	**20**	pPKP	**PKiKP**	**20 13 44.2**	**+2.4**
	comp=Z,3.0nm,0.8s,baz=294,slow=1.4,SNR=2.5						
ZALV	**Zalesovo Beam**	**138.05**	**20**		pPKPdf	20 13 46.7	-5.4
MKAR	**Makanchi Array**	**142.68**	**29**	pPKP	**PKiKP**	**20 13 51.6**	**0.0**
	comp=Z,0.8nm,0.8s,baz=285,slow=3.7,SNR=3.5						
MKAR	**Makanchi Array**	**142.68**	**29**		**PKiKP**	**20 13 51.6**	**0.0**
KSRS	**Korea Array**	**152.00**	**324**		**PKPab**	**20 14 18.1**	**-1.8**
KSRS	**Korea Array**	**152.00**	**324**	pPKPbc	**PKPab**	**20 14 18.1**	**-1.8**
	comp=Z,3.0nm,0.8s,baz=20,slow=2.0,SNR=9.4						

JMA 08 20:05:03.1, 37°.27N×141°.08E, h25^{km}±1^{km}, M3.5, 4C-3D Broadband fault plane solution: P waves. NP1: φ$_{s}$98.00000°, δ43.00000°, λ-63.00000°. **NP2:** φ$_{s}$243.00000°, δ53.00000°, λ-113.00000°. **Principal axes:** T Plg5.0000°, Azm349.0000°; N Plg18.0000°, Azm257.0000°; P Plg71.0000°, Azm94.0000°; **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.19**	**301**	⇓P	Pb	20 05 08.4	-0.3
JFK				S	Sb	20 05 12.0	-0.5
ONAJ	**Iwakimizuishiy**	**0.28**	**233**	⇓P	Pb	20 05 09.7	-0.2
ONAJ				S	Sb	20 05 14.2	-0.3
JFFD	**Fukushimafurud**	**0.45**	**247**	⇓P	Pb	20 05 12.3	-0.2
JFFD				S	Sb	20 05 18.6	-0.3
JMST	**Minamisoumatoc**	**0.48**	**341**	⇑P	Pb	20 05 12.4	-0.6
JMST				S	Sb	20 05 19.3	-0.4
JMM	**Marumori**	**0.64**	**339**	⇑P	Pb	20 05 15.0	-0.6
JMM				S	Sb	20 05 23.9	-0.3
JFT	**Otama**	**0.64**	**293**	⇑P	Pb	20 05 15.8	+0.1
JFT				S	Sb	20 05 24.8	+0.5
JHO	**Hitachi**	**0.78**	**212**	P	Pb	20 05 16.8	-1.1
JHO				*e*S	Sb	20 05 27.2	-0.8
JSB	**Shiboa**	**0.97**	**252**	P	Pb	20 05 21.9	+0.6
JSB				S	Sn	20 05 35.1	+0.8
JFY	**Yanaizu**	**1.10**	**278**	P	Pb	20 05 23.5	0.0
JFY				S	Sb	20 05 38.1	+0.6
JOU	**Okura**	**1.14**	**343**	⇑P	Pn	20 05 23.7	+0.2
JOU				S	Sb	20 05 39.4	+0.8
MAT	**Matsushiro**	**2.41**	**253**	P	Pb	20 05 44.1	-1.8
MAT				*e*S	Sb	20 06 16.8	+1.6

IDC 08 20:18:29.5±2.4, **3°.86S×129°.89E, h0^{km}, mb3.3**/2, **mb1 3.5**/3, **mb1mx3.2**/50, **mbtmp3.3**/3, **ML2.8**/1 **Error ellipse: s-maj=155.9km s-min=29.6km az=70.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.56**	**165**	Pn	Pn	20 22 23.0	-0.4
	0.0nm,0.3s,baz=345,slow=11,SNR=1.9						
ASAR	**Alice Springs**	**20.07**	**169**	P	P	20 23 04.8	+0.1
	0.5nm,0.7s,baz=345,slow=10.0,SNR=10						
MKAR	**Makanchi Array**	**65.57**	**326**	P	P	20 29 15.2	0.0
	0.6nm,0.9s,baz=116,slow=7.9,SNR=5.3						

MAN 08 20:37:03.5, 10°.08N×125°.80E, h24^{km}, mb4.2, ML3.1, MS2.8, 4C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**1.82**	**278**	⇑*i*P	Pn	20 37 33.8	+0.6
LLP				*i* S	Sn	20 37 56.0	+0.5
TBP	**Tagbilaran**	**1.95**	**259**	⇓*e*P	Pn	20 37 35.6	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TBP				*i* S	Sn	20 37 59.7	+0.9
BIPH	Bislig	1.97	164	⇑ *i*P	Pb	20 37 39.3	+0.7
BIPH				*i* S	Sb	20 38 06.6	+3.9
CNOP	Candoni, Negro	3.12	266	⇑ *i*P	Pn	20 37 52.1	+0.9
RCP	Roxas	3.34	296	⇑ *e*P	Pn	20 37 54.8	+0.6

ARE **08** *20:47:04±2.4, 15°.77S±0°.04×71°.83W±0°.07, h10^{km}±3^{km}, Error ellipse: s-maj=10.4km s-min=4.9km az=64.0*

NEIC **08** *20:47:06.9, 15°.81S×71°.87W, h32^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.57; M$_{\theta\theta}$-0.64; M$_{\phi\phi}$0.08; M$_{r\theta}$0.37; M$_{\theta\phi}$-0.85; M$_{\phi r}$-0.51; Fault plane solution: M$_0$1.22000×10^{16} NP1:φ$_s$200.41000°, δ60.32000°, λ33.04000°. NP2:φ$_s$92.56000°, δ61.73000°, λ145.79000°. Principal axes: T 1.2324, Plg43.0000°, Azm56.0000°; N -0.0221, Plg47.0000°, Azm238.0000°; P -1.2103, Plg1.0000°, Azm147.0000°;*

IDC **08** *20:47:07.0±0.6, 15°.60S×71°.40W, h0^{km}, mb4.3/11, mb1 4.4/14, mb1mx4.3/27, mbtmp4.3/14, ML3.9/2, MS4.1/26, Ms1 4.1/26, ms1mx4.0/38 Error ellipse: s-maj=23.9km s-min=16.7km az=54.0*

VAO **08** *20:47:08.4±0.4, 15°.71S×71°.87W, h14^{km}, mb4.4*

NEIC **08** *20:47:09.0±2.1, 15°.80S±0°.04×71°.81W±0°.04, h24^{km}±4^{km}, mb4.8/102, Mwr4.7/18, ML4.5(ARE), Error ellipse: s-maj=8.2km s-min=2.2km az=218.0*

ISC 08 20:47:10.7±0.3**, 15°.76S**±0°.04×**71°.81W**±0°.06**, h35^{km}, n224,** σ**1^{s}.62**/210**, mb4.8**/56**, MS4.2**/21**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	2.95	152		Pn	20 47 54.7	-0.4
AP01					Sn	20 48 36.2	+6.9
PB12	IPOC Station P	3.17	154	Pn	Pn	20 47 58.0	-0.2
PB12					Sn	20 48 41.0	+6.1
PB16	IPOC Station P	3.38	140		Pn	20 48 03.2	+1.7
LPAZ	La Paz	3.58	99	Pn	Pn	20 48 07.4	+3.1
	0.7nm,0.3s,baz=276,slow=12,SNR=48						
LPAZ	La Paz	3.58	99	Pn	Pn	20 48 04.1	-0.2
PSGCX	Pisagua	4.14	157		Pn	20 48 10.8	-0.8
PSGCX				Sn	Sn	20 48 58.6	-0.2
PB11	IPOC Station P	4.48	153	Pn	Pn	20 48 16.1	-0.1
TA02	Huaiquique	4.76	161		Pn	20 48 19.0	-1.0
TA01	Diego Aracena	5.02	162	Pn	Pn	20 48 22.5	-1.1
PB08	IPOC Station P	5.04	150		Pn	20 48 23.7	-0.5
PB01	IPOC Station P	5.70	158		Pn	20 48 31.4	-1.6
NNA	Nana	6.16	307	Pn	Pn	20 48 41.3	+2.0
	1.7nm,0.3s,baz=172,slow=8.6,SNR=14						
NNA				Sn	Sn	20 49 53.3	+4.6
	0.5nm,0.3s,baz=58,slow=7.5,SNR=1.7						
NNA				LR	LR	20 51 06.1	
	comp=Z,2µm,21.8s,baz=143,slow=37						
NNA	Nana	6.16	307	Pn	Pn	20 48 38.6	-0.7
NNA	Nana	6.16	307		Sn	20 49 53.3	+4.6
PB07	IPOC Station P	6.21	163		Pn	20 48 38.9	-1.2
PB09	IPOC Station P	6.48	158	Pn	Pn	20 48 43.0	-0.8
PB04	IPOC Station P	6.72	167		Pn	20 48 45.0	-2.2
PB06	IPOC Station P	7.22	163		Pn	20 48 51.9	-2.1
LVC	Limon Verde	7.34	159	Pn	Pn	20 48 55.4	-0.4
	6.2nm,0.3s,baz=339,slow=9.5,SNR=33						
LVC				Sn	Sn	20 50 18.2	+0.1
	2.9nm,0.3s,baz=321,slow=16,SNR=2.5						
LVC				LR	LR	20 51 40.9	
	comp=Z,2µm,19.0s,baz=328,slow=37						
LVC	Limon Verde	7.34	159	*e*P	Pn	20 48 56.1	+0.3
LVC	Limon Verde	7.34	159	Pn	Pn	20 48 54.9	-0.9
LVC	Limon Verde	7.34	159		Sn	20 50 18.2	+0.1
PB15	IPOC Station P	7.73	164		Pn	20 48 58.9	-2.1
PB10	IPOC Station P	7.80	171	Pn	Pn	20 48 59.3	-2.5
CZSB	Cruzeiro do Su	8.03	354	*e*P	Pn	20 49 04.7	-0.3
CZSB	Cruzeiro do Su	8.03	354	Pn	Pn	20 49 05.0	0.0
ETMB	Extrema	8.04	43	*e*P	Pn	20 49 04.8	-0.4
ETMB	Extrema	8.04	43	Pn	Pn	20 49 05.1	-0.1
PB14	IPOC Station P	8.92	172	Pn	Pn	20 49 14.5	-2.9
PB14					Sn	20 50 55.2	-1.7
SIV	San Ignacio	10.34	93	LR	LR	20 53 58.6	
	comp=Z,2µm,18.5s,baz=287,slow=41						
AC02	Maricunga	11.30	168	Pn	Pn	20 49 47.5	-2.7
VILB	Vilhena	11.59	78	*e*P	Pn	20 49 53.6	-0.2
VILB	Vilhena	11.59	78		Pn	20 49 51.5	-2.3
TBTG	Tabatinga, AM	11.65	9	*e*P	Pn	20 49 54.6	-0.1
TBTG	Tabatinga, AM	11.65	9	Pn	Pn	20 49 53.5	-1.2
GO03	Copiap	11.87	173	Pn	Pn	20 49 55.4	-2.1
PTLB	Pontes e Lacer	12.21	90	*e*P	Pn	20 50 03.6	+1.3
PTLB	Pontes e Lacer	12.21	90		Pn	20 50 02.5	+0.2
AC04	Llanos de Chal	12.40	177	Pn	Pn	20 50 02.2	-2.6
CO05	La Serena	14.10	178	Pn	Pn	20 50 26.1	-1.9
GO04	Tololo Observa	14.37	176	Pn	Pn	20 50 29.5	-2.5
CO03	El Pedregal	15.04	176	P	Pn	20 50 40.5	-0.4
PDRB	Porto dos Gac	15.22	76	*e*P	Pn	20 50 44.3	+1.1
SALV	Santo Antonio	15.51	93	*e*P	Pn	20 50 48.1	+1.1
ZON	Zonda	15.97	170	P	Pn	20 50 51.8	-1.1
AQDB	Aquidauana	16.01	109	*e*P	P	20 50 54.6	-2.0
AQDB	Aquidauana	16.01	109		Pn	20 50 52.8	-0.6
CLDB	Colider	16.32	75	*e*P	Pn	20 50 57.2	-0.2
PP1B	Ponte de Pedra	16.32	99	*e*P	P	20 50 59.0	-1.0
MACA	Manacapuru-AM	16.64	42	*e*P	Pn	20 51 02.3	+0.9
MACA	Manacapuru-AM	16.64	42	P	Pn	20 51 01.8	+0.4
VA03	San Esteban	16.97	176	P	Pn	20 51 03.2	-2.2
CPUP	Villa Florida	17.11	130	LR	LR	20 58 35.6	
	comp=Z,546nm,21.4s,baz=316,slow=41						
VA01	Torpederas	17.19	180	P	Pn	20 51 04.8	-3.3
VA01				IAmb	IAmb	20 51 34.0	
	comp=Z,58nm,1.1s						
OTAV	Otavalo	17.20	337	P	P	20 51 10.1	-0.1
PEL	Peldehue	17.34	177	P	P	20 51 09.5	-1.7
MT05	Renca	17.58	177	Pn	Pn	20 51 10.6	-2.5
MT05				IAmb	IAmb	20 51 24.5	
	comp=Z,146nm,1.7s						
FLOC	Florencia	17.65	347	P	P	20 51 15.7	+1.0
VA05	Santo Domingo	17.82	179	P	Pn	20 51 13.8	-2.1
MT09	Talagante	17.95	178	P	Pn	20 51 15.7	-2.0
MT01	Popeta	18.03	178	P	P	20 51 19.7	+0.9
NPGB	Novo Progresso	18.29	64	*e*P	P	20 51 21.6	-0.2
BO01	Tunca	18.56	178	P	Pn	20 51 26.1	+1.1
H03N1	Juan Fernandez	18.74	199	T	T	21 09 45.0	
	baz=22,slow=73,SNR=120						
H03N2	Juan Fernandez	18.74	199	T	T	21 09 39.6	
	baz=22,slow=73,SNR=123						
H03N3	Juan Fernandez	18.75	199	T	T	21 09 50.4	
	baz=22,slow=73,SNR=109						
PTGA	Pitinga	18.96	39	P	P	20 51 27.4	-1.8
	baz=213,slow=12,SNR=7.2						
PTGA				LR	LR	20 58 42.2	
	comp=Z,129nm,20.1s,baz=230,slow=37						
PTGA	Pitinga	18.96	39	P	P	20 51 27.4	-1.8
BO02	Sierra Bellavi	18.97	177	P	P	20 51 26.3	-2.9
GO05	Huala	19.17	180	P	Pn	20 51 31.0	-1.4
ARAG	Araguaiana, MT	19.25	93	*e*P	Pn	20 51 33.6	+0.1
ITTB	Itaituba	19.44	56	*e*P	P	20 51 33.6	-0.8
ITQB	Itaqui	19.66	137	*e*P	Pn	20 51 38.5	+0.2
ITQB	Itaqui	19.66	137	P	P	20 51 34.2	-2.5
SNDB	Serra Nova Dou	20.27	82	*e*P	P	20 51 43.3	-0.1
PCMB	Pacaembu	20.31	110	*e*P	Pn	20 51 45.7	-0.3
ROSC	El Rosal	20.62	353	LR	LR	21 00 19.5	
	comp=Z,1µm,18.4s,baz=206,slow=39						
ROSC	El Rosal	20.62	353	P	P	20 51 44.6	-3.0
ITRB	Iturama	20.80	104	*e*P	Pn	20 51 50.5	-1.2
BOAV	Boa Vista	21.21	33	*e*P	P	20 51 54.6	+0.9
BOAV	Boa Vista	21.21	33	P	P	20 51 53.5	-0.1
ITAB	Concordia	21.54	125	*e*P	P	20 51 58.8	+1.7
ITAB	Concordia	21.54	125	P	P	20 51 55.3	-1.8
ITAB				IAmb	IAmb	20 52 18.9	
	comp=Z,46nm,1.3s						
MALB	Monte Alegre	22.14	53	*e*P	P	20 52 04.2	+0.7
FRTB	Fartura	22.26	113	*e*P	P	20 52 05.6	+0.8
CPSB	Cacapava Do Su	22.27	134	*e*P	P	20 52 06.1	+1.2
IPMB	Ipameri, GO	22.69	99	*e*P	P	20 52 10.5	+1.0
BB19B	Bebedouro	22.70	107	*e*P	P	20 52 09.9	+0.3
BDFB	Brasilia	22.91	93	P	P	20 52 10.1	-1.7
	comp=Z,3.5nm,0.7s,baz=226,slow=15,SNR=3.0						
BDFB				LR	LR	21 01 43.9	
	comp=Z,794nm,18.4s,baz=275,slow=39						
BDFB	Brasilia	22.91	93	P	P	20 52 09.3	-2.5
PLTB	Pedras Altas	23.00	137	*e*P	P	20 52 13.7	+1.2
PLTB	Pedras Altas	23.00	137	P	P	20 52 09.4	-3.1
LC01	Cunco	23.05	180	P	P	20 52 10.0	-3.0
LC01				IAmb	IAmb	20 52 15.9	
	comp=Z,38nm,1.2s						
CNLB	Canela	23.54	129	*e*P	P	20 52 19.6	+1.6
PRPB	Parauapebas	23.58	69	*e*P	P	20 52 18.9	+0.5
TER01	Tubaro-SC	24.50	125	*e*P	P	20 52 26.7	-0.1
SDV	Santo Domingo	24.52	3	P	P	20 52 25.0	-2.3
SDV				IAmb	IAmb	20 52 41.0	
	comp=Z,33nm,1.2s						
SMTB	Santa Maria do	24.62	77	*e*P	P	20 52 30.0	+1.8
MCPB	Macapa, AP	24.79	54	*e*P	P	20 52 30.3	+0.7
BAUV	El Baul	24.83	9	P	P	20 52 28.8	-1.1
PLCA	Paso Flores	24.91	178	P	P	20 52 32.1	+1.6
	comp=Z,28nm,1.1s,baz=1.1,slow=11,SNR=18						
PLCA				LR	LR	21 02 33.4	
	comp=Z,108nm,20.3s,baz=351,slow=37						
PLCA	Paso Flores	24.91	178	*e*P	P	20 52 32.3	+1.8
PLCA	Paso Flores	24.91	178	P	P	20 52 28.0	-2.5
PLCA				IAmb	IAmb	20 52 35.1	
	comp=Z,35nm,1.1s						
LL04	Puerto Octay	25.06	181	P	P	20 52 29.6	-2.3
LL04				IAmb	IAmb	20 52 35.4	
	comp=Z,36nm,1.2s						
SDBA	SAO DESIDERIO	26.30	86	*e*P	P	20 52 43.1	-0.3
PCRV	Puerto La Cruz	26.73	16	LR	LR	21 04 07.0	
	comp=Z,1µm,19.1s,slow=38						
URIC	Uribia, Colomb	27.29	360	P	P	20 52 51.4	-0.7
NBPN	Ponto Novo - B	31.13	85	*e*P	P	20 53 26.5	+0.1
NBIT	Itapeh - BA	31.22	93	*e*P	P	20 53 27.8	+0.7
SMRT	St. Maarten	34.68	15	P	P	20 53 54.1	-3.2
NBLV	Livramento - P	35.14	80	*e*P	P	20 54 02.1	+0.6
APG	El Apazote	35.70	328	LR	LR	21 08 13.7	
	comp=Z,202nm,18.2s,baz=127,slow=35						
EFI	East Falkland	37.48	166	P	P	20 54 20.4	-0.4
152A	Waverly Hall	49.72	346	P	P	20 55 59.1	-0.4
152A				IAmb	IAmb	20 56 05.4	
	comp=Z,8.5nm,0.8s						
PAULI	Pauline	51.19	349	P	P	20 56 09.7	-0.9
PAULI				IAmb	IAmb	20 56 46.2	
	comp=Z,9.4nm,1.0s						
W57A	Gilead	51.23	351	P	P	20 56 11.1	+0.2
W57A				IAmb	IAmb	20 56 30.3	
	comp=Z,19nm,1.2s						
V58A	Windy Hill, Pi	51.74	352	P	P	20 56 13.6	-1.1
X48A	Hartselle	52.00	344	P	P	20 56 16.0	-0.7
X48A				IAmb	IAmb	20 56 20.9	
	comp=Z,14nm,1.4s						
V55A	Taylorsville	52.10	350	P	P	20 56 17.7	+0.3
V55A				IAmb	IAmb	20 56 30.5	
	comp=Z,32nm,1.8s						
V53A	Saluda	52.20	349	P	P	20 56 16.7	-1.5
V53A				IAmb	IAmb	20 56 20.0	
	comp=Z,22nm,1.6s						
TKL	Tuckaleechee C	52.38	348	LR	LR	21 21 34.7	
	comp=Z,175nm,18.2s,baz=153,slow=40						
U56A	King	52.46	351	P	P	20 56 21.0	+1.0
U56A				IAmb	IAmb	20 56 30.2	
	comp=Z,10nm,0.9s						
V52A	Sevierville	52.52	348	P	P	20 56 20.7	+0.2
V52A				IAmb	IAmb	20 56 25.5	
	comp=Z,10nm,1.0s						
T59A	Double "B" Far	52.73	354	P	P	20 56 21.6	-0.4
T57A	Hurt	52.94	353	P	P	20 56 23.3	-0.3
V48A	Smith Brothers	53.16	345	P	P	20 56 25.4	+0.2
V48A				IAmb	IAmb	20 56 28.9	
	comp=Z,12nm,1.1s						
U49A	Red Boiling Sp	53.64	346	P	P	20 56 29.5	+0.7
U49A				IAmb	IAmb	20 56 47.3	
	comp=Z,12nm,1.5s						
S57A	Dark Hollow, R	53.66	353	P	P	20 56 29.4	+0.5
WVT	Waverly	53.79	344	P	P	20 56 28.3	-1.6
WVT				IAmb	IAmb	20 56 35.8	
	comp=Z,6.8nm,0.9s						
X40A	Basin Creek Fa	53.83	338	P	P	20 56 29.4	-0.7
X40A				IAmb	IAmb	20 57 01.9	
	comp=Z,20nm,1.6s						
T50A	Nancy	53.92	347	P	P	20 56 30.8	0.0
T50A				IAmb	IAmb	20 56 36.3	
	comp=Z,7.7nm,0.8s						
MIAR	Mount Ida	54.14	338	P	P	20 56 31.5	-1.0
WHAR	Wooly Hollow	54.36	339	P	P	20 56 32.6	-1.5
WHAR				IAmb	IAmb	20 56 40.9	
	comp=Z,6.1nm,0.8s						
TX31	Lajitas Ar. Si	54.37	325	P	P	20 56 32.4	-2.0
TX31				IAmb	IAmb	20 56 41.8	
	comp=Z,20nm,1.4s						
TX32	Lajitas Array	54.37	325	P	P	20 56 32.5	-1.8
TXAR	Lajitas Array	54.37	325	P	P	20 56 36.4	+2.1
	comp=Z,1.9nm,0.8s,baz=146,slow=7.9,SNR=15						
TXAR				LR	LR	21 17 52.3	
	comp=Z,169nm,19.3s,baz=0.0,slow=34						
TXAR	Lajitas Array	54.37	325	P	P	20 56 32.5	-1.8
Z35A	Perchaven, San	54.53	334	P	P	20 56 33.9	-1.4
LCAR	Lake Charles	54.70	341	P	P	20 56 35.9	-0.6
LCAR				IAmb	IAmb	20 56 41.1	
	comp=Z,8.3nm,1.0s						
W39A	Magazine	54.80	338	P	P	20 56 36.5	-0.7
W39A				IAmb	IAmb	20 56 43.9	
	comp=Z,10nm,0.7s						
FCAR	Ozark Folk Cen	54.85	340	P	P	20 56 38.0	+0.4
FCAR				IAmb	IAmb	20 56 43.2	
	comp=Z,6.7nm,0.8s						
X37A	Clayton	54.86	336	P	P	20 56 38.0	+0.3
X37A				IAmb	IAmb	20 56 48.8	
	comp=Z,7.8nm,0.7s						
ABTX	Abilene, Hawle	54.99	331	P	P	20 56 38.4	-0.3
R50A	Paris	55.03	348	P	P	20 56 39.6	+0.8
Q54A	Coxs Mills	55.11	351	P	P	20 56 39.1	-0.3
Q54A				IAmb	IAmb	20 57 07.3	
	comp=Z,17nm,1.1s						
PBMO	Poplar Bluff	55.13	342	P	P	20 56 40.9	+1.3
U40A	Yellville	55.52	339	P	P	20 56 42.6	+0.1
U40A				IAmb	IAmb	20 56 48.1	
	comp=Z,7.2nm,0.8s						
MCWV	Mont Chateau	55.64	352	P	P	20 56 43.2	0.0
MCWV				IAmb	IAmb	20 56 49.6	
	comp=Z,13nm,0.8s						
S44A	Carbondale	55.65	343	P	P	20 56 42.1	-1.1
SIUC	Southern Illin	55.65	343	P	P	20 56 42.1	-1.3
X34A	Smith Ranch, M	55.86	334	P	P	20 56 43.0	-1.9
MGMO	Mountain Grove	56.05	340	P	P	20 56 44.2	-2.0
MGMO				IAmb	IAmb	20 56 51.1	
	comp=Z,8.3nm,0.8s						
O56A	Blue Knob Stat	56.09	354	P	P	20 56 45.8	-0.7
O56A				IAmb	IAmb	20 56 52.6	
	comp=Z,14nm,0.9s						
Q44A	Meyer Farm, Va	56.71	344	P	P	20 56 51.2	+0.4
S39A	Bolivar	56.89	340	P	P	20 56 51.9	-0.2
S39A				IAmb	IAmb	20 56 58.0	
	comp=Z,9.4nm,0.7s						
MNTX	Cornudas Mount	57.13	326	P	P	20 56 53.7	-0.3
M55A	Ridgway	57.30	354	P	P	20 56 54.4	-0.7
BLOK	Blackwell	57.48	336	P	P	20 56 54.8	-1.5
P43A	Skaggs, Pawnee	57.54	344	P	P	20 56 56.4	-0.3
MSTX	Muleshoe	57.59	330	P	P	20 56 56.8	-0.5
MSTX				IAmb	IAmb	20 57 02.4	
	comp=Z,8.2nm,1.0s						
121A	Cookes Peak, D	59.09	325	P	P	20 57 07.0	-0.9
121A				IAmb	IAmb	20 57 15.6	
	comp=Z,6.5nm,0.8s						
ANMO	Albuquerque	60.21	327	P	P	20 57 14.5	-1.2
SADO	Sadowa	60.61	354	P	P	20 57 16.9	-0.9
SDCO	Great Sand Dun	61.93	330	P	P	20 57 26.6	-0.8
SDCO				IAmb	IAmb	20 57 34.0	
	comp=Z,6.2nm,0.7s						
X16A	Lo Mia Camp, P	62.54	324	P	P	20 57 30.2	-1.2
X16A				IAmb	IAmb	20 57 38.0	
	comp=Z,7.4nm,1.2s						
WUAZ	Wupatki	63.29	324	P	P	20 57 34.9	-1.4
WUAZ				IAmb	IAmb	20 57 43.0	
	comp=Z,7.8nm,1.1s						
ECSD	EROS Data Cent	63.41	340	P	P	20 57 36.5	-0.3
ECSD				IAmb	IAmb	20 57 44.5	
	comp=Z,13nm,1.4s						
KNB	Kanab	65.18	325	P	P	20 57 48.0	-0.7
CCUT	Cedar City	65.87	325	P	P	20 57 54.2	+1.0
CCUT				IAmb	IAmb	20 58 00.5	
	comp=Z,7.2nm,1.1s						
MVU	Marysvale	65.92	326	P	P	20 57 53.9	+0.3
VNA3	Neumayer Olymp	66.36	162	P	P	20 57 58.9	+3.2
VNA1	Neumayer--Stat	66.58	161	P	P	20 58 01.3	+4.4
B35A	Bob, Littlefor	66.76	344	P	P	20 57 58.6	+0.2
B35A				IAmb	IAmb	20 58 03.5	
	comp=Z,7.3nm,0.8s						
QSM	Queen of Sheba	66.80	321	P	P	20 57 59.5	+0.5
PSUT	Pine Spring	66.84	325	P	P	20 57 58.9	-0.5
PSUT				IAmb	IAmb	20 58 06.2	
	comp=Z,8.3nm,1.2s						
NLU	North Lily Min	66.92	327	P	P	20 57 59.4	-0.5
NLU				IAmb	IAmb	20 58 05.3	
	comp=Z,4.5nm,0.5s						
VNA2	Neumayer--Watz	66.94	161	P	P	20 58 02.5	+3.1
AGMN	Agassiz Nation	67.28	343	P	P	20 58 01.4	-0.3
SPR3	Spring Creek 3	67.43	325	P	P	20 58 02.4	-0.9
SPR3				IAmb	IAmb	20 58 09.7	
	comp=Z,7.9nm,1.2s						
R11A	Troy Canyon, C	67.67	324	P	P	20 58 05.0	+0.4
PDAR	Pinedale Array	67.79	331	P	P	20 58 07.3	+2.0
	comp=Z,0.8nm,0.6s,baz=103,slow=4.7,SNR=5.4						
PDAR				LR	LR	21 29 59.1	
	comp=Z,136nm,18.5s,baz=60,slow=38						
SNAA	Sanae	68.57	162	P	P	20 58 12.8	+3.2
SNAA	Sanae	68.57	162	P	P	20 58 09.6	-0.1
SNAA				IAmb	IAmb	20 58 13.5	
	comp=Z,5.8nm,1.0s						
HVU	Hansel Valley	68.62	328	P	P	20 58 09.9	-0.6
HVU				IAmb	IAmb	20 58 16.7	
	comp=Z,7.3nm,1.3s						
ULM	Lac du Bonnet	69.06	344	P	P	20 58 14.2	+1.4
	comp=Z,7.4nm,0.8s,baz=152,slow=4.6,SNR=9.6						
ULM				LR	LR	21 29 42.2	
	comp=Z,103nm,21.8s,baz=94,slow=37						
ULM	Lac du Bonnet	69.06	344	P	P	20 58 12.8	+0.1
ULM				IAmb	IAmb	20 58 17.7	
	comp=Z,8.7nm,0.9s						
ELK	Elko	69.16	326	LR	LR	21 29 25.3	
	comp=Z,200nm,18.4s,baz=96,slow=37						
ELK	Elko	69.16	326	P	P	20 58 13.7	-0.2
NVAR	Mina Array Bea	69.30	322	P	P	20 58 15.9	+1.0
	comp=Z,0.2nm,0.4s,baz=141,slow=6.5,SNR=2.4						
NVAR	Mina Array Bea	69.30	322	P	P	20 58 15.9	+1.0
DBIC	Dimbokro	69.92	77	P	P	20 58 17.8	-1.1
	comp=Z,2.0nm,0.6s,baz=239,slow=4.2,SNR=4.9						
DBIC				LR	LR	21 27 00.3	
	comp=Z,242nm,19.1s,baz=274,slow=34						
DBIC	Dimbokro	69.92	77	IAmb	IAmb	20 58 55.5	
	comp=Z,16nm,1.6s						
SCHQ	Schefferville	70.44	3	LR	LR	21 28 36.7	
	comp=Z,108nm,21.9s,baz=75,slow=35						
PAHR	Pah Rah Range	70.77	323	P	P	20 58 24.2	+0.5
PAHR				IAmb	IAmb	20 58 30.4	
	comp=Z,8.8nm,1.2s						
MFID	Camas Ranch	71.36	328	P	P	20 58 28.1	+0.9
MFID				IAmb	IAmb	20 58 35.7	
	comp=Z,8.9nm,1.0s						
EDM	Edmonton	77.43	336	P	P	20 59 03.8	+1.6
EDM				IAmb	IAmb	20 59 07.4	
	comp=Z,14nm,1.0s						
TORD	Torodi Ar. Bea	78.15	73	P	P	20 59 04.7	-2.4
	comp=Z,1.8nm,0.7s,baz=255,slow=5.7,SNR=10						
TORD				LR	LR	21 33 40.8	
	comp=Z,140nm,18.1s,baz=140,slow=36						
TORD	Torodi Ar. Bea	78.15	73	P	P	20 59 04.1	-3.0
ESDC	Sonseca Array	83.77	46	P	P	20 59 36.2	-0.3
	comp=Z,0.7nm,1.0s,baz=242,slow=7.0,SNR=2.5						
ESDC				LR	LR	21 36 27.1	
	comp=Z,60nm,18.2s,baz=265,slow=36						
YKA	Yellowknife Ar	84.90	342	P	P	20 59 42.7	+1.1
	comp=Z,6.7nm,0.9s,baz=137,slow=4.9,SNR=18						
YKA				LR	LR	21 40 52.4	
	comp=Z,141nm,19.3s,baz=0.0,slow=38						
YKA	Yellowknife Ar	84.90	342	P	P	20 59 41.3	-0.3
BOSA	Boshof	88.60	119	LR	LR	21 37 29.6	
	comp=Z,105nm,18.0s,baz=242,slow=34						
MAW	Mawson	90.58	164	P	P	21 00 12.7	+3.7
	comp=Z,4.1nm,0.9s,baz=216,slow=6.8,SNR=4.3						
MAW				LR	LR	21 39 53.5	
	comp=Z,64nm,20.4s,baz=236,slow=35						
SUMG	Summit	90.87	10	P	P	21 00 12.8	+2.2
RES	Resolute Bay	91.42	354	LR	LR	21 42 27.2	
	comp=Z,157nm,21.0s,baz=327,slow=36						
LSZ	Lusaka	95.20	107	LR	LR	21 40 21.6	
	comp=Z,154nm,21.5s,baz=258,slow=34						
ILAR	Eielson Array	97.91	335	LR	LR	21 51 04.0	
	comp=Z,59nm,18.2s,baz=88,slow=39						
NOA	NORSAR Array B	100.31	29	LR	LR	21 44 36.5	
	comp=Z,64nm,18.1s,baz=290,slow=34						
TIXI	Tiksi	122.78	352	PKPdf	PKPdf	21 06 01.8	-0.5
ABKAR	Akbulak array	128.61	39	PKPdf	PKPdf	21 06 13.2	-0.9
ABKAR	Akbulak array	128.61	39	PKPdf	PKPdf	21 06 13.1	-1.0
ASAR	Alice Springs	133.44	213	PKP	PKiKP	21 06 26.1	+0.6
	comp=Z,0.4nm,0.8s,baz=168,slow=2.4,SNR=2.4						
ASAR	Alice Springs	133.44	213		PKiKP	21 06 26.1	+0.6
WRA	Warramunga Arr	136.19	217	PKP	PKiKP	21 06 31.5	+0.4
	comp=Z,2.4nm,1.1s,baz=142,slow=1.5,SNR=4.7						
ZALV	Zalesovo Beam	137.75	20	PKP	PKiKP	21 06 33.3	+0.2
	comp=Z,1.5nm,0.3s,baz=340,slow=2.2,SNR=7.6						
ZALV	Zalesovo Beam	137.75	20	PKPdf	PKPdf	21 06 29.3	-1.8
MKAR	Makanchi Array	142.30	29	PKP	PKPdf	21 06 40.2	+0.5
	comp=Z,0.6nm,0.6s,baz=313,slow=3.2,SNR=3.3						
USRK	Ussuriysk Ar.	145.21	329	PKPbc	PKiKP	21 06 47.5	-1.2
	comp=Z,4.2nm,0.9s,baz=125,slow=2.8,SNR=4.3						
USRK	Ussuriysk Ar.	145.21	329		PKiKP	21 06 47.5	-1.2
MJAR	Matsushiro Arr	146.25	314	PKPbc	PKiKP	21 06 50.6	-0.5
	comp=Z,9.0nm,1.0s,baz=75,slow=1.6,SNR=11						
SONM	Songino Array	147.98	2	PKPbc	PKiKP	21 06 53.4	-1.1
	comp=Z,5.8nm,0.9s,baz=334,slow=1.0,SNR=26						
SONM	Songino Array	147.98	2		PKiKP	21 06 53.4	-1.1
KSRS	Korea Array	152.22	325	PKPbc	PKiKP	21 07 06.8	+3.4
	comp=Z,4.9nm,0.9s,baz=39,slow=1.6,SNR=16						
TNTI	Ternate	155.92	234	PKPdf	PKPdf	21 07 01.3	-1.0

IDC **08** *21:02:56.8±1.8, 43°.98N×105°.71W, h0^{km}, mb1 3.8/4, mb1mx3.5/47, mbtmp3.6/4, ML3.1/3, Error ellipse: s-maj=71.9km s-min=8.3km az=147.0*

NEIC **08** *21:02:57.4±1.0, 43°.76N±0°.05×105°.30W±0°.05, h0^{km}±2^{km}, ML3.3/62, Error ellipse: s-maj=8.7km s-min=6.4km az=341.0*

ISC 08 21:02:56.7±1.0**, 43°.76N**±0°.06×**105°.32W**±0°.06**, h0^{km}, n57,** σ**0^{s}.86**/57**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.99	68	Pg	Pg	21 03 15.9	+0.2
K22A	Casper	1.42	219	Pn	Pn	21 03 22.3	-1.5
K22A				IAML		21 03 47.8	
	comp=E,529nm,0.3s						
RWWY	Rawlins	2.50	215		Pn	21 03 40.0	+1.2
RWWY				IAML		21 04 17.1	
	comp=E,208nm,0.8s						
RWWY				IAML		21 04 18.6	
	comp=E,212nm,0.6s						
LAO	LASA Array	3.00	348		Pn	21 03 45.6	+0.1
RLMT	Red Lodge	3.14	297		Pn	21 03 48.0	+0.4
RLMT				IAML		21 04 40.1	
	comp=E,87nm,0.6s						
RLMT				IAML		21 04 40.9	
	comp=E,91nm,0.3s						
BW06	Boulder Array	3.25	254		Pn	21 03 49.4	+0.2
BW06				IAML		21 04 37.5	
	comp=E,70nm,0.3s						
BW06				IAML		21 04 40.5	
	comp=E,76nm,0.3s						
PD31	Pinedale Array	3.25	254		Pn	21 03 49.5	+0.4
PDAR	Pinedale Array	3.25	254	Pn	Pn	21 03 49.6	+0.4
	comp=E,28nm,0.3s,baz=86,slow=19,SNR=32						
PDAR				Pg	Pb	21 03 54.7	-0.8
	comp=E,28nm,0.3s,baz=69,slow=19,SNR=61						
PDAR				Lg	Lg	21 04 34.0	
	comp=E,21nm,0.3s,baz=334,slow=9.6,SNR=2.1						
PDAR	Pinedale Array	3.25	254	Pn	Pn	21 03 49.4	+0.2
YMP	Mirror Lake Pl	3.61	287		Pn	21 03 54.8	+0.6
GCMT	Greycliff	3.70	305		Pn	21 03 55.9	+0.6
OGNE	Ogallala	3.72	138	Pn	Pn	21 03 56.2	+0.7
LOHW	Long Hollow	3.84	270		Pn	21 03 57.4	+0.2
H17A	Grant Village	3.84	281		Pn	21 03 58.3	+1.0
H17A				IAML		21 05 00.7	
	comp=N,37nm,0.8s						
H17A				IAML		21 05 03.5	
	comp=E,26nm,1.2s						
FLWY	Flagg Ranch	3.90	277		Pn	21 03 59.0	+0.9
FLWY				IAML		21 05 07.1	
	comp=E,51nm,2.2s						
FLWY				IAML		21 05 12.2	
	comp=E,40nm,1.0s						
MOOW	Moose Ponds	3.93	272	Pn	Pn	21 03 59.5	+1.0
SNOW	Snow King Moun	3.96	268		Pn	21 04 00.5	+1.6
SNOW				IAML		21 05 04.3	
	comp=E,39nm,0.4s						
SNOW				IAML		21 05 06.9	
	comp=E,42nm,1.3s						
ISCO	Idaho Springs	3.96	183	Pn	Pn	21 03 59.7	+0.7
YNR	Norris Junctio	3.97	286		Pn	21 04 00.5	+1.5

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REDW  Red Top Meadow     4.04 266          Pn      21 04 00.9 +0.9
REDW                                IAML           21 05 19.8
      comp=E,41nm,0.9s
TPAW  Teton Pass         4.10 268          Pn      21 04 01.8 +1.0
TPAW                                IAML           21 05 18.2
      comp=E,28nm,1.1s
TPAW                                IAML           21 05 29.2
      comp=E,52nm,1.1s
YHH   Holmes Hill        4.10 286   Pn     Pn      21 04 01.0 +0.1
YHH                                 IAML           21 05 13.6
      comp=N,26nm,1.1s
FXWY  Fox Creek          4.14 270          Pn      21 04 02.4 +1.0
YMR   Madison River      4.16 285          Pn      21 04 02.8 +1.1
O20A  White River Ci     4.23 212          Pn      21 04 03.4 +0.8
O20A                                IAML           21 05 27.7
      comp=N,38nm,1.3s
E28A  Huff               4.32  48          Pn      21 04 03.7 +0.1
AHID  Auburn Hatcher     4.34 259          Pn      21 04 04.5 +0.5
AHID                                IAML           21 05 20.7
      comp=N,30nm,0.7s
AHID                                IAML           21 05 24.2
      comp=N,40nm,1.0s
YHL   Hebgen Lake        4.35 287          Pn      21 04 05.0 +0.7
YHL                                 IAML           21 05 20.6
      comp=N,41nm,1.1s
YHL                                 IAML           21 05 23.0
      comp=E,40nm,1.0s
RDMU  Red Mountain       4.49 226   Pn     Pn      21 04 07.1 +0.9
RDMU                                IAML           21 05 23.9
      comp=N,35nm,0.8s
RDMU                                IAML           21 05 25.0
      comp=E,33nm,1.0s
DGMT  Dagmar             4.78   9   Pn     Pn      21 04 11.5 +1.6
BOZ   Bozeman (W)        4.86 294          Pn      21 04 11.8 +0.6
BOZ                                 IAML           21 05 30.1
      comp=E,20nm,1.2s
BOZ                                 IAML           21 05 40.2
      comp=E,20nm,0.9s
HWUT  Hardware Ranch     5.08 247   Pn     Pn      21 04 14.2 -0.1
KSCO  Kaye Shedlock'     5.16 156          Pn      21 04 15.9 +0.6
EGMT  Eagleton           5.27 326          Pn      21 04 16.7  0.0
HRY   Holter Researc     5.46 305          Pn      21 04 19.5 +0.1
LRM   Limekiln Ridge     5.48 295          Pn      21 04 20.4 +0.7
P18A  Preston Nutter     5.54 223          Pn      21 04 21.2 +0.6
MDND  Maddock            5.72  42          Pn      21 04 22.9 +0.1
SPUT  South Promonto     5.81 248          Pn      21 04 23.8 -0.4
HVU   Hansel Valley      5.83 253          Pn      21 04 25.1 +0.5
BCYI  Bear Canyon        5.86 278   Pn     Pn      21 04 26.4 +1.5
P17A  Butcher Ranch,     5.90 225          Pn      21 04 26.4 +0.8
SDCO  Great Sand Dun     6.01 181   Pn     Pn      21 04 27.4 +0.3
SRU   San Rafael Swe     6.07 222          Pn      21 04 27.6 -0.2
TMUT  Trail Mountain     6.28 227          Pn      21 04 31.4 +0.6
ECSD  EROS Data Cent     6.30  87   Pn     Pn      21 04 30.8 -0.1
BGU   Big Grassy Mou     6.38 246   Pn     Pn      21 04 33.2 +1.2
Q16A  Castle Valley      6.54 224          Pn      21 04 34.5 +0.2
HLID  Hailey             6.60 271   Pn     Pn      21 04 36.5 +1.4
DUG   Dugway, Tooele     6.62 240   Pn     Pn      21 04 35.4  0.0
F33A  5 Mile Ranch,      6.75  69          Pn      21 04 38.9 +1.9
MSO   Missoula           6.81 300   Pn     Pn      21 04 38.4 +0.5
MSU   Marysvale          7.37 227          Pn      21 04 46.2 +0.5
ELK   Elko               7.95 251   Pn     Pn      21 04 54.2 +0.5
      comp=E,0.8nm,0.3s,baz=71,slow=10,SNR=13
ELK                                 Lg     Lg      21 06 56.8
      comp=E,0.1nm,0.3s,baz=154,slow=19,SNR=1.5
ULM   Lac du Bonnet      9.15  41   Pn     Pn      21 05 08.2 -1.6
      comp=E,1.3nm,0.3s,baz=235,slow=12,SNR=9.4
ULM                                 Lg     Lg      21 07 40.6
      baz=126,slow=22,SNR=3.0
NEW   Newport            9.37 303   Lg     Lg      21 07 43.8
      comp=E,0.1nm,0.3s,baz=234,slow=7.1,SNR=2.4
NVAR  Mina Array Bea    11.15 246   Pn     Pn      21 05 38.3 +0.8
      comp=E,0.2nm,0.3s,baz=51,slow=13,SNR=4.4
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JMA ***08*** *21:36:33.1±0.4, 43°.32N×147°.08E, h30^{km}±5^{km}, M3.8*

NIED ***08*** *21:36:33.2, 43°.33N×147°.08E, h30^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.93; $M_{\theta\theta}$-0.96; $M_{\phi\phi}$-0.97; $M_{r\theta}$0.28; $M_{\theta\phi}$-1.46; $M_{\phi r}$1.64; Fault plane solution: $M_0$2.77000×10^{14} NP1:ϕ_s23.00000°, δ65.00000°, λ67.00000°. NP2:ϕ_s248.00000°, δ33.00000°, λ129.00000°.*

SKHL ***08*** *21:36:33.8±0.3, 43°.40N×147°.20E, h51^{km}±4^{km}, mb4.9/4*

MOS ***08*** *21:36:35.2±1.2, 43°.54N×146°.95E, h51^{km}, mb4.1/5, Error ellipse: s-maj=12.8km s-min=10.4km az=129.7*

NEIC ***08*** *21:36:36.0±1.4, 43°.2N±0°.1×147°.02E±0°.05, h52^{km}±11^{km}, mb4.2/7, Error ellipse: s-maj=16.0km s-min=3.3km az=194.0*

IDC ***08*** *21:36:44.7±3.2, 44°.45N×146°.61E, h69^{km}±29^{km}, mb3.5/12, mb1 3.7/13, mb1mx3.4/52, mbtmp3.8/13, ML3.4/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/47, Error ellipse: s-maj=29.9km s-min=21.0km az=164.0*

ISC 08 21:36:34.9±1.5**, 43°.39N**±0°.06×**147°.04E**±0°.05**, h32**^{km}±8^{km}**, n75, σ**1^{s}**08**/81**, mb3.8**/19**, MS3.4**/3**, 5D, Kuril Islands**

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Code  Station Name        Δ°   AZ°     Phase ID         Time      Res
                                     Op     ISC       h  m  s    ISC
SHO   Shikotan           0.51 342d iPN    Pb      21 36 45.1 -0.4
SHO                                iS     Sb      21 36 53.2 +0.4
SHO                                 pmax   pmax
      comp=Z,2μm,0.3s
SHO                                 pmax   pmax
      comp=E,360nm,0.1s
SHO                                 pmax   pmax
      comp=N,732nm,0.2s
SHO                                 smax   smax
      comp=E,2μm,0.3s
SHO                                 smax   smax
      comp=E,5μm,0.2s
SHO   Shikotan           0.51 342  i P    Pb      21 36 45.1 -0.4
SHO                                 AMB    AMB     21 36 45.5
      comp=E,1μm,0.3s
SHO                                i S    Sb      21 36 53.3 +0.4
SHO                                 A      A       21 36 55.2
      comp=E,5μm,0.3s
SHO                                 A      A       21 36 55.2
      comp=E,2μm,0.3s
NEM2  Nemuro 2           0.95 269   P     Pn      21 36 50.8 -1.0
NEM2                               eS     Sn      21 37 03.6 -0.6
NMR   Nemuro--Hokkai     0.96 269⇓iPN    Pn      21 36 50.9 -1.1
NMR                                eS     Sn      21 37 04.3 -0.2
NMR   Nemuro--Hokkai     0.96 269  i P    Pn      21 36 51.1 -0.9
NMR                                eS     Sn      21 37 04.3 -0.2
YUK   Yuzh-Kuril'sk      1.07 307d iPN    Pn      21 36 53.2 -0.4
YUK                                i S    Sn      21 37 07.4 +0.1
YUK                                 pmax   pmax
      comp=N,217nm,0.1s
YUK                                 pmax   pmax
      comp=E,162nm,0.1s
YUK                                 pmax   pmax
      comp=Z,1μm,0.1s
YUK                                 smax   smax
      comp=E,3μm,0.5s
YUK                                 smax   smax
      comp=N,2μm,0.2s
YUK   Yuzh-Kuril'sk      1.07 307  i P    Pn      21 36 53.2 -0.4
YUK                                 AMB    AMB     21 36 54.0
      comp=N,780nm,0.2s
YUK                                i S    Sn      21 37 07.4 +0.1
YUK                                 A      A       21 37 09.0
      comp=N,2μm,0.5s
YUK                                 A      A       21 37 09.0
      comp=N,3μm,0.5s
GLVR  Golovnino          1.16 288⇓iPN    Pn      21 36 54.3 -0.5
GLVR                               i S    Sn      21 37 10.2 +0.7
GLVR                                pmax   pmax
      comp=Z,339nm,0.1s
GLVR                                smax   smax
      comp=N,2μm,0.3s
GLVR                                smax   smax
      comp=E,3μm,0.2s
GLVR  Golovnino          1.16 288  i P    Pn      21 36 54.3 -0.5
GLVR                                AMB    AMB     21 36 56.0
      comp=E,340nm,0.3s
GLVR                               i S    Sn      21 37 10.2 +0.7
GLVR                                A      A       21 37 13.0
      comp=E,2μm,0.5s
GLVR                                A      A       21 37 13.0
      comp=E,3μm,0.5s
JKHN  Kushirohamanak     1.41 258   P     Pn      21 36 57.7 -0.5
JKHN                               eS     Sn      21 37 15.9 +0.3
RUSJ  Misakicho          1.48 299  ePN    Pn      21 36 59.5 +0.3
RUSJ                               eS     Sn      21 37 18.5 +1.0
JRA   Rausu              1.50 292   P     Pn      21 36 59.6 +0.2
JNSB  Nemuroshibetsu     1.53 285   P     Pn      21 36 59.7 -0.2
AKK   Akkeshi            1.65 258  i P    Pn      21 37 01.4 -0.1
AKK                                eS     Sn      21 37 22.2 +0.6
JNK   Nakash             1.70 277   P     Pn      21 37 01.6 -0.6
JAK   Akkeshi            1.76 258   P     Pn      21 37 02.4 -0.6
KUR   Kuril'sk           1.94  18  ePN    Pn      21 37 05.5  0.0
KUR                                eS     Sn      21 37 29.4 +0.7
KUR                                 pmax   pmax
      comp=Z,70nm,0.6s
KUR                                 smax   smax
      comp=N,173nm,0.5s
KUR                                 smax   smax
      comp=E,270nm,0.5s
KUR   Kuril'sk           1.94  18  eP     Pn      21 37 05.1 -0.4
KUR                                 AMB    AMB     21 37 10.2
      comp=E,70nm,0.4s
KUR                                eS     Sn      21 37 27.3 -1.4
KUR                                 A      A       21 37 36.0
      comp=E,180nm,0.2s
KUR                                 A      A       21 37 36.0
      comp=E,270nm,0.2s
JTKR  Abashiri--Toko     2.35 285   P     Pn      21 37 12.0 +0.9
JAR   Ashorobuto         2.39 269   P     Pn      21 37 11.8 +0.1
JOB   Onbets             2.40 259   P     Pn      21 37 11.7 -0.1
JCH   Churui             2.81 255   P     Pn      21 37 17.9 +0.5
ERM   Erimo              3.17 246  ePN    Pn      21 37 24.5 +2.0
ERM   Erimo              3.17 246   Pn    Pn      21 37 23.8 +1.3
JEM   Erimo              3.17 246   Pn    Pn      21 37 24.2 +1.7
JKA   Kamikawa-asahi     3.30 284         Pn      21 37 26.2 +2.0
ASAJ  Asahikawa          3.30 284   P     Pn      21 37 27.3 +3.1
      comp=E,3.9nm,0.3s,baz=150,slow=6.6,SNR=16
ASAJ                                S     Sn      21 38 03.5 +1.2
      comp=E,2.8nm,0.3s,baz=198,slow=34,SNR=1.8
JEW   Eniwo              4.13 264   Pn    Pn      21 37 37.7 +2.1
YSS   Yuzh-Sakhalins     4.68 321  eP     Pn      21 37 44.7 +1.6
YSS                                 AMB    AMB     21 37 47.0
      comp=E,10.0nm,0.3s
YSS   Yuzh-Sakhalins     4.68 321   Pn    Pn      21 37 45.3 +2.2
JTM   Tenmabayashi       5.15 242   Pn    Pn      21 37 49.9 +0.3
BILL  Bilibino          26.73  16⇓eP     P       21 42 09.1 -1.8
BILL                                PPP    PPP     21 42 57.0
BILL                                SSS    SSS     21 47 54.0
BILL                                pmax   pmax
      comp=Z,3.0nm,1.6s
BILL                                MLR    MLR
      comp=Z,111nm,19.0s
ULN   Ulaanbaatar       28.09 293  eP     P       21 42 20.6 -3.0
ULN                                 pmax   pmax
      comp=Z,2.0nm,1.1s
SONM  Songino Array     28.54 293   P     P       21 42 27.2 -0.3
      comp=Z,0.7nm,0.4s,baz=90,slow=9.2,SNR=8.1
H11N2 WAKE ISLAND Hy    28.88 139   T     T       22 13 11.1
      baz=330,slow=75,SNR=65
H11N1 WAKE ISLAND Hy    28.89 139   T     T       22 13 12.0
      baz=330,slow=75,SNR=60
H11N3 WAKE ISLAND Hy    28.90 139   T     T       22 13 12.4
      baz=330,slow=75,SNR=85
GUMO  Guam              29.75 184   LR    LR      21 56 22.9
      comp=Z,16nm,18.6s,baz=68,slow=38
H11S1 WAKE ISLAND Hy    29.84 140   T     T       22 14 15.4
      baz=331,slow=76,SNR=159
H11S3 WAKE ISLAND Hy    29.84 140   T     T       22 14 17.8
      baz=331,slow=76,SNR=149
H11S2 WAKE ISLAND Hy    29.86 140   T     T       22 14 19.6
      baz=331,slow=76,SNR=102
IMAR  Indian Mountai    38.99  34   P     P       21 43 57.6  0.0
H21K  Melozitna Rive    39.35  35   P     P       21 44 01.2 +0.5
H21K                                IAmb   IAmb    21 44 08.0
      comp=Z,2.4nm,1.2s
ILAR  Eielson Array     41.83  36   P     P       21 44 21.5 +0.3
      comp=Z,0.6nm,0.9s,baz=271,slow=6.4,SNR=3.3
MK31  Makanchi Array    44.68 298   P     P       21 44 43.4 -1.1
MK31                                pmax   pmax
      comp=Z,5.0nm,1.3s
MK31  Makanchi Array    44.68 298   P     P       21 44 43.4 -1.1
MK31                                IAmb   IAmb    21 44 47.0
      comp=Z,4.8nm,1.3s
MKAR  Makanchi Array    44.68 298   P     P       21 44 43.4 -1.1
      comp=Z,0.4nm,0.6s,baz=81,slow=9.4,SNR=7.0
MKAR  Makanchi Array    44.68 298  i P    P       21 44 44.4 -0.1
MKAR  Makanchi Array    44.68 298  eP     P       21 44 44.4 -0.1
MKAR  Makanchi Array    44.68 298   P     P       21 44 43.6 -0.9
MAKZ  Makanchi          44.88 298   P     P       21 44 45.7 -0.3
MAKZ                                pmax   pmax
      comp=Z,15nm,1.5s
MAKZ  Makanchi          44.88 298   P     P       21 44 45.7 -0.3
MAKZ                                IAmb   IAmb    21 44 51.7
      comp=Z,15nm,1.5s
INK   Inuvik            46.75  30   P     P       21 45 00.8 +0.3
      comp=Z,0.9nm,0.5s,baz=308,slow=12,SNR=2.2
BOOM  Boomskoye usch    50.56 295   P     P       21 45 30.2 -0.1
BOOM                                pmax   pmax
      comp=Z,2.0nm,0.9s
BOOM  Boomskoye usch    50.56 295   P     P       21 45 30.2 -0.1
BOOM                                IAmb   IAmb    21 45 31.5
      comp=Z,2.3nm,0.9s
AAK   Ala-Archa         51.44 296   P     P       21 45 36.8 -0.1
AAK                                 pmax   pmax
      comp=Z,3.0nm,1.5s
AAK   Ala-Archa         51.44 296  eP     P       21 45 36.8 -0.1
AAK   Ala-Archa         51.44 296   P     P       21 45 36.8 -0.1
AAK                                 IAmb   IAmb    21 45 50.5
      comp=Z,2.9nm,1.4s
KKAR  Karatay Array     53.81 298   P     P       21 45 53.3 -1.0
KKAR  Karatay Array     53.81 298   P     P       21 45 53.3 -1.0
YKA   Yellowknife Ar    56.15  34   P     P       21 46 11.9 +1.1
      comp=Z,0.1nm,0.3s,baz=315,slow=7.8,SNR=1.5
ABKAR Akbulak array     57.23 309   P     P       21 46 18.5 -0.2
ABKAR Akbulak array     57.23 309   P     P       21 46 18.5 -0.2
ARCES ARCESS Array B    59.56 340   P     P       21 46 33.4 -1.3
      comp=Z,4.8nm,1.0s,baz=57,slow=10.0,SNR=1.7
WRA   Warramunga Arr    64.09 193   P     P       21 47 18.2  +13
      comp=Z,0.3nm,0.7s,baz=14,slow=3.5,SNR=1.4
FIA1  FINESS Array S    65.16 333   P     P       21 47 11.2 -1.0
FINES FINESS Array B    65.16 333   P     P       21 47 11.0 -1.2
      comp=Z,2.4nm,0.7s,baz=48,slow=6.2,SNR=11
FINES FINESS Array B    65.16 333  i P    P       21 47 09.8 -2.4
FINES                               pmax   pmax
      comp=Z,2.0nm,0.7s
FINES FINESS Array B    65.16 333   P     P       21 47 11.4 -0.7
NVAR  Mina Array Bea    67.84  58   P     P       21 47 33.1 +3.1
      comp=Z,0.1nm,0.3s,baz=292,slow=2.8,SNR=1.3
NOA   NORSAR Array B    69.91 339   P     P       21 47 41.9 -0.3
      comp=Z,0.8nm,0.7s,baz=49,slow=7.4,SNR=2.0
KBZ   Khabaz            69.98 312   LR    LR      22 20 29.1
      comp=Z,97nm,18.8s,baz=342,slow=38
AKASG Malin Array Be    71.82 324   P     P       21 47 53.1 -0.9
      comp=Z,0.3nm,0.3s,baz=40,slow=5.7,SNR=5.6
AKASG Malin Array Be    71.82 324  i P    P       21 47 53.2 -0.8
AKASG                               pmax   pmax
      comp=Z,1.0nm,0.6s
SCHQ  Schefferville     77.99  19   P     P       21 48 30.4 +0.8
      comp=Z,2.9nm,0.9s,baz=209,slow=18,SNR=1.7
```

IDC ***08*** *22:03:22.7±0.8, 31°.40S×178°.27W, h0^{km}, mb4.7/8, mb1 4.9/10, mb1mx4.3/37, mbtmp4.7/10, ML4.6/2, MS3.6/10, Ms1 3.6/10, ms1mx3.4/29, Error ellipse: s-maj=25.0km s-min=18.4km az=126.0*

NEIC ***08*** *22:03:29.0±1.5, 31°.40S±0°.07×178°.4W±0°.2, h35^{km}±1^{km}, mb4.8/23, Error ellipse: s-maj=24.1km s-min=10.3km az=105.0*

WEL ***08*** *22:04:59.9, 37°S±16°×17°8E±1°1, h34^{km}±13^{km}, M2.9/25, ML3.4/31, MLv2.9/25, Error ellipse: s-maj=0.0km s-min=0.0km az=165.7*

ISC 08 22:03:28.2±0.5**, 31°.39S**±0°.06×**178°.3W**±0°.1**, h35**^{km}**, n121, σ**1^{s}**68**/104**, mb4.8**/20**, MS3.6**/8**, Kermadec Islands region**

```
Code  Station Name        Δ°   AZ°     Phase ID         Time      Res
                                     Op     ISC       h  m  s    ISC
RAO   Raoul Island       2.16   9   Pn    Pn      22 04 01.6 -0.1
      400nm,0.3s,baz=95,slow=17,SNR=11
RAO                                 Sn    Sn      22 04 29.1 +1.9
      923nm,0.3s,baz=90,slow=23,SNR=11
RAO   Raoul Island       2.16   9         Pn      22 04 02.4 +0.7
MXZ   Matakaoa Point     6.76 203   P     Pn      22 05 05.2 +0.3
MXZ   Matakaoa Point     6.76 203   Pn    Pn      22 05 03.9 -1.1
WMGZ  Waiomatatini S     6.96 202   P     Pn      22 05 08.6 +1.0
HAZ   Te Kaha            7.12 206   P     Pn      22 05 09.9 +0.1
PKGZ  Pakihiroa          7.13 204   P     Pn      22 05 09.3 -0.8
PUZ   Puketiti           7.24 202   P     Pn      22 05 11.1 -0.5
RUGZ  Raukumara Rang     7.34 206   P     Pn      22 05 13.4 +0.4
MYRZ  Mayor Island       7.40 216   P     Pn      22 05 22.6 +8.8
TWGZ  Tauwhareparae      7.43 203   P     Pn      22 05 14.6 +0.5
WHRZ  Whale Island       7.53 210   P     Pn      22 05 21.1 +5.6
CNGZ  Carnagh Statio     7.63 201   P     Pn      22 05 16.6 -0.2
OPRZ  Ohinepanea         7.70 212   P     Pn      22 05 21.6 +3.8
TKGZ  Te Karaka          7.71 203   P     Pn      22 05 20.6 +2.6
MWZ   Matawai            7.72 205   P     Pn      22 05 18.7 +0.5
URZ   Urewera            7.82 208   Pn    Pn      22 05 18.8 -0.6
      3.3nm,0.3s,baz=121,slow=23,SNR=20
URZ                                 Sn    Sn      22 06 45.2 -1.5
      14nm,0.3s,baz=204,slow=23,SNR=6.6
URZ   Urewera            7.82 208   P     Pn      22 05 18.8 -0.6
RAGZ  Rawiri             7.91 205   P     Pn      22 05 22.3 +1.5
RIGZ  Rimuhau            7.98 203   P     Pn      22 05 22.2 +0.5
PRGZ  Paritu Road        8.13 201   P     Pn      22 05 25.2 +1.4
MUGZ  Murupara           8.14 208   P     Pn      22 05 22.3 -1.6
RTZ   Ruatahuna          8.18 207   P     Pn      22 05 23.8 -0.7
SNGZ  Shannon Statio     8.19 205   P     Pn      22 05 26.6 +2.1
GRRZ  Galatos Road       8.32 212   P     Pn      22 05 23.4 -2.9
MHGZ  Mahia Peninsul     8.34 201   P     Pn      22 05 25.3 -1.3
RAHZ  Arahi              8.40 205   P     Pn      22 05 29.4 +2.0
MTHZ  Maungataniwha      8.44 207   P     Pn      22 05 27.7 -0.3
NMHZ  Naumai             8.66 206   P     Pn      22 05 32.7 +1.5
BKZ   Black Stump Fm     8.84 207   P     Pn      22 05 32.0 -1.6
MCHZ  McNeill Hill       9.01 206   P     Pn      22 05 39.4 +3.7
KWHZ  Kaweka Forest      9.09 207   P     Pn      22 05 35.6 -1.4
NTVZ  North Tongarir     9.13 211   P     Pn      22 05 39.7 +2.2
TMVZ  Te Maari           9.13 211   P     Pn      22 05 39.1 +1.5
ETVZ  East Tongariro     9.14 211   P     Pn      22 05 39.5 +1.8
NNVZ  North Ngauruho     9.18 211   P     Pn      22 05 42.5 +4.3
OTVZ  Oturere            9.19 211   P     Pn      22 05 39.7 +1.4
SNVZ  South Ngauruho     9.21 211   P     Pn      22 05 39.8 +1.0
NGZ   Ngauruhoe          9.22 211   P     Pn      22 05 41.9 +3.1
KAHZ  Kahuranaki         9.26 204   P     Pn      22 05 37.2 -2.0
BHHZ  Black Hill Sta     9.29 208   P     Pn      22 05 40.7 +1.0
KRHZ  Kereru             9.30 206   P     Pn      22 05 39.1 -0.8
FWVZ  Far West T-bar     9.31 211   P     Pn      22 05 41.5 +1.4
WNVZ  Wahianoa           9.35 210   P     Pn      22 05 43.3 +2.7
PRHZ  Porangahau         9.76 203   P     Pn      22 05 45.8 -0.3
TSZ   Takapari Road      9.82 207   P     Pn      22 05 45.4 -1.5
MSVF  Nonsavu           13.99 345   LR    LR      22 11 05.2
      comp=Z,231nm,21.2s,baz=138,slow=33
FOZ   Fox Glacier       15.34 214   P     P       22 07 10.6 +4.3
DZM   Mont Dzumac       16.47 301  eLR    LR      22 11 05.9
      comp=Z,560nm,26.1s
DZM   Mont Dzumac       16.47 301   LR    LR      22 12 22.4
      comp=Z,234nm,18.3s,baz=108,slow=33
RAR   Rarotonga         19.44  63   LR    LR      22 17 00.1
      comp=Z,59nm,18.1s,baz=256,slow=42
ARMA  Armidale          25.78 264   P     P       22 08 58.0 +2.0
ARMA                                IAmb   IAmb    22 09 28.2
      comp=Z,14nm,1.4s
CAN   Canberra          27.52 253   P     P       22 09 12.9 +1.3
CAN                                 IAmb   IAmb    22 09 34.2
      comp=Z,17nm,1.1s
EIDS  Eidsvold          27.54 275   P     P       22 09 12.7 +0.9
EIDS                                IAmb   IAmb    22 09 14.8
      comp=Z,8.3nm,0.8s
PAE   Paea              29.39  69  eT     T       22 40 17.3
      comp=Z,16nm,0.3s
PPT2  Papeete2          29.43  69  eLR    LR      22 16 58.4
      comp=Z,185nm,27.8s
MEH   Mehetia           30.49  71  eT     T       22 41 36.0
      comp=Z,26nm,0.3s
VAH   Vaihoa            32.29  67  eT     T       22 43 47.1
      comp=Z,34nm,0.2s
CTA   Charters Tower    33.71 281   P     P       22 10 07.6 +1.3
      comp=Z,8.5nm,0.6s,baz=103,slow=12,SNR=10
CTAO  Charters Tower    33.71 281   P     P       22 10 07.7 +1.3
CTAO                                IAmb   IAmb    22 10 09.2
      comp=Z,13nm,0.7s
STKA  Stephens Creek    34.01 258   P     P       22 10 10.1 +1.3
      comp=Z,4.8nm,0.7s,baz=100,slow=11,SNR=11
STKA                                LR     LR      22 21 48.2
      comp=Z,89nm,21.6s,baz=30,slow=32
STKA  Stephens Creek    34.01 258   P     P       22 10 10.3 +1.5
BBOO  Buckleboo         38.45 255   P     P       22 10 46.3 -0.5
BBOO                                IAmb   IAmb    22 10 47.1
      comp=Z,11nm,0.7s
COEN  Coen              39.30 287   P     P       22 10 55.1 +1.0
COEN                                IAmb   IAmb    22 11 11.0
      comp=Z,19nm,1.3s
AS31  Alice Springs     42.80 268   P     P       22 11 22.5 -0.4
ASAR  Alice Springs     42.80 268   P     P       22 11 22.4 -0.4
      comp=Z,8.1nm,0.4s,baz=105,slow=7.2,SNR=144
ASAR                                PcP    PcP     22 13 12.7 -1.1
      comp=Z,0.5nm,0.5s,baz=125,slow=4.7,SNR=1.3
WR0   Warramunga Arr    43.70 273   P     P       22 11 29.4 -0.7
WRAB  Tennant Creek     43.88 273   P     P       22 11 30.9 -0.6
WRA   Warramunga Arr    43.88 273   P     P       22 11 31.0 -0.5
      comp=Z,24nm,0.5s,baz=112,slow=7.8,SNR=386
WRA                                 PcP    PcP     22 13 16.0 -1.5
      comp=Z,0.8nm,0.6s,baz=129,slow=3.7,SNR=1.5
WRA                                 LR     LR      22 28 49.2
      comp=Z,66nm,18.4s,baz=200,slow=35
WRA   Warramunga Arr    43.88 273   P     P       22 11 30.3 -1.2
FORT  Forrest           45.55 256   P     P       22 11 44.1 -0.5
FORT                                IAmb   IAmb    22 11 44.4
      comp=Z,20nm,1.1s
JAY   Jayapura          48.12 298   LR    LR      22 29 48.6
      comp=Z,102nm,21.8s,baz=325,slow=33
MTN   Manton Dam        49.88 280   P     P       22 12 17.0 -1.5
MTN                                 IAmb   IAmb    22 12 30.1
      comp=Z,20nm,1.3s
KNRA  Kununurra         50.52 275   P     P       22 12 23.1 -0.2
FITZ  Fitzroy Crossi    52.10 271   P     P       22 12 34.7 -0.4
      comp=Z,6.5nm,0.7s,baz=149,slow=6.9,SNR=18
FITZ                                LR     LR      22 33 17.6
      comp=Z,61nm,20.1s,baz=174,slow=34
CASY  Casey             54.14 208   P     P       22 12 49.4 -0.1
FAKI  Fak Fak           54.44 291   P     P       22 12 50.8 -1.6
FAKI                                IAmb   IAmb    22 13 11.1
      comp=Z,5.3nm,0.9s
PSA00 Pilbara Seismi    55.59 264   P     P       22 12 58.8 -1.9
PSA00 Pilbara Seismi    55.59 264   P     P       22 12 59.7 -1.0
PSA00                               IAmb   IAmb    22 13 24.5
      comp=Z,16nm,1.4s
BATI  Baumata           57.52 278   LR    LR      22 37 16.0
      comp=Z,164nm,19.1s,baz=218,slow=35
QSPA  South Pole Qui    58.72 180   P     P       22 13 23.5 +1.2
QSPA                                IAmb   IAmb    22 13 30.9
      comp=Z,6.3nm,0.7s
JAGI  Jajag, Banyuwa    66.48 274   P     P       22 14 13.6 -1.0
SMAI  San Martin Ant    68.61 158         P       22 14 29.1 +1.9
SMAI                                IAmb   IAmb    22 14 50.7
      comp=Z,18nm,1.4s
MAW   Mawson            71.29 201   P     P       22 14 43.8 +0.1
      comp=Z,4.1nm,0.8s,baz=48,slow=3.7,SNR=3.9
MAW                                 LR     LR      22 44 41.9
      comp=Z,53nm,18.5s,baz=236,slow=35
MAW   Mawson            71.29 201   P     P       22 14 44.0 +0.3
SNAA  Sanae             77.17 179   P     P       22 15 19.0 +0.9
SNAA  Sanae             77.17 179   PcP   PcP     22 15 23.6 -5.1
SNAA  Sanae             77.17 179   P     P       22 15 18.9 +0.9
SNAA                                IAmb   IAmb    22 15 30.6
      comp=Z,4.8nm,0.9s
VNA3  Neumayer Olymp    77.34 176   P     P       22 15 19.8 +1.0
VNA3  Neumayer Olymp    77.34 176   PcP   PcP     22 15 25.0 -4.4
VNA2  Neumayer--Watz    77.77 177   P     P       22 15 22.7 +1.4
VNA2  Neumayer--Watz    77.77 177   PcP   PcP     22 15 27.5 -3.7
VNA1  Neumayer--Stat    78.00 177   P     P       22 15 23.8 +1.3
VNA1  Neumayer--Stat    78.00 177   PcP   PcP     22 15 28.8 -3.4
MJAR  Matsushiro Arr    78.91 326   LR    LR      22 50 30.4
      comp=Z,19nm,18.0s,baz=35,slow=36
H03S2 Juan Fernandez    80.14 124   T     T       23 44 23.8
      SNR=58
H03S1 Juan Fernandez    80.15 124   T     T       23 44 26.4
      SNR=52
H03S3 Juan Fernandez    80.16 124   T     T       23 44 25.1
      SNR=58
H03N3 Juan Fernandez    80.34 123   T     T       23 44 34.5
      baz=241,slow=72,SNR=82
H03N2 Juan Fernandez    80.34 123   T     T       23 44 35.6
      baz=241,slow=72,SNR=66
H03N1 Juan Fernandez    80.35 123   T     T       23 44 33.7
      baz=241,slow=72,SNR=197
NVAR  Mina Array Bea    89.14  43   P     P       22 16 21.4 +1.1
      comp=Z,1.4nm,0.6s,baz=241,slow=6.1,SNR=4.1
CMAR  Chiang Mai Arr    93.48 289   P     P       22 16 40.8 +0.2
      comp=Z,1.2nm,0.3s,baz=131,slow=4.1,SNR=1.9
BOSA  Boshof           116.25 203   PKP   PKPdf   22 22 08.5  0.0
      comp=Z,0.9nm,0.5s,baz=160,slow=2.2,SNR=7.5
BOSA  Boshof           116.25 203         PKPdf   22 22 08.8 +0.3
MKAR  Makanchi Array   118.20 310   PKP   PKPdf   22 22 10.0 -1.4
      comp=Z,0.4nm,0.4s,baz=214,slow=1.3,SNR=9.0
```

MKAR	Makanchi Array	118.20	310		PKPdf	22 22 10.2	-1.2
H10N3	ASCENSION HYDR	38.02	156	T	T	00 57 36.1	
	baz=205,slow=75,SNR=56						
H10N1	ASCENSION HYDR	38.03	156	T	T	00 57 36.7	
	baz=205,slow=75,SNR=40						
H10N2	ASCENSION HYDR	38.04	156	T	T	00 57 37.4	
	baz=205,slow=75,SNR=58						
ARCES	ARCESS Array B	139.50	347	PKhKP	PKPpre	22 22 45.3	
	comp=Z,3.2nm,0.8s,baz=35,slow=3.0,SNR=5.7						
FINES	FINESS Array B	145.98	339	PKPbc	PKPdf	22 23 02.3	-0.3
	comp=Z,12nm,0.5s,baz=55,slow=3.5,SNR=48						
FINES	FINESS Array B	145.98	339		PKPdf	22 23 02.2	-0.5
NB2	NORSAR Subarra	149.69	351	PKP	PKPbc	22 23 12.6	-1.0
	comp=Z,1.5nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.69	351	PKPbc	PKPbc	22 23 12.9	-0.6
	comp=Z,3.7nm,0.7s,baz=17,slow=4.2,SNR=11						
AKASG	Malin Array Be	151.92	321	PKPbc	PKPbc	22 23 17.7	-1.3
	comp=Z,1.5nm,0.5s,baz=52,slow=2.8,SNR=7.5						
AKASG	Malin Array Be	151.92	321		PKPbc	22 23 18.1	-0.9
BRTR	Keskin Array B	152.82	297	PKPbc	PKPbc	22 23 20.2	-1.4
	comp=Z,0.9nm,0.5s,baz=309,slow=35,SNR=2.3						
BRTR				PKPab	pPKPbc	22 23 31.4	-0.8
	comp=Z,2.8nm,0.8s,baz=199,slow=3.4,SNR=5.7						
GERES	GERESS Array B	160.34	336	PKPab	PKPab	22 24 05.6	+1.0
	comp=Z,0.2nm,0.3s,baz=32,slow=6.1,SNR=1.9						
TORD	Torodi Ar. Bea	161.84	180	PKP	PKPdf	22 23 27.2	+0.9
	comp=Z,1.1nm,0.9s,baz=344,slow=1.3,SNR=5.3						
TORD				PKPab	PKPab	22 24 12.2	+0.4
	comp=Z,2.9nm,0.6s,baz=182,slow=2.9,SNR=17						
ESDC	Sonseca Array	170.54	28	PKP	PKPdf	22 23 33.9	+1.3
	comp=Z,0.5nm,0.7s,baz=351,slow=2.1,SNR=4.4						

NNC 08 22:06:53.7±5.7**, 37°.04N×71°.03E, h0^{km}, mb3.8, mpv3.4, 3C-1D, Error ellipse: s-maj=50.8km s-min=43.4km az=64.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	Karatay Array	6.07	356	⇑P	Pn	22 08 26.0	+1.3
	1.8nm,0.6s,baz=178,slow=13						
KK02				⇓S	Sn	22 09 35.7	+0.7
	0.7nm,0.3s						
AAK	Ala-Archa	6.20	24	P	Pn	22 08 26.7	+0.1
	1.6nm,0.5s						
AAK				⇑S	Sn	22 09 39.7	+1.5
	4.3nm,0.7s						
TKM2	Tokmak 2	6.84	29	⇑P	Pn	22 08 34.3	-1.3
	4.4nm,1.2s						

*NNC **08** 22:19:16.8±2.4, 38°.73N×72°.62E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=19.5km s-min=12.9km az=167.0*

ISC 08 22:19:21.4±3.2**, 38°.9N**±0°.2×**72°.56E**±0°.07**, h10^{km}, n25, σ2^{s}31**/24**, 4C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	3.30	15	P	Pb	22 20 18.6	-1.8
	SNR=11						
UCH	Uchtor	3.61	24	P	Pb	22 20 24.5	-1.1
	SNR=8.0						
IUG	Iuzhnay	3.74	330	Pg	Pb	22 20 25.0	-2.6
	465nm,0.4s						
IUG				Lg	Lg	22 21 19.2	
	58nm,0.7s						
MRKS	Merke	3.84	7	Pg	Pb	22 20 27.0	-2.2
	6.7nm,0.3s						
MRKS				Lg	Lg	22 21 22.4	
	18nm,0.4s						
AAK	Ala-Archa	3.98	21	P	Pb	22 20 30.9	-0.8
	SNR=16						
AAK	Ala-Archa	3.98	21	⇑Pn	Pn	22 20 24.1	+1.5
	11nm,0.6s						
AAK				Lg	Lg	22 21 28.5	
	28nm,0.8s						
DZA	Taraz	4.06	347	Pg	Pb	22 20 31.6	-1.4
	26nm,0.1s						
DZA				Lg	Lg	22 21 30.3	
	56nm,0.5s						
KBK	Karagaybulak	4.13	25	P	Pg	22 20 37.1	-3.5
	SNR=7.2						
CHMS	Chumysh	4.38	22	P	Pb	22 20 36.1	-2.4
	SNR=7.2						
KK02	Karatay Array	4.44	340	⇑Pn	Pn	22 20 30.4	+1.5
	3.2nm,0.4s,baz=147,slow=12						
KK02				Sn	Sn	22 21 25.8	+5.3
USP	Ospenovka	4.57	18	P	Pb	22 20 38.1	-3.6
	SNR=5.5						
TKM2	Tokmak 2	4.60	29	⇓Pg	Pb	22 20 43.5	+1.2
	6.9nm,0.7s						
TKM2				⇑Lg	Lg	22 21 49.1	
	20nm,1.0s						
SGDS	Sogindy	4.77	18	Pg	Pb	22 20 44.7	-0.5
	8.7nm,0.6s						
SGDS				Lg	Lg	22 21 53.3	
	6.7nm,0.5s						
KST	Kastek	4.84	31	Pg	Pb	22 20 47.6	+1.2
	14nm,0.5s						
KST				Lg	Lg	22 21 58.1	
	15nm,0.6s						
DGS	Degeres	4.94	28	Pg	Pb	22 20 48.8	+0.8
	12nm,0.7s						
DGS				Lg	Lg	22 22 00.1	
	14nm,0.6s						
MTBS	Maitube	5.11	34	Pg	Pb	22 20 52.3	+1.4
	4.0nm,0.5s						
MTBS				Lg	Lg	22 22 06.6	
	12nm,0.6s						
TNSS	Tian-Shan	5.27	38	Pg	Pb	22 20 54.3	+0.4
	5.2nm,0.4s						
TNSS				Lg	Lg	22 22 09.5	
	4.4nm,1.0s						
KRBS	Karabastau	5.30	25	Pg	Pg	22 20 57.3	-5.6
	3.1nm,0.4s						
KRBS				Lg	Lg	22 22 14.9	
	4.2nm,0.4s						
MDOK	Medeo	5.42	37	Pg	Pb	22 20 57.2	+1.0
	4.4nm,0.5s						
MDOK				Lg	Lg	22 22 14.6	
	19nm,1.3s						
KOTS	Kotyrbulak	5.50	37	Pg	Pb	22 20 59.6	+1.9
	6.2nm,0.5s						
KOTS				Lg	Lg	22 22 18.7	
	24nm,1.0s						
KTBS	Karatobe	5.69	32	Pg	Pb	22 21 01.8	+1.0
	4.7nm,0.6s						
KTBS				Lg	Lg	22 22 22.5	
	9.7nm,0.4s						
KUU	Kurty	5.71	29	Pg	Pb	22 21 03.5	+2.4
	3.5nm,0.8s						
KUU				Lg	Lg	22 22 25.3	
	14nm,1.0s						
ARXS	Arharly	6.58	35	Pg	Pb	22 21 19.2	+3.1
	4.9nm,0.5s						
ARXS				Lg	Lg	22 22 52.2	
	8.0nm,0.6s						
PDGK	Podgornoye	6.83	48	⇑Pn	Pn	22 20 58.7	-3.1
	3.3nm,0.7s						
PDGK				⇓Lg	Lg	22 22 56.7	
	15nm,1.2s						
AB31	Akbulak array	13.71	323	Pn	Pn	22 22 37.6	+1.8
	2.8nm,0.9s,baz=219,slow=10,SNR=10						

*NNC **08** 22:27:04.6±3.2, 36°.74N×70°.59E, h104^{km}±86^{km}, mb2.9, mpv3.5, Error ellipse: s-maj=25.6km s-min=25.3km az=165.0*

*IDC **08** 22:27:06.1±7.1, 37°.09N×70°.08E, h177^{km}±56^{km}, mb1 3.0/4, mb1mx2.7/56, mbtmp3.6/4, Error ellipse: s-maj=102.8km s-min=18.6km az=155.0*

ISC 08 22:27:01.6±2.1**, 36°.6N**±0°.1×**70°.5E**±0°.1**, h150^{km}, n8, σ1^{s}24**/13**, 3C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	Karatay Array	6.52	360	⇑P	Pn	22 28 35.5	+0.3
	2.0nm,0.3s						
KK02				⇓S	Sn	22 29 47.6	-1.0
	2.2nm,0.4s						
AAK	Ala-Archa	6.78	26	P	Pn	22 28 39.9	+1.0
	1.2nm,0.3s,baz=204,slow=8.4,SNR=16						
AAK				S	Sn	22 29 53.7	-1.3
	0.6nm,0.3s,baz=332,slow=23,SNR=8.7						
AAK	Ala-Archa	6.78	26	⇑P	Pn	22 28 40.2	+1.3
	1.9nm,0.6s						
AAK				⇑S	Sn	22 29 54.5	-0.5
	7.1nm,0.8s						
TKM2	Tokmak 2	7.44	30	⇓P	Pn	22 28 47.7	0.0
	1.8nm,0.8s						
TKM2				⇓S	Sn	22 30 09.3	-1.6
	3.9nm,1.2s						
GEYT	Alibeck	9.99	281	P	Pn	22 29 20.0	-1.5
	0.2nm,0.3s,baz=116,slow=9.9,SNR=1.3						
GEYT				S	Sn	22 31 06.0	-6.2
	0.1nm,0.3s,baz=112,slow=14,SNR=1.7						
MKAR	Makanchi Array	13.45	37	P	Pn	22 30 07.1	+0.6
	0.1nm,0.3s,baz=218,slow=14,SNR=9.0						
AB31	Akbulak array	14.84	332	P	P	22 30 27.9	+2.0
	0.3nm,0.5s,baz=166,slow=11,SNR=14						
AB31				S	Sn	22 33 08.8	+0.3
	0.3nm,0.4s,baz=165,slow=22,SNR=4.2						
ZALV	Zalesovo Beam	20.00	25	P	P	22 31 21.7	-0.7
	0.5nm,0.3s,baz=225,slow=14,SNR=3.9						

IDC 08 22:28:18.6±2.0**, 2°.09N×127°.60E, h0^{km}, mb3.4**/4**, mb1 3.5**/4**, mb1mx3.3**/47**, mbtmp3.4**/4**, Error ellipse: s-maj=177.4km s-min=23.3km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.87	164	P	P	22 33 24.3	+0.4
	0.3nm,0.4s,baz=343,slow=11,SNR=2.0						
ASAR	Alice Springs	26.33	167	P	P	22 33 55.9	-0.6
	0.1nm,0.3s,baz=347,slow=12,SNR=1.4						
MKAR	Makanchi Array	59.39	325	P	P	22 38 23.1	+0.2
	0.3nm,0.3s,baz=122,slow=8.1,SNR=9.0						
KURBB	Kurchatov Arra	63.58	327	P	P	22 38 51.0	-0.1
	0.5nm,0.5s,baz=128,slow=6.0,SNR=5.8						

IDC 08 22:35:38.7±2.3**, 0°.85N×127°.17E, h0^{km}, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/32**, mbtmp3.6**/3**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.7**/28**, Error ellipse: s-maj=174.3km s-min=28.3km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.83	162	P	P	22 40 32.1	-0.7
	1.2nm,0.6s,baz=340,slow=11,SNR=7.3						
ASAR	Alice Springs	25.23	165	P	P	22 41 07.0	+0.5
	1.0nm,0.6s,baz=346,slow=10,SNR=10						
TLY	Talaya	54.39	342	LR	LR	23 09 51.4	
	comp=Z,88nm,18.1s,baz=350,slow=38						
MKAR	Makanchi Array	60.16	326	P	P	22 45 48.3	-0.1
	0.3nm,0.5s,baz=122,slow=7.6,SNR=1.9						

IDC 08 22:40:28.3±13.0**, 15°.01S×165°.50E, h0^{km}, mb4.0**/3**, mb1 4.1**/4**, mb1mx3.5**/33**, mbtmp3.9**/4**, ML3.7**/1**, Error ellipse: s-maj=227.9km s-min=36.1km az=54.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.08	173	Pn	Pn	22 42 13.9	+0.5
	1.3nm,0.3s,baz=299,slow=22,SNR=11						
DZM				Sn	Sn	22 43 33.6	-1.0
	0.4nm,0.3s,baz=275,slow=21,SNR=1.6						
STKA	Stephens Creek	27.52	228	P	P	22 46 16.7	-0.1
	1.9nm,0.5s,baz=60,slow=8.3,SNR=6.8						
WRA	Warramunga Arr	30.10	256	P	P	22 46 39.7	-0.1
	0.5nm,0.8s,baz=84,slow=8.8,SNR=6.1						
ASAR	Alice Springs	30.98	249	P	P	22 46 47.8	+0.1
	1.0nm,0.4s,baz=78,slow=9.1,SNR=19						

*IDC **08** 23:05:35.6±1.7, 29°.52S×71°.83W, h0^{km}, mb3.8/1, mb1 3.8/4, mb1mx3.6/25, mbtmp3.7/4, ML3.5/3, Error ellipse: s-maj=93.2km s-min=36.9km az=115.0*

*GUC **08** 23:05:38.0±0.5, 29°.43S×71°.93W, h34^{km}±2^{km}, ML3.8*

ISC 08 23:05:36.2±1.8**, 29°.42S**±0°.03×**71°.92W**±0°.08**, h6^{km}**±11^{km}**, n24, σ1^{s}21**/37**, 3C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.77	130	⇓iP	Pb	23 05 52.6	+0.6
CO05				i S	Sn	23 06 03.1	-2.4
CO05				IAML		23 06 06.4	
	comp=E,4µm,0.7s						
LCO	Las Campanas	1.14	69	⇓iP	Pg	23 05 58.4	+0.3
LCO				i S	Sb	23 06 14.2	+0.6
GO04	Tololo Observa	1.23	128	⇓iP	Pn	23 06 00.2	0.0
GO04				i S	Sn	23 06 15.9	-1.2
CO06	Fray Jorge	1.27	169	⇑iP	Pg	23 06 00.0	-0.6
CO06				i S	Sb	23 06 16.8	-0.4
CO06				IAML		23 06 25.8	
	comp=E,1µm,0.3s						
AC04	Llanos de Chal	1.42	32	⇑iP	Pn	23 06 01.6	-1.0
AC04				i S	Sb	23 06 19.6	-1.8
CO03	El Pedregal	1.77	143	⇑iP	Pn	23 06 08.1	+0.6
CO03				i S	Sg	23 06 31.4	-1.7
CO03				IAML		23 06 34.5	
	comp=E,906nm,0.3s						
GO03	Copiap	2.35	40	eP	Pn	23 06 15.2	-0.2
GO03				IAML		23 06 57.8	
	comp=N,452nm,0.4s						
VA06	Catapilco	3.17	170	eP	Pn	23 06 26.9	+0.2
VA06				IAML		23 07 36.4	
	comp=E,308nm,0.5s						
VA03	San Esteban	3.53	161	eP	Pn	23 06 32.4	+0.7
VA03				i S	Sn	23 07 13.9	0.0
VA03				IAML		23 07 31.7	
	comp=E,673nm,0.8s						
AC02	Maricunga	3.56	44	eP	Pn	23 06 33.3	+0.9
AC02				i S	Sn	23 07 15.8	+0.7
AC02				IAML		23 07 38.7	
	comp=N,188nm,0.4s						
ROCH	El Roble	3.62	168	eP	Pn	23 06 33.6	+0.6
ROCH				i S	Sn	23 07 16.2	0.0
PEL	Peldehue	3.86	164	eP	Pn	23 06 37.1	+1.0
PEL				i S	Sn	23 07 21.6	-0.2
MT02	Curacav	3.88	170	eP	Pn	23 06 36.5	+0.1
MT02				i S	Sn	23 07 21.8	-0.6
FCH	Farellones	4.14	161	eP	Pn	23 06 41.2	+1.0
MT09	Talagante	4.41	170	⇓iP	Pn	23 06 44.6	+0.8
MT01	Popeta	4.47	173	eP	Pn	23 06 44.4	0.0
LMEL	Las Melosas	4.65	162	eP	Pn	23 06 49.2	+2.2
BO04	La Punta	4.69	167	eP	Pn	23 06 48.4	+0.9
BO04				i S	Sn	23 07 41.2	-1.1
LVC	Limon Verde	7.30	22	Pn	Pn	23 07 22.5	-1.3
	comp=N,0.3nm,0.3s,baz=223,slow=13,SNR=2.2						
LVC				Sn	Sn	23 08 44.2	-3.0
	comp=N,0.7nm,0.3s,baz=213,slow=20,SNR=1.3						
LPAZ	La Paz	13.53	16	Pn	Pn	23 08 50.9	+1.6
	comp=N,0.2nm,0.3s,baz=145,slow=5.5,SNR=5.5						
SIV	San Ignacio	16.68	39	Pn	Pn	23 09 33.2	+2.5
	comp=N,0.2nm,0.3s,baz=218,slow=12,SNR=8.4						
TORD	Torodi Ar. Bea	82.57	70	P	P	23 18 00.3	-0.2
	comp=N,0.6nm,0.7s,baz=265,slow=4.9,SNR=5.8						
WRA	Warramunga Arr	124.78	210	PKP	PKPdf	23 24 37.3	-0.3
	comp=N,0.3nm,0.9s,baz=148,slow=1.8,SNR=4.5						
ZALV	Zalesovo Beam	150.22	28	PKPbc	PKPbc	23 25 28.7	+1.0
	comp=N,1.8nm,0.5s,baz=293,slow=4.2,SNR=7.3						

*CNRM **08** 23:51:29.7, 35°.60N×3°.60W, h8^{km}, ml2.9*

*MDD **08** 23:51:31.5±0.7, 35°.33N×3°.64W, h19^{km}±20^{km}, mbLg2.4/19, Error ellipse: s-maj=21.6km s-min=5.2km az=164.0, PRXIMO*

*SFS **08** 23:51:31.0, 35°.30N×3°.60W, h21^{km}, ML2.3, ANOUAL (MARRUECOS)*

*INMG **08** 23:51:31.7±1.4, 35°.32N×3°.64W, h22^{km}, ML2.2, Error ellipse: s-maj=5.4km s-min=3.2km az=20.0*

*IGIL **08** 23:51:31.8, 35°.30N×3°.62W, h22^{km}*

ISC 08 23:51:30.6±1.2**, 35°.48N**±0°.02×**3°.62W**±0°.02**, h20^{km}**±5^{km}**, n75, σ1^{s}57**/139**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.37	225	P	Pb	23 51 38.9	+0.5
PALE				S	Sb	23 51 45.2	+1.4
EMEL	Melilla	0.57	108	P	Pb	23 51 42.0	+0.1
	130nm,0.2s,SNR=19						
EMEL				S	Sb	23 51 49.7	+0.2
	984nm,0.2s,SNR=9.4						
GOG	Mont Gurugu	0.57	116	P	Pb	23 51 41.7	-0.1
GOG				S	Sb	23 51 49.6	0.0
AKLM	AKL	0.98	192	P	Pg	23 51 50.5	+0.8
AKLM				S	Sn	23 52 04.9	+2.2
CHAS	Isla Isabel II	1.02	106	P	Pb	23 51 48.4	-1.0
CHAS				S	Sb	23 52 01.3	-1.1
CHAS	Isla Isabel II	1.02	106	P	Pb	23 51 48.4	-1.0
CHAS				S	Sb	23 52 01.3	-1.1
TAF	Taforalt	1.19	123	P	Pn	23 51 51.7	-0.4
TAF				S	Sg	23 52 09.9	+0.7
ELGU	Los Guajares,	1.39	360	P	Pn	23 51 55.2	+0.2
	2.4nm,0.1s,SNR=7.9						
ELGU				S	Sn	23 52 12.4	-0.4
	57nm,0.2s,SNR=7.9						
JBK	JBK	1.43	142	P	Pn	23 51 55.8	+0.2
JBK				S	Sg	23 52 17.7	+0.8
EMAL	Malaga-Limoner	1.44	333	P	Pn	23 51 55.7	+0.1
EMAL				S	Sn	23 52 12.6	-1.3
EMAL	Malaga-Limoner	1.44	333	P	Pn	23 51 55.7	+0.1
EMAL				S	Sn	23 52 12.6	-1.3
SMIR	Smir Dam	1.45	279	P	Pn	23 51 55.2	-0.5
SMIR				S	Sn	23 52 13.6	-0.5
CHEFC	Chefchaouen	1.45	256	P	Pg	23 51 58.0	-0.6
CHEFC				S	Sg	23 52 16.8	-0.9
CEU	Ceuta	1.49	287	P	Pn	23 51 54.8	-1.4
CEU				S	Sn	23 52 10.3	-4.7
CEU	Ceuta	1.49	287	P	Pn	23 51 54.8	-1.4
CEU				S	Sn	23 52 10.3	-4.7
ECEU	Ceuta	1.49	287	P	Pn	23 51 55.4	-0.8
	3.8nm,0.3s,SNR=8.6						
ECEU				S	Sn	23 52 13.7	-1.4
	27nm,0.2s						
EBER	Berja	1.54	22	P	Pb	23 51 57.7	-0.8
	4.9nm,0.3s,SNR=24						
EBER				S	Sn	23 52 16.5	-0.1
	22nm,0.4s,SNR=7.7						
EGOR	Sierra Gorda,	1.68	347	P	Pb	23 52 00.9	0.0
	0.8nm,0.2s,SNR=7.9						
EGOR				S	Sb	23 52 21.4	-0.2
	28nm,0.4s,SNR=7.9						
EJIF	Jimena Fronter	1.79	304	P	Pb	23 52 01.8	-0.9
	3µm,0.2s,SNR=7.9						
ENIJ	Nijar	1.88	37	P	Pn	23 52 01.2	-0.4
	3.3nm,0.3s,SNR=7.9						
ENIJ				S	Sn	23 52 24.6	-0.1
	12nm,0.3s,SNR=7.9						
LIJA	Lijar	2.03	315	P	Pb	23 52 06.8	-0.1
LIJA	Lijar	2.03	315	P	Pb	23 52 06.8	-0.1
GORA	Gorafe	2.05	13	P	Pb	23 52 06.9	-0.3
	6.9nm,0.2s,SNR=7.9						
GORA				S	Sb	23 52 32.2	-0.2
	22nm,0.3s,SNR=7.9						
LCRM	LCR	2.06	210	P	Pb	23 52 07.7	+0.4
LCRM				S	Sg	23 52 36.1	-0.7
ESPR	Espera	2.28	308	P	Pb	23 52 09.8	-1.3
	1.9nm,0.3s						
ESPR				S	Sb	23 52 37.4	-1.4
	4.5nm,0.3s,SNR=5.3						
IFR	Ifrane	2.32	213	P	Pn	23 52 08.4	+0.6
IFR				S	Sn	23 52 34.1	-1.6
EQES	Quesada	2.37	11	P	Pb	23 52 11.5	-1.0
	9.8nm,0.8s,SNR=37						
EQES				S	Sb	23 52 39.9	-1.4
	45nm,0.6s,SNR=7.0						
TDRA	Tendrara	2.76	151	P	Pb	23 52 16.8	-2.7
TDRA				S	Sb	23 52 51.8	-1.2
MD31	MD31	2.77	200	P	Pn	23 52 15.2	+1.3
MD31				S	Sb	23 52 53.3	+0.4
SESP	Santiago Espad	2.78	18	P	Pb	23 52 17.4	-2.2
	1.8nm,0.2s,SNR=7.9						
SESP				S	Sn	23 52 50.0	+2.9
	14nm,0.4s,SNR=7.9						
MDT	Midelt	2.78	197	P	Pn	23 52 15.5	+1.5
MDT				S	Sb	23 52 53.6	+0.4
EADA	Adamuz	2.79	344	P	Pb	23 52 17.2	-2.6
	1.5nm,0.3s,SNR=11						
EADA				S	Sn	23 52 49.3	+2.0
	20nm,0.6s						
ECAB	El Cabril	2.97	331	P	Pn	23 52 19.0	+2.4
	0.8nm,0.3s,SNR=6.3						
ECAB				S	Sn	23 52 54.2	+2.5
	6.2nm,0.5s,SNR=7.4						
CART	Cartagena	2.98	44	P	Pn	23 52 16.1	-0.6
CART				S	Sn	23 52 51.1	-0.7
EMUR	La Murta	3.04	38	P	Pb	23 52 20.7	-3.3
	1.1nm,0.3s,SNR=7.9						
EMUR				S	Sn	23 52 52.1	-1.3
	3.6nm,0.4s,SNR=5.8						
EMIN	Mina Concepcio	3.35	314	P	Pn	23 52 22.8	+0.9
	1.1nm,0.3s,SNR=9.3						
EMIN				S	Sn	23 53 00.5	-0.6
	1.0nm,0.3s						
ETOB	Tobarra	3.57	27	P	Pn	23 52 27.6	+2.7
	1.9nm,0.3s,SNR=31						
ETOB				S	Sn	23 53 08.7	+2.1
	1.6nm,0.3s						
EGRO	El Granado	3.73	305	P	Pn	23 52 28.1	+1.1
	2.9nm,0.3s,SNR=22						
EGRO				S	Sn	23 53 10.1	-0.2
	4.3nm,0.3s						
PVAQ	Vaqueiros	3.82	301	ePn	Pn	23 52 29.4	+1.1
PVAQ				eSn	Sn	23 53 12.1	-0.6
PVAQ				A	A	23 53 20.3	
	2.2nm,0.2s						
PVAQ	Vaqueiros	3.82	301	P	Pn	23 52 29.4	+1.1
PVAQ				S	Sn	23 53 12.1	-0.6
	2.2nm,0.2s						
PVAQ	Vaqueiros	3.82	301	P	Pn	23 52 29.9	+1.6
PVAQ				S	Sn	23 53 14.3	+1.6
FIGM	Figuig	3.87	149	P	Pn	23 52 31.8	+2.7
FIGM				S	Sb	23 53 22.1	-2.6
PBDV	Barranco-do-Ve	3.90	298	ePn	Pn	23 52 30.5	+1.1
PBDV				eSn	Sn	23 53 14.5	-0.1
PBDV				A	A	23 53 19.3	
	3.4nm,0.6s						
PBDV	Barranco-do-Ve	3.90	298	P	Pn	23 52 30.5	+1.1
PBDV				S	Sn	23 53 14.5	-0.1
	3.4nm,0.6s						
AFON	Font Roja	4.03	37	P	Pn	23 52 33.3	+2.1
	1.2nm,0.3s,SNR=7.9						
PAB	San Pablo	4.10	352	P	Pn	23 52 35.0	+2.8
	0.3nm,0.1s,SNR=7.9						
PAB				S	Sn	23 53 20.3	+0.5
	1.4nm,0.3s,SNR=7.9						
PCVE	Castro Verde	4.16	302	ePn	Pn	23 52 34.7	+1.8
PCVE				eSn	Sn	23 53 22.5	+1.6
PCVE				A	A	23 53 37.5	
	1.6nm,0.6s						
PCVE	Castro Verde	4.16	302	P	Pn	23 52 34.7	+1.8
PCVE				S	Sn	23 53 22.5	+1.6
	1.6nm,0.6s						
ESDC	Sonseca Array	4.20	356	P	Pn	23 52 36.3	+2.7
	0.4nm,0.3s,baz=175,slow=12,SNR=13						
ESDC				S	Sn	23 53 21.9	-0.2
	0.2nm,0.3s,baz=179,slow=22,SNR=5.8						
EBAD	Badajoz	4.25	321	P	Pn	23 52 35.3	+1.2
	1.0nm,0.2s,SNR=9.9						
EBAD				S	Sn	23 53 23.3	+0.1
	3.3nm,0.2s						
MESJ	Messejana	4.39	304	eP	Pn	23 52 36.9	+0.9
MESJ	Messejana	4.39	304	ePn	Pn	23 52 37.3	+1.3
MESJ				eSn	Sn	23 53 27.9	+1.3
MESJ				A	A	23 53 30.3	
	2.6nm,0.5s						
MESJ	Messejana	4.39	304	P	Pn	23 52 37.3	+1.3
MESJ				S	Sn	23 53 27.9	+1.3
	2.6nm,0.5s						
PFVI	Vila Bisbo	4.52	293	ePn	Pn	23 52 40.2	+2.3
PFVI				eSn	Sn	23 53 29.8	0.0
PFVI	Vila Bisbo	4.52	293	P	Pn	23 52 38.0	+0.2
PFVI				S	Sn	23 53 30.2	+0.4
PTEO	Sao Teotonio	4.60	298	ePn	Pn	23 52 40.6	+1.6
PTEO				eSn	Sn	23 53 32.6	+0.8
PTEO	Sao Teotonio	4.60	298	P	Pn	23 52 40.6	+1.6
PTEO				S	Sn	23 53 32.6	+0.8
PESTR	Estremoz	4.64	318	ePn	Pn	23 52 41.8	+2.3
PESTR				eSn	Sn	23 53 32.5	-0.3
PESTR	Estremoz	4.64	318	P	Pn	23 52 40.8	+1.3
PESTR				S	Sn	23 53 34.9	+2.1
EVO	Evora	4.65	312	P	Pn	23 52 41.5	+1.9
EVO	Evora	4.65	312	ePn	Pn	23 52 41.6	+1.9
EVO				eSn	Sn	23 53 32.9	-0.3
EVO				A	A	23 53 43.5	
	2.5nm,1.2s						
EVO	Evora	4.65	312	P	Pn	23 52 41.6	+1.9
EVO				S	Sn	23 53 32.9	-0.3
	2.5nm,1.2s						

PNCL	**Nicolau / Gran**	**4.74**	**305**	*e*Pn	**Pn**	**23 52 41.9**	**+1.1**
PNCL				*e*Sn	**Sn**	**23 53 35.4**	**+0.2**
PNCL				A	A	23 53 54.4	
	5.3nm,0.7s						
PNCL	**Nicolau / Gran**	**4.74**	**305**	P	**Pn**	**23 52 41.9**	**+1.1**
PNCL				S	**Sn**	**23 53 35.4**	**+0.2**
	5.3nm,0.7s						
UCM	**Universidad Co**	**4.83**	**3**	P	**Pn**	**23 52 44.8**	**+2.6**
PMRV	**Marv??o**	**4.96**	**324**	*e*Pn	**Pn**	**23 52 46.0**	**+2.1**
PMRV				*e*Sn	**Sn**	**23 53 40.3**	**-0.3**
PMRV				A	A	23 54 16.6	
	1.9nm,0.5s						
PMRV	**Marv??o**	**4.96**	**324**	P	**Pn**	**23 52 46.0**	**+2.1**
PMRV				S	**Sn**	**23 53 40.3**	**-0.3**
	1.9nm,0.5s						
PMTG	**Montargil**	**5.13**	**316**	*e*Pn	**Pn**	**23 52 48.1**	**+1.8**
PMTG				*e*Sn	**Sn**	**23 53 43.4**	**-1.6**
PMTG	**Montargil**	**5.13**	**316**	P	**Pn**	**23 52 48.1**	**+1.8**
PMTG				S	**Sn**	**23 53 43.4**	**-1.6**
EIBI	**Ibiza**	**5.31**	**47**	P	**Pn**	**23 52 50.6**	**+1.8**
	1.7nm,0.5s,SNR=7.9						
EIBI				S	**Sn**	**23 53 47.5**	**-1.9**
	0.7nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**5.32**	**326**	*e*Pn	**Pn**	**23 52 51.4**	**+2.5**
PCBR	**Castelo Branco**	**5.32**	**326**	P	**Pn**	**23 52 51.4**	**+2.5**
PSBE	**So Bento**	**5.76**	**316**	*e*Pn	**Pn**	**23 52 57.8**	**+2.9**
PSBE				*e*Sn	**Sn**	**23 54 00.7**	**+0.2**
MVO	**Moncorvo**	**6.28**	**336**	*e*Pn	**Pn**	**23 53 04.9**	**+2.8**
PBRG	**Braganca**	**6.78**	**340**	*e*Pn	**Pn**	**23 53 12.3**	**+3.4**

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*IDC **08** 23:58:15.4±1.5, 0°.91N×127°.41E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.1/41, mbtmp3.6/4, MS3.6/2, Ms1 3.6/2, ms1mx2.8/33, Error ellipse: s-maj=141.5km s-min=21.8km az=69.0*

*DJA **08** 23:58:17.8±0.4, 1°N±3°×12°7E±°, h10^{km}, M3.3/6, MLv3.3/6*

ISC 08 23:58:17.0±1.2**, 0°.98N**±0°.07×**127°.53E**±0°.10**, h10^{km}, n11, σ1ˢ.72**/10**, mb3.7**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.26**	**218**	P	**Pg**	**23 58 22.1**	**-0.2**
TNTI				S	**Sg**	**23 58 26.3**	**+0.4**
LBMI	**Labuha**	**1.61**	**181**	P	**Pb**	**23 58 45.6**	**-1.2**
SANI	**Sanana**	**3.38**	**207**	P	**Pn**	**23 59 11.5**	**+1.6**
KMSI	**Cibinong**	**3.57**	**264**	P	**Pb**	**23 59 17.7**	**-2.6**
GTOI	**Gorontalo**	**4.53**	**266**	P	**Pn**	**23 59 28.7**	**+3.0**
WRA	**Warramunga Arr**	**21.84**	**163**	P	**P**	**00 03 09.6**	**-0.2**
	1.3nm,0.6s,baz=341,slow=11,SNR=15						
PMG	**Port Moresby**	**22.11**	**118**	LR	LR	00 13 42.5	
	comp=Z,48nm,18.7s,baz=58,slow=42						
ASAR	**Alice Springs**	**25.27**	**166**	P	**P**	**00 03 43.0**	**-0.7**
	2.3nm,0.8s,baz=345,slow=11,SNR=19						
SONM	**Songino Array**	**50.14**	**342**	P	**P**	**00 07 12.5**	**-0.2**
	0.4nm,0.7s,baz=157,slow=7.8,SNR=2.2						
MKAR	**Makanchi Array**	**60.26**	**326**	P	**P**	**00 08 25.8**	**+0.1**
	0.5nm,0.6s,baz=121,slow=7.0,SNR=5.4						
AFI	**Afiamalu**	**61.89**	**106**	LR	LR	00 35 03.6	
	comp=Z,113nm,18.5s,baz=339,slow=36						

NNC 08 23:59:10.1±8.5**, 37°.86N×72°.98E, h0^{km}, mb3.9, mpv3.5, 3C-5D, Error ellipse: s-maj=69.2km s-min=45.2km az=153.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**4.91**	**13**	⇓Pn	Pn	00 00 27.1	+1.8
	1.9nm,0.5s						
AAK				⇓Pg	Pb	00 00 38.4	+1.3
	5.0nm,0.5s						
AAK				⇓Sn	Sn	00 01 26.4	+3.5
	12nm,1.0s						
TKM2	**Tokmak 2**	**5.43**	**21**	⇑Pg	Pb	00 00 49.3	+3.3
	3.1nm,0.7s						
TKM2				⇑Lg	Lg	00 02 00.0	
	6.6nm,1.0s						
KK08	**Karatay Array**	**5.57**	**341**	⇓Pn	Pn	00 00 33.3	-1.0
	4.8nm,0.4s,baz=153,slow=13						
KK08				⇑Sn	Sn	00 01 39.0	-0.1
	3.2nm,0.5s,baz=154,slow=26						
AB31	**Akbulak array**	**14.78**	**325**	P	Pn	00 02 34.5	-5.7
	1.3nm,0.8s,baz=131,slow=14,SNR=10						
AKTO	**Aktyubinsk**	**16.49**	**324**	⇓P	Pn	00 03 01.5	-1.2
	4.2nm,1.1s						

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*IDC **09** 00:05:03.8±1.0, 26°.22N×142°.83E, h0^{km}, mb3.8/8, mb1 4.0/9, mb1mx3.6/42, mbtmp3.8/9, ML3.1/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/38, Error ellipse: s-maj=27.5km s-min=18.4km az=75.0*

*NEIC **09** 00:05:10.9±2.5, 26°.28N±0°.07×142°.81E±0°.10, h39^{km}±8^{km}, mb4.5/10, Error ellipse: s-maj=13.2km s-min=9.2km az=62.0*

ISC 09 00:05:09.5±0.9**, 26°.2N**±0°.1×**142°.8E**±0°.2**, h35^{km}, n26, σ1ˢ.19**/27**, mb4.2**/13**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.03**	**328**	Pn	**Pn**	**00 05 26.0**	**-1.4**
	58nm,0.3s,baz=278,slow=21,SNR=25						
JCJ				Sn	**Sn**	**00 05 42.1**	**+1.5**
	455nm,0.3s,baz=287,slow=22,SNR=18						
JCJ	**Chichijima**	**1.03**	**328**		**Pn**	**00 05 25.1**	**-2.3**
JCJ				Sn	**Sn**	**00 05 40.8**	**+0.2**
MJAR	**Matsushiro Arr**	**11.01**	**340**	Pn	**Pn**	**00 07 42.3**	**-2.2**
	0.1nm,0.3s,baz=134,slow=6.7,SNR=1.8						
MJB9	**Matsu-Tunnel**	**11.01**	**340**	Pn	**Pn**	**00 07 46.5**	**+1.9**
GUMO	**Guam**	**12.72**	**171**	LR	LR	00 12 11.5	
	comp=Z,50nm,19.9s,baz=98,slow=34						
INCN	**Inchon**	**17.71**	**313**		**Pn**	**00 09 13.4**	**0.0**
INCN				IAmb	IAmb	00 09 32.5	
	comp=Z,24nm,0.3s						
KLR	**Kul'dur**	**24.52**	**342**	P	**P**	**00 10 26.4**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=129,slow=6.8,SNR=5.4						
CMAR	**Chiang Mai Arr**	**41.13**	**268**	P	**P**	**00 12 50.1**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=44,slow=8.0,SNR=5.0						
WB0	**Warramunga Arr**	**46.44**	**191**	P	**P**	**00 13 32.9**	**-0.1**
WB0				IAmb	IAmb	00 13 56.5	
	comp=Z,5.0nm,1.1s						
WR0	**Warramunga Arr**	**46.60**	**191**	P	**P**	**00 13 34.2**	**-0.1**
WR0				IAmb	IAmb	00 13 54.8	
	comp=Z,9.2nm,1.5s						
WB2	**Warramunga Arr**	**46.61**	**191**	P	**P**	**00 13 34.2**	**-0.2**
WB2				IAmb	IAmb	00 13 59.0	
	comp=Z,7.7nm,1.2s						
WRA	**Warramunga Arr**	**46.62**	**191**	P	**P**	**00 13 34.1**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=11,slow=8.4,SNR=21						
WRA	**Warramunga Arr**	**46.62**	**191**	P	**P**	**00 13 34.1**	**-0.3**
MK31	**Makanchi Array**	**51.45**	**310**	P	**P**	**00 14 11.5**	**+0.2**
MK31				IAmb	IAmb	00 14 15.0	
	comp=Z,4.7nm,1.2s						
MKAR	**Makanchi Array**	**51.45**	**310**	P	**P**	**00 14 10.9**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=88,slow=11,SNR=1.8						
MKAR	**Makanchi Array**	**51.45**	**310**	P	**P**	**00 14 13.3**	**+2.0**
ILAR	**Eielson Array**	**58.22**	**28**	P	**P**	**00 14 59.0**	**-0.9**
	comp=Z,0.5nm,1.1s,baz=262,slow=4.5,SNR=2.0						
BRVK	**Borovoye**	**59.11**	**318**	P	**P**	**00 15 06.8**	**+0.4**
DOT	**Dot Lake**	**59.37**	**30**	P	**P**	**00 15 07.0**	**-1.0**
HYT	**Haines Junctio**	**62.50**	**33**	P	**P**	**00 15 29.8**	**+0.4**
HYT				IAmb	IAmb	00 15 44.5	
	comp=Z,8.5nm,1.2s						
INK	**Inuvik**	**63.60**	**24**	P	**P**	**00 15 35.4**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=239,slow=4.7,SNR=1.5						
ABKAR	**Akbulak array**	**66.09**	**315**	P	**P**	**00 15 53.8**	**+0.8**
YKA	**Yellowknife Ar**	**72.65**	**28**	P	**P**	**00 16 33.9**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=294,slow=6.5,SNR=3.8						
FIA1	**FINESS Array S**	**78.97**	**334**	P	**P**	**00 17 10.8**	**+1.4**
FINES	**FINESS Array B**	**78.97**	**334**	P	**P**	**00 17 08.0**	**-1.4**
	comp=Z,2.4nm,0.8s,baz=57,slow=5.1,SNR=6.9						
FINES	**FINESS Array B**	**78.97**	**334**	P	**P**	**00 17 10.9**	**+1.5**

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*BEO **09** 00:51:38.3±0.7, 40°.71N×19°.63E, h9^{km}±2^{km}, ML2.4/11*

*PDG **09** 00:51:39.1±0.3, 40°.78N×19°.65E, h16^{km}, ML2.7/13, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*

*TIR **09** 00:51:39.3, 40°.79N×19°.81E, h1^{km}±1^{km}, Md2.9, Ml2.7*

*ATH **09** 00:51:40.8, 40°.79N×19°.85E, h20^{km}±4^{km}, ML2.4/9, Error ellipse: s-maj=5.1km s-min=1.1km az=280.0*

*THE **09** 00:51:40.6, 40°.79N×19°.81E, h8^{km}±6^{km}, ML2.3/6, Error ellipse: s-maj=6.6km s-min=0.3km az=274.0*

ISC 09 00:51:39.7±0.9**, 40°.79N**±0°.02×**19°.74E**±0°.02**, h17^{km}**±6^{km}**, n64, σ1ˢ.32**/114**, 9C-4D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FIER	**Fieri**	**0.15**	**241**	P	**Pg**	**00 51 43.3**	**-0.5**
	baz=248						
FIER				S	**Sg**	**00 51 47.4**	**+0.9**
	baz=248						
VLO	**Vlora**	**0.37**	**210**	P	**Pb**	**00 51 48.2**	**+0.4**
VLO				S	**Sb**	**00 51 54.2**	**+0.9**
VLO	**Vlora**	**0.37**	**210**	P	**Pb**	**00 51 47.8**	**0.0**
	baz=217						
VLO				S	**Sb**	**00 51 54.6**	**+1.3**
	baz=217						
VLO				AMP			
	comp=E,10.0nm,0.2s,baz=217						
TPE	**Tepelena**	**0.54**	**157**	P	**Pb**	**00 51 49.9**	**-0.7**
	baz=162						
TIR	**Tirane**	**0.56**	**10**	P	**Pb**	**00 51 51.2**	**+0.1**
TIR				S	**Sb**	**00 51 59.3**	**+0.4**
	comp=E,182nm,0.3s						
TIR	**Tirane**	**0.56**	**10**	P	**Pb**	**00 51 51.4**	**+0.3**
TIR				S	**Sb**	**00 52 00.5**	**+1.6**
TIR				AML	AML	00 52 08.1	
	comp=E,876μm,0.3s						
TIR				AML	AML	00 52 08.8	
	comp=N,991μm,0.4s						
TIR	**Tirane**	**0.56**	**10**	P	**Pb**	**00 51 51.1**	**0.0**
	baz=4.0						
TIR				S	**Sb**	**00 51 59.7**	**+0.8**
	baz=4.0						
TIR				AMP			
	comp=E,0.7nm,0.3s,baz=4.0						
TIR	**Tirane**	**0.56**	**10**	*e*Pg	**Pb**	**00 51 51.1**	**0.0**
TIR				*e*Sg	**Sb**	**00 52 00.4**	**+1.6**
KBN	**Korca**	**0.81**	**102**	P	**Pb**	**00 51 54.8**	**-0.6**
KBN				S	**Sb**	**00 52 05.8**	**-0.3**
	comp=E,310nm,0.6s						
KBN	**Korca**	**0.81**	**102**	P	**Pb**	**00 51 55.0**	**-0.4**
	baz=102						
KBN				S	**Sn**	**00 52 06.7**	**-1.5**
	baz=102						
KBN				AMP			
	comp=E,1.1nm,0.6s,baz=102						
OHR	**Ohrid**	**0.86**	**68**	*e*Pg	**Pb**	**00 51 55.7**	**-0.5**
OHR				*e*Sg	**Sn**	**00 52 09.0**	**-0.3**
LSK	**Leskovik**	**0.92**	**134**	P	**Pb**	**00 51 56.9**	**-0.3**
LSK				S	**Sn**	**00 52 10.2**	**-0.5**
	comp=E,295nm,0.5s						
LSK	**Leskovik**	**0.92**	**134**	P	**Pb**	**00 51 57.2**	**0.0**
	baz=136						
LSK				AMP			
	comp=E,1.0nm,0.5s,baz=136						
SRN	**Sarande**	**0.93**	**168**	P	**Pb**	**00 51 57.6**	**+0.2**
SRN				S	**Sn**	**00 52 11.2**	**+0.3**
	comp=E,170nm,0.5s						
SRN	**Sarande**	**0.93**	**168**	P	**Pn**	**00 51 58.2**	**+0.2**
	baz=170						
SRN				S	**Sn**	**00 52 12.0**	**+1.1**
	baz=170						
SRN				AMP			
	comp=E,0.8nm,0.5s,baz=170						
PHP	**Peshkopia**	**1.04**	**30**	P	**Pn**	**00 51 59.6**	**+0.1**
PHP				S	**Sn**	**00 52 14.7**	**+1.1**
	comp=E,150nm,0.5s						
PHP	**Peshkopia**	**1.04**	**30**	P	**Pb**	**00 51 59.2**	**0.0**
	baz=27						
PHP				AMP			
	comp=N,0.9nm,0.4s,baz=27						
KASA	**Kassiopi**	**1.05**	**172**	P	**Pn**	**00 52 01.1**	**+1.4**
KASA				S	**Sn**	**00 52 15.0**	**+1.0**
NEST	**Nestorio**	**1.06**	**110**	P	**Pn**	**00 52 00.1**	**+0.2**
NEST				AML	AML	00 52 22.8	
	comp=E,353μm,0.5s						
NEST				AML	AML	00 52 27.0	
	comp=N,200μm,0.7s						
KEK	**Kerkira**	**1.08**	**178**	P	**Pn**	**00 52 00.8**	**+0.8**
KEK				S	**Sn**	**00 52 16.2**	**+1.7**
	comp=N,168nm,0.3s						
KEK	**Kerkira**	**1.08**	**178**	P	**Pn**	**00 52 01.2**	**+1.2**
KEK				S	**Sn**	**00 52 16.1**	**+1.5**
KEK				AML	AML	00 52 18.3	
	comp=E,351μm,0.4s						
KEK				AML	AML	00 52 19.4	
	comp=N,326μm,0.2s						
PENT	**Pentalofos**	**1.22**	**119**	P	**Pn**	**00 52 02.8**	**+0.7**
PENT				AML	AML	00 52 25.4	
	comp=E,294μm,0.6s						
PENT				AML	AML	00 52 26.6	
	comp=N,166μm,0.3s						
ULC	**Ulcinj**	**1.23**	**342**	⇓*i*Pg	**Pn**	**00 52 01.6**	**-0.5**
ULC				*i* Sg	**Sn**	**00 52 21.0**	**+2.7**
FNA	**Florina**	**1.24**	**90**	P	**Pn**	**00 52 02.6**	**+0.3**
FNA				AML	AML	00 52 26.0	
	comp=N,578μm,0.7s						
FNA				AML	AML	00 52 26.3	
	comp=E,668μm,0.6s						
IGT	**Igoumenitsa**	**1.34**	**160**	P	**Pg**	**00 52 05.1**	**-0.3**
IGT				AML	AML	00 52 25.7	
	comp=E,294μm,0.6s						
IGT				AML	AML	00 52 26.3	
	comp=N,258μm,0.5s						
JAN	**Janina**	**1.42**	**143**	P	**Pg**	**00 52 06.4**	**-0.6**
JAN				AML	AML	00 52 34.3	
	comp=N,221μm,0.4s						
JAN				AML	AML	00 52 34.9	
	comp=E,426μm,0.5s						
DRME	**Dracevica, Mon**	**1.46**	**344**	⇑*i*Pg	**Pn**	**00 52 05.9**	**+0.7**
DRME				*i* Sg	**Sg**	**00 52 26.9**	**+0.2**
KPRO	**Kipourio**	**1.50**	**123**	P	**Pg**	**00 52 07.5**	**-1.0**
KPRO				AML	AML	00 52 33.3	
	comp=N,257μm,0.6s						
KPRO				AML	AML	00 52 36.4	
	comp=E,238μm,0.4s						
BCI	**Bajram Curri**	**1.59**	**9**	P	**Pg**	**00 52 09.9**	**-0.4**
	baz=6.0						
BCI				AMP			
	comp=E,0.7nm,0.6s,baz=6.0						
KZN	**Kozani**	**1.62**	**107**	P	**Pg**	**00 52 09.6**	**-1.3**
KZN				AML	AML	00 52 38.1	
	comp=E,175μm,0.7s						
KZN				AML	AML	00 52 41.3	
	comp=N,142μm,0.7s						
BUM	**Brajici-Budva**	**1.64**	**337**	⇓*i*Pn	**Pn**	**00 52 06.7**	**-1.0**
BUM				*i* Sn	**Sb**	**00 52 30.9**	**+1.1**
PDG	**Podgorica**	**1.68**	**348**	*e*Pg	**Pb**	**00 52 10.5**	**+0.4**
PDG				*e*Sg	**Sg**	**00 52 32.9**	**-0.8**
TTG	**Podgorica**	**1.68**	**348**	⇑*i*Pn	**Pn**	**00 52 08.9**	**+0.7**
TTG				*e*Sn	**Sb**	**00 52 31.9**	**+1.0**
PVY	**Plav**	**1.81**	**5**	⇓*i*Pn	**Pn**	**00 52 11.3**	**+1.1**
PVY				*i* Sn	**Sb**	**00 52 35.6**	**+0.8**
CEME	**Cevo**	**1.86**	**341**	⇑*i*Pn	**Pn**	**00 52 10.8**	**0.0**
CEME				*i* Sn	**Sn**	**00 52 36.3**	**+2.4**
HCY	**Herceg Novi**	**1.90**	**331**	⇑*i*Pn	**Pn**	**00 52 11.7**	**+0.4**
HCY				*i* Sn	**Sn**	**00 52 37.6**	**+2.7**
NKME	**Niksic**	**2.06**	**344**	⇑*i*Pn	**Pn**	**00 52 14.2**	**+0.6**
NKME				*i* Sn	**Sn**	**00 52 41.5**	**+2.6**
KOME	**Kolasin**	**2.06**	**355**	⇑*i*Pn	**Pn**	**00 52 14.3**	**+0.6**
KOME				*i* Sn	**Sn**	**00 52 41.3**	**+2.3**
IVA	**Berane**	**2.08**	**3**	⇓*i*Pn	**Pn**	**00 52 14.7**	**+0.8**
IVA				*i* Sn	**Sb**	**00 52 42.5**	**-0.1**
NKY	**Niksic**	**2.10**	**345**	⇑*i*Pn	**Pn**	**00 52 15.2**	**+1.1**
NKY				*i* Sn	**Sn**	**00 52 42.2**	**+2.4**
TREB	**Trebinje**	**2.19**	**332**	*e*Pn	**Pn**	**00 52 14.7**	**-0.6**
TREB				*e*Sn	**Sn**	**00 52 42.2**	**+0.3**
VAY	**Valandovo**	**2.20**	**75**	*e*Pn	**Pn**	**00 52 16.2**	**+0.7**
VAY				*e*Sn	**Sb**	**00 52 46.1**	**0.0**
PRVS	**Prvonek**	**2.45**	**45**	*e*Pn	**Pn**	**00 52 20.2**	**+1.3**
PRVS				*e*Sn	**Sb**	**00 52 52.7**	**-0.5**
SJES	**Sjenica**	**2.47**	**4**	*e*Pn	**Pn**	**00 52 21.0**	**+1.7**
SJES				*e*Sn	**Sn**	**00 52 52.0**	**+2.8**
UPM	**Unac-Piva**	**2.49**	**346**	⇑*i*Pn	**Pn**	**00 52 20.2**	**+0.6**
UPM				*i* Sn	**Sn**	**00 52 51.6**	**+2.0**
BARS	**Barje**	**2.55**	**37**	*e*Pn	**Pn**	**00 52 21.7**	**+1.5**
BARS				*e*Sn	**Sb**	**00 52 54.1**	**-1.9**
PLE	**Pljevlja**	**2.55**	**354**	⇑*i*Pn	**Pn**	**00 52 21.4**	**+1.0**
PLE				*i* Sn	**Sn**	**00 52 53.7**	**+2.6**
STON	**Ston**	**2.58**	**324**	*i* Pn	**Pn**	**00 52 20.4**	**-0.2**
STON				Sn	**Sn**	**00 52 49.8**	**-1.7**
SELS	**Selova**	**2.63**	**22**	*e*Pn	**Pn**	**00 52 21.7**	**+0.3**
BOSS	**Bosilegrad**	**2.67**	**49**	*e*Pn	**Pn**	**00 52 23.1**	**+1.2**
BOSS				*e*Sn	**Sb**	**00 52 56.8**	**-2.6**
LSTV	**Lastovo**	**2.91**	**314**	*e*Pn	**Pn**	**00 52 24.4**	**-0.7**
LSTV				Sn	**Sn**	**00 52 58.0**	**-1.6**
BBLS	**Lazići**	**3.08**	**355**	*e*Pn	**Pn**	**00 52 29.0**	**+1.4**
BBLS				*e*Sn	**Sn**	**00 53 06.3**	**+2.2**
GRUS	**Gruza**	**3.18**	**13**	*e*Pn	**Pn**	**00 52 30.6**	**+1.7**
VTS	**Vitosha**	**3.19**	**54**	*e*Pn	**Pn**	**00 52 29.4**	**+0.2**
VTS				*e*Sn	**Sn**	**00 53 07.0**	**+0.1**
MAKA	**Makarska**	**3.21**	**322**	*e*Pn	**Pn**	**00 52 28.9**	**-0.4**
MAKA				Sn	**Sn**	**00 53 05.4**	**-1.8**
DIVS	**Divibare**	**3.31**	**3**	*e*Pn	**Pn**	**00 52 31.4**	**+0.6**
RICI	**Ricice**	**3.32**	**325**	*e*Pn	**Pn**	**00 52 30.8**	**-0.1**
RICI				Sn	**Sn**	**00 53 08.8**	**-1.2**
HVAR	**Hvar**	**3.42**	**315**	*e*Pn	**Pn**	**00 52 31.7**	**-0.5**
HVAR				Sn	**Sn**	**00 53 09.6**	**-2.8**
ZIRJ	**Zirje**	**4.17**	**315**	*e*Pn	**Pn**	**00 52 41.6**	**-1.0**
ZIRJ				Sn	**Sn**	**00 53 27.5**	**-3.4**
MORI	**Morici**	**4.29**	**317**	*e*Pn	**Pn**	**00 52 43.8**	**-0.3**
MORI				Sn	**Sn**	**00 53 31.5**	**-2.2**
DUGI	**Dugi Otok**	**4.72**	**314**	*e*Pn	**Pn**	**00 52 50.5**	**+0.5**
DUGI				Sn	**Sn**	**00 53 41.8**	**-2.5**
UDBI	**Udbina**	**4.75**	**323**	*e*Pn	**Pn**	**00 52 51.2**	**+0.7**
UDBI				Sn	**Sn**	**00 53 43.7**	**-1.4**
PLIT	**Plitvice**	**5.08**	**325**	*e*Pn	**Pn**	**00 52 55.6**	**+0.5**
PLIT				Sn	**Sn**	**00 53 50.6**	**-2.8**
NVLJ	**Novalja**	**5.20**	**318**	*e*Pn	**Pn**	**00 52 56.3**	**-0.4**
NVLJ				Sn	**Sn**	**00 53 53.1**	**-3.2**

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*IDC **09** 00:58:31.2±1.4, 30°.39N×130°.50E, h0^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.1/32, mbtmp3.6/4, ML2.7/1, Error ellipse: s-maj=96.2km s-min=21.6km az=87.0*

*JMA **09** 00:58:34.6±0.1, 30°.40N×131°.29E, h28^{km}±1^{km}, M3.2*

ISC 09 00:58:35.5±1.4**, 30°.43N**±0°.06×**131°.21E**±0°.09**, h31^{km}**±7^{km}**, n13, σ0ˢ.71**/20**, mb3.5**/3**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMTN	**Minamitane**	**0.27**	**263**	P	**Pb**	**00 58 42.3**	**-0.4**
JMTN				S	**Sb**	**00 58 48.0**	**+0.4**
JTN	**Tanegashima 3**	**0.30**	**318**	P	**Pb**	**00 58 42.7**	**-0.4**
JTN				S	**Sb**	**00 58 48.7**	**+0.4**
JYAK	**Yakushimahirau**	**0.64**	**253**	P	**Pb**	**00 58 47.7**	**-0.5**
JYAK				S	**Sn**	**00 58 57.3**	**-0.1**
JTSR	**Tashiro 2**	**0.77**	**341**	P	**Pb**	**00 58 50.1**	**-0.4**
JTSR				*e*S	**Sn**	**00 59 01.0**	**+0.1**
JKC	**Kuchinoerabu**	**0.88**	**272**	P	**Pn**	**00 58 51.9**	**+0.3**
JKC				S	**Sn**	**00 59 04.1**	**+0.8**
JNAR	**Kushima--Naru**	**1.09**	**3**	P	**Pb**	**00 58 55.2**	**-0.7**
JNKG	**Nichinankitago**	**1.23**	**7**	P	**Pn**	**00 58 57.2**	**+0.6**
JSU	**Suzuyama**	**1.25**	**329**	P	**Pn**	**00 58 57.1**	**+0.2**
JTZ	**Takazaki**	**1.47**	**356**	P	**Pn**	**00 59 00.6**	**+0.8**
JTZ				S	**Sb**	**00 59 19.4**	**-1.1**
JNU	**Nakatsue**	**2.70**	**354**	Pn	**Pn**	**00 59 17.4**	**+0.7**
	1.8nm,0.3s,baz=197,slow=14,SNR=8.3						
JNU				Sn	**Sn**	**00 59 49.6**	**+1.3**
	1.8nm,0.3s,baz=198,slow=6.8,SNR=1.8						
WRA	**Warramunga Arr**	**50.17**	**176**	P	**P**	**01 07 28.2**	**-0.1**
	0.2nm,0.5s,baz=354,slow=8.5,SNR=1.9						
ASAR	**Alice Springs**	**53.85**	**177**	P	**P**	**01 07 56.2**	**+0.6**
	0.3nm,0.6s,baz=11,slow=12,SNR=4.5						
FINES	**FINESS Array B**	**70.51**	**331**	P	**P**	**01 09 45.9**	**-0.9**
	1.8nm,0.7s,baz=62,slow=6.4,SNR=7.7						

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*IDC **09** 01:11:36.5±3.0, 30°.79S×71°.71W, h0^{km}, mb3.8/1, mb1 3.8/5, mb1mx3.6/25, mbtmp3.7/5, ML3.6/4, MS3.0/3, Ms1 3.0/3, ms1mx2.8/20, Error ellipse: s-maj=115.6km s-min=31.0km az=98.0*

*GUC **09** 01:11:41.7±0.5, 30°.82S×71°.60W, h33^{km}±2^{km}, ML4.1*

*NEIC **09** 01:11:42.6±1.5, 30°.86S±0°.04×71°.6W±0°.1, h29^{km}±3^{km}, mb4.4/5, ML4.1(GUC), Error ellipse: s-maj=16.0km s-min=6.2km az=97.0*

ISC 09 01:11:41.5±0.8**, 30°.87S**±0°.03×**71°.67W**±0°.06**, h29^{km}**±5^{km}**, n48, σ1ˢ.44**/62**, mb4.3**/4**, 11C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.20**	**8**	⇑*e*P	**Pb**	**01 11 48.2**	**+0.5**
CO06				*e*S	**Sn**	**01 11 52.8**	**+0.9**
CO06				IAML		01 11 53.1	
	comp=N,60μm,0.2s						
CO06	**Fray Jorge**	**0.20**	**8**	Pg	**Pn**	**01 11 48.5**	**-0.1**
CO06				Sg	**Sn**	**01 11 52.6**	**+0.8**
CO03	**El Pedregal**	**0.84**	**88**	*e*P	**Pn**	**01 11 57.7**	**+0.2**
CO03				*e*S	**Sn**	**01 12 09.1**	**+0.1**
CO03				IAML		01 12 11.7	
	comp=N,4μm,0.2s						
CO03	**El Pedregal**	**0.84**	**88**	Pn	**Pn**	**01 11 57.7**	**+0.2**
CO05	**La Serena**	**1.02**	**21**	⇑*e*P	**Pn**	**01 11 59.7**	**-0.2**
CO05				*e*S	**Sn**	**01 12 13.2**	**0.0**
CO05				IAML		01 12 19.2	
	comp=E,4μm,0.4s						
CO05	**La Serena**	**1.02**	**21**	Pn	**Pb**	**01 12 00.4**	**-0.2**
GO04	**Tololo Observa**	**1.03**	**47**	*e*P	**Pn**	**01 12 00.4**	**+0.3**
GO04				*e*S	**Sb**	**01 12 14.6**	**+0.6**
GO04				IAML		01 12 18.4	
	comp=N,20μm,0.4s						
GO04	**Tololo Observa**	**1.03**	**47**	Pn	**Pn**	**01 12 00.6**	**+0.4**
VA06	**Catapilco**	**1.71**	**169**	⇑*e*P	**Pn**	**01 12 10.2**	**+0.8**
VA06				*e*P	**Sn**	**01 12 31.7**	**+1.5**
VA06				IAML		01 12 36.6	
	comp=E,3μm,0.4s						
LCO	**Las Campanas**	**2.04**	**25**	⇑*e*P	**Pn**	**01 12 15.2**	**+1.1**
LCO				*e*S	**Sb**	**01 12 40.9**	**-2.2**
LCO	**Las Campanas**	**2.04**	**25**	Pn	**Pn**	**01 12 15.2**	**+1.1**
VA03	**San Esteban**	**2.11**	**153**	⇑*e*P	**Pn**	**01 12 17.2**	**+2.3**
VA03				*e*S	**Sb**	**01 12 45.9**	**+0.9**
VA03				IAML		01 12 48.6	
	comp=E,2μm,0.1s						
VA03	**San Esteban**	**2.11**	**153**	Pn	**Pn**	**01 12 17.2**	**+2.3**
VA01	**Torpederas**	**2.14**	**180**	Pn	**Pn**	**01 12 16.6**	**+1.3**
ROCH	**El Roble**	**2.17**	**165**	⇑*e*P	**Pb**	**01 12 17.2**	**-3.0**
ROCH				⇑*e*P	**Pn**	**01 12 17.1**	**+1.3**
ROCH				*e*S	**Sn**	**01 12 43.8**	**+2.0**
ROCH				*e*S	**Sb**	**01 12 45.1**	**-1.6**
ROCH				IAML		01 12 50.4	
	comp=E,1μm,0.5s						
ROCH				IAML		01 12 56.7	
	comp=N,2μm,0.3s						
PEL	**Peldehue**	**2.41**	**160**	⇑*e*P	**Pn**	**01 12 20.8**	**+1.7**
PEL				*e*S	**Sb**	**01 12 51.4**	**-2.2**
PEL				IAML		01 13 02.7	
	comp=E,1μm,0.3s						
PEL	**Peldehue**	**2.41**	**160**		**Pn**	**01 12 20.8**	**+1.7**
MT02	**Curacav**	**2.42**	**169**	⇑*e*P	**Pn**	**01 12 22.1**	**+2.9**
MT02				*e*S	**Sb**	**01 12 53.6**	**-0.2**
MT02				IAML		01 12 56.6	
	comp=N,501nm,0.3s						
MT02	**Curacav**	**2.42**	**169**	Pn	**Pn**	**01 12 20.5**	**+1.4**
MT05	**Renca**	**2.63**	**163**	⇑*e*P	**Pn**	**01 12 25.4**	**+3.3**
MT05				*e*S	**Sb**	**01 12 59.2**	**-0.7**
MT05				IAML		01 13 07.0	
	comp=E,2μm,0.2s						
MT05	**Renca**	**2.63**	**163**	Pn	**Pn**	**01 12 23.2**	**+1.1**
ZON	**Zonda**	**2.65**	**105**		**Pb**	**01 12 27.1**	**-1.2**
AC04	**Llanos de Chal**	**2.71**	**11**		**Pn**	**01 12 23.5**	**+0.4**
VA05	**Santo Domingo**	**2.77**	**179**	Pn	**Pn**	**01 12 24.8**	**+0.8**
MT09	**Talagante**	**2.95**	**169**	⇑*e*P	**Pn**	**01 12 28.5**	**+2.0**
MT09				*e*S	**Sn**	**01 13 03.0**	**+1.9**
MT09				IAML		01 13 16.4	
	comp=N,1μm,0.2s						
MT09	**Talagante**	**2.95**	**169**	Pn	**Pn**	**01 12 28.6**	**+2.0**
MT01	**Popeta**	**3.00**	**173**	Pn	**Pn**	**01 12 27.4**	**+0.3**
GO03	**Copiap**	**3.50**	**21**	Pn	**Pn**	**01 12 34.8**	**+0.7**
BO01	**Tunca**	**3.54**	**172**	Pn	**Pn**	**01 12 36.3**	**+1.8**
BO02	**Sierra Bellavi**	**3.98**	**169**	Pn	**Pn**	**01 12 41.8**	**+1.2**
GO05	**Huala**	**4.13**	**183**	Pn	**Pn**	**01 12 41.9**	**-0.8**
AC02	**Maricunga**	**4.60**	**30**	Pn	**Pn**	**01 12 51.2**	**+1.7**
LC01	**Cunco**	**8.01**	**181**	Pn	**Pn**	**01 13 36.4**	**+0.5**
LVC	**Limon Verde**	**8.59**	**17**	Pn	**Pn**	**01 13 41.6**	**-2.6**
	comp=N,0.4nm,0.3s,baz=142,slow=12,SNR=2.0						
LVC	**Limon Verde**	**8.59**	**17**	Pn	**Pn**	**01 13 44.5**	**+0.2**
PLCA	**Paso Flores**	**9.88**	**175**	Pn	**Pn**	**01 14 01.6**	**0.0**
	comp=N,0.1nm,0.3s,baz=11,slow=17,SNR=1.8						
PLCA				LR	LR	01 18 26.0	
	comp=N,62nm,18.1s,baz=300,slow=41						
TRQA	**Tornquist**	**10.73**	**134**	Pn	**Pn**	**01 14 14.8**	**+1.6**
CPUP	**Villa Florida**	**13.38**	**74**	LR	LR	01 20 38.3	
	comp=N,55nm,20.3s,baz=244,slow=40						
LPAZ	**La Paz**	**14.88**	**13**	Pn	**Pn**	**01 15 09.3**	**-1.2**
	comp=N,0.1nm,0.3s,baz=197,slow=14,SNR=4.6						
LPAZ	**La Paz**	**14.88**	**13**		**Pn**	**01 15 10.9**	**+0.4**
SIV	**San Ignacio**	**17.70**	**36**	P	**Pn**	**01 15 43.5**	**-2.4**
	comp=N,0.3nm,0.3s,baz=195,slow=5.0,SNR=5.6						

SIV				LR	LR	01 22 07.0	
	comp=N,84nm,18.1s,baz=208,slow=36						
SNAA	**Sanae**	**54.37**	**159**	P	**P**	**01 21 05.4**	**+0.2**
SNAA				IAmb	IAmb	01 21 06.7	
	comp=Z,2.7nm,1.2s						
QSPA	**South Pole Qui**	**59.35**	**180**	P	**P**	**01 21 40.4**	**-0.3**
QSPA				IAmb	IAmb	01 21 41.6	
	comp=Z,4.3nm,1.3s						
AMTX	**Amarillo**	**71.25**	**334**	P	**P**	**01 22 60.0**	**+2.0**
DBIC	**Dimbokro**	**73.90**	**72**	P	**P**	**01 23 14.8**	**+0.6**
DBIC				IAmb	IAmb	01 23 18.8	
	comp=Z,13nm,1.5s						
TORD	**Torodi Ar. Bea**	**82.86**	**70**	P	**P**	**01 24 03.4**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=254,slow=3.7,SNR=6.2						
TORD	**Torodi Ar. Bea**	**82.86**	**70**	P	**P**	**01 24 03.8**	**+0.2**
ZALV	**Zalesovo Beam**	**151.39**	**30**	PKPbc	**PKPbc**	**01 31 31.0**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=285,slow=2.8,SNR=2.0						

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*JMA **09** 01:41:08.9±0.2, 31°.41N×128°.70E, h7^{km}±2^{km}, M3.8*
*IDC **09** 01:41:08.9±0.7, 31°.46N×128°.75E, h0^{km}, mb3.4/2, mb1 3.7/3, mb1mx3.3/47, mbtmp3.4/3, ML3.3/1, MS3.0/2, Ms1 3.1/2, ms1mx2.8/22, Error ellipse: s-maj=90.5km s-min=5.4km az=84.0*
*NIED **09** 01:41:08.9, 31°.41N×128°.70E, h7^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.57; M$_{\theta\theta}$3.38; M$_{\phi\phi}$-1.81; M$_{r\theta}$1.56; M$_{\theta\phi}$6.83; M$_{\phi r}$-0.50; Fault plane solution: M$_0$7.52000×10^{14} NP1: ϕ_s279.00000°, δ84.00000°, λ-14.00000°. NP2:ϕ_s11.00000°, δ76.00000°, λ-174.00000°.*
ISC 09 01:41:09.4±1.3**, 31°.39N**±0°.06×**128°.73E**±0°.07**, h10^{km}, n12, σ0^s.89**/16**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.89**	**71**	P	**Pg**	**01 41 25.9**	**-0.7**
JSJ				*e*S	**Sg**	**01 41 38.0**	**-0.2**
JFU	**Fukue jima 2**	**1.26**	**1**	P	**Pn**	**01 41 32.2**	**-0.9**
JFU				*e*S	**Sn**	**01 41 49.5**	**-0.7**
JSU	**Suzuyama**	**1.48**	**85**	P	**Pb**	**01 41 36.5**	**-0.6**
JSU				*e*S	**Sb**	**01 41 56.2**	**+0.3**
JYAK	**Yakushimahirau**	**1.92**	**126**	P	**Pn**	**01 41 40.7**	**-1.4**
JTN	**Tanegashima 3**	**2.07**	**110**	P	**Pn**	**01 41 44.4**	**+0.2**
JTZ	**Takazaki**	**2.08**	**75**	P	**Pn**	**01 41 44.8**	**+0.5**
JMTN	**Minamitane**	**2.11**	**117**	P	**Pn**	**01 41 45.2**	**+0.4**
JMTN				*e*S	**Sn**	**01 42 12.0**	**+0.8**
JIU3	**Izumi3**	**2.12**	**56**	P	**Pn**	**01 41 45.5**	**+0.6**
KSRS	**Korea Array**	**6.09**	**354**	Pn	**Pn**	**01 42 39.9**	**+0.4**
	0.7nm,0.3s,baz=180,slow=14,SNR=8.3						
KSRS				Sn	**Sn**	**01 43 50.5**	**+1.4**
	0.8nm,0.3s,baz=173,slow=25,SNR=2.3						
KSRS				Lg	Lg	01 44 18.9	
	1.4nm,0.3s,baz=172,slow=30,SNR=5.8						
KSRS				LR	LR	01 45 14.9	
	comp=Z,85nm,19.8s,baz=204,slow=41						
CMAR	**Chiang Mai Arr**	**29.82**	**251**	LR	LR	02 00 18.3	
	comp=Z,44nm,18.8s,baz=100,slow=38						
WRA	**Warramunga Arr**	**51.32**	**173**	P	**P**	**01 50 13.5**	**-0.5**
	0.4nm,0.9s,baz=354,slow=8.1,SNR=1.9						
ASAR	**Alice Springs**	**54.97**	**174**	P	**P**	**01 50 42.4**	**+1.6**
	0.3nm,0.6s,baz=5.7,slow=14,SNR=5.6						

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*IDC **09** 01:41:18.5±2.4, 38°.71N×73°.34E, h0^{km}, mb3.8/2, mb1 3.7/4, mb1mx3.4/39, mbtmp3.7/4, ML2.7/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/45, Error ellipse: s-maj=37.2km s-min=22.9km az=178.0*
*NNC **09** 01:41:18.1±4.5, 38°.63N×73°.16E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=35.1km s-min=25.1km az=154.0*
ISC 09 01:41:17.2±2.3**, 38°.5N**±0°.2×**73°.2E**±0°.1**, h10^{km}, n14, σ1^s.81**/13**, 6C-1D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	**Merke**	**4.28**	**1**	Pg	**Pb**	**01 42 31.7**	**-0.8**
	20nm,0.5s						
MRKS				Lg	Lg	01 43 28.2	
	43nm,0.5s						
AAK	**Ala-Archa**	**4.29**	**13**	⇑Pn	**Pn**	**01 42 23.9**	**+1.2**
	20nm,0.8s						
AAK				⇑Lg	Lg	01 43 22.5	
	34nm,0.8s						
TKM2	**Tokmak 2**	**4.82**	**22**	⇑Pg	**Pg**	**01 42 47.4**	**-2.2**
	12nm,0.7s						
TKM2				⇑Lg	Lg	01 43 47.7	
	13nm,0.8s						
KST	**Kastek**	**5.04**	**24**	Pg	**Pb**	**01 42 46.6**	**+1.0**
	10nm,0.7s						
KST				Lg	Lg	01 43 53.0	
	28nm,0.8s						
KK08	**Karatay Array**	**5.06**	**337**	⇑Pn	**Pn**	**01 42 32.3**	**-0.8**
	5.7nm,0.5s,baz=152,slow=13						
KK08				⇑Sn	**Sn**	**01 43 34.0**	**+2.3**
	17nm,0.8s,baz=144,slow=23						
KRBS	**Karabastau**	**5.56**	**19**	Pg	**Pb**	**01 42 56.7**	**+2.3**
	7.3nm,0.6s						
KRBS				Lg	Lg	01 44 10.0	
	6.2nm,0.5s						
KUU	**Kurty**	**5.93**	**23**	Pg	**Pb**	**01 43 02.8**	**+2.2**
	5.0nm,0.9s						
KUU				Lg	Lg	01 44 21.1	
	20nm,0.8s						
MKAR	**Makanchi Array**	**10.69**	**36**	Pn	**Pn**	**01 43 50.0**	**-0.3**
	0.0nm,0.3s,baz=230,slow=13,SNR=4.4						
AB31	**Akbulak array**	**14.37**	**323**	P	Pn	01 44 34.1	-6.5
	0.7nm,0.5s,baz=135,slow=13,SNR=19						
AKTO	**Aktyubinsk**	**16.09**	**323**	⇓P	**Pn**	**01 45 03.3**	**-0.1**
	3.0nm,0.7s						
ZALV	**Zalesovo Beam**	**17.42**	**24**	P	**Pn**	**01 45 17.8**	**-2.4**
	0.2nm,0.3s,baz=215,slow=12,SNR=1.4						
SONM	**Songino Array**	**25.82**	**58**	P	**P**	**01 46 49.0**	**+0.4**
	1.0nm,0.7s,baz=260,slow=11,SNR=5.2						
IDI	**Anoyia**	**38.40**	**281**	LR	LR	02 07 41.3	
	comp=Z,33nm,18.3s,baz=296,slow=41						
ARCES	**ARCESS Array B**	**40.02**	**336**	P	**P**	**01 48 53.5**	**+1.7**
	1.6nm,0.7s,baz=100,slow=7.4,SNR=4.0						

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*IDC **09** 01:45:11.1±3.2, 9°.45N×127°.79E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/39, mbtmp3.4/3, Error ellipse: s-maj=243.6km s-min=18.8km az=67.0*
ISC 09 01:45:12.8±1.6**, 9°.4N**±0°.2×**127°.7E**±0°.1**, h10^{km}, n4, σ0^s.63**/5**, mb3.2**/3**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**2.98**	**240**	⇑*e*P	**Pb**	**01 46 05.5**	**-0.5**
BUKP				*i* S	**Sn**	**01 46 36.7**	**+0.7**
WRA	**Warramunga Arr**	**29.89**	**167**	P	**P**	**01 51 20.8**	**-0.1**
	0.2nm,0.5s,baz=348,slow=9.3,SNR=5.1						
ASAR	**Alice Springs**	**33.43**	**170**	P	**P**	**01 51 52.3**	**+0.3**
	0.1nm,0.3s,baz=353,slow=6.3,SNR=1.8						
MKAR	**Makanchi Array**	**53.54**	**323**	P	**P**	**01 54 33.9**	**+0.1**
	0.9nm,0.8s,baz=119,slow=9.2,SNR=2.9						

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*NNC **09** 01:59:33.6±5.1, 38°.61N×72°.89E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=41.1km s-min=28.7km az=159.0*
ISC 09 01:59:30.8±3.5**, 38°.4N**±0°.2×**72°.8E**±0°.1**, h10^{km}, n10, σ1^s.44**/11**, 3C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.85**	**10**	P	**Pn**	**02 00 31.8**	**+1.4**
	SNR=23						
UCH	**Uchtor**	**4.10**	**18**	P	**Pn**	**02 00 35.6**	**+1.7**
	SNR=6.1						
EKS2	**Erkin-Say**	**4.38**	**10**	P	**Pn**	**02 00 39.2**	**+1.7**
	SNR=6.3						
AAK	**Ala-Archa**	**4.48**	**17**	P	**Pn**	**02 00 40.4**	**+1.4**
	SNR=10						
AAK	**Ala-Archa**	**4.48**	**17**	⇑Pn	**Pn**	**02 00 40.3**	**+1.4**
	4.7nm,0.5s						
AAK				⇑Sn	**Sn**	**02 01 31.2**	**0.0**
	10nm,0.8s						
ULHL	**Ulahol**	**4.71**	**33**	P	Pb	02 00 49.5	-4.1
	SNR=5.4						
TKM2	**Tokmak 2**	**5.05**	**24**	⇓Pg	**Pb**	**02 00 57.7**	**-1.6**
	2.8nm,0.6s						
TKM2				⇓Lg	Lg	02 02 02.6	
	3.2nm,0.8s						
KK08	**Karatay Array**	**5.06**	**341**	⇓Pn	**Pn**	**02 00 47.9**	**+1.2**
	2.3nm,0.6s						
KK08				⇓Sn	**Sn**	**02 01 45.7**	**+0.5**
	3.8nm,0.5s						
AB31	**Akbulak array**	**14.28**	**324**	P	**Pn**	**02 02 52.1**	**-0.9**
	0.4nm,0.5s,baz=130,slow=13,SNR=10						
AKTO	**Aktyubinsk**	**16.00**	**324**	⇑P	**P**	**02 03 19.4**	**0.0**
	3.9nm,1.2s						

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*TUL **09** 02:14:05.6±1.1, 36°.76N±0°.01×97°.61W±0°.02, h6^{km}±5^{km}, ML3.0, mb_Lg2.8/41(NEIC), Error ellipse: s-maj=1.9km s-min=1.6km az=62.0*
*NEIC **09** 02:14:05.7±0.6, 36°.74N±0°.01×97°.60W±0°.02, h3^{km}±7^{km}, Error ellipse: s-maj=2.0km s-min=1.6km az=57.0*
*ANF **09** 02:14:06.2±0.3, 36°.73N×97°.58W, h6^{km}, ML3.3/11, Error ellipse: s-maj=4.1km s-min=3.0km az=57.0*
ISC 09 02:14:05.9±1.0**, 36°.75N**±0°.02×**97°.61W**±0°.02**, h6**^{km}±11^{km}**, n71, σ0^s.48**/85**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.23**	**298**	Pg	**Pg**	**02 14 10.3**	**-0.1**
GC02				Sg	**Sg**	**02 14 13.5**	**+0.1**
KAN13	**South Haven SW**	**0.29**	**21**	Pg	**Pg**	**02 14 11.5**	**0.0**
KAN13				Sg	**Sg**	**02 14 15.3**	**0.0**
BLOK	**Blackwell**	**0.32**	**87**	Pg	**Pg**	**02 14 12.1**	**+0.1**
BLOK				Sg	**Sg**	**02 14 16.7**	**+0.5**
KAN17	**Caldwell West**	**0.32**	**337**	Pg	**Pg**	**02 14 12.1**	**-0.2**
KAN17				Sg	**Sg**	**02 14 16.5**	**0.0**
KAN14	**Manchester OK**	**0.35**	**307**		**Pg**	**02 14 12.7**	**-0.1**
KAN14				Sg	**Sg**	**02 14 17.4**	**-0.1**
CROK	**Carrier**	**0.39**	**232**	Pg	**Pg**	**02 14 13.4**	**+0.1**
CROK				Sg	**Sg**	**02 14 18.9**	**+0.4**
KAN09	**Caldwell North**	**0.39**	**359**		**Pg**	**02 14 13.3**	**-0.2**
KAN09				Sg	**Sg**	**02 14 18.6**	**0.0**
KAN05	**Bluff City Nor**	**0.42**	**330**		**Pg**	**02 14 13.8**	**-0.2**
KAN05				Sg	**Sg**	**02 14 19.4**	**-0.1**
KAN01	**Argonia South**	**0.42**	**343**	Pg	**Pg**	**02 14 13.9**	**-0.2**
KAN01				Sg	**Sg**	**02 14 19.8**	**+0.1**
OK032	**Salt Plains WL**	**0.49**	**277**	Pg	**Pg**	**02 14 15.1**	**-0.2**
OK032				Sg	**Sg**	**02 14 21.8**	**+0.1**
KAN06	**Argonia West S**	**0.54**	**338**	Pg	**Pg**	**02 14 16.1**	**-0.2**
KAN06				Sg	**Sg**	**02 14 23.4**	**0.0**
KAN10	**Anthony SW Sta**	**0.54**	**314**	Pg	**Pg**	**02 14 16.1**	**-0.2**
KAN10				Sg	**Sg**	**02 14 23.5**	**0.0**
KAN08	**Anthony NE Sta**	**0.56**	**329**	Pg	**Pg**	**02 14 16.3**	**-0.4**
KAN08				Sg	**Sg**	**02 14 24.0**	**-0.1**
KAN16	**Harper SW Stat**	**0.60**	**323**	Pg	**Pg**	**02 14 16.9**	**-0.6**
KAN16				Sg	**Sg**	**02 14 25.3**	**-0.1**
KAN12	**Harper NE Stat**	**0.63**	**331**	Pg	**Pg**	**02 14 17.7**	**-0.4**
KAN12				Sg	**Sg**	**02 14 26.1**	**-0.2**
T35A	**Sooner Cattle**	**0.90**	**79**		**Pg**	**02 14 22.5**	**-0.5**
T35A				Sg	**Sg**	**02 14 34.5**	**-0.2**
T35B	**Sooner Cattle**	**0.90**	**79**	P	**Pg**	**02 14 22.7**	**-0.4**
	baz=260,SNR=72						
T35B				S	**Sg**	**02 14 34.6**	**-0.1**
	baz=260						
OK029	**Liberty Lake**	**0.95**	**173**	Pg	**Pg**	**02 14 23.9**	**-0.3**
OK029				Sg	**Sg**	**02 14 36.9**	**+0.3**
OK031	**S. Brethren Rd**	**1.00**	**142**	Pg	**Pg**	**02 14 24.8**	**-0.3**
OK031				Sg	**Sg**	**02 14 38.0**	**-0.2**
OK034	**N. Norfolk Rd.**	**1.03**	**135**		**Pg**	**02 14 25.2**	**-0.4**
OK034				Sg	**Sg**	**02 14 38.6**	**-0.3**
OK030	**Cody Creek RV**	**1.05**	**141**		**Pg**	**02 14 25.7**	**-0.4**
OK030				Sg	**Sg**	**02 14 39.6**	**-0.1**
BCOK	**Bluff Creek, N**	**1.09**	**180**		**Pg**	**02 14 26.2**	**-0.5**
OK025	**Westminster Rd**	**1.18**	**169**		**Pg**	**02 14 27.9**	**-0.6**
OKCFA	**Oklahoma City**	**1.33**	**175**		**Pg**	**02 14 30.4**	**-1.0**
OKCFA	**Oklahoma City**	**1.33**	**175**	P	**Pg**	**02 14 30.6**	**-0.8**
	baz=355,SNR=8.5						
OKCFA				S	**Sb**	**02 14 48.9**	**+0.3**
	baz=355						
OKCSW	**OKLAHOMA CITY**	**1.34**	**174**		**Pn**	**02 14 30.6**	**-0.6**
FNO	**Franklin**	**1.49**	**174**		**Pn**	**02 14 33.3**	**0.0**
TUL1	**Leonard**	**1.69**	**119**	Pn	**Pn**	**02 14 36.2**	**+0.4**
TUL1				IAmb_Lg		02 15 03.4	
	comp=Z,50nm,0.9s						
TUL1	**Leonard**	**1.69**	**119**	P	**Pn**	**02 14 36.3**	**+0.4**
	baz=301,SNR=65						
TUL1				S	**Sb**	**02 14 59.1**	**+0.3**
	baz=301						
R32A	**Long Quarter,**	**1.89**	**333**	Pn	**Pn**	**02 14 39.3**	**+0.5**
R32A	**Long Quarter,**	**1.89**	**333**	P	**Pn**	**02 14 39.1**	**+0.3**
	baz=152,SNR=50						
R32A				S	**Sb**	**02 15 04.3**	**-0.4**
	baz=152						
X34A	**Smith Ranch, M**	**2.15**	**185**	Pn	**Pn**	**02 14 43.4**	**+1.1**
KSU1	**Kansas State U**	**2.48**	**18**	Pn	**Pn**	**02 14 47.2**	**+0.4**
KSU1	**Kansas State U**	**2.48**	**18**	P	**Pn**	**02 14 47.0**	**+0.2**
	baz=199,SNR=8.1						
U38A	**Gravette**	**2.61**	**96**	Pn	**Pn**	**02 14 49.4**	**+0.8**
U38A	**Gravette**	**2.61**	**96**	P	**Pn**	**02 14 49.4**	**+0.8**
	baz=278,SNR=43						
CBKS	**Cedar Bluff**	**2.67**	**321**	Pn	**Pn**	**02 14 50.0**	**+0.5**
CBKS	**Cedar Bluff**	**2.67**	**321**	P	**Pn**	**02 14 49.7**	**+0.2**
	baz=140						
CBKS				S	**Sb**	**02 15 27.6**	**+0.5**
	baz=140						
X37A	**Clayton**	**2.82**	**139**	P	**Pn**	**02 14 51.2**	**-0.3**
	baz=321						
HHAR	**Hobbs**	**2.99**	**98**	Pn	**Pn**	**02 14 54.5**	**+0.7**
Z35A	**Perchaven, San**	**3.42**	**175**	P	**Pn**	**02 15 00.4**	**+0.7**
	baz=355						
S39A	**Bolivar**	**3.55**	**73**	Pn	**Pn**	**02 15 02.2**	**+0.7**
S39A				IAmb_Lg		02 16 03.7	
	comp=Z,21nm,0.8s						
AMTX	**Amarillo**	**3.80**	**242**	IAmb_Lg		02 16 10.5	
	comp=Z,17nm,0.8s						
U40A	**Yellville**	**3.85**	**94**	Pn	**Pn**	**02 15 06.1**	**+0.5**
U40A	**Yellville**	**3.85**	**94**	P	**Pn**	**02 15 06.1**	**+0.5**
	baz=278,SNR=18						
U40A				P	**Pn**	**02 15 06.1**	**+0.5**
	baz=278,SNR=18						
MIAR	**Mount Ida**	**3.95**	**123**	Pn	**Pn**	**02 15 07.6**	**+0.6**
MIAR				IAmb_Lg		02 16 13.5	
	comp=Z,19nm,0.9s						
Z38A	**Mt. Pleasant**	**4.09**	**147**	Pn	**Pn**	**02 15 10.5**	**+1.6**
Z38A				IAmb_Lg		02 16 23.1	
	comp=Z,28nm,0.7s						
MGMO	**Mountain Grove**	**4.29**	**83**	Pn	**Pn**	**02 15 11.5**	**-0.3**
MGMO				IAmb_Lg		02 16 23.0	
	comp=Z,17nm,0.7s						
P38A	**Dawn**	**4.31**	**47**	Pn	**Pn**	**02 15 12.4**	**+0.5**
P38A				IAmb_Lg		02 16 27.8	
	comp=Z,17nm,0.9s						
N35A	**Tabor**	**4.39**	**20**	Pn	**Pn**	**02 15 13.7**	**+0.7**
N35A				IAmb_Lg		02 16 28.2	
	comp=Z,23nm,0.8s						
N35A	**Tabor**	**4.39**	**20**	P	**Pn**	**02 15 13.6**	**+0.5**
	baz=201,SNR=7.4						
X40A	**Basin Creek Fa**	**4.49**	**119**	Pn	**Pn**	**02 15 15.1**	**+0.6**
R40A	**Maddies Statio**	**4.52**	**68**	Pn	**Pn**	**02 15 14.9**	**+0.2**
R40A				IAmb_Lg		02 16 37.0	
	comp=Z,19nm,0.8s						
R40A	**Maddies Statio**	**4.52**	**68**	P	**Pn**	**02 15 14.8**	**0.0**
	baz=252,SNR=11						
WHAR	**Wooly Hollow**	**4.55**	**107**	IAmb_Lg		02 16 36.1	
	comp=Z,15nm,1.0s						
KSCO	**Kaye Shedlock'**	**4.57**	**301**	IAmb_Lg		02 16 31.6	
	comp=Z,16nm,0.7s						
BGNE	**Belgrade**	**4.68**	**355**	Pn	**Pn**	**02 15 16.3**	**-0.7**
WLAR	**White Oak Lake**	**4.78**	**128**	IAmb_Lg		02 16 50.2	
	comp=Z,15nm,1.0s						
P40A	**Paris**	**5.19**	**56**	IAmb_Lg		02 16 49.6	
	comp=Z,12nm,0.7s						
CCM	**Cathedral Cave**	**5.23**	**74**	IAmb_Lg		02 16 57.4	
	comp=Z,19nm,0.8s						
LCAR	**Lake Charles**	**5.25**	**95**	Pn	**Pn**	**02 15 25.9**	**+1.0**
N38A	**Joes South For**	**5.29**	**39**	Pn	**Pn**	**02 15 24.9**	**-0.6**
N38A				IAmb_Lg		02 16 55.5	
	comp=Z,19nm,0.8s						
L34A	**Svendsen Farm,**	**5.30**	**10**	Pn	**Pn**	**02 15 25.1**	**-0.5**
OGNE	**Ogallala**	**5.43**	**322**	IAmb_Lg		02 16 57.7	
	comp=Z,17nm,0.8s						
HBAR	**Harrisburg**	**5.75**	**100**	IAmb_Lg		02 17 17.9	
	comp=Z,22nm,0.8s						
PBMO	**Poplar Bluff**	**5.76**	**88**	IAmb_Lg		02 17 12.4	
	comp=Z,10nm,0.8s						
FVM	**French Village**	**5.85**	**76**	IAmb_Lg		02 17 10.4	
	comp=Z,14nm,0.8s						
K31A	**O'Neill**	**5.94**	**352**	Pn	**Pn**	**02 15 34.7**	**+0.3**
SDCO	**Great Sand Dun**	**6.38**	**281**	Pn	**Pn**	**02 15 39.9**	**-0.7**
S44A	**Carbondale**	**6.73**	**79**	IAmb_Lg		02 17 40.2	
	comp=Z,14nm,0.7s						
K22A	**Casper**	**9.05**	**313**	IAmb_Lg		02 19 11.0	
	comp=Z,6.5nm,0.9s						

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*NNC **09** 03:03:45.3±10.0, 38°.58N×72°.84E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=82.3km s-min=54.1km az=166.0*
*SOME **09** 03:03:47.4, 39°.05N×73°.57E, h5^{km}*
*KRNET **09** 03:03:49.9±0.1, 39°.18N×73°.77E, h13^{km}, mb3.3*
ISC 09 03:03:47.0±1.8**, 38°.97N**±0°.08×**73°.88E**±0°.05**, h10^{km}, n25, σ2^s.21**/45**, 25C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.08**	**345**	⇑*e*P	**Pg**	**03 04 06.2**	**-1.6**
	baz=46						
SFK				⇑*e*S	**Sg**	**03 04 18.3**	**-3.6**
	baz=46						
DRK	**Karamyk**	**1.69**	**288**	⇑*i*P	**Pg**	**03 04 19.0**	**-0.5**
	baz=82						
DRK				⇑*i*S	**Sg**	**03 04 40.2**	**-1.3**
	baz=82						
OHH	**Osh**	**1.77**	**332**	⇑*i*P	**Pb**	**03 04 18.8**	**-0.7**
	baz=31						
OHH				⇑*i*S	**Sn**	**03 04 39.9**	**-0.4**
	baz=31						
BTK	**Batken**	**2.60**	**296**	⇑*i*P	**Pb**	**03 04 32.7**	**-1.1**
	baz=92						
BTK				⇑*i*S	**Sb**	**03 05 04.3**	**-1.6**
	baz=92						
GAR	**Garm**	**2.78**	**272**	⇑*i*P	**Pb**	**03 04 36.1**	**-0.7**
	baz=67						
GAR				⇑*i*S	**Sb**	**03 05 10.2**	**-0.7**
	baz=67						
AML	**Almayashu**	**3.16**	**358**	P	**Pb**	**03 04 42.2**	**-1.3**
	SNR=20						
AML	**Almayashu**	**3.16**	**358**	⇑*e*P	**Pb**	**03 04 39.9**	**-3.6**
	baz=59						
AML				⇑*i*S	**Sn**	**03 05 16.3**	**+1.2**
	baz=59						
UCH	**Uchtor**	**3.29**	**8**	P	**Pb**	**03 04 45.1**	**-0.6**
	SNR=14						
UCH	**Uchtor**	**3.29**	**8**	⇑*i*P	**Pb**	**03 04 42.0**	**-3.7**
	baz=10.0						
UCH				⇑*i*S	**Sn**	**03 05 19.8**	**+1.4**
	baz=10.0						
TRKS	**Terek-Say**	**3.31**	**322**	⇑*i*P	**Pn**	**03 04 40.9**	**+2.0**
	baz=20						
TRKS				⇑*i*S	**Sn**	**03 05 18.2**	**-0.2**
	baz=20						
MNAS	**Manas**	**3.66**	**344**	⇑*i*P	**Pn**	**03 04 46.8**	**+2.9**
	baz=44						
MNAS				⇑*i*S	**Sn**	**03 05 28.2**	**+1.0**
	baz=44						
EKS2	**Erkin-Say**	**3.69**	**359**	P	**Pb**	**03 04 50.8**	**-1.5**
	SNR=7.2						
EKS2	**Erkin-Say**	**3.69**	**359**	⇓*i*P	**Pn**	**03 04 47.3**	**+3.1**
	baz=0.0						
EKS2				⇓*i*S	**Sn**	**03 05 29.0**	**+1.2**
	baz=0.0						
AAK	**Ala-Archa**	**3.69**	**7**	P	**Pb**	**03 04 50.6**	**-1.8**
	SNR=8.6						
AAK	**Ala-Archa**	**3.69**	**7**	⇑Pn	**Pb**	**03 04 50.6**	**-1.8**
	4.8nm,0.6s						
AAK				⇑Sn	**Sb**	**03 05 40.3**	**+3.0**
	11nm,0.6s						
AAK	**Ala-Archa**	**3.69**	**7**	⇑*e*P	**Pn**	**03 04 47.6**	**+3.3**
	baz=9.0						
AAK				⇑*i*S	**Sn**	**03 05 29.5**	**+1.6**
	baz=9.0						
ULHL	**Ulahol**	**3.73**	**28**	P	**Pg**	**03 04 59.4**	**+0.9**
	SNR=6.2						
KBK	**Karagaybulak**	**3.77**	**12**	⇑*e*P	**Pn**	**03 04 48.8**	**+3.5**
	baz=14						
KBK				⇑*i*S	**Sn**	**03 05 31.6**	**+1.7**
	baz=14						
MRKS	**Merke**	**3.80**	**353**	*e*P	**Pb**	**03 04 55.0**	**+0.8**
	9.8nm,0.4s						
MRKS				*e*S	**Sb**	**03 05 43.6**	**+3.2**
	11nm,0.5s						
TKM2	**Tokmak 2**	**4.16**	**18**	⇓Pn	**Pb**	**03 04 57.8**	**-2.5**
	3.7nm,0.7s						
TKM2				⇓Sn	**Sg**	**03 05 59.1**	**-1.3**
	5.7nm,0.8s						
KST	**Kastek**	**4.36**	**21**	*e*P	**Pg**	**03 05 07.9**	**-2.6**
	5.4nm,0.8s						
KST				*e*S	**Sg**	**03 06 06.6**	**-0.4**
	13nm,0.7s						
DGS	**Degeres**	**4.50**	**18**	*e*P	**Pg**	**03 05 12.2**	**-1.0**
	3.1nm,0.6s						
DGS				*e*S	**Sg**	**03 06 13.1**	**+1.7**
	7.4nm,0.8s						
KK08	**Karatay Array**	**4.86**	**329**	⇓Pn	**Pn**	**03 05 03.0**	**+2.8**
	2.0nm,0.6s,baz=165,slow=15						
KK08				⇑Sn	**Sn**	**03 05 58.1**	**+1.6**
	10nm,0.7s,baz=161,slow=22						
KUU	**Kurty**	**5.25**	**20**	*e*P	**Pg**	**03 05 24.1**	**-3.5**
	1.5nm,0.8s						
KUU				*e*S	**Sg**	**03 06 33.5**	**-2.1**
	7.1nm,1.0s						
ARXS	**Arharly**	**6.01**	**28**	*e*P	**Pg**	**03 05 38.1**	**-4.1**
	1.9nm,0.6s						
ARXS				*e*S	**Sg**	**03 06 57.9**	**-2.2**
	6.6nm,0.7s						

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*JMA **09** 03:05:10.1±0.1, 38°.70N×142°.27E, h38^{km}±1^{km}, M4.0*
JMA Felt I J1.
*NIED **09** 03:05:10.2, 38°.70N×142°.27E, h38^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.37; M$_{\theta\theta}$-0.16; M$_{\phi\phi}$-0.21; M$_{r\theta}$0.73; M$_{\theta\phi}$-0.16; M$_{\phi r}$0.80; Fault plane solution: M$_0$1.14000×10^{15} NP1:ϕ_s42.00000°, δ81.00000°, λ91.00000°. NP2:ϕ_s219.00000°, δ9.00000°, λ87.00000°.*
*IDC **09** 03:05:10.8±0.7, 38°.63N×142°.25E, h44^{km}±6^{km}, mb3.6/13, mb1 3.8/17, mb1mx3.4/56, mbtmp3.9/17, ML3.2/4, MS2.9/3, Ms1 2.9/3, ms1mx2.6/47 Error ellipse: s-maj=17.8km s-min=14.9km az=122.0*
*NEIC **09** 03:05:11.9±1.8, 38°.73N±0°.06×142°.3E±0°.1, h47^{km}±6^{km}, mb4.4/8, Error ellipse: s-maj=15.0km s-min=7.0km az=113.0*
ISC 09 03:05:11.1±0.7**, 38°.68N**±0°.04×**142°.19E**±0°.06**, h43**^{km}±6^{km}**, n61, σ1^s.16**/71**, mb4.1**/17**, 8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.57**	**314**	⇓P	**Pn**	**03 05 22.3**	**-0.6**
OFUJ				S	**Sn**	**03 05 30.8**	**-0.4**
JKMT	**Kesennumamotoy**	**0.58**	**283**	⇓P	**Pn**	**03 05 22.6**	**-0.3**
JKMT				S	**Sn**	**03 05 31.2**	**-0.2**
JIKH	**Ishinomakikobu**	**0.68**	**237**	⇓P	**Pn**	**03 05 24.0**	**-0.3**
JIKH				S	**Sn**	**03 05 33.7**	**-0.1**
JIO	**Ouri**	**0.70**	**251**	⇓P	**Pn**	**03 05 24.3**	**-0.3**
JIO				S	**Sn**	**03 05 34.2**	**-0.1**
JMK	**Ichinoseki**	**0.81**	**290**	⇓P	**Pn**	**03 05 26.0**	**0.0**
JMK				S	**Sn**	**03 05 37.2**	**+0.3**
JOM	**Ohasama**	**1.06**	**319**	⇓P	**Pn**	**03 05 29.4**	**0.0**
JOM				S	**Sn**	**03 05 43.3**	**+0.3**
JOU	**Okura**	**1.24**	**256**	P	**Pn**	**03 05 32.6**	**+0.6**
JOU				S	**Sn**	**03 05 48.9**	**+1.4**
JTH	**Tanohata**	**1.28**	**349**	P	**Pn**	**03 05 31.9**	**-0.6**
JMM	**Marumori**	**1.37**	**234**	P	**Pn**	**03 05 33.8**	**+0.1**
JMM				S	**Sn**	**03 05 50.9**	**+0.2**
JMM	**Marumori**	**1.37**	**234**		**Pn**	**03 05 34.0**	**+0.2**
JMM				Sn	**Sn**	**03 05 51.2**	**+0.6**
JRG	**Rokugo**	**1.41**	**301**	⇓P	**Pn**	**03 05 34.7**	**+0.4**
JYK	**Kaneyama**	**1.45**	**280**	⇓P	**Pn**	**03 05 35.4**	**+0.5**
JTM	**Tenmabayashi**	**2.27**	**338**		**Pn**	**03 05 47.6**	**+1.5**
JTM				Sn	**Sn**	**03 06 13.8**	**+0.8**
JYT	**Yasato**	**2.92**	**214**		**Pn**	**03 05 55.9**	**+0.8**
JSD	**Sado**	**3.16**	**259**		**Pn**	**03 05 59.1**	**+0.8**
ERM	**Erimo**	**3.41**	**12**	Pn	**Pn**	**03 06 02.4**	**+0.7**
ERM					**Sn**	**03 06 44.8**	**+4.0**
MJAR	**Matsushiro Arr**	**3.82**	**237**	P	**Pn**	**03 06 08.3**	**+0.9**
	0.5nm,0.3s,baz=21,slow=12,SNR=14						
MJAR	**Matsushiro Arr**	**3.82**	**237**		**Pn**	**03 06 09.2**	**+1.8**
MAJO	**Matsushiro**	**3.82**	**237**		**Pn**	**03 06 10.2**	**+2.9**
MAT	**Matsushiro**	**3.82**	**237**	P	**Pn**	**03 06 09.8**	**+2.4**
MAT				*e*S	**Sn**	**03 06 54.3**	**+3.3**
JGF	**Kuroka**	**4.94**	**233**		**Pn**	**03 06 25.8**	**+3.0**
INU	**Inuyama**	**5.31**	**233**		**Pn**	**03 06 29.2**	**+1.4**
JKA	**Kamikawa-asahi**	**5.44**	**3**		**Pn**	**03 06 28.7**	**-0.9**
ASAJ	**Asahikawa**	**5.44**	**3**	P	**Pn**	**03 06 28.6**	**-1.0**
	2.1nm,0.3s,baz=228,slow=8.0,SNR=8.5						
ASAJ				LR	LR	03 08 51.7	
	comp=Z,183nm,20.5s,baz=180,slow=40						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	5.89	200	LR	LR	03 08 53.9	
	comp=Z,82nm,19.0s,baz=46,slow=38						
JWT	Wachi	6.41	240		Pn	03 06 45.2	+2.3
USA0B	Ussuriysk Arra	9.44	309		Pn	03 07 25.1	+0.7
USRK	Ussuriysk Ar.	9.44	309	P	Pn	03 07 26.0	+1.7
	baz=120,slow=14,SNR=26						
USRK	Ussuriysk Ar.	9.44	309		Pn	03 07 25.5	+1.2
MDJ	Mudanjiang	11.13	306		Pn	03 07 47.6	+0.1
KSRS	Korea Array	11.32	268	P	Pn	03 07 52.0	+1.9
	0.2nm,0.3s,baz=81,slow=14,SNR=5.4						
KSRS				LR	LR	03 11 41.2	
	comp=Z,64nm,19.7s,baz=50,slow=34						
INCN	Inchon	12.32	269	Pn	Pn	03 08 04.3	+0.4
SONM	Songino Array	27.42	301	P	P	03 10 53.1	+0.3
	0.4nm,0.4s,baz=100,slow=8.9,SNR=4.1						
SONM	Songino Array	27.42	301	P	P	03 10 53.0	+0.3
H11N2	WAKE ISLAND Hy	28.52	124	T	T	03 41 20.7	
	baz=316,slow=75,SNR=410						
H11N1	WAKE ISLAND Hy	28.52	124	T	T	03 41 23.1	
	baz=316,slow=75,SNR=273						
H11N3	WAKE ISLAND Hy	28.53	124	T	T	03 41 28.5	
	baz=316,slow=75,SNR=250						
H11S1	WAKE ISLAND Hy	29.29	126	T	T	03 42 18.9	
	baz=318,slow=76,SNR=86						
H11S3	WAKE ISLAND Hy	29.29	126	T	T	03 42 19.0	
	baz=318,slow=76,SNR=124						
H11S2	WAKE ISLAND Hy	29.30	126	T	T	03 42 20.1	
	baz=318,slow=76,SNR=58						
ZAA0	Zalesovo Array	41.28	311	P	P	03 12 52.2	+0.2
ZAA0				IAmb	IAmb	03 12 53.4	
	comp=Z,2.8nm,0.6s						
ZALV	Zalesovo Beam	41.28	311	P	P	03 12 51.7	-0.3
	comp=Z,2.4nm,0.4s,baz=86,slow=8.4,SNR=11						
ZALV	Zalesovo Beam	41.28	311	P	P	03 12 52.4	+0.4
MK31	Makanchi Array	43.79	301	P	P	03 13 12.2	-0.2
MK31				IAmb	IAmb	03 13 37.9	
	comp=Z,6.2nm,1.3s						
MKAR	Makanchi Array	43.79	301	P	P	03 13 12.8	+0.4
	comp=Z,1.1nm,0.6s,baz=84,slow=10,SNR=11						
MKAR	Makanchi Array	43.79	301	P	P	03 13 12.7	+0.2
KURK	Kurchatov	45.42	307	P	P	03 13 25.4	0.0
KURK				IAmb	IAmb	03 13 26.1	
	comp=Z,6.6nm,0.8s						
KURBB	Kurchatov Arra	45.49	307	P	P	03 13 25.9	-0.1
	comp=Z,6.8nm,0.7s,baz=81,slow=8.3						
ILAR	Eielson Array	47.78	33	P	P	03 13 44.3	+0.6
	comp=Z,0.4nm,0.6s,baz=256,slow=5.5,SNR=5.4						
ILAR				pP	pP	03 13 56.5	+1.0
	comp=Z,1.0nm,0.7s,baz=264,slow=6.2,SNR=4.7						
INK	Inuvik	52.64	28	P	P	03 14 19.9	-0.4
	comp=Z,1.3nm,1.2s,baz=254,slow=5.7,SNR=6.1						
INK				pP	pP	03 14 32.9	+0.7
	comp=Z,2.2nm,1.1s,baz=306,slow=5.8,SNR=3.1						
CHGR	Chuyangaron	55.53	295	P	P	03 14 41.4	-0.7
ABKAR	Akbulak array	57.36	310	P	P	03 14 54.6	-0.1
ABKAR				IAmb	IAmb	03 15 10.1	
	comp=Z,8.4nm,1.6s						
WB0	Warramunga Arr	58.60	189	P	P	03 15 03.1	-0.5
WRA	Warramunga Arr	58.78	189	P	P	03 15 04.4	-0.5
	comp=Z,0.6nm,0.7s,baz=11,slow=4.4,SNR=2.7						
WRA				pP	pP	03 15 16.5	-0.5
	comp=Z,1.3nm,0.8s,baz=8.2,slow=7.3,SNR=6.5						
WRA	Warramunga Arr	58.78	189	P	P	03 15 04.8	-0.1
ASAR	Alice Springs	62.51	189	P	P	03 15 29.7	-0.5
	comp=Z,0.2nm,0.7s,baz=22,slow=9.4,SNR=1.5						
ASAR				pP	pP	03 15 41.4	-1.1
	comp=Z,0.4nm,0.7s,baz=10,slow=7.2,SNR=4.0						
FINES	FINESS Array B	67.65	332	P	P	03 16 03.2	0.0
	comp=Z,2.5nm,0.8s,baz=12,slow=7.1,SNR=1.9						
KBZ	Khabaz	70.30	311	P	P	03 16 19.9	-0.1
	comp=Z,2.7nm,0.9s,baz=118,slow=0.7,SNR=4.3						
AKASG	Malin Array Be	73.37	322	P	P	03 16 36.8	-1.5
	comp=Z,1.3nm,0.7s,baz=45,slow=6.4,SNR=5.4						
NVAR	Mina Array Bea	73.51	54	P	P	03 16 38.5	-1.2
	comp=Z,0.2nm,0.6s,baz=269,slow=7.4,SNR=3.5						
TXAR	Lajitas Array	88.63	53	P	P	03 18 00.5	+0.5
	comp=Z,0.2nm,0.7s,baz=296,slow=4.9,SNR=2.4						
TXAR				pP	pP	03 18 12.4	-0.2
	comp=Z,0.3nm,0.7s,baz=295,slow=3.2,SNR=3.2						

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*JMA **09** 03:26:29.6±0.1, 38°.70N×142°.26E, h38^{km}±1^{km}, M4.1*
JMA Felt I J1.
*NIED **09** 03:26:29.7, 38°.70N×142°.26E, h38^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.10; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-0.13; $M_{r\theta}$0.86; $M_{\theta\phi}$-0.05; $M_{\phi r}$1.15; Fault plane solution: $M_0$1.45000×10^{15} NP1:ϕ_s37.00000°, δ88.00000°, λ92.00000°. NP2:ϕ_s170.00000°, δ3.00000°, λ44.00000°.*
*IDC **09** 03:26:30.7±0.7, 38°.63N×142°.28E, h48^{km}±7^{km}, mb3.6/12, mb1 3.8/17, mb1mx3.5/62, mbtmp3.8/17, MS3.3/8, Ms1 3.3/8, ms1mx3.0/49 Error ellipse: s-maj=16.5km s-min=14.4km az=103.0*
*NEIC **09** 03:26:31.6±1.6, 38°.73N±0°.06×142°.15E±0°.08, h48^{km}±9^{km}, mb4.4/10, Error ellipse: s-maj=13.0km s-min=2.6km az=134.0*
ISC 09 03:26:30.8±0.7, **38°.71N**±0°.05×**142°.22E**±0°.07, **h44**^{km}±6^{km}, **n69**, σ**0^{s}97**/71, **mb4.1**/18, **MS3.3**/3, **1C-8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.56	311	⇓P	Pn	03 26 41.7	-0.8
OFUJ				S	Sn	03 26 49.9	-1.0
JKMT	Kesennumamotoy	0.59	280	⇓P	Pn	03 26 42.0	-0.9
JKMT				S	Sn	03 26 50.4	-1.1
JIKH	Ishinomakikobu	0.71	236	⇓P	Pn	03 26 43.4	-1.1
JIKH				S	Sn	03 26 53.1	-1.3
JIO	Ouri	0.73	249	⇓P	Pn	03 26 43.7	-1.0
JIO				S	Sn	03 26 53.4	-1.3
JMK	Ichinoseki	0.81	287	⇓P	Pn	03 26 45.4	-0.5
JMK				S	Sn	03 26 56.4	-0.4
JOM	Ohasama	1.05	317	⇓P	Pn	03 26 48.8	-0.2
JOM				S	Sn	03 27 02.8	+0.3
JTH	Tanohata	1.25	347	P	Pn	03 26 51.1	-0.8
JOU	Okura	1.27	255	⇓P	Pn	03 26 51.7	-0.4
JOU				S	Sn	03 27 08.5	+0.6
JMM	Marumori	1.40	233	⇓P	Pn	03 26 53.0	-0.9
JMM				*e*S	Sn	03 27 10.1	-1.1
JMM	Marumori	1.40	233		Pn	03 26 52.8	-1.1
JMM				Sn	Sn	03 27 11.3	+0.1
JRG	Rokugo	1.41	299	P	Pn	03 26 54.4	+0.4
JYK	Kaneyama	1.47	279	⇑P	Pn	03 26 55.0	+0.2
JTM	Tenmabayashi	2.25	337		Pn	03 27 07.2	+1.6
JYT	Yasato	2.96	214	Pn	Pn	03 27 15.9	+0.7
JSD	Sado	3.18	259		Pn	03 27 18.4	+0.1
MAJO	Matsushiro	3.85	237		Pn	03 27 29.0	+1.5
MAT	Matsushiro	3.85	237	P	Pn	03 27 28.8	+1.3
MAT				*e*S	Sn	03 28 13.0	+1.5
MJAR	Matsushiro Arr	3.85	237	P	Pn	03 27 27.5	0.0
	0.9nm,0.3s,baz=31,slow=11,SNR=24						
MJAR				LR	LR	03 29 10.6	
	comp=Z,194nm,19.0s,baz=45,slow=42						
MJAR	Matsushiro Arr	3.85	237		Pn	03 27 27.2	-0.3
JGF	Kuroka	4.97	233		Pn	03 27 44.2	+1.3
INU	Inuyama	5.34	233	Pn	Pn	03 27 48.9	+0.9
ASAJ	Asahikawa	5.41	3	P	Pn	03 27 49.7	+0.9
	1.0nm,0.3s,baz=251,slow=19,SNR=4.4						
ASAJ				LR	LR	03 30 25.1	
	comp=Z,152nm,21.3s,baz=132,slow=43						
JKA	Kamikawa-asahi	5.41	3		Pn	03 27 49.2	+0.4
JWT	Wachi	6.44	240		Pn	03 28 04.6	+1.6
JHS	Saijyo	8.18	246	Pn	Pn	03 28 27.6	+0.7
JMN	Monobe	8.37	236	Pn	Pn	03 28 30.2	+0.6
USA0B	Ussuriysk Arra	9.43	309	Pn	Pn	03 28 41.7	-2.3
USRK	Ussuriysk Ar.	9.43	309	P	Pn	03 28 46.5	+2.5
	baz=107,slow=14,SNR=32						
USRK				LR	LR	03 32 16.2	
	comp=Z,141nm,19.6s,baz=102,slow=36						
USRK	Ussuriysk Ar.	9.43	309		Pn	03 28 42.5	-1.5
KSRS	Korea Array	11.34	268	P	Pn	03 29 11.9	+1.8
	0.6nm,0.3s,baz=81,slow=13,SNR=7.9						
KSRS				LR	LR	03 33 22.4	
	comp=Z,106nm,18.9s,baz=56,slow=36						
KLR	Kul'dur	12.92	328	P	Pn	03 29 33.8	+2.1
	0.1nm,0.3s,baz=122,slow=13,SNR=2.8						
KLR				LR	LR	03 34 28.0	
	comp=Z,171nm,18.7s,baz=126,slow=37						
YAK	Yakutsk	24.59	346	LR	LR	03 42 21.8	
	comp=Z,63nm,21.3s,baz=88,slow=38						
SONM	Songino Array	27.42	301	P	P	03 32 12.7	+0.4
	1.0nm,0.9s,baz=84,slow=9.7,SNR=3.8						
SONM	Songino Array	27.42	301	P	P	03 32 12.4	+0.1
H11N2	WAKE ISLAND Hy	28.52	125	T	T	04 02 38.9	
	baz=316,slow=75,SNR=379						
H11N1	WAKE ISLAND Hy	28.53	125	T	T	04 02 41.9	
	baz=316,slow=75,SNR=226						
H11N3	WAKE ISLAND Hy	28.54	125	T	T	04 02 42.6	
	baz=316,slow=75,SNR=240						
H11S1	WAKE ISLAND Hy	29.29	127	T	T	04 03 38.7	
	baz=318,slow=76,SNR=67						
H11S3	WAKE ISLAND Hy	29.29	127	T	T	04 03 36.3	
	baz=318,slow=76,SNR=125						
H11S2	WAKE ISLAND Hy	29.31	127	T	T	04 03 38.6	
	baz=318,slow=76,SNR=62						
TLY	Talaya	29.75	309	LR	LR	03 44 52.1	
	comp=Z,78nm,19.9s,baz=4.0,slow=37						
DLV	T Lat	40.11	238	P	P	03 34 02.2	-0.3
ZALV	Zalesovo Beam	41.27	311	P	P	03 34 10.8	-0.7
	2.6nm,0.6s,baz=94,slow=8.7,SNR=9.6						
ZALV	Zalesovo Beam	41.27	311	P	P	03 34 12.1	+0.6
MK31	Makanchi Array	43.79	301	P	P	03 34 31.5	-0.6
MK31				IAmb	IAmb	03 34 42.1	
	comp=Z,6.2nm,1.2s						
MKAR	Makanchi Array	43.79	301	P	P	03 34 32.0	-0.1
	comp=Z,1.1nm,0.7s,baz=85,slow=10,SNR=6.3						
MKAR	Makanchi Array	43.79	301	P	P	03 34 31.8	-0.2
KURK	Kurchatov	45.41	307	P	P	03 34 44.1	-0.8
KURK				IAmb	IAmb	03 34 45.9	
	comp=Z,6.2nm,0.8s						
KURBB	Kurchatov Arra	45.49	307	P	P	03 34 45.4	-0.1
	comp=Z,4.5nm,0.7s,baz=82,slow=8.4,SNR=20						
ILAR	Eielson Array	47.74	33	P	P	03 35 02.5	-0.4
	comp=Z,0.4nm,0.6s,baz=262,slow=6.7,SNR=6.3						
ILAR				pP	pP	03 35 15.7	+0.7
	comp=Z,1.0nm,0.7s,baz=266,slow=6.1,SNR=3.4						
BVAR	Borovoye Array	49.93	311	P	P	03 35 20.0	+0.1
	comp=Z,0.8nm,0.5s,baz=155,slow=4.9,SNR=4.5						
INK	Inuvik	52.60	28	P	P	03 35 39.3	-0.3
	comp=Z,1.0nm,1.0s,baz=295,slow=13,SNR=5.7						
INK				pP	pP	03 35 52.8	+1.1
	comp=Z,1.2nm,0.9s,baz=310,slow=10,SNR=2.3						
ABKAR	Akbulak array	57.35	310	P	P	03 36 14.1	-0.1
ABKAR				IAmb	IAmb	03 36 17.6	
	comp=Z,3.2nm,1.1s						
ABKAR	Akbulak array	57.35	310	P	P	03 36 13.9	-0.3
WB0	Warramunga Arr	58.63	189	P	P	03 36 22.4	-1.0
WB0				IAmb	IAmb	03 36 23.4	
	comp=Z,4.7nm,1.1s						
WR0	Warramunga Arr	58.80	188	P	P	03 36 23.6	-1.0
WR0				IAmb	IAmb	03 36 24.5	
	comp=Z,5.0nm,1.2s						
WB2	Warramunga Arr	58.81	189	P	P	03 36 23.6	-1.0
WB2				IAmb	IAmb	03 36 37.2	
	comp=Z,3.8nm,0.9s						
WRA	Warramunga Arr	58.81	189	P	P	03 36 23.7	-1.0
	comp=Z,1.6nm,0.8s,baz=7.6,slow=7.1,SNR=18						
WRA				pP	pP	03 36 36.8	-0.3
	comp=Z,1.0nm,0.7s,baz=6.0,slow=7.2,SNR=4.6						
WRA	Warramunga Arr	58.81	189	P	P	03 36 23.4	-1.2
ASAR	Alice Springs	62.54	189	P	P	03 36 48.9	-1.2
	comp=Z,0.5nm,0.6s,baz=16,slow=5.6,SNR=7.5						
ASAR	Alice Springs	62.54	189	P	P	03 36 49.7	-0.3
DZM	Mont Dzumac	64.59	155	LR	LR	04 04 33.8	
	comp=Z,50nm,18.3s,baz=12,slow=35						
BOZ	Bozeman (W)	73.10	45	P	P	03 37 56.8	+0.3
AKASG	Malin Array Be	73.36	322	P	P	03 37 57.6	-0.2
	comp=Z,1.0nm,0.6s,baz=44,slow=6.2,SNR=2.0						
PDAR	Pinedale Array	76.04	46	P	P	03 38 14.1	+0.3
	comp=Z,0.3nm,0.5s,baz=240,slow=4.4,SNR=4.6						
TXAR	Lajitas Array	88.60	53	P	P	03 39 19.2	-0.1
	comp=Z,0.3nm,0.7s,baz=290,slow=3.0,SNR=4.2						
TXAR				pP	pP	03 39 32.4	+0.1
	comp=Z,0.3nm,0.6s,baz=310,slow=3.4,SNR=3.4						
H03S2	Juan Fernandez	146.68	95	T	T	06 29 30.0	
	baz=298,SNR=20						
H03S3	Juan Fernandez	146.69	94	T	T	06 29 30.2	
	baz=298,SNR=20						
H03S1	Juan Fernandez	146.70	95	T	T	06 29 31.0	
	baz=298,SNR=38						

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*HEL **09** 03:29:10.3±0.2, 67°.67N×34°.00E, h0^{km}, ML2.0, Suspected explosion*
*KOLA **09** 03:29:12.6, 67°.67N×33°.65E, h0^{km}, ML2.4, Error ellipse: s-maj=6.0km s-min=2.2km az=120.0, Khibiny Mines*
*NAO **09** 03:29:13.4±1.5, 67°.67N×33°.54E, ML2.8*
*IDC **09** 03:29:14.7±2.0, 67°.69N×33°.35E, h0^{km}, mb1 3.6/4, mb1mx3.0/51, mbtmp3.6/4, ML2.3/3, Error ellipse: s-maj=21.9km s-min=9.6km az=80.0*
ISC 09 03:29:11.2±1.0, **67°.68N**±0°.03×**33°.68E**±0°.05, **h0**^{km}, **n40**, σ**1^{s}46**/73, **3D, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	Apatity	0.15	223	P	Pg	03 29 14.9	+0.8
APA				S	Sg	03 29 17.3	+1.2
APZ9	Apatity	0.15	223	Pg	Pg	03 29 15.1	+0.9
APZ9				Lg	Lg	03 29 17.6	
APZ9	Apatity	0.15	223	Pg	Pg	03 29 15.1	+0.9
APZ9				Sg	Sg	03 29 17.6	+1.5
VRF	Varrio	1.55	274	PG	Pn	03 29 40.3	+0.2
	baz=90						
VRF				MSG		03 30 00.3	
	comp=Z,13nm,0.2s						
VRF				SN	Sg	03 30 00.6	-0.4
TERR	Teriberka	1.61	18	P	Pn	03 29 41.3	+0.4
TERR				S	Sn	03 30 02.5	+0.2
KU6	Riekki	2.24	224	PG	Pn	03 29 51.7	+2.2
	baz=43						
KU6				MSG		03 30 18.7	
	comp=Z,7.8nm,0.2s						
KU6				SG	Sb	03 30 21.4	+0.8
MSF	Maaselka	2.56	228	PG	Pb	03 29 57.6	-0.3
MSF				SG	Sg	03 30 32.2	-1.0
RNF	Rovaniemi	3.18	254	PN	Pn	03 30 03.5	+1.1
KEV	Kevo	3.20	314	Pn	Pn	03 30 04.3	+1.7
KEV				Sn	Sn	03 30 42.7	+1.3
KEV	Kevo	3.20	314	*e*P	Pn	03 30 04.4	+1.7
KEV				*e*S	Sn	03 30 42.4	+1.0
KEV	Kevo	3.20	314	PN	Pn	03 30 04.3	+1.7
KEV				SN	Sn	03 30 43.0	+1.5
ARA0	ARCESS Array S	3.52	306	Pn	Pn	03 30 08.1	+1.0
	baz=122,slow=16						
ARA0				Pg	Pg	03 30 17.5	-1.2
	baz=118,slow=16						
ARA0				Sn	Sn	03 30 49.6	+0.1
	baz=118,slow=28						
ARA0				Lg	Lg	03 31 00.9	
	baz=108,slow=37						
ARA0	ARCESS Array S	3.52	306	Pn	Pn	03 30 08.1	+1.0
	baz=122,slow=16						
ARA0				Pg	Pg	03 30 17.5	-1.2
	baz=118,slow=16						
ARA0				Sn	Sn	03 30 49.6	+0.1
	baz=118,slow=28						
ARA0	ARCESS Array S	3.52	306	PN	Pn	03 30 08.1	+1.0
	baz=121						
ARA0				SN	Sn	03 30 49.6	+0.1
ARCES	ARCESS Array B	3.52	306	Pn	Pn	03 30 08.1	+1.0
	baz=123,slow=15,SNR=89						
ARCES				Pg	Pb	03 30 16.4	+2.1
	baz=122,slow=16,SNR=14						
ARCES				Sn	Sn	03 30 48.8	-0.6
	baz=116,slow=24,SNR=13						
ARCES				Lg	Lg	03 31 01.0	
	baz=121,slow=24,SNR=11						
ARCES	ARCESS Array B	3.52	306	P	Pn	03 30 08.2	+1.0
ARCES				S	Sn	03 30 49.0	-0.4
KLF	Kolari	3.77	268	PN	Pn	03 30 12.5	+2.0
	baz=75						
KLF				SG	Sg	03 31 09.6	-2.5
HEF	Hetta	3.83	286	Pn	Pn	03 30 12.8	+1.4
HEF				Pg	Pb	03 30 22.1	+2.5
HEF				Sn	Sn	03 30 58.9	+1.8
HEF				Lg	Lg	03 31 12.7	
HEF	Hetta	3.83	286	*e*P	Pn	03 30 12.3	+0.9
HEF				*e*S	Sn	03 30 56.3	-0.7
HEF	Hetta	3.83	286	PN	Pn	03 30 12.6	+1.2
	baz=97						
HEF				SN	Sn	03 30 58.9	+1.8
TOF	Tornio	4.02	251	PG	Pb	03 30 22.9	+0.1
TOF				SN	Sn	03 31 02.3	+0.6
OUL	Oulu	4.07	234	PB	Pb	03 30 21.0	-2.7
	baz=44						
KTK1	Kautokeino	4.09	294	*e*P	Pn	03 30 17.1	+2.2
KTK1				IAML		03 31 26.4	
	comp=Z,18nm,0.6s						
PAJU	Pajala	4.14	266	PN	Pn	03 30 16.2	+0.7
	baz=73						
PAJU				SN	Sn	03 31 04.4	-0.2
LANU	Lannavaara	4.44	280	PN	Pn	03 30 20.0	+0.3
LANU				SG	Sg	03 31 30.0	-3.5
KALU	Kalix	4.48	251	PN	Pn	03 30 23.2	+3.1
ERTU	Ertsjaerv	4.63	261	PN	Pn	03 30 22.7	+0.5
ERTU				SN	Sn	03 31 16.6	+0.1
KIF	Kilpisjarvi	4.95	291	Pn	Pn	03 30 27.3	+0.6
KIF				Sn	Sn	03 31 22.9	-1.6
KIF	Kilpisjarvi	4.95	291	Pn	Pn	03 30 27.3	+0.6
KIF				Sn	Sn	03 31 22.9	-1.6
TRO	Tromso	5.73	297	*e*P	Pn	03 30 39.3	+2.0
TRO				*e*S	Sn	03 31 42.0	-1.6
FIA0	FINESS Array S	7.06	211	Pn	Pn	03 30 56.4	+0.7
FIA0				Sn	Sn	03 32 14.4	-2.1
	baz=30,slow=22						
FIA0				Lg	Lg	03 32 49.1	
	baz=29,slow=28						
FIA0	FINESS Array S	7.06	211	Pn	Pn	03 30 56.4	+0.7
FIA0				Sg	Sb	03 32 49.1	+10
	baz=29,slow=28						
FINES	FINESS Array B	7.06	211	Pn	Pn	03 30 56.3	+0.7
	comp=Z,0.2nm,0.3s,baz=28,slow=15,SNR=1.3						
FINES				Sn	Sn	03 32 15.0	-1.5
	comp=Z,0.2nm,0.3s,baz=32,slow=21,SNR=2.4						
FINES				Lg	Lg	03 32 50.4	
	comp=Z,1.1nm,0.3s,baz=20,slow=26,SNR=12						
KLMR	Klimovskoe	7.31	157	*e*Pn	Pn	03 31 01.2	+2.2
KLMR				AMP		03 31 10.4	
	comp=Z,14nm,1.2s						
KLMR				*e*Sn	Sn	03 32 19.9	-2.7
KLMR				*e*Sn	Sn	03 32 19.9	-2.7
KLMR				⇓Lg	Lg	03 32 56.6	
KLMR				⇓Lg	Lg	03 32 56.6	
KLMR				⇓Lg	Lg	03 32 56.6	
SPA0	Spitsbergen Ar	11.62	342	Pn	Pn	03 31 57.2	-0.8
	baz=138,slow=16						
SPA0	Spitsbergen Ar	11.62	342	Pn	Pn	03 31 57.2	-0.8
	baz=138,slow=16						
SPITS	Spitsbergen Ar	11.62	342	Pn	Pn	03 31 56.4	-1.5
	baz=144,slow=17,SNR=2.2						
NOA	NORSAR Array B	11.73	246	Pn	Pn	03 31 58.5	-1.1
	comp=Z,0.0nm,0.3s,baz=45,slow=11,SNR=1.1						
NRA0	NORESS Array S	11.83	245	Pn	Pn	03 32 00.2	-0.7
	baz=41,slow=14						
NRA0	NORESS Array S	11.83	245	Pn	Pn	03 32 00.2	-0.7
	baz=41,slow=14						

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*INET **09** 04:06:13.3, 11°.06N×86°.97W, h15^{km}, MW3.7*
UCR 09 04:06:15.9±1.9, **10°.88N**×**86°.81W**, **h23**^{km}±8^{km}, **MW4.0, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	Horizontes, Gu	1.20	98	*e*P	Pn	04 06 36.9	-0.4
HZTE				*e*S	Sb	04 06 55.0	+1.8
SAJU	San Juanillo,	1.35	127	*e*P	Pn	04 06 38.5	-0.8
SAJU				*e*S	Sn	04 06 56.7	+0.2
LAPC	Finca la Perla	1.35	94	*i* P	Pn	04 06 38.5	-1.0
LAPC				*i* S	Sb	04 06 57.2	-0.3
BUEV	Buena Vista	1.38	93	*i* P	Pn	04 06 39.2	-0.6
GUAI	GUAI	1.41	115	*i* P	Pn	04 06 39.8	-0.4
CUI	Cuipilapa	1.63	97	*i* P	Pn	04 06 43.2	0.0
INDI	Punta indio, G	1.63	128	*e*P	Pn	04 06 42.9	-0.3
INDI				*i* S	Sn	04 07 03.7	+0.2
ACAL	Aguas Claras	1.76	98	*i* P	Pn	04 06 45.6	+0.6
JTS	Las Juntas de	1.92	108	*e*P	Pn	04 06 46.3	-0.8
SRBA	San Rafael, Bu	3.77	115	*e*P	Pn	04 07 14.0	+1.3

NNC 09 04:41:13.1±4.1, **40°.62N**×**83°.61E**, **h0**^{km}, **mb3.3, mpv3.0, 1C-1D, Error ellipse: s-maj=112.8km s-min=28.9km az=38.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	4.09	313	Pg	Pg	04 42 29.0	-2.6
	0.3nm,0.2s						
PDGK				Lg	Lg	04 43 24.2	
	1.8nm,0.3s						
PDGK	Podgornoye	4.09	313	⇓Pn	Pn	04 42 16.8	-0.3
	0.4nm,0.3s						
PDGK				⇑Lg	Lg	04 43 25.3	
	1.7nm,0.3s						
SATY	Saty	4.59	304	Pg	Pg	04 42 38.2	-2.9
	1.0nm,0.2s						
BLB	Baldybastay	5.15	314	Pg	Pb	04 42 45.6	+1.5
	2.8nm,0.3s						
BLB				Lg	Lg	04 43 53.6	
	3.0nm,0.3s						
KTBS	Karatobe	6.00	303	Pg	Pb	04 43 01.2	+2.6
	1.1nm,0.8s						
KTBS				Lg	Lg	04 44 19.9	
	8.8nm,0.8s						

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*SKHL **09** 05:06:47.6±0.3, 46°.10N×152°.80E, h57^{km}±2^{km}, mb5.4/7*
*MOS **09** 05:06:47.9±1.2, 46°.31N×152°.58E, h53^{km}, mb4.8/20, Error ellipse: s-maj=7.1km s-min=5.5km az=75.9*
*JMA **09** 05:06:47.2±0.7, 46°.30N×152°.64E, h30^{km}, M5.0*
*NEIC **09** 05:06:50.2±1.7, 46°.44N±0°.08×152°.2E±0°.1, h51^{km}±6^{km}, mb4.7/52, Error ellipse: s-maj=12.8km s-min=9.5km az=140.0*
*IDC **09** 05:06:50.4±0.5, 46°.40N×152°.41E, h56^{km}±4^{km}, mb3.9/24, mb1 4.1/30, mb1mx4.1/46, mbtmp4.2/30, MS3.6/7, Ms1 3.6/7, ms1mx3.2/32, Error ellipse: s-maj=13.9km s-min=10.4km az=144.0*
ISC 09 05:06:49.5±0.4, **46°.22N**±0°.05×**152°.64E**±0°.05, **h54**^{km}±3^{km}, **h54**^{km}**:pP-P, n277**, σ**1^{s}43**/285, **mb4.6**/78, **MS3.8**/7, **13C-25D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.49	255	*e*PN	Pn	05 07 41.9	+0.8
KUR				*e*S	Sn	05 08 21.3	+0.1
KUR				pmax	pmax		
	comp=Z,402nm,0.3s						
KUR				pmax	pmax		
	comp=N,207nm,0.2s						
KUR				pmax	pmax		
	comp=E,147nm,0.3s						
KUR				smax	smax		
	comp=N,1µm,0.4s						
KUR				smax	smax		
	comp=E,394nm,0.2s						
KUR	Kuril'sk	3.49	255	*e*P	Pn	05 07 42.0	+0.8
KUR				AMB	AMB	05 07 45.0	
	comp=E,400nm,0.3s						
KUR				*e*S	Sn	05 08 21.3	+0.1
KUR				A	A	05 08 30.0	
	comp=E,1µm,0.4s						
KUR				A	A	05 08 30.0	
	comp=E,390nm,0.4s						
SHO	Shikotan	4.74	242*c*	*i*PN	Pn	05 07 56.7	-1.7
SHO				pmax	pmax		
	comp=N,62nm,0.3s						
SHO				pmax	pmax		
	comp=Z,205nm,0.3s						
SHO				pmax	pmax		
	comp=E,102nm,0.2s						
SHO				MLR	MLR		
	comp=Z,117nm,12.0s						
SHO	Shikotan	4.74	242	*i* P	Pn	05 07 56.9	-1.5
SHO				AMB	AMB	05 07 59.0	
	comp=Z,210nm,0.3s						
SHO				*e*S	Sn	05 08 49.9	-2.1
SHO				A	A	05 08 58.0	
	comp=Z,290nm,0.5s						
SHO				A	A	05 08 58.0	
	comp=Z,330nm,0.5s						
SKR	Severo-Kuril’s	5.03	26	*e*PN	Pn	05 08 01.0	-1.2
SKR				pmax	pmax		
	comp=Z,465nm,0.6s						
SKR				MLR	MLR		
	comp=Z,700nm,12.0s						
SKR	Severo-Kuril’s	5.03	26	*e*P	Pn	05 08 01.0	-1.2
SKR				AMB	AMB	05 08 03.2	
	comp=Z,470nm,0.6s						
SKR				*e*S	Sn	05 08 55.9	-3.0
SKR				A	A	05 09 00.0	

	comp=Z,850nm,0.5s						
SKR				A	A	05 09 00.0	
	comp=Z,1µm,0.5s						
YUK	Yuzh-Kuril'sk	5.27	248	d iPN	Pn	05 08 06.1	+0.5
YUK				eS	Sn	05 09 04.1	-0.9
YUK				pmax	pmax		
	comp=Z,589nm,0.2s						
YUK				pmax	pmax		
	comp=E,111nm,0.1s						
YUK				pmax	pmax		
	comp=N,107nm,0.2s						
YUK				smax	smax		
	comp=E,747nm,0.5s						
YUK				smax	smax		
	comp=N,756nm,0.7s						
YUK				MLR	MLR		
	comp=Z,136nm,17.0s						
YUK				MLR	MLR		
	comp=E,125nm,15.0s						
YUK	Yuzh-Kuril'sk	5.27	248	i P	Pn	05 08 06.1	+0.5
YUK				AMB	AMB	05 08 09.0	
	comp=E,600nm,0.4s						
YUK				eS	Sn	05 09 05.2	+0.2
YUK				A	A	05 09 17.0	
	comp=E,770nm,0.6s						
YUK				A	A	05 09 17.0	
	comp=E,750nm,0.6s						
YUK				AMS	AMS	05 10 19.4	
	comp=E,130nm,16.0s						
YUK				AMS	AMS	05 10 19.4	
	comp=E,140nm,16.0s						
GLVR	Golovnino	5.63	246	ePN	Pn	05 08 10.5	0.0
GLVR				pmax	pmax		
	comp=Z,265nm,0.3s						
GLVR				pmax	pmax		
	comp=E,114nm,0.2s						
GLVR				pmax	pmax		
	comp=N,22nm,0.1s						
GLVR	Golovnino	5.63	246	eP	Pn	05 08 10.5	0.0
GLVR				AMB	AMB	05 08 14.0	
	comp=N,300nm,0.3s						
GLVR				eS	Sn	05 09 11.0	-2.8
GLVR				A	A	05 09 29.8	
	comp=N,6µm,0.5s						
GLVR				A	A	05 09 29.8	
	comp=N,3µm,0.5s						
RUSJ	Misakicho	5.64	251	ePN	Pn	05 08 11.9	+1.2
RUSJ				S	Sn	05 09 16.9	+2.8
NEM2	Nemuro 2	5.68	242	P	Pn	05 08 09.3	-1.9
NEM2				eS	Sn	05 09 10.1	-5.0
NMR	Nemuro--Hokkai	5.69	242	⇑iPN	Pn	05 08 09.3	-2.0
NMR	Nemuro--Hokkai	5.69	242	i P	Pn	05 08 09.3	-2.0
JRA	Rausu	5.79	249	P	Pn	05 08 13.4	+0.6
PAU	Pauzhetka	5.92	26	eP	Pn	05 08 13.5	-1.0
PAU				AMB	AMB	05 08 16.7	
	comp=N,130nm,0.4s						
PAU				eS	Sn	05 09 19.3	-1.7
PAU				A	A	05 09 21.6	
	comp=N,400nm,0.4s						
PAU				A	A	05 09 21.6	
	comp=N,600nm,0.4s						
JNK	Nakash	6.21	248	P	Pn	05 08 18.6	+0.1
JNK				eS	Sn	05 09 26.7	-1.5
JAK	Akkeshi	6.53	243	P	Pn	05 08 20.9	-1.9
JTKR	Abashiri--Toko	6.58	253	P	Pn	05 08 24.4	+0.9
YSS	Yuzh-Sakhalins	6.85	280	ePN	Pn	05 08 29.5	+2.2
YSS				eS	Sn	05 09 49.4	+5.6
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS				MLR	MLR		
	comp=Z,400nm,17.0s						
YSS	Yuzh-Sakhalins	6.85	280	eP	Pn	05 08 28.5	+1.2
YSS				AMB	AMB	05 08 33.8	
	comp=Z,60nm,0.5s						
YSS				eS	Sn	05 09 43.5	-0.3
YSS				A	A	05 09 50.3	
	comp=Z,120nm,0.7s						
YSS				A	A	05 09 50.3	
	comp=Z,120nm,0.7s						
JMP	Maruseppu	6.93	255	P	Pn	05 08 29.8	+1.4
JAR	Ashorobuto	6.96	248	P	Pn	05 08 28.8	0.0
JOB	Onbets	7.11	245	P	Pn	05 08 29.9	-0.9
JKK2	Kamakawa 2	7.39	255	P	Pn	05 08 36.0	+1.3
JKA	Kamikawa-asahi	7.41	257	eP	Pn	05 08 36.1	+1.2
JKA	Kamikawa-asahi	7.41	257	Pn	Pn	05 08 36.0	+1.2
ASAJ	Asahikawa	7.41	257	P	Pn	05 08 35.8	+1.0
	comp=Z,6.6nm,0.3s,baz=75,slow=20,SNR=15						
ASAJ	Asahikawa	7.41	257	P	Pn	05 08 36.6	+1.7
ASAJ	Asahikawa	7.41	257	PN	Pn	05 08 36.1	+1.2
JCH	Churui	7.56	245	P	Pn	05 08 35.4	-1.6
PEA0B	Petropavlovsk-	7.63	24	PN	Pn	05 08 37.0	-0.9
PEA0B	Petropavlovsk-	7.63	24		Pn	05 08 37.0	-0.9
PETK	Petropavlovsk-	7.63	24	P	Pn	05 08 37.5	-0.4
	comp=Z,2.5nm,0.3s,baz=176,slow=10,SNR=22						
PETK				LR	LR	05 11 31.0	
	comp=Z,254nm,21.3s,baz=203,slow=37						
PETK	Petropavlovsk-	7.63	24		Pn	05 08 36.3	-1.6
UGL	Uglegorsk	7.69	296	eP	Pn	05 08 40.5	+1.8
UGL				AMB	AMB	05 08 42.0	
	comp=Z,50nm,0.5s						
JFR	Furan	7.79	250	P	Pn	05 08 40.3	+0.2
PET	Petropavlovsk	7.84	28	i PN	Pn	05 08 39.8	-1.0
PET	Petropavlovsk	7.84	28	eP	Pn	05 08 39.8	-1.0
PET				eS	Sn	05 10 04.1	-3.9
JAB	Ashibetsu	7.89	254	P	Pn	05 08 42.2	+0.8
ERM	Erimo	8.02	242	cePN	Pn	05 08 42.8	-0.4
ERM				pmax	pmax		
	comp=Z,83nm,1.0s						
ERM	Erimo	8.02	242	Pn	Pn	05 08 43.0	-0.1
TYV	Tymovskoe	8.09	309	ePN	Pn	05 08 45.9	+1.7
TYV				eS	Sn	05 10 15.1	+1.0
TYV				pmax	pmax		
	comp=Z,15nm,1.1s						
TYV				pmax	pmax		
	comp=Z,500nm,4.1s						
TYV				smax	smax		
	comp=N,200nm,4.9s						
TYV				smax	smax		
	comp=E,400nm,4.9s						
TYV				smax	smax		
	comp=N,21nm,1.4s						
TYV				smax	smax		
	comp=E,27nm,1.4s						
TYV	Tymovskoe	8.09	309	eP	Pn	05 08 45.9	+1.7
TYV				AMB	AMB	05 08 46.1	
	comp=E,10.0nm,0.4s						
JBT2	Biratori 2	8.11	249	P	Pn	05 08 43.7	-0.9
JNBK	Urakawa-nobuka	8.12	244	P	Pn	05 08 42.7	-1.9
JRBN	Rebuntou	8.13	269	P	Pn	05 08 48.1	+3.4
JKB	Kayabe	9.41	247	P	Pn	05 09 00.0	-2.3
JSH	Shimam	9.70	253	P	Pn	05 09 06.6	+0.4
JYM2	Yakumo 2	9.73	249	P	Pn	05 09 05.1	-1.5
JSR	Shiriuchi	9.99	246	P	Pn	05 09 07.8	-2.5
JANG	Nango	9.99	238	P	Pn	05 09 06.0	-4.3
JTM	Tenmabayashi	10.01	241	P	Pn	05 09 07.4	-3.1
JTM	Tenmabayashi	10.01	241	Pn	Pn	05 09 08.1	-2.4
OFUJ	Ofunato	10.78	232	P	Pn	05 09 17.0	-4.0
JRG	Rokugo	11.14	237	P	Pn	05 09 22.3	-3.7
GRNR	Gornyy	11.68	299	⇑iPN	Pn	05 09 36.7	+3.5
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,230nm,14.0s						
GRNR				MLR	MLR		
	comp=N,130nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,160nm,18.0s						
GRNR	Gornyy	11.68	299	eP	Pn	05 09 36.7	+3.5
MA2	Magadan	13.42	356	PN	Pn	05 09 55.7	-1.3
MA2	Magadan	13.42	356		Pn	05 09 55.7	-1.3
JSD	Sado	13.43	238		Pn	05 09 53.4	-3.8
KLR	Kul'dur	14.37	290	P	Pn	05 10 08.7	-1.1
	baz=336,slow=20,SNR=4.6						
KLR	Kul'dur	14.37	290	i P	Pn	05 10 10.4	+0.6
KLR	Kul'dur	14.37	290	eP	Pn	05 10 07.4	-2.4
MJAR	Matsushiro Arr	14.50	233	P	Pn	05 10 12.2	+0.6
	comp=Z,0.2nm,0.3s,baz=28,slow=12,SNR=5.3						
MAJO	Matsushiro	14.50	233	P	Pn	05 10 11.1	-0.5
MAJO	Matsushiro	14.50	233	Pn	Pn	05 10 11.1	-0.5
MAT	Matsushiro	14.50	233	P	Pn	05 10 11.7	+0.1
USA0B	Ussuriysk Arra	14.70	270	i P	Pn	05 10 14.7	+0.7
USRK	Ussuriysk Ar.	14.70	270	P	Pn	05 10 13.2	-0.9
	baz=65,slow=12,SNR=8.5						
USRK	Ussuriysk Ar.	14.70	270	P	Pn	05 10 15.7	+1.7
USRK	Ussuriysk Ar.	14.70	270	P	Pn	05 10 15.7	+1.7
SEY	Seymchan	16.75	360	P	Pn	05 10 39.4	-0.6
	comp=Z,1.2nm,0.3s,baz=182,slow=14,SNR=13						
JWT	Wachi	16.99	236	P	P	05 10 45.2	+0.7
ZEA	Zeya	17.91	304	eP	P	05 10 55.6	+1.2
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZEA	Zeya	17.91	304	eP	Pn	05 10 51.7	-2.7
KSRS	Korea Array	20.33	253	P	P	05 11 21.6	+0.5
	comp=Z,4.9nm,0.7s,baz=61,slow=11,SNR=16						
YAK	Yakutsk	20.59	328	P	P	05 11 23.0	-0.6
	comp=Z,25nm,0.6s,baz=116,slow=1.4,SNR=7.0						
YAK	Yakutsk	20.59	328	eP	P	05 11 22.9	-0.7
YAK				e		05 11 45.1	
YAK				eS	S	05 15 09.0	-1.6
YAK				e*SS	sS	05 15 31.6	+2.3
YAK				e		05 15 32.2	
YAK				e		05 22 51.3	
YAK				pmax	pmax		
	comp=Z,22nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,179nm,2.8s						
YAK				pmax	pmax		
	comp=E,157nm,3.2s						
YAK				pmax	pmax		
	comp=N,173nm,3.2s						
YAK				smax	smax		
	comp=N,142nm,3.3s						
YAK				smax	smax		
	comp=E,57nm,3.0s						
TJN	Taejon	21.31	252	ceP	P	05 11 33.8	+2.3
BILL	Bilibino	22.98	13	eP	P	05 11 48.7	-0.3
BILL				e*PP	pP	05 12 01.7	+1.1
BILL				e*SP	sP	05 12 07.9	+0.9
BILL				e		05 12 14.8	
BILL				e		05 15 38.7	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BILL				MLR	MLR		
	comp=Z,121nm,6.0s						
BILL	Bilibino	22.98	13	eP	P	05 11 48.7	-0.3
BILL	Bilibino	22.98	13	P	P	05 11 48.9	-0.2
H11N2	WAKE ISLAND Hy	28.91	151	T	T	05 44 26.1	
	baz=340,slow=76,SNR=5056						
H11N1	WAKE ISLAND Hy	28.92	151	T	T	05 44 25.3	
	baz=340,slow=76,SNR=3558						
H11N3	WAKE ISLAND Hy	28.92	151	T	T	05 44 27.4	
	baz=340,slow=76,SNR=3111						
H11S1	WAKE ISLAND Hy	29.98	153	T	T	05 45 28.6	
	baz=340,slow=76,SNR=3551						
H11S3	WAKE ISLAND Hy	29.99	153	T	T	05 45 45.2	
	baz=340,slow=76,SNR=3383						
H11S2	WAKE ISLAND Hy	30.00	153	T	T	05 45 29.9	
	baz=340,slow=76,SNR=2452						
ULN	Ulaanbaatar	30.77	290	i P	P	05 12 59.3	-0.4
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	Ulaanbaatar	30.77	290	eP	P	05 12 59.3	-0.4
SONM	Songino Array	31.20	290	P	P	05 13 02.1	-1.4
	comp=Z,0.4nm,0.4s,baz=82,slow=8.4,SNR=4.6						
TLY	Talaya	32.13	298	c iP	P	05 13 11.4	-0.1
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TLY	Talaya	32.13	298	eP	P	05 13 11.4	-0.1
A21K	Barrow	34.62	26	P	P	05 13 33.5	+0.7
KDAK	Kodiak Island	34.69	50	pP	pP	05 13 47.8	+1.3
	comp=Z,7.3nm,0.6s,baz=284,slow=6.3,SNR=1.5						
KDAK	Kodiak Island	34.69	50	P	P	05 13 34.5	+0.9
KDAK				pmax	pmax		
	comp=Z,27nm,1.0s						
KDAK	Kodiak Island	34.69	50	P	P	05 13 34.5	+0.9
H21K	Melozitna Rive	34.73	36	P	P	05 13 35.2	+1.3
H21K					pP	05 13 47.7	+0.8
H21K				IAmb	IAmb	05 13 49.4	
	comp=Z,13nm,0.9s						
PPLA	Purkeypile	34.77	41	P	P	05 13 36.8	+2.4
XAN	Xi'an	35.15	266	P	P	05 13 43.5	+5.6
XAN				pP	pP	05 13 52.4	+1.6
XAN				pmax	pmax		
	comp=Z,10.0nm,1.6s						
KTH	Kantishna Hill	35.37	40	P	P	05 13 40.4	+0.9
KTH					pwP	05 13 55.3	-1.2
MLY	Manley	35.53	38	P	P	05 13 41.8	+0.9
MLY					pP	05 13 55.5	+1.8
MLY				IAmb	IAmb	05 13 56.6	
	comp=Z,7.9nm,0.9s						
TRF	Thorofare Moun	35.65	40	P	P	05 13 43.0	+0.9
TRF				IAmb	IAmb	05 14 11.0	
	comp=Z,15nm,1.2s						
COLD	Coldfoot	35.95	34	P	P	05 13 45.7	+1.3
COLD				IAmb	IAmb	05 13 59.7	
	comp=Z,6.5nm,0.6s						
NEA2	Nenana	36.22	38		pP	05 14 01.6	+2.0
NEA2				IAmb	IAmb	05 14 02.6	
	comp=Z,8.2nm,0.8s						
GHO	Glory Hole Cre	36.30	43	P	P	05 13 48.5	+1.1
TOLK	Toolik Lake Re	36.36	32	IAmb	IAmb	05 14 03.2	
	comp=Z,6.7nm,0.6s						
SML	Sawmill	36.58	43	P	P	05 13 51.5	+1.7
SML					pP	05 14 04.5	+1.7
MDM	Murphy Dome	36.59	38		pwP	05 14 05.0	-1.7
MDM				IAmb	IAmb	05 14 05.5	
	comp=Z,10.0nm,0.9s						
WRH	Wood River Hil	36.64	39	P	P	05 13 51.3	+1.0
WRH				IAmb	IAmb	05 14 07.4	
	comp=Z,11nm,1.2s						
COLA	College	36.75	38	i P	P	05 13 51.4	+0.3
COLA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CCB	Clear Creek Bu	36.77	38	P	P	05 13 52.2	+0.9
CCB					pwP	05 14 06.4	-2.0
CCB				IAmb	IAmb	05 14 09.6	
	comp=Z,8.8nm,1.3s						
H24K	Noodor Dome	36.77	36	IAmb	IAmb	05 14 13.7	
	comp=Z,14nm,1.2s						
POKR	Poker Plat Res	36.93	38		pwP	05 14 08.2	-1.4
DHY	Denali Highway	36.97	41	P	P	05 13 53.6	+0.3
DHY				IAmb	IAmb	05 14 08.4	
	comp=Z,7.5nm,0.7s						
SCM	Sheep Creek Mo	37.05	43	P	P	05 13 55.0	+1.1
SCM				pmax	pmax		
	comp=Z,28nm,1.3s						
SCM	Sheep Creek Mo	37.05	43	P	P	05 13 55.0	+1.1
HDA	Harding Lake	37.14	39	IAmb	IAmb	05 14 09.8	
	comp=Z,11nm,0.7s						
IL31		37.16	38	IAmb	IAmb	05 14 10.4	
	comp=Z,9.6nm,1.1s						
ILAR	Eielson Array	37.16	38	P	P	05 13 55.2	+0.6
	comp=Z,2.1nm,0.7s,baz=258,slow=7.7,SNR=40						
ILAR				pP	pP	05 14 08.8	+1.2
	comp=Z,4.7nm,0.9s,baz=257,slow=6.4,SNR=10						
SCRK	Sand Creek	38.45	39	P	P	05 14 05.8	+0.1
GTA	Gaotai	38.73	279	eP	P	05 14 11.7	+3.3
GTA				pP	pP	05 14 20.9	-0.7
GTA				sP	pwP	05 14 25.3	+0.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
M26K	Nabesna, AK	39.03	42	P	P	05 14 12.6	+2.1
M26K					pwP	05 14 26.6	-1.0
M26K				IAmb	IAmb	05 14 27.6	
	comp=Z,14nm,0.9s						
L27K	Beaver Creek,	39.49	41	P	P	05 14 16.2	+1.9
L27K				IAmb	IAmb	05 14 30.9	
	comp=Z,11nm,0.8s						
EGAK	Eagle	39.61	38		pP	05 14 29.6	+1.3
EGAK				IAmb	IAmb	05 14 30.3	
	comp=Z,13nm,0.8s						
CTGM	Chitina Glacie	40.01	44		pwP	05 14 35.0	-1.0
INK	Inuvik	42.27	32	P	P	05 14 38.0	+1.0
	comp=Z,2.0nm,0.5s,baz=290,slow=6.2,SNR=19						
INK				pP	pP	05 14 51.9	+1.7
	comp=Z,6.8nm,0.6s,baz=291,slow=6.5,SNR=13						
INK	Inuvik	42.27	32	P	P	05 14 38.5	+1.5
INK	Inuvik	42.27	32	IAmb	IAmb	05 14 52.9	
	comp=Z,8.1nm,0.7s						
DGZ	Jazzator, Alta	42.58	299	i P	P	05 14 38.3	-1.7
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	42.66	306	P	P	05 14 37.4	-2.9
	comp=Z,0.9nm,0.4s,baz=63,slow=7.6,SNR=4.5						
ZALV				pPcP		05 16 45.8	
	comp=Z,0.9nm,0.3s,baz=85,slow=3.4,SNR=4.9						
ZALV				LR	LR	05 35 29.8	
	comp=Z,72nm,18.1s,baz=49,slow=40						
A36M	Sachs Harbour	44.47	26	P	P	05 14 55.8	+1.2
MK31	Makanchi Array	46.90	298	i P	P	05 15 12.3	-1.9
MK31	Makanchi Array	46.90	298	P	P	05 15 12.1	-2.1
MKAR	Makanchi Array	46.90	298	P	P	05 15 12.7	-1.5
	comp=Z,2.2nm,0.6s,baz=67,slow=7.0,SNR=24						
MKAR				PcP	PcP	05 16 47.8	+1.7
	comp=Z,0.6nm,0.6s,baz=76,slow=6.1,SNR=2.3						
MKAR				pPcP		05 17 01.3	
	comp=Z,1.3nm,0.6s,baz=77,slow=1.0,SNR=6.0						
MKAR	Makanchi Array	46.90	298	P	P	05 15 12.3	-1.9
KURK	Kurchatov	47.39	304	ceP	P	05 15 15.3	-2.6
KURK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KURK	Kurchatov	47.39	304	P	P	05 15 15.6	-2.3
EUNU	Eureka	49.71	11	IAmb	IAmb	05 15 36.6	
	comp=Z,9.2nm,0.9s						
BRVK	Borovoye	50.98	310	i P	P	05 15 43.3	-2.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA	Yellowknife Ar	51.54	36	P	P	05 15 50.3	+1.0
	comp=Z,1.1nm,0.6s,baz=297,slow=7.0,SNR=9.2						
YKA				pP	pP	05 16 04.1	+1.2
	comp=Z,1.9nm,0.7s,baz=298,slow=7.0,SNR=9.2						
YKA	Yellowknife Ar	51.54	36	i P	P	05 15 50.2	+0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	51.54	36	P	P	05 15 50.0	+0.6
CMAR	Chiang Mai Arr	51.93	256	P	P	05 15 54.2	+1.3
	comp=Z,1.5nm,0.5s,baz=38,slow=7.7,SNR=8.0						
CMAR				pP	pP	05 16 07.7	+1.7
	comp=Z,0.9nm,0.2s,baz=37,slow=8.0,SNR=2.5						
CMAR				LR	LR	05 38 51.5	
	comp=Z,33nm,18.6s,baz=95,slow=37						
AAK	Ala-Archa	53.78	296	i P	P	05 16 05.1	-1.3
AAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AAK	Ala-Archa	53.78	296	eP	P	05 16 05.1	-1.3
DAG	Danmarks Havn	57.16	358	i P	P	05 16 29.0	-1.0
ARCES	ARCESS Array B	58.24	341	P	P	05 16 36.1	-1.5
	comp=Z,3.3nm,0.8s,baz=25,slow=2.6,SNR=10.0						
NVAR	Mina Array Bea	62.97	62	P	P	05 17 10.2	-0.4
	comp=Z,0.2nm,0.5s,baz=305,slow=6.3,SNR=2.0						
NVAR				pP	pP	05 17 26.5	+2.1
	comp=Z,0.8nm,0.7s,baz=298,slow=7.4,SNR=5.7						
FINES	FINESS Array B	64.38	335	P	P	05 17 17.5	-1.7
	comp=Z,4.5nm,0.5s,baz=33,slow=6.2,SNR=18						
PDAR	Pinedale Array	65.32	53	P	P	05 17 25.9	-0.1
	comp=Z,0.3nm,0.8s,baz=259,slow=0.5,SNR=2.2						
PDAR				pP	pwP	05 17 42.2	-1.6
	comp=Z,0.8nm,0.7s,baz=285,slow=3.6,SNR=7.2						
OBN	Obninsk	65.56	325	eP	P	05 17 25.7	-1.2
OBN				e*PP	pP	05 17 38.8	-2.3
OBN				e*SP	sP	05 17 47.1	+0.2
OBN				e		05 17 58.0	
OBN				e		05 19 51.1	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,118nm,17.0s						
OBN	Obninsk	65.56	325	eP	P	05 17 25.7	-1.2
GEYT	Alibeck	66.59	301	P	P	05 17 32.2	-1.8
	comp=Z,3.8nm,0.7s,baz=50,slow=12,SNR=5.0						
GEYT	Alibeck	66.59	301	IAmb	IAmb	05 17 35.0	
	comp=Z,3.9nm,0.8s						
WRAB	Tennant Creek	67.90	199	ceP	P	05 17 43.8	+1.6
WRAB				pmax	pmax		
	comp=Z,13nm,2.5s						
WRA	Warramunga Arr	67.91	199	P	P	05 17 42.8	+0.5
	comp=Z,2.4nm,0.7s,baz=19,slow=7.0,SNR=24						
WRA	Warramunga Arr	67.91	199	i P	P	05 17 42.7	+0.4
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	67.91	199	P	P	05 17 43.0	+0.7
NB2	NORSAR Subarra	68.62	341	P	P	05 17 45.2	-1.2
	comp=Z,3.1nm,0.4s,baz=29,slow=6.5						
NOA	NORSAR Array B	68.62	341	P	P	05 17 45.8	-0.5
	comp=Z,2.4nm,0.5s,baz=29,slow=6.5,SNR=27						
NOA				LR	LR	05 51 24.6	
	comp=Z,55nm,18.4s,baz=310,slow=39						
KIV	Kislovodsk	70.93	314	eP	P	05 17 58.9	-2.0
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV	Kislovodsk	70.93	314	eP	P	05 17 58.9	-2.0
KBZ	Khabaz	70.99	314	P	P	05 18 00.8	-0.3
	comp=Z,4.7nm,0.8s,baz=90,slow=1.8,SNR=8.5						
KBZ	Khabaz	70.99	314	ceP	P	05 18 01.7	+0.6
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KBZ	Khabaz	70.99	314	eP	P	05 18 01.7	+0.6
ASAR	Alice Springs	71.61	198	P	P	05 18 06.5	+1.6
	comp=Z,1.8nm,0.6s,baz=12,slow=6.1,SNR=34						
ASAR	Alice Springs	71.61	198	P	P	05 18 06.9	+1.9
AKASG	Malin Array Be	71.80	326	P	P	05 18 04.6	-1.4
	comp=Z,2.9nm,0.5s,baz=35,slow=6.1,SNR=15						
AKASG				LR	LR	05 53 44.9	
	comp=Z,63nm,19.1s,baz=310,slow=39						
AKASG	Malin Array Be	71.80	326	i P	P	05 18 04.5	-1.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SORM	Soroca	74.19	325	⇓P	P	05 18 19.3	-0.8
SORM	Soroca	74.19	325	⇓P	P	05 18 19.3	-0.8
BUR08	Bucovina Ar. S	75.83	326	P	P	05 18 28.9	-0.7
BUR08				IAmb	IAmb	05 18 30.3	
	comp=Z,9.0nm,0.6s						
BURAR	Bucovina Array	75.85	326	⇓P	P	05 18 29.8	0.0
BURAR	Bucovina Array	75.85	326	⇓P	P	05 18 29.8	0.0
UZH	Uzhgorod	76.09	329	eP	P	05 18 31.7	+0.7
UZH				e		05 18 40.9	
TESR	Tescani	76.19	325	⇓P	P	05 18 30.7	-0.9
TRPA	Tarpa	76.42	328	⇓P	P	05 18 32.8	-0.1
CHVC	Chvalec	76.52	333	eP	P	05 18 34.0	+0.5
DPC	Dobruska-Polom	76.65	333	eP	P	05 18 34.6	+0.4
DPC	Dobruska-Polom	76.65	333	eP	P	05 18 34.6	+0.4
LANS	Liptovska Anna	76.65	331	eP	P	05 18 35.0	+0.8
LANS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LANS	Liptovska Anna	76.65	331	eP	P	05 18 35.0	+0.8
VRI	Vrincioaia	76.69	324	⇓P	P	05 18 34.2	-0.3
VRI	Vrincioaia	76.69	324	⇓P	P	05 18 34.2	-0.3
PLOR	Plostina	76.73	324	⇓P	P	05 18 31.9	-2.8
PLOR	Plostina	76.73	324	⇓P	P	05 18 31.9	-2.8
KRLC	Kraliky	76.74	333	⇑eP	P	05 18 34.6	-0.1
KRLC	Kraliky	76.74	333	eP	P	05 18 34.6	-0.1
MORC	Moravsky Berou	76.75	332	eP	P	05 18 34.9	+0.1
MORC	Moravsky Berou	76.75	332	IAmb	IAmb	05 18 35.7	
	comp=Z,5.9nm,0.8s						
CLL	Collm	76.81	335	i P	P	05 18 34.2	-0.8
CLL				pmax	pmax		
	comp=Z,11nm,0.7s						
CLL	Collm	76.81	335	i P	P	05 18 34.2	-0.8
	comp=Z,11nm,0.7s						
CLL	Collm	76.81	335	P	P	05 18 34.0	-1.0
CLL				IAmb	IAmb	05 18 35.2	
	comp=Z,10.0nm,0.7s						
TPGR	Topolog	76.81	323	⇓P	P	05 18 35.3	+0.1
MLR	Muntele Rosu	77.31	325	⇓P	P	05 18 37.8	-0.3
MLR	Muntele Rosu	77.31	325	⇓P	P	05 18 37.8	-0.3
MLR	Muntele Rosu	77.31	325	P	P	05 18 37.9	-0.2
MLR				IAmb	IAmb	05 18 39.6	
	comp=Z,7.8nm,0.7s						
VYHS	Vyhne	77.43	331	eP	P	05 18 39.0	+0.4
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VYHS	Vyhne	77.43	331	eP	P	05 18 39.0	+0.4
VRAC	Vranov	77.47	332	eP	P	05 18 39.3	+0.5
JAVC	Velka Javorina	77.50	331	eP	P	05 18 40.2	+1.2
PRU	Pruhonice	77.52	334	⇑eP	P	05 18 38.8	-0.2
PRU	Pruhonice	77.52	334	eP	P	05 18 38.8	-0.2
PSZ	Piszkesteto	77.55	330	IAmb	IAmb	05 18 40.6	
	comp=Z,9.1nm,1.0s						
VOIR		77.71	325	⇓P	P	05 18 40.9	+0.6
VOIR		77.71	325	⇓P	P	05 18 40.9	+0.6
KRUC	Moravsky	77.75	332	eP	P	05 18 40.6	+0.3
SMOL	Smolenice	77.88	331	eP	P	05 18 41.8	+0.7
SMOL	Smolenice	77.88	331	eP	P	05 18 41.8	+0.7
ARR	Arges	77.93	325	⇓P	P	05 18 43.1	+1.6
TX31	Lajitas Ar. Si	78.03	60	P	P	05 18 44.4	+2.0
TX31				IAmb	IAmb	05 19 06.8	
	comp=Z,8.7nm,1.1s						
TX32	Lajitas Array	78.03	60	P	P	05 18 44.0	+1.6

TXAR	Lajitas Array	78.03	60	P	P	05 18 44.1	+1.7
	comp=Z,0.7nm,0.6s,baz=295,slow=4.3,SNR=17						
TXAR	Lajitas Array	78.03	60	P	P	05 18 43.7	+1.3
TXAR	Lajitas Array	78.03	60	P	P	05 18 43.7	+1.3
MODS	Modra-Piesok	78.06	331	eP	P	05 18 41.9	-0.2
MODS				pmax	pmax		
	comp=Z,14nm,1.1s						
MODS	Modra-Piesok	78.06	331	eP	P	05 18 41.9	-0.2
STKA	Stephens Creek	78.38	190	P	P	05 18 45.1	+1.4
	comp=Z,1.4nm,0.7s,baz=351,slow=10,SNR=3.1						
STKA				LR	LR	05 58 19.7	
	comp=Z,17nm,18.1s,baz=24,slow=39						
STKA	Stephens Creek	78.38	190	IAmb	IAmb	05 18 46.3	
	comp=Z,1.6nm,1.2s						
BRTR	Keskin Array B	78.55	317	P	P	05 18 44.8	-0.3
	comp=Z,2.2nm,0.8s,baz=62,slow=5.7,SNR=5.7						
BRTR				LR	LR	05 58 32.6	
	comp=Z,62nm,18.0s,baz=314,slow=40						
KHC	Kasperske Hory	78.57	334	⇑iP	P	05 18 45.3	+0.4
KHC				esP	sP	05 19 03.9	-1.3
KHC	Kasperske Hory	78.57	334	⇑iP	P	05 18 45.3	+0.4
KHC				e		05 19 03.9	
CKRC	Cesky Krumlov	78.62	333	eP	P	05 18 46.6	+1.4
COPA	Copaceanca	78.72	324	⇓P	P	05 18 45.4	-0.3
GERES	GERESS Array B	78.78	334	P	P	05 18 46.1	-0.1
	comp=Z,3.1nm,0.6s,baz=35,slow=5.2,SNR=25						
BZS	Buzias	78.88	327	⇓P	P	05 18 46.8	+0.1
BZS	Buzias	78.88	327	⇓P	P	05 18 46.8	+0.1
CONA	Conrad Observa	78.91	332	eP	P	05 18 47.0	+0.2
	comp=Z,6.5nm,0.6s						
MOA	Molln	79.49	333	i P	P	05 18 50.3	+0.3
	comp=Z,3.0nm,0.6s,SNR=4.6						
MDVR	Moldovita	79.55	327	⇓P	P	05 18 49.8	-0.6
FRGS	Fruska Gora	79.94	328	⇓P	P	05 18 51.8	-0.7
FRGS	Fruska Gora	79.94	328	eP	P	05 18 52.3	-0.2
SOKA	Soboth	80.28	332	i P	P	05 18 54.5	+0.2
	comp=Z,6.3nm,0.9s,SNR=7.6						
KBA	Koelnbreinsper	80.46	333	eP	P	05 18 56.2	+0.8
	comp=Z,11nm,0.6s						
ZAPS	Zavoj	80.47	325	eP	P	05 18 54.2	-1.1
TRUS	Trudelj	80.52	327	eP	P	05 18 55.3	-0.3
BOVS	Bovan	80.53	326	⇓P	P	05 18 54.6	-1.0
BOVS	Bovan	80.53	326	eP	P	05 18 54.7	-0.9
OBKA	Obir	80.58	332	eP	P	05 18 56.4	+0.4
	comp=Z,1.6nm,0.5s						
GRUS	Gruza	80.69	327	eP	P	05 18 56.3	-0.2
WATA	Walderalm	80.78	334	eP	P	05 18 57.7	+0.7
	comp=Z,8.5nm,0.6s						
DIVS	Divibare	80.78	328	P	P	05 18 54.2	-2.9
DIVS	Divibare	80.78	328	eP	P	05 18 56.5	-0.6
VTS	Vitosha	80.78	325	⇓P	P	05 18 56.7	-0.5
VTS	Vitosha	80.78	325	⇓P	P	05 18 56.7	-0.5
VTS	Vitosha	80.78	325	IAmb	IAmb	05 18 58.3	
	comp=Z,13nm,0.9s						
WTTA	Wattenberg	80.82	334	eP	P	05 18 58.1	+0.7
	comp=Z,8.4nm,0.4s						
RETA	Reutte	80.88	335	eP	P	05 18 57.9	+0.4
	comp=Z,3.9nm,0.7s						
MOTA	Moosalm	80.91	335	i P	P	05 18 58.4	+0.6
	comp=Z,17nm,1.1s,SNR=7.3						
PRED	Cave del Predi	80.96	333	P	P	05 18 57.2	-0.7
SQTA	Sankt Quirin	80.99	335	eP	P	05 18 59.1	+0.9
	comp=Z,11nm,1.2s						
ABTA	Abfaltersbach	81.02	333	eP	P	05 18 57.1	-1.2
	comp=Z,4.3nm,1.2s						
SELS	Selova	81.10	326	eP	P	05 18 56.9	-1.8
BARS	Barje	81.18	326	eP	P	05 18 50.9	-8.2
BARS	Barje	81.18	326	eP	P	05 18 57.9	-1.2
BOSS	Bosilegrad	81.18	325	eP	P	05 18 58.7	-0.5
BBLS	Lazići	81.20	328	eP	P	05 18 59.3	0.0
FETA	Feichten	81.31	335	i P	P	05 19 00.9	+0.9
	comp=Z,7.3nm,1.2s,SNR=4.4						
DAVA	Damuels	81.32	335	i P	P	05 19 00.4	+0.4
	comp=Z,6.8nm,0.8s,SNR=4.7						
SJES	Sjenica	81.50	327	eP	P	05 18 57.4	-3.6
NRCA	Norcia	84.32	331	IAmb	IAmb	05 19 16.9	
	comp=Z,7.9nm,1.0s						
ESDC	Sonseca Array	91.96	342	P	P	05 19 51.9	-0.2
	comp=Z,0.2nm,0.6s,baz=342,slow=4.1,SNR=4.6						
TORD	Torodi Ar. Bea	115.38	328	PKP	PKiKP	05 25 24.1	-1.2
	comp=Z,0.6nm,0.9s,baz=354,slow=1.4,SNR=2.7						
H03N2	Juan Fernandez	139.07	91	T	T	08 01 49.1	
	baz=308,slow=77,SNR=86						
H03N1	Juan Fernandez	139.09	91	T	T	08 01 53.3	
	baz=308,slow=77,SNR=117						
H03N3	Juan Fernandez	139.09	91	T	T	08 01 43.2	
	baz=308,slow=77,SNR=90						
PLCA	Paso Flores	148.48	96	PKPbc	PKPbc	05 26 30.6	+1.0
	comp=Z,2.4nm,0.9s,baz=285,slow=1.1,SNR=4.9						
PLCA				pPKPbc	sPKPdf	05 26 47.2	+0.3
	comp=Z,1.5nm,0.7s,baz=253,slow=7.0,SNR=2.4						
CPUP	Villa Florida	149.01	61	PKPbc	PKPbc	05 26 32.1	+0.8
	comp=Z,1.5nm,0.5s,baz=5.4,slow=4.9,SNR=5.0						
CPUP				pPKPbc	sPKPdf	05 26 47.8	-0.2
	comp=Z,1.3nm,0.5s,baz=240,slow=1.6,SNR=1.5						
SNAA	Sanae	151.96	196	PKPab	PKPab	05 26 47.7	+1.1
SNAA	Sanae	151.96	196	PKPdf	PKPbc	05 26 37.2	+0.1
VNA2	Neumayer--Watz	153.41	195	PKPab	PKPab	05 26 54.2	+1.5
VNA2	Neumayer--Watz	153.41	195	PKPdf	PKPbc	05 26 40.5	+0.4
VNA3	Neumayer Olymp	153.51	193	PKPab	PKPab	05 26 53.9	+0.8
VNA3	Neumayer Olymp	153.51	193	PKPdf	PKPbc	05 26 40.8	+0.4
VNA1	Neumayer--Stat	153.80	194	PKPab	PKPab	05 26 55.2	+1.0

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*IDC **09** 05:45:20.0±1.3, 0°.68N×126°.91E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.8/28, mbtmp3.9/5, Error ellipse: s-maj=133.7km s-min=19.7km az=68.0*

*DJA **09** 05:45:21.5±0.5, 1°N±4°×12°8E±°, h10^{km}, M3.5/6, MLv3.5/6*

ISC 09 05:45:21.5±1.5**, 0°.76N**±0°.07×**127°.14E**±0°.09**, h11**^{km}±12^{km}**, n10, σ1**^{s}**28**/10**, mb4.1**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.23	86	P	Pg	05 45 26.4	+0.1
LBMI	Labuha	1.43	165	P	Pg	05 45 50.0	+1.0
SANI	Sanana	3.02	202	P	Pb	05 46 13.9	-1.3
KMSI	Cibinong	3.16	267	P	Pb	05 46 18.8	+1.1
GTOI	Gorontalo	4.13	268	P	Pb	05 46 32.2	-2.0
WRA	Warramunga Arr	21.75	161	P	P	05 50 13.1	-0.1
	5.1nm,0.8s,baz=340,slow=11,SNR=22						
ASAR	Alice Springs	25.15	165	P	P	05 50 47.5	+0.6
	3.7nm,0.8s,baz=342,slow=9.4,SNR=33						
STKA	Stephens Creek	35.23	158	P	P	05 52 16.0	-0.1
	1.7nm,0.7s,baz=313,slow=9.8,SNR=3.3						
SONM	Songino Array	50.23	342	P	P	05 54 18.7	+1.0
	0.2nm,0.3s,baz=150,slow=7.1,SNR=4.2						
MKAR	Makanchi Array	60.22	326	P	P	05 55 29.0	-0.7
	1.0nm,0.6s,baz=114,slow=8.3,SNR=7.2						

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*NNC **09** 05:51:44.9±7.0, 39°.23N×73°.25E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=51.7km s-min=30.7km az=166.0*

*SOME **09** 05:51:46.2, 39°.23N×72°.93E, h5^{km}*

ISC 09 05:51:49.1±2.6**, 39°.4N**±0°.1×**72°.98E**±0°.05**, h10**^{km}**, n14, σ2**^{s}**19**/21**, 2C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	Merke	3.31	3	eP	Pg	05 52 50.9	-1.6
	3.2nm,0.4s						
MRKS				eS	Sg	05 53 37.8	+2.4
	5.3nm,0.6s						
MRKS	Merke	3.31	3	Pg	Pn	05 52 43.4	+2.3
	2.4nm,0.3s						
MRKS				Lg	Lg	05 53 31.8	
	5.4nm,0.4s						
AAK	Ala-Archa	3.40	19	⇓Pg	Pn	05 52 44.7	+2.4
	3.4nm,0.6s						
AAK				⇓Lg	Lg	05 53 33.4	
	12nm,0.8s						
IUG	Iuzhnay	3.51	321	eP	Pg	05 52 53.8	-2.5
	206nm,0.7s						
IUG				eS	Sg	05 53 42.7	+0.9
	23nm,0.8s						
TKM2	Tokmak 2	4.00	29	⇑Pg	Pg	05 53 03.8	-2.0
	2.0nm,0.6s						
TKM2				⇑Lg	Lg	05 53 58.4	
	3.6nm,0.7s						
KK08	Karatay Array	4.11	334	⇓Pn	Pn	05 52 54.0	+1.9
	1.4nm,0.3s,baz=137,slow=14						
KK08				⇓Sn	Sb	05 53 48.9	-2.5
	4.0nm,0.7s,baz=150,slow=25						
KST	Kastek	4.25	31	eP	Pg	05 53 07.6	-2.9
	2.9nm,0.6s						
KST				eS	Sg	05 54 05.8	+0.3
	8.9nm,0.6s						
KST	Kastek	4.25	31	Pg	Pb	05 53 03.8	-0.2
	4.6nm,0.6s						
KST				Lg	Lg	05 54 05.8	
	8.9nm,0.6s						
DGS	Degeres	4.34	28	eP	Pg	05 53 09.9	-2.4
	1.8nm,0.6s						
DGS				eS	Sg	05 54 10.7	+2.1
	3.1nm,0.6s						
DGS	Degeres	4.34	28	Pg	Pb	05 53 06.7	+1.1
	2.3nm,0.5s						
DGS				Lg	Lg	05 54 10.7	
	3.1nm,0.6s						
TNSS	Tian-Shan	4.68	39	eP	Pg	05 53 16.0	-2.8
	2.7nm,0.4s						
TNSS				eS	Sg	05 54 20.5	+1.2
	2.7nm,0.7s						
TNSS	Tian-Shan	4.68	39	Pg	Pb	05 53 12.5	+1.0
	2.7nm,0.4s						
TNSS				Lg	Lg	05 54 20.5	
	2.7nm,0.7s						
KUU	Kurty	5.11	28	eP	Pg	05 53 23.2	-3.8
	1.0nm,0.3s						
KUU				eS	Sg	05 54 32.6	-0.6
	4.0nm,0.5s						
KUU	Kurty	5.11	28	Pg	Pb	05 53 19.5	+0.9
	1.8nm,0.6s						
KUU				Lg	Lg	05 54 32.6	
	4.0nm,0.5s						

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*IDC **09** 05:52:48.5±2.7, 31°.33S×68°.63W, h68^{km}±24^{km}, mb3.4/5, mb1 3.8/10, mb1mx3.7/22, mbtmp3.8/10, Error ellipse: s-maj=31.4km s-min=20.0km az=76.0*

*NEIC **09** 05:52:54.3±2.2, 31°.29S±0°.06×68°.80W±0°.07, h121^{km}±7^{km}, mb4.4/12, Error ellipse: s-maj=9.5km s-min=7.8km az=158.0*

ISC 09 05:52:53.1±0.8**, 31°.16S**±0°.04×**68°.65W**±0°.06**, h109**^{km}±8^{km}**, n75, σ1**^{s}**37**/93**, mb4.2**/9**, 12C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	Zonda	0.38	184		Pn	05 53 10.7	+1.4
CO03	El Pedregal	1.78	280	⇑eP	Pn	05 53 25.4	+2.0
CO03				eS	Sn	05 53 48.7	+2.2
CO03				IAML		05 53 50.1	
	comp=E,4μm,0.4s						
CO03	El Pedregal	1.78	280		Pn	05 53 25.5	+2.0
GO04	Tololo Observa	2.10	297	eP	Pn	05 53 29.0	+1.4
GO04				eS	Sn	05 53 56.3	+2.3
GO04	Tololo Observa	2.10	297		Pn	05 53 29.3	+1.7
VA03	San Esteban	2.27	225	⇑eP	Pn	05 53 30.9	+1.3
VA03				eS	Sn	05 53 59.5	+1.8
VA03				IAML		05 54 02.4	
	comp=E,1μm,0.4s						
VA03	San Esteban	2.27	225		Pn	05 53 31.0	+1.3
CO05	La Serena	2.56	298	eP	Pn	05 53 33.9	+0.6
CO05				eS	Sn	05 54 03.9	-0.2
CO05				IAML		05 54 07.0	
	comp=N,1μm,0.5s						
CO05	La Serena	2.56	298		Pn	05 53 34.0	+0.8
FCH	Farellones	2.57	212	⇑eP	Pn	05 53 35.2	+1.4
FCH				eS	Sn	05 54 07.1	+2.2
FCH				IAML		05 54 15.2	
	comp=E,566nm,0.3s						
CO06	Fray Jorge	2.62	280	eP	Pn	05 53 33.8	-0.2
CO06				eS	Sn	05 54 03.1	-2.3
CO06				IAML		05 54 09.6	
	comp=N,844nm,0.4s						
CO06	Fray Jorge	2.62	280		Pn	05 53 33.8	-0.2
PEL	Peldehue	2.63	221	⇑eP	Pn	05 53 34.8	+0.6
PEL				eS	Sn	05 54 05.9	+0.1
PEL				IAML		05 54 07.6	
	comp=N,605nm,0.4s						
PEL	Peldehue	2.63	221	Pn	Pn	05 53 34.7	+0.5
VA06	Catapilco	2.65	238	eP	Pn	05 53 34.0	-0.4
VA06				eS	Sn	05 54 05.0	-1.3
VA06				IAML		05 54 10.7	
	comp=E,2μm,0.4s						
ROCH	El Roble	2.70	227	⇑eP	Pn	05 53 35.4	+0.1
ROCH				⇑eP	Pn	05 53 35.3	-0.1
ROCH				eS	Sn	05 54 07.7	-0.1
ROCH				eS	Sn	05 54 07.9	+0.1
ROCH				IAML		05 54 11.3	
	comp=N,1μm,0.4s						
ROCH				IAML		05 54 11.5	
	comp=N,1μm,0.3s						
LCO	Las Campanas	2.79	320	eP	Pn	05 53 37.9	+1.3
LCO				eS	Sn	05 54 11.4	+1.5
LCO	Las Campanas	2.79	320	Pn	Pn	05 53 38.2	+1.6
MT05	Renca	2.84	218	eP	Pn	05 53 37.9	+0.8
MT05				eS	Sn	05 54 11.5	+0.6
MT05				IAML		05 54 14.2	
	comp=N,1μm,0.2s						
MT05	Renca	2.84	218		Pn	05 53 37.7	+0.6
MT02	Curacav	2.97	225		Pn	05 53 38.6	-0.2
LMEL	Las Melosas	2.98	206	⇑eP	Pn	05 53 40.5	+1.5
LMEL				eS	Sn	05 54 16.1	+1.7
LMEL				IAML		05 54 26.0	
	comp=N,327nm,0.1s						
VA01	Torpederas	3.15	233		Pn	05 53 40.0	-1.0
BO04	La Punta	3.27	210	⇑eP	Pn	05 53 43.5	+0.8
BO04				eS	Sn	05 54 21.0	-0.1
BO04				IAML		05 54 23.3	
	comp=N,304nm,0.4s						
MT09	Talagante	3.27	217	⇑eP	Pn	05 53 42.5	-0.4
MT09				eS	Sn	05 54 20.5	-0.8
MT09				IAML		05 54 25.2	
	comp=E,433nm,0.2s						
MT09	Talagante	3.27	217		Pn	05 53 42.6	-0.2
MT01	Popeta	3.48	219	eP	Pn	05 53 44.5	-1.0
MT01				eS	Sn	05 54 23.7	-2.2
MT01				IAML		05 54 27.0	
	comp=E,228nm,0.1s						
MT01	Popeta	3.48	219		Pn	05 53 44.5	-1.0
VA05	Santo Domingo	3.54	224	⇑eP	Pn	05 53 45.0	-1.2
VA05				eS	Sn	05 54 24.3	-2.9
VA05				IAML		05 54 37.3	
	comp=E,412nm,0.3s						
VA05	Santo Domingo	3.54	224		Pn	05 53 45.1	-1.2
AC04	Llanos de Chal	3.63	324	⇑eP	Pn	05 53 48.5	+1.0
AC04				eS	Sn	05 54 29.7	+0.2
AC04	Llanos de Chal	3.63	324	Pn	Pn	05 53 48.5	+1.0
GO03	Copiap	3.82	338	Pn	Pn	05 53 51.8	+1.7
BO01	Tunca	3.82	212		Pn	05 53 49.0	-1.0
BO02	Sierra Bellavi	4.04	206	⇑eP	Pn	05 53 53.0	-0.1
BO02				eS	Sn	05 54 38.1	-1.4
BO02				IAML		05 54 43.4	
	comp=E,227nm,0.2s						
BO02	Sierra Bellavi	4.04	206	Pn	Pn	05 53 53.2	+0.1
AC02	Maricunga	4.33	354	Pn	Pn	05 54 00.4	+3.0
GO05	Huala	4.72	215		Pn	05 53 59.6	-2.6
PB10	IPOC Station P	7.81	347	Pn	Pn	05 54 43.7	-0.4
PB15	IPOC Station P	7.96	355		Pn	05 54 46.9	+0.6
LC01	Cunco	8.16	198	Pn	Pn	05 54 47.2	-1.5
PB06	IPOC Station P	8.46	354	Pn	Pn	05 54 52.5	-0.6
LVC	Limon Verde	8.52	358	P	Pn	05 54 53.6	-0.5
	comp=E,3.1nm,0.3s,baz=199,slow=9.9,SNR=33						
LVC				S	Sn	05 56 25.1	-3.6
	comp=E,2.0nm,0.3s,baz=3.2,slow=23,SNR=7.5						
LVC	Limon Verde	8.52	358	Pn	Pn	05 54 53.8	-0.2
TRQA	Tornquist	8.80	143	Pn	Pn	05 54 57.1	-0.3
PB09	IPOC Station P	9.34	357		Pn	05 55 04.7	-0.3
PLCA	Paso Flores	9.67	189	P	Pn	05 55 01.4	-7.9
	comp=E,0.1nm,0.3s,baz=324,slow=15,SNR=1.3						
PB01	IPOC Station P	10.11	356		Pn	05 55 13.3	-2.0
CPUP	Villa Florida	11.03	67	P	Pn	05 55 24.4	-3.3
	comp=E,0.2nm,0.3s,baz=225,slow=17,SNR=1.6						
PB11	IPOC Station P	11.39	355	Pn	Pn	05 55 29.7	-3.0
PB16	IPOC Station P	12.80	356		Pn	05 55 51.3	-0.3
LPAZ	La Paz	14.81	2	P	Pn	05 56 18.4	+0.7
	comp=E,0.7nm,0.3s,baz=182,slow=6.4,SNR=15						
LPAZ	La Paz	14.81	2		P	05 56 19.8	-1.1
SIV	San Ignacio	16.61	26	P	P	05 56 40.3	+0.1
	comp=E,0.8nm,0.3s,baz=205,slow=9.7,SNR=24						
PTLB	Pontes e Lacer	17.90	31	P	Pn	05 56 56.4	+1.2
VILB	Vilhena	19.72	25	P	Pn	05 57 15.6	-1.2
VILB				IAmb	IAmb	05 57 16.6	
	comp=Z,11nm,0.7s						
ETMB	Extrema	21.36	7	P	P	05 57 33.2	+1.4
CZSB	Cruzeiro do Su	23.62	350	P	P	05 57 56.1	+1.6
CZSB				IAmb	IAmb	05 57 57.8	
	comp=Z,12nm,0.5s						
TBTG	Tabatinga, AM	26.86	357	P	P	05 58 24.6	+0.9
TBTG				IAmb	IAmb	05 58 25.7	
	comp=Z,17nm,0.9s						
OBIP	Obispado Ponce	48.96	3	P	P	06 01 29.3	+0.8
CELP	Cerrillos	48.99	3	P	P	06 01 29.1	+0.3
VNA3	Neumayer Olymp	50.94	159	P	P	06 01 44.2	+1.2
VNA1	Neumayer--Stat	51.19	158	P	P	06 01 46.1	+1.3
VNA2	Neumayer--Watz	51.55	158	P	P	06 01 48.5	+1.0
	baz=287,slow=9.1						
SNAA	Sanae	53.16	159	P	P	06 02 00.3	+0.9
TX31	Lajitas Ar. Si	68.78	327	P	P	06 03 46.7	+1.1
TX31				IAmb	IAmb	06 03 48.0	
	comp=Z,4.3nm,1.0s						
TXAR	Lajitas Array	68.78	327	P	P	06 03 47.3	+1.8
	comp=Z,0.4nm,0.5s,baz=150,slow=8.7,SNR=8.8						
WVT	Waverly	69.32	343	P	P	06 03 49.3	+0.7
WVT				IAmb	IAmb	06 03 51.4	
	comp=Z,5.8nm,1.4s						
BOSA	Boshof	78.81	117	P	P	06 04 44.5	+0.1
	comp=Z,2.2nm,0.9s,baz=214,slow=6.4,SNR=3.4						
BOSA	Boshof	78.81	117	IAmb	IAmb	06 05 03.5	
	comp=Z,14nm,1.4s						
TORD	Torodi Ar. Bea	80.53	68	P	P	06 04 53.0	-0.6
	comp=Z,0.5nm,0.7s,baz=272,slow=5.2,SNR=3.5						
TORD	Torodi Ar. Bea	80.53	68	IAmb	IAmb	06 04 56.2	
	comp=Z,1.2nm,1.1s						
PDAR	Pinedale Array	82.61	331	P	P	06 05 04.3	+0.1
	comp=Z,0.2nm,0.5s,baz=124,slow=7.4,SNR=3.8						
NVAR	Mina Array Bea	83.28	323	P	P	06 05 08.2	+0.4
	comp=Z,0.2nm,0.5s,baz=156,slow=6.9,SNR=2.7						
WRA	Warramunga Arr	124.60	207	PKP	PKPdf	06 11 40.1	-0.3
	comp=Z,0.3nm,0.5s,baz=161,slow=1.6,SNR=6.2						

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*TUL **09** 06:03:27±0.7, 36°.59N±0°.01×98°.28W±0°.02, h6^{km}±7^{km}, ML2.6, mb_Lg2.4/13(NEIC), Error ellipse: s-maj=2.0km s-min=1.6km az=122.0*

NEIC 09 06:03:27.1±1.0**, 36°.576N**±0°.003×**98°.26W**±0°.02**, h5**^{km}±2^{km}**, Error ellipse: s-maj=3.0km s-min=2.3km az=297.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.23	11	Pg	Pg	06 03 31.9	+0.3
CROK	Carrier	0.24	107	Pg	Pg	06 03 32.3	+0.6
CROK				Sg	Sg	06 03 36.0	+1.2
GC02	Grant County #	0.43	50	Pg	Pg	06 03 35.6	+0.2
KAN14	Manchester OK	0.45	32		Pg	06 03 36.0	+0.2
KAN14				Sg	Sg	06 03 42.4	+0.7
KAN10	Anthony SW Sta	0.56	14	Pg	Pg	06 03 37.9	0.0
KAN17	Caldwell West	0.62	40	Pg	Pg	06 03 38.9	0.0
KAN17				Sg	Sg	06 03 47.5	+0.6
KAN05	Bluff City Nor	0.62	30	Pg	Pg	06 03 39.1	+0.1
U32A	Winter Ranch,	0.63	252		Pg	06 03 39.0	-0.1
U32A				Sg	Sg	06 03 47.7	+0.5
KAN16	Harper SW Stat	0.67	14	Pg	Pg	06 03 39.8	-0.1
KAN08	Anthony NE Sta	0.69	20	Pg	Pg	06 03 40.3	-0.1
KAN01	Argonia South	0.70	35	Pg	Pg	06 03 40.5	-0.1
KAN06	Argonia West S	0.74	26	Pg	Pg	06 03 41.3	-0.1
KAN12	Harper NE Stat	0.75	16	Pg	Pg	06 03 41.4	-0.1
KAN09	Caldwell North	0.76	43		Pg	06 03 41.5	-0.2
KAN13	South Haven SW	0.77	55	Pg	Pg	06 03 41.7	-0.1
KAN13				Sg	Sg	06 03 52.3	+0.5
BLOK	Blackwell	0.86	77		Pg	06 03 43.6	0.0
BLOK				Sg	Sg	06 03 55.3	+0.4
OK029	Liberty Lake	1.02	140	Pg	Pg	06 03 46.2	-0.4
OK029				Sg	Sb	06 04 00.3	-0.5
BCOK	Bluff Creek, N	1.06	150	Pg	Pg	06 03 46.9	-0.4
BCOK				Sg	Sg	06 04 01.6	+0.5
OK025	Westminster Rd	1.24	143		Pg	06 03 50.3	-0.6
OK031	S. Brethren Rd	1.31	118	Pn	Pn	06 03 51.5	-0.6
OKCFA	Oklahoma City	1.33	150	Pn	Pn	06 03 51.7	-0.6
OKCSW	OKLAHOMA CITY	1.35	150	Pn	Pn	06 03 52.0	-0.6
OK034	N. Norfolk Rd.	1.37	114	Pn	Pn	06 03 52.6	-0.3
T35A	Sooner Cattle	1.45	76	Pn	Pn	06 03 54.0	0.0
FNO	Franklin	1.49	152		Pn	06 03 54.3	-0.2
X34A	Smith Ranch, M	2.00	170	IAmb_Lg		06 04 30.8	
	comp=Z,12nm,1.1s						
TUL1	Leonard	2.10	108		Pn	06 04 03.3	+0.3
KSU1	Kansas State U	2.84	27		Pn	06 04 12.6	-0.5
HHAR	Hobbs	3.50	94	Pn	Pn	06 04 22.1	-0.1
S39A	Bolivar	4.10	73	Pn	Pn	06 04 30.5	0.0
S39A				IAmb_Lg		06 05 37.8	
	comp=Z,6.8nm,0.8s						
N33A	J Bar K, Exete	4.21	8	Pn	Pn	06 04 31.4	-0.5
U40A	Yellville	4.37	91	IAmb_Lg		06 05 47.2	
	comp=Z,7.2nm,0.7s						
P38A	Dawn	4.81	49	IAmb_Lg		06 06 01.7	
	comp=Z,5.1nm,0.8s						
BGNE	Belgrade	4.83	1	Pn	Pn	06 04 40.5	+0.1
R40A	Maddies Statio	5.07	68	IAmb_Lg		06 06 11.5	
	comp=Z,5.9nm,0.8s						
NATX	Nacogdoches	5.66	147	IAmb_Lg		06 06 22.9	
	comp=Z,8.4nm,0.8s						

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*NOU **09** 06:03:33.3, 42°.19S×173°.28E, h65^{km}, MLv4.1/8, South Island, New Zealand*

WEL 09 06:03:34.4±0.3**, 42°S**±3°×**17°3E**±°**, h31**^{km}±5^{km}**, M3.5**/13**, ML3.7**/13**, MLv3.5**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=122.9, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THZ	Tophouse	0.38	338	P	Pn	06 03 44.2	+0.4
THZ				S	Sn	06 03 50.8	+0.8
KHZ	Kahutara	0.45	133	P	Pn	06 03 45.4	+0.7
KHZ				S	Sn	06 03 53.4	+1.7
KHZ	Kahutara	0.45	133	P	Pn	06 03 45.4	+0.7
BSWZ	Blackbirch Sta	0.71	56	P	Pb	06 03 48.6	+0.3
BSWZ				S	Sn	06 03 59.6	+1.5
GVZ	Greta Valley S	0.86	183	P	Pb	06 03 50.6	-0.2
LTZ	Lake Taylor	0.90	222	P	Pb	06 03 51.6	-0.1
LTZ				S	Sb	06 04 04.0	+0.6
CMWZ	Cape Campbell	0.91	67	P	Pb	06 03 51.7	0.0
NNZ	Nelson	0.92	14	P	Pn	06 03 51.2	0.0
NNZ				S	Sb	06 04 04.1	+0.4
TUWZ	Tuamarina	0.93	43	P	Pn	06 03 51.4	+0.1
TUWZ				S	Sb	06 04 04.8	+0.7
DSZ	Denniston Nort	1.03	290	P	Pn	06 03 53.2	+0.4
DSZ				S	Sb	06 04 06.7	-0.2
AMCZ	Amberley	1.11	197	P	Pn	06 03 54.0	+0.2
TCW	Tory Channel	1.26	45	P	Pn	06 03 55.7	-0.2
TCW				S	Sn	06 04 12.2	+0.4
QRZ	Quartz Range	1.35	342	P	Pn	06 03 57.6	+0.4
QRZ				S	Sn	06 04 14.8	+0.7
QRZ	Quartz Range	1.35	342	P	Pn	06 03 57.8	+0.6
INZ	Inchbonnie	1.37	243	P	Pn	06 03 57.9	+0.6
OXZ	Oxford	1.44	212	P	Pn	06 03 57.6	-0.7
OXZ				S	Sn	06 04 15.3	-0.9
DUWZ	D'Urville Isla	1.45	26	P	Pn	06 03 58.5	0.0
DUWZ				S	Sn	06 04 17.4	+0.9
WEL	Wellington	1.50	57	P	Pn	06 03 58.8	-0.4
BHW	Baring Head	1.50	63	P	Pn	06 03 58.5	-0.7
OKCZ	Okains Bay	1.61	181	P	Pn	06 03 59.7	-1.0
MQZ	McQueen's Vall	1.63	191	S	Sn	06 04 18.5	-2.3
PLWZ	Palliser	1.70	72	P	Pn	06 04 00.4	-1.7
MSWZ	Moikau Station	1.76	67	P	Pn	06 04 01.2	-1.5
RACZ	Rakaia	1.76	203	P	Pn	06 04 01.5	-1.2
AKCZ	Akaroa Harbour	1.76	184	P	Pn	06 04 01.7	-1.1
CAW	Cannon Point	1.79	57	P	Pn	06 04 02.2	-1.0
MHCZ	Mount Hutt	1.81	218	P	Pn	06 04 02.7	-0.8
KIW	Kapiti Island	1.85	48	P	Pn	06 04 03.6	-0.4
PAWZ	Paruwai Farm	1.89	68	P	Pn	06 04 03.0	-1.6
WVZ	Waitaha Valley	1.99	240	P	Pn	06 04 06.5	+0.6
OGWZ	Otaki Gorge	2.03	51	P	Pn	06 04 05.5	-1.0
MTW	Mount Morrison	2.04	63	P	Pn	06 04 04.8	-1.9
WACZ	Wakanui South	2.05	206	P	Pn	06 04 05.7	-1.0
TRWZ	Traveller	2.07	71	P	Pn	06 04 05.6	-1.4
HOWZ	Holdsworth Sta	2.19	57	P	Pn	06 04 07.0	-1.7
RPZ	Rata Peaks	2.19	222	P	Pn	06 04 08.2	-0.6
RPZ	Rata Peaks	2.19	222	P	Pn	06 04 07.6	-1.1
ARCZ	Arundel	2.31	217	P	Pn	06 04 09.5	-0.9
TMWZ	Te Maipa	2.33	65	P	Pn	06 04 08.7	-1.9
GCSZ	Gaunt Creek Bo	2.37	239	P	Pn	06 04 12.0	+0.9
MRZ	Mangatainoka R	2.37	53	P	Pn	06 04 09.6	-1.5
TIWZ	Tintock	2.49	58	P	Pn	06 04 11.4	-1.4
POWZ	Post Office Ro	2.65	50	P	Pn	06 04 13.8	-1.2
PRWZ	Pori Road	2.67	55	P	Pn	06 04 13.5	-1.8
TMZ	Timaru	2.73	213	P	Pn	06 04 14.7	-1.5
WAZ	Wanganui	2.76	32	P	Pn	06 04 17.2	+0.8

NMEZ	Namu Road	2.76	13	P	Pn	06 04 17.8	+1.3
BFZ	Birch Farm	2.77	60	P	Pn	06 04 14.8	-1.9
BFZ	Birch Farm	2.77	60	P	Pn	06 04 14.3	-2.3
FOZ	Fox Glacier	2.80	238	P	Pn	06 04 17.3	+0.4
LREZ	Lake Rotokare	2.83	21	P	Pn	06 04 19.7	+2.2
PREZ	Palmer Road	2.88	17	P	Pn	06 04 20.3	+2.0
KHEZ	Kahui Hut	2.90	14	P	Pn	06 04 19.6	+1.1
NBEZ	Newall Road No	2.90	12	P	Pn	06 04 19.8	+1.4
NEZ	North Egmont	2.94	15	P	Pn	06 04 20.3	+1.3
DVHZ	Dannevirke	2.94	53	P	Pn	06 04 17.4	-1.6
TSZ	Takapari Road	2.98	48	P	Pn	06 04 17.9	-1.8
PKE	Pukeiti	2.99	13	P	Pn	06 04 21.3	+1.5
ANWZ	Angora Road	3.04	58	P	Pn	06 04 18.3	-2.0
DREZ	Durham Road	3.04	16	P	Pn	06 04 21.3	+0.9
LBZ	Lake Benmore	3.11	222	P	Pn	06 04 20.9	-0.5
MHEZ	Mangahewa	3.17	18	P	Pn	06 04 24.1	+1.9
PNHZ	Pukenui	3.22	48	P	Pn	06 04 20.6	-2.2
VRZ	Vera Road	3.24	24	P	Pn	06 04 24.3	+1.1
PRHZ	Porangahau	3.25	57	P	Pn	06 04 21.7	-1.5
WPHZ	Waipukurau	3.25	52	P	Pn	06 04 21.4	-1.9
PKVZ	Pokaka	3.30	32	P	Pn	06 04 24.2	+0.2
WNVZ	Wahianoa	3.37	35	P	Pn	06 04 24.8	-0.3
TRVZ	Turoa	3.37	34	P	Pn	06 04 24.9	-0.2
MOVZ	Moawhango	3.37	38	P	Pn	06 04 23.8	-1.2
WHVZ	Whangaehu Hut	3.40	35	P	Pn	06 04 25.3	-0.2
FWVZ	Far West T-bar	3.41	34	P	Pn	06 04 25.4	-0.3
ODZ	Otahua Downs	3.43	210	P	Pn	06 04 24.0	-1.6
ODZ	Otahua Downs	3.43	210	P	Pn	06 04 24.7	-1.0
TUVZ	Tukino	3.44	35	P	Pn	06 04 25.9	-0.2
BHHZ	Black Hill Sta	3.46	42	P	Pn	06 04 24.8	-1.3
NGZ	Ngauruhoe	3.50	34	P	Pn	06 04 26.5	-0.3
KRHZ	Kereru	3.50	46	P	Pn	06 04 24.6	-2.2
SNVZ	South Ngauruho	3.51	34	P	Pn	06 04 26.6	-0.3
PXZ	Pawanui	3.53	55	P	Pn	06 04 25.9	-1.2
OTVZ	Oturere	3.54	34	P	Pn	06 04 27.0	-0.4
NNVZ	North Ngauruho	3.54	34	P	Pn	06 04 27.5	+0.1
WTVZ	West Tongariro	3.55	33	P	Pn	06 04 27.0	-0.4
ETVZ	East Tongariro	3.58	35	P	Pn	06 04 27.4	-0.5
KRVZ	Karewarewa	3.58	34	P	Pn	06 04 27.6	-0.3
TMVZ	Te Maari	3.59	34	P	Pn	06 04 27.6	-0.5
NTVZ	North Tongarir	3.59	34	P	Pn	06 04 27.9	-0.2
KAHZ	Kahuranaki	3.68	52	P	Pn	06 04 27.5	-1.8
KWHZ	Kaweka Forest	3.69	44	P	Pn	06 04 27.6	-1.7
KATZ	Kakaramea	3.71	33	P	Pn	06 04 32.9	+3.2
JCZ	Jackson Bay	3.71	237	P	Pn	06 04 29.2	-0.5
HIZ	Hauiti	3.84	21	P	Pn	06 04 31.7	+0.3
HIZ	Hauiti	3.84	21	P	Pn	06 04 30.6	-0.7
BKZ	Black Stump Fm	3.92	42	P	Pn	06 04 30.2	-2.2
BKZ	Black Stump Fm	3.92	42	P	Pn	06 04 30.2	-2.3
WKZ	Wanaka	4.02	226	P	Pn	06 04 34.4	+0.6
EAZ	Earnscleugh	4.15	220	P	Pn	06 04 34.6	-1.1
TLZ	Tolley Road	4.22	27	P	Pn	06 04 36.2	-0.4
RTZ	Ruatahuna	4.58	42	P	Pn	06 04 38.7	-3.0
TOZ	Tahuroa Road	4.75	24	P	Pn	06 04 43.5	-0.3
URZ	Urewera	4.93	40	P	Pn	06 04 44.3	-2.0
MWZ	Matawai	5.08	43	P	Pn	06 04 47.1	-1.3
AWAZ	Awhitu Peninsu	5.18	14	P	Pn	06 04 50.6	+0.8
WTAZ	Waiatarua	5.30	13	P	Pn	06 04 53.2	+1.8
RUGZ	Raukumara Rang	5.43	42	P	Pn	06 04 50.8	-2.6
MBAZ	Motutapu North	5.52	15	P	Pn	06 04 55.1	+0.7
WIAZ	Waiheke Island	5.54	17	P	Pn	06 04 55.5	+0.8
PKGZ	Pakihiroa	5.70	44	P	Pn	06 04 54.5	-2.4
KUZ	Kuaotunu	5.73	22	P	Pn	06 04 56.8	-0.5

NNC 09 06:14:49.8±5.0**,38°.84N**×**73°.11E,h0^{km},mb3.8,mpv3.4, 4C-2D,Error ellipse: s-maj=37.1km s-min=24.7km az=163.0,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	Merke	3.90	1	Pg	Pb	06 15 57.9	-1.6
	4.2nm,0.4s						
MRKS				Lg	Lg	06 16 52.5	
	6.7nm,0.5s						
AAK	Ala-Archa	3.94	15	⇑Pn	Pn	06 15 54.2	+2.6
	3.7nm,0.6s						
AAK				⇑Sn	Sb	06 16 44.0	-4.3
	20nm,1.1s						
TKM2	Tokmak 2	4.49	24	⇑Pg	Pg	06 16 15.3	-0.5
	3.9nm,0.7s						
TKM2				⇓Lg	Lg	06 17 12.5	
	5.7nm,0.9s						
KK08	Karatay Array	4.70	336	⇑Pn	Pn	06 16 02.8	+0.8
	1.6nm,0.4s,baz=140,slow=12						
KK08				⇓Sn	Sn	06 16 56.7	-0.4
	5.4nm,0.6s,baz=153,slow=24						
DGS	Degeres	4.84	24	Pg	Pb	06 16 16.2	+0.8
	3.6nm,0.6s						
DGS				Lg	Lg	06 17 23.0	
	3.4nm,0.9s						
IZV	Izvestkoviy	4.96	31	Pg	Pb	06 16 18.1	+0.6
	4.2nm,0.4s						
IZV				Lg	Lg	06 17 27.0	
	7.0nm,0.6s						
TNSS	Tian-Shan	5.10	34	Pg	Pb	06 16 19.7	-0.4
	4.0nm,0.5s						
TNSS				Lg	Lg	06 17 29.5	
	1.9nm,0.8s						
KRBS	Karabastau	5.22	21	Pg	Pb	06 16 22.8	+0.8
	1.9nm,0.5s						
KRBS				Lg	Lg	06 17 33.6	
	3.4nm,0.8s						
KTBS	Karatobe	5.56	28	Pg	Pb	06 16 29.0	+1.2
	2.2nm,0.7s						
KTBS				Lg	Lg	06 17 44.8	
	6.9nm,0.5s						
KUU	Kurty	5.60	25	Pg	Pb	06 16 29.4	+1.0
	2.8nm,0.9s						
KUU				Lg	Lg	06 17 45.8	
	4.1nm,0.7s						

EAF ***09*** *06:32:24.7±1.1,21°.02S×33°.01E,h5^{km}±11^{km},MD4.1*

BUL 09 06:32:23.4±1.5**,21°.18S**×**33°.11E,h8^{km}**±15^{km}**,MD4.4, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	2.81	214	*i* P	Pb	06 33 11.5	-2.4
MOPA				*i* Sg	Sg	06 33 55.1	+1.2
MOPA	Mopani	2.81	214	*i* P	Pb	06 33 11.5	-2.4
MOPA				*i* Sg	Sg	06 33 55.1	+1.2
MSNA	Messina	3.10	247	*i* P	Pn	06 33 12.6	0.0
MSNA				*i* Sg	Sg	06 34 00.1	-2.8
MSNA	Messina	3.10	247	*i* P	Pn	06 33 12.6	0.0
MSNA				*i* Sg	Sg	06 34 00.1	-2.8
MATP	Matopo	4.38	279	*i* P	Pn	06 33 29.7	-0.6
MATP				*i* S	Sn	06 34 17.7	-3.9
MATP	Matopo	4.38	279	*i* P	Pn	06 33 29.7	-0.6
MATP				*i* S	Sn	06 34 17.7	-3.9
KRI	Karoi	5.45	322	*i* P	Pn	06 33 34.6	-10
KRI	Karoi	5.45	322	*i* P	Pn	06 33 34.6	-10

IDC ***09*** *07:12:12.2±2.4,8°.37S×114°.83E,h0^{km},mb3.5/4, mb1 3.7/4,mb1mx3.3/40,mbtmp3.6/4,MS3.2/1,Ms1 3.2/1, ms1mx2.5/27,Error ellipse: s-maj=159.9km s-min=25.4km az=50.0*

DJA ***09*** *07:12:15.8±0.3,8°S±2°×11°5E±°,h10^{km},M3.6/10,mb4.1/1, MLv3.3/10*

ISC 09 07:12:15.5±0.9**,8°.21S**±0°.06×**115°.14E**±0°.04**,h16^{km}**±7^{km}**, n16,**σ**0^{s}72**/17**,mb3.6**/4**,Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRBI	Singaraja	0.14	31	P	Pg	07 12 19.2	-0.1
SRBI				S	Sg	07 12 21.9	+0.1
DNP	Denpasar	0.47	172	P	Pb	07 12 26.0	+0.5
DNP				S	Sb	07 12 31.5	-0.8
IGBI	Denpasar	0.61	180	P	Pb	07 12 27.9	+0.1
ABJI	Asem Bagus	0.98	294	P	Pn	07 12 35.7	+1.0
JAGI	Jajag, Banyuwa	1.01	255	P	Pn	07 12 35.5	+0.4
BLJI	Banyuglugur	1.60	287	P	Pg	07 12 45.8	-0.4
KMMI	Kalianget	1.63	315	P	Pg	07 12 46.7	-0.2
GMJI	Gumukmas	1.68	268	P	Pg	07 12 46.8	-1.0
TWSI	Taliwang, Sumb	1.80	107	P	Pn	07 12 46.3	+0.3
PLAI	Plampang	2.68	104	P	Pn	07 12 58.6	+0.6
BSSI	Bau Bau, Buton	5.69	69	P	Pn	07 13 38.5	-1.0
PSI	Prapat	19.52	303	LR	LR	07 25 40.3	
	comp=Z,74nm,18.9s,baz=342,slow=42						
WRA	Warramunga Arr	21.95	124	P	P	07 17 09.1	+0.4
	1.0nm,0.6s,baz=301,slow=8.0,SNR=8.5						
ASAR	Alice Springs	23.66	133	P	P	07 17 26.0	-0.5
	1.1nm,0.7s,baz=307,slow=9.4,SNR=14						
STKA	Stephens Creek	34.05	137	P	P	07 19 00.3	+1.1
	0.4nm,0.3s,baz=324,slow=12,SNR=3.7						
MKAR	Makanchi Array	62.07	335	P	P	07 22 34.7	-0.7
	0.7nm,0.9s,baz=162,slow=7.3,SNR=4.3						

DJA ***09*** *07:19:02.3±0.3,8°S±2°×11°5E±°,h10^{km},M3.4/9,MLv3.4/9*

IDC ***09*** *07:19:22.5±17.0,11°.27S×115°.65E,h0^{km},mb3.7/2, mb1 3.9/3,mb1mx3.2/42,mbtmp3.7/3,ML3.5/1,Error ellipse: s-maj=263.0km s-min=133.3km az=142.0*

ISC 09 07:19:02.3±0.9**,8°.22S**±0°.04×**115°.19E**±0°.05**,h10^{km},n12,** σ**0^{s}74**/14**,mb3.6**/3**,Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRBI	Singaraja	0.14	9	P	Pg	07 19 05.6	+0.2
SRBI				S	Sg	07 19 08.4	+0.8
DNP	Denpasar	0.45	178	P	Pb	07 19 12.7	+0.3
DNP				S	Sg	07 19 18.0	+0.8
IGBI	Denpasar	0.60	184	P	Pg	07 19 14.4	+0.5
ABJI	Asem Bagus	1.04	294	P	Pg	07 19 22.3	0.0
JAGI	Jajag, Banyuwa	1.06	256	P	Pg	07 19 21.9	-0.8
BLJI	Banyuglugur	1.65	287	P	Pn	07 19 32.2	+0.9
KMMI	Kalianget	1.68	314	P	Pn	07 19 31.9	+0.1
TWSI	Taliwang, Sumb	1.75	107	P	Pn	07 19 32.3	-0.4
PLAI	Plampang	2.63	103	P	Pn	07 19 45.4	+0.6
WRA	Warramunga Arr	21.89	124	P	P	07 23 55.1	-0.6
	0.1nm,0.3s,baz=290,slow=11,SNR=13						
ASAR	Alice Springs	23.61	133	P	P	07 24 12.3	-1.3
	1.4nm,0.7s,baz=308,slow=9.0,SNR=23						
STKA	Stephens Creek	34.01	137	P	P	07 25 46.0	-0.4
	1.1nm,0.6s,baz=331,slow=10,SNR=4.5						

IDC ***09*** *07:31:34.9±1.3,40°.13S×77°.99E,h0^{km},mb4.2/7, mb1 4.3/7,mb1mx4.0/34,mbtmp4.2/7,MS4.0/13, Ms1 4.0/13,ms1mx3.8/24,Error ellipse: s-maj=48.6km s-min=26.3km az=13.0*

NEIC ***09*** *07:31:38.5±2.3,39°.56S±0°.05×78°.1E±0°.2,h10^{km}±1^{km}, mb4.7/10,Error ellipse: s-maj=22.9km s-min=8.9km az=273.0*

ISC 09 07:31:37.8±0.7**,39°.7S**±0°.2×**78°.1E**±0°.1**,h10^{km},n34,** σ**1^{s}41**/16**,mb4.5**/11**,MS4.0**/13**,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIS	Amsterdam Isla	1.95	349	Pn	Pn	07 32 04.3	-6.6
H01W2	Cape Leeuwin H	28.97	92	T	T	08 07 46.0	
	baz=250,slow=74,SNR=441						
H01W3	Cape Leeuwin H	28.98	92	T	T	08 07 47.7	
	baz=250,slow=74,SNR=408						
H01W1	Cape Leeuwin H	28.99	92	T	T	08 07 48.7	
	baz=250,slow=74,SNR=317						
MAW	Mawson	29.18	192	LR	LR	07 47 21.7	
	comp=Z,145nm,18.1s,baz=55,slow=33						
H08S2	Diego Garcia H	32.32	350	T	T	08 11 38.5	
	baz=172,slow=76,SNR=15						
H08S1	Diego Carcia H	32.32	350	T	T	08 11 37.3	
	baz=172,slow=76,SNR=14						
H08S3	Diego Garcia H	32.34	350	T	T	08 11 40.0	
	baz=172,slow=76,SNR=16						
LEM	Lembang	42.15	47	LR	LR	07 54 06.5	
	comp=Z,183nm,19.6s,baz=190,slow=32						
BOSA	Boshof	44.50	268	LR	LR	07 54 33.7	
	comp=Z,269nm,20.4s,baz=171,slow=31						
LBTB	Lobatse	46.05	272	P	P	07 40 00.5	-1.5
	1.0nm,0.5s,baz=113,slow=8.7,SNR=1.6						
LBTB	Lobatse	46.05	272	IAmb	IAmb	07 40 11.2	
	comp=Z,14nm,1.1s						
FITZ	Fitzroy Crossi	46.26	76	LR	LR	07 56 03.2	
	comp=Z,394nm,21.9s,baz=270,slow=32						
ASAR	Alice Springs	49.38	89	P	P	07 40 24.8	-3.0
	comp=Z,1.1nm,0.8s,baz=239,slow=5.9,SNR=7.1						
ASAR				LR	LR	07 59 11.8	
	comp=Z,332nm,18.5s,baz=238,slow=34						
LSZ	Lusaka	49.72	285	P	P	07 40 31.5	+1.0
BATI	Baumata	49.97	67	LR	LR	07 59 26.6	
	comp=Z,176nm,19.6s,baz=241,slow=33						
KNRA	Kununurra	50.10	76	P	P	07 40 33.5	+0.2
QSPA	South Pole Qui	50.45	180	P	P	07 40 37.2	+1.8
QSPA				IAmb	IAmb	07 40 45.2	
	comp=Z,12nm,1.1s						
KAPI	Kappang	51.02	58	LR	LR	07 57 45.0	
	comp=Z,96nm,21.7s,baz=236,slow=31						
STKA	Stephens Creek	51.18	102	P	P	07 40 40.4	-0.9
	comp=Z,1.3nm,0.7s,baz=292,slow=5.1,SNR=3.1						
STKA				LR	LR	07 58 01.8	
	comp=Z,153nm,21.6s,baz=211,slow=31						
WRA	Warramunga Arr	51.79	85	P	P	07 40 46.2	+0.2
	comp=Z,6.6nm,0.9s,baz=235,slow=7.5,SNR=23						
WRA				LR	LR	07 59 57.6	
	comp=Z,283nm,20.8s,baz=235,slow=33						
WRA	Warramunga Arr	51.79	85	IAmb	IAmb	07 40 52.8	
	comp=Z,0.3nm,1.0s						
WB2	Warramunga Arr	51.80	85	P	P	07 40 46.5	+0.5
WB2				IAmb	IAmb	07 40 46.7	
	comp=Z,6.6nm,0.9s						
WB0	Warramunga Arr	51.93	85	P	P	07 40 47.1	+0.1
WB0				IAmb	IAmb	07 40 52.7	
	comp=Z,10nm,0.8s						
CMAR	Chiang Mai Arr	61.07	23	P	P	07 41 54.0	+2.1
	comp=Z,1.2nm,0.3s,baz=209,slow=6.3,SNR=9.8						
CMAR				LR	LR	08 04 07.5	
	comp=Z,50nm,19.9s,baz=214,slow=32						
BTK	Batken	79.67	354	P	P	07 43 45.4	+0.1
BTK				IAmb	IAmb	07 43 57.7	
	comp=Z,7.1nm,0.9s						
KKAR	Karatay Array	82.72	354	P	P	07 44 00.2	-1.2
MKAR	Makanchi Array	86.21	3	P	P	07 44 18.5	-0.5
	comp=Z,3.7nm,1.0s,baz=186,slow=7.3,SNR=6.9						
MKAR				LR	LR	08 20 14.0	
	comp=Z,59nm,19.5s,baz=288,slow=34						
TORD	Torodi Ar. Bea	88.09	289	LR	LR	08 21 36.4	
	comp=Z,59nm,19.6s,baz=270,slow=34						
DBIC	Dimbokro	88.79	280	LR	LR	08 21 27.9	
	comp=Z,98nm,18.1s,baz=88,slow=34						
SONM	Songino Array	90.74	19	P	P	07 44 41.1	+0.5
	comp=Z,0.8nm,0.8s,baz=191,slow=6.8,SNR=4.0						
SONM	Songino Array	90.74	19	IAmb	IAmb	07 44 57.0	
	comp=Z,2.1nm,1.2s						
INK	Inuvik	146.62	21	PKPbc	PKPbc	07 51 17.9	-0.6
	comp=Z,1.5nm,0.8s,baz=339,slow=2.8,SNR=6.0						
PDAR	Pinedale Array	173.50	60	PKP	PKPdf	07 51 45.8	-1.7
	comp=Z,0.1nm,0.7s,baz=355,slow=2.2,SNR=1.4						

KRSC 09 07:35:58.5±1.1**,49°.90N**×**156°.84E,h97^{km}**±21^{km}**,ML3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.91	330	*e*P	Pn	07 36 18.2	+0.6
SKR				*e*S	Sn	07 36 32.3	+0.3
PAU	Pauzhetka	1.57	359	S	Sn	07 36 47.9	+2.1
KDTR	Khodutka, Kamc	2.07	22	*e*S	Sn	07 36 59.7	+2.6
RUS	Russkaya	2.75	22	*e*P	Pn	07 36 42.9	+2.2
RUS				*e*S	Sn	07 37 14.6	+1.4
DALK	Dalny	3.36	20	*e*P	Pn	07 36 51.0	+2.2
DALK				*e*S	Sn	07 37 30.7	+2.9
UGLR	Uglovaya	3.54	20	*e*P	Pn	07 36 54.3	+2.9
AVH	Avacha	3.57	19	*e*P	Pn	07 36 54.6	+2.8
KOK	Koryaka	3.58	18	*e*P	Pn	07 36 54.4	+2.5
SMAR	Somma	3.58	19	*e*P	Pn	07 36 54.6	+2.5
SDLR	Sedlovina	3.62	20	*e*P	Pn	07 36 54.6	+2.1
MKZ	Mys Kozlova	5.55	31	*e*P	Pn	07 37 20.0	+1.6

IDC 09 07:49:03.1±2.9**,4°.75S**×**132°.60E,h0^{km},mb3.5**/1**, mb1 3.6**/4**,mb1mx3.5**/26**,mbtmp3.4**/4**,ML3.4**/2**,Error ellipse: s-maj=122.6km s-min=29.8km az=79.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.91	207	Pn	Pn	07 52 36.0	+0.6
	baz=46,slow=14						
FITZ				Sn	Sn	07 55 16.2	-5.3
	0.1nm,0.3s,baz=165,slow=18,SNR=2.5						
WRA	Warramunga Arr	15.20	174	Pn	Pn	07 52 37.3	-2.0
	0.1nm,0.3s,baz=356,slow=13,SNR=8.5						
WRA				Sn	Sn	07 55 19.4	-9.1
	0.1nm,0.3s,baz=357,slow=23,SNR=4.4						
ASAR	Alice Springs	18.85	176	P	P	07 53 25.1	+0.2
	0.2nm,0.3s,baz=356,slow=9.1,SNR=13						
ASAR				S	Sn	07 56 50.9	-6.3
	0.1nm,0.3s,baz=354,slow=27,SNR=4.9						
MKAR	Makanchi Array	67.82	325	P	P	08 00 03.2	+0.1
	0.2nm,0.4s,baz=128,slow=6.7,SNR=4.2						

BUL ***09*** *07:50:05.2±1.3,26°.92S×27°.07E,h11^{km}±12^{km},MD4.8*

PRE ***09*** *07:50:06.9±1.2,26°.95S×26°.58E,h2^{km},ML2.7*

ISC 09 07:50:07.5±1.3**,26°.90S**±0°.04×**26°.58E**±0°.04**,h6^{km}**±12^{km}**, n21,**σ**2^{s}04**/18**,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	Parys	0.70	92	*e*P	Pg	07 50 20.5	-0.5
PRYS				*e*S	Sg	07 50 29.3	-0.8
PRYS				IAML		07 50 35.5	
	comp=Z,164nm,0.7s						
KSR	Koster	1.08	15	*e*P	Pb	07 50 29.1	+0.3
KSR				*e*S	Sb	07 50 44.2	+0.9
KSR				IAML		07 50 50.0	
	comp=Z,455nm,0.2s						
SWZ	Schweizer	1.15	256	*e*P	Pb	07 50 29.2	-0.7
SWZ				*e*S	Sg	07 50 43.9	-0.4
SWZ				IAML		07 50 48.8	
	comp=Z,211nm,0.3s						
HRAO	HartRAO	1.42	45	*e*P	Pb	07 50 35.0	+0.6
HRAO				*e*S	Sn	07 50 54.3	+1.3
HRAO				IAML		07 50 57.1	
	comp=Z,56nm,0.2s						
SLR	Silverton	1.92	53	*e*P	Pn	07 50 41.6	+0.6
SLR				*e*S	Sb	07 51 07.2	-0.2
SLR				IAML		07 51 11.0	
	comp=Z,93nm,0.3s						
BOSA	Boshof	2.07	214	*i* P	Pn	07 50 43.2	+0.3
BOSA	Boshof	2.07	214	*i* P	Pn	07 50 43.2	+0.3
LBTB	Lobatse	2.08	335	*i* Sg	Sg	07 51 17.0	+2.8
LBTB	Lobatse	2.08	335	*i* Sg	Sg	07 51 17.0	+2.8
NWCL	Newcastle	3.06	107	*e*P	Pn	07 50 57.3	+0.6
NWCL				*e*S	Sn	07 51 34.4	+0.7
NWCL				IAML		07 51 46.8	
	comp=Z,32nm,0.9s						
CNG	Changalane	5.06	84	*i* P	Pn	07 51 14.6	-9.4
CNG	Changalane	5.06	84	*i* P	Pn	07 51 14.6	-9.4
MSNA	Messina	5.51	35	*i* P	Pn	07 51 24.6	-5.6
MSNA	Messina	5.51	35	*i* P	Pn	07 51 24.6	-5.6
MOPA	Mopani	5.51	53	*i* P	Pn	07 51 20.7	-10
MOPA	Mopani	5.51	53	*i* P	Pn	07 51 20.7	-10
MATP	Matopo	6.68	16	*i* P	Pn	07 51 42.1	-4.3
MATP				*i* S	Sn	07 52 51.0	-12
MATP	Matopo	6.68	16	*i* P	Pn	07 51 42.1	-4.3
MATP				*i* S	Sn	07 52 51.0	-12
KRI	Karoi	10.41	16	*i* S	Sn	07 54 07.2	-28
TETE	Tete	12.52	33	*i* P	Pn	07 52 57.8	-8.5
TETE	Tete	12.52	33	*i* P	Pn	07 52 57.8	-8.5

KMA 09 08:26:36.0±0.1**,36°.25N**×**126°.56E,h15^{km},Error ellipse: s-maj=1.9km s-min=1.1km az=282.0,South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PORA	Boryeong	0.08	0	P	Pg	08 26 39.0	0.0
	SNR=9.8						
PORA	Boryeong	0.08	0	P	Pg	08 26 39.0	0.0
	SNR=9.8						
OYDB	Oeyeondo	0.39	268	P	Pb	08 26 45.7	+1.2
	SNR=7.0						
MNYD	Munyeodo	0.45	194	P	Pg	08 26 44.8	-0.2
	SNR=9.3						
MNYD	Munyeodo	0.45	194	P	Pg	08 26 44.8	-0.2
	SNR=9.3						
KSJEO	Jeonju	0.67	117	P	Pg	08 26 49.0	-0.1
	SNR=11						
KSJEO	Jeonju	0.67	117	P	Pg	08 26 49.0	-0.1
	SNR=11						
KSJEO				S	Sg	08 26 57.4	-0.5
KSJEU	Jeongeup	0.81	158	P	Pn	08 26 52.3	-0.5
	SNR=7.6						
KSJEU	Jeongeup	0.81	158	P	Pn	08 26 52.3	-0.5
	SNR=7.6						
KSYOJ	YEONGJU	1.70	68	P	Pn	08 27 05.0	-0.1
	SNR=150						

GUC 09 08:26:37.3±0.9**,30°.89S**×**70°.07W,h118^{km}**±8^{km}**,ML3.9, 2C-1D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO03	El Pedregal	0.54	275	*e*P	Pn	08 26 56.0	+0.7
CO03				*i* S	Sn	08 27 10.8	+1.8
GO04	Tololo Observa	0.95	318	*e*P	Pn	08 26 59.8	+0.8
GO04				*i* S	Sn	08 27 17.0	+1.6
CO06	Fray Jorge	1.37	279	⇑*i*P	Pn	08 27 03.7	+0.6
CO06				*e*S	Sn	08 27 23.7	+1.0
CO05	La Serena	1.40	313	⇑*i*P	Pn	08 27 04.1	+0.7
CO05				*e*S	Sn	08 27 25.1	+1.8
CO05				IAML		08 27 26.2	
	comp=N,2µm,0.3s						
VA03	San Esteban	1.91	192	*e*P	Pn	08 27 09.6	-0.1
VA03				*e*S	Sn	08 27 34.7	+0.3
VA03				IAML		08 27 38.0	
	comp=N,1µm,0.2s						
LCO	Las Campanas	1.95	343	*e*P	Pn	08 27 10.3	0.0
LCO				*i* S	Sn	08 27 35.4	-0.1
VA06	Catapilco	1.97	212	*e*P	Pn	08 27 09.7	-0.6
VA06				*e*S	Sn	08 27 35.0	-0.4
ROCH	El Roble	2.23	201	*e*P		08 27 13.2	
ROCH				*e*P	Pn	08 27 12.8	-0.9
ROCH				*e*S	Sn	08 27 40.7	-0.9
ROCH				IAML		08 27 43.2	
	comp=N,640nm,0.3s						
ROCH				IAML		08 27 44.0	
	comp=N,813nm,0.4s						
PEL	Peldehue	2.31	193	*e*P	Pn	08 27 13.7	-0.9
PEL				*e*S	Sn	08 27 42.2	-1.0
PEL				IAML		08 27 44.8	
	comp=E,418nm,0.3s						
FCH	Farellones	2.44	184	*e*P	Pn	08 27 16.5	-0.1
FCH				IAML		08 27 50.0	
	comp=E,571nm,0.3s						
MT02	Curacav	2.53	201	*e*P	Pn	08 27 16.4	-1.0
MT05	Renca	2.56	193	*e*P	Pn	08 27 17.0	-0.8
MT05				*e*S	Sn	08 27 48.5	-0.5
AC04	Llanos de Chal	2.82	342	*e*P	Pn	08 27 21.0	-0.1
AC04				IAML		08 28 05.8	
	comp=E,220nm,0.4s						
LMEL	Las Melosas	2.95	182	*e*P	Pn	08 27 22.5	-0.6
MT09	Talagante	2.98	195	⇓*i*P	Pn	08 27 21.6	-1.8
MT09				IAML		08 27 59.1	
	comp=N,387nm,0.1s						
VA05	Santo Domingo	3.06	205	*e*P	Pn	08 27 22.5	-1.7
VA05				IAML		08 28 11.4	
	comp=E,416nm,0.5s						
BO04	La Punta	3.12	188	*e*P	Pn	08 27 23.8	-1.4
BO04				IAML		08 28 07.1	
	comp=E,262nm,0.3s						
MT01	Popeta	3.13	198	*e*P	Pn	08 27 23.6	-1.6
MT01				*e*S	Sn	08 27 59.4	-2.8
MT01				IAML		08 28 01.4	
	comp=E,368nm,0.3s						
GO03	Copiap	3.29	357	*e*P	Pn	08 27 26.9	-0.5
GO03				*e*S	Sn	08 28 02.2	-3.8
GO03				IAML		08 28 07.2	
	comp=E,196nm,0.5s						
BO01	Tunca	3.60	194	*e*P	Pn	08 27 29.1	-2.3
BO02	Sierra Bellavi	3.94	189	*e*P	Pn	08 27 34.2	-1.8
GO05	Huala	4.40	200	*e*P	Pn	08 27 38.8	-3.3

IDC ***09*** *08:55:20.7±0.8,4°.12S×129°.51E,h0^{km},mb4.3/9, mb1 4.3/13,mb1mx4.0/46,mbtmp4.2/13,ML3.7/4,MS3.3/7, Ms1 3.3/7,ms1mx3.1/37,Error ellipse: s-maj=32.2km s-min=15.8km az=76.0*

NEIC ***09*** *08:55:24.6±2.1,4°.16S±0°.08×129°.43E±0°.09,h22^{km}±7^{km}, mb4.0/12,Error ellipse: s-maj=13.9km s-min=11.1km az=125.0*

DJA ***09*** *08:55:25.5±0.7,4°S±4°×12°9E±°,h12^{km}±5^{km},M4.4/9, mb4.7/2,mB5.0/2,MLv4.2/9,Mw(mB)4.4/2*

ISC 09 08:55:25.4±0.6**,4°.17S**±0°.05×**129°.44E**±0°.06**,h36^{km},n38,** σ**1^{s}25**/38**,mb4.3**/10**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.97	328	P	Pn	08 55 41.0	-1.5
MSAI				S	Sn	08 55 51.9	-3.1
AAI	Ambon	1.33	291	P	Pn	08 55 46.5	-1.0
AAI				S	Sn	08 56 03.0	-1.0
FAKI	Fak Fak	3.06	66	P	Pn	08 56 11.5	+0.2
FAKI	Fak Fak	3.06	66		Pn	08 56 11.7	+0.3
SIJI	Sorong	3.75	29	Pn	Pn	08 56 20.7	-0.1
	28nm,0.3s,baz=239,slow=23,SNR=86						
SIJI				Sn	Sn	08 57 02.7	-1.1
	14nm,0.3s,baz=162,slow=0.9,SNR=3.9						
SWI	Sorong	3.75	29	P	Pn	08 56 20.7	-0.1
LBMI	Labuha	4.01	331	P	Pn	08 56 24.8	+0.4
SANI	Sanana	4.04	301	P	Pn	08 56 25.6	+0.8
SOEI	Soe	7.56	223	Pn	Pn	08 57 13.4	+0.1
BATI	Baumata	8.29	223	LR	LR	09 00 28.8	
	comp=Z,339nm,21.1s,baz=42,slow=37						
KAPI	Kappang	9.70	265	LR	LR	09 01 13.4	
	comp=Z,122nm,18.6s,baz=99,slow=36						
DAV	Davao City (W)	11.81	341	LR	LR	09 03 28.5	
	comp=Z,74nm,19.1s,baz=230,slow=41						
FITZ	Fitzroy Crossi	14.33	195	Pn	Pn	08 58 46.2	+0.4
	0.1nm,0.3s,baz=11,slow=13,SNR=2.7						
WB0	Warramunga Arr	16.23	163		Pn	08 59 10.2	-0.7
WRA	Warramunga Arr	16.39	163	Pn	Pn	08 59 11.2	-1.6
	0.2nm,0.3s,baz=335,slow=12,SNR=17						
WRA				Sn	Sn	09 02 09.0	-4.7
	0.2nm,0.3s,baz=346,slow=21,SNR=3.4						
WRA				LR	LR	09 05 36.3	
	comp=Z,82nm,19.9s,baz=330,slow=38						
WB2	Warramunga Arr	16.39	163	Pn	Pn	08 59 11.3	-1.6
WB2				IAmb	IAmb	08 59 28.1	
	comp=Z,6.3nm,0.9s						
WR0	Warramunga Arr	16.46	163	Pn	Pn	08 59 13.2	-0.6
WR0				IAmb	IAmb	08 59 29.5	
	comp=Z,14nm,1.4s						
COEN	Coen	16.67	127	Pn	Pn	08 59 16.1	-0.4
COEN				IAmb	IAmb	08 59 39.2	
	comp=Z,16nm,1.1s						
PSA00	Pilbara Seismi	19.65	207	P	P	08 59 51.4	+0.3
PSA00	Pilbara Seismi	19.65	207	P	P	08 59 51.5	+0.3
PSA00				IAmb	IAmb	08 59 55.1	
	comp=Z,28nm,1.1s						
AS31	Alice Springs	19.85	168	P	Pn	08 59 54.8	-0.5
AS31				IAmb	IAmb	09 00 09.7	
	comp=Z,3.5nm,0.8s						
ASAR	Alice Springs	19.85	168	P	Pn	08 59 55.2	-0.1
	comp=Z,0.5nm,0.3s,baz=348,slow=9.7,SNR=41						
ASAR				PcP	PcP	09 04 09.7	-0.7
	comp=Z,0.1nm,0.3s,baz=11,slow=1.8,SNR=4.6						
ASAR				LR	LR	09 08 31.4	
	comp=Z,53nm,18.5s,baz=358,slow=40						
ASAR	Alice Springs	19.85	168	P	Pn	08 59 55.0	-0.3
CTAO	Charters Tower	22.77	135	P	P	09 00 24.5	-0.5
CTAO				IAmb	IAmb	09 00 47.1	
	comp=Z,13nm,0.9s						
STKA	Stephens Creek	29.83	159	P	P	09 01 30.9	+1.6
	comp=Z,0.7nm,0.3s,baz=328,slow=11,SNR=4.7						
STKA				LR	LR	09 13 18.5	
	comp=Z,98nm,20.1s,baz=15,slow=36						
CMAR	Chiang Mai Arr	37.53	308	P	P	09 02 37.2	+0.9
	comp=Z,2.2nm,0.7s,baz=142,slow=8.2,SNR=12						
CHTO	Chiang Mai	37.73	308	P	P	09 02 37.8	-0.3
MJAR	Matsushiro Arr	41.32	11	P	P	09 03 07.1	-0.6
	comp=Z,1.9nm,0.9s,baz=206,slow=11,SNR=2.7						
KSRS	Korea Array	41.44	358	LR	LR	09 19 25.3	
	comp=Z,51nm,19.1s,baz=30,slow=35						
SONM	Songino Array	55.60	341	P	P	09 04 58.8	+1.1
	comp=Z,1.5nm,1.1s,baz=158,slow=6.1,SNR=6.2						
SONM	Songino Array	55.60	341	IAmb	IAmb	09 05 00.9	
	comp=Z,1.9nm,1.1s						
MKAR	Makanchi Array	65.57	326	P	P	09 06 06.0	+0.4
	comp=Z,4.1nm,0.7s,baz=121,slow=7.9,SNR=20						
ZALV	Zalesovo Beam	68.82	334	P	P	09 06 26.6	+0.6
	comp=Z,2.3nm,0.7s,baz=104,slow=4.7,SNR=11						
ZALV	Zalesovo Beam	68.82	334	P	P	09 06 25.4	-0.5
KURBB	Kurchatov Arra	69.83	328	P	P	09 06 32.8	+0.6
	comp=Z,7.6nm,0.8s,baz=130,slow=5.6,SNR=33						
BVAR	Borovoye Array	75.39	328	P	P	09 07 06.7	+1.4
	comp=Z,3.0nm,0.8s,baz=187,slow=12,SNR=14						
AKTO	Aktyubinsk	81.51	322	P	P	09 07 40.3	+1.2
	comp=Z,2.4nm,0.7s,baz=179,slow=3.9,SNR=5.2						
LPAZ	La Paz	153.25	140	PKPbc	PKiKP	09 15 21.6	+0.1
	comp=Z,0.9nm,0.9s,baz=211,slow=5.9,SNR=3.6						

IDC 09 09:00:26.7±1.6**, 4°.05S**×**129°.39E, h0km, mb3.8**/1**, mb1 3.6**/4**, mb1mx3.4**/37**, mbtmp3.5**/4**, ML3.2**/3**, Error ellipse: s-maj=46.4km s-min=25.5km az=91.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.67	31	Pn	Pn	09 01 25.6	+0.9
	8.0nm,0.3s,baz=58,slow=22,SNR=12						
SIJI				Sn	Sn	09 02 09.4	+0.7
	baz=232,slow=19						
WRA	Warramunga Arr	16.52	163	Pn	Pn	09 04 20.5	+0.5
	0.0nm,0.3s,baz=346,slow=11,SNR=2.7						
ASAR	Alice Springs	19.99	168	P	P	09 05 00.8	-0.2
	0.1nm,0.3s,baz=349,slow=11,SNR=2.4						
MKAR	Makanchi Array	65.44	326	P	P	09 11 11.3	-0.2
	0.4nm,0.4s,baz=115,slow=8.2,SNR=8.2						

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*CFUSG **09** 09:03:33.2, 38°.58N×38°.06E, h33km, mb3.2/3, Central Turkey*

*DDA **09** 09:03:33.8, 38°.82N×37°.85E, h18km, MW4.5*

*ISK **09** 09:03:33.4, 38°.81N×37°.85E, h5km, ML4.6/35*

*IDC **09** 09:03:34.6±0.6, 38°.86N×37°.73E, h0km, mb4.1/17, mb1 4.1/25, mb1mx4.0/48, mbtmp4.0/25, ML3.8/8, MS3.6/24, Ms1 3.6/24, ms1mx3.4/56, Error ellipse: s-maj=13.0km s-min=10.0km az=162.0*

*MOS **09** 09:03:34.8±1.8, 38°.87N×37°.60E, h12km, mb4.6/22, Error ellipse: s-maj=5.6km s-min=4.1km az=97.8*

*NEIC **09** 09:03:34.5±1.4, 38°.88N±0°.06×37°.86E±0°.06, h10km±1km, Error ellipse: s-maj=9.9km s-min=8.3km az=162.0*

*MED_RC **09** 09:03:34.0±1.3, 38°.88N×37°.92E, h23km±2km, MW4.5/17, Moment Tensor Solution.Mantle waves: s17,c22; Duration: 1s.0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.38±1.01; $M_{\theta\theta}$-4.72±1.13; $M_{\phi\phi}$6.09±1.08; $M_{r\theta}$-1.36±.65; $M_{\theta\phi}$4.80±.36; $M_{\phi r}$1.57±.59; Best double couple: $M_0$7.58000×10^{15} NP1:ϕ_s65.00000°, δ73.00000°, λ-8.00000°. NP2:ϕ_s157.00000°, δ82.00000°, λ-163.00000°. Principal axes: T 8.0200, Plg6.0000°, Azm290.0000°; N -0.9000, Plg71.0000°, Azm182.0000°; P -7.1300, Plg18.0000°, Azm22.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

ISC 09 09:03:34.8±0.8**, 38°.83N**±0°.02×**37°.84E**±0°.01**, h9**km±5km**, n303,** σ1s.75/334**, mb4.4**/42**, MS3.6**/17**, 40C-21D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEKM	Malatya_Hekimh	0.10	62	⇑iP	Pg	09 03 37.7	+0.2
HEKM				iS	Sg	09 03 40.1	+0.7
HEKM				IAML		09 03 42.0	
	comp=N,182μm,0.4s						
HEKM				IAML		09 03 43.0	
	comp=E,246μm,0.9s						
DARE	Darende-Malaty	0.38	227	PG	Pg	09 03 41.9	-0.4
DARE				SG	Sg	09 03 48.0	+0.6
CUGUR	Gurin_SVAS	0.46	257	⇑iP	Pg	09 03 43.4	-0.4
CUGUR				iS	Sg	09 03 50.8	+1.0
CUGUR				IAML		09 03 51.0	
	comp=N,133μm,0.8s						
CUGUR				IAML		09 03 52.0	
	comp=E,108μm,0.4s						
ARPR	Arapgir-MALATY	0.47	56	PG	Pg	09 03 43.7	-0.2
ARPR				SG	Sg	09 03 51.3	+1.2
AKCD	Akcadag	0.54	173	⇓iP	Pg	09 03 44.2	-1.0
AKCD				iS	Sg	09 03 52.7	+0.4
CUKAN	kangal_SIVAS	0.57	329	⇑iP	Pg	09 03 45.3	-0.5
CUKAN				iS	Sg	09 03 53.3	0.0
CUKAN				IAML		09 03 54.0	
	comp=N,18μm,0.5s						
CUKAN				IAML		09 04 01.0	
	comp=E,11μm,0.7s						
KEMA	Kemaliye	0.67	49	⇓iP	Pg	09 03 46.6	-1.2
KEMA				iS	Sg	09 03 57.2	+0.6
KEMA				IAML		09 04 00.0	
	comp=N,10μm,0.5s						
KEMA				IAML		09 04 02.0	
	comp=E,9μm,0.6s						
MALT	Malatya	0.69	138	PG	Pg	09 03 47.3	-0.8
MALT				SG	Sg	09 03 57.7	+0.5
ELBS	KAHRAMANMARAS_	0.75	228	⇓iP	Pg	09 03 48.4	-0.9
ELBS				iS	Sg	09 04 00.0	+0.9
ELBS				IAML		09 04 01.0	
	comp=N,41μm,0.4s						
ELBS				IAML		09 04 01.0	
	comp=E,48μm,0.7s						
ILIC	ilic-Erzincan	0.84	42	PG	Pg	09 03 50.9	-0.1
ELZG	Elazig	0.95	110	⇑iP	Pb	09 03 51.9	-1.8
ELZG				iS	Sb	09 04 06.0	-0.4
CUAYA	Sivas-Altinyay	0.96	297	⇑iP	Pb	09 03 52.0	-1.6
CUAYA				iS	Sg	09 04 06.5	+0.8
CUAYA				IAML		09 04 10.0	
	comp=E,4μm,0.6s						
CUAYA				IAML		09 04 13.0	
	comp=N,5μm,0.4s						
CUZAR	Zara_SIVAS	1.06	357	⇓iP	Pb	09 03 54.7	-0.7
CUZAR				iS	Sn	09 04 11.6	+0.6
CUZAR				IAML		09 04 14.0	
	comp=E,5μm,1.0s						
CUZAR				IAML		09 04 15.0	
	comp=N,4μm,0.5s						
SCER	sogukcermik	1.17	332	⇑iP	Pb	09 03 56.0	-1.2
SCER				iS	Sg	09 04 13.1	+0.6
SARI	SarD1z-Kayseri	1.19	250	PN	Pn	09 03 57.2	-0.6
SARI				SN	Sg	09 04 14.9	+1.7
SVRC	Sivrice-ELAZID	1.23	111	PN	Pn	09 03 56.8	-1.6
SVSK	Karacayir	1.27	329	PN	Pb	09 03 58.9	+0.1
REFA	Refahiye_ERZN	1.29	33	⇓iP	Pn	09 03 58.6	-0.6
REFA				iS	Sg	09 04 17.8	+1.4
REFA				IAML		09 04 22.0	
	comp=E,2μm,0.7s						
REFA				IAML		09 04 26.0	
	comp=N,2μm,0.8s						
TNCL	Tunceli-Merkez	1.36	77	⇑iP	Pn	09 03 58.8	-1.2
TNCL				iS	Sn	09 04 17.9	-0.3
CUSAR	Sarkisla-SIVAS	1.37	296	⇑iP	Pn	09 03 59.3	-1.0
CUSAR				iS	Sg	09 04 19.8	+0.7
ATAB	Bozova	1.41	165	⇓iP	Pn	09 04 00.8	+0.2
ATAB				iS	Sb	09 04 20.2	+0.9
ATAB				IAML		09 04 25.0	
	comp=N,6μm,0.6s						
ATAB				IAML		09 04 25.0	
	comp=E,11μm,0.8s						
SUSE	Susehri	1.41	11	⇓iP	Pg	09 04 01.9	+0.2
SUSE				iS	Sg	09 04 23.5	+3.4
SUSE				IAML		09 04 25.0	
	comp=E,2μm,0.6s						
SUSE				IAML		09 04 26.0	
	comp=N,1μm,0.6s						
KAHM	Kahramanmaras,	1.47	207	⇓iP	Pn	09 04 01.4	-0.2
KAHM				iS	Sg	09 04 23.9	+1.7
GZT	Gaziantep	1.49	189	⇓iP	Pn	09 04 01.9	+0.1
GZT				iS	Sg	09 04 23.6	+0.9
KOVA	Elazig, Kovanc	1.55	94	⇑iP	Pn	09 04 02.3	-0.3
KOVA				iS	Sg	09 04 25.8	+1.3
BNN	Bunyan	1.56	271	PN	Pn	09 04 03.4	+0.6
BNN				SN	Sg	09 04 25.4	+0.5
BNN	Bunyan	1.56	271		Pn	09 04 02.5	-0.3
URFA	Urfa	1.59	151	PN	Pn	09 04 03.8	+0.6
RSDY	Resadiye-TOKAT	1.61	346	PN	Pb	09 04 04.4	-0.4
SAIM	ADANA	1.62	239	⇑iP	Pb	09 04 04.9	-0.1
SAIM				iS	Sb	09 04 26.5	+0.9
SAIM				IAML		09 04 28.0	
	comp=N,4μm,0.3s						
SAIM				IAML		09 04 30.0	
	comp=E,5μm,0.4s						
ERZN	Erzincan	1.65	62	PN	Pn	09 04 04.7	+0.7
ALUC	Giresun/Alucra	1.67	25	⇓iP	Pb	09 04 06.0	+0.2
ALUC				iS	Sg	09 04 30.2	+1.5
EUZM	Uzumlu	1.69	58	⇓iP	Pb	09 04 05.8	-0.2
EUZM				iS	Sg	09 04 29.3	+0.2
ANDN	Andirin	1.72	224	⇓iP	Pn	09 04 05.7	+0.7
ANDN				iS	Sg	09 04 30.8	+0.8
GAZ	Gaziantep	1.73	197	PN	Pn	09 04 05.8	+0.7
GAZ	Gaziantep	1.73	197		Pn	09 04 05.1	0.0
GAZ				Sn	Sg	09 04 31.6	+1.2
GUNE	Kayseri	1.73	273	⇑iP	Pb	09 04 06.5	-0.4
GUNE				iS	Sg	09 04 34.7	+4.2
TOKT	Tokat	1.79	326	PN	Pb	09 04 06.9	-1.0
HACI	Hacifakili, Ak	1.86	299	⇑iP	Pn	09 04 07.8	+0.9
HACI				iS	Sg	09 04 34.0	-0.5
DIYA	Diyarbakir	2.01	116	⇑iP	Pn	09 04 09.7	+0.8
DIYA				iS	Sb	09 04 37.0	+0.4
DYBB	Diyarbakir	2.01	115	PN	Pn	09 04 09.7	+0.8
ERBA	Erbaa	2.03	336	iP	Pb	09 04 10.6	-1.3
ERBA				iS	Sg	09 04 40.4	+0.3
HANI	Diyarbakir_Han	2.05	101	⇑iP	Pn	09 04 10.3	+0.9
HANI				iS	Sg	09 04 40.6	0.0
BINT	Bingol	2.07	88	P	Pg	09 04 14.5	+0.1
YAHY	KAYSERI_Yahyal	2.08	250	iP	Pn	09 04 10.9	+0.9
YAHY				iS	Sg	09 04 45.0	+3.4
KOZT	Kozan	2.08	230	PN	Pn	09 04 10.8	+0.9
YOZ	Yozgat	2.12	293	PN	Pn	09 04 11.5	+1.0
KUZU	Kuzuini	2.14	197	iP	Pn	09 04 12.5	+1.8
KUZU				iS	Sg	09 04 45.4	+1.8
SIRC	Yozgat	2.16	284	iP	Pn	09 04 11.7	+0.7
SIRC				iS	Sg	09 04 43.8	-0.3
YEDI	Yedisu-Bingol	2.19	73	PN	Pn	09 04 12.3	+0.8
CKRK	Yozgat, Cekere	2.20	305	iP	Pn	09 04 12.5	+0.9
CKRK				iS	Sg	09 04 44.5	-1.0
BNGB	Bingl	2.22	85	PN	Pn	09 04 12.6	+0.7
AKO	Adana	2.33	235	iP	Pb	09 04 16.4	-0.6
AKO				iS	Sg	09 04 51.9	+2.2
AVNS	Nevsehir-Avano	2.34	270	iP	Pn	09 04 14.1	+0.6
AVNS				iS	Sg	09 04 51.0	+1.1
KOZK	Kozakli-Nevseh	2.35	280	PN	Pn	09 04 14.9	+1.2
BAYB	BAYBURT	2.35	52	iP	Pn	09 04 14.1	+0.3
BAYB				iS	Sb	09 04 48.3	+1.7
BAYT	Aydıntepe-Bayb	2.37	48	PN	Pn	09 04 15.1	+1.1
KOPT	Kop Dagi	2.37	59	iP	Pn	09 04 15.7	+1.5
KOPT				iS	Sg	09 04 50.9	-0.2
CEYT	Ceyhan	2.46	223	PN	Pn	09 04 16.5	+1.4
KUPE	Kupecik-Ladik(	2.47	327	PN	Pn	09 04 16.6	+1.3
MAZI	Mazidag	2.47	123	PN	Pn	09 04 15.9	+0.6
SLHN	Bingol, Solhan	2.49	86	iP	Pb	09 04 19.5	-0.2
SLHN				iS	Sg	09 04 56.2	+1.5
HKOY	Hamitkoy-Ladik	2.50	326	PN	Pn	09 04 17.4	+1.6
CMRD	Camardi-Nigde	2.53	243	PN	Pn	09 04 17.5	+1.3
KIZO	Buyukkizoglu-L	2.54	325	PN	Pn	09 04 17.4	+1.2
KARO	Karliova-Bingo	2.54	78	PN	Pn	09 04 17.5	+1.1
NIDE	Nigde/Merkez-G	2.55	252	iP	Pn	09 04 18.1	+1.7
NIDE				iS	Sg	09 04 59.3	+2.7
ECAT	Cat-ERZURUM	2.55	71	iP	Pn	09 04 18.7	+2.2
ECAT				iS	Sg	09 05 01.1	+4.3
MACK	Trabzon	2.58	34	iP	Pb	09 04 19.0	-2.3
MACK				iS	Sg	09 04 56.4	-1.2
YARM	Yarimca-Ladik(	2.60	324	PN	Pn	09 04 18.4	+1.3
KTUT	Trabzon	2.61	34	PN	Pn	09 04 18.8	+1.6
COAL	Corum-Alaca	2.63	304	iP	Pn	09 04 18.6	+1.1
COAL				iS	Sg	09 04 59.0	-0.2
KVT	Kavak	2.64	329	PN	Pn	09 04 19.1	+1.5
YURE	YUREGIR	2.66	222	iP	Pn	09 04 19.2	+1.4
YURE				iS	Sg	09 05 02.4	+2.2
KARA	Karaisali	2.70	235	PN	Pn	09 04 19.9	+1.5
SVAN	Silvan-Diyarba	2.72	103	iP	Pn	09 04 18.7	0.0
SVAN				iS	Sg	09 05 02.6	+0.5
SVAN	Silvan-Diyarba	2.72	103	PN	Pn	09 04 19.1	+0.4
MARD	Mardin	2.77	122	iP	Pn	09 04 20.4	+0.9
MARD				iS	Sg	09 05 03.2	-0.5
KRIK	Erzurum-spir	2.82	57	iP	Pn	09 04 22.8	+2.5
KRIK				iS	Sg	09 05 05.4	0.0
CORM	Corum	2.83	299	PN	Pn	09 04 21.6	+1.3
VRTB	Varto-Mus	2.83	82	iP	Pn	09 04 21.0	+0.6
VRTB				iS	Sg	09 05 11.2	+5.4
VRTB	Varto-Mus	2.83	82	PN	Pn	09 04 21.5	+1.1
GULA	Gulagac	2.87	261	PN	Pn	09 04 22.4	+1.6
KRTD	Karatas-Adana	2.95	221	PN	Pn	09 04 23.2	+1.4
KRTS	Karatas	2.98	222	PN	Pn	09 04 23.6	+1.3
CHOM	Cayeli-Rize	3.19	44	PN	Pn	09 04 26.4	+1.3
GURO	Guroymak-BITLI	3.29	94	PN	Pn	09 04 27.9	+1.2
GURO	Guroymak-BITLI	3.29	94		Pn	09 04 25.8	-0.8
KOPR	Koprukoy-ERZUR	3.32	68	PN	Pn	09 04 28.3	+1.2
BR131	Keskin Array S	3.38	287	P	Pn	09 04 28.0	+0.1
BR131	Keskin Array S	3.38	287	Pn	Pn	09 04 28.0	+0.1
BRTR	Keskin Array B	3.38	287	Pn	Pn	09 04 28.8	+0.8
	comp=E,3.8nm,0.3s,baz=121,slow=12,SNR=36						
BRTR	Keskin Array B	3.38	287	iP	Pn	09 04 28.7	+0.8
BRTR				pmax	pmax		
	comp=Z,13nm,0.4s						
BRTR	Keskin Array B	3.38	287	Pn	Pn	09 04 28.1	+0.2
DIKM	Dikmen	3.44	326	⇑P	Pn	09 04 30.8	+2.2
SNOP	Sinop	3.77	329	Pn	Pn	09 04 32.7	-0.4
SIRT	Sirnak	3.86	109	Pn	Pn	09 04 33.4	-1.0
BCA	Borcka	3.90	47	⇑P	Pb	09 04 42.8	-1.0
BATM	Batumi	4.05	46	⇑P	Pb	09 04 45.5	-0.8
ANTO	Ankara	4.05	286	P	Pn	09 04 36.9	-0.1
ANTO	Ankara	4.05	286		Pn	09 04 36.9	-0.1
BR231	Keskin MP Arra	4.06	286		Pn	09 04 36.8	-0.3
BZK	Bozkurt	4.29	318	⇑P	Pn	09 04 43.1	+2.9
BZK	Bozkurt	4.29	318	Pn	Pn	09 04 39.9	-0.3
KARS	Kars	4.42	64	P	Pn	09 04 41.5	-0.7
KARS	Kars	4.42	64	Pn	Pn	09 04 41.5	-0.7
HWQ	Hawqa	4.79	199	eP	Pn	09 04 50.7	+3.4
SOC	Sochi	4.96	16	eP	Pn	09 04 49.9	+0.5
SOC				e		09 05 46.4	
SOC				pmax	pmax		
	comp=Z,22nm,0.6s						
SOC				MLR	MLR		
	comp=Z,288nm,11.0s						
AKH	Akhalkalaki	5.04	57	⇓P	Pb	09 05 01.8	-1.4
BHL	Bhannes	5.22	200	eP	Pn	09 04 57.0	+3.9
CSS	Mathiatis	5.29	224	Pn	Pn	09 04 53.3	-0.7
MDUB	Mudurnu	5.38	290		Pn	09 04 55.0	-0.4
DQRL	Deir Qamar	5.43	200	eP	Pn	09 05 00.7	+4.7
GNI	Garni	5.50	74	Pn	Pb	09 05 04.4	-6.6
	comp=Z,0.9nm,0.3s,baz=232,slow=17,SNR=2.4						
GNI	Garni	5.50	74	⇓iP	Pb	09 05 04.3	-6.8
GNI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GNI	Garni	5.50	74	Pn	Pn	09 04 55.9	-1.1
RCY	Rachaya	5.56	198	eP	Pn	09 05 02.2	+4.3
ONI	Oni	5.68	47	P	Pn	09 04 58.4	-1.0
ONI	Oni	5.68	47	Pn	Pn	09 04 58.4	-1.0
NEY	Neytrino	5.75	38	⇑eP	Pn	09 05 04.5	+4.0
ANN	Anapa	5.97	357	eP	Pn	09 05 04.1	+0.8
ANN				eS	Sn	09 06 12.0	+0.2
ANN				pmax	pmax		
	comp=Z,58nm,1.7s						
ZEI	Tsey	6.06	47	eP	Pn	09 05 10.8	+6.0
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MMAI	Mount Meron Ar	6.13	200	Pn	Pn	09 05 07.6	+2.0
	comp=Z,4.0nm,0.3s,baz=15,slow=13,SNR=9.1						
KBZ	Khabaz	6.20	36	Pn	Pn	09 05 09.9	+3.4
	comp=Z,0.2nm,0.3s,baz=249,slow=6.6,SNR=3.7						
KBZ				LR	LR	09 08 08.1	
	comp=Z,317nm,18.1s,baz=246,slow=44						
KBZ	Khabaz	6.20	36	⇓eP	Pn	09 05 10.6	+4.2
KIV	Kislovodsk	6.28	34	⇑P	Pn	09 05 13.8	+6.1
KIV	Kislovodsk	6.28	34	eP	Pn	09 05 11.1	+3.4
KIV				eS	Sn	09 06 23.3	+3.6
KIV				pmax	pmax		
	comp=Z,29nm,1.1s						
KIV				MLR	MLR		
	comp=Z,64nm,9.0s						
KIV	Kislovodsk	6.28	34	Pn	Pn	09 05 06.3	-1.4
ALU	Alushta	6.39	337	eP	Pb	09 05 17.8	-8.3
ALU	Alushta	6.39	337	eP	Pb	09 05 17.8	-8.3
ALU				Pm		09 05 19.0	
	comp=Z,15nm,0.4s						
SUDU	Sudak	6.42	342	eP	Pn	09 05 12.8	+3.4
SUDU	Sudak	6.42	342	eP	Pn	09 05 12.8	+3.4
SUDU				Pm		09 05 26.0	
	comp=Z,26nm,0.8s						
SEV	Sevastopol'	6.51	333	eP	Pn	09 05 14.2	+3.5
SEV	Sevastopol'	6.51	333	eP	Pn	09 05 14.2	+3.5
SEV				Pm		09 05 15.0	
	comp=Z,5.0nm,0.3s						
ELL	Elmali	6.62	254	P	Pn	09 05 12.2	-0.2
ELL	Elmali	6.62	254		Pn	09 05 12.2	-0.2
ASF	Jabal al Asfar	6.69	187	Pn	Pn	09 05 15.8	+2.6
	comp=Z,1.9nm,0.3s,baz=26,slow=14,SNR=9.3						
ASF				Lg	Lg	09 07 07.5	
	comp=Z,2.4nm,0.3s,baz=7.6,slow=21,SNR=3.0						
MAK	Makhachkala	8.40	58	eP	Pn	09 05 35.7	-1.0
MAK				pmax	pmax		
	comp=Z,298nm,1.1s						
MAK				MLR	MLR		
	comp=Z,571nm,8.0s						
TIRR	Tirgusor	9.02	312	⇑P	Pn	09 05 47.9	+2.7
TIRR	Tirgusor	9.02	312	P	Pn	09 05 44.5	-0.7
TIRR	Tirgusor	9.02	312	Pn	Pn	09 05 44.5	-0.7
TLCR		9.24	316	⇓P	Pn	09 05 49.3	+1.1
TPGR	Topolog	9.25	314	⇑P	Pn	09 05 50.8	+2.4
HARR	Harsova	9.44	312	⇑P	Pn	09 05 54.0	+3.2
EIL	Elat	9.45	196	Lg	Lg	09 08 40.3	
	comp=Z,0.3nm,0.3s,baz=42,slow=15,SNR=1.8						
EIL				LR	LR	09 09 23.0	
	comp=Z,160nm,18.4s,baz=16,slow=37						
CFR	Carcaliu	9.61	314	⇑P	Pn	09 05 55.7	+2.5
SANT	Santorini	10.13	260	Pn	Pn	09 05 58.9	-1.5
VRI	Vrincioaia	10.81	314	⇑P	Pn	09 06 13.2	+3.4
PLOR	Plostina	10.85	314	⇑P	Pn	09 06 13.4	+3.1
IDI	Anoyia	10.94	255	LR	LR	09 10 34.7	
	comp=Z,260nm,19.0s,baz=78,slow=39						
MLR	Muntele Rosu	11.05	311	⇑P	Pn	09 06 15.3	+2.2
MLR	Muntele Rosu	11.05	311	Pn	Pn	09 06 14.2	+1.1
	comp=Z,0.2nm,0.3s,baz=146,slow=14,SNR=1.7						
MLR				LR	LR	09 10 37.7	
	comp=Z,317nm,20.0s,baz=118,slow=39						
MLR	Muntele Rosu	11.05	311		Pn	09 06 09.3	-3.8
TESR	Tescani	11.25	317	⇓P	Pn	09 06 17.4	+1.7
VOIR		11.56	309	⇑P	Pn	09 06 23.6	+3.6
DOPR	Dopca	11.64	312	⇑P	Pn	09 06 24.3	+3.3
VTS	Vitosha	11.71	293	P	Pn	09 06 19.1	-3.1
VTS	Vitosha	11.71	293	Pn	Pn	09 06 19.1	-3.1
AGG	Agios Georgios	12.09	276	P	Pn	09 06 23.8	-3.4
AGG	Agios Georgios	12.09	276	Pn	Pn	09 06 23.8	-3.4
VSR	Storozhevoye	12.42	4	eP	Pn	09 06 31.3	-0.4
VSR				pmax	pmax		
	comp=Z,50nm,0.6s						
VRH	Novokhopyorsk	12.67	11	eP	Pn	09 06 35.1	0.0
VRH				pmax	pmax		
	comp=Z,20nm,1.2s						
BURAR	Bucovina Array	12.71	318	⇑P	Pn	09 06 37.2	+1.5
BURAR	Bucovina Array	12.71	318		Pn	09 06 32.9	-2.9
BUR08	Bucovina Ar. S	12.73	318		Pn	09 06 34.0	-2.2
FNA	Florina	12.81	284	P	Pn	09 06 35.1	-2.1
FNA	Florina	12.81	284	Pn	Pn	09 06 35.1	-2.1
AKASG	Malin Array Be	13.34	336	Pn	Pn	09 06 42.9	-1.4
	comp=Z,0.6nm,0.3s,baz=143,slow=13,SNR=3.2						
AKASG	Malin Array Be	13.34	336	iP	Pn	09 06 48.7	+4.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	13.34	336	Pn	Pn	09 06 41.5	-2.8
AKBB	Malin Array Si	13.34	336	⇑eP	Pn	09 06 48.5	+4.3
AKBB				pmax	pmax		
	comp=Z,39nm,3.5s						
LPSR	Galich'ya Gora	13.79	3	eP	Pn	09 06 49.4	-1.0
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TIR	Tirane	13.99	286	P	Pn	09 06 52.1	-1.1
TIR	Tirane	13.99	286	Pn	Pn	09 06 52.1	-1.1
DIVS	Divibare	14.37	297	Pn	Pn	09 06 57.5	-1.0
BELG	Belogornoye	15.17	23	LR	LR	09 12 49.9	
	comp=Z,94nm,18.7s,baz=216,slow=37						
BELG	Belogornoye	15.17	23	⇑eP	P	09 07 13.1	-1.1
BELG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CRVS	Cervenica-Dubn	15.49	316	eP	P	09 07 20.1	+2.3
CRVS	Cervenica-Dubn	15.49	316	eP	P	09 07 20.1	+2.3
PSZ	Piszkesteto	15.87	311	P	Pn	09 07 17.3	-1.1
PSZ				pmax	pmax		
	comp=Z,11nm,1.2s						
PSZ	Piszkesteto	15.87	311	Pn	Pn	09 07 17.3	-1.1
GEYT	Alibeck	15.93	87	LR	LR	09 14 36.9	
	comp=Z,95nm,20.7s,baz=200,slow=41						
GEYT	Alibeck	15.93	87	Pn	Pn	09 07 17.9	-1.3
GYA0B	ALIBECK ARRAY	15.93	87	Pn	Pn	09 07 18.2	-1.0
OBN	Obninsk	16.31	357	eP	P	09 07 26.1	-0.8
OBN				pmax	pmax		
	comp=Z,88nm,4.3s						
OBN				MLR	MLR		
	comp=Z,229nm,5.0s						
TIP	Timpagrande	16.39	278	Pn	Pn	09 07 24.2	-1.0
MOS	Moscow	16.92	360	eP	Pn	09 07 28.8	-2.8
MNK	Minsk	17.07	340	iP	Pn	09 07 33.0	-0.5
MNK				iS	Sn	09 10 41.4	-1.9
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						

MNK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,13nm,0.8s						
MNK				MLR	MLR		
	comp=Z,26nm,6.0s						
MNK				MLR	MLR		
	comp=N,91nm,12.0s						
MNK				MLR	MLR		
	comp=E,18nm,11.0s						
MNK	**Minsk**	**17.07**	**340**	iP	**Pn**	**09 07 33.0**	**-0.5**
	comp=E,3.0nm,1.0s						
MNK				iP	**Pn**	**09 07 33.0**	**-0.5**
	comp=N,13nm,0.8s						
MNK				iP	**Pn**	**09 07 33.0**	**-0.5**
	comp=Z,5.0nm,0.7s,baz=152						
MNK				iPP	**PnPn**	**09 07 42.5**	**-0.7**
MNK				iPPP	PPP	09 07 50.3	
MNK				iS	**Sn**	**09 10 41.4**	**-1.9**
MNK				iSS	**SnSn**	**09 10 55.3**	**-1.2**
MNK				iSSS	SSS	09 11 08.7	
MNK				iLR	LR	09 13 49.6	
MNK				iLRM	MLR	09 14 50.5	
	comp=Z,26nm,6.4s						
MNK				iLRM	MLR	09 14 57.8	
	comp=N,91nm,12.1s						
MNK				iLRM	MLR	09 15 01.0	
	comp=E,18nm,11.2s						
OJC	**Ojcow**	**17.13**	**318**	P	**Pn**	**09 07 33.1**	**-1.2**
OJC				pmax	pmax		
	comp=Z,23nm,1.6s						
OJC	**Ojcow**	**17.13**	**318**	P	**Pn**	**09 07 33.1**	**-1.2**
MORC	**Moravsky Berou**	**18.13**	**314**	P	**Pn**	**09 07 44.0**	**-2.7**
MORC				pmax	pmax		
	comp=Z,35nm,1.9s						
MORC	**Moravsky Berou**	**18.13**	**314**	P	**Pn**	**09 07 44.0**	**-2.7**
AKTO	**Aktyubinsk**	**18.39**	**44**	P	**Pn**	**09 07 50.5**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=255,slow=6.7,SNR=5.3						
AKTO				LR	LR	09 16 40.0	
	comp=Z,126nm,18.7s,baz=255,slow=43						
VRAC	**Vranov**	**18.45**	**311**	LR	LR	09 16 50.4	
	comp=Z,169nm,18.1s,baz=112,slow=43						
KRLC	**Kraliky**	**18.70**	**314**	eP	**Pn**	**09 07 55.5**	**+1.7**
KRLC	**Kraliky**	**18.70**	**314**	eP	**Pn**	**09 07 55.5**	**+1.7**
OBKA	**Obir**	**18.72**	**302**	ePn	**P**	**09 07 51.2**	**-2.5**
	comp=Z,4.8nm,1.0s						
DPC	**Dobruska-Polom**	**19.09**	**314**	eP	**Pn**	**09 07 59.9**	**+1.4**
DPC	**Dobruska-Polom**	**19.09**	**314**	eP	**Pn**	**09 07 59.9**	**+1.4**
NRCA	**Norcia**	**19.11**	**290**	P	**P**	**09 07 57.7**	**-0.3**
CORL	**Corleone**	**19.25**	**275**	P	**P**	**09 07 57.5**	**-2.0**
CORL				IAmb	IAmb	09 08 10.0	
	comp=Z,20nm,1.2s						
MOA	**Molln**	**19.31**	**305**	ePn	**Pn**	**09 08 00.4**	**-0.7**
MURB	**Monte Urbino**	**19.57**	**291**	P	**P**	**09 08 02.5**	**-0.6**
MURB				IAmb	IAmb	09 08 11.6	
	comp=Z,35nm,1.2s						
KLNR	**Kaliningrad**	**19.79**	**329**⇑	eP	**Pn**	**09 08 08.1**	**+1.5**
KLNR				pmax	pmax		
	comp=Z,96nm,0.8s						
ZOU	**Zoufplan**	**19.79**	**301**	P	**P**	**09 08 04.8**	**-0.7**
ZOU				IAmb	IAmb	09 08 14.7	
	comp=Z,22nm,1.4s						
STAL	**STALIGIAL**	**19.89**	**300**	P	**P**	**09 08 05.8**	**-0.7**
STAL				IAmb	IAmb	09 08 49.7	
	comp=Z,21nm,1.6s						
GERES	**GERESS Array B**	**20.01**	**308**	P	**Pn**	**09 08 08.6**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=113,slow=9.0,SNR=12						
GERES				LR	LR	09 17 00.7	
	comp=Z,119nm,19.9s,baz=136,slow=40						
GERES	**GERESS Array B**	**20.01**	**308**	P	**P**	**09 08 06.7**	**-1.0**
KHC	**Kasperske Hory**	**20.19**	**309**	eP	Pn	09 08 11.1	-0.4
KHC	**Kasperske Hory**	**20.19**	**309**⇓	eP	Pn	09 08 10.7	-0.8
KHC				pmax	pmax		
	comp=Z,21nm,1.4s						
OSSC	**Osservatorio P**	**20.52**	**292**	P	**P**	**09 08 12.4**	**-0.9**
CTI	**Castel Tesino**	**20.57**	**299**	P	**P**	**09 08 13.0**	**-0.9**
CTI				pmax	pmax		
	comp=Z,16nm,1.0s						
CTI	**Castel Tesino**	**20.57**	**299**	P	**P**	**09 08 13.0**	**-0.9**
CTI				IAmb	IAmb	09 08 16.6	
	comp=Z,16nm,1.0s						
CASP	**Castiglione de**	**20.76**	**290**	P	**P**	**09 08 14.0**	**-1.9**
CASP				IAmb	IAmb	09 08 20.6	
	comp=Z,13nm,1.0s						
ZCCA	**Zocca**	**20.79**	**294**	P	**P**	**09 08 15.1**	**-1.1**
WTTA	**Wattenberg**	**20.85**	**302**	ePn	**P**	**09 08 14.4**	**-2.6**
	comp=Z,6.9nm,0.9s						
WATA	**Walderalm**	**20.91**	**302**	ePn	**P**	**09 08 17.9**	**+0.4**
	comp=Z,12nm,1.3s						
SQTA	**Sankt Quirin**	**21.12**	**302**	ePn	**P**	**09 08 19.0**	**-0.9**
	comp=Z,2.7nm,0.5s						
KIRV	**Kirov**	**21.14**	**17**	P	**P**	**09 08 20.8**	**+1.1**
	comp=Z,18nm,0.6s,baz=289,slow=3.0,SNR=7.3						
KIRV				LR	LR	09 16 58.3	
	comp=Z,148nm,20.1s,baz=233,slow=38						
KIRV	**Kirov**	**21.14**	**17**⇓	eP	**P**	**09 08 23.2**	**+3.5**
MOTA	**Moosalm**	**21.22**	**302**	ePn	**P**	**09 08 21.2**	**+0.2**
	comp=Z,12nm,0.8s						
FETA	**Feichten**	**21.39**	**301**	ePn	**P**	**09 08 20.0**	**-2.9**
	comp=Z,7.7nm,1.3s						
CLL	**Collm**	**21.41**	**314**	iP	**P**	**09 08 24.2**	**+1.5**
CLL				pmax	pmax		
	comp=Z,34nm,1.5s						
CLL	**Collm**	**21.41**	**314**	iP	**P**	**09 08 24.2**	**+1.5**
	comp=Z,34nm,1.5s						
CLL				i		09 08 30.1	
CLL	**Collm**	**21.41**	**314**	P	**P**	**09 08 22.0**	**-0.7**
CLL				IAmb	IAmb	09 08 25.0	
	comp=Z,14nm,1.0s						
RETA	**Reutte**	**21.48**	**303**	ePn	**P**	**09 08 23.6**	**0.0**
	comp=Z,8.5nm,0.8s						
GRA1	**Grafenberg Arr**	**21.82**	**308**	P	**P**	**09 08 26.0**	**-1.3**
GRA1				IAmb	IAmb	09 08 41.9	
	comp=Z,15nm,0.6s						
GRF	**Grafenberg Arr**	**21.82**	**308**	P	**P**	**09 08 26.0**	**-1.3**
GRF				pmax	pmax		
	comp=Z,15nm,0.6s						
GRFO	**Grafenberg**	**21.83**	**308**	P	**P**	**09 08 26.0**	**-1.3**
GRFO				pmax	pmax		
	comp=Z,14nm,0.6s						
GRFO	**Grafenberg**	**21.83**	**308**	P	**P**	**09 08 26.0**	**-1.3**
GRFO				IAmb	IAmb	09 08 41.9	
	comp=Z,14nm,0.6s						
MSSA	**Maissana**	**21.83**	**294**	P	**P**	**09 08 26.9**	**-0.6**
MSSA				IAmb	IAmb	09 08 34.5	
	comp=Z,11nm,1.0s						
DAVOX	**Davos/Dischmat**	**21.92**	**300**	P	**P**	**09 08 29.1**	**+0.6**
	comp=Z,4.9nm,1.0s,baz=106,slow=16,SNR=3.3						
DAVOX				LR	LR	09 19 22.2	
	comp=Z,86nm,19.0s,baz=78,slow=43						
DAVA	**Damuels**	**22.02**	**302**	ePn	**P**	**09 08 30.2**	**+0.7**
	comp=Z,12nm,0.8s						
KLMR	**Klimovskoe**	**22.07**	**2**	eP	**P**	**09 08 28.4**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,36nm,1.2s						
KLMR	**Klimovskoe**	**22.07**	**2**	eP	**P**	**09 08 28.4**	**-1.4**
KLMR				AMP		09 08 32.5	
	comp=Z,36nm,1.2s						
ARU	**Arti**	**22.32**	**31**	P	**P**	**09 08 33.6**	**+1.1**
	comp=Z,1.6nm,0.2s,baz=219,slow=7.3,SNR=6.6						
ARU	**Arti**	**22.32**	**31**c	iP	**P**	**09 08 34.7**	**+2.2**
ARU						09 08 55.3	
ARU				S	Sn	09 12 43.3	-6.4
ARU				SS	**SnSn**	**09 13 09.1**	**+3.9**
ARU				pmax	pmax		
	comp=Z,20nm,1.7s						
ARU	**Arti**	**22.32**	**31**	P	**P**	**09 08 31.0**	**-1.5**
ARU				IAmb	IAmb	09 08 46.3	
	comp=Z,11nm,0.9s						
KEST	**Kesra**	**22.84**	**271**	P	**P**	**09 08 38.9**	**+0.5**
	comp=Z,6.4nm,0.8s,baz=329,slow=2.1,SNR=5.6						
KEST	**Kesra**	**22.84**	**271**	P	**P**	**09 08 36.7**	**-1.7**
KEST				IAmb	IAmb	09 08 59.6	
	comp=Z,15nm,1.0s						
PRGR	**Permogore**	**23.34**	**9**	eP	**P**	**09 08 42.3**	**-0.7**
PRGR				pmax	pmax		
	comp=Z,15nm,0.5s						
SVE	**Sverdlovsk**	**23.44**	**32**	eP	**P**	**09 08 45.0**	**+0.9**
SVE				pmax	pmax		
	comp=Z,25nm,0.9s						
SENIN	**Lac Senin/Sane**	**23.60**	**298**	P	**P**	**09 08 44.9**	**-1.2**
SENIN				IAmb	IAmb	09 08 51.5	
	comp=Z,44nm,1.9s						
FINES	**FINESS Array B**	**23.79**	**346**	P	**P**	**09 08 48.5**	**+1.1**
	comp=Z,6.8nm,0.6s,baz=150,slow=8.8,SNR=14						
FINES				LR	LR	09 20 06.6	
	comp=Z,166nm,18.5s,baz=242,slow=42						
FINES	**FINESS Array B**	**23.79**	**346**	iP	**P**	**09 08 50.0**	**+2.5**
FINES				pmax	pmax		
	comp=Z,7.0nm,0.6s						
FINES	**FINESS Array B**	**23.79**	**346**	P	**P**	**09 08 46.4**	**-1.1**
BNI	**Bardonecchia**	**23.90**	**295**	P	**P**	**09 08 47.8**	**-1.2**
BNI				pmax	pmax		
	comp=Z,21nm,1.1s						
BNI	**Bardonecchia**	**23.90**	**295**	P	**P**	**09 08 47.8**	**-1.2**
BNI				IAmb	IAmb	09 08 57.6	
	comp=Z,21nm,1.1s						
ECH	**Echery**	**24.01**	**303**	P	**P**	**09 08 48.7**	**-1.1**
ECH				pmax	pmax		
	comp=Z,28nm,1.3s						
ECH	**Echery**	**24.01**	**303**	P	**P**	**09 08 48.7**	**-1.1**
ECH				IAmb	IAmb	09 08 56.9	
	comp=Z,28nm,1.3s						
KKAR	**Karatay Array**	**24.94**	**70**	P	**P**	**09 08 56.2**	**-2.2**
KKAR	**Karatay Array**	**24.94**	**70**	P	**P**	**09 08 56.2**	**-2.2**
WLF	**Walferdange**	**24.97**	**306**	P	**P**	**09 08 56.4**	**-2.1**
WLF				pmax	pmax		
	comp=Z,45nm,1.7s						
WLF	**Walferdange**	**24.97**	**306**	P	**P**	**09 08 56.4**	**-2.1**
HFS	**Hagfors**	**26.19**	**332**	LR	LR	09 20 23.5	
	comp=Z,169nm,19.8s,baz=176,slow=39						
BRVK	**Borovoye**	**26.40**	**47**⇑	eP	**P**	**09 09 15.5**	**+4.1**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BRVK	**Borovoye**	**26.40**	**47**	P	**P**	**09 09 09.0**	**-2.4**
BRVK				IAmb	IAmb	09 09 19.2	
	comp=Z,6.5nm,1.0s						
BVAR	**Borovoye Array**	**26.45**	**47**	P	**P**	**09 09 13.9**	**+2.1**
	comp=Z,3.3nm,0.8s,baz=228,slow=15,SNR=7.6						
NOA	**NORSAR Array B**	**27.71**	**332**	LR	LR	09 21 22.3	
	comp=Z,94nm,19.9s,baz=300,slow=39						
AAK	**Ala-Archa**	**27.89**	**70**	LR	LR	09 20 49.4	
	comp=Z,146nm,18.1s,baz=282,slow=37						
KURK	**Kurchatov**	**30.90**	**54**⇓	eP	**P**	**09 09 56.0**	**+4.5**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KURK	**Kurchatov**	**30.90**	**54**	P	**P**	**09 09 50.5**	**-1.1**
KURK				IAmb	IAmb	09 09 58.3	
	comp=Z,11nm,1.2s						
ARCES	**ARCESS Array B**	**31.47**	**352**	P	**P**	**09 09 57.8**	**+1.4**
	comp=Z,2.6nm,0.6s,baz=161,slow=7.7,SNR=13						
ARCES				LR	LR	09 23 24.1	
	comp=Z,161nm,19.5s,baz=240,slow=38						
ARCES	**ARCESS Array B**	**31.47**	**352**	P	**P**	**09 09 54.1**	**-2.2**
ESDC	**Sonseca Array**	**32.17**	**285**	P	**P**	**09 10 02.3**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=71,slow=8.3,SNR=5.3						
MK31	**Makanchi Array**	**33.19**	**62**⇑	eP	P	09 10 17.1	+5.3
MKAR	**Makanchi Array**	**33.19**	**62**	P	**P**	**09 10 12.9**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=273,slow=6.7,SNR=7.1						
MKAR				LR	LR	09 26 22.4	
	comp=Z,116nm,18.2s,baz=282,slow=41						
MKAR	**Makanchi Array**	**33.19**	**62**	iP	**P**	**09 10 13.8**	**+2.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**33.19**	**62**	P	**P**	**09 10 09.2**	**-2.6**
ZALV	**Zalesovo Beam**	**35.05**	**49**	P	**P**	**09 10 28.6**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=263,slow=8.2,SNR=8.1						
ZALV	**Zalesovo Beam**	**35.05**	**49**	P	**P**	**09 10 26.9**	**-0.7**
DGZ	**Jazzator, Alta**	**36.52**	**56**⇓	eP	**P**	**09 10 44.9**	**+4.3**
DGZ				pmax	pmax		
	comp=Z,15nm,3.3s						
WMQ	**Urumqi**	**37.31**	**66**	eP	P	09 10 54.8	+7.5
NRIK	**Noril'sk**	**40.27**	**25**	P	**P**	**09 11 14.0**	**+2.3**
	comp=Z,3.6nm,1.1s,baz=274,slow=7.8,SNR=2.4						
NRIK				LR	LR	09 30 58.3	
	comp=Z,124nm,18.4s,baz=337,slow=41						
NRIK	**Noril'sk**	**40.27**	**25**⇑	iP	**P**	**09 11 13.9**	**+2.3**
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NRIK	**Noril'sk**	**40.27**	**25**	P	**P**	**09 11 10.5**	**-1.1**
SPB2	**Spitsbergen Ar**	**40.45**	**353**	P	**P**	**09 11 12.6**	**-0.5**
TORD	**Torodi Ar. Bea**	**40.93**	**241**	P	**P**	**09 11 18.0**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=35,slow=7.4,SNR=10						
TLY	**Talaya**	**46.53**	**51**	LR	LR	09 33 52.1	
	comp=Z,68nm,18.2s,baz=304,slow=39						
SONM	**Songino Array**	**49.17**	**56**	P	**P**	**09 12 24.8**	**+1.7**
	comp=Z,0.9nm,0.8s,baz=278,slow=8.9,SNR=3.9						
SONM				LR	LR	09 35 12.8	
	comp=Z,110nm,18.8s,baz=316,slow=39						
SONM	**Songino Array**	**49.17**	**56**	P	**P**	**09 12 21.9**	**-1.2**
SONM				IAmb	IAmb	09 12 29.8	
	comp=Z,12nm,1.8s						
ULN	**Ulaanbaatar**	**49.58**	**56**⇑	eP	P	09 12 31.0	+4.7
ULN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LZH	**Lanzhou**	**51.43**	**71**	eP	P	09 12 46.0	+5.6
LZH				pP	sP	09 12 49.2	+4.2
LZH				sP	pP	09 12 52.3	+8.6
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
TIXI	**Tiksi**	**53.99**	**23**	LR	LR	09 40 37.2	
	comp=Z,88nm,18.5s,baz=317,slow=41						
TIXI	**Tiksi**	**53.99**	**23**⇑	eP	**P**	**09 13 01.1**	**+2.5**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**55.04**	**63**	eP	P	09 13 12.1	+5.2
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,7.0s						
CMAR	**Chiang Mai Arr**	**56.30**	**93**	P	**P**	**09 13 19.2**	**+3.1**
	comp=Z,1.9nm,0.8s,baz=296,slow=8.1,SNR=7.6						
CMAR				LR	LR	09 41 30.5	
	comp=Z,26nm,18.6s,baz=155,slow=40						
CMAR	**Chiang Mai Arr**	**56.30**	**93**	iP	P	09 13 21.1	+5.0
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SACV	**Santiago Islan**	**58.59**	**264**	P	**P**	**09 13 31.5**	**-0.8**
NJ2	**Nanjing**	**64.32**	**69**	eP	P	09 14 15.5	+4.7
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
BILL	**Bilibino**	**66.67**	**19**	eP	P	09 14 32.1	+6.7
BILL				e		09 15 01.4	
BILL				e		09 16 53.9	
BILL				ePPP	PPP	09 18 32.2	
BILL				pmax	pmax		
	comp=Z,16nm,2.4s						
BILL				MLR	MLR		
	comp=Z,72nm,15.0s						
USRK	**Ussuriysk Ar.**	**66.84**	**51**	LR	LR	09 48 53.0	
	comp=Z,88nm,18.8s,baz=16,slow=41						
KS19	**Wonju Array Si**	**67.77**	**59**	P	**P**	**09 14 30.7**	**-2.3**
KSAR	**Wonju Array Be**	**67.82**	**59**	P	**P**	**09 14 32.0**	**-1.2**
KSAR	**Wonju Array Be**	**67.82**	**59**	P	**P**	**09 14 32.0**	**-1.2**
KSRS	**Korea Array**	**67.84**	**59**	P	**P**	**09 14 34.1**	**+0.8**
	comp=Z,4.4nm,0.9s,baz=293,slow=5.8,SNR=11						
BOSA	**Boshof**	**68.12**	**192**	P	**P**	**09 14 35.4**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=17,slow=10,SNR=3.6						
A21K	**Barrow**	**69.67**	**5**	P	**P**	**09 14 42.7**	**-1.4**
YHNB	**Yeheng**	**70.17**	**74**	P	**P**	**09 14 46.1**	**-2.0**
MJAR	**Matsushiro Arr**	**75.11**	**55**	LR	LR	09 51 14.4	
	comp=Z,79nm,18.5s,baz=345,slow=38						
COLA	**College**	**76.53**	**2**⇑	eP	P	09 15 31.2	+6.4
COLA				pmax	pmax		
	comp=Z,17nm,2.1s						
YKA	**Yellowknife Ar**	**76.61**	**347**	P	**P**	**09 15 26.9**	**+1.6**
	comp=Z,1.8nm,0.9s,baz=8.5,slow=5.0,SNR=4.6						

IDC ***09*** *09:13:59.0±0.8, 30°.78S×71°.68W, h0km, mb4.2/6, mb1 4.3/10, mb1mx4.1/33, mbtmp4.1/10, ML3.9/4, MS3.7/8, Ms1 3.7/8, ms1mx3.5/20, Error ellipse: s-maj=29.4km s-min=21.6km az=90.0*

SJA ***09*** *09:13:58.6±1.1, 30°.67S×72°.21W, h27km, ML4.6, MW4.7*

GUC ***09*** *09:14:02.4±0.8, 30°.72S×71°.73W, h34km±4km, ML4.6*

VAO ***09*** *09:14:02.8±0.5, 30°.73S×71°.76W, h26km, mb4.4*

NEIC ***09*** *09:14:02.7±1.5, 30°.71S±0°.05×71°.86W±0°.07, h22km±4km, mb4.5/23, Mwr4.3/45, ML4.6(GUC), Error ellipse: s-maj=8.5km s-min=6.4km az=112.0*

NEIC ***09*** *09:14:03.1, 30°.69S×71°.79W, h26km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.09; $M_{\theta\theta}$0.47; $M_{\phi\phi}$-2.56; $M_{r\theta}$1.01; $M_{\theta\phi}$-0.11; $M_{\phi r}$-2.87; Fault plane solution: $M_0$3.85000×10^{15} NP1:ϕ_s22.61000°, δ22.24000°, λ125.99000°. NP2:ϕ_s164.48000°, δ72.17000°, λ76.49000°. Principal axes: T 3.7471, Plg61.0000°, Azm55.0000°; N 0.2063, Plg13.0000°, Azm169.0000°; P -3.9534, Plg26.0000°, Azm265.0000°;*

ISC 09 09:13:60.0±1.2, **30°.74S**±0°.02×**72°.00W**±0°.04, **h12**km±7km,

n172, $\sigma 1^{s}62$/200, mb4.5/15, MS3.9/4, 1C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.32**	**79**⇓	iP	**Pb**	**09 14 08.3**	**+0.6**
CO06	**Fray Jorge**	**0.32**	**79**		**Pb**	**09 14 08.3**	**+0.6**
CO06				Sg	**Sg**	**09 14 12.1**	**+1.2**
CO05	**La Serena**	**1.05**	**39**⇓	iP	**Pb**	**09 14 20.1**	**-0.1**
CO05				eS	**Sb**	**09 14 32.7**	**-1.1**
CO05				IAML		09 14 38.0	
	comp=E,17µm,0.4s						
CO05	**La Serena**	**1.05**	**39**		**Pb**	**09 14 20.2**	**+0.1**
CO05				Sg	**Sb**	**09 14 32.7**	**-1.1**
CO03	**El Pedregal**	**1.14**	**95**⇓	iP	**Pb**	**09 14 20.5**	**-1.2**
CO03				eS	**Sb**	**09 14 33.4**	**-3.0**
CO03	**El Pedregal**	**1.14**	**95**		**Pb**	**09 14 20.6**	**-1.0**
GO04	**Tololo Observa**	**1.18**	**62**⇓	iP	**Pn**	**09 14 21.8**	**-0.8**
GO04				eS	**Sb**	**09 14 35.8**	**-2.1**
GO04	**Tololo Observa**	**1.18**	**62**		**Pn**	**09 14 21.8**	**-0.8**
GO04					**Sb**	**09 14 37.0**	**-0.9**
VA06	**Catapilco**	**1.91**	**162**	eP	**Pn**	**09 14 32.9**	**+0.5**
VA06				IAML		09 15 09.9	
	comp=N,8µm,0.6s						
LCO	**Las Campanas**	**2.06**	**34**		**Pn**	**09 14 34.9**	**+0.2**
LCO	**Las Campanas**	**2.06**	**34**	eP	**Pn**	**09 14 35.0**	**+0.3**
AROD	**Rodeo**	**2.26**	**76**	eP	**Pb**	**09 14 40.0**	**-0.9**
AROD				eS	**Sb**	**09 15 07.8**	**-1.1**
VA03	**San Esteban**	**2.37**	**149**	eP	**Pn**	**09 14 40.0**	**+1.3**
VA03				eS	**Sb**	**09 15 10.5**	**-1.4**
VA03				IAML		09 15 17.9	
	comp=N,7µm,0.6s						
VA03	**San Esteban**	**2.37**	**149**	Pn	**Pn**	**09 14 40.1**	**+1.3**
VA03	**San Esteban**	**2.37**	**149**	eP	**Pn**	**09 14 40.0**	**+1.3**
VA03				eP	**Pb**	**09 14 40.5**	**-2.2**
VA03				eS	**Sn**	**09 15 06.9**	**-0.9**
VA03				IAML		09 15 17.3	
	comp=Z,4µm,0.6s						
ROCH	**El Roble**	**2.38**	**160**	eP	**Pb**	**09 14 39.9**	**-3.1**
ROCH				eP	**Pn**	**09 14 39.6**	**+0.5**
ROCH				eS	**Sb**	**09 15 11.2**	**-1.2**
ROCH				eS	**Sn**	**09 15 12.1**	**+3.8**
ROCH				IAML		09 15 23.5	
	comp=N,4µm,0.6s						
ROCH				IAML		09 15 23.8	
	comp=N,5µm,0.5s						
ROC1	**El Roble**	**2.38**	**160**	eP	**Pn**	**09 14 35.4**	**-3.7**
ROC1				eP	**Pb**	**09 14 40.0**	**-3.0**
ACCO	**Cerro Coronel**	**2.54**	**87**	eP	**Pb**	**09 14 44.0**	**-1.6**
ACCO				eS	**Sb**	**09 15 17.6**	**+0.7**
RTLS	**Leoncito**	**2.55**	**115**	eP	**Pn**	**09 14 39.4**	**-2.0**
RTLS				eP	**Pb**	**09 14 45.0**	**-0.8**
RTLS				eS	**Sn**	**09 15 14.4**	**+1.9**
RTLS				IAML		09 15 22.8	
	comp=Z,2µm,0.5s						
ACDV	**Cuesta del Vie**	**2.55**	**78**	eP	**Pb**	**09 14 45.0**	**-0.8**
ACDV				IAML		09 15 28.0	
	comp=Z,1µm,1.0s						
MT02	**Curacav**	**2.62**	**164**	eP	**Pn**	**09 14 42.7**	**+0.6**
MT02				eS	**Sn**	**09 15 15.2**	**+1.3**
MT02				IAML		09 15 27.2	
	comp=E,1µm,0.6s						
MT02	**Curacav**	**2.62**	**164**		**Pn**	**09 14 43.4**	**+1.2**
MT02	**Curacav**	**2.62**	**164**	eP	**Pn**	**09 14 44.0**	**+1.9**
MT02				IAML		09 15 26.7	
	comp=Z,1µm,0.4s						
PEL	**Peldehue**	**2.65**	**155**	eP	**Pn**	**09 14 43.9**	**+1.4**
PEL				eS	**Sn**	**09 15 17.3**	**+2.6**
PEL				IAML		09 15 25.2	
	comp=E,3µm,0.3s						
PEL	**Peldehue**	**2.65**	**155**	Pn	**Pn**	**09 14 44.1**	**+1.6**
PEL	**Peldehue**	**2.65**	**155**	eP	**Pn**	**09 14 44.0**	**+1.4**
PEL				eP	**Pn**	**09 14 44.2**	**+1.6**
PEL				eS	**Sn**	**09 15 14.9**	**+0.2**
AC04	**Llanos de Chal**	**2.65**	**18**⇑	iP	**Pn**	**09 14 42.2**	**-0.4**
AC04	**Llanos de Chal**	**2.65**	**18**		**Pn**	**09 14 42.4**	**-0.2**
AC04	**Llanos de Chal**	**2.65**	**18**	eP	Pn	09 14 36.9	-5.7
AC04				eP	Pb	09 14 42.5	-4.9
AC04				eS	**Sn**	**09 15 14.4**	**-0.3**
AUSP	**Uspallata**	**2.68**	**124**	eP	**Pb**	**09 14 46.9**	**-1.2**
AUSP				eP	**Pn**	**09 14 47.0**	**+3.7**
AUSP				eS	**Sn**	**09 15 16.9**	**+1.1**
MT05	**Renca**	**2.85**	**158**	eP	**Pn**	**09 14 46.6**	**+1.2**
MT05				eS	**Sb**	**09 15 26.3**	**+0.4**
MT05	**Renca**	**2.85**	**158**		**Pn**	**09 14 46.7**	**+1.2**
MT05	**Renca**	**2.85**	**158**	eP	**Pn**	**09 14 47.0**	**+1.5**
MT05				eS	**Sn**	**09 15 20.4**	**+0.6**
MT05				IAML		09 15 33.3	
	comp=Z,2µm,0.6s						
VA05	**Santo Domingo**	**2.93**	**174**	eP	**Pn**	**09 14 47.0**	**+0.6**
VA05				IAML		09 15 40.9	
	comp=E,3µm,0.6s						
ZON	**Zonda**	**2.96**	**107**	eP	**Pn**	**09 14 50.0**	**+3.1**
ZON				IAML		09 15 43.8	
	comp=Z,1µm,1.8s						
FCH	**Farellones**	**2.96**	**151**	eP	**Pn**	**09 14 48.6**	**+1.5**
FCH				IAML		09 15 36.8	
	comp=E,1µm,0.4s						
MT09	**Talagante**	**3.15**	**164**	eP	**Pn**	**09 14 50.9**	**+1.4**
MT09				IAML		09 15 44.5	
	comp=N,2µm,0.4s						
MT09	**Talagante**	**3.15**	**164**		**Pn**	**09 14 51.3**	**+1.7**
RTCV	**Cerro Valdivia**	**3.17**	**112**	eP	**Pb**	**09 14 54.0**	**-2.3**
RTCV				eS	**Sb**	**09 15 36.9**	**+2.0**
MT01	**Popeta**	**3.18**	**169**	eP	**Pn**	**09 14 50.9**	**+1.1**
MT01				IAML		09 15 43.0	
	comp=E,1µm,0.6s						
MT01	**Popeta**	**3.18**	**169**	Pn	**Pn**	**09 14 51.3**	**+1.4**
MT01	**Popeta**	**3.18**	**169**	eP	**Pn**	**09 14 52.0**	**+2.1**
MT01				eS	**Sb**	**09 15 32.4**	**-2.8**
MT01				IAML		09 15 42.7	
	comp=Z,1µm,0.4s						
ASAL	**Salagasta**	**3.27**	**125**	eP	**Pn**	**09 14 55.0**	**+3.8**
ASAL				eS	**Sb**	**09 15 35.4**	**-2.5**
ARCO	**CERRO ARCO**	**3.35**	**130**	eP	**Pb**	**09 14 57.0**	**-2.5**
ARCO				eS	**Sb**	**09 15 39.4**	**-0.9**
ARCO				IAML		09 15 50.2	
	comp=Z,1µm,0.7s						
BO04	**La Punta**	**3.45**	**160**	eP	**Pn**	**09 14 54.9**	**+1.3**
BO04				IAML		09 15 48.0	
	comp=E,1µm,0.6s						
LMEL	**Las Melosas**	**3.45**	**154**	eP	**Pn**	**09 14 55.9**	**+2.2**
LMEL				IAML		09 15 50.2	
	comp=N,1µm,0.3s						
GO03	**Copiap**	**3.49**	**27**	eP	**Pn**	**09 14 54.3**	**+0.1**
GO03				IAML		09 15 55.2	
	comp=E,855nm,0.6s						
GO03	**Copiap**	**3.49**	**27**		**Pn**	**09 14 54.8**	**+0.6**
GO03	**Copiap**	**3.49**	**27**	eP	**Pn**	**09 14 55.0**	**+0.8**
GO03				eS	**Sb**	**09 15 39.4**	**-4.9**
AAGR	**Agrelo**	**3.57**	**132**	eP	**Pb**	**09 14 59.9**	**-3.3**
AAGR				eS	**Sg**	**09 15 54.9**	**+0.1**
AAGR				eS	**Sg**	**09 15 55.0**	**+0.3**
BO01	**Tunca**	**3.73**	**168**	eP	**Pn**	**09 14 58.2**	**+0.9**
BO01	**Tunca**	**3.73**	**168**	Pn	**Pn**	**09 14 58.7**	**+1.4**
BO01	**Tunca**	**3.73**	**168**	eP	**Pn**	**09 14 58.7**	**+1.4**
BO01				eS	**Sn**	**09 15 46.4**	**+5.2**
BO01				IAML		09 16 05.7	
	comp=Z,567nm,0.7s						
VCA	**Vinchina**	**3.86**	**60**	eP	**Pn**	**09 14 58.4**	**-0.9**
VCA				eP	Pb	09 15 03.0	-5.1
VCA				eS	**Sb**	**09 15 58.4**	**+3.5**
VCA				IAML		09 16 04.5	
	comp=Z,1µm,1.4s						
AVFE	**Valle Fertil**	**3.92**	**90**	eP	**Pn**	**09 15 03.0**	**+2.9**
AVFE				eS	**Sb**	**09 15 51.9**	**-4.6**
AVFE				IAML		09 16 00.3	
	comp=Z,621nm,0.5s						
BO02	**Sierra Bellavi**	**4.17**	**166**	eP	**Pn**	**09 15 04.6**	**+1.0**
BO02	**Sierra Bellavi**	**4.17**	**166**	Pn	**Pn**	**09 15 05.1**	**+1.6**
BO02	**Sierra Bellavi**	**4.17**	**166**	eP	**Pn**	**09 15 05.0**	**+1.4**
BO02				eS	**Sb**	**09 16 00.9**	**-2.9**
BO02				IAML		09 16 15.5	
	comp=Z,952nm,0.6s						
GO05	**Huala**	**4.26**	**179**		**Pn**	**09 15 04.7**	**-0.1**
ACLC	**CERRO LA CRUZ**	**4.57**	**75**	eP	**Pn**	**09 15 11.7**	**+2.6**
ACLC				eS	**Sn**	**09 16 04.9**	**+2.6**
ACLC				IAML		09 16 15.6	
	comp=Z,1µm,1.0s						
ACHE	**Chepes**	**4.61**	**97**	eP	**Pn**	**09 15 12.0**	**+2.4**
ACHE				eS	**Sn**	**09 16 04.3**	**+1.1**
AC02	**Maricunga**	**4.63**	**34**	eP	**Pn**	**09 15 11.0**	**+0.7**
AC02	**Maricunga**	**4.63**	**34**		**Pn**	**09 15 11.1**	**+0.7**

AC02	**Maricunga**	**4.63**	**34**	*e*P	**Pn**	**09 15 11.0**	**+0.7**
AC02				*e*S	**Sb**	**09 16 13.9**	**-3.6**
AC02				IAML		09 16 23.9	
	comp=Z,571nm,1.6s						
APLL	**PUNTA DE LOS L**	**4.73**	**87**	*e*P	**Pn**	**09 15 13.4**	**+2.1**
APLL				*e*S	**Sb**	**09 16 18.2**	**-1.8**
RFA	**San Rafael**	**5.00**	**144**	*e*P	**Pn**	**09 15 13.9**	**-1.1**
RFA				*e*P	**Pn**	**09 15 17.0**	**+2.0**
RFA				IAML		09 16 41.4	
	comp=Z,256nm,0.8s						
CYA	**Choya**	**5.86**	**69**	*e*P	**Pn**	**09 15 28.5**	**+1.7**
PB14	**IPOC Station P**	**6.25**	**13**	Pn	**Pn**	**09 15 31.6**	**-0.8**
H03N1	**Juan Fernandez**	**6.45**	**244**	T	T	09 22 32.6	
	baz=72,slow=72,SNR=2988						
H03N3	**Juan Fernandez**	**6.47**	**243**	T	T	09 22 29.5	
	baz=72,slow=72,SNR=3165						
H03N2	**Juan Fernandez**	**6.47**	**244**	T	T	09 22 30.8	
	baz=72,slow=72,SNR=4851						
H03S3	**Juan Fernandez**	**6.61**	**240**	T	T	09 22 58.9	
	baz=84,SNR=10						
H03S1	**Juan Fernandez**	**6.61**	**240**	T	T	09 22 54.4	
	baz=84,SNR=7.9						
H03S2	**Juan Fernandez**	**6.63**	**240**	T	T	09 22 57.2	
	baz=84,SNR=11						
LC01	**Cunco**	**8.14**	**179**	Pn	**Pn**	**09 15 58.5**	**+0.5**
LVC	**Limon Verde**	**8.55**	**20**	Pn	**Pn**	**09 16 02.4**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=195,slow=19,SNR=1.9						
LVC				LR	LR	09 19 20.4	
	comp=Z,539nm,18.0s,baz=211,slow=38						
LVC	**Limon Verde**	**8.55**	**20**		**Pn**	**09 16 03.3**	**-0.7**
PLCA	**Paso Flores**	**10.04**	**174**	Pn	**Pn**	**09 16 24.9**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=339,slow=12,SNR=11						
PLCA				LR	LR	09 20 43.0	
	comp=Z,281nm,19.7s,baz=352,slow=40						
PLCA	**Paso Flores**	**10.04**	**174**	*e*P	**Pn**	**09 16 25.3**	**+1.1**
PLCA	**Paso Flores**	**10.04**	**174**	Pn	**Pn**	**09 16 25.5**	**+1.4**
TRQA	**Tornquist**	**11.03**	**134**	Pn	**Pn**	**09 16 37.9**	**+0.2**
ITQB	**Itaqui**	**13.35**	**89**	*e*P	**Pn**	**09 17 07.2**	**-2.1**
ITQB	**Itaqui**	**13.35**	**89**	Pn	**Pn**	**09 17 07.1**	**-2.2**
CPUP	**Villa Florida**	**13.62**	**75**	LR	LR	09 22 32.9	
	comp=Z,194nm,21.9s,baz=250,slow=38						
CPUP	**Villa Florida**	**13.62**	**75**	Pn	**Pn**	**09 17 10.6**	**-2.5**
LPAZ	**La Paz**	**14.81**	**15**	Pn	**Pn**	**09 17 31.9**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=175,slow=8.3,SNR=16						
LPAZ	**La Paz**	**14.81**	**15**	Pn	**Pn**	**09 17 31.7**	**+1.7**
CPSB	**Cacapava Do Su**	**16.00**	**94**	*e*P	**Pn**	**09 17 43.5**	**-1.4**
SIV	**San Ignacio**	**17.76**	**37**	P	**Pn**	**09 18 06.4**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=210,slow=11,SNR=24						
SIV				LR	LR	09 26 21.4	
	comp=Z,438nm,18.8s,baz=226,slow=42						
AQDB	**Aquidauana**	**17.89**	**59**	*e*P	**Pn**	**09 18 08.1**	**-0.7**
AQDB	**Aquidauana**	**17.89**	**59**	Pn	**Pn**	**09 18 06.0**	**-2.7**
NNA	**Nana**	**19.19**	**345**	P	**P**	**09 18 24.0**	**+0.2**
PTLB	**Pontes e Lacer**	**19.25**	**41**	*e*P	**P**	**09 18 23.6**	**-0.8**
PTLB	**Pontes e Lacer**	**19.25**	**41**	P	**P**	**09 18 23.1**	**-1.3**
TER01	**Tubaro-SC**	**20.00**	**89**	*e*P	**P**	**09 18 31.6**	**-0.9**
PP1B	**Ponte de Pedra**	**20.34**	**54**	*e*P	**P**	**09 18 35.3**	**-1.0**
PCMB	**Pacaembu**	**20.69**	**69**	*e*P	**P**	**09 18 39.2**	**-0.9**
VILB	**Vilhena**	**20.79**	**34**	*e*P	**P**	**09 18 41.3**	**+0.2**
VILB	**Vilhena**	**20.79**	**34**	P	**P**	**09 18 39.9**	**-1.2**
VILB				IAmb	IAmb	09 18 41.9	
	comp=Z,18nm,1.0s						
SALV	**Santo Antonio**	**20.99**	**49**	*e*P	**P**	**09 18 42.9**	**-0.5**
FRTB	**Fartura**	**21.28**	**75**	*e*P	**P**	**09 18 45.7**	**-0.8**
ETMB	**Extrema**	**21.50**	**16**	*e*P	**P**	**09 18 48.5**	**-0.3**
ETMB	**Extrema**	**21.50**	**16**	P	**P**	**09 18 49.0**	**+0.1**
CZSB	**Cruzeiro do Su**	**22.90**	**358**	*e*P	**P**	**09 19 04.5**	**+0.7**
CZSB	**Cruzeiro do Su**	**22.90**	**358**	P	**P**	**09 19 04.0**	**+0.2**
CZSB				IAmb	IAmb	09 19 11.9	
	comp=Z,15nm,1.0s						
VAO	**Valinhos**	**23.59**	**77**	*e*P	**P**	**09 19 10.2**	**-0.7**
PDRB	**Porto dos Gac**	**23.72**	**40**	*e*P	**P**	**09 19 12.1**	**+0.1**
ARAG	**Araguaiana, MT**	**23.78**	**56**	*e*P	**P**	**09 19 12.0**	**-0.6**
PARB	**Paraibuna**	**24.59**	**79**	*e*P	**P**	**09 19 19.5**	**-0.7**
IPMB	**Ipameri, GO**	**25.05**	**65**	*e*P	**P**	**09 19 23.0**	**-1.4**
TBTG	**Tabatinga, AM**	**26.48**	**5**	*e*P	**P**	**09 19 38.8**	**+1.6**
TBTG	**Tabatinga, AM**	**26.48**	**5**	P	**P**	**09 19 37.4**	**+0.2**
BDFB	**Brasilia**	**26.60**	**61**	P	**P**	**09 19 37.2**	**-1.3**
	comp=Z,7.3nm,0.9s,baz=236,slow=8.3,SNR=8.2						
BDFB				LR	LR	09 31 09.3	
	comp=Z,327nm,19.6s,baz=18,slow=39						
BDFB	**Brasilia**	**26.60**	**61**	P	**P**	**09 19 36.8**	**-1.6**
BDFB				IAmb	IAmb	09 19 53.8	
	comp=Z,10nm,1.0s						
SNDB	**Serra Nova Dou**	**26.76**	**50**	*e*P	**P**	**09 19 39.3**	**-0.5**
DUB01	**Friburgo-RJ**	**27.84**	**79**	*e*P	**P**	**09 19 48.2**	**-1.3**
PEXB	**Peixe**	**28.71**	**55**	*e*P	**P**	**09 19 56.5**	**-0.8**
MACA	**Manacapuru-AM**	**29.44**	**23**	*e*P	**P**	**09 20 03.6**	**-0.1**
MACA	**Manacapuru-AM**	**29.44**	**23**	P	**P**	**09 20 03.1**	**-0.6**
MACA				IAmb	IAmb	09 20 08.6	
	comp=Z,6.1nm,0.7s						
JANB	**Januaria**	**29.79**	**65**	*e*P	**P**	**09 20 06.3**	**-0.6**
ITTB	**Itaituba**	**30.39**	**34**	*e*P	**P**	**09 20 11.0**	**-1.1**
RIB01	**Linhares ES**	**30.71**	**76**	*e*P	**P**	**09 20 13.9**	**-1.1**
SMTB	**Santa Maria do**	**31.50**	**51**	*e*P	**P**	**09 20 21.2**	**-0.8**
NAN01	**Guarapari, ES**	**31.64**	**73**	*e*P	**P**	**09 20 20.9**	**-2.4**
PTGA	**Pitinga**	**31.95**	**23**	P	**P**	**09 20 25.4**	**-0.5**
	comp=Z,4.9nm,1.0s,baz=213,slow=11,SNR=6.8						
PRPB	**Parauapebas**	**32.11**	**45**	*e*P	**P**	**09 20 26.4**	**-0.9**
GUA01	**Guaratinga, BA**	**32.55**	**72**	*e*P	**P**	**09 20 29.4**	**-1.7**
CMC01	**Camacan, BA**	**33.43**	**70**	*e*P	**P**	**09 20 37.1**	**-1.8**
GDU01	**Guandu, BA**	**34.30**	**68**	*e*P	**P**	**09 20 46.0**	**-0.5**
BOAV	**Boa Vista**	**34.72**	**20**	*e*P	**P**	**09 20 49.6**	**-0.4**
BOAV	**Boa Vista**	**34.72**	**20**	P	**P**	**09 20 48.8**	**-1.2**
BOAV				IAmb	IAmb	09 20 51.3	
	comp=Z,6.6nm,0.9s						
ROSC	**El Rosal**	**35.45**	**356**	LR	LR	09 36 21.2	
	comp=Z,82nm,18.9s,baz=148,slow=38						
MCPB	**Macapa, AP**	**35.66**	**36**	*e*P	**P**	**09 20 57.6**	**-0.6**
ZARC	**Zaragoza, Cauc**	**38.11**	**355**	P	**P**	**09 21 19.5**	**+0.5**
ZARC				IAmb	IAmb	09 21 22.6	
	comp=Z,5.2nm,0.9s						
BAUV	**El Baul**	**39.64**	**6**	P	**P**	**09 21 31.6**	**-0.2**
BAUV				IAmb	IAmb	09 21 33.0	
	comp=Z,26nm,1.0s						
CDVI	**St. Croix**	**48.71**	**9**	P	**P**	**09 22 43.7**	**-0.7**
MTDJ	**Mount Denham**	**48.97**	**353**	P	**P**	**09 22 46.1**	**-0.4**
VNA3	**Neumayer Olymp**	**52.37**	**159**	P	**P**	**09 23 12.1**	**+0.6**
VNA1	**Neumayer--Stat**	**52.66**	**158**	P	**P**	**09 23 15.0**	**+1.3**
VNA2	**Neumayer--Watz**	**53.01**	**158**	P	**P**	**09 23 16.9**	**+0.6**
	baz=285,slow=7.8						
SNAA	**Sanae**	**54.59**	**159**	P	**P**	**09 23 28.5**	**+0.6**
SNAA	**Sanae**	**54.59**	**159**	P	**P**	**09 23 27.6**	**-0.3**
SNAA				IAmb	IAmb	09 23 29.4	
	comp=Z,6.5nm,1.0s						
QSPA	**South Pole Qui**	**59.49**	**180**	P	**P**	**09 24 04.0**	**+1.3**
QSPA				IAmb	IAmb	09 24 18.1	
	comp=Z,2.8nm,0.9s						
TXAR	**Lajitas Array**	**66.92**	**330**	P	**P**	**09 24 54.1**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=152,slow=7.8,SNR=7.9						
TXAR	**Lajitas Array**	**66.92**	**330**	P	**P**	**09 24 54.8**	**+2.4**
KSPA	**Keystone Colle**	**72.02**	**357**	P	**P**	**09 25 24.6**	**+1.0**
KSPA				IAmb	IAmb	09 25 25.1	
	comp=Z,16nm,1.3s						
P40A	**Paris**	**72.35**	**344**	P	**P**	**09 25 25.2**	**-0.3**
P40A				IAmb	IAmb	09 25 27.6	
	comp=Z,5.1nm,0.8s						
ALLY	**Alegheny Colle**	**72.42**	**354**	P	**P**	**09 25 26.7**	**+0.8**
SDCO	**Great Sand Dun**	**74.98**	**333**	P	**P**	**09 25 41.9**	**+0.4**
MAW	**Mawson**	**76.29**	**164**	LR	LR	10 01 20.6	
	comp=Z,77nm,19.4s,baz=236,slow=37						
NVAR	**Mina Array Bea**	**81.23**	**325**	P	**P**	**09 26 18.9**	**+2.9**
	comp=Z,0.4nm,0.7s,baz=139,slow=4.9,SNR=3.9						
NVAR	**Mina Array Bea**	**81.23**	**325**	P	**P**	**09 26 18.3**	**+2.3**
BOSA	**Boshof**	**81.57**	**118**	P	**P**	**09 26 18.0**	**-0.1**
	comp=Z,3.8nm,0.9s,baz=168,slow=5.0,SNR=4.7						
BOSA				LR	LR	09 59 23.1	
	comp=Z,42nm,18.6s,baz=2.5,slow=34						
BOSA	**Boshof**	**81.57**	**118**	P	**P**	**09 26 17.3**	**-0.8**
BOSA				IAmb	IAmb	09 26 18.8	
	comp=Z,6.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**83.08**	**70**	P	**P**	**09 26 25.6**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=255,slow=5.4,SNR=17						
WRA	**Warramunga Arr**	**123.61**	**210**	PKP	**PKPdf**	**09 32 57.5**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=175,slow=1.4,SNR=5.8						
WRA	**Warramunga Arr**	**123.61**	**210**	PKPdf	**PKPdf**	**09 32 57.9**	**-0.2**
H11S2	**WAKE ISLAND Hy**	**125.78**	**271**	T	T	11 51 49.9	
	baz=116,slow=75,SNR=85						
H11S1	**WAKE ISLAND Hy**	**125.80**	**271**	T	T	11 51 45.6	
	baz=116,slow=75,SNR=72						
H11S3	**WAKE ISLAND Hy**	**125.80**	**271**	T	T	11 51 46.2	
	baz=116,slow=75,SNR=80						
H11N3	**WAKE ISLAND Hy**	**126.11**	**273**	T	T	11 52 15.4	
	baz=117,slow=76,SNR=7.4						
H11N1	**WAKE ISLAND Hy**	**126.13**	**273**	T	T	11 52 13.5	
	baz=117,slow=76,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	**126.13**	**273**	T	T	11 52 16.0	
	baz=117,slow=76,SNR=16						
BVAR	**Borovoye Array**	**144.82**	**40**	PKP	PKPbc	09 33 35.6	+0.1
	comp=Z,2.6nm,0.8s,baz=238,slow=9.9,SNR=7.6						
KURBB	**Kurchatov Arra**	**150.41**	**39**	PKPbc	**PKiKP**	**09 33 51.9**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=301,slow=3.2,SNR=11						
KURK	**Kurchatov**	**150.41**	**39**	PKPdf	**PKPdf**	**09 33 46.0**	**+0.3**
KURK					**pPKPdf**	**09 33 51.4**	**+2.5**
ZALV	**Zalesovo Beam**	**151.41**	**29**	PKP	**PKPdf**	**09 33 48.3**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=282,slow=2.8,SNR=2.3						
ZALV				PKPbc	**PKiKP**	**09 33 53.8**	**+0.1**
	comp=Z,7.2nm,0.8s,baz=294,slow=3.5,SNR=17						
ZALV	**Zalesovo Beam**	**151.41**	**29**	PKPdf	**PKPdf**	**09 33 47.8**	**+0.7**
ZALV					**PKiKP**	**09 33 54.0**	**+0.2**
MKAR	**Makanchi Array**	**154.50**	**44**	PKPab	**PKPab**	**09 34 15.3**	**+0.5**
	comp=Z,2.2nm,1.0s,baz=272,slow=5.9,SNR=4.7						
MKAR	**Makanchi Array**	**154.50**	**44**		**PKPab**	**09 34 15.5**	**+0.7**
SONM	**Songino Array**	**162.88**	**4**	PKPab	**PKPab**	**09 34 52.7**	**+1.6**
	comp=Z,1.3nm,1.0s,baz=321,slow=2.1,SNR=5.4						
CMAR	**Chiang Mai Arr**	**165.27**	**144**	PKPab	**PKPab**	**09 35 01.4**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=218,slow=6.5,SNR=4.4						

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*IDC **09** 09:17:26.7±2.7, 28°.27N×141°.75E, h0^{km}, mb3.9/5, mb1 4.0/5, mb1mx3.5/43, mbtmp3.9/5, Error ellipse: s-maj=116.6km s-min=28.6km az=75.0*

*NEIC **09** 09:17:38.8±0.9, 28°.20N±0°.10×140°.9E±0°.2, h82^{km}±9^{km}, mb4.5/15, Error ellipse: s-maj=23.2km s-min=14.1km az=86.0*

ISC 09 09:17:33.8±0.8**, 28°.07N**±0°.08×**140°.9E**±0°.1**, h35^{km}, n26, σ1^{s}.32**/26**, mb4.4**/12**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**5.12**	**349**	Pn	**Pn**	**09 18 51.1**	**+3.1**
JGF	**Kuroka**	**8.10**	**339**	Pn	**Pn**	**09 19 31.7**	**+2.6**
USA0B	**Ussuriysk Arra**	**17.63**	**338**	P	**P**	**09 21 35.7**	**-1.6**
USRK	**Ussuriysk Ar.**	**17.63**	**338**		**Pn**	**09 21 35.3**	**-1.3**
YULB	**Yu-li**	**18.30**	**260**	P	**Pn**	**09 21 45.6**	**+0.6**
YULB				IAmb	IAmb	09 21 46.6	
	comp=Z,67nm,1.5s						
MYLDM	**Lahad Datu**	**31.19**	**227**	P	**P**	**09 23 48.7**	**-1.1**
SLVN	**Son La**	**34.22**	**267**	P	**P**	**09 24 15.5**	**-0.9**
SLVN				IAmb	IAmb	09 24 42.3	
	comp=Z,10nm,1.4s						
PMG	**Port Moresby**	**37.74**	**170**	P	**P**	**09 24 47.2**	**+0.8**
SOEI	**Soe**	**40.92**	**206**	P	**P**	**09 25 13.2**	**0.0**
ATKA	**Atka Island**	**41.02**	**41**	P	**P**	**09 25 12.1**	**-1.4**
MTN	**Manton Dam**	**41.77**	**194**	P	**P**	**09 25 20.6**	**+0.7**
MTN				IAmb	IAmb	09 25 43.4	
	comp=Z,9.7nm,1.2s						
COEN	**Coen**	**41.83**	**177**	P	**P**	**09 25 21.7**	**+1.3**
COEN				IAmb	IAmb	09 25 25.5	
	comp=Z,12nm,1.1s						
ZAA0	**Zalesovo Array**	**48.03**	**319**	P	**P**	**09 26 07.7**	**-1.7**
ZALV	**Zalesovo Beam**	**48.03**	**319**	P	**P**	**09 26 08.1**	**-1.3**
WRAB	**Tennant Creek**	**48.15**	**188**	P	**P**	**09 26 11.3**	**+0.7**
WRAB				IAmb	IAmb	09 26 27.0	
	comp=Z,4.4nm,1.3s						
WR0	**Warramunga Arr**	**48.15**	**188**	P	**P**	**09 26 11.0**	**+0.4**
WR0				IAmb	IAmb	09 26 19.8	
	comp=Z,7.8nm,1.4s						
CTAO	**Charters Tower**	**48.15**	**173**	P	**P**	**09 26 11.5**	**+0.9**
CTAO				IAmb	IAmb	09 26 31.5	
	comp=Z,14nm,1.5s						
WB2	**Warramunga Arr**	**48.15**	**188**	P	**P**	**09 26 10.6**	**-0.1**
WB2				IAmb	IAmb	09 26 11.6	
	comp=Z,6.7nm,1.4s						
WRA	**Warramunga Arr**	**48.16**	**188**	P	**P**	**09 26 11.0**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=6.8,slow=7.7,SNR=7.2						
WRA	**Warramunga Arr**	**48.16**	**188**	P	**P**	**09 26 11.2**	**+0.5**
MKAR	**Makanchi Array**	**49.01**	**309**	P	**P**	**09 26 17.3**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=89,slow=8.9,SNR=2.1						
MKAR	**Makanchi Array**	**49.01**	**309**	P	**P**	**09 26 16.7**	**-0.4**
KURBB	**Kurchatov Arra**	**51.57**	**314**	P	**P**	**09 26 37.8**	**+1.4**
	comp=Z,1.5nm,0.4s,baz=91,slow=8.2,SNR=13						
BVAR	**Borovoye Array**	**56.58**	**317**	P	**P**	**09 27 13.8**	**+0.9**
	comp=Z,2.2nm,0.4s,baz=169,slow=4.9,SNR=12						
FINES	**FINESS Array B**	**76.59**	**333**	P	**P**	**09 29 19.2**	**-1.2**
	comp=Z,1.8nm,0.5s,baz=72,slow=4.5,SNR=8.5						
FINES	**FINESS Array B**	**76.59**	**333**	P	**P**	**09 29 19.4**	**-1.0**

KRSC 09 09:20:38.8±2.3**, 54°.72N**×**165°.82E, h30^{km}**±16^{km}**, ML3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.49**	**10**	*e*P	Pb	09 20 49.0	-0.1
BKI				*e*S	Sb	09 20 55.6	-0.5
KBTR	**Krutoberegovo**	**2.27**	**312**	*e*P	Pn	09 21 15.1	+0.9
MKZ	**Mys Kozlova**	**2.38**	**268**	*e*P	Pb	09 21 20.3	-0.6
MKZ				*e*S	Sb	09 21 49.3	-0.5
SMKR	**Semkarok**	**3.09**	**309**	*e*S	Sb	09 22 07.2	-3.1
SPN	**Mys Shipunski**	**3.79**	**247**	*e*P	Pn	09 21 38.9	+3.8
SPN				*e*S	Sn	09 22 21.5	+2.8
NLC	**Nalytchevo**	**4.13**	**251**	*e*S	Sn	09 22 30.4	+3.5
SDLR	**Sedlovina**	**4.34**	**253**	*e*P	Pb	09 21 48.6	-5.7
SDLR				*e*S	Sn	09 22 36.4	+4.0
SMAR	**Somma**	**4.39**	**253**	P	Pb	09 21 49.5	-5.8
UGLR	**Uglovaya**	**4.40**	**253**	*e*P	Pn	09 21 48.9	+5.3
KRER	**Koryakskii**	**4.40**	**254**	*e*P	Pn	09 21 49.4	+5.7
KRER				*e*S	Sn	09 22 38.5	+4.4
AVH	**Avacha**	**4.42**	**254**	*e*P	Pb	09 21 50.0	-5.8
AVH				*e*S	Sn	09 22 40.2	+5.8
KOK	**Koryaka**	**4.47**	**254**	*e*P	Pb	09 21 50.6	-6.0
DALK	**Dalny**	**4.51**	**251**	*e*S	Sn	09 22 41.0	+4.7
PET	**Petropavlovsk**	**4.57**	**251**	S	Sn	09 22 42.9	+5.1
RUS	**Russkaya**	**4.92**	**245**	*e*P	Pn	09 21 55.2	+4.6
RUS				S	Sn	09 22 48.8	+2.4
KRMR	**Karymshinskiy**	**4.94**	**251**	S	Sn	09 22 51.4	+4.5
MTVR	**Mutnovka**	**5.07**	**247**	*e*P	Pn	09 21 58.3	+5.5
MTVR				S	Sn	09 22 54.2	+3.8
ASAK	**Asacha**	**5.27**	**247**	P	Pn	09 22 01.5	+6.0
KDTR	**Khodutka, Kamc**	**5.48**	**241**	S	Sn	09 23 02.1	+1.7

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*IDC **09** 09:25:52.0±2.2, 31°.90S×177°.79W, h0^{km}, mb4.1/3, mb1 4.2/5, mb1mx3.9/24, mbtmp4.1/5, ML3.8/2, MS3.6/5, Ms1 3.6/5, ms1mx3.2/41, Error ellipse: s-maj=54.4km s-min=25.1km az=116.0*

*NEIC **09** 09:25:55.6±1.0, 31°.94S±0°.06×178°.01W±0°.05, h10^{km}±1^{km}, mb4.6/16, Error ellipse: s-maj=10.7km s-min=7.4km az=160.0*

ISC 09 09:25:56.7±0.8**, 31°.92S**±0°.07×**178°.0W**±0°.1**, h24^{km}, n34, σ0^{s}.83**/36**, mb4.5**/11**, MS3.6**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.66**	**2**	Pn	**Pn**	**09 26 37.0**	**-1.0**
	67nm,0.3s,baz=168,slow=20,SNR=2.3						
RAO				Sn	**Sn**	**09 27 08.9**	**-0.6**
	107nm,0.3s,baz=282,slow=24,SNR=4.8						
RAO	**Raoul Island**	**2.66**	**2**		**Pn**	**09 26 38.1**	**+0.1**
RAO					**Sn**	**09 27 08.3**	**-1.1**
URZ	**Urewera**	**7.48**	**211**	Pn	**Pn**	**09 27 42.8**	**-1.6**
	0.4nm,0.3s,baz=127,slow=20,SNR=1.1						
URZ				Sn	**Sn**	**09 29 06.1**	**-2.3**
	4.3nm,0.3s,baz=326,slow=24,SNR=9.0						
URZ	**Urewera**	**7.48**	**211**		**Pn**	**09 27 44.1**	**-0.2**
URZ					**Sn**	**09 29 07.7**	**-0.7**
BKZ	**Black Stump Fm**	**8.50**	**210**	Pn	**Pn**	**09 27 57.3**	**-1.1**
KHZ	**Kahutara**	**12.45**	**210**	Pn	**Pn**	**09 28 52.8**	**+0.5**
MSVF	**Nonsavu**	**14.56**	**345**	LR	LR	09 34 58.5	
	comp=Z,134nm,18.0s,baz=177,slow=38						
PINNC	**Pines Island,**	**15.89**	**302**	Pn	**Pn**	**09 29 38.6**	**-0.2**
MARNC	**Mare, Loyalty**	**16.21**	**306**	Pn	**Pn**	**09 29 43.5**	**+0.5**
DZM	**Mont Dzumac**	**16.95**	**302**	LR	LR	09 35 26.3	
	comp=Z,239nm,19.8s,baz=208,slow=34						
CAN	**Canberra**	**27.61**	**254**	P	**P**	**09 31 41.3**	**-1.0**
EIDS	**Eidsvold**	**27.83**	**276**	P	**P**	**09 31 44.9**	**+0.6**
EIDS				IAmb	IAmb	09 32 00.9	
	comp=Z,10nm,1.3s						
PPT	**Papeete**	**29.41**	**68**	LR	LR	09 42 29.1	
	comp=Z,68nm,18.9s,baz=58,slow=34						
CTAO	**Charters Tower**	**34.05**	**281**	P	**P**	**09 32 40.1**	**+0.9**
CTAO				IAmb	IAmb	09 32 43.9	
	comp=Z,7.2nm,0.9s						
STKA	**Stephens Creek**	**34.15**	**259**	P	**P**	**09 32 41.4**	**+1.4**
	comp=Z,2.1nm,0.8s,baz=73,slow=8.2,SNR=4.5						
STKA				LR	LR	09 45 42.4	
	comp=Z,111nm,18.1s,baz=29,slow=35						
AS31	**Alice Springs**	**43.03**	**269**	P	**P**	**09 33 54.7**	**0.0**
ASAR	**Alice Springs**	**43.03**	**269**	P	**P**	**09 33 54.8**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=104,slow=7.3,SNR=24						
ASAR	**Alice Springs**	**43.03**	**269**	P	**P**	**09 33 54.3**	**-0.4**
WR0	**Warramunga Arr**	**43.98**	**274**	P	**P**	**09 34 02.3**	**0.0**
WR0				IAmb	IAmb	09 34 17.9	
	comp=Z,8.4nm,1.3s						
WB2	**Warramunga Arr**	**44.15**	**274**	P	**P**	**09 34 04.0**	**+0.3**
WB2				IAmb	IAmb	09 34 04.7	
	comp=Z,8.8nm,1.1s						
WRAB	**Tennant Creek**	**44.15**	**274**	P	**P**	**09 34 04.0**	**+0.3**
WRA	**Warramunga Arr**	**44.16**	**274**	P	**P**	**09 34 04.1**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=112,slow=7.9,SNR=25						
WRA				LR	LR	09 51 47.8	
	comp=Z,92nm,18.6s,baz=110,slow=35						
WRA	**Warramunga Arr**	**44.16**	**274**	P	**P**	**09 34 04.1**	**+0.3**
WB0	**Warramunga Arr**	**44.19**	**274**	P	**P**	**09 34 04.2**	**+0.2**
KNRA	**Kununurra**	**50.82**	**276**	P	**P**	**09 34 55.7**	**+0.1**
KNRA				IAmb	IAmb	09 34 58.0	
	comp=Z,7.7nm,1.0s						
CASY	**Casey**	**53.80**	**208**	P	**P**	**09 35 17.6**	**+0.6**
PSA00	**Pilbara Seismi**	**55.79**	**264**	P	**P**	**09 35 32.3**	**+0.2**
PSA00				IAmb	IAmb	09 35 56.6	
	comp=Z,16nm,1.5s						
QSPA	**South Pole Qui**	**58.20**	**180**	P	**P**	**09 35 50.0**	**+1.3**
QSPA				IAmb	IAmb	09 36 13.1	
	comp=Z,6.8nm,1.0s						
SBUM	**Sibu**	**74.24**	**283**	P	**P**	**09 37 32.7**	**+0.5**
SBUM				IAmb	IAmb	09 37 52.2	
	comp=Z,6.9nm,1.5s						
F10A	**Beach Ranch, E**	**95.03**	**38**	P	**P**	**09 39 17.7**	**+0.4**
FINES	**FINESS Array B**	**146.55**	**339**	PKPbc	**PKPdf**	**09 45 34.1**	**+0.3**
	comp=Z,4.9nm,0.8s,baz=54,slow=3.3,SNR=8.1						
FINES	**FINESS Array B**	**146.55**	**339**	PKPdf	**PKPbc**	**09 45 34.5**	**-0.8**
AKASG	**Malin Array Be**	**152.48**	**321**	PKPbc	**PKPbc**	**09 45 49.6**	**-0.9**
	comp=Z,0.2nm,0.2s,baz=45,slow=1.4,SNR=5.0						
AKASG	**Malin Array Be**	**152.48**	**321**		**PKPdf**	**09 45 42.8**	**-0.7**
AKASG				PKPbc	**sPKPdf**	**09 45 51.4**	**-0.8**

NNC 09 09:29:53.4±19.0**, 38°.03N**×**72°.92E, h0^{km}, mb3.7, mpv3.3, 4C-2D, Error ellipse: s-maj=145.9km s-min=86.9km az=162.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**4.76**	**14**	⇑Pg	Pb	09 31 16.1	-1.6
	3.7nm,0.6s						
AAK				⇑Sn	Sn	09 32 06.2	+3.8
	11nm,0.7s						
TKM2	**Tokmak 2**	**5.29**	**22**	⇓Pg	Pg	09 31 33.5	-1.4
	1.5nm,0.5s						
TKM2				⇓Lg	Lg	09 32 35.0	
	2.9nm,0.7s						
KK08	**Karatay Array**	**5.39**	**341**	⇑Pn	Pn	09 31 11.6	-3.5
	2.3nm,0.5s,baz=151,slow=13						
KK08				⇑Sn	Sn	09 32 18.2	+0.3
	3.8nm,0.8s,baz=154,slow=26						

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*IDC **09** 09:48:59.1±0.8, 8°.40N×71°.42W, h0^{km}, mb3.8/7, mb1 4.2/9, mb1mx3.9/31, mbtmp3.9/9, ML4.0/2, MS3.4/7, Ms1 3.4/7, ms1mx3.2/57, Error ellipse: s-maj=27.9km s-min=20.6km az=57.0*

*CAR **09** 09:49:01.8±0.0, 8°.50N×71°.43W, h5^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*NEIC **09** 09:49:02.6±1.6, 8°.63N±0°.04×71°.39W±0°.03, h10^{km}±1^{km}, mb4.4/17, Mwr3.8(CAR), Error ellipse: s-maj=8.0km s-min=5.5km az=162.0*

*FUNV **09** 09:49:02.2, 8°.49N×71°.43W, h5^{km}, MW4.1*

ISC 09 09:49:00.6±1.3**, 8°.56N**±0°.02×**71°.38W**±0°.02**, h5^{km}**±8^{km}**, n112, σ1^{s}.53**/146**, mb4.2**/15**, MS3.4**/5**, 3C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.59**	**118**	*e*P	**Pg**	**09 49 12.0**	**0.0**
SOCV				*e*S	**Sg**	**09 49 19.9**	**+0.2**
SDV	**Santo Domingo**	**0.81**	**66**	*e*P	**Pg**	**09 49 17.4**	**+1.3**
SDV				*e*S	**Sb**	**09 49 29.0**	**+0.5**
SDV	**Santo Domingo**	**0.81**	**66**		**Pg**	**09 49 17.4**	**+1.3**
SDV				Sg	**Sb**	**09 49 28.4**	**-0.2**
CAPV	**Capacho**	**1.15**	**233**	⇓*e*P	**Pn**	**09 49 21.1**	**-2.5**
CAPV				*e*S	**Sb**	**09 49 37.2**	**-1.3**
PAMC	**Pamplona, Colo**	**1.78**	**227**	*e*P	**Pn**	**09 49 32.9**	**+0.4**
PAMC				*e*S	**Sb**	**09 49 57.5**	**+0.6**
MCQV	**Machiques**	**1.87**	**323**	⇑*e*P	**Pn**	**09 49 34.4**	**+1.2**
MCQV				*e*S	**Sb**	**09 49 58.9**	**0.0**
OCAC	**Ocana**	**1.94**	**261**	*e*P	**Pn**	**09 49 34.8**	**+0.3**
OCAC				*e*S	**Sn**	**09 50 01.0**	**+1.6**
OCAC	**Ocana**	**1.94**	**261**		**Pn**	**09 49 35.1**	**+0.7**
OCAC				Sn	**Sn**	**09 50 00.9**	**+1.6**
SANV	**Sanarito**	**2.05**	**63**	*e*P	**Pb**	**09 49 38.1**	**-0.4**
SANV				*e*S	**Sb**	**09 50 04.1**	**-0.2**
TAMC	**Tame, Arauca**	**2.15**	**191**	*e*P	**Pn**	**09 49 38.3**	**+1.1**
TAMC				*e*S	**Sb**	**09 50 08.1**	**+0.9**
ELOV	**Elorza**	**2.44**	**129**	*e*P	**Pn**	**09 49 42.5**	**+1.4**
ELOV				*e*S	**Sb**	**09 50 14.3**	**-1.1**
ELOV	**Elorza**	**2.44**	**129**	*e*P	**Pn**	**09 49 42.1**	**+0.9**
ELOV				*e*S	**Sn**	**09 50 11.2**	**-0.2**
DABV	**Dabajuro**	**2.46**	**17**	*e*P	**Pn**	**09 49 42.5**	**+1.0**
DABV				*i*S	**Sb**	**09 50 15.5**	**-0.4**
DABV	**Dabajuro**	**2.46**	**17**	⇑*e*P	**Pn**	**09 49 43.6**	**+2.2**
DABV				*e*S	**Sn**	**09 50 13.2**	**+1.3**
SIQV	**Siquisique**	**2.59**	**37**	*e*P	**Pn**	**09 49 45.4**	**+2.1**
BARC	**Barichara**	**2.65**	**222**	*e*P	**Pn**	**09 49 45.1**	**+0.9**
BARC				*e*S	**Sb**	**09 50 22.0**	**+0.4**
SMLC	**San Martn de**	**2.67**	**275**	*e*P	**Pn**	**09 49 44.3**	**0.0**
SMLC				*e*S	**Sb**	**09 50 21.9**	**-0.1**
BRRC	**Barranca, Sant**	**2.72**	**238**	*e*P	**Pn**	**09 49 46.0**	**+0.9**
BRRC				*e*S	**Sb**	**09 50 25.5**	**+1.9**
CRJC	**Cerrejon, Guaj**	**2.85**	**329**	⇑*e*P	**Pn**	**09 49 47.5**	**+0.5**
CRJC				*e*S	**Sn**	**09 50 23.2**	**+1.4**
RUSC	**La Rusia**	**3.14**	**213**	*e*P	**Pn**	**09 49 52.1**	**+0.9**
RUSC				*e*S	**Sb**	**09 50 38.0**	**+1.9**
MAPV	**Macapo**	**3.15**	**66**	*e*P	**Pn**	**09 49 52.9**	**+2.0**
URIC	**Uribia, Colomb**	**3.18**	**349**	*e*P	**Pn**	**09 49 51.1**	**-0.2**
URIC				*e*S	**Sn**	**09 50 29.2**	**-0.4**
URIC	**Uribia, Colomb**	**3.18**	**349**	Pn	**Pn**	**09 49 50.9**	**-0.4**
BAUV	**El Baul**	**3.32**	**83**	*e*P	**Pn**	**09 49 54.7**	**+1.4**
BAUV				*e*S	**Sn**	**09 50 32.8**	**-0.5**
BAUV	**El Baul**	**3.32**	**83**	Pn	**Pn**	**09 49 55.3**	**+2.0**
JACV	**Jacura**	**3.55**	**45**	*e*P	**Pn**	**09 49 58.4**	**+1.9**
ZARC	**Zaragoza, Cauc**	**3.60**	**253**	*e*P	**Pn**	**09 49 57.8**	**+0.6**
ZARC				*e*S	**Sb**	**09 50 45.9**	**-3.0**
ZARC	**Zaragoza, Cauc**	**3.60**	**253**		**Pn**	**09 49 57.4**	**+0.2**
MONV	**Montecano**	**3.65**	**22**	*e*P	**Pn**	**09 49 59.5**	**+1.7**
MONV				*e*S	**Sn**	**09 50 41.0**	**-0.2**
PTBC	**PUERTO BERRIO,**	**3.65**	**237**	*e*P	**Pn**	**09 49 57.3**	**-0.5**
PTBC				*e*S	**Sb**	**09 50 52.0**	**+1.7**
SMRC	**Santa Marta, M**	**3.81**	**313**	*e*P	**Pn**	**09 50 00.0**	**0.0**
SMRC				*e*S	**Sn**	**09 50 42.7**	**-2.6**
SPBC	**San Pablo de B**	**3.93**	**223**	*e*P	**Pn**	**09 50 02.5**	**+0.7**
SPBC				*e*S	**Sb**	**09 51 00.4**	**+1.8**
SJCC	**San Jacinto, C**	**3.98**	**290**	*e*P	**Pn**	**09 50 04.1**	**+1.8**
SJCC				*e*S	**Sn**	**09 50 51.9**	**+2.5**
SJCC	**San Jacinto, C**	**3.98**	**290**	Pn	**Pn**	**09 50 04.0**	**+1.6**
BENV	**Beln**	**3.99**	**69**	*e*P	**Pn**	**09 50 04.0**	**+1.5**
UREC	**San Jos de Ur**	**4.19**	**259**	*e*P	**Pn**	**09 50 05.9**	**+0.7**
MOTC	**Monteria, Cord**	**4.24**	**273**	*e*P	**Pn**	**09 50 07.4**	**+1.4**
MOTC				*e*S	**Sg**	**09 51 14.5**	**-2.4**
MOTC	**Monteria, Cord**	**4.24**	**273**		**Pn**	**09 50 07.3**	**+1.4**
PTGC	**Puerto Gaitan,**	**4.40**	**190**	*e*P	**Pn**	**09 50 08.1**	**0.0**
PTGC				*e*S	**Sb**	**09 51 17.2**	**+5.3**
NORC	**Norcasia**	**4.57**	**230**	*e*P	**Pn**	**09 50 10.7**	**+0.2**
NORC				*e*S	**Sn**	**09 51 05.0**	**+1.0**
ROSC	**El Rosal**	**4.71**	**218**	Pn	**Pn**	**09 50 15.3**	**+2.5**
	12nm,0.3s,baz=37,slow=6.8,SNR=27						
ROSC	**El Rosal**	**4.71**	**218**	Pn	**Pn**	**09 50 15.0**	**+2.3**
HELC	**Santa Helena**	**4.74**	**240**	*e*P	**Pn**	**09 50 13.8**	**+0.7**
HELC				*e*S	**Sn**	**09 51 12.5**	**+3.8**
CACV	**CAICARA DEL OR**	**4.90**	**101**	*e*P	Pb	09 50 22.8	-4.1
VILC	**Villavicencio,**	**4.98**	**208**	*e*P	**Pn**	**09 50 16.6**	**+0.3**
GUY2C	**Guyana, Caldas**	**5.16**	**230**	*e*P	**Pn**	**09 50 19.6**	**+0.6**
GUY2C				*e*S	**Sn**	**09 51 14.6**	**-4.6**
CBOC	**Ciudad Bolivar**	**5.32**	**240**	*e*P	**Pn**	**09 50 23.1**	**+2.2**
CBOC				*e*S	**Sb**	**09 51 43.6**	**+5.1**
BIRV	**Birongo**	**5.39**	**69**	*e*P	**Pn**	**09 50 22.1**	**+0.3**
BIRV	**Birongo**	**5.39**	**69**	Pn	**Pn**	**09 50 23.8**	**+2.1**
ANIL	**Santa Ana**	**5.68**	**225**	*e*P	**Pn**	**09 50 27.3**	**+1.2**
ORTC	**Ortega, Tolima**	**6.01**	**220**	*e*P	**Pn**	**09 50 30.1**	**-0.2**

ORTC				eS	Sn	09 51 39.2	-0.3
PLMC	San Jos del P	6.07	234	eP	Pn	09 50 32.7	+1.5
PLMC				eS	Sn	09 51 43.3	+2.1
GUVC	San Jose del G	6.10	192	eP	Pn	09 50 31.5	-0.1
GUVC				eS	Sn	09 51 38.0	-3.9
PTAC	Punta Ardita,	6.52	258	eP	Pn	09 50 38.5	+1.3
PRGV	PARIAGUAN	6.66	88	eP	Pn	09 50 39.7	+0.5
YOTC	Yotoco, Valle	6.71	228	eP	Pn	09 50 40.8	+0.8
MACC	Macarena, Meta	6.83	201	eP	Pn	09 50 40.0	-1.6
MACC				eS	Sn	09 51 57.0	-2.8
PCRV	Puerto La Cruz	6.85	76	Pn	Pn	09 50 44.6	+2.8
	3.3nm,0.3s,baz=264,slow=3.3,SNR=11						
PCRV				Sn	Sn	09 52 01.8	+1.6
	3.3nm,0.3s,baz=122,slow=22,SNR=5.7						
PCRV	Puerto La Cruz	6.85	76	eP	Pn	09 50 41.6	-0.2
PLCV	Puerto La Cruz	6.89	76		Pn	09 50 44.6	+2.2
MARP	Paez Belalcaza	7.28	219	eP	Pn	09 50 46.8	-1.1
MARP				eS	Sn	09 52 09.9	-1.3
PCON	Cinco Dias	7.95	219	eP	Pn	09 50 58.4	+1.0
POPC	Popayan, Colom	7.97	222	eP	Pn	09 50 58.2	+0.8
FLOC	Florencia	8.13	212	eP	Pn	09 50 58.3	-1.2
FLOC				eS	Sn	09 52 43.3	+11
FLOC	Florencia	8.13	212		Pn	09 50 59.1	-0.4
BCIP	Isla Barro Col	8.38	275	Pn	Pn	09 51 03.0	+0.2
MLPR	Magueyes Islan	10.26	24	Pn	Pn	09 51 28.0	-0.6
CRPR	Cabo Rojo, PR	10.27	23	Pn	Pn	09 51 28.0	-0.7
CELP	Cerrillos	10.55	26	Pn	Pn	09 51 32.1	-0.4
PDPR	Patillas Dam,	10.75	28	Pn	Pn	09 51 34.8	-0.5
SJG	San Juan	10.77	28	LR	LR	09 56 12.9	
	comp=Z,110nm,18.5s,baz=249,slow=40						
CUPR	Culebra, Puert	11.36	31	Pn	Pn	09 51 43.8	+0.2
GTBY	Guantanamo Bay	11.86	343	Pn	Pn	09 51 51.0	+0.4
BOAV	Boa Vista	12.42	119	Pn	Pn	09 51 59.0	+0.7
TBTG	Tabatinga, AM	12.75	173	Pn	Pn	09 52 00.1	-2.6
PTGA	Pitinga	14.65	129	Pn	Pn	09 52 26.4	-2.3
	0.5nm,0.3s,baz=304,slow=21,SNR=9.0						
PTGA				LR	LR	09 58 34.1	
	comp=Z,81nm,19.6s,baz=305,slow=39						
CZSB	Cruzeiro do Su	16.24	185	Pn	Pn	09 52 50.8	+1.1
ETMB	Extrema	18.97	164		P	09 53 22.8	-0.2
NNA	Nana	21.12	195	LR	LR	10 02 49.4	
	comp=Z,74nm,20.8s,baz=18,slow=40						
CCIG	Comitan	21.66	293	P	P	09 53 51.6	-0.9
CCIG				IAmb	IAmb	09 54 02.0	
	comp=Z,14nm,1.4s						
LPAZ	La Paz	24.90	173	P	P	09 54 27.4	+2.0
	comp=Z,1.7nm,0.6s,baz=0.8,slow=10,SNR=7.6						
LPAZ	La Paz	24.90	173	P	P	09 54 26.6	+1.2
LPAZ				IAmb	IAmb	09 54 31.0	
	comp=Z,5.7nm,1.1s						
Y58A	Scranton	26.35	344	P	P	09 54 37.4	-0.3
Y58A				IAmb	IAmb	09 54 58.7	
	comp=Z,20nm,1.1s						
SIV	San Ignacio	26.45	157	P	P	09 54 40.4	+1.7
	comp=Z,1.7nm,0.7s,baz=314,slow=7.7,SNR=9.1						
SIV				LR	LR	10 05 38.6	
	comp=Z,90nm,18.8s,baz=92,slow=38						
PB11	IPOC Station P	28.20	177	P	P	09 54 55.2	+0.6
PB11				IAmb	IAmb	09 55 00.8	
	comp=Z,8.0nm,1.0s						
TKL	Tuckaleechee C	29.25	339	LR	LR	10 07 42.0	
	comp=Z,97nm,19.0s,baz=25,slow=38						
LVC	Limon Verde	31.07	176	LR	LR	10 08 43.4	
	comp=Z,81nm,19.0s,baz=338,slow=38						
WVT	Waverly	31.27	334	P	P	09 55 21.7	+0.2
WVT				IAmb	IAmb	09 55 43.5	
	comp=Z,6.4nm,1.4s						
HALT	Halls	31.77	332	P	P	09 55 26.0	+0.1
UCCT	U. Connecticut	33.11	359	P	P	09 55 37.2	-0.3
FCAR	Ozark Folk Cen	33.14	328	P	P	09 55 36.9	-1.1
FCAR				IAmb	IAmb	09 55 58.3	
	comp=Z,3.3nm,1.1s						
LBNH	Lisbon	35.55	359	P	P	09 55 58.6	-0.1
HDIL	Hopedale	35.63	336	P	P	09 55 59.8	+0.4
HDIL				IAmb	IAmb	09 56 03.3	
	comp=Z,7.5nm,0.9s						
TXAR	Lajitas Array	36.66	309	P	P	09 56 08.2	-0.4
	comp=Z,0.2nm,0.5s,baz=130,slow=10,SNR=4.4						
TXAR				PcP	PcP	09 58 31.3	-0.3
	comp=Z,0.3nm,0.6s,baz=127,slow=6.9,SNR=4.7						
ULM	Lac du Bonnet	46.28	338	LR	LR	10 18 40.5	
	comp=Z,128nm,18.7s,baz=94,slow=38						
SCHQ	Schefferville	46.29	4	P	P	09 57 27.2	+0.1
	comp=Z,2.1nm,0.8s,baz=192,slow=9.3,SNR=1.7						
SCHQ	Schefferville	46.29	4	P	P	09 57 27.4	+0.3
BW06	Boulder Array	47.73	322	P	P	09 57 39.2	+0.3
PD31	Pinedale Array	47.73	322	P	P	09 57 39.4	+0.5
PDAR	Pinedale Array	47.73	322	P	P	09 57 39.4	+0.5
	comp=Z,0.7nm,0.4s,baz=124,slow=10,SNR=13						
PDAR	Pinedale Array	47.73	322	P	P	09 57 38.9	0.0
PLCA	Paso Flores	49.05	179	P	P	09 57 47.3	-1.5
	comp=Z,5.0nm,1.0s,baz=5.7,slow=7.9,SNR=8.2						
PLCA	Paso Flores	49.05	179	P	P	09 57 47.9	-0.9
PLCA				IAmb	IAmb	09 57 59.9	
	comp=Z,9.7nm,1.3s						
NVAR	Mina Array Bea	51.53	313	P	P	09 58 09.0	+1.1
	comp=Z,0.3nm,0.6s,baz=98,slow=9.1,SNR=4.0						
YKA	Yellowknife Ar	62.25	339	P	P	09 59 23.1	-0.2
	comp=Z,0.9nm,0.5s,baz=124,slow=6.8,SNR=7.4						
YKA	Yellowknife Ar	62.25	339	P	P	09 59 23.4	+0.1
ILAR	Eielson Array	76.13	335	P	P	10 00 48.9	-0.4
	comp=Z,0.4nm,0.5s,baz=98,slow=4.3,SNR=3.8						
CMAR	Chiang Mai Arr	151.51	20	PKPbc	PKiKP	10 09 00.1	+2.8
	comp=Z,1.0nm,0.3s,baz=342,slow=4.7,SNR=4.4						
ASAR	Alice Springs	151.52	235	PKPbc	PKPbc	10 08 55.0	-1.8
	comp=Z,1.3nm,0.7s,baz=116,slow=2.3,SNR=12						
ASAR	Alice Springs	151.52	235		PKPbc	10 08 55.6	-1.2
WRA	Warramunga Arr	152.67	243	PKPbc	PKPbc	10 08 58.2	-1.3
	comp=Z,1.7nm,0.6s,baz=109,slow=2.7,SNR=20						
WRA	Warramunga Arr	152.67	243		PKPbc	10 08 58.4	-1.1

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*UPP **09** 10:01:22.2±3.2, 64°.69N×31°.03E, h0^{km}, ML1.9, Suspected explosion*
*HEL **09** 10:01:23.1±0.1, 64°.75N×30°.67E, h0^{km}, ML2.1, Explosion*
*NAO **09** 10:01:25.8±2.1, 64°.82N×30°.18E, ML2.2*
*BER **09** 10:01:26.4±3.1, 64°.80N×30°.52E, h0^{km}, ML2.2(NAO), Suspected explosion*
*IDC **09** 10:01:26.1±2.3, 64°.79N×30°.26E, h0^{km}, mb1 3.1/3, mb1mx2.6/58, mbtmp3.0/3, ML2.2/3, Error ellipse: s-maj=34.5km s-min=8.7km az=98.0*
ISC 09 10:01:24.1±1.1, **64°.86N**±0°.02×**30°.67E**±0°.06, **h0^{km}, n39, σ1s.44**/61, **Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	Riekki	1.22	345	PG	Pg	10 01 47.0	-0.4
	baz=164						
KU6				MSG		10 02 03.0	
	comp=Z,13nm,0.2s						
KU6				SB	Sb	10 02 04.3	0.0
MSF	Maaselka	1.26	328	PG	Pg	10 01 47.8	-0.5
MSF				SG	Sg	10 02 04.8	+0.2
JOF	Joensuu	1.96	171	PG	Pn	10 01 56.7	-1.8
JOF				SG	Sn	10 02 23.9	+0.1
OUL	Oulu	2.04	279	PG	Pn	10 02 00.5	+0.9
OUL				SG	Sb	10 02 27.2	-0.7
OUF	Merijarvi	2.61	262	PB	Pn	10 02 08.0	+0.6
	baz=83						
OUF				MSG		10 02 39.5	
	comp=Z,20nm,0.2s						
OUF				SG	Sb	10 02 42.8	-1.3
RNF	Rovaniemi	2.61	315	PB	Pn	10 02 08.7	+1.3
RNF				SB	Sb	10 02 43.6	-0.5
OBF0	Syolatti, Pyha	2.79	266	PG	Pn	10 02 11.8	+1.9
OBF0				SG	Sb	10 02 50.0	+0.7
TOF	Tornio	2.92	298	PB	Pn	10 02 13.5	+1.8
TOF				MSG		10 02 50.4	
	comp=Z,6.6nm,0.2s						
TOF				SG	Sb	10 02 51.8	-1.4
SUF	Sumiainen	2.94	225	PG	Pn	10 02 13.3	+1.4
SUF				MSG		10 02 47.3	
	comp=Z,6.4nm,0.2s						
SUF				SG	Sn	10 02 50.8	+2.9
VRF	Varrio	2.94	352	PB	Pn	10 02 13.1	+1.2
	baz=172						
VRF				MSG		10 02 52.5	
	comp=Z,2.7nm,0.2s						
VRF				SG	Sb	10 02 55.0	+1.4
SGF	Sodankyl	3.10	329	PN	Pn	10 02 15.0	+0.9
SGF				SB	Sb	10 02 57.8	-0.4
KALU	Kalix	3.23	292	P	Pn	10 02 16.9	+1.0
KALU	Kalix	3.23	292	PB	Pn	10 02 18.7	+2.8
KAF	Kangasniemi	3.38	217	PB	Pn	10 02 19.2	+1.2
KAF				SG	Sb	10 03 04.1	-2.2
KLF	Kolari	3.63	314	PN	Pn	10 02 22.6	+1.1
KLF				SG	Sg	10 03 18.8	-1.8
KEF	Keuruu	3.75	227	PB	Pn	10 02 24.4	+1.3
PAJU	Pajala	3.78	309	P	Pn	10 02 23.9	+0.3
PAJU	Pajala	3.78	309	PN	Pn	10 02 24.3	+0.7
SJUU	Sjulsmark	3.88	284	P	Pn	10 02 25.0	+0.1
BURU	Burvik	4.00	270	P	Pn	10 02 26.2	-0.2
BURU				S	Sn	10 03 14.4	+0.4
BURU	Burvik	4.00	270	PN	Pn	10 02 26.8	+0.3
FIA0	FINESS Array S	4.01	213	Pn	Pn	10 02 26.2	-0.4
	baz=36,slow=14						
FIA0				Sn	Sn	10 03 13.2	-1.0
	baz=38,slow=28						
FIA0				Lg	Lg	10 03 26.4	
	baz=26,slow=37						
FIA0	FINESS Array S	4.01	213	Pn	Pn	10 02 26.2	-0.4
	baz=36,slow=14						
FIA0				Sn	Sn	10 03 13.2	-1.0
	baz=38,slow=28						
FIA0				Sg	Sb	10 03 26.4	+2.0
	baz=26,slow=37						
FIA0	FINESS Array S	4.01	213	PN	Pn	10 02 26.3	-0.4
	baz=29						
FIA0				SG	Sb	10 03 26.7	+2.3
FINES	FINESS Array B	4.01	213	Pn	Pn	10 02 26.2	-0.4
	comp=Z,0.3nm,0.3s,baz=28,slow=14,SNR=6.5						
FINES				Lg	Lg	10 03 25.9	
	comp=Z,1.7nm,0.3s,baz=31,slow=30,SNR=13						
HARU	Harads	4.25	292	P	Pn	10 02 30.2	+0.3
HEF	Hetta	4.53	325	PN	Pn	10 02 36.0	+2.2
HEF				SG	Sb	10 03 44.4	+5.0
VJF	Virojoki	4.56	200	SG	Sb	10 03 43.1	+2.8
LILU	Lilltraesk	4.60	280	P	Pn	10 02 34.9	+0.1
DUNU	Dundret	4.71	303	P	Pn	10 02 36.7	+0.3
LANU	Lannavaara	4.73	317	P	Pn	10 02 36.6	0.0
ARA0	ARCESS Array S	5.11	339	Pn	Pn	10 02 41.8	0.0
	baz=160,slow=16						
ARA0				Sn	Sn	10 03 39.8	-1.6
	baz=155,slow=28						
ARA0				Lg	Lg	10 03 59.9	
	baz=153,slow=37						
ARA0	ARCESS Array S	5.11	339	Pn	Pn	10 02 41.8	0.0
	baz=160,slow=16						
ARA0				Sn	Sn	10 03 39.8	-1.6
	baz=155,slow=28						
ARCES	ARCESS Array B	5.11	339	Pn	Pn	10 02 42.1	+0.4
	baz=155,slow=13,SNR=50						
ARCES				Sn	Sn	10 03 40.2	-1.2
	baz=158,slow=24,SNR=1.2						
ARCES				Lg	Lg	10 04 02.4	
	baz=155,slow=32,SNR=7.9						
SALU	Saltoluokta	5.55	303	P	Pn	10 02 48.4	+0.6
NIKU	Nikkaluokta	5.57	308	P	Pn	10 02 48.8	+0.7
NOA	NORSAR Array B	9.64	256	Pn	Pn	10 03 41.2	-2.7
	comp=Z,0.0nm,0.3s,baz=64,slow=12,SNR=1.5						
NRA0	NORESS Array S	9.67	254	Pn	Pn	10 03 43.6	-0.6
	baz=54,slow=12						
NRA0	NORESS Array S	9.67	254	Pn	Pn	10 03 43.6	-0.6
	baz=54,slow=12						

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*IDC **09** 10:01:29.6±0.8, 59°.34S×25°.81W, h0^{km}, mb4.2/5, mb1 4.3/6, mb1mx3.9/26, mbtmp4.2/6, ML4.7/1, MS3.7/1, Ms1 3.7/1, ms1mx3.0/23, Error ellipse: s-maj=33.8km s-min=23.7km az=63.0*
*NEIC **09** 10:01:35.2±1.7, 59°.48S±0°.07×25°.9W±0°.2, h35^{km}±1^{km}, mb4.6/17, Error ellipse: s-maj=19.6km s-min=10.1km az=251.0*
ISC 09 10:01:34.5±0.6, **59°.51S**±0°.10×**25°.8W**±0°.1, **h35^{km}, n38, σ1s.54**/40, **mb4.5**/12, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.86	307	Pn	Pn	10 03 26.1	0.0
HOPE					Sn	10 04 53.4	-0.3
VNA1	Neumayer--Stat	13.32	154	P	Pn	10 04 41.1	+0.4
VNA1				S	Sn	10 07 00.9	-6.3
VNA3	Neumayer Olymp	13.48	157	P	Pn	10 04 43.2	+0.2
VNA3				S	Sn	10 06 58.4	-13
VNA2	Neumayer--Watz	13.72	154	P	Pn	10 04 45.9	-0.3
	baz=315,slow=14						
VNA2				S	Sn	10 07 07.3	-10
SNAA	Sanae	15.29	152	P	Pn	10 05 07.5	+0.1
SNAA				S	Sn	10 07 45.5	-10
SNAA	Sanae	15.29	152	Pn	Pn	10 05 07.7	+0.2
	3.2nm,0.3s,baz=310,slow=15,SNR=71						
SNAA				Sn	Sn	10 07 41.4	-14
	0.2nm,0.3s,baz=205,slow=17,SNR=3.1						
SNAA	Sanae	15.29	152		Pn	10 05 07.9	+0.4
PMSA	Palmer Station	18.41	237	LR	LR	10 11 36.4	
	comp=Z,209nm,18.8s,baz=68,slow=33						
PMSA	Palmer Station	18.41	237	P	P	10 05 46.0	-0.4
MG01	Puerto William	22.82	263	P	P	10 06 34.0	+0.1
COYC	Coyhaique	30.71	276	P	P	10 07 43.9	-1.9
COYC				IAmb	IAmb	10 07 49.5	
	comp=Z,8.4nm,0.9s						
QSPA	South Pole Qui	30.73	180	P	P	10 07 48.7	+2.7
	comp=Z,2.0nm,0.5s,baz=12,slow=0.8,SNR=52						
QSPA	South Pole Qui	30.73	180	P	P	10 07 48.9	+2.9
QSPA				IAmb	IAmb	10 07 49.5	
	comp=Z,9.9nm,1.4s						
TRQA	Tornquist	31.47	297	P	P	10 07 53.6	+1.0
PLCA	Paso Flores	33.46	284	P	P	10 08 10.3	+0.3
	comp=Z,1.2nm,0.5s,baz=124,slow=3.9,SNR=9.1						
PLCA	Paso Flores	33.46	284	P	P	10 08 10.3	+0.3
PLCA				IAmb	IAmb	10 08 29.3	
	comp=Z,4.5nm,1.1s						
LC01	Cunco	35.52	285	P	P	10 08 28.1	+0.3
LC01				IAmb	IAmb	10 08 29.9	
	comp=Z,4.4nm,0.6s						
BO02	Sierra Bellavi	38.24	290	P	P	10 08 49.9	-1.2
BO02				IAmb	IAmb	10 09 09.3	
	comp=Z,7.8nm,0.8s						
GO05	Huala	38.62	288	P	P	10 08 53.6	-0.6
MT09	Talagante	39.17	291	P	P	10 08 58.5	-0.4
MT09				IAmb	IAmb	10 09 07.3	
	comp=Z,23nm,1.3s						
MT02	Curacav	39.66	291	P	P	10 09 03.0	+0.1
MT02				IAmb	IAmb	10 09 19.7	
	comp=Z,32nm,1.4s						
VNDA	Vanda	43.14	182	P	P	10 09 34.2	+3.3
BDFB	Brasilia	46.74	330	P	P	10 09 59.0	-1.2
BDFB				IAmb	IAmb	10 10 24.9	
	comp=Z,16nm,1.5s						
LVC	Limon Verde	47.72	301	P	P	10 10 05.4	-2.7
LVC				IAmb	IAmb	10 10 06.3	
	comp=Z,5.1nm,1.0s						
LPAZ	La Paz	53.01	306	P	P	10 10 47.8	-0.6
	comp=Z,0.7nm,0.6s,baz=194,slow=5.8,SNR=3.9						
NNA	Nana	60.59	299	P	P	10 11 41.0	-0.5
TORD	Torodi Ar. Bea	75.74	28	P	P	10 13 16.9	+0.5
	comp=Z,1.4nm,0.7s,baz=193,slow=6.2,SNR=10.0						
TORD	Torodi Ar. Bea	75.74	28	P	P	10 13 16.8	+0.5
ASAR	Alice Springs	95.46	161	P	P	10 14 55.8	+0.3
	comp=Z,0.8nm,0.6s,baz=182,slow=4.2,SNR=13						
ASAR	Alice Springs	95.46	161	P	P	10 14 56.0	+0.5
YKA	Yellowknife Ar	139.20	315	PKP	PKPdf	10 20 56.0	+0.1
	comp=Z,1.3nm,0.7s,baz=131,slow=2.2,SNR=11						
YKA	Yellowknife Ar	139.20	315		PKPdf	10 20 56.2	+0.2
INK	Inuvik	148.91	317	PKPbc	PKPbc	10 21 15.7	-1.0
	comp=Z,1.0nm,0.7s,baz=42,slow=3.1,SNR=9.5						
INK	Inuvik	148.91	317		PKPbc	10 21 16.2	-0.5
SONM	Songino Array	150.04	91	PKPbc	PKPbc	10 21 20.9	+0.5
	comp=Z,0.8nm,0.5s,baz=234,slow=5.0,SNR=5.8						
SONM	Songino Array	150.04	91		PKPbc	10 21 20.8	+0.4
ILAR	Eielson Array	152.89	306	PKPbc	PKPbc	10 21 25.3	-0.9
	comp=Z,0.3nm,0.5s,baz=149,slow=1.0,SNR=5.9						
ILAR	Eielson Array	152.89	306		PKiKP	10 21 26.4	+0.1
ILAR				PKPab	PKPab	10 21 38.5	+0.9

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*ISK **09** 10:13:05.5, 38°.82N×37°.84E, h5^{km}, ML3.7/30*
*DDA **09** 10:13:06.7, 38°.83N×37°.84E, h16^{km}, MW3.7*
ISC 09 10:13:07.0±0.9, **38°.83N**±0°.02×**37°.84E**±0°.02, **h11^{km}**±7^{km}, **n56, σ1s.47**/85, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEKM	Malatya_Hekimh	0.10	61	i P	Pb	10 13 10.1	-1.1
HEKM				i S	Sg	10 13 12.6	+0.5
DARE	Darende-Malaty	0.38	228	PG	Pb	10 13 14.5	-1.4
DARE				SG	Sb	10 13 20.3	-1.5
CUGUR	Gurin_SVAS	0.46	257	i P	Pb	10 13 16.0	-1.3
CUGUR				i S	Sb	10 13 23.3	-0.8
ARPR	Arapgir-MALATY	0.47	55	PG	Pb	10 13 16.3	-1.1
ARPR				SG	Sb	10 13 24.0	-0.3
AKCD	Akcadag	0.54	173	i P	Pb	10 13 17.4	-1.1
AKCD				i S	Sb	10 13 26.5	+0.1
CUKAN	kangal_SIVAS	0.57	329	i P	Pb	10 13 17.8	-1.3
CUKAN				i S	Sb	10 13 26.1	-1.2
KEMA	Kemaliye	0.67	49	i P	Pg	10 13 19.4	-0.7
KEMA				i S	Sb	10 13 29.9	-0.3
MALT	Malatya	0.69	138	PG	Pg	10 13 19.8	-0.6
MALT				SG	Sb	10 13 30.1	-0.6
ELBS	KAHRAMANMARAS	0.75	228	i P	Pb	10 13 21.4	-0.8
ELBS				i S	Sb	10 13 32.7	+0.2
ILIC	ilic-Erzincan	0.84	42	PG	Pg	10 13 22.6	-0.7
ELZG	Elazig	0.95	110	i P	Pg	10 13 24.4	-1.0
ELZG				i S	Sn	10 13 38.8	-1.4
CUAYA	Sivas-Altinyay	0.96	297	i P	Pg	10 13 24.6	-0.9
CUAYA				i S	Sn	10 13 39.0	-1.3
CUZAR	Zara_SIVAS	1.06	357	i P	Pn	10 13 27.4	-0.6
CUZAR				i S	Sn	10 13 44.2	+1.4
SCER	sogukcermik	1.17	332	i P	Pb	10 13 28.4	-1.0
SCER				i S	Sn	10 13 46.4	+0.8
SARI	SarD1z-Kayseri	1.19	250	PN	Pg	10 13 29.2	-0.8
SVRC	Sivrice-ELAZID	1.23	111	PN	Pn	10 13 29.1	-1.3
SVSK	Karacayir	1.27	329	PN	Pg	10 13 30.4	-1.0
REFA	Refahiye_ERZN	1.29	33	i P	Pg	10 13 31.2	-0.7
REFA				i S	Sg	10 13 51.4	+2.7
TNCL	Tunceli-Merkez	1.35	77	i P	Pb	10 13 31.6	-0.9
TNCL				i S	Sg	10 13 51.2	+0.6
CUSAR	Sarkisla-SIVAS	1.38	296	i P	Pb	10 13 32.0	-0.9
CUSAR				i S	Sg	10 13 52.7	+1.3
ATAB	Bozova	1.40	165	i P	Pg	10 13 33.0	-0.9
ATAB				i S	Sg	10 13 55.3	+3.1
SUSE	Susehri	1.41	11	i P	Pg	10 13 34.6	+0.6
SUSE				i S	Sg	10 13 57.3	+5.0
GZT	Gaziantep	1.49	189	i P	Pg	10 13 35.3	-0.3
GZT				i S	Sg	10 13 57.5	+2.6
KMRS	Kahramanmaras	1.52	210	PN	Pg	10 13 35.1	-1.0
KOVA	Elazig, Kovanc	1.54	94	i P	Pb	10 13 35.0	-0.7
KOVA				i S	Sg	10 13 59.7	+2.9
BNN	Bunyan	1.56	271	PN	Pb	10 13 35.5	-0.5
URFA	Urfa	1.59	151	PN	Pg	10 13 36.7	-0.8
RSDY	Resadiye-TOKAT	1.62	346	PN	Pn	10 13 35.0	-0.5
SAIM	ADANA	1.62	239	i P	Pg	10 13 36.9	-1.3
SAIM				i S	Sg	10 13 59.7	+0.4
ERZN	Erzincan	1.64	62	PN	Pb	10 13 36.9	-0.5
ALUC	Giresun/Alucra	1.67	25	i P	Pg	10 13 38.2	-1.0
ALUC				i S	Sg	10 14 02.6	+1.7
EUZM	Uzumlu	1.69	58	i P	Pg	10 13 38.7	-0.6
EUZM				i S	Sg	10 14 02.8	+1.5
KELT	Kelkit	1.71	39	i P	Pg	10 13 38.5	-1.4
KELT				i S	Sg	10 14 02.5	+0.4
ANDN	Andirin	1.72	224	i P	Pg	10 13 39.6	-0.3
ANDN				i S	Sg	10 14 04.3	+2.0
GUNE	Kayseri	1.73	273	i P	Pg	10 13 39.1	-1.2
GUNE				i S	Sg	10 14 06.8	+4.0
TOKT	Tokat	1.80	326	PN	Pb	10 13 39.1	-0.9
TOKA	Tokat	1.83	325	i P	Pg	10 13 40.7	-1.4
TOKA				i S	Sg	10 14 06.4	+0.6
HACI	Hacifakili, Ak	1.86	299	i P	Pb	10 13 40.5	-0.6
HACI				i S	Sg	10 14 07.2	+0.5
SANL	SANLIURFA_Merk	1.89	151	i P	Pb	10 13 40.7	-0.8
SANL				i S	Sg	10 14 08.7	+1.0
DYBB	Diyarbakir	2.00	115	PN	Pb	10 13 41.9	-1.7
KOZT	Kozan	2.08	230	PN	Pb	10 13 42.9	-2.0
YOZ	Yozgat	2.12	293	PN	Pb	10 13 43.6	-2.0
YEDI	Yedisu-Bingol	2.19	73	PN	Pb	10 13 44.8	-1.9
BNGB	Bingl	2.22	85	PN	Pn	10 13 44.3	+0.4
KOZK	Kozakli-Nevseh	2.35	280	PN	Pb	10 13 46.9	-2.5
CEYT	Ceyhan	2.46	223	PN	Pn	10 13 48.0	+0.9
MAZI	Mazidag	2.47	123	PN	Pn	10 13 48.3	+1.0
CMRD	Camardi-Nigde	2.53	243	PN	Pn	10 13 49.3	+1.1
KTUT	Trabzon	2.61	34	PN	Pn	10 13 50.7	+1.5
KVT	Kavak	2.64	329	PN	Pn	10 13 50.9	+1.3
KARA	Karaisali	2.70	235	PN	Pn	10 13 51.9	+1.5
SVAN	Silvan-Diyarba	2.72	103	PN	Pn	10 13 51.9	+1.2
CORM	Corum	2.83	299	PN	Pn	10 13 53.6	+1.3
KAMT	Kaman	3.26	281	PN	Pn	10 13 59.7	+1.5
MERS	Mersin	3.28	234	PN	Pn	10 14 00.1	+1.7
SERE	Sereflikochisa	3.34	273	PN	Pn	10 14 00.9	+1.6

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*IDC **09** 10:18:59.1±0.8, 4°.02S×129°.76E, h0^{km}, mb4.5/8, mb1 4.5/12, mb1mx3.9/52, mbtmp4.4/12, ML4.0/4, Error ellipse: s-maj=36.4km s-min=16.5km az=69.0*
*NEIC **09** 10:19:04.1±1.4, 4°.10S±0°.07×129°.60E±0°.07, h28^{km}±5^{km}, mb4.6/34, Error ellipse: s-maj=10.1km s-min=9.5km az=137.0*
*DJA **09** 10:19:07.5±0.5, 4°S±3°×12°9E±°, h32^{km}±5^{km}, M4.6/18, mB5.0/5, mb4.7/18, MLv4.7/10, Mw(mB)4.3/5*
ISC 09 10:19:04.6±0.4, **4°.07S**±0°.05×**129°.56E**±0°.05, **h36^{km}, n82, σ1s.65**/83, **mb4.6**/25, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.96	319	P	Pn	10 19 19.8	-1.7
MSAI				S	Sn	10 19 31.0	-3.0
AAI	Ambon	1.42	286	P	Pn	10 19 25.4	-2.4
AAI				S	Sn	10 19 41.4	-3.9
FAKI	Fak Fak	2.92	67	P	Pn	10 19 50.2	+1.7
FAKI	Fak Fak	2.92	67	Pn	Pn	10 19 50.0	+1.5
SIJI	Sorong	3.61	28	Pn	Pn	10 19 59.2	+1.2
	39nm,0.3s,baz=52,slow=23,SNR=69						
SIJI				Sn	Sn	10 20 40.2	+0.8
	15nm,0.3s,baz=219,slow=8.5,SNR=3.8						
SWI	Sorong	3.61	28	P	Pn	10 19 59.2	+1.2
LBMI	Labuha	3.99	329	P	Pn	10 20 02.3	-0.9
SANI	Sanana	4.10	299	P	Pn	10 20 04.0	-0.7
SOEI	Soe	7.71	223	P	Pn	10 20 58.6	+4.1
	28nm981nm44nm,0.8s						
SOEI	Soe	7.71	223	Pn	Pn	10 20 58.9	+4.4
BATI	Baumata	8.45	224	Pn	Pn	10 21 04.8	+0.3
	6.6nm,0.3s,baz=200,slow=0.7,SNR=6.3						
APSI	Ampana	8.51	291	P	Pn	10 21 06.3	+1.0
	377nm36nm,0.9s						
MTN	Manton Dam	8.85	170		Pn	10 21 10.4	+0.4
MRSI	Marisa	8.86	301	P	Pn	10 21 11.3	+1.2
	731nm18nm,0.5s						
EDFI	Ende, Flores	9.10	239	P	Pn	10 21 16.6	+3.1
	18nm,0.9s						
BSSI	Bau Bau, Buton	9.27	257	P	Pn	10 21 35.1	+19
BNSI	Bone	9.44	268	P	Pn	10 21 21.4	+3.3
	24nm,0.8s						
BKSI	Bulukumba	9.49	262	P	Pn	10 21 21.8	+3.0
	24nm,0.9s						
SPSI	Sidrap Palu	9.77	270	P	Pn	10 21 27.3	+4.7
	20nm,1.5s						
TTSI	Tana Toraja	9.78	276	P	Pn	10 21 33.5	+11
KAPI	Kappang	9.82	264	Pn	Pn	10 21 24.7	+1.3
	1.1nm,0.3s,baz=113,slow=6.3,SNR=6.5						
KAPI	Kappang	9.82	264		Pn	10 21 23.7	+0.3
TOLI2	Tolitoli	10.18	300	Pn	Pn	10 21 27.4	-0.8
KNRA	Kununurra	11.56	184		Pn	10 21 45.9	-1.2
PLAI	Plampang	12.62	247	P	P	10 22 15.3	+2.6
TWSI	Taliwang, Sumb	13.42	249	P	P	10 22 21.5	0.0
MYLDM	Lahad Datu	14.37	310	Pn	Pn	10 22 25.6	-0.1
BBKI	Banjar Baru	14.70	272	P	P	10 22 34.3	-1.5
	16nm,0.8s						
SRBI	Singaraja	14.81	254	P	P	10 22 38.0	+1.0
	59nm,1.0s						
KMMI	Kalianget	15.80	259	P	P	10 22 50.7	+2.7
	52nm,1.0s						
JAGI	Jajag, Banyuwa	15.93	253	P	P	10 22 49.3	-0.1
	72nm,1.5s						
WB0	Warramunga Arr	16.29	164		Pn	10 22 49.0	-1.8
WRAB	Tennant Creek	16.44	164		Pn	10 22 49.7	-2.9
WRA	Warramunga Arr	16.45	164	Pn	Pn	10 22 49.4	-3.4
	0.3nm,0.3s,baz=347,slow=13,SNR=16						
WRA	Warramunga Arr	16.45	164		Pn	10 22 50.4	-2.3
WB2	Warramunga Arr	16.45	164		Pn	10 22 48.7	-4.1
WR0	Warramunga Arr	16.52	163	P	Pn	10 22 51.5	-2.1
COEN	Coen	16.64	127	Pn	Pn	10 22 53.8	-1.3
KKM	Kota Kinabalu	16.69	307	Pn	Pn	10 22 56.2	+0.3
KKM				IAmb	IAmb	10 23 08.3	
	comp=Z,45nm,1.2s						
PMG	Port Moresby	18.25	108	P	P	10 23 13.5	-1.7
PMG				IAmb	IAmb	10 23 41.9	
	comp=Z,42nm,1.2s						
SBUM	Sibu	18.50	290	P	P	10 23 17.8	-0.1
PSA00	Pilbara Seismi	19.79	208	P	P	10 23 32.2	+0.3

PSA00	Pilbara Seismi	19.79	208	P	P	10 23 31.6	-0.3
PSA00				IAmb	IAmb	10 23 33.2	
	comp=Z,46nm,0.9s						
AS31	Alice Springs	19.92	168		P	10 23 33.5	+0.1
ASAR	Alice Springs	19.93	168	P	P	10 23 34.0	+0.5
	comp=Z,0.6nm,0.3s,baz=348,slow=9.2,SNR=69						
CTAO	Charters Tower	22.76	136	P	P	10 24 03.7	-0.2
CTAO				IAmb	IAmb	10 24 24.9	
	comp=Z,20nm,1.2s						
GIRL	Giralia	23.69	217	P	P	10 24 14.1	+1.0
FORT	Forrest	26.60	183	P	P	10 24 39.0	-0.6
FORT				IAmb	IAmb	10 24 59.8	
	comp=Z,14nm,0.8s						
BBOO	Buckleboo	29.23	169	P	P	10 25 03.2	+0.1
BBOO				IAmb	IAmb	10 25 25.5	
	comp=Z,21nm,1.4s						
EIDS	Eidsvold	29.59	138	P	P	10 25 06.0	-0.3
EIDS				IAmb	IAmb	10 25 26.5	
	comp=Z,11nm,1.4s						
IPM	Ipoh	29.75	286	P	P	10 25 07.8	-0.2
STKA	Stephens Creek	29.88	159	P	P	10 25 09.3	+0.4
	comp=Z,2.7nm,1.0s,baz=285,slow=4.4,SNR=3.6						
STKA	Stephens Creek	29.88	159	IAmb	IAmb	10 25 17.8	
	comp=Z,0.9nm,1.1s						
KULM	Kulim	30.34	288	P	P	10 25 12.7	-0.5
KULM				IAmb	IAmb	10 25 15.0	
	comp=Z,12nm,0.9s						
CM31	Chiang Mai Arr	37.57	308	P	P	10 26 16.2	+0.3
CM31				IAmb	IAmb	10 26 25.3	
	comp=Z,8.1nm,1.1s						
CMAR	Chiang Mai Arr	37.57	308	P	P	10 26 16.9	+1.0
	comp=Z,3.8nm,0.8s,baz=140,slow=7.7,SNR=25						
CMAR				PcP	PcP	10 28 34.8	+1.4
	comp=Z,0.7nm,0.4s,baz=165,slow=3.7,SNR=4.9						
CHTO	Chiang Mai	37.77	308	P	P	10 26 17.8	+0.3
CHTO				IAmb	IAmb	10 26 19.3	
	comp=Z,9.7nm,0.8s						
LSA	Lhasa	49.81	315	P	P	10 27 55.2	+0.5
LSA				IAmb	IAmb	10 27 57.6	
	comp=Z,4.6nm,0.6s						
GTA	Gaotai	51.22	330	*e*P	P	10 28 04.7	-0.1
GTA				pP	pP	10 28 11.8	-2.4
GTA				sP	sP	10 28 16.1	-2.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	55.55	341	P	P	10 28 37.0	+0.6
	comp=Z,2.6nm,1.2s,baz=169,slow=5.3,SNR=7.7						
MK31	Makanchi Array	65.56	326	P	P	10 29 45.0	+0.4
MK31				IAmb	IAmb	10 29 45.8	
	comp=Z,4.4nm,0.8s						
MKAR	Makanchi Array	65.56	326	P	P	10 29 44.9	+0.3
	comp=Z,5.0nm,0.7s,baz=127,slow=7.8,SNR=30						
MAKZ	Makanchi	65.74	326	P	P	10 29 45.4	-0.4
MAKZ				IAmb	IAmb	10 29 46.8	
	comp=Z,6.2nm,0.9s						
KDJ	Kajisay	66.06	320	P	P	10 29 48.3	+0.1
KDJ				IAmb	IAmb	10 29 49.4	
	comp=Z,3.7nm,0.8s						
BOOM	Boomskoye usch	67.04	320	P	P	10 29 54.6	+0.2
BOOM				IAmb	IAmb	10 30 14.2	
	comp=Z,2.8nm,1.0s						
SMY	Shemya	67.89	27	P	P	10 29 59.3	0.0
AAK	Ala-Archa	68.05	319	P	P	10 30 01.1	+0.4
AAK				IAmb	IAmb	10 30 04.5	
	comp=Z,4.7nm,1.5s						
ZAA0	Zalesovo Array	68.78	333	P	P	10 30 04.8	-0.1
ZAA0				IAmb	IAmb	10 30 05.6	
	comp=Z,6.1nm,0.9s						
ZALV	Zalesovo Beam	68.78	333	P	P	10 30 05.1	+0.2
	comp=Z,7.2nm,1.0s,baz=111,slow=6.5,SNR=13						
ZALV	Zalesovo Beam	68.78	333	P	P	10 30 04.9	0.0
KURBB	Kurchatov Arra	69.81	328	P	P	10 30 11.6	+0.3
	comp=Z,8.5nm,0.8s,baz=129,slow=5.5,SNR=62						
KURK	Kurchatov	69.81	328	P	P	10 30 11.7	+0.4
BVAR	Borovoye Array	75.37	328	P	P	10 30 45.2	+0.8
	comp=Z,4.6nm,0.8s,baz=187,slow=12,SNR=21						
BRVK	Borovoye	75.44	328	P	P	10 30 45.4	+0.6
BRVK				IAmb	IAmb	10 30 46.1	
	comp=Z,7.1nm,0.9s						
ABKAR	Akbulak array	79.96	321	P	P	10 31 10.2	+0.1
ABKAR	Akbulak array	79.96	321	P	P	10 31 10.3	+0.3
ABKAR				IAmb	IAmb	10 31 11.0	
	comp=Z,6.1nm,0.9s						
AKTO	Aktyubinsk	81.51	322	P	P	10 31 18.6	+0.3
	comp=Z,4.6nm,0.8s,baz=108,slow=7.1,SNR=4.1						
RAYN	Ar Rayn	86.17	294	P	P	10 31 42.5	-0.3
TORD	Torodi Ar. Bea	127.77	283	PKP	PKPdf	10 38 07.7	+0.4
	comp=Z,1.4nm,0.7s,baz=62,slow=2.8,SNR=9.3						
CPUP	Villa Florida	149.05	168	PKPbc	PKPbc	10 38 48.3	-1.4
	comp=Z,3.2nm,0.9s,baz=180,slow=1.0,SNR=4.1						
CPUP	Villa Florida	149.05	168		PKPdf	10 38 45.4	-0.2
LPAZ	La Paz	153.25	140	PKPbc	PKPbc	10 39 00.4	-0.2
	comp=Z,1.4nm,0.8s,baz=135,slow=1.9,SNR=4.7						

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*IDC **09** 10:21:44.0±0.3, 4°.17S×129°.41E, h0^{km}, mb6.1/41, mb1 6.0/47, mb1mx5.8/51, mbtmp6.0/47, ML5.6/4, MS6.5/34, Ms1 6.5/34, ms1mx6.3/47, Error ellipse: s-maj=8.9km s-min=6.8km az=62.0*

*BJI **09** 10:21:46.0±0.0, 4°.25S×129°.55E, h30^{km}, mB6.6/78, mb6.2/82, Ms6.7/99, Ms7 6.5/94*

*MOS **09** 10:21:46.4±1.0, 4°.12S×129°.36E, h23^{km}, mb6.7/77, MS6.5/36, Error ellipse: s-maj=7.7km s-min=4.1km az=114.4*

*NEIC **09** 10:21:48.5, 4°.11S×129°.51E, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}1.74; $M_{\theta\theta}$-1.86; $M_{\phi\phi}$0.13; $M_{r\theta}$-0.43; $M_{\theta\phi}$1.01; $M_{\phi r}$-1.66; Fault plane solution: $M_0$2.69000×10^{19} NP1:ϕ_s143.87000°, δ58.72000°, λ132.13000°. NP2:ϕ_s263.73000°, δ50.66000°, λ42.16000°. Principal axes: T 2.9513, Plg55.0000°, Azm109.0000°; N -0.6440, Plg35.0000°, Azm299.0000°; P -2.3073, Plg5.0000°, Azm205.0000°;*

*NEIC **09** 10:21:48.5±1.8, 4°.11S±0°.06×129°.51E±0°.05, h21^{km}±1^{km}, mb6.6/305, Ms_20 6.9/407, Mwb6.9/32, Mwc6.9/92, Mww6.9 Error ellipse: s-maj=9.4km s-min=8.4km az=176.0*

*DJA **09** 10:21:51.4±0.2, 4°S±2°×13°0E±°, h57^{km}±2^{km}, M6.8/121, mB6.9/121, mb6.3/120, MLv6.8/20, Mw(mB)6.8/121, MwMwp6.7/115, Mwp6.6/115*

*GCMT **09** 10:21:54.5±0.0, 4°.16S×129°.51E, h12^{km}, MW6.8/168, Moment Tensor Solution. s168,c459; s166,c836; Duration: 6^{s}1 Moment tensor: Scale 10^{19}Nm; M_{rr}1.79±.01; $M_{\theta\theta}$-1.72±.01; $M_{\phi\phi}$-0.07±.01; $M_{r\theta}$-0.11±.02; $M_{\theta\phi}$0.88±.00; $M_{\phi r}$-0.02±.02; Best double couple: $M_0$1.94900×10^{19} NP1:ϕ_s116.00000°, δ44.00000°, λ94.00000°. NP2:ϕ_s291.00000°, δ46.00000°, λ87.00000°. Principal axes: T 1.7950, Plg87.0000°, Azm142.0000°; N 0.3070, Plg3.0000°, Azm293.0000°; P -2.1030, Plg1.0000°, Azm23.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=125s. Triangular moment-rate function*

*KLM **09** 10:21:55, 4°.11S×129°.43E, h81^{km}, mb6.6*

*NEIC **09** 10:21:57, 4°.12S×129°.68E, h16^{km}, Moment Tensor Solution. Duration: 14^{s}0 Moment tensor: Scale 10^{19}Nm; M_{rr}2.20; $M_{\theta\theta}$-1.84; $M_{\phi\phi}$-0.36; $M_{r\theta}$0.09; $M_{\theta\phi}$0.99; $M_{\phi r}$-0.93; Fault plane solution: $M_0$2.46000×10^{19} NP1: ϕ_s279.00000°, δ42.00000°, λ62.00000°. NP2: ϕ_s134.00000°, δ54.00000°, λ112.00000°. Principal axes: T 2.5142, Plg71.0000°, Azm100.0000°; N -0.1193, Plg18.0000°, Azm301.0000°; P -2.3949, Plg7.0000°, Azm209.0000°;*

*NEIC **09** 10:22:02.7, 4°.22S×128°.98E, h25^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}2.37; $M_{\theta\theta}$-2.06; $M_{\phi\phi}$-0.32; $M_{r\theta}$-0.20; $M_{\theta\phi}$1.15; $M_{\phi r}$-1.98; Fault plane solution: $M_0$3.13000×10^{19} NP1:ϕ_s272.73000°, δ42.82000°, λ46.01000°. NP2:ϕ_s145.50000°, δ60.72000°, λ122.77000°. Principal axes: T 3.5124, Plg60.0000°, Azm105.0000°; N -0.7635, Plg28.0000°, Azm308.0000°; P -2.7489, Plg10.0000°, Azm213.0000°;*

ISC 09 10:21:48.6±0.3**, 4°.12S**±0°.02×**129°.45E**±0°.03**, h27**^{km}±1^{km}**, h27**^{km}**:pP-P, n2315, σ1^{s}92**/2316**, mb6.5**/292**, MS6.8**/308**, 227C-75D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.61	131	⇓P	Pb	10 21 59.5	-1.1
BNDI	Bandanaira	0.61	131	P	Pb	10 22 00.9	+0.3
MSAI	Masohi	0.93	326	P	Pn	10 22 04.6	-1.3
AAI	Ambon	1.32	289	P	Pn	10 22 10.2	-1.1
FAKI	Fak Fak	3.04	67	⇓P	Pn	10 22 35.3	+0.3
FAKI	Fak Fak	3.04	67	P	Pn	10 22 35.6	+0.6
FAKI	Fak Fak	3.04	67	Pn	Pn	10 22 35.5	+0.4
FAKI	Fak Fak	3.04	67	P	Pn	10 22 36.4	+1.4
SIJI	Sorong	3.71	29	Pn	Pn	10 22 44.1	-0.1
	1μm,0.3s,baz=234,slow=22,SNR=295						
SIJI				Sn	Sn	10 23 28.7	+1.6
	1μm,0.3s,baz=252,slow=19,SNR=1.6						
SWI	Sorong	3.71	29	P	Pn	10 22 43.8	-0.4
LBMI	Labuha	3.97	331	P	Pn	10 22 48.4	+0.6
SANI	Sanana	4.02	301	⇑P	Pn	10 22 48.7	+0.2
SANI	Sanana	4.02	301	P	Pn	10 22 48.3	-0.1
SANI	Sanana	4.02	301	P	Pn	10 22 50.2	+1.8
SAUI	Saumlaki	4.25	154	⇑P	Pn	10 22 54.9	+3.2
SAUI	Saumlaki	4.25	154	P	Pn	10 22 55.4	+3.8
SAUI	Saumlaki	4.25	154		Pn	10 22 54.9	+3.2
SAUI	Saumlaki	4.25	154	P	Pn	10 22 55.5	+3.8
TNTI	Ternate	5.29	337	⇓P	Pn	10 23 07.0	+1.1
TNTI	Ternate	5.29	337	P	Pn	10 23 06.7	+0.8
	28nm748μm102μm5μm,1.5s						
TNTI	Ternate	5.29	337	Pn	Pn	10 23 06.9	+1.0
TNTI	Ternate	5.29	337	P	Pn	10 23 08.3	+2.4
SRPI	Serui, Papua	7.14	72	P	Pn	10 23 31.6	+0.2
	28nm890μm60μm4μm,0.7s						
KMSI	Cibinong	7.18	310	P	Pn	10 23 33.3	+1.4
	61nm4μm65μm5μm,0.7s						
SOEI	Soe	7.60	222	P	Pn	10 23 41.0	+3.3
	31nm154μm5μm,1.0s						
SOEI	Soe	7.60	222	Pn	Pn	10 23 41.1	+3.4
SOEI	Soe	7.60	222	P	Pn	10 23 41.7	+4.0
GTOI	Gorontalo	7.98	306	P	Pn	10 23 48.1	+5.2
	22nm167μm30μm3μm,1.0s						
BATI	Baumata	8.33	223	Pn	Pn	10 23 52.1	+4.4
	501nm,0.3s,baz=89,slow=2.2,SNR=92						
BATI	Baumata	8.33	223	P	Pn	10 23 51.8	+4.1
	10nm845μm73μm2μm,0.7s						
DRS	Darwin Rock St	8.38	170	P	Pn	10 23 50.5	+2.1
APSI	Ampana	8.42	292	P	Pn	10 23 52.8	+3.9
	29nm228μm92μm7μm,1.0s						
MMRI	Maumere	8.45	238	⇑P	Pn	10 23 54.0	+4.6
MMRI	Maumere	8.45	238	P	Pn	10 23 54.5	+5.2
	179μm4μm,1.6s						
MMRI	Maumere	8.45	238	Pn	Pn	10 23 55.2	+5.9
SGSI	Sangihe	8.69	333	P	Pn	10 24 00.9	+8.3
MRSI	Marisa	8.78	301	P	Pn	10 23 57.3	+3.4
	11nm335μm49μm3μm,0.7s						
MTN	Manton Dam	8.82	169	P	Pn	10 23 55.9	+1.5
	baz=8.8,SNR=90						
MTN	Manton Dam	8.82	169	⇓P	Pn	10 23 54.0	-0.4
MTN	Manton Dam	8.82	169	Pn	Pn	10 23 54.0	-0.4
MTN	Manton Dam	8.82	169	P	Pn	10 23 56.0	+1.5
EDFI	Ende, Flores	8.97	239	P	Pn	10 24 00.7	+4.1
	85μm1μm,0.9s						
KDU	Kakadu	9.02	161	P	Pn	10 23 56.8	-0.4
	baz=9.0,SNR=180						
KDU	Kakadu	9.02	161	⇓P	Pn	10 23 56.2	-0.9
KDU	Kakadu	9.02	161	P	Pn	10 23 56.8	-0.4
BSSI	Bau Bau, Buton	9.14	257	P	Pn	10 24 00.7	+1.9
	524μm51μm2μm,1.0s						
BNSI	Bone	9.32	268	P	Pn	10 24 06.4	+5.2
	550μm74μm3μm,1.5s						
BKSI	Bulukumba	9.37	262	P	Pn	10 24 06.9	+5.0
	780μm73μm3μm,1.2s						
SMPI	Sarmi	9.49	77	P	Pn	10 24 02.5	-1.1
	584μm60μm2μm,0.8s						
SPSI	Sidrap Palu	9.65	271	P	Pn	10 24 10.9	+5.0
	483μm79μm2μm,0.9s						
TTSI	Tana Toraja	9.67	276	P	Pn	10 24 11.5	+5.5
	397μm43μm1μm,1.2s						
KAPI	Kappang	9.70	264	Pn	Pn	10 24 09.8	+3.2
	37nm,0.3s,baz=128,slow=4.2,SNR=72						
KAPI				LR	LR	10 27 24.6	
	comp=Z,223μm,22.0s,baz=101,slow=35						
KAPI	Kappang	9.70	264	P	Pn	10 24 10.7	+4.2
KAPI	Kappang	9.70	264	P	Pn	10 24 11.2	+4.6
KAPI				S	Sn	10 26 04.0	+9.3
KAPI	Kappang	9.70	264	⇑P	Pn	10 24 10.3	+3.8
KAPI	Kappang	9.70	264	Pn	Pn	10 24 10.7	+4.2
KAPI	Kappang	9.70	264	P	Pn	10 24 11.1	+4.6
TOLI2	Tolitoli	10.10	301	Pn	Pn	10 24 13.6	+1.7
TOLI2	Tolitoli	10.10	301	P	Pn	10 24 15.1	+3.1
MPSI	Mapaga	10.52	295	P	Pn	10 24 20.0	+2.3
	403μm35μm1μm,0.8s						
BASI	Baing, Sumba	10.68	235	P	Pn	10 24 22.0	+2.1
	609μm62μm2μm,1.0s						
GENI	Genyem	10.81	82	⇓P	Pn	10 24 21.3	-0.4
GENI	Genyem	10.81	82	P	Pn	10 24 22.9	+1.2
	835μm79μm3μm,2.0s						
GENI	Genyem	10.81	82	P	Pn	10 24 22.9	+1.2
JAY	Jayapura	11.35	82	Pn	Pn	10 24 27.9	-1.3
	7.7nm,0.3s,baz=229,slow=8.0,SNR=18						
JAY	Jayapura	11.35	82	P	Pn	10 24 30.7	+1.5
	348μm19μm636nm,1.0s						
WBSI	Waikabubak, Su	11.38	241	P	Pn	10 24 31.4	+1.8
	774μm94μm4μm,0.9s						
KNRA	Kununurra	11.50	183	P	Pn	10 24 30.9	-0.3
	baz=12,SNR=136						
KNRA	Kununurra	11.50	183	Pn	Pn	10 24 29.8	-1.4
KNRA	Kununurra	11.50	183	P	Pn	10 24 31.5	+0.3
MMPI	Merauke	11.70	112	P	Pn	10 24 35.4	+1.6
	253μm59μm3μm,1.1s						
DAV	Davao City (W)	11.77	341	Pn	Pn	10 24 34.3	-0.6
	55nm,0.3s,baz=63,slow=4.5,SNR=1.8						
DAV	Davao City (W)	11.77	341	P	Pn	10 24 41.8	+7.0
DAV				S	Sn	10 26 45.2	-0.2
DAV	Davao City (W)	11.77	341		Pn	10 24 35.9	+1.1
KCP	Kidapawan	11.88	339	⇑*e*P	Pn	10 24 37.5	+1.0
PLAI	Plampang	12.50	247	P	P	10 24 50.8	-5.5
	642μm111μm4μm,1.0s						
PLAI	Plampang	12.50	247	P	Pn	10 24 49.2	+4.4
BIPH	Bislig	12.61	346	⇓*i*P	P	10 25 05.0	+7.5
I39PW	PALAU INFRASON	12.65	24	Pn	Pn	10 24 46.6	-0.3
	baz=239,slow=10.0,SNR=8.1						
I39PW				*i*		11 36 30.0	
	baz=205,slow=317,SNR=0.9						
SMKI	Samarinda	12.76	286	P	Pn	10 24 51.8	+3.4
	372μm56μm4μm,1.1s						
BKB	Balikpapan	12.85	282	⇑P	Pn	10 24 54.5	+4.9
BKB	Balikpapan	12.85	282	P	Pn	10 24 53.9	+4.2
	310μm70μm3μm,0.9s						
BKB	Balikpapan	12.85	282		Pn	10 24 53.9	+4.2
BKB	Balikpapan	12.85	282	P	P	10 24 55.9	-4.3
KBKI	Kotabaru	13.28	273	P	Pn	10 24 58.6	+3.2
	10μm15μm632nm,1.1s						
TWSI	Taliwang, Sumb	13.30	249	P	Pn	10 24 58.8	+3.1
	346μm60μm2μm,1.2s						
PAGZ	Pagadian	13.34	333	⇓*i*P	Pn	10 24 57.1	+0.8
DCPH	Dipolog City	14.01	334	⇓*e*P	P	10 25 21.1	+8.1
MYLDM	Lahad Datu	14.31	310	⇓P	Pn	10 25 12.0	+2.3
MYLDM	Lahad Datu	14.31	310		Pn	10 25 12.3	+2.6
FITZ	Fitzroy Crossi	14.38	195	Pn	Pn	10 25 07.8	-2.7
	baz=358,slow=14						
FITZ				LR	LR	10 30 54.3	
	comp=Z,308μm,21.3s,baz=36,slow=38						
FITZ	Fitzroy Crossi	14.38	195	P	Pn	10 25 08.2	-2.3
	baz=14						
BBKI	Banjar Baru	14.59	272	P	P	10 25 17.7	-1.8
	234μm114μm2μm,2.5s						
SRBI	Singaraja	14.69	254	P	P	10 25 17.9	-2.7
	536μm185μm7μm,1.0s						
SNPH	Sibulan	14.74	335	*e*P	Pn	10 25 17.4	+1.9
DNP	Denpasar	14.85	252	P	Pn	10 25 19.1	+2.2
	548μm182μm6μm,1.3s						
MTKI	Muara Teweh, K	14.87	282	P	Pn	10 25 18.7	+1.4
	158μm42μm1μm,0.9s						
IGBI	Denpasar	14.95	251	P	P	10 25 23.9	+0.3
	255μm66μm3μm,1.0s						
LLP	Lapu-Lapu	15.35	339	⇑*e*P	Pn	10 25 24.1	+0.6
CNOP	Candoni, Negro	15.43	334	⇑*e*P	P	10 25 30.3	+1.4
ABJI	Asem Bagus	15.56	256	P	P	10 25 30.4	0.0
	683μm238μm7μm,1.9s						
KMMI	Kalianget	15.68	259	P	P	10 25 32.1	+0.5
	641μm199μm5μm,3.0s						
JAGI	Jajag, Banyuwa	15.80	253	⇑P	Pn	10 25 30.8	+1.4
JAGI	Jajag, Banyuwa	15.80	253	P	P	10 25 33.3	+0.3
	551μm147μm4μm,2.0s						
JAGI	Jajag, Banyuwa	15.80	253		Pn	10 25 30.7	+1.4
JAGI				IAmb	IAmb	10 25 49.0	
	comp=Z,3μm,1.0s						
JAGI	Jajag, Banyuwa	15.80	253	P	P	10 25 33.0	0.0
BLJI	Banyuglugur	16.17	256	P	P	10 25 38.4	+1.3
	comp=Z,420μmcomp=Z,138μmcomp=Z,3μm,1.1s						
WB0	Warramunga Arr	16.28	163		Pn	10 25 30.9	-4.7
WB0				IAmb	IAmb	10 25 52.2	
	comp=Z,6μm,1.5s						
I07AU	WARRAMUNGA INF	16.42	164	Pn	Pn	10 25 36.9	-0.5
	baz=333,slow=16,SNR=5.8						
WRAB	Tennant Creek	16.43	163	*c i*P	Pn	10 25 32.7	-4.7
WRAB	Tennant Creek	16.43	163		Pn	10 25 33.0	-4.3
WRAB				IAmb	IAmb	10 25 54.8	
	comp=Z,4μm,1.4s						
WRAB	Tennant Creek	16.43	163	P	Pn	10 25 36.7	-0.7
GMJI	Gumukmas	16.43	255	P	P	10 25 41.8	+1.8
	comp=Z,553μmcomp=Z,158μmcomp=Z,2μm,1.3s						
WRA	Warramunga Arr	16.43	164	Pn	Pn	10 25 32.4	-5.1
	comp=Z,8.0nm,0.3s,baz=338,slow=13,SNR=122						
WRA				Sn	Sn	10 28 31.1	-8.1
	comp=Z,4.9nm,0.3s,baz=340,slow=21,SNR=4.2						
WRA				LR	LR	10 33 23.6	
	comp=Z,183μm,18.1s,baz=340,slow=43						
WRA				PKiKP	PKiKP	10 38 22.0	-1.0
	comp=Z,0.7nm,0.3s,baz=312,slow=1.3,SNR=4.7						
WB2	Warramunga Arr	16.43	163	IAmb	IAmb	10 25 54.8	
	comp=Z,4μm,1.3s						
WC3	Warramunga Arr	16.46	163	P	Pn	10 25 33.6	-4.2
	baz=16						
KKM	Kota Kinabalu	16.63	307	⇑P	Pn	10 25 41.1	+1.0
KKM	Kota Kinabalu	16.63	307	P	P	10 25 41.6	-0.8
KKM				IAmb	IAmb	10 26 00.8	
	comp=Z,5μm,1.4s						
KKM	Kota Kinabalu	16.63	307	P	P	10 25 42.5	+0.2
COEN	Coen	16.70	127	⇑P	Pn	10 25 35.9	-5.0
COEN	Coen	16.70	127		Pn	10 25 36.4	-4.5
COEN	Coen	16.70	127	P	Pn	10 25 39.8	-1.1
BWJI	Bawean	16.81	263	P	P	10 25 52.8	+8.5
RCP	Roxas	16.95	337	⇑*e*P	P	10 25 45.1	-0.6
PPR	Puerto Princes	17.45	322	⇓*e*P	P	10 25 55.9	+4.6
PBKI	Pangkalan Bun	17.80	274	P	P	10 25 59.2	+4.0
	comp=Z,275μmcomp=Z,70μmcomp=Z,3μm,1.0s						
MANU	Manus Island	18.01	84	⇓P	P	10 25 57.9	+0.3
MANU	Manus Island	18.01	84	P	P	10 25 57.4	-0.1
PMG	Port Moresby	18.35	108	P	P	10 25 58.6	-2.6
	comp=Z,3.3nm,0.3s,baz=295,slow=10,SNR=65						
PMG				LR	LR	10 34 49.7	
	comp=Z,147μm,19.2s,baz=283,slow=43						
PMG	Port Moresby	18.35	108	P	P	10 25 59.5	-1.8
PMG				pmax	pmax		
	comp=Z,6μm,1.5s						
PMG	Port Moresby	18.35	108	⇑P	P	10 25 58.4	-2.9
PMG	Port Moresby	18.35	108	P	P	10 25 59.5	-1.8
PMG				IAmb	IAmb	10 26 27.6	
	comp=Z,6μm,1.4s						
PMG	Port Moresby	18.35	108	P	Pn	10 26 01.7	+0.3
PMG	Port Moresby	18.35	108	P	Pn	10 26 02.0	+0.6
SBUM	Sibu	18.41	290	⇑P	Pn	10 26 04.1	+2.0
SBUM	Sibu	18.41	290	P	Pn	10 26 05.0	+2.9
SBUM	Sibu	18.41	290	P	Pn	10 26 04.2	+2.0
STKI	Sintang	18.43	283	P	Pn	10 26 05.5	+3.2
	comp=Z,136μmcomp=Z,41μmcomp=Z,1μm,2.1s						
UWJI	Ujung Watu	18.56	262	P	Pn	10 26 07.3	+3.4
	comp=Z,77μmcomp=Z,2μm,1.3s						
PCJI	Pacitan	18.60	257	P	Pn	10 26 06.0	+1.5
	comp=Z,372μmcomp=Z,87μmcomp=Z,2μm,0.9s						
WOJI	Wonogiri, Jawa	18.78	258	P	Pn	10 26 08.2	+1.6
	comp=Z,227μmcomp=Z,57μmcomp=Z,2μm,1.0s						
QIS	Mount Isa	19.10	150	P	P	10 26 09.3	-0.2
	baz=19,SNR=1000						
QIS	Mount Isa	19.10	150	P	Pn	10 26 09.9	-0.5
SMRI	Semarang	19.14	260	⇑P	Pn	10 26 10.5	-0.5
SMRI	Semarang	19.14	260	P	Pn	10 26 13.1	+2.2
	comp=Z,462μmcomp=Z,155μmcomp=Z,3μm,1.4s						
SMRI	Semarang	19.14	260	P	Pn	10 26 10.4	-0.5
SMRI				IAmb	IAmb	10 26 45.6	
	comp=Z,5μm,1.3s						
SMRI	Semarang	19.14	260	P	Pn	10 26 12.5	+1.6
UGM	Wanagama	19.19	258	P	Pn	10 26 14.1	+2.5
	comp=Z,373μmcomp=Z,100μmcomp=Z,2μm,1.6s						
UGM	Wanagama	19.19	258	P	P	10 26 10.0	-0.5
UGM				IAmb	IAmb	10 27 02.2	
	comp=Z,2μm,1.0s						
UGM	Wanagama	19.19	258	P	Pn	10 26 13.0	+1.4
GQP	Guinayangan	19.21	339	⇓*e*P	Pn	10 26 15.2	+3.4
MBWA	Marble Bar	19.39	208	P	Pn	10 26 14.1	+0.3
MBWA				S	Sn	10 29 55.5	+4.8
MBWA	Marble Bar	19.39	208	⇑P	Pn	10 26 13.8	-0.1
MBWA	Marble Bar	19.39	208	P	Pn	10 26 14.0	+0.1
YOGI	Yogyakarta	19.39	258	P	Pn	10 26 17.0	+3.0
	comp=Z,210μmcomp=Z,48μmcomp=Z,2μm,1.7s						
PGP	Puerto Galera	19.43	334	⇓*e*P	Pn	10 26 15.2	+0.8
JCNP	Jose Panganiba	19.48	340	⇓*e*P	Pn	10 26 16.1	+1.2
PSA00	Pilbara Seismi	19.69	207	P	Pn	10 26 17.0	-0.5
PSA00	Pilbara Seismi	19.69	207	P	Pn	10 26 16.8	-0.6
PSA00				IAmb	IAmb	10 26 20.6	
	comp=Z,7μm,1.0s						
PSA00	Pilbara Seismi	19.69	207	P	Pn	10 26 17.2	-0.3
LQP	Lukban	19.74	337	⇓*e*P	Pn	10 26 18.9	+0.7
AS31	Alice Springs	19.90	168	P	P	10 26 18.6	+0.4
ASAR	Alice Springs	19.90	168	P	P	10 26 18.2	0.0
	comp=Z,33nm,0.3s,baz=351,slow=10,SNR=276						
ASAR				S	Sn	10 30 04.1	+1.0
	comp=Z,4.1nm,0.3s,baz=352,slow=17,SNR=4.5						
ASAR				PcP	PcP	10 30 34.1	-0.8
	comp=Z,11nm,0.3s,baz=13,slow=1.9,SNR=4.2						
ASAR				LR	LR	10 34 43.5	
	comp=Z,217μm,19.6s,baz=346,slow=39						
ASAR				PKiKP	PKiKP	10 38 22.3	-2.0
	comp=Z,0.2nm,0.3s,baz=345,slow=2.9,SNR=3.2						
ASAR				SKKS	SKKSdf	11 00 40.2	+0.2
	baz=142,slow=4.7,SNR=3.5						
ASAR	Alice Springs	19.90	168	P	P	10 26 18.6	+0.3
LUBP	Lubang	19.95	333	⇓*i*P	Pn	10 26 21.3	+0.8
TGY	Tagaytay City	19.98	335	P	Pn	10 26 22.5	+1.6
	comp=Z,1μm,0.8s,baz=122,slow=1.4,SNR=16						
TGY				LR	LR	10 35 07.9	
	comp=Z,105μm,21.8s,baz=88,slow=40						
MTSU	Mount Surprise	20.14	135	P	P	10 26 21.0	+0.1
	baz=20,SNR=568						
MTSU	Mount Surprise	20.14	135	P	Pn	10 26 22.0	-0.9
WRKA	Warakurna	20.82	183	P	P	10 26 29.0	+0.8
	baz=21,SNR=444						
WRKA	Warakurna	20.82	183	⇑P	P	10 26 29.1	+0.9
WRKA	Warakurna	20.82	183	P	Pn	10 26 30.1	-0.7
CMJI	Cimerak	21.19	259	P	P	10 26 34.2	+1.9
	comp=Z,118μmcomp=Z,32μmcomp=Z,687nm,0.9s						
LEM	Lembang	21.89	262	P	P	10 26 37.8	-2.2
	comp=Z,142nm,0.8s,baz=88,slow=6.9,SNR=20						
LEM				S	S	10 30 44.1	+3.2
	comp=Z,135nm,0.8s,baz=176,slow=19,SNR=2.7						
LEM				LR	LR	10 36 24.7	
	comp=Z,60μm,21.5s,baz=68,slow=40						
CNJI	Cibinong	22.43	261	P	P	10 26 40.6	-4.9
	comp=Z,217μmcomp=Z,46μmcomp=Z,2μm,0.8s						
RABL	Rabaul	22.66	91	⇑P	P	10 26 47.1	-1.0
RABL	Rabaul	22.66	91	P	P	10 26 47.1	-1.0
RABL				IAmb	IAmb	10 27 01.3	
	comp=Z,4μm,1.1s						
RABL	Rabaul	22.66	91	P	P	10 26 49.9	+1.8
DBJI	Dramaga	22.72	263	P	P	10 26 50.0	+1.3
	comp=Z,29μmcomp=Z,638nm,1.5s						
CTA	Charters Tower	22.80	135	P	P	10 26 49.5	0.0
	comp=Z,471nm,0.7s,baz=310,slow=13,SNR=272						
CTA				S	S	10 30 55.9	-1.4
	comp=Z,52nm,0.8s,baz=124,slow=18,SNR=1.8						
CTA				LR	LR	10 36 35.1	
	comp=Z,73μm,19.9s,baz=314,slow=39						
CTA	Charters Tower	22.80	135	P	P	10 26 49.7	+0.2
CTAO	Charters Tower	22.80	135	P	P	10 26 49.2	-0.3
CTAO				pmax	pmax		
	comp=Z,4μm,1.4s						
CTAO	Charters Tower	22.80	135	⇑P	P	10 26 49.2	-0.3
CTAO	Charters Tower	22.80	135	P	P	10 26 49.2	-0.3
CTAO				IAmb	IAmb	10 27 07.9	
	comp=Z,4μm,1.4s						
CTAO	Charters Tower	22.80	135	P	P	10 26 49.6	0.0
APYP	Conner	23.30	340	⇑*i*P	P	10 26 54.6	+0.1
SBJI	Serang	23.31	264	P	P	10 26 57.0	+2.3
	comp=Z,191μmcomp=Z,32μmcomp=Z,320nm,1.9s						
GUMO	Guam	23.32	41	P	P	10 26 53.7	-1.1
	comp=Z,855nm,1.1s,baz=190,slow=7.5,SNR=7.2						
GUMO				LR	LR	10 35 59.7	
	comp=Z,87μm,19.5s,baz=222,slow=37						
GUMO	Guam	23.32	41	P	P	10 26 53.9	-0.9
GUMO				pmax	pmax		
	comp=Z,8μm,1.6s						
GUMO				MLR	MLR		
	comp=Z,124μm,21.0s						
GUMO	Guam	23.32	41	⇓P	P	10 26 54.2	-0.6
GUMO	Guam	23.32	41	P	P	10 26 53.9	-0.9
GUMO	Guam	23.32	41	P	P	10 26 57.2	+2.4

PPBI	Pangkal Pinang	23.35	274	P	P	10 26 53.2	-2.0
	comp=Z,126µmcomp=Z,68µmcomp=Z,548nm,1.1s						
GIRL	Giralia	23.58	217	P	P	10 26 58.5	+1.3
	baz=24,SNR=183						
GIRL	Giralia	23.58	217	⇑P	P	10 26 57.8	+0.6
GIRL	Giralia	23.58	217	P	P	10 26 57.8	+0.6
GIRL	Giralia	23.58	217	P	P	10 26 59.0	+1.8
CGJI	Cibinong	23.77	263	P	P	10 26 57.7	-1.5
	comp=Z,122µmcomp=Z,28µmcomp=Z,498nm,0.8s						
BLSI	Bandar Lampung	24.15	266	P	P	10 27 05.8	+3.0
	comp=Z,131µmcomp=Z,11µmcomp=Z,171nm,0.8s						
OOD	Oodnadatta	24.28	166	P	P	10 27 04.4	+0.6
XMI	Christmas Isla	24.38	254	⇑P	P	10 27 01.8	-3.0
XMIS	Christmas Isla	24.42	254	P	P	10 27 01.6	-3.7
XMIS	Christmas Isla	24.42	254	P	P	10 27 07.0	+1.8
KLI	Kotabumi	24.52	267	P	P	10 27 02.5	-3.7
	comp=Z,157µmcomp=Z,15µmcomp=Z,565nm,0.7s						
KLSI		24.65	268	P	P	10 27 03.1	-4.2
	comp=Z,58µmcomp=Z,7µmcomp=Z,83nm,0.6s						
PMBI	Palembang	24.66	272	P	P	10 27 07.1	-0.3
	comp=Z,137µmcomp=Z,24µmcomp=Z,1µm,0.9s						
PMBI	Palembang	24.66	272	P	P	10 27 08.2	+0.8
PMBI				IAmb	IAmb	10 27 25.2	
	comp=Z,1µm,1.2s						
MEEK	Meekatharra	24.67	204	P	P	10 27 07.0	-0.4
	baz=25,SNR=52						
MEEK	Meekatharra	24.67	204	P	P	10 27 07.6	+0.2
KASI	Kota Agung	24.90	266	P	P	10 27 03.7	-5.9
	comp=Z,120µmcomp=Z,13µmcomp=Z,492nm,0.9s						
DSRI	Dabo	25.11	278	P	P	10 27 10.4	-1.1
	comp=Z,75µmcomp=Z,16µmcomp=Z,268nm,1.4s						
MDSI	Maura Dua	25.20	268	P	P	10 27 08.7	-3.6
	comp=Z,70µmcomp=Z,9µmcomp=Z,142nm,1.2s						
LWLI	Liwa	25.32	267	P	P	10 27 10.3	-3.2
	comp=Z,14µmcomp=Z,395nm,0.8s						
INKA	Innaminka	25.84	157	P	P	10 27 19.5	+1.6
LHSI	Lahat	25.86	270	P	P	10 27 15.8	-2.5
	comp=Z,129µmcomp=Z,28µmcomp=Z,334nm,0.8s						
JMBI	JAMBI	25.89	275	P	P	10 27 18.6	+0.1
	comp=Z,16µmcomp=Z,822nm,1.3s						
MYKOM	Kota Tinggi	26.24	282	⇑P	P	10 27 21.5	-0.3
MYKOM	Kota Tinggi	26.24	282	P	P	10 27 24.0	+2.2
MYKOM	Kota Tinggi	26.24	282	P	P	10 27 22.1	+0.3
MYKOM				IAmb	IAmb	10 27 44.8	
	comp=Z,2µm,1.3s						
DLV	T Lat	26.25	308	P	P	10 27 22.7	+0.7
DLV	T Lat	26.25	308	P	P	10 27 24.6	+2.6
MULG	Mulgathing	26.38	171	P	P	10 27 23.8	+1.0
QLP	Quilpie	26.44	149	P	P	10 27 23.7	+0.3
	baz=26,SNR=5.0						
QLP	Quilpie	26.44	149	⇑P	P	10 27 22.9	-0.6
QLP	Quilpie	26.44	149	P	P	10 27 24.5	+1.1
FORT	Forrest	26.55	183	P	P	10 27 24.1	-0.1
	baz=27,SNR=209						
FORT	Forrest	26.55	183	⇑P	P	10 27 23.8	-0.5
FORT	Forrest	26.55	183	P	P	10 27 24.2	-0.1
FORT	Forrest	26.55	183	P	P	10 27 25.1	+0.8
KSI	Kapahiang	26.79	270	P	P	10 27 32.7	+5.9
MASI	Maura Aman, Be	27.17	271	P	P	10 27 29.6	-0.6
	comp=Z,117µmcomp=Z,34µmcomp=Z,700nm,1.3s						
RGRI	Rengat	27.34	277	P	P	10 27 33.0	+1.3
	comp=Z,949nmcomp=Z,38µmcomp=Z,200nm,0.9s						
LCRK	Leigh Creek	27.46	163	P	P	10 27 33.8	+1.2
MORW	Morawa	27.88	206	P	P	10 27 36.1	-0.2
	baz=28,SNR=24						
MORW	Morawa	27.88	206	⇑P	P	10 27 35.4	-0.9
MORW	Morawa	27.88	206	P	P	10 27 35.4	-0.9
MORW	Morawa	27.88	206	P	P	10 27 36.8	+0.5
RK1H	Rockhampton Ha	27.93	135	P	P	10 27 38.2	+1.4
TWG	Pinlang	28.00	343	P	P	10 27 36.9	-0.5
KRJI	Kerinci	28.01	273	P	P	10 27 37.7	-0.1
	comp=Z,124µmcomp=Z,25µmcomp=Z,1µm,1.3s						
JRMM	Jerantut	28.10	286	P	P	10 27 39.0	+0.6
YULB	Yu-li	28.48	344	P	P	10 27 41.6	-0.1
TPUB	Ta-pu	28.58	343	P	P	10 27 42.6	0.0
TPUB				IAmb	IAmb	10 28 00.2	
	comp=Z,852nm,0.9s						
TPUB	Ta-pu	28.58	343	P	P	10 27 45.9	+3.3
BKNI	Bangkinang	28.73	278	P	P	10 27 46.9	+2.9
	comp=Z,111µmcomp=Z,18µmcomp=Z,905nm,1.2s						
BKNI	Bangkinang	28.73	278	P	P	10 27 43.4	-0.7
BKNI				IAmb	IAmb	10 28 04.2	
	comp=Z,1µm,1.2s						
RMQ	Roma	28.92	142	P	P	10 27 45.2	-0.4
	baz=29,SNR=48						
RMQ	Roma	28.92	142	P	P	10 27 46.4	+0.8
SSLB	Suanglung	28.95	344	P	P	10 27 45.8	-0.1
SSLB				IAmb	IAmb	10 28 03.4	
	comp=Z,674nm,0.9s						
SSLB	Suanglung	28.95	344	P	P	10 27 47.9	+2.0
BLDU	Ballidu	28.96	203	P	P	10 27 45.8	-0.1
	baz=29,SNR=31						
BLDU	Ballidu	28.96	203	P	P	10 27 46.7	+0.7
JMJ	Miyako jima 2	29.05	352	P	P	10 27 50.4	+3.7
YOJ	Yonaguni jima	29.09	348	P	P	10 27 47.0	-0.1
YOJ				pmax	pmax		
	comp=Z,942nm,0.8s						
YOJ	Yonaguni jima	29.09	348	⇑P	P	10 27 49.9	+2.7
YOJ	Yonaguni jima	29.09	348	P	P	10 27 47.0	-0.1
YOJ				IAmb	IAmb	10 27 57.3	
	comp=Z,942nm,0.8s						
PDSI	Padang	29.13	276	P	P	10 27 45.7	-2.0
	comp=Z,65µmcomp=Z,6µmcomp=Z,180nm,0.8s						
NACB	Ninganchiao	29.15	345	P	P	10 27 47.0	-0.6
NACB				IAmb	IAmb	10 28 11.6	
	comp=Z,1µm,1.7s						
BBOO	Buckleboo	29.20	169	P	P	10 27 47.8	-0.2
	baz=29,SNR=51						
BBOO	Buckleboo	29.20	169	P	P	10 27 47.3	-0.8
BBOO				IAmb	IAmb	10 28 52.7	
	comp=Z,732nm,1.0s						
BBOO	Buckleboo	29.20	169	P	P	10 27 48.8	+0.7
PPI	Padang Panjang	29.25	276	P	P	10 27 47.7	-1.0
	comp=Z,317nmcomp=Z,2µmcomp=Z,322nm,1.0s						
PPSI	Pulau Pagai	29.41	272	P	P	10 27 59.8	+10
KLBR	Kellerberrin	29.45	201	P	P	10 27 50.1	-0.2
	baz=30,SNR=153						
KLBR	Kellerberrin	29.45	201	P	P	10 27 51.0	+0.7
EIDS	Eidsvold	29.63	138	P	P	10 27 50.7	-1.2
	baz=30,SNR=46						
EIDS	Eidsvold	29.63	138	⇑P	P	10 27 50.8	-1.2
EIDS	Eidsvold	29.63	138	P	P	10 27 50.6	-1.2
EIDS				IAmb	IAmb	10 28 55.0	
	comp=Z,1µm,1.8s						
EIDS	Eidsvold	29.63	138	P	P	10 27 53.3	+1.3
IPM	Ipoh	29.65	286	P	P	10 27 53.0	+0.7
IPM	Ipoh	29.65	286	P	P	10 27 52.4	+0.1
IPM	Ipoh	29.65	286	P	P	10 27 54.0	+1.7
YHNB	Yeheng	29.68	345	P	P	10 27 51.8	-0.6
YHNB				IAmb	IAmb	10 28 22.6	
	comp=Z,1µm,1.2s						
YHNB	Yeheng	29.68	345	P	P	10 27 56.1	+3.7
WHYH	Whyalla	29.75	166	P	P	10 27 53.5	+0.6
JMZ	Minamidaito 2	29.81	3	⇑P	P	10 27 57.6	+4.2
STKA	Stephens Creek	29.87	159	P	P	10 27 52.6	-1.4
	comp=Z,194nm,0.8s,baz=334,slow=8.5,SNR=106						
STKA				S	S	10 32 50.4	+0.8
	comp=Z,75nm,1.1s,baz=73,slow=19,SNR=1.5						
STKA				LR	LR	10 40 40.5	
	comp=Z,266µm,19.3s,baz=328,slow=38						
STKA	Stephens Creek	29.87	159	P	P	10 27 53.5	-0.6
	baz=30,SNR=126						
STKA	Stephens Creek	29.87	159	P	P	10 27 53.4	-0.6
STKA				pmax	pmax		
	comp=Z,402nm,1.8s						
STKA	Stephens Creek	29.87	159	P	P	10 27 53.4	-0.6
STKA	Stephens Creek	29.87	159	P	P	10 27 54.6	+0.6
TATO	Taipei	29.94	345	P	P	10 27 53.9	-0.8
QIZ	Qiongzhong	30.03	321	P	P	10 27 56.7	+1.2
QIZ				S	S	10 32 51.4	-0.9
QIZ				pmax	pmax		
	comp=Z,100nm,2.1s						
QIZ				pmax	pmax		
	comp=Z,14µm,10.0s						
QIZ				LR	LR		
	comp=Z,16µm,24.3s						
QIZ				LR	LR		
	comp=Z,30µm,17.9s						
QIZ				LR	LR		
	comp=Z,23µm,14.2s						
QIZ	Qiongzhong	30.03	321	P	P	10 27 55.7	+0.2
QIZ				IAmb	IAmb	10 28 21.8	
	comp=Z,761nm,1.3s						
QIZ	Qiongzhong	30.03	321	P	P	10 27 57.9	+2.4
NAPP	Napperby	30.03	165	P	P	10 27 56.2	+0.8
HKPS	Hong Kong Po S	30.21	331	P	P	10 27 57.8	+0.7
HKPS				IAmb	IAmb	10 28 24.0	
	comp=Z,1µm,1.9s						
HKC	Hong Kong Obse	30.21	331	⇑P	P	10 28 06.0	+8.9
MNSI	Mandailing Nat	30.24	279	P	P	10 27 57.4	-0.1
	comp=Z,61µmcomp=Z,14µmcomp=Z,428nm,0.7s						
KULM	Kulim	30.24	288	⇑P	P	10 27 57.5	0.0
KULM	Kulim	30.24	288	P	P	10 27 58.0	+0.5
KULM	Kulim	30.24	288	P	P	10 27 57.5	0.0
KULM				IAmb	IAmb	10 28 15.4	
	comp=Z,1µm,1.2s						
MCO	Taipa Grande	30.36	330	P	P	10 28 00.0	+1.6
MUN	Mundaring	30.37	203	P	P	10 27 58.2	-0.2
	baz=30,SNR=17						
MUN	Mundaring	30.37	203	P	P	10 27 59.2	+0.8
KNMB	Chin-men Tao	30.38	340	P	P	10 27 58.6	+0.1
KNMB				IAmb	IAmb	10 28 12.9	
	comp=Z,680nm,1.0s						
SISI	Saibi	30.45	274	P	P	10 28 00.2	+0.9
	comp=Z,55µmcomp=Z,6µmcomp=Z,303nm,0.9s						
HTT	Hallett	30.47	164	P	P	10 27 59.0	-0.4
	baz=31,SNR=50						
HTT	Hallett	30.47	164	⇑P	P	10 27 59.0	-0.4
HTT	Hallett	30.47	164	P	P	10 28 00.9	+1.6
UBPT	Khong Chiam	30.59	310	⇑P	P	10 28 01.0	+0.6
UBPT	Khong Chiam	30.59	310	P	P	10 28 00.5	+0.1
UBPT				IAmb	IAmb	10 28 23.1	
	comp=Z,1µm,1.6s						
HNR	Honiara	30.73	101	P	P	10 28 00.8	-1.0
	comp=Z,998nm,0.8s,baz=228,slow=1.3,SNR=49						
HNR				LR	LR	10 42 07.1	
	comp=Z,68µm,19.6s,baz=266,slow=40						
HNR	Honiara	30.73	101	⇑P	P	10 28 00.8	-1.0
HNR	Honiara	30.73	101	P	P	10 28 00.6	-1.3
HNR	Honiara	30.73	101	P	P	10 28 02.1	+0.3
QZH	Quanzhou	30.76	340	⇑iP	P	10 28 01.6	-0.2
QZH				S	S	10 33 03.9	+0.4
QZH				pmax	pmax		
	comp=Z,600nm,2.2s						
QZH				pmax	pmax		
	comp=Z,14µm,7.9s						
QZH				LR	LR		
	comp=Z,19µm,14.2s						
QZH				LR	LR		
	comp=Z,45µm,21.0s						
QZH				LR	LR		
	comp=Z,72µm,22.7s						
JOW	Kunigami	30.79	358	P	P	10 28 02.6	+0.4
	comp=Z,387nm,0.8s,baz=183,slow=8.7,SNR=47						
JOW				PcP	PcP	10 30 58.1	-1.1
	comp=Z,36nm,0.7s,baz=286,slow=7.4,SNR=1.8						
JOW				S	S	10 33 04.9	+0.8
	comp=Z,10nm,0.5s,baz=118,slow=19,SNR=1.2						
JOW				LR	LR	10 38 35.2	
	comp=Z,135µm,21.2s,baz=181,slow=33						
JOW	Kunigami	30.79	358	⇓P	P	10 28 03.4	+1.2
JOW	Kunigami	30.79	358	P	P	10 28 02.5	+0.3
JOW				IAmb	IAmb	10 28 19.4	
	comp=Z,1µm,1.1s						
JOW	Kunigami	30.79	358	P	P	10 28 03.9	+1.7
PATS	Pohnpei	30.80	69	P	P	10 28 02.4	0.0
	baz=31,SNR=15						
PATS	Pohnpei	30.80	69	P	P	10 28 01.7	-0.7
PATS				IAmb	IAmb	10 28 17.2	
	comp=Z,1µm,1.3s						
PATS	Pohnpei	30.80	69	P	P	10 28 04.3	+1.9
NWAO	Narrogin (SRO)	30.85	200	P	P	10 28 04.0	+1.4
CMSA	Cobar Meteorol	31.26	153	P	P	10 28 05.9	-0.3
	baz=31,SNR=196						
CMSA	Cobar Meteorol	31.26	153	P	P	10 28 07.1	+0.9
PSI	Prapat	31.27	282	P	P	10 28 04.6	-2.1
	comp=Z,169nm,0.9s,baz=103,slow=4.5,SNR=69						
PSI				PcP	PcP	10 30 60.0	-1.0
	comp=Z,58nm,0.8s,baz=0.0,slow=2.0,SNR=2.5						
PSI				S	S	10 33 15.9	+3.8
	comp=Z,7.0nm,0.9s,baz=168,slow=20,SNR=0.7						
PSI				ScP	ScP	10 34 44.3	+1.9
	comp=Z,24nm,0.9s,baz=190,slow=6.2,SNR=4.0						
PSI				LR	LR	10 42 40.9	
	comp=Z,60µm,18.6s,baz=150,slow=40						
TSI	Tuntungan	31.77	283	P	P	10 28 13.4	+2.4
TWOA	Tennyson Woods	31.90	166	P	P	10 28 13.4	+1.6
GSI	Gunungsitoli	32.30	279	⇑P	P	10 28 13.3	-2.3
GSI				⇓P	PcP	10 31 06.3	+2.6
GSI	Gunungsitoli	32.30	279	P	P	10 28 14.9	-0.8
	comp=Z,53µmcomp=Z,12µmcomp=Z,671nm,1.2s						
GSI	Gunungsitoli	32.30	279	P	P	10 28 13.5	-2.1
GSI				IAmb	IAmb	10 28 37.4	
	comp=Z,647nm,1.0s						
GSI	Gunungsitoli	32.30	279	P	P	10 28 16.5	+0.8
SRIT	Nakonsritamara	32.33	293	P	P	10 28 16.6	+0.7
KCSI	Kotacane, Aceh	32.55	283	P	P	10 28 17.4	-0.4
	comp=Z,45µmcomp=Z,10µmcomp=Z,388nm,1.1s						
TPTI		33.07	282	P	P	10 28 24.3	+2.0
	comp=Z,16µmcomp=Z,3µmcomp=Z,78nm,1.2s						
JCJ	Chichijima	33.39	21	P	P	10 28 26.1	+1.1
	comp=Z,100nm,0.4s,baz=83,slow=2.3,SNR=5.7						
JCJ				LR	LR	10 39 44.6	
	comp=Z,235µm,21.4s,baz=194,slow=32						
JCJ	Chichijima	33.39	21	P	P	10 28 23.3	-1.6
JCJ	Chichijima	33.39	21	P	P	10 28 28.2	+3.2
ARMA	Armidale	33.51	144	P	P	10 28 26.3	+0.2
	baz=34,SNR=57						
ARMA	Armidale	33.51	144	⇑P	P	10 28 26.0	-0.2
ARMA	Armidale	33.51	144	IAmb	IAmb	10 28 45.8	
	comp=Z,601nm,1.2s						
ARMA	Armidale	33.51	144	P	P	10 28 27.6	+1.5
LHMI	Lhok Sumawe	33.76	286	⇑P	P	10 28 28.1	-0.3
LHMI	Lhok Sumawe	33.76	286	P	P	10 28 29.7	+1.3
	comp=Z,106µmcomp=Z,36µmcomp=Z,2µm,1.4s						
LHMI	Lhok Sumawe	33.76	286	P	P	10 28 28.5	+0.1
ARPS	Mount Arapiles	34.43	162	P	P	10 28 34.7	+0.8
	baz=34,SNR=99						
ARPS	Mount Arapiles	34.43	162	P	P	10 28 34.7	+0.8
MGCD	Mangrove Creek	35.31	148	P	P	10 28 42.7	+1.2
	baz=35,SNR=43						
MGCD	Mangrove Creek	35.31	148	P	P	10 28 42.3	+0.8
JSU	Suzuyama	35.44	1	⇑P	P	10 28 43.4	+0.7
JSU	Suzuyama	35.44	1	P	P	10 28 43.1	+0.4
SYDH	Sydney Hard Ro	35.54	149	P	P	10 28 45.0	+1.5
SLVN	Son La	35.59	316	P	P	10 28 45.5	+1.4
RIV	Riverview	35.81	148	P	P	10 28 47.4	+1.6
	baz=36,SNR=6.1						
RIV	Riverview	35.81	148	⇑P	P	10 28 46.8	+1.0
BRAT	Ballarat	35.81	160	P	P	10 28 47.4	+1.6
SSE	Sheshan	35.90	348	P	P	10 28 49.3	+2.7
SSE				S	S	10 34 26.5	+3.4
SSE				pmax	pmax		
	comp=Z,120nm,1.0s						
SSE				pmax	pmax		
	comp=Z,6µm,6.0s						
SSE				LR	LR		
	comp=Z,8µm,13.9s						
SSE				LR	LR		
	comp=Z,9µm,13.9s						
CAN	Canberra	35.93	152	P	P	10 28 47.0	+0.1
CAN				pmax	pmax		
	comp=Z,807nm,1.0s						
CAN				MLR	MLR		
	comp=Z,142µm,22.0s						
CAN	Canberra	35.93	152	⇑P	P	10 28 47.4	+0.4
CAN	Canberra	35.93	152	P	P	10 28 47.0	+0.1
CAN				IAmb	IAmb	10 29 09.6	
	comp=Z,807nm,1.0s						
CAN	Canberra	35.93	152	P	P	10 28 47.7	+0.8
CNB	Canberra Magne	36.10	152	P	P	10 28 49.1	+0.8
	baz=36,SNR=26						
CNB	Canberra Magne	36.10	152	P	P	10 28 49.8	+1.4
TOO	Toolangi	36.39	158	P	P	10 28 52.1	+1.3
	baz=36,SNR=52						
TOO	Toolangi	36.39	158	P	P	10 28 51.0	+0.2
TOO				pmax	pmax		
	comp=Z,815nm,1.3s						
TOO	Toolangi	36.39	158	⇑P	P	10 28 51.3	+0.5
TOO	Toolangi	36.39	158	P	P	10 28 51.0	+0.2
TOO				IAmb	IAmb	10 29 09.2	
	comp=Z,815nm,1.3s						
TOO	Toolangi	36.39	158	P	P	10 28 52.5	+1.7
GEXS	Deakin Univers	36.52	160	P	P	10 28 53.4	+1.5
JNU	Nakatsue	37.07	2	P	P	10 28 56.6	+0.1
	comp=Z,218nm,0.9s,baz=193,slow=3.9,SNR=31						
JNU				LR	LR	10 44 40.3	
	comp=Z,148µm,18.8s,baz=172,slow=37						
JNU	Nakatsue	37.07	2	⇑P	P	10 28 56.6	+0.1
JNU	Nakatsue	37.07	2	P	P	10 28 56.3	-0.3
JNU				IAmb	IAmb	10 29 16.2	
	comp=Z,2µm,1.4s						
JNU	Nakatsue	37.07	2	P	P	10 28 57.8	+1.2
NJ2	Nanjing	37.36	345	⇑iP	P	10 28 59.1	+0.1
NJ2				pP	sP	10 29 08.2	-0.2
NJ2				sP	pwP	10 29 13.8	+2.4
NJ2				S	S	10 34 46.3	+0.9
NJ2				ScP	ScP	10 35 03.9	+0.4
NJ2				SS	SnSn	10 37 23.6	+0.4
NJ2				ScS	ScS	10 39 12.3	+0.8
NJ2				pmax	pmax		
	comp=Z,190nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,13µm,5.7s						
NJ2				LR	LR		
	comp=Z,32µm,24.6s						
NJ2				LR	LR		
	comp=Z,34µm,18.9s						
NJ2				LR	LR		
	comp=Z,45µm,24.7s						
WHN	Wuhan	37.37	338	⇑P	P	10 29 00.3	+1.1
WHN				pP	sP	10 29 09.4	+0.9
WHN				S	S	10 34 46.2	+0.5
WHN				pmax	pmax		
	comp=Z,1µm,1.4s						
WHN				pmax	pmax		
	comp=Z,25µm,5.4s						
WHN				LR	LR		
	comp=Z,66µm,14.9s						
WHN				LR	LR		
	comp=Z,37µm,8.9s						
WHN				LR	LR		
	comp=Z,543µm,47.5s						
MILA	Mila	37.43	154	P	P	10 29 00.6	+0.9
	baz=38,SNR=22						
MILA	Mila	37.43	154	⇑P	P	10 29 00.5	+0.7
HALB	Hallimjungang-	37.44	356	P	P	10 29 07.0	+7.3
	SNR=21						
HALB	Hallimjungang-	37.44	356	P	P	10 29 07.0	+7.3
	SNR=21						
KSJJU	Jeju	37.45	356	P	P	10 29 02.9	+3.1
	SNR=29						
KSJJU	Jeju	37.45	356	P	P	10 29 02.9	+3.1
	SNR=29						
CM31	Chiang Mai Arr	37.51	308	P	P	10 29 01.9	+1.4
	SNR=328						
CM31				S	S	10 34 48.8	+0.6
CM31	Chiang Mai Arr	37.51	308	IAmb	IAmb	10 29 23.6	
	comp=Z,1µm,1.2s						
CMAR	Chiang Mai Arr	37.51	308	P	P	10 29 01.1	+0.5
	comp=Z,175nm,0.8s,baz=132,slow=6.7,SNR=7.3						
CMAR				PcP	PcP	10 31 20.4	+1.8
	comp=Z,64nm,0.8s,baz=165,slow=2.2,SNR=4.3						
CMAR				ScP	ScP	10 35 05.8	+1.4
	comp=Z,23nm,0.9s,baz=180,slow=3.0,SNR=5.8						
CMAR				PKiKP	PKiKP	10 38 35.4	-0.1
	comp=Z,4.6nm,0.6s,baz=107,slow=1.4,SNR=5.5						
CMAR				P3KPbc		10 59 22.8	
	comp=Z,1.6nm,0.6s,baz=299,slow=5.3,SNR=6.6						
CMAR				PKPPKP		11 01 38.5	
	comp=Z,3.5nm,0.9s,baz=307,slow=4.5,SNR=4.8						
GYA	Guiyang	37.56	325	⇓P	P	10 29 02.3	+1.3
GYA				sP	pwP	10 29 16.1	+2.8
GYA				PP	PnPn	10 30 33.8	+5.8
GYA				PcP	PcP	10 31 21.2	+2.4
GYA				S	S	10 34 50.4	+1.5
GYA				pmax	pmax		
	comp=Z,140nm,0.7s						
GYA				pmax	pmax		
	comp=Z,7µm,5.1s						
GYA				LR	LR		
	comp=Z,38µm,18.0s						
GYA				LR	LR		
	comp=Z,25µm,16.8s						
GYA				LR	LR		
	comp=Z,55µm,16.5s						
KOUNC	Koumac, New Ca	37.62	119	⇑P	P	10 29 00.8	-0.6
KOUNC	Koumac, New Ca	37.62	119	P	P	10 29 01.9	+0.5
CHTO	Chiang Mai	37.70	308	P	P	10 29 02.8	+0.6
CHTO				pmax	pmax		
	comp=Z,1µm,1.0s						
CHTO	Chiang Mai	37.70	308	P	P	10 29 03.5	+1.2
CHTO				S	S	10 34 51.6	+0.5
CHTO	Chiang Mai	37.70	308	⇑P	P	10 29 03.1	+0.9
CHTO	Chiang Mai	37.70	308	P	P	10 29 02.8	+0.6
CHTO				IAmb	IAmb	10 29 25.1	
	comp=Z,1µm,1.0s						
CHTO	Chiang Mai	37.70	308	P	P	10 29 04.2	+2.0
JMN	Monobe	37.88	6	⇑P	P	10 29 04.2	+0.8
JMN	Monobe	37.88	6	P	P	10 29 04.2	+0.8
CJD	Chujado	37.99	356	P	P	10 29 09.0	+4.6
	SNR=72						
JHJ	Hachijo jima 2	38.31	14	P	P	10 29 07.7	+0.6
	comp=Z,279nm,0.9s,baz=164,slow=0.7,SNR=2.6						
JHJ2	Mitsune	38.31	14	P	P	10 29 10.1	+3.0
JTU	Tsushima	38.44	360	⇑P	P	10 29 08.4	+0.3
JTU	Tsushima	38.44	360	P	P	10 29 08.4	+0.3
JTU				IAmb	IAmb	10 29 26.1	
	comp=Z,3µm,1.9s						
HANB	Haenam	38.56	356	P	P	10 29 13.4	+4.2
	SNR=68						
HANB	Haenam	38.56	356	P	P	10 29 13.4	+4.2
	SNR=68						
HANB	Haenam	38.56	356	P	P	10 29 13.4	+4.2
	SNR=68						
KOHB	KOHEUNG	38.59	357	P	P	10 29 09.6	+0.3
	SNR=76						
KOHB	KOHEUNG	38.59	357	P	P	10 29 09.6	+0.3
	SNR=76						
KOHB	KOHEUNG	38.59	357	P	P	10 29 09.6	+0.3
	SNR=76						
BOSB	Boseong-gun	38.74	357	P	P	10 29 12.0	+1.4
	SNR=87						
BOSB	Boseong-gun	38.74	357	P	P	10 29 12.0	+1.4
	SNR=87						
BOSB	Boseong-gun	38.74	357	P	P	10 29 12.0	+1.4
	SNR=87						
SANVU	Saraoutou	38.80	110	⇑P	P	10 29 11.8	+0.4
SANVU	Saraoutou	38.80	110	P	P	10 29 11.6	+0.1
SANVU				IAmb	IAmb	10 29 31.8	
	comp=Z,2µm,1.0s						
SANVU	Saraoutou	38.80	110	P	P	10 29 12.9	+1.5
LHI	Lord Howe Isla	38.95	138	P	P	10 29 13.3	+0.8
	baz=39,SNR=4.4						
LHI	Lord Howe Isla	38.95	138	⇑P	P	10 29 11.8	-0.8
LHI	Lord Howe Isla	38.95	138	P	P	10 29 11.8	-0.8
KMI	Kunming	38.96	320	⇑P	P	10 29 13.9	+0.9
KMI				pP	sP	10 29 22.2	-0.1
KMI				sP	pwP	10 29 26.5	+1.2
KMI				PP	PP	10 30 43.7	+1.1
KMI				S	S	10 35 05.6	-4.8
KMI				SS	SnSn	10 37 58.6	-3.9
KMI				pmax	pmax		
	comp=Z,370nm,1.3s						
KMI				pmax	pmax		
	comp=Z,7µm,5.5s						
KMI				LR	LR		
	comp=Z,38µm,16.1s						
KMI				LR	LR		
	comp=Z,37µm,24.8s						
KMI				LR	LR		
	comp=Z,57µm,23.5s						
KSSCH	SUNCHEON	39.03	357	P	P	10 29 14.2	+1.1
	SNR=122						
KSSCH	SUNCHEON	39.03	357	P	P	10 29 14.2	+1.1
	SNR=122						
KSSCH	SUNCHEON	39.03	357	P	P	10 29 14.2	+1.1
	SNR=122						
JHS	Saijyo	39.07	5	⇑P	P	10 29 14.1	+0.6
KSKWJ	Gwangju	39.14	357	P	P	10 29 18.1	+4.1
	SNR=76						
KSKWJ	Gwangju	39.14	357	P	P	10 29 18.1	+4.1
	SNR=76						
KSKWJ	Gwangju	39.14	357	P	P	10 29 16.8	+2.7
	SNR=76						
KSKWJ	Gwangju	39.14	357	P	P	10 29 18.1	+4.1
	SNR=76						
KSKWJ	Gwangju	39.14	357	P	P	10 29 18.1	+4.1
	SNR=76						
KSKWJ	Gwangju	39.14	357	P	P	10 29 16.8	+2.7
	SNR=76						
KSKWJ	Gwangju	39.14	357	P	P	10 29 18.1	+4.1
	SNR=76						
KSKWJ	Gwangju	39.14	357	P	P	10 29 18.1	+4.1
	SNR=76						
ENH	Enshi	39.17	332	IAmb	IAmb	10 29 38.1	

	comp=Z,2µm,1.8s						
SUCA	Sunchang	39.35	357	P	P	10 29 19.0	+3.3
	SNR=71						
SUCA	Sunchang	39.35	357	P	P	10 29 19.0	+3.3
	SNR=71						
SUCA	Sunchang	39.35	357	P	P	10 29 19.0	+3.3
	SNR=71						
GOCB	Gochang-gun	39.35	356	P	P	10 29 21.0	+5.2
	SNR=54						
GOCB	Gochang-gun	39.35	356	P	P	10 29 21.0	+5.2
	SNR=54						
GOCB	Gochang-gun	39.35	356	P	P	10 29 21.0	+5.2
	SNR=54						
NAWB	Namwon	39.38	357	P	P	10 29 18.0	+2.0
	SNR=79						
NAWB	Namwon	39.38	357	P	P	10 29 18.0	+2.0
	SNR=79						
NAWB	Namwon	39.38	357	P	P	10 29 18.0	+2.0
	SNR=79						
HAMB	Hamyang	39.46	358	P	P	10 29 18.0	+1.3
	SNR=98						
HAMB	Hamyang	39.46	358	P	P	10 29 18.0	+1.3
	SNR=98						
HAMB	Hamyang	39.46	358	P	P	10 29 18.0	+1.3
	SNR=98						
JSG	Sagara	39.46	11	⇓P	P	10 29 17.8	+1.1
JSG	Sagara	39.46	11	P	P	10 29 17.1	+0.4
JSG				IAmb	IAmb	10 29 37.1	
	comp=Z,868nm,1.1s						
JWT	Wachi	39.59	8	⇑P	P	10 29 18.1	+0.4
JWT	Wachi	39.59	8	IAmb	IAmb	10 29 35.0	
	comp=Z,2µm,1.2s						
PBA	Port Blair	39.73	294	*e*P	P	10 29 16.5	-2.7
PBA	Port Blair	39.73	294	⇑P	P	10 29 17.8	-1.4
INU	Inuyama	39.90	10	⇑P	P	10 29 20.8	+0.4
INU	Inuyama	39.90	10	P	P	10 29 20.5	+0.1
INU				IAmb	IAmb	10 29 45.0	
	comp=Z,1µm,1.2s						
INU				IAMs_20	IAMs_20	10 43 14.0	
	comp=Z,229µm,21.0s						
INU	Inuyama	39.90	10	P	P	10 29 23.0	+2.7
KSJEO	Jeonju	39.90	357	P	P	10 29 25.0	+4.6
	SNR=75						
KSJEO	Jeonju	39.90	357	P	P	10 29 25.0	+4.6
	SNR=75						
NOUC	Port Laguerre	39.93	120	P	P	10 29 20.9	+0.1
KSGIC	Gimchen	40.01	358	P	P	10 29 24.1	+2.9
	SNR=13						
DZM	Mont Dzumac	40.04	120	*e*P	P	10 29 21.7	-0.2
	comp=Z,980nm,1.1s						
DZM				*e*S	S	10 35 29.8	+3.3
	comp=Z,46µm,25.1s						
DZM				*e*LR	LR	10 40 28.8	
	comp=Z,101µm,25.8s						
DZM	Mont Dzumac	40.04	120	P	P	10 29 21.6	-0.2
	comp=Z,196nm,0.9s,baz=280,slow=8.2,SNR=50						
DZM	Mont Dzumac	40.04	120	⇑P	P	10 29 21.4	-0.5
DZM	Mont Dzumac	40.04	120	P	P	10 29 21.6	-0.2
DZM	Mont Dzumac	40.04	120	P	P	10 29 22.1	+0.2
DGPR	DIGLIPUR	40.13	296	*e*P	P	10 29 22.2	-0.3
DGPR				IAmb	IAmb	10 29 29.4	
	comp=Z,413nm,0.8s						
ONTNC	Ouen Toro	40.13	120	P	P	10 29 21.7	-0.8
ONTNC	Ouen Toro	40.13	120	P	P	10 29 23.7	+1.2
KSCPR	CHUPUNGNYEONG	40.16	358	P	P	10 29 25.4	+2.9
	SNR=62						
KSCPR	CHUPUNGNYEONG	40.16	358	P	P	10 29 23.7	+1.3
	SNR=57						
KSCPR	CHUPUNGNYEONG	40.16	358	P	P	10 29 23.7	+1.3
	SNR=57						
JGF	Kuroka	40.21	10	⇓P	P	10 29 23.2	+0.3
DVP	Devils Point	40.26	113	P	P	10 29 25.1	+1.5
KSEUS	ULSEONG	40.27	359	P	P	10 29 26.3	+3.0
	SNR=20						
EUSB	Uiseong	40.27	359	P	P	10 29 26.0	+2.6
	SNR=33						
OKCB	Cheongsan-myeo	40.29	358	P	P	10 29 27.0	+3.5
	SNR=19						
OKCB	Cheongsan-myeo	40.29	358	P	P	10 29 27.0	+3.5
	SNR=19						
LIFNC	LIFOU	40.29	118	P	P	10 29 23.1	-0.8
LIFNC				IAmb	IAmb	10 29 26.0	
	comp=Z,883nm,0.9s						
LIFNC	LIFOU	40.29	118	P	P	10 29 24.4	+0.5
GLAD	Gladstone	40.31	158	P	P	10 29 26.2	+2.5
KSADO	Andong	40.33	359	P	P	10 29 27.0	+3.1
	SNR=44						
TJN	Taejon	40.34	357	*c i*P	P	10 29 24.2	+0.3
TJN	Taejon	40.34	357	P	P	10 29 28.4	+4.5
KSSAJ	Sangju	40.34	358	P	P	10 29 26.8	+2.9
	SNR=44						
KSSAJ	Sangju	40.34	358	P	P	10 29 26.4	+2.4
	SNR=55						
KSSAJ	Sangju	40.34	358	P	P	10 29 26.4	+2.4
	SNR=55						
YATNC	Mamie plateau,	40.42	120	P	P	10 29 26.2	+1.3
YODB	Yeongdeok	40.45	360	P	P	10 29 27.0	+2.1
	SNR=54						
RTV	Rentapao	40.50	113	P	P	10 29 26.9	+1.3
OUENC	Ouen Island, N	40.51	120	P	P	10 29 25.4	-0.2
OUENC	Ouen Island, N	40.51	120	P	P	10 29 26.6	+1.0
KSMGY	Mungyeong	40.59	358	P	P	10 29 29.1	+3.1
	SNR=56						
KSMGY	Mungyeong	40.59	358	P	P	10 29 29.1	+3.1
	SNR=56						
KSULJ	Uljin	40.61	360	P	P	10 29 29.0	+2.8
	SNR=34						
YOJB	Youngju	40.79	359	P	P	10 29 31.0	+3.3
	SNR=35						
YOJB	Youngju	40.79	359	P	P	10 29 31.0	+3.3
	SNR=35						
KSCHJ	Chungju	40.81	358	P	P	10 29 33.0	+5.1
	SNR=53						
KSCHJ	Chungju	40.81	358	P	P	10 29 33.0	+5.1
	SNR=53						
CHYB	Chungyang	40.86	359	P	P	10 29 31.0	+2.7
	SNR=54						
CHYB	Chungyang	40.86	359	P	P	10 29 31.0	+2.7
	SNR=54						
KSTBA	Taebaek	41.04	359	P	P	10 29 33.0	+3.2
	SNR=72						
KSTBA	Taebaek	41.04	359	P	P	10 29 33.0	+3.2
	SNR=72						
JECH	Jecheon	41.09	358	P	P	10 29 35.0	+4.8
	SNR=75						
JECH	Jecheon	41.09	358	P	P	10 29 35.0	+4.8
	SNR=75						
PINNC	Pines Island,	41.10	120	P	P	10 29 30.2	-0.2
PINNC				IAmb	IAmb	10 30 14.4	
	comp=Z,1µm,1.5s						
PINNC	Pines Island,	41.10	120	P	P	10 29 31.6	+1.1
KSGWL	Sabuk	41.12	359	P	P	10 29 33.9	+3.5
	SNR=15						
KSGWL	Sabuk	41.12	359	P	P	10 29 33.9	+3.5
	SNR=15						
IMWB	Imwonan-gil	41.15	360	P	P	10 29 34.0	+3.4
	SNR=19						
IMWB	Imwonan-gil	41.15	360	P	P	10 29 34.0	+3.4
	SNR=19						
MARNC	Mare, Loyalty	41.22	118	⇑P	P	10 29 31.2	-0.3
MARNC	Mare, Loyalty	41.22	118	P	P	10 29 31.2	-0.3
MARNC	Mare, Loyalty	41.22	118	P	P	10 29 33.3	+1.8
MAJO	Matsushiro	41.27	11	*c i*P	P	10 29 30.6	-1.1
MAJO				pmax	pmax		
	comp=Z,634nm,0.8s						
MAJO				MLR	MLR		
	comp=Z,57µm,19.0s						
MAJO	Matsushiro	41.27	11	⇑P	P	10 29 30.8	-1.0
MAJO	Matsushiro	41.27	11	P	P	10 29 30.7	-1.0
MAJO				IAmb	IAmb	10 29 51.2	
	comp=Z,670nm,0.8s						
MAJO	Matsushiro	41.27	11	P	P	10 29 33.0	+1.3
MAT	Matsushiro	41.27	11	P	P	10 29 30.7	-1.0
MAT				S	S	10 35 40.7	-3.6
MJAR	Matsushiro Arr	41.27	11	P	P	10 29 31.2	-0.5
	comp=Z,288nm,0.8s,baz=170,slow=10,SNR=175						
MJAR				LR	LR	10 44 56.1	
	comp=Z,76µm,21.4s,baz=220,slow=34						
MJB9	Matsu-Tunnel	41.28	11	P	P	10 29 31.5	-0.3
MJB9				IAmb	IAmb	10 29 51.2	
	comp=Z,772nm,0.8s						
MOO	Moorlands	41.30	160	P	P	10 29 33.1	+1.3
	baz=41,SNR=4.8						
MOO	Moorlands	41.30	160	P	P	10 29 32.7	+0.8
KSAR	Wonju Array Be	41.38	358	P	P	10 29 32.7	+0.2
KSAR	Wonju Array Be	41.38	358	P	P	10 29 32.6	+0.2
JYT	Yasato	41.38	13	⇓P	P	10 29 32.3	-0.2
JYT	Yasato	41.38	13	P	P	10 29 31.9	-0.6
JYT				IAmb	IAmb	10 29 53.1	
	comp=Z,732nm,0.7s						
KSRS	Korea Array	41.39	358	P	P	10 29 33.5	+0.9
	comp=Z,115nm,0.7s,baz=176,slow=8.9,SNR=113						
KSRS				ScP	ScP	10 35 21.2	+2.2
	comp=Z,11nm,1.0s,baz=193,slow=3.9,SNR=5.2						
KSRS				LR	LR	10 45 36.0	
	comp=Z,95µm,21.0s,baz=166,slow=35						
ULDB	Ullung-do Bore	41.41	2	P	P	10 29 35.7	+2.9
	SNR=31						
ULDB	Ullung-do Bore	41.41	2	P	P	10 29 35.7	+2.9
	SNR=31						
KS19	Wonju Array Si	41.44	358	P	P	10 29 33.1	+0.1
INCN	Inchon	41.48	357	P	P	10 29 34.0	+0.6
INCN				pmax	pmax		
	comp=Z,739nm,1.0s						
INCN				MLR	MLR		
	comp=Z,111µm,19.0s						
INCN	Inchon	41.48	357	⇑P	P	10 29 34.2	+0.9
INCN	Inchon	41.48	357	P	P	10 29 34.0	+0.6
INCN				IAmb	IAmb	10 29 44.2	
	comp=Z,740nm,1.0s						
INCN	Inchon	41.48	357	IAMs_20	IAMs_20	10 47 04.5	
	comp=Z,111µm,19.0s						
OKEB	Okgye-meyeon	41.53	359	P	P	10 29 38.1	+4.3
	SNR=80						
OKEB	Okgye-meyeon	41.53	359	P	P	10 29 38.1	+4.3
	SNR=80						
TIA	Tai'an	41.75	345	⇓P	P	10 29 35.5	-0.1
TIA				S	S	10 35 46.2	-5.1
TIA				pmax	pmax		
	comp=Z,150nm,1.5s						
TIA				pmax	pmax		
	comp=Z,12µm,13.9s						
TIA				LR	LR		
	comp=Z,17µm,25.0s						
TIA				LR	LR		
	comp=Z,38µm,23.0s						
TIA				LR	LR		
	comp=Z,50µm,24.0s						
TAU	Tasmania Unive	41.76	160	P	P	10 29 35.6	0.0
TAU				pmax	pmax		
	comp=Z,689nm,1.5s						
TAU				MLR	MLR		
	comp=Z,234µm,22.0s						
TAU	Tasmania Unive	41.76	160	⇑P	P	10 29 36.3	+0.7
TAU	Tasmania Unive	41.76	160	P	P	10 29 35.6	0.0
TAU	Tasmania Unive	41.76	160	P	P	10 29 38.1	+2.5
CD2	Chengdu	42.60	327	⇑*i*P	P	10 29 42.5	-0.2
CD2				pP	pwP	10 29 54.3	-0.8
CD2				sP	sP	10 30 00.0	+7.9
CD2				PP	PP	10 31 23.4	+1.5
CD2				S	S	10 36 03.3	-0.9
CD2				sS	sS	10 36 25.0	+10
CD2				pmax	pmax		
	comp=Z,360nm,0.9s						
CD2				pmax	pmax		
	comp=Z,5µm,6.2s						
CD2				LR	LR		
	comp=Z,135µm,30.0s						
CD2				LR	LR		
	comp=Z,142µm,25.9s						
CD2				LR	LR		
	comp=Z,92µm,28.6s						
XAN	Xi'an	42.62	335	P	P	10 29 42.2	-0.6
XAN				S	S	10 36 03.9	-0.4
XAN				pmax	pmax		
	comp=Z,76nm,1.5s						
XAN				pmax	pmax		
	comp=Z,4µm,6.8s						
XAN				LR	LR		
	comp=Z,52µm,26.5s						
XAN				LR	LR		
	comp=Z,67µm,29.9s						
XAN				LR	LR		
	comp=Z,141µm,40.7s						
JSD	Sado	42.74	10	⇑P	P	10 29 43.3	-0.3
JSD	Sado	42.74	10	IAmb	IAmb	10 30 03.5	
	comp=Z,3µm,1.8s						
H11S3	WAKE ISLAND Hy	43.03	57	P	P	10 29 49.9	+3.8
	baz=242						
H11S2	WAKE ISLAND Hy	43.04	57	P	P	10 29 49.6	+3.4
	baz=242						
H11S1	WAKE ISLAND Hy	43.04	57	P	P	10 29 50.2	+4.0
	baz=242						
JMM	Marumori	43.09	13	⇑P	P	10 29 46.8	+0.4
JMM	Marumori	43.09	13	P	P	10 29 47.1	+0.7
WAKE	Wake Island	43.37	56	⇑P	P	10 29 52.1	+3.1
WAKE	Wake Island	43.37	56	P	P	10 29 49.2	+0.2
WAKE				IAmb	IAmb	10 30 06.0	
	comp=Z,2µm,1.2s						
DL2	Dalian	43.42	351	⇑*i*P	P	10 29 49.0	-0.1
DL2				pP	sP	10 29 58.8	+0.3
DL2				S	S	10 36 14.6	-1.1
DL2				pmax	pmax		
	comp=Z,140nm,1.4s						
DL2				pmax	pmax		
	comp=Z,5µm,4.0s						
DL2				LR	LR		
	comp=Z,35µm,18.9s						
DL2				LR	LR		
	comp=Z,38µm,21.6s						
DL2				LR	LR		
	comp=Z,57µm,20.1s						
H11N1	WAKE ISLAND Hy	43.77	56	P	P	10 29 56.1	+4.1
	baz=235,slow=13,SNR=9.3						
H11N2	WAKE ISLAND Hy	43.78	56	P	P	10 29 57.5	+5.4
	baz=235,slow=13,SNR=5.9						
TARA	Tarawa	43.79	84	P	P	10 29 53.0	+0.5
H11N3	WAKE ISLAND Hy	43.79	56	P	P	10 29 56.8	+4.7
	baz=235,slow=13,SNR=11						
NFK	Norfolk Island	44.10	128	P	P	10 29 55.6	+0.8
	baz=44,SNR=4.5						
NFK	Norfolk Island	44.10	128	⇑P	P	10 29 54.9	0.0
TIY	Taiyuan	44.53	341	⇑P	P	10 29 59.4	+1.3
TIY				S	S	10 36 29.3	-2.8
TIY				SS	SS	10 39 47.2	-5.3
TIY				pmax	pmax		
	comp=Z,200nm,1.1s						
TIY				pmax	pmax		
	comp=Z,8µm,5.1s						
TIY				LR	LR		
	comp=Z,14µm,11.1s						
TIY				LR	LR		
	comp=Z,9µm,12.2s						
TIY				LR	LR		
	comp=Z,15µm,15.5s						
KOHI	KOHIMA	45.32	313	*e*P	P	10 30 04.5	-0.2
MOKO	MOKOCHONG	45.38	314	*e*P	P	10 30 04.9	-0.3
MOKO				IAmb	IAmb	10 30 43.1	
	comp=Z,822nm,1.0s						
BRDH	Bariadhala	45.53	308	P	P	10 30 06.4	+0.1
	comp=Z,0.6nm,0.3s,baz=253,slow=20,SNR=1.4						
BJT	Baijiatuau	45.59	346	IAmb	IAmb	10 30 16.4	
	comp=Z,542nm,1.2s						
BJI	Beijing	45.61	346	P	P	10 30 05.9	-0.7
BJI				pP	pP	10 30 14.2	+0.8
BJI				sP	pwP	10 30 18.5	-0.1
BJI				sS	sS	10 36 59.4	+0.6
BJI				pmax	pmax		
	comp=Z,150nm,1.3s						
BJI				pmax	pmax		
	comp=Z,14µm,6.7s						
BJI				LR	LR		
	comp=Z,33µm,29.0s						
BJI				LR	LR		
	comp=Z,35µm,29.2s						
BJI				LR	LR		
	comp=Z,49µm,29.2s						
JTM	Tenmabayashi	45.94	12	⇑P	P	10 30 09.8	+0.6
JTM	Tenmabayashi	45.94	12	P	P	10 30 08.0	-1.2
SNY	Shenyang	46.04	354	⇑P	P	10 30 10.0	0.0
SNY				S	S	10 36 45.5	-8.2
SNY				pmax	pmax		
	comp=Z,73nm,1.3s						
SNY				pmax	pmax		
	comp=Z,6µm,6.9s						
SNY				LR	LR		
	comp=Z,82µm,21.3s						
SNY				LR	LR		
	comp=Z,41µm,20.8s						
SNY				LR	LR		
	comp=Z,105µm,20.8s						
ITAN	ITANAGAR	46.44	314	*e*P	P	10 30 14.4	+1.0
ITAN				IAmb	IAmb	10 30 28.0	
	comp=Z,711nm,0.8s						
LZH	Lanzhou	46.63	331	⇑P	P	10 30 15.6	+0.7
LZH				sP	pwP	10 30 31.9	+4.6
LZH				S	S	10 37 02.7	0.0
LZH				pmax	pmax		
	comp=Z,660nm,1.3s						
LZH				pmax	pmax		
	comp=Z,11µm,6.4s						
LZH				LR	LR		
	comp=Z,56µm,14.5s						
LZH				LR	LR		
	comp=Z,59µm,14.3s						
LZH				LR	LR		
	comp=Z,102µm,17.0s						
SHL	Shillong	46.88	311	P	P	10 30 16.7	-0.4
SHL				pmax	pmax		
	comp=Z,566nm,0.9s						
SHL	Shillong	46.88	311	*e*P	P	10 30 16.9	-0.3
SHL				IAmb	IAmb	10 30 21.5	
	comp=Z,441nm,1.0s						
SHL	Shillong	46.88	311	P	P	10 30 18.1	+1.0
	SNR=137						
SHL	Shillong	46.88	311	P	P	10 30 16.7	-0.4
SHL				IAmb	IAmb	10 30 43.2	
	comp=Z,566nm,0.9s						
VLA	Vladivostok	47.08	2	*ce*P	P	10 30 18.9	+0.9
VLA				pmax	pmax		
	comp=Z,399nm,1.0s						
VLA				MLR	MLR		
	comp=Z,143µm,18.0s						
ERM	Erimo	47.59	14	*ce*P	P	10 30 22.8	+0.8
ERM				pmax	pmax		
	comp=Z,1µm,1.7s						
ERM				MLR	MLR		
	comp=Z,161µm,19.0s						
ERM	Erimo	47.59	14	⇓P	P	10 30 23.5	+1.5
ERM	Erimo	47.59	14	P	P	10 30 21.1	-0.9
ERM	Erimo	47.59	14	P	P	10 30 25.2	+3.2
HHC	Hu-ho-hao-te	47.66	342	*e*P	P	10 30 26.1	+3.3
HHC				PP	PP	10 32 17.2	+2.5
HHC				S	S	10 37 19.5	+2.4
HHC				pmax	pmax		
	comp=Z,100nm,1.3s						
HHC				pmax	pmax		
	comp=Z,15µm,9.3s						
HHC				LR	LR		
	comp=Z,21µm,16.1s						
HHC				LR	LR		
	comp=Z,24µm,17.1s						
HHC				LR	LR		
	comp=Z,25µm,18.8s						
CN2	Changchun	47.84	356	*e*P	P	10 30 22.7	-1.3
CN2				sP	pwP	10 30 40.4	+4.2
CN2				PP	PP	10 32 14.3	-1.8
CN2				S	S	10 37 16.4	-3.0
CN2				SS	SS	10 40 40.3	-8.1
CN2				pmax	pmax		
	comp=Z,80nm,1.2s						
CN2				LR	LR		
	comp=Z,72µm,20.0s						
CN2				LR	LR		
	comp=Z,28µm,20.0s						
CN2				LR	LR		
	comp=Z,87µm,22.0s						
BTO	Baotou	47.94	340	*e*P	P	10 30 25.7	+0.7
BTO				S	S	10 37 20.9	-0.2
BTO				LR	LR		
	comp=Z,139µm,22.1s						
BTO				LR	LR		
	comp=Z,157µm,23.8s						
JEW	Eniwo	47.99	12	P	P	10 30 25.9	+0.8
USRK	Ussuriysk Ar.	48.16	2	P	P	10 30 27.1	+0.7
	comp=Z,280nm,0.6s,baz=183,slow=4.8,SNR=120						
USRK				ScP	ScP	10 35 48.3	+1.7
	comp=Z,12nm,0.9s,baz=189,slow=2.8,SNR=3.4						
USRK				S	S	10 37 24.0	+0.2
	comp=Z,1.9nm,0.6s,baz=201,slow=7.7,SNR=1.5						
USRK				LR	LR	10 51 39.4	
	comp=Z,98µm,19.3s,baz=149,slow=37						
MDJ	Mudanjiang	48.52	0	P	P	10 30 29.9	+0.7
MDJ				pP	pwP	10 30 41.7	+0.3
MDJ				sP	sP	10 30 44.7	+6.0
MDJ				PP	PP	10 32 25.8	+3.5
MDJ				ScP	ScP	10 35 49.2	+1.1
MDJ				S	S	10 37 30.0	+1.1
MDJ				ScS	ScS	10 40 18.6	-1.6
MDJ				pmax	pmax		
	comp=Z,100nm,1.8s						
MDJ				LR	LR		
	comp=Z,66µm,21.5s						
MDJ				LR	LR		
	comp=Z,55µm,23.7s						
MDJ				LR	LR		
	comp=Z,90µm,16.7s						
MDJ	Mudanjiang	48.52	0	IAMs_20	IAMs_20	10 49 16.3	
	comp=Z,84µm,20.0s						
MDJ	Mudanjiang	48.52	0	P	P	10 30 32.1	+2.9
TEY	Ternei	49.36	7	⇑*e*P	P	10 30 36.3	+0.7
TEY				*e*		10 37 42.3	
TEY				pmax	pmax		
	comp=N,40nm,1.0s						
TEY				pmax	pmax		
	comp=Z,70nm,1.1s						
TEY				pmax	pmax		
	comp=N,500nm,3.6s						
TEY				pmax	pmax		
	comp=Z,800nm,3.4s						
MSVF	Nonsavu	49.44	110	*c i*P	P	10 30 37.6	+0.7
MSVF				pmax	pmax		
	comp=Z,766nm,1.6s						
MSVF	Nonsavu	49.44	110	⇑P	P	10 30 37.3	+0.4
MSVF				⇑P	P	10 30 38.0	+1.1
MSVF				⇑s	sP	10 30 47.6	+0.5
MSVF	Nonsavu	49.44	110	P	P	10 30 36.7	-0.2
MSVF				IAmb	IAmb	10 31 18.4	
	comp=Z,677nm,1.3s						
MSVF	Nonsavu	49.44	110	P	P	10 30 39.4	+2.5
ASAJ	Asahikawa	49.46	12	P	P	10 30 36.9	+0.5
	comp=Z,76nm,0.8s,baz=200,slow=9.5,SNR=20						
ASAJ				LR	LR	10 50 28.5	
	comp=Z,82µm,21.3s,baz=206,slow=35						
JKA	Kamikawa-asahi	49.46	12	P	P	10 30 36.2	-0.2
JKA				IAmb	IAmb	10 31 01.6	
	comp=Z,873nm,1.2s						
FUNA	Funafuti	49.61	98	P	P	10 30 37.8	-0.3
LSA	Lhasa	49.77	315	P	P	10 30 40.3	+0.7
LSA				S	S	10 37 46.2	-1.7
LSA				pmax	pmax		
	comp=Z,670nm,1.0s						
LSA				pmax	pmax		
	comp=Z,12µm,4.8s						
LSA				LR	LR		
	comp=Z,38µm,25.6s						
LSA				LR	LR		
	comp=Z,50µm,21.4s						
LSA				LR	LR		
	comp=Z,74µm,18.5s						
LSA	Lhasa	49.77	315	IAmb	IAmb	10 30 59.2	
	comp=Z,507nm,0.7s						
PALK	Pallekele	49.94	283	P	P	10 30 39.2	-1.5
	comp=Z,27nm,0.8s,baz=194,slow=8.7,SNR=13						
PALK				PcP	PcP	10 32 02.2	+1.3
	comp=Z,100nm,0.9s,baz=181,slow=3.8,SNR=4.4						
PALK				S	S	10 37 50.7	+0.7
	comp=Z,1.9nm,0.4s,baz=176,slow=19,SNR=1.1						
PALK				LR	LR	10 53 12.3	
	comp=Z,36µm,20.2s,baz=215,slow=38						
PALK	Pallekele	49.94	283	⇑P	P	10 30 39.2	-1.5
PALK				⇑P	P	10 30 40.4	-0.3
PALK	Pallekele	49.94	283	P	P	10 30 39.2	-1.5
PALK				IAmb	IAmb	10 31 35.1	
	comp=Z,905nm,1.9s						
YUK	Yuzh-Kuril'sk	50.16	15	*c i*P	P	10 30 42.2	+0.4
YUK				*e*		10 32 00.8	
YUK				*e*		10 32 37.4	
YUK				*e*PPP	PPP	10 33 33.0	
YUK				*e*S	S	10 37 49.0	-3.0
YUK				*e*SS	SS	10 41 23.4	-2.3
YUK				*e*SSS	SSS	10 42 48.0	
YUK				pmax	pmax		
	comp=Z,3µm,2.8s						
YUK				pmax	pmax		
	comp=Z,1µm,1.2s						
YUK				pmax	pmax		

	comp=N,996nm,1.9s						
YUK				pmax	pmax		
	comp=E,379nm,0.8s						
GTK	**Tadong**	**50.30**	**311**	*e*P	**P**	**10 30 43.4**	**0.0**
GTK				IAmb	IAmb	10 30 55.2	
	comp=Z,491nm,1.2s						
BOK	**Bokaro**	**50.70**	**305**	*e*P	**P**	**10 30 47.2**	**+0.9**
BOK				IAmb	IAmb	10 30 57.2	
	comp=Z,164nm,0.8s						
DGTI	**Dogotuki**	**50.81**	**108**	P	**P**	**10 30 48.5**	**+1.3**
OUZ	**Omahuta**	**51.17**	**133**	⇑P	**P**	**10 30 50.6**	**+1.0**
OUZ	**Omahuta**	**51.17**	**133**	P	**P**	**10 30 50.0**	**+0.3**
OUZ	**Omahuta**	**51.17**	**133**	P	**P**	**10 30 50.6**	**+1.0**
GTA	**Gaotai**	**51.21**	**331**	⇑P	**P**	**10 30 49.9**	**-0.1**
GTA				pP	sP	10 30 59.4	-0.1
GTA				sP	pwP	10 31 04.4	+2.0
GTA				ScP	**ScP**	**10 36 01.4**	**+1.4**
GTA				S	**S**	**10 38 06.4**	**-0.6**
GTA				ScS	**ScS**	**10 40 39.0**	**0.0**
GTA				pmax	pmax		
	comp=Z,130nm,1.3s						
GTA				pmax	pmax		
	comp=Z,3µm,6.2s						
GTA				LR	LR		
	comp=Z,32µm,23.6s						
GTA				LR	LR		
	comp=Z,40µm,24.0s						
GTA				LR	LR		
	comp=Z,71µm,24.0s						
TAVE	**Taveuni**	**51.21**	**108**	P	**P**	**10 30 53.2**	**+3.0**
MDRS	**Chennai**	**51.75**	**290**	*e*P	**P**	**10 30 54.6**	**+0.4**
MDRS				IAmb	IAmb	10 30 56.9	
	comp=Z,429nm,1.1s						
KUR	**Kuril'sk**	**51.82**	**17**	*c i*P	**P**	**10 30 53.9**	**-0.3**
KUR				*i* S	**S**	**10 38 12.9**	**-2.0**
KUR				*e*SS	**SS**	**10 41 50.4**	**-1.6**
KUR				*e*SSS	SSS	10 43 35.1	
KUR				pmax	pmax		
	comp=Z,17µm,5.0s						
KUR				pmax	pmax		
	comp=Z,1µm,1.1s						
KUR				pmax	pmax		
	comp=N,159nm,0.9s						
KUR				pmax	pmax		
	comp=E,668nm,1.3s						
YSS	**Yuzh-Sakhalins**	**52.20**	**12**	*e*P	**P**	**10 30 57.6**	**+0.6**
YSS				*e**PP	**pwP**	**10 31 10.9**	**+1.5**
YSS				*e*		10 32 06.9	
YSS				*e*		10 32 58.9	
YSS				*e*S	**S**	**10 38 16.6**	**-3.4**
YSS				*e*SS	**SS**	**10 41 59.0**	**+1.0**
YSS				*e*SSS	SSS	10 43 40.0	
YSS				pmax	pmax		
	comp=Z,210nm,0.7s						
YSS				pmax	pmax		
	comp=Z,7µm,6.7s						
YSS				pmax	pmax		
	comp=N,3µm,6.0s						
YSS				pmax	pmax		
	comp=E,2µm,4.7s						
YSS	**Yuzh-Sakhalins**	**52.20**	**12**	⇑P	**P**	**10 30 57.6**	**+0.6**
YSS	**Yuzh-Sakhalins**	**52.20**	**12**	P	**P**	**10 30 57.0**	**0.0**
YSS				IAmb	IAmb	10 31 21.0	
	comp=Z,2µm,1.9s						
YSS				IAMs_20	IAMs_20	10 51 20.5	
	comp=Z,150µm,21.0s						
YSS	**Yuzh-Sakhalins**	**52.20**	**12**	P	**P**	**10 30 59.7**	**+2.7**
LKBA	**Tubou, Lakemba**	**52.47**	**110**	P	**P**	**10 31 00.6**	**+1.1**
DCZ	**Deep Cove**	**52.69**	**147**	P	**P**	**10 31 00.5**	**-0.2**
PYZ	**Puysegur Point**	**52.90**	**148**	P	**P**	**10 31 02.0**	**-0.3**
PYZ				IAmb	IAmb	10 31 33.0	
	comp=Z,1µm,2.0s						
PYZ				IAMs_20	IAMs_20	10 53 58.7	
	comp=Z,88µm,19.0s						
FOZ	**Fox Glacier**	**53.01**	**144**	P	**P**	**10 31 02.4**	**-0.7**
FOZ				IAMs_20	IAMs_20	10 54 39.6	
	comp=Z,79µm,20.0s						
BLSP	**Bilaspur**	**53.11**	**302**	*e*P	**P**	**10 31 03.4**	**-0.9**
MLZ	**Mavora Lakes**	**53.16**	**147**	P	**P**	**10 31 03.7**	**-0.6**
MLZ				IAMs_20	IAMs_20	10 53 09.5	
	comp=Z,98µm,20.0s						
KLR	**Kul'dur**	**53.17**	**2**	P	**P**	**10 31 04.4**	**+0.2**
	comp=Z,90nm,0.8s,baz=198,slow=5.7,SNR=97						
KLR				LR	LR	10 51 35.0	
	comp=Z,75µm,21.6s,baz=170,slow=34						
KLR				PKPPKP		11 01 16.6	
	comp=Z,2.5nm,0.9s,baz=357,slow=4.7,SNR=4.3						
KLR				P4KPbc		11 08 29.7	
	comp=Z,1.2nm,0.9s,baz=198,slow=3.2,SNR=3.7						
KLR	**Kul'dur**	**53.17**	**2**	*c i*P	**P**	**10 31 04.7**	**+0.5**
KLR				pmax	pmax		
	comp=Z,1µm,1.5s						
KLR				MLR	MLR		
	comp=Z,59µm,17.0s						
QRZ	**Quartz Range**	**53.18**	**140**	P	**P**	**10 31 03.8**	**-0.7**
QRZ				IAMs_20	IAMs_20	10 52 16.0	
	comp=Z,74µm,21.0s						
QRZ	**Quartz Range**	**53.18**	**140**	P	**P**	**10 31 05.7**	**+1.2**
WKZ	**Wanaka**	**53.32**	**146**	P	**P**	**10 31 05.6**	**+0.1**
KHEZ	**Kahui Hut**	**53.38**	**137**	P	**P**	**10 31 08.7**	**+2.6**
WHZ	**Wether Hill Ro**	**53.40**	**147**	P	**P**	**10 31 05.4**	**-0.5**
WHZ				IAmb	IAmb	10 31 22.9	
	comp=Z,804nm,1.5s						
WHZ				IAMs_20	IAMs_20	10 53 15.9	
	comp=Z,77µm,21.0s						
HIZ	**Hauiti**	**53.59**	**136**	P	**P**	**10 31 09.5**	**+2.0**
HIZ	**Hauiti**	**53.59**	**136**	P	**P**	**10 31 07.7**	**+0.2**
HIZ	**Hauiti**	**53.59**	**136**	P	**P**	**10 31 09.1**	**+1.6**
TOZ	**Tahuroa Road**	**53.68**	**135**	P	**P**	**10 31 10.3**	**+2.1**
LBZ	**Lake Benmore**	**53.73**	**145**	P	**P**	**10 31 08.0**	**-0.5**
VRZ	**Vera Road**	**53.81**	**137**	P	**P**	**10 31 11.7**	**+2.5**
TRD	**Trivandrum**	**53.82**	**284**	*e*P	**P**	**10 31 08.8**	**-0.8**
TRD				IAmb	IAmb	10 31 27.7	
	comp=Z,211nm,0.9s						
HIA	**Hailar**	**53.84**	**352**	IAmb	IAmb	10 31 26.8	
	comp=Z,1µm,1.9s						
RPZ	**Rata Peaks**	**53.85**	**143**	P	**P**	**10 31 09.4**	**0.0**
RPZ				IAmb	IAmb	10 31 16.8	
	comp=Z,425nm,0.9s						
RPZ				IAMs_20	IAMs_20	10 56 26.7	
	comp=Z,85µm,19.0s						
RPZ	**Rata Peaks**	**53.85**	**143**	P	**P**	**10 31 10.5**	**+1.2**
THZ	**Tophouse**	**53.91**	**140**	P	**P**	**10 31 09.2**	**-0.7**
THZ				IAMs_20	IAMs_20	10 54 58.4	
	comp=Z,71µm,19.0s						
NNZ	**Nelson**	**53.93**	**140**	P	**P**	**10 31 09.8**	**-0.2**
NNZ	**Nelson**	**53.93**	**140**	P	**P**	**10 31 09.0**	**-0.9**
TLZ	**Tolley Road**	**53.98**	**136**	P	**P**	**10 31 12.7**	**+2.3**
LTZ	**Lake Taylor**	**54.06**	**142**	IAmb	IAmb	10 31 30.2	
	comp=Z,629nm,1.5s						
LTZ				IAMs_20	IAMs_20	10 54 38.4	
	comp=Z,72µm,20.0s						
UGL	**Uglegorsk**	**54.11**	**10**	⇓*i*P	**P**	**10 31 12.7**	**+1.6**
UGL				*e*S	S	10 38 36.6	-9.4
UGL				*e*SS	**SS**	**10 42 31.2**	**+3.1**
UGL				pmax	pmax		
	comp=Z,250nm,1.0s						
UGL				pmax	pmax		
	comp=E,4µm,5.3s						
UGL				pmax	pmax		
	comp=N,6µm,4.7s						
UGL				pmax	pmax		
	comp=Z,15µm,4.6s						
UGL				smax	smax		
	comp=E,7µm,18.0s						
UGL				smax	smax		
	comp=N,21µm,11.0s						
OXZ	**Oxford**	**54.22**	**142**	P	**P**	**10 31 12.2**	**+0.2**
OXZ				IAMs_20	IAMs_20	10 54 39.6	
	comp=Z,71µm,19.0s						
TWVZ	**Taurewa**	**54.25**	**136**	P	**P**	**10 31 14.1**	**+1.6**
WAZ	**Wanganui**	**54.26**	**137**	P	**P**	**10 31 14.1**	**+1.7**
WTVZ	**West Tongariro**	**54.37**	**136**	P	**P**	**10 31 15.8**	**+2.4**
ODZ	**Otahua Downs**	**54.38**	**145**	⇑P	**P**	**10 31 13.0**	**-0.1**
ODZ				⇓P	**P**	**10 31 14.2**	**+1.0**
ODZ				⇑P	**pP**	**10 31 17.3**	**-3.5**
ODZ	**Otahua Downs**	**54.38**	**145**	P	**P**	**10 31 13.3**	**+0.1**
ODZ				IAMs_20	IAMs_20	10 55 49.9	
	comp=Z,85µm,18.0s						
ODZ	**Otahua Downs**	**54.38**	**145**	P	**P**	**10 31 14.5**	**+1.3**
NNVZ	**North Ngauruho**	**54.40**	**136**	P	**P**	**10 31 16.0**	**+2.3**
NGZ	**Ngauruhoe**	**54.41**	**136**	P	**P**	**10 31 15.9**	**+2.2**
FWVZ	**Far West T-bar**	**54.41**	**137**	P	**P**	**10 31 15.3**	**+1.4**
NTVZ	**North Tongarir**	**54.42**	**136**	P	**P**	**10 31 16.0**	**+2.2**
TRVZ	**Turoa**	**54.43**	**137**	P	**P**	**10 31 16.7**	**+2.8**
SNVZ	**South Ngauruho**	**54.44**	**136**	P	**P**	**10 31 16.7**	**+2.7**
OTVZ	**Oturere**	**54.45**	**136**	P	**P**	**10 31 15.4**	**+1.4**
TMVZ	**Te Maari**	**54.45**	**136**	P	**P**	**10 31 16.2**	**+2.2**
OMRZ	**Omania**	**54.46**	**135**	P	**P**	**10 31 16.1**	**+2.2**
HSRZ	**Hossack Road**	**54.46**	**135**	P	**P**	**10 31 16.8**	**+2.8**
ETVZ	**East Tongariro**	**54.47**	**136**	P	**P**	**10 31 16.2**	**+2.1**
OPRZ	**Ohinepanea**	**54.47**	**135**	P	**P**	**10 31 15.3**	**+1.3**
WNVZ	**Wahianoa**	**54.48**	**137**	P	**P**	**10 31 15.7**	**+1.5**
TUVZ	**Tukino**	**54.49**	**136**	P	**P**	**10 31 16.7**	**+2.4**
WPRZ	**Whakapapatarin**	**54.50**	**135**	P	**P**	**10 31 16.4**	**+2.2**
BSWZ	**Blackbirch Sta**	**54.51**	**140**	P	**P**	**10 31 13.4**	**-0.8**
HRRZ	**Handcock Road**	**54.52**	**135**	P	**P**	**10 31 17.0**	**+2.6**
HRRZ				S	**pP**	**10 31 25.9**	**+4.0**
HYB	**Hyderabad**	**54.59**	**295**	*i* P	**P**	**10 31 14.0**	**-1.2**
	comp=Z,1µm,1.0s						
HYB				*e*PcP	**PcP**	**10 32 16.0**	**-2.2**
HYB				*e*PP	PP	10 33 26.0	+8.1
HYB				*e*S	**S**	**10 38 52.0**	**-1.6**
HYB				*e*PKPPKP	**P'P'df**	**11 01 34.0**	**+5.5**
HYB				*e*LR	LR		
	comp=Z,22nm,22.0s						
HYB	**Hyderabad**	**54.59**	**295**	*e*P	**P**	**10 31 14.3**	**-0.9**
HYB				IAmb	IAmb	10 31 17.2	
	comp=Z,865nm,0.9s						
TARZ	**Mount Tarawera**	**54.61**	**135**	P	**P**	**10 31 17.1**	**+2.0**
MOVZ	**Moawhango**	**54.62**	**137**	P	**P**	**10 31 15.8**	**+0.6**
PRRZ	**Plateau Road**	**54.65**	**135**	P	**P**	**10 31 17.4**	**+2.1**
KHZ	**Kahutara**	**54.66**	**141**	P	**P**	**10 31 14.6**	**-0.6**
KHZ				IAMs_20	IAMs_20	10 56 02.2	
	comp=Z,82µm,18.0s						
KHZ	**Kahutara**	**54.66**	**141**	P	**P**	**10 31 15.5**	**+0.3**
OHWZ	**Ohakea**	**54.70**	**138**	P	**P**	**10 31 16.2**	**+0.6**
CMWZ	**Cape Campbell**	**54.74**	**140**	P	**P**	**10 31 15.9**	**0.0**
KIW	**Kapiti Island**	**54.75**	**139**	P	**P**	**10 31 16.9**	**+0.9**
MQZ	**McQueen's Vall**	**54.80**	**143**	P	**P**	**10 31 16.3**	**+0.1**
MQZ				IAmb	IAmb	10 31 43.7	
	comp=Z,841nm,1.8s						
SNZO	**South Karori**	**54.84**	**139**	P	**P**	**10 31 15.3**	**-1.2**
SNZO				IAmb	IAmb	10 31 33.4	
	comp=Z,359nm,1.0s						
SNZO	**South Karori**	**54.84**	**139**	IAMs_20	IAMs_20	10 55 52.9	
	comp=Z,72µm,19.0s						
SNZO	**South Karori**	**54.84**	**139**	P	**P**	**10 31 16.8**	**+0.3**
BHHZ	**Black Hill Sta**	**54.87**	**137**	P	**P**	**10 31 17.2**	**+0.2**
OGWZ	**Otaki Gorge**	**54.90**	**138**	P	**P**	**10 31 17.4**	**+0.4**
MUGZ	**Murupara**	**54.91**	**135**	P	**P**	**10 31 19.6**	**+2.4**
CAW	**Cannon Point**	**54.98**	**139**	P	**P**	**10 31 17.8**	**+0.3**
BHW	**Baring Head**	**55.00**	**139**	P	**P**	**10 31 17.7**	**0.0**
BHW	**Baring Head**	**55.00**	**139**	P	**P**	**10 31 16.6**	**-1.1**
GRNR	**Gornyy**	**55.01**	**5**	⇓*i*P	**P**	**10 31 19.0**	**+1.4**
GRNR				*e*S	**S**	**10 39 03.2**	**+5.2**
GRNR				*e*SS	**SS**	**10 42 48.5**	**+6.3**
GRNR				pmax	pmax		
	comp=N,20nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,30nm,0.9s						
GRNR				smax	smax		
	comp=N,9.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,11µm,17.0s						
GRNR				MLR	MLR		
	comp=N,32µm,18.0s						
GRNR				MLR	MLR		
	comp=Z,40µm,18.0s						
BKZ	**Black Stump Fm**	**55.02**	**136**	P	**P**	**10 31 17.8**	**-0.3**
BKZ	**Black Stump Fm**	**55.02**	**136**	P	**P**	**10 31 17.4**	**-0.7**
BKZ				IAmb	IAmb	10 31 20.2	
	comp=Z,366nm,0.8s						
BKZ	**Black Stump Fm**	**55.02**	**136**	P	**P**	**10 31 18.7**	**+0.7**
URZ	**Urewera**	**55.05**	**135**	P	**P**	**10 31 18.0**	**-0.1**
URZ	**Urewera**	**55.05**	**135**	P	**P**	**10 31 17.1**	**-1.0**
URZ	**Urewera**	**55.05**	**135**	P	**P**	**10 31 18.4**	**+0.2**
TSZ	**Takapari Road**	**55.07**	**137**	P	**P**	**10 31 18.2**	**-0.1**
KWHZ	**Kaweka Forest**	**55.09**	**136**	P	**P**	**10 31 19.4**	**+0.9**
POWZ	**Post Office Ro**	**55.09**	**138**	P	**P**	**10 31 18.7**	**+0.2**
KRHZ	**Kereru**	**55.15**	**137**	P	**P**	**10 31 18.8**	**-0.1**
PNHZ	**Pukenui**	**55.16**	**137**	P	**P**	**10 31 18.9**	**-0.1**
HOWZ	**Holdsworth Sta**	**55.17**	**138**	P	**P**	**10 31 18.7**	**-0.3**
MSWZ	**Moikau Station**	**55.25**	**139**	P	**P**	**10 31 20.3**	**+0.8**
MSWZ	**Moikau Station**	**55.25**	**139**	P	**P**	**10 31 18.7**	**-0.8**
MTW	**Mount Morrison**	**55.29**	**139**	P	**P**	**10 31 19.5**	**-0.4**
MCHZ	**McNeill Hill**	**55.29**	**136**	P	**P**	**10 31 20.9**	**+1.0**
PRWZ	**Pori Road**	**55.31**	**138**	P	**P**	**10 31 20.0**	**0.0**
RAHZ	**Arahi**	**55.32**	**135**	P	**P**	**10 31 21.3**	**+1.2**
PLWZ	**Palliser**	**55.33**	**139**	P	**P**	**10 31 19.8**	**-0.4**
PLWZ	**Palliser**	**55.33**	**139**	P	**P**	**10 31 18.6**	**-1.6**
JBP	**Jabalpur**	**55.34**	**302**	*e*P	**P**	**10 31 20.0**	**-0.4**
JBP				*e*S	**S**	**10 39 00.5**	**-2.9**
RAGZ	**Rawiri**	**55.37**	**135**	P	**P**	**10 31 21.5**	**+0.9**
ULN	**Ulaanbaatar**	**55.38**	**342**	P	**P**	**10 31 21.0**	**+0.5**
ULN				pmax	pmax		
	comp=Z,853nm,1.0s						
ULN				MLR	MLR		
	comp=Z,36µm,20.0s						
ULN	**Ulaanbaatar**	**55.38**	**342**	⇑P	**P**	**10 31 21.0**	**+0.5**
ULN				⇑p	**sP**	**10 31 29.8**	**-0.2**
ULN	**Ulaanbaatar**	**55.38**	**342**	P	**P**	**10 31 21.0**	**+0.5**
ULN				IAmb	IAmb	10 31 31.4	
	comp=Z,853nm,1.0s						
MWZ	**Matawai**	**55.38**	**135**	P	**P**	**10 31 20.9**	**+0.3**
ARHZ	**Aropaoanui**	**55.41**	**136**	P	**P**	**10 31 22.0**	**+1.2**
TMWZ	**Te Maipa**	**55.52**	**138**	P	**P**	**10 31 21.9**	**+0.4**
TRWZ	**Traveller**	**55.53**	**139**	P	**P**	**10 31 22.6**	**+1.0**
BFZ	**Birch Farm**	**55.55**	**138**	P	**P**	**10 31 21.5**	**-0.2**
BFZ	**Birch Farm**	**55.55**	**138**	P	**P**	**10 31 20.5**	**-1.3**
BFZ				IAMs_20	IAMs_20	10 55 14.9	
	comp=Z,104µm,19.0s						
BFZ	**Birch Farm**	**55.55**	**138**	P	**P**	**10 31 21.9**	**+0.1**
SONM	**Songino Array**	**55.56**	**341**	P	**P**	**10 31 22.2**	**+0.5**
	comp=Z,104nm,1.0s,baz=152,slow=6.8,SNR=121						
SONM				PKP2bc		11 01 36.0	
	comp=Z,9.1nm,1.1s,baz=289,slow=2.3,SNR=6.4						
SONM				PKP2ab		11 01 59.0	
	comp=Z,14nm,1.2s,baz=273,slow=2.8,SNR=4.1						
SONM				P4KPbc		11 08 39.0	
	comp=Z,2.8nm,1.0s,baz=152,slow=6.4,SNR=8.7						
KAHZ	**Kahuranaki**	**55.57**	**137**	P	**P**	**10 31 22.4**	**+0.5**
MXZ	**Matakaoa Point**	**55.61**	**134**	P	**P**	**10 31 21.7**	**-0.5**
MXZ				IAmb	IAmb	10 31 45.2	
	comp=Z,512nm,1.3s						
MXZ				IAMs_20	IAMs_20	10 54 07.4	
	comp=Z,95µm,22.0s						
MCQ	**Macquarie Isla**	**55.64**	**160**	P	**P**	**10 31 23.5**	**+1.4**
	baz=56,SNR=15						
MCQ	**Macquarie Isla**	**55.64**	**160**	P	**P**	**10 31 22.6**	**+0.5**
MCQ				pmax	pmax		
	comp=Z,718nm,1.0s						
MCQ	**Macquarie Isla**	**55.64**	**160**	P	**P**	**10 31 22.6**	**+0.5**
MCQ				IAmb	IAmb	10 31 31.2	
	comp=Z,718nm,1.0s						
MCQ	**Macquarie Isla**	**55.64**	**160**	P	**P**	**10 31 23.0**	**+0.9**
TKGZ	**Te Karaka**	**55.65**	**135**	P	**P**	**10 31 23.5**	**+1.0**
RAO	**Raoul Island**	**55.69**	**123**	P	**P**	**10 31 21.8**	**-1.1**
RAO				pmax	pmax		
	comp=Z,722nm,1.1s						
RAO	**Raoul Island**	**55.69**	**123**	P	**P**	**10 31 21.8**	**-1.1**
RAO				IAmb	IAmb	10 31 49.4	
	comp=Z,722nm,1.1s						
RIGZ	**Rimuhau**	**55.70**	**135**	P	**P**	**10 31 23.4**	**+0.5**
TYV	**Tymovskoe**	**55.94**	**10**	*e*P	**P**	**10 31 26.2**	**+2.0**
TYV				*e*S	**S**	**10 39 15.3**	**+4.9**
TYV				pmax	pmax		
	comp=Z,194nm,1.8s						
TYV				pmax	pmax		
	comp=Z,9µm,6.0s						
TYV				smax	smax		
	comp=N,48nm,2.8s						
TYV				smax	smax		
	comp=N,5µm,8.1s						
TYV				smax	smax		
	comp=E,8µm,8.1s						
KAAM	**Kaadhehdhoo**	**56.59**	**273**	⇑P	**P**	**10 31 29.3**	**-0.3**
H08S2	**Diego Garcia H**	**56.73**	**264**	P	**P**	**10 31 32.6**	**+2.3**
	baz=50,slow=11,SNR=6.1						
H08S3	**Diego Garcia H**	**56.74**	**264**	P	**P**	**10 31 33.2**	**+2.8**
	baz=50,slow=11,SNR=6.7						
H08S1	**Diego Carcia H**	**56.75**	**264**	P	**P**	**10 31 32.6**	**+2.2**
	baz=50,slow=11,SNR=6.0						
DGAR	**Diego Garcia**	**56.77**	**264**	P	**P**	**10 31 30.6**	**-0.3**
DGAR				pmax	pmax		
	comp=Z,1µm,1.7s						
DGAR	**Diego Garcia**	**56.77**	**264**	P	**P**	**10 31 30.6**	**-0.3**
DGAR				IAmb	IAmb	10 31 57.0	
	comp=Z,1µm,1.6s						
JHNI	**Jhansi**	**57.45**	**304**	*e*P	**P**	**10 31 33.3**	**-2.2**
CIT	**Chita**	**57.54**	**348**	*e*P	**P**	**10 31 36.8**	**+1.1**
CIT				*e*		10 32 24.2	
CIT				*e*		10 35 08.4	
CIT				*e*S	**S**	**10 39 31.6**	**-0.2**
CIT				*e*		10 41 15.7	
CIT				pmax	pmax		
	comp=Z,4µm,3.2s						
BHPL	**Bhopal**	**57.55**	**301**	*e*P	**P**	**10 31 35.4**	**-0.9**
BHPL				IAmb	IAmb	10 31 45.3	
	comp=Z,387nm,1.1s						
ZEA	**Zeya**	**57.68**	**358**	*e*P	**P**	**10 31 37.1**	**+0.5**
ZEA				*e*S	**S**	**10 39 36.3**	**+2.9**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=N,70nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,120nm,0.9s						
ZEA				pmax	pmax		
	comp=E,400nm,3.4s						
ZEA				pmax	pmax		
	comp=N,3µm,3.7s						
ZEA				pmax	pmax		
	comp=Z,4µm,4.0s						
ZEA				smax	smax		
	comp=E,6µm,17.4s						
ZEA				smax	smax		
	comp=N,6µm,15.4s						
NKL	**Nikolayevsk**	**57.84**	**8**	*e*P	**P**	**10 31 37.1**	**-0.6**
NKL				*e*S	**S**	**10 39 35.7**	**+0.2**
NKL				pmax	pmax		
	comp=N,2.0nm,0.6s						
NKL				pmax	pmax		
	comp=Z,681nm,0.9s						
NKL				pmax	pmax		
	comp=E,3.0nm,1.2s						
NKL				smax	smax		
	comp=N,3.0nm,1.0s						
NKL				smax	smax		
	comp=E,3.0nm,1.0s						
GOA	**Goa**	**58.40**	**291**	*e*P	**P**	**10 31 41.7**	**-0.5**
KAD	**Karad**	**58.54**	**293**	*e*P	**P**	**10 31 40.9**	**-2.4**
KNTN	**Kanton**	**58.73**	**91**	⇓P	**P**	**10 31 46.1**	**+1.4**
KNTN				⇓p	**pP**	**10 31 49.0**	**-3.1**
KNTN	**Kanton**	**58.73**	**91**	P	**P**	**10 31 42.9**	**-1.8**
KNTN				IAmb	IAmb	10 31 57.3	
	comp=Z,1µm,1.4s						
KNTN	**Kanton**	**58.73**	**91**	P	**P**	**10 31 46.3**	**+1.6**
ZAK	**Zakamensk**	**58.78**	**341**	*e*P	**P**	**10 31 45.0**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,535nm,1.4s						
POO	**Poona**	**59.19**	**294**	*e*P	**P**	**10 31 47.5**	**-0.3**
POO	**Poona**	**59.19**	**294**	*i* S	**S**	**10 39 48.0**	**-6.4**
SKR	**Severo-Kuril's**	**59.21**	**19**	*e*P	**P**	**10 31 50.1**	**+2.8**
SKR				*e*PPP	PPP	10 34 01.0	
SKR				*e*S	**S**	**10 39 55.2**	**+1.9**
SKR				*e*SSS	SSS	10 43 54.1	
SKR				pmax	pmax		
	comp=Z,275nm,1.8s						
SKR				pmax	pmax		
	comp=Z,4µm,5.1s						
SKR				pmax	pmax		
	comp=Z,6µm,4.3s						
SKR				MLR	MLR		
	comp=Z,12µm,17.0s						
SKR				MLR	MLR		
	comp=Z,11µm,16.0s						
TLY	**Talaya**	**59.79**	**342**	LR	LR	11 01 00.2	
	comp=Z,21µm,19.6s,baz=142,slow=39						
TLY	**Talaya**	**59.79**	**342**	*c i*P	**P**	**10 31 52.2**	**+0.9**
TLY				*e*S	**S**	**10 40 00.8**	**-0.1**
TLY				*e*		10 41 43.8	
TLY				*e*SSS	SSS	10 46 33.4	
TLY				pmax	pmax		
	comp=Z,2µm,1.6s						
TLY				MLR	MLR		
	comp=Z,49µm,18.0s						
TLY	**Talaya**	**59.79**	**342**	P	**P**	**10 31 52.1**	**+0.8**
TLY				IAmb	IAmb	10 32 11.0	
	comp=Z,979nm,1.6s						
AYAN	**Aya Nagar**	**59.81**	**306**	*e*P	**P**	**10 31 50.8**	**-1.1**
NDI	**New Delhi**	**59.82**	**307**	*e*P	**P**	**10 31 50.8**	**-1.1**
IRK	**Irkutsk**	**60.08**	**342**	*e*P	**P**	**10 31 54.7**	**+1.4**
IRK				*e*		10 40 12.8	
IRK				pmax	pmax		
	comp=Z,3µm,2.6s						
KUDL	**Kundal**	**60.19**	**306**	*e*P	**P**	**10 31 53.0**	**-1.5**
MOY	**Mondy**	**60.64**	**340**	*e*P	**P**	**10 31 58.4**	**+1.1**
MOY				pmax	pmax		
	comp=Z,3µm,3.3s						
WMQ	**Urumqi**	**60.70**	**326**	P	**P**	**10 31 58.1**	**+0.3**
WMQ				pP	sP	10 32 06.3	-1.1
WMQ				sP	pwP	10 32 12.6	+2.2
WMQ				S	**S**	**10 40 12.2**	**-0.9**
WMQ				ScS	**ScS**	**10 41 47.7**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,900nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,13µm,4.7s						
WMQ				LR	LR		
	comp=Z,47µm,18.3s						
WMQ				LR	LR		
	comp=Z,31µm,21.5s						
WMQ				LR	LR		
	comp=Z,58µm,22.7s						
SMLA	**Simla**	**60.88**	**309**	*e*P	**P**	**10 31 58.7**	**-0.5**
SMLA				IAmb	IAmb	10 32 11.9	
	comp=Z,890nm,0.8s						
NIUE	**Niue**	**60.93**	**109**	P	**P**	**10 31 60.0**	**+0.3**
	baz=61,SNR=4.8						
NIUE	**Niue**	**60.93**	**109**	P	**P**	**10 31 59.8**	**+0.1**
NIUE	**Niue**	**60.93**	**109**	P	**P**	**10 32 01.1**	**+1.4**
AJM	**Ajmer**	**61.08**	**303**	*e*P	**P**	**10 31 57.4**	**-3.3**
BHK	**Bhakra**	**61.59**	**309**	*e*P	**P**	**10 32 04.7**	**+0.7**
PEA0B	**Petropavlovsk-**	**61.79**	**19**	⇓*i*P	**P**	**10 32 06.0**	**+1.1**
PEA0B	**Petropavlovsk-**	**61.79**	**19**	P	**P**	**10 32 04.6**	**-0.3**
PETK	**Petropavlovsk-**	**61.79**	**19**	P	**P**	**10 32 06.2**	**+1.4**
	comp=Z,118nm,0.8s,baz=206,slow=9.9,SNR=38						
PETK				LR	LR	10 55 15.2	
	comp=Z,70µm,21.8s,baz=204,slow=32						
PETK				PKPPKP		11 01 14.2	
	comp=Z,9.4nm,1.0s,baz=130,slow=2.3,SNR=4.3						
PETK	**Petropavlovsk-**	**61.79**	**19**	P	**P**	**10 32 05.7**	**+0.8**
DHRM	**DHARAMSHALA**	**62.03**	**310**	*e*P	**P**	**10 32 06.6**	**-0.6**
DHRM				IAmb	IAmb	10 32 15.1	
	comp=Z,597nm,0.6s						
PET	**Petropavlovsk**	**62.03**	**19**	*e*P	**P**	**10 32 06.9**	**+0.4**
PET				*e*		10 32 47.7	
PET				*e*		10 34 27.9	
PET				*e*S	**S**	**10 40 27.8**	**-1.6**
PET				*e*		10 41 50.9	
PET				*e*SS	**SS**	**10 44 39.3**	**+6.9**
PET				pmax	pmax		
	comp=Z,573nm,1.2s						
PET				pmax	pmax		
	comp=Z,14µm,18.0s						
PET				pmax	pmax		
	comp=Z,14µm,10.3s						
PET				smax	smax		
	comp=E,10µm,17.2s						
PET				smax	smax		
	comp=E,12µm,14.2s						
PET	**Petropavlovsk**	**62.03**	**19**	P	**P**	**10 32 06.1**	**-0.4**
PET				IAmb	IAmb	10 32 31.8	
	comp=Z,996nm,1.5s						
PET	**Petropavlovsk**	**62.03**	**19**	P	**P**	**10 32 09.0**	**+2.5**
BOD	**Bodaibo**	**62.99**	**351**	*e*P	**P**	**10 32 13.5**	**+0.7**
BOD				pmax	pmax		
	comp=Z,981nm,1.7s						
CASY	**Casey**	**63.45**	**188**	P	**P**	**10 32 15.0**	**-0.7**
CASY				IAmb	IAmb	10 32 19.9	
	comp=Z,460nm,1.1s						
CASY	**Casey**	**63.45**	**188**	IAMs_20	IAMs_20	10 55 36.6	
	comp=Z,61µm,22.0s						
JOHN	**Johnston Islan**	**63.73**	**69**	IAMs_20	IAMs_20	10 57 25.6	
	comp=Z,58µm,22.0s						
ZSN	**Zaisan**	**64.55**	**328**	⇑*i*P	**P**	**10 32 23.4**	**0.0**
	baz=328						
ZSN				*e*S	**S**	**10 41 01.2**	**+0.1**
	baz=328						
ZSN	**Zaisan**	**64.55**	**328**	*c i*P	**P**	**10 32 23.4**	**0.0**
ZSN				*e*S	**S**	**10 41 01.2**	**+0.1**

DGZ	Jazzator, Alta	64.73	331	c iP	P	10 32 24.1	-0.6
DGZ				pmax	pmax		
	comp=Z,1µm,1.1s						
DGZ				MLR	MLR		
	comp=Z,54µm,23.0s						
NIL	Nilore	64.94	310	P	P	10 32 25.5	-0.7
NIL				pmax	pmax		
	comp=Z,2µm,2.0s						
NIL	Nilore	64.94	310	P	P	10 32 25.5	-0.7
SHLS	Shalkode	65.12	322	eP	P	10 32 25.7	-1.7
	baz=322						
SHLS				eS	S	10 41 05.5	-3.1
	baz=322						
SHLS	Shalkode	65.12	322	eP	P	10 32 25.6	-1.7
SHLS				eS	S	10 41 05.5	-3.1
PDGK	Podgornoye	65.20	322	P	P	10 32 27.7	-0.1
UZB	Uzynbulak	65.39	322	⇑iP	P	10 32 29.1	0.0
	baz=322						
UZB				eS	S	10 41 11.7	-0.3
	baz=322						
UZB	Uzynbulak	65.39	322	c iP	P	10 32 29.1	0.0
UZB				eS	S	10 41 11.6	-0.3
TARG	Taragay, Kyrgy	65.42	320	IAmb	IAmb	10 32 49.4	
	comp=Z,358nm,1.1s						
MK31	Makanchi Array	65.53	326	eP	P	10 32 29.8	0.0
MKAR	Makanchi Array	65.53	326	P	P	10 32 29.7	-0.1
	comp=Z,317nm,0.7s,baz=114,slow=7.5,SNR=493						
MKAR				PKPPKP	P'P'df	11 01 06.3	-2.6
	comp=Z,3.3nm,0.8s,baz=300,slow=2.4,SNR=5.7						
MKAR				P4KPbc		11 09 23.5	
	comp=Z,2.9nm,0.8s,baz=122,slow=4.1,SNR=9.4						
KSH	Kashi	65.55	317	P	P	10 32 30.8	+0.7
KSH				pP	sP	10 32 40.8	+1.0
KSH				sP	pwP	10 32 45.6	+2.8
KSH				PP	PP	10 34 58.6	+4.0
KSH				S	S	10 41 11.1	-2.8
KSH				sS	sS	10 41 27.3	+1.9
KSH				pmax	pmax		
	comp=Z,250nm,1.2s						
KSH				pmax	pmax		
	comp=Z,11µm,8.4s						
KSH				LR	LR		
	comp=Z,19µm,23.0s						
KSH				LR	LR		
	comp=Z,23µm,22.8s						
KSH				LR	LR		
	comp=Z,38µm,25.1s						
MA2	Magadan	65.71	12	d iP	P	10 32 32.4	+1.8
MA2				pmax	pmax		
	comp=Z,954nm,1.4s						
MA2				MLR	MLR		
	comp=Z,18µm,18.0s						
MA2	Magadan	65.71	12	P	P	10 32 31.1	+0.5
MA2				IAMs_20	IAMs_20	11 00 02.6	
	comp=Z,70µm,20.0s						
MA2	Magadan	65.71	12	P	P	10 32 32.9	+2.3
MAKZ	Makanchi	65.72	326	P	P	10 32 31.1	+0.1
MAKZ				pmax	pmax		
	comp=Z,1µm,1.3s						
MAKZ				MLR	MLR		
	comp=Z,17µm,19.0s						
MAKZ	Makanchi	65.72	326	P	P	10 32 31.1	+0.1
SATY	Saty	65.73	321	⇑iP	P	10 32 31.5	+0.3
	comp=Z,280nm,1.0s,baz=321						
SATY				eS	S	10 41 16.3	+0.3
	baz=321						
SATY	Saty	65.73	321	c iP	P	10 32 31.5	+0.3
SATY				eS	S	10 41 16.3	+0.3
SATY				pmax	pmax		
	comp=Z,280nm,1.0s						
YAK	Yakutsk	65.97	0	c iP	P	10 32 32.6	+0.4
YAK				e*PP	pwP	10 32 46.5	+1.8
YAK				e		10 33 00.4	
YAK				e		10 35 01.7	
YAK				eS	S	10 41 17.7	-0.2
YAK				e*SS	sS	10 41 44.7	+15
YAK				e		10 42 26.3	
YAK				eSS	SS	10 45 32.0	-1.5
YAK				pmax	pmax		
	comp=Z,1µm,0.9s						
YAK				pmax	pmax		
	comp=E,46nm,0.9s						
YAK				pmax	pmax		
	comp=N,214nm,0.9s						
YAK				pmax	pmax		
	comp=Z,416nm,1.8s						
YAK				pmax	pmax		
	comp=N,378nm,1.9s						
YAK				pmax	pmax		
	comp=E,115nm,1.6s						
YAK				smax	smax		
	comp=N,7µm,4.4s						
YAK				smax	smax		
	comp=E,6µm,4.2s						
YAK				MLR	MLR		
	comp=Z,71µm,22.0s						
YAK				MLR	MLR		
	comp=N,45µm,22.0s						
YAK				MLR	MLR		
	comp=E,19µm,21.0s						
YAK	Yakutsk	65.97	0	P	P	10 32 32.3	+0.1
YAK				IAMs_20	IAMs_20	10 58 55.7	
	comp=Z,76µm,22.0s						
KDJ	Kajisay	66.02	320	P	P	10 32 33.7	+0.5
KDJ				pmax	pmax		
	comp=Z,302nm,1.0s						
KDJ	Kajisay	66.02	320	P	P	10 32 33.7	+0.5
KDJ				IAmb	IAmb	10 32 52.5	
	comp=Z,302nm,0.9s						
MDOK	Medeo	66.63	321	i P	P	10 32 37.2	+0.1
	baz=321						
MDOK				eS	S	10 41 27.3	+0.2
	baz=321						
MDOK	Medeo	66.63	321	i P	P	10 32 37.2	+0.1
MDOK				eS	S	10 41 27.3	+0.2
TNSS	Tian-Shan	66.63	321	i P	P	10 32 37.6	+0.3
	baz=321						
ULHL	Ulahol	66.69	320	P	P	10 32 40.8	+3.3
	SNR=36						
ARXS	Arharly	66.69	322	eP	P	10 32 37.0	-0.3
AAA	Alma-Ata	66.74	321	eP	P	10 32 37.9	+0.3
	comp=Z,234nm,1.0s,baz=321						
AAA				eS	S	10 41 28.4	+0.2
	baz=321						
AAA				LR	LR	10 59 52.8	
	comp=Z,20µm,18.1s,baz=321						
AAA	Alma-Ata	66.74	321	eP	P	10 32 37.9	+0.3
AAA				eS	S	10 41 28.4	+0.2
AAA				pmax	pmax		
	comp=Z,234nm,1.0s						
AAA				MLR	MLR		
	comp=Z,20µm,18.0s						
TDK	Taldyqorghan	66.76	323	eP	P	10 32 38.0	+0.3
	comp=Z,259nm,1.0s,baz=323						
TDK				eS	S	10 41 28.7	+0.4
	baz=323						
TDK	Taldyqorghan	66.76	323	eP	P	10 32 37.9	+0.3
TDK				eS	S	10 41 28.6	+0.4
TDK				pmax	pmax		
	comp=Z,259nm,1.0s						
BOOM	Boomskoye usch	67.00	320	IAmb	IAmb	10 32 58.5	
	comp=Z,401nm,1.1s						
PAF	Port-aux-Franc	67.19	218	P	P	10 32 40.7	+0.4
PAF				pmax	pmax		
	comp=Z,612nm,1.6s						
PAF	Port-aux-Franc	67.19	218	P	P	10 32 40.7	+0.4
PAF				IAmb	IAmb	10 33 04.5	
	comp=Z,612nm,1.6s						
TKM2	Tokmak 2	67.43	320	P	P	10 32 42.2	-0.1
	SNR=310						
TKM2	Tokmak 2	67.43	320	i P	P	10 32 41.9	-0.3
TKM2				pmax	pmax		
	comp=Z,304nm,0.8s						
KUU	Kurty	67.44	321	eP	P	10 32 42.0	-0.1
	comp=Z,607nm,0.9s,baz=321						
KUU				eS	S	10 41 36.5	-0.2
	baz=321						
KUU	Kurty	67.44	321	eP	P	10 32 41.9	-0.1
KUU				eS	S	10 41 36.4	-0.2
KUU				pmax	pmax		
	comp=Z,607nm,0.9s						
KBK	Karagaybulak	67.72	320	P	P	10 32 44.6	+0.6
	SNR=67						
UCH	Uchtor	67.80	319	P	P	10 32 45.3	+0.4
	SNR=195						
SMY	Shemya	67.99	27	P	P	10 32 45.4	+0.2
SMY				pmax	pmax		
	comp=Z,702nm,1.1s						
SMY	Shemya	67.99	27	P	P	10 32 45.4	+0.2
SMY				IAmb	IAmb	10 32 55.1	
	comp=Z,702nm,1.1s						
FRU1	Bishkek	68.00	320	P	P	10 32 45.9	+0.2
FRU1				pmax	pmax		
	comp=Z,210nm,1.0s						
FRU1	Bishkek	68.00	320	P	P	10 32 45.9	+0.2
AAK	Ala-Archa	68.01	319	S	S	10 41 43.4	-0.3
	comp=Z,3.2nm,0.8s,baz=331,slow=19,SNR=1.2						
AAK	Ala-Archa	68.01	319	P	P	10 32 46.2	+0.3
	SNR=128						
AAK	Ala-Archa	68.01	319	i P	P	10 32 46.1	+0.3
	SNR=174						
AAK	Ala-Archa	68.01	319	c iP	P	10 32 46.3	+0.5
AAK				pmax	pmax		
	comp=Z,778nm,1.2s						
AAK				MLR	MLR		
	comp=Z,112µm,26.0s						
AAK	Ala-Archa	68.01	319	P	P	10 32 46.0	+0.2
AAK				IAmb	IAmb	10 33 05.1	
	comp=Z,519nm,1.3s						
CHMS	Chumysh	68.01	320	P	P	10 32 45.5	-0.2
	SNR=42						
AML	Almayashu	68.30	319	P	P	10 32 48.2	+0.3
	SNR=285						
AML	Almayashu	68.30	319	i P	P	10 32 48.2	+0.3
	SNR=292						
USP	Ospenovka	68.30	320	P	P	10 32 47.4	-0.1
	SNR=382						
SGDS	Sogindy	68.31	320	eP	P	10 32 46.7	-0.8
	baz=320						
SGDS				eS	S	10 41 45.9	-1.1
	baz=320						
SGDS	Sogindy	68.31	320	eP	P	10 32 47.1	-0.5
DRK	Karamyk	68.41	315	IAmb	IAmb	10 33 21.0	
	comp=Z,280nm,0.9s						
EKS2	Erkin-Say	68.49	319	P	P	10 32 49.2	+0.4
	SNR=197						
KBL	Kabul	68.51	310	P	P	10 32 48.5	-0.7
KBL				pmax	pmax		
	comp=Z,358nm,1.1s						
KBL	Kabul	68.51	310	P	P	10 32 49.8	+0.6
	SNR=148						
KBL	Kabul	68.51	310	P	P	10 32 48.5	-0.7
KBL				IAmb	IAmb	10 33 09.2	
	comp=Z,358nm,1.1s						
SEM	Semipalatinsk	68.77	329	⇑iP	P	10 32 49.8	-0.7
	baz=329						
SEM	Semipalatinsk	68.77	329	c iP	P	10 32 49.7	-0.7
ZALV	Zalesovo Beam	68.78	334	P	P	10 32 49.4	-0.7
	comp=Z,384nm,0.9s,baz=119,slow=4.7,SNR=214						
ZALV				PKP2bc		11 00 50.8	
	comp=Z,3.0nm,0.8s,baz=298,slow=3.2,SNR=4.7						
ZALV				P4KPbc		11 09 33.2	
	comp=Z,0.4nm,0.3s,baz=111,slow=6.3,SNR=1.5						
BTK	Batken	69.34	316	IAmb	IAmb	10 33 12.9	
	comp=Z,928nm,1.5s						
BTLS	Baital	69.44	321	eP	P	10 32 54.0	-0.5
	baz=322						
BTLS	Baital	69.44	321	eP	P	10 32 54.0	-0.5
AMKA	Amchitka	69.67	31	P	P	10 32 54.6	-1.1
KURBB	Kurchatov Arra	69.79	328	P	P	10 32 56.4	-0.1
	comp=Z,921nm,0.9s,baz=122,slow=5.5,SNR=416						
KURBB				S	S	10 42 06.1	+2.0
	comp=Z,9.5nm,1.0s,baz=133,slow=12,SNR=6.4						
KURK	Kurchatov	69.79	328	P	P	10 32 56.4	-0.1
KURK				S	S	10 42 06.1	+2.0
KURK	Kurchatov	69.79	328	P	P	10 32 56.4	-0.1
IUG	Iuzhnay	70.75	317	⇑iP	P	10 33 02.5	-0.2
	baz=317						
IUG				eS	S	10 42 15.8	-0.2
	baz=317						
IUG	Iuzhnay	70.75	317	c iP	P	10 33 02.5	-0.2
IUG				eS	S	10 42 15.7	-0.2
KK31	Karatay Array	70.83	318	P	P	10 33 02.3	-0.8
KKAR	Karatay Array	70.83	318	P	P	10 33 02.3	-0.8
KKAR	Karatay Array	70.83	318	P	P	10 33 02.3	-0.8
TAS	Tashkent	70.92	316	P	P	10 33 03.8	+0.1
TAS				pmax	pmax		
	comp=Z,954nm,1.3s						
TAS	Tashkent	70.92	316	P	P	10 33 03.8	+0.1
BRLS	Borolday	71.25	318	eP	P	10 33 05.2	-0.4
	baz=318						
BRLS				eS	S	10 42 21.1	-0.4
	baz=318						
BRLS	Borolday	71.25	318	eP	P	10 33 05.2	-0.4
BRLS				eS	S	10 42 21.1	-0.4
KIWB	Kanaga Island	71.77	32	P	P	10 33 07.6	-0.9
ADK	Adak	72.03	32	P	P	10 33 10.4	+0.3
ADK				pmax	pmax		
	comp=Z,380nm,0.9s						
ADK	Adak	72.03	32	P	P	10 33 10.4	+0.3
ADK				IAmb	IAmb	10 33 19.6	
	comp=Z,380nm,0.9s						
ADK	Adak	72.03	32	IAMs_20	IAMs_20	11 00 12.8	
	comp=Z,55µm,21.0s						
ADK	Adak	72.03	32	P	P	10 33 11.0	+0.9
BRZS	Berezniki	72.64	326	⇑iP	P	10 33 14.0	+0.2
	comp=Z,226nm,1.0s,baz=326						
BRZS	Berezniki	72.64	326	c iP	P	10 33 14.0	+0.2
BRZS				pmax	pmax		
	comp=Z,226nm,1.0s						
JLN	Jalan Bani Buh	73.20	294	P	P	10 33 18.2	+0.5
	SNR=14						
RER	Riviere de l'E	73.33	249	P	P	10 33 18.2	-0.4
ATKA	Atka Island	73.51	32	P	P	10 33 18.5	-0.3
ATKA	Atka Island	73.51	32	P	P	10 33 20.4	+1.5
WBK	Wadi Bani Khal	73.70	295	P	P	10 33 21.6	+0.9
	SNR=14						
MSEY	Mahe Island	73.72	266	P	P	10 33 20.9	0.0
WSAR	Wadi Sarin	74.13	295	P	P	10 33 23.7	+0.6
	SNR=35						
JMDO	Jabal Madar	74.43	294	P	P	10 33 25.1	+0.2
	SNR=26						
DQM	DQM	74.50	292	P	P	10 33 26.0	+0.6
	SNR=22						
SMDO	Samad	74.62	295	P	P	10 33 26.2	+0.1
	SNR=28						
BIDO	Bidbid	74.64	296	P	P	10 33 26.7	+0.6
	SNR=49						
BSY	Bisya	75.33	295	P	P	10 33 31.0	+0.9
	SNR=24						
KIP	Kipapa	75.35	67	⇑eP	P	10 33 30.9	+0.7
KIP				pmax	pmax		
	comp=Z,1µm,1.6s						
KIP	Kipapa	75.35	67	P	P	10 33 30.0	-0.2
KIP	Kipapa	75.35	67	P	P	10 33 32.7	+2.5
KIP	Kipapa	75.35	67	P	P	10 33 33.6	+3.4
BVAR	Borovoye Array	75.35	328	P	P	10 33 29.8	+0.2
	comp=Z,489nm,0.9s,baz=177,slow=10,SNR=216						
BVAR				P4KPbc		11 10 07.9	
	comp=Z,0.9nm,0.8s,baz=190,slow=7.3,SNR=3.7						
HOQ	Hoqain	75.38	296	P	P	10 33 31.6	+1.2
	SNR=46						
BRVK	Borovoye	75.42	328	c iP	P	10 33 29.7	-0.3
BRVK				pmax	pmax		
	comp=Z,839nm,1.0s						
BRVK	Borovoye	75.42	328	P	P	10 33 30.0	0.0
BRVK				IAmb	IAmb	10 33 33.8	
	comp=Z,681nm,0.9s						
TIXI	Tiksi	75.63	360	P	P	10 33 30.6	-0.1
	baz=162,slow=6.0						
TIXI	Tiksi	75.63	360	P	P	10 33 30.0	-0.8
TIXI				IAmb	IAmb	10 33 44.8	
	comp=Z,620nm,1.3s						
SHAO	Shalim	75.97	290	i P	P	10 33 33.6	-0.2
	SNR=11						
SHAO	Shalim	75.97	290	P	P	10 33 34.7	+0.9
	SNR=9.9						
ARQ	Araqi	76.05	295	P	P	10 33 36.0	+1.7
	SNR=45						
SOHO	SOHO	76.19	296	i P	P	10 33 35.1	+0.1
	SNR=98						
SBA	Scott Base	76.24	172	P	P	10 33 34.6	+0.4
SBA				pmax	pmax		
	comp=Z,2µm,2.0s						
SBA	Scott Base	76.24	172	P	P	10 33 34.6	+0.4
SBA				IAmb	IAmb	10 33 52.1	
	comp=Z,2µm,2.0s						
SBA	Scott Base	76.24	172	IAMs_20	IAMs_20	11 04 21.2	
	comp=Z,44µm,22.0s						
BILL	Bilibino	76.46	13	d iP	P	10 33 35.3	-0.3
BILL				e*PP	PcP	10 33 46.5	-0.7
BILL				e		10 33 48.5	
BILL				ePPP	PPP	10 38 14.3	
BILL				eS	S	10 43 15.7	-3.5
BILL				eSS	SS	10 48 14.1	-0.2
BILL				eSSS	SSS	10 51 34.0	
BILL				MLR	MLR		
	comp=Z,44µm,20.0s						
BILL	Bilibino	76.46	13	P	P	10 33 35.0	-0.6
BILL				IAMs_20	IAMs_20	11 07 13.5	
	comp=Z,44µm,20.0s						
DMTO	DMTO	76.56	289	P	P	10 33 36.8	-0.4
	SNR=7.6						
MDH	Madha	76.62	297	i P	P	10 33 36.4	-1.0
	SNR=8.9						
UOSS	Minazif	76.64	297	i P	P	10 33 36.3	-1.2
	SNR=36						
UOSS	Minazif	76.64	297	P	P	10 33 36.6	-0.9
HATD	Hatta, Dubai	76.68	297	i P	P	10 33 37.4	-0.3
	SNR=44						
HATD	Hatta, Dubai	76.68	297	P	P	10 33 38.0	+0.2
	SNR=40						
SOCY	Socotra	76.71	283	P	P	10 33 37.5	-0.7
	SNR=18						
SOCY	Socotra	76.71	283	P	P	10 33 37.0	-1.1
ASHO	Ashiyiah	76.72	296	i P	P	10 33 37.9	-0.2
	SNR=56						
ASHO	Ashiyiah	76.72	296	P	P	10 33 38.2	+0.2
	SNR=39						
BANOM	Banah	76.74	298	i P	P	10 33 38.1	0.0
	SNR=21						
BANOM	Banah	76.74	298	P	P	10 33 38.6	+0.5
	SNR=13						
MSFE	Esma-Masafi	76.75	297	i P	P	10 33 37.9	-0.3
	SNR=62						
NIKH	Nikolski High	76.75	33	P	P	10 33 37.6	+0.1
	baz=244,SNR=6.0						
NIKH				S	S	10 43 23.6	+0.6
	baz=244						
MASF	Masafi	76.76	297	P	P	10 33 38.8	+0.6
	SNR=25						
ALNE	Al Ain	76.88	296	i P	P	10 33 38.8	-0.1
	SNR=33						
ALNE	Al Ain	76.88	296	P	P	10 33 39.1	+0.2
	SNR=60						
SHME	Shamm	76.90	298	i P	P	10 33 38.9	-0.1
	SNR=21						
SHME	Shamm	76.90	298	P	P	10 33 39.4	+0.4
	SNR=15						
NAZ	Nazwa, Dubai	77.13	297	i P	P	10 33 39.5	-0.8
	SNR=31						
NAZ	Nazwa, Dubai	77.13	297	P	P	10 33 40.3	+0.1
	SNR=25						
FAQ	Al Faqa, Dubai	77.14	296	i P	P	10 33 39.2	-1.2
	SNR=44						
FAQ	Al Faqa, Dubai	77.14	296	P	P	10 33 40.5	+0.1
	SNR=24						
RBK	Rabkut	77.22	289	P	P	10 33 41.0	0.0
	SNR=14						
UMQ	Umm Al-Quwin	77.23	297	i P	P	10 33 41.7	+0.9
	SNR=9.3						
UMQ	Umm Al-Quwin	77.23	297	P	P	10 33 42.2	+1.4
	SNR=8.5						
MLOA	Mauna Loa Obse	77.29	69	P	P	10 33 41.6	-0.2
ASUD	Al Ashush, Dub	77.36	296	i P	P	10 33 42.1	+0.5
	SNR=51						
ASUD	Al Ashush, Dub	77.36	296	P	P	10 33 42.2	+0.6
	SNR=28						
POHA	Pohakuloa	77.36	69	P	P	10 33 41.4	-0.6
MAW	Mawson	77.41	201	P	P	10 33 40.4	-0.6
	comp=Z,72nm,0.6s,baz=66,slow=7.1,SNR=52						
MAW				PKKPbc	PKKPbc	10 52 47.9	-1.0
	comp=Z,5.5nm,0.7s,baz=317,slow=3.4,SNR=5.6						
MAW				LR	LR	11 04 08.0	
	comp=Z,28µm,21.2s,baz=65,slow=33						
MAW	Mawson	77.41	201	P	P	10 33 41.0	0.0
	baz=77,SNR=37						
MAW	Mawson	77.41	201	P	P	10 33 40.1	-0.8
DOK	Doka	77.46	290	P	P	10 33 42.1	-0.1
	SNR=19						
AJN	Ajban	77.65	296	i P	P	10 33 43.2	0.0
	SNR=14						
AJN	Ajban	77.65	296	P	P	10 33 43.5	+0.3
	SNR=25						
WHFO	Wadi Hawf	77.69	289	P	P	10 33 43.1	-0.5
	SNR=10						
SPIA	Saint Paul Isl	77.92	29	P	P	10 33 45.0	+1.0
	baz=242						
GEYT	Alibeck	77.95	310	P	P	10 33 45.0	+0.3
	comp=Z,118nm,0.9s,baz=132,slow=4.2,SNR=78						
GEYT	Alibeck	77.95	310	P	P	10 33 45.3	+0.7
GYA0B	ALIBECK ARRAY	77.95	310	P	P	10 33 45.1	+0.4
ABTO	Aybut	78.06	289	P	P	10 33 45.3	-0.4
	SNR=27						
UNV	Unalaska Valle	78.40	33	P	P	10 33 46.8	+0.1
UNV	Unalaska Valle	78.40	33	P	P	10 33 47.1	+0.4
	baz=246,SNR=9.2						
UNV				S	S	10 43 39.9	-0.8
	baz=246						
CRZF	Crozet Islands	78.47	224	P	P	10 33 46.6	-0.7
NRIK	Noril'sk	78.65	346	P	P	10 33 48.0	+0.2
	comp=Z,197nm,0.9s,baz=134,slow=5.5,SNR=85						
NRIK				S	S	10 43 41.0	-2.0
	comp=Z,4.5nm,0.7s,baz=336,slow=20,SNR=1.7						
NRIK				PKPPKP	P'P'df	11 00 42.4	-2.8
	comp=Z,0.9nm,0.4s,baz=34,slow=3.6,SNR=1.4						
NRIK				LR	LR	11 10 26.4	
	comp=Z,63µm,21.1s,baz=132,slow=37						
NRIK	Noril'sk	78.65	346	P	P	10 33 48.0	+0.2
NRIK				IAmb	IAmb	10 33 58.5	
	comp=Z,849nm,1.1s						
MZR	Muzera	78.75	294	i P	P	10 33 49.1	-0.3
	SNR=49						
MZR	Muzera	78.75	294	P	P	10 33 49.5	+0.2
	SNR=41						
SBV	Sambava	78.87	257	P	P	10 33 49.8	-0.4
	SNR=8.3						
SBV	Sambava	78.87	257	P	P	10 34 00.9	+11
AKUT	Akutan	78.91	33	P	P	10 33 49.9	+0.4
AB31	Akbulak array	79.93	321	i P	P	10 33 54.4	-0.8
ABKAR	Akbulak array	79.93	321	P	P	10 33 54.8	-0.4
ABKAR	Akbulak array	79.93	321	P	P	10 33 54.9	-0.3
ABKAR				IAmb	IAmb	10 34 06.6	
	comp=Z,905nm,1.1s						
PAE	Paea	80.17	107	eP	P	10 33 58.8	+1.6
PPT2	Papeete2	80.17	107	eP	P	10 33 58.9	+1.6
	comp=Z,490nm,1.2s						
PPT2	Papeete2	80.17	107	eS	S	10 44 03.0	+1.8
	comp=Z,52µm,27.0s						
PPT2	Papeete2	80.17	107	eLQ	LQ	10 55 32.4	
	comp=Z,44µm,33.0s						
PPT2				eLR	LR	10 59 04.7	
	comp=Z,29µm,23.8s						
PPT	Papeete	80.18	107	P	P	10 33 57.7	+0.5
	comp=Z,222nm,1.0s,baz=350,slow=6.1,SNR=11						
PPT				LR	LR	11 08 07.5	
	comp=Z,9µm,21.1s,baz=268,slow=35						
PPTF	Pamatai, Papee	80.19	107	P	P	10 34 00.0	+2.6
TBI	Tubuai	80.21	113	eP	P	10 33 59.2	+1.9
	comp=Z,698nm,1.2s						
TBI	Tubuai	80.21	113	eS	S	10 44 03.1	+1.9
	comp=Z,35µm,28.2s						
TBI	Tubuai	80.21	113	eLQ	LQ	10 55 36.6	
	comp=Z,36µm,30.5s						
TBI				eLR	LR	10 59 00.7	
	comp=Z,34µm,37.2s						
TIAR	Tiarei	80.40	107	eP	P	10 34 00.1	+1.7
FALS	False Pass	80.46	33	P	P	10 33 58.3	+0.4
FALS				IAmb	IAmb	10 34 03.7	
	comp=Z,512nm,1.0s						
FALS	False Pass	80.46	33	P	P	10 33 57.9	0.0
	baz=249,SNR=7.9						
FALS				S	S	10 44 00.6	-1.9
	baz=249						
GAMB	Gambell	80.49	23	IAmb	IAmb	10 34 05.3	
	comp=Z,810nm,1.5s						
GAMB	Gambell	80.49	23	P	P	10 33 58.7	+0.9
	baz=240,SNR=8.6						
GAMB				S	S	10 44 03.2	+0.8
	baz=240						
SLWR	Sila	80.54	295	P	P	10 33 59.3	+0.3
KHOR	Al-Khor Airpor	80.94	297	P	P	10 34 01.1	0.0
TRNA	Turayna	81.07	296	P	P	10 34 02.0	+0.2
ABPO	Ambohimpanom	81.32	251	P	P	10 34 01.6	-1.9
SHMA	Al-Shehemyia	81.46	297	P	P	10 34 04.1	+0.2
AKTO	Aktyubinsk	81.47	322	P	P	10 34 03.3	-0.1
	comp=Z,233nm,0.8s,baz=99,slow=6.0,SNR=207						
AKTO				S	S	10 44 11.2	-2.2
	comp=Z,8.7nm,1.0s,baz=229,slow=19,SNR=3.4						

MEH	Mehetia	81.61	107	*e*P	P	10 34 06.2	+1.3
	comp=Z,374nm,1.5s						
VOI	Vohitsoka	81.67	249	P	P	10 34 04.7	-0.6
	SNR=8.3						
VOI	Vohitsoka	81.67	249	P	P	10 34 05.7	+0.4
PMOR	Pomariorio Ree	81.86	104	*e*P	P	10 34 07.6	+1.4
	comp=Z,2µm,1.5s						
SVE	Sverdlovsk	82.03	329	*d* *i*P	P	10 34 06.5	+0.2
SVE				*e*S	S	10 44 14.7	-4.2
SVE				*e*		10 49 39.3	
SVE				*e*		10 53 02.7	
SVE				pmax	pmax		
	comp=Z,965nm,1.4s						
SVE				pmax	pmax		
	comp=Z,9µm,11.6s						
VAH	Vaihoa	82.11	105	*e*P	P	10 34 09.0	+1.5
	comp=Z,1µm,1.5s						
SDPT	Sand Point	82.21	33	P	P	10 34 06.9	-0.3
	baz=251,SNR=28						
CNBA	Chernabura Isl	82.53	33	IAmb	IAmb	10 34 26.6	
	comp=Z,368nm,1.0s						
CHNA	Chernabura Isl	82.53	33	P	P	10 34 08.6	-0.3
	baz=252,SNR=14						
TNA	Tin City	82.77	22	IAmb	IAmb	10 34 15.7	
	comp=Z,702nm,1.6s						
TNA	Tin City	82.77	22	P	P	10 34 10.9	+1.1
	baz=243						
TNA				S	S	10 44 27.1	+1.1
	baz=243						
ARU	Arti	82.99	328	P	P	10 34 10.8	-0.5
	comp=Z,74nm,0.7s,baz=113,slow=1.7,SNR=128						
ARU	Arti	82.99	328	*d* *i*P	P	10 34 10.6	-0.6
ARU						10 37 23.3	
ARU				PPP	PPP	10 39 15.6	
ARU				S	S	10 44 28.3	-0.3
ARU				pmax	pmax		
	comp=Z,430nm,0.9s						
ARU				pmax	pmax		
	comp=Z,4µm,5.5s						
ARU	Arti	82.99	328	P	P	10 34 11.0	-0.3
ARU				IAmb	IAmb	10 34 26.3	
	comp=Z,382nm,0.9s						
SKRH	Sakahara	83.55	248	P	P	10 34 12.3	-2.7
CHGN	Chignik	83.61	32	IAmb	IAmb	10 34 18.3	
	comp=Z,284nm,0.9s						
CHGN	Chignik	83.61	32	P	P	10 34 14.1	-0.3
	baz=253,SNR=15						
CHGN				S	S	10 44 33.1	-1.8
	baz=253						
QRN	Al-Qurain	84.56	299	*e*P	P	10 34 19.1	-0.8
KBD	Kabd	84.81	300	*e*P	P	10 34 20.7	-0.5
UMR	Umm Al-Rimmam	84.84	300	*e*P	P	10 34 20.5	-0.8
CHIR	Chirikof Islan	84.99	33	IAMs_20	IAMs_20	11 11 53.2	
	comp=Z,33µm,20.0s						
CHIR	Chirikof Islan	84.99	33	P	P	10 34 21.1	-0.3
	baz=255						
MIB	Mutribah	85.20	300	*e*P	P	10 34 22.0	-1.1
RST	Umm Al-Ruwaisa	85.45	300	*e*P	P	10 34 24.0	-0.4
RDOG	Red Dog Mine	85.62	20	IAMs_20	IAMs_20	11 13 33.6	
	comp=Z,33µm,20.0s						
RDOG	Red Dog Mine	85.62	20	P	P	10 34 32.2	+7.8
	baz=248,SNR=20						
RDOG				S	S	10 44 58.7	+4.2
	baz=248						
QSPA	South Pole Qui	85.83	180	LR	LR	11 10 45.3	
	comp=Z,52µm,21.6s,baz=355,slow=34						
QSPA	South Pole Qui	85.83	180	P	P	10 34 24.4	-1.3
QSPA				IAmb	IAmb	10 34 41.0	
	comp=Z,757nm,1.5s						
QSPA	South Pole Qui	85.83	180	IAMs_20	IAMs_20	11 10 22.9	
	comp=Z,57µm,21.0s						
SII	Sitkinak Islan	85.95	33	IAMs_20	IAMs_20	11 11 54.6	
	comp=Z,63µm,20.0s						
SII	Sitkinak Islan	85.95	33	P	P	10 34 25.3	-0.9
	baz=256,SNR=16						
SII	Sitkinak Islan	85.95	33	P	P	10 34 29.3	+3.0
RAYN	Ar Rayn	86.08	294	P	P	10 34 27.5	-0.2
RAYN	Ar Rayn	86.08	294	P	P	10 34 27.5	-0.2
RAYN				pmax	pmax		
	comp=Z,706nm,0.9s						
RAYN				MLR	MLR		
	comp=Z,22µm,20.0s						
RAYN	Ar Rayn	86.08	294	P	P	10 34 27.5	-0.2
P18K	Big Mountain,	86.11	30	IAmb	IAmb	10 34 31.3	
	comp=Z,328nm,1.0s						
P18K	Big Mountain,	86.11	30	P	P	10 34 25.5	-1.5
	baz=255,SNR=31						
P18K				S	S	10 44 57.5	-2.2
	baz=255						
SYO	Syowa Base	86.13	201	⇑*i*P	P	10 34 25.4	-1.5
SYO	Syowa Base	86.13	201	⇓*i*PcP	P	10 34 27.8	+0.9
SYO	Syowa Base	86.13	201	⇓*i*pP	pP	10 34 33.6	-0.7
O18K	Koktuh Hills	86.23	29	P	P	10 34 26.4	-1.2
	baz=255						
O18K				S	S	10 45 02.3	+1.4
	baz=255						
SVW2	Sparrevohn	86.38	28	IAmb	IAmb	10 34 35.0	
	comp=Z,851nm,1.5s						
OHAK	Old Harbor	86.58	32	P	P	10 34 29.6	+0.3
	baz=257,SNR=68						
OHAK				S	S	10 45 03.4	-0.9
	baz=257						
TTA	Tatalina	86.67	26	IAmb	IAmb	10 34 36.0	
	comp=Z,646nm,1.3s						
TTA	Tatalina	86.67	26	P	P	10 34 30.0	+0.3
	baz=254,SNR=200						
TTA				S	S	10 45 05.0	-0.1
	baz=254						
O19K	Port Alsworth	86.75	29	P	P	10 34 29.4	-0.7
	baz=256,SNR=36						
O19K				S	S	10 45 06.6	+0.8
	baz=256						
Q19K	Cape Douglas,	86.78	30	IAMs_20	IAMs_20	11 11 06.6	
	comp=Z,48µm,21.0s						
Q19K	Cape Douglas,	86.78	30	P	P	10 34 29.2	-1.1
	baz=257,SNR=12						
Q19K				S	S	10 45 03.8	-2.5
	baz=257						
GCSA	Galena City Sc	86.80	24	P	P	10 34 30.4	+0.1
	baz=253,SNR=39						
GCSA				S	S	10 45 05.1	-1.0
	baz=253						
N19K	Bonanza Creek	86.82	28	P	P	10 34 31.1	+0.6
	baz=256						
N19K				S	S	10 45 07.0	+0.2
	baz=256						
MAK	Makhachkala	86.89	313	*d* *i*P	P	10 34 31.8	+0.6
MAK				*e*		10 37 48.7	
MAK				*e*		10 44 53.0	
MAK				*e*SS	SS	10 50 44.9	-5.8
MAK				*e*SSS	SSS	10 54 22.8	
MAK				pmax	pmax		
	comp=Z,14µm,4.3s						
MAK				pmax	pmax		
	comp=Z,2µm,1.7s						
L19K	White Mountain	86.99	27	IAMs_20	IAMs_20	11 07 14.0	
	comp=Z,69µm,22.0s						
L19K	White Mountain	86.99	27	P	P	10 34 32.0	+0.8
	baz=255,SNR=66						
L19K				S	S	10 45 09.0	+0.8
	baz=255						
KDAK	Kodiak Island	87.07	32	P	P	10 34 31.9	+0.2
KDAK				pmax	pmax		
	comp=Z,665nm,1.1s						
KDAK				MLR	MLR		
	comp=Z,34µm,20.0s						
KDAK	Kodiak Island	87.07	32	P	P	10 34 31.9	+0.2
KDAK	Kodiak Island	87.07	32	IAMs_20	IAMs_20	11 11 51.6	
	comp=Z,34µm,20.0s						
KDAK	Kodiak Island	87.07	32	P	P	10 34 32.3	+0.6
	baz=258						
KDAK				S	S	10 45 09.9	+0.9
	baz=258						
M19K	Big River Lodg	87.13	27	IAmb	IAmb	10 34 46.5	
	comp=Z,554nm,1.1s						
M19K				IAMs_20	IAMs_20	11 08 06.5	
	comp=Z,43µm,22.0s						
M19K	Big River Lodg	87.13	27	P	P	10 34 33.2	+1.2
	baz=256,SNR=106						
M19K				S	S	10 45 10.8	+1.3
	baz=256						
P19K	Oil Pt	87.16	30	P	P	10 34 33.5	+1.4
	baz=257						
ATD	Arta Tunnel	87.49	282	LR	LR	11 11 50.9	
	comp=Z,9µm,20.7s,baz=71,slow=34						
ATD	Arta Tunnel	87.49	282	P	P	10 34 36.0	+1.3
	SNR=35						
ATD	Arta Tunnel	87.49	282	*e*P	P	10 34 36.2	+1.4
ATD				*e*S	S	10 45 14.2	-0.7
ATD	Arta Tunnel	87.49	282	IAmb	IAmb	10 34 39.7	
	comp=Z,448nm,1.0s						
ATD	Arta Tunnel	87.49	282	P	P	10 34 35.9	+1.2
L20K	Farewell, AK	87.50	27	P	P	10 34 34.4	+0.7
	baz=256						
O20K	Slope Mountain	87.55	29	P	P	10 34 33.9	-0.2
	baz=257,SNR=6.5						
K20K	Telida	87.63	26	P	P	10 34 34.8	+0.4
	baz=256						
K20K				S	S	10 45 15.6	+1.3
	baz=256						
J20K	Nowinta River	87.80	25	IAmb	IAmb	10 34 57.4	
	comp=Z,632nm,1.8s						
J20K				IAMs_20	IAMs_20	11 07 22.2	
	comp=Z,46µm,22.0s						
J20K	Nowinta River	87.80	25	P	P	10 34 35.5	+0.5
	baz=256						
J20K				S	S	10 45 17.6	+1.8
	baz=256						
HOM	Homer	87.94	30	IAMs_20	IAMs_20	11 09 37.2	
	comp=Z,51µm,22.0s						
HOM	Homer	87.94	30	P	P	10 34 34.9	-0.9
	baz=258,SNR=13						
SPCR	Spurr Chakacha	87.99	28	P	P	10 34 35.4	-0.8
	baz=258,SNR=36						
CNPM	China Poot	88.12	30	IAMs_20	IAMs_20	11 09 55.0	
	comp=Z,41µm,21.0s						
GROC	Groznyy	88.17	313	*e*P	P	10 34 36.3	-1.0
GROC				*e*S	SKSac	10 45 02.3	-2.1
GROC				*e*PS	PnS	10 46 19.2	-5.6
GROC				*e*SS	SS	10 51 05.4	-3.9
GROC				pmax	pmax		
	comp=Z,417nm,1.5s						
BELG	Belogornoye	88.25	323	P	P	10 34 36.9	-0.5
	comp=Z,339nm,0.9s,baz=300,slow=2.0,SNR=34						
BELG				LR	LR	11 16 57.8	
	comp=Z,9µm,21.3s,baz=88,slow=38						
BELG	Belogornoye	88.25	323	*c* *i*P	P	10 34 35.9	-1.5
BELG				pmax	pmax		
	comp=Z,155nm,0.9s						
KIRV	Kirov	88.30	329	P	P	10 34 37.2	-0.3
	comp=Z,112nm,0.7s,baz=104,slow=5.3,SNR=25						
KIRV				LR	LR	11 18 29.6	
	comp=Z,14µm,19.6s,baz=95,slow=38						
KIRV	Kirov	88.30	329	*ce*P	P	10 34 36.5	-1.0
BRLK	Bradley Lake	88.34	30	IAMs_20	IAMs_20	11 10 01.5	
	comp=Z,48µm,21.0s						
PPLA	Purkeypile	88.36	27	IAmb	IAmb	10 35 17.2	
	comp=Z,393nm,1.3s						
PPLA	Purkeypile	88.36	27	P	P	10 34 37.4	-0.6
	baz=258,SNR=24						
CAPN	Captain Cook N	88.41	29	P	P	10 34 38.7	+0.7
	baz=259						
BRSE	Bradley Lake S	88.41	30	P	P	10 34 38.2	+0.1
	baz=259,SNR=32						
BRSE				S	S	10 45 19.9	-2.0
	baz=259						
SKT	Skwentna	88.47	28	IAmb	IAmb	10 35 17.6	
	comp=Z,765nm,1.9s						
SKT				IAMs_20	IAMs_20	11 09 11.2	
	comp=Z,64µm,22.0s						
SKT	Skwentna	88.47	28	P	P	10 34 37.3	-1.0
	baz=258						
SKT				S	S	10 45 21.3	-1.0
	baz=258						
CHUM	Lake Minchumin	88.51	26	P	P	10 34 38.0	-0.5
	baz=258,SNR=81						
CAST	Castle Rocks	88.52	26	IAmb	IAmb	10 34 56.5	
	comp=Z,653nm,1.9s						
CAST	Castle Rocks	88.52	26	P	P	10 34 38.1	-0.4
	baz=258,SNR=16						
CAST				S	S	10 45 22.2	-0.6
	baz=258						
GNI	Garni	88.58	310	*c* *i*P	P	10 34 40.2	+0.6
GNI				pmax	pmax		
	comp=Z,452nm,1.0s						
GNI	Garni	88.58	310	P	P	10 34 40.6	+1.0
GNI	Garni	88.58	310	P	P	10 34 40.0	+0.4
H21K	Melozitna Rive	88.70	24	IAMs_20	IAMs_20	11 13 59.7	
	comp=Z,38µm,20.0s						
H21K	Melozitna Rive	88.70	24	P	P	10 34 39.8	+0.4
	baz=257						
A21K	Barrow	88.78	18	IAmb	IAmb	10 34 45.2	
	comp=Z,497nm,1.4s						
A21K				IAMs_20	IAMs_20	11 11 24.4	
	comp=Z,30µm,20.0s						
A21K	Barrow	88.78	18	P	P	10 34 39.6	+0.1
	baz=253						
I21K	Tanana	88.93	24	IAMs_20	IAMs_20	11 08 54.5	
	comp=Z,40µm,21.0s						
I21K	Tanana	88.93	24	P	P	10 34 40.2	-0.2
	baz=258,SNR=8.0						
O22K	Cooper Landing	89.05	29	P	P	10 34 40.9	-0.1
	baz=260,SNR=26						
O22K				S	S	10 45 28.2	+0.5
	baz=260						
M22K	Willow	89.08	28	P	P	10 34 40.2	-1.0
	baz=260,SNR=54						
M22K				S	S	10 45 26.6	-1.4
	baz=260						
SEW	Seward	89.11	30	P	P	10 34 41.2	-0.1
	baz=260,SNR=18						
BPAW	Bear Paw Mtn.	89.13	26	IAMs_20	IAMs_20	11 12 23.6	
	comp=Z,41µm,21.0s						
BPAW	Bear Paw Mtn.	89.13	26	P	P	10 34 40.5	-0.9
	baz=259,SNR=7.4						
BPAW				S	S	10 45 34.0	+5.5
	baz=259						
CUT	Chulitna	89.13	27	IAmb	IAmb	10 35 16.6	
	comp=Z,340nm,1.2s						
CUT				IAMs_20	IAMs_20	11 08 34.0	
	comp=Z,54µm,22.0s						
CUT	Chulitna	89.13	27	P	P	10 34 40.5	-0.9
	baz=260						
RC01	Rabbit Creek A	89.14	29	P	P	10 34 40.4	-1.2
	baz=260,SNR=65						
RC01				S	S	10 45 27.5	-1.2
	baz=260						
GINR	Hospital, Gini	89.25	277	P	P	10 34 44.0	+0.7
TEND	Ethiopian Broa	89.31	282	*e*P	P	10 34 43.0	-0.3
TEND				*e*S	S	10 45 40.0	+7.9
TRF	Thorofare Moun	89.31	26	P	P	10 34 40.8	-1.7
	baz=259,SNR=35						
MLY	Manley	89.42	25	IAMs_20	IAMs_20	11 09 08.3	
	comp=Z,49µm,22.0s						
MLY	Manley	89.42	25	P	P	10 34 42.1	-0.7
	baz=259,SNR=79						
ZEI	Tsey	89.50	313	*e*P	P	10 34 42.4	-1.5
ZEI				pmax	pmax		
	comp=Z,176nm,1.3s						
PMR	Palmer	89.52	28	IAmb	IAmb	10 34 48.5	
	comp=Z,230nm,1.0s						
PMR	Palmer	89.52	28	P	P	10 34 42.8	-0.4
	baz=260,SNR=47						
GHO	Glory Hole Cre	89.64	28	IAmb	IAmb	10 35 22.2	
	comp=Z,816nm,1.9s						
AKH	Akhalkalaki	89.66	311	⇑P	P	10 34 46.0	+1.4
TAOE	Nuku Hiva Isla	89.78	99	*e*P	P	10 34 46.4	+0.8
	comp=Z,905nm,1.5s						
TAOE	Nuku Hiva Isla	89.78	99	*e*S	S	10 45 36.0	-0.6
	comp=Z,32µm,28.5s						
TAOE	Nuku Hiva Isla	89.78	99	*e*LQ	LQ	10 59 37.1	
	comp=Z,44µm,40.6s						
TAOE				*e*LR	LR	11 03 25.5	
	comp=Z,32µm,28.8s						
PWL	Port Wells	89.78	29	IAmb	IAmb	10 34 50.3	
	comp=Z,434nm,1.1s						
PWL	Port Wells	89.78	29	P	P	10 34 44.4	-0.2
	baz=261,SNR=42						
NCK	Nalchik	89.80	313	⇓*e*P	P	10 34 45.9	+0.9
NCK				pmax	pmax		
	comp=Z,416nm,1.3s						
NCK				MLR	MLR		
	comp=Z,13µm,22.0s						
BWN	Browne	89.80	26	IAmb	IAmb	10 34 49.7	
	comp=Z,569nm,1.2s						
BWN				IAMs_20	IAMs_20	11 10 26.2	
	comp=Z,40µm,21.0s						
KNK	Knik Glacier	89.81	28	P	P	10 34 44.8	+0.2
	baz=261,SNR=57						
KNK				S	S	10 45 34.7	-0.2
	baz=261						
ONI	Oni	89.81	313	IAmb	IAmb	10 34 56.0	
	comp=Z,557nm,1.7s						
SML	Sawmill	89.93	28	IAmb	IAmb	10 34 58.0	
	comp=Z,272nm,0.8s						
SML	Sawmill	89.93	28	P	P	10 34 45.1	-0.1
	baz=261,SNR=48						
SML				S	S	10 45 36.5	+0.4
	baz=261						
RND	Reindeer	89.94	26	IAmb	IAmb	10 34 49.6	
	comp=Z,348nm,1.0s						
MCK	McKinley	89.96	26	IAmb	IAmb	10 34 49.9	
	comp=Z,482nm,1.3s						
MCK				IAMs_20	IAMs_20	11 10 40.7	
	comp=Z,65µm,22.0s						
MCK	McKinley	89.96	26	P	P	10 34 44.4	-0.9
	baz=261,SNR=101						
MCK				S	S	10 45 36.6	+0.4
	baz=261						
WAT1	Susitna Watana	89.99	27	P	P	10 34 44.7	-0.8
	baz=261						
WAT1				S	S	10 45 36.1	-0.4
	baz=261						
I23K	Minto, Yukon-K	90.01	25	IAMs_20	IAMs_20	11 09 48.1	
	comp=Z,50µm,22.0s						
I23K	Minto, Yukon-K	90.01	25	P	P	10 34 44.8	-0.7
	baz=260,SNR=152						
COLD	Coldfoot	90.04	23	IAmb	IAmb	10 34 50.1	
	comp=Z,210nm,0.9s						
COLD	Coldfoot	90.04	23	P	P	10 34 45.6	0.0
	baz=260,SNR=168						
COLD				S	S	10 45 40.6	+3.8
	baz=260						
NEA2	Nenana	90.04	25	IAMs_20	IAMs_20	11 10 09.6	
	comp=Z,47µm,22.0s						
NEA2	Nenana	90.04	25	P	P	10 34 45.0	-0.7
	baz=260,SNR=13						
NEA2				S	S	10 45 40.0	+3.1
	baz=260						
NGLE	Hospital, Nege	90.25	275	P	P	10 34 47.4	-0.6
WAT6	Susitna Watana	90.32	27	P	P	10 34 46.3	-0.9
	baz=262,SNR=40						
WAT6				S	S	10 45 38.9	-1.0
	baz=262						
KBZ	Khabaz	90.32	314	P	P	10 34 47.2	-0.2
	comp=Z,45nm,0.9s,baz=91,slow=3.6,SNR=37						
KBZ				PKKPbc	PKKPbc	10 52 18.9	+1.1
	comp=Z,6.4nm,0.8s,baz=161,slow=3.8,SNR=5.8						
KBZ	Khabaz	90.32	314	*c* *i*P	P	10 34 47.0	-0.4
KBZ				pmax	pmax		
	comp=Z,97nm,0.9s						
KBZ				MLR	MLR		
	comp=Z,12µm,24.0s						
GOF	Gofitskoye	90.34	315	⇑*e*P	P	10 34 48.1	+0.6
GOF				*e*S	SKSac	10 45 19.2	+2.0
GOF				pmax	pmax		
	comp=Z,339nm,1.3s						
GLI	Glacier Island	90.39	29	P	P	10 34 46.6	-0.8
	baz=262,SNR=8.0						
GLI				S	S	10 45 38.0	-2.2
	baz=262						
ANKE	Ethiopia-Afar	90.39	280	*e*P	P	10 34 50.6	+1.7
ANKE				*e*S	SKSac	10 45 25.1	+5.6
SCM	Sheep Creek Mo	90.40	28	IAmb	IAmb	10 35 12.1	
	comp=Z,260nm,1.0s						
SCM	Sheep Creek Mo	90.40	28	P	P	10 34 47.1	-0.4
	baz=262,SNR=18						
SCM				S	S	10 45 38.7	-1.8
	baz=262						
NEY	Neytrino	90.41	313	*ce*P	P	10 34 48.6	+0.5
NEY				pmax	pmax		
	comp=Z,116nm,1.4s						
NEY				MLR	MLR		
	comp=Z,3µm,16.0s						
WRH	Wood River Hil	90.44	25	IAmb	IAmb	10 34 52.8	
	comp=Z,536nm,1.3s						
WRH				IAMs_20	IAMs_20	11 10 12.4	
	comp=Z,38µm,21.0s						
MDM	Murphy Dome	90.45	25	IAMs_20	IAMs_20	11 09 58.8	
	comp=Z,39µm,22.0s						
KVAR	Kislovodsk Arr	90.49	314	P	P	10 34 48.7	+0.4
	comp=Z,16nm,0.8s,baz=90,slow=20,SNR=3.1						
KIV	Kislovodsk	90.50	314	⇑P	P	10 34 51.1	+2.7
KIV	Kislovodsk	90.50	314	*i* P	P	10 34 48.4	0.0
	SNR=20						
KIV	Kislovodsk	90.50	314	*e*P	P	10 34 47.7	-0.7
KIV				*e*		10 38 23.6	
KIV				*e*		10 45 15.6	
KIV				*e*SS	SS	10 51 45.6	+2.3
KIV				pmax	pmax		
	comp=Z,791nm,4.1s						
KIV				pmax	pmax		
	comp=Z,85nm,1.1s						
KIV				MLR	MLR		
	comp=Z,8µm,20.0s						
KIV	Kislovodsk	90.50	314	P	P	10 34 48.1	-0.2
KIV	Kislovodsk	90.50	314	P	P	10 34 47.9	-0.4
GURO	Guroymak-BITLI	90.52	308	IAmb	IAmb	10 34 53.1	
	comp=Z,400nm,0.9s						
TOLK	Toolik Lake Re	90.53	21	IAMs_20	IAMs_20	11 11 02.6	
	comp=Z,42µm,22.0s						
TOLK	Toolik Lake Re	90.53	21	P	P	10 34 48.1	+0.2
	baz=260,SNR=104						
DHY	Denali Highway	90.55	27	IAmb	IAmb	10 34 52.8	
	comp=Z,294nm,1.2s						
DHY	Denali Highway	90.55	27	P	P	10 34 47.9	-0.4
	baz=262						
DHY				S	S	10 45 42.3	+0.3
	baz=262						
Q23K	Middleton Isla	90.57	31	IAMs_20	IAMs_20	11 10 11.1	
	comp=Z,34µm,22.0s						
Q23K	Middleton Isla	90.57	31	P	P	10 34 47.4	-0.7
	baz=263						
CCB	Clear Creek Bu	90.59	25	IAmb	IAmb	10 34 53.2	
	comp=Z,543nm,1.3s						
CCB				IAMs_20	IAMs_20	11 10 05.3	
	comp=Z,40µm,22.0s						
TCOL	CIGO, UAF Yank	90.60	25	IAMs_20	IAMs_20	11 10 59.6	
	comp=Z,46µm,22.0s						
TCOL	CIGO, UAF Yank	90.60	25	P	P	10 34 46.4	-1.8
	baz=262,SNR=24						
TCOL				S	S	10 45 39.0	-3.0
	baz=262						
DESE	Dese	90.60	281	*e*P	P	10 34 48.7	-1.0
DESE				*e*S	S	10 45 47.7	+3.0
COLA	College	90.60	25	⇑*e*P	P	10 34 49.4	+1.2
COLA				pmax	pmax		
	comp=Z,147nm,1.0s						
COLA				MLR	MLR		
	comp=Z,8µm,18.0s						
COLA	College	90.60	25	P	P	10 34 47.9	-0.3
COLA	College	90.60	25	IAMs_20	IAMs_20	11 11 00.6	
	comp=Z,43µm,22.0s						
COLA	College	90.60	25	P	P	10 34 46.4	-1.8
	baz=262						
COLA				S	S	10 45 40.8	-1.2
	baz=262						
HIN	Hinchinbrook I	90.61	30	IAMs_20	IAMs_20	11 11 13.5	
	comp=Z,42µm,22.0s						
PRGR	Permogore	90.66	332	*e*P	P	10 34 46.2	-2.3
PRGR				*e*		10 45 43.4	
PRGR				pmax	pmax		
	comp=Z,437nm,1.0s						
H24K	Noodor Dome	90.73	24	IAmb	IAmb	10 34 53.2	
	comp=Z,250nm,1.0s						
H24K	Noodor Dome	90.73	24	P	P	10 34 48.7	-0.2
	baz=262						
H24K				S	S	10 45 42.6	-0.7
	baz=262						
POKR	Poker Plat Res	90.81	25	IAMs_20	IAMs_20	11 10 56.2	
	comp=Z,54µm,22.0s						
POKR	Poker Plat Res	90.81	25	P	P	10 34 47.7	-1.6
	baz=262,SNR=29						
POKR				S	S	10 45 46.5	+2.5
	baz=262						
HDA	Harding Lake	90.92	26	IAMs_20	IAMs_20	11 10 48.2	
	comp=Z,42µm,22.0s						
HDA	Harding Lake	90.92	26	P	P	10 34 48.2	-1.6
	baz=262,SNR=74						
HDA				S	S	10 45 44.1	-1.0
	baz=262						
HDA				S	S	10 45 44.1	-1.0
	baz=262						
M24K	Tolsona, Glenn	90.98	28	IAmb	IAmb	10 35 00.8	
	comp=Z,561nm,1.4s						
M24K	Tolsona, Glenn	90.98	28	P	P	10 34 50.2	+0.1
	baz=263,SNR=25						
M24K				S	S	10 45 47.3	+1.5
	baz=263						
ILAR	Eielson Array	91.00	25	P	P	10 34 48.5	-1.6
	comp=Z,54nm,0.9s,baz=274,slow=3.8,SNR=98						

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ILAR                              PKKPbc    PKKPdf   10 52 13.8 +0.4
      comp=Z,10.0nm,0.8s,baz=88,slow=2.2,SNR=14
ILAR                              PKPPKP    P'P'df   11 00 14.6 -8.5
      comp=Z,1.6nm,1.0s,baz=271,slow=1.4,SNR=5.9
ILAR                              LR        LR       11 11 01.1
      comp=Z,33µm,21.7s,baz=254,slow=32
EYAK  Cordova Ski Ar    91.00  29 IAmb      IAmb     10 35 36.3
      comp=Z,524nm,2.0s
EYAK  Cordova Ski Ar    91.00  29 P         P        10 34 49.9 -0.2
      baz=263
BATM  Batumi            91.03 311 ⇑P        P        10 34 53.3 +2.5
BATM  Batumi            91.03 311 ⇑P        P        10 34 53.3 +2.5
KLU   Klutina           91.03  29 P         P        10 34 50.1 -0.3
      baz=263,SNR=19
KLU                               S         S        10 45 48.1 +1.9
      baz=263
DIV   Divide            91.06  29 IAmb      IAmb     10 34 55.4
      comp=Z,314nm,1.2s
BCA   Borcka            91.07 311 ⇑P        P        10 34 52.3 +1.4
KIBK  Kibwezi           91.23 268 P         P        10 34 52.4  0.0
      SNR=52
AAE   Adis Abeba        91.31 279 eP        P        10 34 55.0 +2.0
AAE                               eS        SKSac    10 45 34.4 +10
AAE   Adis Abeba        91.31 279 eP        P        10 34 51.2 -1.8
AAE                               eS        SKSac    10 45 33.4 +8.8
FURI  Furi              91.39 279 eP        P        10 34 55.2 +1.8
FURI                              eS        SKSac    10 45 32.5 +7.4
FURI  Furi              91.39 279 eP        P        10 34 53.7 +0.3
FURI                              eS        SKSac    10 45 34.9 +10
FURI  Furi              91.39 279 P         P        10 34 55.4 +2.0
PAX   Paxson            91.40  27 P         P        10 34 52.1 -0.1
      baz=264,SNR=92
PAX                               S         S        10 45 48.1 -1.6
      baz=264
HARP  HAARP             91.49  28 P         P        10 34 51.7 -0.8
      baz=264,SNR=19
RAGM  Ragged Mountai    91.51  30 IAMs_20   IAMs_20  11 14 34.9
      comp=Z,47µm,20.0s
KAIM  Kayak Island      91.60  30 IAMs_20   IAMs_20  11 12 49.1
      comp=Z,55µm,21.0s
KAIM  Kayak Island      91.60  30 P         P        10 34 52.9  0.0
      baz=265
BMRM  Bremner River     91.60  29 IAmb      IAmb     10 34 59.3
      comp=Z,167nm,1.0s
BMRM  Bremner River     91.60  29 P         P        10 34 53.1  0.0
      baz=264,SNR=22
DILA  Dilla             91.60 276 eP        P        10 34 53.7 -0.5
J25K  Salcha River,     91.62  25 P         P        10 34 51.9 -1.2
      baz=264,SNR=71
J25K                              S         S        10 45 50.3 -1.3
      baz=264
N25K  Chitina, Valde    91.67  28 IAmb      IAmb     10 34 59.1
      comp=Z,312nm,1.4s
N25K  Chitina, Valde    91.67  28 P         P        10 34 53.9 +0.5
      baz=264,SNR=27
HMT   Hamilton          91.71  30 IAmb      IAmb     10 35 07.4
      comp=Z,424nm,1.5s
HMT                               IAMs_20   IAMs_20  11 14 51.2
      comp=Z,43µm,21.0s
VRH   Novokhopyorsk     91.75 321 eP        P        10 34 53.9  0.0
VRH                               e                  10 38 32.8
VRH                               pmax      pmax
      comp=Z,120nm,1.0s
VRH                               MLR       MLR
      comp=Z,26µm,27.0s
RIDG  Independent Ri    91.76  26 P         P        10 34 53.2 -0.6
      baz=264
MERTO Secondary Scho    91.92 281 P         P        10 34 57.3 +1.4
SUCK  Suckling Hills    91.93  30 IAMs_20   IAMs_20  11 12 58.9
      comp=Z,57µm,21.0s
BERG  Berg Lake         91.99  30 IAmb      IAmb     10 34 59.9
      comp=Z,471nm,1.4s
BERG                              IAMs_20   IAMs_20  11 15 10.7
      comp=Z,34µm,21.0s
GLB   Gilahina Butte    92.03  29 IAmb      IAmb     10 35 01.2
      comp=Z,581nm,1.7s
DOT   Dot Lake          92.10  26 IAmb      IAmb     10 35 00.5
      comp=Z,405nm,1.6s
KMBO  Kilima Mbogo      92.11 269 P         P        10 34 55.2 -1.5
      comp=Z,52nm,1.0s,baz=63,slow=5.1,SNR=48
KMBO                              LR        LR       11 12 58.4
      comp=Z,20µm,20.6s,baz=94,slow=33
KMBO  Kilima Mbogo      92.11 269 P         P        10 34 56.4 -0.2
KMBO  Kilima Mbogo      92.11 269 i P       P        10 34 56.7  0.0
KMBO                              pmax      pmax
      comp=Z,52nm,1.0s
KMBO  Kilima Mbogo      92.11 269 eP        P        10 34 56.7  0.0
KMBO                              eS        SKSac    10 45 32.2 +3.1
KMBO  Kilima Mbogo      92.11 269 P         P        10 34 56.0 -0.7
KMBO  Kilima Mbogo      92.11 269 P         P        10 34 56.5 -0.2
SCRK  Sand Creek        92.16  26 P         P        10 34 55.0 -0.7
      baz=265,SNR=48
SCRK                              S         S        10 45 54.5 -2.0
      baz=265
MENT  Mentasta          92.20  27 IAmb      IAmb     10 35 00.5
      comp=Z,468nm,1.7s
CRQM  Cirque            92.30  29 P         P        10 34 56.4 -0.1
CRQM                              IAmb      IAmb     10 35 05.1
      comp=Z,154nm,1.0s
CRQM                              IAMs_20   IAMs_20  11 12 21.3
      comp=Z,57µm,22.0s
SILA  Clinic, Silare    92.31 283 P         P        10 34 57.1 -0.4
CRQE  Cirque            92.32  29 P         P        10 34 56.9 +0.4
      baz=266,SNR=19
CRQE                              S         S        10 45 56.4 -1.6
      baz=266
L26K  Log Cabin Wild    92.37  27 P         P        10 34 56.7 +0.2
L26K                              IAmb      IAmb     10 35 01.4
      comp=Z,366nm,1.6s
L26K  Log Cabin Wild    92.37  27 P         P        10 34 57.0 +0.4
      baz=266,SNR=52
L26K                              S         S        10 45 58.5 +0.2
      baz=266
J26L  Joseph Creek      92.39  26 P         P        10 34 56.7  0.0
      baz=266
J26L                              S         S        10 45 58.0 -0.5
      baz=266
MCARA McCarthy VSAT     92.40  29 P         P        10 34 56.7 +0.1
MCARA                             IAmb      IAmb     10 35 10.9
      comp=Z,148nm,1.0s
MCARA McCarthy VSAT     92.40  29 P         P        10 34 56.9 +0.2
      baz=266,SNR=7.2
MCARA                             S         S        10 45 59.2 +0.7
      baz=266
SNH   Sunshine Point    92.41  30 IAMs_20   IAMs_20  11 13 14.5
      comp=Z,51µm,21.0s
WAX   Waxell Ridge      92.42  30 P         P        10 34 57.5 +0.6
WAX                               IAMs_20   IAMs_20  11 11 04.9
      comp=Z,30µm,21.0s
KTUT  Trabzon           92.43 311 ⇑P        P        10 34 56.5 -0.8
TGL   Tana Glacier      92.45  29 P         P        10 34 57.8 +0.7
TGL                               IAmb      IAmb     10 35 02.8
      comp=Z,255nm,1.1s
TGL                               IAMs_20   IAMs_20  11 12 35.7
      comp=Z,54µm,22.0s
M26K  Nabesna, AK       92.49  28 P         P        10 34 57.3 +0.2
      baz=266
M26K                              S         S        10 45 59.6 +0.2
      baz=266
SOC   Sochi             92.61 313 c iP      P        10 34 56.2 -1.8
SOC                               e*PP      pP       10 35 04.8 -0.5
SOC                               e                  10 38 37.1
SOC                               eS        SKSac    10 45 26.8 -3.3
SOC                               eSS       SS       10 52 09.6 -4.0
SOC                               eSSS      SSS      10 55 49.1
SOC                               pmax      pmax
      comp=Z,58nm,0.7s
SOC                               MLR       MLR
      comp=Z,10µm,23.0s
ISLE  Juniper Island    92.68  30 P         P        10 34 58.0 -0.1
ISLE                              IAMs_20   IAMs_20  11 12 54.8
      comp=Z,41µm,22.0s
BAHR  High School, B    92.83 281 P         P        10 35 01.2 +1.3
GOND  University, Go    92.83 282 P         P        10 35 00.6 +0.6
MESA  MESA              92.85  30 IAMs_20   IAMs_20  11 13 39.3
      comp=Z,53µm,22.0s
MESA  MESA              92.85  30 P         P        10 34 59.2 +0.1
      baz=267
MESA                              S         S        10 46 03.0 +0.1
      baz=267
ZOMB  Zomba             92.86 254 P         P        10 34 57.8 -2.1
YAH   Yahtse            92.96  30 P         P        10 34 59.9 +0.3
YAH                               IAmb      IAmb     10 35 05.7
      comp=Z,242nm,1.2s
YAH                               IAMs_20   IAMs_20  11 11 17.1
      comp=Z,55µm,22.0s
M27K  Edge Creek, AK    93.01  28 IAMs_20   IAMs_20  11 15 40.3
      comp=Z,47µm,22.0s
M27K  Edge Creek, AK    93.01  28 P         P        10 34 59.9 +0.3
      baz=267
M27K                              S         S        10 46 03.1 -1.0
      baz=267
BARN  Barnard Glacie    93.04  29 P         P        10 35 00.2 +0.3
L27K  Beaver Creek,     93.07  27 IAmb      IAmb     10 35 04.4
      comp=Z,178nm,0.8s
L27K                              IAMs_20   IAMs_20  11 12 51.9
      comp=Z,51µm,21.0s
L27K  Beaver Creek,     93.07  27 P         P        10 35 00.2 +0.4
      baz=267,SNR=130
L27K                              S         S        10 46 02.8 -1.6
      baz=267
BCAR  Beaver Creek A    93.09  27 P         P        10 35 00.9 +1.0
CTG   Chitna Glacier    93.19  29 P         P        10 35 01.1 +0.6
      baz=267,SNR=36
CTG                               S         S        10 46 04.0 -1.8
      baz=267
CTGM  Chitina Glacie    93.19  29 IAMs_20   IAMs_20  11 12 36.3
      comp=Z,60µm,22.0s
KIRE  School, Kiremu    93.24 280 P         P        10 35 02.8 +1.0
TABL  Table Mountain    93.27  30 P         P        10 35 00.0 -0.9
LOGN  Logan Glacier     93.35  29 P         P        10 35 01.4 +0.1
LOGN                              IAmb      IAmb     10 35 08.1
      comp=Z,312nm,1.6s
LOGN                              IAMs_20   IAMs_20  11 13 03.4
      comp=Z,50µm,22.0s
VORR  Voronezh          93.35 321 eP        P        10 35 00.0 -1.2
VORR                              pmax      pmax
      comp=Z,350nm,1.0s
SHAW  Medical Clinic    93.36 282 P         P        10 35 03.6 +1.2
VSR   Storozhevoye      93.36 321 eP        P        10 34 59.5 -1.8
VSR                               e                  10 38 42.3
VSR                               eS        S        10 46 02.8 -4.5
VSR                               pmax      pmax
      comp=Z,60nm,1.2s
VSR                               smax      smax
      comp=N,5µm,14.8s
VSR                               MLR       MLR
      comp=Z,22µm,27.0s
EGAK  Eagle             93.44  25 P         P        10 35 00.9 -0.5
EGAK                              IAmb      IAmb     10 35 07.7
      comp=Z,212nm,1.1s
EGAK                              IAMs_20   IAMs_20  11 11 31.5
      comp=Z,34µm,22.0s
EGAK  Eagle             93.44  25 P         P        10 35 02.1 +0.7
      baz=268
EGAK                              S         S        10 46 06.9 -0.6
      baz=268
BVCY  Beaver Creek      93.48  28 P         P        10 35 02.2 +0.5
      baz=268,SNR=66
BVCY                              S         S        10 46 06.5 -1.6
      baz=268
KLMR  Klimovskoe        93.53 331 c iP      P        10 34 59.9 -1.9
KLMR                              ePPP      PPP      10 40 46.5
KLMR                              eS        SKSac    10 45 31.4 -2.9
KLMR                              pmax      pmax
      comp=Z,316nm,1.0s
KLMR  Klimovskoe        93.53 331 ⇑iP       P        10 35 00.0 -1.9
KLMR                              i P       P        10 35 00.0 -1.9
KLMR                              i P       P        10 35 00.0 -1.9
KLMR                              AMP                10 35 10.6
      comp=Z,316nm,1.0s
KLMR                              ePP       PP       10 38 39.0 -7.5
KLMR                              ePPP      PPP      10 40 46.5
KLMR                              eS        SKSac    10 45 31.5 -2.9
KLMR                              eS        SKSac    10 45 31.5 -2.9
KLMR                              LQ        LQ       11 08 46.6
KLMR                              LQ        LQ       11 08 46.6
KLMR                              LR        LR       11 15 18.0
KLMR                              AMP                11 26 12.2
      comp=Z,22µm,17.7s
LPSR  Galich'ya Gora    93.56 322 eP        P        10 35 00.7 -1.5
LPSR                              e                  10 38 46.1
LPSR                              eS        S        10 46 01.8 -7.2
LPSR                              pmax      pmax
      comp=Z,180nm,1.2s
LPSR                              smax      smax
      comp=N,5µm,13.8s
LPSR                              MLR       MLR
      comp=Z,5µm,20.0s
CHGE  School, Chagni    93.64 281 P         P        10 35 04.5 +0.8
YUK3  Moose Creek       93.65  28 P         P        10 35 02.8 +0.1
      baz=268,SNR=68
YUK3                              S         S        10 46 09.6 -0.3
      baz=268
MQOL  MQOL              93.67 290 i S       PP       10 38 58.5 +10
MQOL  MQOL              93.67 290 i P       P        10 35 03.5 +0.1
MQOL  MQOL              93.67 290 i         P        10 35 10.0 +6.5
      baz=273,slow=12
PINM  Pinnacle          93.69  30 P         P        10 35 03.3 +0.6
      baz=268
HARO  School, Haroo     93.78 280 P         P        10 35 05.0 +0.7
MUKA  Police Camp, M    93.85 282 P         P        10 35 02.5 -2.0
KSLA  Kassala           93.98 285 i P       P        10 35 04.1 -0.9
BCPM  Bancas Point      94.00  30 IAMs_20   IAMs_20  11 14 24.7
      comp=Z,32µm,21.0s
PNL   Peninsula         94.11  31 P         P        10 35 04.4 -0.2
      baz=269
DAWY  Dawson            94.19  26 P         P        10 35 05.0 +0.1
      baz=269,SNR=126
DAWY                              S         S        10 46 10.9 -3.3
      baz=269
GAZ   Gaziantep         94.25 307 IAmb      IAmb     10 35 14.7
      comp=Z,633nm,1.9s
MELAE School, Dubaba    94.27 282 P         P        10 35 05.7 -0.7
ANN   Anapa             94.31 314 eP        P        10 35 03.4 -2.4
ANN                               e*PP      pP       10 35 13.7 +0.6
ANN                               e                  10 38 50.9
ANN                               ePPP      PPP      10 40 54.8
ANN                               eS        SKSac    10 45 35.6 -3.7
ANN                               eSSS      SSS      10 56 19.7
ANN                               pmax      pmax
      comp=Z,217nm,1.0s
ANN                               smax      smax
      comp=N,4µm,3.7s
LODK  Lodwar            94.31 273 P         P        10 35 06.5 -0.1
      SNR=26
ASF   Jabal al Asfar    94.33 302 PKKPbc    PKKPbc   10 52 06.6 -0.7
      comp=N,6.7nm,0.8s,baz=344,slow=2.1,SNR=6.4
MOS   Moscow            94.41 325 eP        P        10 35 03.9 -2.1
MOS                               e                  10 38 50.5
MOS                               e                  10 45 37.4
MOS                               eS        S        10 46 14.1 -2.2
MOS                               ePS       PS       10 47 30.1 -4.9
MOS                               pmax      pmax
      comp=Z,179nm,0.9s
MOS                               smax      smax
      comp=N,7µm,4.2s
MOS                               smax      smax
      comp=E,6µm,4.8s
GOREE District Admin    94.44 278 P         P        10 35 07.6 +0.2
DEBR  School, Debre     94.46 280 P         P        10 35 08.2 +0.6
TETE  Tete              94.49 254 P         P        10 35 05.2 -2.0
YUK4  Talbot Arm        94.51  29 P         P        10 35 06.3 -0.4
      baz=270,SNR=19
YUK4                              S         S        10 46 15.6 -1.9
      baz=270
ABMD  Abulta/Almeha     94.61 281 P         P        10 35 08.0  0.0
YUK6  Outpost Mounta    94.64  29 P         P        10 35 07.8 +0.5
      baz=270,SNR=5.7
YUK6                              S         S        10 46 17.7 -1.0
      baz=270
I29M  Ogilvie Camp,     94.66  25 P         P        10 35 06.5 -0.5
      baz=270,SNR=213
I29M                              S         S        10 46 14.9 -3.4
      baz=270
CNG   Changalane        94.68 243 i P       P        10 35 07.5 -0.4
CNG   Changalane        94.68 243 i P       P        10 35 07.5 -0.4
J29M  Klondike Camp     94.70  26 P         P        10 35 07.7 +0.4
      baz=270,SNR=27
J29M                              S         S        10 46 19.8 +1.0
      baz=270
GUBA  Police Station    94.86 281 P         P        10 35 08.7 -0.4
NVL   N'lazarevskaya    94.92 197 ⇓iP       P        10 35 12.5 +4.4
NVL                               i                  10 38 57.9
NVL                               eS        SKSac    10 45 47.7 +6.0
NVL                               pmax      pmax
      comp=Z,157nm,1.1s
MEND  High School, M    94.95 279 P         P        10 35 09.7  0.0
POGA  Pongola           94.98 242 P         P        10 35 05.8 -3.5
OBN   Obninsk           95.00 325 ⇑P        P        10 35 08.3 -0.5
OBN   Obninsk           95.00 325 P         P        10 35 07.9 -0.8
      comp=Z,15nm,0.5s,baz=77,slow=3.0,SNR=23
OBN   Obninsk           95.00 325 ⇓eP       P        10 35 07.7 -1.1
OBN                               e*PP      pP       10 35 17.1 +1.1
OBN                               e                  10 38 53.0
OBN                               ePPP      PPP      10 40 57.3
OBN                               eS        SKSac    10 45 40.6 -2.0
OBN                               pmax      pmax
      comp=Z,299nm,1.5s
OBN   Obninsk           95.00 325 P         P        10 35 07.6 -1.1
OBN                               IAmb      IAmb     10 35 13.0
      comp=Z,429nm,1.5s
HYT   Haines Junctio    95.06  29 P         P        10 35 09.2 +0.1
      baz=271,SNR=16
EPYK  Eagle Plains      95.29  24 P         P        10 35 09.5 -0.4
EPYK                              IAMs_20   IAMs_20  11 14 21.7
      comp=Z,33µm,22.0s
EPYK  Eagle Plains      95.29  24 P         P        10 35 09.8 -0.1
      baz=272
EPYK                              S         S        10 46 18.3 -5.5
      baz=272
SHERE Police Station    95.32 280 P         P        10 35 10.2 -1.0
SHBL  Chebaa            95.33 303 eP        P        10 35 10.2 -0.8
BNN   Bunyan            95.37 308 P         P        10 35 10.3 -0.7
BNN                               IAmb      IAmb     10 35 39.5
      comp=Z,481nm,1.5s
M30M  Minto, Yukon      95.37  28 P         P        10 35 11.0 +0.6
      baz=271,SNR=50
M30M                              S         S        10 46 17.5 -7.1
      baz=271
GIDAE Health Center,    95.40 279 P         P        10 35 12.3 +0.5
BHL   Bhannes           95.42 304 eP        P        10 35 09.1 -2.2
GHAJ  Ghor Haditha      95.43 301 P         P        10 35 10.5 -0.7
GHAJ                              IAmb      IAmb     10 35 20.2
      comp=Z,186nm,1.0s
LVZ   Lovozero          95.60 338 deP       P        10 35 11.6 +0.3
LVZ                               pmax      pmax
      comp=Z,196nm,1.0s
LVZ                               MLR       MLR
      comp=Z,24µm,22.0s
LVZ   Lovozero          95.60 338 P         P        10 35 10.7 -0.6
LVZ                               IAmb      IAmb     10 35 17.6
      comp=Z,156nm,0.9s
LVZ                               IAMs_20   IAMs_20  11 23 07.9
      comp=Z,47µm,22.0s
MOPA  Mopani            95.73 246 i P       P        10 35 13.3 +0.5
MOPA  Mopani            95.73 246 i P       P        10 35 13.3 +0.5
MAYO  Mayo, Yukon       95.75  27 P         P        10 35 12.1 +0.1
      baz=272,SNR=55
MAYO                              S         S        10 46 20.9 -6.8
      baz=272
DIKM  Dikmen            95.85 311 ⇑P        P        10 35 24.5 +12
N31M  Braeburn, Yuko    95.88  29 P         P        10 35 12.9 +0.2
      baz=272,SNR=15
N31M                              S         S        10 46 29.3 +0.2
      baz=272
EIL   Elat              95.92 299 P         P        10 35 13.0 -0.6
      comp=Z,47nm,0.8s,baz=130,slow=3.2,SNR=26
APA   Apatity           96.10 337 ⇓iP       P        10 35 11.7 -1.8
APA                               i                  10 45 42.0
APA                               i S       S        10 46 32.0 +1.4
APA                               i PS      PS       10 48 25.0 +32
APA                               i SS      SS       10 52 58.0 -3.9
APA                               pmax      pmax
      comp=Z,62nm,0.9s
SKAG  Skagway           96.19  31 P         P        10 35 13.8 -0.2
      baz=272,SNR=9.1
SIT   Sitka             96.29  33 P         P        10 35 14.2 -0.3
      baz=272
INK   Inuvik            96.41  22 P         P        10 35 14.2 -0.7
      baz=275,SNR=165
INK                               S         S        10 46 29.9 -3.3
      baz=275
M31M  Drury Creek, Y    96.50  28 P         P        10 35 14.6 -0.9
      baz=274,SNR=19
M31M                              S         S        10 46 35.1 +0.7
      baz=274
JIS   Juneau Island     96.74  32 IAMs_20   IAMs_20  11 17 47.1
      comp=Z,31µm,21.0s
FARO  Faro, Yukon       96.99  28 P         P        10 35 17.3 -0.4
      baz=274,SNR=42
FARO                              S         S        10 46 36.6 -1.9
      baz=274
BR131 Keskin Array S    97.08 309 P         P        10 35 18.4 -0.4
      SNR=14
BRTR  Keskin Array B    97.08 309 P         P        10 35 17.9 -0.9
      comp=Z,19nm,0.9s,baz=129,slow=5.9,SNR=27
BRTR                              PKKPbc    PKKPbc   10 51 58.9 -1.3
      comp=Z,4.5nm,0.9s,baz=250,slow=2.5,SNR=4.9
BRTR                              LR        LR       11 27 59.1
      comp=Z,5µm,19.0s,baz=98,slow=41
BRTR  Keskin Array B    97.08 309 i P       P        10 35 18.2 -0.6
BRTR                              pmax      pmax
      comp=Z,19nm,0.9s
BRTR  Keskin Array B    97.08 309 P         P        10 35 18.0 -0.8
MSNA  Messina           97.13 247 i P       Pdif     10 35 21.4 +2.1
MSNA  Messina           97.13 247 i P       Pdif     10 35 21.4 +2.1
HOPEN Hopen             97.34 347 eP        Pdif     10 35 21.8 +2.7
HOPEN                             ePP       PP       10 39 19.6 +3.9
HOPEN                             eSKSac    SKSac    10 45 57.2 +3.1
HOPEN                             IVMs_BB   IVMs_BB  11 22 43.5
      comp=Z,17µm,20.3s
CSS   Mathiatis         97.35 305 IAmb      IAmb     10 35 28.1
      comp=Z,172nm,1.1s
P33M  Teslin, Yukon     97.41  30 P         P        10 35 19.1 -0.6
      baz=275,SNR=7.9
P33M                              S         S        10 46 45.1 +2.7
      baz=275
CRAG  Craig             97.59  35 P         P        10 35 19.8 -0.7
      baz=274
VALR  Valaam            97.71 331 ⇓eP       P        10 35 20.6 -0.3
VALR                              pmax      pmax
      comp=Z,123nm,0.9s
LEF   Lefka             97.72 305 ⇑P        Pdif     10 35 21.9 +0.3
ANTO  Ankara            97.73 310 P         P        10 35 21.1 -0.5
ANTO                              pmax      pmax
      comp=Z,113nm,1.5s
ANTO                              MLR       MLR
      comp=Z,6µm,20.0s
ANTO  Ankara            97.73 310 P         P        10 35 21.1 -0.5
WRAK  Wrangell Islan    97.96  34 IAMs_20   IAMs_20  11 15 28.6
      comp=Z,30µm,20.0s
WRAK  Wrangell Islan    97.96  34 P         P        10 35 22.0 -0.1
      baz=274
PUL   Pulkovo           98.14 330 ⇓eP       Pdif     10 35 24.3 +1.4
PUL                               pmax      pmax
      comp=Z,91nm,0.4s
PUL                               MLR       MLR
      comp=Z,25µm,22.0s
KEV   Kevo              98.15 340 P         P        10 35 22.6 -0.1
KEV                               pmax      pmax
      comp=Z,135nm,1.3s
KEV   Kevo              98.15 340 P         P        10 35 22.6 -0.1
KRI   Karoi             98.19 252 i P       Pdif     10 35 26.8 +2.5
KRI   Karoi             98.19 252 i P       Pdif     10 35 26.8 +2.5
SNAA  Sanae             98.31 194 P         P        10 35 23.1 -0.4
SNAA                              x         x        10 51 55.6
SNAA  Sanae             98.31 194 PKKPbc    PKKPbc   10 51 53.3 -4.3
      comp=Z,14nm,0.9s,baz=281,slow=5.1,SNR=14
SNAA  Sanae             98.31 194 c iP      Pdif     10 35 23.6  0.0
SNAA                              pmax      pmax
      comp=Z,176nm,1.2s
SNAA                              MLR       MLR
      comp=Z,29µm,19.0s
SNAA  Sanae             98.31 194 IAmb      IAmb     10 35 28.1
      comp=Z,142nm,1.1s
SNAA                              IAMs_20   IAMs_20  11 19 29.7
      comp=Z,36µm,22.0s
A36M  Sachs Harbour     98.61  18           P        10 35 24.2 -0.6
A36M                              IAmb      IAmb     10 35 37.5
      comp=Z,106nm,1.0s
A36M  Sachs Harbour     98.61  18 P         P        10 35 24.3 -0.4
      baz=283,SNR=78
A36M                              S         S        10 46 51.0 -0.9
      baz=283
MBAR  Mbarara           98.64 269 P         P        10 35 25.3 -1.1
MBAR                              pmax      pmax
      comp=Z,115nm,1.8s
MBAR  Mbarara           98.64 269 P         P        10 35 25.3 -1.1
SPB2  Spitsbergen Ar    98.65 349 P         Pdif     10 35 25.4 +0.5
SPB2                              IAmb      IAmb     10 35 41.2
      comp=Z,233nm,1.4s
SPA0  Spitsbergen Ar    98.66 349 ePdif     Pdif     10 35 25.5 +0.6
SPA0                              ePP       PP       10 39 32.2 +6.5
SPA0                              eSP       SP       10 48 15.6 -1.0
SPITS Spitsbergen Ar    98.66 349 P         Pdif     10 35 25.4 +0.5
SPITS                             pmax      pmax
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      comp=Z,215nm,1.3s
ARCES ARCESS Array B  98.71 340  P        P        10 35 24.5 -0.7
      comp=Z,73nm,0.8s,baz=77,slow=5.5,SNR=41
ARCES                            PKiKP    PKiKP    10 39 55.8 -0.7
      comp=Z,8.1nm,0.8s,baz=83,slow=0.9,SNR=10
ARCES                            PKKPbc   PKKPbc   10 51 53.4 -3.1
      comp=Z,4.3nm,0.5s,baz=262,slow=1.6,SNR=11
ARCES                            LR       LR       11 25 39.6
      comp=Z,37µm,20.5s,baz=70,slow=39
ARCES ARCESS Array B  98.71 340  IAmb     IAmb     10 35 27.6
      comp=Z,141nm,1.0s
BLWY  Bulawayo        98.73 249 i P       Pdif     10 35 29.4 +2.7
BLWY  Bulawayo        98.73 249 i P       Pdif     10 35 29.4 +2.7
MATP  Matopo          98.79 249 i P       Pdif     10 35 28.3 +1.4
MATP  Matopo          98.79 249 i P       Pdif     10 35 28.3 +1.4
MDUB  Mudurnu         98.94 310           P        10 35 26.0 -1.0
HAMF  Hammerfest      99.07 341 ePdif     Pdif     10 35 28.7 +1.8
HAMF                            ePP       PP       10 39 33.6 +4.6
HAMF                            eSKSac    SKSac    10 46 01.4 -1.6
HAMF                            eSP       SP       10 48 23.3 +2.0
HAMF                             IVMs_BB  IVMs_BB  11 27 58.8
      comp=Z,11µm,20.8s
KBS   Kingsbay        99.16 350 ePdif     Pdif     10 35 32.2 +5.1
KBS                             ePP       PP       10 39 35.6 +6.1
KBS                             eSKSac    SKSac    10 46 01.3 -1.9
KBS                             eSP       SP       10 48 24.2 +2.4
KBS                             eSS       SS       10 53 48.4 +3.9
KBS                              IVMs_BB  IVMs_BB  11 20 54.0
      comp=Z,13µm,16.3s
KBS   Kingsbay        99.16 350  IAMs_20  IAMs_20  11 20 55.1
      comp=Z,38µm,21.0s
HSPB  Hornsund (broa  99.27 348 ePdif     Pdif     10 35 25.9 -1.6
HSPB                            ePS       PS       10 48 27.9 +0.6
HSPB                            eL        L        11 19 20.9
      comp=Z,44µm,25.3s
HSPB  Hornsund (broa  99.27 348 ePdif     Pdif     10 35 29.7 +2.1
HSPB                            ePP       PP       10 39 36.8 +6.4
HSPB                            eSKSac    SKSac    10 46 00.5 -3.4
HSPB                            eSP       SP       10 48 23.5 +0.3
HSPB                             IVMsBB            11 19 37.2
      comp=Z,12µm,22.9s
BJO1  Bjornoya        99.35 345 ePdif     Pdif     10 35 35.5 +7.5
BJO1                            eSKSac    SKSac    10 46 04.5 +0.2
BJO1                            eSP       SP       10 48 23.2 -0.9
BJO1                             IVMs_BB  IVMs_BB  11 23 02.2
      comp=Z,13µm,24.1s
WTLY  Watson Lake, Y  99.42  30  Pdiff    Pdif     10 35 28.4 -0.2
      baz=278
KTK1  Kautokeino      99.61 339 ePdif     Pdif     10 35 34.5 +5.2
KTK1                            ePP       PP       10 39 38.0 +4.9
KTK1                            eSKSac    SKSac    10 46 04.0 -1.9
KTK1                            e                  10 48 36.8
KTK1                            eSS       SS       10 53 54.4 +3.2
AKASG Malin Array Be  99.65 321  P        Pdif     10 35 28.8 -1.0
      comp=Z,8.7nm,0.7s,baz=72,slow=4.6,SNR=23
AKASG                            PP       PP       10 39 38.0 +4.0
      comp=Z,8.3nm,0.8s,baz=70,slow=7.2,SNR=2.7
AKASG                            PKKPbc   PKKPbc   10 51 50.1 -3.1
      comp=Z,1.8nm,0.6s,baz=273,slow=3.1,SNR=6.8
AKASG Malin Array Be  99.65 321 i P       Pdif     10 35 28.5 -1.3
AKBB  Malin Array Si  99.65 321⇓i P       Pdif     10 35 29.7 -0.1
AKBB                             pmax     pmax
      comp=Z,62nm,1.5s
AKBB                             MLR      MLR
      comp=Z,15µm,21.0s
LSZ   Lusaka          99.74 254 i P       Pdif     10 35 35.6 +4.4
LSZ   Lusaka          99.74 254 i P       Pdif     10 35 35.6 +4.4
LSZ   Lusaka          99.74 254  IAMs_20  IAMs_20  11 16 39.2
      comp=Z,30µm,22.0s
VNA2  Neumayer--Watz  99.89 193  Pdiff    Pdif     10 35 30.2 -0.4
      baz=127,slow=4.9
FINES FINESS Array B  99.99 332  P        Pdif     10 35 29.8 -1.3
      comp=Z,31nm,0.8s,baz=96,slow=5.7,SNR=31
FINES                            PKiKP    PKiKP    10 40 00.3 +1.4
      comp=Z,8.3nm,0.6s,baz=83,slow=2.2,SNR=5.3
FINES                            PKKPbc   PKKPbc   10 51 50.6 -2.0
      comp=Z,4.7nm,0.8s,baz=90,slow=1.9,SNR=5.6
MNK   Minsk          100.06 325 i P       Pdif     10 35 30.6 -0.9
MNK                             i                  10 39 35.8
MNK                             i PPP     PPP      10 41 43.0
MNK                             i S       SKSac    10 46 06.7 -1.8
MNK                             i SS      SS       10 53 59.0 +0.8
MNK                             i SSS     SSS      10 57 45.0
MNK                              pmax     pmax
      comp=E,13nm,2.0s
MNK                              pmax     pmax
      comp=N,10.0nm,0.7s
MNK                              pmax     pmax
      comp=Z,60nm,0.7s
MNK                              MLR      MLR
      comp=N,3µm,8.0s
MNK                              MLR      MLR
      comp=E,2µm,24.0s
MNK                              MLR      MLR
      comp=Z,12µm,21.0s
MNK   Minsk          100.06 325 i P       Pdif     10 35 30.7 -0.9
      comp=E,13nm,2.0s
MNK                             i P       Pdif     10 35 30.7 -0.9
      comp=N,10.0nm,0.7s
MNK                             i P       Pdif     10 35 30.7 -0.9
      comp=Z,60nm,0.7s,baz=83
MNK                             i PP      PP       10 39 35.8 -1.1
MNK                             i PPP     PPP      10 41 43.0
MNK                             i S       SKSac    10 46 06.8 -1.8
MNK                             i SS      SS       10 53 59.1 +0.9
MNK                             i SSS     SSS      10 57 45.1
MNK                             i LR      LR       11 19 42.0
MNK                             i LRM     MLR      11 23 04.0
      comp=N,3µm,7.7s
MNK                             i LRM     MLR      11 23 13.4
      comp=E,2µm,24.1s
MNK                             i LRM     MLR      11 23 16.0
      comp=Z,12µm,20.6s
VSU   Vasula         100.14 329 eP        Pdif     10 35 33.0 +1.2
VSU   Vasula         100.14 329⇓eP        Pdif     10 35 32.4 +0.6
VSU                              pmax     pmax
      comp=Z,93nm,0.8s
VNA3  Neumayer Olymp 100.16 192  Pdiff    Pdif     10 35 31.1 -0.6
KIS   Kishinev       100.25 317 eP        Pdif     10 35 31.0 -1.6
      comp=Z,570nm,4.1s
KIS   Kishinev       100.25 317 ePP       PP       10 39 38.0 -0.7
KIS                             eS        Sdif     10 47 02.0 -4.7
KIS   Kishinev       100.25 317 ePS       PS       10 48 48.0 +9.1
KIS                             eLQ       LQ       11 11 26.0
      comp=Z,5µm,23.0s
KIS                             eLR       LR       11 17 18.0
      comp=Z,4µm,27.0s
KIS   Kishinev       100.25 317 eP        Pdif     10 35 31.0 -1.6
KIS                             e                  10 39 38.0
KIS                             eS        Sdif     10 47 02.0 -4.7
KIS                              pmax     pmax
      comp=Z,570nm,4.1s
MILM  Milestii Mici  100.26 317 ⇑P        Pdif     10 35 31.8 -0.8
MILM  Milestii Mici  100.26 317 eP        Pdif     10 35 32.0 -0.6
MILM                            e                  10 39 39.0
MILM                            eS        Sdif     10 47 02.0 -4.8
MILM                            ePS       PS       10 48 44.0 +5.0
MILM                             pmax     pmax
      comp=Z,2µm,5.6s
VNA1  Neumayer--Stat 100.29 193  Pdiff    Pdif     10 35 32.1 -0.2
BOSA  Boshof         100.42 240  P        Pdif     10 35 32.6 -1.4
      comp=Z,21nm,0.8s,baz=95,slow=3.2,SNR=22
BOSA                             PKKPbc   PKKPbc   10 51 50.2 -0.1
      comp=Z,7.1nm,0.9s,baz=249,slow=1.8,SNR=7.4
BOSA  Boshof         100.42 240 i P       Pdif     10 35 31.6 -2.4
BOSA  Boshof         100.42 240 i P       Pdif     10 35 31.6 -2.4
NACGM Naroch         100.64 325 i P       Pdif     10 35 34.4 +0.3
TPGR  Topolog        100.71 315 ⇑P        Pdif     10 35 35.0 +0.3
TPGR  Topolog        100.71 315 ⇓P        PKKPbc   10 51 49.3 -0.7
TIRR  Tirgusor       100.75 314 ⇑P        Pdif     10 35 36.7 +1.8
TIRR  Tirgusor       100.75 314 ⇑P        Pdif     10 35 36.7 +1.8
LBTB  Lobatse        100.75 244 i P       Pdif     10 35 34.0 -1.5
LBTB  Lobatse        100.75 244 i P9               10 35 34.0
CFR   Carcaliu       100.89 315 ⇑P        Pdif     10 35 35.7 +0.3
CFR   Carcaliu       100.89 315 ⇓P        PKKPbc   10 51 45.1 -4.4
CFR   Carcaliu       100.89 315 ⇑P        Pdif     10 35 35.7 +0.3
ISAL  Salakas        100.91 326 eP        Pdif     10 35 35.3  0.0
TRO   Tromso         100.91 340 ePdif     Pdif     10 35 34.6 -0.4
TRO                             ePP       PKiKP    10 39 52.4 -8.0
TRO                             eSKSac    SKSac    10 46 09.6 -2.5
TRO                             eSP       SP       10 48 41.5 +0.6
TRO                             eSS       SS       10 54 10.9 +1.7
TRO                              IVMs_BB  IVMs_BB  11 12 53.4
      comp=Z,8µm,38.6s
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SCTR  Scanteiesti    100.94 316 ⇑P        Pdif     10 35 43.1 +7.4
VASR  Vaslui         100.99 317 ⇑P        Pdif     10 35 37.8 +1.9
HARR  Harsova        101.07 315 ⇑P        Pdif     10 35 35.6 -0.7
HARR  Harsova        101.07 315 ⇑P        Pdif     10 35 35.6 -0.7
NOR   Nord           101.09 355 eP        Pdif     10 35 36.1 +0.4
NOR                              IAmb     IAmb     10 35 56.2
      comp=Z,434nm,2.1s
SLCR  Slobozia Conac 101.10 316 ⇑P        PKKPbc   10 51 54.2 +5.4
ICOR  Ion Corvin     101.22 314 ⇑P        Pdif     10 35 38.2 +1.3
WRGLY Wrigley        101.33  26  Pdiff    Pdif     10 35 36.0 -1.0
      baz=284
ALE   Alert          101.48   2  IAMs_20  IAMs_20  11 19 59.4
      comp=Z,34µm,22.0s
TESR  Tescani        101.78 317 ⇑P        Pdif     10 35 38.8 -0.7
VRI   Vrincioaia     101.80 316 ⇑P        Pdif     10 35 40.5 +0.9
VRI   Vrincioaia     101.80 316 ⇑P        PKKPbc   10 51 41.8 -5.1
VRI   Vrincioaia     101.80 316 ⇑P        Pdif     10 35 40.5 +0.9
PLOR  Plostina       101.86 316 ⇑P        Pdif     10 35 40.3 +0.4
PLOR  Plostina       101.86 316 ⇑P        Pdif     10 35 40.3 +0.4
ISR   Istrita        102.01 315 ⇑P        sPdif    10 35 50.7 -0.2
ISR   Istrita        102.01 315 ⇑P        sPdif    10 35 50.7 -0.2
PABE  Paberze        102.13 326 eP        Pdif     10 35 34.8 -6.0
PABE  Paberze        102.13 326  Pdif     Pdif     10 35 40.6 -0.1
PABE                             IAMs_20  IAMs_20  11 31 43.4
      comp=Z,24µm,19.0s
NEHR  Nehoiu         102.15 315 ⇑P        Pdif     10 35 43.1 +1.9
COVR  Voineasa-Covas 102.17 316 ⇑P        Pdif     10 35 40.0 -1.2
COVR  Voineasa-Covas 102.17 316 ⇑P        PKKPbc   10 51 40.1 -5.8
MLR   Muntele Rosu   102.39 316 ⇑P        Pdif     10 35 43.0 +0.6
MLR   Muntele Rosu   102.39 316  P        Pdif     10 35 41.7 -0.6
      comp=Z,18nm,0.8s,baz=3.6,slow=3.4,SNR=14
MLR                              PKiKP    PKiKP    10 40 02.5 -1.5
      comp=Z,61nm,0.9s,baz=90,slow=5.1,SNR=6.0
MLR   Muntele Rosu   102.39 316 ⇑P        Pdif     10 35 43.0 +0.6
BURAR Bucovina Array 102.62 318 ⇑P        Pdif     10 35 43.9 +0.6
BURAR Bucovina Array 102.62 318 ⇓P        PKKPbc   10 51 42.3 -2.4
BURAR Bucovina Array 102.62 318 ⇑P        Pdif     10 35 43.9 +0.6
DOPR  Dopca          102.72 316 ⇑P        Pdif     10 35 44.2 +0.6
DOPR  Dopca          102.72 316 ⇓P        PKKPbc   10 51 43.8 -0.4
STEI  Steigen        102.75 339 ePdif     Pdif     10 35 44.9 +1.7
STEI                            ePP       PKiKP    10 40 00.2 -3.5
STEI                            eSP       SP       10 49 02.2 +1.8
SUW   Suwalki        102.86 324 ePdif     Pdif     10 35 43.6 -0.4
SUW                             ePS       PS       10 49 05.2 -1.1
SUW   Suwalki        102.86 324 eP        Pdif     10 35 38.8 -5.2
FAUS  Fauske         102.93 339 ePdif     Pdif     10 35 44.2 +0.1
FAUS                            ePP       PKiKP    10 40 01.4 -2.7
FAUS                            eSP       SP       10 49 02.9 +0.5
FAUS                             IVMs_BB  IVMs_BB  11 22 19.3
      comp=Z,9µm,18.3s
VOIR                 103.02 316 ⇑P        Pdif     10 35 45.2 +0.1
VOIR                 103.02 316 ⇑P        PKKPbc   10 51 47.9 +4.5
VOIR                 103.02 316 ⇑P        Pdif     10 35 45.2 +0.1
COPA  Copaceanca     103.07 314 ⇑P        Pdif     10 35 43.1 -2.1
LVV   L'vov          103.07 320 eP        Pdif     10 35 46.1 +1.0
LVV                             e                  10 40 05.3
LVV                             eS        Sdif     10 47 24.9 -5.2
AAL   Aland          103.17 331 eP        Pdif     10 35 45.4 +0.2
LOF   Lofoten        103.27 340 ePdif     Pdif     10 35 50.5 +4.9
LOF                             ePP       PP       10 40 01.8 +1.2
LOF                             eSKSac    SKSac    10 46 22.9 -0.4
LOF                             eSP       SP       10 49 08.3 +2.4
LOF                              IVMs_BB  IVMs_BB  11 30 16.6
      comp=Z,11µm,21.1s
ARCR  ARCALIA        103.27 317 ⇑P        Pdif     10 35 49.0 +2.9
ARR   Arges          103.32 316 ⇑P        Pdif     10 35 46.7 +0.3
ARR   Arges          103.32 316 ⇓P        PKKPbc   10 51 43.1 +0.6
SUR   Sutherland     103.39 236  PKKPbc   PKKPbc   10 51 42.9 +1.0
      comp=Z,11nm,0.9s,baz=313,slow=3.2,SNR=5.3
SUR   Sutherland     103.39 236  IAMs_20  IAMs_20  11 14 55.0
      comp=Z,32µm,22.0s
MOR8  Moi Rana       103.68 338 ePdif     Pdif     10 35 46.1 -1.4
MOR8                            e                  10 40 09.9
MOR8                            eSP       SP       10 49 08.1 -2.3
MOR8                            eSP       SP       10 49 09.7 -0.7
MOR8                            eSS       SS       10 54 47.9 +0.2
MOR8                             IVMs_BB  IVMs_BB  11 26 26.5
      comp=Z,11µm,29.9s
BMR   Baia Mare      103.76 318 ⇑P        Pdif     10 35 50.8 +2.6
BMR   Baia Mare      103.76 318 ⇑P        Pdif     10 35 50.8 +2.6
CJR   Cluj-Napoca    103.84 317 ⇑P        Pdif     10 35 51.7 +3.0
CJR   Cluj-Napoca    103.84 317 ⇑P        Pdif     10 35 51.7 +3.0
KWP   Kalwaria Pacla 103.95 320 ePdif     Pdif     10 35 48.9 -0.2
KWP                             ePP       PP       10 39 57.2 -9.2
KWP                             ePS       PS       10 49 23.4 +5.3
IDI   Anoyia         104.25 305  PKiKP    PKiKP    10 40 08.6 +1.0
      comp=Z,9.8nm,0.6s,baz=329,slow=5.9,SNR=6.2
NLWA  Neilton Lookou 104.30  42  IAMs_20  IAMs_20  11 14 02.7
      comp=Z,37µm,22.0s
TRPA  Tarpa          104.32 319 ⇑P        Pdif     10 35 51.4 +0.7
TRPA  Tarpa          104.32 319 ⇑P        PKKPbc   10 51 40.2 +0.8
TRPA  Tarpa          104.32 319 eP        Pdif     10 35 52.2 +1.5
KOLS  Kolonicke sedl 104.35 319 eP        Pdif     10 35 52.9 +2.1
KOLS  Kolonicke sedl 104.35 319 ePDIFF    Pdif     10 35 52.9 +2.1
UZH   Uzhgorod       104.39 319 eP        Pdif     10 35 49.0 -2.0
UZH                             e                  10 46 25.8
UZH                             eS        Sdif     10 47 32.6 -8.6
UPP   Uppsala        104.40 331 eP        Pdif     10 35 48.3 -2.4
SRE   Strehaia       104.42 315 ⇑P        PKKPbc   10 51 37.0 -2.0
DRGR                 104.43 317 ⇑P        Pdif     10 35 52.3 +1.0
DRGR                 104.43 317 ⇑P        Pdif     10 35 52.3 +1.0
VTS   Vitosha        104.70 313 ⇑P        Pdif     10 35 53.0 +0.3
VTS   Vitosha        104.70 313 ⇑P        Pdif     10 35 53.0 +0.3
BEL   Belsk          104.71 323 ePdif     Pdif     10 35 54.6 +2.3
BEL                             ePP       PP       10 40 14.4 +2.5
BEL                             ePS       PS       10 49 21.2 -4.7
D03D  Eldon          104.80  42  Pdiff    Pdif     10 35 51.6 -1.2
      baz=280
CRVS  Cervenica-Dubn 104.89 320 eP        Pdif     10 35 54.3 +1.1
CRVS  Cervenica-Dubn 104.89 320 ePDIFF    Pdif     10 35 54.3 +1.1
DJES  Djerdap        104.91 315 eP        Pdif     10 35 56.4 +3.0
HERR  Herculane      104.95 315 ⇑P        Pdif     10 35 55.5 +1.9
HERR  Herculane      104.95 315 ⇓P        PKKPbc   10 51 37.9 +0.4
RES   Resolute Bay   104.98  11  PKKPbc   PKKPbc   10 51 28.4 -10
      comp=Z,4.4nm,0.8s,baz=110,slow=2.9,SNR=5.6
ZAPS  Zavoj          105.04 314 eP        Pdif     10 35 55.9 +1.8
ZAPS  Zavoj          105.04 314 eP        PKKPbc   10 51 37.8 +0.6
G03D  McMinnville, O 105.08  44  PKiKP    PKiKP    10 40 07.8 -0.9
      baz=280
COR   Corvallis      105.15  45  IAMs_20  IAMs_20  11 15 44.3
      comp=Z,49µm,22.0s
JCC   Jacoby Creek,  105.18  49  IAMs_20  IAMs_20  11 14 11.4
      comp=Z,37µm,22.0s
K02D  Willamette Mer 105.18  47  PKiKP    PKiKP    10 40 08.9 -0.2
      baz=278
SIRR  Siria          105.24 317 ⇑P        Pdif     10 35 55.7 +0.9
SIRR  Siria          105.24 317 ⇓P        PKKPbc   10 51 37.1 +0.5
ZAGS  Zajecar        105.25 314 eP        Pdif     10 35 55.9 +1.0
ZAGS  Zajecar        105.25 314 eP        PKKPbc   10 51 36.0 -0.5
I03D  Drain, OR      105.26  46  PKiKP    PKiKP    10 40 08.2 -0.9
      baz=279
BOSS  Bosilegrad     105.27 313 eP        Pdif     10 35 54.3 -0.8
NSS   Namsos         105.27 337 ePdif     Pdif     10 36 00.1 +5.6
NSS                             ePP       PP       10 40 15.9 +0.2
NSS                             eSKSac    SKSac    10 46 30.4 -2.2
NSS                             eSP       SP       10 49 27.5 +0.4
NSS                              IVMs_BB  IVMs_BB  11 31 39.0
      comp=Z,10µm,22.2s
L02E  Cave Junction  105.31  48  PKiKP    PKiKP    10 40 08.5 -0.8
      baz=278
B05A  Bryant         105.32  41  PKiKP    PKiKP    10 40 09.2 +0.1
      baz=281
E04D  Cinebar        105.32  43  PKiKP    PKiKP    10 40 08.4 -0.7
      baz=280
DAG   Danmarks Havn  105.34 353 i P       Pdif     10 35 54.0 -0.6
DAG                              IAmb     IAmb     10 36 26.2
      comp=Z,34nm,1.0s
DAG   Danmarks Havn  105.34 353 i P       PKKPbc   10 51 26.0 -11
BZS   Buzias         105.38 316 ⇑P        Pdif     10 35 56.7 +1.2
BZS   Buzias         105.38 316 ⇓P        PKKPbc   10 51 36.0 -0.2
BZS   Buzias         105.38 316 ⇑P        Pdif     10 35 56.7 +1.2
YKA   Yellowknife Ar 105.42  26  Pdiff    Pdif     10 35 54.7 -0.6
      comp=Z,14nm,0.8s,baz=295,slow=4.7,SNR=26
YKA                              PKiKP    PKiKP    10 40 08.8  0.0
      comp=Z,12nm,0.8s,baz=294,slow=1.6,SNR=17
YKA                              PKKPbc   PKKPbc   10 51 32.5 -4.1
      comp=Z,13nm,0.8s,baz=117,slow=3.3,SNR=23
MDVR  Moldovita      105.45 315 ⇑P        Pdif     10 35 56.8 +0.9
MDVR  Moldovita      105.45 315 ⇓P        PKKPbc   10 51 35.6 -0.4
NIE   Niedzica       105.53 320 ePdif     Pdif     10 35 57.7 +1.6
NIE                             ePP       PP       10 40 27.1 +8.9
KUBS  Kucevo         105.54 315 eP        Pdif     10 35 57.1 +0.9
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KUBS  Kucevo         105.54 315 eP        PKKPbc   10 51 35.6  0.0
H04D  Lebanon        105.56  45  PKiKP    PKiKP    10 40 09.2 -0.4
      baz=280
PRVS  Prvonek        105.56 313 eP        Pdif     10 35 54.4 -2.0
PRVS  Prvonek        105.56 313 eP        PKKPbc   10 51 36.7 +1.1
KECS  Kecovo         105.60 319 eP        Pdif     10 35 57.9 +1.5
KECS  Kecovo         105.60 319 ePDIFF    Pdif     10 35 57.9 +1.5
BOVS  Bovan          105.65 314 ⇑P        Pdif     10 35 56.9 +0.3
BOVS  Bovan          105.65 314 ⇑P        PKKPbc   10 51 34.5 -0.7
BOVS  Bovan          105.65 314 eP        Pdif     10 35 57.0 +0.3
BOVS  Bovan          105.65 314 eP        PKKPbc   10 51 34.0 -1.3
OJC   Ojcow          105.67 321 ePdif     Pdif     10 35 57.4 +0.7
OJC                             ePP       PP       10 40 30.8  +12
OJC                             ePS       PS       10 49 35.1 -1.0
BARS  Barje          105.70 313 eP        Pdif     10 35 52.2 -4.8
BARS  Barje          105.70 313 eP        Pdif     10 35 53.1 -3.9
BARS  Barje          105.70 313 eP        PKKPbc   10 51 33.6 -1.5
HUMO  Hull Mountain  105.71  47  IAMs_20  IAMs_20  11 15 16.4
      comp=Z,43µm,22.0s
SVIS  Svilajnac      105.89 315 eP        PKKPbc   10 51 35.0 +0.5
I04A  Tendick Farm,  105.91  46  PKiKP    PKiKP    10 40 09.7 -0.7
      baz=280
M02C  Callahan       105.98  48  PKiKP    PKiKP    10 40 09.9 -0.7
      baz=279
PSZ   Piszkesteto    106.10 319 ⇑P        Pdif     10 36 00.5 +1.8
PSZ   Piszkesteto    106.10 319 eP        Pdif     10 36 00.8 +2.1
PSZ   Piszkesteto    106.10 319 ⇑P        Pdif     10 36 00.5 +1.8
PSZ   Piszkesteto    106.10 319  IAMs_20  IAMs_20  11 33 19.6
      comp=Z,30µm,20.0s
LANS  Liptovska Anna 106.12 320 eP        Pdif     10 35 59.8 +1.1
SELS  Selova         106.14 314 eP        Pdif     10 35 58.8 -0.1
N02D  Trinity Center 106.15  49  PKiKP    PKiKP    10 40 10.1 -0.8
      baz=279
HOPS  Hopland Field  106.16  51  IAMs_20  IAMs_20  11 17 24.4
      comp=Z,29µm,21.0s
C06D  Leavenworth    106.17  41  PKiKP    PKiKP    10 40 10.1 -0.6
      baz=282
HFS   Hagfors        106.18 332  Pdiff    Pdif     10 35 57.2 -1.5
      comp=Z,14nm,0.7s,baz=76,slow=6.3,SNR=29
F05D  White Salmon   106.20  43  PKiKP    PKiKP    10 40 09.7 -1.1
      baz=281
O02D  Mt. Diablo Mer 106.21  49  PKiKP    PKiKP    10 40 10.4 -0.7
      baz=278
L04D  Klamath Falls  106.25  47  PKiKP    PKiKP    10 40 10.5 -0.6
      baz=279
GRUS  Gruza          106.31 314 eP        Pdif     10 36 00.5 +0.8
GRUS  Gruza          106.31 314 eP        PKKPbc   10 51 33.9 +0.7
WDC   Whiskeytown Da 106.33  49  IAMs_20  IAMs_20  11 18 40.0
      comp=Z,25µm,21.0s
G05D  Wamic, OR      106.42  44  PKiKP    PKiKP    10 40 10.4 -0.8
      baz=281
TRUS  Trudelj        106.47 315 eP        Pdif     10 35 59.3 -1.1
TRUS  Trudelj        106.47 315 eP        PKKPbc   10 51 34.9 +2.1
I05D  Terrebonne, OR 106.58  45  PKiKP    PKiKP    10 40 10.4 -1.2
      baz=281
K04D  Chiloquin, OR  106.59  47  PKiKP    PKiKP    10 40 11.4 -0.4
      baz=280
M04C  Macdoel        106.67  48  PKiKP    PKiKP    10 40 10.5 -1.4
      baz=280
FRGS  Fruska Gora    106.72 316 ⇑P        Pdif     10 36 02.6 +1.2
FRGS  Fruska Gora    106.72 316 ⇑P        PKKPbc   10 51 29.5 -2.6
FRGS  Fruska Gora    106.72 316 eP        Pdif     10 36 02.0 +0.6
FRGS  Fruska Gora    106.72 316 eP        PKKPbc   10 51 32.3 +0.2
NEEM  North Greenlan 106.73   0 eP        Pdif     10 36 03.3 +2.1
NEEM                             IAmb     IAmb     10 36 17.4
      comp=Z,1µm,2.6s
NEEM  North Greenlan 106.73   0 i P       PKKPbc   10 51 28.9 -4.4
DIVS  Divibare       106.79 315 eP        Pdif     10 36 02.4 +0.5
DIVS  Divibare       106.79 315 eP        PKKPbc   10 51 32.2 +0.3
J05D  Fort Rock, OR  106.84  46  PKiKP    PKiKP    10 40 10.9 -1.4
      baz=280
O03E  Paynes Creek   106.93  49  PKiKP    PKiKP    10 40 11.5 -0.9
      baz=279
TULEG Thule          106.94   4 eP        Pdif     10 36 02.4 +0.7
TULEG Thule          106.94   4 i P       PKKPbc   10 51 28.5 -3.6
TULEG Thule          106.94   4  IAMs_20  IAMs_20  11 23 33.1
      comp=Z,42µm,20.0s
NC602 NORSAR Array S 106.95 333 ePdif     Pdif     10 35 57.2 -4.9
NC602                           ePP       PP       10 40 28.2  0.0
NC602                           eSKSac    SKSac    10 46 40.7 +0.3
NC602                            IVMs_BB  IVMs_BB  11 17 32.9
      comp=Z,7µm,43.3s
SJES  Sjenica        106.96 314 eP        Pdif     10 36 01.1 -1.6
SJES  Sjenica        106.96 314 eP        PKKPbc   10 51 32.7 +1.3
NB2   NORSAR Subarra106.98 333  P         Pdif     10 36 01.0 -1.3
      comp=Z,25nm,0.9s,baz=70,slow=4.4
NB2   NORSAR Subarra106.98 333  P         Pdif     10 36 01.0 -1.3
      baz=70,slow=4.4
NOA   NORSAR Array B 106.98 333  Pdiff    Pdif     10 36 01.0 -1.3
      comp=Z,11nm,0.8s,baz=68,slow=4.6,SNR=24
NOA                              PKKPbc   PKKPbc   10 51 29.0 -2.8
      comp=Z,5.2nm,0.8s,baz=67,slow=3.2,SNR=12
MORC  Moravsky Berou 107.19 321 ⇑P        Pdif     10 36 04.2 +0.7
MORC  Moravsky Berou 107.19 321 ⇑P        PKKPbc   10 51 29.8 -1.0
MORC  Moravsky Berou 107.19 321 ePDIF     Pdif     10 36 04.4 +0.9
MORC                            ePP       PP       10 40 35.7 +5.3
MORC  Moravsky Berou 107.19 321 ⇑P        Pdif     10 36 04.2 +0.7
BSD   Bornholm Skovb 107.24 327 eP        Pdif     10 35 50.5  -13
BBLS  Lazi&#263;i    107.25 315 eP        Pdif     10 36 06.5 +2.6
BBLS  Lazi&#263;i    107.25 315 eP        PKKPbc   10 51 31.2 +0.8
MORH  Mrgy, Hungar   107.30 317 ⇓P        PKKPbc   10 51 29.7 -0.5
JAVC  Velka Javorina 107.34 320 ePDIF     Pdif     10 36 06.2 +2.0
JAVC                            ePP       PP       10 40 32.3 +0.9
TIR   Tirane         107.38 312 ⇓P        PKKPbc   10 51 29.9  0.0
HAWA  Hanford        107.41  43  IAMs_20  IAMs_20  11 20 47.0
      comp=Z,29µm,20.0s
DOMB  Dombas         107.50 335 ePdif     Pdif     10 36 05.3 +0.7
DOMB                            eSKSac    SKSac    10 46 42.9 +0.2
DOMB                            eSP       SP       10 49 50.1 -0.1
DOMB                             IVMs_BB  IVMs_BB  11 19 45.0
      comp=Z,9µm,35.0s
DOMB                             IVMsBB            11 19 45.0
      comp=Z,9µm,35.0s
KRLC  Kraliky        107.59 321 epP       Pdif     10 36 13.6 +8.3
KRLC                            eSP       SP       10 49 52.4 +0.5
KRLC                             AMS      AMS      11 36 10.0
      comp=Z,21µm,18.5s
KRLC  Kraliky        107.59 321 eP        Pdif     10 36 13.6 +8.3
KRLC                            eSP       SP       10 49 52.4 +0.5
KRLC                             MLR      MLR
      comp=Z,21µm,18.5s
PDG   Podgorica      107.63 313 ⇑P        PKKPbc   10 51 29.9 +0.8
DBG   Daneborg       107.64 352 eP        Pdif     10 36 05.4 +0.5
DBG                              IAmb     IAmb     10 36 30.0
      comp=Z,6µm,5.4s
OSL   Oslo           107.64 332 ePP       PP       10 40 36.3 +3.1
OSL                             eSKSac    SKSac    10 46 44.4 +1.2
OSL                             eSP       SP       10 49 52.3 +0.6
OSL                              IVMs_BB  IVMs_BB  11 24 58.5
      comp=Z,9µm,25.5s
KSP   Ksiaz          107.69 322 ePdif     Pdif     10 36 06.4 +0.8
KSP                             ePP       PP       10 40 29.9 -4.0
KSP                             ePS       PS       10 49 51.2 -5.5
KSP                             eSS       SS       10 55 36.3 -6.8
MOD   Modoc Plateau  107.77  47  IAMs_20  IAMs_20  11 17 28.0
      comp=Z,32µm,21.0s
DPC   Dobruska-Polom 107.81 322 ePDIFF    Pdif     10 36 06.9 +0.7
DPC                             eSP       SP       10 49 51.6 -2.4
DPC                              AMS      AMS      11 36 20.0
      comp=Z,26µm,19.5s
DPC   Dobruska-Polom 107.81 322 eP        Pdif     10 36 06.9 +0.7
DPC                             eSP       SP       10 49 51.6 -2.4
DPC                              MLR      MLR
      comp=Z,26µm,19.5s
OSTC  Ostas          107.81 322 ePDIFF    Pdif     10 36 15.0 +8.8
OSTC                            eSP       SP       10 49 51.4 -2.7
OSTC                             AMS      AMS      11 38 30.0
      comp=Z,25µm,19.2s
MOL   Molde          107.90 336 ePP       PP       10 40 37.4 +2.4
MOL                             ePS       PS       10 50 00.6 +2.3
MOL                              IVMs_BB  IVMs_BB  11 16 29.9
      comp=Z,9µm,46.2s
CHVC  Chvalec        107.91 322 ePDIFF    Pdif     10 36 08.8 +2.2
CHVC                             AMS      AMS      11 38 30.0
      comp=Z,23µm,19.3s
VRAC  Vranov         107.91 321  Pdiff    Pdif     10 36 08.6 +1.9
      comp=Z,1.7nm,0.3s,baz=77,slow=6.2,SNR=4.9
VRAC                             PP       PP       10 40 37.2 +1.6
      comp=Z,21nm,1.0s,baz=68,slow=9.7,SNR=5.0
VRAC  Vranov         107.91 321 ePDIF     Pdif     10 36 08.2 +1.5
VRAC                            ePP       PP       10 40 40.3 +4.7
UPC   Upice          107.95 322 eSP       SP       10 49 52.0 -3.5
UPC                              AMS      AMS      11 38 30.0
      comp=Z,26µm,18.9s
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KRUC	Moravsky	108.10	320	ePDIF	Pdif	10 36 07.8	+0.3
KRUC				ePP	PP	10 40 40.8	+3.9
KONO	Kongsberg	108.28	332	ePdif	Pdif	10 36 06.7	-1.3
KONO				ePP	PP	10 40 38.7	+0.9
KONO				eSKSac	SKSac	10 46 42.3	-3.8
KONO				eSS	SS	10 55 53.7	+3.3
KONO				IVMs_BB	IVMs_BB	11 25 30.5	
	comp=Z,7µm,21.5s						
RGN	Rugen	108.30	327	eSP	SP	10 49 59.8	+1.2
	baz=68,slow=11						
RGN	Rugen	108.30	327	IAMs_20	IAMs_20	11 35 43.4	
	comp=Z,22µm,20.0s						
AKN	Aaknes	108.31	335	ePdif	Pdif	10 36 12.6	+4.5
AKN				ePP	PP	10 40 40.6	+2.6
AKN				eSKSac	SKSac	10 46 45.9	-0.3
AKN				eSP	SP	10 49 59.2	+0.8
AKN				IVMsBB		11 20 23.1	
	comp=Z,9µm,32.8s						
SKAR	Skarslia	108.42	334	ePdif	Pdif	10 36 13.3	+4.6
SKAR				ePP	PP	10 40 41.9	+2.9
SKAR				eSP	SP	10 50 02.4	+2.7
SKAR				IVMs_BB	IVMs_BB	11 28 26.6	
	comp=Z,9µm,27.4s						
NEW	Newport	108.55	40	IAMs_20	IAMs_20	11 23 26.1	
	comp=Z,29µm,21.0s						
NEW	Newport	108.55	40	PKiKP	PKiKP	10 40 13.8	-1.4
	baz=285						
NEPA	Kaukuwa	108.59	250	P	Pdif	10 36 14.8	+4.3
RUE	Ruedersdorf	108.71	324	eP	Pdif	10 36 04.3	-5.7
RUE	Ruedersdorf	108.71	324	eSP	SP	10 50 02.3	-0.6
	baz=68,slow=11						
CONA	Conrad Observa	108.74	319	eP	PKKPbc	10 51 25.1	-0.8
	comp=Z,16nm,1.0s						
KOGS	Kog	108.86	318	ePP	PP	10 40 53.2	+11
WVOR	Wild Horse Val	108.88	47	IAMs_20	IAMs_20	11 18 43.1	
	comp=Z,23µm,20.0s						
PRU	Pruhonice	109.01	322	eSP	SP	10 50 09.0	+2.8
PRU				AMS	AMS	11 37 50.0	
	comp=Z,24µm,18.8s						
PRA	Prague	109.05	322	eSP	SP	10 50 05.5	-1.1
PRA				AMS	AMS	11 37 50.0	
	comp=Z,21µm,19.0s						
BRG	Berggiesshubel	109.11	323	eSP	SP	10 50 12.2	+5.0
	baz=68,slow=11						
BRG	Berggiesshubel	109.11	323	⇓ePif		10 36 12.6	
BRG				Amp		10 36 20.9	
	comp=Z,19nm,1.1s						
BRG	Berggiesshubel	109.11	323	P	PKiKP	10 40 16.9	+0.9
BRG				Amp		10 40 24.9	
	comp=Z,30nm,1.1s						
BRG	Berggiesshubel	109.11	323	PP	PP	10 40 42.0	-2.2
BRG				Amp		10 41 13.3	
	comp=Z,46nm,1.1s						
BRG	Berggiesshubel	109.11	323	SP	SP	10 50 06.0	-1.2
BRG				PKKP		10 51 25.0	
BRG				Amp		10 51 30.9	
	comp=Z,8.7nm,1.0s						
BRG				SKKP		10 55 33.0	
BRG				Amp		10 55 37.8	
	comp=Z,32nm,1.6s						
TSUM	Tsumeb	109.13	248	PKKPbc	PKKPbc	10 51 25.6	+1.8
	comp=Z,8.4nm,0.9s,baz=322,slow=2.6,SNR=10						
ARSA	Arzberg	109.14	319	eP	PKiKP	10 40 16.9	+0.7
	comp=Z,11nm,1.4s						
ARSA	Arzberg	109.14	319	eP	PKKPbc	10 51 22.9	-1.6
	comp=Z,7.5nm,1.1s						
BMO	Blue Mountains	109.28	44	IAMs_20	IAMs_20	11 17 47.7	
	comp=Z,45µm,22.0s						
PKM	Mcpherson Peak	109.33	55	PKiKP	PKiKP	10 40 15.4	-1.8
	baz=279						
HOMB	Homborsund	109.37	331	ePdif	Pdif	10 36 16.3	+3.4
HOMB				ePP	PP	10 40 43.3	-2.4
HOMB				eSP	SP	10 50 06.8	-2.6
HOMB				eSS	SS	10 56 03.6	-1.6
HOMB				IVMs_BB	IVMs_BB	11 27 48.0	
	comp=Z,7µm,26.3s						
FOO	Floro	109.40	335	ePdif	Pdif	10 36 16.0	+3.1
FOO				ePP	PP	10 40 48.1	+2.3
FOO				e		10 46 47.6	
FOO				eSP	SP	10 50 09.1	-0.4
FOO				IVMs_BB	IVMs_BB	11 19 34.5	
	comp=Z,6µm,13.0s						
VOG	Valley Oaks Go	109.45	53	PKiKP	PKiKP	10 40 15.2	-1.9
	baz=280						
SBC	Santa Barbara	109.48	55	PKiKP	PKiKP	10 40 16.6	-0.7
	baz=279						
CKRC	Cesky Krumlov	109.49	321	eSP	SP	10 50 18.2	+7.0
CKRC				AMS	AMS	11 37 30.0	
	comp=Z,29µm,18.6s						
CLL	Collm	109.54	323	i P	Pdif	10 36 14.9	+1.1
CLL				i		10 40 50.7	
CLL				e		10 46 53.0	
CLL				ePS	PS	10 50 15.0	-0.5
CLL				pmax	pmax		
	comp=Z,27nm,1.6s						
CLL				pmax	pmax		
	comp=Z,74nm,1.2s						
CLL				MLR	MLR		
	comp=Z,37µm,19.4s						
CLL	Collm	109.54	323	i Pdif	Pdif	10 36 14.9	+1.1
	comp=Z,27nm,1.6s						
CLL				e		10 40 04.0	
CLL				e(PKiKP)		10 40 21.0	
CLL				i PP	PP	10 40 50.7	+3.4
	comp=Z,74nm,1.2s						
CLL				ePPlp		10 41 02.0	
	comp=N,1µm,18.4s						
CLL				ePPlp		10 41 02.0	
	comp=E,2µm,22.5s						
CLL				ePPlp		10 41 02.0	
	comp=Z,3µm,19.3s						
CLL				eSKSac	SKSac	10 46 53.0	+1.2
CLL				eSdif	SKKSac	10 48 17.0	+28
CLL				ePS	PS	10 50 15.0	-0.5
CLL				ePPS	PPS	10 51 15.0	
CLL				ePKKPbc	PKKPbc	10 51 25.0	+1.7
CLL				eSS	SS	10 56 06.0	-1.9
CLL				eSSS	SSS	11 00 30.0	
CLL				e		11 07 09.0	
CLL				L	L	11 40 00.0	
	comp=Z,37µm,19.4s						
CLL	Collm	109.54	323	eSP	SP	10 50 15.8	+4.3
	baz=68,slow=11						
CLL	Collm	109.54	323	IAMs_20	IAMs_20	11 36 45.5	
	comp=Z,31µm,20.0s						
SOKA	Soboth	109.61	318	eP	PKiKP	10 40 16.9	-0.3
	comp=Z,25nm,1.8s						
SOKA	Soboth	109.61	318	eP	PKKPbc	10 51 20.7	-2.4
	comp=Z,6.6nm,1.0s						
MLAC	Mammoth, Mammo	109.66	52	PKiKP	PKiKP	10 40 15.9	-1.9
	baz=280						
VES	Vestal, Richgr	109.77	53	PKiKP	PKiKP	10 40 16.1	-1.6
	baz=280						
SUE	Sulen	109.79	335	ePdif	Pdif	10 36 15.6	+0.9
SUE				ePP	PP	10 40 58.3	+10
SUE				eSKSac	SKSac	10 46 50.5	-1.9
SUE				eSP	SP	10 50 12.8	-0.6
MOA	Molln	109.79	320	eP	PKiKP	10 40 18.2	+0.7
	comp=Z,11nm,0.9s						
MOA	Molln	109.79	320	eP	PKKPbc	10 51 21.1	-1.4
	comp=Z,7.6nm,0.9s						
SNCC	San Nicolas Is	109.81	56	PKiKP	PKiKP	10 40 16.9	-1.0
	baz=278						
BLS5	Blasjo	109.82	333	ePdif	Pdif	10 36 15.5	+0.6
BLS5				e		10 40 55.4	
BLS5				eSP	SP	10 50 14.5	+0.7
BLS5				IVMs_BB	IVMs_BB	11 18 06.8	
	comp=Z,5µm,30.9s						
KHC	Kasperske Hory	109.86	321	ePDIFF	Pdif	10 36 15.4	0.0
KHC				epP	sPdif	10 36 26.3	+0.6
KHC				ePP	PP	10 40 45.8	-4.0
KHC				eSP	SP	10 50 19.0	+4.1
KHC				ePKKP	PKKPab	10 51 29.5	-2.8
KHC				AMS	AMS	11 38 50.0	
	comp=Z,26µm,19.3s						
KHC	Kasperske Hory	109.86	321	eP	Pdif	10 36 15.4	0.0
KHC				e		10 40 45.8	
KHC				eSP	SP	10 50 19.0	+4.1
KHC				e		10 51 29.5	
KHC				MLR	MLR		
	comp=Z,26µm,19.3s						
MATE	Matera	109.86	312	⇓P	PKKPbc	10 51 21.1	-0.8
BER	Bergen	109.87	334	ePdif	Pdif	10 36 22.7	+7.6
BER				ePP	PP	10 40 49.9	+0.6
BER				eSP	SP	10 50 11.9	-2.3
BER				IVMs_BB	IVMs_BB	11 28 39.7	
	comp=Z,11µm,22.0s						
GEC2	GERESS Array S	109.87	321	eSP	SP	10 50 19.4	+4.3
	baz=68,slow=11						
GERES	GERESS Array B	109.87	321	Pdiff	Pdif	10 36 16.6	+1.1
	comp=Z,1.2nm,0.7s,baz=84,slow=5.5,SNR=8.2						
GERES				PKiKP	PKiKP	10 40 17.8	+0.2
	comp=Z,10nm,0.8s,baz=94,slow=4.0,SNR=7.1						
GERES				PKKPbc	PKKPbc	10 51 21.9	-0.5
	comp=Z,4.4nm,0.7s,baz=222,slow=1.8,SNR=10						
ASK	Askoy	109.88	334	ePP	PP	10 40 48.6	-0.8
NVAR	Mina Array Bea	109.93	51	Pdiff	Pdif	10 36 16.9	+0.7
	comp=Z,4.2nm,0.9s,baz=263,slow=5.4,SNR=17						
NVAR				PKiKP	PKiKP	10 40 20.1	+1.9
	comp=Z,15nm,0.8s,baz=252,slow=1.9,SNR=14						
NVAR				PKKPbc	PKKPbc	10 51 17.4	-4.6
	comp=Z,1.6nm,0.8s,baz=135,slow=4.2,SNR=4.1						
NVAR				PKPPKP		10 59 44.2	
	comp=Z,0.6nm,0.8s,baz=149,slow=3.7,SNR=2.6						
OBKA	Obir	109.98	318	eP	PKiKP	10 40 18.9	+1.0
	comp=Z,28nm,1.1s						
OBKA	Obir	109.98	318	eP	PKKPbc	10 51 23.0	+1.1
	comp=Z,8.5nm,0.8s						
ARVC	Arvin	110.09	54	PKiKP	PKiKP	10 40 17.4	-0.9
	baz=279						
LJU	Ljubljana	110.12	318	ePP	PP	10 41 03.2	+11
TIP	Timpagrande	110.12	310	⇑P	Pdif	10 36 19.6	+2.8
TIP	Timpagrande	110.12	310	⇓P	PKKPbc	10 51 20.6	-0.5
PLID	Pearl Lake	110.12	43	IAMs_20	IAMs_20	11 19 18.9	
	comp=Z,27µm,21.0s						
TANN	Tannenbergstha	110.15	323	eSP	SP	10 50 22.2	+4.5
	baz=68,slow=11						
BSEG	Bad Segeberg	110.16	327	eSP	SP	10 50 20.1	+2.6
	baz=68,slow=11						
NKC	Novy Kostel	110.21	322	eSP	SP	10 50 23.7	+5.4
NKC				AMS	AMS	11 41 20.0	
	comp=Z,28µm,19.2s						
FLTG	Flechtingen	110.23	325	eSP	SP	10 50 20.9	+2.8
	baz=68,slow=11						
TIN	Tinemaha, Big	110.24	52	PKiKP	PKiKP	10 40 18.0	-0.8
	baz=280						
OSI	Osito Audit: C	110.26	55	PKiKP	PKiKP	10 40 17.4	-1.4
	baz=279						
CEY	Cerknica	110.27	317	ePdiff	Pdif	10 36 19.1	+1.8
CEY				i PKiKP	PKiKP	10 40 19.8	+1.3
CEY				i PP	PP	10 41 03.7	+11
CEY				eSdiff		10 48 27.8	
CEY				eSP	SP	10 50 25.0	+5.9
ISA	Isabella, Lake	110.29	54	PKiKP	PKiKP	10 40 16.9	-2.0
	baz=280						
WET	Wettzell	110.29	321	eSP	SP	10 50 24.4	+5.4
	baz=68,slow=11						
NEUB	Neuenburg	110.30	324	eSP	SP	10 50 22.7	+3.8
	baz=68,slow=11						
PLN	Plauen	110.31	323	eSP	SP	10 50 21.7	+2.6
	baz=68,slow=11						
CWC	Cottonwood Cre	110.47	53	PKiKP	PKiKP	10 40 18.2	-1.1
	baz=280						
MANZ	Manzenberg	110.50	322	eSP	SP	10 50 25.8	+4.9
	baz=68,slow=11						
ROTZ	Rotzenmuhle	110.51	322	eSP	SP	10 50 26.3	+5.2
	baz=68,slow=11						
MYKA	Terra Mystica	110.55	319	eP	PKiKP	10 40 18.8	-0.2
	comp=Z,18nm,1.1s						
MYKA	Terra Mystica	110.55	319	eP	PKKPbc	10 51 18.5	-1.5
	comp=Z,13nm,0.9s						
PMSA	Palmer Station	110.56	174	IAMs_20	IAMs_20	11 25 57.4	
	comp=Z,33µm,22.0s						
MOX	Moxa	110.58	323	eSP	SP	10 50 25.8	+4.2
	baz=68,slow=11						
MOX				eL	L	11 34 29.9	
	comp=Z,23µm,21.5s						
KBA	Koelnbreinsper	110.61	319	eP	PKiKP	10 40 20.1	+0.9
	comp=Z,23nm,1.2s						
KBA	Koelnbreinsper	110.61	319	eP	PKKPbc	10 51 19.5	-0.4
	comp=Z,14nm,1.1s						
ASSE	Asse, Remlinge	110.62	325	eSP	SP	10 50 25.1	+3.4
	baz=68,slow=11						
DECC	Green Verdugo	110.64	55	PKiKP	PKiKP	10 40 19.5	0.0
	baz=279						
SCI2	San Clemente I	110.66	56	PKiKP	PKiKP	10 40 20.2	+0.7
	baz=279						
MFID	Camas Ranch	110.67	45	IAMs_20	IAMs_20	11 17 39.4	
	comp=Z,30µm,22.0s						
CIS	Catalina Islan	110.71	56	PKiKP	PKiKP	10 40 18.4	-1.3
	baz=279						
FMP	Fort Macarthur	110.76	56	PKiKP	PKiKP	10 40 19.2	-0.4
	baz=279						
RJOB	Jochberg	110.77	320	eSP	SP	10 50 29.3	+5.7
	baz=68,slow=11						
EDW2	Edwards Air Fo	110.81	54	PKiKP	PKiKP	10 40 19.3	-0.5
	baz=280						
NRDL	Niedersach Rie	110.81	325	eSP	SP	10 50 27.7	+4.3
	baz=68,slow=11						
CLZ	Clausthal	110.90	325	eSP	SP	10 50 28.7	+4.3
	baz=68,slow=11						
LRMC	Laurel Mtn Rad	110.96	54	PKiKP	PKiKP	10 40 18.8	-1.4
	baz=280						
MPMC	Manual Prospec	111.01	53	PKiKP	PKiKP	10 40 18.7	-1.6
	baz=281						
MSO	Missoula	111.02	41	IAMs_20	IAMs_20	11 19 31.5	
	comp=Z,29µm,21.0s						
MSO	Missoula	111.02	41	PKiKP	PKiKP	10 40 18.9	-1.0
	baz=287						
GRA1	Grafenberg Arr	111.14	322	IAMs_20	IAMs_20	11 36 31.0	
	comp=Z,21µm,20.0s						
GRF	Grafenberg Arr	111.14	322	ePdiff	Pdif	10 36 22.2	+1.1
	baz=70,slow=4.2						
GRF				eSP	SP	10 50 31.6	+4.9
	baz=68,slow=11						
GRF				eL	L	11 36 41.3	
	comp=Z,20µm,21.6s						
BFSC	Mount Baldy Ra	111.19	55	PKiKP	PKiKP	10 40 18.1	-2.5
	baz=280						
SCO	Scoresbysund	111.20	350	IAMs_20	IAMs_20	11 30 14.1	
	comp=Z,29µm,20.0s						
SUMG	Summit	111.22	356	i P	PKKPbc	10 51 15.6	-3.3
SUMG	Summit	111.22	356	IAMs_20	IAMs_20	11 27 56.5	
	comp=Z,33µm,21.0s						
GTTG	Gottingen	111.24	324	eSP	SP	10 50 32.1	+4.5
	baz=68,slow=11						
ABTA	Abfaltersbach	111.26	319	eP	PKiKP	10 40 19.7	-0.7
	comp=Z,25nm,0.9s,SNR=4.9						
ABTA	Abfaltersbach	111.26	319	eP	PKKPbc	10 51 18.3	+0.6
	comp=Z,4.4nm,0.9s						
HLG	Helgoland	111.39	327	eSP	SP	10 50 32.6	+4.0
	baz=68,slow=11						
FURC	Furnace Creek,	111.43	52	PKiKP	PKiKP	10 40 21.2	+0.4
	baz=281						
UBBA	Unterbreizbach	111.48	324	eSP	SP	10 50 34.4	+4.7
	baz=68,slow=11						
FUR	Furstenfeldbru	111.61	321	eSP	SP	10 50 36.2	+5.0
	baz=68,slow=11						
RRX	Edison Barstow	111.62	54	PKiKP	PKiKP	10 40 20.8	-0.5
	baz=280						
HLID	Hailey	111.62	45	IAMs_20	IAMs_20	11 17 23.6	
	comp=Z,26µm,22.0s						
HLID	Hailey	111.62	45	PKiKP	PKiKP	10 40 20.7	-0.5
	baz=286						
WTTA	Wattenberg	111.67	320	eP	PKiKP	10 40 21.4	+0.2
	comp=Z,74nm,0.9s,SNR=12						
WTTA	Wattenberg	111.67	320	eP	PKKPbc	10 51 16.1	-0.4
	comp=Z,32nm,1.6s						
MURC	Murrieta	111.68	56	PKiKP	PKiKP	10 40 20.4	-1.0
	baz=280						
WATA	Walderalm	111.68	320	eP	PKiKP	10 40 21.1	-0.1
	comp=Z,46nm,1.1s						
WATA	Walderalm	111.68	320	eP	PKKPbc	10 51 18.3	+1.9
	comp=Z,28nm,1.3s						
GSC	Goldstone, Bar	111.69	54	PKiKP	PKiKP	10 40 20.6	-0.9
	baz=281						
ELK	Elko	111.75	48	IAMs_20	IAMs_20	11 19 00.1	
	comp=Z,37µm,22.0s						
BBRC	Big Bear Solar	111.79	55	PKiKP	PKiKP	10 40 20.7	-1.3
	baz=280						
AQU	L'Aquila	111.87	314	IAMs_20	IAMs_20	11 38 26.7	
	comp=Z,23µm,22.0s						
109C	Camp Elliot, M	111.87	56	IAMs_20	IAMs_20	11 18 07.2	
	comp=Z,34µm,21.0s						
109C	Camp Elliot, M	111.87	56	PKiKP	PKiKP	10 40 20.1	-1.7
	baz=280						
SQTA	Sankt Quirin	111.96	320	eP	PKiKP	10 40 21.8	+0.1
	comp=Z,46nm,1.4s						
SQTA	Sankt Quirin	111.96	320	eP	PKKPbc	10 51 14.9	-0.5
	comp=Z,21nm,1.1s						
MOTA	Moosalm	111.99	320	eP	PKiKP	10 40 21.8	0.0
	comp=Z,39nm,1.0s,SNR=5.3						
MOTA	Moosalm	111.99	320	eP	PKKPbc	10 51 15.3	-0.1
	comp=Z,19nm,0.9s						
SHOC	Shoshone, Teco	112.00	53	PKiKP	PKiKP	10 40 20.6	-1.4
	baz=281						
R11A	Troy Canyon, C	112.04	50	PKiKP	PKiKP	10 40 21.1	-1.1
	baz=283						
RETA	Reutte	112.16	320	eP	PKiKP	10 40 21.8	-0.3
	comp=Z,40nm,1.9s						
RETA	Reutte	112.16	320	eP	PKKPbc	10 51 15.5	+0.7
	comp=Z,16nm,1.0s						
HEC	Hector,Ludlow	112.16	54	PKiKP	PKiKP	10 40 19.8	-2.6
	baz=281						
IBBN	Ibbenburen	112.22	326	eSP	SP	10 50 41.3	+4.9
	baz=68,slow=11						
PFO	Pinyon Flats O	112.28	55	PKiKP	PKiKP	10 40 20.8	-1.9
	baz=280						
TPFO	Pinon Flats	112.29	55	PKiKP	PKiKP	10 40 20.8	-1.9
	baz=280						
FETA	Feichten	112.33	320	eP	PKiKP	10 40 22.7	+0.2
	comp=Z,42nm,1.3s						
FETA	Feichten	112.33	320	eP	PKKPbc	10 51 11.4	-2.8
	comp=Z,17nm,0.9s						
DLMT	Dillon	112.35	42	IAMs_20	IAMs_20	11 21 34.8	
	comp=Z,30µm,22.0s						
TUQ	Turquoise Moun	112.38	53	PKiKP	PKiKP	10 40 21.0	-1.9
	baz=281						
MONP2	Monument Peak	112.44	56	PKiKP	PKiKP	10 40 22.1	-1.0
	baz=280						
UBR	Ueberruh	112.51	320	eSP	SP	10 50 45.9	+6.3
	baz=68,slow=11						
BELC	Belle Mtn. Jos	112.59	55	PKiKP	PKiKP	10 40 21.7	-1.7
	baz=281						
TNS	Taunus Mts	112.62	323	eSP	SP	10 50 46.0	+5.6
	baz=68,slow=11						
STU	Stuttgart	112.70	322	eSP	SP	10 50 47.5	+6.3
	baz=68,slow=11						
GMRC	Granite Mounta	112.72	54	PKiKP	PKiKP	10 40 22.2	-1.3
	baz=281						
IKP	In-Ko-Pah, Jac	112.74	56	PKiKP	PKiKP	10 40 23.2	-0.3
	baz=280						
DAVA	Damuels	112.79	320	i P	PKiKP	10 40 23.5	+0.2
	comp=Z,17nm,0.5s,SNR=10						
DAVA	Damuels	112.79	320	eP	PKKPbc	10 51 10.5	-2.2
	comp=Z,14nm,1.1s						
BUG	Bochum--Univer	112.84	325	eSP	SP	10 50 48.0	+5.8
	baz=68,slow=11						
BOZ	Bozeman (W)	112.93	42	IAMs_20	IAMs_20	11 19 05.0	
	comp=Z,26µm,21.0s						
BOZ	Bozeman (W)	112.93	42	PKiKP	PKiKP	10 40 23.2	-0.5
	baz=289						
SWSC	Sam W. Stewart	112.94	56	PKiKP	PKiKP	10 40 23.4	-0.4
	baz=280						
DAVOX	Davos/Dischmat	112.96	320	Pdiff	Pdif	10 36 30.3	+0.9
	comp=Z,3.1nm,0.7s,baz=130,slow=18,SNR=4.3						
DAVOX				PKiKP	PKiKP	10 40 23.8	+0.1
	comp=Z,8.5nm,0.4s,baz=101,slow=4.0,SNR=5.0						
DAVOX				PKKPbc	PKKPbc	10 51 09.6	-2.6
	comp=Z,5.6nm,0.7s,baz=344,slow=4.2,SNR=6.4						
BC3	Big Chuckawall	113.10	55	PKiKP	PKiKP	10 40 23.4	-0.9
	baz=281						
IRM	Iron Mountain	113.25	55	PKiKP	PKiKP	10 40 24.4	0.0
	baz=281						
AHRW	Bad Neuenahr-A	113.31	324	eSP	SP	10 50 54.3	+7.7
	baz=68,slow=11						
EGMT	Eagleton	113.31	39	IAMs_20	IAMs_20	11 23 20.0	
	comp=Z,32µm,22.0s						
EGMT	Eagleton	113.31	39	PKiKP	PKiKP	10 40 23.5	-0.7
	baz=291						
BFO	Black Forest	113.40	322	eSP	SP	10 50 55.8	+8.1
	baz=68,slow=11						
VLC	Villacollemand	113.47	317	IAMs_20	IAMs_20	11 39 29.7	
	comp=Z,26µm,21.0s						
NEE2	Needles Airpor	113.56	54	PKiKP	PKiKP	10 40 24.5	-0.4
	baz=282						
DUG	Dugway, Tooele	113.67	48	PKiKP	PKiKP	10 40 25.2	0.0
	baz=286						
GLA	Glamis	113.73	56	PKiKP	PKiKP	10 40 26.1	+0.7
	baz=281						
BTNL	Ternell	113.84	324	dPKiKP	PKiKP	10 40 24.9	-0.2
MEM	Membach	113.91	324	dPKiKP	PKiKP	10 40 25.9	+0.8
FXWY	Fox Creek	113.95	44	IAMs_20	IAMs_20	11 21 30.3	
	comp=Z,23µm,22.0s						
BHOU	Houvegnez	114.01	324	dPKiKP	PKiKP	10 40 26.5	+1.1
BHOU				dPP	PP	10 41 20.7	+1.4
H17A	Grant Village	114.02	43	PKiKP	PKPdf	10 40 25.4	-0.5
	baz=289						
FLWY	Flagg Ranch	114.04	43	IAMs_20	IAMs_20	11 22 19.5	
	comp=Z,25µm,21.0s						
PDMCI	Parker Dam,Lak	114.04	54	PKiKP	PKPdf	10 40 25.7	-0.2
	baz=282						
TPAW	Teton Pass	114.05	44	IAMs_20	IAMs_20	11 21 21.9	
	comp=Z,26µm,22.0s						
MOOW	Moose Ponds	114.11	44	IAMs_20	IAMs_20	11 25 00.5	
	comp=Z,23µm,21.0s						
REDW	Red Top Meadow	114.16	44	IAMs_20	IAMs_20	11 21 25.8	
	comp=Z,28µm,22.0s						
AHID	Auburn Hatcher	114.17	45	IAMs_20	IAMs_20	11 22 17.2	
	comp=Z,31µm,21.0s						
HWUT	Hardware Ranch	114.19	46	IAMs_20	IAMs_20	11 21 46.6	
	comp=Z,30µm,20.0s						
SNOW	Snow King Moun	114.20	44	IAMs_20	IAMs_20	11 21 38.7	
	comp=Z,23µm,22.0s						
WLF	Walferdange	114.21	323	dPKiKP	PKiKP	10 40 27.4	+1.7
WLF	Walferdange	114.21	323	eSP	SP	10 51 05.7	+11
	baz=68,slow=11						
WLF	Walferdange	114.21	323	IAMs_20	IAMs_20	11 36 40.1	
	comp=Z,26µm,20.0s						
LOHW	Long Hollow	114.25	44	IAMs_20	IAMs_20	11 23 57.2	
	comp=Z,24µm,22.0s						
BCLA	Clavier	114.39	324	dPKiKP	PKiKP	10 40 26.9	+0.9
BCLA				dPP	PP	10 41 25.6	+3.5
BGES	Gesves	114.53	324	dPP	PP	10 41 28.1	+5.1
RCHB	Rochefort	114.55	324	dPKiKP	PKPdf	10 40 27.1	+0.7
RLMT	Red Lodge	114.66	42	IAMs_20	IAMs_20	11 28 01.7	
	comp=Z,30µm,21.0s						
RLMT	Red Lodge	114.66	42	PKiKP	PKPdf	10 40 27.4	+0.3
	baz=290						
SOEG	Soedalen	114.71	352	i P	PKKPbc	10 51 09.9	+3.4
ICESG	Greenland Ices	114.73	356	eP	PKiKP	10 40 26.5	-0.1
ICESG	Greenland Ices	114.73	356	i P	PKKPbc	10 51 09.8	+2.8
BMRD	Maredsous	114.75	324	dPKiKP	PKPdf	10 40 27.3	+0.5
FFC	Flin Flon	114.77	30	IAMs_20	IAMs_20	11 25 32.8	
	comp=Z,39µm,22.0s						
SENIN	Lac Senin/Sane	114.78	320	IAMs_20	IAMs_20	11 38 49.8	
	comp=Z,25µm,21.0s						
DOU	Dourbes	114.94	324	dPKiKP	PKPdf	10 40 27.6	+0.5
SNF	Seneffe	114.94	325	dPKiKP	PKPdf	10 40 27.6	+0.5
ILULI	Ilulissat	115.01	0	IAMs_20	IAMs_20	11 30 27.5	
	comp=Z,34µm,21.0s						
BW06	Boulder Array	115.25	44	IAMs_20	IAMs_20	11 24 43.4	
	comp=Z,39µm,22.0s						
BW06	Boulder Array	115.25	44	PKiKP	PKiKP	10 40 27.7	-0.6
	baz=289						
PDAR	Pinedale Array	115.25	44	PKP	PKPdf	10 40 28.7	+0.4
	comp=Z,18nm,0.9s,baz=233,slow=1.5,SNR=31						
PDAR				PKKPbc	PKKPbc	10 51 03.5	-0.8
	comp=Z,10nm,0.8s,baz=106,slow=3.2,SNR=11						
VSL	Villasalto	115.59	312		PKiKP	10 40 27.8	-0.9
214A	Organ Pipe Nat	115.61	57	PKiKP	PKPdf	10 40 28.5	-0.6
	baz=282						
BNI	Bardonecchia	115.66	319	IAMs_20	IAMs_20	11 40 07.4	
	comp=Z,26µm,21.0s						
SRU	San Rafael Swe	115.67	48	PKIKP	PKiKP	10 40 28.7	-0.4
SRU	San Rafael Swe	115.67	48		PKiKP	10 40 28.7	-0.4
MDO	Dochfour	115.69	334	eP	PKiKP	10 40 25.0	-3.4
WUAZ	Wupatki	115.98	52	IAMs_20	IAMs_20	11 21 43.5	
	comp=Z,27µm,21.0s						
WUAZ	Wupatki	115.98	52	PKiKP	PKPdf	10 40 29.5	-0.3
	baz=284						
LAO	LASA Array	116.04	39	IAMs_20	IAMs_20	11 25 39.2	
	comp=Z,39µm,22.0s						
LAO	LASA Array	116.04	39	PKiKP	PKPdf	10 40 30.0	+0.5
	baz=294						
EDMD	Edmundbyers	116.10	331	eP	PKiKP	10 40 28.7	-0.5
EDMD				IAMs_20	IAMs_20	11 32 04.4	
	comp=Z,33µm,23.3s						
INVG	Invergeldie, C	116.15	333	eP	PKPdf	10 40 29.6	+0.3
INVG				IAMs_20	IAMs_20	11 33 53.2	
	comp=Z,31µm,23.9s						
KPL	Plockton	116.30	335	eP	PKPdf	10 40 30.0	+0.5
KPL				IAMs_20	IAMs_20	11 29 59.3	
	comp=Z,30µm,23.3s						
EKA	Eskdalemuir Ar	116.39	332	PKP	PKPdf	10 40 29.6	-0.2
	comp=Z,7.8nm,0.5s,baz=40,slow=2.6,SNR=17						
EKA				PKKPbc	PKKPbc	10 50 59.0	-1.4
	comp=Z,17nm,0.8s,baz=250,slow=2.6,SNR=13						
HPK	Haverah Park	116.42	330	eP	PKiKP	10 40 30.4	+0.5
HPK				IAMs_20	IAMs_20	11 36 22.4	

	comp=Z,38μm,21.2s						
ESK	**Eskdalemuir**	**116.42**	**332**	*e*P	**PKiKP**	**10 40 31.3**	**+1.5**
ESK				IAMs_20	IAMs_20	11 35 17.1	
	comp=Z,28μm,20.8s						
ESK	**Eskdalemuir**	**116.42**	**332**	IAMs_20	IAMs_20	11 38 32.6	
	comp=Z,25μm,20.0s						
DGMT	**Dagmar**	**116.54**	**37**	PKPdf	**PKPdf**	**10 40 30.1**	**-0.2**
DGMT	**Dagmar**	**116.54**	**37**	IAMs_20	IAMs_20	11 26 56.2	
	comp=Z,28μm,21.0s						
DGMT	**Dagmar**	**116.54**	**37**	PKiKP	**PKPdf**	**10 40 29.9**	**-0.4**
	baz=296						
KEST	**Kesra**	**116.65**	**308**	PKP	**PKiKP**	**10 40 31.5**	**+0.5**
	comp=Z,17nm,0.9s,baz=328,slow=7.1,SNR=8.0						
KEST				PKKPab	**PKKPbc**	**10 51 00.2**	**+1.2**
	comp=Z,13nm,1.0s,baz=266,slow=4.1,SNR=7.1						
KEST	**Kesra**	**116.65**	**308**	P	**PKiKP**	**10 40 32.9**	**+1.9**
	SNR=6.8						
KEST	**Kesra**	**116.65**	**308**	PKPdf	**PKPdf**	**10 40 29.6**	**-1.4**
LBWR	**Ladybower, Pea**	**116.77**	**330**	*e*P	**PKiKP**	**10 40 31.1**	**+0.5**
LBWR				IAMs_20	IAMs_20	11 36 48.5	
	comp=Z,34μm,22.1s						
LAWE	**Loch Awe, Argy**	**116.86**	**334**	*e*P	**PKPdf**	**10 40 28.6**	**-2.0**
SSB	**Saint Sauveur**	**116.97**	**319**	PKIKP	**PKPdf**	**10 40 30.7**	**-0.6**
SSB	**Saint Sauveur**	**116.97**	**319**	PKPdf	**PKPdf**	**10 40 30.7**	**-0.6**
NEWG	**New Galloway**	**117.01**	**332**	*e*P	**PKPdf**	**10 40 30.6**	**-0.4**
NEWG				IAMs_20	IAMs_20	11 32 60.0	
	comp=Z,20μm,22.7s						
O20A	**White River Ci**	**117.04**	**47**		**PKPdf**	**10 40 30.7**	**-1.1**
O20A	**White River Ci**	**117.04**	**47**	PKiKP	**PKiKP**	**10 40 32.5**	**+0.7**
	baz=289						
STNC	**Stoke**	**117.18**	**330**	*e*P	**PKiKP**	**10 40 33.4**	**+2.0**
STNC				IAMs_20	IAMs_20	11 36 27.0	
	comp=Z,31μm,22.5s						
TUC	**Tucson**	**117.22**	**56**	PKIKP	**PKPdf**	**10 40 32.1**	**-0.1**
TUC	**Tucson**	**117.22**	**56**	PKPdf	**PKPdf**	**10 40 32.1**	**-0.1**
TUC	**Tucson**	**117.22**	**56**	IAMs_20	IAMs_20	11 19 53.6	
	comp=Z,38μm,22.0s						
TUC	**Tucson**	**117.22**	**56**	PKiKP	**PKiKP**	**10 40 32.7**	**+0.5**
	baz=283						
CLF	**Chambon-Foret**	**117.23**	**323**	PKPdf	**PKiKP**	**10 40 31.9**	**+0.3**
CLF				IAMs_20	IAMs_20	11 39 49.1	
	comp=Z,31μm,21.0s						
SFJD	**Kangerlussuaq**	**117.24**	**0**	PKKPab	PKKPab	10 50 57.1	-2.1
	comp=Z,31nm,1.0s,baz=204,slow=10.0,SNR=4.2						
SFJD	**Kangerlussuaq**	**117.24**	**0**	PKIKP	**PKiKP**	**10 40 31.4**	**+0.3**
SFJD				MLR	MLR		
	comp=Z,37μm,22.0s						
SFJD	**Kangerlussuaq**	**117.24**	**0**	PKPdf	**PKiKP**	**10 40 31.4**	**+0.3**
SFJD	**Kangerlussuaq**	**117.24**	**0**	IAMs_20	IAMs_20	11 31 09.3	
	comp=Z,37μm,22.0s						
RWWY	**Rawlins**	**117.26**	**45**	IAMs_20	IAMs_20	11 23 29.7	
	comp=Z,37μm,22.0s						
W18A	**Petrified Fore**	**117.38**	**52**	PKiKP	**PKPdf**	**10 40 32.1**	**-0.5**
	baz=285						
GAL1	**Galloway**	**117.38**	**332**	*e*P	**PKiKP**	**10 40 32.2**	**+0.5**
GAL1				IAMs_20	IAMs_20	11 32 55.6	
	comp=Z,22μm,24.6s						
K22A	**Casper**	**117.39**	**44**	PKiKP	**PKPdf**	**10 40 31.6**	**-0.8**
	baz=292						
DY2G	**Dye2**	**117.69**	**358**	*e*P	**PKiKP**	**10 40 32.5**	**+0.2**
MVCO	**Mesa Verde**	**117.75**	**50**	PKiKP	**PKiKP**	**10 40 33.5**	**+0.2**
	baz=287						
STRD	**Stroud**	**117.87**	**328**	*e*P	**PKPdf**	**10 40 32.5**	**-0.2**
CMAH	**Djebel Manchou**	**117.90**	**309**	P	**PKiKP**	**10 40 33.6**	**+0.2**
ABSA	**Djebel Ababsia**	**117.96**	**309**	P	**PKPdf**	**10 40 33.4**	**-0.1**
WME	**Myndd Eilian**	**118.05**	**331**	*e*P	**PKPdf**	**10 40 28.1**	**-4.9**
YLL	**Llanberis**	**118.13**	**330**	*e*P	**PKiKP**	**10 40 33.6**	**+0.4**
MCH1	**Michaelchurch**	**118.19**	**329**	*e*P	**PKiKP**	**10 40 33.5**	**+0.2**
MCH1				IAMs_20	IAMs_20	11 37 46.7	
	comp=Z,21μm,23.0s						
SMCO	**Snowmass**	**118.28**	**47**	IAMs_20	IAMs_20	11 23 38.0	
	comp=Z,23μm,22.0s						
N23A	**Red Feather La**	**118.43**	**45**	PKiKP	**PKiKP**	**10 40 34.8**	**+0.3**
	baz=291						
RSSD	**Black Hills**	**118.49**	**41**	PKIKP	**PKPdf**	**10 40 33.8**	**-0.7**
RSSD	**Black Hills**	**118.49**	**41**	PKPdf	**PKPdf**	**10 40 33.8**	**-0.7**
RSSD	**Black Hills**	**118.49**	**41**	IAMs_20	IAMs_20	11 27 43.1	
	comp=Z,26μm,22.0s						
RSSD	**Black Hills**	**118.49**	**41**	PKiKP	**PKPdf**	**10 40 33.9**	**-0.6**
	baz=294						
CKFL	**Kef-Lekhel**	**118.51**	**309**	P	**PKiKP**	**10 40 35.0**	**+0.4**
CTEI	**Djebel Teioual**	**118.85**	**309**	P	**PKiKP**	**10 40 36.0**	**+0.7**
S22A	**4UR Ranch, Cre**	**118.85**	**49**	PKiKP	**PKiKP**	**10 40 36.4**	**+0.9**
	baz=289						
ISCO	**Idaho Springs**	**119.06**	**46**	PKiKP	**PKiKP**	**10 40 36.3**	**+0.4**
	baz=291						
DFRA	**Djebel Bou Aff**	**119.11**	**310**	P	**PKiKP**	**10 40 36.5**	**+0.7**
USHA	**Ushuaia**	**119.40**	**168**	PKP	**PKiKP**	**10 40 36.5**	**+0.9**
	comp=Z,29nm,0.8s,baz=226,slow=2.6,SNR=3.1						
DYA	**Yadsworthy**	**119.54**	**328**	*e*P	**PKPdf**	**10 40 34.7**	**-1.2**
DYA				IAMs_20	IAMs_20	11 22 33.2	
	comp=Z,25μm,33.4s						
MDND	**Maddock**	**119.55**	**36**	PKiKP	**PKPdf**	**10 40 35.4**	**-0.8**
	baz=300						
121A	**Cookes Peak, D**	**119.62**	**55**	PKiKP	**PKiKP**	**10 40 37.4**	**+0.4**
	baz=285						
Q24A	**Divide**	**119.69**	**47**	PKiKP	**PKiKP**	**10 40 37.3**	**+0.1**
	baz=291						
SDCO	**Great Sand Dun**	**119.85**	**48**	IAMs_20	IAMs_20	11 27 13.6	
	comp=Z,23μm,22.0s						
SDCO	**Great Sand Dun**	**119.85**	**48**	PKiKP	**PKPdf**	**10 40 37.3**	**-0.1**
	baz=290						
Y22D	**IRIS PASSCAL I**	**119.89**	**53**	PKiKP	**PKiKP**	**10 40 38.2**	**+0.7**
	baz=287						
ANMO	**Albuquerque**	**120.00**	**52**	IAMs_20	IAMs_20	11 22 50.1	
	comp=Z,34μm,22.0s						
ANMO	**Albuquerque**	**120.00**	**52**	PKiKP	**PKiKP**	**10 40 38.1**	**+0.4**
	baz=288						
ULM	**Lac du Bonnet**	**120.33**	**32**	PKP	**PKiKP**	**10 40 37.7**	**+0.1**
	comp=Z,44nm,0.8s,baz=311,slow=3.1,SNR=23						
ULM				PKKPbc	**PKKPab**	**10 50 43.6**	**-2.3**
	comp=Z,16nm,0.7s,baz=134,slow=4.2,SNR=11						
T25A	**Trinidad**	**120.87**	**49**	IAMs_20	IAMs_20	11 25 52.7	
	comp=Z,23μm,21.0s						
T25A	**Trinidad**	**120.87**	**49**	PKiKP	**PKiKP**	**10 40 39.5**	**+0.1**
	baz=290						
EPT	**El Paso**	**120.87**	**55**	IAMs_20	IAMs_20	11 23 17.3	
	comp=Z,38μm,22.0s						
OGNE	**Ogallala**	**121.14**	**44**	IAMs_20	IAMs_20	11 23 49.6	
	comp=Z,37μm,22.0s						
OGNE	**Ogallala**	**121.14**	**44**	PKiKP	**PKPdf**	**10 40 39.2**	**-0.3**
	baz=294						
AGMN	**Agassiz Nation**	**121.44**	**34**	PKiKP	**PKPdf**	**10 40 38.7**	**-1.0**
	baz=304						
KSCO	**Kaye Shedlock’**	**121.50**	**46**	PKiKP	**PKPdf**	**10 40 39.5**	**-0.7**
	baz=293						
SUSD	**Miller**	**121.61**	**39**		**PKPdf**	**10 40 39.8**	**-0.4**
SUSD	**Miller**	**121.61**	**39**	PKiKP	**PKPdf**	**10 40 39.5**	**-0.7**
	baz=299						
GO09	**Cerro Castillo**	**121.75**	**164**		**PKPdf**	**10 40 39.5**	**-0.8**
MNTX	**Cornudas Mount**	**121.81**	**55**	IAMs_20	IAMs_20	11 23 35.2	
	comp=Z,28μm,22.0s						
MNTX	**Cornudas Mount**	**121.81**	**55**	PKiKP	**PKiKP**	**10 40 41.3**	**+0.2**
	baz=286						
F33A	**5 Mile Ranch,**	**122.53**	**36**		**PKPdf**	**10 40 41.8**	**-0.1**
B35A	**Bob, Littlefor**	**122.57**	**33**		**PKPdf**	**10 40 41.0**	**-0.8**
NRS	**Narsarsuaq**	**122.97**	**357**	IAMs_20	IAMs_20	11 31 21.8	
	comp=Z,26μm,21.0s						
IVI	**Ivigtut**	**123.02**	**359**	*e*P	**PKiKP**	**10 40 43.5**	**+1.0**
IVI	**Ivigtut**	**123.02**	**359**	IAMs_20	IAMs_20	11 33 45.3	
	comp=Z,29μm,22.0s						
MSTX	**Muleshoe**	**123.20**	**52**	PKiKP	**PKPdf**	**10 40 43.5**	**-0.1**
	baz=290						
ECSD	**EROS Data Cent**	**123.43**	**39**	IAMs_20	IAMs_20	11 33 24.6	
	comp=Z,32μm,21.0s						
ECSD	**EROS Data Cent**	**123.43**	**39**	PKiKP	**PKPdf**	**10 40 43.1**	**-0.7**
	baz=301						
BGNE	**Belgrade**	**123.58**	**42**	PKiKP	**PKPdf**	**10 40 43.3**	**-0.7**
	baz=298						
CBKS	**Cedar Bluff**	**123.64**	**45**	PKiKP	**PKPdf**	**10 40 44.0**	**-0.3**
	baz=295						
AMTX	**Amarillo**	**123.73**	**50**	PKiKP	**PKPdf**	**10 40 43.9**	**-0.7**
	baz=291						
CART	**Cartagena**	**123.88**	**313**	PKP	**PKiKP**	**10 40 46.1**	**+1.1**
CART	**Cartagena**	**123.88**	**313**	PP	PP	10 42 31.6	+3.8
TXAR	**Lajitas Array**	**123.89**	**57**	PKP	**PKPdf**	**10 40 45.2**	**+0.1**
	comp=Z,52nm,0.9s,baz=251,slow=1.0,SNR=57						
TXAR				PKKPbc	**PKKPbc**	**10 50 33.3**	**+1.5**
	comp=Z,4.7nm,0.9s,baz=128,slow=4.7,SNR=6.2						
EYMN	**Ely**	**124.02**	**32**	PKiKP	**PKPdf**	**10 40 43.4**	**-1.3**
	baz=308						
EFI	**East Falkland**	**124.05**	**174**	IAMs_20	IAMs_20	11 32 41.2	
	comp=Z,38μm,22.0s						
L34A	**Svendsen Farm,**	**124.47**	**40**		**PKPdf**	**10 40 44.5**	**-1.2**
R32A	**Long Quarter,**	**124.53**	**45**		**PKPdf**	**10 40 46.0**	**0.0**
E38A	**The Farm, Brul**	**124.80**	**33**	PKPdf	**PKPdf**	**10 40 45.6**	**-0.6**
SPMN	**Marine on St.**	**124.91**	**35**	PKPdf	**PKPdf**	**10 40 45.9**	**-0.6**
SPMN	**Marine on St.**	**124.91**	**35**	PKiKP	**PKPdf**	**10 40 45.9**	**-0.6**
	baz=305						
ESBB	**Sonseca Array**	**125.06**	**317**		**PKPdf**	**10 40 46.7**	**-0.3**
ESDC	**Sonseca Array**	**125.06**	**317**	PKhKP	PKPpre	10 40 42.3	
	comp=Z,2.5nm,1.0s,baz=26,slow=2.9,SNR=2.7						
ESDC				PKP	**PKiKP**	**10 40 48.0**	**+0.6**
	comp=Z,23nm,1.2s,baz=14,slow=2.2,SNR=27						
ESDC				PP	**PP**	**10 42 38.4**	**+2.6**
	comp=Z,19nm,0.9s,baz=56,slow=6.7,SNR=7.0						
ESDC				PKKPbc	**PKKPbc**	**10 50 29.4**	**+1.9**
	comp=Z,2.5nm,0.9s,baz=265,slow=3.8,SNR=5.3						
U32A	**Winter Ranch,**	**125.18**	**48**	IAMs_20	IAMs_20	11 30 52.7	
	comp=Z,22μm,22.0s						
PAB	**San Pablo**	**125.38**	**317**	PKIKP	**PKPdf**	**10 40 47.8**	**+0.2**
PAB	**San Pablo**	**125.38**	**317**	PKPdf	**PKPdf**	**10 40 47.8**	**+0.2**
PAB	**San Pablo**	**125.38**	**317**	IAMs_20	IAMs_20	11 46 27.0	
	comp=Z,24μm,21.0s						
N35A	**Tabor**	**125.50**	**41**		**PKPdf**	**10 40 47.0**	**-0.7**
OK032	**Salt Plains WL**	**125.58**	**47**	IAMs_20	IAMs_20	11 27 08.3	
	comp=Z,32μm,22.0s						
KSU1	**Kansas State U**	**125.69**	**44**	PKPdf	**PKPdf**	**10 40 47.8**	**-0.3**
KSU1	**Kansas State U**	**125.69**	**44**	IAMs_20	IAMs_20	11 28 49.0	
	comp=Z,37μm,22.0s						
KSU1	**Kansas State U**	**125.69**	**44**	PKiKP	**PKPdf**	**10 40 47.9**	**-0.3**
	baz=298						
PBRG	**Braganca**	**125.84**	**320**	*e*PKPdf	**PKiKP**	**10 40 49.7**	**+0.9**
PBRG	**Braganca**	**125.84**	**320**	*e*PP	PP	10 43 08.2	+27
CHAS	**Isla Isabel II**	**125.90**	**311**	PKP	**PKPdf**	**10 40 48.0**	**-0.6**
CHAS	**Isla Isabel II**	**125.90**	**311**	PP	PP	10 42 38.3	-3.1
TAF	**Taforalt**	**126.03**	**311**	P	**PKiKP**	**10 40 52.0**	**+2.5**
ABTX	**Abilene, Hawle**	**126.12**	**52**	PKPdf	**PKPdf**	**10 40 48.9**	**-0.3**
ABTX	**Abilene, Hawle**	**126.12**	**52**	PKiKP	**PKPdf**	**10 40 49.1**	**-0.1**
	baz=291						
FIGM	**Figuig**	**126.14**	**307**	P	**PKiKP**	**10 40 52.0**	**+2.2**
JBK	**JBK**	**126.34**	**310**	P	**PKiKP**	**10 40 53.0**	**+2.7**
MVO	**Moncorvo**	**126.36**	**320**	*e*PKPdf	**PKiKP**	**10 40 51.0**	**+1.1**
MVO	**Moncorvo**	**126.36**	**320**	*e*PP	PP	10 42 56.9	+13
MVO	**Moncorvo**	**126.36**	**320**	*e*SS	SS	11 00 03.9	+17
MVO	**Moncorvo**	**126.36**	**320**	*e*LR	LR	11 23 20.1	
	comp=Z,24μm,20.0s						
TDRA	**Tendrara**	**126.42**	**309**	P	**PKiKP**	**10 40 53.0**	**+2.5**
SCIA	**State Center**	**126.52**	**39**	PKPdf	**PKPdf**	**10 40 49.4**	**-0.2**
SCIA				IAMs_20	IAMs_20	11 29 24.3	
	comp=Z,18μm,21.0s						
SCIA	**State Center**	**126.52**	**39**	PKiKP	**PKPdf**	**10 40 48.9**	**-0.7**
	baz=303						
OK029	**Liberty Lake**	**126.56**	**48**	IAMs_20	IAMs_20	11 36 26.2	
	comp=Z,23μm,20.0s						
PCAB	**Cabril**	**126.71**	**321**	*e*PKPdf	**PKiKP**	**10 40 51.8**	**+1.3**
EMAL	**Malaga-Limoner**	**126.71**	**314**	PP	PP	10 42 45.8	-0.9
PGAV	**Gavieira, Arco**	**126.72**	**321**	*e*PKPdf	**PKiKP**	**10 40 51.4**	**+0.8**
PGAV	**Gavieira, Arco**	**126.72**	**321**	*e*SS	SS	11 00 01.0	+10
PGAV	**Gavieira, Arco**	**126.72**	**321**	*e*LR	LR	11 23 26.6	
	comp=Z,13μm,20.0s						
OK025	**Westminster Rd**	**126.73**	**48**	IAMs_20	IAMs_20	11 36 32.9	
	comp=Z,23μm,20.0s						
JCT	**Junction City**	**126.74**	**55**	PKIKP	**PKiKP**	**10 40 50.9**	**0.0**
JCT	**Junction City**	**126.74**	**55**	PKPdf	**PKiKP**	**10 40 50.9**	**0.0**
JCT				IAMs_20	IAMs_20	11 31 37.6	
	comp=Z,25μm,20.0s						
JCT	**Junction City**	**126.74**	**55**	PKiKP	**PKPdf**	**10 40 50.4**	**0.0**
	baz=290						
POLO	**Lamas de Olo**	**126.74**	**320**	*e*PKPdf	**PKiKP**	**10 40 51.9**	**+1.2**
POLO	**Lamas de Olo**	**126.74**	**320**	*e*PP	PP	10 43 18.4	+32
PVRL	**Vila Real**	**126.74**	**320**	*e*PKPdf	**PKiKP**	**10 40 51.6**	**+1.0**
COYC	**Coyhaique**	**126.94**	**161**	PKPdf	**PKPdf**	**10 40 50.5**	**+0.1**
COYC	**Coyhaique**	**126.94**	**161**	IAMs_20	IAMs_20	11 31 23.8	
	comp=Z,25μm,22.0s						
OK031	**S. Brethren Rd**	**126.94**	**47**	IAMs_20	IAMs_20	11 28 36.4	
	comp=Z,31μm,21.0s						
OK034	**N. Norfolk Rd.**	**127.01**	**47**	IAMs_20	IAMs_20	11 29 09.2	
	comp=Z,35μm,22.0s						
PALE	**Palemas**	**127.01**	**312**	P	**PKiKP**	**10 40 55.1**	**+3.7**
MTE	**Manteigas**	**127.09**	**319**	*e*PKPdf	**PKiKP**	**10 40 52.4**	**+1.0**
MTE	**Manteigas**	**127.09**	**319**	*e*PP	PP	10 43 02.4	+13
MTE	**Manteigas**	**127.09**	**319**	*e*LR	LR	11 24 01.6	
	comp=Z,27μm,20.0s						
MTE	**Manteigas**	**127.09**	**319**	PKPdf	**PKPdf**	**10 40 50.4**	**-0.5**
MTE				IAMs_20	IAMs_20	11 44 39.9	
	comp=Z,30μm,21.0s						
PVIS	**Viseu**	**127.15**	**320**	*e*PKPdf	**PKiKP**	**10 40 51.6**	**+0.1**
PCBR	**Castelo Branco**	**127.34**	**319**	*e*PKPdf	**PKiKP**	**10 40 52.0**	**+0.2**
PCBR	**Castelo Branco**	**127.34**	**319**	*e*PP	PP	10 43 03.3	+13
PMRV	**Marv??o**	**127.49**	**318**	*e*PKPdf	**PKiKP**	**10 40 53.0**	**+0.8**
PMRV	**Marv??o**	**127.49**	**318**	*e*PP	PP	10 42 55.2	+3.4
PMRV	**Marv??o**	**127.49**	**318**	*e*SS	SS	11 00 06.3	+5.6
PMRV	**Marv??o**	**127.49**	**318**	*e*LR	LR	11 23 09.4	
	comp=Z,22μm,20.0s						
LOOK	**Love County**	**127.51**	**50**		**PKPdf**	**10 40 51.7**	**-0.1**
TORD	**Torodi Ar. Bea**	**127.66**	**283**	PKhKP	PKPpre	10 40 37.9	
	comp=Z,1.2nm,0.5s,baz=103,slow=2.0,SNR=7.9						
TORD				PKP	**PKPdf**	**10 40 51.9**	**-0.7**
	comp=Z,25nm,1.1s,baz=89,slow=0.7,SNR=8.3						
TORD				PP	**PP**	**10 42 54.9**	**+0.8**
	comp=Z,28nm,1.2s,baz=46,slow=5.4,SNR=2.1						
TORD	**Torodi Ar. Bea**	**127.66**	**283**	PKPdf	**PKPdf**	**10 40 51.7**	**-0.8**
L40A	**Anamosa**	**127.67**	**38**		**PKPdf**	**10 40 50.5**	**-1.3**
TUL1	**Leonard**	**127.73**	**47**		**PKPdf**	**10 40 51.9**	**-0.3**
TUL1				IAMs_20	IAMs_20	11 30 03.1	
	comp=Z,31μm,21.0s						
TUL1	**Leonard**	**127.73**	**47**	PKiKP	**PKPdf**	**10 40 51.8**	**-0.3**
	baz=296						
SCHQ	**Schefferville**	**127.75**	**12**	PKP	**PKPdf**	**10 40 49.5**	**-2.1**
	comp=Z,14nm,0.7s,baz=8.4,slow=6.3,SNR=9.8						
JFWS	**Jewell Farm**	**127.76**	**36**	PKiKP	**PKPdf**	**10 40 50.7**	**-1.2**
	baz=306						
COI	**Coimbra**	**127.76**	**319**	*e*PKPdf	**PKiKP**	**10 40 53.4**	**+0.8**
COI	**Coimbra**	**127.76**	**319**	*e*PP	PP	10 43 05.3	+12
COI	**Coimbra**	**127.76**	**319**	IAMs_20	IAMs_20	11 47 51.4	
	comp=Z,21μm,20.0s						
833A	**Chaparral WMA,**	**127.77**	**57**	PKiKP	**PKPdf**	**10 40 52.6**	**+0.2**
	baz=288						
CEU	**Ceuta**	**127.77**	**313**	PKP	**PKPdf**	**10 40 50.1**	**-2.1**
CEU	**Ceuta**	**127.77**	**313**	PP	PP	10 42 59.2	+5.5
PCAS	**Casmilo, Conde**	**127.90**	**319**	*e*PKPdf	**PKiKP**	**10 40 54.3**	**+1.4**
PCAS	**Casmilo, Conde**	**127.90**	**319**	*e*PP	PP	10 43 07.3	+13
PESTR	**Estremoz**	**127.91**	**318**	*e*PKPdf	**PKiKP**	**10 40 54.3**	**+1.3**
PESTR	**Estremoz**	**127.91**	**318**	*e*PP	PP	10 42 48.3	-6.2
PESTR	**Estremoz**	**127.91**	**318**	PKPdf	**PKPdf**	**10 40 51.8**	**-0.6**
PESTR	**Estremoz**	**127.91**	**318**	P	**PKiKP**	**10 40 55.4**	**+2.4**
WHTX	**Lake Whitney,**	**128.08**	**52**	PKPdf	**PKPdf**	**10 40 52.7**	**-0.2**
WHTX	**Lake Whitney,**	**128.08**	**52**	PKiKP	**PKPdf**	**10 40 52.7**	**-0.2**
	baz=292						
SFS	**San Fernando**	**128.12**	**314**	PKP	**PKiKP**	**10 40 58.2**	**+4.8**
SFS	**San Fernando**	**128.12**	**314**	PP	PP	10 43 01.6	+5.7
ARNO	**Arenosillo**	**128.19**	**315**	PKP	**PKiKP**	**10 40 54.6**	**+1.1**
ARNO	**Arenosillo**	**128.19**	**315**	PP	PP	10 42 56.5	+0.1
PMTG	**Montargil**	**128.23**	**318**	*e*PKPdf	**PKiKP**	**10 40 54.5**	**+0.9**
PMTG	**Montargil**	**128.23**	**318**	*e*PP	PP	10 43 03.2	+6.6
LCRM	**LCR**	**128.34**	**310**	P	**PKiKP**	**10 40 56.0**	**+1.8**
EVO	**Evora**	**128.37**	**317**	PKP	**PKiKP**	**10 40 59.3**	**+5.4**
EVO	**Evora**	**128.37**	**317**	PP	PP	10 43 08.2	+11
EVO	**Evora**	**128.37**	**317**	*e*PKPdf	**PKiKP**	**10 40 55.5**	**+1.6**
EVO	**Evora**	**128.37**	**317**	*e*PP	PP	10 43 08.8	+11
PSBE	**So Bento**	**128.38**	**319**	*e*PKPdf	**PKiKP**	**10 40 55.6**	**+1.7**
PSBE	**So Bento**	**128.38**	**319**	*e*PP	PP	10 43 04.3	+6.7
435B	**Jarrell**	**128.42**	**53**	IAMs_20	IAMs_20	11 34 25.2	
	comp=Z,17μm,20.0s						
435B	**Jarrell**	**128.42**	**53**	PKiKP	**PKPdf**	**10 40 53.6**	**0.0**
	baz=291						
U38A	**Gravette**	**128.50**	**46**		**PKPdf**	**10 40 52.6**	**-1.0**
PBEJ	**Beja**	**128.52**	**317**	*e*PKPdf	**PKiKP**	**10 40 55.5**	**+1.3**
PBEJ	**Beja**	**128.52**	**317**	*e*PP	PP	10 43 14.3	+16
P40A	**Paris**	**128.54**	**41**		**PKPdf**	**10 40 53.4**	**-0.2**
IFR	**Ifrane**	**128.61**	**310**	PKP	**PKPdf**	**10 40 54.0**	**-0.1**
IFR	**Ifrane**	**128.61**	**310**	PP	PP	10 43 03.8	+4.2
PVAQ	**Vaqueiros**	**128.73**	**316**	*e*PKPdf	**PKiKP**	**10 40 56.1**	**+1.4**
PVAQ	**Vaqueiros**	**128.73**	**316**	*e*PP	PP	10 43 10.8	+11
PVAQ	**Vaqueiros**	**128.73**	**316**	*e*SS	SS	11 00 16.2	0.0
PVAQ	**Vaqueiros**	**128.73**	**316**	*e*LR	LR	11 24 06.6	
	comp=Z,25μm,20.0s						
PCVE	**Castro Verde**	**128.84**	**316**	*e*PKPdf	**PKiKP**	**10 40 56.3**	**+1.4**
PCVE	**Castro Verde**	**128.84**	**316**	*e*PP	PP	10 43 12.0	+11
MESJ	**Messejana**	**128.86**	**317**	*e*PKPdf	**PKiKP**	**10 40 55.1**	**+0.2**
MESJ				*e*PP	**PP**	**10 43 02.3**	**+1.5**
MESJ				IAMs_20	IAMs_20	11 48 34.7	
	comp=Z,20μm,17.5s						
MESJ	**Messejana**	**128.86**	**317**	*e*PKPdf	**PKiKP**	**10 40 56.4**	**+1.5**
MESJ	**Messejana**	**128.86**	**317**	*e*PP	PP	10 43 11.6	+11
MESJ	**Messejana**	**128.86**	**317**	*e*PKIKP	**PKiKP**	**10 40 55.1**	**+0.2**
MESJ				*e*		10 43 02.3	
PNCL	**Nicolau / Gran**	**128.93**	**317**	*e*PKPdf	**PKiKP**	**10 40 56.5**	**+1.5**
PNCL	**Nicolau / Gran**	**128.93**	**317**	*e*PP	PP	10 43 12.3	+11
PBDV	**Barranco-do-Ve**	**128.96**	**316**	*e*PKPdf	**PKiKP**	**10 40 57.4**	**+2.2**
PBDV	**Barranco-do-Ve**	**128.96**	**316**	*e*PP	PP	10 43 13.0	+12
PMAFR	**Mafra**	**128.99**	**319**	*e*PKPdf	**PKPdf**	**10 40 54.7**	**+0.2**
PMAFR	**Mafra**	**128.99**	**319**	*e*PP	PP	10 43 01.8	+0.2
LIS	**Lisbon**	**129.03**	**318**	*e*PKPdf	**PKiKP**	**10 40 55.3**	**+0.1**
LIS				*e*PP	**PP**	**10 43 03.5**	**+1.7**
LIS				IAMs_20	IAMs_20	11 45 45.7	
	comp=Z,38μm,30.7s						
LIS	**Lisbon**	**129.03**	**318**	*e*PKIKP	**PKiKP**	**10 40 55.3**	**+0.1**
LIS				*e*		10 43 03.5	
LL02	**Futaleuf**	**129.12**	**160**		**PKPdf**	**10 40 53.9**	**-0.8**
GOLM	**Goulmima**	**129.21**	**308**	P	**PKiKP**	**10 40 59.0**	**+3.0**
KVTX	**Kingsville**	**129.27**	**58**	IAMs_20	IAMs_20	11 29 01.0	
	comp=Z,25μm,22.0s						
PTEO	**Sao Teotonio**	**129.35**	**317**	*e*PKPdf	**PKiKP**	**10 40 56.0**	**+0.1**
MORF	**Marmelete**	**129.42**	**316**	*e*PKPdf	**PKiKP**	**10 40 56.5**	**+0.4**
MORF				*e*PP	**PP**	**10 43 06.0**	**+1.4**
MORF				IAMs_20	IAMs_20	11 45 26.3	
	comp=Z,24μm,22.4s						
MORF	**Marmelete**	**129.42**	**316**	*e*PKPdf	**PKiKP**	**10 40 58.0**	**+1.9**
MORF	**Marmelete**	**129.42**	**316**	*e*PP	PP	10 43 14.9	+10
MORF	**Marmelete**	**129.42**	**316**	*e*PKIKP	**PKiKP**	**10 40 56.5**	**+0.4**
MORF				*e*		10 43 06.0	
W39A	**Magazine**	**129.51**	**47**	PKiKP	**PKPdf**	**10 40 55.1**	**-0.4**
	baz=298						
L44A	**Lake County Fo**	**129.57**	**36**	PKiKP	**PKPdf**	**10 40 54.2**	**-1.3**
	baz=308						
U40A	**Yellville**	**129.62**	**45**	PKiKP	**PKPdf**	**10 40 55.1**	**-0.7**
	baz=299						
MGMO	**Mountain Grove**	**129.63**	**44**	PKPdf	**PKPdf**	**10 40 55.2**	**-0.6**
PFVI	**Vila Bisbo**	**129.63**	**316**	*e*PKPdf	**PKiKP**	**10 40 58.3**	**+1.8**
GLMI	**Grayling**	**129.66**	**31**	PKPdf	**PKPdf**	**10 40 55.8**	**+0.3**
GLMI				IAMs_20	IAMs_20	11 33 13.8	
	comp=Z,34μm,22.0s						
GLMI	**Grayling**	**129.66**	**31**	PKiKP	**PKPdf**	**10 40 54.8**	**-0.7**
	baz=314						
HDIL	**Hopedale**	**129.72**	**38**	PKiKP	**PKPdf**	**10 40 55.0**	**-0.8**
	baz=306						
CCM	**Cathedral Cave**	**129.86**	**42**	IAMs_20	IAMs_20	11 36 08.0	
	comp=Z,23μm,22.0s						
CCM	**Cathedral Cave**	**129.86**	**42**	PKiKP	**PKPdf**	**10 40 55.5**	**-0.6**
	baz=302						
MIAR	**Mount Ida**	**129.96**	**47**	PKIKP	**PKiKP**	**10 40 56.9**	**-0.3**
MIAR	**Mount Ida**	**129.96**	**47**	PKPdf	**PKiKP**	**10 40 56.9**	**-0.3**
MIAR	**Mount Ida**	**129.96**	**47**	PKiKP	**PKPdf**	**10 40 56.0**	**-0.4**
	baz=298						
TZRR	**Tazzarine**	**130.05**	**307**	P	**PKiKP**	**10 41 00.1**	**+2.4**
HKT	**Hockley**	**130.14**	**54**	IAMs_20	IAMs_20	11 32 56.3	
	comp=Z,29μm,21.0s						
UNM	**Universidad Na**	**130.25**	**68**	IAMs_20	IAMs_20	11 27 12.7	
	comp=Z,34μm,22.0s						
ZGR	**Zagora**	**130.35**	**307**	P	**PKiKP**	**10 40 60.0**	**+1.7**
NATX	**Nacogdoches**	**130.35**	**51**	IAMs_20	IAMs_20	11 30 50.0	
	comp=Z,29μm,22.0s						
NATX	**Nacogdoches**	**130.35**	**51**	PKiKP	**PKPdf**	**10 40 56.7**	**-0.5**
	baz=294						
AVE	**Averroes**	**130.43**	**311**	PKP	**PKPdf**	**10 40 56.5**	**-0.9**
AVE	**Averroes**	**130.43**	**311**	PP	PP	10 43 21.4	+10
AVE	**Averroes**	**130.43**	**311**	P	**PKiKP**	**10 41 00.1**	**+1.9**
X40A	**Basin Creek Fa**	**130.53**	**47**	PKiKP	**PKPdf**	**10 40 56.8**	**-0.7**
	baz=298						
W41B	**Gary Mavity, V**	**130.63**	**46**	PKiKP	**PKPdf**	**10 40 57.1**	**-0.5**
	baz=299						
OUZM	**OUZ**	**130.94**	**308**	P	**PKiKP**	**10 41 02.0**	**+2.5**
Z41A	**Richland Creek**	**131.12**	**48**	PKiKP	**PKPdf**	**10 40 58.8**	**+0.2**
	baz=297						
SFIN	**Lafayette**	**131.17**	**37**	PKiKP	**PKPdf**	**10 40 58.4**	**-0.1**
	baz=308						
SHEL	**Horse Pasture**	**131.39**	**245**	IAMs_20	IAMs_20	11 31 31.7	
	comp=Z,20μm,22.0s						
OUK	**Oukaimeden**	**131.69**	**309**	P	**PKiKP**	**10 41 04.0**	**+2.7**
PLCA	**Paso Flores**	**131.75**	**160**	PKhKP	PKPpre	10 40 46.1	
	comp=Z,4.4nm,0.8s,baz=203,slow=3.9,SNR=6.0						
PLCA				PKP	**PKPdf**	**10 40 58.2**	**-1.6**
	comp=Z,40nm,1.1s,baz=230,slow=3.8,SNR=14						
PLCA				SKPbc	**SKPbc**	**10 44 22.8**	**-1.0**
	comp=Z,12nm,0.9s,baz=235,slow=4.0,SNR=2.6						
PLCA	**Paso Flores**	**131.75**	**160**	*e*P	**PKPdf**	**10 40 59.3**	**-0.5**
AAM	**Ann Arbor**	**131.90**	**33**	PKiKP	**PKPdf**	**10 40 59.3**	**-0.5**
	baz=313						
SADO	**Sadowa**	**132.38**	**27**	SKPbc	**SKPab**	**10 44 27.5**	**+0.6**
	comp=Z,29nm,0.9s,baz=63,slow=5.3,SNR=7.5						
TTIG	**Tnine Tigouga,**	**132.41**	**308**	P	**PKiKP**	**10 41 05.0**	**+2.5**
WCI	**Wyandotte Cave**	**132.97**	**39**	PKiKP	**PKPdf**	**10 41 01.1**	**-1.0**
	baz=307						
KOWA	**Kowa**	**133.03**	**286**	SKPbc	**SKPab**	**10 44 30.5**	**-0.1**
	comp=Z,26nm,0.8s,baz=346,slow=4.2,SNR=9.1						
KOWA	**Kowa**	**133.03**	**286**	P	**PKiKP**	**10 41 05.7**	**+1.8**
P49A	**Miami Univ. Ec**	**133.12**	**37**	IAMs_20	IAMs_20	11 35 28.9	
	comp=Z,32μm,22.0s						
P49A	**Miami Univ. Ec**	**133.12**	**37**	PKiKP	**PKPdf**	**10 41 01.1**	**-1.2**
	baz=310						
WVT	**Waverly**	**133.19**	**42**	IAMs_20	IAMs_20	11 38 37.4	
	comp=Z,29μm,22.0s						
WVT	**Waverly**	**133.19**	**42**	PKiKP	**PKPdf**	**10 41 02.0**	**-0.5**
	baz=304						
VBMS	**Vicksburg**	**133.31**	**48**	PKiKP	**PKPdf**	**10 41 01.5**	**-1.3**
	baz=298						
ACSO	**Alum Creek Sta**	**133.67**	**35**	PKiKP	**PKPdf**	**10 41 02.3**	**-0.9**
	baz=312						
ERPA	**Erie**	**133.95**	**31**	PKiKP	**PKPdf**	**10 41 01.6**	**-2.2**
	baz=317						
M53A	**WI Miller and**	**134.09**	**32**	PKiKP	**PKPdf**	**10 41 03.4**	**-0.6**
	baz=316						
KIC	**Kosan Boka**	**134.34**	**275**	*e*P	**PKPdf**	**10 40 58.3**	**-7.0**
	comp=Z,168nm,1.0s						
KIC	**Kosan Boka**	**134.34**	**275**	*e*P	**SKPbc**	**10 44 34.4**	**+1.0**
	comp=Z,411nm,1.7s						
DBIC	**Dimbokro**	**134.45**	**275**	PKhKP	PKPpre	10 40 50.5	
	comp=Z,7.3nm,0.7s,baz=108,slow=2.7,SNR=9.5						
DBIC				PKP	**PKPdf**	**10 41 04.8**	**-0.6**
	comp=Z,45nm,0.8s,baz=107,slow=2.6,SNR=9.9						
DBIC				SKPbc	**SKPbc**	**10 44 34.1**	**+0.4**
	comp=Z,51nm,1.1s,baz=309,slow=20,SNR=8.7						
LONY	**Lake Ozonia**	**134.47**	**24**	IAMs_20	IAMs_20	11 42 35.7	
	comp=Z,28μm,20.0s						
LONY	**Lake Ozonia**	**134.47**	**24**	PKiKP	**PKPdf**	**10 41 03.1**	**-1.6**
	baz=325						
P52A	**Corning**	**134.56**	**35**	PKiKP	**PKPdf**	**10 41 04.1**	**-0.8**
	baz=313						
M54A	**Oil Creek Stat**	**134.56**	**31**	PKiKP	**PKPdf**	**10 41 04.0**	**-1.0**
	baz=317						
J56A	**Wolcott**	**134.57**	**27**	PKPdf	**PKPdf**	**10 41 01.6**	**-3.3**
TIC	**Toumodi**	**134.61**	**275**	*e*P	PKPdf	10 40 57.3	-8.5
TIC	**Toumodi**	**134.61**	**275**	*e*P	**SKPbc**	**10 44 35.2**	**+0.9**
LIC	**Lamto**	**134.62**	**275**	*e*P	PKPdf	10 40 56.1	-10
	comp=Z,453nm,1.5s						
LIC	**Lamto**	**134.62**	**275**	*e*P	**SKPbc**	**10 44 38.4**	**+4.1**
	comp=Z,419nm,1.7s						
O53A	**New Philadelph**	**134.64**	**33**	PKiKP	**PKPdf**	**10 41 04.0**	**-1.1**
	baz=314						
CMIG	**Matias Romero**	**134.69**	**70**	SKPbc	**SKPbc**	**10 44 35.3**	**+0.9**
	comp=Z,11nm,0.9s,baz=357,slow=4.4,SNR=3.0						
N54A	**Moraine State**	**134.79**	**32**	PKiKP	**PKPdf**	**10 41 04.8**	**-0.5**
	baz=316						
PQI	**Presque Isle**	**134.99**	**17**	IAMs_20	IAMs_20	11 42 48.9	
	comp=Z,31μm,21.0s						
VT1	**Waterbury**	**135.44**	**23**	IAMs_20	IAMs_20	11 40 40.4	
	comp=Z,31μm,21.0s						
TZTN	**Tazewell**	**135.73**	**39**	PKiKP	**PKPdf**	**10 41 07.2**	**-0.1**
	baz=309						
MCWV	**Mont Chateau**	**135.80**	**33**	PKiKP	**PKPdf**	**10 41 07.0**	**-0.2**
	baz=316						
BINY	**Binghamton**	**135.82**	**27**	PKiKP	**PKPdf**	**10 41 06.1**	**-1.1**
	baz=322						
LBNH	**Lisbon**	**135.83**	**22**	IAMs_20	IAMs_20	11 43 02.4	
	comp=Z,30μm,22.0s						
LBNH	**Lisbon**	**135.83**	**22**	PKiKP	**PKPdf**	**10 41 07.3**	**+0.1**
	baz=329						
PKME	**Peaks-Kenny Pk**	**135.86**	**19**	IAMs_20	IAMs_20	11 46 37.0	
	comp=Z,17μm,20.0s						
PKME	**Peaks-Kenny Pk**	**135.86**	**19**	PKiKP	**PKPdf**	**10 41 06.9**	**-0.3**
	baz=333						
O56A	**Blue Knob Stat**	**136.04**	**31**	PKiKP	**PKPdf**	**10 41 07.0**	**-0.8**
	baz=318						
SSPA	**Standing Stone**	**136.11**	**30**	PKiKP	**PKPdf**	**10 41 07.1**	**-0.7**
	baz=319						
TKL	**Tuckaleechee C**	**136.14**	**40**	SKPbc	**SKPbc**	**10 44 37.0**	**-1.4**
	comp=Z,36nm,1.1s,baz=260,slow=1.3,SNR=4.2						
WVL	**Waterville**	**136.36**	**20**	IAMs_20	IAMs_20	11 39 54.2	
	comp=Z,26μm,22.0s						
BRAL	**Brewton**	**136.40**	**48**	PKiKP	**PKPdf**	**10 41 08.7**	**+0.1**
	baz=301						
TRQA	**Tornquist**	**136.71**	**167**	*e*P	**PKPdf**	**10 41 09.7**	**+0.6**
TRQA	**Tornquist**	**136.71**	**167**	IAMs_20	IAMs_20	11 42 54.0	

	comp=Z,21µm,21.0s						
N59A	State Game Lan	136.93	28	PKiKP	PKPdf	10 41 09.3	0.0
	baz=322						
EMMW	East Machias	136.94	18	IAMs_20	IAMs_20	11 45 53.4	
	comp=Z,21µm,21.0s						
PMPST	Porto Santo, M	136.99	316	ePKPdf	PKiKP	10 41 23.3	+12
L61B	Northampton	137.05	24	PKiKP	PKPdf	10 41 09.0	-0.5
	baz=327						
BLA	Blacksburg	137.19	36	IAMs_20	IAMs_20	11 35 07.4	
	comp=Z,27µm,22.0s						
BLA	Blacksburg	137.19	36	PKiKP	PKPdf	10 41 08.5	-1.4
	baz=313						
HRV	Adam Dziewonsk	137.45	23	IAMs_20	IAMs_20	11 43 22.2	
	comp=Z,27µm,20.0s						
HRV	Adam Dziewonsk	137.45	23	PKiKP	PKPdf	10 41 09.3	-1.0
	baz=328						
PMAR	Madeira	137.59	316	ePKPdf	PKPdf	10 41 09.0	-2.1
GOGA	Godfrey	137.69	42	PKiKP	PKPdf	10 41 10.8	-0.1
	baz=306						
PAL	Palisades	137.71	26	PKiKP	PKPdf	10 41 10.5	-0.3
	baz=324						
PMOZ	Porto Moniz, M	137.73	316	eLR	LR	11 27 42.4	
	comp=Z,7µm,20.0s						
P60A	Greenville	137.85	29	PKiKP	PKPdf	10 41 10.8	-0.3
	baz=321						
KMSC	Kings Mountain	138.01	39	PKiKP	PKPdf	10 41 10.5	-1.0
	baz=310						
CBN	Corbin Frederi	138.18	32	PKiKP	PKPdf	10 41 11.2	-0.6
	baz=318						
M65A	Busby, Falmout	138.61	23	PKiKP	PKPdf	10 41 11.6	-0.7
	baz=329						
Q61A	Milford	138.72	30	PKiKP	PKPdf	10 41 11.9	-0.8
	baz=321						
TIGA	Tifton	138.75	45	PKiKP	PKPdf	10 41 12.7	-0.2
	baz=305						
BART	Pico Bartolome	139.25	329	ePP	PP	10 44 09.7	+3.2
APG	El Apazote	139.26	72	PKhKP	PKPpre	10 41 06.2	
	comp=Z,35nm,1.1s,baz=85,slow=2.1,SNR=1.5						
APG				PKP	PKPdf	10 41 14.6	0.0
	comp=Z,31nm,0.8s,baz=306,slow=8.0,SNR=4.3						
APG				SKPbc	SKPbc	10 44 49.2	+0.9
	comp=Z,32nm,1.1s,baz=243,slow=4.5,SNR=4.8						
CMLA	Cha da Macela	139.45	329	ePP	PP	10 44 09.3	+1.7
PAGU	Agualva, Azore	139.49	331	ePP	PP	10 44 10.9	+3.2
PSET	Sete Cidades	139.50	329	ePP	PP	10 44 10.8	+2.9
SRBC	Serra Branca	139.68	333	ePP	PP	10 44 10.4	+1.6
PSMN	Pico do Norte,	139.78	328	ePP	PP	10 44 08.2	-1.5
PAYG	Puerto Ayora	140.01	96	IAMs_20	IAMs_20	11 35 19.7	
	comp=Z,17µm,22.0s						
PMAN	Manadas	140.03	332	ePP	PP	10 44 11.7	+0.7
CNNC	Cliffs of the	140.03	36	IAMs_20	IAMs_20	11 41 41.6	
	comp=Z,29µm,21.0s						
CNNC	Cliffs of the	140.03	36	PKiKP	PKPdf	10 41 15.0	-0.1
	baz=315						
ROSA	Rosais	140.03	332	ePP	PP	10 44 12.2	+1.2
ROSA	Rosais	140.03	332	PKPdf	PKPdf	10 41 11.4	-3.7
NHSC	New Hope	140.05	40	IAMs_20	IAMs_20	11 40 45.6	
	comp=Z,26µm,21.0s						
NHSC	New Hope	140.05	40	PKiKP	PKPdf	10 41 15.6	+0.3
	baz=310						
RGRS	Roger Stewart	140.16	40		PKPdf	10 41 12.8	-2.6
PID	Ribeirinha	140.19	332	ePP	PP	10 44 12.9	+0.8
PPNO	Prainha do Nor	140.24	332	ePP	PP	10 44 15.5	+3.1
PICO	Pico	140.29	332	ePP	PP	10 44 14.0	+1.3
PCED	Cedros	140.31	333	ePP	PP	10 44 16.1	+3.4
PCAN	Candelaria	140.34	332	ePP	PP	10 44 15.3	+2.3
CALA	Caldeira	140.35	333	ePP	PP	10 44 13.8	+0.7
LPA	La Plata	140.56	170	dePDIFF	Pdif	10 38 36.3	+4.1
LPA				PP	PP	10 44 17.4	+3.7
LPA				PPP	PPP	10 47 24.4	
LPA				SKIKS		10 48 20.4	
SNET	Serv Nac Est T	140.68	73	IAMs_20	IAMs_20	11 40 13.5	
	comp=Z,14µm,20.0s						
H07S1	FLORES T-PHASE	140.76	336	ePP	PP	10 44 18.7	+3.3
LCO	Las Campanas	141.79	151	IAMs_20	IAMs_20	11 46 42.4	
	comp=Z,16µm,19.0s						
ASCN	Ascension	141.96	252	PKPdf	PKPdf	10 41 16.8	-2.5
DWPF	Disney Wildern	142.16	48	PKPdf	PKPdf	10 41 15.7	-3.5
DWPF	Disney Wildern	142.16	48	PKiKP	PKPdf	10 41 18.6	-0.6
	baz=304						
TGUH	Tegucigalpa,Un	142.48	72	IAMs_20	IAMs_20	11 50 06.0	
	comp=Z,18µm,22.0s						
PLTB	Pedras Altas	144.19	176	eP	PKPbc	10 41 20.8	0.0
BOAB	BOACO BROADBAN	144.32	74	IAMs_20	IAMs_20	11 41 11.0	
	comp=Z,26µm,21.0s						
SAJU	San Juanillo,	144.64	78	eP	PKPbc	10 41 23.0	+0.3
HZTE	Horizontes, Gu	144.67	77	eP	PKPdf	10 41 23.5	-0.5
GBS3	Finca Las Img	144.79	77	eP	PKPdf	10 41 23.9	-0.3
GUAI	GUAI	144.81	78	eP	PKPdf	10 41 24.8	+0.5
LAPC	Finca la Perla	144.82	77	eP	PKPbc	10 41 23.6	+0.3
BUEV	Buena Vista	144.84	77	eP	PKPdf	10 41 24.4	0.0
GB1A	Borinquen Arri	144.84	77	eP	PKPdf	10 41 25.0	+0.6
INDI	Punta indio, G	144.87	79	eP	PKPbc	10 41 23.6	+0.2
LIM1	Limonal	145.00	77	eP	PKPdf	10 41 24.8	+0.1
GUAB	Guayabo de Bag	145.02	77	eP	PKPdf	10 41 25.2	+0.5
COLC	Colonia	145.05	77	eP	PKPbc	10 41 24.0	-0.1
HORNC	Hornillas	145.07	77	eP	PKPdf	10 41 25.2	+0.4
CUI	Cuipilapa	145.09	77	eP	PKPdf	10 41 25.5	+0.7
ACAL	Aguas Claras	145.22	77	eP	PKPdf	10 41 25.7	+0.6
PTEN	Parque Tenorio	145.26	77	⇑eP	PKPdf	10 41 25.2	+0.1
JTS	Las Juntas de	145.35	78	eP	PKPbc	10 41 24.3	-0.7
JTS	Las Juntas de	145.35	78	⇑eP	PKPab	10 41 25.4	+0.2
JTS	Las Juntas de	145.35	78	IAMs_20	IAMs_20	11 37 12.4	
	comp=Z,17µm,22.0s						
MBO	M'Bour	145.36	289	IAMs_20	IAMs_20	11 51 24.5	
	comp=Z,16µm,22.0s						
LAFE	Finca La Fe, P	145.45	79	eP	PKPab	10 41 26.1	+0.5
CASO	Castillo	145.54	78	eP	PKPab	10 41 26.8	+0.8
ARE1	Arenal 1	145.55	78	eP	PKPdf	10 41 25.5	0.0
CPSB	Cacapava Do Su	145.56	176	eP	PKPab	10 41 25.4	0.0
CEDE	Laguna Cedeo	145.57	78	eP	PKPab	10 41 26.9	+0.8
FORC	Fortuna	145.60	78	eP	PKPab	10 41 27.4	+1.2
JACO	JACO, Garabito	145.72	79	eP	PKPab	10 41 26.4	-0.1
COVE	Coope Vega, Sa	145.83	77	eP	PKPdf	10 41 25.1	-0.8
SRA1	San Ramn	145.84	78	eP	PKPbc	10 41 26.9	+0.2
ITQB	Itaqui	145.90	171	eP	PKPdf	10 41 25.4	-0.3
ITQB	Itaqui	145.90	171		PKPbc	10 41 26.0	-0.3
HDC	Heredia	146.21	78	eP	PKPab	10 41 28.6	0.0
PB10	IPOC Station P	146.31	146		PKPdf	10 41 26.6	0.0
PB10				IAMs_20	IAMs_20	11 44 58.6	
	comp=Z,20µm,21.0s						
LCR2	La Lucha 2	146.34	79	eP	PKPbc	10 41 27.9	-0.5
EDDO	Dominical	146.54	80	eP	PKPab	10 41 29.7	0.0
PEZE	Perez Zeledon,	146.71	79	eP	PKPbc	10 41 28.9	-0.4
CNLB	Canela	146.75	180	eP	PKPdf	10 41 27.5	+0.2
EDBA	Buenos Aires	147.13	80	eP	PKPbc	10 41 31.0	+0.6
PB15	IPOC Station P	147.15	147	IAMs_20	IAMs_20	11 45 16.8	
	comp=Z,17µm,21.0s						
PB06	IPOC Station P	147.50	146	IAMs_20	IAMs_20	11 49 20.0	
	comp=Z,15µm,22.0s						
TER01	Tubaro-SC	147.50	182	eP	PKPdf	10 41 28.4	-0.1
BRU2	Volcan	147.74	80	eP	PKPdf	10 41 29.9	+0.4
LVC	Limon Verde	147.94	147	PKPbc	PKPdf	10 41 30.3	+0.5
	comp=Z,297nm,0.8s,baz=128,slow=0.7,SNR=99						
LVC	Limon Verde	147.94	147	PKIKP	PKPdf	10 41 29.8	0.0
LVC				MLR	MLR		
	comp=Z,10µm,21.0s						
LVC	Limon Verde	147.94	147	eP	PKPdf	10 41 29.7	0.0
LVC	Limon Verde	147.94	147	PKPdf	PKPdf	10 41 29.8	0.0
PB07	IPOC Station P	148.09	144		PKPdf	10 41 30.3	+0.4
PRVC	Isla de Provid	148.23	71	eP	PKPdf	10 41 31.6	+1.6
PRVC	Isla de Provid	148.23	71	PKPdf	PKPdf	10 41 29.3	-0.7
PB09	IPOC Station P	148.40	145	PKPdf	PKPdf	10 41 29.3	-1.0
PATCX	Punta Patache	148.63	143		PKPdf	10 41 30.0	-0.7
ITAB	Concordia	148.79	177	eP	PKPdf	10 41 31.2	+0.6
ITAB	Concordia	148.79	177		PKPdf	10 41 30.7	+0.1
TA01	Diego Aracena	148.81	143	PKPdf	PKPdf	10 41 29.8	-1.0
PB01	IPOC Station P	148.85	144		PKPdf	10 41 30.9	-0.1
BBSR	BB Station	148.93	24		PKPdf	10 41 30.7	+0.1
BBSR	BB Station	148.93	24	IAMs_20	IAMs_20	11 44 50.3	
	comp=Z,23µm,22.0s						
CPUP	Villa Florida	149.02	168	PKP	PKPdf	10 41 30.3	-0.7
	comp=Z,65nm,1.0s,baz=165,slow=0.4,SNR=24						
CPUP				PKPbc	PKPbc	10 41 33.4	-1.7
	comp=Z,380nm,0.9s,baz=206,slow=2.8,SNR=60						
CPUP	Villa Florida	149.02	168	eP	PKPdf	10 41 31.7	+0.7
TA02	Huaiquique	149.06	142		PKPdf	10 41 31.6	+0.4
NNA	Nana	149.35	122	PKP	PKPdf	10 41 31.8	-0.1
	comp=Z,129nm,0.9s,baz=280,slow=3.7,SNR=28						
NNA				PKPbc	PKPbc	10 41 34.5	-1.8
	comp=Z,210nm,0.8s,baz=277,slow=3.5,SNR=22						
NNA	Nana	149.35	122		PKPdf	10 41 32.1	+0.2
NNA	Nana	149.35	122	IAMs_20	IAMs_20	11 42 52.9	
	comp=Z,15µm,20.0s						
ATAH	Atahualpa	150.05	112	PKPbc	PKPdf	10 41 35.5	+2.0
	comp=Z,154nm,1.0s,baz=268,slow=1.7,SNR=36						
MCJ	Malvern	150.11	61	iP	PKiKP	10 41 38.9	-0.1
MCJ				iP	pPKPbc	10 41 46.3	+0.7
CVJ	Coleyville	150.12	60	iP	PKPdf	10 41 34.7	+1.6
MTDJ	Mount Denham	150.12	60	⇑eP	PKPdf	10 41 32.4	-0.6
BCIP	Isla Barro Col	150.50	79	eP	PKPdf	10 41 31.3	-2.3
BCIP	Isla Barro Col	150.50	79	IAMs_20	IAMs_20	11 39 18.8	
	comp=Z,17µm,22.0s						
TIJ01	Guaruva-PR	150.69	183	eP	PKPdf	10 41 33.9	+0.1
STH	Stony Hill	150.81	60	iP	PKPbc	10 41 38.3	-1.4
HOJ	Hope	150.89	60	iP	PKPdf	10 41 35.5	+1.4
PTGB	Pitanga	151.30	177	eP	PKPdf	10 41 35.1	+0.3
SACV	Santiago Islan	151.37	294		PKPdf	10 41 34.8	-0.1
SACV				IAMs_20	IAMs_20	11 56 32.8	
	comp=Z,13µm,21.0s						
GTBY	Guantanamo Bay	151.38	55	eP	PKPdf	10 41 31.5	-3.3
PAC1	Pacto, Paraso	151.53	97	⇑eP	PKPdf	10 41 35.3	-0.2
PET01	Itanhaem-SP	151.58	186	eP	PKPdf	10 41 35.2	+0.2
CTUM2	Tumaco	151.78	94	eP	PKPdf	10 41 36.9	+1.2
OTAV	Otavalo	151.86	97	⇑eP	PKPdf	10 41 37.1	+0.7
OTAV	Otavalo	151.86	97	eP	PKPdf	10 41 36.0	-0.4
CUSE	Cuicocha Este	151.92	97	eP	PKPdf	10 41 35.9	-0.5
CUSE				eP	PKPbc	10 41 40.7	-2.2
CUSE				eP	PKiKP	10 41 41.6	-1.6
PARB	Paraibuna	152.28	190	eP	PKPdf	10 41 35.5	-0.7
MAN01	Angra dos Reis	152.41	193	eP	PKPdf	10 41 37.0	+0.6
CMBC	Cumbal	152.58	96	eP	PKPdf	10 41 39.4	+2.0
FRTB	Fartura	152.68	182	eP	PKPdf	10 41 37.3	+0.5
PTAC	Punta Ardita,	152.72	82	⇑eP	PKPdf	10 41 37.1	+0.1
DUB01	Friburgo-RJ	152.75	197	eP	PKPdf	10 41 36.4	-0.5
CAM01	Campos-RJ	152.78	198	eP	PKPdf	10 41 37.6	+0.7
VAO	Valinhos	152.81	187	eP	PKPdf	10 41 37.6	+0.6
VAS01	Vassouras-RJ	152.85	195	eP	PKPdf	10 41 37.9	+0.9
CCUFI	Cufio, Nario	153.09	95	eP	PKPdf	10 41 39.6	+1.4
GCUF	Volcan Galeras	153.09	95	eP	PKPdf	10 41 39.0	+0.8
GCUF				eP	PKPdf	10 41 39.1	+0.8
GCUF				⇑eP	PKPdf	10 41 39.1	+0.8
CPAS1	Pasto	153.11	95	eP	PKPdf	10 41 39.6	+1.4
TRCB	Terra Rica	153.17	176	eP	PKPdf	10 41 38.2	+0.7
CPAS2	Pasto	153.18	95	eP	PKiKP	10 41 46.2	+0.4
CPAS2				eP	sPKPdf	10 41 49.0	+0.7
PIZC	Pizarro, Choco	153.27	87	⇑eP	PKPdf	10 41 38.9	+1.0
LPAZ	La Paz	153.29	140	PKP	PKPdf	10 41 38.4	-0.1
	comp=Z,67nm,0.9s,baz=346,slow=0.8,SNR=63						
LPAZ				PKPbc	PKiKP	10 41 47.2	+1.0
	comp=Z,151nm,1.0s,baz=246,slow=0.5,SNR=19						
LPAZ	La Paz	153.29	140	⇑eP	PKPdf	10 41 39.1	+0.6
LPAZ	La Paz	153.29	140	eP	PKPdf	10 41 38.1	-0.5
RCLB	Rio Claro- Sao	153.46	186	eP	PKPdf	10 41 38.4	+0.4
GRTK	Grand Turk	153.58	47		PKPdf	10 41 38.2	+0.2
GRTK				IAMs_20	IAMs_20	11 47 37.9	
	comp=Z,18µm,22.0s						
ALF01	Guarapari-ES	153.59	201	eP	PKPdf	10 41 38.8	+0.7
POPC	Popayan, Colom	153.88	93	⇑eP	PKPdf	10 41 38.8	-0.3
LCBC	Los crdobas,	153.93	78	eP	PKPdf	10 41 39.6	+0.8
PCON	Cinco Dias	154.14	93	⇑eP	PKPdf	10 41 40.6	+0.8
YOTC	Yotoco, Valle	154.27	89	eP	PKPdf	10 41 38.9	-0.6
PLMC	San Jos del P	154.34	87	⇑eP	PKPdf	10 41 38.8	-0.7
BSCB	Bom Sucesso	154.40	193	eP	PKPdf	10 41 39.9	+0.5
PCMB	Pacaembu	154.42	178	eP	PKPdf	10 41 39.6	+0.3
CBOC	Ciudad Bolivar	154.58	85	⇑iP	PKPdf	10 41 40.0	0.0
MARP	Paez Belalcaza	154.62	92	⇑eP	PKPdf	10 41 40.3	+0.2
MOTC	Monteria, Cord	154.63	78	⇑eP	PKPdf	10 41 40.1	+0.3
RIB01	Linhares ES	154.66	203	eP	PKPdf	10 41 38.8	-0.8
FLOC	Florencia	154.81	95	⇑eP	PKPdf	10 41 40.2	+0.1
FLOC				eP	pPKPdf	10 41 40.9	-6.8
FLOC				eP	PKPbc	10 41 43.0	-5.8
BB19B	Bebedouro	154.89	184	eP	PKPdf	10 41 40.6	+0.6
SDDR	Presa de Saban	154.94	52	⇑eP	PKPdf	10 41 39.6	-0.5
CZSB	Cruzeiro do Su	154.96	118	eP	PKPdf	10 41 40.5	+0.2
GARC	Garzon, Huila	155.03	94	eP	PKPdf	10 41 40.5	-0.2
GARC				eP	pPKPdf	10 41 44.5	-3.7
GARC				eP	sPKPdf	10 41 50.8	0.0
AQDB	Aquidauana	155.04	169	eP	PKPdf	10 41 40.6	+0.5
HELC	Santa Helena	155.04	84	⇑eP	PKPdf	10 41 40.4	-0.5
HELC				eP	pPKPdf	10 41 40.5	-7.9
BETC	Betania	155.12	93	eP	PKPdf	10 41 42.1	+1.6
SC01	Santiago de lo	155.12	51		PKPdf	10 41 41.2	+0.9
ANIL	Santa Ana	155.22	88	⇑eP	PKPdf	10 41 40.8	-0.2
GUY2C	Guyana, Caldas	155.25	86	⇑eP	PKPdf	10 41 41.1	-0.1
GUY2C				eP	pPKPdf	10 41 42.6	-6.2
GUY2C				eP	sPKPdf	10 41 43.3	-8.1
BSFB	Barra de Sao F	155.27	202	eP	PKPdf	10 41 41.6	+1.1
ORTC	Ortega, Tolima	155.37	90	⇑eP	PKPdf	10 41 40.2	-0.7
PTLC	Puerto Leguiza	155.46	99	⇑eP	PKPdf	10 41 40.3	-0.6
PRAC	Prado	155.72	90	⇑eP	PKPdf	10 41 41.0	-0.3
NORC	Norcasia	155.73	86	⇑eP	PKPdf	10 41 40.3	-1.1
ARGC	Ariguani, Magd	155.81	75	eP	PKPdf	10 41 41.3	0.0
PTBC	PUERTO BERRIO,	156.08	83	eP	PKPdf	10 41 42.6	+0.9
CROSA	EL ROSAL, CUND	156.30	87	eP	PKPdf	10 41 42.4	-0.2
ROSC	El Rosal	156.30	87	PKP	PKPdf	10 41 42.4	-0.1
	comp=Z,98nm,1.0s,baz=180,slow=1.1,SNR=22						
ROSC				PKPab	PKPab	10 42 12.2	+1.5
	comp=Z,226nm,0.9s,baz=129,slow=10,SNR=8.8						
ROSC	El Rosal	156.30	87	⇑eP	PKPdf	10 41 42.8	+0.3
ITRB	Iturama	156.32	180	eP	PKPdf	10 41 42.5	+0.6
LL5C	La Loma 5 El P	156.34	75	eP	PKPdf	10 41 42.4	+0.4
LL1C	La Loma 1 Cana	156.55	76	eP	PKPdf	10 41 43.2	+0.9
MACC	Macarena, Meta	156.66	94	⇑eP	PKPdf	10 41 42.5	0.0
BRRC	Barranca, Sant	156.77	82	eP	PKPdf	10 41 41.8	-0.8
CRJC	Cerrejon, Guaj	156.84	72	⇑eP	PKPdf	10 41 42.9	+0.1
CRJC				eP	pPKPdf	10 41 45.9	-4.5
CRJC				eP	sPKPdf	10 41 55.0	+2.0
GUA01	Guaratinga, BA	156.84	207	eP	PKPdf	10 41 43.1	+0.5
OCAC	Ocana	157.01	79	⇑eP	PKPdf	10 41 42.9	-0.2
BARC	Barichara	157.34	83	eP	PKPdf	10 41 42.1	-1.5
RUSC	La Rusia	157.49	85	⇑eP	PKPdf	10 41 43.9	-0.3
PAMC	Pamplona, Colo	157.74	81	eP	PKPdf	10 41 44.0	-0.4
CMC01	Camacan, BA	157.77	209	eP	PKPdf	10 41 44.5	+0.7
IPMB	Ipameri, GO	157.91	186	eP	PKPdf	10 41 43.9	-0.2
PP1B	Ponte de Pedra	158.00	169	eP	PKPdf	10 41 44.6	+0.5
MC01	Montes Claros	158.29	197	eP	PKPdf	10 41 45.4	+0.8
PTGC	Puerto Gaitan,	158.48	89	⇑eP	PKPdf	10 41 43.1	-1.7
CRPR	Cabo Rojo, PR	158.72	48	PKPdf	PKPdf	10 41 42.2	-2.6
PTLB	Pontes e Lacer	158.78	157	eP	PKPdf	10 41 45.2	+0.2
MLPR	Magueyes Islan	158.79	48	PKPdf	PKPdf	10 41 44.0	-1.0
TBTG	Tabatinga, AM	158.97	113	eP	PKPdf	10 41 45.4	0.0
DABV	Dabajuro	158.99	70	⇑eP	PKPdf	10 41 45.6	+0.2
DABV				eP	pPKPdf	10 41 46.2	-6.7
DABV				eP	sPKPdf	10 41 53.6	-2.0
ETMB	Extrema	159.14	132	eP	PKPdf	10 41 45.4	-0.2
ETMB	Extrema	159.14	132	PKPdf	PKPdf	10 41 44.7	-0.9
ETMB				PKPab	PKPab	10 42 23.9	+1.7
GDU01	Guandu, BA	159.19	211	eP	PKPdf	10 41 45.7	+0.1
SJG	San Juan	159.35	46	PKP	PKPdf	10 41 44.7	-0.9
	comp=Z,23nm,0.2s,baz=35,slow=1.5,SNR=16						
SJG				PKPab	PKPab	10 42 23.4	+0.4
	comp=Z,258nm,0.9s,baz=352,slow=5.6,SNR=12						
SJG	San Juan	159.35	46	PKPdf	PKPdf	10 41 45.2	-0.5
SJG					PKPab	10 42 25.0	+1.9
SJG	San Juan	159.35	46	IAMs_20	IAMs_20	11 49 06.7	
	comp=Z,18µm,22.0s						
SALV	Santo Antonio	159.47	166	eP	PKPdf	10 41 46.4	+0.6
SDV	Santo Domingo	159.50	76	eP	PKPdf	10 41 46.1	-0.1
SDV	Santo Domingo	159.50	76	IAMs_20	IAMs_20	12 02 36.4	
	comp=Z,23µm,22.0s						
JANB	Januaria	159.96	198	eP	PKPdf	10 41 46.5	+0.1
STVI	Saint Thomas	160.04	44	PKPdf	PKPdf	10 41 44.6	-1.8
STVI				PKPab	PKPab	10 42 27.7	+1.7
BDFB	Brasilia	160.20	187	PKP	PKPdf	10 41 45.3	-1.5
	comp=Z,42nm,0.9s,baz=38,slow=2.1,SNR=18						
BDFB				PKPab	PKPab	10 42 25.2	-1.6
	comp=Z,58nm,1.0s,baz=102,slow=5.1,SNR=5.1						
BDFB	Brasilia	160.20	187	PKPdf	PKPdf	10 41 46.8	-0.1
ARAG	Araguaiana, MT	160.26	176	eP	PKPdf	10 41 47.4	+0.7
VILB	Vilhena	160.52	151	eP	PKPdf	10 41 47.9	+0.8
ELOV	Elorza	160.95	81	⇑eP	PKPdf	10 41 48.0	+0.4
ELOV				eP	pPKPdf	10 41 54.8	-0.4
ELOV				eP	sPKPdf	10 41 58.2	+0.4
SMRT	St. Maarten	161.51	41	eP	PKPdf	10 41 44.0	-4.1
SABA	Saba	161.71	42	eP	PKPdf	10 41 46.4	-1.8
SEUS	St. Eustatius	161.98	42	eP	PKPdf	10 41 45.8	-2.7
BAUV	El Baul	161.98	74	PKPdf	PKPdf	10 41 47.3	-1.3
ANWB	Willy Bob	162.61	38	eP	PKPdf	10 41 45.2	-3.9
SDBA	SAO DESIDERIO	162.64	199	eP	PKPdf	10 41 48.5	-0.9
PDRB	Porto dos Gac	163.20	159	eP	PKPdf	10 41 50.0	+0.1
PEXB	Peixe	163.72	188	eP	PKPdf	10 41 50.3	-0.1
CBE	Ff, Capester	163.91	42	eP	PKPdf	10 41 49.5	-1.0
SNDB	Serra Nova Dou	163.99	177	eP	PKPdf	10 41 50.6	0.0
TDBA	Terre de Bas,	164.05	42	eP	PKPdf	10 41 47.0	-3.6
CLDB	Colider	164.22	161	eP	PKPdf	10 41 50.6	-0.2
DSLB	Salisbury	164.49	43	eP	PKPdf	10 41 49.9	-1.0
PCRV	Puerto La Cruz	164.79	66	PKP	PKPdf	10 41 48.8	-2.5
	comp=Z,39nm,1.1s,baz=320,slow=3.0,SNR=5.6						
PCRV				PKPab	PKPab	10 42 46.9	-0.3
	comp=Z,28nm,0.8s,baz=349,slow=9.5,SNR=3.7						
FDF	Fort de France	165.16	44	eP	PKPdf	10 41 49.6	-2.0
FDF	Fort de France	165.16	44	e	PKPab	10 42 48.4	-0.2
ILAM	Ilet Lapin Mar	165.32	43	eP	PKPdf	10 41 49.6	-2.1
BIM	Bigot	165.37	44	eP	PKPdf	10 41 50.5	-1.3
BIM	Bigot	165.37	44	e	PKPab	10 42 53.8	+4.3
MPOM	Morne Pois Mar	165.57	44	eP	PKPdf	10 41 49.9	-1.9
MPOM	Morne Pois Mar	165.57	44	PKPab	PKPab	10 42 50.2	-0.1
SLBI	Saint Lucia, B	165.77	46	eP	PKPdf	10 41 45.9	-6.1
SLBI	Saint Lucia, B	165.77	46	e	PKPab	10 42 50.2	-1.0
GCMP	Grenada, Carri	166.41	52	eP	PKPdf	10 41 49.7	-2.9
GRGR	Grenville	166.44	53	eP	PKPdf	10 41 47.3	-5.3
SMTB	Santa Maria do	166.77	193	eP	PKPdf	10 41 52.8	-0.1
BBGH	Gun Hill	167.37	44	eP	PKPdf	10 41 50.2	-3.0
TRN	Trinidad (W)	167.44	58	eP	PKPdf	10 41 50.9	-2.4
BBSP	Saint Philip	167.47	44	eP	PKPdf	10 41 59.0	+5.6
MACA	Manacapuru-AM	167.56	125	eP	PKPdf	10 41 52.8	-0.7
TPP	Pointe-a-Pierr	167.56	60	eP	PKPdf	10 41 56.1	+2.6
BOT	Bacolet	167.74	55	eP	PKPdf	10 41 57.0	+3.5
NPGB	Novo Progresso	167.91	157	eP	PKPdf	10 41 53.7	-0.1
PTGA	Pitinga	169.43	117	PKP	PKPdf	10 41 54.3	-0.5
	comp=Z,47nm,1.1s,baz=295,slow=0.9,SNR=37						
PTGA				PKPab	PKPab	10 43 07.5	-0.2
	comp=Z,40nm,0.9s,baz=222,slow=4.1,SNR=6.9						
PRPB	Parauapebas	169.75	184	eP	PKPdf	10 41 53.5	-1.4
BOAV	Boa Vista	169.90	99	eP	PKPdf	10 41 54.6	-0.5
BOAV	Boa Vista	169.90	99		PKPdf	10 41 54.4	-0.6
ITTB	Itaituba	170.10	148	eP	PKPdf	10 41 53.8	-1.3
ROSB	Rosrio	170.52	223	eP	PKPdf	10 41 54.9	-0.5
MALB	Monte Alegre	173.00	148	eP	PKPdf	10 41 55.0	-1.5
TMAB	Tom-Au,PA,Br	173.10	201	eP	PKPdf	10 41 56.2	-0.4
MCPB	Macapa, AP	175.30	161	eP	PKPdf	10 41 56.7	-0.7
MDP	Montagnes des	177.70	65	PKP	PKPdf	10 41 56.4	-1.4
	comp=Z,73nm,0.9s,baz=20,slow=1.7,SNR=9.4						
MDP				PKPab	PKPab	10 43 44.5	+0.1
	comp=Z,108nm,1.0s,baz=290,slow=6.1,SNR=7.8						

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*IDC **09** 10:30:07.6±2.4, 4°.01S×129°.35E, h0^{km}, mb4.6/4, mb1 4.8/4, mb1mx4.0/41, mbtmp4.7/4, Error ellipse: s-maj=145.6km s-min=32.2km az=67.0*

*NEIC **09** 10:30:09.3±1.8, 4°.15S±0°.09×129°.22E±0°.09, h14^{km}±4^{km}, mb4.8/15, Error ellipse: s-maj=14.5km s-min=11.1km az=51.0*

ISC 09 10:30:11.2±0.6**, 4°.19S**±0°.08×**129°.22E**±0°.09**, h32^{km}, n25, σ1ˢ.28**/25**, mb4.8**/8**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	8.23	237	Pn	Pn	10 32 08.1	-0.4
MTN	Manton Dam	8.80	168	Pn	Pn	10 32 17.1	+0.8
KAPI	Kappang	9.48	265	Pn	Pn	10 32 24.6	-1.0
KNRA	Kununurra	11.42	182	Pn	Pn	10 32 52.2	-0.1
WB0	Warramunga Arr	16.28	162	Pn	Pn	10 33 56.8	-0.8
WRAB	Tennant Creek	16.43	163	Pn	Pn	10 33 59.0	-0.5
WRAB				IAmb	IAmb	10 34 01.9	
	comp=Z,138nm,0.9s						
KKM	Kota Kinabalu	16.50	308	Pn	Pn	10 33 59.1	-1.4
WR0	Warramunga Arr	16.51	162	Pn	Pn	10 34 00.5	-0.1
WR0				IAmb	IAmb	10 34 09.6	
	comp=Z,67nm,1.1s						
COEN	Coen	16.84	126	Pn	Pn	10 34 03.8	-0.9
COEN				IAmb	IAmb	10 34 03.9	
	comp=Z,98nm,1.1s						
SBUM	Sibu	18.23	291	P	P	10 34 18.9	-3.1
PMG	Port Moresby	18.54	107	P	P	10 34 22.9	-2.5
PMG				IAmb	IAmb	10 34 39.6	
	comp=Z,39nm,0.9s						
ASAR	Alice Springs	19.88	167	P	Pn	10 34 42.3	+0.5
	comp=Z,40nm,0.8s,baz=349,slow=9.3,SNR=4.1						
CMAR	Chiang Mai Arr	37.38	308	P	P	10 37 22.1	+0.7
	comp=Z,3.3nm,0.7s,baz=134,slow=7.2,SNR=2.5						
MJAR	Matsushiro Arr	41.38	11	P	P	10 37 55.0	+0.5
KNTN	Kanton	58.95	91	P	P	10 40 07.2	-0.9
CASY	Casey	63.35	188	P	P	10 40 38.2	+1.3
CASY				IAmb	IAmb	10 40 48.9	
	comp=Z,6.5nm,1.1s						
MK31	Makanchi Array	65.47	327	P	P	10 40 52.8	+1.6
MK31				IAmb	IAmb	10 41 02.2	
	comp=Z,9.2nm,1.0s						
MKAR	Makanchi Array	65.47	327	P	P	10 40 53.0	+1.8
	comp=Z,2.8nm,0.4s,baz=114,slow=7.3,SNR=7.2						
MKAR	Makanchi Array	65.47	327	P	P	10 40 52.8	+1.5
MAKZ	Makanchi	65.65	326	P	P	10 40 53.3	+0.9
MAKZ				IAmb	IAmb	10 41 07.1	
	comp=Z,10nm,1.1s						
MA2	Magadan	65.82	12	P	P	10 40 53.7	+0.6
MA2				IAmb	IAmb	10 41 11.4	
	comp=Z,2.6nm,0.4s						
YAK	Yakutsk	66.03	0	P	P	10 40 55.9	+1.5
ZAA0	Zalesovo Array	68.74	334	P	P	10 41 12.3	+0.5
ZAA0				IAmb	IAmb	10 41 14.1	
	comp=Z,11nm,0.9s						
KURBB	Kurchatov Arra	69.73	328	P	P	10 41 17.8	-0.2
	comp=Z,5.7nm,0.7s,baz=128,slow=5.7,SNR=3.8						
SYO	Syowa Base	85.98	201	⇑eP	P	10 42 48.6	+0.6

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*IDC **09** 10:31:42.3±1.1, 3°.61S×129°.14E, h0^{km}, mb4.6/11, mb1 4.7/13, mb1mx4.3/47, mbtmp4.6/13, ML4.2/2, Error ellipse: s-maj=33.5km s-min=23.0km az=84.0*

*NEIC **09** 10:31:43.3±1.8, 3°.66S±0°.06×129°.43E±0°.05, h12^{km}±4^{km}, mb4.7/21, Error ellipse: s-maj=9.4km s-min=7.8km az=183.0*

ISC 09 10:31:45.8±0.5**, 3°.77S**±0°.06×**129°.39E**±0°.06**, h35^{km}, n49, σ0ˢ.98**/49**, mb4.7**/16**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.98	74	Pn	Pn	10 32 27.3	-3.3
FAKI				Sn	Sn	10 33 05.4	+0.3
SIJI	Sorong	3.44	33	Pn	Pn	10 32 39.4	+2.5
	49nm,0.3s,baz=230,slow=17,SNR=4.1						
SAUI	Saumlaki	4.60	156	Pn	Pn	10 32 52.4	-0.6
TNTI	Ternate	4.94	336	Pn	Pn	10 32 55.2	-2.5
SOEI	Soe	7.83	220	Pn	Pn	10 33 36.9	-0.5
MTN	Manton Dam	9.18	169	Pn	Pn	10 33 55.9	0.0
KAPI	Kappang	9.69	262	Pn	Pn	10 34 02.2	-0.6
KNRA	Kununurra	11.85	183	Pn	Pn	10 34 31.7	-0.8
WRA	Warramunga Arr	16.79	164	P	P	10 35 41.1	+0.8
	0.7nm,0.3s,baz=346,slow=11,SNR=2.0						
MANU	Manus Island	18.04	85	P	Pn	10 35 53.6	-0.3
PSA00	Pilbara Seismi	19.98	207	P	P	10 36 15.0	-0.4
PSA00				IAmb	IAmb	10 36 19.7	
	comp=Z,27nm,1.1s						
ASAR	Alice Springs	20.26	168	P	Pn	10 36 22.8	+2.2
	comp=Z,36nm,0.7s,baz=346,slow=10,SNR=6.0						
ASAR	Alice Springs	20.26	168	P	P	10 36 18.5	+0.1
BBOO	Buckleboo	29.56	169	P	P	10 37 48.7	+1.3
EIDS	Eidsvold	29.93	138		P	10 37 51.1	+0.3
EIDS				IAmb	IAmb	10 37 53.0	
	comp=Z,5.0nm,0.7s						
STKA	Stephens Creek	30.23	159	P	P	10 37 53.6	+0.4
CMAR	Chiang Mai Arr	37.25	307	P	P	10 38 55.0	+0.6
	comp=Z,3.5nm,0.6s,baz=137,slow=7.5,SNR=4.6						
MAJO	Matsushiro	40.94	11	P	P	10 39 24.9	-0.2
MAJO				IAmb	IAmb	10 39 26.6	
	comp=Z,18nm,0.8s						
MAT	Matsushiro	40.94	11	P	P	10 39 24.8	-0.3
MJAR	Matsushiro Arr	40.94	11	P	P	10 39 25.4	+0.3
	comp=Z,12nm,0.8s,baz=188,slow=10.0,SNR=7.8						
MJAR	Matsushiro Arr	40.94	11	P	P	10 39 25.0	-0.1
MJAR				IAmb	IAmb	10 39 26.2	
	comp=Z,9.7nm,1.1s						
KSRS	Korea Array	41.03	358	P	P	10 39 26.9	+1.1
	comp=Z,3.1nm,0.6s,baz=178,slow=8.9,SNR=6.8						
JYT	Yasato	41.05	13	P	P	10 39 25.1	-0.9
KS19	Wonju Array Si	41.08	358	P	P	10 39 25.0	-1.3
PINNC	Pines Island,	41.33	120	P	P	10 39 28.8	+0.3
PINNC				IAmb	IAmb	10 39 32.4	
	comp=Z,16nm,1.0s						
JSD	Sado	42.40	10	P	P	10 39 37.0	0.0
JMM	Marumori	42.75	13	P	P	10 39 39.9	0.0
USRK	Ussuriysk Ar.	47.81	3	P	P	10 40 20.1	+0.3
	comp=Z,2.5nm,0.6s,baz=182,slow=7.6,SNR=5.1						
SONM	Songino Array	55.20	341	P	P	10 41 16.1	+0.8
	comp=Z,1.6nm,0.6s,baz=149,slow=6.0,SNR=1.6						

DGAR	Diego Garcia	56.75	264	P	P	10 41 27.9	+1.1
PEA0B	Petropavlovsk-	61.47	19	P	P	10 41 58.7	-0.1
PETK	Petropavlovsk-	61.47	19	P	P	10 41 59.2	+0.3
	comp=Z,4.8nm,0.8s,baz=210,slow=11,SNR=4.0						
PETK	Petropavlovsk-	61.47	19	P	P	10 41 57.9	-0.9
PET	Petropavlovsk	61.72	20	P	P	10 42 00.4	-0.1
CASY	Casey	63.79	188	P	P	10 42 15.7	+1.7
CASY				IAmb	IAmb	10 42 20.5	
	comp=Z,4.0nm,0.8s						
MK31	Makanchi Array	65.21	326	P	P	10 42 23.7	-0.1
MKAR	Makanchi Array	65.21	326	P	P	10 42 22.9	-0.8
	comp=Z,5.1nm,0.7s,baz=127,slow=8.7,SNR=4.3						
MKAR	Makanchi Array	65.21	326	P	P	10 42 24.1	+0.3
MAKZ	Makanchi	65.39	326	P	P	10 42 23.8	-1.1
MAKZ				IAmb	IAmb	10 42 25.2	
	comp=Z,7.3nm,0.9s						
ZAA0	Zalesovo Array	68.44	334	P	P	10 42 44.3	+0.2
ZALV	Zalesovo Beam	68.44	334	P	P	10 42 43.8	-0.3
	comp=Z,8.2nm,0.9s,baz=109,slow=4.7,SNR=4.0						
KURBB	Kurchatov Arra	69.46	328	P	P	10 42 50.5	0.0
	comp=Z,9.8nm,0.8s,baz=125,slow=5.4,SNR=6.1						
KKAR	Karatay Array	70.53	318	P	P	10 42 57.0	-0.3
BVAR	Borovoye Array	75.02	328	P	P	10 43 23.7	0.0
	comp=Z,6.1nm,0.8s,baz=201,slow=7.9,SNR=3.7						
UOSS	Minazif	76.43	297	P	P	10 43 30.9	-1.5
UOSS				IAmb	IAmb	10 43 39.4	
	comp=Z,8.5nm,1.1s						
GEYT	Alibeck	77.68	310	P	P	10 43 39.0	-0.2
KNK	Knik Glacier	89.52	28	P	P	10 44 40.4	+1.0
MCK	McKinley	89.67	26	P	P	10 44 40.4	+0.4
KMBO	Kilima Mbogo	92.06	269	P	P	10 44 51.7	-0.8

GRAL 09 10:32:15.6±0.3**, 34.°39N**×**36.°76E, h3**^{km}±6^{km}**, MD3.1, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWQ	Hawqa	0.69	261	*e*P	Pg	10 32 27.9	-0.9
HWQ				*e*S	Sg	10 32 37.0	-0.7
BHL	Bhannes	1.04	242	*e*P	Pg	10 32 34.4	-1.2
RCY	Rachaya	1.18	221	*e*P	Pg	10 32 36.6	-1.7
DQRL	Deir Qamar	1.21	236	*e*P	Pg	10 32 37.1	-1.6
DQRL				*e*S	Sg	10 32 52.9	-1.4

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*NEIC **09** 10:35:45.5±1.2, 4.°07S±0.°06×129.°53E±0.°07, h24^{km}±6^{km}, mb4.5/18, Error ellipse: s-maj=9.8km s-min=9.0km az=112.0*

*IDC **09** 10:35:48.7±1.2, 4.°13S×129.°48E, h26^{km}±5^{km}, mb4.1/4, mb1 4.4/7, mb1mx3.8/44, mbtmp4.4/7, ML4.2/3, Error ellipse: s-maj=45.9km s-min=22.1km az=70.0*

ISC 09 10:35:46.3±0.5**, 4.°07S**±0.°07×**129.°53E**±0.°08**, h36**^{km}**, n36,** σ**1.**^{s}**10**/31**, mb4.4**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.94	67	Pn	Pn	10 36 29.8	-0.7
SIJI	Sorong	3.62	29	Pn	Pn	10 36 45.2	+5.4
	27nm,0.3s,baz=206,slow=23,SNR=2.0						
SAUI	Saumlaki	4.27	156	Pn	Pn	10 36 47.8	-1.0
TNTI	Ternate	5.27	336	Pn	Pn	10 37 00.8	-1.7
SOEI	Soe	7.70	222	Pn	Pn	10 37 35.9	0.0
MTN	Manton Dam	8.87	170	Pn	Pn	10 37 51.8	-0.1
KNRA	Kununurra	11.56	184	Pn	Pn	10 38 29.0	+0.2
WRAB	Tennant Creek	16.46	164	Pn	Pn	10 39 34.9	+0.4
WRAB				IAmb	IAmb	10 39 53.1	
	comp=Z,101nm,1.3s						
WRA	Warramunga Arr	16.46	164	Pn	P	10 39 35.5	-1.5
	comp=Z,0.5nm,0.3s,baz=348,slow=12,SNR=1.8						
WB2	Warramunga Arr	16.47	164	Pn	Pn	10 39 34.9	+0.2
WR0	Warramunga Arr	16.54	163	Pn	Pn	10 39 35.2	-0.3
COEN	Coen	16.67	127	Pn	Pn	10 39 37.5	+0.2
COEN				IAmb	IAmb	10 39 54.7	
	comp=Z,37nm,1.3s						
PMG	Port Moresby	18.29	108	P	P	10 39 56.5	-0.7
SMRI	Semarang	19.23	260	P	P	10 40 06.9	-0.6
PSA00	Pilbara Seismi	19.78	208	P	P	10 40 13.3	-0.2
ASAR	Alice Springs	19.94	168	P	Pn	10 40 19.1	+1.9
	comp=Z,2.1nm,0.3s,baz=347,slow=9.4,SNR=11						
ASAR	Alice Springs	19.94	168	P	P	10 40 13.0	-2.3
CTAO	Charters Tower	22.79	136	P	P	10 40 46.2	+0.3
FORT	Forrest	26.61	183	P	P	10 41 21.1	-0.3
IPM	Ipoh	29.71	286	P	P	10 41 48.0	-1.3
IPM				IAmb	IAmb	10 42 01.7	
	comp=Z,11nm,0.7s						
KNMB	Chin-men Tao	30.36	340	P	P	10 41 55.5	+0.6
CMAR	Chiang Mai Arr	37.54	308	P	P	10 43 01.3	+4.0
	comp=Z,2.2nm,0.6s,baz=136,slow=7.2,SNR=5.9						
CMAR				pP	sP	10 43 09.6	-1.8
	comp=Z,3.3nm,0.6s,baz=131,slow=7.3,SNR=4.0						
KS19	Wonju Array Si	41.38	358	P	P	10 43 28.9	-0.1
KS19				IAmb	IAmb	10 43 38.3	
	comp=Z,11nm,1.4s						
JEM	Erimo	47.51	14	P	P	10 44 33.0	+15
JEW	Eniwo	47.92	12	P	P	10 44 21.4	+0.4
PALK	Pallekele	50.01	283	P	P	10 44 37.3	-0.4
MSWZ	Moikau Station	55.23	139	P	P	10 45 15.8	0.0
MCQ	Macquarie Isla	55.67	160	P	P	10 45 18.7	+0.1
MKAR	Makanchi Array	65.53	326	P	P	10 46 30.0	+3.9
	comp=Z,2.0nm,0.7s,baz=128,slow=7.7,SNR=4.3						
MKAR				pP	sP	10 46 37.5	-2.2
	comp=Z,3.6nm,0.7s,baz=128,slow=7.2,SNR=7.1						
ZALV	Zalesovo Beam	68.76	334	P	P	10 46 49.8	+3.4
	comp=Z,2.0nm,0.8s,baz=111,slow=6.3,SNR=3.1						
ZALV	Zalesovo Beam	68.76	334	P	P	10 46 47.0	+0.6
KURBB	Kurchatov Arra	69.78	328	P	P	10 46 56.7	+3.9
	comp=Z,3.8nm,0.8s,baz=127,slow=5.4,SNR=5.1						
KURBB				pP	sP	10 47 05.3	-1.1
	comp=Z,7.0nm,0.8s,baz=124,slow=5.4,SNR=10						
MAW	Mawson	77.50	201	P	P	10 47 38.8	+1.0
ABKAR	Akbulak array	79.94	321	P	P	10 47 51.6	0.0
ABKAR				IAmb	IAmb	10 48 00.2	
	comp=Z,3.1nm,1.0s						
QSPA	South Pole Qui	85.89	180	P	P	10 48 23.5	+1.2
QSPA				IAmb	IAmb	10 48 43.4	
	comp=Z,1.0nm,0.5s						
CPUP	Villa Florida	149.06	168	PKPbc	PKPab	10 55 34.9	-0.6
	comp=Z,2.9nm,0.7s,baz=146,slow=7.3,SNR=3.8						

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*NEIC **09** 10:36:09.9±2.0, 4.°14S±0.°07×129.°34E±0.°07, h22^{km}±5^{km}, mb4.7/30, Error ellipse: s-maj=11.1km s-min=9.1km az=61.0*

*IDC **09** 10:36:09.8±0.5, 4.°13S×129.°36E, h24^{km}±1^{km}, mb4.4/10, mb1 4.5/13, mb1mx4.1/43, mbtmp4.6/13, ML4.3/3, Error ellipse: s-maj=11.7km s-min=9.2km az=98.0*

ISC 09 10:36:09.6±0.6**, 4.°13S**±0.°07×**129.°40E**±0.°09**, h24**^{km}±4^{km}**, h25**^{km}**:pP-P, n55,** σ**0.**^{s}**98**/60**, mb4.8**/22**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	3.09	67	Pn	Pn	10 36 57.9	+1.0
SIJI	Sorong	3.74	30	Pn	Pn	10 37 07.7	+1.8
	35nm,0.3s,baz=127,slow=20,SNR=2.6						
SAUI	Saumlaki	4.27	154	Pn	Pn	10 37 13.0	-0.1
TNTI	Ternate	5.28	337	Pn	Pn	10 37 25.2	-1.7
WB0	Warramunga Arr	16.29	163	Pn	Pn	10 39 56.0	-0.9
WRA	Warramunga Arr	16.44	163	Pn	Pn	10 39 59.2	+0.4
	0.8nm,0.3s,baz=344,slow=13,SNR=1.9						
WB2	Warramunga Arr	16.44	163	Pn	Pn	10 39 57.1	-1.7
WB2				IAmb	IAmb	10 39 57.2	
	comp=Z,59nm,1.1s						
WR0	Warramunga Arr	16.51	163	Pn	Pn	10 39 58.5	-1.3
WR0				IAmb	IAmb	10 40 10.2	
	comp=Z,39nm,0.9s						
COEN	Coen	16.73	127	Pn	Pn	10 40 00.5	-2.1
SBUM	Sibu	18.37	291	P	P	10 40 20.4	-2.3
PMG	Port Moresby	18.40	107	P	P	10 40 22.3	-0.8
ASAR	Alice Springs	19.90	168	P	P	10 40 40.8	+1.2
	comp=Z,1.3nm,0.3s,baz=346,slow=10,SNR=2.8						
XMIS	Christmas Isla	24.37	254	P	P	10 41 25.8	-0.3
CAN	Canberra	35.95	152	P	P	10 43 07.3	-1.1
JNU	Nakatsue	37.08	2	P	P	10 43 18.4	+0.4
	comp=Z,9.2nm,0.5s,baz=159,slow=5.2,SNR=4.3						
JNU	Nakatsue	37.08	2	P	P	10 43 18.1	+0.1
JNU				IAmb	IAmb	10 43 25.6	
	comp=Z,16nm,1.0s						
CMAR	Chiang Mai Arr	37.47	308	P	P	10 43 22.7	+1.1
	comp=Z,2.5nm,0.4s,baz=139,slow=8.2,SNR=5.8						
CMAR				pP	sP	10 43 30.2	-0.1
	comp=Z,3.4nm,0.6s,baz=136,slow=8.0,SNR=3.3						
JHJ2	Mitsune	38.33	14	P	P	10 43 28.7	+0.1
ENH	Enshi	39.16	332	P	P	10 43 34.6	-1.0
JWT	Wachi	39.61	8	P	P	10 43 38.9	-0.3
JWT				IAmb	IAmb	10 43 49.5	
	comp=Z,19nm,1.0s						
MJAR	Matsushiro Arr	41.29	11	P	P	10 43 52.9	-0.3
	comp=Z,2.2nm,0.5s,baz=182,slow=9.7,SNR=2.4						
MJAR	Matsushiro Arr	41.29	11	P	P	10 43 52.4	-0.8
MAT	Matsushiro	41.29	11	P	P	10 43 51.9	-1.3
KSRS	Korea Array	41.40	358	P	P	10 43 54.5	+0.6
	comp=Z,2.3nm,0.6s,baz=174,slow=9.3,SNR=6.5						
KSRS				pP	sP	10 44 01.5	-1.0
	comp=Z,5.1nm,0.8s,baz=172,slow=9.4,SNR=7.7						
KS19	Wonju Array Si	41.44	358	P	P	10 43 54.9	+0.5
INCN	Inchon	41.48	357	P	P	10 43 55.1	+0.4
INCN				IAmb	IAmb	10 43 56.1	
	comp=Z,12nm,0.7s						
TARA	Tarawa	43.84	84	P	P	10 44 15.5	+1.3
BJT	Baijiatuau	45.59	346	P	P	10 44 28.0	+0.3
BJT				IAmb	IAmb	10 44 28.3	
	comp=Z,4.5nm,0.6s						
ERM	Erimo	47.61	14	P	P	10 44 44.1	+0.6
USRK	Ussuriysk Ar.	48.17	3	P	P	10 44 48.0	+0.1
	comp=Z,3.7nm,0.5s,baz=187,slow=7.0,SNR=12						
USRK				pP	pP	10 44 55.2	+1.2
	comp=Z,8.5nm,0.7s,baz=185,slow=7.3,SNR=7.3						
USRK	Ussuriysk Ar.	48.17	3	P	P	10 44 46.6	-1.2
HIA	Hailar	53.84	352	P	P	10 45 31.4	+0.9
HIA				IAmb	IAmb	10 45 40.9	
	comp=Z,7.6nm,0.9s						
SONM	Songino Array	55.55	341	P	P	10 45 43.3	+0.3
	comp=Z,2.3nm,0.9s,baz=170,slow=6.6,SNR=5.5						
PETK	Petropavlovsk-	61.81	19	P	P	10 46 26.5	+0.1
PET	Petropavlovsk	62.06	20	P	P	10 46 28.3	+0.3
CASY	Casey	63.43	188	P	P	10 46 39.1	+2.1
CASY				IAmb	IAmb	10 46 40.3	
	comp=Z,9.2nm,1.0s						
MK31	Makanchi Array	65.52	326		P	10 46 51.0	0.0
MK31				IAmb	IAmb	10 46 51.6	
	comp=Z,6.0nm,0.7s						
MKAR	Makanchi Array	65.52	326	P	P	10 46 51.3	+0.3
	comp=Z,6.3nm,0.5s,baz=116,slow=8.6,SNR=35						
MKAR				pP	pP	10 46 58.6	+1.2
	comp=Z,6.3nm,0.5s,baz=116,slow=8.7,SNR=7.9						
MAKZ	Makanchi	65.70	326	P	P	10 46 52.4	+0.2
YAK	Yakutsk	65.98	0	P	P	10 46 53.1	-0.5
KDJ	Kajisay	66.00	320	P	P	10 46 54.9	+0.5
KDJ				IAmb	IAmb	10 46 55.3	
	comp=Z,8.4nm,0.9s						
ZALV	Zalesovo Beam	68.76	334	P	P	10 47 11.4	0.0
	comp=Z,3.7nm,0.8s,baz=108,slow=4.8,SNR=4.0						
KURBB	Kurchatov Arra	69.77	328	P	P	10 47 17.6	-0.1
	comp=Z,9.6nm,0.6s,baz=182,slow=25,SNR=27						
KURBB				pP	pP	10 47 25.2	+1.2
	comp=Z,5.3nm,0.5s,baz=182,slow=25,SNR=9.2						
KURK	Kurchatov	69.77	328	P	P	10 47 18.0	+0.3
BVAR	Borovoye Array	75.33	328	P	P	10 47 50.9	+0.1
	comp=Z,17nm,1.1s,baz=165,slow=11,SNR=11						
BRVK	Borovoye	75.40	328	P	P	10 47 52.1	+0.9
BRVK				IAmb	IAmb	10 47 59.4	
	comp=Z,10nm,1.1s						
TIXI	Tiksi	75.64	360	P	P	10 47 51.8	-0.4
TIXI				IAmb	IAmb	10 47 52.6	
	comp=Z,7.1nm,1.1s						
OBL	Observatory Le	77.59	69	P	P	10 48 03.9	-0.6
ABKAR	Akbulak array	79.90	321	P	P	10 48 16.1	-0.3
ABKAR	Akbulak array	79.90	321	IAmb	IAmb	10 48 17.8	
	comp=Z,6.0nm,0.6s						
AKTO	Aktyubinsk	81.45	322	P	P	10 48 25.2	+0.5
	baz=107,slow=10						
QSPA	South Pole Qui	85.83	180	P	P	10 48 47.7	+0.7
RAYN	Ar Rayn	86.04	294	P	P	10 48 48.7	-0.2
RAYN				IAmb	IAmb	10 48 49.5	
	comp=Z,7.5nm,0.8s						
KNK	Knik Glacier	89.84	28	P	P	10 49 06.7	+0.6
KNK				IAmb	IAmb	10 49 10.8	
	comp=Z,4.9nm,1.0s						
SACV	Santiago Islan	151.32	294		PKPbc	10 56 00.8	-1.4
SACV				PKPab	pPKPbc	10 56 07.4	-1.6

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*DJA **09** 10:38:23.5±0.7, 4°S±6°×12°9E±°, h10^{km}, M4.8/7, MLv4.8/7*

*IDC **09** 10:38:24.9±0.7, 4.°13S×129.°51E, h29^{km}±4^{km}, mb4.2/11, mb1 4.4/15, mb1mx4.0/41, mbtmp4.4/15, ML4.4/4, MS5.6/1, Ms1 5.6/1, ms1mx4.6/54, Error ellipse: s-maj=24.5km s-min=13.9km az=81.0*

*NEIC **09** 10:38:24.8±1.4, 4.°14S±0.°06×129.°44E±0.°06, h27^{km}±4^{km}, mb4.7/32, Error ellipse: s-maj=9.5km s-min=8.1km az=150.0*

ISC 09 10:38:25.4±0.4**, 4.°13S**±0.°05×**129.°45E**±0.°05**, h36**^{km}**, n77,** σ**0.**^{s}**96**/86**, mb4.6**/22**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.94	326	P	Pn	10 38 40.8	-1.2
MSAI				S	Sn	10 38 52.2	-2.0
AAI	Ambon	1.32	289	P	Pn	10 38 45.8	-1.5
AAI				S	Sn	10 39 01.8	-1.9
FAKI	Fak Fak	3.05	67	P	Pn	10 39 12.2	+1.2
FAKI	Fak Fak	3.05	67	Pn	Pn	10 39 10.2	-0.8
SIJI	Sorong	3.72	29	Pn	Pn	10 39 20.4	+0.1
	55nm,0.3s,baz=221,slow=21,SNR=6.2						
SIJI				Sn	Sn	10 40 01.2	-1.6
	77nm,0.3s,baz=232,slow=23,SNR=11						
SIJI	Sorong	3.72	29		Sn	10 40 01.2	-1.6
SWI	Sorong	3.72	29	P	Pn	10 39 20.9	+0.6
LBMI	Labuha	3.98	331	P	Pn	10 39 24.4	+0.5
SANI	Sanana	4.03	301	P	Pn	10 39 24.7	+0.2
SAUI	Saumlaki	4.25	154	Pn	Pn	10 39 26.3	-1.2
BATI	Baumata	8.33	223	Pn	Pn	10 40 26.2	+2.6
	10nm,0.3s,baz=116,slow=2.4,SNR=3.1						
KNRA	Kununurra	11.49	183	Pn	Pn	10 41 06.3	-0.7
JAGI	Jajag, Banyuwa	15.80	253		P	10 42 09.4	+0.7
JAGI				IAmb	IAmb	10 42 09.8	
	comp=Z,38nm,1.2s						
WB0	Warramunga Arr	16.27	163	Pn	Pn	10 42 10.4	-0.9
WB0				IAmb	IAmb	10 42 15.6	
	comp=Z,39nm,1.3s						
WRAB	Tennant Creek	16.42	163	Pn	Pn	10 42 11.3	-1.9
WRA	Warramunga Arr	16.42	164	Pn	Pn	10 42 11.3	-1.9
	comp=Z,0.6nm,0.3s,baz=348,slow=10,SNR=1.8						
WB2	Warramunga Arr	16.43	163	Pn	Pn	10 42 11.1	-2.2
WR0	Warramunga Arr	16.50	163	Pn	Pn	10 42 12.9	-1.2
WR0				IAmb	IAmb	10 42 20.7	
	comp=Z,64nm,1.4s						
KKM	Kota Kinabalu	16.64	307	Pn	Pn	10 42 13.3	-2.7
COEN	Coen	16.69	127	Pn	Pn	10 42 14.4	-2.2
PSA00	Pilbara Seismi	19.68	207	P	Pn	10 42 52.8	-0.4
PSA00				IAmb	IAmb	10 42 53.7	
	comp=Z,34nm,0.9s						
AS31	Alice Springs	19.89	168	P	P	10 42 53.6	-0.3
ASAR	Alice Springs	19.89	168	P	P	10 42 54.6	+0.8
	comp=Z,2.8nm,0.3s,baz=347,slow=10,SNR=9.1						
ASAR	Alice Springs	19.89	168	P	P	10 42 54.5	+0.7
CTAO	Charters Tower	22.80	135	P	P	10 43 25.5	+0.4
GUMO	Guam	23.33	41	P	P	10 43 30.5	0.0
GIRL	Giralia	23.57	217	P	P	10 43 32.6	-0.2
FORT	Forrest	26.54	183	P	P	10 44 00.6	+0.7
MORW	Morawa	27.87	206	P	P	10 44 12.2	+0.3
BBOO	Buckleboo	29.19	169	P	P	10 44 24.3	+0.8
IPM	Ipoh	29.66	286	P	P	10 44 27.5	-0.4
IPM				IAmb	IAmb	10 44 39.0	
	comp=Z,18nm,0.7s						
STKA	Stephens Creek	29.86	159	P	P	10 44 29.0	-0.5
	comp=Z,1.5nm,0.3s,baz=317,slow=12,SNR=8.2						
STKA	Stephens Creek	29.86	159	P	P	10 44 29.6	+0.1
JNU	Nakatsue	37.08	2	P	P	10 45 32.5	+0.3
JNU				IAmb	IAmb	10 45 42.1	
	comp=Z,18nm,1.0s						
CMAR	Chiang Mai Arr	37.51	308	P	P	10 45 37.5	+1.3
	comp=Z,3.7nm,0.5s,baz=137,slow=7.6,SNR=11						
CMAR				pP	pP	10 45 46.9	+1.4
	comp=Z,4.5nm,0.5s,baz=134,slow=6.7,SNR=5.3						
CMAR	Chiang Mai Arr	37.51	308	P	P	10 45 35.6	-0.5
CHTO	Chiang Mai	37.71	308	P	P	10 45 38.2	+0.4
CHTO				IAmb	IAmb	10 45 39.8	
	comp=Z,8.0nm,0.7s						
DZM	Mont Dzumac	40.03	120	LR	LR	11 03 17.0	
	comp=Z,8µm,18.2s,baz=18,slow=37						
PINNC	Pines Island,	41.09	120	P	P	10 46 06.6	+0.6
MJAR	Matsushiro Arr	41.28	11	P	P	10 46 06.8	-0.5
	comp=Z,5.3nm,0.6s,baz=185,slow=9.8,SNR=6.1						
MJAR	Matsushiro Arr	41.28	11	P	P	10 46 07.4	+0.1
MAJO	Matsushiro	41.28	11	P	P	10 46 06.9	-0.4
MAJO				IAmb	IAmb	10 46 08.4	
	comp=Z,9.8nm,0.7s						
MAT	Matsushiro	41.28	11	P	P	10 46 06.3	-1.0
KSRS	Korea Array	41.40	358	P	P	10 46 09.3	+1.2
	comp=Z,1.8nm,0.7s,baz=173,slow=9.2,SNR=5.3						
KSRS				pP	pP	10 46 18.4	+1.1
	comp=Z,2.4nm,0.7s,baz=174,slow=9.3,SNR=6.3						
KS19	Wonju Array Si	41.45	358	P	P	10 46 08.9	+0.2
KS19				IAmb	IAmb	10 46 24.1	
	comp=Z,12nm,1.2s						
JSD	Sado	42.75	10	P	P	10 46 19.1	-0.1
JMM	Marumori	43.09	13	P	P	10 46 22.2	+0.2
USA0B	Ussuriysk Arra	48.17	2	P	P	10 47 02.0	0.0
USA0B				IAmb	IAmb	10 47 04.1	
	comp=Z,11nm,1.4s						
USRK	Ussuriysk Ar.	48.17	2	P	P	10 47 02.6	+0.6
	comp=Z,2.1nm,0.6s,baz=184,slow=6.9,SNR=5.1						
USRK	Ussuriysk Ar.	48.17	2	P	P	10 47 01.9	-0.1
SONM	Songino Array	55.56	341	P	P	10 47 58.1	+0.8
	comp=Z,0.5nm,0.3s,baz=168,slow=6.0,SNR=5.1						
PEA0B	Petropavlovsk-	61.80	19	P	P	10 48 41.9	+1.5
PETK	Petropavlovsk-	61.80	19	P	P	10 48 41.6	+1.2
	comp=Z,1.5nm,0.6s,baz=208,slow=4.9,SNR=1.7						
PETK	Petropavlovsk-	61.80	19	P	P	10 48 41.1	+0.7
CASY	Casey	63.44	188	P	P	10 48 50.9	-0.2
CASY				IAmb	IAmb	10 49 07.7	
	comp=Z,12nm,1.1s						
MK31	Makanchi Array	65.54	326	P	P	10 49 05.6	+0.3
MK31				IAmb	IAmb	10 49 15.8	
	comp=Z,4.6nm,0.7s						
MKAR	Makanchi Array	65.54	326	P	P	10 49 05.7	+0.4
	comp=Z,4.8nm,0.4s,baz=113,slow=7.2,SNR=21						
MKAR				pP	pP	10 49 14.8	-0.1
	comp=Z,5.9nm,0.4s,baz=114,slow=7.7,SNR=14						
MKAR	Makanchi Array	65.54	326	P	P	10 49 05.6	+0.3
MA2	Magadan	65.72	12	P	P	10 49 07.2	+1.1
MA2				IAmb	IAmb	10 49 23.3	
	comp=Z,11nm,1.0s						
MAKZ	Makanchi	65.72	326	P	P	10 49 06.5	0.0
YAK	Yakutsk	65.98	0	P	P	10 49 08.1	+0.4
ZAA0	Zalesovo Array	68.78	334	P	P	10 49 25.5	-0.2
ZAA0				IAmb	IAmb	10 49 26.1	
	comp=Z,4.8nm,0.8s						
ZALV	Zalesovo Beam	68.78	334	P	P	10 49 25.5	-0.2
	comp=Z,2.5nm,0.6s,baz=112,slow=5.2,SNR=5.0						
ZALV				pP	pP	10 49 35.6	+0.2
	comp=Z,3.5nm,0.6s,baz=111,slow=5.0,SNR=5.3						
ZALV	Zalesovo Beam	68.78	334	P	P	10 49 25.6	-0.1
KURBB	Kurchatov Arra	69.80	328	P	P	10 49 32.2	+0.2
	comp=Z,11nm,0.6s,baz=128,slow=5.6,SNR=18						
KURBB				pP	pP	10 49 41.4	-0.4
	comp=Z,8.6nm,0.5s,baz=129,slow=5.9,SNR=14						
KURK	Kurchatov	69.80	328	P	P	10 49 32.2	+0.2
BVAR	Borovoye Array	75.36	328	P	P	10 50 05.5	+0.4
	comp=Z,3.5nm,0.6s,baz=169,slow=12,SNR=7.9						
BVAR				pP	pP	10 50 14.6	-0.3
	comp=Z,2.5nm,0.4s,baz=163,slow=11,SNR=7.8						
ABKAR	Akbulak array	79.94	321	P	P	10 50 30.4	-0.3
ABKAR				IAmb	IAmb	10 50 40.9	
	comp=Z,4.6nm,0.7s						
RAYN	Ar Rayn	86.09	294	P	P	10 51 03.3	+0.1
TXAR	Lajitas Array	123.89	57	PKP	PKiKP	10 57 21.1	+0.3
	comp=Z,0.3nm,0.5s,baz=214,slow=3.6,SNR=4.7						
TXAR	Lajitas Array	123.89	57	PKPdf	PKiKP	10 57 21.4	+0.6
LVC	Limon Verde	147.93	147	PKPbc	PKPbc	10 58 08.8	+0.6
	comp=Z,3.2nm,0.4s,baz=177,slow=3.3,SNR=7.4						
LVC	Limon Verde	147.93	147	PKPbc	PKiKP	10 58 09.8	-0.3
CPUP	Villa Florida	149.01	168	PKPbc	PKPbc	10 58 10.4	0.0
	comp=Z,2.3nm,0.5s,baz=212,slow=3.0,SNR=3.4						
CPUP	Villa Florida	149.01	168	PKPdf	PKPdf	10 58 06.1	-0.3
CPUP					PKPbc	10 58 10.9	+0.4
LPAZ	La Paz	153.28	140	PKPbc	PKiKP	10 58 21.9	+0.4
	comp=Z,0.7nm,0.6s,baz=139,slow=2.8,SNR=3.8						
LPAZ	La Paz	153.28	140		PKPdf	10 58 14.1	+0.2

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*IDC **09** 10:38:55.0±0.3, 4.°03S×129.°49E, h0^{km}, mb4.5/13, mb1 4.6/15, mb1mx4.3/38, mbtmp4.5/15, ML4.5/2, MS5.7/1, Ms1 5.7/1, ms1mx4.8/53, Error ellipse: s-maj=14.4km s-min=6.4km az=71.0*

*NEIC **09** 10:38:55.7±1.9, 4.°05S±0.°07×129.°57E±0.°10, h10^{km}±1^{km}, mb4.9/33, Error ellipse: s-maj=16.9km s-min=11.7km az=279.0*

ISC 09 10:38:59.2±0.5**, 4.°12S**±0.°07×**129.°53E**±0.°10**, h36**^{km}**, n64,** σ**1.**^{s}**01**/63**, mb4.8**/29**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.96	66	Pn	Pn	10 39 43.6	-0.1
SAUI	Saumlaki	4.22	155	Pn	Pn	10 40 03.3	+2.2
KNRA	Kununurra	11.51	184	Pn	Pn	10 41 40.3	-0.8
DAV	Davao City (W)	11.79	340	LR	LR	10 46 11.1	
	comp=Z,37µm,18.3s,baz=121,slow=37						
WRAB	Tennant Creek	16.41	164	P	P	10 42 48.7	-0.7
WRA	Warramunga Arr	16.41	164	Pn	P	10 42 48.8	-0.6
	1.4nm,0.3s,baz=338,slow=14,SNR=4.9						
WB2	Warramunga Arr	16.42	164	P	Pn	10 42 48.1	+1.1
COEN	Coen	16.63	127	P	P	10 42 51.8	0.0
PMG	Port Moresby	18.27	108	P	P	10 43 10.0	+0.1
PMG				IAmb	IAmb	10 43 24.6	
	comp=Z,93nm,1.2s						
SBUM	Sibu	18.49	290	P	Pn	10 43 13.3	+0.5
ASAR	Alice Springs	19.89	168	P	Pn	10 43 29.3	-0.2
	comp=Z,2.5nm,0.3s,baz=347,slow=11,SNR=6.7						
ASAR	Alice Springs	19.89	168	P	P	10 43 26.9	-0.8
CTA	Charters Tower	22.75	136	P	P	10 43 59.5	+1.0
	comp=Z,7.3nm,0.5s,baz=313,slow=15,SNR=2.4						
CTAO	Charters Tower	22.75	136	P	P	10 43 56.6	-1.9
GIRL	Giralia	23.63	217	P	P	10 44 07.3	+0.1
CMAR	Chiang Mai Arr	37.57	308	P	P	10 46 11.1	+0.6
	comp=Z,3.9nm,0.6s,baz=134,slow=7.1,SNR=8.7						
CMAR	Chiang Mai Arr	37.57	308	P	P	10 46 10.9	+0.4
CHTO	Chiang Mai	37.77	308	P	P	10 46 12.2	0.0
JMN	Monobe	37.86	6	P	P	10 46 12.0	-0.7
JMN				IAmb	IAmb	10 46 15.6	
	comp=Z,22nm,0.9s						
JHS	Saijyo	39.05	5	P	P	10 46 20.7	-2.0
JHS				IAmb	IAmb	10 46 31.8	
	comp=Z,29nm,1.1s						
JWT	Wachi	39.58	8	P	P	10 46 26.6	-0.4
JWT				IAmb	IAmb	10 46 35.3	
	comp=Z,50nm,1.2s						
INU	Inuyama	39.88	10	P	P	10 46 30.1	+0.5
INU				IAmb	IAmb	10 46 37.7	
	comp=Z,26nm,1.1s						
MJAR	Matsushiro Arr	41.25	11	P	P	10 46 40.6	-0.3
	comp=Z,6.7nm,0.7s,baz=226,slow=18,SNR=7.9						
MAJO	Matsushiro	41.25	11	P	P	10 46 40.4	-0.6
MAJO				IAmb	IAmb	10 46 49.1	
	comp=Z,19nm,0.8s						
MAT	Matsushiro	41.25	11	P	P	10 46 40.8	-0.1
JYT	Yasato	41.36	13	P	P	10 46 40.4	-1.3
JYT				IAmb	IAmb	10 46 50.3	
	comp=Z,25nm,0.7s						
KSAR	Wonju Array Be	41.38	358	P	P	10 46 39.5	-2.4
KSRS	Korea Array	41.38	358	P	P	10 46 42.4	+0.4
	comp=Z,2.9nm,0.7s,baz=172,slow=9.5,SNR=5.5						
KS19	Wonju Array Si	41.44	358	P	P	10 46 39.3	-3.1
JSD	Sado	42.72	10	P	P	10 46 52.5	-0.3
JMM	Marumori	43.06	13	P	P	10 46 56.0	+0.4
USA0B	Ussuriysk Arra	48.15	2	P	P	10 47 34.9	-0.9
USA0B				IAmb	IAmb	10 47 54.3	
	comp=Z,18nm,1.4s						
USRK	Ussuriysk Ar.	48.15	2	P	P	10 47 36.7	+1.0
	comp=Z,2.6nm,0.7s,baz=182,slow=6.6,SNR=3.4						
USRK	Ussuriysk Ar.	48.15	2	P	P	10 47 33.8	-1.9
ASAJ	Asahikawa	49.43	12	P	P	10 47 47.1	+1.5
	comp=Z,6.4nm,0.8s,baz=266,slow=19,SNR=1.6						
KLR	Kul'dur	53.16	2	P	P	10 48 14.6	+1.1
	comp=Z,5.1nm,1.1s,baz=173,slow=6.7,SNR=4.4						
ULN	Ulaanbaatar	55.40	342	P	P	10 48 29.0	-1.0
ULN				IAmb	IAmb	10 48 53.7	
	comp=Z,21nm,1.3s						
SONM	Songino Array	55.58	341	P	P	10 48 32.6	+1.3
	comp=Z,4.1nm,1.0s,baz=171,slow=4.9,SNR=4.4						
TLY	Talaya	59.81	342	P	P	10 49 00.3	-0.5
TLY				IAmb	IAmb	10 49 18.9	
	comp=Z,9.4nm,1.1s						
PEA0B	Petropavlovsk-	61.76	19	P	P	10 49 13.4	-0.6
PETK	Petropavlovsk-	61.76	19	P	P	10 49 15.3	+1.3
	comp=Z,1.7nm,0.7s,baz=171,slow=5.5,SNR=4.1						
PETK	Petropavlovsk-	61.76	19	P	P	10 49 14.2	+0.2
CASY	Casey	63.46	188	P	P	10 49 25.3	+0.1
MK31	Makanchi Array	65.58	326		P	10 49 39.2	-0.2

MK31				IAmb	IAmb	10 49 46.8	
	comp=Z,7.7nm,1.1s						
MKAR	Makanchi Array	65.58	326	P	P	10 49 40.1	+0.8
	comp=Z,6.7nm,0.6s,baz=121,slow=8.0,SNR=9.3						
MKAR	Makanchi Array	65.58	326	P	P	10 49 38.9	-0.5
MAKZ	Makanchi	65.76	326		P	10 49 41.1	+0.6
MAKZ				IAmb	IAmb	10 49 45.2	
	comp=Z,9.5nm,1.1s						
YAK	Yakutsk	65.96	0	P	P	10 49 41.5	+0.1
ZAA0	Zalesovo Array	68.81	334		P	10 49 59.4	-0.3
ZAA0				IAmb	IAmb	10 50 07.2	
	comp=Z,11nm,1.0s						
ZALV	Zalesovo Beam	68.81	334	P	P	10 49 59.8	+0.2
	comp=Z,5.5nm,0.7s,baz=122,slow=6.3,SNR=6.1						
ZALV	Zalesovo Beam	68.81	334		P	10 49 59.5	-0.2
KURBB	Kurchatov Arra	69.83	328	P	P	10 50 06.2	+0.2
	comp=Z,8.0nm,0.6s,baz=128,slow=5.7,SNR=10						
BVAR	Borovoye Array	75.39	328	P	P	10 50 39.6	+0.4
	baz=184,slow=14						
ABKAR	Akbulak array	79.98	321	P	P	10 51 04.4	-0.4
ABKAR				IAmb	IAmb	10 51 08.2	
	comp=Z,24nm,1.4s						
ARU	Arti	83.03	328	P	P	10 51 20.6	-0.1
ARU				IAmb	IAmb	10 51 37.8	
	comp=Z,14nm,1.1s						
O18K	Koktuh Hills	86.19	29	P	P	10 51 36.1	-0.6
O18K				IAmb	IAmb	10 51 41.6	
	comp=Z,8.0nm,0.9s						
TTA	Tatalina	86.62	26	P	P	10 51 39.2	+0.4
TTA				IAmb	IAmb	10 51 50.8	
	comp=Z,11nm,1.4s						
N19K	Bonanza Creek	86.78	28	P	P	10 51 38.8	-0.8
ILAR	Eielson Array	90.95	25	P	P	10 52 00.5	+1.3
	comp=Z,1.2nm,0.9s,baz=256,slow=3.3,SNR=4.8						
L27K	Beaver Creek,	93.02	27	P	P	10 52 08.2	-0.6
BCAR	Beaver Creek A	93.04	27	P	P	10 52 08.2	-0.8
EGAK	Eagle	93.40	25	P	P	10 52 08.3	-2.1
LVC	Limon Verde	147.90	147	PKPbc	PKiKP	10 58 43.0	-0.9
	comp=Z,3.2nm,0.6s,baz=170,slow=4.7,SNR=2.7						
CPUP	Villa Florida	149.01	168	PKPbc	PKPbc	10 58 44.6	+0.4
	comp=Z,3.6nm,0.9s,baz=12,slow=2.1,SNR=3.2						

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*IDC **09** 10:39:49.4±1.7, 4°.57S×129°.82E, h0^{km}, mb4.4/6, mb1 4.5/7, mb1mx4.0/36, mbtmp4.4/7, ML4.3/1, Error ellipse: s-maj=65.2km s-min=32.0km az=77.0*

ISC 09 10:39:54.4±1.2**, 4°.5S**±0°.2×**130°.1E**±0°.3**, h40^{km}, n8,** σ1^{s}**01**/8**, mb4.3**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	19.39	169	P	P	10 44 17.2	+0.1
	0.9nm,0.3s,baz=348,slow=10,SNR=1.5						
CMAR	Chiang Mai Arr	38.23	308	P	P	10 47 10.1	-0.7
	2.2nm,0.6s,baz=139,slow=7.6,SNR=1.8						
MAT	Matsushiro	41.57	10	P	P	10 47 38.1	-0.2
KSRS	Korea Array	41.82	357	P	P	10 47 42.1	+1.8
	2.1nm,0.8s,baz=179,slow=9.1,SNR=2.0						
USRK	Ussuriysk Ar.	48.54	2	P	P	10 48 33.8	+0.3
	3.1nm,0.7s,baz=193,slow=5.9,SNR=2.3						
SONM	Songino Array	56.13	341	P	P	10 49 29.6	-0.4
	1.3nm,0.6s,baz=162,slow=6.1,SNR=1.3						
MKAR	Makanchi Array	66.20	326	P	P	10 50 38.3	+0.1
	6.5nm,0.7s,baz=112,slow=7.5,SNR=5.5						
KURBB	Kurchatov Arra	70.45	328	P	P	10 51 05.6	+1.0
	9.0nm,0.7s,baz=133,slow=5.8,SNR=2.9						

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*DJA **09** 10:41:44.4±4.8, 5°S±43°×13°0E±1°2, h10^{km}, M4.9/5, MLv4.9/5*

*IDC **09** 10:41:46.7±0.7, 4°.16S×129°.59E, h0^{km}, mb4.5/11, mb1 4.7/14, mb1mx4.3/39, mbtmp4.6/14, ML4.2/3, Error ellipse: s-maj=28.9km s-min=16.0km az=74.0*

*BJI **09** 10:41:46.0±0.0, 4°.40S×129°.50E, h9^{km}, mb4.9/14*

*NEIC **09** 10:41:50.5±1.6, 4°.24S±0°.06×129°.69E±0°.07, h30^{km}±2^{km}, mb4.9/35, Error ellipse: s-maj=9.7km s-min=9.1km az=120.0*

ISC 09 10:41:50.9±0.5**, 4°.24S**±0°.05×**129°.71E**±0°.06**, h36^{km}, n92,** σ1^{s}**14**/87**, mb4.8**/33**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	1.61	290	P	Pn	10 42 13.6	-3.2
FAKI	Fak Fak	2.85	63	Pn	Pn	10 42 33.4	-0.5
SIJI	Sorong	3.69	25	Pn	Pn	10 42 45.6	+0.2
	23nm,0.3s,baz=210,slow=20,SNR=2.6						
SIJI				Sn	Sn	10 43 28.0	+0.3
	55nm,0.3s,baz=264,slow=23,SNR=4.2						
SWI	Sorong	3.69	25	P	Pn	10 42 46.6	+1.1
SAUI	Saumlaki	4.04	157	Pn	Pn	10 42 50.9	+0.6
LBMI	Labuha	4.20	328	P	Pn	10 42 52.7	+0.2
TNTI	Ternate	5.50	335	Pn	Pn	10 43 10.5	+0.1
SOEI	Soe	7.70	224	Pn	Pn	10 43 39.2	-1.4
MMRI	Maumere	8.61	239	Pn	Pn	10 43 53.0	-0.1
MTN	Manton Dam	8.66	171	Pn	Pn	10 43 53.6	-0.2
BKSI	Bulukumba	9.62	263	P	Pn	10 44 14.0	+7.2
SPSI	Sidrap Palu	9.92	271	P	Pn	10 44 18.9	+7.9
KAPI	Kappang	9.96	265	Pn	Pn	10 44 13.7	+2.2
	1.9nm,0.3s,baz=107,slow=5.6,SNR=5.4						
KAPI	Kappang	9.96	265		Pn	10 44 11.2	-0.3
TOLI2	Tolitoli	10.38	301	Pn	Pn	10 44 15.6	-1.8
SMKI	Samarinda	13.04	286	P	P	10 45 09.1	+5.5
BKB	Balikpapan	13.13	283	Pn	Pn	10 44 53.0	-2.1
TWSI	Taliwang, Sumb	13.50	250	P	P	10 45 09.4	+0.7
BBKI	Banjar Baru	14.86	272	P	P	10 45 28.6	+4.8
MTKI	Muara Teweh, K	15.15	282	P	P	10 45 28.3	+1.2
KMMI	Kalianget	15.91	259	P	P	10 45 38.8	+3.3
JAGI	Jajag, Banyuwa	16.02	254	P	P	10 45 36.9	+0.1
JAGI	Jajag, Banyuwa	16.02	254		Pn	10 45 33.3	-0.3
JAGI				IAmb	IAmb	10 45 37.1	
	comp=Z,89nm,1.1s						
WB0	Warramunga Arr	16.10	164	Pn	Pn	10 45 33.6	-1.0
WRA	Warramunga Arr	16.25	164	Pn	Pn	10 45 36.7	+0.1
	comp=Z,0.5nm,0.3s,baz=350,slow=10,SNR=2.5						
WB2	Warramunga Arr	16.25	164	Pn	Pn	10 45 35.9	-0.7
WB2				IAmb	IAmb	10 46 05.1	
	comp=Z,192nm,1.7s						
WR0	Warramunga Arr	16.32	164	Pn	Pn	10 45 36.7	-0.8
COEN	Coen	16.42	127	Pn	Pn	10 45 37.3	-1.4
KKM	Kota Kinabalu	16.91	307		Pn	10 45 44.9	-0.1
SBUM	Sibu	18.70	291	P	Pn	10 46 06.5	-0.5
WOJI	Wonogiri, Jawa	19.02	258	P	Pn	10 46 14.8	+4.0
PSA00	Pilbara Seismi	19.71	208	P	Pn	10 46 17.6	-1.4
ASAR	Alice Springs	19.73	169	P	Pn	10 46 21.1	+1.8
	comp=Z,1.5nm,0.3s,baz=348,slow=9.9,SNR=6.2						
CTA	Charters Tower	22.54	136	P	P	10 46 50.4	+2.4
	comp=Z,11nm,0.7s,baz=317,slow=12,SNR=5.1						
CTAO	Charters Tower	22.54	136	P	P	10 46 48.3	+0.3
DBJI	Dramaga	22.97	263	P	P	10 47 05.2	+13
GUMO	Guam	23.24	40	P	P	10 46 55.2	0.0
MYKOM	Kota Tinggi	26.53	283	P	P	10 47 24.8	-0.7
IPM	Ipoh	29.94	286	P	P	10 47 55.1	-0.8
CM31	Chiang Mai Arr	37.79	308	P	P	10 49 04.2	+0.2
CM31				IAmb	IAmb	10 49 05.1	
	comp=Z,9.4nm,0.6s						
CMAR	Chiang Mai Arr	37.79	308	P	P	10 49 04.2	+0.2
	comp=Z,7.7nm,0.8s,baz=140,slow=7.1,SNR=12						
CMAR	Chiang Mai Arr	37.79	308	P	P	10 49 04.1	+0.1
CHTO	Chiang Mai	37.98	308	P	P	10 49 05.9	+0.2
CHTO				IAmb	IAmb	10 49 06.6	
	comp=Z,14nm,0.8s						
MJAR	Matsushiro Arr	41.34	10	P	P	10 49 33.8	+0.4
	comp=Z,5.4nm,0.8s,baz=190,slow=8.9,SNR=6.0						
MAT	Matsushiro	41.34	10	P	P	10 49 33.0	-0.3
MJB9	Matsu-Tunnel	41.34	10	P	P	10 49 32.0	-1.3
JYT	Yasato	41.43	13	P	P	10 49 33.9	-0.1
KSAR	Wonju Array Be	41.50	358	P	P	10 49 35.7	+1.1
KSRS	Korea Array	41.51	358	P	P	10 49 35.4	+0.7
	comp=Z,4.9nm,0.7s,baz=175,slow=9.2,SNR=12						
KS19	Wonju Array Si	41.56	358	P	P	10 49 35.4	+0.3
JSD	Sado	42.80	10	P	P	10 49 45.9	+0.7
JSD				IAmb	IAmb	10 49 48.2	
	comp=Z,11nm,0.7s						
BJT	Baijiatuau	45.77	345	P	P	10 50 08.5	-0.4
BJT				IAmb	IAmb	10 51 29.1	
	comp=Z,37nm,2.0s						
LZH	Lanzhou	46.86	331	*e*P	P	10 50 21.3	+3.5
LZH				pP	pP	10 50 24.4	-2.7
LZH				pmax	pmax		
	comp=Z,26nm,1.6s						
SHL	Shillong	47.16	311	P	P	10 50 18.9	-1.5
SHL				IAmb	IAmb	10 50 22.2	
	comp=Z,12nm,0.9s						
USA0B	Ussuriysk Arra	48.26	2	P	P	10 50 27.7	-0.6
USA0B				IAmb	IAmb	10 50 32.1	
	comp=Z,12nm,0.8s						
USRK	Ussuriysk Ar.	48.26	2	P	P	10 50 29.3	+1.0
	comp=Z,6.9nm,0.6s,baz=189,slow=7.2,SNR=11						
USRK	Ussuriysk Ar.	48.26	2	P	P	10 50 28.7	+0.4
LSA	Lhasa	50.03	315	P	P	10 50 42.7	0.0
LSA				IAmb	IAmb	10 50 46.7	
	comp=Z,12nm,0.7s						
ODAN	Odare	51.26	310	*e*P	P	10 50 50.8	-1.0
	comp=Z,29nm,0.8s						
GTA	Gaotai	51.44	330	⇓P	P	10 50 52.7	0.0
GTA				pP	pP	10 51 00.8	-2.2
GTA				sP	pwP	10 51 04.3	-0.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RAMN	Ramite	51.92	309	*e*P	P	10 50 56.0	-0.7
	comp=Z,21nm,0.4s						
KLR	Kul'dur	53.28	2	P	P	10 51 06.5	+0.4
	comp=Z,4.7nm,0.8s,baz=256,slow=3.4,SNR=8.3						
KOLN	Koldanda	54.65	308	*e*P	P	10 51 15.8	-0.9
	comp=Z,60nm,0.9s						
DANN	Dangsing	54.80	309	*e*P	P	10 51 16.7	-1.2
	comp=Z,48nm,0.9s						
HYB	Hyderabad	54.88	295	*i* P	P	10 51 17.0	-1.3
PYUN	Piuthan	55.28	309	*e*P	P	10 51 20.7	-0.6
	comp=Z,73nm,1.0s						
ULN	Ulaanbaatar	55.57	342	P	P	10 51 22.8	-0.1
SONM	Songino Array	55.75	341	P	P	10 51 25.0	+0.8
	comp=Z,2.1nm,0.8s,baz=161,slow=8.1,SNR=3.9						
MK31	Makanchi Array	65.78	326	P	P	10 52 31.9	-0.5
MK31				IAmb	IAmb	10 52 32.9	
	comp=Z,7.1nm,0.7s						
MKAR	Makanchi Array	65.78	326	P	P	10 52 32.6	+0.2
	comp=Z,12nm,0.7s,baz=113,slow=7.6,SNR=18						
MKAR	Makanchi Array	65.78	326	P	P	10 52 31.9	-0.5
KSH	Kashi	65.81	317	P	P	10 52 32.3	-0.5
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAKZ	Makanchi	65.96	326	P	P	10 52 32.1	-1.4
MAKZ				IAmb	IAmb	10 52 36.0	
	comp=Z,8.6nm,0.8s						
KDJ	Kajisay	66.28	320	P	P	10 52 35.6	-0.3
KDJ				IAmb	IAmb	10 52 36.6	
	comp=Z,6.9nm,0.7s						
BOOM	Boomskoye usch	67.26	320	P	P	10 52 40.8	-1.3
BOOM				IAmb	IAmb	10 52 42.9	
	comp=Z,6.5nm,0.9s						
AAK	Ala-Archa	68.27	319	P	P	10 52 48.9	+0.5
	comp=Z,3.4nm,0.8s,baz=120,slow=6.7,SNR=4.0						
AAK	Ala-Archa	68.27	319	P	P	10 52 48.0	-0.5
AAK				IAmb	IAmb	10 53 12.5	
	comp=Z,9.1nm,1.2s						
KBL	Kabul	68.78	309	P	P	10 52 51.1	-0.8
KBL				IAmb	IAmb	10 53 11.1	
	comp=Z,5.7nm,0.8s						
ZAA0	Zalesovo Array	69.00	333	P	P	10 52 52.1	-0.4
ZAA0				IAmb	IAmb	10 52 57.2	
	comp=Z,10nm,1.1s						
ZALV	Zalesovo Beam	69.00	333	P	P	10 52 52.2	-0.3
	comp=Z,5.3nm,0.8s,baz=119,slow=5.2,SNR=6.7						
ZALV	Zalesovo Beam	69.00	333	P	P	10 52 51.9	-0.7
KURK	Kurchatov	70.03	328	P	P	10 52 58.9	0.0
KKAR	Karatay Array	71.09	318	P	P	10 53 05.2	-0.4
BRVK	Borovoye	75.66	328	P	P	10 53 32.4	+0.1
BRVK				IAmb	IAmb	10 53 33.2	
	comp=Z,14nm,0.9s						
NRIK	Noril'sk	78.83	346	P	P	10 53 51.0	+1.2
	comp=Z,6.4nm,0.9s,baz=119,slow=2.9,SNR=3.5						
NRIK	Noril'sk	78.83	346	IAmb	IAmb	10 53 53.2	
	comp=Z,14nm,1.1s						
ABKAR	Akbulak array	80.18	321	P	P	10 53 56.9	-0.7
RAYN	Ar Rayn	86.37	294	P	P	10 54 30.1	0.0
TXAR	Lajitas Array	123.73	57	PKP	PKiKP	11 00 46.2	+0.2
	comp=Z,0.8nm,1.0s,baz=321,slow=1.8,SNR=3.5						
TORD	Torodi Ar. Bea	127.94	283	PKP	PKiKP	11 00 54.8	+0.2
	comp=Z,1.8nm,0.7s,baz=69,slow=1.3,SNR=5.3						
CPUP	Villa Florida	148.86	168	PKPbc	PKiKP	11 01 36.5	-0.4
	comp=Z,5.4nm,0.9s,baz=193,slow=1.3,SNR=5.1						
LPAZ	La Paz	153.03	140	PKPbc	PKiKP	11 01 48.0	+1.4
	comp=Z,1.7nm,0.7s,baz=109,slow=2.7,SNR=2.9						

IDC 09 10:45:14.5±5.1**, 3°.93S**×**130°.14E, h0^{km}, mb4.0**/2**, mb1 4.1**/3**, mb1mx3.4**/36**, mbtmp4.0**/3**, ML3.9**/1**, Error ellipse: s-maj=486.5km s-min=34.1km az=72.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	19.96	170	P	P	10 49 48.4	0.0
	0.3nm,0.3s,baz=344,slow=10,SNR=3.9						
MKAR	Makanchi Array	65.76	326	P	P	10 56 01.6	+0.3
	1.0nm,0.6s,baz=121,slow=7.5,SNR=4.6						
ZALV	Zalesovo Beam	68.91	333	P	P	10 56 20.8	-0.3
	0.5nm,0.3s,baz=123,slow=7.6,SNR=2.2						

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*IDC **09** 10:46:07.4±1.0, 4°.23S×129°.28E, h0^{km}, mb4.2/8, mb1 4.4/11, mb1mx4.1/39, mbtmp4.3/11, ML3.8/3, Error ellipse: s-maj=37.0km s-min=20.7km az=82.0*

*NEIC **09** 10:46:09.7±1.8, 4°.13S±0°.07×129°.88E±0°.07, h25^{km}±5^{km}, mb4.5/28, Error ellipse: s-maj=11.1km s-min=8.9km az=147.0*

*DJA **09** 10:46:10.6±1.5, 4°S±9°×12°9E±°, h11^{km}±10^{km}, M4.3/6, MLv4.3/6*

ISC 09 10:46:10.7±0.5**, 4°.19S**±0°.06×**129°.69E**±0°.06**, h36^{km}, n58,** σ1^{s}**82**/58**, mb4.4**/17**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.13	317	P	Pn	10 46 26.9	-3.1
MSAI				S	Sn	10 46 39.8	-4.4
AAI	Ambon	1.57	288	P	Pn	10 46 33.2	-2.9
AAI				S	Sn	10 46 49.7	-5.5
FAKI	Fak Fak	2.84	64	P	Pn	10 46 59.6	+6.1
FAKI	Fak Fak	2.84	64	Pn	Pn	10 46 50.6	-2.9
SIJI	Sorong	3.65	26	Pn	Pn	10 47 06.6	+2.0
	16nm,0.3s,baz=301,slow=8.1,SNR=6.5						
LBMI	Labuha	4.15	328	P	Pn	10 47 10.3	-1.2
SANI	Sanana	4.26	300	P	Pn	10 47 11.4	-1.7
MMRI	Maumere	8.63	239	Pn	Pn	10 48 15.2	+2.2
TOLI2	Tolitoli	10.34	300	Pn	Pn	10 48 37.9	+1.3
KNRA	Kununurra	11.46	185	Pn	Pn	10 48 52.5	+0.7
JAGI	Jajag, Banyuwa	16.02	254	Pn	P	10 49 56.0	-0.5
JAGI				IAmb	IAmb	10 49 58.4	
	comp=Z,50nm,1.4s						
WB0	Warramunga Arr	16.15	164	Pn	Pn	10 49 55.4	+0.3
WB0				IAmb	IAmb	10 50 02.5	
	comp=Z,55nm,1.4s						
WRAB	Tennant Creek	16.30	164	Pn	Pn	10 49 57.2	+0.3
WRA	Warramunga Arr	16.30	164	Pn	Pn	10 49 56.8	-0.2
	comp=Z,0.1nm,0.3s,baz=348,slow=14,SNR=3.9						
WR0	Warramunga Arr	16.38	164	Pn	Pn	10 49 58.1	+0.2
WR0				IAmb	IAmb	10 50 05.8	
	comp=Z,25nm,1.1s						
COEN	Coen	16.46	127	Pn	Pn	10 49 58.0	-1.1
KKM	Kota Kinabalu	16.86	307	Pn	Pn	10 50 02.8	-1.4
KKM				IAmb	IAmb	10 50 12.3	
	comp=Z,34nm,1.1s						
MANU	Manus Island	17.77	84	P	Pn	10 50 11.8	-3.6
PMG	Port Moresby	18.10	108	P	Pn	10 50 17.1	-2.3
SBUM	Sibu	18.66	290	P	Pn	10 50 27.0	+0.7
PSA00	Pilbara Seismi	19.75	208	P	Pn	10 50 38.6	-0.6
PSA00	Pilbara Seismi	19.75	208	P	Pn	10 50 39.0	-0.3
PSA00				IAmb	IAmb	10 50 40.3	
	comp=Z,43nm,1.3s						
AS31	Alice Springs	19.79	169	P	P	10 50 38.1	+0.1
ASAR	Alice Springs	19.79	169	P	Pn	10 50 41.6	+1.8
	comp=Z,0.6nm,0.3s,baz=347,slow=11,SNR=15						
ASAR	Alice Springs	19.79	169	P	P	10 50 38.7	+0.7
FORT	Forrest	26.50	183	P	P	10 51 44.6	-0.2
IPM	Ipoh	29.91	286	P	P	10 52 15.7	+0.2
IPM				IAmb	IAmb	10 52 16.9	
	comp=Z,16nm,1.1s						
CMAR	Chiang Mai Arr	37.74	308	P	P	10 53 23.7	+0.3
	comp=Z,1.4nm,0.3s,baz=134,slow=8.2,SNR=7.3						
CMAR	Chiang Mai Arr	37.74	308	P	P	10 53 24.6	+1.2
CHTO	Chiang Mai	37.94	308	P	P	10 53 25.1	+0.1
CHTO				IAmb	IAmb	10 53 34.5	
	comp=Z,5.4nm,1.1s						
SANVU	Saraoutou	38.54	110	P	P	10 53 28.0	-2.2
MAT	Matsushiro	41.29	10	P	P	10 53 53.4	+0.7
MJAR	Matsushiro Arr	41.29	10	P	P	10 53 55.6	+3.0
	comp=Z,3.8nm,0.8s,baz=186,slow=8.9,SNR=7.2						
MJAR	Matsushiro Arr	41.29	10	P	P	10 53 54.2	+1.5
MJAR				IAmb	IAmb	10 53 58.9	
	comp=Z,4.9nm,1.0s						
KSAR	Wonju Array Be	41.45	358	P	P	10 53 52.5	-1.4
KSRS	Korea Array	41.46	358	P	P	10 53 57.1	+3.2
	comp=Z,1.5nm,0.7s,baz=172,slow=9.4,SNR=7.1						
USRK	Ussuriysk Ar.	48.21	2	P	P	10 54 50.6	+3.0
	comp=Z,3.2nm,0.8s,baz=185,slow=6.4,SNR=5.9						
USRK	Ussuriysk Ar.	48.21	2	P	P	10 54 47.9	+0.3
KLR	Kul'dur	53.23	2	P	P	10 55 29.2	+3.8
	comp=Z,2.3nm,0.9s,baz=228,slow=3.6,SNR=3.5						
SONM	Songino Array	55.69	341	P	P	10 55 45.7	+2.1
	comp=Z,1.0nm,0.7s,baz=169,slow=9.1,SNR=3.2						
KNTN	Kanton	58.49	91	P	P	10 56 01.2	-2.6
MK31	Makanchi Array	65.72	326	P	P	10 56 52.2	+0.4
MK31				IAmb	IAmb	10 56 55.6	
	comp=Z,2.8nm,0.8s						
MKAR	Makanchi Array	65.72	326	P	P	10 56 51.9	+0.1
	comp=Z,3.1nm,0.5s,baz=115,slow=8.1,SNR=12						
MKAR	Makanchi Array	65.72	326	P	P	10 56 51.4	-0.4
MAKZ	Makanchi	65.91	326	P	P	10 56 53.4	+0.4
MAKZ				IAmb	IAmb	10 57 01.6	
	comp=Z,7.1nm,1.2s						
YAK	Yakutsk	66.03	360	P	P	10 56 54.6	+1.3
KBL	Kabul	68.74	309	P	P	10 57 11.8	+0.4
KBL				IAmb	IAmb	10 57 13.0	
	comp=Z,3.2nm,0.8s						
ZAA0	Zalesovo Array	68.94	333	P	P	10 57 13.2	+1.3
ZAA0				IAmb	IAmb	10 57 16.0	
	comp=Z,5.5nm,0.9s						
ZALV	Zalesovo Beam	68.94	333	P	P	10 57 11.7	-0.2
	comp=Z,3.0nm,0.7s,baz=120,slow=5.6,SNR=8.1						
ZALV	Zalesovo Beam	68.94	333	P	P	10 57 12.5	+0.6
KURK	Kurchatov	69.97	328	P	P	10 57 18.1	-0.3
BRVK	Borovoye	75.61	328	P	P	10 57 52.9	+1.1
BRVK				IAmb	IAmb	10 57 56.5	
	comp=Z,10nm,1.1s						
GEYT	Alibeck	78.18	310	P	P	10 58 06.4	-0.3
ABKAR	Akbulak array	80.13	321	P	P	10 58 18.1	+1.0
QSPA	South Pole Qui	85.77	180	P	P	10 58 46.5	+0.4
QSPA				IAmb	IAmb	10 58 56.8	
	comp=Z,6.0nm,1.3s						
RAYN	Ar Rayn	86.34	294	P	P	10 58 50.7	+1.0
RAYN				IAmb	IAmb	10 58 58.5	
	comp=Z,6.0nm,0.9s						
Q19K	Cape Douglas,	86.71	30	P	P	10 58 50.2	-0.5
CPUP	Villa Florida	148.91	168	PKPbc	PKiKP	11 05 57.1	+0.3
	comp=Z,0.6nm,0.3s,baz=121,slow=5.9,SNR=3.0						

IDC 09 10:48:20.0±2.6**, 3°.94S**×**129°.33E, h0^{km}, mb3.7**/2**, mb1 4.0**/3**, mb1mx3.4**/42**, mbtmp3.8**/3**, ML3.5**/1**, Error ellipse: s-maj=178.8km s-min=32.2km az=69.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.64	163	Pn	Pn	10 52 13.9	-0.9
	0.2nm,0.3s,baz=346,slow=13,SNR=2.1						
ASAR	Alice Springs	20.10	168	P	P	10 52 56.0	+0.4
	4.6nm,0.7s,baz=350,slow=11,SNR=3.4						
MKAR	Makanchi Array	65.32	326	P	P	10 59 04.0	0.0
	0.7nm,0.6s,baz=118,slow=6.9,SNR=1.9						

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*IDC **09** 10:49:49.3±1.3, 4°.13S×129°.68E, h0^{km}, mb3.9/4, mb1 4.2/6, mb1mx3.7/47, mbtmp4.0/6, ML3.8/2, Error ellipse: s-maj=59.4km s-min=24.4km az=74.0*

ISC 09 10:49:53.9±1.1**, 4°.2S**±0°.2×**129°.8E**±0°.4**, h36^{km}, n7,** σ0^{s}**56**/7**, mb4.0**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.26	164	Pn	Pn	10 53 39.1	-0.6
	0.2nm,0.3s,baz=351,slow=12,SNR=1.7						
ASAR	Alice Springs	19.75	169	P	Pn	10 54 23.1	+0.6
	1.3nm,0.3s,baz=345,slow=10,SNR=7.7						
CMAR	Chiang Mai Arr	37.80	308	P	P	10 57 07.3	+0.2
	1.0nm,0.6s,baz=119,slow=7.5,SNR=3.5						
KSRS	Korea Array	41.49	358	P	P	10 57 37.5	0.0
	0.6nm,0.5s,baz=172,slow=9.7,SNR=2.7						
USRK	Ussuriysk Ar.	48.24	2	P	P	10 58 31.4	+0.3
	2.1nm,0.6s,baz=206,slow=6.5,SNR=1.7						
MKAR	Makanchi Array	65.78	326	P	P	11 00 34.8	-0.6
	0.9nm,0.5s,baz=118,slow=8.0,SNR=4.9						
TORD	Torodi Ar. Bea	127.98	283	PKP	PKPdf	11 08 57.2	+0.1
	1.2nm,0.8s,baz=80,slow=1.5,SNR=2.5						

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*IDC **09** 10:50:08.9±0.6, 2°.86S×129°.38E, h0^{km}, mb4.4/13, mb1 4.6/17, mb1mx4.3/50, mbtmp4.5/17, ML4.6/4, Error ellipse: s-maj=20.8km s-min=13.8km az=67.0*

*NEIC **09** 10:50:13.0±1.8, 2°.77S±0°.07×129°.47E±0°.09, h35^{km}±7^{km}, mb4.9/43, Error ellipse: s-maj=12.9km s-min=9.3km az=66.0*

*DJA **09** 10:50:13.0±0.2, 3°S±2°×12°9E±°, h10^{km}, M4.9/23, mb4.9/23, MLv4.9/15*

ISC 09 10:50:12.5±0.3**, 2°.82S**±0°.05×**129°.46E**±0°.05**, h28^{km}, n135,** σ1^{s}**58**/126**, mb4.9**/44**, 2C, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.74	225	P	Pn	10 50 28.9	+1.7
AAI	Ambon	1.53	236	P	Pb	10 50 42.0	+1.8
SIJI	Sorong	2.65	43	Pn	Pn	10 50 55.0	+1.6
	308nm,0.3s,baz=249,slow=13,SNR=50						
SIJI				Sn	Sn	10 51 25.2	+0.6
	143nm,0.3s,baz=70,slow=22,SNR=5.1						
SWI	Sorong	2.65	43	P	Pn	10 50 55.0	+1.6
FAKI	Fak Fak	2.79	92	P	Pn	10 50 57.1	+1.7
LBMI	Labuha	2.92	318	P	Pn	10 50 57.7	+0.6
SANI	Sanana	3.55	282	P	Pn	10 51 07.2	+1.5
TNTI	Ternate	4.13	330	P	Pn	10 51 13.1	-0.7
TNTI	Ternate	4.13	330		Pn	10 51 12.1	-1.7
KMSI	Cibinong	6.43	302	P	Pn	10 51 45.4	+0.1
	1.4nm176nm,0.5s						
SRPI	Serui, Papua	6.84	82	P	Pn	10 51 52.2	+1.1
	1.2nm124nm,0.6s						
APSI	Ampana	8.03	283	P	Pn	10 52 07.6	+0.2
	1.0nm274nm,0.9s						
MRSI	Marisa	8.19	293	P	Pn	10 52 08.7	-0.9
	208nm,0.7s						
SOEI	Soe	8.61	217	P	Pn	10 52 32.9	+17
SOEI	Soe	8.61	217	Pn	Pn	10 52 14.5	-0.9
SMPI	Sarmi	9.28	85	P	Pn	10 52 25.8	+1.2
	33nm,1.3s						
BATI	Baumata	9.32	218	Pn	Pn	10 52 24.0	-1.2
	5.6nm,0.3s,baz=256,slow=4.2,SNR=1.9						
BATI	Baumata	9.32	218	P	Pn	10 52 30.2	+5.0
	56nm,0.9s						
BNSI	Bone	9.46	260	P	Pn	10 52 38.2	+11
TOLI2	Tolitoli	9.51	294	Pn	Pn	10 52 27.4	-0.3
BSSI	Bau Bau, Buton	9.53	249	P	Pn	10 52 30.7	+2.8
	166nm,0.9s						
TTSI	Tana Toraja	9.63	268	P	Pn	10 52 28.8	-0.5
	46nm,2.2s						
BKSI	Bulukumba	9.64	255	P	Pn	10 52 33.9	+4.5
	72nm,2.5s						
EDFI	Ende, Flores	9.71	232	P	Pn	10 52 36.0	+5.4
	29nm,1.1s						
SPSI	Sidrap Palu	9.74	263	P	Pn	10 52 34.1	+3.3
	56nm,1.2s						
KAPI	Kappang	9.92	257	Pn	Pn	10 52 38.0	+4.6
	1.3nm,0.3s,baz=97,slow=6.8,SNR=12						
KAPI	Kappang	9.92	257	Pn	Pn	10 52 32.6	-0.8
MPSI	Mapaga	10.05	288	P	Pn	10 52 37.0	+1.8
	42nm,0.7s						
MTN	Manton Dam	10.10	171		Pn	10 52 36.1	+0.3
GENI	Genyem	10.70	89	P	Pn	10 52 47.2	+3.1
	104nm,1.0s						
JAY	Jayapura	11.24	89	Pn	Pn	10 52 52.6	+1.1
	1.2nm,0.3s,baz=244,slow=5.2,SNR=6.8						
JAY	Jayapura	11.24	89	P	Pn	10 52 56.4	+4.9
	19nm,0.8s						
BASI	Baing, Sumba	11.48	230	P	Pn	10 53 11.6	+17
WBSI	Waikabubak, Su	12.08	235	P	P	10 53 16.6	+1.1
KNRA	Kununurra	12.80	183	P	Pn	10 53 13.5	+0.8
	baz=13,SNR=4.9						
KNRA	Kununurra	12.80	183	Pn	Pn	10 53 13.1	+0.5
MYLDM	Lahad Datu	13.52	306	Pn	Pn	10 53 22.0	-0.6
TWSI	Taliwang, Sumb	13.82	244	P	P	10 53 31.4	-3.4
	31nm,1.2s						
BBKI	Banjar Baru	14.61	267	P	P	10 53 46.6	+3.1
SRBI	Singaraja	15.11	249	P	P	10 53 49.4	+0.3
	58nm,1.0s						
KKM	Kota Kinabalu	15.88	304		P	10 53 56.4	-1.4

KMMI	Kalianget	15.99	254	P	P	10 54 01.7	+2.8
	94nm,2.7s						
JAGI	Jajag, Banyuwa	16.23	249	P	P	10 54 00.9	-0.6
	65nm,0.9s						
JAGI	Jajag, Banyuwa	16.23	249	P	Pn	10 53 59.6	+1.0
JAGI				IAmb	IAmb	10 54 01.2	
	comp=Z,54nm,0.9s						
BLJI	Banyuglugur	16.53	252	P	P	10 54 07.8	+2.9
	comp=Z,57nm,0.7s						
GMJI	Gumukmas	16.83	251	P	P	10 54 09.5	+1.3
	comp=Z,48nm,1.1s						
COEN	Coen	17.50	130		Pn	10 54 14.5	-0.1
WB0	Warramunga Arr	17.52	164		Pn	10 54 15.3	+0.4
WRAB	Tennant Creek	17.67	165	P	Pn	10 54 15.5	-1.3
WRAB				IAmb	IAmb	10 54 18.6	
	comp=Z,59nm,1.3s						
WRA	Warramunga Arr	17.68	165	P	Pn	10 54 15.9	-1.0
	comp=Z,2.5nm,0.3s,baz=342,slow=12,SNR=15						
WB2	Warramunga Arr	17.68	165		Pn	10 54 15.6	-1.3
WB2				IAmb	IAmb	10 54 18.6	
	comp=Z,61nm,1.3s						
WR0	Warramunga Arr	17.75	164		Pn	10 54 18.2	+0.5
SBUM	Sibu	18.01	287		P	10 54 20.9	-0.3
STKI	Sintang	18.20	279	P	P	10 54 35.2	+12
PMG	Port Moresby	18.77	111	P	P	10 54 27.5	-2.1
WOJI	Wonogiri, Jawa	19.11	254	P	Pn	10 54 36.3	+2.0
	comp=Z,99nm,1.1s						
SMRI	Semarang	19.40	257	P	Pn	10 54 39.1	+1.2
	comp=Z,154nm,0.8s						
SMRI	Semarang	19.40	257	P	P	10 54 36.2	-0.4
SMRI				IAmb	IAmb	10 54 39.9	
	comp=Z,128nm,0.9s						
QIS	Mount Isa	20.22	151	P	P	10 54 46.0	+0.5
	baz=20,SNR=7.8						
PSA00	Pilbara Seismi	20.86	206	P	P	10 54 50.3	-2.0
AS31	Alice Springs	21.17	169	P	P	10 54 55.0	-0.8
AS31				IAmb	IAmb	10 54 57.4	
	comp=Z,23nm,0.8s						
ASAR	Alice Springs	21.17	169	P	P	10 54 55.3	-0.5
	comp=Z,66nm,0.8s,baz=347,slow=9.7,SNR=39						
ASAR	Alice Springs	21.17	169	P	P	10 54 54.3	-1.4
WRKA	Warakurna	22.12	183	P	P	10 55 05.0	-1.0
	baz=22,SNR=6.8						
PPBI	Pangkal Pinang	23.31	271	P	P	10 55 20.8	+2.3
CTA	Charters Tower	23.74	138	P	P	10 55 22.4	-0.2
	comp=Z,13nm,0.8s,baz=320,slow=12,SNR=5.6						
CTAO	Charters Tower	23.74	138	P	P	10 55 22.0	-0.6
CTAO				IAmb	IAmb	10 55 25.7	
	comp=Z,25nm,1.0s						
MEEK	Meekatharra	25.87	203	P	P	10 55 42.0	0.0
	baz=26,SNR=5.5						
QLP	Quilpie	27.55	150	P	P	10 56 00.4	+3.2
	baz=28,SNR=3.3						
FORT	Forrest	27.84	183	P	P	10 55 58.5	-1.2
FORT				IAmb	IAmb	10 56 25.0	
	comp=Z,22nm,0.8s						
MORW	Morawa	29.06	205	P	P	10 56 08.3	-2.2
MORW				IAmb	IAmb	10 56 27.7	
	comp=Z,22nm,1.4s						
IPM	Ipoh	29.32	284	P	P	10 56 12.7	-0.4
IPM				IAmb	IAmb	10 56 16.1	
	comp=Z,15nm,0.7s						
KULM	Kulim	29.88	286	P	P	10 56 15.6	-2.4
BBOO	Buckleboo	30.47	169	P	P	10 56 20.8	-2.2
PSI	Prapat	31.02	280	P	P	10 56 29.0	+0.7
	comp=Z,9.9nm,0.7s,baz=93,slow=5.8,SNR=9.4						
STKA	Stephens Creek	31.08	160	P	P	10 56 29.1	+0.6
	comp=Z,3.2nm,0.3s,baz=337,slow=16,SNR=4.3						
STKA	Stephens Creek	31.08	160	P	P	10 56 28.4	0.0
GSI	Gunungsitoli	32.13	277	P	P	10 56 35.1	-2.8
GSI				IAmb	IAmb	10 56 42.7	
	comp=Z,40nm,1.4s						
JNU	Nakatsue	35.77	2	P	P	10 57 07.7	-1.6
JNU				IAmb	IAmb	10 57 08.5	
	comp=Z,23nm,0.9s						
NJ2	Nanjing	36.11	345	*e*P	P	10 57 14.2	+2.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
GYA	Guiyang	36.50	324	⇑P	P	10 57 19.1	+3.3
GYA				pmax	pmax		
	comp=Z,12nm,0.8s						
CMAR	Chiang Mai Arr	36.73	306	P	P	10 57 17.6	-0.2
	comp=Z,4.2nm,0.8s,baz=134,slow=7.0,SNR=13						
CMAR	Chiang Mai Arr	36.73	306	P	P	10 57 16.9	-0.8
CHTO	Chiang Mai	36.92	307	P	P	10 57 17.0	-2.3
CHTO				IAmb	IAmb	10 57 21.9	
	comp=Z,9.4nm,0.7s						
JHJ2	Mitsune	37.05	15	P	P	10 57 17.2	-3.0
KMI	Kunming	37.99	319	⇑P	P	10 57 31.8	+3.3
KMI				pP	sP	10 57 43.8	+3.5
KMI				pmax	pmax		
	comp=Z,13nm,0.8s						
MAT	Matsushiro	40.00	11	P	P	10 57 44.9	0.0
KSRS	Korea Array	40.09	358	P	P	10 57 45.9	+0.2
	comp=Z,0.6nm,0.6s,baz=175,slow=11,SNR=2.3						
LZH	Lanzhou	45.50	331	*e*P	P	10 58 35.9	+6.1
LZH				pP	sP	10 58 46.2	+4.5
LZH				sP	pP	10 58 52.9	+15
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
SHL	Shillong	46.05	310	P	P	10 58 31.7	-2.6
ERM	Erimo	46.33	14	P	P	10 58 34.4	-1.5
HHC	Hu-ho-hao-te	46.43	341	*e*P	P	10 58 39.4	+2.4
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,44μm,7.8s						
LSA	Lhasa	48.86	314	P	P	10 58 56.1	-0.4
LSA				IAmb	IAmb	10 58 59.0	
	comp=Z,8.4nm,0.7s						
GTA	Gaotai	50.09	330	*e*P	P	10 59 06.5	+1.3
GTA				pP	pP	10 59 13.3	-0.3
GTA				sP	sP	10 59 16.2	-1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ODAN	Odare	50.17	309	*e*P	P	10 59 06.8	+0.5
	comp=Z,29nm,0.7s						
RAMN	Ramite	50.83	308	*e*P	P	10 59 12.2	+0.9
	comp=Z,32nm,0.5s						
GUN	Gumba	51.86	309	*e*P	P	10 59 19.4	+0.4
	comp=Z,37nm,0.7s						
PKI	Pulchoki	52.06	309	*e*P	P	10 59 20.7	+0.2
DMN	Daman	52.32	308	*e*P	P	10 59 22.4	0.0
	comp=Z,35nm,0.9s						
KOLN	Koldanda	53.57	308	*e*P	P	10 59 32.0	+0.4
	comp=Z,72nm,0.8s						
DANN	Dangsing	53.71	309	*e*P	P	10 59 33.0	+0.3
	comp=Z,69nm,0.8s						
PYZ	Puysegur Point	54.00	149	P	P	10 59 33.7	-0.4
HYB	Hyderabad	54.07	294	*i* P	P	10 59 35.0	-0.1
PYUN	Piuthan	54.20	308	*e*P	P	10 59 36.9	+0.7
	comp=Z,55nm,0.9s						
SONM	Songino Array	54.33	341	P	P	10 59 37.2	+0.5
	comp=Z,1.7nm,1.1s,baz=153,slow=6.2,SNR=3.5						
WHZ	Wether Hill Ro	54.48	148	P	P	10 59 36.7	-1.0
WHZ				IAmb	IAmb	10 59 40.3	
	comp=Z,25nm,1.0s						
LBZ	Lake Benmore	54.78	145	P	P	10 59 41.9	+2.0
RPZ	Rata Peaks	54.88	144	P	P	10 59 42.9	+2.3
RPZ				IAmb	IAmb	10 59 43.1	
	comp=Z,16nm,0.8s						
OXZ	Oxford	55.24	143	P	P	10 59 45.4	+2.1
OXZ				IAmb	IAmb	11 00 09.6	
	comp=Z,25nm,1.1s						
URZ	Urewera	55.96	135	P	P	10 59 49.6	+1.2
	comp=Z,7.1nm,0.6s,baz=307,slow=20,SNR=2.6						
AIS	Amsterdam Isla	58.79	227	P	P	11 00 07.6	-0.8
WMQ	Urumqi	59.63	326	*e*P	P	11 00 17.7	+3.5
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
PETK	Petropavlovsk-	60.56	19	P	P	11 00 22.3	+2.0
	comp=Z,4.0nm,0.8s,baz=186,slow=6.9,SNR=5.2						
PETK	Petropavlovsk-	60.56	19	P	P	11 00 18.4	-1.9
MK31	Makanchi Array	64.46	326	P	P	11 00 45.6	-1.0
MK31				IAmb	IAmb	11 01 15.9	
	comp=Z,5.5nm,1.0s						
MKAR	Makanchi Array	64.46	326	P	P	11 00 47.7	+1.1
	comp=Z,4.3nm,0.8s,baz=119,slow=7.6,SNR=8.7						
MKAR	Makanchi Array	64.46	326	P	P	11 00 44.7	-1.9
MAKZ	Makanchi	64.65	326	P	P	11 00 46.3	-1.5
MAKZ				IAmb	IAmb	11 01 10.1	
	comp=Z,21nm,1.5s						
KDJ	Kajisay	65.04	320	P	P	11 00 50.7	+0.1
KDJ				IAmb	IAmb	11 01 16.6	
	comp=Z,24nm,1.1s						
BOOM	Boomskoye usch	66.02	319	P	P	11 00 55.6	-1.3
FRU1	Bishkek	67.02	319	P	P	11 01 02.2	-1.1
AAK	Ala-Archa	67.03	319	P	P	11 01 02.2	-1.2
KBL	Kabul	67.69	309	P	P	11 01 04.5	-3.3
KBL				IAmb	IAmb	11 01 08.3	
	comp=Z,15nm,1.1s						
AMKA	Amchitka	68.56	31	P	P	11 01 10.8	-1.7
NRIK	Noril'sk	77.40	346	P	P	11 02 05.0	+0.4
	comp=Z,3.9nm,0.6s,baz=115,slow=6.5,SNR=6.3						
ABKAR	Akbulak array	78.92	321	P	P	11 02 12.9	-0.6
ABKAR				IAmb	IAmb	11 02 19.0	
	comp=Z,6.2nm,0.8s						
RAYN	Ar Rayn	85.57	294	P	P	11 02 47.1	-1.8
RAYN				IAmb	IAmb	11 02 51.0	
	comp=Z,13nm,1.0s						
QSPA	South Pole Qui	87.13	180	P	P	11 02 56.0	+0.2
	comp=Z,4.5nm,1.0s,baz=334,slow=7.0,SNR=3.7						
QSPA	South Pole Qui	87.13	180	P	P	11 02 55.5	-0.2
QSPA				IAmb	IAmb	11 02 56.4	
	comp=Z,8.5nm,1.1s						
ILAR	Eielson Array	89.82	25	P	P	11 03 08.8	+0.5
	comp=Z,0.4nm,0.6s,baz=229,slow=5.0,SNR=6.4						
ILAR	Eielson Array	89.82	25	P	P	11 03 06.7	-1.6
TORD	Torodi Ar. Bea	127.36	284	PKP	PKPdf	11 09 15.9	+0.2
	comp=Z,1.7nm,0.9s,baz=38,slow=2.5,SNR=3.6						
PLCA	Paso Flores	132.96	159	PKP	PKiKP	11 09 28.7	+1.7
	comp=Z,1.6nm,0.7s,baz=49,slow=2.7,SNR=4.9						
CPUP	Villa Florida	150.29	168	PKPbc	PKiKP	11 10 03.3	+0.6
	comp=Z,9.0nm,0.8s,baz=203,slow=1.3,SNR=12						
LPAZ	La Paz	154.26	138	PKPbc	PKiKP	11 10 12.8	+0.8
	comp=Z,2.2nm,0.8s,baz=312,slow=3.2,SNR=6.1						

IDC 09 10:52:29.1±3.3, 4°.28S×128°.22E, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.5/50, mbtmp3.9/3, Error ellipse: s-maj=354.7km s-min=30.1km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.67	160	Pn	Pn	10 56 24.4	+0.1
	baz=336,slow=14,SNR=1.6						
ASAR	Alice Springs	20.04	165	P	P	10 57 03.9	0.0
	4.7nm,0.8s,baz=349,slow=10.0,SNR=2.2						
MKAR	Makanchi Array	65.00	327	P	P	11 03 11.0	0.0
	0.5nm,0.3s,baz=116,slow=7.7,SNR=6.9						

IDC 09 10:53:07.6±2.7, 4°.36S×128°.58E, h0km, mb4.3/1, mb1 4.3/3, mb1mx3.6/51, mbtmp4.2/3, ML3.8/2, Error ellipse: s-maj=256.8km s-min=29.3km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.48	161	Pn	Pn	10 57 01.1	+0.8
	0.2nm,0.3s,baz=334,slow=15,SNR=1.8						
ASAR	Alice Springs	19.87	166	P	P	10 57 40.2	-0.4
	0.6nm,0.3s,baz=350,slow=9.9,SNR=2.7						
MKAR	Makanchi Array	65.25	327	P	P	11 03 51.2	0.0
	1.4nm,0.4s,baz=115,slow=7.4,SNR=14						

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*IDC **09** 10:53:20.9±0.7, 4°.32S×129°.41E, h0km, mb4.4/10, mb1 4.6/13, mb1mx4.2/53, mbtmp4.5/13, ML4.2/3, Error ellipse: s-maj=35.7km s-min=15.6km az=69.0*

*NEIC **09** 10:53:22.3±2.0, 4°.26S±0°.06×129°.53E±0°.05, h10km±1km, mb4.6/41, Error ellipse: s-maj=10.0km s-min=7.6km az=184.0*

ISC 09 10:53:25.1±0.4, 4°.27S±0°.06×129°.55E±0°.07, h35km, n74, σ1s.04/74, mb4.6/25, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	3.01	64	Pn	Pn	10 54 10.9	+0.5
SIJI	Sorong	3.79	27	Pn	Pn	10 54 22.7	+1.6
	21nm,0.3s,baz=172,slow=21,SNR=4.5						
SAUI	Saumlaki	4.08	155	Pn	Pn	10 54 26.0	+0.9
SOEI	Soe	7.56	224	Pn	Pn	10 55 13.7	+0.6
MMRI	Maumere	8.46	239	Pn	Pn	10 55 25.5	+0.2
MTN	Manton Dam	8.67	170	Pn	Pn	10 55 28.9	+0.8
KAPI	Kappang	9.79	265	Pn	Pn	10 55 45.3	+1.7
	0.4nm,0.3s,baz=110,slow=16,SNR=1.4						
TOLI2	Tolitoli	10.26	301	Pn	Pn	10 55 49.5	-0.5
KNRA	Kununurra	11.37	184	Pn	Pn	10 56 05.7	+0.5
MYLDM	Lahad Datu	14.48	310	Pn	Pn	10 56 47.1	-0.6
JAGI	Jajag, Banyuwa	15.86	254	Pn	Pn	10 57 06.8	+0.9
JAGI				IAmb	IAmb	10 57 11.3	
	comp=Z,30nm,1.1s						
WB0	Warramunga Arr	16.12	163	Pn	Pn	10 57 08.3	-0.9
WRAB	Tennant Creek	16.26	164	Pn	Pn	10 57 10.8	-0.2
WRA	Warramunga Arr	16.27	164	Pn	Pn	10 57 09.3	-1.8
	comp=Z,0.6nm,0.3s,baz=350,slow=13,SNR=5.6						
WB2	Warramunga Arr	16.27	164	Pn	Pn	10 57 09.3	-1.8
WR0	Warramunga Arr	16.34	163	Pn	Pn	10 57 12.4	+0.4
WR0				IAmb	IAmb	10 57 16.5	
	comp=Z,21nm,0.7s						
COEN	Coen	16.54	127	Pn	Pn	10 57 14.5	0.0
PMG	Port Moresby	18.21	107	P	P	10 57 34.5	-0.8
SBUM	Sibu	18.55	291	P	P	10 57 37.8	-1.3
PSA00	Pilbara Seismi	19.61	208	P	P	10 57 51.2	+0.5
PSA00				IAmb	IAmb	10 57 54.6	
	comp=Z,36nm,0.8s						
AS31	Alice Springs	19.74	168	P	Pn	10 57 53.3	-0.5
ASAR	Alice Springs	19.74	168	P	Pn	10 57 53.7	-0.1
	comp=Z,1.7nm,0.3s,baz=350,slow=12,SNR=9.4						
CTA	Charters Tower	22.63	135	P	P	10 58 24.7	+1.4
	comp=Z,11nm,0.6s,baz=316,slow=14,SNR=13						
CTAO	Charters Tower	22.63	135	P	P	10 58 23.2	-0.1
CTAO				IAmb	IAmb	10 58 25.9	
	comp=Z,18nm,0.7s						
MYKOM	Kota Tinggi	26.37	283	P	P	10 58 58.2	-0.2
MYKOM				IAmb	IAmb	10 59 16.6	
	comp=Z,9.1nm,0.7s						
FORT	Forrest	26.41	183	P	P	10 58 57.1	-1.5
FORT				IAmb	IAmb	10 59 02.2	
	comp=Z,17nm,0.8s						
BBOO	Buckleboo	29.05	169	P	P	10 59 23.0	+0.9
BBOO				IAmb	IAmb	10 59 28.8	
	comp=Z,14nm,1.1s						
EIDS	Eidsvold	29.46	138	P	P	10 59 25.3	-0.6
STKA	Stephens Creek	29.71	159	P	P	10 59 26.5	-1.5
IPM	Ipoh	29.79	287	P	P	10 59 28.9	0.0
TOO	Toolangi	36.22	158	P	P	11 00 23.2	-1.6
TOO				IAmb	IAmb	11 00 40.4	
	comp=Z,21nm,1.5s						
JNU	Nakatsue	37.20	2	P	P	11 00 31.6	-1.6
JNU				IAmb	IAmb	11 00 31.9	
	comp=Z,11nm,0.7s						
CM31	Chiang Mai Arr	37.67	308	P	P	11 00 36.5	-0.9
CM31				IAmb	IAmb	11 00 48.8	
	comp=Z,9.8nm,1.0s						
CMAR	Chiang Mai Arr	37.67	308	P	P	11 00 38.8	+1.4
	comp=Z,2.6nm,0.7s,baz=138,slow=7.9,SNR=7.2						
CMAR	Chiang Mai Arr	37.67	308	P	P	11 00 36.2	-1.2
CHTO	Chiang Mai	37.87	308	P	P	11 00 35.4	-3.7
CHTO				IAmb	IAmb	11 00 53.1	
	comp=Z,11nm,1.1s						
MAJO	Matsushiro	41.40	11	P	P	11 01 07.6	-0.6
MAJO				IAmb	IAmb	11 01 11.9	
	comp=Z,8.7nm,0.8s						
MAT	Matsushiro	41.40	11	P	P	11 01 07.2	-1.0
MJAR	Matsushiro Arr	41.40	11	P	P	11 01 08.6	+0.4
MJAR				IAmb	IAmb	11 01 23.1	
	comp=Z,9.8nm,1.3s						
KSAR	Wonju Array Be	41.52	358	P	P	11 01 07.4	-1.7
KSRS	Korea Array	41.53	358	P	P	11 01 10.8	+1.6
	comp=Z,2.9nm,0.7s,baz=172,slow=8.9,SNR=11						
KS19	Wonju Array Si	41.58	358	P	P	11 01 10.2	+0.5
KS19				IAmb	IAmb	11 01 29.2	
	comp=Z,17nm,1.1s						
TAU	Tasmania Unive	41.60	160	P	P	11 01 10.3	+0.6
INCN	Inchon	41.62	357	P	P	11 01 10.3	+0.3
USRK	Ussuriysk Ar.	48.29	2	P	P	11 02 03.8	+0.8
	comp=Z,4.1nm,0.7s,baz=221,slow=5.7,SNR=3.0						
MDJ	Mudanjiang	48.66	0	P	P	11 02 05.9	+0.2
MDJ				IAmb	IAmb	11 02 10.5	
	comp=Z,12nm,1.3s						
TUWZ	Tuamarina	54.23	140	P	P	11 02 48.4	+0.8
MCQ	Macquarie Isla	55.48	160	P	P	11 02 55.8	-0.5
SONM	Songino Array	55.72	341	P	P	11 03 00.6	+2.2
	comp=Z,4.9nm,1.1s,baz=155,slow=7.7,SNR=1.8						
KNTN	Kanton	58.63	91	P	P	11 03 18.4	-1.0
NIUE	Niue	60.79	109	P	P	11 03 32.7	-1.4
PEA0B	Petropavlovsk-	61.89	19	P	P	11 03 40.0	-0.9
PETK	Petropavlovsk-	61.89	19	P	P	11 03 41.1	+0.2
CASY	Casey	63.32	188	P	P	11 03 50.1	-0.1
MK31	Makanchi Array	65.71	326	P	P	11 04 05.8	-0.5
MK31				IAmb	IAmb	11 04 10.3	
	comp=Z,4.8nm,0.8s						
MKAR	Makanchi Array	65.71	326	P	P	11 04 07.2	+0.9
	comp=Z,7.4nm,0.7s,baz=115,slow=8.2,SNR=12						
MKAR	Makanchi Array	65.71	326	P	P	11 04 06.6	+0.3
MAKZ	Makanchi	65.89	326	P	P	11 04 07.2	-0.2
MAKZ				IAmb	IAmb	11 04 11.4	
	comp=Z,7.7nm,1.1s						
YAK	Yakutsk	66.11	0	P	P	11 04 08.8	+0.3
ZAA0	Zalesovo Array	68.95	334	P	P	11 04 26.8	+0.2
ZAA0				IAmb	IAmb	11 04 30.3	
	comp=Z,5.6nm,0.9s						
ZALV	Zalesovo Beam	68.95	334	P	P	11 04 26.9	+0.3
	comp=Z,4.7nm,0.9s,baz=117,slow=5.2,SNR=4.1						
ZALV	Zalesovo Beam	68.95	334	P	P	11 04 26.7	+0.1
KKAR	Karatay Array	71.00	318	P	P	11 04 39.0	-0.5
VNDA	Vanda	75.20	173	P	P	11 05 04.7	+1.1
SBA	Scott Base	76.09	172	P	P	11 05 09.2	+0.5
NRIK	Noril'sk	78.81	346	P	P	11 05 24.6	+0.5
	comp=Z,1.3nm,0.3s,baz=147,slow=9.3,SNR=2.2						
ABKAR	Akbulak array	80.10	321	P	P	11 05 31.5	0.0
ABKAR				IAmb	IAmb	11 05 32.6	
	comp=Z,4.4nm,0.8s						
AKTO	Aktyubinsk	81.65	322	P	P	11 05 40.1	+0.4
	comp=Z,4.3nm,0.9s,baz=134,slow=7.6,SNR=5.9						
QSPA	South Pole Qui	85.69	180	P	P	11 06 00.4	+0.1
	comp=Z,2.7nm,0.9s,baz=152,slow=0.7,SNR=6.5						
QSPA	South Pole Qui	85.69	180	P	P	11 06 01.6	+1.3
QSPA				IAmb	IAmb	11 06 07.4	
	comp=Z,10nm,1.5s						
RAYN	Ar Rayn	86.23	294	P	P	11 06 03.2	-0.6
TORD	Torodi Ar. Bea	127.79	283	PKP	PKiKP	11 12 29.0	+0.3
	comp=Z,1.3nm,0.8s,baz=52,slow=2.5,SNR=4.6						
CPUP	Villa Florida	148.87	168	PKPbc	PKiKP	11 13 10.9	-0.5
	comp=Z,4.7nm,0.9s,baz=198,slow=4.4,SNR=4.8						
LPAZ	La Paz	153.12	140	PKPbc	PKiKP	11 13 22.8	+1.7
	comp=Z,1.4nm,0.7s,baz=90,slow=3.0,SNR=3.8						

IDC 09 10:59:17.1±1.8, 4°.30S×129°.25E, h0km, mb4.0/1, mb1 4.0/4, mb1mx3.5/53, mbtmp3.9/4, ML3.5/3, Error ellipse: s-maj=62.7km s-min=28.9km az=83.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.96	31	Pn	Pn	11 00 18.8	-0.4
	4.0nm,0.3s,baz=307,slow=20,SNR=2.2						
WRA	Warramunga Arr	16.32	163	Pn	Pn	11 03 06.5	-1.3
	0.1nm,0.3s,baz=343,slow=13,SNR=2.0						
ASAR	Alice Springs	19.77	167	P	P	11 03 49.5	+0.6
	0.4nm,0.3s,baz=350,slow=11,SNR=4.9						
MKAR	Makanchi Array	65.58	327	P	P	11 10 02.9	+0.1
	1.3nm,0.8s,baz=111,slow=7.9,SNR=1.4						

IDC 09 11:00:06.2±1.8, 4°.14S×129°.36E, h0km, mb3.8/2, mb1 4.0/4, mb1mx3.4/52, mbtmp3.9/4, ML4.0/2, Error ellipse: s-maj=48.9km s-min=31.9km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.76	30	Pn	Pn	11 01 05.9	+0.3
	15nm,0.3s,baz=208,slow=16,SNR=7.2						
SIJI				Sn	Sn	11 01 46.5	-4.1
	5.5nm,0.3s,baz=224,slow=23,SNR=1.4						
ASAR	Alice Springs	19.91	168	P	P	11 04 39.7	+0.1
	0.3nm,0.3s,baz=341,slow=9.1,SNR=4.3						
CMAR	Chiang Mai Arr	37.45	308	P	P	11 07 22.2	+0.5
	0.6nm,0.3s,baz=140,slow=7.6,SNR=1.6						
MKAR	Makanchi Array	65.50	326	P	P	11 10 50.7	-0.7
	0.4nm,0.5s,baz=122,slow=7.6,SNR=1.1						

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*IDC **09** 11:00:44.4±2.2, 4°.08S×129°.78E, h0km, mb3.7/3, mb1 4.0/5, mb1mx3.5/52, mbtmp3.8/5, ML3.8/2, Error ellipse: s-maj=121.2km s-min=27.0km az=66.0*

*DJA **09** 11:00:58.2±1.6, 4°S±7°×12°9E±°, h21km±15km, M4.3/6, MLv4.3/6*

ISC 09 11:00:51.9±1.0, 4°.75S±0°.09×128°.89E±0°.09, h35km, n11, σ3s.20/10, mb3.8/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.39	2	P	Pn	11 01 18.4	+3.6
MSAI				S	Sn	11 01 29.7	-2.3
FAKI	Fak Fak	3.81	62	P	Pn	11 01 50.8	+2.7
SANI	Sanana	3.94	313	P	Pn	11 01 54.1	+4.1
LBMI	Labuha	4.31	341	P	Pn	11 02 00.9	+5.9
SIJI	Sorong	4.52	32	Sn	Sn	11 02 22.1	-27
	12nm,0.3s,baz=209,slow=7.5,SNR=4.4						
SWI	Sorong	4.52	32	P	Pn	11 02 01.5	+3.6
WRA	Warramunga Arr	16.01	161	Pn	Pn	11 04 34.4	-0.1
	0.2nm,0.3s,baz=347,slow=13,SNR=3.3						
ASAR	Alice Springs	19.42	166	P	Pn	11 05 18.1	+1.4
	0.6nm,0.3s,baz=345,slow=10,SNR=5.9						
CMAR	Chiang Mai Arr	37.46	309	P	P	11 08 02.6	+0.3
	0.6nm,0.4s,baz=136,slow=7.1,SNR=1.3						
MKAR	Makanchi Array	65.75	327	P	P	11 11 30.4	-2.9
	0.4nm,0.5s,baz=123,slow=7.8,SNR=1.9						
BVAR	Borovoye Array	75.58	328	P	P	11 12 30.5	-2.5
	0.8nm,0.8s,baz=174,slow=14,SNR=3.6						

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*IDC **09** 11:03:30.6±1.4, 7°.02N×126°.41E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.5/55, mbtmp3.9/4, Error ellipse: s-maj=32.1km s-min=10.7km az=12.0*

*MAN **09** 11:03:31.9, 6°.70N×126°.11E, h17km, mb4.6, ML3.5, MS3.4*

ISC 09 11:03:32.9±0.9, 6°.78N±0°.06×126°.05E±0°.06, h10km, n14, σ1s.57/13, mb3.9/4, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.55	301	Pg	Pn	11 03 46.2	-0.6
	331nm,0.3s,baz=250,slow=8.1,SNR=18						
DAV				Lg	Lg	11 03 58.4	
	340nm,0.3s,baz=96,slow=22,SNR=38						
DMPH	Davao City--Mi	0.62	299	⇑*e*P	Pb	11 03 46.2	+0.4
DMPH				*e*S	Sn	11 03 57.6	-0.1
KCP	Kidapawan	0.98	283	⇓*i*P	Pg	11 03 51.5	-0.4
KCP				*i* S	Sb	11 04 06.2	+1.1
GSPH	General Santos	1.30	238	*e*P	Pg	11 04 00.0	+2.2
BIPH	Bislig	1.42	12	⇓*i*P	Pg	11 04 01.3	+1.0
BIPH				*i* S	Sg	11 04 21.5	+2.7
BUKP	Musuan	1.47	318	⇑*e*P	Pg	11 04 07.9	+6.8
BUKP				*i* S	Sg	11 04 33.8	+14
PAGZ	Pagadian	2.85	292	⇑*e*P	Pn	11 04 17.1	-1.5
WRA	Warramunga Arr	27.78	163	P	P	11 09 23.2	+0.9
	1.5nm,0.8s,baz=344,slow=10,SNR=1.9						
ASAR	Alice Springs	31.22	166	P	P	11 09 52.0	-0.8
	1.6nm,0.6s,baz=342,slow=8.2,SNR=1.6						
STKA	Stephens Creek	41.21	160	P	P	11 11 18.5	+0.5
	1.2nm,0.4s,baz=341,slow=11,SNR=1.8						
H11S3	WAKE ISLAND Hy	41.22	70	T	T	11 55 14.4	
	baz=263						
H11S1	WAKE ISLAND Hy	41.23	70	T	T	11 55 12.0	
	baz=263						
H11S2	WAKE ISLAND Hy	41.24	70	T	T	11 55 12.6	
	baz=263						
ILAR	Eielson Array	82.66	26	P	P	11 15 53.9	-2.5
	0.2nm,0.5s,baz=246,slow=6.5,SNR=5.2						

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*IDC **09** 11:04:41.3±1.2, 4°.07S×129°.48E, h0km, mb4.2/10, mb1 4.3/13, mb1mx3.9/51, mbtmp4.2/13, ML3.8/3, Error ellipse: s-maj=35.1km s-min=22.8km az=90.0*

*NEIC **09** 11:04:44.8±1.1, 4°.05S±0°.08×129°.70E±0°.07, h25km±7km, mb4.3/16, Error ellipse: s-maj=12.0km s-min=9.1km az=149.0*

ISC 09 11:04:45.6±0.5, 4°.15S±0°.06×129°.65E±0°.07, h36km, n34, σ0s.85/35, mb4.3/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.86	65	Pn	Pn	11 05 27.4	-1.3
SIJI	Sorong	3.63	26	Pn	Pn	11 05 40.6	+1.3
	9.1nm,0.3s,baz=208,slow=17,SNR=2.6						
SIJI				Sn	Sn	11 06 22.8	+1.7
	9.2nm,0.3s,baz=302,slow=23,SNR=2.3						
SAUI	Saumlaki	4.14	157	Pn	Pn	11 05 46.5	+0.1

SOEI	Soe	7.72	224	Pn	Pn	11 06 36.5	+0.9
WRA	Warramunga Arr	16.35	164	Pn	Pn	11 08 33.0	+0.5
	0.2nm,0.3s,baz=345,slow=14,SNR=2.7						
WB2	Warramunga Arr	16.35	164	Pn	Pn	11 08 33.2	+0.7
WB2				IAmb	IAmb	11 08 42.1	
	comp=Z,8.5nm,1.1s						
COEN	Coen	16.52	127	Pn	Pn	11 08 34.9	+0.2
COEN				IAmb	IAmb	11 08 54.4	
	comp=Z,17nm,1.3s						
PMG	Port Moresby	18.14	108	P	Pn	11 08 54.4	-0.4
PMG				IAmb	IAmb	11 08 56.3	
	comp=Z,23nm,1.0s						
SBUM	Sibu	18.61	290	P	P	11 08 58.7	-1.4
UGM	Wanagama	19.39	258	P	P	11 09 09.0	+0.4
PSA00	Pilbara Seismi	19.77	208	P	Pn	11 09 14.0	-0.3
PSA00				IAmb	IAmb	11 09 21.5	
	comp=Z,11nm,0.9s						
AS31	Alice Springs	19.83	168	P	Pn	11 09 15.8	+0.7
ASAR	Alice Springs	19.83	168	P	Pn	11 09 15.4	+0.3
	comp=Z,0.8nm,0.3s,baz=348,slow=10.0,SNR=6.8						
ASAR	Alice Springs	19.83	168	P	Pn	11 09 14.4	-0.7
CTAO	Charters Tower	22.64	136	P	P	11 09 44.5	+0.8
BBOO	Buckleboo	29.14	169	P	P	11 10 43.9	+0.6
BBOO				IAmb	IAmb	11 10 50.2	
	comp=Z,13nm,1.3s						
YOJ	Yonaguni jima	29.16	348	P	P	11 10 41.9	-1.6
IPM	Ipoh	29.86	286	P	P	11 10 49.0	-0.9
IPM				IAmb	IAmb	11 10 50.7	
	comp=Z,4.8nm,0.8s						
SLVN	Son La	35.75	316	P	P	11 11 41.6	+0.3
SLVN				IAmb	IAmb	11 11 51.0	
	comp=Z,6.4nm,1.2s						
CMAR	Chiang Mai Arr	37.69	308	P	P	11 11 57.7	-0.2
	comp=Z,1.0nm,0.3s,baz=129,slow=7.1,SNR=1.6						
SANVU	Saraoutou	38.59	110	P	P	11 12 04.6	-0.8
MJAR	Matsushiro Arr	41.26	10	P	P	11 12 27.0	-0.3
	comp=Z,1.5nm,0.5s,baz=182,slow=8.5,SNR=4.8						
ERM	Erimo	47.56	14	P	P	11 13 17.0	-0.5
USRK	Ussuriysk Ar.	48.17	2	P	P	11 13 23.4	+1.1
	comp=Z,2.0nm,0.6s,baz=193,slow=5.9,SNR=4.2						
USRK	Ussuriysk Ar.	48.17	2	P	P	11 13 21.4	-0.9
SONM	Songino Array	55.65	341	P	P	11 14 17.2	-1.0
	comp=Z,0.3nm,0.6s,baz=157,slow=7.8,SNR=1.9						
MKAR	Makanchi Array	65.67	326	P	P	11 15 26.7	+0.4
	comp=Z,2.3nm,0.6s,baz=114,slow=7.6,SNR=16						
MAKZ	Makanchi	65.85	326	P	P	11 15 27.9	+0.4
MAKZ				IAmb	IAmb	11 15 42.2	
	comp=Z,4.4nm,1.1s						
YAK	Yakutsk	65.99	0	P	P	11 15 29.3	+1.3
	comp=Z,9.3nm,0.3s,baz=175,slow=0.6,SNR=2.6						
ZALV	Zalesovo Beam	68.89	333	P	P	11 15 46.2	-0.3
	comp=Z,1.4nm,0.7s,baz=113,slow=6.8,SNR=3.8						
KURBB	Kurchatov Arra	69.92	328	P	P	11 15 53.4	+0.5
	comp=Z,3.6nm,0.7s,baz=130,slow=5.5,SNR=13						
KURK	Kurchatov	69.92	328	P	P	11 15 52.8	-0.2
BVAR	Borovoye Array	75.48	328	P	P	11 16 26.6	+0.6
	comp=Z,1.9nm,0.9s,baz=188,slow=18,SNR=3.6						
AKTO	Aktyubinsk	81.62	322	P	P	11 17 00.6	+0.7
	comp=Z,1.3nm,0.6s,baz=124,slow=7.3,SNR=3.7						

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*IDC **09** 11:08:30.7±1.4, 4°.07S×129°.82E, h0^{km}, mb4.0/6, mb1 4.2/8, mb1mx3.8/48, mbtmp4.0/8, ML3.9/2, Error ellipse: s-maj=42.3km s-min=26.0km az=94.0*

*DJA **09** 11:08:33.8±1.8, 4°S±12°×12°9E±°, h16^{km}±14^{km}, M3.8/4, MLv3.8/4*

*NEIC **09** 11:08:34.2±1.4, 4°.18S±0°.07×129°.88E±0°.05, h27^{km}±7^{km}, mb4.3/16, Error ellipse: s-maj=11.0km s-min=6.6km az=156.0*

ISC 09 11:08:31.7±0.6, **4°.10S**±0°.06×**129°.50E**±0°.07, **h10**^{km}**, n36,** σ**1^{s}84**/30, **mb4.2**/10, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.94	323	P	Pg	11 08 49.7	-0.2
AAI	Ambon	1.37	287	P	Pb	11 08 55.2	-2.2
AAI				S	Sb	11 09 11.0	-4.0
FAKI	Fak Fak	2.98	67	Pn	Pn	11 09 15.4	-3.7
SIJI	Sorong	3.66	29	Pn	Pn	11 09 27.1	-1.4
	8.2nm,0.3s,baz=252,slow=20,SNR=3.1						
SIJI				Sn	Sn	11 10 09.6	-2.2
	8.5nm,0.3s,baz=228,slow=22,SNR=2.0						
SWI	Sorong	3.67	29	P	Pn	11 09 30.9	+2.4
SAUI	Saumlaki	4.25	155	Pn	Pn	11 09 35.3	-1.3
MTN	Manton Dam	8.84	170	Pn	Pn	11 10 37.8	-1.9
KAPI	Kappang	9.76	264	Pn	Pn	11 10 56.1	+3.8
TOLI2	Tolitoli	10.13	301	Pn	Pn	11 11 02.5	+5.0
KNRA	Kununurra	11.53	184	Pn	Pn	11 11 14.7	-1.8
WB0	Warramunga Arr	16.29	163		Pn	11 12 20.3	-0.4
WRAB	Tennant Creek	16.43	164	Pn	Pn	11 12 19.2	-3.4
WR0	Warramunga Arr	16.51	163		Pn	11 12 22.5	-1.1
COEN	Coen	16.67	127	Pn	Pn	11 12 21.2	-4.5
COEN				IAmb	IAmb	11 12 33.4	
	comp=Z,18nm,1.2s						
MANU	Manus Island	17.96	84	P	Pn	11 12 34.2	-7.5
MANU				IAmb	IAmb	11 12 40.2	
	comp=Z,25nm,1.4s						
PMG	Port Moresby	18.31	108		P	11 12 39.8	-6.4
PMG				IAmb	IAmb	11 12 53.9	
	comp=Z,25nm,1.1s						
PSA00	Pilbara Seismi	19.74	208	P	P	11 13 02.2	+0.4
PSA00				IAmb	IAmb	11 13 11.5	
	comp=Z,36nm,1.5s						
AS31	Alice Springs	19.91	168	P	P	11 13 03.1	-0.6
ASAR	Alice Springs	19.91	168	P	P	11 13 03.6	-0.1
	comp=Z,0.5nm,0.3s,baz=348,slow=12,SNR=12						
TOO	Toolangi	36.39	158	P	P	11 15 33.5	-2.9
TOO				IAmb	IAmb	11 15 49.0	
	comp=Z,6.8nm,1.0s						
CMAR	Chiang Mai Arr	37.54	308	P	P	11 15 48.9	+2.5
	comp=Z,0.7nm,0.4s,baz=126,slow=7.1,SNR=1.8						
JWT	Wachi	39.56	8	P	P	11 16 02.6	-0.5
LIFNC	LIFOU	40.26	118	P	P	11 16 02.1	-7.1
MJAR	Matsushiro Arr	41.24	11	P	P	11 16 16.6	-0.5
	comp=Z,2.7nm,0.7s,baz=187,slow=8.6,SNR=3.1						
USRK	Ussuriysk Ar.	48.13	2	P	P	11 17 11.8	-0.1
SONM	Songino Array	55.55	341	P	P	11 18 07.2	-0.2
	comp=Z,0.5nm,0.7s,baz=147,slow=8.6,SNR=3.8						
ZAA0	Zalesovo Array	68.78	334	P	P	11 19 36.7	+0.8
ZAA0				IAmb	IAmb	11 19 38.1	
	comp=Z,1.5nm,0.8s						
ZALV	Zalesovo Beam	68.78	334	P	P	11 19 37.1	+1.2
	comp=Z,0.7nm,0.4s,baz=123,slow=5.3,SNR=5.0						
ZALV	Zalesovo Beam	68.78	334	P	P	11 19 37.3	+1.3
KURBB	Kurchatov Arra	69.80	328	P	P	11 19 43.9	+1.6
	comp=Z,2.3nm,0.8s,baz=128,slow=5.4,SNR=7.3						
KURK	Kurchatov	69.80	328	P	P	11 19 43.7	+1.4
BVAR	Borovoye Array	75.36	328	P	P	11 20 17.8	+2.4
	comp=Z,1.4nm,0.9s,baz=182,slow=14,SNR=3.9						
BRVK	Borovoye	75.43	328	P	P	11 20 16.9	+1.1
BRVK				IAmb	IAmb	11 20 18.1	
	comp=Z,6.2nm,1.4s						
ABKAR	Akbulak array	79.94	321	P	P	11 20 42.6	+1.6
RAYN	Ar Rayn	86.13	294	P	P	11 21 13.7	0.0
RAYN				IAmb	IAmb	11 21 13.8	
	comp=Z,2.9nm,1.0s						
J20K	Nowinta River	87.75	25	P	P	11 21 20.3	-0.4

IDC 09 11:12:01.5±1.8, **4°.19S**×**129°.24E, h0**^{km}**, mb3.5**/1, **mb1 3.8**/4, **mb1mx3.1**/52, **mbtmp3.7**/4, **ML3.5**/3, **Error ellipse: s-maj=59.5km s-min=29.0km az=84.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.87	32	Pn	Pn	11 13 02.1	-0.1
	13nm,0.3s,baz=228,slow=10,SNR=5.6						
SIJI				Sn	Sn	11 13 44.3	-4.2
	3.3nm,0.3s,baz=217,slow=23,SNR=2.1						
WRA	Warramunga Arr	16.43	163	Pn	Pn	11 15 52.8	-0.9
	0.1nm,0.3s,baz=345,slow=13,SNR=2.0						
ASAR	Alice Springs	19.88	167	P	P	11 16 35.0	+0.4
	0.1nm,0.3s,baz=347,slow=9.9,SNR=3.4						
MKAR	Makanchi Array	65.47	327	P	P	11 22 46.6	0.0
	0.4nm,0.6s,baz=117,slow=8.2,SNR=2.5						

IDC 09 11:12:33.9±1.8, **4°.16S**×**129°.33E, h0**^{km}**, mb3.7**/1, **mb1 3.8**/4, **mb1mx3.1**/53, **mbtmp3.7**/4, **ML3.4**/3, **Error ellipse: s-maj=61.9km s-min=28.9km az=83.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.80	31	Pn	Pn	11 13 34.5	+0.6
	4.0nm,0.3s,baz=239,slow=19,SNR=1.8						
SIJI				Sn	Sn	11 14 14.4	-4.9
	4.5nm,0.3s,baz=221,slow=21,SNR=1.7						
WRA	Warramunga Arr	16.43	163	Pn	Pn	11 16 24.5	-1.5
	0.1nm,0.3s,baz=348,slow=12,SNR=1.5						
ASAR	Alice Springs	19.89	168	P	Pn	11 17 07.9	-0.7
	0.2nm,0.3s,baz=348,slow=9.4,SNR=4.0						
MKAR	Makanchi Array	65.50	326	P	P	11 23 18.9	-0.2
	0.3nm,0.6s,baz=123,slow=7.1,SNR=3.1						

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*IDC **09** 11:14:03.2±1.6, 3°.74S×130°.48E, h0^{km}, mb3.7/3, mb1 4.0/5, mb1mx3.4/49, mbtmp3.8/5, ML3.6/2, Error ellipse: s-maj=68.8km s-min=25.5km az=82.0*

ISC 09 11:14:02.9±1.3, **3°.5S**±0°.1×**131°.6E**±0°.8, **h10**^{km}**, n5,** σ**0^{s}54**/6, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.58	353	Pn	Pb	11 14 49.8	+0.5
	18nm,0.3s,baz=279,slow=5.1,SNR=8.4						
SIJI				Sn	Sb	11 15 20.4	-0.7
	30nm,0.3s,baz=254,slow=23,SNR=10						
WRA	Warramunga Arr	16.62	171	Pn	Pn	11 17 56.0	-0.2
	0.2nm,0.3s,baz=345,slow=13,SNR=2.4						
ASAR	Alice Springs	20.23	174	P	P	11 18 38.4	0.0
	2.9nm,0.6s,baz=348,slow=10,SNR=6.1						
MKAR	Makanchi Array	66.17	325	P	P	11 24 50.6	-0.2
	0.4nm,0.6s,baz=117,slow=7.0,SNR=2.9						
KURBB	Kurchatov Arra	70.35	327	P	P	11 25 17.2	+0.3
	0.4nm,0.4s,baz=131,slow=6.5,SNR=1.6						

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*IDC **09** 11:14:43.8±1.5, 4°.29S×129°.27E, h0^{km}, mb4.0/7, mb1 4.0/8, mb1mx3.5/47, mbtmp4.0/8, ML3.6/1, Error ellipse: s-maj=50.2km s-min=33.9km az=83.0*

ISC 09 11:14:49.2±1.3, **4°.2S**±0°.2×**129°.4E**±0°.2, **h36**^{km}**, n9,** σ**0^{s}34**/9, **mb4.0**/7, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.85	30	Pn	Pn	11 15 45.8	-0.2
	4.1nm,0.3s,baz=245,slow=23,SNR=1.1						
CMAR	Chiang Mai Arr	37.51	308	P	P	11 21 59.5	-0.4
	1.2nm,0.5s,baz=129,slow=6.0,SNR=6.1						
SONM	Songino Array	55.63	341	P	P	11 24 22.2	+0.6
	0.4nm,0.7s,baz=167,slow=6.5,SNR=1.7						
MKAR	Makanchi Array	65.58	326	P	P	11 25 29.4	0.0
	1.9nm,0.8s,baz=129,slow=7.0,SNR=4.5						
ZALV	Zalesovo Beam	68.84	334	P	P	11 25 49.6	-0.3
	1.1nm,0.5s,baz=121,slow=6.4,SNR=4.4						
KURBB	Kurchatov Arra	69.84	328	P	P	11 25 56.3	+0.2
	1.8nm,0.7s,baz=135,slow=5.5,SNR=2.7						
AKTO	Aktyubinsk	81.51	322	P	P	11 27 03.1	+0.2
	0.7nm,0.4s,baz=83,slow=8.1,SNR=2.0						
QSPA	South Pole Qui	85.72	180	P	P	11 27 24.4	0.0
	0.8nm,0.8s,baz=335,slow=0.4,SNR=2.8						
TORD	Torodi Ar. Bea	127.60	283	PKP	PKiKP	11 33 52.1	-0.1
	0.4nm,0.6s,baz=74,slow=1.4,SNR=1.2						

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*IDC **09** 11:15:24.7±0.4, 4°.28S×129°.59E, h0^{km}, mb4.8/29, mb1 4.8/35, mb1mx4.5/52, mbtmp4.8/35, ML4.4/3, MS4.9/2, Ms1 4.9/2, ms1mx4.2/48, Error ellipse: s-maj=17.9km s-min=10.7km az=76.0*

*MOS **09** 11:15:25.6±1.0, 4°.34S×129°.61E, h20^{km}, mb5.4/45, Error ellipse: s-maj=11.9km s-min=5.5km az=117.8*

*BJI **09** 11:15:27.2±0.0, 4°.30S×129°.80E, h30^{km}, mB5.7/9, mb4.9/62, Ms5.4/13, Ms7 5.2/12*

*NEIC **09** 11:15:29.2±1.9, 4°.28S±0°.06×129°.67E±0°.05, h26^{km}±4^{km}, mb5.2/73, Error ellipse: s-maj=8.8km s-min=7.1km az=170.0*

*DJA **09** 11:15:29.1±0.2, 4°S±2°×13°0E±°, h10^{km}, M5.2/18, mb5.2/18, mB5.9/2, MLv5.2/15, Mw(mB)5.5/2*

*KLM **09** 11:15:31, 4°.03S×129°.90E, h50^{km}, mb5.3*

ISC 09 11:15:30.8±0.5, **4°.30S**±0°.04×**129°.65E**±0°.05, **h42**^{km}±4^{km}, **h43**^{km}**:pP-P, n381,** σ**1^{s}56**/386, **mb5.1**/100, **19C-11D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.34	132	P	Pn	11 15 36.1	-3.5
MSAI	Masohi	1.19	322	P	Pn	11 15 48.0	-3.0
AAI	Ambon	1.58	292	P	Pn	11 15 52.7	-3.6
FAKI	Fak Fak	2.93	62	P	Pn	11 16 14.6	-0.3
FAKI	Fak Fak	2.93	62	Pn	Pn	11 16 14.2	-0.8
FAKI				Sn	Sn	11 16 48.4	-0.5
SIJI	Sorong	3.77	25	Pn	Pn	11 16 24.4	-2.0
	78nm,0.3s,baz=290,slow=4.8,SNR=13						
SIJI				Sn	Sn	11 17 04.0	-5.6
	65nm,0.3s,baz=196,slow=23,SNR=7.4						
SIJI				LR	LR	11 18 06.4	
	comp=Z,9µm,18.9s,baz=130,slow=43						
SWI	Sorong	3.77	25	P	Pn	11 16 24.9	-1.6
SAUI	Saumlaki	4.01	156	P	Pn	11 16 33.0	+3.2
SAUI	Saumlaki	4.01	156	Pn	Pn	11 16 30.3	+0.5
SAUI	Saumlaki	4.01	156	P	Pn	11 16 29.4	-0.4
LBMI	Labuha	4.22	329	P	Pn	11 16 32.7	0.0
SANI	Sanana	4.29	301	P	Pn	11 16 32.4	-1.1
SANI	Sanana	4.29	301	P	Pn	11 16 32.5	-1.1
TNTI	Ternate	5.53	336	P	Pn	11 16 51.2	+0.5
	0.9nm145nm,0.7s						
TNTI	Ternate	5.53	336		Pn	11 16 50.1	-0.5
SRPI	Serui, Papua	7.00	70	P	Pn	11 17 10.0	-0.9
KMSI	Cibinong	7.45	310	P	Pn	11 17 18.5	+1.4
	2.3nm3µm252nm,0.6s						
SOEI	Soe	7.62	224	P	Pn	11 17 24.8	+5.4
	0.8nm163nm,1.2s						
SOEI	Soe	7.62	224	Pn	Pn	11 17 19.0	-0.4
DRS	Darwin Rock St	8.18	171	P	Pn	11 17 26.9	-0.1
BATI	Baumata	8.35	225	Pn	Pn	11 17 31.4	+2.0
	10nm,0.3s,baz=33,slow=0.9,SNR=7.9						
BATI	Baumata	8.35	225	P	Pn	11 17 32.8	+3.3
	80nm,0.7s						
MMRI	Maumere	8.54	239	Pn	Pn	11 17 29.6	-2.3
MTN	Manton Dam	8.62	170	P	Pn	11 17 33.5	+0.4
	baz=8.6,SNR=9.1						
MTN	Manton Dam	8.62	170	Pn	Pn	11 17 32.3	-0.7
MTN	Manton Dam	8.62	170	P	Pn	11 17 33.6	+0.5
APSI	Ampana	8.67	293	P	Pn	11 17 34.2	+0.4
	277nm,1.0s						
KDU	Kakadu	8.79	162	P	Pn	11 17 34.4	-1.0
	baz=8.8,SNR=12						
KDU	Kakadu	8.79	162	P	Pn	11 17 34.6	-0.8
MRSI	Marisa	9.05	301	P	Pn	11 17 38.2	-0.8
	103nm,0.8s						
BSSI	Bau Bau, Buton	9.31	258	P	Pn	11 17 43.3	+0.7
	97nm,1.2s						
SMPI	Sarmi	9.33	76	P	Pn	11 17 44.0	+1.2
	15µm76nm,1.5s						
BNSI	Bone	9.52	269	P	Pn	11 17 46.6	+1.1
	101nm,1.5s						
BKSI	Bulukumba	9.55	263	P	Pn	11 17 50.5	+4.6
	109nm,0.9s						
SPSI	Sidrap Palu	9.87	272	P	Pn	11 17 54.4	+4.2
	91nm,1.6s						
TTSI	Tana Toraja	9.89	277	P	Pn	11 17 52.4	+1.8
	51nm,1.2s						
KAPI	Kappang	9.90	265	Pn	Pn	11 17 52.8	+2.2
	baz=126,slow=4.0,SNR=4.6						
KAPI	Kappang	9.90	265	P	Pn	11 17 51.1	+0.5
KAPI	Kappang	9.90	265	Pn	Pn	11 17 51.1	+0.5
TOLI2	Tolitoli	10.37	301		Pn	11 17 56.3	-0.7
GENI	Genyem	10.63	81	P	Pn	11 18 01.9	+1.2
	112nm,0.8s						
MPSI	Mapaga	10.78	295	P	Pn	11 18 04.3	+1.6
	57nm,1.7s						
JAY	Jayapura	11.17	81	Pn	Pn	11 18 06.4	-1.7
	0.7nm,0.3s,baz=280,slow=7.9,SNR=4.0						
KNRA	Kununurra	11.34	184	P	Pn	11 18 09.6	-0.8
	baz=11,SNR=27						
KNRA	Kununurra	11.34	184	Pn	Pn	11 18 09.6	-0.8
KNRA	Kununurra	11.34	184	P	Pn	11 18 09.9	-0.5
KCP	Kidapawan	12.12	338	⇑eP	Pn	11 18 24.1	+3.1
PLAI	Plampang	12.63	249	P	Pn	11 18 29.2	+1.2
BUKP	Musuan	12.93	339	⇑eP	P	11 18 47.1	+5.2
FITZ	Fitzroy Crossi	14.27	196	Pn	Pn	11 18 48.3	-2.1
	baz=34,slow=11						
MYLDM	Lahad Datu	14.59	310	Pn	Pn	11 18 54.1	-0.5
SPMM	Sapulut	15.93	304	P	P	11 19 14.0	-1.2
JAGI	Jajag, Banyuwa	15.95	254	Pn	Pn	11 19 12.0	-0.4
JAGI	Jajag, Banyuwa	15.95	254	P	Pn	11 19 12.4	-0.1
WB0	Warramunga Arr	16.06	164	Pn	Pn	11 19 10.7	-3.1
WRAB	Tennant Creek	16.20	164	⇑eP	Pn	11 19 13.6	-2.0
WRAB	Tennant Creek	16.20	164		Pn	11 19 11.8	-3.8
WRAB	Tennant Creek	16.20	164	P	Pn	11 19 16.1	+0.5
WRA	Warramunga Arr	16.21	164	Pn	Pn	11 19 12.2	-3.5
	1.6nm,0.3s,baz=334,slow=13,SNR=17						
WRA				Sn	Sn	11 22 10.1	-4.5
	0.6nm,0.3s,baz=348,slow=22,SNR=2.7						
WRA	Warramunga Arr	16.21	164	P	Pn	11 19 12.9	-2.8
WRA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRA	Warramunga Arr	16.21	164		Pn	11 19 12.9	-2.8
WB2	Warramunga Arr	16.21	164	P	Pn	11 19 13.4	-2.3
	baz=16						
WB2	Warramunga Arr	16.21	164	Pn	Pn	11 19 12.4	-3.3
WR0	Warramunga Arr	16.28	163		Pn	11 19 13.6	-3.0
COEN	Coen	16.43	127	Pn	Pn	11 19 17.5	-1.0
COEN	Coen	16.43	127	P	Pn	11 19 16.6	-1.9
KKM	Kota Kinabalu	16.90	307		Pn	11 19 23.9	-0.7
KKM				IAmb	IAmb	11 19 35.5	
	comp=Z,141nm,1.2s						
RCP	Roxas	17.19	336	⇑eP	P	11 19 31.0	+1.9
MANU	Manus Island	17.82	83	P	Pn	11 19 33.9	-2.0
PMG	Port Moresby	18.10	107	P	P	11 19 39.2	0.0
	comp=Z,1.3nm,0.3s,baz=320,slow=1.1,SNR=7.9						
PMG	Port Moresby	18.10	107	P	P	11 19 38.4	-0.9
PMG				pmax	pmax		
	comp=Z,289nm,1.4s						
PMG	Port Moresby	18.10	107	P	P	11 19 38.4	-0.9
PMG				IAmb	IAmb	11 19 48.5	
	comp=Z,289nm,1.4s						
SBUM	Sibu	18.67	291	P	Pn	11 19 47.0	+0.8
SBUM	Sibu	18.67	291	P	P	11 19 45.3	-0.2
QIS	Mount Isa	18.84	150	P	Pn	11 19 47.8	-0.4
	baz=19,SNR=15						
QIS	Mount Isa	18.84	150	P	Pn	11 19 47.9	-0.4
SMRI	Semarang	19.31	261	P	P	11 19 52.5	-0.2
MBWA	Marble Bar	19.34	209	P	Pn	11 19 53.9	-0.2
UGM	Wanagama	19.36	258	P	P	11 19 52.8	-0.3
UGM				IAmb	IAmb	11 20 20.0	
	comp=Z,231nm,1.3s						
PSA00	Pilbara Seismi	19.64	208	P	P	11 19 55.7	-0.3
PSA00				IAmb	IAmb	11 19 58.9	
	comp=Z,150nm,0.8s						
PSA00	Pilbara Seismi	19.64	208	P	P	11 19 56.0	-0.1
PSA00				IAmb	IAmb	11 19 58.9	
	comp=Z,90nm,1.0s						
PSA00	Pilbara Seismi	19.64	208	P	Pn	11 19 57.1	-0.6
AS31	Alice Springs	19.69	168	P	P	11 19 57.2	+0.6
ASAR	Alice Springs	19.69	168	P	Pn	11 19 57.7	-0.7
	comp=Z,6.8nm,0.3s,baz=347,slow=11,SNR=30						
ASAR				PcP	PcP	11 24 15.7	+1.0
	comp=Z,0.4nm,0.3s,baz=338,slow=1.6,SNR=1.2						
ASAR	Alice Springs	19.69	168	P	P	11 19 54.9	-1.8
ASAR	Alice Springs	19.69	168	P	P	11 19 54.9	-1.8
ASPA	Alice Springs	19.69	168	P	Pn	11 19 57.8	-0.6
	baz=20						
JCNP	Jose Panganiba	19.71	340	⇑eP	P	11 19 54.7	-2.2
MTSU	Mount Surprise	19.87	135	P	P	11 19 59.5	+0.8
	baz=20,SNR=16						
LQP	Lukban	19.98	336	⇑eP	Pn	11 20 01.5	-0.6
LUBP	Lubang	20.20	333	⇑eP	P	11 20 02.9	+0.7
WRKA	Warakurna	20.66	183	P	P	11 20 08.3	+1.1
	baz=21,SNR=26						
WRKA	Warakurna	20.66	183	P	P	11 20 08.4	+1.1
LEM	Lembang	22.07	262	LR	LR	11 29 30.5	
	comp=Z,5µm,18.1s,baz=54,slow=38						
CTA	Charters Tower	22.54	136	P	P	11 20 26.5	-0.9
	comp=Z,28nm,0.7s,baz=318,slow=14,SNR=19						
CTAO	Charters Tower	22.54	136	P	P	11 20 26.6	-0.8
CTAO				pmax	pmax		
	comp=Z,38nm,0.9s						
CTAO	Charters Tower	22.54	136	P	P	11 20 26.6	-0.8
CTAO	Charters Tower	22.54	136	P	P	11 20 27.9	+0.5
	comp=Z,46nm,0.8s						
APYP	Conner	23.53	340	⇓eP	P	11 20 38.0	+0.7
GIRL	Giralia	23.57	218	P	P	11 20 38.8	+1.1
	baz=24,SNR=7.8						
GIRL	Giralia	23.57	218	P	P	11 20 39.1	+1.4
OOD	Oodnadatta	24.07	167	P	P	11 20 42.7	+0.4
MEEK	Meekatharra	24.60	204	P	P	11 20 47.2	-0.1
	baz=25,SNR=5.8						
MEEK	Meekatharra	24.60	204	P	P	11 20 49.2	+1.9
MULG	Mulgathing	26.18	171	P	P	11 21 01.9	+0.4
FORT	Forrest	26.39	183	P	P	11 21 04.5	+1.1
	baz=26,SNR=8.3						
FORT	Forrest	26.39	183	P	P	11 21 04.1	+0.7
FORT				IAmb	IAmb	11 21 28.8	
	comp=Z,61nm,0.8s						
FORT	Forrest	26.39	183	P	P	11 21 03.5	+0.1
LCRK	Leigh Creek	27.24	164	P	P	11 21 12.5	+1.5
RMQ	Roma	28.65	142	P	P	11 21 24.1	+0.3
BLDU	Ballidu	28.89	204	P	P	11 21 27.6	+1.8
BBOO	Buckleboo	28.99	169	P	P	11 21 26.7	+0.1
	baz=29,SNR=6.5						
BBOO	Buckleboo	28.99	169	P	P	11 21 26.8	+0.1
EIDS	Eidsvold	29.36	138	P	P	11 21 27.0	-3.1
KLBR	Kellerberrin	29.37	201	P	P	11 21 30.1	+0.1
	baz=29,SNR=7.4						
KLBR	Kellerberrin	29.37	201	P	P	11 21 30.1	+0.1
STKA	Stephens Creek	29.64	159	P	P	11 21 32.6	+0.2
	comp=Z,4.9nm,0.7s,baz=336,slow=8.7,SNR=9.7						
STKA	Stephens Creek	29.64	159	P	P	11 21 33.2	+0.8
	baz=30,SNR=7.0						
STKA	Stephens Creek	29.64	159	P	P	11 21 31.9	-0.5
STKA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
STKA	Stephens Creek	29.64	159	P	P	11 21 31.9	-0.5
STKA	Stephens Creek	29.64	159	P	P	11 21 32.9	+0.5
IPM	Ipoh	29.90	287	P	P	11 21 35.0	0.0
IPM	Ipoh	29.90	287	P	P	11 21 35.1	+0.2
IPM				IAmb	IAmb	11 21 45.8	
	comp=Z,46nm,0.8s						
HTT	Hallett	30.25	164	P	P	11 21 39.8	+1.9
MUN	Mundaring	30.29	203	P	P	11 21 39.5	+1.3
	baz=30,SNR=3.5						
MUN	Mundaring	30.29	203	P	P	11 21 39.3	+1.1
KULM	Kulim	30.49	288	P	P	11 21 40.0	-0.2
KULM	Kulim	30.49	288	IAmb	IAmb	11 22 01.0	
	comp=Z,55nm,1.1s						
JOW	Kunigami	30.97	358	P	P	11 21 43.7	-0.5
	comp=Z,25nm,0.9s,baz=174,slow=10,SNR=2.4						
CMSA	Cobar Meteorol	31.01	153	P	P	11 21 44.6	+0.1
PSI	Prapat	31.51	282	P	P	11 21 48.1	-1.2
	comp=Z,4.6nm,0.4s,baz=164,slow=7.4,SNR=2.4						
SRIT	Nakonsritamara	32.59	293	P	P	11 21 57.7	-1.0
ARMA	Armidale	33.24	144	P	P	11 22 05.7	+1.4
	baz=33,SNR=4.7						
ARMA	Armidale	33.24	144	P	P	11 22 02.9	-1.4
ARPS	Mount Arapiles	34.20	162	P	P	11 22 13.5	+1.1
	baz=34,SNR=8.6						
ARPS	Mount Arapiles	34.20	162	P	P	11 22 13.6	+1.2
CAN	Canberra	35.68	152	P	P	11 22 26.4	+1.1
SLVN	Son La	35.86	316	P	P	11 22 27.9	+0.9
JNU	Nakatsue	37.23	2	P	P	11 22 39.0	+0.5
	comp=Z,13nm,1.0s,baz=230,slow=2.5,SNR=4.2						
JNU	Nakatsue	37.23	2	P	P	11 22 37.1	-1.3
JNU				IAmb	IAmb	11 22 47.9	
	comp=Z,74nm,1.4s						
NJ2	Nanjing	37.58	345	eP	P	11 22 41.3	0.0
NJ2				pP	pP	11 22 49.7	-2.7
NJ2				sP	sP	11 22 57.7	+0.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
WHN	Wuhan	37.61	338	⇑P	P	11 22 45.3	+3.7
CM31	Chiang Mai Arr	37.78	308	P	P	11 22 44.0	+0.7
CM31				IAmb	IAmb	11 22 51.1	
	comp=Z,39nm,1.1s						
CMAR	Chiang Mai Arr	37.78	308	P	P	11 22 43.4	+0.1
	comp=Z,9.0nm,0.7s,baz=138,slow=7.2,SNR=31						
CMAR	Chiang Mai Arr	37.78	308	P	P	11 22 43.3	0.0
CMAR	Chiang Mai Arr	37.78	308	P	P	11 22 43.3	0.0
GYA	Guiyang	37.82	325	⇑P	P	11 22 47.0	+3.4
GYA				pmax	pmax		
	comp=Z,20nm,1.1s						
CHTO	Chiang Mai	37.98	308	P	P	11 22 44.9	0.0
CHTO				pmax	pmax		
	comp=Z,88nm,1.4s						
CHTO	Chiang Mai	37.98	308	P	P	11 22 44.9	0.0
CHTO	Chiang Mai	37.98	308	P	P	11 22 45.2	+0.3
KMI	Kunming	39.23	320	⇑P	P	11 22 58.2	+2.6
KMI				pP	pP	11 23 07.3	+0.8

KMI				sP	sP	11 23 14.4	+3.3
KMI				pmax	pmax		
	comp=Z,25nm,0.7s						
KMI				LR	LR		
	comp=Z,4µm,19.8s						
KMI				LR	LR		
	comp=Z,3µm,22.8s						
JWT	Wachi	39.74	7	P	P	11 22 58.5	-0.9
JWT				IAmb	IAmb	11 23 08.6	
	comp=Z,49nm,0.9s						
INU	Inuyama	40.04	9	P	P	11 23 01.4	-0.5
INU				IAmb	IAmb	11 23 10.8	
	comp=Z,39nm,1.0s						
TJN	Taejon	40.52	357	⇓eP	P	11 23 07.8	+2.0
MJAR	Matsushiro Arr	41.41	10	P	P	11 23 10.9	-2.3
	comp=Z,12nm,0.8s,baz=180,slow=8.5,SNR=12						
MAJO	Matsushiro	41.41	10	⇓eP	P	11 23 11.9	-1.3
MAJO				pmax	pmax		
	comp=Z,45nm,0.8s						
MAJO	Matsushiro	41.41	10	P	P	11 23 11.4	-1.8
MAJO				IAmb	IAmb	11 23 22.1	
	comp=Z,46nm,0.8s						
MAT	Matsushiro	41.41	10	P	P	11 23 11.2	-2.0
JYT	Yasato	41.50	13	P	P	11 23 13.2	-0.8
JYT				IAmb	IAmb	11 23 22.9	
	comp=Z,55nm,1.0s						
KSAR	Wonju Array Be	41.56	358	P	P	11 23 13.4	-1.0
KSAR	Wonju Array Be	41.56	358	P	P	11 23 13.4	-1.0
KSRS	Korea Array	41.57	358	P	P	11 23 14.2	-0.3
	comp=Z,4.1nm,0.7s,baz=176,slow=9.3,SNR=14						
KS19	Wonju Array Si	41.62	358	P	P	11 23 14.4	-0.5
KS19				IAmb	IAmb	11 23 24.0	
	comp=Z,49nm,1.4s						
INCN	Inchon	41.66	356	P	P	11 23 15.0	-0.3
INCN				pmax	pmax		
	comp=Z,79nm,1.4s						
INCN	Inchon	41.66	356	P	P	11 23 15.0	-0.3
INCN				IAmb	IAmb	11 23 22.6	
	comp=Z,79nm,1.4s						
CD2	Chengdu	42.86	327	P	P	11 23 25.8	+0.6
CD2				pP	pP	11 23 36.2	+0.1
CD2				sP	sP	11 23 40.4	-0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN	Xi'an	42.86	334	P	P	11 23 25.9	+0.7
XAN				pP	pP	11 23 32.4	-3.6
XAN				pmax	pmax		
	comp=Z,11nm,1.5s						
JSD	Sado	42.87	10	P	P	11 23 25.4	+0.4
JSD				IAmb	IAmb	11 23 33.4	
	comp=Z,38nm,0.8s						
BJT	Baijiatuau	45.81	346	P	P	11 23 48.1	-0.5
BJT				pmax	pmax		
	comp=Z,37nm,1.1s						
BJT	Baijiatuau	45.81	346	P	P	11 23 48.1	-0.5
BJT				IAmb	IAmb	11 23 58.0	
	comp=Z,37nm,1.1s						
BJI	Beijing	45.83	346	P	P	11 23 48.7	0.0
BJI				pP	pP	11 23 57.3	-2.6
BJI				pmax	pmax		
	comp=Z,17nm,1.2s						
JTM	Tenmabayashi	46.07	12	P	P	11 23 48.0	-2.5
LZH	Lanzhou	46.88	331	⇑P	P	11 23 59.0	+1.7
LZH				pP	pP	11 24 06.1	-2.1
LZH				sP	pwP	11 24 09.0	-3.1
LZH				pmax	pmax		
	comp=Z,49nm,1.3s						
SHL	Shillong	47.15	311	P	P	11 23 59.1	-0.5
SHL				pmax	pmax		
	comp=Z,23nm,0.6s						
SHL	Shillong	47.15	311	P	P	11 23 59.1	-0.5
ERM	Erimo	47.70	14	⇓eP	P	11 24 03.3	0.0
ERM	Erimo	47.70	14	P	P	11 24 02.8	-0.6
HHC	Hu-ho-hao-te	47.88	341	eP	P	11 24 07.7	+2.8
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
CN2	Changchun	48.03	356	eP	P	11 24 05.5	-0.3
CN2				pmax	pmax		
	comp=Z,20nm,1.3s						
BTO	Baotou	48.17	340	eP	P	11 24 10.9	+3.7
BTO				S	S	11 31 03.3	-0.2
BTO				LR	LR		
	comp=Z,9µm,14.9s						
BTO				LR	LR		
	comp=Z,6µm,14.5s						
USRK	Ussuriysk Ar.	48.32	2	P	P	11 24 08.1	0.0
	comp=Z,6.5nm,0.7s,baz=197,slow=12,SNR=9.2						
USRK	Ussuriysk Ar.	48.32	2	P	P	11 24 07.5	-0.6
USRK	Ussuriysk Ar.	48.32	2	P	P	11 24 07.5	-0.6
MDJ	Mudanjiang	48.69	360	P	P	11 24 16.2	+5.3
MDJ				pP	pP	11 24 23.2	+0.9
MDJ				sP	sP	11 24 26.3	-0.7
MDJ				pmax	pmax		
	comp=Z,23nm,1.6s						
TEY	Ternei	49.50	6	⇑eP	P	11 24 16.0	-1.1
TEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ASAJ	Asahikawa	49.58	12	P	P	11 24 18.3	+0.6
	comp=Z,7.4nm,0.9s,baz=144,slow=14,SNR=1.8						
ASAJ	Asahikawa	49.58	12	P	P	11 24 17.6	-0.1
ASAJ				pmax	pmax		
	comp=Z,72nm,1.4s						
JKA	Kamikawa-asahi	49.58	12	P	P	11 24 17.6	-0.2
LSA	Lhasa	50.04	315	P	P	11 24 21.9	-0.2
LSA				pmax	pmax		
	comp=Z,21nm,0.6s						
LSA	Lhasa	50.04	315	P	P	11 24 21.9	-0.2
LSA				IAmb	IAmb	11 24 42.9	
	comp=Z,20nm,0.6s						
PALK	Pallekele	50.19	283	P	P	11 24 22.4	-0.6
PALK				pmax	pmax		
	comp=Z,12nm,1.1s						
PALK	Pallekele	50.19	283	P	P	11 24 22.4	-0.6
ODAN	Odare	51.26	310	eP	P	11 24 31.1	+0.1
TAPN	Taplejung	51.26	310	eP	P	11 24 30.3	-0.9
	comp=Z,28nm,0.4s						
GTA	Gaotai	51.46	330	⇑P	P	11 24 30.4	-1.8
GTA				pP	pP	11 24 40.8	-2.4
GTA				sP	pwP	11 24 46.1	-1.3
RAMN	Ramite	51.91	309	eP	P	11 24 35.1	-0.8
	comp=Z,63nm,0.5s						
YSS	Yuzh-Sakhalins	52.33	11	P	P	11 24 38.5	+0.2
YSS				IAmb	IAmb	11 24 58.9	
	comp=Z,63nm,1.5s						
KLR	Kul'dur	53.34	2	P	P	11 24 45.7	-0.1
	comp=Z,7.1nm,1.0s,baz=209,slow=5.7,SNR=9.9						
KLR	Kul'dur	53.34	2	⇑eP	P	11 24 45.6	-0.2
KLR				pmax	pmax		
	comp=Z,48nm,1.6s						
GKN	Gorkha	53.95	309	eP	P	11 24 49.7	-1.1
	comp=Z,112nm,1.1s						
KOLN	Koldanda	54.64	309	eP	P	11 24 54.7	-1.2
	comp=Z,136nm,1.0s						
DANN	Dangsing	54.79	309	eP	P	11 24 55.8	-1.3
	comp=Z,110nm,0.9s						
HYB	Hyderabad	54.85	295	i P	P	11 24 55.5	-1.9
	comp=Z,45nm,1.0s						
PYUN	Piuthan	55.27	309	eP	P	11 24 59.5	-1.0
	comp=Z,77nm,0.8s						
ULN	Ulaanbaatar	55.60	342	P	P	11 25 02.5	0.0
ULN				pmax	pmax		
	comp=Z,66nm,1.2s						
ULN	Ulaanbaatar	55.60	342	P	P	11 25 02.5	0.0
SONM	Songino Array	55.79	341	P	P	11 25 03.7	-0.1
	comp=Z,14nm,1.1s,baz=164,slow=7.8,SNR=16						
ZEA	Zeya	57.86	358	eP	P	11 25 20.9	+2.8
ZEA				e		11 25 32.1	
ZEA				pmax	pmax		
	comp=N,10.0nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
ZAK	Zakamensk	59.01	341	eP	P	11 25 25.4	-1.0
ZAK				pmax	pmax		
	comp=Z,27nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
POO	Poona	59.45	294	eP	P	11 25 26.0	-4.0
TLY	Talaya	60.02	342	eP	P	11 25 35.3	+2.1
TLY				pmax	pmax		
	comp=Z,53nm,1.5s						
TLY	Talaya	60.02	342	P	P	11 25 34.5	+1.3
TLY				IAmb	IAmb	11 25 44.1	
	comp=Z,18nm,1.0s						
IRK	Irkutsk	60.31	342	eP	P	11 25 37.3	+2.1
IRK				pmax	pmax		
	comp=Z,85nm,1.8s						
MOY	Mondy	60.87	340	eP	P	11 25 41.4	+2.2
MOY				pmax	pmax		
	comp=Z,97nm,2.0s						
WMQ	Urumqi	60.96	326	eP	P	11 25 40.9	+1.0
WMQ				pP	pP	11 25 52.5	+1.5
WMQ				sP	pwP	11 25 58.4	+2.9
WMQ				pmax	pmax		
	comp=Z,48nm,1.1s						
PETK	Petropavlovsk-	61.88	19	P	P	11 25 45.8	-0.1
	comp=Z,8.4nm,0.8s,baz=187,slow=10,SNR=6.0						
BOD	Bodaibo	63.19	351	eP	P	11 25 56.4	+2.0
BOD				pmax	pmax		
	comp=Z,68nm,1.6s						
ZSN	Zaisan	64.81	328	eP	P	11 26 04.3	-1.0
	baz=328						
ZSN				eS	S	11 34 44.1	+0.9
	baz=328						
ZSN	Zaisan	64.81	328	eP	P	11 26 04.3	-1.0
ZSN				eS	S	11 34 44.1	+0.9
NIL	Nilore	65.21	310	P	P	11 26 07.6	-0.7
NIL				pmax	pmax		
	comp=Z,11nm,0.7s						
NIL	Nilore	65.21	310	P	P	11 26 07.6	-0.7
NIL				IAmb	IAmb	11 26 17.3	
	comp=Z,11nm,0.7s						
SHLS	Shalkode	65.39	322	eP	P	11 26 06.9	-2.4
	baz=322						
SHLS	Shalkode	65.39	322	eP	P	11 26 06.9	-2.4
PDGK	Podgornoye	65.46	322	P	P	11 26 09.0	-0.8
UZB	Uzynbulak	65.65	322	eP	P	11 26 10.3	-0.8
	baz=322						
UZB	Uzynbulak	65.65	322	eP	P	11 26 10.3	-0.8
PRZ	Przheval'sk	65.69	321	P	P	11 26 10.6	-0.8
PRZ				pmax	pmax		
	comp=Z,35nm,1.2s						
PRZ	Przheval'sk	65.69	321	P	P	11 26 10.6	-0.8
PRZ				IAmb	IAmb	11 26 40.2	
	comp=Z,35nm,1.2s						
MK31	Makanchi Array	65.79	326	i P	P	11 26 10.9	-0.8
MK31				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MK31	Makanchi Array	65.79	326	P	P	11 26 11.0	-0.7
MK31				IAmb	IAmb	11 26 25.2	
	comp=Z,32nm,1.2s						
MKAR	Makanchi Array	65.79	326	P	P	11 26 11.1	-0.7
	comp=Z,11nm,0.6s,baz=123,slow=8.1,SNR=32						
MKAR	Makanchi Array	65.79	326	P	P	11 26 10.9	-0.9
MKAR	Makanchi Array	65.79	326	P	P	11 26 10.8	-0.9
KSH	Kashi	65.81	317	P	P	11 26 15.8	+3.7
KSH				pmax	pmax		
	comp=Z,12nm,1.0s						
MAKZ	Makanchi	65.98	326	P	P	11 26 12.4	-0.5
MAKZ				pmax	pmax		
	comp=Z,56nm,1.3s						
MAKZ	Makanchi	65.98	326	P	P	11 26 12.4	-0.5
SATY	Saty	65.99	321	eP	P	11 26 12.5	-0.7
	comp=Z,6.1nm,0.6s,baz=321						
SATY	Saty	65.99	321	eP	P	11 26 12.5	-0.7
SATY				pmax	pmax		
	comp=Z,6.0nm,0.6s						
YAK	Yakutsk	66.14	0	P	P	11 26 13.7	+0.2
	comp=Z,7.1nm,0.4s,baz=207,slow=2.5,SNR=5.2						
YAK	Yakutsk	66.14	0	eP	P	11 26 14.9	+1.4
YAK				e*PP	pwP	11 26 28.5	+0.1
YAK				e		11 26 44.2	
YAK				eS	S	11 35 01.1	+2.2
YAK				e*SS	sS	11 35 23.1	+5.9
YAK				e		11 36 07.1	
YAK				eSS	SS	11 39 19.5	+4.1
YAK				pmax	pmax		
	comp=Z,30nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,12nm,1.3s						
YAK				smax	smax		
	comp=N,2µm,15.3s						
YAK				smax	smax		
	comp=E,2µm,16.2s						
YAK	Yakutsk	66.14	0	P	P	11 26 13.5	-0.1
KDJ	Kajisay	66.29	320	P	P	11 26 14.4	-0.8
KDJ				pmax	pmax		
	comp=Z,23nm,1.3s						
KDJ	Kajisay	66.29	320	P	P	11 26 14.4	-0.8
KDJ				IAmb	IAmb	11 26 37.2	
	comp=Z,23nm,1.2s						
MDOK	Medeo	66.90	321	eP	P	11 26 18.3	-0.7
	baz=321						
MDOK				eS	S	11 35 09.4	+0.2
	baz=321						
MDOK	Medeo	66.90	321	eP	P	11 26 18.3	-0.7
MDOK				eS	S	11 35 09.3	+0.1
TNSS	Tian-Shan	66.90	321	eP	P	11 26 18.6	-0.8
	baz=321						
TDK	Taldyqorghan	67.02	323	eP	P	11 26 18.9	-0.8
	comp=Z,8.8nm,0.6s,baz=323						
TDK	Taldyqorghan	67.02	323	eP	P	11 26 18.8	-0.8
TDK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BOOM	Boomskoye usch	67.27	320	IAmb	IAmb	11 26 43.5	
	comp=Z,26nm,1.4s						
TKM2	Tokmak 2	67.70	320	i P	P	11 26 22.9	-1.3
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KUU	Kurty	67.71	321	eP	P	11 26 22.9	-1.1
	comp=Z,11nm,0.5s,baz=321						
KUU	Kurty	67.71	321	eP	P	11 26 22.9	-1.1
KUU				pmax	pmax		
	comp=Z,11nm,0.5s						
AAK	Ala-Archa	68.27	319	ceP	P	11 26 28.1	+0.3
AAK				pmax	pmax		
	comp=Z,39nm,1.7s						
AAK	Ala-Archa	68.27	319	P	P	11 26 27.5	-0.2
AAK				IAmb	IAmb	11 26 46.7	
	comp=Z,13nm,1.0s						
SGDS	Sogindy	68.57	320	eP	P	11 26 28.6	-0.9
	baz=320						
KBL	Kabul	68.78	310	P	P	11 26 30.1	-1.1
KBL				pmax	pmax		
	comp=Z,14nm,1.1s						
KBL	Kabul	68.78	310	P	P	11 26 30.1	-1.1
KBL				IAmb	IAmb	11 26 40.6	
	comp=Z,14nm,1.1s						
SEM	Semipalatinsk	69.02	329	eP	P	11 26 32.2	-0.1
	baz=329						
SEM	Semipalatinsk	69.02	329	eP	P	11 26 32.1	-0.2
ZALV	Zalesovo Beam	69.02	333	P	P	11 26 31.2	-0.7
	comp=Z,8.5nm,0.8s,baz=114,slow=7.9,SNR=20						
ZALV	Zalesovo Beam	69.02	333	P	P	11 26 31.1	-0.9
ZALV	Zalesovo Beam	69.02	333	P	P	11 26 31.1	-0.9
SEY	Seymchan	69.23	11	P	P	11 26 33.7	+0.7
	comp=Z,8.7nm,0.8s,baz=209,slow=6.1,SNR=10						
BTLS	Baital	69.70	321	eP	P	11 26 35.7	-0.7
	baz=321						
BTLS	Baital	69.70	321	eP	P	11 26 35.6	-0.7
KURBB	Kurchatov Arra	70.04	328	P	P	11 26 37.8	-0.5
	comp=Z,16nm,0.6s,baz=131,slow=5.8,SNR=32						
KURK	Kurchatov	70.05	328	deP	P	11 26 37.9	-0.4
KURK				pmax	pmax		
	comp=Z,81nm,1.2s						
KURK	Kurchatov	70.05	328	P	P	11 26 37.8	-0.6
IUG	Iuzhnay	71.02	317	eP	P	11 26 43.7	-0.9
	baz=317						
IUG	Iuzhnay	71.02	317	eP	P	11 26 43.7	-0.9
KKAR	Karatay Array	71.10	318	P	P	11 26 44.6	-0.4
KKAR	Karatay Array	71.10	318	P	P	11 26 44.6	-0.4
BRLS	Borolday	71.52	318	eP	P	11 26 47.1	-0.5
	baz=318						
BRLS	Borolday	71.52	318	eP	P	11 26 47.0	-0.5
BRZS	Berezniki	72.90	326	eP	P	11 26 54.6	-1.0
	baz=326						
BRZS	Berezniki	72.90	326	eP	P	11 26 54.6	-1.0
BVAR	Borovoye Array	75.61	328	P	P	11 27 10.8	-0.5
	comp=Z,6.4nm,0.7s,baz=182,slow=12,SNR=23						
BRVK	Borovoye	75.68	328	⇓eP	P	11 27 11.2	-0.5
BRVK				pmax	pmax		
	comp=Z,57nm,1.4s						
BRVK	Borovoye	75.68	328	P	P	11 27 11.7	0.0
TIXI	Tiksi	75.80	360	P	P	11 27 10.8	-1.2
	comp=Z,5.6nm,0.7s,baz=184,slow=2.0,SNR=8.8						
TIXI	Tiksi	75.80	360	⇑eP	P	11 27 12.8	+0.8
TIXI				pmax	pmax		
	comp=Z,23nm,1.4s						
TIXI	Tiksi	75.80	360	P	P	11 27 11.5	-0.5
TIXI				IAmb	IAmb	11 27 25.8	
	comp=Z,28nm,1.4s						
BILL	Bilibino	76.58	13	eP	P	11 27 19.7	+3.2
BILL				e		11 27 28.3	
BILL				e		11 30 10.0	
BILL				ePPP	PPP	11 31 56.9	
BILL				pmax	pmax		
	comp=Z,27nm,3.5s						
MAW	Mawson	77.33	201	P	P	11 27 20.1	-0.7
	comp=Z,5.8nm,1.0s,baz=82,slow=9.5,SNR=4.1						
MAW	Mawson	77.33	201	P	P	11 27 21.0	+0.3
	baz=77						
GEYT	Alibeck	78.22	310	P	P	11 27 26.5	+0.1
	comp=Z,4.9nm,0.8s,baz=54,slow=20,SNR=6.5						
NRIK	Noril'sk	78.87	346	P	P	11 27 29.3	+0.1
	comp=Z,8.5nm,0.6s,baz=124,slow=8.8,SNR=14						
NRIK	Noril'sk	78.87	346	⇓eP	P	11 27 29.3	+0.1
NRIK				pmax	pmax		
	comp=Z,73nm,1.8s						
NRIK	Noril'sk	78.87	346	IAmb	IAmb	11 27 55.2	
	comp=Z,25nm,0.9s						
AB31	Akbulak array	80.19	321	i P	P	11 27 35.9	-0.9
ABKAR	Akbulak array	80.19	321	IAmb	IAmb	11 27 50.2	
	comp=Z,23nm,0.9s						
AKTO	Aktyubinsk	81.74	322	P	P	11 27 44.2	-0.9
	comp=Z,8.9nm,0.9s,baz=104,slow=11,SNR=12						
SVE	Sverdlovsk	82.29	329	eP	P	11 27 48.3	+0.5
SVE				pmax	pmax		
	comp=Z,33nm,1.4s						
ARU	Arti	83.24	328	P	P	11 27 52.6	-0.1
	comp=Z,1.7nm,0.4s,baz=137,slow=3.1,SNR=6.2						
ARU	Arti	83.24	328	c iP	P	11 27 51.3	-1.5
ARU				S	S	11 38 09.8	-0.2
ARU				SS	SS	11 43 32.3	-3.1
ARU				pmax	pmax		
	comp=Z,17nm,1.3s						
ARU	Arti	83.24	328	P	P	11 27 52.2	-0.6
QSPA	South Pole Qui	85.66	180	P	P	11 28 04.6	-0.4
	comp=Z,5.2nm,1.0s,baz=319,slow=4.2,SNR=12						
QSPA	South Pole Qui	85.66	180	P	P	11 28 04.7	-0.4
QSPA				IAmb	IAmb	11 28 06.9	
	comp=Z,23nm,1.4s						
RAYN	Ar Rayn	86.34	294	P	P	11 28 07.3	-1.9
RAYN				pmax	pmax		
	comp=Z,15nm,0.8s						
RAYN	Ar Rayn	86.34	294	P	P	11 28 07.2	-1.9
RAYN				IAmb	IAmb	11 28 11.5	
	comp=Z,15nm,0.8s						
TTA	Tatalina	86.73	26	P	P	11 28 10.3	0.0
TTA				pmax	pmax		
	comp=Z,22nm,1.3s						
TTA	Tatalina	86.73	26	P	P	11 28 10.2	0.0
TTA				IAmb	IAmb	11 28 20.3	
	comp=Z,22nm,1.3s						
TTA	Tatalina	86.73	26	P	P	11 28 08.8	-1.4
	baz=254						
GCSA	Galena City Sc	86.87	24	P	P	11 28 11.5	+0.7
	baz=253						
N19K	Bonanza Creek	86.87	28	P	P	11 28 10.4	-0.6
N19K	Bonanza Creek	86.87	28	P	P	11 28 10.6	-0.4
	baz=256						
L19K	White Mountain	87.05	27	P	P	11 28 12.8	+1.0
	baz=255						
M19K	Big River Lodg	87.19	27	P	P	11 28 14.0	+1.6
	baz=256						
L20K	Farewell, AK	87.56	27	P	P	11 28 16.5	+2.3
	baz=256						
K20K	Telida	87.69	26	P	P	11 28 18.7	+3.8
	baz=256						
BELG	Belogornoye	88.51	323	⇑iP	P	11 28 19.6	+0.7
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIRV	Kirov	88.56	329	⇓eP	P	11 28 20.8	+1.9
GNI	Garni	88.86	310	⇑eP	P	11 28 22.8	+1.8
GNI				pmax	pmax		
	comp=Z,20nm,1.5s						
A21K	Barrow	88.88	18	P	P	11 28 21.5	+1.3
	baz=253						
RC01	Rabbit Creek A	89.19	29	P	P	11 28 23.2	+1.2
	baz=260						
ZEI	Tsey	89.77	313	eP	P	11 28 27.6	+2.3
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KBZ	Khabaz	90.59	314	P	P	11 28 30.5	+1.7
	comp=Z,1.3nm,0.5s,baz=90,slow=5.1,SNR=2.1						
TOLK	Toolik Lake Re	90.61	21	P	P	11 28 28.8	+0.3
	baz=260						
KIV	Kislovodsk	90.77	314	eP	P	11 28 30.2	+0.4
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GURO	Guroymak-BITLI	90.79	308	IAmb	IAmb	11 28 39.9	
	comp=Z,11nm,0.8s						
H24K	Noodor Dome	90.80	24	IAmb	IAmb	11 28 35.8	
	comp=Z,9.8nm,1.2s						
H24K	Noodor Dome	90.80	24	P	P	11 28 28.6	-0.8
	baz=261						
HDA	Harding Lake	90.99	26	P	P	11 28 29.2	-1.0
	baz=262						
ILAR	Eielson Array	91.06	25	P	P	11 28 28.3	-2.3
	comp=Z,0.8nm,0.7s,baz=263,slow=5.2,SNR=3.2						
BMAR	Burnt Mountain	92.31	23	P	P	11 28 35.5	-0.9
KMBO	Kilima Mbogo	92.31	269	P	P	11 28 37.9	+0.1
	comp=Z,1.0nm,0.3s,baz=56,slow=6.2,SNR=5.6						
KMBO	Kilima Mbogo	92.31	269	i P	P	11 28 38.2	+0.4
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMBO	Kilima Mbogo	92.31	269	P	P	11 28 33.4	-4.4
J26L	Joseph Creek	92.46	26	P	P	11 28 36.7	-0.4
	baz=265						
L27K	Beaver Creek,	93.12	27	IAmb	IAmb	11 28 49.4	
	comp=Z,6.1nm,0.8s						
L27K	Beaver Creek,	93.12	27	P	P	11 28 40.0	-0.2
	baz=267						
KLMR	Klimovskoe	93.79	331	eP	P	11 28 38.7	-4.5
KLMR				pmax	pmax		
	comp=Z,32nm,1.5s						
KLMR	Klimovskoe	93.79	331	eP	P	11 28 38.8	-4.5
KLMR				AMP		11 28 51.4	
	comp=Z,32nm,1.5s						
OBN	Obninsk	95.26	325	⇓eP	P	11 28 49.1	-1.0
OBN				e		11 32 41.4	
OBN				ePPP	PPP	11 34 40.9	
OBN				pmax	pmax		
	comp=Z,18nm,0.5s						
EPYK	Eagle Plains	95.37	24	P	P	11 28 50.5	+0.1
	baz=272						
APA	Apatity	96.34	337	⇓iP	P	11 28 58.2	+3.5
APA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
INK	Inuvik	96.49	22	P	P	11 28 54.6	-0.9
	baz=275						
SNAA	Sanae	98.19	194	P	Pdif	11 29 03.4	+0.2
SNAA	Sanae	98.19	194	⇓eP	P	11 29 03.1	-0.1
SNAA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ARCES	ARCESS Array B	98.94	340	P	Pdif	11 29 06.8	+0.4
	comp=Z,4.5nm,0.9s,baz=83,slow=2.9,SNR=4.6						
VNA2	Neumayer--Watz	99.77	193	P	Pdif	11 29 08.3	-1.9
	baz=126,slow=2.5						
YKA	Yellowknife Ar	105.48	26	PKiKP	PKiKP	11 33 48.2	-0.8
	comp=Z,0.7nm,0.9s,baz=285,slow=2.4,SNR=2.4						
GERES	GERESS Array B	110.13	321	PKiKP	PKiKP	11 33 57.9	-0.4
	comp=Z,0.2nm,0.3s,baz=52,slow=2.2,SNR=3.9						
PDAR	Pinedale Array	115.23	44	PKP	PKPdf	11 34 09.3	+1.0
	comp=Z,0.6nm,0.9s,baz=151,slow=3.4,SNR=3.7						
ECSD	EROS Data Cent	123.43	39	PKPdf	PKiKP	11 34 24.2	+0.2
TXAR	Lajitas Array	123.81	57	PKP	PKPdf	11 34 25.1	+0.1
	comp=Z,0.6nm,0.8s,baz=285,slow=1.4,SNR=6.1						
P38A	Dawn	127.50	42	PKPdf	PKPdf	11 34 30.0	-1.7
TORD	Torodi Ar. Bea	127.90	283	PKP	PKPdf	11 34 32.8	-0.3
	comp=Z,2.7nm,0.7s,baz=61,slow=1.7,SNR=9.9						
TORD	Torodi Ar. Bea	127.90	283	PKPdf	PKPdf	11 34 31.8	-1.3
S39A	Bolivar	128.62	44		PKPdf	11 34 31.9	-2.0
PLCA	Paso Flores	131.51	159	PKP	PKiKP	11 34 41.7	+1.3
	comp=Z,1.9nm,0.9s,baz=187,slow=8.0,SNR=3.1						
PLCA	Paso Flores	131.51	159	eP	PKiKP	11 34 41.9	+1.5
TRQA	Tornquist	136.50	167	eP	PKiKP	11 34 50.5	0.0
PLTB	Pedras Altas	144.01	175	eP	PKPdf	11 35 03.0	+0.5
AC02	Maricunga	144.11	151	PKPdf	PKPab	11 35 01.3	+0.2
CPSB	Cacapava Do Su	145.37	175	eP	PKPdf	11 35 05.7	+0.8
ITQB	Itaqui	145.69	170	eP	PKPab	11 35 06.0	-0.1
ITAB	Concordia	148.61	177	eP	PKPbc	11 35 13.5	-0.6
TA02	Huaiquique	148.79	142		PKPbc	11 35 15.2	+0.4
CPUP	Villa Florida	148.81	168	PKPbc	PKPbc	11 35 14.0	-0.6

	comp=Z,5.9nm,0.8s,baz=121,slow=1.1,SNR=6.8						
CPUP	Villa Florida	148.81	168	PKP2	PKPbc	11 35 14.7	+0.1
CPUP	Villa Florida	148.81	168	eP	PKPdf	11 35 12.3	+1.5
CPUP	Villa Florida	148.81	168		PKPbc	11 35 14.7	+0.1
PB08	IPOC Station P	149.48	143		PKiKP	11 35 17.8	-0.3
TIJ01	Guaruva-PR	150.53	182	eP	PKPdf	11 35 15.7	+2.0
PTGB	Pitanga	151.11	177	eP	PKPdf	11 35 16.8	+2.2
PET01	Itanhaem-SP	151.43	186	eP	PKPdf	11 35 17.3	+2.4
OTAV	Otavalo	151.63	97	eP	PKPdf	11 35 18.5	+2.4
PARB	Paraibuna	152.15	189	eP	PKPdf	11 35 18.9	+2.7
MAN01	Angra dos Reis	152.29	193	eP	PKPdf	11 35 19.0	+2.7
FRTB	Fartura	152.52	182	eP	PKPdf	11 35 18.4	+1.7
DUB01	Friburgo-RJ	152.65	196	eP	PKPbc	11 35 20.6	-3.4
LPAZ	La Paz	153.02	140	PKPbc	PKiKP	11 35 27.0	+1.3
	comp=Z,2.5nm,0.6s,baz=299,slow=3.0,SNR=8.0						
LPAZ	La Paz	153.02	140	eP	PKPdf	11 35 19.6	+1.4
CZSB	Cruzeiro do Su	154.69	118	eP	PKPdf	11 35 20.6	+0.6
BB19B	Bebedouro	154.73	184	eP	PKPdf	11 35 22.0	+2.1
ITRB	Iturama	156.15	180	eP	PKPdf	11 35 24.6	+2.8
SALV	Santo Antonio	159.25	165	eP	PKPdf	11 35 28.9	+3.2
SDV	Santo Domingo	159.34	76	eP	PKPdf	11 35 28.6	+2.5
PDRB	Porto dos Gac	162.97	158	eP	PKPdf	11 35 31.1	+1.3
PRPB	Parauapebas	169.59	183	eP	PKPdf	11 35 37.6	+2.7

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*IDC **09** 11:18:32.5±0.8, 4°.08S×129°.57E, h0^{km}, mb4.6/17, mb1 4.6/19, mb1mx4.2/44, mbtmp4.6/19, ML4.3/2, Error ellipse: s-maj=26.2km s-min=17.7km az=59.0*

*NEIC **09** 11:18:37.0±1.3, 4°.10S±0°.06×129°.62E±0°.06, h30^{km}±5^{km}, mb4.8/48, Error ellipse: s-maj=9.3km s-min=8.5km az=83.0*

ISC 09 11:18:37.3±0.3, **4°.09S**±0°.05×**129°.63E**±0°.06, **h36**^{km}**, n90, σ1^{s}.03**/91**, mb4.7**/36**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.86	66	Pn	Pn	11 19 19.8	-0.6
SIJI	Sorong	3.59	27	Pn	Pn	11 19 30.6	+0.2
	15nm,0.3s,baz=216,slow=19,SNR=2.7						
SIJI				Sn	Sn	11 20 09.3	-2.4
	5.3nm,0.3s,baz=267,slow=23,SNR=1.7						
SAUI	Saumlaki	4.21	157	Pn	Pn	11 19 38.8	-0.2
TNTI	Ternate	5.33	335	Pn	Pn	11 19 53.0	-1.3
BATI	Baumata	8.48	224	Pn	Pn	11 20 40.6	+2.9
	7.0nm,0.3s,baz=90,slow=20,SNR=2.2						
MMRI	Maumere	8.62	238	Pn	Pn	11 20 39.0	-0.6
MTN	Manton Dam	8.83	170	Pn	Pn	11 20 41.9	-0.5
KAPI	Kappang	9.89	264	Pn	Pn	11 21 01.2	+4.3
	0.8nm,0.3s,baz=113,slow=9.5,SNR=4.5						
KAPI	Kappang	9.89	264	Pn	Pn	11 20 55.6	-1.3
TOLI2	Tolitoli	10.24	300	Pn	Pn	11 20 59.3	-2.4
KNRA	Kununurra	11.55	184	Pn	Pn	11 21 19.2	-0.5
BKB	Balikpapan	13.02	282	Pn	Pn	11 21 37.3	-2.5
JAGI	Jajag, Banyuwa	15.98	253	Pn	Pn	11 22 18.7	-0.9
WB0	Warramunga Arr	16.26	164	Pn	Pn	11 22 22.7	-0.3
WRAB	Tennant Creek	16.41	164	Pn	Pn	11 22 24.5	-0.4
WRAB				IAmb	IAmb	11 22 36.2	
	comp=Z,69nm,1.0s						
WB2	Warramunga Arr	16.42	164	Pn	Pn	11 22 24.5	-0.6
MANU	Manus Island	17.83	84		Pn	11 22 42.0	-0.7
PMG	Port Moresby	18.19	108	P	Pn	11 22 47.5	+0.4
PMG				IAmb	IAmb	11 22 53.2	
	comp=Z,83nm,1.5s						
SBUM	Sibu	18.57	290	P	Pn	11 22 51.8	0.0
SMRI	Semarang	19.32	260	P	Pn	11 23 00.1	-0.7
SMRI				IAmb	IAmb	11 23 04.7	
	comp=Z,67nm,1.1s						
PSA00	Pilbara Seismi	19.81	208	P	Pn	11 23 05.7	-0.8
PSA00				IAmb	IAmb	11 23 06.5	
	comp=Z,36nm,1.1s						
PSA00	Pilbara Seismi	19.81	208	P	Pn	11 23 05.6	-0.8
PSA00				IAmb	IAmb	11 23 06.5	
	comp=Z,71nm,1.1s						
ASAR	Alice Springs	19.90	168	P	P	11 23 06.5	+0.7
	comp=Z,1.3nm,0.3s,baz=346,slow=9.4,SNR=2.3						
CTA	Charters Tower	22.70	136	P	P	11 23 36.0	0.0
	comp=Z,7.4nm,0.7s,baz=324,slow=14,SNR=2.1						
CTAO	Charters Tower	22.70	136	P	P	11 23 36.5	+0.5
DLV	T Lat	26.37	307	P	P	11 24 10.5	-0.1
DLV				IAmb	IAmb	11 24 16.9	
	comp=Z,50nm,1.5s						
MYKOM	Kota Tinggi	26.41	282	P	P	11 24 11.5	+0.7
MYKOM				IAmb	IAmb	11 24 25.0	
	comp=Z,28nm,1.3s						
BBOO	Buckleboo	29.20	169	P	P	11 24 34.8	-0.7
BBOO				IAmb	IAmb	11 24 40.0	
	comp=Z,22nm,1.2s						
EIDS	Eidsvold	29.54	138	P	P	11 24 37.8	-0.8
IPM	Ipoh	29.81	286	P	P	11 24 41.3	+0.1
HNR	Honiara	30.56	102	P	P	11 24 50.0	+2.2
	comp=Z,63nm,0.4s,baz=206,slow=2.2,SNR=4.2						
SLVN	Son La	35.69	316	P	P	11 25 32.4	-0.1
SLVN				IAmb	IAmb	11 25 44.9	
	comp=Z,13nm,1.1s						
JNU	Nakatsue	37.02	2	P	P	11 25 42.3	-1.4
CMAR	Chiang Mai Arr	37.63	308	P	P	11 25 50.4	+1.3
	comp=Z,5.4nm,0.6s,baz=137,slow=7.5,SNR=7.9						
CHTO	Chiang Mai	37.83	308	P	P	11 25 51.4	+0.7
CHTO				IAmb	IAmb	11 25 52.7	
	comp=Z,15nm,0.8s						
JHS	Saijyo	39.02	5	P	P	11 26 00.1	-0.3
JHS				IAmb	IAmb	11 26 02.8	
	comp=Z,17nm,1.1s						
MAJO	Matsushiro	41.21	11	P	P	11 26 17.9	-0.7
MAJO				IAmb	IAmb	11 26 18.8	
	comp=Z,13nm,1.0s						
MAT	Matsushiro	41.21	11	P	P	11 26 16.4	-2.2
MJAR	Matsushiro Arr	41.21	11	P	P	11 26 17.4	-1.2
	comp=Z,4.5nm,0.6s,baz=184,slow=9.5,SNR=6.6						
JYT	Yasato	41.31	13	P	P	11 26 19.8	+0.4
JYT				IAmb	IAmb	11 26 38.3	
	comp=Z,16nm,1.0s						
KSAR	Wonju Array Be	41.35	358	P	P	11 26 20.1	+0.4
KSRS	Korea Array	41.36	358	P	P	11 26 20.9	+1.1
	comp=Z,3.9nm,0.8s,baz=176,slow=9.3,SNR=9.1						
TAU	Tasmania Unive	41.74	160	P	P	11 26 22.1	-0.7
JSD	Sado	42.67	10	P	P	11 26 29.3	-1.2
JMM	Marumori	43.01	13	P	P	11 26 33.5	+0.3
BJT	Baijiatuau	45.60	346	P	P	11 26 53.7	-0.3
SHL	Shillong	47.00	311	P	P	11 27 05.1	-0.3
USA0B	Ussuriysk Arra	48.12	2	P	P	11 27 13.2	-0.3
USA0B				IAmb	IAmb	11 27 26.8	
	comp=Z,16nm,1.4s						
USRK	Ussuriysk Ar.	48.12	2	P	P	11 27 13.8	+0.3
	comp=Z,4.2nm,0.6s,baz=184,slow=9.8,SNR=6.9						
USRK	Ussuriysk Ar.	48.12	2	P	P	11 27 13.3	-0.2
MDJ	Mudanjiang	48.48	360	P	P	11 27 16.4	+0.1
MDJ				IAmb	IAmb	11 27 25.4	
	comp=Z,14nm,1.2s						
LSA	Lhasa	49.87	315	P	P	11 27 28.3	+0.5
PYZ	Puysegur Point	52.83	148	P	P	11 27 49.6	+0.4
KLR	Kul'dur	53.13	2	P	P	11 27 52.2	+0.9
	comp=Z,3.3nm,0.9s,baz=280,slow=0.7,SNR=4.1						
HYB	Hyderabad	54.74	295	iP	P	11 28 02.0	-1.7
MSWZ	Moikau Station	55.16	139	P	P	11 28 06.3	0.0
ULN	Ulaanbaatar	55.40	342	P	P	11 28 08.3	+0.2
ULN				IAmb	IAmb	11 28 10.3	
	comp=Z,13nm,0.9s						
SONM	Songino Array	55.58	341	P	P	11 28 10.4	+1.1
	comp=Z,5.0nm,1.0s,baz=148,slow=6.0,SNR=5.0						
MCQ	Macquarie Isla	55.61	160	P	P	11 28 09.5	+0.2
NIL	Nilore	65.06	310	P	P	11 29 13.9	-0.4
MK31	Makanchi Array	65.61	326	P	P	11 29 17.7	+0.1
MK31				IAmb	IAmb	11 29 36.8	
	comp=Z,7.5nm,0.9s						
MKAR	Makanchi Array	65.61	326	P	P	11 29 18.3	+0.7
	comp=Z,7.5nm,0.8s,baz=126,slow=7.9,SNR=8.5						
MKAR	Makanchi Array	65.61	326	P	P	11 29 18.1	+0.5
MAKZ	Makanchi	65.79	326	P	P	11 29 18.9	+0.1
YAK	Yakutsk	65.93	0	P	P	11 29 20.0	+0.7
	comp=Z,9.6nm,0.5s,baz=118,slow=0.3,SNR=4.4						
YAK	Yakutsk	65.93	0	P	P	11 29 20.0	+0.7
ZAA0	Zalesovo Array	68.83	333	P	P	11 29 38.0	+0.2
ZAA0				IAmb	IAmb	11 29 56.0	
	comp=Z,11nm,1.0s						
ZALV	Zalesovo Beam	68.83	333	P	P	11 29 38.0	+0.2
	comp=Z,4.0nm,0.9s,baz=107,slow=5.0,SNR=4.4						
ZALV	Zalesovo Beam	68.83	333	P	P	11 29 38.0	+0.2
SEY	Seymchan	69.03	11	P	P	11 29 40.0	+1.1
	comp=Z,2.4nm,0.8s,baz=222,slow=4.7,SNR=3.8						
KURBB	Kurchatov Arra	69.85	328	P	P	11 29 44.8	+0.5
	comp=Z,14nm,0.9s,baz=128,slow=5.4,SNR=11						
KURK	Kurchatov	69.86	328	P	P	11 29 44.9	+0.6
VNDA	Vanda	75.36	173	P	P	11 30 16.6	+0.1
BVAR	Borovoye Array	75.42	328	P	P	11 30 17.9	+0.5
	comp=Z,7.0nm,0.9s,baz=194,slow=11,SNR=5.4						
BRVK	Borovoye	75.49	328	P	P	11 30 18.1	+0.4
BRVK				IAmb	IAmb	11 30 19.3	
	comp=Z,12nm,0.9s						
TIXI	Tiksi	75.59	360	P	P	11 30 18.2	+0.3
	comp=Z,4.3nm,0.7s,baz=165,slow=3.9,SNR=4.2						
TIXI	Tiksi	75.59	360	P	P	11 30 18.0	+0.1
TIXI				IAmb	IAmb	11 30 19.7	
	comp=Z,8.6nm,1.1s						
NRIK	Noril'sk	78.66	346	P	P	11 30 35.7	+0.5
	comp=Z,9.6nm,0.9s,baz=129,slow=7.9,SNR=5.1						
NRIK	Noril'sk	78.66	346	P	P	11 30 36.2	+1.0
ABKAR	Akbulak array	80.01	321		P	11 30 43.4	+0.4
ABKAR				IAmb	IAmb	11 30 44.1	
	comp=Z,8.5nm,0.9s						
AKTO	Aktyubinsk	81.56	322	P	P	11 30 51.3	+0.1
	comp=Z,5.3nm,0.8s,baz=118,slow=7.2,SNR=3.8						
CNBA	Chernabura Isl	82.40	33	P	P	11 30 55.8	+0.3
QSPA	South Pole Qui	85.87	180	P	P	11 31 12.6	-0.6
QSPA				IAmb	IAmb	11 31 23.8	
	comp=Z,8.2nm,1.4s						
RAYN	Ar Rayn	86.23	294	P	P	11 31 14.6	-1.2
TTA	Tatalina	86.56	26	P	P	11 31 18.0	+1.5
TTA				IAmb	IAmb	11 31 35.7	
	comp=Z,6.1nm,1.2s						
ILAR	Eielson Array	90.89	25	P	P	11 31 35.7	-1.2
	comp=Z,0.8nm,0.9s,baz=262,slow=5.0,SNR=3.4						
KMBO	Kilima Mbogo	92.29	269	P	P	11 31 45.0	+0.1
	comp=Z,1.0nm,0.3s,baz=86,slow=15,SNR=1.6						
PDAR	Pinedale Array	115.10	44	PKP	PKiKP	11 37 15.3	0.0
	comp=Z,0.3nm,0.8s,baz=228,slow=1.1,SNR=4.3						
TXAR	Lajitas Array	123.72	57	PKP	PKiKP	11 37 32.9	+0.6
	comp=Z,1.0nm,1.0s,baz=223,slow=2.2,SNR=4.3						
TORD	Torodi Ar. Bea	127.83	283	PKP	PKPdf	11 37 40.3	+0.2
	comp=Z,2.1nm,1.0s,baz=67,slow=1.9,SNR=1.9						

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*SOME **09** 11:26:25.8, 38°.90N×72°.83E, h5^{km}*

*KRNET **09** 11:26:26.7±0.1, 38°.81N×73°.31E, h19^{km}, mb3.6*

*NNC **09** 11:26:29.0±4.4, 38°.70N×73°.39E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=34.1km s-min=22.0km az=158.0*

*IDC **09** 11:26:30.6±2.4, 38°.99N×73°.48E, h0^{km}, mb3.8/3, mb1 3.9/5, mb1mx3.2/56, mbtmp3.8/5, ML3.3/3, Error ellipse: s-maj=33.9km s-min=32.5km az=129.0*

ISC 09 11:26:29.6±1.2, **38°.99N**±0°.07×**73°.19E**±0°.04, **h10**^{km}**, n40, σ2^{s}.34**/55**, mb3.5**/3**, 12C-6D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	1.05	13	⇑eP	Pb	11 26 49.4	-0.6
	baz=7.0						
SFK				⇑eS	Sg	11 27 05.8	+2.3
	baz=7.0						
DRK	Karamyk	1.19	295	⇑iP	Pn	11 26 51.8	-0.7
	baz=0.0						
DRK				⇑iS	Sg	11 27 10.1	+2.2
	baz=0.0						
OHH	Osh	1.56	349	⇑iP	Pb	11 26 58.9	+0.2
	baz=47						
OHH				⇑iS	Sg	11 27 22.5	+2.6
	baz=47						
BTK	Batken	2.12	301	⇓iP	Pb	11 27 06.7	-1.5
	baz=4.0						
BTK				⇓iS	Sb	11 27 35.8	+1.1
	baz=4.0						
TRKS	Terek-Say	2.98	329	⇑iP	Pn	11 27 18.2	+1.1
	baz=29						
TRKS				⇑iS	Sn	11 27 55.9	+2.9
	baz=29						
AML	Almayashu	3.16	7	P	Pb	11 27 25.2	-0.8
	SNR=31						
UCH	Uchtor	3.39	17	P	Pb	11 27 31.6	+1.6
	SNR=6.8						
MNAS	Manas	3.53	352	⇑eP	Pn	11 27 26.8	+2.2
	baz=51						
MNAS				⇑iS	Sn	11 28 10.7	+4.2
	baz=51						
EKS2	Erkin-Say	3.69	7	P	Pb	11 27 31.3	-3.7
	SNR=5.9						
MRKS	Merke	3.75	0	eP	Pb	11 27 37.9	+1.9
	10nm,0.8s						
MRKS				eS	Sg	11 28 29.6	-0.4
	30nm,0.9s						
MRKS	Merke	3.75	0	Pg	Pb	11 27 34.9	-1.1
	9.8nm,0.6s						
MRKS				Lg	Lg	11 28 24.9	
	30nm,0.9s						
AAK	Ala-Archa	3.77	15	Pn	Pb	11 27 33.4	-3.0
	3.8nm,0.3s,baz=193,slow=10,SNR=26						
AAK				Sn	Sb	11 28 20.2	-2.0
	0.9nm,0.3s,baz=356,slow=20,SNR=1.6						
AAK	Ala-Archa	3.77	15	P	Pb	11 27 36.1	-0.4
	SNR=9.9						
AAK	Ala-Archa	3.77	15	⇑Pn	Pb	11 27 35.9	-0.5
	22nm,0.7s						
AAK				⇓Sn	Sb	11 28 25.1	+2.9
	12nm,0.7s						
KBK	Karagaybulak	3.90	19	P	Pg	11 27 43.0	-1.2
	SNR=6.1						
CHMS	Chumysh	4.17	16	P	Pb	11 27 42.1	-1.1
	SNR=5.5						
TKM2	Tokmak 2	4.33	24	⇓Pg	Pg	11 27 51.2	-1.2
	9.6nm,0.6s						
TKM2				⇓Lg	Lg	11 28 53.9	
	14nm,0.8s						
KST	Kastek	4.56	26	eP	Pg	11 27 54.4	-2.5
	11nm,0.6s						
KST				eS	Sg	11 28 58.0	+2.0
	17nm,1.0s						
KST	Kastek	4.56	26	Pg	Pg	11 27 54.4	-2.5
	11nm,0.6s						
KST				Lg	Lg	11 28 57.9	
	17nm,1.0s						
KK08	Karatay Array	4.59	334	⇑Pn	Pn	11 27 44.5	+5.4
	7.1nm,0.5s						
KK08				⇓Sn	Sb	11 28 41.6	-3.9
	20nm,0.8s						
DGS	Degeres	4.67	24	eP	Pg	11 27 55.5	-3.5
	6.5nm,0.5s						
DGS				eS	Sg	11 29 00.2	+0.6
	21nm,1.0s						
DGS	Degeres	4.67	24	Pg	Pg	11 27 55.5	-3.5
	6.5nm,0.5s						
DGS				Lg	Lg	11 29 00.2	
	21nm,1.0s						
MTBS	Maitube	4.80	30	eP	Pg	11 27 57.2	-4.4
	7.9nm,0.6s						
MTBS				eS	Sg	11 29 03.3	-0.6
	9.3nm,1.1s						
MTBS	Maitube	4.80	30	Pg	Pg	11 27 57.2	-4.4
	7.9nm,0.6s						
MTBS				Lg	Lg	11 29 03.3	
	9.3nm,1.1s						
TNSS	Tian-Shan	4.94	34	eP	Pg	11 28 02.3	-2.0
	7.1nm,0.6s						
TNSS				eS	Sg	11 29 11.9	+3.6
	7.3nm,1.1s						
TNSS	Tian-Shan	4.94	34	Pg	Pg	11 28 02.3	-2.0
	7.1nm,0.6s						
TNSS				Lg	Lg	11 29 11.9	
	7.3nm,1.1s						
KRBS	Karabastau	5.06	21	eP	Pg	11 28 03.3	-3.2
	8.6nm,0.3s						
KRBS				eS	Sg	11 29 13.4	+1.4
	9.3nm,1.1s						
KRBS	Karabastau	5.06	21	Pg	Pg	11 28 03.3	-3.2
	8.6nm,0.3s						
KRBS				Lg	Lg	11 29 13.4	
	9.3nm,1.1s						
MDOK	Medeo	5.08	34	eP	Pg	11 28 04.4	-2.6
	7.9nm,0.5s						
MDOK				eS	Sg	11 29 15.6	+2.8
	18nm,1.8s						
MDOK	Medeo	5.08	34	Pg	Pg	11 28 04.4	-2.6
	7.9nm,0.5s						
MDOK				Lg	Lg	11 29 15.6	
	18nm,1.8s						
KOTS	Kotyrbulak	5.17	34	eP	Pg	11 28 06.0	-2.6
	6.6nm,0.8s						
KOTS				eS	Sg	11 29 18.2	+2.7
	29nm,0.9s						
KOTS	Kotyrbulak	5.17	34	Pg	Pg	11 28 06.0	-2.6
	6.6nm,0.8s						
KOTS				Lg	Lg	11 29 18.2	
	29nm,0.9s						
KUU	Kurty	5.44	25	eP	Pg	11 28 10.8	-2.9
	6.9nm,0.7s						
KUU				eS	Sg	11 29 26.4	+2.2
	18nm,1.4s						
KUU	Kurty	5.44	25	Pg	Pg	11 28 10.8	-2.9
	6.9nm,0.7s						
KUU				Lg	Lg	11 29 26.4	
	18nm,1.4s						
AB31	Akbulak array	13.97	322	P	Pn	11 29 47.5	-0.1
	0.5nm,0.5s,baz=130,slow=13,SNR=14						
AKTO	Aktyubinsk	15.69	322	Pn	P	11 30 13.2	-1.5
	0.1nm,0.3s,baz=123,slow=17,SNR=1.4						
ZALV	Zalesovo Beam	16.93	24	Pn	P	11 30 28.0	-0.5
	0.2nm,0.3s,baz=206,slow=9.0,SNR=1.2						
SONM	Songino Array	25.52	59	P	P	11 31 59.9	+1.5
	0.4nm,0.6s,baz=260,slow=8.6,SNR=4.7						
ARCES	ARCESS Array B	39.55	336	P	P	11 34 03.5	+3.2
	6.4nm,1.1s,baz=104,slow=7.5,SNR=3.6						
YKA	Yellowknife Ar	78.67	4	P	P	11 38 33.3	+1.9
	0.3nm,0.6s,baz=354,slow=5.7,SNR=1.5						

ISC 09 11:27:33.0±1.1, **48°.79N**±0°.07×**18°.10E**±0°.05, **h12**^{km}±10^{km}**, n6, σ0^{s}.69**/11**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAVC	Velka Javorina	0.29	284	ePG	Pg	11 27 38.3	-0.7
JAVC				eSG	Sg	11 27 43.4	+0.4
KOLL	Kolacno	0.29	136	ePG	Pg	11 27 39.4	+0.5
KOLL				eSG	Sb	11 27 43.9	-1.0
SMOL	Smolenice	0.52	239	eSG	Sb	11 27 51.7	+0.2
VYHS	Vyhne	0.57	121	ePG	Pg	11 27 43.5	-0.6
VYHS				eSG	Sg	11 27 52.2	+0.5
MORC	Moravsky Berou	1.05	340	ePG	Pg	11 27 53.2	-0.1
MORC				eSG	Sn	11 28 08.8	+0.5
VRAC	Vranov	1.12	298	ePG	Pb	11 27 54.0	-0.2
VRAC				eSG	Sn	11 28 10.5	+0.7

IDC 09 11:28:05.1±1.8**, 4°.31S**×**128°.89E, h0**^{km}**, mb3.5**/1**, mb1 3.7**/4**, mb1mx3.0**/55**, mbtmp3.5**/4**, ML3.3**/3**, Error ellipse: s-maj=59.3km s-min=29.7km az=82.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.16	35	Pn	Pn	11 29 10.8	+0.7
	3.7nm,0.3s,baz=241,slow=23,SNR=2.5						
SIJI				Sn	Sn	11 29 55.4	-4.1
	3.7nm,0.3s,baz=214,slow=22,SNR=2.0						
WRA	Warramunga Arr	16.42	162	Pn	Pn	11 31 55.9	-1.2
	0.1nm,0.3s,baz=347,slow=14,SNR=1.8						
ASAR	Alice Springs	19.84	166	P	P	11 32 38.5	+0.7
	0.1nm,0.3s,baz=349,slow=9.5,SNR=3.3						
MKAR	Makanchi Array	65.39	327	P	P	11 38 49.3	-0.3
	0.4nm,0.9s,baz=123,slow=5.5,SNR=1.7						

IDC 09 11:29:15.3±1.8**, 4°.11S**×**129°.51E, h0**^{km}**, mb3.5**/1**, mb1 3.7**/4**, mb1mx3.0**/53**, mbtmp3.5**/4**, ML3.3**/3**, Error ellipse: s-maj=65.5km s-min=29.1km az=83.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.67	29	Pn	Pn	11 30 13.8	+0.5
	3.5nm,0.3s,baz=210,slow=20,SNR=1.9						
WRA	Warramunga Arr	16.42	164	Pn	Pn	11 33 06.6	-0.8
	0.1nm,0.3s,baz=349,slow=12,SNR=1.6						
ASAR	Alice Springs	19.90	168	P	P	11 33 49.0	+0.5
	0.1nm,0.3s,baz=352,slow=10,SNR=1.5						
MKAR	Makanchi Array	65.56	326	P	P	11 40 00.7	-0.2
	0.4nm,0.7s,baz=122,slow=7.6,SNR=2.3						

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*IDC **09** 11:29:53.6±0.8, 4°.21S×129°.42E, h0^{km}, mb4.0/8, mb1 4.1/11, mb1mx3.7/55, mbtmp4.0/11, ML4.0/3, Error ellipse: s-maj=46.7km s-min=17.0km az=80.0*

*NEIC **09** 11:29:56.3±1.7, 3°.91S±0°.07×129°.67E±0°.06, h20^{km}±6^{km}, mb4.1/13, Error ellipse: s-maj=10.8km s-min=8.1km az=214.0*

*DJA **09** 11:29:58.3±0.7, 4°S±8°×13°0E±°, h10^{km}, M4.2/8, mb4.6/1, MLv3.9/8*

ISC 09 11:29:58.5±0.5, **4°.10S**±0°.05×**129°.62E**±0°.06, **h36**^{km}**, n43, σ1^{s}.32**/45**, mb4.1**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.02	317	P	Pn	11 30 16.1	-0.1
MSAI				S	Sn	11 30 27.5	-1.7
AAI	Ambon	1.48	286	P	Pn	11 30 23.0	+0.5
FAKI	Fak Fak	2.87	66	P	Pn	11 30 43.3	+1.5
FAKI	Fak Fak	2.87	66		Pn	11 30 38.7	-3.1
SIJI	Sorong	3.60	27	Pn	Pn	11 30 53.0	+1.1
	11nm,0.3s,baz=247,slow=19,SNR=6.8						
SIJI				Sn	Sn	11 31 32.7	-0.5
	12nm,0.3s,baz=254,slow=23,SNR=2.4						
SWI	Sorong	3.61	27	P	Pn	11 30 53.3	+1.5
LBMI	Labuha	4.04	328	P	Pn	11 30 59.9	+2.1
SANI	Sanana	4.16	299	P	Pn	11 31 00.9	+1.5
SAUI	Saumlaki	4.21	157	Pn	Pn	11 31 01.4	+1.4
MTN	Manton Dam	8.82	170	Pn	Pn	11 32 04.6	+1.2
KAPI	Kappang	9.88	264	Pn	Pn	11 32 18.3	+0.3
TOLI2	Tolitoli	10.24	300	Pn	Pn	11 32 21.1	-1.8
KNRA	Kununurra	11.54	184	Pn	Pn	11 32 41.0	+0.2
WB0	Warramunga Arr	16.25	164	Pn	Pn	11 33 44.3	+0.1
WRA	Warramunga Arr	16.41	164	Pn	Pn	11 33 45.4	-0.7
	0.4nm,0.3s,baz=350,slow=13,SNR=5.9						
WRA	Warramunga Arr	16.41	164	Pn	Pn	11 33 46.8	+0.7
WB2	Warramunga Arr	16.41	164	Pn	Pn	11 33 47.1	+1.0
WR0	Warramunga Arr	16.48	163	Pn	Pn	11 33 46.8	-0.2
WR0				IAmb	IAmb	11 34 04.5	
	comp=Z,5.6nm,0.7s						
KKM	Kota Kinabalu	16.75	307	Pn	Pn	11 33 47.6	-3.0
KKM				IAmb	IAmb	11 33 54.2	
	comp=Z,39nm,1.2s						
PSA00	Pilbara Seismi	19.79	208	P	Pn	11 34 27.3	-0.3
PSA00				IAmb	IAmb	11 34 37.6	
	comp=Z,15nm,0.9s						
PSA00	Pilbara Seismi	19.79	208	P	Pn	11 34 27.6	0.0
PSA00				IAmb	IAmb	11 34 38.2	
	comp=Z,8.2nm,1.1s						
AS31	Alice Springs	19.89	168	P	P	11 34 27.1	+0.2
AS31				IAmb	IAmb	11 34 29.8	
	comp=Z,2.7nm,0.6s						
ASAR	Alice Springs	19.89	168	P	P	11 34 27.8	+0.9
	comp=Z,1.1nm,0.3s,baz=346,slow=10,SNR=13						
ASAR	Alice Springs	19.89	168	P	P	11 34 28.0	+1.1
RABL	Rabaul	22.49	91	P	P	11 34 53.4	-1.6
FORT	Forrest	26.58	183	P	P	11 35 34.0	+0.8
STKA	Stephens Creek	29.84	159	P	P	11 36 02.9	+0.6
	comp=Z,1.3nm,0.6s,baz=344,slow=13,SNR=4.0						
KSRS	Korea Array	41.37	358	P	P	11 37 42.8	+1.7
	comp=Z,1.1nm,0.8s,baz=171,slow=8.4,SNR=3.2						
USRK	Ussuriysk Ar.	48.13	2	P	P	11 38 35.6	+0.8
	comp=Z,1.2nm,0.6s,baz=196,slow=6.6,SNR=5.0						
MSWZ	Moikau Station	55.15	139	P	P	11 39 27.3	-0.2
SONM	Songino Array	55.59	341	P	P	11 39 32.1	+1.5
	comp=Z,0.6nm,0.9s,baz=163,slow=6.0,SNR=2.1						
MK31	Makanchi Array	65.61	326	P	P	11 40 38.9	0.0
MK31				IAmb	IAmb	11 40 40.4	
	comp=Z,1.2nm,0.8s						
MKAR	Makanchi Array	65.61	326	P	P	11 40 39.6	+0.8
	comp=Z,1.3nm,0.6s,baz=122,slow=8.1,SNR=9.3						
MKAR	Makanchi Array	65.61	326	P	P	11 40 38.2	-0.7
ZALV	Zalesovo Beam	68.83	333	P	P	11 40 57.9	-1.2
SEY	Seymchan	69.05	11	P	P	11 41 01.9	+1.7
	comp=Z,1.0nm,0.3s,baz=207,slow=14,SNR=4.0						
KURBB	Kurchatov Arra	69.86	328	P	P	11 41 06.1	+0.7
	comp=Z,2.1nm,0.7s,baz=125,slow=5.6,SNR=3.2						
ABKAR	Akbulak array	80.02	321	P	P	11 42 04.8	+0.6
QSPA	South Pole Qui	85.86	180	P	P	11 42 33.2	-1.1
	comp=Z,0.7nm,0.7s,baz=1.8,slow=5.1,SNR=5.3						
QSPA	South Pole Qui	85.86	180	P	P	11 42 33.5	-0.8
K20K	Telida	87.53	26	P	P	11 42 39.2	-3.2
K20K				IAmb	IAmb	11 42 46.9	
	comp=Z,2.9nm,1.2s						
TXAR	Lajitas Array	123.73	57	PKP	PKPdf	11 48 53.5	+0.3
	comp=Z,0.1nm,0.5s,baz=205,slow=1.9,SNR=2.4						
TORD	Torodi Ar. Bea	127.83	283	PKP	PKPdf	11 49 00.9	-0.5
	comp=Z,1.7nm,1.1s,baz=63,slow=2.7,SNR=1.9						

NEIC ***09*** *11:34:17.7±2.3, 8°.16S±0°.07×116°.10E±0°.03, h210^{km}±5^{km}, mb4.8/65, Error ellipse: s-maj=10.6km s-min=4.9km az=181.0*

DJA ***09*** *11:34:18.9±0.1, 8˚S±2˚×11˚6E±˚, h203^{km}±1^{km}, M4.8/52, mB5.3/19, mb4.9/52, MLv5.1/32, Mw(mB)4.7/19*

IDC ***09*** *11:34:19.9±0.9, 7°.93S×116°.11E, h225^{km}±7^{km}, mb4.3/34, mb1 4.3/37, mb1mx4.1/55, mbtmp4.9/37, Error ellipse: s-maj=9.6km s-min=7.3km az=50.0*

KLM ***09*** *11:34:19, 8°.12S×116°.10E, h221^{km}, mb5.1*

ISC 09 11:34:18.1±0.5**, 8°.11S**±0°.04×**116°.16E**±0°.04**, h215**^{km}±4^{km}**, n284, σ1ˢ41**/293**, mb4.7**/89**, 3C-3D, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRBI	Singaraja	0.94	272	P	Pn	11 34 49.5	+0.5
SRBI				S	S	11 35 12.6	-0.3
TWSI	Taliwang, Sumb	0.95	131	P	Pn	11 34 49.2	+0.1
TWSI				S	S	11 35 10.9	-2.3
DNP	Denpasar	1.09	239	P	Pn	11 34 50.4	+0.4
DNP				S	S	11 35 13.1	-1.6
IGBI	Denpasar	1.22	235	P	Pn	11 34 50.8	-0.1
IGBI				S	S	11 35 13.7	-2.6
PLAI	Plampang	1.75	114	P	Pn	11 34 55.7	+0.3
PLAI				S	S	11 35 22.6	-1.5
PLAI	Plampang	1.75	114	P	Pn	11 34 55.9	+0.6
ABJI	Asem Bagus	1.93	279	P	Pn	11 34 57.6	+0.6
JAGI	Jajag, Banyuwa	2.02	260	P	Pn	11 34 57.5	-0.4
JAGI	Jajag, Banyuwa	2.02	260	Pn	Pn	11 34 57.6	-0.4
JAGI				Sn	S	11 35 26.7	-1.9
JAGI	Jajag, Banyuwa	2.02	260	P	Pn	11 34 57.9	0.0
KMMI	Kalianget	2.42	296	P	Pn	11 35 03.0	+1.0
BLJI	Banyuglugur	2.56	278	P	Pn	11 35 04.8	+1.2
GMJI	Gumukmas	2.69	266	P	Pn	11 35 04.9	-0.1
WBSI	Waikabubak, Su	3.54	116	P	Pn	11 35 12.6	-2.3
BWJI	Bawean	4.14	303	P	Pn	11 35 23.8	+1.6
KAPI	Kappang	4.71	49	P	Pn	11 35 31.0	+1.7
	48nm,0.3s,baz=246,slow=7.7,SNR=194						
KAPI	Kappang	4.71	49	P	Pn	11 35 31.4	+2.1
BSSI	Bau Bau, Buton	4.72	66	P	Pn	11 35 31.1	+1.7
KBKI	Kotabaru	4.78	0	P	Pn	11 35 31.6	+1.4
BBKI	Banjar Baru	4.80	344	P	Pn	11 35 32.5	+2.1
BKSI	Bulukumba	4.81	55	P	Pn	11 35 32.3	+1.7
BASI	Baing, Sumba	4.84	116	P	Pn	11 35 30.1	-0.8
PCJI	Pacitan	4.93	269	P	Pn	11 35 32.1	+0.1
WOJI	Wonogiri, Jawa	5.19	273	P	Pn	11 35 35.8	+0.5
	2.0nm5μm292nm,0.4s						
BNSI	Bone	5.38	47	P	Pn	11 35 40.5	+2.7
	1.8nm4μm431nm,1.1s						
SPSI	Sidrap Palu	5.46	41	P	Pn	11 35 40.4	+1.6
	1.1nm3μm307nm,1.1s						
EDFI	Ende, Flores	5.51	97	P	Pn	11 35 38.0	-1.5
	1.9nm3μm101nm,0.6s						
UGM	Wanagama	5.58	272	P	Pn	11 35 41.0	+0.6
	6.2nm6μm318nm,0.6s						
UGM	Wanagama	5.58	272		Pn	11 35 40.1	-0.2
UGM	Wanagama	5.58	272	P	Pn	11 35 41.2	+0.8
SMRI	Semarang	5.77	280	P	Pn	11 35 43.9	+1.2
	1.1nm214nm,0.6s						
SMRI	Semarang	5.77	280	Pn	Pn	11 35 41.9	-0.8
SMRI	Semarang	5.77	280	P	Pn	11 35 45.3	+2.6
YOGI	Yogyakarta	5.81	272	P	Pn	11 35 44.7	+1.4
	1.7nm267nm,0.7s						
MMRI	Maumere	6.04	95	P	Pn	11 35 46.0	-0.1
	2.7nm6μm222nm,0.5s						
MMRI	Maumere	6.04	95	Pn	Pn	11 35 45.8	-0.3
TTSI	Tana Toraja	6.21	36	P	Pn	11 35 51.6	+3.2
	1.3nm4μm279nm,1.3s						
PBKI	Pangkalan Bun	6.99	320	P	Pn	11 36 00.5	+2.2
	3.3nm17μm126nm,1.1s						
MTKI	Muara Teweh, K	7.23	350	P	Pn	11 36 03.5	+2.0
CMJI	Cimerak	7.64	272	P	Pn	11 36 05.7	-1.1
	1.0nm2μm141nm,0.6s						
BATI	Baumata	7.70	106	P	Pn	11 36 06.3	-1.2
	46nm,0.3s,baz=316,slow=4.0,SNR=13						
BATI				S	S	11 37 28.8	-6.0
	121nm,0.3s,baz=200,slow=22,SNR=10						
BATI	Baumata	7.70	106	P	Pn	11 36 06.3	-1.2
	1.4nm97nm,0.6s						
SOEI	Soe	8.18	102	P	Pn	11 36 12.8	-1.0
	226nm,0.6s						
SOEI	Soe	8.18	102	Pn	Pn	11 36 13.0	-0.8
SOEI	Soe	8.18	102	P	Pn	11 36 12.9	-0.9
LEM	Lembang	8.56	278	P	Pn	11 36 19.0	+0.1
	18nm,0.3s,baz=58,slow=13,SNR=15						
LEM				S	S	11 37 55.9	+0.3
	11nm,0.3s,baz=197,slow=22,SNR=2.5						
LEM	Lembang	8.56	278	P	Pn	11 36 20.0	+1.1
	71nm,0.8s						
CNJI	Cibinong	8.98	274	P	Pn	11 36 23.4	-0.7
	3μm209nm,0.7s						
APSI	Ampana	9.01	38	P	P	11 36 32.9	-0.5
MPSI	Mapaga	9.19	24	P	Pn	11 36 29.4	+2.7
	60nm,1.5s						
STKI	Sintang	9.37	330	P	Pn	11 36 31.4	+2.3
	60nm,0.9s						
DBJI	Dramaga	9.46	279	P	Pn	11 36 30.2	-0.1
	9μm34nm,0.4s						
TOLI2	Tolitoli	10.26	27		Pn	11 36 40.2	-0.3
TOLI2	Tolitoli	10.26	27	P	Pn	11 36 42.6	+2.1
MRSI	Marisa	10.30	34	P	Pn	11 36 43.0	+2.0
	50nm,1.0s						
CGJI	Cibinong	10.49	277	P	Pn	11 36 42.1	-1.3
	2μm152nm,0.7s						
XMI	Christmas Isla	10.59	257	P	Pn	11 36 46.7	+1.9
	216nm,0.7s						
XMIS	Christmas Isla	10.63	256	Pn	Pn	11 36 41.5	-3.9
GTOI	Gorontalo	11.05	38	P	P	11 36 54.6	-1.7
	67nm,0.9s						
BLSI	Bandar Lampung	11.18	283	P	P	11 36 59.4	+1.7
SBUM	Sibu	11.20	339	P	Pn	11 36 55.0	+2.4
SBUM	Sibu	11.20	339	Pn	Pn	11 36 53.2	+0.6
SANI	Sanana	11.49	59	P	P	11 36 58.8	-2.4
	325nm,0.7s						
SANI	Sanana	11.49	59	P	Pn	11 36 57.3	+1.0
PPBI	Pangkal Pinang	11.60	300	P	P	11 37 01.3	-1.1
KMSI	Cibinong	11.63	42	P	P	11 37 03.3	+0.5
	349nm,1.1s						
KLI	Kotabumi	11.68	285	P	P	11 37 06.2	+2.8
KLSI		11.85	286	P	P	11 37 03.1	-2.2
	43nm,0.6s						
KASI	Kota Agung	11.86	282	P	P	11 37 07.1	+1.8
LWLI	Liwa	12.41	284	P	P	11 37 12.5	+1.0
	7μm422nm,0.6s						
MDSI	Maura Dua	12.44	286	P	P	11 37 11.5	-0.3
	42nm,0.7s						
LHSI	Lahat	13.27	288	P	P	11 37 21.2	+0.2
	151nm,0.6s						
MYLDM	Lahad Datu	13.41	10		Pn	11 37 20.3	0.0
MBWA	Marble Bar	13.42	165	P	P	11 37 22.6	0.0
LBMI	Labuha	13.52	57	P	P	11 37 24.7	+0.9
	72nm,1.4s						
PSA00	Pilbara Seismi	13.85	166	Pn	Pn	11 37 23.5	-2.2
PSA00	Pilbara Seismi	13.85	166	P	Pn	11 37 25.4	-0.3
PSA00	Pilbara Seismi	13.85	166	P	P	11 37 28.4	+1.1
KKM	Kota Kinabalu	14.06	0	P	Pn	11 37 29.2	+0.7
KKM	Kota Kinabalu	14.06	0	P	P	11 37 30.4	+0.5
TNTI	Ternate	14.24	52	P	P	11 37 33.3	+1.5
	61nm,1.1s						
TNTI	Ternate	14.24	52		P	11 37 32.3	+0.5
TNTI	Ternate	14.24	52	P	P	11 37 32.6	+0.8
KNRA	Kununurra	14.44	123		P	11 37 32.9	-1.0
KNRA	Kununurra	14.44	123	P	P	11 37 35.4	+1.5
GIRL	Giralia	14.57	187	P	P	11 37 37.2	+1.9
MASI	Maura Aman, Be	14.70	289	P	P	11 37 37.8	+0.9
	4μm412nm,0.8s						
DRS	Darwin Rock St	15.12	108	P	P	11 37 41.5	0.0
MTN	Manton Dam	15.45	109	P	P	11 37 44.0	-1.2
MTN	Manton Dam	15.45	109	P	Pn	11 37 46.3	+1.0
MYKOM	Kota Tinggi	15.73	308		P	11 37 47.1	-1.1
KRJI	Kerinci	15.81	291	P	Pn	11 37 51.5	+1.8
	924nm,0.8s						
KDU	Kakadu	16.68	107	P	Pn	11 37 59.9	0.0
SWI	Sorong	16.68	65	P	Pn	11 38 00.3	+0.3
	248nm,0.9s						
SIJI	Sorong	16.68	65	P	Pn	11 38 00.1	+0.1
	8.2nm,0.3s,baz=282,slow=8.8,SNR=15						
FAKI	Fak Fak	16.82	73	P	Pn	11 38 01.1	-0.6
	108nm,0.7s						
FAKI	Fak Fak	16.82	73	P	P	11 38 00.8	+0.5
FAKI	Fak Fak	16.82	73	P	P	11 38 00.5	+0.2
PDSI	Padang	17.20	294	P	P	11 38 04.6	+0.2
BKNI	Bangkinang	17.25	298	P	Pn	11 38 07.2	+0.5
	128nm,0.6s						
BKNI	Bangkinang	17.25	298	P	Pn	11 38 07.2	+0.5
	265nm,0.9s						
PPI	Padang Panjang	17.45	295	P	P	11 38 07.7	+0.6
	532nm43nm,0.7s						
JRMM	Jerantut	18.12	311	P	P	11 38 15.0	+0.6
MEEK	Meekatharra	18.57	173	P	Pn	11 38 22.0	-0.2
MNSI	Mandailing Nat	18.75	297	P	P	11 38 20.5	-0.7
	41nm,0.9s						
IPM	Ipoh	19.60	309	P	P	11 38 31.0	+0.6
IPM	Ipoh	19.60	309	P	P	11 38 29.4	-1.1
IPM				IAmb	IAmb	11 38 33.9	
	comp=Z,18nm,0.6s						
IPM	Ipoh	19.60	309	P	Pn	11 38 33.0	-1.5
PSI	Prapat	20.32	302	P	P	11 38 37.8	-0.5
	comp=Z,71nm,0.8s,baz=144,slow=9.0,SNR=44						
KULM	Kulim	20.41	310	P	P	11 38 40.0	+1.0
KULM	Kulim	20.41	310	P	P	11 38 36.0	-3.0
WRKA	Warakurna	20.43	147	P	Pn	11 38 41.7	-2.9
GSI	Gunungsitoli	20.76	296	P	Pn	11 38 47.1	-1.6
	comp=Z,51nm,0.5s						
GSI	Gunungsitoli	20.76	296	P	P	11 38 39.2	-3.5
GSI				IAmb	IAmb	11 38 48.4	
	comp=Z,37nm,0.6s						
GSI	Gunungsitoli	20.76	296	P	P	11 38 45.1	+2.4
MORW	Morawa	20.85	180	P	P	11 38 41.5	-2.0
MORW				IAmb	IAmb	11 38 48.4	
	comp=Z,31nm,0.8s						
MORW	Morawa	20.85	180	P	Pn	11 38 46.8	-2.9
TSI	Tuntungan	21.00	303	P	P	11 38 46.5	+1.2
	comp=Z,519nm,0.9s						
WB0	Warramunga Arr	21.12	125	P	P	11 38 45.5	-1.1
WB0				IAmb	IAmb	11 39 33.2	
	comp=Z,14nm,0.7s						
WRA	Warramunga Arr	21.17	126	P	P	11 38 47.8	+0.7
	comp=Z,6.2nm,0.5s,baz=298,slow=12,SNR=35						
WRA				S	S	11 42 27.6	-1.5
	comp=Z,4.9nm,0.8s,baz=294,slow=20,SNR=7.9						
WRA	Warramunga Arr	21.17	126	P	P	11 38 45.8	-1.2
WRAB	Tennant Creek	21.18	126	P	P	11 38 45.8	-1.2
WRAB				IAmb	IAmb	11 39 08.4	
	comp=Z,26nm,0.6s						
WRAB	Tennant Creek	21.18	126	P	P	11 38 48.1	+1.0
WB2	Warramunga Arr	21.18	126	P	P	11 38 47.0	-0.2
WB2				IAmb	IAmb	11 39 08.4	
	comp=Z,21nm,0.6s						
DLV	T Lat	21.34	339	P	P	11 38 48.5	-0.4
DLV				IAmb	IAmb	11 38 52.0	
	comp=Z,54nm,1.0s						
DLV	T Lat	21.34	339	P	P	11 38 51.1	+2.2
WR0	Warramunga Arr	21.34	125	P	P	11 38 46.8	-1.9
WR0				IAmb	IAmb	11 39 10.0	
	comp=Z,23nm,0.7s						
KCSI	Kotacane, Aceh	21.68	302	P	P	11 38 51.0	-1.2
	comp=Z,70nm,0.7s						
TPTI		22.05	300	P	P	11 38 54.8	-0.9
	comp=Z,40nm,1.2s						
BLDU	Ballidu	22.39	179	P	P	11 39 00.7	+2.0
TGY	Tagaytay City	22.57	12	P	P	11 39 01.6	+1.0
	comp=Z,272nm,0.6s,baz=191,slow=5.2,SNR=7.5						
AS31	Alice Springs	22.99	134	P	P	11 39 04.9	+0.6
ASAR	Alice Springs	22.99	134	P	P	11 39 06.3	+2.1
	comp=Z,15nm,0.5s,baz=307,slow=9.0,SNR=101						
ASAR				ScP	ScP	11 46 04.5	-0.4
	comp=Z,4.9nm,0.7s,baz=310,slow=2.5,SNR=7.6						
ASAR	Alice Springs	22.99	134	P	P	11 39 04.3	+0.1
LHMI	Lhok Sumawe	23.30	304	P	P	11 39 07.4	+0.3
LHMI	Lhok Sumawe	23.30	304	P	P	11 39 06.4	-0.7
LHMI	Lhok Sumawe	23.30	304	P	P	11 39 07.7	+0.6
KLBR	Kellerberrin	23.41	177	P	P	11 39 10.0	+2.1
NWAO	Narrogin (SRO)	24.71	178	P	P	11 39 22.1	+2.4
FORT	Forrest	25.15	155	P	P	11 39 23.6	-0.1
FORT	Forrest	25.15	155	P	P	11 39 26.1	+2.4
QIS	Mount Isa	25.82	121	P	P	11 39 32.4	+2.5
OOD	Oodnadatta	26.91	139	P	P	11 39 42.0	+2.5
COEN	Coen	27.13	105	P	P	11 39 42.4	+0.7
COEN				IAmb	IAmb	11 39 43.7	
	comp=Z,21nm,0.6s						
COEN	Coen	27.13	105	P	P	11 39 43.1	+1.4
MTSU	Mount Surprise	29.13	113	P	P	11 40 01.9	+2.5
INKA	Innaminka	30.35	133	P	P	11 40 12.6	+2.6
CMAR	Chiang Mai Arr	31.39	327	P	P	11 40 19.8	+0.5
	comp=Z,10nm,0.9s,baz=154,slow=7.1,SNR=33						
CMAR				PcP	PcP	11 43 08.4	+0.9
	comp=Z,2.8nm,0.6s,baz=180,slow=2.8,SNR=6.5						
CMAR				ScP	ScP	11 46 29.6	-0.7
	comp=Z,1.6nm,0.7s,baz=172,slow=3.5,SNR=8.2						
CTA	Charters Tower	31.46	115	P	P	11 40 22.1	+2.3
	comp=Z,5.4nm,0.6s,baz=284,slow=8.2,SNR=2.1						
CHTO	Chiang Mai	31.69	328	P	P	11 40 21.4	-0.4
CHTO	Chiang Mai	31.69	328	P	P	11 40 22.9	+1.1
	comp=Z,5.1nm,0.8s						
YULB	Yu-li	31.71	9	P	P	11 40 22.1	+0.2
QLP	Quilpie	32.36	128	P	P	11 40 30.3	+2.7
HTT	Hallett	32.82	143	P	P	11 40 34.3	+2.7
YHNB	Yeheng	32.98	9	P	P	11 40 34.5	+1.5
STKA	Stephens Creek	33.45	138	P	P	11 40 39.4	+2.4
	comp=Z,5.5nm,0.4s,baz=318,slow=8.1,SNR=27						
STKA	Stephens Creek	33.45	138	P	P	11 40 39.5	+2.5
KMI	Kunming	35.53	339	⇑P	P	11 40 57.2	+2.1
KMI				pP	pP	11 41 41.6	+2.3
KMI				pmax	pmax		
	comp=Z,34nm,0.8s						
GYA	Guiyang	35.58	345	⇑P	P	11 40 57.3	+1.9
GYA				pmax	pmax		
	comp=Z,38nm,0.8s						
PALK	Pallekele	38.51	292	P	P	11 41 19.4	-0.8
	comp=Z,11nm,0.7s,baz=205,slow=4.3,SNR=5.9						
PALK				PcP	PcP	11 43 29.7	+1.2
	comp=Z,7.3nm,0.7s,baz=205,slow=3.5,SNR=5.1						
NJ2	Nanjing	40.02	4	⇑P	P	11 41 33.7	+1.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CD2	Chengdu	40.58	344	⇓*i*P	P	11 41 37.8	+0.8
CD2				pmax	pmax		
	comp=Z,180nm,0.6s						
SHL	Shillong	40.97	326	P	P	11 41 39.6	-0.8
SHL				IAmb	IAmb	11 41 40.9	
	comp=Z,49nm,0.8s						
XAN	Xi'an	42.48	351	P	P	11 41 52.6	+0.3
XAN				pP	pP	11 42 05.1	-33
XAN				pmax	pmax		
	comp=Z,29nm,0.9s						
HNR	Honiara	43.28	95	P	P	11 42 00.3	+1.3
	comp=Z,35nm,0.4s,baz=215,slow=6.9,SNR=2.3						
KAAM	Kaadhehdhoo	43.87	279	P	P	11 42 03.7	0.0
ODAN	Odare	44.58	322	*e*P	P	11 42 08.7	-0.7
	comp=Z,57nm,0.7s						
LSA	Lhasa	44.64	328	P	P	11 42 10.4	+0.4
LSA				IAmb	IAmb	11 42 12.9	
	comp=Z,26nm,0.6s						
TAPN	Taplejung	44.74	323	*e*P	P	11 42 10.6	-0.2
	comp=Z,41nm,0.4s						
HYB	Hyderabad	44.99	305	*i* P	P	11 42 11.0	-1.6
RAMN	Ramite	45.12	322	*e*P	P	11 42 13.4	-0.3
	comp=Z,66nm,0.5s						
LZH	Lanzhou	45.47	346	⇓P	P	11 42 17.4	+1.3
LZH				pP	pP	11 42 40.8	-22
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,45nm,1.3s						
JHS	Saijyo	45.78	20	P	P	11 42 19.4	+1.0
JHS				IAmb	IAmb	11 42 20.2	
	comp=Z,27nm,0.8s						
PKI	Pulchoki	46.30	321	*e*P	P	11 42 21.9	-1.1
	comp=Z,41nm,0.5s						
PKIN	Phulchoki	46.32	321	*e*P	P	11 42 21.9	-1.2
	comp=Z,49nm,0.4s						
DMN	Daman	46.52	321	*e*P	P	11 42 23.7	-0.9
	comp=Z,59nm,0.5s						
KKN	Kakani	46.54	321	*e*P	P	11 42 23.6	-1.1
	comp=Z,17nm,0.4s						
KSAR	Wonju Array Be	46.63	13	P	P	11 42 26.1	+1.2
KSRS	Korea Array	46.65	13	P	P	11 42 26.0	+0.9
	comp=Z,24nm,0.8s,baz=192,slow=7.7,SNR=86						
KS19	Wonju Array Si	46.68	13	P	P	11 42 25.8	+0.4
KS19				IAmb	IAmb	11 42 27.1	
	comp=Z,27nm,0.9s						
JWT	Wachi	46.83	22	P	P	11 42 26.3	-0.3
JWT				IAmb	IAmb	11 42 28.3	
	comp=Z,30nm,1.1s						
GKN	Gorkha	47.09	321	*e*P	P	11 42 27.9	-1.0
	comp=Z,62nm,0.3s						
INU	Inuyama	47.50	23	P	P	11 42 32.0	+0.3
KOLN	Koldanda	47.59	320	*e*P	P	11 42 31.6	-1.2
	comp=Z,51nm,0.5s						
JGF	Kuroka	47.85	23	P	P	11 42 34.2	-0.2
DANN	Dangsing	47.88	320	*e*P	P	11 42 34.1	-1.1
	comp=Z,138nm,0.5s						
BJI	Beijing	47.91	0	P	P	11 42 34.9	+0.1
BJI				pmax	pmax		
	comp=Z,19nm,0.9s						
PYUN	Piuthan	48.20	320	*e*P	P	11 42 36.2	-1.3
	comp=Z,69nm,0.7s						
BTO	Baotou	48.80	354	*e*P	P	11 42 43.0	+1.3
BTO				S	S	11 49 28.0	-0.3
BTO				LR	LR		
	comp=N,8μm,22.0s						
BTO				LR	LR		
	comp=E,4μm,16.7s						
HHC	Hu-ho-hao-te	48.90	355	*e*P	P	11 42 47.2	+4.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,1μm,7.6s						
MAJO	Matsushiro	49.01	24	P	P	11 42 42.9	-0.4
MAJO				IAmb	IAmb	11 42 43.7	
	comp=Z,25nm,0.8s						
MAT	Matsushiro	49.01	24	P	P	11 42 42.4	-0.9
MJAR	Matsushiro Arr	49.01	24	P	P	11 42 42.1	-1.2
	comp=Z,24nm,0.7s,baz=190,slow=8.4,SNR=61						
MJAR	Matsushiro Arr	49.01	24	P	P	11 42 41.7	-1.6
GTA	Gaotai	49.65	343	⇓P	P	11 42 49.1	+0.9
GTA				pP	pP	11 43 42.7	+7.5
GTA				sP	PcP	11 44 07.2	+0.9
GTA				pmax	pmax		
	comp=Z,17nm,1.0s						
CN2	Changchun	52.35	8	*e*P	P	11 43 06.4	-1.6
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
MDJ	Mudanjiang	53.87	12	P	P	11 43 19.3	+0.2
MDJ				pmax	pmax		
	comp=Z,50nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,2μm,5.4s						
USA0B	Ussuriysk Arra	54.00	14	IAmb	IAmb	11 43 21.4	
	comp=Z,54nm,1.7s						
USRK	Ussuriysk Ar.	54.00	14	P	P	11 43 19.4	-0.6
	comp=Z,8.7nm,0.6s,baz=193,slow=9.5,SNR=14						
ULN	Ulaanbaatar	56.31	353	P	P	11 43 36.5	-0.2
ULN				IAmb	IAmb	11 43 37.7	
	comp=Z,15nm,0.8s						
SONM	Songino Array	56.37	352	P	P	11 43 37.0	-0.1
	comp=Z,27nm,0.8s,baz=170,slow=9.0,SNR=112						
HIA	Hailar	57.22	3	P	P	11 43 42.6	-0.3
ASAJ	Asahikawa	57.23	22	P	P	11 43 43.4	+0.4
	comp=Z,22nm,0.6s,baz=243,slow=7.3,SNR=22						
WMQ	Urumqi	57.77	336	*e*P	P	11 43 47.3	+0.4
WMQ				pP	PcP	11 44 37.3	+0.2
WMQ				pmax	pmax		
	comp=Z,47nm,0.9s						
KLR	Kul'dur	58.71	12	P	P	11 43 52.8	-0.4
	comp=Z,5.7nm,0.5s,baz=188,slow=4.9,SNR=26						
KSH	Kashi	60.25	325	P	P	11 44 02.4	-1.6
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KBL	Kabul	61.50	317	P	P	11 44 10.7	-2.0
KBL				IAmb	IAmb	11 44 11.3	
	comp=Z,12nm,0.6s						
BOOM	Boomskoye usch	62.30	327	IAmb	IAmb	11 44 18.6	
	comp=Z,10nm,0.9s						
MK31	Makanchi Array	62.42	334	IAmb	IAmb	11 44 19.1	
	comp=Z,16nm,0.9s						
MKAR	Makanchi Array	62.42	334	P	P	11 44 17.6	-0.8
	comp=Z,14nm,0.6s,baz=152,slow=7.0,SNR=73						
MAKZ	Makanchi	62.56	334	P	P	11 44 18.4	-0.9
DRK	Karamyk	62.67	322	P	P	11 44 19.9	-0.5
DRK				IAmb	IAmb	11 46 17.1	
	comp=Z,15nm,0.6s						
TKM2	Tokmak 2	62.78	328	P	P	11 44 20.2	-0.8
	SNR=6.8						
KBK	Karagaybulak	62.95	327	P	P	11 44 21.7	-0.4
	SNR=12						
AAK	Ala-Archa	63.18	327	P	P	11 44 22.1	-1.4
	SNR=7.6						
AAK	Ala-Archa	63.18	327	P	P	11 44 22.6	-1.0
AAK				IAmb	IAmb	11 44 24.2	
	comp=Z,16nm,1.1s						
AML	Almayashu	63.28	326	P	P	11 44 23.8	-0.8
	SNR=7.2						
GAR	Garm	63.28	321	IAmb	IAmb	11 44 23.9	
	comp=Z,28nm,0.8s						
EKS2	Erkin-Say	63.59	326	P	P	11 44 26.2	0.0
	SNR=8.9						
USP	Ospenovka	63.60	327	P	P	11 44 25.2	-1.0
	SNR=7.0						
KURBB	Kurchatov Arra	66.96	335	P	P	11 44 46.5	-1.0
	comp=Z,4.1nm,0.5s,baz=149,slow=5.2,SNR=32						
KURK	Kurchatov	66.99	335	P	P	11 44 46.8	-0.9
KURK				IAmb	IAmb	11 44 47.9	
	comp=Z,18nm,1.1s						
ZAA0	Zalesovo Array	67.25	341	IAmb	IAmb	11 44 48.7	
	comp=Z,12nm,0.9s						
ZALV	Zalesovo Beam	67.25	341	P	P	11 44 47.7	-1.5
	comp=Z,9.3nm,0.4s,baz=145,slow=4.8,SNR=40						
PETK	Petropavlovsk-	70.43	25	P	P	11 45 08.7	-0.2
	comp=Z,6.9nm,0.6s,baz=211,slow=4.2,SNR=24						
YAK	Yakutsk	70.72	7	P	P	11 45 09.7	-0.7
	comp=Z,6.2nm,0.5s,baz=277,slow=1.2,SNR=5.4						
YAK	Yakutsk	70.72	7	P	P	11 45 09.8	-0.7
YAK				IAmb	IAmb	11 45 10.5	
	comp=Z,20nm,0.9s						
GEYT	Alibeck	70.82	315	P	P	11 45 10.6	-1.0
	comp=Z,2.8nm,0.3s,baz=122,slow=5.4,SNR=9.7						
BVAR	Borovoye Array	72.21	333	P	P	11 45 18.6	-1.0
	comp=Z,6.8nm,0.7s,baz=184,slow=13,SNR=39						
BRVK	Borovoye	72.28	333	P	P	11 45 18.8	-1.1
BRVK				IAmb	IAmb	11 45 20.1	
	comp=Z,22nm,1.2s						
ABKAR	Akbulak array	75.24	326	P	P	11 45 36.2	-1.0
RAYN	Ar Rayn	75.79	297	P	P	11 45 39.6	-1.4
SEY	Seymchan	76.07	16	P	P	11 45 41.6	0.0
	comp=Z,5.7nm,0.7s,baz=230,slow=6.3,SNR=18						
AKTO	Aktyubinsk	76.91	326	P	P	11 45 46.0	-0.6
	comp=Z,14nm,0.6s,baz=81,slow=6.8,SNR=45						
KIBK	Kibwezi	77.91	269	P	P	11 45 54.2	+1.2
KIBK				IAmb	IAmb	11 45 55.3	
	comp=Z,14nm,0.9s						
KMBO	Kilima Mbogo	78.86	270	P	P	11 45 59.9	+1.4
	comp=Z,6.2nm,0.7s,baz=66,slow=7.6,SNR=14						
ARU	Arti	79.74	332	P	P	11 46 01.5	-0.4
	comp=Z,1.1nm,0.4s,baz=177,slow=6.2,SNR=4.8						
ARU	Arti	79.74	332	P	P	11 46 00.2	-1.8
NRIK	Noril'sk	79.78	350	P	P	11 46 00.6	-1.3
	comp=Z,3.1nm,0.6s,baz=156,slow=6.8,SNR=5.7						
NRIK				PP	PP	11 49 07.2	+0.9
	comp=Z,2.8nm,0.5s,baz=139,slow=7.2,SNR=7.0						
NRIK	Noril'sk	79.78	350	IAmb	IAmb	11 46 04.1	
	comp=Z,19nm,1.6s						
QSPA	South Pole Qui	81.88	180	P	P	11 46 15.2	+1.9
	comp=Z,2.3nm,0.5s,baz=234,slow=0.4,SNR=48						
QSPA	South Pole Qui	81.88	180	P	P	11 46 14.4	+1.0
GURO	Guroymak-BITLI	82.80	311	P	P	11 46 18.9	+0.3
BELG	Belogornoye	83.61	325	P	P	11 46 21.0	-1.2
	comp=Z,8.1nm,0.6s,baz=127,slow=20,SNR=4.2						
KBZ	Khabaz	83.67	316	P	P	11 46 22.6	-0.2
	comp=Z,4.2nm,0.8s,baz=111,slow=7.1,SNR=7.2						
MBAR	Mbarara	85.38	270	P	P	11 46 32.9	+0.6
MBAR				IAmb	IAmb	11 46 34.6	
	comp=Z,17nm,0.9s						
GAZ	Gaziantep	86.14	308	P	P	11 46 34.7	-0.6
MMAI	Mount Meron Ar	86.70	304	P	P	11 46 39.1	+0.9
	comp=Z,7.0nm,0.4s,baz=100,slow=7.9,SNR=11						
BOSA	Boshof	86.96	242	P	P	11 46 41.2	+1.6
	comp=Z,3.7nm,0.4s,baz=118,slow=6.1,SNR=5.6						
BOSA	Boshof	86.96	242	IAmb	IAmb	11 46 41.8	
	comp=Z,22nm,1.0s						
LBTB	Lobatse	87.12	245	P	P	11 46 42.1	+1.6
LBTB				IAmb	IAmb	11 46 42.9	
	comp=Z,9.5nm,0.9s						
BRTR	Keskin Array B	89.42	310	P	P	11 46 50.0	-1.0
	comp=Z,2.9nm,0.8s,baz=116,slow=5.6,SNR=6.5						
BRTR	Keskin Array B	89.42	310	P	P	11 46 49.7	-1.2
SNAA	Sanae	91.08	196	P	P	11 47 00.3	+2.4
SNAA	Sanae	91.08	196	P	P	11 47 00.4	+2.4
SNAA				IAmb	IAmb	11 47 01.2	
	comp=Z,7.3nm,0.9s						
VNA2	Neumayer--Watz	92.72	196	P	P	11 47 07.7	+2.2
	baz=106,slow=3.4						
VNA3	Neumayer Olymp	93.14	195	P	P	11 47 09.3	+1.9

AKASG	Malin Array Be	94.27	320	P	P	11 47 10.8	-2.1
	comp=Z,0.7nm,0.4s,baz=82,slow=4.3,SNR=4.8						
AKASG	Malin Array Be	94.27	320	P	P	11 47 11.2	-1.8
FINES	FINESS Array B	97.10	331	PKiKP	PKiKP	11 51 59.9	-0.1
	comp=Z,2.4nm,0.8s,baz=90,slow=3.3,SNR=3.9						
ARCES	ARCESS Array B	97.77	339	P	P	11 47 26.8	-1.6
	comp=Z,2.5nm,0.9s,baz=93,slow=5.5,SNR=1.4						
ARCES				PKiKP	PKiKP	11 52 00.6	-0.4
	comp=Z,7.7nm,1.1s,baz=90,slow=0.9,SNR=4.5						
SPITS	Spitsbergen Ar	99.90	348	P	Pdif	11 47 35.6	-2.1
	comp=Z,13nm,1.0s,baz=92,slow=10,SNR=1.0						
ILAR	Eielson Array	100.26	26	P	Pdif	11 47 37.9	-1.7
	comp=Z,0.5nm,0.7s,baz=254,slow=4.6,SNR=6.1						
ILAR				PKiKP	PKiKP	11 52 04.7	-0.9
	comp=Z,0.2nm,0.4s,baz=270,slow=2.7,SNR=1.7						
ILAR				PKKPbc	PKKPbc	12 03 56.9	-1.9
	comp=Z,0.3nm,0.6s,baz=101,slow=1.2,SNR=7.5						
INK	Inuvik	104.95	21	PKiKP	PKiKP	11 52 13.8	-0.2
	comp=Z,0.5nm,0.6s,baz=311,slow=1.4,SNR=5.1						
YKA	Yellowknife Ar	114.52	23	PKP	PKPdf	11 52 31.7	-0.5
	comp=Z,3.3nm,0.5s,baz=306,slow=1.9,SNR=61						
YKA				SKP		11 55 45.1	
	comp=Z,0.8nm,0.6s,baz=305,slow=1.9,SNR=8.7						
YKA	Yellowknife Ar	114.52	23		PKPdf	11 52 31.6	-0.6
TORD	Torodi Ar. Bea	115.54	281	PKP	PKPdf	11 52 35.2	-0.3
	comp=Z,4.7nm,0.6s,baz=50,slow=1.5,SNR=28						
TORD				SKP		11 55 49.8	
	comp=Z,2.1nm,1.0s,baz=68,slow=1.8,SNR=4.4						
ESDC	Sonseca Array	118.20	311	PKP	PKiKP	11 52 40.3	+0.1
	comp=Z,1.4nm,0.5s,baz=24,slow=2.7,SNR=5.0						
ESDC	Sonseca Array	118.20	311		PKPdf	11 52 39.5	-0.6
KIC	Kosan Boka	121.39	273	ePKIKP	PKiKP	11 52 46.7	-0.3
	comp=Z,14nm,1.0s						
DBIC	Dimbokro	121.53	273	PKP	PKiKP	11 52 47.2	-0.1
	comp=Z,3.6nm,0.5s,baz=105,slow=2.0,SNR=6.0						
DBIC	Dimbokro	121.53	273		PKiKP	11 52 47.4	+0.2
LIC	Lamto	121.66	272	ePKIKP	PKPdf	11 52 47.1	-0.3
	comp=Z,17nm,0.5s						
TIC	Toumodi	121.69	273	ePKIKP	PKPdf	11 52 47.1	-0.4
NVAR	Mina Array Bea	122.60	49	PKP	PKiKP	11 52 50.0	+1.0
	comp=Z,3.0nm,0.6s,baz=265,slow=1.7,SNR=37						
NVAR	Mina Array Bea	122.60	49		PKiKP	11 52 50.2	+1.2
PDAR	Pinedale Array	127.15	41	PKP	PKiKP	11 52 58.0	0.0
	comp=Z,1.1nm,0.4s,baz=109,slow=1.1,SNR=29						
ULM	Lac du Bonnet	130.27	27	SKPbc	SKPbc	11 56 04.0	-1.7
	comp=Z,1.8nm,0.4s,baz=282,slow=3.9,SNR=5.2						
PLCA	Paso Flores	131.01	173	SKPbc	SKPab	11 56 09.0	-0.3
	comp=Z,9.5nm,1.2s,baz=104,slow=1.0,SNR=5.4						
SCHQ	Schefferville	133.35	2	PKP	PKPdf	11 53 08.8	+0.3
	comp=Z,3.1nm,0.5s,baz=269,slow=1.1,SNR=13						
SCHQ				SKPbc	SKPbc	11 56 15.7	-0.9
	comp=Z,3.5nm,0.8s,baz=36,slow=4.7,SNR=4.3						
TXAR	Lajitas Array	137.08	55	PKhKP	PKPpre	11 53 06.5	
	comp=Z,0.6nm,0.7s,baz=267,slow=1.8,SNR=7.9						
TXAR				PKP	PKiKP	11 53 17.4	-0.9
	comp=Z,0.6nm,0.6s,baz=184,slow=1.6,SNR=13						
TXAR				SKPbc	SKPbc	11 56 27.4	-1.8
	comp=Z,2.2nm,0.9s,baz=255,slow=1.4,SNR=12						
CPUP	Villa Florida	145.18	190	PKPbc	PKiKP	11 53 32.6	-2.2
	comp=Z,10nm,0.5s,baz=187,slow=2.0,SNR=38						
BDFB	Brasilia	151.67	214	PKPbc	PKiKP	11 53 49.2	+0.6
	comp=Z,12nm,0.4s,baz=140,slow=3.0,SNR=19						
LPAZ	La Paz	155.39	170	PKP	PKPdf	11 53 48.2	+0.5
	comp=Z,1.1nm,0.7s,baz=270,slow=3.0,SNR=3.6						
LPAZ				PKPab	PKPab	11 54 15.1	+1.2
	comp=Z,1.7nm,0.6s,baz=202,slow=5.4,SNR=5.2						

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*NEIC **09** 11:36:37.3±0.8, 19°.15N±0°.06×66°.52W±0°.04, h31^{km}±13^{km}, Error ellipse: s-maj=9.7km s-min=2.8km az=205.0*

*RSPR **09** 11:36:38.3, 19°.17N×66°.53W, h32^{km}±12^{km}, MD3.3/14*

ISC 09 11:36:35.5±1.3, **19°.18N**±0°.06×**66°.50W**±0°.03, **h28**^{km}**, n48, σ0^{s}.89**/53**, 14C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.70	182⇓	eP	Pn	11 36 50.4	+0.9
EMPR	Esperanza - Ma	0.70	182	eS	Sn	11 36 59.1	-0.3
EMPR	Esperanza - Ma	0.70	182		Pn	11 36 50.4	+0.9
EMPR					Sn	11 36 58.7	-0.7
EMPR				IAML		11 37 01.1	
	comp=E,2μm,0.5s						
EMPR				IAML		11 37 01.0	
	comp=N,1μm,0.6s						
AOPR	Arecibo Observ	0.86	196⇑	eP	Pb	11 36 52.4	+0.5
AOPR	Arecibo Observ	0.86	196	eS	Sn	11 37 03.9	+0.4
AOPR	Arecibo Observ	0.86	196		Pb	11 36 52.3	+0.5
AOPR					Sn	11 37 03.6	+0.2
AGPR	Aguadilla, PR	0.91	219⇑	eP	Pb	11 36 52.1	-0.7
AGPR	Aguadilla, PR	0.91	219	eS	Sn	11 37 05.2	+0.5
AGPR	Aguadilla, PR	0.91	219		Pb	11 36 52.0	-0.7
AGPR				IAML		11 37 05.4	
	comp=N,533nm,0.4s						
AGPR				IAML		11 37 07.9	
	comp=E,423nm,0.5s						
GCPR	Guaynabo City	0.95	155⇑	eP	Pb	11 36 53.6	+0.2
GCPR	Guaynabo City	0.95	155	eS	Sn	11 37 06.5	+0.9
GCPR	Guaynabo City	0.95	155		Pb	11 36 54.5	+1.1
GCPR				Sn	Sn	11 37 06.8	+1.2
CBYP	Canovanas	1.09	146⇓	eP	Pb	11 36 55.9	+0.1
CBYP	Canovanas	1.09	146	eS	Sb	11 37 09.1	-0.5
CBYP	Canovanas	1.09	146		Pb	11 36 56.4	+0.6
CELP	Cerrillos	1.10	184⇑	eP	Pb	11 36 56.2	+0.3
CELP	Cerrillos	1.10	184	eS	Sb	11 37 09.2	-0.6
CELP	Cerrillos	1.10	184		Pb	11 36 56.3	+0.4
CELP				IAML		11 37 17.6	
	comp=E,351nm,0.4s						
SJG	San Juan	1.11	162		Pb	11 36 56.4	+0.3
SJG				IAML		11 37 19.1	
	comp=E,368nm,0.4s						
OBIP	Obispado Ponce	1.13	185⇑	eP	Pb	11 36 56.4	-0.1
OBIP	Obispado Ponce	1.13	185	eS	Sb	11 37 10.4	-0.4
OBIP	Obispado Ponce	1.13	185		Pb	11 36 57.1	+0.6
PRSN	Puerto Rico Se	1.13	213		Pb	11 36 55.8	-0.7
LSP	Las Mesas	1.14	209⇑	eP	Pb	11 36 56.0	-0.6
HUMP	Col San Antoni	1.20	149		Pb	11 36 57.9	+0.2
IDE	Isla Desecheo	1.21	230⇑	eP	Pb	11 36 56.9	-1.0
IDE	Isla Desecheo	1.21	230	eS	Sb	11 37 11.8	-1.3
PDPR	Patillas Dam,	1.24	158		Pb	11 36 58.5	+0.2
GBPR	Guanica, Bosqu	1.25	197⇑	eP	Pb	11 36 57.9	-0.5
GBPR	Guanica, Bosqu	1.25	197	eS	Sb	11 37 12.6	-1.5
IGPR	InterUniversit	1.26	163⇑	eP	Pb	11 36 59.0	+0.3
IGPR	InterUniversit	1.26	163	eS	Sb	11 37 14.1	-0.5
CRPR	Cabo Rojo, PR	1.30	206⇑	eP	Pb	11 36 58.6	-0.8
CRPR	Cabo Rojo, PR	1.30	206	eS	Sb	11 37 13.6	-2.0
CRPR	Cabo Rojo, PR	1.30	206		Pb	11 36 58.8	-0.5
MLPR	Magueyes Islan	1.31	203⇑	eP	Pb	11 36 58.8	-0.6
MLPR				eS	Sn	11 37 12.9	-1.6
MLPR	Magueyes Islan	1.31	203	Pn	Pb	11 36 58.8	-0.6
MLPR					Pn	11 36 59.1	+1.2
MLPR				IAML		11 37 18.3	
	comp=N,222nm,1.2s						
MLPR				IAML		11 37 21.3	
	comp=E,266nm,0.4s						
MTP	Monte Pirata	1.40	140⇑	eP	Pb	11 37 00.3	-0.7
MTP	Monte Pirata	1.40	140	eS	Sb	11 37 17.6	-0.9
MTP	Monte Pirata	1.40	140		Pb	11 37 00.4	-0.7
CUPR	Culebra, Puert	1.44	127⇑	eP	Pb	11 37 00.7	-1.1
CUPR	Culebra, Puert	1.44	127	eS	Sb	11 37 18.1	-1.6
CUPR	Culebra, Puert	1.44	127		Pb	11 37 00.8	-0.9
STVI	Saint Thomas	1.68	119⇑	eP	Pb	11 37 04.8	-1.0
STVI	Saint Thomas	1.68	119	eS	Sn	11 37 23.1	-0.6
STVI	Saint Thomas	1.68	119		Pb	11 37 04.7	-1.0
SDDR	Presa de Saban	4.53	268		Pn	11 37 44.3	+1.9
SDDR				IAML		11 39 07.8	
	comp=E,43nm,0.7s						
SDDR				IAML		11 39 09.4	
	comp=E,39nm,0.8s						
GRTK	Grand Turk	4.93	299	Pn	Pn	11 37 49.2	+1.5

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*IDC **09** 11:44:19.1±1.4, 4°.05S×129°.57E, h0^{km}, mb3.8/2, mb1 3.8/5, mb1mx3.2/53, mbtmp3.7/5, ML3.5/3, Error ellipse: s-maj=46.1km s-min=24.8km az=88.0*

*DJA **09** 11:44:26.2±1.6, 4°S±13°×12°9E±°, h14^{km}±10^{km}, M3.3/5, MLv3.3/5*

ISC 09 11:44:20.7±1.0, **4°.07S**±0°.09×**129°.53E**±0°.08, **h10**^{km}**, n8, σ0^{s}.69**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.94	320	P	Pn	11 44 40.6	+0.7
AAI	Ambon	1.38	286	P	Pn	11 44 46.1	0.0
FAKI	Fak Fak	2.95	67	P	Pg	11 45 16.7	-0.6
SIJI	Sorong	3.63	29	Pn	Pn	11 45 18.0	+1.0
	3.0nm,0.3s,baz=221,slow=20,SNR=2.8						
SIJI				Sn	Sn	11 45 59.1	-0.7
	2.2nm,0.3s,baz=235,slow=23,SNR=1.6						
WRA	Warramunga Arr	16.46	164	Pn	Pn	11 48 12.4	+0.5
	0.2nm,0.3s,baz=347,slow=11,SNR=1.9						
ASAR	Alice Springs	19.93	168	P	P	11 48 52.7	-0.2
	0.2nm,0.3s,baz=347,slow=9.8,SNR=5.4						
MKAR	Makanchi Array	65.54	326	P	P	11 55 04.2	-0.4
	0.8nm,0.7s,baz=127,slow=7.3,SNR=5.0						
KURBB	Kurchatov Arra	69.79	328	P	P	11 55 31.4	+0.2
	0.8nm,0.7s,baz=128,slow=5.8,SNR=4.5						

IDC 09 11:45:12.1±2.6**, 4°.01S**×**129°.51E, h0**^{km}**, mb3.5**/2**, mb1 3.7**/3**, mb1mx2.9**/52**, mbtmp3.5**/3**, ML3.5**/1**, Error ellipse: s-maj=174.6km s-min=31.9km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.58	29	Sn	Sn	11 46 52.0	+0.1
	2.6nm,0.3s,baz=247,slow=23,SNR=1.5						
WRA	Warramunga Arr	16.52	164	Pn	Pn	11 49 05.9	+0.4
	0.2nm,0.3s,baz=347,slow=13,SNR=1.8						
ASAR	Alice Springs	20.00	168	P	P	11 49 46.4	-0.2
	1.0nm,0.4s,baz=346,slow=9.7,SNR=4.9						
MKAR	Makanchi Array	65.47	326	P	P	11 55 57.2	0.0
	0.3nm,0.6s,baz=110,slow=8.2,SNR=1.7						

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*IDC **09** 11:49:12.5±1.5, 4°.11S×129°.22E, h0^{km}, mb3.8/2, mb1 3.6/5, mb1mx3.1/50, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=54.7km s-min=27.7km az=79.0*

*DJA **09** 11:49:17.0±2.3, 4°S±16°×12°9E±°, h19^{km}±11^{km}, M3.5/6, MLv3.5/6*

ISC 09 11:49:16.3±1.3, **4°.1S**±0°.1×**129°.34E**±0°.07, **h35**^{km}**, n10, σ1^{s}.50**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.84	331	P	Pn	11 49 31.2	-0.6
AAI	Ambon	1.21	289	P	Pn	11 49 36.9	+0.2
AAI				S	Sn	11 49 51.5	-0.4
SIJI	Sorong	3.74	31	Pn	Pn	11 50 12.6	+1.0
	4.8nm,0.3s,baz=180,slow=19,SNR=6.7						
SIJI				Sn	Sn	11 50 51.6	-2.8
	4.7nm,0.3s,baz=215,slow=23,SNR=2.5						
SWI	Sorong	3.74	31	P	Pn	11 50 13.3	+1.7
LBMI	Labuha	3.89	332	P	Pn	11 50 14.0	+0.3
SANI	Sanana	3.91	301	P	Pn	11 50 14.4	+0.5
WRA	Warramunga Arr	16.49	163	Pn	Pn	11 53 03.6	-1.6
	baz=345,slow=13,SNR=1.8						
ASAR	Alice Springs	19.95	168	P	Pn	11 53 47.6	+0.1
	0.1nm,0.3s,baz=352,slow=10,SNR=2.6						
MKAR	Makanchi Array	65.45	326	P	P	11 59 56.8	+1.0
	0.4nm,0.6s,baz=123,slow=8.2,SNR=4.0						
KURBB	Kurchatov Arra	69.70	328	P	P	12 00 23.9	+1.4
	0.6nm,0.4s,baz=126,slow=4.8,SNR=1.8						

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*IDC **09** 11:49:42.1±1.5, 4°.16S×129°.35E, h0^{km}, mb3.9/2, mb1 3.8/5, mb1mx3.2/51, mbtmp3.7/5, ML3.5/3, Error ellipse: s-maj=55.5km s-min=27.5km az=80.0*

ISC 09 11:49:43.5±1.2, **4°.1S**±0°.1×**129°.6E**±0°.2, **h10**^{km}**, n5, σ0^{s}.77**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.66	28	Pn	Pn	11 50 40.6	+0.4
	8.8nm,0.3s,baz=239,slow=19,SNR=6.8						
SIJI				Sn	Sn	11 51 23.0	-0.4
	3.4nm,0.3s,baz=249,slow=23,SNR=1.6						
WRA	Warramunga Arr	16.38	164	Pn	Pn	11 53 32.9	-0.8
	0.1nm,0.3s,baz=342,slow=13,SNR=2.5						
ASAR	Alice Springs	19.86	168	P	P	11 54 15.8	+0.8
	0.2nm,0.3s,baz=346,slow=9.6,SNR=3.6						
MKAR	Makanchi Array	65.62	326	P	P	12 00 27.6	-0.2
	0.4nm,0.6s,baz=117,slow=8.1,SNR=2.6						
KURBB	Kurchatov Arra	69.87	328	P	P	12 00 54.4	0.0
	0.6nm,0.3s,baz=122,slow=5.6,SNR=2.3						

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*IDC **09** 11:52:22.4±1.6, 4°.35S×129°.65E, h0^{km}, mb3.7/2, mb1 3.7/5, mb1mx3.3/46, mbtmp3.6/5, ML3.4/2, Error ellipse: s-maj=65.2km s-min=27.7km az=79.0*

ISC 09 11:52:23.9±1.2, **4°.35S**±0°.10×**129°.7E**±0°.3, **h10**^{km}**, n5, σ0^{s}.50**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.79	24	Pn	Pn	11 53 22.9	+0.4
	7.4nm,0.3s,baz=180,slow=20,SNR=2.3						
SIJI				Sn	Sn	11 54 06.7	-0.5
	1.6nm,0.3s,baz=212,slow=23,SNR=1.0						
WRA	Warramunga Arr	16.15	164	Pn	Pn	11 56 10.9	-0.3
	0.1nm,0.3s,baz=350,slow=13,SNR=2.3						
ASAR	Alice Springs	19.63	168	P	P	11 56 53.1	+0.2
	baz=347,slow=10,SNR=2.0						
MKAR	Makanchi Array	65.86	326	P	P	12 03 09.4	-0.4
	0.2nm,0.4s,baz=121,slow=7.3,SNR=4.2						
KURBB	Kurchatov Arra	70.11	328	P	P	12 03 36.7	+0.2
	0.5nm,0.4s,baz=120,slow=5.5,SNR=1.4						

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*IDC **09** 11:53:11.6±0.7, 4°.14S×129°.45E, h0^{km}, mb4.3/12, mb1 4.4/15, mb1mx4.1/47, mbtmp4.3/15, ML4.0/3, Error ellipse: s-maj=32.1km s-min=16.5km az=73.0*

*NEIC **09** 11:53:15.9±0.9, 4°.16S±0°.05×129°.53E±0°.05, h29^{km}±5^{km}, mb4.5/30, Error ellipse: s-maj=9.4km s-min=3.5km az=139.0*

*DJA **09** 11:53:16.3±0.5, 4°S±5°×12°9E±°, h10^{km}, M4.4/9, mb4.8/2, MLv4.2/9*

ISC 09 11:53:16.2±0.4, **4°.19S**±0°.05×**129°.47E**±0°.05, **h36**^{km}**, n66, σ1^{s}.17**/70**, mb4.5**/24**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.00	327	P	Pn	11 53 31.9	-1.9
AAI	Ambon	1.37	291	P	Pn	11 53 37.9	-0.9
AAI				S	Sn	11 53 53.3	-2.5
FAKI	Fak Fak	3.05	66	P	Pn	11 54 03.1	+1.2
FAKI	Fak Fak	3.05	66	Pn	Pn	11 54 01.0	-0.9
SIJI	Sorong	3.76	29	Pn	Pn	11 54 11.6	-0.1
	49nm,0.3s,baz=209,slow=8.3,SNR=23						
SIJI				Sn	Sn	11 54 52.5	-2.2
	29nm,0.3s,baz=217,slow=20,SNR=8.1						
SWI	Sorong	3.76	28	P	Pn	11 54 12.2	+0.5
LBMI	Labuha	4.04	331	P	Pn	11 54 16.9	+1.2
SANI	Sanana	4.08	301	P	Pn	11 54 16.2	+0.1
SAUI	Saumlaki	4.18	154	Pn	Pn	11 54 17.3	-0.2
TNTI	Ternate	5.36	337	Pn	Pn	11 54 33.2	-0.6
SOEI	Soe	7.56	223	Pn	Pn	11 55 04.8	+0.7
BATI	Baumata	8.30	224	Pn	Pn	11 55 17.7	+3.5
	6.3nm,0.3s,baz=135,slow=3.3,SNR=4.2						
MTN	Manton Dam	8.75	169	Pn	Pn	11 55 20.6	+0.3
TOLI2	Tolitoli	10.16	301	Pn	Pn	11 55 38.5	-1.1
KNRA	Kununurra	11.43	183	Pn	Pn	11 55 56.8	-0.2
WB0	Warramunga Arr	16.21	163	Pn	Pn	11 56 59.9	-1.4
WRAB	Tennant Creek	16.35	163	Pn	Pn	11 57 04.2	+1.0
WRA	Warramunga Arr	16.36	164	Pn	Pn	11 57 01.6	-1.6
	0.2nm,0.3s,baz=346,slow=12,SNR=6.0						
WRA				Sn	Sn	11 59 57.9	-5.8
	0.1nm,0.3s,baz=341,slow=23,SNR=4.2						
WRA	Warramunga Arr	16.36	164		Pn	11 57 03.4	+0.2
WB2	Warramunga Arr	16.36	164		Pn	11 57 01.9	-1.4
WR0	Warramunga Arr	16.43	163	Pn	Pn	11 57 03.9	-0.3
COEN	Coen	16.64	127		Pn	11 57 07.1	+0.2
COEN				IAmb	IAmb	11 57 15.2	
	comp=Z,21nm,1.2s						
PMG	Port Moresby	18.30	107	P	P	11 57 27.0	-0.3
PMG				IAmb	IAmb	11 57 38.0	
	comp=Z,27nm,1.2s						
PSA00	Pilbara Seismi	19.64	208	P	Pn	11 57 43.5	0.0
PSA00				IAmb	IAmb	11 57 45.2	
	comp=Z,13nm,0.9s						
AS31	Alice Springs	19.82	168	P	P	11 57 44.2	+0.2
ASAR	Alice Springs	19.83	168	P	Pn	11 57 46.2	+0.4
	comp=Z,0.6nm,0.3s,baz=351,slow=10,SNR=20						
ASAR				PcP	PcP	12 02 01.7	+0.6
	comp=Z,0.2nm,0.3s,baz=356,slow=1.9,SNR=5.9						
ASAR	Alice Springs	19.83	168	P	Pn	11 57 45.7	-0.1
IPM	Ipoh	29.70	287	P	P	11 59 19.1	0.0
IPM				IAmb	IAmb	11 59 21.0	
	comp=Z,14nm,0.8s						
STKA	Stephens Creek	29.80	159	P	P	11 59 21.1	+1.3
	comp=Z,1.2nm,0.8s,baz=349,slow=10,SNR=1.8						
STKA	Stephens Creek	29.80	159	P	P	11 59 19.5	-0.3
JNU	Nakatsue	37.13	2	P	P	12 00 23.3	-0.3
JNU				IAmb	IAmb	12 00 29.5	
	comp=Z,16nm,1.0s						
CMAR	Chiang Mai Arr	37.57	308	P	P	12 00 28.9	+1.4
	comp=Z,2.3nm,0.6s,baz=136,slow=7.5,SNR=15						
CMAR	Chiang Mai Arr	37.57	308	P	P	12 00 27.6	+0.1
CHTO	Chiang Mai	37.77	308	P	P	12 00 28.7	-0.5
CHTO				IAmb	IAmb	12 00 41.1	
	comp=Z,6.8nm,0.8s						
MJAR	Matsushiro Arr	41.34	11	P	P	12 00 58.3	-0.4
	comp=Z,1.3nm,0.8s,baz=190,slow=8.2,SNR=2.9						
KLR	Kul'dur	53.24	2	P	P	12 02 32.4	+1.3
	comp=Z,1.2nm,0.8s,baz=264,slow=19,SNR=4.1						
ULN	Ulaanbaatar	55.45	342	P	P	12 02 47.7	+0.3
ULN				IAmb	IAmb	12 03 00.0	
	comp=Z,3.0nm,0.9s						
MCQ	Macquarie Isla	55.57	160	P	P	12 02 48.2	+0.3
SONM	Songino Array	55.63	341	P	P	12 02 48.7	+0.1
	comp=Z,0.9nm,0.7s,baz=149,slow=11,SNR=5.5						
DGAR	Diego Garcia	56.79	264	P	P	12 02 57.5	+0.1
PEA0B	Petropavlovsk-	61.85	19	P	P	12 03 30.8	-0.9
PET	Petropavlovsk	62.09	19	P	P	12 03 32.7	-0.5
MK31	Makanchi Array	65.61	326	P	P	12 03 57.0	+0.4
MK31				IAmb	IAmb	12 03 57.8	
	comp=Z,3.1nm,0.8s						
MKAR	Makanchi Array	65.61	326	P	P	12 03 57.0	+0.4
	comp=Z,3.4nm,0.6s,baz=121,slow=8.0,SNR=27						
MKAR	Makanchi Array	65.61	326	P	P	12 03 56.4	-0.2
MAKZ	Makanchi	65.79	326	P	P	12 03 57.5	-0.3
MAKZ				IAmb	IAmb	12 03 58.8	
	comp=Z,4.5nm,0.9s						
YAK	Yakutsk	66.04	0	P	P	12 03 59.7	+0.7
KDJ	Kajisay	66.10	320	P	P	12 03 59.7	-0.4
KDJ				IAmb	IAmb	12 04 01.1	
	comp=Z,4.8nm,0.8s						
ZAA0	Zalesovo Array	68.85	334	P	P	12 04 16.8	-0.1
ZAA0				IAmb	IAmb	12 04 18.2	
	comp=Z,5.7nm,1.2s						
ZALV	Zalesovo Beam	68.85	334	P	P	12 04 16.7	-0.2
	comp=Z,2.9nm,0.7s,baz=104,slow=6.3,SNR=9.2						
SEY	Seymchan	69.17	11	P	P	12 04 19.4	+0.7
	comp=Z,3.4nm,0.7s,baz=188,slow=2.8,SNR=7.2						
KURBB	Kurchatov Arra	69.86	328	P	P	12 04 23.6	+0.3
	comp=Z,6.1nm,0.7s,baz=129,slow=5.6,SNR=33						
KURK	Kurchatov	69.87	328	P	P	12 04 23.4	+0.1
BVAR	Borovoye Array	75.43	328	P	P	12 04 56.8	+0.4
	comp=Z,2.9nm,0.8s,baz=180,slow=12,SNR=13						
BRVK	Borovoye	75.50	328	P	P	12 04 56.8	0.0
BRVK				IAmb	IAmb	12 04 58.1	
	comp=Z,5.1nm,0.9s						
TIXI	Tiksi	75.70	360	P	P	12 04 57.8	+0.3
	comp=Z,1.8nm,0.5s,baz=176,slow=2.3,SNR=3.8						
TIXI	Tiksi	75.70	360	P	P	12 04 57.6	+0.1
TIXI				IAmb	IAmb	12 04 58.6	
	comp=Z,2.5nm,0.8s						
ABKAR	Akbulak array	80.00	321	P	P	12 05 22.3	+0.4
ABKAR				IAmb	IAmb	12 05 23.2	
	comp=Z,5.4nm,1.1s						
AKTO	Aktyubinsk	81.55	322	P	P	12 05 30.4	+0.2
	comp=Z,1.4nm,0.4s,baz=103,slow=6.6,SNR=6.1						
QSPA	South Pole Qui	85.76	180	P	P	12 05 51.6	0.0
QSPA				IAmb	IAmb	12 06 00.6	
	comp=Z,1.9nm,1.1s						
SII	Sitkinak Islan	85.99	33	P	P	12 05 50.9	-1.9
RAYN	Ar Rayn	86.14	294	P	P	12 05 54.6	+0.3
RAYN				IAmb	IAmb	12 05 55.7	
	comp=Z,5.5nm,0.8s						
TXAR	Lajitas Array	123.90	57	PKP	PKiKP	12 12 12.3	+0.7
	comp=Z,0.3nm,0.7s,baz=205,slow=2.6,SNR=3.9						
TXAR	Lajitas Array	123.90	57	PKPdf	PKiKP	12 12 12.8	+1.1
TORD	Torodi Ar. Bea	127.70	283	PKP	PKiKP	12 12 19.7	+0.3
	comp=Z,0.7nm,0.6s,baz=69,slow=2.8,SNR=3.5						
LPAZ	La Paz	153.22	140	PKPbc	PKiKP	12 13 13.2	+0.9
	comp=Z,0.8nm,0.5s,baz=148,slow=4.3,SNR=3.8						

IDC 09 11:56:38.1±1.6**, 4°.10S**×**129°.24E, h0**^{km}**, mb3.6**/1**, mb1 3.8**/4**, mb1mx3.3**/42**, mbtmp3.6**/4**, ML3.5**/3**, Error ellipse: s-maj=55.6km s-min=27.7km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.80	32	Pn	Pn	11 57 37.5	-0.4
	6.0nm,0.3s,baz=240,slow=20,SNR=6.4						
SIJI				Sn	Sn	11 58 17.4	-5.9
	2.4nm,0.3s,baz=229,slow=23,SNR=1.8						
WRA	Warramunga Arr	16.51	163	Pn	Pn	12 00 30.4	-0.9
	0.1nm,0.3s,baz=343,slow=13,SNR=1.6						
ASAR	Alice Springs	19.97	167	P	P	12 01 12.4	+0.4
	0.3nm,0.3s,baz=349,slow=9.6,SNR=4.6						
MKAR	Makanchi Array	65.40	326	P	P	12 07 22.7	+0.1
	0.2nm,0.3s,baz=134,slow=6.2,SNR=7.2						

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*IDC **09** 11:58:46.5±1.4, 5°.88S×131°.05E, h0^{km}, mb3.9/3, mb1 4.3/7, mb1mx3.7/40, mbtmp4.2/7, ML4.3/4, Error ellipse: s-maj=43.8km s-min=21.0km az=74.0*

*NEIC **09** 11:58:49.0±1.5, 5°.90S±0°.07×131°.1E±0°.1, h22^{km}±7^{km}, mb4.2/12, Error ellipse: s-maj=17.4km s-min=9.3km az=78.0*

ISC 09 11:58:51.3±0.6, **5°.91S**±0°.07×**131°.06E**±0°.09, **h50**^{km}**, n43, σ1^{s}.69**/41**, mb3.9**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.08	174	Pn	Pn	11 59 23.6	-0.1
SIJI	Sorong	5.01	2	Pn	Pn	12 00 02.8	-1.2
	9.0nm,0.3s,baz=184,slow=18,SNR=10						
DRS	Darwin Rock St	6.49	181	P	Pn	12 00 27.6	+3.4
KDU	Kakadu	6.88	168	P	Pn	12 00 34.9	+5.3
MTN	Manton Dam	6.89	179		Pn	12 00 29.3	-0.6
MTN	Manton Dam	6.89	179	P	Pn	12 00 33.4	+3.6
BATI	Baumata	8.48	239	Pn	Pn	12 00 51.8	+0.1
	7.0nm,0.3s,baz=67,slow=4.5,SNR=4.4						
BATI				Sn	Sn	12 02 13.9	-12
	5.8nm,0.3s,baz=255,slow=24,SNR=5.7						
KNRA	Kununurra	9.97	193	Pn	Pn	12 01 11.5	-0.4
KNRA	Kununurra	9.97	193	P	Pn	12 01 11.7	-0.3
WB0	Warramunga Arr	14.15	167	Pn	Pn	12 02 07.8	-1.4
WRAB	Tennant Creek	14.30	167	Pn	Pn	12 02 09.5	-1.7
WRA	Warramunga Arr	14.31	167	Pn	Pn	12 02 10.7	-0.6
	0.9nm,0.3s,baz=348,slow=13,SNR=15						
WRA				Sn	Sn	12 04 38.3	-10
	0.8nm,0.3s,baz=335,slow=22,SNR=1.7						
WRA	Warramunga Arr	14.31	167		Pn	12 02 10.2	-1.0
WB2	Warramunga Arr	14.31	167	Pn	Pn	12 02 10.2	-1.0
COEN	Coen	14.36	125	Pn	Pn	12 02 10.0	-1.8
COEN	Coen	14.36	125	P	P	12 02 23.2	+5.6
WR0	Warramunga Arr	14.37	167	Pn	Pn	12 02 11.0	-1.0
PMG	Port Moresby	16.32	103	Pn	Pn	12 02 36.6	-0.7
PMG				IAmb	IAmb	12 02 46.2	
	comp=Z,19nm,1.1s						
MYLDM	Lahad Datu	16.69	311	Pn	Pn	12 02 40.5	-1.4
MYLDM				IAmb	IAmb	12 02 54.9	
	comp=Z,31nm,1.4s						
MANU	Manus Island	16.71	77	Pn	Pn	12 02 41.2	-0.9
MANU				IAmb	IAmb	12 02 51.0	
	comp=Z,15nm,1.1s						
AS31	Alice Springs	17.87	171		Pn	12 02 54.0	-2.4
ASAR	Alice Springs	17.87	171	P	P	12 02 57.8	+1.2
	comp=Z,1.3nm,0.3s,baz=350,slow=11,SNR=30						
ASAR	Alice Springs	17.87	171		Pn	12 02 55.3	-1.1
PSA00	Pilbara Seismi	18.99	214	P	P	12 03 06.5	-2.3
PSA00				IAmb	IAmb	12 03 25.7	
	comp=Z,5.7nm,1.0s						
PSA00	Pilbara Seismi	18.99	214	P	P	12 03 05.5	-3.3
PSA00				IAmb	IAmb	12 03 05.9	
	comp=Z,3.1nm,0.9s						
WRKA	Warakurna	19.21	188	P	P	12 03 10.2	-1.1
OOD	Oodnadatta	22.21	169	P	P	12 03 44.4	+0.8
MULG	Mulgathing	24.41	174	P	P	12 04 06.5	+1.3
FORT	Forrest	24.90	186	P	P	12 04 09.9	+0.3
FORT	Forrest	24.90	186	P	P	12 04 09.7	+0.1
LCRK	Leigh Creek	25.32	165	P	P	12 04 14.5	+1.0
BBOO	Buckleboo	27.17	171	P	P	12 04 30.3	+0.2
BBOO				IAmb	IAmb	12 04 47.3	
	comp=Z,15nm,1.4s						
BBOO	Buckleboo	27.17	171	P	P	12 04 32.5	+2.4
	comp=Z,18nm,2.1s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
STKA	Stephens Creek	27.65	160	P	P	12 04 35.8	+1.3
	comp=Z,1.2nm,0.7s,baz=309,slow=14,SNR=1.5						
STKA	Stephens Creek	27.65	160	P	P	12 04 35.7	+1.3
CMSA	Cobar Meteorol	28.95	154	P	P	12 04 49.2	+3.2
CMAR	Chiang Mai Arr	39.87	308	P	P	12 06 21.9	+1.4
	comp=Z,0.5nm,0.3s,baz=124,slow=7.4,SNR=4.2						
MKAR	Makanchi Array	67.90	326	P	P	12 09 46.9	+2.1
	comp=Z,0.7nm,0.4s,baz=118,slow=7.9,SNR=9.8						
MKAR	Makanchi Array	67.90	326	P	P	12 09 47.0	+2.3
MAKZ	Makanchi	68.09	326	P	P	12 09 48.1	+2.2
KKAR	Karatay Array	73.23	318	P	P	12 10 16.4	-0.8
ABKAR	Akbulak array	82.32	321	P	P	12 11 08.6	+1.0
ARU	Arti	85.34	328	P	P	12 11 23.8	+0.9

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*IDC **09** 11:59:11.7±0.9, 4°.14S×129°.38E, h0^{km}, mb4.3/11, mb1 4.3/14, mb1mx4.0/42, mbtmp4.2/14, ML3.5/3, Error ellipse: s-maj=30.6km s-min=21.0km az=83.0*

*DJA **09** 11:59:12.4±1.3, 4°S±15°×12°9E±°, h10^{km}, M4.1/6, MLv4.1/6*

*NEIC **09** 11:59:14.0±1.4, 4°.17S±0°.07×129°.77E±0°.06, h18^{km}±4^{km}, mb4.6/44, Error ellipse: s-maj=9.4km s-min=8.0km az=187.0*

ISC 09 11:59:15.7±0.4, **4°.23S**±0°.05×**129°.66E**±0°.06, **h36^{km}, n83, σ1^{s}08**/83, **mb4.5**/30, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.14	320	P	Pn	11 59 32.0	-3.1
AAI	Ambon	1.56	290	P	Pn	11 59 37.5	-3.3
FAKI	Fak Fak	2.90	63	P	Pn	12 00 01.6	+2.3
FAKI	Fak Fak	2.90	63		Pn	11 59 57.0	-2.2
SIJI	Sorong	3.71	26	Pn	Pn	12 00 11.7	+1.3
	12nm,0.3s,baz=246,slow=20,SNR=12						
SIJI				Sn	Sn	12 00 51.6	-1.3
	6.4nm,0.3s,baz=221,slow=20,SNR=5.1						
LBMI	Labuha	4.17	329	P	Pn	12 00 16.0	-0.8
SANI	Sanana	4.26	301	P	Pn	12 00 15.2	-2.8
TNTI	Ternate	5.47	335	Pn	Pn	12 00 33.5	-1.2
SOEI	Soe	7.66	224	Pn	Pn	12 01 06.4	+1.5
MTN	Manton Dam	8.68	170	Pn	Pn	12 01 19.6	+0.9
TOLI2	Tolitoli	10.34	301	Pn	Pn	12 01 41.7	+0.2
KNRA	Kununurra	11.41	184	Pn	Pn	12 01 55.1	-1.0
MYLDM	Lahad Datu	14.55	310	Pn	Pn	12 02 39.1	0.0
JAGI	Jajag, Banyuwa	15.97	254	Pn	Pn	12 02 58.9	+1.1
WB0	Warramunga Arr	16.11	164	Pn	Pn	12 03 00.1	+0.5
WRAB	Tennant Creek	16.26	164	Pn	Pn	12 03 02.2	+0.7
WRA	Warramunga Arr	16.27	164	Pn	P	12 03 03.6	-0.6
	0.1nm,0.3s,baz=341,slow=13,SNR=3.1						
WB2	Warramunga Arr	16.27	164	Pn	Pn	12 02 60.0	-1.6
WR0	Warramunga Arr	16.34	163	Pn	Pn	12 03 01.5	-1.0
COEN	Coen	16.46	127	Pn	Pn	12 03 03.3	-0.7
KKM	Kota Kinabalu	16.86	307	IAmb	IAmb	12 03 10.2	
	comp=Z,48nm,1.2s						
KKM	Kota Kinabalu	16.86	307	Pn	Pn	12 03 08.3	-0.9
KKM				IAmb	IAmb	12 03 10.2	
	comp=Z,48nm,1.2s						
KKM	Kota Kinabalu	16.86	307		Pn	12 03 08.3	-0.9
PMG	Port Moresby	18.12	107	P	Pn	12 03 22.4	-2.2
SMRI	Semarang	19.33	261	P	Pn	12 03 39.0	-0.2
PSA00	Pilbara Seismi	19.69	208		Pn	12 03 44.0	+0.4
PSA00				IAmb	IAmb	12 03 46.1	
	comp=Z,29nm,1.1s						
PSA00	Pilbara Seismi	19.69	208	P	Pn	12 03 43.0	-0.6
PSA00				IAmb	IAmb	12 03 46.0	
	comp=Z,14nm,1.1s						
AS31	Alice Springs	19.75	168	P	Pn	12 03 43.4	-0.8
ASAR	Alice Springs	19.75	168	P	Pn	12 03 45.3	+1.0
	comp=Z,0.4nm,0.3s,baz=347,slow=11,SNR=8.0						
ASAR	Alice Springs	19.75	168	P	Pn	12 03 43.9	-0.4
CTAO	Charters Tower	22.58	136	P	P	12 04 12.6	-0.5
GUMO	Guam	23.27	40	P	P	12 04 18.2	-2.0
FORT	Forrest	26.45	183	P	P	12 04 49.1	-0.2
FORT				IAmb	IAmb	12 04 58.0	
	comp=Z,19nm,1.1s						
MYKOM	Kota Tinggi	26.48	283	P	P	12 04 50.9	+1.1
MYKOM				IAmb	IAmb	12 04 52.8	
	comp=Z,8.1nm,0.8s						
BBOO	Buckleboo	29.05	169	P	P	12 05 12.4	-0.2
BBOO				IAmb	IAmb	12 05 26.6	
	comp=Z,12nm,1.4s						
EIDS	Eidsvold	29.41	138	P	P	12 05 14.3	-1.6
EIDS				IAmb	IAmb	12 05 21.1	
	comp=Z,15nm,1.4s						
IPM	Ipoh	29.89	287	P	P	12 05 20.2	-0.1
TATO	Taipei	30.10	345	P	P	12 05 21.9	0.0
CMAR	Chiang Mai Arr	37.74	308	P	P	12 06 26.9	-1.5
	comp=Z,2.0nm,0.6s,baz=133,slow=7.9,SNR=13						
CMAR	Chiang Mai Arr	37.74	308	P	P	12 06 28.9	+0.5
CHTO	Chiang Mai	37.94	308	P	P	12 06 29.9	-0.2
CHTO				IAmb	IAmb	12 06 31.3	
	comp=Z,5.7nm,0.8s						
INU	Inuyama	39.98	9	P	P	12 06 46.9	+0.1
INU				IAmb	IAmb	12 06 56.0	
	comp=Z,8.9nm,0.8s						
MJAR	Matsushiro Arr	41.34	10	P	P	12 06 57.8	-0.3
	comp=Z,2.9nm,0.8s,baz=188,slow=9.5,SNR=11						
MAJO	Matsushiro	41.34	10	P	P	12 06 57.5	-0.6
MAJO				IAmb	IAmb	12 06 59.2	
	comp=Z,9.2nm,0.8s						
MAT	Matsushiro	41.34	10	P	P	12 06 57.5	-0.6
KSAR	Wonju Array Be	41.49	358	P	P	12 07 00.2	+0.9
KSRS	Korea Array	41.51	358	P	P	12 07 00.5	+1.1
	comp=Z,1.6nm,0.7s,baz=173,slow=10,SNR=8.7						
INCN	Inchon	41.60	356	P	P	12 06 60.0	-0.2
INCN				IAmb	IAmb	12 07 13.4	
	comp=Z,21nm,1.1s						
JMM	Marumori	43.15	13	P	P	12 07 12.8	0.0
BJT	Baijiatuau	45.75	346	P	P	12 07 34.0	+0.4
BJT				IAmb	IAmb	12 07 43.5	
	comp=Z,3.9nm,1.1s						
USA0B	Ussuriysk Arra	48.26	2	P	P	12 07 53.1	+0.1
USA0B				IAmb	IAmb	12 07 58.1	
	comp=Z,14nm,1.5s						
USRK	Ussuriysk Ar.	48.26	2	P	P	12 07 53.9	+0.9
	comp=Z,3.1nm,0.7s,baz=208,slow=8.2,SNR=5.0						
USRK	Ussuriysk Ar.	48.26	2	P	P	12 07 53.3	+0.3
LSA	Lhasa	49.99	315	P	P	12 08 07.0	-0.2
LSA				IAmb	IAmb	12 08 08.5	
	comp=Z,4.6nm,0.8s						
PALK	Pallekele	50.17	283	P	P	12 08 09.1	+0.8
OUZ	Omahuta	50.94	133	P	P	12 08 13.2	-0.5
OUZ				IAmb	IAmb	12 08 13.5	
	comp=Z,12nm,1.1s						
KLR	Kul'dur	53.28	2	P	P	12 08 31.8	+1.0
	comp=Z,2.5nm,0.9s,baz=159,slow=5.2,SNR=6.4						
ULN	Ulaanbaatar	55.55	342	P	P	12 08 47.9	+0.4
ULN				IAmb	IAmb	12 08 58.0	
	comp=Z,4.0nm,1.1s						
SONM	Songino Array	55.73	341	P	P	12 08 49.2	+0.4
	comp=Z,1.2nm,1.0s,baz=156,slow=7.4,SNR=2.9						
PEA0B	Petropavlovsk-	61.82	19	P	P	12 09 30.8	-0.2
PETK	Petropavlovsk-	61.82	19	P	P	12 09 32.3	+1.4
	comp=Z,6.4nm,1.1s,baz=216,slow=7.1,SNR=2.4						
PETK	Petropavlovsk-	61.82	19	P	P	12 09 31.6	+0.7
CASY	Casey	63.37	189	P	P	12 09 41.7	+0.7
NIL	Nilore	65.17	310	P	P	12 09 53.6	+0.1
NIL				IAmb	IAmb	12 09 54.0	
	comp=Z,9.2nm,1.4s						
MK31	Makanchi Array	65.74	326	P	P	12 09 57.1	+0.2
MK31				IAmb	IAmb	12 09 57.8	
	comp=Z,4.6nm,0.9s						
MKAR	Makanchi Array	65.74	326	P	P	12 09 57.0	+0.1
	comp=Z,3.7nm,0.5s,baz=116,slow=7.8,SNR=29						
MKAR	Makanchi Array	65.74	326	P	P	12 09 56.9	+0.1
MAKZ	Makanchi	65.93	326	P	P	12 09 57.8	-0.2
MAKZ				IAmb	IAmb	12 09 58.9	
	comp=Z,4.9nm,1.0s						
YAK	Yakutsk	66.08	0	P	P	12 09 59.3	+0.7
SMY	Shemya	67.99	27	P	P	12 10 11.3	+0.4
AAK	Ala-Archa	68.23	319	P	P	12 10 13.9	+0.9
	comp=Z,0.8nm,0.4s,baz=110,slow=9.0,SNR=2.5						
AAK	Ala-Archa	68.23	319	P	P	12 10 13.4	+0.4
ZAA0	Zalesovo Array	68.97	333	P	P	12 10 16.5	-0.6
ZAA0				IAmb	IAmb	12 10 21.0	
	comp=Z,5.0nm,1.1s						
ZALV	Zalesovo Beam	68.97	333	P	P	12 10 16.9	-0.2
	comp=Z,2.8nm,0.9s,baz=130,slow=4.6,SNR=5.7						
KURBB	Kurchatov Arra	69.99	328	P	P	12 10 23.8	+0.3
	comp=Z,7.3nm,0.7s,baz=130,slow=5.6,SNR=37						
KURK	Kurchatov	70.00	328	P	P	12 10 23.7	+0.1
KKAR	Karatay Array	71.05	318	P	P	12 10 30.0	-0.2
BRVK	Borovoye	75.63	328	P	P	12 10 57.4	+0.4
BRVK				IAmb	IAmb	12 10 58.2	
	comp=Z,5.8nm,0.9s						
ABKAR	Akbulak array	80.15	321	P	P	12 11 22.3	+0.2
RAYN	Ar Rayn	86.32	294	P	P	12 11 54.5	-0.1
RAYN				IAmb	IAmb	12 11 55.9	
	comp=Z,5.2nm,0.8s						
PDAR	Pinedale Array	115.18	44	PKP	PKPdf	12 17 55.3	+1.5
	comp=Z,0.2nm,0.7s,baz=300,slow=1.8,SNR=2.1						
TXAR	Lajitas Array	123.77	57	PKP	PKiKP	12 18 12.9	+2.1
	comp=Z,0.3nm,0.8s,baz=245,slow=1.9,SNR=2.6						
TORD	Torodi Ar. Bea	127.89	283	PKP	PKiKP	12 18 19.6	+0.3
	comp=Z,0.6nm,0.7s,baz=88,slow=1.6,SNR=3.9						

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*IDC **09** 12:00:18.0±0.7, 10°.38N×93°.74E, h0^{km}, mb4.1/17, mb1 4.1/19, mb1mx3.9/52, mbtmp4.0/19, Error ellipse: s-maj=27.9km s-min=15.4km az=62.0*

*NEIC **09** 12:00:19.9±0.8, 10°.47N±0°.08×93°.94E±0°.07, h10^{km}±1^{km}, mb4.5/15, Error ellipse: s-maj=17.1km s-min=5.7km az=216.0*

ISC 09 12:00:21.1±0.5, **10°.45N**±0°.06×**93°.86E**±0°.08, **h19^{km}, n49, σ1^{s}09**/51, **mb4.3**/25, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	1.63	318	eP	Pg	12 00 51.6	-0.9
PBA				eS	Sg	12 01 12.3	-1.5
PBA				IAML		12 01 26.7	
	comp=N,756nm,0.6s						
PBA	Port Blair	1.63	318		Pn	12 00 49.0	+0.2
PBA					Sg	12 01 13.4	-0.4
DGPR	DIGLIPUR	2.87	342	eP	Pb	12 01 10.8	-0.9
DGPR				eS	Sn	12 01 42.6	+2.8
DGPR				IAML		12 01 54.2	
	comp=N,149nm,0.7s						
DGPR				IAML		12 01 54.8	
	comp=E,180nm,0.7s						
SRIT	Nakonsritamara	5.95	107	Pn	Pn	12 01 48.0	-0.3
KULM	Kulim	8.45	127	Pn	Pn	12 02 21.0	-1.7
PSI	Prapat	9.11	146	Pn	Pn	12 02 32.0	+0.3
	baz=162,slow=17,SNR=1.5						
RPSI	Rantau Prapat	9.19	147		Pn	12 02 32.0	-0.8
CMAR	Chiang Mai Arr	9.36	31	Pn	Pn	12 02 36.6	+1.5
	baz=220,slow=15,SNR=6.4						
GSI	Gunungsitoli	9.80	158	Pn	Pn	12 02 40.2	-0.9
PALK	Pallekele	13.38	257	Pn	Pn	12 03 30.3	+0.1
SHL	Shillong	15.16	353	Pn	Pn	12 03 53.6	-0.9
LSA	Lhasa	19.32	353	P	P	12 04 45.1	-0.7
NIL	Nilore	29.85	324	P	P	12 06 26.7	-0.7
NIL				IAmb	IAmb	12 06 29.9	
	comp=Z,8.1nm,0.9s						
GAR	Garm	35.36	327	P	P	12 07 14.8	-0.8
BJT	Baijiatuau	35.49	30	P	P	12 07 14.9	-1.7
BJT				IAmb	IAmb	12 07 29.5	
	comp=Z,2.7nm,0.5s						
BTK	Batken	35.89	329	P	P	12 07 20.6	+0.4
BTK				IAmb	IAmb	12 07 31.8	
	comp=Z,6.6nm,0.8s						
AAK	Ala-Archa	36.26	336	P	P	12 07 22.3	-1.1
	comp=Z,1.6nm,0.7s,baz=170,slow=6.1,SNR=4.7						
MKAR	Makanchi Array	37.54	347	P	P	12 07 32.6	-1.4
	comp=Z,1.0nm,0.6s,baz=161,slow=7.7,SNR=6.8						
MKAR	Makanchi Array	37.54	347	P	P	12 07 32.3	-1.8
KKAR	Karatay Array	38.37	332	P	P	12 07 42.4	+1.3
SONM	Songino Array	38.74	14	P	P	12 07 44.2	0.0
	comp=Z,1.1nm,0.8s,baz=191,slow=6.9,SNR=4.4						
TLY	Talaya	41.89	9	P	P	12 08 12.5	+2.4
	comp=Z,3.0nm,0.5s,baz=110,slow=12,SNR=2.5						
KURBB	Kurchatov Arra	42.00	345	P	P	12 08 12.0	+1.0
	comp=Z,0.7nm,0.6s,baz=163,slow=7.2,SNR=4.6						
KURK	Kurchatov	42.07	346	P	P	12 08 10.6	-0.9
KURK				IAmb	IAmb	12 08 21.3	
	comp=Z,6.1nm,1.2s						
GEYT	Alibeck	42.14	316	P	P	12 08 15.3	+2.8
	comp=Z,23nm,0.8s,baz=111,slow=11,SNR=24						
ZAA0	Zalesovo Array	43.99	352	P	P	12 08 26.9	-0.2
ZAA0				IAmb	IAmb	12 08 36.6	
	comp=Z,4.4nm,0.8s						
ZALV	Zalesovo Beam	43.99	352	P	P	12 08 28.4	+1.3
	comp=Z,2.7nm,0.6s,baz=177,slow=8.9,SNR=12						
ZALV	Zalesovo Beam	43.99	352	P	P	12 08 27.3	+0.2
BVAR	Borovoye Array	46.49	341	P	P	12 08 47.4	+0.4
	comp=Z,0.6nm,0.5s,baz=167,slow=14,SNR=4.3						
BRVK	Borovoye	46.55	341	P	P	12 08 47.2	-0.2
ABKAR	Akbulak array	47.87	330	P	P	12 08 57.0	-0.8
ABKAR				IAmb	IAmb	12 09 07.0	
	comp=Z,2.9nm,0.8s						
WRA	Warramunga Arr	50.00	127	P	P	12 09 14.9	+0.3
	comp=Z,0.9nm,0.6s,baz=305,slow=8.7,SNR=4.2						
ASAR	Alice Springs	51.79	131	P	P	12 09 27.0	-1.0
	comp=Z,1.0nm,0.9s,baz=321,slow=7.3,SNR=2.9						
KBZ	Khabaz	55.03	317	P	P	12 09 51.1	-0.4
	comp=Z,4.9nm,1.1s,baz=142,slow=4.9,SNR=3.8						
KIV	Kislovodsk	55.25	317	P	P	12 09 54.6	+1.3
BRTR	Keskin Array B	60.57	310	P	P	12 10 30.9	+0.1
	comp=Z,2.8nm,0.8s,baz=120,slow=6.7,SNR=6.3						
BRTR	Keskin Array B	60.57	310	P	P	12 10 30.7	-0.1
STKA	Stephens Creek	62.08	135	P	P	12 10 41.9	+1.0
	comp=Z,0.9nm,0.6s,baz=342,slow=9.6,SNR=1.6						
TIXI	Tiksi	64.78	12	IAmb	IAmb	12 10 58.9	
	comp=Z,6.8nm,1.1s						
TIXI	Tiksi	64.78	12	P	P	12 10 58.0	-0.1
TIXI				IAmb	IAmb	12 10 58.9	
	comp=Z,6.8nm,1.1s						
TIXI	Tiksi	64.78	12	P	P	12 10 58.0	-0.1
FINES	FINESS Array B	70.33	332	P	P	12 11 32.4	-0.9
	comp=Z,3.3nm,0.9s,baz=93,slow=5.8,SNR=3.4						
ARCES	ARCESS Array B	72.77	340	P	P	12 11 47.4	-0.5
	comp=Z,7.5nm,1.2s,baz=90,slow=8.5,SNR=4.8						
ARCES	ARCESS Array B	72.77	340	P	P	12 11 48.0	+0.1
GERES	GERESS Array B	75.74	318	P	P	12 12 05.1	-0.7
	comp=Z,0.9nm,0.6s,baz=87,slow=6.0,SNR=3.7						
BOSA	Boshof	76.72	237	P	P	12 12 12.1	+0.4
	comp=Z,1.6nm,0.6s,baz=88,slow=3.5,SNR=4.9						
BOSA	Boshof	76.72	237	P	P	12 12 12.9	+1.2
BOSA				IAmb	IAmb	12 12 18.5	
	comp=Z,7.9nm,1.4s						
NOA	NORSAR Array B	77.37	330	P	P	12 12 14.4	-0.3
	comp=Z,0.8nm,0.7s,baz=74,slow=6.5,SNR=2.1						
PDAR	Pinedale Array	122.88	20	PKP	PKPdf	12 19 16.7	0.0
	comp=Z,0.3nm,0.7s,baz=29,slow=2.1,SNR=2.8						

IDC 09 12:00:29.4±1.5, **4°.23S**×**129°.33E, h0^{km}, mb3.8**/3, **mb1 4.1**/5, **mb1mx3.6**/39, **mbtmp3.9**/5, **ML3.7**/2, **Error ellipse: s-maj=101.7km s-min=26.5km az=74.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.36	163	Pn	Pn	12 04 18.9	-1.8
	0.2nm,0.3s,baz=349,slow=13,SNR=1.7						
ASAR	Alice Springs	19.82	168	P	Pn	12 05 02.8	-0.5
	1.0nm,0.3s,baz=351,slow=12,SNR=5.8						
KSRS	Korea Array	41.49	358	P	P	12 08 19.3	+1.1
	0.3nm,0.3s,baz=178,slow=9.3,SNR=1.6						
MKAR	Makanchi Array	65.56	326	P	P	12 11 14.4	-0.6
	1.0nm,0.7s,baz=129,slow=6.7,SNR=2.3						
KURBB	Kurchatov Arra	69.82	328	P	P	12 11 41.0	-0.6
	1.0nm,0.7s,baz=130,slow=5.7,SNR=2.3						

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*IDC **09** 12:06:19.9±0.5, 4°.27S×129°.49E, h0^{km}, mb4.8/29, mb1 4.8/34, mb1mx4.6/51, mbtmp4.8/34, ML4.5/4, Error ellipse: s-maj=17.4km s-min=11.5km az=72.0*

*MOS **09** 12:06:21.6±1.1, 4°.24S×129°.53E, h23^{km}, mb5.3/49, Error ellipse: s-maj=9.6km s-min=4.9km az=117.9*

*DJA **09** 12:06:24.3±0.2, 4°S±2°×13°0E±°, h10^{km}, M5.0/28, mb5.2/28, mB5.5/19, MLv5.3/15, Mw(mB)5.0/19*

*BJI **09** 12:06:24.0±0.0, 4°.20S×129°.70E, h40^{km}, mB5.6/29, mb4.9/65, Ms5.1/18, Ms7 4.8/18*

*NEIC **09** 12:06:24.2±1.9, 4°.14S±0°.05×129°.60E±0°.06, h22^{km}±3^{km}, mb5.2/98, Error ellipse: s-maj=8.2km s-min=7.9km az=125.0*

*KLM **09** 12:06:25, 4°.20S×129°.88E, h27^{km}, mb5.3*

ISC 09 12:06:24.7±0.5, **4°.23S**±0°.04×**129°.61E**±0°.04, **h32^{km}**±3^{km}, **h32^{km}:pP-P, n428, σ1^{s}40**/445, **mb5.1**/115, **7C-18D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.41	135	P	Pb	12 06 33.2	-0.8
MSAI	Masohi	1.11	322	P	Pn	12 06 41.6	-2.4
MSAI				S	Sn	12 06 55.2	-3.0
AAI	Ambon	1.51	291	P	Pn	12 06 47.9	-1.6
FAKI	Fak Fak	2.94	64	P	Pn	12 07 09.8	+0.7
FAKI	Fak Fak	2.94	64		Pn	12 07 09.3	+0.1
FAKI				Sn	Sn	12 07 41.9	-1.5
FAKI	Fak Fak	2.94	64	P	Pn	12 07 10.0	+0.9
SIJI	Sorong	3.72	26	Pn	Pn	12 07 18.9	-1.0
	68nm,0.3s,baz=204,slow=7.5,SNR=53						
SIJI				Sn	Sn	12 08 00.2	-2.5
	73nm,0.3s,baz=268,slow=23,SNR=2.6						
SWI	Sorong	3.73	26	P	Pn	12 07 19.3	-0.7
SAUI	Saumlaki	4.09	156	P	Pn	12 07 28.8	+3.7
SAUI	Saumlaki	4.09	156		Pn	12 07 26.1	+1.0
LBMI	Labuha	4.14	329	P	Pn	12 07 24.9	-0.8
SANI	Sanana	4.21	301	P	Pn	12 07 26.1	-0.6
SANI	Sanana	4.21	301	P	Pn	12 07 27.4	+0.7
TNTI	Ternate	5.45	336	P	Pn	12 07 43.4	-0.3
	1.1nm3µm136nm,1.0s						
TNTI	Ternate	5.45	336	Pn	Pn	12 07 43.5	-0.2
TNTI	Ternate	5.45	336	P	Pn	12 07 43.9	+0.2
	136nm,1.0s						
SRPI	Serui, Papua	7.02	71	P	Pn	12 08 06.3	+1.0
	1.1nm136nm,1.1s						
KMSI	Cibinong	7.38	310	P	Pn	12 08 10.5	+0.3
	3.1nm4µm270nm,0.6s						
SOEI	Soe	7.63	224	P	Pn	12 08 19.3	+5.4
	0.9nm148nm,1.5s						
SOEI	Soe	7.63	224	Pn	Pn	12 08 15.3	+1.4
DRS	Darwin Rock St	8.25	171	P	Pn	12 08 23.8	+1.6
BATI	Baumata	8.37	224	Pn	Pn	12 08 26.4	+2.5
	42nm,0.3s,baz=155,slow=1.9,SNR=22						
BATI	Baumata	8.37	224	P	Pn	12 08 27.2	+3.3
	1µm78nm,0.5s						
MMRI	Maumere	8.54	239	Pn	Pn	12 08 25.2	-0.9
APSI	Ampana	8.61	292	P	Pn	12 08 28.0	+0.9
	3µm251nm,0.9s						
MTN	Manton Dam	8.69	170	Pn	Pn	12 08 29.1	+0.8
MTN	Manton Dam	8.69	170	P	Pn	12 08 29.4	+1.1
KDU	Kakadu	8.87	162	P	Pn	12 08 31.1	+0.4
MRSI	Marisa	8.98	301	P	Pn	12 08 33.2	+1.0
	2µm145nm,0.8s						
EDFI	Ende, Flores	9.06	240	P	Pn	12 08 37.5	+4.0
	1µm109nm,1.4s						
BSSI	Bau Bau, Buton	9.28	258	P	Pn	12 08 39.4	+3.0
	2µm113nm,1.3s						
SMPI	Sarmi	9.35	77	P	Pn	12 08 39.5	+2.2
	56nm,0.9s						
BNSI	Bone	9.48	269	P	Pn	12 08 43.5	+4.4
	1µm132nm,1.1s						
BKSI	Bulukumba	9.52	263	P	Pn	12 08 43.2	+3.6
	2µm153nm,1.0s						
SPSI	Sidrap Palu	9.82	271	P	Pn	12 08 46.8	+3.0
	2µm76nm,0.9s						
TTSI	Tana Toraja	9.84	277	P	Pn	12 08 47.5	+3.4
	89nm,1.1s						
KAPI	Kappang	9.86	265	Pn	Pn	12 08 48.9	+4.6
	12nm,0.3s,baz=126,slow=3.6,SNR=9.4						
KAPI	Kappang	9.86	265	P	Pn	12 08 45.6	+1.3
KAPI	Kappang	9.86	265	Pn	Pn	12 08 45.6	+1.3
TOLI2	Tolitoli	10.29	301	Pn	Pn	12 08 48.7	-1.5
TOLI2	Tolitoli	10.29	301	P	Pn	12 08 53.0	+2.7
GENI	Genyem	10.66	82	P	Pn	12 08 55.6	+0.3
	68nm,0.7s						
GENI	Genyem	10.66	82	P	Pn	12 08 55.9	+0.6
MPSI	Mapaga	10.71	295	P	Pn	12 08 58.9	+2.9
	51nm,1.1s						
BASI	Baing, Sumba	10.76	236	P	Pn	12 09 01.9	+5.3
	2µm84nm,0.7s						
JAY	Jayapura	11.20	82	Pn	Pn	12 09 03.5	+0.7
	0.7nm,0.3s,baz=305,slow=3.0,SNR=5.8						
KNRA	Kununurra	11.41	184	Pn	Pn	12 09 05.2	-0.3
KNRA	Kununurra	11.41	184	P	Pn	12 09 05.9	+0.4
WBSI	Waikabubak, Su	11.48	242	P	Pn	12 09 12.3	+5.7
	100nm,0.7s						
PLAI	Plampang	12.61	248	P	Pn	12 09 26.4	+4.4
	2µm207nm,1.2s						
PLAI	Plampang	12.61	248	P	Pn	12 09 24.6	+2.6
BKB	Balikpapan	13.04	283	Pn	Pn	12 09 28.4	+0.6
TWSI	Taliwang, Sumb	13.42	250	P	Pn	12 09 36.3	+3.3
	1µm100nm,1.2s						
KBKI	Kotabaru	13.45	273	P	Pn	12 09 36.5	+3.1
	1µm25nm,0.8s						
MYLDM	Lahad Datu	14.51	310		Pn	12 09 49.2	+1.3
IGBI	Denpasar	15.08	252	P	P	12 10 00.3	-0.1
SPMM	Sapulut	15.85	304	P	P	12 10 09.0	-0.1
JAGI	Jajag, Banyuwa	15.93	254	P	P	12 10 08.7	-1.3
JAGI				IAmb	IAmb	12 10 11.5	
	comp=Z,204nm,1.1s						
JAGI	Jajag, Banyuwa	15.93	254	P	P	12 10 09.6	-0.3
WB0	Warramunga Arr	16.14	164		Pn	12 10 07.0	-2.3
WRAB	Tennant Creek	16.28	164	P	Pn	12 10 08.7	-2.4
WRAB				pmax	pmax		
	comp=Z,55nm,0.9s						
WRAB	Tennant Creek	16.28	164		Pn	12 10 08.7	-2.4
WRA	Warramunga Arr	16.29	164	Pn	Pn	12 10 08.2	-3.0
	comp=Z,1.8nm,0.3s,baz=336,slow=13,SNR=27						
WRA				Sn	Sn	12 13 02.9	-8.1
	baz=331,slow=24,SNR=2.6						
WRA	Warramunga Arr	16.29	164	P	Pn	12 10 08.7	-2.5
WRA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WRA	Warramunga Arr	16.29	164		Pn	12 10 08.7	-2.5
WB2	Warramunga Arr	16.29	164		Pn	12 10 08.7	-2.5
WR0	Warramunga Arr	16.36	163		Pn	12 10 10.2	-1.9
COEN	Coen	16.51	127		Pn	12 10 12.8	-1.2
COEN	Coen	16.51	127	P	Pn	12 10 13.0	-1.0
KKM	Kota Kinabalu	16.82	307	Pn	Pn	12 10 17.3	-0.8
KKM	Kota Kinabalu	16.82	307	P	P	12 10 21.3	+1.3
MANU	Manus Island	17.86	84	P	Pn	12 10 29.0	-1.9
PMG	Port Moresby	18.16	107	P	P	12 10 35.5	+0.8
	comp=Z,0.4nm,0.3s,baz=306,slow=8.8,SNR=14						
PMG	Port Moresby	18.16	107	P	P	12 10 34.6	0.0
PMG	Port Moresby	18.16	107	P	P	12 10 36.0	+1.3
	comp=Z,91nm,1.2s						
PMG	Port Moresby	18.16	107	P	P	12 10 36.0	+1.3
	comp=Z,91nm,1.2s						
SBUM	Sibu	18.60	291	P	Pn	12 10 42.0	+2.0
SBUM	Sibu	18.60	291	P	Pn	12 10 40.4	+0.4
QIS	Mount Isa	18.92	150	P	Pn	12 10 43.9	+0.1
SMRI	Semarang	19.28	261	P	Pn	12 10 49.0	+0.8
MBWA	Marble Bar	19.38	209	P	Pn	12 10 49.6	+0.4
PSA00	Pilbara Seismi	19.68	208	P	Pn	12 10 52.6	-0.2
PSA00	Pilbara Seismi	19.68	208	P	Pn	12 10 52.2	-0.6
PSA00				IAmb	IAmb	12 10 54.0	
	comp=Z,339nm,1.2s						
PSA00	Pilbara Seismi	19.68	208	P	Pn	12 10 52.9	+0.1
AS31	Alice Springs	19.77	168		Pn	12 10 53.0	-0.9
ASAR	Alice Springs	19.77	168	P	P	12 10 52.9	+0.6
	comp=Z,3.8nm,0.3s,baz=346,slow=9.9,SNR=65						
ASAR				ScP	ScP	12 18 44.1	+0.1
	baz=9.7,slow=1.7,SNR=6.5						
ASAR	Alice Springs	19.77	168	P	Pn	12 10 53.2	-0.7
ASAR	Alice Springs	19.77	168	P	Pn	12 10 53.2	-0.7
MTSU	Mount Surprise	19.95	135	P	Pn	12 10 55.7	-0.4
WRKA	Warakurna	20.73	183	P	Pn	12 11 04.1	-1.1
RABL	Rabaul	22.49	91	P	P	12 11 20.9	-0.9
RABL				IAmb	IAmb	12 11 51.6	
	comp=Z,109nm,1.1s						
CTA	Charters Tower	22.61	136	P	P	12 11 23.9	+0.9
	comp=Z,12nm,0.6s,baz=318,slow=13,SNR=15						
CTA	Charters Tower	22.61	136	P	P	12 11 23.9	+0.9
CTAO	Charters Tower	22.61	136	P	P	12 11 23.1	+0.1
CTAO				pmax	pmax		
	comp=Z,43nm,0.8s						
CTAO	Charters Tower	22.61	136	P	P	12 11 23.1	+0.1
CTAO				IAmb	IAmb	12 11 34.4	
	comp=Z,42nm,0.8s						
CTAO	Charters Tower	22.61	136	P	P	12 11 23.8	+0.9
GIRL	Giralia	23.59	218	P	P	12 11 34.1	+1.2
GIRL	Giralia	23.59	218	P	P	12 11 34.3	+1.5
OOD	Oodnadatta	24.14	167	P	P	12 11 38.2	+0.3
MEEK	Meekatharra	24.64	204	P	P	12 11 43.5	+0.9
INKA	Innaminka	25.68	157	P	P	12 11 53.3	+1.4
MULG	Mulgathing	26.25	171	P	P	12 11 59.2	+2.1
MYKOM	Kota Tinggi	26.43	283	P	P	12 12 01.0	+2.2
MYKOM	Kota Tinggi	26.43	283	P	P	12 11 59.0	+0.1
MYKOM				IAmb	IAmb	12 12 13.2	
	comp=Z,71nm,1.1s						
FORT	Forrest	26.45	183	P	P	12 11 58.8	0.0
FORT				IAmb	IAmb	12 12 19.4	
	comp=Z,32nm,0.8s						
FORT	Forrest	26.45	183	P	P	12 11 59.1	+0.3
LCRK	Leigh Creek	27.32	164	P	P	12 12 08.0	+1.4
RK1H	Rockhampton Ha	27.74	135	P	P	12 12 12.0	+1.5

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MORW  Morawa            27.86 206    P      P       12 12 11.2 -0.4
JRMM  Jerantut          28.29 286    P      P       12 12 17.0 +1.5
RMQ   Roma              28.73 142    P      P       12 12 20.5 +1.1
BBOO  Buckleboo         29.07 169    P      P       12 12 22.9 +0.6
BBOO                                 IAmb   IAmb    12 12 50.1
      comp=Z,38nm,1.2s
SSLB  Suanglung         29.09 344    P      P       12 12 26.1 +3.5
KLBR  Kellerberrin      29.41 201    P      P       12 12 27.6 +2.3
      comp=Z,39nm,1.1s
EIDS  Eidsvold          29.44 138    P      P       12 12 25.4 -0.3
EIDS  Eidsvold          29.44 138    P      P       12 12 27.5 +1.8
      comp=Z,13nm,1.4s
STKA  Stephens Creek    29.72 159    P      P       12 12 28.4 +0.3
      comp=Z,1.7nm,0.3s,baz=345,slow=9.1,SNR=14
STKA  Stephens Creek    29.72 159    P      P       12 12 27.6 -0.4
STKA  Stephens Creek    29.72 159    P      P       12 12 28.6 +0.6
IPM   Ipoh              29.84 287    P      P       12 12 30.0 +0.7
IPM   Ipoh              29.84 287    P      P       12 12 29.2 -0.2
IPM   Ipoh              29.84 287    P      P       12 12 30.6 +1.3
KULM  Kulim             30.43 288    P      P       12 12 35.0 +0.4
KULM  Kulim             30.43 288    P      P       12 12 34.4 -0.2
KULM                                 IAmb   IAmb    12 12 48.5
      comp=Z,65nm,1.3s
JOW   Kunigami          30.90 358    P      P       12 12 40.3 +1.8
CMSA  Cobar Meteorol    31.09 153    P      P       12 12 40.9 +0.7
RPSI  Rantau Prapat     31.43 282    P      P       12 12 42.2 -1.1
PSI   Prapat            31.45 282    P      P       12 12 42.2 -1.4
      comp=Z,2.4nm,0.6s,baz=101,slow=5.2,SNR=5.2
TWOA  Tennyson Woods    31.76 166    P      P       12 12 47.4 +1.4
GSI   Gunungsitoli      32.48 279    P      P       12 12 54.6 +2.0
SRIT  Nakonsritamara    32.52 293    P      P       12 12 53.5 +0.6
ARMA  Armidale          33.33 144    P      P       12 13 01.4 +1.5
LHMI  Lhok Sumawe       33.95 286    P      P       12 13 03.6 -1.8
ARPS  Mount Arapiles    34.28 162    P      P       12 13 09.6 +1.6
CAN   Canberra          35.76 152    P      P       12 13 21.8 +0.9
CAN                                  pmax   pmax
      comp=Z,29nm,1.1s
CAN   Canberra          35.76 152    P      P       12 13 21.8 +0.9
CAN                                  IAmb   IAmb    12 13 22.4
      comp=Z,29nm,1.1s
SLVN  Son La            35.78 316    P      P       12 13 21.2  0.0
SLVN                                 IAmb   IAmb    12 13 42.2
      comp=Z,32nm,1.4s
TOO   Toolangi          36.23 158    P      P       12 13 25.9 +1.0
TOO                                  pmax   pmax
      comp=Z,48nm,1.5s
TOO   Toolangi          36.23 158    P      P       12 13 25.9 +1.0
TOO                                  IAmb   IAmb    12 13 27.1
      comp=Z,48nm,1.5s
JNU   Nakatsue          37.16   2    P      P       12 13 32.6 -0.2
      comp=Z,16nm,0.8s,baz=162,slow=7.8,SNR=6.9
JNU   Nakatsue          37.16   2    P      P       12 13 31.9 -0.9
JNU                                  IAmb   IAmb    12 13 37.4
      comp=Z,39nm,1.1s
NJ2   Nanjing           37.50 345 ⇓P     P       12 13 38.3 +2.7
NJ2                                  pP     sP      12 13 46.1 -1.6
NJ2                                  pmax   pmax
      comp=Z,30nm,1.2s
WHN   Wuhan             37.53 338 ⇓P     P       12 13 39.8 +3.9
CM31  Chiang Mai Arr    37.70 308    P      P       12 13 38.6 +1.1
CM31                                 IAmb   IAmb    12 14 05.4
      comp=Z,49nm,1.1s
CMAR  Chiang Mai Arr    37.70 308    P      P       12 13 37.9 +0.3
      comp=Z,15nm,1.0s,baz=138,slow=7.6,SNR=48
CMAR                                 PcP    PcP     12 15 55.6 +1.1
      comp=Z,2.4nm,0.7s,baz=164,slow=2.4,SNR=3.5
CMAR                                 ScP    ScP     12 19 40.5 +0.7
      comp=Z,1.0nm,0.6s,baz=136,slow=3.1,SNR=5.8
CMAR  Chiang Mai Arr    37.70 308  i P      P       12 13 38.7 +1.1
CMAR                                 pmax   pmax
      comp=Z,15nm,1.0s
GYA   Guiyang           37.74 325 ⇑P     P       12 13 40.8 +2.9
GYA                                  pmax   pmax
      comp=Z,21nm,1.1s
CHTO  Chiang Mai        37.90 308    P      P       12 13 39.6 +0.4
CHTO                                 pmax   pmax
      comp=Z,53nm,1.1s
CHTO  Chiang Mai        37.90 308    P      P       12 13 39.6 +0.4
CHTO                                 IAmb   IAmb    12 14 06.9
      comp=Z,53nm,1.1s
CHTO  Chiang Mai        37.90 308    P      P       12 13 40.3 +1.1
      comp=Z,37nm,1.1s
JTU   Tsushima          38.54 360    P      P       12 13 44.0 -0.3
JTU                                  IAmb   IAmb    12 13 57.7
      comp=Z,67nm,1.5s
SANVU Saraoutou         38.61 109    P      P       12 13 45.3 +0.1
SANVU Saraoutou         38.61 109    P      P       12 13 47.0 +1.8
KMI   Kunming           39.15 320 ⇓P     P       12 13 51.5 +1.6
KMI                                  pP     sP      12 14 02.1 +0.3
KMI                                  sP     pwP     12 14 10.2 +8.6
KMI                                  pmax   pmax
      comp=Z,27nm,0.9s
KMI                                  LR     LR
      comp=Z,690nm,20.1s
KMI                                  LR     LR
      comp=Z,820nm,20.1s
KMI                                  LR     LR
      comp=Z,1µm,21.9s
JHS   Saijyo            39.16   5    P      P       12 13 49.7 +0.1
JHS                                  IAmb   IAmb    12 14 08.7
      comp=Z,47nm,1.1s
ENH   Enshi             39.34 332    P      P       12 13 50.1 -1.0
ENH                                  IAmb   IAmb    12 13 55.2
      comp=Z,37nm,1.3s
JWT   Wachi             39.67   7    P      P       12 13 53.7 -0.1
JWT                                  IAmb   IAmb    12 14 16.0
      comp=Z,51nm,1.1s
INU   Inuyama           39.98   9    P      P       12 13 55.9 -0.4
INU                                  IAmb   IAmb    12 14 03.8
      comp=Z,60nm,1.4s
INU   Inuyama           39.98   9    P      P       12 13 57.5 +1.2
TJN   Taejon            40.45 357deP    P       12 14 00.3 +0.1
TJN   Taejon            40.45 357    P      P       12 14 04.0 +3.8
      comp=Z,110nm,0.9s
MJAR  Matsushiro Arr    41.34  11    P      P       12 14 06.4 -1.3
      comp=Z,13nm,0.8s,baz=185,slow=8.6,SNR=11
MAJO  Matsushiro        41.35  10⇓iP    P       12 14 06.1 -1.6
MAJO                                 pmax   pmax
      comp=Z,24nm,0.9s
MAJO  Matsushiro        41.35  10    P      P       12 14 06.3 -1.4
MAT   Matsushiro        41.35  10    P      P       12 14 06.1 -1.6
MJB9  Matsu-Tunnel      41.35  10    P      P       12 14 06.0 -1.7
MJB9                                 IAmb   IAmb    12 14 10.7
      comp=Z,35nm,0.7s
JYT   Yasato            41.44  13    P      P       12 14 07.9 -0.5
JYT                                  IAmb   IAmb    12 14 24.6
      comp=Z,36nm,0.9s
KSRS  Korea Array       41.50 358    P      P       12 14 09.6 +0.7
      comp=Z,3.9nm,0.7s,baz=174,slow=9.2,SNR=20
KSRS                                 ScP    ScP     12 19 54.9 +0.8
      comp=Z,1.6nm,0.9s,baz=163,slow=4.7,SNR=5.2
KS19  Wonju Array Si    41.55 358    P      P       12 14 09.3  0.0
INCN  Inchon            41.59 356    P      P       12 14 08.6 -1.0
INCN                                 pmax   pmax
      comp=Z,58nm,1.1s
INCN  Inchon            41.59 356    P      P       12 14 08.6 -1.0
INCN                                 IAmb   IAmb    12 14 21.7
      comp=Z,58nm,1.1s
INCN  Inchon            41.59 356    P      P       12 14 13.7 +4.1
CD2   Chengdu           42.78 327⇑iP    P       12 14 20.1 +0.6
CD2                                  pP     pwP     12 14 31.5  0.0
CD2                                  pmax   pmax
      comp=Z,20nm,0.6s
XAN   Xi'an             42.78 334    P      P       12 14 19.0 -0.5
XAN                                  pP     pP      12 14 28.7 +0.4
XAN                                  pmax   pmax
      comp=Z,10.0nm,1.2s
JSD   Sado              42.81  10    P      P       12 14 19.0 -0.5
JMM   Marumori          43.15  13    P      P       12 14 21.5 -0.8
BJT   Baijiatuau        45.73 346    P      P       12 14 42.8 -0.1
BJT                                  pmax   pmax
      comp=Z,32nm,0.9s
BJT   Baijiatuau        45.73 346    P      P       12 14 42.8 -0.1
BJT                                  IAmb   IAmb    12 14 54.1
      comp=Z,32nm,0.9s
BJI   Beijing           45.75 346    P      P       12 14 43.6 +0.6
BJI                                  pP     sP      12 14 53.5 -1.7
BJI                                  pmax   pmax
      comp=Z,21nm,1.4s
JTM   Tenmabayashi      46.01  12    P      P       12 14 43.8 -1.3
LZH   Lanzhou           46.80 331 ⇓P     P       12 14 52.5 +0.9
LZH                                  pP     sP      12 15 02.4 -1.2
LZH                                  sP     pwP     12 15 06.7 +2.8
LZH                                  pmax   pmax
      comp=Z,38nm,1.3s
SHL   Shillong          47.08 311    P      P       12 14 53.2 -0.8
SHL                                  pmax   pmax
      comp=Z,27nm,1.0s
SHL   Shillong          47.08 311    P      P       12 14 53.1 -0.8
SHL                                  IAmb   IAmb    12 15 14.2
      comp=Z,27nm,1.0s
VLA   Vladivostok       47.17   2ceP    P       12 14 57.4 +3.3
VLA                                  pmax   pmax
      comp=Z,44nm,1.1s
HHC   Hu-ho-hao-te      47.81 342  eP     P       12 15 02.4 +3.1
HHC                                  pmax   pmax
      comp=Z,21nm,1.1s
HHC                                  pmax   pmax
      comp=Z,820nm,8.8s
CN2   Changchun         47.95 356  eP     P       12 14 58.8 -1.4
CN2                                  pmax   pmax
      comp=Z,10.0nm,1.0s
BTO   Baotou            48.09 340  eP     P       12 15 08.5 +7.0
BTO                                  S      S       12 22 08.1  +10
USA0B Ussuriysk Arra    48.25   2    P      P       12 15 01.4 -1.1
USA0B                                pmax   pmax
      comp=Z,31nm,1.0s
USA0B Ussuriysk Arra    48.25   2    P      P       12 15 01.4 -1.1
USA0B                                IAmb   IAmb    12 15 14.5
      comp=Z,31nm,1.0s
USRK  Ussuriysk Ar.     48.25   2    P      P       12 15 03.1 +0.6
      comp=Z,5.9nm,0.7s,baz=192,slow=11,SNR=13
USRK  Ussuriysk Ar.     48.25   2    P      P       12 15 00.8 -1.8
MDJ   Mudanjiang        48.62 360    P      P       12 15 07.8 +2.4
MDJ                                  pmax   pmax
      comp=Z,23nm,1.8s
MDJ                                  pmax   pmax
      comp=Z,700nm,7.1s
MDJ   Mudanjiang        48.62 360    P      P       12 15 05.4  0.0
MDJ                                  IAmb   IAmb    12 15 17.5
      comp=Z,29nm,1.0s
TEY   Ternei            49.44   7  eP     P       12 15 06.6 -5.0
ASAJ  Asahikawa         49.52  12    P      P       12 15 14.1 +1.9
      comp=Z,16nm,1.1s,baz=231,slow=13,SNR=2.2
LSA   Lhasa             49.96 315    P      P       12 15 16.4 -0.1
LSA                                  pmax   pmax
      comp=Z,16nm,0.7s
LSA   Lhasa             49.96 315    P      P       12 15 16.4 -0.1
LSA                                  IAmb   IAmb    12 15 27.8
      comp=Z,16nm,0.7s
ODAN  Odare             51.18 310  eP     P       12 15 25.0 -0.4
TAPN  Taplejung         51.19 310  eP     P       12 15 24.6 -1.0
      comp=Z,27nm,0.7s
GTA   Gaotai            51.38 330 ⇓P     P       12 15 27.2 +0.6
GTA                                  pP     pP      12 15 36.7 +1.2
GTA                                  sP     pwP     12 15 41.8 +2.8
GTA                                  ScP    ScP     12 20 36.9 +1.5
GTA                                  ScS    ScS     12 25 14.9  0.0
GTA                                  pmax   pmax
      comp=Z,15nm,1.2s
RAMN  Ramite            51.83 309  eP     P       12 15 30.1 -0.3
      comp=Z,35nm,0.5s
PKI   Pulchoki          53.06 309  eP     P       12 15 38.6 -1.0
PKIN  Phulchoki         53.07 309  eP     P       12 15 39.0 -0.6
KKN   Kakani            53.27 309  eP     P       12 15 40.5 -0.4
KLR   Kul'dur           53.27   2    P      P       12 15 40.7 +0.5
      comp=Z,14nm,1.1s,baz=200,slow=6.1,SNR=13
KLR   Kul'dur           53.27   2deP    P       12 15 41.9 +1.6
KLR                                  pmax   pmax
      comp=Z,37nm,1.2s
DMN   Daman             53.31 309  eP     P       12 15 40.8 -0.5
      comp=Z,110nm,1.3s
GKN   Gorkha            53.87 309  eP     P       12 15 44.7 -0.6
LTZ   Lake Taylor       53.88 142    P      P       12 15 46.1 +1.1
LTZ                                  IAmb   IAmb    12 16 13.8
      comp=Z,28nm,1.2s
TUWZ  Tuamarina         54.22 140    P      P       12 15 47.3 -0.1
KHZ   Kahutara          54.47 141    P      P       12 15 49.0 -0.2
KHZ                                  IAmb   IAmb    12 16 08.2
      comp=Z,42nm,1.4s
KOLN  Koldanda          54.56 309  eP     P       12 15 50.0 -0.4
DANN  Dangsing          54.71 309  eP     P       12 15 50.7 -0.9
      comp=Z,104nm,0.9s
HYB   Hyderabad         54.78 295  i P      P       12 15 51.0 -0.9
      comp=Z,50nm,1.0s
GRNR  Gornyy            55.09   5⇑iP    P       12 15 56.3 +2.8
GRNR                                 pmax   pmax
      comp=Z,5.0nm,1.2s
PYUN  Piuthan           55.19 309  eP     P       12 15 54.1 -0.9
ULN   Ulaanbaatar       55.53 342d iP    P       12 15 59.5 +2.6
ULN                                  pmax   pmax
      comp=Z,59nm,1.7s
ULN   Ulaanbaatar       55.53 342    P      P       12 15 57.3 +0.3
SONM  Songino Array     55.71 341    P      P       12 15 58.9 +0.8
      comp=Z,13nm,1.1s,baz=154,slow=4.9,SNR=33
ZEA   Zeya              57.79 358  eP     P       12 16 16.9 +4.3
ZEA                                  pmax   pmax
      comp=N,10.0nm,1.0s
ZEA                                  pmax   pmax
      comp=Z,10.0nm,1.1s
ZAK   Zakamensk         58.94 341  eP     P       12 16 21.0 +0.1
ZAK                                  pmax   pmax
      comp=Z,15nm,1.4s
POO   Poona             59.38 294  eP     P       12 16 20.0 -4.5
TLY   Talaya            59.94 342    P      P       12 16 28.3 +0.6
      comp=Z,3.4nm,0.7s,baz=174,slow=8.1,SNR=3.3
TLY   Talaya            59.94 342  eP     P       12 16 30.4 +2.7
TLY                                  pmax   pmax
      comp=Z,50nm,1.5s
MOY   Mondy             60.79 340  eP     P       12 16 35.4 +1.8
MOY                                  pmax   pmax
      comp=Z,99nm,2.1s
WMQ   Urumqi            60.88 326  eP     P       12 16 35.5 +1.2
WMQ                                  pP     pwP     12 16 51.1 +3.9
WMQ                                  pmax   pmax
      comp=Z,39nm,1.1s
PETK  Petropavlovsk-    61.83  19    P      P       12 16 41.6 +1.1
      comp=Z,3.1nm,0.8s,baz=174,slow=5.8,SNR=2.2
PET   Petropavlovsk     62.07  19    P      P       12 16 39.8 -2.3
BOD   Bodaibo           63.12 351  eP     P       12 16 49.8 +0.8
BOD                                  pmax   pmax
      comp=Z,50nm,1.5s
CASY  Casey             63.37 189    P      P       12 16 50.8 +0.2
CASY                                 IAmb   IAmb    12 16 51.6
      comp=Z,35nm,1.3s
ZSN   Zaisan            64.72 328  eP     P       12 16 59.1 -0.7
      baz=328
ZSN   Zaisan            64.72 328  eP     P       12 16 59.1 -0.7
DGZ   Jazzator, Alta    64.90 331d iP    P       12 17 01.7 +0.6
DGZ                                  pmax   pmax
      comp=Z,26nm,1.2s
NIL   Nilore            65.14 310    P      P       12 17 01.7 -1.1
NIL                                  pmax   pmax
      comp=Z,25nm,1.4s
NIL   Nilore            65.14 310    P      P       12 17 01.7 -1.1
NIL                                  IAmb   IAmb    12 17 11.5
      comp=Z,25nm,1.4s
SHLS  Shalkode          65.31 322  eP     P       12 17 01.7 -2.1
      baz=322
SHLS  Shalkode          65.31 322  eP     P       12 17 01.7 -2.1
UZB   Uzynbulak         65.57 322  eP     P       12 17 05.3 -0.3
      baz=322
UZB   Uzynbulak         65.57 322  eP     P       12 17 05.2 -0.3
PRZ   Przheval'sk       65.61 321    P      P       12 17 06.4 +0.5
PRZ                                  pmax   pmax
      comp=Z,39nm,1.2s
PRZ   Przheval'sk       65.61 321    P      P       12 17 06.4 +0.5
MK31  Makanchi Array    65.71 326d iP    P       12 17 06.7 +0.4
MK31  Makanchi Array    65.71 326    P      P       12 17 06.4 +0.1
MK31                                 IAmb   IAmb    12 17 18.4
      comp=Z,13nm,0.8s
MKAR  Makanchi Array    65.71 326    P      P       12 17 06.3 +0.1
      comp=Z,10nm,0.6s,baz=122,slow=8.1,SNR=64
MKAR  Makanchi Array    65.71 326    P      P       12 17 06.5 +0.2
MKAR  Makanchi Array    65.71 326    P      P       12 17 06.5 +0.2
KSH   Kashi             65.73 317    P      P       12 17 07.3 +0.6
KSH                                  pP     pwP     12 17 23.7 +4.1
KSH                                  sP     sP      12 17 28.3 +9.2
KSH                                  pmax   pmax
      comp=Z,8.0nm,0.9s
MAKZ  Makanchi          65.89 326    P      P       12 17 07.8 +0.4
MAKZ                                 pmax   pmax
      comp=Z,22nm,1.0s
MAKZ  Makanchi          65.89 326    P      P       12 17 07.8 +0.4
MAKZ                                 IAmb   IAmb    12 17 19.4
      comp=Z,22nm,0.9s
SATY  Saty              65.91 321  eP     P       12 17 07.4 -0.3
      comp=Z,14nm,1.0s,baz=321
SATY  Saty              65.91 321  eP     P       12 17 07.4 -0.3
SATY                                 pmax   pmax
      comp=Z,15nm,1.0s
YAK   Yakutsk           66.07   0    P      P       12 17 09.0 +0.8
      comp=Z,15nm,0.6s,baz=184,slow=0.6,SNR=12
YAK   Yakutsk           66.07   0  eP     P       12 17 08.7 +0.6
YAK                                e*PP     sP      12 17 19.3 -1.2
YAK                                e                12 17 39.1
YAK                                e                12 19 33.6
YAK                                eS       S       12 25 53.5 -0.4
YAK                                e*SS     sS      12 26 13.6 +4.1
YAK                                e                12 27 00.7
YAK                                  pmax   pmax
      comp=Z,58nm,1.0s
YAK                                  pmax   pmax
      comp=N,14nm,1.3s
YAK                                  pmax   pmax
      comp=E,5.0nm,1.3s
YAK                                  pmax   pmax
      comp=Z,150nm,3.1s
YAK                                  pmax   pmax
      comp=N,82nm,3.0s
YAK                                  pmax   pmax
      comp=E,71nm,2.8s
YAK                                  smax   smax
      comp=E,166nm,2.5s
YAK                                  smax   smax
      comp=N,60nm,2.0s
YAK   Yakutsk           66.07   0    P      P       12 17 08.0 -0.2
KDJ   Kajisay           66.21 320    P      P       12 17 09.7 -0.1
KDJ                                  pmax   pmax
      comp=Z,9.0nm,0.8s
KDJ   Kajisay           66.21 320    P      P       12 17 09.7 -0.1
KDJ                                  IAmb   IAmb    12 17 23.6
      comp=Z,9.0nm,0.8s
MDOK  Medeo             66.82 321  eP     P       12 17 12.9 -0.6
      baz=321
MDOK  Medeo             66.82 321  eP     P       12 17 12.9 -0.6
TNSS  Tian-Shan         66.82 321  eP     P       12 17 13.4 -0.4
      baz=321
AAA   Alma-Ata          66.92 321  eP     P       12 17 13.8 -0.3
      baz=321
AAA   Alma-Ata          66.92 321  eP     P       12 17 13.8 -0.3
TDK   Taldyqorghan      66.94 323  eP     P       12 17 13.9 -0.2
      baz=323
TDK   Taldyqorghan      66.94 323  eP     P       12 17 13.9 -0.2
BOOM  Boomskoye usch    67.19 320    P      P       12 17 16.0  0.0
BOOM                                 pmax   pmax
      comp=Z,12nm,1.1s
BOOM  Boomskoye usch    67.19 320    P      P       12 17 16.0  0.0
BOOM                                 IAmb   IAmb    12 17 38.1
      comp=Z,12nm,1.1s
TKM2  Tokmak 2          67.62 320    P      P       12 17 18.7  0.0
      SNR=12
KUU   Kurty             67.63 321  eP     P       12 17 17.9 -0.6
      comp=Z,37nm,1.4s,baz=321
KUU   Kurty             67.63 321  eP     P       12 17 17.9 -0.6
KUU                                  pmax   pmax
      comp=Z,37nm,1.4s
UCH   Uchtor            67.99 319    P      P       12 17 22.2 +0.8
      SNR=7.7
AAK   Ala-Archa         68.19 319⇓iP    P       12 17 22.9 +0.6
AAK                                  pmax   pmax
      comp=Z,46nm,1.7s
AAK   Ala-Archa         68.19 319    P      P       12 17 22.7 +0.4
AML   Almayashu         68.48 319    P      P       12 17 24.9 +0.4
      SNR=8.9
USP   Ospenovka         68.49 320    P      P       12 17 24.0  0.0
      SNR=14
SGDS  Sogindy           68.49 320  eP     P       12 17 23.0 -1.1
      baz=320
EKS2  Erkin-Say         68.67 319    P      P       12 17 26.1 +0.8
      SNR=10
KBL   Kabul             68.70 309    P      P       12 17 24.6 -1.1
KBL                                  pmax   pmax
      comp=Z,11nm,1.1s
KBL   Kabul             68.70 309    P      P       12 17 24.6 -1.1
SEM   Semipalatinsk     68.94 329  eP     P       12 17 25.6 -1.2
      baz=329
SEM   Semipalatinsk     68.94 329  eP     P       12 17 25.6 -1.2
ZAA0  Zalesovo Array    68.94 333    P      P       12 17 26.4 -0.1
ZALV  Zalesovo Beam     68.94 333    P      P       12 17 26.3 -0.2
      comp=Z,11nm,0.9s,baz=120,slow=5.3,SNR=23
ZALV  Zalesovo Beam     68.94 333  i P      P       12 17 26.2 -0.3
ZALV                                 pmax   pmax
      comp=Z,8.0nm,0.8s
ZALV  Zalesovo Beam     68.94 333    P      P       12 17 25.7 -0.8
SEY   Seymchan          69.17  11    P      P       12 17 29.1 +1.3
      comp=Z,12nm,0.8s,baz=198,slow=4.8,SNR=16
GAR   Garm              69.46 314    P      P       12 17 29.3 -0.9
BTK   Batken            69.53 316    P      P       12 17 29.6 -1.0
BTK                                  pmax   pmax
      comp=Z,13nm,1.1s
BTK   Batken            69.53 316    P      P       12 17 29.6 -1.0
BTK                                  IAmb   IAmb    12 17 51.9
      comp=Z,13nm,1.1s
BTLS  Baital            69.62 321  eP     P       12 17 30.0 -1.0
      baz=321
BTLS  Baital            69.62 321  eP     P       12 17 29.9 -1.0
KURBB Kurchatov Arra    69.96 328    P      P       12 17 32.9 +0.1
      comp=Z,26nm,0.8s,baz=129,slow=5.5,SNR=111
KURK  Kurchatov         69.97 328d iP    P       12 17 33.3 +0.4
KURK                                 pmax   pmax
      comp=Z,48nm,1.0s
KURK  Kurchatov         69.97 328    P      P       12 17 33.0 +0.1
IUG   Iuzhnay           70.94 317  eP     P       12 17 38.8 -0.5
      baz=317
IUG   Iuzhnay           70.94 317  eP     P       12 17 38.7 -0.5
KKAR  Karatay Array     71.02 318    P      P       12 17 39.0 -0.5
KKAR  Karatay Array     71.02 318    P      P       12 17 39.0 -0.5
BRLS  Borolday          71.44 318  eP     P       12 17 41.8 -0.3
      baz=318
BRLS  Borolday          71.44 318  eP     P       12 17 41.7 -0.3
BRZS  Berezniki         72.82 326  eP     P       12 17 49.4 -0.8
      baz=326
BRZS  Berezniki         72.82 326  eP     P       12 17 49.4 -0.8
HRA   Herat             73.96 307    P      P       12 17 57.0 -0.5
HRA                                  IAmb   IAmb    12 18 00.7
      comp=Z,20nm,1.2s
VNDA  Vanda             75.23 173    P      P       12 18 03.3 -0.5
VNDA                                 pmax   pmax
      comp=Z,10.0nm,1.1s
VNDA  Vanda             75.23 173    P      P       12 18 03.3 -0.5
BVAR  Borovoye Array    75.53 328    P      P       12 18 06.3 +0.4
      comp=Z,12nm,0.8s,baz=186,slow=10,SNR=54
BRVK  Borovoye          75.60 328d iP    P       12 18 06.9 +0.6
BRVK                                 pmax   pmax
      comp=Z,60nm,1.7s
BRVK  Borovoye          75.60 328    P      P       12 18 06.4 +0.1
TIXI  Tiksi             75.73 360    P      P       12 18 06.8 +0.1
      comp=Z,5.6nm,0.5s,baz=160,slow=4.2,SNR=16
TIXI  Tiksi             75.73 360⇑eP    P       12 18 06.7 +0.1
TIXI                                 pmax   pmax
      comp=Z,31nm,1.9s
TIXI  Tiksi             75.73 360    P      P       12 18 06.2 -0.4
TIXI                                 IAmb   IAmb    12 18 19.0
      comp=Z,14nm,1.0s
BILL  Bilibino          76.52  13  eP     P       12 18 12.0 +0.8
BILL                               e                12 18 23.1
BILL                                 pmax   pmax
      comp=Z,3.0nm,1.3s
SOCY  Socotra           76.89 283    P      P       12 18 13.4 -1.1
MAW   Mawson            77.38 201    P      P       12 18 14.6 -1.5
      comp=Z,10nm,1.1s,baz=121,slow=4.5,SNR=5.9
MAW   Mawson            77.38 201    P      P       12 18 16.8 +0.7
MAW   Mawson            77.38 201    P      P       12 18 16.8 +0.7
GEYT  Alibeck           78.14 310    P      P       12 18 20.2 -0.8
      comp=Z,5.1nm,0.8s,baz=105,slow=9.1,SNR=7.6
GEYT  Alibeck           78.14 310    P      P       12 18 21.0  0.0
NRIK  Noril'sk          78.79 346    P      P       12 18 24.6 +0.8
      comp=Z,12nm,0.8s,baz=120,slow=5.1,SNR=20
NRIK  Noril'sk          78.79 346d iP    P       12 18 24.9 +1.0
NRIK                                 pmax   pmax
      comp=Z,56nm,1.3s
NRIK  Noril'sk          78.79 346    P      P       12 18 24.5 +0.7
ABKAR Akbulak array     80.11 321    P      P       12 18 31.0 -0.5
ABKAR                                IAmb   IAmb    12 18 46.4
      comp=Z,32nm,1.2s
ABKAR Akbulak array     80.11 321    P      P       12 18 31.4 -0.1
AKTO  Aktyubinsk        81.66 322    P      P       12 18 40.0 +0.3
      comp=Z,5.8nm,0.6s,baz=91,slow=5.6,SNR=21
SVE   Sverdlovsk        82.21 329  eP     P       12 18 43.2 +0.7
SVE                                  pmax   pmax
      comp=Z,29nm,1.2s
ARU   Arti              83.16 328    P      P       12 18 48.0 +0.6
      comp=Z,2.6nm,0.2s,baz=215,slow=1.2,SNR=8.9
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ARU	Arti	83.16	328c	iP	P	12 18 47.1	-0.3
ARU				S	S	12 29 05.7	+0.6
ARU				SS	SS	12 34 27.5	-2.5
ARU				pmax	pmax		
	comp=Z,47nm,1.7s						
ARU	Arti	83.16	328	P	P	12 18 47.2	-0.3
MIB	Mutribah	85.39	300	eP	P	12 18 58.5	-0.8
RST	Umm Al-Ruwaisa	85.65	300	eP	P	12 18 59.4	-1.2
QSPA	South Pole Qui	85.73	180	P	P	12 18 60.0	-0.5
QSPA				IAmb	IAmb	12 19 01.0	
	comp=Z,26nm,1.4s						
RAYN	Ar Rayn	86.28	294	P	P	12 19 03.4	-0.6
RAYN				pmax	pmax		
	comp=Z,31nm,1.0s						
RAYN	Ar Rayn	86.28	294	P	P	12 19 03.4	-0.6
TTA	Tatalina	86.69	26	P	P	12 19 05.2	0.0
TTA				pmax	pmax		
	comp=Z,29nm,1.4s						
TTA	Tatalina	86.69	26	P	P	12 19 05.2	0.0
TTA				IAmb	IAmb	12 19 25.4	
	comp=Z,29nm,1.4s						
TTA	Tatalina	86.69	26	P	P	12 19 05.6	+0.4
	baz=254						
GCSA	Galena City Sc	86.83	24	P	P	12 19 04.7	-0.9
	baz=253						
N19K	Bonanza Creek	86.83	28	P	P	12 19 06.9	+0.9
N19K	Bonanza Creek	86.83	28	P	P	12 19 07.0	+1.1
	baz=256						
L19K	White Mountain	87.01	27	P	P	12 19 08.2	+1.5
	baz=255						
M19K	Big River Lodg	87.15	27	P	P	12 19 08.1	+0.7
	baz=256						
K20K	Telida	87.65	26	P	P	12 19 10.7	+1.0
	baz=256						
J20K	Nowinta River	87.82	25	P	P	12 19 10.7	+0.2
J20K				IAmb	IAmb	12 19 22.9	
	comp=Z,20nm,1.5s						
J20K	Nowinta River	87.82	25	P	P	12 19 11.8	+1.3
	baz=256						
KIRV	Kirov	88.48	329⇑	eP	P	12 19 15.3	+1.6
CHUM	Lake Minchumin	88.53	26	P	P	12 19 15.4	+1.5
	baz=257						
H21K	Melozitna Rive	88.72	24	P	P	12 19 17.6	+2.8
	baz=257						
GNI	Garni	88.78	310	P	P	12 19 15.4	-0.4
GNI				pmax	pmax		
	comp=Z,12nm,0.8s						
GNI	Garni	88.78	310	P	P	12 19 15.4	-0.4
GNI				IAmb	IAmb	12 19 23.4	
	comp=Z,12nm,0.8s						
A21K	Barrow	88.83	18	P	P	12 19 15.0	0.0
A21K	Barrow	88.83	18	P	P	12 19 15.8	+0.7
	baz=253						
MLY	Manley	89.44	25	P	P	12 19 18.7	+0.5
MLY	Manley	89.44	25	P	P	12 19 18.6	+0.5
	baz=259						
ZEI	Tsey	89.69	313	eP	P	12 19 17.3	-2.8
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SML	Sawmill	89.94	28	P	P	12 19 20.9	+0.3
	baz=261						
RND	Reindeer	89.96	26	P	P	12 19 20.3	-0.4
RND				pmax	pmax		
	comp=Z,13nm,1.0s						
RND	Reindeer	89.96	26	P	P	12 19 20.3	-0.4
RND				IAmb	IAmb	12 19 21.7	
	comp=Z,13nm,1.0s						
MCK	McKinley	89.98	26	P	P	12 19 21.3	+0.6
	baz=260						
I23K	Minto, Yukon-K	90.04	25	P	P	12 19 21.6	+0.8
	baz=260						
WAT6	Susitna Watana	90.33	27	P	P	12 19 22.2	-0.4
	baz=262						
WRH	Wood River Hil	90.46	25	P	P	12 19 22.2	-0.7
KBZ	Khabaz	90.52	314⇓	eP	P	12 19 23.4	-0.2
KBZ				pmax	pmax		
	comp=Z,10.0nm,1.6s						
NEY	Neytrino	90.60	313⇓	eP	P	12 19 27.0	+2.8
NEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV	Kislovodsk	90.69	314	eP	P	12 19 22.0	-2.5
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GURO	Guroymak-BITLI	90.71	308	P	P	12 19 25.3	+0.4
H24K	Noodor Dome	90.76	24	P	P	12 19 24.5	+0.2
H24K				IAmb	IAmb	12 19 25.9	
	comp=Z,9.1nm,1.0s						
H24K	Noodor Dome	90.76	24	P	P	12 19 25.0	+0.6
	baz=261						
HDA	Harding Lake	90.94	26	P	P	12 19 24.7	-0.5
HDA	Harding Lake	90.94	26	P	P	12 19 24.5	-0.6
	baz=262						
ILAR	Eielson Array	91.02	25	P	P	12 19 24.5	-1.0
	comp=Z,1.3nm,0.9s,baz=283,slow=4.6,SNR=12						
ILAR	Eielson Array	91.02	25	P	P	12 19 23.9	-1.6
RIDG	Independent Ri	91.78	26	P	P	12 19 28.9	-0.2
	baz=264						
BMAR	Burnt Mountain	92.26	23	P	P	12 19 30.8	-0.5
KMBO	Kilima Mbogo	92.27	269	P	P	12 19 31.9	-0.9
	comp=Z,1.4nm,0.3s,baz=56,slow=4.4,SNR=6.9						
KMBO	Kilima Mbogo	92.27	269	iP	P	12 19 33.9	+1.2
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMBO	Kilima Mbogo	92.27	269	P	P	12 19 32.3	-0.4
KMBO				IAmb	IAmb	12 19 34.0	
	comp=Z,7.2nm,1.1s						
L26K	Log Cabin Wild	92.39	27	P	P	12 19 31.9	0.0
	baz=265						
J26L	Joseph Creek	92.41	26	P	P	12 19 32.0	0.0
	baz=265						
SOC	Sochi	92.81	313	eP	P	12 19 34.3	+0.1
SOC				e		12 23 16.1	
SOC				ePPP	PPP	12 25 12.5	
SOC				eS	SKSac	12 30 05.6	-0.2
SOC				MLR	MLR		
	comp=Z,510nm,17.0s						
M27K	Edge Creek, AK	93.02	28	P	P	12 19 34.8	-0.2
	baz=267						
L27K	Beaver Creek,	93.08	27	P	P	12 19 35.5	+0.4
L27K				IAmb	IAmb	12 19 37.1	
	comp=Z,6.1nm,0.8s						
L27K	Beaver Creek,	93.08	27	P	P	12 19 35.9	+0.7
	baz=267						
BCAR	Beaver Creek A	93.10	27	P	P	12 19 35.9	+0.6
PINM	Pinnacle	93.70	30	P	P	12 19 38.2	+0.1
	baz=268						
KLMR	Klimovskoe	93.71	331	eP	P	12 19 35.8	-2.1
KLMR				pmax	pmax		
	comp=Z,26nm,1.5s						
KLMR	Klimovskoe	93.71	331	eP	P	12 19 35.9	-2.0
KLMR				AMP		12 19 37.5	
	comp=Z,26nm,1.5s						
DAWY	Dawson	94.21	26	P	P	12 19 40.5	+0.2
	baz=269						
I29M	Ogilvie Camp,	94.68	25	P	P	12 19 42.7	+0.2
	baz=270						
OBN	Obninsk	95.18	325	eP	P	12 19 42.4	-2.4
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
EPYK	Eagle Plains	95.32	24	P	P	12 19 45.2	-0.2
EPYK	Eagle Plains	95.32	24	P	P	12 19 45.3	-0.1
	baz=272						
M30M	Minto, Yukon	95.39	28	P	P	12 19 45.8	+0.1
	baz=271						
INK	Inuvik	96.45	22	P	P	12 19 49.9	-0.4
	comp=Z,4.0nm,0.9s,baz=286,slow=4.1,SNR=14						
INK	Inuvik	96.45	22	P	P	12 19 50.1	-0.2
	baz=275						
SNAA	Sanae	98.25	194	P	Pdif	12 19 58.6	0.0
SNAA	Sanae	98.25	194⇓	eP	P	12 19 58.0	-0.6
SNAA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ARCES	ARCESS Array B	98.86	340	P	P	12 20 00.4	-0.9
	comp=Z,7.5nm,0.9s,baz=85,slow=5.5,SNR=4.0						
VNA2	Neumayer--Watz	99.83	193	P	Pdif	12 20 05.6	0.0
VNA1	Neumayer--Stat	100.23	193	P	Pdif	12 20 07.4	+0.1
PDAR	Pinedale Array	115.21	44	PKP	PKPdf	12 25 04.0	+0.5
	comp=Z,1.2nm,0.9s,baz=228,slow=1.8,SNR=7.2						
RSSD	Black Hills	118.46	41	PKIKP	PKPdf	12 25 08.5	-1.2
RSSD	Black Hills	118.46	41	PKPdf	PKPdf	12 25 08.5	-1.2
K31A	O'Neill	122.58	41	PKPdf	PKiKP	12 25 17.6	0.0
TXAR	Lajitas Array	123.81	57	PKP	PKiKP	12 25 21.1	+0.7
	comp=Z,0.9nm,0.8s,baz=239,slow=1.9,SNR=9.4						
P38A	Dawn	127.48	42	PKPdf	PKiKP	12 25 27.1	-0.3
TORD	Torodi Ar. Bea	127.85	283	PKP	PKPdf	12 25 27.8	-0.4
	comp=Z,3.7nm,1.0s,baz=20,slow=1.0,SNR=14						
TORD	Torodi Ar. Bea	127.85	283	PKPdf	PKPdf	12 25 27.4	-0.7
U40A	Yellville	129.58	45	PKPdf	PKPdf	12 25 30.9	0.0
PLCA	Paso Flores	131.59	159	PKP	PKPdf	12 25 35.0	+0.2
	comp=Z,2.5nm,1.1s,baz=272,slow=11,SNR=2.3						
PLCA	Paso Flores	131.59	159	PKIKP	PKPdf	12 25 35.0	+0.2
DBIC	Dimbokro	134.62	275	PKP	PKiKP	12 25 41.8	-0.7
	comp=Z,1.4nm,0.5s,baz=97,slow=3.3,SNR=3.1						
AC02	Maricunga	144.19	151	PKPdf	PKPbc	12 25 57.6	+0.7
SRBA	San Rafael, Bu	146.89	80		PKPdf	12 26 01.3	-1.9
LVC	Limon Verde	147.76	147	PKP2	PKPbc	12 26 07.2	-0.4
LVC	Limon Verde	147.76	147		PKPbc	12 26 07.2	-0.4
PB07	IPOC Station P	147.91	144		PKPbc	12 26 08.4	+0.6
PB09	IPOC Station P	148.22	145	PKPab	PKiKP	12 26 09.9	-0.5
PATCX	Punta Patache	148.45	143		PKPbc	12 26 09.8	+0.7
TA01	Diego Aracena	148.62	142	PKPdf	PKPdf	12 26 04.8	-1.0
TA01					PKPbc	12 26 10.1	+0.7
PB01	IPOC Station P	148.67	144		PKiKP	12 26 10.9	-0.3
TA02	Huaiquique	148.88	142	PKPdf	PKPdf	12 26 05.2	-1.0
TA02					PKiKP	12 26 10.8	-0.7
CPUP	Villa Florida	148.89	168	PKP2	PKPbc	12 26 10.5	+0.5
CPUP	Villa Florida	148.89	168		PKPbc	12 26 10.5	+0.5
NNA	Nana	149.16	122	PKP2	PKiKP	12 26 11.9	-0.4
NNA	Nana	149.16	122		PKiKP	12 26 11.9	-0.4
PB08	IPOC Station P	149.56	143		PKPdf	12 26 05.1	-2.7
PB08				PKPbc	PKiKP	12 26 13.2	-0.3
LPAZ	La Paz	153.10	140	PKP	PKPdf	12 26 14.3	+0.8
	comp=Z,2.7nm,1.0s,baz=321,slow=4.2,SNR=6.9						
LPAZ				PKPbc	PKiKP	12 26 21.3	+0.2
	comp=Z,8.4nm,1.1s,baz=237,slow=2.0,SNR=14						
LPAZ	La Paz	153.10	140	PKIKP	PKPdf	12 26 12.7	-0.9
LPAZ						12 26 21.4	
LPAZ	La Paz	153.10	140	PKPdf	PKPdf	12 26 12.7	-0.9
LPAZ				PKPbc	PKiKP	12 26 21.4	+0.3
ZARC	Zaragoza, Cauc	155.45	81	PKPdf	PKPdf	12 26 14.6	-1.5
ZARC					pPKPdf	12 26 24.9	-1.4
ZARC				PKPab	PKPab	12 26 43.1	+1.3

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*IDC **09** 12:14:20.9±0.7, 4°.17S×129°.54E, h0^{km}, mb4.2/12, mb1 4.3/15, mb1mx4.0/50, mbtmp4.3/15, ML4.3/3, MS4.4/2, Ms1 4.4/2, ms1mx3.7/49, Error ellipse: s-maj=28.8km s-min=15.7km az=74.0*

*DJA **09** 12:14:23.8±0.7, 4°S±7°×13°0E±°, h10^{km}, M4.4/8, mb5.0/1, MLv4.2/8*

*NEIC **09** 12:14:24.5±1.3, 4°.13S±0°.06×129°.53E±0°.07, h20^{km}±4^{km}, mb4.3/27, Error ellipse: s-maj=9.7km s-min=8.8km az=73.0*

ISC 09 12:14:25.7±0.4**, 4°.17S**±0°.05×**129°.51E**±0°.06**, h36^{km}, n62,** σ**1^{s}.08**/63**, mb4.2**/19**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.01	325	P	Pn	12 14 41.9	-1.4
MSAI				S	Sn	12 14 55.0	-1.3
AAI	Ambon	1.40	290	P	Pn	12 14 48.0	-0.7
FAKI	Fak Fak	3.00	66	P	Pn	12 15 10.6	-0.2
FAKI	Fak Fak	3.00	66		Pn	12 15 10.2	-0.6
SIJI	Sorong	3.72	28	Pn	Pn	12 15 19.6	-1.1
	18nm,0.3s,baz=45,slow=4.5,SNR=23						
SIJI				Sn	Sn	12 16 01.0	-2.3
	13nm,0.3s,baz=336,slow=20,SNR=4.4						
SWI	Sorong	3.72	28	P	Pn	12 15 20.4	-0.3
LBMI	Labuha	4.05	330	P	Pn	12 15 25.8	+0.6
SANI	Sanana	4.10	301	P	Pn	12 15 26.5	+0.6
BATI	Baumata	8.34	224	Pn	Pn	12 16 24.4	+0.2
	2.5nm,0.3s,baz=51,slow=6.5,SNR=1.8						
MTN	Manton Dam	8.76	170		Pn	12 16 30.1	+0.1
KAPI	Kappang	9.77	265	Pn	Pn	12 16 43.9	+0.2
TOLI2	Tolitoli	10.18	301	Pn	Pn	12 16 47.8	-1.7
KNRA	Kununurra	11.46	184	Pn	Pn	12 17 07.0	+0.2
JAGI	Jajag, Banyuwa	15.85	254	Pn	Pn	12 18 04.4	-1.9
JAGI				IAmb	IAmb	12 18 18.9	
	comp=Z,57nm,1.5s						
WRA	Warramunga Arr	16.36	164	Pn	Pn	12 18 09.6	-3.2
	comp=Z,0.6nm,0.3s,baz=346,slow=13,SNR=5.3						
WRA	Warramunga Arr	16.36	164	Pn	Pn	12 18 11.3	-1.5
WB2	Warramunga Arr	16.37	164	Pn	Pn	12 18 10.9	-1.9
WR0	Warramunga Arr	16.44	163	Pn	Pn	12 18 11.7	-2.0
COEN	Coen	16.62	127	Pn	Pn	12 18 15.0	-1.1
MANU	Manus Island	17.95	84	P	Pn	12 18 30.9	-1.7
PMG	Port Moresby	18.27	107	P	P	12 18 33.6	-2.9
PMG				IAmb	IAmb	12 18 46.1	
	comp=Z,20nm,1.1s						
MBWA	Marble Bar	19.38	209	P	P	12 18 48.2	-0.4
PSA00	Pilbara Seismi	19.68	208	P	Pn	12 18 52.7	-0.7
PSA00	Pilbara Seismi	19.68	208	P	Pn	12 18 52.7	-0.7
PSA00				IAmb	IAmb	12 18 54.7	
	comp=Z,13nm,0.8s						
AS31	Alice Springs	19.84	168	P	Pn	12 18 54.6	-0.7
AS31				IAmb	IAmb	12 18 57.2	
	comp=Z,5.5nm,0.5s						
ASAR	Alice Springs	19.84	168	P	Pn	12 18 54.5	-0.8
	comp=Z,1.6nm,0.3s,baz=346,slow=10,SNR=27						
ASAR	Alice Springs	19.84	168	P	Pn	12 18 54.9	-0.5
CTA	Charters Tower	22.72	135	P	P	12 19 24.9	+0.2
	comp=Z,7.7nm,0.6s,baz=314,slow=12,SNR=7.2						
CTAO	Charters Tower	22.72	135	P	P	12 19 25.2	+0.6
CTAO				IAmb	IAmb	12 19 25.6	
	comp=Z,10nm,0.7s						
FORT	Forrest	26.50	183	P	P	12 20 00.3	+0.5
STKA	Stephens Creek	29.80	159	P	P	12 20 29.2	-0.1
	comp=Z,0.7nm,0.3s,baz=3.0,slow=5.4,SNR=5.8						
STKA	Stephens Creek	29.80	159	P	P	12 20 30.1	+0.7
JCJ	Chichijima	33.41	21	LR	LR	12 33 06.4	
	comp=Z,561nm,19.3s,baz=4.5,slow=34						
TOO	Toolangi	36.31	158	P	P	12 21 27.4	+1.3
JNU	Nakatsue	37.11	2	P	P	12 21 35.1	+2.2
	comp=Z,6.5nm,0.3s,baz=217,slow=18,SNR=4.8						
CMAR	Chiang Mai Arr	37.59	308	P	P	12 21 37.6	+0.4
	comp=Z,0.9nm,0.3s,baz=134,slow=7.0,SNR=2.5						
CHTO	Chiang Mai	37.79	308	P	P	12 21 39.9	+1.1
CHTO				IAmb	IAmb	12 21 52.6	
	comp=Z,3.3nm,0.7s						
MJAR	Matsushiro Arr	41.31	11	P	P	12 22 08.5	+0.6
MJAR				IAmb	IAmb	12 22 09.4	
	comp=Z,6.2nm,1.3s						
MAJO	Matsushiro	41.31	11	P	P	12 22 08.3	+0.4
MAJO				IAmb	IAmb	12 22 09.6	
	comp=Z,17nm,1.4s						
KSRS	Korea Array	41.44	358	P	P	12 22 10.3	+1.4
	comp=Z,0.7nm,0.5s,baz=174,slow=8.4,SNR=4.4						
KSRS				LR	LR	12 39 00.9	
	comp=Z,622nm,20.1s,baz=356,slow=36						
TAU	Tasmania Unive	41.69	160	P	P	12 22 11.3	+0.4
SONM	Songino Array	55.63	341	P	P	12 23 58.4	+0.3
	comp=Z,0.2nm,0.5s,baz=174,slow=5.8,SNR=1.7						
NIUE	Niue	60.85	109	P	P	12 24 35.6	+0.6
PEA0B	Petropavlovsk-	61.81	19	P	P	12 24 41.7	+0.8
PETK	Petropavlovsk-	61.81	19	P	P	12 24 41.4	+0.5
NIL	Nilore	65.03	310	P	P	12 25 02.3	-0.3
NIL				IAmb	IAmb	12 25 11.8	
	comp=Z,5.4nm,1.1s						
MK31	Makanchi Array	65.61	326	P	P	12 25 06.2	+0.1
MK31				IAmb	IAmb	12 25 07.3	
	comp=Z,2.3nm,0.9s						
MKAR	Makanchi Array	65.61	326	P	P	12 25 06.7	+0.6
	comp=Z,1.0nm,0.4s,baz=117,slow=8.6,SNR=20						
MKAR	Makanchi Array	65.61	326	P	P	12 25 06.5	+0.4
MAKZ	Makanchi	65.80	326	P	P	12 25 07.8	+0.5
MAKZ				IAmb	IAmb	12 25 19.0	
	comp=Z,4.9nm,1.2s						
YAK	Yakutsk	66.02	0	P	P	12 25 08.7	+0.4
ZALV	Zalesovo Beam	68.85	334	P	P	12 25 26.9	+0.5
	comp=Z,0.4nm,0.3s,baz=108,slow=4.7,SNR=1.5						
SEY	Seymchan	69.14	11	P	P	12 25 28.7	+0.7
	comp=Z,2.7nm,0.8s,baz=190,slow=10,SNR=4.3						
KURBB	Kurchatov Arra	69.86	328	P	P	12 25 33.5	+0.7
	comp=Z,1.8nm,0.6s,baz=129,slow=5.4,SNR=10.0						
KURK	Kurchatov	69.87	328	P	P	12 25 33.4	+0.5
TIXI	Tiksi	75.68	360	P	P	12 26 06.8	-0.1
	comp=Z,1.9nm,0.3s,baz=191,slow=5.2,SNR=4.8						
TIXI	Tiksi	75.68	360	P	P	12 26 07.2	+0.4
TIXI				IAmb	IAmb	12 26 16.3	
	comp=Z,1.8nm,0.8s						
ABKAR	Akbulak array	80.01	321	P	P	12 26 31.7	+0.3
QSPA	South Pole Qui	85.78	180	P	P	12 27 01.3	0.0
ILAR	Eielson Array	91.01	25	P	P	12 27 26.5	+0.6
	comp=Z,0.6nm,1.1s,baz=250,slow=4.5,SNR=2.0						
INK	Inuvik	96.43	22	P	P	12 27 50.1	-0.7
	comp=Z,0.8nm,1.0s,baz=278,slow=1.9,SNR=1.0						
TXAR	Lajitas Array	123.86	57	PKP	PKPdf	12 33 20.3	-0.5
	comp=Z,0.3nm,0.8s,baz=306,slow=3.0,SNR=2.8						

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*IDC **09** 12:17:15.8±0.5, 4°.15S×129°.53E, h0^{km}, mb4.8/25, mb1 4.8/31, mb1mx4.6/51, mbtmp4.8/31, ML4.5/4, MS4.4/1, Ms1 4.4/1, ms1mx3.5/49, Error ellipse: s-maj=15.3km s-min=12.3km az=74.0*

*MOS **09** 12:17:16.2±1.1, 4°.18S×129°.47E, h21^{km}, mb5.3/36, Error ellipse: s-maj=9.3km s-min=5.4km az=117.3*

*DJA **09** 12:17:17.8±0.2, 4°S±2°×12°9E±°, h10^{km}, M5.0/15, mB5.5/5, mb5.1/15, MLv5.0/12, Mw(mB)4.9/5*

*NEIC **09** 12:17:19.5±1.7, 4°.13S±0°.06×129°.56E±0°.06, h29^{km}±4^{km}, mb5.0/69, Error ellipse: s-maj=8.9km s-min=8.6km az=52.0*

ISC 09 12:17:20.0±0.3**, 4°.18S**±0°.04×**129°.53E**±0°.05**, h36^{km}, n245,** σ**1^{s}.47**/254**, mb5.0**/90**, 10C-11D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.02	324	P	Pn	12 17 33.9	-3.9
AAI	Ambon	1.42	290	P	Pn	12 17 39.7	-3.6
FAKI	Fak Fak	2.98	65	P	Pn	12 18 04.9	+0.1
FAKI	Fak Fak	2.98	65	Pn	Pn	12 18 04.7	-0.2
SIJI	Sorong	3.71	28	Pn	Pn	12 18 13.8	-1.0
	86nm,0.3s,baz=51,slow=4.7,SNR=42						
SIJI				Sn	Sn	12 18 56.3	-1.1
	113nm,0.3s,baz=235,slow=24,SNR=6.0						
SIJI				LR	LR	12 20 08.3	
	comp=Z,5µm,21.3s,baz=234,slow=47						
SWI	Sorong	3.72	28	P	Pn	12 18 14.0	-0.9
LBMI	Labuha	4.06	330	P	Pn	12 18 17.6	-2.0
SANI	Sanana	4.12	301	P	Pn	12 18 18.0	-2.4
SAUI	Saumlaki	4.17	155	P	Pn	12 18 24.8	+3.7
SAUI	Saumlaki	4.17	155	Pn	Pn	12 18 21.4	+0.3
TNTI	Ternate	5.37	336	P	Pn	12 18 36.0	-1.6
	0.6nm1µm98nm,0.7s						
TNTI	Ternate	5.37	336	Pn	Pn	12 18 37.0	-0.6
KMSI	Cibinong	7.28	310	P	Pn	12 19 01.5	-2.4
	2.0nm268nm,0.9s						
SOEI	Soe	7.62	223	Pn	Pn	12 19 09.3	+0.7
BATI	Baumata	8.35	224	Pn	Pn	12 19 19.6	+1.0
	27nm,0.3s,baz=88,slow=2.8,SNR=16						
BATI	Baumata	8.35	224	P	Pn	12 19 20.3	+1.7
	63nm,0.5s						
APSI	Ampana	8.52	292	P	Pn	12 19 21.7	+0.9
	2µm176nm,0.7s						
MTN	Manton Dam	8.76	170	P	Pn	12 19 27.1	+3.0
	baz=8.9,SNR=11						
MTN	Manton Dam	8.76	170	Pn	Pn	12 19 26.1	+2.0
MRSI	Marisa	8.88	301	P	Pn	12 19 23.8	-2.1
	77nm,1.0s						
KDU	Kakadu	8.94	161	P	Pn	12 19 26.9	+0.3
	baz=9.0,SNR=12						
EDFI	Ende, Flores	9.02	239	P	Pn	12 19 27.7	-0.1
	40nm,0.7s						
BKSI	Bulukumba	9.45	263	P	Pn	12 19 33.6	0.0
	84nm,0.7s						
KAPI	Kappang	9.79	265	Pn	Pn	12 19 39.6	+1.4
	3.9nm,0.3s,baz=104,slow=5.4,SNR=6.7						
KAPI	Kappang	9.79	265	P	Pn	12 19 39.9	+1.7
KAPI	Kappang	9.79	265	Pn	Pn	12 19 39.9	+1.7
TOLI2	Tolitoli	10.20	301	Pn	Pn	12 19 43.9	0.0
MPSI	Mapaga	10.62	295	P	Pn	12 19 48.6	-1.1
	28nm,1.0s						
JAY	Jayapura	11.28	82	Pn	Pn	12 20 00.1	+1.4
	0.5nm,0.3s,baz=341,slow=20,SNR=2.0						
WBSI	Waikabubak, Su	11.44	241	P	Pn	12 20 01.3	+0.4
	112nm,0.8s						
KNRA	Kununurra	11.45	184	P	Pn	12 20 01.4	+0.4
	baz=12,SNR=9.2						
KNRA	Kununurra	11.45	184	Pn	Pn	12 20 02.3	+1.2
FITZ	Fitzroy Crossi	14.35	195	P	Pn	12 20 39.9	-0.8
	baz=14,SNR=6.3						
WB0	Warramunga Arr	16.20	163		Pn	12 21 02.9	-2.2
WRAB	Tennant Creek	16.35	164⇓	eP	Pn	12 21 06.4	-0.5
WRAB				pmax	pmax		
	comp=Z,18nm,0.8s						
WRAB	Tennant Creek	16.35	164		Pn	12 21 04.8	-2.1
WRA	Warramunga Arr	16.36	164	Pn	Pn	12 21 03.9	-3.1
	comp=Z,1.5nm,0.3s,baz=340,slow=13,SNR=14						
WRA	Warramunga Arr	16.36	164	iP	Pn	12 21 05.8	-1.2
WRA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WRA	Warramunga Arr	16.36	164		Pn	12 21 04.8	-2.2
WB2	Warramunga Arr	16.36	164	Pn	Pn	12 21 05.7	-1.3
WC3	Warramunga Arr	16.38	164	P	Pn	12 21 03.8	-3.5
	baz=16						
WR0	Warramunga Arr	16.43	163	Pn	Pn	12 21 05.8	-2.1
COEN	Coen	16.60	127	P	Pn	12 21 08.0	-2.0
	baz=17						
COEN	Coen	16.60	127	Pn	Pn	12 21 08.1	-2.0
KKM	Kota Kinabalu	16.73	307	Pn	Pn	12 21 11.3	-0.6
PMG	Port Moresby	18.25	107	P	P	12 21 28.8	-1.7
	comp=Z,0.4nm,0.3s,baz=52,slow=6.0,SNR=2.6						
PMG	Port Moresby	18.25	107	P	P	12 21 28.7	-1.9
SBUM	Sibu	18.51	291	P	P	12 21 33.0	-0.3
QIS	Mount Isa	19.01	150	P	P	12 21 38.7	-0.1
	baz=19,SNR=19						
SMRI	Semarang	19.21	261	P	P	12 21 41.3	+0.2
SMRI				IAmb	IAmb	12 22 04.1	
	comp=Z,79nm,1.1s						
PSA00	Pilbara Seismi	19.68	208	P	P	12 21 46.4	+0.2
PSA00	Pilbara Seismi	19.68	208	P	P	12 21 45.7	-0.5
PSA00				IAmb	IAmb	12 21 50.3	
	comp=Z,96nm,1.0s						
AS31	Alice Springs	19.83	168	P	P	12 21 48.4	+0.6
ASAR	Alice Springs	19.83	168	P	P	12 21 48.3	+0.5
	comp=Z,3.3nm,0.3s,baz=346,slow=10,SNR=20						
MTSU	Mount Surprise	20.04	135	P	P	12 21 50.6	+0.4
	baz=20,SNR=24						
WRKA	Warakurna	20.77	183	P	P	12 21 58.7	+0.7
	baz=21,SNR=19						
LEM	Lembang	21.97	262	P	P	12 22 12.2	+1.1
	comp=Z,7.8nm,0.3s,baz=75,slow=18,SNR=1.8						
RABL	Rabaul	22.57	91	P	P	12 22 16.5	-0.9
CTA	Charters Tower	22.70	136	P	P	12 22 18.8	0.0
	comp=Z,15nm,0.9s,baz=320,slow=15,SNR=4.2						
CTAO	Charters Tower	22.70	136	P	P	12 22 18.4	-0.4
CTAO				pmax	pmax		
	comp=Z,27nm,0.9s						
CTAO	Charters Tower	22.70	136	P	P	12 22 18.4	-0.4
CTAO				IAmb	IAmb	12 22 32.5	
	comp=Z,27nm,0.8s						
GIRL	Giralia	23.59	218	P	P	12 22 30.1	+2.5
	baz=24,SNR=5.2						
GIRL	Giralia	23.59	218	P	P	12 22 28.9	+1.3
MEEK	Meekatharra	24.66	204	P	P	12 22 37.9	+0.5
	baz=25,SNR=4.9						
MYKOM	Kota Tinggi	26.34	283	P	P	12 22 52.3	-0.6
MYKOM				IAmb	IAmb	12 22 57.3	
	comp=Z,29nm,0.7s						
FORT	Forrest	26.50	183	P	P	12 22 53.1	-0.9
FORT				IAmb	IAmb	12 23 20.1	
	comp=Z,48nm,0.8s						
BBOO	Buckleboo	29.13	169	P	P	12 23 17.7	+0.1
KLBR	Kellerberrin	29.43	201	P	P	12 23 22.2	+1.9
	baz=30,SNR=4.8						
EIDS	Eidsvold	29.53	138	P	P	12 23 19.8	-1.5
EIDS				IAmb	IAmb	12 23 47.1	
	comp=Z,21nm,1.4s						
IPM	Ipoh	29.75	286	P	P	12 23 21.9	-1.4
STKA	Stephens Creek	29.79	159	P	P	12 23 23.8	+0.3
	comp=Z,1.7nm,0.4s,baz=340,slow=7.8,SNR=6.2						
STKA	Stephens Creek	29.79	159	P	P	12 23 23.6	+0.1
KULM	Kulim	30.34	288	P	P	12 23 27.3	-1.3
KULM				IAmb	IAmb	12 23 31.1	
	comp=Z,26nm,0.9s						
HTT	Hallett	30.39	164	P	P	12 23 29.9	+1.0
	baz=31,SNR=3.5						
RPSI	Rantau Prapat	31.34	282	P	P	12 23 37.0	-0.4
PSI	Prapat	31.36	282	P	P	12 23 37.0	-0.7
	comp=Z,6.3nm,0.8s,baz=88,slow=4.4,SNR=7.1						
PSI	Prapat	31.36	282	P	P	12 23 37.0	-0.7
GSI	Gunungsitoli	32.40	279	P	P	12 23 45.9	-0.8
GSI				IAmb	IAmb	12 23 55.1	
	comp=Z,26nm,1.1s						
CAN	Canberra	35.84	152	P	P	12 24 16.2	-0.2
CAN				pmax	pmax		
	comp=Z,48nm,1.5s						
CAN	Canberra	35.84	152	P	P	12 24 16.2	-0.2
CAN				IAmb	IAmb	12 24 30.4	
	comp=Z,48nm,1.5s						
NJ2	Nanjing	37.43	345	eP	P	12 24 33.6	+3.8
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CM31	Chiang Mai Arr	37.61	308	P	P	12 24 30.9	-0.7

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CM31                               IAmb  IAmb    12 24 34.4
       comp=Z,23nm,1.0s
CMAR  Chiang Mai Arr   37.61 308   P     P       12 24 31.2 -0.3
       comp=Z,15nm,0.8s,baz=137,slow=7.5,SNR=51
CMAR                               PcP   PcP     12 26 51.5 +2.5
       comp=Z,3.4nm,0.8s,baz=117,slow=0.2,SNR=6.1
CMAR  Chiang Mai Arr   37.61 308   P     P       12 24 30.6 -1.0
GYA   Guiyang          37.65 325 ⇑P     P       12 24 33.9 +2.0
GYA                                pmax  pmax
       comp=Z,15nm,0.6s
CHTO  Chiang Mai       37.81 308   P     P       12 24 32.0 -1.2
CHTO                               pmax  pmax
       comp=Z,32nm,0.8s
CHTO  Chiang Mai       37.81 308   P     P       12 24 32.0 -1.2
SANVU Saraoutou        38.70 110   P     P       12 24 39.9 -0.9
KMI   Kunming          39.06 320 ⇓P     P       12 24 46.6 +2.7
KMI                                pP    pP      12 24 53.0 -0.1
KMI                                sP    sP      12 24 57.2 -0.6
KMI                                pmax  pmax
       comp=Z,21nm,0.7s
KMI                                LR    LR
       comp=Z,720nm,18.1s
KMI                                LR    LR
       comp=Z,970nm,19.0s
KMI                                LR    LR
       comp=Z,740nm,21.2s
ENH   Enshi            39.26 332   P     P       12 24 45.4 +0.1
ENH                                IAmb  IAmb    12 25 08.2
       comp=Z,24nm,1.3s
JWT   Wachi            39.64   8   P     P       12 24 48.0 -0.4
JWT                                IAmb  IAmb    12 25 05.0
       comp=Z,20nm,0.9s
TJN   Taejon           40.39 357deP     P       12 24 56.2 +1.6
MJAR  Matsushiro Arr   41.31  11   P     P       12 25 01.4 -0.7
       comp=Z,8.8nm,0.9s,baz=187,slow=9.3,SNR=14
MJAR  Matsushiro Arr   41.31  11   P     P       12 25 01.0 -1.2
MAJO  Matsushiro       41.31  11⇑eP     P       12 25 01.1 -1.1
MAJO                               pmax  pmax
       comp=Z,10.0nm,0.6s
MAT   Matsushiro       41.31  11   P     P       12 25 00.1 -2.1
JYT   Yasato           41.41  13   P     P       12 25 02.2 -0.8
JYT                                IAmb  IAmb    12 25 14.0
       comp=Z,26nm,0.8s
KSRS  Korea Array      41.45 358   P     P       12 25 03.3 +0.1
       comp=Z,3.7nm,0.7s,baz=174,slow=10.0,SNR=19
KS19  Wonju Array Si   41.49 358   P     P       12 25 03.0 -0.6
CD2   Chengdu          42.70 327   P     P       12 25 14.4 +0.8
CD2                                pmax  pmax
       comp=Z,20nm,0.8s
XAN   Xi'an            42.70 334   P     P       12 25 13.9 +0.3
XAN                                pP    pP      12 25 21.4 -1.5
XAN                                pmax  pmax
       comp=Z,9.0nm,0.9s
JMM   Marumori         43.12  13   P     P       12 25 16.1 -0.7
BJT   Baijiatuau       45.66 346   P     P       12 25 36.2 -1.0
BJT                                pmax  pmax
       comp=Z,9.0nm,0.9s
BJT   Baijiatuau       45.66 346   P     P       12 25 36.2 -1.0
BJI   Beijing          45.68 346   P     P       12 25 38.2 +0.9
BJI                                pmax  pmax
       comp=Z,13nm,1.1s
LZH   Lanzhou          46.72 331  eP     P       12 25 47.0 +1.2
LZH                                pP    pP      12 25 53.6 -1.6
LZH                                sP    sP      12 25 56.9 -2.5
LZH                                pmax  pmax
       comp=Z,23nm,1.3s
SHL   Shillong         46.98 311   P     P       12 25 48.2 +0.2
SHL                                pmax  pmax
       comp=Z,27nm,1.1s
SHL   Shillong         46.98 311   P     P       12 25 48.2 +0.2
SHL                                IAmb  IAmb    12 25 49.2
       comp=Z,27nm,1.1s
VLA   Vladivostok      47.12   2⇑eP     P       12 25 49.8 +1.2
VLA                                pmax  pmax
       comp=Z,46nm,1.7s
CN2   Changchun        47.90 356  eP     P       12 25 53.6 -1.0
BTO   Baotou           48.02 340  eP     P       12 26 00.6 +4.9
BTO                                S     S       12 32 58.5 +6.9
BTO                                LR    LR
       comp=Z,2μm,21.8s
BTO                                LR    LR
       comp=Z,3μm,22.0s
USRK  Ussuriysk Ar.    48.21   2   P     P       12 25 57.9 +0.9
       comp=Z,6.9nm,0.7s,baz=171,slow=6.4,SNR=14
USA0B Ussuriysk Arra   48.21   2   P     P       12 25 57.4 +0.4
USA0B                              pmax  pmax
       comp=Z,9.0nm,0.8s
USA0B Ussuriysk Arra   48.21   2   P     P       12 25 57.4 +0.4
USA0B                              IAmb  IAmb    12 26 08.7
       comp=Z,8.6nm,0.8s
MDJ   Mudanjiang       48.57   0   P     P       12 26 01.2 +1.4
MDJ                                pmax  pmax
       comp=Z,14nm,1.4s
MDJ                                pmax  pmax
       comp=Z,640nm,9.9s
MDJ   Mudanjiang       48.57   0   P     P       12 25 59.8  0.0
MDJ                                IAmb  IAmb    12 26 16.6
       comp=Z,16nm,1.1s
ASAJ  Asahikawa        49.49  12   P     P       12 26 08.1 +1.3
       comp=Z,8.2nm,0.9s,baz=225,slow=14,SNR=1.8
JKA   Kamikawa-asahi   49.49  12   P     P       12 26 06.9 +0.1
LSA   Lhasa            49.87 315   P     P       12 26 10.4 -0.2
LSA                                pmax  pmax
       comp=Z,15nm,0.8s
LSA   Lhasa            49.87 315   P     P       12 26 10.3 -0.2
LSA                                IAmb  IAmb    12 26 13.1
       comp=Z,15nm,0.8s
PALK  Pallekele        50.04 283   P     P       12 26 11.7 +0.1
PALK                               pmax  pmax
       comp=Z,21nm,1.3s
PALK  Pallekele        50.04 283   P     P       12 26 11.7 +0.1
PALK                               IAmb  IAmb    12 26 31.4
       comp=Z,20nm,1.2s
ODAN  Odare            51.09 310  eP     P       12 26 19.4 -0.1
       comp=Z,75nm,1.1s
TAPN  Taplejung        51.09 310  eP     P       12 26 19.8 +0.1
GTA   Gaotai           51.30 331  eP     P       12 26 20.2 -0.6
GTA                                pP    pP      12 26 27.0 -3.2
GTA                                sP    sP      12 26 32.0 -2.5
RAMN  Ramite           51.74 309  eP     P       12 26 23.3 -1.2
       comp=Z,47nm,0.5s
PKI   Pulchoki         52.97 309  eP     P       12 26 33.6 -0.1
PKIN  Phulchoki        52.98 309  eP     P       12 26 33.5 -0.2
KKN   Kakani           53.18 309  eP     P       12 26 35.4 +0.4
DMN   Daman            53.22 309  eP     P       12 26 35.6 +0.2
KLR   Kul'dur          53.22   2   P     P       12 26 36.1 +1.4
       comp=Z,7.1nm,1.0s,baz=188,slow=4.5,SNR=12
KLR   Kul'dur          53.22   2c iP     P       12 26 35.9 +1.2
KLR                                pmax  pmax
       comp=Z,16nm,1.2s
GKN   Gorkha           53.78 309  eP     P       12 26 39.5 +0.1
KOLN  Koldanda         54.47 309  eP     P       12 26 42.5 -2.0
       comp=Z,104nm,0.9s
DANN  Dangsing         54.62 309  eP     P       12 26 44.4 -1.3
       comp=Z,82nm,0.9s
HYB   Hyderabad        54.69 295  i P    P       12 26 46.0 -0.1
PYUN  Piuthan          55.10 309  eP     P       12 26 47.1 -2.0
       comp=Z,115nm,1.0s
ULN   Ulaanbaatar      55.45 342deP     P       12 26 50.7 -0.5
ULN                                pmax  pmax
       comp=Z,14nm,0.9s
ULN   Ulaanbaatar      55.45 342   P     P       12 26 50.4 -0.8
ULN                                IAmb  IAmb    12 26 53.8
       comp=Z,13nm,0.9s
SONM  Songino Array    55.63 341   P     P       12 26 53.8 +1.4
       comp=Z,9.3nm,1.1s,baz=160,slow=7.5,SNR=21
ZEA   Zeya             57.73 358  eP     P       12 27 06.0 -1.1
ZEA                                pmax  pmax
       comp=N,10.0nm,1.1s
ZEA                                pmax  pmax
       comp=Z,10.0nm,1.8s
ZAK   Zakamensk        58.86 341  eP     P       12 27 15.0 -0.2
ZAK                                pmax  pmax
       comp=Z,9.0nm,1.3s
POO   Poona            59.29 294  eP     P       12 27 15.0 -3.7
TLY   Talaya           59.87 342   P     P       12 27 24.0 +2.0
       comp=Z,2.8nm,0.7s,baz=107,slow=1.8,SNR=3.2
TLY   Talaya           59.87 342   P     P       12 27 24.0 +2.0
MOY   Mondy            60.72 340  eP     P       12 27 29.7 +1.8
MOY                                pmax  pmax
       comp=Z,32nm,1.6s
WMQ   Urumqi           60.80 326 ⇓P     P       12 27 30.2 +1.7
WMQ                                pP    pP      12 27 39.1 +1.0
WMQ                                sP    sP      12 27 42.4  0.0
WMQ                                pmax  pmax
       comp=Z,48nm,0.9s
PETK  Petropavlovsk-   61.81  19   P     P       12 27 38.0 +2.9
       comp=Z,5.8nm,0.9s,baz=198,slow=5.4,SNR=5.7
PETK  Petropavlovsk-   61.81  19   P     P       12 27 33.9 -1.3
BOD   Bodaibo          63.05 351  eP     P       12 27 44.7 +1.4
BOD                                pmax  pmax
       comp=Z,21nm,2.0s
CASY  Casey            63.41 188   P     P       12 27 46.9 +1.4
CASY                               IAmb  IAmb    12 27 48.2
       comp=Z,16nm,1.1s
DGZ   Jazzator, Alta   64.82 331⇓eP     P       12 27 54.3 -1.0
DGZ                                pmax  pmax
       comp=Z,18nm,0.8s
NIL   Nilore           65.04 310   P     P       12 27 55.9 -1.1
NIL                                pmax  pmax
       comp=Z,9.0nm,0.8s
NIL   Nilore           65.04 310   P     P       12 27 55.9 -1.1
NIL                                IAmb  IAmb    12 28 17.2
       comp=Z,8.5nm,0.8s
PDGK  Podgornoye       65.30 322   P     P       12 27 58.5  0.0
MK31  Makanchi Array   65.63 326ceP     P       12 27 58.9 -1.6
MK31  Makanchi Array   65.63 326         P       12 27 59.4 -1.0
MKAR  Makanchi Array   65.63 326   P     P       12 28 01.8 +1.3
       comp=Z,21nm,0.5s,baz=114,slow=7.9,SNR=122
MKAR  Makanchi Array   65.63 326   P     P       12 27 59.6 -0.9
MA2   Magadan          65.74  12⇑eP     P       12 28 03.0 +2.1
MA2                                pmax  pmax
       comp=Z,113nm,2.7s
MAKZ  Makanchi         65.81 326   P     P       12 28 00.9 -0.8
MAKZ                               pmax  pmax
       comp=Z,22nm,0.5s
MAKZ  Makanchi         65.81 326   P     P       12 28 00.8 -0.8
YAK   Yakutsk          66.02   0  eP     P       12 28 03.9 +1.3
YAK                               e*PP   pP      12 28 12.1 -0.3
YAK                               e              12 28 35.8
YAK                               e              12 30 36.0
YAK                               eS     S       12 36 49.9 +2.1
YAK                               e*SS   sS      12 37 03.9 -2.1
YAK                               e              12 37 58.0
YAK                                pmax  pmax
       comp=Z,48nm,0.8s
YAK                                pmax  pmax
       comp=N,13nm,1.2s
YAK                                pmax  pmax
       comp=Z,125nm,3.2s
YAK                                pmax  pmax
       comp=N,124nm,3.3s
YAK                                pmax  pmax
       comp=E,83nm,3.4s
YAK                                smax  smax
       comp=N,76nm,2.5s
YAK   Yakutsk          66.02   0   P     P       12 28 02.5 -0.1
KDJ   Kajisay          66.12 320   P     P       12 28 03.0 -1.0
KDJ                                pmax  pmax
       comp=Z,10.0nm,0.7s
KDJ   Kajisay          66.12 320   P     P       12 28 03.0 -1.0
KDJ                                IAmb  IAmb    12 28 06.1
       comp=Z,10nm,0.7s
MDOK  Medeo            66.73 321   P     P       12 28 07.6 -0.2
BOOM  Boomskoye usch   67.10 320   P     P       12 28 10.0 -0.2
BOOM                               pmax  pmax
       comp=Z,9.0nm,0.9s
BOOM  Boomskoye usch   67.10 320   P     P       12 28 10.0 -0.2
BOOM                               IAmb  IAmb    12 28 12.2
       comp=Z,9.4nm,0.9s
TKM2  Tokmak 2         67.53 320  i P    P       12 28 12.8 -0.1
TKM2                               pmax  pmax
       comp=Z,11nm,0.7s
AAK   Ala-Archa        68.11 319⇓iP     P       12 28 14.4 -2.1
AAK                                pmax  pmax
       comp=Z,27nm,0.9s
AAK   Ala-Archa        68.11 319   P     P       12 28 15.0 -1.5
AAK                                IAmb  IAmb    12 28 18.8
       comp=Z,8.3nm,0.9s
KBL   Kabul            68.61 310   P     P       12 28 20.1 +0.2
KBL                                pmax  pmax
       comp=Z,11nm,0.9s
KBL   Kabul            68.61 310   P     P       12 28 20.1 +0.2
KBL                                IAmb  IAmb    12 28 45.7
       comp=Z,10nm,0.9s
ZAA0  Zalesovo Array   68.86 334   P     P       12 28 19.3 -1.4
ZALV  Zalesovo Beam    68.86 334   P     P       12 28 21.1 +0.4
       comp=Z,21nm,0.9s,baz=107,slow=5.1,SNR=34
ZALV  Zalesovo Beam    68.86 334   P     P       12 28 19.1 -1.7
SEY   Seymchan         69.14  11   P     P       12 28 24.0 +1.7
       comp=Z,20nm,0.8s,baz=206,slow=4.8,SNR=32
KURBB Kurchatov Arra   69.88 328   P     P       12 28 28.4 +1.3
       comp=Z,46nm,0.8s,baz=127,slow=5.5,SNR=35
KURK  Kurchatov        69.88 328⇓iP     P       12 28 26.0 -1.1
KURK                               pmax  pmax
       comp=Z,69nm,0.8s
KURK  Kurchatov        69.88 328   P     P       12 28 26.4 -0.8
KKAR  Karatay Array    70.93 318   P     P       12 28 32.9 -0.9
KKAR  Karatay Array    70.93 318   P     P       12 28 32.9 -0.9
VNDA  Vanda            75.29 173   P     P       12 29 00.1 +1.2
VNDA                               pmax  pmax
       comp=Z,5.0nm,1.0s
VNDA  Vanda            75.29 173   P     P       12 29 00.1 +1.2
BRVK  Borovoye         75.52 328⇑eP     P       12 28 59.3 -1.3
BRVK                               pmax  pmax
       comp=Z,46nm,1.3s
BRVK  Borovoye         75.52 328   P     P       12 29 00.1 -0.5
TIXI  Tiksi            75.68 360   P     P       12 29 02.3 +1.1
       comp=Z,8.1nm,0.6s,baz=163,slow=3.7,SNR=14
TIXI  Tiksi            75.68 360ceP     P       12 29 02.1 +1.0
TIXI  Tiksi            75.68 360   P     P       12 29 01.5 +0.3
TIXI                               IAmb  IAmb    12 29 03.0
       comp=Z,9.1nm,0.7s
BILL  Bilibino         76.49  13  eP     P       12 29 06.5 +0.7
BILL                              e              12 29 21.8
BILL                              e              12 31 54.8
BILL                               pmax  pmax
       comp=Z,2.0nm,1.1s
GEYT  Alibeck          78.05 310   P     P       12 29 17.0 +1.7
       comp=Z,3.5nm,0.8s,baz=162,slow=5.2,SNR=5.5
GEYT  Alibeck          78.05 310   P     P       12 29 16.0 +0.8
NRIK  Noril'sk         78.73 346   P     P       12 29 19.7 +1.4
       comp=Z,8.2nm,0.8s,baz=132,slow=6.2,SNR=12
NRIK  Noril'sk         78.73 346   P     P       12 29 19.0 +0.7
NRIK                               IAmb  IAmb    12 29 43.1
       comp=Z,10nm,0.8s
AB31  Akbulak array    80.02 321  eP     P       12 29 24.0 -1.8
ABKAR Akbulak array    80.02 321   P     P       12 29 24.5 -1.3
ABKAR                              IAmb  IAmb    12 29 27.5
       comp=Z,19nm,0.8s
SVE   Sverdlovsk       82.13 329  eP     P       12 29 37.9 +1.1
SVE                                pmax  pmax
       comp=Z,38nm,1.0s
ARU   Arti             83.08 328c iP     P       12 29 42.5 +0.7
ARU                                S     S       12 40 01.1 +2.4
ARU                                SS    SS      12 45 23.5 +0.3
ARU                                pmax  pmax
       comp=Z,17nm,0.8s
ARU   Arti             83.08 328   P     P       12 29 42.1 +0.3
ARU                                IAmb  IAmb    12 29 43.4
       comp=Z,21nm,1.0s
QSPA  South Pole Qui   85.78 180   P     P       12 29 54.1 -1.4
QSPA                               IAmb  IAmb    12 29 57.2
       comp=Z,8.6nm,1.0s
SYO   Syowa Base       86.11 201⇓eX     P       12 29 55.6 -1.2
RAYN  Ar Rayn          86.19 294   P     P       12 29 57.0 -1.3
RAYN                               pmax  pmax
       comp=Z,29nm,0.8s
RAYN  Ar Rayn          86.19 294   P     P       12 29 57.0 -1.3
KDAK  Kodiak Island    87.07  32   P     P       12 30 03.2 +1.5
       comp=Z,11nm,0.7s,baz=329,slow=5.9,SNR=2.0
BELG  Belogornoye      88.35 323⇑eP     P       12 30 07.7 -0.2
BELG                               pmax  pmax
       comp=Z,5.0nm,0.9s
GNI   Garni            88.69 310   P     P       12 30 10.4 +0.3
GNI                                pmax  pmax
       comp=Z,13nm,0.6s
GNI   Garni            88.69 310   P     P       12 30 10.4 +0.3
ZEI   Tsey             89.60 313  eP     P       12 30 08.0 -6.4
ZEI                                pmax  pmax
       comp=Z,4.0nm,1.3s
RND   Reindeer         89.95  26   P     P       12 30 16.0 +0.6
RND                                pmax  pmax
       comp=Z,14nm,1.2s
RND   Reindeer         89.95  26   P     P       12 30 16.0 +0.6
RND                                IAmb  IAmb    12 30 39.7
       comp=Z,14nm,1.2s
COLD  Coldfoot         90.06  23   P     P       12 30 16.4 +0.6
COLD                               IAmb  IAmb    12 30 19.0
       comp=Z,5.4nm,0.9s
KBZ   Khabaz           90.42 314⇓eP     P       12 30 17.5 -0.4
KBZ                                pmax  pmax
       comp=Z,7.0nm,1.4s
KIV   Kislovodsk       90.60 314  eP     P       12 30 15.1 -3.8
KIV                                pmax  pmax
       comp=Z,7.0nm,1.1s
GURO  Guroymak-BITLI   90.62 308   P     P       12 30 19.4 +0.3
ILAR  Eielson Array    91.01  25   P     P       12 30 20.4 +0.2
       comp=Z,1.1nm,0.9s,baz=285,slow=4.1,SNR=11
ILAR  Eielson Array    91.01  25   P     P       12 30 20.5 +0.3
ILAR  Eielson Array    91.01  25   P     P       12 30 20.5 +0.3
KMBO  Kilima Mbogo     92.19 269   P     P       12 30 28.4 +1.3
       comp=Z,1.4nm,0.3s,baz=37,slow=7.1,SNR=5.1
KMBO  Kilima Mbogo     92.19 269   P     P       12 30 27.2  0.0
KMBO                               IAmb  IAmb    12 30 29.8
       comp=Z,6.8nm,1.2s
SOC   Sochi            92.72 313  eP     P       12 30 24.3 -4.2
SOC                               e              12 34 06.6
SOC                               eS     SKSac   12 40 54.6 -5.1
SOC                                pmax  pmax
       comp=Z,6.0nm,0.4s
KLMR  Klimovskoe       93.62 331  eP     P       12 30 30.5 -1.8
KLMR                               pmax  pmax
       comp=Z,12nm,0.9s
KLMR  Klimovskoe       93.62 331   AMP           12 30 42.6
       comp=Z,12nm,0.9s
KLMR  Klimovskoe       93.62 331  eP     P       12 30 30.6 -1.8
OBN   Obninsk          95.10 325  eP     P       12 30 37.6 -1.6
OBN                               e              12 34 27.8
OBN                                pmax  pmax
       comp=Z,5.0nm,0.9s
APA   Apatity          96.18 337⇓iP     P       12 30 34.5 -9.4
APA                                pmax  pmax
       comp=Z,7.0nm,1.2s
APA                                MLR   MLR
       comp=Z,2μm,23.0s
INK   Inuvik           96.43  22   P     P       12 30 45.6 +0.6
       comp=Z,2.9nm,0.9s,baz=285,slow=4.0,SNR=9.6
INK   Inuvik           96.43  22   P     P       12 30 44.8 -0.2
INK                                IAmb  IAmb    12 30 46.4
       comp=Z,4.7nm,1.1s
SNAA  Sanae            98.28 194   P     P       12 30 50.8 -2.6
ARCES ARCESS Array B   98.79 340   P     P       12 30 55.4 -0.3
       comp=Z,4.2nm,0.9s,baz=81,slow=4.0,SNR=5.0
VNA2  Neumayer--Watz   99.86 193   P     Pdif    12 30 59.3 -1.1
PDAR  Pinedale Array  115.23  44   PKP   PKPdf   12 35 59.3 +1.0
       comp=Z,0.6nm,0.8s,baz=90,slow=0.5,SNR=3.7
ULM   Lac du Bonnet   120.33  32   PKP   PKiKP   12 36 10.1 +2.5
       comp=Z,1.0nm,0.5s,baz=0.0,slow=1.0,SNR=1.2
TXAR  Lajitas Array   123.85  57   PKP   PKiKP   12 36 17.3 +2.0
       comp=Z,1.2nm,0.9s,baz=261,slow=0.7,SNR=11
TORD  Torodi Ar. Bea  127.76 283   PKP   PKiKP   12 36 23.4 +0.1
       comp=Z,3.8nm,0.8s,baz=54,slow=1.9,SNR=23
S39A  Bolivar         128.62  44         PKPdf   12 36 23.8  0.0
PLCA  Paso Flores     131.67 160   PKP   PKiKP   12 36 32.3 +1.7
       comp=Z,1.1nm,0.7s,baz=45,slow=2.9,SNR=2.0
AC02  Maricunga       144.28 151         PKPbc   12 36 51.8 -0.1
PB01  IPOC Station P  148.76 144         PKiKP   12 37 06.7 +0.6
CPUP  Villa Florida   148.95 168   PKPbc PKiKP   12 37 06.4 +0.2
       comp=Z,8.4nm,0.8s,baz=194,slow=3.4,SNR=11
CPUP  Villa Florida   148.95 168   PKIKP PKPdf   12 37 00.0 -0.9
CPUP                                             12 37 07.1
CPUP  Villa Florida   148.95 168   PKPdf PKPdf   12 36 60.0 -0.9
CPUP                                     PKiKP   12 37 07.1 +0.9
PB08  IPOC Station P  149.65 143   PKPdf PKPdf   12 37 01.5 -1.2
PB08                                     PKiKP   12 37 09.3 +0.9
LPAZ  La Paz          153.19 140   PKP   PKPdf   12 37 10.9 +2.5
       comp=Z,0.7nm,0.6s,baz=121,slow=2.2,SNR=5.6
LPAZ                               PKPbc pPKPdf  12 37 17.6 -1.6
       comp=Z,2.8nm,0.8s,baz=141,slow=3.0,SNR=7.5
LPAZ                               PKPab PKPab   12 37 28.1 +0.6
       comp=Z,3.4nm,0.8s,baz=234,slow=1.2,SNR=6.1
LPAZ  La Paz          153.19 140         PKPdf   12 37 07.4 -1.0
LPAZ                               PKPbc pPKPdf  12 37 17.6 -1.6
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*IDC **09** 12:22:20.5±1.2, 4.°19S×129.°63E, h0km, mb3.9/8, mb1 4.1/12, mb1mx3.8/46, mbtmp4.0/12, ML4.2/3, Error ellipse: s-maj=35.6km s-min=22.0km az=93.0*

*NEIC **09** 12:22:24.6±1.5, 4.°20S±0.°06×129.°51E±0.°07, h26km±6km, mb4.5/13, Error ellipse: s-maj=11.0km s-min=8.0km az=114.0*

ISC 09 12:22:25.0±0.6, **4.°20S**±0.°06×**129.°60E**±0.°07, **h36km, n37, σ1.ˢ35**/37, **mb4.2**/13, **Banda Sea**

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Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op    ISC        h  m  s     ISC
FAKI  Fak Fak           2.94  64          Pn       12 23 09.5 +0.4
SIJI  Sorong            3.70  27    Pn    Pn       12 23 19.1 -0.6
       20nm,0.3s,baz=53,slow=23,SNR=20
SIJI                                Sn    Sn       12 23 58.8 -3.3
       11nm,0.3s,baz=287,slow=12,SNR=4.2
SAUI  Saumlaki          4.12 156    Pn    Pn       12 23 25.5  0.0
TNTI  Ternate           5.42 336    Pn    Pn       12 23 41.1 -2.1
SOEI  Soe               7.65 223    Pn    Pn       12 24 12.6 -1.4
BATI  Baumata           8.38 224    Pn    Pn       12 24 23.6 -0.4
       2.4nm,0.3s,baz=104,slow=21,SNR=1.5
KAPI  Kappang           9.85 265    Pn    Pn       12 24 48.2 +4.1
       0.3nm,0.3s,baz=5.1,slow=18,SNR=1.8
KNRA  Kununurra        11.44 184    Pn    Pn       12 25 06.2 +0.4
WRA   Warramunga Arr   16.32 164    Pn    Pn       12 26 10.4 -1.1
       baz=350,slow=11,SNR=2.1
WR0   Warramunga Arr   16.39 163    Pn    Pn       12 26 12.1 -0.4
WR0                                 IAmb  IAmb     12 26 15.3
       comp=Z,27nm,1.1s
PMG   Port Moresby     18.18 107    P     P        12 26 35.3 +0.5
SBUM  Sibu             18.58 291    P     P        12 26 37.3 -1.8
MBWA  Marble Bar       19.40 209    P     P        12 26 46.5 -1.5
PSA00 Pilbara Seismi   19.70 208    P     P        12 26 49.4 -1.9
PSA00                               IAmb  IAmb     12 26 53.9
       comp=Z,15nm,0.7s
ASAR  Alice Springs    19.80 168    P     Pn       12 26 53.3 -0.9
       comp=Z,0.6nm,0.3s,baz=346,slow=10,SNR=5.2
CTAO  Charters Tower   22.65 136    P     P        12 27 23.0 -0.1
CMAR  Chiang Mai Arr   37.67 308    P     P        12 29 38.5 +1.4
       comp=Z,1.0nm,0.5s,baz=143,slow=9.0,SNR=4.3
MJAR  Matsushiro Arr   41.32  11    P     P        12 30 07.6 +0.4
       comp=Z,2.1nm,0.7s,baz=181,slow=7.2,SNR=3.0
JYT   Yasato           41.42  13    P     P        12 30 08.6 +0.6
JYT                                 IAmb  IAmb     12 30 10.1
       comp=Z,15nm,1.2s
INCN  Inchon           41.56 356    P     P        12 30 09.2  0.0
LSA   Lhasa            49.92 315    P     P        12 31 15.7 -0.3
LSA                                 IAmb  IAmb     12 31 29.1
       comp=Z,3.2nm,0.7s
PALK  Pallekele        50.11 283    P     P        12 31 16.8 -0.3
SONM  Songino Array    55.67 341    P     P        12 31 58.5 +0.8
       comp=Z,0.2nm,0.6s,baz=164,slow=8.1,SNR=1.3
TLY   Talaya           59.90 342    P     P        12 32 27.1 -0.1
MK31  Makanchi Array   65.68 326    P     P        12 33 06.1 +0.3
MK31                                IAmb  IAmb     12 33 19.3
       comp=Z,3.8nm,1.3s
MKAR  Makanchi Array   65.68 326    P     P        12 33 06.3 +0.5
       comp=Z,1.9nm,0.8s,baz=113,slow=8.0,SNR=7.5
MKAR  Makanchi Array   65.68 326    P     P        12 33 06.1 +0.3
MAKZ  Makanchi         65.86 326    P     P        12 33 07.7 +0.7
MAKZ                                IAmb  IAmb     12 33 20.5
       comp=Z,2.2nm,0.8s
ZALV  Zalesovo Beam    68.91 333    P     P        12 33 29.0 +2.9
       comp=Z,0.6nm,0.5s,baz=168,slow=7.4,SNR=1.2
ZALV  Zalesovo Beam    68.91 333    P     P        12 33 27.0 +1.0
SEY   Seymchan         69.14  11    P     P        12 33 28.2 +0.9
       comp=Z,2.7nm,0.9s,baz=261,slow=3.5,SNR=4.1
KURBB Kurchatov Arra   69.93 328    P     P        12 33 33.1 +0.7
       comp=Z,1.4nm,0.7s,baz=132,slow=5.8,SNR=5.4
KURK  Kurchatov        69.93 328    P     P        12 33 33.1 +0.7
KURK  Kurchatov        69.93 328    IAmb  IAmb     12 33 43.0
       comp=Z,8.5nm,1.1s
KKAR  Karatay Array    70.99 318    P     P        12 33 39.1  0.0
BVAR  Borovoye Array   75.49 328    P     P        12 34 06.1 +0.6
       comp=Z,0.2nm,0.4s,baz=157,slow=42,SNR=2.7
ABKAR Akbulak array    80.08 321    P     P        12 34 31.6 +0.5
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*IDC **09** 12:24:26.9±0.5, 4.°14S×129.°54E, h0km, mb4.5/23, mb1 4.6/29, mb1mx4.3/51, mbtmp4.5/29, ML4.3/5, Error ellipse: s-maj=17.1km s-min=12.5km az=75.0*

*NEIC **09** 12:24:28.5±1.3, 4.°16S±0.°06×129.°57E±0.°06, h10km±1km, mb4.8/59, Error ellipse: s-maj=9.8km s-min=9.2km az=304.0*

*DJA **09** 12:24:33.7±0.2, 4 °S±2 °×13 °0E± °, h41km±4km, M4.8/28, mB5.7/3, mb4.8/28, MLv4.7/12, Mw(mB)5.2/3*

*KLM **09** 12:24:36, 4.°20S×129.°57E, h72km, mb4.8*

ISC 09 12:24:31.7±0.3**,4°.20S**±0°.04×**129°.64E**±0°.05**,h36^{km},n165,**
σ1^{s}35/166**,mb4.7**/55**,1C-1D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.10**	**320**	P	**Pn**	**12 24 48.6**	**-2.0**
AAI	**Ambon**	**1.53**	**289**	P	**Pn**	**12 24 54.6**	**-1.9**
FAKI	**Fak Fak**	**2.90**	**64**	P	**Pn**	**12 25 16.1**	**+0.8**
FAKI	**Fak Fak**	**2.90**	**64**	Pn	**Pn**	**12 25 15.9**	**+0.6**
SIJI	**Sorong**	**3.68**	**26**	Pn	**Pn**	**12 25 25.6**	**-0.5**
	23nm,0.3s,baz=51,slow=20,SNR=10						
SIJI				Sn	**Sn**	**12 26 07.6**	**-0.7**
	27nm,0.3s,baz=5.5,slow=23,SNR=4.1						
SWI	**Sorong**	**3.69**	**26**	P	**Pn**	**12 25 26.5**	**+0.4**
SAUI	**Saumlaki**	**4.11**	**156**	P	Pn	12 25 37.9	+5.9
SAUI	**Saumlaki**	**4.11**	**156**		**Pn**	**12 25 31.9**	**-0.1**
LBMI	**Labuha**	**4.13**	**329**	P	**Pn**	**12 25 31.1**	**-1.2**
SANI	**Sanana**	**4.23**	**300**	P	**Pn**	**12 25 33.5**	**-0.1**
TNTI	**Ternate**	**5.43**	**335**	Pn	**Pn**	**12 25 49.4**	**-0.8**
SOEI	**Soe**	**7.68**	**224**	P	Pn	12 26 26.2	+5.0
	0.4nm78nm,1.2s						
SOEI	**Soe**	**7.68**	**224**	Pn	**Pn**	**12 26 21.4**	**+0.3**
BATI	**Baumata**	**8.41**	**224**	Pn	**Pn**	**12 26 31.4**	**+0.2**
	2.9nm,0.3s,baz=324,slow=9.2,SNR=2.0						
BATI	**Baumata**	**8.41**	**224**	P	**Pn**	**12 26 35.2**	**+4.0**
	47nm,0.9s						
MMRI	**Maumere**	**8.58**	**239**	Pn	**Pn**	**12 26 33.2**	**-0.2**
APSI	**Ampana**	**8.63**	**292**	P	**Pn**	**12 26 35.4**	**+1.3**
	126nm,1.2s						
MTN	**Manton Dam**	**8.72**	**170**	Pn	**Pn**	**12 26 36.8**	**+1.4**
EDFI	**Ende, Flores**	**9.10**	**240**	P	**Pn**	**12 26 43.2**	**+2.5**
	18nm,1.2s						
BNSI	**Bone**	**9.51**	**268**	P	**Pn**	**12 26 50.3**	**+4.1**
	26nm,1.1s						
BKSI	**Bulukumba**	**9.55**	**263**	P	**Pn**	**12 26 49.5**	**+2.7**
	49nm,1.3s						
SPSI	**Sidrap Palu**	**9.85**	**271**	P	Pn	12 26 55.8	+4.9
	19nm,0.9s						
KAPI	**Kappang**	**9.89**	**265**	Pn	**Pn**	**12 26 49.8**	**-1.6**
	0.6nm,0.3s,baz=96,slow=12,SNR=1.8						
KAPI	**Kappang**	**9.89**	**265**	Pn	**Pn**	**12 26 50.3**	**-1.1**
TOLI2	**Tolitoli**	**10.30**	**301**	Pn	**Pn**	**12 26 56.2**	**-0.9**
MPSI	**Mapaga**	**10.73**	**295**	P	**Pn**	**12 27 06.1**	**+3.2**
	15nm,1.0s						
KNRA	**Kununurra**	**11.44**	**184**	Pn	**Pn**	**12 27 11.7**	**-0.9**
KNRA	**Kununurra**	**11.44**	**184**	P	**Pn**	**12 27 13.1**	**+0.5**
PLAI	**Plampang**	**12.65**	**248**	P	**Pn**	**12 27 31.8**	**+2.6**
	64nm,1.1s						
PLAI	**Plampang**	**12.65**	**248**	P	**P**	**12 27 36.7**	**-3.4**
TWSI	**Taliwang, Sumb**	**13.46**	**250**	P	**P**	**12 27 47.2**	**-1.8**
	22nm,1.0s						
BBKI	**Banjar Baru**	**14.79**	**272**	P	**P**	**12 28 01.8**	**-2.0**
	32nm,1.3s						
SRBI	**Singaraja**	**14.86**	**254**	P	**P**	**12 28 04.6**	**0.0**
	72nm,1.1s						
MTKI	**Muara Teweh, K**	**15.08**	**282**	P	**Pn**	**12 28 03.5**	**+1.3**
	26nm,0.8s						
KMMI	**Kalianget**	**15.85**	**259**	P	**P**	**12 28 16.4**	**+0.7**
	53nm,1.5s						
JAGI	**Jajag, Banyuwa**	**15.97**	**254**	P	**P**	**12 28 16.1**	**-0.8**
	80nm,1.4s						
JAGI	**Jajag, Banyuwa**	**15.97**	**254**	Pn	**Pn**	**12 28 13.1**	**-0.7**
JAGI				IAmb	IAmb	12 28 17.8	
	comp=Z,98nm,1.2s						
WB0	**Warramunga Arr**	**16.16**	**164**		**Pn**	**12 28 16.2**	**+0.1**
WRAB	**Tennant Creek**	**16.30**	**164**		**Pn**	**12 28 15.8**	**-2.2**
WRAB	**Tennant Creek**	**16.30**	**164**	P	**Pn**	**12 28 17.2**	**-0.8**
WRA	**Warramunga Arr**	**16.31**	**164**	Pn	**Pn**	**12 28 16.7**	**-1.4**
	comp=Z,1.6nm,0.3s,baz=348,slow=13,SNR=8.7						
WRA				Sn	**Sn**	**12 31 13.9**	**-4.1**
	comp=Z,0.5nm,0.3s,baz=349,slow=22,SNR=3.1						
WRA	**Warramunga Arr**	**16.31**	**164**		**Pn**	**12 28 16.6**	**-1.4**
WB2	**Warramunga Arr**	**16.31**	**164**	Pn	**Pn**	**12 28 16.6**	**-1.6**
BLJI	**Banyuglugur**	**16.34**	**257**	P	**P**	**12 28 21.7**	**+0.6**
	comp=Z,41nm,1.0s						
WR0	**Warramunga Arr**	**16.38**	**163**	Pn	**Pn**	**12 28 18.1**	**-0.9**
COEN	**Coen**	**16.50**	**127**		**Pn**	**12 28 20.5**	**0.0**
COEN	**Coen**	**16.50**	**127**	P	**Pn**	**12 28 21.4**	**+0.9**
KKM	**Kota Kinabalu**	**16.83**	**307**	Pn	**Pn**	**12 28 21.5**	**-3.3**
KKM				IAmb	IAmb	12 28 34.0	
	comp=Z,55nm,1.2s						
MANU	**Manus Island**	**17.83**	**84**		**Pn**	**12 28 36.5**	**-0.6**
PMG	**Port Moresby**	**18.14**	**107**	P	**P**	**12 28 41.7**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=342,slow=8.9,SNR=3.7						
PMG	**Port Moresby**	**18.14**	**107**	P	**P**	**12 28 41.4**	**+0.4**
SBUM	**Sibu**	**18.62**	**290**	P	**Pn**	**12 28 48.0**	**+1.2**
SBUM	**Sibu**	**18.62**	**290**	P	**P**	**12 28 44.8**	**-1.5**
STKI	**Sintang**	**18.64**	**283**	P	**Pn**	**12 28 49.3**	**+2.3**
PCJI	**Pacitan**	**18.78**	**257**	P	**Pn**	**12 28 53.1**	**+4.4**
	comp=Z,68nm,1.1s						
QIS	**Mount Isa**	**18.93**	**150**	P	**Pn**	**12 28 51.4**	**+0.8**
SMRI	**Semarang**	**19.32**	**261**	P	**P**	**12 28 53.0**	**-0.9**
SMRI				IAmb	IAmb	12 29 19.4	
	comp=Z,154nm,1.5s						
MBWA	**Marble Bar**	**19.42**	**209**	P	**Pn**	**12 28 56.8**	**+0.5**
PSA00	**Pilbara Seismi**	**19.72**	**208**	P	**Pn**	**12 28 59.9**	**0.0**
PSA00	**Pilbara Seismi**	**19.72**	**208**	P	**Pn**	**12 28 59.2**	**-0.7**
PSA00				IAmb	IAmb	12 29 00.9	
	comp=Z,101nm,0.9s						
PSA00	**Pilbara Seismi**	**19.72**	**208**	P	**Pn**	**12 29 00.2**	**+0.3**
AS31	**Alice Springs**	**19.79**	**168**	P	**Pn**	**12 29 00.5**	**-0.3**
ASAR	**Alice Springs**	**19.79**	**168**	P	**Pn**	**12 29 00.8**	**+0.1**
	comp=Z,3.1nm,0.3s,baz=350,slow=9.9,SNR=30						
ASAR				S	**S**	**12 32 39.6**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=347,slow=20,SNR=3.3						
ASAR				PcP	**PcP**	**12 33 16.9**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=7.0,slow=1.3,SNR=6.6						
ASAR	**Alice Springs**	**19.79**	**168**	P	**P**	**12 28 59.6**	**+0.6**
MTSU	**Mount Surprise**	**19.95**	**135**	P	**Pn**	**12 29 02.9**	**+0.2**
WRKA	**Warakurna**	**20.76**	**183**	P	Pn	12 29 11.6	-0.6
LEM	**Lembang**	**22.08**	**262**	P	**P**	**12 29 22.7**	**-1.3**
	comp=Z,10.0nm,0.4s,baz=280,slow=19,SNR=2.3						
RABL	**Rabaul**	**22.46**	**91**	P	**P**	**12 29 27.6**	**-0.4**
CTA	**Charters Tower**	**22.61**	**136**	P	**P**	**12 29 31.4**	**+1.9**
	comp=Z,17nm,0.6s,baz=310,slow=13,SNR=16						
CTAO	**Charters Tower**	**22.61**	**136**	P	**P**	**12 29 30.1**	**+0.6**
CTAO				IAmb	IAmb	12 29 31.9	
	comp=Z,26nm,0.7s						
CTAO	**Charters Tower**	**22.61**	**136**	P	**P**	**12 29 31.4**	**+1.9**
GIRL	**Giralia**	**23.64**	**218**	P	**P**	**12 29 42.4**	**+2.6**
	comp=Z,162nm,1.9s						
OOD	**Oodnadatta**	**24.16**	**167**	P	**P**	**12 29 46.1**	**+1.5**
INKA	**Innaminka**	**25.70**	**157**	P	**P**	**12 30 00.3**	**+1.8**
MULG	**Mulgathing**	**26.28**	**171**	P	**P**	**12 30 06.7**	**+2.9**
FORT	**Forrest**	**26.48**	**183**	P	**P**	**12 30 05.5**	**-0.2**
FORT				IAmb	IAmb	12 30 26.2	
	comp=Z,31nm,0.8s						
FORT	**Forrest**	**26.48**	**183**	P	**P**	**12 30 06.8**	**+1.2**
JRMM	**Jerantut**	**28.31**	**286**	P	**P**	**12 30 23.0**	**+0.8**
BBOO	**Buckleboo**	**29.09**	**169**	P	**P**	**12 30 29.3**	**+0.3**
BBOO				IAmb	IAmb	12 30 49.5	
	comp=Z,23nm,1.3s						
YOJ	**Yonaguni jima**	**29.21**	**348**	P	**P**	**12 30 29.4**	**-0.6**
EIDS	**Eidsvold**	**29.45**	**138**	P	**P**	**12 30 30.4**	**-1.8**
EIDS				IAmb	IAmb	12 30 34.3	
	comp=Z,18nm,1.4s						
STKA	**Stephens Creek**	**29.74**	**159**	P	**P**	**12 30 36.0**	**+1.3**
	comp=Z,3.2nm,0.5s,baz=341,slow=7.9,SNR=6.2						
STKA	**Stephens Creek**	**29.74**	**159**	P	**P**	**12 30 34.0**	**-0.7**
IPM	**Ipoh**	**29.86**	**286**	P	**P**	**12 30 36.0**	**-0.1**
IPM	**Ipoh**	**29.86**	**286**	P	**P**	**12 30 34.9**	**-1.2**
KULM	**Kulim**	**30.45**	**288**	P	**P**	**12 30 41.0**	**-0.3**
KULM	**Kulim**	**30.45**	**288**	P	**P**	**12 30 40.2**	**-1.0**
KULM				IAmb	IAmb	12 30 42.6	
	comp=Z,19nm,1.1s						
PSI	**Prapat**	**31.47**	**282**	P	**P**	**12 30 49.0**	**-1.5**
	comp=Z,3.2nm,0.5s,baz=226,slow=5.4,SNR=2.5						
ARMA	**Armidale**	**33.33**	**144**	P	**P**	**12 31 06.5**	**0.0**
ARMA				IAmb	IAmb	12 31 15.3	
	comp=Z,16nm,1.4s						
CAN	**Canberra**	**35.77**	**152**	P	**P**	**12 31 25.0**	**-2.5**
SLVN	**Son La**	**35.78**	**316**	P	**P**	**12 31 26.0**	**-1.7**
SLVN				IAmb	IAmb	12 31 33.0	
	comp=Z,14nm,1.4s						
TOO	**Toolangi**	**36.25**	**158**	P	**P**	**12 31 31.8**	**+0.3**
TOO				IAmb	IAmb	12 31 56.4	
	comp=Z,8.7nm,1.0s						
NJ2	**Nanjing**	**37.48**	**345**	*e*P	**P**	**12 31 44.2**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**37.71**	**308**	P	**P**	**12 31 44.6**	**+0.5**
	comp=Z,3.1nm,0.6s,baz=141,slow=7.6,SNR=17						
CMAR				PcP	**PcP**	**12 34 02.5**	**+1.5**
	comp=Z,0.8nm,0.4s,baz=158,slow=2.4,SNR=5.1						
CMAR	**Chiang Mai Arr**	**37.71**	**308**	P	**P**	**12 31 44.2**	**+0.1**
CHTO	**Chiang Mai**	**37.90**	**308**	P	**P**	**12 31 44.7**	**-1.0**
CHTO				IAmb	IAmb	12 31 59.9	
	comp=Z,16nm,1.1s						
KMI	**Kunming**	**39.14**	**319**	⇑P	**P**	**12 31 57.2**	**+0.8**
KMI				pP	pP	12 32 06.6	+1.1
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
MJAR	**Matsushiro Arr**	**41.31**	**10**	P	**P**	**12 32 13.4**	**-0.5**
	comp=Z,2.8nm,0.4s,baz=183,slow=9.8,SNR=8.9						
MJAR	**Matsushiro Arr**	**41.31**	**10**	P	**P**	**12 32 13.3**	**-0.6**
MAT	**Matsushiro**	**41.31**	**10**	P	**P**	**12 32 13.5**	**-0.4**
KSAR	**Wonju Array Be**	**41.46**	**358**	P	**P**	**12 32 14.3**	**-0.8**
KSRS	**Korea Array**	**41.47**	**358**	P	**P**	**12 32 15.5**	**+0.4**
	comp=Z,2.9nm,0.7s,baz=176,slow=9.3,SNR=13						
KS19	**Wonju Array Si**	**41.52**	**358**	P	**P**	**12 32 15.4**	**-0.1**
CD2	**Chengdu**	**42.77**	**326**	P	**P**	**12 32 27.2**	**+1.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JMM	**Marumori**	**43.11**	**13**	P	**P**	**12 32 28.1**	**-0.4**
JMM				IAmb	IAmb	12 32 32.3	
	comp=Z,29nm,1.0s						
BJT	**Baijiatuau**	**45.71**	**346**	P	**P**	**12 32 49.6**	**+0.3**
BJI	**Beijing**	**45.73**	**346**	P	**P**	**12 32 50.3**	**+0.9**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
LZH	**Lanzhou**	**46.79**	**331**	*e*P	**P**	**12 32 59.6**	**+1.6**
LZH				pP	pwP	12 33 12.4	-0.1
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
SHL	**Shillong**	**47.08**	**311**	P	**P**	**12 32 58.7**	**-1.8**
SHL				IAmb	IAmb	12 33 00.3	
	comp=Z,16nm,1.2s						
HHC	**Hu-ho-hao-te**	**47.79**	**341**	*e*P	**P**	**12 33 09.7**	**+4.0**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,590nm,7.8s						
USRK	**Ussuriysk Ar.**	**48.22**	**2**	P	**P**	**12 33 09.3**	**+0.5**
	comp=Z,3.8nm,0.5s,baz=186,slow=7.2,SNR=9.8						
LSA	**Lhasa**	**49.96**	**315**	P	**P**	**12 33 22.2**	**-0.7**
LSA				IAmb	IAmb	12 33 38.5	
	comp=Z,6.2nm,0.7s						
GTA	**Gaotai**	**51.37**	**330**	⇓P	**P**	**12 33 33.3**	**+0.3**
GTA				pP	pP	12 33 41.8	-0.7
GTA				sP	sP	12 33 46.9	+0.5
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLR	**Kul'dur**	**53.24**	**2**	P	**P**	**12 33 47.2**	**+0.7**
	comp=Z,4.4nm,1.0s,baz=184,slow=4.7,SNR=6.2						
TUWZ	**Tuamarina**	**54.22**	**140**	P	**P**	**12 33 54.5**	**+0.6**
HYB	**Hyderabad**	**54.80**	**295**	*i* P	**P**	**12 33 57.5**	**-1.0**
BKZ	**Black Stump Fm**	**54.83**	**136**	P	**P**	**12 33 58.1**	**-0.4**
BKZ				IAmb	IAmb	12 34 00.9	
	comp=Z,18nm,1.0s						
ULN	**Ulaanbaatar**	**55.51**	**342**	P	**P**	**12 34 03.1**	**-0.1**
ULN				IAmb	IAmb	12 34 24.3	
	comp=Z,16nm,1.4s						
SONM	**Songino Array**	**55.69**	**341**	P	**P**	**12 34 05.1**	**+0.6**
	comp=Z,3.8nm,1.2s,baz=169,slow=6.8,SNR=10.0						
KNTN	**Kanton**	**58.54**	**91**	P	**P**	**12 34 25.3**	**+0.2**
NIUE	**Niue**	**60.72**	**109**	P	**P**	**12 34 39.8**	**-0.4**
WMQ	**Urumqi**	**60.87**	**326**	*e*P	**P**	**12 34 41.0**	**+0.2**
WMQ				pP	sP	12 34 54.7	+0.2
WMQ				pmax	pmax		
	comp=Z,39nm,0.9s						
PETK	**Petropavlovsk-**	**61.80**	**19**	P	**P**	**12 34 48.6**	**+1.9**
	comp=Z,4.7nm,0.9s,baz=195,slow=10,SNR=2.6						
NIL	**Nilore**	**65.14**	**310**	P	**P**	**12 35 08.4**	**-0.9**
NIL				IAmb	IAmb	12 35 36.4	
	comp=Z,6.8nm,1.1s						
MK31	**Makanchi Array**	**65.70**	**326**	P	**P**	**12 35 12.2**	**-0.5**
MK31				IAmb	IAmb	12 35 13.6	
	comp=Z,6.1nm,0.9s						
MKAR	**Makanchi Array**	**65.70**	**326**	P	**P**	**12 35 12.6**	**-0.1**
	comp=Z,3.9nm,0.5s,baz=115,slow=8.2,SNR=35						
MKAR	**Makanchi Array**	**65.70**	**326**	P	**P**	**12 35 12.1**	**-0.6**
MAKZ	**Makanchi**	**65.89**	**326**	P	**P**	**12 35 13.6**	**-0.3**
MAKZ				IAmb	IAmb	12 35 14.6	
	comp=Z,14nm,1.1s						
YAK	**Yakutsk**	**66.04**	**0**	P	**P**	**12 35 14.4**	**0.0**
	comp=Z,4.6nm,0.4s,baz=206,slow=2.8,SNR=6.9						
YAK	**Yakutsk**	**66.04**	**0**	P	**P**	**12 35 14.5**	**0.0**
BOOM	**Boomskoye usch**	**67.18**	**320**	P	**P**	**12 35 22.1**	**-0.3**
BOOM				IAmb	IAmb	12 35 23.4	
	comp=Z,6.6nm,1.0s						
AAK	**Ala-Archa**	**68.19**	**319**	P	**P**	**12 35 28.0**	**-0.8**
	comp=Z,2.6nm,0.9s,baz=151,slow=6.4,SNR=4.9						
AAK	**Ala-Archa**	**68.19**	**319**	P	**P**	**12 35 28.2**	**-0.5**
AAK				IAmb	IAmb	12 35 34.6	
	comp=Z,7.7nm,1.4s						
KBL	**Kabul**	**68.71**	**309**	P	**P**	**12 35 31.3**	**-0.9**
KBL				IAmb	IAmb	12 35 49.0	
	comp=Z,3.9nm,0.8s						
ZAA0	**Zalesovo Array**	**68.93**	**333**	P	**P**	**12 35 32.3**	**-0.6**
ZALV	**Zalesovo Beam**	**68.93**	**333**	P	**P**	**12 35 33.1**	**+0.2**
	comp=Z,4.0nm,0.7s,baz=106,slow=5.3,SNR=13						
ZALV	**Zalesovo Beam**	**68.93**	**333**	P	**P**	**12 35 32.5**	**-0.3**
SEY	**Seymchan**	**69.14**	**11**	P	**P**	**12 35 35.2**	**+1.2**
	comp=Z,6.1nm,0.8s,baz=208,slow=4.5,SNR=9.2						
GAR	**Garm**	**69.46**	**314**	P	**P**	**12 35 36.0**	**-0.6**
KURK	**Kurchatov**	**69.96**	**328**	P	**P**	**12 35 39.2**	**-0.1**
KKAR	**Karatay Array**	**71.02**	**318**	P	**P**	**12 35 45.3**	**-0.7**
BVAR	**Borovoye Array**	**75.52**	**328**	P	**P**	**12 36 12.2**	**-0.2**
	comp=Z,8.3nm,0.9s,baz=185,slow=12,SNR=20						
BRVK	**Borovoye**	**75.59**	**328**	P	**P**	**12 36 12.6**	**-0.1**
BRVK				IAmb	IAmb	12 36 13.9	
	comp=Z,15nm,1.1s						
TIXI	**Tiksi**	**75.70**	**360**	P	**P**	**12 36 13.3**	**+0.3**
	comp=Z,3.0nm,0.4s,baz=179,slow=2.3,SNR=7.9						
TIXI	**Tiksi**	**75.70**	**360**	P	**P**	**12 36 13.3**	**+0.3**
TIXI				IAmb	IAmb	12 36 14.4	
	comp=Z,6.5nm,1.0s						
NRIK	**Noril'sk**	**78.77**	**346**	P	**P**	**12 36 30.6**	**+0.4**
	comp=Z,7.4nm,1.1s,baz=143,slow=4.7,SNR=7.0						
NRIK	**Noril'sk**	**78.77**	**346**	P	**P**	**12 36 30.6**	**+0.4**
NRIK				IAmb	IAmb	12 36 31.9	
	comp=Z,18nm,1.3s						
ABKAR	**Akbulak array**	**80.11**	**321**	P	**P**	**12 36 37.4**	**-0.5**
ABKAR				IAmb	IAmb	12 36 38.7	
	comp=Z,9.1nm,1.0s						
ARU	**Arti**	**83.15**	**328**	P	**P**	**12 36 53.2**	**-0.7**
ARU				IAmb	IAmb	12 36 54.5	
	comp=Z,19nm,1.4s						
QSPA	**South Pole Qui**	**85.76**	**180**	P	**P**	**12 37 07.1**	**0.0**
QSPA				IAmb	IAmb	12 37 07.3	
	comp=Z,5.8nm,0.9s						
RAYN	**Ar Rayn**	**86.29**	**294**	P	**P**	**12 37 09.9**	**-0.6**
GURO	**Guroymak-BITLI**	**90.72**	**308**	P	**P**	**12 37 30.3**	**-1.0**
GURO				IAmb	IAmb	12 37 33.3	
	comp=Z,6.9nm,0.9s						
ILAR	**Eielson Array**	**90.98**	**25**	P	**P**	**12 37 30.6**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=267,slow=4.7,SNR=5.2						
KMBO	**Kilima Mbogo**	**92.30**	**269**	P	**P**	**12 37 39.0**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=123,slow=6.7,SNR=4.2						
INK	**Inuvik**	**96.41**	**22**	P	**P**	**12 37 56.1**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=304,slow=2.7						
ARCES	**ARCESS Array B**	**98.84**	**340**	P	**P**	**12 38 06.7**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=78,slow=5.0,SNR=4.4						
ARCES	**ARCESS Array B**	**98.84**	**340**	P	**P**	**12 38 07.6**	**0.0**
VNA2	**Neumayer--Watz**	**99.86**	**193**	P	**Pdif**	**12 38 11.5**	**-0.7**
VNA3	**Neumayer Olymp**	**100.13**	**192**	P	**Pdif**	**12 38 12.3**	**-1.1**
VNA1	**Neumayer--Stat**	**100.26**	**193**	P	**Pdif**	**12 38 12.4**	**-1.5**
TXAR	**Lajitas Array**	**123.76**	**57**	PKP	**PKiKP**	**12 43 27.6**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=235,slow=1.7,SNR=6.5						
TORD	**Torodi Ar. Bea**	**127.87**	**283**	PKP	**PKiKP**	**12 43 35.1**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=55,slow=2.7,SNR=8.0						
CPUP	**Villa Florida**	**148.91**	**168**	PKPbc	**PKPbc**	**12 44 16.6**	**+0.1**
	comp=Z,2.5nm,0.6s,baz=198,slow=3.6,SNR=5.6						
LPAZ	**La Paz**	**153.11**	**140**	PKPbc	**PKiKP**	**12 44 28.5**	**+1.0**
	comp=Z,6.8nm,1.2s,baz=357,slow=1.4,SNR=5.6						
LPAZ	**La Paz**	**153.11**	**140**	PKPdf	**PKPdf**	**12 44 17.9**	**-2.1**

HEL 09 12:28:32.4±0.1**,63°.97N**×**28°.11E,h0^{km},ML1.6,**
Explosion,Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUL	**Oulu**	**1.47**	**320**	PG	Pn	12 28 58.9	-1.3
OUF	**Merijarvi**	**1.53**	**287**	PG	Pn	12 28 59.5	-1.4
OUF				MSG		12 29 18.3	
	comp=Z,4.3nm,0.2s						
OUF				SN	Sn	12 29 20.0	-1.6
SUF	**Sumiainen**	**1.54**	**216**	PG	Pn	12 29 00.0	-1.0
SUF				MSG		12 29 18.5	
	comp=Z,1.9nm,0.2s						
SUF				SN	Sn	12 29 20.5	-1.2
OBF0	**Syolatti, Pyha**	**1.77**	**289**	PG	Pn	12 29 04.1	-0.2
OBF0				SN	Sn	12 29 27.2	-0.3
JOF	**Joensuu**	**1.78**	**125**	PG	Pn	12 29 04.2	-0.2
JOF				SG	Sn	12 29 27.3	-0.5
MSF	**Maaselka**	**1.99**	**11**	PG	Pn	12 29 07.4	+0.1
MSF				SB	Sn	12 29 32.4	-0.4
KAF	**Kangasniemi**	**2.04**	**205**	PG	Pn	12 29 08.7	+0.8
	baz=25						
KAF				SG	Sb	12 29 35.3	-0.8
KU6	**Riekki**	**2.20**	**19**	PB	Pn	12 29 10.7	+0.6
KU6				MSG		12 29 37.5	
	comp=Z,3.2nm,0.2s						
KU6				SB	Sn	12 29 38.9	+0.9
KEF	**Keuruu**	**2.34**	**221**	PG	Pb	12 29 13.7	-1.6
KEF				MSG		12 29 41.6	
	comp=Z,4.5nm,0.2s						
KEF				SG	Sb	12 29 43.6	-1.1
TOF	**Tornio**	**2.66**	**324**	PN	Pn	12 29 16.6	+0.2
TOF				MSG		12 29 50.7	
	comp=Z,2.3nm,0.2s						
TOF				SG	Sb	12 29 53.0	-0.9
FIA0	**FINESS Array S**	**2.71**	**201**	PB	Pn	12 29 19.0	+1.9
	baz=19						
FIA0				SG	Sb	12 29 53.4	-1.9
KALU	**Kalix**	**2.77**	**315**	SN	Sn	12 29 52.4	+0.3
RNF	**Rovaniemi**	**2.79**	**343**	PB	Pb	12 29 21.2	-1.9
RNF				SB	Sb	12 29 56.1	-1.7
ERTU	**Ertsjaerv**	**3.59**	**319**	PN	Pn	12 29 29.7	+0.4
KLF	**Kolari**	**3.70**	**334**	PN	Pn	12 29 31.0	+0.2
KLF				SN	Sn	12 30 12.9	-2.1
PAJU	**Pajala**	**3.71**	**328**	PN	Pn	12 29 31.6	+0.7
PAJU				SN	Sn	12 30 15.3	+0.2
VRF	**Varrio**	**3.84**	**9**	SB	Sb	12 30 23.8	-4.2

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*IDC **09** 12:31:24.3±1.4, 4°.16S×129°.44E, h0^{km}, mb4.1/2,*
mb1 4.1/5, mb1mx3.3/47, mbtmp3.9/5, ML3.6/3, Error
ellipse: s-maj=53.2km s-min=25.5km az=77.0
*NEIC **09** 12:31:25.2±1.1, 4°.02S±0°.05×129°.92E±0°.07, h21^{km}±6^{km},*
mb4.2/22, Error ellipse: s-maj=10.6km s-min=7.3km
az=113.0
*DJA **09** 12:31:26.8±0.7, 4°S±6°×12°9E±°, h10^{km}, M3.9/7, MLv3.9/7*
ISC 09 12:31:23.0±0.5**,4°.04S**±0°.06×**129°.81E**±0°.05**,h10^{km},n42,**
σ1^{s}57/44**,mb4.3**/5**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.11**	**308**	P	**Pb**	**12 31 44.3**	**-0.1**
MSAI				S	**Sb**	**12 31 56.6**	**-2.4**
AAI	**Ambon**	**1.65**	**282**	P	**Pn**	**12 31 50.4**	**-1.6**
AAI				S	**Sn**	**12 32 07.5**	**-5.8**
FAKI	**Fak Fak**	**2.68**	**66**	P	**Pg**	**12 32 14.2**	**-0.1**
FAKI	**Fak Fak**	**2.68**	**66**		**Pn**	**12 32 05.5**	**-0.7**
SIJI	**Sorong**	**3.47**	**25**	Pn	**Pb**	**12 32 23.9**	**-0.6**
	5.9nm,0.3s,baz=235,slow=16,SNR=8.7						
SWI	**Sorong**	**3.47**	**25**	P	**Pb**	**12 32 24.3**	**-0.3**
LBMI	**Labuha**	**4.09**	**326**	P	**Pn**	**12 32 28.5**	**+2.9**
SANI	**Sanana**	**4.29**	**297**	P	**Pn**	**12 32 28.9**	**+0.4**
TNTI	**Ternate**	**5.36**	**333**	Pn	**Pn**	**12 32 42.8**	**-0.4**
SOEI	**Soe**	**7.91**	**224**	Pn	**Pn**	**12 33 19.8**	**+1.6**
MTN	**Manton Dam**	**8.85**	**172**	Pn	**Pn**	**12 33 31.6**	**+0.5**
KAPI	**Kappang**	**10.07**	**264**	Pn	**Pn**	**12 33 50.2**	**+2.3**
TOLI2	**Tolitoli**	**10.37**	**299**	Pn	**Pn**	**12 33 54.1**	**+2.2**
KNRA	**Kununurra**	**11.61**	**185**	Pn	**Pn**	**12 34 10.0**	**+1.1**
WB0	**Warramunga Arr**	**16.26**	**164**	Pn	**Pn**	**12 35 12.7**	**+1.0**
WRAB	**Tennant Creek**	**16.41**	**165**	Pn	**Pn**	**12 35 13.2**	**-0.4**
WRA	**Warramunga Arr**	**16.41**	**165**	Pn	**Pn**	**12 35 14.0**	**+0.4**
	0.2nm,0.3s,baz=348,slow=13,SNR=2.6						
WRA	**Warramunga Arr**	**16.41**	**165**		**Pn**	**12 35 13.3**	**-0.4**
WB2	**Warramunga Arr**	**16.42**	**165**	Pn	**Pn**	**12 35 13.2**	**-0.5**
WB2				IAmb	IAmb	12 35 33.9	
	comp=Z,13nm,1.3s						
COEN	**Coen**	**16.46**	**128**	Pn	**Pn**	**12 35 13.6**	**-0.7**
COEN				IAmb	IAmb	12 35 22.9	
	comp=Z,8.5nm,0.8s						
WR0	**Warramunga Arr**	**16.48**	**164**	Pn	**Pn**	**12 35 14.6**	**+0.1**
KKM	**Kota Kinabalu**	**16.87**	**306**	Pn	**Pn**	**12 35 20.6**	**+1.1**
KKM				IAmb	IAmb	12 35 32.2	
	comp=Z,51nm,1.5s						
MANU	**Manus Island**	**17.64**	**84**	P	**Pn**	**12 35 27.5**	**-1.6**
PMG	**Port Moresby**	**18.03**	**108**	P	**Pn**	**12 35 32.8**	**-1.1**
PMG				IAmb	IAmb	12 35 41.4	
	comp=Z,14nm,1.0s						
ASAR	**Alice Springs**	**19.91**	**169**	P	**Pn**	**12 35 58.2**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=346,slow=9.9,SNR=8.3						
ASAR	**Alice Springs**	**19.91**	**169**	P	**P**	**12 35 54.9**	**-0.1**
PSA00	**Pilbara Seismi**	**19.94**	**208**	P	**P**	**12 35 55.9**	**+0.6**
PSA00				IAmb	IAmb	12 35 58.2	
	comp=Z,9.5nm,0.9s						
PSA00	**Pilbara Seismi**	**19.94**	**208**	P	**P**	**12 35 56.3**	**+1.0**
PSA00				IAmb	IAmb	12 35 58.3	
	comp=Z,20nm,0.8s						
YOJ	**Yonaguni jima**	**29.09**	**347**	P	**P**	**12 37 23.8**	**-0.2**
IPM	**Ipoh**	**29.98**	**286**	P	**P**	**12 37 33.1**	**+1.1**
IPM				IAmb	IAmb	12 37 34.0	
	comp=Z,6.7nm,0.9s						
ARMA	**Armidale**	**33.36**	**144**	P	**P**	**12 38 00.4**	**-1.4**
TOO	**Toolangi**	**36.33**	**159**	P	**P**	**12 38 26.4**	**-0.7**
YSS	**Yuzh-Sakhalins**	**52.05**	**11**	P	**P**	**12 40 34.1**	**+1.3**
HIZ	**Hauiti**	**53.40**	**136**	P	**P**	**12 40 42.2**	**-0.9**
RPZ	**Rata Peaks**	**53.70**	**144**	P	**P**	**12 40 43.8**	**-1.4**
MA2	**Magadan**	**65.55**	**12**	P	**P**	**12 42 07.7**	**+1.1**
MK31	**Makanchi Array**	**65.67**	**326**	P	**P**	**12 42 09.2**	**+1.5**
MK31				IAmb	IAmb	12 42 18.7	
	comp=Z,3.2nm,1.3s						
MKAR	**Makanchi Array**	**65.67**	**326**	P	**P**	**12 42 09.8**	**+2.2**
	comp=Z,0.8nm,0.4s,baz=114,slow=7.6,SNR=20						
MKAR	**Makanchi Array**	**65.67**	**326**	P	**P**	**12 42 09.2**	**+1.5**
MAKZ	**Makanchi**	**65.85**	**326**	P	**P**	**12 42 08.1**	**-0.7**
MAKZ				IAmb	IAmb	12 42 08.2	
	comp=Z,4.5nm,1.3s						
KURBB	**Kurchatov Arra**	**69.91**	**328**	P	**P**	**12 42 36.5**	**+2.2**
	comp=Z,1.2nm,0.6s,baz=127,slow=5.7,SNR=9.4						
KURK	**Kurchatov**	**69.91**	**328**	P	**P**	**12 42 34.7**	**+0.4**

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*IDC **09** 12:32:04.3±1.6, 4°.33S×129°.87E, h0^{km}, mb4.0/4,*
mb1 4.2/6, mb1mx3.6/48, mbtmp4.0/6, ML4.0/2, Error
ellipse: s-maj=54.4km s-min=29.8km az=79.0
*NEIC **09** 12:32:05.9±1.8, 4°.25S±0°.09×130°.0E±0°.1, h10^{km}±2^{km},*
mb4.2/12, Error ellipse: s-maj=26.5km s-min=12.3km
az=64.0
ISC 09 12:32:08.9±0.6**,4°.28S**±0°.07×**129°.98E**±0°.09**,h40^{km},n24,**
σ1^{s}22/25**,mb4.1**/6**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.62**	**21**	Pn	**Pn**	**12 33 02.5**	**-0.1**
	8.2nm,0.3s,baz=286,slow=5.1,SNR=5.3						
SIJI				Sn	**Sn**	**12 33 43.2**	**-0.8**
	7.9nm,0.3s,baz=199,slow=23,SNR=1.4						
TNTI	**Ternate**	**5.66**	**332**	Pn	**Pn**	**12 33 28.7**	**-1.8**
SOEI	**Soe**	**7.86**	**226**	Pn	**Pn**	**12 34 00.7**	**-0.2**
KNRA	**Kununurra**	**11.39**	**186**	Pn	**Pn**	**12 34 49.4**	**+0.2**
MYLDM	**Lahad Datu**	**14.83**	**309**	Pn	**Pn**	**12 35 34.5**	**-1.5**
WB0	**Warramunga Arr**	**15.98**	**165**	Pn	**Pn**	**12 35 49.7**	**-1.4**
WB0				IAmb	IAmb	12 35 54.3	
	comp=Z,18nm,1.4s						
WRAB	**Tennant Creek**	**16.13**	**165**	Pn	**Pn**	**12 35 53.4**	**+0.5**
WRAB				IAmb	IAmb	12 35 54.2	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**16.14**	**165**	Pn	**Pn**	**12 35 49.9**	**-3.1**
	comp=Z,0.3nm,0.3s,baz=348,slow=12,SNR=2.3						
WB2	**Warramunga Arr**	**16.14**	**165**	Pn	**Pn**	**12 35 52.8**	**-0.3**
WR0	**Warramunga Arr**	**16.21**	**164**	Pn	**Pn**	**12 35 52.4**	**-1.5**
JAGI	**Jajag, Banyuwa**	**16.27**	**254**	Pn	**Pn**	**12 35 54.2**	**-0.5**
JAGI				IAmb	IAmb	12 36 06.6	
	comp=Z,31nm,1.2s						
PMG	**Port Moresby**	**17.79**	**108**	P	**Pn**	**12 36 13.0**	**-0.7**
PMG				IAmb	IAmb	12 36 17.8	
	comp=Z,47nm,1.4s						
ASAR	**Alice Springs**	**19.64**	**169**	P	**P**	**12 36 34.4**	**0.0**
	comp=Z,0.7nm,0.3s,baz=342,slow=8.9,SNR=7.1						
CTAO	**Charters Tower**	**22.32**	**136**	P	**P**	**12 37 03.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**38.03**	**307**	P	**P**	**12 39 23.6**	**0.0**
	comp=Z,0.7nm,0.3s,baz=139,slow=7.8,SNR=4.1						
CHTO	**Chiang Mai**	**38.22**	**308**	P	**P**	**12 39 25.9**	**+0.6**
CHTO				IAmb	IAmb	12 39 30.4	
	comp=Z,3.9nm,1.2s						
CASY	**Casey**	**63.37**	**189**	P	**P**	**12 42 34.3**	**+0.5**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	65.96	326	P	P	12 42 52.7	+1.6
	comp=Z,0.9nm,0.6s,baz=122,slow=8.0,SNR=4.7						
ZAA0	Zalesovo Array	69.15	333	P	P	12 43 12.2	+1.2
ZAA0				IAmb	IAmb	12 43 13.4	
	comp=Z,1.9nm,0.8s						
ZALV	Zalesovo Beam	69.15	333	P	P	12 43 12.5	+1.5
	comp=Z,0.7nm,0.4s,baz=133,slow=6.3,SNR=2.1						
ZALV	Zalesovo Beam	69.15	333	P	P	12 43 11.4	+0.3
BTK	Batken	69.83	315	P	P	12 43 17.2	+1.5
KURBB	Kurchatov Arra	70.20	328	P	P	12 43 19.1	+1.4
	comp=Z,1.8nm,0.8s,baz=125,slow=5.6,SNR=4.9						
RAYN	Ar Rayn	86.64	294	P	P	12 44 49.9	+1.0

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*IDC **09** 12:34:05.2±1.3, 4°.06S×129°.18E, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.3/50, mbtmp3.9/5, ML3.9/1, Error ellipse: s-maj=45.2km s-min=29.1km az=68.0*

*NEIC **09** 12:34:07.4±1.2, 4°.12S±0°.06×129°.43E±0°.06, h26^{km}±7^{km}, mb4.3/14, Error ellipse: s-maj=9.5km s-min=8.5km az=123.0*

ISC 09 12:34:08.1±0.6**, 4°.13S**±0°.06×**129°.43E**±0°.07**, h36^{km}, n27, σ1^{s}.36**/29**, mb4.1**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	3.06	67	Pn	Pn	12 34 53.0	-0.9
SIJI	Sorong	3.72	30	Pn	Pn	12 35 03.4	+0.4
	8.4nm,0.3s,baz=189,slow=9.3,SNR=4.4						
SIJI				Sn	Sn	12 35 46.0	+0.3
	7.0nm,0.3s,baz=218,slow=23,SNR=2.4						
SAUI	Saumlaki	4.25	154	Pn	Pn	12 35 10.0	-0.4
TNTI	Ternate	5.29	337	Pn	Pn	12 35 23.2	-1.4
SOEI	Soe	7.58	222	Pn	Pn	12 35 55.9	-0.4
SOEI				Sn	Sn	12 37 21.2	+0.1
TOLI2	Tolitoli	10.09	301	Pn	Pn	12 36 30.6	0.0
KNRA	Kununurra	11.49	183	Pn	Pn	12 36 50.0	+0.2
WRA	Warramunga Arr	16.43	163	Pn	Pn	12 37 53.5	-2.5
	0.1nm,0.3s,baz=348,slow=12,SNR=2.0						
WB2	Warramunga Arr	16.43	163	Pn	Pn	12 37 54.7	-1.4
COEN	Coen	16.71	127	Pn	Pn	12 37 59.3	-0.2
PMG	Port Moresby	18.36	108	P	P	12 38 19.2	-0.6
PMG				IAmb	IAmb	12 38 36.8	
	comp=Z,13nm,0.9s						
SMRI	Semarang	19.12	260	P	P	12 38 26.9	-1.3
SMRI				IAmb	IAmb	12 38 28.8	
	comp=Z,70nm,1.1s						
PSA00	Pilbara Seismi	19.68	207	P	P	12 38 34.2	0.0
PSA00				IAmb	IAmb	12 38 36.5	
	comp=Z,9.0nm,0.9s						
AS31	Alice Springs	19.90	168	P	P	12 38 37.5	+0.9
ASAR	Alice Springs	19.90	168	P	Pn	12 38 38.0	-0.4
	comp=Z,2.4nm,0.6s,baz=344,slow=9.5,SNR=6.6						
CTAO	Charters Tower	22.81	135	P	P	12 39 08.8	+0.8
CTAO				IAmb	IAmb	12 39 16.8	
	comp=Z,14nm,1.4s						
JMZ	Minamidaito 2	29.82	3	P	P	12 40 09.9	-2.0
CMAR	Chiang Mai Arr	37.50	308	P	P	12 41 20.1	+1.3
	comp=Z,0.5nm,0.3s,baz=137,slow=7.7,SNR=1.6						
CHTO	Chiang Mai	37.70	308	P	P	12 41 19.8	-0.6
CHTO				IAmb	IAmb	12 41 22.5	
	comp=Z,2.9nm,0.9s						
INU	Inuyama	39.91	10	P	P	12 41 38.9	+0.2
INU				IAmb	IAmb	12 41 39.5	
	comp=Z,16nm,1.3s						
LIFNC	LIFOU	40.30	118	P	P	12 41 42.1	-0.1
TAU	Tasmania Unive	41.76	160	P	P	12 41 53.9	0.0
MK31	Makanchi Array	65.53	326	P	P	12 44 48.5	+0.6
MK31				IAmb	IAmb	12 44 58.0	
	comp=Z,2.9nm,1.5s						
MKAR	Makanchi Array	65.53	326	P	P	12 44 48.6	+0.6
	comp=Z,0.5nm,0.6s,baz=122,slow=8.4,SNR=4.3						
KURBB	Kurchatov Arra	69.78	328	P	P	12 45 15.0	+0.3
	comp=Z,0.9nm,0.6s,baz=128,slow=5.7,SNR=6.2						
KURK	Kurchatov	69.79	328	P	P	12 45 15.2	+0.5
KURK				IAmb	IAmb	12 45 16.1	
	comp=Z,2.4nm,0.9s						
TXAR	Lajitas Array	123.90	57	PKP	PKiKP	12 53 08.6	+5.1
	comp=Z,0.6nm,0.7s,baz=225,slow=2.4,SNR=8.2						

IDC 09 12:36:02.3±1.8**, 4°.27S×129°.97E, h0^{km}, mb3.4**/1**, mb1 3.6**/4**, mb1mx2.9**/47**, mbtmp3.4**/4**, ML3.2**/3**, Error ellipse: s-maj=67.1km s-min=27.8km az=85.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.62	21	Pn	Pn	12 36 59.6	0.0
	15nm,0.3s,baz=225,slow=23,SNR=18						
SIJI				Sn	Sn	12 37 37.0	-6.1
	12nm,0.3s,baz=232,slow=22,SNR=8.2						
WRA	Warramunga Arr	16.15	165	Pn	Pn	12 39 51.8	+0.9
	0.0nm,0.3s,baz=345,slow=11,SNR=1.1						
ASAR	Alice Springs	19.66	169	P	P	12 40 32.5	-0.4
	0.2nm,0.3s,baz=340,slow=9.0,SNR=4.1						
MKAR	Makanchi Array	65.95	326	P	P	12 46 50.4	+0.1
	0.2nm,0.5s,baz=107,slow=7.5,SNR=1.6						

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*IDC **09** 12:36:25.5±1.6, 4°.12S×129°.32E, h0^{km}, mb4.0/2, mb1 3.9/5, mb1mx3.2/49, mbtmp3.7/5, ML3.2/3, Error ellipse: s-maj=51.5km s-min=26.1km az=93.0*

ISC 09 12:36:30.4±1.2**, 4°.2S**±0°.1×**129°.3E**±0°.2**, h35^{km}, n5, σ1^{s}.08**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.83	31	Pn	Pn	12 37 27.1	+0.1
	3.9nm,0.3s,baz=194,slow=22,SNR=2.4						
SIJI				Sn	Sn	12 38 11.2	+0.4
	8.7nm,0.3s,baz=240,slow=23,SNR=2.2						
WRA	Warramunga Arr	16.42	163	Pn	Pn	12 40 17.8	-0.5
	0.1nm,0.3s,baz=348,slow=12,SNR=2.0						
ASAR	Alice Springs	19.88	167	P	P	12 40 59.9	+1.1
	0.2nm,0.3s,baz=344,slow=9.3,SNR=3.7						
MKAR	Makanchi Array	65.50	326	P	P	12 47 10.7	+0.5
	0.4nm,0.6s,baz=126,slow=7.1,SNR=2.2						
INK	Inuvik	96.52	22	P	P	12 49 54.7	-1.3
	0.6nm,0.6s,baz=288,slow=1.2,SNR=1.8						

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*IDC **09** 12:39:06.7±0.4, 4°.11S×129°.64E, h0^{km}, mb4.9/29, mb1 5.0/34, mb1mx4.7/53, mbtmp4.9/34, ML4.3/3, MS4.5/5, Ms1 4.5/5, ms1mx3.9/52, Error ellipse: s-maj=15.6km s-min=10.5km az=79.0*

*MOS **09** 12:39:08.4±0.9, 4°.11S×129°.62E, h24^{km}, mb5.4/53, Error ellipse: s-maj=10.5km s-min=5.1km az=117.5*

*BJI **09** 12:39:11.0±0.0, 4°.10S×129°.70E, h46^{km}, mB5.6/32, mb4.9/61, Ms5.2/20, Ms7 5.1/21*

*NEIC **09** 12:39:11.2±1.6, 4°.06S±0°.06×129°.71E±0°.06, h24^{km}±3^{km}, mb5.3/91, Error ellipse: s-maj=8.2km s-min=7.9km az=208.0*

*DJA **09** 12:39:13.5±0.2, 4°S±2°×13°0E±°, h49^{km}±3^{km}, M5.1/62, mB5.6/51, mb5.2/62, MLv5.3/19, Mw(mB)5.1/51, MwMwp5.8/1, Mwp5.9/1*

ISC 09 12:39:12.0±0.2**, 4°.15S**±0°.04×**129°.65E**±0°.05**, h36^{km}, n467, σ1^{s}.41**/474**, mb5.2**/120**, 15C-11D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.45	146	P	Pn	12 39 21.1	-0.7
MSAI	Masohi	1.07	318	P	Pn	12 39 27.0	-3.5
AAI	Ambon	1.52	287	P	Pn	12 39 33.7	-2.9
FAKI	Fak Fak	2.87	65	P	Pn	12 39 55.2	0.0
FAKI	Fak Fak	2.87	65		Pn	12 39 55.4	+0.2
SIJI	Sorong	3.64	26	Pn	Pn	12 40 05.0	-0.8
	78nm,0.3s,baz=231,slow=22,SNR=30						
SIJI				Sn	Sn	12 40 47.5	+0.1
	66nm,0.3s,baz=186,slow=21,SNR=6.5						
SIJI				LR	LR	12 41 57.1	
	comp=Z,15μm,21.4s,baz=132,slow=47						
SWI	Sorong	3.64	26	P	Pn	12 40 05.5	-0.3
LBMI	Labuha	4.09	328	P	Pn	12 40 11.6	-0.5
SAUI	Saumlaki	4.15	157	P	Pn	12 40 17.2	+4.4
SAUI	Saumlaki	4.15	157	Pn	Pn	12 40 14.3	+1.5
SAUI	Saumlaki	4.15	157	P	Pn	12 40 13.7	+0.9
SANI	Sanana	4.21	300	P	Pn	12 40 12.5	-1.1
SANI	Sanana	4.21	300	P	Pn	12 40 12.9	-0.7
TNTI	Ternate	5.39	335	P	Pn	12 40 29.5	-0.4
	0.8nm3μm238nm,0.9s						
TNTI	Ternate	5.39	335	Pn	Pn	12 40 29.9	0.0
TNTI	Ternate	5.39	335	P	Pn	12 40 29.6	-0.4
SRPI	Serui, Papua	6.96	71	P	Pn	12 40 51.9	+0.5
	1.0nm154nm,0.7s						
KMSI	Cibinong	7.36	310	P	Pn	12 40 57.2	+0.3
	2.5nm4μm290nm,0.8s						
SOEI	Soe	7.72	224	P	Pn	12 41 06.5	+4.5
	1.2nm3μm236nm,0.9s						
SOEI	Soe	7.72	224	Pn	Pn	12 41 05.3	+3.4
DRS	Darwin Rock St	8.32	172	P	Pn	12 41 11.8	+1.7
BATI	Baumata	8.45	224	Pn	Pn	12 41 14.7	+2.7
	25nm,0.3s,baz=109,slow=2.0,SNR=21						
BATI	Baumata	8.45	224	P	Pn	12 41 16.0	+4.0
	0.5nm1μm83nm,0.6s						
MMRI	Maumere	8.61	238	P	Pn	12 41 19.6	+5.5
	5μm186nm,1.2s						
MMRI	Maumere	8.61	238	Pn	Pn	12 41 17.5	+3.4
APSI	Ampana	8.62	292	P	Pn	12 41 16.2	+2.0
	4μm406nm,1.1s						
MTN	Manton Dam	8.76	170	P	Pn	12 41 17.6	+1.4
	baz=8.9,SNR=18						
MTN	Manton Dam	8.76	170	Pn	Pn	12 41 17.3	+1.1
MTN	Manton Dam	8.76	170	P	Pn	12 41 18.4	+2.2
KDU	Kakadu	8.93	162	P	Pn	12 41 18.3	-0.2
	baz=9.0,SNR=31						
KDU	Kakadu	8.93	162	P	Pn	12 41 18.8	+0.3
MRSI	Marisa	8.97	301	P	Pn	12 41 20.5	+1.5
	0.6nm1μm141nm,1.0s						
EDFI	Ende, Flores	9.13	240	P	Pn	12 41 24.9	+3.5
	1μm100nm,1.6s						
SMPI	Sarmi	9.30	77	P	Pn	12 41 23.7	+0.2
	3μm67nm,1.0s						
BSSI	Bau Bau, Buton	9.34	257	P	Pn	12 41 27.6	+3.5
	2μm123nm,1.1s						
BNSI	Bone	9.52	268	P	Pn	12 41 30.6	+4.0
	2μm211nm,1.1s						
BKSI	Bulukumba	9.57	263	P	Pn	12 41 30.7	+3.5
	3μm126nm,0.9s						
SPSI	Sidrap Palu	9.86	271	P	Pn	12 41 34.6	+3.4
	2μm92nm,1.0s						
TTSI	Tana Toraja	9.87	276	P	Pn	12 41 35.1	+3.7
	2μm119nm,1.0s						
KAPI	Kappang	9.90	265	Pn	Pn	12 41 33.3	+1.4
	3.2nm,0.3s,baz=110,slow=4.7,SNR=22						
KAPI				LR	LR	12 45 08.1	
	comp=Z,2μm,21.7s,baz=119,slow=36						
KAPI	Kappang	9.90	265	P	Pn	12 41 33.8	+2.0
KAPI	Kappang	9.90	265	Pn	Pn	12 41 33.8	+2.0
KAPI	Kappang	9.90	265	P	Pn	12 41 33.4	+1.5
TOLI2	Tolitoli	10.29	300	Pn	Pn	12 41 38.1	+1.0
TOLI2	Tolitoli	10.29	300	P	Pn	12 41 38.4	+1.3
GENI	Genyem	10.61	82	P	Pn	12 41 43.9	+2.3
	84nm,0.8s						
MPSI	Mapaga	10.71	294	P	Pn	12 41 45.1	+2.1
	1μm58nm,1.3s						
BASI	Baing, Sumba	10.83	236	P	Pn	12 41 49.9	+5.3
	3μm94nm,0.8s						
JAY	Jayapura	11.15	82	Pn	Pn	12 41 49.6	+0.6
	0.5nm,0.3s,baz=259,slow=16,SNR=2.2						
KNRA	Kununurra	11.49	184	P	Pn	12 41 53.6	+0.1
	baz=12,SNR=24						
KNRA	Kununurra	11.49	184	Pn	Pn	12 41 53.4	-0.1
KNRA	Kununurra	11.49	184	P	Pn	12 41 55.2	+1.6
WBSI	Waikabubak, Su	11.55	241	P	Pn	12 41 58.1	+3.6
	2μm172nm,0.9s						
DAV	Davao City (W)	11.86	340	LR	LR	12 47 03.9	
	comp=Z,1μm,21.2s,baz=146,slow=40						
PLAI	Plampang	12.68	248	P	Pn	12 42 14.0	+4.2
	5μm284nm,1.8s						
PLAI	Plampang	12.68	248	P	Pn	12 42 12.1	+2.3
TWSI	Taliwang, Sumb	13.48	250	P	P	12 42 25.3	-4.2
	2μm116nm,1.2s						
KBKI	Kotabaru	13.48	273	P	Pn	12 42 23.1	+2.3
	2μm62nm,1.4s						
FITZ	Fitzroy Crossi	14.41	196	P	Pn	12 42 32.8	-0.6
	baz=14,SNR=8.1						
MYLDM	Lahad Datu	14.49	310		Pn	12 42 35.8	+1.3
BBKI	Banjar Baru	14.79	272	P	Pn	12 42 41.1	+2.4
	138nm,1.9s						
SRBI	Singaraja	14.88	254	P	P	12 42 42.9	-2.2
	5μm267nm,1.1s						
DNP	Denpasar	15.04	252	P	Pn	12 42 42.1	+0.2
	24μm471nm,1.1s						
MTKI	Muara Teweh, K	15.08	282	P	Pn	12 42 44.4	+1.9
	3μm75nm,1.4s						
IGBI	Denpasar	15.14	251	P	P	12 42 47.3	-0.7
	3μm179nm,0.9s						
ABJI	Asem Bagus	15.75	256	P	P	12 42 53.5	-1.3
	9μm338nm,1.1s						
KMMI	Kalianget	15.87	259	P	P	12 42 56.0	-0.1
	5μm291nm,1.5s						
JAGI	Jajag, Banyuwa	15.99	254	P	P	12 42 56.6	-0.8
	4μm220nm,1.1s						
JAGI	Jajag, Banyuwa	15.99	254		Pn	12 42 55.6	+1.3
JAGI				IAmb	IAmb	12 43 05.7	
	comp=Z,305nm,1.2s						
WB0	Warramunga Arr	16.20	164		Pn	12 42 55.9	-1.1
WRAB	Tennant Creek	16.34	164	P	Pn	12 42 56.7	-2.1
WRAB				pmax	pmax		
	comp=Z,115nm,1.2s						
WRAB	Tennant Creek	16.34	164		Pn	12 42 56.7	-2.1
WRAB	Tennant Creek	16.34	164	P	Pn	12 42 57.9	-0.9
WRA	Warramunga Arr	16.35	164	Pn	Pn	12 42 56.6	-2.3
	comp=Z,1.5nm,0.3s,baz=351,slow=13,SNR=28						
WRA				Sn	Sn	12 45 57.6	-1.7
	comp=Z,1.1nm,0.3s,baz=346,slow=24,SNR=1.9						
WRA				LR	LR	12 49 55.4	
	comp=Z,2μm,19.6s,baz=330,slow=40						
WRA	Warramunga Arr	16.35	164	*i* P	Pn	12 42 56.5	-2.4
WRA				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WRA	Warramunga Arr	16.35	164		Pn	12 42 56.4	-2.4
WB2	Warramunga Arr	16.35	164		Pn	12 42 56.6	-2.3
BLJI	Banyuglugur	16.36	257	P	P	12 43 00.9	-0.7
	comp=Z,3μmcomp=Z,180nm,1.3s						
WC3	Warramunga Arr	16.38	164	P	Pn	12 42 56.0	-3.2
	baz=16						
WR0	Warramunga Arr	16.42	164		Pn	12 42 58.5	-1.3
COEN	Coen	16.52	127	P	Pn	12 42 59.6	-1.5
	baz=17						
COEN	Coen	16.52	127		Pn	12 42 59.2	-1.8
COEN	Coen	16.52	127	P	Pn	12 42 59.9	-1.2
GMJI	Gumukmas	16.62	255	P	P	12 43 05.0	+0.6
	comp=Z,3μmcomp=Z,140nm,1.2s						
KKM	Kota Kinabalu	16.81	307		Pn	12 43 03.8	-1.0
KKM				IAmb	IAmb	12 43 23.1	
	comp=Z,273nm,1.5s						
KKM	Kota Kinabalu	16.81	307	P	P	12 43 06.3	-0.3
MANU	Manus Island	17.81	84		Pn	12 43 14.8	-2.4
PBKI	Pangkalan Bun	18.00	274	P	P	12 43 22.7	+2.9
	comp=Z,2μmcomp=Z,230nm,1.2s						
PMG	Port Moresby	18.15	108	P	P	12 43 21.7	+0.4
	comp=Z,0.7nm,0.3s,baz=302,slow=9.0,SNR=9.6						
PMG	Port Moresby	18.15	108	P	Pn	12 43 20.7	-0.6
PMG				pmax	pmax		
	comp=Z,104nm,1.1s						
PMG	Port Moresby	18.15	108	P	Pn	12 43 20.7	-0.6
SBUM	Sibu	18.61	290	P	Pn	12 43 27.4	+0.5
STKI	Sintang	18.63	283	P	Pn	12 43 28.8	+1.6
	comp=Z,66nm,1.6s						
UWJI	Ujung Watu	18.76	262	P	Pn	12 43 30.1	+1.4
	comp=Z,4μmcomp=Z,117nm,1.7s						
PCJI	Pacitan	18.80	257	P	Pn	12 43 31.8	+2.6
	comp=Z,228nm,1.2s						
QIS	Mount Isa	18.97	150	P	P	12 43 30.4	0.0
	baz=19,SNR=38						
QIS	Mount Isa	18.97	150	P	P	12 43 30.6	+0.2
WOJI	Wonogiri, Jawa	18.98	258	P	Pn	12 43 33.9	+2.5
	comp=Z,91nm,1.4s						
SMRI	Semarang	19.33	261	P	Pn	12 43 37.1	+1.4
	comp=Z,6μmcomp=Z,188nm,1.2s						
UGM	Wanagama	19.38	258	P	P	12 43 34.3	-0.6
UGM				IAmb	IAmb	12 43 38.4	
	comp=Z,286nm,1.5s						
UGM	Wanagama	19.38	258	P	Pn	12 43 37.1	+0.8
MBWA	Marble Bar	19.46	209	P	Pn	12 43 37.1	0.0
PSA00	Pilbara Seismi	19.76	208	P	Pn	12 43 40.2	-0.5
PSA00	Pilbara Seismi	19.76	208	P	Pn	12 43 40.5	-0.2
AS31	Alice Springs	19.83	168	P	Pn	12 43 40.7	-0.9
ASAR	Alice Springs	19.83	168	P	P	12 43 40.1	+0.3
	comp=Z,5.7nm,0.3s,baz=351,slow=10,SNR=86						
ASAR				S	S	12 47 18.0	-3.4
	baz=353,slow=22,SNR=2.7						
ASAR				PcP	PcP	12 47 56.8	0.0
	comp=Z,0.3nm,0.3s,baz=358,slow=3.6,SNR=4.2						
ASAR				ScP	ScP	12 51 32.0	+1.5
	baz=348,slow=2.2,SNR=7.0						
ASPA	Alice Springs	19.83	168	P	P	12 43 40.2	+0.4
	baz=20						
MTSU	Mount Surprise	19.98	135	P	Pn	12 43 43.3	0.0
	baz=20,SNR=7.7						
TGY	Tagaytay City	20.09	335	P	P	12 43 42.5	-0.2
	comp=Z,96nm,0.3s,baz=97,slow=19,SNR=2.2						
WRKA	Warakurna	20.81	183	P	P	12 43 50.8	+0.4
	baz=21,SNR=47						
WRKA	Warakurna	20.81	183	P	P	12 43 51.0	+0.6
LEM	Lembang	22.09	262	P	P	12 44 04.8	+0.4
	comp=Z,14nm,0.4s,baz=354,slow=19,SNR=3.8						
LEM				LR	LR	12 53 47.3	
	comp=Z,1μm,19.6s,baz=108,slow=40						
CTA	Charters Tower	22.64	136	P	P	12 44 10.0	-0.1
	comp=Z,31nm,0.9s,baz=319,slow=14,SNR=17						
CTAO	Charters Tower	22.64	136	P	P	12 44 10.6	+0.5
CTAO				pmax	pmax		
	comp=Z,70nm,1.1s						
CTAO	Charters Tower	22.64	136	P	P	12 44 10.6	+0.5
CTAO				IAmb	IAmb	12 44 14.1	
	comp=Z,70nm,1.1s						
CTAO	Charters Tower	22.64	136	P	P	12 44 10.3	+0.2
PPBI	Pangkal Pinang	23.56	274	P	P	12 44 17.7	-1.7
GIRL	Giralia	23.68	218	P	P	12 44 22.0	+1.6
	baz=24,SNR=5.3						
GIRL	Giralia	23.68	218	P	P	12 44 21.2	+0.8
GIRL	Giralia	23.68	218	P	P	12 44 21.9	+1.5
OOD	Oodnadatta	24.21	167	P	P	12 44 25.4	+0.1
MEEK	Meekatharra	24.73	204	P	P	12 44 31.2	+1.1
	baz=25,SNR=7.4						
MEEK	Meekatharra	24.73	204	P	P	12 44 31.1	+1.0
DSRI	Dabo	25.31	278	P	P	12 44 35.6	+0.1
	comp=Z,13nm,1.2s						
MDSI	Maura Dua	25.40	268	P	P	12 44 32.7	-3.6
	comp=Z,9.5nm,1.2s						
INKA	Innaminka	25.74	157	P	P	12 44 39.8	+0.6
MULG	Mulgathing	26.32	171	P	P	12 44 44.9	+0.4
MYKOM	Kota Tinggi	26.45	282	P	P	12 44 45.8	-0.1
MYKOM				IAmb	IAmb	12 44 57.1	
	comp=Z,156nm,1.4s						
FORT	Forrest	26.53	183	P	P	12 44 47.4	+1.0
	baz=27						
FORT	Forrest	26.53	183	P	P	12 44 46.5	+0.1
FORT				IAmb	IAmb	12 45 06.1	
	comp=Z,64nm,1.0s						
FORT	Forrest	26.53	183	P	P	12 44 46.3	0.0
LCRK	Leigh Creek	27.38	164	P	P	12 44 55.5	+1.5
RGRI	Rengat	27.55	277	P	P	12 44 58.0	+2.3
RK1H	Rockhampton Ha	27.77	135	P	P	12 44 58.6	+1.0
MORW	Morawa	27.95	206	P	P	12 45 00.0	+0.9
	baz=28,SNR=4.3						
TPUB	Ta-pu	28.67	343	P	P	12 45 04.3	-1.3
TPUB				IAmb	IAmb	12 45 17.0	
	comp=Z,75nm,1.2s						
TPUB	Ta-pu	28.67	343	P	P	12 45 04.1	-1.5
RMQ	Roma	28.77	142	P	P	12 45 08.2	+1.7
	baz=29,SNR=5.9						
RMQ	Roma	28.77	142	P	P	12 45 07.8	+1.3
BLDU	Ballidu	29.02	203	P	P	12 45 09.8	+1.2
SSLB	Suanglung	29.03	343	P	P	12 45 07.9	-1.0
SSLB				IAmb	IAmb	12 45 10.3	
	comp=Z,60nm,1.1s						
BBOO	Buckleboo	29.14	169	P	P	12 45 09.7	+0.1
	baz=29,SNR=8.0						
BBOO	Buckleboo	29.14	169	P	P	12 45 09.5	-0.1
BBOO	Buckleboo	29.14	169	P	P	12 45 11.6	+1.9
EIDS	Eidsvold	29.48	138	P	P	12 45 13.5	+0.7
	baz=30,SNR=3.8						
EIDS	Eidsvold	29.48	138	P	P	12 45 13.0	+0.2
KLBR	Kellerberrin	29.50	201	P	P	12 45 13.9	+1.0
	baz=30,SNR=4.9						
YHNB	Yeheng	29.75	345	P	P	12 45 13.7	-1.6
STKA	Stephens Creek	29.78	159	P	P	12 45 15.9	+0.6
	comp=Z,5.6nm,0.6s,baz=338,slow=7.7,SNR=18						
STKA				PKKP	PKKPdf	13 10 49.8	-3.5
	comp=Z,3.5nm,0.8s,baz=88,slow=7.6,SNR=4.2						
STKA	Stephens Creek	29.78	159	P	P	12 45 16.0	+0.6
	baz=30,SNR=20						
STKA	Stephens Creek	29.78	159	P	P	12 45 16.0	+0.6
STKA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
STKA	Stephens Creek	29.78	159	P	P	12 45 16.0	+0.6
STKA	Stephens Creek	29.78	159	P	P	12 45 16.0	+0.6
IPM	Ipoh	29.85	286	P	P	12 45 15.5	-0.7
IPM	Ipoh	29.85	286	P	P	12 45 16.3	0.0
HTT	Hallett	30.39	165	P	P	12 45 23.1	+2.3
	baz=31,SNR=5.0						
HTT	Hallett	30.39	165	P	P	12 45 22.4	+1.6
MUN	Mundaring	30.42	203	P	P	12 45 23.8	+2.7
KULM	Kulim	30.45	288	P	P	12 45 21.3	-0.2
JOW	Kunigami	30.83	358	P	P	12 45 24.3	-0.3
	comp=Z,59nm,1.0s,baz=201,slow=11,SNR=5.3						
NWAO	Narrogin (SRO)	30.89	201	P	P	12 45 27.6	+2.4
CMSA	Cobar Meteorol	31.14	153	P	P	12 45 28.7	+1.3
	baz=31,SNR=7.4						
CMSA	Cobar Meteorol	31.14	153	P	P	12 45 27.9	+0.5
RPSI	Rantau Prapat	31.45	282	P	P	12 45 29.4	-0.9
PSI	Prapat	31.47	282	P	P	12 45 29.4	-1.3
	comp=Z,6.5nm,0.9s,baz=116,slow=5.2,SNR=7.1						
GSI	Gunungsitoli	32.51	279	P	P	12 45 37.1	-2.6
GSI				IAmb	IAmb	12 46 05.7	
	comp=Z,27nm,0.8s						
SRIT	Nakonsritamara	32.53	293	P	P	12 45 39.4	-0.4
ARMA	Armidale	33.37	144	P	P	12 45 50.2	+3.2
	baz=34,SNR=6.0						
ARMA	Armidale	33.37	144	P	P	12 45 46.0	-1.1
LHMI	Lhok Sumawe	33.97	286	P	P	12 45 51.9	-0.5
ARPS	Mount Arapiles	34.34	163	P	P	12 45 56.9	+1.6
	baz=34,SNR=7.5						
ARPS	Mount Arapiles	34.34	163	P	P	12 45 57.0	+1.7
CAN	Canberra	35.81	152	P	P	12 46 08.8	+0.7
CAN				pmax	pmax		
	comp=Z,61nm,1.5s						
CAN	Canberra	35.81	152	P	P	12 46 08.8	+0.7
CAN				IAmb	IAmb	12 46 33.2	
	comp=Z,61nm,1.5s						
CAN	Canberra	35.81	152	P	P	12 46 09.4	+1.3
CNB	Canberra Magne	35.98	152	P	P	12 46 10.9	+1.4
TOO	Toolangi	36.29	159	P	P	12 46 14.1	+2.0
	baz=36,SNR=8.0						
TOO	Toolangi	36.29	159	P	P	12 46 13.1	+1.0
TOO				pmax	pmax		
	comp=Z,23nm,1.2s						
TOO	Toolangi	36.29	159	P	P	12 46 13.1	+1.0
TOO	Toolangi	36.29	159	P	P	12 46 14.1	+2.0
JNU	Nakatsue	37.09	2	P	P	12 46 18.6	-0.3
	comp=Z,26nm,0.9s,baz=177,slow=4.8,SNR=6.8						
NJ2	Nanjing	37.44	345	*e*P	P	12 46 22.8	+1.0
NJ2				pP	pP	12 46 30.0	-0.9
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
WHN	Wuhan	37.47	338	⇑P	P	12 46 25.2	+3.0
CM31	Chiang Mai Arr	37.69	308	P	P	12 46 24.5	+0.3
CM31				IAmb	IAmb	12 46 42.4	
	comp=Z,66nm,1.2s						
CMAR	Chiang Mai Arr	37.69	308	P	P	12 46 24.7	+0.5
	comp=Z,10.0nm,0.6s,baz=138,slow=7.5,SNR=61						
CMAR	Chiang Mai Arr	37.69	308	P	P	12 46 24.0	-0.2
CMAR	Chiang Mai Arr	37.69	308	P	P	12 46 24.0	-0.2
GYA	Guiyang	37.69	325	⇑P	P	12 46 27.0	+2.7
GYA				pmax	pmax		
	comp=Z,17nm,0.8s						
CHTO	Chiang Mai	37.88	308	P	P	12 46 25.9	+0.1
CHTO				pmax	pmax		
	comp=Z,56nm,1.0s						
CHTO	Chiang Mai	37.88	308	P	P	12 46 25.9	+0.1
CHTO				IAmb	IAmb	12 46 35.7	
	comp=Z,56nm,1.0s						
CHTO	Chiang Mai	37.88	308	P	P	12 46 25.9	+0.1
JMN	Monobe	37.88	6	P	P	12 46 25.5	-0.2
JHS	Saijyo	39.08	5	P	P	12 46 35.4	-0.3
JHS				IAmb	IAmb	12 46 46.3	
	comp=Z,136nm,1.4s						
KMI	Kunming	39.11	319	⇑P	P	12 46 36.9	+0.5
KMI				pP	pP	12 46 45.6	+0.2
KMI				sP	pwP	12 46 54.4	+2.8
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KMI				LR	LR		
	comp=Z,2μm,38.0s						
ENH	Enshi	39.29	332	P	P	12 46 36.5	-1.0
ENH				IAmb	IAmb	12 46 46.6	
	comp=Z,89nm,1.4s						
JWT	Wachi	39.59	7	P	P	12 46 39.6	-0.3
INU	Inuyama	39.89	9	P	P	12 46 41.3	-1.2
INU				IAmb	IAmb	12 46 54.9	

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       comp=Z,51nm,1.1s
JGF    Kuroka            40.20  10 P       P       12 46 44.8 -0.2
TJN    Taejon            40.37 357 ⇓eP     P       12 46 46.4  0.0
MJAR   Matsushiro Arr    41.26  10 P       P       12 46 52.2 -1.5
       comp=Z,14nm,0.7s,baz=183,slow=9.4,SNR=26
MAJO   Matsushiro        41.26  10 deP     P       12 46 52.4 -1.4
MAJO                               pmax    pmax
       comp=Z,43nm,0.9s
MAJO   Matsushiro        41.26  10 P       P       12 46 52.1 -1.6
MAJO                               IAmb    IAmb    12 47 11.9
       comp=Z,52nm,0.9s
MAJO   Matsushiro        41.26  10 P       P       12 46 52.7 -1.1
MAT    Matsushiro        41.26  10 P       P       12 46 51.9 -1.9
JYT    Yasato            41.36  13 P       P       12 46 54.2 -0.4
JYT                                IAmb    IAmb    12 47 05.3
       comp=Z,53nm,0.9s
KSAR   Wonju Array Be    41.41 358 P       P       12 46 54.6 -0.3
KSAR   Wonju Array Be    41.41 358 P       P       12 46 54.6 -0.3
KSRS   Korea Array       41.42 358 P       P       12 46 55.2 +0.3
       comp=Z,18nm,1.0s,baz=176,slow=9.6,SNR=44
KSRS                               PcP     PcP     12 48 53.0 +0.5
       comp=Z,2.5nm,0.7s,baz=181,slow=2.8,SNR=5.0
KS19   Wonju Array Si    41.47 358 P       P       12 46 54.9 -0.6
INCN   Inchon            41.51 356 P       P       12 46 55.2 -0.6
INCN                               pmax    pmax
       comp=Z,114nm,1.3s
INCN   Inchon            41.51 356 P       P       12 46 55.2 -0.6
INCN                               IAmb    IAmb    12 47 06.4
       comp=Z,114nm,1.3s
JSD    Sado              42.73  10 P       P       12 47 04.8 -0.9
JSD                                IAmb    IAmb    12 47 23.6
       comp=Z,37nm,1.0s
XAN    Xi'an             42.73 334 P       P       12 47 04.8 -1.0
XAN                                pP      pP      12 47 13.6 -1.4
XAN                                pmax    pmax
       comp=Z,8.0nm,1.2s
CD2    Chengdu           42.74 326 P       P       12 47 07.4 +1.5
CD2                                pP      sP      12 47 18.7 -0.5
CD2                                pmax    pmax
       comp=Z,20nm,1.3s
JMM    Marumori          43.06  13 P       P       12 47 07.9 -0.4
BJT    Baijiatuau        45.67 346 P       P       12 47 28.5 -0.7
BJT                                pmax    pmax
       comp=Z,42nm,1.2s
BJT    Baijiatuau        45.67 346 P       P       12 47 28.5 -0.7
BJT                                IAmb    IAmb    12 47 40.6
       comp=Z,42nm,1.2s
BJI    Beijing           45.69 346 P       P       12 47 28.7 -0.6
BJI                                pmax    pmax
       comp=Z,23nm,1.7s
LZH    Lanzhou           46.75 331 ⇑P      P       12 47 39.9 +1.9
LZH                                pP      pP      12 47 47.0 -0.2
LZH                                sP      pwP     12 47 55.7 +2.5
LZH                                PP      PP      12 49 32.2 +3.8
LZH                                pmax    pmax
       comp=Z,89nm,1.3s
LZH                                pmax    pmax
       comp=Z,320nm,6.0s
LZH                                LR      LR
       comp=Z,2µm,15.2s
LZH                                LR      LR
       comp=Z,1µm,15.7s
LZH                                LR      LR
       comp=Z,2µm,16.8s
SHL    Shillong          47.05 311 P       P       12 47 39.3 -1.3
SHL                                pmax    pmax
       comp=Z,45nm,1.0s
SHL    Shillong          47.05 311 P       P       12 47 39.3 -1.3
SHL                                IAmb    IAmb    12 47 42.5
       comp=Z,46nm,1.0s
VLA    Vladivostok       47.09   2 ⇓eP     P       12 47 41.8 +1.5
VLA                                pmax    pmax
       comp=Z,107nm,1.7s
HHC    Hu-ho-hao-te      47.74 341 eP      P       12 47 47.9 +2.3
HHC                                pmax    pmax
       comp=Z,25nm,0.7s
HHC                                pmax    pmax
       comp=Z,700nm,8.9s
CN2    Changchun         47.88 356 eP      P       12 47 44.7 -1.7
CN2                                pmax    pmax
       comp=Z,30nm,1.2s
BTO    Baotou            48.03 340 eP      P       12 47 53.8 +6.0
BTO                                S       S       12 54 51.8 +8.0
BTO                                LR      LR
       comp=N,6µm,24.1s
BTO                                LR      LR
       comp=E,5µm,21.0s
USA0B  Ussuriysk Arra    48.17   2 P       P       12 47 48.1 -0.6
USA0B                              pmax    pmax
       comp=Z,43nm,1.0s
USA0B  Ussuriysk Arra    48.17   2 P       P       12 47 48.1 -0.6
USA0B                              IAmb    IAmb    12 48 01.0
       comp=Z,43nm,1.0s
USRK   Ussuriysk Ar.     48.17   2 P       P       12 47 48.6 -0.1
       comp=Z,13nm,0.6s,baz=173,slow=6.9,SNR=23
USRK   Ussuriysk Ar.     48.17   2 P       P       12 47 48.3 -0.4
USRK   Ussuriysk Ar.     48.17   2 P       P       12 47 48.3 -0.4
MDJ    Mudanjiang        48.55 360 P       P       12 47 51.3 -0.3
MDJ                                pmax    pmax
       comp=Z,22nm,1.8s
MDJ                                pmax    pmax
       comp=Z,910nm,10.1s
MDJ    Mudanjiang        48.55 360 P       P       12 47 51.1 -0.4
MDJ                                IAmb    IAmb    12 48 01.5
       comp=Z,51nm,1.1s
TEY    Ternei            49.36   6 eP      P       12 48 00.6 +2.8
LSA    Lhasa             49.93 315 P       P       12 48 03.0  0.0
LSA                                pmax    pmax
       comp=Z,28nm,0.9s
LSA    Lhasa             49.93 315 P       P       12 48 03.0  0.0
LSA                                IAmb    IAmb    12 48 24.7
       comp=Z,28nm,0.9s
ODAN   Odare             51.16 310 eP      P       12 48 11.0 -1.1
       comp=Z,37nm,0.6s
TAPN   Taplejung         51.16 310 eP      P       12 48 11.1 -1.1
GTA    Gaotai            51.33 330 ⇑P      P       12 48 12.3 -0.7
GTA                                pP      pP      12 48 21.6 -0.7
GTA                                sP      sP      12 48 25.9 -0.5
GTA                                pmax    pmax
       comp=Z,7.0nm,1.2s
GTA                                pmax    pmax
       comp=Z,230nm,5.8s
GTA                                LR      LR
       comp=Z,970nm,18.5s
GTA                                LR      LR
       comp=Z,1µm,20.4s
GTA                                LR      LR
       comp=Z,2µm,18.9s
RAMN   Ramite            51.81 309 eP      P       12 48 16.3 -0.7
       comp=Z,98nm,0.5s
YSS    Yuzh-Sakhalins    52.19  11 eP      P       12 48 27.7 +8.7
YSS                                pmax    pmax
       comp=Z,20nm,1.3s
PKI    Pulchoki          53.04 309 eP      P       12 48 24.7 -1.5
       comp=Z,106nm,1.3s
PKIN   Phulchoki         53.05 309 eP      P       12 48 25.2 -1.0
KLR    Kul'dur           53.19   2 P       P       12 48 26.6 +0.1
       comp=Z,16nm,1.0s,baz=208,slow=4.1,SNR=24
KKN    Kakani            53.25 309 eP      P       12 48 26.3 -1.3
       comp=Z,30nm,0.7s
DMN    Daman             53.30 309 eP      P       12 48 27.0 -1.0
GKN    Gorkha            53.85 309 eP      P       12 48 30.8 -1.1
HIA    Hailar            53.89 352 P       P       12 48 31.2 -0.4
HIA                                pmax    pmax
       comp=Z,20nm,1.4s
HIA    Hailar            53.89 352 P       P       12 48 31.2 -0.4
TUWZ   Tuamarina         54.25 140 P       P       12 48 34.5 +0.1
KOLN   Koldanda          54.54 308 eP      P       12 48 36.1 -0.9
       comp=Z,173nm,1.0s
DANN   Dangsing          54.69 309 eP      P       12 48 37.0 -1.2
       comp=Z,87nm,0.8s
HYB    Hyderabad         54.78 295 i P     P       12 48 36.5 -2.2
       comp=Z,107nm,1.2s
BKZ    Black Stump Fm    54.86 136 P       P       12 48 39.1 +0.2
BKZ                                IAmb    IAmb    12 48 42.8
       comp=Z,19nm,0.9s
GRNR   Gornyy            55.01   5 ⇑iP     P       12 48 48.8 +9.1
GRNR                               pmax    pmax
       comp=Z,10.0nm,1.1s
GRNR                               MLR     MLR
       comp=E,530nm,19.0s
GRNR                               MLR     MLR
       comp=N,400nm,10.0s
GRNR                               MLR     MLR
       comp=Z,1µm,18.0s
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PYUN   Piuthan           55.17 308 eP      P       12 48 40.8 -0.8
       comp=Z,202nm,1.0s
ULN    Ulaanbaatar       55.46 342 ceP     P       12 48 43.3 +0.1
ULN                                pmax    pmax
       comp=Z,31nm,1.0s
ULN    Ulaanbaatar       55.46 342 P       P       12 48 43.1 -0.1
SONM   Songino Array     55.65 341 P       P       12 48 44.7 +0.2
       comp=Z,21nm,1.0s,baz=154,slow=5.4,SNR=39
CIT    Chita             57.61 348 eP      P       12 48 44.6  -14
CIT                                pmax    pmax
       comp=Z,92nm,2.0s
ZEA    Zeya              57.71 358 eP      P       12 48 59.4 +0.5
ZEA                                e               12 49 08.0
ZEA                                pmax    pmax
       comp=N,10.0nm,0.7s
ZEA                                pmax    pmax
       comp=Z,10.0nm,1.1s
ZAK    Zakamensk         58.88 341 eP      P       12 49 06.8 -0.4
ZAK                                pmax    pmax
       comp=Z,27nm,1.5s
POO    Poona             59.39 294 eP      P       12 49 18.0 +6.7
TLY    Talaya            59.88 342 eP      P       12 49 17.1 +3.1
TLY                                pmax    pmax
       comp=Z,114nm,1.5s
IRK    Irkutsk           60.17 342 eP      P       12 49 17.6 +1.6
IRK                                pmax    pmax
       comp=Z,105nm,1.9s
MOY    Mondy             60.73 340 eP      P       12 49 20.3 +0.3
MOY                                pmax    pmax
       comp=Z,88nm,2.6s
WMQ    Urumqi            60.84 326 eP      P       12 49 20.8  0.0
WMQ                                pP      pP      12 49 29.6 -0.9
WMQ                                sP      pwP     12 49 39.5 +3.8
WMQ                                pmax    pmax
       comp=Z,27nm,0.9s
WMQ                                LR      LR
       comp=Z,1µm,18.7s
WMQ                                LR      LR
       comp=Z,1µm,16.3s
WMQ                                LR      LR
       comp=Z,2µm,17.7s
PETK   Petropavlovsk-    61.75  19 P       P       12 49 26.3 -0.3
       comp=Z,10nm,0.9s,baz=201,slow=2.5,SNR=6.2
PETK   Petropavlovsk-    61.75  19 P       P       12 49 26.5 -0.2
PETK   Petropavlovsk-    61.75  19 P       P       12 49 26.5 -0.2
PET    Petropavlovsk     61.99  19 P       P       12 49 28.4 +0.2
PET                                IAmb    IAmb    12 49 41.7
       comp=Z,28nm,1.0s
BOD    Bodaibo           63.05 351 eP      P       12 49 35.1 -0.1
BOD                                pmax    pmax
       comp=Z,98nm,1.7s
CASY   Casey             63.45 189 P       P       12 49 38.2 +0.3
CASY                               IAmb    IAmb    12 49 38.9
       comp=Z,18nm,0.9s
ZSN    Zaisan            64.68 328 eP      P       12 49 44.8 -1.5
       baz=328
ZSN    Zaisan            64.68 328 eP      P       12 49 44.8 -1.5
DGZ    Jazzator, Alta    64.85 331 ⇓iP     P       12 49 47.6 +0.1
DGZ                                pmax    pmax
       comp=Z,27nm,1.0s
NIL    Nilore            65.11 310 P       P       12 49 49.3 -0.1
NIL                                pmax    pmax
       comp=Z,36nm,0.8s
NIL    Nilore            65.11 310 P       P       12 49 49.2 -0.1
SHLS   Shalkode          65.27 322 eP      P       12 49 48.0 -2.4
       baz=322
SHLS   Shalkode          65.27 322 eP      P       12 49 47.9 -2.4
PDGK   Podgornoye        65.34 322 P       P       12 49 49.6 -1.2
UZB    Uzynbulak         65.54 322 eP      P       12 49 51.0 -1.1
       baz=322
UZB    Uzynbulak         65.54 322 eP      P       12 49 51.0 -1.1
PRZ    Przheval'sk       65.58 321 P       P       12 49 52.6 +0.1
PRZ                                pmax    pmax
       comp=Z,35nm,1.0s
PRZ    Przheval'sk       65.58 321 P       P       12 49 52.5 +0.1
PRZ                                IAmb    IAmb    12 50 02.1
       comp=Z,35nm,1.0s
MK31   Makanchi Array    65.67 326 c iP    P       12 49 52.1 -0.6
MK31   Makanchi Array    65.67 326 P       P       12 49 52.5 -0.2
MK31                               IAmb    IAmb    12 50 01.5
       comp=Z,29nm,0.9s
MKAR   Makanchi Array    65.67 326 P       P       12 49 52.2 -0.5
       comp=Z,22nm,0.9s,baz=115,slow=8.2,SNR=100
MKAR   Makanchi Array    65.67 326 P       P       12 49 52.5 -0.2
MKAR   Makanchi Array    65.67 326 P       P       12 49 52.5 -0.2
MAKZ   Makanchi          65.85 326 P       P       12 49 53.4 -0.5
MAKZ                               pmax    pmax
       comp=Z,40nm,1.0s
MAKZ   Makanchi          65.85 326 P       P       12 49 53.4 -0.5
SATY   Saty              65.87 321 eP      P       12 49 53.6 -0.7
       comp=Z,22nm,1.1s,baz=321
SATY   Saty              65.87 321 eP      P       12 49 53.5 -0.7
SATY                               pmax    pmax
       comp=Z,22nm,1.1s
YAK    Yakutsk           65.99   0 eP      P       12 49 54.1 -0.3
YAK                                e               12 50 23.6
YAK                                eS      S       12 58 36.5 -2.9
YAK                                e*SS    sS      12 59 03.8 +6.2
YAK                                e               12 59 44.1
YAK                                eSS     SS      13 02 52.7 -2.6
YAK                                pmax    pmax
       comp=Z,78nm,0.9s
YAK                                pmax    pmax
       comp=N,12nm,0.9s
YAK                                pmax    pmax
       comp=E,5.0nm,0.9s
YAK                                smax    smax
       comp=E,128nm,3.8s
YAK                                smax    smax
       comp=N,76nm,1.6s
YAK    Yakutsk           65.99   0 P       P       12 49 54.4  0.0
KDJ    Kajisay           66.17 320 P       P       12 49 56.3  0.0
KDJ                                pmax    pmax
       comp=Z,18nm,1.0s
KDJ    Kajisay           66.17 320 P       P       12 49 56.3  0.0
KDJ                                IAmb    IAmb    12 50 05.2
       comp=Z,18nm,0.9s
MDOK   Medeo             66.78 321 eP      P       12 49 59.4 -0.7
       baz=321
MDOK   Medeo             66.78 321 eP      P       12 49 59.4 -0.7
TNSS   Tian-Shan         66.78 321 eP      P       12 49 59.9 -0.6
       baz=321
AAA    Alma-Ata          66.89 321 i P     P       12 49 59.5 -1.2
BOOM   Boomskoye usch    67.15 320 P       P       12 50 02.3 -0.2
BOOM                               pmax    pmax
       comp=Z,23nm,1.0s
BOOM   Boomskoye usch    67.15 320 P       P       12 50 02.3 -0.2
BOOM                               IAmb    IAmb    12 50 11.4
       comp=Z,23nm,1.0s
TKM2   Tokmak 2          67.58 320 i P     P       12 50 04.5 -0.8
TKM2                               pmax    pmax
       comp=Z,21nm,0.9s
KUU    Kurty             67.59 321 eP      P       12 50 04.1 -1.0
       comp=Z,26nm,0.9s,baz=321
KUU    Kurty             67.59 321 eP      P       12 50 04.0 -1.0
KUU                                pmax    pmax
       comp=Z,26nm,0.9s
AAK    Ala-Archa         68.16 319 ⇓eP     P       12 50 09.9 +1.1
AAK                                pmax    pmax
       comp=Z,75nm,1.6s
SGDS   Sogindy           68.46 320 eP      P       12 50 09.4 -1.2
       baz=320
SGDS   Sogindy           68.46 320 eP      P       12 50 09.6 -1.0
ZAA0   Zalesovo Array    68.89 333 P       P       12 50 12.1 -0.8
ZALV   Zalesovo Beam     68.89 333 P       P       12 50 12.8 -0.1
       comp=Z,18nm,0.9s,baz=117,slow=5.2,SNR=34
ZALV   Zalesovo Beam     68.89 333 i P     P       12 50 12.1 -0.8
ZALV                               pmax    pmax
       comp=Z,18nm,0.9s
ZALV   Zalesovo Beam     68.89 333 P       P       12 50 11.6 -1.3
SEM    Semipalatinsk     68.89 329 eP      P       12 50 12.4 -0.9
       baz=329
SEM    Semipalatinsk     68.89 329 eP      P       12 50 12.4 -0.9
SEY    Seymchan          69.09  11 P       P       12 50 14.4 +0.5
       comp=Z,22nm,1.0s,baz=196,slow=5.8,SNR=21
KURK   Kurchatov         69.92 328 ceP     P       12 50 18.8 -0.6
KURK                               pmax    pmax
       comp=Z,92nm,1.0s
KURK   Kurchatov         69.92 328 P       P       12 50 18.7 -0.7
BRZS   Berezniki         72.78 325 eP      P       12 50 35.6 -1.1
       comp=Z,8.1nm,0.9s,baz=326
BRZS   Berezniki         72.78 325 eP      P       12 50 35.6 -1.1
BRZS                               pmax    pmax
       comp=Z,8.0nm,0.9s
HRA    Herat             73.95 307 P       P       12 50 43.5 -0.7
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HRA                                IAmb    IAmb    12 50 53.1
       comp=Z,43nm,1.5s
VNDA   Vanda             75.30 173 P       P       12 50 51.3 +0.3
VNDA                               pmax    pmax
       comp=Z,11nm,1.2s
VNDA   Vanda             75.30 173 P       P       12 50 51.2 +0.3
BRVK   Borovoye          75.56 328 ceP     P       12 50 52.1 -0.7
BRVK                               pmax    pmax
       comp=Z,29nm,1.0s
BRVK   Borovoye          75.56 328 P       P       12 50 52.5 -0.3
TIXI   Tiksi             75.66 360 P       P       12 50 52.6 -0.4
       comp=Z,7.4nm,0.5s,baz=165,slow=3.1,SNR=28
TIXI   Tiksi             75.66 360 ⇑eP     P       12 50 53.4 +0.4
TIXI                               pmax    pmax
       comp=Z,26nm,1.4s
TIXI   Tiksi             75.66 360 P       P       12 50 52.2 -0.8
TIXI                               IAmb    IAmb    12 51 02.8
       comp=Z,35nm,1.2s
BILL   Bilibino          76.44  13 eP      P       12 50 58.8 +1.3
BILL                               e               12 51 08.4
BILL                               e               12 53 47.2
BILL                               pmax    pmax
       comp=Z,21nm,2.0s
MAW    Mawson            77.46 201 P       P       12 51 03.9 +0.6
       comp=Z,4.4nm,0.9s,baz=79,slow=7.2,SNR=3.7
GEYT   Alibeck           78.12 310 P       P       12 51 08.2 +0.5
       comp=Z,10nm,1.0s,baz=86,slow=6.1,SNR=8.4
GEYT   Alibeck           78.12 310 P       P       12 51 08.2 +0.5
NRIK   Noril'sk          78.73 346 P       P       12 51 10.7 +0.4
       comp=Z,20nm,0.6s,baz=126,slow=6.7,SNR=26
NRIK   Noril'sk          78.73 346 P       P       12 51 10.2 -0.1
NRIK                               pmax    pmax
       comp=Z,47nm,1.0s
NRIK   Noril'sk          78.73 346 P       P       12 51 10.2 -0.1
AB31   Akbulak array     80.08 321 i P     P       12 51 17.1 -0.9
ABKAR  Akbulak array     80.08 321 P       P       12 51 17.4 -0.6
OPO    Ambohidratompo    81.56 252 P       P       12 51 26.9 +0.1
       comp=Z,2.3nm,0.7s,baz=141,slow=6.5,SNR=2.7
SVE    Sverdlovsk        82.16 329 ⇓eP     P       12 51 29.5 +0.5
SVE                                pmax    pmax
       comp=Z,64nm,1.3s
ARU    Arti              83.12 328 c iP    P       12 51 33.2 -0.7
ARU                                                12 54 39.0
ARU                                S       S       13 01 51.7 +0.6
ARU                                pmax    pmax
       comp=Z,14nm,1.0s
ARU    Arti              83.12 328 P       P       12 51 34.0 +0.1
QRN    Al-Qurain         84.75 299 eP      P       12 51 42.5 -0.4
KBD    Kabd              85.00 300 eP      P       12 51 43.4 -0.7
MIB    Mutribah          85.39 300 eP      P       12 51 45.7 -0.4
QSPA   South Pole Qui    85.81 180 P       P       12 51 47.2 -0.4
       comp=Z,6.2nm,0.8s,baz=321,slow=1.7,SNR=35
QSPA   South Pole Qui    85.81 180 P       P       12 51 46.8 -0.8
QSPA                               IAmb    IAmb    12 51 55.6
       comp=Z,26nm,1.4s
SYO    Syowa Base        86.18 201 ⇑eP     P       12 51 49.4 +0.3
SYO    Syowa Base        86.18 201 ⇓ePcP   PcP     12 51 52.6 +0.9
RAYN   Ar Rayn           86.28 294 P       P       12 51 50.8 +0.1
RAYN                               pmax    pmax
       comp=Z,127nm,1.5s
RAYN   Ar Rayn           86.28 294 P       P       12 51 50.8 +0.1
TTA    Tatalina          86.60  26 P       P       12 51 51.7 +0.3
TTA                                pmax    pmax
       comp=Z,33nm,1.4s
TTA    Tatalina          86.60  26 P       P       12 51 51.7 +0.3
TTA                                IAmb    IAmb    12 52 06.6
       comp=Z,33nm,1.4s
TTA    Tatalina          86.60  26 P       P       12 51 52.3 +0.8
       baz=254
GCSA   Galena City Sc    86.74  24 P       P       12 51 53.3 +1.3
       baz=253
N19K   Bonanza Creek     86.75  28 P       P       12 51 52.8 +0.6
N19K   Bonanza Creek     86.75  28 P       P       12 51 53.1 +0.9
       baz=256
L19K   White Mountain    86.92  27 P       P       12 51 52.5 -0.5
L19K                               IAmb    IAmb    12 52 07.6
       comp=Z,34nm,1.2s
L19K   White Mountain    86.92  27 P       P       12 51 53.6 +0.7
       baz=255
M19K   Big River Lodg    87.06  27 P       P       12 51 54.9 +1.3
M19K                               IAmb    IAmb    12 52 08.0
       comp=Z,32nm,1.2s
M19K   Big River Lodg    87.06  27 P       P       12 51 55.1 +1.5
       baz=256
L20K   Farewell, AK      87.44  27 P       P       12 51 56.2 +0.7
       baz=256
K20K   Telida            87.56  26 P       P       12 51 57.2 +1.2
       baz=256
J20K   Nowinta River     87.73  25 P       P       12 51 57.1 +0.3
J20K   Nowinta River     87.73  25 P       P       12 51 58.2 +1.4
       baz=256
BELG   Belogornoye       88.39 323 P       P       12 52 00.5 +0.3
       comp=Z,46nm,1.1s,baz=99,slow=3.6
BELG   Belogornoye       88.39 323 ⇑eP     P       12 52 01.0 +0.9
BELG                               pmax    pmax
       comp=Z,7.0nm,1.0s
KIRV   Kirov             88.43 329 ceP     P       12 52 00.8 +0.6
CHUM   Lake Minchumin    88.45  26 P       P       12 52 01.2 +1.0
       baz=257
M22K   Willow            89.01  28 P       P       12 52 03.2 +0.4
       baz=259
CUT    Chulitna          89.06  27 P       P       12 52 03.3 +0.2
       baz=259
RC01   Rabbit Creek A    89.07  29 P       P       12 52 04.0 +0.8
       baz=260
MLY    Manley            89.35  25 P       P       12 52 05.0 +0.5
MLY    Manley            89.35  25 P       P       12 52 04.2 -0.3
       baz=259
PMR    Palmer            89.44  28 P       P       12 52 05.4 +0.5
       baz=260
ZEI    Tsey              89.67 313 eP      P       12 52 06.2 -0.5
ZEI                                pmax    pmax
       comp=Z,5.0nm,0.9s
PWL    Port Wells        89.70  29 P       P       12 52 07.2 +1.0
       baz=261
KNK    Knik Glacier      89.73  28 P       P       12 52 06.0 -0.4
       baz=261
SML    Sawmill           89.86  28 P       P       12 52 07.8 +0.8
       baz=261
RND    Reindeer          89.87  26 P       P       12 52 06.8 -0.2
RND                                pmax    pmax
       comp=Z,25nm,1.3s
RND    Reindeer          89.87  26 P       P       12 52 06.8 -0.2
RND                                IAmb    IAmb    12 52 20.2
       comp=Z,25nm,1.3s
MCK    McKinley          89.89  26 P       P       12 52 06.4 -0.6
       baz=260
I23K   Minto, Yukon-K    89.95  25 P       P       12 52 07.1 -0.1
I23K                               IAmb    IAmb    12 52 11.6
       comp=Z,9.8nm,0.9s
I23K   Minto, Yukon-K    89.95  25 P       P       12 52 07.9 +0.7
       baz=260
COLD   Coldfoot          89.99  23 P       P       12 52 08.4 +1.0
COLD                               IAmb    IAmb    12 52 10.2
       comp=Z,11nm,0.9s
COLD   Coldfoot          89.99  23 P       P       12 52 08.5 +1.2
       baz=259
WAT6   Susitna Watana    90.25  27 P       P       12 52 09.3 +0.4
       baz=262
TOLK   Toolik Lake Re    90.48  21 P       P       12 52 09.7  0.0
TOLK                               IAmb    IAmb    12 52 35.1
       comp=Z,14nm,1.2s
TOLK   Toolik Lake Re    90.48  21 P       P       12 52 10.2 +0.5
       baz=260
DHY    Denali Highway    90.48  27 P       P       12 52 10.7 +0.7
       baz=262
KBZ    Khabaz            90.49 314 P       P       12 52 10.7 +0.5
       comp=Z,3.4nm,0.7s,baz=88,slow=2.6,SNR=5.9
KBZ    Khabaz            90.49 314 ⇓eP     P       12 52 10.8 +0.6
KBZ                                pmax    pmax
       comp=Z,7.0nm,1.1s
CCB    Clear Creek Bu    90.52  25 P       P       12 52 09.4 -0.5
CCB                                IAmb    IAmb    12 52 24.5
       comp=Z,23nm,1.4s
COLA   College           90.54  25 ⇓eP     P       12 52 11.7 +1.8
COLA                               pmax    pmax
       comp=Z,19nm,1.9s
KIV    Kislovodsk        90.66 314 eP      P       12 52 09.3 -1.8
KIV                                pmax    pmax
       comp=Z,5.0nm,0.9s
H24K   Noodor Dome       90.67  24 P       P       12 52 11.1 +0.5
H24K                               IAmb    IAmb    12 52 20.3
       comp=Z,15nm,1.2s
H24K   Noodor Dome       90.67  24 P       P       12 52 10.9 +0.3
       baz=261
GURO   Guroymak-BITLI    90.69 308 P       P       12 52 12.1 +0.6
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PRGR	Permogore	90.78	332	*e*P	P	12 52 09.3	-1.8
PRGR				pmax	pmax		
	comp=Z,57nm,1.4s						
HDA	Harding Lake	90.86	26	P	P	12 52 11.5	0.0
	baz=262						
ILAR	Eielson Array	90.93	25	P	P	12 52 10.8	-1.1
	comp=Z,2.3nm,0.9s,baz=265,slow=4.7,SNR=13						
PAX	Paxson	91.33	27	P	P	12 52 13.4	-0.5
	baz=264						
HARP	HAARP	91.41	28	P	P	12 52 16.1	+1.9
	baz=264						
RIDG	Independent Ri	91.69	26	P	P	12 52 16.0	+0.5
	baz=264						
SCRK	Sand Creek	92.10	26	P	P	12 52 15.2	-2.2
	baz=265						
BMAR	Burnt Mountain	92.17	23	P	P	12 52 18.0	+0.4
KMBO	Kilima Mbogo	92.31	269	P	P	12 52 19.4	-0.2
	comp=Z,4.3nm,0.7s,baz=49,slow=6.7,SNR=8.5						
KMBO	Kilima Mbogo	92.31	269	P	P	12 52 20.0	+0.3
KMBO				pmax	pmax		
	comp=Z,12nm,1.2s						
KMBO	Kilima Mbogo	92.31	269	P	P	12 52 20.0	+0.3
KMBO				IAmb	IAmb	12 52 29.2	
	comp=Z,12nm,1.2s						
J26L	Joseph Creek	92.33	26	P	P	12 52 18.4	0.0
	baz=265						
L27K	Beaver Creek,	93.00	27	P	P	12 52 22.4	+0.9
	baz=267						
BCAR	Beaver Creek A	93.02	27	P	P	12 52 22.0	+0.5
KLMR	Klimovskoe	93.66	331	*e*P	P	12 52 22.3	-2.1
KLMR				pmax	pmax		
	comp=Z,40nm,1.4s						
KLMR	Klimovskoe	93.66	331	*e*P	P	12 52 22.3	-2.1
KLMR				AMP		12 52 32.7	
	comp=Z,40nm,1.4s						
DAWY	Dawson	94.12	26	P	P	12 52 27.2	+0.6
	baz=269						
I29M	Ogilvie Camp,	94.60	25	P	P	12 52 28.9	+0.1
	baz=270						
OBN	Obninsk	95.14	325	*e*P	P	12 52 29.3	-2.1
OBN				*e*		12 56 20.1	
OBN				*e*PPP	PPP	12 58 23.0	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
EPYK	Eagle Plains	95.23	24	P	P	12 52 32.2	+0.6
EPYK	Eagle Plains	95.23	24	P	P	12 52 31.6	0.0
	baz=272						
M30M	Minto, Yukon	95.30	28	P	P	12 52 31.9	-0.1
	baz=271						
INK	Inuvik	96.36	22	P	P	12 52 35.5	-1.2
	comp=Z,4.8nm,1.0s,baz=277,slow=4.0,SNR=14						
INK	Inuvik	96.36	22	P	P	12 52 35.4	-1.2
INK				pmax	pmax		
	comp=Z,19nm,1.4s						
INK	Inuvik	96.36	22	P	P	12 52 35.4	-1.2
INK				IAmb	IAmb	12 52 50.9	
	comp=Z,19nm,1.4s						
INK	Inuvik	96.36	22	P	P	12 52 35.9	-0.7
	baz=275						
SNAA	Sanae	98.33	194	P	Pdif	12 52 46.0	+0.3
SNAA	Sanae	98.33	194	⇓*i*P	P	12 52 45.6	-0.1
SNAA				pmax	pmax		
	comp=Z,7.0nm,1.7s						
SNAA	Sanae	98.33	194	P	Pdif	12 52 46.0	+0.3
SNAA				IAmb	IAmb	12 53 05.6	
	comp=Z,9.9nm,1.3s						
A36M	Sachs Harbour	98.58	18	P	P	12 52 45.8	-0.8
	baz=283						
ARCES	ARCESS Array B	98.80	340	P	P	12 52 46.4	-1.3
	comp=Z,5.6nm,0.9s,baz=74,slow=4.3,SNR=6.3						
VNA2	Neumayer--Watz	99.91	193	P	Pdif	12 52 52.9	+0.2
VNA1	Neumayer--Stat	100.31	193	P	Pdif	12 52 53.0	-1.4
YKA	Yellowknife Ar	105.36	26	PKKPbc	PKKPbc	13 08 56.1	-2.6
	comp=Z,0.5nm,0.6s,baz=113,slow=2.9,SNR=4.1						
DAG	Danmarks Havn	105.39	353	*i* P	Pdif	12 53 16.0	-0.8
BMRD	Maredsous	114.89	325	*d*PKiKP	PKPdf	12 57 49.9	+0.9
PDAR	Pinedale Array	115.13	44	PKP	PKPdf	12 57 50.6	+0.6
	comp=Z,1.3nm,0.9s,baz=180,slow=1.5,SNR=9.4						
PDAR				PKKPbc	PKKPbc	13 08 25.5	-1.3
	comp=Z,0.6nm,0.8s,baz=149,slow=3.7,SNR=3.9						
O20A	White River Ci	116.91	47		PKPdf	12 57 51.9	-1.6
RSSD	Black Hills	118.38	41	PKIKP	PKPdf	12 57 55.7	-0.6
RSSD	Black Hills	118.38	41	PKPdf	PKPdf	12 57 55.6	-0.6
ULM	Lac du Bonnet	120.25	32	PKP	PKPdf	12 57 59.3	0.0
	comp=Z,3.0nm,0.7s,baz=255,slow=1.2,SNR=3.7						
ECSD	EROS Data Cent	123.32	39	PKPdf	PKiKP	12 58 06.0	+0.3
TXAR	Lajitas Array	123.73	57	PKP	PKiKP	12 58 07.4	+0.4
	comp=Z,2.3nm,0.9s,baz=281,slow=1.5,SNR=21						
ESDC	Sonseca Array	125.22	317	PKP	PKiKP	12 58 09.6	-0.1
	comp=Z,0.5nm,0.6s,baz=347,slow=4.6,SNR=3.1						
P38A	Dawn	127.40	42	PKPdf	PKPdf	12 58 13.1	-0.3
TORD	Torodi Ar. Bea	127.87	283	PKP	PKiKP	12 58 15.6	+0.1
	comp=Z,3.2nm,0.7s,baz=66,slow=1.8,SNR=22						
TORD	Torodi Ar. Bea	127.87	283	PKPdf	PKPdf	12 58 15.0	+0.1
S39A	Bolivar	128.51	44		PKiKP	12 58 16.4	+0.2
PLCA	Paso Flores	131.65	159	PKP	PKiKP	12 58 23.1	+0.5
	comp=Z,2.0nm,0.7s,baz=253,slow=4.1,SNR=5.5						
DBIC	Dimbokro	134.65	275	PKP	PKiKP	12 58 29.3	+0.1
	comp=Z,1.7nm,0.6s,baz=98,slow=1.5,SNR=4.5						
AC02	Maricunga	144.24	151	PKPdf	PKPdf	12 58 44.9	-0.7
LVC	Limon Verde	147.81	146	PKP2	PKPbc	12 58 54.2	-0.2
LVC	Limon Verde	147.81	146		PKPbc	12 58 54.2	-0.2
PB07	IPOC Station P	147.95	144		PKPdf	12 58 51.4	-0.2
PB09	IPOC Station P	148.27	145		PKPdf	12 58 50.6	-1.5
PATCX	Punta Patache	148.48	143	PKPdf	PKPdf	12 58 51.2	-1.2
PATCX					PKiKP	12 58 57.1	-0.4
TA01	Diego Aracena	148.66	142		PKiKP	12 58 57.2	-0.5
PB01	IPOC Station P	148.71	144		PKiKP	12 58 57.5	-0.5
CPUP	Villa Florida	148.96	168	PKPbc	PKiKP	12 58 57.8	-0.5
	comp=Z,7.5nm,0.8s,baz=235,slow=2.1,SNR=12						
CPUP	Villa Florida	148.96	168	PKP2	PKiKP	12 58 57.9	-0.3
CPUP	Villa Florida	148.96	168		PKiKP	12 58 57.9	-0.3
NNA	Nana	149.16	122	PKIKP	PKPdf	12 58 53.5	-0.1
NNA	Nana	149.16	122	PKPdf	PKPdf	12 58 53.5	-0.1
PB11	IPOC Station P	149.59	142	PKPdf	PKPdf	12 58 53.8	-0.5
PB08	IPOC Station P	149.60	143		PKPdf	12 58 53.0	-1.6
PB08				PKPbc	PKiKP	12 59 00.5	+0.3
LPAZ	La Paz	153.14	140	PKP	PKPdf	12 59 01.4	+1.1
	comp=Z,3.1nm,0.9s,baz=252,slow=2.4,SNR=7.6						
LPAZ				PKPbc	PKiKP	12 59 08.6	+0.7
	comp=Z,8.9nm,0.9s,baz=220,slow=3.0,SNR=16						
LPAZ	La Paz	153.14	140	PKIKP	PKPdf	12 58 58.5	-1.8
LPAZ	La Paz	153.14	140		PKPdf	12 58 58.5	-1.8
CZSB	Cruzeiro do Su	154.77	118	PKPdf	PKPdf	12 58 59.7	-2.3
CZSB				PKPbc	PKiKP	12 59 11.3	+0.7
AQDB	Aquidauana	154.97	168		PKiKP	12 59 11.1	+0.3

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*JMA **09** 12:39:48.1, 31°.25N×140°.62E, h11^{km}, M3.5*
*IDC **09** 12:39:53.9±3.6, 31°.64N×140°.58E, h0^{km}, mb3.6/1, mb1 3.8/3, mb1mx2.9/53, mbtmp3.5/3, ML2.9/2, Error ellipse: s-maj=80.9km s-min=30.6km az=42.0*
ISC 09 12:39:47.5±5.2, **31°.2N**±0°.3×**140°.7E**±0°.2, **h10^{km}, n16,** σ**0^{s}.96**/6, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.50	330	P	Pn	12 40 13.6	-0.8
JHJ	Hachijo jima 2	2.08	339	Pn	Pn	12 40 21.9	-0.6
	7.2nm,0.3s,baz=53,slow=20,SNR=1.2						
JHJ				Sn	Sn	12 40 47.9	-0.5
	28nm,0.3s,baz=216,slow=20,SNR=4.5						
TTO1	TONANKAI O.B.S	4.09	308	*e*S	Sn	12 41 38.0	+0.5
JHU	Hanno	4.81	347	*e*S	Sn	12 41 56.0	+0.3
MJAR	Matsushiro Arr	5.73	340	Pn	Pn	12 41 13.7	+1.1
	0.2nm,0.3s,baz=162,slow=12,SNR=7.4						
KSRS	Korea Array	12.25	304	Pn	Pn	12 42 46.5	+4.5
	0.1nm,0.3s,baz=115,slow=14,SNR=4.8						
H11N2	WAKE ISLAND Hy	26.22	110	T	T	13 12 56.7	
	baz=301,slow=75						
H11N1	WAKE ISLAND Hy	26.23	110	T	T	13 12 54.5	
	baz=301,slow=75						
H11N3	WAKE ISLAND Hy	26.24	110	T	T	13 12 54.9	
	baz=301,slow=75						
H11S3	WAKE ISLAND Hy	26.71	112	T	T	13 13 30.2	
	baz=303,slow=75						
H11S1	WAKE ISLAND Hy	26.71	112	T	T	13 13 30.2	
	baz=303,slow=75						
H11S2	WAKE ISLAND Hy	26.72	112	T	T	13 13 31.9	
	baz=303,slow=75						
NVAR	Mina Array Bea	79.05	52	P	P	12 51 59.3	+7.0
	0.9nm,1.0s,baz=284,slow=5.0,SNR=3.5						
H03N2	Juan Fernandez	146.60	105	T	T	15 43 26.6	
	baz=281,slow=75,SNR=25						
H03N3	Juan Fernandez	146.61	105	T	T	15 43 27.6	
	baz=281,slow=75,SNR=30						
H03N1	Juan Fernandez	146.62	105	T	T	15 43 27.5	
	baz=281,slow=75,SNR=26						

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*IDC **09** 12:45:00.2±1.2, 4°.08S×129°.41E, h0^{km}, mb4.0/6, mb1 4.1/9, mb1mx3.8/52, mbtmp4.0/9, ML4.0/2, Error ellipse: s-maj=40.1km s-min=23.9km az=80.0*
ISC 09 12:45:05.3±0.8, **4°.08S**±0°.09×**129°.5E**±0°.2, **h36^{km}, n11,** σ**1^{s}.01**/12, **mb4.0**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.65	29	Pn	Pn	12 46 00.7	+1.5
	12nm,0.3s,baz=214,slow=22,SNR=7.6						
SIJI				Sn	Sn	12 46 40.2	-0.8
	12nm,0.3s,baz=247,slow=23,SNR=6.1						
WRA	Warramunga Arr	16.46	164	Pn	Pn	12 48 53.6	-0.1
	baz=348,slow=13,SNR=1.2						
ASAR	Alice Springs	19.93	168	P	P	12 49 34.6	+0.4
	0.5nm,0.3s,baz=342,slow=8.2,SNR=5.2						
CMAR	Chiang Mai Arr	37.52	308	P	P	12 52 17.2	+1.1
	1.5nm,0.5s,baz=144,slow=7.1,SNR=6.4						
MAT	Matsushiro	41.22	11	P	P	12 52 45.5	-1.3
MJAR	Matsushiro Arr	41.22	11	P	P	12 52 46.3	-0.5
	2.0nm,0.6s,baz=173,slow=11,SNR=5.4						
SONM	Songino Array	55.53	341	P	P	12 54 37.8	+0.8
	0.6nm,0.6s,baz=143,slow=8.9,SNR=2.8						
MKAR	Makanchi Array	65.52	326	P	P	12 55 45.3	+0.2
	2.6nm,0.6s,baz=115,slow=7.9,SNR=14						
ZALV	Zalesovo Beam	68.76	334	P	P	12 56 05.0	-0.5
	1.2nm,0.6s,baz=120,slow=5.7,SNR=2.9						
BVAR	Borovoye Array	75.34	328	P	P	12 56 43.4	-1.5
	0.6nm,0.7s,baz=268,slow=40,SNR=3.2						
TORD	Torodi Ar. Bea	127.70	283	PKP	PKPdf	13 04 07.4	-0.5
	0.3nm,0.7s,baz=46,slow=4.2,SNR=1.5						

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*IDC **09** 12:47:44.4±1.6, 3°.97S×130°.13E, h0^{km}, mb3.5/2, mb1 3.7/5, mb1mx3.3/52, mbtmp3.5/5, ML3.1/3, Error ellipse: s-maj=47.6km s-min=24.9km az=86.0*
ISC 09 12:47:45.3±1.2, **4°.04S**±0°.10×**130°.1E**±0°.2, **h10^{km}, n5,** σ**1^{s}.03**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.35	20	Pn	Pn	12 48 36.8	-1.0
	1.2nm,0.3s,baz=251,slow=23,SNR=1.7						
SIJI				Sn	Sn	12 49 18.6	+0.9
	0.7nm,0.3s,baz=226,slow=23,SNR=1.4						
WRA	Warramunga Arr	16.33	166	Pn	Pn	12 51 34.7	-0.2
	0.1nm,0.3s,baz=352,slow=13,SNR=2.1						
ASAR	Alice Springs	19.85	170	P	Pn	12 52 18.6	+0.4
	0.1nm,0.3s,baz=348,slow=11,SNR=2.2						
CMAR	Chiang Mai Arr	38.01	307	P	P	12 55 03.4	-0.5
	0.5nm,0.4s,baz=125,slow=7.8,SNR=2.3						
MKAR	Makanchi Array	65.85	326	P	P	12 58 32.1	+0.9
	0.3nm,0.7s,baz=132,slow=6.7,SNR=1.8						

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*IDC **09** 12:49:58.2±0.6, 4°.02S×129°.79E, h0^{km}, mb4.3/16, mb1 4.4/22, mb1mx4.2/57, mbtmp4.4/22, ML3.0/3, MS3.9/1, Ms1 3.9/1, ms1mx3.3/43, Error ellipse: s-maj=19.3km s-min=12.7km az=77.0*
*DJA **09** 12:50:00.5±0.4, 4°S±4°×13°0E±°, h10^{km}, M4.6/9, mb5.0/2, MLv4.5/9*
*NEIC **09** 12:50:01.7±0.9, 4°.11S±0°.06×129°.73E±0°.06, h29^{km}±5^{km}, mb4.7/46, Error ellipse: s-maj=9.4km s-min=9.0km az=67.0*
ISC 09 12:50:02.7±0.3, **4°.09S**±0°.04×**129°.66E**±0°.05, **h36^{km}, n133,** σ**1^{s}.52**/138, **mb4.7**/38, **2C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.50	151	P	Pn	12 50 13.5	+0.2
MSAI	Masohi	1.03	315	P	Pn	12 50 18.6	-2.1
MSAI				S	Sn	12 50 30.0	-3.9
AAI	Ambon	1.51	285	P	Pn	12 50 24.3	-3.0
FAKI	Fak Fak	2.83	66	P	Pn	12 50 47.2	+1.7
FAKI	Fak Fak	2.83	66	Pn	Pn	12 50 44.1	-1.3
FAKI	Fak Fak	2.83	66	P	Pn	12 50 48.1	+2.6
SIJI	Sorong	3.58	27	Pn	Pn	12 50 53.4	-2.3
	1.5nm,0.3s,baz=202,slow=23,SNR=6.2						
SIJI				Sn	Sn	12 51 35.4	-1.3
	17nm,0.3s,baz=217,slow=15,SNR=4.6						
SIJI				LR	LR	12 52 46.5	
	comp=Z,2μm,21.1s,baz=92,slow=49						
SWI	Sorong	3.58	27	P	Pn	12 50 54.7	-1.0
LBMI	Labuha	4.05	328	P	Pn	12 51 01.4	-0.8
LBMI				S	Sn	12 51 47.7	-0.6
SANI	Sanana	4.19	299	P	Pn	12 51 03.7	-0.4
SANI	Sanana	4.19	299	P	Pn	12 51 04.0	-0.1
SAUI	Saumlaki	4.20	157	Pn	Pn	12 51 01.5	-2.8
TNTI	Ternate	5.34	335		Pn	12 51 18.8	-1.2
SOEI	Soe	7.77	223		Pn	12 51 52.5	-0.9
SOEI	Soe	7.77	223	P	Pn	12 51 53.5	0.0
DRS	Darwin Rock St	8.38	172	P	Pn	12 52 02.7	+0.9
BATI	Baumata	8.51	224	Pn	Pn	12 52 06.2	+2.7
	4.8nm,0.3s,baz=160,slow=2.7,SNR=4.8						
MTN	Manton Dam	8.82	171	Pn	Pn	12 52 07.6	-0.2
MTN	Manton Dam	8.82	171	P	Pn	12 52 10.1	+2.3
KDU	Kakadu	8.99	162	P	Pn	12 52 10.9	+0.8
KAPI	Kappang	9.92	264	Pn	Pn	12 52 25.5	+2.6
	0.7nm,0.3s,baz=130,slow=6.6,SNR=4.7						
KAPI	Kappang	9.92	264	Pn	Pn	12 52 22.9	+0.1
TOLI2	Tolitoli	10.26	300	Pn	Pn	12 52 28.3	+0.8
KNRA	Kununurra	11.55	184	Pn	Pn	12 52 44.5	-0.7
KNRA	Kununurra	11.55	184	P	Pn	12 52 45.2	0.0
PLAI	Plampang	12.71	248	P	Pn	12 53 02.0	+0.9
MYLDM	Lahad Datu	14.46	309	Pn	Pn	12 53 24.2	-0.7
FITZ	Fitzroy Crossi	14.47	195	Pn	Pn	12 53 24.4	-0.7
	baz=37,slow=14						
JAGI	Jajag, Banyuwa	16.02	253	Pn	Pn	12 53 46.5	+1.1
WB0	Warramunga Arr	16.26	164		Pn	12 53 47.0	-1.4
WRAB	Tennant Creek	16.40	164		Pn	12 53 48.8	-1.5
WRAB				IAmb	IAmb	12 54 01.4	
	comp=Z,66nm,1.4s						
WRAB	Tennant Creek	16.40	164	P	Pn	12 53 50.4	+0.1
WRA	Warramunga Arr	16.41	164	Pn	Pn	12 53 47.5	-3.0
	comp=Z,0.7nm,0.3s,baz=346,slow=13,SNR=14						
WRA				Sn	Sn	12 56 50.2	-1.3
	comp=Z,0.3nm,0.3s,baz=340,slow=22,SNR=4.6						
WRA	Warramunga Arr	16.41	164		Pn	12 53 48.7	-1.7
WB2	Warramunga Arr	16.41	164	Pn	Pn	12 53 48.5	-2.0
WB2				IAmb	IAmb	12 54 00.7	
	comp=Z,57nm,1.4s						
WR0	Warramunga Arr	16.48	164	Pn	Pn	12 53 49.5	-1.8
COEN	Coen	16.55	127		Pn	12 53 49.9	-2.4
COEN	Coen	16.55	127	P	P	12 53 54.5	0.0
KKM	Kota Kinabalu	16.78	307	Pn	Pn	12 53 53.6	-1.5
KKM				IAmb	IAmb	12 54 05.3	
	comp=Z,62nm,1.3s						
PMG	Port Moresby	18.16	108	P	Pn	12 54 09.2	-3.0
	comp=Z,0.4nm,0.3s,baz=286,slow=18,SNR=1.8						
PMG	Port Moresby	18.16	108	P	Pn	12 54 09.2	-3.0
SBUM	Sibu	18.60	290	P	P	12 54 16.6	-0.4
QIS	Mount Isa	19.02	150	P	Pn	12 54 22.9	+0.2
SMRI	Semarang	19.35	260	P	P	12 54 24.8	-0.6
SMRI				IAmb	IAmb	12 54 39.8	
	comp=Z,56nm,1.0s						
MBWA	Marble Bar	19.52	209	P	Pn	12 54 28.4	-0.2
PSA00	Pilbara Seismi	19.82	208	P	P	12 54 30.7	+0.3
PSA00				IAmb	IAmb	12 54 33.6	
	comp=Z,43nm,1.0s						
PSA00	Pilbara Seismi	19.82	208	P	Pn	12 54 31.7	-0.5
AS31	Alice Springs	19.89	168		P	12 54 30.2	-1.0
ASAR	Alice Springs	19.89	168	P	Pn	12 54 32.2	-0.8
	comp=Z,2.1nm,0.3s,baz=340,slow=9.5,SNR=56						
ASAR				S	S	12 58 11.9	-1.5
	baz=351,slow=22,SNR=3.5						
ASAR	Alice Springs	19.89	168	P	P	12 54 31.4	+0.1
MTSU	Mount Surprise	20.02	135	P	Pn	12 54 35.0	+0.4
WRKA	Warakurna	20.87	183	P	Pn	12 54 43.4	-1.1
CTA	Charters Tower	22.68	136	P	P	12 55 01.9	+0.6
	comp=Z,5.1nm,0.5s,baz=310,slow=12,SNR=10						
CTAO	Charters Tower	22.68	136	P	P	12 54 59.6	-1.7
CTAO				IAmb	IAmb	12 55 13.2	
	comp=Z,31nm,1.0s						
CTAO	Charters Tower	22.68	136	P	P	12 55 03.2	+1.9
OOD	Oodnadatta	24.27	167	P	P	12 55 18.1	+1.5
MULG	Mulgathing	26.39	171	P	P	12 55 38.5	+2.7
FORT	Forrest	26.60	183	P	P	12 55 36.6	-1.1
FORT				IAmb	IAmb	12 56 06.2	
	comp=Z,23nm,0.8s						
FORT	Forrest	26.60	183	P	P	12 55 39.7	+2.0
LCRK	Leigh Creek	27.44	164	P	P	12 55 47.7	+2.4
BBOO	Buckleboo	29.20	169	P	P	12 55 58.8	-2.1
BBOO				IAmb	IAmb	12 56 11.5	
	comp=Z,35nm,1.5s						
BBOO	Buckleboo	29.20	169	P	P	12 56 03.0	+2.0
STKA	Stephens Creek	29.83	159	P	P	12 56 07.3	+0.7
	comp=Z,1.7nm,0.5s,baz=343,slow=8.2,SNR=11						
STKA	Stephens Creek	29.83	159	P	P	12 56 04.5	-2.1
STKA	Stephens Creek	29.83	159	P	P	12 56 08.0	+1.4
IPM	Ipoh	29.84	286	P	P	12 56 06.2	-0.7
IPM				IAmb	IAmb	12 56 19.7	
	comp=Z,15nm,0.9s						
HTT	Hallett	30.45	165	P	P	12 56 15.5	+3.4
CMSA	Cobar Meteorol	31.19	153	P	P	12 56 20.1	+1.5
PSI	Prapat	31.47	282	P	P	12 56 24.3	+2.9
	comp=Z,2.3nm,0.7s,baz=346,slow=16,SNR=1.9						
ARMA	Armidale	33.41	144	P	P	12 56 39.9	+1.7
CAN	Canberra	35.87	152	P	P	12 56 58.0	-1.3
TOO	Toolangi	36.34	159	P	P	12 57 02.0	-1.4
TOO	Toolangi	36.34	159	P	P	12 57 05.3	+1.9
JNU	Nakatsue	37.02	2	P	P	12 57 09.0	-0.2
	comp=Z,14nm,0.9s,baz=156,slow=3.3,SNR=4.1						
JNU	Nakatsue	37.02	2	P	P	12 57 08.3	-0.8
NJ2	Nanjing	37.38	345	*e*P	P	12 57 15.6	+3.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CM31	Chiang Mai Arr	37.65	307	P	P	12 57 15.3	+0.6
CM31				IAmb	IAmb	12 57 39.5	
	comp=Z,9.1nm,1.1s						
CMAR	Chiang Mai Arr	37.65	307	P	P	12 57 15.5	+0.8
	comp=Z,1.3nm,0.8s,baz=138,slow=7.2,SNR=9.3						
CMAR	Chiang Mai Arr	37.65	307	P	P	12 57 15.3	+0.6
CHTO	Chiang Mai	37.85	308	P	P	12 57 16.8	+0.4
CHTO				IAmb	IAmb	12 57 26.8	
	comp=Z,7.9nm,0.8s						
KMI	Kunming	39.07	319	⇑P	P	12 57 30.5	+3.7
KMI				sP	pwP	12 57 41.3	-0.4
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MJAR	Matsushiro Arr	41.20	10	P	P	12 57 43.8	-0.2
	comp=Z,5.0nm,0.8s,baz=187,slow=9.5,SNR=11						
MAT	Matsushiro	41.20	10	P	P	12 57 43.3	-0.7
JYT	Yasato	41.30	13	P	P	12 57 44.6	-0.2
JYT				IAmb	IAmb	12 57 47.2	
	comp=Z,22nm,1.0s						
KSAR	Wonju Array Be	41.35	358	P	P	12 57 44.9	-0.3
KSRS	Korea Array	41.36	358	P	P	12 57 46.5	+1.3
	comp=Z,3.9nm,0.9s,baz=171,slow=9.9,SNR=15						
JMM	Marumori	43.00	13	P	P	12 57 59.3	+0.6
WAKE	Wake Island	43.17	56	P	P	12 57 58.7	-1.6
BJT	Baijiatuau	45.61	345	P	P	12 58 19.9	+0.5
BJT				IAmb	IAmb	12 58 38.8	
	comp=Z,12nm,1.3s						
SHL	Shillong	47.02	311	P	P	12 58 31.4	+0.3
SHL				IAmb	IAmb	12 58 50.2	
	comp=Z,6.5nm,0.5s						
ERM	Erimo	47.50	14	P	P	12 58 34.2	0.0
HHC	Hu-ho-hao-te	47.69	341	*e*P	P	12 58 39.1	+3.2
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,460nm,8.1s						
USRK	Ussuriysk Ar.	48.11	2	P	P	12 58 40.1	+1.1
	comp=Z,5.5nm,0.8s,baz=193,slow=8.0,SNR=9.6						
USRK	Ussuriysk Ar.	48.11	2	P	P	12 58 39.1	+0.1
LSA	Lhasa	49.89	315	P	P	12 58 53.1	-0.4
LSA				IAmb	IAmb	12 59 02.5	
	comp=Z,6.8nm,0.9s						
GTA	Gaotai	51.28	330	*e*P	P	12 59 05.2	+1.8
GTA				pP	pP	12 59 13.7	+1.0
GTA				sP	sP	12 59 17.6	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KLR	Kul'dur	53.13	2	P	P	12 59 17.6	+0.8
	comp=Z,4.0nm,0.9s,baz=199,slow=5.2,SNR=8.7						
ULN	Ulaanbaatar	55.41	342	P	P	12 59 32.6	-1.0
ULN				IAmb	IAmb	12 59 54.0	
	comp=Z,11nm,1.1s						
SONM	Songino Array	55.59	341	P	P	12 59 35.9	+1.0
	comp=Z,2.5nm,1.0s,baz=168,slow=8.0,SNR=9.0						
WMQ	Urumqi	60.79	326	*e*P	P	13 00 12.8	+1.5
WMQ				pP	sP	13 00 24.4	-0.4
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
MK31	Makanchi Array	65.62	326	P	P	13 00 43.0	-0.2
MKAR	Makanchi Array	65.62	326	P	P	13 00 43.4	+0.2
	comp=Z,3.8nm,0.6s,baz=114,slow=7.6,SNR=44						
MKAR	Makanchi Array	65.62	326	P	P	13 00 42.8	-0.4
KSH	Kashi	65.66	317	P	P	13 00 45.5	+1.8
MAKZ	Makanchi	65.80	326	P	P	13 00 44.2	-0.2
MAKZ				IAmb	IAmb	13 00 58.1	
	comp=Z,8.4nm,1.2s						
YAK	Yakutsk	65.93	0	P	P	13 00 44.5	-0.3
KDJ	Kajisay	66.13	320	P	P	13 00 46.3	-0.5
KDJ				IAmb	IAmb	13 00 51.9	
	comp=Z,4.0nm,0.8s						
FRU1	Bishkek	68.11	319	P	P	13 00 58.9	-0.3
AAK	Ala-Archa	68.12	319	P	P	13 00 59.7	+0.3
ZAA0	Zalesovo Array	68.84	333	P	P	13 01 03.7	+0.4
ZAA0				IAmb	IAmb	13 01 26.3	
	comp=Z,11nm,1.4s						
ZALV	Zalesovo Beam	68.84	333	P	P	13 01 03.9	+0.5
	comp=Z,0.6nm,0.3s,baz=103,slow=4.7,SNR=6.8						
ZALV	Zalesovo Beam	68.84	333	P	P	13 01 03.6	+0.2
KURK	Kurchatov	69.87	328		P	13 01 10.0	+0.2
KKAR	Karatay Array	70.94	318	P	P	13 01 16.4	-0.2
BVAR	Borovoye Array	75.43	328	P	P	13 01 43.5	+0.7
	comp=Z,5.2nm,0.9s,baz=179,slow=12,SNR=15						
BRVK	Borovoye	75.51	328	P	P	13 01 43.7	+0.5
BRVK				IAmb	IAmb	13 01 57.3	
	comp=Z,7.7nm,0.9s						
TIXI	Tiksi	75.59	360	P	P	13 01 43.5	+0.2
TIXI				IAmb	IAmb	13 01 53.5	
	comp=Z,12nm,1.4s						
NRIK	Noril'sk	78.67	346	P	P	13 02 02.2	+1.5
	comp=Z,2.8nm,0.4s,baz=139,slow=7.0,SNR=4.6						
NRIK	Noril'sk	78.67	346	P	P	13 02 00.7	0.0
NRIK				IAmb	IAmb	13 02 11.6	
	comp=Z,10nm,1.1s						
ABKAR	Akbulak array	80.03	321	P	P	13 02 08.4	-0.2
AKTO	Aktyubinsk	81.58	322	P	P	13 02 17.2	+0.4
	comp=Z,4.8nm,0.9s,baz=104,slow=8.4,SNR=6.8						
QSPA	South Pole Qui	85.87	180	P	P	13 02 38.6	0.0
QSPA				IAmb	IAmb	13 02 48.5	
	comp=Z,9.0nm,1.4s						
SYO	Syowa Base	86.24	201	⇑*e*PcP	PcP	13 02 42.0	-0.8
RAYN	Ar Rayn	86.27	294	P	P	13 02 40.7	-0.7
RAYN				IAmb	IAmb	13 02 52.1	
	comp=Z,6.0nm,0.8s						
SIRT	Sirnak	90.25	307	P	P	13 02 59.5	-0.7
ILAR	Eielson Array	90.87	25	P	P	13 03 02.0	-0.3
	comp=Z,0.2nm,0.6s,baz=297,slow=4.0,SNR=3.0						
ISLE	Juniper Island	92.54	30	P	P	13 03 07.1	-3.2
PDAR	Pinedale Array	115.08	44	PKP	PKPdf	13 08 43.5	+2.7
	comp=Z,0.8nm,0.9s,baz=215,slow=1.1,SNR=3.8						
TXAR	Lajitas Array	123.69	57	PKP	PKiKP	13 08 58.6	+0.9
	comp=Z,0.5nm,0.9s,baz=282,slow=1.2,SNR=3.8						
TORD	Torodi Ar. Bea	127.86	283	PKP	PKiKP	13 09 06.1	-0.2
	comp=Z,0.5nm,0.7s,baz=59,slow=2.1,SNR=2.5						
CPUP	Villa Florida	149.02	168	PKPbc	PKPbc	13 09 46.2	-1.6
	comp=Z,1.4nm,0.4s,baz=232,slow=5.4,SNR=3.2						
LPAZ	La Paz	153.18	139	PKP	PKPdf	13 09 52.2	+1.1
	comp=Z,0.6nm,0.6s,baz=211,slow=5.9,SNR=1.8						
LPAZ				PKPbc	pPKPdf	13 10 01.4	-0.5
	comp=Z,0.8nm,0.4s,baz=0.0,slow=2.0,SNR=2.4						
LPAZ	La Paz	153.18	139	PKPdf	PKPdf	13 09 48.0	-3.2

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*IDC **09** 12:52:48.7±2.0, 6°.92S×130°.88E, h48^{km}±27^{km}, mb3.6/2, mb1 4.3/6, mb1mx3.5/53, mbtmp4.3/6, ML4.4/4, Error ellipse: s-maj=40.2km s-min=16.5km az=90.0*
ISC 09 12:52:47.8±1.0, **6°.98S**±0°.08×**130°.9E**±0°.2, **h35^{km}, n7,** σ**1^{s}.68**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.08	3	P	Pn	12 54 15.1	-0.3
	7.6nm,0.3s,baz=202,slow=23,SNR=12						
SIJI				S	Sn	12 55 24.2	+0.4
	19nm,0.3s,baz=265,slow=23,SNR=5.5						
BATI	Baumata	7.85	245	P	Pn	12 54 40.8	+1.2
	30nm,0.3s,baz=83,slow=3.0,SNR=12						
BATI				S	Sn	12 55 59.1	-8.2

	5.3nm,0.3s,baz=169,slow=3.4,SNR=1.8						
FITZ	**Fitzroy Crossi**	**12.18**	**204**	P	**Pn**	**12 55 36.4**	**-2.6**
	1.6nm,0.3s,baz=26,slow=12,SNR=7.8						
FITZ				S	Sn	12 57 39.5	-14
	2.9nm,0.3s,baz=280,slow=22,SNR=10.0						
WRA	**Warramunga Arr**	**13.31**	**166**	P	**Pn**	**12 55 54.1**	**-0.2**
	1.5nm,0.3s,baz=352,slow=13,SNR=8.1						
WRA				S	Sn	12 58 11.9	-9.2
	2.5nm,0.3s,baz=341,slow=22,SNR=9.4						
ASAR	**Alice Springs**	**16.84**	**170**	P	**Pn**	**12 56 42.5**	**+1.5**
	1.0nm,0.3s,baz=348,slow=11,SNR=4.9						
ASAR				S	Sn	12 59 38.5	-8.6
	0.9nm,0.3s,baz=307,slow=32,SNR=5.1						
STKA	**Stephens Creek**	**26.70**	**159**	P	**P**	**12 58 25.1**	**+1.2**
	1.2nm,0.4s,baz=332,slow=11,SNR=1.1						
MKAR	**Makanchi Array**	**68.71**	**326**	P	**P**	**13 03 46.5**	**-1.5**
	0.3nm,0.6s,baz=118,slow=7.6,SNR=2.5						

*IDC **09** 12:55:20.6±1.6, 1°.57N×127°.14E, h113^{km}±15^{km}, mb4.0/14, mb1 4.1/19, mb1mx3.7/68, mbtmp4.4/19, Error ellipse: s-maj=19.6km s-min=9.3km az=76.0*

*NEIC **09** 12:55:22.8±1.8, 1°.56N±0°.04×127°.20E±0°.07, h130^{km}±6^{km}, mb4.7/24, Error ellipse: s-maj=11.1km s-min=4.1km az=112.0*

*DJA **09** 12:55:23.1±0.4, 2°N±3°×12°7E±°, h87^{km}±7^{km}, M4.8/12, mB5.1/2, mb4.8/12, MLv4.8/11, Mw(mB)4.4/2*

ISC 09 12:55:24.2±0.5**, 1°.57N**±0°.05×**127°.11E**±0°.07**, h150**^{km}**, n76, σ1^{s}57**/79**, mb4.4**/25**, 2C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.83**	**162**	P	**Pn**	**12 55 43.6**	**-4.1**
TNTI	**Ternate**	**0.83**	**162**	Pn	**Pn**	**12 55 43.8**	**-3.9**
SGSI	**Sangihe**	**2.63**	**323**	P	**Pn**	**12 56 05.8**	**-1.3**
KMSI	**Cibinong**	**3.28**	**253**	P	**Pn**	**12 56 13.5**	**-1.7**
SANI	**Sanana**	**3.76**	**197**	P	**Pn**	**12 56 18.0**	**-3.4**
GTOI	**Gorontalo**	**4.20**	**257**	P	**Pn**	**12 56 26.6**	**-0.6**
SIJI	**Sorong**	**4.80**	**120**	P	**Pn**	**12 56 32.0**	**-3.2**
	9.3nm,0.3s,baz=256,slow=19,SNR=3.8						
MRSI	**Marisa**	**5.28**	**258**	P	**Pn**	**12 56 40.8**	**-0.6**
	0.6nm2μm149nm,0.5s						
DAV	**Davao City (W)**	**5.68**	**344**	P	Pn	12 56 42.4	-4.3
	baz=162,slow=9.6,SNR=0.9						
DAV				S	**Sn**	**12 57 45.5**	**-5.6**
	44nm,0.3s,baz=282,slow=8.8,SNR=1.5						
KCP	**Kidapawan**	**5.77**	**340**	⇑*e*P	Pn	12 56 43.5	-4.5
KCP				*i*S	**Sn**	**12 57 50.4**	**-3.1**
TOLI2	**Tolitoli**	**6.34**	**266**	Pn	**Pn**	**12 56 53.9**	**-1.7**
FAKI	**Fak Fak**	**6.80**	**131**	Pn	**Pn**	**12 57 01.5**	**-0.2**
MPSI	**Mapaga**	**7.32**	**260**	P	**Pn**	**12 57 09.0**	**+0.4**
	0.1nm16nm,0.7s						
TTSI	**Tana Toraja**	**8.61**	**238**	P	**Pn**	**12 57 24.8**	**-1.0**
	25nm,0.6s						
SPSI	**Sidrap Palu**	**9.17**	**233**	P	**Pn**	**12 57 33.0**	**-0.3**
	51nm,0.5s						
BNSI	**Bone**	**9.17**	**230**	P	**Pn**	**12 57 32.7**	**-0.6**
	31nm,1.0s						
MYLDM	**Lahad Datu**	**9.32**	**293**	Pn	**Pn**	**12 57 35.2**	**-0.1**
BKSI	**Bulukumba**	**9.78**	**226**	P	**Pn**	**12 57 42.3**	**+1.0**
	63nm,0.4s						
KAPI	**Kappang**	**9.84**	**228**	P	**Pn**	**12 57 39.9**	**-2.2**
	7.8nm,0.3s,baz=45,slow=8.2,SNR=7.6						
KAPI				S	**Sn**	**12 59 28.1**	**-3.1**
	9.3nm,0.3s,baz=71,slow=22,SNR=11						
KAPI	**Kappang**	**9.84**	**228**		**Pn**	**12 57 40.2**	**-2.0**
BSSI	**Bau Bau, Buton**	**10.12**	**221**	P	**Pn**	**12 57 44.9**	**-1.0**
	24nm,0.8s						
EDFI	**Ende, Flores**	**11.59**	**208**	P	**Pn**	**12 58 04.9**	**-0.4**
	26nm,0.7s						
BATI	**Baumata**	**12.19**	**196**	P	**Pn**	**12 58 12.1**	**-1.0**
	1.9nm,0.3s,baz=244,slow=18,SNR=1.6						
PLAI	**Plampang**	**13.90**	**222**	P	**P**	**12 58 38.2**	**-0.1**
	104nm,1.0s						
TWSI	**Taliwang, Sumb**	**14.45**	**225**	P	**P**	**12 58 43.2**	**-1.2**
	35nm,1.0s						
MTN	**Manton Dam**	**14.86**	**165**	Pn	**Pn**	**12 58 44.7**	**-2.4**
KNRA	**Kununurra**	**17.21**	**175**	P	**Pn**	**12 59 15.0**	**-0.7**
KNRA				IAmb	IAmb	12 59 20.4	
	comp=Z,31nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.59**	**184**	P	**P**	**12 59 39.6**	**-1.3**
	comp=Z,1.4nm,0.3s,baz=9.0,slow=10,SNR=2.3						
WB0	**Warramunga Arr**	**22.37**	**162**	P	**P**	**13 00 09.4**	**-0.8**
YULB	**Yu-li**	**22.42**	**346**	P	**P**	**13 00 10.9**	**+0.2**
YULB				IAmb	IAmb	13 00 16.0	
	comp=Z,59nm,1.3s						
WRAB	**Tennant Creek**	**22.51**	**162**	P	**P**	**13 00 10.9**	**-0.7**
WRA	**Warramunga Arr**	**22.52**	**162**	P	**P**	**13 00 10.6**	**-1.0**
	comp=Z,16nm,0.4s,baz=339,slow=11,SNR=14						
WRA				PcP	**PcP**	**13 04 01.0**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=342,slow=2.0,SNR=2.6						
WRA	**Warramunga Arr**	**22.52**	**162**	P	**P**	**13 00 09.6**	**-2.1**
WB2	**Warramunga Arr**	**22.52**	**162**	P	**P**	**13 00 11.0**	**-0.7**
WR0	**Warramunga Arr**	**22.60**	**162**	P	**P**	**13 00 11.4**	**-1.0**
WR0				IAmb	IAmb	13 00 11.9	
	comp=Z,20nm,0.6s						
YOJ	**Yonaguni jima**	**23.11**	**350**	P	**P**	**13 00 16.4**	**-0.6**
PSA00	**Pilbara Seismi**	**24.07**	**197**	P	**P**	**13 00 26.3**	**+0.5**
PSA00				IAmb	IAmb	13 00 27.3	
	comp=Z,31nm,0.8s						
UBPT	**Khong Chiam**	**25.33**	**304**	P	**P**	**13 00 39.2**	**+1.8**
UBPT				IAmb	IAmb	13 00 39.4	
	comp=Z,9.1nm,0.7s						
ASAR	**Alice Springs**	**25.93**	**166**	P	**P**	**13 00 42.4**	**-0.4**
	comp=Z,4.4nm,0.4s,baz=347,slow=7.8,SNR=10						
ASAR				PcP	**PcP**	**13 04 08.1**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=350,slow=2.5,SNR=2.1						
ASAR	**Alice Springs**	**25.93**	**166**	P	**P**	**13 00 42.2**	**-0.6**
BKNI	**Bangkinang**	**26.10**	**268**	P	**P**	**13 00 45.4**	**+1.0**
PSI	**Prapat**	**28.19**	**273**	P	**P**	**13 01 03.0**	**-0.2**
	comp=Z,2.9nm,0.6s,baz=51,slow=6.5,SNR=3.7						
CMAR	**Chiang Mai Arr**	**32.33**	**303**	P	**P**	**13 01 40.1**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=120,slow=7.2,SNR=4.3						
CMAR	**Chiang Mai Arr**	**32.33**	**303**	P	**P**	**13 01 40.3**	**+0.8**
KSRS	**Korea Array**	**35.72**	**1**	P	**P**	**13 02 08.5**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=177,slow=9.7,SNR=7.9						
STKA	**Stephens Creek**	**35.98**	**159**	P	**P**	**13 02 10.7**	**0.0**
	comp=Z,7.4nm,0.6s,baz=340,slow=8.4,SNR=24						
STKA	**Stephens Creek**	**35.98**	**159**	P	**P**	**13 02 10.8**	**0.0**
XAN	**Xi'an**	**36.51**	**334**	P	**P**	**13 02 15.4**	**+0.1**
XAN				pP	pP	13 02 17.9	-29
XAN				pmax	pmax		
	comp=Z,13nm,0.6s						
ARMA	**Armidale**	**39.47**	**146**	P	**P**	**13 02 41.2**	**+1.0**
CAN	**Canberra**	**42.02**	**153**	P	**P**	**13 03 02.4**	**+1.4**
CAN				IAmb	IAmb	13 03 14.1	
	comp=Z,36nm,1.5s						
TOO	**Toolangi**	**42.50**	**158**	P	**P**	**13 03 06.3**	**+1.5**
TOO				IAmb	IAmb	13 03 22.7	
	comp=Z,14nm,1.2s						
GTA	**Gaotai**	**45.14**	**330**	*e*P	**P**	**13 03 27.2**	**+1.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TAU	**Tasmania Unive**	**47.87**	**160**	P	**P**	**13 03 45.2**	**-1.7**
SONM	**Songino Array**	**49.46**	**342**	P	**P**	**13 03 59.9**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=154,slow=7.9,SNR=6.4						
SMLA	**Simla**	**55.56**	**307**	*e*P	**P**	**13 04 45.8**	**+1.5**
DHRM	**DHARAMSHALA**	**56.66**	**308**	*e*P	**P**	**13 04 53.1**	**+0.7**
MK31	**Makanchi Array**	**59.55**	**326**	P	**P**	**13 05 12.7**	**+0.8**
MKAR	**Makanchi Array**	**59.55**	**326**	P	**P**	**13 05 12.7**	**+0.8**
	comp=Z,5.0nm,0.5s,baz=119,slow=7.9,SNR=31						
MKAR	**Makanchi Array**	**59.55**	**326**	P	**P**	**13 05 12.5**	**+0.6**
MAKZ	**Makanchi**	**59.73**	**326**	P	**P**	**13 05 13.8**	**+0.6**
MAKZ				IAmb	IAmb	13 05 15.8	
	comp=Z,4.5nm,0.5s						
THZ	**Tophouse**	**59.77**	**142**	P	**P**	**13 05 14.0**	**+0.4**
KDJ	**Kajisay**	**60.21**	**319**	P	**P**	**13 05 17.9**	**+1.1**
KDJ				IAmb	IAmb	13 05 19.8	
	comp=Z,4.1nm,0.6s						
ZALV	**Zalesovo Beam**	**62.68**	**333**	P	**P**	**13 05 34.5**	**+1.6**
	comp=Z,1.2nm,0.4s,baz=124,slow=7.9,SNR=4.4						
ZALV	**Zalesovo Beam**	**62.68**	**333**	P	**P**	**13 05 32.7**	**-0.1**
KURK	**Kurchatov**	**63.76**	**328**	P	**P**	**13 05 39.9**	**-0.2**
KURK				IAmb	IAmb	13 05 43.5	
	comp=Z,8.7nm,0.8s						
SEY	**Seymchan**	**64.05**	**13**	P	**P**	**13 05 40.8**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=50,slow=23,SNR=1.6						
KKAR	**Karatay Array**	**65.07**	**318**	P	**P**	**13 05 49.3**	**+0.5**
BVAR	**Borovoye Array**	**69.33**	**327**	P	**P**	**13 06 15.7**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=180,slow=4.4,SNR=4.6						
ABKAR	**Akbulak array**	**74.06**	**321**	P	**P**	**13 06 43.8**	**0.0**
AKTO	**Aktyubinsk**	**75.58**	**322**	P	**P**	**13 06 52.9**	**+0.4**
	comp=Z,2.6nm,0.7s,baz=95,slow=7.9,SNR=7.2						
VNDA	**Vanda**	**81.25**	**173**	P	**P**	**13 07 23.4**	**+0.4**
MAW	**Mawson**	**81.87**	**200**	P	**P**	**13 07 27.0**	**+0.6**
	comp=Z,2.5nm,0.7s,baz=68,slow=8.2,SNR=4.3						
MAW	**Mawson**	**81.87**	**200**	P	**P**	**13 07 27.9**	**+1.5**
SYO	**Syowa Base**	**90.56**	**201**	⇑*e*PcP	**PcP**	**13 08 13.4**	**+3.5**
QSPA	**South Pole Qui**	**91.48**	**180**	P	**P**	**13 08 14.3**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=166,slow=1.4,SNR=9.2						
TORD	**Torodi Ar. Bea**	**123.93**	**287**	PKP	**PKPdf**	**13 14 05.3**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=77,slow=2.4,SNR=2.1						

*IDC **09** 12:57:39.9±1.6, 4°.13S×129°.20E, h0^{km}, mb4.0/2, mb1 4.2/4, mb1mx3.3/62, mbtmp4.1/4, ML3.9/2, Error ellipse: s-maj=54.3km s-min=30.2km az=79.0*

ISC 09 12:57:44.7±1.4**, 4°.0S**±0°.1×**129°.4E**±0°.2**, h35**^{km}**, n5, σ1^{s}60**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.68**	**31**	Pn	**Pn**	**12 58 40.6**	**+1.5**
	14nm,0.3s,baz=235,slow=22,SNR=14						
SIJI				Sn	**Sn**	**12 59 19.8**	**-1.5**
	8.1nm,0.3s,baz=254,slow=22,SNR=1.8						
TGY	**Tagaytay City**	**19.86**	**335**	P	**Pn**	**13 02 13.8**	**-0.9**
	119nm,0.3s,baz=186,slow=9.2,SNR=4.3						
ASAR	**Alice Springs**	**20.01**	**168**	P	**P**	**13 02 13.9**	**-0.6**
	0.2nm,0.3s,baz=344,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**65.41**	**326**	P	**P**	**13 08 25.1**	**+1.2**
	0.9nm,0.4s,baz=112,slow=8.1,SNR=14						
ZALV	**Zalesovo Beam**	**68.65**	**334**	P	**P**	**13 08 43.6**	**-0.7**
	0.5nm,0.3s,baz=120,slow=5.2,SNR=2.2						

*BJI **09** 12:57:59.0±0.0, 16°.70S×175°.15E, h5^{km}, mB6.1/53, mb5.2/64, Ms5.9/74, Ms7 5.7/69*

*IDC **09** 12:58:00.1±0.4, 16°.76S×175°.11E, h0^{km}, mb5.2/37, mb1 5.3/40, mb1mx5.0/49, mbtmp5.2/40, ML5.6/2, MS5.5/35, Ms1 5.6/35, ms1mx5.5/42, Error ellipse: s-maj=13.1km s-min=10.5km az=174.0*

*NEIC **09** 12:58:01.8±1.6, 16°.74S±0°.08×175°.25E±0°.06, h10^{km}±1^{km}, mb5.7/298, Ms_20 5.9/332, Mww6.1, Error ellipse: s-maj=13.7km s-min=10.3km az=184.0*

*MOS **09** 12:58:02.6±1.5, 16°.75S×174°.98E, h22^{km}, mb5.7/40, MS5.5/9, Error ellipse: s-maj=8.7km s-min=7.3km az=44.5*

*BGR **09** 12:58:04.0±0.0, 16°.74S×175°.16E, h10^{km}, Ms5.6*

*GCMT **09** 12:58:06.8±0.1, 16°.65S±0°.01×175°.04E±0°.01, h19^{km}, MW6.1/161, Moment Tensor Solution. s118,c200; s161,c431; Duration: 2^{s}7 Moment tensor: Scale 10^{18} Nm; M_{rr}-0.18±.02; $M_{\theta\theta}$-0.69±.02; $M_{\phi\phi}$0.86±.02; $M_{r\theta}$0.40±.04; $M_{\theta\phi}$1.40±.01; $M_{\phi r}$-0.12±.04; Best double couple: $M_0$1.66000×10^{18} NP1:ϕ_s347.00000°, δ77.00000°, λ-171.00000°. NP2:ϕ_s254.00000°, δ81.00000°, λ-14.00000°. Principal axes: T 1.6940, Plg3.0000°, Azm301.0000°; N -0.0680, Plg74.0000°, Azm42.0000°; P -1.6260, Plg16.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NOU **09** 12:58:06.4, 16°.73S×175°.17E, h43^{km}, mb5.8/60, Fiji Islands Region*

*NEIC **09** 12:58:06, 16°.72S×175°.17E, h14^{km}, Moment Tensor Solution. Duration: 10^{s}0 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.38; $M_{\theta\theta}$-0.53; $M_{\phi\phi}$0.92; $M_{r\theta}$-0.19; $M_{\theta\phi}$1.26; $M_{\phi r}$-0.66; Fault plane solution: $M_0$1.64000×10^{18} NP1: ϕ_s257.00000°, δ69.00000°, λ3.00000°. NP2:ϕ_s165.00000°, δ87.00000°, λ159.00000°. Principal axes: T 1.8475, Plg17.0000°, Azm119.0000°; N -0.5484, Plg69.0000°, Azm337.0000°; P -1.2991, Plg12.0000°, Azm213.0000°;*

ISC 09 12:58:01.4±0.4**, 16°.76S**±0°.04×**175°.23E**±0°.04**, h11**^{km}±2^{km}**, h11**^{km}**:pP-P, n1043, σ1^{s}36**/875**, mb5.7**/287**, MS5.8**/226**, 62C-72D, Fault plane solution: NP1:**ϕ_s250.57381°, δ86.98188°, λ-32.34022°. **NP2:**ϕ_s342.48315°, δ57.71008°, λ-176.42911°. **Principal axes:** T Plg19.9079°, Azm301.1245°; N Plg57.5345°, Azm65.8202°; P Plg24.5174°, Azm201.6171°; **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.87**	**110**	Pn	**Pn**	**12 58 47.0**	**-0.1**
	124nm,0.3s,baz=273,slow=9.4,SNR=329						
MSVF				Sn	**Sb**	**12 59 30.4**	**+2.6**
	28nm,0.3s,baz=235,slow=16,SNR=3.7						
MSVF				LR	LR	13 00 05.9	
	comp=Z,408μm,20.6s,baz=260,slow=42						
MSVF	**Nonsavu**	**2.87**	**110**	P	**Pn**	**12 58 47.0**	**-0.1**
MSVF	**Nonsavu**	**2.87**	**110**		**Pn**	**12 58 46.6**	**-0.5**
RTV	**Rentapao**	**6.58**	**260**	P	**Pn**	**12 59 39.9**	**+1.7**
DVP	**Devils Point**	**6.80**	**261**	P	**Pn**	**12 59 43.4**	**+2.2**
SANVU	**Saraoutou**	**7.82**	**278**	Pn	**Pn**	**12 59 55.2**	**0.0**
SANVU	**Saraoutou**	**7.82**	**278**	P	**Pn**	**12 59 56.7**	**+1.4**
MARNC	**Mare, Loyalty**	**8.27**	**234**		**Pn**	**13 00 02.0**	**+0.6**
MARNC	**Mare, Loyalty**	**8.27**	**234**	P	**Pn**	**13 00 02.9**	**+1.5**
LIFNC	**LIFOU**	**8.56**	**241**	Pn	**Pn**	**13 00 05.5**	**+0.1**
LIFNC	**LIFOU**	**8.56**	**241**	P	**Pn**	**13 00 06.3**	**+1.0**
FUNA	**Funafuti**	**9.05**	**26**		**Pn**	**13 00 08.6**	**-3.5**
PINNC	**Pines Island,**	**9.36**	**230**		**Pn**	**13 00 17.2**	**+0.8**
PINNC	**Pines Island,**	**9.36**	**230**	P	**Pn**	**13 00 18.8**	**+2.4**
YATNC	**Mamie plateau,**	**9.47**	**235**	P	**Pn**	**13 00 20.0**	**+2.1**
OUENC	**Ouen Island, N**	**9.71**	**233**		**Pn**	**13 00 22.6**	**+1.6**
OUENC	**Ouen Island, N**	**9.71**	**233**	P	**Pn**	**13 00 23.2**	**+2.1**
DZM	**Mont Dzumac**	**9.83**	**236**	*e*Pn	**Pn**	**13 00 24.0**	**+1.1**
	3μm,1.5s						
DZM				*e*LR	LR	13 02 33.6	
	comp=Z,103μm,25.9s						
DZM	**Mont Dzumac**	**9.83**	**236**		**Pn**	**13 00 24.0**	**+1.1**
DZM	**Mont Dzumac**	**9.83**	**236**	P	**Pn**	**13 00 24.9**	**+2.0**
ONTNC	**Ouen Toro**	**9.95**	**235**		**Pn**	**13 00 25.6**	**+1.2**
ONTNC	**Ouen Toro**	**9.95**	**235**	P	**Pn**	**13 00 26.7**	**+2.3**
NOUC	**Port Laguerre**	**9.96**	**236**	P	**Pn**	**13 00 26.7**	**+2.2**
KOUNC	**Koumac, New Ca**	**11.04**	**248**	P	**Pn**	**13 00 40.1**	**+0.8**
AFI	**Afiamalu**	**12.85**	**79**	Pn	**Pn**	**13 01 04.3**	**+0.1**
	1.1nm,0.3s,baz=277,slow=16,SNR=2.0						
AFI				LR	LR	13 04 57.7	
	comp=Z,18μm,19.5s,baz=252,slow=32						
RAO	**Raoul Island**	**13.94**	**154**	Pn	**P**	**13 01 23.9**	**-3.3**
	114nm,0.3s,baz=127,slow=15,SNR=4.4						
RAO				LR	LR	13 05 38.6	
	comp=Z,44μm,18.7s,baz=316,slow=33						
NFK	**Norfolk Island**	**13.95**	**207**	P	**Pn**	**13 01 21.6**	**+2.5**
	baz=14,SNR=10.0						
NIUE	**Niue**	**14.31**	**102**	Pn	**Pn**	**13 01 22.9**	**-1.3**
HNR	**Honiara**	**16.56**	**294**	Pn	**Pn**	**13 01 53.6**	**-0.2**
	2.5nm,0.3s,baz=214,slow=3.9,SNR=30						
HNR				LR	LR	13 07 53.0	
	comp=Z,17μm,18.3s,baz=120,slow=36						
HNR	**Honiara**	**16.56**	**294**		**Pn**	**13 01 53.4**	**-0.4**
TARA	**Tarawa**	**18.14**	**353**		**Pn**	**13 02 12.4**	**-1.0**
TARA				IAmb	IAmb	13 02 54.9	
	comp=Z,887nm,1.9s						
OUZ	**Omahuta**	**18.45**	**184**	P	**Pn**	**13 02 18.4**	**+1.3**
KNTN	**Kanton**	**18.91**	**44**	P	**P**	**13 02 22.2**	**-0.1**
KNTN				IAmb	IAmb	13 02 28.5	
	comp=Z,710nm,1.6s						
KNTN	**Kanton**	**18.91**	**44**	P	**Pn**	**13 02 23.4**	**+0.5**
KUZ	**Kuaotunu**	**19.92**	**179**	P	**Pn**	**13 02 36.2**	**+1.5**
WIAZ	**Waiheke Island**	**19.96**	**180**	P	**Pn**	**13 02 39.6**	**+4.3**
LHI	**Lord Howe Isla**	**20.79**	**222**	P	**P**	**13 02 43.5**	**+0.8**
	baz=21,SNR=3.2						
LHI	**Lord Howe Isla**	**20.79**	**222**	P	**P**	**13 02 43.6**	**+1.0**
LHI				IAmb	IAmb	13 02 47.5	
	comp=Z,652nm,1.2s						
LHI	**Lord Howe Isla**	**20.79**	**222**	P	**P**	**13 02 43.7**	**+1.1**
TOZ	**Tahuroa Road**	**20.90**	**179**	P	Pn	13 02 47.1	+0.8
MXZ	**Matakaoa Point**	**20.90**	**173**	P	Pn	13 02 45.8	-0.5
MXZ	**Matakaoa Point**	**20.90**	**173**	IAMs_20	IAMs_20	13 08 41.0	
	comp=Z,36μm,19.0s						
TGRZ	**Tauranga**	**20.91**	**178**	P	Pn	13 02 45.5	-1.0
HAZ	**Te Kaha**	**21.04**	**174**	P	**P**	**13 02 47.4**	**+2.0**
OPRZ	**Ohinepanea**	**21.04**	**177**	P	**P**	**13 02 48.6**	**+3.3**
WMGZ	**Waiomatatini S**	**21.17**	**173**	P	**P**	**13 02 50.7**	**+3.9**
PKGZ	**Pakihiroa**	**21.20**	**174**	P	**P**	**13 02 50.3**	**+3.2**
RUGZ	**Raukumara Rang**	**21.24**	**175**	P	**P**	**13 02 49.0**	**+1.4**
OMRZ	**Omania**	**21.29**	**178**	P	**P**	**13 02 50.8**	**+2.7**
PUZ	**Puketiti**	**21.40**	**173**	P	**P**	**13 02 50.4**	**+1.2**
TWGZ	**Tauwhareparae**	**21.48**	**174**	P	**P**	**13 02 52.8**	**+2.7**
URZ	**Urewera**	**21.49**	**176**	P	**P**	**13 02 52.1**	**+2.0**
	comp=Z,117nm,1.1s,baz=120,slow=23,SNR=23						
URZ	**Urewera**	**21.49**	**176**	P	**P**	**13 02 53.1**	**+3.0**
URZ	**Urewera**	**21.49**	**176**	P	**P**	**13 02 51.2**	**+1.1**
TLZ	**Tolley Road**	**21.49**	**179**	P	**P**	**13 02 54.0**	**+3.7**
MWZ	**Matawai**	**21.59**	**175**	P	**P**	**13 02 54.5**	**+3.2**
MUGZ	**Murupara**	**21.68**	**177**	P	**P**	**13 02 56.3**	**+4.1**
TKGZ	**Te Karaka**	**21.72**	**174**	P	**P**	**13 02 52.1**	**-0.6**
RIGZ	**Rimuhau**	**21.98**	**175**	P	**P**	**13 02 52.9**	**-2.5**
BKZ	**Black Stump Fm**	**22.36**	**177**	P	**P**	**13 03 00.2**	**+0.7**
BKZ				IAmb	IAmb	13 03 17.2	
	comp=Z,224nm,1.2s						
BKZ	**Black Stump Fm**	**22.36**	**177**	P	**P**	**13 03 00.4**	**+0.9**
BFZ	**Birch Farm**	**23.86**	**178**	P	**P**	**13 03 14.8**	**0.0**
BFZ	**Birch Farm**	**23.86**	**178**	P	**P**	**13 03 15.2**	**+0.4**
RAR	**Rarotonga**	**24.04**	**105**	P	**P**	**13 03 17.5**	**+0.8**
	comp=Z,55nm,0.8s,baz=263,slow=6.9,SNR=12						
RAR				LR	LR	13 10 47.4	
	comp=Z,14μm,20.5s,baz=272,slow=32						
RAR	**Rarotonga**	**24.04**	**105**	P	**P**	**13 03 17.7**	**+1.0**
RAR				pmax	pmax		
	comp=Z,764nm,2.0s						
RAR	**Rarotonga**	**24.04**	**105**	P	**P**	**13 03 17.7**	**+1.0**
RAR	**Rarotonga**	**24.04**	**105**	P	**P**	**13 03 18.4**	**+1.7**
EIDS	**Eidsvold**	**24.08**	**245**	P	**P**	**13 03 16.6**	**-0.5**
	baz=24,SNR=38						
EIDS	**Eidsvold**	**24.08**	**245**	P	**P**	**13 03 16.5**	**-0.5**
EIDS				IAmb	IAmb	13 03 18.7	
	comp=Z,215nm,1.1s						
EIDS	**Eidsvold**	**24.08**	**245**	P	**P**	**13 03 17.0**	**-0.1**
QRZ	**Quartz Range**	**24.10**	**185**	P	**P**	**13 03 17.9**	**+0.8**
QRZ				IAmb	IAmb	13 03 22.9	
	comp=Z,182nm,1.0s						
RK1H	**Rockhampton Ha**	**24.13**	**250**	P	**P**	**13 03 17.5**	**-0.1**
NNZ	**Nelson**	**24.43**	**183**	P	**P**	**13 03 20.6**	**+0.5**
SNZO	**South Karori**	**24.47**	**181**	P	**P**	**13 03 20.5**	**0.0**
SNZO				IAmb	IAmb	13 03 28.8	
	comp=Z,374nm,1.4s						
SNZO	**South Karori**	**24.47**	**181**	P	**P**	**13 03 22.0**	**+1.5**
BHW	**Baring Head**	**24.57**	**181**	P	**P**	**13 03 21.1**	**-0.3**
TUWZ	**Tuamarina**	**24.61**	**182**	P	**P**	**13 03 22.0**	**+0.3**
PLWZ	**Palliser**	**24.73**	**180**	P	**P**	**13 03 21.2**	**-1.7**
BSWZ	**Blackbirch Sta**	**24.90**	**182**	P	**P**	**13 03 24.5**	**+0.1**
CMWZ	**Cape Campbell**	**24.92**	**182**	P	**P**	**13 03 24.9**	**+0.3**
THZ	**Tophouse**	**25.00**	**184**	P	**P**	**13 03 25.3**	**-0.1**
ARMA	**Armidale**	**25.48**	**234**	P	**P**	**13 03 30.2**	**+0.3**
	baz=26,SNR=50						
ARMA	**Armidale**	**25.48**	**234**	P	**P**	**13 03 29.9**	**0.0**
ARMA	**Armidale**	**25.48**	**234**	P	**P**	**13 03 30.6**	**+0.7**
KHZ	**Kahutara**	**25.62**	**183**	P	**P**	**13 03 30.9**	**+0.1**
KHZ				IAmb	IAmb	13 03 39.0	
	comp=Z,150nm,0.9s						
RABL	**Rabaul**	**25.85**	**296**	P	**P**	**13 03 31.0**	**-2.2**
RABL	**Rabaul**	**25.85**	**296**	P	**P**	**13 03 34.5**	**+1.2**
LTZ	**Lake Taylor**	**26.06**	**185**	P	**P**	**13 03 34.8**	**-0.2**
LTZ				IAmb	IAmb	13 03 42.1	
	comp=Z,210nm,0.9s						
RMQ	**Roma**	**26.40**	**244**	P	**P**	**13 03 38.3**	**+0.2**
	baz=26,SNR=94						
RMQ	**Roma**	**26.40**	**244**	P	**P**	**13 03 38.8**	**+0.6**
OXZ	**Oxford**	**26.62**	**185**	P	**P**	**13 03 39.5**	**-0.4**
OXZ				IAmb	IAmb	13 03 52.0	
	comp=Z,201nm,1.1s						
NTLH	**Newcastle Hard**	**26.63**	**229**	P	**P**	**13 03 41.5**	**+1.4**
FOZ	**Fox Glacier**	**27.08**	**189**	P	**P**	**13 03 44.9**	**+0.8**
RPZ	**Rata Peaks**	**27.11**	**187**	P	**P**	**13 03 45.0**	**+0.6**
RPZ				IAmb	IAmb	13 03 51.3	
	comp=Z,154nm,1.3s						
MGCD	**Mangrove Creek**	**27.22**	**229**	P	**P**	**13 03 46.8**	**+1.4**
	baz=27,SNR=6.5						
MGCD	**Mangrove Creek**	**27.22**	**229**	P	**P**	**13 03 46.4**	**+0.9**
CTA	**Charters Tower**	**27.67**	**259**	P	**P**	**13 03 49.3**	**-0.4**
	comp=Z,13nm,0.6s,baz=90,slow=13,SNR=12						
CTA	**Charters Tower**	**27.67**	**259**	P	**P**	**13 03 51.2**	**+1.5**
CTAO	**Charters Tower**	**27.67**	**259**	P	**P**	**13 03 48.3**	**-1.4**
CTAO				pmax	pmax		
	comp=Z,328nm,1.8s						
CTAO	**Charters Tower**	**27.67**	**259**	P	**P**	**13 03 48.3**	**-1.4**
CTAO				IAmb	IAmb	13 03 58.0	
	comp=Z,328nm,1.8s						
CTAO	**Charters Tower**	**27.67**	**259**	P	**P**	**13 03 49.6**	**-0.1**
SYDH	**Sydney Hard Ro**	**27.77**	**228**	P	**P**	**13 03 51.2**	**+0.9**
LBZ	**Lake Benmore**	**27.87**	**188**	P	**P**	**13 03 51.3**	**+0.1**
LBZ				IAmb	IAmb	13 03 58.6	
	comp=Z,179nm,1.1s						
LBZ				IAMs_20	IAMs_20	13 13 00.1	
	comp=Z,30μm,21.0s						
PMG	**Port Moresby**	**28.28**	**281**	P	**P**	**13 03 55.0**	**-0.1**
	comp=Z,124nm,1.0s,baz=80,slow=8.0,SNR=19						
PMG				LR	LR	13 14 20.5	
	comp=Z,27μm,18.6s,baz=94,slow=35						
PMG	**Port Moresby**	**28.28**	**281**	P	**P**	**13 03 54.7**	**-0.4**
PMG				IAmb	IAmb	13 03 57.5	
	comp=Z,149nm,1.1s						
PMG	**Port Moresby**	**28.28**	**281**	IAMs_20	IAMs_20	13 14 00.4	
	comp=Z,25μm,19.0s						
PMG	**Port Moresby**	**28.28**	**281**	P	**P**	**13 03 55.7**	**+0.6**
PMG	**Port Moresby**	**28.28**	**281**	P	**P**	**13 03 55.7**	**+0.6**
ODZ	**Otahua Downs**	**28.46**	**187**	P	**P**	**13 03 56.4**	**0.0**
ODZ				IAmb	IAmb	13 04 09.8	
	comp=Z,278nm,1.9s						
WKZ	**Wanaka**	**28.47**	**189**	P	**P**	**13 03 57.4**	**+0.9**
WKZ				IAmb	IAmb	13 04 52.6	
	comp=Z,224nm,1.3s						
WKZ				IAMs_20	IAMs_20	13 13 54.9	
	comp=Z,24μm,20.0s						
PATS	**Pohnpei**	**28.80**	**323**	P	**P**	**13 03 60.0**	**+0.3**
	baz=29,SNR=3.3						
PATS	**Pohnpei**	**28.80**	**323**	P	**P**	**13 03 59.2**	**-0.4**
PATS				IAmb	IAmb	13 04 00.6	
	comp=Z,164nm,1.0s						
PATS	**Pohnpei**	**28.80**	**323**	P	**P**	**13 03 59.8**	**+0.1**
MLZ	**Mavora Lakes**	**29.14**	**190**	P	**P**	**13 04 03.1**	**+0.6**
MLZ				IAmb	IAmb	13 04 10.9	
	comp=Z,206nm,1.2s						
MLZ				IAMs_20	IAMs_20	13 14 03.6	
	comp=Z,27μm,19.0s						
DCZ	**Deep Cove**	**29.41**	**192**	P	**P**	**13 04 05.4**	**+0.5**
DCZ				IAMs_20	IAMs_20	13 13 30.8	
	comp=Z,24μm,22.0s						
MTSU	**Mount Surprise**	**29.51**	**263**	P	**P**	**13 04 05.8**	**-0.3**
	baz=30,SNR=21						
MTSU	**Mount Surprise**	**29.51**	**263**	P	**P**	**13 04 06.5**	**+0.4**
CNB	**Canberra Magne**	**29.55**	**226**	P	**P**	**13 04 06.9**	**+0.5**
	baz=30,SNR=9.6						
CNB	**Canberra Magne**	**29.55**	**226**	P	**P**	**13 04 07.3**	**+1.0**
WHZ	**Wether Hill Ro**	**29.68**	**190**	P	**P**	**13 04 07.3**	**+0.1**
WHZ				IAmb	IAmb	13 04 14.4	
	comp=Z,126nm,1.2s						
WHZ				IAMs_20	IAMs_20	13 14 30.9	
	comp=Z,21μm,20.0s						
CAN	**Canberra**	**29.81**	**227**	P	**P**	**13 04 08.2**	**-0.4**
CAN				pmax	pmax		
	comp=Z,110nm,1.4s						
CAN	**Canberra**	**29.81**	**227**	P	**P**	**13 04 08.2**	**-0.4**
CAN	**Canberra**	**29.81**	**227**	P	**P**	**13 04 09.1**	**+0.5**
PYZ	**Puysegur Point**	**30.18**	**192**	IAMs_20	IAMs_20	13 13 53.0	
	comp=Z,25μm,22.0s						
QLP	**Quilpie**	**30.35**	**246**	P	**P**	**13 04 13.1**	**-0.3**
	baz=30,SNR=15						
QLP	**Quilpie**	**30.35**	**246**	P	**P**	**13 04 12.9**	**-0.5**
CMSA	**Cobar Meteorol**	**30.59**	**236**	P	**P**	**13 04 15.6**	**+0.2**
	baz=31,SNR=27						
CMSA	**Cobar Meteorol**	**30.59**	**236**	P	**P**	**13 04 15.3**	**-0.1**
MILA	**Mila**	**30.64**	**224**	P	**P**	**13 04 16.7**	**+0.8**
	baz=31,SNR=3.2						
COEN	**Coen**	**31.02**	**271**	P	**P**	**13 04 18.4**	**-1.1**
COEN	**Coen**	**31.02**	**271**	P	**P**	**13 04 19.0**	**-0.4**
MANU	**Manus Island**	**31.06**	**295**	P	**P**	**13 04 19.0**	**-0.8**
MANU				IAmb	IAmb	13 04 22.1	
	comp=Z,305nm,2.0s						
TOO	**Toolangi**	**33.39**	**226**	P	**P**	**13 04 40.1**	**+0.1**
	baz=33,SNR=15						
TOO	**Toolangi**	**33.39**	**226**	P	**P**	**13 04 39.8**	**-0.2**
TOO				pmax	pmax		
	comp=Z,88nm,1.1s						
TOO	**Toolangi**	**33.39**	**226**	P	**P**	**13 04 39.8**	**-0.2**
TOO				IAmb	IAmb	13 04 41.6	
	comp=Z,88nm,1.1s						
TOO	**Toolangi**	**33.39**	**226**	P	**P**	**13 04 40.4**	**+0.4**
PAE	**Paea**	**33.60**	**97**	*e*P	**P**	**13 04 45.4**	**+3.4**
	comp=Z,36nm,1.4s						
PPT2	**Papeete2**	**33.61**	**97**	*e*P	**P**	**13 04 46.0**	**+3.8**
	comp=Z,164nm,1.4s						
PPT2				*e*S	**S**	**13 10 05.2**	**+0.2**
	comp=Z,6μm,27.2s						
PPT2				*e*LQ	LQ	13 12 12.0	
	comp=Z,56μm,26.5s						
PPT2				*e*LR	LR	13 13 40.1	
	comp=Z,46μm,26.2s,baz=256						
PPT	**Papeete**	**33.61**	**97**	P	**P**	**13 04 44.1**	**+2.0**
	comp=Z,54nm,1.0s,baz=304,slow=11,SNR=3.0						

PPT				LR	LR	13 15 12.9	
	comp=Z,13µm,20.0s,baz=262,slow=31						
PPTF	**Pamatai, Papee**	**33.62**	**97**	P	**P**	**13 04 43.7**	**+1.4**
INKA	**Innaminka**	**33.63**	**245**	P	**P**	**13 04 42.3**	**+0.1**
GLAD	**Gladstone**	**33.68**	**219**	P	**P**	**13 04 43.8**	**+1.4**
TBI	**Tubuai**	**33.75**	**107**	*e*S	**S**	**13 10 07.0**	**+0.1**
	comp=Z,8µm,28.0s						
TBI				*e*LQ	LQ	13 12 16.5	
	comp=Z,23µm,29.0s						
TBI				*e*LR	LR	13 13 38.5	
	comp=Z,35µm,32.5s,baz=270						
QIS	**Mount Isa**	**33.92**	**258**	P	**P**	**13 04 45.2**	**+0.3**
	baz=34,SNR=10						
QIS	**Mount Isa**	**33.92**	**258**	P	**P**	**13 04 46.0**	**+1.1**
STKA	**Stephens Creek**	**33.98**	**237**	P	**P**	**13 04 45.0**	**-0.2**
	comp=Z,59nm,1.0s,baz=69,slow=8.4,SNR=42						
STKA				PcP	**PcP**	**13 07 23.6**	**+0.2**
	comp=Z,12nm,0.9s,baz=109,slow=3.7,SNR=3.5						
STKA				LR	LR	13 17 16.3	
	comp=Z,14µm,19.6s,baz=71,slow=34						
STKA	**Stephens Creek**	**33.98**	**237**	P	**P**	**13 04 45.2**	**-0.1**
	baz=34,SNR=35						
STKA	**Stephens Creek**	**33.98**	**237**	P	**P**	**13 04 45.0**	**-0.2**
STKA	**Stephens Creek**	**33.98**	**237**	P	**P**	**13 04 45.6**	**+0.4**
BRAT	**Ballarat**	**34.46**	**227**	P	**P**	**13 04 50.5**	**+1.2**
CORO	**Coronation Par**	**34.48**	**219**	P	**P**	**13 04 50.7**	**+1.3**
MOO	**Moorlands**	**35.06**	**217**	P	**P**	**13 04 55.7**	**+1.3**
	baz=35,SNR=3.3						
MOO	**Moorlands**	**35.06**	**217**	P	**P**	**13 04 55.6**	**+1.2**
TAU	**Tasmania Unive**	**35.27**	**217**	P	**P**	**13 04 56.4**	**+0.1**
TAU				pmax	pmax		
	comp=Z,148nm,1.2s						
TAU	**Tasmania Unive**	**35.27**	**217**	P	**P**	**13 04 56.4**	**+0.1**
TAU				IAmb	IAmb	13 04 57.6	
	comp=Z,148nm,1.1s						
TAU	**Tasmania Unive**	**35.27**	**217**	IAMs_20	IAMs_20	13 16 26.4	
	comp=Z,19µm,19.0s						
ARPS	**Mount Arapiles**	**35.60**	**229**	P	**P**	**13 04 59.8**	**+0.7**
	baz=36,SNR=16						
ARPS	**Mount Arapiles**	**35.60**	**229**	P	**P**	**13 04 59.9**	**+0.7**
H11S2	**WAKE ISLAND Hy**	**36.02**	**346**	T	T	13 43 17.9	
	baz=166,slow=76,SNR=149						
H11S3	**WAKE ISLAND Hy**	**36.02**	**346**	T	T	13 43 19.6	
	baz=166,slow=76,SNR=121						
H11S1	**WAKE ISLAND Hy**	**36.03**	**346**	T	T	13 43 18.2	
	baz=166,slow=76,SNR=14						
LCRK	**Leigh Creek**	**36.38**	**241**	P	**P**	**13 05 05.6**	**-0.3**
HTT	**Hallett**	**36.61**	**236**	P	**P**	**13 05 07.6**	**-0.2**
	baz=37,SNR=16						
HTT	**Hallett**	**36.61**	**236**	P	**P**	**13 05 08.0**	**+0.1**
JAY	**Jayapura**	**36.77**	**289**	P	**P**	**13 05 08.6**	**-0.9**
	comp=Z,50nm,0.9s,baz=120,slow=6.1,SNR=12						
JAY				LR	LR	13 20 40.3	
	comp=Z,13µm,18.7s,baz=104,slow=37						
JAY	**Jayapura**	**36.77**	**289**	P	**P**	**13 05 08.7**	**-0.7**
	comp=Z,1µmcomp=Z,43nm,1.6s						
H11N1	**WAKE ISLAND Hy**	**37.16**	**347**	T	T	13 44 49.9	
	baz=164,slow=77,SNR=73						
H11N3	**WAKE ISLAND Hy**	**37.16**	**347**	T	T	13 44 46.6	
	baz=164,slow=77,SNR=14						
H11N2	**WAKE ISLAND Hy**	**37.17**	**347**	T	T	13 44 45.5	
	baz=164,slow=77,SNR=38						
GENI	**Genyem**	**37.22**	**288**	P	**P**	**13 05 13.2**	**-0.1**
	comp=Z,10µmcomp=Z,318nm,2.7s						
GENI	**Genyem**	**37.22**	**288**	P	**P**	**13 05 13.5**	**+0.2**
OOD	**Oodnadatta**	**38.05**	**246**	P	**P**	**13 05 20.3**	**+0.1**
WR0	**Warramunga Arr**	**38.69**	**259**	P	**P**	**13 05 24.4**	**-1.2**
BBOO	**Buckleboo**	**38.74**	**238**	P	**P**	**13 05 25.6**	**-0.3**
	baz=39,SNR=18						
BBOO	**Buckleboo**	**38.74**	**238**	P	**P**	**13 05 25.0**	**-0.9**
BBOO				IAmb	IAmb	13 05 26.9	
	comp=Z,186nm,1.3s						
BBOO	**Buckleboo**	**38.74**	**238**	P	**P**	**13 05 25.8**	**-0.1**
	comp=Z,132nm,1.6s						
SMPI	**Sarmi**	**38.80**	**288**	P	**P**	**13 05 26.6**	**+0.1**
	comp=Z,6µmcomp=Z,354nm,1.3s						
WB0	**Warramunga Arr**	**38.83**	**259**	P	**P**	**13 05 24.4**	**-2.4**
WC3	**Warramunga Arr**	**38.84**	**259**	P	**P**	**13 05 24.4**	**-2.5**
	baz=39						
WB2	**Warramunga Arr**	**38.86**	**259**	P	**P**	**13 05 25.0**	**-2.1**
WB2				IAmb	IAmb	13 05 28.4	
	comp=Z,159nm,1.4s						
WRAB	**Tennant Creek**	**38.87**	**259**	*de*P	**P**	**13 05 24.6**	**-2.5**
WRAB				pmax	pmax		
	comp=Z,130nm,1.5s						
WRAB	**Tennant Creek**	**38.87**	**259**	P	**P**	**13 05 24.8**	**-2.3**
WRAB				IAmb	IAmb	13 05 28.3	
	comp=Z,164nm,1.4s						
WRA	**Warramunga Arr**	**38.88**	**259**	P	**P**	**13 05 24.8**	**-2.4**
	comp=Z,45nm,1.0s,baz=92,slow=8.2,SNR=52						
WRA				LR	LR	13 20 28.6	
	comp=Z,11µm,20.5s,baz=90,slow=35						
WRA	**Warramunga Arr**	**38.88**	**259**	P	**P**	**13 05 25.0**	**-2.2**
WRA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
WRA	**Warramunga Arr**	**38.88**	**259**	P	**P**	**13 05 24.9**	**-2.2**
AS31	**Alice Springs**	**39.28**	**253**	P	**P**	**13 05 29.1**	**-1.5**
ASAR	**Alice Springs**	**39.28**	**253**	P	**P**	**13 05 29.1**	**-1.6**
	comp=Z,68nm,0.7s,baz=83,slow=8.9,SNR=132						
ASAR				PcP	**PcP**	**13 07 39.2**	**-0.3**
	comp=Z,13nm,0.9s,baz=110,slow=3.3,SNR=6.6						
ASAR				LR	LR	13 20 22.5	
	comp=Z,14µm,20.1s,baz=96,slow=34						
ASAR	**Alice Springs**	**39.28**	**253**	P	**P**	**13 05 28.7**	**-1.9**
MCQ	**Macquarie Isla**	**39.72**	**195**	P	**P**	**13 05 32.6**	**-1.1**
	baz=40						
SRPI	**Serui, Papua**	**41.10**	**287**	P	**P**	**13 05 46.5**	**+0.8**
	comp=Z,5µmcomp=Z,217nm,1.5s						
KDU	**Kakadu**	**41.49**	**270**	P	**P**	**13 05 47.5**	**-1.4**
	baz=42,SNR=6.0						
GUMO	**Guam**	**42.53**	**313**	LR	LR	13 22 35.1	
	comp=Z,4µm,20.7s,baz=128,slow=35						
MTN	**Manton Dam**	**42.75**	**269**	P	**P**	**13 05 57.6**	**-1.6**
	baz=43,SNR=16						
MTN	**Manton Dam**	**42.75**	**269**	P	**P**	**13 05 57.7**	**-1.6**
MTN				IAmb	IAmb	13 06 01.0	
	comp=Z,409nm,1.8s						
TAOE	**Nuku Hiva Isla**	**44.13**	**85**	*e*S	**S**	**13 12 42.9**	**-0.8**
	comp=Z,2µm,26.3s						
TAOE				*e*LQ	LQ	13 16 32.3	
	comp=Z,35µm,28.1s						
TAOE				*e*LR	LR	13 18 25.7	
	comp=Z,11µm,26.5s,baz=256						
FAKI	**Fak Fak**	**44.40**	**283**	P	**P**	**13 06 12.2**	**-0.3**
	comp=Z,5µmcomp=Z,384nm,1.5s						
FAKI	**Fak Fak**	**44.40**	**283**	P	**P**	**13 06 11.8**	**-0.7**
WRKA	**Warakurna**	**44.44**	**251**	P	**P**	**13 06 11.8**	**-1.0**
	baz=44,SNR=20						
KNRA	**Kununurra**	**44.55**	**265**	P	**P**	**13 06 12.1**	**-1.7**
	baz=44,SNR=19						
KNRA	**Kununurra**	**44.55**	**265**	P	**P**	**13 06 12.2**	**-1.5**
FORT	**Forrest**	**45.05**	**243**	P	**P**	**13 06 16.6**	**-1.0**
	baz=45,SNR=9.9						
FORT	**Forrest**	**45.05**	**243**	P	**P**	**13 06 16.3**	**-1.2**
FORT				IAmb	IAmb	13 06 27.8	
	comp=Z,160nm,1.1s						
SIJI	**Sorong**	**46.06**	**285**	P	**P**	**13 06 24.9**	**-0.9**
	comp=Z,153nm,1.1s,baz=79,slow=6.3,SNR=47						
SIJI				LR	LR	13 24 57.9	
	comp=Z,11µm,21.4s,baz=98,slow=35						
SWI	**Sorong**	**46.07**	**285**	P	**P**	**13 06 25.6**	**-0.2**
	comp=Z,4µmcomp=Z,208nm,1.4s						
POHA	**Pohakuloa**	**46.28**	**40**	IAMs_20	IAMs_20	13 21 04.2	
	comp=Z,11µm,20.0s						
FITZ	**Fitzroy Crossi**	**47.22**	**261**	P	**P**	**13 06 33.9**	**-0.8**
	comp=Z,84nm,1.1s,baz=95,slow=11						
FITZ				LR	LR	13 24 47.1	
	comp=Z,9µm,19.9s,baz=90,slow=34						
AAI	**Ambon**	**47.94**	**280**	P	**P**	**13 06 41.8**	**+1.4**
	comp=Z,6µmcomp=Z,310nm,1.6s						
LBMI	**Labuha**	**49.64**	**284**	P	**P**	**13 06 55.0**	**+1.5**
	comp=Z,3µmcomp=Z,112nm,1.4s						
SOEI	**Soe**	**49.98**	**271**	P	**P**	**13 06 57.4**	**+1.2**
	comp=Z,3µmcomp=Z,133nm,1.3s						
SOEI	**Soe**	**49.98**	**271**	P	**P**	**13 06 56.1**	**-0.1**
TNTI	**Ternate**	**50.29**	**285**	P	**P**	**13 06 58.7**	**+0.3**
	comp=Z,5µmcomp=Z,155nm,2.8s						
TNTI	**Ternate**	**50.29**	**285**	P	**P**	**13 06 58.2**	**-0.2**
BATI	**Baumata**	**50.45**	**270**	P	**P**	**13 06 59.9**	**+0.2**
	comp=Z,87nm,0.7s,baz=174,slow=0.8,SNR=18						
BATI				LR	LR	13 28 27.6	
	comp=Z,6µm,18.5s,baz=132,slow=36						
BATI	**Baumata**	**50.45**	**270**	P	**P**	**13 07 00.1**	**+0.4**
	comp=Z,3µmcomp=Z,130nm,1.6s						
SANI	**Sanana**	**50.56**	**281**	P	**P**	**13 06 59.9**	**-0.6**
	comp=Z,5µmcomp=Z,145nm,1.1s						
MMRI	**Maumere**	**52.20**	**272**	P	**P**	**13 07 11.6**	**-1.2**
	comp=Z,38µmcomp=Z,10µmcomp=Z,136nm,1.9s						
MMRI	**Maumere**	**52.20**	**272**	P	**P**	**13 07 11.8**	**-1.0**
PSA00	**Pilbara Seismi**	**52.31**	**255**	P	**P**	**13 07 12.1**	**-1.5**
PSA00	**Pilbara Seismi**	**52.31**	**255**	P	**P**	**13 07 11.9**	**-1.7**
PSA00				IAmb	IAmb	13 07 16.9	
	comp=Z,276nm,1.5s						
EDFI	**Ende, Flores**	**52.69**	**272**	P	**P**	**13 07 15.8**	**-0.8**
	comp=Z,3µmcomp=Z,139nm,1.7s						
MEEK	**Meekatharra**	**53.16**	**249**	P	**P**	**13 07 18.6**	**-1.2**
	baz=53,SNR=19						
BASI	**Baing, Sumba**	**53.41**	**270**	P	**P**	**13 07 22.2**	**+0.5**
	comp=Z,7µmcomp=Z,454nm,1.6s						
KLBR	**Kellerberrin**	**53.92**	**243**	P	**P**	**13 07 23.7**	**-1.5**
	baz=54,SNR=21						
DAV	**Davao City (W)**	**54.51**	**292**	LR	LR	13 29 37.6	
	comp=Z,5µm,20.0s,baz=85,slow=35						
BSSI	**Bau Bau, Buton**	**54.52**	**274**	P	**P**	**13 07 29.7**	**-0.2**
	comp=Z,3µmcomp=Z,164nm,1.6s						
WBSI	**Waikabubak, Su**	**54.68**	**270**	P	**P**	**13 07 32.9**	**+1.8**
	comp=Z,4µmcomp=Z,164nm,1.3s						
BLDU	**Ballidu**	**54.80**	**244**	P	**P**	**13 07 30.5**	**-1.2**
	baz=55,SNR=5.9						
APSI	**Ampana**	**55.02**	**281**	P	**P**	**13 07 33.9**	**+0.4**
	comp=Z,6µmcomp=Z,329nm,1.6s						
BKSI	**Bulukumba**	**55.10**	**275**	P	**P**	**13 07 33.7**	**-0.4**
	comp=Z,3µmcomp=Z,136nm,1.7s						
MRSI	**Marisa**	**55.23**	**283**	P	**P**	**13 07 34.5**	**-0.5**
	comp=Z,2µmcomp=Z,60nm,1.4s						
MUN	**Mundaring**	**55.24**	**242**	P	**P**	**13 07 34.8**	**-0.1**
	baz=55,SNR=6.4						
BNSI	**Bone**	**55.38**	**276**	P	**P**	**13 07 36.3**	**+0.2**
	comp=Z,5µmcomp=Z,287nm,1.5s						
MORW	**Morawa**	**55.38**	**246**	P	**P**	**13 07 35.6**	**-0.4**
	baz=55,SNR=14						
MORW	**Morawa**	**55.38**	**246**	P	**P**	**13 07 34.2**	**-1.8**
MORW				IAmb	IAmb	13 07 39.0	
	comp=Z,150nm,1.3s						
KAPI	**Kappang**	**55.54**	**275**	P	**P**	**13 07 36.8**	**-0.5**
	comp=Z,66nm,0.9s,baz=129,slow=4.1,SNR=24						
KAPI				LR	LR	13 30 59.8	
	comp=Z,1µm,19.5s,baz=98,slow=36						
KAPI	**Kappang**	**55.54**	**275**	P	**P**	**13 07 37.3**	**0.0**
KAPI				pmax	pmax		
	comp=Z,583nm,1.6s						
KAPI	**Kappang**	**55.54**	**275**	P	**P**	**13 07 37.3**	**0.0**
SPSI	**Sidrap Palu**	**55.83**	**277**	P	**P**	**13 07 38.3**	**-1.1**
	comp=Z,2µmcomp=Z,139nm,1.4s						
TTSI	**Tana Toraja**	**56.06**	**278**	P	**P**	**13 07 41.0**	**0.0**
	comp=Z,2µmcomp=Z,108nm,1.4s						
PLAI	**Plampang**	**56.42**	**270**	P	**P**	**13 07 44.3**	**+0.7**
	comp=Z,5µmcomp=Z,245nm,1.6s						
TOLI2	**Tolitoli**	**56.53**	**283**	P	**P**	**13 07 43.0**	**-1.4**
MPSI	**Mapaga**	**57.09**	**282**	P	**P**	**13 07 47.8**	**-0.5**
	comp=Z,3µmcomp=Z,128nm,1.9s						
TWSI	**Taliwang, Sumb**	**57.30**	**270**	P	**P**	**13 07 49.6**	**-0.2**
	comp=Z,4µmcomp=Z,328nm,1.5s						
GIRL	**Giralia**	**57.40**	**254**	P	**P**	**13 07 53.9**	**+3.5**
	baz=57,SNR=3.8						
IGBI	**Denpasar**	**58.94**	**270**	P	**P**	**13 08 01.4**	**+0.1**
	comp=Z,6µmcomp=Z,451nm,1.5s						
SRBI	**Singaraja**	**59.06**	**271**	P	**P**	**13 08 01.6**	**-0.5**
	comp=Z,6µmcomp=Z,294nm,1.7s						
SMKI	**Samarinda**	**59.36**	**280**	P	**P**	**13 08 05.6**	**+1.4**
	comp=Z,9µmcomp=Z,420nm,1.5s						
BKB	**Balikpapan**	**59.40**	**279**	P	**P**	**13 08 06.0**	**+1.5**
	comp=Z,4µmcomp=Z,191nm,1.3s						
KBKI	**Kotabaru**	**59.46**	**276**	P	**P**	**13 08 04.5**	**-0.4**
	comp=Z,2µmcomp=Z,152nm,1.4s						
JAGI	**Jajag, Banyuwa**	**59.98**	**270**	P	**P**	**13 08 07.0**	**-1.5**
	comp=Z,4µmcomp=Z,173nm,1.5s						
JAGI	**Jajag, Banyuwa**	**59.98**	**270**	P	**P**	**13 08 06.7**	**-1.9**
ABJI	**Asem Bagus**	**60.07**	**271**	P	**P**	**13 08 09.9**	**+0.8**
	comp=Z,5µmcomp=Z,311nm,1.3s						
MYLDM	**Lahad Datu**	**60.15**	**286**	P	**P**	**13 08 11.0**	**+1.4**
KMMI	**Kalianget**	**60.52**	**271**	P	**P**	**13 08 10.3**	**-1.9**
	comp=Z,3µmcomp=Z,171nm,1.6s						
BBKI	**Banjar Baru**	**60.68**	**276**	P	**P**	**13 08 13.4**	**+0.1**
	comp=Z,5µmcomp=Z,223nm,1.7s						
BLJI	**Banyuglugur**	**60.70**	**270**	P	**P**	**13 08 11.7**	**-1.7**
	comp=Z,2µmcomp=Z,142nm,1.6s						
GMJI	**Gumukmas**	**60.71**	**270**	P	**P**	**13 08 14.3**	**+0.8**
	comp=Z,3µmcomp=Z,124nm,1.8s						
VNDA	**Vanda**	**61.16**	**183**	P	**P**	**13 08 15.4**	**-0.1**
VNDA				pmax	pmax		
	comp=Z,58nm,1.6s						
VNDA	**Vanda**	**61.16**	**183**	P	**P**	**13 08 15.3**	**-0.1**
SBA	**Scott Base**	**61.27**	**182**	P	**P**	**13 08 17.2**	**+1.0**
SBA				pmax	pmax		
	comp=Z,230nm,1.7s						
SBA	**Scott Base**	**61.27**	**182**	P	**P**	**13 08 17.2**	**+1.0**
MTKI	**Muara Teweh, K**	**61.39**	**278**	P	**P**	**13 08 17.7**	**-0.4**
	comp=Z,68nm,1.5s						
TGY	**Tagaytay City**	**61.76**	**297**	P	**P**	**13 08 20.6**	**0.0**
	comp=Z,115nm,0.3s,baz=141,slow=6.5,SNR=6.7						
TGY				LR	LR	13 30 55.4	
	comp=Z,4µm,21.6s,baz=108,slow=32						
SPMM	**Sapulut**	**61.85**	**285**	P	**P**	**13 08 22.0**	**+0.8**
JYT	**Yasato**	**62.24**	**328**	P	**P**	**13 08 23.0**	**-0.4**
JYT				IAmb	IAmb	13 08 25.4	
	comp=Z,49nm,1.0s						
KKM	**Kota Kinabalu**	**62.58**	**286**	P	**P**	**13 08 25.8**	**-0.4**
JOW	**Kunigami**	**62.89**	**313**	LR	LR	13 32 40.0	
	comp=Z,3µm,21.2s,baz=151,slow=33						
PCJI	**Pacitan**	**62.90**	**269**	P	**P**	**13 08 27.3**	**-0.9**
	comp=Z,6µmcomp=Z,377nm,1.4s						
WOJI	**Wonogiri, Jawa**	**63.23**	**270**	P	**P**	**13 08 30.0**	**-0.5**
	comp=Z,3µmcomp=Z,168nm,1.6s						
INU	**Inuyama**	**63.23**	**326**	P	**P**	**13 08 29.5**	**-0.5**
JGF	**Kuroka**	**63.24**	**326**	P	**P**	**13 08 28.6**	**-1.5**
MJAR	**Matsushiro Arr**	**63.50**	**327**	P	**P**	**13 08 31.2**	**-0.6**
	comp=Z,24nm,1.1s,baz=154,slow=7.5,SNR=41						
MJAR				LR	LR	13 36 28.2	
	comp=Z,1µm,18.4s,baz=115,slow=36						
MJAR	**Matsushiro Arr**	**63.50**	**327**	P	**P**	**13 08 30.0**	**-1.8**
MAJO	**Matsushiro**	**63.50**	**327**	*c i*P	**P**	**13 08 30.7**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,66nm,1.3s						
MAJO	**Matsushiro**	**63.50**	**327**	P	**P**	**13 08 30.4**	**-1.4**
MAJO				IAmb	IAmb	13 08 32.4	
	comp=Z,62nm,1.2s						
MAT	**Matsushiro**	**63.50**	**327**	P	**P**	**13 08 30.5**	**-1.3**
MAT				*e*S	**S**	**13 17 09.0**	**+3.9**
UWJI	**Ujung Watu**	**63.58**	**271**	P	**P**	**13 08 32.0**	**-0.8**
	comp=Z,5µmcomp=Z,218nm,1.5s						
UGM	**Wanagama**	**63.60**	**269**	P	**P**	**13 08 33.4**	**+0.5**
	comp=Z,289nm,1.5s						
SMRI	**Semarang**	**63.90**	**270**	P	**P**	**13 08 35.2**	**+0.3**
	comp=Z,121nm,1.7s						
SMRI	**Semarang**	**63.90**	**270**	P	**P**	**13 08 36.0**	**+1.1**
PBKI	**Pangkalan Bun**	**63.92**	**275**	P	**P**	**13 08 36.3**	**+1.2**
	comp=Z,4µmcomp=Z,275nm,2.0s						
JWT	**Wachi**	**64.07**	**324**	P	**P**	**13 08 35.1**	**-0.4**
JWT				IAmb	IAmb	13 08 36.8	
	comp=Z,74nm,1.4s						
JSD	**Sado**	**64.62**	**328**	P	**P**	**13 08 38.9**	**-0.1**
JSD				IAmb	IAmb	13 08 40.1	
	comp=Z,78nm,1.3s						
CASY	**Casey**	**64.68**	**204**	P	**P**	**13 08 37.8**	**-1.3**
CASY				IAmb	IAmb	13 08 39.4	
	comp=Z,72nm,1.2s						
CASY	**Casey**	**64.68**	**204**	IAMs_20	IAMs_20	13 30 35.1	
	comp=Z,8µm,22.0s						
STKI	**Sintang**	**64.95**	**278**	P	**P**	**13 08 42.9**	**+1.1**
	comp=Z,115nm,1.5s						
SBUM	**Sibu**	**65.02**	**281**	P	**P**	**13 08 44.0**	**+1.8**
SBUM	**Sibu**	**65.02**	**281**	P	**P**	**13 08 41.8**	**-0.5**
SBUM				IAmb	IAmb	13 08 47.2	
	comp=Z,132nm,1.6s						
JHS	**Saijyo**	**65.17**	**323**	P	**P**	**13 08 43.0**	**+0.2**
JHS				IAmb	IAmb	13 08 47.3	
	comp=Z,99nm,1.5s						
JNU	**Nakatsue**	**65.22**	**320**	P	**P**	**13 08 41.9**	**-1.3**
	comp=Z,26nm,0.9s,baz=85,slow=3.9,SNR=5.1						
CMJI	**Cimerak**	**65.62**	**269**	P	**P**	**13 08 46.0**	**-0.1**
	comp=Z,93nm,0.9s						
TWG	**Pinlang**	**65.98**	**305**	IAMs_20	IAMs_20	13 31 46.9	
	comp=Z,9µm,22.0s						
NACB	**Ninganchiao**	**66.29**	**307**	P	**P**	**13 08 49.4**	**-0.7**
NACB				IAMs_20	IAMs_20	13 32 09.3	
	comp=Z,9µm,22.0s						
LEM	**Lembang**	**66.66**	**270**	P	**P**	**13 08 52.5**	**-0.5**
	comp=Z,113nm,0.6s,baz=108,slow=5.5,SNR=16						
LEM				LR	LR	13 38 02.6	
	comp=Z,2µm,19.3s,baz=110,slow=36						
YHNB	**Yeheng**	**66.72**	**307**	P	**P**	**13 08 52.0**	**-1.1**
CNJI	**Cibinong**	**67.00**	**269**	P	**P**	**13 08 53.1**	**-1.9**
	comp=Z,3µmcomp=Z,284nm,1.5s						
ASAJ	**Asahikawa**	**67.52**	**335**	P	**P**	**13 08 57.2**	**-0.3**
	comp=Z,13nm,1.1s,baz=121,slow=5.9,SNR=2.4						
DBJI	**Dramaga**	**67.56**	**270**	P	**P**	**13 08 59.3**	**+0.7**
	comp=Z,158nm,1.4s						
SBJI	**Serang**	**68.27**	**270**	P	**P**	**13 09 03.1**	**+0.1**
	comp=Z,7µmcomp=Z,303nm,1.1s						
CGJI	**Cibinong**	**68.56**	**269**	P	**P**	**13 09 03.7**	**-1.1**
	comp=Z,3µmcomp=Z,235nm,1.4s						
QZH	**Quanzhou**	**69.01**	**306**	⇓*i*P	**P**	**13 09 10.9**	**+3.5**
QZH				S	**S**	**13 18 13.0**	**+0.5**
QZH				pmax	pmax		
	comp=Z,980nm,4.7s						
QZH				LR	LR		
	comp=Z,4µm,20.8s						
QZH				LR	LR		
	comp=Z,3µm,21.2s						
QZH				LR	LR		
	comp=Z,5µm,21.2s						
SKR	**Severo-Kuril's**	**69.22**	**347**	*e*P	**P**	**13 09 06.7**	**-1.3**
SKR				*e*S	**S**	**13 18 12.6**	**-1.3**
SKR				*e*SS	**SS**	**13 22 46.5**	**+5.6**
SKR				pmax	pmax		
	comp=Z,84nm,1.3s						
BLSI	**Bandar Lampung**	**69.32**	**271**	P	**P**	**13 09 09.4**	**-0.2**
PPBI	**Pangkal Pinang**	**69.37**	**274**	P	**P**	**13 09 10.3**	**+0.5**
	comp=Z,14µmcomp=Z,55nm,0.4s						
TJN	**Taejon**	**69.54**	**320**	*c i*P	**P**	**13 09 09.3**	**-1.1**
YSS	**Yuzh-Sakhalins**	**69.82**	**337**	*e*P	**P**	**13 09 12.3**	**+0.4**
YSS				*e*S	**S**	**13 18 20.6**	**-0.6**
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
RPN	**Rapa Nui**	**69.84**	**113**	IAMs_20	IAMs_20	13 31 43.4	
	comp=Z,5µm,20.0s						
KSRS	**Korea Array**	**69.91**	**321**	P	**P**	**13 09 13.2**	**+0.6**
	comp=Z,6.5nm,1.0s,baz=132,slow=6.2,SNR=4.9						
KSRS				LR	LR	13 37 06.9	
	comp=Z,984nm,20.2s,baz=130,slow=34						
KSAR	**Wonju Array Be**	**69.93**	**321**	P	**P**	**13 09 12.8**	**+0.1**
KSAR	**Wonju Array Be**	**69.93**	**321**	P	**P**	**13 09 12.8**	**+0.1**
KASI	**Kota Agung**	**70.00**	**270**	P	**P**	**13 09 12.0**	**-1.7**
	comp=Z,3µmcomp=Z,197nm,1.7s						
KLSI		**70.00**	**271**	P	**P**	**13 09 13.8**	**+0.1**
	comp=Z,808nmcomp=Z,25nm,1.5s						
SSE	**Sheshan**	**70.41**	**313**	P	**P**	**13 09 15.6**	**-0.2**
SSE				S	**S**	**13 18 30.9**	**+2.2**
SSE				pmax	pmax		
	comp=Z,30nm,0.7s						
SSE				pmax	pmax		
	comp=Z,790nm,11.9s						
SSE				LR	LR		
	comp=Z,960nm,19.9s						
SSE				LR	LR		
	comp=Z,1µm,19.7s						
PMBI	**Palembang**	**70.45**	**273**	P	**P**	**13 09 18.6**	**+2.1**
	comp=Z,322nm,1.4s						
LWLI	**Liwa**	**70.55**	**271**	P	**P**	**13 09 17.0**	**-0.3**
	comp=Z,218nm,1.2s						
MDSI	**Maura Dua**	**70.58**	**271**	P	**P**	**13 09 16.0**	**-1.3**
	comp=Z,46nm,1.9s						
INCN	**Inchon**	**70.70**	**321**	P	**P**	**13 09 18.0**	**+0.4**
INCN				pmax	pmax		
	comp=Z,62nm,1.5s						
INCN	**Inchon**	**70.70**	**321**	P	**P**	**13 09 18.0**	**+0.4**
INCN				IAmb	IAmb	13 09 34.5	
	comp=Z,62nm,1.4s						
NIKH	**Nikolski High**	**70.79**	**10**	P	**P**	**13 09 17.3**	**-0.3**
NIKH	**Nikolski High**	**70.79**	**10**	P	**P**	**13 09 15.7**	**-1.9**
	baz=196						
TEY	**Ternei**	**70.81**	**332**	⇑*e*P	**P**	**13 09 17.3**	**-0.7**
TEY				pmax	pmax		
	comp=Z,10.0nm,1.7s						
PET	**Petropavlovsk**	**70.95**	**349**	*e*P	P	13 09 25.0	+6.4
PET				*e*S	**S**	**13 18 38.5**	**+4.4**
PET				*e*SS	**SS**	**13 23 12.1**	**+4.6**
PET				pmax	pmax		
	comp=Z,95nm,1.5s						
PET	**Petropavlovsk**	**70.95**	**349**	P	**P**	**13 09 18.2**	**-0.4**
PEA0B	**Petropavlovsk-**	**71.20**	**349**	⇑*e*P	**P**	**13 09 21.8**	**+1.6**
PEA0B	**Petropavlovsk-**	**71.20**	**349**	P	**P**	**13 09 20.4**	**+0.2**
PETK	**Petropavlovsk-**	**71.20**	**349**	P	**P**	**13 09 20.8**	**+0.6**
	comp=Z,14nm,0.9s,baz=161,slow=9.4,SNR=11						
PETK				LR	LR	13 34 18.8	
	comp=Z,2µm,21.5s,baz=161,slow=31						
DSRI	**Dabo**	**71.35**	**275**	P	**P**	**13 09 22.9**	**+0.9**
	comp=Z,2µmcomp=Z,82nm,1.6s						
LHSI	**Lahat**	**71.39**	**272**	P	**P**	**13 09 22.8**	**+0.6**
	comp=Z,78nm,1.9s						
VLA	**Vladivostok**	**71.64**	**328**	*c i*P	**P**	**13 09 22.6**	**-0.4**
VLA				pmax	pmax		
	comp=Z,80nm,2.9s						
DLV	**T Lat**	**71.86**	**289**	P	**P**	**13 09 25.0**	**-0.2**
JMBI	**JAMBI**	**71.91**	**274**	P	**P**	**13 09 27.1**	**+1.8**
	comp=Z,3µmcomp=Z,138nm,1.4s						
UNV	**Unalaska Valle**	**72.04**	**11**	P	**P**	**13 09 24.0**	**-1.1**
	baz=198						
USA0B	**Ussuriysk Arra**	**72.37**	**329**	P	**P**	**13 09 27.4**	**0.0**
USA0B				pmax	pmax		
	comp=Z,75nm,1.8s						
USA0B	**Ussuriysk Arra**	**72.37**	**329**	P	**P**	**13 09 27.4**	**0.0**
USRK	**Ussuriysk Ar.**	**72.37**	**329**	P	**P**	**13 09 28.0**	**+0.7**
	comp=Z,5.4nm,1.0s,baz=186,slow=3.6,SNR=10						
USRK				LR	LR	13 36 44.5	
	comp=Z,2µm,19.9s,baz=110,slow=32						
USRK	**Ussuriysk Ar.**	**72.37**	**329**	P	**P**	**13 09 27.8**	**+0.4**
NJ2	**Nanjing**	**72.59**	**312**	⇑P	**P**	**13 09 28.0**	**-1.0**
NJ2				pP	**pP**	**13 09 31.4**	**-0.3**
NJ2				sP	**pwP**	**13 09 35.0**	**-0.2**
NJ2				PcP	**PcP**	**13 09 46.9**	**+0.4**
NJ2				S	**S**	**13 18 51.7**	**-2.2**
NJ2				sS	**pS**	**13 18 57.5**	**+0.2**
NJ2				SKS	**SKSac**	**13 19 27.2**	**-7.0**
NJ2				SS	**SS**	**13 23 37.3**	**+3.8**
NJ2				pmax	pmax		
	comp=Z,26nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,1µm,4.5s						
NJ2				LR	LR		
	comp=Z,4µm,16.9s						
NJ2				LR	LR		
	comp=Z,3µm,17.5s						
NJ2				LR	LR		
	comp=Z,4µm,18.6s						
MYKOM	**Kota Tinggi**	**72.73**	**277**	P	**P**	**13 09 30.0**	**-0.3**
MASI	**Maura Aman, Be**	**72.81**	**272**	P	**P**	**13 09 30.9**	**+0.1**
	comp=Z,3µmcomp=Z,179nm,1.4s						
TYV	**Tymovskoe**	**73.14**	**339**	*e*P	P	13 09 37.4	+5.6
TYV				pmax	pmax		
	comp=Z,800nm,5.7s						
TYV				pmax	pmax		
	comp=Z,33nm,1.4s						
QSPA	**South Pole Qui**	**73.29**	**180**	P	**P**	**13 09 32.0**	**-0.8**
	comp=Z,36nm,1.1s,baz=30,slow=2.3,SNR=45						
QSPA	**South Pole Qui**	**73.29**	**180**	P	**P**	**13 09 32.1**	**-0.8**
QSPA	**South Pole Qui**	**73.29**	**180**	IAMs_20	IAMs_20	13 36 00.7	
	comp=Z,5µm,22.0s						
QIZ	**Qiongzhong**	**73.46**	**296**	P	**P**	**13 09 34.3**	**-0.1**
QIZ				S	**S**	**13 19 04.6**	**+0.3**
QIZ				LR	LR		
	comp=Z,1µm,28.2s						
QIZ				LR	LR		
	comp=Z,2µm,24.6s						
QIZ				LR	LR		
	comp=Z,3µm,24.9s						
KRJI	**Kerinci**	**73.86**	**273**	P	**P**	**13 09 38.1**	**+1.0**
	comp=Z,5µmcomp=Z,188nm,1.1s						
MDJ	**Mudanjiang**	**73.87**	**328**	P	**P**	**13 09 36.8**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,17nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,1µm,7.7s						
JRMM	**Jerantut**	**74.69**	**279**	P	**P**	**13 09 42.0**	**+0.3**
BKNI	**Bangkinang**	**74.97**	**275**	P	**P**	**13 09 44.6**	**+1.2**
	comp=Z,4µmcomp=Z,203nm,1.7s						
WHN	**Wuhan**	**75.09**	**309**	⇓P	**P**	**13 09 44.0**	**+0.3**
WHN				S	**S**	**13 19 27.9**	**+5.8**
WHN				pmax	pmax		
	comp=Z,370nm,1.8s						
WHN				LR	LR		
	comp=Z,9µm,22.0s						
WHN				LR	LR		
	comp=Z,6µm,18.9s						
WHN				LR	LR		
	comp=Z,19µm,31.8s						
PDSI	**Padang**	**75.16**	**274**	P	**P**	**13 09 44.2**	**-0.3**

	comp=Z,18nm,0.6s						
PPI	Padang Panjang	75.35	274	P	P	13 09 47.0	+1.4
	comp=Z,6.4nm,0.5s						
GRNR	Gornyy	75.36	336	⇓iP	P	13 09 46.3	+1.5
GRNR				eS	S	13 19 30.8	+6.4
GRNR				pmax	pmax		
	comp=N,3.0nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GRNR				smax	smax		
	comp=N,2.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,550nm,17.0s						
GRNR				MLR	MLR		
	comp=N,720nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,18.0s						
CN2	Changchun	75.50	325	eP	P	13 09 44.0	-1.8
CN2				PP	PP	13 12 35.5	+0.2
CN2				S	S	13 19 23.4	-2.8
CN2				pmax	pmax		
	comp=Z,50nm,1.2s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
COCO	West Island	75.61	261	IAMs_20	IAMs_20	13 39 59.8	
	comp=Z,5µm,21.0s						
UBPT	Khong Chiam	75.83	291	P	P	13 09 47.5	-0.7
UBPT				IAmb	IAmb	13 09 52.5	
	comp=Z,184nm,1.9s						
TIA	Tai'an	76.06	315	⇓P	P	13 09 49.2	0.0
TIA				S	S	13 19 29.6	-3.2
TIA				SS	SS	13 24 25.1	-1.2
TIA				pmax	pmax		
	comp=Z,31nm,1.3s						
TIA				pmax	pmax		
	comp=Z,2µm,11.5s						
TIA				LR	LR		
	comp=Z,2µm,18.6s						
TIA				LR	LR		
	comp=Z,1µm,16.7s						
TIA				LR	LR		
	comp=Z,3µm,20.6s						
KLR	Kul'dur	76.15	332	P	P	13 09 49.4	0.0
	comp=Z,9.2nm,1.2s,baz=119,slow=7.4,SNR=8.3						
KLR	Kul'dur	76.15	332	ceP	P	13 09 50.1	+0.7
KLR				pmax	pmax		
	comp=Z,44nm,1.8s						
IPM	Ipoh	76.25	279	P	P	13 09 51.0	+0.3
IPM	Ipoh	76.25	279	P	P	13 09 50.6	-0.1
SISI	Saibi	76.35	273	P	P	13 09 52.0	+0.7
	comp=Z,1µmcomp=Z,60nm,1.5s						
MNSI	Mandailing Nat	76.50	275	P	P	13 09 51.4	-0.7
	comp=Z,2µmcomp=Z,27nm,0.4s						
KULM	Kulim	76.85	280	P	P	13 09 55.0	+0.9
KULM	Kulim	76.85	280	P	P	13 09 53.2	-1.0
SII	Sitkinak Islan	77.41	17	P	P	13 09 55.5	-0.8
	baz=210						
PSI	Prapat	77.72	277	P	P	13 09 58.2	-0.9
	comp=Z,22nm,1.0s,baz=169,slow=3.4,SNR=16						
PSI				LR	LR	13 45 14.9	
	comp=Z,1µm,20.6s,baz=122,slow=36						
OHAK	Old Harbor	78.23	17	P	P	13 10 01.9	+1.2
OHAK				IAmb	IAmb	13 10 05.7	
	comp=Z,93nm,1.1s						
OHAK	Old Harbor	78.23	17	P	P	13 10 00.3	-0.5
	baz=211						
GSI	Gunungsitoli	78.56	275	P	P	13 10 04.3	+0.6
	comp=Z,2µmcomp=Z,84nm,1.3s						
GSI	Gunungsitoli	78.56	275	P	P	13 10 03.6	-0.1
MA2	Magadan	78.63	348	⇑eP	P	13 10 05.4	+2.4
MA2				pmax	pmax		
	comp=Z,82nm,1.6s						
ENH	Enshi	78.65	306	P	P	13 10 03.4	-0.5
ENH				IAmb	IAmb	13 10 26.5	
	comp=Z,148nm,1.5s						
BJT	Baijiatuau	78.77	318	P	P	13 10 04.1	-0.1
BJT				pmax	pmax		
	comp=Z,72nm,1.5s						
BJT	Baijiatuau	78.77	318	P	P	13 10 04.1	-0.1
BJI	Beijing	78.78	318	P	P	13 10 03.6	-0.6
BJI				pP	pP	13 10 07.4	+0.5
BJI				S	S	13 20 06.0	+4.0
BJI				ScS	ScS	13 20 25.6	-0.3
BJI				SS	SS	13 25 09.6	+2.5
BJI				pmax	pmax		
	comp=Z,32nm,1.3s						
BJI				pmax	pmax		
	comp=Z,910nm,3.7s						
SRIT	Nakonsritamara	78.89	283	P	P	13 10 05.9	+0.4
KDAK	Kodiak Island	78.91	17	P	P	13 10 05.4	+0.9
	comp=Z,40nm,1.0s,baz=351,slow=3.8,SNR=5.0						
KDAK	Kodiak Island	78.91	17	P	P	13 10 04.7	+0.2
	baz=211						
KCSI	Kotacane, Aceh	79.04	277	P	P	13 10 07.5	+1.2
	comp=Z,36nm,1.5s						
GYA	Guiyang	79.23	302	⇓P	P	13 10 07.6	+0.4
GYA				pP	pP	13 10 10.4	+0.5
GYA				S	S	13 20 08.7	+1.0
GYA				ScS	ScS	13 20 29.6	-0.9
GYA				pmax	pmax		
	comp=Z,33nm,1.6s						
GYA				pmax	pmax		
	comp=Z,990nm,3.5s						
GYA				LR	LR		
	comp=Z,2µm,20.9s						
GYA				LR	LR		
	comp=Z,2µm,18.9s						
GYA				LR	LR		
	comp=Z,3µm,19.6s						
SLVN	Son La	79.49	296	IAmb	IAmb	13 10 13.9	
	comp=Z,108nm,1.5s						
Q19K	Cape Douglas,	79.61	16	P	P	13 10 08.2	-0.2
	baz=210						
P18K	Big Mountain,	79.61	15	IAmb	IAmb	13 10 12.7	
	comp=Z,118nm,1.1s						
P18K	Big Mountain,	79.61	15	P	P	13 10 07.7	-0.7
	baz=209						
MCCM	Marconi Confer	79.65	45	IAMs_20	IAMs_20	13 39 28.9	
	comp=Z,4µm,19.0s						
SAO	San Andreas Ge	79.94	47	P	P	13 10 11.9	+1.2
SAO				pmax	pmax		
	comp=Z,36nm,1.2s						
SAO	San Andreas Ge	79.94	47	P	P	13 10 11.9	+1.2
HOPS	Hopland Field	79.95	44	IAMs_20	IAMs_20	13 36 49.0	
	comp=Z,4µm,20.0s						
O18K	Koktuh Hills	80.02	15	P	P	13 10 10.2	-0.5
O18K				IAmb	IAmb	13 10 15.1	
	comp=Z,133nm,1.4s						
O18K	Koktuh Hills	80.02	15	P	P	13 10 09.9	-0.7
	baz=209						
TIY	Taiyuan	80.05	314	⇑P	P	13 10 11.5	+0.1
TIY				S	S	13 20 17.9	+2.1
TIY				pmax	pmax		
	comp=Z,45nm,0.8s						
TIY				LR	LR		
	comp=Z,2µm,16.4s						
TIY				LR	LR		
	comp=Z,2µm,19.0s						
TIY				LR	LR		
	comp=Z,2µm,17.2s						
KMRM	Mail Ridge	80.17	43	P	P	13 10 11.3	-0.7
KMRM				IAmb	IAmb	13 10 30.6	
	comp=Z,110nm,1.3s						
PKM	Mcpherson Peak	80.20	49	P	P	13 10 10.3	-2.1
	baz=242						
SCI2	San Clemente I	80.24	51	P	P	13 10 11.2	-1.2
	baz=243						
JCC	Jacoby Creek,	80.28	42	IAMs_20	IAMs_20	13 42 45.5	
	comp=Z,5µm,19.0s						
LHMI	Lhok Sumawe	80.34	278	P	P	13 10 14.2	+0.8
P19K	Oil Pt	80.34	16	P	P	13 10 11.4	-1.0
	baz=210						
O19K	Port Alsworth	80.54	15	IAmb	IAmb	13 10 17.7	
	comp=Z,140nm,1.2s						
O19K				IAMs_20	IAMs_20	13 38 16.8	
	comp=Z,4µm,21.0s						
O19K	Port Alsworth	80.54	15	P	P	13 10 13.1	-0.2
	baz=209,SNR=15						
O02D	Mt. Diablo Mer	80.75	43	P	P	13 10 13.0	-2.1
	baz=239						
CNPM	China Poot	80.76	17	IAMs_20	IAMs_20	13 37 43.8	
	comp=Z,6µm,20.0s						
XAN	Xi'an	80.79	310	P	P	13 10 15.8	+0.4
XAN				pP	PcP	13 10 22.1	0.0
XAN				S	S	13 20 25.4	+1.7
XAN				pmax	pmax		
	comp=Z,31nm,1.5s						
XAN				pmax	pmax		
	comp=Z,1µm,4.9s						
XAN				LR	LR		
	comp=Z,2µm,25.6s						
XAN				LR	LR		
	comp=Z,2µm,30.6s						
XAN				LR	LR		
	comp=Z,7µm,26.5s						
O20K	Slope Mountain	80.87	16	P	P	13 10 13.7	-1.5
	baz=211						
ARVC	Arvin	81.02	49	P	P	13 10 14.7	-1.9
	baz=242						
N19K	Bonanza Creek	81.04	14	P	P	13 10 15.1	-1.1
	baz=209						
PASC	Pasadena Art C	81.06	50	IAMs_20	IAMs_20	13 38 10.4	
	comp=Z,6µm,20.0s						
BRLK	Bradley Lake	81.06	17	IAmb	IAmb	13 10 21.5	
	comp=Z,87nm,0.9s						
BRSE	Bradley Lake S	81.08	17	P	P	13 10 16.5	+0.2
	baz=213						
WDC	Whiskeytown Da	81.12	43	IAMs_20	IAMs_20	13 38 38.8	
	comp=Z,5µm,20.0s						
N02D	Trinity Center	81.22	43	P	P	13 10 17.1	-0.5
	baz=239						
109C	Camp Elliot, M	81.29	52	IAMs_20	IAMs_20	13 37 24.6	
	comp=Z,6µm,22.0s						
M02C	Callahan	81.34	42	P	P	13 10 17.6	-0.6
	baz=239						
ZEA	Zeya	81.34	333	eP	P	13 10 19.1	+1.3
ZEA				eS	S	13 20 32.6	+4.1
ZEA				eSS	SS	13 25 47.1	+2.1
ZEA				pmax	pmax		
	comp=N,300nm,5.2s						
ZEA				pmax	pmax		
	comp=Z,500nm,5.6s						
ZEA				pmax	pmax		
	comp=E,10.0nm,1.5s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.8s						
ZEA				smax	smax		
	comp=Z,600nm,12.9s						
ZEA				smax	smax		
	comp=E,900nm,17.2s						
ZEA				smax	smax		
	comp=N,1µm,17.0s						
SEY	Seymchan	81.42	350	P	P	13 10 19.2	+1.2
	comp=N,16nm,1.0s,baz=150,slow=4.9,SNR=11						
O03E	Paynes Creek	81.46	44	P	P	13 10 18.2	-0.6
	baz=240						
EDW2	Edwards Air Fo	81.52	50	P	P	13 10 18.3	-1.0
	baz=243,SNR=17						
ISA	Isabella, Lake	81.53	49	P	P	13 10 19.4	+0.1
	baz=242,SNR=22						
MURC	Murrieta	81.53	51	P	P	13 10 19.3	0.0
	baz=244,SNR=5.5						
YBH	Yreka Blue Hor	81.61	42	IAMs_20	IAMs_20	13 41 39.6	
	comp=Z,4µm,19.0s						
MONP2	Monument Peak	81.80	52	P	P	13 10 20.9	-0.2
	baz=244,SNR=5.9						
HUMO	Hull Mountain	81.90	41	IAMs_20	IAMs_20	13 37 13.5	
	comp=Z,4µm,22.0s						
KMI	Kunming	81.93	299	⇓P	P	13 10 22.5	+0.6
KMI				pP	sP	13 10 25.2	-0.3
KMI				S	S	13 20 32.9	-3.4
KMI				sS	pS	13 20 40.2	+0.5
KMI				SS	SS	13 25 50.7	-4.6
KMI				pmax	pmax		
	comp=Z,28nm,1.2s						
KMI				LR	LR		
	comp=Z,2µm,19.4s						
KMI				LR	LR		
	comp=Z,3µm,24.5s						
KMI				LR	LR		
	comp=Z,3µm,24.5s						
SPCR	Spurr Chakacha	81.93	15	P	P	13 10 21.0	+0.2
	baz=211						
IKP	In-Ko-Pah, Jac	81.94	53	P	P	13 10 21.2	-0.4
	baz=244						
O22K	Cooper Landing	81.98	17	IAMs_20	IAMs_20	13 38 21.0	
	comp=Z,4µm,21.0s						
O22K	Cooper Landing	81.98	17	P	P	13 10 21.5	+0.5
	baz=214						
M19K	Big River Lodg	82.02	14	IAMs_20	IAMs_20	13 41 08.8	
	comp=Z,4µm,20.0s						
M19K	Big River Lodg	82.02	14	P	P	13 10 21.7	+0.5
	baz=209						
LRMC	Laurel Mtn Rad	82.02	49	P	P	13 10 21.0	-1.0
	baz=243,SNR=11						
BBRC	Big Bear Solar	82.03	51	P	P	13 10 21.5	-0.7
	baz=244						
PFO	Pinyon Flats O	82.09	52	P	P	13 10 23.9	+1.5
PFO				pmax	pmax		
	comp=Z,46nm,1.7s						
PFO	Pinyon Flats O	82.09	52	P	P	13 10 23.9	+1.5
PFO	Pinyon Flats O	82.09	52	IAMs_20	IAMs_20	13 37 56.9	
	comp=Z,6µm,21.0s						
PFO	Pinyon Flats O	82.09	52	P	P	13 10 22.0	-0.4
	baz=244						
TPFO	Pinon Flats	82.09	52	P	P	13 10 23.0	+0.6
	baz=244						
L04D	Klamath Falls	82.11	42	P	P	13 10 22.6	+0.2
	baz=239						
L19K	White Mountain	82.15	14	P	P	13 10 22.4	+0.5
L19K				IAMs_20	IAMs_20	13 41 24.4	
	comp=Z,5µm,19.0s						
L19K	White Mountain	82.15	14	P	P	13 10 21.8	-0.1
	baz=209,SNR=30						
CWC	Cottonwood Cre	82.17	48	P	P	13 10 23.4	+0.6
	baz=243						
MLAC	Mammoth, Mammo	82.18	47	P	P	13 10 22.5	-0.4
	baz=242						
M04C	Macdoel	82.19	42	P	P	13 10 21.9	-0.9
	baz=239						
HHC	Hu-ho-hao-te	82.20	317	eP	P	13 10 22.9	+0.1
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,1µm,7.9s						
I03D	Drain, OR	82.23	40	P	P	13 10 21.4	-1.3
	baz=238						
SWSC	Sam W. Stewart	82.30	52	P	P	13 10 23.3	0.0
	baz=244						
PNTR	Pine Nut	82.35	45	IAmb	IAmb	13 10 29.6	
	comp=Z,38nm,0.9s						
MPMC	Manual Prospec	82.42	49	P	P	13 10 23.3	-0.9
	baz=243,SNR=26						
RC01	Rabbit Creek A	82.48	16	IAmb	IAmb	13 10 29.0	
	comp=Z,113nm,1.2s						
RC01				IAMs_20	IAMs_20	13 39 47.3	
	comp=Z,4µm,21.0s						
RC01	Rabbit Creek A	82.48	16	P	P	13 10 23.9	+0.2
	baz=214,SNR=12						
SUA	Susitna One	82.53	16	IAmb	IAmb	13 10 31.5	
	comp=Z,56nm,1.0s						
TTA	Tatalina	82.56	13	P	P	13 10 25.0	+0.9
TTA				pmax	pmax		
	comp=Z,95nm,1.2s						
TTA	Tatalina	82.56	13	P	P	13 10 25.0	+0.9
TTA				IAmb	IAmb	13 10 31.9	
	comp=Z,95nm,1.2s						
TTA	Tatalina	82.56	13	P	P	13 10 24.4	+0.3
	baz=208,SNR=38						
GSC	Goldstone, Bar	82.58	50	IAmb	IAmb	13 10 29.7	
	comp=Z,110nm,1.9s						
GSC	Goldstone, Bar	82.58	50	P	P	13 10 24.1	-0.8
	baz=244,SNR=6.3						
BELC	Belle Mtn. Jos	82.61	51	P	P	13 10 24.0	-1.1
	baz=244,SNR=10						
L20K	Farewell, AK	82.64	14	P	P	13 10 24.2	-0.3
	baz=210						
PWL	Port Wells	82.68	17	IAMs_20	IAMs_20	13 40 13.5	
	comp=Z,4µm,20.0s						
PWL	Port Wells	82.68	17	P	P	13 10 25.2	+0.4
	baz=215						
LHV	Little Huntoon	82.71	47	IAmb	IAmb	13 10 31.6	
	comp=Z,57nm,1.2s						
HEC	Hector,Ludlow	82.72	50	P	P	13 10 25.2	-0.4
	baz=244,SNR=6.5						
PAHR	Pah Rah Range	82.79	45	IAmb	IAmb	13 10 30.8	
	comp=Z,118nm,1.8s						
CMAR	Chiang Mai Arr	82.80	292	P	P	13 10 26.9	+0.7
	comp=Z,25nm,1.0s,baz=119,slow=3.7,SNR=87						
CMAR				LR	LR	13 44 28.2	
	comp=Z,1µm,21.9s,baz=128,slow=34						
CMAR	Chiang Mai Arr	82.80	292	iP	P	13 10 27.5	+1.2
CMAR				pmax	pmax		
	comp=Z,25nm,1.0s						
MAW	Mawson	82.82	201	P	P	13 10 25.1	-0.4
	comp=Z,18nm,1.0s,baz=88,slow=4.5,SNR=9.4						
MAW				LR	LR	13 43 55.5	
	comp=Z,3µm,18.8s,baz=97,slow=33						
MAW	Mawson	82.82	201	P	P	13 10 25.6	+0.2
	baz=83,SNR=5.0						
MAW	Mawson	82.82	201	P	P	13 10 25.1	-0.4
HIN	Hinchinbrook I	82.83	18	IAMs_20	IAMs_20	13 39 16.6	
	comp=Z,5µm,18.0s						
LCH	Last Change Ra	82.84	48	IAmb	IAmb	13 11 05.1	
	comp=Z,107nm,2.0s						
I04A	Tendick Farm,	82.86	40	P	P	13 10 25.4	-0.7
	baz=239						
BC3	Big Chuckawall	82.86	52	P	P	13 10 26.2	-0.3
	baz=245,SNR=9.8						
CHTO	Chiang Mai	82.92	292	P	P	13 10 25.8	-1.1
CHTO				pmax	pmax		
	comp=Z,164nm,1.5s						
CHTO	Chiang Mai	82.92	292	P	P	13 10 25.8	-1.1
NVAR	Mina Array Bea	82.93	47	P	P	13 10 27.9	+1.0
	comp=Z,13nm,0.9s,baz=228,slow=7.2,SNR=38						
NVAR				LR	LR	13 40 11.9	
	comp=Z,7µm,20.1s,baz=262,slow=30						
M22K	Willow	82.94	16	P	P	13 10 26.2	+0.3
	baz=213,SNR=19						
NV11	Mina Array Sit	83.03	47	IAmb	IAmb	13 10 33.0	
	comp=Z,69nm,1.4s						
GLI	Glacier Island	83.05	18	IAmb	IAmb	13 10 31.4	
	comp=Z,74nm,1.1s						
GLI				IAMs_20	IAMs_20	13 39 18.3	
	comp=Z,5µm,21.0s						
GLI	Glacier Island	83.05	18	P	P	13 10 26.7	+0.1
	baz=216						
FURC	Furnace Creek,	83.06	49	P	P	13 10 26.8	-0.3
	baz=243,SNR=7.5						
PMR	Palmer	83.07	16	P	P	13 10 26.8	+0.1
	baz=214,SNR=13						
GLA	Glamis	83.08	53	IAmb	IAmb	13 10 35.4	
	comp=Z,140nm,2.0s						
GLA	Glamis	83.08	53	P	P	13 10 27.2	-0.3
	baz=245,SNR=6.2						
KNK	Knik Glacier	83.10	17	IAmb	IAmb	13 10 31.6	
	comp=Z,70nm,1.2s						
KNK	Knik Glacier	83.10	17	P	P	13 10 27.3	+0.4
	baz=215						
FID	Port Fidalgo	83.12	18	IAMs_20	IAMs_20	13 40 56.9	
	comp=Z,5µm,20.0s						
GMRC	Granite Mounta	83.20	51	P	P	13 10 27.1	-1.1
	baz=244,SNR=6.1						
MOD	Modoc Plateau	83.24	43	IAmb	IAmb	13 10 43.8	
	comp=Z,55nm,1.5s						
GHO	Glory Hole Cre	83.27	16	IAMs_20	IAMs_20	13 39 28.1	
	comp=Z,5µm,22.0s						
K05A	Summer Lake	83.27	42	IAmb	IAmb	13 10 34.5	
	comp=Z,81nm,1.2s						
TUQ	Turquoise Moun	83.28	50	P	P	13 10 28.7	+0.1
	baz=244,SNR=15						
IRM	Iron Mountain	83.31	52	P	P	13 10 29.0	+0.4
	baz=245,SNR=22						
J05D	Fort Rock, OR	83.34	41	P	P	13 10 28.6	-0.2
	baz=240						
KVN	Kaiserville	83.36	46	IAmb	IAmb	13 10 34.6	
	comp=Z,42nm,1.1s						
K20K	Telida	83.36	13	IAMs_20	IAMs_20	13 42 23.3	
	comp=Z,4µm,20.0s						
K20K	Telida	83.36	13	P	P	13 10 28.7	+0.5
	baz=210						
SLBS	Sierra La Lagu	83.37	63	IAmb	IAmb	13 10 47.0	
	comp=Z,66nm,1.3s						
SLBS	Sierra La Lagu	83.37	63	IAMs_20	IAMs_20	13 37 58.1	
	comp=Z,5µm,21.0s						
CD2	Chengdu	83.38	305	⇓iP	P	13 10 30.0	+0.9
CD2				pP	pP	13 10 32.3	+0.5
CD2				sP	PcP	13 10 33.7	+0.2
CD2				S	S	13 20 50.8	+0.3
CD2				pmax	pmax		
	comp=Z,40nm,0.8s						
CD2				pmax	pmax		
	comp=Z,1µm,6.1s						
CD2				LR	LR		
	comp=Z,6µm,24.7s						
CD2				LR	LR		
	comp=Z,7µm,22.0s						
CD2				LR	LR		
	comp=Z,8µm,23.5s						
PPLA	Purkeypile	83.39	14	IAmb	IAmb	13 11 24.7	
	comp=Z,77nm,1.5s						
PPLA	Purkeypile	83.39	14	P	P	13 10 29.1	+0.6
	baz=211						
CUT	Chulitna	83.45	15	P	P	13 10 28.1	-0.5
	baz=213,SNR=19						
SML	Sawmill	83.46	16	P	P	13 10 28.2	-0.6
	baz=215,SNR=6.6						
DIV	Divide	83.64	18	IAmb	IAmb	13 10 34.1	
	comp=Z,83nm,1.2s						
BERG	Berg Lake	83.69	19	IAMs_20	IAMs_20	13 51 59.3	
	comp=Z,5µm,19.0s						
SCM	Sheep Creek Mo	83.76	17	P	P	13 10 30.3	-0.1
	baz=216,SNR=7.3						
PINE	Pine Mountain	83.78	41	IAmb	IAmb	13 10 36.9	
	comp=Z,67nm,1.1s						
I05D	Terrebonne, OR	83.80	40	P	P	13 10 30.1	-0.9
	baz=240						
BMRM	Bremner River	83.86	18	IAMs_20	IAMs_20	13 39 17.7	
	comp=Z,4µm,21.0s						
BMRM	Bremner River	83.86	18	P	P	13 10 29.4	-1.4
	baz=218						
CAST	Castle Rocks	83.86	14	IAMs_20	IAMs_20	13 42 58.7	
	comp=Z,4µm,20.0s						
CAST	Castle Rocks	83.86	14	P	P	13 10 30.6	-0.2
	baz=211,SNR=12						
KLU	Klutina	83.88	18	IAmb	IAmb	13 10 40.7	
	comp=Z,79nm,1.4s						
KLU				IAMs_20	IAMs_20	13 38 45.3	
	comp=Z,7µm,22.0s						
KLU	Klutina	83.88	18	P	P	13 10 30.8	-0.2
	baz=217						
NEE2	Needles Airpor	83.96	51	P	P	13 10 31.7	-0.3
	baz=245						
WAX	Waxell Ridge	84.00	19	IAMs_20	IAMs_20	13 41 18.5	
	comp=Z,5µm,20.0s						
GCSA	Galena City Sc	84.00	12	P	P	13 10 31.8	+0.4
	baz=207,SNR=19						
J20K	Nowinta River	84.06	13	P	P	13 10 31.6	-0.1
J20K				IAmb	IAmb	13 10 36.7	
	comp=Z,93nm,1.4s						
J20K				IAMs_20	IAMs_20	13 42 35.8	
	comp=Z,5µm,20.0s						
J20K	Nowinta River	84.06	13	P	P	13 10 31.4	-0.3
	baz=209						
MESA	MESA	84.08	20	P	P	13 10 32.1	0.0
	baz=221						
PDMCI	Parker Dam,Lak	84.13	52	P	P	13 10 31.6	-1.1
	baz=245,SNR=6.2						
CRQM	Cirque	84.14	19	IAmb	IAmb	13 10 37.7	
	comp=Z,50nm,1.0s						
CRQM				IAMs_20	IAMs_20	13 39 52.7	
	comp=Z,4µm,21.0s						
CRQE	Cirque	84.16	19	P	P	13 10 32.4	-0.1
	baz=220						
214A	Organ Pipe Nat	84.19	54	P	P	13 10 33.1	-0.1
214A				IAmb	IAmb	13 10 52.3	
	comp=Z,51nm,1.4s						
214A	Organ Pipe Nat	84.19	54	P	P	13 10 32.8	-0.4
	baz=246						
E04D	Cinebar	84.21	38	P	P	13 10 31.5	-1.3
	baz=238						
CHUM	Lake Minchumin	84.21	14	P	P	13 10 31.8	-0.7
	baz=211,SNR=14						
TGL	Tana Glacier	84.24	19	IAMs_20	IAMs_20	13 38 13.9	
	comp=Z,4µm,20.0s						
WAT1	Susitna Watana	84.24	16	P	P	13 10 32.9	+0.2
	baz=215						
WAT6	Susitna Watana	84.25	16	P	P	13 10 32.6	-0.4
	baz=215,SNR=17						
KTH	Kantishna Hill	84.25	15	IAMs_20	IAMs_20	13 43 19.1	
	comp=Z,4µm,21.0s						
ISLE	Juniper Island	84.28	20	IAmb	IAmb	13 10 38.2	
	comp=Z,63nm,1.0s						
ISLE				IAMs_20	IAMs_20	13 40 37.0	
	comp=Z,5µm,22.0s						

M24K	**Tolsona, Glenn**	**84.30**	**17**	P	**P**	**13 10 32.1**	**-1.0**
	baz=217,SNR=8.0						
SHPR	**Sheep Range**	**84.31**	**49**	IAmb	IAmb	13 10 39.9	
	comp=Z,43nm,1.2s						
TRF	**Thorofare Moun**	**84.32**	**15**	IAMs_20	IAMs_20	13 41 12.8	
	comp=Z,4µm,22.0s						
TRF	**Thorofare Moun**	**84.32**	**15**	P	**P**	**13 10 33.0**	**-0.3**
	baz=213,SNR=14						
N25K	**Chitina, Valde**	**84.36**	**18**	IAMs_20	IAMs_20	13 40 17.0	
	comp=Z,4µm,20.0s						
N25K	**Chitina, Valde**	**84.36**	**18**	P	**P**	**13 10 33.0**	**-0.4**
	baz=218,SNR=16						
VRDI	**Verde Repeater**	**84.41**	**19**	IAmb	IAmb	13 10 38.2	
	comp=Z,73nm,1.2s						
VRDI				IAMs_20	IAMs_20	13 38 21.4	
	comp=Z,4µm,21.0s						
GLB	**Gilahina Butte**	**84.47**	**18**	IAmb	IAmb	13 10 38.3	
	comp=Z,74nm,1.2s						
TABL	**Table Mountain**	**84.55**	**20**	IAMs_20	IAMs_20	13 40 37.0	
	comp=Z,6µm,20.0s						
WVOR	**Wild Horse Val**	**84.58**	**43**	IAmb	IAmb	13 10 40.9	
	comp=Z,40nm,1.1s						
BMN	**Battle Mountai**	**84.59**	**45**	IAmb	IAmb	13 10 41.0	
	comp=Z,50nm,1.2s						
MCARA	**McCarthy VSAT**	**84.66**	**19**	IAmb	IAmb	13 10 40.1	
	comp=Z,72nm,1.2s						
MCARA	**McCarthy VSAT**	**84.66**	**19**	P	**P**	**13 10 34.7**	**-0.1**
	baz=220						
BCPM	**Bancas Point**	**84.69**	**21**	IAMs_20	IAMs_20	13 40 05.9	
	comp=Z,6µm,21.0s						
BPAW	**Bear Paw Mtn.**	**84.70**	**14**	IAMs_20	IAMs_20	13 43 22.9	
	comp=Z,4µm,20.0s						
BPAW	**Bear Paw Mtn.**	**84.70**	**14**	P	**P**	**13 10 35.2**	**+0.2**
	baz=212						
DHY	**Denali Highway**	**84.75**	**16**	IAmb	IAmb	13 10 39.7	
	comp=Z,72nm,1.4s						
DHY				IAMs_20	IAMs_20	13 40 25.4	
	comp=Z,5µm,22.0s						
DHY	**Denali Highway**	**84.75**	**16**	P	**P**	**13 10 34.3**	**-1.2**
	baz=216,SNR=14						
R11A	**Troy Canyon, C**	**84.80**	**48**	IAmb	IAmb	13 10 52.6	
	comp=Z,78nm,1.9s						
R11A	**Troy Canyon, C**	**84.80**	**48**	P	**P**	**13 10 36.1**	**-0.3**
	baz=244,SNR=11						
BILL	**Bilibino**	**84.81**	**357**	*ce*P	**P**	**13 10 36.0**	**+0.6**
BILL				*e*		13 13 53.3	
BILL				*e*PPP	PPP	13 15 49.3	
BILL				pmax	pmax		
	comp=Z,51nm,1.7s						
BILL				MLR	MLR		
	comp=Z,1µm,18.0s						
BILL	**Bilibino**	**84.81**	**357**	P	**P**	**13 10 35.0**	**-0.5**
BILL				IAmb	IAmb	13 10 42.6	
	comp=Z,67nm,1.6s						
HARP	**HAARP**	**84.82**	**17**	P	**P**	**13 10 35.8**	**+0.1**
	baz=218						
BARN	**Barnard Glacie**	**84.84**	**19**	IAMs_20	IAMs_20	13 41 13.9	
	comp=Z,4µm,20.0s						
CTG	**Chitna Glacier**	**84.88**	**20**	P	**P**	**13 10 35.7**	**-0.4**
	baz=221						
CTGM	**Chitina Glacie**	**84.88**	**20**	IAmb	IAmb	13 10 41.3	
	comp=Z,55nm,0.9s						
CTGM				IAMs_20	IAMs_20	13 41 47.7	
	comp=Z,4µm,19.0s						
LOGN	**Logan Glacier**	**84.88**	**20**	IAmb	IAmb	13 10 41.3	
	comp=Z,73nm,1.0s						
LOGN				IAMs_20	IAMs_20	13 39 40.8	
	comp=Z,5µm,21.0s						
MCK	**McKinley**	**84.89**	**15**	IAmb	IAmb	13 10 40.8	
	comp=Z,65nm,1.3s						
MCK	**McKinley**	**84.89**	**15**	P	**P**	**13 10 35.8**	**-0.2**
	baz=214,SNR=7.3						
WRAK	**Wrangell Islan**	**85.04**	**26**	P	**P**	**13 10 36.8**	**0.0**
	baz=230						
BWN	**Browne**	**85.13**	**15**	IAMs_20	IAMs_20	13 40 54.3	
	comp=Z,6µm,21.0s						
J08A	**Circle Bar Ran**	**85.13**	**42**	IAmb	IAmb	13 10 43.4	
	comp=Z,38nm,1.1s						
PAX	**Paxson**	**85.19**	**17**	IAmb	IAmb	13 10 41.5	
	comp=Z,43nm,1.3s						
PAX	**Paxson**	**85.19**	**17**	P	**P**	**13 10 36.9**	**-0.7**
	baz=218,SNR=5.1						
B05A	**Bryant**	**85.37**	**37**	P	**P**	**13 10 38.6**	**-0.1**
	baz=239						
I21K	**Tanana**	**85.40**	**13**	P	**P**	**13 10 39.7**	**+1.2**
	baz=211						
LZH	**Lanzhou**	**85.43**	**310**	⇑P	**P**	**13 10 40.6**	**+1.1**
LZH				pP	sP	13 10 44.2	+1.0
LZH				sP	pwP	13 10 46.0	+0.2
LZH				PP	**PP**	**13 13 58.6**	**+0.6**
LZH				S	**S**	**13 21 12.6**	**+1.6**
LZH				SS	**SS**	**13 26 50.8**	**+4.2**
LZH				pmax	pmax		
	comp=Z,82nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1µm,7.0s						
LZH				LR	LR		
	comp=Z,3µm,17.4s						
LZH				LR	LR		
	comp=Z,4µm,16.8s						
LZH				LR	LR		
	comp=Z,4µm,19.5s						
M26K	**Nabesna, AK**	**85.46**	**18**	IAmb	IAmb	13 10 44.1	
	comp=Z,62nm,1.1s						
M26K	**Nabesna, AK**	**85.46**	**18**	P	**P**	**13 10 39.7**	**+0.8**
	baz=220						
BESE	**Bessie Mountai**	**85.46**	**24**	IAmb	IAmb	13 10 44.4	
	comp=Z,51nm,1.0s						
MLY	**Manley**	**85.55**	**14**	P	**P**	**13 10 39.2**	**-0.1**
	baz=212,SNR=14						
NEA2	**Nenana**	**85.58**	**15**	IAMs_20	IAMs_20	13 41 07.0	
	comp=Z,4µm,22.0s						
NEA2	**Nenana**	**85.58**	**15**	P	**P**	**13 10 39.8**	**+0.4**
	baz=214						
H21K	**Melozitna Rive**	**85.63**	**13**	IAmb	IAmb	13 10 44.8	
	comp=Z,62nm,1.6s						
H21K	**Melozitna Rive**	**85.63**	**13**	P	**P**	**13 10 40.8**	**+1.2**
	baz=210						
MENT	**Mentasta**	**85.66**	**18**	P	**P**	**13 10 40.1**	**+0.3**
MENT				IAmb	IAmb	13 10 44.5	
	comp=Z,54nm,1.2s						
LTY	**Liberty**	**85.68**	**38**	IAmb	IAmb	13 11 36.3	
	comp=Z,76nm,1.8s						
WRH	**Wood River Hil**	**85.71**	**15**	IAmb	IAmb	13 10 43.8	
	comp=Z,50nm,1.3s						
M27K	**Edge Creek, AK**	**85.76**	**19**	IAmb	IAmb	13 10 46.1	
	comp=Z,57nm,1.1s						
M27K	**Edge Creek, AK**	**85.76**	**19**	P	**P**	**13 10 41.2**	**+0.7**
	baz=221						
YUK3	**Moose Creek**	**85.77**	**19**	P	**P**	**13 10 40.7**	**0.0**
	baz=222,SNR=17						
L26K	**Log Cabin Wild**	**85.84**	**18**	IAmb	IAmb	13 10 45.4	
	comp=Z,57nm,1.4s						
L26K				IAMs_20	IAMs_20	13 40 57.0	
	comp=Z,5µm,22.0s						
L26K	**Log Cabin Wild**	**85.84**	**18**	P	**P**	**13 10 41.2**	**+0.5**
	baz=219,SNR=5.8						
YUK6	**Outpost Mounta**	**85.85**	**21**	P	**P**	**13 10 41.5**	**+0.4**
	baz=224						
SKAG	**Skagway**	**85.88**	**23**	IAmb	IAmb	13 10 49.7	
	comp=Z,42nm,1.1s						
SKAG	**Skagway**	**85.88**	**23**	P	**P**	**13 10 41.4**	**+0.5**
	baz=227						
TUC	**Tucson**	**85.91**	**55**	P	**P**	**13 10 42.2**	**+0.3**
TUC				pmax	pmax		
	comp=Z,30nm,1.3s						
TUC	**Tucson**	**85.91**	**55**	P	**P**	**13 10 42.2**	**+0.3**
TUC	**Tucson**	**85.91**	**55**	IAMs_20	IAMs_20	13 41 54.0	
	comp=Z,4µm,19.0s						
TUC	**Tucson**	**85.91**	**55**	P	**P**	**13 10 41.7**	**-0.1**
	baz=247						
CCB	**Clear Creek Bu**	**85.93**	**15**	IAmb	IAmb	13 10 44.6	
	comp=Z,101nm,1.9s						
HAWA	**Hanford**	**85.93**	**39**	IAmb	IAmb	13 10 47.1	
	comp=Z,40nm,1.1s						
HDA	**Harding Lake**	**85.95**	**15**	IAmb	IAmb	13 10 46.1	
	comp=Z,62nm,1.2s						
HDA				IAMs_20	IAMs_20	13 41 37.0	
	comp=Z,6µm,22.0s						
HDA	**Harding Lake**	**85.95**	**15**	P	**P**	**13 10 41.8**	**+0.6**
	baz=216,SNR=23						
I23K	**Minto, Yukon-K**	**85.97**	**14**	P	**P**	**13 10 42.0**	**+0.8**
	baz=214,SNR=5.0						
RIDG	**Independent Ri**	**85.97**	**17**	IAmb	IAmb	13 10 46.4	
	comp=Z,51nm,1.1s						
RIDG				IAMs_20	IAMs_20	13 43 26.6	
	comp=Z,3µm,19.0s						
YUK4	**Talbot Arm**	**86.04**	**20**	P	**P**	**13 10 42.3**	**+0.3**
	baz=224						
CCUT	**Cedar City**	**86.05**	**49**	IAmb	IAmb	13 10 59.6	
	comp=Z,67nm,1.6s						
HYT	**Haines Junctio**	**86.06**	**21**	P	**P**	**13 10 42.1**	**+0.1**
	baz=225						
RDOG	**Red Dog Mine**	**86.06**	**8**	IAMs_20	IAMs_20	13 44 11.5	
	comp=Z,3µm,20.0s						
RDOG	**Red Dog Mine**	**86.06**	**8**	P	P	13 10 49.8	+8.1
	baz=201						
MDM	**Murphy Dome**	**86.08**	**15**	IAMs_20	IAMs_20	13 41 43.4	
	comp=Z,5µm,22.0s						
ELK	**Elko**	**86.08**	**46**	IAmb	IAmb	13 10 47.5	
	comp=Z,102nm,1.9s						
ELK				IAMs_20	IAMs_20	13 42 17.3	
	comp=Z,5µm,20.0s						
TCOL	**CIGO, UAF Yank**	**86.10**	**15**	IAMs_20	IAMs_20	13 41 20.9	
	comp=Z,6µm,22.0s						
TCOL	**CIGO, UAF Yank**	**86.10**	**15**	P	**P**	**13 10 41.1**	**-0.8**
	baz=215,SNR=8.6						
COLA	**College**	**86.10**	**15**	⇑*e*P	**P**	**13 10 41.5**	**-0.5**
COLA				pmax	pmax		
	comp=Z,41nm,1.2s						
COLA	**College**	**86.10**	**15**	P	**P**	**13 10 41.4**	**-0.5**
COLA	**College**	**86.10**	**15**	IAMs_20	IAMs_20	13 41 20.9	
	comp=Z,6µm,22.0s						
COLA	**College**	**86.10**	**15**	P	**P**	**13 10 41.7**	**-0.3**
	baz=215						
BVCY	**Beaver Creek**	**86.12**	**19**	P	**P**	**13 10 42.2**	**0.0**
	baz=222,SNR=10						
DOT	**Dot Lake**	**86.12**	**17**	IAmb	IAmb	13 10 46.5	
	comp=Z,53nm,1.4s						
KNB	**Kanab**	**86.22**	**50**	IAmb	IAmb	13 10 48.7	
	comp=Z,148nm,2.0s						
ILAR	**Eielson Array**	**86.26**	**15**	P	**P**	**13 10 42.2**	**-0.6**
	comp=Z,18nm,0.8s,baz=236,slow=5.2,SNR=80						
ILAR				LR	LR	13 42 52.5	
	comp=Z,6µm,21.3s,baz=228,slow=31						
E08A	**Dider Farm, El**	**86.27**	**39**	IAmb	IAmb	13 10 48.9	
	comp=Z,125nm,1.7s						
SZCU	**Shurtz Canyon**	**86.27**	**49**	IAmb	IAmb	13 11 00.5	
	comp=Z,77nm,1.6s						
L27K	**Beaver Creek,**	**86.31**	**18**	IAMs_20	IAMs_20	13 44 20.6	
	comp=Z,3µm,20.0s						
L27K	**Beaver Creek,**	**86.31**	**18**	P	**P**	**13 10 43.7**	**+0.6**
	baz=221						
YAK	**Yakutsk**	**86.35**	**340**	P	**P**	**13 10 43.2**	**0.0**
	comp=Z,2.7nm,0.3s,baz=96,slow=2.4,SNR=1.6						
YAK	**Yakutsk**	**86.35**	**340**	*e*P	**P**	**13 10 46.3**	**+3.1**
YAK				*e*		13 14 11.4	
YAK				*e*S	**S**	**13 21 12.1**	**-6.4**
YAK				pmax	pmax		
	comp=Z,55nm,1.8s						
YAK				pmax	pmax		
	comp=N,17nm,1.6s						
YAK				pmax	pmax		
	comp=E,16nm,1.8s						
YAK				pmax	pmax		
	comp=Z,183nm,3.0s						
YAK				pmax	pmax		
	comp=N,122nm,3.3s						
YAK				pmax	pmax		
	comp=E,99nm,2.4s						
YAK				smax	smax		
	comp=N,147nm,3.0s						
YAK				smax	smax		
	comp=E,63nm,2.7s						
YAK	**Yakutsk**	**86.35**	**340**	IAmb	IAmb	13 10 51.0	
	comp=Z,129nm,1.6s						
U15A	**North Rim**	**86.38**	**50**	IAmb	IAmb	13 11 01.3	
	comp=Z,68nm,1.5s						
SCRK	**Sand Creek**	**86.40**	**17**	IAmb	IAmb	13 10 48.1	
	comp=Z,96nm,1.7s						
SCRK				IAMs_20	IAMs_20	13 43 30.7	
	comp=Z,4µm,21.0s						
SCRK	**Sand Creek**	**86.40**	**17**	P	**P**	**13 10 44.2**	**+0.6**
	baz=219,SNR=9.9						
POKR	**Poker Plat Res**	**86.41**	**15**	P	**P**	**13 10 42.7**	**-0.8**
	baz=216						
J25K	**Salcha River,**	**86.53**	**16**	P	**P**	**13 10 44.7**	**+0.6**
	baz=218,SNR=15						
BMO	**Blue Mountains**	**86.57**	**41**	IAmb	IAmb	13 10 49.4	
	comp=Z,122nm,2.0s						
BMO				IAMs_20	IAMs_20	13 40 41.0	
	comp=Z,5µm,22.0s						
D08A	**Wollman Farm,**	**86.62**	**39**	IAmb	IAmb	13 10 49.5	
	comp=Z,113nm,2.0s						
WUAZ	**Wupatki**	**86.70**	**52**	IAMs_20	IAMs_20	13 41 17.8	
	comp=Z,6µm,21.0s						
WUAZ	**Wupatki**	**86.70**	**52**	P	**P**	**13 10 46.8**	**+1.0**
	baz=247,SNR=7.6						
CIT	**Chita**	**86.81**	**327**	*e*P	**P**	**13 10 44.6**	**-1.2**
CIT				pmax	pmax		
	comp=Z,218nm,2.8s						
MFID	**Camas Ranch**	**86.87**	**43**	IAmb	IAmb	13 10 52.0	
	comp=Z,38nm,1.2s						
MFID				IAMs_20	IAMs_20	13 42 05.9	
	comp=Z,4µm,20.0s						
PAF	**Port-aux-Franc**	**86.88**	**219**	IAMs_20	IAMs_20	13 40 51.5	
	comp=Z,4µm,21.0s						
H24K	**Noodor Dome**	**86.89**	**14**	P	**P**	**13 10 44.8**	**-1.1**
	baz=215						
J26L	**Joseph Creek**	**86.92**	**17**	P	**P**	**13 10 46.4**	**+0.3**
	baz=219						
MTPU	**Mount Pierson**	**87.10**	**49**	IAmb	IAmb	13 11 05.2	
	comp=Z,84nm,1.6s						
N31M	**Braeburn, Yuko**	**87.12**	**21**	P	**P**	**13 10 46.4**	**-0.6**
	baz=226						
DLBC	**Dease Lake**	**87.29**	**25**	P	**P**	**13 10 48.6**	**+0.6**
DLBC				IAmb	IAmb	13 10 53.3	
	comp=Z,40nm,1.2s						
P33M	**Teslin, Yukon**	**87.33**	**23**	P	**P**	**13 10 47.8**	**-0.4**
	baz=229						
C09A	**Chrisman Ranch**	**87.36**	**38**	IAmb	IAmb	13 10 53.9	
	comp=Z,65nm,1.6s						
X18A	**Snowflake**	**87.39**	**53**	IAmb	IAmb	13 11 06.0	
	comp=Z,48nm,1.6s						
PLID	**Pearl Lake**	**87.50**	**41**	IAMs_20	IAMs_20	13 41 10.7	
	comp=Z,6µm,22.0s						
COLD	**Coldfoot**	**87.52**	**13**	IAmb	IAmb	13 10 54.3	
	comp=Z,37nm,1.2s						
COLD	**Coldfoot**	**87.52**	**13**	P	**P**	**13 10 49.8**	**+0.9**
	baz=213						
DUG	**Dugway, Tooele**	**87.53**	**47**	IAmb	IAmb	13 11 06.0	
	comp=Z,44nm,1.4s						
DUG	**Dugway, Tooele**	**87.53**	**47**	P	**P**	**13 10 49.3**	**-0.5**
	baz=246,SNR=7.9						
M30M	**Minto, Yukon**	**87.53**	**20**	P	**P**	**13 10 49.2**	**+0.2**
	baz=225,SNR=7.6						
BGU	**Big Grassy Mou**	**87.68**	**46**	IAmb	IAmb	13 11 06.8	
	comp=Z,94nm,1.8s						
DAWY	**Dawson**	**87.79**	**18**	P	**P**	**13 10 50.6**	**+0.3**
	baz=223,SNR=5.7						
EGAK	**Eagle**	**87.80**	**17**	IAMs_20	IAMs_20	13 43 31.0	
	comp=Z,5µm,21.0s						
EGAK	**Eagle**	**87.80**	**17**	P	**P**	**13 10 50.1**	**-0.2**
	baz=221,SNR=7.5						
HLID	**Hailey**	**87.86**	**43**	IAmb	IAmb	13 10 57.2	
	comp=Z,23nm,0.8s						
HLID				IAMs_20	IAMs_20	13 42 48.2	
	comp=Z,4µm,20.0s						
HLID	**Hailey**	**87.86**	**43**	P	**P**	**13 10 52.1**	**+0.8**
	baz=244,SNR=32						
NLU	**North Lily Min**	**87.95**	**47**	P	**P**	**13 10 52.6**	**+0.7**
NLU				IAmb	IAmb	13 11 08.3	
	comp=Z,72nm,1.8s						
M31M	**Drury Creek, Y**	**88.09**	**21**	P	**P**	**13 10 52.2**	**+0.5**
	baz=228						
HPIG		**88.13**	**61**	P	**P**	**13 10 54.2**	**+1.2**
HVU	**Hansel Valley**	**88.21**	**45**	IAmb	IAmb	13 10 58.8	
	comp=Z,85nm,1.4s						
SPUT	**South Promonto**	**88.24**	**46**	IAmb	IAmb	13 10 59.0	
	comp=Z,70nm,1.5s						
NEW	**Newport**	**88.26**	**38**	IAmb	IAmb	13 11 08.7	
	comp=Z,56nm,1.6s						
NEW	**Newport**	**88.26**	**38**	P	**P**	**13 10 53.1**	**+0.2**
	baz=242						
121A	**Cookes Peak, D**	**88.34**	**55**	P	**P**	**13 10 54.3**	**+0.5**
	baz=249						
ULN	**Ulaanbaatar**	**88.40**	**321**	⇓*i*P	**P**	**13 10 53.9**	**+0.2**
ULN				pmax	pmax		
	comp=Z,76nm,2.3s						
ULN	**Ulaanbaatar**	**88.40**	**321**	P	**P**	**13 10 53.2**	**-0.4**
ULN				IAmb	IAmb	13 10 58.2	
	comp=Z,47nm,1.3s						
J29M	**Klondike Camp**	**88.42**	**18**	P	**P**	**13 10 53.5**	**+0.2**
	baz=224						
FARO	**Faro, Yukon**	**88.47**	**21**	P	**P**	**13 10 52.7**	**-0.8**
	baz=228						
CTU	**Camp Tracy**	**88.47**	**47**	IAmb	IAmb	13 11 03.9	
	comp=Z,41nm,1.2s						
MAYO	**Mayo, Yukon**	**88.54**	**20**	P	**P**	**13 10 54.0**	**+0.2**
	baz=226,SNR=8.2						
JLU	**Jordanelle**	**88.65**	**47**	IAmb	IAmb	13 11 11.6	
	comp=Z,102nm,1.6s						
P17A	**Butcher Ranch,**	**88.70**	**48**	P	**P**	**13 10 56.4**	**+1.0**
P17A				IAmb	IAmb	13 11 12.0	
	comp=Z,88nm,1.8s						
SRU	**San Rafael Swe**	**88.72**	**48**	IAmb	IAmb	13 11 05.6	
	comp=Z,30nm,1.0s						
SONM	**Songino Array**	**88.78**	**321**	P	**P**	**13 10 55.4**	**-0.1**
	comp=Z,13nm,1.1s,baz=131,slow=3.4,SNR=25						
SONM				LR	LR	13 49 43.5	
	comp=Z,2µm,20.0s,baz=118,slow=35						
SYO	**Syowa Base**	**88.83**	**195**	⇓*e*P	**P**	**13 10 53.6**	**-1.6**
TOLK	**Toolik Lake Re**	**88.84**	**12**	IAMs_20	IAMs_20	13 45 30.2	
	comp=Z,4µm,19.0s						
TOLK	**Toolik Lake Re**	**88.84**	**12**	P	**P**	**13 10 54.8**	**-0.4**
	baz=214						
HWUT	**Hardware Ranch**	**88.97**	**46**	IAmb	IAmb	13 11 16.5	
	comp=Z,59nm,1.5s						
HWUT				IAMs_20	IAMs_20	13 42 16.6	
	comp=Z,5µm,22.0s						
I29M	**Ogilvie Camp,**	**89.05**	**18**	P	**P**	**13 10 55.9**	**-0.2**
	baz=224,SNR=15						
EPT	**El Paso**	**89.09**	**57**	IAMs_20	IAMs_20	13 42 48.4	
	comp=Z,5µm,20.0s						
MVCO	**Mesa Verde**	**89.48**	**51**	IAmb	IAmb	13 11 23.2	
	comp=Z,76nm,1.9s						
MVCO	**Mesa Verde**	**89.48**	**51**	P	**P**	**13 10 58.3**	**-0.9**
	baz=249						
MSO	**Missoula**	**89.56**	**40**	P	**P**	**13 10 58.7**	**-0.4**
MSO				IAmb	IAmb	13 11 13.4	
	comp=Z,72nm,1.9s						
MSO	**Missoula**	**89.56**	**40**	P	**P**	**13 10 58.7**	**-0.4**
	baz=245						
Y22D	**IRIS PASSCAL I**	**89.56**	**54**	IAMs_20	IAMs_20	13 48 04.8	
	comp=Z,4µm,18.0s						
GTA	**Gaotai**	**89.67**	**311**	⇑P	**P**	**13 10 59.7**	**-0.1**
GTA				pP	sP	13 11 04.8	+1.3
GTA				sP	pwP	13 11 08.6	+2.5
GTA				pmax	pmax		
	comp=Z,28nm,1.6s						
GTA				pmax	pmax		
	comp=Z,940nm,5.8s						
GTA				LR	LR		
	comp=Z,2µm,19.6s						
GTA				LR	LR		
	comp=Z,3µm,19.6s						
GTA				LR	LR		
	comp=Z,4µm,20.4s						
BOD	**Bodaibo**	**89.73**	**332**	*e*P	**P**	**13 10 59.4**	**-0.1**
BOD				pmax	pmax		
	comp=Z,37nm,2.0s						
AHID	**Auburn Hatcher**	**89.74**	**45**	P	**P**	**13 11 01.2**	**+1.0**
AHID				IAmb	IAmb	13 11 06.0	
	comp=Z,106nm,1.9s						
AHID				IAMs_20	IAMs_20	13 42 29.0	
	comp=Z,4µm,22.0s						
DLMT	**Dillon**	**89.80**	**42**	IAmb	IAmb	13 11 06.1	
	comp=Z,40nm,1.0s						
DLMT				IAMs_20	IAMs_20	13 43 00.3	
	comp=Z,5µm,22.0s						
A21K	**Barrow**	**89.95**	**9**	IAMs_20	IAMs_20	13 44 13.3	
	comp=Z,5µm,22.0s						
A21K	**Barrow**	**89.95**	**9**	P	**P**	**13 11 00.9**	**+0.7**
	baz=207						
MNTX	**Cornudas Mount**	**89.97**	**57**	IAMs_20	IAMs_20	13 43 15.6	
	comp=Z,4µm,21.0s						
MNTX	**Cornudas Mount**	**89.97**	**57**	P	**P**	**13 11 00.6**	**-0.6**
	baz=250						
TPAW	**Teton Pass**	**90.12**	**44**	IAmb	IAmb	13 11 17.5	
	comp=Z,130nm,1.9s						
TPAW				IAMs_20	IAMs_20	13 43 59.2	
	comp=Z,3µm,21.0s						
FXWY	**Fox Creek**	**90.13**	**44**	IAMs_20	IAMs_20	13 43 28.4	
	comp=Z,3µm,20.0s						
REDW	**Red Top Meadow**	**90.14**	**44**	IAmb	IAmb	13 11 11.7	
	comp=Z,72nm,1.4s						
REDW				IAMs_20	IAMs_20	13 43 58.6	
	comp=Z,4µm,20.0s						
ANMO	**Albuquerque**	**90.23**	**54**	*de*P	**P**	**13 11 03.9**	**+1.3**
ANMO				pmax	pmax		
	comp=Z,37nm,1.3s						
ANMO	**Albuquerque**	**90.23**	**54**	P	**P**	**13 11 02.8**	**+0.2**
ANMO	**Albuquerque**	**90.23**	**54**	IAMs_20	IAMs_20	13 43 57.3	
	comp=Z,4µm,20.0s						
ANMO	**Albuquerque**	**90.23**	**54**	P	**P**	**13 11 02.1**	**-0.5**
	baz=250						
EPYK	**Eagle Plains**	**90.23**	**17**	IAmb	IAmb	13 11 06.0	
	comp=Z,43nm,1.2s						
EPYK	**Eagle Plains**	**90.23**	**17**	P	**P**	**13 11 01.4**	**-0.3**
	baz=225						
SNOW	**Snow King Moun**	**90.25**	**44**	IAmb	IAmb	13 11 19.1	
	comp=Z,94nm,1.6s						
SNOW				IAMs_20	IAMs_20	13 43 51.4	
	comp=Z,4µm,21.0s						
QLMT	**Earthquake Lak**	**90.34**	**43**	P	**P**	**13 11 04.4**	**+1.5**
MOOW	**Moose Ponds**	**90.36**	**44**	P	**P**	**13 11 04.1**	**+1.0**
MOOW				IAmb	IAmb	13 11 19.3	
	comp=Z,68nm,1.9s						
MOOW				IAMs_20	IAMs_20	13 43 58.5	
	comp=Z,4µm,20.0s						
LOHW	**Long Hollow**	**90.41**	**44**	IAmb	IAmb	13 11 08.0	
	comp=Z,69nm,1.9s						
LOHW				IAMs_20	IAMs_20	13 44 08.6	
	comp=Z,4µm,20.0s						
YHL	**Hebgen Lake**	**90.51**	**43**	IAmb	IAmb	13 11 10.1	
	comp=Z,74nm,1.6s						
BOZ	**Bozeman (W)**	**90.51**	**42**	IAMs_20	IAMs_20	13 43 54.3	
	comp=Z,4µm,21.0s						
BOZ	**Bozeman (W)**	**90.51**	**42**	P	**P**	**13 11 03.4**	**-0.3**
	baz=246						
FLWY	**Flagg Ranch**	**90.52**	**44**	IAmb	IAmb	13 11 09.9	
	comp=Z,43nm,1.4s						
FLWY				IAMs_20	IAMs_20	13 44 14.7	
	comp=Z,4µm,20.0s						
TX32	**Lajitas Array**	**90.59**	**60**	IAmb	IAmb	13 11 22.1	
	comp=Z,51nm,1.4s						
TXAR	**Lajitas Array**	**90.59**	**60**	P	**P**	**13 11 05.8**	**+1.4**
	comp=Z,6.8nm,0.9s,baz=232,slow=5.0,SNR=36						
TXAR				PKKP	**PKKPbc**	**13 28 33.5**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=95,slow=4.2,SNR=8.1						
TXAR				LR	LR	13 43 19.1	
	comp=Z,7µm,21.3s,baz=0.0,slow=30						
O20A	**White River Ci**	**90.74**	**48**	IAmb	IAmb	13 11 21.2	
	comp=Z,77nm,1.4s						
O20A	**White River Ci**	**90.74**	**48**	P	**P**	**13 11 05.6**	**+0.7**
	baz=249						
BW06	**Boulder Array**	**90.79**	**45**	IAMs_20	IAMs_20	13 43 38.8	
	comp=Z,4µm,22.0s						
BW06	**Boulder Array**	**90.79**	**45**	P	**P**	**13 11 05.8**	**+0.7**
	baz=248						
PDAR	**Pinedale Array**	**90.79**	**45**	P	**P**	**13 11 05.7**	**+0.5**
	comp=Z,3.5nm,1.0s,baz=200,slow=3.0,SNR=16						
PDAR				LR	LR	13 44 13.1	
	comp=Z,3µm,21.6s,baz=242,slow=30						
S22A	**4UR Ranch, Cre**	**90.92**	**51**	P	**P**	**13 11 05.8**	**-0.1**
	baz=250						
SHL	**Shillong**	**91.30**	**296**	IAmb	IAmb	13 11 11.6	
	comp=Z,64nm,1.2s						
SMCO	**Snowmass**	**91.31**	**49**	IAmb	IAmb	13 11 24.1	
	comp=Z,84nm,1.9s						
SMCO				IAMs_20	IAMs_20	13 46 50.8	
	comp=Z,4µm,20.0s						
ZAK	**Zakamensk**	**91.72**	**322**	*e*P	**P**	**13 11 08.7**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,23nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,15nm,1.5s						
SNAA	**Sanae**	**91.78**	**181**	P	**P**	**13 11 07.5**	**-1.6**
SNAA	**Sanae**	**91.78**	**181**	*d i*P	**P**	**13 11 07.5**	**-1.6**
SNAA				pmax	pmax		
	comp=Z,47nm,1.4s						
SNAA	**Sanae**	**91.78**	**181**	P	**P**	**13 11 08.0**	**-1.1**
SNAA				IAmb	IAmb	13 11 16.3	
	comp=Z,68nm,1.5s						
GCMT	**Greycliff**	**91.86**	**43**	P	**P**	**13 11 10.3**	**+0.5**
RLMT	**Red Lodge**	**91.86**	**43**	IAMs_20	IAMs_20	13 44 48.2	
	comp=Z,3µm,20.0s						
SDCO	**Great Sand Dun**	**91.91**	**51**	IAMs_20	IAMs_20	13 43 43.7	
	comp=Z,5µm,22.0s						
SDCO	**Great Sand Dun**	**91.91**	**51**	P	**P**	**13 11 10.0**	**-0.5**
	baz=250						
NVL	**N'lazarevskaya**	**91.94**	**185**	⇑*i*P	**P**	**13 11 11.4**	**+1.7**
NVL				*i*		13 11 21.1	

NVL				pmax	pmax		
	comp=Z,59nm,1.4s						
TLY	Talaya	92.05	324	eP	P	13 11 09.1	-1.4
TLY				pmax	pmax		
	comp=Z,27nm,0.9s						
VNA3	Neumayer Olymp	92.16	178	P	P	13 11 09.8	-1.0
INK	Inuvik	92.46	17	P	P	13 11 12.2	+0.3
	comp=Z,4.4nm,1.1s,baz=272,slow=7.1,SNR=5.9						
INK	Inuvik	92.46	17	P	P	13 11 11.4	-0.6
	baz=228						
ISCO	Idaho Springs	92.51	49	IAMs_20	IAMs_20	13 49 02.6	
	comp=Z,4µm,18.0s						
ISCO	Idaho Springs	92.51	49	P	P	13 11 12.3	-1.0
	baz=250						
T25A	Trinidad	92.52	52	P	P	13 11 13.0	-0.3
T25A				IAMs_20	IAMs_20	13 49 54.1	
	comp=Z,3µm,18.0s						
T25A	Trinidad	92.52	52	P	P	13 11 12.1	-1.2
	baz=251						
VNA2	Neumayer--Watz	92.53	179	P	P	13 11 11.2	-1.2
	baz=160,slow=4.5						
Q24A	Divide	92.57	50	P	P	13 11 11.8	-1.8
	baz=251						
EGMT	Eagleton	92.64	40	IAMs_20	IAMs_20	13 44 37.5	
	comp=Z,5µm,21.0s						
EGMT	Eagleton	92.64	40	P	P	13 11 13.2	-0.2
	baz=248						
N23A	Red Feather La	92.64	48	P	P	13 11 12.4	-1.4
	baz=250						
WRGLY	Wrigley	92.70	23	P	P	13 11 13.5	+0.4
	baz=237						
MSTX	Muleshoe	92.78	55	IAmb	IAmb	13 11 30.1	
	comp=Z,54nm,1.2s						
MSTX	Muleshoe	92.78	55	P	P	13 11 14.1	-0.3
	baz=252						
VNA1	Neumayer--Stat	92.79	179	P	P	13 11 12.5	-1.1
LSA	Lhasa	93.17	300	P	P	13 11 17.3	+0.6
LSA				pP	pP	13 11 19.8	+0.4
LSA				S	S	13 22 24.5	+0.1
LSA				pmax	pmax		
	comp=Z,26nm,1.1s						
LSA				LR	LR		
	comp=Z,4µm,22.8s						
LSA				LR	LR		
	comp=Z,5µm,21.4s						
LSA				LR	LR		
	comp=Z,10µm,24.2s						
LSA	Lhasa	93.17	300	IAMs_20	IAMs_20	13 49 49.3	
	comp=Z,3µm,22.0s						
COYC	Coyhaique	93.19	140	IAmb	IAmb	13 11 25.8	
	comp=Z,32nm,1.1s						
TIXI	Tiksi	93.58	347	P	P	13 11 17.1	+0.1
	comp=Z,2.3nm,0.7s,baz=110,slow=4.0,SNR=9.6						
TIXI	Tiksi	93.58	347	⇑eP	P	13 11 19.4	+2.4
TIXI				pmax	pmax		
	comp=Z,28nm,1.6s						
TIXI	Tiksi	93.58	347	P	P	13 11 18.0	+1.0
TIXI				IAmb	IAmb	13 11 23.7	
	comp=Z,48nm,1.7s						
AMTX	Amarillo	93.92	55	IAmb	IAmb	13 11 35.2	
	comp=Z,40nm,1.2s						
AMTX				IAMs_20	IAMs_20	13 49 02.2	
	comp=Z,3µm,18.0s						
AMTX	Amarillo	93.92	55	P	P	13 11 19.3	-0.3
	baz=252						
ABTX	Abilene, Hawle	94.88	58	IAmb	IAmb	13 11 40.3	
	comp=Z,36nm,1.1s						
ABTX	Abilene, Hawle	94.88	58	P	P	13 11 24.5	+0.6
	baz=253						
KVTX	Kingsville	94.90	63	IAMs_20	IAMs_20	13 51 59.6	
	comp=Z,4µm,18.0s						
RSSD	Black Hills	95.03	46	P	P	13 11 24.1	-0.6
RSSD				pmax	pmax		
	comp=Z,21nm,1.0s						
RSSD	Black Hills	95.03	46	P	P	13 11 24.1	-0.6
RSSD				IAmb	IAmb	13 11 30.0	
	comp=Z,21nm,1.0s						
RSSD	Black Hills	95.03	46	IAMs_20	IAMs_20	13 49 16.0	
	comp=Z,4µm,19.0s						
RSSD	Black Hills	95.03	46	P	P	13 11 24.5	-0.1
	baz=252						
OGNE	Ogallala	95.47	49	IAMs_20	IAMs_20	13 46 34.9	
	comp=Z,3µm,22.0s						
YKA	Yellowknife Ar	95.90	26	P	P	13 11 28.7	+0.8
	comp=Z,6.3nm,0.9s,baz=251,slow=4.6,SNR=20						
YKA				LR	LR	13 50 39.0	
	comp=Z,2µm,18.5s,baz=0.0,slow=33						
DGMT	Dagmar	96.28	41	IAMs_20	IAMs_20	13 47 49.0	
	comp=Z,5µm,20.0s						
DGMT	Dagmar	96.28	41	P	P	13 11 29.5	-0.5
	baz=252						
PALK	Pallekele	96.38	276	LR	LR	13 54 42.6	
	comp=Z,2µm,21.2s,baz=222,slow=35						
U32A	Winter Ranch,	96.44	54	IAMs_20	IAMs_20	13 54 15.9	
	comp=Z,3µm,18.0s						
PLCA	Paso Flores	96.46	136	P	P	13 11 32.2	+1.1
	comp=Z,1.6nm,0.9s,baz=237,slow=10,SNR=1.8						
PLCA				LR	LR	13 45 35.3	
	comp=Z,2µm,21.9s,baz=246,slow=30						
CBKS	Cedar Bluff	96.55	52	IAMs_20	IAMs_20	13 46 19.6	
	comp=Z,4µm,22.0s						
A36M	Sachs Harbour	96.96	16	IAMs_20	IAMs_20	13 48 14.8	
	comp=Z,3µm,22.0s						
A36M	Sachs Harbour	96.96	16	P	P	13 11 32.5	+0.1
	baz=236						
OK029	Liberty Lake	97.49	55	IAMs_20	IAMs_20	13 51 41.7	
	comp=Z,4µm,18.0s						
OK025	Westminster Rd	97.53	55	IAMs_20	IAMs_20	13 50 40.7	
	comp=Z,3µm,18.0s						
OK031	S. Brethren Rd	98.01	55	IAMs_20	IAMs_20	13 52 15.6	
	comp=Z,4µm,18.0s						
OK030	Cody Creek RV	98.05	55	IAMs_20	IAMs_20	13 52 35.6	
	comp=Z,4µm,18.0s						
OK034	N. Norfolk Rd.	98.13	55	IAMs_20	IAMs_20	13 52 18.6	
	comp=Z,4µm,18.0s						
TUL1	Leonard	98.83	55	IAMs_20	IAMs_20	13 48 41.1	
	comp=Z,4µm,21.0s						
X37A	Clayton	98.84	57	IAMs_20	IAMs_20	13 49 19.5	
	comp=Z,4µm,21.0s						
KSU1	Kansas State U	98.98	52	IAMs_20	IAMs_20	13 48 17.9	
	comp=Z,5µm,22.0s						
SNET	Serv Nac Est T	99.05	78	IAMs_20	IAMs_20	13 48 36.9	
	comp=Z,3µm,19.0s						
WMQ	Urumqi	99.66	313	eP	Pdif	13 11 48.8	+3.4
WMQ				pP	pwP	13 11 52.4	+0.7
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
WMQ				LR	LR		
	comp=Z,1µm,19.5s						
WMQ				LR	LR		
	comp=Z,2µm,18.5s						
WMQ				LR	LR		
	comp=Z,2µm,21.9s						
W39A	Magazine	100.25	56	IAMs_20	IAMs_20	13 50 33.8	
	comp=Z,4µm,20.0s						
MIAR	Mount Ida	100.27	57	IAMs_20	IAMs_20	13 50 55.3	
	comp=Z,3µm,21.0s						
X40A	Basin Creek Fa	100.85	57	IAMs_20	IAMs_20	13 50 26.8	
	comp=Z,3µm,20.0s						
TGUH	Tegucigalpa,Un	100.98	79	IAMs_20	IAMs_20	13 49 38.2	
	comp=Z,3µm,19.0s						
DGZ	Jazzator, Alta	101.19	319	⇓eP	Pdif	13 11 52.2	+0.1
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
U40A	Yellville	101.24	55	IAMs_20	IAMs_20	13 50 14.1	
	comp=Z,4µm,20.0s						
JTS	Las Juntas de	102.22	83	IAMs_20	IAMs_20	13 47 11.0	
	comp=Z,3µm,20.0s						
CCM	Cathedral Cave	102.85	54	IAMs_20	IAMs_20	13 54 24.5	
	comp=Z,3µm,19.0s						
TRQA	Tornquist	103.52	137	IAMs_20	IAMs_20	13 50 24.8	
	comp=Z,3µm,20.0s						
ZALV	Zalesovo Beam	103.60	323	Pdiff	Pdif	13 12 02.8	+0.3
	comp=Z,0.3nm,0.3s,baz=83,slow=3.5,SNR=1.6						
MKAR	Makanchi Array	104.00	315	Pdiff	Pdif	13 12 06.1	+1.5
	comp=Z,2.3nm,0.9s,baz=90,slow=6.2,SNR=7.0						
MKAR				PKiKP	PKiKP	13 16 18.8	-3.2
	comp=Z,1.2nm,0.9s,baz=98,slow=4.4,SNR=4.5						
HOPE	Hope Point	104.23	161	IAMs_20	IAMs_20	13 50 19.1	
	comp=Z,3µm,20.0s						
NRIK	Noril'sk	104.72	338	Pdiff	Pdif	13 12 09.2	+2.0
	comp=Z,1.4nm,0.3s,baz=63,slow=4.6,SNR=4.8						
NRIK				PKiKP	PKiKP	13 16 19.9	-2.6
	comp=Z,0.6nm,0.3s,baz=21,slow=2.1,SNR=1.3						
BRAL	Brewton	104.94	62	IAMs_20	IAMs_20	13 54 49.5	
	comp=Z,4µm,20.0s						
PB04	IPOC Station P	105.15	119	IAMs_20	IAMs_20	13 48 58.4	
	comp=Z,4µm,22.0s						
PB06	IPOC Station P	105.47	120	IAMs_20	IAMs_20	13 49 07.8	
	comp=Z,3µm,22.0s						
COWI	Conover	105.74	46	IAMs_20	IAMs_20	13 57 55.4	
	comp=Z,3µm,20.0s						
PATCX	Punta Patache	105.79	118	IAMs_20	IAMs_20	13 49 02.5	
	comp=Z,4µm,22.0s						
PB12	IPOC Station P	106.56	116	IAMs_20	IAMs_20	13 49 33.1	
	comp=Z,3µm,22.0s						
PB08	IPOC Station P	106.92	118	IAMs_20	IAMs_20	13 49 35.6	
	comp=Z,3µm,21.0s						
TZTN	Tazewell	108.66	56	IAMs_20	IAMs_20	13 55 26.6	
	comp=Z,4µm,20.0s						
ACSO	Alum Creek Sta	109.52	53	IAMs_20	IAMs_20	13 59 15.1	
	comp=Z,3µm,19.0s						
O53A	New Philadelph	110.87	53	IAMs_20	IAMs_20	14 01 16.8	
	comp=Z,4µm,19.0s						
BLA	Blacksburg	111.23	56	IAMs_20	IAMs_20	13 57 54.5	
	comp=Z,2µm,20.0s						
M53A	WI Miller and	111.37	52	IAMs_20	IAMs_20	13 58 11.8	
	comp=Z,3µm,20.0s						
N54A	Moraine State	111.85	52	IAMs_20	IAMs_20	13 58 00.7	
	comp=Z,3µm,20.0s						
ERPA	Erie	111.92	51	IAMs_20	IAMs_20	13 55 45.4	
	comp=Z,4µm,22.0s						
BVAR	Borovoye Array	112.12	321	Pdiff	Pdif	13 12 42.1	+1.6
	comp=Z,1.1nm,0.8s,baz=202,slow=6.4,SNR=4.7						
BVAR				PKiKP	PKiKP	13 16 36.9	0.0
	comp=Z,1.7nm,0.9s,baz=190,slow=7.5,SNR=5.4						
BRVK	Borovoye	112.19	321	⇑iPKIKP	PKiKP	13 16 37.8	+0.8
BRVK	Borovoye	112.19	321	IAMs_20	IAMs_20	14 03 22.7	
	comp=Z,2µm,20.0s						
SSPA	Standing Stone	113.43	53	IAMs_20	IAMs_20	13 59 13.5	
	comp=Z,4µm,20.0s						
N59A	State Game Lan	115.04	52	IAMs_20	IAMs_20	14 01 35.2	
	comp=Z,4µm,20.0s						
VOI	Vohitsoka	116.54	234	IAMs_20	IAMs_20	14 00 07.8	
	comp=Z,3µm,20.0s						
SAML	Samuel	116.84	109	IAMs_20	IAMs_20	14 03 08.0	
	comp=Z,2µm,19.0s						
SDDR	Presa de Saban	116.99	77	IAMs_20	IAMs_20	13 58 49.4	
	comp=Z,3µm,20.0s						
GRTK	Grand Turk	117.53	74	IAMs_20	IAMs_20	14 00 11.4	
	comp=Z,2µm,20.0s						
SPITS	Spitsbergen Ar	117.69	355	PKP	PKPdf	13 16 45.6	-1.3
	comp=Z,6.9nm,0.9s,baz=23,slow=8.5,SNR=1.8						
HRV	Adam Dziewonsk	118.17	50	IAMs_20	IAMs_20	13 59 57.8	
	comp=Z,4µm,21.0s						
ARU	Arti	118.50	326	⇓iPKIKP	PKiKP	13 16 51.0	+2.0
WVL	Waterville	119.41	48	IAMs_20	IAMs_20	14 01 18.2	
	comp=Z,3µm,20.0s						
GEYT	Alibeck	121.38	304	PKP	PKPdf	13 16 55.0	-0.2
	comp=Z,3.5nm,0.9s,baz=11,slow=4.7,SNR=2.6						
APA	Apatity	123.62	343	⇓iPKIKP	PKPdf	13 16 41.7	-17
APA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,2µm,20.0s						
ARCES	ARCESS Array B	124.00	348	PKP	PKiKP	13 17 00.1	+0.6
	comp=Z,5.3nm,0.8s,baz=48,slow=1.8,SNR=9.6						
SUR	Sutherland	125.34	207	IAMs_20	IAMs_20	14 13 22.6	
	comp=Z,2µm,18.0s						
BELG	Belogornoye	125.78	323	⇓iPKIKP	PKiKP	13 17 05.7	+2.2
KLMR	Klimovskoe	125.84	335	ePKIKP	PKiKP	13 17 04.5	+1.2
KLMR				pmax	pmax		
	comp=Z,37nm,1.5s						
KLMR	Klimovskoe	125.84	335	ePKPdf	PKiKP	13 17 04.6	+1.2
KLMR				AMP		13 17 08.5	
	comp=Z,37nm,1.5s						
MAK	Makhachkala	128.68	312	eP	Pdif	13 13 45.5	-8.8
MAK				pmax	pmax		
	comp=Z,156nm,1.0s						
MAK				MLR	MLR		
	comp=Z,1µm,17.0s						
MOS	Moscow	129.53	330	i PKIKP	PKPdf	13 17 10.2	+0.1
MOS				e		13 19 19.0	
MOS				MLR	MLR		
	comp=Z,2µm,21.0s						
OBN	Obninsk	130.38	330	⇓iPKIKP	PKiKP	13 17 14.1	+1.5
OBN				e		13 19 26.4	
OBN				ePPP	PPP	13 22 12.8	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KBZ	Khabaz	131.69	314	PKP	PKiKP	13 17 16.1	+0.5
	comp=Z,1.2nm,0.5s,baz=163,slow=3.6,SNR=2.4						
KIV	Kislovodsk	131.76	314	i PKIKP	PKPdf	13 17 15.0	+0.1
KIV				e		13 19 34.3	
KIV				eSS	SS	13 37 11.1	+0.6
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,839nm,23.0s						
KIBK	Kibwezi	133.68	250	IAMs_20	IAMs_20	14 12 01.1	
	comp=Z,3µm,21.0s						
SOC	Sochi	133.91	315	i PKIKP	PKPdf	13 17 15.8	-3.0
SOC				e		13 19 46.2	
SOC				ePPP	PPP	13 22 40.3	
SOC				ePS	PS	13 29 59.8	-8.8
SOC				eSSS	SSS	13 42 32.9	
NOA	NORSAR Array B	134.31	349	PKP	PKiKP	13 17 21.6	+1.1
	comp=Z,2.7nm,1.1s,baz=37,slow=1.7,SNR=3.3						
LSZ	Lusaka	134.49	227	IAMs_20	IAMs_20	14 06 03.8	
	comp=Z,3µm,22.0s						
MNK	Minsk	134.69	334	i PKIKP	PKPdf	13 17 18.4	-1.5
MNK				i		13 19 50.1	
MNK				i		13 24 29.5	
MNK				i SS	SS	13 37 46.1	+1.6
MNK				i SSS	SSS	13 42 39.5	
MNK				pmax	pmax		
	comp=N,12nm,0.9s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,19nm,0.9s						
MNK	Minsk	134.69	334	i PKP	PKPdf	13 17 18.4	-1.5
	comp=E,1.0nm,0.9s						
MNK				i PKP	PKPdf	13 17 18.4	-1.5
	comp=N,12nm,0.9s						
MNK				i PKP	PKPdf	13 17 18.4	-1.5
	comp=Z,19nm,0.9s,baz=47						
MNK				i PP	PP	13 19 50.2	-2.7
MNK				i PPP	PPP	13 22 43.2	
MNK				i SKS	SKSdf	13 24 29.5	-1.4
MNK				i SKS	SKKSdf	13 33 29.4	-50
MNK				i SS	SS	13 37 46.1	+1.7
MNK				i SSS	SSS	13 42 39.6	
MNK				i LR	LR	14 12 24.3	
MNK				i LRM	MLR	14 19 27.3	
	comp=E,257nm,22.9s						
MNK				i LRM	MLR	14 19 32.4	
	comp=Z,1µm,19.1s						
MNK				i LRM	MLR	14 20 14.4	
	comp=N,467nm,16.5s						
NACGM	Naroch	134.86	335	i PKP	PKiKP	13 17 22.7	+1.0
KMBO	Kilima Mbogo	134.91	251	PKP	PKiKP	13 17 24.1	+0.8
	comp=N,4.0nm,1.0s,baz=90,slow=3.0,SNR=7.1						
KMBO	Kilima Mbogo	134.91	251	IAMs_20	IAMs_20	14 13 10.0	
	comp=Z,2µm,20.0s						
AKASG	Malin Array Be	136.57	329	PKP	PKiKP	13 17 25.8	+0.5
	comp=Z,2.5nm,0.7s,baz=41,slow=2.6,SNR=8.4						
FURI	Furi	137.00	265	IAMs_20	IAMs_20	14 10 18.9	
	comp=Z,3µm,22.0s						
TSUM	Tsumeb	138.05	213	IAMs_20	IAMs_20	14 11 16.6	
	comp=Z,2µm,20.0s						
BRTR	Keskin Array B	139.59	312	PKP	PKPdf	13 17 30.8	+1.1
	comp=Z,1.0nm,0.5s,baz=307,slow=37,SNR=2.6						
KWP	Kalwaria Pacla	140.39	332	ePP	PP	13 20 30.2	+1.6
BURAR	Bucovina Array	140.57	328	⇑P	PKiKP	13 17 33.5	-0.3
BURAR	Bucovina Array	140.57	328	⇑PKIKP	PKiKP	13 17 33.5	-0.3
OJC	Ojcow	141.20	335	ePKPdf	PKPdf	13 17 27.9	-4.2
OJC				ePP	PP	13 20 29.4	-4.0
UZH	Uzhgorod	141.30	331	ePKIKP	PKPdf	13 17 31.2	-1.1
UZH				e		13 17 36.9	
CRVS	Cervenica-Dubn	141.48	332	ePKIKP	PKiKP	13 17 34.7	-0.7
CRVS				e		13 17 39.2	
CRVS	Cervenica-Dubn	141.48	332	ePKP	PKiKP	13 17 34.7	-0.7
CRVS				e		13 17 39.2	
MLR	Muntele Rosu	141.54	325	PKIKP	PKPdf	13 17 31.0	-2.0
MLR	Muntele Rosu	141.54	325	PKPdf	PKPdf	13 17 31.0	-2.0
NIE	Niedzica	141.60	334	ePKPdf	PKPdf	13 17 33.7	+0.8
NIE				ePP	PP	13 20 26.8	-9.2
KSP	Ksiaz	142.04	338	ePKPdf	PKPdf	13 17 32.0	-1.6
KSP				eSKSdf	SKSdf	13 24 43.5	0.0
VOIR		142.06	325	⇓P	PKPdf	13 17 32.0	-1.9
VOIR		142.06	325	⇓PKIKP	PKPdf	13 17 32.0	-1.9
OSTC	Ostas	142.30	338	ePKP	PKiKP	13 17 41.0	+3.9
OSTC				AMS	AMS	14 26 20.0	
	comp=Z,2µm,22.8s						
ARR	Arges	142.34	326	⇑P	PKPdf	13 17 33.0	-1.3
DPC	Dobruska-Polom	142.43	338	ePKP	PKiKP	13 17 38.7	+1.3
DPC				AMS	AMS	14 28 20.0	
	comp=Z,2µm,21.6s						
DPC	Dobruska-Polom	142.43	338	ePKIKP	PKiKP	13 17 38.7	+1.3
DPC				MLR	MLR		
	comp=Z,2µm,21.6s						
MORC	Moravsky Berou	142.44	336	ePKP	PKPdf	13 17 33.1	-1.3
CLL	Collm	142.72	342	ePKIKP	PKiKP	13 17 39.0	+1.1
CLL				pmax	pmax		
	comp=Z,18nm,1.1s						
CLL				MLR	MLR		
	comp=Z,1µm,19.9s						
CLL	Collm	142.72	342	ePKPdf	PKPdf	13 17 36.0	+1.3
CLL				ePKiKP	PKiKP	13 17 38.0	+0.1
	comp=Z,8.0nm,1.0s						
CLL				i pPKiKP	pPKiKP	13 17 41.6	+1.0
	comp=Z,18nm,1.1s						
CLL				eSS	SS	13 39 23.0	+4.1
CLL				eSSS	SSS	13 44 49.0	
CLL				L	L	14 25 00.0	
	comp=Z,1µm,19.9s						
BRG	Berggiesshubel	142.81	340	ePKP	PKiKP	13 17 39.0	+1.0
BRG				Amp		13 17 43.5	
	comp=Z,9.9nm,1.1s						
BRG	Berggiesshubel	142.81	340	P	PKiKP	13 17 52.3	+14
BRG				Amp		13 17 54.6	
	comp=Z,5.6nm,0.9s						
PSZ	Piszkesteto	142.91	332	IAMs_20	IAMs_20	14 17 19.4	
	comp=Z,2µm,22.0s						
VYHS	Vyhne	142.93	334	ePKIKP	PKiKP	13 17 37.4	-1.0
VYHS	Vyhne	142.93	334	ePKP	PKiKP	13 17 37.4	-1.0
JAVC	Velka Javorina	143.13	335	ePKP	PKPdf	13 17 36.0	+0.4
VRAC	Vranov	143.19	337	ePKP	PKPdf	13 17 36.3	+0.6
KRUC	Moravsky	143.46	336	ePKP	PKPdf	13 17 36.9	+0.8
MODS	Modra-Piesok	143.67	335	ePKIKP	PKPdf	13 17 37.5	+0.9
MODS	Modra-Piesok	143.67	335	ePKP	PKPdf	13 17 37.5	+0.9
TANN	Tannenbergstha	143.67	341	ePKPbc	PKPdf	13 17 36.6	+0.1
	baz=27,slow=3.3						
WERD	Werda	143.69	342	ePKPbc	PKPdf	13 17 36.8	+0.3
	baz=27,slow=3.3						
PLN	Plauen	143.70	342	ePKPbc	PKPdf	13 17 36.7	+0.1
	baz=27,slow=3.3						
MOX	Moxa	143.72	342	ePKPbc	PKPdf	13 17 36.7	+0.2
	baz=27,slow=3.3						
MOX				eL	L	14 37 14.5	
	comp=Z,1µm,19.7s						
BZS	Buzias	143.75	328	⇑P	PKPdf	13 17 38.1	+1.4
BZS	Buzias	143.75	328	⇑PKIKP	PKPdf	13 17 38.1	+1.4
GUNZ	Gunzen	143.76	341	ePKPbc	PKPdf	13 17 37.0	+0.3
	baz=27,slow=3.3						
WERN	Wernitzgruen	143.81	341	ePKPbc	PKPdf	13 17 36.7	0.0
	baz=27,slow=3.3						
HERR	Herculane	143.84	327	⇑P	PKPdf	13 17 36.3	-0.6
UBBA	Unterbreizbach	144.01	344	ePKPbc	PKPdf	13 17 37.6	+0.7
	baz=27,slow=3.3						
BUG	Bochum--Univer	144.09	347	ePKPbc	PKPdf	13 17 38.2	+1.1
	baz=27,slow=3.3						
MANZ	Manzenberg	144.16	341	ePKPbc	PKPdf	13 17 38.1	+0.7
	baz=27,slow=3.3						
MDVR	Moldovita	144.28	327	⇑P	PKiKP	13 17 40.0	-1.4
ROTZ	Rotzenmuhle	144.32	341	ePKPbc	PKPdf	13 17 39.0	+1.4
	baz=27,slow=3.3						
KHC	Kasperske Hory	144.43	339	ePKP	PKPdf	13 17 39.6	+1.7
KHC				AMS	AMS	14 28 00.0	
	comp=Z,2µm,20.3s						
KHC	Kasperske Hory	144.43	339	ePKIKP	PKPdf	13 17 39.6	+1.7
KHC				MLR	MLR		
	comp=Z,2µm,20.3s						
KHC	Kasperske Hory	144.43	339	PKPdf	PKPab	13 17 36.1	0.0
CKRC	Cesky Krumlov	144.44	338	ePKP	PKiKP	13 17 41.1	-0.4
CKRC				AMS	AMS	14 28 10.0	
	comp=Z,2µm,21.7s						
KUBS	Kucevo	144.55	327	eP	PKPab	13 17 36.3	-0.3
CONA	Conrad Observa	144.59	336	i P	PKPdf	13 17 37.9	-0.3
	comp=Z,10nm,0.7s,SNR=10.0						
GEC2	GERESS Array S	144.63	339	ePKPbc	PKPdf	13 17 39.7	+1.4
	baz=27,slow=3.3						
GEC2	GERESS Array S	144.63	339	PKPdf	PKPab	13 17 36.4	-0.4
GERES	GERESS Array B	144.63	339	PKP	PKPdf	13 17 37.9	-0.4
	comp=Z,11nm,0.9s,baz=46,slow=3.9,SNR=39						
GERES	GERESS Array B	144.63	339	PKPdf	PKPab	13 17 36.6	-0.2
WET	Wettzell	144.65	340	ePKPbc	PKiKP	13 17 40.2	-1.7
	baz=27,slow=3.3						
ZAGS	Zajecar	144.65	325	eP	PKPab	13 17 36.7	-0.3
GRF	Grafenberg Arr	144.69	342	ePKPbc	PKiKP	13 17 40.5	-1.5
	baz=27,slow=3.3						
GRF				eL	L	14 22 11.7	
	comp=Z,1µm,21.5s						
MORH	Mrgy, Hungar	144.75	331	⇑P	PKPdf	13 17 39.5	+1.1
MORH	Mrgy, Hungar	144.75	331	eP	PKPdf	13 17 38.0	-0.5
ZAPS	Zavoj	144.78	324	eP	PKPdf	13 17 39.9	+1.2
VTS	Vitosha	144.85	323	⇓P	PKPdf	13 17 39.8	+0.8
VTS	Vitosha	144.85	323	⇓PKIKP	PKPdf	13 17 39.8	+0.8
VTS	Vitosha	144.85	323	PKPdf	PKPbc	13 17 38.2	+0.1
PRK	Paraskevi	144.88	316	P	PKiKP	13 17 41.4	-1.3
SVIS	Svilajnac	144.89	327	eP	PKPdf	13 17 40.5	+1.7
TNS	Taunus Mts	144.96	345	ePKPbc	PKiKP	13 17 41.3	-1.3
	baz=27,slow=3.3						
AHRW	Bad Neuenahr-A	144.98	347	ePKPbc	PKiKP	13 17 41.3	-1.2
	baz=27,slow=3.3						
FRGS	Fruska Gora	144.98	329	⇑P	PKPdf	13 17 39.1	+0.2
FRGS	Fruska Gora	144.98	329	eP	PKPbc	13 17 38.5	+0.3
FRGS	Fruska Gora	144.98	329	eP	PKPdf	13 17 38.9	0.0
BOVS	Bovan	145.05	326	⇓P	PKPbc	13 17 38.1	-0.3
BOVS	Bovan	145.05	326	eP	PKPdf	13 17 38.8	-0.3
KAVA	Kavala	145.06	320	P	PKPbc	13 17 37.3	-1.2
BTNL	Ternell	145.13	348	dPKP	PKPbc	13 17 38.2	-0.3
BTNL				dPKiKP	pPKPbc	13 17 41.5	0.0
MEM	Membach	145.13	348	dPKPdf	PKPbc	13 17 38.1	-0.4
MEM				dPKP	PKPab	13 17 38.3	-0.2
MEM				dPKiKP	pPKPdf	13 17 41.9	+0.1
MEM				dpPKiKP	pPKiKP	13 17 44.9	-0.7
THAS	Thassos island	145.15	319	P	PKPbc	13 17 38.1	-0.7
SIGR	SIGRI	145.18	316	P	PKiKP	13 17 41.5	-1.8
LIA	Limnos Island	145.25	318	P	PKPbc	13 17 36.3	-2.9
NVR	Nevrokopi	145.25	321	P	PKPab	13 17 39.4	+0.1
MOA	Molln	145.27	337	i P	PKPdf	13 17 40.0	+0.6
	comp=Z,29nm,1.0s,SNR=35						
ARSA	Arzberg	145.28	335	eP	PKPdf	13 17 41.3	+1.9
	comp=Z,11nm,0.9s,SNR=13						
TRUS	Trudelj	145.34	327	eP	PKPdf	13 17 40.1	+0.5
BOSS	Bosilegrad	145.36	323	eP	PKPab	13 17 40.1	+0.4
BHOU	Houvegnez	145.38	348	dPKP	PKPab	13 17 40.9	+1.4
GRUS	Gruza	145.41	327	eP	PKPdf	13 17 39.7	0.0
BCLA	Clavier	145.45	349	dPKP	PKPab	13 17 40.8	+1.1
CHOS	Chios island	145.46	315	P	PKiKP	13 17 42.5	-1.5
KOKK	Kokkinochori,	145.48	320	P	PKPdf	13 17 39.1	-0.8
BGES	Gesves	145.53	349	dPKP	PKiKP	13 17 42.9	-0.7
BARS	Barje	145.53	324	eP	PKPdf	13 17 35.6	-4.4
BARS	Barje	145.53	324	eP	PKPab	13 17 41.3	+1.0
TEKS	Tekeris	145.55	329	eP	PKiKP	13 17 43.4	-0.6
TEKS	Tekeris	145.55	329	eP	PKiKP	13 17 43.6	-0.4
SRS	Serrai	145.56	321	P	PKPdf	13 17 39.0	-1.1
PRVS	Prvonek	145.59	324	eP	PKPab	13 17 41.5	+1.0
KOGS	Kog	145.62	334	i PKPdf	PKPab	13 17 40.7	+0.2
DIVS	Divibare	145.64	328	eP	PKPab	13 17 41.1	+0.4
DIVS	Divibare	145.64	328	PKPdf	PKPdf	13 17 38.6	-1.6
DIVS	Divibare	145.64	328	eP	PKPab	13 17 41.4	+0.7
SELS	Selova	145.65	326	eP	PKPdf	13 17 39.3	-0.9
BMRD	Maredsous	145.66	349	dx	x	13 17 44.6	
RCHB	Rochefort	145.72	349	dPKP	PKPdf	13 17 40.1	+0.1
RCHB				dx	x	13 17 47.3	
OUR	Ouranopolis	145.77	319	P	PKPbc	13 17 40.7	-0.1
SOH	Sokhos	145.88	320	P	PKPab	13 17 42.9	+1.2
RJOB	Jochberg	145.89	339	ePKPbc	PKiKP	13 17 44.2	-0.4
	baz=27,slow=3.3						
DOU	Dourbes	145.89	349	dPKP	PKPdf	13 17 39.4	-0.9
IVAS	Ivanjica	145.92	327	eP	PKPbc	13 17 41.3	0.0
SOKA	Soboth	145.94	335	i P	PKPbc	13 17 41.5	+0.2
	comp=Z,20nm,0.9s,SNR=40						
SOKA				eP	sPKPab	13 17 45.6	+0.1
	comp=Z,83nm,1.3s						
KNT	Kendrikon	145.95	321	P	PKPdf	13 17 37.6	-3.1
WLF	Walferdange	146.00	347	dPKP	PKPab	13 17 41.9	+0.1
WLF				dx	x	13 17 46.5	
WLF	Walferdange	146.00	347	PKIKP	PKPdf	13 17 39.7	-0.8
WLF	Walferdange	146.00	347	ePKPbc	PKiKP	13 17 45.0	+0.3
	baz=27,slow=3.3						
WLF	Walferdange	146.00	347	PKPdf	PKPdf	13 17 39.7	-0.8
FUR	Furstenfeldbru	146.02	341	ePKPbc	PKiKP	13 17 44.7	-0.1
	baz=27,slow=3.3						

STIP	Stip	146.04	323	*i* P	PKPab	13 17 43.6	+1.4
VAY	Valandovo	146.05	322	*i* P	PKPdf	13 17 40.6	-0.3
STU	Stuttgart	146.09	343	*e*PKPbc	PKiKP	13 17 44.8	-0.1
	baz=27,slow=3.3						
BBLS	Lazići	146.10	328	*e*P	PKiKP	13 17 45.0	-0.2
BBLS	Lazići	146.10	328	*e*P	PKiKP	13 17 45.0	-0.2
THE	Thessaloniki	146.23	320	P	PKPdf	13 17 39.8	-1.4
SJES	Sjenica	146.23	327	*e*P	PKPab	13 17 44.2	+1.2
KBA	Koelnbreinsper	146.25	338	*e*P	PKiKP	13 17 45.4	-0.1
	comp=Z,18nm,0.6s,SNR=8.5						
OBKA	Obir	146.27	336	*i* P	PKiKP	13 17 46.1	+0.6
	comp=Z,52nm,1.4s,SNR=12						
OBKA	Obir	146.27	336	*i* P	PKiKP	13 17 46.1	+0.6
	comp=Z,52nm,1.4s,SNR=12						
SKO	Skopje	146.29	324	*i* P	PKiKP	13 17 45.4	-0.1
RUDO	Rudo	146.30	328	*e*P	PKPbc	13 17 42.1	-0.3
GRG	Griva	146.37	321	P	PKPab	13 17 43.6	+0.1
CRES	Cresnjev	146.45	334	*e*P	PKPbc	13 17 42.5	-0.3
MYKA	Terra Mystica	146.52	337	*i* P	PKPbc	13 17 43.0	0.0
	comp=Z,3.0nm,0.5s,SNR=12						
MYKA				*e*P	PKiKP	13 17 46.2	+0.2
	comp=Z,40nm,1.6s						
BLY	Banja Luka	146.53	331	*e*P	PKPab	13 17 44.0	0.0
WATA	Walderalm	146.65	340	*e*P	PKPab	13 17 44.0	-0.5
	comp=Z,3.1nm,0.6s						
WATA				*i* P	pPKPab	13 17 47.7	+0.4
	comp=Z,46nm,1.2s,SNR=10						
LJU	Ljubljana	146.66	335	*i* PKPdf	PKPab	13 17 44.2	-0.2
LJU	Ljubljana	146.66	335	*e*P	PKiKP	13 17 45.9	-0.3
WTTA	Wattenberg	146.69	339	*e*P	PKPab	13 17 44.3	-0.4
	comp=Z,6.2nm,0.6s						
WTTA				*i* P	sPKPab	13 17 48.2	-0.3
	comp=Z,57nm,1.0s,SNR=10						
BFO	Black Forest	146.73	344	PKIKP	PKPdf	13 17 40.7	-1.1
BFO	Black Forest	146.73	344	*e*PKPbc	PKiKP	13 17 46.4	+0.1
	baz=27,slow=3.3						
BFO	Black Forest	146.73	344	PKPdf	PKPdf	13 17 40.7	-1.1
RETA	Reutte	146.78	341	*e*P	PKPab	13 17 44.5	-0.5
	comp=Z,2.3nm,0.5s						
RETA				*i* P	pPKPab	13 17 48.2	+0.5
	comp=Z,43nm,1.2s,SNR=18						
BOJS	Bojanci	146.80	334	*i* PKPdf	PKPab	13 17 44.9	-0.1
MOTA	Moosalm	146.80	340	*i* P	PKPbc	13 17 44.3	+0.4
	comp=Z,6.5nm,1.0s,SNR=23						
MOTA				*e*P	pPKPab	13 17 48.3	+0.5
	comp=Z,115nm,1.3s						
UBR	Ueberruh	146.81	342	*e*PKPbc	PKiKP	13 17 46.6	0.0
	baz=27,slow=3.3						
UPM	Unac-Piva	146.83	328	*e*P	PKiKP	13 17 46.4	-0.5
MGRS	Mrkonjic Grad	146.83	331	*e*P	PKiKP	13 17 48.3	+1.7
ABTA	Abfaltersbach	146.84	338	*i* P	PKPbc	13 17 43.9	0.0
	comp=Z,5.6nm,0.7s,SNR=12						
ABTA				*e*P	sPKPbc	13 17 47.8	+0.1
	comp=Z,39nm,1.0s						
NEO	Neokhori	146.84	318	P	PKPbc	13 17 44.2	+0.1
SANT	Santorini	146.85	312	⇓P	PKPbc	13 17 43.4	-0.8
ZKR	Zakros	146.87	309	P	PKiKP	13 17 47.2	+0.3
SQTA	Sankt Quirin	146.87	340	*i* P	PKPab	13 17 44.8	-0.5
	comp=Z,4.2nm,0.6s,SNR=21						
SQTA				*e*P	pPKPab	13 17 48.6	+0.5
	comp=Z,107nm,1.2s						
KTI	Kastanea	146.89	321	P	PKPbc	13 17 44.4	0.0
CEY	Cerknica	146.95	335	*e*P	PKPab	13 17 45.2	-0.4
DION	Dionisos Attik	147.05	316	P	PKPbc	13 17 44.8	0.0
FNA	Florina	147.09	322	P	PKPbc	13 17 44.5	-0.3
FNA	Florina	147.09	322	PKP2	PKPbc	13 17 44.0	-0.8
FNA	Florina	147.09	322		PKPbc	13 17 44.0	-0.8
KZN	Kozani	147.15	321	P	PKPbc	13 17 45.0	0.0
PDG	Podgorica	147.19	326	⇑P	PKPbc	13 17 45.2	+0.3
PDG	Podgorica	147.19	326	*e*P	PKPbc	13 17 45.6	+0.7
FETA	Feichten	147.21	340	*i* P	PKPbc	13 17 45.9	+0.8
	comp=Z,3.6nm,0.8s,SNR=15						
FETA				*e*P	pPKPbc	13 17 48.3	+0.4
	comp=Z,42nm,1.0s						
OHR	Ohrid	147.22	323	*i* P	PKPbc	13 17 44.3	-0.8
CIMO	Cimolais	147.24	338		PKPdf	13 17 42.7	-0.1
DAVA	Damuels	147.24	341	*e*P	PKPbc	13 17 45.6	+0.4
	comp=Z,6.5nm,1.1s						
DAVA				*i* P	pPKPbc	13 17 48.4	+0.5
	comp=Z,83nm,1.2s,SNR=17						
NPS	Neapolis	147.25	310	P	PKPab	13 17 46.6	-0.5
DRME	Dracevica, Mon	147.40	326	*e*P	PKPbc	13 17 45.0	-0.6
THL	Klokotos Trika	147.45	320	P	PKPdf	13 17 44.5	+1.2
TREB	Trebinje	147.46	327	*e*P	PKiKP	13 17 50.8	+2.9
SHEL	Horse Pasture	147.48	178	IAMs_20	IAMs_20	14 16 53.2	
	comp=Z,2µm,20.0s						
NEST	Nestorio	147.51	322	P	PKPbc	13 17 45.3	-0.8
AGG	Agios Georgios	147.57	319	PKP2	PKPab	13 17 48.3	0.0
AGG	Agios Georgios	147.57	319		PKPab	13 17 48.2	0.0
STON	Ston	147.68	328	*e*P	PKPbc	13 17 47.1	+0.8
EVR	Evrytania	147.96	319	P	PKPbc	13 17 47.3	0.0
JAN	Janina	148.10	321	P	PKPbc	13 17 46.9	-0.7
VAM	Vamos	148.21	311	P	PKPab	13 17 50.6	-0.3
KLV	Kalavryta, Ach	148.25	317	P	PKPbc	13 17 48.8	+0.7
TEOL	Teolo	148.33	338		PKPab	13 17 51.3	+0.3
IMMV	Iera Moni Meta	148.34	312	P	PKiKP	13 17 49.5	-0.5
VLI	Veliai	148.44	314	P	PKPbc	13 17 48.9	+0.4
IGT	Igoumenitsa	148.50	321	P	PKPbc	13 17 48.3	-0.3
SALO	Salr	148.51	339	PKPab	PKPab	13 17 51.0	-0.8
GVD	Gavdhos	148.56	310	P	PKiKP	13 17 51.2	+0.8
RLS	Riolos of Patr	148.68	318	P	PKPbc	13 17 49.7	+0.6
KEK	Kerkira	148.70	322	P	PKPbc	13 17 49.5	+0.4
LKD2	Lefkada island	148.76	320	P	PKPbc	13 17 49.0	-0.3
SENIN	Lac Senin/Sane	148.82	344	PKPab	PKPab	13 17 52.6	-0.6
ITM	Ithomi	148.88	316	P	PKPbc	13 17 49.8	+0.1
VLS	Valsamata	149.17	319	P	PKiKP	13 17 52.3	+0.7
ZCCA	Zocca	149.44	337	PKPdf	PKPdf	13 17 46.5	+0.1
VLC	Villacollemand	149.82	338	PKPdf	PKPdf	13 17 45.3	-1.7
VLC					sPKPbc	13 17 55.4	-0.2
VLC				IAMs_20	IAMs_20	14 27 23.0	
	comp=Z,2µm,20.0s						
OSSC	Osservatorio P	150.05	336		PKiKP	13 17 55.4	+2.2
OSSC				PKPab	sPKPab	13 18 04.8	+3.0
AQU	L'Aquila	150.12	332	IAMs_20	IAMs_20	14 25 31.2	
	comp=Z,2µm,21.0s						
BNI	Bardonecchia	150.19	344	PKIKP	PKPab	13 17 57.1	-1.7
BNI	Bardonecchia	150.19	344	PKPab	PKPab	13 17 57.1	-1.7
TIP	Timpagrande	150.81	324	⇑P	PKiKP	13 17 55.2	+0.2
TIP	Timpagrande	150.81	324		PKPdf	13 17 50.0	+1.2
TIP					sPKPbc	13 17 58.5	+0.4
TIP				IAMs_20	IAMs_20	14 28 02.2	
	comp=Z,2µm,21.0s						
CEL	Celeste	151.93	324	IAMs_20	IAMs_20	14 31 10.0	
	comp=Z,2µm,22.0s						
VSL	Villasalto	154.20	334	IAMs_20	IAMs_20	14 43 02.1	
	comp=Z,2µm,20.0s						
ESDC	Sonseca Array	157.15	358	PKP	PKPdf	13 17 57.8	+0.1
	comp=Z,1.2nm,1.2s,baz=328,slow=4.6,SNR=1.5						
ESDC				PKPab	PKPab	13 18 29.3	+1.1
	comp=Z,5.4nm,1.2s,baz=9.1,slow=3.5,SNR=8.2						
KEST	Kesra	157.30	329	PKPab	PKPab	13 18 31.2	+2.1
	comp=Z,6.0nm,1.0s,baz=313,slow=4.1,SNR=6.0						
DBIC	Dimbokro	169.98	180	PKP	PKPdf	13 18 10.4	+0.1
	comp=Z,5.4nm,1.1s,baz=301,slow=2.4,SNR=1.7						
DBIC				PKPab	pPKPab	13 19 27.1	-0.5
	comp=Z,4.9nm,1.0s,baz=133,slow=2.1,SNR=3.8						
TORD	Torodi Ar. Bea	172.80	241	PKP	PKPdf	13 18 10.6	-1.1
	comp=Z,3.9nm,1.0s,baz=338,slow=1.7,SNR=16						
TORD				PKPab	pPKPab	13 19 39.6	-0.9
	comp=Z,10nm,1.1s,baz=116,slow=2.7,SNR=11						
TORD	Torodi Ar. Bea	172.80	241		PKPdf	13 18 10.3	-1.3
TORD					pPKPab	13 19 40.1	-0.4

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*IDC **09** 13:03:55.2±1.0, 16.°77S×175.°02E, h0^{km}, mb4.2/8,*
mb1 4.4/9, mb1mx4.1/41, mbtmp4.1/9, ML4.6/1 Error
ellipse: s-maj=41.9km s-min=20.4km az=160.0
ISC 09 13:04:00.3±0.8**, 16.°9S**±0.°2×**175.°1E**±0.°1**, h35^{km}, n9,**
σ**1^{s}.58**/9**, mb4.2**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.92	106	Pn	Pn	13 04 43.5	-0.9
	3.1nm,0.3s,baz=271,slow=22,SNR=5.0						
STKA	Stephens Creek	33.79	238	P	P	13 10 40.1	+1.0
	3.2nm,0.9s,baz=11,slow=9.4,SNR=2.9						
WRA	Warramunga Arr	38.73	259	P	P	13 11 19.8	-1.6
	3.0nm,0.8s,baz=91,slow=9.1,SNR=7.2						
ASAR	Alice Springs	39.12	253	P	P	13 11 23.7	-1.0
	8.1nm,0.8s,baz=81,slow=9.1,SNR=26						
SEY	Seymchan	81.57	350	P	P	13 16 13.2	-0.7
	1.9nm,0.7s,baz=227,slow=2.5,SNR=3.5						
CMAR	Chiang Mai Arr	82.75	292	P	P	13 16 22.2	+1.1
	2.5nm,0.9s,baz=120,slow=3.6,SNR=7.4						
NVAR	Mina Array Bea	83.13	47	P	P	13 16 24.2	+1.2
	0.4nm,0.7s,baz=222,slow=11,SNR=2.8						
ILAR	Eielson Array	86.45	15	P	P	13 16 37.0	-1.8
	1.3nm,0.7s,baz=232,slow=5.0,SNR=10						
TXAR	Lajitas Array	90.77	60	P	P	13 17 02.1	+1.8
	0.4nm,0.9s,baz=198,slow=5.7,SNR=5.0						

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*JMA **09** 13:04:50.9±0.1, 31.°93N×129.°14E, h14^{km}±2^{km}, M3.8*
*IDC **09** 13:04:51.1±2.9, 32.°04N×129.°20E, h0^{km}, mb3.4/2,*
mb1 3.5/3, mb1mx2.9/60, mbtmp3.3/3, ML3.2/1, Error
ellipse: s-maj=36.1km s-min=26.7km az=14.0
*KMA **09** 13:04:52.9, 31.°19N×129.°17E, h15^{km}*
ISC 09 13:04:51.5±1.2**, 31.°97N**±0.°04×**129.°22E**±0.°03**, h7^{km}**±10^{km}**,**
n29, σ**1^{s}.08**/35**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.52	124	P	Pg	13 05 01.2	-0.2
JSJ				S	Sg	13 05 08.7	+0.6
JFU	Fukue jima 2	0.79	330	P	Pg	13 05 06.1	-0.6
JFU				*e*S	Sg	13 05 16.9	0.0
NGSJ	Nagasakinomoza	0.82	37	P	Pg	13 05 07.7	+0.4
NGSJ				S	Sb	13 05 19.6	+0.2
JHD	Hondo	0.92	57	P	Pb	13 05 09.6	-0.2
JHD				*e*S	Sb	13 05 22.3	+0.1
JSU	Suzuyama	1.15	113	P	Pg	13 05 12.9	-0.7
JZO	Okuchi	1.19	81	P	Pg	13 05 13.6	-0.6
JIU3	Izumi3	1.47	66	P	Pn	13 05 17.8	-0.6
JTA	Tamana	1.49	48	P	Pn	13 05 18.0	-0.6
JNU	Nakatsue	1.81	50	Pn	Pn	13 05 22.9	-0.2
	26nm,0.3s,baz=269,slow=6.4,SNR=21						
JNU				Sn	Sg	13 05 49.4	-0.4
	26nm,0.3s,baz=85,slow=19,SNR=17						
GMDB	Geomundo	2.62	322	P	Pn	13 05 35.0	+0.7
	SNR=20						
KSJJU	Jeju	2.68	304	P	Pg	13 05 41.5	-1.4
	SNR=7.3						
YNDB	Yeoundo	2.73	335	P	Pn	13 05 36.0	+0.3
	SNR=13						
GOS1	Gosan-ri	2.86	298	P	Pn	13 05 37.5	0.0
	SNR=9.7						
HALB	Hallimjungang-	2.86	301	P	Pn	13 05 37.0	-0.5
	SNR=19						
GOS2	Gosang-Q330s	2.87	298	P	Pn	13 05 37.0	-0.5
	SNR=9.6						
KOHB	KOHEUNG	3.10	329	P	Pg	13 05 49.8	-1.1
	SNR=6.1						
CJD	Chujado	3.16	310	P	Pg	13 05 50.0	-2.0
	SNR=12						
KSMAS	Masan	3.24	351	P	Pg	13 05 53.1	-0.4
	SNR=10						
BOSB	Boseong-gun	3.25	329	P	Pg	13 05 53.0	-0.8
	SNR=6.4						
EURB	Uiryeong-eup	3.43	347	P	Pg	13 05 57.0	-0.2
	SNR=7.8						
KSJDO	Jindo	3.48	317	P	Pb	13 05 54.1	+0.7
	SNR=15						
KSKWJ	Gwangju	3.68	330	P	Pb	13 05 59.1	+2.2
	SNR=11						
KSUSN	Ulsan	3.72	359	P	Pg	13 06 00.5	-2.3
	SNR=9.8						
HAMB	Hamyang	3.74	341	P	Pb	13 05 60.0	+2.2
	SNR=7.7						
KSKCH	Geochang	3.79	344	P	Pg	13 06 02.5	-1.6
	SNR=9.0						
SUCA	Sunchang	3.81	334	P	Pb	13 06 01.0	+1.9
	SNR=6.7						
KSRS	Korea Array	5.57	349	Pn	Pn	13 06 15.0	+0.2
	0.7nm,0.3s,baz=165,slow=14,SNR=6.4						
KSRS				Sn	Sn	13 07 18.2	-0.8
	1.5nm,0.3s,baz=173,slow=25,SNR=4.6						
KSRS				Lg	Lg	13 07 44.2	
	2.4nm,0.3s,baz=169,slow=27,SNR=4.8						
SONM	Songino Array	23.48	319	P	P	13 10 03.0	+1.2
	0.9nm,0.8s,baz=134,slow=10,SNR=3.6						
ILAR	Eielson Array	59.02	30	P	P	13 14 50.8	-0.7
	0.3nm,0.6s,baz=278,slow=7.9,SNR=1.4						

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*IDC **09** 13:11:42.2±0.7, 16.°75S×175.°03E, h0^{km}, mb4.3/14,*
mb1 4.5/15, mb1mx4.2/41, mbtmp4.3/15, ML4.4/1, MS5.0/1,
Ms1 5.0/1, ms1mx4.0/45, Error ellipse: s-maj=26.1km
s-min=16.9km az=154.0
*NEIC **09** 13:11:47.1±2.0, 16.°79S±0.°10×175.°26E±0.°05, h29^{km}±4^{km},*
mb4.6/9, Error ellipse: s-maj=14.8km s-min=5.1km
az=162.0
ISC 09 13:11:47.6±0.5**, 16.°80S**±0.°09×**175.°17E**±0.°08**, h35^{km}, n53,**
σ**1^{s}.60**/53**, mb4.3**/22**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.91	109	Pn	Pn	13 12 29.9	-1.6
	2.2nm,0.3s,baz=274,slow=9.6,SNR=19						
SANVU	Saraoutou	7.77	279	Pn	Pn	13 13 39.7	+1.5
PINNC	Pines Island,	9.29	230		Pn	13 13 59.3	+0.2
OUENC	Ouen Island, N	9.63	233		Pn	13 14 05.0	+1.2
DZM	Mont Dzumac	9.76	236	Pn	Pn	13 14 07.2	+1.7
ONTNC	Ouen Toro	9.87	235		Pn	13 14 07.3	+0.3
URZ	Urewera	21.45	176	P	P	13 16 32.9	+0.1
	7.5nm,1.0s,baz=122,slow=22,SNR=1.5						
NNZ	Nelson	24.38	183	P	P	13 17 02.7	+0.2
CTA	Charters Tower	27.61	259	LR	LR	13 26 24.0	
	comp=Z,4µm,21.5s,baz=60,slow=32						
STKA	Stephens Creek	33.91	237	P	P	13 18 27.4	0.0
	3.7nm,0.9s,baz=81,slow=8.8,SNR=4.6						
WB2	Warramunga Arr	38.80	259	P	P	13 19 10.2	+0.9
WB2				IAmb	IAmb	13 19 11.6	
	comp=Z,5.7nm,1.1s						
WRA	Warramunga Arr	38.81	259	P	P	13 19 07.2	-2.3
	comp=Z,2.0nm,0.9s,baz=91,slow=8.8,SNR=9.7						
WRA	Warramunga Arr	38.81	259	P	P	13 19 09.9	+0.5
AS31	Alice Springs	39.21	253	P	P	13 19 11.6	-1.2
ASAR	Alice Springs	39.21	253	P	P	13 19 11.1	-1.7
	comp=Z,4.9nm,0.7s,baz=83,slow=9.0,SNR=56						
ASAR				PcP	PcP	13 21 20.8	-0.8
	comp=Z,1.2nm,1.0s,baz=73,slow=3.1,SNR=4.5						
ASAR	Alice Springs	39.21	253	P	P	13 19 10.8	-1.9
MTN	Manton Dam	42.69	269	P	P	13 19 39.6	-1.8
MTN				IAmb	IAmb	13 19 42.2	
	comp=Z,8.1nm,0.7s						
KNRA	Kununurra	44.49	265	P	P	13 19 54.3	-1.6
KNRA				IAmb	IAmb	13 19 55.1	
	comp=Z,23nm,1.4s						
FITZ	Fitzroy Crossi	47.15	261	P	P	13 20 15.7	-1.3
	comp=Z,4.0nm,0.9s,baz=92,slow=7.7,SNR=4.6						
KAPI	Kappang	55.49	276	P	P	13 21 19.1	-0.3
PETK	Petropavlovsk-	71.24	349	P	P	13 23 02.5	-0.4
	comp=Z,6.5nm,0.9s,baz=134,slow=6.2,SNR=5.0						
NJ2	Nanjing	72.58	312	*e*P	P	13 23 13.4	+2.0
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
QSPA	South Pole Qui	73.24	180	P	P	13 23 14.9	-0.2
QSPA				IAmb	IAmb	13 23 18.6	
	comp=Z,15nm,1.2s						
KLR	Kul'dur	76.16	332	P	P	13 23 31.8	-0.2
	comp=Z,1.2nm,1.0s,baz=118,slow=15,SNR=1.8						
HHC	Hu-ho-hao-te	82.19	317	*e*P	P	13 24 07.1	+1.9
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,420nm,8.2s						
CMAR	Chiang Mai Arr	82.76	292	P	P	13 24 08.3	-0.3
	comp=Z,1.9nm,0.9s,baz=109,slow=3.8,SNR=8.5						
CMAR	Chiang Mai Arr	82.76	292	P	P	13 24 08.4	-0.1
MAW	Mawson	82.76	201	P	P	13 24 10.1	+2.5
MAW				IAmb	IAmb	13 24 17.3	
	comp=Z,3.2nm,1.2s						
NVAR	Mina Array Bea	83.00	47	P	P	13 24 10.2	+0.5
	comp=Z,2.4nm,0.9s,baz=230,slow=9.5,SNR=10						
NVAR	Mina Array Bea	83.00	47	P	P	13 24 09.7	+0.1
BTO	Baotou	83.09	316	*e*P	P	13 24 11.2	+1.3
BTO	Baotou	83.09	316	S	S	13 34 19.7	-7.6
IMAR	Indian Mountai	85.78	12	P	P	13 24 22.5	-0.3
ILAR	Eielson Array	86.32	15	P	P	13 24 24.1	-1.4
	comp=Z,4.3nm,0.8s,baz=232,slow=3.9,SNR=30						
BCAR	Beaver Creek A	86.39	18	P	P	13 24 27.9	+2.0
SONM	Songino Array	88.77	321	P	P	13 24 37.1	-0.8
	comp=Z,1.1nm,1.0s,baz=145,slow=5.3,SNR=4.1						
GTA	Gaotai	89.66	311	*e*P	P	13 24 42.8	+0.6
GTA				pP	pwP	13 24 56.0	0.0
GTA				sP	sP	13 25 02.0	+5.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TXAR	Lajitas Array	90.66	60	P	P	13 24 48.5	+1.4
	comp=Z,1.3nm,1.0s,baz=243,slow=4.1,SNR=9.4						
PDAR	Pinedale Array	90.86	45	P	P	13 24 49.4	+1.5
	comp=Z,1.1nm,1.0s,baz=180,slow=4.2,SNR=5.3						
SNAA	Sanae	91.74	181	P	P	13 24 49.7	-1.6
VNA3	Neumayer Olymp	92.12	178	P	P	13 24 52.9	-0.1
VNA2	Neumayer--Watz	92.48	179	P	P	13 24 52.2	-2.5
YKA	Yellowknife Ar	95.97	26	P	P	13 25 11.4	+0.8
	comp=Z,1.6nm,0.9s,baz=251,slow=4.8,SNR=4.8						
WMQ	Urumqi	99.65	313	*e*P	Pdif	13 25 29.0	+1.3
GERES	GERESS Array B	144.65	339	PKP	PKPdf	13 31 20.5	-0.2
	comp=Z,1.1nm,0.7s,baz=22,slow=4.3,SNR=7.3						
MOA	Molln	145.28	337	*e*P	PKPbc	13 31 21.5	0.0
	comp=Z,8.1nm,0.9s						
SOKA	Soboth	145.95	335	P	PKPbc	13 31 23.8	+0.1
	comp=Z,6.7nm,1.0s						
WTTA	Wattenberg	146.71	339	*e*P	PKPab	13 31 27.6	+0.4
	comp=Z,10nm,1.2s						
RETA	Reutte	146.81	341	*e*P	PKiKP	13 31 28.9	+0.1
	comp=Z,2.3nm,0.6s						
MOTA	Moosalm	146.82	340	*e*P	PKiKP	13 31 28.9	-0.1
	comp=Z,4.6nm,0.6s						
ABTA	Abfaltersbach	146.85	338	*e*P	PKPab	13 31 27.4	-0.3
	comp=Z,9.3nm,1.1s						
SQTA	Sankt Quirin	146.89	340	*e*P	PKPab	13 31 28.4	+0.5
	comp=Z,5.5nm,0.7s						
FETA	Feichten	147.23	340	*e*P	PKPab	13 31 29.3	+0.1
	comp=Z,5.9nm,1.0s						

ATH 09 13:15:39.0, 38.°59N×20.°55E, h15^{km}±2^{km}, ML1.6/3, Error
ellipse: s-maj=4.0km s-min=0.9km az=98.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EVGI	Lefkada island	0.09	71	P	Pg	13 15 41.8	-0.3
EVGI				S	Sg	13 15 44.0	-0.2
DRAG	Dragano-Lefkad	0.09	11	P	Pg	13 15 41.8	-0.4
DRAG				S	Sg	13 15 44.1	-0.2
FSK	Fiskardo	0.13	177	P	Pg	13 15 42.6	0.0
FSK				AML	AML	13 15 45.4	
	comp=N,337µm,0.3s						
FSK				S	S	13 15 45.4	+0.4
FSK				AML	AML	13 15 45.4	
	comp=E,1261µm,0.2s						
NYDR	Nydri-Lefkada	0.17	44	P	Pg	13 15 42.8	-0.3
NYDR				S	Sg	13 15 45.9	+0.1
LKD2	Lefkada island	0.21	23	P	Pg	13 15 43.7	-0.1
LKD2				S	Sg	13 15 47.2	+0.1
LKD2				AML	AML	13 15 47.7	
	comp=N,494µm,0.3s						
LKD2				AML	AML	13 15 47.8	
	comp=E,402µm,0.2s						
TSLK	Tsoukalades, L	0.24	19	P	Pg	13 15 44.4	0.0
TSLK				S	Sg	13 15 48.7	+0.7
TSLK				AML	AML	13 15 49.3	
	comp=N,439µm,0.4s						
TSLK				AML	AML	13 15 50.3	
	comp=E,373µm,0.4s						
KEF4	Livadi, Kephal	0.35	197	P	Pg	13 15 46.4	+0.3
VLS	Valsamata	0.42	176	P	Pg	13 15 47.0	-0.4
VLS				S	Sg	13 15 53.5	+0.5
KEF3	Kipouria, Keph	0.42	202	P	Pg	13 15 46.5	-0.9

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*IDC **09** 13:19:30.4±0.9, 4.°20S×129.°78E, h0^{km}, mb4.3/8,*
mb1 4.3/14, mb1mx4.0/38, mbtmp4.1/14, ML3.8/6, MS5.2/2,
Ms1 5.2/2, ms1mx4.1/48, Error ellipse: s-maj=27.7km
s-min=16.5km az=97.0
*NEIC **09** 13:19:32.8±1.7, 4.°29S±0.°03×129.°43E±0.°08, h10^{km}±1^{km},*
mb4.5/21, Error ellipse: s-maj=13.4km s-min=5.2km
az=270.0
*DJA **09** 13:19:35.1±1.0, 4°S±12°×12°9E±°, h57^{km}±18^{km}, M4.2/7,*
MLv4.2/7
ISC 09 13:19:32.4±0.5**, 4.°19S**±0.°06×**129.°50E**±0.°07**, h10^{km}, n54,**
σ**1^{s}.34**/49**, mb4.6**/19**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSAI	Masohi	1.01	326	P	Pg	13 19 48.7	-3.2
AAI	Ambon	1.40	291	P	Pn	13 19 52.5	-5.5
FAKI	Fak Fak	3.02	65	P	Pn	13 20 23.0	+2.8
FAKI	Fak Fak	3.02	65	Pn	Pn	13 20 22.2	+1.9
SIJI	Sorong	3.74	28	Pn	Pn	13 20 26.1	-4.1
	3.1nm,0.3s,baz=219,slow=23,SNR=15						
SIJI				Sn	Sn	13 21 13.1	-1.2
	38nm,0.3s,baz=250,slow=24,SNR=10.0						
SWI	Sorong	3.74	28	P	Pn	13 20 26.7	-3.5
TNTI	Ternate	5.37	337	Pn	Pn	13 20 54.2	+1.6
BATI	Baumata	8.32	224	Pn	Pn	13 21 37.2	+3.9
	10.0nm,0.3s,baz=72,slow=1.5,SNR=9.8						
MTN	Manton Dam	8.75	169	Pn	Pn	13 21 38.2	-0.8
KAPI	Kappang	9.76	265	Pn	Pn	13 21 56.3	+3.4
	0.6nm,0.3s,baz=183,slow=8.2,SNR=2.2						
TOLI2	Tolitoli	10.18	301	Pn	Pn	13 21 59.0	+0.2
KNRA	Kununurra	11.44	184	Pn	Pn	13 22 14.1	-1.8
FITZ	Fitzroy Crossi	14.33	195	Pn	Pn	13 22 55.6	+0.1
	0.2nm,0.3s,baz=41,slow=16,SNR=6.6						
WB0	Warramunga Arr	16.20	163		Pn	13 23 18.2	-2.1
WRAB	Tennant Creek	16.35	164		Pn	13 23 20.5	-1.7
WRA	Warramunga Arr	16.35	164	Pn	Pn	13 23 20.6	-1.6
	0.3nm,0.3s,baz=347,slow=13,SNR=15						
WRA	Warramunga Arr	16.35	164	Pn	Pn	13 23 20.2	-2.0
WB2	Warramunga Arr	16.36	164	Pn	Pn	13 23 20.8	-1.4
WB2				IAmb	IAmb	13 23 33.0	
	comp=Z,12nm,1.1s						
WR0	Warramunga Arr	16.43	163	Pn	Pn	13 23 21.0	-2.2
AS31	Alice Springs	19.82	168		P	13 24 02.9	-0.5
ASAR	Alice Springs	19.82	168	P	P	13 24 00.4	-3.0
	comp=Z,0.2nm,0.3s,baz=350,slow=9.5,SNR=15						
CTAO	Charters Tower	22.72	135	P	P	13 24 34.5	-0.2
CTAO				IAmb	IAmb	13 25 03.7	
	comp=Z,9.7nm,1.1s						
FORT	Forrest	26.48	183	P	P	13 25 10.1	+0.1
FORT				IAmb	IAmb	13 25 18.2	
	comp=Z,18nm,1.0s						
IPM	Ipoh	29.73	287	P	P	13 25 40.1	+1.0
CMAR	Chiang Mai Arr	37.59	308	P	P	13 26 48.8	+1.2
	comp=Z,2.8nm,0.6s,baz=136,slow=7.3,SNR=24						
CHTO	Chiang Mai	37.79	308	P	P	13 26 49.5	+0.3
CHTO				IAmb	IAmb	13 26 51.0	
	comp=Z,8.2nm,0.8s						
JMN	Monobe	37.94	6	P	P	13 26 51.3	+1.1
JWT	Wachi	39.65	8	P	P	13 27 04.5	0.0
JWT				IAmb	IAmb	13 27 26.0	
	comp=Z,8.4nm,1.0s						
DZM	Mont Dzumac	39.95	120	P	P	13 27 07.4	0.0
MJAR	Matsushiro Arr	41.33	11	P	P	13 27 18.1	-0.3
	comp=Z,3.0nm,0.8s,baz=188,slow=8.9,SNR=7.4						
MAT	Matsushiro	41.33	11	P	P	13 27 17.7	-0.7
KSRS	Korea Array	41.46	358	P	P	13 27 20.2	+0.8
	comp=Z,0.9nm,0.7s,baz=169,slow=12,SNR=6.2						
JMM	Marumori	43.14	13	P	P	13 27 34.1	+1.1
USRK	Ussuriysk Ar.	48.22	2	P	P	13 28 13.1	-0.1
	comp=Z,1.5nm,0.6s,baz=192,slow=5.7,SNR=2.8						
ASAJ	Asahikawa	49.51	12	LR	LR	13 51 06.0	
	comp=Z,1µm,18.0s,baz=174,slow=38						
GTA	Gaotai	51.29	331	*e*P	P	13 28 37.5	+0.6
GTA				pP	pwP	13 28 46.9	+2.6
GTA				sP	sP	13 28 50.7	+11
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM	Songino Array	55.64	341	P	P	13 29 09.1	+0.4
	comp=Z,1.2nm,0.7s,baz=147,slow=8.4,SNR=6.4						
MK31	Makanchi Array	65.62	326	P	P	13 30 16.4	-0.3
MK31				IAmb	IAmb	13 30 17.2	
	comp=Z,3.8nm,0.7s						
MKAR	Makanchi Array	65.62	326	P	P	13 30 16.9	+0.1
	comp=Z,4.0nm,0.5s,baz=120,slow=8.2,SNR=32						
MKAR	Makanchi Array	65.62	326	P	P	13 30 17.1	+0.4
ZAA0	Zalesovo Array	68.86	334	P	P	13 30 36.8	-0.3
ZAA0				IAmb	IAmb	13 30 37.5	
	comp=Z,3.3nm,0.7s						
ZALV	Zalesovo Beam	68.86	334	P	P	13 30 36.8	-0.3
	comp=Z,3.2nm,0.7s,baz=116,slow=5.7,SNR=11						
ZALV	Zalesovo Beam	68.86	334	P	P	13 30 36.6	-0.5
KURK	Kurchatov	69.88	328	P	P	13 30 43.5	+0.1
VNDA	Vanda	75.28	173	P	P	13 31 15.4	+0.2
VNDA				IAmb	IAmb	13 31 35.7	
	comp=Z,7.9nm,1.5s						
BRVK	Borovoye	75.51	328	P	P	13 31 16.7	-0.2
BRVK				IAmb	IAmb	13 31 17.9	
	comp=Z,6.4nm,0.9s						
ABKAR	Akbulak array	80.02	321	P	P	13 31 41.9	-0.2

ABKAR				IAmb	IAmb	13 31 52.9	
	comp=Z,7.6nm,1.1s						
ABKAR	Akbulak array	80.02	321	P	P	13 31 41.6	-0.5
QSPA	South Pole Qui	85.77	180	P	P	13 32 11.0	-0.8
QSPA				IAmb	IAmb	13 32 26.8	
	comp=Z,9.3nm,1.5s						
KMBO	Kilima Mbogo	92.16	269	LR	LR	14 13 22.1	
	comp=Z,2µm,18.9s,baz=96,slow=35						
ARCES	ARCESS Array B	98.79	340	P	P	13 33 10.7	-1.4
	comp=Z,2.4nm,0.9s,baz=33,slow=3.5,SNR=4.5						
TXAR	Lajitas Array	123.88	57	PKP	PKPdf	13 38 32.2	+0.5
	comp=Z,0.2nm,0.6s,baz=270,slow=1.8,SNR=2.1						
TORD	Torodi Ar. Bea	127.73	283	PKP	PKPdf	13 38 39.6	+0.4
	comp=Z,0.9nm,0.6s,baz=68,slow=1.9,SNR=6.4						
CPUP	Villa Florida	148.95	168	PKPbc	PKPbc	13 39 21.0	-0.4
	comp=Z,1.0nm,0.4s,baz=197,slow=17,SNR=3.0						

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*DJA **09** 13:21:36.5±2.2, 4°S±7°×12°9E±°, h15^{km}±17^{km}, M4.4/7, mb4.4/2, MLv4.3/7*
*IDC **09** 13:21:37.0±0.6, 4°.19S×129°.41E, h0^{km}, mb4.3/11, mb1 4.4/16, mb1mx4.2/40, mbtmp4.3/16, ML4.0/5, Error ellipse: s-maj=24.1km s-min=14.0km az=70.0*
*NEIC **09** 13:21:39.4±1.8, 4°.02S±0°.04×129°.59E±0°.08, h10^{km}±1^{km}, mb4.6/25, Error ellipse: s-maj=14.0km s-min=4.3km az=115.0*
*KLM **09** 13:21:50, 4°.14S×129°.65E, h110^{km}, mb4.7*
ISC 09 13:21:42.3±0.4**, 4°.14S**±0°.05×**129°.58E**±0°.06**, h36^{km}, n75,** σ1^s**46**/73**, mb4.5**/28**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.02	321	P	Pn	13 21 58.9	-1.2
AAI	Ambon	1.45	288	P	Pn	13 22 01.1	-5.0
FAKI	Fak Fak	2.93	66	P	Pn	13 22 27.5	+1.1
FAKI	Fak Fak	2.93	66	Pn	Pn	13 22 25.8	-0.5
SIJI	Sorong	3.66	27	Pn	Pn	13 22 35.9	-0.6
	10nm,0.3s,baz=41,slow=21,SNR=7.3						
SIJI				Sn	Sn	13 23 15.8	-2.6
	23nm,0.3s,baz=264,slow=3.1,SNR=3.7						
SWI	Sorong	3.66	27	P	Pn	13 22 36.2	-0.3
LBMI	Labuha	4.05	329	P	Pn	13 22 42.3	+0.5
SANI	Sanana	4.14	300	P	Pn	13 22 39.8	-3.3
SAUI	Saumlaki	4.18	156	Pn	Pn	13 22 46.5	+2.9
SOEI	Soe	7.67	223	Pn	Pn	13 23 32.8	+1.0
MTN	Manton Dam	8.78	170	Pn	Pn	13 23 48.3	+1.5
EDFI	Ende, Flores	9.08	239	P	Pn	13 23 43.2	-7.8
	19nm,1.0s						
BNSI	Bone	9.45	268	P	Pn	13 23 50.8	-5.2
KAPI	Kappang	9.84	265	Pn	Pn	13 24 02.8	+1.5
	0.6nm,0.3s,baz=190,slow=5.7,SNR=4.5						
JAY	Jayapura	11.22	82	Pn	Pn	13 24 22.7	+2.4
	0.4nm,0.3s,baz=317,slow=18,SNR=1.3						
KNRA	Kununurra	11.49	184	Pn	Pn	13 24 25.6	+1.6
FITZ	Fitzroy Crossi	14.40	195	Pn	Pn	13 25 01.7	-1.9
	0.2nm,0.3s,baz=9.1,slow=16,SNR=2.4						
WB0	Warramunga Arr	16.23	164		Pn	13 25 26.7	-0.9
WRA	Warramunga Arr	16.38	164	Pn	Pn	13 25 27.0	-2.6
	0.9nm,0.3s,baz=341,slow=13,SNR=5.6						
WRA				Sn	Sn	13 28 26.1	-4.3
	0.1nm,0.3s,baz=338,slow=22,SNR=3.4						
WRA	Warramunga Arr	16.38	164	Pn	Pn	13 25 29.0	-0.6
COEN	Coen	16.58	127	Pn	Pn	13 25 31.8	-0.4
SBUM	Sibu	18.54	290	P	Pn	13 25 59.0	+2.5
SBUM	Sibu	18.54	290	P	P	13 25 55.1	-1.0
PSA00	Pilbara Seismi	19.74	208	P	Pn	13 26 10.7	-0.1
AS31	Alice Springs	19.85	168	P	P	13 26 11.5	+1.1
ASAR	Alice Springs	19.86	168	P	P	13 26 11.0	+0.6
	1.5nm,0.3s,baz=350,slow=10,SNR=16						
ASAR				S	S	13 29 48.8	-3.4
	0.1nm,0.3s,baz=347,slow=20,SNR=4.7						
ASAR				PcP	PcP	13 30 27.4	+0.2
	0.2nm,0.3s,baz=339,slow=0.9,SNR=5.6						
ASAR	Alice Springs	19.86	168	P	P	13 26 11.7	+1.3
CTA	Charters Tower	22.70	136	P	P	13 26 40.7	-0.4
	9.3nm,0.6s,baz=313,slow=12,SNR=3.4						
CTAO	Charters Tower	22.70	136	P	P	13 26 41.2	+0.1
CTAO				IAmb	IAmb	13 26 44.5	
	comp=Z,20nm,1.0s						
FORT	Forrest	26.54	183	P	P	13 27 18.2	+1.4
IPM	Ipoh	29.79	286	P	P	13 27 47.0	+1.0
IPM	Ipoh	29.79	286	P	P	13 27 46.5	+0.5
STKA	Stephens Creek	29.81	159	P	P	13 27 46.4	+0.4
	comp=Z,1.2nm,0.4s,baz=356,slow=7.1,SNR=6.2						
RPSI	Rantau Prapat	31.38	282	P	P	13 27 57.3	-2.7
PSI	Prapat	31.40	282	P	P	13 27 57.3	-3.1
	comp=Z,3.6nm,0.7s,baz=152,slow=2.5,SNR=5.2						
NJ2	Nanjing	37.41	345	*e*P	P	13 28 53.5	+1.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CM31	Chiang Mai Arr	37.62	308	P	P	13 28 54.9	+0.8
CM31				IAmb	IAmb	13 29 04.7	
	comp=Z,13nm,1.2s						
CMAR	Chiang Mai Arr	37.62	308	P	P	13 28 54.4	+0.4
	comp=Z,1.5nm,0.5s,baz=138,slow=7.8,SNR=9.6						
CMAR	Chiang Mai Arr	37.62	308	P	P	13 28 54.7	+0.7
KMI	Kunming	39.06	319	⇑P	P	13 29 08.6	+2.3
KMI				pP	sP	13 29 19.0	-1.1
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KMI				LR	LR		
	comp=N,1µm,18.0s						
KMI				LR	LR		
	comp=E,1µm,16.3s						
KMI				LR	LR		
	comp=Z,2µm,18.3s						
MAJO	Matsushiro	41.27	11	P	P	13 29 23.2	-1.0
MAJO				IAmb	IAmb	13 29 33.6	
	comp=Z,13nm,0.8s						
MAT	Matsushiro	41.27	11	P	P	13 29 23.1	-1.1
MJAR	Matsushiro Arr	41.27	11	P	P	13 29 24.0	-0.2
	comp=Z,7.5nm,0.9s,baz=195,slow=9.5,SNR=5.1						
MJAR	Matsushiro Arr	41.27	11	IAmb	IAmb	13 29 32.3	
	comp=Z,6.0nm,0.9s						
KSRS	Korea Array	41.41	358	P	P	13 29 26.3	+1.0
	comp=Z,2.2nm,0.9s,baz=180,slow=8.0,SNR=6.8						
BJI	Beijing	45.66	346	P	P	13 30 07.3	+7.8
BJI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LZH	Lanzhou	46.71	331	*e*P	P	13 30 06.2	-1.8
LZH				pP	pP	13 30 16.8	-0.6
LZH				sP	pwP	13 30 22.3	-0.4
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
HHC	Hu-ho-hao-te	47.72	342	*e*P	P	13 30 19.1	+3.4
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,610nm,8.8s						
USRK	Ussuriysk Ar.	48.17	2	P	P	13 30 19.7	+0.7
	comp=Z,3.2nm,0.6s,baz=170,slow=6.7,SNR=6.7						
GTA	Gaotai	51.29	330	*e*P	P	13 30 43.4	+0.4
GTA				pP	pP	13 30 51.7	-0.9
GTA				sP	sP	13 30 55.8	-0.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	Ulaanbaatar	55.44	342	P	P	13 31 13.8	+0.5
ULN				IAmb	IAmb	13 31 23.9	
	comp=Z,6.8nm,0.8s						
SONM	Songino Array	55.62	341	P	P	13 31 14.3	-0.4
	comp=Z,1.5nm,1.0s,baz=157,slow=7.4,SNR=4.6						
WMQ	Urumqi	60.79	326	*e*P	P	13 31 52.4	+1.5
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,20nm,5.9s						
CASY	Casey	63.45	188	P	P	13 32 08.5	+0.3
CASY				IAmb	IAmb	13 32 09.3	
	comp=Z,7.4nm,1.1s						
MK31	Makanchi Array	65.62	326	P	P	13 32 22.9	+0.1
MK31				IAmb	IAmb	13 32 23.2	
	comp=Z,2.7nm,0.7s						
MKAR	Makanchi Array	65.62	326	P	P	13 32 22.7	-0.1
	comp=Z,3.8nm,0.6s,baz=126,slow=7.9,SNR=15						
MKAR	Makanchi Array	65.62	326		P	13 32 22.4	-0.4
MAKZ	Makanchi	65.81	326	P	P	13 32 23.7	-0.3
KDJ	Kajisay	66.12	320	P	P	13 32 26.3	0.0
KDJ				IAmb	IAmb	13 32 36.8	
	comp=Z,3.8nm,0.9s						
ZAA0	Zalesovo Array	68.85	333	P	P	13 32 42.9	-0.2
ZAA0				IAmb	IAmb	13 32 52.6	
	comp=Z,6.9nm,1.1s						
ZALV	Zalesovo Beam	68.85	333	P	P	13 32 43.2	+0.2
	comp=Z,1.8nm,0.6s,baz=125,slow=4.4,SNR=5.7						
ZALV	Zalesovo Beam	68.85	333	P	P	13 32 42.3	-0.7
GAR	Garm	69.37	314	P	P	13 32 46.3	-0.5
KURK	Kurchatov	69.88	328		P	13 32 49.1	-0.3
KKAR	Karatay Array	70.93	318	P	P	13 32 55.5	-0.7
BRVK	Borovoye	75.51	328		P	13 33 23.6	+0.7
BRVK				IAmb	IAmb	13 33 32.5	
	comp=Z,5.6nm,0.8s						
NRIK	Noril'sk	78.70	346	P	P	13 33 40.6	+0.1
	comp=Z,0.9nm,0.3s,baz=159,slow=7.8,SNR=4.1						
NRIK	Noril'sk	78.70	346	IAmb	IAmb	13 33 56.7	
	comp=Z,11nm,1.4s						
ABKAR	Akbulak array	80.03	321	P	P	13 33 47.9	-0.2
ABKAR	Akbulak array	80.03	321	P	P	13 33 48.0	-0.1
ABKAR				IAmb	IAmb	13 33 48.8	
	comp=Z,4.5nm,0.8s						
QSPA	South Pole Qui	85.82	180	P	P	13 34 17.5	-0.5
QSPA				IAmb	IAmb	13 34 27.1	
	comp=Z,1.8nm,0.8s						
TXAR	Lajitas Array	123.79	57	PKP	PKiKP	13 40 37.6	+0.1
	comp=Z,0.5nm,0.9s,baz=222,slow=1.7,SNR=4.5						
TORD	Torodi Ar. Bea	127.80	283	PKP	PKPdf	13 40 44.9	-0.3
	comp=Z,0.8nm,0.7s,baz=52,slow=1.6,SNR=6.0						
CPUP	Villa Florida	148.98	168	PKPbc	PKPbc	13 41 27.1	-0.2
	comp=Z,3.3nm,0.9s,baz=49,slow=2.6,SNR=3.8						
LPAZ	La Paz	153.19	140	PKPbc	PKPbc	13 41 38.5	+0.3
	comp=Z,1.6nm,0.8s,baz=181,slow=7.8,SNR=4.4						

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*IDC **09** 13:28:37.2±0.9, 4°.13S×129°.71E, h0^{km}, mb4.2/9, mb1 4.3/15, mb1mx4.1/40, mbtmp4.2/15, ML3.9/5, Error ellipse: s-maj=24.9km s-min=16.2km az=90.0*
*NEIC **09** 13:28:39.2±1.1, 4°.10S±0°.07×129°.55E±0°.07, h10^{km}±1^{km}, mb4.4/14, Error ellipse: s-maj=12.7km s-min=10.9km az=229.0*
*DJA **09** 13:28:44.6±0.9, 3°S±8°×13°0E±°, h36^{km}±22^{km}, M3.9/6, MLv3.9/6*
ISC 09 13:28:42.4±0.5**, 4°.15S**±0°.06×**129°.56E**±0°.07**, h36^{km}, n44,** σ1^s**29**/43**, mb4.3**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.02	322	P	Pn	13 28 58.7	-1.4
AAI	Ambon	1.44	289	P	Pn	13 29 08.3	+2.4
FAKI	Fak Fak	2.95	66	P	Pn	13 29 25.5	-1.2
FAKI	Fak Fak	2.95	66	Pn	Pn	13 29 26.1	-0.6
SIJI	Sorong	3.68	28	Pn	Pn	13 29 35.5	-1.3
	16nm,0.3s,baz=164,slow=18,SNR=9.8						
SIJI				Sn	Sn	13 30 19.8	+0.9
	10nm,0.3s,baz=240,slow=23,SNR=2.5						
SWI	Sorong	3.68	27	P	Pn	13 29 29.2	-7.6
LBMI	Labuha	4.05	329	P	Pn	13 29 35.6	-6.3
TNTI	Ternate	5.36	336	Pn	Pn	13 29 56.9	-3.0
BATI	Baumata	8.39	224	Pn	Pn	13 30 42.0	+0.5
	2.1nm,0.3s,baz=145,slow=0.9,SNR=4.2						
MTN	Manton Dam	8.77	170	Pn	Pn	13 30 48.4	+1.7
KAPI	Kappang	9.81	265	Pn	Pn	13 31 03.8	+2.7
	baz=156,slow=11,SNR=1.1						
KAPI	Kappang	9.81	265	Pn	Pn	13 31 00.7	-0.3
TOLI2	Tolitoli	10.21	301	Pn	Pn	13 31 05.1	-1.4
KNRA	Kununurra	11.48	184		Pn	13 31 23.2	-0.6
FITZ	Fitzroy Crossi	14.38	195	Pn	Pn	13 32 02.2	-1.3
	0.2nm,0.3s,baz=22,slow=9.8,SNR=5.6						
WRA	Warramunga Arr	16.37	164	Pn	Pn	13 32 26.3	-3.2
	0.3nm,0.3s,baz=341,slow=13,SNR=5.0						
WRA	Warramunga Arr	16.37	164	Pn	Pn	13 32 28.6	-1.0
WB2	Warramunga Arr	16.37	164	Pn	Pn	13 32 27.8	-1.8
KKM	Kota Kinabalu	16.74	307		Pn	13 32 35.0	+0.7
KKM				IAmb	IAmb	13 32 52.5	
	comp=Z,34nm,1.1s						
PSA00	Pilbara Seismi	19.72	208	P	Pn	13 33 09.7	-0.9
PSA00	Pilbara Seismi	19.72	208	P	Pn	13 33 09.8	-0.7
PSA00				IAmb	IAmb	13 33 17.8	
	comp=Z,27nm,1.4s						
AS31	Alice Springs	19.85	168	P	P	13 33 10.0	-0.4
ASAR	Alice Springs	19.85	168	P	P	13 33 10.6	+0.2
	comp=Z,1.2nm,0.3s,baz=346,slow=11,SNR=35						
ASAR	Alice Springs	19.85	168	P	P	13 33 10.7	+0.3
CTA	Charters Tower	22.70	136	P	P	13 33 40.5	-0.6
	comp=Z,6.6nm,0.8s,baz=320,slow=13,SNR=2.3						
CTAO	Charters Tower	22.70	136	P	P	13 33 41.0	-0.1
CTAO				IAmb	IAmb	13 33 49.7	
	comp=Z,14nm,1.1s						
CMAR	Chiang Mai Arr	37.62	308	P	P	13 35 55.5	+1.4
	comp=Z,2.4nm,0.6s,baz=135,slow=7.2,SNR=20						
JWT	Wachi	39.61	8	P	P	13 36 10.3	-0.1
MAT	Matsushiro	41.28	11	P	P	13 36 21.9	-2.4
MJAR	Matsushiro Arr	41.28	11	P	P	13 36 22.5	-1.9
	comp=Z,2.9nm,0.7s,baz=181,slow=9.3,SNR=8.5						
KSRS	Korea Array	41.42	358	P	P	13 36 25.9	+0.6
	comp=Z,1.7nm,0.7s,baz=169,slow=8.8,SNR=9.3						
USRK	Ussuriysk Ar.	48.18	2	P	P	13 37 19.5	+0.3
	comp=Z,2.4nm,0.6s,baz=195,slow=9.0,SNR=5.6						
SONM	Songino Array	55.62	341	P	P	13 38 15.5	+0.7
	comp=Z,1.3nm,0.8s,baz=150,slow=7.9,SNR=7.7						
MKAR	Makanchi Array	65.62	326	P	P	13 39 22.7	-0.2
	comp=Z,5.7nm,0.8s,baz=128,slow=8.0,SNR=13						
ZAA0	Zalesovo Array	68.86	334	P	P	13 39 43.1	0.0
ZAA0				IAmb	IAmb	13 39 51.0	
	comp=Z,3.2nm,0.9s						
ZALV	Zalesovo Beam	68.86	334	P	P	13 39 42.9	-0.2
	comp=Z,0.7nm,0.4s,baz=127,slow=4.7,SNR=4.4						
ZALV	Zalesovo Beam	68.86	334	P	P	13 39 42.7	-0.4
KURK	Kurchatov	69.88	328	P	P	13 39 49.4	-0.1
VNDA	Vanda	75.31	173	P	P	13 40 21.1	-0.3
VNDA				IAmb	IAmb	13 40 42.0	
	comp=Z,4.0nm,1.3s						
BRVK	Borovoye	75.51	328	P	P	13 40 23.1	+0.2
BRVK				IAmb	IAmb	13 40 24.1	
	comp=Z,3.1nm,0.8s						
NRIK	Noril'sk	78.71	346	P	P	13 40 41.2	+0.6
	comp=Z,4.1nm,0.6s,baz=119,slow=6.6,SNR=7.0						
ABKAR	Akbulak array	80.02	321	P	P	13 40 48.1	0.0
ABKAR	Akbulak array	80.02	321	P	P	13 40 48.3	+0.1
ABKAR				IAmb	IAmb	13 40 48.9	
	comp=Z,3.3nm,0.8s						
QSPA	South Pole Qui	85.81	180	P	P	13 41 17.3	-0.7
QSPA				IAmb	IAmb	13 41 27.4	
	comp=Z,5.3nm,1.4s						

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*IDC **09** 13:32:53.3±0.9, 15°.17S×177°.76W, h373^{km}±8^{km}, mb4.8/36, mb1 4.8/38, mb1mx4.7/47, mbtmp5.5/38, Error ellipse: s-maj=10.2km s-min=7.2km az=173.0*
*BJI **09** 13:32:54.0±0.0, 14°.79S×177°.21W, h400^{km}, mB5.6/21, mb5.3/54*
*MOS **09** 13:32:55.1±1.0, 15°.18S×177°.77W, h406^{km}, mb5.2/26, Error ellipse: s-maj=8.2km s-min=7.6km az=35.2*
*BGR **09** 13:32:55.6±0.0, 15°.34S×176°.99W, h397^{km}*
*NEIC **09** 13:32:56.1±2.1, 15°.18S±0°.09×177°.76W±0°.09, h402^{km}±6^{km}, mb5.3/83, Error ellipse: s-maj=13.5km s-min=11.3km az=139.0*
ISC 09 13:32:55.2±0.4**, 15°.19S**±0°.04×**177°.76W**±0°.04**, h399^{km}±3^{km}, h399^{km}:pP-P, n832,** σ1^s**30**/844**, mb5.3**/156**, 254C-92D, Fault plane solution: NP1:**ϕ_s189.32466°, δ60.54915°**,** λ-5.29622°. **NP2:**ϕ_s281.93433°**,** δ85.38976°**,** λ-150.44408°. **Principal axes:** T Plg16.9078°**,** Azm51.9415°**;** N Plg60.1188°**,** Azm290.0019°**;** P Plg23.8600°**,** Azm149.6682°**; Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.75	237	P	Pn	13 34 16.1	+1.4
	164nm,0.3s,baz=99,slow=23,SNR=1324						
MSVF				S	S	13 35 22.6	+3.4
	baz=108,slow=23,SNR=14						
MSVF	Nonsavu	4.75	237*c*	*i*P	Pn	13 34 16.6	+1.9
MSVF	Nonsavu	4.75	237	Pn	Pn	13 34 16.3	+1.6
AFI	Afiamalu	5.93	78	P	Pn	13 34 25.2	-2.0
	148nm,0.3s,baz=55,slow=0.9,SNR=251						
AFI				S	S	13 35 44.9	+2.9
	10nm,0.3s,baz=325,slow=19,SNR=3.7						
FUNA	Funafuti	7.26	335	Pn	Pn	13 34 40.9	-0.9
NIUE	Niue	8.43	118	P	Pn	13 34 53.6	-1.4
	baz=8.3,SNR=36						
NIUE				S	S	13 36 30.4	-2.9
	baz=8.3						
NIUE	Niue	8.43	118		Pn	13 34 53.7	-1.4
KNTN	Kanton	13.70	26	P	P	13 35 53.1	-0.5
MARNC	Mare, Loyalty	14.87	243	P	P	13 36 07.1	+0.8
LIFNC	LIFOU	15.31	247	P	P	13 36 11.6	+0.4
OUENC	Ouen Island, N	16.25	241	P	P	13 36 21.6	+0.4
OUENC				IAmb	IAmb	13 36 27.8	
	comp=Z,114nm,0.9s						
DZM	Mont Dzumac	16.46	243	*e*P	P	13 36 23.2	-0.4
	comp=Z,118nm,1.1s						
DZM	Mont Dzumac	16.46	243	P	P	13 36 23.9	+0.3
ONTNC	Ouen Toro	16.54	242	P	P	13 36 24.7	+0.4
ONTNC				IAmb	IAmb	13 36 27.4	
	comp=Z,162nm,0.9s						
RAR	Rarotonga	18.10	112	P	P	13 36 41.1	+0.2
	comp=Z,2.7nm,0.3s,baz=251,slow=7.4,SNR=30						
RAR	Rarotonga	18.10	112	P	P	13 36 41.0	+0.1
RAR				IAmb	IAmb	13 36 44.0	
	comp=Z,294nm,1.0s						
TARA	Tarawa	18.84	330	P	P	13 36 48.4	-0.4
NFK	Norfolk Island	19.10	221	P	P	13 36 52.7	+1.5
	baz=19,SNR=3.9						
OUZ	Omahuta	21.41	200	P	P	13 37 13.7	+1.2
WCZ	Waipu Caves	21.84	197	P	P	13 37 18.2	+1.8
HNR	Honiara	22.51	282	P	P	13 37 22.9	+0.1
	comp=Z,372nm,0.8s,baz=188,slow=2.9,SNR=21						
HNR	Honiara	22.51	282	P	P	13 37 22.4	-0.3
HAZ	Te Kaha	22.83	189	P	P	13 37 22.0	-3.3
PKGZ	Pakihiroa	22.91	188	P	P	13 37 23.6	-2.6
RUGZ	Raukumara Rang	23.05	189	P	P	13 37 23.6	-3.9
WHRZ	Whale Island	23.06	191	P	P	13 37 23.7	-3.7
PUZ	Puketiti	23.07	188	P	P	13 37 24.8	-2.7
PUZ				S	S	13 41 08.3	-0.2
TGRZ	Tauranga	23.07	192	P	P	13 37 27.1	-0.4
OPRZ	Ohinepanea	23.12	192	P	P	13 37 27.1	-0.9
TWGZ	Tauwhareparae	23.21	189	P	P	13 37 26.4	-2.5
TOZ	Tahuroa Road	23.24	194	P	P	13 37 28.8	-0.2
KMRZ	Kaimai	23.25	193	P	P	13 37 30.0	+0.8
EDRZ	Edgecumbe	23.34	191	P	P	13 37 29.0	-1.0
OMRZ	Omania	23.41	192	P	P	13 37 29.9	-0.8
URZ	Urewera	23.43	190	P	P	13 37 26.9	-3.8
	comp=Z,100nm,0.3s,baz=301,slow=23,SNR=135						
URZ	Urewera	23.43	190	P	P	13 37 26.0	-4.7
MWZ	Matawai	23.43	189	P	P	13 37 26.8	-4.0
MWZ				S	S	13 41 09.5	-4.8
CNGZ	Carnagh Statio	23.48	188	P	P	13 37 29.1	-2.0
TKGZ	Te Karaka	23.48	189	P	P	13 37 29.0	-2.2
UTU	Utuhina	23.52	192	P	P	13 37 33.3	+1.7
HSRZ	Hossack Road	23.64	192	P	P	13 37 32.3	-0.4
RIGZ	Rimuhau	23.76	189	P	P	13 37 30.3	-3.5
RIGZ				S	S	13 41 16.3	-3.1
PRRZ	Plateau Road	23.79	191	P	P	13 37 31.6	-2.4
RTZ	Ruatahuna	23.80	190	P	P	13 37 30.8	-3.3
TLZ	Tolley Road	23.80	193	P	P	13 37 34.3	+0.2
ALRZ	Allen Road	23.86	191	P	P	13 37 33.6	-1.1
KUTZ	Kaahu Road	23.89	193	P	P	13 37 33.9	-1.1
PRGZ	Paritu Road	23.95	188	P	P	13 37 34.3	-1.2
RAHZ	Arahi	24.07	190	P	P	13 37 33.6	-3.0
RAHZ				S	S	13 41 24.6	+0.3
MRHZ	Matea Rd	24.11	191	P	P	13 37 33.6	-3.3
WATZ	Wairara	24.12	193	P	P	13 37 35.5	-1.5
HIZ	Hauiti	24.13	194	P	P	13 37 37.8	+0.7
MHGZ	Mahia Peninsul	24.18	188	P	P	13 37 36.0	-1.5
RATZ	Rangitukua	24.27	192	P	P	13 37 36.2	-2.1
NMHZ	Naumai	24.30	190	P	P	13 37 35.8	-2.8
RITZ	Rihia Road	24.36	192	P	P	13 37 37.1	-2.0
BKZ	Black Stump Fm	24.42	191	P	P	13 37 35.4	-4.3
BKZ				S	S	13 41 23.1	-6.7
ARHZ	Aropaoanui	24.43	190	P	P	13 37 37.4	-2.3
TMVZ	Te Maari	24.52	192	P	P	13 37 38.3	-2.4
TWVZ	Taurewa	24.54	193	P	P	13 37 38.6	-2.2
ETVZ	East Tongariro	24.54	192	P	P	13 37 38.4	-2.4
WTVZ	West Tongariro	24.55	193	P	P	13 37 38.5	-2.4
NNVZ	North Ngauruho	24.56	192	P	P	13 37 39.9	-1.1
OTVZ	Oturere	24.58	192	P	P	13 37 37.9	-3.3
MCHZ	McNeill Hill	24.65	190	P	P	13 37 38.3	-3.4
TUVZ	Tukino	24.68	192	P	P	13 37 39.3	-2.8
KWHZ	Kaweka Forest	24.68	191	P	P	13 37 38.7	-3.3
FWVZ	Far West T-bar	24.69	193	P	P	13 37 40.5	-1.8
MOVZ	Moawhango	24.79	192	P	P	13 37 40.5	-2.5
PAE	Paea	27.13	99	*e*P	P	13 38 03.2	-0.8
	comp=Z,23nm,1.0s						
PPT	Papeete	27.13	99	P	P	13 38 03.9	-0.2
	comp=Z,54nm,0.7s,baz=102,slow=13,SNR=6.5						
PPT2	Papeete2	27.13	99	*e*P	P	13 38 03.6	-0.5
	comp=Z,83nm,1.2s						
PPTF	Pamatai, Papee	27.14	99	P	P	13 38 03.9	-0.3
PPTF				IAmb	IAmb	13 38 05.8	
	comp=Z,344nm,1.7s						
TBI	Tubuai	27.88	111	*e*P	P	13 38 10.2	-0.3
	comp=Z,341nm,1.1s						
LTZ	Lake Taylor	28.80	195	P	P	13 38 16.8	-1.7
LTZ				IAmb	IAmb	13 38 18.3	
	comp=Z,106nm,0.9s						
PMOR	Pomariorio Ree	28.82	94	*e*P	P	13 38 17.9	-1.0
	comp=Z,270nm,0.9s						
VAH	Vaihoa	29.07	94	*e*P	P	13 38 20.2	-0.8
	comp=Z,141nm,0.9s						
EIDS	Eidsvold	30.86	246	P	P	13 38 36.0	-0.7
	baz=31,SNR=14						
EIDS	Eidsvold	30.86	246	P	P	13 38 37.8	+1.1
RABL	Rabaul	31.55	287	P	P	13 38 41.4	-1.4
ARMA	Armidale	31.90	236	P	P	13 38 45.6	-0.1
	baz=32,SNR=20						
ARMA	Armidale	31.90	236	P	P	13 38 46.0	+0.3
MLZ	Mavora Lakes	32.36	199	P	P	13 38 47.3	-2.0
WHZ	Wether Hill Ro	32.88	199	P	P	13 38 52.8	-1.0
WHZ				IAmb	IAmb	13 38 54.8	
	comp=Z,408nm,1.2s						
RMQ	Roma	33.16	245	P	P	13 38 56.6	+0.1
	baz=33,SNR=64						
MGCD	Mangrove Creek	33.41	232	P	P	13 38 58.2	-0.2
	baz=34,SNR=81						
CTA	Charters Tower	34.60	257	P	P	13 39 08.7	-0.1
	comp=Z,34nm,0.5s,baz=80,slow=9.9,SNR=30						
CTAO	Charters Tower	34.60	257	P	P	13 39 08.0	-0.8
CTAO				pmax	pmax		
	comp=Z,46nm,0.7s						
CTAO	Charters Tower	34.60	257	P	P	13 39 08.0	-0.8
PMG	Port Moresby	34.73	275	P	P	13 39 10.6	+0.8
	comp=Z,126nm,0.9s,baz=72,slow=5.9,SNR=23						
PMG	Port Moresby	34.73	275	P	P	13 39 10.7	+0.8
PMG				pmax	pmax		
	comp=Z,162nm,1.1s						
PMG	Port Moresby	34.73	275	P	P	13 39 10.7	+0.8
PMG				IAmb	IAmb	13 39 12.2	
	comp=Z,162nm,1.1s						
CNB	Canberra Magne	35.62	230	P	P	13 39 16.8	-0.4
	baz=36,SNR=86						
CAN	Canberra	35.89	230	P	P	13 39 20.4	+0.9
CAN				pmax	pmax		
	comp=Z,19nm,0.7s						
CAN	Canberra	35.89	230	P	P	13 39 20.4	+0.9
MTSU	Mount Surprise	36.41	260	P	P	13 39 24.2	+0.1
	baz=36,SNR=72						
MILA	Mila	36.55	227	P	P	13 39 24.4	-0.6
	baz=37,SNR=13						
MANU	Manus Island	36.79	287	P	P	13 39 28.0	+0.7
MANU				IAmb	IAmb	13 39 29.1	
	comp=Z,75nm,0.8s						
CMSA	Cobar Meteorol	37.08	237	P	P	13 39 28.8	-0.7
	baz=37,SNR=83						
QLP	Quilpie	37.14	246	P	P	13 39 29.6	-0.5
	baz=37,SNR=24						
COEN	Coen	37.80	267	P	P	13 39 36.6	+1.0
	baz=38						
COEN	Coen	37.80	267	P	P	13 39 36.2	+0.6
COEN				IAmb	IAmb	13 39 37.6	
	comp=Z,126nm,0.8s						
TOO	Toolangi	39.40	229	P	P	13 39 48.1	-0.4
	baz=40,SNR=85						
TOO	Toolangi	39.40	229	P	P	13 39 49.1	+0.6
TOO				pmax	pmax		
	comp=Z,175nm,1.6s						
TOO	Toolangi	39.40	229	P	P	13 39 49.1	+0.6
TOO				IAmb	IAmb	13 39 51.0	
	comp=Z,175nm,1.6s						
MOO	Moorlands	40.53	221	P	P	13 39 58.8	+1.3
	baz=41,SNR=5.3						
STKA	Stephens Creek	40.53	239	P	P	13 39 57.8	+0.1
	comp=Z,17nm,0.6s,baz=83,slow=9.6,SNR=32						
STKA	Stephens Creek	40.53	239	P	P	13 39 57.6	-0.1
	baz=41,SNR=28						
STKA	Stephens Creek	40.53	239	P	P	13 39 57.5	-0.2
KHLU	Kahalu`u	40.71	33	P	P	13 39 59.5	+0.2
KHLU				IAmb	IAmb	13 40 01.1	
	comp=Z,223nm,0.7s						
HUH	Hualalai	40.81	33	P	P	13 40 00.7	+0.3
HUH				IAmb	IAmb	13 40 01.9	
	comp=Z,115nm,0.7s						
QIS	Mount Isa	40.84	256	P	P	13 39 59.8	-0.6

	baz=41,SNR=22						
POHA	Pohakuloa	41.03	33	P	P	13 40 02.1	0.0
POHA				IAmb	IAmb	13 40 03.9	
	comp=Z,133nm,0.8s						
DHH	Diamond Head	41.18	29	P	P	13 40 03.8	+0.8
DHH	Diamond Head	41.18	29	P	P	13 40 03.8	+0.8
KIP	Kipapa	41.22	29	⇑eP	P	13 40 04.7	+1.4
KIP				pmax	pmax		
	comp=Z,217nm,2.5s						
WMR	Waimanalo Ridg	41.28	29	P	P	13 40 04.9	+1.1
ARPS	Mount Arapiles	41.80	231	P	P	13 40 07.2	-0.6
	baz=42,SNR=31						
JAY	Jayapura	42.83	283	P	P	13 40 17.0	+0.6
	comp=Z,193nm,0.6s,baz=127,slow=3.9,SNR=126						
JAY	Jayapura	42.83	283	P	P	13 40 17.0	+0.6
JAY	Jayapura	42.83	283	P	P	13 40 16.8	+0.4
	comp=Z,154nm,0.7s						
HTT	Hallett	43.10	237	P	P	13 40 18.0	-0.3
	baz=43,SNR=17						
GENI	Genyem	43.31	283	P	P	13 40 20.9	+0.8
	comp=Z,7µmcomp=Z,530nm,0.7s						
SMPI	Sarmi	44.88	283	P	P	13 40 33.0	+0.6
	comp=Z,112nm,0.7s						
BBOO	Buckleboo	45.30	239	P	P	13 40 35.1	-0.4
	baz=45,SNR=87						
BBOO	Buckleboo	45.30	239	P	P	13 40 34.7	-0.8
WR0	Warramunga Arr	45.61	257	P	P	13 40 36.8	-1.2
WC3	Warramunga Arr	45.77	257	P	P	13 40 38.4	-0.8
	baz=46						
WRAB	Tennant Creek	45.79	257	c iP	P	13 40 38.4	-1.0
WRAB				pmax	pmax		
	comp=Z,52nm,1.3s						
WRAB	Tennant Creek	45.79	257	P	P	13 40 38.2	-1.2
WRA	Warramunga Arr	45.80	257	P	P	13 40 38.5	-1.0
	comp=Z,12nm,0.6s,baz=83,slow=5.9,SNR=152						
WRA				S	S	13 46 50.0	-2.9
	comp=Z,4.9nm,0.7s,baz=92,slow=14,SNR=10						
WRA	Warramunga Arr	45.80	257	P	P	13 40 38.5	-1.0
AS31	Alice Springs	46.18	252	P	P	13 40 41.8	-0.6
AS31				IAmb	IAmb	13 40 43.2	
	comp=Z,159nm,0.6s						
ASAR	Alice Springs	46.18	252	P	P	13 40 42.2	-0.2
	comp=Z,406nm,0.5s,baz=84,slow=8.2,SNR=3251						
ASAR				S	S	13 46 55.6	-2.6
	comp=Z,19nm,0.8s,baz=86,slow=15,SNR=37						
ASAR	Alice Springs	46.18	252	P	P	13 40 41.9	-0.5
ASPA	Alice Springs	46.18	252	P	P	13 40 42.1	-0.4
	baz=46						
GUMO	Guam	46.74	306	P	P	13 40 46.8	+0.1
	comp=Z,129nm,0.6s,baz=182,slow=12,SNR=6.1						
GUMO	Guam	46.74	306	P	P	13 40 47.9	+1.2
GUMO				pmax	pmax		
	comp=Z,477nm,1.4s						
GUMO	Guam	46.74	306	P	P	13 40 47.9	+1.2
GUMO				IAmb	IAmb	13 41 44.4	
	comp=Z,477nm,1.4s						
SRPI	Serui, Papua	47.25	282	P	P	13 40 52.2	+1.5
	comp=Z,81nm,1.0s						
KDU	Kakadu	48.29	266	P	P	13 40 58.6	+0.1
	baz=48,SNR=28						
MTN	Manton Dam	49.55	266	P	P	13 41 08.1	+0.1
	baz=50,SNR=4.9						
MTN	Manton Dam	49.55	266	P	P	13 41 07.5	-0.5
MTN				IAmb	IAmb	13 41 08.6	
	comp=Z,129nm,0.7s						
FAKI	Fak Fak	50.72	279	P	P	13 41 16.4	-0.2
WRKA	Warakurna	51.31	250	P	P	13 41 20.7	-0.2
	baz=51,SNR=164						
KNRA	Kununurra	51.44	262	P	P	13 41 21.5	-0.4
	baz=52,SNR=26						
KNRA	Kununurra	51.44	262	P	P	13 41 21.4	-0.4
KNRA				IAmb	IAmb	13 41 22.4	
	comp=Z,80nm,0.8s						
FORT	Forrest	51.77	243	P	P	13 41 23.4	-0.7
	baz=52,SNR=175						
FORT	Forrest	51.77	243	P	P	13 41 23.5	-0.6
SIJI	Sorong	52.28	281	P	P	13 41 28.7	+0.6
	comp=Z,389nm,0.8s,baz=92,slow=5.7,SNR=65						
SWI	Sorong	52.29	281	P	P	13 41 28.6	+0.5
	comp=Z,5µmcomp=Z,667nm,0.8s						
FITZ	Fitzroy Crossi	54.13	258	P	P	13 41 41.4	+0.1
	comp=Z,11nm,0.6s,baz=146,slow=4.1,SNR=13						
FITZ	Fitzroy Crossi	54.13	258	P	P	13 41 41.6	+0.2
	baz=54,SNR=7.5						
LBMI	Labuha	55.93	280	P	P	13 41 55.3	+1.2
	comp=Z,2µmcomp=Z,188nm,0.9s						
TNTI	Ternate	56.50	281	P	P	13 41 59.0	+1.0
	comp=Z,2µmcomp=Z,75nm,1.7s						
TNTI	Ternate	56.50	281	P	P	13 41 58.2	+0.2
SOEI	Soe	56.73	268	P	P	13 42 01.3	+1.5
	comp=Z,341nm,0.9s						
SOEI	Soe	56.73	268	P	P	13 42 00.1	+0.2
SANI	Sanana	56.96	278	P	P	13 42 00.9	-0.3
	comp=Z,2µmcomp=Z,161nm,0.8s						
BATI	Baumata	57.23	268	P	P	13 42 04.9	+1.8
	comp=Z,56nm,0.4s,baz=88,slow=0.2,SNR=16						
BATI	Baumata	57.23	268	P	P	13 42 04.9	+1.8
	comp=Z,72nm,1.0s						
MMRI	Maumere	58.93	269	P	P	13 42 15.1	+0.4
	comp=Z,147nm,0.9s						
MMRI	Maumere	58.93	269	P	P	13 42 14.5	-0.2
MMRI				IAmb	IAmb	13 42 15.4	
	comp=Z,111nm,0.9s						
PSA00	Pilbara Seismi	59.23	254	P	P	13 42 15.8	-0.9
EDFI	Ende, Flores	59.43	269	P	P	13 42 17.6	-0.7
	comp=Z,1µmcomp=Z,155nm,0.8s						
KMSI	Cibinong	59.65	280	P	P	13 42 19.7	+0.1
	comp=Z,2µmcomp=Z,236nm,0.8s						
MEEK	Meekatharra	60.00	248	P	P	13 42 21.2	-0.7
	baz=60,SNR=14						
GTOI	Gorontalo	60.59	280	P	P	13 42 27.0	+1.1
	comp=Z,46nm,0.7s						
KLBR	Kellerberrin	60.62	242	P	P	13 42 25.2	-0.7
	baz=61,SNR=14						
BSSI	Bau Bau, Buton	61.18	271	P	P	13 42 29.6	-0.3
	comp=Z,41nm,1.1s						
APSI	Ampana	61.44	277	P	P	13 42 32.1	+0.5
	comp=Z,2µmcomp=Z,153nm,1.0s						
WBSI	Waikabubak, Su	61.46	267	P	P	13 42 31.7	-0.1
	comp=Z,73nm,1.6s						
BLDU	Ballidu	61.53	243	P	P	13 42 31.3	-0.6
	baz=62,SNR=22						
MRSI	Marisa	61.56	279	P	P	13 42 32.2	-0.2
	comp=Z,72nm,0.9s						
BKSI	Bulukumba	61.73	272	P	P	13 42 33.4	-0.1
	comp=Z,21nm,1.0s						
MUN	Mundaring	61.93	242	P	P	13 42 34.7	+0.1
	baz=62,SNR=9.8						
BNSI	Bone	61.98	273	P	P	13 42 35.8	+0.7
	comp=Z,82nm,1.2s						
KAPI	Kappang	62.17	272	P	P	13 42 36.7	+0.3
	comp=Z,19nm,0.8s,baz=166,slow=4.5,SNR=13						
KAPI	Kappang	62.17	272	P	P	13 42 36.2	-0.2
MORW	Morawa	62.17	245	P	P	13 42 35.7	-0.5
	baz=62,SNR=8.7						
SPSI	Sidrap Palu	62.41	273	P	P	13 42 37.4	-0.6
	comp=Z,1µmcomp=Z,43nm,1.1s						
TTSI	Tana Toraja	62.61	274	P	P	13 42 40.4	+1.2
	comp=Z,31nm,1.0s						
JHJ2	Mitsune	62.83	320	P	P	13 42 40.6	+0.3
JHJ	Hachijo jima 2	62.86	320	P	P	13 42 40.5	0.0
	comp=Z,545nm,0.8s,baz=189,slow=6.3,SNR=8.6						
TOLI2	Tolitoli	62.86	279	P	P	13 42 40.3	-0.6
SBA	Scott Base	63.16	184	P	P	13 42 43.2	+1.5
SBA				pmax	pmax		
	comp=Z,459nm,1.6s						
SBA	Scott Base	63.16	184	P	P	13 42 43.2	+1.5
PLAI	Plampang	63.19	268	P	P	13 42 43.3	+0.2
	comp=Z,95nm,1.0s						
VNDA	Vanda	63.20	185	P	P	13 42 42.5	+0.5
VNDA				pmax	pmax		
	comp=Z,198nm,1.5s						
VNDA	Vanda	63.20	185	P	P	13 42 42.5	+0.5
VNDA				IAmb	IAmb	13 42 44.1	
	comp=Z,198nm,1.5s						
MPSI	Mapaga	63.47	278	P	P	13 42 44.8	-0.1
	comp=Z,58nm,1.0s						
TWSI	Taliwang, Sumb	64.07	268	P	P	13 42 48.3	-0.5
	comp=Z,113nm,0.9s						
RCP	Roxas	64.63	291	⇓eP	P	13 42 52.8	+0.5
JYT	Yasato	64.75	323	P	P	13 42 53.0	+0.4
JSG	Sagara	64.88	321	P	P	13 42 54.0	+0.5
IGBI	Denpasar	65.73	267	P	P	13 42 59.8	+0.5
	comp=Z,141nm,0.8s						
SRBI	Singaraja	65.83	268	P	P	13 42 59.9	0.0
	comp=Z,108nm,1.1s						
JGF	Kuroka	66.01	321	P	P	13 43 00.0	-0.6
JGF				IAmb	IAmb	13 43 01.6	
	comp=Z,40nm,0.8s						
INU	Inuyama	66.05	321	P	P	13 43 00.4	-0.5
INU				IAmb	IAmb	13 43 02.7	
	comp=Z,39nm,0.8s						
KBKI	Kotabaru	66.06	273	P	P	13 43 02.5	+1.1
	comp=Z,917nmcomp=Z,79nm,1.1s						
MJAR	Matsushiro Arr	66.13	322	P	P	13 43 00.3	-1.0
	comp=Z,63nm,0.9s,baz=155,slow=6.2,SNR=98						
MJAR	Matsushiro Arr	66.13	322	P	P	13 43 00.9	-0.4
MJAR				pmax	pmax		
	comp=Z,36nm,0.9s						
MJAR	Matsushiro Arr	66.13	322	P	P	13 43 00.9	-0.4
MJAR				IAmb	IAmb	13 43 02.1	
	comp=Z,36nm,0.9s						
MAJO	Matsushiro	66.13	322	c iP	P	13 43 01.2	-0.2
MAJO				pmax	pmax		
	comp=Z,95nm,1.2s						
MYLDM	Lahad Datu	66.29	283	P	P	13 43 04.5	+1.7
MYLDM				IAmb	IAmb	13 43 06.8	
	comp=Z,112nm,1.0s						
LQP	Lukban	66.71	293	⇑eP	P	13 43 05.7	+0.1
JAGI	Jajag, Banyuwa	66.77	267	P	P	13 43 04.7	-1.1
	comp=Z,134nm,1.0s						
JMN	Monobe	67.00	317	P	P	13 43 07.5	+0.6
JMN				IAmb	IAmb	13 43 09.0	
	comp=Z,143nm,1.0s						
JWT	Wachi	67.00	320	P	P	13 43 06.7	-0.1
JWT				IAmb	IAmb	13 43 08.2	
	comp=Z,68nm,0.8s						
JOW	Kunigami	67.01	308	P	P	13 43 07.6	+0.6
	comp=Z,58nm,0.8s,baz=146,slow=17,SNR=7.4						
JSD	Sado	67.12	323	P	P	13 43 07.4	-0.1
JSD				IAmb	IAmb	13 43 08.7	
	comp=Z,52nm,0.7s						
KMMI	Kalianget	67.27	269	P	P	13 43 09.1	+0.2
	comp=Z,79nm,0.8s						
BBKI	Banjar Baru	67.30	273	P	P	13 43 10.3	+1.2
	comp=Z,2µmcomp=Z,80nm,1.1s						
BLJI	Banyuglugur	67.47	268	P	P	13 43 10.1	0.0
	comp=Z,118nm,0.8s						
GMJI	Gumukmas	67.49	267	P	P	13 43 17.4	+7.1
JSU	Suzuyama	67.99	314	P	P	13 43 13.8	+0.7
SPMM	Sapulut	68.06	282	P	P	13 43 15.0	+1.1
JHS	Saijyo	68.28	318	P	P	13 43 15.3	+0.5
NIKH	Nikolski High	68.31	6	P	P	13 43 14.3	-0.2
	baz=189						
JNU	Nakatsue	68.63	315	P	P	13 43 17.4	+0.4
	comp=Z,53nm,0.5s,baz=205,slow=0.6,SNR=34						
CASY	Casey	68.86	204	P	P	13 43 17.9	+0.2
ASAJ	Asahikawa	69.21	331	P	P	13 43 21.8	+1.6
	comp=Z,80nm,0.8s,baz=214,slow=7.0,SNR=34						
UNV	Unalaska Valle	69.42	7	P	P	13 43 20.6	-0.6
	baz=192,SNR=6.2						
SKR	Severo-Kuril's	69.47	343	eP	P	13 43 19.2	-2.4
SKR				eS	SKiKP	13 52 23.0	-4.0
SKR				pmax	pmax		
	comp=Z,185nm,0.8s						
PCJI	Pacitan	69.69	267	P	P	13 43 24.3	+0.5
	comp=Z,276nm,1.1s						
WOJI	Wonogiri, Jawa	70.02	267	P	P	13 43 26.4	+0.7
	comp=Z,67nm,1.1s						
PBKI	Pangkalan Bun	70.55	273	P	P	13 43 30.9	+2.0
	comp=Z,137nm,1.0s						
PET	Petropavlovsk	70.91	345	eP	P	13 43 30.1	0.0
PET				pmax	pmax		
	comp=Z,85nm,1.3s						
PEA0B	Petropavlovsk-	71.23	345	c iP	P	13 43 32.5	+0.4
PETK	Petropavlovsk-	71.23	345	P	P	13 43 31.5	-0.6
	comp=Z,97nm,0.8s,baz=134,slow=7.1,SNR=112						
PETK	Petropavlovsk-	71.23	345	P	P	13 43 32.1	0.0
PETK	Petropavlovsk-	71.23	345	P	P	13 43 32.1	0.0
YSS	Yuzh-Sakhalins	71.29	333	eP	P	13 43 33.4	+0.9
YSS				pmax	pmax		
	comp=Z,100nm,0.9s						
SSLB	Suanglung	71.31	302	P	P	13 43 32.9	-0.4
SSLB				IAmb	IAmb	13 46 06.9	
	comp=Z,34nm,0.7s						
TPUB	Ta-pu	71.36	301	P	P	13 43 33.4	-0.1
TPUB				IAmb	IAmb	13 43 33.8	
	comp=Z,94nm,0.8s						
SBUM	Sibu	71.43	278	P	P	13 43 35.0	+0.9
SBUM	Sibu	71.43	278	P	P	13 43 35.3	+1.2
CHNA	Chernabura Isl	71.43	11	P	P	13 43 32.6	-0.6
	baz=198						
STKI	Sintang	71.47	275	P	P	13 43 35.6	+1.2
	comp=Z,45nm,1.1s						
SDPT	Sand Point	71.77	10	P	P	13 43 34.4	-0.7
	baz=198,SNR=5.2						
TEY	Ternei	72.84	328	⇓eP	P	13 43 42.2	+0.5
TEY				pmax	pmax		
	comp=N,20nm,0.8s						
TEY				pmax	pmax		
	comp=Z,50nm,0.8s						
TJN	Taejon	72.87	316	ceP	P	13 43 42.2	+0.2
CHGN	Chignik	73.04	11	P	P	13 43 42.1	-0.4
CHGN				IAmb	IAmb	13 43 43.0	
	comp=Z,106nm,0.6s						
CHGN	Chignik	73.04	11	P	P	13 43 42.2	-0.4
	baz=200,SNR=6.2						
KSRS	Korea Array	73.11	318	P	P	13 43 44.6	+1.2
	comp=Z,29nm,0.9s,baz=132,slow=6.5,SNR=96						
CHIR	Chirikof Islan	73.15	13	P	P	13 43 43.5	+0.2
	baz=202						
LEM	Lembang	73.44	267	P	P	13 43 46.5	+0.3
	comp=Z,77nm,0.7s,baz=61,slow=6.4,SNR=20						
VLA	Vladivostok	74.11	324	c iP	P	13 43 50.2	+1.2
VLA				pmax	pmax		
	comp=Z,93nm,0.7s						
SII	Sitkinak Islan	74.15	13	P	P	13 43 49.5	+0.5
	baz=204						
PKM	Mcpherson Peak	74.16	46	P	P	13 43 49.5	-0.2
	baz=238						
HOPS	Hopland Field	74.23	41	P	P	13 43 51.3	+1.5
HOPS				IAmb	IAmb	13 43 52.4	
	comp=Z,44nm,1.0s						
TYV	Tymovskoe	74.33	335	eP	P	13 43 50.6	+0.5
TYV				pmax	pmax		
	comp=Z,80nm,0.9s						
TYV				pmax	pmax		
	comp=Z,600nm,6.5s						
USRK	Ussuriysk Ar.	74.74	325	P	P	13 43 53.5	+0.9
	comp=Z,40nm,0.9s,baz=139,slow=3.1,SNR=42						
QSPA	South Pole Qui	74.85	180	P	P	13 43 53.8	+0.6
OHAK	Old Harbor	74.95	13	P	P	13 43 53.9	+0.4
	baz=204,SNR=8.1						
ARVC	Arvin	74.97	47	P	P	13 43 55.3	+1.1
	baz=239,SNR=6.2						
O02D	Mt. Diablo Mer	75.09	40	P	P	13 43 56.8	+2.0
	baz=235,SNR=13						
VES	Vestal, Richgr	75.16	46	P	P	13 43 56.0	+0.8
	baz=238,SNR=12						
CGJI	Cibinong	75.35	267	P	P	13 43 56.5	-0.3
	comp=Z,115nm,0.7s						
MURC	Murrieta	75.36	49	P	P	13 43 57.5	+1.0
	baz=240						
EDW2	Edwards Air Fo	75.43	47	P	P	13 43 58.1	+1.3
	baz=239,SNR=16						
ISA	Isabella, Lake	75.49	46	P	P	13 43 58.3	+1.1
	baz=239,SNR=16						
MONP2	Monument Peak	75.58	50	P	P	13 43 59.2	+1.3
	baz=241,SNR=15						
N02D	Trinity Center	75.60	40	P	P	13 43 59.5	+1.9
	baz=235,SNR=15						
KDAK	Kodiak Island	75.62	14	P	P	13 43 58.0	+0.7
	comp=Z,112nm,0.7s,baz=252,slow=3.7,SNR=53						
KDAK	Kodiak Island	75.62	14	P	P	13 43 58.0	+0.7
KDAK	Kodiak Island	75.62	14	P	P	13 43 57.9	+0.6
KDAK	Kodiak Island	75.62	14	P	P	13 43 58.0	+0.7
	baz=205						
IKP	In-Ko-Pah, Jac	75.70	50	P	P	13 43 59.8	+1.4
	baz=241						
L02E	Cave Junction	75.74	38	P	P	13 43 59.9	+1.5
	baz=234						
M02C	Callahan	75.75	39	P	P	13 44 00.4	+1.9
	baz=234,SNR=7.5						
O03E	Paynes Creek	75.78	41	P	P	13 43 59.7	+1.1
	baz=236,SNR=8.0						
BBRC	Big Bear Solar	75.89	48	P	P	13 44 00.6	+1.0
	baz=240						
PFO	Pinyon Flats O	75.91	49	P	P	13 44 00.6	+1.0
	baz=241,SNR=6.8						
TPFO	Pinon Flats	75.91	49	P	P	13 44 00.7	+1.0
	baz=241,SNR=6.2						
LRMC	Laurel Mtn Rad	75.95	47	P	P	13 44 01.1	+1.2
	baz=240,SNR=13						
K02D	Willamette Mer	76.02	38	P	P	13 44 01.5	+1.5
	baz=234						
PPBI	Pangkal Pinang	76.03	272	P	P	13 44 01.4	+0.8
	comp=Z,73nm,1.0s						
YBH	Yreka Blue Hor	76.03	39	P	P	13 44 01.6	+1.5
YBH				pmax	pmax		
	comp=Z,39nm,0.9s						
YBH	Yreka Blue Hor	76.03	39	P	P	13 44 01.6	+1.5
YBH				IAmb	IAmb	13 44 02.8	
	comp=Z,39nm,0.8s						
SWSC	Sam W. Stewart	76.07	50	P	P	13 44 01.6	+1.3
	baz=241,SNR=5.8						
RRX	Edison Barstow	76.14	48	P	P	13 44 01.9	+1.1
	baz=240						
J01E	Myrtle Point	76.14	37	P	P	13 44 01.8	+1.3
	baz=233						
CWC	Cottonwood Cre	76.17	46	P	P	13 44 02.4	+1.3
	baz=239						
MLAC	Mammoth, Mammo	76.27	44	P	P	13 44 03.2	+1.6
	baz=238,SNR=6.8						
MDJ	Mudanjiang	76.34	324	P	P	13 44 02.7	+1.1
MDJ				pmax	pmax		
	comp=Z,85nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,1µm,4.4s						
TIN	Tinemaha, Big	76.38	45	P	P	13 44 03.6	+1.5
	baz=239,SNR=7.1						
MPMC	Manual Prospec	76.38	46	P	P	13 44 03.8	+1.5
	baz=240,SNR=25						
BELC	Belle Mtn. Jos	76.43	49	P	P	13 44 03.8	+1.2
	baz=241,SNR=15						
Q19K	Cape Douglas,	76.44	13	P	P	13 44 02.0	+0.2
	baz=204						
GSC	Goldstone, Bar	76.49	47	P	P	13 44 03.7	+0.9
	baz=240,SNR=14						
PNTR	Pine Nut	76.53	43	P	P	13 44 04.7	+1.6
PNTR				IAmb	IAmb	13 44 05.5	
	comp=Z,57nm,0.8s						
P18K	Big Mountain,	76.54	12	P	P	13 44 02.5	+0.1
P18K	Big Mountain,	76.54	12	P	P	13 44 02.6	+0.1
	baz=202,SNR=22						
L04D	Klamath Falls	76.56	39	P	P	13 44 04.4	+1.3
	baz=235,SNR=9.6						
HEC	Hector,Ludlow	76.59	48	P	P	13 44 04.4	+1.0
	baz=240,SNR=20						
M04C	Macdoel	76.59	40	P	P	13 44 04.7	+1.5
	baz=235,SNR=5.8						
BC3	Big Chuckawall	76.66	49	P	P	13 44 04.8	+1.0
	baz=241,SNR=13						
NJ2	Nanjing	76.72	309	⇑P	P	13 44 04.4	+0.5
NJ2				PcP	PcP	13 44 12.9	-0.5
NJ2				pmax	pmax		
	comp=Z,37nm,0.9s						
I02E	Swisshome, OR	76.75	37	P	P	13 44 05.7	+1.8
	baz=233						
KASI	Kota Agung	76.77	268	P	P	13 44 04.5	-0.2
	comp=Z,96nm,1.0s						
I03D	Drain, OR	76.80	37	P	P	13 44 05.4	+1.2
	baz=234						
GLA	Glamis	76.84	50	P	P	13 44 06.3	+1.6
	baz=242,SNR=13						
GRNR	Gornyy	76.93	332	⇑iP	P	13 44 05.8	+1.1
GRNR				eS	S	13 53 17.6	-1.5
GRNR				pmax	pmax		
	comp=E,20nm,0.8s						
GRNR				pmax	pmax		
	comp=N,20nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,70nm,1.0s						
GRNR				smax	smax		
	comp=N,2.0nm,0.8s						
O18K	Koktuh Hills	76.98	11	P	P	13 44 05.3	+0.5
	baz=202,SNR=21						
FURC	Furnace Creek,	77.03	46	P	P	13 44 06.8	+1.3
	baz=240,SNR=17						
NVAR	Mina Array Bea	77.04	44	P	P	13 44 07.2	+1.2
	comp=N,19nm,0.7s,baz=227,slow=9.1,SNR=172						
NVAR	Mina Array Bea	77.04	44	P	P	13 44 06.8	+0.9
GMRC	Granite Mounta	77.05	48	P	P	13 44 07.0	+1.0
	baz=241,SNR=12						
IRM	Iron Mountain	77.13	49	P	P	13 44 07.5	+1.2
	baz=242,SNR=19						
TUQ	Turquoise Moun	77.18	48	P	P	13 44 07.8	+1.1
	baz=241,SNR=16						
P19K	Oil Pt	77.19	12	P	P	13 44 06.4	+0.4
	baz=204						
J04D	Umpqua Nationa	77.27	38	P	P	13 44 08.5	+1.5
	baz=235,SNR=13						
MDSI	Maura Dua	77.33	269	P	P	13 44 06.8	-1.0
	comp=N,11nm,1.1s						
I04A	Tendick Farm,	77.41	38	P	P	13 44 08.5	+0.9
	baz=234						
O19K	Port Alsworth	77.47	12	P	P	13 44 07.7	+0.3
	baz=203,SNR=54						
HOM	Homer	77.53	13	P	P	13 44 08.5	+0.7
	baz=206						
MOD	Modoc Plateau	77.61	40	P	P	13 44 10.2	+1.3
H04D	Lebanon	77.64	37	P	P	13 44 09.8	+1.0
	baz=234						
K05A	Summer Lake	77.71	39	P	P	13 44 10.7	+1.3
K05A				IAmb	IAmb	13 44 12.0	
	comp=Z,61nm,0.9s						
O20K	Slope Mountain	77.71	13	P	P	13 44 09.2	+0.3
	baz=205						
G03D	McMinnville, O	77.75	36	P	P	13 44 10.8	+1.5
	baz=234						
NEE2	Needles Airpor	77.80	49	P	P	13 44 11.3	+1.4
	baz=242						
BRLK	Bradley Lake	77.80	14	P	P	13 44 09.9	+0.6
BRLK				IAmb	IAmb	13 44 10.7	
	comp=Z,94nm,0.8s						
BRSE	Bradley Lake S	77.81	14	P	P	13 44 10.1	+0.8
	baz=207,SNR=14						
J05D	Fort Rock, OR	77.81	39	P	P	13 44 11.6	+1.7
	baz=235,SNR=32						
214A	Organ Pipe Nat	77.85	52	P	P	13 44 11.9	+1.6
	baz=243,SNR=7.7						
PDMCI	Parker Dam,Lak	77.93	49	P	P	13 44 12.1	+1.5
	baz=242,SNR=13						
DSRI	Dabo	77.97	273	P	P	13 44 12.2	+0.9
	comp=Z,2µmcomp=Z,34nm,1.2s						
N19K	Bonanza Creek	78.00	11	P	P	13 44 10.5	0.0
	baz=203						
DL2	Dalian	78.06	316	⇑P	P	13 44 12.4	+1.2
DL2				pmax	pmax		
	comp=Z,77nm,0.6s						
SVW2	Sparrevohn	78.06	11	P	P	13 44 10.7	0.0
SVW2				IAmb	IAmb	13 44 11.9	
	comp=Z,37nm,0.8s						
KLR	Kul'dur	78.11	329	P	P	13 44 12.1	+0.9
	comp=Z,8.0nm,0.7s,baz=107,slow=4.1,SNR=28						
KLR	Kul'dur	78.11	329	ceP	P	13 44 11.9	+0.7
KLR				pmax	pmax		
	comp=Z,39nm,1.9s						
CN2	Changchun	78.27	322	eP	P	13 44 12.2	0.0
CN2				pmax	pmax		
	comp=Z,60nm,1.1s						
I05D	Terrebonne, OR	78.35	38	P	P	13 44 13.8	+1.0
	baz=235,SNR=7.9						
F04D	Rainier, OR	78.41	35	P	P	13 44 14.7	+1.8
	baz=234,SNR=5.4						
SEW	Seward	78.43	14	P	P	13 44 12.7	+0.1
SEW				IAmb	IAmb	13 44 13.7	
	comp=Z,74nm,0.9s						
SEW	Seward	78.43	14	P	P	13 44 12.8	+0.1
	baz=208						
O22K	Cooper Landing	78.70	14	P	P	13 44 14.4	+0.3
	baz=208						
MA2	Magadan	78.75	344	⇑iP	P	13 44 14.3	-0.2
MA2				pmax	pmax		
	comp=Z,75nm,2.5s						
SPCR	Spurr Chakacha	78.81	12	P	P	13 44 14.2	-0.6
	baz=205,SNR=11						
R11A	Troy Canyon, C	78.84	45	P	P	13 44 16.6	+0.9
	baz=240,SNR=20						
GAMB	Gambell	78.85	3	P	P	13 44 16.0	+1.2
	baz=186,SNR=5.7						
G05D	Wamic, OR	78.88	37	P	P	13 44 16.7	+1.1
	baz=235						
E04D	Cinebar	78.93	35	P	P	13 44 17.2	+1.5
	baz=234						
WVOR	Wild Horse Val	78.94	40	P	P	13 44 15.5	-0.5
WVOR				pmax	pmax		
	comp=Z,35nm,0.9s						
WVOR	Wild Horse Val	78.94	40	P	P	13 44 15.5	-0.5
WVOR				IAmb	IAmb	13 44 18.3	
	comp=Z,35nm,0.9s						

M19K	**Big River Lodg**	79.03	11	P	P	13 44 16.1	+0.2
	baz=203						
F05D	**White Salmon**	79.17	36	P	P	13 44 18.1	+1.1
	baz=235						
L19K	**White Mountain**	79.20	11	P	P	13 44 17.6	+0.7
	baz=202,SNR=8.9						
D03D	**Eldon**	79.23	34	P	P	13 44 18.7	+1.5
	baz=233,SNR=5.1						
RC01	**Rabbit Creek A**	79.24	13	P	P	13 44 16.9	-0.1
RC01				IAmb	IAmb	13 44 18.3	
	comp=Z,78nm,1.0s						
RC01	**Rabbit Creek A**	79.24	13	P	P	13 44 17.3	+0.2
	baz=208,SNR=7.7						
PWL	**Port Wells**	79.36	14	P	P	13 44 17.8	+0.1
	baz=209,SNR=14						
WHN	**Wuhan**	79.52	306	⇑P	P	13 44 20.3	+1.1
TUC	**Tucson**	79.55	52	P	P	13 44 21.4	+1.9
	baz=244						
L20K	**Farewell, AK**	79.65	11	P	P	13 44 19.6	+0.4
	baz=203						
GLI	**Glacier Island**	79.68	15	P	P	13 44 19.4	0.0
	baz=210,SNR=9.0						
TTA	**Tatalina**	79.70	10	P	P	13 44 20.7	+1.1
	baz=201,SNR=64						
EYAK	**Cordova Ski Ar**	79.73	15	P	P	13 44 20.4	+0.8
	baz=211						
M22K	**Willow**	79.75	13	P	P	13 44 19.6	0.0
	baz=207,SNR=18						
CRAG	**Craig**	79.79	24	P	P	13 44 20.8	+0.7
	baz=224						
KNK	**Knik Glacier**	79.82	14	P	P	13 44 20.5	+0.3
	baz=209,SNR=8.6						
PMR	**Palmer**	79.82	13	P	P	13 44 20.3	+0.2
	baz=208,SNR=10						
GHO	**Glory Hole Cre**	80.03	13	P	P	13 44 21.4	+0.1
GHO				IAmb	IAmb	13 44 22.5	
	comp=Z,99nm,0.8s						
A04D	**Lummi Island**	80.14	33	P	P	13 44 23.4	+1.3
	baz=233						
SML	**Sawmill**	80.19	14	P	P	13 44 22.2	+0.1
	baz=209						
B05A	**Bryant**	80.20	34	P	P	13 44 23.6	+1.2
	baz=234,SNR=5.7						
CUT	**Chulitna**	80.30	13	P	P	13 44 22.7	+0.1
	baz=207,SNR=21						
PPLA	**Purkeypile**	80.36	12	P	P	13 44 23.0	-0.1
	baz=205						
BMRM	**Bremner River**	80.38	16	P	P	13 44 23.6	+0.4
	baz=212,SNR=7.8						
K20K	**Telida**	80.43	11	P	P	13 44 24.1	+0.8
	baz=203						
MESA	**MESA**	80.45	17	P	P	13 44 24.6	+0.9
	baz=215,SNR=6.6						
SCM	**Sheep Creek Mo**	80.45	14	P	P	13 44 23.8	+0.2
	baz=210,SNR=14						
KLU	**Klutina**	80.50	15	P	P	13 44 24.0	+0.2
	baz=211,SNR=5.7						
WUAZ	**Wupatki**	80.50	49	P	P	13 44 26.1	+1.6
	baz=244,SNR=7.7						
CRQE	**Cirque**	80.61	16	P	P	13 44 24.9	+0.5
	baz=214,SNR=9.4						
WRAK	**Wrangell Islan**	80.78	24	P	P	13 44 26.3	+1.0
	baz=224						
PNL	**Peninsula**	80.80	19	P	P	13 44 25.9	+0.6
	baz=217						
TNA	**Tin City**	80.85	4	P	P	13 44 26.5	+1.1
	baz=190,SNR=12						
CAST	**Castle Rocks**	80.85	11	P	P	13 44 25.2	-0.4
CAST				IAmb	IAmb	13 44 26.4	
	comp=Z,53nm,0.7s						
CAST	**Castle Rocks**	80.85	11	P	P	13 44 24.7	-0.9
	baz=205,SNR=15						
PINM	**Pinnacle**	80.88	18	P	P	13 44 26.2	+0.4
	baz=216						
N25K	**Chitina, Valde**	80.93	15	P	P	13 44 26.4	+0.4
	baz=212,SNR=18						
M24K	**Tolsona, Glenn**	80.96	14	P	P	13 44 27.0	+0.9
	baz=211,SNR=12						
WAT6	**Susitna Watana**	81.01	14	P	P	13 44 26.8	+0.2
	baz=209,SNR=38						
WAT1	**Susitna Watana**	81.05	13	P	P	13 44 26.7	+0.1
	baz=208						
MCARA	**McCarthy VSAT**	81.15	16	P	P	13 44 27.5	+0.4
	baz=214,SNR=7.0						
JRMM	**Jerantut**	81.16	276	P	P	13 44 29.0	+0.8
J20K	**Nowinta River**	81.17	10	P	P	13 44 28.0	+0.8
	baz=203						
CHUM	**Lake Minchumin**	81.23	11	P	P	13 44 27.2	-0.2
	baz=205,SNR=32						
TRF	**Thorofare Moun**	81.23	12	P	P	13 44 27.5	-0.2
	baz=207,SNR=28						
GCSA	**Galena City Sc**	81.27	9	P	P	13 44 28.7	+1.1
	baz=200,SNR=24						
CTG	**Chitna Glacier**	81.27	17	P	P	13 44 28.4	+0.5
	baz=215,SNR=22						
SEY	**Seymchan**	81.28	347	P	P	13 44 27.7	0.0
	comp=Z,91nm,0.7s,baz=146,slow=6.0,SNR=24						
HARP	**HAARP**	81.46	15	P	P	13 44 29.2	+0.5
	baz=212,SNR=10						
DHY	**Denali Highway**	81.52	13	P	P	13 44 29.3	+0.1
	baz=210,SNR=27						
DUG	**Dugway, Tooele**	81.61	45	P	P	13 44 31.1	+0.9
	baz=242,SNR=17						
BPAW	**Bear Paw Mtn.**	81.68	12	P	P	13 44 28.8	-1.0
	baz=206,SNR=8.9						
MCK	**McKinley**	81.76	13	P	P	13 44 30.4	+0.1
	baz=208,SNR=30						
PDSI	**Padang**	81.83	271	P	P	13 44 31.4	-0.3
	comp=Z,2µmcomp=Z,18nm,0.9s						
PAX	**Paxson**	81.87	14	P	P	13 44 30.7	-0.3
	baz=211,SNR=13						
SKAG	**Skagway**	81.94	20	P	P	13 44 32.6	+1.4
	baz=221,SNR=10						
121A	**Cookes Peak, D**	81.95	53	P	P	13 44 34.2	+2.0
	baz=246						
M26K	**Nabesna, AK**	82.01	16	P	P	13 44 32.2	+0.6
	baz=214						
YUK6	**Outpost Mounta**	82.12	18	P	P	13 44 33.1	+0.7
	baz=218						
HLID	**Hailey**	82.18	41	P	P	13 44 34.4	+1.4
	baz=240,SNR=59						
YUK3	**Moose Creek**	82.18	17	P	P	13 44 33.3	+0.6
	baz=216,SNR=23						
M27K	**Edge Creek, AK**	82.27	16	P	P	13 44 33.9	+0.9
	baz=215						
HYT	**Haines Junctio**	82.29	19	P	P	13 44 34.1	+0.9
	baz=219,SNR=11						
BJI	**Beijing**	82.31	315	P	P	13 44 34.3	+0.8
BJI				pmax	pmax		
	comp=Z,140nm,0.7s						
YUK4	**Talbot Arm**	82.36	18	P	P	13 44 34.8	+1.2
	baz=218,SNR=8.7						
L26K	**Log Cabin Wild**	82.44	15	P	P	13 44 34.5	+0.7
	baz=213,SNR=33						
I21K	**Tanana**	82.47	11	P	P	13 44 34.0	+0.2
	baz=205,SNR=52						
NEA2	**Nenana**	82.50	12	P	P	13 44 33.6	-0.3
	baz=208,SNR=17						
MLY	**Manley**	82.56	11	P	P	13 44 34.1	-0.3
	baz=206,SNR=57						
BVCY	**Beaver Creek**	82.58	16	P	P	13 44 35.3	+0.8
	baz=216,SNR=27						
IPM	**Ipoh**	82.72	277	P	P	13 44 37.0	+0.7
H21K	**Melozitna Rive**	82.76	10	P	P	13 44 36.0	+0.7
	baz=204						
HDA	**Harding Lake**	82.78	13	P	P	13 44 35.4	0.0
	baz=210,SNR=86						
L27K	**Beaver Creek,**	82.86	16	P	P	13 44 36.4	+0.5
	baz=215,SNR=20						
I23K	**Minto, Yukon-K**	82.93	12	P	P	13 44 35.9	-0.3
	baz=208,SNR=27						
NEW	**Newport**	82.95	36	P	P	13 44 36.8	+0.1
	baz=238,SNR=9.7						
TCOL	**CIGO, UAF Yank**	82.99	12	P	P	13 44 36.4	0.0
	baz=209,SNR=68						
COLA	**College**	83.00	12	*c i*P	P	13 44 36.2	-0.2
COLA				pmax	pmax		
	comp=Z,202nm,0.8s						
COLA	**College**	83.00	12	P	P	13 44 36.4	0.0
	baz=209						
SCRK	**Sand Creek**	83.08	14	P	P	13 44 37.6	+0.5
	baz=213,SNR=43						
ILAR	**Eielson Array**	83.11	13	P	P	13 44 36.8	-0.3
	comp=Z,99nm,0.9s,baz=228,slow=6.0,SNR=377						
MNSI	**Mandailing Nat**	83.12	273	P	P	13 44 38.6	+0.3
	comp=Z,38nm,0.7s						
ZEA	**Zeya**	83.13	331	*e*P	P	13 44 38.2	+0.8
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.8s						
KULM	**Kulim**	83.30	277	P	P	13 44 40.0	+0.8
POKR	**Poker Plat Res**	83.30	12	P	P	13 44 37.9	-0.1
	baz=209,SNR=56						
J25K	**Salcha River,**	83.31	13	P	P	13 44 38.3	+0.1
	baz=211,SNR=109						
MVCO	**Mesa Verde**	83.33	49	P	P	13 44 39.8	+0.7
	baz=245						
N31M	**Braeburn, Yuko**	83.34	19	P	P	13 44 39.1	+0.7
	baz=220,SNR=15						
P33M	**Teslin, Yukon**	83.36	21	P	P	13 44 39.3	+0.7
	baz=223,SNR=7.9						
MNTX	**Cornudas Mount**	83.51	55	P	P	13 44 41.3	+1.4
	baz=248						
J26L	**Joseph Creek**	83.63	14	P	P	13 44 40.8	+1.0
	baz=213						
RDOG	**Red Dog Mine**	83.71	6	P	P	13 44 48.5	+8.5
	baz=194,SNR=18						
BILL	**Bilibino**	83.80	354	*d i*P	P	13 44 40.4	-0.1
BILL				*e**PP	pwP	13 46 13.2	-1.0
BILL				*e*		13 47 58.4	
BILL				pmax	pmax		
	comp=Z,210nm,1.7s						
H24K	**Noodor Dome**	83.84	12	P	P	13 44 39.7	-1.1
	baz=209						
M30M	**Minto, Yukon**	83.87	18	P	P	13 44 41.6	+0.6
	baz=220,SNR=40						
ANMO	**Albuquerque**	83.92	51	*ce*P	P	13 44 43.1	+1.0
ANMO				pmax	pmax		
	comp=Z,21nm,1.3s						
ANMO	**Albuquerque**	83.92	51	P	P	13 44 43.2	+1.1
	baz=247						
TXAR	**Lajitas Array**	84.02	58	P	P	13 44 44.7	+2.1
	comp=Z,10nm,0.7s,baz=220,slow=6.6,SNR=141						
TXAR				PKKPbc	PKKPbc	14 02 55.5	+0.3
	comp=Z,0.3nm,0.7s,baz=82,slow=6.5,SNR=3.5						
MSO	**Missoula**	84.07	38	P	P	13 44 42.7	+0.2
	baz=240,SNR=11						
GYA	**Guiyang**	84.25	299	⇓P	P	13 44 45.3	+1.5
GYA				pmax	pmax		
	comp=Z,31nm,1.3s						
PSI	**Prapat**	84.28	274	P	P	13 44 43.9	-0.4
	comp=Z,14nm,0.9s,baz=173,slow=5.3,SNR=17						
M31M	**Drury Creek, Y**	84.31	19	P	P	13 44 43.4	+0.3
	baz=222,SNR=13						
DAWY	**Dawson**	84.31	16	P	P	13 44 43.9	+0.7
	baz=217,SNR=54						
EGAK	**Eagle**	84.44	15	P	P	13 44 44.2	+0.5
	baz=215,SNR=47						
HIA	**Hailar**	84.53	324	⇓*i*P	P	13 44 44.9	+0.3
HIA				pmax	pmax		
	comp=Z,57nm,1.0s						
COLD	**Coldfoot**	84.64	10	P	P	13 44 45.4	+0.8
	baz=207,SNR=49						
FARO	**Faro, Yukon**	84.66	19	P	P	13 44 45.2	+0.2
	baz=223,SNR=14						
WTLY	**Watson Lake, Y**	84.71	22	P	P	13 44 46.3	+1.1
	baz=227						
O20A	**White River Ci**	84.73	46	P	P	13 44 46.7	+0.7
	baz=245						
S22A	**4UR Ranch, Cre**	84.76	49	P	P	13 44 47.5	+1.2
	baz=246						
BOZ	**Bozeman (W)**	84.90	40	P	P	13 44 47.9	+1.2
	baz=242,SNR=10						
MAYO	**Mayo, Yukon**	84.92	17	P	P	13 44 47.2	+1.1
	baz=220,SNR=27						
BW06	**Boulder Array**	84.96	43	P	P	13 44 47.7	+0.5
	baz=244,SNR=15						
PDAR	**Pinedale Array**	84.96	43	P	P	13 44 47.6	+0.5
	comp=Z,8.3nm,0.6s,baz=212,slow=3.2,SNR=96						
PDAR				PP	PP	13 48 08.4	-2.4
	comp=Z,0.8nm,0.8s,baz=239,slow=6.8,SNR=4.3						
PDAR				PKKPbc	PKKPbc	14 02 52.1	-1.9
	comp=Z,0.3nm,0.7s,baz=77,slow=4.9,SNR=3.6						
H17A	**Grant Village**	85.01	42	P	P	13 44 49.7	+2.3
	baz=243,SNR=8.3						
XAN	**Xi'an**	85.12	307	P	P	13 44 48.9	+1.0
XAN				pmax	pmax		
	comp=Z,44nm,1.3s						
GSI	**Gunungsitoli**	85.19	273	P	P	13 44 50.2	+1.6
	comp=Z,100nm,1.0s						
SDCO	**Great Sand Dun**	85.72	49	P	P	13 44 51.5	+0.5
	baz=247						
HHC	**Hu-ho-hao-te**	85.83	314	*e*P	P	13 44 53.0	+1.8
HHC				pmax	pmax		
	comp=Z,69nm,0.9s						
HHC				pmax	pmax		
	comp=Z,330nm,8.6s						
TOLK	**Toolik Lake Re**	86.01	10	P	P	13 44 51.6	+0.2
TOLK	**Toolik Lake Re**	86.01	10	P	P	13 44 51.6	+0.2
	baz=207						
PMSA	**Palmer Station**	86.05	157	P	P	13 44 52.8	+1.0
	comp=Z,44nm,0.8s						
RLMT	**Red Lodge**	86.17	41	P	P	13 44 54.2	+1.3
	baz=244,SNR=6.3						
T25A	**Trinidad**	86.30	50	P	P	13 44 54.1	+0.4
	baz=248						
MSTX	**Muleshoe**	86.38	54	P	P	13 44 54.4	+0.3
	baz=249						
ISCO	**Idaho Springs**	86.44	47	P	P	13 44 54.9	+0.5
	baz=247						
Q24A	**Divide**	86.45	48	P	P	13 44 55.5	+1.0
	baz=247						
MAW	**Mawson**	86.62	200	P	P	13 44 55.2	+0.8
	comp=Z,83nm,0.7s,baz=134,slow=5.3,SNR=118						
MAW	**Mawson**	86.62	200	P	P	13 44 55.2	+0.8
	baz=86,SNR=86						
MAW	**Mawson**	86.62	200	P	P	13 44 55.2	+0.8
N23A	**Red Feather La**	86.64	46	P	P	13 44 56.4	+1.1
	baz=247						
BTO	**Baotou**	86.81	313	*e*P	P	13 44 57.9	+2.0
BTO				S	S	13 54 51.2	-8.3
EPYK	**Eagle Plains**	86.83	15	P	P	13 44 55.3	0.0
	baz=219,SNR=13						
EGMT	**Eagleton**	87.14	39	P	P	13 44 57.9	+0.6
	baz=244,SNR=6.7						
KMI	**Kunming**	87.16	297	⇑P	P	13 45 00.0	+1.9
KMI				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK	**Yakutsk**	87.30	338	P	P	13 44 56.2	-1.3
	comp=Z,7.3nm,0.6s,baz=147,slow=3.3,SNR=12						
YAK	**Yakutsk**	87.30	338	*c i*P	P	13 44 56.2	-1.3
YAK				*e**PP	pP	13 46 27.1	-1.5
YAK				*e*		13 48 37.9	
YAK				*e*S	SKSac	13 54 44.3	-1.5
YAK				pmax	pmax		
	comp=Z,37nm,1.0s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,212nm,2.8s						
YAK				pmax	pmax		
	comp=N,84nm,2.7s						
YAK				pmax	pmax		
	comp=E,130nm,2.7s						
YAK				smax	smax		
	comp=N,56nm,1.6s						
YAK				smax	smax		
	comp=E,16nm,2.0s						
A21K	**Barrow**	87.50	7	P	P	13 44 58.1	-0.2
	baz=200						
AMTX	**Amarillo**	87.55	53	P	P	13 44 59.8	+0.3
	baz=250						
CD2	**Chengdu**	88.13	303	P	P	13 45 03.5	+1.2
CD2				pP	pwP	13 46 36.2	-0.4
CD2				pmax	pmax		
	comp=E,40nm,0.9s						
ABTX	**Abilene, Hawle**	88.39	56	P	P	13 45 04.1	+0.7
	baz=251						
USHA	**Ushuaia**	88.43	147	P	P	13 45 04.8	+1.6
	comp=E,12nm,0.6s,baz=224,slow=8.0,SNR=8.4						
CMAR	**Chiang Mai Arr**	88.57	289	P	P	13 45 06.2	+1.7
	comp=E,17nm,0.9s,baz=102,slow=2.8,SNR=75						
CMAR				PP	PP	13 48 37.4	-2.4
	comp=E,0.5nm,0.3s,baz=107,slow=5.6,SNR=4.2						
CMAR				PKKPbc	PKKPbc	14 02 45.0	+1.1
	comp=E,0.7nm,0.7s,baz=276,slow=4.5,SNR=5.5						
WRGLY	**Wrigley**	88.68	22	P	P	13 45 04.7	+0.7
	baz=232,SNR=12						
LAO	**LASA Array**	88.76	41	P	P	13 45 06.3	+1.4
	baz=246						
INK	**Inuvik**	89.11	15	PP	PP	13 48 40.3	-2.6
	comp=E,2.3nm,0.9s,baz=215,slow=12,SNR=3.8						
INK	**Inuvik**	89.11	15	P	P	13 45 05.5	-0.4
	baz=222						
RSSD	**Black Hills**	89.18	44	P	P	13 45 07.6	+0.5
	baz=248						
CIT	**Chita**	89.30	325	*e*P	P	13 45 07.6	+0.3
CIT				*e*		13 46 39.4	
CIT				pmax	pmax		
	comp=Z,132nm,1.3s						
LZH	**Lanzhou**	89.73	307	⇑P	P	13 45 11.3	+1.5
LZH				pP	pwP	13 46 43.3	-1.0
LZH				pmax	pmax		
	comp=Z,52nm,1.3s						
HKT	**Hockley**	90.66	59	⇑*e*P	P	13 45 12.6	-1.4
HKT				pmax	pmax		
	comp=Z,7.0nm,1.0s						
DGMT	**Dagmar**	90.72	40	P	P	13 45 15.1	+1.2
	baz=248						
LL02	**Futaleuf**	90.92	135	P	P	13 45 16.0	+0.9
LL02				IAmb	IAmb	13 45 17.8	
	comp=Z,27nm,0.9s						
ULN	**Ulaanbaatar**	91.50	319	*d i*P	P	13 45 18.2	+0.5
ULN				pmax	pmax		
	comp=Z,26nm,0.9s						
YKA	**Yellowknife Ar**	91.61	24	P	P	13 45 17.7	+0.1
	comp=Z,3.9nm,0.6s,baz=240,slow=4.6,SNR=38						
YKA				PKKPbc	PKKPdf	14 02 34.0	-0.8
	comp=Z,0.5nm,0.7s,baz=43,slow=2.0,SNR=5.7						
YKA	**Yellowknife Ar**	91.61	24	P	P	13 45 17.0	-0.6
BOD	**Bodaibo**	91.62	330	*e*P	P	13 45 17.5	-0.3
BOD				pmax	pmax		
	comp=Z,16nm,1.9s						
SONM	**Songino Array**	91.91	319	P	P	13 45 19.7	+0.2
	comp=Z,6.7nm,0.7s,baz=135,slow=5.6,SNR=40						
SONM				PP	PP	13 49 02.4	-3.2
	comp=Z,3.0nm,1.0s,baz=120,slow=6.3,SNR=6.0						
SONM				PKKPbc	PKKPdf	14 02 34.9	+0.9
	comp=Z,0.3nm,0.4s,baz=202,slow=3.6,SNR=3.6						
SYO	**Syowa Base**	91.93	193	⇓*e*P	P	13 45 18.4	-0.7
SYO	**Syowa Base**	91.93	193	⇑*e*PcP	PcP	13 45 21.8	+2.1
PLCA	**Paso Flores**	92.74	133	P	P	13 45 24.9	+1.3
	comp=Z,5.8nm,0.7s,baz=231,slow=4.4,SNR=11						
SNAA	**Sanae**	93.29	178	P	P	13 45 24.9	-0.6
SNAA	**Sanae**	93.29	178	*d i*P	P	13 45 24.8	-0.6
SNAA				pmax	pmax		
	comp=Z,42nm,1.4s						
SNAA	**Sanae**	93.29	178	P	P	13 45 25.0	-0.4
SNAA				IAmb	IAmb	13 45 26.2	
	comp=Z,53nm,1.4s						
MDND	**Maddock**	93.38	41	P	P	13 45 26.4	+0.3
	baz=251						
VNA3	**Neumayer Olymp**	93.40	176	P	P	13 45 25.7	-0.2
TIXI	**Tiksi**	93.70	345	⇑*i*P	P	13 45 26.2	-0.8
TIXI				pmax	pmax		
	comp=Z,16nm,1.2s						
TIXI	**Tiksi**	93.70	345	P	P	13 45 26.4	-0.6
TIXI				IAmb	IAmb	13 45 28.5	
	comp=Z,19nm,1.2s						
A36M	**Sachs Harbour**	93.70	14	P	P	13 45 27.1	0.0
A36M	**Sachs Harbour**	93.70	14	P	P	13 45 27.4	+0.3
	baz=230						
GTA	**Gaotai**	93.79	310	⇑P	P	13 45 29.1	+0.7
GTA				pP	pP	13 47 01.1	+1.0
GTA				sP	sP	13 47 41.8	+0.8
GTA				pmax	pmax		
	comp=Z,20nm,0.9s						
MIAR	**Mount Ida**	93.79	55	P	P	13 45 28.9	+0.6
	baz=254						
W39A	**Magazine**	93.81	55	P	P	13 45 28.8	+0.4
	baz=254						
VNA2	**Neumayer--Watz**	93.85	177	P	P	13 45 27.9	0.0
	baz=197,slow=3.4						
NVL	**N'lazarevskaya**	94.01	183	*e*P	P	13 45 31.4	+2.8
NVL				pmax	pmax		
	comp=Z,14nm,0.8s						
VNA1	**Neumayer--Stat**	94.07	177	P	P	13 45 29.6	+0.7
ECSD	**EROS Data Cent**	94.11	46	P	P	13 45 29.2	-0.4
ECSD	**EROS Data Cent**	94.11	46	P	P	13 45 29.5	-0.1
	baz=253						
ZAK	**Zakamensk**	94.68	321	*e*P	P	13 45 31.3	-0.9
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
U40A	**Yellville**	94.84	54	P	P	13 45 33.6	+0.5
	baz=255						
W41B	**Gary Mavity, V**	95.01	55	P	P	13 45 34.5	+0.6
	baz=255						
CCM	**Cathedral Cave**	96.51	52	P	P	13 45 40.8	+0.2
	baz=256						
JFWS	**Jewell Farm**	98.38	48	P	P	13 45 49.2	+0.3
	baz=257						
ZSN	**Zaisan**	105.98	316	*e*PKiKP	PKiKP	13 50 31.8	-0.7
	baz=316						
ZALV	**Zalesovo Beam**	106.48	322	PKiKP	PKiKP	13 50 32.7	-0.5
	comp=Z,2.5nm,0.5s,baz=159,slow=1.5,SNR=9.5						
MKAR	**Makanchi Array**	107.69	315	Pdiff	Pdif	13 46 30.7	+0.5
	comp=Z,1.2nm,0.7s,baz=86,slow=5.9,SNR=7.4						
MKAR				PKiKP	PKiKP	13 50 35.0	-0.7
	comp=Z,2.3nm,0.6s,baz=72,slow=2.7,SNR=18						
MKAR				PKKPbc	PKKPbc	14 01 51.1	-1.1
	comp=Z,2.1nm,0.8s,baz=268,slow=4.1,SNR=9.7						
SEM	**Semipalatinsk**	109.17	318	*e*PKiKP	PKiKP	13 50 37.1	-1.5
	baz=318						
KURK	**Kurchatov**	110.21	319	*i* PKIKP	PKiKP	13 50 39.5	-0.8
KURK	**Kurchatov**	110.21	319		PKiKP	13 50 39.5	-0.8
KURBB	**Kurchatov Arra**	110.27	319	PKiKP	PKiKP	13 50 39.5	-0.9
	comp=Z,1.6nm,0.4s,baz=90,slow=1.9,SNR=9.6						
KSH	**Kashi**	111.97	307	PKP	PKiKP	13 50 43.8	-0.4
SGDS	**Sogindy**	113.03	311	*e*PKiKP	PKiKP	13 50 44.7	-1.3
	baz=311						
AAK	**Ala-Archa**	113.13	310	PKiKP	PKiKP	13 50 46.0	-0.3
	comp=Z,1.4nm,0.5s,baz=171,slow=4.6,SNR=11						
AAK	**Ala-Archa**	113.13	310	⇓*i*PKIKP	PKiKP	13 50 46.2	-0.1
BTLS	**Baital**	113.41	313	*e*PKiKP	PKiKP	13 50 45.7	-0.8
	baz=313						
BTLS	**Baital**	113.41	313	*i* PKIKP	PKiKP	13 50 45.7	-0.8
BRVK	**Borovoye**	115.18	322	*d i*PKIKP	PKPdf	13 50 48.5	-1.2
BRLS	**Borolday**	116.54	311	*e*PKP	PKPdf	13 50 52.0	-0.7
	baz=310						
BRLS	**Borolday**	116.54	311	*e*PKIKP	PKPdf	13 50 52.0	-0.7
ARU	**Arti**	120.92	327	PKP	PKPdf	13 51 00.5	-0.1
	comp=Z,5.6nm,0.5s,baz=26,slow=1.0,SNR=29						
ARU	**Arti**	120.92	327	*i* PKIKP	PKPdf	13 51 00.4	-0.2
ARU						13 52 34.2	
ARU						13 57 32.3	
BDFB	**Brasilia**	121.67	119	PKP	PKPdf	13 51 03.1	-0.3
	comp=Z,5.0nm,0.8s,baz=185,slow=4.2,SNR=5.2						
AKTO	**Aktyubinsk**	123.19	321	PKP	PKPdf	13 51 05.3	+0.1
	comp=Z,5.9nm,0.8s,baz=67,slow=5.7,SNR=17						
ARCES	**ARCESS Array B**	123.76	350	PKP	PKPdf	13 51 05.6	-0.2
	comp=Z,12nm,0.5s,baz=335,slow=5.5,SNR=3.8						
ARCES				PKKPbc	PKKPab	14 00 53.7	-0.6
	comp=Z,5.7nm,0.8s,baz=208,slow=5.1,SNR=9.0						
APA	**Apatity**	123.88	346	⇓*i*PKIKP	PKPdf	13 51 05.3	-0.7
APA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PRGR	**Permogore**	124.32	337	*e*PKIKP	PKPdf	13 51 05.0	-2.0
PRGR				pmax	pmax		
	comp=Z,30nm,0.9s						
KIRV	**Kirov**	124.44	332	PKP	PKPdf	13 51 06.3	-0.9
	comp=Z,18nm,0.7s,baz=155,slow=0.2,SNR=5.8						
KIRV	**Kirov**	124.44	332	*de*PKIKP	PKPdf	13 51 06.8	-0.5
GEYT	**Alibeck**	125.99	306	PKP	PKiKP	13 51 11.8	+0.3
	comp=Z,10.0nm,0.8s,baz=214,slow=7.2,SNR=12						
KLMR	**Klimovskoe**	127.09	338	*e*PKIKP	PKPdf	13 51 09.4	-2.9
KLMR				pmax	pmax		
	comp=Z,19nm,0.9s						
KLMR	**Klimovskoe**	127.09	338	*e*PKPdf	PKPdf	13 51 09.5	-2.9
KLMR				AMP		13 51 12.9	
	comp=Z,19nm,0.9s						
KLMR				*e*PP	PP	13 53 09.3	-7.3
BELG	**Belogornoye**	128.41	326	PKP	PKPdf	13 51 14.6	-0.5
	comp=Z,16nm,0.6s,baz=5.5,slow=1.6,SNR=5.2						
FINES	**FINESS Array B**	130.74	345	PKhKP	PKPpre	13 51 08.3	
	comp=Z,1.6nm,0.5s,baz=342,slow=2.4,SNR=10						
FINES				PKP	PKPdf	13 51 19.1	-0.2
	comp=Z,5.5nm,0.7s,baz=174,slow=1.4,SNR=9.2						
FINES				SKPbc	SKPab	13 54 06.7	+1.0
	comp=Z,8.4nm,0.8s,baz=26,slow=4.9,SNR=8.1						
BOSA	**Boshof**	131.09	207	PKP	PKPdf	13 51 21.2	0.0
	comp=Z,4.8nm,0.8s,baz=111,slow=1.7,SNR=6.9						
BOSA				SKPbc	SKPab	13 54 11.1	+2.6
	comp=Z,9.5nm,0.9s,baz=151,slow=6.9,SNR=5.9						
OBN	**Obninsk**	132.16	334	*ce*PKIKP	PKPdf	13 51 22.1	0.0
OBN				*e*		13 53 02.2	
OBN				*e*		13 53 49.2	

OBN				ePPP	PPP	13 56 43.6	
OBN				pmax	pmax		
	comp=Z,14nm,0.9s						
VRH	Novokhopyorsk	132.16	327	ePKIKP	PKPdf	13 51 20.6	-1.6
VRH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MAK	Makhachkala	132.50	315	eP	Pdif	13 48 14.7	-5.9
MAK				e		13 57 47.0	
MAK				pmax	pmax		
	comp=Z,263nm,1.5s						
LPSR	Galich'ya Gora	132.73	330	ePKIKP	PKPdf	13 51 23.5	+0.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	133.46	329	ePKIKP	PKPdf	13 51 23.5	-1.2
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NB2	NORSAR Subarra	133.75	354	PKP	PKPdf	13 51 25.3	+0.3
	comp=Z,4.1nm,0.8s,baz=17,slow=2.6						
NOA	NORSAR Array B	133.75	354	PKP	PKPdf	13 51 25.1	0.0
	comp=Z,2.2nm,0.7s,baz=13,slow=4.0,SNR=11						
NOA				SKPbc	SKPab	13 54 18.7	-0.1
	comp=Z,3.2nm,0.9s,baz=9.2,slow=2.3,SNR=4.4						
HFS	Hagfors	134.35	352	PKhKP	PKPpre	13 51 12.5	
	comp=Z,3.2nm,0.8s,baz=177,slow=7.4,SNR=4.3						
HFS				PKP	PKPdf	13 51 26.6	+0.5
	comp=Z,3.7nm,0.6s,baz=46,slow=4.2,SNR=6.5						
KBZ	Khabaz	135.26	318	PKP	PKiKP	13 51 30.1	+0.3
	comp=Z,1.8nm,0.4s,baz=295,slow=4.6,SNR=4.5						
KIV	Kislovodsk	135.29	318	ePKIKP	PKPdf	13 51 28.9	+0.4
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NEY	Neytrino	135.59	317	⇑iPKIKP	PKiKP	13 51 30.7	-0.1
AKASG	Malin Array Be	138.42	334	PKhKP	PKPpre	13 51 24.5	
	comp=Z,1.0nm,0.4s,baz=40,slow=3.5,SNR=4.4						
AKASG				PKP	PKiKP	13 51 35.3	-0.8
	comp=Z,7.2nm,0.8s,baz=42,slow=2.6,SNR=9.7						
AKBB	Malin Array Si	138.42	334	⇓iPKIKP	PKPdf	13 51 34.6	+0.7
SORM	Soroca	140.72	332	⇑P	PKPdf	13 51 34.3	-3.9
SORM	Soroca	140.72	332	⇑PKIKP	PKPdf	13 51 34.3	-3.9
KWP	Kalwaria Pacla	141.81	338	ePKPdf	PKPdf	13 51 36.3	-3.8
OJC	Ojcow	142.26	342	ePKPdf	PKPdf	13 51 37.6	-3.3
BURAR	Bucovina Array	142.48	334	⇑P	PKPdf	13 51 38.5	-3.0
BURAR	Bucovina Array	142.48	334	⇑PKIKP	PKPdf	13 51 38.5	-3.0
HLM1	Long Mynd	142.53	5	eP	PKPdf	13 51 38.0	-3.3
KOLS	Kolonicke sedl	142.55	338	ePKIKP	PKPdf	13 51 39.1	-2.3
KOLS	Kolonicke sedl	142.55	338	ePKP	PKPdf	13 51 39.1	-2.3
KSP	Ksiaz	142.67	345	ePKPdf	PKPdf	13 51 39.0	-2.6
TESR	Tescani	142.70	332	⇑P	PKPdf	13 51 39.0	-2.8
UZH	Uzhgorod	142.80	338	ePKIKP	PKPdf	13 51 38.7	-3.1
UZH				i		13 53 15.5	
NIE	Niedzica	142.81	340	ePKPdf	PKPdf	13 51 40.6	-1.3
CRVS	Cervenica-Dubn	142.86	339	ePKIKP	PKPdf	13 51 39.6	-2.4
CRVS	Cervenica-Dubn	142.86	339	ePKP	PKPdf	13 51 39.6	-2.4
CRVS				e		13 54 46.6	
CLL	Collm	142.94	349	i PKIKP	PKPdf	13 51 40.6	-1.4
CLL				pmax	pmax		
	comp=Z,23nm,0.7s						
CLL	Collm	142.94	349	i PKPpre	PKPpre	13 51 38.6	
CLL				i PKPdf	PKPdf	13 51 40.6	-1.4
	comp=Z,23nm,0.7s						
CLL				i SKPbc	SKiKP	13 54 45.9	+3.0
	comp=Z,46nm,1.9s						
CLL	Collm	142.94	349	ePKPbc	PKPdf	13 51 39.0	-3.1
	baz=14,slow=3.2						
CLL				eSKPbc	SKiKP	13 54 45.9	+3.0
	baz=17,slow=2.5						
OSTC	Ostas	142.95	345	ePKP	PKPdf	13 51 39.9	-2.2
CHVC	Chvalec	142.96	345	ePKP	PKPdf	13 51 39.5	-2.6
MCH1	Michaelchurch	143.04	5	eP	PKPbc	13 51 39.6	0.0
UPC	Upice	143.05	345	ePKP	PKPbc	13 51 40.3	+0.6
UPC	Upice	143.05	345	ePKIKP	PKPbc	13 51 40.3	+0.6
DPC	Dobruska-Polom	143.12	345	ePKP	PKPbc	13 51 40.8	+0.8
DPC				eSKP		13 54 46.8	
DPC	Dobruska-Polom	143.12	345	ePKIKP	PKPbc	13 51 40.8	+0.8
TRPA	Tarpa	143.12	337	⇑P	PKPbc	13 51 40.4	+0.5
BMR	Baia Mare	143.13	336	⇑P	PKPab	13 51 39.5	-0.1
BMR	Baia Mare	143.13	336	⇑PKIKP	PKPab	13 51 39.5	-0.1
BRG	Berggiesshubel	143.17	348	ePKPbc	PKPbc	13 51 40.0	-0.1
	baz=14,slow=3.2						
BRG				eSKPbc	SKiKP	13 54 46.1	+2.7
	baz=17,slow=2.5						
BRG	Berggiesshubel	143.17	348	ePKP	PKPbc	13 51 40.5	+0.4
BRG				Amp		13 51 42.4	
	comp=Z,14nm,0.7s						
BRG	Berggiesshubel	143.17	348	P	PKiKP	13 51 46.6	+0.7
BRG				Amp		13 51 47.2	
	comp=Z,6.2nm,0.6s						
BRG				SKP		13 54 46.5	
BRG				Amp		13 54 48.0	
	comp=Z,12nm,1.2s						
GTTG	Gottingen	143.21	352	ePKPbc	PKPbc	13 51 40.0	-0.1
	baz=14,slow=3.2						
FBE	Freiberg	143.25	348	ePKPbc	PKPbc	13 51 40.2	-0.1
	baz=14,slow=3.2						
FBE				eSKPbc	SKiKP	13 54 47.0	+3.5
	baz=17,slow=2.5						
KRLC	Kraliky	143.25	344	ePKP	PKPbc	13 51 40.9	+0.5
KRLC				eSKP		13 54 46.8	
KRLC	Kraliky	143.25	344	ePKIKP	PKPbc	13 51 40.9	+0.5
BRTR	Keskin Array B	143.26	318	PKP	PKPbc	13 51 41.4	+0.4
	comp=Z,66nm,0.8s,baz=103,slow=1.6,SNR=108						
BRTR				SKPbc	SKiKP	13 54 46.9	+2.7
	comp=Z,1.9nm,0.5s,baz=104,slow=1.5,SNR=3.6						
ARCR	ARCALIA	143.26	335	⇑P	PKPbc	13 51 41.4	+0.9
NEUB	Neuenburg	143.26	350	ePKPbc	PKPbc	13 51 40.4	0.0
	baz=14,slow=3.2						
LANS	Liptovska Anna	143.31	341	ePKIKP	PKPdf	13 51 42.1	-0.7
LANS	Liptovska Anna	143.31	341	ePKP	PKPdf	13 51 42.1	-0.7
MORC	Moravsky Berou	143.32	343	⇑P	PKPbc	13 51 41.0	+0.4
MORC	Moravsky Berou	143.32	343	ePKP	PKPbc	13 51 40.8	+0.2
MORC				e		13 54 47.3	
MORC	Moravsky Berou	143.32	343	⇑PKIKP	PKPbc	13 51 41.0	+0.4
TIRR	Tirgusor	143.34	328	⇓P	PKPbc	13 51 40.9	+0.1
TIRR	Tirgusor	143.34	328	⇓PKIKP	PKPbc	13 51 40.9	+0.1
PVCC	Panska Ves	143.36	347	ePKP	PKPbc	13 51 41.2	+0.5
PVCC	Panska Ves	143.36	347	ePKIKP	PKPbc	13 51 41.2	+0.5
COVR	Voineasa-Covas	143.41	332	⇑P	PKPbc	13 51 42.0	+0.9
OZUR		143.41	332	⇑P	PKPdf	13 51 42.4	-0.7
KECS	Kecovo	143.56	339	ePKIKP	PKPbc	13 51 42.1	+0.7
KECS	Kecovo	143.56	339	ePKP	PKPbc	13 51 42.1	+0.7
BUG	Bochum--Univer	143.61	355	ePKPbc	PKPbc	13 51 41.5	0.0
	baz=14,slow=3.2						
DOPR	Dopca	143.68	332	⇑P	PKPdf	13 51 43.2	-0.3
MANR	Mangalia	143.70	327	⇑P	PKPdf	13 51 43.7	+0.1
IZAB	Izabela	143.74	340	ePKIKP	PKPdf	13 51 42.9	-0.6
ISR	Istrita	143.79	330	⇑P	PKPdf	13 51 43.1	-0.7
ISR	Istrita	143.79	330	⇑PKIKP	PKPdf	13 51 43.1	-0.7
MLR	Muntele Rosu	143.79	331	⇑P	PKPbc	13 51 43.1	+0.7
MLR	Muntele Rosu	143.79	331	PKP	PKPdf	13 51 43.2	-0.7
	comp=Z,53nm,1.0s,baz=183,slow=2.8,SNR=38						
MLR	Muntele Rosu	143.79	331	PKPdf	PKPdf	13 51 43.3	-0.6
PRA	Prague	143.82	347	ePKP	PKPdf	13 51 42.9	-0.7
PRA	Prague	143.82	347	ePKIKP	PKPdf	13 51 42.9	-0.7
MOX	Moxa	143.83	350	ePKPbc	PKPab	13 51 41.8	-0.3
	baz=14,slow=3.2						
MOX				eSKPbc	SKiKP	13 54 47.8	+3.0
	baz=17,slow=2.5						
CJR	Cluj-Napoca	143.87	335	⇑P	PKPab	13 51 42.4	0.0
CJR	Cluj-Napoca	143.87	335	⇑PKIKP	PKPab	13 51 42.4	0.0
PRU	Pruhonice	143.88	347	ePKP	PKPbc	13 51 42.9	+0.5
PRU	Pruhonice	143.88	347	ePKIKP	PKPbc	13 51 42.9	+0.5
PLN	Plauen	143.89	349	ePKPbc	PKPbc	13 51 42.5	+0.1
	baz=14,slow=3.2						
WERD	Werda	143.90	349	ePKPbc	PKPbc	13 51 42.8	+0.4
	baz=14,slow=3.2						
TANN	Tannenbergstha	143.90	349	ePKPbc	PKPbc	13 51 42.6	+0.1
	baz=14,slow=3.2						
UBBA	Unterbreizbach	143.91	352	ePKPbc	PKPbc	13 51 42.8	+0.5
	baz=14,slow=3.2						
GUNZ	Gunzen	143.97	349	ePKPbc	PKPbc	13 51 43.0	+0.3
	baz=14,slow=3.2						
VRAC	Vranov	144.00	344	⇓P	PKPdf	13 51 43.4	-0.6
VRAC	Vranov	144.00	344	PKP	PKPdf	13 51 43.4	-0.6
	comp=Z,52nm,0.9s,baz=22,slow=3.9,SNR=40						
VRAC	Vranov	144.00	344	ePKP	PKPbc	13 51 43.3	+0.5
VRAC				e		13 54 48.8	
WERN	Wernitzgruen	144.04	349	ePKPbc	PKPbc	13 51 43.3	+0.4
	baz=14,slow=3.2						
WERN				eSKPbc	SKiKP	13 54 48.5	+3.2
	baz=17,slow=2.5						
KALB	Balgarevo	144.07	327	⇑P	PKPdf	13 51 44.8	+0.5
NKC	Novy Kostel	144.08	349	ePKP	PKPab	13 51 43.4	+0.4
NKC	Novy Kostel	144.08	349	ePKIKP	PKPab	13 51 43.4	+0.4
SECR		144.08	331	⇓P	PKPdf	13 51 44.2	-0.1
VYHS	Vyhne	144.08	341	ePKIKP	PKPdf	13 51 43.7	-0.5
VYHS	Vyhne	144.08	341	ePKP	PKPdf	13 51 43.7	-0.5
VYHS				e		13 54 49.1	
JAVC	Velka Javorina	144.11	343	ePKP	PKPdf	13 51 44.7	+0.5
JAVC				e		13 54 50.3	
ELSH	Elham, Standar	144.12	1	eP	PKPdf	13 51 43.6	-0.5
LEHL	Lehliu	144.13	329	⇑P	PKPdf	13 51 44.3	0.0
KOLL	Kolacno	144.14	342	ePKP	PKPdf	13 51 44.1	-0.1
DRGR		144.16	336	⇑P	PKPab	13 51 43.8	+0.3
DRGR		144.16	336	⇑PKIKP	PKPab	13 51 43.8	+0.3
PLAR	PLOIESTI	144.19	331	⇑P	PKPab	13 51 43.8	+0.3
HWQ	Hawqa	144.20	308	eP	PKPab	13 51 44.5	+0.3
ASF	Jabal al Asfar	144.24	304	PKP	PKPdf	13 51 45.2	+0.2
	comp=Z,58nm,0.8s,baz=88,slow=2.0,SNR=49						
ASF				SKPbc	SKiKP	13 54 48.6	+2.2
	comp=Z,4.3nm,0.8s,baz=31,slow=1.3,SNR=4.2						
PSZ	Piszkesteto	144.24	340	⇑P	PKPdf	13 51 44.3	-0.3
PSZ	Piszkesteto	144.24	340	⇑PKIKP	PKPdf	13 51 44.3	-0.3
VOIR		144.24	332	⇑P	PKPdf	13 51 44.3	-0.3
VOIR		144.24	332	⇑PKIKP	PKPdf	13 51 44.3	-0.3
SULR		144.25	330	⇑P	PKPbc	13 51 42.8	-1.0
KRUC	Moravsky	144.28	344	ePKP	PKPab	13 51 44.0	+0.2
KRUC				e		13 54 49.3	
TREC	Trest	144.30	345	ePKP	PKPab	13 51 44.2	+0.3
TREC	Trest	144.30	345	ePKIKP	PKPab	13 51 44.2	+0.3
BEBN	Eben Emael	144.37	356	dPKP	PKPdf	13 51 44.4	-0.1
MANZ	Manzenberg	144.38	349	ePKPbc	PKPab	13 51 44.2	0.0
	baz=14,slow=3.2						
MANZ				eSKPbc	SKiKP	13 54 49.9	+3.9
	baz=17,slow=2.5						
HMNX	Herstmonceux	144.38	2	eP	PKPab	13 51 44.2	+0.2
MTUR	Matau	144.40	332	⇑P	PKPbc	13 51 44.1	-0.3
MTUR	Matau	144.40	332	⇑PKIKP	PKPbc	13 51 44.1	-0.2
UCC	Uccle	144.44	358	dPKP	PKPab	13 51 44.4	+0.1
ARR	Arges	144.48	332	⇓P	PKPdf	13 51 46.3	+1.3
DYA	Yadsworthy	144.49	7	eP	PKPbc	13 51 44.1	-0.3
SMOL	Smolenice	144.49	343	ePKIKP	PKPdf	13 51 45.5	+0.7
SMOL	Smolenice	144.49	343	ePKP	PKPdf	13 51 45.5	+0.7
SMOL				e		13 54 50.6	
AHRW	Bad Neuenahr-A	144.52	355	ePKPbc	PKPbc	13 51 44.4	0.0
	baz=14,slow=3.2						
MEM	Membach	144.54	356	dPKP	PKPbc	13 51 44.5	+0.1
BTNL	Ternell	144.55	356	dPKP	PKPab	13 51 44.8	0.0
ROTZ	Rotzenmuhle	144.57	349	ePKPbc	PKPab	13 51 44.8	0.0
	baz=14,slow=3.2						
CCA1	Carnmenellis	144.57	8	eP	PKPbc	13 51 44.5	-0.1
BHL	Bhannes	144.57	308	eP	PKPdf	13 51 46.1	+0.5
MODS	Modra-Piesok	144.66	343	ePKIKP	PKPbc	13 51 45.0	0.0
MODS	Modra-Piesok	144.66	343	ePKP	PKPbc	13 51 45.0	0.0
MODS				e		13 54 50.0	
TNS	Taunus Mts	144.69	353	ePKPbc	PKPbc	13 51 45.0	-0.1
	baz=14,slow=3.2						
DQRL	Deir Qamar	144.72	308	eP	PKPab	13 51 46.8	+0.7
SHBL	Chebaa	144.72	307	eP	PKPab	13 51 46.8	+0.6
SNF	Seneffe	144.73	358	dPKP	PKPab	13 51 45.5	+0.2
BCLA	Clavier	144.77	357	dPKP	PKPab	13 51 45.5	-0.1
BHOU	Houvegnez	144.79	356	dPKP	PKPab	13 51 45.9	+0.3
GRF	Grafenberg Arr	144.81	350	ePKPbc	PKPab	13 51 45.7	-0.1
	baz=14,slow=3.2						
BGES	Gesves	144.82	357	dPKP	PKPbc	13 51 45.4	0.0
SRO	Srobarova	144.85	341	ePKIKP	PKPab	13 51 47.3	+1.4
SRO	Srobarova	144.85	341	ePKP	PKPab	13 51 47.3	+1.4
ZST	Bratislava	144.87	343	ePKIKP	PKPab	13 51 46.7	+0.7
ZST	Bratislava	144.87	343	ePKP	PKPab	13 51 46.7	+0.7
KHC	Kasperske Hory	144.90	347	ePKP	PKPab	13 51 46.3	+0.2
KHC				ex	x	13 51 54.0	
KHC				eSKP		13 54 50.7	
KHC	Kasperske Hory	144.90	347	c iPKIKP	PKPab	13 51 46.0	-0.1
BMRD	Maredsous	144.92	357	dPKP	PKPbc	13 51 45.7	0.0
SIRR	Siria	145.00	336	⇑P	PKPab	13 51 46.7	+0.1
CKRC	Cesky Krumlov	145.02	346	ePKP	PKPab	13 51 47.7	+1.1
CKRC				eSKP		13 54 52.1	
WET	Wettzell	145.03	348	ePKPbc	PKPab	13 51 46.4	-0.2
	baz=14,slow=3.2						
RCHB	Rochefort	145.04	357	dPKP	PKPdf	13 51 45.9	+0.2
MMAI	Mount Meron Ar	145.11	307	PKPbc	PKPab	13 51 48.0	+0.5
	comp=Z,48nm,0.5s,baz=66,slow=4.7,SNR=113						
MMAI				SKPbc	SKiKP	13 54 51.2	+3.1
	comp=Z,5.3nm,0.8s,baz=46,slow=4.8,SNR=4.6						
DOU	Dourbes	145.13	357	dPKP	PKPbc	13 51 46.6	+0.2
GEC2	GERESS Array S	145.14	347	ePKPbc	PKPbc	13 51 46.6	0.0
	baz=14,slow=3.2						
GEC2				eSKPbc	SKiKP	13 54 51.4	+3.7
	baz=17,slow=2.5						
GEC2	GERESS Array S	145.14	347	PKPbc	PKPab	13 51 47.1	0.0
GERES	GERESS Array B	145.14	347	PKPbc	PKPab	13 51 46.9	-0.3
	comp=Z,17nm,0.5s,baz=28,slow=3.5,SNR=101						
GERES				SKPbc	SKiKP	13 54 51.4	+3.7
	comp=Z,4.6nm,1.0s,baz=64,slow=3.1,SNR=9.9						
GERES	GERESS Array B	145.14	347	PKP2	PKPab	13 51 47.0	-0.1
CONA	Conrad Observa	145.46	344	i P	PKPab	13 51 48.4	0.0
	comp=Z,69nm,0.9s,SNR=28						
CONA				eP	pPKPdf	13 53 24.2	+0.3
	comp=Z,9.4nm,1.1s						
WLF	Walferdange	145.47	356	dPKP	PKPab	13 51 48.3	0.0
WLF	Walferdange	145.47	356	ePKPbc	PKPab	13 51 48.0	-0.2
	baz=14,slow=3.2						
BZS	Buzias	145.56	336	⇑P	PKPbc	13 51 47.6	-0.2
BZS	Buzias	145.56	336	⇑PKP2	PKPbc	13 51 47.6	-0.2
HERR	Herculane	145.83	334	⇓P	PKPbc	13 51 48.9	+0.3
JSA	Saint Aubin	145.90	5	eP	PKPbc	13 51 48.6	0.0
MOA	Molln	145.94	345	i P	PKPab	13 51 49.5	-0.7
	comp=Z,31nm,0.6s,SNR=18						
MOA				eP	pPKPdf	13 53 24.4	-0.2
	comp=Z,23nm,1.3s						
STU	Stuttgart	146.02	352	ePKPbc	PKPbc	13 51 49.3	+0.2
	baz=14,slow=3.2						
PUNG	Punghina	146.09	333	⇓P	PKPbc	13 51 50.0	+0.6
LEF	Lefka	146.10	311	⇓P	PKPbc	13 51 49.4	-0.3
MORH	Mrgy, Hungar	146.15	339	⇑P	PKPbc	13 51 49.3	-0.2
MORH	Mrgy, Hungar	146.15	339	⇑iP	PKPbc	13 51 49.3	-0.2
ARSA	Arzberg	146.17	344	i P	PKPbc	13 51 49.8	+0.3
	comp=Z,42nm,1.2s,SNR=14						
ARSA				eP	pPKPbc	13 53 25.9	+0.4
	comp=Z,9.6nm,1.1s						
MDVR	Moldovita	146.21	335	⇑P	PKPdf	13 51 48.6	+0.7
FUR	Furstenfeldbru	146.28	349	ePKPbc	PKPbc	13 51 49.9	+0.1
	baz=14,slow=3.2						
RJOB	Jochberg	146.38	347	ePKPbc	PKPbc	13 51 50.7	+0.5
	baz=14,slow=3.2						
RJOB				epPKPbc	pPKPbc	13 53 26.0	+0.1
	baz=23,slow=2.5						
KUBS	Kucevo	146.52	334	eP	PKPbc	13 51 50.9	+0.3
BFO	Black Forest	146.57	353	ePKPbc	PKPbc	13 51 50.8	+0.2
	baz=14,slow=3.2						
BFO				epPKPbc	pPKPab	13 53 26.5	+0.2
	baz=23,slow=2.5						
FRGS	Fruska Gora	146.64	337	⇓P	PKPbc	13 51 51.5	+0.6
FRGS	Fruska Gora	146.64	337	⇑iP	PKPbc	13 51 50.9	0.0
FRGS	Fruska Gora	146.64	337	eP	PKPbc	13 51 51.0	0.0
EIL	Elat	146.64	301	PKPbc	PKPbc	13 51 52.1	+0.7
	comp=Z,24nm,0.7s,baz=94,slow=0.4,SNR=18						
KOGS	Kog	146.70	342	i PKPbc	PKPbc	13 51 51.0	0.0
KOGS				epPKPbc	pPKPdf	13 53 26.4	+0.5
ZAGS	Zajecar	146.77	333	eP	PKPbc	13 51 50.1	-1.2
SOKA	Soboth	146.83	344	i P	PKPbc	13 51 51.4	-0.1
	comp=Z,40nm,0.8s,SNR=21						
SOKA				i P	pPKPab	13 53 26.9	-0.5
	comp=Z,24nm,1.3s,SNR=6.9						
PERS	Pernice	146.85	344	ePKPdf	PKPdf	13 51 48.9	-0.1
PERS				i PKPbc	PKPbc	13 51 51.3	-0.2
PERS				i PKPab	PKiKP	13 51 53.7	0.0
PERS				epPKPbc	pPKPab	13 53 27.0	-0.4
PERS				i SKPbc	SKiKP	13 54 54.4	+3.2
KBA	Koelnbreinsper	146.88	346	i P	PKPbc	13 51 51.5	-0.2
	comp=Z,29nm,0.6s,SNR=12						
KBA				eP	pPKPab	13 53 28.3	+0.5
	comp=Z,20nm,1.5s						
UBR	Ueberruh	146.95	350	ePKPbc	PKPbc	13 51 52.0	+0.2
	baz=14,slow=3.2						
ZAPS	Zavoj	147.01	332	eP	PKPbc	13 51 50.8	-1.2
WATA	Walderalm	147.02	348	i P	PKPbc	13 51 52.3	+0.2
	comp=Z,19nm,0.6s,SNR=10						
WATA				eP	pPKPab	13 53 28.4	+0.2
	comp=Z,20nm,1.2s						
RETA	Reutte	147.03	349	i P	PKPbc	13 51 52.3	+0.3
	comp=Z,44nm,1.1s,SNR=13						
RETA				eP	pPKPab	13 53 28.0	-0.1
	comp=Z,26nm,1.4s						
WTTA	Wattenberg	147.07	348	i P	PKPbc	13 51 52.7	+0.4
	comp=Z,60nm,0.6s,SNR=21						
WTTA				eP	pPKPab	13 53 28.6	+0.1
	comp=Z,27nm,1.3s						
MOTA	Moosalm	147.10	349	i P	PKPbc	13 51 52.5	+0.2
	comp=Z,67nm,1.2s,SNR=16						
MOTA				eP	pPKPbc	13 53 28.0	-0.1
	comp=Z,35nm,1.7s						
OBKA	Obir	147.12	344	i P	PKPbc	13 51 52.0	-0.3
	comp=Z,28nm,0.8s,SNR=11						
OBKA				eP	pPKPbc	13 53 28.0	+0.1
	comp=Z,14nm,1.2s						
BOVS	Bovan	147.14	334	⇓P	PKPbc	13 51 51.9	-0.4
BOVS	Bovan	147.14	334	eP	PKPbc	13 51 51.7	-0.6
TRUS	Trudelj	147.19	336	eP	PKPbc	13 51 52.5	+0.1
SQTA	Sankt Quirin	147.20	349	eP	PKPdf	13 51 50.6	+1.0
	comp=Z,5.0nm,0.7s						
SQTA				i P	PKPbc	13 51 52.9	+0.4
	comp=Z,35nm,0.7s,SNR=11						
SQTA				eP	pPKPab	13 53 29.1	+0.3
	comp=Z,20nm,1.1s						
MYKA	Terra Mystica	147.23	345	i P	PKPbc	13 51 52.2	-0.3
	comp=Z,35nm,0.7s,SNR=15						
MYKA				eP	pPKPbc	13 53 28.1	-0.3
	comp=Z,16nm,1.0s						
VTS	Vitosha	147.25	331	⇑P	PKPbc	13 51 53.1	+0.3
VTS	Vitosha	147.25	331	⇑PKP2	PKPbc	13 51 53.1	+0.3
TEKS	Tekeris	147.26	337	eP	PKPbc	13 51 52.5	-0.1
GRUS	Gruza	147.35	335	eP	PKPdf	13 51 50.7	+0.9
DAVA	Damuels	147.37	350	i P	PKPbc	13 51 53.3	+0.3
	comp=Z,35nm,0.7s,SNR=14						
DAVA				eP	pPKPab	13 53 29.4	-0.2
	comp=Z,26nm,1.2s						
ABTA	Abfaltersbach	147.38	347	i P	PKPbc	13 51 52.7	-0.2
	comp=Z,48nm,0.7s,SNR=15						
ABTA				eP	pPKPbc	13 53 28.4	-0.4
	comp=Z,16nm,1.0s						
DIVS	Divibare	147.46	336	⇑iP	PKPbc	13 51 53.6	+0.3
DIVS	Divibare	147.46	336	eP	PKPbc	13 51 53.5	+0.3
FETA	Feichten	147.48	349	eP	PKPdf	13 51 50.6	+0.5
	comp=Z,9.2nm,0.9s						
FETA				i P	PKPbc	13 51 53.7	+0.4
	comp=Z,36nm,1.1s,SNR=8.4						
FETA				eP	pPKPab	13 53 30.0	0.0
	comp=Z,16nm,1.7s						
CRES	Cresnjev	147.50	343	⇑iP	PKPbc	13 51 53.2	0.0
LJU	Ljubljana	147.55	344	i PKPbc	PKPbc	13 51 53.4	0.0
LJU				i PKPab	PKPab	13 51 56.2	-0.4
LJU				i pPKPab	pPKPbc	13 53 29.2	-0.1
LJU	Ljubljana	147.55	344	⇑iP	PKPbc	13 51 53.2	-0.1
BOSS	Bosilegrad	147.69	331	eP	PKPbc	13 51 54.1	+0.3
SELS	Selova	147.72	334	eP	PKPbc	13 51 53.8	-0.1
BARS	Barje	147.74	332	eP	PKPdf	13 51 49.6	-0.9
BARS	Barje	147.74	332	eP	PKPbc	13 51 54.1	+0.2
IVAS	Ivanjica	147.83	335	eP	PKPbc	13 51 53.8	-0.4
DAVOX	Davos/Dischmat	147.86	350	PKPbc	PKPbc	13 51 54.8	+0.5
	comp=Z,50nm,0.7s,baz=235,slow=1.7,SNR=6.0						
CEY	Cerknica	147.86	344	⇑iP	PKPbc	13 51 54.2	0.0
PRVS	Prvonek	147.87	332	eP	PKPbc	13 51 54.3	0.0
BBLS	Lazići	147.89	336	⇑iP	PKPbc	13 51 54.8	+0.4
BBLS	Lazići	147.89	336	eP	PKPbc	13 51 54.4	0.0
BLY	Banja Luka	147.93	340	⇑iP	PKPbc	13 51 54.8	+0.5
RUDO	Rudo	148.11	336	⇑iP	PKPbc	13 51 54.7	-0.2
SJES	Sjenica	148.17	335	eP	PKPbc	13 51 55.5	+0.4
RIY	Rijeka	148.23	343	⇑iP	PKPbc	13 51 54.7	-0.4
MGRS	Mrkonjic Grad	148.25	340	eP	PKPbc	13 51 55.6	+0.4
STIP	Stip	148.46	331	i P	PKPbc	13 51 54.9	-0.9
UPM	Unac-Piva	148.64	336	⇑iP	PKPbc	13 51 54.9	-1.5
PDG	Podgorica	149.15	335	⇑P	PKPbc	13 51 57.5	0.0
PDG	Podgorica	149.15	335	⇑iP	PKPbc	13 51 57.3	-0.1
DRME	Dracevica, Mon	149.38	335	⇑iP	PKPbc	13 51 58.0	0.0
STON	Ston	149.38	337	⇑iP	PKPab	13 52 02.5	-1.7
OHR	Ohrid	149.56	332	i P	PKPbc	13 51 58.4	-0.2
TIR	Tirane	149.79	333	⇓P	PKiKP	13 51 59.6	-0.2
TIR	Tirane	149.79	333	⇓PKP2	PKiKP	13 51 59.6	-0.2
SANT	Santorini	150.44	320	⇓P	PKPbc	13 52 00.4	-0.3
AQU	L'Aquila	151.27	343	⇑iP	PKiKP	13 52 03.2	+0.3
IDI	Anoyia	151.48	319	PKPbc	PKiKP	13 52 03.8	+0.2
	comp=Z,27nm,0.5s,baz=298,slow=12,SNR=25						
PGAV	Gavieira, Arco	151.81	17	ePKP	PKiKP	13 52 04.3	+0.2
PGAV	Gavieira, Arco	151.81	17	ePKPab	PKPab	13 52 14.8	+0.3
PCAB	Cabril	152.12	17	ePKP	PKiKP	13 52 05.0	+0.4
PCAB	Cabril	152.12	17	ePKPab	PKPab	13 52 16.3	+0.6
PBRG	Braganca	152.36	15	ePKP	PKiKP	13 52 05.2	0.0
PBRG	Braganca	152.36	15	ePKPab	PKPab	13 52 17.2	+0.5
POLO	Lamas de Olo	152.49	16	ePKP	PKiKP	13 52 05.9	+0.4
POLO	Lamas de Olo	152.49	16	ePKPab	PKPab	13 52 18.2	+0.8
MVO	Moncorvo	152.89	15	ePKP	PKiKP	13 52 06.8	+0.5
MVO	Moncorvo	152.89	15	ePKPab	PKPab	13 52 19.8	+0.8
TIP	Timpagrande	152.91	335	⇓P	PKiKP	13 52 06.6	+0.2
PVIS	Viseu	153.08	17	ePKP	PKiKP	13 52 06.8	+0.1
PVIS	Viseu	153.08	17	ePKPab	PKPab	13 52 20.4	+0.6
MTE	Manteigas	153.47	17	ePKP	PKiKP	13 52 07.8	+0.3
PCAS	Casmilo, Conde	153.51	19	ePKP	PKPbc	13 52 04.8	-2.7
PCAS	Casmilo, Conde	153.51	19	ePKPab	PKPab	13 52 22.1	+0.5
PCBR	Castelo Branco	154.01	17	ePKP	PKPbc	13 52 07.6	-0.9
PCBR	Castelo Branco	154.01	17	ePKPab	PKPab	13 52 24.1	+0.4
PMAFR	Mafra	154.24	21	ePKPab	PKPab	13 52 25.5	+0.7
PMRV	Marv??o	154.41	17	ePKP	PKPbc	13 52 09.9	+0.5
PMRV	Marv??o	154.41	17	ePKPab	PKPab	13 52 26.0	+0.5
PESTR	Estremoz	154.87	18	ePKPab	PKPab	13 52 27.7	+0.2
ESDC	Sonseca Array	155.00	11	PKPbc	PKPdf	13 52 11.4	+10
	comp=Z,1.1nm,0.8s,baz=347,slow=3.8,SNR=6.2						
ESDC				PKPab	PKPab	13 52 28.5	+0.4
	comp=Z,4.2nm,0.8s,baz=340,slow=3.8,SNR=11						
ESDC				PP	PP	13 56 06.8	+2.0
	comp=Z,1.2nm,1.0s,baz=20,slow=4.1,SNR=5.0						
PNCL	Nicolau / Gran	155.26	21	ePKPab	PKPab	13 52 29.7	+0.6
PBEJ	Beja	155.56	20	ePKPab	PKPab	13 52 30.8	+0.4
MESJ	Messejana	155.61	20	ePKPab	PKPab	13 52 31.1	+0.5
PCVE	Castro Verde	155.86	20	ePKPab	PKPab	13 52 32.2	+0.5
PVAQ	Vaqueiros	156.17	20	ePKPab	PKPab	13 52 33.9	+0.8
KEST	Kesra	158.57	344	PKPab	PKPab	13 52 44.2	+0.6
	comp=Z,15nm,0.7s,baz=268,slow=1.3,SNR=14						
MDT	Midelt	161.38	18	PKP	PKPdf	13 52 10.1	+0.6
	comp=Z,2.9nm,0.7s,baz=30,slow=2.0,SNR=6.0						
MDT				PKPab	PKPab	13 52 57.7	+1.7
	comp=Z,20nm,1.0s,baz=37,slow=2.4,SNR=20						
LIC	Lamto	168.59	141	ePKP2	PKPab	13 53 28.1	0.0
	comp=Z,32nm,0.9s						
KIC	Kosan Boka	168.87	141	ePKP2	PKPab	13 53 29.3	-0.1
	comp=Z,18nm,1.0s						
TIC	Toumodi	168.92	139	ePKP2	PKPab	13 53 29.4	-0.2
DBIC	Dimbokro	169.04	140	PKPab	PKPab	13 53 29.6	-0.5
	comp=Z,2.8nm,0.4s,baz=214,slow=7.0,SNR=6.3						
KOWA	Kowa	173.91	96	PKP	PKPdf	13 52 18.1	-0.5
	comp=Z,2.2nm,0.6s,baz=83,slow=2.2,SNR=6.2						
KOWA				PKPab	PKPab	13 53 51.9	-0.1
	comp=Z,3.6nm,0.9s,baz=279,slow=4.6,SNR=9.3						
TORD	Torodi Ar. Bea	177.91	165	PKP	PKPdf	13 52 18.9	-0.5
	comp=Z,1.6nm,0.9s,baz=321,slow=1.3,SNR=7.7						
TORD				PKPab	PKPab	13 54 09.4	+0.2
	comp=Z,5.3nm,0.8s,baz=188,slow=3.2,SNR=19						
TORD				PP	PP	13 58 02.0	+0.6
	comp=Z,2.3nm,0.9s,baz=183,slow=3.6,SNR=6.8						

IDC 09 13:33:13.7±1.7, 4°.07S×129°.50E, h0^{km}, mb3.8/1, mb1 3.9/4, mb1mx3.1/47, mbtmp3.8/4, ML3.6/3 Error ellipse: s-maj=51.2km s-min=25.5km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.64	29	Pn	Pn	13 34 12.1	+0.8
	6.3nm,0.3s,baz=137,slow=23,SNR=2.5						
SIJI				Sn	Sn	13 34 54.1	-0.9
	3.9nm,0.3s,baz=240,slow=22,SNR=1.8						
WRA	Warramunga Arr	16.47	164	Pn	Pn	13 37 07.1	+0.8
	0.2nm,0.3s,baz=343,slow=14,SNR=1.5						
ASAR	Alice Springs	19.94	168	P	P	13 37 47.0	-0.5
	0.4nm,0.3s,baz=345,slow=10,SNR=5.9						
MKAR	Makanchi Array	65.52	326	P	P	13 43 59.0	0.0
	0.6nm,0.5s,baz=123,slow=8.5,SNR=4.5						

RSNC 09 13:33:45.4±1.0, 6°.81N×73°.12W, h148^{km}±4^{km}, ML2.9, Mw3.5, 1C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.22	196	⇓iP	Pn	13 34 05.2	-0.7
BARC				eS	Sn	13 34 21.0	-0.4
BARC				i		13 34 21.8	
	comp=Z,125nm,0.3s						
BRRC	Barranca, Sant	0.66	297	eP	Pn	13 34 07.1	-0.4
BRRC				eS	Sn	13 34 24.6	+0.3
BRRC				i		13 34 26.8	
	comp=Z,78nm,0.2s						

PAMC	**Pamplona, Colo**	**0.67**	**38**	⇑*e*P	Pn	13 34 08.0	-0.1
PAMC				*e*S	Sn	13 34 25.1	-0.3
PAMC				*i*		13 34 27.3	
	comp=Z,108nm,0.5s						
RUSC	**La Rusia**	**0.91**	**178**	*e*P	Pn	13 34 09.1	-0.8
RUSC				*e*S	Sn	13 34 28.2	-0.3
RUSC				*i*		13 34 31.1	
	comp=Z,54nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.35**	**259**	*e*P	Pn	13 34 12.1	-1.2
PTBC				*e*S	Sn	13 34 33.6	-1.1
PTBC				*i*		13 34 39.1	
	comp=Z,121nm,0.6s						
TAMC	**Tame, Arauca**	**1.37**	**106**	⇓*e*P	Pn	13 34 13.4	-0.2
TAMC				*i*		13 34 34.1	
	comp=Z,54nm,0.4s						
TAMC				*e*S	Sn	13 34 35.1	0.0
OCAC	**Ocana**	**1.44**	**352**	*e*P	Pn	13 34 14.2	-0.2
OCAC				*e*S	Sn	13 34 35.8	-0.8
OCAC				*i*		13 34 41.1	
	comp=Z,157nm,0.2s						
SPBC	**San Pablo de B**	**1.49**	**220**	*e*P	Pn	13 34 14.2	-0.7
SPBC				*e*S	Sn	13 34 36.8	-0.6
SPBC				*i*		13 34 43.4	
	comp=Z,189nm,0.4s						
ZARC	**Zaragoza, Cauc**	**1.85**	**292**	*e*P	Pn	13 34 17.9	-0.9
ZARC				*e*S	Sn	13 34 43.4	-1.0
ZARC				*i*		13 34 49.6	
	comp=Z,120nm,0.2s						
NORC	**Norcasia**	**2.13**	**235**	*e*P	Pn	13 34 21.3	-0.8
NORC				*e*S	Sn	13 34 49.5	-0.8
NORC				*i*		13 34 56.3	
	comp=Z,77nm,0.3s						
SMLC	**San Martn de**	**2.19**	**335**	*e*P	Pn	13 34 22.2	-0.6
SMLC				*e*S	Sn	13 34 51.5	0.0
SMLC				*i*		13 34 53.0	
	comp=Z,63nm,0.2s						
ROSC	**El Rosal**	**2.29**	**211**	*e*P	Pn	13 34 24.8	+0.5
ROSC				*e*S	Sn	13 34 55.0	+0.7
ROSC				*i*		13 34 59.6	
	comp=Z,96nm,0.4s						
HELC	**Santa Helena**	**2.47**	**256**	*e*P	Pn	13 34 27.1	+0.6
HELC				*e*S	Sn	13 34 58.2	+0.2
HELC				*i*		13 35 03.9	
	comp=Z,48nm,0.4s						
UREC	**San Jos de Ur**	**2.57**	**292**	*e*S	Sn	13 34 55.1	-4.6
SOCV	**Socops**	**2.68**	**57**	*e*P	Pn	13 34 26.7	-2.0
SOCV				*e*S	Sn	13 34 59.0	-3.1
GUY2C	**Guyana, Caldas**	**2.73**	**235**	*e*P	Pn	13 34 30.4	+0.6
GUY2C				*e*S	Sn	13 35 07.6	+3.6
GUY2C				*i*		13 35 12.1	
	comp=Z,78nm,0.8s						
VILC	**Villavicencio,**	**2.74**	**192**	*e*P	Pn	13 34 28.5	-1.1
VILC				*e*S	Sn	13 35 03.0	-0.7
PTGC	**Puerto Gaitan,**	**2.77**	**159**	*e*P	Pn	13 34 28.1	-1.8
PTGC				*e*S	Sn	13 35 01.9	-2.3
PTGC				*i*		13 35 06.2	
	comp=Z,28nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.91**	**357**	*e*P	Pn	13 34 31.0	-0.7
LL6C				*e*S	Sn	13 35 06.7	-0.7
CBOC	**Ciudad Bolivar**	**3.02**	**252**	*e*P	Pn	13 34 33.2	0.0
CBOC				*e*S	Sn	13 35 10.2	+0.1
CBOC				*i*		13 35 20.9	
	comp=Z,13nm,0.5s						
MOTC	**Monteria, Cord**	**3.19**	**308**	*e*S	Sn	13 35 11.1	-2.7
SDV	**Santo Domingo**	**3.21**	**50**	*e*P	Pn	13 34 34.3	-1.3
SDV				*e*S	Sn	13 35 10.9	-3.6
SDV				*i*		13 35 14.0	
	comp=Z,12nm,0.3s						
ARGC	**Ariguani, Magd**	**3.23**	**340**	*e*P	Pn	13 34 35.4	-0.3
ARGC				*e*S	Sn	13 35 13.7	-0.9
ARGC				*i*		13 35 18.1	
	comp=Z,13nm,0.2s						
ANIL	**Santa Ana**	**3.23**	**225**	*e*P	Pn	13 34 37.5	+1.5
ANIL				*e*S	Sn	13 35 15.8	+0.7
PRAC	**Prado**	**3.54**	**210**	*e*P	Pn	13 34 38.7	-1.1
PRAC				*e*S	Sn	13 35 21.4	-0.5
PRAC				*i*		13 35 26.9	
	comp=Z,45nm,0.4s						
ORTC	**Ortega, Tolima**	**3.58**	**216**	*e*P	Pn	13 34 39.5	-0.7
ORTC				*e*S	Sn	13 35 22.6	-0.1
ORTC				*i*		13 35 26.9	
	comp=Z,26nm,0.3s						
PLMC	**San Jos del P**	**3.67**	**239**	*e*P	Pn	13 34 40.8	-0.7
PLMC				*e*S	Sn	13 35 23.5	-1.3
PLMC				*i*		13 35 29.7	
	comp=Z,15nm,0.5s						
SJCC	**San Jacinto, C**	**3.68**	**327**	*e*P	Pn	13 34 39.2	-2.3
SJCC				*e*S	Sn	13 35 20.2	-5.0
SJCC				*i*		13 35 33.1	
	comp=Z,12nm,0.3s						
CRJC	**Cerrejon, Guaj**	**4.19**	**3**	*e*P	Pn	13 34 45.5	-2.8
CRJC				*e*S	Sn	13 35 33.3	-3.9
CRJC				*i*		13 35 38.8	
	comp=Z,21nm,0.1s						

KRNET ***09*** *13:36:02.8±0.1, 41°.79N×77°.25E, h16^{km}, mb3.7*
SOME ***09*** *13:36:03.0, 41°.80N×77°.23E, h15^{km}*
NNC ***09*** *13:36:04.7±0.6, 41°.89N×77°.26E, h0^{km}, mb4.0, mpv3.9, Error ellipse: s-maj=4.1km s-min=2.6km az=176.0*
KNET ***09*** *13:36:05.4±0.5, 41°.88N×77°.11E, h10^{km}±3^{km}, ml2.9, Error ellipse: s-maj=5.9km s-min=3.4km az=26.0*
ISC 09 13:36:03.3±1.1**, 41°.84N**±0°.03×**77°.27E**±0°.02**, h6**^{km}±9^{km}**, n85, σ0^{s}.92**/152**, 32C-22D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**0.30**	**347**	⇑*i*P	**Pg**	**13 36 09.3**	**+0.1**
	baz=53						
KDJ				⇑*i*S	**Sg**	**13 36 14.5**	**+1.3**
	baz=53						
TARG	**Taragay, Kyrgy**	**0.42**	**105**	*i* P	**Pg**	**13 36 10.8**	**-0.7**
	baz=99						
TARG				*i* S	**Sg**	**13 36 16.7**	**-0.3**
	baz=99						
ULHL	**Ulahol**	**0.86**	**298**	⇑P	**Pg**	**13 36 19.4**	**-0.6**
	27nm,0.1s						
ULHL				⇓S	**Sg**	**13 36 31.5**	**+0.3**
	129nm,0.1s						
ULHL	**Ulahol**	**0.86**	**298**	⇑*i*P	**Pg**	**13 36 19.4**	**-0.6**
	baz=1.0						
ULHL				⇑*i*S	**Sg**	**13 36 31.3**	**+0.1**
	baz=1.0						
ANVS	**Anan'yevo**	**0.99**	**17**	⇓*i*P	**Pb**	**13 36 22.6**	**-0.4**
	baz=17						
ANVS				⇓*i*S	**Sn**	**13 36 36.8**	**-1.5**
	baz=17						
PRZ	**Przheval'sk**	**1.06**	**52**	⇑*i*P	**Pb**	**13 36 23.6**	**-0.6**
	baz=50						
PRZ				⇑*i*S	**Sn**	**13 36 39.2**	**-0.9**
	baz=50						
BOOM	**Boomskoye usch**	**1.18**	**304**	⇓*i*P	**Pb**	**13 36 25.0**	**-1.3**
	baz=6.0						
BOOM				⇓*i*S	**Sb**	**13 36 41.5**	**-0.4**
	baz=6.0						
TNSS	**Tian-Shan**	**1.22**	**349**	*e*P	**Pb**	**13 36 26.4**	**-0.7**
	95nm,0.2s						
TNSS				*e*S	**Sn**	**13 36 43.2**	**-1.1**
	67nm,0.2s						
TNSS	**Tian-Shan**	**1.22**	**349**	P	**Pb**	**13 36 26.4**	**-0.7**
	95nm,0.2s						
TNSS				S	**Sn**	**13 36 43.2**	**-1.1**
	67nm,0.2s						
TNSS	**Tian-Shan**	**1.22**	**349**	*e*P	**Pb**	**13 36 26.4**	**-0.7**
	baz=50						
TNSS				*e*S	**Sn**	**13 36 43.2**	**-1.1**
	baz=50						
MDOK	**Medeo**	**1.33**	**353**	*e*P	**Pn**	**13 36 28.4**	**-0.2**
	45nm,0.2s						
MDOK				*e*S	**Sg**	**13 36 46.5**	**+0.3**
	114nm,0.5s						
MDOK	**Medeo**	**1.33**	**353**	⇓P	**Pn**	**13 36 28.2**	**-0.5**
	28nm,0.5s						
MDOK				⇓S	**Sg**	**13 36 46.4**	**+0.3**
	73nm,0.5s						
MDOK	**Medeo**	**1.33**	**353**	Pg	**Pn**	**13 36 28.4**	**-0.2**
	45nm,0.2s						
MDOK				Lg	Lg	13 36 46.5	
	114nm,0.5s						
MDOK	**Medeo**	**1.33**	**353**	*e*P	**Pn**	**13 36 28.4**	**-0.2**
	baz=54						
MDOK				*e*S	**Sg**	**13 36 46.4**	**+0.3**
	baz=54						
AAA	**Alma-Ata**	**1.39**	**349**	*e*P	**Pb**	**13 36 30.2**	**+0.4**
	128nm,0.2s						
AAA				*e*S	**Sg**	**13 36 49.2**	**+1.1**
	227nm,0.2s						
AAA	**Alma-Ata**	**1.39**	**349**	P	**Pb**	**13 36 30.2**	**+0.4**
	128nm,0.2s						
AAA				S	**Sg**	**13 36 49.2**	**+1.1**
	227nm,0.2s						
AAA	**Alma-Ata**	**1.39**	**349**	*e*P	**Pb**	**13 36 30.2**	**+0.4**
	baz=50						
AAA				*e*S	**Sg**	**13 36 49.2**	**+1.1**
	baz=50						
KNDC	**Almaty**	**1.39**	**351**	⇓P	**Pb**	**13 36 30.0**	**+0.2**
	71nm,0.5s						
KNDC				⇑S	**Sg**	**13 36 49.5**	**+1.3**
	175nm,0.4s						
KOTS	**Kotyrbulak**	**1.40**	**355**	*e*P	**Pb**	**13 36 29.9**	**-0.1**
	63nm,0.2s						
KOTS				*e*S	**Sg**	**13 36 49.1**	**+0.9**
	274nm,0.2s						
KOTS	**Kotyrbulak**	**1.40**	**355**	P	**Pb**	**13 36 29.9**	**-0.1**
	63nm,0.2s						
KOTS				S	**Sg**	**13 36 49.1**	**+0.9**
	274nm,0.2s						
KOTS	**Kotyrbulak**	**1.40**	**355**	*e*P	**Pb**	**13 36 29.9**	**-0.1**
	baz=56						
KOTS				*e*S	**Sg**	**13 36 49.2**	**+0.9**
	baz=56						
MTBS	**Maitube**	**1.43**	**335**	*e*P	**Pb**	**13 36 30.1**	**-0.4**
	60nm,0.2s						
MTBS				*e*S	**Sg**	**13 36 49.2**	**-0.1**
	117nm,0.2s						
MTBS	**Maitube**	**1.43**	**335**	P	**Pb**	**13 36 30.1**	**-0.4**
	60nm,0.2s						
MTBS				S	**Sg**	**13 36 49.2**	**-0.1**
	117nm,0.2s						
MTBS	**Maitube**	**1.43**	**335**	*e*P	**Pb**	**13 36 30.1**	**-0.4**
	baz=36						
MTBS				*e*S	**Sg**	**13 36 49.2**	**-0.1**
	baz=36						
SATY	**Saty**	**1.48**	**34**	*e*P	**Pb**	**13 36 31.3**	**0.0**
	21nm,0.1s						
SATY				*e*S	**Sg**	**13 36 51.4**	**+0.5**
	220nm,0.1s						
SATY	**Saty**	**1.48**	**34**	P	**Pb**	**13 36 31.3**	**0.0**
	21nm,0.1s						
SATY				S	**Sg**	**13 36 51.4**	**+0.5**
	220nm,0.1s						
SATY	**Saty**	**1.48**	**34**	*e*P	**Pb**	**13 36 31.3**	**0.0**
	baz=34						
SATY				*e*S	**Sg**	**13 36 51.4**	**+0.5**
	baz=34						
KST	**Kastek**	**1.54**	**322**	*e*P	**Pb**	**13 36 32.0**	**-0.4**
	113nm,0.2s						
KST				*e*S	**Sg**	**13 36 52.8**	**-0.1**
	70nm,0.2s						
KST	**Kastek**	**1.54**	**322**	P	**Pb**	**13 36 32.0**	**-0.4**
	113nm,0.2s						
KST				S	**Sg**	**13 36 52.8**	**-0.1**
	70nm,0.2s						
KST	**Kastek**	**1.54**	**322**	*e*P	**Pb**	**13 36 32.0**	**-0.4**
	baz=23						
KST				*e*S	**Sg**	**13 36 52.8**	**-0.1**
	baz=23						
ZHN	**Zhinishke**	**1.58**	**33**	*e*P	**Pb**	**13 36 33.1**	**0.0**
	37nm,0.2s						
ZHN				*e*S	**Sg**	**13 36 54.6**	**+0.4**
	344nm,0.2s						
ZHN	**Zhinishke**	**1.58**	**33**	P	**Pb**	**13 36 33.1**	**0.0**
	37nm,0.2s						
ZHN				S	**Sg**	**13 36 54.6**	**+0.4**
	344nm,0.2s						
ZHN	**Zhinishke**	**1.58**	**33**	*e*P	**Pb**	**13 36 33.1**	**0.0**
	baz=32						
ZHN				*e*S	**Sg**	**13 36 54.6**	**+0.4**
	baz=32						
TKM2	**Tokmak 2**	**1.64**	**312**	⇓P	**Pb**	**13 36 33.7**	**-0.5**
	25nm,0.1s,SNR=35						
TKM2				⇑S	**Sg**	**13 36 56.3**	**+0.2**
	95nm,0.1s						
TKM2	**Tokmak 2**	**1.64**	**312**	⇓P	**Pb**	**13 36 33.6**	**-0.6**
	8.1nm,0.3s						
TKM2				⇓S	**Sg**	**13 36 56.0**	**-0.2**
	60nm,0.5s						
TKM2	**Tokmak 2**	**1.64**	**312**	⇓*i*P	**Pn**	**13 36 33.4**	**+0.4**
	baz=13						
TKM2				⇓*i*S	**Sg**	**13 36 56.1**	**-0.1**
	baz=13						
KURS	**Kuram**	**1.77**	**22**	*e*P	**Pb**	**13 36 36.5**	**+0.2**
	7.0nm,0.2s						
KURS				*e*S	**Sg**	**13 37 00.1**	**-0.3**
	37nm,0.3s						
KURS	**Kuram**	**1.77**	**22**	P	**Pb**	**13 36 36.5**	**+0.2**
	7.0nm,0.2s						
KURS				S	**Sg**	**13 37 00.1**	**-0.3**
	37nm,0.3s						
KURS	**Kuram**	**1.77**	**22**	*e*P	**Pb**	**13 36 36.5**	**+0.2**
	baz=21						
KURS				*e*S	**Sg**	**13 37 00.1**	**-0.3**
	baz=21						
DGS	**Degeres**	**1.78**	**322**	*e*P	**Pb**	**13 36 36.4**	**-0.1**
	53nm,0.2s						
DGS				*e*S	**Sg**	**13 37 00.4**	**-0.2**
	83nm,0.3s						
DGS	**Degeres**	**1.78**	**322**	P	**Pb**	**13 36 36.4**	**-0.1**
	53nm,0.2s						
DGS				S	**Sg**	**13 37 00.4**	**-0.2**
	83nm,0.3s						
DGS	**Degeres**	**1.78**	**322**	*e*P	**Pb**	**13 36 36.4**	**-0.1**
	baz=23						
DGS				*e*S	**Sg**	**13 37 00.4**	**-0.2**
	baz=23						
UZB	**Uzynbulak**	**1.84**	**44**	*e*P	**Pb**	**13 36 37.3**	**-0.2**
	45nm,0.2s						
UZB				*e*S	**Sg**	**13 37 02.1**	**-0.4**
	180nm,0.5s						
UZB	**Uzynbulak**	**1.84**	**44**	P	**Pb**	**13 36 37.3**	**-0.2**
	45nm,0.2s						
UZB				S	**Sg**	**13 37 02.1**	**-0.4**
	180nm,0.5s						
UZB	**Uzynbulak**	**1.84**	**44**	*e*P	**Pb**	**13 36 37.3**	**-0.2**
	baz=43						
UZB				*e*S	**Sg**	**13 37 02.0**	**-0.4**
	baz=43						
KBK	**Karagaybulak**	**1.91**	**296**	⇑P	**Pb**	**13 36 38.6**	**0.0**
	15nm,0.1s,SNR=38						
KBK				⇑S	**Sg**	**13 37 04.3**	**-0.2**
	63nm,0.2s						
KBK	**Karagaybulak**	**1.91**	**296**	⇑*i*P	**Pb**	**13 36 37.7**	**-0.9**
	baz=98						
KBK				⇑*i*S	**Sb**	**13 37 03.3**	**+0.5**
	baz=98						
KTBS	**Karatobe**	**1.92**	**347**	*e*P	**Pb**	**13 36 39.0**	**+0.2**
	52nm,0.2s						
KTBS				*e*S	**Sg**	**13 37 04.5**	**-0.5**
	122nm,0.4s						
KTBS	**Karatobe**	**1.92**	**347**	Pg	**Pb**	**13 36 39.0**	**+0.2**
	52nm,0.2s						
KTBS				Lg	Lg	13 37 04.5	
	122nm,0.4s						
UCH	**Uchtor**	**2.09**	**282**	⇑P	**Pb**	**13 36 41.8**	**-0.1**
	12nm,0.3s,SNR=12						
UCH				⇓S	**Sb**	**13 37 09.5**	**+1.2**
	26nm,0.2s						
UCH	**Uchtor**	**2.09**	**282**	⇓*i*P	**Pn**	**13 36 40.0**	**+0.7**
	baz=83						
UCH				⇓*i*S	**Sb**	**13 37 07.5**	**-0.8**
	baz=83						
KUU	**Kurty**	**2.16**	**342**	*e*P	**Pb**	**13 36 42.8**	**-0.1**
	48nm,0.3s						
KUU				*e*S	**Sg**	**13 37 11.2**	**-1.6**
	107nm,0.3s						
KUU	**Kurty**	**2.16**	**342**	Pg	**Pb**	**13 36 42.8**	**-0.1**
	48nm,0.3s						
KUU				Lg	Lg	13 37 11.2	
	107nm,0.3s						
FRU1	**Bishkek**	**2.18**	**297**	⇑*i*P	**Pn**	**13 36 41.7**	**+1.4**
	baz=99						
FRU1				⇑*i*S	**Sb**	**13 37 10.1**	**-0.5**
	baz=99						
CHMS	**Chumysh**	**2.19**	**303**	⇓P	**Pb**	**13 36 43.2**	**-0.3**
	28nm,0.3s,SNR=19						
CHMS	**Chumysh**	**2.19**	**303**	⇑*i*P	**Pn**	**13 36 41.6**	**+1.2**
	baz=4.0						
CHMS				⇑*i*S	**Sb**	**13 37 10.1**	**-0.8**
	baz=4.0						
KRBS	**Karabastau**	**2.19**	**328**	*e*P	**Pb**	**13 36 43.6**	**+0.1**
	94nm,0.4s						
KRBS				*e*S	**Sg**	**13 37 12.7**	**-1.1**
	119nm,0.3s						
KRBS	**Karabastau**	**2.19**	**328**	Pg	**Pb**	**13 36 43.6**	**+0.1**
	94nm,0.4s						
KRBS				Lg	Lg	13 37 12.7	
	119nm,0.3s						
AAK	**Ala-Archa**	**2.21**	**292**	⇑P	**Pb**	**13 36 43.5**	**-0.3**
	11nm,0.2s,SNR=19						
AAK				⇑S	**Sb**	**13 37 12.5**	**+1.1**
	36nm,0.2s						
AAK	**Ala-Archa**	**2.21**	**292**	⇑Pn	**Pb**	**13 36 43.5**	**-0.3**
	6.7nm,0.3s						
AAK				⇓Sn	**Sb**	**13 37 12.7**	**+1.3**
	61nm,0.6s						
AAK	**Ala-Archa**	**2.21**	**292**	⇑*e*P	**Pn**	**13 36 41.6**	**+0.9**
	baz=93						
AAK				⇑*i*S	**Sb**	**13 37 10.2**	**-1.2**
	baz=93						
PDGK	**Podgornoye**	**2.21**	**47**	Pg	**Pb**	**13 36 43.9**	**0.0**
	17nm,0.3s						
PDGK				Lg	Lg	13 37 13.3	
	94nm,0.6s						
PDGK	**Podgornoye**	**2.21**	**47**	⇑Pn	**Pb**	**13 36 43.0**	**-0.8**
	18nm,0.5s						
PDGK				⇑Sn	**Sg**	**13 37 13.3**	**-1.1**
	151nm,0.5s						
ARXS	**Arharly**	**2.41**	**10**	*e*P	**Pb**	**13 36 47.4**	**+0.3**
	14nm,0.2s						
ARXS				*e*S	**Sg**	**13 37 19.2**	**-1.4**
	251nm,0.4s						
ARXS	**Arharly**	**2.41**	**10**	Pg	**Pb**	**13 36 47.4**	**+0.3**
	14nm,0.2s						
ARXS				Lg	Lg	13 37 19.2	
	251nm,0.4s						
BLB	**Baldybastay**	**2.42**	**21**	Pg	**Pb**	**13 36 47.3**	**-0.2**
	32nm,0.2s						
BLB				Lg	Lg	13 37 18.9	
	497nm,0.3s						
USP	**Ospenovka**	**2.49**	**306**	⇑P	**Pb**	**13 36 48.0**	**-0.6**
	27nm,0.3s,SNR=27						
USP	**Ospenovka**	**2.49**	**306**	⇓*i*P	**Pn**	**13 36 45.8**	**+1.3**
	baz=7.0						
USP				⇓*i*S	**Sb**	**13 37 17.4**	**-2.1**
	baz=7.0						
AML	**Almayashu**	**2.68**	**277**	⇑*e*P	**Pn**	**13 36 48.4**	**+1.0**
	baz=78						
AML				⇑*i*S	**Sn**	**13 37 21.7**	**+1.3**
	baz=78						
EKS2	**Erkin-Say**	**2.72**	**289**	⇑*i*P	**Pn**	**13 36 48.8**	**+1.1**
	baz=90						
EKS2				⇑*i*S	**Sn**	**13 37 22.4**	**+1.5**
	baz=90						
KTMS	**Ketmen**	**2.78**	**54**	*e*P	**Pb**	**13 36 53.7**	**+0.1**
	18nm,0.3s						
KTMS				*e*S	**Sb**	**13 37 30.0**	**+2.1**
	46nm,0.2s						
KTMS	**Ketmen**	**2.78**	**54**	Pg	**Pb**	**13 36 53.7**	**+0.1**
	18nm,0.3s						
KTMS				Lg	Lg	13 37 30.0	
	46nm,0.2s						
DJR	**Jarkent**	**3.10**	**36**	*e*P	**Pb**	**13 36 59.1**	**+0.2**
	5.8nm,0.2s						
DJR				*e*S	**Sb**	**13 37 39.3**	**+2.3**
	58nm,0.4s						
DJR	**Jarkent**	**3.10**	**36**	Pg	**Pb**	**13 36 59.1**	**+0.2**
	5.8nm,0.2s						
DJR				Lg	Lg	13 37 39.3	
	58nm,0.4s						
MRKS	**Merke**	**3.13**	**288**	*e*P	**Pb**	**13 37 00.4**	**+1.0**
	8.2nm,0.3s						
MRKS				*e*S	**Sg**	**13 37 42.0**	**-1.9**
	43nm,0.4s						
MRKS	**Merke**	**3.13**	**288**	Pg	**Pb**	**13 37 00.4**	**+1.0**
	8.2nm,0.3s						
MRKS				Lg	Lg	13 37 42.0	
	43nm,0.4s						
TDK	**Taldyqorghan**	**3.27**	**14**	*e*P	**Pb**	**13 37 02.5**	**+0.8**
	25nm,0.2s						
TDK				*e*S	**Sg**	**13 37 45.1**	**-3.1**
	111nm,0.3s						
TDK	**Taldyqorghan**	**3.27**	**14**	Pg	**Pb**	**13 37 02.5**	**+0.8**
	25nm,0.2s						
TDK				Lg	Lg	13 37 45.1	
	111nm,0.3s						
SFK	**Sufi-Kurgan**	**3.39**	**239**	⇓*e*P	**Pn**	**13 36 57.1**	**+0.1**
	baz=39						
SFK				⇓*e*S	**Sn**	**13 37 37.2**	**-0.4**
	baz=39						
KAPS	**Kapalarasan**	**3.76**	**23**	*e*P	**Pb**	**13 37 11.3**	**+1.1**
	2.0nm,0.3s						
KAPS				*e*S	**Sg**	**13 38 00.3**	**-3.8**
	29nm,0.3s						
KAPS	**Kapalarasan**	**3.76**	**23**	Pg	**Pb**	**13 37 11.3**	**+1.1**
	2.0nm,0.3s						
KAPS				Lg	Lg	13 38 00.3	
	29nm,0.3s						
BTLS	**Baital**	**3.97**	**325**	*e*P	**Pb**	**13 37 15.7**	**+2.0**
	5.7nm,0.4s						
BTLS				*e*S	**Sg**	**13 38 07.5**	**-3.2**
	2.9nm,0.4s						
BTLS	**Baital**	**3.97**	**325**	Pg	**Pb**	**13 37 15.7**	**+2.0**
	5.7nm,0.4s						
BTLS				Lg	Lg	13 38 07.5	
	2.9nm,0.4s						
KK08	**Karatay Array**	**5.17**	**286**	⇑Lg	Lg	13 38 45.2	
	5.1nm,0.6s						
MK31	**Makanchi Array**	**6.12**	**34**	Pn	**Pn**	**13 37 35.1**	**+0.8**
	0.2nm,0.3s,baz=213,slow=15,SNR=11						
MK31				⇑Lg	Lg	13 39 12.8	
	3.3nm,0.7s,baz=218,slow=28,SNR=4.5						

IDC ***09*** *13:37:13.4±1.5, 4°.07S×129°.65E, h0^{km}, mb4.2/3, mb1 4.3/7, mb1mx3.6/64, mbtmp4.2/7, ML3.7/3, MS4.6/1, Ms1 4.6/1, ms1mx3.5/47, Error ellipse: s-maj=40.2km s-min=22.2km az=101.0*
DJA ***09*** *13:37:15.9±1.1, 4°S±12°×13°0E±°, h10^{km}, M3.8/6, MLv3.8/6*
ISC 09 13:37:18.6±0.9**, 4°.07S**±0°.08×**129°.55E**±0°.09**, h36**^{km}**, n12, σ1^{s}.03**/13**, mb4.3**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.95**	**319**	P	**Pn**	**13 37 33.9**	**-1.6**
AAI	**Ambon**	**1.41**	**286**	P	**Pn**	**13 37 39.9**	**-1.8**
FAKI	**Fak Fak**	**2.92**	**67**	P	**Pn**	**13 38 03.0**	**+0.4**
SIJI	**Sorong**	**3.61**	**28**	Pn	**Pn**	**13 38 11.9**	**-0.2**
	10nm,0.3s,baz=40,slow=14,SNR=13						
SIJI				Sn	**Sn**	**13 38 52.5**	**-1.1**
	7.8nm,0.3s,baz=219,slow=23,SNR=1.9						
SWI	**Sorong**	**3.62**	**28**	P	**Pn**	**13 38 12.1**	**0.0**
SANI	**Sanana**	**4.09**	**299**	P	**Pn**	**13 38 19.4**	**+0.8**
BATI	**Baumata**	**8.44**	**223**	Pn	**Pn**	**13 39 18.4**	**-0.1**
	2.6nm,0.3s,baz=116,slow=16,SNR=2.7						
BATI				LR	LR	13 43 08.0	
	comp=Z,4μm,18.2s,baz=159,slow=42						
FITZ	**Fitzroy Crossi**	**14.46**	**195**	Pn	**Pn**	**13 40 40.5**	**-0.2**
	0.1nm,0.3s,baz=242,slow=8.5,SNR=1.3						
ASAR	**Alice Springs**	**19.93**	**168**	P	**P**	**13 41 46.5**	**-0.9**
	baz=346,slow=9.4,SNR=1.9						
CMAR	**Chiang Mai Arr**	**37.56**	**308**	P	**P**	**13 44 31.1**	**+1.4**
	0.8nm,0.5s,baz=135,slow=7.6,SNR=6.8						
MKAR	**Makanchi Array**	**65.55**	**326**	P	**P**	**13 47 58.9**	**+0.3**
	1.7nm,0.6s,baz=119,slow=8.7,SNR=9.6						
KURBB	**Kurchatov Arra**	**69.80**	**328**	P	**P**	**13 48 25.4**	**+0.1**
	2.4nm,0.7s,baz=131,slow=5.6,SNR=9.9						

EAF ***09*** *13:38:49.0±0.7, 26°.68S×29°.27E, h13^{km}±11^{km}, MD4.2*
BUL 09 13:38:49.6±1.5**, 26°.67S×29°.28E, h13**^{km}±27^{km}**, MD4.5, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNG	**Changalane**	**2.64**	**82**	*i* P	Pn	13 39 30.9	-1.0
CNG				*i* Sg	Sb	13 40 11.4	+2.4
CNG	**Changalane**	**2.64**	**82**	*i* P	Pn	13 39 30.9	-1.0
CNG				*i* Sg	Sb	13 40 11.4	+2.4
MOPA	**Mopani**	**3.68**	**32**	*i* P	Pn	13 39 45.4	-0.9
MOPA	**Mopani**	**3.68**	**32**	*i* P	Pn	13 39 45.4	-0.9
MSNA	**Messina**	**4.36**	**9**	*i* P	Pn	13 39 55.0	-0.6
MSNA	**Messina**	**4.36**	**9**	*i* P	Pn	13 39 55.0	-0.6
MATP	**Matopo**	**6.25**	**353**	*i* S	Sn	13 41 26.9	-6.3
MATP	**Matopo**	**6.25**	**353**	*i* S	Sn	13 41 26.9	-6.3
BLWY	**Bulawayo**	**6.53**	**354**	*i* P	Pn	13 40 24.6	-0.9
BLWY				*i* S	Sn	13 41 33.8	-6.1
BLWY	**Bulawayo**	**6.53**	**354**	*i* P	Pn	13 40 24.6	-0.9

BLWY				*i* S	Sn	13 41 33.8	-6.1

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*TAP **09** 13:45:12.6, 24°76N×122°32E, h7^{km}±1^{km}, ML2.9, C*
*JMA **09** 13:45:13.2±0.1, 24°84N×122°33E, h42^{km}±3^{km}, M2.4*
ISC 09 13:45:13.4±1.1**, 24°79N**±0°03×**122°33E**±0°02**, h19**^{km}±3^{km}**, n36,** σ**0^{s}71**/67**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		**0.36**	**279**	*e*P	**Pg**	**13 45 21.1**	**0.0**
	baz=283						
TWB1	**Santiao Chiao**	**0.38**	**306**	*i* P	**Pg**	**13 45 20.9**	**-0.5**
	baz=309						
TWB1				*e*S	**Sg**	**13 45 25.7**	**-1.0**
	baz=309						
NTC	**Toucheng**	**0.46**	**279**	*i* P	**Pg**	**13 45 22.4**	**-0.4**
	baz=281						
NTC				S	**Sb**	**13 45 29.7**	**+0.3**
	baz=281						
TWC	**Suao**	**0.47**	**248**	*i* P	**Pg**	**13 45 22.2**	**-0.7**
	baz=249						
TWC				*e*S	**Sb**	**13 45 31.4**	**+1.7**
	baz=249						
TIPB	**Shuangxi**	**0.49**	**292**	*i* P	**Pg**	**13 45 23.3**	**-0.1**
	baz=294						
TIPB				*i* S	**Sb**	**13 45 31.9**	**+1.5**
	baz=294						
ILA	**Ilan**	**0.53**	**268**	S	**Sb**	**13 45 32.1**	**+0.9**
	baz=270						
NWF	**Wu-fen Shan**	**0.57**	**300**	*e*P	**Pn**	**13 45 26.0**	**-0.6**
	baz=302						
NWF				S	**Sn**	**13 45 34.3**	**-1.3**
	baz=302						
NDS	**Dongshan**	**0.58**	**255**	P	**Pb**	**13 45 24.2**	**-0.6**
	baz=256						
NDS				*e*S	**Sb**	**13 45 32.0**	**-0.6**
	baz=256						
EWUT	**Wuta**	**0.60**	**236**	P	**Pb**	**13 45 25.2**	**-0.1**
	baz=237						
EWUT				S	**Sg**	**13 45 34.2**	**+0.7**
	baz=237						
TWE	**Neicheng**	**0.60**	**264**	*i* P	**Pb**	**13 45 24.7**	**-0.6**
	baz=265						
TWE				*e*S	**Sn**	**13 45 35.2**	**-1.0**
	baz=265						
ENA	**Nanau**	**0.64**	**236**	P	**Pb**	**13 45 25.6**	**-0.4**
	baz=237						
ENA				S	**Sg**	**13 45 35.3**	**+0.6**
	baz=237						
JYNG	**Yonagunijimaku**	**0.65**	**120**	P	**Pb**	**13 45 26.4**	**+0.2**
JYNG				S	**Sg**	**13 45 35.9**	**+0.8**
YOJ	**Yonaguni jima**	**0.70**	**117**	P	**Pg**	**13 45 27.3**	**+0.1**
	baz=115						
YOJ				S	**Sg**	**13 45 37.1**	**+0.5**
	baz=115						
YOJ	**Yonaguni jima**	**0.70**	**117**	P	**Pb**	**13 45 27.1**	**+0.1**
YOJ				*e*S	**Sg**	**13 45 37.2**	**+0.6**
ENTT	**Nioudou**	**0.71**	**258**	P	**Pb**	**13 45 27.0**	**-0.1**
	baz=259						
ENTT				S	**Sg**	**13 45 37.7**	**+1.0**
	baz=259						
NWLT	**Wulai**	**0.75**	**270**	P	**Pb**	**13 45 27.4**	**-0.5**
	baz=271						
NWLT				*e*S	**Sb**	**13 45 36.3**	**-1.4**
	baz=271						
NDT	**Datong Townshi**	**0.76**	**256**	*i* P	**Pb**	**13 45 28.1**	**+0.1**
	baz=257						
NDT				S	**Sg**	**13 45 38.9**	**+0.3**
	baz=257						
YM01	**YM01**	**0.78**	**298**	P	**Pg**	**13 45 29.1**	**+0.5**
	baz=299						
YM01				S	**Sg**	**13 45 39.7**	**+0.8**
	baz=299						
TWY	**Chenhua**	**0.82**	**307**	*e*P	**Pn**	**13 45 30.8**	**+0.8**
	baz=308						
TWY				S	**Sn**	**13 45 41.4**	**-0.2**
	baz=308						
PCYT	**Pengchaiyu**	**0.87**	**345**	P	**Pg**	**13 45 30.6**	**+0.2**
	baz=345						
YHNB	**Yeheng**	**0.87**	**263**	P	**Pb**	**13 45 30.2**	**+0.2**
	baz=263						
YHNB				S	**Sn**	**13 45 42.9**	**-0.2**
	baz=263						
NSK	**Sanguang**	**0.89**	**263**	P	**Pb**	**13 45 30.3**	**+0.1**
	baz=264						
NSK				S	**Sn**	**13 45 43.2**	**-0.2**
	baz=264						
ETL	**Fush Village**	**0.90**	**226**	P	**Pb**	**13 45 29.8**	**-0.6**
	baz=226						
ETL				*e*S	**Sb**	**13 45 41.3**	**-0.6**
	baz=226						
NACB	**Ninganchiao**	**0.90**	**228**	P	**Pb**	**13 45 30.6**	**+0.1**
	baz=228						
NACB				*e*S	**Sb**	**13 45 41.8**	**-0.3**
	baz=228						
NNSB	**Datong**	**0.93**	**248**	P	**Pb**	**13 45 31.2**	**+0.2**
	baz=248						
NNSB				S	**Sg**	**13 45 43.6**	**-0.2**
	baz=248						
NNS	**Nan Shan**	**0.93**	**249**	*i* P	**Pb**	**13 45 31.2**	**+0.2**
	baz=249						
NNS				S	**Sg**	**13 45 44.1**	**+0.1**
	baz=249						
ETLH	**Xiulin Townshi**	**0.96**	**233**	P	**Pb**	**13 45 31.6**	**0.0**
	baz=234						
ETLH				S	**Sg**	**13 45 44.7**	**-0.1**
	baz=234						
TWD	**Chiawan**	**0.97**	**224**	*i* P	**Pb**	**13 45 31.8**	**+0.2**
	baz=223						
TWD				S	**Sn**	**13 45 45.3**	**+0.1**
	baz=223						
FUSS	**Fushou**	**1.12**	**242**	P	**Pg**	**13 45 35.0**	**-0.2**
	baz=242						
FUSS				S	**Sb**	**13 45 49.0**	**+0.3**
	baz=242						
WHF	**Hehuan Shan**	**1.16**	**237**	*i* P	**Pb**	**13 45 35.5**	**+0.4**
	baz=237						
WHF				*e*S	**Sb**	**13 45 49.6**	**-0.3**
	baz=237						
LIOB	**Emei**	**1.20**	**264**	*e*P	**Pg**	**13 45 37.7**	**+1.0**
	baz=264						
LIOB				*e*S	**Sg**	**13 45 54.4**	**+2.0**
	baz=264						
NSTT	**Nanjuang**	**1.22**	**263**	*e*P	**Pg**	**13 45 38.4**	**+1.5**
	baz=263						
NSTT				S	**Sg**	**13 45 53.0**	**+0.2**
	baz=263						
IRIF	**Iriomote-Funau**	**1.35**	**109**	*e*S	**Sn**	**13 45 53.6**	**-1.2**
JKRS	**Kuro-shima**	**1.63**	**109**	P	**Pn**	**13 45 40.7**	**-0.4**
JKRS				*e*S	**Sn**	**13 46 01.4**	**-0.1**
JIJ	**Ishigaki jima**	**1.71**	**104**	P	**Pn**	**13 45 41.3**	**-0.9**
JIJ				*e*S	**Sn**	**13 46 04.1**	**+0.6**
JISG	**Ishigakijimahi**	**1.81**	**96**	P	**Pn**	**13 45 43.0**	**-0.7**

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*DJA **09** 13:46:00.3±1.3, 4°S±13°×12°9E±°, h10^{km}, M3.3/6, MLv3.3/6*
*IDC **09** 13:46:05.0±1.7, 4°21S×130°59E, h0^{km}, mb3.4/1, mb1 3.6/4, mb1mx3.2/55, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=79.4km s-min=23.9km az=87.0*
ISC 09 13:46:03.6±1.3**, 4°09S**±0°10×**129°29E**±0°08**, h35**^{km}**, n7,** σ**0^{s}39**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.82**	**334**	P	**Pn**	**13 46 18.6**	**-0.1**
AAI	**Ambon**	**1.17**	**290**	P	**Pn**	**13 46 23.2**	**-0.2**
FAKI	**Fak Fak**	**3.18**	**69**	P	**Pn**	**13 46 50.9**	**-0.2**
SIJI	**Sorong**	**3.76**	**32**	Pn	**Pn**	**13 46 58.8**	**-0.3**
	3.3nm,0.3s,baz=280,slow=23,SNR=6.8						
SIJI				Sn	**Sn**	**13 47 42.7**	**+0.4**
	2.8nm,0.3s,baz=220,slow=23,SNR=2.3						
WRA	**Warramunga Arr**	**16.50**	**163**	Pn	**Pn**	**13 49 52.3**	**-0.2**
	baz=350,slow=12,SNR=5.9						
ASAR	**Alice Springs**	**19.96**	**168**	P	**Pn**	**13 50 35.2**	**+0.5**
	0.2nm,0.3s,baz=343,slow=9.0,SNR=7.1						
MKAR	**Makanchi Array**	**65.42**	**326**	P	P	13 56 55.0	+12
	0.3nm,0.6s,baz=120,slow=8.6,SNR=1.8						

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*TAP **09** 13:46:25.0, 24°79N×122°31E, h10^{km}, ML2.8, C*
*JMA **09** 13:46:26.4±0.1, 24°78N×122°34E, h41^{km}±4^{km}*
ISC 09 13:46:25.3±1.1**, 24°82N**±0°03×**122°37E**±0°02**, h20**^{km}±4^{km}**, n62,** σ**0^{s}42**/119**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.39**	**298**	P	**Pb**	**13 46 33.5**	**-0.1**
	baz=307						
TWB1				S	**Sg**	**13 46 37.9**	**-1.2**
	baz=307						
TIPB	**Shuangxi**	**0.52**	**287**	*e*P	**Pg**	**13 46 36.0**	**+0.2**
	baz=292						
TIPB				*e*S	**Sb**	**13 46 42.7**	**-0.1**
	baz=292						
TWC	**Suao**	**0.52**	**246**	P	**Pb**	**13 46 34.6**	**-1.1**
	baz=246						
NWF	**Wu-fen Shan**	**0.59**	**295**	*e*P	**Pg**	**13 46 37.2**	**+0.1**
	baz=300						
NWF				*e*S	**Sg**	**13 46 45.5**	**+0.4**
	baz=300						
NDS	**Dongshan**	**0.63**	**253**	P	**Pb**	**13 46 36.7**	**-0.8**
	baz=254						
JYNG	**Yonagunijimaku**	**0.64**	**125**	P	**Pn**	**13 46 39.0**	**-0.2**
JYNG				*e*S	**Sn**	**13 46 48.4**	**-0.4**
TWE	**Neicheng**	**0.65**	**261**	*i* P	**Pb**	**13 46 37.2**	**-0.7**
	baz=263						
TWE				*e*S	**Sg**	**13 46 46.7**	**-0.2**
	baz=263						
EWUT	**Wuta**	**0.66**	**235**	P	**Pb**	**13 46 37.5**	**-0.6**
	baz=235						
EWUT				S	**Sb**	**13 46 46.5**	**-0.3**
	baz=235						
YOJ	**Yonaguni jima**	**0.68**	**122**	P	**Pg**	**13 46 39.4**	**+0.6**
	baz=116						
YOJ				S	**Sn**	**13 46 49.5**	**-0.4**
	baz=116						
YOJ	**Yonaguni jima**	**0.68**	**122**	P	**Pn**	**13 46 39.6**	**-0.2**
YOJ				S	**Sn**	**13 46 49.7**	**-0.2**
ENA	**Nanau**	**0.70**	**236**	*i* P	**Pb**	**13 46 38.1**	**-0.7**
	baz=235						
ENA				S	**Sb**	**13 46 47.6**	**-0.4**
	baz=235						
ENTT	**Nioudou**	**0.76**	**256**	P	**Pb**	**13 46 39.3**	**-0.5**
	baz=257						
ENTT				*e*S	**Sb**	**13 46 49.3**	**-0.4**
	baz=257						
NHDH	**Xindian Distri**	**0.78**	**280**	*e*P	**Pb**	**13 46 40.0**	**-0.2**
	baz=283						
NHDH				*e*S	**Sn**	**13 46 51.6**	**-0.7**
	baz=283						
NWLT	**Wulai**	**0.79**	**267**	P	**Pb**	**13 46 40.0**	**-0.4**
	baz=269						
NWLT				*e*S	**Sb**	**13 46 50.7**	**-0.1**
	baz=269						
YM01	**YM01**	**0.80**	**294**	*e*P	**Pn**	**13 46 41.5**	**0.0**
	baz=298						
YM01				*e*S	**Sg**	**13 46 51.5**	**-0.1**
	baz=298						
NDT	**Datong Townshi**	**0.81**	**254**	P	**Pb**	**13 46 40.3**	**-0.4**
	baz=255						
NDT				*e*S	**Sb**	**13 46 51.2**	**-0.1**
	baz=255						
TWY	**Chenhua**	**0.83**	**303**	*e*P	**Pn**	**13 46 42.6**	**+0.7**
	baz=307						
TWY				*e*S	**Sn**	**13 46 53.6**	**-0.1**
	baz=307						
PCYT	**Pengchaiyu**	**0.85**	**341**	*e*P	**Pn**	**13 46 42.6**	**+0.5**
	baz=345						
PCYT				*e*S	**Sn**	**13 46 54.3**	**+0.3**
	baz=345						
NTST	**Danshui**	**0.90**	**292**	*e*P	**Pb**	**13 46 42.2**	**-0.1**
	baz=295						
NTST				*e*S	**Sg**	**13 46 54.8**	**-0.1**
	baz=295						
YHNB	**Yeheng**	**0.92**	**261**	*e*P	**Pb**	**13 46 42.1**	**-0.5**
	baz=262						
YHNB				*e*S	**Sb**	**13 46 54.6**	**+0.1**
	baz=262						
NSK	**Sanguang**	**0.93**	**261**	P	**Pb**	**13 46 42.3**	**-0.6**
	baz=262						
NSK				*e*S	**Sb**	**13 46 54.8**	**-0.1**
	baz=262						
ETL	**Fush Village**	**0.95**	**226**	*e*P	**Pb**	**13 46 42.7**	**-0.4**
	baz=225						
ETL				*e*S	**Sb**	**13 46 55.4**	**+0.1**
	baz=225						
NACB	**Ninganchiao**	**0.96**	**228**	*e*P	**Pb**	**13 46 42.9**	**-0.3**
	baz=227						
NACB				*e*S	**Sb**	**13 46 55.4**	**-0.2**
	baz=227						
NNSB	**Datong**	**0.98**	**247**	P	**Pb**	**13 46 43.3**	**-0.4**
	baz=247						
NNSB				S	**Sb**	**13 46 56.3**	**0.0**
	baz=247						
NNS	**Nan Shan**	**0.99**	**247**	*e*P	**Pb**	**13 46 43.5**	**-0.2**
	baz=247						
NNS				*e*S	**Sn**	**13 46 57.5**	**-0.1**
	baz=247						
ETLH	**Xiulin Townshi**	**1.02**	**233**	P	**Pb**	**13 46 43.9**	**-0.4**
	baz=232						
ETLH				*e*S	**Sb**	**13 46 57.4**	**+0.1**
	baz=232						
TWD	**Chiawan**	**1.02**	**224**	*e*P	**Pb**	**13 46 44.0**	**-0.4**
	baz=222						
TWD				*e*S	**Sb**	**13 46 57.5**	**+0.1**
	baz=222						
FUSS	**Fushou**	**1.18**	**241**	*e*P	**Pb**	**13 46 47.4**	**+0.3**
	baz=241						
FUSS				*e*S	**Sb**	**13 47 01.9**	**-0.1**
	baz=241						
WHF	**Hehuan Shan**	**1.21**	**236**	P	**Pn**	**13 46 47.5**	**0.0**
	baz=236						
WHF				*e*S	**Sb**	**13 47 02.9**	**-0.3**
	baz=236						
TWT	**Tachien**	**1.23**	**243**	*e*P	**Pn**	**13 46 47.6**	**+0.1**
	baz=243						
TWT				*e*S	**Sn**	**13 47 03.9**	**+0.2**
	baz=243						
LIOB	**Emei**	**1.25**	**262**	*e*P	**Pn**	**13 46 47.7**	**+0.1**
	baz=263						
LIOB				*e*S	**Sn**	**13 47 04.0**	**+0.2**
	baz=263						
NSTT	**Nanjuang**	**1.26**	**262**	*e*P	**Pn**	**13 46 48.0**	**+0.1**
	baz=262						
NSTT				*e*S	**Sn**	**13 47 04.3**	**+0.1**
	baz=262						
ESL	**Shilin**	**1.32**	**221**	*e*P	**Pn**	**13 46 48.7**	**+0.1**
	baz=219						
ESL				*e*S	**Sn**	**13 47 05.6**	**-0.1**
	baz=219						
IRIF	**Iriomote-Funau**	**1.33**	**111**	*e*S	**Sn**	**13 47 06.0**	**+0.2**
CHGB	**Renai**	**1.33**	**235**	P	**Pn**	**13 46 49.2**	**+0.3**
	baz=235						
CHGB				*e*S	**Sn**	**13 47 06.1**	**-0.2**
	baz=235						
OWD	**Renai**	**1.39**	**232**	*e*P	**Pn**	**13 46 49.8**	**0.0**
	baz=231						
OWD				*e*S	**Sb**	**13 47 08.3**	**+0.2**
	baz=231						
WHP	**Taichung City**	**1.41**	**248**	*e*P	**Pb**	**13 46 50.4**	**-0.5**
	baz=247						
WHP				*e*S	**Sn**	**13 47 07.9**	**-0.1**
	baz=247						
NSY	**Sanyi**	**1.52**	**255**	*e*P	**Pn**	**13 46 51.5**	**+0.1**
	baz=255						
NSY				*e*S	**Sn**	**13 47 10.8**	**+0.1**
	baz=255						
WCS	**Beigang Elemen**	**1.54**	**240**	*e*P	**Pn**	**13 46 52.1**	**+0.6**
	baz=240						
WCS				*e*S	**Sn**	**13 47 11.0**	**0.0**
	baz=240						
VWDT	**VWDT**	**1.55**	**227**	*e*P	**Pn**	**13 46 51.9**	**+0.2**
	baz=226						
VWDT				*e*S	**Sn**	**13 47 11.4**	**+0.2**
	baz=226						
HGSD	**Ruisui**	**1.58**	**213**	*e*P	**Pn**	**13 46 52.6**	**+0.3**
	baz=212						
HGSD				*e*S	**Sn**	**13 47 12.3**	**+0.1**
	baz=212						
JKRS	**Kuro-shima**	**1.60**	**111**	P	**Pn**	**13 46 53.3**	**+0.8**
EHY	**Hungye**	**1.62**	**216**	*e*P	**Pn**	**13 46 53.1**	**+0.3**
	baz=215						
EHY				*e*S	**Sn**	**13 47 13.4**	**+0.2**
	baz=215						
SMLT	**Sun Moon Lake**	**1.64**	**235**	*e*P	**Pn**	**13 46 53.4**	**+0.4**
	baz=234						
SMLT				*e*S	**Sn**	**13 47 14.0**	**+0.3**
	baz=234						
SSLB	**Suanglung**	**1.66**	**232**	*e*P	**Pn**	**13 46 53.9**	**+0.6**
	baz=231						
SSLB				*e*S	**Sn**	**13 47 14.3**	**+0.3**
	baz=231						
TYC	**Yuchr**	**1.66**	**237**	*e*P	**Pn**	**13 46 53.8**	**+0.5**
	baz=236						
TYC				*e*S	**Sb**	**13 47 14.8**	**-0.8**
	baz=236						
JIJ	**Ishigaki jima**	**1.68**	**106**	P	**Pb**	**13 46 54.8**	**-0.6**
YULB	**Yu-li**	**1.73**	**215**	*e*P	**Pn**	**13 46 54.7**	**+0.4**
	baz=213						
YULB				*e*S	**Sn**	**13 47 16.0**	**+0.2**
	baz=213						
WJS	**Zhushan**	**1.80**	**237**	*e*P	**Pn**	**13 46 55.7**	**+0.5**
	baz=236						
WJS				*e*S	**Sn**	**13 47 17.4**	**-0.1**
	baz=236						
WNT	**Mingjian**	**1.81**	**239**	*e*P	**Pn**	**13 46 55.7**	**+0.4**
	baz=238						
WNT				*e*S	**Sn**	**13 47 17.7**	**+0.1**
	baz=238						
ALS	**Alishan**	**1.94**	**228**	*e*P	**Pn**	**13 46 57.3**	**-0.1**
	baz=227						
ALS				*e*S	**Sn**	**13 47 20.9**	**-0.5**
	baz=227						
CHN5	**Tsauling**	**1.97**	**232**	*e*P	**Pn**	**13 46 58.4**	**+0.7**
	baz=231						
CHN5				*e*S	**Sn**	**13 47 21.9**	**+0.1**
	baz=231						
ELDTW	**Lidau**	**2.05**	**218**	*e*P	**Pn**	**13 46 59.3**	**+0.6**
	baz=216						
ELDTW				*e*S	**Sn**	**13 47 23.7**	**-0.1**
	baz=216						
CHN4	**Tsaushan**	**2.19**	**228**	*e*P	**Pn**	**13 47 01.2**	**+0.6**
	baz=227						
CHN4				*e*S	**Sn**	**13 47 27.7**	**+0.6**
	baz=227						
TPUB	**Ta-pu**	**2.20**	**227**	*e*P	**Pn**	**13 47 01.1**	**+0.3**
	baz=226						
TPUB				*e*S	**Sn**	**13 47 27.5**	**+0.1**
	baz=226						
STYH	**Taoyuan**	**2.20**	**222**	*e*P	**Pn**	**13 47 01.2**	**+0.5**
	baz=221						
STYH				*e*S	**Sn**	**13 47 27.9**	**+0.6**
	baz=221						
LONT	**Longtian**	**2.22**	**211**	*e*P	**Pn**	**13 47 01.7**	**+0.7**
	baz=210						
LONT				*e*S	**Sn**	**13 47 28.5**	**+0.6**
	baz=210						
TWK	**Hsinying**	**2.32**	**228**	*e*P	**Pn**	**13 47 02.9**	**+0.5**
	baz=227						
TWK				*e*S	**Sn**	**13 47 30.6**	**+0.3**
	baz=227						
CHN1	**Nanshi**	**2.35**	**226**	*e*P	**Pn**	**13 47 03.1**	**+0.3**
	baz=225						
CHN1				*e*S	**Sn**	**13 47 31.5**	**+0.5**
	baz=225						
SLGT	**Liugui**	**2.41**	**221**	*e*P	**Pn**	**13 47 04.3**	**+0.7**
	baz=220						
SLGT				*e*S	**Sn**	**13 47 33.4**	**+0.8**
	baz=220						
SSD	**Sandimen**	**2.61**	**218**	*e*P	**Pn**	**13 47 07.1**	**+0.7**
	baz=217						
SSD				*e*S	**Sn**	**13 47 37.6**	**+0.1**
	baz=217						
MASBT	**Mashibuluo**	**2.72**	**216**	*e*P	**Pn**	**13 47 08.3**	**+0.4**
	baz=215						
MASBT				*e*S	**Sn**	**13 47 41.0**	**+0.8**
	baz=215						

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*IDC **09** 13:48:31.3±1.3, 4°09S×129°52E, h0^{km}, mb3.9/2, mb1 3.9/6, mb1mx3.5/51, mbtmp3.8/6, ML3.4/4, Error ellipse: s-maj=44.3km s-min=21.8km az=89.0*
*NEIC **09** 13:48:34.1±2.0, 4°05S±0°06×129°55E±0°09, h10^{km}±1^{km}, mb4.1/13, Error ellipse: s-maj=18.0km s-min=5.6km az=299.0*
*DJA **09** 13:48:34.7±2.7, 4°S±12°×13°0E±°, h17^{km}±23^{km}, M3.4/4, MLv3.4/4*
ISC 09 13:48:36.6±0.7**, 4°07S**±0°07×**129°51E**±0°05**, h36**^{km}**, n28,** σ**1^{s}48**/29**, mb4.0**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.93**	**321**	P	**Pn**	**13 48 52.6**	**-0.5**
AAI	**Ambon**	**1.36**	**286**	P	**Pn**	**13 48 59.1**	**0.0**
FAKI	**Fak Fak**	**2.97**	**67**	P	**Pn**	**13 49 21.5**	**+0.3**
FAKI	**Fak Fak**	**2.97**	**67**		**Pn**	**13 49 21.3**	**+0.2**
SIJI	**Sorong**	**3.64**	**29**	Pn	**Pn**	**13 49 30.4**	**0.0**
	3.3nm,0.3s,baz=156,slow=9.6,SNR=8.6						
SIJI				Sn	**Sn**	**13 50 12.2**	**+0.1**
	4.0nm,0.3s,baz=231,slow=3.8,SNR=3.8						
SWI	**Sorong**	**3.64**	**29**	P	**Pn**	**13 49 31.1**	**+0.7**
LBMI	**Labuha**	**3.96**	**330**	P	**Pn**	**13 49 35.5**	**+0.7**
SANI	**Sanana**	**4.05**	**300**	P	**Pn**	**13 49 35.7**	**-0.3**
MTN	**Manton Dam**	**8.86**	**170**	Pn	**Pn**	**13 50 42.6**	**+0.4**
KNRA	**Kununurra**	**11.55**	**184**	Pn	**Pn**	**13 51 20.6**	**+1.6**
FITZ	**Fitzroy Crossi**	**14.44**	**195**	Pn	**Pn**	**13 51 56.6**	**-1.9**
	0.1nm,0.3s,baz=354,slow=8.8,SNR=2.1						
WRA	**Warramunga Arr**	**16.46**	**164**	Pn	**Pn**	**13 52 21.5**	**-3.4**
	0.1nm,0.3s,baz=349,slow=13,SNR=3.1						
WB2	**Warramunga Arr**	**16.46**	**164**	Pn	**Pn**	**13 52 22.2**	**-2.7**
WB2				IAmb	IAmb	13 52 33.4	
	comp=Z,5.5nm,1.1s						
WR0	**Warramunga Arr**	**16.54**	**163**	Pn	**Pn**	**13 52 23.6**	**-2.2**
COEN	**Coen**	**16.68**	**127**	Pn	**Pn**	**13 52 27.5**	**-0.2**
COEN				IAmb	IAmb	13 52 35.0	
	comp=Z,27nm,1.4s						
PMG	**Port Moresby**	**18.31**	**108**	P	**P**	**13 52 45.5**	**-2.2**
PMG				IAmb	IAmb	13 52 51.0	
	comp=Z,40nm,1.4s						
SBUM	**Sibu**	**18.45**	**290**	P	**P**	**13 52 48.7**	**-0.7**
PSA00	**Pilbara Seismi**	**19.76**	**208**	P	**Pn**	**13 53 03.8**	**-1.6**
PSA00				IAmb	IAmb	13 53 13.7	
	comp=Z,8.8nm,0.9s						
PSA00	**Pilbara Seismi**	**19.76**	**208**	P	**Pn**	**13 53 04.1**	**-1.3**
PSA00				IAmb	IAmb	13 53 13.0	
	comp=Z,8.4nm,1.1s						
AS31	**Alice Springs**	**19.93**	**168**	P	**Pn**	**13 53 06.4**	**-1.0**
ASAR	**Alice Springs**	**19.94**	**168**	P	**Pn**	**13 53 05.7**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=350,slow=10,SNR=21						
RABL	**Rabaul**	**22.60**	**91**	P	**P**	**13 53 33.5**	**-0.9**
CTAO	**Charters Tower**	**22.80**	**136**	P	**P**	**13 53 36.7**	**+0.3**
CTAO				IAmb	IAmb	13 53 37.2	
	comp=Z,4.2nm,0.8s						
MK31	**Makanchi Array**	**65.53**	**326**	P	**P**	**13 59 17.6**	**+1.1**
MKAR	**Makanchi Array**	**65.53**	**326**	P	**P**	**13 59 17.8**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=116,slow=7.7,SNR=8.2						
KURBB	**Kurchatov Arra**	**69.78**	**328**	P	**P**	**13 59 42.1**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=123,slow=5.8,SNR=6.4						
KURK	**Kurchatov**	**69.78**	**328**	P	**P**	**13 59 42.1**	**-1.0**
VNDA	**Vanda**	**75.39**	**173**	P	**P**	**14 00 18.4**	**+2.4**
VNDA				IAmb	IAmb	14 00 38.5	
	comp=Z,3.8nm,1.3s						

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*IDC **09** 13:51:43.8±1.3, 4°11S×129°52E, h0^{km}, mb3.9/5, mb1 4.0/8, mb1mx3.7/40, mbtmp3.8/8, ML3.5/3, Error ellipse: s-maj=37.0km s-min=22.6km az=90.0*
*DJA **09** 13:51:47.5±1.4, 4°S±15°×12°9E±°, h55^{km}±35^{km}, M3.7/6, MLv3.7/6*
ISC 09 13:51:48.3±1.0**, 4°21S**±0°09×**129°46E**±0°07**, h36**^{km}**, n13,** σ**0^{s}97**/14**, mb3.9**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.00**	**328**	P	**Pn**	**13 52 07.2**	**+1.3**
AAI	**Ambon**	**1.36**	**292**	P	**Pn**	**13 52 09.5**	**-1.3**
FAKI	**Fak Fak**	**3.07**	**65**	P	**Pn**	**13 52 35.1**	**+0.8**
SIJI	**Sorong**	**3.78**	**29**	Pn	**Pn**	**13 52 43.4**	**-0.7**
	9.6nm,0.3s,baz=225,slow=23,SNR=11						
SIJI				Sn	**Sn**	**13 53 25.6**	**-1.7**
	6.2nm,0.3s,baz=222,slow=22,SNR=6.2						
SWI	**Sorong**	**3.78**	**29**	P	**Pn**	**13 52 44.4**	**+0.3**
SANI	**Sanana**	**4.07**	**302**	P	**Pn**	**13 52 48.5**	**+0.4**
WRA	**Warramunga Arr**	**16.35**	**163**	Pn	**Pn**	**13 55 34.7**	**-0.5**
	0.1nm,0.3s,baz=350,slow=12,SNR=4.0						
ASAR	**Alice Springs**	**19.82**	**168**	P	**Pn**	**13 56 17.7**	**-0.1**
	0.4nm,0.3s,baz=347,slow=10,SNR=8.8						
CMAR	**Chiang Mai Arr**	**37.57**	**308**	P	**P**	**13 59 00.6**	**+1.0**
	0.7nm,0.6s,baz=139,slow=6.8,SNR=4.7						
MJAR	**Matsushiro Arr**	**41.35**	**11**	P	**P**	**13 59 29.9**	**-1.0**
	1.7nm,0.7s,baz=184,slow=9.9,SNR=5.0						
KSRS	**Korea Array**	**41.47**	**358**	P	**P**	**13 59 32.1**	**+0.3**
	0.5nm,0.6s,baz=173,slow=8.1,SNR=2.4						
MKAR	**Makanchi Array**	**65.61**	**326**	P	**P**	**14 02 29.3**	**+0.6**
	1.1nm,0.6s,baz=122,slow=8.0,SNR=6.8						
ZALV	**Zalesovo Beam**	**68.86**	**334**	P	**P**	**14 02 49.1**	**0.0**
	0.7nm,0.3s,baz=106,slow=5.1,SNR=1.6						

*SOF **09** 13:53:16.4, 44°.51N×27°.63E, h10^{km}, MD3.1*
*CFUSG **09** 13:53:16.7, 44°.64N×27°.87E, h5^{km}, mb3.5/1, MD3.0/1, Romania Magtype MSH 2.6 from 1 stations*
*BUC **09** 13:53:17.7±0.1, 44°.54N×27°.67E, h2^{km}, ml3.0/37, Error ellipse: s-maj=1.0km s-min=0.8km az=44.0*
ISC 09 13:53:17.1±0.9**, 44°.53N**±0°.02×**27°.67E**±0°.02**, h14^{km}**±8^{km}**, n58, σ0^{s}.93**/92**, 55C-25D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HARR	**Harsova**	**0.25**	**49**	⇑P	**Pb**	**13 53 23.2**	**-0.2**
AMRR	**Amara**	**0.25**	**290**	⇓P	**Pg**	**13 53 22.3**	**-0.2**
AMRR				⇑S	**Sg**	**13 53 26.6**	**+0.3**
TLBR	**Topalu**	**0.27**	**86**	⇓P	**Pb**	**13 53 23.8**	**0.0**
TLBR				⇑S	**Sb**	**13 53 28.1**	**-0.1**
CVDA	**Cernavoda**	**0.33**	**126**	⇑P	**Pb**	**13 53 24.6**	**-0.1**
CVDA				⇑S	**Sb**	**13 53 29.7**	**-0.1**
ICOR	**Ion Corvin**	**0.42**	**167**	⇑P	**Pb**	**13 53 26.2**	**-0.1**
ICOR				⇓S	**Sb**	**13 53 32.3**	**-0.2**
RASA	**Rasa**	**0.48**	**230**	⇓P	**Pb**	**13 53 27.4**	**0.0**
RASA				⇑S	**Sg**	**13 53 33.2**	**0.0**
TIRR	**Tirgusor**	**0.54**	**97**	⇓P	**Pb**	**13 53 28.0**	**-0.2**
TIRR				⇓S	**Sb**	**13 53 35.9**	**+0.1**
LEHL	**Lehliu**	**0.61**	**265**	⇑P	**Pb**	**13 53 29.5**	**0.0**
LEHL				⇓S	**Sb**	**13 53 37.7**	**-0.2**
TPGR	**Topolog**	**0.63**	**58**	⇑P	**Pb**	**13 53 30.0**	**+0.1**
TPGR				⇑S	**Sb**	**13 53 37.7**	**-0.9**
MFTR	**Murfatlar**	**0.64**	**122**	⇑P	**Pb**	**13 53 30.0**	**-0.1**
MFTR				⇑S	**Sb**	**13 53 39.2**	**+0.3**
CFR	**Carcaliu**	**0.73**	**27**	⇑P	**Pb**	**13 53 31.5**	**-0.1**
CFR				⇑S	**Sb**	**13 53 41.4**	**-0.1**
TSCT	**Constanta Port**	**0.80**	**117**	⇓P	**Pb**	**13 53 32.8**	**+0.1**
TSCT				⇓S	**Sb**	**13 53 43.9**	**+0.6**
EFOR	**EFORIE**	**0.82**	**122**	⇑P	**Pb**	**13 53 33.3**	**+0.2**
EFOR				⇓S	**Sn**	**13 53 45.3**	**-0.8**
PSN	**Preselentsi**	**0.92**	**156**	*i* P	**Pn**	**13 53 35.6**	**0.0**
MANR	**Mangalia**	**0.97**	**137**	⇑P	**Pn**	**13 53 35.9**	**-0.3**
MANR				⇑S	**Sn**	**13 53 49.5**	**-0.2**
SCHL	**Schela**	**0.98**	**7**	⇑S	**Sb**	**13 53 48.8**	**+0.1**
TSMN	**Mangalia Port-**	**0.98**	**137**	⇑S	**Sn**	**13 53 50.0**	**-0.1**
GRER		**0.99**	**330**	⇑P	**Pn**	**13 53 36.6**	**+0.1**
GRER				⇑S	**Sb**	**13 53 49.1**	**+0.3**
ISR	**Istrita**	**1.00**	**307**	⇑P	**Pn**	**13 53 36.9**	**+0.2**
ISR				⇑S	**Sn**	**13 53 50.2**	**-0.4**
IZVR	**Izvoarele**	**1.02**	**4**	⇓S	**Sn**	**13 53 50.5**	**-0.6**
SULR		**1.02**	**279**	⇑P	**Pn**	**13 53 37.7**	**+0.7**
SULR				⇑S	**Sn**	**13 53 50.9**	**-0.1**
GIUM	**Giurgiulesti**	**1.03**	**22**	⇑P	**Pn**	**13 53 37.0**	**-0.2**
GIUM				⇑S	**Sn**	**13 53 51.2**	**-0.2**
TLCR		**1.05**	**51**	⇑P	**Pn**	**13 53 37.6**	**+0.2**
TLCR				⇑S	**Sn**	**13 53 51.6**	**-0.2**
SLCR	**Slobozia Conac**	**1.07**	**4**	⇑S	**Sn**	**13 53 51.7**	**-0.5**
TUDR		**1.07**	**0**	⇑S	**Sn**	**13 53 52.6**	**+0.3**
TATR	**Tatarca**	**1.11**	**14**	⇓P	**Pn**	**13 53 38.1**	**-0.1**
TATR				⇓S	**Sn**	**13 53 53.0**	**-0.2**
SCTR	**Scanteiesti**	**1.17**	**11**	⇑P	**Pg**	**13 53 39.4**	**-0.3**
SCTR				⇓S	**Sn**	**13 53 54.9**	**+0.1**
BISRR	**Bisoca**	**1.23**	**327**	⇑P	**Pg**	**13 53 41.9**	**+1.1**
BISRR				⇑S	**Sn**	**13 53 58.6**	**+2.3**
KALB	**Balgarevo**	**1.24**	**154**	⇓P	**Pg**	**13 53 41.6**	**+0.6**
KALB				⇓S	**Sn**	**13 53 59.6**	**+3.0**
ODBI	**Odobesti**	**1.31**	**341**	⇑P	**Pg**	**13 53 43.1**	**+0.8**
ODBI				⇑S	**Sg**	**13 54 01.5**	**+2.1**
NEHR	**Nehoiu**	**1.33**	**313**	⇓P	**Pg**	**13 53 43.0**	**+0.3**
NEHR				⇑S	**Sg**	**13 54 02.1**	**+2.1**
PRD	**Provadia**	**1.34**	**188**	*i* P	**Pg**	**13 53 42.5**	**-0.4**
VLDR	**Vladesti**	**1.35**	**12**	⇑P	**Pg**	**13 53 42.6**	**-0.6**
ROIA	**ROIAK**	**1.45**	**188**	*i* P	**Pb**	**13 53 44.0**	**+0.2**
VRI	**Vrincioaia**	**1.50**	**334**	⇑P	**Pg**	**13 53 45.3**	**-0.6**
VRI				⇓S	**Sg**	**13 54 06.3**	**+0.9**
PLOR	**Plostina**	**1.51**	**332**	⇑P	**Pg**	**13 53 46.1**	**0.0**
PLOR				⇓S	**Sg**	**13 54 07.1**	**+1.3**
GHRR		**1.55**	**353**	⇓P	**Pg**	**13 53 45.7**	**-1.1**
GHRR				⇑S	**Sg**	**13 54 06.7**	**-0.3**
MLR	**Muntele Rosu**	**1.56**	**309**	⇓P	**Pg**	**13 53 46.7**	**-0.4**
MLR				⇓S	**Sg**	**13 54 07.6**	**+0.2**
TSSL	**Sulina**	**1.60**	**66**	⇑S	**Sg**	**13 54 08.7**	**+0.2**
COVR	**Voineasa-Covas**	**1.68**	**322**	⇑P	**Pg**	**13 53 48.4**	**-0.9**
BIR	**Birlad**	**1.74**	**359**	⇓P	**Pb**	**13 53 48.4**	**-0.5**
BIR				⇑S	**Sb**	**13 54 11.0**	**+0.5**
SZH	**Strazhica**	**1.78**	**226**	*i* P	**Pn**	**13 53 47.3**	**-0.1**
COPA	**Copaceanca**	**1.80**	**258**	⇓P	**Pb**	**13 53 49.2**	**-0.7**
COPA				⇑S	**Sg**	**13 54 13.4**	**-1.6**
ZIMR		**1.87**	**243**	⇑S	**Sb**	**13 54 15.1**	**+0.8**
HUMR	**Humele**	**1.92**	**271**	⇑P	**Pb**	**13 53 51.3**	**-0.7**
HUMR				⇓S	**Sg**	**13 54 17.5**	**-1.5**
LEOM	**Leova**	**1.99**	**12**	⇑P	**Pb**	**13 53 52.7**	**-0.4**
LEOM				⇑S	**Sb**	**13 54 18.7**	**+1.1**
VOIR		**2.07**	**297**	⇑P	**Pb**	**13 53 54.2**	**-0.2**
VOIR				⇑S	**Sb**	**13 54 21.1**	**+1.1**
VASR	**Vaslui**	**2.12**	**2**	⇑P	**Pb**	**13 53 54.5**	**-0.8**
VASR				⇑S	**Sb**	**13 54 21.7**	**+0.3**
DOPR	**Dopca**	**2.16**	**313**	⇑P	**Pb**	**13 53 55.4**	**-0.6**
MILM	**Milestii Mici**	**2.52**	**18**	⇑P	**Pb**	**13 53 59.6**	**-2.6**
MPEP	**Malo Peshtene**	**3.07**	**249**	P	**Pn**	**13 54 05.8**	**+0.7**
ZAPS	**Zavoj**	**3.85**	**253**	*e*Pn	**Pb**	**13 54 25.6**	**+0.8**
ZAGS	**Zajecar**	**3.98**	**262**	*e*Pn	**Pn**	**13 54 20.2**	**+2.6**
BOSS	**Bosilegrad**	**4.28**	**244**	*e*Pn	**Pn**	**13 54 22.4**	**+0.5**
SEV	**Sevastopol'**	**4.29**	**88**	*e*P	**Pn**	**13 54 22.1**	**+0.2**
SEV				Pm		13 54 25.1	
	comp=Z,46nm,1.1s						
SEV				*e*S	**Sn**	**13 55 11.8**	**+0.1**
SEV				Sm		13 55 35.0	
	comp=N,8.0nm,0.4s						
SEV				Sm		13 55 35.0	
	comp=E,12nm,0.7s						
BOVS	**Bovan**	**4.39**	**260**	*e*Pn	**Pb**	**13 54 31.5**	**-2.4**
PRVS	**Prvonek**	**4.54**	**246**	*e*Pn	Pb	13 54 31.3	-5.2
BARS	**Barje**	**4.58**	**250**	*e*Pn	**Pg**	**13 54 41.8**	**-2.9**

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*IDC **09** 13:56:09.3±1.1, 4°.12S×129°.56E, h0^{km}, mb4.0/7, mb1 4.0/10, mb1mx3.8/35, mbtmp3.9/10, ML3.5/3, Error ellipse: s-maj=34.5km s-min=20.9km az=94.0*
*DJA **09** 13:56:13.8±2.3, 4°S±10°×12°9E±°, h21^{km}±16^{km}, M3.7/7, MLv3.7/7*
ISC 09 13:56:13.9±0.9**, 4°.19S**±0°.08×**129°.45E**±0°.07**, h36^{km}, n16, σ1^{s}.42**/19**, mb4.0**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.99**	**328**	P	**Pn**	**13 56 31.2**	**0.0**
MSAI				S	**Sn**	**13 56 41.6**	**-2.4**
AAI	**Ambon**	**1.35**	**292**	P	**Pn**	**13 56 35.0**	**-1.2**
AAI				S	**Sn**	**13 56 52.0**	**-0.9**
SIJI	**Sorong**	**3.76**	**29**	Pn	**Pn**	**13 57 08.2**	**-1.3**
	5.0nm,0.3s,baz=150,slow=22,SNR=12						
SIJI				Sn	**Sn**	**13 57 51.3**	**-1.3**
	4.9nm,0.3s,baz=231,slow=23,SNR=2.3						
SWI	**Sorong**	**3.77**	**29**	P	**Pn**	**13 57 09.5**	**0.0**
LBMI	**Labuha**	**4.03**	**331**	P	**Pn**	**13 57 14.7**	**+1.6**
SANI	**Sanana**	**4.06**	**301**	P	**Pn**	**13 57 12.5**	**-1.0**
WRA	**Warramunga Arr**	**16.37**	**163**	Pn	**Pn**	**13 59 59.2**	**-1.9**
	0.1nm,0.3s,baz=346,slow=13,SNR=4.5						
ASAR	**Alice Springs**	**19.84**	**168**	P	**P**	**14 00 43.0**	**+1.2**
	0.3nm,0.3s,baz=349,slow=11,SNR=9.3						
CMAR	**Chiang Mai Arr**	**37.55**	**308**	P	**P**	**14 03 26.2**	**+1.2**
	0.5nm,0.4s,baz=138,slow=7.2,SNR=9.5						
MJAR	**Matsushiro Arr**	**41.34**	**11**	P	**P**	**14 03 55.2**	**-1.2**
	2.4nm,0.7s,baz=184,slow=9.7,SNR=5.8						
KSRS	**Korea Array**	**41.45**	**358**	P	**P**	**14 03 57.7**	**+0.5**
	0.9nm,0.6s,baz=168,slow=8.1,SNR=5.7						
USRK	**Ussuriysk Ar.**	**48.22**	**2**	P	**P**	**14 04 51.9**	**+0.9**
	1.6nm,0.6s,baz=184,slow=4.3,SNR=4.0						
SONM	**Songino Array**	**55.62**	**341**	P	**P**	**14 05 47.0**	**+0.7**
	0.3nm,0.5s,baz=148,slow=6.3,SNR=2.5						
MKAR	**Makanchi Array**	**65.59**	**326**	P	**P**	**14 06 54.8**	**+0.6**
	2.9nm,0.6s,baz=112,slow=7.9,SNR=29						
ZALV	**Zalesovo Beam**	**68.84**	**334**	P	**P**	**14 07 14.5**	**0.0**
	0.6nm,0.3s,baz=106,slow=4.8,SNR=4.8						
BOSA	**Boshof**	**100.40**	**240**	P	**Pdif**	**14 10 00.7**	**+2.8**
	4.2nm,0.7s,baz=334,slow=15,SNR=7.7						

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*NEIC **09** 13:56:17.9±1.9, 23°.7S±0°.1×179°.7W±0°.1, h524^{km}±9^{km}, mb4.6/23, Error ellipse: s-maj=18.6km s-min=16.2km az=123.0*
*IDC **09** 13:56:17.6±1.4, 23°.65S×179°.80W, h517^{km}±12^{km}, mb3.8/17, mb1 4.0/18, mb1mx3.7/37, mbtmp4.7/18, Error ellipse: s-maj=14.8km s-min=13.5km az=137.0*
*NOU **09** 13:56:19.7, 23°.53S×179°.79W, h549^{km}, mb4.8/34, South of Fiji Islands*
ISC 09 13:56:18.5±0.5**, 23°.73S**±0°.08×**179°.81W**±0°.08**, h532^{km}, n109, σ1^{s}.11**/115**, mb4.5**/39**, 5C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**5.55**	**10**	P	**P**	**13 57 52.0**	**-0.3**
MSVF	**Nonsavu**	**6.29**	**341**	P	**P**	**13 57 57.7**	**-1.5**
	0.8nm,0.3s,baz=242,slow=20,SNR=2.5						
MSVF	**Nonsavu**	**6.29**	**341**	P	**P**	**13 57 58.3**	**-0.9**
DGTI	**Dogotuki**	**7.41**	**357**	P	**P**	**13 58 10.0**	**+0.1**
NIUE	**Niue**	**10.31**	**65**	P	**P**	**13 58 37.0**	**-2.4**
MARNC	**Mare, Loyalty**	**11.45**	**279**	P	**P**	**13 58 51.9**	**+0.5**
PINNC	**Pines Island,**	**11.77**	**273**	P	**P**	**13 58 56.5**	**+1.8**
AFI	**Afiamalu**	**12.38**	**39**	P	P	13 58 55.6	-5.6
	4.8nm,0.3s,baz=322,slow=0.3,SNR=9.5						
AFI				S	S	14 01 03.4	-12
	3.2nm,0.3s,baz=48,slow=23,SNR=1.5						
URZ	**Urewera**	**14.72**	**190**	P	**P**	**13 59 24.7**	**-0.5**
	1.3nm,0.3s,baz=120,slow=23,SNR=11						
URZ				S	**S**	**14 01 54.3**	**-4.7**
	0.3nm,0.3s,baz=299,slow=23,SNR=2.8						
URZ	**Urewera**	**14.72**	**190**	P	**P**	**13 59 29.0**	**+3.9**
HIZ	**Hauiti**	**15.42**	**196**	P	**P**	**13 59 35.6**	**+3.1**
KHZ	**Kahutara**	**19.44**	**195**	P	**P**	**14 00 10.7**	**+0.6**
ARMA	**Armidale**	**26.24**	**249**	P	**P**	**14 01 12.7**	**+1.3**
ARMA				IAmb	IAmb	14 01 13.2	
	comp=Z,7.8nm,0.8s						
EIDS	**Eidsvold**	**26.50**	**260**	P	**P**	**14 01 14.1**	**+0.5**
EIDS				IAmb	IAmb	14 01 14.9	
	comp=Z,14nm,0.6s						
CAN	**Canberra**	**29.37**	**240**	P	**P**	**14 01 39.5**	**+0.9**
CAN				IAmb	IAmb	14 01 40.5	
	comp=Z,11nm,0.8s						
CTA	**Charters Tower**	**31.65**	**270**	P	**P**	**14 01 58.9**	**+0.6**
	comp=Z,39nm,0.5s,baz=92,slow=11,SNR=64						
CTAO	**Charters Tower**	**31.65**	**270**	P	**P**	**14 01 59.2**	**+1.0**
CTAO	**Charters Tower**	**31.65**	**270**	P	**P**	**14 01 59.3**	**+1.0**
TOO	**Toolangi**	**32.68**	**237**	P	**P**	**14 02 07.7**	**+0.8**
TOO				IAmb	IAmb	14 02 08.1	
	comp=Z,31nm,1.3s						
BRAT	**Ballarat**	**33.88**	**237**	P	**P**	**14 02 18.5**	**+1.6**
PMG	**Port Moresby**	**34.60**	**289**	P	**P**	**14 02 23.4**	**+0.1**
	comp=Z,58nm,0.9s,baz=89,slow=4.9,SNR=11						
PMG	**Port Moresby**	**34.60**	**289**	P	**P**	**14 02 23.0**	**-0.3**
PMG	**Port Moresby**	**34.60**	**289**	P	**P**	**14 02 23.3**	**0.0**
PMG	**Port Moresby**	**34.60**	**289**	P	**P**	**14 02 23.6**	**+0.3**
STKA	**Stephens Creek**	**34.94**	**248**	P	**P**	**14 02 26.5**	**+0.5**
	comp=Z,10.0nm,0.8s,baz=93,slow=11,SNR=18						
STKA	**Stephens Creek**	**34.94**	**248**	P	**P**	**14 02 26.2**	**+0.3**
STKA	**Stephens Creek**	**34.94**	**248**	P	**P**	**14 02 26.7**	**+0.7**
	comp=Z,2.8nm,1.1s						
INKA	**Innaminka**	**35.65**	**255**	P	**P**	**14 02 33.1**	**+1.2**
	comp=Z,52nm,0.8s						
HTT	**Hallett**	**37.30**	**246**	P	**P**	**14 02 45.7**	**+0.2**
LCRK	**Leigh Creek**	**37.80**	**250**	P	**P**	**14 02 49.7**	**+0.2**
NAPP	**Napperby**	**37.93**	**246**	P	**P**	**14 02 51.1**	**+0.5**
OOD	**Oodnadatta**	**40.12**	**254**	P	**P**	**14 03 09.3**	**+1.0**
MULG	**Mulgathing**	**41.39**	**251**	P	**P**	**14 03 18.3**	**-0.1**
AS31	**Alice Springs**	**42.23**	**260**	P	**P**	**14 03 25.1**	**-0.1**
AS31				IAmb	IAmb	14 03 26.2	
	comp=Z,6.2nm,0.6s						
ASAR	**Alice Springs**	**42.23**	**260**	P	**P**	**14 03 25.1**	**-0.1**
	comp=Z,21nm,0.8s,baz=96,slow=7.9,SNR=105						
ASAR				ScP	**ScP**	**14 08 09.6**	**+2.6**
	comp=Z,2.3nm,0.9s,baz=115,slow=4.0,SNR=10						
ASAR				S	**S**	**14 09 05.3**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=100,slow=15,SNR=4.1						
ASAR	**Alice Springs**	**42.23**	**260**	P	**P**	**14 03 25.2**	**0.0**
WB0	**Warramunga Arr**	**42.58**	**266**	P	**P**	**14 03 27.1**	**-0.9**
WRAB	**Tennant Creek**	**42.58**	**266**	P	**P**	**14 03 27.5**	**-0.5**
WRAB				IAmb	IAmb	14 03 28.0	
	comp=Z,30nm,0.8s						
WRAB	**Tennant Creek**	**42.58**	**266**	P	**P**	**14 03 27.7**	**-0.3**
WRA	**Warramunga Arr**	**42.59**	**266**	P	**P**	**14 03 27.3**	**-0.7**
	comp=Z,26nm,0.5s,baz=103,slow=8.0,SNR=131						
WRA				ScP	**ScP**	**14 08 11.4**	**+3.0**
	comp=Z,1.2nm,0.8s,baz=99,slow=4.2,SNR=5.4						
WRA				S	**S**	**14 09 09.4**	**-3.0**
	comp=Z,2.3nm,0.9s,baz=103,slow=13,SNR=8.6						
WRA	**Warramunga Arr**	**42.59**	**266**	P	**P**	**14 03 27.3**	**-0.7**
JAY	**Jayapura**	**43.61**	**293**	P	**P**	**14 03 35.3**	**-0.7**
	comp=Z,22nm,0.6s						
JAY	**Jayapura**	**43.61**	**293**	P	**P**	**14 03 36.3**	**+0.2**
	comp=Z,22nm,1.1s						
GENI	**Genyem**	**44.02**	**292**	P	**P**	**14 03 39.3**	**+0.1**
	comp=Z,57nm,0.9s						
GENI	**Genyem**	**44.02**	**292**	P	**P**	**14 03 39.3**	**+0.1**
	comp=Z,57nm,0.9s						
KDU	**Kakadu**	**46.44**	**275**	P	**P**	**14 03 57.3**	**-0.5**
FORT	**Forrest**	**46.53**	**249**	P	**P**	**14 03 57.4**	**-0.8**
FORT	**Forrest**	**46.53**	**249**	P	**P**	**14 03 57.9**	**-0.3**
WRKA	**Warakurna**	**47.04**	**257**	P	**P**	**14 04 02.0**	**-0.2**
MTN	**Manton Dam**	**47.61**	**274**	P	**P**	**14 04 05.2**	**-1.3**
MTN				IAmb	IAmb	14 04 06.2	
	comp=Z,13nm,0.6s						
MTN	**Manton Dam**	**47.61**	**274**	P	**P**	**14 04 05.7**	**-0.9**
DRS	**Darwin Rock St**	**47.97**	**275**	P	**P**	**14 04 08.7**	**-0.5**
KNRA	**Kununurra**	**48.86**	**270**	P	**P**	**14 04 15.5**	**-0.3**
KNRA				IAmb	IAmb	14 04 16.5	
	comp=Z,36nm,0.9s						
KNRA	**Kununurra**	**48.86**	**270**	P	**P**	**14 04 15.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**51.01**	**265**	P	**P**	**14 04 31.6**	**0.0**
	comp=Z,13nm,0.6s,baz=123,slow=5.9,SNR=28						
SIJI	**Sorong**	**52.55**	**288**	P	**P**	**14 04 42.3**	**-0.5**
SWI	**Sorong**	**52.55**	**288**	P	**P**	**14 04 42.5**	**-0.3**
	comp=Z,956nmcomp=Z,97nm,0.8s						
SOEI	**Soe**	**55.00**	**275**	P	**P**	**14 05 00.2**	**-0.1**
	comp=Z,64nm,1.1s						
SOEI	**Soe**	**55.00**	**275**	P	**P**	**14 05 01.4**	**+1.1**
SOEI				IAmb	IAmb	14 05 02.4	
	comp=Z,51nm,0.9s						
SOEI	**Soe**	**55.00**	**275**	P	**P**	**14 05 01.1**	**+0.8**
KLBR	**Kellerberrin**	**55.21**	**247**	P	**P**	**14 05 00.8**	**-0.6**
PSA00	**Pilbara Seismi**	**55.36**	**259**	P	**P**	**14 05 01.6**	**-1.0**
PSA00				IAmb	IAmb	14 05 02.9	
	comp=Z,27nm,1.2s						
PSA00	**Pilbara Seismi**	**55.36**	**259**	P	**P**	**14 05 01.7**	**-0.8**
PSA00				IAmb	IAmb	14 05 02.9	
	comp=Z,11nm,1.2s						
PSA00	**Pilbara Seismi**	**55.36**	**259**	P	**P**	**14 05 02.1**	**-0.5**
MBWA	**Marble Bar**	**55.57**	**260**	P	**P**	**14 05 03.5**	**-0.5**
LBMI	**Labuha**	**55.95**	**286**	P	**P**	**14 05 07.2**	**+0.5**
	comp=Z,31nm,1.2s						
SANI	**Sanana**	**56.64**	**284**	P	**P**	**14 05 10.5**	**-0.9**
	comp=Z,24nm,0.8s						
SANI	**Sanana**	**56.64**	**284**	P	**P**	**14 05 10.9**	**-0.5**
MORW	**Morawa**	**57.09**	**250**	P	**P**	**14 05 14.3**	**-0.1**
EDFI	**Ende, Flores**	**57.73**	**275**	P	**P**	**14 05 18.4**	**-0.7**
	comp=Z,27nm,0.9s						
GTOI	**Gorontalo**	**60.51**	**285**	P	**P**	**14 05 38.3**	**+0.8**
	comp=Z,16nm,0.7s						
BNSI	**Bone**	**60.91**	**279**	P	**P**	**14 05 40.7**	**+0.5**
	comp=Z,24nm,0.8s						
TWSI	**Taliwang, Sumb**	**62.14**	**273**	P	**P**	**14 05 49.0**	**+0.8**
TOLI2	**Tolitoli**	**62.70**	**284**	P	**P**	**14 05 51.0**	**-0.9**
TOLI2				IAmb	IAmb	14 05 53.2	
	comp=Z,22nm,0.6s						
TOLI2	**Tolitoli**	**62.70**	**284**	P	**P**	**14 05 51.9**	**0.0**
QSPA	**South Pole Qui**	**66.35**	**180**	P	**P**	**14 06 15.2**	**+1.0**
	comp=Z,7.5nm,1.0s,baz=28,slow=1.2,SNR=26						
QSPA	**South Pole Qui**	**66.35**	**180**	P	**P**	**14 06 15.1**	**+0.8**
QSPA				IAmb	IAmb	14 06 16.3	
	comp=Z,7.4nm,0.9s						
KKM	**Kota Kinabalu**	**69.02**	**287**	P	**P**	**14 06 31.5**	**+0.1**
MJAR	**Matsushiro Arr**	**71.86**	**325**	P	**P**	**14 06 46.4**	**-1.1**
	comp=Z,3.3nm,0.9s,baz=142,slow=6.4,SNR=7.3						
JWT	**Wachi**	**72.42**	**323**	P	**P**	**14 06 51.0**	**+0.1**
JWT				IAmb	IAmb	14 07 02.3	
	comp=Z,24nm,1.5s						
KSRS	**Korea Array**	**78.23**	**320**	P	**P**	**14 07 23.9**	**+0.8**
	comp=Z,2.5nm,0.7s,baz=135,slow=5.9,SNR=13						
PETK	**Petropavlovsk-**	**78.98**	**346**	P	**P**	**14 07 26.7**	**-0.1**
	comp=Z,3.1nm,0.6s,baz=90,slow=5.9,SNR=7.8						
USRK	**Ussuriysk Ar.**	**80.72**	**327**	P	**P**	**14 07 37.0**	**+0.9**
	comp=Z,3.9nm,0.8s,baz=128,slow=3.6,SNR=6.0						
IPM	**Ipoh**	**81.91**	**278**	P	**P**	**14 07 43.3**	**+0.3**
	comp=Z,16nm,0.8s						
CN2	**Changchun**	**83.86**	**324**	*e*P	**P**	**14 07 51.8**	**-0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLR	**Kul'dur**	**84.47**	**330**	P	**P**	**14 07 55.4**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=322,slow=8.6,SNR=4.3						
NVAR	**Mina Array Bea**	**84.51**	**44**	P	**P**	**14 07 55.7**	**0.0**
	comp=Z,0.6nm,0.7s,baz=220,slow=9.4,SNR=4.5						
VNA3	**Neumayer Olymp**	**85.03**	**177**	P	P	14 07 47.7	-10
CMAR	**Chiang Mai Arr**	**89.63**	**290**	P	**P**	**14 08 21.4**	**+1.4**
	comp=Z,5.0nm,0.9s,baz=136,slow=3.4,SNR=24						
CHTO	**Chiang Mai**	**89.78**	**291**	P	**P**	**14 08 20.2**	**-0.5**
TX32	**Lajitas Array**	**90.20**	**58**	P	**P**	**14 08 23.7**	**+1.2**
TXAR	**Lajitas Array**	**90.20**	**58**	P	**P**	**14 08 23.4**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=218,slow=6.0,SNR=17						
TXAR	**Lajitas Array**	**90.20**	**58**		**P**	**14 08 23.7**	**+1.2**
PDAR	**Pinedale Array**	**92.45**	**44**	P	**P**	**14 08 32.5**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=212,slow=5.3,SNR=4.6						
MKAR	**Makanchi Array**	**112.17**	**313**	PKiKP	**PKiKP**	**14 13 52.2**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=189,slow=0.8,SNR=7.4						
ARCES	**ARCESS Array B**	**131.76**	**348**	PKP	**PKPdf**	**14 14 27.9**	**-2.4**
	comp=Z,2.5nm,0.7s,baz=343,slow=2.5,SNR=7.7						
FINES	**FINESS Array B**	**138.34**	**342**	PKhKP	PKPpre	14 14 33.5	
	comp=Z,5.2nm,1.1s,baz=86,slow=4.3,SNR=4.0						
FINES				PKP	**PKPdf**	**14 14 42.8**	**+0.1**
	comp=Z,5.0nm,1.1s,baz=174,slow=7.0,SNR=3.6						
FINES				SKPbc	**SKPbc**	**14 17 27.6**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=342,slow=2.4,SNR=6.7						
NOA	**NORSAR Array B**	**141.94**	**351**	PKhKP	PKPpre	14 14 45.1	
	comp=Z,1.1nm,0.6s,baz=16,slow=4.6,SNR=2.6						
AKASG	**Malin Array Be**	**144.92**	**328**	PKP	**PKPdf**	**14 14 54.4**	**-0.3**
	comp=Z,3.4nm,0.5s,baz=42,slow=4.2,SNR=19						
AKASG				SKPbc	**SKiKP**	**14 17 44.7**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=43,slow=2.9,SNR=6.4						
BRTR	**Keskin Array B**	**147.61**	**307**	PKPbc	**PKPbc**	**14 15 02.6**	**-0.8**
	comp=Z,2.9nm,0.7s,baz=177,slow=5.2,SNR=4.7						
LANS	**Liptovska Anna**	**150.44**	**334**	*e*PKP	**PKiKP**	**14 15 11.2**	**+0.9**
OSTC	**Ostas**	**150.46**	**339**	⇑*e*PKP	**PKiKP**	**14 15 10.2**	**-0.1**
CHVC	**Chvalec**	**150.49**	**339**	⇑*e*PKP	**PKPbc**	**14 15 10.0**	**+0.1**
DPC	**Dobruska-Polom**	**150.60**	**339**	⇑*e*PKP	**PKPbc**	**14 15 10.3**	**+0.1**
DPC				*e*PKPAB	**PKPab**	**14 15 19.1**	**-0.3**
KRLC	**Kraliky**	**150.68**	**338**	⇑*e*PKP	**PKPbc**	**14 15 10.3**	**-0.1**
KRLC				*e*PKPAB	**PKPab**	**14 15 20.1**	**+0.4**
VYHS	**Vyhne**	**151.21**	**334**	*e*PKP	**PKPbc**	**14 15 11.8**	**+0.2**
KHC	**Kasperske Hory**	**152.54**	**341**	⇑*e*PKP	**PKPbc**	**14 15 14.1**	**-0.4**
GERES	**GERESS Array B**	**152.76**	**340**	PKPbc	**PKPbc**	**14 15 14.7**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=83,slow=3.1,SNR=2.5						
TORD	**Torodi Ar. Bea**	**169.38**	**188**	PKPab	**PKPab**	**14 16 42.0**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=175,slow=4.1,SNR=4.5						

IDC 09 14:07:23.1±1.8**, 3°.14S**×**128°.92E, h0^{km}, mb3.1**/2**, mb1 3.3**/4**, mb1mx3.2**/40**, mbtmp3.2**/4**, ML3.0**/2**, Error ellipse: s-maj=41.8km s-min=27.1km az=97.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.26**	**46**	Pn	Pn	14 08 15.8	+0.3
	0.5nm,0.3s,baz=173,slow=22,SNR=1.5						
SIJI				Sn	Sn	14 08 57.3	+2.2
	0.9nm,0.3s,baz=240,slow=23,SNR=2.0						
WRA	**Warramunga Arr**	**17.52**	**163**	P	P	14 11 30.8	+0.7
	0.1nm,0.3s,baz=348,slow=25,SNR=1.5						
ASAR	**Alice Springs**	**20.96**	**167**	P	P	14 12 06.9	-1.0
	0.2nm,0.6s,baz=349,slow=9.5,SNR=1.4						
MKAR	**Makanchi Array**	**64.43**	**326**	P	P	14 18 01.1	-0.2
	0.2nm,0.4s,baz=108,slow=7.1,SNR=2.8						

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*IDC **09** 14:08:35.8±1.8, 4°.09S×129°.56E, h0^{km}, mb3.2/1, mb1 3.3/4, mb1mx3.0/43, mbtmp3.2/4, ML2.9/2, Error ellipse: s-maj=64.7km s-min=29.0km az=84.0*
*DJA **09** 14:08:38.9±1.9, 4°S±13°×12°9E±°, h15^{km}±12^{km}, M2.7/3, MLv2.7/3*
ISC 09 14:08:40.2±1.1**, 4°.08S**±0°.09×**129°.40E**±0°.07**, h36^{km}, n8, σ1^{s}.77**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.87**	**327**	P	**Pn**	**14 08 56.4**	**+0.5**
AAI	**Ambon**	**1.26**	**288**	P	**Pn**	**14 09 01.4**	**+0.1**
FAKI	**Fak Fak**	**3.07**	**68**	P	**Pn**	**14 09 27.7**	**+1.5**
SIJI	**Sorong**	**3.70**	**30**	Pn	**Pn**	**14 09 34.0**	**-0.8**
	1.4nm,0.3s,baz=245,slow=23,SNR=2.5						
SIJI				Sn	**Sn**	**14 10 15.4**	**-1.8**
	2.2nm,0.3s,baz=196,slow=22,SNR=5.1						
SWI	**Sorong**	**3.70**	**30**	P	**Pn**	**14 09 35.4**	**+0.6**
WRA	**Warramunga Arr**	**16.48**	**163**	Pn	**Pn**	**14 12 25.8**	**-2.9**
	baz=347,slow=12,SNR=1.9						
ASAR	**Alice Springs**	**19.95**	**168**	P	**P**	**14 13 10.5**	**+1.2**
	0.0nm,0.3s,baz=346,slow=11,SNR=2.5						
MKAR	**Makanchi Array**	**65.48**	**326**	P	**P**	**14 19 21.2**	**+1.5**
	0.1nm,0.4s,baz=124,slow=7.7,SNR=1.5						

IDC 09 14:09:09.9±1.8**, 4°.12S**×**129°.48E, h0^{km}, mb3.1**/1**, mb1 3.3**/4**, mb1mx3.0**/45**, mbtmp3.1**/4**, ML2.9**/3**, Error ellipse: s-maj=53.1km s-min=25.7km az=92.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.69**	**29**	Pn	Pn	14 10 08.1	-0.1
	1.5nm,0.3s,baz=234,slow=23,SNR=1.8						
SIJI				Sn	Sn	14 10 52.8	+0.3
	1.1nm,0.3s,baz=279,slow=23,SNR=1.4						
WRA	**Warramunga Arr**	**16.43**	**164**	Pn	Pn	14 13 01.8	-0.2
	0.0nm,0.3s,baz=341,slow=10,SNR=1.1						
ASAR	**Alice Springs**	**19.90**	**168**	P	P	14 13 43.2	0.0
	0.1nm,0.3s,baz=344,slow=9.7,SNR=6.3						
MKAR	**Makanchi Array**	**65.55**	**326**	P	P	14 19 55.6	+0.2
	0.1nm,0.5s,baz=114,slow=6.5,SNR=1.0						

IDC 09 14:11:35.2±1.8**, 4°.25S**×**130°.88E, h0^{km}, mb3.2**/1**, mb1 3.3**/4**, mb1mx2.8**/45**, mbtmp3.1**/4**, ML3.0**/3**, Error ellipse: s-maj=80.0km s-min=24.4km az=85.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.38**	**7**	Pn	Pn	14 12 29.3	+0.1
	1.3nm,0.3s,baz=242,slow=22,SNR=2.4						
SIJI				Sn	Sn	14 13 09.4	-0.6
	0.9nm,0.3s,baz=208,slow=23,SNR=1.7						
WRA	**Warramunga Arr**	**15.96**	**168**	Pn	Pn	14 15 22.4	+1.1
	0.1nm,0.3s,baz=348,slow=11,SNR=1.6						
ASAR	**Alice Springs**	**19.53**	**172**	P	P	14 16 03.7	-0.8
	0.1nm,0.3s,baz=348,slow=11,SNR=5.1						
MKAR	**Makanchi Array**	**66.44**	**326**	P	P	14 22 26.8	+0.3
	0.1nm,0.5s,baz=110,slow=8.3,SNR=1.5						

ROM 09 14:12:34.5±0.1**, 43°.630N**±0°.005×**12°.197E**±0°.006**, h8^{km}, ML0.8**/2**, 2C-3D, Error ellipse: s-maj=0.6km s-min=0.3km az=179.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PARC	**Parchiule**	**0.04**	**59**	P	Pg	14 12 36.1	0.0
PARC				S	Sg	14 12 37.1	-0.1
SSP9	**Sansepolcro**	**0.07**	**220**	⇑P	Pg	14 12 37.0	+0.5
SSP9				S	Sg	14 12 38.5	+0.6
SSP9				AML	AML		
	comp=E,156µm,0.9s						
SSP9				AML	AML		
	comp=N,121µm,1.3s						
BADI	**Badiali**	**0.12**	**164**	P	Pg	14 12 37.9	+0.6
BADI				S	Sg	14 12 40.3	+1.2
CRE	**Caprese Michel**	**0.18**	**267**	⇑P	Pg	14 12 38.6	+0.4
CRE				S	Sg	14 12 41.7	+0.9
CPGN	**Carpegna, Ital**	**0.19**	**28**	P	Pg	14 12 39.8	+1.3
PIEI	**Pieia**	**0.26**	**111**	P	Pg	14 12 40.4	+0.6
PIEI				S	Sg	14 12 44.7	+1.5
NARO	**Abbazia di Nar**	**0.28**	**94**	⇓P	Pg	14 12 40.8	+0.7
NARO				S	Sb	14 12 45.2	-1.4
ATVO	**AVT- Monte Val**	**0.29**	**148**	⇓P	Pb	14 12 41.4	-0.6
ATVO				S	Sb	14 12 46.2	-0.8
CAFI	**Castiglion Fio**	**0.34**	**209**	⇓P	Pg	14 12 41.8	+0.6
CAFI				S	Sb	14 12 47.6	-0.9
CAFI				AML	AML		
	comp=E,20µm,0.7s						
CAFI				AML	AML		
	comp=N,17µm,0.6s						
FDMO	**Fiordimonte**	**0.88**	**132**	S	Sb	14 13 04.0	+0.1

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*IDC **09** 14:14:01.9±3.9, 4°.12S×129°.56E, h18^{km}±23^{km}, mb5.0/34, mb1 5.0/39, mb1mx4.7/53, mbtmp5.0/39, ML3.9/3, MS4.3/16, Ms1 4.3/16, ms1mx4.1/45, Error ellipse: s-maj=14.0km* *s-min=10.2km az=73.0*

*MOS **09** 14:14:01.6±0.9, 4°.16S×129°.58E, h30^{km}, mb5.5/55, Error ellipse: s-maj=9.3km s-min=4.9km az=114.6*

*NEIC **09** 14:14:01.4±1.6, 4°.06S±0°.05×129°.60E±0°.06, h10^{km}±1^{km}, mb5.4/78, Error ellipse: s-maj=10.1km s-min=8.1km az=110.0*

*KLM **09** 14:14:04, 4°.09S×129°.81E, h37^{km}, mb5.3*

*DJA **09** 14:14:05.6±0.2, 4°S±2°×13°0E±°, h51^{km}±3^{km}, M4.9/67, mb5.1/67, mB5.4/45, MLv5.2/16, Mw(mB)4.8/45, MwMwp6.1/1, Mwp6.1/1*

ISC 09 14:14:03.0±0.5**, 4°.11S**±0°.03×**129°.51E**±0°.04**, h24**^{km}±3^{km}**, n573, σ1^{s}23**/592**, mb5.3**/128**, MS4.3**/16**, 19C-14D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.57	136	P	Pb	14 14 13.7	-0.7
MSAI	Masohi	0.95	322	P	Pb	14 14 19.7	-1.1
MSAI				S	Sb	14 14 32.9	-0.1
AAI	Ambon	1.38	288	P	Pn	14 14 25.9	-0.8
AAI				S	Sn	14 14 42.8	-1.3
FAKI	Fak Fak	2.98	67	P	Pn	14 14 50.0	+1.3
FAKI				S	Sn	14 15 22.8	-0.9
FAKI	Fak Fak	2.98	67	Pn	Pn	14 14 48.3	-0.4
SIJI	Sorong	3.66	29	Pn	Pn	14 14 58.5	+0.3
	62nm,0.3s,baz=210,slow=7.3,SNR=123						
SIJI				Sn	Sn	14 15 39.6	-1.1
	87nm,0.3s,baz=103,slow=22,SNR=8.7						
SIJI				LR	LR	14 16 50.2	
	comp=Z,6μm,20.9s,baz=257,slow=46						
SWI	Sorong	3.67	29	P	Pn	14 14 59.2	+1.0
LBMI	Labuha	3.99	330	P	Pn	14 15 04.0	+1.4
SANI	Sanana	4.07	300	P	Pn	14 15 04.2	+0.5
SANI	Sanana	4.07	300	P	Pn	14 15 04.4	+0.7
SAUI	Saumlaki	4.24	155	P	Pn	14 15 09.9	+3.7
SAUI	Saumlaki	4.24	155	Pn	Pn	14 15 08.3	+2.1
SAUI	Saumlaki	4.24	155	P	Pn	14 15 06.5	+0.3
TNTI	Ternate	5.30	336	P	Pn	14 15 21.5	+0.9
	0.7nm2μm132nm,1.0s						
TNTI	Ternate	5.30	336	Pn	Pn	14 15 21.2	+0.5
TNTI	Ternate	5.30	336	P	Pn	14 15 22.0	+1.4
SRPI	Serui, Papua	7.08	72	P	Pn	14 15 46.4	+1.2
	0.9nm87nm,0.7s						
KMSI	Cibinong	7.22	310	P	Pn	14 15 46.5	-0.6
	2.4nm3μm278nm,0.6s						
SOEI	Soe	7.65	223	P	Pn	14 15 57.3	+4.2
	1.0nm3μm141nm,1.0s						
SOEI	Soe	7.65	223	Pn	Pn	14 15 55.6	+2.5
SOEI	Soe	7.65	223	P	Pn	14 15 54.8	+1.7
GTOI	Gorontalo	8.02	306	P	Pn	14 16 02.3	+4.2
	778nm97nm,0.8s						
DRS	Darwin Rock St	8.39	171	P	Pn	14 16 05.0	+1.9
BATI	Baumata	8.39	223	Pn	Pn	14 16 05.9	+2.8
	25nm,0.3s,baz=92,slow=2.6,SNR=36						
BATI				Sn	Sn	14 17 38.2	+1.1
	4.6nm,0.3s,baz=284,slow=20,SNR=1.1						
BATI				LR	LR	14 19 35.2	
	comp=Z,2μm,21.1s,baz=40,slow=40						
BATI	Baumata	8.39	223	P	Pn	14 16 05.9	+2.8
	1μm60nm,0.6s						
APSI	Ampana	8.47	292	P	Pn	14 16 07.9	+3.7
	2μm276nm,0.9s						
MMRI	Maumere	8.51	238	P	Pn	14 16 07.3	+2.5
	11μm42nm,0.5s						
MMRI	Maumere	8.51	238	Pn	Pn	14 16 07.0	+2.2
MRSI	Marisa	8.83	301	P	Pn	14 16 10.5	+1.4
	1μm115nm,0.8s						
MTN	Manton Dam	8.83	170	P	Pn	14 16 10.3	+1.2
	baz=8.8,SNR=32						
MTN	Manton Dam	8.83	170	Pn	Pn	14 16 10.8	+1.6
MTN	Manton Dam	8.83	170	P	Pn	14 16 10.8	+1.6
KDU	Kakadu	9.02	161	P	Pn	14 16 10.8	-0.9
	baz=9.0,SNR=51						
KDU	Kakadu	9.02	161	P	Pn	14 16 11.3	-0.4
EDFI	Ende, Flores	9.03	239	P	Pn	14 16 15.4	+3.3
	904nm68nm,0.8s						
BSSI	Bau Bau, Buton	9.21	257	P	Pn	14 16 18.4	+4.0
	926nm63nm,0.8s						
BNSI	Bone	9.38	268	P	Pn	14 16 20.9	+4.2
	78μm2μm150nm,1.0s						
BKSI	Bulukumba	9.43	262	P	Pn	14 16 22.1	+4.7
	1μm97nm,1.2s						
SPSI	Sidrap Palu	9.72	270	P	Pn	14 16 25.1	+3.8
	1μm111nm,1.1s						
TTSI	Tana Toraja	9.73	276	P	Pn	14 16 24.9	+3.4
	926nm64nm,0.9s						
KAPI	Kappang	9.77	264	Pn	Pn	14 16 26.4	+4.3
	4.0nm,0.3s,baz=118,slow=5.7,SNR=22						
KAPI				Sn	Sn	14 18 09.1	-1.9
	2.0nm,0.3s,baz=118,slow=21,SNR=1.0						
KAPI				LR	LR	14 20 09.9	
	comp=Z,680nm,19.9s,baz=125,slow=38						
KAPI	Kappang	9.77	264	P	Pn	14 16 24.7	+2.6
KAPI	Kappang	9.77	264	Pn	Pn	14 16 24.7	+2.6
KAPI	Kappang	9.77	264	P	Pn	14 16 24.6	+2.6
TOLI2	Tolitoli	10.14	301	Pn	Pn	14 16 27.9	+0.7
TOLI2	Tolitoli	10.14	301	P	Pn	14 16 29.4	+2.2
MPSI	Mapaga	10.57	294	P	Pn	14 16 36.4	+3.4
	719nm39nm,0.8s						
BASI	Baing, Sumba	10.74	235	P	Pn	14 16 40.5	+5.1
	3μm208nm,1.4s						
GENI	Genyem	10.75	82	P	Pn	14 16 35.7	+0.2
	77nm,1.2s						
GENI	Genyem	10.75	82	P	Pn	14 16 35.5	0.0
JAY	Jayapura	11.29	82	Pn	Pn	14 16 40.4	-2.6
	0.2nm,0.3s,baz=325,slow=12,SNR=1.7						
WBSI	Waikabubak, Su	11.45	241	P	Pn	14 16 49.3	+4.2
	1μm139nm,0.9s						
KNRA	Kununurra	11.52	184	P	Pn	14 16 46.2	+0.1
	baz=12,SNR=26						
KNRA	Kununurra	11.52	184	Pn	Pn	14 16 46.9	+0.8
KNRA	Kununurra	11.52	184	P	Pn	14 16 46.2	+0.1
DAV	Davao City (W)	11.77	341	LR	LR	14 21 56.4	
	comp=Z,1μm,19.0s,baz=144,slow=40						
PLAI	Plampang	12.56	247	P	Pn	14 17 04.1	+3.7
	3μm148nm,0.8s						
PLAI	Plampang	12.56	247	P	Pn	14 17 02.3	+1.9
KBKI	Kotabaru	13.34	273	P	Pn	14 17 13.0	+2.1
	586nm48nm,0.8s						
TWSI	Taliwang, Sumb	13.36	249	P	Pn	14 17 15.1	+3.8
	876nm86nm,1.1s						
FITZ	Fitzroy Crossi	14.41	195	Pn	Pn	14 17 24.2	-1.4
	0.6nm,0.3s,baz=34,slow=10,SNR=17						
FITZ				LR	LR	14 23 30.3	
	comp=Z,1μm,20.6s,baz=12,slow=39						
FITZ	Fitzroy Crossi	14.41	195	P	Pn	14 17 24.4	-1.2
	baz=14,SNR=34						
BBKI	Banjar Baru	14.65	272	P	P	14 17 32.5	-2.4
	2μm58nm,1.0s						
SRBI	Singaraja	14.75	254	P	P	14 17 34.6	-1.4
	3μm310nm,1.0s						
DNP	Denpasar	14.91	252	P	P	14 17 42.6	+4.7
MTKI	Muara Teweh, K	14.93	282	P	P	14 17 36.1	-2.0
IGBI	Denpasar	15.02	251	P	P	14 17 37.0	-2.0
	2μm137nm,0.8s						
ABJI	Asem Bagus	15.63	256	P	P	14 17 45.9	+0.1
	3μm215nm,1.2s						
SPMM	Sapulut	15.70	304	P	P	14 17 46.0	-0.6
KMMI	Kalianget	15.74	259	P	P	14 17 46.2	-0.8
	3μm187nm,0.9s						
JAGI	Jajag, Banyuwa	15.87	253	P	P	14 17 48.1	-0.4
	2μm135nm,1.3s						
JAGI	Jajag, Banyuwa	15.87	253	P	P	14 17 48.0	-0.4
BLJI	Banyuglugur	16.23	256	P	P	14 17 53.2	+0.7
	2μm115nm,1.0s						
WRAB	Tennant Creek	16.43	164	*ce*P	Pn	14 17 49.0	-3.0
WRAB				pmax	pmax		
	comp=Z,37nm,1.0s						
WRAB	Tennant Creek	16.43	164		Pn	14 17 48.4	-3.6
WRA	Warramunga Arr	16.43	164	Pn	Pn	14 17 48.5	-3.6
	comp=Z,1.9nm,0.3s,baz=347,slow=13,SNR=64						
WRA				LR	LR	14 24 37.2	
	comp=Z,2μm,20.7s,baz=0.0,slow=39						
WRA	Warramunga Arr	16.43	164	P	Pn	14 17 49.6	-2.5
WRA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
WRA	Warramunga Arr	16.43	164	Pn	Pn	14 17 49.6	-2.5
WB2	Warramunga Arr	16.43	164	P	Pn	14 17 48.1	-4.0
	baz=16						
GMJI	Gumukmas	16.50	255	P	P	14 17 56.0	+0.6
	comp=Z,127nm,1.2s						
COEN	Coen	16.66	127	P	Pn	14 17 52.9	-2.1
	baz=17						
COEN	Coen	16.66	127	P	Pn	14 17 56.0	+1.0
COEN	Coen	16.66	127	P	Pn	14 17 53.2	-1.8
KKM	Kota Kinabalu	16.67	307	P	P	14 17 56.8	-0.7
KKM	Kota Kinabalu	16.67	307	P	P	14 17 57.3	-0.2
PBKI	Pangkalan Bun	17.86	274	P	P	14 18 12.6	+2.0
	comp=Z,2μmcomp=Z,131nm,1.1s						
MANU	Manus Island	17.95	84	P	Pn	14 18 09.4	-1.7
PMG	Port Moresby	18.30	108	P	Pn	14 18 13.7	-1.7
	comp=Z,0.4nm,0.3s,baz=304,slow=9.6,SNR=9.6						
PMG	Port Moresby	18.30	108	P	Pn	14 18 14.1	-1.3
PMG				pmax	pmax		
	comp=Z,93nm,1.2s						
PMG	Port Moresby	18.30	108	P	Pn	14 18 14.1	-1.3
PMG	Port Moresby	18.30	108	P	P	14 18 15.8	+0.4
PMG	Port Moresby	18.30	108	P	P	14 18 15.8	+0.4
SBUM	Sibu	18.46	290	P	Pn	14 18 20.0	+2.6
SBUM	Sibu	18.46	290	P	Pn	14 18 18.6	+1.2
STKI	Sintang	18.49	283	P	Pn	14 18 18.8	+1.1
	comp=Z,39nm,0.9s						
UWJI	Ujung Watu	18.62	262	P	Pn	14 18 21.2	+1.8
	comp=Z,2μmcomp=Z,85nm,0.9s						
PCJI	Pacitan	18.67	257	P	Pn	14 18 21.0	+1.1
	comp=Z,160nm,1.2s						
WOJI	Wonogiri, Jawa	18.85	258	P	Pn	14 18 22.9	+0.8
	comp=Z,143nm,0.9s						
QIS	Mount Isa	19.08	150	P	P	14 18 23.7	-0.2
	baz=19,SNR=41						
QIS	Mount Isa	19.08	150	P	P	14 18 24.0	0.0
MBWA	Marble Bar	19.43	208	P	Pn	14 18 29.2	+0.1
PSA00	Pilbara Seismi	19.74	208	P	P	14 18 31.3	+0.2
PSA00				IAmb	IAmb	14 18 33.8	
	comp=Z,180nm,1.1s						
PSA00	Pilbara Seismi	19.74	208	P	Pn	14 18 32.4	-0.3
AS31	Alice Springs	19.90	168	P	P	14 18 33.1	+0.2
ASAR	Alice Springs	19.91	168	P	P	14 18 33.4	+0.4
	comp=Z,0.8nm,0.3s,baz=349,slow=7.8,SNR=6.3						
ASAR				PcP	PcP	14 22 49.1	-0.6
	baz=356,slow=1.6,SNR=1.1						
ASAR				ScP	ScP	14 26 23.2	-1.4
	comp=Z,0.0nm,0.3s,baz=352,slow=2.5,SNR=2.6						
ASAR				LR	LR	14 26 41.6	
	comp=Z,1μm,19.3s,baz=350,slow=38						
ASAR	Alice Springs	19.91	168	P	P	14 18 32.7	-0.3
ASAR	Alice Springs	19.91	168	P	P	14 18 32.7	-0.3
ASPA	Alice Springs	19.91	168	P	P	14 18 33.4	+0.4
	baz=20						
MTSU	Mount Surprise	20.11	135	P	P	14 18 35.5	+0.3
	baz=20,SNR=28						
MTSU	Mount Surprise	20.11	135	P	P	14 18 35.7	+0.5
WRKA	Warakurna	20.84	183	P	P	14 18 43.6	+0.5
	baz=21,SNR=163						
WRKA	Warakurna	20.84	183	P	P	14 18 44.4	+1.2
LEM	Lembang	21.96	262	P	P	14 18 54.4	-0.9
	comp=Z,17nm,0.4s,baz=211,slow=19,SNR=1.2						
RABL	Rabaul	22.60	91	P	P	14 19 02.6	+0.5
CTA	Charters Tower	22.77	136	P	P	14 19 02.8	-1.1
	comp=Z,21nm,0.6s,baz=298,slow=14,SNR=28						
CTA	Charters Tower	22.77	136	P	P	14 19 04.7	+0.8
CTAO	Charters Tower	22.77	136	P	P	14 19 03.7	-0.2
CTAO				pmax	pmax		
	comp=Z,234nm,1.7s						
CTAO	Charters Tower	22.77	136	P	P	14 19 03.7	-0.2
CTAO				IAmb	IAmb	14 19 06.5	
	comp=Z,234nm,1.7s						
CTAO	Charters Tower	22.77	136	P	P	14 19 04.2	+0.3
PPBI	Pangkal Pinang	23.42	274	P	P	14 19 08.9	-1.6
GIRL	Giralia	23.63	217	P	P	14 19 14.0	+1.6
	baz=24,SNR=11						
GIRL	Giralia	23.63	217	P	P	14 19 14.0	+1.6
OOD	Oodnadatta	24.28	167	P	P	14 19 18.8	+0.3
MEEK	Meekatharra	24.71	204	P	P	14 19 21.7	-0.8
	baz=25,SNR=8.8						
MEEK	Meekatharra	24.71	204	P	P	14 19 21.9	-0.6
DSRI	Dabo	25.17	278	P	P	14 19 28.5	+1.8
	comp=Z,14nm,0.9s						
MDSI	Maura Dua	25.26	268	P	P	14 19 24.6	-3.0
	comp=Z,7.8nm,1.3s						
INKA	Innaminka	25.83	157	P	P	14 19 32.0	-0.6
MYKOM	Kota Tinggi	26.30	282	P	P	14 19 39.0	+2.0
MYKOM	Kota Tinggi	26.30	282	P	P	14 19 37.6	+0.6
MYKOM				IAmb	IAmb	14 19 41.0	
	comp=Z,55nm,1.0s						
MULG	Mulgathing	26.39	171	P	P	14 19 38.3	+0.7
QLP	Quilpie	26.42	149	P	P	14 19 39.4	+1.4
FORT	Forrest	26.57	183	P	P	14 19 39.6	+0.3
	baz=27,SNR=14						
FORT	Forrest	26.57	183	P	P	14 19 39.1	-0.1
FORT				IAmb	IAmb	14 20 00.8	
	comp=Z,89nm,0.9s						
FORT	Forrest	26.57	183	P	P	14 19 39.5	+0.3
LCRK	Leigh Creek	27.46	164	P	P	14 19 48.8	+1.5
RK1H	Rockhampton Ha	27.90	135	P	P	14 19 52.1	+0.8
	comp=Z,23nm,0.7s						
JRMM	Jerantut	28.15	286	P	P	14 19 55.0	+1.3
RMQ	Roma	28.89	142	P	P	14 20 01.7	+1.6
	comp=Z,7.8nm,0.9s						
SSLB	Suanglung	28.95	344	P	P	14 20 00.1	-0.5
SSLB				IAmb	IAmb	14 20 04.8	
	comp=Z,78nm,1.3s						
SSLB	Suanglung	28.95	344	P	P	14 20 01.9	+1.3
	comp=Z,37nm,1.1s						
PDSI	Padang	29.19	275	P	P	14 20 01.2	-1.7
PPI	Padang Panjang	29.31	276	P	P	14 20 03.0	-0.9
	comp=Z,23nm,0.9s						
KLBR	Kellerberrin	29.49	201	P	P	14 20 05.2	-0.2
	baz=30,SNR=7.1						
KLBR	Kellerberrin	29.49	201	P	P	14 20 04.9	-0.5
EIDS	Eidsvold	29.60	138	P	P	14 20 07.3	+0.9
	comp=Z,10nm,2.5s						
IPM	Ipoh	29.71	286	P	P	14 20 08.0	+0.5
IPM	Ipoh	29.71	286	P	P	14 20 08.0	+0.5
IPM	Ipoh	29.71	286	P	P	14 20 08.5	+1.0
STKA	Stephens Creek	29.87	159	P	P	14 20 08.1	-0.6
	comp=Z,4.5nm,0.8s,baz=337,slow=10.0,SNR=6.5						
STKA	Stephens Creek	29.87	159	P	P	14 20 08.4	-0.3
	baz=30,SNR=7.9						
STKA	Stephens Creek	29.87	159	P	P	14 20 07.9	-0.8
STKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
STKA	Stephens Creek	29.87	159	P	P	14 20 07.9	-0.8
STKA	Stephens Creek	29.87	159	P	P	14 20 08.3	-0.4
KULM	Kulim	30.30	288	P	P	14 20 13.0	+0.3
KULM	Kulim	30.30	288	P	P	14 20 12.7	0.0
KULM				IAmb	IAmb	14 20 14.8	
	comp=Z,90nm,1.3s						
HTT	Hallett	30.47	164	P	P	14 20 14.4	+0.4
	baz=31,SNR=3.8						
HTT	Hallett	30.47	164	P	P	14 20 15.9	+1.8
JOW	Kunigami	30.78	358	P	P	14 20 16.4	-0.3
	comp=Z,64nm,0.8s,baz=170,slow=6.1,SNR=9.4						
JOW				LR	LR	14 30 52.5	
	comp=Z,698nm,22.0s,baz=92,slow=33						
JOW	Kunigami	30.78	358	P	P	14 20 19.5	+2.7
CMSA	Cobar Meteorol	31.24	153	P	P	14 20 20.9	+0.1
	baz=31,SNR=7.5						
CMSA	Cobar Meteorol	31.24	153	P	P	14 20 21.5	+0.7
RPSI	Rantau Prapat	31.30	282	P	P	14 20 20.6	-0.9
PSI	Prapat	31.32	282	P	P	14 20 20.6	-1.3
	comp=Z,16nm,0.8s,baz=110,slow=6.9,SNR=25						
GSI	Gunungsitoli	32.36	279	P	P	14 20 28.6	-2.3
	comp=Z,33nm,0.9s						
GSI	Gunungsitoli	32.36	279	P	P	14 20 29.3	-1.6
GSI				IAmb	IAmb	14 20 49.7	
	comp=Z,38nm,1.1s						
GSI	Gunungsitoli	32.36	279	P	P	14 20 30.5	-0.4
SRIT	Nakonsritamara	32.38	293	P	P	14 20 31.1	0.0
SRIT				IAmb	IAmb	14 20 33.1	
	comp=Z,62nm,1.0s						
JCJ	Chichijima	33.35	21	LR	LR	14 32 21.4	
	comp=Z,615nm,19.8s,baz=174,slow=33						
ARPS	Mount Arapiles	34.43	162	P	P	14 20 50.3	+1.7
	baz=34,SNR=8.4						
ARPS	Mount Arapiles	34.43	162	P	P	14 20 50.3	+1.7
JSU	Suzuyama	35.42	1	P	P	14 20 58.0	+0.7
SLVN	Son La	35.62	316	P	P	14 20 60.0	+0.8
CAN	Canberra	35.92	152	P	P	14 21 02.5	+1.0
JNU	Nakatsue	37.05	2	P	P	14 21 10.8	-0.4
JNU				IAmb	IAmb	14 21 41.3	
	comp=Z,56nm,0.6s						
JNU	Nakatsue	37.05	2	P	P	14 21 14.2	+3.1
NJ2	Nanjing	37.36	345	*e*P	P	14 21 15.6	+1.9
NJ2				pP	sP	14 21 22.0	-0.3
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CM31	Chiang Mai Arr	37.55	308	P	P	14 21 15.9	+0.3
CM31				IAmb	IAmb	14 21 18.1	
	comp=Z,34nm,0.9s						
CMAR	Chiang Mai Arr	37.55	308	P	P	14 21 16.5	+0.9
	comp=Z,24nm,0.7s,baz=140,slow=7.7,SNR=136						
CMAR				PcP	PcP	14 23 34.5	+1.0
	comp=Z,5.4nm,0.8s,baz=168,slow=2.6,SNR=7.3						
CMAR	Chiang Mai Arr	37.55	308	*i* P	P	14 21 17.1	+1.5
CMAR				pmax	pmax		
	comp=Z,24nm,0.7s						
CMAR	Chiang Mai Arr	37.55	308	P	P	14 21 16.7	+1.2
GYA	Guiyang	37.58	325	⇓P	P	14 21 17.2	+1.3
GYA				pmax	pmax		
	comp=Z,38nm,0.7s						
CHTO	Chiang Mai	37.74	308	P	P	14 21 17.8	+0.6
CHTO				pmax	pmax		
	comp=Z,58nm,0.8s						
CHTO	Chiang Mai	37.74	308	P	P	14 21 17.8	+0.6
CHTO				IAmb	IAmb	14 21 19.6	
	comp=Z,58nm,0.8s						
CHTO	Chiang Mai	37.74	308	P	P	14 21 18.8	+1.5
JHJ	Hachijo jima 2	38.28	14	LR	LR	14 35 08.2	
	comp=Z,842nm,19.9s,baz=94,slow=33						
SANVU	Saraoutou	38.74	110	P	P	14 21 25.6	-0.1
SANVU				IAmb	IAmb	14 21 28.3	
	comp=Z,121nm,1.1s						
SANVU	Saraoutou	38.74	110	P	P	14 21 26.8	+1.1
KMI	Kunming	38.99	320	⇓P	P	14 21 29.5	+1.6
KMI				pP	pwP	14 21 38.1	-1.3
KMI				sP	sP	14 21 43.4	+6.9
KMI				pmax	pmax		
	comp=Z,35nm,1.0s						
KMI				LR	LR		
	comp=Z,300nm,13.3s						
KMI				LR	LR		
	comp=Z,320nm,14.8s						
KMI				LR	LR		
	comp=Z,360nm,17.0s						
ENH	Enshi	39.19	332	P	P	14 21 29.1	-0.2
JWT	Wachi	39.57	8	P	P	14 21 32.8	+0.5
JWT				IAmb	IAmb	14 21 34.5	
	comp=Z,68nm,0.9s						
INU	Inuyama	39.87	10	P	P	14 21 35.1	+0.3
INU				IAmb	IAmb	14 21 36.6	
	comp=Z,38nm,0.9s						
INU	Inuyama	39.87	10	P	P	14 21 35.6	+0.8
TJN	Taejon	40.32	357	*c i*P	P	14 21 39.4	+0.9
TJN	Taejon	40.32	357	P	P	14 21 39.8	+1.3
	comp=Z,230nm,1.0s						
MAJO	Matsushiro	41.25	11	*c i*P	P	14 21 45.6	-0.6
MAJO				pmax	pmax		
	comp=Z,63nm,0.8s						
MAJO	Matsushiro	41.25	11	P	P	14 21 45.2	-1.0
MAJO				IAmb	IAmb	14 21 47.2	
	comp=Z,64nm,0.8s						
MAJO	Matsushiro	41.25	11	P	P	14 21 46.0	-0.2
MAT	Matsushiro	41.25	11	P	P	14 21 45.3	-0.9
MJAR	Matsushiro Arr	41.25	11	P	P	14 21 44.7	-1.5
	comp=Z,36nm,0.8s,baz=186,slow=9.3,SNR=82						
MJAR				LR	LR	14 36 04.9	
	comp=Z,329nm,21.0s,baz=205,slow=32						
MJAR	Matsushiro Arr	41.25	11	P	P	14 21 45.3	-0.9
MJAR				pmax	pmax		
	comp=Z,18nm,1.1s						
MJAR	Matsushiro Arr	41.25	11	P	P	14 21 45.3	-0.9
MJB9	Matsu-Tunnel	41.25	11	P	P	14 21 45.2	-1.0
MJB9				IAmb	IAmb	14 21 47.2	
	comp=Z,71nm,0.8s						
JYT	Yasato	41.35	13	P	P	14 21 46.5	-0.5
JYT				IAmb	IAmb	14 21 48.8	
	comp=Z,94nm,1.0s						
KSAR	Wonju Array Be	41.36	358	P	P	14 21 48.0	+0.9
KSAR	Wonju Array Be	41.36	358	P	P	14 21 48.0	+0.9
KSRS	Korea Array	41.37	358	P	P	14 21 48.0	+0.9
	comp=Z,17nm,0.7s,baz=174,slow=9.8,SNR=88						
KSRS				LR	LR	14 37 44.0	
	comp=Z,591nm,21.4s,baz=170,slow=34						
KS19	Wonju Array Si	41.42	358	P	P	14 21 48.0	+0.4
INCN	Inchon	41.46	357	P	P	14 21 46.7	-1.3
INCN				pmax	pmax		
	comp=Z,51nm,1.0s						
INCN	Inchon	41.46	357	P	P	14 21 46.7	-1.3
INCN				IAmb	IAmb	14 21 50.3	
	comp=Z,51nm,1.0s						
INCN	Inchon	41.46	357	P	P	14 21 49.6	+1.6
	comp=Z,54nm,1.0s						
CD2	Chengdu	42.62	327	P	P	14 21 58.0	+0.4
CD2				pP	pwP	14 22 09.2	0.0
CD2				sP	sP	14 22 13.9	+7.6
CD2				PP	PP	14 23 38.6	+1.8
CD2				S	S	14 28 21.3	+1.9
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
CD2				pmax	pmax		
	comp=Z,240nm,7.3s						
CD2				LR	LR		
	comp=Z,1μm,29.0s						
CD2				LR	LR		
	comp=Z,2μm,24.9s						
CD2				LR	LR		
	comp=Z,2μm,26.3s						
XAN	Xi'an	42.63	334	P	P	14 21 57.4	-0.2
XAN				pP	sP	14 22 05.5	-0.7
XAN				pmax	pmax		
	comp=Z,20nm,0.9s						
JSD	Sado	42.71	10	P	P	14 21 57.9	-0.2
JSD				IAmb	IAmb	14 21 59.2	
	comp=Z,39nm,0.7s						
JMM	Marumori	43.05	13	P	P	14 22 01.2	+0.3
TIY	Taiyuan	44.53	341	*e*P	P	14 22 12.5	-0.4
TIY				S	S	14 28 41.5	-5.6
TIY				pmax	pmax		
	comp=Z,290nm,4.8s						
BJT	Baijiatuau	45.59	346	P	P	14 22 20.8	-0.3
BJT				pmax	pmax		
	comp=Z,12nm,0.9s						
BJT	Baijiatuau	45.59	346	P	P	14 22 20.8	-0.3
BJI	Beijing	45.61	346	P	P	14 22 21.4	+0.1
BJI				pP	sP	14 22 29.6	-0.3
BJI				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH	Lanzhou	46.64	331	⇑P	P	14 22 30.8	+1.0
LZH				pP	sP	14 22 39.0	+0.6
LZH				sS	sS	14 29 32.5	+4.1
LZH				pmax	pmax		
	comp=Z,35nm,1.3s						
LZH				pmax	pmax		
	comp=Z,260nm,5.4s						
LZH				LR	LR		
	comp=Z,470nm,13.0s						
LZH				LR	LR		
	comp=Z,540nm,13.5s						
LZH				LR	LR		
	comp=Z,520nm,16.7s						
SHL	Shillong	46.92	311	P	P	14 22 31.9	-0.2
SHL				pmax	pmax		
	comp=Z,53nm,1.2s						
SHL	Shillong	46.92	311	P	P	14 22 31.9	-0.2
VLA	Vladivostok	47.05	2	*ce*P	P	14 22 33.9	+1.3
VLA				pmax	pmax		
	comp=Z,37nm,0.9s						
HHC	Hu-ho-hao-te	47.66	342	*e*P	P	14 22 41.1	+3.6
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,230nm,8.8s						
CN2	Changchun	47.83	356	*e*P	P	14 22 37.5	-1.1
CN2				*e*sP	pwP	14 22 55.5	+6.3
CN2				*e*S	S	14 29 31.4	-2.7
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				LR	LR		
	comp=Z,400nm,20.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
CN2				LR	LR		
	comp=Z,600nm,20.0s						
BTO	Baotou	47.95	340	*e*P	P	14 22 45.5	+5.7
BTO				LR	LR		
	comp=Z,1μm,17.1s						
BTO				LR	LR		
	comp=Z,2μm,16.3s						
USA0B	Ussuriysk Arra	48.14	2	P	P	14 22 41.6	+0.6
USA0B				pmax	pmax		
	comp=Z,32nm,0.8s						
USA0B	Ussuriysk Arra	48.14	2	P	P	14 22 41.6	+0.6
USA0B				IAmb	IAmb	14 22 42.6	
	comp=Z,32nm,0.8s						

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USRK  Ussuriysk Ar.    48.14   2   P      P       14 22 41.9 +0.9
      comp=Z,27nm,0.7s,baz=189,slow=7.2,SNR=45
USRK                               PcP    PcP     14 24 07.7 -0.6
      comp=Z,3.6nm,0.6s,baz=179,slow=6.2,SNR=2.7
USRK                               LR     LR      14 43 47.8
      comp=Z,333nm,19.0s,baz=148,slow=37
USRK  Ussuriysk Ar.    48.14   2   P      P       14 22 41.6 +0.6
USRK  Ussuriysk Ar.    48.14   2   P      P       14 22 41.6 +0.6
MDJ   Mudanjiang       48.50   0   P      P       14 22 44.8 +1.0
MDJ                                pmax   pmax
      comp=Z,41nm,1.6s
MDJ                                pmax   pmax
      comp=Z,530nm,8.9s
MDJ   Mudanjiang       48.50   0   P      P       14 22 44.1 +0.3
MDJ                                IAmb   IAmb    14 22 46.1
      comp=Z,31nm,0.9s
TEY   Ternei           49.33   7⇓eP     P       14 22 51.0 +0.8
TEY                                pmax   pmax
      comp=N,20nm,1.0s
TEY                                pmax   pmax
      comp=Z,30nm,1.0s
ASAJ  Asahikawa        49.42  12   LR     LR      14 43 34.6
      comp=Z,361nm,20.5s,baz=188,slow=36
LSA   Lhasa            49.80 315   P      P       14 22 55.5 +0.9
LSA                                pmax   pmax
      comp=Z,34nm,0.8s
LSA   Lhasa            49.80 315   P      P       14 22 55.5 +0.9
LSA                                IAmb   IAmb    14 22 56.8
      comp=Z,34nm,0.8s
ODAN  Odare            51.02 310  eP      P       14 23 03.5 -0.2
TAPN  Taplejung        51.03 310  eP      P       14 23 03.3 -0.5
GTA   Gaotai           51.22 331 ⇓P      P       14 23 05.0 +0.2
GTA                                pP     pwP     14 23 14.1 -2.5
GTA                                sP     sP      14 23 18.4 +4.9
GTA                                PcP    PcP     14 24 21.4 +1.5
GTA                                pmax   pmax
      comp=Z,27nm,0.9s
GTA                                pmax   pmax
      comp=Z,330nm,6.9s
GTA                                LR     LR
      comp=Z,210nm,16.0s
GTA                                LR     LR
      comp=Z,280nm,17.1s
GTA                                LR     LR
      comp=Z,250nm,19.3s
RAMN  Ramite           51.68 309  eP      P       14 23 08.9 +0.3
      comp=Z,83nm,0.5s
YSS   Yuzh-Sakhalins   52.17  11  eP      P       14 23 10.6 -0.9
YSS                                pmax   pmax
      comp=Z,20nm,1.4s
PKI   Pulchoki         52.91 309  eP      P       14 23 17.2 -0.6
PKIN  Phulchoki        52.92 309  eP      P       14 23 17.0 -0.8
      comp=Z,65nm,1.2s
KKN   Kakani           53.11 309  eP      P       14 23 18.9 -0.3
KLR   Kul'dur          53.15   2   P      P       14 23 18.9 +0.1
      comp=Z,23nm,1.0s,baz=196,slow=4.9,SNR=39
KLR                                LR     LR      14 43 20.9
      comp=Z,286nm,21.6s,baz=180,slow=33
KLR   Kul'dur          53.15   2ceP     P       14 23 19.1 +0.3
KLR                                pmax   pmax
      comp=Z,43nm,1.1s
DMN   Daman            53.16 309  eP      P       14 23 19.3 -0.3
      comp=Z,114nm,1.1s
GKN   Gorkha           53.71 309  eP      P       14 23 23.2 -0.3
      comp=Z,135nm,1.0s
KOLN  Koldanda         54.41 308  eP      P       14 23 28.6  0.0
      comp=Z,178nm,0.9s
DANN  Dangsing         54.56 309  eP      P       14 23 29.6 -0.2
      comp=Z,157nm,0.9s
HYB   Hyderabad        54.64 295  i P     P       14 23 29.0 -1.3
      comp=Z,80nm,1.0s
GRNR  Gornyy           54.98   5⇑iP     P       14 23 33.4 +1.3
GRNR                              eS      S       14 31 17.8 +5.2
GRNR                               pmax   pmax
      comp=N,6.0nm,1.2s
GRNR                               pmax   pmax
      comp=Z,10.0nm,0.9s
GRNR                               smax   smax
      comp=N,2.0nm,0.9s
GRNR                               MLR    MLR
      comp=N,170nm,14.0s
GRNR                               MLR    MLR
      comp=E,140nm,14.0s
GRNR                               MLR    MLR
      comp=Z,230nm,18.0s
PYUN  Piuthan          55.04 309  eP      P       14 23 33.5 +0.3
      comp=Z,208nm,1.0s
ULN   Ulaanbaatar      55.38 342c iP     P       14 23 36.3 +1.0
ULN                                pmax   pmax
      comp=Z,47nm,1.7s
ULN   Ulaanbaatar      55.38 342   P      P       14 23 35.8 +0.6
SONM  Songino Array    55.56 341   P      P       14 23 37.0 +0.5
      comp=Z,11nm,1.0s,baz=156,slow=8.3,SNR=33
SONM                               PcP    PcP     14 24 36.3 +0.1
      comp=Z,5.9nm,0.8s,baz=162,slow=4.3,SNR=3.7
TYV   Tymovskoe        55.91  10  eP      P       14 23 39.9 +1.2
TYV                                pmax   pmax
      comp=Z,21nm,0.9s
TYV                                pmax   pmax
      comp=Z,300nm,6.4s
CIT   Chita            57.54 348  eP      P       14 24 00.2  +10
ZEA   Zeya             57.66 358  eP      P       14 23 51.3 +0.1
ZEA                               e               14 24 00.2
ZEA                                pmax   pmax
      comp=N,10.0nm,0.9s
ZEA                                pmax   pmax
      comp=Z,10.0nm,1.0s
ZAK   Zakamensk        58.79 341  eP      P       14 23 59.3  0.0
ZAK                                pmax   pmax
      comp=Z,15nm,1.2s
POO   Poona            59.24 294  eP      P       14 23 59.0 -3.9
TLY   Talaya           59.79 342   P      P       14 24 06.5 +0.4
      comp=Z,3.0nm,0.5s,baz=237,slow=9.3,SNR=3.8
TLY   Talaya           59.79 342  eP      P       14 24 06.0 -0.1
TLY                                pmax   pmax
      comp=Z,55nm,1.5s
TLY   Talaya           59.79 342   IAmb   IAmb    14 24 11.3
      comp=Z,57nm,1.8s
MOY   Mondy            60.65 340  eP      P       14 24 13.3 +1.3
MOY                                pmax   pmax
      comp=Z,88nm,2.1s
WMQ   Urumqi           60.72 326  eP      P       14 24 13.8 +1.1
WMQ                                sP     pwP     14 24 29.2 +4.6
WMQ                                pmax   pmax
      comp=Z,85nm,0.9s
WMQ                                pmax   pmax
      comp=Z,450nm,5.9s
PETK  Petropavlovsk-   61.75  19   P      P       14 24 18.6 -0.8
      comp=Z,14nm,0.9s,baz=203,slow=9.7,SNR=10
PETK                               LR     LR      14 46 47.2
      comp=Z,217nm,21.9s,baz=186,slow=32
PETK  Petropavlovsk-   61.75  19   P      P       14 24 20.1 +0.7
PETK  Petropavlovsk-   61.75  19   P      P       14 24 20.1 +0.7
PET   Petropavlovsk    61.99  19⇑eP     P       14 24 21.1 +0.2
PET                                pmax   pmax
      comp=Z,48nm,1.2s
BOD   Bodaibo          62.98 351  eP      P       14 24 28.1 +0.6
BOD                                pmax   pmax
      comp=Z,31nm,1.9s
ZSN   Zaisan           64.57 328  eP      P       14 24 38.1 -0.2
      baz=328
ZSN   Zaisan           64.57 328  eP      P       14 24 38.0 -0.2
DGZ   Jazzator, Alta   64.75 331⇓iP     P       14 24 39.8 +0.3
DGZ                                pmax   pmax
      comp=Z,47nm,1.0s
SHLS  Shalkode         65.15 322  eP      P       14 24 40.9 -1.4
      comp=Z,14nm,0.8s,baz=322
SHLS  Shalkode         65.15 322  eP      P       14 24 40.8 -1.4
SHLS                               pmax   pmax
      comp=Z,13nm,0.8s
PDGK  Podgornoye       65.22 322   P      P       14 24 42.6 -0.1
UZB   Uzynbulak        65.42 322  eP      P       14 24 44.1 +0.1
      comp=Z,8.1nm,0.7s,baz=322
UZB   Uzynbulak        65.42 322  eP      P       14 24 44.1 +0.1
UZB                                pmax   pmax
      comp=Z,8.0nm,0.7s
PRZ   Przheval'sk      65.45 321   P      P       14 24 44.4 +0.1
PRZ                                pmax   pmax
      comp=Z,29nm,1.0s
PRZ   Przheval'sk      65.45 321   P      P       14 24 44.4 +0.1
PRZ                                IAmb   IAmb    14 24 46.8
      comp=Z,29nm,0.9s
MK31  Makanchi Array   65.56 326d iP     P       14 24 44.8 +0.1
MK31  Makanchi Array   65.56 326   P      P       14 24 44.6 -0.1
MKAR  Makanchi Array   65.56 326   P      P       14 24 45.0 +0.3
      comp=Z,43nm,0.7s,baz=123,slow=8.0,SNR=279
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MKAR  Makanchi Array   65.56 326  i P     P       14 24 45.0 +0.3
MKAR                               pmax   pmax
      comp=Z,44nm,0.7s
MKAR  Makanchi Array   65.56 326   P      P       14 24 44.6 -0.1
MA2   Magadan          65.68  12⇓iP     P       14 24 46.7 +1.6
MA2                                pmax   pmax
      comp=Z,54nm,1.1s
MAKZ  Makanchi         65.74 326   P      P       14 24 45.9 +0.1
MAKZ                               pmax   pmax
      comp=Z,55nm,1.1s
MAKZ  Makanchi         65.74 326   P      P       14 24 45.9 +0.1
SATY  Saty             65.75 321  eP      P       14 24 46.5 +0.3
      comp=Z,17nm,0.6s,baz=321
SATY  Saty             65.75 321  eP      P       14 24 46.4 +0.3
SATY                               pmax   pmax
      comp=Z,17nm,0.6s
YAK   Yakutsk          65.95   0   P      P       14 24 45.0 -1.8
      comp=Z,74nm,0.8s,baz=7.5,slow=0.8,SNR=68
YAK   Yakutsk          65.95   0c iP     P       14 24 47.5 +0.7
YAK                               e*PP    pwP     14 24 57.8 -0.2
YAK                               e               14 25 17.5
YAK                               e               14 27 12.4
YAK                               eS      S       14 33 33.7 +1.1
YAK                               e*SS    sS      14 33 56.6  +13
YAK                               e               14 34 42.0
YAK                               eSS     SS      14 37 48.5 +0.3
YAK                                pmax   pmax
      comp=Z,151nm,0.9s
YAK                                pmax   pmax
      comp=N,31nm,1.1s
YAK                                pmax   pmax
      comp=E,9.0nm,1.0s
YAK                                pmax   pmax
      comp=Z,93nm,2.7s
YAK                                pmax   pmax
      comp=N,78nm,2.8s
YAK                                pmax   pmax
      comp=E,67nm,2.2s
YAK                                smax   smax
      comp=N,135nm,2.5s
YAK                                smax   smax
      comp=E,53nm,2.5s
YAK   Yakutsk          65.95   0   P      P       14 24 47.3 +0.5
KDJ   Kajisay          66.05 320   P      P       14 24 48.3 +0.1
KDJ                                pmax   pmax
      comp=Z,21nm,0.8s
KDJ   Kajisay          66.05 320   P      P       14 24 48.3 +0.1
KDJ                                IAmb   IAmb    14 24 49.8
      comp=Z,21nm,0.8s
MDOK  Medeo            66.66 321  eP      P       14 24 52.1 +0.1
      baz=321
MDOK  Medeo            66.66 321  eP      P       14 24 52.1 +0.1
AAA   Alma-Ata         66.77 321  eP      P       14 24 52.9 +0.3
      comp=Z,23nm,0.9s,baz=321
AAA   Alma-Ata         66.77 321  eP      P       14 24 52.8 +0.3
AAA                                pmax   pmax
      comp=Z,23nm,0.9s
TDK   Taldyqorghan     66.78 323  eP      P       14 24 52.7 +0.1
      comp=Z,19nm,0.9s,baz=323
TDK   Taldyqorghan     66.78 323  eP      P       14 24 52.6 +0.1
TDK                                pmax   pmax
      comp=Z,19nm,0.9s
BOOM  Boomskoye usch   67.03 320   P      P       14 24 54.5 +0.1
BOOM                               pmax   pmax
      comp=Z,31nm,1.0s
BOOM  Boomskoye usch   67.03 320   P      P       14 24 54.5 +0.1
BOOM                               IAmb   IAmb    14 26 41.1
      comp=Z,31nm,1.0s
TKM2  Tokmak 2         67.46 320   P      P       14 24 57.4 +0.3
      SNR=15
TKM2  Tokmak 2         67.46 320  i P     P       14 24 57.1 -0.1
TKM2                               pmax   pmax
      comp=Z,21nm,0.8s
KUU   Kurty            67.47 321  eP      P       14 24 57.0  0.0
      comp=Z,49nm,0.8s,baz=321
KUU   Kurty            67.47 321  eP      P       14 24 56.9  0.0
KUU                                pmax   pmax
      comp=Z,49nm,0.8s
UCH   Uchtor           67.83 319   P      P       14 25 01.1 +1.3
      SNR=8.4
AAK   Ala-Archa        68.03 319   P      P       14 25 01.1 +0.4
      comp=Z,12nm,0.9s,baz=136,slow=5.2,SNR=11
AAK   Ala-Archa        68.03 319   P      P       14 25 01.4 +0.7
      SNR=7.0
AAK   Ala-Archa        68.03 319ceP     P       14 25 01.3 +0.6
AAK                                pmax   pmax
      comp=Z,89nm,1.7s
AAK   Ala-Archa        68.03 319   P      P       14 25 00.9 +0.2
AAK                                IAmb   IAmb    14 25 26.6
      comp=Z,18nm,0.7s
AML   Almayashu        68.32 319   P      P       14 25 03.7 +0.9
      SNR=9.8
USP   Ospenovka        68.33 320   P      P       14 25 02.9 +0.5
      SNR=19
SGDS  Sogindy          68.33 320  eP      P       14 25 02.1 -0.4
      baz=320
SGDS  Sogindy          68.33 320  eP      P       14 25 02.4 -0.1
EKS2  Erkin-Say        68.51 319   P      P       14 25 04.6 +0.9
      SNR=11
SEM   Semipalatinsk    68.78 329  eP      P       14 25 04.5 -0.8
      baz=329
SEM   Semipalatinsk    68.78 329  eP      P       14 25 04.5 -0.8
ZAA0  Zalesovo Array   68.79 334   P      P       14 25 04.3 -0.7
ZALV  Zalesovo Beam    68.79 334   P      P       14 25 04.7 -0.2
      comp=Z,41nm,0.9s,baz=108,slow=4.8,SNR=97
ZALV  Zalesovo Beam    68.79 334  i P     P       14 25 04.6 -0.4
ZALV                               pmax   pmax
      comp=Z,41nm,0.9s
SEY   Seymchan         69.07  11   P      P       14 25 07.7 +1.1
      comp=Z,48nm,0.8s,baz=203,slow=5.0,SNR=81
BTLS  Baital           69.47 321  eP      P       14 25 09.0 -0.4
      baz=321
BTLS  Baital           69.47 321  eP      P       14 25 09.0 -0.4
KURBB Kurchatov Arra   69.81 328   P      P       14 25 11.6 +0.3
      comp=Z,80nm,0.8s,baz=129,slow=5.5,SNR=513
KURK  Kurchatov        69.81 328deP     P       14 25 11.5 +0.1
KURK                               pmax   pmax
      comp=Z,173nm,1.0s
KURK  Kurchatov        69.81 328   P      P       14 25 11.2 -0.1
IUG   Iuzhnay          70.78 317  eP      P       14 25 17.4 -0.3
      baz=317
IUG   Iuzhnay          70.78 317  eP      P       14 25 17.3 -0.3
KKAR  Karatay Array    70.86 318   P      P       14 25 17.7 -0.3
KKAR  Karatay Array    70.86 318   P      P       14 25 17.7 -0.3
BRLS  Borolday         71.28 318  eP      P       14 25 20.1 -0.5
      baz=318
BRLS  Borolday         71.28 318  eP      P       14 25 20.0 -0.5
HRA   Herat            73.81 307   P      P       14 25 35.8 -0.3
WSAR  Wadi Sarin       74.18 295   P      P       14 25 38.2  0.0
      comp=Z,11nm,0.7s,baz=133,slow=4.3,SNR=4.4
BVAR  Borovoye Array   75.37 328   P      P       14 25 44.8 +0.4
      comp=Z,46nm,0.9s,baz=186,slow=11,SNR=151
BRVK  Borovoye         75.44 328c iP     P       14 25 45.3 +0.5
BRVK                               pmax   pmax
      comp=Z,94nm,1.3s
BRVK  Borovoye         75.44 328   P      P       14 25 45.0 +0.1
TIXI  Tiksi            75.61 360   P      P       14 25 44.7 -0.7
      comp=Z,18nm,0.8s,baz=149,slow=4.4,SNR=39
TIXI  Tiksi            75.61 360⇑eP     P       14 25 45.1 -0.3
TIXI                               pmax   pmax
      comp=Z,28nm,1.0s
TIXI  Tiksi            75.61 360   P      P       14 25 44.9 -0.5
TIXI                               IAmb   IAmb    14 25 46.6
      comp=Z,22nm,0.9s
BILL  Bilibino         76.43  13  eP      P       14 25 51.2 +1.1
BILL                              e               14 25 59.4
BILL                              e               14 26 05.3
BILL                              e               14 28 38.4
BILL                               pmax   pmax
      comp=Z,11nm,2.5s
BILL  Bilibino         76.43  13   P      P       14 25 49.7 -0.5
MAW   Mawson           77.45 201   P      P       14 25 56.1 +0.2
      comp=Z,7.6nm,1.0s,baz=62,slow=14,SNR=4.5
MAW   Mawson           77.45 201   P      P       14 25 56.1 +0.2
MAW                                pmax   pmax
      comp=Z,10.0nm,1.7s
GEYT  Alibeck          77.98 310   P      P       14 26 00.1 +0.5
      comp=Z,9.1nm,0.9s,baz=189,slow=12,SNR=14
GEYT  Alibeck          77.98 310   P      P       14 26 00.1 +0.5
UNV   Unalaska Valle   78.35  33   P      P       14 26 01.5 +0.3
      baz=246
NRIK  Noril'sk         78.65 346   P      P       14 26 03.1 +0.6
      comp=Z,18nm,0.9s,baz=135,slow=6.1,SNR=21
NRIK  Noril'sk         78.65 346c iP     P       14 26 03.4 +0.9
NRIK                               pmax   pmax
      comp=Z,42nm,1.2s
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NRIK  Noril'sk         78.65 346   P      P       14 26 03.0 +0.5
NRIK                               IAmb   IAmb    14 26 04.6
      comp=Z,41nm,1.1s
AB31  Akbulak array    79.95 321   P      P       14 26 09.8 -0.3
ABKAR Akbulak array    79.95 321   P      P       14 26 10.1  0.0
ABKAR Akbulak array    79.95 321   P      P       14 26 10.0  0.0
ABKAR                              IAmb   IAmb    14 26 11.2
      comp=Z,46nm,0.9s
FALS  False Pass       80.41  33   P      P       14 26 12.0 -0.4
      baz=249
GAMB  Gambell          80.45  23   P      P       14 26 12.6 +0.2
      baz=240
OPO   Ambohidratompo   81.43 252   P      P       14 26 18.5 -0.4
      comp=Z,4.1nm,0.9s,baz=72,slow=4.0,SNR=4.8
AKTO  Aktyubinsk       81.50 322   P      P       14 26 18.7 +0.3
      comp=Z,30nm,0.8s,baz=105,slow=7.0,SNR=64
SVE   Sverdlovsk       82.05 329deP     P       14 26 21.5 +0.4
SVE                                pmax   pmax
      comp=Z,62nm,1.0s
SDPT  Sand Point       82.16  33   P      P       14 26 21.4 -0.2
      baz=251
CHNA  Chernabura Isl   82.48  33   P      P       14 26 23.9 +0.5
      baz=252
ARU   Arti             83.01 328   P      P       14 26 25.7 -0.4
      comp=Z,9.3nm,0.8s,baz=111,slow=1.3,SNR=33
ARU   Arti             83.01 328c iP     P       14 26 26.0 -0.1
ARU                                S      S       14 36 44.6 +0.8
ARU                                SS     SS      14 42 09.0 +1.3
ARU                                pmax   pmax
      comp=Z,30nm,0.8s
ARU   Arti             83.01 328   P      P       14 26 25.9 -0.1
ARU                                IAmb   IAmb    14 26 27.1
      comp=Z,28nm,0.8s
CHGN  Chignik          83.57  32   P      P       14 26 29.9 +1.0
      baz=253
QRN   Al-Qurain        84.60 299  eP      P       14 26 34.8 -0.1
KBD   Kabd             84.85 300  eP      P       14 26 36.2 +0.1
UMR   Umm Al-Rimmam    84.88 300  eP      P       14 26 36.2 -0.1
CHIR  Chirikof Islan   84.94  33   P      P       14 26 36.0 +0.1
      baz=255
MIB   Mutribah         85.24 300  eP      P       14 26 38.0 -0.1
RST   Umm Al-Ruwaisa   85.50 300  eP      P       14 26 39.0 -0.4
RDOG  Red Dog Mine     85.58  20   P      P       14 26 39.4 +0.5
      baz=248
QSPA  South Pole Qui   85.85 180   P      P       14 26 39.8 -0.8
QSPA                               IAmb   IAmb    14 26 40.7
      comp=Z,20nm,1.1s
P18K  Big Mountain,    86.06  30   P      P       14 26 41.5  0.0
      baz=255
RAYN  Ar Rayn          86.14 294   P      P       14 26 42.6 -0.1
RAYN                               pmax   pmax
      comp=Z,59nm,0.9s
RAYN  Ar Rayn          86.14 294   P      P       14 26 42.6 -0.1
SYO   Syowa Base       86.17 201⇑eX     P       14 26 40.8 -1.0
OHAK  Old Harbor       86.53  32   P      P       14 26 44.1 +0.3
      baz=257
TTA   Tatalina         86.62  26   P      P       14 26 44.5 +0.2
TTA                                pmax   pmax
      comp=Z,24nm,1.1s
TTA   Tatalina         86.62  26   P      P       14 26 44.5 +0.2
TTA                                IAmb   IAmb    14 26 46.9
      comp=Z,24nm,1.1s
TTA   Tatalina         86.62  26   P      P       14 26 44.3  0.0
      baz=254,SNR=12
O19K  Port Alsworth    86.70  29   P      P       14 26 44.8 +0.2
      baz=256
GCSA  Galena City Sc   86.76  24   P      P       14 26 45.2 +0.4
      baz=253
N19K  Bonanza Creek    86.78  28   P      P       14 26 45.6 +0.5
N19K  Bonanza Creek    86.78  28   P      P       14 26 45.6 +0.5
      baz=256
L19K  White Mountain   86.95  27   P      P       14 26 46.4 +0.6
      baz=255
KDAK  Kodiak Island    87.03  32   P      P       14 26 46.3 +0.1
      baz=258
M19K  Big River Lodg   87.09  27   P      P       14 26 47.0 +0.5
      baz=256
L20K  Farewell, AK     87.46  27   P      P       14 26 49.0 +0.7
      baz=256
O20K  Slope Mountain   87.50  29   P      P       14 26 48.8 +0.2
      baz=257
K20K  Telida           87.59  26   P      P       14 26 49.0 +0.1
J20K  Nowinta River    87.75  25   P      P       14 26 49.6  0.0
      baz=256,SNR=6.8
BELG  Belogornoye      88.28 323⇓eP     P       14 26 52.5 +0.2
BELG                               pmax   pmax
      comp=Z,10.0nm,0.9s
PPLA  Purkeypile       88.31  27   P      P       14 26 52.6 +0.1
      baz=258
KIRV  Kirov            88.32 329⇓eP     P       14 26 51.6 -0.8
IMAR  Indian Mountai   88.35  23   P      P       14 26 52.4  0.0
CHUM  Lake Minchumin   88.47  26   P      P       14 26 53.1 +0.1
      baz=258,SNR=10
GNI   Garni            88.62 310ceP     P       14 26 55.7 +1.2
GNI                                pmax   pmax
      comp=Z,15nm,0.8s
H21K  Melozitna Rive   88.66  24   P      P       14 26 54.2 +0.3
H21K                               IAmb   IAmb    14 26 55.3
      comp=Z,13nm,1.4s
H21K  Melozitna Rive   88.66  24   P      P       14 26 54.2 +0.3
      baz=257
SUA   Susitna One      88.69  28   P      P       14 26 54.7 +0.5
A21K  Barrow           88.74  18   P      P       14 26 54.4 +0.3
A21K                               IAmb   IAmb    14 26 55.6
      comp=Z,23nm,1.2s
A21K  Barrow           88.74  18   P      P       14 26 54.3 +0.2
      baz=253
I21K  Tanana           88.89  24   P      P       14 26 55.4 +0.4
      baz=258
M22K  Willow           89.04  28   P      P       14 26 55.7  0.0
      baz=260
SEW   Seward           89.07  30   P      P       14 26 55.7 -0.1
      baz=260
CUT   Chulitna         89.09  27   P      P       14 26 56.5 +0.6
      baz=259
BPAW  Bear Paw Mtn.    89.09  26   P      P       14 26 56.2 +0.2
      baz=259
RC01  Rabbit Creek A   89.10  29   P      P       14 26 56.3 +0.2
RC01                               IAmb   IAmb    14 26 57.9
      comp=Z,19nm,0.9s
RC01  Rabbit Creek A   89.10  29   P      P       14 26 55.4 -0.6
      baz=260
TRF   Thorofare Moun   89.27  26   P      P       14 26 56.4 -0.7
      baz=259
MLY   Manley           89.37  25   P      P       14 26 57.2 -0.1
MLY   Manley           89.37  25   P      P       14 26 56.5 -0.8
      baz=259,SNR=6.6
PMR   Palmer           89.47  28   P      P       14 26 57.1 -0.7
      baz=260
ZEI   Tsey             89.53 313  eP      P       14 26 58.7 -0.1
ZEI                                pmax   pmax
      comp=Z,7.0nm,1.4s
PWL   Port Wells       89.74  29   P      P       14 26 58.4 -0.7
      baz=261
KNK   Knik Glacier     89.76  28   P      P       14 26 58.7 -0.5
KNK   Knik Glacier     89.76  28   P      P       14 26 58.6 -0.5
      baz=261
SML   Sawmill          89.88  28   P      P       14 26 58.5 -1.3
SML                                IAmb   IAmb    14 27 01.2
      comp=Z,24nm,0.8s
SML   Sawmill          89.88  28   P      P       14 26 59.3 -0.5
      baz=261
RND   Reindeer         89.90  26   P      P       14 26 59.7 -0.2
RND                                pmax   pmax
      comp=Z,23nm,1.0s
RND   Reindeer         89.90  26   P      P       14 26 59.7 -0.2
RND                                IAmb   IAmb    14 27 01.2
      comp=Z,23nm,1.0s
MCK   McKinley         89.92  26   P      P       14 26 58.7 -1.2
      baz=261,SNR=6.3
WAT1  Susitna Watana   89.94  27   P      P       14 26 59.6 -0.4
      baz=261
I23K  Minto, Yukon-K   89.97  25   P      P       14 26 60.0  0.0
      baz=260,SNR=11
NEA2  Nenana           90.00  25   P      P       14 27 00.7 +0.5
      baz=260
COLD  Coldfoot         90.00  23   P      P       14 27 00.7 +0.5
      baz=259
WAT6  Susitna Watana   90.27  27   P      P       14 27 01.7  0.0
      baz=262
GLI   Glacier Island   90.34  29   P      P       14 27 02.8 +0.9
      baz=262
KBZ   Khabaz           90.36 314   P      P       14 27 01.9 -0.4
      comp=Z,4.3nm,0.8s,baz=117,slow=3.2,SNR=5.7
KBZ   Khabaz           90.36 314deP     P       14 27 02.6 +0.3
KBZ                                pmax   pmax
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	comp=Z,9.0nm,1.0s						
SCM	Sheep Creek Mo	90.36	28	P	P	14 27 01.7	-0.3
	baz=262						
NEY	Neytrino	90.44	313	⇓*e*P	P	14 27 04.9	+1.9
NEY				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TOLK	Toolik Lake Re	90.49	21	P	P	14 27 02.8	+0.4
	baz=260						
DHY	Denali Highway	90.51	27	P	P	14 27 03.2	+0.4
	baz=262						
KIV	Kislovodsk	90.53	314	*e*P	P	14 27 00.7	-2.6
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CCB	Clear Creek Bu	90.55	25	P	P	14 27 02.1	-0.6
CCB				IAmb	IAmb	14 27 04.4	
	comp=Z,15nm,1.0s						
TCOL	CIGO, UAF Yank	90.55	25	P	P	14 27 03.0	+0.3
	baz=262						
GURO	Guroymak-BITLI	90.56	308	P	P	14 27 04.5	+0.9
COLA	College	90.56	25	⇑*e*P	P	14 27 03.1	+0.3
COLA				pmax	pmax		
	comp=Z,68nm,4.8s						
COLA	College	90.56	25	P	P	14 27 02.7	-0.1
	baz=262						
PRGR	Permogore	90.67	332	*e*P	P	14 26 59.4	-3.9
PRGR				pmax	pmax		
	comp=Z,44nm,1.4s						
POKR	Poker Plat Res	90.77	25	P	P	14 27 04.5	+0.7
	baz=262						
HDA	Harding Lake	90.88	26	P	P	14 27 03.3	-1.1
HDA				IAmb	IAmb	14 27 05.8	
	comp=Z,11nm,0.9s						
HDA	Harding Lake	90.88	26	P	P	14 27 03.6	-0.7
	baz=262,SNR=7.1						
M24K	Tolsona, Glenn	90.93	28	P	P	14 27 05.4	+0.7
	baz=263						
ILAR	Eielson Array	90.95	25	P	P	14 27 03.2	-1.4
	comp=Z,3.0nm,0.8s,baz=275,slow=4.2,SNR=26						
ILAR				PKKP	PKKPdf	14 44 28.1	-0.2
	comp=Z,0.5nm,0.8s,baz=48,slow=1.3,SNR=4.8						
KLU	Klutina	90.98	29	P	P	14 27 05.4	+0.5
	baz=263						
PAX	Paxson	91.36	27	P	P	14 27 07.3	+0.6
	baz=264						
BMRM	Bremner River	91.56	29	P	P	14 27 08.3	+0.7
	baz=264						
N25K	Chitina, Valde	91.62	28	P	P	14 27 08.8	+0.9
	baz=264						
SCRK	Sand Creek	92.12	26	P	P	14 27 10.5	+0.3
	baz=265						
KMBO	Kilima Mbogo	92.17	269	P	P	14 27 11.6	-0.1
	comp=Z,6.4nm,0.9s,baz=58,slow=5.4,SNR=9.1						
KMBO	Kilima Mbogo	92.17	269	*i* P	P	14 27 12.3	+0.6
KMBO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BMAR	Burnt Mountain	92.19	23	P	P	14 27 10.9	+0.6
L26K	Log Cabin Wild	92.33	27	P	P	14 27 11.2	+0.1
	baz=266						
J26L	Joseph Creek	92.35	26	P	P	14 27 10.9	-0.3
	baz=265,SNR=7.5						
M26K	Nabesna, AK	92.44	28	P	P	14 27 12.3	+0.6
	baz=266						
M27K	Edge Creek, AK	92.96	28	P	P	14 27 14.8	+0.7
	baz=267						
L27K	Beaver Creek,	93.02	27	P	P	14 27 15.1	+0.8
	baz=267						
BCAR	Beaver Creek A	93.04	27	P	P	14 27 14.8	+0.4
CTG	Chitna Glacier	93.15	29	P	P	14 27 16.1	+1.1
	baz=267						
EGAK	Eagle	93.40	25	P	P	14 27 16.6	+0.7
	baz=268						
BVCY	Beaver Creek	93.44	28	P	P	14 27 17.1	+0.9
	baz=268						
KLMR	Klimovskoe	93.55	331	*e*P	P	14 27 14.0	-2.7
KLMR				pmax	pmax		
	comp=Z,34nm,1.4s						
KLMR	Klimovskoe	93.55	331	*e*P	P	14 27 14.0	-2.7
KLMR				AMP		14 27 25.6	
	comp=Z,34nm,1.4s						
YUK3	Moose Creek	93.60	28	P	P	14 27 18.0	+0.8
	baz=268						
DAWY	Dawson	94.15	26	P	P	14 27 19.5	0.0
	baz=269,SNR=10						
ANN	Anapa	94.34	314	*e*P	P	14 27 18.7	-2.0
ANN				*e**PP	sP	14 27 28.8	-0.8
ANN				*e*S	SKSac	14 37 51.3	-3.1
ANN				pmax	pmax		
	comp=Z,76nm,1.3s						
I29M	Ogilvie Camp,	94.62	25	P	P	14 27 22.3	+0.7
	baz=270						
HYT	Haines Junctio	95.02	29	P	P	14 27 24.3	+0.7
	baz=270						
OBN	Obninsk	95.03	325	*e*P	P	14 27 22.1	-1.5
OBN				pmax	pmax		
	comp=Z,11nm,0.4s						
EPYK	Eagle Plains	95.25	24	P	P	14 27 25.3	+0.8
	baz=272						
M30M	Minto, Yukon	95.33	28	P	P	14 27 25.6	+0.7
	baz=271						
INK	Inuvik	96.37	22	P	P	14 27 28.8	-0.7
	comp=Z,10nm,1.0s,baz=265,slow=3.2,SNR=23						
INK	Inuvik	96.37	22	P	P	14 27 29.3	-0.1
	baz=275						
FARO	Faro, Yukon	96.95	28	P	P	14 27 32.6	+0.4
	baz=274						
BRTR	Keskin Array B	97.12	309	P	P	14 27 31.2	-2.5
	comp=Z,2.9nm,0.9s,baz=101,slow=2.9,SNR=4.9						
BRTR	Keskin Array B	97.12	309	*i* P	P	14 27 33.0	-0.7
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SNAA	Sanae	98.34	194	⇓*i*P	P	14 27 38.4	-0.1
SNAA				pmax	pmax		
	comp=Z,11nm,1.2s						
A36M	Sachs Harbour	98.58	18	P	P	14 27 39.4	0.0
	baz=283						
ARCES	ARCESS Array B	98.71	340	P	P	14 27 38.6	-1.3
	comp=Z,7.5nm,0.9s,baz=100,slow=4.7,SNR=6.2						
ARCES	ARCESS Array B	98.71	340	P	P	14 27 38.7	-1.3
ARCES				pmax	pmax		
	comp=Z,186nm,2.0s						
AKASG	Malin Array Be	99.68	321	P	Pdif	14 27 46.1	+1.4
	comp=Z,0.2nm,0.3s,baz=177,slow=18,SNR=3.0						
VNA2	Neumayer--Watz	99.92	193	P	Pdif	14 27 43.4	-2.0
FINES	FINESS Array B	100.00	332	P	Pdif	14 27 44.4	-1.5
	comp=Z,5.1nm,0.8s,baz=168,slow=9.8,SNR=5.6						
FINES	FINESS Array B	100.00	332	*i* P	Pdif	14 27 45.7	-0.2
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VNA3	Neumayer Olymp	100.19	192	P	Pdif	14 27 44.1	-2.6
VNA1	Neumayer--Stat	100.32	193	P	Pdif	14 27 45.3	-1.9
CRVS	Cervenica-Dubn	104.91	320	*e*P	Pdif	14 28 09.2	+1.1
CRVS	Cervenica-Dubn	104.91	320	*e*PDIFF	Pdif	14 28 09.2	+1.1
CRVS	Cervenica-Dubn	104.91	320	*e*PKP		14 15 08.5	
YKA	Yellowknife Ar	105.38	26	Pdiff	Pdif	14 28 09.4	-0.4
	comp=Z,0.6nm,0.7s,baz=296,slow=5.1,SNR=2.6						
YKA				PKiKP	PKiKP	14 32 23.0	-0.5
	comp=Z,1.0nm,0.8s,baz=273,slow=1.9,SNR=4.1						
NIE	Niedzica	105.56	320	*e*PKPbc		14 15 08.1	
OJC	Ojcow	105.70	321	*e*PKPbc		14 15 07.7	
O03E	Paynes Creek	106.88	49	P	PKiKP	14 32 26.2	-0.8
	baz=279						
NOA	NORSAR Array B	106.99	333	Pdiff	Pdif	14 28 16.1	-1.0
	comp=Z,2.3nm,0.9s,baz=68,slow=4.7,SNR=3.8						
KSP	Ksiaz	107.72	322	*e*PKPbc		14 15 09.5	
NVAR	Mina Array Bea	109.87	51	PKiKP	PKiKP	14 32 33.6	+0.6
	comp=Z,0.7nm,0.7s,baz=34,slow=0.3,SNR=4.0						
GERES	GERESS Array B	109.89	321	PKiKP	PKiKP	14 32 32.3	-0.1
	comp=Z,0.4nm,0.4s,baz=70,slow=1.1,SNR=4.8						
MSO	Missoula	110.97	41	P	PKiKP	14 32 35.0	+0.4
	baz=287						
HLID	Hailey	111.57	45	P	PKiKP	14 32 36.5	+0.6
	baz=286						
R11A	Troy Canyon, C	111.98	50	P	PKiKP	14 32 37.0	+0.1
	baz=283						
PFO	Pinyon Flats O	112.22	55	P	PKiKP	14 32 37.9	+0.5
	baz=280						
TPFO	Pinon Flats	112.23	55	P	PKiKP	14 32 38.0	+0.6
	baz=280						
MONP2	Monument Peak	112.38	56	P	PKiKP	14 32 38.4	+0.6
	baz=280						
BELC	Belle Mtn. Jos	112.53	55	P	PKiKP	14 32 38.6	+0.6
	baz=281						
GMRC	Granite Mounta	112.65	54	P	PKiKP	14 32 39.0	+0.9
	baz=281						
IRM	Iron Mountain	113.19	55	P	PKiKP	14 32 39.4	+0.3
	baz=281						
EGMT	Eagleton	113.26	39	P	PKiKP	14 32 39.6	+0.7
	baz=291						
DUG	Dugway, Tooele	113.62	48	P	PKiKP	14 32 39.5	-0.4
	baz=285						
BW06	Boulder Array	115.19	44	P	PKPdf	14 32 43.3	+0.3
	baz=289						
PDAR	Pinedale Array	115.19	44	PKP	PKiKP	14 32 42.7	-0.3
	comp=Z,1.5nm,0.9s,baz=236,slow=1.6,SNR=9.8						
PDAR				PKKPbc	PKKPbc	14 43 16.9	-2.3
	comp=Z,1.0nm,0.9s,baz=108,slow=4.8,SNR=5.8						
WUAZ	Wupatki	115.92	52	P	PKiKP	14 32 45.5	+1.0
	baz=284						
LAO	LASA Array	115.99	39	P	PKPdf	14 32 45.6	+1.5
	baz=294						
O20A	White River Ci	116.98	47	P	PKiKP	14 32 46.7	+0.3
	baz=289						
TUC	Tucson	117.16	56	P	PKiKP	14 32 48.1	+1.3
	baz=283						
W18A	Petrified Fore	117.31	52	P	PKiKP	14 32 48.1	+0.8
	baz=285						
MVCO	Mesa Verde	117.69	50	P	PKiKP	14 32 48.8	+0.8
	baz=287						
RSSD	Black Hills	118.44	41	P	PKiKP	14 32 49.5	+0.3
	baz=294						
S22A	4UR Ranch, Cre	118.79	49	P	PKiKP	14 32 51.1	+0.9
	baz=289						
ISCO	Idaho Springs	119.00	46	P	PKiKP	14 32 51.4	+0.9
	baz=291						
121A	Cookes Peak, D	119.56	55	P	PKiKP	14 32 52.5	+0.8
	baz=285						
SDCO	Great Sand Dun	119.79	48	P	PKiKP	14 32 52.6	+0.6
	baz=290						
ANMO	Albuquerque	119.94	52	P	PKiKP	14 32 52.7	+0.4
	baz=288						
T25A	Trinidad	120.81	49	P	PKiKP	14 32 54.5	+0.5
	baz=290						
MNTX	Cornudas Mount	121.75	55	P	PKiKP	14 32 56.3	+0.6
	baz=286						
MSTX	Muleshoe	123.14	52	P	PKiKP	14 32 58.7	+0.2
	baz=290						
ECSD	EROS Data Cent	123.38	39	P	PKiKP	14 32 58.8	+0.2
	baz=301						
BGNE	Belgrade	123.52	42	P	PKPdf	14 32 58.9	+0.2
	baz=298						
CBKS	Cedar Bluff	123.58	45	P	PKPdf	14 32 59.2	+0.2
	baz=295						
AMTX	Amarillo	123.67	50	P	PKPdf	14 32 59.3	0.0
	baz=291						
TXAR	Lajitas Array	123.83	57	PKP	PKPdf	14 32 59.8	0.0
	comp=Z,3.0nm,0.9s,baz=258,slow=1.1,SNR=25						
TXAR				PKKPab	PKKPab	14 42 46.2	-0.1
	comp=Z,0.1nm,0.6s,baz=98,slow=4.6,SNR=3.5						
EYMN	Ely	123.97	32	P	PKiKP	14 32 59.8	+0.1
	baz=308						
ESDC	Sonseca Array	125.09	317	PKP	PKiKP	14 33 02.2	+0.1
	comp=Z,1.5nm,1.0s,baz=19,slow=2.8,SNR=6.0						
KSU1	Kansas State U	125.64	44	P	PKPdf	14 33 03.1	+0.3
	baz=298						
ABTX	Abilene, Hawle	126.06	52	P	PKPdf	14 33 03.6	-0.3
	baz=291						
JCT	Junction City	126.68	55	P	PKPdf	14 33 05.0	-0.1
	baz=290,SNR=11						
TUL1	Leonard	127.67	47	P	PKPdf	14 33 06.6	-0.2
	baz=296						
JFWS	Jewell Farm	127.70	36	P	PKPdf	14 33 06.4	-0.3
	baz=306						
TORD	Torodi Ar. Bea	127.72	283	PKP	PKPdf	14 33 07.7	+0.3
	comp=Z,7.8nm,0.8s,baz=54,slow=2.0,SNR=37						
W39A	Magazine	129.45	47	P	PKPdf	14 33 10.3	+0.1
	baz=298						
U40A	Yellville	129.56	45	P	PKPdf	14 33 10.5	+0.1
	baz=299,SNR=7.5						
CCM	Cathedral Cave	129.80	42	P	PKPdf	14 33 11.3	+0.5
	baz=302						
MIAR	Mount Ida	129.90	47	P	PKPdf	14 33 10.5	-0.6
	baz=297,SNR=6.7						
PLCA	Paso Flores	131.74	160	PKP	PKPdf	14 33 15.0	+0.4
	comp=Z,2.5nm,1.0s,baz=182,slow=23,SNR=3.3						
WCI	Wyandotte Cave	132.92	39	P	PKPdf	14 33 17.3	+0.7
	baz=307						
P49A	Miami Univ. Ec	133.07	37	P	PKiKP	14 33 17.7	-0.4
	baz=310						
WVT	Waverly	133.14	42	P	PKiKP	14 33 18.0	-0.3
	baz=304						
P52A	Corning	134.50	35	P	PKPdf	14 33 19.8	+0.2
	baz=313						
DBIC	Dimbokro	134.51	275	PKP	PKPdf	14 33 20.0	-0.3
	comp=Z,6.1nm,0.8s,baz=86,slow=1.4,SNR=8.1						
M54A	Oil Creek Stat	134.51	31	P	PKPdf	14 33 19.9	+0.3
	baz=317						
BINY	Binghamton	135.77	27	P	PKPdf	14 33 22.3	+0.3
	baz=322						
LBNH	Lisbon	135.79	22	P	PKiKP	14 33 22.8	-0.6
	baz=328						
PKME	Peaks-Kenny Pk	135.82	19	P	PKPdf	14 33 22.7	+0.8
	baz=332						
O56A	Blue Knob Stat	135.99	31	P	PKPdf	14 33 23.2	+0.8
	baz=318						
SSPA	Standing Stone	136.06	30	P	PKiKP	14 33 23.9	-0.2
	baz=319						
TKL	Tuckaleechee C	136.08	40	PKP	PKPdf	14 33 22.7	0.0
	comp=Z,12nm,0.9s,baz=180,slow=2.2,SNR=14						
N59A	State Game Lan	136.88	28	P	PKiKP	14 33 25.3	-0.5
	baz=322						
L61B	Northampton	137.00	24	P	PKiKP	14 33 25.7	-0.4
	baz=326						
BLA	Blacksburg	137.14	36	P	PKiKP	14 33 25.9	-0.6
	baz=313						
GOGA	Godfrey	137.64	43	P	PKiKP	14 33 26.8	-0.8
	baz=306						
KMSC	Kings Mountain	137.96	39	P	PKiKP	14 33 27.9	-0.3
	baz=310						
AC02	Maricunga	144.35	151	PKPdf	PKPbc	14 33 37.2	+0.3
LVC	Limon Verde	147.92	147	PKPbc	PKPdf	14 33 45.2	+0.7
	comp=Z,20nm,0.9s,baz=214,slow=1.7,SNR=13						
CPUP	Villa Florida	149.03	168	PKP	PKPdf	14 33 45.1	-0.7
	comp=Z,12nm,1.1s,baz=202,slow=6.8,SNR=4.0						
CPUP				PKPbc	PKPbc	14 33 49.5	-0.4
	comp=Z,14nm,0.9s,baz=241,slow=1.5,SNR=14						
NNA	Nana	149.31	122	PKP	PKPdf	14 33 45.8	-0.7
	comp=Z,4.6nm,0.3s,baz=227,slow=12,SNR=1.7						
NNA				PKPbc	PKPbc	14 33 51.1	+0.2
	comp=Z,6.6nm,0.4s,baz=286,slow=3.9,SNR=6.4						
NNA	Nana	149.31	122	*c i*PKP2	PKPdf	14 33 48.6	+2.0
NNA				pmax	pmax		
	comp=Z,114nm,1.7s						
ATAH	Atahualpa	150.00	112	PKP	PKPdf	14 33 47.9	-0.3
	comp=Z,26nm,1.0s,baz=273,slow=14,SNR=4.6						
ATAH				PKPbc	PKPbc	14 33 53.1	0.0
	comp=Z,20nm,0.9s,baz=245,slow=0.8,SNR=13						
LPAZ	La Paz	153.26	140	PKP	PKPdf	14 33 52.6	-0.7
	comp=Z,3.2nm,0.9s,baz=52,slow=4.0,SNR=8.1						
LPAZ				PKPbc	PKPbc	14 34 00.7	-0.1
	comp=Z,6.3nm,0.9s,baz=168,slow=2.1,SNR=12						

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*IDC **09** 14:15:25.1±1.1, 4°.11S×129°.42E, h0^{km}, mb4.4/6, mb1 4.6/10, mb1mx4.0/55, mbtmp4.5/10, ML4.4/1, Error ellipse: s-maj=38.4km s-min=23.2km az=84.0*

ISC 09 14:15:29.7±0.8**, 4°.17S**±0°.09×**129°.5E**±0°.2**, h36^{km}, n11, σ0^{s}.82**/12**, mb4.3**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.72	28	Pn	Pn	14 16 25.4	+0.8
	29nm,0.3s,baz=246,slow=23,SNR=1.0						
SIJI				Sn	Sn	14 17 05.9	-1.2
	21nm,0.3s,baz=228,slow=23,SNR=1.3						
FITZ	Fitzroy Crossi	14.35	195	Pn	Pn	14 18 50.0	-0.4
	baz=18,slow=19,SNR=0.9						
WRA	Warramunga Arr	16.37	164	Pn	Pn	14 19 16.5	-0.3
	baz=343,slow=13,SNR=0.9						
ASAR	Alice Springs	19.84	168	P	Pn	14 19 59.3	-0.1
	baz=347,slow=11,SNR=1.4						
CMAR	Chiang Mai Arr	37.59	308	P	P	14 22 40.6	-0.5
	1.8nm,0.7s,baz=132,slow=6.9,SNR=0.9						
MAT	Matsushiro	41.31	11	P	P	14 23 10.9	-0.9
MJAR	Matsushiro Arr	41.31	11	P	P	14 23 11.2	-0.7
	3.8nm,0.6s,baz=187,slow=8.6,SNR=4.2						
MKAR	Makanchi Array	65.61	326	P	P	14 26 10.6	+0.5
	3.6nm,0.4s,baz=112,slow=7.5,SNR=7.8						
KURBB	Kurchatov Arra	69.86	328	P	P	14 26 37.3	+0.6
	5.6nm,0.6s,baz=126,slow=5.4,SNR=4.8						
ILAR	Eielson Array	91.01	25	P	P	14 28 31.0	+1.1
	0.6nm,0.8s,baz=258,slow=4.5,SNR=1.7						
INK	Inuvik	96.43	22	P	P	14 28 55.0	+0.3
	1.1nm,0.9s,baz=297,slow=3.7,SNR=1.0						

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*NEIC **09** 14:16:34.2±2.1, 4°.05S±0°.07×129°.6E±0°.1, h10^{km}±1^{km}, mb4.9/19, Error ellipse: s-maj=17.6km s-min=10.9km az=98.0*

*IDC **09** 14:16:37.0±2.4, 4°.14S×129°.54E, h40^{km}±20^{km}, mb4.5/18, mb1 4.6/22, mb1mx4.1/55, mbtmp4.7/22, ML4.5/3, Error ellipse: s-maj=23.0km s-min=11.1km az=76.0*

ISC 09 14:16:36.9±0.4**, 4°.10S**±0°.05×**129°.63E**±0°.07**, h36^{km}, n58, σ1^{s}.26**/60**, mb4.8**/25**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.87	66	Pn	Pn	14 17 21.2	+1.1
SIJI	Sorong	3.60	27	Pn	Pn	14 17 31.0	+0.8
	23nm,0.3s,baz=208,slow=19,SNR=1.6						
SIJI				Sn	Sn	14 18 11.6	+0.1
	30nm,0.3s,baz=216,slow=23,SNR=2.0						
SAUI	Saumlaki	4.20	157	Pn	Pn	14 17 40.7	+2.2
BATI	Baumata	8.47	224	Pn	Pn	14 18 37.8	+0.6
	6.3nm,0.3s,baz=172,slow=23,SNR=1.6						
KAPI	Kappang	9.89	264	Pn	Pn	14 18 57.8	+1.3
	1.3nm,0.3s,baz=137,slow=16,SNR=1.3						
FITZ	Fitzroy Crossi	14.45	195	Pn	Pn	14 20 01.4	+2.5
	baz=17,slow=11						
JAGI	Jajag, Banyuwa	15.98	253	P	Pn	14 20 21.6	+2.5
WRA	Warramunga Arr	16.41	164	Pn	Pn	14 20 21.3	-3.3
	0.8nm,0.3s,baz=342,slow=14,SNR=2.4						
WRA				Sn	Sn	14 23 16.4	-9.2
	0.3nm,0.3s,baz=342,slow=22,SNR=3.7						
PMG	Port Moresby	18.19	108	P	P	14 20 47.7	+0.9
	0.4nm,0.3s,baz=289,slow=12,SNR=3.2						
PMG	Port Moresby	18.19	108	IAmb	IAmb	14 21 04.0	
	comp=Z,63nm,1.2s						
PSA00	Pilbara Seismi	19.80	208	P	P	14 21 04.6	+0.2
PSA00	Pilbara Seismi	19.80	208	P	P	14 21 04.4	+0.1
PSA00				IAmb	IAmb	14 21 05.1	
	comp=Z,79nm,1.1s						
AS31	Alice Springs	19.89	168	P	P	14 21 05.8	+0.5
ASAR	Alice Springs	19.89	168	P	P	14 21 05.2	-0.2
	comp=Z,2.0nm,0.3s,baz=350,slow=10,SNR=4.3						
ASAR				S	S	14 24 46.0	-1.5
	comp=Z,0.1nm,0.3s,baz=343,slow=21,SNR=1.5						
ASAR				PcP	PcP	14 25 20.8	-1.1
	comp=Z,0.3nm,0.3s,baz=10,slow=1.6,SNR=2.0						
ASAR				ScP	ScP	14 28 55.1	-0.5
	comp=Z,0.0nm,0.3s,baz=337,slow=1.6,SNR=1.9						
ASAR	Alice Springs	19.89	168	P	P	14 21 05.8	+0.5
CTA	Charters Tower	22.70	136	P	P	14 21 35.9	+0.3
	comp=Z,15nm,0.6s,baz=314,slow=14,SNR=7.3						
CTAO	Charters Tower	22.70	136	P	P	14 21 35.8	+0.1
CTAO				IAmb	IAmb	14 21 38.2	
	comp=Z,47nm,1.1s						
KULM	Kulim	30.41	288	P	P	14 22 48.4	+2.3
KULM				IAmb	IAmb	14 22 55.8	
	comp=Z,20nm,1.2s						
CMAR	Chiang Mai Arr	37.64	308	P	P	14 23 47.3	-1.4
	comp=Z,4.0nm,0.8s,baz=133,slow=6.8,SNR=4.4						
JWT	Wachi	39.55	7	P	P	14 24 05.1	+0.6
JWT				IAmb	IAmb	14 24 08.0	
	comp=Z,22nm,1.0s						
MJAR	Matsushiro Arr	41.22	11	P	P	14 24 17.0	-1.3
	comp=Z,9.8nm,0.7s,baz=182,slow=9.3,SNR=7.9						
MAJO	Matsushiro	41.22	11	P	P	14 24 18.3	-0.1
MAJO				IAmb	IAmb	14 24 18.9	
	comp=Z,21nm,0.8s						
MAT	Matsushiro	41.22	11	P	P	14 24 17.4	-0.9
KSRS	Korea Array	41.37	358	P	P	14 24 19.1	-0.5
	comp=Z,5.0nm,0.7s,baz=170,slow=9.1,SNR=6.0						
JSD	Sado	42.68	10	P	P	14 24 30.1	-0.1
JSD				IAmb	IAmb	14 24 31.3	
	comp=Z,12nm,0.8s						
JMM	Marumori	43.02	13	P	P	14 24 33.5	+0.5
USRK	Ussuriysk Ar.	48.12	2	P	P	14 25 13.8	+0.5
	comp=Z,8.5nm,0.7s,baz=186,slow=8.7,SNR=7.5						
KLR	Kul'dur	53.14	2	P	P	14 25 51.3	+0.3
	comp=Z,7.1nm,1.0s,baz=223,slow=5.5,SNR=4.7						
HYB	Hyderabad	54.74	295	*i* P	P	14 26 01.0	-2.4
SONM	Songino Array	55.59	341	P	P	14 26 08.6	-0.5
	comp=Z,2.0nm,0.8s,baz=168,slow=7.4,SNR=2.4						
PETK	Petropavlovsk-	61.71	19	P	P	14 26 52.5	+1.1
	comp=Z,3.6nm,0.8s,baz=202,slow=7.2,SNR=2.4						
CASY	Casey	63.50	189	P	P	14 27 01.7	-1.4
CASY				IAmb	IAmb	14 27 03.0	
	comp=Z,15nm,1.1s						
MK31	Makanchi Array	65.61	326	P	P	14 27 17.0	-0.3
MK31				IAmb	IAmb	14 27 17.9	
	comp=Z,8.6nm,0.9s						
MKAR	Makanchi Array	65.61	326	P	P	14 27 17.1	-0.2
	comp=Z,4.4nm,0.3s,baz=113,slow=7.5,SNR=20						
MKAR	Makanchi Array	65.61	326	P	P	14 27 16.9	-0.4
YAK	Yakutsk	65.94	0	P	P	14 27 18.8	-0.2
	comp=Z,17nm,0.6s,baz=43,slow=1.1,SNR=6.2						
ZALV	Zalesovo Beam	68.83	333	P	P	14 27 36.8	-0.7
	comp=Z,12nm,1.0s,baz=122,slow=5.4,SNR=5.2						
SEY	Seymchan	69.04	11	P	P	14 27 39.4	+0.7
	comp=Z,14nm,0.8s,baz=216,slow=3.6,SNR=6.3						
KURBB	Kurchatov Arra	69.86	328	P	P	14 27 43.5	-0.4
	comp=Z,18nm,0.8s,baz=128,slow=5.5,SNR=7.5						
KURK	Kurchatov	69.87	328	P	P	14 27 43.5	-0.5
KURK	Kurchatov	69.87	328	IAmb	IAmb	14 27 45.1	
	comp=Z,35nm,0.9s						
VNDA	Vanda	75.35	173	P	P	14 28 14.9	-1.2
BVAR	Borovoye Array	75.43	328	P	P	14 28 16.7	-0.3
	comp=Z,10.0nm,0.9s,baz=185,slow=10,SNR=5.2						
TIXI	Tiksi	75.61	360	P	P	14 28 17.3	-0.3
	comp=Z,4.6nm,0.5s,baz=206,slow=1.5,SNR=3.7						
ABKAR	Akbulak array	80.02	321	P	P	14 28 41.9	-0.8
ABKAR	Akbulak array	80.02	321	P	P	14 28 42.2	-0.5
ABKAR				IAmb	IAmb	14 28 43.0	
	comp=Z,12nm,1.0s						
AKTO	Aktyubinsk	81.57	322	P	P	14 28 49.8	-1.1
	comp=Z,6.4nm,0.7s,baz=105,slow=4.7,SNR=4.3						
QSPA	South Pole Qui	85.86	180	P	P	14 29 11.7	-1.1
RAYN	Ar Rayn	86.24	294	P	P	14 29 15.3	-0.2
ILAR	Eielson Array	90.90	25	P	P	14 29 34.5	-2.1
	comp=Z,1.3nm,0.8s,baz=253,slow=4.6,SNR=4.5						
INK	Inuvik	96.32	22	P	P	14 30 00.6	-0.8
	comp=Z,5.8nm,1.1s,baz=256,slow=3.9,SNR=5.2						
INK	Inuvik	96.32	22	IAmb	IAmb	14 30 01.6	
	comp=Z,8.7nm,1.1s						
PDAR	Pinedale Array	115.11	44	PKP	PKiKP	14 35 15.0	0.0
	comp=Z,0.7nm,0.8s,baz=2.9,slow=1.8,SNR=3.6						
TXAR	Lajitas Array	123.72	57	PKP	PKPdf	14 35 32.1	+0.4
	comp=Z,1.1nm,0.9s,baz=338,slow=2.7,SNR=4.6						
TXAR				PP	PP	14 37 15.3	+0.9
	comp=Z,0.5nm,0.9s,baz=333,slow=1.4,SNR=3.4						
TORD	Torodi Ar. Bea	127.83	283	PKP	PKPdf	14 35 39.4	-0.4
	comp=Z,1.6nm,0.7s,baz=60,slow=1.8,SNR=4.1						
TKL	Tuckaleechee C	136.00	40	PKP	PKPdf	14 35 54.6	-0.1
	comp=Z,3.8nm,0.7s,baz=52,slow=3.9,SNR=4.1						
LVC	Limon Verde	147.86	146	PKPbc	PKPdf	14 36 19.9	+3.3
	comp=Z,7.6nm,0.7s,baz=319,slow=4.3,SNR=3.1						
CPUP	Villa Florida	149.01	168	PKPbc	PKPdf	14 36 20.9	+2.9
	comp=Z,5.6nm,0.8s,baz=60,slow=2.5,SNR=4.1						

IDC 09 14:22:18.3±1.8**, 4°.16S×129°.39E, h0^{km}, mb3.5**/1**, mb1 3.5**/4**, mb1mx2.9**/54**, mbtmp3.3**/4**, Error ellipse: s-maj=65.9km s-min=29.3km az=83.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.77	30	Pn	Pn	14 23 18.1	+0.3
	baz=149,slow=22,SNR=0.9						
SIJI				Sn	Sn	14 23 59.1	-3.9
	0.6nm,0.3s,baz=212,slow=23,SNR=1.5						
WRA	Warramunga Arr	16.41	163	Pn	Pn	14 26 10.4	+0.1
	baz=352,slow=13,SNR=1.1						
ASAR	Alice Springs	19.87	168	P	P	14 26 51.3	0.0
	baz=1.9,slow=11,SNR=1.4						
MKAR	Makanchi Array	65.54	326	P	P	14 33 03.6	-0.1
	0.4nm,0.8s,baz=138,slow=5.2,SNR=1.8						

IDC 09 14:23:52.9±1.8**, 4°.28S×129°.79E, h0^{km}, mb3.4**/1**, mb1 3.4**/4**, mb1mx2.9**/52**, mbtmp3.3**/4**, ML2.9**/1**, Error ellipse: s-maj=66.5km s-min=28.9km az=83.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.70	24	Pn	Pn	14 24 49.7	-1.7
	0.9nm,0.3s,baz=190,slow=22,SNR=1.7						
WRA	Warramunga Arr	16.18	164	Pn	Pn	14 27 43.1	+1.2
	baz=340,slow=10,SNR=2.0						
ASAR	Alice Springs	19.68	169	P	P	14 28 22.8	-0.9
	baz=350,slow=10,SNR=2.1						

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**65.86**	**326**	P	P	14 34 41.1	+0.7
	0.3nm,0.7s,baz=132,slow=8.1,SNR=1.4						

IDC 09 14:25:39.6±1.8, 4°.06S×129°.11E, h0^{km}, mb3.0/2, mb1 3.3/4, mb1mx2.8/51, mbtmp3.2/4, ML2.7/2, Error ellipse: s-maj=50.2km s-min=27.0km az=93.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.83**	**34**	Pn	Pn	14 26 40.4	+0.4
	0.9nm,0.3s,baz=223,slow=23,SNR=2.2						
SIJI				Sn	Sn	14 27 25.7	-0.1
	0.9nm,0.3s,baz=254,slow=23,SNR=1.4						
WRA	**Warramunga Arr**	**16.59**	**163**	Pn	Pn	14 29 34.4	+0.6
	0.0nm,0.3s,baz=339,slow=14,SNR=1.9						
ASAR	**Alice Springs**	**20.04**	**167**	P	P	14 30 14.0	-0.4
	0.3nm,0.7s,baz=353,slow=9.5,SNR=1.8						
MKAR	**Makanchi Array**	**65.30**	**327**	P	P	14 36 23.5	0.0
	0.1nm,0.4s,baz=114,slow=7.5,SNR=1.6						

IDC 09 14:26:46.2±1.8, 4°.06S×128°.99E, h0^{km}, mb3.2/2, mb1 3.6/4, mb1mx3.2/50, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=58.1km s-min=28.6km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.90**	**36**	Pn	Pn	14 27 47.6	+0.1
	2.8nm,0.3s,baz=217,slow=22,SNR=2.7						
WRA	**Warramunga Arr**	**16.63**	**162**	Pn	Pn	14 30 41.4	+0.5
	0.0nm,0.3s,baz=344,slow=11,SNR=2.8						
ASAR	**Alice Springs**	**20.06**	**167**	P	P	14 31 21.1	-0.2
	0.8nm,0.6s,baz=346,slow=9.4,SNR=6.1						
MKAR	**Makanchi Array**	**65.23**	**327**	P	P	14 37 29.7	0.0
	0.3nm,0.7s,baz=111,slow=7.9,SNR=1.7						

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*IDC **09** 14:26:55.8±0.9, 16°.83S×174°.94E, h0^{km}, mb4.1/9, mb1 4.4/10, mb1mx3.8/50, mbtmp4.0/10, ML5.3/1, MS4.2/6, Ms1 4.2/6, ms1mx3.7/47, Error ellipse: s-maj=43.9km s-min=19.5km az=161.0*

ISC 09 14:27:00.9±0.8, 17°.0S±0°.2×175°.0E±0°.1, h35^{km}, n27, σ1^s.19/11, mb4.0/9, MS4.2/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.98**	**105**	Pn	**Pn**	**14 27 44.8**	**-0.9**
	14nm,0.3s,baz=300,slow=23,SNR=4.8						
DZM	**Mont Dzumac**	**9.55**	**237**	*e*LR	LR	14 31 36.6	
	comp=Z,2μm,24.6s						
RAO	**Raoul Island**	**13.82**	**153**	LR	LR	14 34 36.0	
	comp=Z,756nm,18.9s,baz=152,slow=33						
HNR	**Honiara**	**16.48**	**295**	LR	LR	14 36 13.1	
	comp=Z,589nm,20.3s,baz=155,slow=34						
URZ	**Urewera**	**21.28**	**175**	LR	LR	14 38 01.2	
	comp=Z,590nm,20.9s,baz=31,slow=31						
RAR	**Rarotonga**	**24.16**	**104**	LR	LR	14 39 32.2	
	comp=Z,514nm,21.6s,baz=268,slow=31						
PMG	**Port Moresby**	**28.14**	**282**	LR	LR	14 42 54.8	
	comp=Z,999nm,19.2s,baz=90,slow=34						
STKA	**Stephens Creek**	**33.71**	**238**	P	**P**	**14 33 40.1**	**+1.2**
	1.5nm,0.7s,baz=77,slow=11,SNR=2.7						
PPT2	**Papeete2**	**33.77**	**96**	*e*LR	LR	14 42 38.0	
	comp=Z,1μm,26.5s						
PPT	**Papeete**	**33.77**	**96**	LR	LR	14 44 08.3	
	comp=Z,309nm,19.5s,baz=257,slow=30						
TBI	**Tubuai**	**33.86**	**107**	*e*LR	LR	14 42 49.5	
	comp=Z,867nm,33.5s						
H11S2	**WAKE ISLAND Hy**	**36.18**	**347**	T	T	15 12 13.3	
	baz=166,slow=76,SNR=6.2						
H11S3	**WAKE ISLAND Hy**	**36.19**	**347**	T	T	15 12 12.2	
	baz=166,slow=76,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	**36.20**	**347**	T	T	15 12 12.0	
	baz=166,slow=76,SNR=6.6						
H11N1	**WAKE ISLAND Hy**	**37.33**	**347**	T	T	15 13 50.9	
	baz=164						
H11N3	**WAKE ISLAND Hy**	**37.33**	**347**	T	T	15 13 40.1	
	baz=164						
H11N2	**WAKE ISLAND Hy**	**37.34**	**347**	T	T	15 13 46.3	
	baz=164						
WRA	**Warramunga Arr**	**38.65**	**259**	P	**P**	**14 34 19.1**	**-2.2**
	1.8nm,0.9s,baz=91,slow=8.1,SNR=7.4						
ASAR	**Alice Springs**	**39.04**	**253**	P	**P**	**14 34 24.6**	**-0.1**
	4.5nm,0.7s,baz=83,slow=9.0,SNR=22						
TAOE	**Nuku Hiva Isla**	**44.34**	**85**	*e*LR	LR	14 47 26.8	
	comp=Z,542nm,27.1s						
CMAR	**Chiang Mai Arr**	**82.70**	**292**	P	**P**	**14 39 21.9**	**+0.4**
	1.3nm,0.5s,baz=132,slow=3.9,SNR=12						
NVAR	**Mina Array Bea**	**83.22**	**47**	P	**P**	**14 39 24.0**	**0.0**
	0.3nm,0.7s,baz=225,slow=7.5,SNR=2.0						
ILAR	**Eielson Array**	**86.52**	**15**	P	**P**	**14 39 39.1**	**-0.7**
	1.7nm,0.8s,baz=234,slow=5.7,SNR=10						
SONM	**Songino Array**	**88.83**	**321**	P	**P**	**14 39 50.8**	**-0.6**
	0.9nm,1.0s,baz=116,slow=6.8,SNR=4.4						
TXAR	**Lajitas Array**	**90.86**	**60**	P	**P**	**14 40 02.8**	**+1.5**
	1.7nm,1.1s,baz=224,slow=3.5,SNR=6.3						
PDAR	**Pinedale Array**	**91.08**	**45**	P	**P**	**14 40 03.2**	**+1.0**
	0.3nm,0.7s,baz=247,slow=4.6,SNR=3.3						
GERES	**GERESS Array B**	**144.76**	**339**	PKP	**PKPab**	**14 46 33.0**	**0.0**
	0.2nm,0.3s,baz=22,slow=3.2,SNR=1.6						

IDC 09 14:27:27.6±1.6, 4°.14S×129°.19E, h0^{km}, mb3.5/1, mb1 3.8/4, mb1mx3.1/48, mbtmp3.6/4, ML3.4/3, Error ellipse: s-maj=57.4km s-min=27.5km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.85**	**33**	Pn	Pn	14 28 28.1	-0.2
	3.1nm,0.3s,baz=331,slow=20,SNR=5.2						
SIJI				Sn	Sn	14 29 06.6	-7.7
	2.6nm,0.3s,baz=109,slow=22,SNR=3.5						
WRA	**Warramunga Arr**	**16.49**	**163**	Pn	Pn	14 31 19.8	-0.7
	0.1nm,0.3s,baz=344,slow=13,SNR=2.3						
ASAR	**Alice Springs**	**19.94**	**167**	P	P	14 32 01.6	+0.3
	0.3nm,0.3s,baz=344,slow=10,SNR=9.3						
MKAR	**Makanchi Array**	**65.41**	**327**	P	P	14 38 12.3	+0.1
	0.3nm,0.5s,baz=124,slow=7.1,SNR=5.1						

IDC 09 14:29:22.2±1.7, 4°.26S×129°.64E, h0^{km}, mb3.5/1, mb1 3.3/4, mb1mx3.0/48, mbtmp3.2/4, ML2.6/2, Error ellipse: s-maj=53.6km s-min=26.0km az=90.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.74**	**26**	Pn	Pn	14 30 21.9	+0.6
	0.8nm,0.3s,baz=132,slow=23,SNR=1.1						
SIJI				Sn	Sn	14 31 06.3	+0.3
	0.7nm,0.3s,baz=209,slow=22,SNR=1.4						
WRA	**Warramunga Arr**	**16.25**	**164**	Pn	Pn	14 33 11.9	-0.2
	0.0nm,0.3s,baz=348,slow=12,SNR=1.8						
ASAR	**Alice Springs**	**19.73**	**168**	P	P	14 33 53.8	+0.1
	baz=350,slow=9.8,SNR=1.6						
MKAR	**Makanchi Array**	**65.75**	**326**	P	P	14 40 09.0	-0.1
	0.2nm,0.3s,baz=116,slow=7.5,SNR=5.4						

IDC 09 14:30:38.5±1.6, 4°.17S×129°.59E, h0^{km}, mb3.5/1, mb1 3.6/4, mb1mx2.9/49, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=62.3km s-min=27.5km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.68**	**27**	Pn	Pn	14 31 37.4	+0.7
	1.3nm,0.3s,baz=42,slow=21,SNR=6.6						
SIJI				Sn	Sn	14 32 18.2	-2.5
	1.0nm,0.3s,baz=250,slow=22,SNR=2.0						
WRA	**Warramunga Arr**	**16.35**	**164**	Pn	Pn	14 34 27.5	-2.2
	0.1nm,0.3s,baz=349,slow=17,SNR=3.0						
ASAR	**Alice Springs**	**19.83**	**168**	P	Pn	14 35 12.2	-0.4
	0.1nm,0.3s,baz=351,slow=10,SNR=5.0						
MKAR	**Makanchi Array**	**65.65**	**326**	P	P	14 41 24.4	-0.2
	0.2nm,0.4s,baz=118,slow=7.9,SNR=5.9						

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*DJA **09** 14:31:47.9±0.8, 4°S±10°×12°9E±°, h10^{km}, M3.9/3, mb5.0/2, mB5.3/1, MLv3.4/3, Mw(mB)4.8/1*

*IDC **09** 14:31:50.6±4.2, 4°.14S×129°.60E, h35^{km}±40^{km}, mb3.8/5, mb1 3.9/10, mb1mx3.4/50, mbtmp3.9/10, ML3.7/5, Error ellipse: s-maj=36.9km s-min=19.9km az=102.0*

ISC 09 14:31:50.7±0.8, 4°.12S±0°.07×129°.52E±0°.08, h36^{km}, n16, σ1^s.17/17, mb4.2/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.97**	**322**	P	**Pn**	**14 32 06.1**	**-1.6**
AAI	**Ambon**	**1.39**	**288**	P	**Pn**	**14 32 12.0**	**-1.5**
FAKI	**Fak Fak**	**2.97**	**67**	P	**Pn**	**14 32 35.9**	**+0.6**
SIJI	**Sorong**	**3.67**	**28**	Pn	**Pn**	**14 32 45.0**	**+0.1**
	7.8nm,0.3s,baz=223,slow=22,SNR=18						
SIJI				Sn	**Sn**	**14 33 25.4**	**-1.5**
	9.8nm,0.3s,baz=9.7,slow=17,SNR=4.1						
SWI	**Sorong**	**3.67**	**28**	P	**Pn**	**14 32 45.4**	**+0.5**
LBMI	**Labuha**	**4.00**	**330**	P	**Pn**	**14 32 49.6**	**+0.1**
SANI	**Sanana**	**4.08**	**300**	P	**Pn**	**14 32 50.5**	**-0.1**
BATI	**Baumata**	**8.39**	**224**	Pn	**Pn**	**14 33 51.2**	**+1.4**
	1.6nm,0.3s,baz=295,slow=19,SNR=1.9						
FITZ	**Fitzroy Crossi**	**14.41**	**195**	Pn	**Pn**	**14 35 11.6**	**-0.6**
	0.1nm,0.3s,baz=34,slow=11,SNR=2.6						
WRA	**Warramunga Arr**	**16.42**	**164**	Pn	**Pn**	**14 35 36.1**	**-2.3**
	0.2nm,0.3s,baz=346,slow=12,SNR=7.3						
ASAR	**Alice Springs**	**19.89**	**168**	P	**P**	**14 36 19.1**	**0.0**
	0.4nm,0.3s,baz=348,slow=9.7,SNR=12						
CMAR	**Chiang Mai Arr**	**37.56**	**308**	P	**P**	**14 39 03.1**	**+1.2**
	0.5nm,0.4s,baz=129,slow=7.1,SNR=0.9						
KSRS	**Korea Array**	**41.38**	**358**	P	**P**	**14 39 33.2**	**-0.1**
	0.7nm,0.7s,baz=172,slow=9.7,SNR=3.2						
MKAR	**Makanchi Array**	**65.57**	**326**	P	**P**	**14 42 31.1**	**+0.3**
	1.0nm,0.4s,baz=114,slow=7.8,SNR=30						
ZALV	**Zalesovo Beam**	**68.80**	**334**	P	**P**	**14 42 50.4**	**-0.7**
	0.8nm,0.3s,baz=106,slow=5.1,SNR=2.3						
SEY	**Seymchan**	**69.08**	**11**	P	**P**	**14 42 53.9**	**+1.3**
	1.7nm,0.7s,baz=184,slow=4.1,SNR=4.3						

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*IDC **09** 14:36:40.4±1.4, 4°.18S×129°.45E, h0^{km}, mb3.9/2, mb1 3.7/5, mb1mx3.1/46, mbtmp3.6/5, ML3.2/3, MS4.1/1, Ms1 4.1/1, ms1mx3.1/39, Error ellipse: s-maj=55.9km s-min=25.6km az=78.0*

*DJA **09** 14:36:45.3±2.9, 4°S±13°×12°9E±°, h25^{km}±28^{km}, M3.1/3, MLv3.1/3*

ISC 09 14:36:45.7±1.0, 4°.07S±0°.08×129°.48E±0°.06, h36^{km}, n12, σ1^s.68/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.91**	**323**	P	**Pn**	**14 37 02.5**	**+0.6**
AAI	**Ambon**	**1.34**	**287**	P	**Pn**	**14 37 08.0**	**+0.2**
FAKI	**Fak Fak**	**2.99**	**68**	P	**Pn**	**14 37 32.0**	**+1.4**
SIJI	**Sorong**	**3.65**	**29**	Pn	**Pn**	**14 37 39.6**	**0.0**
	2.7nm,0.3s,baz=227,slow=9.4,SNR=5.0						
SIJI				Sn	**Sn**	**14 38 19.6**	**-1.9**
	2.1nm,0.3s,baz=198,slow=22,SNR=1.7						
SWI	**Sorong**	**3.65**	**29**	P	**Pn**	**14 37 41.6**	**+1.9**
LBMI	**Labuha**	**3.94**	**330**	P	**Pn**	**14 37 44.5**	**+0.8**
SANI	**Sanana**	**4.03**	**300**	P	**Pn**	**14 37 45.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**14.44**	**195**	Pn	**Pn**	**14 40 09.4**	**+1.9**
	0.1nm,0.3s,baz=19,slow=14,SNR=1.4						
WRA	**Warramunga Arr**	**16.47**	**164**	Pn	**Pn**	**14 40 31.2**	**-2.9**
	0.1nm,0.3s,baz=344,slow=12,SNR=2.4						
ASAR	**Alice Springs**	**19.94**	**168**	P	**P**	**14 41 13.4**	**-1.3**
	0.2nm,0.3s,baz=347,slow=9.6,SNR=11						
ASAR				LR	LR	14 49 16.5	
	comp=Z,567nm,19.9s,baz=92,slow=38						
MKAR	**Makanchi Array**	**65.51**	**326**	P	**P**	**14 47 27.1**	**+1.7**
	0.5nm,0.3s,baz=114,slow=7.9,SNR=16						
ZALV	**Zalesovo Beam**	**68.75**	**334**	P	**P**	**14 47 44.7**	**-1.1**
	0.4nm,0.3s,baz=130,slow=6.2,SNR=1.4						

IDC 09 14:38:45.0±1.8, 4°.08S×129°.60E, h0^{km}, mb3.6/1, mb1 3.5/4, mb1mx2.9/44, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=58.0km s-min=28.3km az=84.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.60**	**28**	Pn	Pn	14 39 43.4	+1.4
	1.6nm,0.3s,baz=240,slow=23,SNR=1.9						
SIJI				Sn	Sn	14 40 21.9	-3.4
	1.1nm,0.3s,baz=250,slow=24,SNR=1.5						
WRA	**Warramunga Arr**	**16.43**	**164**	Pn	Pn	14 42 37.4	+0.3
	0.1nm,0.3s,baz=346,slow=11,SNR=1.7						
ASAR	**Alice Springs**	**19.91**	**168**	P	P	14 43 18.5	+0.1
	0.2nm,0.3s,baz=347,slow=10,SNR=4.8						
MKAR	**Makanchi Array**	**65.58**	**326**	P	P	14 49 30.2	-0.5
	0.3nm,0.5s,baz=125,slow=7.3,SNR=3.2						

IDC 09 14:41:30.9±1.8, 4°.11S×129°.48E, h0^{km}, mb3.2/1, mb1 3.3/4, mb1mx2.8/44, mbtmp3.1/4, ML3.0/3, Error ellipse: s-maj=58.1km s-min=28.3km az=84.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.69**	**29**	Pn	Pn	14 42 30.4	+1.2
	1.9nm,0.3s,baz=206,slow=23,SNR=6.3						
SIJI				Sn	Sn	14 43 11.7	-1.8
	1.2nm,0.3s,baz=285,slow=23,SNR=1.9						
WRA	**Warramunga Arr**	**16.43**	**164**	Pn	Pn	14 45 22.2	-0.9
	0.0nm,0.3s,baz=347,slow=11,SNR=1.9						
ASAR	**Alice Springs**	**19.90**	**168**	P	P	14 46 05.0	+0.7
	0.1nm,0.3s,baz=346,slow=9.8,SNR=4.1						
MKAR	**Makanchi Array**	**65.54**	**326**	P	P	14 52 15.9	-0.6
	0.1nm,0.4s,baz=118,slow=8.0,SNR=1.7						

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*IDC **09** 14:44:08.8±0.7, 16°.73S×174°.95E, h0^{km}, mb4.2/15, mb1 4.5/16, mb1mx4.2/41, mbtmp4.2/16, ML5.0/1, MS4.4/7, Ms1 4.4/7, ms1mx4.1/39, Error ellipse: s-maj=23.6km s-min=17.3km az=152.0*

*NEIC **09** 14:44:11.5±2.1, 16°.8S±0°.1×175°.17E±0°.08, h11^{km}±4^{km}, mb4.8/19, Error ellipse: s-maj=16.5km s-min=11.3km az=168.0*

*GCMT **09** 14:44:14.5±0.4, 16°.70S±0°.02×175°.07E±0°.02, h12^{km}, MW5.2/82, Moment Tensor Solution. s3,c3; s82,c107; Duration: 1^s.0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.40±.45; $M_{\theta\theta}$-4.74±.41; $M_{\phi\phi}$4.34±.33; $M_{r\theta}$0.45±1.22; $M_{\theta\phi}$6.39±.31; $M_{\phi r}$-1.95±1.09; Best double couple: $M_0$8.09400×10^{16} NP1:ϕ_s253.00000°, δ76.00000°, λ2.00000°. NP2:ϕ_s162.00000°, δ88.00000°, λ166.00000°. Principal axes: T 7.9520, Plg12.0000°, Azm116.0000°; N 0.2820, Plg75.0000°, Azm334.0000°; P -8.2350, Plg9.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 14:44:14.4±0.4, 16°.73S±0°.08×175°.04E±0°.09, h35^{km}, n74, σ1^s.25/60, mb4.6/24, MS4.5/7, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.04**	**110**	Pn	**Pn**	**14 44 57.5**	**-2.7**
	7.0nm,0.3s,baz=273,slow=10,SNR=39						
MSVF	**Nonsavu**	**3.04**	**110**	Pn	**Pn**	**14 44 57.3**	**-2.9**
PINNC	**Pines Island,**	**9.24**	**230**		**Pn**	**14 46 25.4**	**+0.2**
DZM	**Mont Dzumac**	**9.70**	**235**	*e*Pn	**Pn**	**14 46 32.0**	**+0.4**
	140nm,1.8s						
DZM				*e*LR	LR	14 48 46.3	
	comp=Z,2μm,24.1s						
DZM	**Mont Dzumac**	**9.70**	**235**		**Pn**	**14 46 31.9**	**+0.3**
ONTNC	**Ouen Toro**	**9.81**	**234**		**Pn**	**14 46 33.2**	**+0.1**
AFI	**Afiamalu**	**13.02**	**79**	LR	LR	14 51 33.7	
	comp=Z,834nm,20.5s,baz=254,slow=34						
RAO	**Raoul Island**	**14.04**	**154**	LR	LR	14 51 40.7	
	comp=Z,2μm,20.5s,baz=308,slow=32						
HNR	**Honiara**	**16.39**	**294**	LR	LR	14 53 25.3	
	comp=Z,802nm,21.0s,baz=142,slow=34						
OUZ	**Omahuta**	**18.46**	**184**	P	**Pn**	**14 48 28.9**	**+1.5**
OUZ				IAmb	IAmb	14 48 34.2	
	comp=Z,38nm,1.3s						
URZ	**Urewera**	**21.52**	**176**	P	**P**	**14 49 00.1**	**-0.3**
	comp=Z,13nm,0.7s,baz=303,slow=23,SNR=9.7						
URZ				LR	LR	14 55 15.4	
	comp=Z,955nm,22.0s,baz=31,slow=31						
URZ	**Urewera**	**21.52**	**176**	P	**P**	**14 49 02.1**	**+1.7**
URZ				IAmb	IAmb	14 49 14.3	
	comp=Z,59nm,1.3s						
RAR	**Rarotonga**	**24.22**	**105**	LR	LR	14 56 47.0	
	comp=Z,909nm,20.7s,baz=264,slow=31						
THZ	**Tophouse**	**25.01**	**184**	P	**P**	**14 49 35.6**	**+0.5**
LTZ	**Lake Taylor**	**26.07**	**185**	P	**P**	**14 49 45.2**	**+0.5**
LTZ				IAmb	IAmb	14 50 14.7	
	comp=Z,33nm,1.1s						
PPT2	**Papeete2**	**33.79**	**97**	*e*LR	LR	15 00 02.2	
	comp=Z,2μm,27.0s						
PPT	**Papeete**	**33.79**	**97**	LR	LR	15 01 12.2	
	comp=Z,563nm,21.4s,baz=262,slow=30						
STKA	**Stephens Creek**	**33.84**	**237**	P	**P**	**14 50 52.2**	**-1.4**
	comp=Z,2.4nm,0.6s,baz=64,slow=10,SNR=3.5						
STKA	**Stephens Creek**	**33.84**	**237**	IAmb	IAmb	14 51 01.6	
	comp=Z,1.1nm,0.8s						
TBI	**Tubuai**	**33.93**	**107**	*e*LR	LR	15 00 07.0	
	comp=Z,2μm,32.8s						
H11S2	**WAKE ISLAND Hy**	**35.95**	**346**	T	T	15 29 40.2	
	baz=166,slow=76,SNR=6.7						
H11S3	**WAKE ISLAND Hy**	**35.96**	**346**	T	T	15 29 34.5	
	baz=166,slow=76,SNR=7.2						
H11S1	**WAKE ISLAND Hy**	**35.97**	**346**	T	T	15 29 24.5	
	baz=166,slow=76,SNR=8.1						
JAY	**Jayapura**	**36.59**	**289**	LR	LR	15 06 30.1	
	comp=Z,2μm,18.7s,baz=5.0,slow=37						
H11N1	**WAKE ISLAND Hy**	**37.09**	**347**	T	T	15 31 03.9	
	baz=164,slow=74						
H11N3	**WAKE ISLAND Hy**	**37.09**	**347**	T	T	15 31 03.1	
	baz=164,slow=74						
H11N2	**WAKE ISLAND Hy**	**37.11**	**347**	T	T	15 30 59.7	
	baz=164						
WB0	**Warramunga Arr**	**38.66**	**259**	P	**P**	**14 51 33.1**	**-1.9**
WB0				IAmb	IAmb	14 51 47.0	
	comp=Z,15nm,1.2s						
WRAB	**Tennant Creek**	**38.69**	**259**	P	**P**	**14 51 34.4**	**-0.9**
WRA	**Warramunga Arr**	**38.70**	**259**	P	**P**	**14 51 33.0**	**-2.4**
	comp=Z,4.2nm,1.0s,baz=92,slow=9.0,SNR=16						
WRA	**Warramunga Arr**	**38.70**	**259**	P	**P**	**14 51 35.5**	**+0.1**
AS31	**Alice Springs**	**39.12**	**253**	P	**P**	**14 51 36.9**	**-1.9**
ASAR	**Alice Springs**	**39.12**	**253**	P	**P**	**14 51 36.8**	**-2.0**
	comp=Z,7.0nm,0.8s,baz=84,slow=8.8,SNR=60						
ASAR				PcP	**PcP**	**14 53 48.4**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=112,slow=3.3,SNR=3.2						
ASAR	**Alice Springs**	**39.12**	**253**	P	**P**	**14 51 37.1**	**-1.7**
TAOE	**Nuku Hiva Isla**	**44.31**	**86**	*e*LR	LR	15 04 50.2	
	comp=Z,1μm,26.7s						
FITZ	**Fitzroy Crossi**	**47.05**	**261**	P	**P**	**14 52 42.5**	**-0.4**
	comp=Z,8.4nm,1.1s,baz=109,slow=8.9,SNR=5.4						
VNDA	**Vanda**	**61.17**	**183**	P	**P**	**14 54 25.4**	**+0.4**
VNDA				IAmb	IAmb	14 54 47.2	
	comp=Z,5.1nm,1.3s						
SBA	**Scott Base**	**61.28**	**182**	P	**P**	**14 54 26.9**	**+1.1**
SBA				IAmb	IAmb	14 54 27.7	
	comp=Z,9.4nm,0.8s						
CASY	**Casey**	**64.63**	**204**	P	**P**	**14 54 48.6**	**+0.4**
CASY				IAmb	IAmb	14 55 07.2	
	comp=Z,12nm,1.2s						
KSRS	**Korea Array**	**69.78**	**322**	P	**P**	**14 55 21.2**	**0.0**
	comp=Z,0.5nm,0.7s,baz=101,slow=6.3,SNR=4.1						
PETK	**Petropavlovsk-**	**71.15**	**349**	P	**P**	**14 55 28.8**	**-0.5**
	comp=Z,9.3nm,0.9s,baz=163,slow=11,SNR=7.2						
QSPA	**South Pole Qui**	**73.31**	**180**	P	**P**	**14 55 41.8**	**-0.5**
QSPA				IAmb	IAmb	14 56 03.9	
	comp=Z,22nm,1.5s						
KLR	**Kul'dur**	**76.05**	**332**	P	**P**	**14 55 56.5**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=117,slow=14,SNR=1.7						
CM31	**Chiang Mai Arr**	**82.62**	**292**	P	**P**	**14 56 35.6**	**+0.9**
CM31				IAmb	IAmb	14 56 50.1	
	comp=Z,8.6nm,1.1s						
CMAR	**Chiang Mai Arr**	**82.62**	**292**	P	**P**	**14 56 35.2**	**+0.5**
	comp=Z,5.0nm,0.9s,baz=125,slow=3.9,SNR=23						
CHTO	**Chiang Mai**	**82.74**	**292**	P	**P**	**14 56 35.8**	**+0.5**
CHTO				IAmb	IAmb	14 56 37.7	
	comp=Z,4.7nm,0.8s						
NVAR	**Mina Array Bea**	**83.04**	**47**	P	**P**	**14 56 37.8**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=223,slow=6.2,SNR=2.4						
RND	**Reindeer**	**84.67**	**15**	P	**P**	**14 56 45.5**	**+1.3**
IL31		**86.29**	**15**	P	**P**	**14 56 52.9**	**+0.8**
IL31				IAmb	IAmb	14 57 06.9	
	comp=Z,5.3nm,1.0s						
ILAR	**Eielson Array**	**86.29**	**15**	P	**P**	**14 56 51.4**	**-0.8**
	comp=Z,3.0nm,0.8s,baz=234,slow=5.6,SNR=22						
ILAR	**Eielson Array**	**86.29**	**15**	P	**P**	**14 56 52.8**	**+0.6**
Q16A	**Castle Valley**	**88.30**	**49**	P	**P**	**14 57 06.3**	**+3.5**
HVU	**Hansel Valley**	**88.32**	**45**	P	**P**	**14 57 05.1**	**+2.3**
SONM	**Songino Array**	**88.65**	**321**	P	**P**	**14 57 03.7**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=126,slow=3.8,SNR=6.4						
SYO	**Syowa Base**	**88.81**	**195**⥣	*e*P	**P**	**14 57 04.8**	**+0.4**
TXAR	**Lajitas Array**	**90.73**	**60**	P	**P**	**14 57 16.1**	**+1.9**
	comp=Z,2.1nm,1.1s,baz=229,slow=3.5,SNR=8.3						
PDAR	**Pinedale Array**	**90.90**	**45**	P	**P**	**14 57 14.2**	**-0.7**
	comp=Z,0.3nm,1.0s,baz=219,slow=2.3,SNR=1.7						
SNAA	**Sanae**	**91.81**	**181**	P	**P**	**14 57 17.9**	**-0.5**
VNA3	**Neumayer Olymp**	**92.19**	**178**	P	**P**	**14 57 21.2**	**+1.0**
VNA2	**Neumayer--Watz**	**92.55**	**179**	P	**P**	**14 57 21.6**	**-0.2**
	baz=170,slow=4.4						
VNA1	**Neumayer--Stat**	**92.81**	**179**	P	**P**	**14 57 24.1**	**+1.1**
YKA	**Yellowknife Ar**	**95.96**	**26**	P	**P**	**14 57 37.2**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=249,slow=4.6,SNR=3.1						
KHC	**Kasperske Hory**	**144.34**	**339**	*e*PKP	**PKPdf**	**15 03 46.8**	**-0.1**
KHC				*e*x	x	15 03 59.4	
CKRC	**Cesky Krumlov**	**144.35**	**338**	*e*PKP	**PKPdf**	**15 03 47.8**	**+0.9**
GERES	**GERESS Array B**	**144.54**	**339**	PKP	**PKPdf**	**15 03 46.5**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=46,slow=3.9,SNR=9.2						
ARSA	**Arzberg**	**145.18**	**335**	*e*P	**PKiKP**	**15 03 53.7**	**+1.4**
	comp=Z,11nm,1.2s						
SOKA	**Soboth**	**145.84**	**335**	*e*P	**PKPab**	**15 03 51.3**	**+0.7**
	comp=Z,7.7nm,1.2s						
MYKA	**Terra Mystica**	**146.43**	**337**	*e*P	**PKPbc**	**15 03 51.4**	**-0.5**
	comp=Z,3.5nm,0.5s						
WATA	**Walderalm**	**146.57**	**339**	*e*P	**PKPab**	**15 03 54.1**	**+0.6**
	comp=Z,2.5nm,0.4s						
WTTA	**Wattenberg**	**146.61**	**339**	*e*P	**PKPab**	**15 03 53.8**	**+0.1**
	comp=Z,5.5nm,0.8s						
MOTA	**Moosalm**	**146.72**	**340**	*e*P	**PKPab**	**15 03 53.8**	**-0.2**
	comp=Z,4.7nm,0.9s						
MOTA				*e*P	**pPKPdf**	**15 03 59.8**	**-2.0**
	comp=Z,24nm,1.4s						
ABTA	**Abfaltersbach**	**146.75**	**338**	*e*P	**PKPbc**	**15 03 53.2**	**+0.3**
	comp=Z,8.5nm,1.3s						
FETA	**Feichten**	**147.12**	**340**	*e*P	**PKPab**	**15 03 55.1**	**-0.5**
	comp=Z,5.9nm,1.0s						
DAVA	**Damuels**	**147.16**	**341**	*e*P	**PKPab**	**15 03 55.6**	**-0.2**
	comp=Z,13nm,1.3s						

IDC 09 14:45:45.9±1.7, 4°.10S×129°.21E, h0^{km}, mb3.4/1, mb1 3.3/4, mb1mx3.0/39, mbtmp3.2/4, ML2.8/3, Error ellipse: s-maj=56.6km s-min=28.3km az=83.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.81**	**33**	Pn	Pn	14 46 45.6	-0.3
	2.9nm,0.3s,baz=147,slow=21,SNR=6.6						
SIJI				Sn	Sn	14 47 26.4	-5.1
	1.4nm,0.3s,baz=294,slow=24,SNR=1.7						
WRA	**Warramunga Arr**	**16.52**	**163**	Pn	Pn	14 49 39.4	+0.1
	0.0nm,0.3s,baz=344,slow=13,SNR=2.1						
ASAR	**Alice Springs**	**19.97**	**167**	P	P	14 50 19.9	-0.1
	0.0nm,0.3s,baz=344,slow=9.6,SNR=4.0						
MKAR	**Makanchi Array**	**65.39**	**326**	P	P	14 56 30.5	+0.1
	0.2nm,0.4s,baz=116,slow=8.1,SNR=4.6						

DJA 09 14:47:44.9±0.6, 4°S±6°×12°9E±°, h10^{km}, M3.8/7, mb3.9/1, MLv3.8/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.14**	**335**	P	Pb	14 48 04.8	-2.0
AAI	**Ambon**	**1.40**	**300**	P	Pb	14 48 10.9	-0.2
FAKI	**Fak Fak**	**3.19**	**63**	P	Pn	14 48 35.9	+0.8
SWI	**Sorong**	**3.96**	**28**	P	Pn	14 48 46.7	+0.9
SANI	**Sanana**	**4.13**	**304**	P	Pn	14 48 49.4	+1.3
SOEI	**Soe**	**7.38**	**223**	P	Pn	14 49 34.6	+1.7

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*VAO **09** 14:49:53.1±0.3, 10°.68S×43°.86W, h0^{km}, mbR3.8*

*IDC **09** 14:49:53.2±1.6, 10°.87S×43°.78W, h0^{km}, mb3.6/2, mb1 3.8/3, mb1mx3.5/25, mbtmp3.6/3, ML3.9/1, Error ellipse: s-maj=55.0km s-min=21.3km az=136.0*

ISC 09 14:49:54.4±0.8, 10°.74S±0°.07×43°.85W±0°.08, h10^{km}, n28, σ1^s.31/31, Brazil

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDBA	**SAO DESIDERIO**	**1.95**	**212**	*e*P	**Pb**	**14 50 30.0**	**-0.1**
SDBA				*e*S	**Sb**	**14 50 54.5**	**-0.1**
SMTB	**Santa Maria do**	**4.13**	**297**	*e*P	**Pn**	**14 50 58.1**	**+0.5**
JANB	**Januaria**	**4.32**	**186**	*e*P	**Pn**	**14 51 00.9**	**+0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PEXB	Peixe	4.57	252	*e*P	Pn	14 51 04.2	+0.5
GDU01	Guandu, BA	5.12	126	*e*P	Pn	14 51 11.6	+0.3
CMC01	Camacan, BA	6.24	138	*e*P	Pn	14 51 27.3	+0.7
BDFB	Brasilia	6.34	219	Pn	Pn	14 51 28.7	+0.7
	1.4nm,0.3s,baz=41,slow=11,SNR=5.9						
BDFB				Pg	Pb	14 51 49.0	+4.1
	3.7nm,0.3s,baz=46,slow=20,SNR=6.7						
BDFB				Sn	Sn	14 52 37.4	-3.2
	6.6nm,0.3s,baz=68,slow=27,SNR=3.6						
BDFB				Lg	Lg	14 53 10.5	
	23nm,0.3s,baz=185,slow=20,SNR=8.5						
GUA01	Guaratinga, BA	7.02	146	*e*P	Pn	14 51 38.2	+0.9
PRPB	Parauapebas	7.44	307	*e*P	Pn	14 51 42.8	-0.3
DIAM	Diamantina, MG	7.51	179	*e*P	Pn	14 51 44.2	0.0
ROSB	Rosrio	7.80	358	*e*P	Pn	14 51 47.4	-0.6
SJMB	Sao Joao De Ma	8.33	162	*e*P	Pn	14 51 55.7	+0.4
IPMB	Ipameri, GO	8.35	210	*e*P	Pn	14 51 56.0	+0.4
RIB01	Linhares ES	9.16	159	*e*P	Pn	14 52 07.5	+0.9
ARAG	Araguaiana, MT	9.19	237	*e*P	Pn	14 52 07.8	+0.7
ALF01	Guarapari-ES	10.27	163	*e*P	Pn	14 52 22.4	+0.5
CLDB	Colider	11.73	268	*e*P	Pn	14 52 42.3	+0.3
NPGB	Novo Progresso	11.94	287	*e*P	Pn	14 52 43.4	-1.5
VAO	Valinhos	12.55	193	*e*P	Pn	14 52 52.2	-1.0
PARB	Paraibuna	12.64	187	*e*P	Pn	14 52 53.8	-0.6
PDRB	Porto dos Gac	12.66	265	*e*P	Pn	14 52 52.2	-2.5
PP1B	Ponte de Pedra	12.68	236	*e*P	Pn	14 52 55.0	+0.1
PCMB	Pacaembu	12.93	212	*e*P	Pn	14 52 58.7	+0.3
MCPB	Macapa, AP	13.15	321	*e*P	Pn	14 53 00.5	-0.8
ITTB	Itaituba	13.37	297	*e*P	Pn	14 53 02.6	-1.8
PTLB	Pontes e Lacer	15.60	251	*e*P	Pn	14 53 35.2	+0.6
TORD	Torodi Ar. Bea	51.06	63	P	P	14 58 57.5	+0.1
	0.9nm,0.5s,baz=245,slow=8.0,SNR=6.9						
TXAR	Lajitas Array	70.05	307	P	P	15 01 08.2	+1.1
	0.1nm,0.5s,baz=111,slow=8.8,SNR=1.9						

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*NEIC **09** 14:50:18.8±2.3, 4°.10S±0°.06×129°.61E±0°.06, h10^{km}±1^{km}, mb4.4/12, Error ellipse: s-maj=10.8km s-min=9.8km az=239.0*

*DJA **09** 14:50:18.3±1.3, 4°S±14°×13°0E±°, h10^{km}, M3.7/3, MLv3.7/3*

*IDC **09** 14:50:21.7±2.5, 4°.11S×129°.63E, h39^{km}±23^{km}, mb3.9/8, mb1 4.1/13, mb1mx3.8/39, mbtmp4.2/13, ML4.0/5, Error ellipse: s-maj=24.4km s-min=14.4km az=74.0*

ISC 09 14:50:21.1±0.5, **4°.18S**±0°.05×**129°.60E**±0°.06, **h36^{km}, n58, σ1.^{s}57**/60, **mb4.2**/10, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.46	138	P	Pn	14 50 30.2	-0.9
MSAI	Masohi	1.06	321	P	Pn	14 50 38.1	-1.4
AAI	Ambon	1.48	289	P	Pn	14 50 44.0	-1.2
FAKI	Fak Fak	2.93	65	P	Pn	14 51 06.0	+0.8
FAKI	Fak Fak	2.93	65		Pn	14 51 05.8	+0.6
FAKI	Fak Fak	2.93	65	P	Pn	14 51 06.6	+1.4
SIJI	Sorong	3.69	27	Pn	Pn	14 51 15.8	+0.2
	7.8nm,0.3s,baz=235,slow=23,SNR=6.1						
SIJI				Sn	Sn	14 51 56.5	-1.3
	6.8nm,0.3s,baz=290,slow=7.5,SNR=6.4						
SWI	Sorong	3.69	27	P	Pn	14 51 16.0	+0.4
LBMI	Labuha	4.09	329	P	Pn	14 51 21.5	+0.3
SAUI	Saumlaki	4.14	156	Pn	Pn	14 51 25.1	+3.2
SANI	Sanana	4.18	300	P	Pn	14 51 21.9	-0.4
SANI	Sanana	4.18	300	P	Pn	14 51 23.2	+0.9
TNTI	Ternate	5.40	336	Pn	Pn	14 51 39.3	+0.1
DRS	Darwin Rock St	8.30	171	P	Pn	14 52 19.9	+0.9
BATI	Baumata	8.40	224	Pn	Pn	14 52 21.9	+1.5
	2.8nm,0.3s,baz=46,slow=3.5,SNR=4.6						
MTN	Manton Dam	8.74	170	Pn	Pn	14 52 26.8	+1.7
KDU	Kakadu	8.92	162	P	Pn	14 52 28.3	+0.8
KAPI	Kappang	9.85	265	Pn	Pn	14 52 41.3	+1.1
	0.5nm,0.3s,baz=103,slow=14,SNR=1.7						
KNRA	Kununurra	11.46	184	Pn	Pn	14 53 02.9	+0.6
KNRA	Kununurra	11.46	184	P	Pn	14 53 03.4	+1.1
FITZ	Fitzroy Crossi	14.37	195	Pn	Pn	14 53 43.4	+1.4
	0.4nm,0.3s,baz=15,slow=12,SNR=6.6						
WB0	Warramunga Arr	16.19	164		Pn	14 54 05.4	-0.5
WB0				IAmb	IAmb	14 54 10.3	
	comp=Z,38nm,1.4s						
WRAB	Tennant Creek	16.33	164	P	P	14 54 09.7	-0.7
WRA	Warramunga Arr	16.34	164	Pn	Pn	14 54 04.0	-3.9
	comp=Z,0.5nm,0.3s,baz=341,slow=14,SNR=15						
WRA				Sn	Sn	14 57 00.4	-7.8
	baz=352,slow=22,SNR=2.2						
WRA	Warramunga Arr	16.34	164		Pn	14 54 06.2	-1.8
COEN	Coen	16.55	127		Pn	14 54 09.7	-0.9
COEN	Coen	16.55	127	P	P	14 54 13.5	+0.7
QIS	Mount Isa	18.97	150	P	Pn	14 54 41.0	+0.5
MBWA	Marble Bar	19.41	209	P	Pn	14 54 46.5	+0.8
PSA00	Pilbara Seismi	19.71	208		Pn	14 54 49.2	0.0
PSA00	Pilbara Seismi	19.71	208	P	Pn	14 54 48.5	-0.8
PSA00				IAmb	IAmb	14 54 50.5	
	comp=Z,28nm,0.9s						
PSA00	Pilbara Seismi	19.71	208	P	Pn	14 54 49.9	+0.6
AS31	Alice Springs	19.82	168		Pn	14 54 49.8	-0.7
AS31				IAmb	IAmb	14 54 54.2	
	comp=Z,8.0nm,0.6s						
ASAR	Alice Springs	19.82	168	P	Pn	14 54 50.0	-0.5
	comp=Z,1.8nm,0.3s,baz=343,slow=9.4,SNR=43						
ASAR				S	S	14 58 27.4	-2.8
	comp=Z,0.0nm,0.3s,baz=349,slow=24,SNR=3.7						
ASAR				PcP	PcP	14 59 06.4	+0.4
	comp=Z,0.1nm,0.3s,baz=1.5,slow=1.7,SNR=4.3						
ASAR	Alice Springs	19.82	168		Pn	14 54 49.7	-0.9
MTSU	Mount Surprise	20.00	135	P	Pn	14 54 52.9	+0.2
WRKA	Warakurna	20.78	183	P	Pn	14 55 01.7	-0.1
CTA	Charters Tower	22.66	136	P	P	14 55 20.4	+0.9
	comp=Z,9.2nm,0.8s,baz=314,slow=14,SNR=12						
CTAO	Charters Tower	22.66	136	P	P	14 55 20.0	+0.6
CTAO				IAmb	IAmb	14 55 21.3	
	comp=Z,12nm,0.7s						
CTAO	Charters Tower	22.66	136	P	P	14 55 20.7	+1.2
OOD	Oodnadatta	24.19	167	P	P	14 55 35.4	+1.1
INKA	Innaminka	25.73	157	P	P	14 55 50.1	+1.8
STKA	Stephens Creek	29.77	159	P	P	14 56 24.7	+0.3
	comp=Z,1.8nm,0.7s,baz=331,slow=11,SNR=6.3						
STKA	Stephens Creek	29.77	159	IAmb	IAmb	14 56 30.8	
	comp=Z,1.3nm,1.5s						
CMAR	Chiang Mai Arr	37.66	308	P	P	14 57 33.3	+0.2
	comp=Z,2.5nm,0.8s,baz=139,slow=7.4,SNR=6.5						
CMAR				PcP	PcP	14 59 51.3	+1.1
	comp=Z,0.4nm,0.7s,baz=158,slow=3.1,SNR=4.5						
CHTO	Chiang Mai	37.86	308	P	P	14 57 36.6	+1.8
CHTO				IAmb	IAmb	14 58 00.8	
	comp=Z,4.8nm,0.9s						
KSRS	Korea Array	41.45	358	P	P	14 58 03.9	-0.5
	comp=Z,1.5nm,0.7s,baz=175,slow=8.7,SNR=6.7						
USRK	Ussuriysk Ar.	48.20	2	P	P	14 58 58.5	+0.4
BKZ	Black Stump Fm	54.88	136	P	P	14 59 49.3	+1.0
SONM	Songino Array	55.66	341	P	P	14 59 52.1	-1.6
	comp=Z,1.3nm,1.0s,baz=158,slow=6.7,SNR=4.4						
MK31	Makanchi Array	65.66	326	P	P	15 01 02.1	+0.3
MK31				IAmb	IAmb	15 01 14.7	
	comp=Z,2.2nm,0.8s						
MKAR	Makanchi Array	65.66	326	P	P	15 01 02.2	+0.3
	comp=Z,2.2nm,0.7s,baz=124,slow=7.7,SNR=18						
MKAR	Makanchi Array	65.66	326	P	P	15 01 02.3	+0.5
ZALV	Zalesovo Beam	68.89	333	P	P	15 01 21.7	-0.3
	comp=Z,0.5nm,0.3s,baz=116,slow=3.4,SNR=4.3						
NRIK	Noril'sk	78.74	346	P	P	15 02 19.9	+0.4
	comp=Z,2.8nm,0.7s,baz=79,slow=4.0,SNR=4.2						
NRIK	Noril'sk	78.74	346	IAmb	IAmb	15 02 46.0	
	comp=Z,5.3nm,1.1s						
TORD	Torodi Ar. Bea	127.82	283	PKP	PKPdf	15 09 24.1	+0.2
	comp=Z,0.5nm,0.7s,baz=89,slow=2.2,SNR=3.7						
LPAZ	La Paz	153.15	140	PKPbc	PKPbc	15 10 16.2	-0.6
	comp=Z,0.9nm,0.6s,baz=22,slow=1.3,SNR=2.1						

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*BJI **09** 14:56:53.3±0.0, 4°.72S×129°.75E, h30^{km}, mB5.5/56, mb5.4/70, Ms5.0/66, Ms7 4.7/65*

*IDC **09** 14:56:57.6±1.8, 4°.16S×129°.40E, h15^{km}±10^{km}, mb5.3/32, mb1 5.3/39, mb1mx5.0/46, mbtmp5.3/39, ML4.7/3, MS4.7/23, Ms1 4.7/23, ms1mx4.6/38, Error ellipse: s-maj=13.1km s-min=9.7km az=71.0*

*MOS **09** 14:56:58.0±1.0, 4°.17S×129°.42E, h29^{km}, mb5.6/63, MS4.8/6, Error ellipse: s-maj=7.9km s-min=4.4km az=116.6*

*NEIC **09** 14:56:58.0±1.9, 4°.05S±0°.06×129°.51E±0°.06, h10^{km}±1^{km}, mb5.6/93, Ms_20 4.9/28, Error ellipse: s-maj=10.2km s-min=9.7km az=230.0*

*GCMT **09** 14:57:00.0±0.2, 4°.10S±0°.01×129°.45E±0°.02, h12^{km}, MW5.4/136, Moment Tensor Solution. s76,c99; s136,c241; Duration: 1.^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.62±.03; $M_{\theta\theta}$-1.69±.03; $M_{\phi\phi}$0.07±.03; $M_{r\theta}$0.13±.09; $M_{\theta\phi}$0.23±.03; $M_{\phi r}$-0.40±.12; Best double couple: $M_0$1.72300×10^{17} NP1:ϕ_s264.00000°, δ43.00000°, λ71.00000°. NP2:ϕ_s110.00000°, δ50.00000°, λ107.00000°. Principal axes: T 1.7170, Plg77.0000°, Azm84.0000°; N 0.0150, Plg13.0000°, Azm279.0000°; P -1.7290, Plg3.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **09** 14:57:02.4±0.2, 4°S±2°×13°0E±°, h52^{km}±2^{km}, M5.2/90, mB5.7/72, mb5.4/90, MLv5.5/16, Mw(mB)5.2/72, MwMwp5.3/13, Mwp5.5/13*

*KLM **09** 14:57:05, 4°.02S×129°.53E, h62^{km}, mb5.5*

ISC 09 14:57:00.6±0.4, **4°.20S**±0°.03×**129°.45E**±0°.04, **h33^{km}**±1^{km}, **h34^{km}:pP-P, n746, σ1.^{s}50**/798, **mb5.5**/160, **MS4.8**/50, **20C-20D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.56	125	P	Pb	14 57 11.8	-0.4
MSAI	Masohi	0.99	329	P	Pn	14 57 15.4	-2.7
AAI	Ambon	1.34	292	P	Pn	14 57 21.5	-1.5
FAKI	Fak Fak	3.07	66	P	Pn	14 57 46.4	-0.4
FAKI	Fak Fak	3.07	66	Pn	Pn	14 57 45.7	-1.1
FAKI	Fak Fak	3.07	66	P	Pn	14 57 46.5	-0.4
SIJI	Sorong	3.77	29	Pn	Pn	14 57 56.0	-0.5
	162nm,0.3s,baz=272,slow=10.0,SNR=99						
SIJI				Sn	Sn	14 58 37.0	-2.7
	170nm,0.3s,baz=256,slow=5.2,SNR=5.7						
SIJI				LR	LR	14 59 46.5	
	comp=Z,32µm,19.2s,baz=196,slow=45						
SWI	Sorong	3.77	29	P	Pn	14 57 55.2	-1.3
LBMI	Labuha	4.03	331	P	Pn	14 57 59.7	-0.3
SANI	Sanana	4.06	302	P	Pn	14 57 59.9	-0.5
SANI	Sanana	4.06	302	P	Pn	14 58 00.8	+0.4
SAUI	Saumlaki	4.19	154	P	Pn	14 58 06.9	+4.7
SAUI	Saumlaki	4.19	154	Pn	Pn	14 58 04.9	+2.7
SAUI	Saumlaki	4.19	154	P	Pn	14 58 05.6	+3.4
TNTI	Ternate	5.35	337	P	Pn	14 58 16.5	-1.7
	1.2nm12µm5µm374nm,1.0s						
TNTI	Ternate	5.35	337	Pn	Pn	14 58 17.7	-0.5
TNTI	Ternate	5.35	337	P	Pn	14 58 18.9	+0.7
SRPI	Serui, Papua	7.17	71	P	Pn	14 58 43.5	+0.3
	1.8nm8µm5µm350nm,0.9s						
KMSI	Cibinong	7.23	311	P	Pn	14 58 45.0	+1.0
	4.4nm8µm792nm,0.6s						
SOEI	Soe	7.54	223	P	Pn	14 58 53.2	+4.8
	1.7nm18µm7µm305nm,0.7s						
SOEI	Soe	7.54	223	Pn	Pn	14 58 52.9	+4.4
SOEI	Soe	7.54	223	P	Pn	14 58 53.1	+4.7
BATI	Baumata	8.28	224	Pn	Pn	14 59 02.1	+3.7
	43nm,0.3s,baz=106,slow=1.6,SNR=57						
BATI				LR	LR	15 02 32.4	
	comp=Z,14µm,22.0s,baz=31,slow=40						
BATI	Baumata	8.28	224	P	Pn	14 59 03.1	+4.7
	7µm2µm261nm,0.8s						
DRS	Darwin Rock St	8.31	170	P	Pn	14 59 02.8	+4.0
MMRI	Maumere	8.41	238	P	Pn	14 59 04.3	+4.1
	9µm310nm,1.0s						
MMRI	Maumere	8.41	238	P	Pn	14 59 02.2	+2.0
APSI	Ampana	8.44	293	P	Pn	14 59 03.5	+2.8
	5µm495nm,0.8s						
MTN	Manton Dam	8.75	169	P	Pn	14 59 08.3	+3.4
	baz=8.9,SNR=6.8						
MTN	Manton Dam	8.75	169	Pn	Pn	14 59 07.5	+2.5
MTN	Manton Dam	8.75	169	P	Pn	14 59 07.9	+3.0
MRSI	Marisa	8.82	302	P	Pn	14 59 07.6	+1.8
	3µm348nm,0.7s						
EDFI	Ende, Flores	8.93	239	P	Pn	14 59 12.4	+4.9
	2µm110nm,0.9s						
KDU	Kakadu	8.95	161	P	Pn	14 59 07.5	-0.2
BSSI	Bau Bau, Buton	9.12	257	P	Pn	14 59 13.8	+3.8
	5µm2µm147nm,0.8s						
BNSI	Bone	9.31	268	P	Pn	14 59 15.8	+3.2
	3µm284nm,0.9s						
BKSI	Bulukumba	9.36	263	P	Pn	14 59 17.3	+4.1
	10µm3µm302nm,0.8s						
SMPI	Sarmi	9.51	77	P	Pn	14 59 14.2	-1.1
	2µm112nm,1.1s						
SPSI	Sidrap Palu	9.65	271	P	Pn	14 59 21.3	+4.0
	3µm151nm,1.1s						
TTSI	Tana Toraja	9.67	276	P	Pn	14 59 20.9	+3.3
	3µm194nm,1.1s						
KAPI	Kappang	9.70	265	Pn	Pn	14 59 20.8	+3.0
	13nm,0.3s,baz=127,slow=6.8,SNR=52						
KAPI				LR	LR	15 02 39.1	
	comp=Z,2µm,20.0s,baz=99,slow=35						
KAPI	Kappang	9.70	265	P	Pn	14 59 20.6	+2.8
KAPI	Kappang	9.70	265	Pn	Pn	14 59 20.6	+2.8
KAPI	Kappang	9.70	265	P	Pn	14 59 21.2	+3.3
TOLI2	Tolitoli	10.13	301	Pn	Pn	14 59 24.3	+0.5
TOLI2	Tolitoli	10.13	301	P	Pn	14 59 25.6	+1.7
MPSI	Mapaga	10.55	295	P	Pn	14 59 31.3	+1.8
	2µm78nm,0.8s						
BASI	Baing, Sumba	10.64	235	P	Pn	14 59 38.5	+7.7
GENI	Genyem	10.82	82	P	Pn	14 59 32.9	-0.3
	4µm146nm,0.7s						
GENI	Genyem	10.82	82	P	Pn	14 59 33.0	-0.3
WBSI	Waikabubak, Su	11.35	241	P	Pn	14 59 46.6	+6.0
	3µm316nm,0.6s						
JAY	Jayapura	11.36	82	Pn	Pn	14 59 41.5	+0.7
	0.8nm,0.3s,baz=281,slow=3.3,SNR=5.7						
JAY	Jayapura	11.36	82	P	Pn	14 59 41.3	+0.5
	638nm40nm,1.0s						
KNRA	Kununurra	11.43	183	Pn	Pn	14 59 42.4	+0.8
KNRA	Kununurra	11.43	183	P	Pn	14 59 42.7	+1.1
DAV	Davao City (W)	11.84	341	LR	LR	15 04 52.7	
	comp=Z,4µm,20.4s,baz=144,slow=40						
KCP	Kidapawan	11.95	339⇓	*e*P	Pn	14 59 45.9	-2.9
PLAI	Plampang	12.47	248	P	Pn	14 59 59.7	+3.8
	4µm364nm,0.8s						
PLAI	Plampang	12.47	248	P	Pn	15 00 00.2	+4.3
BKB	Balikpapan	12.87	283	P	Pn	15 00 04.9	+3.6
	3µm250nm,1.4s						
TWSI	Taliwang, Sumb	13.27	249	P	Pn	15 00 10.9	+4.1
	2µm206nm,0.8s						
KBKI	Kotabaru	13.28	273	P	Pn	15 00 09.4	+2.5
	886nm114nm,0.8s						
FITZ	Fitzroy Crossi	14.31	195	Pn	Pn	15 00 21.3	+0.3
	baz=22,slow=19						
FITZ				LR	LR	15 07 26.1	
	comp=Z,4µm,18.4s,baz=24,slow=44						
FITZ	Fitzroy Crossi	14.31	195	P	Pn	15 00 21.2	+0.3
	baz=14,SNR=6.7						
BBKI	Banjar Baru	14.59	272	P	Pn	15 00 27.7	+2.9
	5µm130nm,2.6s						
SRBI	Singaraja	14.67	254	P	P	15 00 31.2	-0.5
	7µm394nm,1.0s						
DNP	Denpasar	14.83	252	P	P	15 00 32.6	-0.8
	42µm549nm,1.0s						
TBP	Tagbilaran	14.87	338	*e*P	P	15 00 35.2	+1.3
MTKI	Muara Teweh, K	14.89	282	P	P	15 00 31.5	-2.6
	3µm101nm,2.0s						
IGBI	Denpasar	14.93	251	P	P	15 00 33.2	-1.4
	3µm241nm,0.9s						
CNOP	Candoni, Negro	15.49	334⇑	*e*P	P	15 00 41.1	+0.3
ABJI	Asem Bagus	15.54	256	P	P	15 00 42.8	+1.4
	11µm9µm419nm,2.0s						
KMMI	Kalianget	15.66	259	P	P	15 00 44.1	+1.4
	7µm343nm,1.0s						
SPMM	Sapulut	15.70	304	P	P	15 00 42.0	-1.1
JAGI	Jajag, Banyuwa	15.78	254	P	P	15 00 44.1	+0.1
	6µm341nm,1.4s						
JAGI	Jajag, Banyuwa	15.78	254	P	P	15 00 43.6	-0.4
BLJI	Banyuglugur	16.15	257	P	P	15 00 49.4	+1.2
	6µm6µm259nm,0.8s						
WRAB	Tennant Creek	16.36	163	*d i*P	Pn	15 00 45.5	-2.4
WRAB	Tennant Creek	16.36	163	P	Pn	15 00 47.7	-0.2
WRA	Warramunga Arr	16.36	163	Pn	Pn	15 00 45.7	-2.3
	4.1nm,0.3s,baz=347,slow=13,SNR=73						
WRA				Sn	Sn	15 03 41.1	-7.5
	0.6nm,0.3s,baz=336,slow=24,SNR=5.3						
WRA				LR	LR	15 07 36.2	
	comp=Z,7µm,21.4s,baz=340,slow=39						
WRA	Warramunga Arr	16.36	163	P	Pn	15 00 45.8	-2.1
WRA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WRA	Warramunga Arr	16.36	163	Pn	Pn	15 00 45.8	-2.1
WB2	Warramunga Arr	16.37	163	P	Pn	15 00 45.5	-2.5
	baz=16						
GMJI	Gumukmas	16.41	255	P	P	15 00 52.7	+1.6
	comp=Z,4µmcomp=Z,190nm,1.2s						
COEN	Coen	16.66	127		Pn	15 00 51.1	-0.6
COEN	Coen	16.66	127	P	Pn	15 00 51.2	-0.5
KKM	Kota Kinabalu	16.67	308	P	Pn	15 00 52.0	0.0
KKM	Kota Kinabalu	16.67	308	P	P	15 00 53.6	-0.5
RCP	Roxas	17.01	337⇑	*e*P	P	15 00 59.5	+1.8
PBKI	Pangkalan Bun	17.80	274	P	P	15 01 09.7	+3.2
	comp=Z,4µmcomp=Z,193nm,1.0s						
PMG	Port Moresby	18.33	107	P	Pn	15 01 12.4	0.0
	comp=Z,0.9nm,0.3s,baz=291,slow=10,SNR=15						
PMG				LR	LR	15 10 24.1	
	comp=Z,3µm,18.0s,baz=298,slow=44						
PMG	Port Moresby	18.33	107	P	Pn	15 01 12.2	-0.2
PMG				pmax	pmax		
	comp=Z,178nm,1.1s						
PMG	Port Moresby	18.33	107	P	Pn	15 01 12.2	-0.2
PMG	Port Moresby	18.33	107	P	Pn	15 01 12.2	-0.2
PMG	Port Moresby	18.33	107	P	Pn	15 01 12.1	-0.3
SBUM	Sibu	18.43	291	P	Pn	15 01 16.0	+2.3
SBUM	Sibu	18.43	291	P	Pn	15 01 14.2	+0.5
STKI	Sintang	18.44	283	P	Pn	15 01 16.2	+2.4
	comp=Z,4µmcomp=Z,95nm,1.4s						
UWJI	Ujung Watu	18.55	262	P	Pn	15 01 17.1	+2.0
	comp=Z,153nm,1.5s						
PCJI	Pacitan	18.59	257	P	P	15 01 15.0	-0.1
	comp=Z,3µmcomp=Z,285nm,0.9s						
WOJI	Wonogiri, Jawa	18.77	258	P	Pn	15 01 19.2	+1.4
	comp=Z,4µmcomp=Z,158nm,0.9s						
QIS	Mount Isa	19.04	150	P	Pn	15 01 20.4	-0.5
	baz=19,SNR=84						
QIS	Mount Isa	19.04	150	P	Pn	15 01 20.6	-0.3
SMRI	Semarang	19.12	261	P	Pn	15 01 23.7	+1.6
	comp=Z,287nm,1.1s						
SMRI	Semarang	19.12	261	P	Pn	15 01 22.1	0.0
SMRI				IAmb	IAmb	15 01 44.0	
	comp=Z,218nm,1.0s						
SMRI	Semarang	19.12	261	P	Pn	15 01 23.2	+1.1
UGM	Wanagama	19.17	258	P	Pn	15 01 24.0	+1.3
	comp=Z,265nm,1.3s						
UGM	Wanagama	19.17	258	P	Pn	15 01 22.5	-0.2
UGM				IAmb	IAmb	15 01 42.0	
	comp=Z,269nm,1.1s						
UGM	Wanagama	19.17	258	P	Pn	15 01 24.6	+1.9
MBWA	Marble Bar	19.32	208	P	Pn	15 01 25.2	+0.8
PSA00	Pilbara Seismi	19.63	208	P	Pn	15 01 28.2	+0.2
PSA00	Pilbara Seismi	19.63	208	P	Pn	15 01 27.9	-0.2
PSA00				IAmb	IAmb	15 01 30.9	
	comp=Z,566nm,1.0s						
PSA00	Pilbara Seismi	19.63	208	P	Pn	15 01 28.8	+0.8
AS31	Alice Springs	19.83	168	P	Pn	15 01 29.7	-0.8
ASPA	Alice Springs	19.83	168	P	Pn	15 01 30.1	-0.4
	baz=20						
ASAR	Alice Springs	19.83	168	P	Pn	15 01 29.8	-0.7
	comp=Z,13nm,0.3s,baz=350,slow=11,SNR=224						
ASAR				S	S	15 05 10.1	-0.4
	comp=Z,0.9nm,0.3s,baz=353,slow=23,SNR=2.6						
ASAR				PcP	PcP	15 05 45.2	-0.7
	comp=Z,1.6nm,0.3s,baz=4.9,slow=1.4,SNR=5.7						
ASAR				ScP	ScP	15 09 20.4	+0.7
	baz=353,slow=1.7,SNR=1.8						
ASAR				LR	LR	15 09 50.7	
	comp=Z,5µm,18.9s,baz=355,slow=39						
ASAR	Alice Springs	19.83	168	P	Pn	15 01 29.7	-0.8
TGY	Tagaytay City	20.04	335	P	P	15 01 31.0	-0.1
	comp=Z,53nm,0.3s,baz=115,slow=21,SNR=1.4						
TGY	Tagaytay City	20.04	335	P	P	15 01 31.0	-0.1
MTSU	Mount Surprise	20.09	135	P	P	15 01 32.3	+0.7
	baz=20,SNR=196						
MTSU	Mount Surprise	20.09	135	P	Pn	15 01 32.5	-1.1
WRKA	Warakurna	20.75	183	P	Pn	15 01 40.3	-0.9
	baz=21,SNR=278						
WRKA	Warakurna	20.75	183	P	Pn	15 01 41.1	-0.1
LEM	Lembang	21.88	262	P	P	15 01 49.7	-1.4
	comp=Z,26nm,0.5s,baz=344,slow=17,SNR=6.3						
LEM				LR	LR	15 10 45.1	
	comp=Z,2µm,20.3s,baz=80,slow=38						
CNJI	Cibinong	22.41	261	P	P	15 01 54.3	-2.3
	comp=Z,3µmcomp=Z,229nm,1.3s						
RABL	Rabaul	22.66	91	P	P	15 01 57.6	-1.6
RABL				IAmb	IAmb	15 02 03.0	
	comp=Z,237nm,0.9s						
RABL	Rabaul	22.66	91	P	P	15 01 59.9	+0.6
CTA	Charters Tower	22.75	135	P	P	15 02 00.7	+0.5
	comp=Z,84nm,0.9s,baz=316,slow=13,SNR=29						
CTA	Charters Tower	22.75	135	P	P	15 02 01.6	+1.4
CTAO	Charters Tower	22.75	135	P	P	15 01 59.5	-0.7
CTAO				pmax	pmax		
	comp=Z,174nm,1.0s						
CTAO	Charters Tower	22.75	135	P	P	15 01 59.5	-0.7
CTAO				IAmb	IAmb	15 02 15.3	
	comp=Z,174nm,1.0s						
CTAO	Charters Tower	22.75	135	P	P	15 02 00.7	+0.5
PPBI	Pangkal Pinang	23.36	274	P	P	15 02 06.4	0.0
	comp=Z,6µmcomp=Z,27nm,0.8s						
GIRL	Giralia	23.52	217	P	P	15 02 10.6	+2.8
	baz=24,SNR=17						
GIRL	Giralia	23.52	217	P	P	15 02 09.4	+1.6
GIRL	Giralia	23.52	217	P	P	15 02 10.7	+2.8
OOD	Oodnadatta	24.21	166	P	P	15 02 15.0	+0.7
MEEK	Meekatharra	24.61	204	P	P	15 02 19.0	+1.0
	baz=25,SNR=20						
MEEK	Meekatharra	24.61	204	P	P	15 02 18.4	+0.4
KLSI		24.64	268	P	P	15 02 17.5	-0.9
	comp=Z,598nmcomp=Z,19nm,0.8s						
DSRI	Dabo	25.11	278	P	P	15 02 24.1	+1.4
	comp=Z,1µmcomp=Z,23nm,1.0s						
MDSI	Maura Dua	25.20	268	P	P	15 02 24.2	+0.8
	comp=Z,614nmcomp=Z,18nm,0.9s						
INKA	Innaminka	25.78	156	P	P	15 02 29.6	+1.1
LHSI	Lahat	25.86	270	P	P	15 02 32.0	+2.5
	comp=Z,68nm,0.8s						
JMBI	JAMBI	25.89	275	P	P	15 02 31.1	+1.3
	comp=Z,2µmcomp=Z,88nm,0.8s						
MYKOM	Kota Tinggi	26.26	283	P	P	15 02 34.0	+0.9
DLV	T Lat	26.29	308	P	P	15 02 35.0	+1.5
DLV	T Lat	26.29	308	P	P	15 02 35.6	+2.0
MULG	Mulgathing	26.31	171	P	P	15 02 34.4	+1.1
QLP	Quilpie	26.38	149	P	P	15 02 35.6	+1.6
	baz=26,SNR=5.8						
QLP	Quilpie	26.38	149	P	P	15 02 35.7	+1.7
FORT	Forrest	26.48	183	P	P	15 02 35.7	+0.9
	baz=27,SNR=9.9						
FORT	Forrest	26.48	183	P	P	15 02 34.6	-0.2
FORT				IAmb	IAmb	15 03 02.0	
	comp=Z,162nm,0.8s						
FORT	Forrest	26.48	183	P	P	15 02 36.3	+1.5
MASI	Maura Aman, Be	27.17	271	P	P	15 02 42.2	+0.9
	comp=Z,2µmcomp=Z,93nm,0.8s						
LCRK	Leigh Creek	27.39	163	P	P	15 02 44.4	+1.3
MORW	Morawa	27.82	206	P	P	15 02 47.9	+1.0
	baz=28,SNR=11						
MORW	Morawa	27.82	206	P	P	15 02 46.7	-0.2
MORW	Morawa	27.82	206	P	P	15 02 47.5	+0.6
RK1H	Rockhampton Ha	27.88	135	P	P	15 02 48.6	+1.1
JRMM	Jerantut	28.12	286	P	P	15 02 51.0	+1.2
TPUB	Ta-pu	28.65	343	P	P	15 02 51.6	-2.8
TPUB				IAmb	IAmb	15 03 04.0	
	comp=Z,172nm,1.3s						
TPUB	Ta-pu	28.65	343	P	P	15 02 52.8	-1.6
BKNI	Bangkinang	28.73	278	P	P	15 02 56.2	+0.9
	comp=Z,3µmcomp=Z,94nm,0.5s						
BKNI	Bangkinang	28.73	278	P	P	15 02 55.8	+0.5
RMQ	Roma	28.86	142	P	P	15 02 58.1	+1.9
	baz=29,SNR=5.9						
RMQ	Roma	28.86	142	P	P	15 02 58.6	+2.3
BLDU	Ballidu	28.90	203	P	P	15 02 57.5	+0.9
	baz=29,SNR=5.3						
BLDU	Ballidu	28.90	203	P	P	15 02 59.9	+3.4
SSLB	Suanglung	29.02	344	P	P	15 02 55.3	-2.3
SSLB				IAmb	IAmb	15 03 07.3	
	comp=Z,188nm,1.2s						
SSLB	Suanglung	29.02	344	P	P	15 02 56.9	-0.8
BBOO	Buckleboo	29.13	169	P	P	15 02 58.9	+0.3
	baz=29,SNR=13						
BBOO	Buckleboo	29.13	169	P	P	15 02 58.6	0.0
BBOO	Buckleboo	29.13	169	P	P	15 03 00.0	+1.4
PDSI	Padang	29.13	276	P	P	15 02 57.2	-1.7
	comp=Z,26nm,0.8s						
KLBR	Kellerberrin	29.39	201	P	P	15 03 02.2	+1.3
	baz=30,SNR=9.9						
KLBR	Kellerberrin	29.39	201	P	P	15 03 01.9	+1.1
EIDS	Eidsvold	29.58	137	P	P	15 03 03.4	+0.8
	baz=30,SNR=6.9						
EIDS	Eidsvold	29.58	137	P	P	15 03 02.6	0.0
EIDS	Eidsvold	29.58	137	P	P	15 03 03.3	+0.7

IPM	**Ipoh**	**29.67**	**287**	P	**P**	**15 03 05.0**	**+1.4**
IPM	**Ipoh**	**29.67**	**287**	P	**P**	**15 03 01.8**	**-1.8**
IPM	**Ipoh**	**29.67**	**287**	P	**P**	**15 03 04.1**	**+0.5**
WHYH	**Whyalla**	**29.68**	**166**	P	**P**	**15 03 05.2**	**+1.8**
YHNB	**Yeheng**	**29.75**	**345**	P	**P**	**15 03 02.6**	**-1.5**
YHNB				IAmb	IAmb	15 03 21.3	
	comp=Z,158nm,1.1s						
YHNB	**Yeheng**	**29.75**	**345**	P	**P**	**15 03 04.0**	**-0.2**
STKA	**Stephens Creek**	**29.81**	**159**	P	**P**	**15 03 04.8**	**+0.2**
	comp=Z,16nm,0.8s,baz=345,slow=7.8,SNR=28						
STKA				ScP	**ScP**	**15 09 48.6**	**+1.2**
	comp=Z,6.2nm,0.9s,baz=260,slow=6.1,SNR=2.3						
STKA				LR	LR	15 15 47.9	
	comp=Z,5µm,20.6s,baz=325,slow=38						
STKA	**Stephens Creek**	**29.81**	**159**	P	**P**	**15 03 05.2**	**+0.6**
	baz=30,SNR=25						
STKA	**Stephens Creek**	**29.81**	**159**	P	**P**	**15 03 04.0**	**-0.6**
STKA	**Stephens Creek**	**29.81**	**159**	P	**P**	**15 03 05.3**	**+0.7**
QIZ	**Qiongzhong**	**30.08**	**321**	P	**P**	**15 03 07.0**	**-0.1**
QIZ				S	**S**	**15 08 04.0**	**+0.3**
QIZ				LR	LR		
	comp=Z,720nm,11.3s						
QIZ				LR	LR		
	comp=Z,700nm,10.1s						
QIZ				LR	LR		
	comp=Z,780nm,14.8s						
MNSI	**Mandailing Nat**	**30.25**	**279**	P	**P**	**15 03 08.1**	**-0.6**
	comp=Z,98nm,0.7s						
KULM	**Kulim**	**30.26**	**288**	P	**P**	**15 03 10.0**	**+1.2**
KULM	**Kulim**	**30.26**	**288**	P	**P**	**15 03 08.2**	**-0.6**
KULM				IAmb	IAmb	15 03 11.4	
	comp=Z,67nm,0.7s						
MUN	**Mundaring**	**30.30**	**203**	P	**P**	**15 03 09.9**	**+0.9**
	baz=30,SNR=3.5						
HTT	**Hallett**	**30.40**	**164**	P	**P**	**15 03 11.5**	**+1.7**
	baz=31,SNR=15						
HTT	**Hallett**	**30.40**	**164**	P	**P**	**15 03 12.0**	**+2.1**
SISI	**Saibi**	**30.45**	**274**	P	**P**	**15 03 08.8**	**-1.7**
	comp=Z,33nm,0.8s						
UBPT	**Khong Chiam**	**30.63**	**310**	P	**P**	**15 03 12.4**	**+0.4**
UBPT				IAmb	IAmb	15 03 21.5	
	comp=Z,110nm,1.5s						
HNR	**Honiara**	**30.72**	**101**	P	**P**	**15 03 12.5**	**-0.4**
	comp=Z,213nm,0.9s,baz=230,slow=3.7,SNR=9.9						
HNR	**Honiara**	**30.72**	**101**	P	**P**	**15 03 11.7**	**-1.2**
HNR	**Honiara**	**30.72**	**101**	P	**P**	**15 03 13.5**	**+0.7**
NWAO	**Narrogin (SRO)**	**30.78**	**200**	IAMs_20	IAMs_20	15 17 01.4	
	comp=Z,2µm,19.0s						
NWAO	**Narrogin (SRO)**	**30.78**	**200**	P	**P**	**15 03 14.9**	**+1.7**
JOW	**Kunigami**	**30.86**	**358**	P	**P**	**15 03 14.2**	**+0.3**
	comp=Z,97nm,0.8s,baz=171,slow=8.4,SNR=13						
JOW				LR	LR	15 13 37.6	
	comp=Z,2µm,20.5s,baz=176,slow=32						
JOW	**Kunigami**	**30.86**	**358**	P	**P**	**15 03 14.1**	**+0.2**
JOW				IAmb	IAmb	15 03 16.1	
	comp=Z,119nm,0.9s						
JOW	**Kunigami**	**30.86**	**358**	P	**P**	**15 03 14.8**	**+0.9**
CMSA	**Cobar Meteorol**	**31.20**	**153**	P	**P**	**15 03 17.6**	**+0.8**
	baz=31,SNR=30						
CMSA	**Cobar Meteorol**	**31.20**	**153**	P	**P**	**15 03 18.2**	**+1.4**
RPSI	**Rantau Prapat**	**31.26**	**282**	P	**P**	**15 03 16.6**	**-1.1**
PSI	**Prapat**	**31.28**	**282**	P	**P**	**15 03 16.6**	**-1.4**
	comp=Z,30nm,0.8s,baz=108,slow=5.2,SNR=48						
PSI				PcP	**PcP**	**15 06 10.9**	**-1.1**
	comp=Z,5.3nm,0.6s,baz=156,slow=10,SNR=3.1						
PSI				ScP	**ScP**	**15 09 53.7**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=208,slow=9.4,SNR=2.1						
GSI	**Gunungsitoli**	**32.31**	**279**	P	**P**	**15 03 25.0**	**-1.9**
	comp=Z,82nm,0.9s						
GSI	**Gunungsitoli**	**32.31**	**279**	P	**P**	**15 03 26.5**	**-0.4**
GSI				IAmb	IAmb	15 03 41.0	
	comp=Z,59nm,0.8s						
GSI	**Gunungsitoli**	**32.31**	**279**	P	**P**	**15 03 26.3**	**-0.6**
KCSI	**Kotacane, Aceh**	**32.56**	**283**	P	**P**	**15 03 28.1**	**-1.0**
	comp=Z,675nmcomp=Z,34nm,0.8s						
ARMA	**Armidale**	**33.45**	**144**	P	**P**	**15 03 38.7**	**+2.0**
	baz=34,SNR=9.0						
ARMA	**Armidale**	**33.45**	**144**	P	**P**	**15 03 38.2**	**+1.4**
ARMA	**Armidale**	**33.45**	**144**	P	**P**	**15 03 38.8**	**+2.0**
ARPS	**Mount Arapiles**	**34.36**	**162**	P	**P**	**15 03 46.2**	**+1.7**
	baz=35,SNR=34						
ARPS	**Mount Arapiles**	**34.36**	**162**	P	**P**	**15 03 46.2**	**+1.7**
MGCD	**Mangrove Creek**	**35.25**	**148**	P	**P**	**15 03 53.5**	**+1.4**
	baz=35,SNR=5.1						
JSU	**Suzuyama**	**35.51**	**1**	P	**P**	**15 03 54.6**	**+0.2**
JSU				IAmb	IAmb	15 03 56.3	
	comp=Z,105nm,0.9s						
BRAT	**Ballarat**	**35.75**	**160**	P	**P**	**15 03 59.5**	**+3.1**
CAN	**Canberra**	**35.87**	**152**	P	**P**	**15 03 58.8**	**+1.2**
CAN				pmax	pmax		
	comp=Z,46nm,1.0s						
CAN				MLR	MLR		
	comp=Z,2µm,22.0s						
CAN	**Canberra**	**35.87**	**152**	P	**P**	**15 03 58.8**	**+1.2**
CAN				IAmb	IAmb	15 04 18.7	
	comp=Z,46nm,1.0s						
CAN				IAMs_20	IAMs_20	15 18 21.7	
	comp=Z,2µm,22.0s						
CAN	**Canberra**	**35.87**	**152**	P	**P**	**15 03 59.1**	**+1.6**
TOO	**Toolangi**	**36.32**	**158**	P	**P**	**15 04 03.4**	**+2.0**
	baz=36,SNR=7.5						
TOO	**Toolangi**	**36.32**	**158**	P	**P**	**15 04 02.4**	**+1.0**
TOO				pmax	pmax		
	comp=Z,38nm,1.0s						
TOO	**Toolangi**	**36.32**	**158**	P	**P**	**15 04 02.4**	**+1.0**
TOO	**Toolangi**	**36.32**	**158**	P	**P**	**15 04 03.8**	**+2.4**
JNU	**Nakatsue**	**37.14**	**2**	P	**P**	**15 04 07.3**	**-1.0**
	comp=Z,77nm,0.9s,baz=158,slow=1.7,SNR=21						
JNU	**Nakatsue**	**37.14**	**2**	P	**P**	**15 04 09.1**	**+0.8**
NJ2	**Nanjing**	**37.43**	**345**	⇓P	**P**	**15 04 10.8**	**+0.1**
NJ2				pP	**pP**	**15 04 18.8**	**-0.4**
NJ2				sP	**sP**	**15 04 22.1**	**-0.6**
NJ2				S	**S**	**15 09 54.8**	**-2.2**
NJ2				pmax	pmax		
	comp=Z,31nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,580nm,4.5s						
NJ2				LR	LR		
	comp=Z,460nm,12.3s						
NJ2				LR	LR		
	comp=Z,690nm,12.7s						
NJ2				LR	LR		
	comp=Z,950nm,12.6s						
WHN	**Wuhan**	**37.44**	**338**	⇓P	**P**	**15 04 12.3**	**+1.5**
WHN				pP	**pP**	**15 04 20.5**	**+1.2**
WHN				PP	**PnPn**	**15 05 44.1**	**+6.5**
WHN				S	S	15 10 10.1	+13
WHN				pmax	pmax		
	comp=Z,78nm,1.0s						
WHN				LR	LR		
	comp=Z,6µm,44.1s						
CMAR	**Chiang Mai Arr**	**37.55**	**308**	P	**P**	**15 04 12.1**	**0.0**
	comp=Z,44nm,0.6s,baz=137,slow=7.4,SNR=260						
CMAR				PcP	**PcP**	**15 06 29.6**	**-0.1**
	comp=Z,9.4nm,0.7s,baz=162,slow=3.0,SNR=8.7						
CMAR				ScP	**ScP**	**15 10 17.6**	**+2.7**
	comp=Z,3.4nm,0.9s,baz=156,slow=3.1,SNR=7.6						
CMAR				LR	LR	15 21 23.7	
	comp=Z,187nm,19.3s,baz=310,slow=39						
KOUNC	**Koumac, New Ca**	**37.58**	**119**	P	**P**	**15 04 13.6**	**+1.3**
GYA	**Guiyang**	**37.62**	**325**	⇓P	**P**	**15 04 13.8**	**+1.2**
GYA				sP	pwP	15 04 28.5	+1.7
GYA				PP	**PnPn**	**15 05 43.3**	**+3.3**
GYA				PcP	**PcP**	**15 06 31.6**	**+1.6**
GYA				S	**S**	**15 10 02.1**	**+1.8**
GYA				SS	**SS**	**15 12 48.1**	**+1.8**
GYA				pmax	pmax		
	comp=Z,46nm,0.6s						
GYA				LR	LR		
	comp=Z,680nm,10.6s						
GYA				LR	LR		
	comp=Z,380nm,8.7s						
GYA				LR	LR		
	comp=Z,620nm,12.5s						
CHTO	**Chiang Mai**	**37.75**	**308**	P	**P**	**15 04 13.8**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,82nm,0.7s						
CHTO	**Chiang Mai**	**37.75**	**308**	P	**P**	**15 04 13.8**	**+0.1**
CHTO				IAmb	IAmb	15 04 16.0	
	comp=Z,82nm,0.7s						
CHTO	**Chiang Mai**	**37.75**	**308**	P	**P**	**15 04 14.7**	**+1.0**
JMN	**Monobe**	**37.95**	**6**	P	**P**	**15 04 15.3**	**+0.1**
SANVU	**Saraoutou**	**38.77**	**109**	P	**P**	**15 04 22.1**	**-0.3**
SANVU				IAmb	IAmb	15 04 25.1	
	comp=Z,161nm,1.0s						
SANVU	**Saraoutou**	**38.77**	**109**	P	**P**	**15 04 23.7**	**+1.3**
KMI	**Kunming**	**39.02**	**320**	⇑P	**P**	**15 04 25.4**	**+0.9**
KMI				pP	pP	15 04 34.3	+1.3
KMI				S	**S**	**15 10 19.0**	**-2.7**
KMI				pmax	pmax		
	comp=Z,21nm,1.0s						
KMI				LR	LR		
	comp=Z,570nm,14.8s						
KMI				LR	LR		
	comp=Z,580nm,17.8s						
KMI				LR	LR		
	comp=Z,760nm,25.2s						
JHS	**Saijyo**	**39.14**	**5**	P	**P**	**15 04 24.4**	**-0.7**
JHS				IAmb	IAmb	15 04 35.0	
	comp=Z,297nm,1.4s						
JWT	**Wachi**	**39.66**	**8**	P	**P**	**15 04 29.1**	**-0.4**
JWT				IAmb	IAmb	15 04 39.3	
	comp=Z,179nm,1.0s						
NOUC	**Port Laguerre**	**39.89**	**120**	P	**P**	**15 04 31.7**	**+0.1**
INU	**Inuyama**	**39.97**	**10**	P	**P**	**15 04 31.4**	**-0.7**
INU				IAmb	IAmb	15 04 40.9	
	comp=Z,169nm,1.3s						
INU	**Inuyama**	**39.97**	**10**	P	**P**	**15 04 31.8**	**-0.3**
DZM	**Mont Dzumac**	**40.00**	**120**	P	**P**	**15 04 33.7**	**+1.0**
JGF	**Kuroka**	**40.28**	**10**	P	**P**	**15 04 35.0**	**+0.4**
YATNC	**Mamie plateau,**	**40.39**	**119**	P	**P**	**15 04 37.8**	**+2.0**
TJN	**Taejon**	**40.41**	**357**	*c i*P	**P**	**15 04 35.8**	**+0.2**
TJN	**Taejon**	**40.41**	**357**	P	**P**	**15 04 36.7**	**+1.1**
MAJO	**Matsushiro**	**41.34**	**11**	*ce*P	**P**	**15 04 41.5**	**-1.9**
MAJO				pmax	pmax		
	comp=Z,148nm,0.8s						
MAJO	**Matsushiro**	**41.34**	**11**	P	**P**	**15 04 41.8**	**-1.6**
MAJO				IAmb	IAmb	15 04 44.5	
	comp=Z,166nm,0.9s						
MAJO	**Matsushiro**	**41.34**	**11**	IAMs_20	IAMs_20	15 19 49.8	
	comp=Z,1µm,19.0s						
MAJO	**Matsushiro**	**41.34**	**11**	P	**P**	**15 04 42.5**	**-0.9**
MAT	**Matsushiro**	**41.34**	**11**	P	**P**	**15 04 41.4**	**-2.0**
MAT				S	**S**	**15 10 54.0**	**-1.8**
MJAR	**Matsushiro Arr**	**41.34**	**11**	P	**P**	**15 04 41.1**	**-2.3**
	comp=Z,88nm,0.8s,baz=188,slow=9.2,SNR=152						
MJAR				LR	LR	15 19 22.9	
	comp=Z,866nm,21.3s,baz=235,slow=33						
MJAR	**Matsushiro Arr**	**41.34**	**11**	P	**P**	**15 04 41.8**	**-1.6**
MJAR				IAmb	IAmb	15 04 44.0	
	comp=Z,75nm,0.8s						
KSAR	**Wonju Array Be**	**41.45**	**358**	P	**P**	**15 04 44.5**	**+0.3**
KSAR	**Wonju Array Be**	**41.45**	**358**	P	**P**	**15 04 44.5**	**+0.3**
KSRS	**Korea Array**	**41.46**	**358**	P	**P**	**15 04 44.2**	**-0.1**
	comp=Z,31nm,0.7s,baz=174,slow=9.8,SNR=114						
KS19	**Wonju Array Si**	**41.51**	**358**	P	**P**	**15 04 44.3**	**-0.5**
INCN	**Inchon**	**41.55**	**357**	IAMs_20	IAMs_20	15 22 08.2	
	comp=Z,2µm,19.0s						
INCN	**Inchon**	**41.55**	**357**	P	**P**	**15 04 46.4**	**+1.3**
TIA	**Tai'an**	**41.82**	**345**	*e*P	**P**	**15 04 46.8**	**-0.5**
TIA				S	**S**	**15 11 07.2**	**+4.4**
TIA				pmax	pmax		
	comp=Z,31nm,1.2s						
TIA				LR	LR		
	comp=Z,330nm,17.2s						
TIA				LR	LR		
	comp=Z,330nm,17.7s						
TIA				LR	LR		
	comp=Z,550nm,20.1s						
CD2	**Chengdu**	**42.66**	**327**	P	**P**	**15 04 53.7**	**-0.6**
CD2				pP	pP	15 05 03.1	+0.3
CD2				sP	pwP	15 05 08.6	-0.1
CD2				S	**S**	**15 11 15.8**	**+0.3**
CD2				sS	sS	15 11 33.1	+2.3
CD2				SS	**SS**	**15 14 27.4**	**+0.6**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,380nm,9.2s						
CD2				LR	LR		
	comp=Z,2µm,29.4s						
CD2				LR	LR		
	comp=Z,2µm,22.2s						
CD2				LR	LR		
	comp=Z,1µm,15.9s						
XAN	**Xi'an**	**42.68**	**335**	P	**P**	**15 04 54.0**	**-0.4**
XAN				pP	pP	15 05 01.7	-1.3
XAN				S	**S**	**15 11 20.0**	**+4.3**
XAN				pmax	pmax		
	comp=Z,28nm,0.9s						
XAN				pmax	pmax		
	comp=Z,520nm,4.9s						
XAN				LR	LR		
	comp=Z,870nm,23.3s						
XAN				LR	LR		
	comp=Z,450nm,18.8s						
XAN				LR	LR		
	comp=Z,2µm,25.0s						
JSD	**Sado**	**42.81**	**10**	P	**P**	**15 04 54.3**	**-1.0**
JSD				IAmb	IAmb	15 04 56.1	
	comp=Z,76nm,0.7s						
JMM	**Marumori**	**43.16**	**13**	P	**P**	**15 04 57.4**	**-0.7**
DL2	**Dalian**	**43.49**	**351**	P	**P**	**15 05 02.5**	**+1.7**
DL2				S	**S**	**15 11 34.6**	**+7.3**
DL2				pmax	pmax		
	comp=Z,32nm,0.8s						
DL2				pmax	pmax		
	comp=Z,450nm,4.5s						
DL2				LR	LR		
	comp=Z,840nm,16.1s						
DL2				LR	LR		
	comp=Z,710nm,17.5s						
DL2				LR	LR		
	comp=Z,950nm,21.4s						
TIY	**Taiyuan**	**44.59**	**341**	*e*P	**P**	**15 05 10.6**	**+0.8**
TIY				S	**S**	**15 11 41.3**	**-2.3**
TIY				pmax	pmax		
	comp=Z,330nm,5.0s						
TIY				LR	LR		
	comp=Z,570nm,11.8s						
TIY				LR	LR		
	comp=Z,280nm,13.7s						
TIY				LR	LR		
	comp=Z,760nm,30.0s						
KOHI	**KOHIMA**	**45.37**	**313**	*e*P	**P**	**15 05 15.3**	**-0.9**
MOKO	**MOKOCHONG**	**45.42**	**314**	*e*P	**P**	**15 05 16.6**	**-0.1**
BJI	**Beijing**	**45.68**	**346**	P	**P**	**15 05 18.3**	**+0.1**
BJI				pP	**pP**	**15 05 26.1**	**-0.8**
BJI				sP	**pwP**	**15 05 31.6**	**-0.8**
BJI				S	**S**	**15 11 58.4**	**-0.6**
BJI				pmax	pmax		
	comp=Z,43nm,0.9s						
BJI				pmax	pmax		
	comp=Z,450nm,5.0s						
LZH	**Lanzhou**	**46.69**	**331**	⇓P	**P**	**15 05 27.6**	**+1.1**
LZH				pP	pP	15 05 34.8	-0.3
LZH				sP	sP	15 05 39.2	-0.1
LZH				sS	sS	15 12 35.7	+6.5
LZH				SS	**SS**	**15 15 38.1**	**-2.8**
LZH				pmax	pmax		
	comp=Z,77nm,1.3s						
LZH				pmax	pmax		
	comp=Z,520nm,5.4s						
LZH				LR	LR		
	comp=Z,880nm,14.1s						
LZH				LR	LR		
	comp=Z,950nm,14.3s						
LZH				LR	LR		
	comp=Z,1µm,16.5s						
SHL	**Shillong**	**46.93**	**311**	*e*P	**P**	**15 05 28.1**	**-0.4**
SHL				IAmb	IAmb	15 05 30.9	
	comp=Z,34nm,0.7s						
VLA	**Vladivostok**	**47.15**	**2**	*d i*P	**P**	**15 05 30.9**	**+1.2**
VLA				pmax	pmax		
	comp=Z,61nm,0.9s						
ERM	**Erimo**	**47.66**	**14**	IAMs_20	IAMs_20	15 23 22.7	
	comp=Z,2µm,22.0s						
HHC	**Hu-ho-hao-te**	**47.72**	**342**	*e*P	**P**	**15 05 36.1**	**+1.7**
HHC				PP	**PP**	**15 07 27.2**	**+0.7**
HHC				S	**S**	**15 12 29.5**	**+0.9**
HHC				pmax	pmax		
	comp=Z,24nm,0.8s						
HHC				pmax	pmax		
	comp=Z,510nm,8.1s						
HHC				LR	LR		
	comp=Z,550nm,17.8s						
HHC				LR	LR		
	comp=Z,500nm,20.2s						
HHC				LR	LR		
	comp=Z,440nm,14.8s						
CN2	**Changchun**	**47.91**	**356**	*e*P	**P**	**15 05 33.9**	**-1.8**
CN2				*e*sP	pwP	15 05 51.5	+1.4
CN2				*e*S	**S**	**15 12 27.6**	**-3.3**
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
CN2				LR	LR		
	comp=Z,900nm,18.0s						
CN2				LR	LR		
	comp=Z,500nm,18.0s						
CN2				LR	LR		
	comp=Z,1µm,18.0s						
BTO	**Baotou**	**48.01**	**340**	*e*P	P	15 05 42.6	+6.0
BTO				S	**S**	**15 12 35.2**	**+2.6**
BTO				LR	LR		
	comp=N,2µm,15.5s						
BTO				LR	LR		
	comp=E,2µm,17.5s						
USRK	**Ussuriysk Ar.**	**48.23**	**2**	P	**P**	**15 05 37.9**	**-0.2**
	comp=E,53nm,0.7s,baz=184,slow=6.8,SNR=95						
USA0B	**Ussuriysk Arra**	**48.23**	**2**	P	**P**	**15 05 37.9**	**-0.2**
USA0B				pmax	pmax		
	comp=Z,166nm,1.4s						
USA0B	**Ussuriysk Arra**	**48.23**	**2**	P	**P**	**15 05 37.9**	**-0.2**
MDJ	**Mudanjiang**	**48.59**	**0**	P	**P**	**15 05 41.6**	**+0.7**
MDJ				pP	sP	15 05 51.9	-1.3
MDJ				sP	pwP	15 05 54.0	-1.3
MDJ				S	**S**	**15 12 33.8**	**-6.7**
MDJ				pmax	pmax		
	comp=Z,68nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,760nm,5.5s						
MDJ				LR	LR		
	comp=Z,840nm,23.1s						
MDJ				LR	LR		
	comp=Z,640nm,17.9s						
MDJ				LR	LR		
	comp=Z,1µm,19.9s						
MDJ	**Mudanjiang**	**48.59**	**0**	IAMs_20	IAMs_20	15 23 24.7	
	comp=Z,1µm,22.0s						
MDJ	**Mudanjiang**	**48.59**	**0**	P	**P**	**15 05 41.9**	**+1.0**
MSVF	**Nonsavu**	**49.42**	**110**	P	**P**	**15 05 48.5**	**+0.7**
TEY	**Ternei**	**49.43**	**7**	⇓*e*P	**P**	**15 05 48.1**	**+0.8**
TEY				*e*		15 12 51.0	
TEY				pmax	pmax		
	comp=N,30nm,1.0s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,50nm,1.0s						
ASAJ	**Asahikawa**	**49.53**	**12**	P	**P**	**15 05 47.3**	**-0.8**
	comp=Z,23nm,0.8s,baz=220,slow=11,SNR=8.1						
ASAJ				LR	LR	15 28 15.9	
	comp=Z,454nm,18.7s,baz=171,slow=38						
LSA	**Lhasa**	**49.82**	**315**	*i* P	**P**	**15 05 51.3**	**+0.1**
	SNR=31						
LSA	**Lhasa**	**49.82**	**315**	P	**P**	**15 05 52.2**	**+1.1**
LSA				pmax	pmax		
	comp=Z,59nm,0.8s						
LSA	**Lhasa**	**49.82**	**315**	P	**P**	**15 05 52.2**	**+1.1**
LSA				IAmb	IAmb	15 05 53.9	
	comp=Z,59nm,0.8s						
PALK	**Pallekele**	**49.96**	**283**	P	**P**	**15 05 51.4**	**-0.6**
	comp=Z,6.8nm,0.6s,baz=220,slow=6.2,SNR=8.6						
PALK	**Pallekele**	**49.96**	**283**	P	**P**	**15 05 51.4**	**-0.6**
BOK	**Bokaro**	**50.74**	**305**	*e*P	**P**	**15 05 58.4**	**+0.8**
BOK				IAmb	IAmb	15 06 02.5	
	comp=Z,14nm,0.9s						
DGTI	**Dogotuki**	**50.79**	**108**	P	**P**	**15 05 59.3**	**+1.1**
ODAN	**Odare**	**51.03**	**310**	*e*P	**P**	**15 05 59.5**	**-0.6**
	comp=Z,110nm,0.7s						
TAPN	**Taplejung**	**51.04**	**310**	*e*P	**P**	**15 05 59.6**	**-0.6**
	comp=Z,74nm,0.6s						
GTA	**Gaotai**	**51.27**	**331**	⇑P	**P**	**15 06 01.1**	**-0.4**
GTA				pP	pP	15 06 09.4	-0.8
GTA				sP	sP	15 06 13.1	-1.3
GTA				PcP	**PcP**	**15 07 17.9**	**+1.6**
GTA				pmax	pmax		
	comp=Z,32nm,0.8s						
GTA				pmax	pmax		
	comp=Z,360nm,5.8s						
GTA				LR	LR		
	comp=Z,430nm,19.3s						
GTA				LR	LR		
	comp=Z,590nm,20.4s						
GTA				LR	LR		
	comp=Z,1µm,22.2s						
RAMN	**Ramite**	**51.69**	**309**	*e*P	**P**	**15 06 04.8**	**-0.2**
	comp=Z,200nm,0.5s						
YSS	**Yuzh-Sakhalins**	**52.27**	**12**	*e*P	**P**	**15 06 08.5**	**-0.2**
YSS				*e**SP	**pwP**	**15 06 22.5**	**-0.6**
YSS				*e*		15 08 10.6	
YSS				*e*S	**S**	**15 13 29.7**	**-1.8**
YSS				*e*PS	PKiKP	15 13 43.2	-17
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS				pmax	pmax		
	comp=Z,500nm,6.4s						
YSS	**Yuzh-Sakhalins**	**52.27**	**12**	P	**P**	**15 06 08.3**	**-0.3**
YSS				IAmb	IAmb	15 06 17.6	
	comp=Z,93nm,1.4s						
YSS				IAMs_20	IAMs_20	15 26 02.0	
	comp=Z,2µm,22.0s						
YSS	**Yuzh-Sakhalins**	**52.27**	**12**	P	**P**	**15 06 08.4**	**-0.2**
PKI	**Pulchoki**	**52.91**	**309**	*e*P	**P**	**15 06 13.2**	**-1.0**
PKIN	**Phulchoki**	**52.92**	**309**	*e*P	**P**	**15 06 13.2**	**-1.0**
KKN	**Kakani**	**53.12**	**309**	*e*P	**P**	**15 06 14.8**	**-0.8**
	comp=Z,65nm,0.7s						
DMN	**Daman**	**53.16**	**309**	*e*P	**P**	**15 06 15.3**	**-0.7**
	comp=Z,123nm,0.9s						
KLR	**Kul'dur**	**53.24**	**2**	*ce*P	**P**	**15 06 15.8**	**0.0**
KLR				pmax	pmax		
	comp=Z,68nm,1.0s						
LBZ	**Lake Benmore**	**53.67**	**144**	P	**P**	**15 06 19.4**	**+0.3**
LBZ				IAmb	IAmb	15 06 45.5	
	comp=Z,44nm,1.3s						
HIA	**Hailar**	**53.91**	**352**	*d i*P	**P**	**15 06 22.1**	**+1.4**
HIA				pmax	pmax		
	comp=Z,24nm,1.4s						
KOLN	**Koldanda**	**54.41**	**309**	*e*P	**P**	**15 06 24.6**	**-0.4**
	comp=Z,213nm,0.8s						
DANN	**Dangsing**	**54.56**	**309**	*e*P	**P**	**15 06 25.5**	**-0.8**
	comp=Z,206nm,0.8s						
HYB	**Hyderabad**	**54.62**	**295**	*i* P	**P**	**15 06 24.5**	**-2.0**
	comp=Z,80nm,1.0s						
HYB	**Hyderabad**	**54.62**	**295**	*e*P	**P**	**15 06 25.0**	**-1.5**
HYB				IAmb	IAmb	15 06 26.7	
	comp=Z,52nm,0.9s						
MQZ	**McQueen's Vall**	**54.75**	**143**	IAMs_20	IAMs_20	15 31 08.0	
	comp=Z,1µm,20.0s						
BKZ	**Black Stump Fm**	**54.97**	**136**	P	**P**	**15 06 29.4**	**+0.7**
PYUN	**Piuthan**	**55.04**	**309**	*e*P	**P**	**15 06 29.1**	**-0.5**
	comp=Z,236nm,0.9s						
GRNR	**Gornyy**	**55.08**	**5**	⇓*i*P	**P**	**15 06 30.2**	**+1.0**
GRNR				*e*S	**S**	**15 14 14.4**	**+4.9**
GRNR				pmax	pmax		
	comp=N,9.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.8s						
GRNR				smax	smax		
	comp=N,2.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,240nm,18.0s						
GRNR				MLR	MLR		
	comp=N,470nm,20.0s						
GRNR				MLR	MLR		
	comp=Z,640nm,20.0s						
ULN	**Ulaanbaatar**	**55.44**	**342**	*c i*P	**P**	**15 06 32.3**	**+0.2**
ULN				pmax	pmax		
	comp=Z,43nm,1.0s						
ULN	**Ulaanbaatar**	**55.44**	**342**	P	**P**	**15 06 32.4**	**+0.3**
ULN				IAmb	IAmb	15 06 43.1	
	comp=Z,87nm,1.1s						
SONM	**Songino Array**	**55.62**	**341**	P	**P**	**15 06 32.8**	**-0.5**
	comp=Z,18nm,1.0s,baz=160,slow=7.9,SNR=50						
SONM				PcP	**PcP**	**15 07 32.6**	**-0.1**
	comp=Z,9.6nm,0.8s,baz=168,slow=5.2,SNR=1.5						
TYV	**Tymovskoe**	**56.01**	**10**	*e*P	**P**	**15 06 37.2**	**+1.4**
TYV				*e*S	**S**	**15 14 25.8**	**+4.0**
TYV				pmax	pmax		
	comp=Z,36nm,0.8s						
TYV				pmax	pmax		
	comp=Z,600nm,5.2s						
TYV				smax	smax		
	comp=N,12nm,1.5s						
TYV				smax	smax		
	comp=E,8.0nm,1.5s						

TYV				smax	smax		
	comp=N,700nm,6.7s						
TYV				smax	smax		
	comp=E,300nm,6.7s						
JHNI	Jhansi	57.49	304	*e*P	P	15 06 45.3	-1.6
BHPL	Bhopal	57.59	301	*e*P	P	15 06 46.0	-1.6
BHPL				IAmb	IAmb	15 06 47.7	
	comp=Z,19nm,0.6s						
CIT	Chita	57.61	348	*e*P	P	15 06 49.0	+1.7
CIT				*e*		15 07 38.4	
CIT				pmax	pmax		
	comp=Z,162nm,1.3s						
ZEA	Zeya	57.75	358	*e*P	P	15 06 48.6	+0.5
ZEA				*e*S	S	15 14 48.2	+3.4
ZEA				pmax	pmax		
	comp=N,20nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				pmax	pmax		
	comp=E,100nm,5.4s						
ZEA				pmax	pmax		
	comp=N,200nm,3.5s						
ZEA				pmax	pmax		
	comp=Z,100nm,5.8s						
ZEA				smax	smax		
	comp=N,200nm,9.0s						
ZAK	Zakamensk	58.85	341	*e*P	P	15 06 56.6	+0.6
ZAK				pmax	pmax		
	comp=Z,36nm,1.2s						
POO	Poona	59.22	294	*e*P	P	15 06 57.6	-1.5
POO				IAmb	IAmb	15 06 59.6	
	comp=Z,41nm,0.8s						
POO	Poona	59.22	294	*e*P	P	15 06 55.0	-4.1
TLY	Talaya	59.85	342	*e*P	P	15 07 05.7	+2.8
TLY				*e*		15 07 20.6	
TLY				pmax	pmax		
	comp=Z,71nm,0.9s						
TLY				MLR	MLR		
	comp=Z,959nm,16.0s						
MOY	Mondy	60.71	340	*e*P	P	15 07 10.3	+1.5
MOY				pmax	pmax		
	comp=Z,152nm,2.3s						
WMQ	Urumqi	60.76	326	*e*P	P	15 07 10.1	+0.8
WMQ				pP	sP	15 07 20.4	-1.8
WMQ				sP	pwP	15 07 24.8	+0.8
WMQ				S	S	15 15 25.2	+0.9
WMQ				ScS	SKKSac	15 16 50.8	-7.0
WMQ				pmax	pmax		
	comp=Z,110nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,940nm,4.5s						
WMQ				LR	LR		
	comp=Z,790nm,19.3s						
WMQ				LR	LR		
	comp=Z,570nm,18.1s						
WMQ				LR	LR		
	comp=Z,660nm,22.7s						
SMLA	Simla	60.93	309	*e*P	P	15 07 09.8	-0.7
SMLA				IAmb	IAmb	15 07 19.9	
	comp=Z,90nm,0.9s						
PEA0B	Petropavlovsk-	61.86	19	*de*P	P	15 07 17.4	+1.0
PEA0B	Petropavlovsk-	61.86	19	P	P	15 07 17.0	+0.6
PETK	Petropavlovsk-	61.86	19	P	P	15 07 16.4	0.0
	comp=Z,38nm,0.9s,baz=204,slow=9.2,SNR=30						
PETK				LR	LR	15 30 08.0	
	comp=Z,606nm,21.8s,baz=204,slow=32						
PETK	Petropavlovsk-	61.86	19	P	P	15 07 16.7	+0.3
DHRM	DHARAMSHALA	62.08	310	*e*P	P	15 07 17.4	-1.2
PET	Petropavlovsk	62.10	19	*e*P	P	15 07 19.4	+1.5
PET				*e*S	S	15 15 41.5	+0.8
PET				pmax	pmax		
	comp=Z,105nm,1.3s						
PET	Petropavlovsk	62.10	19	P	P	15 07 19.5	+1.5
BOD	Bodaibo	63.06	351	*e*P	P	15 07 25.1	+0.8
BOD				pmax	pmax		
	comp=Z,113nm,1.5s						
CASY	Casey	63.38	188	P	P	15 07 26.1	-0.2
CASY				IAmb	IAmb	15 07 29.2	
	comp=Z,50nm,1.2s						
CASY	Casey	63.38	188	IAMs_20	IAMs_20	15 32 48.7	
	comp=Z,816nm,20.0s						
ZSN	Zaisan	64.61	328	*e*P	P	15 07 33.7	-1.1
	comp=Z,14nm,0.9s,baz=328						
ZSN	Zaisan	64.61	328	*e*P	P	15 07 33.7	-1.1
ZSN				pmax	pmax		
	comp=Z,13nm,0.9s						
DGZ	Jazzator, Alta	64.79	331	⇑*i*P	P	15 07 36.0	-0.1
DGZ				pmax	pmax		
	comp=Z,38nm,0.7s						
NIL	Nilore	64.99	310	P	P	15 07 38.0	+0.4
NIL				pmax	pmax		
	comp=Z,25nm,0.8s						
NIL	Nilore	64.99	310	P	P	15 07 38.0	+0.4
NIL				IAmb	IAmb	15 07 49.9	
	comp=Z,25nm,0.8s						
SHLS	Shalkode	65.18	322	*e*P	P	15 07 36.3	-2.5
	comp=Z,15nm,0.6s,baz=322						
SHLS	Shalkode	65.18	322	*e*P	P	15 07 36.3	-2.5
SHLS				pmax	pmax		
	comp=Z,15nm,0.6s						
PDGK	Podgornoye	65.25	322	P	P	15 07 38.5	-0.8
UZB	Uzynbulak	65.45	322	*e*P	P	15 07 39.1	-1.4
	comp=Z,18nm,0.8s,baz=322						
UZB	Uzynbulak	65.45	322	*e*P	P	15 07 39.1	-1.4
UZB				pmax	pmax		
	comp=Z,18nm,0.8s						
TARG	Taragay, Kyrgy	65.47	320	P	P	15 07 42.1	+1.0
TARG				IAmb	IAmb	15 07 50.8	
	comp=Z,23nm,0.6s						
MK31	Makanchi Array	65.59	326	*c i*P	P	15 07 40.8	-0.4
MK31	Makanchi Array	65.59	326	P	P	15 07 41.0	-0.2
MKAR	Makanchi Array	65.59	326	P	P	15 07 40.9	-0.4
	comp=Z,80nm,0.6s,baz=118,slow=7.5,SNR=409						
KSH	Kashi	65.60	317	P	P	15 07 42.1	+0.6
KSH				pP	sP	15 07 52.0	-2.4
KSH				sP	pwP	15 07 58.2	+1.9
KSH				pmax	pmax		
	comp=Z,48nm,0.7s						
MA2	Magadan	65.78	12	*de*P	P	15 07 43.4	+1.3
MA2				pmax	pmax		
	comp=Z,89nm,1.3s						
MA2	Magadan	65.78	12	P	P	15 07 41.5	-0.6
MAKZ	Makanchi	65.78	326	P	P	15 07 41.5	-0.9
MAKZ				pmax	pmax		
	comp=Z,58nm,0.7s						
MAKZ	Makanchi	65.78	326	P	P	15 07 41.5	-0.9
SATY	Saty	65.78	321	*e*P	P	15 07 41.8	-0.9
	comp=Z,42nm,0.7s,baz=321						
SATY	Saty	65.78	321	*e*P	P	15 07 41.7	-0.9
SATY				pmax	pmax		
	comp=Z,43nm,0.7s						
YAK	Yakutsk	66.04	0	P	P	15 07 43.4	-0.3
	comp=Z,130nm,0.7s,baz=177,slow=4.8						
YAK				LR	LR	15 35 51.7	
	comp=Z,898nm,20.8s,baz=236,slow=35						
YAK	Yakutsk	66.04	0	*c i*P	P	15 07 43.2	-0.5
YAK				*e**PP	pP	15 07 51.8	-0.8
YAK				*e*		15 08 13.1	
YAK				*e*		15 10 14.9	
YAK				*e*S	S	15 16 29.2	0.0
YAK				*e**SS	sS	15 16 49.1	+4.1
YAK				*e*		15 17 37.8	
YAK				*e*SS	SS	15 20 49.5	+4.3
YAK				pmax	pmax		
	comp=Z,278nm,0.9s						
YAK				pmax	pmax		
	comp=E,19nm,1.1s						
YAK				pmax	pmax		
	comp=N,46nm,1.1s						
YAK				pmax	pmax		
	comp=Z,205nm,3.2s						
YAK				pmax	pmax		
	comp=E,60nm,2.5s						
YAK				pmax	pmax		
	comp=N,59nm,2.8s						
YAK				smax	smax		
	comp=N,420nm,4.1s						
YAK				smax	smax		
	comp=E,73nm,2.3s						
YAK	Yakutsk	66.04	0	P	P	15 07 43.5	-0.2
YAK				IAMs_20	IAMs_20	15 35 39.1	
	comp=Z,1µm,19.0s						
KDJ	Kajisay	66.08	320	P	P	15 07 44.9	+0.2
KDJ				pmax	pmax		
	comp=Z,40nm,0.7s						
KDJ	Kajisay	66.08	320	P	P	15 07 44.9	+0.2
KDJ				IAmb	IAmb	15 07 46.6	
	comp=Z,40nm,0.7s						
MDOK	Medeo	66.69	321	*e*P	P	15 07 47.7	-0.8
	baz=321						
MDOK	Medeo	66.69	321	*e*P	P	15 07 47.6	-0.8
TNSS	Tian-Shan	66.69	321	*e*P	P	15 07 48.0	-0.8
	baz=321						
AAA	Alma-Ata	66.79	321	*e*P	P	15 07 48.5	-0.5
	comp=Z,25nm,0.7s,baz=321						
AAA	Alma-Ata	66.79	321	*i* P	P	15 07 49.0	-0.1
TDK	Taldyqorghan	66.81	323	*e*P	P	15 07 48.0	-1.2
	comp=Z,22nm,0.6s,baz=323						
TDK	Taldyqorghan	66.81	323	*e*P	P	15 07 47.9	-1.2
TDK				pmax	pmax		
	comp=Z,22nm,0.6s						
BOOM	Boomskoye usch	67.06	320	P	P	15 07 51.2	+0.3
BOOM				pmax	pmax		
	comp=Z,43nm,1.1s						
BOOM	Boomskoye usch	67.06	320	P	P	15 07 51.2	+0.3
BOOM				IAmb	IAmb	15 08 00.2	
	comp=Z,43nm,1.1s						
TKM2	Tokmak 2	67.49	320	P	P	15 07 53.5	-0.2
	SNR=63						
TKM2	Tokmak 2	67.49	320	P	P	15 07 53.3	-0.4
KUU	Kurty	67.50	321	*e*P	P	15 07 53.0	-0.5
	baz=321						
KUU	Kurty	67.50	321	*e*P	P	15 07 53.0	-0.5
KBK	Karagaybulak	67.78	320	P	P	15 07 56.6	+1.1
	SNR=16						
UCH	Uchtor	67.86	319	P	P	15 07 56.5	+0.2
	SNR=27						
AAK	Ala-Archa	68.06	319	P	P	15 07 57.7	+0.5
	SNR=16						
AAK	Ala-Archa	68.06	319	*i* P	P	15 07 57.7	+0.5
	SNR=17						
AAK	Ala-Archa	68.06	319	*c i*P	P	15 07 57.8	+0.5
AAK				pmax	pmax		
	comp=Z,47nm,0.8s						
AAK	Ala-Archa	68.06	319	P	P	15 07 57.6	+0.3
AAK				IAmb	IAmb	15 08 07.3	
	comp=Z,18nm,0.7s						
CHMS	Chumysh	68.07	320	P	P	15 07 57.6	+0.5
	SNR=14						
AML	Almayashu	68.35	319	P	P	15 08 00.6	+1.3
	SNR=24						
AML	Almayashu	68.35	319	*i* P	P	15 07 59.8	+0.5
	SNR=24						
USP	Ospenovka	68.36	320	P	P	15 07 58.6	-0.3
	SNR=57						
SGDS	Sogindy	68.36	320	*e*P	P	15 07 57.8	-1.2
	baz=320						
SGDS	Sogindy	68.36	320	*i* P	P	15 07 59.1	+0.1
EKS2	Erkin-Say	68.54	319	P	P	15 08 00.4	+0.2
	SNR=26						
KBL	Kabul	68.55	310	P	P	15 08 00.7	+0.1
KBL				pmax	pmax		
	comp=Z,21nm,0.8s						
KBL	Kabul	68.55	310	P	P	15 08 00.7	+0.1
KBL				IAmb	IAmb	15 08 01.7	
	comp=Z,21nm,0.8s						
SEM	Semipalatinsk	68.83	329	*e*P	P	15 08 00.6	-1.4
	comp=Z,10nm,0.6s,baz=329						
SEM	Semipalatinsk	68.83	329	*e*P	P	15 08 00.5	-1.4
SEM				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZAA0	Zalesovo Array	68.84	334	P	P	15 08 02.0	+0.4
ZALV	Zalesovo Beam	68.84	334	P	P	15 08 00.8	-0.8
	comp=Z,33nm,0.7s,baz=113,slow=5.0,SNR=100						
ZALV				PKP2bc		15 36 14.5	
	comp=Z,0.8nm,0.4s,baz=290,slow=4.4,SNR=5.3						
ZALV				LR	LR	15 40 29.2	
	comp=Z,282nm,20.1s,baz=140,slow=38						
ZALV	Zalesovo Beam	68.84	334	P	P	15 08 02.0	+0.4
SEY	Seymchan	69.17	11	P	P	15 08 04.0	+0.5
	comp=Z,114nm,0.8s,baz=205,slow=4.8,SNR=153						
SEY				LR	LR	15 36 46.7	
	comp=Z,1µm,20.9s,baz=210,slow=35						
GAR	Garm	69.31	314	P	P	15 08 05.5	+0.4
BTK	Batken	69.39	316	P	P	15 08 06.4	+0.9
BTK				pmax	pmax		
	comp=Z,38nm,1.4s						
BTK	Batken	69.39	316	P	P	15 08 06.4	+0.9
BTK				IAmb	IAmb	15 08 26.3	
	comp=Z,38nm,1.4s						
BTLS	Baital	69.50	321	*e*P	P	15 08 04.5	-1.4
	baz=321						
BTLS	Baital	69.50	321	*e*P	P	15 08 04.5	-1.4
KURBB	Kurchatov Arra	69.85	328	PKP2bc		15 36 11.2	
	comp=Z,0.4nm,0.3s,baz=305,slow=3.3,SNR=6.5						
KURK	Kurchatov	69.85	328	*c i*P	P	15 08 07.4	-0.5
KURK				pmax	pmax		
	comp=Z,217nm,0.8s						
KURK	Kurchatov	69.85	328	P	P	15 08 07.7	-0.2
IUG	Iuzhnay	70.80	317	*e*P	P	15 08 13.3	-0.8
	baz=317						
IUG	Iuzhnay	70.80	317	*e*P	P	15 08 13.3	-0.8
BRLS	Borolday	71.30	318	*e*P	P	15 08 15.9	-1.1
	baz=318						
BRLS	Borolday	71.30	318	*e*P	P	15 08 15.9	-1.1
VNDA	Vanda	75.28	173	P	P	15 08 39.6	-0.2
VNDA				pmax	pmax		
	comp=Z,20nm,1.1s						
VNDA	Vanda	75.28	173	P	P	15 08 39.6	-0.2
BRVK	Borovoye	75.48	328	*c i*P	P	15 08 41.0	-0.4
BRVK				pmax	pmax		
	comp=Z,80nm,0.8s						
BRVK	Borovoye	75.48	328	P	P	15 08 41.8	+0.4
TIXI	Tiksi	75.70	360	P	P	15 08 41.2	-1.1
	comp=Z,39nm,0.8s,baz=158,slow=5.1,SNR=8.3						
TIXI	Tiksi	75.70	360	*c i*P	P	15 08 41.5	-0.7
TIXI				pmax	pmax		
	comp=Z,42nm,0.9s						
TIXI	Tiksi	75.70	360	P	P	15 08 41.6	-0.7
TIXI				IAmb	IAmb	15 08 44.1	
	comp=Z,38nm,0.8s						
SHAO	Shalim	75.99	290	P	P	15 08 45.5	+0.5
SBA	Scott Base	76.17	172	P	P	15 08 45.6	+0.7
SBA				pmax	pmax		
	comp=Z,20nm,1.1s						
SBA	Scott Base	76.17	172	P	P	15 08 45.6	+0.7
SBA	Scott Base	76.17	172	IAMs_20	IAMs_20	15 39 16.3	
	comp=Z,814nm,20.0s						
SOHO	SOHO	76.22	296	*i* P	P	15 08 46.3	+0.1
	SNR=6.7						
BILL	Bilibino	76.53	13	*e*P	P	15 08 48.7	+1.7
BILL				*e*		15 08 55.4	
BILL				*e*		15 09 04.0	
BILL				*e*		15 11 41.7	
BILL				*e*PPP	PPP	15 13 24.0	
BILL				*e*S	S	15 18 32.6	+2.2
BILL				*e*SS	SS	15 23 29.4	+3.5
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,505nm,19.0s						
BILL	Bilibino	76.53	13	P	P	15 08 47.4	+0.3
MDH	Madha	76.65	297	P	P	15 08 48.7	+0.1
UOSS	Minazif	76.67	297	P	P	15 08 49.1	+0.3
HATD	Hatta, Dubai	76.71	297	P	P	15 08 49.9	+0.9
SOCY	Socotra	76.72	283	P	P	15 08 48.5	-0.9
ASHO	Ashiyiah	76.75	296	P	P	15 08 49.7	+0.4
BANOM	Banah	76.77	298	P	P	15 08 49.6	+0.2
MSFE	Esma-Masafi	76.79	297	P	P	15 08 50.8	+1.4
SHME	Shamm	76.94	298	P	P	15 08 51.6	+1.4
NAZ	Nazwa, Dubai	77.16	297	P	P	15 08 51.9	+0.4
FAQ	Al Faqa, Dubai	77.18	296	P	P	15 08 51.8	+0.2
MAW	Mawson	77.35	201	P	P	15 08 51.4	-0.2
	comp=Z,17nm,1.0s,baz=72,slow=6.8,SNR=9.3						
MAW				LR	LR	15 40 22.2	
	comp=Z,548nm,18.8s,baz=49,slow=34						
MAW	Mawson	77.35	201	P	P	15 08 53.1	+1.4
	baz=78,SNR=7.1						
MAW	Mawson	77.35	201	P	P	15 08 52.0	+0.3
MAW	Mawson	77.35	201	P	P	15 08 52.0	+0.3
ASUD	Al Ashush, Dub	77.39	296	P	P	15 08 53.2	+0.4
GEYT	Alibeck	77.99	310	P	P	15 08 56.3	+0.4
	comp=Z,12nm,0.8s,baz=113,slow=6.1,SNR=16						
GEYT	Alibeck	77.99	310	P	P	15 08 56.9	+0.9
UNV	Unalaska Valle	78.46	33	P	P	15 08 58.0	0.0
UNV				IAmb	IAmb	15 09 00.8	
	comp=Z,46nm,0.9s						
UNV	Unalaska Valle	78.46	33	P	P	15 08 57.6	-0.4
	baz=246						
NRIK	Noril'sk	78.72	346	P	P	15 08 59.0	-0.2
	comp=Z,20nm,0.7s,baz=124,slow=5.7,SNR=35						
NRIK				LR	LR	15 45 39.9	
	comp=Z,726nm,20.6s,baz=132,slow=37						
MZR	Muzera	78.78	294	*i* P	P	15 09 00.9	+0.3
	SNR=7.2						
AB31	Akbulak array	79.98	321	*i* P	P	15 09 06.0	-0.5
ABKAR	Akbulak array	79.98	321	P	P	15 09 06.3	-0.2
ABKAR				IAmb	IAmb	15 09 07.7	
	comp=Z,66nm,0.7s						
PPT	Papeete	80.16	107	P	P	15 09 07.9	-0.2
	comp=Z,34nm,1.0s,baz=306,slow=23,SNR=2.6						
AKTO	Aktyubinsk	81.53	322	P	P	15 09 13.7	-1.1
SVE	Sverdlovsk	82.10	329	*de*P	P	15 09 17.5	-0.1
SVE				pmax	pmax		
	comp=Z,107nm,1.0s						
SDPT	Sand Point	82.27	33	P	P	15 09 18.1	-0.4
SDPT	Sand Point	82.27	33	P	P	15 09 18.5	0.0
	baz=251						
ARU	Arti	83.05	328	*c i*P	P	15 09 22.4	-0.2
ARU				S	S	15 19 40.1	+0.5
ARU				pmax	pmax		
	comp=Z,59nm,0.7s						
ARU	Arti	83.05	328	P	P	15 09 23.2	+0.6
CHGN	Chignik	83.67	32	P	P	15 09 25.6	-0.2
	baz=253						
QRN	Al-Qurain	84.59	299	*e*P	P	15 09 31.0	-0.1
KBD	Kabd	84.84	300	*e*P	P	15 09 32.4	+0.1
UMR	Umm Al-Rimmam	84.87	300	*e*P	P	15 09 32.4	-0.1
MIB	Mutribah	85.23	300	*e*P	P	15 09 33.7	-0.6
RST	Umm Al-Ruwaisa	85.49	300	*e*P	P	15 09 34.9	-0.7
QSPA	South Pole Qui	85.76	180	P	P	15 09 36.1	-0.3
QSPA				IAmb	IAmb	15 09 37.5	
	comp=Z,18nm,0.9s						
SII	Sitkinak Islan	86.01	33	P	P	15 09 38.3	+0.7
	baz=256						
RAYN	Ar Rayn	86.11	294	*i* P	P	15 09 39.0	+0.1
	SNR=92						
P18K	Big Mountain,	86.17	30	P	P	15 09 38.0	-0.4
	baz=255						
OHAK	Old Harbor	86.64	32	P	P	15 09 41.2	+0.6
	baz=257,SNR=6.1						
TTA	Tatalina	86.73	26	P	P	15 09 41.5	+0.4
	baz=254						
O19K	Port Alsworth	86.81	29	P	P	15 09 41.6	+0.2
	baz=256						
GCSA	Galena City Sc	86.87	24	P	P	15 09 42.3	+0.8
	baz=253						
N19K	Bonanza Creek	86.89	28	P	P	15 09 42.6	+0.7
	baz=256						
MAK	Makhachkala	86.94	313	*e*P	P	15 09 38.4	-4.0
MAK				*e*		15 20 01.9	
MAK				*e*SS	SS	15 26 01.5	-0.4
MAK				pmax	pmax		
	comp=Z,269nm,1.1s						
L19K	White Mountain	87.05	27	P	P	15 09 43.3	+0.7
	baz=255,SNR=8.8						
KDAK	Kodiak Island	87.14	32	P	P	15 09 42.5	-0.5
	comp=Z,62nm,0.9s,baz=300,slow=3.3,SNR=11						
KDAK	Kodiak Island	87.14	32	P	P	15 09 42.3	-0.7
KDAK				pmax	pmax		
	comp=Z,64nm,0.9s						
KDAK	Kodiak Island	87.14	32	P	P	15 09 42.3	-0.7
KDAK	Kodiak Island	87.14	32	P	P	15 09 43.6	+0.6
	baz=258						
L20K	Farewell, AK	87.57	27	P	P	15 09 46.0	+0.9
	baz=256						
K20K	Telida	87.69	26	P	P	15 09 45.9	+0.3
	baz=256,SNR=7.2						
J20K	Nowinta River	87.86	25	P	P	15 09 47.2	+0.8
	baz=256						
HOM	Homer	88.01	30	P	P	15 09 47.7	+0.5
	baz=258						
SPCR	Spurr Chakacha	88.05	28	P	P	15 09 48.1	+0.6
	baz=258						
GROC	Groznyy	88.22	313	*e*P	P	15 09 48.7	+0.1
GROC				*e*S	SKSac	15 20 13.4	-1.6
GROC				pmax	pmax		
	comp=Z,25nm,0.6s						
BELG	Belogornoye	88.31	323	*ce*P	P	15 09 47.8	-0.9
BELG				pmax	pmax		
	comp=Z,16nm,0.9s						
KIRV	Kirov	88.36	329	⇓*e*P	P	15 09 48.3	-0.6
CHUM	Lake Minchumin	88.58	26	P	P	15 09 50.1	+0.3
	baz=258,SNR=16						
GNI	Garni	88.63	310	*c i*P	P	15 09 52.0	+1.2
GNI				pmax	pmax		
	comp=Z,21nm,1.0s						
H21K	Melozitna Rive	88.76	24	P	P	15 09 51.4	+0.7
H21K	Melozitna Rive	88.76	24	P	P	15 09 51.1	+0.4
	baz=257						
SUA	Susitna One	88.80	28	P	P	15 09 51.1	0.0
SUA				IAmb	IAmb	15 09 52.8	
	comp=Z,38nm,0.8s						
A21K	Barrow	88.85	18	P	P	15 09 50.9	0.0
	baz=253,SNR=9.5						
O22K	Cooper Landing	89.11	29	P	P	15 09 52.5	+0.1
	baz=260						
M22K	Willow	89.14	28	P	P	15 09 52.2	-0.3
	baz=260						
SEW	Seward	89.18	30	P	P	15 09 53.0	+0.3
	baz=260						
CUT	Chulitna	89.19	27	P	P	15 09 52.9	+0.2
	baz=260						
BPAW	Bear Paw Mtn.	89.20	26	P	P	15 09 53.1	+0.3
	baz=259						
RC01	Rabbit Creek A	89.21	29	P	P	15 09 53.0	+0.2
RC01	Rabbit Creek A	89.21	29	P	P	15 09 52.8	0.0
	baz=260,SNR=8.6						
TRF	Thorofare Moun	89.38	26	P	P	15 09 53.7	-0.1
	baz=259						
MLY	Manley	89.48	25	P	P	15 09 54.1	0.0
	baz=259,SNR=11						
ZEI	Tsey	89.55	313	*e*P	P	15 09 54.4	-0.7
ZEI				pmax	pmax		
	comp=Z,12nm,1.0s						
PMR	Palmer	89.58	28	P	P	15 09 53.2	-1.4
PMR				pmax	pmax		
	comp=Z,31nm,1.0s						
PMR	Palmer	89.58	28	P	P	15 09 53.2	-1.4
PMR				IAmb	IAmb	15 09 56.7	
	comp=Z,30nm,1.0s						
PMR	Palmer	89.58	28	P	P	15 09 54.8	+0.2
	baz=260,SNR=5.4						
PWL	Port Wells	89.84	29	P	P	15 09 55.9	0.0
	baz=261						
NCK	Nalchik	89.84	313	⇓*e*P	P	15 09 56.7	+0.4
NCK				pmax	pmax		
	comp=Z,17nm,0.5s						
KNK	Knik Glacier	89.87	28	P	P	15 09 56.4	+0.4
	baz=261,SNR=8.3						
SML	Sawmill	89.99	28	P	P	15 09 56.9	+0.3
	baz=261,SNR=8.8						
MCK	McKinley	90.02	26	P	P	15 09 57.1	+0.4
	baz=261,SNR=8.9						
WAT1	Susitna Watana	90.05	27	P	P	15 09 56.8	0.0
	baz=261						
I23K	Minto, Yukon-K	90.08	25	P	P	15 09 57.0	+0.2
	baz=260,SNR=15						
NEA2	Nenana	90.11	25	P	P	15 09 57.0	0.0
	baz=260						
COLD	Coldfoot	90.11	23	P	P	15 09 57.3	+0.4
	baz=260,SNR=20						
KBZ	Khabaz	90.37	314	P	P	15 09 58.3	-0.3
	comp=Z,8.1nm,0.8s,baz=113,slow=4.7,SNR=14						
KBZ	Khabaz	90.37	314	*d i*P	P	15 09 59.1	+0.5
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WAT6	Susitna Watana	90.38	27	P	P	15 09 58.5	0.0
	baz=262						
GOF	Gofitskoye	90.39	315	⇑*e*P	P	15 09 59.4	+0.6
NEY	Neytrino	90.45	313	⇓*e*P	P	15 10 00.9	+1.6
NEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SCM	Sheep Creek Mo	90.47	28	P	P	15 09 58.3	-0.5
	baz=262						
KIV	Kislovodsk	90.55	314	*e*P	P	15 09 59.9	+0.3
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV	Kislovodsk	90.55	314	IAMs_20	IAMs_20	15 53 25.1	
	comp=Z,369nm,19.0s						
TOLK	Toolik Lake Re	90.59	21	P	P	15 09 59.5	+0.3
TOLK	Toolik Lake Re	90.59	21	P	P	15 09 59.6	+0.4
	baz=260,SNR=11						
DHY	Denali Highway	90.62	27	P	P	15 09 59.8	+0.2
	baz=262,SNR=7.0						
COLA	College	90.67	25	⇓*e*P	P	15 09 58.7	-0.8

COLA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
COLA	College	90.67	25	P	P	15 09 59.2	-0.3
	baz=262						
PRGR	Permogore	90.72	332	eP	P	15 09 58.0	-1.8
PRGR				pmax	pmax		
	comp=Z,45nm,0.9s						
H24K	Noodor Dome	90.80	24	P	P	15 10 00.5	+0.3
	baz=262,SNR=18						
POKR	Poker Plat Res	90.88	25	P	P	15 10 01.4	+0.8
	baz=262						
HDA	Harding Lake	90.99	26	P	P	15 10 00.3	-0.8
	baz=262,SNR=12						
M24K	Tolsona, Glenn	91.04	28	P	P	15 10 01.6	+0.1
	baz=263						
ILAR	Eielson Array	91.06	25	P	P	15 10 00.0	-1.4
	comp=Z,5.6nm,0.8s,baz=280,slow=4.2,SNR=48						
ILAR				PP	PP	15 13 38.2	+0.1
	comp=Z,0.7nm,0.9s,baz=254,slow=6.3,SNR=2.0						
ILAR				PKKPbc	PKKPdf	15 27 25.4	+1.0
	comp=Z,1.5nm,0.8s,baz=48,slow=1.7,SNR=13						
ILAR				LR	LR	15 44 35.9	
	comp=Z,288nm,21.3s,baz=286,slow=31						
ILAR	Eielson Array	91.06	25	P	P	15 10 00.2	-1.2
PAX	Paxson	91.47	27	P	P	15 10 03.3	-0.2
	baz=264						
BMRM	Bremner River	91.67	29	P	P	15 10 04.2	-0.2
	baz=264						
N25K	Chitina, Valde	91.73	28	P	P	15 10 04.6	-0.1
	baz=264						
VRH	Novokhopyorsk	91.81	321	eP	P	15 10 03.9	-1.2
VRH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
RIDG	Independent Ri	91.83	26	P	P	15 10 04.6	-0.4
RIDG				IAmb	IAmb	15 10 17.7	
	comp=Z,29nm,1.2s						
KMBO	Kilima Mbogo	92.11	269	P	P	15 10 06.7	-1.1
	comp=Z,7.7nm,0.9s,baz=38,slow=6.4,SNR=12						
KMBO	Kilima Mbogo	92.11	269	i P	P	15 10 08.4	+0.6
	SNR=9.0						
KMBO	Kilima Mbogo	92.11	269	IAMs_20	IAMs_20	15 51 00.8	
	comp=Z,378nm,21.0s						
DOT	Dot Lake	92.17	26	P	P	15 10 06.2	-0.4
SCRK	Sand Creek	92.23	26	P	P	15 10 06.5	-0.5
	baz=265						
L26K	Log Cabin Wild	92.44	27	P	P	15 10 07.8	0.0
	baz=266						
J26L	Joseph Creek	92.45	26	P	P	15 10 08.0	0.0
	baz=266						
SOC	Sochi	92.66	313	eP	P	15 10 07.0	-2.3
SOC				e		15 13 46.7	
SOC				ePPP	PPP	15 15 48.3	
SOC				eS	SKSac	15 20 37.6	-3.1
SOC				eSS	SS	15 27 24.9	+0.1
SOC				eSSS	SSS	15 31 03.9	
SOC				MLR	MLR		
	comp=Z,153nm,15.0s						
M27K	Edge Creek, AK	93.07	28	P	P	15 10 10.9	0.0
M27K				IAmb	IAmb	15 10 12.9	
	comp=Z,13nm,0.8s						
L27K	Beaver Creek,	93.13	27	P	P	15 10 10.9	-0.1
L27K				IAmb	IAmb	15 10 13.1	
	comp=Z,23nm,0.8s						
L27K	Beaver Creek,	93.13	27	P	P	15 10 11.2	+0.2
	baz=267						
BCAR	Beaver Creek A	93.15	27	P	P	15 10 11.3	+0.1
VORD	Divnogorie	93.32	321	eP	P	15 10 10.6	-1.5
VORD				pmax	pmax		
	comp=Z,7.0nm,0.7s						
VSR	Storozhevoye	93.41	321	eP	P	15 10 11.6	-1.0
VSR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
EGAK	Eagle	93.51	25	P	P	15 10 12.6	-0.1
	baz=268,SNR=7.6						
BVCY	Beaver Creek	93.55	28	P	P	15 10 13.1	+0.1
	baz=268						
KLMR	Klimovskoe	93.60	331	eP	P	15 10 09.9	-3.2
KLMR				e		15 13 53.3	
KLMR				pmax	pmax		
	comp=Z,29nm,0.9s						
KLMR	Klimovskoe	93.60	331	eP	P	15 10 10.0	-3.2
KLMR				AMP		15 10 20.9	
	comp=Z,29nm,0.9s						
KLMR				ePP	PP	15 13 53.3	-4.8
LPSR	Galich'ya Gora	93.61	322	eP	P	15 10 12.0	-1.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YUK3	Moose Creek	93.71	28	P	P	15 10 13.7	-0.3
	baz=268						
DAWY	Dawson	94.25	26	P	P	15 10 16.1	-0.1
	baz=269,SNR=17						
ANN	Anapa	94.36	314	eP	P	15 10 14.7	-2.3
ANN				e*PP	pP	15 10 25.5	-0.8
ANN				e		15 14 03.2	
ANN				ePPP	PPP	15 16 04.7	
ANN				eS	SKSac	15 20 47.0	-2.9
ANN				eSSS	SSS	15 31 30.9	
ANN				pmax	pmax		
	comp=Z,65nm,1.4s						
MOS	Moscow	94.46	325	eP	P	15 10 21.2	+3.9
OBN	Obninsk	95.06	325	eP	P	15 10 19.2	-0.8
OBN				e		15 14 12.0	
OBN				ePPP	PPP	15 16 10.7	
OBN				pmax	pmax		
	comp=Z,29nm,0.7s						
EPYK	Eagle Plains	95.36	24	P	P	15 10 20.5	-0.8
EPYK	Eagle Plains	95.36	24	P	P	15 10 21.2	-0.1
	baz=272						
M30M	Minto, Yukon	95.43	28	P	P	15 10 21.5	-0.2
	baz=271,SNR=5.5						
APA	Apatity	96.16	337	⇓iP	P	15 10 26.5	+1.7
APA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SKAG	Skagway	96.25	31	P	P	15 10 24.8	-0.5
	baz=272						
INK	Inuvik	96.48	22	P	P	15 10 24.4	-1.8
	comp=Z,11nm,0.8s,baz=276,slow=3.3,SNR=42						
INK				PP	PP	15 14 17.9	-2.4
	comp=Z,3.6nm,1.0s,baz=275,slow=6.9,SNR=3.7						
INK				PKKPbc	PKKPbc	15 27 10.5	-3.1
	comp=Z,1.5nm,0.8s,baz=72,slow=3.8,SNR=5.7						
INK	Inuvik	96.48	22	P	P	15 10 25.0	-1.2
INK				IAmb	IAmb	15 10 35.1	
	comp=Z,29nm,1.1s						
INK	Inuvik	96.48	22	P	P	15 10 25.5	-0.7
	baz=275						
FARO	Faro, Yukon	97.05	28	P	P	15 10 28.8	-0.3
	baz=274						
BRTR	Keskin Array B	97.13	309	P	P	15 10 28.6	-1.4
	comp=Z,3.5nm,0.8s,baz=115,slow=5.9,SNR=7.6						
BRTR				LR	LR	16 03 22.7	
	comp=Z,52nm,18.1s,baz=96,slow=41						
SNAA	Sanae	98.24	194	P	Pdif	15 10 35.1	+0.8
SNAA	Sanae	98.24	194	ceP	Pdif	15 10 35.0	+0.7
SNAA				pmax	pmax		
	comp=Z,11nm,1.2s						
SNAA	Sanae	98.24	194	P	Pdif	15 10 34.8	+0.4
SNAA				IAmb	IAmb	15 10 36.7	
	comp=Z,12nm,1.2s						
SNAA				IAMs_20	IAMs_20	15 54 36.2	
	comp=Z,517nm,20.0s						
ARA0	ARCESS Array S	98.77	340	eP	P	15 10 35.6	-0.9
ARCES	ARCESS Array B	98.77	340	P	P	15 10 35.5	-1.1
	comp=Z,11nm,0.8s,baz=79,slow=4.6,SNR=17						
ARCES				PKKPbc	PKKPbc	15 27 06.2	-1.1
	comp=Z,6.8nm,1.0s,baz=269,slow=4.4,SNR=3.6						
ARCES				LR	LR	16 00 09.1	
	comp=Z,450nm,19.8s,baz=60,slow=38						
ARCES	ARCESS Array B	98.77	340	IAmb	IAmb	15 10 37.5	
	comp=Z,17nm,0.9s						
KTK1	Kautokeino	99.68	339	eP	Pdif	15 10 40.1	-0.5
AKASG	Malin Array Be	99.71	321	P	Pdif	15 10 39.5	-1.6
	comp=Z,1.4nm,0.7s,baz=76,slow=4.7,SNR=6.6						
AKBB	Malin Array Si	99.71	321	⇓eP	Pdif	15 10 40.6	-0.5
AKBB				pmax	pmax		
	comp=Z,15nm,1.8s						
VNA2	Neumayer--Watz	99.82	193	P	Pdif	15 10 37.4	-3.9
FINES	FINESS Array B	100.05	332	P	Pdif	15 10 40.0	-2.4
	comp=Z,9.2nm,0.8s,baz=115,slow=6.7,SNR=13						
FINES	FINESS Array B	100.05	332	P	Pdif	15 10 40.0	-2.4
VNA3	Neumayer Olymp	100.09	192	P	Pdif	15 10 35.8	-6.7
MNK	Minsk	100.11	325	i P	Pdif	15 10 40.2	-2.6
MNK				i		15 14 46.2	
MNK				i PPP	PPP	15 16 54.7	
MNK				i S	SKSac	15 21 16.3	-2.8
MNK				i SS	SS	15 29 09.7	+0.2
MNK				i SSS	SSS	15 32 57.4	
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,31nm,0.8s						
MNK				pmax	pmax		
	comp=N,13nm,0.8s						
MNK				MLR	MLR		
	comp=Z,304nm,17.0s						
MNK				MLR	MLR		
	comp=N,111nm,11.0s						
MNK				MLR	MLR		
	comp=E,38nm,15.0s						
MNK	Minsk	100.11	325	i P	Pdif	15 10 40.2	-2.6
	comp=E,3.0nm,0.9s						
MNK				i P	Pdif	15 10 40.2	-2.6
	comp=N,13nm,0.8s						
MNK				i P	Pdif	15 10 40.2	-2.6
	comp=Z,31nm,0.8s,baz=83						
MNK				i PP	PP	15 14 46.3	-2.2
MNK				i PPP	PPP	15 16 54.7	
MNK				i S	SKSac	15 21 16.3	-2.8
MNK				i SS	SS	15 29 09.7	+0.3
MNK				i SSS	SSS	15 32 57.5	
MNK				i LQ	LQ	15 50 00.2	
MNK				i LR	LR	15 53 42.6	
MNK				i LRM	MLR	15 57 47.0	
	comp=Z,304nm,17.2s						
MNK				i LRM	MLR	15 57 48.9	
	comp=N,111nm,10.9s						
MNK				i LRM	MLR	15 57 57.2	
	comp=E,38nm,15.3s						
VNA1	Neumayer--Stat	100.22	193	P	Pdif	15 10 39.6	-3.4
BOSA	Boshof	100.39	240	P	Pdif	15 10 43.5	-1.4
	comp=E,6.0nm,0.9s,baz=85,slow=3.1,SNR=7.0						
JETT	Jettan, Norway	100.50	340	eP	Pdif	15 10 45.3	+1.0
NACGM	Naroch	100.69	325	i P	Pdif	15 10 44.5	-0.9
STEI	Steigen	102.81	339	eP	Pdif	15 10 53.9	-0.7
FAUS	Fauske	103.00	339	eP	Pdif	15 10 54.6	-0.8
UZH	Uzhgorod	104.45	319	eP	Pdif	15 11 01.5	-0.7
CRVS	Cervenica-Dubn	104.94	319	eP	Pdif	15 11 05.6	+1.1
CRVS	Cervenica-Dubn	104.94	319	ePDIFF	Pdif	15 11 05.5	+1.1
RES	Resolute Bay	105.05	11	Pdiff	Pdif	15 11 03.8	-0.5
	comp=E,2.6nm,0.7s,baz=330,slow=1.0,SNR=5.1						
RES				PKiKP	PKiKP	15 15 19.4	+0.6
	comp=E,2.0nm,0.8s,baz=319,slow=5.4,SNR=6.0						
YKA	Yellowknife Ar	105.48	26	Pdiff	Pdif	15 11 05.8	-0.8
	comp=E,2.0nm,1.0s,baz=293,slow=4.8,SNR=4.0						
YKA				PKiKP	PKiKP	15 15 20.1	+0.2
	comp=E,1.2nm,0.7s,baz=300,slow=1.8,SNR=5.1						
YKA				PKKPbc	PKKPbc	15 26 43.9	-3.5
	comp=E,2.4nm,0.8s,baz=103,slow=2.8,SNR=8.4						
TBLU	Trondheim	106.55	336	ePdif	Pdif	15 11 09.1	-2.2
NB2	NORSAR Subarra	107.04	333	P	Pdif	15 11 12.5	-1.1
	comp=Z,3.0nm,0.7s,baz=70,slow=4.6						
NB2	NORSAR Subarra	107.04	333	P	Pdif	15 11 12.5	-1.1
	baz=70,slow=4.6						
NOA	NORSAR Array B	107.04	333	Pdiff	Pdif	15 11 11.8	-1.8
	comp=Z,2.4nm,0.7s,baz=69,slow=4.4,SNR=8.0						
CKRC	Cesky Krumlov	109.54	321	ePKP	PKiKP	15 15 29.8	+1.9
CLL	Collm	109.59	323	ePKiKP	PKiKP	15 15 26.0	-1.9
SUE	Sulen	109.85	335	ePdif	Pdif	15 11 26.3	+0.4
KHC	Kasperske Hory	109.91	321	ePKP	PKiKP	15 15 29.0	+0.3
GERES	GERESS Array B	109.92	321	PKiKP	PKiKP	15 15 28.7	-0.1
	comp=Z,1.8nm,0.6s,baz=64,slow=3.1,SNR=12						
BER	Bergen	109.93	334	ePdif	Pdif	15 11 25.5	-0.8
NVAR	Mina Array Bea	109.97	51	Pdiff	Pdif	15 11 26.6	-0.8
	comp=Z,0.3nm,0.5s,baz=256,slow=7.3,SNR=1.4						
NVAR				PKiKP	PKiKP	15 15 30.1	+0.7
	comp=Z,1.8nm,0.7s,baz=242,slow=1.9,SNR=7.0						
NVAR				PKKPbc	PKKPbc	15 26 31.5	-1.3
	comp=Z,0.8nm,0.7s,baz=122,slow=3.7,SNR=5.1						
KBA	Koelnbreinsper	110.67	319	eP	PKiKP	15 15 32.3	+2.0
	comp=Z,7.9nm,0.9s						
EDW2	Edwards Air Fo	110.85	54	PKiKP	PKiKP	15 15 31.4	+0.5
	baz=280						
MPMC	Manual Prospec	111.05	53	PKiKP	PKiKP	15 15 32.1	+0.7
	baz=281						
MSO	Missoula	111.08	41	PKiKP	PKiKP	15 15 31.3	+0.3
	baz=287						
ABTA	Abfaltersbach	111.31	319	eP	PKiKP	15 15 31.4	0.0
	comp=Z,6.9nm,0.8s						
FURC	Furnace Creek,	111.47	52	PKiKP	PKiKP	15 15 32.9	+1.0
	baz=281						
HLID	Hailey	111.67	45	PKiKP	PKiKP	15 15 33.4	+1.0
	baz=286						
WTTA	Wattenberg	111.72	320	eP	PKiKP	15 15 32.0	-0.3
	comp=Z,12nm,0.6s						
GSC	Goldstone, Bar	111.74	54	PKiKP	PKiKP	15 15 33.3	+0.7
	baz=281						
SQTA	Sankt Quirin	112.01	320	eP	PKiKP	15 15 34.5	+1.7
	comp=Z,3.3nm,0.6s						
MOTA	Moosalm	112.04	320	eP	PKiKP	15 15 33.4	+0.5
	comp=Z,5.3nm,0.8s						
R11A	Troy Canyon, C	112.08	50	PKiKP	PKiKP	15 15 34.2	+0.9
	baz=283						
PFO	Pinyon Flats O	112.32	55	PKiKP	PKiKP	15 15 34.7	+0.9
	baz=280						
TPFO	Pinon Flats	112.33	55	PKiKP	PKiKP	15 15 34.5	+0.6
	baz=280						
FETA	Feichten	112.39	320	eP	PKiKP	15 15 35.5	+1.9
	comp=Z,5.8nm,1.2s						
TUQ	Turquoise Moun	112.42	53	PKiKP	PKiKP	15 15 34.7	+0.8
	baz=281						
MONP2	Monument Peak	112.48	56	PKiKP	PKiKP	15 15 34.9	+0.6
	baz=280						
BELC	Belle Mtn. Jos	112.63	55	PKiKP	PKiKP	15 15 35.3	+0.8
	baz=281						
GMRC	Granite Mounta	112.76	54	PKiKP	PKiKP	15 15 35.5	+0.9
	baz=281						
DAVA	Damuels	112.84	320	eP	PKiKP	15 15 34.8	+0.4
	comp=Z,6.0nm,0.7s						
BOZ	Bozeman (W)	112.98	42	PKiKP	PKiKP	15 15 35.7	+1.0
	baz=289						
SWSC	Sam W. Stewart	112.99	56	PKiKP	PKiKP	15 15 35.7	+0.8
	baz=280						
BC3	Big Chuckawall	113.14	55	PKiKP	PKiKP	15 15 36.2	+0.9
	baz=281						
IRM	Iron Mountain	113.30	55	PKiKP	PKiKP	15 15 36.3	+0.8
	baz=281						
EGMT	Eagleton	113.37	39	PKiKP	PKiKP	15 15 36.2	+0.9
	baz=291						
DUG	Dugway, Tooele	113.72	48	PKiKP	PKiKP	15 15 37.0	+0.6
	baz=286						
BW06	Boulder Array	115.30	44	PKiKP	PKPdf	15 15 39.6	+0.2
	baz=289						
PDAR	Pinedale Array	115.30	44	PKP	PKPdf	15 15 39.5	+0.1
	comp=Z,2.5nm,0.8s,baz=242,slow=1.3,SNR=16						
PDAR				PKKPbc	PKKPbc	15 26 14.2	-1.0
	comp=Z,1.6nm,0.9s,baz=120,slow=5.1,SNR=9.3						
214A	Organ Pipe Nat	115.65	57	PKiKP	PKiKP	15 15 40.5	+0.3
	baz=282						
WUAZ	Wupatki	116.02	52	PKiKP	PKiKP	15 15 41.8	+0.9
	baz=284						
LAO	LASA Array	116.10	39	PKiKP	PKiKP	15 15 41.7	+1.1
	baz=294						
KEST	Kesra	116.69	308	PP	PP	15 16 48.7	-1.3
	comp=Z,6.2nm,0.9s,baz=10.0,slow=10.0,SNR=4.6						
O20A	White River Ci	117.09	47	PKiKP	PKiKP	15 15 43.4	+0.5
	baz=289						
TUC	Tucson	117.26	56	PKiKP	PKiKP	15 15 44.7	+1.4
	baz=283						
W18A	Petrified Fore	117.42	52	PKiKP	PKiKP	15 15 45.1	+1.4
	baz=285						
MVCO	Mesa Verde	117.80	50	PKiKP	PKiKP	15 15 45.8	+1.4
	baz=287						
N23A	Red Feather La	118.48	45	PKiKP	PKiKP	15 15 46.1	+0.5
	baz=291						
RSSD	Black Hills	118.55	41	PKiKP	PKiKP	15 15 46.2	+0.6
	baz=294						
S22A	4UR Ranch, Cre	118.90	49	PKiKP	PKiKP	15 15 47.5	+0.9
	baz=289						
ISCO	Idaho Springs	119.10	46	PKiKP	PKiKP	15 15 47.7	+0.7
	baz=291						
121A	Cookes Peak, D	119.66	55	PKiKP	PKiKP	15 15 48.9	+0.8
	baz=285						
SDCO	Great Sand Dun	119.89	48	PKiKP	PKiKP	15 15 49.4	+0.9
	baz=290						
ANMO	Albuquerque	120.05	52	PKiKP	PKiKP	15 15 49.6	+0.8
	baz=288						
ULM	Lac du Bonnet	120.39	32	PKP	PKPdf	15 15 48.0	-0.6
	comp=Z,6.2nm,0.8s,baz=303,slow=4.5,SNR=4.7						
T25A	Trinidad	120.92	49	PKiKP	PKiKP	15 15 50.9	+0.5
	baz=290						
MNTX	Cornudas Mount	121.85	55	PKiKP	PKiKP	15 15 52.9	+0.7
	baz=286						
ECSD	EROS Data Cent	123.49	39	PKiKP	PKiKP	15 15 55.1	0.0
	baz=301						
BGNE	Belgrade	123.63	42	PKiKP	PKiKP	15 15 55.6	+0.2
	baz=298						
CBKS	Cedar Bluff	123.69	45	PKiKP	PKiKP	15 15 55.6	0.0
	baz=295						
AMTX	Amarillo	123.78	50	PKiKP	PKPdf	15 15 55.6	-0.2
	baz=291						
TXAR	Lajitas Array	123.93	57	PKP	PKPdf	15 15 56.2	0.0
	comp=Z,5.6nm,0.9s,baz=260,slow=1.1,SNR=42						
TXAR				PKKPab	PKKPab	15 25 41.8	-0.3
	comp=Z,0.4nm,0.7s,baz=116,slow=6.2,SNR=4.3						
EYMN	Ely	124.08	32	PKiKP	PKiKP	15 15 56.0	0.0
	baz=308						
ESDC	Sonseca Array	125.11	317	PKP	PKPdf	15 15 56.9	-1.2
	comp=Z,0.2nm,0.3s,baz=22,slow=4.4,SNR=6.6						
KSU1	Kansas State U	125.75	44	PKiKP	PKiKP	15 15 59.5	-0.2
	baz=298						
ABTX	Abilene, Hawle	126.17	52	PKiKP	PKPdf	15 16 00.3	0.0
	baz=291						
SCIA	State Center	126.57	39	PKiKP	PKiKP	15 16 01.3	+0.1
	baz=303						
JCT	Junction City	126.78	55	PKiKP	PKiKP	15 16 02.3	+0.3
	baz=290						
TORD	Torodi Ar. Bea	127.68	283	PKP	PKiKP	15 16 04.0	-0.2
	comp=Z,13nm,0.7s,baz=54,slow=1.9,SNR=70						
TORD				PKKPab	PKKPdf	15 25 28.1	-47
	comp=Z,0.4nm,0.7s,baz=248,slow=0.3,SNR=3.5						
TUL1	Leonard	127.78	47	PKiKP	PKiKP	15 16 03.9	+0.1
	baz=297						
833A	Chaparral WMA,	127.81	57	PKiKP	PKiKP	15 16 04.8	+0.7
	baz=288						
JFWS	Jewell Farm	127.81	36	PKiKP	PKiKP	15 16 03.6	-0.1
	baz=306						
SCHQ	Schefferville	127.82	12	PKP	PKPdf	15 16 02.0	-0.7
	comp=Z,3.6nm,0.7s,baz=40,slow=4.6,SNR=4.6						
WHTX	Lake Whitney,	128.12	52	PKiKP	PKiKP	15 16 05.2	+0.6
	baz=292						
W39A	Magazine	129.56	47	PKiKP	PKiKP	15 16 07.3	-0.1
	baz=298						
U40A	Yellville	129.67	45	PKiKP	PKiKP	15 16 07.4	-0.2
	baz=300						
HDIL	Hopedale	129.78	38	PKiKP	PKiKP	15 16 07.4	-0.2
	baz=306						
CCM	Cathedral Cave	129.91	42	PKiKP	PKiKP	15 16 07.7	-0.3
	baz=302						
MIAR	Mount Ida	130.01	47	PKiKP	PKiKP	15 16 08.0	-0.3
	baz=298						
X40A	Basin Creek Fa	130.58	47	PKiKP	PKiKP	15 16 09.1	-0.3
	baz=298						
W41B	Gary Mavity, V	130.68	46	PKiKP	PKiKP	15 16 09.3	-0.3
	baz=299						
PLCA	Paso Flores	131.68	160	PKP	PKPdf	15 16 09.3	-1.3
	comp=Z,3.5nm,0.9s,baz=220,slow=0.8,SNR=5.9						
PLCA				SKPbc	SKPab	15 19 36.0	+1.5
	comp=Z,7.0nm,1.1s,baz=161,slow=5.6,SNR=4.7						
WCI	Wyandotte Cave	133.03	39	PKiKP	PKiKP	15 16 14.1	-0.2
	baz=307						
P49A	Miami Univ. Ec	133.18	37	PKiKP	PKiKP	15 16 14.1	-0.4
	baz=310						
WVT	Waverly	133.25	42	PKiKP	PKPdf	15 16 14.0	+0.4
	baz=304						
ACSO	Alum Creek Sta	133.73	35	PKiKP	PKPdf	15 16 14.5	+0.1
	baz=312						
M53A	WI Miller and	134.15	32	PKiKP	PKPdf	15 16 15.4	+0.2
	baz=316						
KIC	Kosan Boka	134.34	275	ePKIKP	PKiKP	15 16 18.1	+0.5
	comp=Z,12nm,0.7s						
DBIC	Dimbokro	134.45	275	PKP	PKPdf	15 16 15.1	-1.4
	comp=Z,8.5nm,0.7s,baz=63,slow=2.2,SNR=11						
DBIC				SKPbc	SKPbc	15 19 45.2	+1.2
	comp=Z,6.6nm,1.0s,baz=195,slow=21,SNR=7.3						
LONY	Lake Ozonia	134.54	24	PKiKP	PKPdf	15 16 16.0	+0.2
	baz=325						
P52A	Corning	134.61	35	PKiKP	PKiKP	15 16 16.9	-0.6
	baz=313						
TIC	Toumodi	134.62	275	ePKIKP	PKiKP	15 16 18.6	+0.4
M54A	Oil Creek Stat	134.62	31	PKiKP	PKiKP	15 16 16.8	-0.7
	baz=317						
LIC	Lamto	134.63	275	ePKIKP	PKiKP	15 16 18.6	+0.4
	comp=Z,32nm,0.7s						
O53A	New Philadelph	134.70	33	PKiKP	PKiKP	15 16 17.0	-0.7
	baz=314						
N54A	Moraine State	134.85	32	PKiKP	PKPdf	15 16 17.1	+0.6
	baz=316						
TZTN	Tazewell	135.78	39	PKiKP	PKiKP	15 16 19.7	-0.3
	baz=309						
BINY	Binghamton	135.88	27	PKiKP	PKiKP	15 16 19.3	-0.7
	baz=322						
LBNH	Lisbon	135.90	22	PKiKP	PKiKP	15 16 19.1	-0.8
	baz=329						
O56A	Blue Knob Stat	136.10	31	PKiKP	PKPdf	15 16 19.5	+0.6
	baz=318						
SSPA	Standing Stone	136.17	30	PKiKP	PKiKP	15 16 20.0	-0.6
	baz=319						
BLA	Blacksburg	137.25	36	PKiKP	PKPdf	15 16 21.8	+0.7
	baz=313						
GOGA	Godfrey	137.75	43	PKiKP	PKPdf	15 16 22.6	+0.6
	baz=306						
P60A	Greenville	137.91	29	PKiKP	PKiKP	15 16 23.8	-0.4
	baz=321						
TGUH	Tegucigalpa,Un	142.50	72	eP	PKiKP	15 16 49.6	+15
AC02	Maricunga	144.30	151	PKPdf	PKPdf	15 16 34.1	-0.6
JTS	Las Juntas de	145.37	78	eP	PKPab	15 16 37.2	+0.9
PRVC	Isla de Provid	148.25	71	eP	PKiKP	15 16 45.8	-0.2
CPUP	Villa Florida	148.95	168	PKPbc	PKPbc	15 16 45.2	-0.6
	comp=Z,30nm,0.8s,baz=174,slow=1.9,SNR=14						
MTDJ	Mount Denham	150.15	60	eP	PKPbc	15 16 48.7	-0.5
GTBY	Guantanamo Bay	151.42	55	eP	PKPbc	15 16 49.6	-2.3
OTAV	Otavalo	151.85	97	eP	PKPdf	15 16 48.7	+1.3
PTAC	Punta Ardita,	152.73	83	eP	PKiKP	15 16 55.4	0.0
GCUF	Volcan Galeras	153.08	96	eP	PKPdf	15 16 49.6	+0.4
LPAZ	La Paz	153.24	140	PKP	PKPdf	15 16 48.5	-0.9
	comp=Z,7.7nm,0.9s,baz=83,slow=0.6,SNR=24						
LPAZ				PKPbc	PKiKP	15 16 57.4	+0.3
	comp=Z,16nm,0.8s,baz=152,slow=1.7,SNR=22						
LPAZ	La Paz	153.24	140	eP	PKPdf	15 16 49.6	+0.2
PIZC	Pizarro, Choco	153.27	87	eP	PKPbc	15 16 52.5	-3.9
POPC	Popayan, Colom	153.87	93	eP	PKPdf	15 16 48.7	-1.4
SOTA	Rioblanco	153.91	94	eP	PKPdf	15 16 52.5	+2.1
PCON	Cinco Dias	154.13	93	eP	PKPdf	15 16 52.5	+1.7
YOTC	Yotoco, Valle	154.28	90	eP	PKPdf	15 16 47.7	-2.7
PLMC	San Jos del P	154.34	87	eP	PKPdf	15 16 47.7	-2.8
FLOC	Florencia	154.80	95	eP	PKPbc	15 16 58.2	-1.5
UREC	San Jos de Ur	154.91	81	eP	PKPdf	15 16 53.4	+2.3
SJCC	San Jacinto, C	154.92	76	eP	PKPdf	15 16 50.6	-0.6
GUY2C	Guyana, Caldas	155.25	87	eP	PKPdf	15 17 00.1	+7.9
ORTC	Ortega, Tolima	155.37	90	eP	PKPdf	15 16 50.6	-1.3
SMRC	Santa Marta, M	155.56	72	eP	PKPdf	15 16 53.4	+1.5
ZARC	Zaragoza, Cauc	155.61	81	eP	PKPdf	15 16 50.6	-1.5
PRAC	Prado	155.72	90	eP	PKPdf	15 16 48.7	-3.7
SMLC	San Martn de	156.20	78	eP	PKPdf	15 16 52.5	-0.4
ROSC	El Rosal	156.30	88	eP	PKPab	15 17 23.0	+1.3
SPBC	San Pablo de B	156.53	85	eP	PKPdf	15 16 52.5	-0.9
MACC	Macarena, Meta	156.66	94	eP	PKPdf	15 16 53.4	-0.1
RUSC	La Rusia	157.50	85	eP	PKPdf	15 16 52.5	-2.7
URIC	Uribia, Colomb	157.51	69	eP	PKPdf	15 16 54.4	-0.1
PAMC	Pamplona, Colo	157.75	81	eP	PKPdf	15 16 54.4	-1.1
DABV	Dabajuro	159.01	70	eP	PKPdf	15 16 57.3	+0.9
SDV	Santo Domingo	159.52	76	eP	PKPdf	15 16 56.3	-0.9
BDFB	Brasilia	160.13	187	PKP	PKPdf	15 16 58.5	+0.8
	comp=Z,3.2nm,0.5s,baz=71,slow=1.8,SNR=5.6						
BDFB				PKPab	PKPab	15 17 38.0	+0.6
	comp=Z,3.0nm,0.7s,baz=25,slow=6.3,SNR=3.6						
ELOV	Elorza	160.96	81	eP	PKPdf	15 16 59.2	+0.6

MAN 09 15:10:45.7, 8.°11N×122.°33E, h35^{km}, mb4.4, ML3.3, MS3.1, 4C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	Pagadian	1.07	104	⇑iP	Pn	15 11 04.3	0.0
PAGZ				i S	Sn	15 11 18.3	+0.3
DCPH	Dipolog City	1.11	65	⇑eP	Pn	15 11 04.8	+0.1
SNPH	Sibulan	1.51	36	⇑iP	Pn	15 11 11.4	+1.0
SNPH				i S	Sn	15 11 31.4	+2.5
CNOP	Candoni, Negro	1.73	10	⇑eP	Pn	15 11 13.8	+0.5
CNOP				eS	Sn	15 11 34.4	+0.2
TBP	Tagbilaran	2.18	44	eP	Pn	15 11 20.0	+0.5

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*DJA **09** 15:12:37.2±0.8, 4°S±9°×12°9E±°, h10^{km}, M4.4/8, mb4.9/2, MLv4.1/8*

*NEIC **09** 15:12:38.8±2.2, 3.°98S±0.°06×129.°56E±0.°07, h10^{km}±1^{km}, mb4.4/31, Error ellipse: s-maj=12.2km s-min=10.4km*

az=117.0

*IDC **09** 15:12:41.5±1.9, 4°.07S×129°.72E, h41^{km}±18^{km}, mb4.0/12, mb1 4.1/17, mb1mx3.9/36, mbtmp4.2/17, ML4.0/5, Error ellipse: s-maj=20.6km s-min=11.5km az=104.0*

ISC 09 15:12:41.0±0.5**, 4°.09S**±0°.05×**129°.55E**±0°.06**, h36^{km}, n68, σ1^{s}.52**/69**, mb4.4**/23**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.96	320	P	Pn	15 12 56.2	-1.8
AAI	Ambon	1.41	286	P	Pn	15 13 02.0	-2.1
FAKI	Fak Fak	2.94	67	P	Pn	15 13 26.4	+1.3
FAKI	Fak Fak	2.94	67		Pn	15 13 25.7	+0.6
SIJI	Sorong	3.63	28	P	Pn	15 13 34.1	-0.5
	13nm,0.3s,baz=64,slow=23,SNR=9.8						
SIJI				S	Sn	15 14 14.8	-1.6
	11nm,0.3s,baz=238,slow=17,SNR=6.1						
SWI	Sorong	3.63	28	P	Pn	15 13 35.5	+0.8
LBMI	Labuha	3.99	329	P	Pn	15 13 40.2	+0.5
SANI	Sanana	4.09	300	P	Pn	15 13 40.7	-0.3
TNTI	Ternate	5.30	336	Pn	Pn	15 13 57.6	-0.1
SOEI	Soe	7.69	223	Pn	Pn	15 14 34.9	+4.3
BATI	Baumata	8.43	224	P	Pn	15 14 42.9	+2.3
	3.3nm,0.3s,baz=128,slow=2.0,SNR=6.0						
MTN	Manton Dam	8.84	170		Pn	15 14 48.4	+2.2
KAPI	Kappang	9.81	264	P	Pn	15 15 02.1	+2.6
	3.9nm,0.3s,baz=118,slow=1.7,SNR=5.4						
KNRA	Kununurra	11.54	184		Pn	15 15 23.9	+0.7
FITZ	Fitzroy Crossi	14.44	195	P	Pn	15 16 05.6	+2.8
	0.1nm,0.3s,baz=304,slow=15,SNR=1.4						
MTKI	Muara Teweh, K	14.97	282	P	Pn	15 15 52.3	-18
JAGI	Jajag, Banyuwa	15.91	253	P	P	15 16 25.6	+0.1
JAGI				IAmb	IAmb	15 16 27.1	
	comp=Z,58nm,1.5s						
WB0	Warramunga Arr	16.28	164	Pn	Pn	15 16 24.9	-2.1
WRAB	Tennant Creek	16.43	164	Pn	Pn	15 16 26.5	-2.4
WRA	Warramunga Arr	16.43	164	P	Pn	15 16 25.2	-3.7
	comp=Z,0.3nm,0.3s,baz=345,slow=13,SNR=11						
WRA				S	Sn	15 19 17.7	-13
	baz=332,slow=25,SNR=2.1						
WRA	Warramunga Arr	16.43	164	Pn	Pn	15 16 27.5	-1.4
WB2	Warramunga Arr	16.44	164	Pn	Pn	15 16 26.0	-3.0
WR0	Warramunga Arr	16.51	163	Pn	Pn	15 16 27.3	-2.5
COEN	Coen	16.64	127	P	P	15 16 34.0	+0.4
COEN				IAmb	IAmb	15 16 47.2	
	comp=Z,24nm,1.4s						
PSA00	Pilbara Seismi	19.77	208	P	P	15 17 08.8	+0.7
PSA00				IAmb	IAmb	15 17 17.3	
	comp=Z,20nm,0.9s						
PSA00	Pilbara Seismi	19.77	208	P	Pn	15 17 09.3	-0.4
PSA00				IAmb	IAmb	15 17 17.2	
	comp=Z,11nm,1.1s						
AS31	Alice Springs	19.91	168	P	P	15 17 09.9	+0.3
ASAR	Alice Springs	19.91	168	P	P	15 17 10.0	+0.3
	comp=Z,0.7nm,0.3s,baz=347,slow=9.0,SNR=16						
ASAR				S	S	15 20 46.8	-5.2
	comp=Z,0.0nm,0.3s,baz=351,slow=22,SNR=4.6						
ASAR	Alice Springs	19.91	168	P	P	15 17 09.9	+0.3
CTA	Charters Tower	22.76	136	P	P	15 17 38.2	-2.1
	comp=Z,6.5nm,0.7s,baz=126,slow=0.9,SNR=2.8						
CTAO	Charters Tower	22.76	136	P	P	15 17 41.1	+0.8
CTAO				IAmb	IAmb	15 18 01.0	
	comp=Z,7.7nm,0.9s						
MYKOM	Kota Tinggi	26.34	282	P	P	15 18 14.9	+1.1
MYKOM				IAmb	IAmb	15 18 25.3	
	comp=Z,13nm,1.3s						
IPM	Ipoh	29.74	286	P	P	15 18 44.8	+0.5
STKA	Stephens Creek	29.87	159	P	P	15 18 44.7	-0.4
	comp=Z,0.5nm,0.5s,baz=349,slow=7.1,SNR=3.4						
STKA	Stephens Creek	29.87	159	P	P	15 18 44.9	-0.2
KULM	Kulim	30.33	288	P	P	15 18 49.8	+0.3
KULM				IAmb	IAmb	15 19 03.5	
	comp=Z,16nm,1.5s						
CMAR	Chiang Mai Arr	37.57	308	P	P	15 19 53.1	+0.9
	comp=Z,1.5nm,0.5s,baz=136,slow=7.4,SNR=14						
CMAR	Chiang Mai Arr	37.57	308	P	P	15 19 53.3	+1.1
CHTO	Chiang Mai	37.77	308	P	P	15 19 55.1	+1.2
CHTO				IAmb	IAmb	15 19 55.5	
	comp=Z,4.6nm,0.8s						
JMN	Monobe	37.84	6	P	P	15 19 54.2	-0.1
JWT	Wachi	39.55	8	P	P	15 20 09.5	+0.9
JWT				IAmb	IAmb	15 20 17.3	
	comp=Z,12nm,1.0s						
MAJO	Matsushiro	41.22	11	P	P	15 20 21.9	-0.5
MAJO				IAmb	IAmb	15 20 22.5	
	comp=Z,5.2nm,0.8s						
MAT	Matsushiro	41.22	11	P	P	15 20 21.6	-0.9
MJAR	Matsushiro Arr	41.22	11	P	P	15 20 21.3	-1.1
	comp=Z,5.0nm,0.8s,baz=178,slow=10.0,SNR=8.1						
MJAR	Matsushiro Arr	41.22	11	P	P	15 20 21.6	-0.9
MJAR				IAmb	IAmb	15 20 22.9	
	comp=Z,5.6nm,1.1s						
KSRS	Korea Array	41.36	358	P	P	15 20 24.4	+0.9
	comp=Z,1.7nm,0.6s,baz=176,slow=9.1,SNR=11						
JSD	Sado	42.69	10	P	P	15 20 34.2	-0.1
JSD				IAmb	IAmb	15 20 47.2	
	comp=Z,8.4nm,1.1s						
JMM	Marumori	43.03	13	P	P	15 20 37.9	+0.8
USA0B	Ussuriysk Arra	48.12	2	P	P	15 21 18.3	+1.0
USA0B				IAmb	IAmb	15 21 18.6	
	comp=Z,5.3nm,0.6s						
USRK	Ussuriysk Ar.	48.12	2	P	P	15 21 18.3	+1.0
	comp=Z,2.8nm,0.5s,baz=176,slow=6.1,SNR=8.3						
USRK	Ussuriysk Ar.	48.12	2	P	P	15 21 18.4	+1.2
KLR	Kul'dur	53.14	2	P	P	15 21 55.5	+0.5
	comp=Z,1.1nm,0.7s,baz=317,slow=6.0,SNR=4.6						
SONM	Songino Array	55.56	341	P	P	15 22 11.3	-1.6
	comp=Z,0.9nm,0.8s,baz=164,slow=6.0,SNR=4.9						
MK31	Makanchi Array	65.56	326	P	P	15 23 21.3	+0.2
MK31				IAmb	IAmb	15 23 21.6	
	comp=Z,2.8nm,0.5s						
MKAR	Makanchi Array	65.56	326	P	P	15 23 21.2	+0.1
	comp=Z,3.5nm,0.4s,baz=113,slow=7.8,SNR=42						
MAKZ	Makanchi	65.75	326	P	P	15 23 22.2	0.0
YAK	Yakutsk	65.94	0	P	P	15 23 23.9	+0.9
	comp=Z,5.9nm,0.7s,baz=339,slow=5.1,SNR=7.9						
YAK	Yakutsk	65.94	0	P	P	15 23 24.0	+0.9
KDJ	Kajisay	66.06	320	P	P	15 23 25.1	+0.5
KDJ				IAmb	IAmb	15 23 25.1	
	comp=Z,3.7nm,0.8s						
BOOM	Boomskoye usch	67.04	320	P	P	15 23 30.7	-0.1
ZALV	Zalesovo Beam	68.79	333	P	P	15 23 41.2	-0.1
	comp=Z,0.9nm,0.4s,baz=125,slow=7.4,SNR=5.9						
KURK	Kurchatov	69.82	328	P	P	15 23 48.2	+0.5
BRVK	Borovoye	75.45	328	P	P	15 24 21.3	+0.1
BRVK				IAmb	IAmb	15 24 22.3	
	comp=Z,5.4nm,0.9s						
TIXI	Tiksi	75.60	360	P	P	15 24 20.2	-1.4
	comp=Z,1.5nm,0.6s,baz=158,slow=3.5,SNR=3.9						
ABKAR	Akbulak array	79.97	321	P	P	15 24 46.2	-0.2
ARU	Arti	83.01	328	P	P	15 25 02.8	+0.4
ARU				IAmb	IAmb	15 25 32.4	
	comp=Z,6.2nm,1.3s						
TORD	Torodi Ar. Bea	127.75	283	PKP	PKPdf	15 31 43.9	+0.2
	comp=Z,0.6nm,0.7s,baz=65,slow=1.4,SNR=3.7						
TORD	Torodi Ar. Bea	127.75	283		PKPdf	15 31 43.1	-0.6

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*EAF **09** 15:12:47.1±0.9, 25°.67S×29°.42E, h10^{km}, MD3.8*

BUL 09 15:12:47.2±1.2**, 25°.68S×29°.40E, h10^{km}, MD4.1, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	Changalane	2.59	104	*i* P	Pn	15 13 28.1	-1.0
CNG	Changalane	2.59	104	*i* P	Pn	15 13 28.1	-1.0
MOPA	Mopani	2.82	41	*i* P	Pn	15 13 31.8	-0.6
MOPA	Mopani	2.82	41	*i* P	Pn	15 13 31.8	-0.6
MSNA	Messina	3.37	10	*i* P	Pn	15 13 39.1	-0.9
MSNA	Messina	3.37	10	*i* P	Pn	15 13 39.1	-0.9
LBTB	Lobatse	3.50	280	*i* P	Pn	15 13 40.8	-1.0
LBTB	Lobatse	3.50	280	*i* P	Pn	15 13 40.8	-1.0
BOSA	Boshof	4.71	231	*i* P	Pn	15 13 58.6	+0.2
BOSA	Boshof	4.71	231	*i* P	Pn	15 13 58.6	+0.2
KRI	Karoi	8.81	1	*i* P	Pn	15 14 46.3	-8.5
KRI	Karoi	8.81	1	*i* P	Pn	15 14 46.3	-8.5

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*IDC **09** 15:20:21.8±1.5, 4°.02S×129°.42E, h0^{km}, mb3.7/3, mb1 3.9/5, mb1mx3.6/34, mbtmp3.8/5, ML3.4/2, Error ellipse: s-maj=46.8km s-min=25.8km az=81.0*

*DJA **09** 15:20:22.8±1.2, 4°S±15°×12°9E±°, h10^{km}, M3.4/5, MLv3.4/5*

ISC 09 15:20:25.3±0.9**, 4°.12S**±0°.07×**129°.49E**±0°.07**, h36^{km}, n9, σ2^{s}.33**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.95	324	P	Pn	15 20 41.1	-1.0
AAI	Ambon	1.36	288	P	Pn	15 20 46.9	-0.9
FAKI	Fak Fak	3.00	67	P	Pn	15 21 11.2	+1.0
SIJI	Sorong	3.68	29	Pn	Pn	15 21 19.6	0.0
	6.9nm,0.3s,baz=208,slow=13,SNR=5.1						
SIJI				Sn	Sn	15 21 59.5	-2.4
	2.3nm,0.3s,baz=207,slow=23,SNR=1.4						
FITZ	Fitzroy Crossi	14.40	195	Pn	Pn	15 23 48.6	+2.0
	0.1nm,0.3s,baz=25,slow=17,SNR=1.1						
WRA	Warramunga Arr	16.42	164	Pn	Pn	15 24 10.8	-2.3
	0.1nm,0.3s,baz=346,slow=13,SNR=5.0						
WRA				Sn	Sn	15 27 09.5	-4.9
	0.1nm,0.3s,baz=346,slow=23,SNR=3.4						
ASAR	Alice Springs	19.90	168	P	Pn	15 24 56.1	+0.5
	1.0nm,0.5s,baz=348,slow=8.9,SNR=16						
CMAR	Chiang Mai Arr	37.54	308	P	P	15 27 37.0	+0.7
	0.3nm,0.3s,baz=137,slow=6.2,SNR=4.1						
MKAR	Makanchi Array	65.56	326	P	P	15 31 06.5	+1.2
	0.9nm,0.4s,baz=116,slow=7.9,SNR=14						

IDC 09 15:23:05.3±1.8**, 4°.07S×129°.34E, h0^{km}, mb3.4**/1**, mb1 3.3**/4**, mb1mx2.9**/41**, mbtmp3.2**/4**, ML2.9**/2**, Error ellipse: s-maj=56.9km s-min=29.3km az=84.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.72	31	Pn	Pn	15 24 05.5	+1.5
	baz=264,slow=22,SNR=0.9						
WRA	Warramunga Arr	16.51	163	Pn	Pn	15 26 58.1	-0.4
	0.0nm,0.3s,baz=345,slow=11,SNR=1.4						
ASAR	Alice Springs	19.98	168	P	P	15 27 39.8	+0.4
	0.1nm,0.3s,baz=346,slow=9.2,SNR=2.5						
MKAR	Makanchi Array	65.43	326	P	P	15 33 49.5	-0.6
	0.2nm,0.4s,baz=112,slow=5.3,SNR=2.2						

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*IDC **09** 15:25:25.7±3.8, 4°.02S×129°.72E, h70^{km}±48^{km}, mb3.4/3, mb1 3.7/6, mb1mx3.1/45, mbtmp3.8/6, ML3.8/3, Error ellipse: s-maj=56.9km s-min=18.5km az=92.0*

ISC 09 15:25:21.8±0.9**, 4°.23S**±0°.09×**129°.6E**±0°.2**, h36^{km}, n7, σ1^{s}.49**/8**, mb3.8**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.73	27	P	Pn	15 26 18.1	+1.3
	6.2nm,0.3s,baz=270,slow=19,SNR=4.5						
SIJI				S	Sn	15 26 58.2	-1.5
	5.4nm,0.3s,baz=16,slow=20,SNR=4.6						
FITZ	Fitzroy Crossi	14.32	195	P	P	15 28 47.6	-1.0
	0.3nm,0.3s,baz=30,slow=14,SNR=2.8						
WRA	Warramunga Arr	16.29	164	P	P	15 29 08.9	-1.7
	0.1nm,0.3s,baz=349,slow=13,SNR=3.4						
ASAR	Alice Springs	19.77	168	P	Pn	15 29 52.4	+1.8
	0.3nm,0.3s,baz=349,slow=9.9,SNR=13						
CMAR	Chiang Mai Arr	37.69	308	P	P	15 32 34.4	+0.3
	0.7nm,0.6s,baz=134,slow=6.8,SNR=5.9						
MKAR	Makanchi Array	65.70	326	P	P	15 36 02.7	-0.1
	0.3nm,0.5s,baz=117,slow=9.3,SNR=3.8						
KURBB	Kurchatov Arra	69.95	328	P	P	15 36 28.8	-0.6
	0.9nm,0.7s,baz=124,slow=5.5,SNR=5.4						

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*DJA **09** 15:30:14.0±1.4, 4°S±15°×13°0E±°, h10^{km}, M4.4/8, mb4.9/1, MLv4.2/8*

*NEIC **09** 15:30:23.1±2.2, 4°.02S±0°.07×129°.59E±0°.08, h28^{km}±1^{km}, mb4.4/21, Error ellipse: s-maj=11.5km s-min=10.3km az=120.0*

*IDC **09** 15:30:23.8±1.7, 4°.08S×129°.66E, h46^{km}±15^{km}, mb4.0/12, mb1 4.0/17, mb1mx3.7/50, mbtmp4.2/17, ML3.7/5, Error ellipse: s-maj=24.8km s-min=12.7km az=118.0*

ISC 09 15:30:23.1±0.5**, 4°.04S**±0°.06×**129°.51E**±0°.07**, h36^{km}, n56, σ1^{s}.61**/56**, mb4.4**/21**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.90	320	P	Pn	15 30 37.9	-1.3
AAI	Ambon	1.35	285	P	Pn	15 30 42.9	-2.6
FAKI	Fak Fak	2.96	68	P	Pn	15 31 01.7	-5.8
FAKI	Fak Fak	2.96	68	Pn	Pn	15 31 07.2	-0.4
SIJI	Sorong	3.61	29	P	Pn	15 31 17.2	+0.7
	6.7nm,0.3s,baz=67,slow=23,SNR=21						
SIJI				S	Sn	15 31 57.8	-0.2
	13nm,0.3s,baz=184,slow=22,SNR=8.4						
SWI	Sorong	3.61	29	P	Pn	15 31 15.1	-1.4
LBMI	Labuha	3.93	329	P	Pn	15 31 21.3	+0.4
SANI	Sanana	4.03	299	P	Pn	15 31 21.7	-0.6
BATI	Baumata	8.43	223	P	Pn	15 32 24.8	+2.0
	3.3nm,0.3s,baz=307,slow=20,SNR=2.9						
MTN	Manton Dam	8.89	170	Pn	Pn	15 32 31.6	+2.5
KAPI	Kappang	9.77	264	P	Pn	15 32 44.4	+3.2
	1.3nm,0.3s,baz=151,slow=4.6,SNR=5.6						
KAPI	Kappang	9.77	264	Pn	Pn	15 32 44.0	+2.8
KNRA	Kununurra	11.59	184	Pn	Pn	15 33 04.7	-1.3
FITZ	Fitzroy Crossi	14.47	195	P	Pn	15 33 44.4	-1.1
	0.1nm,0.3s,baz=13,slow=14,SNR=2.1						
WB0	Warramunga Arr	16.34	163	Pn	Pn	15 34 06.4	-3.5
WRAB	Tennant Creek	16.49	164	Pn	Pn	15 34 08.2	-3.5
WRA	Warramunga Arr	16.49	164	P	Pn	15 34 07.7	-4.1
	0.2nm,0.3s,baz=339,slow=14,SNR=5.7						
WRA	Warramunga Arr	16.49	164	Pn	Pn	15 34 08.5	-3.3
WB2	Warramunga Arr	16.50	164	Pn	Pn	15 34 08.6	-3.3
COEN	Coen	16.70	127	Pn	P	15 34 14.7	-1.8
COEN				IAmb	IAmb	15 34 43.0	
	comp=Z,25nm,1.4s						
PSA00	Pilbara Seismi	19.79	207	P	P	15 34 50.6	+0.2
PSA00				IAmb	IAmb	15 34 51.4	
	comp=Z,9.5nm,0.9s						
AS31	Alice Springs	19.97	168	P	Pn	15 34 53.0	-1.3
ASAR	Alice Springs	19.97	168	P	Pn	15 34 52.4	-1.9
	comp=Z,0.3nm,0.3s,baz=350,slow=10,SNR=4.1						
ASAR	Alice Springs	19.97	168	P	Pn	15 34 53.6	-0.7
CTAO	Charters Tower	22.82	136	P	P	15 35 23.1	0.0
CTAO				IAmb	IAmb	15 35 40.8	
	comp=Z,6.7nm,1.1s						
IPM	Ipoh	29.69	286	P	P	15 36 25.5	-0.4
IPM				IAmb	IAmb	15 36 27.1	
	comp=Z,11nm,0.8s						
KULM	Kulim	30.28	288	P	P	15 36 30.9	-0.2
KULM				IAmb	IAmb	15 36 57.7	
	comp=Z,6.3nm,1.0s						
CMAR	Chiang Mai Arr	37.51	308	P	P	15 37 35.0	+1.2
	comp=Z,2.0nm,0.6s,baz=135,slow=7.2,SNR=17						
CHTO	Chiang Mai	37.70	308	P	P	15 37 36.9	+1.4
CHTO				IAmb	IAmb	15 37 37.1	
	comp=Z,5.0nm,0.8s						
JWT	Wachi	39.51	8	P	P	15 37 51.0	+0.6
JWT				IAmb	IAmb	15 37 55.3	
	comp=Z,17nm,1.2s						
MAJO	Matsushiro	41.18	11	P	P	15 38 03.5	-0.7
MAJO				IAmb	IAmb	15 38 05.1	
	comp=Z,7.6nm,0.8s						
MJAR	Matsushiro Arr	41.18	11	P	P	15 38 03.5	-0.7
	comp=Z,3.1nm,0.7s,baz=189,slow=9.3,SNR=9.7						
KSRS	Korea Array	41.31	358	P	P	15 38 05.7	+0.4
	comp=Z,1.3nm,0.7s,baz=171,slow=9.1,SNR=7.1						
JSD	Sado	42.65	10	P	P	15 38 15.9	-0.2
JSD				IAmb	IAmb	15 38 27.1	
	comp=Z,4.5nm,0.8s						
JMM	Marumori	42.99	13	P	P	15 38 20.0	+1.0
USRK	Ussuriysk Ar.	48.07	2	P	P	15 38 58.3	-0.8
	comp=Z,2.7nm,0.5s,baz=192,slow=6.7,SNR=6.1						
USRK	Ussuriysk Ar.	48.07	2	P	P	15 39 00.0	+1.0
KLR	Kul'dur	53.09	2	P	P	15 39 36.6	-0.2
	comp=Z,2.0nm,0.9s,baz=175,slow=8.7,SNR=4.9						
SONM	Songino Array	55.50	341	P	P	15 39 55.0	+0.4
	comp=Z,0.4nm,0.4s,baz=161,slow=6.3,SNR=4.0						
MK31	Makanchi Array	65.50	326	P	P	15 41 02.5	-0.2
MK31				IAmb	IAmb	15 41 03.6	
	comp=Z,3.4nm,0.8s						
MKAR	Makanchi Array	65.50	326	P	P	15 41 02.9	+0.1
	comp=Z,3.0nm,0.4s,baz=112,slow=8.0,SNR=56						
MAKZ	Makanchi	65.68	326	P	P	15 41 03.8	-0.2
YAK	Yakutsk	65.89	0	P	P	15 41 05.4	+0.6
	comp=Z,6.7nm,0.7s,baz=322,slow=0.5,SNR=8.4						
YAK	Yakutsk	65.89	0	P	P	15 41 05.9	+1.0
ZALV	Zalesovo Beam	68.73	334	P	P	15 41 22.2	-0.9
	comp=Z,0.7nm,0.3s,baz=98,slow=3.0,SNR=6.8						
SEY	Seymchan	69.01	11	P	P	15 41 25.8	+1.2
	comp=Z,4.9nm,0.8s,baz=216,slow=4.1,SNR=12						
KURBB	Kurchatov Arra	69.75	328	P	P	15 41 29.6	+0.1
	comp=Z,6.7nm,0.7s,baz=130,slow=5.5,SNR=40						
KURK	Kurchatov	69.75	328	P	P	15 41 29.5	0.0
BRVK	Borovoye	75.39	328	P	P	15 42 03.4	+0.4
BRVK				IAmb	IAmb	15 42 03.9	
	comp=Z,5.2nm,0.9s						
ABKAR	Akbulak array	79.90	321	P	P	15 42 28.2	0.0
RAYN	Ar Rayn	86.11	294	P	P	15 43 01.0	0.0
ILAR	Eielson Array	90.90	25	P	P	15 43 21.2	-1.6
	comp=Z,0.2nm,0.7s,baz=235,slow=5.3,SNR=4.4						
TORD	Torodi Ar. Bea	127.70	283	PKP	PKPdf	15 49 24.4	-1.3
	comp=Z,0.8nm,0.9s,baz=108,slow=2.1,SNR=3.7						
TORD	Torodi Ar. Bea	127.70	283		PKPdf	15 49 24.2	-1.5
LPAZ	La Paz	153.31	140	PKPbc	PKPbc	15 50 17.9	-1.4
	comp=Z,0.8nm,0.3s,baz=117,slow=5.3,SNR=3.9						
LPAZ	La Paz	153.31	140		PKPbc	15 50 18.2	-1.0

INET 09 15:36:03.6, 10°.66N×87°.36W, h15^{km}, ML3.7, MW3.8, Off coast of Costa Rica

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*DJA **09** 15:39:37.5±0.7, 4°S±6°×12°9E±°, h10^{km}, M4.0/7, MLv4.0/7*

*NEIC **09** 15:39:37.1±1.9, 4°.20S±0°.08×129°.5E±0°.1, h10^{km}±1^{km}, mb4.1/16, Error ellipse: s-maj=18.5km s-min=12.7km az=93.0*

*IDC **09** 15:39:39.3±2.4, 4°.34S×129°.76E, h44^{km}±27^{km}, mb3.7/5, mb1 3.9/10, mb1mx3.6/36, mbtmp4.0/10, ML3.4/5, Error ellipse: s-maj=36.3km s-min=20.2km az=98.0*

ISC 09 15:39:39.4±0.5**, 4°.16S**±0°.06×**129°.50E**±0°.05**, h36^{km}, n52, σ1^{s}.79**/54**, mb4.1**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.54	132	P	Pn	15 39 48.9	-1.8
MSAI	Masohi	0.99	325	P	Pn	15 39 56.5	-0.3
MSAI				S	Sn	15 40 09.1	-0.4
AAI	Ambon	1.39	290	P	Pn	15 40 01.3	-0.9
AAI				S	Sn	15 40 18.2	-1.1
FAKI	Fak Fak	3.01	66	P	Pn	15 40 25.6	+1.1
FAKI	Fak Fak	3.01	66		Pn	15 40 25.3	+0.8
FAKI	Fak Fak	3.01	66	P	Pn	15 40 26.2	+1.7
SIJI	Sorong	3.71	28	P	Pn	15 40 35.4	+1.1
	4.9nm,0.3s,baz=285,slow=8.8,SNR=10.0						
SIJI				S	Sn	15 41 12.8	-4.1
	4.9nm,0.3s,baz=296,slow=9.9,SNR=6.9						
SWI	Sorong	3.72	28	P	Pn	15 40 36.3	+2.0
LBMI	Labuha	4.03	330	P	Pn	15 40 40.2	+1.6
SANI	Sanana	4.09	301	P	Pn	15 40 40.0	+0.6
SANI	Sanana	4.09	301	P	Pn	15 40 40.3	+0.9
BATI	Baumata	8.34	224	P	Pn	15 41 39.6	+1.7
	3.7nm,0.3s,baz=93,slow=1.9,SNR=5.3						
MTN	Manton Dam	8.78	170	Pn	Pn	15 41 44.7	+0.8
MTN	Manton Dam	8.78	170	P	Pn	15 41 45.2	+1.3
KDU	Kakadu	8.97	161	P	Pn	15 41 45.6	-0.9
KNRA	Kununurra	11.47	184	Pn	Pn	15 42 20.4	-0.3
KNRA	Kununurra	11.47	184	P	Pn	15 42 21.8	+1.1
FITZ	Fitzroy Crossi	14.36	195	P	Pn	15 42 57.6	-2.7
	0.0nm,0.3s,baz=122,slow=8.9,SNR=2.3						
WB0	Warramunga Arr	16.23	163	Pn	Pn	15 43 21.1	-3.7
WRAB	Tennant Creek	16.38	164	Pn	Pn	15 43 22.9	-3.7
WRAB				IAmb	IAmb	15 43 35.7	
	comp=Z,13nm,1.3s						
WRA	Warramunga Arr	16.38	164	P	Pn	15 43 21.7	-5.0
	comp=Z,0.2nm,0.3s,baz=346,slow=13,SNR=18						
WRA	Warramunga Arr	16.38	164	Pn	Pn	15 43 23.4	-3.4
WB2	Warramunga Arr	16.39	164		Pn	15 43 23.1	-3.7
WB2				IAmb	IAmb	15 43 32.4	
	comp=Z,8.3nm,1.1s						
WR0	Warramunga Arr	16.45	163	Pn	Pn	15 43 24.7	-3.0
COEN	Coen	16.64	127	Pn	Pn	15 43 28.6	-1.4
COEN				IAmb	IAmb	15 43 55.2	
	comp=Z,12nm,0.9s						
COEN	Coen	16.64	127	P	P	15 43 31.5	-0.6
QIS	Mount Isa	19.04	150	P	Pn	15 43 59.6	+0.1
PSA00	Pilbara Seismi	19.68	208	P	Pn	15 44 06.4	-0.9
PSA00	Pilbara Seismi	19.68	208	P	Pn	15 44 06.4	-0.9
PSA00				IAmb	IAmb	15 44 08.3	
	comp=Z,17nm,1.1s						
PSA00	Pilbara Seismi	19.68	208	P	Pn	15 44 07.5	+0.3
AS31	Alice Springs	19.85	168	P	P	15 44 08.0	+0.5
ASAR	Alice Springs	19.85	168	P	P	15 44 04.2	-3.3
	comp=Z,0.1nm,0.3s,baz=344,slow=9.8,SNR=2.8						
ASAR	Alice Springs	19.85	168	P	P	15 44 08.0	+0.5
MTSU	Mount Surprise	20.08	135	P	P	15 44 10.0	0.0
WRKA	Warakurna	20.79	183	P	Pn	15 44 19.3	-0.9
OOD	Oodnadatta	24.23	167	P	P	15 44 54.7	+1.7
IPM	Ipoh	29.71	286	P	P	15 45 42.4	0.0
CMAR	Chiang Mai Arr	37.57	308	P	P	15 46 51.5	+0.8
	comp=Z,0.7nm,0.4s,baz=136,slow=6.9,SNR=7.6						
CMAR	Chiang Mai Arr	37.57	308	P	P	15 46 51.0	+0.3
CHTO	Chiang Mai	37.77	308	P	P	15 46 53.9	+1.5
CHTO				IAmb	IAmb	15 47 07.3	
	comp=Z,4.9nm,1.1s						
MJAR	Matsushiro Arr	41.30	11	P	P	15 47 21.0	-0.5
	comp=Z,2.0nm,0.7s,baz=202,slow=12,SNR=5.9						
SONM	Songino Array	55.61	341	P	P	15 49 13.1	+1.4
	comp=Z,0.5nm,0.7s,baz=141,slow=7.4,SNR=2.5						
MK31	Makanchi Array	65.60	326	P	P	15 50 20.4	+0.7
MK31				IAmb	IAmb	15 50 21.5	
	comp=Z,1.4nm,0.8s						
MKAR	Makanchi Array	65.60	326	P	P	15 50 20.6	+0.9
	comp=Z,1.4nm,0.6s,baz=126,slow=7.6,SNR=14						
MAKZ	Makanchi	65.78	326	P	P	15 50 21.5	+0.6
MAKZ				IAmb	IAmb	15 50 38.4	
	comp=Z,1.8nm,0.9s						
ZALV	Zalesovo Beam	68.83	334	P	P	15 50 40.0	0.0
	comp=Z,0.6nm,0.3s,baz=141,slow=5.0,SNR=4.5						
KURK	Kurchatov	69.85	328	P	P	15 50 47.5	+1.1
VNDA	Vanda	75.31	173	P	P	15 51 18.3	-0.1
VNDA				IAmb	IAmb	15 51 19.5	
	comp=Z,3.4nm,1.2s						
BRVK	Borovoye	75.48	328	P	P	15 51 20.8	+0.9
ABKAR	Akbulak array	79.99	321	P	P	15 51 44.7	-0.4
TORD	Torodi Ar. Bea	127.72	283	PKP	PKiKP	15 58 42.6	-0.1
	comp=Z,0.5nm,0.8s,baz=102,slow=2.2,SNR=2.9						
TORD	Torodi Ar. Bea	127.72	283	PKPdf	PKiKP	15 58 43.0	+0.3

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*IDC **09** 15:40:58.9±1.3, 8°.09N×82°.70W, h0^{km}, mb4.1/12, mb1 4.4/12, mb1mx4.1/42, mbtmp4.2/12, Error ellipse: s-maj=48.3km s-min=18.1km az=32.0*

*NEIC **09** 15:41:00.8±2.2, 7°.87N±0°.04×82°.83W±0°.06, h8^{km}±4^{km}, mb4.5/17, Mwr4.2/18, Error ellipse: s-maj=8.6km s-min=5.7km az=81.0*

*UCR **09** 15:41:01.4±1.9, 7°.87N×82°.70W, h12^{km}±9^{km}, MW4.8, mb4.2(NEIC)*

*UPA **09** 15:41:01.0±1.2, 7°.87N×82°.68W, h10^{km}±4^{km}, MW4.2*

*NEIC **09** 15:41:02.8, 7°.92N×82°.80W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.61; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$-1.48; $M_{r\theta}$0.89; $M_{\theta\phi}$0.94; $M_{\phi r}$-1.02; Fault plane solution: $M_0$2.26000×10^{15} NP1:ϕ_s344.64000°, δ27.76000°, λ109.13000°. NP2:ϕ_s143.24000°, δ63.89000°, λ80.21000°. Principal axes: T 2.0987, Plg70.0000°, Azm33.0000°; N 0.2964, Plg9.0000°, Azm148.0000°; P -2.3951, Plg18.0000°, Azm241.0000°;*

ISC 09 15:40:59.9±1.5**, 7°.82N**±0°.05×**82°.72W**±0°.04**, h11^{km}**±8^{km}**, n117, σ1^{s}.18**/136**, mb4.4**/17**, 4C-6D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTPM	Petroterminale	0.42	338	⇓*i*P	Pb	15 41 09.3	0.0
PTPM				*e*S	Sb	15 41 15.4	-0.2
CCOL	Caracol de Cor	0.64	337	*e*P	Pg	15 41 12.9	+0.5
DVD	David	0.67	23	⇑*i*P	Pg	15 41 12.8	-0.1
DVD				*e*S	Sb	15 41 21.9	-1.0
CDITO	Canoas	0.77	349	*e*P	Pg	15 41 14.3	-0.4
CDITO				*e*S	Sb	15 41 25.3	-0.4
CDITO	Canoas	0.77	349	Pg	Pg	15 41 14.2	-0.6
CDITO				Sg	Sb	15 41 25.0	-0.7
BCO2	Palmira	0.92	12	⇓*i*P	Pg	15 41 17.1	-0.5
BCO2				*e*S	Sb	15 41 30.2	0.0
REME3	Remedios, Chir	0.97	65	⇓*i*P	Pg	15 41 17.9	-0.6
REME3				*e*S	Sb	15 41 31.5	0.0
BRU2	Volcan	0.97	2	*e*P	Pg	15 41 18.0	-0.7
BRU2				*e*S	Sb	15 41 31.2	-0.5
BRU2	Volcan	0.97	2	Pg	Pg	15 41 17.9	-0.7
BRU2				Sg	Sb	15 41 30.7	-0.7
BRU2	Volcan	0.97	2	⇓*i*P	Pg	15 41 17.8	-0.9

BRU2				eS	Sb	15 41 32.1	+0.4
BC3P	Paso Ancho	1.00	6	⇓iP	Pn	15 41 21.4	+1.4
BC3P				eS	Sb	15 41 32.7	+0.2
EDSV	San Vito	1.03	346	eP	Pg	15 41 19.1	-0.6
CHGR2	Aguacate	1.25	27	eP	Pb	15 41 21.8	-1.8
CHGR2				eS	Sb	15 41 36.9	-2.8
POTG	Potrero Grande	1.29	342	eP	Pn	15 41 23.6	-0.3
EDPN	Palmar Norte	1.35	327	eP	Pn	15 41 24.4	-0.3
EDPN				eS	Sb	15 41 42.2	-0.4
EDBA	Buenos Aires	1.45	338	eP	Pn	15 41 26.2	+0.2
EDBA				eS	Sb	15 41 45.6	+0.3
GMAL	Guarumal, Vera	1.47	92	eP	Pn	15 41 25.3	-1.0
GMAL	Guarumal, Vera	1.47	92	⇓iP	Pn	15 41 25.4	-1.0
GMAL				eS	Sn	15 41 45.1	-0.5
SRBA	San Rafael, Bu	1.54	336	eP	Pn	15 41 27.0	-0.4
SRBA				eS	Sn	15 41 47.0	-0.5
SRBA	San Rafael, Bu	1.54	336	Pn	Pn	15 41 26.9	-0.5
CNI2	El Empalme, Bo	1.62	9	⇑iP	Pn	15 41 28.3	0.0
CNI2				eS	Sn	15 41 49.0	-0.1
MARI3	Mariato, Verag	1.72	95	eP	Pn	15 41 30.1	+0.4
MARI3				eS	Sg	15 41 55.6	+0.3
EDDO	Dominical	1.82	322	eP	Pn	15 41 30.8	-0.3
EDDO				eS	Sn	15 41 55.2	+1.0
PEZE	Perez Zeledon,	1.82	329	eP	Pn	15 41 30.9	-0.3
PEZE	Perez Zeledon,	1.82	329	Pn	Pn	15 41 30.9	-0.3
CACAO	El Cacao, Vera	1.90	104	eP	Pn	15 41 31.4	-0.7
CACAO				eS	Sn	15 41 55.8	-0.3
CDM	Cerro de Muert	2.01	329	eP	Pn	15 41 34.0	-0.2
LCR2	La Lucha 2	2.30	326	eP	Pn	15 41 38.0	+0.1
VTCV	VTCV, Calle Va	2.37	335	eP	Pn	15 41 40.0	+1.1
RAFA	San Farael, Vo	2.39	333	eP	Pn	15 41 40.0	+0.8
OCM	Ochomogo	2.40	329	eP	Pn	15 41 40.2	+0.9
VTRT	Volcan Turrial	2.42	334	eP	Pn	15 41 40.9	+1.2
CVTR	Volcan Turrial	2.42	335	eP	Pn	15 41 41.0	+1.2
CVTR	Volcan Turrial	2.42	335	Pn	Pn	15 41 40.5	+0.7
AZU	Azuero	2.42	90	⇑iP	Pn	15 41 40.0	+0.6
AZU				eS	Sb	15 42 12.7	-0.6
HDC3	Heredia 3	2.57	328	eP	Pn	15 41 42.5	+0.9
HDC	Heredia	2.57	328	eP	Pn	15 41 42.6	+1.0
HDC	Heredia	2.57	328	Pn	Pn	15 41 42.3	+0.7
HDC	Heredia	2.57	328	⇑iP	Pn	15 41 42.5	+1.0
HDC				eS	Sn	15 42 14.3	+1.4
JACO	JACO, Garabito	2.66	314		Pn	15 41 41.5	-1.1
RIFO	Rio Frio, Sara	2.76	335	eP	Pn	15 41 44.9	+1.0
BCIP	Isla Barro Col	3.15	65	Pn	Pn	15 41 51.4	+2.0
FORC	Fortuna	3.26	324	eP	Pn	15 41 53.7	+2.7
ARE1	Arenal 1	3.29	323	eP	Pn	15 41 53.0	+1.7
CEDE	Laguna Cedeo	3.30	324	eP	Pn	15 41 53.3	+1.8
JTS	Las Juntas de	3.31	318	eP	Pn	15 41 50.8	-0.8
JTS	Las Juntas de	3.31	318	Pn	Pn	15 41 50.9	-0.7
COVE	Coope Vega, Sa	3.33	330	Pn	Pn	15 41 53.0	+1.1
INDI	Punta indio, G	3.42	307	eP	Pn	15 41 52.9	-0.2
DUNO	Dulce Nombre,	3.55	310	Pn	Pn	15 41 54.1	-0.8
GRZA	Playa Garza	3.56	306	eP	Pn	15 41 54.7	-0.3
ACAL	Aguas Claras	3.62	321	eP	Pn	15 41 57.8	+1.9
PLVR	Palo Verde	3.62	314	eP	Pn	15 41 56.8	+0.7
PTEN	Parque Tenorio	3.65	322	eP	Pn	15 41 58.8	+2.5
GUAI	GUAI	3.68	312	eP	Pn	15 41 57.2	+0.5
SAJU	San Juanillo,	3.71	307	eP	Pn	15 41 56.9	-0.2
CUI	Cuipilapa	3.72	320	eP	Pn	15 41 57.8	+0.6
COLC	Colonia	3.75	319	eP	Pn	15 41 59.2	+1.6
HORNC	Hornillas	3.77	320	eP	Pn	15 41 59.6	+1.6
LIM1	Limonal	3.80	319	eP	Pn	15 42 00.1	+1.6
VRLE	La Escondida,	3.94	319	eP	Pn	15 42 01.9	+1.5
LAPC	Finca la Perla	3.97	318	eP	Pn	15 42 02.3	+1.5
BUEV	Buena Vista	3.98	318	eP	Pn	15 42 02.4	+1.5
BUAI	Buenos Aires	3.99	320	eP	Pn	15 42 01.8	+0.8
GB1A	Borinquen Arri	3.99	319	eP	Pn	15 42 02.5	+1.5
GBS3	Finca Las Img	4.00	318	eP	Pn	15 42 02.8	+1.7
HZTE	Horizontes, Gu	4.04	316	eP	Pn	15 42 03.6	+1.9
HZTE	Horizontes, Gu	4.04	316	Pn	Pn	15 42 02.1	+0.4
ESPN	Las Esperanzas	4.62	340	eP	Pn	15 42 10.5	+0.8
ESPN	Las Esperanzas	4.62	340	Pn	Pn	15 42 10.6	+0.9
ACON	Acoyapa	4.78	330	eP	Pn	15 42 13.6	+1.7
ACON	Acoyapa	4.78	330	Pn	Pn	15 42 12.9	+1.1
BOAB	BOACO BROADBAN	5.44	328		Pn	15 42 22.1	+1.2
PRVC	Isla de Provid	5.69	13	Pn	Pn	15 42 24.4	+0.2
MATN	Matagalpa	5.98	328	Pn	Pn	15 42 31.5	+3.1
SJCC	San Jacinto, C	7.73	74		Pn	15 42 53.7	+1.2
ZARC	Zaragoza, Cauc	7.80	92	Pn	Pn	15 42 56.5	+3.2
APG	El Apazote	10.42	314	Pn	Pn	15 43 30.6	+1.0
	0.2nm,0.3s,baz=169,slow=13,SNR=2.2						
MTDJ	Mount Denham	11.51	25	Pn	Pn	15 43 45.5	+1.1
GTBY	Guantanamo Bay	14.12	31	Pn	Pn	15 44 22.1	+2.2
LGNH	Logne	14.48	42	Pn	Pn	15 44 28.1	+3.2
CELP	Cerrillos	18.73	55	P	Pn	15 45 20.9	+1.8
CELP				IAmb	IAmb	15 45 28.5	
	comp=Z,70nm,1.4s						
MTP	Monte Pirata	19.58	57	P	Pn	15 45 30.0	+0.6
MTP				IAmb	IAmb	15 45 34.8	
	comp=Z,31nm,1.1s						
BOAV	Boa Vista	22.75	103	P	P	15 46 04.0	+1.8
ETMB	Extrema	24.02	137	P	P	15 46 16.8	+1.9
PTGA	Pitinga	24.22	110	P	P	15 46 18.7	+1.8
	comp=Z,2.1nm,0.5s,baz=286,slow=9.9,SNR=6.6						
SAML	Samuel	25.62	130	P	P	15 46 30.8	+1.3
SAML				IAmb	IAmb	15 46 36.5	
	comp=Z,6.1nm,0.9s						
V48A	Smith Brothers	28.05	353	P	P	15 46 52.0	+0.8
V48A				IAmb	IAmb	15 46 52.4	
	comp=Z,8.5nm,0.8s						
WVT	Waverly	28.57	351	P	P	15 46 54.4	-1.4
WVT				IAmb	IAmb	15 46 56.1	
	comp=Z,5.4nm,0.8s						
TXAR	Lajitas Array	29.09	320	P	P	15 47 00.9	+0.1
	comp=Z,0.2nm,0.6s,baz=148,slow=10,SNR=2.2						
T47A	Sharon Grove	29.31	353	P	P	15 47 01.5	-1.0
T47A				IAmb	IAmb	15 47 03.5	
	comp=Z,8.7nm,0.9s						
OLIL	Olney	31.16	352	P	P	15 47 18.0	-0.8
HWUT	Hardware Ranch	42.25	327	P	P	15 48 52.5	-0.9
ULM	Lac du Bonnet	43.70	348	P	P	15 49 02.5	-2.2
	comp=Z,6.0nm,0.8s,baz=157,slow=8.6,SNR=5.8						
NVAR	Mina Array Bea	44.23	319	P	P	15 49 09.5	0.0
	comp=Z,1.3nm,0.8s,baz=131,slow=7.2,SNR=7.8						
NVAR	Mina Array Bea	44.23	319	P	P	15 49 09.8	+0.3
YKA	Yellowknife Ar	59.32	343	P	P	15 50 58.8	-2.7
	comp=Z,1.8nm,0.7s,baz=135,slow=7.1,SNR=11						
INK	Inuvik	69.01	342	P	P	15 52 05.0	0.0
	comp=Z,3.3nm,1.0s,baz=136,slow=4.6,SNR=5.9						
A36M	Sachs Harbour	69.17	347	P	P	15 52 04.7	-1.3
BCAR	Beaver Creek A	69.38	335	P	P	15 52 06.6	-0.9
ILAR	Eielson Array	72.12	336	P	P	15 52 24.4	+0.3
	comp=Z,2.2nm,0.8s,baz=111,slow=4.8,SNR=18						
ILAR	Eielson Array	72.12	336	P	P	15 52 24.0	-0.1
BMAR	Burnt Mountain	72.24	339	P	P	15 52 25.3	+0.5
COLD	Coldfoot	74.21	338	P	P	15 52 37.4	+1.0
COLD				IAmb	IAmb	15 52 39.0	
	comp=Z,9.0nm,1.2s						
ESDC	Sonseca Array	76.41	51	P	P	15 52 50.5	+0.8
	comp=Z,2.9nm,0.8s,baz=275,slow=5.7,SNR=16						
ESDC	Sonseca Array	76.41	51	P	P	15 52 49.4	-0.3
ESDC				IAmb	IAmb	15 52 51.6	
	comp=Z,4.4nm,1.1s						
DBIC	Dimbokro	77.14	85	P	P	15 52 54.9	+0.7
	comp=Z,2.5nm,0.7s,baz=359,slow=2.0,SNR=4.8						
DBIC	Dimbokro	77.14	85	P	P	15 52 54.6	+0.4
KOWA	Kowa	77.20	77	P	P	15 52 55.7	+1.2
	comp=Z,2.6nm,0.6s,baz=240,slow=5.3,SNR=9.4						
EKA	Eskdalemuir Ar	77.67	35	P	P	15 52 54.8	-1.6
	comp=Z,2.2nm,0.6s,baz=235,slow=4.7,SNR=2.0						
TORD	Torodi Ar. Bea	82.85	78	P	P	15 53 25.1	0.0
	comp=Z,0.7nm,0.7s,baz=295,slow=4.7,SNR=5.6						
TORD	Torodi Ar. Bea	82.85	78	P	P	15 53 26.2	+1.1
SONM	Songino Array	124.01	353	PKP	PKPdf	15 59 58.6	-0.1
	comp=Z,0.4nm,0.6s,baz=338,slow=1.6,SNR=2.1						
ASAR	Alice Springs	141.54	242	PKhKP	PKPpre	16 00 25.9	
	comp=Z,0.5nm,0.9s,baz=100,slow=3.4,SNR=2.8						
WRA	Warramunga Arr	142.16	248	PKhKP	PKPpre	16 00 29.6	
	comp=Z,0.6nm,0.8s,baz=98,slow=3.4,SNR=4.8						
FITZ	Fitzroy Crossi	150.58	247	PKPbc	PKPbc	16 00 53.1	+0.3
	comp=Z,1.6nm,0.8s,baz=113,slow=5.6,SNR=2.8						
CMAR	Chiang Mai Arr	153.84	356	PKPbc	PKPbc	16 00 59.5	-0.7
	comp=Z,1.1nm,0.6s,baz=317,slow=2.8,SNR=8.2						

INET 09 15:45:24.2, 11°.16N×86°.90W, h15km, MW3.5, Near coast of Nicaragua

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*NEIC **09** 15:48:36.6±2.5, 4°.05S±0°.07×129°.53E±0°.05, h10km±1km, mb4.4/22, Error ellipse: s-maj=12.9km s-min=6.1km az=155.0*

*DJA **09** 15:48:37.8±0.5, 4°S±4°×12°9E±°, h10km, M4.1/8, mb4.3/4, MLv4.0/8*

*IDC **09** 15:48:40.8±2.5, 4°.07S×129°.59E, h52km±22km, mb3.8/8, mb1 4.0/12, mb1mx3.8/31, mbtmp4.1/12, ML4.1/4, MS3.0/1, Ms1 3.0/1, ms1mx2.6/37, Error ellipse: s-maj=26.5km s-min=17.6km az=96.0*

ISC 09 15:48:39.1±0.5**, 4°.08S**±0°.05×**129°.53E**±0°.06**, h36km, n66, σ1ˢ.72**/70**, mb4.3**/17**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.57	140	P	Pn	15 48 49.3	-1.6
MSAI	Masohi	0.95	320	P	Pn	15 48 53.8	-2.1
MSAI				S	Sn	15 49 05.0	-3.2
AAI	Ambon	1.39	286	P	Pn	15 48 59.7	-2.3
AAI				S	Sn	15 49 17.1	-2.0
FAKI	Fak Fak	2.95	67	P	Pn	15 49 24.8	+1.4
FAKI	Fak Fak	2.95	67	Pn	Pn	15 49 24.6	+1.2
FAKI	Fak Fak	2.95	67	P	Pn	15 49 25.1	+1.7
SIJI	Sorong	3.63	29	P	Pn	15 49 34.1	+1.2
	11nm,0.3s,baz=227,slow=14,SNR=22						
SIJI				S	Sn	15 50 10.4	-4.1
	8.6nm,0.3s,baz=288,slow=7.2,SNR=5.6						
SIJI				LR	LR	15 51 23.7	
	comp=Z,230nm,21.8s,baz=260,slow=45						
SWI	Sorong	3.63	28	P	Pn	15 49 35.0	+2.1
LBMI	Labuha	3.98	329	P	Pn	15 49 39.1	+1.5
SANI	Sanana	4.07	300	P	Pn	15 49 38.3	-0.6
SANI	Sanana	4.07	300	P	Pn	15 49 38.7	-0.2
BATI	Baumata	8.42	223	P	Pn	15 50 40.0	+1.3
	3.5nm,0.3s,baz=121,slow=1.7,SNR=5.6						
MTN	Manton Dam	8.85	170	Pn	Pn	15 50 46.2	+1.6
BNSI	Bone	9.41	268	P	Pn	15 50 51.9	-0.3
	9.5nm,0.8s						
BKSI	Bulukumba	9.46	262	P	Pn	15 50 53.6	+0.7
KAPI	Kappang	9.79	264	P	Pn	15 51 01.1	+3.6
	1.9nm,0.3s,baz=135,slow=3.9,SNR=6.2						
KNRA	Kununurra	11.55	184	Pn	Pn	15 51 21.4	-0.1
FITZ	Fitzroy Crossi	14.44	195	P	Pn	15 51 59.1	-1.9
	0.0nm,0.3s,baz=35,slow=19,SNR=1.9						
WB0	Warramunga Arr	16.30	163	Pn	Pn	15 52 22.7	-2.7
WRAB	Tennant Creek	16.44	164	Pn	Pn	15 52 23.9	-3.3
WRAB				IAmb	IAmb	15 52 51.5	
	comp=Z,9.0nm,1.1s						
WRA	Warramunga Arr	16.45	164	P	Pn	15 52 23.1	-4.2
	comp=Z,0.2nm,0.3s,baz=345,slow=13,SNR=13						
WRA	Warramunga Arr	16.45	164	Pn	Pn	15 52 23.7	-3.6
WB2	Warramunga Arr	16.45	164	Pn	Pn	15 52 23.2	-4.2
WR0	Warramunga Arr	16.52	163	Pn	Pn	15 52 25.6	-2.6
COEN	Coen	16.66	127	P	P	15 52 31.5	-0.5
COEN				IAmb	IAmb	15 52 50.0	
	comp=Z,30nm,1.5s						
QIS	Mount Isa	19.09	150	P	P	15 52 59.3	+0.5
PSA00	Pilbara Seismi	19.77	208	P	P	15 53 06.5	+0.2
PSA00				IAmb	IAmb	15 53 07.9	
	comp=Z,23nm,0.9s						
PSA00	Pilbara Seismi	19.77	208	P	P	15 53 05.9	-0.3
PSA00				IAmb	IAmb	15 53 08.4	
	comp=Z,9.9nm,0.9s						
PSA00	Pilbara Seismi	19.77	208	P	Pn	15 53 07.3	-0.6
AS31	Alice Springs	19.92	168		P	15 53 08.3	+0.4
ASAR	Alice Springs	19.92	168	P	P	15 53 08.3	+0.4
	comp=Z,0.7nm,0.3s,baz=346,slow=10,SNR=45						
ASAR				PcP	PcP	15 57 23.3	-0.9
	comp=Z,0.2nm,0.3s,baz=8.9,slow=1.7,SNR=10						
ASAR	Alice Springs	19.92	168	P	Pn	15 53 09.2	-0.6
WRKA	Warakurna	20.87	183	P	P	15 53 19.2	+1.0
IPM	Ipoh	29.72	286	P	P	15 54 42.7	+0.5
IPM	Ipoh	29.72	286	P	P	15 54 42.9	+0.6
KULM	Kulim	30.31	288	P	P	15 54 48.6	+1.1
KULM				IAmb	IAmb	15 55 02.7	
	comp=Z,8.4nm,1.1s						
CMAR	Chiang Mai Arr	37.55	308	P	P	15 55 49.5	-0.8
	comp=Z,1.7nm,0.4s,baz=137,slow=6.8,SNR=13						
CMAR	Chiang Mai Arr	37.55	308	P	P	15 55 49.8	-0.4
CHTO	Chiang Mai	37.75	308	P	P	15 55 52.4	+0.6
CHTO				IAmb	IAmb	15 55 53.8	
	comp=Z,4.1nm,0.7s						
CHTO	Chiang Mai	37.75	308	P	P	15 55 53.2	+1.3
JWT	Wachi	39.54	8	P	P	15 56 07.8	+1.1
JWT				IAmb	IAmb	15 56 36.6	
	comp=Z,20nm,1.3s						
MJAR	Matsushiro Arr	41.22	11	P	P	15 56 19.6	-1.0
	comp=Z,1.7nm,0.6s,baz=194,slow=10,SNR=5.4						
MAT	Matsushiro	41.22	11	P	P	15 56 20.1	-0.5
KSRS	Korea Array	41.35	358	P	P	15 56 23.1	+1.5
	comp=Z,1.3nm,0.6s,baz=175,slow=9.1,SNR=6.6						
JSD	Sado	42.68	10	P	P	15 56 32.9	+0.5
JSD				IAmb	IAmb	15 56 35.4	
	comp=Z,6.9nm,1.1s						
JMM	Marumori	43.03	13	P	P	15 56 36.3	+1.1
HHC	Hu-ho-hao-te	47.65	342	eP	P	15 57 14.9	+2.9
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,7.4s						
USRK	Ussuriysk Ar.	48.11	2	P	P	15 57 14.9	-0.5
	comp=Z,1.5nm,0.5s,baz=180,slow=7.5,SNR=2.6						
SONM	Songino Array	55.55	341	P	P	15 58 10.7	-0.3
	comp=Z,0.8nm,0.9s,baz=147,slow=3.0,SNR=4.8						
WMQ	Urumqi	60.72	326	eP	P	15 58 50.9	+3.8
MK31	Makanchi Array	65.55	326	P	P	15 59 19.2	+0.1
MK31				IAmb	IAmb	15 59 20.3	
	comp=Z,2.5nm,0.8s						
MKAR	Makanchi Array	65.55	326	P	P	15 59 19.6	+0.5
	comp=Z,4.3nm,0.6s,baz=116,slow=8.1,SNR=54						
MKAR	Makanchi Array	65.55	326	P	P	15 59 19.0	-0.1
MAKZ	Makanchi	65.73	326	P	P	15 59 19.5	-0.8
YAK	Yakutsk	65.93	0	P	P	15 59 21.9	+0.8
ZALV	Zalesovo Beam	68.78	334	P	P	15 59 39.4	+0.1
	comp=Z,0.7nm,0.3s,baz=91,slow=5.9,SNR=5.7						
ZALV	Zalesovo Beam	68.78	334	P	P	15 59 38.9	-0.5
KURK	Kurchatov	69.80	328	P	P	15 59 46.1	+0.3
VNDA	Vanda	75.38	173	P	P	16 00 18.4	-0.2
VNDA				IAmb	IAmb	16 00 29.2	
	comp=Z,2.8nm,1.2s						
BRVK	Borovoye	75.44	328	P	P	16 00 19.6	+0.3
BRVK				IAmb	IAmb	16 00 20.7	
	comp=Z,4.5nm,0.9s						
ABKAR	Akbulak array	79.95	321	P	P	16 00 44.2	-0.3
RAYN	Ar Rayn	86.15	294	P	P	16 01 17.7	+0.5
RAYN				IAmb	IAmb	16 01 18.4	
	comp=Z,3.7nm,0.8s						
ILAR	Eielson Array	90.92	25	P	P	16 01 36.7	-2.3
	comp=Z,0.4nm,0.8s,baz=258,slow=4.5,SNR=2.3						
TORD	Torodi Ar. Bea	127.74	283	PKP	PKPdf	16 07 42.1	+0.2
	comp=Z,0.6nm,0.8s,baz=70,slow=2.1,SNR=4.6						
AC02	Maricunga	144.36	151	PKPdf	PKPdf	16 08 12.5	-0.4
CPUP	Villa Florida	149.05	168	PKPbc	PKPbc	16 08 24.2	-0.1
	comp=Z,1.2nm,0.5s,baz=44,slow=13,SNR=1.5						

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*IDC **09** 15:59:40.8±1.8, 30°.39S×60°.17E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.4/48, mbtmp3.8/3, Error ellipse: s-maj=70.0km s-min=36.2km az=13.0*

*NEIC **09** 15:59:42.9±3.0, 30°.2S±0°.1×60°.0E±0°.1, h10km±1km, mb4.1/4, Error ellipse: s-maj=25.5km s-min=12.4km az=218.0*

ISC 09 15:59:41.8±0.8**, 30°.2S**±0°.1×**60°.0E**±0°.1**, h10km, n13, σ1ˢ.47**/13**, mb4.0**/4**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RER	Riviere de l'E	9.81	336	Pn	Pn	16 02 01.3	-1.8
VOI	Vohitsoka	14.47	302	Pn	Pn	16 03 06.9	0.0
SNAA	Sanae	53.12	201	P	P	16 08 59.6	+0.3
SNAA				IAmb	IAmb	16 09 06.4	
	comp=Z,4.5nm,1.3s						
QSPA	South Pole Qui	59.94	180	P	P	16 09 45.1	-2.8
CMAR	Chiang Mai Arr	61.22	43	P	P	16 09 58.0	+0.9
	comp=Z,0.8nm,0.6s,baz=226,slow=7.6,SNR=10						
CMAR	Chiang Mai Arr	61.22	43	P	P	16 09 57.3	+0.2
ASAR	Alice Springs	65.16	104	P	P	16 10 23.1	-0.3
	comp=Z,0.9nm,0.8s,baz=242,slow=6.0,SNR=4.9						
ASAR	Alice Springs	65.16	104	P	P	16 10 22.7	-0.7
STKA	Stephens Creek	68.22	115		P	16 10 44.7	+1.9
TORD	Torodi Ar. Bea	70.76	299	P	P	16 11 00.6	+2.0
	comp=Z,0.4nm,0.7s,baz=110,slow=5.4,SNR=3.6						
TORD	Torodi Ar. Bea	70.76	299		P	16 10 59.6	+1.1
TORD				IAmb	IAmb	16 11 04.5	
	comp=Z,1.5nm,1.4s						
YKA	Yellowknife Ar	147.53	355	PKPbc	PKPbc	16 19 25.6	+0.1
	comp=Z,0.9nm,0.7s,baz=2.5,slow=2.6,SNR=8.2						
YKA	Yellowknife Ar	147.53	355		PKPbc	16 19 25.2	-0.3

DJA 09 16:01:23.6±1.6**, 4°S**±8°×**12°9E**±°**, h13km**±10km**, M3.7**/7**, MLv3.7**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.90	327	P	Pb	16 01 41.2	0.0
MSAI				S	Sb	16 01 53.6	+0.5
AAI	Ambon	1.29	289	P	Pn	16 01 47.1	-0.3
AAI				S	Sb	16 02 04.0	-0.3
FAKI	Fak Fak	3.06	67	P	Pn	16 02 11.2	-0.5
SWI	Sorong	3.71	30	P	Pn	16 02 20.7	0.0

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*IDC **09** 16:02:12.5±1.4, 4°.15S×129°.32E, h0km, mb3.9/2, mb1 3.8/6, mb1mx3.5/35, mbtmp3.7/6, ML3.3/4, Error ellipse: s-maj=45.4km s-min=23.1km az=76.0*

ISC 09 16:02:17.0±1.0**, 4°.15S**±0°.09×**129°.5E**±0°.2**, h36km, n6, σ1ˢ.08**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.71	29	Pn	Pn	16 03 12.8	+0.9
	4.5nm,0.3s,baz=221,slow=19,SNR=2.6						
SIJI				Sn	Sn	16 03 53.0	-1.5
	6.5nm,0.3s,baz=82,slow=7.2,SNR=3.6						
FITZ	Fitzroy Crossi	14.37	195	Pn	Pn	16 05 37.0	-0.9
	0.0nm,0.3s,baz=34,slow=11,SNR=0.9						
WRA	Warramunga Arr	16.40	164	Pn	Pn	16 06 04.3	-0.3
	0.1nm,0.3s,baz=346,slow=13,SNR=4.6						
ASAR	Alice Springs	19.87	168	P	P	16 06 46.1	+0.8
	0.4nm,0.3s,baz=347,slow=9.3,SNR=11						
CMAR	Chiang Mai Arr	37.54	308	P	P	16 09 28.2	+0.2
	0.2nm,0.3s,baz=137,slow=7.4,SNR=6.2						
MKAR	Makanchi Array	65.57	326	P	P	16 12 57.1	0.0
	0.9nm,0.4s,baz=115,slow=7.8,SNR=22						

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*IDC **09** 16:02:33.0±1.4, 4°.26S×129°.21E, h0km, mb3.7/2, mb1 4.0/6, mb1mx3.6/35, mbtmp3.8/6, ML3.8/4, MS4.5/1, Ms1 4.5/1, ms1mx2.9/35, Error ellipse: s-maj=55.7km s-min=23.7km az=84.0*

ISC 09 16:02:37.1±0.9**, 4°.34S**±0°.09×**129°.5E**±0°.2**, h35km, n6, σ0ˢ.41**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.86	27	Pn	Pn	16 03 34.0	-0.1
	7.8nm,0.3s,baz=250,slow=22,SNR=2.6						
SIJI				Sn	Sn	16 04 18.7	+0.4
	5.2nm,0.3s,baz=241,slow=23,SNR=1.7						
FITZ	Fitzroy Crossi	14.19	195	Pn	Pn	16 05 56.1	+0.4
	0.2nm,0.3s,baz=26,slow=12,SNR=5.4						
FITZ				LR	LR	16 10 54.1	
	comp=Z,2μm,21.6s,baz=31,slow=35						
WRA	Warramunga Arr	16.20	164	Pn	P	16 06 24.6	-0.5
	0.4nm,0.3s,baz=342,slow=14,SNR=7.0						
ASAR	Alice Springs	19.67	168	P	Pn	16 07 05.0	+0.1
	0.4nm,0.3s,baz=352,slow=9.9,SNR=5.7						
SONM	Songino Array	55.79	341	P	P	16 12 10.9	+0.1
	0.6nm,0.8s,baz=151,slow=6.3,SNR=3.4						
MKAR	Makanchi Array	65.76	326	P	P	16 13 18.3	-0.3
	0.6nm,0.6s,baz=123,slow=7.9,SNR=4.1						

IDC 09 16:03:27.8±2.4**, 4°.48S**×**129°.58E, h0km, mb3.8**/2**, mb1 4.2**/4**, mb1mx3.6**/31**, mbtmp3.9**/4**, ML3.8**/2**, Error ellipse: s-maj=120.2km s-min=27.0km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.05	164	Pn	Pn	16 07 15.8	+0.8
	0.3nm,0.3s,baz=344,slow=12,SNR=6.0						
ASAR	Alice Springs	19.52	168	P	P	16 07 56.7	-0.3
	0.7nm,0.3s,baz=346,slow=10,SNR=8.9						
CMAR	Chiang Mai Arr	37.83	308	P	P	16 10 47.1	+0.7
	0.8nm,0.7s,baz=130,slow=6.2,SNR=4.9						
MKAR	Makanchi Array	65.91	326	P	P	16 14 14.9	-0.7
	0.5nm,0.6s,baz=120,slow=7.2,SNR=4.0						

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*IDC **09** 16:06:06.0±0.5, 4°.06S×129°.53E, h0km, mb4.7/18, mb1 4.8/22, mb1mx4.6/34, mbtmp4.7/22, ML4.7/3, MS3.5/3, Ms1 3.5/3, ms1mx3.1/27, Error ellipse: s-maj=19.4km s-min=12.3km az=73.0*

*MOS **09** 16:06:07.4±1.0, 4°.08S×129°.49E, h21km, mb5.2/34, Error ellipse: s-maj=11.3km s-min=5.8km az=114.5*

*BJI **09** 16:06:09.0±0.0, 4°.10S×129°.60E, h30km, mB5.0/26, mb4.8/50, Ms4.6/7, Ms7 4.1/7*

*DJA **09** 16:06:10.1±0.3, 4°S±3°×12°9E±°, h10km, M4.7/16, mb5.1/12, mB5.2/11, MLv5.0/16, Mw(mB)4.5/11*

*NEIC **09** 16:06:10.4±2.1, 4°.04S±0°.05×129°.55E±0°.06, h26km±2km, mb5.0/87, Error ellipse: s-maj=8.6km s-min=7.0km az=75.0*

*KLM **09** 16:06:11, 4°.13S×129°.73E, h45km, mb4.8*

ISC 09 16:06:11.1±0.2**, 4°.12S**±0°.03×**129°.51E**±0°.04**, h36km, n299, σ1ˢ.44**/313**, mb4.9**/90**, MS4.2**/3**, 14C-6D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.57	135	P	Pn	16 06 21.0	-1.8
MSAI	Masohi	0.96	323	P	Pn	16 06 25.1	-2.9
MSAI				S	Sn	16 06 36.6	-3.9
AAI	Ambon	1.38	288	P	Pn	16 06 31.0	-2.8
AAI				S	Sn	16 06 47.4	-3.3
FAKI	Fak Fak	2.99	67	P	Pn	16 06 57.3	+1.3
FAKI	Fak Fak	2.99	67		Pn	16 06 55.6	-0.3
FAKI	Fak Fak	2.99	67	P	Pn	16 06 55.7	-0.3
SIJI	Sorong	3.67	29	Pn	Pn	16 07 04.5	-1.0
	154nm,0.3s,baz=220,slow=23,SNR=94						
SIJI				Sn	Sn	16 07 45.9	-1.6
	118nm,0.3s,baz=252,slow=23,SNR=8.6						
SIJI				LR	LR	16 08 39.6	
	comp=Z,670nm,18.5s,baz=297,slow=42						
SWI	Sorong	3.68	29	P	Pn	16 07 05.1	-0.4
LBMI	Labuha	3.99	330	P	Pn	16 07 09.9	+0.1
SANI	Sanana	4.07	300	P	Pn	16 07 09.1	-1.7
SANI	Sanana	4.07	300	P	Pn	16 07 11.5	+0.7
SAUI	Saumlaki	4.24	155	Pn	Pn	16 07 15.2	+2.0
SAUI	Saumlaki	4.24	155	P	Pn	16 07 15.4	+2.2
TNTI	Ternate	5.30	336	P	Pn	16 07 27.8	-0.1
	0.6nm1μm58nm,0.7s						
TNTI	Ternate	5.30	336	Pn	Pn	16 07 27.1	-0.8
TNTI	Ternate	5.30	336	P	Pn	16 07 27.4	-0.5
SRPI	Serui, Papua	7.09	72	P	Pn	16 07 53.7	+1.3
	1.0nm100nm,0.7s						
KMSI	Cibinong	7.22	310	P	Pn	16 07 53.5	-0.7
	1.1nm1μm151nm,0.6s						
SOEI	Soe	7.64	223	P	Pn	16 08 03.3	+3.2
	0.4nm1μm109nm,0.7s						
SOEI	Soe	7.64	223	Pn	Pn	16 08 02.1	+2.0
GTOI	Gorontalo	8.02	306	P	Pn	16 08 07.5	+2.3
	529nm63nm,1.1s						
DRS	Darwin Rock St	8.38	171	P	Pn	16 08 11.0	+0.9
BATI	Baumata	8.38	223	Pn	Pn	16 08 12.3	+2.2
	48nm,0.3s,baz=92,slow=2.1,SNR=34						
BATI				Sn	Sn	16 09 47.1	+3.6
	baz=29,slow=19,SNR=1.2						
BATI	Baumata	8.38	223	P	Pn	16 08 12.7	+2.6
	1μm94nm,0.5s						
MMRI	Maumere	8.50	238	P	Pn	16 08 14.4	+2.6
	101nm,0.8s						
MTN	Manton Dam	8.82	170	Pn	Pn	16 08 16.6	+0.4
MTN	Manton Dam	8.82	170	P	Pn	16 08 17.7	+1.5
KDU	Kakadu	9.01	161	P	Pn	16 08 18.8	+0.1
EDFI	Ende, Flores	9.03	239	P	Pn	16 08 21.6	+2.5
KAPI	Kappang	9.76	264	Pn	Pn	16 08 31.6	+2.5
	2.2nm,0.3s,baz=134,slow=6.5,SNR=13						
KAPI				Sn	Sn	16 10 19.4	+1.9
	1.0nm,0.3s,baz=193,slow=14,SNR=1.3						
KAPI				LR	LR	16 12 16.4	
	comp=Z,233nm,20.3s,baz=100,slow=38						
KAPI	Kappang	9.76	264	P	Pn	16 08 30.0	+0.9
KAPI	Kappang	9.76	264	Pn	Pn	16 08 30.0	+0.9
KAPI	Kappang	9.76	264	P	Pn	16 08 32.0	+2.9
TOLI2	Tolitoli	10.15	301	Pn	Pn	16 08 36.3	+2.0
TOLI2	Tolitoli	10.15	301	P	Pn	16 08 37.0	+2.6
JAY	Jayapura	11.29	82	Pn	Pn	16 08 53.0	+2.9

	0.6nm,0.3s,baz=222,slow=14,SNR=2.7						
KNRA	Kununurra	11.51	184	Pn	Pn	16 08 51.4	-1.7
KNRA	Kununurra	11.51	184	P	Pn	16 08 53.8	+0.8
MYLDM	Lahad Datu	14.36	310	Pn	Pn	16 09 31.5	-0.5
FITZ	Fitzroy Crossi	14.40	195	Pn	Pn	16 09 30.8	-1.7
	1.0nm,0.3s,baz=21,slow=10,SNR=14						
FITZ				Sn	Sn	16 12 15.1	+4.1
	0.2nm,0.3s,baz=62,slow=8.3,SNR=3.1						
SPMM	Sapulut	15.70	304	P	P	16 09 52.0	-1.5
JAGI	Jajag, Banyuwa	15.86	253		P	16 09 53.9	-1.2
JAGI	Jajag, Banyuwa	15.86	253	P	P	16 09 54.6	-0.6
WB0	Warramunga Arr	16.27	163	Pn	Pn	16 09 53.0	-4.0
WRAB	Tennant Creek	16.42	164	⇑*e*P	Pn	16 09 56.5	-2.4
WRAB				pmax	pmax		
	comp=Z,18nm,1.0s						
WRAB	Tennant Creek	16.42	164		Pn	16 09 55.6	-3.3
WRA	Warramunga Arr	16.42	164	Pn	Pn	16 09 55.6	-3.3
	comp=Z,1.9nm,0.3s,baz=352,slow=13,SNR=23						
WRA				Sn	Sn	16 12 51.3	-8.9
	baz=346,slow=22,SNR=5.8						
WRA	Warramunga Arr	16.42	164	P	Pn	16 09 55.6	-3.3
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRA	Warramunga Arr	16.42	164		Pn	16 09 55.6	-3.3
WB2	Warramunga Arr	16.43	164	Pn	Pn	16 09 56.3	-2.7
WR0	Warramunga Arr	16.50	163	Pn	Pn	16 09 56.7	-3.2
COEN	Coen	16.66	127	Pn	Pn	16 09 58.8	-3.2
COEN				IAmb	IAmb	16 10 05.8	
	comp=Z,51nm,0.6s						
KKM	Kota Kinabalu	16.67	307	P	P	16 10 04.0	-0.3
PMG	Port Moresby	18.30	108	P	P	16 10 21.8	-0.3
	comp=Z,0.8nm,0.3s,baz=254,slow=7.0,SNR=6.1						
PMG	Port Moresby	18.30	108	P	Pn	16 10 22.4	+0.1
PMG				pmax	pmax		
	comp=Z,35nm,0.9s						
PMG	Port Moresby	18.30	108	P	Pn	16 10 22.4	+0.1
SBUM	Sibu	18.46	290	P	Pn	16 10 26.0	+1.7
SBUM	Sibu	18.46	290	P	P	16 10 23.7	-0.3
QIS	Mount Isa	19.07	150	P	P	16 10 30.9	+0.2
UGM	Wanagama	19.25	258	P	Pn	16 10 33.4	-0.5
UGM				IAmb	IAmb	16 10 58.5	
	comp=Z,154nm,1.4s						
MBWA	Marble Bar	19.42	208	P	Pn	16 10 35.3	-0.5
PSA00	Pilbara Seismi	19.73	208	P	P	16 10 38.3	+0.5
PSA00				IAmb	IAmb	16 10 40.5	
	comp=Z,70nm,0.8s						
PSA00	Pilbara Seismi	19.73	208	P	P	16 10 38.0	+0.2
PSA00				IAmb	IAmb	16 10 40.4	
	comp=Z,45nm,0.9s						
PSA00	Pilbara Seismi	19.73	208	P	Pn	16 10 39.0	-0.4
AS31	Alice Springs	19.89	168		P	16 10 39.3	-0.4
ASAR	Alice Springs	19.89	168	P	P	16 10 39.8	+0.1
	comp=Z,4.6nm,0.3s,baz=348,slow=10,SNR=73						
ASAR				S	S	16 14 18.6	-3.2
	comp=Z,0.1nm,0.3s,baz=348,slow=18,SNR=4.0						
ASAR				PcP	PcP	16 14 56.5	+0.4
	comp=Z,1.2nm,0.3s,baz=13,slow=1.5,SNR=12						
ASAR	Alice Springs	19.89	168	P	P	16 10 39.0	-0.7
MTSU	Mount Surprise	20.11	135	P	P	16 10 42.1	+0.1
RABL	Rabaul	22.60	91	P	P	16 11 08.2	-0.7
CTA	Charters Tower	22.77	136	P	P	16 11 10.7	+0.1
	comp=Z,27nm,0.8s,baz=316,slow=13,SNR=14						
CTAO	Charters Tower	22.77	136	P	P	16 11 10.3	-0.3
CTAO				pmax	pmax		
	comp=Z,41nm,0.8s						
CTAO	Charters Tower	22.77	136	P	P	16 11 10.3	-0.3
CTAO				IAmb	IAmb	16 11 13.9	
	comp=Z,41nm,0.8s						
CTAO	Charters Tower	22.77	136	P	P	16 11 11.6	+1.0
GIRL	Giralia	23.62	217	P	P	16 11 20.4	+1.3
GIRL	Giralia	23.62	217	P	P	16 11 20.5	+1.5
MEEK	Meekatharra	24.70	204	P	P	16 11 29.5	+0.5
DLV	T Lat	26.29	308	P	P	16 11 44.1	+0.3
MYKOM	Kota Tinggi	26.30	282	P	P	16 11 45.0	+1.3
MYKOM	Kota Tinggi	26.30	282	P	P	16 11 43.5	-0.1
MYKOM				IAmb	IAmb	16 11 47.5	
	comp=Z,16nm,0.7s						
MULG	Mulgathing	26.38	171	P	P	16 11 44.4	+0.2
FORT	Forrest	26.56	183	P	P	16 11 45.1	-0.7
FORT				IAmb	IAmb	16 12 11.7	
	comp=Z,35nm,0.8s						
FORT	Forrest	26.56	183	P	P	16 11 46.5	+0.8
LCRK	Leigh Creek	27.45	164	P	P	16 11 55.1	+1.3
MORW	Morawa	27.91	206	P	P	16 11 57.6	-0.3
MORW				IAmb	IAmb	16 12 19.2	
	comp=Z,22nm,1.2s						
MORW	Morawa	27.91	206	P	P	16 11 58.7	+0.7
JRMM	Jerantut	28.15	286	P	P	16 12 01.0	+0.7
BKNI	Bangkinang	28.78	278	P	P	16 12 05.1	-0.8
SSLB	Suanglung	28.96	344	P	P	16 12 06.4	-0.9
SSLB				IAmb	IAmb	16 12 19.2	
	comp=Z,40nm,1.0s						
BLDU	Ballidu	28.99	203	P	P	16 12 08.1	+0.5
BBOO	Buckleboo	29.20	169	P	P	16 12 08.6	-0.8
BBOO	Buckleboo	29.20	169	P	P	16 12 09.9	+0.5
KLBR	Kellerberrin	29.48	201	P	P	16 12 12.1	+0.2
EIDS	Eidsvold	29.60	138	P	P	16 12 12.6	-0.4
IPM	Ipoh	29.71	286	P	P	16 12 15.0	+0.9
IPM	Ipoh	29.71	286	P	P	16 12 13.7	-0.4
IPM	Ipoh	29.71	286	P	P	16 12 15.1	+0.9
STKA	Stephens Creek	29.86	159	P	P	16 12 14.9	-0.4
	comp=Z,3.8nm,0.4s,baz=332,slow=8.4,SNR=23						
STKA	Stephens Creek	29.86	159	P	P	16 12 14.6	-0.6
KULM	Kulim	30.30	288	P	P	16 12 19.0	-0.3
KULM	Kulim	30.30	288	P	P	16 12 18.5	-0.8
KULM				IAmb	IAmb	16 12 31.7	
	comp=Z,25nm,0.9s						
UBPT	Khong Chiam	30.63	310	P	P	16 12 21.5	-0.7
NWAO	Narrogin (SRO)	30.88	200	P	P	16 12 25.5	+1.3
RPSI	Rantau Prapat	31.30	282	P	P	16 12 28.4	+0.2
PSI	Prapat	31.32	282	P	P	16 12 28.4	-0.1
	comp=Z,6.3nm,0.9s,baz=99,slow=5.9,SNR=5.1						
GSI	Gunungsitoli	32.36	279	P	P	16 12 36.6	-0.9
GSI				IAmb	IAmb	16 12 47.2	
	comp=Z,16nm,0.9s						
ARMA	Armidale	33.48	144	P	P	16 12 48.2	+0.9
ARMA				IAmb	IAmb	16 12 51.9	
	comp=Z,20nm,1.4s						
ARMA	Armidale	33.48	144	P	P	16 12 48.6	+1.4
CAN	Canberra	35.91	152	P	P	16 13 07.7	-0.4
CAN				pmax	pmax		
	comp=Z,34nm,1.2s						
CAN	Canberra	35.91	152	P	P	16 13 07.7	-0.4
CAN				IAmb	IAmb	16 13 23.8	
	comp=Z,34nm,1.2s						
CAN	Canberra	35.91	152	P	P	16 13 08.9	+0.8
TOO	Toolangi	36.37	158	P	P	16 13 12.4	+0.4
TOO				pmax	pmax		
	comp=Z,15nm,1.1s						
TOO	Toolangi	36.37	158	P	P	16 13 12.4	+0.4
TOO				IAmb	IAmb	16 13 15.0	
	comp=Z,15nm,1.1s						
TOO	Toolangi	36.37	158	P	P	16 13 12.9	+0.9
NJ2	Nanjing	37.37	345	*e*P	P	16 13 23.1	+2.7
NJ2				pP	pP	16 13 30.6	+0.9
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
CM31	Chiang Mai Arr	37.55	308	P	P	16 13 21.8	-0.4
CM31				IAmb	IAmb	16 13 34.9	
	comp=Z,30nm,1.3s						
CMAR	Chiang Mai Arr	37.55	308	P	P	16 13 22.6	+0.3
	comp=Z,6.3nm,0.5s,baz=137,slow=7.4,SNR=38						
CMAR				PcP	PcP	16 15 41.6	+1.7
	comp=Z,2.5nm,0.6s,baz=170,slow=2.6,SNR=7.6						
CMAR	Chiang Mai Arr	37.55	308	P	P	16 13 21.6	-0.6
GYA	Guiyang	37.59	325	⇓P	P	16 13 23.7	+1.2
GYA				pmax	pmax		
	comp=Z,13nm,0.7s						
CHTO	Chiang Mai	37.75	308	P	P	16 13 23.2	-0.7
CHTO				pmax	pmax		
	comp=Z,23nm,0.9s						
CHTO	Chiang Mai	37.75	308	P	P	16 13 23.2	-0.7
CHTO				IAmb	IAmb	16 13 36.4	
	comp=Z,23nm,0.8s						
CHTO	Chiang Mai	37.75	308	P	P	16 13 24.7	+0.8
	comp=Z,18nm,1.1s						
JMN	Monobe	37.87	6	P	P	16 13 25.2	+0.5
JMN				IAmb	IAmb	16 13 37.1	
	comp=Z,31nm,0.9s						
SANVU	Saraoutou	38.74	110	P	P	16 13 33.3	+1.0
KMI	Kunming	38.99	320	⇑P	P	16 13 37.2	+2.6
KMI				sP	sP	16 13 47.1	-0.9
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
JHS	Saijyo	39.05	5	P	P	16 13 34.4	-0.3
JHS				IAmb	IAmb	16 13 50.2	
	comp=Z,38nm,1.1s						
ENH	Enshi	39.19	332	P	P	16 13 36.1	+0.2
JWT	Wachi	39.58	8	P	P	16 13 38.2	-0.8
INU	Inuyama	39.88	10	P	P	16 13 41.3	-0.2
INU				IAmb	IAmb	16 13 53.5	
	comp=Z,19nm,0.8s						
TJN	Taejon	40.33	357	*c i*P	P	16 13 45.9	+0.7
MAJO	Matsushiro	41.26	11	⇑*e*P	P	16 13 51.0	-1.8
MAJO				pmax	pmax		
	comp=Z,20nm,0.7s						
MAJO	Matsushiro	41.26	11	P	P	16 13 51.1	-1.8
MAJO				IAmb	IAmb	16 14 04.4	
	comp=Z,31nm,0.9s						
MAJO	Matsushiro	41.26	11	P	P	16 13 52.1	-0.8
MAT	Matsushiro	41.26	11	P	P	16 13 50.9	-2.0
MJAR	Matsushiro Arr	41.26	11	P	P	16 13 51.4	-1.5
	comp=Z,12nm,0.8s,baz=187,slow=9.3,SNR=26						
MJB9	Matsu-Tunnel	41.26	11	P	P	16 13 51.4	-1.5
MJB9				IAmb	IAmb	16 13 59.1	
	comp=Z,28nm,0.7s						
JYT	Yasato	41.36	13	P	P	16 13 52.4	-1.3
JYT				IAmb	IAmb	16 14 05.7	
	comp=Z,41nm,0.9s						
KSAR	Wonju Array Be	41.37	358	P	P	16 13 54.9	+1.1
KSAR	Wonju Array Be	41.37	358	P	P	16 13 54.9	+1.1
KSRS	Korea Array	41.38	358	P	P	16 13 53.5	-0.3
	comp=Z,4.4nm,0.8s,baz=174,slow=10,SNR=24						
KS19	Wonju Array Si	41.43	358	P	P	16 13 54.1	-0.2
XAN	Xi'an	42.64	334	P	P	16 14 03.8	-0.4
XAN				pP	pP	16 14 14.6	+1.1
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
JSD	Sado	42.72	10	P	P	16 14 03.4	-1.4
JSD				IAmb	IAmb	16 14 16.1	
	comp=Z,14nm,0.8s						
JMM	Marumori	43.07	13	P	P	16 14 06.7	-0.8
BJT	Baijiatuau	45.60	346	P	P	16 14 26.9	-0.9
BJT				pmax	pmax		
	comp=Z,15nm,0.9s						
BJT	Baijiatuau	45.60	346	P	P	16 14 26.9	-0.9
BJT				IAmb	IAmb	16 14 39.4	
	comp=Z,15nm,0.9s						
BJI	Beijing	45.62	346	P	P	16 14 27.3	-0.6
BJI				sP	pP	16 14 37.7	+0.5
BJI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LZH	Lanzhou	46.65	331	*e*P	P	16 14 37.2	+0.8
LZH				pP	pP	16 14 47.5	+1.7
LZH				sP	pwP	16 14 51.9	+0.9
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				LR	LR		
	comp=Z,210nm,13.5s						
LZH				LR	LR		
	comp=Z,230nm,14.0s						
LZH				LR	LR		
	comp=Z,180nm,15.7s						
SHL	Shillong	46.92	311	P	P	16 14 36.9	-1.8
SHL				pmax	pmax		
	comp=Z,17nm,0.8s						
SHL	Shillong	46.92	311	P	P	16 14 36.9	-1.8
SHL				IAmb	IAmb	16 14 49.7	
	comp=Z,17nm,0.8s						
HHC	Hu-ho-hao-te	47.67	342	*e*P	P	16 14 47.3	+3.1
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,6.5s						
CN2	Changchun	47.84	356	*e*P	P	16 14 45.3	0.0
CN2				*e*sP	sP	16 14 59.3	-0.7
CN2				*e*S	S	16 21 40.2	+0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
USA0B	Ussuriysk Arra	48.15	2	P	P	16 14 46.2	-1.4
USA0B				pmax	pmax		
	comp=Z,16nm,0.9s						
USA0B	Ussuriysk Arra	48.15	2	P	P	16 14 46.2	-1.4
USA0B				IAmb	IAmb	16 14 60.0	
	comp=Z,16nm,0.8s						
USRK	Ussuriysk Ar.	48.15	2	P	P	16 14 47.4	-0.3
	comp=Z,11nm,0.8s,baz=178,slow=6.3,SNR=22						
USRK	Ussuriysk Ar.	48.15	2	P	P	16 14 46.9	-0.8
MDJ	Mudanjiang	48.51	0	P	P	16 14 47.3	-3.2
MDJ				pmax	pmax		
	comp=Z,9.0nm,2.9s						
MDJ				pmax	pmax		
	comp=Z,16nm,2.2s						
MDJ	Mudanjiang	48.51	0	P	P	16 14 50.9	+0.4
LSA	Lhasa	49.80	315	P	P	16 15 01.4	+0.2
LSA				pmax	pmax		
	comp=Z,11nm,0.7s						
LSA	Lhasa	49.80	315	P	P	16 15 01.4	+0.2
LSA				IAmb	IAmb	16 15 03.1	
	comp=Z,11nm,0.7s						
ODAN	Odare	51.03	310	*e*P	P	16 15 09.2	-1.0
TAPN	Taplejung	51.03	310	*e*P	P	16 15 08.9	-1.5
	comp=Z,15nm,0.3s						
GTA	Gaotai	51.23	331	*e*P	P	16 15 10.8	-0.6
GTA				pP	pP	16 15 17.9	-2.8
GTA				sP	sP	16 15 22.1	-3.0
GTA				PcP	PcP	16 16 27.2	+0.8
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,70nm,5.5s						
GTA				LR	LR		
	comp=Z,160nm,13.8s						
GTA				LR	LR		
	comp=Z,150nm,14.9s						
GTA				LR	LR		
	comp=Z,120nm,14.9s						
RAMN	Ramite	51.68	309	*e*P	P	16 15 14.3	-0.9
	comp=Z,46nm,0.4s						
PKIN	Phulchoki	52.92	309	*e*P	P	16 15 22.8	-1.6
	comp=Z,10nm,0.6s						
KKN	Kakani	53.12	309	*e*P	P	16 15 25.0	-0.8
QRZ	Quartz Range	53.14	140	P	P	16 15 25.8	+0.3
DMN	Daman	53.16	309	*e*P	P	16 15 25.1	-1.0
KLR	Kul'dur	53.16	2	*c i*P	P	16 15 26.1	+0.7
KLR				pmax	pmax		
	comp=Z,12nm,1.1s						
LBZ	Lake Benmore	53.70	145	P	P	16 15 28.4	-1.1
LBZ				IAmb	IAmb	16 15 34.1	
	comp=Z,27nm,1.3s						
GKN	Gorkha	53.72	309	*e*P	P	16 15 29.2	-0.9
	comp=Z,6.7nm,0.3s						
TUWZ	Tuamarina	54.37	140	P	P	16 15 34.1	-0.3
KOLN	Koldanda	54.41	309	*e*P	P	16 15 34.0	-1.2
DANN	Dangsing	54.56	309	*e*P	P	16 15 35.0	-1.4
KHZ	Kahutara	54.62	141	P	P	16 15 36.3	0.0
KHZ				IAmb	IAmb	16 15 37.5	
	comp=Z,10nm,0.6s						
HYB	Hyderabad	54.64	295	*i* P	P	16 15 36.0	-0.8
HYB				*e*		16 15 46.0	
BHW	Baring Head	54.96	139	P	P	16 15 38.4	-0.4
BKZ	Black Stump Fm	54.98	136	P	P	16 15 39.2	+0.2
BKZ				IAmb	IAmb	16 15 41.0	
	comp=Z,11nm,0.5s						
PYUN	Piuthan	55.04	309	*e*P	P	16 15 38.6	-1.2
ULN	Ulaanbaatar	55.39	342	⇑*e*P	P	16 15 42.4	+0.5
ULN				pmax	pmax		
	comp=Z,11nm,1.3s						
ULN	Ulaanbaatar	55.39	342	P	P	16 15 41.8	0.0
ULN				IAmb	IAmb	16 15 55.1	
	comp=Z,16nm,1.1s						
SONM	Songino Array	55.57	341	P	P	16 15 42.9	-0.2
	comp=Z,4.7nm,0.9s,baz=158,slow=6.9,SNR=19						
ZEA	Zeya	57.67	358	*e*P	P	16 15 58.5	+0.7
ZEA				*e*		16 16 09.1	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZAK	Zakamensk	58.80	341	*e*P	P	16 16 06.3	+0.4
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TLY	Talaya	59.80	342	LR	LR	16 42 43.0	
	comp=Z,43nm,20.9s,baz=186,slow=37						
TLY	Talaya	59.80	342	*e*P	P	16 16 21.3	+8.6
TLY				pmax	pmax		
	comp=Z,25nm,0.8s						
MOY	Mondy	60.65	340	*e*P	P	16 16 19.1	+0.5
WMQ	Urumqi	60.73	326	*e*P	P	16 16 20.2	+1.0
WMQ				pP	pP	16 16 30.1	+1.3
WMQ				pmax	pmax		
	comp=Z,30nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.9s						
PETK	Petropavlovsk-	61.76	19	P	P	16 16 26.6	+0.6
	comp=Z,5.4nm,0.8s,baz=182,slow=5.1,SNR=6.9						
PETK	Petropavlovsk-	61.76	19	P	P	16 16 27.6	+1.6
PETK	Petropavlovsk-	61.76	19	P	P	16 16 27.6	+1.6
BOD	Bodaibo	62.99	351	*e*P	P	16 16 34.8	+0.8
BOD				pmax	pmax		
	comp=Z,40nm,1.6s						
DGZ	Jazzator, Alta	64.75	331	*c i*P	P	16 16 46.6	+0.6
DGZ				pmax	pmax		
	comp=Z,12nm,0.9s						
TARG	Taragay, Kyrgy	65.45	320	P	P	16 16 52.4	+1.3
TARG				IAmb	IAmb	16 16 58.9	
	comp=Z,5.9nm,0.7s						
MK31	Makanchi Array	65.56	326	*ce*P	P	16 16 50.2	-1.0
MK31	Makanchi Array	65.56	326	P	P	16 16 50.2	-1.0
MK31				IAmb	IAmb	16 16 52.4	
	comp=Z,15nm,0.9s						
MKAR	Makanchi Array	65.56	326	P	P	16 16 51.0	-0.2
	comp=Z,15nm,0.3s,baz=114,slow=7.8,SNR=258						
MKAR	Makanchi Array	65.56	326	P	P	16 16 50.2	-1.0
KSH	Kashi	65.58	317	P	P	16 16 51.9	+0.3
KSH				pP	pP	16 17 03.0	+1.6
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MA2	Magadan	65.69	12	⇑*e*P	P	16 16 52.7	+1.0
MA2				pmax	pmax		
	comp=Z,43nm,1.9s						
MAKZ	Makanchi	65.74	326	P	P	16 16 51.4	-1.0
MAKZ				pmax	pmax		
	comp=Z,23nm,0.4s						
MAKZ	Makanchi	65.74	326	P	P	16 16 51.4	-1.0
YAK	Yakutsk	65.96	0	*e*P	P	16 16 53.7	+0.3
YAK				*e**PP	pP	16 16 59.7	-3.2
YAK				*e*		16 17 27.1	
YAK				*e*		16 19 22.9	
YAK				*e*S	S	16 25 42.1	+3.9
YAK				*e*		16 26 46.3	
YAK				*e*SS	SS	16 30 00.3	+6.4
YAK				pmax	pmax		
	comp=Z,52nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,136nm,3.2s						
YAK				pmax	pmax		
	comp=E,135nm,2.8s						
YAK				pmax	pmax		
	comp=N,86nm,3.7s						
YAK				smax	smax		
	comp=E,65nm,3.0s						
YAK				smax	smax		
	comp=N,58nm,2.4s						
YAK	Yakutsk	65.96	0	P	P	16 16 53.1	-0.3
KDJ	Kajisay	66.06	320	P	P	16 16 55.3	+0.6
KDJ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KDJ	Kajisay	66.06	320	P	P	16 16 55.3	+0.6
KDJ				IAmb	IAmb	16 16 56.1	
	comp=Z,10.0nm,0.7s						
BOOM	Boomskoye usch	67.03	320	P	P	16 17 01.5	+0.6
BOOM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BOOM	Boomskoye usch	67.03	320	P	P	16 17 01.4	+0.6
BOOM				IAmb	IAmb	16 17 13.2	
	comp=Z,10.0nm,0.9s						
TKM2	Tokmak 2	67.47	320	P	P	16 17 04.2	+0.5
	SNR=16						
UCH	Uchtor	67.83	319	P	P	16 17 07.5	+1.1
	SNR=7.8						
AAK	Ala-Archa	68.04	319	⇓*e*P	P	16 17 08.2	+0.9
AAK				pmax	pmax		
	comp=Z,11nm,1.3s						
AAK	Ala-Archa	68.04	319	P	P	16 17 07.1	-0.2
AML	Almayashu	68.33	319	P	P	16 17 10.2	+0.8
	SNR=10						
USP	Ospenovka	68.34	320	P	P	16 17 09.4	+0.5
	SNR=10.0						
EKS2	Erkin-Say	68.52	319	P	P	16 17 11.1	+0.8
	SNR=7.2						
KBL	Kabul	68.55	309	P	P	16 17 10.0	-0.7
KBL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KBL	Kabul	68.55	309	P	P	16 17 10.0	-0.7
KBL				IAmb	IAmb	16 17 21.8	
	comp=Z,9.8nm,1.1s						
ZAA0	Zalesovo Array	68.80	334	P	P	16 17 10.0	-1.5
ZAA0				IAmb	IAmb	16 17 12.3	
	comp=Z,14nm,0.9s						
ZALV	Zalesovo Beam	68.80	334	P	P	16 17 11.8	+0.3
	comp=Z,8.8nm,0.8s,baz=118,slow=4.6,SNR=27						
ZALV	Zalesovo Beam	68.80	334	P	P	16 17 09.6	-1.9
GAR	Garm	69.30	314	P	P	16 17 14.1	-1.0
BTK	Batken	69.38	316	P	P	16 17 15.0	-0.6
BTK				pmax	pmax		
	comp=Z,14nm,0.3s						
BTK	Batken	69.38	316	P	P	16 17 15.0	-0.6
KURK	Kurchatov	69.82	328	P	P	16 17 17.3	-0.6
KURK				pmax	pmax		
	comp=Z,49nm,0.8s						
KURK	Kurchatov	69.82	328	P	P	16 17 17.3	-0.6
VNDA	Vanda	75.35	173	P	P	16 17 50.5	+0.1
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VNDA	Vanda	75.35	173	P	P	16 17 50.5	+0.1
BRVK	Borovoye	75.45	328	*c i*P	P	16 17 51.5	+0.1
BRVK				pmax	pmax		
	comp=Z,29nm,1.3s						
BRVK	Borovoye	75.45	328	P	P	16 17 51.0	-0.4
TIXI	Tiksi	75.62	360	⇑*e*P	P	16 17 52.2	+0.3
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TIXI	Tiksi	75.62	360	P	P	16 17 51.8	-0.2
TIXI				IAmb	IAmb	16 17 53.0	
	comp=Z,8.1nm,0.8s						
SBA	Scott Base	76.24	172	P	P	16 17 57.5	+2.0
SBA				pmax	pmax		
	comp=Z,12nm,1.2s						
SBA	Scott Base	76.24	172	P	P	16 17 57.5	+2.0
SBA				IAmb	IAmb	16 18 15.7	
	comp=Z,12nm,1.2s						
BILL	Bilibino	76.44	13	*e*P	P	16 17 55.9	-0.8
BILL				*e*		16 18 05.9	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SOCY	Socotra	76.77	283	P	P	16 17 58.6	-1.1
GEYT	Alibeck	77.99	310	P	P	16 18 06.7	+0.6
	comp=Z,2.8nm,0.8s,baz=243,slow=6.3,SNR=5.5						
GEYT	Alibeck	77.99	310	P	P	16 18 06.0	-0.1
NRIK	Noril'sk	78.66	346	P	P	16 18 09.5	+0.4
	comp=Z,5.9nm,0.7s,baz=131,slow=7.7,SNR=8.5						
NRIK	Noril'sk	78.66	346	⇑*i*P	P	16 18 09.8	+0.7
NRIK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NRIK	Noril'sk	78.66	346	P	P	16 18 09.4	+0.4
NRIK				IAmb	IAmb	16 18 22.5	
	comp=Z,25nm,1.4s						
ABKAR	Akbulak array	79.96	321	P	P	16 18 15.5	-1.1
SVE	Sverdlovsk	82.06	329	*e*P	P	16 18 27.8	+0.2
SVE				pmax	pmax		
	comp=Z,33nm,1.0s						
ARU	Arti	83.01	328	*d i*P	P	16 18 31.7	-0.9
ARU				S	S	16 28 49.3	+0.1
ARU				pmax	pmax		
	comp=Z,61nm,3.7s						
ARU	Arti	83.01	328	P	P	16 18 32.2	-0.4
ARU				IAmb	IAmb	16 18 44.0	
	comp=Z,12nm,0.9s						
UMR	Umm Al-Rimmam	84.89	300	*e*P	P	16 18 42.6	-0.1
MIB	Mutribah	85.24	300	*e*P	P	16 18 44.2	-0.3
RST	Umm Al-Ruwaisa	85.50	300	*e*P	P	16 18 45.6	-0.2
RAYN	Ar Rayn	86.14	294	P	P	16 18 49.7	+0.5
RAYN				pmax	pmax		
	comp=Z,20nm,0.8s						
RAYN	Ar Rayn	86.14	294	P	P	16 18 49.7	+0.5
SYO	Syowa Base	86.16	201	⇑*e*P	P	16 18 47.9	-0.3
TTA	Tatalina	86.64	26	P	P	16 18 51.8	+1.0
TTA				pmax	pmax		
	comp=Z,12nm,1.1s						
TTA	Tatalina	86.64	26	P	P	16 18 51.8	+1.0
TTA				IAmb	IAmb	16 19 05.0	

	comp=Z,12nm,1.1s						
BELG	Belogornoye	88.28	323	⇓eP	P	16 19 00.1	+1.3
BELG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIRV	Kirov	88.33	329	⇓eP	P	16 19 00.5	+1.6
MLY	Manley	89.39	25	P	P	16 19 03.8	0.0
RND	Reindeer	89.91	26	P	P	16 19 05.8	-0.5
RND				pmax	pmax		
	comp=Z,27nm,1.4s						
RND	Reindeer	89.91	26	P	P	16 19 05.8	-0.5
COLD	Coldfoot	90.01	23	P	P	16 19 07.0	+0.4
COLD				IAmb	IAmb	16 19 08.6	
	comp=Z,9.1nm,1.3s						
KBZ	Khabaz	90.36	314	P	P	16 19 08.9	+0.1
	comp=Z,2.3nm,0.8s,baz=107,slow=8.6,SNR=5.2						
KBZ	Khabaz	90.36	314	⇓eP	P	16 19 08.5	-0.3
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CCB	Clear Creek Bu	90.56	25	P	P	16 19 08.6	-0.6
CCB				IAmb	IAmb	16 19 11.3	
	comp=Z,5.3nm,0.9s						
GURO	Guroymak-BITLI	90.56	308	P	P	16 19 09.9	-0.1
ILAR	Eielson Array	90.97	25	P	P	16 19 10.3	-0.8
	comp=Z,1.3nm,0.9s,baz=242,slow=4.9,SNR=12						
ILAR	Eielson Array	90.97	25	P	P	16 19 10.5	-0.6
ILAR	Eielson Array	90.97	25	P	P	16 19 10.5	-0.6
KMBO	Kilima Mbogo	92.17	269	P	P	16 19 18.5	+0.4
	comp=Z,0.7nm,0.4s,baz=59,slow=6.6,SNR=3.7						
KMBO	Kilima Mbogo	92.17	269	P	P	16 19 17.8	-0.3
KMBO				IAmb	IAmb	16 19 20.1	
	comp=Z,4.2nm,1.1s						
OBN	Obninsk	95.03	325	eP	P	16 19 28.8	-1.2
OBN				e		16 23 19.2	
OBN				ePPP	PPP	16 25 21.0	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SNAA	Sanae	98.33	194	P	Pdif	16 19 45.1	+0.3
SNAA	Sanae	98.33	194	⇑eP	Pdif	16 19 44.9	0.0
SNAA				pmax	pmax		
	comp=Z,5.0nm,1.7s						
ARCES	ARCESS Array B	98.72	340	P	P	16 19 45.4	-1.1
	comp=Z,4.2nm,0.9s,baz=92,slow=3.6,SNR=4.7						
ARCES	ARCESS Array B	98.72	340	P	P	16 19 45.4	-1.1
AKASG	Malin Array Be	99.69	321	P	Pdif	16 19 50.1	-1.1
	comp=Z,0.2nm,0.4s,baz=80,slow=4.0,SNR=1.7						
VNA2	Neumayer--Watz	99.91	193	P	Pdif	16 19 52.2	+0.4
PDAR	Pinedale Array	115.20	44	PKP	PKPdf	16 24 50.1	+0.8
	comp=Z,0.8nm,0.9s,baz=216,slow=1.6,SNR=4.2						
MNTX	Cornudas Mount	121.76	55	PKPdf	PKiKP	16 25 03.2	+1.1
TX31	Lajitas Ar. Si	123.83	57	PKPdf	PKPdf	16 25 06.2	+0.1
TXAR	Lajitas Array	123.84	57	PKP	PKiKP	16 25 07.0	+0.6
	comp=Z,1.1nm,0.8s,baz=270,slow=0.9,SNR=9.2						
TXAR	Lajitas Array	123.84	57	PKIKP	PKiKP	16 25 06.2	-0.2
TXAR	Lajitas Array	123.84	57	PKPdf	PKiKP	16 25 06.2	-0.2
JCT	Junction City	126.69	55	PKIKP	PKPdf	16 25 10.5	-1.0
JCT	Junction City	126.69	55	PKPdf	PKPdf	16 25 10.5	-1.0
TORD	Torodi Ar. Bea	127.72	283	PKP	PKiKP	16 25 14.2	-0.1
	comp=Z,2.9nm,0.7s,baz=26,slow=1.3,SNR=21						
TORD	Torodi Ar. Bea	127.72	283	PKPdf	PKPdf	16 25 12.7	-1.1
PLCA	Paso Flores	131.74	160	PKP	PKiKP	16 25 21.6	-0.3
	comp=Z,1.1nm,0.6s,baz=315,slow=4.3,SNR=3.7						
DBIC	Dimbokro	134.50	275	PKP	PKiKP	16 25 27.4	-0.7
	comp=Z,2.8nm,0.9s,baz=97,slow=2.7,SNR=3.3						
DBIC	Dimbokro	134.50	275		PKiKP	16 25 28.2	+0.2
PLTB	Pedras Altas	144.20	175	PKPdf	PKPbc	16 25 42.8	+0.8
AC02	Maricunga	144.34	151	PKPdf	PKPbc	16 25 43.3	+0.1
HZTE	Horizontes, Gu	144.61	77	PKPdf	PKPdf	16 25 45.7	+0.6
PB04	IPOC Station P	147.44	145	PKPbc	PKPab	16 25 53.6	-0.7
LVC	Limon Verde	147.91	147	PKP2	PKiKP	16 25 54.9	-0.9
LVC	Limon Verde	147.91	147	PKPbc	PKiKP	16 25 54.9	-0.9
TA01	Diego Aracena	148.78	142		PKiKP	16 25 57.1	0.0
ITAB	Concordia	148.79	177	PKPbc	PKPbc	16 25 56.1	+0.5
CPUP	Villa Florida	149.02	168	PKPbc	PKPbc	16 25 56.7	+0.5
	comp=Z,8.0nm,0.8s,baz=200,slow=1.6,SNR=8.9						
PB11	IPOC Station P	149.70	142	PKPbc	PKPbc	16 25 57.9	-0.4
LPAZ	La Paz	153.26	140	PKP	PKPdf	16 26 00.8	+1.1
	comp=Z,1.8nm,0.7s,baz=264,slow=1.2,SNR=6.4						
LPAZ				PKPbc	PKiKP	16 26 07.8	+0.5
	comp=Z,2.3nm,0.5s,baz=269,slow=1.7,SNR=13						
LPAZ	La Paz	153.26	140	PKIKP	PKPdf	16 25 59.5	-0.1
LPAZ						16 26 07.7	
LPAZ	La Paz	153.26	140	PKPdf	PKPdf	16 25 59.5	-0.1
LPAZ				PKPbc	PKiKP	16 26 07.7	+0.5

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*IDC **09** 16:06:12.5±10.0, 4°.64S×129°.89E, h0^{km}, mb4.8/4, mb1 5.0/5, mb1mx4.3/30, mbtmp4.9/5, ML5.4/1, MS3.7/2, Ms1 3.7/2, ms1mx3.2/23, Error ellipse: s-maj=223.8km s-min=42.4km az=149.0*

ISC 09 16:06:17.8±0.7**, 4°.60S**±0°.09×**130°.0E**±0°.2**, h40**^{km}**, n21, σ0**^{s}**.93**/17**, mb4.8**/5**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.91	19	Pn	Pn	16 07 13.8	-1.6
	226nm,0.3s,baz=266,slow=21,SNR=19						
SOEI	Soe	7.65	228	P	Pn	16 08 03.5	-3.4
DAV	Davao City (W)	12.40	339	LR	LR	16 14 25.8	
	comp=Z,295nm,20.4s,baz=310,slow=40						
WRAB	Tennant Creek	15.83	165	P	Pn	16 09 57.4	-0.5
COEN	Coen	15.98	126	P	Pn	16 10 00.9	+1.0
PMG	Port Moresby	17.69	107	LR	LR	16 19 17.3	
	comp=Z,285nm,18.1s,baz=280,slow=44						
WRKA	Warakurna	20.39	184	P	P	16 10 50.2	-1.2
OOD	Oodnadatta	23.70	167	P	P	16 11 24.6	-1.4
INKA	Innaminka	25.20	157	P	P	16 11 39.1	-0.6
QLP	Quilpie	25.76	150	P	P	16 11 45.2	+0.3
RK1H	Rockhampton Ha	27.22	135	P	P	16 11 58.2	+0.1
STKA	Stephens Creek	29.24	159	P	P	16 12 15.0	-1.0
HTT	Hallett	29.87	165	P	P	16 12 21.8	+0.1
CMSA	Cobar Meteorol	30.59	153	P	P	16 12 28.3	+0.3
ARPS	Mount Arapiles	33.82	163	P	P	16 12 56.5	+0.3
MGCD	Mangrove Creek	34.62	148	P	P	16 13 04.4	+1.2
	20nm,0.9s						
WHN	Wuhan	38.01	338	⇑P	P	16 13 32.7	+0.6
CMAR	Chiang Mai Arr	38.23	308	P	P	16 13 34.2	0.0
	6.8nm,0.6s,baz=136,slow=7.8,SNR=7.3						
KSRS	Korea Array	41.88	358	P	P	16 14 05.3	+1.2
	8.4nm,0.7s,baz=175,slow=9.7,SNR=20						
USRK	Ussuriysk Ar.	48.60	2	P	P	16 14 58.4	+0.9
	15nm,0.9s,baz=188,slow=7.1,SNR=14						
MKAR	Makanchi Array	66.23	326	P	P	16 17 01.5	-0.2
	5.2nm,0.6s,baz=115,slow=8.3,SNR=5.3						

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*IDC **09** 16:06:45.8±8.3, 26°.09S×28°.90E, h0^{km}, mb1 2.6/1, mb1mx2.4/34, mbtmp2.7/1, ML2.2/1, Error ellipse: s-maj=85.7km s-min=55.5km az=141.0*

*EAF **09** 16:06:45.1±2.1, 25°.95S×29°.95E, h0^{km}±42^{km}, MD4.2*

*BUL **09** 16:06:45.9±1.5, 25°.97S×29°.92E, h5^{km}±30^{km}, MD4.6*

ISC 09 16:06:38.2±1.0**, 25°.65S**±0°.05×**29°.35E**±0°.06**, h10**^{km}**, n17, σ2**^{s}**.43**/19**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	Changalane	2.63	105	i P	Pn	16 07 20.7	-0.1
CNG	Changalane	2.63	105	i P	Pn	16 07 20.7	-0.1
MOPA	Mopani	2.82	42	i P	Pb	16 07 28.7	-0.1
MOPA	Mopani	2.82	42	i P	Pb	16 07 28.7	-0.1
LBTB	Lobatse	3.46	280	i P	Pg	16 07 46.6	+2.1
LBTB	Lobatse	3.46	280	i P	Pg	16 07 46.6	+2.1
BOSA	Boshof	4.70	230	Pn	Pn	16 07 50.2	+0.9
	0.1nm,0.3s,baz=48,slow=16,SNR=1.8						
BOSA				Pg	Pb	16 08 00.2	-0.6
	0.3nm,0.3s,baz=60,slow=15,SNR=6.6						
BOSA				Sn	Sn	16 08 38.7	-5.2
	0.7nm,0.3s,baz=92,slow=10.0,SNR=3.8						
BOSA				Lg	Lg	16 08 57.2	
	3.3nm,0.3s,baz=148,slow=21,SNR=19						
BOSA	Boshof	4.70	230	i P	Pb	16 08 00.6	-0.1
BOSA	Boshof	4.70	230	i P	Pb	16 08 00.6	-0.1
I47ZA	BOSHOF INFRASO	4.71	230	i		16 32 20.0	
	baz=54,slow=330,SNR=4.4						
MATP	Matopo	5.26	351	i S	Sb	16 09 12.3	-1.4
MATP	Matopo	5.26	351	i S	Sb	16 09 12.3	-1.4
BLWY	Bulawayo	5.53	353	i P	Pb	16 08 14.7	-0.3
BLWY				i S	Sb	16 09 17.0	-4.4
BLWY	Bulawayo	5.53	353	i P	Pb	16 08 14.7	-0.3
BLWY				i S	Sb	16 09 17.0	-4.4
KRI	Karoi	8.78	2	i P	Pn	16 08 48.2	+2.7
KRI	Karoi	8.78	2	i P	Pn	16 08 48.2	+2.7
I35NA	TSUMEB INFRASO	12.64	298	i		17 20 20.0	
	baz=128,slow=322,SNR=1.2						

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*SOME **09** 16:09:39.0, 39°.17N×73°.73E, h5^{km}*

*KRNET **09** 16:09:43.7±0.1, 39°.11N×74°.88E, mb3.2*

*NNC **09** 16:09:47.7±5.4, 39°.08N×74°.68E, h0^{km}, mb3.6, mpv3.1, Error ellipse: s-maj=41.8km s-min=29.0km az=149.0*

ISC 09 16:09:45.4±1.8**, 39°.15N**±0°.08×**74°.80E**±0°.07**, h10**^{km}**, n25, σ2**^{s}**.19**/43**, 19C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.32	311	⇓eP	Pb	16 10 10.2	-0.2
	baz=11						
SFK				⇓eS	Sn	16 10 28.3	+0.4
	baz=11						
OHH	Osh	2.07	312	⇑iP	Pb	16 10 21.5	-1.6
	baz=12						
OHH				⇑iS	Sb	16 10 49.4	+0.6
	baz=12						
DRK	Karamyk	2.35	279	⇓iP	Pb	16 10 25.6	-2.3
	baz=80						
DRK				⇓iS	Sb	16 10 56.4	-0.7
	baz=80						
UCH	Uchtor	3.08	356	⇑eP	Pn	16 10 35.6	+1.1
	baz=55						
UCH				⇑iS	Sn	16 11 13.2	+1.5
	baz=55						
AML	Almayashu	3.09	345	⇑eP	Pn	16 10 35.9	+1.3
	baz=44						
AML				⇑iS	Sn	16 11 14.1	+2.2
	baz=44						
BTK	Batken	3.20	288	⇑iP	Pn	16 10 37.3	+1.4
	baz=88						
BTK				⇑iS	Sn	16 11 16.8	+2.7
	baz=88						
GAR	Garm	3.49	269	⇑iP	Pn	16 10 41.2	+1.4
	baz=70						
GAR				⇑iS	Sn	16 11 23.4	+2.2
	baz=70						
AAK	Ala-Archa	3.49	356	⇑Pn	Pb	16 10 48.4	+1.0
	6.8nm,0.7s						
AAK				⇑Sn	Sg	16 11 33.9	-3.6
	5.9nm,0.8s						
EKS2	Erkin-Say	3.59	348	⇑eP	Pn	16 10 42.5	+1.3
	baz=47						
EKS2				⇑iS	Sn	16 11 25.5	+1.7
	baz=47						
TRKS	Terek-Say	3.67	312	⇓iP	Pn	16 10 43.1	+0.8
	baz=11						
TRKS				⇓iS	Sn	16 11 26.6	+0.9
	baz=11						
MNAS	Manas	3.76	333	⇑iP	Pn	16 10 44.9	+1.3
	baz=33						
MNAS				⇑iS	Sn	16 11 29.9	+2.0
	baz=33						
MRKS	Merke	3.78	342	eP	Pn	16 10 45.2	+1.3
	1.6nm,0.8s						
MRKS				eS	Sn	16 11 32.9	+4.5
	2.9nm,0.3s						
TKM2	Tokmak 2	3.81	9	⇑Pn	Pb	16 10 48.6	-4.4
	1.8nm,0.5s						
TKM2				⇑Sn	Sb	16 11 35.8	-3.5
	6.0nm,0.8s						
DGS	Degeres	4.15	10	eP	Pg	16 11 00.8	-4.2
	3.2nm,0.8s						
DGS				eS	Sg	16 11 59.8	+1.1
	7.4nm,1.0s						
DGS	Degeres	4.15	10	Pg	Pg	16 11 03.8	-1.2
	3.2nm,0.8s						
DGS				Lg	Lg	16 11 59.8	
	7.4nm,1.0s						
TNSS	Tian-Shan	4.21	22	eP	Pg	16 11 03.1	-2.9
	0.8nm,0.9s						
TNSS				eS	Sg	16 12 03.5	+3.0
	3.6nm,1.0s						
TNSS	Tian-Shan	4.21	22	Pg	Pg	16 11 05.1	-1.0
	2.2nm,0.7s						
TNSS				Lg	Lg	16 12 01.9	
	3.6nm,1.0s						
MDOK	Medeo	4.35	22	eP	Pg	16 11 05.1	-3.7
	2.5nm,0.4s						
MDOK				eS	Sg	16 12 07.1	+1.9
	7.8nm,0.9s						
MDOK	Medeo	4.35	22	Pg	Pg	16 11 08.0	-0.7
	2.6nm,0.4s						
MDOK				Lg	Lg	16 12 07.1	
	7.8nm,0.9s						
KOTS	Kotyrbulak	4.44	22	Pg	Pg	16 11 10.1	-0.2
	2.8nm,0.6s						
KOTS				Lg	Lg	16 12 10.9	
	12nm,0.9s						
KRBS	Karabastau	4.59	8	eP	Pb	16 11 08.4	+2.3
	1.7nm,0.6s						
KRBS				eS	Sg	16 12 12.6	-0.1
	4.1nm,0.8s						
KRBS	Karabastau	4.59	8	Pg	Pg	16 11 11.1	-2.2
	1.7nm,0.6s						
KRBS				Lg	Lg	16 12 12.6	
	4.1nm,0.8s						
KTBS	Karatobe	4.77	17	Pg	Pg	16 11 15.2	-1.6
	1.5nm,0.5s						
KTBS				Lg	Lg	16 12 19.5	
	6.4nm,0.9s						
KUU	Kurty	4.88	13	Pg	Pg	16 11 17.1	-1.7
	1.3nm,0.4s						
KUU				Lg	Lg	16 12 22.7	
	12nm,0.9s						
KK08	Karatay Array	5.12	322	⇑Pn	Pn	16 11 04.5	+2.4
	1.4nm,0.5s,baz=141,slow=13						
KK08				⇓Sn	Sn	16 12 02.6	+1.4
	1.8nm,0.6s,baz=133,slow=22						

RSNC 09 16:11:43.2±1.2**, 6°.81N×73°.11W, h145**^{km}±4^{km}**, ML3.2, Mw3.5, 3C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	199	⇓eP	Pn	16 12 03.1	-0.2
BARC				eS	Sn	16 12 17.3	-1.2
BARC				i		16 12 19.3	
	comp=Z,326nm,0.2s						
PAMC	Pamplona, Colo	0.67	38	⇑eP	Pn	16 12 05.9	+0.4
PAMC				eS	Sn	16 12 22.9	+0.3
PAMC				i		16 12 25.1	
	comp=Z,242nm,0.7s						
BRRC	Barranca, Sant	0.67	297	eP	Pn	16 12 05.0	0.0
BRRC				eS	Sn	16 12 21.8	+0.2
BRRC				i		16 12 22.7	
	comp=Z,230nm,0.1s						
RUSC	La Rusia	0.91	178	eP	Pn	16 12 07.2	-0.2
RUSC				eS	Sn	16 12 25.9	+0.3
RUSC				i		16 12 27.5	
	comp=Z,205nm,0.3s						
TAMC	Tame, Arauca	1.36	106	⇑eP	Pn	16 12 11.5	+0.5
TAMC				eS	Sn	16 12 32.8	+0.6
PTBC	PUERTO BERRIO,	1.36	259	eP	Pn	16 12 09.7	-1.3
PTBC				eS	Sn	16 12 31.0	-1.2
PTBC				i		16 12 33.4	
	comp=Z,155nm,0.2s						
OCAC	Ocana	1.44	352	eP	Pn	16 12 11.3	-0.7
OCAC				eS	Sn	16 12 32.9	-1.0
OCAC				i		16 12 40.7	
	comp=Z,174nm,0.2s						
SPBC	San Pablo de B	1.49	220	eP	Pn	16 12 12.1	-0.3
SPBC				eS	Sn	16 12 33.6	-1.2
SPBC				i		16 12 38.5	
	comp=Z,178nm,0.2s						
ZARC	Zaragoza, Cauc	1.86	292	eP	Pn	16 12 16.1	-0.3
ZARC				eS	Sn	16 12 42.2	+0.2
ZARC				i		16 12 47.6	
	comp=Z,142nm,0.5s						
NORC	Norcasia	2.14	235	eP	Pn	16 12 19.1	-0.7
NORC				eS	Sn	16 12 47.3	-0.6
NORC				i		16 12 49.2	
	comp=Z,106nm,0.2s						
SMLC	San Martn de	2.20	334	eP	Pn	16 12 20.9	+0.4
SMLC				eS	Sn	16 12 49.1	+0.1
ROSC	El Rosal	2.30	212	eP	Pn	16 12 23.2	+1.2
ROSC				eS	Sn	16 12 54.4	+2.7
ROSC				i		16 12 59.2	
	comp=Z,91nm,0.5s						
HELC	Santa Helena	2.48	256	eP	Pn	16 12 24.7	+0.5
HELC				eS	Sn	16 12 55.0	-0.7
HELC				i		16 13 01.6	
	comp=Z,74nm,0.5s						
UREC	San Jos de Ur	2.58	291	eP	Pn	16 12 24.3	-0.8
UREC				eS	Sn	16 12 54.6	-2.8
UREC				i		16 13 07.2	
	comp=Z,64nm,0.2s						
SOCV	Socops	2.67	57	⇑eP	Pn	16 12 25.0	-1.3
SOCV				eS	Sn	16 12 55.7	-3.8
GUY2C	Guyana, Caldas	2.74	235	eP	Pn	16 12 27.8	+0.3
GUY2C				eS	Sn	16 13 01.8	+0.1
GUY2C				i		16 13 08.5	
	comp=Z,67nm,0.4s						
VILC	Villavicencio,	2.74	192	eP	Pn	16 12 26.9	-0.3
VILC				eS	Sn	16 12 59.9	-1.3
PTGC	Puerto Gaitan,	2.77	159	eP	Pn	16 12 26.6	-0.9
PTGC				eS	Sn	16 12 59.8	-1.8
PTGC				i		16 13 01.6	
	comp=Z,54nm,0.3s						
CBOC	Ciudad Bolivar	3.03	252	eP	Pn	16 12 32.0	+1.0
CBOC				eS	Sn	16 13 07.3	-0.5
DBBC	Dabeiba	3.09	274	eP	Pn	16 12 31.0	-0.6
DBBC				eS	Sn	16 13 07.0	-1.9
DBBC				i		16 13 15.1	
	comp=Z,182nm,0.5s						
SDV	Santo Domingo	3.21	50	eP	Pn	16 12 32.9	-0.3
SDV				eS	Sn	16 13 10.4	-1.5
ANIL	Santa Ana	3.24	225	eP	Pn	16 12 35.3	+1.5
ANIL				eS	Sn	16 13 15.8	+3.0
ANIL				i		16 13 20.4	
	comp=Z,114nm,0.3s						
PRAC	Prado	3.55	210	eP	Pn	16 12 37.1	-0.4
PRAC				eS	Sn	16 13 19.1	-0.4
PRAC				i		16 13 24.3	
	comp=Z,32nm,0.2s						
ORTC	Ortega, Tolima	3.58	217	eP	Pn	16 12 38.2	+0.3
ORTC				eS	Sn	16 13 19.7	-0.6
ORTC				i		16 13 28.6	
	comp=Z,42nm,0.6s						
ELOV	Elorza	3.60	87	eP	Pn	16 12 37.6	-0.5
ELOV				eS	Sn	16 13 17.3	-3.5
PLMC	San Jos del P	3.68	239	eP	Pn	16 12 39.2	0.0
PLMC				eS	Sn	16 13 21.7	-1.0
PLMC				i		16 13 27.1	
	comp=Z,30nm,0.2s						
CRJC	Cerrejon, Guaj	4.19	3	eP	Pn	16 12 43.8	-2.2
CRJC				eS	Sn	16 13 29.4	-5.4

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*IDC **09** 16:16:47.6±1.2, 4°.11S×129°.51E, h0^{km}, mb3.8/5, mb1 3.8/9, mb1mx3.4/44, mbtmp3.7/9, ML3.2/3, Error ellipse: s-maj=38.4km s-min=21.1km az=85.0*

*DJA **09** 16:16:50.1±0.7, 4°S±6°×12°9E±°, h10^{km}, M4.2/8, mb4.7/1, MLv3.9/8*

*NEIC **09** 16:16:50.0±1.4, 3°.99S±0°.05×129°.5E±0°.1, h10^{km}±1^{km}, mb4.1/7, Error ellipse: s-maj=23.0km s-min=5.9km az=283.0*

ISC 09 16:16:53.0±0.7**, 4°.08S**±0°.06×**129°.42E**±0°.05**, h36**^{km}**, n27, σ1**^{s}**.37**/30**, mb4.0**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.88	326	P	Pn	16 17 06.9	-1.9
MSAI				S	Sn	16 17 19.0	-1.4
AAI	Ambon	1.29	288	P	Pn	16 17 13.4	-1.0
AAI				S	Sn	16 17 28.9	-1.5
FAKI	Fak Fak	3.04	68	P	Pn	16 17 37.2	-1.4
FAKI	Fak Fak	3.04	68		Pn	16 17 37.6	-1.1
SIJI	Sorong	3.68	30	Pn	Pn	16 17 46.8	-0.6
	3.0nm,0.3s,baz=217,slow=17,SNR=5.8						
SIJI				Sn	Sn	16 18 28.8	-0.8
	4.8nm,0.3s,baz=217,slow=20,SNR=3.9						
SWI	Sorong	3.68	30	P	Pn	16 17 48.3	+0.9
LBMI	Labuha	3.92	331	P	Pn	16 17 51.4	+0.7
SANI	Sanana	3.98	300	P	Pn	16 17 51.4	-0.1
MTN	Manton Dam	8.87	169	Pn	Pn	16 19 00.7	+2.0
KNRA	Kununurra	11.54	183	Pn	Pn	16 19 36.2	+0.8
FITZ	Fitzroy Crossi	14.42	195	Pn	Pn	16 20 13.6	-1.0
	baz=22,slow=12,SNR=0.9						
WRA	Warramunga Arr	16.48	163	Pn	Pn	16 20 37.9	-3.7
	0.1nm,0.3s,baz=345,slow=12,SNR=3.8						
WRA	Warramunga Arr	16.48	163	P	P	16 20 45.7	+1.8
WB2	Warramunga Arr	16.48	163	P	Pn	16 20 38.4	-3.2
WB2				IAmb	IAmb	16 20 53.6	
	comp=Z,7.3nm,1.1s						
PSA00	Pilbara Seismi	19.72	207	P	P	16 21 19.8	+0.2
PSA00				IAmb	IAmb	16 21 36.6	
	comp=Z,18nm,0.8s						
AS31	Alice Springs	19.95	168	P	P	16 21 21.6	-0.5
AS31				IAmb	IAmb	16 21 46.5	
	comp=Z,1.8nm,0.8s						
ASAR	Alice Springs	19.95	168	P	P	16 21 21.6	-0.5
	comp=Z,0.1nm,0.3s,baz=347,slow=11,SNR=11						
ASAR	Alice Springs	19.95	168	P	P	16 21 22.2	+0.1
CMAR	Chiang Mai Arr	37.46	308	P	P	16 24 04.7	+1.4
	comp=Z,0.5nm,0.3s,baz=141,slow=7.9,SNR=4.1						
SONM	Songino Array	55.51	341	P	P	16 26 25.2	+0.6
	comp=Z,0.6nm,0.8s,baz=157,slow=9.1,SNR=2.3						
MK31	Makanchi Array	65.49	326	P	P	16 27 33.0	+0.5
MK31				IAmb	IAmb	16 27 48.3	
	comp=Z,1.2nm,0.6s						
MKAR	Makanchi Array	65.49	326	P	P	16 27 32.9	+0.4
	comp=Z,0.4nm,0.3s,baz=114,slow=7.5,SNR=16						
MKAR	Makanchi Array	65.49	326	P	P	16 27 32.8	+0.2
MAKZ	Makanchi	65.67	326	P	P	16 27 33.7	0.0
MAKZ				IAmb	IAmb	16 27 49.7	
	comp=Z,3.1nm,1.1s						
KURBB	Kurchatov Arra	69.74	328	P	P	16 27 59.5	+0.3
	comp=Z,1.3nm,0.7s,baz=128,slow=5.7,SNR=12						
KURK	Kurchatov	69.74	328	P	P	16 27 59.0	-0.3
BVAR	Borovoye Array	75.30	328	P	P	16 28 32.5	+0.1
	comp=Z,0.9nm,0.9s,baz=198,slow=8.7,SNR=4.8						

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*IDC **09** 16:17:02.1±1.1, 3°.91S×129°.94E, h0^{km}, mb4.0/7, mb1 4.1/11, mb1mx3.6/46, mbtmp4.0/11, ML3.5/4, MS3.0/1, Ms1 3.0/1, ms1mx2.6/35, Error ellipse: s-maj=34.1km s-min=20.2km az=89.0*

ISC 09 16:17:06.8±0.8**, 3°.95S**±0°.08×**130°.0E**±0°.1**, h35**^{km}**, n12, σ0**^{s}**.93**/13**, mb4.0**/6**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.33	23	Pn	Pn	16 17 54.8	-1.6
	5.8nm,0.3s,baz=223,slow=22,SNR=9.8						
SIJI				Sn	Sn	16 18 35.4	+0.6
	2.8nm,0.3s,baz=223,slow=23,SNR=2.2						
SIJI				LR	LR	16 19 51.0	
	comp=Z,209nm,19.1s,baz=47,slow=51						
KAPI	Kappang	10.22	264	Pn	Pn	16 19 29.8	-1.2
	0.7nm,0.3s,baz=251,slow=17,SNR=5.1						
FITZ	Fitzroy Crossi	14.68	196	Pn	Pn	16 20 32.4	+0.4
	0.1nm,0.3s,baz=15,slow=16,SNR=3.3						
WRA	Warramunga Arr	16.47	165	Pn	Pn	16 20 54.5	-0.8
	0.1nm,0.3s,baz=348,slow=12,SNR=5.0						
ASAR	Alice Springs	19.97	169	P	P	16 21 36.7	+0.5
	2.8nm,0.6s,baz=347,slow=9.5,SNR=7.8						
CMAR	Chiang Mai Arr	37.80	307	P	P	16 24 20.0	-0.1
	1.1nm,0.6s,baz=138,slow=7.3,SNR=7.3						
SONM	Songino Array	55.55	341	P	P	16 26 40.2	+1.4
	0.7nm,0.9s,baz=142,slow=7.2,SNR=3.6						
MKAR	Makanchi Array	65.67	326	P	P	16 27 48.1	+0.4
	1.3nm,0.4s,baz=115,slow=8.1,SNR=20						
ZALV	Zalesovo Beam	68.84	333	P	P	16 28 08.1	+0.5
	0.8nm,0.6s,baz=192,slow=13,SNR=3.8						
KURBB	Kurchatov Arra	69.90	328	P	P	16 28 14.7	+0.5
	3.0nm,0.7s,baz=128,slow=5.5,SNR=18						
BVAR	Borovoye Array	75.47	327	P	P	16 28 47.9	+0.6
	1.5nm,0.7s,baz=180,slow=12,SNR=7.5						
TORD	Torodi Ar. Bea	128.11	284	PKP	PKiKP	16 36 10.7	-0.2
	0.3nm,0.7s,baz=95,slow=1.9,SNR=2.1						

WEL 09 16:22:11.9±0.5**, 33°S**±7°×**18°0W**±1°7**, h231**^{km}±10^{km}**, M4.1**/24**, mB4.7**/16**, ML4.8**/31**, MLv4.6**/24**, Mw(mB)3.9**/16**, Error ellipse: s-maj=0.0km s-min=0.0km az=112.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.02	23	S	S	16 23 58.1	-6.9
MXZ	Matakaoa Point	4.84	199	P	Pn	16 23 25.4	+0.5
MXZ				S	S	16 24 25.6	+2.7
WMGZ	Waiomatatini S	5.05	197	P	Pn	16 23 30.6	+3.0
WMGZ				S	S	16 24 30.8	+3.0
HAZ	Te Kaha	5.17	202	P	Pn	16 23 30.2	+1.1
HAZ				S	S	16 24 30.4	0.0
PKGZ	Pakihiroa	5.21	200	P	Pn	16 23 33.0	+3.4

PKGZ				S	S	16 24 34.1	+2.7
PUZ	Puketiti	5.33	197	P	Pn	16 23 32.6	+1.5
PUZ				S	S	16 24 35.4	+1.3
RUGZ	Raukumara Rang	5.40	202	P	Pn	16 23 33.5	+1.4
RUGZ				S	S	16 24 35.4	-0.4
TWGZ	Tauwhareparae	5.50	199	P	Pn	16 23 36.5	+3.2
TWGZ				S	S	16 24 38.5	+0.4
OPRZ	Ohinepanea	5.72	211	P	Pn	16 23 39.4	+3.5
MWZ	Matawai	5.78	202	P	Pn	16 23 37.7	+0.8
TKGZ	Te Karaka	5.79	199	P	Pn	16 23 37.4	+0.6
TKGZ				S	S	16 24 45.4	+1.0
URZ	Urewera	5.86	205	P	Pn	16 23 38.5	+0.9
RIGZ	Rimuhau	6.06	199	P	Pn	16 23 42.5	+2.2
RIGZ				S	S	16 24 53.1	+2.3
MUGZ	Murupara	6.17	206	P	Pn	16 23 43.4	+1.6
MUGZ				S	S	16 24 54.8	+1.4
RTZ	Ruatahuna	6.22	205	P	Pn	16 23 42.5	+0.1
PRGZ	Paritu Road	6.23	197	P	Pn	16 23 44.8	+2.4
PRGZ				S	S	16 24 55.4	+0.7
MHGZ	Mahia Peninsul	6.44	197	P	Pn	16 23 45.6	+0.5
MHGZ				S	S	16 24 58.7	-0.8
HIZ	Hauiti	7.05	217	P	Pn	16 23 57.0	+4.1
TMVZ	Te Maari	7.15	210	P	Pn	16 23 55.2	+1.0
NNVZ	North Ngauruho	7.20	210	P	Pn	16 23 56.8	+1.9
OTVZ	Oturere	7.20	210	P	Pn	16 23 55.6	+0.6
NGZ	Ngauruhoe	7.24	210	P	Pn	16 23 57.2	+1.8
TUVZ	Tukino	7.29	210	P	Pn	16 23 57.4	+1.2
TUVZ				S	S	16 25 19.1	-0.5
KAHZ	Kahuranaki	7.32	201	P	Pn	16 23 56.0	-0.4
KAHZ				S	S	16 25 21.2	+1.1
BHHZ	Black Hill Sta	7.32	206	P	Pn	16 23 56.6	+0.2
BHHZ				S	S	16 25 15.7	-4.4
KRHZ	Kereru	7.35	204	P	Pn	16 23 55.7	-1.0
KRHZ				S	S	16 25 18.3	-2.4
WNVZ	Wahianoa	7.37	210	P	Pn	16 23 58.0	+0.9
PXZ	Pawanui	7.54	200	P	Pn	16 23 59.3	+0.1
PXZ				S	S	16 25 21.0	-4.1
VRZ	Vera Road	7.58	215	P	Pn	16 24 02.2	+2.6
PNHZ	Pukenui	7.65	204	P	Pn	16 24 00.4	-0.2
WPHZ	Waipukurau	7.71	203	P	Pn	16 24 01.9	+0.7
WPHZ				S	S	16 25 26.2	-2.7
PRHZ	Porangahau	7.83	201	P	Pn	16 24 03.0	+0.2
TSZ	Takapari Road	7.86	205	P	Pn	16 24 02.4	-0.8
TSZ				S	S	16 25 25.0	-7.6
WAZ	Wanganui	7.99	211	P	Pn	16 24 04.9	+0.1
WAZ				S	S	16 25 35.2	-0.2
NEZ	North Egmont	8.02	217	P	Pn	16 24 08.2	+2.9
ANWZ	Angora Road	8.05	201	P	Pn	16 24 06.1	+0.4
ANWZ				S	S	16 25 36.4	-0.7
POWZ	Post Office Ro	8.23	205	P	Pn	16 24 07.6	-0.2
POWZ				S	S	16 25 38.8	-2.2
BFZ	Birch Farm	8.33	202	P	Pn	16 24 08.9	-0.3
BFZ				S	S	16 25 37.5	-6.0
MRZ	Mangatainoka R	8.53	205	P	Pn	16 24 10.4	-1.4
HOWZ	Holdsworth Sta	8.76	204	P	Pn	16 24 13.3	-1.5
TMWZ	Te Maipa	8.83	202	P	Pn	16 24 15.1	-0.5
KIW	Kapiti Island	8.95	207	P	Pn	16 24 15.3	-1.9
MTW	Mount Morrison	9.00	204	P	Pn	16 24 16.3	-1.5
CAW	Cannon Point	9.11	206	P	Pn	16 24 17.0	-2.2
TRWZ	Traveller	9.15	202	P	Pn	16 24 19.0	-0.8
MSWZ	Moikau Station	9.31	204	P	Pn	16 24 19.7	-2.1
PLWZ	Palliser	9.45	204	P	Pn	16 24 21.3	-2.3

IDC 09 16:25:05.5±1.8,**4°.24S**×**130°.99E**,**h0^{km}**,**mb3.4**/1, **mb1 3.3**/4,**mb1mx2.8**/43,**mbtmp3.2**/4,**ML3.0**/3,**Error ellipse: s-maj=96.8km s-min=24.3km az=85.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	3.36	5	Pn	Pn	16 25 59.3	-0.1
	1.5nm,0.3s,baz=196,slow=23,SNR=3.1						
SIJI				Sn	Sn	16 26 41.1	+1.1
	0.9nm,0.3s,baz=220,slow=22,SNR=1.6						
WRA	Warramunga Arr	15.94	168	Pn	Pn	16 28 51.8	+0.5
	0.1nm,0.3s,baz=350,slow=10,SNR=2.3						
ASAR	Alice Springs	19.51	172	P	P	16 29 34.4	-0.2
	0.1nm,0.3s,baz=347,slow=11,SNR=4.9						
MKAR	Makanchi Array	66.50	326	P	P	16 35 57.1	0.0
	0.3nm,0.8s,baz=134,slow=7.8,SNR=1.3						

IDC 09 16:29:34.6±1.8,**4°.20S**×**130°.26E**,**h0^{km}**,**mb3.4**/1, **mb1 3.2**/4,**mb1mx2.7**/43,**mbtmp3.1**/4,**ML2.8**/3,**Error ellipse: s-maj=67.5km s-min=24.6km az=89.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	3.46	17	Pn	Pn	16 30 30.1	+0.4
	1.1nm,0.3s,baz=226,slow=23,SNR=7.5						
SIJI				Sn	Sn	16 31 11.4	-0.1
	1.0nm,0.3s,baz=224,slow=23,SNR=1.8						
WRA	Warramunga Arr	16.15	166	Pn	Pn	16 33 23.2	+0.1
	0.0nm,0.3s,baz=346,slow=12,SNR=1.6						
ASAR	Alice Springs	19.67	170	P	P	16 34 05.3	-0.1
	0.0nm,0.3s,baz=349,slow=11,SNR=5.2						
MKAR	Makanchi Array	66.05	326	P	P	16 40 23.3	0.0
	0.2nm,0.5s,baz=108,slow=7.6,SNR=1.5						

IDC ***09*** *16:29:58.9±1.9, 35°.32N×140°.82E, h0^{km}, mb3.6/3, mb1 3.6/6, mb1mx3.1/56, mbtmp3.6/6, ML3.2/3, Error ellipse: s-maj=37.3km s-min=25.1km az=110.0*

JMA ***09*** *16:30:03.4±0.1, 35°.37N×140°.68E, h36^{km}±2^{km}, M3.3 Broadband fault plane solution: P waves. NP1: φs170.00000°, δ31.00000°, λ-139.00000°. NP2: φs43.00000°, δ70.00000°, λ-66.00000°. Principal axes: T Plg22.0000°, Azm115.0000°; N Plg22.0000°, Azm215.0000°; P Plg58.0000°, Azm346.0000°;*

JMA Felt II J1.

ISC 09 16:30:04.1±1.0,**35°.33N**±0°.05×**140°.70E**±0°.06,**h45^{km}**,**n25**, σ**1^{s}.51**/21,**mb3.6**/3,**5C-2D**,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTR	Katsuura	0.36	239	⇓P	Pn	16 30 12.2	-1.2
JSMT	Sammumatsuo	0.37	327	P	Pn	16 30 11.9	-1.6
CHOJ	Chosi	0.39	20	⇑P	Pn	16 30 12.0	-1.8
CHOJ				S	Sn	16 30 18.7	-1.9
JCN	Nagara	0.41	282	⇑P	Pn	16 30 13.1	-0.9
JCN				S	Sn	16 30 20.0	-0.9
JKUC	kamogawauchiur	0.44	247	⇑P	Pn	16 30 13.1	-1.2
BSO4	Boso 4	0.45	221	P	Pn	16 30 13.9	-0.4
BSO4				X		16 30 20.8	
BSO3	Boso 3	0.55	196	⇓P	Pn	16 30 15.0	-0.4
BSO3				X		16 30 23.3	
BSO1	Boso 1	0.72	161	⇑P	Pn	16 30 16.6	-0.7
BSO1				X		16 30 26.9	
JYT	Yasato	0.98	336	⇑P	Pn	16 30 20.0	-1.4
JHJ	Hachijo jima 2	2.33	199	Pn	Pn	16 30 38.8	-1.2
	21nm,0.3s,baz=329,slow=23,SNR=8.6						
JHJ				Sn	Sn	16 31 05.1	-2.3
	59nm,0.3s,baz=78,slow=23,SNR=13						
MJAR	Matsushiro Arr	2.35	302	Pn	Pn	16 30 40.5	+0.3
	1.0nm,0.3s,baz=132,slow=13,SNR=34						
MAT	Matsushiro	2.35	302	P	Pn	16 30 40.4	+0.2
MAT				*e*S	Sn	16 31 05.5	-2.4
ASAJ	Asahikawa	8.89	9	Pn	Pn	16 32 08.5	-1.4
	0.5nm,0.3s,baz=202,slow=8.5,SNR=5.8						
ASAJ				Sn	Sn	16 33 50.8	+2.0
	0.1nm,0.3s,baz=41,slow=19,SNR=1.4						
H11N2	WAKE ISLAND Hy	27.84	117	T	T	17 04 59.2	
	baz=309,slow=75,SNR=33						
H11N1	WAKE ISLAND Hy	27.84	117	T	T	17 04 57.8	
	baz=309,slow=75,SNR=32						
H11N3	WAKE ISLAND Hy	27.85	117	T	T	17 04 56.4	
	baz=309,slow=75,SNR=21						
H11S1	WAKE ISLAND Hy	28.48	119	T	T	17 05 40.1	
	baz=312,slow=76,SNR=168						
H11S3	WAKE ISLAND Hy	28.48	119	T	T	17 05 40.9	
	baz=312,slow=76,SNR=122						
H11S2	WAKE ISLAND Hy	28.50	119	T	T	17 05 39.9	
	baz=312,slow=76,SNR=146						
MKAR	Makanchi Array	44.55	303	P	P	16 38 13.3	+1.9
	0.6nm,0.8s,baz=91,slow=9.7,SNR=3.7						
KURBB	Kurchatov Arra	46.61	309	P	P	16 38 28.5	+1.0
	1.3nm,0.7s,baz=86,slow=8.0,SNR=9.4						
ILAR	Eielson Array	51.24	32	P	P	16 39 03.9	+1.1
	0.6nm,0.9s,baz=279,slow=6.3,SNR=2.8						
H03N2	Juan Fernandez	147.39	98	T	T	19 34 20.3	
	baz=289,slow=76,SNR=4.0						
H03N3	Juan Fernandez	147.40	98	T	T	19 34 22.3	
	baz=289,slow=76,SNR=6.8						
H03N1	Juan Fernandez	147.41	98	T	T	19 34 21.4	
	baz=289,slow=76,SNR=4.6						

IDC ***09*** *16:31:41.2±4.9, 36°.04N×141°.13E, h0^{km}, mb3.4/1, mb1 3.6/4, mb1mx2.9/63, mbtmp3.6/4, ML3.1/3, Error ellipse: s-maj=77.7km s-min=37.9km az=77.0*

JMA ***09*** *16:31:51.8±0.2, 35°.72N×140°.21E, h64^{km}±2^{km}, M2.9*

ISC 09 16:31:52.6±1.3,**35°.65N**±0°.05×**140°.22E**±0°.07,**h66^{km}**±10^{km}, **n16**,σ**1^{s}.07**/21,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSMT	Sammumatsuo	0.19	93	P	Pn	16 32 02.2	-0.5
JCN	Nagara	0.23	183	P	Pn	16 32 02.9	0.0
TOK	Tokyo	0.38	276	P	Pn	16 32 03.9	+0.1
JIHU	Itakohorinouch	0.40	39	P	Pn	16 32 03.2	-0.9
BSO3	Boso 3	0.88	164	P	Pn	16 32 08.8	-0.3
JAG	Ashikaga	0.99	322	P	Pn	16 32 09.5	-1.2
JOD2	Odawara 2	1.00	248	P	Pn	16 32 10.1	-0.8
JOD2				S	Sn	16 32 23.2	-1.3
JRY	Ryogami san	1.13	289	P	Pn	16 32 12.2	-0.4
JIM2	Oshima 3	1.13	215	P	Pn	16 32 11.3	-1.3
JIM2				*e*S	Sn	16 32 26.9	-0.6
JKT	Katashina	1.36	325	P	Pn	16 32 14.4	-1.3
JYN	Shimob	1.37	264	P	Pn	16 32 15.2	-0.6
MJAR	Matsushiro Arr	1.85	299	Pn	Pn	16 32 21.4	-0.8
	3.1nm,0.3s,baz=101,slow=14,SNR=16						
MJAR				Sn	Sn	16 32 46.9	+2.3
	1.8nm,0.3s,baz=141,slow=15,SNR=3.0						
MAT	Matsushiro	1.85	299	P	Pn	16 32 21.9	-0.3
MAT				*e*S	Sn	16 32 44.6	-0.1
JHJ	Hachijo jima 2	2.55	188	Pn	Pn	16 32 31.6	-0.1
	12nm,0.3s,baz=61,slow=10,SNR=1.9						
JHJ				Sn	Sn	16 33 01.7	+0.1
	54nm,0.3s,baz=253,slow=22,SNR=6.2						
KSRS	Korea Array	10.05	284	Pn	Pn	16 34 16.2	+2.1
	0.1nm,0.3s,baz=94,slow=14,SNR=4.5						
MKAR	Makanchi Array	44.05	303	P	P	16 39 53.8	0.0
	0.4nm,0.7s,baz=93,slow=9.5,SNR=4.1						

IDC ***09*** *16:35:21.4±0.6, 4°.20S×129°.56E, h0^{km}, mb4.5/19, mb1 4.6/24, mb1mx4.3/43, mbtmp4.5/24, ML4.0/4, Error ellipse: s-maj=20.8km s-min=12.5km az=74.0*

DJA ***09*** *16:35:23.6±0.3, 4°S±3°×13°0E±°, h10^{km}, M4.8/12, mB5.2/7, mb4.8/8, MLv4.9/12, Mw(mB)4.6/7*

NEIC ***09*** *16:35:25.1±1.8, 4°.13S±0°.06×129°.51E±0°.07, h23^{km}±1^{km}, mb4.7/42, Error ellipse: s-maj=9.7km s-min=8.7km az=86.0*

ISC 09 16:35:26.0±0.3,**4°.24S**±0°.04×**129°.55E**±0°.05,**h36^{km}**,**n142**, σ**1^{s}.50**/140,**mb4.6**/40,**1C-1D**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	1.08	325	P	Pn	16 35 43.1	-1.5
MSAI				S	Sn	16 35 57.9	-0.4
AAI	Ambon	1.46	292	P	Pn	16 35 47.5	-2.3
FAKI	Fak Fak	2.99	64	P	Pn	16 36 11.9	+1.0
FAKI	Fak Fak	2.99	64	Pn	Pn	16 36 11.3	+0.4
SIJI	Sorong	3.76	27	Pn	Pn	16 36 21.1	-0.3
	21nm,0.3s,baz=210,slow=20,SNR=20						
SIJI				Sn	Sn	16 37 05.5	+1.0
	41nm,0.3s,baz=270,slow=20,SNR=2.2						
SWI	Sorong	3.76	27	P	Pn	16 36 21.9	+0.4
SAUI	Saumlaki	4.11	155	P	Pn	16 36 27.6	+1.3
SAUI	Saumlaki	4.11	155	Pn	Pn	16 36 27.6	+1.3
LBMI	Labuha	4.12	330	P	Pn	16 36 26.2	-0.2
SANI	Sanana	4.17	301	P	Pn	16 36 26.5	-0.6
TNTI	Ternate	5.43	336	Pn	Pn	16 36 42.7	-1.8
KMSI	Cibinong	7.33	311	P	Pn	16 37 10.8	+0.2
	0.9nm2μm222nm,0.6s						
SOEI	Soe	7.59	223	P	Pn	16 37 14.1	-0.1
	0.6nm1μm70nm,1.6s						
SOEI	Soe	7.59	223		Pn	16 37 14.6	+0.4
BATI	Baumata	8.32	224	Pn	Pn	16 37 26.7	+2.5
	4.5nm,0.3s,baz=98,slow=2.7,SNR=9.9						
MTN	Manton Dam	8.70	170	P	Pn	16 37 31.7	+2.4
	baz=8.8,SNR=19						
MTN	Manton Dam	8.70	170		Pn	16 37 30.0	+0.7
KDU	Kakadu	8.88	161	P	Pn	16 37 32.1	+0.3
	baz=9.0,SNR=26						
BSSI	Bau Bau, Buton	9.22	258	P	Pn	16 37 37.8	+1.3
	614nm38nm,1.0s						
KAPI	Kappang	9.80	265	Pn	Pn	16 37 48.3	+3.9
	0.8nm,0.3s,baz=87,slow=7.7,SNR=4.2						
TOLI2	Tolitoli	10.25	301	Pn	Pn	16 37 49.3	-1.3
GENI	Genyem	10.72	82	P	Pn	16 37 57.9	+0.8
	41nm,0.9s						
KNRA	Kununurra	11.40	184	P	Pn	16 38 06.2	-0.1
	baz=12,SNR=11						
KNRA	Kununurra	11.40	184	Pn	Pn	16 38 06.7	+0.4
PLAI	Plampang	12.55	248	P	Pn	16 38 22.9	+0.7
	1μm61nm,1.2s						
FITZ	Fitzroy Crossi	14.30	195	Pn	Pn	16 38 46.7	+0.7
	0.3nm,0.3s,baz=89,slow=6.6,SNR=10						
JAGI	Jajag, Banyuwa	15.87	254	Pn	Pn	16 39 04.4	-2.4
JAGI				IAmb	IAmb	16 39 14.7	
	comp=Z,41nm,1.0s						
WB0	Warramunga Arr	16.14	163	P	Pn	16 39 07.4	-2.9
BLJI	Banyuglugur	16.25	257	P	P	16 39 18.0	+3.7
WRAB	Tennant Creek	16.29	164	P	Pn	16 39 08.4	-3.7
WRA	Warramunga Arr	16.30	164	Pn	Pn	16 39 10.7	-1.5
	comp=Z,0.5nm,0.3s,baz=348,slow=13,SNR=30						
WRA				Sn	Sn	16 42 03.4	-8.6
	baz=346,slow=23,SNR=4.2						
WRA	Warramunga Arr	16.30	164		Pn	16 39 09.2	-3.1
WB2	Warramunga Arr	16.30	164		Pn	16 39 08.8	-3.5
WR0	Warramunga Arr	16.37	163		Pn	16 39 09.9	-3.2
COEN	Coen	16.55	127		Pn	16 39 13.3	-2.2
PBKI	Pangkalan Bun	17.91	274	P	P	16 39 40.7	+7.9
PMG	Port Moresby	18.22	107	P	Pn	16 39 36.4	+0.2
	comp=Z,0.2nm,0.3s,baz=344,slow=12,SNR=3.6						
PMG	Port Moresby	18.22	107	P	Pn	16 39 36.8	+0.6
SBUM	Sibu	18.55	291		P	16 39 39.6	-0.2
QIS	Mount Isa	18.95	150	P	Pn	16 39 44.6	-0.4
	baz=19,SNR=27						
PSA00	Pilbara Seismi	19.64	208	P	Pn	16 39 52.8	-0.5
PSA00				IAmb	IAmb	16 39 56.0	
	comp=Z,55nm,1.1s						
AS31	Alice Springs	19.77	168		Pn	16 39 54.1	-0.7
ASAR	Alice Springs	19.77	168	P	Pn	16 39 54.5	-0.3
	comp=Z,1.4nm,0.3s,baz=347,slow=10,SNR=65						
ASAR				S	S	16 43 30.7	-3.4
	baz=360,slow=23,SNR=2.4						
ASAR	Alice Springs	19.77	168		Pn	16 39 54.3	-0.6
MTSU	Mount Surprise	19.99	135	P	Pn	16 39 56.8	-0.7
	baz=20,SNR=37						
WRKA	Warakurna	20.72	183	P	Pn	16 40 04.8	-1.2
	baz=21,SNR=63						
RABL	Rabaul	22.55	91	P	P	16 40 22.8	-0.5
CTA	Charters Tower	22.65	135	P	P	16 40 24.7	+0.5
	comp=Z,9.2nm,0.7s,baz=320,slow=12,SNR=9.3						
CTAO	Charters Tower	22.65	135	P	P	16 40 24.5	+0.3
CTAO				IAmb	IAmb	16 40 26.0	
	comp=Z,16nm,0.8s						
GIRL	Giralia	23.55	218	P	P	16 40 35.3	+2.0
	baz=24,SNR=5.2						
MEEK	Meekatharra	24.61	204	P	P	16 40 45.4	+2.3
	baz=25,SNR=5.5						
FORT	Forrest	26.44	183	P	P	16 40 59.7	+0.1
BBOO	Buckleboo	29.07	169	P	P	16 41 23.5	+0.3
BBOO				IAmb	IAmb	16 41 27.6	
	comp=Z,28nm,1.4s						
STKA	Stephens Creek	29.73	159	P	P	16 41 29.4	+0.4
	comp=Z,3.2nm,0.9s,baz=323,slow=9.7,SNR=5.2						
STKA	Stephens Creek	29.73	159	P	P	16 41 30.0	+1.0
	baz=30,SNR=4.1						
STKA	Stephens Creek	29.73	159	P	P	16 41 29.1	+0.2
IPM	Ipoh	29.78	287	P	P	16 41 29.0	-0.7
MUN	Mundaring	30.31	203	P	P	16 41 37.2	+3.1
	baz=30,SNR=3.0						
KULM	Kulim	30.38	288	P	P	16 41 33.4	-1.5
KULM				IAmb	IAmb	16 41 37.5	
	comp=Z,12nm,1.1s						
CMSA	Cobar Meteorol	31.11	153	P	P	16 41 42.3	+1.2
	baz=31,SNR=5.2						
RPSI	Rantau Prapat	31.37	282	P	P	16 41 44.4	+0.7
PSI	Prapat	31.39	282	P	P	16 41 44.4	+0.4
	comp=Z,3.6nm,0.7s,baz=172,slow=7.0,SNR=3.7						
ARPS	Mount Arapiles	34.29	162	P	P	16 42 11.0	+2.1
	baz=34,SNR=7.7						
JNU	Nakatsue	37.17	2	P	P	16 42 33.6	-0.1
	comp=Z,15nm,0.5s,baz=219,slow=1.3,SNR=7.3						
NJ2	Nanjing	37.49	345	*e*P	P	16 42 38.7	+2.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CM31	Chiang Mai Arr	37.66	308	P	P	16 42 37.8	-0.2
CM31				IAmb	IAmb	16 42 52.2	
	comp=Z,8.7nm,1.1s						
CMAR	Chiang Mai Arr	37.66	308	P	P	16 42 38.9	+0.9
	comp=Z,3.3nm,0.8s,baz=137,slow=7.3,SNR=31						
CMAR	Chiang Mai Arr	37.66	308	P	P	16 42 37.5	-0.4
CHTO	Chiang Mai	37.86	308	P	P	16 42 39.4	-0.3
CHTO				IAmb	IAmb	16 42 43.1	
	comp=Z,10.0nm,0.8s						
LHI	Lord Howe Isla	38.80	138	P	P	16 42 50.1	+2.7
	baz=39,SNR=4.6						
MJAR	Matsushiro Arr	41.36	11	P	P	16 43 08.2	-0.4
	comp=Z,5.7nm,0.8s,baz=175,slow=9.3,SNR=16						
MAJO	Matsushiro	41.37	11	P	P	16 43 07.2	-1.4
MAJO				IAmb	IAmb	16 43 10.8	
	comp=Z,13nm,0.7s						
MAT	Matsushiro	41.37	11	P	P	16 43 07.7	-0.9
JYT	Yasato	41.47	13	P	P	16 43 08.4	-1.0
JYT				IAmb	IAmb	16 43 14.5	
	comp=Z,14nm,0.8s						
KSAR	Wonju Array Be	41.49	358	P	P	16 43 09.3	-0.3
KSRS	Korea Array	41.50	358	P	P	16 43 10.4	+0.7
	comp=Z,3.3nm,0.8s,baz=172,slow=8.7,SNR=13						
KS19	Wonju Array Si	41.55	358	P	P	16 43 10.3	+0.2
KS19				IAmb	IAmb	16 43 13.4	
	comp=Z,11nm,0.9s						
XAN	Xi'an	42.76	334	P	P	16 43 20.1	0.0
XAN				pP	pP	16 43 29.9	+0.6
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
JSD	Sado	42.83	10	P	P	16 43 19.4	-1.1
JSD				IAmb	IAmb	16 43 23.2	
	comp=Z,9.6nm,0.7s						
JMM	Marumori	43.17	13	P	P	16 43 22.1	-1.2
BJI	Beijing	45.74	346	P	P	16 43 49.0	+5.2
SHL	Shillong	47.03	311	P	P	16 43 53.2	-1.2
CN2	Changchun	47.96	356	*e*P	P	16 44 01.6	+0.5
USA0B	Ussuriysk Arra	48.26	2	P	P	16 44 03.2	-0.2
USA0B				IAmb	IAmb	16 44 05.0	
	comp=Z,6.0nm,0.7s						
USRK	Ussuriysk Ar.	48.26	2	P	P	16 44 04.0	+0.6
	comp=Z,4.2nm,0.5s,baz=180,slow=6.7,SNR=15						
USRK	Ussuriysk Ar.	48.26	2	P	P	16 44 03.4	-0.1
MDJ	Mudanjiang	48.63	0	P	P	16 44 08.2	+2.0
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,140nm,4.2s						
LSA	Lhasa	49.92	315	P	P	16 44 16.5	-0.4
LSA				IAmb	IAmb	16 44 22.2	
	comp=Z,4.4nm,0.6s						
GTA	Gaotai	51.35	331	⇑P	P	16 44 27.1	-0.1
GTA				pP	pP	16 44 34.1	-2.7
GTA				sP	sP	16 44 38.9	-1.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,39nm,5.8s						
GTA				LR	LR		
	comp=N,110nm,14.9s						
GTA				LR	LR		
	comp=E,130nm,17.4s						
GTA				LR	LR		
	comp=Z,200nm,16.4s						
KLR	Kul'dur	53.28	2	P	P	16 44 42.1	+0.9
	comp=Z,2.3nm,0.6s,baz=243,slow=6.8,SNR=9.1						
HYB	Hyderabad	54.73	295	*i* P	P	16 44 51.5	-0.9
ULN	Ulaanbaatar	55.51	342	P	P	16 44 56.6	-1.0
ULN				IAmb	IAmb	16 45 00.6	
	comp=Z,5.0nm,0.8s						
SONM	Songino Array	55.70	341	P	P	16 44 59.8	+0.9
	comp=Z,2.6nm,0.9s,baz=156,slow=7.3,SNR=10.0						
WMQ	Urumqi	60.85	326	*e*P	P	16 45 37.3	+2.4
WMQ				pP	pP	16 45 41.9	-2.7
PETK	Petropavlovsk-	61.86	19	P	P	16 45 42.7	+1.3
	comp=Z,2.4nm,0.8s,baz=212,slow=8.0,SNR=2.1						
MK31	Makanchi Array	65.69	326	P	P	16 46 06.5	-0.4
MK31				IAmb	IAmb	16 46 09.6	
	comp=Z,5.6nm,0.8s						
MKAR	Makanchi Array	65.69	326	P	P	16 46 07.2	+0.3
	comp=Z,3.3nm,0.4s,baz=117,slow=8.0,SNR=63						
MKAR	Makanchi Array	65.69	326	P	P	16 46 06.6	-0.3
KSH	Kashi	65.70	317	P	P	16 46 06.1	-1.1
KSH				pP	pP	16 46 11.0	-6.0
MAKZ	Makanchi	65.87	326	P	P	16 46 07.2	-0.8
MAKZ				IAmb	IAmb	16 46 10.2	
	comp=Z,7.1nm,0.9s						
YAK	Yakutsk	66.08	0	P	P	16 46 08.4	-0.5
ZAA0	Zalesovo Array	68.92	334	P	P	16 46 26.2	-1.0
ZAA0				IAmb	IAmb	16 46 29.5	
	comp=Z,9.4nm,1.1s						
ZALV	Zalesovo Beam	68.92	334	P	P	16 46 27.3	+0.1
	comp=Z,10nm,1.0s,baz=108,slow=4.8,SNR=15						
ZALV	Zalesovo Beam	68.92	334	P	P	16 46 26.2	-1.0
GAR	Garm	69.42	314	P	P	16 46 30.2	-0.5
GAR				IAmb	IAmb	16 46 32.5	
	comp=Z,9.4nm,1.1s						
KURK	Kurchatov	69.94	328	P	P	16 46 32.7	-0.8
KKAR	Karatay Array	70.98	318	P	P	16 46 39.0	-1.1
BRVK	Borovoye	75.57	328	P	P	16 47 06.3	-0.6
TIXI	Tiksi	75.74	360	P	P	16 47 07.0	-0.5
TIXI				IAmb	IAmb	16 47 08.5	
	comp=Z,4.2nm,0.8s						
GEYT	Alibeck	78.10	310	P	P	16 47 22.7	+1.1
	comp=Z,2.2nm,0.8s,baz=82,slow=4.9,SNR=4.0						
NRIK	Noril'sk	78.79	346	P	P	16 47 25.2	+0.6
	comp=Z,3.1nm,0.6s,baz=141,slow=6.4,SNR=6.6						
NRIK	Noril'sk	78.79	346	P	P	16 47 24.1	-0.5
NRIK				IAmb	IAmb	16 47 29.5	
	comp=Z,7.2nm,1.1s						
ABKAR	Akbulak array	80.08	321	P	P	16 47 31.2	-0.9
ARU	Arti	83.14	328	P	P	16 47 47.4	-0.7
ARU				IAmb	IAmb	16 47 49.8	
	comp=Z,5.4nm,0.8s						
SYO	Syowa Base	86.06	201	⇓*e*P	P	16 48 02.0	-0.6
RAYN	Ar Rayn	86.23	294	P	P	16 48 04.0	-0.5
N19K	Bonanza Creek	86.87	28	P	P	16 48 07.4	+0.5
KDAK	Kodiak Island	87.11	32	P	P	16 48 08.9	+0.9
	comp=Z,20nm,1.0s,baz=243,slow=4.5,SNR=2.6						
ILAR	Eielson Array	91.05	25	P	P	16 48 25.7	-0.7
	comp=Z,0.8nm,0.7s,baz=262,slow=4.5,SNR=10.0						
ILAR	Eielson Array	91.05	25	P	P	16 48 25.4	-1.0
KLMR	Klimovskoe	93.68	331	*e*P	P	16 48 37.4	-1.2
KLMR				AMP		16 48 42.6	
	comp=Z,19nm,1.3s						
INK	Inuvik	96.48	22	P	P	16 48 51.3	+0.1
	comp=Z,1.4nm,0.8s,baz=129,slow=6.2,SNR=3.3						
SNAA	Sanae	98.23	194	P	Pdif	16 49 00.0	+0.8
ARCES	ARCESS Array B	98.85	340	P	Pdif	16 49 03.8	+1.9
	comp=Z,8.1nm,1.1s,baz=357,slow=4.9,SNR=3.8						
ARCES	ARCESS Array B	98.85	340	P	P	16 49 01.4	-0.5
ARCES				IAmb	IAmb	16 49 02.6	
	comp=Z,2.3nm,1.0s						
VNA2	Neumayer--Watz	99.81	193	Pdiff	Pdif	16 49 06.2	0.0
VNA3	Neumayer Olymp	100.07	192	Pdiff	Pdif	16 49 07.6	+0.2
TXAR	Lajitas Array	123.86	57	PKP	PKiKP	16 54 22.1	+0.8
	comp=Z,0.3nm,0.8s,baz=282,slow=1.7,SNR=2.2						
TXAR	Lajitas Array	123.86	57		PKPdf	16 54 21.0	-0.1
TORD	Torodi Ar. Bea	127.79	283	PKP	PKiKP	16 54 29.7	+0.3
	comp=Z,1.1nm,0.8s,baz=54,slow=1.5,SNR=5.1						
TORD	Torodi Ar. Bea	127.79	283	PKPdf	PKPdf	16 54 28.3	-0.5
S39A	Bolivar	128.64	44		PKPdf	16 54 29.8	-0.1
AC02	Maricunga	144.22	151		PKPbc	16 54 58.6	+0.9
PB06	IPOC Station P	147.35	146	PKPbc	PKPbc	16 55 06.5	-0.5
LVC	Limon Verde	147.79	147	PKPbc	PKiKP	16 55 09.7	-0.8
	comp=Z,5.4nm,0.8s,baz=187,slow=1.0,SNR=5.6						
LVC	Limon Verde	147.79	147		PKPbc	16 55 07.5	-0.9
PB07	IPOC Station P	147.94	144	PKPbc	PKPbc	16 55 08.8	+0.2
PB01	IPOC Station P	148.70	144	PKPbc	PKPbc	16 55 10.9	+0.4
CPUP	Villa Florida	148.89	168	PKPbc	PKPbc	16 55 11.2	+0.5
	comp=Z,8.5nm,1.1s,baz=178,slow=4.8,SNR=3.3						
CPUP	Villa Florida	148.89	168		PKPbc	16 55 09.3	-1.4
LPAZ	La Paz	153.14	140	PKPbc	PKiKP	16 55 22.7	+0.8
	comp=Z,1.5nm,0.7s,baz=162,slow=4.8,SNR=3.6						
LPAZ	La Paz	153.14	140	PKPbc	PKiKP	16 55 22.0	+0.1

IDC ***09*** *16:35:39.3±0.4, 4°.21S×129°.54E, h0^{km}, mb4.8/23, mb1 4.9/26, mb1mx4.6/41, mbtmp4.8/26, ML4.4/3, Error ellipse: s-maj=20.0km s-min=11.8km az=73.0*
NEIC ***09*** *16:35:44.6±1.9, 4°.15S±0°.06×129°.47E±0°.07, h27^{km}±4^{km}, mb5.0/79, Error ellipse: s-maj=10.3km s-min=8.4km az=78.0*
ISC 09 16:35:44.9±0.3, **4°.17S**±0°.05×**129°.51E**±0°.06, **h36**^{km}, **n154**, σ**0^{s}.94**/160, **mb5.0**/67, **2C-2D**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**3.00**	**66**	Pn	**Pn**	**16 36 30.4**	**+0.5**
SIJI	**Sorong**	**3.71**	**28**	Pn	**Pn**	**16 36 39.3**	**-0.5**
	18nm,0.3s,baz=189,slow=6.5,SNR=8.3						
SIJI				Sn	**Sn**	**16 37 21.2**	**-1.1**
	34nm,0.3s,baz=270,slow=15,SNR=3.9						
SAUI	**Saumlaki**	**4.19**	**155**	Pn	**Pn**	**16 36 47.5**	**+1.3**
TNTI	**Ternate**	**5.35**	**336**	Pn	**Pn**	**16 37 01.4**	**-1.0**
MTN	**Manton Dam**	**8.77**	**170**	Pn	**Pn**	**16 37 49.4**	**+0.1**
TOLI2	**Tolitoli**	**10.18**	**301**	Pn	**Pn**	**16 38 07.8**	**-0.8**
KNRA	**Kununurra**	**11.46**	**184**	Pn	**Pn**	**16 38 28.3**	**+2.2**
JAGI	**Jajag, Banyuwa**	**15.85**	**254**		**P**	**16 39 28.2**	**-0.7**
JAGI				IAmb	IAmb	16 39 32.4	
	comp=Z,94nm,1.1s						
WB0	**Warramunga Arr**	**16.22**	**163**	Pn	**Pn**	**16 39 30.8**	**+0.6**
WRAB	**Tennant Creek**	**16.36**	**164**	Pn	**Pn**	**16 39 31.7**	**-0.3**
WRA	**Warramunga Arr**	**16.37**	**164**	Pn	**Pn**	**16 39 28.2**	**-3.9**
	comp=Z,0.9nm,0.3s,baz=345,slow=13,SNR=12						
WRA	**Warramunga Arr**	**16.37**	**164**	P	**P**	**16 39 34.7**	**+0.1**
WB2	**Warramunga Arr**	**16.37**	**164**	Pn	**Pn**	**16 39 29.9**	**-2.3**
WR0	**Warramunga Arr**	**16.45**	**163**	P	**Pn**	**16 39 30.9**	**-2.1**
COEN	**Coen**	**16.62**	**127**	Pn	**Pn**	**16 39 35.8**	**+0.5**
SBUM	**Sibu**	**18.49**	**291**	P	**Pn**	**16 39 59.7**	**+1.3**
PSA00	**Pilbara Seismi**	**19.68**	**208**	P	**P**	**16 40 11.8**	**+0.6**
PSA00				IAmb	IAmb	16 40 12.8	
	comp=Z,92nm,0.6s						
PSA00	**Pilbara Seismi**	**19.68**	**208**	P	**P**	**16 40 11.7**	**+0.6**
PSA00				IAmb	IAmb	16 40 12.8	
	comp=Z,44nm,0.8s						
AS31	**Alice Springs**	**19.84**	**168**	P	**P**	**16 40 12.9**	**0.0**
ASAR	**Alice Springs**	**19.84**	**168**	P	**P**	**16 40 11.8**	**-1.1**
	comp=Z,4.2nm,0.3s,baz=347,slow=9.7,SNR=17						
ASAR				PcP	**PcP**	**16 44 29.3**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=356,slow=1.7,SNR=7.7						
ASAR	**Alice Springs**	**19.84**	**168**	P	**P**	**16 40 12.6**	**-0.3**
LEM	**Lembang**	**21.95**	**262**	P	**P**	**16 40 35.8**	**-0.1**
	comp=Z,8.3nm,0.4s,baz=191,slow=16,SNR=4.0						
RABL	**Rabaul**	**22.59**	**91**	P	**P**	**16 40 43.4**	**+0.8**
RABL				IAmb	IAmb	16 40 43.9	
	comp=Z,57nm,0.6s						
CTA	**Charters Tower**	**22.73**	**136**	P	**P**	**16 40 42.8**	**-1.2**
	comp=Z,33nm,0.8s,baz=316,slow=14,SNR=14						
CTAO	**Charters Tower**	**22.73**	**136**	P	**P**	**16 40 43.5**	**-0.4**
CTAO				IAmb	IAmb	16 40 44.4	
	comp=Z,44nm,0.8s						
GIRL	**Giralia**	**23.58**	**217**	P	**P**	**16 40 53.7**	**+1.2**
MYKOM	**Kota Tinggi**	**26.32**	**283**	P	**P**	**16 41 18.0**	**+0.4**
MYKOM				IAmb	IAmb	16 41 21.3	
	comp=Z,17nm,0.7s						
DLV	**T Lat**	**26.33**	**308**	P	**P**	**16 41 18.6**	**+0.7**
DLV				IAmb	IAmb	16 41 25.6	
	comp=Z,46nm,1.4s						
FORT	**Forrest**	**26.51**	**183**	P	**P**	**16 41 18.8**	**-0.3**
FORT				IAmb	IAmb	16 41 19.3	
	comp=Z,42nm,0.7s						
MORW	**Morawa**	**27.87**	**206**	P	**P**	**16 41 30.7**	**-0.7**
TPUB	**Ta-pu**	**28.64**	**343**	P	**P**	**16 41 38.9**	**+0.5**
BBOO	**Buckleboo**	**29.15**	**169**	P	**P**	**16 41 41.8**	**-0.9**
BBOO				IAmb	IAmb	16 42 08.8	
	comp=Z,57nm,1.7s						
YOJ	**Yonaguni jima**	**29.15**	**348**	P	**P**	**16 41 42.7**	**-0.1**
IPM	**Ipoh**	**29.73**	**286**	P	**P**	**16 41 47.5**	**-0.6**
IPM				IAmb	IAmb	16 41 48.9	
	comp=Z,32nm,0.8s						
YHNB	**Yeheng**	**29.74**	**345**	P	**P**	**16 41 48.7**	**+0.6**
STKA	**Stephens Creek**	**29.81**	**159**	P	**P**	**16 41 47.8**	**-0.8**
	comp=Z,6.8nm,0.7s,baz=325,slow=8.7,SNR=9.0						
STKA	**Stephens Creek**	**29.81**	**159**	P	**P**	**16 41 48.5**	**-0.1**
KULM	**Kulim**	**30.32**	**288**	P	**P**	**16 41 53.3**	**-0.1**
KULM				IAmb	IAmb	16 41 54.2	
	comp=Z,32nm,1.2s						
UBPT	**Khong Chiam**	**30.66**	**310**	P	**P**	**16 41 56.7**	**+0.4**
UBPT				IAmb	IAmb	16 41 59.8	
	comp=Z,71nm,1.8s						
JOW	**Kunigami**	**30.84**	**358**	P	**P**	**16 41 58.4**	**+0.7**
GSI	**Gunungsitoli**	**32.37**	**279**	P	**P**	**16 42 09.9**	**-1.5**
GSI				IAmb	IAmb	16 42 18.3	
	comp=Z,20nm,1.1s						
ARMA	**Armidale**	**33.43**	**144**	P	**P**	**16 42 23.5**	**+2.8**
JSU	**Suzuyama**	**35.48**	**1**	P	**P**	**16 42 38.3**	**+0.1**
CAN	**Canberra**	**35.86**	**152**	P	**P**	**16 42 41.9**	**+0.4**
CAN				IAmb	IAmb	16 42 42.6	
	comp=Z,16nm,0.9s						
TOO	**Toolangi**	**36.32**	**158**	P	**P**	**16 42 46.4**	**+1.1**
TOO				IAmb	IAmb	16 42 49.4	
	comp=Z,20nm,1.2s						
JNU	**Nakatsue**	**37.11**	**2**	P	**P**	**16 42 51.9**	**-0.2**
	comp=Z,18nm,0.9s,baz=214,slow=3.7,SNR=4.9						
CM31	**Chiang Mai Arr**	**37.59**	**308**	P	**P**	**16 42 57.5**	**+1.1**
CMAR	**Chiang Mai Arr**	**37.59**	**308**	P	**P**	**16 42 56.6**	**+0.3**
	comp=Z,8.9nm,0.6s,baz=132,slow=6.9,SNR=25						
CMAR				PcP	**PcP**	**16 45 15.2**	**+1.4**
	comp=Z,2.9nm,0.7s,baz=156,slow=2.6,SNR=6.7						
CMAR				ScP	**ScP**	**16 49 02.4**	**+3.8**
	comp=Z,1.1nm,1.0s,baz=158,slow=2.9,SNR=4.2						
CMAR	**Chiang Mai Arr**	**37.59**	**308**	P	**P**	**16 42 56.9**	**+0.6**
GYA	**Guiyang**	**37.63**	**325**	⇓P	**P**	**16 42 57.6**	**+0.9**
GYA				pmax	pmax		
	comp=Z,30nm,0.7s						
CHTO	**Chiang Mai**	**37.78**	**308**	P	**P**	**16 42 58.9**	**+0.9**
CHTO				IAmb	IAmb	16 42 59.7	
	comp=Z,23nm,0.8s						
JMN	**Monobe**	**37.92**	**6**	P	**P**	**16 42 59.5**	**+0.6**
JMN				IAmb	IAmb	16 43 03.3	
	comp=Z,48nm,1.2s						
KMI	**Kunming**	**39.04**	**320**	⇑P	**P**	**16 43 10.2**	**+1.5**
KMI				pP	pwP	16 43 23.0	+0.1
KMI				pmax	pmax		
	comp=Z,19nm,0.6s						
ENH	**Enshi**	**39.24**	**332**	P	**P**	**16 43 10.4**	**+0.3**
JWT	**Wachi**	**39.63**	**8**	P	**P**	**16 43 13.4**	**+0.2**
JWT				IAmb	IAmb	16 43 14.7	
	comp=Z,25nm,0.8s						
INU	**Inuyama**	**39.93**	**10**	P	**P**	**16 43 16.2**	**+0.5**
INU				IAmb	IAmb	16 43 17.0	
	comp=Z,19nm,0.9s						
MJAR	**Matsushiro Arr**	**41.30**	**11**	P	**P**	**16 43 26.6**	**-0.5**
	comp=Z,15nm,0.8s,baz=179,slow=9.5,SNR=18						
MAJO	**Matsushiro**	**41.31**	**11**	P	**P**	**16 43 26.3**	**-0.7**
MAJO				IAmb	IAmb	16 43 27.4	
	comp=Z,26nm,0.9s						
MAT	**Matsushiro**	**41.31**	**11**	P	**P**	**16 43 26.0**	**-1.1**
JYT	**Yasato**	**41.41**	**13**	P	**P**	**16 43 28.4**	**+0.5**
JYT				IAmb	IAmb	16 43 28.7	
	comp=Z,31nm,0.7s						
KSRS	**Korea Array**	**41.43**	**358**	P	**P**	**16 43 28.6**	**+0.6**
	comp=Z,7.1nm,0.7s,baz=175,slow=8.9,SNR=16						
KS19	**Wonju Array Si**	**41.48**	**358**	P	**P**	**16 43 29.6**	**+1.1**
KS19				IAmb	IAmb	16 43 31.3	
	comp=Z,66nm,1.9s						
CD2	**Chengdu**	**42.68**	**327**	P	**P**	**16 43 38.8**	**+0.4**
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
JSD	**Sado**	**42.77**	**10**	P	**P**	**16 43 38.6**	**-0.3**
JSD				IAmb	IAmb	16 43 39.5	
	comp=Z,16nm,0.7s						
JMM	**Marumori**	**43.11**	**13**	P	**P**	**16 43 42.1**	**+0.4**
BJT	**Baijiatuau**	**45.65**	**346**	P	**P**	**16 44 02.0**	**0.0**
BJT				IAmb	IAmb	16 44 10.9	
	comp=Z,26nm,1.6s						
BJI	**Beijing**	**45.67**	**346**	P	**P**	**16 43 59.2**	**-2.9**
BJI				pmax	pmax		
	comp=Z,7.0nm,2.0s						
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LZH	**Lanzhou**	**46.70**	**331**	*e*P	P	16 44 03.3	-7.3
LZH				pP	pP	16 44 11.2	-8.8
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				LR	LR		
	comp=N,190nm,14.1s						
LZH				LR	LR		
	comp=E,210nm,14.6s						
LZH				LR	LR		
	comp=Z,180nm,16.3s						
SHL	**Shillong**	**46.96**	**311**	P	**P**	**16 44 11.7**	**-1.2**
SHL				IAmb	IAmb	16 44 14.1	
	comp=Z,15nm,0.8s						
HHC	**Hu-ho-hao-te**	**47.72**	**342**	*e*P	**P**	**16 44 20.9**	**+2.5**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,7.0s						
USRK	**Ussuriysk Ar.**	**48.20**	**2**	P	**P**	**16 44 22.5**	**+0.6**
	comp=Z,13nm,0.6s,baz=180,slow=7.2,SNR=18						
USRK	**Ussuriysk Ar.**	**48.20**	**2**	P	**P**	**16 44 22.4**	**+0.5**
USA0B	**Ussuriysk Arra**	**48.20**	**2**	P	**P**	**16 44 22.5**	**+0.7**
USA0B				IAmb	IAmb	16 44 23.3	
	comp=Z,15nm,0.7s						
LSA	**Lhasa**	**49.84**	**315**	P	**P**	**16 44 35.9**	**+0.5**
LSA				IAmb	IAmb	16 44 36.9	
	comp=Z,12nm,0.8s						
GTA	**Gaotai**	**51.28**	**331**	⇑P	**P**	**16 44 44.9**	**-0.7**
GTA				pP	sP	16 44 59.3	0.0
GTA				sP	pwP	16 45 04.5	+4.2
GTA				PcP	**PcP**	**16 46 00.9**	**+0.6**
GTA				pmax	pmax		
	comp=Z,18nm,0.9s						
GTA				pmax	pmax		
	comp=Z,75nm,5.1s						
GTA				LR	LR		
	comp=N,120nm,15.6s						
GTA				LR	LR		
	comp=E,130nm,17.8s						
GTA				LR	LR		
	comp=Z,200nm,16.7s						
QRZ	**Quartz Range**	**53.10**	**140**	P	**P**	**16 44 59.2**	**+0.3**
KLR	**Kul'dur**	**53.22**	**2**	P	**P**	**16 45 00.1**	**+0.6**
	comp=Z,6.1nm,0.8s,baz=209,slow=5.5,SNR=12						
LBZ	**Lake Benmore**	**53.65**	**145**	P	**P**	**16 45 03.0**	**0.0**
HYB	**Hyderabad**	**54.67**	**295**	*i* P	**P**	**16 45 10.0**	**-0.8**
	comp=Z,38nm,0.8s						
BKZ	**Black Stump Fm**	**54.94**	**136**	P	**P**	**16 45 12.5**	**0.0**
BKZ				IAmb	IAmb	16 45 13.2	
	comp=Z,13nm,0.9s						
ULN	**Ulaanbaatar**	**55.44**	**342**	P	**P**	**16 45 17.0**	**+1.0**
ULN				IAmb	IAmb	16 45 17.8	
	comp=Z,11nm,0.8s						
SONM	**Songino Array**	**55.62**	**341**	P	**P**	**16 45 17.2**	**-0.1**
	comp=Z,5.6nm,0.8s,baz=151,slow=5.6,SNR=10						
SONM				PcP	**PcP**	**16 46 17.1**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=149,slow=4.0,SNR=1.9						
WMQ	**Urumqi**	**60.77**	**326**	⇓P	**P**	**16 45 54.1**	**+0.7**
WMQ				sP	pwP	16 46 19.4	+11
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.1s						
WMQ				pmax	pmax		
	comp=Z,39nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,190nm,5.5s						
PETK	**Petropavlovsk-**	**61.81**	**19**	P	**P**	**16 45 59.7**	**-0.4**
	comp=Z,8.2nm,0.9s,baz=205,slow=5.6,SNR=6.6						
PETK	**Petropavlovsk-**	**61.81**	**19**	P	**P**	**16 46 02.0**	**+1.9**
CASY	**Casey**	**63.41**	**188**	P	**P**	**16 46 09.7**	**-0.9**
CASY				IAmb	IAmb	16 46 10.8	
	comp=Z,13nm,0.8s						
NIL	**Nilore**	**65.02**	**310**	P	**P**	**16 46 21.5**	**-0.3**
NIL				IAmb	IAmb	16 46 30.8	
	comp=Z,5.6nm,0.7s						
MK31	**Makanchi Array**	**65.61**	**326**	P	**P**	**16 46 25.4**	**+0.1**
MK31				IAmb	IAmb	16 46 26.3	
	comp=Z,14nm,0.8s						
MKAR	**Makanchi Array**	**65.61**	**326**	P	**P**	**16 46 25.6**	**+0.3**
	comp=Z,19nm,0.6s,baz=114,slow=8.1,SNR=40						
MAKZ	**Makanchi**	**65.79**	**326**	P	**P**	**16 46 26.5**	**0.0**
YAK	**Yakutsk**	**66.01**	**0**	P	**P**	**16 46 28.0**	**+0.5**
AAK	**Ala-Archa**	**68.08**	**319**	P	**P**	**16 46 41.3**	**0.0**
DRK	**Karamyk**	**68.49**	**315**	P	**P**	**16 46 44.4**	**+0.3**
KBL	**Kabul**	**68.59**	**310**		**P**	**16 46 44.3**	**-0.4**
ZALV	**Zalesovo Beam**	**68.84**	**334**	P	**P**	**16 46 45.5**	**-0.1**
	comp=Z,23nm,1.0s,baz=116,slow=5.7,SNR=16						
ZALV	**Zalesovo Beam**	**68.84**	**334**	P	**P**	**16 46 45.2**	**-0.4**
GAR	**Garm**	**69.34**	**314**	P	**P**	**16 46 50.5**	**+1.3**
BTK	**Batken**	**69.42**	**316**	P	**P**	**16 46 50.8**	**+1.1**
BTK				IAmb	IAmb	16 46 56.7	
	comp=Z,7.4nm,0.8s						
KURK	**Kurchatov**	**69.86**	**328**	P	**P**	**16 46 52.2**	**+0.3**
KKAR	**Karatay Array**	**70.91**	**318**	P	**P**	**16 46 58.9**	**+0.3**
VNDA	**Vanda**	**75.30**	**173**	P	**P**	**16 47 22.7**	**-1.2**
BRVK	**Borovoye**	**75.50**	**328**	P	**P**	**16 47 25.5**	**+0.1**
BRVK				IAmb	IAmb	16 47 26.6	
	comp=Z,28nm,0.9s						
TIXI	**Tiksi**	**75.67**	**360**	P	**P**	**16 47 26.0**	**0.0**
TIXI				IAmb	IAmb	16 47 26.8	
	comp=Z,9.4nm,0.7s						
SBA	**Scott Base**	**76.19**	**172**	P	**P**	**16 47 29.5**	**+0.6**
SOCY	**Socotra**	**76.78**	**283**	P	**P**	**16 47 32.7**	**-0.9**
GEYT	**Alibeck**	**78.03**	**310**	P	**P**	**16 47 40.8**	**+0.6**
	comp=Z,4.7nm,0.8s,baz=116,slow=8.1,SNR=6.9						
GEYT	**Alibeck**	**78.03**	**310**	P	**P**	**16 47 40.7**	**+0.6**
UNV	**Unalaska Valle**	**78.40**	**33**	P	**P**	**16 47 41.2**	**-0.5**
NRIK	**Noril'sk**	**78.71**	**346**	P	**P**	**16 47 43.8**	**+0.6**
	comp=Z,9.1nm,0.8s,baz=131,slow=9.0,SNR=9.6						
NRIK	**Noril'sk**	**78.71**	**346**	P	**P**	**16 47 43.1**	**-0.1**
NRIK				IAmb	IAmb	16 47 44.8	
	comp=Z,20nm,1.2s						
ABKAR	**Akbulak array**	**80.00**	**321**	P	**P**	**16 47 50.4**	**-0.2**
ARU	**Arti**	**83.06**	**328**	P	**P**	**16 48 06.2**	**-0.4**
ARU				IAmb	IAmb	16 48 06.9	
	comp=Z,9.4nm,0.8s						
UMR	**Umm Al-Rimmam**	**84.92**	**300**	*e*P	**P**	**16 48 16.2**	**-0.5**
MIB	**Mutribah**	**85.28**	**300**	*e*P	**P**	**16 48 17.6**	**-0.9**
RST	**Umm Al-Ruwaisa**	**85.53**	**300**	*e*P	**P**	**16 48 18.9**	**-0.9**
TTA	**Tatalina**	**86.68**	**26**	P	**P**	**16 48 25.4**	**+0.6**
TTA				IAmb	IAmb	16 48 26.5	
	comp=Z,9.9nm,0.8s						
KDAK	**Kodiak Island**	**87.08**	**32**	P	**P**	**16 48 27.2**	**+0.5**
	comp=Z,16nm,0.8s,baz=285,slow=1.5,SNR=6.3						
KDAK	**Kodiak Island**	**87.08**	**32**	P	**P**	**16 48 27.5**	**+0.8**
MLY	**Manley**	**89.43**	**25**	P	**P**	**16 48 37.6**	**-0.3**
MLY				IAmb	IAmb	16 48 51.0	
	comp=Z,17nm,1.6s						
RND	**Reindeer**	**89.95**	**26**	P	**P**	**16 48 39.6**	**-0.8**
RND				IAmb	IAmb	16 48 41.3	
	comp=Z,13nm,0.9s						
KBZ	**Khabaz**	**90.40**	**314**	P	**P**	**16 48 42.3**	**-0.4**
	comp=Z,3.5nm,0.9s,baz=191,slow=3.4,SNR=5.1						
TOLK	**Toolik Lake Re**	**90.54**	**21**	P	**P**	**16 48 43.2**	**+0.2**
CCB	**Clear Creek Bu**	**90.60**	**25**	P	**P**	**16 48 42.2**	**-1.0**
CCB				IAmb	IAmb	16 48 43.4	
	comp=Z,5.4nm,1.0s						
ILAR	**Eielson Array**	**91.01**	**25**	P	**P**	**16 48 43.6**	**-1.5**
	comp=Z,2.0nm,0.8s,baz=288,slow=4.3,SNR=14						
KMBO	**Kilima Mbogo**	**92.17**	**269**	P	**P**	**16 48 51.8**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=31,slow=7.5,SNR=3.4						
KMBO	**Kilima Mbogo**	**92.17**	**269**	P	**P**	**16 48 51.9**	**-0.1**
L27K	**Beaver Creek,**	**93.08**	**27**	P	**P**	**16 48 55.4**	**+0.6**
BCAR	**Beaver Creek A**	**93.09**	**27**	P	**P**	**16 48 55.5**	**+0.6**
INK	**Inuvik**	**96.43**	**22**	P	**P**	**16 49 09.4**	**-0.5**
	comp=Z,2.8nm,0.5s,baz=286,slow=4.6,SNR=10						
BRTR	**Keskin Array B**	**97.16**	**309**	P	**P**	**16 49 13.4**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=123,slow=5.3,SNR=2.3						
SNAA	**Sanae**	**98.28**	**194**	P	**P**	**16 49 18.2**	**-0.2**
ARCES	**ARCESS Array B**	**98.77**	**340**	P	**P**	**16 49 19.4**	**-1.1**
	comp=Z,6.9nm,1.0s,baz=82,slow=7.3,SNR=7.3						
AKASG	**Malin Array Be**	**99.73**	**321**	P	**Pdif**	**16 49 24.6**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=71,slow=4.7,SNR=2.0						
VNA2	**Neumayer--Watz**	**99.86**	**193**	P	**Pdif**	**16 49 26.7**	**+1.3**
FINES	**FINESS Array B**	**100.06**	**332**	P	**Pdif**	**16 49 24.8**	**-1.6**
	comp=Z,3.2nm,0.8s,baz=101,slow=6.0,SNR=6.1						
VNA1	**Neumayer--Stat**	**100.26**	**193**	P	**Pdif**	**16 49 26.8**	**-0.4**
PDAR	**Pinedale Array**	**115.24**	**44**	PKP	**PKPdf**	**16 54 23.5**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=108,slow=3.3,SNR=4.1						
PDAR	**Pinedale Array**	**115.24**	**44**		**PKiKP**	**16 54 22.9**	**-0.3**
ANMO	**Albuquerque**	**119.98**	**52**	PKP	**PKiKP**	**16 54 32.8**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=272,slow=1.1,SNR=5.2						
ANMO	**Albuquerque**	**119.98**	**52**		**PKPdf**	**16 54 31.5**	**-1.0**
ECSD	**EROS Data Cent**	**123.42**	**39**		**PKPdf**	**16 54 37.9**	**-0.7**
TXAR	**Lajitas Array**	**123.86**	**57**	PKP	**PKiKP**	**16 54 40.2**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=317,slow=1.0,SNR=9.2						
TXAR	**Lajitas Array**	**123.86**	**57**		**PKPdf**	**16 54 39.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**127.74**	**283**	PKP	**PKPdf**	**16 54 47.5**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=66,slow=2.0,SNR=14						
R40A	**Maddies Statio**	**129.04**	**42**		**PKPdf**	**16 54 49.2**	**-0.2**
ACON	**Acoyapa**	**144.83**	**75**		**PKPab**	**16 55 18.2**	**0.0**
LVC	**Limon Verde**	**147.87**	**147**	PKPbc	**PKPbc**	**16 55 27.0**	**-0.5**
	comp=Z,11nm,0.6s,baz=271,slow=4.2,SNR=9.7						
PB09	**IPOC Station P**	**148.33**	**145**		**PKPdf**	**16 55 26.2**	**+1.0**
PB01	**IPOC Station P**	**148.78**	**144**		**PKPbc**	**16 55 28.9**	**-0.7**
CPUP	**Villa Florida**	**148.97**	**168**	PKPbc	**PKPbc**	**16 55 29.5**	**-0.4**
	comp=Z,11nm,0.8s,baz=220,slow=2.8,SNR=11						
NNA	**Nana**	**149.27**	**122**	PKPbc	**PKPbc**	**16 55 30.4**	**-0.6**
	comp=Z,5.1nm,0.4s,baz=254,slow=7.4,SNR=2.0						
ATAH	**Atahualpa**	**149.97**	**112**	PKPbc	**PKPbc**	**16 55 33.2**	**0.0**
	comp=Z,11nm,0.9s,baz=148,slow=2.5,SNR=7.3						
LPAZ	**La Paz**	**153.21**	**140**	PKPbc	**PKiKP**	**16 55 41.2**	**+0.2**
	comp=Z,4.4nm,0.9s,baz=226,slow=1.2,SNR=5.9						
SIV	**San Ignacio**	**157.40**	**153**	PKP	**PKPdf**	**16 55 38.5**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=90,slow=1.0,SNR=4.0						
SIV				PKPab	**PKPab**	**16 56 09.4**	**-0.2**
	comp=Z,3.1nm,0.7s,baz=229,slow=4.0,SNR=8.5						

IDC 09 16:37:26.6±8.0, **26°.34S**×**28°.47E**, **h0**^{km}, **mb1 2.3**/1, **mb1mx2.2**/38, **mbtmp2.4**/1, **ML1.9**/1, **Error ellipse: s-maj=68.1km s-min=53.8km az=140.0**, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**3.65**	**231**	Pn	Pn	16 38 26.0	+1.6
	0.1nm,0.3s,baz=53,slow=17,SNR=1.7						
BOSA				Pg	Pb	16 38 31.1	-0.9
	0.1nm,0.3s,baz=50,slow=18,SNR=4.5						
BOSA				Sn	Sn	16 39 06.8	-1.4
	0.1nm,0.3s,baz=53,slow=11,SNR=4.1						
BOSA				Lg	Lg	16 39 22.8	
	0.7nm,0.3s,baz=141,slow=8.9,SNR=17						
I47ZA	**BOSHOF INFRASO**	**3.66**	**231**	*i*		17 02 20.0	
	baz=53,slow=331,SNR=3.2						
I35NA	**TSUMEB INFRASO**	**12.30**	**303**	*i*		17 54 00.0	
	baz=126,slow=313,SNR=1.1						

CNRM ***09*** *16:40:57.2, 35°.61N×3°.58W, h11^{km}, ml2.9*
MDD ***09*** *16:40:59.5±1.1, 35°.41N×3°.63W, h12^{km}±17^{km}, mbLg2.4/17, Error ellipse: s-maj=13.2km s-min=4.6km az=179.0, PRXIMO*
SFS ***09*** *16:40:59.0, 35°.30N×3°.60W, h22^{km}, ML2.4, ANOUAL (MARRUECOS)*
INMG ***09*** *16:41:00.0±1.6, 35°.33N×3°.59W, h30^{km}±15^{km}, ML2.3, Error ellipse: s-maj=5.0km s-min=4.8km az=11.0*
IGIL ***09*** *16:41:00.0, 35°.35N×3°.62W, h20^{km}, ML2.3*
ISC 09 16:40:59.3±1.0, **35°.43N**±0°.03×**3°.65W**±0°.02, **h26**^{km}±10^{km}, **n65**, σ**1^{s}.50**/112, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.32**	**228**	P	**Pb**	**16 41 06.7**	**-0.1**
PALE				S	**Sb**	**16 41 12.9**	**+1.1**
GOG	**Mont Gurugu**	**0.57**	**111**	P	**Pb**	**16 41 10.0**	**-0.9**
GOG				S	**Sb**	**16 41 17.6**	**-1.1**
EMEL	**Melilla**	**0.58**	**103**	P	**Pb**	**16 41 10.1**	**-0.8**
	340nm,0.1s,SNR=13						
EMEL				S	**Sb**	**16 41 17.4**	**-1.4**
	2µm,0.2s,SNR=27						
CHAS	**Isla Isabel II**	**1.03**	**104**	P	**Pb**	**16 41 18.0**	**-0.5**
CHAS				S	**Sb**	**16 41 31.2**	**-0.4**
TAF	**Taforalt**	**1.19**	**121**	P	**Pn**	**16 41 19.6**	**-0.7**
TAF				S	**Sn**	**16 41 36.8**	**+1.2**
JBK	**JBK**	**1.41**	**141**	P	**Pb**	**16 41 24.8**	**-0.4**
JBK				S	**Sb**	**16 41 44.4**	**+1.7**
CHEFC	**Chefchaouen**	**1.42**	**257**	P	**Pn**	**16 41 24.5**	**+1.0**
CHEFC				S	**Sb**	**16 41 43.5**	**+0.5**
ELGU	**Los Guajares,**	**1.43**	**1**	P	**Pn**	**16 41 23.1**	**-0.6**
	3.2nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**16 41 40.1**	**-1.7**
	86nm,0.2s,SNR=7.9						
EMAL	**Malaga-Limoner**	**1.47**	**335**	P	**Pn**	**16 41 23.9**	**-0.2**
EMAL				S	**Sn**	**16 41 40.4**	**-2.1**
EMAL	**Malaga-Limoner**	**1.47**	**335**	P	**Pn**	**16 41 23.9**	**-0.2**
EMAL				S	**Sn**	**16 41 40.4**	**-2.1**
CEU	**Ceuta**	**1.48**	**289**	P	**Pn**	**16 41 21.6**	**-2.6**
CEU				S	**Sn**	**16 41 37.7**	**-5.0**
ECEU	**Ceuta**	**1.48**	**289**	P	**Pn**	**16 41 23.2**	**-1.1**
	6.6nm,0.1s,SNR=4.6						
ECEU				S	**Sn**	**16 41 41.1**	**-1.7**
	16nm,0.1s,SNR=6.2						
EBER	**Berja**	**1.59**	**23**	P	**Pn**	**16 41 25.5**	**-0.5**
	3.8nm,0.2s,SNR=17						
EBER				S	**Sn**	**16 41 45.6**	**-0.1**
	30nm,0.2s,SNR=7.3						
EGOR	**Sierra Gorda,**	**1.72**	**348**	P	**Pn**	**16 41 28.1**	**+0.4**
	1.9nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**16 41 49.6**	**+0.8**
	13nm,0.2s,SNR=7.9						
EJIF	**Jimena Fronter**	**1.79**	**305**	P	**Pn**	**16 41 28.9**	**+0.3**
	SNR=7.9						
ENIJ	**Nijar**	**1.93**	**37**	P	**Pn**	**16 41 30.6**	**+0.2**
	3.8nm,0.2s,SNR=7.9						
ENIJ				S	**Sn**	**16 41 52.2**	**-1.8**
	25nm,0.4s,SNR=7.9						
IFR	**Ifrane**	**2.27**	**213**	P	**Pb**	**16 41 38.0**	**-1.6**
IFR				S	**Sn**	**16 42 02.0**	**-0.4**
ESPR	**Espera**	**2.29**	**309**	P	**Pb**	**16 41 38.1**	**-1.8**
	0.4nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**16 42 04.3**	**+1.6**
	6.6nm,0.3s,SNR=7.9						
EQES	**Quesada**	**2.41**	**11**	P	**Pn**	**16 41 39.6**	**+2.4**
	3.2nm,0.1s,SNR=18						
EQES				S	**Sn**	**16 42 07.8**	**+1.9**
	22nm,0.2s,SNR=6.4						
MD31	**MD31**	**2.72**	**200**	P	**Pn**	**16 41 43.5**	**+2.1**
MD31				S	**Sb**	**16 42 20.1**	**-0.1**
MDT	**Midelt**	**2.73**	**197**	P	**Pn**	**16 41 44.5**	**+2.9**
MDT				S	**Sb**	**16 42 20.6**	**0.0**
TDRA	**Tendrara**	**2.74**	**150**	P	**Pn**	**16 41 42.9**	**+1.1**
TDRA				S	**Sb**	**16 42 19.8**	**-1.1**
SESP	**Santiago Espad**	**2.83**	**18**	P	**Pn**	**16 41 45.2**	**+2.3**
	3.0nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**16 42 17.4**	**+1.2**
	7.2nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.83**	**345**	P	**Pn**	**16 41 44.5**	**+1.6**
	0.6nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**16 42 16.8**	**+0.7**
	14nm,0.3s,SNR=9.5						
ECAB	**El Cabril**	**3.00**	**332**	P	**Pn**	**16 41 46.7**	**+1.5**
	0.3nm,0.1s,SNR=7.1						
ECAB				S	**Sn**	**16 42 21.2**	**+1.0**
	2.3nm,0.3s,SNR=6.4						
EMUR	**La Murta**	**3.09**	**38**	S	**Sn**	**16 42 21.5**	**-1.0**
	4.2nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.37**	**315**	P	**Pn**	**16 41 50.9**	**+0.6**
	1.9nm,0.1s,SNR=11						
EMIN				S	**Sn**	**16 42 30.2**	**+0.8**
	1.1nm,0.3s						
ETOB	**Tobarra**	**3.62**	**27**	P	**Pn**	**16 41 55.9**	**+2.1**
	1.2nm,0.2s,SNR=9.8						
ETOB				S	**Sn**	**16 42 35.6**	**-0.1**
	1.4nm,0.2s						
EGRO	**El Granado**	**3.73**	**305**	P	**Pn**	**16 41 55.9**	**+0.7**
	4.2nm,0.1s,SNR=45						
EGRO				S	**Sn**	**16 42 37.7**	**-0.6**
	2.8nm,0.3s						
PVAQ	**Vaqueiros**	**3.83**	**302**	*e*Pn	**Pn**	**16 41 57.3**	**+0.8**
PVAQ				*e*Sn	**Sn**	**16 42 40.1**	**-0.5**
PVAQ				A	A	16 42 46.7	
	3.9nm,0.3s						
PVAQ	**Vaqueiros**	**3.83**	**302**	P	**Pn**	**16 41 57.3**	**+0.8**
PVAQ				S	**Sn**	**16 42 40.1**	**-0.5**
	3.9nm,0.3s						
PVAQ	**Vaqueiros**	**3.83**	**302**	P	**Pn**	**16 41 57.1**	**+0.6**
PVAQ				S	**Sn**	**16 42 39.8**	**-0.8**
PBDV	**Barranco-do-Ve**	**3.90**	**299**	*e*Pn	**Pn**	**16 41 58.4**	**+0.8**
PBDV				*e*Sn	**Sn**	**16 42 42.4**	**-0.1**
PBDV				A	A	16 42 55.1	
	3.3nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.90**	**299**	P	**Pn**	**16 41 58.4**	**+0.8**
PBDV				S	**Sn**	**16 42 42.4**	**-0.1**
	3.3nm,0.5s						
PAB	**San Pablo**	**4.14**	**353**	P	**Pn**	**16 42 01.9**	**+0.9**
	0.2nm,0.3s,SNR=7.9						
PAB				S	**Sn**	**16 42 49.1**	**+0.5**
	1.9nm,0.4s,SNR=7.9						
PCVE	**Castro Verde**	**4.16**	**303**	*e*Pn	**Pn**	**16 42 02.0**	**+0.9**
PCVE				*e*Sn	**Sn**	**16 42 51.2**	**+2.3**
PCVE				A	A	16 42 56.5	
	3.2nm,0.5s						
PCVE	**Castro Verde**	**4.16**	**303**	P	**Pn**	**16 42 02.0**	**+0.9**
PCVE				S	**Sn**	**16 42 51.2**	**+2.3**
	3.2nm,0.5s						
ESDC	**Sonseca Array**	**4.24**	**357**	P	**Pn**	**16 42 04.8**	**+2.5**
	0.3nm,0.3s,baz=176,slow=12,SNR=5.5						

ESDC				S	Sn	16 42 50.2	-0.8
	0.4nm,0.2s,baz=178,slow=22,SNR=4.6						
EBAD	Badajoz	4.27	322	P	Pn	16 42 03.3	+0.6
	1.1nm,0.1s,SNR=11						
EBAD				S	Sn	16 42 51.0	-0.6
	4.2nm,0.2s,SNR=7.9						
MESJ	Messejana	4.39	305	eP	Pn	16 42 04.8	+0.5
MESJ				eS	Sn	16 42 52.2	-2.4
MESJ				IAML		16 42 58.8	
	comp=N,5.9nm,0.5s						
MESJ	Messejana	4.39	305	ePn	Pn	16 42 06.1	+1.8
MESJ				eSn	Sn	16 42 56.0	+1.4
MESJ				A	A	16 43 19.5	
	comp=N,3.7nm,0.7s						
MESJ	Messejana	4.39	305	P	Pn	16 42 06.1	+1.8
MESJ				S	Sn	16 42 56.0	+1.4
	comp=N,3.7nm,0.7s						
MORF	Marmelete	4.45	296	eP	Pn	16 42 05.7	+0.6
MORF	Marmelete	4.45	296	ePn	Pn	16 42 06.9	+1.8
MORF				eSn	Sn	16 42 56.8	+0.7
MORF				A	A	16 42 59.9	
	comp=N,5.6nm,0.9s						
MORF	Marmelete	4.45	296	P	Pn	16 42 06.9	+1.8
MORF				S	Sn	16 42 56.8	+0.7
	comp=N,5.6nm,0.9s						
PFVI	Vila Bisbo	4.51	294	ePn	Pn	16 42 07.6	+1.6
PFVI				eSn	Sn	16 42 58.4	+0.8
PTEO	Sao Teotonio	4.60	299	ePn	Pn	16 42 07.6	+0.4
PTEO	Sao Teotonio	4.60	299	P	Pn	16 42 07.6	+0.4
PESTR	Estremoz	4.66	319	ePn	Pn	16 42 10.0	+2.1
PESTR				eSn	Sn	16 43 00.4	-0.7
PESTR				A	A	16 43 03.0	
	comp=N,2.2nm,0.7s						
EVO	Evora	4.67	313	P	Pn	16 42 09.5	+1.5
EVO	Evora	4.67	313	ePn	Pn	16 42 09.5	+1.5
EVO	Evora	4.67	313	P	Pn	16 42 09.5	+1.5
PNCL	Nicolau / Gran	4.74	306	ePn	Pn	16 42 10.1	+1.0
PNCL	Nicolau / Gran	4.74	306	P	Pn	16 42 10.1	+1.0
PMRV	Marv??o	4.98	324	ePn	Pn	16 42 13.9	+1.5
PMRV				eSn	Sn	16 43 07.1	-2.0
PMRV	Marv??o	4.98	324	P	Pn	16 42 13.9	+1.5
PMRV				S	Sn	16 43 07.1	-2.0
PMTG	Montargil	5.15	316	ePn	Pn	16 42 16.1	+1.4
PMTG	Montargil	5.15	316	P	Pn	16 42 16.1	+1.4
PCBR	Castelo Branco	5.35	327	ePn	Pn	16 42 19.0	+1.6
EIBI	Ibiza	5.36	47	P	Pn	16 42 18.3	+0.7
	comp=N,2.0nm,0.2s,SNR=7.9						
EIBI				S	Sn	16 43 16.6	-1.9
	comp=N,0.9nm,0.2s,SNR=7.9						
PMAFR	Mafra	5.71	310	ePn	Pn	16 42 26.7	+4.3
MVO	Moncorvo	6.31	336	ePn	Pn	16 42 32.6	+1.9
PVRL	Vila Real	6.65	333	ePn	Pn	16 42 37.1	+1.7
POLO	Lamas de Olo	6.77	333	ePn	Pn	16 42 38.9	+1.9
PBRG	Braganca	6.81	340	ePn	Pn	16 42 40.0	+2.5

IDC ***09*** *16:42:45.4±0.9, 4°.20S×129°.62E, h0^{km}, mb4.1/9, mb1 4.2/13, mb1mx4.0/34, mbtmp4.1/13, ML3.7/4, Error ellipse: s-maj=29.9km s-min=18.1km az=95.0*

NEIC ***09*** *16:42:47.9±2.1, 4°.21S±0°.05×129°.60E±0°.08, h10^{km}±1^{km}, mb4.4/21, Error ellipse: s-maj=13.3km s-min=8.6km az=269.0*

DJA ***09*** *16:42:48.7±2.6, 4°S±18°×12°9E±°, h13^{km}±11^{km}, M3.8/6, MLv3.8/6*

ISC 09 16:42:50.6±0.5**, 4°.21S**±0°.05×**129°.50E**±0°.06**, h36**^{km}**, n49, σ1^s.05**/51**, mb4.2**/18**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.03	326	P	Pn	16 43 06.6	-1.9
AAI	Ambon	1.40	292	P	Pn	16 43 11.8	-1.8
FAKI	Fak Fak	3.03	65		Pn	16 43 35.6	-0.5
SIJI	Sorong	3.76	28	Pn	Pn	16 43 45.6	-0.6
	8.6nm,0.3s,baz=208,slow=17,SNR=16						
SIJI				Sn	Sn	16 44 30.0	+0.8
	2.9nm,0.3s,baz=261,slow=21,SNR=3.7						
SWI	Sorong	3.76	28	P	Pn	16 43 45.9	-0.2
LBMI	Labuha	4.07	331	P	Pn	16 43 48.4	-2.0
SANI	Sanana	4.11	301	P	Pn	16 43 50.5	-0.4
TNTI	Ternate	5.38	337	Pn	Pn	16 44 08.7	+0.2
BATI	Baumata	8.30	224	Pn	Pn	16 44 49.9	+1.3
	2.5nm,0.3s,baz=31,slow=5.9,SNR=4.5						
MTN	Manton Dam	8.73	169	Pn	Pn	16 44 53.0	-1.4
KNRA	Kununurra	11.42	184	Pn	Pn	16 45 30.7	-0.6
WB0	Warramunga Arr	16.19	163	Pn	Pn	16 46 34.1	-1.4
WRA	Warramunga Arr	16.34	164	Pn	Pn	16 46 34.3	-3.1
	0.1nm,0.3s,baz=346,slow=13,SNR=3.3						
WRA				Sn	Sn	16 49 38.5	+0.8
	0.1nm,0.3s,baz=328,slow=17,SNR=2.7						
WRA	Warramunga Arr	16.34	164		Pn	16 46 34.7	-2.7
WR0	Warramunga Arr	16.41	163	P	P	16 46 40.3	-0.5
COEN	Coen	16.61	127	P	P	16 46 42.5	-0.5
PSA00	Pilbara Seismi	19.64	208	P	Pn	16 47 17.6	-0.3
PSA00				IAmb	IAmb	16 47 18.6	
	comp=Z,8.8nm,0.7s						
AS31	Alice Springs	19.81	168	P	Pn	16 47 18.9	-1.0
ASAR	Alice Springs	19.81	168	P	P	16 47 18.6	+0.4
	comp=Z,0.5nm,0.3s,baz=343,slow=10,SNR=12						
ASAR	Alice Springs	19.81	168	P	Pn	16 47 19.1	-0.9
CTAO	Charters Tower	22.71	135	P	P	16 47 49.1	-0.4
CTAO				IAmb	IAmb	16 47 51.2	
	comp=Z,7.8nm,0.9s						
GIRL	Giralia	23.54	218	P	P	16 47 59.0	+1.2
CMAR	Chiang Mai Arr	37.60	308	P	P	16 50 03.3	+1.1
	comp=Z,1.2nm,0.6s,baz=134,slow=7.5,SNR=12						
CHTO	Chiang Mai	37.80	308	P	P	16 50 05.2	+1.4
CHTO				IAmb	IAmb	16 50 05.3	
	comp=Z,3.0nm,0.8s						
JWT	Wachi	39.67	8	P	P	16 50 19.6	+0.3
MAJO	Matsushiro	41.35	11	P	P	16 50 31.9	-1.3
MAJO				IAmb	IAmb	16 50 33.0	
	comp=Z,5.5nm,0.7s						
MAT	Matsushiro	41.35	11	P	P	16 50 32.0	-1.1
MJAR	Matsushiro Arr	41.35	11	P	P	16 50 32.4	-0.7
	comp=Z,3.3nm,0.8s,baz=189,slow=8.8,SNR=8.1						
KSRS	Korea Array	41.47	358	P	P	16 50 34.7	+0.6
	comp=Z,1.2nm,0.7s,baz=177,slow=9.7,SNR=4.7						
JSD	Sado	42.81	10	P	P	16 50 43.9	-1.1
JSD				IAmb	IAmb	16 50 53.8	
	comp=Z,12nm,1.4s						
USA0B	Ussuriysk Arra	48.24	2	P	P	16 51 28.9	+1.0
USA0B				IAmb	IAmb	16 51 29.2	
	comp=Z,4.0nm,0.7s						
USRK	Ussuriysk Ar.	48.24	2	P	P	16 51 28.5	+0.6
	comp=Z,2.5nm,0.5s,baz=183,slow=8.7,SNR=7.9						
USRK	Ussuriysk Ar.	48.24	2	P	P	16 51 28.1	+0.2
ULN	Ulaanbaatar	55.47	342	P	P	16 52 21.9	-0.1
ULN				IAmb	IAmb	16 52 23.7	
	comp=Z,2.4nm,0.9s						
SONM	Songino Array	55.65	341	P	P	16 52 23.7	+0.4
	comp=Z,0.9nm,0.8s,baz=160,slow=4.6,SNR=4.5						
MK31	Makanchi Array	65.63	326	P	P	16 53 31.6	+0.4
MK31				IAmb	IAmb	16 53 31.8	
	comp=Z,2.1nm,0.6s						
MKAR	Makanchi Array	65.63	326	P	P	16 53 31.5	+0.3
	comp=Z,1.8nm,0.4s,baz=113,slow=7.7,SNR=56						
MKAR	Makanchi Array	65.63	326	P	P	16 53 31.2	0.0
MAKZ	Makanchi	65.81	326	P	P	16 53 32.2	-0.1
MAKZ				IAmb	IAmb	16 53 33.4	
	comp=Z,8.7nm,1.4s						
YAK	Yakutsk	66.05	0	P	P	16 53 33.8	+0.4
ZALV	Zalesovo Beam	68.87	334	P	P	16 53 51.1	-0.4
	comp=Z,2.1nm,0.8s,baz=123,slow=5.3,SNR=5.8						
KURK	Kurchatov	69.89	328	P	P	16 53 58.2	+0.3
VNDA	Vanda	75.26	173	P	P	16 54 29.7	+0.3
VNDA				IAmb	IAmb	16 54 52.3	
	comp=Z,2.5nm,1.2s						
SBA	Scott Base	76.15	172	P	P	16 54 35.5	+1.1
ABKAR	Akbulak array	80.03	321	P	P	16 54 56.4	-0.1
ILAR	Eielson Array	91.05	25	P	P	16 55 50.5	-0.6
	comp=Z,0.3nm,0.7s,baz=269,slow=3.7,SNR=1.7						
INK	Inuvik	96.47	22	P	P	16 56 15.2	-0.6
	comp=Z,0.4nm,0.5s,baz=294,slow=4.4,SNR=4.6						
INK	Inuvik	96.47	22	P	P	16 56 15.2	-0.6
INK				IAmb	IAmb	16 56 34.7	
	comp=Z,3.7nm,1.4s						
TORD	Torodi Ar. Bea	127.73	283	PKP	PKiKP	17 01 53.6	-0.3
	comp=Z,0.4nm,0.8s,baz=73,slow=2.2,SNR=2.2						

IDC ***09*** *16:45:57.0±1.2, 4°.05S×129°.53E, h0^{km}, mb4.0/4, mb1 4.0/8, mb1mx3.6/33, mbtmp3.8/8, ML3.4/4, Error ellipse: s-maj=40.8km s-min=21.8km az=85.0*

NEIC ***09*** *16:45:58.6±1.4, 4°.06S±0°.09×129°.52E±0°.06, h10^{km}±2^{km}, mb4.2/12, Error ellipse: s-maj=16.3km s-min=9.6km az=162.0*

ISC 09 16:46:01.6±0.6**, 4°.07S**±0°.07×**129°.6E**±0°.1**, h36**^{km}**, n25, σ1^s.02**/26**, mb4.2**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.87	67	Pn	Pn	16 46 46.7	+1.9
SIJI	Sorong	3.58	27	Pn	Pn	16 46 55.1	+0.4
	6.7nm,0.3s,baz=267,slow=19,SNR=8.8						
SIJI				Sn	Sn	16 47 32.9	-2.9
	4.4nm,0.3s,baz=220,slow=22,SNR=1.9						
KNRA	Kununurra	11.56	184	Pn	Pn	16 48 45.3	+1.0
FITZ	Fitzroy Crossi	14.47	195	Pn	Pn	16 49 23.6	-0.4
	0.1nm,0.3s,baz=352,slow=14,SNR=32						
WRAB	Tennant Creek	16.43	164	Pn	Pn	16 49 47.8	-1.8
WRA	Warramunga Arr	16.44	164	Pn	Pn	16 49 49.5	-0.2
	0.1nm,0.3s,baz=346,slow=13,SNR=2.5						
WB2	Warramunga Arr	16.44	164	P	Pn	16 49 49.1	-0.6
COEN	Coen	16.60	127	P	P	16 49 55.0	+1.1
COEN				IAmb	IAmb	16 50 00.4	
	comp=Z,24nm,1.4s						
PSA00	Pilbara Seismi	19.82	208	P	P	16 50 28.6	-0.7
PSA00				IAmb	IAmb	16 50 31.0	
	comp=Z,13nm,1.1s						
PSA00	Pilbara Seismi	19.82	208	P	P	16 50 28.3	-0.9
PSA00				IAmb	IAmb	16 50 30.4	
	comp=Z,5.3nm,0.9s						
AS31	Alice Springs	19.92	168	P	P	16 50 30.7	+0.3
ASAR	Alice Springs	19.92	168	P	Pn	16 50 31.3	-1.0
	comp=Z,0.1nm,0.3s,baz=350,slow=9.9,SNR=4.8						
ASAR	Alice Springs	19.92	168	P	P	16 50 29.2	-1.1
CTAO	Charters Tower	22.73	136	P	P	16 51 00.4	-0.2
CTAO				IAmb	IAmb	16 51 05.6	
	comp=Z,13nm,1.4s						
KULM	Kulim	30.39	288	P	P	16 52 10.4	-0.2
CMAR	Chiang Mai Arr	37.61	307	P	P	16 53 13.7	+0.5
	comp=Z,0.9nm,0.6s,baz=135,slow=9.0,SNR=8.1						
KSRS	Korea Array	41.34	358	P	P	16 53 44.8	+0.8
	comp=Z,0.9nm,0.7s,baz=178,slow=8.7,SNR=4.1						
JMM	Marumori	42.99	13	P	P	16 53 58.2	+0.7
USRK	Ussuriysk Ar.	48.10	2	P	P	16 54 37.5	-0.2
	comp=Z,1.8nm,0.7s,baz=180,slow=6.7,SNR=4.9						
MK31	Makanchi Array	65.58	326	P	P	16 56 41.5	-0.3
MK31				IAmb	IAmb	16 56 42.4	
	comp=Z,1.5nm,0.8s						
MKAR	Makanchi Array	65.58	326	P	P	16 56 41.8	0.0
	comp=Z,1.8nm,0.6s,baz=115,slow=8.0,SNR=17						
MKAR	Makanchi Array	65.58	326	P	P	16 56 41.7	-0.2
MAKZ	Makanchi	65.77	326	P	P	16 56 42.9	-0.1
MAKZ				IAmb	IAmb	16 56 43.2	
	comp=Z,1.7nm,0.6s						
KURK	Kurchatov	69.84	328	P	P	16 57 08.5	0.0
ABKAR	Akbulak array	79.99	321	P	P	16 58 07.0	-0.2

IDC ***09*** *16:46:25.9±2.9, 3°.90S×129°.88E, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.4/30, mbtmp3.9/3, Error ellipse: s-maj=151.6km s-min=32.5km az=66.0*

NEIC ***09*** *16:46:25.7±1.1, 4°.06S±0°.09×130°.3E±0°.1, h10^{km}±2^{km}, mb4.1/5, Error ellipse: s-maj=26.6km s-min=10.0km az=119.0*

ISC 09 16:46:28.3±0.8**, 4°.08S**±0°.09×**130°.3E**±0°.1**, h35**^{km}**, n13, σ1^s.73**/13**, mb4.0**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.26	60	Pn	Pn	16 47 03.0	-0.2
MTN	Manton Dam	8.75	175	Pn	Pn	16 48 32.6	+0.1
AS31	Alice Springs	19.79	170	P	P	16 50 52.7	-3.0
ASAR	Alice Springs	19.79	170	P	Pn	16 51 00.7	+3.3
	2.3nm,0.8s,baz=348,slow=11,SNR=4.1						
ASAR	Alice Springs	19.79	170	P	P	16 50 53.2	-2.5
PSA00	Pilbara Seismi	20.14	209	P	P	16 50 59.6	+0.1
PSA00				IAmb	IAmb	16 51 00.2	
	comp=Z,15nm,1.1s						
CMAR	Chiang Mai Arr	38.16	307	P	P	16 53 43.5	-1.1
	comp=Z,0.6nm,0.5s,baz=132,slow=7.3,SNR=4.5						
MK31	Makanchi Array	65.97	326	P	P	16 57 11.8	+0.7
MK31				IAmb	IAmb	16 57 12.0	
	comp=Z,1.1nm,0.9s						
MKAR	Makanchi Array	65.97	326	P	P	16 57 11.7	+0.6
	comp=Z,1.0nm,0.4s,baz=115,slow=7.7,SNR=10.0						
MKAR	Makanchi Array	65.97	326	P	P	16 57 11.4	+0.3
MAKZ	Makanchi	66.15	326	P	P	16 57 12.8	+0.6
MAKZ				IAmb	IAmb	16 57 15.7	
	comp=Z,1.7nm,0.9s						
KURK	Kurchatov	70.20	328	P	P	16 57 38.6	+1.1
ABKAR	Akbulak array	80.42	321	P	P	16 58 36.7	+0.3

IDC ***09*** *16:46:52.5±1.7, 4°.26S×129°.31E, h0^{km}, mb3.8/1, mb1 4.2/4, mb1mx3.5/32, mbtmp4.0/4, ML3.9/3, MS3.5/1, Ms1 3.5/1, ms1mx2.8/29, Error ellipse: s-maj=60.0km s-min=27.9km az=83.0*

NEIC ***09*** *16:46:56.0±1.4, 4°.3S±0°.1×129°.4E±0°.1, h25^{km}±8^{km}, mb4.0/8, Error ellipse: s-maj=20.6km s-min=17.2km az=104.0*

ISC 09 16:46:56.7±0.8**, 4°.36S**±0°.10×**129°.4E**±0°.1**, h35**^{km}**, n17, σ0^s.89**/17**, mb4.1**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	3.20	63	Pn	Pn	16 47 44.0	-0.6
SIJI	Sorong	3.95	28	Pn	Pn	16 47 53.5	-1.3
	14nm,0.3s,baz=264,slow=21,SNR=5.9						
MYLDM	Lahad Datu	14.42	311	P	P	16 50 23.7	-1.2
WRAB	Tennant Creek	16.21	163	Pn	Pn	16 50 42.0	0.0
WRAB				IAmb	IAmb	16 50 52.4	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	16.22	163	Pn	Pn	16 50 42.1	0.0
	comp=Z,0.2nm,0.3s,baz=345,slow=12,SNR=2.3						
WRA	Warramunga Arr	16.22	163		P	16 50 44.2	-0.6
WR0	Warramunga Arr	16.30	162	Pn	Pn	16 50 43.1	+0.1
WR0				IAmb	IAmb	16 50 52.2	
	comp=Z,7.9nm,1.2s						
AS31	Alice Springs	19.68	168	P	Pn	16 51 24.7	+0.1
ASAR	Alice Springs	19.68	168	P	Pn	16 51 25.4	+0.8
	comp=Z,0.7nm,0.3s,baz=348,slow=11,SNR=7.9						
ASAR				LR	LR	17 00 21.3	
	comp=Z,136nm,18.9s,baz=336,slow=41						
ASAR	Alice Springs	19.68	168	P	Pn	16 51 25.1	+0.5
JMM	Marumori	43.33	13	P	P	16 54 57.7	+2.3
MK31	Makanchi Array	65.70	326	P	P	16 57 38.0	+0.2
MK31				IAmb	IAmb	16 57 44.4	
	comp=Z,2.2nm,1.3s						
MKAR	Makanchi Array	65.70	326	P	P	16 57 38.2	+0.4
	comp=Z,0.7nm,0.6s,baz=126,slow=8.3,SNR=3.7						
MKAR	Makanchi Array	65.70	326	P	P	16 57 37.9	+0.1
MAKZ	Makanchi	65.88	326	P	P	16 57 39.9	+0.9
MAKZ				IAmb	IAmb	16 57 55.7	
	comp=Z,2.9nm,1.2s						
KURK	Kurchatov	69.96	328	P	P	16 58 04.4	-0.1
ABKAR	Akbulak array	80.08	321	P	P	16 59 02.8	-0.1

IDC ***09*** *16:47:32.9±1.1, 4°.15S×129°.53E, h0^{km}, mb4.0/7, mb1 4.2/11, mb1mx3.9/30, mbtmp4.0/11, ML3.8/4, MS3.5/1, Ms1 3.5/1, ms1mx2.8/28, Error ellipse: s-maj=35.6km s-min=20.5km az=89.0*

NEIC ***09*** *16:47:34.4±1.9, 4°.16S±0°.07×129°.52E±0°.08, h10^{km}±1^{km}, mb4.3/12, Error ellipse: s-maj=13.4km s-min=12.5km az=246.0*

ISC 09 16:47:37.2±0.6**, 4°.24S**±0°.06×**129°.58E**±0°.09**, h36**^{km}**, n32, σ0^s.83**/32**, mb4.0**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.96	64	Pn	Pn	16 48 22.2	+0.5
SIJI	Sorong	3.74	27	Pn	Pn	16 48 31.7	-0.8
	14nm,0.3s,baz=227,slow=22,SNR=5.5						
SIJI				Sn	Sn	16 49 16.3	+1.0
	8.7nm,0.3s,baz=275,slow=23,SNR=1.6						
BATI	Baumata	8.35	224	LR	LR	16 53 25.9	
	comp=Z,319nm,19.6s,baz=36,slow=42						
KNRA	Kununurra	11.40	184	Pn	Pn	16 50 18.9	+1.3
FITZ	Fitzroy Crossi	14.31	195	Pn	Pn	16 50 58.1	+0.8
	0.2nm,0.3s,baz=45,slow=14,SNR=1.3						
MYLDM	Lahad Datu	14.49	310	Pn	Pn	16 51 00.5	+0.6
WB0	Warramunga Arr	16.14	163	Pn	Pn	16 51 21.4	0.0
WRAB	Tennant Creek	16.28	164	Pn	Pn	16 51 23.6	+0.3
WRA	Warramunga Arr	16.29	164	Pn	P	16 51 24.5	-1.5
	0.3nm,0.3s,baz=347,slow=11,SNR=2.4						
WB2	Warramunga Arr	16.29	164	Pn	Pn	16 51 22.8	-0.6
WB2				IAmb	IAmb	16 51 30.5	
	comp=Z,23nm,1.4s						
COEN	Coen	16.52	127		P	16 51 28.0	-0.7
COEN				IAmb	IAmb	16 51 36.9	
	comp=Z,34nm,1.4s						
PSA00	Pilbara Seismi	19.66	208	P	Pn	16 52 04.1	-0.6
PSA00				IAmb	IAmb	16 52 05.5	
	comp=Z,14nm,0.8s						
AS31	Alice Springs	19.76	168	P	Pn	16 52 05.7	-0.4
ASAR	Alice Springs	19.76	168	P	Pn	16 52 06.1	+0.1
	comp=Z,0.5nm,0.3s,baz=348,slow=11,SNR=8.1						
ASAR	Alice Springs	19.76	168	P	P	16 52 05.0	+0.6
CTAO	Charters Tower	22.63	136	P	P	16 52 34.7	-0.5
CTAO				IAmb	IAmb	16 52 51.6	
	comp=Z,15nm,1.4s						
CMAR	Chiang Mai Arr	37.68	308	P	P	16 54 50.0	+0.6
	comp=Z,0.7nm,0.5s,baz=136,slow=7.0,SNR=5.7						
CMAR	Chiang Mai Arr	37.68	308	P	P	16 54 47.5	-2.0
MAJO	Matsushiro	41.36	11	P	P	16 55 19.0	-0.8
MAJO				IAmb	IAmb	16 55 20.0	
	comp=Z,5.0nm,0.7s						
MAT	Matsushiro	41.36	11	P	P	16 55 18.1	-1.7
KSRS	Korea Array	41.50	358	P	P	16 55 21.3	+0.4
	comp=Z,1.3nm,0.7s,baz=174,slow=8.7,SNR=5.6						
JMM	Marumori	43.16	13	P	P	16 55 34.3	-0.2
USRK	Ussuriysk Ar.	48.26	2	P	P	16 56 15.2	+0.6
	comp=Z,1.9nm,0.5s,baz=181,slow=7.6,SNR=5.6						
SONM	Songino Array	55.70	341	P	P	16 57 11.3	+1.1
	comp=Z,0.5nm,0.7s,baz=139,slow=6.8,SNR=2.2						
MK31	Makanchi Array	65.70	326	P	P	16 58 18.1	-0.1
MK31				IAmb	IAmb	16 58 21.3	
	comp=Z,1.4nm,0.8s						
MKAR	Makanchi Array	65.70	326	P	P	16 58 18.2	0.0
	comp=Z,1.8nm,0.5s,baz=115,slow=8.0,SNR=16						
MKAR	Makanchi Array	65.70	326	P	P	16 58 17.6	-0.7
MAKZ	Makanchi	65.89	326	P	P	16 58 19.1	-0.2
ZALV	Zalesovo Beam	68.94	334	P	P	16 58 38.6	+0.1
	comp=Z,0.5nm,0.4s,baz=128,slow=6.1,SNR=4.0						
KURK	Kurchatov	69.96	328	P	P	16 58 44.8	0.0
ABKAR	Akbulak array	80.10	321	P	P	16 59 42.5	-0.9
ILAR	Eielson Array	91.04	25	P	P	17 00 38.0	+0.4
	comp=Z,0.4nm,0.6s,baz=268,slow=3.9,SNR=4.1						

IDC ***09*** *16:50:45.8±1.7, 4°.03S×129°.48E, h0^{km}, mb3.9/2, mb1 4.0/4, mb1mx3.5/27, mbtmp3.9/4, ML3.9/2, Error ellipse: s-maj=39.7km s-min=28.5km az=92.0*

NEIC ***09*** *16:50:47.4±0.3, 4°.00S±0°.06×129°.51E±0°.09, h10^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=17.1km s-min=7.3km az=239.0*

ISC 09 16:50:50.0±0.7**, 4°.09S**±0°.07×**129°.52E**±0°.09**, h36**^{km}**, n15, σ0^s.68**/16**, mb4.1**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.96	67	Pn	Pn	16 51 34.0	-0.5
SIJI	Sorong	3.64	29	Pn	Pn	16 51 44.5	+0.6
	7.3nm,0.3s,baz=229,slow=19,SNR=4.4						
SIJI				Sn	Sn	16 52 25.6	-0.1
	14nm,0.3s,baz=206,slow=23,SNR=9.9						
TNTI	Ternate	5.29	336	Pn	Pn	16 52 05.4	-1.2
KNRA	Kununurra	11.54	184	Pn	Pn	16 53 33.1	+0.8
PSA00	Pilbara Seismi	19.76	208	P	P	16 55 17.3	+0.3
PSA00				IAmb	IAmb	16 55 19.2	
	comp=Z,9.5nm,0.8s						
AS31	Alice Springs	19.91	168	P	Pn	16 55 19.8	-0.8
ASAR	Alice Springs	19.92	168	P	Pn	16 55 20.1	-0.5
	comp=Z,0.4nm,0.3s,baz=346,slow=9.3,SNR=4.7						
ASAR	Alice Springs	19.92	168	P	Pn	16 55 19.7	-1.0
CTAO	Charters Tower	22.77	136	P	P	16 55 48.8	-0.7
CTAO				IAmb	IAmb	16 56 14.9	
	comp=Z,18nm,1.5s						
CMAR	Chiang Mai Arr	37.55	308	P	P	16 58 02.0	+0.8
	comp=Z,0.7nm,0.7s,baz=137,slow=7.1,SNR=5.0						
MK31	Makanchi Array	65.55	326	P	P	17 01 30.3	+0.2
MK31				IAmb	IAmb	17 01 37.4	
	comp=Z,2.0nm,1.2s						
MKAR	Makanchi Array	65.55	326	P	P	17 01 30.3	+0.2
	comp=Z,1.1nm,0.4s,baz=121,slow=8.4,SNR=22						
MAKZ	Makanchi	65.73	326	P	P	17 01 31.4	+0.2
MAKZ				IAmb	IAmb	17 01 58.9	
	comp=Z,2.8nm,1.2s						
KURK	Kurchatov	69.81	328	P	P	17 01 57.0	+0.2
ABKAR	Akbulak array	79.95	321	P	P	17 02 55.2	-0.2
ABKAR				IAmb	IAmb	17 03 23.0	
	comp=Z,1.9nm,1.1s						

IDC ***09*** *16:51:49.5±1.8, 4°.12S×129°.29E, h0^{km}, mb3.7/1, mb1 4.1/4, mb1mx3.5/28, mbtmp3.9/4, ML3.9/3, Error ellipse: s-maj=59.6km s-min=28.5km az=83.0*

NEIC ***09*** *16:51:50.4±1.5, 4°.1S±0°.1×129°.5E±0°.1, h6^{km}±8^{km}, mb4.0/7, Error ellipse: s-maj=18.4km s-min=16.9km az=160.0*

ISC 09 16:51:53.8±0.9**, 4°.20S**±0°.08×**129°.5E**±0°.1**, h36**^{km}**, n14, σ0^s.36**/15**, mb3.9**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	3.04	65	Pn	Pn	16 52 39.6	+0.2
SIJI	Sorong	3.76	28	Pn	Pn	16 52 49.8	+0.4
	9.5nm,0.3s,baz=246,slow=22,SNR=2.2						
SIJI				Sn	Sn	16 53 32.1	-0.3
	9.8nm,0.3s,baz=245,slow=23,SNR=2.0						
WRA	Warramunga Arr	16.34	164	Pn	P	16 55 43.3	+0.1
	0.4nm,0.3s,baz=344,slow=11,SNR=2.2						
WRA	Warramunga Arr	16.34	164	P	P	16 55 43.6	+0.4
PSA00	Pilbara Seismi	19.64	208		Pn	16 56 21.4	+0.4
PSA00				IAmb	IAmb	16 56 22.0	
	comp=Z,6.3nm,0.7s						
AS31	Alice Springs	19.81	168	P	Pn	16 56 23.1	0.0
AS31				IAmb	IAmb	16 56 26.4	
	comp=Z,2.5nm,0.7s						
ASAR	Alice Springs	19.82	168	P	Pn	16 56 22.9	-0.3
	comp=Z,0.7nm,0.3s,baz=347,slow=10,SNR=6.3						
ASAR	Alice Springs	19.82	168	P	Pn	16 56 22.4	-0.7
MK31	Makanchi Array	65.62	326	P	P	17 02 33.9	-0.3
MK31				IAmb	IAmb	17 02 34.0	
	comp=Z,1.2nm,1.1s						
MKAR	Makanchi Array	65.62	326	P	P	17 02 34.1	-0.1
	comp=Z,0.4nm,0.4s,baz=115,slow=7.7,SNR=2.6						
MKAR	Makanchi Array	65.62	326	P	P	17 02 33.9	-0.3
MAKZ	Makanchi	65.80	326	P	P	17 02 34.9	-0.5
MAKZ				IAmb	IAmb	17 03 03.9	
	comp=Z,1.7nm,1.0s						
KURK	Kurchatov	69.88	328	P	P	17 03 00.9	0.0
ABKAR	Akbulak array	80.01	321	P	P	17 03 59.5	0.0
ABKAR				IAmb	IAmb	17 04 08.5	
	comp=Z,1.3nm,0.8s						

IDC ***09*** *16:58:23.8±1.5, 4°.01S×129°.77E, h0^{km}, mb3.7/1, mb1 3.6/5, mb1mx3.3/29, mbtmp3.5/5, ML3.1/4, Error ellipse: s-maj=49.8km s-min=22.4km az=92.0*

ISC 09 16:58:25.2±1.1**, 4°.0S**±0°.1×**129°.8E**±0°.2**, h10**^{km}**, n5, σ0^s.50**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.45	24	Pn	Pn	16 59 18.6	-0.4
	1.7nm,0.3s,baz=142,slow=22,SNR=6.6						
SIJI				Sn	Sn	17 00 00.4	+0.4
	1.3nm,0.3s,baz=217,slow=22,SNR=1.4						
FITZ	Fitzroy Crossi	14.57	196	Pn	Pn	17 01 51.4	-0.2
	0.1nm,0.3s,baz=23,slow=13,SNR=2.4						
WRA	Warramunga Arr	16.41	165	Pn	Pn	17 02 15.5	-0.3
	0.1nm,0.3s,baz=344,slow=12,SNR=2.4						
ASAR	Alice Springs	19.91	169	P	P	17 02 57.7	+0.5
	0.1nm,0.3s,baz=348,slow=10,SNR=10						
MKAR	Makanchi Array	65.68	326	P	P	17 09 10.0	+0.1
	0.5nm,0.5s,baz=116,slow=8.2,SNR=8.2						

IDC 09 16:59:14.4±2.5**, 4°.19S**×**129°.38E, h0**^{km}**, mb3.7**/1**, mb1 3.6**/3**, mb1mx3.2**/27**, mbtmp3.5**/3**, ML3.3**/2**, Error ellipse: s-maj=172.1km s-min=30.8km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.38	163	Pn	Pn	17 03 05.9	0.0

	0.1nm,0.3s,baz=346,slow=12,SNR=2.1						
ASAR	Alice Springs	19.85	168	P	P	17 03 47.1	0.0
	0.2nm,0.3s,baz=349,slow=11,SNR=4.2						
MKAR	Makanchi Array	65.56	326	P	P	17 09 59.9	0.0
	0.4nm,0.5s,baz=113,slow=7.5,SNR=5.0						

BUL 09 17:01:14.2±2.1**, 20°.37S×29°.56E, h10^{km}, MD4.0, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLWY	Bulawayo	0.92	284	*i* P	Pb	17 01 32.3	-0.1
BLWY	Bulawayo	0.92	284	*i* P	Pb	17 01 32.3	-0.1
MATP	Matopo	1.00	267	*i* P	Pg	17 01 30.5	-3.0
MATP	Matopo	1.00	267	*i* P	Pg	17 01 30.5	-3.0
MSNA	Messina	2.01	168	*i* P	Pn	17 01 47.7	-0.6
MSNA	Messina	2.01	168	*i* P	Pn	17 01 47.7	-0.6
KRI	Karoi	3.52	1	*i* P	Pn	17 02 01.1	-8.0
KRI	Karoi	3.52	1	*i* P	Pn	17 02 01.1	-8.0
MOPA	Mopani	3.57	152	*i* P	Pb	17 02 15.6	-1.9
MOPA	Mopani	3.57	152	*i* P	Pb	17 02 15.6	-1.9

IDC 09 17:01:53.2±1.6**, 4°.15S×129°.38E, h0^{km}, mb3.5**/1**, mb1 3.5**/4**, mb1mx3.2**/28**, mbtmp3.4**/4**, ML3.2**/3**, Error ellipse: s-maj=57.9km s-min=27.0km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.77	30	Pn	Pn	17 02 52.2	-0.3
	3.1nm,0.3s,baz=162,slow=22,SNR=5.1						
SIJI				Sn	Sn	17 03 33.8	-3.8
	1.5nm,0.3s,baz=217,slow=22,SNR=1.5						
WRA	Warramunga Arr	16.43	163	Pn	Pn	17 05 43.2	-2.1
	0.0nm,0.3s,baz=344,slow=13,SNR=1.5						
ASAR	Alice Springs	19.89	168	P	Pn	17 06 27.2	-0.7
	0.2nm,0.3s,baz=345,slow=10,SNR=9.3						
MKAR	Makanchi Array	65.52	326	P	P	17 12 38.6	+0.1
	0.2nm,0.3s,baz=108,slow=7.9,SNR=7.3						

IDC ***09*** *17:05:10.5±1.6, 4°.04S×129°.54E, h0^{km}, mb3.9/2, mb1 3.8/5, mb1mx3.4/29, mbtmp3.7/5, ML3.5/3, Error ellipse: s-maj=38.8km s-min=24.5km az=101.0*

DJA ***09*** *17:05:11.0±1.0, 4°S±14°×13°0E±°, h10^{km}, M3.7/6, MLv3.7/6*

ISC 09 17:05:14.9±1.2**, 4°.1S**±0°.1×**129°.5E**±0°.1**, h36^{km}, n9, σ2^{s}.08**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.93	320	P	Pn	17 05 27.5	-3.9
AAI	Ambon	1.38	286	P	Pn	17 05 35.6	-1.9
FAKI	Fak Fak	2.95	67	P	Pn	17 05 57.9	-1.3
SIJI	Sorong	3.62	29	Pn	Pn	17 06 08.3	-0.2
	2.5nm,0.3s,baz=233,slow=20,SNR=3.8						
SIJI				Sn	Sn	17 06 51.5	+1.5
	4.6nm,0.3s,baz=204,slow=22,SNR=2.7						
SANI	Sanana	4.05	299	P	Pn	17 06 12.2	-2.2
BATI	Baumata	8.43	223	Pn	Pn	17 07 14.4	-0.1
	1.1nm,0.3s,baz=141,slow=20,SNR=1.6						
ASAR	Alice Springs	19.94	168	P	P	17 09 44.8	+0.9
	0.1nm,0.3s,baz=350,slow=10,SNR=5.6						
CMAR	Chiang Mai Arr	37.53	308	P	P	17 12 26.9	+1.1
	0.5nm,0.5s,baz=137,slow=7.2,SNR=4.2						
MKAR	Makanchi Array	65.53	326	P	P	17 15 55.4	+0.7
	0.9nm,0.4s,baz=114,slow=7.8,SNR=21						

IDC ***09*** *17:06:12.1±1.5, 4°.11S×129°.44E, h0^{km}, mb3.9/2, mb1 4.1/6, mb1mx3.6/30, mbtmp4.0/6, ML3.8/4, Error ellipse: s-maj=38.5km s-min=24.1km az=86.0*

ISC 09 17:06:16.7±0.9**, 4°.13S**±0°.09×**129°.5E**±0°.2**, h36^{km}, n6, σ0^{s}.87**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.70	29	Pn	Pn	17 07 11.7	+0.4
	19nm,0.3s,baz=215,slow=20,SNR=12						
SIJI				Sn	Sn	17 07 52.5	-1.2
	5.5nm,0.3s,baz=158,slow=23,SNR=1.3						
BATI	Baumata	8.35	223	Pn	Pn	17 08 14.3	-0.9
	2.9nm,0.3s,baz=117,slow=3.2,SNR=6.5						
WRA	Warramunga Arr	16.42	164	Pn	Pn	17 10 04.8	+0.4
	0.1nm,0.3s,baz=350,slow=13,SNR=1.9						
ASAR	Alice Springs	19.89	168	P	P	17 10 45.3	+0.2
	0.4nm,0.3s,baz=349,slow=10.0,SNR=3.3						
CMAR	Chiang Mai Arr	37.53	308	P	P	17 13 28.2	+0.6
	0.6nm,0.5s,baz=133,slow=7.5,SNR=5.7						
MKAR	Makanchi Array	65.56	326	P	P	17 16 56.9	+0.2
	0.9nm,0.4s,baz=113,slow=7.8,SNR=12						

IDC 09 17:07:08.3±999.0**, 29°.99N×106°.60E, h0^{km}, Error ellipse: s-maj=677.5km s-min=206.9km az=82.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I45RU	USSURIYSK INFR	24.59	48	*i*		19 35 30.0	
	baz=240,slow=301,SNR=1.2						
I39PW	PALAU INFRASON	34.44	125	*i*		20 40 10.0	
	baz=307,slow=317,SNR=1.7						
I44RU	PETROPAVLOVSK	43.52	43	*i*		21 34 00.0	
	baz=257,slow=323,SNR=2.5						

IDC ***09*** *17:07:45.1±0.5, 4°.16S×129°.65E, h0^{km}, mb4.6/15, mb1 4.6/22, mb1mx4.5/33, mbtmp4.5/22, ML4.2/6, MS3.9/12, Ms1 3.9/12, ms1mx3.7/26, Error ellipse: s-maj=19.7km s-min=12.2km az=80.0*

NEIC ***09*** *17:07:49±1.7, 4°.18S±0°.06×129°.58E±0°.07, h23^{km}±5^{km}, mb4.8/47, Error ellipse: s-maj=9.7km s-min=9.2km az=122.0*

DJA ***09*** *17:07:51.3±0.2, 4°S±2°×13°0E±°, h42^{km}±4^{km}, M4.5/40, mb4.8/40, mB5.1/23, MLv4.7/14, Mw(mB)4.4/23, MwMwp5.4/4, Mwp5.6/4*

ISC 09 17:07:50.4±0.3**, 4°.19S**±0°.04×**129°.60E**±0°.05**, h36^{km}, n176, σ1^{s}.60**/175**, mb4.7**/50**, MS3.9**/6**, 1C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.45	137	P	Pn	17 07 59.5	-0.6
MSAI	Masohi	1.08	321	P	Pn	17 08 05.8	-3.1
AAI	Ambon	1.49	290	P	Pn	17 08 12.2	-2.4
FAKI	Fak Fak	2.93	65	P	Pn	17 08 34.4	0.0
FAKI	Fak Fak	2.93	65	Pn	Pn	17 08 35.5	+1.0
SIJI	Sorong	3.70	27	Pn	Pn	17 08 44.2	-0.8
	15nm,0.3s,baz=228,slow=22,SNR=16						
SIJI				Sn	Sn	17 09 25.9	-1.5
	37nm,0.3s,baz=70,slow=20,SNR=3.8						
SIJI				LR	LR	17 10 49.4	
	comp=Z,3µm,20.7s,baz=216,slow=51						
SWI	Sorong	3.70	27	P	Pn	17 08 44.8	-0.2
LBMI	Labuha	4.11	329	P	Pn	17 08 50.6	-0.1
SANI	Sanana	4.19	300	P	Pn	17 08 50.2	-1.6
SANI	Sanana	4.19	300	P	Pn	17 08 52.7	+0.9
TNTI	Ternate	5.41	336	P	Pn	17 09 09.4	+0.8
	0.2nm731nm53nm,1.1s						
TNTI	Ternate	5.41	336	Pn	Pn	17 09 07.6	-1.0
SRPI	Serui, Papua	7.02	71	P	Pn	17 09 31.8	+1.1
	0.6nm53nm,0.6s						
KMSI	Cibinong	7.35	310	P	Pn	17 09 33.8	-1.4
	0.6nm1µm88nm,0.9s						
SOEI	Soe	7.65	223	P	Pn	17 09 42.1	+2.6
	0.3nm1µm44nm,0.6s						
SOEI	Soe	7.65	223	Pn	Pn	17 09 38.2	-1.3
SOEI	Soe	7.65	223	P	Pn	17 09 42.1	+2.6
DRS	Darwin Rock St	8.29	171	P	Pn	17 09 50.6	+2.5
BATI	Baumata	8.39	224	Pn	Pn	17 09 51.0	+1.5
	14nm,0.3s,baz=84,slow=2.3,SNR=27						
BATI				LR	LR	17 13 18.3	
	comp=Z,2µm,21.5s,baz=32,slow=39						
BATI	Baumata	8.39	224	P	Pn	17 09 50.7	+1.2
	45nm,0.6s						
MMRI	Maumere	8.55	239	Pn	Pn	17 09 51.7	+0.1
APSI	Ampana	8.59	292	P	Pn	17 09 53.7	+1.5
	985nm94nm,0.9s						
MTN	Manton Dam	8.73	170	Pn	Pn	17 09 53.1	-1.0
MTN	Manton Dam	8.73	170	P	Pn	17 09 55.9	+1.8
KDU	Kakadu	8.90	162	P	Pn	17 09 56.6	+0.1
MRSI	Marisa	8.95	301	P	Pn	17 09 59.2	+2.0
	524nm30nm,0.7s						
EDFI	Ende, Flores	9.07	240	P	Pn	17 10 01.7	+2.8
	410nm22nm,1.2s						
BSSI	Bau Bau, Buton	9.28	258	P	Pn	17 10 04.3	+2.6
	26nm,0.9s						
BNSI	Bone	9.47	268	P	Pn	17 10 06.6	+2.3
	55µm1µm38nm,1.2s						
BKSI	Bulukumba	9.51	263	P	Pn	17 10 06.9	+2.0
	697nm28nm,1.2s						
SPSI	Sidrap Palu	9.81	271	P	Pn	17 10 11.5	+2.5
	509nm19nm,0.7s						
TTSI	Tana Toraja	9.83	276	P	Pn	17 10 10.9	+1.6
	950nm23nm,1.1s						
KAPI	Kappang	9.85	265	Pn	Pn	17 10 10.8	+1.3
	0.5nm,0.3s,baz=232,slow=22,SNR=2.7						
KAPI				LR	LR	17 14 00.9	
	comp=Z,238nm,18.1s,baz=113,slow=38						
KAPI	Kappang	9.85	265		Pn	17 10 08.6	-1.0
KAPI	Kappang	9.85	265	P	Pn	17 10 13.5	+3.9
TOLI2	Tolitoli	10.27	301	Pn	Pn	17 10 13.3	-2.0
TOLI2	Tolitoli	10.27	301	P	Pn	17 10 18.0	+2.7
GENI	Genyem	10.67	82	P	Pn	17 10 20.9	+0.2
	50nm,1.1s						
MPSI	Mapaga	10.69	295	P	Pn	17 10 22.5	+1.5
	14nm,1.0s						
KNRA	Kununurra	11.44	184	Pn	Pn	17 10 29.6	-1.7
KNRA	Kununurra	11.44	184	P	Pn	17 10 31.2	-0.1
PLAI	Plampang	12.62	248	P	Pn	17 10 48.8	+1.4
	68nm,1.0s						
PLAI	Plampang	12.62	248	P	Pn	17 10 51.9	+4.5
FITZ	Fitzroy Crossi	14.35	195	Pn	Pn	17 11 10.1	-1.0
	0.7nm,0.3s,baz=19,slow=9.4,SNR=8.3						
FITZ				LR	LR	17 16 46.9	
	comp=Z,417nm,21.0s,baz=4.5,slow=38						
MYLDM	Lahad Datu	14.48	310		P	17 11 16.4	-2.7
BBKI	Banjar Baru	14.75	272	P	Pn	17 11 18.8	+2.3
	848nm31nm,1.3s						
SRBI	Singaraja	14.82	254	P	Pn	17 11 19.7	+2.3
	1µm104nm,0.8s						
MTKI	Muara Teweh, K	15.04	282	P	Pn	17 11 21.0	+0.6
	1µm15nm,1.7s						
KMMI	Kalianget	15.82	259	P	P	17 11 34.1	+0.2
	79nm,1.3s						
JAGI	Jajag, Banyuwa	15.93	254	P	P	17 11 33.8	-1.4
	47nm,1.0s						
JAGI	Jajag, Banyuwa	15.93	254	P	P	17 11 35.4	+0.1
JAGI	Jajag, Banyuwa	15.93	254	P	P	17 11 36.5	+1.3
WB0	Warramunga Arr	16.17	164	Pn	Pn	17 11 32.8	-2.2
WB0				Sn	Sn	17 14 18.7	-15
BLJI	Banyuglugur	16.30	257	P	Pn	17 11 37.4	+0.7
	1µm51nm,0.7s						
WRAB	Tennant Creek	16.32	164		Pn	17 11 34.7	-2.2
WRAB				Sn	Sn	17 14 21.3	-16
WRA	Warramunga Arr	16.32	164	Pn	Pn	17 11 34.1	-2.8
	0.9nm,0.3s,baz=346,slow=13,SNR=16						
WRA				Sn	Sn	17 14 31.3	-5.7
	0.3nm,0.3s,baz=348,slow=21,SNR=6.6						
WRA				LR	LR	17 18 30.4	
	comp=Z,706nm,20.0s,baz=345,slow=40						
WRA	Warramunga Arr	16.32	164		Sn	17 14 22.1	-15
WB2	Warramunga Arr	16.32	164	Pn	Pn	17 11 33.9	-3.1
WB2					Sn	17 14 20.1	-17
WR0	Warramunga Arr	16.39	163	Pn	Pn	17 11 35.3	-2.6
WR0					Sn	17 14 25.4	-13
COEN	Coen	16.53	127		Pn	17 11 38.5	-1.1
COEN					Sn	17 14 26.2	-16
COEN	Coen	16.53	127	P	Pn	17 11 39.3	-0.3
GMJI	Gumukmas	16.56	255	P	P	17 11 41.8	-0.4
	31nm,1.0s						
PMG	Port Moresby	18.18	107	P	Pn	17 11 59.1	-1.0
	0.5nm,0.3s,baz=316,slow=9.1,SNR=4.1						
PMG				LR	LR	17 21 40.0	
	comp=Z,219nm,19.1s,baz=311,slow=46						
SBUM	Sibu	18.58	290	P	P	17 12 02.9	-1.7
STKI	Sintang	18.60	283	P	P	17 12 04.7	0.0
WOJI	Wonogiri, Jawa	18.92	258	P	Pn	17 12 10.2	+1.1
	46nm,1.2s						
QIS	Mount Isa	18.96	150	P	Pn	17 12 09.8	+0.3
UGM	Wanagama	19.33	258	P	Pn	17 12 17.3	+3.3
MBWA	Marble Bar	19.40	209	P	Pn	17 12 14.6	-0.2
PSA00	Pilbara Seismi	19.70	208	P	P	17 12 17.1	+0.3
PSA00				IAmb	IAmb	17 12 21.5	
	comp=Z,62nm,0.8s						
PSA00	Pilbara Seismi	19.70	208	P	P	17 12 16.6	-0.1
PSA00				IAmb	IAmb	17 12 21.5	
	comp=Z,37nm,0.9s						
PSA00	Pilbara Seismi	19.70	208	P	Pn	17 12 18.7	+0.3
AS31	Alice Springs	19.80	168	P	P	17 12 17.0	-0.9
ASAR	Alice Springs	19.80	168	P	P	17 12 18.6	+0.7
	comp=Z,2.1nm,0.3s,baz=344,slow=10,SNR=29						
ASAR				S	S	17 15 58.0	-1.2
	baz=344,slow=18,SNR=5.2						
ASAR				LR	LR	17 20 34.3	
	comp=Z,586nm,18.4s,baz=348,slow=39						
ASAR	Alice Springs	19.80	168	P	P	17 12 17.8	-0.1
MTSU	Mount Surprise	19.98	135	P	Pn	17 12 21.1	-0.7
WRKA	Warakurna	20.76	183	P	Pn	17 12 29.6	-1.3
LEM	Lembang	22.04	262	LR	LR	17 21 47.1	
	comp=Z,342nm,20.8s,baz=112,slow=38						
CTA	Charters Tower	22.64	136	P	P	17 12 49.1	+0.5
	comp=Z,14nm,0.7s,baz=309,slow=15,SNR=14						
CTAO	Charters Tower	22.64	136	P	P	17 12 48.5	-0.1
CTAO				IAmb	IAmb	17 12 50.3	
	comp=Z,19nm,0.8s						
CTAO	Charters Tower	22.64	136	P	P	17 12 49.5	+1.0
GUMO	Guam	23.27	40	LR	LR	17 21 36.9	
	comp=Z,99nm,18.2s,baz=120,slow=36						
GIRL	Giralia	23.62	218	P	P	17 13 01.4	+3.1
OOD	Oodnadatta	24.18	167	P	P	17 13 04.9	+1.5
MEEK	Meekatharra	24.67	204	P	P	17 13 10.6	+2.6
MULG	Mulgathing	26.29	171	P	P	17 13 23.6	+1.0
FORT	Forrest	26.49	183	P	P	17 13 25.0	+0.6
LCRK	Leigh Creek	27.35	164	P	P	17 13 34.2	+2.0
BBOO	Buckleboo	29.11	169	P	P	17 13 48.4	+0.6
STKA	Stephens Creek	29.75	159	P	P	17 13 52.2	-1.3
	comp=Z,3.5nm,1.0s,baz=343,slow=10,SNR=5.2						
STKA				LR	LR	17 26 32.8	
	comp=Z,433nm,20.0s,baz=340,slow=38						
STKA	Stephens Creek	29.75	159	P	P	17 13 56.5	+3.0
IPM	Ipoh	29.82	286	P	P	17 13 53.3	-1.1
IPM				IAmb	IAmb	17 13 57.9	
	comp=Z,14nm,0.8s						
HTT	Hallett	30.36	164	P	P	17 14 00.8	+1.8
NWAO	Narrogin (SRO)	30.84	201	P	P	17 14 03.9	+0.8
	comp=Z,22nm,1.6s						
ARPS	Mount Arapiles	34.32	162	P	P	17 14 35.3	+1.8
CAN	Canberra	35.80	152	P	P	17 14 48.5	+2.1
NJ2	Nanjing	37.47	345	*e*P	P	17 15 03.5	+3.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CMAR	Chiang Mai Arr	37.67	308	P	P	17 15 03.2	+0.7
	comp=Z,4.6nm,0.6s,baz=139,slow=7.5,SNR=31						
CMAR				PcP	PcP	17 17 21.1	+1.5
	comp=Z,1.9nm,0.8s,baz=163,slow=2.3,SNR=6.0						
CMAR				ScP	ScP	17 21 07.4	+3.0
	comp=Z,0.3nm,0.4s,baz=174,slow=4.9,SNR=4.4						
CMAR	Chiang Mai Arr	37.67	308	P	P	17 15 02.2	-0.3
CHTO	Chiang Mai	37.87	308	P	P	17 15 04.4	+0.2
CHTO				IAmb	IAmb	17 15 06.3	
	comp=Z,12nm,0.9s						
KMI	Kunming	39.12	320	⇓P	P	17 15 16.3	+1.5
KMI				pP	pwP	17 15 30.6	+1.1
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JWT	Wachi	39.64	7	P	P	17 15 19.1	+0.4
JWT				IAmb	IAmb	17 15 21.1	
	comp=Z,18nm,0.9s						
MJAR	Matsushiro Arr	41.31	11	P	P	17 15 31.4	-1.2
	comp=Z,11nm,0.7s,baz=180,slow=9.1,SNR=32						
MJAR				LR	LR	17 30 04.8	
	comp=Z,93nm,20.9s,baz=15,slow=32						
MAJO	Matsushiro	41.31	11	P	P	17 15 31.7	-0.9
MAJO				IAmb	IAmb	17 15 34.2	
	comp=Z,23nm,0.8s						
MAT	Matsushiro	41.31	11	P	P	17 15 31.7	-0.9
JYT	Yasato	41.41	13	P	P	17 15 31.9	-1.4
KSRS	Korea Array	41.46	358	P	P	17 15 34.8	+1.0
	comp=Z,5.0nm,0.8s,baz=172,slow=10.0,SNR=22						
KS19	Wonju Array Si	41.51	358	P	P	17 15 34.1	-0.1
KS19				IAmb	IAmb	17 15 36.9	
	comp=Z,8.5nm,0.8s						
XAN	Xi'an	42.75	334	P	P	17 15 44.1	-0.3
XAN				pP	pP	17 15 50.4	-3.6
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
JSD	Sado	42.78	10	P	P	17 15 44.6	+0.1
JSD				IAmb	IAmb	17 15 46.6	
	comp=Z,13nm,0.7s						
JMM	Marumori	43.12	13	P	P	17 15 46.8	-0.5
BJT	Baijiatuau	45.70	346	P	P	17 16 08.0	+0.2
BJT				IAmb	IAmb	17 16 23.9	
	comp=Z,6.7nm,0.9s						
BJI	Beijing	45.72	346	P	P	17 16 11.7	+3.8
BJI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SHL	Shillong	47.05	311	P	P	17 16 17.7	-1.2
SHL				IAmb	IAmb	17 16 28.0	
	comp=Z,10nm,1.0s						
HHC	Hu-ho-hao-te	47.77	342	*e*P	P	17 16 27.4	+3.2
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,7.6s						
BTO	Baotou	48.06	340	*e*P	P	17 16 32.4	+6.0
USA0B	Ussuriysk Arra	48.22	2	P	P	17 16 27.7	+0.2
USA0B				IAmb	IAmb	17 16 30.5	
	comp=Z,9.4nm,0.7s						
USRK	Ussuriysk Ar.	48.22	2	P	P	17 16 28.4	+0.9
	comp=Z,8.8nm,0.6s,baz=177,slow=6.6,SNR=19						
USRK	Ussuriysk Ar.	48.22	2	P	P	17 16 27.7	+0.2
MDJ	Mudanjiang	48.59	360	P	P	17 16 30.4	+0.1
MDJ				IAmb	IAmb	17 16 32.8	
	comp=Z,11nm,0.9s						
LSA	Lhasa	49.93	315	P	P	17 16 40.5	-0.9
LSA				IAmb	IAmb	17 16 43.4	
	comp=Z,6.8nm,0.8s						
ODAN	Odare	51.15	310	*e*P	P	17 16 49.8	-0.6
	comp=Z,13nm,0.6s						
TAPN	Taplejung	51.16	310	*e*P	P	17 16 49.4	-1.1
	comp=Z,7.9nm,0.4s						
GTA	Gaotai	51.34	330	⇑P	P	17 16 51.5	0.0
GTA				pP	pP	17 17 02.2	+1.1
GTA				sP	pwP	17 17 06.2	+0.2
GTA				PcP	PcP	17 18 07.5	+1.5
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,6.2s						
GTA				LR	LR		
	comp=N,120nm,15.6s						
GTA				LR	LR		
	comp=E,140nm,16.0s						
GTA				LR	LR		
	comp=Z,190nm,16.4s						
RAMN	Ramite	51.80	309	*e*P	P	17 16 55.0	-0.3
	comp=Z,29nm,0.5s						
PKI	Pulchoki	53.03	309	*e*P	P	17 17 03.7	-0.8
	comp=Z,6.9nm,0.7s						
PKIN	Phulchoki	53.05	309	*e*P	P	17 17 04.2	-0.3
KKN	Kakani	53.24	309	*e*P	P	17 17 05.0	-0.9
DMN	Daman	53.28	309	*e*P	P	17 17 05.3	-1.0
GKN	Gorkha	53.84	309	*e*P	P	17 17 09.4	-0.8
KOLN	Koldanda	54.53	308	*e*P	P	17 17 14.7	-0.7
	comp=Z,33nm,0.9s						
DANN	Dangsing	54.68	309	*e*P	P	17 17 15.6	-1.0
	comp=Z,39nm,0.9s						
HYB	Hyderabad	54.76	295	*i* P	P	17 17 15.5	-1.5
PYUN	Piuthan	55.16	309	*e*P	P	17 17 19.3	-0.6
	comp=Z,38nm,0.9s						
ULN	Ulaanbaatar	55.49	342	P	P	17 17 22.1	+0.3
ULN				IAmb	IAmb	17 17 24.9	
	comp=Z,7.8nm,0.8s						
SONM	Songino Array	55.67	341	P	P	17 17 23.0	-0.1
	comp=Z,3.4nm,1.0s,baz=150,slow=8.4,SNR=14						
SONM				PcP	PcP	17 18 24.0	+1.7
	comp=Z,1.9nm,0.8s,baz=155,slow=4.9,SNR=1.7						
WMQ	Urumqi	60.85	326	*e*P	P	17 18 00.2	+0.9
WMQ				pP	pP	17 18 08.0	-0.9
WMQ				pmax	pmax		
	comp=Z,24nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.9s						
PETK	Petropavlovsk-	61.80	19	P	P	17 18 06.0	+0.5
	comp=Z,3.8nm,0.8s,baz=211,slow=5.0,SNR=3.3						
MK31	Makanchi Array	65.68	326	P	P	17 18 30.5	-0.7
MK31				IAmb	IAmb	17 18 32.8	
	comp=Z,7.4nm,0.8s						
MKAR	Makanchi Array	65.68	326	P	P	17 18 31.2	0.0
	comp=Z,7.3nm,0.6s,baz=115,slow=7.7,SNR=58						
MAKZ	Makanchi	65.86	326	P	P	17 18 32.1	-0.3
MAKZ				IAmb	IAmb	17 18 33.9	
	comp=Z,7.4nm,0.8s						
YAK	Yakutsk	66.04	0	P	P	17 18 33.4	+0.3
KBL	Kabul	68.67	309	P	P	17 18 49.7	-1.0
KBL				IAmb	IAmb	17 19 07.8	
	comp=Z,4.3nm,0.7s						
ZAA0	Zalesovo Array	68.91	333	P	P	17 18 50.5	-1.0
ZAA0				IAmb	IAmb	17 18 55.9	
	comp=Z,10nm,0.9s						
ZALV	Zalesovo Beam	68.91	333	P	P	17 18 50.9	-0.5
	comp=Z,8.2nm,0.7s,baz=110,slow=5.1,SNR=24						
ZALV	Zalesovo Beam	68.91	333	P	P	17 18 50.8	-0.7
KURK	Kurchatov	69.93	328	P	P	17 18 57.5	-0.3
KKAR	Karatay Array	70.99	318	P	P	17 19 03.9	-0.7
VNDA	Vanda	75.26	173	P	P	17 19 29.2	+0.1
BRVK	Borovoye	75.57	328	P	P	17 19 31.5	+0.2
TIXI	Tiksi	75.70	360	P	P	17 19 31.3	-0.3
TIXI				IAmb	IAmb	17 19 33.3	
	comp=Z,7.3nm,0.8s						
MAW	Mawson	77.41	201	P	P	17 19 41.2	-0.2
	comp=Z,3.0nm,0.8s,baz=70,slow=15,SNR=2.0						
NRIK	Noril'sk	78.76	346	P	P	17 19 48.5	-0.3
	comp=Z,5.6nm,0.8s,baz=131,slow=6.4,SNR=14						
NRIK	Noril'sk	78.76	346	P	P	17 19 49.0	+0.2
NRIK				IAmb	IAmb	17 19 54.4	
	comp=Z,8.1nm,0.9s						
ABKAR	Akbulak array	80.08	321	P	P	17 19 55.9	-0.6
ABKAR				IAmb	IAmb	17 19 57.9	
	comp=Z,6.9nm,0.8s						
ABKAR	Akbulak array	80.08	321	P	P	17 19 55.8	-0.7
ARU	Arti	83.13	328	P	P	17 20 12.0	-0.4
ARU				IAmb	IAmb	17 20 13.3	
	comp=Z,5.4nm,0.7s						
RAYN	Ar Rayn	86.26	294	P	P	17 20 28.6	-0.4
N19K	Bonanza Creek	86.81	28	P	P	17 20 31.3	+0.4
COLD	Coldfoot	90.04	23	P	P	17 20 46.6	+0.5
COLD				IAmb	IAmb	17 20 48.7	
	comp=Z,4.3nm,0.7s						
SIRT	Sirnak	90.27	307	P	P	17 20 47.3	-0.6
KBZ	Khabaz	90.48	314	P	P	17 20 47.6	-0.9
	comp=Z,2.6nm,0.8s,baz=50,slow=4.4,SNR=5.4						
GURO	Guroymak-BITLI	90.68	308	P	P	17 20 50.4	+0.6
ILAR	Eielson Array	90.99	25	P	P	17 20 49.1	-1.4
	comp=Z,0.9nm,0.7s,baz=289,slow=3.8,SNR=11						
L27K	Beaver Creek,	93.06	27	P	P	17 21 00.4	+0.2
BRTR	Keskin Array B	97.25	309	LR	LR	18 12 02.4	
	comp=Z,49nm,18.2s,baz=12,slow=40						
SNAA	Sanae	98.28	194	P	Pdif	17 21 24.1	+0.3
ARCES	ARCESS Array B	98.83	340	P	P	17 21 24.5	-1.7
	comp=Z,6.4nm,0.9s,baz=94,slow=5.4,SNR=3.9						
ARCES	ARCESS Array B	98.83	340	IAmb	IAmb	17 21 26.8	
	comp=Z,11nm,1.1s						
VNA3	Neumayer Olymp	100.12	192	P	Pdif	17 21 25.7	-6.4
PDAR	Pinedale Array	115.19	44	PKP	PKPdf	17 26 28.6	0.0
	comp=Z,0.5nm,0.7s,baz=107,slow=2.0,SNR=4.4						
TXAR	Lajitas Array	123.80	57	PKP	PKiKP	17 26 46.4	+0.8
	comp=Z,0.6nm,0.8s,baz=300,slow=1.0,SNR=5.3						
TORD	Torodi Ar. Bea	127.83	283	PKP	PKPdf	17 26 52.9	-0.4
	comp=Z,0.9nm,0.7s,baz=42,slow=2.0,SNR=6.2						
TORD	Torodi Ar. Bea	127.83	283		PKiKP	17 26 53.6	-0.2
CPUP	Villa Florida	148.92	168	PKPbc	PKPbc	17 27 35.8	+0.6
	comp=Z,4.6nm,0.8s,baz=201,slow=1.6,SNR=7.2						
LPAZ	La Paz	153.14	140	PKPbc	PKiKP	17 27 46.7	+0.5
	comp=Z,1.2nm,0.5s,baz=190,slow=4.3,SNR=6.4						

IDC 09 17:10:11.7±1.7**, 4°.37S×129°.40E, h0^{km}, mb4.0**/1**, mb1 4.1**/4**, mb1mx3.5**/30**, mbtmp3.9**/4**, ML3.6**/1**, Error ellipse: s-maj=61.6km s-min=28.8km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.94	28	Pn	Pn	17 11 12.3	-1.3
	4.2nm,0.3s,baz=251,slow=22,SNR=0.9						
WRA	Warramunga Arr	16.21	163	Pn	Pn	17 13 59.6	-1.5
	baz=338,slow=11,SNR=0.9						
ASAR	Alice Springs	19.67	168	P	P	17 14 43.1	+0.6
	baz=353,slow=11,SNR=1.0						
MKAR	Makanchi Array	65.71	326	P	P	17 20 58.6	+0.3
	0.6nm,0.4s,baz=110,slow=7.4,SNR=5.1						

*IDC **09** 17:10:31.2±1.5, 4°.24S×129°.67E, h0^{km}, mb3.8/2, mb1 4.1/6, mb1mx3.7/31, mbtmp4.0/6, ML3.9/4, Error ellipse: s-maj=49.7km s-min=23.8km az=94.0*

ISC 09 17:10:35.1±1.0, 4°.3S±0°.1×129°.8E±0°.2, h35^{km}, n6, σ1^{s}.05/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.71	23	Pn	Pn	17 11 29.2	-0.8
	8.6nm,0.3s,baz=222,slow=22,SNR=1.9						
SIJI				Sn	Sn	17 12 11.8	-0.6
	9.8nm,0.3s,baz=225,slow=23,SNR=2.0						
BATI	Baumata	8.45	226	Pn	Pn	17 12 34.4	-0.8
	3.6nm,0.3s,baz=66,slow=22,SNR=2.1						
WRA	Warramunga Arr	16.17	164	Pn	Pn	17 14 19.9	-0.1
	0.2nm,0.3s,baz=348,slow=13,SNR=1.4						
ASAR	Alice Springs	19.66	169	P	Pn	17 15 03.5	+0.7
	0.8nm,0.3s,baz=347,slow=11,SNR=4.1						
KSRS	Korea Array	41.57	358	P	P	17 18 21.0	+1.5
	0.7nm,0.6s,baz=174,slow=9.0,SNR=2.5						
MKAR	Makanchi Array	65.87	326	P	P	17 21 17.5	+0.2
	0.9nm,0.7s,baz=118,slow=7.4,SNR=3.4						

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*IDC **09** 17:10:44.0±11.0, 4°.93S×129°.80E, h0^{km}, mb4.1/4, mb1 4.2/5, mb1mx3.7/27, mbtmp4.1/5, ML3.9/1, Error ellipse: s-maj=238.1km s-min=47.1km az=147.0*

ISC 09 17:10:56.3±4.6, 4°.0S±0°.5×129°.4E±0°.4, h35^{km}, n6, σ0^{s}.81/7, mb4.1/4, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.62	31	Pn	Pn	17 11 51.0	+1.1
	7.2nm,0.3s,baz=221,slow=19,SNR=1.5						
SIJI				Sn	Sn	17 12 30.7	-0.6
	6.9nm,0.3s,baz=220,slow=23,SNR=2.0						
CMAR	Chiang Mai Arr	37.38	308	P	P	17 18 06.3	+0.3
	1.1nm,0.7s,baz=137,slow=7.3,SNR=2.6						
MAT	Matsushiro	41.15	11	P	P	17 18 36.4	-0.8
KSRS	Korea Array	41.24	358	P	P	17 18 38.2	+0.2
	1.1nm,0.6s,baz=174,slow=9.2,SNR=4.4						
USRK	Ussuriysk Ar.	48.02	3	P	P	17 19 31.8	-0.2
	1.8nm,0.5s,baz=200,slow=5.9,SNR=4.3						
MKAR	Makanchi Array	65.39	326	P	P	17 21 35.1	-0.2
	1.5nm,0.4s,baz=113,slow=7.7,SNR=13						

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*IDC **09** 17:16:49.4±1.5, 4°.12S×129°.38E, h0^{km}, mb3.5/2, mb1 3.6/5, mb1mx3.4/28, mbtmp3.4/5, ML3.1/3, Error ellipse: s-maj=48.4km s-min=25.9km az=73.0*

*DJA **09** 17:16:53.5±3.3, 4°S±18°×12°9E±°, h25^{km}±28^{km}, M3.2/6, MLv3.2/6*

ISC 09 17:16:54.2±1.0, 4°.08S±0°.09×129°.40E±0°.07, h36^{km}, n9, σ1^{s}.00/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.87	327	P	Pn	17 17 10.5	+0.6
AAI	Ambon	1.27	288	P	Pn	17 17 16.1	+0.7
FAKI	Fak Fak	3.07	68	P	Pn	17 17 41.4	+1.3
SIJI	Sorong	3.70	30	Pn	Pn	17 17 48.7	-0.1
	1.4nm,0.3s,baz=268,slow=22,SNR=3.4						
SIJI				Sn	Sn	17 18 29.8	-1.4
	2.1nm,0.3s,baz=177,slow=23,SNR=5.8						
SANI	Sanana	3.96	301	P	Pn	17 17 52.1	-0.4
WRA	Warramunga Arr	16.48	163	Pn	Pn	17 20 41.4	-1.3
	0.1nm,0.3s,baz=347,slow=13,SNR=2.0						
ASAR	Alice Springs	19.95	168	P	P	17 21 23.0	-0.3
	0.1nm,0.3s,baz=347,slow=10.0,SNR=8.9						
CMAR	Chiang Mai Arr	37.45	308	P	P	17 24 05.1	+0.6
	0.2nm,0.6s,baz=149,slow=7.4,SNR=1.8						
MKAR	Makanchi Array	65.48	326	P	P	17 27 34.3	+0.6
	0.5nm,0.6s,baz=122,slow=6.2,SNR=7.8						

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*IDC **09** 17:18:11.1±4.4, 5°.74S×146°.98E, h172^{km}±55^{km}, mb3.0/3, mb1 3.1/5, mb1mx2.8/28, mbtmp3.5/5, Error ellipse: s-maj=81.9km s-min=35.3km az=118.0*

ISC 09 17:18:12.2±2.0, 5°.9S±0°.1×147°.1E±0°.3, h200^{km}, n6, σ1^{s}.36/7, mb3.3/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.52	179	P	Pn	17 19 08.7	+0.6
	3.4nm,0.3s,baz=14,slow=10,SNR=22						
PMG				S	Sn	17 19 51.1	-0.9
	baz=60,slow=20,SNR=1.9						
WRA	Warramunga Arr	18.69	220	P	Pn	17 22 17.2	-1.2
	0.2nm,0.3s,baz=45,slow=9.4,SNR=11						
ASAR	Alice Springs	21.78	214	P	P	17 22 50.2	+1.9
	0.4nm,0.4s,baz=46,slow=8.5,SNR=7.0						
FITZ	Fitzroy Crossi	24.21	238	P	P	17 23 10.7	+0.1
	1.2nm,0.8s,baz=52,slow=12,SNR=1.9						
MKAR	Makanchi Array	77.44	320	P	P	17 29 45.5	+0.1
	0.4nm,1.0s,baz=107,slow=5.2,SNR=1.8						
TORD	Torodi Ar. Bea	145.14	285	PKPbc	PKiKP	17 37 29.6	-1.2
	0.4nm,0.8s,baz=94,slow=4.3,SNR=2.3						

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*IDC **09** 17:22:19.1±1.5, 4°.21S×129°.55E, h0^{km}, mb3.7/2, mb1 3.6/5, mb1mx3.0/41, mbtmp3.5/5, ML3.0/3, Error ellipse: s-maj=59.3km s-min=26.2km az=78.0*

ISC 09 17:22:19.5±1.2, 4°.03S±0°.09×130°.2E±0°.3, h10^{km}, n5, σ0^{s}.99/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.33	19	Pn	Pb	17 23 18.6	-0.1
	1.0nm,0.3s,baz=208,slow=19,SNR=2.5						
SIJI				Sn	Sb	17 23 59.5	+0.2
	0.6nm,0.3s,baz=228,slow=23,SNR=1.6						
WRA	Warramunga Arr	16.33	166	Pn	Pn	17 26 08.0	-1.1
	0.0nm,0.3s,baz=348,slow=13,SNR=1.3						
ASAR	Alice Springs	19.85	170	P	P	17 26 52.1	+1.3
	0.1nm,0.3s,baz=346,slow=11,SNR=8.6						
MKAR	Makanchi Array	65.86	326	P	P	17 33 05.4	0.0
	0.7nm,0.8s,baz=118,slow=7.6,SNR=4.3						
KURBB	Kurchatov Arra	70.09	328	P	P	17 33 31.8	-0.1
	0.3nm,0.4s,baz=127,slow=5.6,SNR=4.5						

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*IDC **09** 17:23:27.8±1.0, 4°.19S×129°.50E, h0^{km}, mb4.0/6, mb1 3.9/10, mb1mx3.5/43, mbtmp3.8/10, ML3.3/4, Error ellipse: s-maj=44.3km s-min=18.6km az=73.0*

ISC 09 17:23:32.3±0.8, 4°.20S±0°.08×129°.7E±0°.2, h36^{km}, n10, σ1^{s}.02/11, mb3.9/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.66	26	Pn	Pn	17 24 27.9	+1.4
	6.8nm,0.3s,baz=209,slow=23,SNR=14						
SIJI				Sn	Sn	17 25 06.3	-2.1
	5.2nm,0.3s,baz=53,slow=18,SNR=3.8						
FITZ	Fitzroy Crossi	14.37	196	Pn	Pn	17 26 52.5	-0.8
	0.0nm,0.3s,baz=32,slow=13,SNR=1.5						
WRA	Warramunga Arr	16.29	164	Pn	Pn	17 27 18.7	+0.2
	0.1nm,0.3s,baz=347,slow=13,SNR=2.9						
ASAR	Alice Springs	19.78	169	P	Pn	17 28 02.2	+0.9
	0.2nm,0.3s,baz=352,slow=9.4,SNR=8.0						
STKA	Stephens Creek	29.72	159	P	P	17 29 35.0	-0.2
	0.6nm,0.5s,baz=324,slow=18,SNR=1.6						
CMAR	Chiang Mai Arr	37.74	308	P	P	17 30 44.9	-0.2
	0.5nm,0.4s,baz=137,slow=7.7,SNR=6.2						
MKAR	Makanchi Array	65.73	326	P	P	17 34 13.6	+0.1
	0.9nm,0.4s,baz=113,slow=7.8,SNR=26						
ZALV	Zalesovo Beam	68.95	333	P	P	17 34 33.9	+0.3
	0.6nm,0.3s,baz=150,slow=9.5,SNR=1.7						
KURBB	Kurchatov Arra	69.98	328	P	P	17 34 40.5	+0.4
	1.6nm,0.6s,baz=128,slow=5.6,SNR=16						
BVAR	Borovoye Array	75.54	328	P	P	17 35 13.0	-0.1
	0.4nm,0.4s,baz=143,slow=11,SNR=2.8						

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*IDC **09** 17:25:36.8±1.3, 4°.06S×129°.44E, h0^{km}, mb3.9/4, mb1 3.8/8, mb1mx3.5/46, mbtmp3.7/8, ML3.1/4, Error ellipse: s-maj=44.6km s-min=22.9km az=77.0*

*NEIC **09** 17:25:40.1±0.2, 4°.2S±0°.1×129°.7E±0°.1, h29^{km}±9^{km}, mb4.3/3, Error ellipse: s-maj=19.8km s-min=18.4km az=208.0*

ISC 09 17:25:40.7±0.8, 4°.18S±0°.08×129°.7E±0°.1, h36^{km}, n14, σ0^{s}.55/14, mb4.2/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.85	64	Pn	Pn	17 26 23.2	-0.4
SIJI	Sorong	3.65	26	Pn	Pn	17 26 35.2	+0.6
	2.3nm,0.3s,baz=210,slow=20,SNR=2.0						
SIJI				Sn	Sn	17 27 16.2	-0.3
	6.1nm,0.3s,baz=207,slow=22,SNR=3.3						
FITZ	Fitzroy Crossi	14.39	196	Pn	Pn	17 29 01.6	-0.3
	0.0nm,0.3s,baz=45,slow=5.7,SNR=1.3						
WRA	Warramunga Arr	16.31	164	Pn	P	17 29 29.9	+0.2
	0.1nm,0.3s,baz=344,slow=12,SNR=2.1						
PSA00	Pilbara Seismi	19.75	208	P	P	17 30 07.2	-0.4
PSA00				IAmb	IAmb	17 30 10.3	
	comp=Z,5.4nm,1.1s						
ASAR	Alice Springs	19.80	169	P	Pn	17 30 11.2	+1.3
	comp=Z,0.1nm,0.3s,baz=346,slow=9.7,SNR=5.3						
ASAR	Alice Springs	19.80	169	P	P	17 30 07.9	-0.3
CMAR	Chiang Mai Arr	37.73	308	P	P	17 32 52.8	-0.5
	comp=Z,0.4nm,0.5s,baz=140,slow=7.2,SNR=4.6						
MKAR	Makanchi Array	65.71	326	P	P	17 36 21.7	0.0
	comp=Z,0.8nm,0.4s,baz=114,slow=7.8,SNR=15						
MAKZ	Makanchi	65.89	326	P	P	17 36 22.7	-0.2
MAKZ				IAmb	IAmb	17 36 44.9	
	comp=Z,3.8nm,1.4s						
KURBB	Kurchatov Arra	69.96	328	P	P	17 36 48.6	+0.3
	comp=Z,1.6nm,0.7s,baz=131,slow=5.6,SNR=14						
KURK	Kurchatov	69.96	328	P	P	17 36 48.6	+0.3
KURK	Kurchatov	69.96	328	IAmb	IAmb	17 36 49.3	
	comp=Z,2.9nm,0.8s						
BVAR	Borovoye Array	75.52	328	P	P	17 37 21.5	+0.2
	comp=Z,0.5nm,0.4s,baz=135,slow=8.0,SNR=3.7						

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*IDC **09** 17:26:17.4±1.7, 4°.06S×129°.46E, h0^{km}, mb3.7/5, mb1 3.7/7, mb1mx3.2/47, mbtmp3.6/7, ML3.5/2, Error ellipse: s-maj=111.0km s-min=26.3km az=69.0*

ISC 09 17:26:21.4±1.0, 4°.12S±0°.10×129°.7E±0°.2, h36^{km}, n8, σ0^{s}.91/8, mb3.7/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.60	26	Sn	Sn	17 27 55.7	-0.3
	3.6nm,0.3s,baz=204,slow=23,SNR=1.6						
WRA	Warramunga Arr	16.37	164	Pn	P	17 30 11.5	+0.4
	0.2nm,0.3s,baz=340,slow=12,SNR=4.9						
ASAR	Alice Springs	19.86	169	P	Pn	17 30 50.8	-0.5
	0.2nm,0.3s,baz=347,slow=11,SNR=1.5						
CMAR	Chiang Mai Arr	37.69	307	P	P	17 33 33.1	-0.6
	0.4nm,0.6s,baz=132,slow=6.7,SNR=2.6						
SONM	Songino Array	55.63	341	P	P	17 35 53.7	-0.1
	0.3nm,0.6s,baz=147,slow=7.0,SNR=1.7						
MKAR	Makanchi Array	65.66	326	P	P	17 37 02.5	+0.3
	0.4nm,0.6s,baz=119,slow=8.3,SNR=2.4						
ZALV	Zalesovo Beam	68.88	333	P	P	17 37 24.1	+1.8
	0.5nm,0.3s,baz=115,slow=6.5,SNR=1.8						
KURBB	Kurchatov Arra	69.91	328	P	P	17 37 28.6	-0.1
	0.6nm,0.6s,baz=130,slow=5.8,SNR=2.8						

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*IDC **09** 17:28:43.9±1.5, 4°.40S×129°.23E, h0^{km}, mb3.6/2, mb1 3.5/5, mb1mx3.0/51, mbtmp3.4/5, ML3.0/2, Error ellipse: s-maj=57.6km s-min=27.9km az=78.0*

ISC 09 17:28:43.9±1.2, 4°.00S±0°.08×130°.4E±0°.3, h10^{km}, n5, σ0^{s}.80/6, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.24	16	Pn	Pg	17 29 46.5	+0.5
	1.4nm,0.3s,baz=144,slow=22,SNR=2.2						
SIJI				Sn	Sg	17 30 27.3	-0.6
	1.6nm,0.3s,baz=251,slow=23,SNR=2.0						
WRA	Warramunga Arr	16.31	167	Pn	Pn	17 32 33.5	+0.3
	baz=343,slow=12,SNR=1.5						
ASAR	Alice Springs	19.85	170	P	P	17 33 14.7	-0.5
	0.0nm,0.3s,baz=349,slow=11,SNR=1.3						
MKAR	Makanchi Array	65.94	326	P	P	17 39 29.6	-0.7
	0.2nm,0.3s,baz=113,slow=8.1,SNR=4.7						
KURBB	Kurchatov Arra	70.17	328	P	P	17 39 57.4	+0.7
	0.3nm,0.5s,baz=127,slow=5.6,SNR=2.7						

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*IDC **09** 17:29:50.0±1.2, 4°.26S×129°.53E, h0^{km}, mb3.7/6, mb1 3.9/10, mb1mx3.4/52, mbtmp3.7/10, ML3.6/4, Error ellipse: s-maj=48.3km s-min=22.0km az=79.0*

ISC 09 17:29:53.9±0.9, 4°.32S±0°.09×129°.7E±0°.2, h35^{km}, n10, σ1^{s}.18/11, mb3.8/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.75	24	Pn	Pn	17 30 49.5	+0.1
	7.8nm,0.3s,baz=224,slow=15,SNR=7.4						
SIJI				Sn	Sn	17 31 31.2	-1.2
	6.3nm,0.3s,baz=67,slow=22,SNR=6.0						
FITZ	Fitzroy Crossi	14.27	196	Pn	Pn	17 33 12.2	-1.3
	0.1nm,0.3s,baz=27,slow=12,SNR=1.7						
WRA	Warramunga Arr	16.17	164	Pn	Pn	17 33 38.3	-0.4
	0.2nm,0.3s,baz=345,slow=13,SNR=4.6						
ASAR	Alice Springs	19.66	169	P	Pn	17 34 22.9	+1.4
	0.4nm,0.3s,baz=343,slow=8.5,SNR=9.1						
CMAR	Chiang Mai Arr	37.84	308	P	P	17 37 07.4	-0.1
	0.5nm,0.4s,baz=129,slow=7.1,SNR=2.7						
SONM	Songino Array	55.83	341	P	P	17 39 28.2	+0.4
	0.2nm,0.6s,baz=150,slow=12,SNR=1.8						
MKAR	Makanchi Array	65.85	326	P	P	17 40 36.6	+0.7
	0.9nm,0.6s,baz=118,slow=7.7,SNR=12						
ZALV	Zalesovo Beam	69.07	333	P	P	17 40 58.3	+2.2
	0.4nm,0.3s,baz=155,slow=4.8,SNR=1.3						
KURBB	Kurchatov Arra	70.09	328	P	P	17 41 02.9	+0.4
	0.9nm,0.6s,baz=132,slow=5.8,SNR=14						
BVAR	Borovoye Array	75.66	328	P	P	17 41 35.1	-0.4
	0.3nm,0.6s,baz=121,slow=7.1,SNR=2.1						

IDC 09 17:34:19.1±1.8, 4°.08S×129°.63E, h0^{km}, mb3.0/1, mb1 3.3/4, mb1mx3.0/52, mbtmp3.1/4, ML3.1/2, Error ellipse: s-maj=51.0km s-min=25.7km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.58	27	Pn	Pn	17 35 16.8	+0.8
	1.4nm,0.3s,baz=275,slow=22,SNR=2.5						
SIJI				Sn	Sn	17 35 59.6	+0.5
	0.7nm,0.3s,baz=200,slow=23,SNR=1.5						
WRA	Warramunga Arr	16.42	164	Pn	Pn	17 38 11.2	+0.1
	baz=347,slow=14,SNR=1.8						
ASAR	Alice Springs	19.90	168	P	P	17 38 52.8	+0.3
	0.1nm,0.3s,baz=351,slow=9.2,SNR=4.2						
MKAR	Makanchi Array	65.60	326	P	P	17 45 04.6	-0.4
	0.1nm,0.3s,baz=117,slow=5.0,SNR=1.0						

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*IDC **09** 17:35:54.1±1.5, 4°.19S×129°.37E, h0^{km}, mb3.4/2, mb1 3.5/5, mb1mx3.0/50, mbtmp3.4/5, ML3.1/3, MS3.4/1, Ms1 3.4/1, ms1mx2.6/23, Error ellipse: s-maj=55.1km s-min=26.4km az=79.0*

ISC 09 17:35:54.0±1.2, 3°.87S±0°.08×130°.4E±0°.3, h10^{km}, n6, σ0^{s}.96/6, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.10	16	Pn	Pg	17 36 53.9	+0.4
	2.9nm,0.3s,baz=219,slow=21,SNR=7.0						
SIJI				Sn	Sg	17 37 33.4	-0.4
	2.7nm,0.3s,baz=206,slow=22,SNR=2.1						
WRA	Warramunga Arr	16.43	167	Pn	Pn	17 39 43.8	-1.0
	0.0nm,0.3s,baz=345,slow=13,SNR=2.1						
ASAR	Alice Springs	19.97	171	P	P	17 40 27.6	+1.1
	0.1nm,0.3s,baz=349,slow=10,SNR=7.4						
JOW	Kunigami	30.59	356	LR	LR	17 54 52.0	
	comp=Z,73nm,19.8s,baz=192,slow=37						
MKAR	Makanchi Array	65.86	326	P	P	17 46 40.1	+0.2
	0.2nm,0.4s,baz=128,slow=7.2,SNR=5.3						
KURBB	Kurchatov Arra	70.08	328	P	P	17 47 05.8	-0.6
	0.3nm,0.7s,baz=120,slow=5.6,SNR=1.9						

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*IDC **09** 17:43:26.4±1.4, 4°.28S×129°.50E, h0^{km}, mb3.8/2, mb1 3.7/6, mb1mx3.4/41, mbtmp3.5/6, ML3.1/4, Error ellipse: s-maj=45.0km s-min=23.2km az=79.0*

ISC 09 17:43:30.2±1.0, 4°.35S±0°.09×129°.7E±0°.2, h35^{km}, n6, σ1^{s}.14/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.81	25	Pn	Pn	17 44 26.1	-0.3
	3.4nm,0.3s,baz=212,slow=21,SNR=16						
SIJI				Sn	Sn	17 45 09.4	-0.6
	1.1nm,0.3s,baz=240,slow=23,SNR=1.3						
FITZ	Fitzroy Crossi	14.22	196	Pn	Pn	17 46 47.7	-1.4
	0.0nm,0.3s,baz=19,slow=13,SNR=1.6						
WRA	Warramunga Arr	16.16	164	Pn	Pn	17 47 15.6	+0.8
	0.0nm,0.3s,baz=346,slow=13,SNR=2.5						
ASAR	Alice Springs	19.64	168	P	Pn	17 47 58.8	+1.2
	0.2nm,0.3s,baz=345,slow=10,SNR=16						
CMAR	Chiang Mai Arr	37.80	308	P	P	17 50 44.2	+0.7
	0.7nm,0.3s,baz=130,slow=8.4,SNR=1.3						
MKAR	Makanchi Array	65.83	326	P	P	17 54 12.5	+0.4
	0.4nm,0.5s,baz=114,slow=7.9,SNR=10						

IDC 09 17:47:05.6±1.8, 4°.19S×129°.65E, h0^{km}, mb3.3/1, mb1 3.4/4, mb1mx3.1/34, mbtmp3.2/4, ML3.1/3, Error ellipse: s-maj=61.1km s-min=27.4km az=85.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.68	26	Pn	Pn	17 48 04.6	+0.8
	3.6nm,0.3s,baz=61,slow=4.5,SNR=46						
SIJI				Sn	Sn	17 48 44.9	-2.9
	5.6nm,0.3s,baz=222,slow=22,SNR=8.3						
WRA	Warramunga Arr	16.31	164	Pn	Pn	17 50 55.7	-0.5
	0.0nm,0.3s,baz=346,slow=11,SNR=1.4						
ASAR	Alice Springs	19.79	168	P	P	17 51 38.1	+0.4
	0.1nm,0.3s,baz=347,slow=11,SNR=8.1						
MKAR	Makanchi Array	65.70	326	P	P	17 57 51.7	-0.4
	0.2nm,0.7s,baz=123,slow=6.7,SNR=1.7						

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*NOU **09** 17:47:08.9, 15°.29S×177°.58W, h414^{km}, mb4.5/64, Fiji Islands Region*

*IDC **09** 17:47:09.6±1.3, 15°.49S×177°.75W, h413^{km}±13^{km}, mb3.9/16, mb1 4.0/18, mb1mx3.7/38, mbtmp4.7/18, Error ellipse: s-maj=20.2km s-min=10.7km az=152.0*

*NEIC **09** 17:47:09.1±1.9, 15°.3S±0°.1×177°.68W±0°.09, h401^{km}±8^{km}, mb4.4/80, Error ellipse: s-maj=18.0km s-min=10.7km az=155.0*

ISC 09 17:47:08.4±0.4, 15°.28S±0°.08×177°.70W±0°.06, h400^{km}, n171, σ1^{s}.29/176, mb4.4/55, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAVE	Taveuni	2.56	236	P	Pn	17 48 09.4	+1.2
DGTI	Dogotuki	2.67	247	P	Pn	17 48 09.6	+0.5
LKBA	Tubou, Lakemba	3.13	200	P	Pn	17 48 13.8	+1.1
MSVF	Nonsavu	4.75	239	P	Pn	17 48 29.5	+1.4
	92nm,0.3s,baz=168,slow=22,SNR=382						
MSVF				S	S	17 49 33.0	+0.3
	baz=122,slow=23,SNR=0.6						
MSVF	Nonsavu	4.75	239	Pn	Pn	17 48 29.6	+1.5
MSVF	Nonsavu	4.75	239	P	Pn	17 48 29.8	+1.7
AFI	Afiamalu	5.89	77	P	Pn	17 48 39.0	-1.0
	26nm,0.3s,baz=340,slow=2.3,SNR=17						
AFI				S	S	17 49 49.4	-5.1
	baz=217,slow=20,SNR=0.9						
NIUE	Niue	8.33	118		Pn	17 49 06.6	-0.6
NIUE	Niue	8.33	118	P	P	17 49 07.9	+0.4
DVP	Devils Point	13.76	258	P	P	17 50 09.1	+1.6
SANVU	Saraoutou	14.57	267	P	P	17 50 14.3	-2.0
MARNC	Mare, Loyalty	14.88	243	P	P	17 50 19.2	-0.4
MARNC	Mare, Loyalty	14.88	243	P	P	17 50 21.0	+1.3
LIFNC	LIFOU	15.33	247	P	P	17 50 24.3	-0.2
LIFNC	LIFOU	15.33	247	P	P	17 50 25.1	+0.5
PINNC	Pines Island,	15.83	240	P	P	17 50 31.2	+1.3
YATNC	Mamie plateau,	16.08	243	P	P	17 50 35.3	+2.7
OUENC	Ouen Island, N	16.26	242	P	P	17 50 33.7	-0.8
OUENC	Ouen Island, N	16.26	242	P	P	17 50 36.6	+2.1
DZM	Mont Dzumac	16.47	243	P	P	17 50 36.4	-0.5
	1.0nm,0.3s,baz=273,slow=22,SNR=13						
DZM	Mont Dzumac	16.47	243	P	P	17 50 37.3	+0.4
DZM	Mont Dzumac	16.47	243	P	P	17 50 39.0	+2.1
ONTNC	Ouen Toro	16.55	243	P	P	17 50 36.0	-1.6
ONTNC	Ouen Toro	16.55	243	P	P	17 50 39.5	+1.9
NOUC	Port Laguerre	16.60	243	P	P	17 50 40.4	+2.2
KOUNC	Koumac, New Ca	17.93	250	P	P	17 50 53.0	+0.7
TARA	Tarawa	18.95	330	P	P	17 51 03.8	+0.7
OUZ	Omahuta	21.34	200	P	P	17 51 24.4	-0.6
OUZ				IAmb	IAmb	17 51 28.9	
	comp=Z,14nm,0.7s						
OUZ	Omahuta	21.34	200	P	P	17 51 25.3	+0.3
URZ	Urewera	23.35	190	P	P	17 51 39.9	-3.3
	comp=Z,12nm,0.3s,baz=302,slow=23,SNR=39						
URZ	Urewera	23.35	190	P	P	17 51 39.8	-3.3
URZ				IAmb	IAmb	17 51 50.1	
	comp=Z,22nm,0.9s						
BKZ	Black Stump Fm	24.34	191	P	P	17 51 48.2	-3.9
BKZ				IAmb	IAmb	17 52 13.0	
	comp=Z,24nm,1.4s						
BKZ	Black Stump Fm	24.34	191	P	P	17 51 51.1	-1.0
QRZ	Quartz Range	26.84	197	P	P	17 52 13.0	-1.3
QRZ	Quartz Range	26.84	197	P	P	17 52 13.9	-0.4
NNZ	Nelson	26.98	195	P	P	17 52 15.4	-0.1
TUWZ	Tuamarina	27.05	194	P	P	17 52 15.8	-0.3
BSWZ	Blackbirch Sta	27.33	194	P	P	17 52 18.0	-0.6
THZ	Tophouse	27.61	195	P	P	17 52 20.6	-0.6
THZ				IAmb	IAmb	17 52 43.9	
	comp=Z,35nm,1.4s						
KHZ	Kahutara	28.08	194	P	P	17 52 23.5	-1.6
KHZ				IAmb	IAmb	17 52 36.4	
	comp=Z,34nm,1.4s						
MQZ	McQueen’s Vall	29.51	194	P	P	17 52 36.7	-1.0
FOZ	Fox Glacier	30.11	198	P	P	17 52 40.9	-2.1
FOZ				IAmb	IAmb	17 52 43.9	
	comp=Z,20nm,0.7s						
LBZ	Lake Benmore	30.79	197	P	P	17 52 47.9	-1.0
LBZ				IAmb	IAmb	17 52 48.2	
	comp=Z,35nm,1.4s						
EIDS	Eidsvold	30.88	246	P	P	17 52 48.0	-2.0
EIDS	Eidsvold	30.88	246	P	P	17 52 51.4	+1.4
ODZ	Otahua Downs	31.27	196	P	P	17 52 50.9	-2.1
ODZ				IAmb	IAmb	17 53 19.1	
	comp=Z,31nm,1.3s						
ODZ	Otahua Downs	31.27	196	P	P	17 52 52.6	-0.4
WKZ	Wanaka	31.53	198	P	P	17 52 54.0	-1.4
ARMA	Armidale	31.90	237	P	P	17 52 58.1	-0.8
MLZ	Mavora Lakes	32.29	199	P	P	17 53 01.3	-0.7
DCZ	Deep Cove	32.69	200	P	P	17 53 02.9	-2.4
DCZ				IAmb	IAmb	17 53 03.5	
	comp=Z,28nm,1.1s						
WHZ	Wether Hill Ro	32.82	199	P	P	17 53 03.9	-2.5
WHZ				IAmb	IAmb	17 53 07.9	
	comp=Z,17nm,0.7s						
RMQ	Roma	33.17	245	P	P	17 53 09.9	+0.2
MGCD	Mangrove Creek	33.40	232	P	P	17 53 11.8	+0.2
CTA	Charters Tower	34.63	257	P	P	17 53 21.6	-0.6
	comp=Z,7.4nm,0.4s,baz=88,slow=12,SNR=8.4						
CTAO	Charters Tower	34.63	257	P	P	17 53 21.1	-1.1
CTAO				IAmb	IAmb	17 53 26.1	
	comp=Z,11nm,0.8s						
CTAO	Charters Tower	34.63	257	P	P	17 53 22.2	-0.1
CNB	Canberra Magne	35.60	230	P	P	17 53 30.0	-0.3
MTSU	Mount Surprise	36.45	260	P	P	17 53 37.6	0.0
CMSA	Cobar Meteorol	37.08	238	P	P	17 53 42.1	-0.5
QLP	Quilpie	37.16	246	P	P	17 53 43.0	-0.3
COEN	Coen	37.85	267	P	P	17 53 49.0	-0.3
COEN				IAmb	IAmb	17 53 50.6	
	comp=Z,17nm,0.8s						
COEN	Coen	37.85	267	P	P	17 53 49.9	+0.7
GLAD	Gladstone	39.22	222	P	P	17 53 59.9	-0.2
TOO	Toolangi	39.38	229	P	P	17 54 01.1	-0.4
TOO				IAmb	IAmb	17 54 19.2	
	comp=Z,15nm,1.1s						
TOO	Toolangi	39.38	229	P	P	17 54 01.1	-0.4
INKA	Innaminka	40.42	245	P	P	17 54 10.6	+0.6
STKA	Stephens Creek	40.53	239	P	P	17 54 10.0	-0.9
	comp=Z,2.3nm,0.3s,baz=91,slow=8.2,SNR=18						
STKA	Stephens Creek	40.53	239	P	P	17 54 10.3	-0.6
STKA	Stephens Creek	40.53	239	P	P	17 54 10.8	-0.1
TAU	Tasmania Unive	40.66	220	P	P	17 54 11.3	-0.4
TAU	Tasmania Unive	40.66	220	P	P	17 54 11.6	-0.1
QIS	Mount Isa	40.88	256	P	P	17 54 13.4	-0.5
HMH	Humu‘ula Sheep	40.98	33	P	P	17 54 15.5	+0.6
ARPS	Mount Arapiles	41.78	231	P	P	17 54 20.4	-0.4
JAY	Jayapura	42.91	283	P	P	17 54 29.4	-0.8
	comp=Z,17nm,0.7s,baz=142,slow=5.0,SNR=8.4						
LCRK	Leigh Creek	43.06	242	P	P	17 54 30.8	-0.3
HTT	Hallett	43.10	237	P	P	17 54 31.3	-0.1
OOD	Oodnadatta	44.87	246	P	P	17 54 45.4	+0.1
BBOO	Buckleboo	45.31	239	P	P	17 54 48.1	-0.6
BBOO				IAmb	IAmb	17 54 49.2	

```
           comp=Z,14nm,0.8s
BBOO  Buckleboo        45.31 239  P      P       17 54 48.3 -0.4
WR0   Warramunga Arr   45.65 257  P      P       17 54 50.1 -1.3
WB0   Warramunga Arr   45.79 257  P      P       17 54 51.4 -1.2
WB0                               IAmb   IAmb    17 54 51.9
           comp=Z,9.9nm,0.6s
WB2   Warramunga Arr   45.82 257  P      P       17 54 51.7 -1.1
WRAB  Tennant Creek    45.83 257  P      P       17 54 51.6 -1.3
WRAB  Tennant Creek    45.83 257  P      P       17 54 51.8 -1.0
WRA   Warramunga Arr   45.84 257  P      P       17 54 51.7 -1.2
           comp=Z,3.1nm,0.5s,baz=83,slow=7.8,SNR=90
WRA                               PcP    PcP     17 56 23.0 +0.3
           comp=Z,1.0nm,0.5s,baz=92,slow=3.3,SNR=3.5
WRA                               S      S       18 01 00.9 -5.6
           comp=Z,0.7nm,1.1s,baz=90,slow=14,SNR=2.9
WRA   Warramunga Arr   45.84 257  P      P       17 54 51.5 -1.5
AS31  Alice Springs    46.21 252  P      P       17 54 55.6 -0.2
ASAR  Alice Springs    46.21 252  P      P       17 54 54.8 -1.0
           comp=Z,74nm,0.3s,baz=84,slow=8.5,SNR=1094
ASAR                              PcP    PcP     17 56 23.5 -0.4
           comp=Z,1.4nm,0.4s,baz=95,slow=3.4,SNR=2.6
ASAR                              S      S       18 01 09.8 -2.0
           comp=Z,1.3nm,0.8s,baz=83,slow=15,SNR=8.9
ASAR  Alice Springs    46.21 252  P      P       17 54 55.2 -0.6
MULG  Mulgathing       46.58 243  P      P       17 54 58.2 -0.3
KDU   Kakadu           48.34 266  P      P       17 55 12.0  0.0
MTN   Manton Dam       49.61 266  P      P       17 55 20.9 -0.6
MTN                               IAmb   IAmb    17 55 21.8
           comp=Z,19nm,0.7s
MTN   Manton Dam       49.61 266  P      P       17 55 21.4 -0.1
DRS   Darwin Rock St   49.90 266  P      P       17 55 23.4 -0.3
WRKA  Warakurna        51.34 250  P      P       17 55 34.2 -0.1
KNRA  Kununurra        51.48 262  P      P       17 55 34.8 -0.5
KNRA                              IAmb   IAmb    17 55 35.9
           comp=Z,14nm,0.7s
KNRA  Kununurra        51.48 262  P      P       17 55 34.8 -0.5
FORT  Forrest          51.78 243  P      P       17 55 36.7 -0.6
FORT  Forrest          51.78 243  P      P       17 55 36.7 -0.6
SIJI  Sorong           52.36 281  P      P       17 55 41.5 -0.3
           comp=Z,28nm,0.7s,baz=157,slow=22,SNR=4.7
FITZ  Fitzroy Crossi   54.18 259  P      P       17 55 54.4 -0.4
           comp=Z,2.4nm,0.5s,baz=112,slow=4.4,SNR=20
BATI  Baumata          57.28 268  P      P       17 56 17.1 +0.4
           comp=Z,11nm,0.6s,baz=144,slow=6.1,SNR=3.8
PSA00 Pilbara Seismi   59.26 254  P      P       17 56 29.2 -0.8
PSA00 Pilbara Seismi   59.26 254  P      P       17 56 29.6 -0.5
PSA00                             IAmb   IAmb    17 56 35.0
           comp=Z,8.7nm,0.6s
PSA00 Pilbara Seismi   59.26 254  P      P       17 56 29.7 -0.4
MBWA  Marble Bar       59.41 254  P      P       17 56 30.7 -0.4
MEEK  Meekatharra      60.02 248  P      P       17 56 34.6 -0.6
KLBR  Kellerberrin     60.63 242  P      P       17 56 38.5 -0.6
NWAO  Narrogin (SRO)   61.07 241  P      P       17 56 41.8 -0.2
BLDU  Ballidu          61.55 243  P      P       17 56 44.5 -0.7
MUN   Mundaring        61.94 242  P      P       17 56 47.6 -0.2
MORW  Morawa           62.18 245  P      P       17 56 48.9 -0.5
MORW                              IAmb   IAmb    17 57 14.7
           comp=Z,23nm,1.4s
MORW  Morawa           62.18 245  P      P       17 56 48.9 -0.5
SBA   Scott Base       63.07 184  P      P       17 56 56.9 +2.6
SBA                               IAmb   IAmb    17 57 12.6
           comp=Z,19nm,1.4s
VNDA  Vanda            63.11 185  P      P       17 56 56.5 +1.9
CASY  Casey            68.80 204  P      P       17 57 31.3 +0.8
CASY                              IAmb   IAmb    17 57 32.0
           comp=Z,20nm,1.2s
KKM   Kota Kinabalu    68.80 283  P      P       17 57 31.6  0.0
UGM   Wanagama         70.45 267  P      P       17 57 41.5  0.0
UGM   Wanagama         70.45 267  P      P       17 57 41.2 -0.3
LEM   Lembang          73.50 267  P      P       17 57 58.9 -0.7
           comp=Z,9.3nm,0.4s,baz=25,slow=14,SNR=3.6
PMPB  Monarch Peak     74.20  45  P      P       17 58 04.8 +1.8
KMRM  Mail Ridge       74.57  40  P      P       17 58 07.2 +2.2
KDAK  Kodiak Island    75.70  14  P      P       17 58 11.9 +1.1
YBH   Yreka Blue Hor   76.06  39  P      P       17 58 15.2 +1.8
HUMO  Hull Mountain    76.43  38  P      P       17 58 16.9 +1.6
HUMO                              IAmb   IAmb    17 58 23.9
           comp=Z,14nm,1.5s
QSM   Queen of Sheba   76.79  47  P      P       17 58 17.5  0.0
LHV   Little Huntoon   76.84  44  P      P       17 58 19.3 +1.7
LHV                               IAmb   IAmb    17 58 20.1
           comp=Z,7.3nm,1.0s
GLA   Glamis           76.85  50  P      P       17 58 19.0 +1.1
GLA                               IAmb   IAmb    17 58 20.0
           comp=Z,8.7nm,1.2s
LCH   Last Change Ra   76.89  45  P      P       17 58 18.6 +0.4
LCH                               IAmb   IAmb    17 58 20.0
           comp=Z,4.3nm,0.8s
NVAR  Mina Array Bea   77.06  44  P      P       17 58 20.2 +1.1
           comp=Z,3.0nm,0.7s,baz=226,slow=8.9,SNR=19
NVAR  Mina Array Bea   77.06  44  P      P       17 58 20.1 +0.9
NV11  Mina Array Sit   77.17  44  P      P       17 58 20.7 +1.0
NV11                              IAmb   IAmb    17 58 21.6
           comp=Z,6.1nm,1.2s
KVN   Kaiserville      77.53  43  P      P       17 58 21.9 +0.3
KVN                               IAmb   IAmb    17 58 22.8
           comp=Z,9.8nm,1.4s
TPH   Tonopah          77.61  45  P      P       17 58 23.2 +1.1
214A  Organ Pipe Nat   77.86  52  P      P       17 58 24.4 +1.0
PINE  Pine Mountain    78.31  38  P      P       17 58 27.2 +1.4
PINE                              IAmb   IAmb    17 58 28.1
           comp=Z,7.9nm,0.8s
PRN   Pahroc Range     78.77  46  P      P       17 58 29.6 +1.2
PRN                               IAmb   IAmb    17 58 30.8
           comp=Z,4.8nm,0.8s
BMN   Battle Mountai   78.82  43  P      P       17 58 28.7 +0.1
BMN                               IAmb   IAmb    17 58 30.5
           comp=Z,4.7nm,0.8s
R11A  Troy Canyon, C   78.86  45  P      P       17 58 29.3 +0.4
WVOR  Wild Horse Val   78.97  40  P      P       17 58 30.8 +1.4
WVOR                              IAmb   IAmb    17 58 30.9
           comp=Z,4.6nm,0.9s
I07A  Izee             79.34  39  P      P       17 58 32.3 +1.1
I07A                              IAmb   IAmb    17 58 40.6
           comp=Z,9.0nm,1.4s
TUC   Tucson           79.56  52  P      P       17 58 34.1 +1.4
CCUT  Cedar City       80.02  47  P      P       17 58 36.7 +1.5
PSUT  Pine Spring      80.14  46  P      P       17 58 36.7 +0.9
U15A  North Rim        80.26  48  P      P       17 58 38.0 +1.4
U15A                              IAmb   IAmb    17 58 39.2
           comp=Z,4.5nm,0.9s
PLID  Pearl Lake       81.99  39  P      P       17 58 45.6 +0.4
HLID  Hailey           82.21  41  P      P       17 58 47.4 +1.1
HLID                              IAmb   IAmb    17 58 48.5
           comp=Z,5.0nm,0.9s
TMUT  Trail Mountain   82.32  46  P      P       17 58 48.2 +1.0
TMUT                              IAmb   IAmb    17 58 50.2
           comp=Z,12nm,1.1s
SPUT  South Promonto   82.40  44  P      P       17 58 48.5 +1.1
HVU   Hansel Valley    82.41  43  P      P       17 58 48.3 +0.9
HVU                               IAmb   IAmb    17 58 49.4
           comp=Z,5.6nm,1.0s
SRU   San Rafael Swe   82.72  46  P      P       17 58 49.8 +0.8
SRU                               IAmb   IAmb    17 58 51.0
           comp=Z,6.4nm,0.9s
IPM   Ipoh             82.79 277  P      P       17 58 50.1 +0.3
IPM                               IAmb   IAmb    17 58 51.6
           comp=Z,7.5nm,1.0s
ILAR  Eielson Array    83.19  13  P      P       17 58 50.3 -0.3
           comp=Z,2.4nm,0.7s,baz=226,slow=6.2,SNR=14
ANMO  Albuquerque      83.93  51  P      P       17 58 55.5 +0.2
TX31  Lajitas Ar. Si   84.02  58  P      P       17 58 57.4 +1.7
TX32  Lajitas Array    84.02  58  P      P       17 58 57.2 +1.5
TX32                              IAmb   IAmb    17 58 58.8
           comp=Z,4.4nm,0.9s
TXAR  Lajitas Array    84.02  58  P      P       17 58 57.9 +2.2
           comp=Z,3.9nm,0.8s,baz=220,slow=6.7,SNR=26
PD31  Pinedale Array   84.98  43  P      P       17 59 00.7 +0.4
PDAR  Pinedale Array   84.98  43  P      P       17 59 00.9 +0.6
           comp=Z,0.9nm,0.5s,baz=214,slow=4.1,SNR=13
HHC   Hu-ho-hao-te     85.94 314  eP     P       17 59 06.0 +1.1
HHC                               pmax   pmax
           comp=Z,7.0nm,0.8s
HHC                               pmax   pmax
           comp=Z,110nm,6.9s
MAW   Mawson           86.55 200  P      P       17 59 08.0 +0.8
           comp=Z,5.7nm,0.6s,baz=130,slow=7.1,SNR=6.9
CMAR  Chiang Mai Arr   88.66 289  P      P       17 59 19.1 +1.0
           comp=Z,0.5nm,0.4s,baz=113,slow=3.4,SNR=7.2
SONM  Songino Array    92.02 319  P      P       17 59 32.7 -0.5
           comp=Z,0.3nm,0.6s,baz=121,slow=6.9,SNR=2.3
SNAA  Sanae            93.19 178  P      P       17 59 38.1  0.0
VNA3  Neumayer Olymp   93.30 176  P      P       17 59 38.9 +0.3
VNA2  Neumayer--Watz   93.75 177  P      P       17 59 41.9 +1.2
           baz=198,slow=3.5
VNA1  Neumayer--Stat   93.97 176  P      P       17 59 39.2 -2.4
BRTR  Keskin Array B  143.37 318  PKP    PKPab   18 05 54.1  0.0
           comp=Z,1.8nm,0.7s,baz=96,slow=2.5,SNR=4.1
GERES GERESS Array B  145.24 347  PKPbc  PKPdf   18 05 59.0 -0.3
           comp=Z,0.3nm,0.4s,baz=48,slow=4.4,SNR=2.4
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*IDC **09** 17:57:39.4±1.6, 4°.11S×129°.57E, h0^{km}, mb3.4/1, mb1 3.6/5, mb1mx3.5/29, mbtmp3.5/5, ML3.3/4, Error ellipse: s-maj=56.5km s-min=24.7km az=87.0*

*DJA **09** 17:57:41.9±1.2, 4°S±13°×13°0E±°, h10^{km}, M3.7/7, MLv3.7/7*

ISC 09 17:57:43.9±1.0**, 4°.12S**±0°.08×**129°.63E**±0°.07**, h36^{km}, n11, σ0^{s}.87**/12**, Banda Sea**

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Code  Station Name       Δ°   AZ°  Phase ID            Time     Res
                                   Op     ISC        h  m  s    ISC
MSAI  Masohi            1.04 318   P      Pn       17 58 01.3 -0.8
AAI   Ambon             1.50 287   P      Pn       17 58 08.2 -0.1
FAKI  Fak Fak           2.87  65   P      Pn       17 58 27.7 +0.5
SIJI  Sorong            3.62  27   Pn     Pn       17 58 37.5  0.0
           6.2nm,0.3s,baz=213,slow=15,SNR=20
SIJI                               Sn     Sn       17 59 17.8 -1.2
           2.6nm,0.3s,baz=256,slow=20,SNR=6.5
SWI   Sorong            3.62  27   P      Pn       17 58 37.9 +0.4
LBMI  Labuha            4.07 328   P      Pn       17 58 44.8 +1.2
SANI  Sanana            4.18 299   P      Pn       17 58 46.1 +0.9
FITZ  Fitzroy Crossi   14.43 195   Pn     Pn       18 01 04.8 -0.8
           0.0nm,0.3s,baz=13,slow=14,SNR=1.5
WRA   Warramunga Arr   16.38 164   Pn     Pn       18 01 30.5 -0.7
           0.1nm,0.3s,baz=349,slow=12,SNR=6.1
ASAR  Alice Springs    19.86 168   P      P        18 02 12.9 +0.8
           0.2nm,0.3s,baz=348,slow=10.0,SNR=16
MKAR  Makanchi Array   65.64 326   P      P        18 08 25.0 +0.5
           0.2nm,0.5s,baz=132,slow=6.6,SNR=4.1
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*IDC **09** 18:00:01.1±1.0, 4°.24S×129°.56E, h0^{km}, mb3.8/7, mb1 4.1/11, mb1mx3.9/27, mbtmp3.9/11, ML3.7/4, Error ellipse: s-maj=40.1km s-min=17.7km az=80.0*

*DJA **09** 18:00:03.9±1.1, 4°S±12°×12°9E±°, h10^{km}, M4.0/7, MLv4.0/7*

ISC 09 18:00:06.3±0.6**, 4°.17S**±0°.06×**129°.47E**±0°.05**, h36^{km}, n35, σ1^{s}.41**/33**, mb3.8**/7**, Banda Sea**

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Code  Station Name       Δ°   AZ°  Phase ID            Time     Res
                                   Op     ISC        h  m  s    ISC
BNDI  Bandanaira        0.56 130   P      Pn       18 00 15.1 -2.7
MSAI  Masohi            0.98 326   P      Pn       18 00 21.3 -2.2
AAI   Ambon             1.36 290   P      Pn       18 00 27.6 -1.1
FAKI  Fak Fak           3.04  66   P      Pn       18 00 52.2 +0.4
FAKI  Fak Fak           3.04  66   P      Pn       18 00 52.0 +0.2
SIJI  Sorong            3.73  29   Pn     Pn       18 01 01.3 -0.1
           6.8nm,0.3s,baz=243,slow=23,SNR=18
SIJI                               Sn     Sn       18 01 41.7 -2.5
           12nm,0.3s,baz=213,slow=23,SNR=2.9
SWI   Sorong            3.73  29   P      Pn       18 01 01.1 -0.3
LBMI  Labuha            4.02 331   P      Pn       18 01 05.9 +0.6
SANI  Sanana            4.07 301   P      Pn       18 01 05.9  0.0
SANI  Sanana            4.07 301   P      Pn       18 01 06.5 +0.6
TNTI  Ternate           5.34 337   P      Pn       18 01 31.3 +7.9
DRS   Darwin Rock St    8.33 170   P      Pn       18 02 06.0 +1.4
KDU   Kakadu            8.97 161   P      Pn       18 02 13.2 -0.2
KNRA  Kununurra        11.46 183   P      Pn       18 02 47.2 -0.3
FITZ  Fitzroy Crossi   14.35 195   Pn     Pn       18 03 24.9 -2.0
           0.1nm,0.3s,baz=21,slow=10,SNR=1.8
WRA   Warramunga Arr   16.38 164   Pn     Pn       18 03 49.4 -4.2
           0.3nm,0.3s,baz=349,slow=13,SNR=14
COEN  Coen             16.65 127   P      Pn       18 03 55.6 -1.5
PMG   Port Moresby     18.31 107   P      Pn       18 04 18.3 +0.7
PMG   Port Moresby     18.31 107   P      Pn       18 04 18.3 +0.7
QIS   Mount Isa        19.05 150   P      Pn       18 04 25.8 -0.7
MBWA  Marble Bar       19.36 208   P      Pn       18 04 30.4 +0.1
PSA00 Pilbara Seismi   19.67 208   P      Pn       18 04 33.9  0.0
ASAR  Alice Springs    19.85 168   P      Pn       18 04 34.3 -1.8
           0.9nm,0.3s,baz=350,slow=11,SNR=27
MTSU  Mount Surprise   20.09 135   P      Pn       18 04 37.5 -1.5
WRKA  Warakurna        20.78 183   P      Pn       18 04 45.6 -1.4
OOD   Oodnadatta       24.23 166   P      P        18 05 20.3 +0.5
MULG  Mulgathing       26.34 171   P      P        18 05 40.3 +1.4
FORT  Forrest          26.51 183   P      P        18 05 40.8 +0.4
STKA  Stephens Creek   29.82 159   P      P        18 06 08.9 -1.2
           1.6nm,0.8s,baz=13,slow=4.4,SNR=2.8
CMAR  Chiang Mai Arr   37.55 308   P      P        18 07 18.5 +1.1
           0.4nm,0.3s,baz=136,slow=6.7,SNR=1.9
MJAR  Matsushiro Arr   41.31  11   P      P        18 07 47.9 -0.5
           1.3nm,0.7s,baz=184,slow=8.9,SNR=4.2
KSRS  Korea Array      41.43 358   P      P        18 07 50.3 +0.9
           0.7nm,0.8s,baz=174,slow=9.4,SNR=2.4
SONM  Songino Array    55.60 341   P      P        18 09 39.8 +1.2
           0.2nm,0.3s,baz=156,slow=7.3,SNR=1.8
MKAR  Makanchi Array   65.58 326   P      P        18 10 47.2 +0.8
           0.4nm,0.3s,baz=115,slow=7.7,SNR=14
ZALV  Zalesovo Beam    68.83 334   P      P        18 11 07.7 +0.9
           0.6nm,0.3s,baz=111,slow=3.2,SNR=2.3
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*IDC **09** 18:00:25.3±1.4, 4°.17S×129°.50E, h0^{km}, mb4.0/2, mb1 4.3/5, mb1mx3.8/27, mbtmp4.1/5, ML4.0/3, Error ellipse: s-maj=42.4km s-min=22.4km az=79.0*

ISC 09 18:00:26.7±1.4**, 4°.20S**±0°.09×**129°.5E**±0°.2**, h10^{km}, n5, σ0^{s}.41**/6**, Banda Sea**

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Code  Station Name       Δ°   AZ°  Phase ID            Time     Res
                                   Op     ISC        h  m  s    ISC
SIJI  Sorong            3.75  28   Pn     Pn       18 01 24.9 +0.2
           11nm,0.3s,baz=265,slow=22,SNR=4.3
SIJI                               Sn     Sn       18 02 08.8 -0.3
           6.8nm,0.3s,baz=222,slow=23,SNR=1.4
WRA   Warramunga Arr   16.35 164   Pn     Pn       18 04 16.1 -0.5
           0.4nm,0.3s,baz=348,slow=13,SNR=6.4
ASAR  Alice Springs    19.82 168   P      P        18 04 58.0 +0.3
           1.2nm,0.3s,baz=353,slow=11,SNR=5.6
CTA   Charters Tower   22.73 135   P      P        18 05 29.3 +0.2
           3.2nm,0.5s,baz=330,slow=8.0,SNR=1.8
MKAR  Makanchi Array   65.61 326   P      P        18 11 11.0  0.0
           0.5nm,0.4s,baz=111,slow=7.9,SNR=7.3
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*IDC **09** 18:09:04.3±1.4, 4°.25S×129°.46E, h0^{km}, mb3.7/2, mb1 3.9/6, mb1mx3.6/36, mbtmp3.7/6, ML3.4/4, Error ellipse: s-maj=43.7km s-min=22.7km az=77.0*

*DJA **09** 18:09:06.0±1.4, 4°S±13°×12°9E±°, h12^{km}±7^{km}, M3.9/7, MLv3.9/7*

ISC 09 18:09:08.7±0.9**, 4°.24S**±0°.08×**129°.42E**±0°.06**, h36^{km}, n12, σ1^{s}.30**/14**, Banda Sea**

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Code  Station Name       Δ°   AZ°  Phase ID            Time     Res
                                   Op     ISC        h  m  s    ISC
MSAI  Masohi            1.02 331   P      Pn       18 09 24.5 -2.0
AAI   Ambon             1.34 294   P      Pn       18 09 29.8 -1.1
FAKI  Fak Fak           3.11  65   P      Pn       18 09 55.3  0.0
SIJI  Sorong            3.83  29   Pn     Pn       18 10 04.8 -0.4
           12nm,0.3s,baz=210,slow=20,SNR=24
SIJI                               Sn     Sn       18 10 47.5 -1.4
           14nm,0.3s,baz=22,slow=23,SNR=9.4
SWI   Sorong            3.83  29   P      Pn       18 10 04.9 -0.2
SANI  Sanana            4.06 302   P      Pn       18 10 07.3 -1.0
SANI                               S      Sn       18 10 55.5 +0.8
LBMI  Labuha            4.06 332   P      Pn       18 10 08.2 -0.2
FITZ  Fitzroy Crossi   14.26 195   Pn     Pn       18 12 28.1 -0.1
           0.0nm,0.3s,baz=16,slow=13,SNR=2.3
WRA   Warramunga Arr   16.32 163   Pn     Pn       18 12 52.9 -2.4
           0.2nm,0.3s,baz=346,slow=13,SNR=8.1
ASAR  Alice Springs    19.79 168   P      Pn       18 13 37.1 -0.7
           0.2nm,0.3s,baz=340,slow=10,SNR=19
CMAR  Chiang Mai Arr   37.56 308   P      P        18 16 21.6 +1.7
           0.7nm,0.6s,baz=135,slow=7.1,SNR=8.5
MKAR  Makanchi Array   65.62 326   P      P        18 19 49.9 +0.7
           0.4nm,0.4s,baz=110,slow=7.6,SNR=14
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*IDC **09** 18:10:22.6±1.4, 6°.70N×72°.94W, h166^{km}±13^{km}, mb3.5/7, mb1 3.8/9, mb1mx3.4/39, mbtmp4.1/9, Error ellipse: s-maj=25.2km s-min=17.8km az=119.0*

*NEIC **09** 18:10:22.1±2.6, 6°.91N±0°.08×73°.08W±0°.07, h154^{km}±7^{km}, mb4.0/5, Error ellipse: s-maj=12.3km s-min=8.9km az=139.0*

*RSNC **09** 18:10:23.0±1.0, 6°.82N×73°.13W, h151^{km}±3^{km}, ML4.0, Mw4.0, Fault plane solution: NP1:ϕ_s100.00000°, δ54.00000°, λ58.00000°.*

ISC 09 18:10:21.6±0.6**, 6°.83N**±0°.03×**73°.10W**±0°.03**, h156^{km}**±5^{km}**, n77, σ1^{s}.37**/123**, mb4.0**/9**, 10C-6D, Northern Colombia**

```
Code  Station Name       Δ°   AZ°  Phase ID            Time     Res
                                   Op     ISC        h  m  s    ISC
BARC  Barichara         0.25 200⇑iP      Pn       18 10 43.4 +0.3
BARC                              eS      Sn       18 10 58.5 -1.0
BARC                              i                18 10 59.3
           comp=Z,2µm,0.3s
PAMC  Pamplona, Colo    0.64  38⇑eP      Pn       18 10 46.3 +1.3
PAMC                              eS      Sn       18 11 03.1 +0.2
PAMC                              i                18 11 05.3
           comp=Z,2µm,0.5s
BRRC  Barranca, Sant    0.67 294⇑iP      Pn       18 10 45.3 +0.7
BRRC                              eS      Sn       18 11 02.4 +0.3
BRRC                              i                18 11 03.4
           comp=Z,1µm,0.1s
RUSC  La Rusia          0.93 179⇑iP      Pn       18 10 47.3 +0.3
RUSC                              eS      Sn       18 11 06.0 -0.5
RUSC                              i                18 11 06.9
           comp=Z,752nm,0.3s
TAMC  Tame, Arauca      1.35 107⇑iP      Pn       18 10 51.7 +1.5
TAMC                              i                18 11 12.3
           comp=Z,587nm,0.4s
TAMC                              eS      Sn       18 11 13.2 +1.1
PTBC  PUERTO BERRIO,    1.38 258 eP      Pn       18 10 49.9 -0.6
PTBC                              eS      Sn       18 11 11.8 -0.8
PTBC                              i                18 11 13.4
           comp=Z,1µm,0.2s
OCAC  Ocana             1.41 351⇓eP      Pn       18 10 51.6 +0.7
OCAC                              eS      Sn       18 11 13.7 +0.1
OCAC                              i                18 11 18.3
           comp=Z,3µm,0.3s
OCAC  Ocana             1.41 351  Pn     Pn       18 10 51.4 +0.4
SPBC  San Pablo de B    1.52 220 eP      Pn       18 10 52.4 +0.4
SPBC                              eS      Sn       18 11 14.3 -1.0
SPBC                              i                18 11 16.8
           comp=Z,1µm,0.3s
ZARC  Zaragoza, Cauc    1.87 291⇑eP      Pn       18 10 56.0 +0.4
ZARC                              eS      Sn       18 11 22.1 +0.3
ZARC                              i                18 11 29.7
           comp=Z,782nm,0.2s
ZARC  Zaragoza, Cauc    1.87 291  Pn     Pn       18 10 55.9 +0.2
NORC  Norcasia          2.17 235⇑eP      Pn       18 10 59.3 +0.2
NORC                              eS      Sn       18 11 27.3 -0.7
NORC                              i                18 11 32.6
           comp=Z,744nm,0.2s
SMLC  San Martn de      2.18 334 eP      Pn       18 10 59.7 +0.5
SMLC                              eS      Sn       18 11 28.2 -0.1
SMLC                              i                18 11 34.8
           comp=Z,977nm,0.3s
ROSC  El Rosal          2.32 212  P      Pn       18 11 03.2 +1.9
           comp=Z,112nm,0.3s,baz=115,slow=5.8,SNR=59
ROSC                              S      Sn       18 11 33.9 +2.0
           comp=Z,229nm,0.3s,baz=33,slow=21,SNR=23
ROSC  El Rosal          2.32 212 eP      Pn       18 11 03.2 +1.9
ROSC                              eS      Sn       18 11 33.1 +1.1
ROSC                              i                18 11 40.9
           comp=Z,810nm,0.5s
HELC  Santa Helena      2.50 255 eP      Pn       18 11 03.9 +0.5
HELC                              eS      Sn       18 11 35.9 +0.3
HELC                              i                18 11 41.7
           comp=Z,519nm,0.4s
UREC  San Jos de Ur     2.58 291 eP      Pn       18 11 03.6 -0.5
UREC                              eS      Sn       18 11 35.7 -1.2
UREC                              i                18 11 47.9
           comp=Z,676nm,0.2s
SOCV  Socops            2.65  57 eP      Pn       18 11 05.2 +0.3
SOCV                              eS      Sn       18 11 37.7 -0.6
LL1C  La Loma 1 Cana    2.73 350⇑eP      Pn       18 11 08.3 +2.4
LL1C                              eS      Sn       18 11 42.4 +2.2
LL1C                              i                18 11 51.0
           comp=Z,1µm,0.2s
GUY2C Guyana, Caldas    2.77 235 eP      Pn       18 11 07.5 +0.8
GUY2C                             eS      Sn       18 11 42.2 +0.6
GUY2C                             i                18 11 51.0
           comp=Z,476nm,0.6s
VILC  Villavicencio,    2.77 192 eP      Pn       18 11 07.1 +0.6
VILC                              eS      Sn       18 11 40.5 -0.7
PTGC  Puerto Gaitan,    2.79 160⇑iP      Pn       18 11 06.5 -0.1
PTGC                              eS      Sn       18 11 40.0 -1.4
PTGC                              i                18 11 42.3
           comp=Z,347nm,0.4s
LL6C  La Loma 6 Bece    2.89 357⇓eP      Pn       18 11 08.2 +0.3
LL6C                              eS      Sn       18 11 43.5 -0.2
CBOC  Ciudad Bolivar    3.05 252⇓eP      Pn       18 11 11.0 +0.9
CBOC                            ⇑eP      Pn       18 11 11.4 +1.3
CBOC                              eS      Sn       18 11 46.5 -1.1
CBOC                              i                18 11 52.6
           comp=Z,195nm,0.4s
DBBC  Dabeiba           3.10 274⇓eP      Pn       18 11 11.3 +0.8
DBBC                              eS      Sn       18 11 48.3 -0.1
DBBC                              i                18 11 49.5
           comp=Z,1µm,0.4s
SDV   Santo Domingo     3.18  50 eP      Pn       18 11 13.0 +1.3
SDV                               eS      Sn       18 11 49.9 -0.7
SDV                               i                18 11 55.2
           comp=Z,134nm,0.7s
SDV   Santo Domingo     3.18  50         Pn       18 11 12.4 +0.7
MOTC  Monteria, Cord    3.20 307 eP      Pn       18 11 11.6 -0.1
MOTC                              eS      Sn       18 11 49.8 -0.8
MOTC                              i                18 12 06.6
           comp=Z,168nm,0.4s
MOTC  Monteria, Cord    3.20 307  Pn     Pn       18 11 10.7 -1.0
ARGC  Ariguani, Magd    3.21 339 eP      Pn       18 11 14.0 +2.0
ARGC                              eS      Sn       18 11 52.8 +1.7
ARGC                              i                18 12 07.2
           comp=Z,132nm,0.3s
ANIL  Santa Ana         3.27 225 eP      Pn       18 11 14.8 +1.9
ANIL                              eS      Sn       18 11 52.8 +0.1
ANIL                              i                18 12 00.1
           comp=Z,1µm,0.5s
PRAC  Prado             3.57 210 eP      Pn       18 11 17.1 +0.5
PRAC                              eS      Sn       18 11 59.3  0.0
PRAC                              i                18 12 05.1
           comp=Z,694nm,0.3s
ELOV  Elorza            3.59  87 eP      Pn       18 11 17.6 +0.9
ELOV                              eS      Sn       18 11 58.9 -0.7
ORTC  Ortega, Tolima    3.61 216 eP      Pn       18 11 17.6 +0.6
ORTC                              eS      Sn       18 12 01.2 +1.1
ORTC                              i                18 12 07.7
           comp=Z,359nm,0.3s
SJCC  San Jacinto, C    3.68 326 eP      Pn       18 11 18.2 +0.3
SJCC                              eS      Sn       18 11 59.4 -2.3
SJCC                              i                18 12 03.5
           comp=Z,346nm,0.5s
SJCC  San Jacinto, C    3.68 326  Pn     Pn       18 11 17.4 -0.5
PLMC  San Jos del P     3.70 239 eP      Pn       18 11 19.3 +1.0
PLMC                              eS      Sn       18 12 02.8 +0.4
PLMC                              i                18 12 16.8
           comp=Z,152nm,0.4s
LCBC  Los crdobas,      3.81 302 eS      Sn       18 12 02.7 -2.1
LCBC                              i                18 12 08.8
           comp=Z,204nm,0.4s
CRJC  Cerrejon, Guaj    4.17   3 eP      Pn       18 11 24.4  0.0
CRJC                              eS      Sn       18 12 11.4 -1.8
CRJC                              i                18 12 19.0
           comp=Z,148nm,0.3s
GUVC  San Jose del G    4.29 174 eP      Pn       18 11 26.3 +0.5
GUVC                              eS      Sn       18 12 13.6 -2.2
GUVC                              i                18 12 19.3
           comp=Z,317nm,0.2s
YOTC  Yotoco, Valle     4.30 229 eP      Pn       18 11 26.1 +0.1
YOTC                              eS      Sn       18 12 19.4 +3.2
SMRC  Santa Marta, M    4.45 346 eP      Pn       18 11 29.4 +1.6
SMRC                              eS      Sn       18 12 17.5 -2.1
SMRC                              i                18 12 23.5
           comp=Z,55nm,0.2s
PTAC  Punta Ardita,     4.69 274 eP      Pn       18 11 30.9 -0.2
PTAC                              eS      Sn       18 12 21.3 -3.9
PTAC                              i                18 12 25.0
           comp=Z,43nm,0.4s
MACC  Macarena, Meta    4.72 189⇓eP      Pn       18 11 30.6 -0.9
MACC                              eS      Sn       18 12 23.0 -3.0
MACC                              i                18 12 29.0
           comp=Z,180nm,0.8s
DABV  Dabajuro          4.74  31⇓eP      Pn       18 11 32.5 +0.8
DABV                              eS      Sn       18 12 23.3 -3.1
BETC  Betania           4.74 210 eP      Pn       18 11 31.4 -0.4
BETC                              eS      Sn       18 12 22.2 -4.4
BETC                              i                18 12 27.3
           comp=Z,78nm,0.4s
MARP  Paez Belalcaza    4.88 216 eP      Pn       18 11 34.8 +0.9
MARP                              eS      Sn       18 12 29.5 -0.7
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URIC	Uribia, Colomb	4.96	13	Pn	Pn	18 11 33.2	-1.5
GARC	Garzon, Huila	5.20	207	eP	Pn	18 11 38.2	+0.1
GARC				eS	Sn	18 12 32.6	-5.1
GARC				i		18 12 38.7	
	comp=Z,113nm,0.3s						
BAUV	El Baul	5.43	67	Pn	Pn	18 11 39.3	-1.6
PCON	Cinco Dias	5.55	216	eP	Pn	18 11 44.8	+1.7
POPC	Popayan, Colom	5.56	220	eP	Pn	18 11 43.1	+0.3
POPC				eS	Sn	18 12 44.9	-1.3
FLOC	Florencia	5.80	206	eP	Pn	18 11 46.0	+0.1
FLOC				eS	Sn	18 12 51.1	-0.8
FLOC	Florencia	5.80	206	Pn	Pn	18 11 45.6	-0.2
SOTA	Rioblanco	5.83	217	eP	Pn	18 11 47.7	+1.0
SOTA				eS	Sn	18 12 55.2	+2.1
BBAC	Balboa, Cauca	6.32	221	eS	Sn	18 13 02.6	-1.8
BIRV	Birongo	7.66	61	Pn	Pn	18 12 09.2	-1.3
OTAV	Otavalo	8.45	219	Pn	Pn	18 12 21.3	-0.2
PCRV	Puerto La Cruz	9.00	68	P	Pn	18 12 28.4	-0.1
	comp=Z,2.0nm,0.3s,baz=193,slow=1.4,SNR=8.2						
PLCV	Puerto La Cruz	9.04	68		Pn	18 12 28.4	-0.6
MTDJ	Mount Denham	12.12	339	Pn	P	18 13 13.3	-2.3
BOAV	Boa Vista	13.28	109		Pn	18 13 23.5	-0.8
X40A	Basin Creek Fa	33.00	329	P	P	18 16 40.6	-1.3
TXAR	Lajitas Array	36.47	312	P	P	18 17 13.8	+1.9
	comp=Z,0.7nm,0.4s,baz=125,slow=9.1,SNR=15						
TXAR				PcP	PcP	18 19 31.6	-0.9
	comp=Z,0.3nm,0.6s,baz=142,slow=4.6,SNR=3.0						
TX31	Lajitas Ar. Si	36.47	312	P	P	18 17 12.0	+0.1
TX31				IAmb	IAmb	18 17 14.6	
	comp=Z,3.3nm,0.8s						
TX32	Lajitas Array	36.47	312	P	P	18 17 11.9	-0.1
MNTX	Cornudas Mount	38.98	314	P	P	18 17 34.7	+1.9
MNTX				IAmb	IAmb	18 17 36.2	
	comp=Z,2.4nm,0.7s						
ULM	Lac du Bonnet	47.28	340	P	P	18 18 40.1	+1.0
	comp=Z,3.0nm,0.4s,baz=141,slow=9.6,SNR=2.9						
ULM	Lac du Bonnet	47.28	340	IAmb	IAmb	18 19 06.9	
	comp=Z,4.4nm,1.1s						
PDAR	Pinedale Array	48.08	324	P	P	18 18 47.0	+1.2
	comp=Z,0.6nm,0.5s,baz=128,slow=9.5,SNR=8.1						
SCHQ	Schefferville	48.13	5	P	P	18 18 46.9	+1.3
	comp=Z,4.1nm,1.0s,baz=204,slow=10.0,SNR=2.7						
NVAR	Mina Array Bea	51.49	315	P	P	18 19 12.6	+1.0
	comp=Z,0.6nm,0.5s,baz=145,slow=5.5,SNR=2.9						
YKA	Yellowknife Ar	63.26	340	P	P	18 20 34.4	+1.1
	comp=Z,2.0nm,0.5s,baz=134,slow=6.5,SNR=22						
ILAR	Eielson Array	76.96	335	P	P	18 21 57.3	+0.6
	comp=Z,0.3nm,0.8s,baz=96,slow=4.8,SNR=2.8						
MKAR	Makanchi Array	122.30	20	PKP	PKPdf	18 28 57.4	-0.9
	comp=Z,0.2nm,0.6s,baz=305,slow=5.1,SNR=2.3						
ASAR	Alice Springs	149.14	234	PKPbc	PKPbc	18 29 51.8	-0.7
	comp=Z,0.5nm,0.5s,baz=118,slow=3.7,SNR=10						
WRA	Warramunga Arr	150.36	241	PKPbc	PKPbc	18 29 55.7	+0.2
	comp=Z,0.5nm,0.5s,baz=108,slow=2.9,SNR=16						

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*IDC **09** 18:13:59.9±1.5, 4°.22S×129°.64E, h0^{km}, mb3.6/2, mb1 3.7/5, mb1mx3.5/34, mbtmp3.5/5, ML3.4/3, Error ellipse: s-maj=48.7km s-min=25.4km az=73.0*

ISC 09 18:13:59.8±1.1, **4°.00S**±0°.09×**130°.2E**±0°.2, **h10**^{km}, **n5**, σ**1^{s}34**/6, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.30	20	Pn	Pb	18 14 59.0	+0.5
	2.8nm,0.3s,baz=199,slow=23,SNR=5.3						
SIJI				Sn	Sb	18 15 37.9	-0.8
	2.0nm,0.3s,baz=230,slow=23,SNR=1.9						
WRA	Warramunga Arr	16.36	166	Pn	Pn	18 17 48.5	-1.3
	0.2nm,0.3s,baz=342,slow=14,SNR=3.5						
ASAR	Alice Springs	19.89	170	P	P	18 18 32.7	+1.2
	0.2nm,0.3s,baz=346,slow=11,SNR=11						
CMAR	Chiang Mai Arr	38.00	307	P	P	18 21 17.6	-0.8
	0.3nm,0.4s,baz=123,slow=6.6,SNR=1.9						
MKAR	Makanchi Array	65.83	326	P	P	18 24 46.4	+0.8
	0.5nm,0.6s,baz=122,slow=7.2,SNR=7.1						

IDC 09 18:15:38.7±5.5, **18°.52S**×**177°.81W**, **h605**^{km}±28^{km}, **mb3.0**/4, **mb1 3.1**/5, **mb1mx2.7**/35, **mbtmp4.0**/5, **Error ellipse: s-maj=117.7km s-min=80.6km az=140.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.01	281	P	P	18 17 04.7	-0.1
	1.1nm,0.3s,baz=102,slow=14,SNR=6.2						
STKA	Stephens Creek	38.84	242	P	P	18 22 13.8	+0.2
	0.5nm,0.3s,baz=96,slow=9.6,SNR=4.0						
WRA	Warramunga Arr	45.08	260	P	P	18 23 02.3	-0.3
	1.0nm,0.3s,baz=98,slow=7.4,SNR=27						
ASAR	Alice Springs	45.17	255	P	P	18 23 03.2	-0.1
	2.1nm,0.5s,baz=92,slow=7.4,SNR=40						
ASAR				PcP	PcP	18 24 30.1	-0.4
	0.2nm,0.5s,baz=99,slow=4.0,SNR=1.8						
FITZ	Fitzroy Crossi	53.49	261	P	P	18 24 04.3	0.0
	1.6nm,0.9s,baz=122,slow=4.9						

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*ISK **09** 18:21:30.3, 36°.87N×27°.01E, h5^{km}, ML2.6/13*

*DDA **09** 18:21:30.6, 36°.84N×27°.01E, h7^{km}±2^{km}, ML2.3*

*THE **09** 18:21:31.2, 36°.86N×27°.05E, h5^{km}±1^{km}, ML2.2/1, Error ellipse: s-maj=1.9km s-min=0.5km az=151.0*

ISC 09 18:21:30.9±0.9, **36°.87N**±0°.03×**26°.99E**±0°.03, **h11**^{km}±7^{km}, **n34**, σ**0^{s}67**/50, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOSK	Kos Island	0.12	185	P	Pg	18 21 34.0	+0.2
KOSK				S	Sg	18 21 36.1	+0.2
	2μm,0.3s						
BODT	Bodrum	0.32	53	P	Pg	18 21 37.2	-0.2
BODT				S	Sg	18 21 41.7	0.0
BODT	Bodrum	0.32	53	PG	Pg	18 21 37.3	-0.2
BODT				SG	Sg	18 21 41.8	0.0
YKAV	Yalikavak-Bodr	0.34	42	PG	Pg	18 21 37.8	0.0
YKAV				SG	Sg	18 21 42.3	-0.2
BDRM	Kayabasi	0.41	61	i P	Pg	18 21 38.6	-0.5
BDRM				i S	Sg	18 21 44.4	-0.2
BDRM				IAML		18 21 45.0	
	comp=N,295nm,0.5s						
DAT	Datca	0.49	106	P	Pg	18 21 39.9	-0.7
DAT				S	Sg	18 21 46.8	-0.3
DAT	Datca	0.49	106	i P	Pg	18 21 39.9	-0.7
DAT				i S	Sg	18 21 47.2	+0.2
DAT	Datca	0.49	106	PG	Pg	18 21 39.9	-0.7
DDIM	Aydin, Didim	0.62	19	i P	Pg	18 21 42.7	-0.3
DDIM				i S	Sb	18 21 52.6	0.0
DDIM				IAML		18 21 58.0	
	comp=N,162nm,0.7s						
MLSB	Milas	0.76	56	PG	Pb	18 21 45.7	-0.5
MLSB				SG	Sb	18 21 56.1	-0.5
GCAM	G?zelcaml?	0.85	13	i P	Pb	18 21 47.9	+0.1
GCAM				i S	Sb	18 22 00.6	+1.4
GCAM				IAML		18 22 04.0	
	comp=N,122nm,0.2s						
GCAM	G?zelcaml?	0.85	13	PG	Pb	18 21 47.6	-0.2
GCAM				SG	Sb	18 21 59.7	+0.4
TURN	Turunc	1.01	95	i P	Pg	18 21 49.0	-1.4
TURN				i S	Sb	18 22 03.9	+0.2
TURN				IAML		18 22 06.0	
	comp=N,93nm,0.2s						
TURN				IAML		18 22 07.0	
	comp=E,92nm,0.3s						
TURN	Turunc	1.01	95	PG	Pg	18 21 49.8	-0.6
AYDN	Tasoluk	1.06	42	i P	Pg	18 21 50.4	-1.0
AYDN				i S	Sg	18 22 04.7	-0.6
ARG	Arkhangelos	1.12	125	PN	Pg	18 21 51.8	-0.7
MULA	Mugla, Merkez-	1.13	70	i P	Pg	18 21 52.2	-0.5
MULA				i S	Sb	18 22 08.0	+0.6
DGB	zmir	1.19	356	i P	Pg	18 21 52.3	-1.4
APE	Apeiranthos	1.19	280	PN	Pg	18 21 52.5	-1.3
AYDB	Zeytinkoy-Aydi	1.29	33	PN	Pn	18 21 55.1	0.0
SANT	Santorini	1.33	249	PN	Pg	18 21 56.3	-0.2
DALY	Dalyan (Mula)	1.33	92	i P	Pn	18 21 55.3	-0.2
DALY				IAML		18 22 15.0	
	comp=E,48nm,1.3s						
DALY	Dalyan (Mula)	1.33	92	PN	Pg	18 21 55.9	-0.7
ZEYE	Izmir, Urla-Ze	1.42	344	i P	Pn	18 21 57.1	+0.4
ZEYE				IAML		18 22 20.0	
	comp=E,44nm,0.5s						
ZEYE				IAML		18 22 22.0	
	comp=N,44nm,0.3s						
BLCB	Balcova	1.52	2	P	Pn	18 21 58.2	+0.2
BLCB	Balcova	1.52	2	PN	Pn	18 21 58.9	+0.9
URLA	Izmir	1.52	348	i P	Pg	18 22 00.0	-0.2
URLA				IAML		18 22 25.0	
	comp=Z,33nm,1.1s						
URLA	Izmir	1.52	348	PN	Pn	18 21 58.9	+0.7
TAVA	DENIZLI_Tavas	1.65	68	i P	Pn	18 22 00.3	+0.4
CHOS	Chios island	1.69	334	P	Pn	18 21 59.9	-0.6
CHOS				S	Sn	18 22 23.2	+1.0
FETY	Fethiye	1.70	97	i P	Pb	18 22 02.3	+0.1
FETY				i S	Sg	18 22 25.1	-0.4
FETY	Fethiye	1.70	97	PN	Pb	18 22 01.4	-0.8
CAME	Cameli-Denizli	1.85	87	PN	Pn	18 22 03.5	+0.7
CAEL	Denizli, Camel	1.88	82	i P	Pg	18 22 08.7	+1.7

IDC 09 18:23:57.9±1.7, **4°.25S**×**129°.52E**, **h0**^{km}, **mb3.4**/1, **mb1 3.5**/4, **mb1mx3.1**/28, **mbtmp3.3**/4, **ML3.1**/3, **Error ellipse: s-maj=59.5km s-min=27.1km az=83.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.79	28	Pn	Pn	18 24 58.0	+0.4
	1.8nm,0.3s,baz=204,slow=20,SNR=8.7						
SIJI				Sn	Sn	18 25 40.2	-2.7
	2.1nm,0.3s,baz=241,slow=22,SNR=3.7						
WRA	Warramunga Arr	16.29	164	Pn	Pn	18 27 46.6	-1.7
	0.0nm,0.3s,baz=348,slow=13,SNR=3.4						
ASAR	Alice Springs	19.76	168	P	Pn	18 28 30.5	-0.6
	0.1nm,0.3s,baz=349,slow=12,SNR=12						
MKAR	Makanchi Array	65.68	326	P	P	18 34 44.1	-0.2
	0.2nm,0.4s,baz=114,slow=8.2,SNR=4.2						

IDC 09 18:24:13.8±1.7, **4°.18S**×**129°.56E**, **h0**^{km}, **mb3.5**/1, **mb1 3.4**/4, **mb1mx3.1**/28, **mbtmp3.3**/4, **ML3.1**/3, **Error ellipse: s-maj=52.3km s-min=25.9km az=92.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.70	27	Pn	Pn	18 25 12.8	+0.5
	2.0nm,0.3s,baz=303,slow=18,SNR=6.0						
SIJI				Sn	Sn	18 25 56.1	-0.6
	1.7nm,0.3s,baz=80,slow=21,SNR=3.6						
WRA	Warramunga Arr	16.35	164	Pn	Pn	18 28 03.3	-1.6
	0.1nm,0.3s,baz=342,slow=11,SNR=1.7						
ASAR	Alice Springs	19.83	168	P	P	18 28 47.0	+0.7
	0.1nm,0.3s,baz=351,slow=11,SNR=2.5						
MKAR	Makanchi Array	65.64	326	P	P	18 34 59.9	0.0
	0.2nm,0.4s,baz=124,slow=6.9,SNR=4.1						

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*IDC **09** 18:26:49.5±0.8, 4°.10S×129°.53E, h0^{km}, mb4.0/9, mb1 4.2/13, mb1mx4.0/28, mbtmp4.1/13, ML3.9/4, MS3.3/5, Ms1 3.3/5, ms1mx2.9/41, Error ellipse: s-maj=28.1km s-min=15.6km az=70.0*

*DJA **09** 18:26:52.3±1.0, 4°S±11°×12°9E±°, h10^{km}, M4.5/7, mb5.4/1, mB5.4/1, MLv4.1/7, Mw(mB)4.8/1*

*NEIC **09** 18:26:53.5±1.6, 4°.04S±0°.07×129°.63E±0°.05, h25^{km}±6^{km}, mb4.4/23, Error ellipse: s-maj=11.0km s-min=6.3km az=194.0*

ISC 09 18:26:54.2±0.5, **4°.16S**±0°.06×**129°.50E**±0°.06, **h36**^{km}, **n58**, σ**1^{s}36**/54, **mb4.4**/18, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.99	325	P	Pn	18 27 09.8	-1.8
AAI	Ambon	1.38	290	P	Pn	18 27 14.7	-2.3
FAKI	Fak Fak	3.01	66	P	Pn	18 27 40.4	+1.0
FAKI	Fak Fak	3.01	66	Pn	Pn	18 27 36.1	-3.3
SIJI	Sorong	3.72	28	Pn	Pn	18 27 49.3	+0.2
	13nm,0.3s,baz=230,slow=22,SNR=18						
SIJI				Sn	Sn	18 28 28.7	-3.0
	15nm,0.3s,baz=53,slow=18,SNR=10.0						
SWI	Sorong	3.72	28	P	Pn	18 27 49.5	+0.3
LBMI	Labuha	4.03	330	P	Pn	18 27 53.0	-0.4
SANI	Sanana	4.08	301	P	Pn	18 27 54.0	-0.2
TNTI	Ternate	5.34	336	P	Pn	18 28 19.2	+7.7
TNTI	Ternate	5.34	336	Pn	Pn	18 28 10.4	-1.1
SRPI	Serui, Papua	7.11	72	P	Pn	18 28 45.9	+10
MTN	Manton Dam	8.78	169	Pn	Pn	18 29 00.9	+2.3
KAPI	Kappang	9.75	265	Pn	Pn	18 29 13.4	+1.3
	0.7nm,0.3s,baz=112,slow=19,SNR=5.7						
KAPI	Kappang	9.75	265		Pn	18 29 12.6	+0.6
KNRA	Kununurra	11.46	184	Pn	Pn	18 29 35.8	+0.3
FITZ	Fitzroy Crossi	14.36	195	LR	LR	18 35 05.0	
	comp=Z,86nm,22.0s,baz=102,slow=34						
WB0	Warramunga Arr	16.23	163		Pn	18 30 38.1	-1.5
WB0				IAmb	IAmb	18 30 57.5	
	comp=Z,8.7nm,0.8s						
WRAB	Tennant Creek	16.37	164		Pn	18 30 39.8	-1.7
WRAB				IAmb	IAmb	18 31 08.0	
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	16.38	164	Pn	Pn	18 30 39.5	-2.0
	comp=Z,0.3nm,0.3s,baz=351,slow=12,SNR=16						
WRA	Warramunga Arr	16.38	164		Pn	18 30 39.1	-2.4
WB2	Warramunga Arr	16.38	164	Pn	Pn	18 30 39.2	-2.4
WB2				IAmb	IAmb	18 31 00.5	
	comp=Z,9.6nm,0.8s						
WR0	Warramunga Arr	16.45	163		Pn	18 30 39.9	-2.5
PMG	Port Moresby	18.29	107	LR	LR	18 40 07.6	
	comp=Z,82nm,18.5s,baz=232,slow=44						
SBUM	Sibu	18.47	291	P	Pn	18 31 08.4	+0.8
PSA00	Pilbara Seismi	19.68	208		Pn	18 31 22.4	+0.4
PSA00	Pilbara Seismi	19.68	208	P	Pn	18 31 21.7	-0.3
PSA00				IAmb	IAmb	18 31 23.5	
	comp=Z,28nm,1.1s						
AS31	Alice Springs	19.85	168		Pn	18 31 23.5	-0.5
ASAR	Alice Springs	19.85	168	P	Pn	18 31 24.0	0.0
	comp=Z,1.2nm,0.3s,baz=345,slow=10,SNR=46						
ASAR				LR	LR	18 38 57.4	
	comp=Z,137nm,20.8s,baz=342,slow=37						
ASAR	Alice Springs	19.85	168	P	Pn	18 31 23.5	-0.5
CTA	Charters Tower	22.74	135	P	P	18 31 54.0	+0.6
	comp=Z,5.2nm,0.6s,baz=310,slow=12,SNR=5.5						
CTAO	Charters Tower	22.74	135	P	P	18 31 54.3	+0.9
CTAO				IAmb	IAmb	18 32 05.0	
	comp=Z,28nm,1.4s						
IPM	Ipoh	29.71	286	P	P	18 32 56.4	-0.9
STKA	Stephens Creek	29.82	159	P	P	18 32 58.5	+0.5
	comp=Z,0.7nm,0.5s,baz=349,slow=11,SNR=4.1						
STKA				LR	LR	18 46 11.4	
	comp=Z,132nm,18.1s,baz=16,slow=39						
CMAR	Chiang Mai Arr	37.57	308	P	P	18 34 06.0	+0.5
	comp=Z,1.1nm,0.5s,baz=140,slow=7.5,SNR=12						
CMAR	Chiang Mai Arr	37.57	308	P	P	18 34 05.4	-0.2
CHTO	Chiang Mai	37.77	308	P	P	18 34 07.8	+0.7
CHTO				IAmb	IAmb	18 34 17.3	
	comp=Z,7.8nm,0.9s						
MJAR	Matsushiro Arr	41.30	11	P	P	18 34 35.7	-0.7
	comp=Z,4.6nm,0.8s,baz=194,slow=9.2,SNR=7.4						
MJAR	Matsushiro Arr	41.30	11	IAmb	IAmb	18 34 49.4	
	comp=Z,3.7nm,0.9s						
MAJO	Matsushiro	41.30	11	P	P	18 34 34.4	-2.0
MAJO				IAmb	IAmb	18 34 45.0	
	comp=Z,11nm,0.8s						
MAT	Matsushiro	41.30	11	P	P	18 34 35.5	-0.9
KSRS	Korea Array	41.43	358	P	P	18 34 37.2	-0.1
	comp=Z,0.8nm,0.7s,baz=172,slow=9.5,SNR=5.3						
KSRS				LR	LR	18 52 08.5	
	comp=Z,22nm,19.3s,baz=180,slow=37						
JMM	Marumori	43.11	13	P	P	18 34 51.7	+0.6
HHC	Hu-ho-hao-te	47.71	342	eP	P	18 35 30.1	+2.5
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,63nm,7.6s						
USRK	Ussuriysk Ar.	48.20	2	P	P	18 35 31.1	0.0
	comp=Z,1.8nm,0.8s,baz=180,slow=8.1,SNR=2.4						
GTA	Gaotai	51.27	331	eP	P	18 35 55.3	+0.5
GTA				pP	pP	18 35 59.5	-4.7
GTA				sP	sP	18 36 03.0	-5.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	55.61	341	P	P	18 36 26.7	+0.2
	comp=Z,1.2nm,1.0s,baz=142,slow=7.3,SNR=5.0						
WMQ	Urumqi	60.76	326	eP	P	18 37 05.2	+2.6
MK31	Makanchi Array	65.60	326	P	P	18 37 34.5	0.0
MK31				IAmb	IAmb	18 37 43.4	
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	65.60	326	P	P	18 37 34.8	+0.2
	comp=Z,2.1nm,0.6s,baz=127,slow=7.9,SNR=21						
MKAR	Makanchi Array	65.60	326	P	P	18 37 33.7	-0.9
MAKZ	Makanchi	65.78	326	P	P	18 37 33.9	-1.8
MAKZ				IAmb	IAmb	18 37 59.0	
	comp=Z,6.3nm,1.4s						
YAK	Yakutsk	66.01	0	P	P	18 37 36.6	-0.1
ZALV	Zalesovo Beam	68.84	334	P	P	18 37 54.8	0.0
	comp=Z,1.0nm,0.7s,baz=122,slow=5.6,SNR=6.0						
ZALV	Zalesovo Beam	68.84	334	P	P	18 37 54.0	-0.8
GAR	Garm	69.33	314	P	P	18 37 58.8	+0.4
GAR				IAmb	IAmb	18 38 07.3	
	comp=Z,7.1nm,1.2s						
KURK	Kurchatov	69.85	328	P	P	18 38 01.0	-0.2
BRVK	Borovoye	75.49	328	P	P	18 38 34.9	+0.3
BRVK				IAmb	IAmb	18 38 43.7	
	comp=Z,3.6nm,0.8s						
ABKAR	Akbulak array	79.99	321	P	P	18 38 59.9	0.0
ABKAR				IAmb	IAmb	18 39 11.6	
	comp=Z,3.3nm,0.8s						

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*IDC **09** 18:28:54.9±1.2, 4°.10S×129°.28E, h0^{km}, mb4.0/4, mb1 4.1/6, mb1mx3.7/27, mbtmp4.0/6, ML3.9/2, Error ellipse: s-maj=42.8km s-min=23.0km az=77.0*

ISC 09 18:28:60.0±1.0, **4°.04S**±0°.10×**129°.5E**±0°.2, **h36**^{km}, **n6**, σ**1^{s}50**/7, **mb3.9**/4, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.62	30	Pn	Pn	18 29 53.8	+0.2
	7.6nm,0.3s,baz=253,slow=21,SNR=8.1						
SIJI				Sn	Sn	18 30 34.0	-1.2
	3.6nm,0.3s,baz=204,slow=22,SNR=1.5						
ASAR	Alice Springs	19.98	168	P	P	18 33 27.7	-1.7
	0.4nm,0.3s,baz=344,slow=9.8,SNR=4.1						
STKA	Stephens Creek	29.94	159	P	P	18 35 05.9	+1.1
	1.3nm,0.6s,baz=354,slow=9.2,SNR=1.3						
CMAR	Chiang Mai Arr	37.48	308	P	P	18 36 10.6	+0.1
	0.6nm,0.3s,baz=140,slow=7.1,SNR=1.7						
MJAR	Matsushiro Arr	41.19	11	P	P	18 36 42.6	+1.5
	0.9nm,0.7s,baz=200,slow=5.7,SNR=1.8						
MKAR	Makanchi Array	65.48	326	P	P	18 39 38.4	-1.1
	0.8nm,0.5s,baz=120,slow=7.3,SNR=4.5						

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*IDC **09** 18:34:58.6±0.8, 4°.12S×129°.53E, h0^{km}, mb4.1/7, mb1 4.1/12, mb1mx3.9/33, mbtmp4.0/12, ML3.8/5, MS3.4/4, Ms1 3.4/4, ms1mx2.8/41, Error ellipse: s-maj=32.8km s-min=16.0km az=82.0*

*NEIC **09** 18:35:00.6±1.9, 4°.16S±0°.07×129°.70E±0°.08, h14^{km}±5^{km}, mb4.2/20, Error ellipse: s-maj=12.4km s-min=9.5km az=110.0*

*DJA **09** 18:35:01.3±1.0, 4°S±11°×12°9E±°, h10^{km}, M4.3/9, mb4.8/2, MLv4.1/9*

ISC 09 18:35:04.0±0.5, **4°.12S**±0°.05×**129°.54E**±0°.06, **h36**^{km}, **n67**, σ**1^{s}49**/64, **mb4.4**/13, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.54	138	P	Pn	18 35 14.0	-1.3
MSAI	Masohi	0.98	322	P	Pn	18 35 18.5	-2.7
AAI	Ambon	1.41	288	P	Pn	18 35 25.2	-1.9
FAKI	Fak Fak	2.96	66	P	Pn	18 35 49.1	+0.7
FAKI	Fak Fak	2.96	66	Pn	Pn	18 35 44.0	-4.4
FAKI	Fak Fak	2.96	66	P	Pn	18 35 49.1	+0.7
SIJI	Sorong	3.66	28	Pn	Pn	18 35 58.5	+0.3
	12nm,0.3s,baz=225,slow=16,SNR=35						
SIJI				Sn	Sn	18 36 37.2	-2.8
	12nm,0.3s,baz=242,slow=4.1,SNR=4.7						
SWI	Sorong	3.66	28	P	Pn	18 35 58.3	+0.2
LBMI	Labuha	4.01	329	P	Pn	18 36 03.1	+0.2
SANI	Sanana	4.10	300	P	Pn	18 36 03.8	-0.3
SANI	Sanana	4.10	300	P	Pn	18 36 03.8	-0.3
TNTI	Ternate	5.32	336	Pn	Pn	18 36 19.7	-1.2
SOEI	Soe	7.66	223	Pn	Pn	18 36 53.3	+0.1
BATI	Baumata	8.40	224	Pn	Pn	18 37 02.3	-0.9
	4.2nm,0.3s,baz=69,slow=3.2,SNR=10.0						
BATI				LR	LR	18 40 35.7	
	comp=Z,250nm,19.8s,baz=62,slow=40						
MTN	Manton Dam	8.81	170	Pn	Pn	18 37 05.6	-3.4
KDU	Kakadu	9.00	161	P	Pn	18 37 12.8	+1.4
KAPI	Kappang	9.79	264	LR	LR	18 41 44.1	
	comp=Z,32nm,20.0s,baz=119,slow=41						
KAPI	Kappang	9.79	264		Pn	18 37 25.8	+3.4
KNRA	Kununurra	11.51	184		Pn	18 37 43.2	-2.7
KNRA	Kununurra	11.51	184	P	Pn	18 37 46.6	+0.7
FITZ	Fitzroy Crossi	14.41	195	Pn	Pn	18 38 24.0	-1.5
	0.1nm,0.3s,baz=29,slow=11,SNR=2.4						
WB0	Warramunga Arr	16.26	163		Pn	18 38 47.1	-2.6
WB0				IAmb	IAmb	18 39 04.2	
	comp=Z,6.9nm,1.0s						
WRAB	Tennant Creek	16.41	164	Pn	Pn	18 38 49.8	-1.8
WRAB	Tennant Creek	16.41	164	P	Pn	18 38 51.3	-0.3
WRA	Warramunga Arr	16.41	164	Pn	Pn	18 38 49.1	-2.6
	comp=Z,0.3nm,0.3s,baz=351,slow=13,SNR=14						
WRA	Warramunga Arr	16.41	164		Pn	18 38 50.7	-1.0
WB2	Warramunga Arr	16.41	164	Pn	Pn	18 38 49.6	-2.1
WB2				IAmb	IAmb	18 39 15.3	
	comp=Z,9.3nm,1.1s						
WR0	Warramunga Arr	16.48	163	Pn	Pn	18 38 50.6	-2.0
COEN	Coen	16.63	127	P	P	18 38 57.3	+0.7
SBUM	Sibu	18.50	290	P	Pn	18 39 18.3	+0.7
QIS	Mount Isa	19.05	150	P	Pn	18 39 24.6	+0.3
PSA00	Pilbara Seismi	19.74	208	P	P	18 39 30.9	+0.1
PSA00				IAmb	IAmb	18 39 32.9	
	comp=Z,30nm,1.0s						
PSA00	Pilbara Seismi	19.74	208	P	P	18 39 31.0	+0.2
PSA00				IAmb	IAmb	18 39 32.9	
	comp=Z,15nm,0.9s						
PSA00	Pilbara Seismi	19.74	208	P	Pn	18 39 32.2	-0.2
AS31	Alice Springs	19.89	168		P	18 39 32.1	-0.3
AS31				IAmb	IAmb	18 39 48.0	
	comp=Z,2.5nm,0.5s						
ASAR	Alice Springs	19.89	168	P	Pn	18 39 33.1	-1.1
	comp=Z,0.5nm,0.3s,baz=347,slow=10,SNR=21						
ASAR				PcP	PcP	18 43 48.7	-0.3
	comp=Z,0.1nm,0.3s,baz=1.0,slow=1.9,SNR=7.5						
ASAR				LR	LR	18 48 10.3	
	comp=Z,83nm,18.2s,baz=353,slow=40						
ASAR	Alice Springs	19.89	168	P	P	18 39 31.6	-0.9
WRKA	Warakurna	20.83	183	P	Pn	18 39 43.9	-1.4
OOD	Oodnadatta	24.27	167	P	P	18 40 18.7	+0.8
IPM	Ipoh	29.74	286	P	P	18 41 07.2	-0.1
STKA	Stephens Creek	29.85	159	P	P	18 41 07.8	-0.2
	comp=Z,0.6nm,0.4s,baz=348,slow=8.9,SNR=4.2						
CMAR	Chiang Mai Arr	37.58	308	P	P	18 42 16.2	+0.9
	comp=Z,2.4nm,0.9s,baz=137,slow=7.6,SNR=17						
CHTO	Chiang Mai	37.77	308	P	P	18 42 16.9	0.0
CHTO				IAmb	IAmb	18 42 18.6	
	comp=Z,3.9nm,0.8s						
MAT	Matsushiro	41.25	11	P	P	18 42 44.8	-0.9
KSRS	Korea Array	41.38	358	P	P	18 42 46.3	-0.5
	comp=Z,1.5nm,1.0s,baz=195,slow=7.8,SNR=4.3						
HHC	Hu-ho-hao-te	47.68	342	eP	P	18 43 40.7	+3.6
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,8.4s						
USRK	Ussuriysk Ar.	48.15	2	P	P	18 43 41.2	+0.7
	comp=Z,2.3nm,0.6s,baz=180,slow=7.4,SNR=3.4						
SONM	Songino Array	55.58	341	P	P	18 44 35.8	-0.2
	comp=Z,1.4nm,1.1s,baz=158,slow=5.9,SNR=5.7						
SONM	Songino Array	55.58	341	IAmb	IAmb	18 44 37.7	
	comp=Z,6.0nm,1.5s						
WMQ	Urumqi	60.75	326	eP	P	18 45 14.6	+2.4
MK31	Makanchi Array	65.58	326	P	P	18 45 44.1	-0.1
MK31				IAmb	IAmb	18 45 44.7	
	comp=Z,2.5nm,0.6s						
MKAR	Makanchi Array	65.58	326	P	P	18 45 44.3	+0.1
	comp=Z,3.0nm,0.5s,baz=112,slow=7.9,SNR=28						
MKAR	Makanchi Array	65.58	326	P	P	18 45 43.6	-0.6
KSH	Kashi	65.60	317	P	P	18 45 45.4	+0.8
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MAKZ	Makanchi	65.76	326	P	P	18 45 45.0	-0.4
YAK	Yakutsk	65.96	0	P	P	18 45 46.4	+0.2
ZALV	Zalesovo Beam	68.81	334	P	P	18 46 03.0	-1.4
	comp=Z,0.6nm,0.3s,baz=107,slow=5.0,SNR=6.7						
ZALV	Zalesovo Beam	68.81	334	P	P	18 46 03.5	-1.0
KURK	Kurchatov	69.84	328	P	P	18 46 10.7	-0.2
KKAR	Karatay Array	70.89	318	P	P	18 46 16.6	-0.9
BRVK	Borovoye	75.47	328	P	P	18 46 44.5	+0.2
BRVK				IAmb	IAmb	18 46 45.5	
	comp=Z,4.0nm,0.8s						
ABKAR	Akbulak array	79.98	321	P	P	18 47 08.7	-0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABKAR	Akbulak array	79.98	321	P	P	18 47 09.1	-0.4
ABKAR				IAmb	IAmb	18 47 10.3	
	comp=Z,5.9nm,1.1s						
RAYN	Ar Rayn	86.17	294	P	P	18 47 42.0	-0.2
KBZ	Khabaz	90.39	314	LR	LR	19 34 12.1	
	comp=Z,90nm,18.4s,baz=120,slow=39						
KVAR	Kislovodsk Arr	90.55	314	LR	LR	19 32 20.8	
	comp=Z,463nm,21.6s,baz=218,slow=38						
TORD	Torodi Ar. Bea	127.75	283	PKP	PKPdf	18 54 06.5	-0.3
	comp=Z,0.5nm,0.7s,baz=63,slow=1.4,SNR=4.0						

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*IDC **09** 18:40:12.3±4.6, 5°.88S×103°.51E, h0^{km}, mb3.4/5, mb1 3.5/5, mb1mx3.0/44, mbtmp3.4/5, Error ellipse: s-maj=198.0km s-min=25.0km az=53.0*

ISC 09 18:40:18.4±4.1**, 5°.7S**±0°.7×**103°.8E**±1°.0**, h35^{km}, n12, σ0^s.90**/6**, mb3.5**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W3	Cape Leeuwin H	30.57	163	T	T	19 17 52.8	
	baz=337						
H01W1	Cape Leeuwin H	30.59	163	T	T	19 17 56.2	
	baz=337						
H01W2	Cape Leeuwin H	30.59	163	T	T	19 17 50.9	
	baz=337						
H08S2	Diego Garcia H	31.13	265	T	T	19 18 31.9	
	baz=90						
H08S3	Diego Garcia H	31.14	265	T	T	19 18 31.9	
	baz=90						
H08S1	Diego Carcia H	31.15	265	T	T	19 18 32.7	
	baz=90						
WRA	Warramunga Arr	32.90	118	P	P	18 46 48.6	-0.9
	0.3nm,0.9s,baz=305,slow=8.4,SNR=1.6						
ASAR	Alice Springs	34.04	125	P	P	18 47 00.2	+0.7
	0.1nm,0.5s,baz=292,slow=16,SNR=4.2						
SONM	Songino Array	53.36	2	P	P	18 49 35.1	+0.7
	0.5nm,0.6s,baz=178,slow=10,SNR=5.5						
MKAR	Makanchi Array	55.64	342	P	P	18 49 50.2	-0.6
	0.3nm,0.5s,baz=142,slow=7.3,SNR=2.9						
ZALV	Zalesovo Beam	61.53	347	P	P	18 50 31.3	-0.4
	0.5nm,0.4s,baz=153,slow=7.7,SNR=1.8						
TXAR	Lajitas Array	145.00	45	PKPbc	PKPbc	18 59 52.4	+0.3
	0.8nm,0.6s,baz=303,slow=1.6,SNR=9.9						

DJA 09 18:43:43.2±0.7**, 9°S**±6°×**12°4E**±°**, h93^{km}**±9^{km}**, M3.7**/9**, mb3.9**/2**, mB5.0**/2**, MLv3.6**/9**, Mw(mB)4.3**/2**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.59	168	P	Pn	18 44 00.9	+1.7
BATI	Baumata	1.13	204	P	Pn	18 44 05.8	+1.1
EDFI	Ende, Flores	2.46	280	P	Pn	18 44 21.3	-0.3
BASI	Baing, Sumba	3.66	253	P	Pn	18 44 37.4	-0.3
BSSI	Bau Bau, Buton	4.70	309	P	Pn	18 44 53.4	+1.5
WBSI	Waikabubak, Su	4.71	264	P	Pn	18 44 50.9	-1.1
PLAI	Plampang	6.29	273	P	Pn	18 45 13.6	+0.1
	0.1nm26nm,0.8s						

IDC 09 18:49:11.9±1.6**, 4°.13S**×**129°.56E, h0^{km}, mb3.8**/1**, mb1 3.5**/4**, mb1mx3.0**/43**, mbtmp3.4**/4**, ML3.0**/3**, Error ellipse: s-maj=57.2km s-min=27.7km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.66	28	Pn	Pn	18 50 10.7	+0.8
	2.6nm,0.3s,baz=251,slow=22,SNR=8.0						
SIJI				Sn	Sn	18 50 52.3	-1.6
	1.3nm,0.3s,baz=298,slow=24,SNR=2.0						
WRA	Warramunga Arr	16.39	164	Pn	Pn	18 53 02.0	-1.5
	0.0nm,0.3s,baz=349,slow=13,SNR=1.9						
ASAR	Alice Springs	19.87	168	P	Pn	18 53 45.8	-0.6
	0.1nm,0.3s,baz=350,slow=10,SNR=2.4						
MKAR	Makanchi Array	65.60	326	P	P	18 59 57.5	-0.2
	0.4nm,0.4s,baz=115,slow=7.6,SNR=10						

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*IDC **09** 18:51:30.6±1.4, 4°.17S×129°.56E, h0^{km}, mb3.7/2, mb1 3.8/5, mb1mx3.3/40, mbtmp3.6/5, ML3.3/3, Error ellipse: s-maj=39.2km s-min=23.8km az=83.0*

*DJA **09** 18:51:33.3±1.1, 4°S±12°×12°9E±°, h10^{km}, M3.5/7, MLv3.5/7*

ISC 09 18:51:35.3±1.0**, 4°.19S**±0°.09×**129°.47E**±0°.07**, h36^{km}, n11, σ1^s.44**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.00	327	P	Pn	18 51 51.6	-1.2
AAI	Ambon	1.37	292	P	Pn	18 51 56.7	-1.2
FAKI	Fak Fak	3.05	66	P	Pn	18 52 21.2	+0.2
SIJI	Sorong	3.76	29	Pn	Pn	18 52 30.0	-0.8
	2.8nm,0.3s,baz=207,slow=14,SNR=9.6						
SIJI				Sn	Sn	18 53 13.7	-0.1
	3.0nm,0.3s,baz=299,slow=2.2,SNR=3.8						
SWI	Sorong	3.76	28	P	Pn	18 52 30.6	-0.2
LBMI	Labuha	4.04	331	P	Pn	18 52 33.2	-1.5
SANI	Sanana	4.08	301	P	Pn	18 52 36.5	+1.3
WRA	Warramunga Arr	16.36	164	Pn	Pn	18 55 19.6	-2.7
	0.1nm,0.3s,baz=347,slow=13,SNR=5.4						
ASAR	Alice Springs	19.83	168	P	P	18 56 04.2	+1.1
	0.2nm,0.3s,baz=350,slow=11,SNR=13						
CMAR	Chiang Mai Arr	37.57	308	P	P	18 58 48.1	+1.5
	0.5nm,0.7s,baz=134,slow=8.4,SNR=5.1						
MKAR	Makanchi Array	65.61	326	P	P	19 02 16.2	+0.5
	0.6nm,0.5s,baz=116,slow=8.3,SNR=11						

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*IDC **09** 18:52:57.5±0.9, 16°.87S×175°.06E, h0^{km}, mb4.2/10, mb1 4.3/11, mb1mx4.1/33, mbtmp4.1/11, ML4.3/1, MS3.6/12, Ms1 3.6/12, ms1mx3.3/42, Error ellipse: s-maj=39.0km s-min=18.6km az=162.0*

ISC 09 18:53:02.5±0.7**, 17°.0S**±0°.2×**175°.2E**±0°.1**, h35^{km}, n20, σ1^s.33**/13**, mb4.2**/10**, MS3.5**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.86	105	Pn	Pn	18 53 44.6	-1.2
	1.8nm,0.3s,baz=269,slow=12,SNR=12						
DZM	Mont Dzumac	9.63	237	LR	LR	18 58 24.2	
	comp=Z,262nm,21.2s,baz=34,slow=34						
HNR	Honiara	16.60	295	LR	LR	19 02 55.1	
	comp=Z,78nm,18.2s,baz=186,slow=36						
URZ	Urewera	21.24	176	LR	LR	19 04 12.7	
	comp=Z,115nm,20.2s,baz=31,slow=32						
RAR	Rarotonga	24.05	104	LR	LR	19 07 15.2	
	comp=Z,101nm,19.0s,baz=138,slow=36						
PMG	Port Moresby	28.25	282	P	P	18 58 51.9	-0.7
	9.2nm,1.0s,baz=190,slow=18,SNR=1.3						
PMG				LR	LR	19 08 57.5	
	comp=Z,115nm,18.1s,baz=282,slow=34						
PPT	Papeete	33.65	96	LR	LR	19 11 53.6	
	comp=Z,72nm,18.9s,baz=78,slow=34						
STKA	Stephens Creek	33.79	238	P	P	18 59 41.9	+0.6
	2.2nm,0.8s,baz=91,slow=11,SNR=3.1						
STKA				LR	LR	19 12 40.1	
	comp=Z,88nm,18.9s,baz=28,slow=35						
WRA	Warramunga Arr	38.76	259	P	P	19 00 21.6	-2.3
	1.4nm,0.9s,baz=91,slow=9.0,SNR=4.9						
ASAR	Alice Springs	39.14	253	P	P	19 00 26.4	-0.7
	3.9nm,0.9s,baz=84,slow=8.9,SNR=28						
ASAR				PcP	PcP	19 02 37.7	+1.3
	0.6nm,0.9s,baz=134,slow=2.9,SNR=4.5						
ASAR				LR	LR	19 15 16.9	
	comp=Z,58nm,18.2s,baz=82,slow=34						
FITZ	Fitzroy Crossi	47.11	261	P	P	19 01 31.2	-0.3
	4.0nm,1.1s,baz=105,slow=12,SNR=4.7						
SEY	Seymchan	81.66	350	P	P	19 05 16.1	-0.5
	2.6nm,0.3s,baz=107,slow=18,SNR=4.4						
YBH	Yreka Blue Hor	81.84	42	LR	LR	19 34 28.8	
	comp=Z,55nm,18.8s,baz=302,slow=30						
CMAR	Chiang Mai Arr	82.82	292	P	P	19 05 24.3	+0.5
	0.8nm,0.9s,baz=122,slow=4.3,SNR=6.4						
CMAR				LR	LR	19 40 10.4	
	comp=Z,60nm,20.8s,baz=6.5,slow=34						
NVAR	Mina Array Bea	83.15	47	P	P	19 05 25.5	+0.1
	0.5nm,0.7s,baz=252,slow=7.3,SNR=2.7						
NVAR				LR	LR	19 35 15.9	
	comp=Z,61nm,18.6s,baz=239,slow=30						
LPIG	La Paz	83.39	62	LR	LR	19 35 51.7	
	comp=Z,476nm,21.9s,baz=273,slow=31						
BBB	Bella Bella	84.60	31	LR	LR	19 35 57.9	
	comp=Z,58nm,21.2s,baz=302,slow=30						
ILAR	Eielson Array	86.52	15	P	P	19 05 40.4	-1.1
	1.3nm,0.8s,baz=230,slow=5.1,SNR=15						
TXAR	Lajitas Array	90.78	60	P	P	19 06 05.0	+2.4
	0.7nm,0.9s,baz=218,slow=7.6,SNR=5.3						
GERES	GERESS Array B	144.83	339	PKP	PKPdf	19 12 36.4	+0.4
	0.3nm,0.4s,baz=349,slow=1.0,SNR=4.5						

IDC 09 18:59:13.5±2.7**, 4°.08S**×**129°.88E, h0^{km}, mb3.1**/1**, mb1 3.2**/3**, mb1mx3.1**/32**, mbtmp3.0**/3**, ML2.9**/2**, Error ellipse: s-maj=181.7km s-min=31.9km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.36	165	Pn	Pn	19 03 03.3	-1.5
	0.0nm,0.3s,baz=348,slow=13,SNR=1.5						
ASAR	Alice Springs	19.86	169	P	P	19 03 47.0	+0.6
	0.1nm,0.3s,baz=348,slow=11,SNR=6.3						
MKAR	Makanchi Array	65.74	326	P	P	19 10 00.2	0.0
	0.1nm,0.5s,baz=110,slow=9.8,SNR=1.9						

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*IDC **09** 19:03:38.7±2.1, 4°.29S×129°.29E, h0^{km}, mb3.7/1, mb1 3.7/3, mb1mx3.4/25, mbtmp3.5/3, ML3.2/2, MS3.7/1, Ms1 3.7/1, ms1mx2.7/31, Error ellipse: s-maj=170.9km s-min=26.4km az=69.0*

*DJA **09** 19:03:41.1±1.3, 4°S±14°×13°0E±°, h10^{km}, M3.4/7, MLv3.4/7*

ISC 09 19:03:40.0±1.0**, 4°.27S**±0°.09×**129°.49E**±0°.07**, h10^{km}, n11, σ1^s.39**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.07	329	P	Pg	19 03 59.7	-1.0
AAI	Ambon	1.42	294	P	Pn	19 04 05.2	-0.6
FAKI	Fak Fak	3.06	64	P	Pn	19 04 29.3	+0.8
SWI	Sorong	3.82	28	P	Pn	19 04 39.2	+0.3
LBMI	Labuha	4.12	331	P	Pn	19 04 44.1	+1.1
SANI	Sanana	4.13	302	P	Pn	19 04 45.6	+2.4
FITZ	Fitzroy Crossi	14.25	195	LR	LR	19 11 58.7	
	comp=Z,308nm,21.0s,baz=181,slow=35						
WRA	Warramunga Arr	16.28	164	Pn	Pn	19 07 27.4	-1.5
	0.1nm,0.3s,baz=345,slow=13,SNR=4.6						
ASAR	Alice Springs	19.75	168	P	P	19 08 11.6	+1.4
	0.2nm,0.3s,baz=346,slow=9.3,SNR=13						
MKAR	Makanchi Array	65.68	326	P	P	19 14 24.8	+0.1
	0.4nm,0.4s,baz=126,slow=8.2,SNR=7.8						
KURBB	Kurchatov Arra	69.94	328	P	P	19 14 50.9	-0.5
	baz=127,slow=4.6						

IDC 09 19:04:16.5±2.2**, 3°.88S**×**129°.75E, h0^{km}, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.4**/31**, mbtmp3.6**/4**, ML3.3**/1**, Error ellipse: s-maj=169.2km s-min=27.4km az=70.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.58	165	Pn	P	19 08 11.9	-1.2
	0.1nm,0.3s,baz=348,slow=13,SNR=2.8						
ASAR	Alice Springs	20.07	169	P	P	19 08 51.0	-0.6
	1.5nm,0.6s,baz=346,slow=9.5,SNR=9.3						
MKAR	Makanchi Array	65.51	326	P	P	19 15 01.6	-0.1
	0.3nm,0.5s,baz=123,slow=7.5,SNR=5.0						
KURBB	Kurchatov Arra	69.75	328	P	P	19 15 28.6	+0.2
	0.5nm,0.6s,baz=119,slow=5.4,SNR=1.9						

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*SOME **09** 19:17:33.5, 38°.28N×72°.85E, h10^{km}, MS4.9*

*IDC **09** 19:17:34.6±0.5, 38°.08N×72°.91E, h0^{km}, mb4.5/35, mb1 4.6/43, mb1mx4.5/63, mbtmp4.6/43, ML4.1/8, MS4.1/31, Ms1 4.1/31, ms1mx3.9/54, Error ellipse: s-maj=10.2km s-min=9.6km az=174.0*

*MOS **09** 19:17:36.7±1.4, 38°.18N×72°.89E, h13^{km}, mb5.2/41, MS4.4/8, Error ellipse: s-maj=4.3km s-min=3.0km az=90.3*

*KRNET **09** 19:17:36.5±0.1, 38°.29N×72°.85E, mb5.4*

*NNC **09** 19:17:37.5±2.5, 38°.14N×73°.14E, h0^{km}, mb5.3, mpv5.0, Error ellipse: s-maj=20.2km s-min=15.9km az=159.0*

*NEIC **09** 19:17:38.3±1.6, 38°.37N±0°.05×72°.86E±0°.07, h10^{km}±1^{km}, mb5.0/139, Error ellipse: s-maj=11.1km s-min=6.4km az=230.0*

*BJI **09** 19:17:39.6±0.0, 38°.24N×73°.12E, h7^{km}, mB4.9/32, mb4.6/51, ML4.8/4, Ms4.6/46, Ms7 4.4/40*

*BGR **09** 19:17:52.8±0.0, 39°.12N×72°.15E, h33^{km}, mb4.8*

ISC 09 19:17:38.6±0.4**, 38°.23N**±0°.01×**72°.93E**±0°.01**, h13^{km}**±2^{km}**, h13^{km}:pP-P, n829, σ1^s.99**/883**, mb5.0**/183**, MS4.3**/42**, 72C-73D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.53	325		Pn	19 18 03.2	-2.7
DRK	Karamyk	1.53	325	⇑ *i*P	Pn	19 18 03.7	-2.2
	baz=26						
DRK				⇑ *i*S	Sn	19 18 23.9	-1.9
	baz=26						
SFK	Sufi-Kurgan	1.84	14	⇓ *e*P	Pn	19 18 10.2	+0.1
	baz=16						
SFK				⇓ *e*S	Sn	19 18 34.4	+1.1
	baz=16						
GAR	Garm	2.19	291	*e*PN	Pn	19 18 15.1	+0.3
GAR				*i* S	Sn	19 18 43.1	+1.3
GAR	Garm	2.19	291	⇓ *i*P	Pn	19 18 15.1	+0.3
	baz=90						
GAR				⇓ *i*S	Sn	19 18 43.1	+1.3
	baz=90						
OHH	Osh	2.30	357	*e*PN	Pn	19 18 17.0	+0.8
OHH				*i* S	Sn	19 18 46.5	+2.1
OHH	Osh	2.30	357	⇓ *i*P	Pn	19 18 17.0	+0.8
	baz=59						
OHH				⇓ *i*S	Sn	19 18 46.5	+2.1
	baz=59						
BTK	Batken	2.46	319	PN	Pn	19 18 20.4	+1.9
BTK	Batken	2.46	319		Pn	19 18 20.4	+1.9
BTK	Batken	2.46	319	⇓ *i*P	Pn	19 18 19.0	+0.6
	baz=19						
BTK				⇓ *i*S	Sn	19 18 49.4	+1.0
	baz=19						
KSH	Kashi	2.70	61	Pg	Pn	19 18 18.9	-3.0
KSH				Sg	Sn	19 18 46.4	-8.1
KSH				smax	smax		
	comp=N,6µm,0.8s						
KSH				smax	smax		
	comp=E,8µm,1.0s						
TRKS	Terek-Say	3.57	338	*e*PN	Pn	19 18 33.5	-0.4
TRKS				*i* S	Sn	19 19 15.0	-1.0
TRKS	Terek-Say	3.57	338	⇑ *i*P	Pn	19 18 33.5	-0.4
	baz=38						
TRKS				⇑ *i*S	Sn	19 19 15.0	-1.0
	baz=38						
AML	Almayashu	3.94	8	P	Pn	19 18 41.7	+2.5
	SNR=323						
AML	Almayashu	3.94	8	*i* P	Pn	19 18 41.5	+2.3
	SNR=34						
AML	Almayashu	3.94	8	*e*PN	Pn	19 18 40.4	+1.2
AML				*i* S	Sn	19 19 26.6	+1.1
AML	Almayashu	3.94	8	P	Pn	19 18 41.4	+2.3
AML	Almayashu	3.94	8	⇑ *i*P	Pn	19 18 40.4	+1.2
	baz=9.0						
AML				⇑ *i*S	Sn	19 19 26.6	+1.1
	baz=9.0						
TAS	Tashkent	4.17	319	PN	Pn	19 18 43.5	+1.6
TAS	Tashkent	4.17	319	Pn	Pn	19 18 43.5	+1.6
TAS	Tashkent	4.17	319	⇓ *i*P	Pn	19 18 42.8	+0.8
	baz=19						
TAS				⇓ *i*S	Sn	19 19 30.7	+0.1
	baz=19						
UCH	Uchtor	4.18	16	P	Pn	19 18 45.2	+2.8
	SNR=141						
UCH	Uchtor	4.18	16	*e*PN	Pn	19 18 43.8	+1.4
UCH				*i* S	Sn	19 19 32.7	+1.4
UCH	Uchtor	4.18	16	⇓ *i*P	Pn	19 18 43.8	+1.4
	baz=17						
UCH				⇓ *i*S	Sn	19 19 32.7	+1.4
	baz=17						
MNAS	Manas	4.27	356	*e*PN	Pn	19 18 44.6	+1.2
MNAS				*i* S	Sn	19 19 33.7	+0.6
MNAS	Manas	4.27	356	⇓ *i*P	Pn	19 18 44.6	+1.2
	baz=57						
MNAS				⇓ *i*S	Sn	19 19 33.7	+0.6
	baz=57						
CEP	Cherat	4.47	191	P	Pn	19 18 50.3	+4.1
CEP				S	Sg	19 19 59.0	-3.2
EKS2	Erkin-Say	4.48	8	P	Pn	19 18 49.0	+2.8
	SNR=39						
EKS2	Erkin-Say	4.48	8	*e*PN	Pn	19 18 47.5	+1.3
EKS2				*i* S	Sb	19 19 49.2	-1.8
EKS2	Erkin-Say	4.48	8	⇑ *i*P	Pn	19 18 47.5	+1.3
	baz=9.0						
EKS2				⇑ *i*S	Sn	19 19 39.2	+1.0
	baz=9.0						
IUG	Iuzhnay	4.50	331	*e*P	Pb	19 18 55.5	-2.0
	2µm,0.6s						
IUG				*e*S	Sb	19 19 55.0	+3.3
	3µm,1.1s						
IUG	Iuzhnay	4.50	331	*e*Pg	Pb	19 18 59.0	+1.5
	baz=331						
IUG	Iuzhnay	4.50	331	*e*PN	Pb	19 18 59.0	+1.5
MRKS	Merke	4.52	3	*e*P	Pb	19 18 56.4	-1.5
	456nm,0.5s						
MRKS				*e*S	Sb	19 19 56.3	+4.1
	559nm,1.0s						
MRKS	Merke	4.52	3	Pg	Pb	19 18 56.4	-1.5
	456nm,0.5s						
MRKS				Lg	Lg	19 19 56.3	
	559nm,1.0s						
AAK	Ala-Archa	4.56	15	Pn	Pn	19 18 49.8	+2.4
	9.7nm,0.3s,baz=200,slow=11,SNR=179						
AAK				Sn	Sb	19 19 50.4	-3.2
	18nm,0.3s,baz=16,slow=16,SNR=7.8						
AAK				LR	LR	19 20 50.0	
	comp=Z,4µm,21.4s,baz=200,slow=42						
AAK	Ala-Archa	4.56	15	P	Pn	19 18 50.7	+3.2
	SNR=111						
AAK	Ala-Archa	4.56	15	*i* P	Pn	19 18 50.7	+3.2
	SNR=128						
AAK	Ala-Archa	4.56	15	*d* *i*PN	Pn	19 18 50.5	+3.0
AAK				pmax	pmax		
	comp=Z,505nm,1.0s						
AAK	Ala-Archa	4.56	15	P	Pn	19 18 50.5	+3.0
AAK				S	Sn	19 19 35.4	-5.1
AAK	Ala-Archa	4.56	15	⇑Pn	Pn	19 18 50.4	+3.0
	comp=Z,216nm,0.8s						
AAK				⇑Pg	Pb	19 19 00.7	+2.1
	comp=Z,519nm,0.8s						
AAK				⇓Sn	Sb	19 19 50.2	-3.4
	comp=Z,1µm,1.0s						
AAK	Ala-Archa	4.56	15	Pn	Pn	19 18 50.4	+2.9
AAK	Ala-Archa	4.56	15	⇓ *i*P	Pn	19 18 49.1	+1.6
	baz=16						
AAK				⇓ *i*S	Sn	19 19 41.6	+1.1
	baz=16						
CHCP	Chirah Chowk	4.57	176	P	Pb	19 18 51.9	-6.7
NIL	Nilore	4.58	177	PN	Pn	19 18 50.7	+3.2
NIL	Nilore	4.58	177		Pn	19 18 50.6	+3.2
KBK	Karagaybulak	4.69	19	P	Pn	19 18 52.4	+3.2
	SNR=44						
KBK	Karagaybulak	4.69	19	*e*PN	Pn	19 18 50.8	+1.6
KBK				*i* S	Sn	19 19 44.6	+1.1
KBK	Karagaybulak	4.69	19	⇓ *i*P	Pn	19 18 50.8	+1.6
	baz=19						
KBK				⇓ *i*S	Sn	19 19 44.6	+1.1
	baz=19						
ULHL	Ulahol	4.75	31	P	Pn	19 18 53.9	+3.9
	SNR=12						
ULHL	Ulahol	4.75	31	*e*PN	Pn	19 18 51.9	+1.9
ULHL				*i* S	Sn	19 19 46.5	+1.5
ULHL	Ulahol	4.75	31	⇑ *i*P	Pn	19 18 51.9	+1.9
	baz=32						
ULHL				⇑ *i*S	Sn	19 19 46.5	+1.5
	baz=32						
FRU1	Bishkek	4.76	15	PN	Pn	19 18 53.3	+3.2
FRU1	Bishkek	4.76	15		Pn	19 18 53.3	+3.2
FRU1	Bishkek	4.76	15	⇓ *i*P	Pn	19 18 51.8	+1.7
	baz=16						
FRU1				⇓ *i*S	Sn	19 19 46.5	+1.4
	baz=16						
KBL	Kabul	4.83	222	PN	Pn	19 18 52.5	+1.3
KBL	Kabul	4.83	222	P	Pn	19 18 56.3	+5.1
	SNR=397						
KBL				S	Sn	19 19 50.8	+3.6
KBL	Kabul	4.83	222	Pn	Pn	19 18 52.5	+1.3
BOOM	Boomskoye usch	4.84	27	PN	Pn	19 18 53.9	+2.6
BOOM	Boomskoye usch	4.84	27	Pn	Pn	19 18 53.9	+2.6
BOOM	Boomskoye usch	4.84	27	⇓ *i*P	Pn	19 18 53.1	+1.8
	baz=28						
BOOM				⇓ *i*S	Sn	19 19 48.7	+1.4
	baz=28						
CHMS	Chumysh	4.96	16	P	Pn	19 18 55.7	+2.9
	SNR=88						
CHMS	Chumysh	4.96	16	*e*PN	Pn	19 18 54.5	+1.6
CHMS				*i* S	Sn	19 19 50.9	+0.8
CHMS	Chumysh	4.96	16	⇓ *i*P	Pn	19 18 54.5	+1.6
	baz=16						
CHMS				⇓ *i*S	Sn	19 19 50.9	+0.8
	baz=16						
KDJ	Kajisay	5.08	39	PN	Pn	19 19 00.1	+5.5
KDJ	Kajisay	5.08	39		Pn	19 19 00.1	+5.5
KDJ	Kajisay	5.08	39	⇓ *e*P	Pn	19 18 56.7	+2.1
	baz=40						
KDJ				⇓ *i*S	Sn	19 19 54.9	+1.7
	baz=40						
TKM2	Tokmak 2	5.11	23	P	Pn	19 18 57.9	+2.9
	SNR=30						
TKM2	Tokmak 2	5.11	23	*i* PN	Pn	19 18 57.0	+2.0
TKM2				pmax	pmax		
	comp=Z,49nm,0.9s						
TKM2	Tokmak 2	5.11	23	⇑Pn	Pn	19 18 57.1	+2.0
	comp=Z,49nm,0.9s						
TKM2				⇓Pg	Pb	19 19 08.8	+0.8
	comp=Z,253nm,0.8s						
TKM2				⇓Lg	Lg	19 20 19.8	
	comp=Z,1µm,1.5s						
TKM2	Tokmak 2	5.11	23	⇑ *i*P	Pn	19 18 56.6	+1.6
	baz=23						
TKM2				⇑ *i*S	Sn	19 19 54.7	+0.7
	baz=23						
TARG	Taragay, Kyrgy	5.12	45		Pn	19 18 57.3	+1.9
USP	Ospenovka	5.17	13	P	Pn	19 18 58.2	+2.4
	SNR=28						
USP	Ospenovka	5.17	13	*e*PN	Pn	19 18 57.4	+1.6
USP				*i* S	Sn	19 19 56.0	+0.7
USP	Ospenovka	5.17	13	⇑ *i*P	Pn	19 18 57.4	+1.6
	baz=14						
USP				⇑ *i*S	Sn	19 19 56.0	+0.7
	baz=14						
KK02	Karatay Array	5.21	340	⇓Pn	Pn	19 18 57.5	+1.4
	comp=Z,99nm,0.5s						
KK02				⇑Sn	Sn	19 20 04.5	+8.4
	comp=Z,557nm,0.8s						
KK31	Karatay Array	5.21	340	PN	Pn	19 18 57.5	+1.3
KKAR	Karatay Array	5.21	340	PN	Pn	19 18 57.7	+1.5
KKAR	Karatay Array	5.21	340	Pn	Pn	19 18 57.7	+1.5
KST	Kastek	5.34	25	*e*P	Pb	19 19 13.8	+2.1
	comp=Z,251nm,0.8s						
KST				*e*S	Sg	19 20 26.3	-3.6
	comp=Z,557nm,1.2s						
KST	Kastek	5.34	25	Pg	Pb	19 19 13.8	+2.1
	comp=Z,251nm,0.8s						
KST				Lg	Lg	19 20 26.3	
	comp=Z,557nm,1.2s						
BRLS	Borolday	5.34	335	*e*Pg	Pb	19 19 11.8	-0.1
	baz=332						
BRLS				*e*Lg	Lg	19 20 20.2	
	baz=332						
BRLS	Borolday	5.34	335	*e*PN	Pb	19 19 11.7	-0.1
SGDS	Sogindy	5.38	13	*e*Pg	Pb	19 19 15.1	+2.6
	baz=14						
SGDS				*e*Lg	Lg	19 20 26.5	
	baz=14						
SGDS	Sogindy	5.38	13	*e*PN	Pn	19 19 00.7	+2.1
DGS	Degeres	5.46	22	*e*P	Pb	19 19 14.8	+1.0
	comp=Z,236nm,0.8s						
DGS				*e*S	Sg	19 20 28.4	-5.3
	comp=Z,565nm,1.1s						
DGS	Degeres	5.46	22	Pg	Pb	19 19 14.8	+1.0
	comp=Z,236nm,0.8s						
DGS				Lg	Lg	19 20 28.4	
	comp=Z,565nm,1.1s						
THW	Thamme Wali	5.51	190	P	Pn	19 19 03.2	+2.9
MTBS	Maitube	5.57	27	*e*P	Pb	19 19 18.4	+2.6
	comp=Z,147nm,0.8s						
MTBS				*e*S	Sg	19 20 33.8	-3.7
	comp=Z,290nm,1.1s						
MTBS	Maitube	5.57	27	Pg	Pb	19 19 18.4	+2.6
	comp=Z,147nm,0.8s						
MTBS				Lg	Lg	19 20 33.8	
	comp=Z,290nm,1.1s						
TNSS	Tian-Shan	5.69	31	*e*P	Pb	19 19 20.9	+2.9
	comp=Z,121nm,0.7s						
TNSS				*e*S	Sg	19 20 38.1	-3.3

	comp=Z,168nm,0.9s						
TNSS	**Tian-Shan**	**5.69**	**31**	*e*Pg	**Pb**	**19 19 21.0**	**+2.9**
	baz=32						
TNSS				*e*Lg	Lg	19 20 37.8	
	baz=32						
TNSS	**Tian-Shan**	**5.69**	**31**	Pg	**Pb**	**19 19 20.9**	**+2.9**
	comp=Z,121nm,0.7s						
TNSS				Lg	Lg	19 20 38.1	
	comp=Z,168nm,0.9s						
JMU	**Jammu**	**5.73**	**163**	*i* PS	**Pn**	**19 19 03.0**	**-0.3**
JMU				*i* S	**Sn**	**19 20 08.0**	**-0.9**
ANVS	**Anan'yevo**	**5.81**	**37**	*e*PN	**Pn**	**19 19 06.5**	**+1.9**
ANVS				*i* S	**Sn**	**19 20 12.0**	**+0.8**
ANVS	**Anan'yevo**	**5.81**	**37**	⇑*i*P	**Pn**	**19 19 06.5**	**+1.9**
	baz=38						
ANVS				⇑*i*S	**Sn**	**19 20 12.0**	**+0.8**
	baz=38						
AAA	**Alma-Ata**	**5.83**	**30**	*e*P	**Pb**	**19 19 23.7**	**+3.7**
	comp=Z,113nm,0.9s						
AAA				*e*S	**Sg**	**19 20 42.5**	**-3.0**
	comp=Z,740nm,1.3s						
AAA	**Alma-Ata**	**5.83**	**30**	*e*Pn	**Pn**	**19 19 04.1**	**-0.6**
	comp=Z,68nm,1.9s,baz=31						
AAA				*e*Pg	**Pb**	**19 19 23.5**	**+3.5**
	baz=31						
AAA				*e*Lg	Lg	19 20 42.2	
	baz=31						
AAA	**Alma-Ata**	**5.83**	**30**	*i* PN	**Pn**	**19 19 04.9**	**+0.2**
MDOK	**Medeo**	**5.84**	**31**	*e*P	**Pb**	**19 19 23.1**	**+2.8**
	comp=Z,150nm,1.0s						
MDOK				*e*S	**Sg**	**19 20 41.8**	**-4.2**
	comp=Z,566nm,1.3s						
MDOK	**Medeo**	**5.84**	**31**	*e*Pg	**Pb**	**19 19 22.9**	**+2.5**
	baz=32						
MDOK				*e*Lg	Lg	19 20 41.3	
	baz=32						
MDOK	**Medeo**	**5.84**	**31**	PN	**Pn**	**19 19 07.6**	**+2.6**
MDOK						19 19 22.7	
MDOK	**Medeo**	**5.84**	**31**	⇑Pn	**Pn**	**19 19 07.6**	**+2.6**
	comp=Z,71nm,0.8s						
MDOK				⇓Pg	**Pb**	**19 19 22.7**	**+2.4**
	comp=Z,108nm,1.0s						
MDOK				⇑Lg	Lg	19 20 40.8	
	comp=Z,2µm,1.7s						
MDOK	**Medeo**	**5.84**	**31**	Pg	**Pb**	**19 19 23.1**	**+2.8**
	comp=Z,150nm,1.0s						
MDOK				Lg	Lg	19 20 41.8	
	comp=Z,566nm,1.3s						
KRBS	**Karabastau**	**5.84**	**20**	*e*P	**Pb**	**19 19 21.8**	**+1.4**
	comp=Z,96nm,1.1s						
KRBS				*e*S	**Sg**	**19 20 40.3**	**-5.9**
	comp=Z,110nm,0.7s						
KRBS	**Karabastau**	**5.84**	**20**	Pg	**Pb**	**19 19 21.8**	**+1.4**
	comp=Z,96nm,1.1s						
KRBS				Lg	Lg	19 20 40.3	
	comp=Z,110nm,0.7s						
KNDC	**Almaty**	**5.85**	**30**	PN	**Pn**	**19 19 08.7**	**+3.6**
KNDC						19 19 23.0	
KNDC	**Almaty**	**5.85**	**30**	⇓Pn	**Pn**	**19 19 08.7**	**+3.6**
	comp=Z,156nm,0.9s						
KNDC				⇑Pg	**Pb**	**19 19 23.1**	**+2.6**
	comp=Z,561nm,0.8s						
KNDC				⇑Lg	Lg	19 20 43.9	
	comp=Z,5µm,1.4s						
KOTS	**Kotyrbulak**	**5.92**	**31**	*e*P	**Pb**	**19 19 23.9**	**+2.0**
	comp=Z,170nm,0.8s						
KOTS				*e*S	**Sg**	**19 20 43.5**	**-5.2**
	comp=Z,769nm,0.7s						
KOTS	**Kotyrbulak**	**5.92**	**31**	Pg	**Pb**	**19 19 23.9**	**+2.0**
	comp=Z,170nm,0.8s						
KOTS				Lg	Lg	19 20 43.5	
	comp=Z,769nm,0.7s						
PRZ	**Przheval'sk**	**5.96**	**43**	PN	Pn	19 19 11.4	+4.7
PRZ	**Przheval'sk**	**5.96**	**43**		Pn	19 19 11.4	+4.7
PRZ	**Przheval'sk**	**5.96**	**43**	⇓*i*P	**Pn**	**19 19 09.1**	**+2.4**
	baz=43						
PRZ				⇓*i*S	**Sn**	**19 20 16.2**	**+1.3**
	baz=43						
KTBS	**Karatobe**	**6.17**	**26**	*e*P	**Pb**	**19 19 28.4**	**+2.5**
	comp=Z,121nm,0.8s						
KTBS				*e*S	**Sg**	**19 20 51.4**	**-5.3**
	comp=Z,409nm,1.3s						
KTBS	**Karatobe**	**6.17**	**26**	Pg	**Pb**	**19 19 28.4**	**+2.5**
	comp=Z,121nm,0.8s						
KTBS				Lg	Lg	19 20 51.4	
	comp=Z,409nm,1.3s						
KUU	**Kurty**	**6.22**	**23**	*e*P	**Pb**	**19 19 29.8**	**+3.0**
	comp=Z,64nm,0.8s						
KUU				*e*S	**Sg**	**19 20 53.0**	**-5.2**
	comp=Z,287nm,1.8s						
KUU	**Kurty**	**6.22**	**23**	*e*Pg	**Pb**	**19 19 30.1**	**+3.4**
	baz=24						
KUU				*e*Lg	Lg	19 20 53.6	
	baz=24						
KUU	**Kurty**	**6.22**	**23**	Pg	**Pb**	**19 19 29.7**	**+3.0**
	comp=Z,64nm,0.8s						
KUU				Lg	Lg	19 20 52.9	
	comp=Z,287nm,1.8s						
SARP	**Sargodha**	**6.29**	**182**	P	**Pn**	**19 19 13.2**	**+2.1**
SATY	**Saty**	**6.38**	**39**	*e*P	**Pb**	**19 19 32.0**	**+2.5**
	comp=Z,101nm,1.1s						
SATY				*e*S	**Sg**	**19 20 57.3**	**-5.9**
	comp=Z,673nm,1.8s						
SATY	**Saty**	**6.38**	**39**	*e*Pg	Pb	19 19 34.6	+5.2
	baz=40						
SATY				*e*Lg	Lg	19 20 59.5	
	baz=40						
SATY	**Saty**	**6.38**	**39**	Pg	**Pb**	**19 19 32.0**	**+2.5**
	comp=Z,101nm,1.1s						
SATY				Lg	Lg	19 20 57.3	
	comp=Z,673nm,1.8s						
DHRM	**DHARAMSHALA**	**6.57**	**154**	*e*P	**Pn**	**19 19 16.6**	**+1.5**
DHRM				IAmb	IAmb	19 19 21.0	
	comp=Z,219nm,0.7s						
DHRM				*e*S	**Sn**	**19 20 30.0**	**0.0**
DHRM				IAML		19 20 40.1	
	comp=E,2µm,0.5s						
KURS	**Kuram**	**6.59**	**35**	*e*P	**Pb**	**19 19 36.4**	**+3.4**
	comp=E,122nm,1.3s						
KURS				*e*S	**Sg**	**19 21 04.7**	**-5.3**
	comp=E,251nm,1.1s						
KURS	**Kuram**	**6.59**	**35**	Pg	**Pb**	**19 19 36.4**	**+3.4**
	comp=E,122nm,1.3s						
KURS				Lg	Lg	19 21 04.7	
	comp=E,251nm,1.1s						
UZB	**Uzynbulak**	**6.75**	**41**	*e*P	**Pb**	**19 19 38.1**	**+2.2**
	comp=E,39nm,0.5s						
UZB				*e*S	**Sg**	**19 21 07.3**	**-7.9**
	comp=E,229nm,1.3s						
UZB	**Uzynbulak**	**6.75**	**41**	*e*Pg	Pb	19 19 40.3	+4.5
	baz=42						
UZB	**Uzynbulak**	**6.75**	**41**	*e*PN	**Pn**	**19 19 20.2**	**+2.7**
UZB	**Uzynbulak**	**6.75**	**41**	Pg	**Pb**	**19 19 38.1**	**+2.2**
	comp=E,39nm,0.5s						
UZB				Lg	Lg	19 21 07.3	
	comp=E,229nm,1.3s						
BTLS	**Baital**	**6.86**	**7**	*e*P	**Pb**	**19 19 41.3**	**+3.6**
	comp=E,42nm,0.9s						
BTLS				*e*S	**Sg**	**19 21 13.6**	**-5.1**
	comp=E,170nm,1.0s						
BTLS	**Baital**	**6.86**	**7**	*e*Pg	Pb	19 19 42.5	+4.8
	baz=6.9						
BTLS	**Baital**	**6.86**	**7**	*i* PN	**Pn**	**19 19 20.5**	**+1.7**
BTLS	**Baital**	**6.86**	**7**	Pg	**Pb**	**19 19 41.3**	**+3.6**
	comp=E,42nm,0.9s						
BTLS				Lg	Lg	19 21 13.5	
	comp=E,170nm,1.0s						
ARXS	**Arharly**	**7.03**	**30**	*e*P	**Pb**	**19 19 44.1**	**+3.6**
	comp=E,56nm,0.7s						
ARXS				*e*S	**Sg**	**19 21 18.3**	**-5.7**
	comp=E,192nm,1.0s						
ARXS	**Arharly**	**7.03**	**30**	*i* PN	**Pn**	**19 19 24.4**	**+3.2**
ARXS	**Arharly**	**7.03**	**30**	Pg	**Pb**	**19 19 44.1**	**+3.6**
	comp=E,56nm,0.7s						
ARXS				Lg	Lg	19 21 18.3	
	comp=E,192nm,1.0s						
PDGK	**Podgornoye**	**7.12**	**42**	PN	**Pn**	**19 19 24.7**	**+2.1**
PDGK	**Podgornoye**	**7.12**	**42**	Pg	**Pb**	**19 19 44.9**	**+2.7**
	comp=E,51nm,1.1s						
PDGK				Lg	Lg	19 21 19.5	
	comp=E,135nm,1.8s						
PDGK	**Podgornoye**	**7.12**	**42**	⇓Pn	**Pn**	**19 19 24.8**	**+2.1**
	comp=E,134nm,0.8s						
PDGK				⇑Lg	Lg	19 21 19.1	
	comp=E,682nm,1.5s						
BLB	**Baldybastay**	**7.20**	**34**	Pg	Pb	19 19 49.0	+5.4
	comp=E,58nm,0.6s						
BLB				Lg	Lg	19 21 26.4	
	comp=E,305nm,1.4s						
KTMS	**Ketmen**	**7.67**	**45**	*e*P	Pb	19 19 57.6	+6.2
	comp=E,48nm,1.3s						
KTMS				*e*S	**Sg**	**19 21 41.1**	**-3.5**
	comp=E,123nm,1.1s						
KTMS	**Ketmen**	**7.67**	**45**	Pg	Pb	19 19 57.6	+6.2
	comp=E,48nm,1.3s						
KTMS				Lg	Lg	19 21 41.1	
	comp=E,123nm,1.1s						
SMLA	**Simla**	**7.89**	**153**	*e*P	**Pn**	**19 19 34.8**	**+1.7**
SMLA				IAML		19 21 05.9	
	comp=N,507nm,0.6s						
SMLA				IAML		19 21 07.0	
	comp=E,612nm,0.9s						
TDK	**Taldyqorghan**	**7.91**	**29**	*e*Pn	**Pn**	**19 19 32.2**	**-1.2**
	baz=30						
TDK				*e*Lg	Lg	19 21 47.5	
	baz=30						
TDK	**Taldyqorghan**	**7.91**	**29**	*e*P	**Pn**	**19 19 32.1**	**-1.2**
DJR	**Jarkent**	**7.99**	**38**	*e*P	Pb	19 20 02.0	+5.0
	comp=E,36nm,0.6s						
DJR				*e*S	**Sg**	**19 21 49.1**	**-5.8**
	comp=E,175nm,1.7s						
DJR	**Jarkent**	**7.99**	**38**	Pg	Pb	19 20 02.0	+5.0
	comp=E,36nm,0.6s						
DJR				Lg	Lg	19 21 49.1	
	comp=E,175nm,1.7s						
HRA	**Herat**	**9.44**	**249**		**Pn**	**19 19 54.5**	**0.0**
OTUK	**Ortayu**	**10.02**	**358**	P	**Pn**	**19 20 01.6**	**-0.6**
OTUK	**Ortayu**	**10.02**	**358**	⇓Pn	**Pn**	**19 20 01.7**	**-0.6**
	comp=E,26nm,0.8s						
NDI	**New Delhi**	**10.17**	**158**	*e*S	**Sn**	**19 21 56.0**	**-2.1**
MAKZ	**Makanchi**	**10.86**	**35**	P	**Pn**	**19 20 15.0**	**+1.3**
MAKZ	**Makanchi**	**10.86**	**35**		**Pn**	**19 20 15.0**	**+1.3**
MK31	**Makanchi Array**	**10.99**	**36**	*d* *i*P	**Pn**	**19 20 16.9**	**+1.4**
MK31	**Makanchi Array**	**10.99**	**36**	Pn	**Pn**	**19 20 17.2**	**+1.7**
	comp=E,185nm,1.5s,baz=213,slow=12,SNR=227						
MK31	**Makanchi Array**	**10.99**	**36**	Pn	**Pn**	**19 20 17.0**	**+1.4**
MKAR	**Makanchi Array**	**10.99**	**36**	Pn	**Pn**	**19 20 17.6**	**+2.1**
	comp=E,1.0nm,0.3s,baz=214,slow=12,SNR=97						
MKAR				Lg	Lg	19 23 37.5	
	baz=226,slow=29,SNR=3.8						
MKAR				LR	LR	19 24 06.8	
	comp=E,342nm,18.4s,baz=224,slow=35						
MKAR	**Makanchi Array**	**10.99**	**36**	P	**Pn**	**19 20 16.7**	**+1.2**
MKAR	**Makanchi Array**	**10.99**	**36**	Pn	**Pn**	**19 20 16.7**	**+1.2**
GEYT	**Alibeck**	**11.68**	**273**	Pn	**Pn**	**19 20 20.9**	**-4.1**
	comp=E,4.8nm,0.3s,baz=97,slow=13,SNR=52						
GEYT				Sn	**Sn**	**19 22 27.6**	**-7.6**
	comp=E,2.7nm,0.3s,baz=125,slow=18,SNR=2.9						
GEYT	**Alibeck**	**11.68**	**273**		**Pn**	**19 20 22.2**	**-2.7**
WMQ	**Urumqi**	**12.47**	**59**	*e*P	**Pn**	**19 20 36.4**	**+0.7**
WMQ				pP	P	19 20 40.9	-6.7
WMQ				S	**Sn**	**19 22 56.6**	**+2.1**
WMQ				pmax	pmax		
	comp=E,40nm,1.1s						
WMQ				pmax	pmax		
	comp=E,250nm,3.9s						
WMQ				LR	LR		
	comp=E,2µm,8.3s						
WMQ				LR	LR		
	comp=E,1µm,10.1s						
WMQ				LR	LR		
	comp=E,970nm,16.3s						
ZSN	**Zaisan**	**12.70**	**40**	*e*Pn	**Pn**	**19 20 38.1**	**-0.7**
	baz=40						
ZSN				*e*Lg	Lg	19 24 21.4	
	baz=40						
ZSN	**Zaisan**	**12.70**	**40**	*e*P	**Pn**	**19 20 38.1**	**-0.7**
KURBB	**Kurchatov Arra**	**13.02**	**16**	Pn	**Pn**	**19 20 41.5**	**-1.6**
	comp=E,0.2nm,0.3s,baz=206,slow=11,SNR=89						
KURBB				Lg	Lg	19 24 29.6	
	comp=E,0.1nm,0.3s,baz=203,slow=30,SNR=11						
KURBB	**Kurchatov Arra**	**13.02**	**16**	P	**Pn**	**19 20 41.4**	**-1.7**
KURBB	**Kurchatov Arra**	**13.02**	**16**	⇓Pn	**Pn**	**19 20 41.5**	**-1.6**
	comp=E,48nm,0.8s						
KURK	**Kurchatov**	**13.12**	**16**	*c* *i*P	**Pn**	**19 20 43.5**	**-1.1**
KURK				pmax	pmax		
	comp=Z,67nm,1.3s						
KURK	**Kurchatov**	**13.12**	**16**	P	**Pn**	**19 20 43.6**	**-1.0**
KURK	**Kurchatov**	**13.12**	**16**	Pn	**Pn**	**19 20 42.8**	**-1.8**
KURK	**Kurchatov**	**13.12**	**16**		LR	19 24 29.6	
PYUN	**Piuthan**	**13.14**	**137**	*e*P	**Pn**	**19 20 41.2**	**-4.0**
	comp=Z,187nm,0.8s						
SEM	**Semipalatinsk**	**13.25**	**21**	*e*Pn	**Pn**	**19 20 43.8**	**-2.8**
	comp=Z,36nm,1.7s,baz=21						
SEM	**Semipalatinsk**	**13.25**	**21**	*e*P	**Pn**	**19 20 43.7**	**-2.8**
SEM				pmax	pmax		
	comp=Z,36nm,1.7s						
DANN	**Dangsing**	**13.37**	**134**	*e*P	**Pn**	**19 20 43.9**	**-4.5**
	comp=Z,176nm,0.6s						
KOLN	**Koldanda**	**13.73**	**136**	*e*P	**Pn**	**19 20 48.9**	**-4.3**
	comp=Z,36nm,0.4s						
GKN	**Gorkha**	**14.14**	**133**	*e*P	Pn	19 20 53.7	-5.0
	comp=Z,61nm,0.4s						
AB31	**Akbulak array**	**14.45**	**324**	P	**Pn**	**19 20 58.6**	**-4.1**
AB31	**Akbulak array**	**14.45**	**324**	⇑Pn	**Pn**	**19 20 58.7**	**-4.1**
	comp=Z,17nm,0.5s						
ABKAR	**Akbulak array**	**14.45**	**324**	Pn	Pn	19 20 58.0	-4.7
ABKAR	**Akbulak array**	**14.45**	**324**	Pn	**Pn**	**19 20 58.4**	**-4.3**
KKN	**Kakani**	**14.67**	**132**	*e*P	Pn	19 21 00.3	-5.8
	comp=Z,71nm,0.5s						
DMN	**Daman**	**14.71**	**132**	*e*P	Pn	19 21 01.1	-5.5
	comp=Z,73nm,0.5s						
PKIN	**Phulchoki**	**14.90**	**132**	*e*P	Pn	19 21 03.9	-5.3
	comp=Z,44nm,0.5s						
BVAR	**Borovoye Array**	**14.90**	**354**	Pn	**Pn**	**19 21 06.0**	**-2.9**
	comp=Z,1.2nm,0.3s,baz=185,slow=16,SNR=53						
BVAR				Lg	Lg	19 25 33.5	
	comp=Z,0.3nm,0.3s,baz=185,slow=28,SNR=2.3						
BVAR	**Borovoye Array**	**14.90**	**354**	P	**Pn**	**19 21 06.0**	**-2.9**
PKI	**Pulchoki**	**14.91**	**132**	*e*P	Pn	19 21 04.1	-5.3
	comp=Z,72nm,0.5s						
BRVK	**Borovoye**	**14.95**	**354**	*de*P	**Pn**	**19 21 06.4**	**-3.0**
BRVK				pmax	pmax		
	comp=Z,24nm,1.0s						
BRVK	**Borovoye**	**14.95**	**354**	P	**Pn**	**19 21 06.6**	**-2.8**
BRVK				S	**Sn**	**19 23 48.0**	**-6.8**
BRVK	**Borovoye**	**14.95**	**354**	Pn	**Pn**	**19 21 06.1**	**-3.3**
BHUJ	**Bhuj**	**15.19**	**192**	*e*P	**Pn**	**19 21 10.2**	**-2.5**
BHUJ				IAmb	IAmb	19 21 23.8	
	comp=Z,168nm,0.7s						
BHPL	**Bhopal**	**15.43**	**164**	*e*P	**Pn**	**19 21 12.6**	**-3.3**
BHPL				IAmb	IAmb	19 21 24.9	
	comp=Z,31nm,0.7s						
DGZ	**Jazzator, Alta**	**15.48**	**38**	*c* *i*P	**Pn**	**19 21 16.4**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,75nm,0.6s						
RAMN	**Ramite**	**16.08**	**130**	*e*P	**Pn**	**19 21 18.7**	**-5.9**
	comp=Z,65nm,0.4s						
AKTO	**Aktyubinsk**	**16.17**	**324**	Pn	**Pn**	**19 21 21.8**	**-3.6**
	comp=Z,0.5nm,0.3s,baz=133,slow=12,SNR=23						
AKTO				Sn	**Sn**	**19 24 19.2**	**-5.3**
	comp=Z,0.5nm,0.3s,baz=64,slow=21,SNR=4.5						
AKTO				LR	LR	19 28 29.9	
	comp=Z,230nm,19.8s,baz=140,slow=40						
AKTO	**Aktyubinsk**	**16.17**	**324**	⇓Pn	**Pn**	**19 21 24.2**	**-1.2**
	comp=Z,131nm,0.8s						
TAPN	**Taplejung**	**16.47**	**127**	*e*P	**Pn**	**19 21 24.3**	**-5.4**
	comp=Z,46nm,0.5s						
ODAN	**Odare**	**16.62**	**129**	*e*P	**Pn**	**19 21 26.2**	**-5.4**
	comp=Z,51nm,0.6s						
LSA	**Lhasa**	**17.32**	**114**	P	**Pn**	**19 21 40.4**	**-0.2**
LSA				pP	**pP**	**19 21 46.2**	**-0.7**
LSA				S	**Sn**	**19 24 53.2**	**-0.2**
LSA				pmax	pmax		
	comp=Z,13nm,0.6s						
LSA				LR	LR		
	comp=Z,510nm,9.3s						
LSA				LR	LR		
	comp=Z,630nm,6.4s						
LSA				LR	LR		
	comp=Z,990nm,8.6s						
LSA	**Lhasa**	**17.32**	**114**	P	**Pn**	**19 21 40.4**	**-0.2**
LSA	**Lhasa**	**17.32**	**114**	P	**Pn**	**19 21 39.4**	**-1.2**
LSA				pmax	pmax		
	comp=Z,20nm,0.8s						
LSA	**Lhasa**	**17.32**	**114**		**Pn**	**19 21 39.4**	**-1.2**
ZAA0	**Zalesovo Array**	**17.71**	**24**		**Pn**	**19 21 43.4**	**-1.4**
ZAA0				IAmb	IAmb	19 21 50.1	
	comp=Z,88nm,1.1s						
ZALV	**Zalesovo Beam**	**17.71**	**24**	P	**Pn**	**19 21 43.2**	**-1.6**
	comp=Z,6.4nm,0.3s,baz=220,slow=10,SNR=53						
ZALV				LR	LR	19 28 53.1	
	comp=Z,1µm,19.1s,baz=252,slow=38						
ZALV	**Zalesovo Beam**	**17.71**	**24**	*i* P	**Pn**	**19 21 43.7**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,22nm,0.5s						
ZALV	**Zalesovo Beam**	**17.71**	**24**		**Pn**	**19 21 42.9**	**-1.9**
BOK	**Bokaro**	**18.14**	**139**	*e*P	**Pn**	**19 21 47.1**	**-3.2**
BOK				IAmb	IAmb	19 21 54.6	
	comp=Z,67nm,0.6s						
BANOM	**Banah**	**18.65**	**234**	P	**P**	**19 21 53.9**	**-2.3**
SHME	**Shamm**	**18.66**	**234**	P	**P**	**19 21 55.4**	**-0.9**
SHME	**Shamm**	**18.66**	**234**	P	**P**	**19 21 55.3**	**-0.9**
LKRN	**Lenkeran, Azer**	**18.91**	**279**	P	**P**	**19 21 58.0**	**-0.9**
MDH	**Madha**	**19.09**	**232**	P	**P**	**19 21 59.1**	**-1.9**
MASF	**Masafi**	**19.13**	**233**	P	**Pn**	**19 22 02.2**	**-0.1**
MSFE	**Esma-Masafi**	**19.14**	**233**	*i* P	**Pn**	**19 22 01.6**	**-0.8**
	SNR=8.6						
WSAR	**Wadi Sarin**	**19.31**	**223**	P	**P**	**19 21 59.6**	**-3.8**
	comp=Z,0.2nm,0.3s,baz=70,slow=13,SNR=2.9						
WSAR				LR	LR	19 30 27.9	
	comp=Z,320nm,20.8s,baz=76,slow=40						
WSAR	**Wadi Sarin**	**19.31**	**223**	P	**Pn**	**19 22 05.3**	**+0.8**
UOSS	**Minazif**	**19.41**	**232**	*i* P	**P**	**19 22 04.1**	**-0.4**
	SNR=7.5						
UOSS	**Minazif**	**19.41**	**232**	P	**P**	**19 22 03.9**	**-0.6**
UOSS				P	**P**	**19 22 03.9**	**-0.6**
UOSS	**Minazif**	**19.41**	**232**	P	**P**	**19 22 03.9**	**-0.6**
UOSS				IAmb	IAmb	19 22 26.0	
	comp=Z,166nm,1.4s						
HATD	**Hatta, Dubai**	**19.54**	**232**	*i* P	**P**	**19 22 05.5**	**-0.5**
	SNR=13						
HATD	**Hatta, Dubai**	**19.54**	**232**	P	**P**	**19 22 05.4**	**-0.5**
POO	**Poona**	**19.64**	**177**	*e*P	**P**	**19 22 05.0**	**-2.1**
	comp=Z,60nm,1.0s						
POO				*e*P	**Pn**	**19 22 05.8**	**-2.7**
POO				IAmb	IAmb	19 22 09.5	
	comp=Z,53nm,1.0s						
POO				*e*S	**Sn**	**19 25 50.0**	**+1.1**
ASHO	**Ashiyiah**	**19.69**	**232**	*i* P	**P**	**19 22 07.4**	**-0.2**
	SNR=28						
ASHO				*i* P	**P**	**19 22 07.4**	**-0.2**
	SNR=8.1						
ASHO	**Ashiyiah**	**19.69**	**232**	P	**P**	**19 22 07.2**	**-0.4**
	SNR=9.3						
NAZ	**Nazwa, Dubai**	**19.72**	**233**	*i* P	**Pn**	**19 22 09.0**	**-0.3**
	SNR=8.7						
SOHO	**SOHO**	**19.81**	**230**	P	**P**	**19 22 06.5**	**-2.3**
SOHO	**SOHO**	**19.81**	**230**	P	**Pn**	**19 22 09.4**	**-1.0**
SOHO				P	**Pn**	**19 22 09.4**	**-1.0**
MAK	**Makhachkala**	**19.85**	**292**	*e*P	**P**	**19 22 03.0**	**-6.1**
MAK				*e*S	S	19 25 39.9	-12
MAK				pmax	pmax		
	comp=Z,238nm,1.3s						
MAK				MLR	MLR		
	comp=Z,258nm,17.0s						
FAQ	**Al Faqa, Dubai**	**19.93**	**233**	P	**P**	**19 22 09.2**	**-1.0**
FAQ	**Al Faqa, Dubai**	**19.93**	**233**	P	**P**	**19 22 09.1**	**-1.1**
SEKA	**Sheki**	**19.99**	**287**	P	**P**	**19 22 11.2**	**+0.4**
MNGR	**Mingechevir, A**	**20.08**	**285**	P	**P**	**19 22 12.4**	**+0.7**
ASUD	**Al Ashush, Dub**	**20.19**	**233**	*i* P	**P**	**19 22 12.9**	**-0.1**
	SNR=9.3						
SVE	**Sverdlovsk**	**20.32**	**340**	⇑*e*P	**P**	**19 22 13.4**	**-0.7**
SVE				*e*S	**S**	**19 26 03.9**	**+2.5**
SVE				pmax	pmax		
	comp=Z,44nm,0.8s						
SVE				MLR	MLR		
	comp=Z,2µm,11.0s						
ALNE	**Al Ain**	**20.34**	**231**	*i* P	**P**	**19 22 14.0**	**-0.7**
	SNR=28						
ALNE	**Al Ain**	**20.34**	**231**	P	**P**	**19 22 13.8**	**-0.9**
	SNR=16						
SHL	**Shillong**	**20.40**	**123**	P	**P**	**19 22 14.5**	**-1.0**
SHL				pmax	pmax		
	comp=Z,44nm,0.8s						
SHL	**Shillong**	**20.40**	**123**	P	Pn	19 22 16.7	-0.9
	SNR=13						
SHL	**Shillong**	**20.40**	**123**	P	**P**	**19 22 14.5**	**-1.0**
SHL				IAmb	IAmb	19 22 28.3	
	comp=Z,44nm,0.8s						
ARQ	**Araqi**	**20.42**	**228**	P	**P**	**19 22 15.2**	**-0.3**
	SNR=6.4						
AJN	**Ajban**	**20.45**	**233**	*i* P	**P**	**19 22 15.1**	**-0.6**
	SNR=8.0						
AJN	**Ajban**	**20.45**	**233**	P	**P**	**19 22 14.8**	**-1.0**
	SNR=5.9						
ARU	**Arti**	**20.57**	**337**	P	**P**	**19 22 16.2**	**-0.8**
	comp=Z,13nm,0.8s,baz=150,slow=8.0,SNR=40						
ARU				LR	LR	19 30 47.7	
	comp=Z,660nm,19.6s,baz=151,slow=38						
ARU	**Arti**	**20.57**	**337**	*c* *i*P	**P**	**19 22 16.1**	**-0.8**
ARU						19 22 33.2	
ARU				S	**S**	**19 26 06.1**	**-0.4**
ARU				SS	**SnSn**	**19 26 24.3**	**-1.2**
ARU				pmax	pmax		
	comp=Z,80nm,1.1s						
ARU				MLR	MLR		
	comp=Z,559nm,9.0s						
ARU	**Arti**	**20.57**	**337**	P	**P**	**19 22 15.4**	**-1.4**
ARU				IAmb	IAmb	19 22 18.0	
	comp=Z,60nm,1.0s						
GANJ	**Ganja**	**20.67**	**285**	P	**P**	**19 22 17.5**	**-0.6**
GTA	**Gaotai**	**20.96**	**78**	⇓P	**P**	**19 22 22.0**	**+0.6**
GTA				pP	pP	19 22 25.6	-0.9
GTA				sP	sP	19 22 28.4	-0.3
GTA				pmax	pmax		
	comp=Z,19nm,1.0s						
GTA				pmax	pmax		
	comp=Z,220nm,5.5s						
GTA				LR	LR		
	comp=Z,640nm,14.2s						
GTA				LR	LR		
	comp=Z,680nm,17.5s						
GTA				LR	LR		
	comp=Z,870nm,16.0s						
GROC	**Groznyy**	**21.11**	**292**	*e*P	**P**	**19 22 24.0**	**+1.1**
GROC				*e*PPP	PPP	19 22 49.8	
GROC				*e*S	**S**	**19 26 18.0**	**+0.6**
GROC				pmax	pmax		
	comp=Z,147nm,0.9s						
HYB	**Hyderabad**	**21.31**	**165**	*i* P	**P**	**19 22 24.0**	**-1.2**
	comp=Z,77nm,0.8s						
HYB				*e*		19 26 15.0	
HYB				*e*S	Sn	19 26 29.0	-0.1
HYB	**Hyderabad**	**21.31**	**165**	*e*P	**P**	**19 22 23.4**	**-1.8**
HYB				IAmb	IAmb	19 22 28.2	
	comp=Z,64nm,0.5s						
NAX	**Nakhchivan**	**21.41**	**281**	P	**P**	**19 22 28.0**	**+1.9**
UMZA	**Um Al Zommool**	**21.70**	**230**	P	**P**	**19 22 28.2**	**-1.1**
GNI	**Garni**	**21.90**	**284**	P	**P**	**19 22 33.0**	**+1.5**
	comp=Z,69nm,1.1s,baz=43,slow=5.4,SNR=13						
GNI				LR	LR	19 34 03.7	
	comp=Z,109nm,18.2s,baz=84,slow=45						
GNI	**Garni**	**21.90**	**284**	P	**P**	**19 22 33.7**	**+2.2**
GNI	**Garni**	**21.90**	**284**	⇓*e*P	**P**	**19 22 33.8**	**+2.3**
GNI				pmax	pmax		
	comp=Z,166nm,1.7s						
GNI	**Garni**	**21.90**	**284**	P	P	19 22 23.9	-7.7
GNI				P	P	19 22 23.9	-7.7
GNI	**Garni**	**21.90**	**284**	P	**P**	**19 22 33.1**	**+1.5**
GNI				IAmb	IAmb	19 22 59.8	
	comp=Z,114nm,1.1s						
GHWR	**Ruwais**	**22.23**	**236**	P	**P**	**19 22 32.8**	**-2.1**
ZEI	**Tsey**	**22.48**	**291**	*e*P	**P**	**19 22 40.2**	**+2.4**
ZEI				pmax	pmax		
	comp=Z,12nm,0.8s						
MZR	**Muzera**	**22.52**	**233**	*i* P	**P**	**19 22 35.5**	**-2.7**
	SNR=14						
BELG	**Belogornoye**	**22.59**	**317**	P	**P**	**19 22 37.3**	**-1.3**
	comp=Z,140nm,0.8s,baz=129,slow=19,SNR=59						
BELG				LR	LR	19 32 23.9	
	comp=Z,229nm,19.5s,baz=114,slow=39						
BELG	**Belogornoye**	**22.59**	**317**	*c* *i*P	**P**	**19 22 37.5**	**-1.1**
BELG				pmax	pmax		
	comp=Z,28nm,0.9s						
UMR	**Umm Al-Rimmam**	**22.59**	**255**	*e*P	**P**	**19 22 36.5**	**-2.4**
NCK	**Nalchik**	**22.73**	**293**	⇑*e*P	**P**	**19 22 41.7**	**+1.4**
NCK				pmax	pmax		
	comp=Z,24nm,0.6s						
MIB	**Mutribah**	**22.76**	**256**	*e*P	**P**	**19 22 38.5**	**-2.2**
KBD	**Kabd**	**22.80**	**254**	*e*P	**P**	**19 22 38.5**	**-2.5**
ONI	**Oni**	**22.80**	**290**	P	**P**	**19 22 40.5**	**-0.6**
ONI				pmax	pmax		
	comp=Z,73nm,0.8s						
ONI	**Oni**	**22.80**	**290**	P	**P**	**19 22 40.5**	**-0.6**
ONI				IAmb	IAmb	19 22 48.4	
	comp=Z,73nm,0.8s						
QRN	**Al-Qurain**	**22.84**	**253**	*e*P	**P**	**19 22 40.0**	**-1.5**

SLWR	Sila	22.94	238	P	P	19 22 41.1	-1.4
KARS	Kars	23.13	285	P	P	19 22 42.4	-2.2
KARS				pmax	pmax		
	comp=Z,95nm,0.8s						
KARS	Kars	23.13	285	P	P	19 22 42.4	-2.2
RST	Umm Al-Ruwaisa	23.17	256	eP	P	19 22 42.7	-2.2
KBZ	Khabaz	23.25	293	P	P	19 22 45.5	-0.1
	comp=Z,8.7nm,0.8s,baz=104,slow=9.8,SNR=22						
KBZ	Khabaz	23.25	293	⇓eP	P	19 22 46.9	+1.3
KBZ				pmax	pmax		
	comp=Z,22nm,0.9s						
GOF	Gofitskoye	23.27	297	⇑eP	P	19 22 50.4	+4.7
GOF				eS	S	19 26 56.2	-1.4
GOF				pmax	pmax		
	comp=Z,61nm,0.7s						
GOF				smax	smax		
	comp=E,43nm,1.3s						
GOF				smax	smax		
	comp=N,53nm,1.5s						
NEY	Neytrino	23.36	292	⇓eP	P	19 22 48.2	+1.3
NEY				pmax	pmax		
	comp=Z,14nm,0.8s						
KVAR	Kislovodsk Arr	23.41	294	P	P	19 22 44.8	-2.6
	comp=Z,2.4nm,0.8s,baz=75,slow=19,SNR=3.0						
KIV	Kislovodsk	23.42	294	i P	P	19 22 48.6	+1.2
	SNR=11						
KIV	Kislovodsk	23.42	294	eP	P	19 22 48.2	+0.8
KIV				eS	S	19 27 02.3	+2.0
KIV				pmax	pmax		
	comp=Z,51nm,1.1s						
KIV				MLR	MLR		
	comp=Z,92nm,14.0s						
KIV	Kislovodsk	23.42	294	P	P	19 22 39.7	-7.7
KIV				S	S	19 26 49.2	-11
KIV	Kislovodsk	23.42	294	P	P	19 22 45.6	-1.8
KIV				IAmb	IAmb	19 23 02.5	
	comp=Z,62nm,0.8s						
MOY	Mondy	23.80	47	eP	P	19 22 51.9	+0.8
MOY				pmax	pmax		
	comp=Z,248nm,2.4s						
SIRT	Sirnak	24.03	278	P	P	19 22 50.7	-2.6
GURO	Guroymak-BITLI	24.17	280	P	P	19 22 52.3	-2.3
LZH	Lanzhou	24.68	85	⇑P	P	19 23 00.3	+0.9
LZH				sP	pP	19 23 04.1	-0.7
LZH				PP	PnPn	19 23 39.2	+8.3
LZH				S	S	19 27 23.5	+2.7
LZH				SS	SnSn	19 28 12.4	+5.9
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
LZH				LR	LR		
	comp=Z,780nm,11.9s						
LZH				LR	LR		
	comp=Z,1µm,11.4s						
LZH				LR	LR		
	comp=Z,880nm,13.0s						
ZAK	Zakamensk	24.70	51	eP	P	19 22 59.8	+0.4
ZAK				pmax	pmax		
	comp=Z,55nm,1.3s						
TLY	Talaya	25.34	48	P	P	19 23 02.9	-2.1
	comp=Z,6.4nm,0.7s,baz=247,slow=5.8,SNR=5.5						
TLY				LR	LR	19 33 30.8	
	comp=Z,437nm,22.0s,baz=258,slow=38						
TLY	Talaya	25.34	48	eP	P	19 23 06.8	+1.8
TLY				pmax	pmax		
	comp=Z,68nm,1.3s						
TLY				MLR	MLR		
	comp=Z,2µm,12.0s						
TLY	Talaya	25.34	48	P	P	19 23 05.8	+0.7
TLY				IAmb	IAmb	19 23 12.1	
	comp=Z,21nm,1.0s						
KIRV	Kirov	25.42	331	P	P	19 23 05.4	-0.2
	comp=Z,43nm,0.8s,baz=141,slow=6.5,SNR=22						
KIRV				LR	LR	19 34 13.2	
	comp=Z,316nm,19.3s,baz=136,slow=39						
KIRV	Kirov	25.42	331	deP	P	19 23 05.0	-0.6
VRH	Novokhopyorsk	25.48	311	eP	P	19 23 05.3	-0.9
VRH				pmax	pmax		
	comp=Z,40nm,1.0s						
SOC	Sochi	25.56	293	eP	P	19 23 06.3	-0.7
SOC				e		19 23 39.1	
SOC				eS	S	19 27 34.7	+0.4
SOC				eSSS	SSS	19 28 47.6	
SOC				pmax	pmax		
	comp=Z,22nm,0.7s						
SOC				MLR	MLR		
	comp=Z,142nm,16.0s						
IRK	Irkutsk	25.90	47	eP	P	19 23 10.9	+0.8
IRK				pmax	pmax		
	comp=Z,61nm,1.8s						
SONM	Songino Array	26.10	58	P	P	19 23 12.9	+0.8
	comp=Z,22nm,1.0s,baz=255,slow=10,SNR=60						
SONM				LR	LR	19 34 57.6	
	comp=Z,843nm,20.2s,baz=254,slow=40						
SONM	Songino Array	26.10	58	P	P	19 23 12.5	+0.4
SONM				IAmb	IAmb	19 23 17.0	
	comp=Z,45nm,1.2s						
CD2	Chengdu	26.33	97	P	P	19 23 14.1	-0.1
CD2				LR	LR		
	comp=Z,470nm,11.7s						
CD2				LR	LR		
	comp=Z,550nm,16.2s						
CD2				LR	LR		
	comp=Z,870nm,12.3s						
ULN	Ulaanbaatar	26.55	58	deP	P	19 23 16.6	+0.5
ULN				pmax	pmax		
	comp=Z,12nm,0.8s						
ULN	Ulaanbaatar	26.55	58	P	P	19 23 16.4	+0.2
VORD	Divnogorie	26.87	309	eP	P	19 23 20.9	+2.1
VORD				pmax	pmax		
	comp=Z,440nm,1.9s						
ABTO	Aybut	26.98	225	P	P	19 23 18.6	-1.6
ABTO				P	P	19 23 18.6	-1.6
VSR	Storozhevoye	27.02	310	eP	P	19 23 20.6	+0.5
VSR				pmax	pmax		
	comp=Z,20nm,0.7s						
ANN	Anapa	27.22	295	eP	P	19 23 20.7	-1.3
ANN				e*PP	pP	19 23 23.6	-3.9
ANN				eS	S	19 28 00.4	-0.2
ANN				pmax	pmax		
	comp=Z,57nm,1.5s						
LPSR	Galich'ya Gora	27.55	312	eP	P	19 23 24.1	-0.9
LPSR				pmax	pmax		
	comp=Z,30nm,0.7s						
RAYN	Ar Rayn	27.60	246	P	P	19 23 24.7	-1.0
RAYN	Ar Rayn	27.60	246	P	P	19 23 24.3	-1.4
RAYN				pmax	pmax		
	comp=Z,15nm,1.0s						
RAYN	Ar Rayn	27.60	246	P	P	19 23 25.0	-0.7
RAYN	Ar Rayn	27.60	246	P	P	19 23 24.3	-1.4
GAZ	Gaziantep	28.18	279	P	P	19 23 29.7	-1.1
KMI	Kunming	28.40	109	⇑P	P	19 23 35.6	+2.5
KMI				pP	pP	19 23 37.7	-0.8
KMI				sP	sP	19 23 39.7	-0.9
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BTO	Baotou	28.62	73	eP	P	19 23 34.4	-0.4
BTO				S	S	19 28 21.2	-1.7
BTO				LR	LR		
	comp=Z,2µm,20.1s						
BTO				LR	LR		
	comp=Z,3µm,18.1s						
PRGR	Permogore	28.88	333	eP	P	19 23 35.7	-1.0
PRGR				pmax	pmax		
	comp=Z,59nm,0.8s						
BNN	Bunyan	28.89	283	P	P	19 23 34.6	-2.6
MOS	Moscow	29.34	318	eP	P	19 23 39.6	-1.2
MOS				e		19 24 34.2	
MOS				e		19 24 45.1	
MOS				e		19 29 59.2	
MOS				pmax	pmax		
	comp=Z,35nm,0.7s						
OBN	Obninsk	29.69	317	P	P	19 23 42.9	-1.0
	comp=Z,4.8nm,0.5s,baz=173,slow=19,SNR=5.6						
OBN				LR	LR	19 36 51.5	
	comp=Z,87nm,19.5s,baz=138,slow=39						
OBN	Obninsk	29.69	317	eP	P	19 23 43.7	-0.2
OBN				ePPP	PPP	19 24 46.4	
OBN				e		19 26 46.1	
OBN				eS	S	19 28 40.6	+1.5
OBN				eSS	SnSn	19 30 13.5	+5.4
OBN				eSSS	SSS	19 30 28.3	
OBN				pmax	pmax		
	comp=Z,41nm,1.3s						
OBN				MLR	MLR		
	comp=Z,322nm,15.0s						
OBN	Obninsk	29.69	317	P	P	19 23 42.0	-1.9
OBN				IAmb	IAmb	19 23 50.6	
	comp=Z,28nm,0.8s						
HHC	Hu-ho-hao-te	29.75	73	eP	P	19 23 44.7	-0.1
HHC				PP	PnPn	19 24 40.9	+0.8
HHC				S	S	19 28 38.2	-2.5
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,8.8s						
HHC				LR	LR		
	comp=Z,310nm,10.8s						
HHC				LR	LR		
	comp=Z,530nm,11.7s						
HHC				LR	LR		
	comp=Z,770nm,14.4s						
CHTO	Chiang Mai	29.78	123	P	P	19 23 46.6	+1.5
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CHTO	Chiang Mai	29.78	123	P	P	19 23 46.6	+1.5
ASF	Jabal al Asfar	29.93	269	P	P	19 23 44.1	-2.3
	comp=Z,1.9nm,1.1s,baz=343,slow=9.7,SNR=1.8						
CM31	Chiang Mai Arr	30.03	124	P	P	19 23 48.0	+0.7
CMAR	Chiang Mai Arr	30.03	124	P	P	19 23 44.8	-2.5
	comp=Z,0.3nm,0.4s,baz=309,slow=12,SNR=2.9						
CMAR				ScP	ScP	19 30 31.0	-0.1
	comp=Z,1.1nm,0.8s,baz=298,slow=5.2,SNR=4.2						
CMAR	Chiang Mai Arr	30.03	124	i P	P	19 23 50.0	+2.7
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	Chiang Mai Arr	30.03	124	P	P	19 23 48.8	+1.5
BR131	Keskin Array S	30.42	285	P	P	19 23 50.3	-0.4
BR131				pmax	pmax		
	comp=Z,20nm,0.9s						
BR131	Keskin Array S	30.42	285	P	P	19 23 50.3	-0.4
BR131				IAmb	IAmb	19 23 57.5	
	comp=Z,20nm,0.9s						
BRTR	Keskin Array B	30.42	285	P	P	19 23 49.4	-1.3
	comp=Z,11nm,1.0s,baz=104,slow=7.2,SNR=11						
BRTR				LR	LR	19 38 59.0	
	comp=Z,97nm,21.1s,baz=67,slow=42						
BRTR	Keskin Array B	30.42	285	i P	P	19 23 51.2	+0.5
BRTR				pmax	pmax		
	comp=Z,11nm,1.0s						
BRTR	Keskin Array B	30.42	285	P	P	19 23 49.6	-1.1
KLMR	Klimovskoe	30.78	328	eP	P	19 23 50.1	-3.4
KLMR				eS	S	19 28 54.4	-1.6
KLMR				pmax	pmax		
	comp=Z,24nm,1.1s						
KLMR	Klimovskoe	30.78	328	eP	P	19 23 50.1	-3.4
KLMR				AMP		19 23 57.7	
	comp=Z,24nm,1.1s						
KLMR				eS	S	19 28 54.5	-1.6
KLMR				eS	S	19 28 54.5	-1.6
ANTO	Ankara	31.03	286	P	P	19 23 56.5	+0.4
ANTO				pmax	pmax		
	comp=Z,16nm,0.9s						
ANTO	Ankara	31.03	286	P	P	19 23 56.5	+0.4
ANTO				IAmb	IAmb	19 24 11.6	
	comp=Z,16nm,0.8s						
ENH	Enshi	31.09	94	P	P	19 23 56.5	-0.1
GHAJ	Ghor Haditha	31.30	269	P	P	19 23 56.1	-2.3
GHAJ				IAmb	IAmb	19 24 10.0	
	comp=Z,9.6nm,0.7s						
CIT	Chita	31.36	51	eP	P	19 23 59.5	+0.7
CIT				e		19 24 09.6	
SLVN	Son La	31.52	113	P	P	19 24 00.8	+0.2
NRIK	Noril'sk	32.16	10	P	P	19 24 05.4	-0.1
	comp=Z,38nm,1.0s,baz=197,slow=5.8,SNR=42						
NRIK				LR	LR	19 38 49.7	
	comp=Z,682nm,19.7s,baz=198,slow=40						
NRIK	Noril'sk	32.16	10	d iP	P	19 24 05.5	-0.1
NRIK				pmax	pmax		
	comp=Z,50nm,0.9s						
NRIK	Noril'sk	32.16	10	P	P	19 24 05.2	-0.4
PURM	Purcari	32.53	299	⇑P	P	19 24 03.9	-5.2
BOD	Bodaibo	33.04	40	eP	P	19 24 13.3	-0.1
BOD				pmax	pmax		
	comp=Z,42nm,1.2s						
AKASG	Malin Array Be	33.11	306	P	P	19 24 12.3	-1.8
	comp=Z,6.4nm,0.7s,baz=80,slow=7.3,SNR=21						
AKASG				LR	LR	19 40 08.0	
	comp=Z,124nm,19.2s,baz=100,slow=41						
AKASG	Malin Array Be	33.11	306	i P	P	19 24 13.6	-0.5
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKASG	Malin Array Be	33.11	306	P	P	19 24 13.1	-1.0
AKBB	Malin Array Si	33.11	306	deP	P	19 24 14.1	0.0
AKBB				pmax	pmax		
	comp=Z,11nm,0.8s						
AKBB	Malin Array Si	33.11	306	P	P	19 24 14.0	0.0
AKBB				IAmb	IAmb	19 24 20.8	
	comp=Z,11nm,0.8s						
MILM	Milestii Mici	33.25	300	⇑P	P	19 24 14.2	-1.2
MILM	Milestii Mici	33.25	300	⇑P	P	19 24 14.2	-1.2
BJT	Baijiatuau	33.35	73	P	P	19 24 16.2	-0.1
BJT				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BJT	Baijiatuau	33.35	73	P	P	19 24 16.2	-0.1
BJI	Beijing	33.35	73	P	P	19 24 17.1	+0.8
BJI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SORM	Soroca	33.56	302	⇑P	P	19 24 17.2	-0.8
SORM	Soroca	33.56	302	⇑P	P	19 24 17.2	-0.8
TPGR	Topolog	33.63	296	⇓P	P	19 24 19.2	+0.4
VLDR	Vladesti	33.80	298	⇓P	P	19 24 21.1	+0.9
CFR	Carcaliu	33.80	296	⇑P	P	19 24 18.1	-2.1
CFR	Carcaliu	33.80	296	⇑P	P	19 24 18.1	-2.1
SCTR	Scanteiesti	33.87	297	⇓P	P	19 24 21.1	+0.3
ELL	Elmali	33.94	281	P	P	19 24 19.3	-2.4
ELL				pmax	pmax		
	comp=Z,33nm,0.6s						
ELL	Elmali	33.94	281	P	P	19 24 19.2	-2.4
VARL	Varlezi	33.96	298	⇑P	P	19 24 25.9	+4.4
GHRR		34.26	298	⇑P	P	19 24 29.1	+5.0
MNK	Minsk	34.40	313	i P	P	19 24 23.6	-1.7
MNK				i		19 25 38.0	
MNK				i		19 26 59.3	
MNK				i S	S	19 29 51.9	-0.7
MNK				i SS	SnSn	19 32 03.0	+0.4
MNK				pmax	pmax		
	comp=N,14nm,1.1s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.2s						
MNK				pmax	pmax		
	comp=Z,20nm,0.9s						
MNK				MLR	MLR		
	comp=Z,535nm,15.0s						
MNK				MLR	MLR		
	comp=E,30nm,9.0s						
MNK				MLR	MLR		
	comp=N,59nm,8.0s						
MNK	Minsk	34.40	313	i P	P	19 24 23.6	-1.6
	comp=E,4.0nm,1.2s						
MNK				i P	P	19 24 23.6	-1.6
	comp=N,14nm,1.1s						
MNK				i P	P	19 24 23.6	-1.6
	comp=Z,20nm,0.9s,baz=99						
MNK				i PP	PnPn	19 25 38.1	-1.8
MNK				i PPP	PPP	19 25 49.8	
MNK				i PcP	PcP	19 26 59.4	-1.3
MNK				i S	S	19 29 52.0	-0.7
MNK				i SS	SnSn	19 32 03.0	+0.4
MNK				i SSS	SSS	19 32 18.7	
MNK				i LQ	LQ	19 35 47.6	
MNK				i LR	LR	19 38 24.4	
MNK				i LRM	MLR	19 39 30.1	
	comp=Z,535nm,14.8s						
MNK				i LRM	MLR	19 39 33.9	
	comp=E,30nm,9.3s						
MNK				i LRM	MLR	19 39 40.2	
	comp=N,59nm,7.6s						
VRI	Vrincioaia	34.74	298	⇑P	P	19 24 32.7	+4.3
VRI	Vrincioaia	34.74	298	⇑P	P	19 24 32.7	+4.3
TESR	Tescani	34.76	299	⇑P	P	19 24 28.3	-0.1
PLOR	Plostina	34.80	298	⇑P	P	19 24 30.6	+1.7
PLOR	Plostina	34.80	298	⇑P	P	19 24 30.6	+1.7
GIRR	Girov	34.84	300	⇓P	P	19 24 29.6	+0.4
ISR	Istrita	34.93	296	⇑P	P	19 24 34.8	+4.7
ISR	Istrita	34.93	296	⇑P	P	19 24 34.8	+4.7
NEHR	Nehoiu	35.08	297	⇑P	P	19 24 34.5	+3.2
NACGM	Naroch	35.10	314	i P	P	19 24 34.0	+2.7
COVR	Voineasa-Covas	35.11	298	⇓P	P	19 24 32.3	+0.7
MLR	Muntele Rosu	35.32	297	⇓P	P	19 24 35.1	+1.6
MLR	Muntele Rosu	35.32	297	⇓P	P	19 24 35.1	+1.6
MLR	Muntele Rosu	35.32	297	P	P	19 24 34.5	+1.0
MLR				IAmb	IAmb	19 24 59.2	
	comp=Z,17nm,0.8s						
DOPR	Dopca	35.67	298	⇓P	P	19 24 37.0	+0.7
BURAR	Bucovina Array	35.68	301	⇓P	P	19 24 38.5	+2.0
BURAR	Bucovina Array	35.68	301	⇓P	P	19 24 38.5	+2.0
BURAR	Bucovina Array	35.68	301		P	19 24 36.2	-0.3
BUR08	Bucovina Ar. S	35.69	301	P	P	19 24 36.5	-0.1
VOIR		35.95	297	⇑P	P	19 24 39.0	+0.1
VOIR		35.95	297	⇑P	P	19 24 39.0	+0.1
COPA	Copaceanca	35.98	295	⇑P	P	19 24 34.6	-4.4
ARR	Arges	36.25	297	⇑P	P	19 24 45.7	+4.3
ARCR	ARCALIA	36.30	300	⇑P	P	19 24 45.8	+4.1
LVV	L'vov	36.41	305	eP	P	19 24 43.2	+0.6
LVZ	Lovozero	36.45	337	⇓eP	P	19 24 42.0	-0.8
LVZ				pmax	pmax		
	comp=Z,94nm,1.9s						
LVZ	Lovozero	36.45	337	P	P	19 24 40.9	-1.9
LVZ				IAmb	IAmb	19 24 43.6	
	comp=Z,34nm,0.8s						
APA	Apatity	36.66	336	⇓iP	P	19 24 31.6	-13
APA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,2µm,17.0s						
PABE	Paberze	36.78	314	eP	P	19 24 46.2	+0.6
PABE	Paberze	36.78	314	P	P	19 24 45.7	+0.1
PABE				IAmb	IAmb	19 24 46.8	
	comp=Z,22nm,0.8s						
LOT	Lotru	36.85	297	⇓P	P	19 24 47.0	+0.4
FIA1	FINESS Array S	36.94	324	P	P	19 24 46.4	-0.6
FIA1				IAmb	IAmb	19 24 51.1	
	comp=Z,21nm,0.9s						
FINES	FINESS Array B	36.94	324	P	P	19 24 46.2	-0.8
	comp=Z,13nm,0.6s,baz=113,slow=9.8,SNR=72						
FINES				PP	PP	19 26 09.0	-2.0
	comp=Z,7.8nm,0.8s,baz=95,slow=8.6,SNR=2.5						
FINES				LR	LR	19 40 42.6	
	comp=Z,412nm,19.4s,baz=92,slow=38						
FINES	FINESS Array B	36.94	324	i P	P	19 24 46.5	-0.5
FINES				pmax	pmax		
	comp=Z,13nm,0.6s						
FINES	FINESS Array B	36.94	324	P	P	19 24 46.0	-1.0
APE	Apeiranthos	37.23	283	⇑P	P	19 24 52.4	+2.6
APE	Apeiranthos	37.23	283	⇑P	P	19 24 52.4	+2.6
KWP	Kalwaria Pacla	37.27	304	eP	P	19 24 50.6	+0.6
KWP	Kalwaria Pacla	37.27	304	P	P	19 24 50.6	+0.6
KWP				pmax	pmax		
	comp=Z,447nm,1.5s						
KWP	Kalwaria Pacla	37.27	304	P	P	19 24 50.6	+0.6
MTSE	Matsula	37.38	319	eP	P	19 24 50.8	+0.1
DRGR		37.44	300	⇓P	P	19 24 56.1	+4.6
DRGR		37.44	300	⇓P	P	19 24 56.1	+4.6
TRPA	Tarpa	37.45	302	⇓P	P	19 24 52.9	+1.4
TRPA	Tarpa	37.45	302	eP	P	19 24 52.8	+1.4
KOLS	Kolonicke sedl	37.58	303	eP	P	19 24 56.5	+3.9
KOLS				e		19 26 20.4	
KOLS	Kolonicke sedl	37.58	303	eP	P	19 24 56.5	+3.9
KOLS				ePP	PnPn	19 26 20.4	+1.3
UZH	Uzhgorod	37.58	303	eP	P	19 24 52.3	-0.3
UZH				i		19 24 59.5	
VTS	Vitosha	37.65	293	⇑P	P	19 24 54.4	+1.0
VTS	Vitosha	37.65	293	⇑P	P	19 24 54.4	+1.0
VTS	Vitosha	37.65	293	P	P	19 24 53.3	-0.1
NJ2	Nanjing	37.76	85	eP	P	19 24 57.1	+2.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,260nm,12.8s						
NJ2				LR	LR		
	comp=Z,730nm,8.1s						
NJ2				LR	LR		
	comp=Z,550nm,13.7s						
HERR	Herculane	37.87	297	⇓P	P	19 24 55.9	+0.9
ZAPS	Zavoj	37.97	294	eP	P	19 25 02.4	+6.4
SRIT	Nakonsritamara	38.05	134	P	P	19 24 58.3	+1.4
SRIT				IAmb	IAmb	19 25 10.4	
	comp=Z,19nm,0.5s						
CRVS	Cervenica-Dubn	38.12	303	eP	P	19 24 59.0	+1.9
CRVS				e		19 26 25.0	
CRVS	Cervenica-Dubn	38.12	303	eP	P	19 24 59.0	+1.9
CRVS				ePP	PP	19 26 25.0	+0.9
ZAGS	Zajecar	38.16	295	eP	P	19 24 58.4	+0.9
BOSS	Bosilegrad	38.22	293	eP	P	19 25 02.2	+4.1
BZS	Buzias	38.33	298	⇑P	P	19 24 59.6	+0.7
BZS	Buzias	38.33	298	⇑P	P	19 24 59.6	+0.7
MDVR	Moldovita	38.38	297	⇑P	P	19 24 58.4	-1.1
PRVS	Prvonek	38.51	293	eP	P	19 24 59.8	-0.7
BOVS	Bovan	38.57	295	⇓P	P	19 24 59.0	-2.0
BOVS	Bovan	38.57	295	eP	P	19 24 59.8	-1.2
BARS	Barje	38.64	293	eP	P	19 24 57.5	-4.1
BARS	Barje	38.64	293	eP	P	19 25 01.7	+0.1
NIE	Niedzica	38.84	304	eP	P	19 25 05.0	+1.7
OJC	Ojcow	39.12	305	eP	P	19 25 08.1	+2.5
GRUS	Gruza	39.23	295	eP	P	19 25 09.3	+2.8
PSZ	Piszkesteto	39.24	302	⇑P	P	19 25 11.3	+4.7
PSZ	Piszkesteto	39.24	302	⇑P	P	19 25 11.3	+4.7
PSZ	Piszkesteto	39.24	302	P	P	19 25 05.1	-1.5
FNA	Florina	39.39	290	P	P	19 25 07.0	-1.0
FNA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FNA	Florina	39.39	290	P	P	19 25 07.0	-1.0
LANS	Liptovska Anna	39.41	304	eP	P	19 25 12.7	+4.7
LANS	Liptovska Anna	39.41	304	eP	P	19 25 12.7	+4.7
CN2	Changchun	39.47	65	eP	P	19 25 10.9	+2.4
AAL	Aland	39.56	321	eP	P	19 25 08.1	-0.9
FRGS	Fruska Gora	39.66	298	⇑P	P	19 25 14.6	+4.5
FRGS	Fruska Gora	39.66	298	eP	P	19 25 10.8	+0.7
DIVS	Divibare	39.71	296	P	P	19 25 10.2	-0.4
DIVS	Divibare	39.71	296	eP	P	19 25 10.7	+0.1
ZEA	Zeya	39.77	49	eP	P	19 25 12.1	+1.2
ZEA				e		19 31 09.5	
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA				MLR	MLR		
	comp=E,300nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,17.0s						
SJES	Sjenica	39.88	295	eP	P	19 25 13.8	+1.7
VYHS	Vyhne	39.88	303	eP	P	19 25 12.0	+0.1
VYHS	Vyhne	39.88	303	eP	P	19 25 12.0	+0.1
ARA0	ARCESS Array S	40.16	336	eP	P	19 25 13.7	-0.3
ARCES	ARCESS Array B	40.16	336	P	P	19 25 13.3	-0.6
	comp=Z,14nm,0.8s,baz=109,slow=8.7,SNR=38						
ARCES				LR	LR	19 43 28.2	
	comp=Z,215nm,19.3s,baz=135,slow=39						
ARCES	ARCESS Array B	40.16	336	P	P	19 25 13.8	-0.1
ARCES				pmax	pmax		
	comp=Z,43nm,1.4s						
ARCES	ARCESS Array B	40.16	336	P	P	19 25 13.8	-0.1
ARCES				IAmb	IAmb	19 25 40.8	
	comp=Z,43nm,1.4s						
MORH	Mrgy, Hungar	40.30	299	⇓P	P	19 25 13.5	-1.9
MORH	Mrgy, Hungar	40.30	299	eP	P	19 25 13.9	-1.5
PDG	Podgorica	40.57	293	⇑P	P	19 25 10.0	-7.6
MORC	Moravsky Berou	40.60	305	eP	P	19 25 19.8	+1.9
MORC	Moravsky Berou	40.60	305	P	P	19 25 15.3	-2.6
MORC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MORC	Moravsky Berou	40.60	305	P	P	19 25 15.3	-2.6
JAVC	Velka Javorina	40.61	304	eP	P	19 25 19.4	+1.4
KTK1	Kautokeino	40.68	335	eP	P	19 25 17.1	-1.1
KOVH	Kovagotottos	40.69	299	eP	P	19 25 18.8	+0.1
SMOL	Smolenice	40.81	303	eP	P	19 25 23.7	+4.1
SMOL	Smolenice	40.81	303	eP	P	19 25 23.7	+4.1
MODS	Modra-Piesok	40.93	303	eP	P	19 25 23.9	+3.3
MODS	Modra-Piesok	40.93	303	eP	P	19 25 23.9	+3.3
KRLC	Kraliky	41.07	305	eP	P	19 25 22.2	+0.5
KRLC	Kraliky	41.07	305	eP	P	19 25 22.2	+0.5
HAMF	Hammerfest	41.20	337	eP	P	19 25 22.5	0.0
VRAC	Vranov	41.27	304	⇓P	P	19 25 22.8	-0.6
VRAC	Vranov	41.27	304	eP	P	19 25 22.8	-0.6
VRAC	Vranov	41.27	304	⇓P	P	19 25 22.8	-0.6
KSP	Ksiaz	41.31	307	eP	P	19 25 21.3	-2.4
DPC	Dobruska-Polom	41.34	306	eP	P	19 25 24.8	+0.9
DPC				epP	pP	19 25 28.4	-1.1
DPC	Dobruska-Polom	41.34	306	eP	P	19 25 24.8	+0.9

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DPC                                 e       19 25 28.4
KULM   Kulim            41.35 135   P       P       19 25 24.0 -0.3
OSTC   Ostas            41.38 306  eP       P       19 25 27.0 +2.7
KRUC   Moravsky         41.42 304  eP       P       19 25 23.9 -0.7
CHVC   Chvalec          41.48 306  eP       P       19 25 26.1 +1.0
CHVC                               ex       x       19 25 29.4
YAK    Yakutsk          41.67  36   LR      LR      19 43 33.9
       comp=Z,565nm,18.1s,baz=272,slow=37
YAK    Yakutsk          41.67  36  eP       P       19 25 25.6 -0.9
YAK                                e*PP     sP      19 25 34.7 +0.5
YAK                                e                19 27 00.7
YAK                                e                19 27 22.1
YAK                                eS       S       19 31 40.3 -2.1
YAK                                e*SS     sS      19 31 55.0 +3.6
YAK                                e                19 35 24.9
YAK                                 pmax    pmax
       comp=Z,37nm,1.3s
YAK                                 pmax    pmax
       comp=N,5.0nm,1.1s
YAK                                 pmax    pmax
       comp=E,20nm,1.5s
YAK                                 pmax    pmax
       comp=Z,128nm,3.1s
YAK                                 pmax    pmax
       comp=N,101nm,2.7s
YAK                                 smax    smax
       comp=E,103nm,2.7s
YAK                                 smax    smax
       comp=N,32nm,2.3s
YAK    Yakutsk          41.67  36   P       P       19 25 25.5 -0.9
YAK                                 IAmb    IAmb    19 25 26.5
       comp=Z,26nm,0.8s
JETT   Jettan, Norway   41.81 335  eP       P       19 25 28.4 +0.9
CONA   Conrad Observa   41.93 302  eP       P       19 25 29.8 +0.9
       comp=Z,16nm,0.9s
IPM    Ipoh             42.23 136   P       P       19 25 31.0 -0.5
IPM    Ipoh             42.23 136   P       P       19 25 30.1 -1.4
IPM                                 IAmb    IAmb    19 25 42.3
       comp=Z,14nm,0.7s
MDJ    Mudanjiang       42.23  63   P       P       19 25 30.3 -1.0
MDJ                                 pmax    pmax
       comp=Z,7.0nm,1.7s
MDJ                                 pmax    pmax
       comp=Z,7.0nm,1.8s
MDJ    Mudanjiang       42.23  63   P       P       19 25 31.3 +0.1
ARSA   Arzberg          42.26 301  eP       P       19 25 31.1 -0.4
       comp=Z,2.6nm,0.8s
TRO    Tromso           42.33 335  eP       P       19 25 31.4 -0.3
PRU    Pruhonice        42.51 306  eP       P       19 25 36.0 +2.5
PRU    Pruhonice        42.51 306  eP       P       19 25 36.0 +2.5
PERS   Pernice          42.64 301  i P      P       19 25 34.8 +0.2
SOKA   Soboth           42.69 301  eP       P       19 25 35.1  0.0
       comp=Z,12nm,0.9s
KTGM   Kuala Trenggan   42.73 132   P       P       19 25 36.0 +0.4
BRG    Berggiesshubel   42.79 307  eP       P       19 25 39.5 +3.7
       comp=Z,18nm,0.8s,baz=81,slow=8.0
BRG    Berggiesshubel   42.79 307  eP       P       19 25 36.3 +0.6
BRG                                 Amp             19 25 37.3
       comp=Z,4.2nm,0.7s
BRG    Berggiesshubel   42.79 307   P       P       19 25 39.7 +4.0
BRG                                 Amp             19 25 40.4
       comp=Z,16nm,0.8s
CKRC   Cesky Krumlov    42.82 304  eP       P       19 25 38.6 +2.6
KSAR   Wonju Array Be   42.86  73   P       P       19 25 36.0 -0.5
KSAR   Wonju Array Be   42.86  73   P       P       19 25 36.0 -0.5
KSRS   Korea Array      42.89  73   P       P       19 25 35.5 -1.1
       comp=Z,1.2nm,0.7s,baz=277,slow=5.4,SNR=7.5
KSRS                                LR      LR      19 45 45.9
       comp=Z,394nm,18.5s,baz=267,slow=39
KLR    Kul'dur          42.89  55   LR      LR      19 44 55.5
       comp=Z,563nm,18.9s,baz=276,slow=38
KLR    Kul'dur          42.89  55d iP       P       19 25 36.4 -0.2
KLR                                 pmax    pmax
       comp=Z,15nm,1.4s
MOA    Molln            43.00 302  eP       P       19 25 38.1 +0.6
       comp=Z,7.7nm,0.8s
FAUS   Fauske           43.01 331  eP       P       19 25 36.9 -0.3
OBKA   Obir             43.05 300  eP       P       19 25 41.9 +3.9
       comp=Z,13nm,1.1s
MOR8   Moi Rana         43.09 330  eP       P       19 25 35.9 -2.1
GSI    Gunungsitoli     43.15 142   P       P       19 25 38.6 -0.4
       comp=Z,42nm,0.8s
GSI    Gunungsitoli     43.15 142   P       P       19 25 39.0  0.0
GSI                                 IAmb    IAmb    19 25 48.4
       comp=Z,30nm,0.9s
FBE    Freiberg         43.15 307  eP       P       19 25 42.6 +4.0
       comp=Z,24nm,0.8s,baz=81,slow=8.0
GEC2   GERESS Array S   43.21 304  eP       P       19 25 42.9 +3.6
       comp=Z,14nm,1.4s,baz=81,slow=8.0
GEC2   GERESS Array S   43.21 304   P       P       19 25 35.7 -3.6
GERES  GERESS Array B   43.21 304   P       P       19 25 38.1 -1.2
       comp=Z,1.7nm,0.6s,baz=101,slow=3.1,SNR=5.1
GERES  GERESS Array B   43.21 304   P       P       19 25 37.7 -1.6
TIP    Timpagrande      43.24 290   P       P       19 25 37.2 -2.4
KHC    Kasperske Hory   43.25 304  eP       P       19 25 40.0 +0.4
KHC                                epP      pP      19 25 42.3 -2.8
KHC                                ex       x       19 26 11.5
KHC    Kasperske Hory   43.25 304   P       P       19 25 40.0 +0.4
KHC                                 pmax    pmax
       comp=Z,12nm,0.7s
KHC    Kasperske Hory   43.25 304   P       P       19 25 40.0 +0.4
KHC                                 IAmb    IAmb    19 25 44.8
       comp=Z,12nm,0.7s
SGRT   San Giovanni R   43.27 293   P       P       19 25 37.3 -2.6
CRNS   Crni Vrh         43.32 300  i P      P       19 25 40.4 +0.2
CLL    Collm            43.33 308  eP       P       19 25 40.0 -0.1
CLL                                 pmax    pmax
       comp=Z,15nm,0.8s
CLL    Collm            43.33 308  eP       P       19 25 40.0 -0.1
CLL                                i Pmax           19 25 43.3
       comp=Z,15nm,0.8s
CLL    Collm            43.33 308  eP       P       19 25 43.4 +3.3
       comp=Z,15nm,0.8s,baz=81,slow=8.0
CLL    Collm            43.33 308   P       P       19 25 39.2 -0.9
CLL                                 IAmb    IAmb    19 25 44.6
       comp=Z,13nm,0.7s
JRMM   Jerantut         43.52 134   P       P       19 25 41.0 -1.0
TIXI   Tiksi            43.60  22   LR      LR      19 43 03.1
       comp=Z,137nm,18.6s,baz=220,slow=35
TIXI   Tiksi            43.60  22d iP       P       19 25 41.0 -1.0
TIXI                                pmax    pmax
       comp=Z,30nm,0.6s
TIXI   Tiksi            43.60  22   P       P       19 25 40.9 -1.0
MYKA   Terra Mystica    43.64 301  eP       P       19 25 46.2 +3.4
       comp=Z,7.8nm,0.9s
KONS   Konsvik          43.67 330  eP       P       19 25 42.8 +0.2
WET    Wettzell         43.70 305  eP       P       19 25 47.1 +3.9
       comp=Z,11nm,0.9s,baz=81,slow=8.0
NC405  NORSAR Array S   43.71 322   P       P       19 25 41.5 -1.5
PRED   Cave del Predi   43.73 301   P       P       19 25 43.4 -0.1
NC602  NORSAR Array S   43.78 321  eP       P       19 25 42.6 -1.0
NC602  NORSAR Array S   43.78 321   P       P       19 25 42.6 -1.0
NC602                               IAmb    IAmb    19 25 51.5
       comp=Z,45nm,1.3s
TANN   Tannenbergstha   43.78 306  eP       P       19 25 47.7 +3.9
       comp=Z,8.4nm,0.9s,baz=81,slow=8.0
GUNZ   Gunzen           43.87 306  eP       P       19 25 48.5 +3.9
       comp=Z,10nm,0.9s,baz=81,slow=8.0
WERD   Werda            43.88 307  eP       P       19 25 48.1 +3.5
       comp=Z,9.3nm,0.8s,baz=81,slow=8.0
NC303  NORSAR Array S   43.88 322   P       P       19 25 43.5 -1.0
NC303                               IAmb    IAmb    19 25 50.2
       comp=Z,39nm,0.9s
NB201  NORSAR Array S   43.91 322   P       P       19 25 43.5 -1.1
NB2    NORSAR Subarra   43.95 322   P       P       19 25 43.7 -1.3
       comp=Z,8.2nm,0.6s,baz=91,slow=8.6
NB2    NORSAR Subarra   43.95 322   P       P       19 25 43.7 -1.3
       baz=91,slow=8.6
NOA    NORSAR Array B   43.95 322   P       P       19 25 43.8 -1.3
       comp=Z,19nm,0.8s,baz=92,slow=7.9,SNR=44
NOA                                 LR      LR      19 44 43.3
       comp=Z,234nm,18.6s,baz=110,slow=37
PLN    Plauen           43.97 307  eP       P       19 25 48.8 +3.5
       comp=Z,7.4nm,0.8s,baz=81,slow=8.0
MANZ   Manzenberg       44.07 306  eP       P       19 25 49.9 +3.8
       comp=Z,1.6nm,0.8s,baz=81,slow=8.0
BJO1   Bjornoya         44.09 342  eP       P       19 25 45.8 -0.1
NAO01  NORSAR Array S   44.10 322   P       P       19 25 45.2 -1.0
NEUB   Neuenburg        44.11 308  eP       P       19 25 49.8 +3.5
       comp=Z,30nm,0.9s,baz=81,slow=8.0
NBO00  NORSAR Array S   44.16 322   P       P       19 25 44.6 -2.1
NC204  NORSAR Array S   44.18 322   P       P       19 25 45.8 -1.0
MOX    Moxa             44.28 307  eP       P       19 25 51.5 +3.6
       comp=Z,14nm,0.9s,baz=81,slow=8.0
FLTG   Flechtingen      44.30 309  eP       P       19 25 51.0 +3.2
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       comp=Z,31nm,0.9s,baz=81,slow=8.0
STAL   STALIGIAL        44.34 301   P       P       19 25 46.6 -1.8
ABTA   Abfaltersbach    44.38 301  eP       P       19 25 48.4 -0.2
       comp=Z,7.1nm,1.1s
CIMO   Cimolais         44.52 301   P       P       19 25 49.3 -0.4
MNSI   Mandailing Nat   44.58 140   P       P       19 25 50.1 -0.3
       comp=Z,31nm,0.8s
BSEG   Bad Segeberg     44.67 312  eP       P       19 25 54.6 +3.9
       comp=Z,22nm,0.9s,baz=81,slow=8.0
GRA1   Grafenberg Arr   44.68 306   P       P       19 25 49.8 -1.2
GRA1                                IAmb    IAmb    19 25 57.8
       comp=Z,20nm,0.7s
GRF    Grafenberg Arr   44.68 306   P       P       19 25 49.8 -1.2
GRF                                 pmax    pmax
       comp=Z,20nm,0.7s
GRF    Grafenberg Arr   44.68 306  eP       P       19 25 55.7 +4.7
       comp=Z,26nm,1.0s,baz=81,slow=8.0
GRFO   Grafenberg       44.68 306   P       P       19 25 49.6 -1.4
GRFO                                pmax    pmax
       comp=Z,20nm,0.8s
GRFO   Grafenberg       44.68 306   P       P       19 25 49.6 -1.4
GRFO                                IAmb    IAmb    19 25 57.7
       comp=Z,20nm,0.8s
WTTA   Wattenberg       44.86 302  i P      P       19 25 55.2 +2.5
       comp=Z,15nm,1.0s,SNR=5.3
NRCA   Norcia           44.87 296   P       P       19 25 52.6 -0.1
NRCA                                IAmb    IAmb    19 26 04.6
       comp=Z,14nm,1.0s
WATA   Walderalm        44.88 302  eP       P       19 25 54.2 +1.4
       comp=Z,7.1nm,0.9s
CLZ    Clausthal        44.89 309  eP       P       19 25 56.5 +3.8
       comp=Z,12nm,0.9s,baz=81,slow=8.0
FUR    Furstenfeldbru   44.92 303  eP       P       19 25 57.1 +4.1
       comp=Z,31nm,1.1s,baz=81,slow=8.0
NRDL   Niedersach Rie   44.96 310  eP       P       19 25 57.2 +4.2
       comp=Z,18nm,0.9s,baz=81,slow=8.0
DOMB   Dombas           45.01 323  eP       P       19 25 53.1 -0.4
CTI    Castel Tesino    45.11 300   P       P       19 25 53.7 -0.9
CTI                                 pmax    pmax
       comp=Z,12nm,0.8s
CTI    Castel Tesino    45.11 300   P       P       19 25 53.6 -0.9
CTI                                 IAmb    IAmb    19 25 58.2
       comp=Z,12nm,0.8s
SQTA   Sankt Quirin     45.15 302  i P      P       19 25 54.5 -0.4
       comp=Z,9.0nm,0.7s,SNR=4.6
MURB   Monte Urbino     45.17 296   P       P       19 25 54.3 -0.7
MURB                                IAmb    IAmb    19 26 01.3
       comp=Z,26nm,0.9s
GTTG   Gottingen        45.18 308  eP       P       19 25 58.7 +3.7
       comp=Z,33nm,0.8s,baz=81,slow=8.0
MOTA   Moosalm          45.20 302  i P      P       19 25 54.8 -0.5
       comp=Z,14nm,1.0s,SNR=6.6
TEOL   Teolo            45.25 299   P       P       19 25 54.2 -1.4
SKAR   Skarslia         45.37 321  eP       P       19 25 56.6 +0.3
FETA   Feichten         45.51 302  i P      P       19 25 57.3 -0.5
       comp=Z,10nm,1.1s,SNR=5.4
GRNR   Gornyy           45.63  53⇑iP       P       19 25 59.3 +0.8
GRNR                                pmax    pmax
       comp=E,5.0nm,0.6s
GRNR                                pmax    pmax
       comp=Z,8.0nm,0.7s
GRNR                                MLR     MLR
       comp=E,340nm,20.0s
GRNR                                MLR     MLR
       comp=N,110nm,15.0s
GRNR                                MLR     MLR
       comp=Z,510nm,11.0s
UBR    Ueberruh         45.79 303  eP       P       19 26 03.2 +3.3
       comp=Z,17nm,0.8s,baz=81,slow=8.0
ZCCA   Zocca            45.98 298   P       P       19 26 00.7 -0.7
ZCCA                                IAmb    IAmb    19 26 24.1
       comp=Z,20nm,1.0s
OSSC   Osservatorio P   46.00 297   P       P       19 26 00.2 -1.3
OSSC                                IAmb    IAmb    19 26 06.5
       comp=Z,15nm,0.8s
MYKOM  Kota Tinggi      46.02 134   P       P       19 26 06.0 +4.1
MYKOM  Kota Tinggi      46.02 134   P       P       19 26 02.3 +0.4
MYKOM                               IAmb    IAmb    19 26 15.5
       comp=Z,18nm,1.0s
DAVA   Damuels          46.02 303  eP       P       19 26 01.5 -0.3
       comp=Z,27nm,0.7s
PPI    Padang Panjang   46.06 140   P       P       19 26 00.9 -1.3
STU    Stuttgart        46.16 305  eP       P       19 26 07.2 +4.5
       comp=Z,43nm,0.8s,baz=81,slow=8.0
SPA0   Spitsbergen Ar   46.17 346  eP       P       19 26 03.0 +0.6
IBBN   Ibbenburen       46.41 310  eP       P       19 26 08.3 +3.7
       comp=Z,18nm,0.9s,baz=81,slow=8.0
VLC    Villacollemand   46.44 298   P       P       19 25 59.8 -5.2
VLC                                 IAmb    IAmb    19 26 10.3
       comp=Z,24nm,0.9s
PDSI   Padang           46.48 140   P       P       19 26 03.6 -2.0
BFO    Black Forest     46.81 304   P       P       19 26 07.0 -0.9
BFO                                 pmax    pmax
       comp=Z,6.0nm,0.8s
BFO    Black Forest     46.81 304  eP       P       19 26 11.4 +3.5
       comp=Z,9.2nm,0.9s,baz=81,slow=8.0
BFO    Black Forest     46.81 304   P       P       19 26 07.0 -0.9
BUG    Bochum--Univer   46.86 309  eP       P       19 26 12.0 +3.9
       comp=Z,14nm,0.6s,baz=81,slow=8.0
ASK    Askoy            46.91 321  eP       P       19 26 08.7 +0.4
MSSA   Maissana         46.99 299   P       P       19 26 09.8 +0.4
AHRW   Bad Neuenahr-A   47.15 307  eP       P       19 26 14.3 +3.9
       comp=Z,12nm,1.1s,baz=81,slow=8.0
KBS    Kingsbay         47.28 347   P       P       19 26 11.2 +0.1
KBS                                 pmax    pmax
       comp=Z,24nm,0.8s
KBS    Kingsbay         47.28 347   P       P       19 26 11.2 +0.1
WLF    Walferdange      47.92 306   P       P       19 26 13.4 -3.0
WLF    Walferdange      47.92 306  eP       P       19 26 20.7 +4.3
       comp=Z,18nm,0.8s,baz=81,slow=8.0
WLF    Walferdange      47.92 306   P       P       19 26 13.4 -3.0
WLF                                 IAmb    IAmb    19 26 21.4
       comp=Z,16nm,0.8s
SENIN  Lac Senin/Sane   47.96 302   P       P       19 26 16.4 -0.7
SENIN                               IAmb    IAmb    19 26 26.0
       comp=Z,12nm,0.7s
KRJI   Kerinci          48.00 140   P       P       19 26 14.1 -3.4
       comp=Z,70nm,0.7s
LODK   Lodwar           48.72 234   P       P       19 26 22.1 -1.0
BNI    Bardonecchia     48.74 300   P       P       19 26 21.5 -1.5
BNI                                 pmax    pmax
       comp=Z,43nm,1.5s
BNI    Bardonecchia     48.74 300   P       P       19 26 21.5 -1.5
KSI    Kapahiang        49.91 140   P       P       19 26 30.8 -1.3
       comp=Z,3µmcomp=Z,50nm,0.7s
KEST   Kesra            49.96 288   P       P       19 26 31.8 -0.6
       comp=Z,5.3nm,0.7s,baz=35,slow=2.8,SNR=6.1
KEST   Kesra            49.96 288   P       P       19 26 31.5 -0.9
KEST                                IAmb    IAmb    19 26 56.2
       comp=Z,19nm,1.3s
SSB    Saint Sauveur    50.12 301   P       P       19 26 32.6 -0.8
SSB                                 pmax    pmax
       comp=Z,8.0nm,0.8s
SSB    Saint Sauveur    50.12 301   P       P       19 26 32.6 -0.8
SBUM   Sibu             50.57 125   P       P       19 26 38.0 +0.9
SBUM   Sibu             50.57 125   P       P       19 26 38.7 +1.6
YSS    Yuzh-Sakhalins   50.58  56  eP       P       19 26 37.5 +0.7
YSS                                 pmax    pmax
       comp=Z,30nm,0.9s
YSS                                 MLR     MLR
       comp=Z,500nm,15.0s
MAJO   Matsushiro       50.91  70   P       P       19 26 37.8 -1.7
MAJO                                pmax    pmax
       comp=Z,15nm,1.2s
MAJO   Matsushiro       50.91  70   P       P       19 26 37.8 -1.7
MAJO                                IAmb    IAmb    19 26 48.0
       comp=Z,15nm,1.1s
MAT    Matsushiro       50.91  70   P       P       19 26 38.3 -1.2
MJAR   Matsushiro Arr   50.91  70   P       P       19 26 37.8 -1.7
       comp=Z,3.0nm,0.8s,baz=294,slow=8.0,SNR=5.5
MJAR   Matsushiro Arr   50.91  70   P       P       19 26 38.0 -1.5
MJAR                                pmax    pmax
       comp=Z,10.0nm,1.0s
MJAR   Matsushiro Arr   50.91  70   P       P       19 26 38.0 -1.5
KMBO   Kilima Mbogo     51.13 229   P       P       19 26 40.6 -0.9
       comp=Z,0.6nm,0.3s,baz=96,slow=6.9,SNR=1.4
KIBK   Kibwezi          51.64 227   P       P       19 26 44.4 -0.9
SPMM   Sapulut          51.74 119   P       P       19 26 51.0 +5.1
STKI   Sintang          51.93 128   P       P       19 26 48.2 +0.9
       comp=Z,12nm,1.2s
SEY    Seymchan         52.13  35   LR      LR      19 51 11.2
       comp=Z,268nm,21.7s,baz=275,slow=39
JMM    Marumori         52.30  68   P       P       19 26 48.9 -0.9
JMM                                 IAmb    IAmb    19 26 56.2
       comp=Z,19nm,0.8s
NOR    Nord             52.39 349  eP       P       19 26 48.0 -1.8
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NOR                                 IAmb    IAmb    19 26 58.8
       comp=Z,146nm,2.5s
DAG    Danmarks Havn    53.51 343  i P      P       19 26 57.9 -0.3
DAG                                 IAmb    IAmb    19 26 58.5
       comp=Z,14nm,0.8s
DBG    Daneborg         54.47 340  i P      P       19 27 06.0 +0.8
LEM    Lembang          55.23 137   P       P       19 27 10.4 -1.3
       comp=Z,11nm,0.4s,baz=343,slow=19,SNR=2.3
BILL   Bilibino         56.38  27c iP       P       19 27 18.8 -0.2
BILL                               e                19 28 16.7
BILL                               e                19 29 24.2
BILL                               ePPP     PPP     19 30 43.7
BILL                                pmax    pmax
       comp=Z,23nm,1.3s
BILL                                MLR     MLR
       comp=Z,470nm,16.0s
BILL   Bilibino         56.38  27   P       P       19 27 18.9 -0.2
BILL                                IAmb    IAmb    19 27 20.2
       comp=Z,17nm,1.0s
BBKI   Banjar Baru      56.77 127   P       P       19 27 23.2 +0.7
       comp=Z,5µmcomp=Z,14nm,0.8s
MPSI   Mapaga           57.25 120   P       P       19 27 25.6 -0.3
       comp=Z,19nm,1.0s
PETK   Petropavlovsk-   57.66  45   P       P       19 27 27.8 -0.6
       comp=Z,3.1nm,1.0s,baz=221,slow=10,SNR=2.7
ESBB   Sonseca Array    58.01 298   P       P       19 27 30.4 -0.7
ESBB                                IAmb    IAmb    19 27 36.6
       comp=Z,9.9nm,1.1s
ESDC   Sonseca Array    58.02 298   P       P       19 27 29.1 -2.0
       comp=Z,1.5nm,0.7s,baz=53,slow=6.0,SNR=12
ESDC                                PP      PP      19 29 40.9 +1.5
       comp=Z,0.3nm,0.5s,baz=55,slow=6.7,SNR=2.4
ESDC   Sonseca Array    58.02 298   P       P       19 27 28.8 -2.4
NEEM   North Greenlan   59.67 348  i P      P       19 27 42.4  0.0
NEEM                                IAmb    IAmb    19 27 42.8
       comp=Z,20nm,0.9s
SUMG   Summit           59.93 341   P       P       19 27 44.3  0.0
SUMG                                pmax    pmax
       comp=Z,23nm,1.0s
SUMG   Summit           59.93 341  i P      P       19 27 44.6 +0.3
SUMG                                IAmb    IAmb    19 27 46.7
       comp=Z,6µm,5.0s
SUMG   Summit           59.93 341   P       P       19 27 44.3  0.0
TULEG  Thule            62.99 351  i P      P       19 28 03.8 -0.7
TULEG                               IAmb    IAmb    19 28 05.1
       comp=Z,33nm,1.6s
TULEG  Thule            62.99 351   P       P       19 28 01.7 -2.7
TULEG                               IAmb    IAmb    19 28 11.3
       comp=Z,23nm,1.4s
UPNV   Upernavik        63.87 345  i P      P       19 28 09.9 -0.4
A21K   Barrow           65.25  16   P       P       19 28 18.8 -0.5
A21K   Barrow           65.25  16   P       P       19 28 19.1 -0.1
       baz=319
RDOG   Red Dog Mine     66.12  20   P       P       19 28 32.4 +7.3
       baz=315
TNA    Tin City         66.37  23   P       P       19 28 27.2 +0.5
       baz=312
TORD   Torodi Ar. Bea   67.29 269   P       P       19 28 31.4 -1.9
       comp=Z,3.9nm,0.6s,baz=46,slow=5.3,SNR=23
TORD                                LR      LR      20 01 35.0
       comp=Z,67nm,21.8s,baz=15,slow=39
TORD   Torodi Ar. Bea   67.29 269   P       P       19 28 30.8 -2.5
TORD                                IAmb    IAmb    19 28 38.2
       comp=Z,5.5nm,0.8s
TOLK   Toolik Lake Re   68.86  15   P       P       19 28 41.8 -0.7
TOLK   Toolik Lake Re   68.86  15   P       P       19 28 42.1 -0.4
       baz=325
A36M   Sachs Harbour    69.34   6   P       P       19 28 45.0 -0.3
A36M   Sachs Harbour    69.34   6   P       P       19 28 44.7 -0.5
       baz=345,SNR=11
COLD   Coldfoot         69.89  16   P       P       19 28 48.5 -0.2
COLD   Coldfoot         69.89  16   P       P       19 28 48.3 -0.4
       baz=325
IMAR   Indian Mountai   70.06  18   P       P       19 28 48.8 -1.0
GCSA   Galena City Sc   70.21  20   P       P       19 28 50.4 -0.3
       baz=320
H21K   Melozitna Rive   70.55  18   P       P       19 28 52.4 -0.5
H21K                                IAmb    IAmb    19 28 53.4
       comp=Z,17nm,1.1s
H21K   Melozitna Rive   70.55  18   P       P       19 28 52.6 -0.3
       baz=323
BMAR   Burnt Mountain   70.90  14   P       P       19 28 54.5 -0.4
KOWA   Kowa             71.00 274   P       P       19 28 54.6 -1.8
I21K   Tanana           71.14  18   P       P       19 28 55.8 -0.6
I21K                                IAmb    IAmb    19 28 56.7
       comp=Z,14nm,1.1s
I21K   Tanana           71.14  18   P       P       19 28 56.3 -0.1
       baz=324
J20K   Nowinta River    71.39  20   P       P       19 28 57.9  0.0
J20K                                IAmb    IAmb    19 28 58.8
       comp=Z,17nm,0.9s
J20K   Nowinta River    71.39  20   P       P       19 28 57.6 -0.3
       baz=323
H24K   Noodor Dome      71.57  16   P       P       19 28 58.7 -0.3
       baz=327,SNR=7.3
MLY    Manley           71.57  18   P       P       19 28 58.4 -0.6
MLY                                 IAmb    IAmb    19 29 04.3
       comp=Z,7.2nm,0.8s
MLY    Manley           71.57  18   P       P       19 28 58.5 -0.6
       baz=325,SNR=7.8
I23K   Minto, Yukon-K   71.80  17   P       P       19 28 58.9 -1.5
I23K                                IAmb    IAmb    19 29 06.4
       comp=Z,19nm,0.9s
I23K   Minto, Yukon-K   71.80  17   P       P       19 29 00.2 -0.1
       baz=326,SNR=6.5
TTA    Tatalina         71.86  21   P       P       19 29 00.7 -0.2
TTA                                 pmax    pmax
       comp=Z,9.0nm,1.1s
TTA    Tatalina         71.86  21   P       P       19 29 00.7 -0.2
TTA                                 IAmb    IAmb    19 29 01.8
       comp=Z,8.6nm,1.1s
TTA    Tatalina         71.86  21   P       P       19 29 00.3 -0.6
       baz=322
INK    Inuvik           71.95  10   P       P       19 29 00.6 -0.6
       comp=Z,13nm,0.8s,baz=344,slow=6.9,SNR=36
INK                                 PP      PP      19 31 36.9 -3.3
       comp=Z,1.3nm,0.8s,baz=280,slow=5.8,SNR=1.7
INK    Inuvik           71.95  10   IAmb    IAmb    19 29 07.5
       comp=Z,34nm,1.2s
INK    Inuvik           71.95  10   P       P       19 29 00.9 -0.2
       baz=338,SNR=14
K20K   Telida           72.07  20   P       P       19 29 02.0  0.0
K20K                                IAmb    IAmb    19 29 03.0
       comp=Z,16nm,0.9s
CHUM   Lake Minchumin   72.11  19   P       P       19 29 01.8 -0.4
       baz=324
MDM    Murphy Dome      72.23  17   P       P       19 29 02.5 -0.5
BPAW   Bear Paw Mtn.    72.28  19   P       P       19 29 02.5 -0.8
BPAW                                IAmb    IAmb    19 29 09.5
       comp=Z,14nm,0.9s
BPAW   Bear Paw Mtn.    72.28  19   P       P       19 29 03.0 -0.3
       baz=325
POKR   Poker Plat Res   72.28  17   P       P       19 29 03.0 -0.2
POKR   Poker Plat Res   72.28  17   P       P       19 29 03.1 -0.2
       baz=328,SNR=10
NEA2   Nenana           72.34  18   P       P       19 29 03.0 -0.6
NEA2                                IAmb    IAmb    19 29 09.0
       comp=Z,20nm,0.9s
NEA2   Nenana           72.34  18   P       P       19 29 03.0 -0.6
       baz=327,SNR=7.4
TCOL   CIGO, UAF Yank   72.38  17   P       P       19 29 03.6 -0.3
TCOL   CIGO, UAF Yank   72.38  17   P       P       19 29 03.6 -0.3
       baz=328
COLA   College          72.39  17⇑eP       P       19 29 03.9 +0.1
COLA                                pmax    pmax
       comp=Z,34nm,0.9s
COLA   College          72.39  17   P       P       19 29 03.7 -0.1
COLA   College          72.39  17   P       P       19 29 03.7 -0.1
       baz=328
CAST   Castle Rocks     72.55  19   P       P       19 29 04.7 -0.2
CAST                                IAmb    IAmb    19 29 10.7
       comp=Z,21nm,1.0s
CAST   Castle Rocks     72.55  19   P       P       19 29 04.9  0.0
       baz=324
CCB    Clear Creek Bu   72.59  17   P       P       19 29 03.8 -1.2
BWN    Browne           72.59  18   P       P       19 29 04.4 -0.8
WRH    Wood River Hil   72.67  17   P       P       19 29 05.5  0.0
WRH                                 IAmb    IAmb    19 29 09.2
       comp=Z,7.2nm,0.9s
IL31                    72.69  17   P       P       19 29 04.4 -1.2
IL31                                IAmb    IAmb    19 29 10.6
       comp=Z,16nm,1.0s
ILAR   Eielson Array    72.69  17   P       P       19 29 04.4 -1.3
       comp=Z,8.2nm,0.9s,baz=318,slow=4.8,SNR=65
ILAR                                PP      PP      19 31 40.6 -6.2
       comp=Z,0.2nm,0.7s,baz=317,slow=6.4,SNR=3.5
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ILAR				LR	LR	20 05 22.3	
	comp=Z,160nm,20.4s,baz=311,slow=39						
ILAR	Eielson Array	72.69	17	P	P	19 29 04.2	-1.6
KTH	Kantishna Hill	72.74	19	P	P	19 29 05.5	-0.7
L19K	White Mountain	72.79	21	P	P	19 29 05.7	-0.7
	baz=322						
L20K	Farewell, AK	72.83	21	P	P	19 29 06.7	+0.1
	baz=323						
PPLA	Purkeypile	72.95	20	P	P	19 29 07.2	-0.2
PPLA				IAmb	IAmb	19 29 25.0	
	comp=Z,17nm,1.1s						
PPLA	Purkeypile	72.95	20	P	P	19 29 06.9	-0.6
	baz=324						
HDA	Harding Lake	72.99	17	P	P	19 29 05.8	-1.7
HDA				IAmb	IAmb	19 29 11.8	
	comp=Z,15nm,1.2s						
HDA	Harding Lake	72.99	17	P	P	19 29 06.7	-0.8
	baz=328						
TRF	Thorofare Moun	72.99	19	P	P	19 29 06.5	-1.2
TRF				IAmb	IAmb	19 29 14.8	
	comp=Z,8.6nm,0.9s						
TRF	Thorofare Moun	72.99	19	P	P	19 29 06.9	-0.8
	baz=326						
MCK	McKinley	73.09	18	P	P	19 29 06.5	-1.6
MCK				pmax	pmax		
	comp=Z,20nm,1.3s						
MCK	McKinley	73.09	18	P	P	19 29 06.5	-1.6
MCK				IAmb	IAmb	19 29 24.8	
	comp=Z,20nm,1.3s						
MCK	McKinley	73.09	18	P	P	19 29 07.5	-0.7
	baz=327						
J25K	Salcha River,	73.17	16	P	P	19 29 07.9	-0.7
	baz=330						
EPYK	Eagle Plains	73.26	12	P	P	19 29 08.8	-0.3
	baz=336						
J26L	Joseph Creek	73.66	16	P	P	19 29 11.0	-0.6
	baz=331						
EGAK	Eagle	73.90	14	P	P	19 29 12.4	-0.5
EGAK				IAmb	IAmb	19 29 18.9	
	comp=Z,12nm,1.1s						
EGAK	Eagle	73.90	14	P	P	19 29 12.5	-0.3
	baz=333						
I29M	Ogilvie Camp,	73.91	13	P	P	19 29 12.1	-0.8
	baz=335,SNR=9.4						
WAT1	Susitna Watana	73.94	18	P	P	19 29 12.5	-0.7
	baz=327						
N19K	Bonanza Creek	73.99	22	P	P	19 29 13.4	-0.1
	baz=323						
SCRK	Sand Creek	74.02	16	P	P	19 29 12.8	-0.9
SCRK				IAmb	IAmb	19 29 14.2	
	comp=Z,25nm,1.3s						
SCRK	Sand Creek	74.02	16	P	P	19 29 13.0	-0.8
	baz=331,SNR=7.1						
DHY	Denali Highway	74.02	18	P	P	19 29 12.9	-0.9
DHY				IAmb	IAmb	19 29 20.3	
	comp=Z,9.7nm,0.8s						
DHY	Denali Highway	74.02	18	P	P	19 29 13.4	-0.4
	baz=328						
WAT6	Susitna Watana	74.36	18	P	P	19 29 15.1	-0.7
	baz=328						
M22K	Willow	74.44	20	P	P	19 29 15.7	-0.3
	baz=326						
O19K	Port Alsworth	74.53	22	P	P	19 29 16.4	-0.2
	baz=323						
PAX	Paxson	74.57	17	P	P	19 29 15.5	-1.4
PAX				pmax	pmax		
	comp=Z,15nm,0.9s						
PAX	Paxson	74.57	17	P	P	19 29 15.5	-1.4
PAX				IAmb	IAmb	19 29 22.1	
	comp=Z,15nm,0.9s						
PAX	Paxson	74.57	17	P	P	19 29 15.8	-1.1
	baz=330,SNR=6.8						
FITZ	Fitzroy Crossi	74.72	128	P	P	19 29 15.4	-2.7
	comp=Z,0.8nm,0.7s,baz=352,slow=7.1,SNR=1.7						
GHO	Glory Hole Cre	74.74	19	P	P	19 29 17.2	-0.7
PMR	Palmer	74.84	19	P	P	19 29 17.4	-0.9
	baz=327						
SML	Sawmill	74.86	19	P	P	19 29 17.9	-0.7
SML	Sawmill	74.86	19	P	P	19 29 18.0	-0.6
	baz=328						
DAWY	Dawson	74.88	14	P	P	19 29 18.1	-0.6
	baz=334,SNR=8.7						
P18K	Big Mountain,	74.89	23	P	P	19 29 18.6	-0.1
	baz=323						
L26K	Log Cabin Wild	75.00	16	P	P	19 29 18.9	-0.4
	baz=331						
SCM	Sheep Creek Mo	75.09	18	P	P	19 29 19.2	-0.7
SCM				pmax	pmax		
	comp=Z,48nm,1.0s						
SCM	Sheep Creek Mo	75.09	18	P	P	19 29 19.2	-0.7
SCM	Sheep Creek Mo	75.09	18	P	P	19 29 19.5	-0.5
	baz=328						
RC01	Rabbit Creek A	75.10	20	P	P	19 29 19.0	-0.8
RC01				IAmb	IAmb	19 29 24.9	
	comp=Z,25nm,0.9s						
RC01	Rabbit Creek A	75.10	20	P	P	19 29 19.1	-0.8
	baz=327						
HARP	HAARP	75.13	17	P	P	19 29 20.3	+0.2
	baz=330,SNR=8.4						
M24K	Tolsona, Glenn	75.14	18	P	P	19 29 19.4	-0.8
M24K	Tolsona, Glenn	75.14	18	P	P	19 29 19.4	-0.8
	baz=329						
KNK	Knik Glacier	75.16	19	P	P	19 29 19.8	-0.5
KNK	Knik Glacier	75.16	19	P	P	19 29 19.8	-0.5
	baz=328						
L27K	Beaver Creek,	75.29	16	P	P	19 29 21.0	0.0
L27K				IAmb	IAmb	19 29 27.5	
	comp=Z,11nm,0.9s						
L27K	Beaver Creek,	75.29	16	P	P	19 29 20.7	-0.3
	baz=332						
BCAR	Beaver Creek A	75.30	16	P	P	19 29 21.0	0.0
M26K	Nabesna, AK	75.62	16	P	P	19 29 23.1	+0.2
	baz=332						
PWL	Port Wells	75.67	19	P	P	19 29 22.9	-0.3
	baz=328						
KLU	Klutina	75.73	18	P	P	19 29 23.4	-0.2
	baz=330						
Q19K	Cape Douglas,	75.76	23	P	P	19 29 23.2	-0.5
	baz=324						
M27K	Edge Creek, AK	75.91	16	P	P	19 29 23.8	-0.9
	baz=332						
GLI	Glacier Island	75.97	19	P	P	19 29 24.5	-0.4
	baz=329						
BVCY	Beaver Creek	76.08	15	P	P	19 29 24.7	-0.8
	baz=333						
CHGN	Chignik	76.27	27	P	P	19 29 25.7	-0.8
	baz=321						
DBIC	Dimbokro	76.31	268	P	P	19 29 25.2	-2.3
	comp=Z,6.1nm,1.0s,baz=61,slow=7.4,SNR=4.4						
DBIC				LR	LR	20 07 21.0	
	comp=Z,116nm,18.4s,baz=54,slow=39						
BMRM	Bremner River	76.51	18	P	P	19 29 27.1	-0.9
	baz=331						
MCARA	McCarthy VSAT	76.52	17	P	P	19 29 27.1	-0.8
	baz=332						
EYAK	Cordova Ski Ar	76.59	19	P	P	19 29 27.9	-0.4
	baz=330						
M30M	Minto, Yukon	76.73	14	P	P	19 29 28.4	-0.8
	baz=336						
YUK3	Moose Creek	76.73	16	P	P	19 29 29.5	+0.1
	baz=334						
KDAK	Kodiak Island	77.02	23	P	P	19 29 29.5	-1.3
	comp=Z,17nm,0.9s,baz=346,slow=12,SNR=2.3						
KDAK	Kodiak Island	77.02	23	P	P	19 29 31.0	+0.2
	baz=325						
OHAK	Old Harbor	77.25	24	P	P	19 29 32.2	+0.1
	baz=324						
CTG	Chitna Glacier	77.27	16	P	P	19 29 32.3	-0.1
	baz=333						
CTGM	Chitina Glacie	77.27	16	P	P	19 29 33.4	+0.9
CTGM				IAmb	IAmb	19 29 41.1	
	comp=Z,31nm,1.4s						
YUK4	Talbot Arm	77.50	15	P	P	19 29 33.4	-0.4
	baz=335						
M31M	Drury Creek, Y	77.51	13	P	P	19 29 33.5	0.0
	baz=338						
FARO	Faro, Yukon	77.66	12	P	P	19 29 34.6	+0.1
	baz=339						
YUK6	Outpost Mounta	77.92	15	P	P	19 29 35.9	-0.3
	baz=335						
N31M	Braeburn, Yuko	77.93	14	P	P	19 29 35.6	-0.3
	baz=337						
WRGLY	Wrigley	78.04	8	P	P	19 29 36.4	0.0
	baz=347						
HYT	Haines Junctio	78.20	15	P	P	19 29 37.4	-0.1
HYT	Haines Junctio	78.20	15	P	P	19 29 37.7	+0.1
	baz=336						
YKA	Yellowknife Ar	79.44	4	P	P	19 29 42.5	-1.6
	comp=Z,2.5nm,0.6s,baz=348,slow=5.5,SNR=16						
YKA				LR	LR	20 09 10.9	
	comp=Z,164nm,18.1s,baz=0.0,slow=39						
YKA	Yellowknife Ar	79.44	4	*i* P	P	19 29 43.5	-0.7
YKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
YKA	Yellowknife Ar	79.44	4	P	P	19 29 43.4	-0.7
P33M	Teslin, Yukon	79.65	13	P	P	19 29 45.5	0.0
	baz=340						
BOSA	Boshof	80.06	221	P	P	19 29 45.9	-2.1
	comp=Z,2.5nm,0.9s,baz=2.0,slow=14,SNR=2.6						
BOSA				LR	LR	20 04 18.4	
	comp=Z,106nm,21.4s,baz=33,slow=35						
SCHQ	Schefferville	81.10	338	P	P	19 29 50.7	-2.5
	comp=Z,4.2nm,0.7s,baz=43,slow=5.7,SNR=8.4						
SCHQ				LR	LR	20 05 30.4	
	comp=Z,119nm,18.8s,baz=60,slow=35						
SCHQ	Schefferville	81.10	338	P	P	19 29 52.7	-0.6
SCHQ				IAmb	IAmb	19 29 52.8	
	comp=Z,20nm,1.4s						
WRA	Warramunga Arr	81.63	123	P	P	19 29 52.7	-3.8
	comp=Z,1.5nm,0.7s,baz=345,slow=9.3,SNR=19						
WRAB	Tennant Creek	81.63	123	⇓*e*P	P	19 29 57.3	+0.8
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WR0	Warramunga Arr	81.77	123	P	P	19 29 57.9	+0.6
WR0				IAmb	IAmb	19 30 03.6	
	comp=Z,7.2nm,0.9s						
ASAR	Alice Springs	84.01	126	P	P	19 30 06.9	-1.9
	comp=Z,1.1nm,0.8s,baz=310,slow=4.8,SNR=19						
ASAR	Alice Springs	84.01	126	P	P	19 30 09.7	+0.9
ASAR	Alice Springs	84.01	126	P	P	19 30 09.7	+0.9
ULM	Lac du Bonnet	91.35	353	LR	LR	20 15 31.7	
	comp=Z,112nm,18.3s,baz=16,slow=38						
B05A	Bryant	92.86	10	P	P	19 30 49.9	-0.9
	baz=348						
EYMN	Ely	93.09	350	P	P	19 30 51.0	-1.0
	baz=12						
HRV	Adam Dziewonsk	93.39	335	P	P	19 30 52.4	-1.1
	baz=27						
E04D	Cinebar	94.46	11	P	P	19 30 57.2	-1.1
	baz=348						
G05D	Wamic, OR	95.92	10	P	P	19 31 04.8	-0.3
	baz=349						
M54A	Oil Creek Stat	96.79	340	P	P	19 31 08.5	-0.6
	baz=21						
N54A	Moraine State	97.39	340	P	P	19 31 11.1	-0.7
	baz=21						
PDAR	Pinedale Array	99.35	2	LR	LR	20 21 09.1	
	comp=Z,83nm,18.7s,baz=359,slow=38						
N02D	Trinity Center	99.89	12	P	Pdif	19 31 21.9	-1.2
	baz=348						
S22A	4UR Ranch, Cre	104.40	360	P	Pdif	19 31 42.5	-1.0
	baz=0.2						
MVCO	Mesa Verde	104.92	1	P	Pdif	19 31 44.1	-1.7
	baz=359						
MPMC	Manual Prospec	105.46	9	P	Pdif	19 31 47.1	-1.0
	baz=352						
GMRC	Granite Mounta	106.92	7	P	PKiKP	19 36 05.0	+0.7
	baz=353						
BELC	Belle Mtn. Jos	107.66	8	P	PKiKP	19 36 06.1	+0.4
	baz=353						
IKP	In-Ko-Pah, Jac	108.98	8	P	PKiKP	19 36 08.8	+0.7
	baz=353						
SYO	Syowa Base	109.74	192	⇑*e*Pdiff	Pdif	19 32 07.8	+2.1
MNTX	Cornudas Mount	110.42	358	P	PKiKP	19 36 11.2	+0.4
	baz=1.5						
SNAA	Sanae	121.55	201	PKPdf	PKPdf	19 36 29.9	-0.9
VNA2	Neumayer--Watz	122.58	203	PKPdf	PKPdf	19 36 32.2	-0.5
VNA1	Neumayer--Stat	122.74	203	PKPdf	PKiKP	19 36 32.7	-0.4
VNA3	Neumayer Olymp	123.38	203	PKPdf	PKPdf	19 36 33.4	-0.8
CPUP	Villa Florida	136.77	271	PKP	PKPdf	19 36 59.9	-1.0
	comp=Z,2.4nm,0.7s,baz=76,slow=4.2,SNR=2.5						
TRQA	Tornquist	144.80	256	PKIKP	PKPab	19 37 13.2	-0.9
TRQA	Tornquist	144.80	256		PKPab	19 37 13.2	-0.9
GO04	Tololo Observa	149.09	274		PKPdf	19 37 21.8	-1.0
BO02	Sierra Bellavi	150.75	265		PKPbc	19 37 29.8	-0.8
PLCA	Paso Flores	151.83	253	PKPbc	PKPbc	19 37 30.3	-2.7
	comp=Z,5.5nm,1.0s,baz=27,slow=2.3,SNR=5.2						
PLCA	Paso Flores	151.83	253	PKIKP	PKPbc	19 37 32.2	-0.7
PLCA	Paso Flores	151.83	253		PKPbc	19 37 32.2	-0.7

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*IDC **09** 19:26:04.3±1.5, 4°.10S×129°.46E, h0^{km}, mb3.8/3, mb1 4.1/6, mb1mx3.5/44, mbtmp3.9/6, ML3.8/3, Error ellipse: s-maj=46.1km s-min=25.3km az=82.0*

*DJA **09** 19:26:06.5±0.7, 4°S±7°×13°0E±°, h10^{km}, M3.8/6, MLv3.8/6*

ISC 09 19:26:08.8±0.8**, 4°.07S**±0°.06×**129°.61E**±0°.06**, h36^{km}, n20,** σ**1^{s}29**/22**, mb3.9**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.54	147	P	Pn	19 26 16.8	-3.4
MSAI	Masohi	0.98	317	P	Pn	19 26 25.0	-1.1
MSAI				S	Sn	19 26 37.8	-1.0
AAI	Ambon	1.46	285	P	Pn	19 26 30.9	-1.7
FAKI	Fak Fak	2.88	67	P	Pn	19 26 53.3	+1.2
FAKI	Fak Fak	2.88	67	P	Pn	19 26 52.7	+0.6
SIJI	Sorong	3.58	28	Pn	Pn	19 27 01.9	0.0
	5.3nm,0.3s,baz=226,slow=22,SNR=36						
SIJI				Sn	Sn	19 27 41.4	-1.6
	4.8nm,0.3s,baz=245,slow=22,SNR=3.7						
SWI	Sorong	3.59	28	P	Pn	19 27 02.4	+0.5
SANI	Sanana	4.13	299	P	Pn	19 27 10.2	+0.8
BATI	Baumata	8.48	224	Pn	Pn	19 28 10.1	+0.8
	0.8nm,0.3s,baz=121,slow=23,SNR=2.0						
MTN	Manton Dam	8.85	170	P	Pn	19 28 14.3	0.0
KDU	Kakadu	9.02	162	P	Pn	19 28 16.0	-0.6
KNRA	Kununurra	11.57	184	P	Pn	19 28 51.0	-0.5
FITZ	Fitzroy Crossi	14.48	195	Pn	Pn	19 29 30.5	-0.7
	0.2nm,0.3s,baz=11,slow=12,SNR=2.6						
COEN	Coen	16.61	127	P	Pn	19 29 59.4	+0.4
QIS	Mount Isa	19.07	150	P	P	19 30 28.4	+0.1
PSA00	Pilbara Seismi	19.82	208	P	P	19 30 36.9	+0.5
ASAR	Alice Springs	19.92	168	P	P	19 30 37.4	-0.3
	0.9nm,0.3s,baz=348,slow=10,SNR=15						
CMAR	Chiang Mai Arr	37.60	307	P	P	19 33 19.2	-1.1
	0.4nm,0.3s,baz=136,slow=5.8,SNR=5.6						
MKAR	Makanchi Array	65.58	326	P	P	19 36 49.5	+0.5
	0.5nm,0.4s,baz=114,slow=8.0,SNR=15						
ZALV	Zalesovo Beam	68.80	333	P	P	19 37 11.7	+2.5
	0.6nm,0.3s,baz=134,slow=8.3,SNR=1.7						

IDC 09 19:30:38.5±1.6**, 4°.07S**×**129°.32E, h0^{km}, mb3.4**/1**, mb1 3.4**/4**, mb1mx2.8**/45**, mbtmp3.2**/4**, ML3.1**/3**, Error ellipse: s-maj=57.1km s-min=27.5km az=82.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.72	31	Pn	Pn	19 31 37.3	0.0
	1.4nm,0.3s,baz=217,slow=20,SNR=11						
WRA	Warramunga Arr	16.52	163	Pn	Pn	19 34 32.6	+0.9
	0.1nm,0.3s,baz=343,slow=24,SNR=1.1						
ASAR	Alice Springs	19.98	168	P	P	19 35 12.2	-0.4
	0.1nm,0.3s,baz=345,slow=10.0,SNR=5.6						
MKAR	Makanchi Array	65.42	326	P	P	19 41 23.2	0.0
	0.2nm,0.4s,baz=112,slow=8.0,SNR=5.3						

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*IDC **09** 19:31:50.5±0.6, 4°.33S×129°.65E, h0^{km}, mb4.3/15, mb1 4.4/19, mb1mx4.1/43, mbtmp4.3/19, ML4.0/4, MS3.7/10, Ms1 3.7/10, ms1mx3.4/38, Error ellipse: s-maj=28.0km s-min=13.2km az=76.0*

*NEIC **09** 19:31:53.9±1.8, 4°.16S±0°.06×129°.66E±0°.06, h14^{km}±1^{km}, mb4.7/41, Error ellipse: s-maj=9.3km s-min=8.7km az=89.0*

*DJA **09** 19:31:54.7±0.2, 4°S±2°×13°0E±°, h10^{km}, M4.5/32, mb4.7/32, mB5.1/17, MLv4.7/16, Mw(mB)4.4/17, MwMwp5.1/1, Mwp5.3/1*

ISC 09 19:31:56.5±0.4**, 4°.23S**±0°.04×**129°.61E**±0°.05**, h36^{km}, n136,** σ**1^{s}86**/144**, mb4.6**/38**, MS3.8**/7**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.42	135	P	Pn	19 32 04.8	-1.0
MSAI	Masohi	1.11	322	P	Pn	19 32 11.7	-3.8
MSAI				S	Sn	19 32 25.9	-3.6
AAI	Ambon	1.51	291	P	Pn	19 32 18.0	-3.0
AAI				S	Sn	19 32 36.2	-3.3
FAKI	Fak Fak	2.94	64	P	Pn	19 32 40.1	-0.6
FAKI	Fak Fak	2.94	64		Pn	19 32 39.3	-1.4
FAKI	Fak Fak	2.94	64	P	Pn	19 32 40.7	0.0
SIJI	Sorong	3.72	26	Pn	Pn	19 32 50.3	-1.2
	27nm,0.3s,baz=209,slow=11,SNR=24						
SIJI				Sn	Sn	19 33 29.9	-4.2
	23nm,0.3s,baz=260,slow=19,SNR=6.3						
SIJI				LR	LR	19 34 40.8	
	comp=Z,2µm,20.9s,baz=257,slow=45						
SWI	Sorong	3.73	26	P	Pn	19 32 50.2	-1.3
SAUI	Saumlaki	4.09	156	P	Pn	19 32 59.5	+2.9
SAUI	Saumlaki	4.09	156	Pn	Pn	19 32 55.3	-1.3
SAUI	Saumlaki	4.09	156	P	Pn	19 33 01.4	+4.8
LBMI	Labuha	4.14	329	P	Pn	19 32 56.1	-1.1
SANI	Sanana	4.21	301	P	Pn	19 32 56.7	-1.5
SANI	Sanana	4.21	301	P	Pn	19 32 57.5	-0.7
TNTI	Ternate	5.45	336	P	Pn	19 33 14.3	-0.9
	0.3nm806nm60nm,1.2s						
TNTI	Ternate	5.45	336	Pn	Pn	19 33 13.4	-1.8
TNTI	Ternate	5.45	336	P	Pn	19 33 14.7	-0.5
SRPI	Serui, Papua	7.02	71	P	Pn	19 33 37.7	+0.8
	0.3nm36nm,0.4s						
KMSI	Cibinong	7.37	310	P	Pn	19 33 41.7	0.0
	0.7nm1µm112nm,0.7s						
SOEI	Soe	7.63	224	P	Pn	19 33 48.2	+2.8
	0.4nm2µm94nm,1.4s						
SOEI	Soe	7.63	224	Pn	Pn	19 33 45.6	+0.3
SOEI	Soe	7.63	224	P	Pn	19 33 49.1	+3.7
GTOI	Gorontalo	8.17	306	P	Pn	19 33 55.3	+2.6
	266nm33nm,0.9s						
DRS	Darwin Rock St	8.25	171	P	Pn	19 33 56.9	+3.1
BATI	Baumata	8.37	224	Pn	Pn	19 33 57.5	+2.1
	18nm,0.3s,baz=91,slow=4.0,SNR=34						
BATI				LR	LR	19 37 50.2	
	comp=Z,250nm,18.8s,baz=30,slow=43						
BATI	Baumata	8.37	224	P	Pn	19 33 58.4	+3.0
	41nm,0.5s						
MMRI	Maumere	8.53	239	P	Pn	19 33 58.6	+1.0
	1µm48nm,1.0s						
MMRI	Maumere	8.53	239	Pn	Pn	19 33 59.5	+1.9
APSI	Ampana	8.61	292	P	Pn	19 33 59.0	+0.4
	802nm90nm,1.1s						
MTN	Manton Dam	8.69	170	Pn	Pn	19 34 01.0	+1.2
KDU	Kakadu	8.87	162	P	Pn	19 34 03.7	+1.5
MRSI	Marisa	8.97	301	P	Pn	19 34 04.2	+0.5
EDFI	Ende, Flores	9.06	240	P	Pn	19 34 08.4	+3.5
	359nm28nm,1.3s						
BSSI	Bau Bau, Buton	9.28	258	P	Pn	19 34 10.2	+2.3
	433nm35nm,1.0s						
BNSI	Bone	9.48	269	P	Pn	19 34 12.6	+2.0
	28nm,0.9s						
BKSI	Bulukumba	9.52	263	P	Pn	19 34 13.6	+2.5
	524nm30nm,0.7s						
SPSI	Sidrap Palu	9.82	271	P	Pn	19 34 17.7	+2.5
	30nm,1.2s						
TTSI	Tana Toraja	9.84	277	P	Pn	19 34 17.2	+1.7
	2µm20nm,0.8s						
KAPI	Kappang	9.86	265	Pn	Pn	19 34 17.9	+2.2
	2.8nm,0.3s,baz=108,slow=11,SNR=3.0						
KAPI	Kappang	9.86	265		Pn	19 34 17.8	+2.0
TOLI2	Tolitoli	10.29	301	Pn	Pn	19 34 20.1	-1.7
TOLI2	Tolitoli	10.29	301	P	Pn	19 34 23.1	+1.4
GENI	Genyem	10.66	82	P	Pn	19 34 27.3	+0.4
	21nm,0.7s						
MPSI	Mapaga	10.71	295	P	Pn	19 34 28.4	+0.9
	17nm,1.1s						
KNRA	Kununurra	11.41	184	Pn	Pn	19 34 36.6	-0.4
FITZ	Fitzroy Crossi	14.32	195	Pn	Pn	19 35 13.2	-3.7
	0.1nm,0.3s,baz=15,slow=15,SNR=4.7						
FITZ				LR	LR	19 42 18.5	
	comp=Z,185nm,18.2s,baz=1.5,slow=44						
BBKI	Banjar Baru	14.75	272	P	Pn	19 35 25.0	+2.3
	24nm,1.2s						
SRBI	Singaraja	14.81	254	P	Pn	19 35 25.9	+2.4
	72nm,1.3s						
MTKI	Muara Teweh, K	15.05	282	P	Pn	19 35 24.8	-1.9
	547nm15nm,0.8s						
ABJI	Asem Bagus	15.69	256	P	P	19 35 37.9	-0.8
	72nm,1.5s						
KMMI	Kalianget	15.82	259	P	P	19 35 40.2	+0.1
	54nm,1.4s						
JAGI	Jajag, Banyuwa	15.93	254	P	P	19 35 40.2	-1.1
	48nm,1.9s						
JAGI	Jajag, Banyuwa	15.93	254	P	P	19 35 40.0	-1.3
JAGI				IAmb	IAmb	19 35 50.7	
	comp=Z,83nm,1.3s						
WB0	Warramunga Arr	16.14	164	Pn	Pn	19 35 37.2	-3.5
WRAB	Tennant Creek	16.28	164	Pn	Pn	19 35 39.0	-3.6
WRA	Warramunga Arr	16.29	164	Pn	Pn	19 35 37.4	-5.2
	comp=Z,0.7nm,0.3s,baz=340,slow=13,SNR=27						
WRA				Sn	Sn	19 38 38.6	-3.8
	comp=Z,0.2nm,0.3s,baz=326,slow=23,SNR=4.9						
WRA				LR	LR	19 42 37.4	
	comp=Z,411nm,19.8s,baz=345,slow=40						
WRA	Warramunga Arr	16.29	164	Pn	Pn	19 35 38.9	-3.8
WB2	Warramunga Arr	16.29	164	Pn	Pn	19 35 39.2	-3.5
WB2				IAmb	IAmb	19 35 53.9	
	comp=Z,68nm,1.3s						
BLJI	Banyuglugur	16.30	257	P	P	19 35 45.1	-0.4
	comp=Z,28nm,1.1s						
WR0	Warramunga Arr	16.36	163		Pn	19 35 40.1	-3.5
COEN	Coen	16.51	127		P	19 35 47.1	-0.7
GMJI	Gumukmas	16.56	255	P	P	19 35 52.9	+4.5
SBUM	Sibu	18.60	291	P	Pn	19 36 12.8	+1.4
STKI	Sintang	18.61	283	P	Pn	19 36 13.4	+1.9
	comp=Z,5.1nm,0.5s						
PCJI	Pacitan	18.74	257	P	Pn	19 36 14.9	+1.8
	comp=Z,61nm,1.4s						
WOJI	Wonogiri, Jawa	18.92	258	P	Pn	19 36 17.1	+1.8
	comp=Z,39nm,1.2s						
PSA00	Pilbara Seismi	19.68	208		P	19 36 23.4	+0.8
PSA00	Pilbara Seismi	19.68	208	P	P	19 36 22.6	0.0
PSA00				IAmb	IAmb	19 36 25.9	
	comp=Z,121nm,1.1s						
AS31	Alice Springs	19.77	168		P	19 36 23.7	+0.1
ASAR	Alice Springs	19.77	168	P	P	19 36 21.7	-2.0
	comp=Z,1.5nm,0.3s,baz=347,slow=9.9,SNR=60						
ASAR				S	Sn	19 40 07.8	+1.2
	baz=340,slow=17,SNR=4.1						
ASAR				PcP	PcP	19 40 40.9	-0.4
	comp=Z,0.2nm,0.3s,baz=9.0,slow=1.2,SNR=5.5						
ASAR				ScP	ScP	19 44 16.5	+1.6
	baz=329,slow=1.6,SNR=1.9						
ASAR				LR	LR	19 44 50.7	
	comp=Z,281nm,19.0s,baz=348,slow=40						
ASAR	Alice Springs	19.77	168		P	19 36 23.3	-0.4
CTA	Charters Tower	22.62	136	P	P	19 36 51.8	-2.6
	comp=Z,4.0nm,0.4s,baz=314,slow=13,SNR=11						
CTAO	Charters Tower	22.62	136	P	P	19 36 54.4	-0.1
CTAO				IAmb	IAmb	19 37 04.8	
	comp=Z,15nm,0.8s						
MYKOM	Kota Tinggi	26.43	283	P	P	19 37 28.4	-1.7
MYKOM				IAmb	IAmb	19 37 43.3	
	comp=Z,22nm,1.4s						
FORT	Forrest	26.45	183	P	P	19 37 29.8	-0.5
STKA	Stephens Creek	29.72	159	P	P	19 37 59.3	-0.1
	comp=Z,1.4nm,0.5s,baz=327,slow=12,SNR=6.0						
STKA				LR	LR	19 51 11.2	
	comp=Z,316nm,20.9s,baz=18,slow=39						
IPM	Ipoh	29.84	287	P	P	19 38 00.1	-0.6
NJ2	Nanjing	37.50	345	*e*P	P	19 39 09.7	+2.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CM31	Chiang Mai Arr	37.70	308	P	P	19 39 08.3	-0.6
CMAR	Chiang Mai Arr	37.70	308	P	P	19 39 08.6	-0.3
	comp=Z,1.4nm,0.8s,baz=139,slow=7.8,SNR=18						
CMAR				PcP	PcP	19 41 26.6	+0.8
	comp=Z,0.3nm,0.3s,baz=121,slow=1.6,SNR=2.2						
CMAR				ScP	ScP	19 45 12.4	+1.8
	comp=Z,0.4nm,0.3s,baz=140,slow=1.5,SNR=5.4						
CMAR				LR	LR	19 58 21.5	
	comp=Z,26nm,18.1s,baz=140,slow=42						
CMAR	Chiang Mai Arr	37.70	308	P	P	19 39 09.0	+0.1
CHTO	Chiang Mai	37.90	308	P	P	19 39 10.8	+0.2
CHTO				IAmb	IAmb	19 39 24.6	
	comp=Z,9.5nm,0.9s						
KMI	Kunming	39.15	320	⇑P	P	19 39 23.4	+2.2
KMI				pP	pP	19 39 31.2	+0.8
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
JWT	Wachi	39.67	7	P	P	19 39 26.5	+1.3
JWT				IAmb	IAmb	19 39 39.0	
	comp=Z,31nm,1.4s						
MJAR	Matsushiro Arr	41.34	11	P	P	19 39 37.9	-1.1
	comp=Z,4.8nm,0.7s,baz=169,slow=10,SNR=12						
MJAR	Matsushiro Arr	41.34	11	P	P	19 39 37.1	-1.9
MJAR				IAmb	IAmb	19 39 51.0	
	comp=Z,12nm,1.0s						

MAJO	**Matsushiro**	**41.35**	**11**	P	**P**	**19 39 36.7**	**-2.3**
MAJO				IAmb	IAmb	19 39 41.0	
	comp=Z,9.5nm,0.8s						
MAT	**Matsushiro**	**41.35**	**11**	P	**P**	**19 39 38.2**	**-0.8**
JYT	**Yasato**	**41.45**	**13**	P	**P**	**19 39 39.4**	**-0.4**
JYT				IAmb	IAmb	19 39 42.6	
	comp=Z,14nm,0.7s						
KSAR	**Wonju Array Be**	**41.48**	**358**	P	**P**	**19 39 38.9**	**-1.2**
KSRS	**Korea Array**	**41.50**	**358**	P	**P**	**19 39 40.3**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=173,slow=9.6,SNR=13						
KSRS				LR	LR	19 55 35.3	
	comp=Z,126nm,19.6s,baz=195,slow=34						
KS19	**Wonju Array Si**	**41.55**	**358**	P	**P**	**19 39 39.7**	**-0.9**
KS19				IAmb	IAmb	19 40 01.3	
	comp=Z,25nm,1.4s						
JSD	**Sado**	**42.81**	**10**	P	**P**	**19 39 49.5**	**-1.4**
JSD				IAmb	IAmb	19 40 00.4	
	comp=Z,11nm,0.7s						
JMM	**Marumori**	**43.15**	**13**	P	**P**	**19 39 54.7**	**+1.0**
BJT	**Baijiatuau**	**45.73**	**346**	P	**P**	**19 40 13.2**	**-1.0**
BJT				IAmb	IAmb	19 40 27.0	
	comp=Z,5.8nm,0.9s						
BJI	**Beijing**	**45.75**	**346**	P	**P**	**19 40 17.2**	**+2.8**
BJI				pP	**pP**	**19 40 23.9**	**+0.1**
BJI				sP	**sP**	**19 40 26.3**	**-1.4**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.7s						
LZH	**Lanzhou**	**46.80**	**331**	*e*P	**P**	**19 40 23.6**	**+0.7**
LZH				sP	sP	19 40 36.3	0.0
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				LR	LR		
	comp=N,230nm,14.1s						
LZH				LR	LR		
	comp=E,240nm,14.0s						
LZH				LR	LR		
	comp=Z,190nm,15.7s						
HHC	**Hu-ho-hao-te**	**47.80**	**342**	*e*P	**P**	**19 40 33.9**	**+3.3**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,7.4s						
CN2	**Changchun**	**47.95**	**356**	*e*P	**P**	**19 40 34.9**	**+3.3**
CN2				*e*sP	pwP	19 41 06.4	+20
CN2				ScP	**ScP**	**19 45 53.4**	**+2.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
USRK	**Ussuriysk Ar.**	**48.25**	**2**	P	**P**	**19 40 33.4**	**-0.4**
	comp=Z,3.5nm,0.5s,baz=192,slow=7.4,SNR=8.4						
USRK				LR	LR	20 01 57.2	
	comp=Z,70nm,18.8s,baz=148,slow=37						
LSA	**Lhasa**	**49.95**	**315**	P	**P**	**19 40 47.4**	**-0.4**
LSA				IAmb	IAmb	19 41 11.1	
	comp=Z,7.0nm,1.0s						
GTA	**Gaotai**	**51.38**	**330**	*e*P	**P**	**19 40 57.7**	**-0.2**
GTA				pP	pP	19 41 05.2	-2.1
GTA				sP	sP	19 41 11.2	-0.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,160nm,5.5s						
GTA				LR	LR		
	comp=N,140nm,14.5s						
GTA				LR	LR		
	comp=E,200nm,16.4s						
GTA				LR	LR		
	comp=Z,140nm,15.3s						
KLR	**Kul'dur**	**53.27**	**2**	P	**P**	**19 41 13.8**	**+2.2**
	comp=Z,1.1nm,0.8s,baz=191,slow=5.2,SNR=2.6						
HYB	**Hyderabad**	**54.78**	**295**	*i* P	**P**	**19 41 22.0**	**-1.3**
ULN	**Ulaanbaatar**	**55.52**	**342**	P	**P**	**19 41 28.2**	**-0.1**
ULN				IAmb	IAmb	19 41 37.0	
	comp=Z,12nm,1.3s						
SONM	**Songino Array**	**55.70**	**341**	P	**P**	**19 41 30.3**	**+0.8**
	comp=Z,2.0nm,0.9s,baz=155,slow=4.8,SNR=7.8						
SONM	**Songino Array**	**55.70**	**341**	P	**P**	**19 41 30.0**	**+0.5**
SONM				IAmb	IAmb	19 41 42.1	
	comp=Z,6.8nm,1.2s						
NIUE	**Niue**	**60.74**	**109**	P	**P**	**19 42 05.0**	**-0.1**
WMQ	**Urumqi**	**60.88**	**326**	*e*P	**P**	**19 42 06.8**	**+1.1**
WMQ				pP	pP	19 42 13.6	-2.2
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,92nm,5.3s						
MK31	**Makanchi Array**	**65.71**	**326**	P	**P**	**19 42 37.3**	**-0.3**
MK31				IAmb	IAmb	19 42 46.2	
	comp=Z,7.3nm,0.8s						
MKAR	**Makanchi Array**	**65.71**	**326**	P	**P**	**19 42 37.3**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=115,slow=7.6,SNR=30						
MKAR	**Makanchi Array**	**65.71**	**326**	P	**P**	**19 42 36.7**	**-0.8**
MAKZ	**Makanchi**	**65.89**	**326**	P	**P**	**19 42 38.0**	**-0.7**
YAK	**Yakutsk**	**66.07**	**0**	P	**P**	**19 42 40.4**	**+0.9**
	comp=Z,4.4nm,0.3s,baz=96,slow=0.3,SNR=6.2						
YAK	**Yakutsk**	**66.07**	**0**	P	**P**	**19 42 40.4**	**+0.9**
ZAA0	**Zalesovo Array**	**68.94**	**333**	P	**P**	**19 42 58.1**	**+0.3**
ZAA0				IAmb	IAmb	19 43 05.9	
	comp=Z,9.7nm,1.0s						
ZALV	**Zalesovo Beam**	**68.94**	**333**	P	**P**	**19 42 57.7**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=106,slow=5.3,SNR=6.4						
ZALV	**Zalesovo Beam**	**68.94**	**333**	P	**P**	**19 42 57.5**	**-0.3**
SEY	**Seymchan**	**69.17**	**11**	P	**P**	**19 42 59.5**	**+0.5**
	comp=Z,4.8nm,0.7s,baz=215,slow=3.9,SNR=7.4						
KURK	**Kurchatov**	**69.97**	**328**	P	**P**	**19 43 03.9**	**-0.3**
BRVK	**Borovoye**	**75.60**	**328**	P	**P**	**19 43 37.5**	**-0.1**
BRVK				IAmb	IAmb	19 43 46.4	
	comp=Z,12nm,0.9s						
TIXI	**Tiksi**	**75.73**	**360**	P	**P**	**19 43 38.7**	**+0.7**
	comp=Z,1.8nm,0.3s,baz=184,slow=0.7,SNR=6.4						
TIXI	**Tiksi**	**75.73**	**360**	P	**P**	**19 43 38.4**	**+0.4**
TIXI				IAmb	IAmb	19 43 45.1	
	comp=Z,4.1nm,0.5s						
MAW	**Mawson**	**77.38**	**201**	LR	LR	20 15 09.1	
	comp=Z,43nm,19.7s,baz=58,slow=34						
NRIK	**Noril'sk**	**78.79**	**346**	P	**P**	**19 43 54.4**	**-0.8**
NRIK				IAmb	IAmb	19 44 04.7	
	comp=Z,10nm,1.1s						
ABKAR	**Akbulak array**	**80.11**	**321**	P	**P**	**19 44 01.6**	**-1.2**
ABKAR				IAmb	IAmb	19 44 10.8	
	comp=Z,12nm,1.4s						
RAYN	**Ar Rayn**	**86.28**	**294**	P	**P**	**19 44 33.9**	**-1.4**
ILAR	**Eielson Array**	**91.02**	**25**	P	**P**	**19 44 56.6**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=290,slow=5.4,SNR=2.4						
INK	**Inuvik**	**96.45**	**22**	P	**P**	**19 45 19.9**	**-1.7**
	comp=Z,1.2nm,0.9s,baz=242,slow=5.7,SNR=2.9						
SNAA	**Sanae**	**98.25**	**194**	P	Pdif	19 45 30.6	+0.7
AKASG	**Malin Array Be**	**99.83**	**321**	P	**Pdif**	**19 45 37.2**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=79,slow=5.0,SNR=1.9						
AKASG	**Malin Array Be**	**99.83**	**321**	IAmb	IAmb	19 45 41.8	
	comp=Z,2.4nm,1.5s						
TXAR	**Lajitas Array**	**123.81**	**57**	PKP	**PKPdf**	**19 50 50.9**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=270,slow=0.9,SNR=2.6						
TORD	**Torodi Ar. Bea**	**127.84**	**283**	PKP	**PKPdf**	**19 50 59.6**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=57,slow=1.6,SNR=4.1						
CPUP	**Villa Florida**	**148.89**	**168**	PKPbc	**PKPdf**	**19 51 38.2**	**+0.8**
	comp=Z,2.2nm,0.7s,baz=243,slow=4.5,SNR=2.2						
LPAZ	**La Paz**	**153.11**	**140**	PKPbc	**PKPbc**	**19 51 51.7**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=270,slow=1.6,SNR=4.4						

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*IDC **09** 19:34:05.1±0.8, 17°.15S×175°.25E, h0^{km}, mb4.1/10, mb1 4.4/10, mb1mx3.9/34, mbtmp4.1/10, ML4.7/1, MS3.7/10, Ms1 3.7/10, ms1mx3.6/29, Error ellipse: s-maj=27.2km s-min=20.3km az=178.0*

*NEIC **09** 19:34:08.4±1.4, 17°.2S±0°.2×175°.3E±0°.1, h16^{km}±5^{km}, mb4.2/3, Error ellipse: s-maj=24.3km s-min=15.0km az=203.0*

ISC 09 19:34:10.4±0.7**, 17°.2S**±0°.2×**175°.20E**±0°.09**, h35^{km}, n29, σ1^{s}.13**/15**, mb4.2**/11**, MS3.6**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.76**	**101**	Pn	**Pn**	**19 34 50.8**	**-1.4**
	5.3nm,0.3s,baz=190,slow=23,SNR=19						
MSVF				Sn	**Sn**	**19 35 26.7**	**+2.3**
	2.1nm,0.3s,baz=255,slow=19,SNR=4.7						
MSVF				LR	LR	19 35 50.5	
	comp=Z,864nm,21.6s,baz=252,slow=38						
MSVF	**Nonsavu**	**2.76**	**101**		**Pn**	**19 34 51.0**	**-1.3**
DZM	**Mont Dzumac**	**9.55**	**238**	*e*LR	LR	19 38 24.0	
	comp=Z,2µm,25.6s						
DZM	**Mont Dzumac**	**9.55**	**238**	LR	LR	19 39 42.0	
	comp=Z,1µm,19.9s,baz=64,slow=35						
AFI	**Afiamalu**	**12.97**	**77**	LR	LR	19 41 04.9	
	comp=Z,688nm,21.0s,baz=230,slow=32						
HNR	**Honiara**	**16.74**	**296**	LR	LR	19 43 11.7	
	comp=Z,175nm,20.5s,baz=154,slow=33						
URZ	**Urewera**	**21.01**	**176**	P	**P**	**19 38 50.6**	**-0.3**
	3.7nm,0.8s,baz=308,slow=20,SNR=1.4						
URZ				LR	LR	19 45 51.7	
	comp=Z,220nm,19.3s,baz=31,slow=34						
URZ	**Urewera**	**21.01**	**176**	IAmb	IAmb	19 39 16.6	
	comp=Z,44nm,1.4s						
PPT2	**Papeete2**	**33.58**	**96**	*e*LR	LR	19 49 41.1	
	comp=Z,136nm,22.5s						
PPT	**Papeete**	**33.58**	**96**	LR	LR	19 51 08.1	
	comp=Z,104nm,19.8s,baz=264,slow=30						
TBI	**Tubuai**	**33.63**	**106**	*e*LR	LR	19 49 50.9	
	comp=Z,155nm,28.2s						
H11S2	**WAKE ISLAND Hy**	**36.48**	**346**	T	T	20 19 18.8	
	baz=166,slow=76,SNR=5.9						
H11S3	**WAKE ISLAND Hy**	**36.48**	**346**	T	T	20 19 21.0	
	baz=166,slow=76,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	**36.49**	**346**	T	T	20 19 24.8	
	baz=166,slow=76,SNR=5.4						
WRA	**Warramunga Arr**	**38.76**	**259**	P	**P**	**19 41 32.3**	**+0.5**
	comp=Z,1.6nm,1.0s,baz=135,slow=10.0,SNR=2.7						
WRA				LR	LR	19 57 46.8	
	comp=Z,63nm,18.7s,baz=25,slow=37						
WRA	**Warramunga Arr**	**38.76**	**259**	IAmb	IAmb	19 41 37.8	
	comp=Z,0.2nm,0.9s						
ASAR	**Alice Springs**	**39.12**	**254**	P	**P**	**19 41 34.8**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=84,slow=9.1,SNR=6.6						
TAOE	**Nuku Hiva Isla**	**44.20**	**85**	*e*LR	LR	19 54 29.5	
	comp=Z,254nm,28.2s						
FITZ	**Fitzroy Crossi**	**47.12**	**261**	LR	LR	20 00 29.5	
	comp=Z,140nm,21.7s,baz=116,slow=34						
PETK	**Petropavlovsk-**	**71.67**	**349**	P	**P**	**19 45 28.3**	**0.0**
	comp=Z,7.1nm,0.9s,baz=152,slow=6.7,SNR=5.9						
SEY	**Seymchan**	**81.89**	**350**	P	**P**	**19 46 26.0**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=158,slow=8.3,SNR=5.1						
CMAR	**Chiang Mai Arr**	**82.95**	**292**	P	**P**	**19 46 33.8**	**+1.5**
	comp=Z,0.8nm,0.4s,baz=120,slow=3.3,SNR=6.3						
CMAR				LR	LR	20 20 10.0	
	comp=Z,29nm,21.9s,baz=145,slow=33						
IL31		**86.73**	**15**	P	**P**	**19 46 51.3**	**+1.1**
IL31				IAmb	IAmb	19 47 19.7	
	comp=Z,3.9nm,1.2s						
ILAR	**Eielson Array**	**86.73**	**15**	P	**P**	**19 46 49.2**	**-1.1**
	comp=Z,3.2nm,0.8s,baz=231,slow=5.6,SNR=18						
SONM	**Songino Array**	**89.14**	**321**	P	**P**	**19 47 01.7**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=116,slow=6.6,SNR=3.6						
TXAR	**Lajitas Array**	**90.85**	**60**	P	**P**	**19 47 10.4**	**-0.4**
	comp=Z,0.8nm,1.0s,baz=225,slow=3.7,SNR=4.1						
PDAR	**Pinedale Array**	**91.14**	**45**	P	**P**	**19 47 12.2**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=270,slow=1.8,SNR=2.1						
PLCA	**Paso Flores**	**96.13**	**136**	LR	LR	20 21 49.4	
	comp=Z,49nm,19.8s,baz=180,slow=30						
GERES	**GERESS Array B**	**145.06**	**339**	PKPbc	**PKPbc**	**19 53 42.7**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=45,slow=2.1,SNR=8.2						

IDC 09 19:38:34.6±2.3**, 4°.41S**×**129°.59E, h0^{km}, mb3.6**/1**, mb1 3.8**/4**, mb1mx3.5**/29**, mbtmp3.6**/4**, ML3.0**/3**, Error ellipse: s-maj=109.1km s-min=29.8km az=74.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.14**	**196**	Pn	Pn	19 41 56.5	+0.1
	0.0nm,0.3s,baz=17,slow=11,SNR=2.0						
WRA	**Warramunga Arr**	**16.12**	**164**	Pn	Pn	19 42 22.9	+0.1
	0.1nm,0.3s,baz=347,slow=13,SNR=2.2						
ASAR	**Alice Springs**	**19.60**	**168**	P	P	19 43 04.5	-0.1
	0.1nm,0.3s,baz=342,slow=9.9,SNR=2.0						
MKAR	**Makanchi Array**	**65.85**	**326**	P	P	19 49 22.1	0.0
	0.4nm,0.6s,baz=122,slow=8.3,SNR=4.0						

NNC 09 19:40:15.1±8.9**, 37°.50N**×**72°.73E, h0^{km}, mb4.1, mpv3.6, 5C-3D, Error ellipse: s-maj=75.0km s-min=48.1km az=148.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.30**	**14**	⇑Pn	Pn	19 41 33.6	-2.0
	6.4nm,0.8s						
AAK				⇑Sn	Sn	19 42 39.5	+2.0
	9.3nm,0.8s						
TKM2	**Tokmak 2**	**5.84**	**21**	⇓Pg	Pb	19 41 59.7	+1.8
	7.1nm,1.1s						
TKM2				⇑Sn	Sn	19 42 53.9	+3.1
	7.0nm,0.8s						
KK08	**Karatay Array**	**5.85**	**344**	⇑Pn	Pn	19 41 44.5	+1.5
	2.9nm,0.6s,baz=152,slow=13						
KK08				⇓Sn	Sn	19 42 50.1	-0.8
	2.9nm,0.5s,baz=143,slow=22						
AB31	**Akbulak array**	**14.96**	**326**	⇑P	Pn	19 43 47.8	+0.2
	5.1nm,0.9s,baz=107,slow=5.4,SNR=18						
AKTO	**Aktyubinsk**	**16.67**	**326**	⇓P	P	19 44 11.3	-1.2
	7.0nm,1.1s						

IDC 09 19:44:19.0±1.6**, 4°.20S**×**128°.98E, h0^{km}, mb3.6**/1**, mb1 3.4**/4**, mb1mx3.1**/29**, mbtmp3.3**/4**, ML3.0**/3**, MS3.7**/2**, Ms1 3.7**/2**, ms1mx3.0**/31**, Error ellipse: s-maj=52.9km s-min=27.8km az=80.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.02**	**35**	Pn	Pn	19 45 22.1	+0.1
	2.5nm,0.3s,baz=210,slow=20,SNR=8.5						
WRA	**Warramunga Arr**	**16.49**	**162**	Pn	Pn	19 48 12.8	+0.8
	0.0nm,0.3s,baz=345,slow=12,SNR=1.4						
ASAR	**Alice Springs**	**19.93**	**167**	P	P	19 48 52.2	-0.3
	0.1nm,0.3s,baz=342,slow=10.0,SNR=4.2						
MJAR	**Matsushiro Arr**	**41.44**	**11**	LR	LR	20 07 36.7	
	comp=Z,38nm,20.7s,baz=335,slow=34						
MKAR	**Makanchi Array**	**65.35**	**327**	P	P	19 55 03.2	0.0
	0.2nm,0.4s,baz=120,slow=6.4,SNR=9.6						
ARCES	**ARCESS Array B**	**98.62**	**340**	LR	LR	20 46 59.1	
	comp=Z,69nm,18.4s,baz=225,slow=38						

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*IDC **09** 19:46:20.0±1.4, 4°.18S×129°.51E, h0^{km}, mb4.0/2, mb1 4.1/6, mb1mx3.6/29, mbtmp3.9/6, ML3.6/4, Error ellipse: s-maj=45.6km s-min=23.0km az=79.0*

ISC 09 19:46:24.2±1.0**, 4°.22S**±0°.09×**129°.8E**±0°.2**, h35^{km}, n7, σ0^{s}.92**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.63**	**24**	Pn	**Pn**	**19 47 18.7**	**+0.7**
	3.3nm,0.3s,baz=229,slow=19,SNR=12						
SIJI				Sn	**Sn**	**19 47 59.6**	**-0.1**
	3.1nm,0.3s,baz=241,slow=23,SNR=1.7						
BATI	**Baumata**	**8.51**	**225**	Pn	**Pn**	**19 48 26.1**	**+1.1**
	4.0nm,0.3s,baz=339,slow=2.2,SNR=8.0						
FITZ	**Fitzroy Crossi**	**14.38**	**196**	Pn	**Pn**	**19 49 44.7**	**-0.6**
	0.1nm,0.3s,baz=9.6,slow=15,SNR=2.3						
WRA	**Warramunga Arr**	**16.25**	**165**	Pn	**Pn**	**19 50 09.2**	**-0.7**
	0.2nm,0.3s,baz=345,slow=13,SNR=5.0						
ASAR	**Alice Springs**	**19.74**	**169**	P	**Pn**	**19 50 53.2**	**+0.4**
	0.7nm,0.3s,baz=349,slow=10,SNR=31						
CMAR	**Chiang Mai Arr**	**37.84**	**307**	P	**P**	**19 53 36.6**	**-1.2**
	0.6nm,0.4s,baz=137,slow=7.3,SNR=2.7						
MKAR	**Makanchi Array**	**65.81**	**326**	P	**P**	**19 57 06.0**	**0.0**
	0.5nm,0.4s,baz=118,slow=8.2,SNR=15						

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*IDC **09** 19:47:11.9±1.6, 3°.98S×129°.25E, h0^{km}, mb3.9/4, mb1 4.1/5, mb1mx3.6/27, mbtmp4.0/5, ML3.8/1, Error ellipse: s-maj=48.3km s-min=31.0km az=75.0*

ISC 09 19:47:12.0±1.4**, 3°.7S**±0°.1×**129°.9E**±0°.2**, h10^{km}, n5, σ0^{s}.26**/6**, mb4.3**/3**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.10**	**26**	Pn	**Pg**	**19 48 11.7**	**+0.2**
	6.9nm,0.3s,baz=242,slow=23,SNR=2.1						
SIJI				Sn	**Sg**	**19 48 51.4**	**-0.3**
	6.5nm,0.3s,baz=218,slow=23,SNR=1.9						
ASAR	**Alice Springs**	**20.24**	**169**	P	**P**	**19 51 47.5**	**-0.1**
	1.8nm,0.8s,baz=344,slow=10,SNR=4.6						
CMAR	**Chiang Mai Arr**	**37.62**	**307**	P	**P**	**19 54 27.3**	**-0.1**
	0.6nm,0.3s,baz=132,slow=7.0,SNR=4.7						
MKAR	**Makanchi Array**	**65.44**	**326**	P	**P**	**19 57 55.4**	**+0.2**
	1.0nm,0.5s,baz=122,slow=8.1,SNR=9.1						
ZALV	**Zalesovo Beam**	**68.60**	**333**	P	**P**	**19 58 14.9**	**-0.1**
	0.7nm,0.3s,baz=134,slow=6.2,SNR=2.0						

IDC 09 19:52:28.9±2.4**, 4°.29S**×**128°.87E, h0^{km}, mb3.6**/1**, mb1 3.8**/4**, mb1mx3.5**/32**, mbtmp3.6**/4**, ML3.3**/3**, Error ellipse: s-maj=130.5km s-min=28.5km az=73.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.09**	**193**	Pn	Pn	19 55 50.6	+0.8
	0.7nm,0.3s,baz=43,slow=5.0,SNR=18						
WRA	**Warramunga Arr**	**16.45**	**162**	Pn	Pn	19 56 21.6	+0.3
	0.0nm,0.3s,baz=336,slow=14,SNR=2.1						
ASAR	**Alice Springs**	**19.87**	**166**	P	P	19 57 01.4	-0.4
	0.1nm,0.3s,baz=347,slow=11,SNR=6.2						
MKAR	**Makanchi Array**	**65.36**	**327**	P	P	20 03 13.2	0.0
	0.3nm,0.4s,baz=114,slow=7.1,SNR=4.2						

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*IDC **09** 20:01:26.9±1.3, 4°.28S×129°.25E, h0^{km}, mb3.6/4, mb1 3.6/7, mb1mx3.4/48, mbtmp3.5/7, ML3.1/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/38, Error ellipse: s-maj=45.7km s-min=25.0km az=73.0*

*DJA **09** 20:01:30.4±0.7, 4°S±7°×13°0E±°, h10^{km}, M3.3/7, MLv3.3/7*

ISC 09 20:01:27.3±1.0**, 4°.20S**±0°.08×**129°.62E**±0°.07**, h10^{km}, n13, σ0^{s}.99**/14**, mb3.7**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.09**	**321**	P	**Pn**	**20 01 48.8**	**+0.1**
MSAI				S	**Sg**	**20 02 02.4**	**-0.2**
AAI	**Ambon**	**1.51**	**290**	P	**Pn**	**20 01 54.7**	**+0.2**
FAKI	**Fak Fak**	**2.91**	**64**	P	**Pb**	**20 02 18.1**	**-1.3**
SIJI	**Sorong**	**3.69**	**26**	Pn	**Pn**	**20 02 26.5**	**+2.0**
	3.9nm,0.3s,baz=205,slow=17,SNR=18						
SIJI				Sn	**Sn**	**20 03 07.3**	**-0.8**
	1.9nm,0.3s,baz=213,slow=23,SNR=2.1						
SWI	**Sorong**	**3.69**	**26**	P	**Pg**	**20 02 38.0**	**-0.1**
SANI	**Sanana**	**4.21**	**300**	P	**Pn**	**20 02 33.2**	**+1.6**
JAY	**Jayapura**	**11.19**	**82**	LR	LR	20 09 35.9	
	comp=Z,60nm,21.1s,baz=234,slow=42						
WRA	**Warramunga Arr**	**16.31**	**164**	Pn	**Pn**	**20 05 16.8**	**+0.2**
	0.0nm,0.3s,baz=336,slow=14,SNR=2.1						
ASAR	**Alice Springs**	**19.79**	**168**	P	**Pn**	**20 05 59.3**	**-0.2**
	0.1nm,0.3s,baz=345,slow=10,SNR=11						
CMAR	**Chiang Mai Arr**	**37.69**	**308**	P	**P**	**20 08 42.5**	**-0.8**
	0.3nm,0.6s,baz=134,slow=7.6,SNR=1.5						
MKAR	**Makanchi Array**	**65.69**	**326**	P	**P**	**20 12 12.8**	**+0.7**
	0.4nm,0.5s,baz=117,slow=8.0,SNR=8.6						
KURBB	**Kurchatov Arra**	**69.94**	**328**	P	**P**	**20 12 39.5**	**+0.7**
	0.7nm,0.4s,baz=110,slow=5.5,SNR=4.0						
BVAR	**Borovoye Array**	**75.51**	**328**	P	**P**	**20 13 12.2**	**+0.4**
	0.2nm,0.4s,baz=120,slow=4.9,SNR=2.0						

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*IDC **09** 20:03:59.4±0.8, 16°.72S×175°.15E, h0^{km}, mb3.9/8, mb1 4.2/9, mb1mx3.8/35, mbtmp3.9/9, ML5.0/1, MS3.6/5, Ms1 3.5/5, ms1mx3.2/35, Error ellipse: s-maj=28.2km s-min=19.6km az=175.0*

ISC 09 20:04:00.8±0.7**, 16°.8S**±0°.2×**175°.22E**±0°.08**, h10^{km}, n17, σ1^{s}.17**/13**, mb4.0**/9**, MS3.5**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.87**	**110**	Pn	**Pn**	**20 04 46.2**	**-0.5**
	9.2nm,0.3s,baz=266,slow=14,SNR=39						
MSVF				Sn	**Sb**	**20 05 26.9**	**-0.4**
	1.8nm,0.3s,baz=179,slow=18,SNR=4.1						
MSVF				LR	LR	20 06 01.6	
	comp=Z,411nm,21.5s,baz=207,slow=41						
DZM	**Mont Dzumac**	**9.80**	**236**	*e*LR	LR	20 08 49.9	
	comp=Z,775nm,25.8s						
AFI	**Afiamalu**	**12.87**	**79**	LR	LR	20 10 55.4	
	comp=Z,297nm,20.8s,baz=234,slow=32						
URZ	**Urewera**	**21.46**	**176**	P	**P**	**20 08 49.9**	**+0.5**
	5.5nm,0.7s,baz=306,slow=23,SNR=2.6						
PMG	**Port Moresby**	**28.27**	**281**	LR	LR	20 19 19.6	
	comp=Z,79nm,19.7s,baz=25,slow=33						
PPT2	**Papeete2**	**33.62**	**97**	*e*LR	LR	20 20 01.6	
	comp=Z,85nm,21.5s						
STKA	**Stephens Creek**	**33.95**	**238**	P	**P**	**20 10 46.3**	**+1.8**
	1.8nm,0.8s,baz=100,slow=15,SNR=3.6						
STKA				LR	LR	20 22 56.3	
	comp=Z,110nm,21.5s,baz=22,slow=34						
ASAR	**Alice Springs**	**39.26**	**253**	P	**P**	**20 11 29.6**	**-0.4**
	1.0nm,0.7s,baz=79,slow=9.1,SNR=11						
TAOE	**Nuku Hiva Isla**	**44.15**	**85**	*e*LR	LR	20 24 50.6	
	comp=Z,142nm,26.0s						
BATI	**Baumata**	**50.44**	**271**	P	**P**	**20 12 56.9**	**-2.4**
	8.2nm,0.3s,baz=113,slow=8.2,SNR=2.4						
CMAR	**Chiang Mai Arr**	**82.80**	**292**	P	**P**	**20 16 25.4**	**-0.4**
	0.6nm,0.7s,baz=132,slow=3.7,SNR=6.4						
NVAR	**Mina Array Bea**	**82.96**	**47**	P	**P**	**20 16 27.8**	**+1.2**
	0.1nm,0.3s,baz=242,slow=8.7,SNR=2.5						
ILAR	**Eielson Array**	**86.29**	**15**	P	**P**	**20 16 42.1**	**-0.4**
	1.2nm,0.8s,baz=242,slow=5.9,SNR=10						
SONM	**Songino Array**	**88.79**	**321**	P	**P**	**20 16 56.5**	**+1.4**
	0.2nm,0.3s,baz=120,slow=5.4,SNR=3.2						
TXAR	**Lajitas Array**	**90.61**	**60**	P	**P**	**20 17 04.3**	**+0.3**
	0.7nm,0.9s,baz=251,slow=3.8,SNR=5.9						
TXAR				LR	LR	20 49 05.8	
	comp=Z,62nm,21.0s,baz=0.0,slow=30						
GERES	**GERESS Array B**	**144.65**	**339**	PKP	**PKPdf**	**20 23 37.5**	**-0.5**
	0.8nm,0.8s,baz=40,slow=2.3,SNR=5.0						
TORD	**Torodi Ar. Bea**	**172.77**	**241**	PKP	**PKPdf**	**20 24 10.7**	**-0.6**
	0.8nm,1.0s,baz=135,slow=0.6,SNR=2.5						

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*IDC **09** 20:04:20.6±1.3, 4°.13S×129°.42E, h0^{km}, mb3.9/4, mb1 3.8/7, mb1mx3.5/42, mbtmp3.7/7, ML3.2/3, Error ellipse: s-maj=37.3km s-min=23.7km az=81.0*

ISC 09 20:04:25.3±1.0**, 4°.19S**±0°.10×**129°.5E**±0°.2**, h36^{km}, n7, σ1^{s}.20**/8**, mb3.9**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.73**	**28**	Pn	**Pn**	**20 05 19.6**	**-0.8**
	4.0nm,0.3s,baz=206,slow=24,SNR=9.6						
SIJI				Sn	**Sn**	**20 06 04.2**	**+0.9**
	2.2nm,0.3s,baz=221,slow=19,SNR=1.7						
WRA	**Warramunga Arr**	**16.35**	**164**	Pn	**Pn**	**20 08 10.8**	**-1.5**
	0.1nm,0.3s,baz=343,slow=13,SNR=5.3						
ASAR	**Alice Springs**	**19.82**	**168**	P	**P**	**20 08 54.9**	**+1.8**
	0.1nm,0.3s,baz=338,slow=11,SNR=7.9						
CMAR	**Chiang Mai Arr**	**37.61**	**308**	P	**P**	**20 11 36.7**	**-0.2**
	0.4nm,0.5s,baz=128,slow=7.0,SNR=5.3						
MKAR	**Makanchi Array**	**65.63**	**326**	P	**P**	**20 15 05.8**	**0.0**
	0.8nm,0.4s,baz=120,slow=8.4,SNR=27						
KURBB	**Kurchatov Arra**	**69.88**	**328**	P	**P**	**20 15 32.5**	**0.0**
	0.9nm,0.2s,baz=132,slow=5.8,SNR=5.4						
BVAR	**Borovoye Array**	**75.45**	**328**	P	**P**	**20 16 05.8**	**+0.3**
	0.3nm,0.4s,baz=120,slow=10,SNR=4.1						

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*IDC **09** 20:10:42.8±1.2, 4°.23S×129°.40E, h0^{km}, mb3.7/5, mb1 3.9/9, mb1mx3.6/42, mbtmp3.8/9, ML3.7/4, Error ellipse: s-maj=35.9km s-min=22.2km az=88.0*

ISC 09 20:10:47.4±0.8**, 4°.25S**±0°.09×**129°.5E**±0°.1**, h35^{km}, n10, σ1^{s}.74**/11**, mb3.6**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.79**	**28**	Pn	**Pn**	**20 11 43.8**	**+0.5**
	9.3nm,0.3s,baz=93,slow=4.4,SNR=40						
SIJI				Sn	**Sn**	**20 12 24.6**	**-2.2**
	4.6nm,0.3s,baz=247,slow=23,SNR=2.2						
BATI	**Baumata**	**8.28**	**224**	Pn	**Pn**	**20 12 43.1**	**-2.0**
	1.3nm,0.3s,baz=112,slow=13,SNR=1.9						
BATI				Sn	Sn	20 14 10.4	-7.0
	4.2nm,0.3s,baz=146,slow=15,SNR=2.5						
WRA	**Warramunga Arr**	**16.30**	**164**	Pn	**Pn**	**20 14 32.0**	**-1.7**
	0.2nm,0.3s,baz=350,slow=12,SNR=9.0						
ASAR	**Alice Springs**	**19.77**	**168**	P	**P**	**20 15 16.2**	**+1.5**
	0.5nm,0.3s,baz=349,slow=11,SNR=24						
WRKA	**Warakurna**	**20.70**	**183**	P	**P**	**20 15 27.5**	**+2.7**
CMAR	**Chiang Mai Arr**	**37.62**	**308**	P	**P**	**20 18 00.0**	**+0.8**
	0.3nm,0.5s,baz=118,slow=6.6,SNR=4.3						
PETK	**Petropavlovsk-**	**61.89**	**19**	P	**P**	**20 21 03.8**	**+0.6**
	1.6nm,0.7s,baz=218,slow=9.1,SNR=2.5						
MKAR	**Makanchi Array**	**65.66**	**326**	P	**P**	**20 21 28.4**	**+0.2**
	0.4nm,0.7s,baz=108,slow=8.5,SNR=6.4						
ZALV	**Zalesovo Beam**	**68.91**	**334**	P	**P**	**20 21 49.5**	**+1.0**
	0.4nm,0.3s,baz=171,slow=11,SNR=1.9						
KURBB	**Kurchatov Arra**	**69.92**	**328**	P	**P**	**20 21 54.1**	**-0.8**
	0.3nm,0.6s,baz=88,slow=4.7,SNR=2.9						

*IDC **09** 20:13:32.2±1.5, 3°.97S×129°.21E, h0^{km}, mb3.4/3, mb1 3.5/5, mb1mx3.3/43, mbtmp3.4/5, ML3.1/2, Error ellipse: s-maj=43.9km s-min=25.9km az=88.0*

ISC 09 20:13:33.0±1.3, **3°.8S**±0°.1×**129°.6E**±0°.2, **h10**^{km}, **n5**, σ**0^{s}.50**/6, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.36**	**29**	Pn	**Pb**	**20 14 32.1**	**-0.6**
	3.0nm,0.3s,baz=254,slow=23,SNR=3.9						
SIJI				Sn	**Sb**	**20 15 14.3**	**+0.6**
	1.8nm,0.3s,baz=238,slow=23,SNR=1.8						
WRA	**Warramunga Arr**	**16.67**	**164**	Pn	**Pn**	**20 17 27.0**	**+0.1**
	0.1nm,0.3s,baz=349,slow=13,SNR=2.8						
ASAR	**Alice Springs**	**20.16**	**169**	P	**P**	**20 18 07.7**	**0.0**
	0.7nm,0.7s,baz=346,slow=9.9,SNR=1.7						
MKAR	**Makanchi Array**	**65.39**	**326**	P	**P**	**20 24 15.9**	**+0.1**
	0.2nm,0.5s,baz=117,slow=8.1,SNR=4.6						
KURBB	**Kurchatov Arra**	**69.63**	**328**	P	**P**	**20 24 42.6**	**+0.1**
	0.5nm,0.7s,baz=127,slow=4.9,SNR=4.5						

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*IDC **09** 20:17:08.9±1.4, 4°.04S×129°.28E, h0^{km}, mb3.3/3, mb1 3.4/5, mb1mx3.3/46, mbtmp3.3/5, ML2.6/2, Error ellipse: s-maj=53.5km s-min=26.8km az=78.0*

ISC 09 20:17:09.5±1.2, **3°.86S**±0°.10×**129°.9E**±0°.2, **h10**^{km}, **n5**, σ**0^{s}.95**/6, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.28**	**25**	Pn	**Pb**	**20 18 08.0**	**+0.1**
	1.5nm,0.3s,baz=214,slow=14,SNR=4.7						
SIJI				Sn	**Sb**	**20 18 47.8**	**-0.1**
	1.0nm,0.3s,baz=217,slow=20,SNR=1.7						
WRA	**Warramunga Arr**	**16.57**	**165**	Pn	**Pn**	**20 21 01.0**	**-1.1**
	0.0nm,0.3s,baz=347,slow=13,SNR=1.5						
ASAR	**Alice Springs**	**20.07**	**169**	P	**P**	**20 21 44.4**	**+1.2**
	0.5nm,0.7s,baz=342,slow=9.6,SNR=4.1						
MKAR	**Makanchi Array**	**65.56**	**326**	P	**P**	**20 27 53.0**	**-0.4**
	0.3nm,0.5s,baz=117,slow=6.9,SNR=5.5						
KURBB	**Kurchatov Arra**	**69.79**	**328**	P	**P**	**20 28 20.2**	**+0.2**
	0.5nm,0.7s,baz=116,slow=5.5,SNR=4.7						

IDC 09 20:19:19.8±1.5, **4°.17S**×**129°.61E**, **h0**^{km}, **mb3.2**/2, **mb1 3.4**/5, **mb1mx3.2**/45, **mbtmp3.3**/5, **ML3.0**/3, **Error ellipse: s-maj=58.3km s-min=26.2km az=79.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.68**	**27**	Pn	Pn	20 20 18.8	+0.8
	1.8nm,0.3s,baz=316,slow=14,SNR=4.4						
WRA	**Warramunga Arr**	**16.34**	**164**	Pn	Pn	20 23 09.4	-1.4
	0.0nm,0.3s,baz=349,slow=12,SNR=1.6						
ASAR	**Alice Springs**	**19.82**	**168**	P	P	20 23 53.0	+0.7
	0.1nm,0.3s,baz=349,slow=10,SNR=8.9						
MKAR	**Makanchi Array**	**65.67**	**326**	P	P	20 30 07.2	+1.1
	0.2nm,0.6s,baz=115,slow=7.3,SNR=4.4						
KURBB	**Kurchatov Arra**	**69.92**	**328**	P	P	20 30 31.1	-1.6
	0.1nm,0.5s,baz=113,slow=7.2,SNR=1.5						

NNC 09 20:20:12.4±5.6, **38°.51N**×**71°.71E**, **h0**^{km}, **mb3.6, mpv3.2, 4C-3D, Error ellipse: s-maj=43.4km s-min=26.3km az=166.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.63**	**26**	Pg	Pb	20 21 36.1	+1.4
	1.9nm,0.5s						
AAK				⇓Sn	Sn	20 22 19.4	+1.0
	6.9nm,0.8s						
KK08	**Karatay Array**	**4.68**	**349**	⇑Pn	Pn	20 21 24.0	-0.4
	1.1nm,0.3s						
KK08				⇑Sn	Sn	20 22 21.0	+1.6
	1.9nm,0.5s						
TKM2	**Tokmak 2**	**5.30**	**33**	⇑Pg	Pg	20 21 51.8	-2.2
	2.1nm,0.7s						
TKM2				⇓Lg	Lg	20 22 57.5	
	3.7nm,0.7s						
AB31	**Akbulak array**	**13.67**	**326**	⇓P	Pn	20 23 22.8	-4.6
	0.3nm,0.5s,baz=135,slow=13,SNR=4.7						
AKTO	**Aktyubinsk**	**15.38**	**325**	⇑P	Pn	20 23 52.3	+1.6
	0.5nm,0.3s						

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*IDC **09** 20:20:12.4±1.2, 4°.14S×129°.51E, h0^{km}, mb3.7/5, mb1 3.8/9, mb1mx3.5/46, mbtmp3.7/9, ML3.4/4, Error ellipse: s-maj=38.1km s-min=21.0km az=85.0*

ISC 09 20:20:16.9±0.9, **4°.22S**±0°.08×**129°.6E**±0°.2, **h36**^{km}, **n9**, σ**0^{s}.63**/10, **mb3.7**/5, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.72**	**26**	Pn	**Pn**	**20 21 12.2**	**+0.3**
	4.9nm,0.3s,baz=211,slow=16,SNR=8.6						
SIJI				Sn	**Sn**	**20 21 54.1**	**-0.3**
	5.6nm,0.3s,baz=233,slow=20,SNR=4.4						
FITZ	**Fitzroy Crossi**	**14.33**	**195**	Pn	**Pn**	**20 23 37.5**	**+0.2**
	0.1nm,0.3s,baz=11,slow=16,SNR=1.5						
WRA	**Warramunga Arr**	**16.29**	**164**	Pn	**Pn**	**20 24 02.4**	**-0.7**
	0.1nm,0.3s,baz=349,slow=13,SNR=4.8						
ASAR	**Alice Springs**	**19.77**	**168**	P	**Pn**	**20 24 46.0**	**+0.2**
	0.3nm,0.3s,baz=347,slow=10,SNR=12						
CMAR	**Chiang Mai Arr**	**37.70**	**308**	P	**P**	**20 27 28.5**	**-0.7**
	0.4nm,0.6s,baz=133,slow=7.8,SNR=2.6						
SONM	**Songino Array**	**55.70**	**341**	P	**P**	**20 29 49.5**	**-0.4**
	0.2nm,0.5s,baz=136,slow=6.7,SNR=1.5						
MKAR	**Makanchi Array**	**65.71**	**326**	P	**P**	**20 30 58.0**	**+0.1**
	0.5nm,0.4s,baz=113,slow=8.0,SNR=17						
KURBB	**Kurchatov Arra**	**69.96**	**328**	P	**P**	**20 31 24.6**	**+0.1**
	1.1nm,0.7s,baz=134,slow=5.7,SNR=10.0						
BVAR	**Borovoye Array**	**75.52**	**328**	P	**P**	**20 31 58.7**	**+1.1**
	0.6nm,0.7s,baz=116,slow=9.8,SNR=3.6						

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*IDC **09** 20:21:07.0±0.4, 4°.22S×129°.50E, h0^{km}, mb4.8/28, mb1 4.7/33, mb1mx4.6/48, mbtmp4.7/33, ML4.4/3, MS3.2/3, Ms1 3.2/3, ms1mx2.9/28, Error ellipse: s-maj=18.4km s-min=9.3km az=73.0*

*NEIC **09** 20:21:11.7±1.9, 4°.17S±0°.06×129°.66E±0°.06, h27^{km}±4^{km}, mb4.8/65, Error ellipse: s-maj=9.3km s-min=8.7km az=66.0*

*DJA **09** 20:21:13.5±0.2, 4°S±2°×13°0E±°, h44^{km}±3^{km}, M4.5/49, mb4.8/49, mB5.1/17, MLv4.7/15, Mw(mB)4.4/17, MwMwp6.0/2, Mwp6.0/2*

ISC 09 20:21:12.3±0.3, **4°.20S**±0°.04×**129°.55E**±0°.04, **h36**^{km}, **n229**, σ**1^{s}.59**/231, **mb4.8**/69, **1C-2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.05**	**324**	P	**Pn**	**20 21 28.1**	**-2.4**
AAI	**Ambon**	**1.44**	**291**	P	**Pn**	**20 21 33.8**	**-2.1**
AAI				S	**Sn**	**20 21 50.8**	**-2.8**
FAKI	**Fak Fak**	**2.98**	**65**	P	**Pn**	**20 21 57.8**	**+0.7**
FAKI				S	**Sn**	**20 22 32.8**	**+1.2**
FAKI	**Fak Fak**	**2.98**	**65**	Pn	**Pn**	**20 21 55.5**	**-1.6**
FAKI	**Fak Fak**	**2.98**	**65**	P	**Pn**	**20 21 59.4**	**+2.3**
SIJI	**Sorong**	**3.73**	**27**	Pn	**Pn**	**20 22 07.7**	**+0.3**
	40nm,0.3s,baz=219,slow=10,SNR=15						
SIJI				Sn	**Sn**	**20 22 48.4**	**-1.7**
	45nm,0.3s,baz=233,slow=20,SNR=5.3						
SIJI				LR	LR	20 23 59.7	
	comp=Z,605nm,21.7s,baz=240,slow=46						
SWI	**Sorong**	**3.73**	**27**	P	**Pn**	**20 22 07.3**	**-0.1**
LBMI	**Labuha**	**4.09**	**330**	P	**Pn**	**20 22 12.5**	**+0.2**
SAUI	**Saumlaki**	**4.14**	**155**	P	**Pn**	**20 22 16.0**	**+2.9**
SAUI	**Saumlaki**	**4.14**	**155**	Pn	**Pn**	**20 22 11.7**	**-1.4**
SAUI	**Saumlaki**	**4.14**	**155**	P	**Pn**	**20 22 16.6**	**+3.5**
SANI	**Sanana**	**4.14**	**301**	P	**Pn**	**20 22 12.1**	**-1.0**
SANI	**Sanana**	**4.14**	**301**	P	**Pn**	**20 22 13.1**	**0.0**
TNTI	**Ternate**	**5.40**	**336**	P	**Pn**	**20 22 30.5**	**+0.2**
	0.2nm49nm,0.7s						
TNTI	**Ternate**	**5.40**	**336**	Pn	**Pn**	**20 22 30.6**	**+0.3**
SRPI	**Serui, Papua**	**7.07**	**71**	P	**Pn**	**20 22 53.7**	**+0.3**
KMSI	**Cibinong**	**7.31**	**310**	P	**Pn**	**20 22 57.4**	**+0.8**
	0.8nm2µm154nm,0.6s						
SOEI	**Soe**	**7.61**	**223**	P	**Pn**	**20 23 05.0**	**+4.2**
	0.3nm869nm56nm,0.7s						
SOEI	**Soe**	**7.61**	**223**		**Pn**	**20 23 01.3**	**+0.5**
DRS	**Darwin Rock St**	**8.29**	**171**	P	**Pn**	**20 23 13.3**	**+3.3**
BATI	**Baumata**	**8.35**	**224**	Pn	**Pn**	**20 23 14.2**	**+3.3**
	11nm,0.3s,baz=101,slow=2.3,SNR=17						
BATI	**Baumata**	**8.35**	**224**	P	**Pn**	**20 23 14.0**	**+3.1**
	551nm34nm,0.6s						
MMRI	**Maumere**	**8.49**	**238**	P	**Pn**	**20 23 14.5**	**+1.6**
	54nm,0.8s						
MMRI	**Maumere**	**8.49**	**238**	Pn	Pn	20 23 19.6	+6.7
APSI	**Ampana**	**8.54**	**292**	P	**Pn**	**20 23 15.4**	**+1.9**
	864nm93nm,0.7s						
MTN	**Manton Dam**	**8.73**	**170**	Pn	**Pn**	**20 23 16.1**	**-0.1**
MTN	**Manton Dam**	**8.73**	**170**	P	**Pn**	**20 23 17.3**	**+1.2**
MRSI	**Marisa**	**8.91**	**301**	P	**Pn**	**20 23 19.9**	**+1.4**
	515nm49nm,0.7s						
KDU	**Kakadu**	**8.91**	**161**	P	**Pn**	**20 23 19.0**	**+0.4**
EDFI	**Ende, Flores**	**9.02**	**240**	P	**Pn**	**20 23 23.7**	**+3.5**
	22nm,0.8s						
BSSI	**Bau Bau, Buton**	**9.22**	**258**	P	**Pn**	**20 23 24.7**	**+1.8**
	26nm,0.7s						
BNSI	**Bone**	**9.42**	**268**	P	**Pn**	**20 23 27.8**	**+2.3**
	27nm,1.1s						
BKSI	**Bulukumba**	**9.46**	**263**	P	**Pn**	**20 23 28.5**	**+2.4**
	330nm26nm,0.7s						
SPSI	**Sidrap Palu**	**9.76**	**271**	P	**Pn**	**20 23 33.5**	**+3.3**
	30nm,0.8s						
TTSI	**Tana Toraja**	**9.78**	**276**	P	**Pn**	**20 23 30.9**	**+0.5**
	917nm24nm,1.0s						
KAPI	**Kappang**	**9.80**	**265**	Pn	**Pn**	**20 23 33.8**	**+3.1**
	1.1nm,0.3s,baz=133,slow=8.9,SNR=3.8						
KAPI	**Kappang**	**9.80**	**265**	Pn	**Pn**	**20 23 31.8**	**+1.1**
TOLI2	**Tolitoli**	**10.22**	**301**	Pn	**Pn**	**20 23 37.6**	**+1.0**
TOLI2	**Tolitoli**	**10.22**	**301**	P	**Pn**	**20 23 38.5**	**+1.9**
MPSI	**Mapaga**	**10.64**	**295**	P	**Pn**	**20 23 44.8**	**+2.5**
	18nm,1.1s						
KNRA	**Kununurra**	**11.43**	**184**	Pn	**Pn**	**20 23 53.0**	**-0.1**
KNRA	**Kununurra**	**11.43**	**184**	P	**Pn**	**20 23 55.3**	**+2.2**
WBSI	**Waikabubak, Su**	**11.44**	**241**	P	Pn	20 24 02.0	+8.7
DAV	**Davao City (W)**	**11.87**	**341**	LR	LR	20 29 25.1	
	comp=Z,47nm,18.8s,baz=217,slow=42						
PLAI	**Plampang**	**12.56**	**248**	P	**Pn**	**20 24 12.2**	**+3.6**
	46nm,0.9s						
FITZ	**Fitzroy Crossi**	**14.33**	**195**	Pn	**Pn**	**20 24 31.7**	**-1.1**
	baz=0.0,slow=8.1						
MYLDM	**Lahad Datu**	**14.44**	**310**	Pn	**P**	**20 24 37.9**	**-2.7**
BBKI	**Banjar Baru**	**14.69**	**272**	P	**Pn**	**20 24 38.3**	**+0.6**
	1µm28nm,1.1s						
SRBI	**Singaraja**	**14.76**	**254**	P	**P**	**20 24 41.6**	**-2.6**
	98nm,0.9s						
MTKI	**Muara Teweh, K**	**14.99**	**282**	P	**Pn**	**20 24 43.9**	**+2.3**
	14nm,0.6s						
JAGI	**Jajag, Banyuwa**	**15.88**	**254**		**Pn**	**20 24 54.4**	**+1.2**
WB0	**Warramunga Arr**	**16.18**	**163**	Pn	**Pn**	**20 24 52.4**	**-4.6**
BLJI	**Banyuglugur**	**16.25**	**257**	P	**P**	**20 25 01.2**	**+0.5**
	44nm,0.7s						
WRAB	**Tennant Creek**	**16.32**	**164**	Pn	**Pn**	**20 24 56.2**	**-2.7**
WRA	**Warramunga Arr**	**16.33**	**164**	Pn	**Pn**	**20 24 56.1**	**-2.9**
	0.8nm,0.3s,baz=348,slow=13,SNR=27						
WRA				Sn	**Sn**	**20 27 49.6**	**-10**
	baz=275,slow=28,SNR=5.3						
WRA				PKiKP	**PKiKP**	**20 37 43.8**	**-1.5**
	0.1nm,0.3s,baz=319,slow=1.3,SNR=5.5						
WRA	**Warramunga Arr**	**16.33**	**164**		**Pn**	**20 24 55.0**	**-4.0**
WB2	**Warramunga Arr**	**16.33**	**164**	Pn	**Pn**	**20 24 54.7**	**-4.3**
WR0	**Warramunga Arr**	**16.40**	**163**	Pn	**Pn**	**20 24 56.2**	**-3.7**
GMJI	**Gumukmas**	**16.51**	**255**	P	**P**	**20 25 02.9**	**-0.7**
	35nm,1.1s						
COEN	**Coen**	**16.57**	**127**	Pn	**Pn**	**20 24 58.8**	**-3.3**
COEN				IAmb	IAmb	20 25 05.7	
	comp=Z,53nm,1.2s						
COEN	**Coen**	**16.57**	**127**	P	**Pn**	**20 25 01.7**	**-0.4**
KKM	**Kota Kinabalu**	**16.76**	**307**	Pn	**Pn**	**20 25 04.1**	**-0.4**
KKM				IAmb	IAmb	20 25 30.3	
	comp=Z,140nm,1.3s						
KKM	**Kota Kinabalu**	**16.76**	**307**	P	**P**	**20 25 06.5**	**+0.1**
PMG	**Port Moresby**	**18.23**	**107**	P	**P**	**20 25 21.6**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=337,slow=7.7,SNR=1.8						
SBUM	**Sibu**	**18.53**	**291**	P	**Pn**	**20 25 27.9**	**+1.5**
STKI	**Sintang**	**18.54**	**283**	P	**P**	**20 25 26.2**	**+0.1**
WOJI	**Wonogiri, Jawa**	**18.87**	**258**	P	**Pn**	**20 25 31.9**	**+1.5**
	comp=Z,32nm,1.1s						
QIS	**Mount Isa**	**18.98**	**150**	P	**Pn**	**20 25 31.9**	**+0.2**
MBWA	**Marble Bar**	**19.37**	**209**	P	**Pn**	**20 25 36.8**	**+0.4**
PSA00	**Pilbara Seismi**	**19.67**	**208**	P	**Pn**	**20 25 39.8**	**-0.1**
PSA00	**Pilbara Seismi**	**19.67**	**208**	P	**Pn**	**20 25 39.0**	**-1.0**
PSA00				IAmb	IAmb	20 25 41.2	
	comp=Z,29nm,0.8s						
PSA00	**Pilbara Seismi**	**19.67**	**208**	P	**Pn**	**20 25 40.0**	**0.0**
AS31	**Alice Springs**	**19.80**	**168**	P	**Pn**	**20 25 40.9**	**-0.7**
ASAR	**Alice Springs**	**19.81**	**168**	P	**Pn**	**20 25 40.3**	**-1.2**
	comp=Z,3.6nm,0.3s,baz=347,slow=10,SNR=50						
ASAR				S	**Sn**	**20 29 23.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=358,slow=28,SNR=3.5						
ASAR				PcP	**PcP**	**20 29 57.4**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=5.7,slow=1.5,SNR=9.0						
ASAR				PKiKP	**PKiKP**	**20 37 45.6**	**-1.0**
	baz=275,slow=0.3,SNR=4.7						
ASAR	**Alice Springs**	**19.81**	**168**	P	**Pn**	**20 25 41.0**	**-0.6**
MTSU	**Mount Surprise**	**20.02**	**135**	P	**Pn**	**20 25 43.4**	**-0.7**
WRKA	**Warakurna**	**20.75**	**183**	P	Pn	20 25 51.7	-1.0
LEM	**Lembang**	**21.98**	**262**	LR	LR	20 34 56.2	
	comp=Z,103nm,20.5s,baz=174,slow=38						
CTA	**Charters Tower**	**22.68**	**136**	P	**P**	**20 26 10.8**	**-0.1**
	comp=Z,18nm,0.7s,baz=306,slow=14,SNR=22						
CTAO	**Charters Tower**	**22.68**	**136**	P	**P**	**20 26 11.3**	**+0.5**
CTAO				IAmb	IAmb	20 26 12.4	
	comp=Z,29nm,0.8s						
CTAO	**Charters Tower**	**22.68**	**136**	P	**P**	**20 26 11.9**	**+1.1**
GIRL	**Giralia**	**23.58**	**218**	P	**P**	**20 26 21.4**	**+1.6**
GIRL	**Giralia**	**23.58**	**218**	P	**P**	**20 26 21.7**	**+1.9**
OOD	**Oodnadatta**	**24.18**	**167**	P	**P**	**20 26 26.3**	**+0.9**
MEEK	**Meekatharra**	**24.64**	**204**	P	**P**	**20 26 29.8**	**+0.1**
MULG	**Mulgathing**	**26.29**	**171**	P	**P**	**20 26 46.3**	**+1.8**
	comp=Z,15nm,0.7s						
MYKOM	**Kota Tinggi**	**26.36**	**283**	P	**P**	**20 26 46.3**	**+0.9**
MYKOM				IAmb	IAmb	20 27 03.0	
	comp=Z,13nm,0.9s						
DLV	**T Lat**	**26.38**	**308**	P	**P**	**20 26 46.9**	**+1.2**
DLV				IAmb	IAmb	20 27 12.0	
	comp=Z,24nm,1.2s						
FORT	**Forrest**	**26.48**	**183**	P	**P**	**20 26 46.7**	**+0.5**
FORT	**Forrest**	**26.48**	**183**	P	**P**	**20 26 46.6**	**+0.4**
LCRK	**Leigh Creek**	**27.36**	**164**	P	**P**	**20 26 56.4**	**+2.2**
MORW	**Morawa**	**27.86**	**206**	P	**P**	**20 26 58.7**	**0.0**
BBOO	**Buckleboo**	**29.11**	**169**	P	**P**	**20 27 10.0**	**+0.2**
BBOO				IAmb	IAmb	20 27 13.9	
	comp=Z,17nm,1.2s						
BBOO	**Buckleboo**	**29.11**	**169**	P	**P**	**20 27 10.1**	**+0.3**
KLBR	**Kellerberrin**	**29.42**	**201**	P	**P**	**20 27 12.6**	**+0.1**
STKA	**Stephens Creek**	**29.77**	**159**	P	**P**	**20 27 15.5**	**-0.1**
	comp=Z,3.5nm,0.6s,baz=338,slow=10.0,SNR=9.1						
STKA	**Stephens Creek**	**29.77**	**159**	P	**P**	**20 27 15.9**	**+0.3**
IPM	**Ipoh**	**29.77**	**287**	P	**P**	**20 27 15.9**	**+0.1**
IPM				IAmb	IAmb	20 27 16.8	
	comp=Z,20nm,0.8s						
KULM	**Kulim**	**30.36**	**288**	P	**P**	**20 27 21.1**	**0.0**
KULM				IAmb	IAmb	20 27 43.8	
	comp=Z,10nm,1.0s						
HTT	**Hallett**	**30.37**	**164**	P	**P**	**20 27 22.6**	**+1.6**
UBPT	**Khong Chiam**	**30.71**	**310**	P	**P**	**20 27 25.0**	**+0.9**
UBPT				IAmb	IAmb	20 27 26.7	
	comp=Z,28nm,1.4s						
NWAO	**Narrogin (SRO)**	**30.81**	**200**	P	**P**	**20 27 25.4**	**+0.6**
RPSI	**Rantau Prapat**	**31.36**	**282**	P	**P**	**20 27 29.2**	**-0.6**
PSI	**Prapat**	**31.38**	**282**	P	**P**	**20 27 29.2**	**-1.0**
	comp=Z,3.0nm,0.6s,baz=76,slow=9.4,SNR=6.1						
ARPS	**Mount Arapiles**	**34.33**	**162**	P	**P**	**20 27 57.6**	**+2.1**
CAN	**Canberra**	**35.82**	**152**	P	**P**	**20 28 08.6**	**+0.1**
CAN				IAmb	IAmb	20 28 13.6	
	comp=Z,19nm,1.1s						
JNU	**Nakatsue**	**37.14**	**2**	P	**P**	**20 28 19.2**	**-0.5**
	comp=Z,7.5nm,0.4s,baz=186,slow=5.0,SNR=5.7						
JNU	**Nakatsue**	**37.14**	**2**	P	**P**	**20 28 20.3**	**+0.6**
NJ2	**Nanjing**	**37.46**	**345**	*e*P	**P**	**20 28 24.5**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**37.63**	**308**	P	**P**	**20 28 24.9**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=137,slow=7.2,SNR=4.5						
CMAR				PcP	**PcP**	**20 30 43.1**	**+1.8**
	comp=Z,1.8nm,0.7s,baz=164,slow=2.6,SNR=6.9						
CMAR	**Chiang Mai Arr**	**37.63**	**308**	P	**P**	**20 28 24.7**	**+0.6**
GYA	**Guiyang**	**37.68**	**325**	⇓P	**P**	**20 28 27.6**	**+3.1**
GYA				pmax	pmax		
	comp=Z,13nm,0.8s						
CHTO	**Chiang Mai**	**37.83**	**308**	P	**P**	**20 28 26.6**	**+0.8**
CHTO				IAmb	IAmb	20 28 29.4	
	comp=Z,15nm,0.8s						
CHTO	**Chiang Mai**	**37.83**	**308**	P	**P**	**20 28 27.3**	**+1.5**
JMN	**Monobe**	**37.94**	**6**	P	**P**	**20 28 27.5**	**+1.0**
SANVU	**Saraoutou**	**38.68**	**109**	P	**P**	**20 28 32.1**	**-0.8**
KMI	**Kunming**	**39.09**	**320**	⇓P	**P**	**20 28 38.6**	**+2.1**
KMI				pP	pwP	20 28 51.8	+0.5
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
JWT	**Wachi**	**39.66**	**8**	P	**P**	**20 28 41.5**	**+0.7**
JWT				IAmb	IAmb	20 28 42.6	
	comp=Z,16nm,0.7s						
MAJO	**Matsushiro**	**41.33**	**11**	P	**P**	**20 28 53.9**	**-0.8**
MAJO				IAmb	IAmb	20 28 54.9	
	comp=Z,18nm,0.7s						
MAJO	**Matsushiro**	**41.33**	**11**	P	**P**	**20 28 55.2**	**+0.5**
	comp=Z,26nm,0.8s						
MAT	**Matsushiro**	**41.33**	**11**	P	**P**	**20 28 53.8**	**-0.9**
MJAR	**Matsushiro Arr**	**41.33**	**11**	P	**P**	**20 28 53.2**	**-1.5**
	comp=Z,11nm,0.7s,baz=177,slow=9.2,SNR=24						
MJAR	**Matsushiro Arr**	**41.33**	**11**	IAmb	IAmb	20 28 56.3	
	comp=Z,6.7nm,1.1s						
JYT	**Yasato**	**41.43**	**13**	P	**P**	**20 28 54.0**	**-1.5**
KSAR	**Wonju Array Be**	**41.46**	**358**	P	**P**	**20 28 55.3**	**-0.4**
KSRS	**Korea Array**	**41.47**	**358**	P	**P**	**20 28 56.8**	**+1.0**
	comp=Z,4.4nm,0.7s,baz=173,slow=9.6,SNR=19						
KS19	**Wonju Array Si**	**41.52**	**358**	P	**P**	**20 28 52.8**	**-3.4**
KS19				IAmb	IAmb	20 29 18.4	
	comp=Z,17nm,1.2s						
JSD	**Sado**	**42.79**	**10**	P	**P**	**20 29 03.3**	**-3.2**
JSD				IAmb	IAmb	20 29 07.4	
	comp=Z,12nm,0.7s						
JMM	**Marumori**	**43.14**	**13**	P	**P**	**20 29 09.3**	**0.0**
BJT	**Baijiatuau**	**45.69**	**346**	P	**P**	**20 29 28.8**	**-0.9**
BJI	**Beijing**	**45.71**	**346**	P	**P**	**20 29 30.0**	**+0.2**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SHL	**Shillong**	**47.01**	**311**	P	**P**	**20 29 39.4**	**-1.2**
SHL				IAmb	IAmb	20 29 42.4	
	comp=Z,24nm,1.5s						
HHC	**Hu-ho-hao-te**	**47.76**	**342**	*e*P	**P**	**20 29 49.7**	**+3.6**
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,93nm,9.5s						
CN2	**Changchun**	**47.92**	**356**	*e*P	**P**	**20 29 47.4**	**+0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USA0B	**Ussuriysk Arra**	**48.23**	**2**	P	**P**	**20 29 49.5**	**0.0**
USA0B				IAmb	IAmb	20 29 53.0	
	comp=Z,9.2nm,0.7s						
USRK	**Ussuriysk Ar.**	**48.23**	**2**	P	**P**	**20 29 49.6**	**+0.2**
	comp=Z,10nm,0.6s,baz=197,slow=6.4,SNR=20						
USRK	**Ussuriysk Ar.**	**48.23**	**2**	P	**P**	**20 29 48.8**	**-0.7**
MDJ	**Mudanjiang**	**48.60**	**0**	P	**P**	**20 29 52.8**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,13nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.2s						
MDJ	**Mudanjiang**	**48.60**	**0**	P	**P**	**20 29 51.8**	**-0.5**
MDJ				IAmb	IAmb	20 29 54.3	
	comp=Z,10nm,0.9s						
LSA	**Lhasa**	**49.89**	**315**	P	**P**	**20 30 03.6**	**+0.5**
LSA				IAmb	IAmb	20 30 04.8	
	comp=Z,7.0nm,0.8s						
ODAN	**Odare**	**51.11**	**310**	*e*P	**P**	**20 30 11.8**	**-0.3**
	comp=Z,12nm,0.6s						
TAPN	**Taplejung**	**51.12**	**310**	*e*P	**P**	**20 30 11.8**	**-0.4**
	comp=Z,21nm,0.7s						
GTA	**Gaotai**	**51.32**	**331**	⇑P	**P**	**20 30 13.6**	**+0.3**
GTA				pP	pP	20 30 23.0	+0.3
GTA				sP	pwP	20 30 28.6	+0.2
GTA				pmax	pmax		
	comp=Z,12nm,0.8s						
GTA				pmax	pmax		
	comp=Z,48nm,5.1s						
GTA				LR	LR		
	comp=N,130nm,14.9s						
GTA				LR	LR		
	comp=E,150nm,16.7s						
GTA				LR	LR		
	comp=Z,140nm,16.4s						
RAMN	**Ramite**	**51.77**	**309**	*e*P	**P**	**20 30 17.2**	**+0.2**
	comp=Z,36nm,0.5s						
PKI	**Pulchoki**	**52.99**	**309**	*e*P	**P**	**20 30 25.6**	**-0.6**
PKIN	**Phulchoki**	**53.01**	**309**	*e*P	**P**	**20 30 26.5**	**+0.3**
KKN	**Kakani**	**53.20**	**309**	*e*P	**P**	**20 30 27.2**	**-0.4**
KLR	**Kul'dur**	**53.25**	**2**	P	**P**	**20 30 27.2**	**0.0**
	comp=Z,6.0nm,0.9s,baz=224,slow=3.8,SNR=13						
GKN	**Gorkha**	**53.80**	**309**	*e*P	**P**	**20 30 31.4**	**-0.5**
TUWZ	**Tuamarina**	**54.28**	**140**	P	**P**	**20 30 34.1**	**-0.8**
KOLN	**Koldanda**	**54.49**	**309**	*e*P	**P**	**20 30 36.9**	**-0.1**
DANN	**Dangsing**	**54.65**	**309**	*e*P	**P**	**20 30 37.8**	**-0.4**
	comp=Z,39nm,0.9s						
HYB	**Hyderabad**	**54.71**	**295**	*i* P	**P**	**20 30 37.0**	**-1.5**
PYUN	**Piuthan**	**55.12**	**309**	*e*P	**P**	**20 30 41.5**	**-0.1**
	comp=Z,51nm,1.0s						
ULN	**Ulaanbaatar**	**55.48**	**342**	P	**P**	**20 30 44.4**	**+0.7**
ULN				IAmb	IAmb	20 30 45.6	
	comp=Z,7.0nm,0.8s						
SONM	**Songino Array**	**55.66**	**341**	P	**P**	**20 30 45.6**	**+0.6**
	comp=Z,3.1nm,0.8s,baz=147,slow=8.1,SNR=16						
SONM				PcP	**PcP**	**20 31 45.0**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=152,slow=4.6,SNR=1.5						
SONM	**Songino Array**	**55.66**	**341**	P	**P**	**20 30 45.6**	**+0.6**
WMQ	**Urumqi**	**60.82**	**326**	*e*P	**P**	**20 31 22.0**	**+0.9**
WMQ				pP	sP	20 31 35.1	+0.4
WMQ				sP	pwP	20 31 42.0	+5.6
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.9s						
PETK	**Petropavlovsk-**	**61.83**	**19**	P	**P**	**20 31 29.3**	**+1.7**
	comp=Z,2.9nm,0.7s,baz=196,slow=4.3,SNR=3.8						
ZSN	**Zaisan**	**64.67**	**328**	*e*P	**P**	**20 31 46.1**	**-0.4**
	baz=328						
NIL	**Nilore**	**65.07**	**310**	P	**P**	**20 31 48.0**	**-1.5**
NIL				IAmb	IAmb	20 31 58.7	
	comp=Z,7.6nm,1.1s						
SHLS	**Shalkode**	**65.25**	**322**	*e*P	**P**	**20 31 48.5**	**-2.1**
	baz=322						
UZB	**Uzynbulak**	**65.51**	**322**	*e*P	**P**	**20 31 51.8**	**-0.5**
	baz=322						
MK31	**Makanchi Array**	**65.65**	**326**	P	**P**	**20 31 53.0**	**0.0**
MK31				IAmb	IAmb	20 31 55.9	
	comp=Z,9.1nm,0.8s						
MKAR	**Makanchi Array**	**65.65**	**326**	P	**P**	**20 31 53.0**	**0.0**
	comp=Z,9.7nm,0.4s,baz=114,slow=7.9,SNR=122						
MKAR	**Makanchi Array**	**65.65**	**326**	P	**P**	**20 31 53.1**	**+0.1**
MAKZ	**Makanchi**	**65.84**	**326**	P	**P**	**20 31 53.9**	**-0.3**
SATY	**Saty**	**65.85**	**321**	*e*P	**P**	**20 31 53.5**	**-1.0**
	comp=Z,3.9nm,0.6s,baz=321						
YAK	**Yakutsk**	**66.04**	**0**	P	**P**	**20 31 55.9**	**+0.8**
	comp=Z,15nm,0.5s,baz=174,slow=0.2,SNR=22						
YAK	**Yakutsk**	**66.04**	**0**	P	**P**	**20 31 55.3**	**+0.3**
MDOK	**Medeo**	**66.75**	**321**	*e*P	**P**	**20 31 59.3**	**-1.0**
	baz=321						
TDK	**Taldyqorghan**	**66.88**	**323**	*e*P	**P**	**20 32 00.5**	**-0.4**
	comp=Z,5.4nm,0.7s,baz=323						
KUU	**Kurty**	**67.57**	**321**	*e*P	**P**	**20 32 04.9**	**-0.4**
	comp=Z,7.5nm,0.5s,baz=321						
AAK	**Ala-Archa**	**68.13**	**319**	P	**P**	**20 32 08.8**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=139,slow=7.9,SNR=4.9						
SGDS	**Sogindy**	**68.43**	**320**	*e*P	**P**	**20 32 09.2**	**-1.6**
	baz=320						
KBL	**Kabul**	**68.63**	**310**	P	**P**	**20 32 10.9**	**-1.5**
SEM	**Semipalatinsk**	**68.88**	**329**	*e*P	**P**	**20 32 12.8**	**-0.8**
	baz=329						
ZAA0	**Zalesovo Array**	**68.89**	**334**	P	**P**	**20 32 12.6**	**-0.7**
ZAA0				IAmb	IAmb	20 32 14.0	
	comp=Z,11nm,0.8s						
ZALV	**Zalesovo Beam**	**68.89**	**334**	P	**P**	**20 32 13.4**	**+0.1**
	comp=Z,7.3nm,0.7s,baz=110,slow=5.4,SNR=21						
ZALV	**Zalesovo Beam**	**68.89**	**334**	P	**P**	**20 32 12.1**	**-1.2**
GAR	**Garm**	**69.39**	**314**	P	**P**	**20 32 16.4**	**-0.5**
BTK	**Batken**	**69.47**	**316**	P	**P**	**20 32 18.0**	**+0.7**
BTK				IAmb	IAmb	20 32 19.2	
	comp=Z,7.4nm,1.4s						
KURBB	**Kurchatov Arra**	**69.91**	**328**	P	**P**	**20 32 19.8**	**+0.2**
	comp=Z,23nm,0.7s,baz=129,slow=5.6,SNR=134						
KURK	**Kurchatov**	**69.91**	**328**	P	**P**	**20 32 20.0**	**+0.3**
IUG	**Iuzhnay**	**70.88**	**317**	*e*P	**P**	**20 32 25.7**	**-0.2**
	baz=317						
KKAR	**Karatay Array**	**70.95**	**318**	P	**P**	**20 32 26.1**	**-0.1**
BRLS	**Borolday**	**71.37**	**318**	*e*P	**P**	**20 32 28.3**	**-0.5**
	baz=318						
HRA	**Herat**	**73.90**	**307**	P	**P**	**20 32 43.3**	**-1.0**
WSAR	**Wadi Sarin**	**74.25**	**295**	P	**P**	**20 32 46.2**	**-0.1**
	comp=Z,2.4nm,0.5s,baz=181,slow=3.8,SNR=5.3						
VNDA	**Vanda**	**75.26**	**173**	P	**P**	**20 32 51.0**	**-0.1**
BVAR	**Borovoye Array**	**75.47**	**328**	P	**P**	**20 32 53.1**	**+0.4**

	comp=Z,8.5nm,0.7s,baz=182,slow=10,SNR=34						
BRVK	Borovoye	75.54	328	P	P	20 32 53.4	+0.3
BRVK				IAmb	IAmb	20 32 54.5	
	comp=Z,16nm,0.9s						
TIXI	Tiksi	75.71	360	P	P	20 32 53.6	0.0
	comp=Z,7.2nm,0.5s,baz=169,slow=4.9,SNR=23						
TIXI	Tiksi	75.71	360	P	P	20 32 52.7	-0.9
TIXI				IAmb	IAmb	20 32 54.7	
	comp=Z,7.1nm,0.6s						
NRIK	Noril'sk	78.75	346	P	P	20 33 11.3	+0.6
	comp=Z,3.8nm,0.6s,baz=118,slow=7.3,SNR=7.7						
NRIK	Noril'sk	78.75	346	P	P	20 33 11.2	+0.5
NRIK				IAmb	IAmb	20 33 12.7	
	comp=Z,12nm,1.2s						
ABKAR	Akbulak array	80.05	321	P	P	20 33 18.0	-0.2
ABKAR				IAmb	IAmb	20 33 18.9	
	comp=Z,8.2nm,0.6s						
PPT	Papeete	80.06	107	P	P	20 33 19.9	+0.9
	comp=Z,24nm,0.3s,baz=241,slow=17,SNR=2.4						
AKTO	Aktyubinsk	81.60	322	P	P	20 33 26.9	+0.4
	comp=Z,5.9nm,0.6s,baz=106,slow=7.4,SNR=20						
ARU	Arti	83.11	328	P	P	20 33 34.2	0.0
	comp=Z,1.6nm,0.4s,baz=69,slow=4.5,SNR=16						
ARU	Arti	83.11	328	P	P	20 33 34.0	-0.2
ARU				IAmb	IAmb	20 33 36.1	
	comp=Z,6.1nm,0.6s						
UMR	Umm Al-Rimmam	84.96	300	*e*P	P	20 33 44.4	+0.1
MIB	Mutribah	85.32	300	*e*P	P	20 33 46.0	-0.1
RST	Umm Al-Ruwaisa	85.58	300	*e*P	P	20 33 46.9	-0.5
RAYN	Ar Rayn	86.21	294	P	P	20 33 50.3	-0.4
N19K	Bonanza Creek	86.84	28	P	P	20 33 53.7	+0.7
MLY	Manley	89.44	25	P	P	20 34 05.7	+0.5
MLY				IAmb	IAmb	20 34 06.7	
	comp=Z,3.1nm,0.9s						
SIRT	Sirnak	90.23	307	P	P	20 34 10.1	+0.4
KBZ	Khabaz	90.45	314	P	P	20 34 10.1	-0.2
	comp=Z,1.2nm,0.7s,baz=53,slow=7.5,SNR=2.5						
GURO	Guroymak-BITLI	90.64	308	P	P	20 34 12.2	+0.6
H24K	Noodor Dome	90.76	24	P	P	20 34 11.8	+0.3
ILAR	Eielson Array	91.02	25	P	P	20 34 11.4	-1.1
	comp=Z,1.3nm,0.7s,baz=252,slow=2.8,SNR=14						
KMBO	Kilima Mbogo	92.21	269	P	P	20 34 19.2	-0.3
	comp=Z,0.9nm,0.3s,baz=41,slow=9.5,SNR=4.1						
KMBO	Kilima Mbogo	92.21	269	IAmb	IAmb	20 34 20.7	
	comp=Z,4.0nm,1.2s						
KLMR	Klimovskoe	93.65	331	*e*P	P	20 34 20.5	-4.3
KLMR				AMP		20 34 38.2	
	comp=Z,25nm,1.4s						
INK	Inuvik	96.44	22	P	P	20 34 37.5	+0.1
	comp=Z,1.8nm,0.4s,baz=269,slow=3.7,SNR=8.1						
SNAA	Sanae	98.26	194	P	Pdif	20 34 46.8	+1.1
ARCES	ARCESS Array B	98.81	340	P	P	20 34 47.4	-0.7
	comp=Z,5.0nm,0.9s,baz=74,slow=4.3,SNR=6.5						
VNA2	Neumayer--Watz	99.84	193	P	Pdif	20 34 53.0	+0.4
	baz=129,slow=2.7						
FINES	FINESS Array B	100.10	332	P	Pdif	20 34 52.3	-1.6
	comp=Z,2.6nm,0.9s,baz=46,slow=11,SNR=5.1						
VNA3	Neumayer Olymp	100.11	192	P	Pdif	20 34 54.0	+0.1
VNA1	Neumayer--Stat	100.24	193	P	Pdif	20 34 55.3	+0.9
PDAR	Pinedale Array	115.23	44	PKP	PKPdf	20 39 51.1	+0.6
	comp=Z,0.2nm,0.4s,baz=107,slow=1.5,SNR=3.9						
TXAR	Lajitas Array	123.85	57	PKP	PKiKP	20 40 08.4	+0.8
	comp=Z,0.9nm,0.8s,baz=234,slow=0.8,SNR=6.6						
TORD	Torodi Ar. Bea	127.78	283	PKP	PKPdf	20 40 15.0	-0.1
	comp=Z,2.1nm,0.7s,baz=65,slow=1.8,SNR=16						
TORD	Torodi Ar. Bea	127.78	283	PKPdf	PKPdf	20 40 15.2	+0.1
CPUP	Villa Florida	148.93	168	PKPbc	PKPbc	20 40 56.0	-1.1
	comp=Z,5.9nm,0.8s,baz=149,slow=1.4,SNR=8.8						
CPUP	Villa Florida	148.93	168		PKPbc	20 40 56.9	-0.3
LPAZ	La Paz	153.17	140	PKPbc	PKiKP	20 41 08.1	-0.2
	comp=Z,2.2nm,0.7s,baz=181,slow=6.0,SNR=7.0						

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*IDC **09** 20:28:54.6±1.4, 4°.11S×129°.35E, h0^{km}, mb3.7/2, mb1 3.5/5, mb1mx3.2/42, mbtmp3.4/5, ML3.0/3, Error ellipse: s-maj=43.9km s-min=25.2km az=88.0*

ISC 09 20:28:55.3±1.2**, 3°.89S**±0°.09×**130°.0E**±0°.2**, h10**^{km}**, n5, σ0^{s}.51**/6**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.27	23	Pn	Pb	20 29 54.0	+0.5
	1.6nm,0.3s,baz=233,slow=20,SNR=7.0						
SIJI				Sn	Sg	20 30 39.8	-0.5
	3.1nm,0.3s,baz=240,slow=20,SNR=3.7						
WRA	Warramunga Arr	16.52	165	Pn	Pn	20 32 47.5	+0.2
	0.1nm,0.3s,baz=348,slow=13,SNR=1.7						
ASAR	Alice Springs	20.03	169	P	P	20 33 28.2	-0.4
	0.1nm,0.3s,baz=343,slow=7.9,SNR=4.1						
MKAR	Makanchi Array	65.63	326	P	P	20 39 39.7	0.0
	0.3nm,0.4s,baz=111,slow=7.6,SNR=8.1						
KURBB	Kurchatov Arra	69.87	328	P	P	20 40 06.2	-0.1
	0.5nm,0.7s,baz=125,slow=5.3,SNR=4.2						

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*IDC **09** 20:29:16.8±1.4, 4°.03S×129°.51E, h0^{km}, mb4.1/3, mb1 4.0/8, mb1mx3.6/44, mbtmp3.8/8, ML3.5/5, Error ellipse: s-maj=31.1km s-min=22.0km az=98.0*

ISC 09 20:29:21.5±0.9**, 4°.07S**±0°.09×**129°.5E**±0°.1**, h36**^{km}**, n8, σ1^{s}.22**/9**, mb4.0**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.64	29	Pn	Pn	20 30 15.4	0.0
	2.4nm,0.3s,baz=215,slow=17,SNR=2.6						
SIJI				Sn	Sn	20 30 57.5	+0.3
	2.3nm,0.3s,baz=204,slow=23,SNR=1.6						
BATI	Baumata	8.40	223	Pn	Pn	20 31 21.9	+1.2
	2.3nm,0.3s,baz=315,slow=1.4,SNR=4.2						
KAPI	Kappang	9.75	264	Pn	Pn	20 31 39.0	-0.3
	0.4nm,0.3s,baz=169,slow=21,SNR=6.2						
WRA	Warramunga Arr	16.47	164	Pn	Pn	20 33 07.9	-2.0
	0.1nm,0.3s,baz=347,slow=13,SNR=2.6						
ASAR	Alice Springs	19.94	168	P	P	20 33 51.3	+0.8
	0.2nm,0.3s,baz=346,slow=10,SNR=3.8						
CMAR	Chiang Mai Arr	37.51	308	P	P	20 36 31.2	-1.1
	1.6nm,0.3s,baz=119,slow=7.3,SNR=4.1						
MKAR	Makanchi Array	65.52	326	P	P	20 40 02.2	+0.9
	0.8nm,0.6s,baz=118,slow=8.0,SNR=8.1						
KURBB	Kurchatov Arra	69.77	328	P	P	20 40 28.9	+0.9
	1.0nm,0.7s,baz=128,slow=5.4,SNR=9.0						

IDC 09 20:47:52.5±1.6**, 4°.08S**×**129°.33E, h0**^{km}**, mb3.5**/1**, mb1 3.5**/4**, mb1mx3.2**/43**, mbtmp3.3**/4**, ML3.2**/3**, Error ellipse: s-maj=53.7km s-min=26.7km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.73	31	Pn	Pn	20 48 51.2	-0.1
	2.4nm,0.3s,baz=213,slow=15,SNR=10						
SIJI				Sn	Sn	20 49 32.5	-3.5
	1.2nm,0.3s,baz=211,slow=23,SNR=2.0						
WRA	Warramunga Arr	16.51	163	Pn	Pn	20 51 45.6	-0.1
	0.1nm,0.3s,baz=346,slow=12,SNR=5.7						
ASAR	Alice Springs	19.97	168	P	P	20 52 26.5	0.0
	0.1nm,0.3s,baz=349,slow=9.5,SNR=8.3						
MKAR	Makanchi Array	65.43	326	P	P	20 58 37.3	0.0
	0.2nm,0.4s,baz=121,slow=7.5,SNR=7.0						

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*FUNV **09** 20:49:43.8, 8°.51N×71°.48W, h5^{km}, MW3.7*

ISC 09 20:49:43.6±1.2**, 8°.51N**±0°.03×**71°.44W**±0°.02**, h9**^{km}±10^{km}**, n26, σ1^{s}.88**/52**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.62	111	*e*P	Pg	20 49 57.0	+1.4
SOCV				*e*S	Sg	20 50 04.0	+0.2
SDV	Santo Domingo	0.88	65	*e*P	Pb	20 50 02.3	+1.1
SDV				*e*S	Sg	20 50 13.8	+1.7
CAPV	Capacho	1.08	233	*e*P	Pg	20 50 02.3	-2.1
CAPV				*e*S	Sb	20 50 18.3	-0.6
PAMC	Pamplona, Colo	1.71	227	*e*P	Pn	20 50 14.2	+0.2
PAMC				*e*S	Sg	20 50 39.4	+0.8
OCAC	Ocana	1.88	262	*e*P	Pn	20 50 15.8	-0.3
OCAC				*e*S	Sb	20 50 41.6	-0.3
TAMC	Tame, Arauca	2.09	190	*e*P	Pb	20 50 22.9	+1.1
TAMC				*e*S	Sg	20 50 49.6	-1.4
ELOV	Elorza	2.45	128	*e*P	Pb	20 50 27.6	-0.3
ELOV				*e*S	Sb	20 50 59.0	+0.7
DABV	Dabajuro	2.52	18	*e*P	Pb	20 50 29.1	0.0
DABV				*e*S	Sn	20 50 56.8	+1.1
DABV	Dabajuro	2.52	18	*e*P	Pn	20 50 24.9	+0.1
DABV				*e*S	Sn	20 50 55.0	-0.7
BARC	Barichara	2.57	222	*e*P	Pb	20 50 30.0	-0.2
BARC				*e*S	Sg	20 51 05.1	-1.3
SMLC	San Martn de	2.62	276	*e*P	Pn	20 50 28.2	+2.1
SMLC				*e*S	Sb	20 51 02.9	-0.1
BRRC	Barranca, Sant	2.65	238	*e*P	Pb	20 50 30.4	-0.9
BRRC				*e*S	Sg	20 51 07.5	-1.3
SIQV	Siquisique	2.66	37	*e*P	Pn	20 50 27.1	+0.3
SIQV				*e*S	Sn	20 50 58.7	-0.6
CRJC	Cerrejon, Guaj	2.87	330	*e*P	Pn	20 50 29.2	-0.4
CRJC				*e*S	Sb	20 51 08.4	-1.9
RUSC	La Rusia	3.07	212	*e*P	Pn	20 50 33.1	+0.3
RUSC				*e*S	Sn	20 51 12.8	+2.9
URIC	Uribia, Colomb	3.21	350	*e*P	Pn	20 50 38.2	+3.8
URIC				*e*S	Sn	20 51 12.4	-0.4
ZARC	Zaragoza, Cauc	3.53	254	*e*P	Pn	20 50 40.1	+1.3
ZARC				*e*S	Sb	20 51 26.1	-3.3
PTBC	PUERTO BERRIO,	3.58	237	*e*P	Pn	20 50 41.0	+1.6
PTBC				*e*S	Sb	20 51 28.8	-1.9
MONV	Montecano	3.71	23	*e*P	Pn	20 50 40.9	-0.3
MONV				*e*S	Sn	20 51 23.3	-1.8
SPBC	San Pablo de B	3.86	223	*e*P	Pn	20 50 46.9	+3.6
SPBC				*e*S	Sn	20 51 30.3	+1.4
SJCC	San Jacinto, C	3.94	291	*e*P	Pn	20 50 44.9	+0.5
SJCC				*e*S	Sn	20 51 34.0	+3.2
BENV	Beln	4.06	69	*e*P	Pn	20 50 46.3	+0.3
BENV				*e*S	Sn	20 51 31.5	-2.3
NORC	Norcasia	4.49	229	*e*P	Pn	20 50 55.9	+3.9
NORC				*e*S	Sn	20 51 46.6	+2.1
PAYV	Puerto Ayacuch	4.85	129	*e*P	Pn	20 50 56.3	-0.6
PAYV				*e*S	Sn	20 51 50.5	-2.8
BIRV	Birongo	5.46	69	*e*P	Pn	20 51 04.4	-0.8
BIRV				*e*S	Sn	20 52 04.5	-3.8
ANIL	Santa Ana	5.61	225	*e*P	Pn	20 51 11.6	+4.0
ANIL				*e*S	Sn	20 52 14.5	+2.2

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*NEIC **09** 20:51:28.8±2.6, 21°.9S±0°.2×173°.69W±0°.08, h10^{km}±1^{km}, mb4.5/9, Error ellipse: s-maj=30.3km s-min=12.9km az=177.0*

*IDC **09** 20:51:31.6±1.7, 21°.52S×174°.51W, h0^{km}, mb4.3/10, mb1 4.4/10, mb1mx4.0/40, mbtmp4.3/10, MS3.7/5, Ms1 3.7/5, ms1mx3.3/37, Error ellipse: s-maj=61.8km s-min=24.1km az=145.0*

ISC 09 20:51:29.4±0.7**, 21°.9S**±0°.2×**173°.75W**±0°.07**, h10**^{km}**, n41, σ2^{s}.03**/29**, mb4.5**/14**, MS3.5**/4**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.54	53	Pn	Pn	20 52 37.3	-0.9
MSVF	Nonsavu	8.75	297	Pn	Pn	20 53 36.0	-0.2
	0.7nm,0.3s,baz=126,slow=15,SNR=13						
MSVF				LR	LR	20 56 23.4	
	comp=Z,994nm,18.6s,baz=103,slow=37						
MSVF	Nonsavu	8.75	297		Pn	20 53 37.0	+0.8
RAR	Rarotonga	13.02	90	Pn	Pn	20 54 37.6	+3.1
	5.4nm,0.3s,baz=265,slow=4.2,SNR=9.1						
RAR				Sn	Sn	20 56 55.8	-3.8
	1.6nm,0.3s,baz=119,slow=18,SNR=2.0						
RAR				LR	LR	21 00 47.3	
	comp=Z,189nm,18.2s,baz=260,slow=40						
DZM	Mont Dzumac	18.37	266	*e*LR	LR	21 00 01.9	
	comp=Z,246nm,22.3s						
DZM	Mont Dzumac	18.37	266	LR	LR	21 01 22.3	
	comp=Z,186nm,18.4s,baz=94,slow=33						
TBI	Tubuai	22.46	98	*e*LR	LR	21 02 08.3	
	comp=Z,205nm,26.8s						
PPT2	Papeete2	23.14	84	*e*LR	LR	21 02 28.6	
	comp=Z,143nm,21.5s						
HNR	Honiara	28.13	292	LR	LR	21 07 55.0	
	comp=Z,120nm,18.1s,baz=127,slow=36						
STKA	Stephens Creek	40.81	246	P	P	20 59 09.9	-1.3
	0.8nm,0.3s,baz=94,slow=8.2,SNR=4.1						
STKA	Stephens Creek	40.81	246	P	P	20 59 11.4	+0.2
AS31	Alice Springs	48.08	257	P	P	21 00 08.4	-1.1
AS31				IAmb	IAmb	21 00 09.7	
	comp=Z,1.8nm,1.0s						
ASAR	Alice Springs	48.08	257	P	P	21 00 08.5	-1.0
	comp=Z,4.0nm,0.9s,baz=90,slow=8.2,SNR=35						
ASAR				PcP	PcP	21 01 40.2	+2.9
	comp=Z,0.3nm,0.8s,baz=110,slow=4.4,SNR=2.0						
JAY	Jayapura	48.24	287	P	P	21 00 09.2	-1.7
	comp=Z,6.5nm,0.5s,baz=95,slow=11,SNR=2.6						
WB0	Warramunga Arr	48.33	263	P	P	21 00 08.9	-2.6
WB0				IAmb	IAmb	21 00 19.2	
	comp=Z,7.4nm,1.1s						
WB2	Warramunga Arr	48.33	262	P	P	21 00 09.6	-1.9
WB2				IAmb	IAmb	21 00 10.9	
	comp=Z,6.4nm,1.0s						
WRAB	Tennant Creek	48.34	262	P	P	21 00 09.4	-2.1
WRAB				IAmb	IAmb	21 00 10.8	
	comp=Z,9.3nm,1.1s						
WRA	Warramunga Arr	48.34	262	P	P	21 00 09.0	-2.6
	comp=Z,4.7nm,1.1s,baz=95,slow=8.2,SNR=15						
WRA	Warramunga Arr	48.34	262	P	P	21 00 08.9	-2.7
MJAR	Matsushiro Arr	73.71	321	P	P	21 03 01.7	-1.9
	comp=Z,3.3nm,0.9s,baz=155,slow=7.1,SNR=7.5						
MJAR	Matsushiro Arr	73.71	321	IAmb	IAmb	21 03 02.1	
	comp=Z,2.8nm,0.9s						
YBH	Yreka Blue Hor	78.96	36	LR	LR	21 28 32.6	
	comp=Z,60nm,21.7s,baz=310,slow=28						
NVAR	Mina Array Bea	79.37	41	P	P	21 03 40.5	+4.6
	comp=Z,0.1nm,0.3s,baz=220,slow=8.2,SNR=2.6						
NVAR	Mina Array Bea	79.37	41	P	P	21 03 34.8	-1.1
KSRS	Korea Array	80.58	317	P	P	21 03 43.5	+1.4
	comp=Z,2.0nm,0.9s,baz=136,slow=6.3,SNR=7.4						
KSAR	Wonju Array Be	80.59	317	P	P	21 03 40.0	-2.2
H03S2	Juan Fernandez	81.93	123	T	T	22 35 41.2	
	baz=254						
H03S1	Juan Fernandez	81.94	123	T	T	22 35 48.4	
	baz=254						
H03S3	Juan Fernandez	81.95	123	T	T	22 35 43.1	
	baz=254						
H03N2	Juan Fernandez	82.07	123	T	T	22 35 59.8	
	baz=261,slow=74						
H03N3	Juan Fernandez	82.07	123	T	T	22 35 53.5	
	baz=261,slow=74						
H03N1	Juan Fernandez	82.08	123	T	T	22 36 01.2	
	baz=261						
SEY	Seymchan	88.66	345	P	P	21 04 22.9	+0.6
	comp=Z,2.7nm,0.8s,baz=142,slow=9.1,SNR=3.6						
ILAR	Eielson Array	88.83	11	P	P	21 04 25.6	+2.5
	comp=Z,0.5nm,0.8s,baz=187,slow=7.2,SNR=4.9						
CMAR	Chiang Mai Arr	94.31	288	P	P	21 04 51.5	+1.8
	comp=Z,1.9nm,1.0s,baz=130,slow=3.0,SNR=11						
CMAR	Chiang Mai Arr	94.31	288	P	P	21 04 50.7	+1.1
U38A	Gravette	94.64	53	P	P	21 04 50.1	-0.6
MGMO	Mountain Grove	96.48	53	P	P	21 04 57.1	-2.1
AKASG	Malin Array Be	146.07	334	PKPbc	PKPab	21 11 10.9	+0.9
	comp=Z,1.4nm,0.7s,baz=43,slow=4.1,SNR=8.2						
KHC	Kasperske Hory	152.19	350	*e*PKP	PKiKP	21 11 27.8	+2.3
GERES	GERESS Array B	152.44	349	PKPbc	PKiKP	21 11 28.4	+2.2
	comp=Z,0.3nm,0.7s,baz=56,slow=3.4,SNR=3.9						

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*TAP **09** 20:54:53.9, 25°.31N×122°.77E, h202^{km}, ML3.7, C*

*JMA **09** 20:54:55.0±0.2, 25°.13N×122°.69E, h201^{km}±2^{km}, M3.2*

ISC 09 20:54:54.9±2.1**, 25°.21N**±0°.08×**122°.70E**±0°.03**, h200**^{km}±12^{km}**, n74, σ0^{s}.77**/121**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCYT	Pengchaiyu	0.70	306	*e*P	Pn	20 55 22.1	-0.8
	baz=297						
JYNG	Yonagunijimaku	0.79	163	P	Pn	20 55 23.2	-0.2
JYNG				S	S	20 55 45.8	+0.3
YOJ	Yonaguni jima	0.80	159	*e*P	Pn	20 55 23.5	0.0
	baz=169						
TIPB	Shuangxi	0.82	253	P	Pn	20 55 23.6	-0.1
	baz=247						
TIPB				S	S	20 55 45.5	-0.3
	baz=247						
NWF	Wu-fen Shan	0.84	261	P	Pn	20 55 23.8	0.0
	baz=253						
NWF				S	S	20 55 46.2	+0.1
	baz=253						
WFSB	Wu-fen Shan	0.84	261	*e*P	Pn	20 55 23.6	-0.1
	baz=253						
WFSB				S	S	20 55 46.0	+0.2
	baz=253						
TWC	Suao	0.98	232	*e*P	Pn	20 55 24.3	-0.3
	baz=223						
TWA	Mucha	1.03	257	*e*S	S	20 55 49.4	+1.3
	baz=244						
TWE	Neicheng	1.05	243	*e*P	Pn	20 55 24.7	-0.3
	baz=232						
TWE				*e*S	S	20 55 48.9	+0.6
	baz=232						
NDS	Dongshan	1.06	237	*e*P	Pn	20 55 25.1	0.0
	baz=229						
NDS				*e*S	S	20 55 48.5	+0.1
	baz=229						
TAP1	Taipei	1.08	261	*e*S	S	20 55 49.3	+0.8
	baz=255						
NHDH	Xindian Distri	1.09	257	*e*S	S	20 55 49.0	+0.2
	baz=245						
TATO	Taipei	1.12	258	*e*S	S	20 55 48.3	-0.8
	baz=246						
EWUT	Wuta	1.13	228	*e*P	Pn	20 55 25.5	-0.1
	baz=221						
EWUT				*e*S	S	20 55 48.6	-0.8
	baz=221						
NTST	Danshui	1.13	268	*e*S	S	20 55 50.9	+1.7
	baz=262						
TWS1	Kuangyinshan	1.16	265	*e*S	S	20 55 51.2	+1.5
	baz=261						
NWLT	Wulai	1.17	248	*e*P	Pn	20 55 25.5	-0.4
	baz=240						
NWLT				*e*S	S	20 55 49.3	-0.6
	baz=240						
ENA	Nanau	1.17	228	P	Pn	20 55 26.1	+0.2
	baz=222						
ENA				S	S	20 55 49.4	-0.4
	baz=222						
ENTT	Nioudou	1.17	241	P	Pn	20 55 25.9	-0.1
	baz=234						
ENTT				S	S	20 55 50.1	+0.2
	baz=234						
NDT	Datong Townshi	1.23	241	P	Pn	20 55 26.7	+0.2
	baz=232						
NDT				S	S	20 55 50.8	0.0
	baz=232						
IRIF	Iriomote-Funau	1.28	133	P	Pn	20 55 26.7	-0.1
IRIF				S	S	20 55 50.9	-0.5
YHNB	Yeheng	1.31	246	*e*P	Pn	20 55 27.0	-0.2
	baz=234						
YHNB				*e*S	S	20 55 50.6	-1.4
	baz=234						
NSK	Sanguang	1.33	247	P	Pn	20 55 27.1	-0.1
	baz=234						
NSK				*e*S	S	20 55 50.3	-1.9
	baz=234						
NCUH	Zhongli	1.39	260	S	S	20 55 52.6	-0.4
	baz=263						
NNSB	Datong	1.43	237	P	Pn	20 55 28.1	0.0
	baz=234						
NNSB				*e*S	S	20 55 53.5	-0.3
	baz=234						
NNS	Nan Shan	1.43	238	P	Pn	20 55 28.5	+0.3
	baz=235						
NNS				*e*S	S	20 55 53.5	-0.4
	baz=235						
ETL	Fush Village	1.43	223	*e*P	Pn	20 55 27.9	-0.2
	baz=218						
ETL				*e*S	S	20 55 53.1	-0.7
	baz=218						
NACB	Ninganchiao	1.44	224	P	Pn	20 55 27.6	-0.5
	baz=218						
NACB				*e*S	S	20 55 53.0	-0.8
	baz=218						
ETLH	Xiulin Townshi	1.49	228	*e*P	Pn	20 55 28.4	-0.3
	baz=233						
ETLH				*e*S	S	20 55 53.8	-1.0
	baz=233						
TWD	Chiawan	1.51	222	*e*P	Pn	20 55 28.9	+0.2
	baz=218						
TWD				*e*S	S	20 55 53.9	-1.0
	baz=218						
HATJ	Hateruma jima	1.53	139	*e*S	S	20 55 55.0	-0.2
JKRS	Kuro-shima	1.54	129	P	Pn	20 55 29.4	+0.4
JKRS				S	S	20 55 55.0	-0.3
JIJ	Ishigaki jima	1.56	122	P	Pn	20 55 29.0	-0.2
JIJ				S	S	20 55 54.2	-1.5
JISG	Ishigakijimahi	1.59	113	P	Pn	20 55 29.0	-0.4
JISG				S	S	20 55 55.4	-0.8
LIOB	Emei	1.63	250	P	Pn	20 55 29.6	-0.2
	baz=240						
LIOB				S	S	20 55 56.0	-0.8
	baz=240						
FUSS	Fushou	1.63	234	P	Pn	20 55 30.5	+0.4
	baz=227						
FUSS				*e*S	S	20 55 56.8	-0.6
	baz=227						
NSTT	Nanjuang	1.65	250	*e*P	Pn	20 55 29.5	-0.5
	baz=240						
NSTT				*e*S	S	20 55 55.5	-1.6
	baz=240						
TWT	Tachien	1.68	236	*e*P	Pn	20 55 30.5	0.0
	baz=236						
TWT				*e*S	S	20 55 58.0	-0.1
	baz=236						
TDCB	Techi	1.69	236	*e*P	Pn	20 55 31.2	+0.6
	baz=238						
TDCB				*e*S	S	20 55 57.8	-0.4
	baz=238						
CHGB	Renai	1.80	231	*e*P	Pn	20 55 32.5	+0.8
	baz=229						
CHGB				*e*S	S	20 56 00.3	+0.1
	baz=229						
ESL	Shilin	1.81	220	*e*P	Pn	20 55 30.8	-0.8
	baz=222						
WHP	Taichung City	1.84	240	*e*P	Pn	20 55 31.9	-0.1
	baz=237						
WHP				*e*S	S	20 55 59.9	-0.8
	baz=237						
OWD	Renai	1.87	228	*e*P	Pn	20 55 32.8	+0.5
	baz=224						
OWD				*e*S	S	20 56 00.7	-0.6
	baz=224						
JTJ	Tarama	1.91	107	P	Pn	20 55 33.1	+0.6
JTJ				S	S	20 56 01.2	-0.4
WCS	Beigang Elemen	1.99	235	*e*P	Pn	20 55 33.4	+0.1
	baz=233						
WCS				*e*S	S	20 56 02.4	-0.8
	baz=233						
VWDT	VWDT	2.03	225	*e*P	Pn	20 55 34.5	+0.8
	baz=218						
VWDT				*e*S	S	20 56 04.2	+0.3
	baz=218						
HGSD	Ruisui	2.07	214	*e*P	Pn	20 55 34.3	+0.2
	baz=222						
HGSD				*e*S	S	20 56 05.3	+0.6
	baz=222						
SMLT	Sun Moon Lake	2.10	231	*e*S	S	20 56 05.9	+0.4
	baz=229						
EHY	Hungye	2.11	217	*e*P	Pn	20 55 34.4	-0.3
	baz=216						
TYC	Yuchr	2.12	233	*e*P	Pn	20 55 33.9	-0.8
	baz=230						
TYC				*e*S	S	20 56 05.6	0.0
	baz=230						
SSLB	Suanglung	2.13	229	*e*P	Pn	20 55 35.5	+0.6
	baz=235						
SSLB				*e*S	S	20 56 05.7	-0.2
	baz=235						
YULB	Yu-li	2.22	215	*e*P	Pn	20 55 35.2	-0.5
	baz=215						
YULB				*e*S	S	20 56 05.3	-2.2
	baz=215						
EYUL	Yuli	2.24	214	*e*P	Pn	20 55 35.8	-0.3
	baz=219						
JIRB	Irabujima	2.28	99	P	Pn	20 55 36.7	+0.3
JIRB				S	S	20 56 07.1	-1.5
JIKM	Ikemajima	2.33	97	P	Pn	20 55 37.5	+0.6
JIKM				S	S	20 56 08.9	-0.7
FULB	Fuli	2.38	213	*e*P	Pn	20 55 37.6	0.0
	baz=213						
FULB				*e*S	S	20 56 09.8	-0.9
	baz=213						
JMJ2	Miyako jima3	2.43	101	P	Pn	20 55 38.6	+0.5
JMJ2				S	S	20 56 10.6	-1.0
CHN5	Tsauling	2.44	229	*e*S	S	20 56 12.3	+0.2
	baz=233						
WRL	Guolierlin Hig	2.48	239	*e*P	Pn	20 55 38.1	-0.5
	baz=236						
WRL				*e*S	S	20 56 11.5	-1.1
	baz=236						
WDLH	Douliu	2.48	233	*e*S	S	20 56 12.3	-0.3
	baz=231						
ELDTW	Lidau	2.53	218	*e*P	Pn	20 55 40.5	+1.2
	baz=214						

EDH	Donghe	2.57	210	*e*S	S	20 56 14.3	-0.2
	baz=207						
WTK	Tuku	2.59	235	*e*P	Pn	20 55 39.6	-0.2
	baz=238						
WTK				*e*S	S	20 56 14.1	-0.8
	baz=238						
CHN4	Tsaushan	2.67	226	*e*P	Pn	20 55 39.6	-1.1
	baz=225						
CHN4				*e*S	S	20 56 14.9	-1.6
	baz=225						
TPUB	Ta-pu	2.68	225	*e*P	Pn	20 55 38.7	-2.2
	baz=229						
TPUB				*e*S	S	20 56 16.7	-0.1
	baz=229						
STYH	Taoyuan	2.69	221	*e*S	S	20 56 17.3	+0.5
	baz=227						
WTP	Ta-pu	2.73	225	*e*S	S	20 56 17.4	-0.4
	baz=229						
WSF	Szhu	2.75	236	*e*S	S	20 56 18.2	+0.2
	baz=233						
TWK	Hsinying	2.79	227	*e*S	S	20 56 19.4	+0.2
	baz=225						
TWG	Pinlang	2.81	212	*e*S	S	20 56 17.1	-2.3
	baz=214						
SNST	Tainan City	2.82	226	*e*S	S	20 56 19.2	-0.4
	baz=225						
SGST	Jiashian	2.87	223	*e*S	S	20 56 20.5	-0.1
	baz=227						
SLGT	Liugui	2.90	221	*e*P	Pn	20 55 43.9	+0.5
	baz=224						
SLGT				*e*S	S	20 56 22.4	+1.1
	baz=224						
PHUB	P'eng-hu	3.31	240	*e*S	S	20 56 28.1	-2.0
	baz=237						

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*IDC **09** 21:02:06.1±0.9, 4°.11S×129°.63E, h0^{km}, mb4.2/7, mb1 4.2/12, mb1mx4.0/32, mbtmp4.1/12, ML3.8/5, MS3.1/5, Ms1 3.1/5, ms1mx2.8/33, Error ellipse: s-maj=28.4km s-min=18.0km az=94.0*

*NEIC **09** 21:02:08.8±1.8, 4°.05S±0°.07×129°.66E±0°.07, h10^{km}±1^{km}, mb4.4/24, Error ellipse: s-maj=12.5km s-min=11.7km az=129.0*

*DJA **09** 21:02:09.9±0.7, 4°S±7°×12°9E±°, h10^{km}, M4.0/6, MLv4.0/6*

ISC 09 21:02:11.8±0.5**, 4°.09S**±0°.05×**129°.51E**±0°.05**, h36^{km}, n66, σ1^{s}.23**/63**, mb4.3**/16**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.59	137	P	Pn	21 02 22.6	-1.1
MSAI	Masohi	0.94	322	P	Pn	21 02 27.2	-1.2
MSAI				S	Sn	21 02 38.8	-1.8
AAI	Ambon	1.37	287	P	Pn	21 02 32.6	-1.7
FAKI	Fak Fak	2.97	67	P	Pn	21 02 57.7	+1.3
FAKI	Fak Fak	2.97	67	Pn	Pn	21 02 53.7	-2.7
FAKI	Fak Fak	2.97	67	P	Pn	21 02 58.0	+1.6
SIJI	Sorong	3.65	29	Pn	Pn	21 03 05.2	-0.6
	9.5nm,0.3s,baz=218,slow=23,SNR=24						
SIJI				Sn	Sn	21 03 48.5	+1.0
	24nm,0.3s,baz=127,slow=20,SNR=9.2						
SIJI				LR	LR	21 04 57.1	
	comp=Z,245nm,19.2s,baz=290,slow=47						
SWI	Sorong	3.65	29	P	Pn	21 03 07.1	+1.4
LBMI	Labuha	3.97	330	P	Pn	21 03 15.3	+5.2
SANI	Sanana	4.05	300	P	Pn	21 03 11.4	+0.1
SANI	Sanana	4.05	300	P	Pn	21 03 11.8	+0.5
BATI	Baumata	8.40	223	LR	LR	21 07 51.4	
	comp=Z,204nm,18.2s,baz=68,slow=41						
MTN	Manton Dam	8.85	170	Pn	Pn	21 04 17.8	+0.7
KDU	Kakadu	9.03	161	P	Pn	21 04 20.5	+0.8
BKSI	Bulukumba	9.43	262	P	Pn	21 04 43.3	+18
KAPI	Kappang	9.77	264	Pn	Pn	21 04 31.2	+1.5
	1.3nm,0.3s,baz=162,slow=6.4,SNR=4.8						
KAPI	Kappang	9.77	264		Pn	21 04 31.8	+2.0
KNRA	Kununurra	11.54	184	Pn	Pn	21 04 54.9	+0.9
KNRA	Kununurra	11.54	184	P	Pn	21 04 54.4	+0.4
DAV	Davao City (W)	11.76	341	LR	LR	21 10 27.9	
	comp=Z,46nm,21.2s,baz=148,slow=42						
FITZ	Fitzroy Crossi	14.43	195	Pn	Pn	21 05 31.2	-2.3
	0.1nm,0.3s,baz=40,slow=5.6,SNR=2.0						
JAGI	Jajag, Banyuwa	15.87	253		P	21 05 55.6	-0.3
JAGI				IAmb	IAmb	21 06 02.1	
	comp=Z,40nm,1.4s						
WB0	Warramunga Arr	16.30	163		Pn	21 05 55.3	-2.7
WRA	Warramunga Arr	16.45	164	Pn	Pn	21 05 56.9	-3.0
	comp=Z,0.5nm,0.3s,baz=339,slow=13,SNR=14						
WRA	Warramunga Arr	16.45	164		Pn	21 05 57.7	-2.3
COEN	Coen	16.67	127	Pn	Pn	21 06 00.6	-2.1
COEN	Coen	16.67	127	P	P	21 06 04.8	0.0
QIS	Mount Isa	19.10	150	P	Pn	21 06 32.4	-0.2
MBWA	Marble Bar	19.45	208	P	Pn	21 06 36.0	-0.8
PSA00	Pilbara Seismi	19.75	208	P	Pn	21 06 39.9	-0.4
PSA00				IAmb	IAmb	21 06 41.0	
	comp=Z,18nm,0.9s						
PSA00	Pilbara Seismi	19.75	208	P	Pn	21 06 39.4	-1.0
PSA00				IAmb	IAmb	21 06 40.8	
	comp=Z,9.5nm,0.9s						
PSA00	Pilbara Seismi	19.75	208	P	Pn	21 06 40.1	-0.2
AS31	Alice Springs	19.92	168	P	P	21 06 40.6	+0.1
ASAR	Alice Springs	19.92	168	P	P	21 06 39.6	-0.9
	comp=Z,1.1nm,0.3s,baz=347,slow=10,SNR=43						
ASAR				PcP	PcP	21 10 57.2	+0.4
	comp=Z,0.3nm,0.3s,baz=349,slow=1.9,SNR=9.9						
ASAR	Alice Springs	19.92	168	P	Pn	21 06 41.4	-1.0
WRKA	Warakurna	20.86	183	P	Pn	21 06 51.9	-1.5
CTAO	Charters Tower	22.79	136	P	P	21 07 12.3	+0.9
CTAO				IAmb	IAmb	21 07 25.7	
	comp=Z,9.2nm,1.1s						
OOD	Oodnadatta	24.30	167	P	P	21 07 26.4	+0.5
BBOO	Buckleboo	29.23	169	P	P	21 08 10.1	-0.1
IPM	Ipoh	29.70	286	P	P	21 08 15.1	+0.4
STKA	Stephens Creek	29.89	159	P	P	21 08 16.4	+0.3
CM31	Chiang Mai Arr	37.53	308	P	P	21 09 23.7	+1.0
CM31				IAmb	IAmb	21 09 32.7	
	comp=Z,5.6nm,1.1s						
CMAR	Chiang Mai Arr	37.53	308	P	P	21 09 23.7	+1.0
	comp=Z,1.8nm,0.8s,baz=140,slow=7.5,SNR=16						
CHTO	Chiang Mai	37.73	308	P	P	21 09 25.6	+1.2
CHTO				IAmb	IAmb	21 09 26.7	
	comp=Z,4.5nm,0.8s						
JWT	Wachi	39.55	8	P	P	21 09 41.0	+1.6
JWT				IAmb	IAmb	21 09 49.3	
	comp=Z,11nm,0.9s						
DZM	Mont Dzumac	40.00	120	LR	LR	21 26 44.7	
	comp=Z,48nm,18.0s,baz=20,slow=37						
MJAR	Matsushiro Arr	41.23	11	P	P	21 09 52.4	-0.9
	comp=Z,3.5nm,0.7s,baz=180,slow=9.3,SNR=6.9						
KSRS	Korea Array	41.35	358	P	P	21 09 53.1	-1.1
	comp=Z,0.9nm,0.6s,baz=176,slow=9.3,SNR=4.5						
KSRS				LR	LR	21 29 16.3	
	comp=Z,11nm,18.6s,baz=355,slow=39						
MSVF	Nonsavu	49.40	110	P	P	21 10 55.4	-3.0
SONM	Songino Array	55.54	341	P	P	21 11 43.2	-0.3
	comp=Z,0.8nm,0.7s,baz=148,slow=8.7,SNR=5.0						
SONM	Songino Array	55.54	341	P	P	21 11 43.2	-0.3
SONM				IAmb	IAmb	21 11 45.9	
	comp=Z,2.6nm,1.2s						
MK31	Makanchi Array	65.54	326	P	P	21 12 52.5	+0.8
MK31				IAmb	IAmb	21 12 53.2	
	comp=Z,3.7nm,0.9s						
MKAR	Makanchi Array	65.54	326	P	P	21 12 52.4	+0.7
	comp=Z,2.7nm,0.5s,baz=112,slow=7.8,SNR=74						
MAKZ	Makanchi	65.72	326	P	P	21 12 53.6	+0.7
MAKZ				IAmb	IAmb	21 12 54.3	
	comp=Z,5.4nm,1.1s						
YAK	Yakutsk	65.93	0	P	P	21 12 53.9	+0.1
ZAA0	Zalesovo Array	68.77	334	P	P	21 13 11.9	-0.1
ZAA0				IAmb	IAmb	21 13 13.1	
	comp=Z,2.1nm,0.7s						
ZALV	Zalesovo Beam	68.77	334	P	P	21 13 11.2	-0.8
	comp=Z,0.8nm,0.3s,baz=90,slow=4.9,SNR=5.6						
ZALV	Zalesovo Beam	68.77	334	P	P	21 13 11.9	-0.1
SEY	Seymchan	69.06	11	P	P	21 13 14.1	+0.6
	comp=Z,3.7nm,0.7s,baz=199,slow=18,SNR=6.7						
KURK	Kurchatov	69.80	328	P	P	21 13 18.8	+0.5
BRVK	Borovoye	75.43	328	P	P	21 13 52.3	+0.4
BRVK				IAmb	IAmb	21 13 54.0	
	comp=Z,4.1nm,0.9s						
ABKAR	Akbulak array	79.94	321	P	P	21 14 17.5	+0.4
ABKAR	Akbulak array	79.94	321	P	P	21 14 17.5	+0.4
ABKAR				IAmb	IAmb	21 14 18.5	
	comp=Z,4.2nm,1.0s						
RAYN	Ar Rayn	86.13	294	P	P	21 14 50.6	+0.8
TORD	Torodi Ar. Bea	127.71	283	PKP	PKPdf	21 21 13.8	-0.6
	comp=Z,0.5nm,0.6s,baz=81,slow=2.6,SNR=3.8						
TORD	Torodi Ar. Bea	127.71	283		PKiKP	21 21 15.4	+0.4

IDC 09 21:04:59.6±4.7**, 28°.30N**×**142°.13E, h0^{km}, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.2**/46**, mbtmp3.6**/4**, ML3.1**/1**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.6**/37**, Error ellipse: s-maj=192.4km s-min=26.9km az=75.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	8.86	339	Pn	Pn	21 07 08.7	-0.3
	0.2nm,0.3s,baz=158,slow=11,SNR=13						
GUMO	Guam	14.86	170	LR	LR	21 13 10.8	
	comp=Z,386nm,20.6s,baz=303,slow=33						
WRA	Warramunga Arr	48.55	190	P	P	21 13 44.4	-0.3
	0.7nm,0.5s,baz=12,slow=8.4,SNR=14						
MKAR	Makanchi Array	49.68	309	P	P	21 13 53.1	-0.2
	0.3nm,0.5s,baz=93,slow=9.5,SNR=1.1						
ASAR	Alice Springs	52.27	190	P	P	21 14 13.2	+0.3
	0.3nm,0.8s,baz=354,slow=10,SNR=1.8						

NNC 09 21:07:04.4±11.0**, 38°.54N**×**73°.14E, h0^{km}, mb3.6, mpv3.1, 1C-3D, Error ellipse: s-maj=89.2km s-min=61.6km az=167.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.22	14	Pn	Pn	21 08 10.6	+0.5
	3.6nm,0.5s						
AAK				Lg	Lg	21 09 14.8	
	6.2nm,0.8s						
TKM2	Tokmak 2	4.76	22	⇑Pg	Pg	21 08 35.3	-0.3
	1.5nm,0.6s						
TKM2				⇓Lg	Lg	21 09 38.9	
	3.6nm,0.8s						
KK07	Karatay Array	4.97	337	⇓Sn	Sn	21 09 20.3	+1.8
	2.7nm,0.6s,baz=152,slow=28						
KK09	Karatay Array	5.00	337	⇓Pn	Pn	21 08 17.0	-3.7
	1.1nm,0.4s,baz=149,slow=12						

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*IDC **09** 21:22:19.8±6.4, 22°.43S×178°.69W, h636^{km}±75^{km}, mb3.0/4, mb1 3.2/6, mb1mx2.9/30, mbtmp4.2/6, Error ellipse: s-maj=176.3km s-min=27.7km az=67.0*

ISC 09 21:22:22.6±1.8**, 22°.7S**±0°.1×**179°.4W**±0°.2**, h600^{km}, n7, σ1^{s}.02**/8**, mb3.9**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.51	334	P	P	21 23 59.3	-0.6
	3.5nm,0.3s,baz=255,slow=23,SNR=14						
RAO	Raoul Island	6.64	169	P	P	21 24 10.3	+1.0
	72nm,0.3s,baz=359,slow=16,SNR=4.3						
URZ	Urewera	15.79	190	P	P	21 25 36.7	-1.2
	2.3nm,0.3s,baz=120,slow=24,SNR=11						
URZ				S	S	21 28 15.6	-1.3
	0.5nm,0.3s,baz=124,slow=23,SNR=1.7						
CTA	Charters Tower	32.07	268	P	P	21 28 02.2	0.0
	3.3nm,0.5s,baz=101,slow=7.4,SNR=1.5						
STKA	Stephens Creek	35.71	247	P	P	21 28 33.0	+0.6
	1.3nm,0.5s,baz=99,slow=9.9,SNR=4.5						
ASAR	Alice Springs	42.81	259	P	P	21 29 30.1	+0.6
	1.6nm,0.8s,baz=92,slow=8.3,SNR=15						
WRA	Warramunga Arr	43.08	265	P	P	21 29 31.4	-0.1
	1.3nm,0.3s,baz=95,slow=8.4,SNR=64						

IDC 09 21:22:35.2±2.1**, 4°.27S**×**130°.30E, h0^{km}, mb3.3**/1**, mb1 3.5**/3**, mb1mx3.2**/49**, mbtmp3.3**/3**, ML3.0**/2**, Error ellipse: s-maj=163.6km s-min=12.4km az=71.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.07	166	Pn	Pn	21 26 21.3	-1.4
	0.0nm,0.3s,baz=348,slow=12,SNR=2.6						
ASAR	Alice Springs	19.59	170	P	P	21 27 05.3	+0.2
	0.1nm,0.3s,baz=349,slow=12,SNR=12						
MKAR	Makanchi Array	66.13	326	P	P	21 33 24.3	-0.1
	0.1nm,0.3s,baz=115,slow=6.6,SNR=4.6						

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*IDC **09** 21:29:53.2±4.0, 36°.30N×71°.10E, h125^{km}±31^{km}, mb3.5/6, mb1 3.4/12, mb1mx3.1/63, mbtmp3.7/12, Error ellipse: s-maj=31.9km s-min=21.2km az=174.0*

*NNC **09** 21:29:58.9±2.4, 36°.72N×70°.84E, h122^{km}±41^{km}, mb3.2, mpv3.9, Error ellipse: s-maj=19.3km s-min=18.1km az=172.0*

ISC 09 21:29:56.4±1.2**, 36°.5N**±0°.1×**70°.98E**±0°.10**, h150^{km}, n24, σ1^{s}.13**/28**, mb3.9**/6**, 3C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	6.00	20	P	Pn	21 31 23.5	+0.2
	SNR=90						
UCH	Uchtor	6.34	24	P	Pn	21 31 28.8	+0.8
	SNR=6.2						
EKS2	Erkin-Say	6.52	18	P	Pn	21 31 30.6	+0.6
	SNR=24						
KK08	Karatay Array	6.61	357	⇓P	Pn	21 31 30.7	-0.3
	6.4nm,0.4s						
KK08				⇓S	Sn	21 32 42.2	-3.1
	8.8nm,0.7s						
AAK	Ala-Archa	6.70	23	P	Pn	21 31 32.3	-0.2
	1.6nm,0.3s,baz=181,slow=7.6,SNR=19						
AAK				S	Sn	21 32 47.3	-0.5
	1.2nm,0.3s,baz=17,slow=23,SNR=10						
AAK	Ala-Archa	6.70	23	P	Pn	21 31 33.1	+0.6
	SNR=6.6						
AAK	Ala-Archa	6.70	23	P	Pn	21 31 32.6	+0.2
	2.5nm,0.4s						
AAK				⇓S	Sn	21 32 47.3	-0.5
	9.4nm,0.7s						
USP	Ospenovka	7.28	21	P	Pn	21 31 40.4	+0.3
	SNR=11						
TKM2	Tokmak 2	7.33	28	⇑P	Pn	21 31 41.3	+0.4
	2.8nm,0.5s						
TKM2				⇓S	Sn	21 33 01.8	-1.2
	4.4nm,0.7s						
GEYT	Alibeck	10.36	282	P	Pn	21 32 19.2	-1.9
	0.2nm,0.3s,baz=91,slow=12,SNR=1.6						
MKAR	Makanchi Array	13.30	36	P	Pn	21 32 59.0	-0.2
	0.1nm,0.3s,baz=225,slow=14,SNR=3.6						
AB31	Akbulak array	15.07	331	⇑P	Pn	21 33 21.5	+0.1
	0.5nm,0.3s,baz=148,slow=11,SNR=34						
KURBB	Kurchatov Arra	15.12	19	P	P	21 33 23.2	-0.5
	0.0nm,0.3s,baz=210,slow=10,SNR=9.4						
BVAR	Borovoye Array	16.53	359	P	P	21 33 39.6	+0.4
	0.3nm,0.3s,baz=194,slow=18,SNR=9.2						
AKTO	Aktyubinsk	16.77	330	P	P	21 33 43.2	+1.3
	0.3nm,0.3s,baz=128,slow=9.8,SNR=4.4						
AKTO	Aktyubinsk	16.77	330	⇑P	Pn	21 33 43.9	+1.7
	0.7nm,0.5s						
ZALV	Zalesovo Beam	19.92	25	P	P	21 34 16.6	+0.5
	1.2nm,0.5s,baz=214,slow=12,SNR=4.2						
BELG	Belogornoye	22.88	321	P	P	21 34 48.6	+1.9
	1.5nm,0.4s,baz=102,slow=19,SNR=1.7						
FINES	FINESS Array B	37.47	326	P	P	21 36 56.3	+1.4
	3.3nm,1.0s,baz=119,slow=12,SNR=1.1						
ARCES	ARCESS Array B	41.14	338	P	P	21 37 26.8	+1.5
	3.8nm,1.0s,baz=101,slow=2.5,SNR=3.5						
YAK	Yakutsk	43.97	35	P	P	21 37 47.6	-0.6
	7.8nm,0.3s,baz=193,slow=2.3,SNR=6.3						
NB2	NORSAR Subarra	44.37	323	P	P	21 37 52.2	+0.8
	comp=Z,0.6nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.37	323	P	P	21 37 51.7	+0.3
	comp=Z,0.7nm,0.6s,baz=97,slow=7.9,SNR=3.4						
WRA	Warramunga Arr	82.00	122	P	P	21 41 58.7	-1.1
	comp=Z,0.4nm,0.9s,baz=306,slow=3.0,SNR=2.4						

IDC 09 21:32:55.9±2.2**, 3°.58S**×**130°.90E, h0^{km}, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.4**/31**, mbtmp3.5**/4**, ML3.1**/1**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.6**/32**, Error ellipse: s-maj=178.0km s-min=7.2km az=73.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.61	169	Pn	Pn	21 36 48.6	-1.6
	0.1nm,0.3s,baz=348,slow=13,SNR=6.2						
ASAR	Alice Springs	20.18	172	P	P	21 37 32.2	0.0
	1.2nm,0.5s,baz=347,slow=9.9,SNR=22						
ASAR				LR	LR	21 47 15.4	
	comp=Z,109nm,18.5s,baz=342,slow=43						
MKAR	Makanchi Array	65.90	326	P	P	21 43 43.6	0.0
	0.2nm,0.5s,baz=122,slow=7.0,SNR=6.1						
KURBB	Kurchatov Arra	70.10	328	P	P	21 44 09.7	-0.2
	0.5nm,0.6s,baz=128,slow=5.8,SNR=5.8						

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*FUNV **09** 21:41:13.2, 8°.44N×71°.44W, h5^{km}, MW3.5*

ISC 09 21:41:12.4±1.3**, 8°.52N**±0°.04×**71°.41W**±0°.03**, h4^{km}**±11^{km}**, n24, σ1^{s}.12**/48**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	Socops	0.60	113	*e*P	Pg	21 41 23.6	-0.4
SOCV				*e*S	Sg	21 41 31.7	-0.1
SOCV	Socops	0.60	113	*e*P	Pg	21 41 23.8	-0.2
SOCV				*e*S	Sg	21 41 32.3	+0.5
SDV	Santo Domingo	0.85	65	*e*P	Pg	21 41 29.0	+0.2
SDV				*e*S	Sg	21 41 40.0	+0.2
CAPV	Capacho	1.11	234	*e*P	Pg	21 41 32.7	-1.0
CAPV				*e*S	Sg	21 41 47.1	-1.0
TORV	Torococo	1.56	48	*e*P	Pn	21 41 41.0	-0.1
TORV				*e*S	Sn	21 42 01.6	-0.3
PAMC	Pamplona, Colo	1.73	227	*e*P	Pb	21 41 45.1	-0.1
PAMC				*e*S	Sg	21 42 08.2	0.0
MCQV	Machiques	1.88	324	*e*P	Pn	21 41 45.8	+0.3
MCQV				*e*S	Sn	21 42 10.1	+0.4
OCAC	Ocana	1.91	262	*e*P	Pn	21 41 46.8	+0.9
OCAC				*e*S	Sb	21 42 12.2	-0.1
TAMC	Tame, Arauca	2.11	190	*e*P	Pb	21 41 51.5	+0.2
TAMC				*e*S	Sg	21 42 19.5	-0.8
DABV	Dabajuro	2.50	18	*e*P	Pn	21 41 54.9	+0.9
DABV				*e*S	Sn	21 42 25.6	+0.5
BARC	Barichara	2.60	223	*e*P	Pb	21 42 00.6	+0.7
BARC				*e*S	Sb	21 42 33.6	+1.4
SIQV	Siquisique	2.64	37	*e*P	Pn	21 41 57.2	+1.3
SIQV				*e*S	Sn	21 42 29.2	+0.7
SMLC	San Martn de	2.64	276	*e*P	Pn	21 41 55.9	-0.1
SMLC				*e*S	Sb	21 42 32.8	-0.5
BRRC	Barranca, Sant	2.68	238	*e*P	Pn	21 41 56.5	+0.1
BRRC				*e*S	Sb	21 42 34.9	+0.7
CRJC	Cerrejon, Guaj	2.87	330	*e*P	Pn	21 42 00.2	+1.1
CRJC				*e*S	Sn	21 42 34.1	-0.2
MAPV	Macapo	3.19	66	*e*P	Pn	21 42 04.5	+1.0
MAPV				*e*S	Sn	21 42 41.5	-0.6
URIC	Uribia, Colomb	3.21	350	*e*P	Pn	21 42 03.0	-0.7
URIC				*e*S	Sn	21 42 39.2	-3.3
ZARC	Zaragoza, Cauc	3.56	254	*e*P	Pn	21 42 09.1	+0.5
ZARC				*e*S	Sn	21 42 49.4	-1.8
PTBC	PUERTO BERRIO,	3.60	237	*e*P	Pn	21 42 08.8	-0.4
PTBC				*e*S	Sb	21 43 02.4	+1.4
MONV	Montecano	3.69	22	*e*P	Pn	21 42 11.2	+0.8
MONV				*e*S	Sn	21 42 52.7	-1.7
SPBC	San Pablo de B	3.89	223	*e*P	Pn	21 42 14.5	+1.4
SPBC				*e*S	Sn	21 42 59.8	+0.5
SJCC	San Jacinto, C	3.96	290	*e*P	Pn	21 42 15.7	+1.6
SJCC				*e*S	Sn	21 43 02.2	+1.1
BENV	Beln	4.03	69	*e*P	Pn	21 42 15.1	+0.1
BENV				*e*S	Sn	21 43 01.3	-1.5
BIRV	Birongo	5.43	69	*e*P	Pn	21 42 34.9	+0.6
BIRV				*e*S	Sn	21 43 33.6	-3.7

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*IDC **09** 21:41:53.0±1.1, 2°.80S×129°.55E, h0^{km}, mb3.9/5, mb1 4.1/8, mb1mx3.7/41, mbtmp4.0/8, ML3.8/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/33, Error ellipse: s-maj=30.8km s-min=18.8km az=83.0*

*DJA **09** 21:41:54.1±0.4, 3°S±3°×12°9E±°, h10^{km}, M4.2/8, mb4.6/6, mB4.9/2, MLv3.9/8, Mw(mB)4.2/2*

*NEIC **09** 21:41:57.7±1.1, 2°.86S±0°.07×129°.61E±0°.07, h32^{km}±6^{km}, mb4.1/12, Error ellipse: s-maj=11.1km s-min=9.2km az=212.0*

ISC 09 21:41:56.6±0.6**, 2°.92S**±0°.05×**129°.50E**±0°.06**, h28^{km}, n39, σ1^{s}.27**/40**, mb4.0**/9**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	0.70	234	P	Pb	21 42 08.8	-1.5
MSAI				S	Sb	21 42 17.5	-2.2
AAI	Ambon	1.50	240	P	Pn	21 42 14.1	-7.6
SIJI	Sorong	2.70	41	Pn	Pn	21 42 37.1	-1.1
	20nm,0.3s,baz=128,slow=23,SNR=112						
SIJI				Sn	Sn	21 43 07.3	-2.7
	23nm,0.3s,baz=324,slow=17,SNR=5.1						
SWI	Sorong	2.70	41	P	Pn	21 42 37.7	-0.5
FAKI	Fak Fak	2.75	90	P	Pn	21 42 38.8	0.0
FAKI	Fak Fak	2.75	90		Pn	21 42 37.6	-1.3
LBMI	Labuha	3.02	319	P	Pn	21 42 42.3	-0.3
SANI	Sanana	3.61	284	P	Pn	21 42 49.5	-1.2
TNTI	Ternate	4.24	330	P	Pn	21 42 58.9	-0.5
TNTI	Ternate	4.24	330	Pn	Pn	21 42 59.7	+0.3
APSI	Ampana	8.09	284	P	Pn	21 43 53.3	+1.0
	834nm76nm,0.8s						
MRSI	Marisa	8.27	294	P	Pn	21 43 52.9	-1.9
	39nm,0.6s						
BSSI	Bau Bau, Buton	9.53	250	P	Pn	21 44 12.4	+0.4
	29nm,0.8s						
TOLI2	Tolitoli	9.59	295		Pn	21 44 13.5	+0.7
BKSI	Bulukumba	9.65	255	P	Pn	21 44 12.8	-0.8
	17nm,0.8s						
MPSI	Mapaga	10.13	289	P	Pn	21 44 18.3	-1.9
KNRA	Kununurra	12.69	183		Pn	21 44 56.9	+1.5
FITZ	Fitzroy Crossi	15.55	194	Pn	Pn	21 45 34.5	+0.6
	0.1nm,0.3s,baz=9.1,slow=12,SNR=3.4						
JAGI	Jajag, Banyuwa	16.23	250		P	21 45 45.8	+0.2
JAGI				IAmb	IAmb	21 46 04.2	
	comp=Z,15nm,1.0s						
COEN	Coen	17.40	130	Pn	Pn	21 45 56.5	-1.0
COEN				IAmb	IAmb	21 46 22.4	
	comp=Z,24nm,1.4s						
WB0	Warramunga Arr	17.41	164		Pn	21 45 57.0	-0.7
WRA	Warramunga Arr	17.56	165	P	P	21 46 01.3	+0.9
	comp=Z,0.6nm,0.3s,baz=342,slow=13,SNR=14						
WRA				S	Sn	21 49 12.3	-2.1
	comp=Z,0.1nm,0.3s,baz=347,slow=17,SNR=2.8						
WRA	Warramunga Arr	17.56	165		P	21 46 01.4	+1.0
PMG	Port Moresby	18.70	111	LR	LR	21 54 27.7	
	comp=Z,76nm,19.1s,baz=268,slow=40						
ASAR	Alice Springs	21.06	169	P	P	21 46 41.1	+2.5
	comp=Z,7.2nm,0.6s,baz=347,slow=9.7,SNR=24						
ASAR				S	S	21 50 30.4	-1.4
	comp=Z,1.0nm,0.7s,baz=345,slow=21,SNR=5.0						
STKA	Stephens Creek	30.97	160	P	P	21 48 11.9	+0.3
	comp=Z,0.5nm,0.3s,baz=351,slow=13,SNR=2.0						
STKA	Stephens Creek	30.97	160	IAmb	IAmb	21 48 16.9	
	comp=Z,1.8nm,1.5s						
GSI	Gunungsitoli	32.19	277	P	P	21 48 23.1	+0.6
CMAR	Chiang Mai Arr	36.83	306	P	P	21 49 03.6	+1.0
	comp=Z,0.6nm,0.3s,baz=74,slow=14,SNR=1.5						
MK31	Makanchi Array	64.57	326	P	P	21 52 30.7	-0.6
MK31				IAmb	IAmb	21 52 33.4	
	comp=Z,1.3nm,1.1s						
MKAR	Makanchi Array	64.57	326	P	P	21 52 31.6	+0.2
	comp=Z,0.6nm,0.6s,baz=123,slow=8.2,SNR=3.9						
MKAR	Makanchi Array	64.57	326	P	P	21 52 31.4	+0.1
MAKZ	Makanchi	64.76	326	P	P	21 52 32.2	-0.3
MAKZ				IAmb	IAmb	21 52 45.1	
	comp=Z,3.3nm,1.3s						
ZALV	Zalesovo Beam	67.73	333	P	P	21 52 50.8	-0.6
	comp=Z,0.4nm,0.3s,baz=116,slow=3.4,SNR=1.6						
KURK	Kurchatov	68.81	328	P	P	21 52 59.0	+0.8
VNDA	Vanda	76.53	173	P	P	21 53 44.3	+0.6
VNDA				IAmb	IAmb	21 53 50.0	
	comp=Z,2.7nm,1.4s						
SBA	Scott Base	77.41	172	P	P	21 53 51.5	+2.8
ABKAR	Akbulak array	79.03	321	P	P	21 53 58.6	+0.5
ABKAR	Akbulak array	79.03	321	P	P	21 53 58.8	+0.7
ABKAR				IAmb	IAmb	21 54 04.8	
	comp=Z,4.1nm,1.4s						

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*ISN **09** 21:45:29.4±0.8, 35°.34N×44°.77E, h17^{km}±191^{km}, ML3.4*

*TEH **09** 21:45:30.2, 35°.30N×44°.75E, h12^{km}, ML3.3*

ISC 09 21:45:30.3±1.0**, 35°.27N**±0°.04×**44°.63E**±0°.07**, h10^{km}, n23, σ0^{s}.61**/28**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKRK	Kirkuk	0.27	299	*e*Pg	Pb	21 45 37.0	-0.4
IKRK				*e*Sg	Sb	21 45 41.7	-0.4
IKRK				AML	AML	21 45 43.1	
	comp=N,3µm,0.4s						
IKRK				AML	AML	21 45 43.7	
	comp=E,4µm,0.5s						

IDHR	**Dehrash**	**1.55**	**111**	ePg	**Pn**	**21 45 58.0**	**-0.2**
IDHR				eSg	**Sn**	**21 46 18.5**	**+0.1**
IDHR				e		21 46 22.3	
	comp=Z,5µm,0.3s						
MAHB	**Mahabad**	**1.73**	**30**	ePn	**Pn**	**21 46 00.9**	**+0.3**
MAHB				e		21 46 32.7	
	comp=Z,4µm,0.4s						
IGHG	**Ghaleghazi**	**1.85**	**120**	ePn	**Pn**	**21 46 02.9**	**+0.6**
IGHG				e		21 46 33.3	
	comp=Z,4µm,0.6s						
ILIN	**Lien**	**1.94**	**100**	ePn	**Pn**	**21 46 03.3**	**-0.3**
ILIN				e		21 46 43.5	
	comp=Z,2µm,0.8s						
BHD	**Baghdad**	**2.00**	**186**	ePn	**Pb**	**21 46 06.0**	**-0.8**
BHD				eSn	**Sb**	**21 46 32.0**	**+0.2**
KCHF	**Cheshme Sefid,**	**2.22**	**116**	e		21 46 13.1	
	comp=Z,3µm,0.4s						
KCHF				ePn	**Pn**	**21 46 07.8**	**+0.5**
KER	**Kermanshah**	**2.24**	**112**	ePn	**Pn**	**21 46 08.0**	**+0.4**
IBDR	**Badra**	**2.41**	**153**	ePn	**Pn**	**21 46 10.0**	**+0.3**
IBDR				eSn	**Sn**	**21 46 40.0**	**+0.8**
IAZR	**Azarshahr**	**2.64**	**24**	ePn	**Pn**	**21 46 14.2**	**+1.0**
IAZR				e		21 47 04.2	
	comp=Z,4µm,0.6s						
IBST	**Bostanabad**	**3.04**	**36**	ePn	**Pn**	**21 46 19.2**	**+0.6**
ISHB	**Shabestar**	**3.11**	**14**	ePn	**Pn**	**21 46 19.1**	**-0.6**
ISHB				e		21 46 32.2	
	comp=Z,678nm,0.4s						
IKFM	**Kafar-mosalman**	**3.18**	**122**	ePn	**Pn**	**21 46 20.4**	**+0.1**
ITBZ	**Tabriz**	**3.20**	**22**	ePn	**Pn**	**21 46 20.9**	**0.0**
ITBZ				e		21 46 32.5	
	comp=Z,324nm,0.3s						
IDOB	**Doab**	**3.28**	**116**	ePn	**Pn**	**21 46 22.3**	**+0.3**
HSAM	**Samen**	**3.44**	**107**	ePn	**Pn**	**21 46 23.4**	**-0.8**
HSAM				e		21 47 47.1	
	comp=Z,137nm,0.9s						
ISRB	**Sarab**	**3.53**	**43**	ePn	**Pn**	**21 46 26.3**	**+0.8**
ISRB				e		21 46 37.4	
	comp=Z,412nm,0.6s						
IMRD	**Marand**	**3.55**	**14**	ePn	**Pn**	**21 46 26.7**	**+1.1**
IMRD				e		21 46 42.1	
	comp=Z,462nm,0.4s						
IHRS	**Heris**	**3.61**	**32**	ePn	**Pn**	**21 46 26.4**	**-0.1**
IHRS				e		21 46 37.7	
	comp=Z,347nm,0.5s						
HAGD	**Aghdareh**	**3.73**	**96**	ePn	**Pn**	**21 46 27.5**	**-0.6**
RAFI	**Al-Rafai**	**3.75**	**160**	ePn	**Pn**	**21 46 29.0**	**+0.8**
RAFI				eSn	**Sn**	**21 47 12.0**	**-0.3**
BMDN	**Meydan**	**3.81**	**113**	ePn	**Pn**	**21 46 29.9**	**+0.6**
QAMS	**Qamsar**	**5.79**	**103**	ePn	**Pn**	**21 46 57.5**	**+1.0**

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*INET **09** 21:49:04.8, 12°.48N×87°.87W, h58km, ML3.4, MW3.7*

SNET 09 21:49:06.6±1.1**, 12°.82N×87°.69W, h38km**±13km**, ML3.7, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCND	**La Caada**	**0.52**	**338**	eP	Pn	21 49 20.9	+3.2
LCND				eS	Sn	21 49 32.7	+7.4
LCND				IAML		21 49 34.2	
	comp=Z,6µm,0.4s						
JUCU	**Jucuar¡n**	**0.69**	**308**	eP	Pn	21 49 21.0	+1.0
ALJI	**Alcalda de J**	**0.99**	**301**	eP	Pn	21 49 25.2	+1.2
COEB	**Comit de Eme**	**1.06**	**310**	eP	Pn	21 49 26.3	+1.3
COEB				eP	Pn	21 49 27.3	+2.3
SCLA	**Alcaldia de Sa**	**1.34**	**311**	eP	Pn	21 49 30.1	+1.3
SCLA				IAML		21 49 51.5	
	comp=Z,273nm,0.3s						
COEG	**Centro de Oper**	**1.41**	**305**	eP	Pn	21 49 30.5	+0.8
COEG				IAML		21 49 53.2	
	comp=Z,979nm,0.3s						
SJTE	**Alcalda de S**	**1.51**	**302**	eP	Pn	21 49 31.5	+0.4
SJTE				eS	Sn	21 49 50.9	+1.3
OPAM	**Oficina de Pla**	**1.71**	**301**	eS	Sn	21 49 56.7	+2.0

IDC 09 21:51:17.9±0.9**, 4°.23S×129°.43E, h0km, mb3.6**/1**, mb1 3.3**/4**, mb1mx3.0**/43**, mbtmp3.2**/4**, ML2.7**/3**, Error ellipse: s-maj=30.4km s-min=12.0km az=88.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.81**	**29**	Pn	Pn	21 52 17.9	+0.1
	0.8nm,0.3s,baz=271,slow=23,SNR=2.0						
WRA	**Warramunga Arr**	**16.34**	**163**	Pn	Pn	21 55 08.5	-0.4
	0.0nm,0.3s,baz=348,slow=12,SNR=2.0						
ASAR	**Alice Springs**	**19.80**	**168**	P	P	21 55 50.6	+0.5
	0.0nm,0.3s,baz=350,slow=11,SNR=2.6						
MKAR	**Makanchi Array**	**65.61**	**326**	P	P	22 02 03.7	-0.1
	0.9nm,1.1s,baz=118,slow=7.1,SNR=4.3						

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*BJI **09** 21:52:40.0±0.0, 37°.70S×51°.40E, h10km, mB5.5/26, mb5.0/43, Ms5.1/20, Ms7 4.8/22*

*IDC **09** 21:52:40.3±0.4, 37°.59S×51°.30E, h0km, mb4.7/32, mb1 4.8/33, mb1mx4.7/44, mbtmp4.7/33, ML3.8/1, MS4.4/26, Ms1 4.4/26, ms1mx4.4/29, Error ellipse: s-maj=15.0km s-min=10.6km az=17.0*

*MOS **09** 21:52:41.6±0.8, 37°.64S×51°.35E, h19km, mb5.4/19, Error ellipse: s-maj=13.4km s-min=6.8km az=95.8*

*NEIC **09** 21:52:42.2±1.6, 37°.69S±0°.07×51°.32E±0°.09, h10km±1km, mb5.3/116, Error ellipse: s-maj=12.5km s-min=10.9km az=33.0*

*GCMT **09** 21:52:45.2±0.1, 37°.49S±0°.01×51°.43E±0°.02, h12km, MW5.2/122, Moment Tensor Solution. s63,c82; s122,c209; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.83±.01; $M_{\theta\theta}$0.79±.01; $M_{\phi\phi}$0.03±.01; $M_{r\theta}$-0.03±.04; $M_{\theta\phi}$0.10±.01; $M_{\phi r}$-0.01±.05; Best double couple: $M_0$0.81700×10^{17} NP1:ϕ_s264.00000°, δ44.00000°, λ-89.00000°. NP2:ϕ_s82.00000°, δ46.00000°, λ-91.00000°. Principal axes: T 0.8060, Plg1.0000°, Azm173.0000°; N 0.0220, Plg1.0000°, Azm83.0000°; P -0.8280, Plg89.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 21:52:41.7±0.2**, 37°.67S**±0°.05×**51°.27E**±0°.06**, h10km, n443, σ1^{s}.12**/440**, mb5.2**/138**, MS4.6**/39**, 28C-17D, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRZF	**Crozet Islands**	**8.76**	**177**		**Pn**	**21 54 47.0**	**-1.4**
VOI	**Vohitsoka**	**16.18**	**345**		**Pn**	**21 56 25.9**	**-3.4**
VOI	**Vohitsoka**	**16.18**	**345**	P	**P**	**21 56 32.5**	**0.0**
RER	**Riviere de l'E**	**16.91**	**14**	Pn	**Pn**	**21 56 36.3**	**-2.2**
ABPO	**Ambohimpanom**	**18.92**	**348**	P	**P**	**21 57 01.7**	**-1.1**
ABPO				pmax	pmax		
	comp=Z,198nm,2.0s						
ABPO	**Ambohimpanom**	**18.92**	**348**	P	**P**	**21 57 01.7**	**-1.1**
OPO	**Ambohidratompo**	**19.36**	**348**	P	**P**	**21 57 07.5**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=173,slow=12,SNR=9.0						
OPO				LR	LR	22 02 44.1	
	comp=Z,2µm,21.6s,baz=24,slow=31						
MOPA	**Mopani**	**22.11**	**304**	iP	**P**	**21 57 40.0**	**+2.7**
MOPA	**Mopani**	**22.11**	**304**	iP	**P**	**21 57 40.0**	**+2.7**
BOSA	**Boshof**	**23.52**	**285**	P	**P**	**21 57 52.2**	**+0.1**
	comp=Z,9.1nm,0.8s,baz=121,slow=7.9,SNR=22						
BOSA				LR	LR	22 06 18.4	
	comp=Z,484nm,18.0s,baz=118,slow=35						
BOSA	**Boshof**	**23.52**	**285**	P	**P**	**21 57 52.1**	**0.0**
BOSA				pmax	pmax		
	comp=Z,214nm,2.0s						
BOSA	**Boshof**	**23.52**	**285**	P	**P**	**21 57 52.1**	**0.0**
BOSA				IAmb	IAmb	21 57 57.0	
	comp=Z,214nm,2.0s						
MSNA	**Messina**	**23.83**	**304**	iP	**P**	**21 57 55.7**	**+0.6**
MSNA	**Messina**	**23.83**	**304**	iP	**P**	**21 57 55.7**	**+0.6**
LBTB	**Lobatse**	**25.21**	**293**	P	**P**	**21 58 06.5**	**-1.3**
	comp=Z,5.9nm,0.9s,baz=124,slow=7.6,SNR=9.8						
LBTB				LR	LR	22 07 05.3	
	comp=Z,239nm,20.4s,baz=126,slow=34						
LBTB	**Lobatse**	**25.21**	**293**	P	**P**	**21 58 06.7**	**-1.0**
LBTB				pmax	pmax		
	comp=Z,20nm,1.1s						
LBTB	**Lobatse**	**25.21**	**293**	iP	**P**	**21 58 06.6**	**-1.1**
LBTB	**Lobatse**	**25.21**	**293**	iP	**P**	**21 58 06.6**	**-1.1**
LBTB	**Lobatse**	**25.21**	**293**	P	**P**	**21 58 06.7**	**-1.0**
SUR	**Sutherland**	**25.43**	**273**	P	**P**	**21 58 09.1**	**-0.8**
	comp=Z,16nm,0.8s,baz=101,slow=10,SNR=14						
SUR				LR	LR	22 06 12.5	
	comp=Z,545nm,19.7s,baz=120,slow=32						
SUR	**Sutherland**	**25.43**	**273**	P	**P**	**21 58 08.9**	**-1.0**
MATP	**Matopo**	**26.19**	**305**	P	**P**	**21 58 15.5**	**-1.2**
	comp=Z,2.3nm,0.6s,baz=136,slow=15,SNR=7.4						
MATP	**Matopo**	**26.19**	**305**	iP	**P**	**21 58 15.7**	**-0.9**
MATP	**Matopo**	**26.19**	**305**	iP	**P**	**21 58 15.7**	**-0.9**
BLWY	**Bulawayo**	**26.32**	**305**	iP	**P**	**21 58 16.8**	**-1.2**
BLWY	**Bulawayo**	**26.32**	**305**	iP	**P**	**21 58 16.8**	**-1.2**
MAW	**Mawson**	**30.69**	**171**	P	**P**	**21 58 57.4**	**+1.2**
	comp=Z,7.0nm,0.8s,baz=31,slow=8.0,SNR=6.2						
MAW				LR	LR	22 08 01.3	
	comp=Z,2µm,21.6s,baz=354,slow=30						
MAW	**Mawson**	**30.69**	**171**	P	**P**	**21 58 56.0**	**-0.1**
MAW				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MAW	**Mawson**	**30.69**	**171**	P	**P**	**21 58 56.0**	**-0.1**
SYO	**Syowa Base**	**32.04**	**188**	⇑eP	**P**	**21 59 08.0**	**0.0**
SYO	**Syowa Base**	**32.04**	**188**	⇓epP	pP	21 59 10.2	-0.3
SYO	**Syowa Base**	**32.04**	**188**	⇓esP	sP	21 59 11.8	+0.3
WIN	**Windhoek**	**32.96**	**287**	P	**P**	**21 59 16.9**	**0.0**
WIN				pmax	pmax		
	comp=Z,91nm,1.8s						
WIN	**Windhoek**	**32.96**	**287**	P	**P**	**21 59 16.9**	**0.0**
WIN				IAmb	IAmb	21 59 23.0	
	comp=Z,92nm,1.8s						
TSUM	**Tsumeb**	**34.62**	**293**	P	**P**	**21 59 30.5**	**-0.8**
H08S1	**Diego Carcia H**	**35.54**	**38**	T	T	22 37 16.2	
	baz=210,slow=76,SNR=13						
H08S2	**Diego Garcia H**	**35.55**	**38**	T	T	22 37 05.0	
	baz=210,slow=76,SNR=6.2						
H08S3	**Diego Garcia H**	**35.56**	**38**	T	T	22 37 17.7	
	baz=210,slow=76,SNR=12						
KIBK	**Kibwezi**	**37.20**	**338**	P	**P**	**21 59 52.8**	**-0.6**
KMBO	**Kilima Mbogo**	**38.59**	**337**	P	**P**	**22 00 05.2**	**0.0**
	comp=Z,1.4nm,0.8s,baz=156,slow=12,SNR=9.2						
KMBO				LR	LR	22 14 11.4	
	comp=Z,2µm,20.9s,baz=117,slow=34						
KMBO	**Kilima Mbogo**	**38.59**	**337**	iP	**P**	**22 00 06.8**	**+1.5**
	SNR=5.2						
KMBO	**Kilima Mbogo**	**38.59**	**337**	P	**P**	**22 00 05.0**	**-0.3**
KMBO				pmax	pmax		
	comp=Z,21nm,1.7s						
KMBO	**Kilima Mbogo**	**38.59**	**337**	P	**P**	**22 00 05.0**	**-0.3**
NVL	**N'lazarevskaya**	**38.99**	**200**	⇓iP	P	22 00 12.9	+5.2
NVL				eSS	**S**	**22 06 02.6**	**-3.5**
NVL				pmax	pmax		
	comp=Z,26nm,1.2s						
MBAR	**Mbarara**	**41.46**	**328**	P	**P**	**22 00 29.0**	**0.0**
MBAR				pmax	pmax		
	comp=Z,24nm,1.9s						
MBAR	**Mbarara**	**41.46**	**328**	P	**P**	**22 00 29.0**	**0.0**
LODK	**Lodwar**	**43.48**	**337**	P	**P**	**22 00 45.3**	**+0.1**
SNAA	**Sanae**	**43.58**	**202**	P	**P**	**22 00 46.6**	**+1.1**
SNAA	**Sanae**	**43.58**	**202**	P	**P**	**22 00 46.6**	**+1.1**
	comp=Z,18nm,1.0s,baz=76,slow=5.9,SNR=45						
SNAA	**Sanae**	**43.58**	**202**	d iP	**P**	**22 00 46.4**	**+0.9**
SNAA				pmax	pmax		
	comp=Z,48nm,1.7s						
SNAA	**Sanae**	**43.58**	**202**	P	**P**	**22 00 45.8**	**+0.3**
CASY	**Casey**	**43.90**	**150**	P	**P**	**22 00 49.1**	**+1.1**
VNA2	**Neumayer--Watz**	**44.73**	**204**	P	**P**	**22 00 56.3**	**+1.7**
	baz=71,slow=7.6						
VNA1	**Neumayer--Stat**	**44.94**	**204**	P	**P**	**22 00 58.3**	**+2.0**
VNA3	**Neumayer Olymp**	**45.53**	**203**	P	**P**	**22 01 02.4**	**+1.4**
FURI	**Furi**	**47.80**	**343**	P	**P**	**22 01 21.0**	**+1.3**
ATD	**Arta Tunnel**	**49.58**	**349**	P	**P**	**22 01 33.7**	**+0.6**
ATD				IAmb	IAmb	22 01 37.2	
	comp=Z,89nm,1.9s						
H01W2	**Cape Leeuwin H**	**49.90**	**107**	T	T	22 54 57.5	
	baz=248,slow=75,SNR=2162						
H01W3	**Cape Leeuwin H**	**49.91**	**107**	T	T	22 54 57.8	
	baz=248,slow=75,SNR=1928						
H01W1	**Cape Leeuwin H**	**49.92**	**107**	T	T	22 54 58.5	
	baz=248,slow=75,SNR=2346						
QSPA	**South Pole Qui**	**52.52**	**180**	P	**P**	**22 01 54.5**	**-0.3**
QSPA				IAmb	IAmb	22 01 56.9	
	comp=Z,58nm,1.1s						
MORW	**Morawa**	**53.82**	**101**	P	**P**	**22 02 04.6**	**-0.1**
MORW				IAmb	IAmb	22 02 06.3	
	comp=Z,24nm,0.9s						
GIRL	**Giralia**	**55.51**	**93**	P	**P**	**22 02 17.1**	**0.0**
VNDA	**Vanda**	**57.77**	**166**	P	**P**	**22 02 32.5**	**+0.1**
VNDA				pmax	pmax		
	comp=Z,15nm,1.2s						
VNDA	**Vanda**	**57.77**	**166**	P	**P**	**22 02 32.5**	**+0.1**
PDSI	**Padang**	**58.12**	**63**	P	**P**	**22 02 36.7**	**+1.0**
	comp=Z,19nm,0.8s						
MDSI	**Maura Dua**	**58.37**	**69**	P	**P**	**22 02 37.4**	**0.0**
	comp=Z,8.9nm,1.2s						
SBA	**Scott Base**	**58.50**	**167**	P	**P**	**22 02 38.3**	**+0.8**
SBA				pmax	pmax		
	comp=Z,34nm,1.3s						
SBA	**Scott Base**	**58.50**	**167**	P	**P**	**22 02 38.3**	**+0.8**
SBA				IAmb	IAmb	22 02 52.7	
	comp=Z,34nm,1.3s						
KLSI		**58.64**	**70**	P	**P**	**22 02 38.9**	**-0.4**
	comp=Z,13nm,2.6s						
BKNI	**Bangkinang**	**59.40**	**62**	P	**P**	**22 02 45.0**	**+0.4**
LEM	**Lembang**	**59.43**	**74**	P	**P**	**22 02 45.8**	**+0.7**
	comp=Z,24nm,0.7s,baz=171,slow=9.7,SNR=11						
RPSI	**Rantau Prapat**	**59.63**	**59**	P	**P**	**22 02 46.7**	**+0.5**
PSI	**Prapat**	**59.71**	**59**	P	**P**	**22 02 46.7**	**-0.2**
	comp=Z,12nm,1.0s,baz=206,slow=6.2,SNR=14						
PSI				LR	LR	22 22 00.2	
	comp=Z,221nm,21.8s,baz=220,slow=30						
POO	**Poona**	**59.80**	**25**	eP	**P**	**22 02 44.0**	**-3.2**
PSA00	**Pilbara Seismi**	**60.51**	**95**	P	**P**	**22 02 51.5**	**-0.7**
PSA00				IAmb	IAmb	22 02 52.8	
	comp=Z,42nm,1.1s						
PSA00	**Pilbara Seismi**	**60.51**	**95**	P	**P**	**22 02 51.1**	**-1.0**
PSA00				IAmb	IAmb	22 02 52.7	
	comp=Z,38nm,1.5s						
HYB	**Hyderabad**	**60.51**	**30**	iP	**P**	**22 02 51.5**	**-0.6**
MBWA	**Marble Bar**	**60.64**	**95**	P	**P**	**22 02 52.7**	**-0.3**
RAYN	**Ar Rayn**	**61.11**	**354**	iP	**P**	**22 02 57.5**	**+1.5**
	SNR=8.6						
RAYN	**Ar Rayn**	**61.11**	**354**	P	**P**	**22 02 56.8**	**+0.8**
RAYN				pmax	pmax		
	comp=Z,28nm,1.5s						
RAYN	**Ar Rayn**	**61.11**	**354**	P	**P**	**22 02 56.8**	**+0.8**
RAYN				IAmb	IAmb	22 02 59.8	
	comp=Z,28nm,1.5s						
SOHO	**SOHO**	**61.67**	**5**	iP	**P**	**22 03 00.3**	**+0.5**
	SNR=5.3						
ASUD	**Al Ashush, Dub**	**62.08**	**4**	P	**P**	**22 03 04.8**	**+2.3**
ASHO	**Ashiyiah**	**62.19**	**5**	P	**P**	**22 03 02.8**	**-0.5**
FORT	**Forrest**	**62.23**	**109**	P	**P**	**22 03 03.7**	**+0.1**
IPM	**Ipoh**	**62.36**	**59**	P	**P**	**22 03 05.0**	**+0.3**
IPM	**Ipoh**	**62.36**	**59**	P	**P**	**22 03 04.5**	**-0.3**
IPM	**Ipoh**	**62.36**	**59**	P	**P**	**22 03 05.1**	**+0.3**
KULM	**Kulim**	**62.69**	**58**	P	**P**	**22 03 06.1**	**-0.8**
KULM				IAmb	IAmb	22 03 08.0	
	comp=Z,36nm,1.6s						
MDH	**Madha**	**62.81**	**5**	P	**P**	**22 03 05.3**	**-2.1**
MSFE	**Esma-Masafi**	**62.87**	**5**	P	**P**	**22 03 08.0**	**+0.2**
JAGI	**Jajag, Banyuwa**	**63.45**	**80**	P	**P**	**22 03 11.7**	**-0.3**
	comp=Z,45nm,1.2s						
JAGI	**Jajag, Banyuwa**	**63.45**	**80**	P	**P**	**22 03 11.5**	**-0.5**
JAGI	**Jajag, Banyuwa**	**63.45**	**80**	P	**P**	**22 03 13.2**	**+1.2**
SRIT	**Nakonsritamara**	**64.45**	**55**	P	**P**	**22 03 17.7**	**-0.7**
SRIT				IAmb	IAmb	22 03 18.2	
	comp=Z,14nm,0.5s						
SRBI	**Singaraja**	**64.52**	**80**	P	**P**	**22 03 17.1**	**-1.9**
	comp=Z,58nm,1.2s						
SMAI	**San Martin Ant**	**64.98**	**201**	P	**P**	**22 03 22.4**	**+1.2**
PLAI	**Plampang**	**66.08**	**83**	P	**P**	**22 03 28.8**	**-0.4**
	comp=Z,61nm,1.1s						
PLAI	**Plampang**	**66.08**	**83**	P	**P**	**22 03 29.3**	**+0.1**
STKI	**Sintang**	**66.82**	**71**	P	**P**	**22 03 34.1**	**+0.2**
	comp=Z,2µmcomp=Z,25nm,1.4s						
KSM	**Kuching**	**66.88**	**69**	P	**P**	**22 03 35.0**	**+0.7**
KSM	**Kuching**	**66.88**	**69**	P	**P**	**22 03 34.2**	**-0.1**
KSM				IAmb	IAmb	22 03 35.7	
	comp=Z,39nm,1.2s						
FITZ	**Fitzroy Crossi**	**66.97**	**96**	P	**P**	**22 03 34.8**	**0.0**
	comp=Z,22nm,1.0s,baz=216,slow=6.2,SNR=22						
BBKI	**Banjar Baru**	**67.10**	**76**	P	**P**	**22 03 35.4**	**-0.3**
	comp=Z,19nm,1.6s						
BBOO	**Buckleboo**	**67.11**	**114**	P	**P**	**22 03 35.4**	**-0.1**
BBOO				IAmb	IAmb	22 03 36.2	
	comp=Z,22nm,0.9s						
KIC	**Kosan Boka**	**68.05**	**297**	eP	**P**	**22 03 42.7**	**+1.1**
	comp=Z,17nm,0.8s						
LIC	**Lamto**	**68.15**	**297**	eP	**P**	**22 03 43.3**	**+1.0**
	comp=Z,33nm,0.8s						
DBIC	**Dimbokro**	**68.34**	**297**	P	**P**	**22 03 44.8**	**+1.4**
	comp=Z,13nm,0.8s,baz=154,slow=7.8,SNR=17						
DBIC				LR	LR	22 29 22.6	
	comp=Z,158nm,21.8s,baz=130,slow=32						
DBIC	**Dimbokro**	**68.34**	**297**	P	**P**	**22 03 44.0**	**+0.6**
DBIC				pmax	pmax		
	comp=Z,15nm,0.8s						
DBIC	**Dimbokro**	**68.34**	**297**	P	**P**	**22 03 44.0**	**+0.6**
DBIC				IAmb	IAmb	22 03 45.8	
	comp=Z,15nm,0.8s						
TIC	**Toumodi**	**68.44**	**297**	eP	**P**	**22 03 45.1**	**+1.0**
TORD	**Torodi Ar. Bea**	**68.68**	**307**	P	**P**	**22 03 45.2**	**-0.2**
	comp=Z,8.5nm,1.0s,baz=124,slow=4.0,SNR=45						
TORD				LR	LR	22 33 13.7	
	comp=Z,562nm,18.8s,baz=140,slow=35						
TORD	**Torodi Ar. Bea**	**68.68**	**307**	P	**P**	**22 03 45.3**	**-0.2**
TORD				IAmb	IAmb	22 03 52.1	
	comp=Z,54nm,1.8s						
MTKI	**Muara Teweh, K**	**68.75**	**74**	P	**P**	**22 03 47.4**	**+1.3**
SBUM	**Sibu**	**68.95**	**69**	P	**P**	**22 03 48.0**	**+0.7**
SBUM	**Sibu**	**68.95**	**69**	P	**P**	**22 03 46.6**	**-0.7**
SBUM				IAmb	IAmb	22 03 48.6	
	comp=Z,23nm,1.4s						
EDFI	**Ende, Flores**	**69.21**	**85**	P	**P**	**22 03 48.8**	**-0.3**
	comp=Z,434nmcomp=Z,31nm,1.8s						
MMRI	**Maumere**	**69.71**	**85**	P	**P**	**22 03 51.5**	**-0.6**
	comp=Z,80nm,1.3s						
MMRI	**Maumere**	**69.71**	**85**	P	**P**	**22 03 51.5**	**-0.6**
MMRI	**Maumere**	**69.71**	**85**	P	**P**	**22 03 52.2**	**+0.1**
BSSI	**Bau Bau, Buton**	**69.84**	**82**	P	**P**	**22 03 50.2**	**-2.6**
	comp=Z,14nm,1.5s						
KAPI	**Kappang**	**69.95**	**81**	P	**P**	**22 03 52.4**	**-1.1**
	comp=Z,3.6nm,0.3s,baz=249,slow=8.1,SNR=8.2						
KAPI	**Kappang**	**69.95**	**81**	P	**P**	**22 03 52.5**	**-1.0**
KAPI				pmax	pmax		
	comp=Z,42nm,1.4s						
KAPI	**Kappang**	**69.95**	**81**	P	**P**	**22 03 52.5**	**-1.0**
KAPI				IAmb	IAmb	22 03 53.7	
	comp=Z,42nm,1.4s						
BKSI	**Bulukumba**	**70.05**	**81**	P	**P**	**22 03 53.0**	**-1.1**
	comp=Z,491nmcomp=Z,22nm,1.6s						
GHAJ	**Ghor Haditha**	**70.17**	**346**	P	**P**	**22 03 55.1**	**+0.7**
GHAJ				IAmb	IAmb	22 03 59.8	
	comp=Z,63nm,1.9s						
ASAR	**Alice Springs**	**70.35**	**105**	P	**P**	**22 03 56.0**	**0.0**
	comp=Z,13nm,0.7s,baz=232,slow=5.9,SNR=150						
ASAR	**Alice Springs**	**70.35**	**105**	P	**P**	**22 03 55.7**	**-0.3**
ASAR	**Alice Springs**	**70.35**	**105**	P	**P**	**22 03 55.7**	**-0.3**
AS31	**Alice Springs**	**70.35**	**105**	P	**P**	**22 03 55.4**	**-0.5**
BNSI	**Bone**	**70.61**	**80**	P	**P**	**22 03 56.8**	**-0.7**
	comp=Z,16nm,1.6s						
SPSI	**Sidrap Palu**	**70.61**	**80**	P	**P**	**22 03 57.1**	**-0.4**
	comp=Z,15nm,0.9s						
SOEI	**Soe**	**70.66**	**87**	P	**P**	**22 03 57.8**	**-0.2**
	comp=Z,35nm,1.4s						
SOEI	**Soe**	**70.66**	**87**	P	**P**	**22 03 57.9**	**-0.2**
SOEI	**Soe**	**70.66**	**87**	P	**P**	**22 03 58.8**	**+0.8**
KNRA	**Kununurra**	**70.79**	**95**	P	**P**	**22 03 57.8**	**-0.8**
TTSI	**Tana Toraja**	**71.22**	**79**	P	**P**	**22 04 01.6**	**+0.4**
	comp=Z,877nmcomp=Z,27nm,1.0s						
STKA	**Stephens Creek**	**71.58**	**116**	P	**P**	**22 04 03.6**	**+0.4**
	comp=Z,16nm,0.8s,baz=239,slow=4.8,SNR=37						
STKA				LR	LR	22 29 08.5	
	comp=Z,255nm,21.0s,baz=212,slow=31						
STKA	**Stephens Creek**	**71.58**	**116**	P	**P**	**22 04 03.2**	**0.0**
STKA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
STKA	**Stephens Creek**	**71.58**	**116**	P	**P**	**22 04 03.2**	**0.0**
CM31	**Chiang Mai Arr**	**71.60**	**48**	P	**P**	**22 04 03.2**	**-0.1**
CM31				IAmb	IAmb	22 04 04.2	
	comp=Z,33nm,1.0s						
CMAR	**Chiang Mai Arr**	**71.60**	**48**	P	**P**	**22 04 03.0**	**-0.3**
	comp=Z,12nm,0.8s,baz=231,slow=6.8,SNR=83						
CMAR	**Chiang Mai Arr**	**71.60**	**48**	P	**P**	**22 04 02.8**	**-0.6**
KOLN	**Koldanda**	**71.81**	**30**	eP	**P**	**22 04 03.2**	**-1.5**
	comp=Z,105nm,1.2s						
PYUN	**Piuthan**	**71.87**	**29**	eP	**P**	**22 04 03.7**	**-1.3**
	comp=Z,124nm,1.1s						
CHTO	**Chiang Mai**	**71.88**	**47**	P	**P**	**22 04 04.1**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,60nm,1.8s						
CHTO	**Chiang Mai**	**71.88**	**47**	P	**P**	**22 04 04.1**	**-0.9**
CHTO				IAmb	IAmb	22 04 05.8	
	comp=Z,60nm,1.8s						
CHTO	**Chiang Mai**	**71.88**	**47**	P	**P**	**22 04 04.5**	**-0.5**
DMN	**Daman**	**72.28**	**31**	eP	**P**	**22 04 06.1**	**-1.5**
	comp=Z,48nm,0.9s						
RAMN	**Ramite**	**72.33**	**33**	eP	**P**	**22 04 07.4**	**-0.5**
	comp=Z,30nm,0.6s						
PKI	**Pulchoki**	**72.37**	**32**	eP	**P**	**22 04 06.5**	**-1.7**
PKIN	**Phulchoki**	**72.37**	**31**	eP	**P**	**22 04 06.4**	**-1.7**
DANN	**Dangsing**	**72.39**	**30**	eP	**P**	**22 04 06.4**	**-1.9**
	comp=Z,37nm,0.7s						
HRA	**Herat**	**72.42**	**10**	P	**P**	**22 04 07.6**	**-0.6**
HRA				IAmb	IAmb	22 04 13.5	
	comp=Z,80nm,1.9s						
GKN	**Gorkha**	**72.44**	**31**	eP	**P**	**22 04 07.1**	**-1.3**
	comp=Z,94nm,1.3s						
KKN	**Kakani**	**72.51**	**31**	eP	**P**	**22 04 07.3**	**-1.6**
ODAN	**Odare**	**72.59**	**33**	eP	**P**	**22 04 08.6**	**-0.8**
	comp=Z,25nm,0.6s						
WRA	**Warramunga Arr**	**72.75**	**102**	P	**P**	**22 04 10.5**	**0.0**
	comp=Z,17nm,0.8s,baz=231,slow=5.2,SNR=119						
WRA				LR	LR	22 31 44.3	
	comp=Z,201nm,21.7s,baz=325,slow=32						
WRA	**Warramunga Arr**	**72.75**	**102**	P	**P**	**22 04 09.8**	**-0.7**
WRA				pmax	pmax		
	comp=Z,5.0nm,1.6s						
WRA	**Warramunga Arr**	**72.75**	**102**	P	**P**	**22 04 09.8**	**-0.7**
WRAB	**Tennant Creek**	**72.77**	**102**	d iP	**P**	**22 04 10.4**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,58nm,1.3s						
WRAB	**Tennant Creek**	**72.77**	**102**	P	**P**	**22 04 09.7**	**-0.9**
WRAB	**Tennant Creek**	**72.77**	**102**	P	**P**	**22 04 10.8**	**+0.3**
WR0	**Warramunga Arr**	**72.90**	**102**	P	**P**	**22 04 10.9**	**-0.4**
WR0				IAmb	IAmb	22 04 12.6	
	comp=Z,51nm,1.6s						
TAPN	**Taplejung**	**73.16**	**34**	eP	**P**	**22 04 11.9**	**-1.0**
UBPT	**Khong Chiam**	**73.22**	**55**	P	**P**	**22 04 13.0**	**-0.1**
UBPT				IAmb	IAmb	22 04 16.5	
	comp=Z,64nm,1.8s						
KOWA	**Kowa**	**73.37**	**304**	P	**P**	**22 04 14.4**	**+0.4**
KOWA				IAmb	IAmb	22 04 16.7	
	comp=Z,39nm,1.4s						
MPSI	**Mapaga**	**73.40**	**76**	P	**P**	**22 04 14.1**	**-0.2**
	comp=Z,465nmcomp=Z,30nm,1.3s						
SHL	**Shillong**	**73.57**	**38**	P	**P**	**22 04 14.4**	**-0.8**
SHL				pmax	pmax		
	comp=Z,22nm,1.0s						
SHL	**Shillong**	**73.57**	**38**	P	**P**	**22 04 14.4**	**-0.8**
SHL				IAmb	IAmb	22 04 15.1	
	comp=Z,22nm,1.0s						
KBL	**Kabul**	**73.72**	**15**	P	**P**	**22 04 16.0**	**+0.1**
KBL				pmax	pmax		
	comp=Z,38nm,1.5s						
KBL	**Kabul**	**73.72**	**15**	P	**P**	**22 04 16.0**	**+0.1**
KBL				IAmb	IAmb	22 04 24.4	
	comp=Z,38nm,1.4s						
CSS	**Mathiatis**	**74.17**	**345**	P	**P**	**22 04 18.0**	**-0.3**
CSS				IAmb	IAmb	22 04 31.7	
	comp=Z,33nm,1.1s						
MTN	**Manton Dam**	**74.30**	**94**	P	**P**	**22 04 18.9**	**-0.7**
MTN				IAmb	IAmb	22 04 20.6	
	comp=Z,28nm,1.1s						
TOLI2	**Tolitoli**	**74.57**	**76**	P	**P**	**22 04 19.6**	**-1.5**
TOLI2	**Tolitoli**	**74.57**	**76**	P	**P**	**22 04 20.4**	**-0.7**
SIRT	**Sirnak**	**75.25**	**353**	P	**P**	**22 04 24.2**	**-0.4**
MYLDM	**Lahad Datu**	**75.44**	**72**	P	**P**	**22 04 25.7**	**-0.4**
MYLDM				IAmb	IAmb	22 04 31.9	
	comp=Z,39nm,1.4s						
GEYT	**Alibeck**	**75.49**	**6**	P	**P**	**22 04 26.3**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=55,slow=5.6,SNR=9.6						
GEYT				LR	LR	22 34 43.9	
	comp=Z,182nm,19.4s,baz=25,slow=34						
GEYT	**Alibeck**	**75.49**	**6**	P	**P**	**22 04 26.5**	**+0.6**
GEYT				IAmb	IAmb	22 04 30.4	
	comp=Z,44nm,2.0s						
GYA0B	**ALIBECK ARRAY**	**75.49**	**6**	P	**P**	**22 04 26.0**	**+0.1**
GAZ	**Gaziantep**	**75.60**	**348**	P	**P**	**22 04 25.8**	**-0.8**
GAZ				IAmb	IAmb	22 04 31.9	
	comp=Z,67nm,1.6s						
GURO	**Guroymak-BITLI**	**76.33**	**353**	P	**P**	**22 04 31.1**	**+0.3**
GURO				IAmb	IAmb	22 04 37.9	
	comp=Z,38nm,1.8s						

ELL	**Elmali**	**76.64**	**342**	P	**P**	**22 04 33.2**	**+0.6**
ELL				pmax	pmax		
	comp=Z,250nm,1.9s						
ELL	**Elmali**	**76.64**	**342**	P	**P**	**22 04 33.2**	**+0.6**
SANI	**Sanana**	**76.66**	**82**	P	**P**	**22 04 32.9**	**-0.2**
LSA	**Lhasa**	**76.71**	**35**	P	**P**	**22 04 33.6**	**0.0**
LSA				sP	**PcP**	**22 04 47.0**	**+2.1**
LSA				S	S	22 14 09.1	-12
LSA				SS	**SS**	**22 19 20.8**	**+3.6**
LSA				pmax	pmax		
	comp=Z,99nm,1.7s						
LSA				pmax	pmax		
	comp=Z,670nm,3.1s						
LSA				LR	LR		
	comp=Z,780nm,19.9s						
LSA				LR	LR		
	comp=Z,570nm,17.1s						
LSA				LR	LR		
	comp=Z,1µm,19.2s						
LSA	**Lhasa**	**76.71**	**35**	P	**P**	**22 04 33.8**	**+0.2**
LSA	**Lhasa**	**76.71**	**35**	P	**P**	**22 04 33.4**	**-0.2**
LSA				pmax	pmax		
	comp=Z,26nm,1.0s						
LSA	**Lhasa**	**76.71**	**35**	P	**P**	**22 04 33.4**	**-0.2**
LSA				IAmb	IAmb	22 04 35.1	
	comp=Z,26nm,1.0s						
SLVN	**Son La**	**76.77**	**50**	P	**P**	**22 04 33.4**	**-0.1**
SLVN				IAmb	IAmb	22 04 35.0	
	comp=Z,27nm,1.0s						
BNN	**Bunyan**	**77.46**	**348**	P	**P**	**22 04 37.0**	**-0.2**
ISP	**Isparta**	**77.53**	**343**	P	**P**	**22 04 37.8**	**+0.3**
ISP				pmax	pmax		
	comp=Z,21nm,0.7s						
ISP	**Isparta**	**77.53**	**343**	P	**P**	**22 04 37.8**	**+0.3**
ISP				IAmb	IAmb	22 04 51.6	
	comp=Z,21nm,0.7s						
GNI	**Garni**	**77.68**	**355**	P	**P**	**22 04 39.6**	**+1.2**
GNI	**Garni**	**77.68**	**355**	P	**P**	**22 04 39.0**	**+0.6**
GNI				pmax	pmax		
	comp=Z,152nm,2.0s						
GNI	**Garni**	**77.68**	**355**	P	**P**	**22 04 39.0**	**+0.6**
GAR	**Garm**	**78.28**	**15**	P	**P**	**22 04 41.2**	**-0.6**
GAR				IAmb	IAmb	22 04 50.6	
	comp=Z,39nm,1.0s						
BR131	**Keskin Array S**	**78.71**	**346**	P	**P**	**22 04 43.8**	**-0.3**
BR131				pmax	pmax		
	comp=Z,15nm,1.2s						
BR131	**Keskin Array S**	**78.71**	**346**	P	**P**	**22 04 43.8**	**-0.3**
BRTR	**Keskin Array B**	**78.71**	**346**	P	**P**	**22 04 44.0**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=195,slow=3.9,SNR=1.6						
BRTR				LR	LR	22 36 46.3	
	comp=Z,196nm,20.8s,baz=168,slow=34						
BRTR	**Keskin Array B**	**78.71**	**346**	P	**P**	**22 04 44.1**	**0.0**
BRTR	**Keskin Array B**	**78.71**	**346**	P	**P**	**22 04 44.1**	**0.0**
LBMI	**Labuha**	**78.72**	**82**	P	**P**	**22 04 44.7**	**+0.1**
	comp=Z,720nmcomp=Z,47nm,1.3s						
QIZ	**Qiongzhong**	**78.80**	**55**	P	**P**	**22 04 45.4**	**+0.5**
QIZ				S	**S**	**22 14 44.6**	**+1.8**
QIZ				LR	LR		
	comp=Z,320nm,9.9s						
KMI	**Kunming**	**78.98**	**46**	⇑P	**P**	**22 04 46.1**	**+0.1**
KMI				pP	pwP	22 04 51.2	0.0
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ANTO	**Ankara**	**79.01**	**346**	P	**P**	**22 04 46.0**	**+0.4**
ANTO				pmax	pmax		
	comp=Z,34nm,1.7s						
ANTO	**Ankara**	**79.01**	**346**	P	**P**	**22 04 46.0**	**+0.4**
AKH	**Akhalkalaki**	**79.03**	**354**	⇓P	**P**	**22 04 46.0**	**+0.3**
DRK	**Karamyk**	**79.06**	**16**	P	**P**	**22 04 46.3**	**+0.1**
DRK				IAmb	IAmb	22 07 19.6	
	comp=Z,29nm,0.7s						
BTK	**Batken**	**79.41**	**15**	P	**P**	**22 04 47.7**	**-0.1**
BTK				pmax	pmax		
	comp=Z,45nm,1.4s						
BTK	**Batken**	**79.41**	**15**	P	**P**	**22 04 47.7**	**-0.1**
BTK				IAmb	IAmb	22 04 57.6	
	comp=Z,46nm,1.4s						
BALB	**Balikesir**	**79.88**	**342**	P	**P**	**22 04 50.6**	**+0.4**
KSH	**Kashi**	**80.10**	**19**	P	**P**	**22 04 49.6**	**-2.0**
KSH				pP	sP	22 04 55.1	-0.2
KSH				sP	pwP	22 04 57.0	+0.2
KSH				pmax	pmax		
	comp=Z,29nm,0.9s						
ONI	**Oni**	**80.20**	**354**	P	**P**	**22 04 51.9**	**-0.1**
ONI				pmax	pmax		
	comp=Z,59nm,1.6s						
ONI	**Oni**	**80.20**	**354**	P	**P**	**22 04 51.9**	**-0.1**
ONI				IAmb	IAmb	22 04 57.2	
	comp=Z,59nm,1.6s						
MAK	**Makhachkala**	**80.33**	**357**	*e*P	**P**	**22 04 48.5**	**-4.1**
MAK				*e*S	**S**	**22 14 50.2**	**-7.7**
MAK				pmax	pmax		
	comp=Z,238nm,1.7s						
ZEI	**Tsey**	**80.36**	**355**	*e*P	**P**	**22 04 52.6**	**-0.5**
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GROC	**Groznyy**	**80.65**	**356**	*e*P	**P**	**22 04 53.9**	**-0.4**
GROC				*e*		22 07 56.6	
GROC				pmax	pmax		
	comp=Z,16nm,1.0s						
FAKI	**Fak Fak**	**81.08**	**87**	P	**P**	**22 04 56.8**	**-0.6**
	comp=Z,976nmcomp=Z,30nm,1.5s						
FAKI	**Fak Fak**	**81.08**	**87**	P	**P**	**22 04 57.2**	**-0.2**
FAKI				IAmb	IAmb	22 04 59.1	
	comp=Z,67nm,1.6s						
FAKI	**Fak Fak**	**81.08**	**87**	P	**P**	**22 04 58.3**	**+0.9**
NCK	**Nalchik**	**81.09**	**354**	⇑*e*P	**P**	**22 04 57.5**	**+0.8**
NCK				pmax	pmax		
	comp=Z,52nm,2.5s						
KBZ	**Khabaz**	**81.38**	**354**	P	**P**	**22 04 58.2**	**+0.1**
	comp=Z,7.0nm,1.3s,baz=217,slow=2.3,SNR=7.7						
KBZ				LR	LR	22 38 51.5	
	comp=Z,186nm,20.5s,baz=154,slow=34						
KBZ	**Khabaz**	**81.38**	**354**	⇑*e*P	**P**	**22 04 58.9**	**+0.8**
MTSU	**Mount Surprise**	**81.48**	**106**	P	**P**	**22 05 01.0**	**+1.5**
SIJI	**Sorong**	**81.54**	**85**	P	**P**	**22 05 00.0**	**+0.1**
	comp=Z,23nm,0.8s,baz=254,slow=1.9,SNR=16						
SOC	**Sochi**	**81.56**	**352**	*e*P	**P**	**22 04 59.4**	**+0.3**
SOC				*e*		22 08 02.2	
SOC				*e*S	**S**	**22 15 13.2**	**+2.4**
SOC				*e*SS	**SS**	**22 20 30.1**	**+1.5**
SOC				*e*SSS	SSS	22 23 55.9	
SOC				MLR	MLR		
	comp=Z,163nm,17.0s						
KIV	**Kislovodsk**	**81.62**	**354**	⇑P	**P**	**22 05 00.1**	**+0.5**
KIV	**Kislovodsk**	**81.62**	**354**	*i* P	**P**	**22 04 59.8**	**+0.2**
	SNR=5.8						
KIV	**Kislovodsk**	**81.62**	**354**	*e*P	**P**	**22 04 59.5**	**-0.1**
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KIV				MLR	MLR		
	comp=Z,186nm,19.0s						
KIV	**Kislovodsk**	**81.62**	**354**	P	**P**	**22 04 59.4**	**-0.1**
KIV				IAmb	IAmb	22 05 08.7	
	comp=Z,21nm,1.1s						
PLTB	**Pedras Altas**	**81.65**	**236**	P	**P**	**22 05 00.7**	**+0.5**
PLTB				IAmb	IAmb	22 05 07.9	
	comp=Z,41nm,1.6s						
CTA	**Charters Tower**	**81.78**	**109**	P	**P**	**22 05 00.9**	**-0.2**
	comp=Z,9.8nm,0.8s,baz=215,slow=2.4,SNR=4.3						
CTAO	**Charters Tower**	**81.78**	**109**	P	**P**	**22 05 00.9**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,16nm,1.0s						
CTAO	**Charters Tower**	**81.78**	**109**	P	**P**	**22 05 00.8**	**-0.2**
CTAO	**Charters Tower**	**81.78**	**109**	P	**P**	**22 05 01.9**	**+0.8**
AML	**Almayashu**	**82.02**	**17**	*i* P	**P**	**22 05 03.0**	**+0.9**
	SNR=6.0						
EIDS	**Eidsvold**	**82.12**	**116**	P	**P**	**22 05 02.5**	**-0.4**
EIDS	**Eidsvold**	**82.12**	**116**	P	**P**	**22 05 03.3**	**+0.5**
KKAR	**Karatay Array**	**82.28**	**14**	P	**P**	**22 05 03.5**	**+0.5**
KKAR	**Karatay Array**	**82.28**	**14**	P	**P**	**22 05 03.5**	**+0.5**
GYA	**Guiyang**	**82.28**	**48**	⇑P	**P**	**22 05 03.9**	**+0.4**
GYA				S	**S**	**22 15 21.0**	**+1.7**
GYA				pmax	pmax		
	comp=Z,25nm,1.6s						
GYA				pmax	pmax		
	comp=Z,230nm,5.0s						
GYA				LR	LR		
	comp=Z,290nm,21.8s						
TARG	**Taragay, Kyrgy**	**82.65**	**20**	P	**P**	**22 05 05.7**	**+0.2**
AAK	**Ala-Archa**	**82.68**	**17**	*i* P	**P**	**22 05 06.4**	**+1.1**
	SNR=12						
AAK	**Ala-Archa**	**82.68**	**17**	*d* *i*P	**P**	**22 05 05.9**	**+0.6**
AAK				pmax	pmax		
	comp=Z,182nm,1.7s						
AAK	**Ala-Archa**	**82.68**	**17**	P	**P**	**22 05 05.7**	**+0.4**
GOF	**Gofitskoye**	**82.69**	**354**	⇑*e*P	**P**	**22 05 04.9**	**-0.1**
KEST	**Kesra**	**82.73**	**327**	P	**P**	**22 05 07.2**	**+1.6**
	comp=Z,11nm,0.9s,baz=204,slow=1.4,SNR=12						
KEST				LR	LR	22 43 40.5	
	comp=Z,835nm,18.2s,baz=29,slow=37						
KEST	**Kesra**	**82.73**	**327**	P	**P**	**22 05 07.4**	**+1.7**
KEST				IAmb	IAmb	22 05 09.1	
	comp=Z,21nm,1.1s						
FNA	**Florina**	**82.74**	**338**	P	**P**	**22 05 05.4**	**-0.1**
FNA				pmax	pmax		
	comp=Z,16nm,1.1s						
FNA	**Florina**	**82.74**	**338**	P	**P**	**22 05 05.4**	**-0.1**
TRQA	**Tornquist**	**82.75**	**227**	P	**P**	**22 05 05.9**	**0.0**
TRQA				pmax	pmax		
	comp=Z,23nm,1.2s						
TRQA	**Tornquist**	**82.75**	**227**	P	**P**	**22 05 05.9**	**0.0**
TRQA				IAmb	IAmb	22 05 07.4	
	comp=Z,23nm,1.1s						
KBN	**Korca**	**82.77**	**337**	P	**P**	**22 05 05.3**	**-0.4**
KBN				pmax	pmax		
	comp=Z,21nm,1.1s						
KBN	**Korca**	**82.77**	**337**	P	**P**	**22 05 05.3**	**-0.4**
KBN				IAmb	IAmb	22 05 25.4	
	comp=Z,20nm,1.1s						
FRU1	**Bishkek**	**82.88**	**17**	P	**P**	**22 05 06.4**	**+0.2**
FRU1				pmax	pmax		
	comp=Z,51nm,1.3s						
FRU1	**Bishkek**	**82.88**	**17**	P	**P**	**22 05 06.4**	**+0.2**
BOOM	**Boomskoye usch**	**82.89**	**18**	P	**P**	**22 05 07.3**	**+0.9**
BOOM				pmax	pmax		
	comp=Z,35nm,1.2s						
BOOM	**Boomskoye usch**	**82.89**	**18**	P	**P**	**22 05 07.3**	**+0.9**
BOOM				IAmb	IAmb	22 05 15.8	
	comp=Z,35nm,1.2s						
RK1H	**Rockhampton Ha**	**82.91**	**114**	P	**P**	**22 05 08.2**	**+1.3**
LTZ	**Lake Taylor**	**83.63**	**141**	P	**P**	**22 05 11.2**	**+0.8**
LTZ				IAmb	IAmb	22 08 18.8	
	comp=Z,20nm,0.8s						
VTS	**Vitosha**	**83.89**	**340**	⇑P	**P**	**22 05 10.5**	**-1.0**
VTS	**Vitosha**	**83.89**	**340**	⇑P	**P**	**22 05 10.5**	**-1.0**
CD2	**Chengdu**	**84.02**	**43**	⇓*i*P	**P**	**22 05 12.2**	**-0.1**
CD2				pP	PcP	22 05 16.5	+0.3
CD2				sP	pwP	22 05 18.1	+0.6
CD2				S	**S**	**22 15 39.5**	**+2.9**
CD2				pmax	pmax		
	comp=Z,50nm,1.0s						
CD2				pmax	pmax		
	comp=Z,240nm,4.0s						
CD2				LR	LR		
	comp=Z,370nm,14.7s						
CD2				LR	LR		
	comp=Z,440nm,20.6s						
CD2				LR	LR		
	comp=Z,350nm,21.2s						
ITQB	**Itaqui**	**84.98**	**236**	P	**P**	**22 05 18.1**	**+0.7**
CFR	**Carcaliu**	**85.07**	**344**	⇑P	**P**	**22 05 17.4**	**+0.2**
CFR	**Carcaliu**	**85.07**	**344**	⇑P	**P**	**22 05 17.4**	**+0.2**
BOVS	**Bovan**	**85.26**	**339**	*e*P	**P**	**22 05 18.4**	**+0.2**
SJES	**Sjenica**	**85.43**	**338**	*e*P	**P**	**22 05 20.1**	**+0.9**
PLCA	**Paso Flores**	**85.55**	**220**	P	**P**	**22 05 21.2**	**+1.0**
	comp=Z,13nm,1.2s,baz=143,slow=6.2,SNR=5.3						
PLCA				LR	LR	22 37 00.0	
	comp=Z,190nm,20.6s,baz=148,slow=31						
PLCA	**Paso Flores**	**85.55**	**220**	P	**P**	**22 05 19.9**	**-0.3**
PLCA				pmax	pmax		
	comp=Z,24nm,1.4s						
PLCA	**Paso Flores**	**85.55**	**220**	P	**P**	**22 05 19.9**	**-0.3**
PLCA				IAmb	IAmb	22 05 30.9	
	comp=Z,24nm,1.4s						
GRUS	**Gruza**	**85.78**	**338**	*e*P	**P**	**22 05 21.9**	**+1.1**
MLR	**Muntele Rosu**	**85.87**	**342**	⇑P	**P**	**22 05 21.8**	**+0.4**
MLR	**Muntele Rosu**	**85.87**	**342**	⇑P	**P**	**22 05 21.8**	**+0.4**
MLR	**Muntele Rosu**	**85.87**	**342**	P	**P**	**22 05 21.0**	**-0.4**
MLR				IAmb	IAmb	22 05 41.6	
	comp=Z,46nm,1.4s						
SVIS	**Svilajnac**	**85.98**	**339**	*e*P	**P**	**22 05 23.0**	**+1.3**
VOIR		**86.04**	**342**	⇑P	**P**	**22 05 22.0**	**-0.2**
VOIR		**86.04**	**342**	⇑P	**P**	**22 05 22.0**	**-0.2**
VRI	**Vrincioaia**	**86.04**	**343**	⇑P	**P**	**22 05 22.5**	**+0.4**
VRI	**Vrincioaia**	**86.04**	**343**	⇑P	**P**	**22 05 22.5**	**+0.4**
PLOR	**Plostina**	**86.05**	**343**	⇑P	**P**	**22 05 22.5**	**+0.4**
PLOR	**Plostina**	**86.05**	**343**	⇑P	**P**	**22 05 22.5**	**+0.4**
ARR	**Arges**	**86.08**	**342**	⇑P	**P**	**22 05 22.4**	**+0.1**
COVR	**Voineasa-Covas**	**86.15**	**343**	⇑P	**P**	**22 05 22.4**	**-0.2**
BBLS	**Lazići**	**86.15**	**337**	*e*P	**P**	**22 05 23.6**	**+0.9**
TRUS	**Trudelj**	**86.17**	**338**	*e*P	**P**	**22 05 24.9**	**+2.2**
DIVS	**Divibare**	**86.18**	**338**	P	**P**	**22 05 23.4**	**+0.5**
DIVS	**Divibare**	**86.18**	**338**	*e*P	**P**	**22 05 23.4**	**+0.5**
HERR	**Herculane**	**86.21**	**340**	⇑P	**P**	**22 05 22.4**	**-0.5**
MDVR	**Moldovita**	**86.31**	**339**	⇑P	**P**	**22 05 24.1**	**+0.6**
ENH	**Enshi**	**86.77**	**47**	P	**P**	**22 05 25.6**	**-0.5**
ABKAR	**Akbulak array**	**86.89**	**6**	P	**P**	**22 05 26.2**	**0.0**
ABKAR	**Akbulak array**	**86.89**	**6**	P	**P**	**22 05 26.1**	**-0.1**
ABKAR				IAmb	IAmb	22 05 27.4	
	comp=Z,42nm,1.8s						
FRGS	**Fruska Gora**	**87.20**	**338**	*e*P	**P**	**22 05 28.4**	**+0.6**
WMQ	**Urumqi**	**87.58**	**25**	*e*P	**P**	**22 05 30.1**	**+0.4**
WMQ				pP	sP	22 05 33.5	+0.1
WMQ				pmax	pmax		
	comp=Z,21nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,430nm,5.7s						
WMQ				LR	LR		
	comp=Z,440nm,13.5s						
WMQ				LR	LR		
	comp=Z,440nm,15.3s						
WMQ				LR	LR		
	comp=Z,290nm,19.1s						
CPUP	**Villa Florida**	**87.63**	**238**	P	**P**	**22 05 31.5**	**+1.0**
	comp=Z,5.8nm,1.1s,baz=52,slow=4.6,SNR=3.4						
CPUP				LR	LR	22 38 01.1	
	comp=Z,142nm,20.6s,baz=147,slow=31						
SIRR	**Siria**	**87.69**	**340**	⇑P	**P**	**22 05 30.9**	**+0.7**
BDFB	**Brasilia**	**87.73**	**252**	P	**P**	**22 05 32.4**	**+1.1**
	comp=Z,8.5nm,1.1s,baz=83,slow=2.7,SNR=6.5						
BDFB				LR	LR	22 39 23.4	
	comp=Z,105nm,18.4s,baz=178,slow=32						
BDFB	**Brasilia**	**87.73**	**252**	P	**P**	**22 05 31.6**	**+0.3**
BDFB				pmax	pmax		
	comp=Z,25nm,1.4s						
BDFB	**Brasilia**	**87.73**	**252**	P	**P**	**22 05 31.6**	**+0.3**
BDFB				IAmb	IAmb	22 05 34.4	
	comp=Z,25nm,1.4s						
DRGR		**87.90**	**341**	⇑P	**P**	**22 05 31.8**	**+0.6**
DRGR		**87.90**	**341**	⇑P	**P**	**22 05 31.8**	**+0.6**
BURAR	**Bucovina Array**	**88.04**	**343**	⇓P	**P**	**22 05 32.8**	**+0.9**
BURAR	**Bucovina Array**	**88.04**	**343**	⇓P	**P**	**22 05 32.8**	**+0.9**
BURAR	**Bucovina Array**	**88.04**	**343**	P	**P**	**22 05 32.3**	**+0.5**
LZH	**Lanzhou**	**88.06**	**40**	*e*P	**P**	**22 05 32.3**	**0.0**
LZH				pP	pP	22 05 34.9	-0.2
LZH				S	**S**	**22 16 17.5**	**+1.3**
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				pmax	pmax		
	comp=Z,280nm,7.0s						
LZH				LR	LR		
	comp=Z,370nm,17.9s						
LZH				LR	LR		
	comp=Z,300nm,17.3s						
LZH				LR	LR		
	comp=Z,320nm,19.5s						
BUR08	**Bucovina Ar. S**	**88.07**	**343**	P	**P**	**22 05 32.7**	**+0.7**
MAKZ	**Makanchi**	**88.49**	**21**	P	**P**	**22 05 33.7**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MAKZ	**Makanchi**	**88.49**	**21**	P	**P**	**22 05 33.7**	**-0.2**
MK31	**Makanchi Array**	**88.56**	**21**	⇓*e*P	**P**	**22 05 34.1**	**-0.2**
MK31	**Makanchi Array**	**88.56**	**21**	P	**P**	**22 05 33.8**	**-0.4**
MKAR	**Makanchi Array**	**88.56**	**21**	P	**P**	**22 05 34.5**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=203,slow=4.3,SNR=10						
MKAR				LR	LR	22 41 51.9	
	comp=Z,92nm,19.5s,baz=212,slow=33						
MKAR	**Makanchi Array**	**88.56**	**21**	P	**P**	**22 05 34.1**	**-0.1**
GTA	**Gaotai**	**88.73**	**36**	⇓P	**P**	**22 05 34.8**	**-0.6**
GTA				pP	sP	22 05 39.7	+0.7
GTA				sP	pwP	22 05 42.3	+1.7
GTA				S	**S**	**22 16 25.6**	**+3.3**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,100nm,5.5s						
GTA				LR	LR		
	comp=Z,160nm,18.9s						
GTA				LR	LR		
	comp=Z,230nm,17.4s						
GTA				LR	LR		
	comp=Z,240nm,17.8s						
VORD	**Divnogorie**	**88.89**	**352**	*e*P	**P**	**22 05 34.4**	**-1.2**
VORD				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VRH	**Novokhopyorsk**	**88.90**	**354**	*e*P	**P**	**22 05 34.4**	**-1.2**
VRH				pmax	pmax		
	comp=Z,30nm,1.6s						
VSR	**Storozhevoye**	**89.15**	**352**	*e*P	**P**	**22 05 36.2**	**-0.6**
VSR				pmax	pmax		
	comp=Z,20nm,1.5s						
URZ	**Urewera**	**89.45**	**140**	LR	LR	22 38 13.5	
	comp=Z,360nm,20.4s,baz=211,slow=30						
UZH	**Uzhgorod**	**89.71**	**341**	*e*P	**P**	**22 05 36.3**	**-3.2**
UZH				*e*		22 05 39.1	
UZH				*e*		22 05 47.0	
BELG	**Belogornoye**	**89.75**	**358**	⇓*e*P	**P**	**22 05 39.9**	**+0.3**
BELG				pmax	pmax		
	comp=Z,19nm,4.3s						
BO02	**Sierra Bellavi**	**90.05**	**224**	P	**P**	**22 05 41.5**	**-0.5**
AKASG	**Malin Array Be**	**90.11**	**346**	P	**P**	**22 05 41.2**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=174,slow=4.3,SNR=12						
AKASG				LR	LR	22 44 30.5	
	comp=Z,81nm,21.9s,baz=145,slow=34						
AKBB	**Malin Array Si**	**90.11**	**346**	⇓*e*P	**P**	**22 05 40.0**	**-1.3**
AKBB				pmax	pmax		
	comp=Z,37nm,2.1s						
AKBB	**Malin Array Si**	**90.11**	**346**	P	**P**	**22 05 41.6**	**+0.2**
AKBB				IAmb	IAmb	22 08 01.6	
	comp=Z,25nm,1.6s						
AQDB	**Aquidauana**	**90.32**	**244**	P	**P**	**22 05 43.6**	**+0.3**
AQDB				IAmb	IAmb	22 05 45.8	
	comp=Z,35nm,1.4s						
LVV	**L'vov**	**90.38**	**343**	*e*P	**P**	**22 05 39.4**	**-3.2**
STAL	**STALIGIAL**	**90.45**	**334**	P	**P**	**22 05 43.3**	**+0.2**
STAL				IAmb	IAmb	22 05 44.9	
	comp=Z,20nm,1.4s						
CIMO	**Cimolais**	**90.58**	**334**	P	**P**	**22 05 44.1**	**+0.4**
CIMO				IAmb	IAmb	22 06 04.1	
	comp=Z,22nm,1.5s						
CTI	**Castel Tesino**	**90.63**	**334**	P	**P**	**22 05 45.2**	**+1.2**
CTI				pmax	pmax		
	comp=Z,60nm,1.8s						
CTI	**Castel Tesino**	**90.63**	**334**	P	**P**	**22 05 45.2**	**+1.2**
KURK	**Kurchatov**	**91.24**	**17**	P	**P**	**22 05 46.1**	**-0.5**
KURK				pmax	pmax		
	comp=Z,40nm,1.6s						
KURK	**Kurchatov**	**91.24**	**17**	P	**P**	**22 05 46.1**	**-0.5**
BRVK	**Borovoye**	**91.86**	**11**	⇑*i*P	**P**	**22 05 49.6**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,16nm,1.4s						
BRVK	**Borovoye**	**91.86**	**11**	P	**P**	**22 05 49.3**	**-0.1**
BRVK				IAmb	IAmb	22 05 50.5	
	comp=Z,20nm,1.4s						
ESDC	**Sonseca Array**	**92.17**	**321**	P	**P**	**22 05 51.4**	**+0.1**
	comp=Z,2.4nm,1.1s,baz=142,slow=5.2,SNR=7.5						
ESDC				LR	LR	22 49 06.8	
	comp=Z,342nm,18.2s,baz=155,slow=37						
ESDC	**Sonseca Array**	**92.17**	**321**	P	**P**	**22 05 51.8**	**+0.5**
GERES	**GERESS Array B**	**92.37**	**336**	P	**P**	**22 05 51.7**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=156,slow=7.0,SNR=4.9						
GERES				LR	LR	22 50 19.6	
	comp=Z,82nm,19.2s,baz=152,slow=38						
GERES	**GERESS Array B**	**92.37**	**336**	P	**P**	**22 05 51.4**	**-0.6**
GERES	**GERESS Array B**	**92.37**	**336**	P	**P**	**22 05 51.4**	**-0.6**
KHC	**Kasperske Hory**	**92.66**	**336**	*e*P	**P**	**22 05 53.0**	**-0.3**
KHC	**Kasperske Hory**	**92.66**	**336**	⇑*i*P	**P**	**22 05 52.6**	**-0.7**
DGZ	**Jazzator, Alta**	**92.68**	**23**	⇓*e*P	**P**	**22 05 53.1**	**-0.4**
DGZ				pmax	pmax		
	comp=Z,17nm,1.7s						
OBN	**Obninsk**	**93.28**	**352**	*e*P	**P**	**22 05 54.1**	**-1.8**
OBN				*e*PPP	PPP	22 11 37.9	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,231nm,21.0s						
GRF	**Grafenberg Arr**	**93.92**	**335**	*e*P	**P**	**22 06 01.6**	**+2.6**
	comp=Z,35nm,2.1s,baz=149,slow=5.4						
ARU	**Arti**	**93.94**	**4**	*d* *i*P	**P**	**22 05 58.5**	**-0.4**
ARU						22 09 42.2	
ARU				S	**SKSac**	**22 16 32.5**	**-0.7**
ARU				pmax	pmax		
	comp=Z,16nm,1.8s						
ARU	**Arti**	**93.94**	**4**	P	**P**	**22 05 58.3**	**-0.7**
SVE	**Sverdlovsk**	**94.47**	**5**	*e*P	**P**	**22 06 01.5**	**+0.1**
BTO	**Baotou**	**94.65**	**41**	*e*P	**P**	**22 06 02.1**	**-0.7**
BTO				S	S	22 17 06.7	-9.1
BTO				LR	LR		
	comp=Z,880nm,17.6s						
BTO				LR	LR		
	comp=Z,470nm,18.2s						
CLL	**Collm**	**94.74**	**337**	*i* P	**P**	**22 06 03.3**	**+0.5**
CLL				pmax	pmax		
	comp=Z,56nm,2.2s						
CLL	**Collm**	**94.74**	**337**	*i* P	**P**	**22 06 03.3**	**+0.5**
	comp=Z,56nm,2.2s						
CLL				*e*PS	**PS**	**22 18 43.0**	**+10**
CLL				*e*SS	SS	22 24 06.0	+25
DZM	**Mont Dzumac**	**94.92**	**123**	*e*PS	PS	22 18 39.2	+3.2
	comp=Z,94nm,26.3s						
DZM	**Mont Dzumac**	**94.92**	**123**	*e*LR	LR	22 36 49.6	
	comp=Z,309nm,29.7s						
HHC	**Hu-ho-hao-te**	**95.63**	**41**	*e*P	**P**	**22 06 08.9**	**+1.6**
HHC				pmax	pmax		
	comp=Z,13nm,1.2s						
HHC				pmax	pmax		
	comp=Z,110nm,7.8s						
ZAA0	**Zalesovo Array**	**95.74**	**19**	P	**P**	**22 06 05.8**	**-1.5**
ZAA0				IAmb	IAmb	22 06 07.1	
	comp=Z,9.9nm,0.9s						
ZALV	**Zalesovo Beam**	**95.74**	**19**	P	**P**	**22 06 06.3**	**-0.8**
	comp=Z,5.4nm,0.7s,baz=213,slow=4.3,SNR=22						
ZALV				LR	LR	22 46 14.8	
	comp=Z,189nm,19.5s,baz=116,slow=34						
ZALV	**Zalesovo Beam**	**95.74**	**19**	*i* P	**P**	**22 06 06.4**	**-0.8**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZALV	**Zalesovo Beam**	**95.74**	**19**	P	**P**	**22 06 05.6**	**-1.6**
SONM	**Songino Array**	**98.28**	**34**	P	**P**	**22 06 18.0**	**-1.1**
	comp=Z,1.2nm,1.0s,baz=222,slow=2.0,SNR=5.4						
SONM				LR	LR	22 47 21.4	
	comp=Z,508nm,21.4s,baz=210,slow=33						
SONM	**Songino Array**	**98.28**	**34**	P	**P**	**22 06 17.1**	**-2.0**
SONM				pmax	pmax		
	comp=Z,10.0nm,1.8s						
SONM	**Songino Array**	**98.28**	**34**	P	**P**	**22 06 17.1**	**-2.0**
SONM				IAmb	IAmb	22 10 14.9	
	comp=Z,9.5nm,1.8s						
HNR	**Honiara**	**98.72**	**109**	LR	LR	22 48 07.4	
	comp=Z,697nm,18.1s,baz=334,slow=34						
TBI	**Tubuai**	**116.25**	**159**	*e*LR	LR	22 46 39.7	
	comp=Z,328nm,33.2s						
PPT2	**Papeete2**	**121.64**	**156**	*e*LR	LR	22 49 05.0	
	comp=Z,304nm,22.5s						
MA2	**Magadan**	**126.19**	**38**	⇓*i*PKIKP	**PKiKP**	**22 11 44.0**	**+0.1**
TAOE	**Nuku Hiva Isla**	**132.50**	**165**	*e*LR	LR	22 54 09.4	
	comp=Z,547nm,23.8s						
BILL	**Bilibino**	**133.63**	**28**	*e*PKIKP	**PKPdf**	**22 11 54.7**	**-2.7**
BILL				*e*PPP	PPP	22 17 18.0	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GOGA	**Godfrey**	**143.20**	**277**	PKIKP	PKPbc	22 12 12.9	-0.1
GOGA	**Godfrey**	**143.20**	**277**		PKPbc	22 12 12.9	-0.1
BG3	**Lake Jocassee**	**143.29**	**280**		PKPbc	22 12 13.2	0.0
A21K	**Barrow**	**143.33**	**15**		**PKPdf**	**22 12 15.0**	**0.0**
V53A	**Saluda**	**143.40**	**281**		PKPbc	22 12 13.4	-0.2
W52A	**Murphy**	**144.10**	**280**		**PKPab**	**22 12 15.5**	**+0.3**
TZTN	**Tazewell**	**144.22**	**282**		PKPbc	22 12 16.1	+0.2
P51A	**Williamsport**	**144.54**	**287**		**PKPab**	**22 12 16.9**	**+0.2**
ACSO	**Alum Creek Sta**	**144.63**	**289**		**PKPab**	**22 12 17.0**	**0.0**
X51A	**Calhoun**	**144.67**	**279**		PKPbc	22 12 18.0	+0.6
CPCT	**Cooper Cave**	**144.67**	**280**		**PKPab**	**22 12 17.1**	**-0.1**
250A	**Grady**	**144.91**	**274**		**PKPab**	**22 12 18.1**	**-0.1**
FPAL	**Fort Paine**	**145.25**	**278**		**PKPbc**	**22 12 18.7**	**-0.6**
R50A	**Paris**	**145.25**	**285**		**PKPbc**	**22 12 18.5**	**-0.7**
T50A	**Nancy**	**145.34**	**283**		**PKPbc**	**22 12 19.1**	**-0.4**
AAM	**Ann Arbor**	**145.47**	**292**	PKIKP	**PKPdf**	**22 12 19.6**	**-0.1**
AAM	**Ann Arbor**	**145.47**	**292**	PKPdf	**PKPdf**	**22 12 19.6**	**-0.1**
A36M	**Sachs Harbour**	**145.57**	**358**	PKPdf	**PKPbc**	**22 12 19.2**	**+0.1**
CLTN	**Cedars of Leba**	**146.26**	**281**		**PKPdf**	**22 12 20.5**	**-0.8**
WCI	**Wyandotte Cave**	**146.75**	**284**	PKP2	**PKPdf**	**22 12 22.1**	**+0.1**

WCI	Wyandotte Cave	146.75	284	PKPdf	PKPdf	22 12 22.1	+0.1
N47A	Urbana	146.78	289		PKPdf	22 12 22.6	+0.7
TOLK	Toolik Lake Re	146.92	14	PKPdf	PKPdf	22 12 21.7	+0.3
T47A	Sharon Grove	147.09	282		PKPdf	22 12 22.7	+0.1
WVT	Waverly	147.44	280	PKIKP	PKPdf	22 12 22.3	-0.9
WVT	Waverly	147.44	280		PKPdf	22 12 22.2	-0.9
SFIN	Lafayette	147.76	288		PKPdf	22 12 23.2	-0.4
COLD	Coldfoot	148.00	16		PKPdf	22 12 23.7	+0.5
IMAR	Indian Mountai	148.16	19		PKPdf	22 12 23.3	-0.2
OLIL	Olney	148.24	285	PKPdf	PKPdf	22 12 23.7	-0.7
W45A	Hickory Valley	148.24	278		PKPdf	22 12 25.0	+0.4
H21K	Melozitna Rive	148.66	19		PKPdf	22 12 25.6	+1.3
BMAR	Burnt Mountain	148.88	12		PKPbc	22 12 29.1	+0.4
FCC	Fort Churchill	149.27	325	PKP2	PKPbc	22 12 29.1	-0.6
FCC	Fort Churchill	149.27	325		PKPbc	22 12 29.1	-0.6
COWI	Conover	149.61	299		PKPbc	22 12 30.9	-0.2
MLY	Manley	149.69	18		PKiKP	22 12 31.4	-0.3
I23K	Minto, Yukon-K	149.93	17		PKiKP	22 12 32.1	0.0
MDM	Murphy Dome	150.35	17		PKPbc	22 12 32.0	-0.3
CCB	Clear Creek Bu	150.71	17		PKPbc	22 12 32.5	-0.5
WRH	Wood River Hil	150.79	17		PKPbc	22 12 32.9	-0.4
IL31		150.81	16		PKPbc	22 12 32.5	-0.7
ILAR	Eielson Array	150.81	16	PKPbc	PKPbc	22 12 32.7	-0.6
	comp=Z,9.2nm,0.8s,baz=318,slow=3.2,SNR=66						
ILAR	Eielson Array	150.81	16	PKIKP	PKPbc	22 12 32.5	-0.8
ILAR	Eielson Array	150.81	16		PKPbc	22 12 32.5	-0.8
EPYK	Eagle Plains	150.89	7		PKPbc	22 12 33.8	+0.2
L40A	Anamosa	151.04	291		PKPbc	22 12 34.3	-0.2
EYMN	Ely	151.08	303		PKPbc	22 12 34.5	-0.1
HDA	Harding Lake	151.11	16		PKPbc	22 12 33.3	-0.8
E38A	The Farm, Brul	151.25	300		PKPbc	22 12 34.1	-0.8
U40A	Yellville	151.43	278	PKPdf	PKPdf	22 12 29.6	0.0
U40A					PKPbc	22 12 35.8	+0.1
SCRK	Sand Creek	152.11	14	PKPbc	PKiKP	22 12 37.2	+0.3
DHY	Denali Highway	152.14	18		PKiKP	22 12 37.4	+0.4
HHAR	Hobbs	152.27	278	PKPbc	PKPbc	22 12 36.8	-0.9
P38A	Dawn	152.55	285		PKPbc	22 12 38.2	+0.1
U38A	Gravette	152.65	278		PKPbc	22 12 37.8	-0.6
F36A	Milaca	152.68	299		PKPbc	22 12 37.4	-0.8
L27K	Beaver Creek,	153.35	13	PKPbc	PKiKP	22 12 40.0	+0.7
BCAR	Beaver Creek A	153.36	13		PKiKP	22 12 40.0	+0.6
ULM	Lac du Bonnet	153.45	309	PKPbc	PKPbc	22 12 38.5	-1.2
	comp=Z,8.3nm,0.9s,baz=82,slow=3.2,SNR=5.0						
ULM	Lac du Bonnet	153.45	309	PKIKP	PKPbc	22 12 39.4	-0.3
ULM	Lac du Bonnet	153.45	309		PKPbc	22 12 39.4	-0.3
YKA	Yellowknife Ar	153.67	345	PKPbc	PKPbc	22 12 39.9	+0.1
	comp=Z,5.3nm,0.8s,baz=34,slow=1.9,SNR=12						
YKA				PKPab	PKPab	22 12 51.4	-1.2
	comp=Z,4.2nm,0.8s,baz=27,slow=4.8,SNR=5.5						
YKA	Yellowknife Ar	153.67	345	PKP2	PKPab	22 12 53.4	+0.8
YKA						23 12 31.3	
YKA	Yellowknife Ar	153.67	345	PKPdf	PKPdf	22 12 31.3	-0.7
YKA					PKPbc	22 12 39.4	-0.4
YKA				PKPab	PKPab	22 12 53.4	+0.8
AGMN	Agassiz Nation	153.91	305		PKPab	22 12 54.4	+0.3
T35A	Sooner Cattle	154.43	278		PKPdf	22 12 33.8	-0.2
T35A					PKPab	22 12 57.8	+1.1
TXAR	Lajitas Array	157.56	256	PKP	PKPdf	22 12 38.3	-0.2
	comp=Z,1.1nm,0.9s,baz=152,slow=5.5,SNR=9.1						
TXAR				PKPab	PKPab	22 13 10.3	-0.1
	comp=Z,2.4nm,0.9s,baz=120,slow=7.4,SNR=9.0						
TXAR	Lajitas Array	157.56	256	PKIKP	PKPdf	22 12 38.8	+0.3
TXAR	Lajitas Array	157.56	256		PKPdf	22 12 38.8	+0.3
PDAR	Pinedale Array	164.51	295	PKP	PKPdf	22 12 45.3	-0.4
	comp=Z,0.8nm,0.8s,baz=64,slow=3.4,SNR=5.1						
PDAR	Pinedale Array	164.51	295		PKPdf	22 12 44.8	-0.8
NVAR	Mina Array Bea	171.74	278	PKP	PKPdf	22 12 52.2	+1.5
	comp=Z,1.8nm,0.9s,baz=188,slow=1.1,SNR=8.2						
NVAR	Mina Array Bea	171.74	278		PKPdf	22 12 51.8	+1.1

IDC 09 22:01:27.7±0.7,**4°.17S**×**129°.50E**,**h0**^{km},**mb3.5**/1, **mb1 3.6**/4,**mb1mx3.4**/32,**mbtmp3.4**/4,**ML3.4**/2,**Error ellipse: s-maj=17.8km s-min=7.4km az=104.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.73	28	Pn	Pn	22 02 27.2	+0.6
	3.0nm,0.3s,baz=205,slow=20,SNR=7.8						
SIJI				Sn	Sn	22 03 11.1	-0.2
	1.9nm,0.3s,baz=244,slow=23,SNR=2.0						
WRA	Warramunga Arr	16.37	164	Pn	Pn	22 05 18.2	-0.9
	baz=347,slow=13,SNR=1.1						
ASAR	Alice Springs	19.84	168	P	P	22 06 00.8	+0.4
	0.1nm,0.3s,baz=347,slow=10,SNR=4.3						
MKAR	Makanchi Array	65.60	326	P	P	22 12 13.3	-0.2
	0.3nm,0.5s,baz=111,slow=7.1,SNR=7.3						

JMA 09 22:02:53.3±0.3,**31°.21N**×**128°.71E**,**h17**^{km},**M2.6, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.98	61	P	Pb	22 03 11.2	-0.6
JSJ				*e*S	Sb	22 03 24.2	-0.2
JFU	Fukue jima 2	1.44	1	P	Pb	22 03 19.4	-0.3
JKC	Kuchinoerabu	1.48	120	P	Pb	22 03 20.2	-0.1
JKC				*e*S	Sb	22 03 38.8	0.0
JYAK	Yakushimahirau	1.83	122	P	Pn	22 03 23.4	-0.5
JTN	Tanegashima 3	2.03	105	P	Pn	22 03 27.6	+0.9

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*ISN **09** 22:08:43.5±1.6, 35°.37N×44°.94E, h20^{km}±319^{km}, ML3.3*
*TEH **09** 22:08:51.2, 35°.36N×45°.05E, h19^{km}, ML3.6*
ISC 09 22:08:49.5±1.1,**35°.27N**±0°.05×**44°.92E**±0°.06,**h10**^{km},**n29**, σ**2**^{s}**19**/28,**Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKRK	Kirkuk	0.49	286	*e*Pg	Pg	22 08 54.0	-5.2
IKRK				*e*Sg	Sg	22 08 59.4	-6.3
IKRK				AML	AML	22 09 01.5	
	comp=E,1µm,0.4s						
IKRK				AML	AML	22 09 01.6	
	comp=N,2µm,0.4s						
IDHR	Dehrash	1.33	115	*e*Pg	Pn	22 09 15.4	+1.1
IDHR				*e*		22 09 40.9	
	comp=Z,15µm,0.3s						
MAHB	Mahabad	1.62	23	*e*Pg	Pb	22 09 19.0	-0.7
MAHB				*e*		22 09 47.7	
	comp=Z,5µm,0.6s						
IGHG	Ghaleghazi	1.65	124	*e*Pn	Pb	22 09 21.1	+1.0
IGHG				*e*		22 10 04.5	
	comp=Z,10µm,0.7s						
ILIN	Lien	1.71	101	*e*Pg	Pg	22 09 22.2	-0.1
KCHF	Cheshme Sefid,	2.00	119	*e*Pn	Pn	22 09 25.5	+1.9
KER	Kermanshah	2.02	115	*e*Pn	Pb	22 09 26.5	+0.1
BHD	Baghdad	2.04	193	*e*Pn	Pn	22 09 20.0	-4.0
BHD				*e*Sn	Sn	22 09 47.0	-2.5
CUKT	Cukurca	2.24	332	*e*Pn	Pn	22 09 27.5	+0.6
IBDR	Badra	2.31	159	*e*Pn	Pn	22 09 23.0	-4.6
IBDR				*e*Sn	Sn	22 09 52.0	-4.1
YOVA	Hakkari_Yksek	2.37	348	*e*Pn	Pn	22 09 29.7	+1.0
IAZR	Azarshahr	2.55	19	*e*Pn	Pn	22 09 32.0	+0.8
IAZR				*e*		22 10 24.7	
	comp=Z,4µm,0.7s						
IALM	Almabolaq	2.69	98	*e*Pn	Pn	22 09 35.9	+2.7
IBST	Bostanabad	2.90	33	*e*Pn	Pn	22 09 36.8	+0.8
IKFM	Kafar-mosalman	2.98	125	*e*Pn	Pn	22 09 38.4	+1.6
SIRN	Sırnak	3.01	318	*e*Pn	Pn	22 09 40.7	+3.4
ISHB	Shabestar	3.06	10	*e*Pn	Pn	22 09 38.8	+0.6
IDOB	Doab	3.07	118	*e*Pn	Pn	22 09 40.8	+2.5
HSAM	Samen	3.21	108	*e*Pn	Pn	22 09 42.5	+2.3
DHL1	Dehloran	3.24	142	*e*Pn	Pn	22 09 42.0	+1.6
ISRB	Sarab	3.38	40	*e*Pn	Pn	22 09 43.7	+1.2
IHRS	Heris	3.49	29	*e*Pn	Pn	22 09 45.1	+1.0
HAGD	Aghdareh	3.49	96	*e*Pn	Pn	22 09 46.5	+2.4
HAGD				*e*		22 10 56.2	
	comp=Z,598nm,0.7s						
BMDN	Meydan	3.59	115	*e*Pn	Pn	22 09 47.4	+1.9
RAFI	Al-Rafai	3.67	164	*e*Pn	Pn	22 09 43.0	-3.4
RAFI				*e*Sn	Sn	22 10 26.0	-3.7
SVAN	Silvan-Diyarba	4.15	315	*e*Pn	Pn	22 09 56.6	+3.6
QAMS	Qamsar	5.56	104	*e*Pn	Pn	22 10 15.1	+2.5
IKLH	Kolahrood	5.84	108	*e*Pn	Pn	22 10 18.2	+1.7
KRSH	Karshahi	6.09	100	*e*Pn	Pn	22 10 21.7	+2.0

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*MAN **09** 22:11:37.9, 5°.15N×127°.03E, h149^{km}, mb5.1, ML4.0, MS4.1*
*NEIC **09** 22:11:41.5±1.4, 5°.17N±0°.06×126°.83E±0°.09, h138^{km}±5^{km}, mb4.7/93, Error ellipse: s-maj=13.8km s-min=7.6km az=70.0*
*IDC **09** 22:11:41.3±1.3, 5°.22N×126°.80E, h140^{km}±11^{km}, mb4.3/23, mb1 4.4/27, mb1mx4.3/37, mbtmp4.7/27, MS3.6/4, Ms1 3.6/4, ms1mx3.1/28, Error ellipse: s-maj=16.3km s-min=8.5km az=79.0*
*KLM **09** 22:11:42, 5°.23N×126°.96E, h151^{km}, mb4.8*
*DJA **09** 22:11:43.9±0.7, 5°N±6°×12°7E±°, h138^{km}±4^{km}, M4.5/16, mb4.7/16, mB4.9/11, MLv5.0/12, Mw(mB)4.2/11, MwMwp5.5/1, Mwp5.6/1*
ISC 09 22:11:41.2±0.7,**5°.16N**±0°.04×**126°.83E**±0°.06,**h141**^{km}±6^{km}, **n239**,σ**1**^{s}**03**/250,**mb4.7**/82,**15C-13D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.96	221	P	Pn	22 12 16.2	+0.9
SGSI				S	Sn	22 12 40.8	-0.6
GSPH	General Santos	2.08	296	⇓*i*P	Pn	22 12 14.9	-2.0
GSPH				*i* S	Sn	22 12 42.3	-2.0
DAV	Davao City (W)	2.27	327	P	Pn	22 12 19.1	+0.1
	446nm,0.3s,baz=103,slow=1.5,SNR=45						
DAV				S	Sn	22 12 50.2	+2.1
	166nm,0.3s,baz=242,slow=22,SNR=4.1						
DAV				LR	LR	22 13 09.3	
	comp=Z,288nm,18.0s,baz=104,slow=40						
DAV	Davao City (W)	2.27	327		Pn	22 12 19.1	+0.1
DAV				Sn	Sn	22 12 50.9	+2.8
DMPH	Davao City--Mi	2.31	326	⇓*e*P	Pn	22 12 18.9	-0.8
DMPH				*e*S	Sn	22 12 49.9	+0.7
KCP	Kidapawan	2.52	317	⇓*i*P	Pn	22 12 21.6	-0.6
BIPH	Bislig	3.04	351	⇓*e*P	Pn	22 12 31.3	+2.6
PAGZ	Pagadian	4.34	308	⇓*e*P	Pn	22 12 44.5	-1.2
TNTI	Ternate	4.39	173	P	Pn	22 12 46.7	+0.2
TNTI				S	Sn	22 13 36.0	-1.2
TNTI	Ternate	4.39	173	Pn	Pn	22 12 46.6	+0.2
TNTI				Sn	Sn	22 13 36.3	-0.9
TNTI	Ternate	4.39	173	P	Pn	22 12 47.1	+0.6
DCPH	Dipolog City	4.84	315	⇑*e*P	Pn	22 12 53.9	+1.6
KMSI	Cibinong	5.37	212	P	Pn	22 13 00.6	+1.2
	1.7nm3µm270nm,0.7s						
TBP	Tagbilaran	5.37	327	*e*P	Pn	22 12 58.3	-1.2
LBMI	Labuha	5.80	173	P	Pn	22 13 05.6	+0.4
	1.1nm2µm143nm,0.5s						
GTOI	Gorontalo	5.89	220	P	Pn	22 13 07.2	+0.8
	0.6nm1µm158nm,0.8s						
CNOP	Candoni, Negro	6.22	318	⇓*e*P	Pn	22 13 10.6	-0.3
MRSI	Marisa	6.74	226	P	Pn	22 13 19.4	+1.6
	0.9nm2µm186nm,0.6s						
SANI	Sanana	7.21	187	P	Pn	22 13 21.4	-2.7
	0.9nm2µm73nm,1.1s						
SANI	Sanana	7.21	187	P	Pn	22 13 22.0	-2.1
TOLI2	Tolitoli	7.25	237	Pn	Pn	22 13 24.7	+0.1
TOLI2	Tolitoli	7.25	237	P	Pn	22 13 25.5	+0.8
SWI	Sorong	7.45	143	P	Pn	22 13 27.1	-0.1
	0.2nm1µm58nm,0.7s						
SIJI	Sorong	7.45	143	P	Pn	22 13 27.7	+0.3
	8.1nm,0.3s,baz=335,slow=8.3,SNR=22						
SIJI				S	Sn	22 14 47.8	-2.8
	5.3nm,0.3s,baz=176,slow=22,SNR=13						
SIJI				LR	LR	22 16 23.1	
	comp=Z,85nm,19.0s,baz=204,slow=38						
RCP	Roxas	7.53	328	⇑*e*P	Pn	22 13 28.1	-0.3
APSI	Ampana	7.95	221	P	Pn	22 13 36.7	+2.8
	0.3nm875nm65nm,1.0s						
MYLDM	Lahad Datu	8.29	270	Pn	Pn	22 13 40.4	+1.8
MPSI	Mapaga	8.42	236	P	Pn	22 13 41.1	+0.9
	11nm,0.6s						
AAI	Ambon	8.90	171	P	Pn	22 13 47.0	+0.3
	1µm74nm,0.7s						
FAKI	Fak Fak	9.68	146	P	Pn	22 13 58.8	+1.6
	39nm,0.8s						
FAKI	Fak Fak	9.68	146	Pn	Pn	22 13 58.1	+0.8
SPMM	Sapulut	10.33	268	P	Pn	22 13 57.0	-8.9
TTSI	Tana Toraja	10.74	221	P	Pn	22 14 12.6	+1.3
	923nm30nm,0.9s						
SPSI	Sidrap Palu	11.48	218	P	Pn	22 14 21.2	+0.1
BNSI	Bone	11.63	215	P	Pn	22 14 24.7	+1.7
	20nm,0.7s						
KAPI	Kappang	12.33	215	P	Pn	22 14 32.4	+0.2
	1.2nm,0.3s,baz=20,slow=7.0,SNR=19						
KAPI	Kappang	12.33	215	Pn	Pn	22 14 32.8	+0.6
BKSI	Bulukumba	12.38	213	P	Pn	22 14 33.5	+0.7
	9.9nm,0.9s						
BSSI	Bau Bau, Buton	12.89	209	P	Pn	22 14 38.7	-0.7
SBUM	Sibu	14.82	260	P	P	22 15 09.0	+2.9
SBUM	Sibu	14.82	260		P	22 15 06.5	+0.4
SOEI	Soe	15.04	190	P	P	22 15 08.6	-0.1
SOEI	Soe	15.04	190	P	P	22 15 09.5	+0.8
BATI	Baumata	15.59	192	P	P	22 15 15.2	+0.5
	8.5nm,0.3s,baz=75,slow=2.6,SNR=7.2						
KSM	Kuching	16.89	258	P	Pn	22 15 31.0	+1.6
KSM	Kuching	16.89	258	P	Pn	22 15 29.2	-0.2
MTN	Manton Dam	18.39	167	P	P	22 15 46.0	+0.5
MTN				IAmb	IAmb	22 15 53.4	
	comp=Z,23nm,0.6s						
TWG	Pinlang	18.41	343	P	P	22 15 44.3	-1.4
TWG				IAmb	IAmb	22 15 45.8	
	comp=Z,47nm,0.9s						
KDU	Kakadu	18.60	162	P	Pn	22 15 48.9	-0.8
YULB	Yu-li	18.89	344	P	P	22 15 48.7	-2.2
YULB				IAmb	IAmb	22 15 56.4	
	comp=Z,53nm,1.2s						
TPUB	Ta-pu	19.00	342	P	P	22 15 51.0	-1.1
SSLB	Suanglung	19.36	344	P	P	22 15 55.0	-1.0
SSLB				IAmb	IAmb	22 15 58.9	
	comp=Z,45nm,0.8s						
YHNB	Yeheng	20.09	345	P	P	22 16 03.7	-0.2
KNRA	Kununurra	20.79	175	P	P	22 16 12.6	+1.2
KNRA	Kununurra	20.79	175	P	P	22 16 13.1	+1.7
JOW	Kunigami	21.59	4	P	P	22 16 20.8	+0.8
	comp=Z,33nm,0.6s,baz=196,slow=11,SNR=6.4						
JOW	Kunigami	21.59	4		P	22 16 20.7	+0.8
JOW				IAmb	IAmb	22 16 42.4	
	comp=Z,83nm,1.3s						
FITZ	Fitzroy Crossi	23.14	183	P	P	22 16 35.8	+0.6
	comp=Z,3.0nm,0.5s,baz=17,slow=5.3						
MYKOM	Kota Tinggi	23.17	263	P	P	22 16 35.6	0.0
UBPT	Khong Chiam	23.27	297	P	P	22 16 35.5	-0.9
UBPT				IAmb	IAmb	22 16 36.2	
	comp=Z,28nm,1.5s						
JRMM	Jerantut	24.30	268	P	P	22 16 46.0	+0.1
COEN	Coen	24.98	140	P	P	22 16 52.3	+0.3
COEN				IAmb	IAmb	22 16 55.2	
	comp=Z,17nm,0.6s						
IPM	Ipoh	25.72	270	P	P	22 16 59.0	+0.3
IPM	Ipoh	25.72	270	P	P	22 16 57.9	-0.9
WRAB	Tennant Creek	26.01	164	P	P	22 17 02.1	+0.9
WRA	Warramunga Arr	26.02	164	P	P	22 17 01.7	+0.4
	comp=Z,14nm,0.4s,baz=343,slow=10,SNR=159						
WRA				ScP	ScP	22 23 53.6	+1.0
	comp=Z,0.8nm,0.5s,baz=256,slow=0.9,SNR=9.5						
WRA	Warramunga Arr	26.02	164	P	P	22 17 01.7	+0.4
WB2	Warramunga Arr	26.02	164	P	P	22 17 01.6	+0.3
WB2				IAmb	IAmb	22 17 07.2	
	comp=Z,18nm,0.7s						
KULM	Kulim	26.07	271	P	P	22 17 02.0	+0.2
KULM	Kulim	26.07	271	P	P	22 17 01.3	-0.5
WR0	Warramunga Arr	26.09	163	P	P	22 17 02.0	+0.1
WR0				IAmb	IAmb	22 17 08.8	
	comp=Z,12nm,0.6s						
PSA00	Pilbara Seismi	27.44	194	P	P	22 17 13.2	-0.8
PSA00	Pilbara Seismi	27.44	194	P	P	22 17 13.5	-0.4
PSA00				IAmb	IAmb	22 17 40.6	
	comp=Z,1.6nm,0.8s						
NJ2	Nanjing	27.77	345	*e*P	P	22 17 18.0	+1.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
WHN	Wuhan	27.85	336	⇑P	P	22 17 19.3	+1.8
PSI	Prapat	27.93	266	P	P	22 17 17.9	-0.8
	comp=Z,3.4nm,0.7s,baz=80,slow=8.5,SNR=7.8						
QIS	Mount Isa	28.48	154	P	P	22 17 24.4	+1.2
GYA	Guiyang	28.63	320	⇓P	P	22 17 27.4	+2.7
GYA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GSI	Gunungsitoli	29.45	264	P	P	22 17 30.8	-1.1
GSI				IAmb	IAmb	22 17 31.9	
	comp=Z,17nm,0.6s						
GSI	Gunungsitoli	29.45	264	P	P	22 17 30.4	-1.6
AS31	Alice Springs	29.47	167	P	P	22 17 32.3	+0.2
AS31				IAmb	IAmb	22 17 40.4	
	comp=Z,4.0nm,0.3s						
ASAR	Alice Springs	29.47	167	P	P	22 17 32.8	+0.7
	comp=Z,2.1nm,0.3s,baz=344,slow=7.1,SNR=37						
ASAR				PcP	PcP	22 20 34.9	+0.5
	comp=Z,1.6nm,0.7s,baz=357,slow=3.0,SNR=4.4						
ASAR				ScP	ScP	22 24 04.2	+0.9
	comp=Z,1.4nm,0.5s,baz=344,slow=3.2,SNR=12						
ASAR	Alice Springs	29.47	167	P	P	22 17 32.4	+0.3
ENH	Enshi	29.85	329	P	P	22 17 34.9	-0.5
ENH				IAmb	IAmb	22 17 35.8	
	comp=Z,8.0nm,0.8s						
WRKA	Warakurna	30.05	177	P	P	22 17 38.5	+1.3
JHS	Saijyo	30.25	10	P	P	22 17 39.3	+0.5
JHS				IAmb	IAmb	22 17 41.6	
	comp=Z,24nm,1.2s						
CMAR	Chiang Mai Arr	30.26	298	P	P	22 17 39.0	-0.1
	comp=Z,2.1nm,0.6s,baz=107,slow=7.5,SNR=9.3						
CMAR				PcP	PcP	22 20 37.1	+0.7
	comp=Z,0.7nm,0.3s,baz=142,slow=0.6,SNR=6.3						
CMAR	Chiang Mai Arr	30.26	298	P	P	22 17 38.8	-0.3
CHTO	Chiang Mai	30.39	299	P	P	22 17 39.6	-0.7
JWT	Wachi	31.00	14	P	P	22 17 44.8	-0.5
JWT				IAmb	IAmb	22 17 45.4	
	comp=Z,12nm,0.7s						
INU	Inuyama	31.48	16	P	P	22 17 48.9	-0.6
INU				IAmb	IAmb	22 17 49.3	
	comp=Z,13nm,0.6s						
CTAO	Charters Tower	31.54	143	P	P	22 17 51.7	+1.4
CTAO				IAmb	IAmb	22 17 60.0	
	comp=Z,15nm,0.6s						
KSAR	Wonju Array Be	32.14	2	P	P	22 17 54.6	-0.7
KSRS	Korea Array	32.16	2	P	P	22 17 55.5	0.0
	comp=Z,6.5nm,0.7s,baz=180,slow=9.7,SNR=32						
KSRS				PcP	PcP	22 20 41.4	+0.2
	comp=Z,1.0nm,0.6s,baz=216,slow=1.9,SNR=4.1						
TIA	Tai'an	32.16	345	⇑P	P	22 17 55.5	0.0
TIA				pmax	pmax		
	comp=Z,24nm,0.8s						
KS19	Wonju Array Si	32.20	2	P	P	22 17 55.5	-0.4
KS19				IAmb	IAmb	22 17 56.2	
	comp=Z,8.4nm,0.8s						
MEEK	Meekatharra	32.60	194	P	P	22 18 00.2	+0.7
MJAR	Matsushiro Arr	32.93	17	P	P	22 18 00.2	-2.1
	comp=Z,0.9nm,0.4s,baz=186,slow=8.8,SNR=5.0						
XAN	Xi'an	33.20	332	P	P	22 18 04.0	-0.6
XAN				pP	pP	22 18 12.9	-22
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
OOD	Oodnadatta	33.86	166	P	P	22 18 11.3	+0.9
JSD	Sado	34.34	16	P	P	22 18 12.7	-1.8
JSD				IAmb	IAmb	22 18 13.1	
	comp=Z,12nm,0.8s						
MORW	Morawa	35.58	196	P	P	22 18 25.6	+0.5
MORW				IAmb	IAmb	22 18 44.4	
	comp=Z,14nm,1.1s						
FORT	Forrest	35.76	178	P	P	22 18 27.1	+0.5
FORT	Forrest	35.76	178	P	P	22 18 27.8	+1.2
MULG	Mulgathing	35.92	169	P	P	22 18 29.3	+1.3
BJT	Baijiatuau	36.01	346	P	P	22 18 29.3	+0.6
BJI	Beijing	36.03	346	P	P	22 18 29.0	+0.2
BJI				pmax	pmax		
	comp=Z,70nm,0.7s						
BLDU	Ballidu	36.87	195	P	P	22 18 36.6	+0.5
LCRK	Leigh Creek	37.05	164	P	P	22 18 38.5	+0.9
LZH	Lanzhou	37.33	329	⇓P	P	22 18 41.0	+0.8
LZH				pP	pP	22 19 02.7	-8.0
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
HHC	Hu-ho-hao-te	38.08	341	*e*P	P	22 18 48.6	+2.3
HHC				pmax	pmax		
	comp=Z,24nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,8.5s						
MUN	Mundaring	38.29	195	P	P	22 18 49.1	+1.0
BTO	Baotou	38.38	339	*e*P	P	22 18 51.0	+2.2
BTO				S	S	22 24 18.4	-15
BTO				LR	LR		
	comp=N,780nm,15.9s						
BTO				LR	LR		
	comp=E,630nm,13.1s						
EIDS	Eidsvold	38.42	143	P	P	22 18 49.6	+0.3
BBOO	Buckleboo	38.77	168	P	P	22 18 52.2	+0.2
BBOO				IAmb	IAmb	22 18 53.6	
	comp=Z,11nm,0.7s						
BBOO	Buckleboo	38.77	168	P	P	22 18 53.3	+1.3
SHL	Shillong	39.12	305	P	P	22 18 54.5	-0.8
USA0B	Ussuriysk Arra	39.15	6	P	P	22 18 54.6	-0.3
USRK	Ussuriysk Ar.	39.15	6	P	P	22 18 54.9	-0.1
	comp=Z,3.4nm,0.5s,baz=185,slow=7.8,SNR=11						
USRK	Ussuriysk Ar.	39.15	6	P	P	22 18 54.7	-0.3
MDJ	Mudanjiang	39.37	3	P	P	22 18 57.1	+0.2
MDJ				pmax	pmax		
	comp=Z,15nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,130nm,6.8s						
MDJ	Mudanjiang	39.37	3	P	P	22 18 56.7	-0.1
MDJ				IAmb	IAmb	22 18 58.0	
	comp=Z,12nm,0.9s						
STKA	Stephens Creek	39.43	160	P	P	22 18 58.7	+1.2
	comp=Z,7.9nm,0.4s,baz=332,slow=8.9,SNR=20						
STKA	Stephens Creek	39.43	160	P	P	22 18 58.3	+0.8
STKA	Stephens Creek	39.43	160	P	P	22 18 58.7	+1.2
JKA	Kamikawa-asahi	41.20	17	P	P	22 19 12.1	+0.1
JKA				IAmb	IAmb	22 19 22.4	
	comp=Z,27nm,1.1s						
LSA	Lhasa	41.58	310	P	P	22 19 15.5	-0.3
GTA	Gaotai	41.93	328	*e*P	P	22 19 17.9	-0.3
GTA				pP	pP	22 19 50.0	+0.6
GTA				sP	sP	22 20 08.9	+3.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,110nm,5.1s						
GTA				LR	LR		
	comp=N,150nm,17.8s						
GTA				LR	LR		
	comp=E,230nm,16.4s						
GTA				LR	LR		
	comp=Z,220nm,17.1s						
ARMA	Armidale	42.61	148	P	P	22 19 24.0	+0.3
ARMA				IAmb	IAmb	22 19 30.3	
	comp=Z,9.6nm,0.6s						
TAPN	Taplejung	43.26	305	*e*P	P	22 19 28.6	-0.7
	comp=Z,52nm,0.5s						
ODAN	Odare	43.34	304	*e*P	P	22 19 29.3	-0.5
	comp=Z,74nm,0.6s						
RAMN	Ramite	44.02	304	*e*P	P	22 19 35.3	0.0
	comp=Z,41nm,0.5s						
PKI	Pulchoki	45.24	304	*e*P	P	22 19 44.0	-1.0
	comp=Z,8.2nm,0.3s						
PKIN	Phulchoki	45.25	304	*e*P	P	22 19 44.1	-1.0
	comp=Z,19nm,0.5s						
KKN	Kakani	45.42	304	*e*P	P	22 19 45.5	-0.9
	comp=Z,20nm,0.4s						
DMN	Daman	45.50	304	*e*P	P	22 19 46.3	-0.7
ULN	Ulaanbaatar	45.80	341	P	P	22 19 49.6	+0.6
TOO	Toolangi	45.93	159	P	P	22 19 51.1	+1.2
TOO				IAmb	IAmb	22 19 53.1	
	comp=Z,18nm,1.4s						
SONM	Songino Array	45.98	341	P	P	22 19 50.9	+0.6
	comp=Z,14nm,0.7s,baz=157,slow=9.3,SNR=86						
SONM				PcP	PcP	22 21 24.9	+0.2
	comp=Z,3.1nm,0.7s,baz=162,slow=4.1,SNR=7.3						
SONM	Songino Array	45.98	341	P	P	22 19 50.9	+0.6
SONM				IAmb	IAmb	22 19 51.8	
	comp=Z,15nm,0.6s						
GKN	Gorkha	46.03	304	*e*P	P	22 19 50.0	-1.1
	comp=Z,25nm,0.5s						
KOLN	Koldanda	46.80	304	*e*P	P	22 19 56.7	-0.5
	comp=Z,63nm,0.3s						
DANN	Dangsing	46.88	304	*e*P	P	22 19 57.2	-0.6
	comp=Z,141nm,0.6s						
DZM	Mont Dzumac	47.29	126	P	P	22 20 00.5	-0.4
DZM				IAmb	IAmb	22 20 29.5	
	comp=Z,32nm,1.4s						
PYUN	Piuthan	47.42	304	*e*P	P	22 20 01.6	-0.4
	comp=Z,44nm,0.4s						
WMQ	Urumqi	51.62	324	*e*P	P	22 20 35.9	+2.6
WMQ				LR	LR		
	comp=N,430nm,12.3s						
WMQ				LR	LR		
	comp=E,430nm,18.1s						
WMQ				LR	LR		
	comp=Z,250nm,15.7s						
PEA0B	Petropavlovsk-	54.08	22	P	P	22 20 51.1	0.0
PETK	Petropavlovsk-	54.08	22	P	P	22 20 51.2	+0.1
	comp=Z,6.7nm,0.8s,baz=188,slow=4.4,SNR=15						

PETK	Petropavlovsk-	54.08	22	P	P	22 20 51.5	+0.4
MK31	Makanchi Array	56.45	325	P	P	22 21 07.8	-0.4
MKAR	Makanchi Array	56.45	325	P	P	22 21 08.3	+0.1
	comp=Z,4.5nm,0.5s,baz=124,slow=8.4,SNR=53						
MKAR				PcP	PcP	22 22 03.6	0.0
	comp=Z,3.6nm,0.7s,baz=115,slow=5.1,SNR=8.0						
MKAR	Makanchi Array	56.45	325	P	P	22 21 07.9	-0.4
MAKZ	Makanchi	56.63	325	P	P	22 21 09.3	-0.3
MAKZ				IAmb	IAmb	22 21 10.4	
	comp=Z,5.9nm,0.7s						
PRZ	Przheval'sk	56.70	319	P	P	22 21 11.7	+1.4
YAK	Yakutsk	56.78	2	P	P	22 21 10.3	+0.1
KSH	Kashi	57.11	314	P	P	22 21 14.5	+1.3
KSH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KDJ	Kajisay	57.35	318	P	P	22 21 15.3	+0.4
ZAA0	Zalesovo Array	59.37	333	P	P	22 21 27.6	-0.8
ZAA0				IAmb	IAmb	22 21 28.4	
	comp=Z,6.8nm,0.7s						
ZALV	Zalesovo Beam	59.37	333	P	P	22 21 27.9	-0.5
	comp=Z,7.0nm,0.6s,baz=125,slow=6.6,SNR=19						
KURK	Kurchatov	60.59	327	P	P	22 21 36.4	-0.4
KURK				IAmb	IAmb	22 21 37.8	
	comp=Z,12nm,0.7s						
KBL	Kabul	60.74	307	P	P	22 21 37.7	-0.8
KBL				IAmb	IAmb	22 21 38.5	
	comp=Z,8.8nm,0.8s						
GAR	Garm	61.04	312	P	P	22 21 39.8	-0.5
GAR				IAmb	IAmb	22 21 40.6	
	comp=Z,15nm,0.9s						
CHGR	Chuyangaron	61.79	311	P	P	22 21 44.8	-0.5
CHGR				IAmb	IAmb	22 21 45.4	
	comp=Z,7.2nm,0.6s						
KKAR	Karatay Array	62.26	316	P	P	22 21 47.4	-0.9
BKZ	Black Stump Fm	63.58	139	P	P	22 21 56.9	-0.1
BKZ				IAmb	IAmb	22 21 59.3	
	comp=Z,14nm,1.0s						
BRVK	Borovoye	66.25	327	P	P	22 22 13.9	-0.1
BRVK				IAmb	IAmb	22 22 15.0	
	comp=Z,11nm,0.7s						
TIXI	Tiksi	66.42	1	P	P	22 22 14.2	-0.5
TIXI				IAmb	IAmb	22 22 14.8	
	comp=Z,12nm,1.0s						
BILL	Bilibino	68.15	15	P	P	22 22 25.9	+0.1
NRIK	Noril'sk	69.07	346	P	P	22 22 31.4	0.0
	comp=Z,17nm,0.6s,baz=129,slow=6.5,SNR=37						
NRIK				LR	LR	22 55 26.7	
	comp=Z,130nm,18.6s,baz=222,slow=38						
NRIK	Noril'sk	69.07	346	P	P	22 22 31.3	0.0
ABKAR	Akbulak array	71.11	320	P	P	22 22 44.0	-0.3
ABKAR	Akbulak array	71.11	320	P	P	22 22 44.0	-0.3
SOCY	Socotra	72.18	281	P	P	22 22 49.3	-2.1
AKUT	Akutan	72.69	35	P	P	22 22 52.9	-0.6
ARU	Arti	73.79	327	P	P	22 22 59.4	-0.5
O18K	Koktuh Hills	79.52	30	P	P	22 23 32.7	+0.6
RAYN	Ar Rayn	80.02	293	P	P	22 23 35.0	-0.5
RAYN				IAmb	IAmb	22 23 35.7	
	comp=Z,7.2nm,0.8s						
KDAK	Kodiak Island	80.64	32	P	P	22 23 38.5	+0.4
IMAR	Indian Mountai	81.00	24	P	P	22 23 40.7	+0.8
H21K	Melozitna Rive	81.35	24	P	P	22 23 42.4	+0.6
AKH	Akhalkalaki	81.61	311	⇑P	P	22 23 44.5	+0.7
ONI	Oni	81.65	312	P	P	22 23 44.8	+0.8
ABPO	Ambohimpanom	81.88	250	P	P	22 23 45.3	-0.4
KBZ	Khabaz	82.07	313	P	P	22 23 45.9	-0.1
	comp=Z,3.7nm,0.9s,baz=137,slow=5.0,SNR=7.0						
MLY	Manley	82.15	25	P	P	22 23 46.5	+0.4
KIV	Kislovodsk	82.23	314	P	P	22 23 46.7	-0.3
KIV				IAmb	IAmb	22 23 48.7	
	comp=Z,7.8nm,0.7s						
SIRT	Sirnak	82.43	307	P	P	22 23 48.4	+0.3
COLD	Coldfoot	82.55	23	P	P	22 23 49.0	+1.0
VOI	Vohitsoka	82.71	247	P	P	22 23 49.9	0.0
VOI				IAmb	IAmb	22 24 09.2	
	comp=Z,26nm,1.3s						
GURO	Guroymak-BITLI	82.74	308	P	P	22 23 50.3	+0.5
GURO				IAmb	IAmb	22 23 52.3	
	comp=Z,9.3nm,1.0s						
MCK	McKinley	82.85	26	P	P	22 23 49.5	-0.2
MCK				IAmb	IAmb	22 23 50.3	
	comp=Z,11nm,0.9s						
TOLK	Toolik Lake Re	82.89	22	P	P	22 23 50.7	+0.9
HDA	Harding Lake	83.74	26	P	P	22 23 53.5	-0.7
HDA				IAmb	IAmb	22 23 53.9	
	comp=Z,6.6nm,0.8s						
IL31		83.78	25	P	P	22 23 53.9	-0.3
ILAR	Eielson Array	83.78	25	P	P	22 23 53.0	-1.4
	comp=Z,2.1nm,0.9s,baz=238,slow=6.1,SNR=13						
ILAR	Eielson Array	83.78	25	P	P	22 23 53.1	-1.2
KLMR	Klimovskoe	84.21	331	*e*P	P	22 23 55.2	-1.4
KLMR				AMP		22 23 57.1	
	comp=Z,19nm,0.7s						
BMAR	Burnt Mountain	84.73	23	P	P	22 23 60.0	+0.8
PPT	Papeete	85.46	108	LR	LR	22 57 54.2	
	comp=Z,215nm,18.1s,baz=175,slow=32						
SBA	Scott Base	85.73	172	P	P	22 24 04.5	+0.7
SBA				IAmb	IAmb	22 24 20.1	
	comp=Z,16nm,1.4s						
BCAR	Beaver Creek A	86.07	27	P	P	22 24 06.5	+0.6
GAZ	Gaziantep	86.61	307	P	P	22 24 08.8	-0.4
BNN	Bunyan	87.56	309	P	P	22 24 13.7	-0.1
GHAJ	Ghor Haditha	88.43	301	P	P	22 24 18.0	+0.2
GHAJ				IAmb	IAmb	22 24 19.3	
	comp=Z,13nm,1.0s						
ARCES	ARCESS Array B	89.15	340	P	P	22 24 19.4	-1.0
	comp=Z,6.9nm,0.5s,baz=85,slow=6.3,SNR=53						
ARCES	ARCESS Array B	89.15	340	P	P	22 24 19.4	-1.0
BRTR	Keskin Array B	89.19	310	P	P	22 24 20.6	-0.9
	comp=Z,4.9nm,0.8s,baz=86,slow=6.6,SNR=8.6						
KMBO	Kilima Mbogo	89.67	269	P	P	22 24 24.8	+0.4
	comp=Z,2.1nm,0.7s,baz=83,slow=6.9,SNR=6.0						
KMBO	Kilima Mbogo	89.67	269	P	P	22 24 24.7	+0.4
CSS	Mathiatis	89.94	305	P	P	22 24 24.2	-0.7
CSS				IAmb	IAmb	22 24 25.4	
	comp=Z,7.9nm,0.7s						
FINES	FINESS Array B	90.62	332	P	P	22 24 26.4	-1.0
	comp=Z,3.1nm,0.5s,baz=55,slow=5.6,SNR=37						
AKASG	Malin Array Be	90.85	321	P	P	22 24 27.6	-1.1
	comp=Z,2.4nm,0.5s,baz=69,slow=4.7,SNR=7.6						
AKASG	Malin Array Be	90.85	321	P	P	22 24 27.7	-1.0
PURM	Purcari	91.06	317	⇑P	P	22 24 29.2	-0.6
CFR	Carcaliu	92.48	316	⇑P	P	22 24 29.3	-7.1
ODBI	Odobesti	93.12	316	⇓P	P	22 24 38.8	-0.6
TESR	Tescani	93.26	317	⇑P	P	22 24 39.0	-1.0
VRI	Vrincioaia	93.33	316	⇑P	P	22 24 40.1	-0.3
PLOR	Plostina	93.39	316	⇓P	P	22 24 40.8	+0.2
BISRR	Bisoca	93.40	316	⇓P	P	22 24 40.8	+0.1
NEHR	Nehoiu	93.71	316	⇑P	P	22 24 42.0	-0.1
MLR	Muntele Rosu	93.94	316	⇓P	P	22 24 43.6	+0.2
MLR	Muntele Rosu	93.94	316	P	P	22 24 43.5	+0.2
MLR				IAmb	IAmb	22 24 43.8	
	comp=Z,5.0nm,0.7s						
BURAR	Bucovina Array	94.00	318	⇑P	P	22 24 43.8	+0.3
BUR08	Bucovina Ar. S	94.01	318	P	P	22 24 43.7	+0.2
BUR08				IAmb	IAmb	22 24 44.9	
	comp=Z,5.3nm,1.1s						
HUMR	Humele	94.81	315	⇓P	P	22 24 42.4	-4.7
ARR	Arges	94.87	316	⇑P	P	22 24 44.3	-3.2
DRGR		95.85	318	⇑P	P	22 24 50.8	-1.1
PUNG	Punghina	96.29	315	⇑P	P	22 24 42.2	-12
SIRR	Siria	96.68	318	⇑P	P	22 24 55.3	-0.3
NB2	NORSAR Subarra	97.55	334	P	P	22 24 57.7	-1.6
	comp=Z,0.8nm,0.6s,baz=62,slow=4.6						
NOA	NORSAR Array B	97.55	334	P	P	22 24 58.0	-1.3
	comp=Z,1.5nm,0.7s,baz=65,slow=4.6,SNR=5.3						
GERES	GERESS Array B	101.03	322	P	Pdif	22 25 14.7	-0.4
	comp=Z,0.4nm,0.6s,baz=64,slow=3.1,SNR=4.2						
SCHQ	Schefferville	119.15	9	PKP	PKiKP	22 30 13.8	+0.3
	comp=Z,2.4nm,0.3s,baz=7.7,slow=1.9,SNR=14						
SCHQ	Schefferville	119.15	9		PKiKP	22 30 13.7	+0.2
TXAR	Lajitas Array	120.64	52	PKP	PKPdf	22 30 17.0	-0.2
	comp=Z,0.3nm,0.7s,baz=270,slow=3.4,SNR=4.2						
TXAR	Lajitas Array	120.64	52		PKPdf	22 30 17.2	0.0
TORD	Torodi Ar. Bea	122.56	289	PKP	PKPdf	22 30 20.8	-0.2
	comp=Z,2.7nm,0.7s,baz=37,slow=2.1,SNR=16						
DBIC	Dimbokro	130.36	283	PKP	PKPdf	22 30 36.3	+0.3
	comp=Z,2.0nm,0.6s,baz=88,slow=4.1,SNR=4.3						

IDC 09 22:15:34.3±0.8, 4°.17S×129°.59E, h0^{km}, mb3.8/1, mb1 3.8/4, mb1mx3.6/30, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=21.5km s-min=8.4km az=103.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.68	27	Pn	Pn	22 16 34.0	+1.5
	3.0nm,0.3s,baz=192,slow=20,SNR=3.8						
SIJI				Sn	Sn	22 17 16.6	-0.1
	4.0nm,0.3s,baz=199,slow=22,SNR=2.5						
WRA	Warramunga Arr	16.35	164	Pn	Pn	22 19 25.4	0.0
	baz=348,slow=12,SNR=1.2						
ASAR	Alice Springs	19.83	168	P	P	22 20 06.5	-0.3
	0.2nm,0.3s,baz=353,slow=11,SNR=2.5						
MKAR	Makanchi Array	65.65	326	P	P	22 26 20.2	-0.2
	0.5nm,0.4s,baz=118,slow=7.5,SNR=5.7						

NNC 09 22:16:38.8±2.3, 38°.40N×74°.08E, h0^{km}, mb4.0, mpv3.6, 5C-3D, Error ellipse: s-maj=17.8km s-min=11.7km az=148.0, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.24	4	⇑Pg	Pb	22 17 55.5	+1.2
	20nm,1.1s						
AAK				⇓Lg	Lg	22 18 51.1	
	12nm,0.7s						
MRKS	Merke	4.38	352	Pg	Pn	22 17 50.0	+3.3
	3.0nm,0.5s						
MRKS				Lg	Lg	22 18 43.6	
	12nm,0.6s						
TKM2	Tokmak 2	4.66	14	⇓Pg	Pb	22 18 03.9	+2.4
	6.3nm,0.6s						
TKM2				⇑Lg	Lg	22 19 07.6	
	17nm,0.9s						
DGS	Degeres	5.00	14	Pg	Pb	22 18 10.3	+3.1
	21nm,0.8s						
DGS				Lg	Lg	22 19 18.2	
	16nm,0.9s						
KRBS	Karabastau	5.42	12	Pg	Pb	22 18 17.0	+2.6
	4.1nm,0.7s						
KRBS				Lg	Lg	22 19 30.3	
	6.7nm,0.9s						
KK08	Karatay Array	5.43	331	⇑Pn	Pn	22 18 01.9	+0.9
	4.1nm,0.6s						
KK08				⇑Sn	Sn	22 19 05.8	+1.6
	8.6nm,0.7s						
KTBS	Karatobe	5.66	20	Pg	Pg	22 18 22.8	-4.3
	7.4nm,0.8s						
KTBS				Lg	Lg	22 19 40.1	
	14nm,0.9s						
AB31	Akbulak array	14.87	321	⇓P	Pn	22 20 06.7	-3.4
	1.0nm,0.7s,baz=126,slow=13,SNR=5.0						
AKTO	Aktyubinsk	16.58	322	⇑P	Pn	22 20 31.2	-1.3
	5.2nm,0.9s						

IDC 09 22:30:51.6±1.8, 4°.26S×129°.39E, h0^{km}, mb3.8/1, mb1 3.5/3, mb1mx3.3/24, mbtmp3.3/3, ML2.9/2, Error ellipse: s-maj=183.5km s-min=10.5km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.32	163	Pn	Pn	22 34 42.6	+0.2
	0.0nm,0.3s,baz=346,slow=13,SNR=2.5						
ASAR	Alice Springs	19.78	168	P	P	22 35 23.4	-0.2
	0.1nm,0.3s,baz=350,slow=10,SNR=2.8						
MKAR	Makanchi Array	65.62	326	P	P	22 41 37.6	0.0
	0.4nm,0.4s,baz=112,slow=7.9,SNR=14						

TEH 09 22:33:06.7, 35°.32N×44°.70E, h8^{km}, ML3.9
ISN 09 22:33:06.0±1.2, 35°.33N×44°.73E, h9^{km}±66^{km}, ML3.9
ISC 09 22:33:06.4±0.8, 35°.32N±0°.03×44°.63E±0°.03, h10^{km}, n42, σ1^{s}.92/41, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKRK	Kirkuk	0.25	290	*e*Pg	Pg	22 33 13.0	+1.5
IKRK				*e*Sg	Sg	22 33 17.0	+2.1
IKRK				AML	AML	22 33 20.7	
	comp=N,11μm,0.5s						
IKRK				AML	AML	22 33 24.4	
	comp=E,7μm,0.4s						
IDHR	Dehrash	1.57	113	*e*Pg	Pg	22 33 36.1	-0.4
IDHR				*e*Sg	Sg	22 33 57.2	+0.3
IDHR				*e*		22 33 58.3	
	comp=Z,33μm,0.7s						
MAHB	Mahabad	1.69	31	*e*Pg	Pg	22 33 38.2	-0.6
MAHB				*e*		22 34 05.3	
	comp=Z,12μm,0.4s						
IGHG	Ghaleghazi	1.88	121	*e*Pn	Pb	22 33 40.8	-0.1
IGHG				*e*		22 34 14.3	
	comp=Z,36μm,0.7s						
ILIN	Lien	1.96	101	*e*Pn	Pb	22 33 42.3	+0.1
ILIN				*e*		22 34 19.7	
	comp=Z,17μm,0.7s						
BHD	Baghdad	2.05	186	*e*Pn	Pn	22 33 42.0	+1.1
BHD				*e*Sn	Sb	22 34 10.0	+0.7
BHD				AML	AML	22 34 13.8	
	comp=E,2μm,0.4s						
CUKT	Cukurca	2.10	337	*e*P	Pn	22 33 42.6	+0.9
KCHF	Cheshme Sefid,	2.24	117	*e*Pn	Pb	22 33 45.7	-1.4
KCHF				*e*		22 34 25.7	
	comp=Z,25μm,0.8s						
KER	Kermanshah	2.26	114	*e*Pn	Pb	22 33 45.4	-2.0
IBDR	Badra	2.45	154	*e*Pn	Pn	22 33 48.2	+1.8
IBDR				*e*Sn	Sn	22 34 18.0	+1.5
IAZR	Azarshahr	2.60	24	*e*Pn	Pb	22 33 51.2	-2.0
IAZR				*e*		22 34 40.1	
	comp=Z,7μm,0.7s						
SIRT	Sirnak	2.81	322	*e*P	Pn	22 33 53.7	+2.3
IALM	Almabolaq	2.94	98	*e*Pn	Pn	22 33 55.3	+1.9
IBST	Bostanabad	3.00	37	*e*Pn	Pn	22 33 56.8	+2.6
IBST				*e*		22 34 48.9	
	comp=Z,819nm,0.6s						
ISHB	Shabestar	3.07	15	*e*Pn	Pn	22 33 56.5	+1.4
ITBZ	Tabriz	3.16	22	*e*Pn	Pn	22 33 58.0	+1.7
ITBZ				*e*		22 34 53.3	
	comp=Z,620nm,0.7s						
IKFM	Kafar-mosalman	3.21	123	*e*Pn	Pn	22 33 58.3	+1.5
AKDM	Akdamar-Van	3.28	337	*e*P	Pn	22 34 00.9	+2.8
IDOB	Doab	3.30	116	*e*Pn	Pn	22 34 00.0	+1.6
DHL1	Dehloran	3.43	139	*e*Pn	Pn	22 34 01.7	+1.8
HSAM	Samen	3.45	107	*e*Pn	Pn	22 34 01.5	+1.0
ISRB	Sarab	3.50	43	*e*		22 34 17.9	
	comp=Z,770nm,0.6s						
ISRB				*e*Pn	Pn	22 34 03.3	+2.2
IHRS	Heris	3.57	32	*e*		22 34 28.6	
	comp=Z,631nm,0.5s						
IHRS				*e*Pn	Pn	22 34 04.8	+2.8
HAGD	Aghdareh	3.73	96	*e*Pn	Pn	22 34 06.7	+2.4
HAGD				*e*		22 35 17.1	
	comp=Z,2μm,1.0s						
RAFI	Al-Rafai	3.79	160	*e*Pn	Pn	22 34 06.0	+1.1
RAFI				*e*Sn	Sn	22 34 50.0	+0.4
BMDN	Meydan	3.83	114	*e*Pn	Pn	22 34 07.7	+2.0
SVAN	Silvan-Diyarba	3.95	317	*e*P	Pn	22 34 09.9	+2.8
MAZI	Mazidag	3.99	304	*e*P	Pb	22 34 13.7	-3.2
LRK	Lerik	4.46	41	*e*Pn	Pn	22 34 16.4	+2.2
URFA	Urfa	5.14	296	*e*P	Pn	22 34 28.7	+5.2
SVRC	Sivrice-ELAZID	5.25	307	*e*P	Pb	22 34 33.6	-4.7
AMIS	Naft Sefid	5.33	132	*e*Pn	Pn	22 34 26.0	-0.1
IVRN	Varamin	5.83	91	*e*Pn	Pn	22 34 34.3	+1.4
MIB	Mutribah	5.96	157	*e*P	Pn	22 34 36.2	+1.6
IKLH	Kolahrood	6.09	107	*e*Pn	Pn	22 34 38.4	+1.7
KRSH	Karshahi	6.33	100	*e*Pn	Pn	22 34 41.8	+1.8
IZEF	Zefreh	6.83	109	*e*Pn	Pn	22 34 48.8	+1.9
BANOM	Banah	13.72	130	Pn	Pn	22 36 14.6	-6.5
BANOM				Sn	Sn	22 38 42.9	-11
MSFE	Esma-Masafi	14.05	132	Pn	Pn	22 36 18.3	-7.3
UOSS	Minazif	14.38	133	Pn	Pn	22 36 24.7	-5.4
HATD	Hatta, Dubai	14.43	133	Pn	Pn	22 36 26.7	-4.0
ASHO	Ashiyiah	14.49	134	Pn	Pn	22 36 25.9	-5.7

IDC 09 22:35:39.9±1.7, 4°.18S×129°.52E, h0^{km}, mb3.6/2, mb1 3.5/4, mb1mx3.3/27, mbtmp3.4/4, ML3.2/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/34, Error ellipse: s-maj=168.7km s-min=7.6km az=70.0
DJA 09 22:35:44.5±1.5, 4°S±16°×13°0E±°, h46^{km}±86^{km}, M3.1/6, MLv3.1/6
ISC 09 22:35:44.3±1.2, 4°.2S±0°.1×129°.58E±0°.09, h36^{km}, n8, σ0^{s}.75/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.08	323	P	Pn	22 36 02.4	-0.6
AAI	Ambon	1.48	291	P	Pn	22 36 08.3	-0.1
FAKI	Fak Fak	2.96	64	P	Pn	22 36 28.6	-0.2
WRA	Warramunga Arr	16.30	164	Pn	Pn	22 39 30.9	+0.3
	0.1nm,0.3s,baz=347,slow=13,SNR=1.8						
ASAR	Alice Springs	19.78	168	P	Pn	22 40 12.4	-0.8
	0.2nm,0.3s,baz=346,slow=10,SNR=13						
PSI	Prapat	31.42	282	LR	LR	22 55 22.9	
	comp=Z,22nm,19.0s,baz=346,slow=38						
MKAR	Makanchi Array	65.69	326	P	P	22 46 25.2	0.0
	0.4nm,0.7s,baz=116,slow=6.6,SNR=4.3						
KURBB	Kurchatov Arra	69.94	328	P	P	22 46 52.9	+1.1
	0.4nm,0.6s,baz=129,slow=5.8,SNR=5.0						

IDC 09 22:40:22.9±1.9, 4°.03S×129°.83E, h0^{km}, mb3.4/1, mb1 3.5/3, mb1mx3.3/33, mbtmp3.3/3, ML2.9/2, Error ellipse: s-maj=167.1km s-min=10.5km az=70.0
DJA 09 22:40:26.7±1.8, 4°S±19°×12°9E±°, h10^{km}, M3.2/5, MLv3.2/5
ISC 09 22:40:28.1±1.2, 4°.2S±0°.1×129°.3E±0°.1, h36^{km}, n5, σ1^{s}.46/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.91	337	P	Pn	22 40 43.3	-1.1
FAKI	Fak Fak	3.22	67	P	Pn	22 41 15.7	-0.5
WRA	Warramunga Arr	16.41	163	Pn	Pn	22 44 15.0	-0.8
	0.0nm,0.3s,baz=348,slow=13,SNR=2.2						
ASAR	Alice Springs	19.87	167	P	P	22 44 56.4	+0.1
	0.1nm,0.3s,baz=343,slow=10,SNR=6.7						
MKAR	Makanchi Array	65.50	326	P	P	22 51 09.2	+1.5
	0.2nm,0.4s,baz=113,slow=6.8,SNR=7.9						

IDC 09 22:43:37.8±0.6, 4°.31S×129°.49E, h0^{km}, mb3.6/2, mb1 3.6/5, mb1mx3.0/43, mbtmp3.4/5, ML3.1/3, Error ellipse: s-maj=24.4km s-min=10.9km az=79.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.85	27	Pn	Pn	22 44 38.4	0.0
	2.3nm,0.3s,baz=203,slow=22,SNR=2.3						
WRA	Warramunga Arr	16.24	163	Pn	Pn	22 47 27.7	+0.2
	0.0nm,0.3s,baz=345,slow=13,SNR=2.4						
ASAR	Alice Springs	19.71	168	P	P	22 48 08.9	-0.2
	0.1nm,0.3s,baz=350,slow=10,SNR=2.2						
MKAR	Makanchi Array	65.72	326	P	P	22 54 24.4	0.0
	0.2nm,0.4s,baz=111,slow=7.9,SNR=8.6						
KURBB	Kurchatov Arra	69.97	328	P	P	22 54 51.2	+0.1
	0.3nm,0.4s,baz=127,slow=5.7,SNR=3.3						

FUNV 09 22:44:24.5, 8°.46N×71°.53W, h5^{km}, MW4.0
ISC 09 22:44:22.6±0.7, 8°.55N±0°.02×71°.46W±0°.02, h10^{km}, n33, σ1^{s}.82/65, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.65	114	*e*P	Pg	22 44 35.1	-0.1
SOCV				*e*S	Sg	22 44 42.0	-1.9
SDV	Santo Domingo	0.88	68	*e*P	Pn	22 44 41.2	0.0
SDV				*e*S	Sb	22 44 52.5	+0.4
CAPV	Capacho	1.08	231	*e*P	Pg	22 44 42.6	-0.9
CAPV				*e*S	Sg	22 44 56.3	-1.4
PAMC	Pamplona, Colo	1.72	226	*e*P	Pg	22 44 54.7	-0.9
PAMC				*e*S	Sb	22 45 15.2	-1.2
MCQV	Machiques	1.83	325	*e*P	Pb	22 44 56.5	+0.3
MCQV				*e*S	Sg	22 45 20.7	-0.8
OCAC	Ocana	1.87	261	*e*P	Pb	22 44 56.7	-0.2
OCAC				*e*S	Sb	22 45 19.6	-0.8
TAMC	Tame, Arauca	2.12	189	*e*P	Pb	22 44 59.7	-1.5
TAMC				*e*S	Sb	22 45 27.0	-0.7
ELOV	Elorza	2.49	128	*e*P	Pb	22 45 06.2	-1.2
ELOV				*e*S	Sb	22 45 36.2	-1.9
ELOV	Elorza	2.49	128	*e*P	Pn	22 45 05.0	+1.7
ELOV				*e*S	Sn	22 45 35.0	+1.4
DABV	Dabajuro	2.50	19	*e*P	Pb	22 45 06.2	-1.3
DABV				*e*S	Sb	22 45 37.5	-0.9
DABV	Dabajuro	2.50	19	*e*P	Pb	22 45 06.3	-1.3
DABV				*e*S	Sb	22 45 37.3	-1.0
BARC	Barichara	2.59	221	*e*P	Pb	22 45 07.0	-2.2
BARC				*e*S	Sg	22 45 43.8	-2.0
SMLC	San Martn de	2.59	276	*e*P	Pn	22 45 05.5	+0.8
SMLC				*e*S	Sb	22 45 42.1	+0.9
SIQV	Siquisique	2.65	38	*e*P	Pb	22 45 08.4	-1.8
SIQV				*e*S	Sb	22 45 41.0	-1.8
BRRC	Barranca, Sant	2.65	237	*e*P	Pn	22 45 07.4	+1.9
BRRC				*e*S	Sg	22 45 45.2	-2.6
CRJC	Cerrejon, Guaj	2.83	330	*e*P	Pn	22 45 09.9	+1.9
CRJC				*e*S	Sb	22 45 45.5	-2.6
RUSC	La Rusia	3.09	212	*e*P	Pn	22 45 13.7	+1.7
RUSC				*e*S	Sb	22 45 56.0	0.0
URIC	Uribia, Colomb	3.18	351	*e*P	Pb	22 45 18.2	-1.0
URIC				*e*S	Sn	22 45 50.7	0.0
MAPV	Macapo	3.23	66	*e*P	Pn	22 45 16.8	+3.4
MAPV				*e*S	Sn	22 45 54.3	+2.4
BAUV	El Baul	3.40	83	*e*P	Pn	22 45 18.0	+2.3
BAUV				*e*S	Sn	22 45 57.8	+1.5
ZARC	Zaragoza, Cauc	3.52	253	*e*P	Pn	22 45 18.9	+1.4
ZARC				*e*S	Sn	22 46 00.4	+1.1
PTBC	PUERTO BERRIO,	3.58	236	*e*P	Pn	22 45 19.4	+1.2
PTBC				*e*S	Sb	22 46 09.1	-0.5
JACV	Jacura	3.62	46	*e*P	Pn	22 45 21.5	+2.7
JACV				*e*S	Sn	22 46 03.6	+2.0
MONV	Montecano	3.69	23	*e*P	Pn	22 45 22.2	+2.5
MONV				*e*S	Sn	22 46 04.9	+1.6
SMRC	Santa Marta, M	3.77	314	*e*P	Pn	22 45 21.3	+0.5
SMRC				*e*S	Sn	22 46 03.3	-1.9
SPBC	San Pablo de B	3.87	222	*e*P	Pn	22 45 24.1	+1.8
SPBC				*e*S	Sn	22 46 09.6	+1.6
SJCC	San Jacinto, C	3.91	290	*e*P	Pn	22 45 25.2	+2.4
SJCC				*e*S	Sn	22 46 09.9	+1.1
BENV	Beln	4.06	69	*e*P	Pn	22 45 27.6	+2.7
BENV				*e*S	Sn	22 46 14.2	+1.6
NORC	Norcasia	4.50	229	*e*P	Pn	22 45 32.9	+2.0
NORC				*e*S	Sn	22 46 27.1	+3.7
HELC	Santa Helena	4.67	240	*e*P	Pn	22 45 38.4	+4.9
HELC				*e*S	Sb	22 46 45.5	+4.3
GUY2C	Guyana, Caldas	5.09	230	*e*P	Pn	22 45 41.5	+2.0
GUY2C				*e*S	Sn	22 46 41.5	+2.9
MERV	Las Mercedes	5.15	82	*e*P	Pn	22 45 41.7	+1.9
MERV				*e*S	Sn	22 46 38.6	-0.8
BIRV	Birongo	5.47	69	*e*P	Pn	22 45 46.9	+2.7
BIRV				*e*S	Sn	22 46 46.5	-0.7

IDC 09 22:47:30.8±1.3, 4°.25S×129°.38E, h0^{km}, mb4.1/4, mb1 4.1/7, mb1mx3.5/43, mbtmp4.0/7, ML3.3/3, Error ellipse: s-maj=38.6km s-min=23.4km az=82.0
DJA 09 22:47:32.6±1.5, 4°S±15°×12°9E±°, h10^{km}, M3.6/7, MLv3.6/7
ISC 09 22:47:35.3±1.0, 4°.28S±0°.09×129°.44E±0°.07, h35^{km}, n11, σ0^{s}.81/12, mb4.0/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.06	331	P	Pn	22 47 52.7	-1.0
AAI	Ambon	1.37	295	P	Pn	22 47 58.1	+0.1
FAKI	Fak Fak	3.11	64	P	Pn	22 48 21.2	-0.7
SIJI	Sorong	3.85	28	Pn	Pn	22 48 31.9	-0.1
	4.6nm,0.3s,baz=50,slow=23,SNR=30						
SIJI				Sn	Sn	22 49 17.1	+1.0
	5.3nm,0.3s,baz=210,slow=22,SNR=7.9						
SWI	Sorong	3.85	28	P	Pn	22 48 31.8	-0.3
WRA	Warramunga Arr	16.29	163	Pn	Pn	22 51 21.1	-0.4
	0.1nm,0.3s,baz=348,slow=13,SNR=5.9						
ASAR	Alice Springs	19.75	168	P	P	22 52 03.0	+0.7
	0.2nm,0.3s,baz=346,slow=10,SNR=15						
CMAR	Chiang Mai Arr	37.60	308	P	P	22 54 45.8	-1.1
	0.7nm,0.3s,baz=125,slow=7.8,SNR=1.0						
MKAR	Makanchi Array	65.66	326	P	P	22 58 17.2	+1.1
	1.1nm,0.6s,baz=114,slow=8.4,SNR=15						
ZALV	Zalesovo Beam	68.91	334	P	P	22 58 37.0	+0.4
	0.5nm,0.3s,baz=134,slow=4.3,SNR=3.5						
KURBB	Kurchatov Arra	69.92	328	P	P	22 58 43.2	+0.4
	1.8nm,0.7s,baz=127,slow=5.7,SNR=15						

*IDC **09** 22:53:02.1±2.8, 35°.09N×141°.17E, h0^{km}, mb3.4/3, mb1 3.5/5, mb1mx3.0/42, mbtmp3.4/5, ML2.6/2, Error ellipse: s-maj=66.3km s-min=23.9km az=64.0*
*JMA **09** 22:53:03.7±0.1, 35°.27N×141°.21E, h36^{km}±2^{km}, M2.9*
ISC 09 22:53:03.3±1.3**, 35°.15N**±0°.06×**141°.2E**±0°.1**, h10**^{km}**, n11, σ1^{s}.19**/15**, mb3.8**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.52**	**197**	P	**Pn**	**22 53 16.2**	**-0.1**
CHOJ	**Chosi**	**0.60**	**336**	P	**Pg**	**22 53 14.5**	**-0.5**
CHOJ				*e*S	**Sg**	**22 53 22.5**	**-0.4**
BSO3	**Boso 3**	**0.64**	**237**	P	**Pn**	**22 53 17.7**	**-0.5**
BSO3				*e*X		22 53 28.1	
BSO4	**Boso 4**	**0.69**	**257**	P	**Pn**	**22 53 18.4**	**-0.7**
BSO4				X		22 53 28.5	
JKUC	**kamogawauchiur**	**0.79**	**271**	P	**Pb**	**22 53 19.3**	**+0.2**
JKUC				*e*S	**Sb**	**22 53 30.2**	**+0.4**
JHJ	**Hachijo jima 2**	**2.33**	**210**	Pn	**Pn**	**22 53 41.5**	**-0.2**
	12nm,0.3s,baz=108,slow=20,SNR=1.7						
MJAR	**Matsushiro Arr**	**2.77**	**301**	Pn	**Pn**	**22 53 46.9**	**-0.9**
	0.3nm,0.3s,baz=100,slow=17,SNR=6.3						
MJAR				Sn	**Sn**	**22 54 23.0**	**+1.7**
	0.4nm,0.3s,baz=200,slow=22,SNR=5.7						
MAT	**Matsushiro**	**2.77**	**301**	P	**Pn**	**22 53 48.9**	**+1.1**
MAT				*e*S	**Sn**	**22 54 19.1**	**-2.2**
MKAR	**Makanchi Array**	**44.97**	**304**	P	**P**	**23 01 20.9**	**+2.3**
	0.2nm,0.7s,baz=84,slow=13,SNR=2.2						
KURBB	**Kurchatov Arra**	**47.01**	**309**	P	**P**	**23 01 34.2**	**-0.4**
	0.6nm,0.8s,baz=86,slow=8.1,SNR=2.7						
WRA	**Warramunga Arr**	**55.17**	**188**	P	**P**	**23 02 35.7**	**-0.5**
	0.6nm,0.7s,baz=4.7,slow=7.7,SNR=6.8						

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*IDC **09** 23:07:26.4±2.2, 4°.05S×129°.55E, h0^{km}, mb3.3/2, mb1 3.4/4, mb1mx3.1/40, mbtmp3.3/4, ML3.0/2, Error ellipse: s-maj=171.1km s-min=28.1km az=70.0*
ISC 09 23:07:31.8±1.3**, 4°.2S**±0°.1×**129°.3E**±0°.2**, h36**^{km}**, n6, σ2^{s}.16**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**3.19**	**67**	Pn	**Pn**	**23 08 18.5**	**-1.0**
WRA	**Warramunga Arr**	**16.41**	**163**	Pn	**Pn**	**23 11 17.8**	**-1.7**
	0.0nm,0.3s,baz=347,slow=12,SNR=2.1						
COEN	**Coen**	**16.78**	**126**	Pn	**P**	**23 11 29.0**	**+3.0**
ASAR	**Alice Springs**	**19.87**	**168**	P	**Pn**	**23 12 00.8**	**-1.0**
	0.2nm,0.3s,baz=348,slow=10,SNR=8.2						
MKAR	**Makanchi Array**	**65.51**	**326**	P	**P**	**23 18 11.8**	**+0.2**
	0.3nm,0.7s,baz=110,slow=7.4,SNR=2.6						
KURBB	**Kurchatov Arra**	**69.77**	**328**	P	**P**	**23 18 38.5**	**+0.3**
	0.3nm,0.6s,baz=145,slow=6.1,SNR=3.2						

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*IDC **09** 23:07:43.6±1.2, 4°.10S×129°.51E, h0^{km}, mb4.1/10, mb1 4.1/12, mb1mx3.8/40, mbtmp4.0/12, ML3.6/2, Error ellipse: s-maj=54.8km s-min=23.3km az=75.0*
*NEIC **09** 23:07:43.1±1.9, 4°.04S±0°.04×130°.28E±0°.10, h10^{km}±1^{km}, mb4.2/13, Error ellipse: s-maj=17.0km s-min=6.0km az=253.0*
*DJA **09** 23:07:46.5±0.9, 4°S±10°×12°9E±°, h51^{km}±25^{km}, M4.6/7, mb6.2/1, MLv3.8/7*
ISC 09 23:07:48.0±0.6**, 4°.19S**±0°.07×**129°.51E**±0°.07**, h36**^{km}**, n37, σ1^{s}.39**/35**, mb4.2**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.02**	**325**	P	**Pn**	**23 08 05.2**	**-0.5**
AAI	**Ambon**	**1.40**	**291**	P	**Pn**	**23 08 09.8**	**-1.2**
FAKI	**Fak Fak**	**3.01**	**65**	P	**Pn**	**23 08 31.9**	**-1.3**
SWI	**Sorong**	**3.74**	**28**	P	**Pn**	**23 08 43.3**	**+0.2**
LBMI	**Labuha**	**4.06**	**330**	P	**Pn**	**23 08 45.1**	**-2.4**
SANI	**Sanana**	**4.11**	**301**	P	**Pn**	**23 08 47.6**	**-0.6**
KNRA	**Kununurra**	**11.44**	**184**	Pn	**Pn**	**23 10 30.5**	**+1.7**
DNP	**Denpasar**	**14.89**	**252**	P	**Pn**	**23 11 13.5**	**-2.4**
WB0	**Warramunga Arr**	**16.20**	**163**	Pn	**Pn**	**23 11 29.6**	**-3.3**
WRA	**Warramunga Arr**	**16.35**	**164**	Pn	**Pn**	**23 11 35.4**	**+0.5**
	0.2nm,0.3s,baz=354,slow=13,SNR=11						
WRA	**Warramunga Arr**	**16.35**	**164**	Pn	**Pn**	**23 11 30.6**	**-4.3**
COEN	**Coen**	**16.61**	**127**	IAmb	IAmb	23 11 46.6	
	comp=Z,30nm,1.5s						
PSA00	**Pilbara Seismi**	**19.66**	**208**	P	**Pn**	**23 12 15.8**	**+0.3**
PSA00				IAmb	IAmb	23 12 25.5	
	comp=Z,5.6nm,1.1s						
PSA00	**Pilbara Seismi**	**19.66**	**208**	P	**Pn**	**23 12 16.1**	**+0.6**
PSA00				IAmb	IAmb	23 12 25.5	
	comp=Z,11nm,0.9s						
AS31	**Alice Springs**	**19.82**	**168**	P	**P**	**23 12 15.1**	**-0.6**
ASAR	**Alice Springs**	**19.82**	**168**	P	**Pn**	**23 12 17.6**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=352,slow=10.0,SNR=13						
ASAR	**Alice Springs**	**19.82**	**168**	P	**P**	**23 12 15.0**	**-0.7**
KSM	**Kuching**	**19.99**	**286**	P	Pn	23 12 19.3	-0.2
KSM				IAmb	IAmb	23 12 20.4	
	comp=Z,9.1nm,0.6s						
CMAR	**Chiang Mai Arr**	**37.60**	**308**	P	**P**	**23 15 01.1**	**+1.7**
	comp=Z,1.2nm,0.3s,baz=123,slow=6.9,SNR=5.4						
KSRS	**Korea Array**	**41.46**	**358**	P	**P**	**23 15 32.4**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=173,slow=9.9,SNR=5.8						
USRK	**Ussuriysk Ar.**	**48.22**	**2**	P	**P**	**23 16 25.6**	**+0.6**
	comp=Z,1.9nm,0.5s,baz=175,slow=8.5,SNR=6.5						
USRK	**Ussuriysk Ar.**	**48.22**	**2**	P	**P**	**23 16 23.4**	**-1.6**
SONM	**Songino Array**	**55.64**	**341**	P	**P**	**23 17 20.1**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=142,slow=7.3,SNR=1.9						
MK31	**Makanchi Array**	**65.62**	**326**	P	**P**	**23 18 28.9**	**+0.5**
MK31				IAmb	IAmb	23 18 29.9	
	comp=Z,2.1nm,0.9s						
MKAR	**Makanchi Array**	**65.62**	**326**	P	**P**	**23 18 29.1**	**+0.7**
	comp=Z,2.2nm,0.6s,baz=114,slow=8.2,SNR=37						
MAKZ	**Makanchi**	**65.81**	**326**	P	**P**	**23 18 30.2**	**+0.6**
ZALV	**Zalesovo Beam**	**68.86**	**334**	P	**P**	**23 18 48.9**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=120,slow=8.8,SNR=3.9						
ZALV	**Zalesovo Beam**	**68.86**	**334**	P	**P**	**23 18 48.7**	**-0.1**
KURBB	**Kurchatov Arra**	**69.88**	**328**	P	**P**	**23 18 55.8**	**+0.8**
	comp=Z,3.9nm,0.8s,baz=128,slow=5.5,SNR=33						
KURK	**Kurchatov**	**69.88**	**328**	P	**P**	**23 18 55.6**	**+0.5**
BVAR	**Borovoye Array**	**75.44**	**328**	P	**P**	**23 19 29.1**	**+0.9**
	comp=Z,2.8nm,0.9s,baz=171,slow=10,SNR=9.1						
BRVK	**Borovoye**	**75.51**	**328**	P	**P**	**23 19 28.9**	**+0.4**
BRVK				IAmb	IAmb	23 19 30.3	
	comp=Z,3.9nm,1.1s						
ABKAR	**Akbulak array**	**80.02**	**321**	P	**P**	**23 19 53.7**	**0.0**
ABKAR				IAmb	IAmb	23 19 54.7	
	comp=Z,2.2nm,0.7s						
ABKAR	**Akbulak array**	**80.02**	**321**	P	**P**	**23 19 53.6**	**-0.1**
AKTO	**Aktyubinsk**	**81.56**	**322**	P	**P**	**23 20 02.1**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=123,slow=5.2,SNR=4.6						
ARU	**Arti**	**83.08**	**328**	P	**P**	**23 20 09.7**	**0.0**
	comp=Z,0.5nm,0.5s,baz=286,slow=23,SNR=4.2						
RAYN	**Ar Rayn**	**86.17**	**294**	P	**P**	**23 20 27.3**	**+1.2**

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*IDC **09** 23:11:37.9±0.9, 4°.09S×129°.69E, h0^{km}, mb4.1/11, mb1 4.2/13, mb1mx3.9/50, mbtmp4.1/13, ML3.9/2, Error ellipse: s-maj=45.1km s-min=18.5km az=73.0*
*DJA **09** 23:11:40.3±1.1, 4°S±12°×12°9E±°, h10^{km}, M4.0/6, MLv4.0/6*
*NEIC **09** 23:11:40.4±1.5, 4°.04S±0°.08×129°.47E±0°.07, h10^{km}±1^{km}, mb4.5/23, Error ellipse: s-maj=13.9km s-min=11.8km az=150.0*
ISC 09 23:11:43.3±0.5**, 4°.10S**±0°.06×**129°.40E**±0°.06**, h36**^{km}**, n64, σ1^{s}.22**/62**, mb4.3**/22**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.89**	**328**	P	**Pn**	**23 11 57.6**	**-1.7**
AAI	**Ambon**	**1.27**	**289**	P	**Pn**	**23 12 03.3**	**-1.3**
FAKI	**Fak Fak**	**3.08**	**68**	P	**Pn**	**23 12 29.1**	**-0.3**
FAKI	**Fak Fak**	**3.08**	**68**	Pn	**Pn**	**23 12 28.1**	**-1.2**
FAKI	**Fak Fak**	**3.08**	**68**	P	**Pn**	**23 12 29.0**	**-0.3**
SWI	**Sorong**	**3.71**	**30**	P	**Pn**	**23 12 38.2**	**0.0**
SANI	**Sanana**	**3.97**	**301**	P	**Pn**	**23 12 42.2**	**+0.5**
SOEI	**Soe**	**7.58**	**222**	Pn	**Pn**	**23 13 33.1**	**+1.6**
MTN	**Manton Dam**	**8.85**	**169**	Pn	**Pn**	**23 13 49.9**	**+1.2**
MTN	**Manton Dam**	**8.85**	**169**	P	**Pn**	**23 13 51.1**	**+2.3**
KDU	**Kakadu**	**9.05**	**161**	P	**Pn**	**23 13 51.8**	**+0.3**
KAPI	**Kappang**	**9.66**	**264**	Pn	**Pn**	**23 14 01.3**	**+1.4**
KNRA	**Kununurra**	**11.52**	**183**		**Pn**	**23 14 25.0**	**-0.4**
KNRA	**Kununurra**	**11.52**	**183**	P	**Pn**	**23 14 26.6**	**+1.3**
JAGI	**Jajag, Banyuwa**	**15.76**	**253**	P	**Pn**	**23 15 20.0**	**-2.8**
WB0	**Warramunga Arr**	**16.31**	**163**	Pn	**Pn**	**23 15 25.8**	**-4.0**
WRAB	**Tennant Creek**	**16.46**	**163**	P	**P**	**23 15 33.8**	**-0.2**
WRA	**Warramunga Arr**	**16.46**	**163**	Pn	**Pn**	**23 15 27.8**	**-3.9**
	0.3nm,0.3s,baz=347,slow=13,SNR=10						
COEN	**Coen**	**16.75**	**127**	Pn	**Pn**	**23 15 33.1**	**-2.2**
COEN	**Coen**	**16.75**	**127**	P	**Pn**	**23 15 35.6**	**+0.3**
QIS	**Mount Isa**	**19.14**	**150**	P	**P**	**23 16 03.3**	**-0.2**
	12nm,0.8s						
MBWA	**Marble Bar**	**19.39**	**208**	P	**Pn**	**23 16 07.8**	**+0.2**
PSA00	**Pilbara Seismi**	**19.69**	**207**	P	**P**	**23 16 10.2**	**+0.6**
PSA00	**Pilbara Seismi**	**19.69**	**207**	P	**P**	**23 16 10.0**	**+0.4**
PSA00				IAmb	IAmb	23 16 11.9	
	comp=Z,18nm,0.9s						
PSA00	**Pilbara Seismi**	**19.69**	**207**	P	**Pn**	**23 16 11.4**	**+0.2**
KSM	**Kuching**	**19.87**	**286**	P	**P**	**23 16 12.2**	**+0.6**
AS31	**Alice Springs**	**19.93**	**168**		**P**	**23 16 12.5**	**+0.3**
ASAR	**Alice Springs**	**19.93**	**168**	P	**Pn**	**23 16 12.8**	**-1.3**
	comp=Z,1.2nm,0.3s,baz=345,slow=9.7,SNR=43						
MTSU	**Mount Surprise**	**20.19**	**135**	P	**P**	**23 16 15.4**	**+0.4**
WRKA	**Warakurna**	**20.84**	**183**	P	Pn	23 16 23.5	-1.2
CTAO	**Charters Tower**	**22.85**	**135**	P	**P**	**23 16 43.4**	**-0.2**
CTAO				IAmb	IAmb	23 16 53.4	
	comp=Z,12nm,1.1s						
FORT	**Forrest**	**26.57**	**183**	P	**P**	**23 17 18.4**	**+0.4**
BBOO	**Buckleboo**	**29.23**	**168**	P	**P**	**23 17 40.8**	**-1.0**
BBOO				IAmb	IAmb	23 17 44.6	
	comp=Z,17nm,1.4s						
IPM	**Ipoh**	**29.61**	**286**	P	**P**	**23 17 45.5**	**+0.1**
STKA	**Stephens Creek**	**29.91**	**159**	P	**P**	**23 17 46.5**	**-1.4**
	comp=Z,1.2nm,0.7s,baz=352,slow=8.2,SNR=3.0						
CMAR	**Chiang Mai Arr**	**37.46**	**308**	P	**P**	**23 18 57.0**	**+3.3**
	comp=Z,1.1nm,0.3s,baz=138,slow=6.9,SNR=5.1						
CMAR	**Chiang Mai Arr**	**37.46**	**308**	P	**P**	**23 18 54.1**	**+0.5**
CHTO	**Chiang Mai**	**37.66**	**308**	P	**P**	**23 18 55.8**	**+0.4**
CHTO				IAmb	IAmb	23 19 05.6	
	comp=Z,6.7nm,0.8s						
JWT	**Wachi**	**39.58**	**8**	P	**P**	**23 19 11.6**	**+0.5**
JWT				IAmb	IAmb	23 19 39.6	
	comp=Z,16nm,1.2s						
MJAR	**Matsushiro Arr**	**41.26**	**11**	P	**P**	**23 19 24.0**	**-1.2**
	comp=Z,3.9nm,0.8s,baz=185,slow=8.5,SNR=5.6						
MAJO	**Matsushiro**	**41.26**	**11**	P	**P**	**23 19 24.6**	**-0.6**
MAJO				IAmb	IAmb	23 19 33.7	
	comp=Z,8.9nm,0.8s						
MAT	**Matsushiro**	**41.26**	**11**	P	**P**	**23 19 24.3**	**-0.8**
KSRS	**Korea Array**	**41.37**	**358**	P	**P**	**23 19 26.9**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=148,slow=42,SNR=1.6						
USA0B	**Ussuriysk Arra**	**48.14**	**2**	P	**P**	**23 20 20.1**	**+0.3**
USA0B				IAmb	IAmb	23 20 28.9	
	comp=Z,4.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**48.14**	**2**	P	**P**	**23 20 20.0**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=172,slow=6.1,SNR=5.8						
USRK	**Ussuriysk Ar.**	**48.14**	**2**	P	**P**	**23 20 19.9**	**+0.1**
GTA	**Gaotai**	**51.17**	**331**	*e*P	P	23 20 49.6	+6.5
GTA				pP	pwP	23 20 57.7	+0.2
GTA				sP	sP	23 21 04.4	+7.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**55.52**	**341**	P	**P**	**23 21 16.1**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=166,slow=1.2,SNR=3.7						
SONM	**Songino Array**	**55.52**	**341**	P	**P**	**23 21 15.5**	**+0.5**
SONM				IAmb	IAmb	23 21 24.9	
	comp=Z,5.5nm,1.2s						
MK31	**Makanchi Array**	**65.50**	**326**	P	**P**	**23 22 23.0**	**+0.1**
MK31				IAmb	IAmb	23 22 31.7	
	comp=Z,2.6nm,0.8s						
MKAR	**Makanchi Array**	**65.50**	**326**	P	**P**	**23 22 23.4**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=112,slow=7.5,SNR=16						
MKAR	**Makanchi Array**	**65.50**	**326**	P	**P**	**23 22 23.1**	**+0.1**
MAKZ	**Makanchi**	**65.68**	**326**	P	**P**	**23 22 24.3**	**+0.1**
MAKZ				IAmb	IAmb	23 22 32.7	
	comp=Z,2.1nm,0.9s						
ZALV	**Zalesovo Beam**	**68.74**	**334**	P	**P**	**23 22 43.1**	**-0.2**
KURBB	**Kurchatov Arra**	**69.75**	**328**	P	**P**	**23 22 50.1**	**+0.5**
	comp=Z,3.7nm,0.7s,baz=128,slow=5.6,SNR=29						
KURK	**Kurchatov**	**69.75**	**328**	P	**P**	**23 22 49.7**	**0.0**
BVAR	**Borovoye Array**	**75.31**	**328**	P	**P**	**23 23 23.1**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=185,slow=8.9,SNR=6.1						
BRVK	**Borovoye**	**75.38**	**328**	P	**P**	**23 23 22.9**	**-0.3**
BRVK				IAmb	IAmb	23 23 32.1	
	comp=Z,4.0nm,0.9s						
ABKAR	**Akbulak array**	**79.89**	**321**	P	**P**	**23 23 48.2**	**-0.2**
ABKAR				IAmb	IAmb	23 23 57.5	
	comp=Z,4.6nm,1.1s						
ABKAR	**Akbulak array**	**79.89**	**321**	P	**P**	**23 23 48.1**	**-0.2**
AKTO	**Aktyubinsk**	**81.43**	**322**	P	**P**	**23 23 57.0**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=92,slow=7.6,SNR=4.0						
ARU	**Arti**	**82.95**	**328**	P	**P**	**23 24 04.7**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=354,slow=0.9,SNR=4.7						
ARU	**Arti**	**82.95**	**328**	P	**P**	**23 24 04.2**	**-0.2**
ARU				IAmb	IAmb	23 24 16.0	
	comp=Z,5.6nm,1.1s						
RAYN	**Ar Rayn**	**86.04**	**294**	P	**P**	**23 24 20.5**	**-0.4**

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*ANF **09** 23:12:01.8±0.3, 36°.60N×98°.34W, h3^{km}, ML3.6/9, Error ellipse: s-maj=4.6km s-min=3.3km az=168.0*
*TUL **09** 23:12:01.4±1.4, 36°.60N±0°.02×98°.35W±0°.04, h4^{km}±7^{km}, ML3.3, mb_Lg3.0/48(NEIC), Error ellipse: s-maj=5.0km s-min=1.3km az=54.0*
*NEIC **09** 23:12:02.3±1.7, 36°.58N±0°.03×98°.31W±0°.05, h9^{km}±7^{km}, Error ellipse: s-maj=6.5km s-min=3.0km az=130.0*
ISC 09 23:12:02.1±1.1**, 36°.59N**±0°.02×**98°.33W**±0°.02**, h6**^{km}±10^{km}**, n75, σ0^{s}.58**/73**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	**Salt Plains WL**	**0.23**	**25**	Pg	**Pg**	**23 12 06.6**	**-0.1**
OK032				Sg	**Sg**	**23 12 10.1**	**+0.3**
CROK	**Carrier**	**0.29**	**107**	Pg	**Pg**	**23 12 08.0**	**+0.1**
CROK				Sg	**Sg**	**23 12 12.5**	**+0.8**
GC02	**Grant County #**	**0.46**	**55**	Pg	**Pg**	**23 12 10.9**	**-0.1**
GC02				Sg	**Sg**	**23 12 17.5**	**+0.5**
KAN14	**Manchester OK**	**0.47**	**39**		**Pg**	**23 12 10.9**	**-0.2**
KAN14				Sg	**Sg**	**23 12 17.6**	**+0.3**
KAN10	**Anthony SW Sta**	**0.56**	**20**	Pg	**Pg**	**23 12 12.6**	**-0.4**
KAN10				Sg	**Sg**	**23 12 20.5**	**+0.1**
U32A	**Winter Ranch,**	**0.58**	**249**		**Pg**	**23 12 12.7**	**-0.6**
U32A				Sg	**Sg**	**23 12 20.9**	**+0.1**
U32A	**Winter Ranch,**	**0.58**	**249**	P	**Pg**	**23 12 12.7**	**-0.6**
	baz=70,SNR=39						
U32A				S	**Sg**	**23 12 20.9**	**+0.1**
	baz=70						
KAN05	**Bluff City Nor**	**0.63**	**35**		**Pg**	**23 12 13.9**	**-0.4**
KAN05				Sg	**Sg**	**23 12 22.8**	**+0.2**
KAN17	**Caldwell West**	**0.64**	**45**	Pg	**Pg**	**23 12 14.1**	**-0.4**
KAN16	**Harper SW Stat**	**0.67**	**19**	Pg	**Pg**	**23 12 14.4**	**-0.5**
KAN08	**Anthony NE Sta**	**0.70**	**24**		**Pg**	**23 12 15.0**	**-0.5**
KAN01	**Argonia South**	**0.72**	**39**	Pg	**Pg**	**23 12 15.6**	**-0.4**
KAN12	**Harper NE Stat**	**0.75**	**21**	Pg	**Pg**	**23 12 16.0**	**-0.6**
KAN06	**Argonia West S**	**0.76**	**30**		**Pg**	**23 12 16.2**	**-0.5**
KAN09	**Caldwell North**	**0.79**	**46**		**Pg**	**23 12 16.6**	**-0.6**
KAN13	**South Haven SW**	**0.80**	**58**	Pg	**Pg**	**23 12 17.0**	**-0.6**
BLOK	**Blackwell**	**0.91**	**79**	Pg	**Pg**	**23 12 19.0**	**-0.7**
OK029	**Liberty Lake**	**1.06**	**138**	Pg	**Pg**	**23 12 21.8**	**-0.7**
OK025	**Westminster Rd**	**1.29**	**141**	Pn	**Pg**	**23 12 25.8**	**-1.1**
OK031	**S. Brethren Rd**	**1.36**	**117**		**Pn**	**23 12 27.2**	**-0.5**
OKCFA	**Oklahoma City**	**1.37**	**148**		**Pn**	**23 12 27.1**	**-0.7**
OKCFA	**Oklahoma City**	**1.37**	**148**	P	**Pn**	**23 12 27.2**	**-0.7**
	baz=329						
OKCSW	**OKLAHOMA CITY**	**1.39**	**148**		**Pn**	**23 12 27.3**	**-0.7**
OK030	**Cody Creek RV**	**1.42**	**117**		**Pn**	**23 12 28.0**	**-0.4**
OK034	**N. Norfolk Rd.**	**1.43**	**113**		**Pn**	**23 12 28.3**	**-0.3**
T35A	**Sooner Cattle**	**1.50**	**77**		**Pn**	**23 12 29.4**	**-0.2**
T35B	**Sooner Cattle**	**1.50**	**77**	P	**Pn**	**23 12 29.4**	**-0.2**
	baz=257						
T35B				S	**Sn**	**23 12 49.7**	**+0.2**
	baz=257						
FNO	**Franklin**	**1.53**	**150**	Pn	**Pn**	**23 12 29.8**	**-0.2**
R32A	**Long Quarter,**	**1.85**	**351**		**Pn**	**23 12 34.8**	**+0.4**
R32A				IAmb_Lg		23 13 00.7	
	comp=Z,65nm,0.9s						
R32A	**Long Quarter,**	**1.85**	**351**	P	**Pn**	**23 12 34.8**	**+0.4**
	baz=170,SNR=50						
R32A				S	**Sb**	**23 12 59.9**	**0.0**
	baz=170						
X34A	**Smith Ranch, M**	**2.03**	**168**		**Pn**	**23 12 37.5**	**+0.7**
X34A				IAmb_Lg		23 13 04.5	
	comp=Z,48nm,1.2s						
TUL1	**Leonard**	**2.16**	**108**		**Pn**	**23 12 39.3**	**+0.6**
TUL1	**Leonard**	**2.16**	**108**	P	**Pn**	**23 12 38.7**	**0.0**
	baz=289,SNR=7.3						
TUL1				S	**Sb**	**23 13 09.8**	**+1.1**
	baz=289						
CBKS	**Cedar Bluff**	**2.48**	**334**		**Pn**	**23 12 43.0**	**-0.2**
LOOK	**Love County**	**2.76**	**160**	Pn	**Pn**	**23 12 47.5**	**+0.6**
KSU1	**Kansas State U**	**2.85**	**28**		**Pn**	**23 12 48.8**	**+0.6**
KSU1	**Kansas State U**	**2.85**	**28**	P	**Pn**	**23 12 49.0**	**+0.8**
	baz=209						
X37A	**Clayton**	**3.13**	**129**		**Pn**	**23 12 52.1**	**+0.1**
X37A				IAmb_Lg		23 13 47.9	
	comp=Z,35nm,0.8s						
U38A	**Gravette**	**3.18**	**92**	Pn	**Pn**	**23 12 52.8**	**+0.1**
U38A	**Gravette**	**3.18**	**92**	P	**Pn**	**23 12 52.9**	**+0.2**
	baz=274,SNR=22						
AMTX	**Amarillo**	**3.21**	**239**	Pn	**Pn**	**23 12 54.5**	**+1.3**
Z35A	**Perchaven, San**	**3.37**	**164**		**Pn**	**23 12 55.9**	**+0.6**
HHAR	**Hobbs**	**3.56**	**94**		**Pn**	**23 12 58.5**	**+0.6**
W39A	**Magazine**	**3.95**	**109**		**Pn**	**23 13 01.2**	**-2.0**
W39A				IAmb_Lg		23 14 09.8	
	comp=Z,33nm,0.7s						
ABTX	**Abilene, Hawle**	**4.10**	**196**		**Pn**	**23 13 04.4**	**-1.0**
S39A	**Bolivar**	**4.15**	**73**		**Pn**	**23 13 05.7**	**-0.2**
S39A	**Bolivar**	**4.15**	**73**	P	**Pn**	**23 13 05.8**	**-0.2**
	baz=256,SNR=22						
KSCO	**Kaye Shedlock'**	**4.17**	**307**	IAmb_Lg		23 14 22.9	
	comp=Z,41nm,0.8s						
N33B	**J Bar K, Exete**	**4.20**	**9**	P	**Pn**	**23 13 05.6**	**-1.1**
	baz=190						
N33A	**J Bar K, Exete**	**4.20**	**9**	Pn	**Pn**	**23 13 05.8**	**-0.9**
Z38A	**Mt. Pleasant**	**4.31**	**139**	IAmb_Lg		23 14 22.5	
	comp=Z,42nm,0.7s						
MIAR	**Mount Ida**	**4.38**	**116**		**Pn**	**23 13 08.8**	**-0.4**
MIAR				IAmb_Lg		23 14 26.9	
	comp=Z,28nm,0.9s						
U40A	**Yellville**	**4.42**	**91**		**Pn**	**23 13 09.8**	**0.0**
WHTX	**Lake Whitney,**	**4.64**	**171**	Pn	**Pn**	**23 13 12.6**	**-0.2**
BGNE	**Belgrade**	**4.81**	**2**		**Pn**	**23 13 14.7**	**-0.4**
BGNE	**Belgrade**	**4.81**	**2**	P	**Pn**	**23 13 14.9**	**-0.2**
	baz=182						
P38A	**Dawn**	**4.85**	**50**	Pn	**Pn**	**23 13 15.5**	**-0.1**
P38A				IAmb_Lg		23 14 34.4	
	comp=Z,21nm,0.8s						
MGMO	**Mountain Grove**	**4.89**	**82**	Pn	**Pn**	**23 13 16.4**	**+0.1**
T25A	**Trinidad**	**4.91**	**278**		**Pn**	**23 13 16.6**	**0.0**
T25A				IAmb_Lg		23 14 39.2	
	comp=Z,18nm,0.8s						
X40A	**Basin Creek Fa**	**4.95**	**113**	Pn	**Pn**	**23 13 17.0**	**0.0**
X40A				IAmb_Lg		23 14 37.9	
	comp=Z,23nm,0.7s						
FCAR	**Ozark Folk Cen**	**5.07**	**96**		**Pn**	**23 13 19.1**	**+0.5**
WHAR	**Wooly Hollow**	**5.07**	**103**		**Pn**	**23 13 18.9**	**+0.2**
WHAR				IAmb_Lg		23 14 54.1	
	comp=Z,23nm,0.8s						
R40A	**Maddies Statio**	**5.11**	**69**	Pn	**Pn**	**23 13 18.6**	**-0.7**
R40A				IAmb_Lg		23 14 51.0	
	comp=Z,19nm,0.9s						
WLAR	**White Oak Lake**	**5.17**	**123**	IAmb_Lg		23 14 58.6	
	comp=Z,25nm,0.8s						
L34A	**Svendsen Farm,**	**5.58**	**15**	Pn	**Pn**	**23 13 24.7**	**-0.9**
P40A	**Paris**	**5.76**	**57**	IAmb_Lg		23 15 09.7	
	comp=Z,32nm,0.8s						
LCAR	**Lake Charles**	**5.82**	**93**	IAmb_Lg		23 15 08.2	
	comp=Z,24nm,1.2s						
CCM	**Cathedral Cave**	**5.83**	**73**	IAmb_Lg		23 15 10.1	
	comp=Z,24nm,1.0s						
K31A	**O'Neill**	**6.03**	**357**	IAmb_Lg		23 15 18.3	
	comp=Z,24nm,0.8s						
PBMO	**Poplar Bluff**	**6.35**	**86**	IAmb_Lg		23 15 33.9	
	comp=Z,18nm,0.8s						
FVM	**French Village**	**6.45**	**75**	IAmb_Lg		23 15 33.1	
	comp=Z,12nm,0.8s						
O44A	**Mansfield**	**8.52**	**62**	IAmb_Lg		23 16 35.8	
	comp=Z,21nm,0.9s						
RSSD	**Black Hills**	**8.69**	**332**	IAmb_Lg		23 16 44.8	
	comp=Z,11nm,1.0s						
K22A	**Casper**	**8.75**	**316**	IAmb_Lg		23 16 51.8	
	comp=Z,9.9nm,0.8s						
F33A	**5 Mile Ranch,**	**9.37**	**9**	IAmb_Lg		23 16 55.1	
	comp=Z,15nm,1.3s						

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*IDC **09** 23:16:36.4±0.7, 4°.29S×129°.48E, h0^{km}, mb4.5/21, mb1 4.6/23, mb1mx4.2/51, mbtmp4.5/23, ML4.1/2, MS3.6/9, Ms1 3.6/9, ms1mx3.3/37, Error ellipse: s-maj=25.0km s-min=15.4km az=76.0*
*NEIC **09** 23:16:39.8±1.9, 4°.14S±0°.06×129°.62E±0°.05, h15^{km}±4^{km}, mb4.8/56, Error ellipse: s-maj=8.4km s-min=7.7km az=150.0*
*DJA **09** 23:16:42.5±0.3, 4°S±2°×13°0E±°, h40^{km}±4^{km}, M4.7/44, mB5.2/19, mb4.7/44, MLv4.7/12, Mw(mB)4.6/19*
ISC 09 23:16:41.8±0.3**, 4°.24S**±0°.04×**129°.56E**±0°.04**, h36**^{km}**, n155, σ1^{s}.37**/158**, mb4.7**/48**, MS3.7**/9**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.45**	**130**	P	**Pn**	**23 16 50.1**	**-1.4**
MSAI	**Masohi**	**1.09**	**324**	P	**Pn**	**23 16 58.1**	**-2.4**
AAI	**Ambon**	**1.47**	**292**	P	**Pn**	**23 17 03.0**	**-2.8**
AAI				S	**Sn**	**23 17 21.1**	**-2.6**
FAKI	**Fak Fak**	**2.98**	**64**	P	**Pn**	**23 17 27.2**	**+0.6**
FAKI				S	**Sn**	**23 18 00.7**	**-0.5**
FAKI	**Fak Fak**	**2.98**	**64**	Pn	**Pn**	**23 17 25.9**	**-0.7**
FAKI				Sn	**Sn**	**23 18 00.4**	**-0.8**
FAKI	**Fak Fak**	**2.98**	**64**	P	**Pn**	**23 17 27.7**	**+1.1**
SWI	**Sorong**	**3.75**	**27**	P	**Pn**	**23 17 36.3**	**-0.9**
SWI				S	**Sn**	**23 18 17.8**	**-2.4**
SAUI	**Saumlaki**	**4.10**	**155**	P	**Pn**	**23 17 44.2**	**+2.2**
SAUI	**Saumlaki**	**4.10**	**155**	Pn	**Pn**	**23 17 43.2**	**+1.1**
LBMI	**Labuha**	**4.12**	**330**	P	**Pn**	**23 17 41.2**	**-1.1**
LBMI				S	**Sn**	**23 18 27.8**	**-1.5**
SANI	**Sanana**	**4.18**	**301**	P	**Pn**	**23 17 41.9**	**-1.1**
SANI				S	**Sn**	**23 18 30.0**	**-0.6**
SANI	**Sanana**	**4.18**	**301**	P	**Pn**	**23 17 42.1**	**-0.9**
TNTI	**Ternate**	**5.44**	**336**	P	**Pn**	**23 17 59.6**	**-0.8**
	0.4nm74nm,1.1s						
TNTI	**Ternate**	**5.44**	**336**		**Pn**	**23 17 59.2**	**-1.2**
TNTI				Sn	**Sn**	**23 19 01.4**	**-0.3**
SOEI	**Soe**	**7.59**	**223**		**Pn**	**23 18 32.3**	**+2.1**
BATI	**Baumata**	**8.33**	**224**	P	**Pn**	**23 18 42.8**	**+2.6**
	26nm,1.0s						
MMRI	**Maumere**	**8.49**	**239**	Pn	**Pn**	**23 18 44.2**	**+1.9**
APSI	**Ampana**	**8.57**	**292**	P	**Pn**	**23 18 44.5**	**+1.1**
	1μm86nm,1.2s						
MTN	**Manton Dam**	**8.69**	**170**	Pn	**Pn**	**23 18 46.5**	**+1.4**
MTN	**Manton Dam**	**8.69**	**170**	P	**Pn**	**23 18 46.4**	**+1.4**
KDU	**Kakadu**	**8.88**	**161**	P	**Pn**	**23 18 48.4**	**+0.8**
MRSI	**Marisa**	**8.94**	**301**	P	**Pn**	**23 18 48.8**	**+0.3**
	92nm,1.0s						
EDFI	**Ende, Flores**	**9.01**	**240**	P	**Pn**	**23 18 52.5**	**+2.9**
	399nm25nm,1.6s						
BSSI	**Bau Bau, Buton**	**9.23**	**258**	P	**Pn**	**23 18 54.2**	**+1.7**
	30nm,0.9s						
SMPI	**Sarmi**	**9.40**	**77**	P	**Pn**	**23 18 52.7**	**-2.1**
	2μm16nm,1.4s						
BNSI	**Bone**	**9.43**	**269**	P	**Pn**	**23 18 56.9**	**+1.7**
	44nm,0.9s						
BKSI	**Bulukumba**	**9.47**	**263**	P	**Pn**	**23 18 58.8**	**+3.1**
	564nm32nm,0.9s						
SPSI	**Sidrap Palu**	**9.77**	**271**	P	**Pn**	**23 19 01.5**	**+1.6**
	838nm32nm,1.7s						
TTSI	**Tana Toraja**	**9.79**	**277**	P	**Pn**	**23 19 02.2**	**+2.0**
	2μm29nm,0.9s						
KAPI	**Kappang**	**9.81**	**265**	Pn	**Pn**	**23 19 02.1**	**+1.7**
TOLI2	**Tolitoli**	**10.26**	**301**	Pn	**Pn**	**23 19 06.1**	**-0.4**
MPSI	**Mapaga**	**10.67**	**295**	P	**Pn**	**23 19 12.1**	**-0.1**
	15nm,0.9s						
KNRA	**Kununurra**	**11.40**	**184**	Pn	**Pn**	**23 19 21.9**	**-0.2**
KNRA	**Kununurra**	**11.40**	**184**	P	**Pn**	**23 19 22.5**	**+0.4**
PLAI	**Plampang**	**12.56**	**248**	P	**Pn**	**23 19 41.0**	**+2.9**
	941nm43nm,1.1s						
MYLDM	**Lahad Datu**	**14.48**	**310**	Pn	**Pn**	**23 20 03.9**	**-0.4**
BBKI	**Banjar Baru**	**14.71**	**272**	P	**Pn**	**23 20 09.6**	**+2.2**
	3μm35nm,1.4s						
SRBI	**Singaraja**	**14.77**	**254**	P	**Pn**	**23 20 10.8**	**+2.6**
	67nm,1.5s						
ABJI	**Asem Bagus**	**15.65**	**256**	P	**Pn**	**23 20 20.7**	**+1.0**
	87nm,1.2s						
KMMI	**Kalianget**	**15.77**	**259**	P	**P**	**23 20 23.6**	**-1.2**
	2μm77nm,1.3s						
JAGI	**Jajag, Banyuwa**	**15.88**	**254**	P	**Pn**	**23 20 24.1**	**+1.3**
	1μm60nm,1.4s						
JAGI	**Jajag, Banyuwa**	**15.88**	**254**		**Pn**	**23 20 18.6**	**-4.1**
JAGI				IAmb	IAmb	23 20 35.4	
	comp=Z,77nm,1.3s						
WB0	**Warramunga Arr**	**16.14**	**163**		**Pn**	**23 20 23.7**	**-2.3**
BLJI	**Banyuglugur**	**16.26**	**257**	P	**P**	**23 20 29.2**	**-1.0**
	comp=Z,44nm,1.4s						

WRAB	**Tennant Creek**	**16.29**	**164**		**Pn**	**23 20 25.4**	**-2.5**
WRA	**Warramunga Arr**	**16.29**	**164**	Pn	**Pn**	**23 20 24.4**	**-3.5**
	comp=Z,0.5nm,0.3s,baz=345,slow=12,SNR=17						
WRA				Sn	**Sn**	**23 23 21.5**	**-6.2**
	comp=Z,0.1nm,0.3s,baz=344,slow=22,SNR=2.5						
WRA				LR	LR	23 27 22.1	
	comp=Z,260nm,18.7s,baz=350,slow=40						
WB2	**Warramunga Arr**	**16.30**	**164**	Pn	**Pn**	**23 20 25.1**	**-2.9**
GMJI	**Gumukmas**	**16.51**	**255**	P	**Pn**	**23 20 31.2**	**+0.4**
	comp=Z,58nm,1.3s						
COEN	**Coen**	**16.54**	**127**		**Pn**	**23 20 29.0**	**-2.2**
COEN	**Coen**	**16.54**	**127**	P	**P**	**23 20 32.4**	**-1.0**
PMG	**Port Moresby**	**18.21**	**107**	P	**P**	**23 20 50.6**	**-1.2**
PMG				IAmb	IAmb	23 21 08.9	
	comp=Z,72nm,1.4s						
SBUM	**Sibu**	**18.56**	**291**	P	**Pn**	**23 20 56.4**	**+0.2**
PCJI	**Pacitan**	**18.69**	**257**	P	**Pn**	**23 20 59.1**	**+1.3**
	comp=Z,86nm,1.4s						
WOJI	**Wonogiri, Jawa**	**18.87**	**258**	P	**Pn**	**23 21 02.0**	**+2.0**
	comp=Z,54nm,1.4s						
QIS	**Mount Isa**	**18.94**	**150**	P	**Pn**	**23 21 01.2**	**+0.4**
MBWA	**Marble Bar**	**19.34**	**209**	P	**Pn**	**23 21 06.0**	**+0.4**
PSA00	**Pilbara Seismi**	**19.65**	**208**	P	**P**	**23 21 08.1**	**+0.5**
PSA00				IAmb	IAmb	23 21 10.7	
	comp=Z,74nm,1.1s						
PSA00	**Pilbara Seismi**	**19.65**	**208**		**Pn**	**23 21 08.6**	**-0.6**
PSA00				IAmb	IAmb	23 21 10.7	
	comp=Z,120nm,1.1s						
PSA00	**Pilbara Seismi**	**19.65**	**208**	P	**Pn**	**23 21 09.2**	**0.0**
AS31	**Alice Springs**	**19.77**	**168**		**Pn**	**23 21 09.8**	**-0.8**
ASAR	**Alice Springs**	**19.77**	**168**	P	**P**	**23 21 09.3**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=352,slow=11,SNR=58						
ASAR				LR	LR	23 29 26.9	
	comp=Z,210nm,18.1s,baz=350,slow=39						
ASAR	**Alice Springs**	**19.77**	**168**		**P**	**23 21 09.5**	**+0.5**
KSM	**Kuching**	**20.06**	**286**	P	**P**	**23 21 12.8**	**+0.6**
KSM				IAmb	IAmb	23 21 19.8	
	comp=Z,59nm,1.1s						
WRKA	**Warakurna**	**20.72**	**183**	P	Pn	23 21 20.9	-0.9
LEM	**Lembang**	**21.99**	**262**	LR	LR	23 32 11.3	
	comp=Z,117nm,18.8s,baz=242,slow=43						
CTAO	**Charters Tower**	**22.64**	**135**	P	**P**	**23 21 39.8**	**-0.2**
MYKOM	**Kota Tinggi**	**26.38**	**283**	P	**P**	**23 22 16.1**	**+1.1**
FORT	**Forrest**	**26.44**	**183**	P	**P**	**23 22 16.1**	**+0.7**
FORT				IAmb	IAmb	23 22 18.3	
	comp=Z,24nm,0.9s						
BBOO	**Buckleboo**	**29.07**	**169**	P	**P**	**23 22 40.8**	**+1.9**
BBOO				IAmb	IAmb	23 23 01.9	
	comp=Z,16nm,1.3s						
STKA	**Stephens Creek**	**29.73**	**159**	P	**P**	**23 22 44.5**	**-0.2**
	comp=Z,3.0nm,0.9s,baz=171,slow=1.6,SNR=3.5						
STKA				LR	LR	23 36 07.6	
	comp=Z,184nm,19.5s,baz=8.2,slow=39						
STKA	**Stephens Creek**	**29.73**	**159**	P	**P**	**23 22 44.7**	**-0.1**
IPM	**Ipoh**	**29.79**	**287**	P	**P**	**23 22 45.4**	**-0.2**
KULM	**Kulim**	**30.39**	**288**	P	**P**	**23 22 50.4**	**-0.4**
KULM				IAmb	IAmb	23 22 57.5	
	comp=Z,35nm,1.5s						
RPSI	**Rantau Prapat**	**31.38**	**282**	P	**P**	**23 22 58.1**	**-1.4**
PSI	**Prapat**	**31.40**	**282**	P	**P**	**23 22 58.1**	**-1.8**
	comp=Z,2.5nm,0.3s,baz=225,slow=6.9,SNR=1.9						
SRIT	**Nakonsritamara**	**32.48**	**293**	P	**P**	**23 23 09.8**	**+0.6**
SLVN	**Son La**	**35.75**	**316**	P	**P**	**23 23 38.5**	**+0.9**
JNU	**Nakatsue**	**37.17**	**2**	P	**P**	**23 23 48.7**	**-0.8**
	comp=Z,28nm,1.1s,baz=142,slow=2.4,SNR=4.0						
JNU	**Nakatsue**	**37.17**	**2**	P	**P**	**23 23 49.4**	**-0.1**
NJ2	**Nanjing**	**37.50**	**345**	*e*P	**P**	**23 23 54.8**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CM31	**Chiang Mai Arr**	**37.67**	**308**	P	**P**	**23 23 54.6**	**+0.7**
CM31				IAmb	IAmb	23 23 56.8	
	comp=Z,12nm,1.0s						
CMAR	**Chiang Mai Arr**	**37.67**	**308**	P	**P**	**23 23 54.2**	**+0.3**
	comp=Z,1.6nm,0.3s,baz=139,slow=7.6,SNR=21						
CMAR	**Chiang Mai Arr**	**37.67**	**308**	P	**P**	**23 23 54.5**	**+0.6**
CHTO	**Chiang Mai**	**37.87**	**308**	P	**P**	**23 23 55.7**	**+0.1**
CHTO				IAmb	IAmb	23 24 22.2	
	comp=Z,16nm,1.1s						
KMI	**Kunming**	**39.12**	**320**	⇑P	**P**	**23 24 06.2**	**-0.1**
KMI				pP	pP	23 24 17.2	+1.8
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JWT	**Wachi**	**39.69**	**7**	P	**P**	**23 24 09.7**	**-0.9**
JWT				IAmb	IAmb	23 24 17.2	
	comp=Z,20nm,0.9s						
MJAR	**Matsushiro Arr**	**41.36**	**11**	P	**P**	**23 24 24.1**	**-0.3**
	comp=Z,9.4nm,0.9s,baz=187,slow=10.0,SNR=18						
MJAR	**Matsushiro Arr**	**41.36**	**11**	P	**P**	**23 24 23.5**	**-0.9**
MAJO	**Matsushiro**	**41.36**	**11**	P	**P**	**23 24 23.6**	**-0.8**
MAJO				IAmb	IAmb	23 24 25.7	
	comp=Z,16nm,0.8s						
MAT	**Matsushiro**	**41.36**	**11**	P	**P**	**23 24 23.6**	**-0.8**
JYT	**Yasato**	**41.46**	**13**	P	**P**	**23 24 26.2**	**+1.0**
KSAR	**Wonju Array Be**	**41.49**	**358**	P	**P**	**23 24 25.8**	**+0.3**
KSRS	**Korea Array**	**41.50**	**358**	P	**P**	**23 24 26.9**	**+1.3**
	comp=Z,6.4nm,1.0s,baz=179,slow=10,SNR=16						
KSRS				LR	LR	23 40 52.7	
	comp=Z,63nm,20.0s,baz=138,slow=35						
XAN	**Xi'an**	**42.77**	**334**	P	P	23 24 41.5	+5.5
XAN				pP	pwP	23 25 04.2	+13
XAN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
JSD	**Sado**	**42.83**	**10**	P	**P**	**23 24 37.0**	**+0.7**
JSD				IAmb	IAmb	23 24 47.4	
	comp=Z,15nm,0.9s						
JMM	**Marumori**	**43.17**	**13**	P	**P**	**23 24 39.1**	**+0.1**
BJT	**Baijiatuau**	**45.73**	**346**	P	**P**	**23 24 59.8**	**+0.3**
LZH	**Lanzhou**	**46.78**	**331**	*e*P	**P**	**23 25 08.2**	**+0.1**
LZH				pP	pP	23 25 15.6	-1.8
LZH				sP	sP	23 25 19.0	-2.4
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
LZH				LR	LR		
	comp=N,170nm,14.3s						
LZH				LR	LR		
	comp=E,190nm,14.6s						
LZH				LR	LR		
	comp=Z,140nm,17.9s						
SHL	**Shillong**	**47.05**	**311**	P	**P**	**23 25 09.7**	**-0.6**
SHL				IAmb	IAmb	23 25 11.5	
	comp=Z,12nm,1.1s						
CN2	**Changchun**	**47.96**	**356**	*e*P	**P**	**23 25 19.1**	**+2.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
USA0B	**Ussuriysk Arra**	**48.26**	**2**	P	**P**	**23 25 18.9**	**-0.3**
USA0B				IAmb	IAmb	23 25 21.7	
	comp=Z,11nm,0.9s						
USRK	**Ussuriysk Ar.**	**48.26**	**2**	P	**P**	**23 25 19.2**	**0.0**
	comp=Z,6.2nm,0.8s,baz=185,slow=6.4,SNR=14						
USRK	**Ussuriysk Ar.**	**48.26**	**2**	P	**P**	**23 25 18.5**	**-0.7**
MDJ	**Mudanjiang**	**48.63**	**0**	P	**P**	**23 25 22.6**	**+0.6**
MDJ				IAmb	IAmb	23 25 46.9	
	comp=Z,13nm,1.0s						
ASAJ	**Asahikawa**	**49.54**	**12**	LR	LR	23 44 01.5	
	comp=Z,72nm,20.2s,baz=142,slow=33						
LSA	**Lhasa**	**49.93**	**315**	P	**P**	**23 25 32.8**	**0.0**
GTA	**Gaotai**	**51.36**	**331**	*e*P	**P**	**23 25 44.4**	**+1.3**
GTA				pP	pP	23 25 54.6	+2.0
GTA				sP	pwP	23 25 58.4	+0.6
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,98nm,5.1s						
GTA				LR	LR		
	comp=N,150nm,15.6s						
GTA				LR	LR		
	comp=E,100nm,16.0s						
GTA				LR	LR		
	comp=Z,110nm,16.4s						
KLR	**Kul'dur**	**53.28**	**2**	P	**P**	**23 25 57.2**	**+0.2**
	comp=Z,7.5nm,1.0s,baz=203,slow=5.4,SNR=13						
HYB	**Hyderabad**	**54.74**	**295**	*i* P	**P**	**23 26 07.5**	**-0.8**
ULN	**Ulaanbaatar**	**55.52**	**342**	P	**P**	**23 26 13.6**	**+0.1**
ULN				IAmb	IAmb	23 26 34.7	
	comp=Z,10.0nm,1.1s						
SONM	**Songino Array**	**55.70**	**341**	P	**P**	**23 26 16.0**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=153,slow=6.3,SNR=10						
SONM	**Songino Array**	**55.70**	**341**	P	**P**	**23 26 15.3**	**+0.6**
SONM				IAmb	IAmb	23 26 22.3	
	comp=Z,9.7nm,1.3s						
WMQ	**Urumqi**	**60.86**	**326**	*e*P	**P**	**23 26 52.2**	**+1.4**
WMQ				pP	pP	23 27 02.0	+1.6
WMQ				sP	pwP	23 27 09.6	+3.7
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,250nm,5.3s						
PETK	**Petropavlovsk-**	**61.86**	**19**	P	**P**	**23 26 59.1**	**+1.9**
	comp=Z,6.9nm,1.0s,baz=196,slow=10,SNR=3.7						
PETK				LR	LR	23 58 27.5	
	comp=Z,18nm,18.0s,baz=127,slow=40						
NIL	**Nilore**	**65.10**	**310**	P	**P**	**23 27 19.1**	**-0.1**
NIL				IAmb	IAmb	23 27 45.0	
	comp=Z,6.2nm,1.1s						
MK31	**Makanchi Array**	**65.69**	**326**	P	**P**	**23 27 22.1**	**-0.6**
MK31				IAmb	IAmb	23 27 24.7	
	comp=Z,8.4nm,1.0s						
MKAR	**Makanchi Array**	**65.69**	**326**	P	**P**	**23 27 22.4**	**-0.3**
	comp=Z,12nm,1.0s,baz=122,slow=7.7,SNR=37						
MKAR	**Makanchi Array**	**65.69**	**326**	P	**P**	**23 27 22.5**	**-0.2**
MAKZ	**Makanchi**	**65.88**	**326**	P	**P**	**23 27 23.5**	**-0.4**
MAKZ				IAmb	IAmb	23 27 25.8	
	comp=Z,9.7nm,0.9s						
YAK	**Yakutsk**	**66.08**	**0**	LR	LR	23 56 24.3	
	comp=Z,24nm,18.6s,baz=267,slow=36						
YAK	**Yakutsk**	**66.08**	**0**	P	**P**	**23 27 24.6**	**-0.2**
AAK	**Ala-Archa**	**68.17**	**319**	P	**P**	**23 27 39.5**	**+0.8**
	comp=Z,3.6nm,0.9s,baz=193,slow=3.6,SNR=5.4						
KBL	**Kabul**	**68.67**	**310**	P	**P**	**23 27 41.4**	**-0.7**
KBL				IAmb	IAmb	23 27 43.6	
	comp=Z,6.0nm,1.1s						
ZAA0	**Zalesovo Array**	**68.93**	**334**	P	**P**	**23 27 43.0**	**-0.1**
ZALV	**Zalesovo Beam**	**68.93**	**334**	P	**P**	**23 27 43.4**	**+0.4**
	comp=Z,9.8nm,0.9s,baz=108,slow=4.8,SNR=24						
ZALV	**Zalesovo Beam**	**68.93**	**334**	P	**P**	**23 27 42.3**	**-0.7**
GAR	**Garm**	**69.43**	**314**	P	**P**	**23 27 46.1**	**-0.5**
KURBB	**Kurchatov Arra**	**69.94**	**328**	P	**P**	**23 27 49.3**	**-0.1**
	comp=Z,18nm,0.9s,baz=127,slow=5.5,SNR=58						
KURK	**Kurchatov**	**69.95**	**328**	P	**P**	**23 27 49.0**	**-0.3**
KKAR	**Karatay Array**	**70.99**	**318**	P	**P**	**23 27 56.3**	**+0.3**
VNDA	**Vanda**	**75.23**	**173**	P	**P**	**23 28 22.7**	**+2.3**
BVAR	**Borovoye Array**	**75.51**	**328**	P	**P**	**23 28 22.3**	**0.0**
	comp=Z,10.0nm,0.9s,baz=185,slow=10.0,SNR=35						
BRVK	**Borovoye**	**75.58**	**328**	P	**P**	**23 28 23.5**	**+0.7**
TIXI	**Tiksi**	**75.74**	**360**	P	**P**	**23 28 24.2**	**+0.9**
GYA0B	**ALIBECK ARRAY**	**78.11**	**310**	P	**P**	**23 28 38.5**	**+1.0**
GYA0B				IAmb	IAmb	23 29 00.8	
	comp=Z,9.6nm,1.2s						
NRIK	**Noril'sk**	**78.79**	**346**	P	**P**	**23 28 40.6**	**+0.1**
	comp=Z,3.5nm,0.8s,baz=122,slow=6.5,SNR=6.1						
NRIK	**Noril'sk**	**78.79**	**346**	P	**P**	**23 28 40.9**	**+0.4**
NRIK				IAmb	IAmb	23 29 05.8	
	comp=Z,9.5nm,1.1s						
ABKAR	**Akbulak array**	**80.09**	**321**	P	**P**	**23 28 47.6**	**-0.3**
ABKAR	**Akbulak array**	**80.09**	**321**	P	**P**	**23 28 47.5**	**-0.4**
ABKAR				IAmb	IAmb	23 28 50.4	
	comp=Z,8.3nm,0.9s						
AKTO	**Aktyubinsk**	**81.64**	**322**	P	**P**	**23 28 55.9**	**-0.3**
	comp=Z,8.0nm,1.0s,baz=110,slow=6.4,SNR=8.3						
AKTO				LR	LR	00 07 38.3	
	comp=Z,41nm,18.1s,baz=352,slow=38						
ARU	**Arti**	**83.14**	**328**	P	**P**	**23 29 03.1**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=84,slow=5.0,SNR=5.5						
ARU	**Arti**	**83.14**	**328**	P	**P**	**23 29 04.0**	**0.0**
ARU				IAmb	IAmb	23 29 25.1	
	comp=Z,9.9nm,1.1s						
RAYN	**Ar Rayn**	**86.24**	**294**	P	**P**	**23 29 19.7**	**-0.6**
RAYN				IAmb	IAmb	23 29 28.1	
	comp=Z,11nm,1.1s						
SIRT	**Sirnak**	**90.27**	**307**	P	**P**	**23 29 39.4**	**+0.1**
GURO	**Guroymak-BITLI**	**90.68**	**308**	P	**P**	**23 29 41.6**	**+0.3**
GURO				IAmb	IAmb	23 29 49.9	
	comp=Z,8.9nm,1.2s						
ILAR	**Eielson Array**	**91.05**	**25**	P	**P**	**23 29 41.6**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=198,slow=8.5,SNR=2.4						
KMBO	**Kilima Mbogo**	**92.22**	**269**	P	**P**	**23 29 48.9**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=31,slow=22,SNR=2.0						
INK	**Inuvik**	**96.47**	**22**	P	**P**	**23 30 07.3**	**+0.3**
	comp=Z,1.7nm,1.0s,baz=221,slow=4.8,SNR=4.1						
INK	**Inuvik**	**96.47**	**22**	P	**P**	**23 30 07.2**	**+0.2**
TXAR	**Lajitas Array**	**123.85**	**57**	PKP	**PKiKP**	**23 35 37.8**	**+0.6**
	comp=Z,0.3nm,0.9s,baz=316,slow=3.8,SNR=2.7						
TORD	**Torodi Ar. Bea**	**127.80**	**283**	PKP	**PKPdf**	**23 35 44.2**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=22,slow=1.3,SNR=4.7						
TORD	**Torodi Ar. Bea**	**127.80**	**283**		**PKiKP**	**23 35 45.1**	**-0.1**
TKL	**Tuckaleechee C**	**136.15**	**40**	PKP	**PKiKP**	**23 36 00.9**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=190,slow=6.1,SNR=2.6						
CPUP	**Villa Florida**	**148.89**	**168**	PKPbc	**PKPbc**	**23 36 26.8**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=216,slow=6.2,SNR=2.2						
LPAZ	**La Paz**	**153.13**	**140**	PKPbc	**PKPbc**	**23 36 36.5**	**-1.1**
	comp=Z,2.6nm,1.2s,baz=201,slow=5.8,SNR=2.5						

IDC 09 23:18:13.2±1.6**, 34°.86N×82°.16E, h0^{km}, mb3.2**/3**, mb1 3.4**/7**, mb1mx3.0**/64**, mbtmp3.3**/7**, ML2.9**/3**, Error ellipse: s-maj=36.3km s-min=24.8km az=67.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**11.92**	**0**	Pn	Pn	23 21 03.3	-1.2
	0.2nm,0.3s,baz=183,slow=12,SNR=11						
KURBB	**Kurchatov Arra**	**15.98**	**352**	Pn	Pn	23 21 56.1	-3.1
	0.0nm,0.3s,baz=174,slow=12,SNR=2.1						
ZALV	**Zalesovo Beam**	**19.18**	**5**	P	Pn	23 22 39.2	+0.1
	baz=213,slow=10,SNR=1.1						
BVAR	**Borovoye Array**	**19.99**	**339**	P	P	23 22 45.3	-1.9
	0.1nm,0.3s,baz=183,slow=16,SNR=3.9						
CMAR	**Chiang Mai Arr**	**22.12**	**133**	P	P	23 23 09.2	-1.2
	0.7nm,0.3s,baz=311,slow=10,SNR=7.3						
SONM	**Songino Array**	**22.23**	**47**	P	P	23 23 13.3	+1.8
	0.3nm,0.5s,baz=226,slow=9.9,SNR=1.9						
TORD	**Torodi Ar. Bea**	**74.86**	**276**	P	P	23 29 57.2	+1.1
	0.1nm,0.4s,baz=28,slow=6.5,SNR=1.4						

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*IDC **09** 23:23:33.1±6.4, 17°.97N×106°.92W, h0^{km}, mb3.5/5, mb1 3.9/7, mb1mx3.5/49, mbtmp3.6/7, ML3.8/2, MS3.3/3, Ms1 3.3/3, ms1mx3.0/26, Error ellipse: s-maj=103.4km s-min=42.9km az=153.0*

ISC 09 23:23:39.3±6.3**, 18°.1N**±0°.6×**107°.1W**±0°.4**, h35^{km}, n14, σ0^{s}.74**/8**, mb3.5**/5**, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H06E1	**SOCORRO T-PHAS**	**3.71**	**281**	Pn	**Pn**	**23 24 34.0**	**-0.2**
H06E1				T	T	23 28 09.2	
	SNR=40						
H06S1	**SOCORRO T**	**3.73**	**280**	T	T	23 28 14.4	
	SNR=32						
LPIG	**La Paz**	**6.69**	**334**	LR	LR	23 26 41.4	
	comp=Z,68nm,18.1s,baz=118,slow=27						
TXAR	**Lajitas Array**	**11.61**	**15**	Pn	**Pn**	**23 26 22.4**	**-0.3**
	0.1nm,0.3s,baz=195,slow=14,SNR=9.4						
TXAR				LR	LR	23 31 03.1	
	comp=Z,193nm,19.6s,baz=0.0,slow=38						
PFO	**Pinyon Flats O**	**17.59**	**333**	P	**P**	**23 27 42.3**	**-0.3**
	0.2nm,0.3s,baz=156,slow=12,SNR=3.9						
NVAR	**Mina Array Bea**	**22.50**	**336**	P	**P**	**23 28 37.3**	**+1.2**
	1.0nm,0.8s,baz=150,slow=13,SNR=6.6						
ELK	**Elko**	**23.64**	**344**	P	**P**	**23 28 47.2**	**-0.4**
	1.3nm,0.8s,baz=177,slow=19,SNR=4.7						
PDAR	**Pinedale Array**	**24.68**	**356**	P	**P**	**23 28 57.1**	**0.0**
	0.3nm,0.7s,baz=155,slow=11,SNR=2.2						
TKL	**Tuckaleechee C**	**27.06**	**45**	LR	LR	23 40 44.2	
	comp=Z,135nm,18.2s,baz=316,slow=38						
INK	**Inuvik**	**52.90**	**348**	P	**P**	**23 32 52.3**	**+0.9**
	1.7nm,1.0s,baz=166,slow=6.8,SNR=3.4						
ILAR	**Eielson Array**	**53.69**	**340**	P	**P**	**23 32 57.1**	**-0.3**
	0.5nm,0.9s,baz=137,slow=8.0,SNR=3.3						
H03N2	**Juan Fernandez**	**57.87**	**152**	T	T	00 36 59.1	
	baz=330,slow=78,SNR=69						
H03N1	**Juan Fernandez**	**57.88**	**152**	T	T	00 37 01.0	
	baz=330,slow=78,SNR=66						
H03N3	**Juan Fernandez**	**57.88**	**152**	T	T	00 36 58.9	
	baz=330,slow=78,SNR=57						

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*NEIC **09** 23:25:40.7±1.4, 4°.05S±0°.08×129°.8E±0°.1, h10^{km}±1^{km}, mb4.3/20, Error ellipse: s-maj=18.3km s-min=13.3km az=108.0*

*IDC **09** 23:25:40.2±1.2, 4°.15S×129°.42E, h0^{km}, mb4.0/7, mb1 4.2/10, mb1mx3.8/50, mbtmp4.0/10, ML3.9/3, Error ellipse: s-maj=38.9km s-min=23.3km az=80.0*

*DJA **09** 23:25:44.8±0.9, 4°S±5°×12°9E±°, h11^{km}±7^{km}, M4.1/10, mb4.4/5, MLv4.0/10*

ISC 09 23:25:44.7±0.5**, 4°.18S**±0°.06×**129°.45E**±0°.06**, h36^{km}, n46, σ1^{s}.15**/45**, mb4.2**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.98**	**328**	P	**Pn**	**23 25 59.5**	**-2.4**
AAI	**Ambon**	**1.34**	**291**	P	**Pn**	**23 26 05.5**	**-1.4**
FAKI	**Fak Fak**	**3.07**	**66**	P	**Pn**	**23 26 31.1**	**+0.5**
FAKI	**Fak Fak**	**3.07**	**66**	Pn	Pn	23 26 23.3	-7.3
SIJI	**Sorong**	**3.76**	**29**	Pn	**Pn**	**23 26 39.8**	**-0.4**
	14nm,0.3s,baz=224,slow=23,SNR=19						
SIJI				Sn	**Sn**	**23 27 21.9**	**-1.4**
	9.5nm,0.3s,baz=128,slow=20,SNR=10						
SWI	**Sorong**	**3.76**	**29**	P	**Pn**	**23 26 40.9**	**+0.7**
LBMI	**Labuha**	**4.02**	**331**	P	**Pn**	**23 26 42.7**	**-1.1**
SANI	**Sanana**	**4.05**	**301**	P	**Pn**	**23 26 44.5**	**+0.3**
MTN	**Manton Dam**	**8.77**	**169**	Pn	**Pn**	**23 27 47.9**	**-1.1**
BKSI	**Bulukumba**	**9.36**	**263**	P	**Pn**	**23 27 59.9**	**+2.8**
KNRA	**Kununurra**	**11.44**	**183**	Pn	**Pn**	**23 28 24.5**	**-1.1**
WB0	**Warramunga Arr**	**16.22**	**163**	Pn	**Pn**	**23 29 27.8**	**-2.2**
WRA	**Warramunga Arr**	**16.38**	**163**	Pn	**Pn**	**23 29 30.1**	**-1.8**
	0.3nm,0.3s,baz=347,slow=13,SNR=16						
WRA	**Warramunga Arr**	**16.38**	**163**	Pn	**Pn**	**23 29 29.2**	**-2.7**
COEN	**Coen**	**16.66**	**127**		**Pn**	**23 29 35.5**	**-0.1**
PSA00	**Pilbara Seismi**	**19.64**	**208**	P	**Pn**	**23 30 12.3**	**+0.4**
PSA00				IAmb	IAmb	23 30 14.5	
	comp=Z,26nm,1.0s						
PSA00	**Pilbara Seismi**	**19.64**	**208**	P	**Pn**	**23 30 11.3**	**-0.7**
PSA00				IAmb	IAmb	23 30 14.0	
	comp=Z,11nm,0.9s						
AS31	**Alice Springs**	**19.84**	**168**	P	**P**	**23 30 11.0**	**-1.6**
ASAR	**Alice Springs**	**19.84**	**168**	P	**Pn**	**23 30 14.3**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=345,slow=9.3,SNR=29						
ASAR	**Alice Springs**	**19.84**	**168**	P	**P**	**23 30 11.2**	**-1.5**
KSM	**Kuching**	**19.93**	**286**	P	**P**	**23 30 13.6**	**0.0**
KSM				IAmb	IAmb	23 30 23.9	
	comp=Z,15nm,1.1s						
FORT	**Forrest**	**26.49**	**183**	P	**P**	**23 31 20.1**	**+1.4**
IPM	**Ipoh**	**29.67**	**287**	P	**P**	**23 31 48.2**	**+0.9**
STKA	**Stephens Creek**	**29.82**	**159**	P	**P**	**23 31 48.2**	**-0.2**
KULM	**Kulim**	**30.26**	**288**	P	**P**	**23 31 53.5**	**+0.9**
KULM				IAmb	IAmb	23 31 58.4	
	comp=Z,5.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**37.54**	**308**	P	**P**	**23 32 57.3**	**+1.6**
	comp=Z,0.9nm,0.4s,baz=148,slow=7.5,SNR=4.2						
CHTO	**Chiang Mai**	**37.74**	**308**	P	**P**	**23 32 57.5**	**+0.1**
CHTO				IAmb	IAmb	23 33 07.7	
	comp=Z,6.0nm,0.9s						
JWT	**Wachi**	**39.65**	**8**	P	**P**	**23 33 13.1**	**0.0**
MJAR	**Matsushiro Arr**	**41.33**	**11**	P	**P**	**23 33 27.3**	**+0.3**
	comp=Z,1.4nm,0.4s,baz=187,slow=10,SNR=2.9						
MAT	**Matsushiro**	**41.33**	**11**	P	P	23 33 33.8	+6.7
USRK	**Ussuriysk Ar.**	**48.22**	**2**	P	**P**	**23 34 20.2**	**-1.5**
SONM	**Songino Array**	**55.61**	**341**	P	**P**	**23 35 17.2**	**+0.2**
	comp=Z,0.5nm,1.0s,baz=163,slow=10,SNR=2.3						
SONM	**Songino Array**	**55.61**	**341**	P	**P**	**23 35 16.1**	**-0.9**
SONM				IAmb	IAmb	23 35 27.5	
	comp=Z,6.0nm,1.4s						
MK31	**Makanchi Array**	**65.58**	**326**	P	**P**	**23 36 25.0**	**+0.1**
MK31				IAmb	IAmb	23 36 33.7	
	comp=Z,1.3nm,0.8s						
MKAR	**Makanchi Array**	**65.58**	**326**	P	**P**	**23 36 25.5**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=114,slow=7.8,SNR=35						
MKAR	**Makanchi Array**	**65.58**	**326**	P	**P**	**23 36 25.0**	**+0.1**
MAKZ	**Makanchi**	**65.77**	**326**	P	**P**	**23 36 25.8**	**-0.2**
MAKZ				IAmb	IAmb	23 36 34.9	
	comp=Z,2.8nm,1.1s						
ZALV	**Zalesovo Beam**	**68.83**	**334**	P	**P**	**23 36 45.2**	**0.0**
	comp=Z,0.8nm,0.5s,baz=134,slow=6.2,SNR=1.3						
ZALV	**Zalesovo Beam**	**68.83**	**334**	P	**P**	**23 36 45.0**	**-0.2**
SEY	**Seymchan**	**69.16**	**11**	P	**P**	**23 36 48.8**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=56,slow=13,SNR=1.5						
KURK	**Kurchatov**	**69.84**	**328**	P	**P**	**23 36 51.5**	**-0.1**
BRVK	**Borovoye**	**75.47**	**328**	P	**P**	**23 37 25.5**	**+0.4**
BRVK				IAmb	IAmb	23 37 34.2	
	comp=Z,3.4nm,1.0s						
ABKAR	**Akbulak array**	**79.97**	**321**	P	**P**	**23 37 50.5**	**+0.2**
ABKAR				IAmb	IAmb	23 37 58.7	
	comp=Z,2.1nm,0.8s						
ABKAR	**Akbulak array**	**79.97**	**321**	P	**P**	**23 37 50.4**	**+0.2**
AKTO	**Aktyubinsk**	**81.52**	**322**	P	**P**	**23 37 59.0**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=132,slow=7.1,SNR=3.6						
RAYN	**Ar Rayn**	**86.11**	**294**	P	**P**	**23 38 22.9**	**+0.3**

IDC 09 23:27:10.7±1.8**, 4°.02S×129°.22E, h0^{km}, mb3.7**/2**, mb1 3.9**/4**, mb1mx3.1**/50**, mbtmp3.8**/4**, ML2.7**/2**, MS2.6**/1**, Ms1 2.6**/1**, ms1mx2.3**/36**, Error ellipse: s-maj=48.1km s-min=26.6km az=93.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.74**	**33**	Pn	Pn	23 28 10.6	+0.8
	2.9nm,0.3s,baz=212,slow=22,SNR=1.0						
SIJI				Sn	Sn	23 28 55.8	+1.2
	1.8nm,0.3s,baz=232,slow=23,SNR=1.2						
SIJI				LR	LR	23 29 33.3	
	comp=Z,77nm,20.9s,baz=76,slow=38						
WRA	**Warramunga Arr**	**16.60**	**163**	Pn	Pn	23 31 05.2	+0.2
	0.0nm,0.3s,baz=345,slow=11,SNR=1.4						
ASAR	**Alice Springs**	**20.05**	**167**	P	P	23 31 45.7	0.0
	3.1nm,0.7s,baz=346,slow=10,SNR=1.1						
MKAR	**Makanchi Array**	**65.32**	**326**	P	P	23 37 54.4	-0.3
	0.5nm,0.6s,baz=121,slow=7.1,SNR=2.9						

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*IDC **09** 23:29:11.5±5.1, 21°.94N×143°.16E, h242^{km}±49^{km}, mb3.3/13, mb1 3.5/13, mb1mx3.1/61, mbtmp3.9/13, MS3.3/1, Ms1 3.3/1, ms1mx2.6/20, Error ellipse: s-maj=24.8km s-min=13.6km az=89.0*

ISC 09 23:29:12.2±0.8**, 21°.9N**±0°.1×**143°.2E**±0°.2**, h250^{km}, n16, σ0^{s}.76**/16**, mb3.7**/12**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.33**	**323**	P	**P**	**23 33 30.6**	**+1.0**
	1.3nm,0.7s,baz=133,slow=8.1,SNR=5.7						
KLR	**Kul'dur**	**28.73**	**344**	P	**P**	**23 34 45.7**	**-0.7**
	1.3nm,0.6s,baz=152,slow=6.9,SNR=4.9						
KLR				LR	LR	23 45 44.4	
	comp=Z,54nm,18.2s,baz=188,slow=35						
SONM	**Songino Array**	**39.16**	**320**	P	**P**	**23 36 15.9**	**-0.1**
	0.3nm,0.4s,baz=133,slow=6.8,SNR=2.0						
WRA	**Warramunga Arr**	**42.48**	**192**	P	**P**	**23 36 43.1**	**-0.1**
	0.7nm,0.7s,baz=18,slow=9.0,SNR=16						
ASAR	**Alice Springs**	**46.19**	**192**	P	**P**	**23 37 12.1**	**-0.3**
	0.3nm,0.4s,baz=16,slow=8.0,SNR=2.7						
ZALV	**Zalesovo Beam**	**54.03**	**322**	P	**P**	**23 38 09.9**	**-0.8**
	1.1nm,0.4s,baz=109,slow=7.5,SNR=2.4						
MKAR	**Makanchi Array**	**54.54**	**313**	P	**P**	**23 38 15.1**	**+0.6**
	0.6nm,0.6s,baz=96,slow=7.3,SNR=6.6						
ILAR	**Eielson Array**	**61.86**	**27**	P	**P**	**23 39 03.9**	**-0.8**
	0.6nm,0.7s,baz=257,slow=5.3,SNR=8.9						
INK	**Inuvik**	**67.38**	**24**	P	**P**	**23 39 40.4**	**+0.2**
	0.7nm,0.5s,baz=290,slow=12,SNR=5.7						
YKA	**Yellowknife Ar**	**76.27**	**28**	P	**P**	**23 40 33.3**	**+0.2**
	0.8nm,0.4s,baz=292,slow=5.9,SNR=6.6						
KBZ	**Khabaz**	**82.20**	**314**	P	**P**	**23 41 06.6**	**+1.2**
	2.1nm,0.9s,baz=80,slow=2.1,SNR=4.3						
FINES	**FINESS Array B**	**82.98**	**334**	P	**P**	**23 41 08.2**	**-0.9**
	1.1nm,0.4s,baz=62,slow=5.4,SNR=9.8						
NVAR	**Mina Array Bea**	**83.03**	**51**	P	**P**	**23 41 11.1**	**+0.9**
	1.1nm,0.7s,baz=267,slow=6.7,SNR=5.3						
TORD	**Torodi Ar. Bea**	**128.59**	**309**	PKP	**PKPdf**	**23 47 49.2**	**-1.1**
	0.1nm,0.6s,baz=36,slow=2.7,SNR=1.0						
PLCA	**Paso Flores**	**145.91**	**131**	PKPbc	**PKPab**	**23 48 23.6**	**+0.1**
	0.8nm,0.4s,baz=229,slow=5.5,SNR=2.9						
LPAZ	**La Paz**	**149.94**	**85**	PKPbc	**PKiKP**	**23 48 35.6**	**+0.3**
	1.1nm,0.5s,baz=301,slow=5.2,SNR=5.5						

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*ISK **09** 23:33:08.2, 35°.68N×31°.38E, h5^{km}, ML3.7/51*

*HLW **09** 23:33:09.7, 35°.93N×31°.24E, h29^{km}±24^{km}, Md4.0*

*NIC **09** 23:33:11.0±0.0, 35°.69N×31°.39E, h26^{km}±2^{km}, Ml3.8/7*

*DDA **09** 23:33:10.6, 35°.75N×31°.40E, h12^{km}±2^{km}, MW3.8*

*IDC **09** 23:33:12.8±1.6, 35°.76N×31°.38E, h54^{km}±22^{km}, mb3.4/4, mb1 3.5/10, mb1mx3.2/52, mbtmp3.6/10, ML3.7/6, MS2.4/3, Ms1 2.4/3, ms1mx2.2/38, Error ellipse: s-maj=16.3km s-min=10.9km az=78.0*

*THE **09** 23:33:13.6, 35°.66N×31°.13E, h8^{km}±28^{km}, ML2.9/2, Error ellipse: s-maj=38.4km s-min=2.2km az=117.0*

ISC 09 23:33:10.8±1.4**, 35°.71N**±0°.03×**31°.35E**±0°.02**, h23^{km}**±13^{km}**, n144, σ1^{s}.37**/186**, mb3.5**/5**, 2C, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**0.94**	**56**	*i* P	**Pn**	**23 33 26.7**	**-2.0**
GAZI				*i* S	**Sb**	**23 33 37.6**	**-3.0**
GAZI				IAML		23 33 39.0	

	comp=N,1µm,0.5s						
GAZI				IAML		23 33 40.0	
	comp=E,957nm,0.3s						
GAZI	Gazipasa	0.94	56	PG	Pn	23 33 26.7	-2.0
AKUM	Antalya-Kumluc	1.02	307	i P	Pn	23 33 30.0	+0.2
AKUM				i S	Sn	23 33 45.8	+2.4
AKMS	Akamas	1.06	130	P	Pn	23 33 29.7	-0.6
AKMS				AML	AML	23 33 51.0	
	comp=E,6.3nm,0.5s						
AKMS				AML	AML	23 33 56.1	
	comp=E,6.4nm,0.5s						
KEMT	Kemer-ANTALYA	1.10	325	PN	Pn	23 33 30.1	-0.8
KEMT				SN	Sb	23 33 46.8	+1.6
ALFC	Alefka	1.16	118	P	Pn	23 33 30.4	-1.3
ALFC				AML	AML	23 33 54.1	
	comp=E,5.5nm,0.5s						
ALFC				AML	AML	23 33 54.6	
	comp=E,8.8nm,0.5s						
KEPZ	Antalya-Kepez	1.21	10	i P	Pn	23 33 30.8	-1.6
KEPZ				i S	Sn	23 33 44.3	-3.8
KEPZ				IAML		23 33 45.0	
	comp=N,950nm,0.8s						
KEPZ				IAML		23 33 49.0	
	comp=E,714nm,0.7s						
ANTB	Antalya	1.32	335	PN	Pn	23 33 34.4	+0.6
NATA	Nata	1.36	133	S	Sn	23 33 51.6	-0.2
NATA				AML	AML	23 33 56.1	
	comp=E,4.4nm,0.3s						
NATA				AML	AML	23 33 57.7	
	comp=E,3.5nm,0.5s						
BOZY	Bozyazi-Mersin	1.38	73	PN	Pn	23 33 33.7	-0.9
AKDN	Akdeniz- Kıbrı	1.38	107	PN	Pn	23 33 34.2	-0.5
LEF	Lefka	1.39	115	i P	Pn	23 33 33.1	-1.7
LEF				i S	Sn	23 33 51.8	-0.6
LEF	Lefka	1.39	115	PN	Pn	23 33 33.6	-1.2
LEF				SN	Sn	23 33 52.5	+0.1
TEKE	Tekeli-Mersin	1.50	73	PN	Pn	23 33 36.5	+0.2
KSL	Kastellorizon	1.50	288	P	Pn	23 33 36.7	+0.3
KSL				S	Sn	23 33 55.5	+0.3
	comp=E,260nm,0.7s						
KSL	Kastellorizon	1.50	288	P	Pn	23 33 36.8	+0.5
KSL				S	Sn	23 33 55.9	+0.6
AKAS	Kas	1.51	291	i P	Pn	23 33 36.7	0.0
AKAS	Kas	1.51	291	PN	Pn	23 33 37.3	+0.7
KORT	Korkueli	1.52	328	i P	Pn	23 33 36.6	-0.3
KORT	Korkueli	1.52	328	PN	Pn	23 33 37.9	+1.1
HDMB	Hadim	1.55	36	PN	Pn	23 33 36.7	-0.6
ELL	Elmali	1.56	312	PN	Pn	23 33 37.9	+0.6
ELL	Elmali	1.56	312	P	Pn	23 33 37.6	+0.2
ELL				S	Sb	23 33 58.5	-0.1
ERMK	Ermenek	1.57	53	i P	Pn	23 33 37.4	-0.1
ERMK				i S	Sb	23 34 00.3	+1.5
ERMK				IAML		23 34 03.0	
	comp=E,494nm,0.4s						
ERMK				IAML		23 34 09.0	
	comp=N,558nm,0.7s						
BERE	Bereket-Mersin	1.65	67	PN	Pn	23 33 37.9	-0.6
YORU	Yoruktepe-Mers	1.73	74	PN	Pn	23 33 39.5	0.0
BUCA	Burdur, Bucak-	1.74	339	i P	Pn	23 33 39.2	-0.6
SEYD	Seydisehir-KON	1.74	13	PN	Pn	23 33 40.5	+0.7
ATHAL	Athalassa	1.76	108	P	Pn	23 33 38.9	-1.0
ATHAL				S	Sn	23 34 01.7	+0.1
ATHAL				AML	AML	23 34 04.4	
	comp=N,1.9nm,0.3s						
ATHAL				AML	AML	23 34 04.4	
	comp=N,1.9nm,0.3s						
ATHAL				AML	AML	23 34 04.5	
	comp=N,3.2nm,0.3s						
ATHAL				AML	AML	23 34 04.5	
	comp=N,3.2nm,0.3s						
SEDI	Konya, Seydise	1.77	10	i P	Pn	23 33 39.9	-0.3
SEDI				i S	Sn	23 34 00.7	-1.4
CSS	Mathiatis	1.78	114	PN	Pn	23 33 40.1	-0.1
CSS	Mathiatis	1.78	114	⇑eP	Pn	23 33 38.8	-1.4
CSS				S	Sn	23 34 01.6	-0.5
OREN	Orenkoy-Mersin	1.78	73	PN	Pn	23 33 40.8	+0.6
ASGA	Asgata	1.80	120	P	Pn	23 33 40.3	-0.3
ASGA				AML	AML	23 34 16.3	
	comp=N,3.4nm,0.6s						
ASGA				AML	AML	23 34 18.3	
	comp=N,2.7nm,0.5s						
AKK1	Akkuyu-Mersin	1.83	76	PN	Pn	23 33 40.9	+0.1
LFK	Lefkose	1.83	103	PN	Pn	23 33 40.8	-0.1
AKK2	Akkuyu-Mersin	1.83	76	PN	Pn	23 33 41.1	+0.2
AKKU	Akkuyu-Mersin	1.84	75	PN	Pn	23 33 41.6	+0.6
GULN	MERSIN_Gulnar	1.84	74	i P	Pn	23 33 41.1	+0.1
GULN				i S	Sn	23 34 04.6	+1.0
TEVE	Tevekalti-Mers	1.84	66	PN	Pn	23 33 40.9	-0.3
TEPK	Tepekoy-MERSIN	1.85	73	PN	Pn	23 33 41.4	+0.2
BCK	Bucak	1.85	341	PN	Pn	23 33 42.3	+1.0
TISA	Tisan-Mersin	1.94	76	PN	Pn	23 33 42.6	+0.2
IKL	Isikli	1.97	74	PN	Pn	23 33 43.3	+0.6
KARG	Kargicak-Mersi	1.98	75	PN	Pn	23 33 43.4	+0.5
KKBE	Karaman, Kazim	1.98	40	i P	Pn	23 33 43.9	+0.8
KKBE				i S	Sn	23 34 09.8	+2.5
MVOU	Mavrovouni	1.99	110	⇑eP	Pn	23 33 41.4	-1.6
MVOU				AML	AML	23 34 17.9	
	comp=N,3.0nm,0.5s						
MVOU				AML	AML	23 34 20.4	
	comp=N,2.6nm,0.7s						
KEBE	Keben-Mersin	2.05	68	PN	Pn	23 33 44.9	+0.9
FETY	Fethiye	2.06	297	P	Pn	23 33 45.1	+1.1
FETY				S	Sn	23 34 09.0	0.0
FETY	Fethiye	2.06	297	i P	Pn	23 33 45.1	+1.1
FETY				i S	Sn	23 34 09.8	+0.9
FETY	Fethiye	2.06	297	PN	Pn	23 33 45.3	+1.3
CAME	Cameli-Denizli	2.06	307	PN	Pn	23 33 45.5	+1.2
GOLH	Golhisar	2.10	317	i P	Pn	23 33 46.9	+2.2
KRMN	Karaman	2.13	46	PN	Pn	23 33 46.2	+1.1
CAEL	Denizli, Camel	2.16	311	i P	Pn	23 33 47.3	+1.7
SILI	Silifke-Mersin	2.19	72	PN	Pn	23 33 47.1	+1.3
OSC1	CSNet OBS 1	2.20	182	P	Pn	23 33 46.9	+1.0
OSC1				S	Sn	23 34 12.8	+0.3
KMER	Konya-Meram	2.21	21	i P	Pn	23 33 47.7	+1.4
KMER				i S	Sn	23 34 13.0	0.0
ISP	Isparta	2.21	343	PN	Pn	23 33 47.3	+1.0
BRDR	BURDUR-Merkez	2.24	333	i P	Pb	23 33 49.3	-1.4
EREN	Erenkoy	2.30	94	i P	Pn	23 33 47.4	0.0
EREN				i S	Sn	23 34 14.3	-0.7
EREN	Erenkoy	2.30	94	PN	Pn	23 33 47.7	+0.3
PARAL	Paralimni	2.31	107	P	Pn	23 33 47.2	-0.3
PARAL				AML	AML	23 34 28.6	
	comp=N,3.8nm,0.7s						
PARAL				AML	AML	23 34 28.9	
	comp=N,3.5nm,0.8s						
BAGO	Egridir - ISPA	2.32	349	i P	Pn	23 33 47.7	0.0
BAGO				i S	Sb	23 34 19.0	-1.4
KONT	Konya--Tatoy	2.38	20	i P	Pn	23 33 49.5	+1.0
KONT	Konya--Tatoy	2.38	20	PN	Pn	23 33 49.6	+1.2
KIZK	Mersin	2.39	70	i P	Pn	23 33 49.4	+0.8
KIZK				i S	Sn	23 34 18.3	+1.1
KIZK	Mersin	2.39	70	PN	Pn	23 33 49.7	+1.1
DOGA	KONYA_Doganhis	2.41	6	i P	Pn	23 33 49.9	+0.9
DOGA				i S	Sn	23 34 18.2	+0.3
BASM	Basmaki-Afyon	2.44	335	PN	Pn	23 33 51.4	+2.0
DALY	Dalyan (Mula)	2.45	298	i P	Pn	23 33 49.4	+0.1
DALY	Dalyan (Mula)	2.45	298	PN	Pn	23 33 50.4	+1.1
YVAC	Isparta, Yalva	2.56	358	i P	Pn	23 33 51.4	+0.3
LADK	Ladik-KONYA	2.62	18	PN	Pn	23 33 53.7	+1.9
TAVA	DENIZLI_Tavas	2.63	313	i P	Pn	23 33 53.2	+1.2
ARG	Arkhangelos	2.67	282	P	Pn	23 33 52.7	+0.3
ARG				S	Sn	23 34 22.5	-1.5
	comp=N,165nm,0.4s						
ARG	Arkhangelos	2.67	282	PN	Pn	23 33 52.9	+0.5
ARG	Arkhangelos	2.67	282	P	Pn	23 33 52.7	+0.3
KZIL	AFYON_Kizioren	2.73	340	i P	Pn	23 33 53.0	-0.3
KZIL				i S	Sn	23 34 26.8	+1.2
TURN	Turunc	2.73	294	PN	Pn	23 33 54.3	+1.1
KERG	Konya-Eregli	2.81	52	i P	Pn	23 33 55.4	+1.0
KERG				i S	Sn	23 34 30.0	+2.2
MERS	Mersin	2.81	65	PN	Pn	23 33 55.9	+1.4
KDHN	Kadinhani	2.88	12	i P	Pn	23 33 55.0	-0.3
KDHN				i S	Sn	23 34 29.6	+0.3
SHUT	Suhut-Afyon	2.91	348	PN	Pn	23 33 57.3	+1.4
PASA	Karahalli, USA	3.03	331	i P	Pn	23 33 58.2	+0.8
SULT	Sultanhani-AKS	3.03	34	PN	Pn	23 33 59.2	+1.7
DED	Mersin	3.05	65	i P	Pn	23 33 59.0	+1.2
DED				i S	Sn	23 34 35.4	+1.8
CHBY	Cihanbeyli	3.12	23	PN	Pn	23 33 59.7	+0.9
GULE	Gulek	3.18	59	i P	Pn	23 34 02.2	+2.6
GULE				i S	Sn	23 34 39.1	+2.3
AFYO	Afyonkarahisar	3.19	345	i P	Pn	23 34 03.7	+4.0
AFYO				i S	Sn	23 34 40.3	+3.3
KIZT	Kizilcal	3.20	7	PN	Pn	23 34 00.3	+0.5
DAT	Datca	3.22	290	P	Pn	23 34 00.6	+0.5
DAT				S	Sn	23 34 37.0	-0.7
KARA	Karaisali	3.36	61	PN	Pn	23 34 03.5	+1.5
KRTS	Karatas	3.37	74	PN	Pn	23 34 03.3	+1.3
AKSY	AKSARAY - Alti	3.51	33	i P	Pn	23 34 05.3	+1.3
CMRD	Camardi-Nigde	3.52	55	PN	Pn	23 34 05.4	+1.2
BODT	Bodrum	3.53	294	P	Pn	23 34 04.7	+0.4
BODT				S	Sn	23 34 43.8	-1.5
KULA	Kula-Manisa	3.53	323	P	Pn	23 34 04.8	+0.4
NIDE	Nigde/Merkez-G	3.58	49	i P	Pn	23 34 06.4	+1.4
YURE	YUREGIR	3.63	71	i P	Pn	23 34 06.6	+0.9
YURE				i S	Sn	23 34 49.5	+1.6
ASUZ	Hatay-Arsuz	3.64	79	i P	Pn	23 34 07.4	+1.7
ASUZ				i S	Sn	23 34 50.1	+2.1
CIFT	Cifteler, Eski	3.66	356	PN	Pn	23 34 06.7	+0.6
KKUL	Konya-Kulu	3.68	19	i P	Pn	23 34 07.0	+0.6
KKUL				i S	Sn	23 34 50.4	+1.3
SERE	Sereflikochisa	3.68	28	PN	Pn	23 34 07.6	+1.1
AUSIV	SIVRIHISAR	3.73	2	PN	Pn	23 34 07.8	+0.7
AKO	Adana	3.73	61	i P	Pn	23 34 08.8	+1.7
AKO				i S	Sn	23 34 51.2	+0.9
SVRH	Sivrihisar-ESK	3.74	2	PN	Pn	23 34 08.4	+1.2
CEYT	Ceyhan	3.78	69	PN	Pn	23 34 08.5	+0.8
YAYL	Yayladag	3.88	84	PN	Pn	23 34 09.9	+0.8
BHL	Bhannes	3.97	116	eP	Pn	23 34 13.0	+2.5
KIRS	Kırehir-Merke	3.98	30	i P	Pn	23 34 11.8	+1.2
YAHY	KAYSERI_Yahyal	4.00	52	i P	Pn	23 34 12.2	+1.3
DQRL	Deir Qamar	4.01	119	eP	Pn	23 34 12.2	+1.3
KOZT	Kozan	4.01	63	PN	Pn	23 34 11.8	+0.9
HWQ	Hawqa	4.03	109	eP	Pn	23 34 14.3	+3.0
KAMT	Kaman	4.11	26	PN	Pn	23 34 13.6	+1.3
ZKR	Zakros	4.24	263	P	Pn	23 34 15.5	+1.5
MMAI	Mount Meron Ar	4.29	128	P	Pn	23 34 15.5	+0.7
	comp=N,9.6nm,0.3s,baz=314,slow=11,SNR=32						
MMAI				S	Sn	23 35 05.5	+1.3
	comp=N,13nm,0.3s,baz=299,slow=28,SNR=7.6						
MMAI				LR	LR	23 36 47.3	
	comp=N,25nm,20.1s,baz=145,slow=50						
RCY	Rachaya	4.30	120	eP	Pn	23 34 16.3	+1.3
SHBL	Chebaa	4.32	122	eP	Pn	23 34 17.0	+1.7
BLCB	Balcova	4.36	309	P	Pn	23 34 15.7	0.0
BRTR	Keskin Array B	4.40	24	P	Pn	23 34 17.8	+1.4
	comp=N,3.9nm,0.3s,baz=193,slow=16,SNR=56						
BRTR				S	Sn	23 35 06.2	-0.8
	comp=N,1.1nm,0.3s,baz=193,slow=27,SNR=6.5						
BRTR				LR	LR	23 36 16.6	
	comp=N,98nm,19.1s,baz=246,slow=42						
KOZK	Kozakli-Nevseh	4.48	38	PN	Pn	23 34 18.9	+1.5
IDI	Anoyia	5.29	267	P	Pn	23 34 28.8	+0.3
	comp=N,1.5nm,0.3s,baz=62,slow=11,SNR=33						
IDI				S	Sn	23 35 24.5	-4.3
	comp=N,3.7nm,0.3s,baz=144,slow=20,SNR=7.7						
IDI				LR	LR	23 37 39.6	
	comp=N,24nm,20.9s,baz=92,slow=50						
HHAG	Hagoal	5.77	174	P	Pn	23 34 37.4	+2.3
	baz=172						
KOT	Kottamia	5.78	176	P	Pn	23 34 37.3	+2.1
	baz=175						
ASF	Jabal al Asfar	5.80	126	P	Pn	23 34 37.6	+2.1
	comp=N,0.5nm,0.3s,baz=318,slow=4.7,SNR=12						
ASF				S	Sn	23 35 42.9	+1.4
	comp=N,0.7nm,0.3s,baz=298,slow=8.5,SNR=1.3						
SUZ	Suez	5.98	168	P	Pn	23 34 38.8	+0.8
	baz=167						
HSAF	As Saff	6.07	178	P	Pn	23 34 40.6	+1.4
	baz=177						
HNAT	Natroun	6.09	186	P	Pn	23 34 41.5	+2.0
	baz=185						
GLL	Jalalah	6.12	177	P	Pn	23 34 41.7	+1.8
	baz=176						
SLUM	Salum	6.62	232	P	Pn	23 34 47.1	+0.3
	baz=231						
RYAN	Fayoum	6.67	188	P	Pn	23 34 48.7	+1.3
	baz=188						
RYAN				S	Sn	23 36 01.2	-1.4
	baz=188						
EIL	Elat	6.74	152	P	Pn	23 34 49.2	+0.8
	comp=N,1.3nm,0.3s,baz=233,slow=2.8,SNR=30						
EIL				S	Sn	23 36 05.3	+0.8
	comp=N,2.4nm,0.3s,baz=160,slow=1.0,SNR=6.1						
HBST	Basata	7.07	155	P	Pn	23 34 54.9	+1.9
	baz=155						
SWA2		8.14	219	P	Pn	23 35 07.2	-0.5
	baz=218						
HDK1	Dakhla	10.27	190	P	Pn	23 35 38.9	+2.0
	baz=190						
AKASG	Malin Array Be	15.07	355	P	Pn	23 36 44.6	+2.5
	comp=N,0.5nm,0.3s,baz=175,slow=8.7,SNR=3.2						
GERES	GERESS Array B	18.46	321	P	P	23 37 25.1	+0.1
	comp=N,0.1nm,0.3s,baz=126,slow=9.8,SNR=2.0						
GEYT	Alibeck	21.52	76	P	P	23 38 00.3	+2.0
	comp=N,3.0nm,0.7s,baz=264,slow=14,SNR=5.3						
FINES	FINESS Array B	25.98	354	P	P	23 38 37.6	-3.9
	comp=N,1.1nm,0.6s,baz=156,slow=10,SNR=6.2						
ESDC	Sonseca Array	28.11	289	P	P	23 38 60.0	-1.0
	comp=N,0.4nm,0.8s,baz=81,slow=8.6,SNR=1.8						
TORD	Torodi Ar. Bea	34.89	237	P	P	23 40 00.0	-0.7
	comp=N,0.6nm,0.8s,baz=37,slow=5.3,SNR=3.6						
MKAR	Makanchi Array	39.23	58	P	P	23 40 35.8	-1.6
	comp=N,0.7nm,0.6s,baz=267,slow=9.6,SNR=7.6						

IDC 09 23:34:03.5±1.7, 4°.28S×130°.07E, h0^{km}, mb3.5/1, mb1 3.6/4, mb1mx3.1/51, mbtmp3.5/4, ML3.2/3, Error ellipse: s-maj=62.0km s-min=24.4km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.59	20	Pn	Pn	23 35 01.5	+1.0
	4.1nm,0.3s,baz=322,slow=24,SNR=10.0						
SIJI				Sn	Sn	23 35 43.2	-0.4
	3.3nm,0.3s,baz=104,slow=23,SNR=3.8						
WRA	Warramunga Arr	16.12	165	Pn	Pn	23 37 50.0	-1.7
	0.0nm,0.3s,baz=351,slow=12,SNR=1.5						
ASAR	Alice Springs	19.63	169	P	Pn	23 38 34.5	-0.6
	0.2nm,0.3s,baz=348,slow=9.0,SNR=7.3						
MKAR	Makanchi Array	66.00	326	P	P	23 44 51.7	-0.2
	0.4nm,0.7s,baz=118,slow=8.6,SNR=4.9						

IDC 09 23:38:54.8±2.4, 4°.09S×129°.55E, h0^{km}, mb3.6/1, mb1 3.3/3, mb1mx2.8/43, mbtmp3.1/3, ML2.8/2, Error ellipse: s-maj=171.8km s-min=30.1km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.43	164	Pn	Pn	23 42 45.9	-1.1
	0.0nm,0.3s,baz=347,slow=14,SNR=1.6						
ASAR	Alice Springs	19.91	168	P	P	23 43 28.7	+0.5
	0.1nm,0.3s,baz=347,slow=10,SNR=2.3						
MKAR	Makanchi Array	65.57	326	P	P	23 49 40.4	0.0
	0.3nm,0.3s,baz=119,slow=7.9,SNR=8.6						

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*IDC **09** 23:40:37.4±1.2, 17°.03S×175°.17E, h0^{km}, mb4.0/4, mb1 4.3/4, mb1mx3.6/36, mbtmp4.0/4, ML4.6/1, MS3.6/4, Ms1 3.5/4, ms1mx3.1/41, Error ellipse: s-maj=51.2km s-min=23.7km az=4.0*

ISC 09 23:40:42.7±0.9, 17°.1S±0°.3×175°.2E±0°.1, h35^{km}, n10, σ1^{s}.36/7, mb4.0/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.83	104	Pn	Pn	23 41 24.7	-0.7
	4.1nm,0.3s,baz=256,slow=16,SNR=22						
MSVF				Sn	Sn	23 41 59.3	+0.9
	2.2nm,0.3s,baz=17,slow=19,SNR=2.7						
DZM	Mont Dzumac	9.60	238	LR	LR	23 46 15.4	
	comp=Z,395nm,19.5s,baz=93,slow=35						
AFI	Afiamalu	12.97	78	LR	LR	23 47 27.0	
	comp=Z,208nm,21.0s,baz=142,slow=32						
URZ	Urewera	21.16	176	LR	LR	23 52 14.7	
	comp=Z,108nm,18.8s,baz=31,slow=33						
STKA	Stephens Creek	33.76	238	LR	LR	00 00 02.8	
	comp=Z,108nm,18.8s,baz=27,slow=34						
ASAR	Alice Springs	39.13	253	P	P	23 48 06.3	-0.9
	1.5nm,0.6s,baz=82,slow=9.0,SNR=14						
CMAR	Chiang Mai Arr	82.86	292	P	P	23 53 05.5	+1.4
	0.8nm,0.3s,baz=109,slow=3.2,SNR=5.3						
ILAR	Eielson Array	86.59	15	P	P	23 53 20.6	-1.3
	0.8nm,0.8s,baz=231,slow=5.0,SNR=4.7						
SONM	Songino Array	89.00	321	P	P	23 53 34.1	+0.1
	0.3nm,0.4s,baz=142,slow=7.3,SNR=2.4						
GERES	GERESS Array B	144.91	339	PKP	PKPdf	00 00 17.5	+1.3
	1.5nm,1.1s,baz=45,slow=2.1,SNR=4.7						

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*IDC **09** 23:42:56.3±1.9, 2°.31N×128°.18E, h0^{km}, mb4.0/4, mb1 4.3/4, mb1mx3.5/39, mbtmp4.1/4, Error ellipse: s-maj=129.4km s-min=25.1km az=66.0*

*DJA **09** 23:43:09.1±0.7, 2°N±6°×12°7E±°, h110^{km}±7^{km}, M3.7/7, mb3.8/1, MLv3.6/7*

ISC 09 23:43:08.9±1.6, 1°.9N±0°.2×127°.7E±0°.2, h100^{km}, n7, σ0^{s}.27/7, mb4.1/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.18	194	P	Pn	23 43 31.1	-0.3
SANI	Sanana	4.29	203	P	Pn	23 44 11.9	-0.1
GTOI	Gorontalo	4.82	255	P	Pn	23 44 19.2	0.0
WRA	Warramunga Arr	22.70	164	P	P	23 48 02.6	+0.1
	6.3nm,0.5s,baz=345,slow=11,SNR=104						
ASAR	Alice Springs	26.16	167	P	P	23 48 34.2	+0.2
	1.9nm,0.5s,baz=349,slow=7.3,SNR=24						
STKA	Stephens Creek	36.13	160	P	P	23 50 01.8	+0.3
	1.6nm,0.4s,baz=346,slow=7.7,SNR=6.2						
MKAR	Makanchi Array	59.55	325	P	P	23 53 01.9	-0.2
	0.3nm,0.6s,baz=120,slow=6.9,SNR=4.3						

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*TUL **09** 23:50:10.8±0.8, 36°.47N±0°.02×98°.75W±0°.02, h5^{km}±7^{km}, ML2.6, mb_Lg2.2/5(NEIC), Error ellipse: s-maj=3.2km s-min=2.1km az=149.0*

NEIC 09 23:50:11.0±1.1, 36°.50N±0°.02×98°.76W±0°.02, h13^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=2.2km az=133.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.22	239	Pg	Pg	23 50 15.5	-0.3
U32A				Sg	Sg	23 50 19.1	-0.1
OK032	Salt Plains WL	0.54	55	Pg	Pg	23 50 21.6	0.0
CROK	Carrier	0.63	89	Pg	Pg	23 50 22.8	-0.5
CROK				Sg	Sg	23 50 31.6	+0.1
GC02	Grant County #	0.81	64	Pg	Pg	23 50 26.3	-0.3
KAN10	Anthony SW Sta	0.82	40	Pg	Pg	23 50 27.0	0.0
KAN05	Bluff City Nor	0.94	49	Pg	Pg	23 50 28.4	-0.8
KAN05				Sg	Sg	23 50 41.4	-0.1
KAN08	Anthony NE Sta	0.97	41	Pg	Pb	23 50 29.3	-0.3
KAN17	Caldwell West	0.97	55	Pg	Pb	23 50 29.3	-0.4
KAN17				Sg	Sg	23 50 42.3	-0.1
KAN01	Argonia South	1.04	50	Pg	Pb	23 50 30.6	-0.2
KAN06	Argonia West S	1.04	44	Pg	Pb	23 50 30.7	-0.3
KAN09	Caldwell North	1.12	55	Pg	Pb	23 50 31.9	-0.2
KAN13	South Haven SW	1.15	63		Pb	23 50 32.3	-0.5
BCOK	Bluff Creek, N	1.25	131	Pg	Pn	23 50 33.8	-0.5
BCOK				Sg	Sb	23 50 50.4	-0.1
OK029	Liberty Lake	1.27	123		Pn	23 50 33.8	-0.6
BLOK	Blackwell	1.27	78	Pg	Pn	23 50 34.5	0.0
OK025	Westminster Rd	1.47	128		Pn	23 50 37.7	+0.5
FNO	Franklin	1.66	138	Pn	Pn	23 50 40.2	+0.4
OK030	Cody Creek RV	1.70	109	Pn	Pn	23 50 40.9	+0.6
OK034	N. Norfolk Rd.	1.73	106	Pn	Pn	23 50 41.5	+0.8
T35A	Sooner Cattle	1.86	76		Pn	23 50 43.4	+0.9
R32A	Long Quarter,	1.93	1		Pb	23 50 45.0	-1.0
X34A	Smith Ranch, M	2.04	158	Pn	Pb	23 50 46.5	-1.3
CBKS	Cedar Bluff	2.44	342		Pn	23 50 52.6	+2.0
CBKS				IAmb_Lg		23 51 30.3	
	comp=Z,8.7nm,1.1s						
U38A	Gravette	3.53	90	IAmb_Lg		23 52 03.9	
	comp=Z,4.2nm,0.8s						
W39A	Magazine	4.25	106	IAmb_Lg		23 52 28.8	
	comp=Z,7.2nm,0.7s						

IDC 09 23:50:17.5±2.8, 4°.43S×130°.20E, h0^{km}, mb3.2/1, mb1 3.3/3, mb1mx3.0/35, mbtmp3.1/3, ML2.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/19, Error ellipse: s-maj=179.0km s-min=33.2km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.94	166	Pn	Pn	23 54 02.2	-1.2
	0.0nm,0.3s,baz=349,slow=13,SNR=1.8						
ASAR	Alice Springs	19.46	170	P	P	23 54 46.5	+0.6
	0.1nm,0.3s,baz=349,slow=9.6,SNR=2.7						
ASAR				LR	LR	00 03 21.9	
	comp=Z,64nm,18.8s,baz=99,slow=40						
MKAR	Makanchi Array	66.20	326	P	P	00 01 07.3	0.0
	0.2nm,0.5s,baz=120,slow=5.1,SNR=2.0						

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*IDC **09** 23:59:09.9±1.7, 4°.07S×129°.39E, h0^{km}, mb3.8/1, mb1 3.9/4, mb1mx3.5/39, mbtmp3.8/4, ML3.8/2, Error ellipse: s-maj=63.2km s-min=27.6km az=84.0*

*DJA **09** 23:59:11.1±1.0, 4°S±7°×13°0E±°, h12^{km}±7^{km}, M3.5/7, MLv3.5/7*

ISC 09 23:59:14.4±1.1, 4°.10S±0°.09×129°.52E±0°.06, h36^{km}, n8, σ0^{s}.71/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.95	322	P	Pn	23 59 30.4	-0.8
MSAI				S	Sn	23 59 44.6	+1.0
AAI	Ambon	1.38	287	P	Pn	23 59 36.2	-0.9
AAI				S	Sn	23 59 54.6	+0.4
FAKI	Fak Fak	2.96	67	P	Pn	23 59 58.6	-0.3
SIJI	Sorong	3.65	29	Pn	Pn	00 00 08.2	-0.2
	4.3nm,0.3s,baz=253,slow=22,SNR=6.2						
SIJI				Sn	Sn	00 00 49.4	-0.9
	5.2nm,0.3s,baz=297,slow=15,SNR=5.0						
SWI	Sorong	3.65	28	P	Pn	00 00 08.3	-0.1
WRA	Warramunga Arr	16.44	164	Pn	P	00 03 05.0	+0.2
	baz=334,slow=12,SNR=1.0						
ASAR	Alice Springs	19.91	168	P	P	00 03 43.0	0.0
	0.6nm,0.3s,baz=345,slow=9.7,SNR=12						
MKAR	Makanchi Array	65.56	326	P	P	00 09 55.0	+0.6
	0.5nm,0.5s,baz=121,slow=6.5,SNR=1.8						

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*SOME **10** 00:01:19.0, 38°.50N×73°.55E, h15^{km}, MS4.4*

*IDC **10** 00:01:25.9±0.9, 38°.56N×73°.17E, h0^{km}, mb4.2/17, mb1 4.3/24, mb1mx4.0/61, mbtmp4.2/24, ML3.8/7, MS3.7/4, Ms1 3.7/4, ms1mx3.2/45, Error ellipse: s-maj=16.6km s-min=13.0km az=165.0*

*BJI **10** 00:01:26.8±0.0, 38°.64N×73°.06E, h8^{km}, mB4.5/11, mb4.4/24, ML4.0/6, Ms3.9/8, Ms7 3.6/7*

*MOS **10** 00:01:27.9±1.4, 38°.74N×73°.12E, h15^{km}, mb4.7/23, Error ellipse: s-maj=6.0km s-min=3.8km az=84.9*

*KRNET **10** 00:01:28.9±0.1, 38°.81N×73°.09E, h17^{km}, mb4.9*

*NNC **10** 00:01:29.3±1.6, 38°.70N×73°.37E, h0^{km}, mb5.0, mpv4.7, Error ellipse: s-maj=12.1km s-min=7.9km az=2.0*

*NEIC **10** 00:01:29.6±2.7, 38°.78N±0°.03×73°.10E±0°.06, h10^{km}±1^{km}, mb4.4/28, Error ellipse: s-maj=9.2km s-min=4.1km az=66.0*

ISC 10 00:01:27.4±1.1, 38°.67N±0°.03×73°.18E±0°.02, h7^{km}±7^{km}, n270, σ2^{s}.22/295, mb4.5/47, MS3.5/7, 53C-36D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.35	307		Pn	00 01 51.7	-1.2
DRK				Sn	Sb	00 02 09.3	-1.5
DRK	Karamyk	1.35	307	⇑eP	Pn	00 01 51.8	-1.2
	baz=4.0						
DRK				⇑iS	Sb	00 02 08.9	-1.8
	baz=4.0						
SFK	Sufi-Kurgan	1.37	10	⇓eP	Pn	00 01 52.7	-0.5
	baz=15						
SFK				⇓eS	Sb	00 02 10.5	-0.8
	baz=15						
OHH	Osh	1.88	351	⇑eP	Pb	00 02 01.3	-0.8
	baz=52						
OHH				⇑eS	Sb	00 02 24.8	-1.1
	baz=52						
GAR	Garm	2.26	279	Pn	Pb	00 02 09.1	+0.5
GAR	Garm	2.26	279	⇑iP	Pb	00 02 08.4	-0.3
	baz=76						
GAR				⇑iS	Sb	00 02 37.5	+0.6
	baz=76						
BTK	Batken	2.30	308	PN	Pb	00 02 08.6	-0.7
BTK	Batken	2.30	308	Pn	Pb	00 02 08.6	-0.7

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BTK   Batken             2.30 308⇓eP    Pb     00 02 08.3  -1.0
        baz=6.0
BTK                          ⇓iS    Sb     00 02 37.0  -0.9
        baz=6.0
KSH   Kashi              2.33  68  Pn    Pn     00 02 02.5  -3.8
KSH                             Sn    Sn     00 02 30.6  -4.7
KSH                             smax  smax
        comp=N,3µm,0.7s
KSH                             smax  smax
        comp=E,1µm,0.7s
TRKS  Terek-Say          3.26 332⇑eP    Pn     00 02 20.3  +1.2
        baz=32
TRKS                         ⇑iS    Sn     00 02 57.8  -0.5
        baz=32
AML   Almayashu          3.48   6  P     Pn     00 02 25.7  +3.4
        SNR=96
AML   Almayashu          3.48   6⇑eP    Pn     00 02 25.1  +2.7
        baz=8.0
AML                          ⇑iS    Sn     00 03 05.8  +1.7
        baz=8.0
UCH   Uchtor             3.70  16  P     Pn     00 02 29.1  +3.6
        SNR=100
UCH   Uchtor             3.70  16⇓eP    Pn     00 02 28.1  +2.7
        baz=17
UCH                          ⇓iS    Sn     00 03 11.4  +1.9
        baz=17
TAS   Tashkent           3.99 313  PN    Pn     00 02 31.3  +2.2
TAS   Tashkent           3.99 313  Pn    Pn     00 02 31.3  +2.2
TAS   Tashkent           3.99 313⇑eP    Pn     00 02 31.6  +2.5
        baz=12
TAS                          ⇑iS    Sn     00 03 17.5  +1.3
        baz=12
EKS2  Erkin-Say          4.01   6  P     Pn     00 02 33.3  +3.9
        SNR=28
MRKS  Merke              4.07   0 eP     Pb     00 02 37.4  -2.1
        80nm,0.2s
MRKS                            eS     Sg     00 03 33.9  -4.3
        132nm,0.4s
MRKS  Merke              4.07   0  Pg    Pb     00 02 42.9  +3.4
        193nm,0.6s
MRKS                            Lg    Lg     00 03 40.5
        178nm,0.8s
AAK   Ala-Archa          4.09  14  Pn    Pn     00 02 34.5  +3.9
        15nm,0.3s,baz=183,slow=6.1,SNR=122
AAK                             Sn    Sb     00 03 26.8  -2.7
        6.5nm,0.3s,baz=344,slow=18,SNR=6.3
AAK                             LR    LR     00 04 22.6
        comp=Z,643nm,21.3s,baz=213,slow=42
AAK   Ala-Archa          4.09  14  P     Pn     00 02 34.6  +4.1
        SNR=7.0
AAK   Ala-Archa          4.09  14cePN   Pn     00 02 34.3  +3.7
AAK                             pmax  pmax
        comp=Z,482nm,1.0s
AAK   Ala-Archa          4.09  14 ⇑Pn   Pn     00 02 34.2  +3.7
        comp=Z,167nm,0.7s
AAK                          ⇑Lg    Lg     00 03 38.6
        comp=Z,321nm,0.8s
AAK   Ala-Archa          4.09  14  Pn    Pn     00 02 33.7  +3.2
AAK   Ala-Archa          4.09  14 eP     Pn     00 02 33.3  +2.8
        baz=15
AAK                          i S    Sn     00 03 20.3  +1.6
        baz=15
KBK   Karagaybulak       4.20  18  P     Pn     00 02 36.1  +4.0
        SNR=26
IUG   Iuzhnay            4.22 326 eP     Pb     00 02 45.0  +2.8
        comp=Z,4µm,0.0s
IUG                             eS     Sg     00 03 47.0  +3.9
        comp=Z,460nm,0.3s
IUG   Iuzhnay            4.22 326 ePb    Pb     00 02 39.7  -2.5
        baz=327
IUG   Iuzhnay            4.22 326 ePN    Pb     00 02 39.6  -2.5
IUG   Iuzhnay            4.22 326  Pg    Pg     00 02 48.4  +0.1
        comp=Z,13µm,0.6s
IUG                             Lg    Lg     00 03 50.1
        comp=Z,1µm,1.1s
FRU1  Bishkek            4.28  14  PN    Pn     00 02 36.0  +2.9
FRU1  Bishkek            4.28  14        Pn     00 02 36.0  +2.9
BOOM  Boomskoye usch     4.36  28  PN    Pn     00 02 37.1  +2.9
BOOM  Boomskoye usch     4.36  28  Pn    Pn     00 02 37.1  +2.9
DZA   Taraz              4.45 342 eP     Pb     00 02 46.7  +0.8
        comp=Z,261nm,0.6s
DZA                             eS     Sg     00 03 50.0  -0.2
        comp=Z,695nm,0.7s
DZA   Taraz              4.45 342 ePg    Pb     00 02 45.4  -0.5
        baz=343
DZA   Taraz              4.45 342 ePN    Pb     00 02 45.3  -0.5
DZA   Taraz              4.45 342  Pg    Pb     00 02 48.1  +2.2
        comp=Z,261nm,0.6s
DZA                             Lg    Lg     00 03 50.0
        comp=Z,695nm,0.7s
CHMS  Chumysh            4.49  15  P     Pn     00 02 39.7  +3.8
        SNR=9.5
KDJ   Kajisay            4.61  40  PN    Pn     00 02 41.0  +3.2
KDJ   Kajisay            4.61  40        Pn     00 02 41.0  +3.2
TKM2  Tokmak 2           4.63  23  P     Pn     00 02 41.5  +3.5
        SNR=16
TKM2  Tokmak 2           4.63  23 i PN   Pn     00 02 40.8  +2.8
TKM2                            pmax  pmax
        comp=Z,31nm,1.0s
TKM2  Tokmak 2           4.63  23 ⇑Pn   Pn     00 02 40.8  +2.8
        comp=Z,31nm,1.0s
TKM2                          ⇑Pg    Pb     00 02 49.9  +0.8
        comp=Z,67nm,0.7s
TKM2                          ⇓Lg    Lg     00 03 53.6
        comp=Z,238nm,1.1s
TARG  Taragay, Kyrgy     4.68  48        Pn     00 02 42.4  +3.5
USP   Ospenovka          4.70  12  P     Pn     00 02 42.8  +4.0
        SNR=6.4
KST   Kastek             4.85  25 eP     Pb     00 02 50.5  -2.3
        comp=Z,37nm,0.2s
KST                             eS     Sb     00 03 56.4  +5.0
        comp=Z,116nm,0.5s
KST   Kastek             4.85  25  Pg    Pb     00 02 55.1  +2.2
        comp=Z,71nm,0.7s
KST                             Lg    Lg     00 04 01.9
        comp=Z,116nm,1.2s
KK02  Karatay Array      4.87 336 ⇑Pn   Pn     00 02 44.2  +3.1
        comp=Z,48nm,0.6s
KK02                          ⇓Sn    Sn     00 03 43.3  +5.6
        comp=Z,284nm,0.8s
KK02                          ⇓Lg    Lg     00 04 05.3
        comp=Z,144nm,0.7s
KK31  Karatay Array      4.87 336  PN    Pn     00 02 44.1  +3.0
KK31                                          00 03 43.3
KKAR  Karatay Array      4.87 336  PN    Pn     00 02 43.4  +2.3
KKAR  Karatay Array      4.87 336  Pn    Pn     00 02 43.4  +2.3
SGDS  Sogindy            4.90  12 ePn    Pn     00 02 41.9  +0.3
        baz=14
SGDS                            ePg    Pb     00 02 57.5  +3.8
        baz=14
SGDS  Sogindy            4.90  12  Pg    Pb     00 02 54.7  +1.0
        comp=Z,60nm,0.9s
SGDS                            Lg    Lg     00 04 01.2
        comp=Z,94nm,0.8s
CEP   Cherat             4.94 192  P     Pn     00 02 46.8  +4.5
DGS   Degeres            4.97  22 eP     Pb     00 02 55.8  +0.9
        comp=Z,38nm,0.3s
DGS                             eS     Sg     00 04 05.2  -1.9
        comp=Z,165nm,0.4s
DGS   Degeres            4.97  22  Pg    Pb     00 02 56.9  +2.0
        comp=Z,135nm,0.6s
DGS                             Lg    Lg     00 04 05.2
        comp=Z,212nm,0.5s
CHCP  Chirah Chowk       5.00 179  P     Pn     00 02 48.0  +5.1
NIL   Nilore             5.01 179  PN    Pn     00 02 48.3  +5.2
NIL   Nilore             5.01 179  Pn    Pn     00 02 48.3  +5.2
BRLS  Borolday           5.04 331 eP     Pb     00 02 57.2  +1.2
        comp=Z,36nm,0.5s
BRLS                            eS     Sg     00 04 07.6  -1.6
        comp=Z,122nm,0.6s
BRLS  Borolday           5.04 331  Pg    Pb     00 02 58.6  +2.6
        comp=Z,36nm,0.5s
BRLS                            Lg    Lg     00 04 07.6
        comp=Z,122nm,0.6s
MTBS  Maitube            5.09  28 eP     Pb     00 02 57.6  +0.8
        comp=Z,40nm,0.1s
MTBS                            eS     Sg     00 04 08.8  -2.1
        comp=Z,91nm,0.3s
MTBS  Maitube            5.09  28  Pg    Pb     00 03 00.0  +3.2
        comp=Z,74nm,1.0s
MTBS                            Lg    Lg     00 04 10.1
        comp=Z,165nm,1.1s
TNSS  Tian-Shan          5.21  32 eP     Pb     00 02 58.6  -0.6
        comp=Z,19nm,0.2s
TNSS                            eS     Sg     00 04 10.5  -4.4
        comp=Z,24nm,0.4s
TNSS  Tian-Shan          5.21  32 ePn    Pn     00 02 46.7  +0.5
        baz=34
TNSS                            ePg    Pb     00 03 03.3  +4.1
        baz=34
TNSS  Tian-Shan          5.21  32  Pg    Pb     00 03 01.2  +2.0
        comp=Z,42nm,0.6s
TNSS                            Lg    Lg     00 04 12.6
        comp=Z,34nm,0.9s
KBL   Kabul              5.29 220  PN    Pn     00 02 51.7  +4.5
KBL   Kabul              5.29 220  Pn    Pn     00 02 51.6  +4.5
AAA   Alma-Ata           5.34  31 ePn    Pn     00 02 48.3  +0.5
        baz=32
AAA                             ePg    Pb     00 03 05.7  +4.5
        baz=32
AAA   Alma-Ata           5.34  31 ePN    Pn     00 02 48.2  +0.5
AAA                             e             00 03 05.6
MDOK  Medeo              5.36  32 ePn    Pn     00 02 48.6  +0.5
        baz=33
MDOK                            ePg    Pb     00 03 05.4  +3.9
        baz=33
MDOK  Medeo              5.36  32 ePN    Pn     00 02 48.5  +0.5
MDOK                            e             00 03 05.4
MDOK  Medeo              5.36  32 ⇑Pg   Pb     00 03 05.8  +4.3
        comp=Z,61nm,0.7s
MDOK                          ⇓Lg    Lg     00 04 17.4
        comp=Z,358nm,1.3s
KRBS  Karabastau         5.36  20 eP     Pb     00 03 01.3  -0.2
        comp=Z,20nm,0.2s
KRBS                            eS     Sg     00 04 15.0  -4.6
        comp=Z,59nm,0.5s
KRBS  Karabastau         5.36  20  Pg    Pb     00 03 02.6  +1.1
        comp=Z,50nm,0.5s
KRBS                            Lg    Lg     00 04 14.7
        comp=Z,107nm,0.9s
KNDC  Almaty             5.37  31 ⇑Pg   Pb     00 03 06.6  +5.0
        comp=Z,168nm,0.9s
KNDC                          ⇑Lg    Lg     00 04 18.1
        comp=Z,719nm,1.2s
PRZ   Przheval'sk        5.50  45  PN    Pn     00 02 52.4  +2.4
PRZ   Przheval'sk        5.50  45  Pn    Pn     00 02 52.4  +2.4
KTBS  Karatobe           5.69  27 eP     Pb     00 03 08.7  +1.6
        comp=Z,25nm,0.1s
KTBS                            eS     Sg     00 04 27.4  -2.6
        comp=Z,106nm,0.2s
KTBS  Karatobe           5.69  27  Pg    Pb     00 03 09.9  +2.9
        comp=Z,46nm,0.7s
KTBS                            Lg    Lg     00 04 27.4
        comp=Z,172nm,0.7s
KUU   Kurty              5.74  23 ePn    Pn     00 02 52.9  -0.1
        baz=25
KUU                             ePg    Pb     00 03 12.0  +4.2
        baz=25
KUU   Kurty              5.74  23 ePN    Pn     00 02 52.9  -0.1
KUU                             e             00 03 12.0
SATY  Saty               5.91  40 ePg    Pb     00 03 15.4  +4.6
        baz=42
THW   Thamme Wali        5.98 192  P     Pn     00 02 59.7  +3.3
UZB   Uzynbulak          6.29  43 ePn    Pn     00 03 01.6  +0.8
        comp=Z,5.2nm,0.9s,baz=44
UZB   Uzynbulak          6.29  43 ePN    Pn     00 03 01.6  +0.8
UZB                             pmax  pmax
        comp=Z,5.0nm,0.9s
BTLS  Baital             6.40   6 ePn    Pn     00 03 01.5  -0.6
        baz=6.5
BTLS                            ePg    Pb     00 03 24.1  +5.0
        baz=6.5
BTLS  Baital             6.40   6 ePN    Pn     00 03 01.5  -0.6
BTLS                            e             00 03 24.1
PDGK  Podgornoye         6.67  44  PN    Pn     00 03 08.6  +2.7
PDGK                                          00 03 29.6
PDGK  Podgornoye         6.67  44 ⇓Pn   Pn     00 03 08.7  +2.7
        comp=Z,13nm,0.7s
PDGK                          ⇑Pg    Pb     00 03 29.7  +6.0
        comp=Z,47nm,0.9s
PDGK                          ⇑Lg    Lg     00 04 57.8
        comp=Z,91nm,1.1s
SARP  Sargodha           6.74 184  P     Pn     00 03 09.5  +2.6
DHRM  DHARAMSHALA        6.89 157 eP     Pn     00 03 11.0  +1.9
DHRM                            eS     Sn     00 04 28.2  +0.4
DHRM                            IAML          00 04 43.4
        comp=E,169nm,0.4s
DHRM                            IAML          00 04 43.8
        comp=N,145nm,0.6s
TDK   Taldyqorghan       7.43  30 ePn    Pn     00 03 15.8  -0.5
        comp=N,2.0nm,0.5s,baz=31
TDK   Taldyqorghan       7.43  30 eP     Pn     00 03 15.8  -0.5
TDK                             pmax  pmax
        comp=Z,2.0nm,0.5s
SMLA  Simla              8.20 155 eP     Pn     00 03 28.8  +1.9
SMLA                            eS     Sn     00 04 56.5  -3.3
SMLA                            IAML          00 05 02.0
        comp=N,94nm,0.4s
SMLA                            IAML          00 05 02.5
        comp=E,97nm,0.4s
OTUK  Ortayu             9.59 357  P     Pn     00 03 47.3  +1.4
OTUK  Ortayu             9.59 357 ⇑Pn   Pn     00 03 47.3  +1.4
        comp=E,11nm,0.8s
OTUK                          ⇓Lg    Lg     00 06 29.7
        comp=E,72nm,1.0s
HRA   Herat              9.78 247  Pn    Pn     00 03 51.2  +2.5
MAKZ  Makanchi          10.39  36  P     Pn     00 04 00.4  +3.6
MAKZ  Makanchi          10.39  36 ⇑Pn   Pn     00 03 59.2  +2.4
        comp=E,6.0nm,0.6s
MAKZ                          ⇑Lg    Lg     00 07 00.9
        comp=E,12nm,1.0s
MAKZ  Makanchi          10.39  36  Pn    Pn     00 04 00.4  +3.6
MK31  Makanchi Array    10.52  37ceP     Pn     00 04 01.7  +3.1
MK31  Makanchi Array    10.52  37 ⇑Pn   Pn     00 04 01.8  +3.1
        comp=E,9.2nm,0.7s,baz=203,slow=15,SNR=99
MK31                          ⇑Lg    Lg     00 07 01.4
        comp=E,29nm,1.3s
MK31  Makanchi Array    10.52  37  Pn    Pn     00 04 01.2  +2.5
MKAR  Makanchi Array    10.52  37  Pn    Pn     00 04 01.6  +3.0
        comp=E,0.6nm,0.3s,baz=217,slow=12,SNR=91
MKAR                            Lg    Lg     00 06 58.5
        comp=E,0.1nm,0.3s,baz=262,slow=18,SNR=1.4
MKAR  Makanchi Array    10.52  37  P     Pn     00 04 01.5  +2.8
MKAR  Makanchi Array    10.52  37  Pn    Pn     00 04 01.4  +2.8
GEYT  Alibeck           11.86 271  Pn    Pn     00 04 16.8  -0.2
        comp=E,0.6nm,0.3s,baz=105,slow=11,SNR=4.8
GEYT                            Sn    Sn     00 06 29.6   0.0
        comp=E,0.5nm,0.3s,baz=290,slow=43,SNR=2.5
GYA0B ALIBECK ARRAY     11.86 271  Pn    Pn     00 04 16.6  -0.4
WMQ   Urumqi            12.07  60 eP     Pn     00 04 21.1  +1.2
WMQ                             pP            00 04 27.6
WMQ                             sP            00 04 32.2
WMQ                             pmax  pmax
        comp=E,16nm,0.9s
ZSN   Zaisan            12.24  40 ePn    Pn     00 04 22.4  +0.3
        comp=E,3.1nm,1.2s,baz=41
ZSN                             ePg           00 05 10.8
        baz=41
ZSN   Zaisan            12.24  40 eP     Pn     00 04 22.4  +0.3
ZSN                             pmax  pmax
        comp=Z,3.0nm,1.2s
KURBB Kurchatov Arra    12.54  16  Pn    Pn     00 04 26.0  -0.1
        comp=Z,0.2nm,0.3s,baz=204,slow=12,SNR=17
KURBB                           Lg    Lg     00 08 02.5
        comp=Z,0.1nm,0.3s,baz=202,slow=30,SNR=9.6
KURBB Kurchatov Arra    12.54  16  P     Pn     00 04 25.6  -0.6
KURBB Kurchatov Arra    12.54  16 ⇑Pn   Pn     00 04 25.6  -0.6
        comp=Z,6.6nm,0.7s
KURBB                         ⇓Lg    Lg     00 08 02.5
        comp=Z,78nm,1.1s
KURK  Kurchatov         12.65  16⇑eP     Pn     00 04 26.9  -0.7
KURK  Kurchatov         12.65  16 ⇑Pn   Pn     00 04 27.1  -0.5
        comp=Z,5.6nm,0.7s
KURK                          ⇑Lg    Lg     00 08 08.2
        comp=Z,43nm,1.0s
KURK  Kurchatov         12.65  16  Pn    Pn     00 04 27.2  -0.5
SEM   Semipalatinsk     12.77  21 ePn    Pn     00 04 29.8  +0.3
        comp=Z,1.9nm,0.8s,baz=21
SEM   Semipalatinsk     12.77  21 eP     Pn     00 04 29.7  +0.3
SEM                             pmax  pmax
        comp=Z,2.0nm,0.8s
PYUN  Piuthan           13.34 139 eP     Pn     00 04 33.5  -3.9
        comp=Z,64nm,0.7s
DANN  Dangsing          13.55 136 eP     Pn     00 04 35.4  -4.9
KOLN  Koldanda          13.92 138 eP     Pn     00 04 40.7  -4.7
AB31  Akbulak array     14.22 322 eP     Pn     00 04 47.0  -2.1
AB31  Akbulak array     14.22 322 ⇑Pn   Pn     00 04 50.7  +1.6
        comp=Z,4.3nm,0.5s,baz=129,slow=12,SNR=141
AB31                          ⇑Sn    Sn     00 07 28.5  +1.4
        comp=Z,9.6nm,0.7s,baz=132,slow=26,SNR=6.8
ABKAR Akbulak array     14.22 322  Pn    Pn     00 04 47.2  -1.9
ABKAR Akbulak array     14.22 322  Pn    Pn     00 04 47.1  -2.1
GKN   Gorkha            14.30 135 eP     Pn     00 04 45.1  -5.4
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BVAR  Borovoye Array    14.49 353  Pn    Pn     00 04 51.5  -1.4
        comp=Z,0.5nm,0.3s,baz=238,slow=47,SNR=6.2
BVAR                            Lg    Lg     00 09 02.4
        comp=Z,0.2nm,0.3s,baz=166,slow=32,SNR=3.6
BRVK  Borovoye          14.53 353⇓eP     Pn     00 04 50.7  -2.7
BRVK                            pmax  pmax
        comp=Z,8.0nm,1.7s
BRVK  Borovoye          14.53 353  Pn    Pn     00 04 53.7  +0.3
KKN   Kakani            14.82 133 eP     Pn     00 04 51.8  -5.9
        comp=Z,16nm,0.6s
DGZ   Jazzator, Alta    15.01  38ceP     Pn     00 05 01.3  +1.3
DGZ                             pmax  pmax
        comp=Z,7.0nm,0.6s
PKIN  Phulchoki         15.05 134 eP     Pn     00 04 55.1  -5.7
PKI   Pulchoki          15.06 134 eP     Pn     00 04 54.8  -6.2
        comp=Z,22nm,0.7s
BHPL  Bhopal            15.80 166 eP     Pn     00 05 07.8  -2.7
BHPL                            IAmb  IAmb   00 05 11.3
        comp=Z,5.5nm,0.5s
BHPL                            eS     Sn     00 07 59.4  -6.5
AKTO  Aktyubinsk        15.94 322  Pn    Pn     00 05 11.5  -0.5
        comp=Z,0.8nm,0.3s,baz=118,slow=12,SNR=14
AKTO                            Sn    Sn     00 08 02.2  -6.7
        comp=Z,0.2nm,0.3s,baz=46,slow=9.7,SNR=6.1
AKTO  Aktyubinsk        15.94 322 ⇓Pn   P      00 05 16.4  +0.7
        comp=Z,28nm,0.8s
AKTO                          ⇓Sn    Sn     00 08 12.6  +3.7
        comp=Z,12nm,1.0s
RAMN  Ramite            16.22 132 eP     Pn     00 05 10.2  -5.9
        comp=Z,13nm,0.6s
TAPN  Taplejung         16.59 129 eP     Pn     00 05 14.9  -5.9
        comp=Z,6.9nm,0.5s
ODAN  Odare             16.75 130 eP     Pn     00 05 17.4  -5.4
        comp=Z,12nm,0.7s
ZAA0  Zalesovo Array    17.23  24  Pn    Pn     00 05 28.1  -0.3
ZALV  Zalesovo Beam     17.23  24  P     Pn     00 05 28.8  +0.3
        comp=Z,1.3nm,0.3s,baz=216,slow=10,SNR=16
ZALV                            LR    LR     00 12 16.0
        comp=Z,182nm,18.7s,baz=39,slow=38
ZALV  Zalesovo Beam     17.23  24  Pn    Pn     00 05 27.9  -0.5
LKRN  Lenkeran, Azer    19.04 278  P     P      00 05 50.1  +0.1
UOSS  Minazif           19.84 231  P     P      00 06 00.1  +1.2
UOSS                            IAmb  IAmb   00 06 02.5
        comp=Z,20nm,1.2s
SVE   Sverdlovsk        19.97 340 eP     P      00 06 00.9  +0.8
SVE                             eS     S      00 09 42.3  -2.5
SEKA  Sheki             20.06 286  P     Pn     00 06 02.4  -0.6
MNGR  Mingechevir, A    20.16 284  P     P      00 06 03.1  +0.8
ARU   Arti              20.25 336  P     P      00 06 03.8  +0.8
        comp=Z,2.1nm,0.6s,baz=158,slow=6.9,SNR=16
ARU   Arti              20.25 336d iP    Pn     00 06 04.6  -0.4
ARU                                           00 06 18.4
ARU                             S     Sn     00 09 54.2  +1.2
ARU                             SS    SnSn   00 10 09.8  +2.3
ARU                             pmax  pmax
        comp=Z,10.0nm,0.9s
ARU   Arti              20.25 336  P     P      00 06 03.5  +0.4
SHL   Shillong          20.48 124  P     P      00 06 06.3  +0.3
SHL                             pmax  pmax
        comp=Z,19nm,1.4s
SHL   Shillong          20.48 124  P     P      00 06 06.3  +0.3
GTA   Gaotai            20.68  80 ⇓P    Pn     00 06 10.4   0.0
GTA                             pP    sP     00 06 15.7  +3.1
GTA                             sP    pP     00 06 19.5  +8.3
GTA                             pmax  pmax
        comp=Z,6.0nm,0.8s
GANJ  Ganja             20.75 284  P     P      00 06 08.9  +0.2
GROC  Groznyy           21.14 291 eP     P      00 06 10.4  -2.4
GROC                            e             00 06 29.6
GROC                            pmax  pmax
        comp=Z,8.0nm,0.6s
NAX   Nakhchivan        21.52 280  P     P      00 06 17.4  +0.3
HYB   Hyderabad         21.69 166 i P    P      00 06 21.5  +2.6
GNI   Garni             21.99 283  P     P      00 06 26.2  +4.0
        comp=Z,17nm,0.9s,baz=98,slow=1.2,SNR=10.0
GNI   Garni             21.99 283  P     P      00 06 21.9  -0.3
GNI                             pmax  pmax
        comp=Z,28nm,1.0s
GNI   Garni             21.99 283  P     P      00 06 21.9  -0.3
BELG  Belogornoye       22.41 316  P     P      00 06 26.1  -0.3
        comp=Z,49nm,0.7s,baz=20,slow=0.9,SNR=19
BELG  Belogornoye       22.41 316ceP     P      00 06 25.9  -0.4
BELG                            pmax  pmax
        comp=Z,8.0nm,0.7s
NCK   Nalchik           22.75 292⇑eP     P      00 06 29.7  -0.5
NCK                             pmax  pmax
        comp=Z,5.0nm,0.6s
ONI   Oni               22.84 289  P     P      00 06 31.7  +0.5
ONI                             pmax  pmax
        comp=Z,9.0nm,0.6s
ONI   Oni               22.84 289  P     P      00 06 31.7  +0.5
ONI                             IAmb  IAmb   00 06 39.8
        comp=Z,9.4nm,0.6s
KBZ   Khabaz            23.27 292  P     P      00 06 38.8  +3.4
        comp=Z,1.6nm,0.7s,baz=188,slow=18,SNR=2.2
KIV   Kislovodsk        23.43 293 eP     P      00 06 35.0  -2.2
KIV                             pmax  pmax
        comp=Z,5.0nm,1.0s
KIV                             MLR   MLR
        comp=Z,48nm,14.0s
KIV   Kislovodsk        23.43 293  P     P      00 06 37.8  +0.5
KIV                             IAmb  IAmb   00 07 00.9
        comp=Z,8.9nm,0.8s
ZAK   Zakamensk         24.27  51 eP     P      00 06 46.0  +0.7
ZAK                             pmax  pmax
        comp=Z,10.0nm,0.9s
LZH   Lanzhou           24.45  86 eP     P      00 06 47.3  +0.2
LZH                             sP    pP     00 06 51.9  +1.5
LZH                             pmax  pmax
        comp=Z,16nm,1.0s
KIRV  Kirov             25.13 330  P     P      00 06 53.5  +0.7
        comp=Z,12nm,0.5s,baz=139,slow=4.5,SNR=8.3
KIRV  Kirov             25.13 330ceP     P      00 06 52.9  +0.1
SOC   Sochi             25.57 292 eP     P      00 06 54.7  -2.3
SOC                             e             00 07 28.7
SOC                             ePPP   PPP    00 07 42.9
SOC                             eS     S      00 11 22.4  -2.6
SOC                             eSSS   SSS    00 12 29.8
SOC                             MLR   MLR
        comp=Z,124nm,17.0s
SONM  Songino Array     25.70  58  P     P      00 06 59.4  +1.1
        comp=Z,7.9nm,0.8s,baz=262,slow=7.8,SNR=27
SONM                            LR    LR     00 18 08.4
        comp=Z,133nm,19.8s,baz=248,slow=39
SONM  Songino Array     25.70  58 eP     P      00 06 59.9  +1.6
SONM                            pmax  pmax
        comp=Z,9.0nm,0.9s
SONM  Songino Array     25.70  58  P     P      00 06 59.1  +0.8
ULN   Ulaanbaatar       26.14  58deP     P      00 07 03.8  +1.5
ULN                             pmax  pmax
        comp=Z,8.0nm,0.8s
ULN   Ulaanbaatar       26.14  58  P     P      00 07 03.6  +1.3
ULN                             IAmb  IAmb   00 07 04.9
        comp=Z,9.2nm,1.0s
RAYN  Ar Rayn           27.96 245  P     P      00 07 19.8  +1.1
RAYN                            pmax  pmax
        comp=Z,2.0nm,0.9s
RAYN  Ar Rayn           27.96 245  P     P      00 07 19.8  +1.1
PRGR  Permogore         28.58 332 eP     P      00 07 23.3  -0.5
PRGR                            pmax  pmax
        comp=Z,29nm,1.4s
HHC   Hu-ho-hao-te      29.43  73 eP     P      00 07 35.9  +4.1
HHC                             pmax  pmax
        comp=Z,7.0nm,0.9s
HHC                             pmax  pmax
        comp=Z,78nm,8.7s
OBN   Obninsk           29.50 316  P     P      00 07 32.4  +0.4
        comp=Z,1.5nm,0.5s,baz=349,slow=13,SNR=3.0
OBN   Obninsk           29.50 316⇓eP     P      00 07 32.3  +0.3
OBN                             eSS    SS     00 14 20.5  -11
OBN                             pmax  pmax
        comp=Z,21nm,1.7s
OBN                             MLR   MLR
        comp=Z,123nm,16.0s
KLMR  Klimovskoe        30.51 328 eP     P      00 07 40.2  -0.7
KLMR                            pmax  pmax
        comp=Z,11nm,1.1s
KLMR  Klimovskoe        30.51 328 eP     P      00 07 40.2  -0.7
KLMR                            AMP           00 07 44.5
        comp=Z,11nm,1.1s
NRIK  Noril'sk          31.69  10  P     P      00 07 50.7  -0.5
        comp=Z,5.4nm,1.0s,baz=197,slow=5.3,SNR=9.9
NRIK  Noril'sk          31.69  10⇓eP     P      00 07 52.0  +0.8
NRIK                            pmax  pmax
        comp=Z,8.0nm,1.0s
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NRIK  Noril'sk          31.69  10    P      P      00 07 51.5 +0.3
NRIK                                 IAmb   IAmb   00 07 52.7
      comp=Z,7.4nm,1.1s
BOD   Bodaibo           32.58  41   eP      P      00 07 59.8 +0.7
BOD                                  pmax   pmax
      comp=Z,12nm,1.3s
AKASG Malin Array Be    33.01 306    P      P      00 08 03.5 +0.5
      comp=Z,0.3nm,0.3s,baz=77,slow=7.9,SNR=4.9
AKBB  Malin Array Si    33.01 306⇓ eP      P      00 08 03.2 +0.2
AKBB                                 pmax   pmax
      comp=Z,16nm,1.8s
SORM  Soroca            33.50 301 ⇑P       P      00 08 07.5 +0.2
SORM  Soroca            33.50 301 ⇑P       P      00 08 07.5 +0.2
CFR   Carcaliu          33.79 296 ⇓P       P      00 08 15.7 +5.9
CFR   Carcaliu          33.79 296 ⇓P       P      00 08 15.7 +5.9
MNK   Minsk             34.25 313 i P      P      00 08 13.6  -0.1
MNK                               i               00 09 27.0
MNK                               i               00 10 50.7
MNK                               i S      S      00 13 39.8  -0.9
MNK                               i SS     SnSn   00 15 48.7  -0.2
MNK                               i               00 18 37.8
MNK                                  pmax   pmax
      comp=N,14nm,1.0s
MNK                                  pmax   pmax
      comp=Z,8.0nm,1.2s
MNK                                  pmax   pmax
      comp=E,1.0nm,1.3s
MNK                                  MLR    MLR
      comp=Z,46nm,8.0s
MNK                                  MLR    MLR
      comp=N,70nm,7.0s
MNK                                  MLR    MLR
      comp=E,20nm,14.0s
MNK   Minsk             34.25 313 i P      P      00 08 13.6  -0.1
      comp=E,1.0nm,1.3s
MNK                               i P      P      00 08 13.6  -0.1
      comp=N,14nm,1.0s
MNK                               i P      P      00 08 13.6  -0.1
      comp=Z,8.0nm,1.2s,baz=279
MNK                               i PP     PnPn   00 09 27.1  -0.5
MNK                               i PPP    PPP    00 09 38.5
MNK                               i PcP    PcP    00 10 50.8 +0.7
MNK                               i S      S      00 13 39.8  -0.8
MNK                               i SS     SnSn   00 15 48.7  -0.2
MNK                               i SSS    SSS    00 16 04.5
MNK                               i LR     LR     00 21 34.0
MNK                               i LRM    MLR    00 23 24.8
      comp=N,70nm,7.1s
MNK                               i LRM    MLR    00 23 24.8
      comp=Z,46nm,8.3s
MNK                               i LRM    MLR    00 23 32.0
      comp=E,20nm,13.8s
ODBI  Odobesti          34.50 297 ⇓P       P      00 08 19.3 +3.3
VRI   Vrincioaia        34.72 297 ⇓P       P      00 08 29.9  +12
VRI   Vrincioaia        34.72 297 ⇓P       P      00 08 29.9  +12
TESR  Tescani           34.72 298 ⇑P       P      00 08 19.2 +1.2
PLOR  Plostina          34.77 297 ⇑P       P      00 08 20.6 +2.2
PLOR  Plostina          34.77 297 ⇑P       P      00 08 20.6 +2.2
COVR  Voineasa-Covas    35.08 297 ⇓P       P      00 08 23.2 +2.0
MLR   Muntele Rosu      35.30 297 ⇑P       P      00 08 30.9 +7.8
MLR   Muntele Rosu      35.30 297 ⇑P       P      00 08 30.9 +7.8
MLR   Muntele Rosu      35.30 297  P       P      00 08 24.7 +1.6
MLR                                  IAmb   IAmb   00 08 31.3
      comp=Z,7.6nm,1.0s
BURAR Bucovina Array    35.62 300 ⇓P       P      00 08 28.9 +3.1
BURAR Bucovina Array    35.62 300 ⇓P       P      00 08 28.9 +3.1
BURAR Bucovina Array    35.62 300  P       P      00 08 26.7 +0.8
BUR08 Bucovina Ar. S    35.63 300  P       P      00 08 26.6 +0.7
BUR08                                IAmb   IAmb   00 08 52.4
      comp=Z,11nm,1.5s
DOPR  Dopca             35.64 298 ⇑P       P      00 08 27.9 +2.0
VOIR                    35.93 297 ⇓P       P      00 08 34.0 +5.5
VOIR                    35.93 297 ⇓P       P      00 08 34.0 +5.5
ARR   Arges             36.23 297 ⇓P       P      00 08 32.1 +1.1
ARCR  ARCALIA           36.25 300 ⇓P       P      00 08 33.3 +2.2
FIA1  FINESS Array S    36.70 324  P       P      00 08 34.9 +0.2
FINES FINESS Array B    36.70 324  P       P      00 08 34.7   0.0
      comp=Z,4.6nm,0.6s,baz=111,slow=10.0,SNR=21
FINES FINESS Array B    36.70 324 eP       P      00 08 35.1 +0.3
FINES                                pmax   pmax
      comp=Z,5.0nm,0.6s
FINES FINESS Array B    36.70 324  P       P      00 08 35.0 +0.3
LOT   Lotru             36.82 297 ⇑P       P      00 08 34.8  -1.3
TRPA  Tarpa             37.39 301 ⇑P       P      00 08 42.7 +2.0
GZR   Gura Zlata        37.52 297 ⇑P       P      00 08 47.2 +5.1
GZR   Gura Zlata        37.52 297 ⇑P       P      00 08 47.2 +5.2
FNA   Florina           39.42 290  P       P      00 08 58.8 +0.7
FNA                                  pmax   pmax
      comp=Z,7.0nm,1.2s
FNA   Florina           39.42 290  P       P      00 08 58.8 +0.7
DIVS  Divibare          39.70 295  P       P      00 08 59.8  -0.5
ARCES ARCESS Array B    39.84 336  P       P      00 09 00.7  -0.4
      comp=Z,4.0nm,0.6s,baz=104,slow=10,SNR=16
ARCES                                LR     LR     00 26 50.8
      comp=Z,241nm,18.3s,baz=260,slow=38
ARCES ARCESS Array B    39.84 336  P       P      00 09 01.2 +0.1
ARCES                                pmax   pmax
      comp=Z,5.0nm,1.1s
ARCES ARCESS Array B    39.84 336  P       P      00 09 01.2 +0.1
YAK   Yakutsk           41.20  37⇑eP       P      00 09 12.8 +0.5
YAK                                  pmax   pmax
      comp=Z,7.0nm,0.4s
KLR   Kul'dur           42.48  56deP       P      00 09 23.1   0.0
KLR                                  pmax   pmax
      comp=Z,8.0nm,1.8s
KSRS  Korea Array       42.57  74  P       P      00 09 24.5 +0.6
      comp=Z,0.6nm,0.4s,baz=208,slow=13,SNR=1.8
TIXI  Tiksi             43.11  23⇑eP       P      00 09 27.5  -0.4
TIXI                                 pmax   pmax
      comp=Z,4.0nm,0.7s
GERES GERESS Array B    43.13 304  P       P      00 09 28.4   0.0
      comp=Z,0.8nm,0.8s,baz=69,slow=7.3,SNR=6.6
GERES GERESS Array B    43.13 304 eP       P      00 09 29.9 +1.4
GERES                                pmax   pmax
      comp=Z,1.0nm,0.8s
GERES GERESS Array B    43.13 304  P       P      00 09 27.9  -0.6
KHC   Kasperske Hory    43.17 304⇓eP       P      00 09 30.1 +1.4
KHC                                  pmax   pmax
      comp=Z,49nm,2.8s
CLL   Collm             43.22 307 eP       P      00 09 29.0   0.0
NB2   NORSAR Subarra    43.73 322  P       P      00 09 32.7  -0.3
      comp=Z,2.1nm,0.6s,baz=89,slow=7.9
NOA   NORSAR Array B    43.73 322  P       P      00 09 33.0   0.0
      comp=Z,3.4nm,0.7s,baz=91,slow=7.9,SNR=9.7
NOA   NORSAR Array B    43.73 322  P       P      00 09 33.0   0.0
SENIN Lac Senin/Sane    47.90 302  P       P      00 10 06.3  -0.1
SENIN                                IAmb   IAmb   00 10 33.6
      comp=Z,3.3nm,0.8s
BNI   Bardonecchia      48.69 300  P       P      00 10 13.2 +0.8
BNI                                  pmax   pmax
      comp=Z,6.0nm,1.2s
BNI   Bardonecchia      48.69 300  P       P      00 10 13.2 +0.8
ESDC  Sonseca Array     57.99 297  P       P      00 11 21.0 +0.2
      comp=Z,0.5nm,0.7s,baz=55,slow=7.1,SNR=4.9
SUMG  Summit            59.58 341  P       P      00 11 32.2 +0.5
SUMG                                 pmax   pmax
      comp=Z,9.0nm,1.0s
SUMG  Summit            59.58 341 i P      P      00 11 32.0 +0.3
SUMG  Summit            59.58 341  P       P      00 11 32.2 +0.5
TORD  Torodi Ar. Bea    67.49 269  P       P      00 12 23.6  -0.8
      comp=Z,1.2nm,0.5s,baz=50,slow=5.6,SNR=14
IMAR  Indian Mountai    69.58  19  P       P      00 12 36.6  -0.1
BMAR  Burnt Mountain    70.42  15  P       P      00 12 42.7 +0.8
H24K  Noodor Dome       71.09  17  P       P      00 12 46.6 +0.6
H24K                                 IAmb   IAmb   00 12 59.4
      comp=Z,6.1nm,1.5s
KOWA  Kowa              71.17 274  P       P      00 12 47.2   0.0
KOWA                                 IAmb   IAmb   00 12 56.3
      comp=Z,1.7nm,0.5s
K20K  Telida            71.59  20  P       P      00 12 49.2 +0.2
K20K                                 IAmb   IAmb   00 12 50.0
      comp=Z,3.4nm,0.9s
MDM   Murphy Dome       71.75  17  P       P      00 12 49.9   0.0
MDM                                  IAmb   IAmb   00 13 02.6
      comp=Z,4.8nm,1.4s
ILAR  Eielson Array     72.22  17  P       P      00 12 52.1  -0.6
      comp=Z,1.2nm,0.7s,baz=321,slow=4.2,SNR=14
ILAR  Eielson Array     72.22  17  P       P      00 12 52.4  -0.3
ILAR  Eielson Array     72.22  17  P       P      00 12 52.4  -0.3
SCRK  Sand Creek        73.55  16  P       P      00 13 00.8   0.0
SCRK                                 IAmb   IAmb   00 13 09.3
      comp=Z,4.5nm,1.2s
SML   Sawmill           74.38  19  P       P      00 13 05.7 +0.1
BCAR  Beaver Creek A    74.82  16  P       P      00 13 08.8 +0.6
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YKA   Yellowknife Ar    78.99   4  P       P      00 13 31.8 +0.2
      comp=Z,1.5nm,0.5s,baz=349,slow=5.5,SNR=10
WRA   Warramunga Arr    81.70 124  P       P      00 13 45.9  -0.9
      comp=Z,1.3nm,0.7s,baz=275,slow=3.0,SNR=3.4
```

UPA ***10*** *00:03:13.3±0.9, 10°.09N×85°.75W, h0^{km}±17^{km}, MW5.0*
IDC ***10*** *00:03:14.8±0.7, 10°.56N×85°.21W, h0^{km}, mb4.4/11, mb1 4.6/12, mb1mx4.2/35, mbtmp4.4/12, ML4.1/1, MS3.4/3, Ms1 3.4/3, ms1mx3.0/32, Error ellipse: s-maj=36.2km s-min=14.6km az=49.0*
INET ***10*** *00:03:16.4, 9°.92N×85°.62W, h6^{km}, MW4.6*
UCR ***10*** *00:03:16.5±1.4, 9°.93N×85°.67W, h17^{km}±2^{km}, MW4.8, mb4.6(NEIC)*
NEIC ***10*** *00:03:17.3±1.6, 10°.02N±0°.05×85°.58W±0°.05, h22^{km}±4^{km}, mb4.6/92, ML4.7(UCR), Error ellipse: s-maj=8.4km s-min=5.6km az=224.0*
ISC 10 00:03:16.1±0.7, **9°.94N**±0°.03×**85°.65W**±0°.03, **h19**^{km}±2^{km}, **n212,** σ1^{s}.15/239, **mb4.6**/53, **19C-19D, Off coast of Costa Rica**

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Code  Station Name        Δ°   AZ°    Phase ID         Time       Res
                                     Op     ISC       h  m  s     ISC
GRZA  Playa Garza        0.03 163⇑eP      Pg      00 03 19.8 +0.3
GRZA                                eS      Sg      00 03 22.3 +0.6
SAJU  San Juanillo,      0.14 332⇓eP      Pg      00 03 20.5 +0.1
SAJU                                eS      Sg      00 03 23.7 +0.4
INDI  Punta indio, G     0.16 119⇑eP      Pg      00 03 21.2 +0.6
INDI                                eS      Sg      00 03 24.8 +1.1
DUNO  Dulce Nombre,      0.20  48⇓eP      Pg      00 03 21.4 +0.2
DUNO                                eS      Sg      00 03 25.3 +0.5
DUNO  Dulce Nombre,      0.20  48   Pg      Pg      00 03 21.4 +0.2
DUNO                                Sg      Sg      00 03 25.2 +0.5
NICO  Nicoya             0.27  46⇓eP      Pb      00 03 23.6 +1.3
NICO                                eS      Sg      00 03 28.4 +1.9
GUAI  GUAI               0.35  22⇓iP      Pg      00 03 23.8 +0.2
GUAI                                i S     Sb      00 03 29.6 +0.6
PLVR  Palo Verde         0.49  36⇓eP      Pb      00 03 26.3   0.0
CAO2  Cobano, Puntar     0.59 116   Pg      Pg      00 03 28.1 +0.2
CAO2                                Sg      Sg      00 03 37.2 +1.4
LAFE  Finca La Fe, P     0.74 101⇑eP      Pb      00 03 29.8  -0.5
JTS   Las Juntas de      0.76  63  eP      Pb      00 03 30.9 +0.1
JTS   Las Juntas de      0.76  63  eP      Pb      00 03 30.9 +0.1
JTS   Las Juntas de      0.76  63           Pb      00 03 30.8 +0.1
JTS                                         Sg      00 03 42.2 +0.9
JTS   Las Juntas de      0.76  63  eP      Pb      00 03 30.4  -0.4
JTS                                eS      Sn      00 03 42.6  -0.2
HZTE  Horizontes, Gu     0.77   4⇓eP      Pb      00 03 31.3 +0.5
HZTE  Horizontes, Gu     0.77   4           Pb      00 03 31.3 +0.5
HZTE                                        Sn      00 03 43.1 +0.2
COLC  Colonia            0.84  31⇓iP      Pb      00 03 32.2 +0.1
COLC                               i S     Sg      00 03 44.8 +1.1
LIM1  Limonal            0.84  27⇓iP      Pb      00 03 32.2 +0.1
GPS3  Bodega del ICE     0.85  19⇓iP      Pb      00 03 32.4 +0.1
CUI   Cuipilapa          0.85  34⇓eP      Pb      00 03 32.4 +0.1
GBS3  Finca Las Img      0.85  13⇓iP      Pb      00 03 32.3   0.0
GUAB  Guayabo de Bag     0.86  28⇓iP      Pb      00 03 32.4  -0.1
MICM  Guayabo            0.87  30 i P      Pb      00 03 33.1 +0.4
BUEV  Buena Vista        0.88  15⇓iP      Pb      00 03 32.7  -0.1
BUEV                               i S     Sn      00 03 46.1 +0.3
VRLE  La Escondida,      0.88  18⇓eP      Pb      00 03 32.9   0.0
HORNC Hornillas          0.89  31⇓iP      Pb      00 03 33.0   0.0
GB1A  Borinquen Arri     0.90  16⇓iP      Pb      00 03 33.1   0.0
ACAL  Aguas Claras       0.91  41⇓iP      Pb      00 03 33.5 +0.1
ACAL                               i S     Sn      00 03 47.4 +0.8
BUAI  Buenos Aires       0.98  18⇓iP      Pb      00 03 34.3  -0.1
PTEN  Parque Tenorio     1.00  40⇓iP      Pb      00 03 35.1 +0.2
VMAR  Armenia, Volca     1.00  31  eP      Pb      00 03 35.2 +0.3
JACO  JACO, Garabito     1.01 106⇑eP      Pb      00 03 34.3  -0.7
JACO  JACO, Garabito     1.01 106           Pb      00 03 34.4  -0.6
JACO                                Sn      Sg      00 03 49.8 +0.7
CASO  Castillo           1.02  61 i P      Pb      00 03 35.5 +0.3
ARE1  Arenal 1           1.05  61⇑eP      Pn      00 03 36.1 +0.3
CEDE  Laguna Cedeo       1.07  60⇑iP      Pg      00 03 36.9   0.0
FORC  Fortuna            1.09  62⇑iP      Pn      00 03 36.6 +0.2
SRA1  San Ramn           1.16  83⇑eP      Pn      00 03 37.2  -0.2
CRPO  Crater poas        1.42  80⇑eP      Pn      00 03 41.4 +0.2
COVE  Coope Vega, Sa     1.45  58⇑eP      Pn      00 03 41.2   0.0
COVE  Coope Vega, Sa     1.45  58           Pn      00 03 41.3   0.0
HDC   Heredia            1.51  88⇑eP      Pn      00 03 42.8 +0.5
HDC   Heredia            1.51  88           Pn      00 03 42.7 +0.5
HDC   Heredia            1.51  88  eP      Pn      00 03 42.9 +0.7
HDC                                eS      Sg      00 04 05.0   0.0
HDC3  Heredia 3          1.51  88  eP      Pn      00 03 42.8 +0.5
SJS   Escuela Geolog     1.57  90  eP      Pb      00 03 44.4  -0.2
LCR2  La Lucha 2         1.63  97⇑eP      Pn      00 03 44.0   0.0
OCM   Ochomogo           1.66  92⇑eP      Pn      00 03 44.4 +0.1
RIFO  Rio Frio, Sara     1.73  78⇑eP      Pn      00 03 46.2 +1.0
RIMA  Rio Macho          1.76  96           Pn      00 03 45.9 +0.1
RAFA  San Farael, Vo     1.81  89  eP      Pn      00 03 47.5 +1.0
VTUC  Crater, Volcan     1.86  87  eP      Pn      00 03 48.4 +1.1
CVTR  Volcan Turrial     1.86  88⇑eP      Pn      00 03 48.5 +1.2
CVTR  Volcan Turrial     1.86  88   Pn      Pn      00 03 48.2 +0.9
VTCV  VTCV, Calle Va     1.89  89⇑eP      Pn      00 03 48.7 +1.2
CDM   Cerro de Muert     1.89 102⇑eP      Pn      00 03 47.8   0.0
PEZE  Perez Zeledon,     2.02 106  eP      Pn      00 03 49.8 +0.6
PEZE  Perez Zeledon,     2.02 106   Pn      Pn      00 03 48.9  -0.3
ACON  Acoyapa            2.06  13⇑eP      Pn      00 03 50.0 +0.2
ACON  Acoyapa            2.06  13   Pn      Pn      00 03 49.8   0.0
SRBA  San Rafael, Bu     2.36 107           Pn      00 03 54.2 +0.3
BOAB  BOACO BROADBAN2.49 360   Pn      Pn      00 03 55.8 +0.2
ESPN  Las Esperanzas     2.60  30  eP      Pn      00 03 57.5 +0.5
ESPN  Las Esperanzas     2.60  30   Pn      Pn      00 03 57.1   0.0
POTG  Potrero Grande     2.64 109  eP      Pn      00 03 59.1 +1.3
PIRO  Carate, Puerto     2.75 124  eP      Pn      00 04 00.6 +1.5
PIRO                               eS      Sb      00 04 36.4  -1.4
MATN  Matagalpa          2.98 355   Pn      Pn      00 04 01.7  -0.7
CDITO Canoas             3.06 116   Pn      Pn      00 04 03.5 +0.1
CDITO Canoas             3.06 116  eP      Pn      00 04 04.6 +1.2
CDITO                              eS      Sb      00 04 44.8  -2.0
CRIN  San Cristobal      3.07 333   Pn      Pn      00 04 04.1 +0.5
BRU2  Volcan             3.13 111  eP      Pn      00 04 05.1 +0.5
BRU2  Volcan             3.13 111           Pn      00 04 03.8  -0.8
BRU2  Volcan             3.13 111  eP      Pn      00 04 05.8 +1.3
BRU2                               eS      Sb      00 04 46.0  -3.1
PTPM  Petroterminale     3.23 122  eP      Pn      00 04 07.2 +1.3
PTPM                               eS      Sb      00 04 49.3  -2.6
TGUH  Tegucigalpa,Un     4.39 339  eP      Pn      00 04 23.2 +1.4
TGUH  Tegucigalpa,Un     4.39 339   Pn      Pn      00 04 23.4 +1.6
PRVC  Isla de Provid     5.41  50  eP      Pn      00 04 38.1 +2.4
PRVC  Isla de Provid     5.41  50           Pn      00 04 36.0 +0.3
AZU   Azuero             5.72 112  eP      Pn      00 04 41.5 +1.5
AZU                                eS      Sn      00 05 48.3 +3.0
MTO3  Montecristo        5.73 321   Pn      Pn      00 04 41.4 +1.1
BCIP  Isla Barro Col     5.78  97  eP      Pn      00 04 39.5  -1.3
BCIP  Isla Barro Col     5.78  97           Pn      00 04 41.3 +0.4
BCIP  Isla Barro Col     5.78  97  eP      Pn      00 04 42.1 +1.2
BCIP                               eS      Sn      00 05 49.0 +2.3
ESQI  Esquipulas         5.84 322   Pn      Pn      00 04 43.0 +1.2
APG   El Apazote         6.89 317   Pn      Pn      00 04 59.1 +2.8
      2.1nm,0.3s,baz=126,slow=7.7,SNR=10
CCIG  Comitan            8.92 316   Pn      Pn      00 05 25.7 +1.5
UREC  San Jos de Ur     10.23 101  eP      Pn      00 05 41.7  -0.3
SJCC  San Jacinto, C    10.31  89  eP      Pn      00 05 43.6 +0.5
SJCC  San Jacinto, C    10.31  89   Pn      Pn      00 05 43.4 +0.3
ZARC  Zaragoza, Cauc    10.94 102   Pn      Pn      00 05 52.1 +0.5
CMIG  Matias Romero     11.45 309   Pn      Pn      00 06 00.7 +2.0
      1.1nm,0.3s,baz=136,slow=8.1,SNR=9.5
CMIG                                LR      LR      00 10 09.5
      comp=Z,55nm,21.3s,baz=116,slow=36
ROSC  El Rosal          12.32 113   LR      LR      00 11 33.9
      comp=Z,218nm,20.4s,baz=270,slow=41
TLIG  Tlapa             14.65 303   Pn      Pn      00 06 43.5 +0.9
BAUV  El Baul           17.39  92           Pn      00 07 17.6  -0.3
656A  Willston          19.54   8   P       P       00 07 42.7 +0.1
OBIP  Obispado Ponce    20.14  64   P       P       00 07 47.8  -1.4
OBIP                                IAmb    IAmb    00 08 08.7
      comp=Z,26nm,1.1s
CELP  Cerrillos         20.17  64   P       P       00 07 48.3  -1.3
CELP                                IAmb    IAmb    00 08 11.6
      comp=Z,51nm,1.4s
553A  Crawfordville     20.18   3   P       P       00 07 49.7 +0.2
553A                                IAmb    IAmb    00 08 00.6
      comp=Z,31nm,1.1s
451A  Vernon            20.57 360           Pn      00 07 56.1   0.0
352A  Blakely           21.44   2   P       P       00 08 03.6 +0.4
352A                                IAmb    IAmb    00 08 07.0
      comp=Z,22nm,0.9s
CZSB  Cruzeiro do Su    21.78 143   P       P       00 08 07.6 +0.6
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344A  Westbrook Farm    21.92 348   P       P       00 08 08.2  -0.1
344A                                IAmb    IAmb    00 08 11.4
      comp=Z,36nm,0.9s
HKT   Hockley           22.06 336   P       P       00 08 09.6  -0.2
VBMS  Vicksburg         22.62 349   P       P       00 08 14.9  -0.9
VBMS                                IAmb    IAmb    00 08 25.7
      comp=Z,24nm,0.9s
152A  Waverly Hall      22.63   2   P       P       00 08 16.5 +0.5
154A  Montrose          22.68   6   P       P       00 08 16.1  -0.4
146A  Union             22.80 353   P       P       00 08 17.1  -0.7
Z47A  Carrollton        23.25 355   P       P       00 08 22.2  -0.2
Z47A                                IAmb    IAmb    00 08 24.9
      comp=Z,15nm,0.8s
Z51A  Franklin          23.27   1   P       P       00 08 22.8 +0.3
GOGA  Godfrey           23.44   5   P       P       00 08 23.9  -0.4
GOGA                                IAmb    IAmb    00 08 24.9
      comp=Z,11nm,0.8s
435B  Jarrell           23.52 334   P       P       00 08 24.3  -0.8
435B                                IAmb    IAmb    00 08 26.9
      comp=Z,23nm,0.8s
Y49A  Blount Mountai    23.81 358   P       P       00 08 27.3  -0.6
Y49A                                IAmb    IAmb    00 08 28.6
      comp=Z,8.9nm,0.5s
Y52A  Lilburn           23.85   3   P       P       00 08 27.7  -0.6
Y52A                                IAmb    IAmb    00 08 29.4
      comp=Z,26nm,1.1s
Y45A  Yeager Farm, C    24.08 352   P       P       00 08 29.8  -0.5
JCT   Junction City     24.32 329   P       P       00 08 31.5  -1.2
JCT                                 IAmb    IAmb    00 08 34.1
      comp=Z,13nm,0.9s
HODGE Hodges            24.37   7   P       P       00 08 32.4  -0.7
X48A  Hartselle         24.43 357   P       P       00 08 32.8  -0.8
X48A                                IAmb    IAmb    00 08 35.8
      comp=Z,10nm,0.9s
JSC   Jenkinsville      24.55   9   P       P       00 08 33.6  -1.1
JSC                                 IAmb    IAmb    00 08 35.9
      comp=Z,13nm,0.7s
WLAR  White Oak Lake    24.61 345   P       P       00 08 34.5  -0.7
WLAR                                IAmb    IAmb    00 08 36.2
      comp=Z,20nm,0.9s
PAULI Pauline           25.01   7   P       P       00 08 37.8  -1.1
PAULI                               IAmb    IAmb    00 08 39.3
      comp=Z,14nm,0.6s
BG3   Lake Jocassee     25.06   5   P       P       00 08 38.9  -0.4
W50A  Signal Mountai    25.14   1   P       P       00 08 39.8  -0.3
W50A                                IAmb    IAmb    00 08 47.8
      comp=Z,24nm,1.4s
SWET  Sewanee           25.16 359   P       P       00 08 39.1  -1.1
SWET                                IAmb    IAmb    00 08 40.8
      comp=Z,8.6nm,0.7s
KMSC  Kings Mountain    25.39   8   P       P       00 08 41.5  -0.7
KMSC                                IAmb    IAmb    00 08 43.5
      comp=Z,13nm,0.8s
CPCT  Cooper Cave       25.41   2   P       P       00 08 41.9  -0.6
CPCT                                IAmb    IAmb    00 08 52.6
      comp=Z,12nm,1.2s
MIAR  Mount Ida         25.54 345   P       P       00 08 42.8  -0.9
MIAR                                IAmb    IAmb    00 08 45.1
      comp=Z,16nm,0.8s
W57A  Gilead            25.62  11   P       P       00 08 43.1  -1.2
W57A                                IAmb    IAmb    00 08 43.5
      comp=Z,24nm,1.5s
TXAR  Lajitas Array     25.62 321   P       P       00 08 45.5 +0.9
      comp=Z,8.5nm,0.8s,baz=146,slow=8.5,SNR=49
TXAR                                PcP     PcP     00 12 16.6 +1.3
      comp=Z,0.2nm,0.4s,baz=130,slow=3.1,SNR=3.7
TXAR  Lajitas Array     25.62 321   P       P       00 08 45.1 +0.5
TX31  Lajitas Ar. Si    25.62 321   P       P       00 08 44.5  -0.1
TKL   Tuckaleechee C    25.65   4   P       P       00 08 42.3  -2.4
      comp=Z,7.5nm,0.7s,baz=174,slow=13,SNR=12
TKL   Tuckaleechee C    25.65   4   P       P       00 08 44.1  -0.6
TKL                                 IAmb    IAmb    00 08 54.9
      comp=Z,14nm,0.9s
V53A  Saluda            25.74   5   P       P       00 08 44.8  -0.7
V53A                                IAmb    IAmb    00 08 48.0
      comp=Z,7.5nm,0.8s
V51A  Loudon            25.77   2   P       P       00 08 45.2  -0.5
V51A                                IAmb    IAmb    00 08 46.5
      comp=Z,12nm,0.9s
V52A  Sevierville       25.85   4   P       P       00 08 46.0  -0.4
WHAR  Wooly Hollow      25.95 348   P       P       00 08 45.4  -2.0
H06E1 SOCORRO T-PHAS25.99 293   T       T       00 35 40.2
      SNR=16
ABTX  Abilene, Hawle    26.01 332   P       P       00 08 48.2 +0.2
BOAV  Boa Vista         26.06 105   P       P       00 08 48.6   0.0
W39A  Magazine          26.21 345   P       P       00 08 49.0  -0.8
V58A  Windy Hill, Pi    26.41  12   P       P       00 08 50.1  -1.4
V58A                                IAmb    IAmb    00 08 52.2
      comp=Z,9.8nm,0.8s
FCAR  Ozark Folk Cen    26.49 348   P       P       00 08 50.7  -1.6
U54A  Nelsons Funny     26.68   7   P       P       00 08 53.5  -0.6
U54A                                IAmb    IAmb    00 08 55.1
      comp=Z,8.4nm,0.8s
T47A  Sharon Grove      26.96 357   P       P       00 08 55.2  -1.3
U40A  Yellville         27.09 347   P       P       00 08 57.4  -0.3
ETMB  Extrema           27.55 135   P       P       00 09 02.7 +0.7
S51A  Beattyville       27.64   4   P       P       00 09 01.2  -1.3
S51A                                IAmb    IAmb    00 09 03.1
      comp=Z,9.7nm,0.8s
PTGA  Pitinga           27.67 111   P       P       00 09 04.4 +1.3
      comp=Z,1.8nm,0.4s,baz=287,slow=11,SNR=9.4
MACA  Manacapuru-AM     28.07 116   P       P       00 09 06.2  -0.5
MACA                                IAmb    IAmb    00 09 27.1
      comp=Z,10nm,0.9s
MNTX  Cornudas Mount    28.34 323   P       P       00 09 07.9  -1.0
CCM   Cathedral Cave    28.44 351   P       P       00 09 08.0  -1.7
R55A  Marlinton         28.65   9   P       P       00 09 10.9  -0.7
R55A                                IAmb    IAmb    00 09 12.1
      comp=Z,7.6nm,0.8s
Q52A  Bidwell           29.05   5   P       P       00 09 14.2  -0.9
Q52A                                IAmb    IAmb    00 09 15.4
      comp=Z,14nm,0.9s
Q54A  Coxs Mills        29.23   8   P       P       00 09 16.1  -0.6
Q54A                                IAmb    IAmb    00 09 17.1
      comp=Z,12nm,0.8s
P52A  Corning           29.73   5   P       P       00 09 19.9  -1.3
O52A  Adamsville        30.24   6   P       P       00 09 24.5  -1.1
O52A                                IAmb    IAmb    00 09 25.2
      comp=Z,13nm,0.8s
O53A  New Philadelph    30.44   7   P       P       00 09 26.1  -1.3
O56A  Blue Knob Stat    30.85  11   P       P       00 09 30.5  -0.6
O56A                                IAmb    IAmb    00 09 47.2
      comp=Z,13nm,1.3s
PAGS  Pennsylvania G    31.18  13   P       P       00 09 33.4  -0.6
SSPA  Standing Stone    31.33  11   P       P       00 09 34.6  -0.7
N58A  Sunbury           31.77  13   P       P       00 09 38.6  -0.6
N58A                                IAmb    IAmb    00 09 40.1
      comp=Z,11nm,0.8s
M55A  Ridgway           31.98  10   P       P       00 09 40.1  -0.9
N59A  State Game Lan    32.06  14   P       P       00 09 40.6  -1.1
SDCO  Great Sand Dun    32.95 330   P       P       00 09 49.5  -0.4
BINY  Binghamton        33.23  13   P       P       00 09 50.9  -1.1
L59A  Walton            33.44  14   P       P       00 09 52.9  -1.0
J58A  Remsen            34.49  13   P       P       00 10 01.5  -1.4
SIV   San Ignacio       35.44 136   P       P       00 10 15.9 +4.5
      comp=Z,0.8nm,0.4s,baz=304,slow=8.7,SNR=6.1
SIV                                 PcP     PcP     00 12 43.9 +2.8
      comp=Z,0.4nm,0.3s,baz=282,slow=4.5,SNR=4.7
LONY  Lake Ozonia       35.85  14   P       P       00 10 12.4  -2.1
PB06  IPOC Station P    36.07 154   P       P       00 10 17.6 +0.8
PB06                                IAmb    IAmb    00 10 21.3
      comp=Z,9.1nm,0.7s
PKME  Peaks-Kenny Pk    37.90  19   P       P       00 10 31.1  -0.9
PKME                                IAmb    IAmb    00 10 40.2
      comp=Z,21nm,1.4s
PSUT  Pine Spring       38.06 323   P       P       00 10 34.6 +0.8
GWY   Greenwater Val    38.39 318   P       P       00 10 36.9 +0.4
F64A  Sherman           38.74  19   P       P       00 10 37.9  -1.1
F64A                                IAmb    IAmb    00 11 00.3
      comp=Z,20nm,1.4s
PD31  Pinedale Array    38.81 332   P       P       00 10 39.4  -0.6
PDAR  Pinedale Array    38.81 332   P       P       00 10 38.5  -1.4
      comp=Z,1.1nm,0.8s,baz=133,slow=8.9,SNR=9.1
PDAR                                PcP     PcP     00 12 51.5 +0.4
      comp=Z,0.6nm,0.4s,baz=129,slow=5.1,SNR=7.0
NV11  Mina Array Sit    40.65 320   P       P       00 10 56.6 +1.3
NV11                                IAmb    IAmb    00 10 58.8
      comp=Z,9.0nm,0.8s
BATG  Bathurst New B    40.74  20   P       P       00 10 54.1  -1.7
BATG                                IAmb    IAmb    00 11 04.3
      comp=Z,18nm,1.3s
NVAR  Mina Array Bea    40.74 320   P       P       00 10 58.1 +1.9
      comp=Z,7.9nm,0.7s,baz=127,slow=7.4,SNR=54
NVAR                                PcP     PcP     00 12 59.0 +1.6
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Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,2.1nm,0.8s,baz=141,slow=4.6,SNR=4.3						
NVAR	Mina Array Bea	40.74	320	P	P	00 10 57.9	+1.7
NVAR					PcP	00 12 58.6	+1.2
LHV	Little Huntoon	40.77	319	P	P	00 10 58.2	+2.1
LHV				IAmb	IAmb	00 11 05.0	
	comp=Z,8.7nm,0.8s						
KVN	Kaiserville	40.98	320	P	P	00 10 58.8	+0.7
BMN	Battle Mountai	41.28	323	P	P	00 11 00.6	+0.1
HLID	Hailey	41.79	328	P	P	00 11 04.4	-0.3
PNTR	Pine Nut	41.95	319	P	P	00 11 07.9	+1.8
PNTR				IAmb	IAmb	00 11 09.8	
	comp=Z,11nm,0.8s						
BDFB	Brasilia	45.11	124	P	P	00 11 32.5	+0.8
	comp=Z,1.7nm,0.4s,baz=266,slow=8.1,SNR=4.8						
BDFB	Brasilia	45.11	124	P	P	00 11 32.3	+0.6
SCHQ	Schefferville	47.20	15	P	P	00 11 43.9	-3.5
	comp=Z,4.9nm,0.5s,baz=212,slow=5.4,SNR=17						
PLTB	Pedras Altas	51.58	145	P	P	00 12 21.5	+0.3
PLTB				IAmb	IAmb	00 12 35.8	
	comp=Z,11nm,1.1s						
LPA	La Plata	51.75	151c	iP	P	00 12 24.7	+2.3
LPA				PP	PcP	00 13 30.9	-4.7
YKA	Yellowknife Ar	56.48	344	P	P	00 12 54.1	-2.5
	comp=Z,1.3nm,0.3s,baz=133,slow=8.0,SNR=27						
YKA	Yellowknife Ar	56.48	344	P	P	00 12 54.5	-2.1
DSPA	Despedida	65.34	169	P	P	00 13 57.8	+1.0
BCAR	Beaver Creek A	66.25	336	P	P	00 14 02.1	-0.7
DOT	Dot Lake	67.43	336	P	P	00 14 09.7	-0.5
IL31		69.01	336	P	P	00 14 18.9	-1.1
IL31				IAmb	IAmb	00 14 19.6	
	comp=Z,2.5nm,0.7s						
ILAR	Eielson Array	69.01	336	P	P	00 14 18.9	-1.3
	comp=Z,2.2nm,0.6s,baz=122,slow=4.7,SNR=23						
ILAR	Eielson Array	69.01	336	P	P	00 14 18.6	-1.5
BMAR	Burnt Mountain	69.24	339	P	P	00 14 20.6	-1.0
MLY	Manley	70.64	336	P	P	00 14 29.0	-1.2
MLY				IAmb	IAmb	00 14 30.3	
	comp=Z,6.0nm,0.9s						
ADK	Adak	82.90	321	P	P	00 15 40.3	+0.8
ARCES	ARCESS Array B	87.96	19	P	P	00 16 01.4	-3.1
	comp=Z,5.3nm,1.0s,baz=271,slow=2.7,SNR=5.5						
CIMO	Cimolais	88.42	43	P	P	00 16 04.7	-2.4
CIMO				IAmb	IAmb	00 16 05.3	
	comp=Z,4.5nm,1.2s						
SEY	Seymchan	94.94	337	LR	LR	01 05 19.7	
	comp=Z,44nm,18.0s,baz=225,slow=39						
SONM	Songino Array	121.49	351	PKP	PKPdf	00 22 08.5	-0.2
	comp=Z,0.4nm,0.6s,baz=163,slow=1.5,SNR=4.1						
MKAR	Makanchi Array	122.50	10	PKP	PKPdf	00 22 09.5	-1.0
	comp=Z,0.5nm,0.7s,baz=308,slow=1.1,SNR=5.7						
KSRS	Korea Array	123.32	328	PKP	PKiKP	00 22 12.7	+0.2
	comp=Z,3.0nm,0.7s,baz=12,slow=1.3,SNR=12						
ASAR	Alice Springs	139.91	245	PKP	PKPdf	00 22 44.3	+0.3
	comp=Z,0.3nm,0.5s,baz=128,slow=2.2,SNR=4.5						
WRA	Warramunga Arr	140.20	251	PKP	PKPdf	00 22 45.1	+0.6
	comp=Z,0.8nm,0.7s,baz=90,slow=2.3,SNR=6.1						
WRA	Warramunga Arr	140.20	251		PKPdf	00 22 44.5	-0.1
CMAR	Chiang Mai Arr	151.42	351	PKP	PKPdf	00 23 04.3	+0.7
	comp=Z,1.0nm,0.3s,baz=304,slow=2.1,SNR=6.2						
CMAR				PKPbc	PKPbc	00 23 09.8	+0.1
	comp=Z,8.5nm,0.9s,baz=343,slow=3.2,SNR=25						
CMAR	Chiang Mai Arr	151.42	351		PKPdf	00 23 03.2	-0.4
CMAR				PKPbc	PKPbc	00 23 09.6	-0.1
CMAR				PKPab	PKPab	00 23 18.0	+0.3

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*IDC **10** 00:06:25.5±1.4, 4°.20S×129°.27E, h0^{km}, mb3.9/8, mb1 4.1/10, mb1mx3.8/36, mbtmp4.0/10, ML3.8/2, MS3.4/11, Ms1 3.4/11, ms1mx3.2/42, Error ellipse: s-maj=41.0km s-min=27.5km az=86.0*

*NEIC **10** 00:06:27.6±2.7, 4°.12S±0°.07×129°.69E±0°.05, h10^{km}±1^{km}, mb4.6/27, Error ellipse: s-maj=11.6km s-min=8.8km az=157.0*

*DJA **10** 00:06:28.2±0.2, 4°S±2°×13°0E±°, h10^{km}, M4.4/28, mB5.2/8, mb4.5/28, MLv4.2/9, Mw(mB)4.5/8*

ISC 10 00:06:26.7±0.5**, 4°.19S**±0°.05×**129°.71E**±0°.05**, h10^{km}, n88, σ1^s.56**/79**, mb4.5**/27**, MS3.6**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.15	317	P	Pb	00 06 46.3	-2.3
AAI	Ambon	1.59	288	P	Pn	00 06 51.6	-3.4
FAKI	Fak Fak	2.83	64	P	Pb	00 07 15.3	-2.1
FAKI	Fak Fak	2.83	64		Pb	00 07 14.6	-2.8
SIJI	Sorong	3.65	25	Pn	Pn	00 07 24.4	+1.1
	5.2nm,0.3s,baz=299,slow=9.5,SNR=8.3						
SIJI				Sn	Sn	00 08 05.2	-1.2
	9.2nm,0.3s,baz=268,slow=11,SNR=4.3						
SIJI				LR	LR	00 09 14.3	
	comp=Z,800nm,19.5s,baz=193,slow=44						
SWI	Sorong	3.65	25	P	Pn	00 07 24.9	+1.6
LBMI	Labuha	4.16	328	P	Pn	00 07 29.7	-0.7
SANI	Sanana	4.28	300	P	Pn	00 07 30.3	-1.7
TNTI	Ternate	5.46	335	Pn	Pn	00 07 48.1	0.0
SOEI	Soe	7.73	224	Pn	Pn	00 08 21.8	+2.2
GTOI	Gorontalo	8.23	305	P	Pn	00 08 28.3	+2.0
	173nm17nm,1.0s						
BATI	Baumata	8.47	225	LR	LR	00 12 01.8	
	comp=Z,569nm,19.4s,baz=36,slow=41						
BATI	Baumata	8.47	225	P	Pn	00 08 31.1	+1.5
	21nm,0.7s						
MMRI	Maumere	8.64	239	P	Pn	00 08 32.4	+0.5
	3µm30nm,0.7s						
MMRI	Maumere	8.64	239	Pn	Pn	00 08 33.5	+1.6
APSI	Ampana	8.69	292	P	Pn	00 08 32.0	-0.6
	58nm,1.1s						
MTN	Manton Dam	8.71	171		Pn	00 08 35.5	+2.6
MRSI	Marisa	9.04	301	P	Pn	00 08 37.1	-0.3
	28nm,0.8s						
EDFI	Ende, Flores	9.16	240	P	Pn	00 08 40.1	+0.9
	16nm,1.4s						
BSSI	Bau Bau, Buton	9.39	258	P	Pn	00 08 42.1	0.0
	16nm,0.7s						
BNSI	Bone	9.58	268	P	Pn	00 08 42.5	-2.3
	451nm23nm,1.3s						
BKSI	Bulukumba	9.62	263	P	Pn	00 08 45.4	0.0
	592nm30nm,1.3s						
SPSI	Sidrap Palu	9.92	271	P	Pn	00 08 48.9	-0.6
	15nm,1.0s						
KAPI	Kappang	9.96	265	Pn	Pn	00 08 52.9	+2.9
	0.6nm,0.3s,baz=140,slow=6.8,SNR=6.2						
KAPI				LR	LR	00 12 10.6	
	comp=Z,57nm,21.0s,baz=114,slow=36						
KAPI	Kappang	9.96	265		Pn	00 08 51.7	+1.7
TOLI2	Tolitoli	10.36	300	Pn	Pn	00 08 58.0	+2.4
MPSI	Mapaga	10.79	294	P	Pn	00 09 01.8	+0.4
	16nm,1.2s						
KNRA	Kununurra	11.45	185		Pn	00 09 10.6	+0.2
DAV	Davao City (W)	11.92	340	LR	LR	00 14 21.5	
	comp=Z,117nm,21.7s,baz=160,slow=40						
FITZ	Fitzroy Crossi	14.38	196	LR	LR	00 15 30.3	
	comp=Z,125nm,19.6s,slow=38						
BBKI	Banjar Baru	14.85	272	P	Pn	00 09 57.1	+0.1
ABJI	Asem Bagus	15.80	256	P	Pn	00 10 09.2	-0.3
	58nm,1.2s						
KMMI	Kalianget	15.92	259	P	Pn	00 10 12.4	+1.3
	36nm,0.9s						
WB0	Warramunga Arr	16.14	164		Pn	00 10 13.5	-0.4
WRAB	Tennant Creek	16.29	164		P	00 10 18.6	-0.2
WRA	Warramunga Arr	16.29	164	Pn	Pn	00 10 13.0	-2.9
	0.2nm,0.3s,baz=351,slow=13,SNR=11						
WRA				Sn	Sn	00 13 14.8	-2.0
	baz=342,slow=22,SNR=2.8						
WRA				LR	LR	00 17 25.8	
	comp=Z,150nm,18.9s,baz=330,slow=40						
WRA	Warramunga Arr	16.29	164		Pn	00 10 16.3	+0.4
PMG	Port Moresby	18.08	108	LR	LR	00 18 32.1	
	comp=Z,87nm,18.2s,baz=342,slow=39						
SBUM	Sibu	18.68	290	P	Pn	00 10 45.5	-0.1
PSA00	Pilbara Seismi	19.75	208		Pn	00 10 58.0	-0.5
PSA00	Pilbara Seismi	19.75	208	P	Pn	00 10 57.6	-0.8
PSA00				IAmb	IAmb	00 11 07.8	
	comp=Z,47nm,1.1s						
AS31	Alice Springs	19.78	169	P	Pn	00 10 58.6	-0.2
ASAR	Alice Springs	19.78	169	P	Pn	00 10 58.5	-0.3
	comp=Z,0.3nm,0.3s,baz=347,slow=9.7,SNR=32						
ASAR				LR	LR	00 19 27.3	
	comp=Z,133nm,18.4s,baz=1.0,slow=39						
KSM	Kuching	20.19	286	P	P	00 11 00.7	-1.0
KSM				IAmb	IAmb	00 11 17.9	
	comp=Z,23nm,1.0s						
LEM	Lembang	22.14	262	LR	LR	00 20 05.9	
	comp=Z,160nm,18.2s,baz=72,slow=38						
CTAO	Charters Tower	22.57	136	P	P	00 11 27.2	-0.2
CTAO				IAmb	IAmb	00 11 41.0	
	comp=Z,19nm,1.1s						
PMBI	Palembang	24.92	272	P	P	00 11 52.1	+1.8
PMBI	Palembang	24.92	272	P	P	00 11 52.7	+2.3
MYKOM	Kota Tinggi	26.52	282	P	P	00 12 05.3	+0.5
STKA	Stephens Creek	29.72	159	LR	LR	00 25 27.4	
	comp=Z,133nm,19.2s,baz=13,slow=38						
IPM	Ipoh	29.92	286	P	P	00 12 34.1	-1.1
IPM				IAmb	IAmb	00 12 51.2	
	comp=Z,16nm,0.7s						
KULM	Kulim	30.52	288	P	P	00 12 40.0	-0.5
KULM				IAmb	IAmb	00 12 56.6	
	comp=Z,15nm,1.1s						
JSU	Suzuyama	35.50	1	P	P	00 13 24.8	+0.9
NJ2	Nanjing	37.49	345	*e*P	P	00 13 44.0	+3.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
CM31	Chiang Mai Arr	37.76	308	P	P	00 13 42.6	-0.7
CM31				IAmb	IAmb	00 13 54.3	
	comp=Z,5.7nm,0.9s						
CMAR	Chiang Mai Arr	37.76	308	P	P	00 13 39.6	-3.6
	comp=Z,0.7nm,0.3s,baz=134,slow=7.7,SNR=2.3						
CMAR	Chiang Mai Arr	37.76	308	P	P	00 13 43.4	+0.2
CHTO	Chiang Mai	37.95	308	P	P	00 13 45.5	+0.6
CHTO				IAmb	IAmb	00 14 13.3	
	comp=Z,9.4nm,1.1s						
MJAR	Matsushiro Arr	41.29	10	P	P	00 14 14.1	+1.6
	comp=Z,1.4nm,0.7s,baz=194,slow=9.8,SNR=2.4						
MAT	Matsushiro	41.29	10	P	P	00 14 12.6	+0.1
KSAR	Wonju Array Be	41.45	358	P	P	00 14 15.1	+1.4
KSRS	Korea Array	41.46	358	P	P	00 14 18.9	+5.1
	comp=Z,1.3nm,0.4s,baz=174,slow=10,SNR=7.3						
LZH	Lanzhou	46.81	331	*e*P	P	00 15 04.8	+7.8
LZH				pP	pwP	00 15 10.2	+6.6
LZH				sP	sP	00 15 15.6	+16
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
HHC	Hu-ho-hao-te	47.80	341	*e*P	P	00 15 07.7	+3.1
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,9.3s						
CN2	Changchun	47.93	356	*e*P	P	00 15 12.6	+7.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Ar.	48.21	2	P	P	00 15 08.2	+0.7
	comp=Z,1.4nm,0.6s,baz=187,slow=9.7,SNR=3.2						
GTA	Gaotai	51.40	330	*e*P	P	00 15 31.5	-0.5
GTA				pP	pwP	00 15 39.4	+0.7
GTA				sP	sP	00 15 43.4	+8.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,88nm,4.7s						
GTA				LR	LR		
	comp=N,140nm,15.3s						
GTA				LR	LR		
	comp=E,140nm,17.4s						
GTA				LR	LR		
	comp=Z,210nm,17.1s						
KLR	Kul'dur	53.23	2	P	P	00 15 49.1	+3.8
	comp=Z,3.4nm,0.9s,baz=98,slow=14,SNR=2.8						
ULN	Ulaanbaatar	55.52	342	P	P	00 16 02.4	+0.2
ULN				IAmb	IAmb	00 16 11.7	
	comp=Z,4.9nm,1.0s						
SONM	Songino Array	55.70	341	P	P	00 16 04.6	+1.1
	comp=Z,0.5nm,0.7s,baz=165,slow=7.0,SNR=2.3						
SONM	Songino Array	55.70	341	P	P	00 16 04.5	+0.9
SONM				IAmb	IAmb	00 16 14.1	
	comp=Z,4.0nm,1.0s						
WMQ	Urumqi	60.90	326	*e*P	P	00 16 44.7	+4.8
WMQ				pP	pwP	00 16 53.7	+7.0
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.3s						
MK31	Makanchi Array	65.74	326	P	P	00 17 10.4	-1.4
MK31				IAmb	IAmb	00 17 23.3	
	comp=Z,7.1nm,1.5s						
MKAR	Makanchi Array	65.74	326	P	P	00 17 10.6	-1.2
	comp=Z,0.8nm,0.4s,baz=114,slow=7.7,SNR=22						
MAKZ	Makanchi	65.92	326	P	P	00 17 11.9	-1.1
MAKZ				IAmb	IAmb	00 17 20.8	
	comp=Z,5.9nm,1.2s						
YAK	Yakutsk	66.03	360	LR	LR	00 46 49.4	
	comp=Z,46nm,18.1s,baz=78,slow=37						
YAK	Yakutsk	66.03	360	P	P	00 17 13.3	0.0
ZAA0	Zalesovo Array	68.95	333	P	P	00 17 31.7	-0.3
ZAA0				IAmb	IAmb	00 17 41.0	
	comp=Z,11nm,1.4s						
ZALV	Zalesovo Beam	68.95	333	P	P	00 17 31.4	-0.6
	comp=Z,0.8nm,0.5s,baz=116,slow=3.4,SNR=5.2						
ZALV	Zalesovo Beam	68.95	333	P	P	00 17 31.2	-0.8
KURK	Kurchatov	69.99	328	P	P	00 17 37.2	-1.2
BVAR	Borovoye Array	75.55	328	P	P	00 18 10.4	-1.1
	comp=Z,0.8nm,0.7s,baz=202,slow=14,SNR=4.8						
BRVK	Borovoye	75.62	328	P	P	00 18 11.1	-0.8
BRVK				IAmb	IAmb	00 18 20.2	
	comp=Z,4.8nm,0.9s						
NRIK	Noril'sk	78.78	346	P	P	00 18 28.6	-0.7
	comp=Z,0.4nm,0.4s,baz=10,slow=19,SNR=1.8						
NRIK	Noril'sk	78.78	346	P	P	00 18 28.7	-0.5
NRIK				IAmb	IAmb	00 18 46.9	
	comp=Z,14nm,1.4s						
ABKAR	Akbulak array	80.14	321	P	P	00 18 35.0	-2.1
ABKAR	Akbulak array	80.14	321	P	P	00 18 35.3	-1.8
RAYN	Ar Rayn	86.35	294	P	P	00 19 08.5	-1.4
RAYN				IAmb	IAmb	00 19 18.8	
	comp=Z,8.1nm,1.3s						

PRU 10 00:06:30.0±0.0**, 51°.45N×16°.26E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHVC	Chvalec	0.87	189	*e*PG	Pg	00 06 46.3	-0.4
CHVC				*e*SG	Sg	00 06 57.3	-0.7
OSTC	Ostas	0.90	182	*e*PG	Pg	00 06 46.9	-0.2
OSTC				*e*SG	Sg	00 06 59.2	+0.5
UPC	Upice	0.96	190	*e*PG	Pg	00 06 47.5	-0.8
UPC				*e*SG	Sg	00 07 00.8	+0.1
	comp=Z,5.0nm,0.2s						
DPC	Dobruska-Polom	1.10	178	*e*PG	Pg	00 06 50.6	-0.5
DPC				*e*SG	Sg	00 07 04.8	-0.6
PVCC	Panska Ves	1.41	230	*e*SG	Sg	00 07 15.2	-0.1
	comp=Z,5.3nm,0.3s						
KRLC	Kraliky	1.42	166	*e*PG	Pn	00 06 56.0	-1.0
KRLC				*e*SG	Sg	00 07 14.7	-0.7

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*GUC **10** 00:09:24.8±0.6, 35°.91S×73°.56W, h14^{km}±8^{km}, ML5.3*

*IDC **10** 00:09:31.0±0.5, 35°.90S×73°.07W, h0^{km}, mb5.0/18, mb1 5.0/22, mb1mx4.9/32, mbtmp4.9/22, ML4.6/4, MS5.1/17, Ms1 5.1/17, ms1mx5.0/24, Error ellipse: s-maj=21.8km s-min=13.3km az=87.0*

*NEIC **10** 00:09:32.8±1.4, 35°.88S±0°.05×73°.28W±0°.08, h10^{km}±1^{km}, mb5.3/218, Ms_20 5.4/104, Mwb5.4/51, Mww5.5, ML5.3(GUC), Error ellipse: s-maj=11.9km s-min=7.7km az=290.0*

*NEIC **10** 00:09:33, 35°.86S×73°.24W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.91; $M_{\theta\theta}$0.04; $M_{\phi\phi}$-0.96; $M_{r\theta}$-0.31; $M_{\theta\phi}$-0.29; $M_{\phi r}$-1.04; Fault plane solution: $M_0$1.46000×10^{17} NP1:ϕ_s196.15000°, δ69.10000°, λ90.80000°. NP2:ϕ_s13.91000°, δ20.92000°, λ87.91000°. Principal axes: T 1.3990, Plg66.0000°, Azm108.0000°; N 0.1233, Plg1.0000°, Azm16.0000°; P -1.5223, Plg24.0000°, Azm286.0000°;*

*VAO **10** 00:09:34.0±0.4, 35°.81S×72°.99W, h10^{km}, mb5.2*

*MOS **10** 00:09:35.0±1.1, 35°.84S×73°.04W, h34^{km}, mb5.4/36, MS5.1/4, Error ellipse: s-maj=12.0km s-min=6.2km az=91.4*

*GCMT **10** 00:09:36.8±0.1, 35°.97S±0°.01×73°.45W±0°.01, h19^{km}, MW5.5/127, Moment Tensor Solution. s114,c191; s127,c230; Duration: 1^s.4 Moment tensor: Scale 10^{17} Nm; M_{rr}1.06±.03; $M_{\theta\theta}$-0.04±.02; $M_{\phi\phi}$-1.03±.02; $M_{r\theta}$-0.36±.04; $M_{\theta\phi}$-0.31±.01; $M_{\phi r}$-2.25±.10; Best double couple: $M_0$2.52600×10^{17} NP1:ϕ_s23.00000°, δ13.00000°, λ103.00000°. NP2:ϕ_s190.00000°, δ77.00000°, λ87.00000°. Principal axes: T 2.5030, Plg58.0000°, Azm96.0000°; N 0.0400, Plg3.0000°, Azm190.0000°; P -2.5480, Plg32.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **10** 00:09:38, 35°.94S×73°.38W, h24^{km}, Moment Tensor Solution. Duration: 10^s.4 Moment tensor: Scale 10^{17}Nm; M_{rr}1.34; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-1.15; $M_{r\theta}$-0.60; $M_{\theta\phi}$-0.48; $M_{\phi r}$-1.91; Fault plane solution: $M_0$2.41000×10^{17} NP1: ϕ_s27.00000°, δ17.00000°, λ98.00000°. NP2:ϕ_s198.00000°, δ73.00000°, λ87.00000°. Principal axes: T 2.4112, Plg62.0000°, Azm104.0000°; N 0.0041, Plg2.0000°, Azm199.0000°; P -2.4152, Plg28.0000°, Azm290.0000°;*

ISC 10 00:09:32.3±0.2**, 35°.85S**±0°.03×**73°.08W**±0°.05**, h10^{km}, n708, σ1^s.41**/661**, mb5.3**/131**, MS5.3**/76**, 11C-12D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Huala	1.26	49	*e*P	Pn	00 09 52.0	-4.0
GO05				*e*S	Sb	00 10 11.9	-0.4
GO05				IAML		00 10 22.8	
	comp=N,30µm,0.5s						
GO05	Huala	1.26	49	Pn	Pg	00 09 57.9	+1.4
GO05					Sn	00 10 16.3	+3.3
BO02	Sierra Bellavi	2.15	61⇓	*e*P	Pn	00 10 05.3	-3.1
BO02				*e*S	Sb	00 10 37.3	-0.9
BO02				IAML		00 10 53.9	
	comp=N,29µm,0.4s						
BO02	Sierra Bellavi	2.15	61	Pn	Pb	00 10 11.9	+0.5
BO01	Tunca	2.19	49	*e*P	Pn	00 10 06.2	-2.5
BO01				*e*S	Sb	00 10 37.1	-2.0
BO01				IAML		00 10 55.7	
	comp=N,8µm,0.4s						
BO01	Tunca	2.19	49		Pb	00 10 11.3	-0.7
MT01	Popeta	2.49	38	*e*P	Pn	00 10 09.1	-3.8
MT01				IAML		00 11 06.5	
	comp=E,8µm,0.6s						
MT01	Popeta	2.49	38		Pb	00 10 15.1	-2.0
VA05	Santo Domingo	2.50	29	*e*P	Pn	00 10 09.0	-4.0
VA05	Santo Domingo	2.50	29		Pn	00 10 14.8	+1.8
MT09	Talagante	2.69	40	*e*P	Pn	00 10 12.7	-3.0
MT09				IAML		00 11 11.1	
	comp=E,11µm,0.4s						
MT09	Talagante	2.69	40		Pb	00 10 18.7	-1.9
BO04	La Punta	2.75	48	*e*P	Pn	00 10 14.0	-2.5
BO04				IAML		00 11 08.4	
	comp=E,8µm,0.5s						
MT02	Curacav	3.04	32⇑	*e*P	Pn	00 10 16.4	-4.1
MT02				IAML		00 11 22.1	
	comp=E,4µm,0.5s						
MT02	Curacav	3.04	32		Pn	00 10 22.2	+1.8
VA01	Torpederas	3.06	23	*e*P	Pn	00 10 16.2	-4.5
VA01	Torpederas	3.06	23	Pn	Pn	00 10 21.7	+1.0
MT05	Renca	3.12	39	*e*P	Pn	00 10 18.5	-3.2
MT05				IAML		00 11 23.9	
	comp=E,9µm,0.6s						
MT05	Renca	3.12	39		Pn	00 10 24.0	+2.4
LC01	Cunco	3.19	163	*e*P	Pn	00 10 16.3	-6.3
LC01				*e*S	Sn	00 10 54.9	-5.8
LC01	Cunco	3.19	163	Pn	Pn	00 10 22.4	-0.2
ROCH	El Roble	3.34	31	*e*P	Pn	00 10 21.3	-3.5
PEL	Peldehue	3.34	37	P	Pn	00 10 27.5	+2.8
PEL	Peldehue	3.34	37	Pn	Pn	00 10 27.5	+2.8
VA03	San Esteban	3.72	35		Pn	00 10 32.1	+2.2
LR03	Panguipulli	3.82	171		Pn	00 10 30.6	-0.6
LL04	Puerto Octay	5.08	174	Pn	Pn	00 10 46.9	-1.6
H03S1	Juan Fernandez	5.19	291	T	T	00 15 56.6	
	SNR=1637						
H03S3	Juan Fernandez	5.20	291	T	T	00 15 59.3	
	SNR=1479						
H03S2	Juan Fernandez	5.21	291	T	T	00 15 57.8	
	SNR=1802						
PLCA	Paso Flores	5.27	159	Pn	Pn	00 10 51.9	+0.8
	comp=E,8.0nm,0.3s,baz=325,slow=11,SNR=16						
PLCA				Sn	Sn	00 11 55.6	+3.7
	comp=E,23nm,0.3s,baz=271,slow=19,SNR=1.7						
PLCA	Paso Flores	5.27	159	P	Pn	00 10 52.1	+1.0
PLCA	Paso Flores	5.27	159	*e*P	Pn	00 10 52.3	+1.2
PLCA	Paso Flores	5.27	159	Pn	Pn	00 10 52.1	+1.0
CO06	Fray Jorge	5.30	14		Pn	00 10 51.0	-0.5
LL03	Petrohue	5.31	174		Pn	00 10 50.6	-1.1
H03N1	Juan Fernandez	5.37	295	T	T	00 16 12.3	
	baz=109,slow=76,SNR=55						
H03N3	Juan Fernandez	5.38	295	T	T	00 16 09.3	
	baz=109,slow=76,SNR=70						
CO03	El Pedregal	5.38	22		Pn	00 10 54.5	+1.8
H03N2	Juan Fernandez	5.39	295	T	T	00 16 13.5	
	baz=109,slow=76,SNR=55						
LL05	Los Muermos	5.56	183		Pn	00 10 52.9	-2.2
ZON	Zonda	5.64	42	P	Pn	00 10 59.8	+3.5
ZON	Zonda	5.64	42	Pn	Pn	00 10 59.8	+3.5
GO04	Tololo Observa	5.97	19		Pn	00 11 02.0	+1.0
CO05	La Serena	6.11	15		Pn	00 11 02.9	+0.2
LL07	Hotel Espejo d	6.98	182	Pn	Pn	00 11 12.4	-2.1
LCO	Las Campanas	7.11	17	*e*P	Pn	00 11 16.6	0.0
GO07	Milladeo Hill,	7.27	183		Pn	00 11 17.0	-1.6
LL02	Futaleuf	7.39	173		Pn	00 11 19.8	-0.4
AC04	Llanos de Chal	7.81	13	Pn	Pn	00 11 25.3	-0.7
GO03	Copiap	8.58	17	Pn	Pn	00 11 37.0	+0.4
TRQA	Tornquist	9.15	107	P	Pn	00 11 47.4	+2.9
TRQA	Tornquist	9.15	107	Pn	Pn	00 11 47.4	+2.9
AC02	Maricunga	9.60	22	Pn	Pn	00 11 51.4	+0.4
COYC	Coyhaique	9.74	176	Pn	Pn	00 11 52.1	-0.4
PB14	IPOC Station P	11.42	12		Pn	00 12 14.4	-1.4
PB15	IPOC Station P	12.98	15		Pn	00 12 35.1	-1.9
PB06	IPOC Station P	13.45	14		Pn	00 12 43.5	+0.1
LVC	Limon Verde	13.68	16	Pn	Pn	00 12 45.2	-1.5
	comp=E,1.0nm,0.3s,baz=184,slow=11,SNR=6.6						
LVC				Sn	Sn	00 15 14.7	-4.4
	comp=E,0.4nm,0.3s,baz=276,slow=3.7,SNR=2.8						
LVC				LR	LR	00 18 40.1	
	comp=E,11µm,18.1s,baz=205,slow=40						
LVC	Limon Verde	13.68	16	*e*P	Pn	00 12 46.4	-0.4
LVC	Limon Verde	13.68	16		Pn	00 12 44.6	-2.1
PB04	IPOC Station P	13.71	12	Pn	Pn	00 12 45.4	-1.5
PB07	IPOC Station P	14.35	12		Pn	00 12 54.1	-1.5
PB09	IPOC Station P	14.40	14		Pn	00 12 56.8	+0.4
PB01	IPOC Station P	15.08	13		Pn	00 13 04.4	-1.3
PB01				IAmb	IAmb	00 13 15.9	
	comp=Z,196nm,1.2s						
ITQB	Itaqui	15.14	71	*e*P	Pn	00 13 06.5	+0.2
ITQB	Itaqui	15.14	71	Pn	Pn	00 13 06.2	-0.1
PATCX	Punta Patache	15.19	11		Pn	00 13 05.9	-1.1
PATCX				IAmb	IAmb	00 13 16.5	
	comp=Z,111nm,1.1s						
GO09	Cerro Castillo	15.43	178		Pn	00 13 09.1	-0.8
TA01	Diego Aracena	15.44	10		Pn	00 13 10.7	+0.4
TA01				IAmb	IAmb	00 13 20.4	
	comp=Z,146nm,1.1s						
TA02	Huaiquique	15.73	10		Pn	00 13 14.6	+0.5
TA02				IAmb	IAmb	00 13 23.3	
	comp=Z,165nm,1.0s						
MG05	Puerto Natales	15.83	179		Pn	00 13 12.9	-2.2
MG05				IAmb	IAmb	00 13 29.4	
	comp=Z,367nm,1.5s						
PB08	IPOC Station P	16.02	13		Pn	00 13 17.2	-1.0
PB11	IPOC Station P	16.31	12		Pn	00 13 22.9	+1.2
PB11				IAmb	IAmb	00 13 30.4	
	comp=Z,245nm,1.0s						
CPUP	Villa Florida	16.47	59	Pn	Pn	00 13 22.1	-1.5
	comp=Z,0.5nm,0.3s,baz=211,slow=9.5,SNR=6.0						
CPUP				Lg	Lg	00 18 11.6	
	comp=Z,0.1nm,0.3s,baz=161,slow=20,SNR=0.9						
CPUP	Villa Florida	16.47	59	P	Pn	00 13 24.5	+0.9
CPUP				pmax	pmax		
	comp=Z,34nm,1.1s						
CPUP	Villa Florida	16.47	59	*e*P	Pn	00 13 23.8	+0.3
CPUP	Villa Florida	16.47	59		Pn	00 13 24.5	+0.9
PLTB	Pedras Altas	16.69	81	*e*P	Pn	00 13 26.9	+0.6
PLTB	Pedras Altas	16.69	81		Pn	00 13 26.3	0.0
MG02	Cerro Sombrero	17.15	172		Pn	00 13 31.9	0.0
CPSB	Cacapava Do Su	17.32	77	*e*P	P	00 13 35.4	-0.2
PB12	IPOC Station P	17.34	9		Pn	00 13 34.0	-0.6
GO10	Punta Arenas	17.36	176	P	Pn	00 13 35.0	+0.4
GO10				IAmb	IAmb	00 13 45.2	
	comp=Z,218nm,1.1s						
PB16	IPOC Station P	17.73	11		Pn	00 13 40.1	+0.2
PB16				IAmb	IAmb	00 14 00.6	
	comp=Z,390nm,1.8s						
EFI	East Falkland	19.12	150	P	P	00 13 55.2	-0.1
EFI				pmax	pmax		
	comp=Z,76nm,0.8s						
EFI	East Falkland	19.12	150	P	P	00 13 55.1	-0.1

USHA	**Ushuaia**	**19.25**	**172**	P	**Pn**	**00 13 57.9**	**+0.2**
	comp=Z,1.5nm,0.3s,baz=347,slow=6.0,SNR=19						
USHA				LR	LR	00 22 12.8	
	comp=Z,7μm,18.6s,baz=350,slow=40						
MG01	**Puerto William**	**19.45**	**171**	P	**Pn**	**00 13 59.8**	**-0.3**
ITAB	**Concordia**	**19.78**	**70**	eP	**Pn**	**00 14 04.3**	**0.0**
ITAB	**Concordia**	**19.78**	**70**	P	**Pn**	**00 14 04.2**	**0.0**
ITAB				IAmb	IAmb	00 14 20.5	
	comp=Z,110nm,0.8s						
CNLB	**Canela**	**19.81**	**77**	eP	**Pn**	**00 14 04.6**	**0.0**
LPAZ	**La Paz**	**19.98**	**14**	P	**Pn**	**00 14 07.9**	**+0.7**
	comp=Z,22nm,0.8s,baz=185,slow=7.6,SNR=40						
LPAZ	**La Paz**	**19.98**	**14**	eP	**P**	**00 14 06.5**	**+1.0**
LPAZ	**La Paz**	**19.98**	**14**	P	**P**	**00 14 06.0**	**+0.5**
PTGB	**Pitanga**	**21.23**	**64**	eP	**P**	**00 14 19.3**	**+0.8**
TER01	**Tubaro-SC**	**21.51**	**77**	eP	**P**	**00 14 22.1**	**+0.6**
TRCB	**Terra Rica**	**22.01**	**59**	P	**P**	**00 14 26.6**	**-0.2**
TRCB				IAmb	IAmb	00 14 31.3	
	comp=Z,173nm,0.9s						
SIV	**San Ignacio**	**22.49**	**32**	P	**P**	**00 14 33.1**	**+1.0**
	comp=Z,118nm,1.0s,baz=220,slow=12,SNR=109						
PCMB	**Pacaembu**	**23.75**	**59**	eP	**P**	**00 14 45.5**	**+0.6**
PTLB	**Pontes e Lacer**	**23.84**	**35**	eP	**P**	**00 14 46.4**	**+0.7**
PTLB	**Pontes e Lacer**	**23.84**	**35**	P	**P**	**00 14 46.0**	**+0.3**
PTLB				IAmb	IAmb	00 14 49.0	
	comp=Z,92nm,1.0s						
NNA	**Nana**	**24.00**	**351**	P	**P**	**00 14 48.7**	**+1.4**
	comp=Z,5.4nm,0.4s,baz=208,slow=13,SNR=2.0						
NNA				LR	LR	00 22 10.3	
	comp=Z,3μm,19.6s,baz=178,slow=32						
PP1B	**Ponte de Pedra**	**24.31**	**46**	eP	**P**	**00 14 51.2**	**+1.1**
PET01	**Itanhaem-SP**	**25.05**	**70**	eP	**P**	**00 14 58.8**	**+1.9**
SALV	**Santo Antonio**	**25.21**	**42**	eP	**P**	**00 14 59.8**	**+1.6**
VILB	**Vilhena**	**25.58**	**30**	eP	**P**	**00 15 02.8**	**+1.1**
VILB	**Vilhena**	**25.58**	**30**	P	**P**	**00 15 01.9**	**+0.2**
ITRB	**Iturama**	**25.65**	**57**	eP	**P**	**00 15 03.7**	**+1.4**
RCLB	**Rio Claro- Sao**	**25.93**	**66**	eP	**P**	**00 15 05.9**	**+1.0**
VAO	**Valinhos**	**26.01**	**68**	eP	**P**	**00 15 06.7**	**+1.1**
BB19B	**Bebedouro**	**26.03**	**62**	eP	**P**	**00 15 08.6**	**+2.7**
ETMB	**Extrema**	**26.66**	**15**	eP	**P**	**00 15 13.0**	**+1.6**
ETMB	**Extrema**	**26.66**	**15**	P	**P**	**00 15 12.4**	**+1.1**
ETMB				IAmb	IAmb	00 15 18.7	
	comp=Z,92nm,1.1s						
PARB	**Paraibuna**	**26.84**	**70**	eP	**P**	**00 15 15.4**	**+2.3**
ARAG	**Araguaiana, MT**	**27.62**	**49**	eP	**P**	**00 15 21.6**	**+1.5**
CZSB	**Cruzeiro do Su**	**27.99**	**1**	eP	**P**	**00 15 25.1**	**+1.7**
CZSB	**Cruzeiro do Su**	**27.99**	**1**	P	**P**	**00 15 23.5**	**+0.2**
CZSB				IAmb	IAmb	00 15 32.5	
	comp=Z,44nm,1.0s						
SAML	**Samuel**	**28.26**	**21**	P	**P**	**00 15 26.3**	**+0.5**
SAML				pmax	pmax		
	comp=Z,13nm,0.9s						
SAML				MLR	MLR		
	comp=Z,5μm,22.0s						
SAML	**Samuel**	**28.26**	**21**	P	**P**	**00 15 26.3**	**+0.5**
IPMB	**Ipameri, GO**	**28.30**	**58**	eP	**P**	**00 15 26.4**	**+0.2**
PDRB	**Porto dos Gac**	**28.30**	**36**	eP	**P**	**00 15 26.8**	**+0.6**
MAN01	**Angra dos Reis**	**28.37**	**71**	eP	**P**	**00 15 28.3**	**+1.5**
BSCB	**Bom Sucesso**	**28.83**	**67**	eP	**P**	**00 15 31.8**	**+0.9**
VAS01	**Vassouras-RJ**	**29.09**	**70**	eP	**P**	**00 15 33.1**	**-0.1**
ESPZ	**Base Esperanza**	**29.30**	**165**	P	**P**	**00 15 35.1**	**+0.5**
CLDB	**Colider**	**29.39**	**36**	eP	**P**	**00 15 36.9**	**+1.0**
PMSA	**Palmer Station**	**29.47**	**172**	eP	**P**	**00 15 38.0**	**+2.0**
DUB01	**Friburgo-RJ**	**30.02**	**71**	eP	**P**	**00 15 43.1**	**+1.6**
BDFB	**Brasilia**	**30.09**	**54**	P	**P**	**00 15 42.1**	**-0.1**
	comp=Z,25nm,1.0s,baz=224,slow=5.8,SNR=23						
BDFB	**Brasilia**	**30.09**	**54**	P	**P**	**00 15 42.1**	**-0.1**
BDFB				IAmb	IAmb	00 15 50.2	
	comp=Z,52nm,1.1s						
CAM01	**Campos-RJ**	**30.72**	**72**	eP	**P**	**00 15 49.1**	**+1.6**
ORCD	**Orcadas**	**30.78**	**153**	P	**P**	**00 15 47.8**	**+0.2**
ORCD				IAmb	IAmb	00 16 18.5	
	comp=Z,80nm,1.2s						
SNDB	**Serra Nova Dou**	**30.86**	**45**	eP	**P**	**00 15 49.3**	**+0.4**
DIAM	**Diamantina, MG**	**31.31**	**64**	eP	**P**	**00 15 54.0**	**+1.0**
TBTG	**Tabatinga, AM**	**31.64**	**6**	eP	**P**	**00 15 56.7**	**+1.0**
TBTG	**Tabatinga, AM**	**31.64**	**6**	eP	**P**	**00 15 58.2**	**+2.5**
TBTG	**Tabatinga, AM**	**31.64**	**6**	P	**P**	**00 15 56.3**	**+0.6**
RPN	**Rapa Nui**	**31.97**	**275**	IAMs_20	IAMs_20	00 25 08.8	
	comp=Z,6μm,19.0s						
MC01	**Montes Claros**	**32.15**	**61**	eP	**P**	**00 16 01.8**	**+1.5**
PEXB	**Peixe**	**32.55**	**50**	eP	**P**	**00 16 05.0**	**+1.3**
SJMB	**Sao Joao De Ma**	**32.90**	**67**	eP	**P**	**00 16 06.9**	**+0.1**
NPGB	**Novo Progresso**	**32.95**	**34**	eP	**P**	**00 16 07.6**	**+0.3**
JANB	**Januaria**	**33.01**	**59**	eP	**P**	**00 16 08.1**	**+0.2**
BSFB	**Barra de Sao F**	**33.07**	**68**	eP	**P**	**00 16 08.9**	**+0.6**
RIB01	**Linhares ES**	**33.13**	**69**	eP	**P**	**00 16 09.6**	**+0.8**
NAN01	**Guarapari, ES**	**34.22**	**67**	eP	**P**	**00 16 18.6**	**+0.3**
MACA	**Manacapuru-AM**	**34.49**	**22**	eP	**P**	**00 16 21.1**	**+0.5**
MACA	**Manacapuru-AM**	**34.49**	**22**	P	**P**	**00 16 20.7**	**+0.1**
SDBA	**SAO DESIDERIO**	**34.50**	**55**	eP	**P**	**00 16 21.4**	**+0.6**
ITTB	**Itaituba**	**35.18**	**31**	eP	**P**	**00 16 26.5**	**0.0**
GUA01	**Guaratinga, BA**	**35.24**	**66**	eP	**P**	**00 16 27.4**	**+0.3**
SMTB	**Santa Maria do**	**35.52**	**47**	eP	**P**	**00 16 29.9**	**+0.3**
CMC01	**Camacan, BA**	**36.23**	**64**	eP	**P**	**00 16 36.2**	**+0.5**
OTAV	**Otavalo**	**36.25**	**351**	P	**P**	**00 16 36.4**	**+0.2**
OTAV				pmax	pmax		
	comp=Z,29nm,1.3s						
OTAV	**Otavalo**	**36.25**	**351**	eP	**P**	**00 16 36.2**	**0.0**
OTAV	**Otavalo**	**36.25**	**351**	eP	**P**	**00 16 37.8**	**+1.5**
OTAV	**Otavalo**	**36.25**	**351**	P	**P**	**00 16 36.4**	**+0.2**
PRPB	**Parauapebas**	**36.45**	**41**	eP	**P**	**00 16 39.3**	**+1.8**
PTGA	**Pitinga**	**37.01**	**22**	P	**P**	**00 16 42.6**	**+0.4**
	comp=Z,44nm,0.9s,baz=206,slow=9.8,SNR=48						
PTGA	**Pitinga**	**37.01**	**22**	P	**P**	**00 16 42.6**	**+0.4**
GCUF	**Volcan Galeras**	**37.10**	**353**	eP	P	00 16 48.5	+4.9
GDU01	**Guandu, BA**	**37.27**	**62**	eP	**P**	**00 16 43.8**	**-0.7**
MACC	**Macarena, Meta**	**37.80**	**359**	eP	**P**	**00 16 48.3**	**-0.7**
SOTA	**Rioblanco**	**37.93**	**354**	eP	**P**	**00 16 52.5**	**+2.0**
MALB	**Monte Alegre**	**38.06**	**32**	eP	**P**	**00 16 51.5**	**+0.4**
PCON	**Cinco Dias**	**38.10**	**355**	eP	**P**	**00 16 55.5**	**+3.4**
POPC	**Popayan, Colom**	**38.34**	**354**	eP	**P**	**00 16 55.7**	**+2.0**
PAYG	**Puerto Ayora**	**38.48**	**332**	IAMs_20	IAMs_20	00 29 42.5	
	comp=Z,4μm,18.0s						
PRAC	**Prado**	**39.39**	**357**	eP	**P**	**00 17 05.0**	**+2.6**
ORTC	**Ortega, Tolima**	**39.60**	**357**	eP	**P**	**00 17 04.7**	**+0.6**
YOTC	**Yotoco, Valle**	**39.74**	**355**	eP	**P**	**00 17 07.6**	**+2.2**
BOAV	**Boa Vista**	**39.82**	**20**	P	**P**	**00 17 06.0**	**+0.2**
PTGC	**Puerto Gaitan,**	**39.85**	**1**	eP	**P**	**00 17 07.5**	**+1.5**
ANIL	**Santa Ana**	**40.19**	**356**	eP	**P**	**00 17 12.8**	**+3.6**
MCPB	**Macapa, AP**	**40.36**	**34**	eP	**P**	**00 17 10.8**	**+0.5**
ROSC	**El Rosal**	**40.49**	**358**	P	**P**	**00 17 14.7**	**+2.8**
	comp=Z,11nm,0.4s,baz=153,slow=17,SNR=4.2						
ROSC	**El Rosal**	**40.49**	**358**	P	**P**	**00 17 12.2**	**+0.3**
ROSC				pmax	pmax		
	comp=Z,29nm,1.1s						
ROSC	**El Rosal**	**40.49**	**358**	P	**P**	**00 17 12.2**	**+0.3**
PLMC	**San Jos del P**	**40.65**	**355**	eP	**P**	**00 17 12.1**	**-0.7**
GUY2C	**Guyana, Caldas**	**40.91**	**357**	eP	**P**	**00 17 17.1**	**+1.6**
NORC	**Norcasia**	**41.23**	**357**	eP	**P**	**00 17 21.2**	**+3.6**
RUSC	**La Rusia**	**41.52**	**360**	eP	**P**	**00 17 22.1**	**+1.7**
CBOC	**Ciudad Bolivar**	**41.58**	**356**	eP	**P**	**00 17 21.2**	**+0.6**
HELC	**Santa Helena**	**41.88**	**356**	eP	**P**	**00 17 22.0**	**-1.2**
TAMC	**Tame, Arauca**	**42.08**	**2**	eP	**P**	**00 17 25.1**	**+0.6**
PTBC	**PUERTO BERRIO,**	**42.18**	**358**	eP	**P**	**00 17 22.8**	**-2.5**
ROSB	**Rosrio**	**42.33**	**46**	eP	**P**	**00 17 28.3**	**+1.7**
DBBC	**Dabeiba**	**42.74**	**355**	eP	**P**	**00 17 31.9**	**+1.9**
ELOV	**Elorza**	**42.76**	**5**	eP	**P**	**00 17 29.6**	**-0.3**
ZARC	**Zaragoza, Cauc**	**43.14**	**357**	eP	**P**	**00 17 34.0**	**+0.9**
ZARC	**Zaragoza, Cauc**	**43.14**	**357**	P	**P**	**00 17 33.0**	**-0.1**
OCAC	**Ocana**	**43.85**	**360**	P	**P**	**00 17 38.5**	**-0.5**
SOCV	**Socops**	**43.95**	**3**	eP	**P**	**00 17 39.6**	**0.0**
SMLC	**San Martn de**	**44.42**	**359**	eP	**P**	**00 17 45.5**	**+2.1**
MOTC	**Monteria, Cord**	**44.45**	**356**	P	**P**	**00 17 44.0**	**+0.3**
SDV	**Santo Domingo**	**44.55**	**3**	eP	**P**	**00 17 45.5**	**+0.9**
SDV	**Santo Domingo**	**44.55**	**3**	eP	**P**	**00 17 45.5**	**+0.9**
SDV	**Santo Domingo**	**44.55**	**3**	P	**P**	**00 17 44.6**	**-0.1**
SDV				IAmb	IAmb	00 17 59.2	
	comp=Z,30nm,0.8s						
BAUV	**El Baul**	**44.80**	**7**	P	**P**	**00 17 46.6**	**+0.1**
MDP	**Montagnes des**	**45.02**	**29**	P	**P**	**00 17 48.7**	**+0.4**
	comp=Z,44nm,1.0s,baz=214,slow=7.8,SNR=12						
LL6C	**La Loma 6 Bece**	**45.34**	**360**	eP	**P**	**00 17 49.8**	**-0.9**
SJCC	**San Jacinto, C**	**45.54**	**357**	eP	**P**	**00 17 54.4**	**+2.0**
SJCC	**San Jacinto, C**	**45.54**	**357**	P	**P**	**00 17 52.5**	**+0.1**
SJCC				IAmb	IAmb	00 17 57.5	
	comp=Z,49nm,1.1s						
SRBA	**San Rafael, Bu**	**45.87**	**346**	P	**P**	**00 17 54.9**	**-0.1**
PCRV	**Puerto La Cruz**	**46.47**	**12**	P	**P**	**00 18 01.4**	**+1.8**
	comp=Z,36nm,0.9s,baz=94,slow=2.0,SNR=7.8						
RIMA	**Rio Macho**	**46.50**	**345**	P	**P**	**00 17 59.9**	**-0.2**
RIMA				IAmb	IAmb	00 18 03.2	
	comp=Z,44nm,1.6s						
BIRV	**Birongo**	**46.52**	**9**	P	**P**	**00 18 00.3**	**+0.3**
BIRV				IAmb	IAmb	00 18 04.1	
	comp=Z,44nm,1.0s						
JTS	**Las Juntas de**	**47.24**	**344**	⇓iP	**P**	**00 18 08.7**	**+3.0**
JTS				pmax	pmax		
	comp=Z,20nm,1.5s						
URIC	**Uribia, Colomb**	**47.30**	**1**	P	**P**	**00 18 04.7**	**-1.4**
URIC				IAmb	IAmb	00 18 15.5	
	comp=Z,16nm,0.7s						
VNA3	**Neumayer Olymp**	**47.98**	**157**	P	**P**	**00 18 10.8**	**-0.1**
VNA1	**Neumayer--Stat**	**48.32**	**156**	P	**P**	**00 18 14.2**	**+0.7**
TOSP	**Speyside**	**48.37**	**17**	P	**P**	**00 18 15.3**	**+0.9**
VNA2	**Neumayer--Watz**	**48.65**	**156**	P	**P**	**00 18 16.1**	**+0.1**
	baz=296,slow=8.3						
GRGR	**Grenville**	**48.93**	**15**	P	**P**	**00 18 19.3**	**+0.6**
GRGR				IAMs_20	IAMs_20	00 42 32.2	
	comp=Z,3μm,19.0s						
BOAB	**BOACO BROADBAN**	**49.49**	**344**	IAMs_20	IAMs_20	00 36 56.1	
	comp=Z,2μm,18.0s						
MATN	**Matagalpa**	**50.01**	**344**	P	**P**	**00 18 26.7**	**-0.4**
SVB	**Belmont**	**50.12**	**15**	P	**P**	**00 18 28.0**	**+0.2**
SNAA	**Sanae**	**50.21**	**157**	P	**P**	**00 18 27.8**	**-0.1**
SNAA	**Sanae**	**50.21**	**157**	c iP	**P**	**00 18 28.0**	**0.0**
SNAA				pmax	pmax		
	comp=Z,154nm,1.2s						
SNAA	**Sanae**	**50.21**	**157**	P	**P**	**00 18 28.2**	**+0.2**
MCLT	**Moule a Chique**	**50.61**	**15**	P	**P**	**00 18 31.8**	**+0.3**
MPOM	**Morne Pois Mar**	**51.34**	**15**	eP	P	00 18 46.2	+9.3
MPOM	**Morne Pois Mar**	**51.34**	**15**	P	**P**	**00 18 37.1**	**+0.2**
BIM	**Bigot**	**51.36**	**15**	P	**P**	**00 18 38.1**	**+1.0**
TGUH	**Tegucigalpa,Un**	**51.42**	**342**	P	**P**	**00 18 37.0**	**-0.7**
TGUH				IAmb	IAmb	00 18 58.6	
	comp=Z,44nm,1.1s						
FDF	**Fort de France**	**51.56**	**15**	P	**P**	**00 18 39.2**	**+0.5**
FDF				pmax	pmax		
	comp=Z,149nm,1.2s						
FDF				MLR	MLR		
	comp=Z,2μm,19.0s						
FDF	**Fort de France**	**51.56**	**15**	eP	P	00 18 50.2	+12
FDF	**Fort de France**	**51.56**	**15**	P	**P**	**00 18 39.2**	**+0.5**
SVN	**Savane Anatole**	**51.66**	**15**	IAMs_20	IAMs_20	00 43 55.6	
	comp=Z,2μm,21.0s						
APG	**El Apazote**	**53.19**	**339**	LR	LR	00 36 25.8	
	comp=Z,1μm,21.0s,baz=162,slow=30						
MLPR	**Magueyes Islan**	**53.83**	**7**	P	**P**	**00 18 55.1**	**-0.2**
SEUS	**St. Eustatius**	**53.91**	**12**	IAMs_20	IAMs_20	00 45 31.0	
	comp=Z,3μm,18.0s						
OBIP	**Obispado Ponce**	**53.95**	**8**	P	**P**	**00 18 56.5**	**+0.3**
CELP	**Cerrillos**	**53.98**	**8**	P	**P**	**00 18 56.2**	**-0.3**
SJG	**San Juan**	**54.06**	**8**	P	**P**	**00 18 57.3**	**+0.2**
	comp=Z,45nm,1.0s,baz=217,slow=3.2,SNR=9.2						
SJG	**San Juan**	**54.06**	**8**	P	**P**	**00 18 57.0**	**0.0**
SJG				IAmb	IAmb	00 18 58.9	
	comp=Z,59nm,1.1s						
CBYP	**Canovanas**	**54.26**	**8**	P	**P**	**00 18 58.2**	**-0.4**
QSPA	**South Pole Qui**	**54.39**	**180**	P	**P**	**00 18 58.9**	**-0.3**
QSPA				IAmb	IAmb	00 19 19.1	
	comp=Z,48nm,1.0s						
NVL	**N'lazarevskaya**	**54.97**	**156**	⇓iP	P	00 19 09.0	+5.9
NVL				pmax	pmax		
	comp=Z,98nm,1.5s						
CMIG	**Matias Romero**	**56.56**	**335**	LR	LR	00 38 29.4	
	comp=Z,746nm,19.6s,baz=167,slow=31						
TLIG	**Tlapa**	**58.35**	**331**	P	**P**	**00 19 28.7**	**+0.8**
SOR	**Soroa**	**59.07**	**349**	P	**P**	**00 19 32.5**	**-0.2**
SOR				pmax	pmax		
	comp=Z,66nm,1.3s						
SOR	**Soroa**	**59.07**	**349**	P	**P**	**00 19 32.5**	**-0.2**
SBA	**Scott Base**	**61.09**	**192**	P	**P**	**00 19 46.4**	**+0.5**
SBA				pmax	pmax		
	comp=Z,41nm,1.4s						
SBA	**Scott Base**	**61.09**	**192**	P	**P**	**00 19 46.4**	**+0.5**
SBA				IAmb	IAmb	00 20 11.3	
	comp=Z,41nm,1.4s						
VNDA	**Vanda**	**62.12**	**192**	P	**P**	**00 19 53.7**	**+0.8**
VNDA				pmax	pmax		
	comp=Z,17nm,1.1s						
VNDA	**Vanda**	**62.12**	**192**	P	**P**	**00 19 53.7**	**+0.8**
VNDA				IAmb	IAmb	00 20 06.6	
	comp=Z,17nm,1.1s						
SHEL	**Horse Pasture**	**62.58**	**90**	P	**P**	**00 19 58.4**	**+1.5**
SHEL				pmax	pmax		
	comp=Z,76nm,1.0s						
SHEL	**Horse Pasture**	**62.58**	**90**	P	**P**	**00 19 58.4**	**+1.5**
SHEL	**Horse Pasture**	**62.58**	**90**	IAMs_20	IAMs_20	00 43 15.9	
	comp=Z,3μm,20.0s						
SYO	**Syowa Base**	**64.47**	**158**	⇑epP	**P**	**00 20 09.1**	**+0.6**
ZAIG	**Zacatecas**	**64.64**	**330**	P	**P**	**00 20 11.6**	**+1.1**
H06E1	**SOCORRO T-PHAS**	**65.09**	**320**	T	T	01 31 03.1	
	SNR=8.5						
TBI	**Tubuai**	**66.07**	**258**	eLR	LR	00 40 10.0	
	comp=Z,3μm,25.8s,baz=119						
TAOE	**Nuku Hiva Isla**	**66.30**	**276**	eS	**S**	**00 29 14.1**	**+2.9**
	comp=Z,514nm,22.4s						
TAOE	**Nuku Hiva Isla**	**66.30**	**276**	eLR	LR	00 40 16.7	
	comp=Z,2μm,29.2s,baz=142						
553A	**Crawfordville**	**66.55**	**349**	P	**P**	**00 20 22.9**	**+0.6**
TIGA	**Tifton**	**67.66**	**350**	P	**P**	**00 20 29.4**	**+0.1**
	baz=171						
MEH	**Mehetia**	**67.77**	**264**	eT	T	01 33 58.8	
	comp=Z,141nm,0.2s						
352A	**Blakely**	**67.89**	**349**	P	**P**	**00 20 31.3**	**+0.4**
352A				IAmb	IAmb	00 20 42.4	
	comp=Z,43nm,1.2s						
BRAL	**Brewton**	**67.94**	**347**	P	**P**	**00 20 32.2**	**+1.0**
	baz=168						
833A	**Chaparral WMA,**	**68.48**	**335**	P	**P**	**00 20 35.2**	**+0.5**
	baz=158						
154A	**Montrose**	**68.75**	**351**	P	**P**	**00 20 36.3**	**+0.1**
HKT	**Hockley**	**68.86**	**339**	⇓iP	**P**	**00 20 37.9**	**+1.0**
HKT				pmax	pmax		
	comp=Z,30nm,2.5s						
NHSC	**New Hope**	**68.92**	**354**	P	**P**	**00 20 37.1**	**-0.2**
	baz=174						
344A	**Westbrook Farm**	**68.97**	**344**	P	**P**	**00 20 38.8**	**+1.2**
344A				IAmb	IAmb	00 20 45.5	
	comp=Z,39nm,1.1s						
TIAR	**Tiarei**	**68.97**	**263**	eT	T	01 35 27.4	
	comp=Z,2.9nm,0.2s						
152A	**Waverly Hall**	**69.03**	**350**	P	**P**	**00 20 37.7**	**-0.2**
152A				IAmb	IAmb	00 20 49.2	
	comp=Z,21nm,1.2s						
PAE	**Paea**	**69.11**	**263**	eT	T	01 35 38.7	
	comp=Z,2.0nm,0.3s						
PPT2	**Papeete2**	**69.14**	**263**	eS	**S**	**00 29 49.0**	**+3.8**
	comp=Z,1μm,23.0s						
PPT2	**Papeete2**	**69.14**	**263**	eLR	LR	00 41 33.2	
	comp=Z,4μm,24.2s,baz=120						
PPT	**Papeete**	**69.15**	**263**	LR	LR	00 43 04.9	
	comp=Z,2μm,18.8s,baz=97,slow=29						
LPIG	**La Paz**	**69.25**	**324**	LR	LR	00 44 38.3	
	comp=Z,1μm,18.0s,baz=154,slow=30						
342A	**Flagon Creek P**	**69.27**	**342**	P	**P**	**00 20 40.3**	**+0.8**
GOGA	**Godfrey**	**69.58**	**351**	P	**P**	**00 20 41.1**	**-0.3**
GOGA				pmax	pmax		
	comp=Z,26nm,1.4s						
GOGA	**Godfrey**	**69.58**	**351**	P	**P**	**00 20 41.1**	**-0.3**
GOGA				IAmb	IAmb	00 20 43.3	
	comp=Z,26nm,1.4s						
GOGA	**Godfrey**	**69.58**	**351**	P	**P**	**00 20 41.4**	**0.0**
	baz=171						
HPIG		**69.61**	**329**	P	**P**	**00 20 42.4**	**+0.4**
HPIG				IAmb	IAmb	00 20 52.5	
	comp=Z,18nm,1.0s						
VBMS	**Vicksburg**	**69.66**	**344**	P	**P**	**00 20 42.1**	**+0.3**
VBMS				IAmb	IAmb	00 20 44.4	
	comp=Z,46nm,1.1s						
VBMS	**Vicksburg**	**69.66**	**344**	P	**P**	**00 20 41.4**	**-0.4**
	baz=165						
Z51A	**Franklin**	**69.73**	**349**	P	**P**	**00 20 42.6**	**+0.3**
146A	**Union**	**69.75**	**346**	P	**P**	**00 20 43.3**	**+0.9**
Y52A	**Lilburn**	**70.11**	**350**	P	**P**	**00 20 44.7**	**+0.1**
Y52A				IAmb	IAmb	00 20 55.7	
	comp=Z,30nm,1.1s						
435B	**Jarrell**	**70.17**	**338**	P	**P**	**00 20 45.0**	**0.0**
	baz=159						
JSC	**Jenkinsville**	**70.19**	**353**	P	**P**	**00 20 45.6**	**+0.5**
JSC				pmax	pmax		
	comp=Z,18nm,1.0s						
JSC	**Jenkinsville**	**70.19**	**353**	P	**P**	**00 20 45.6**	**+0.5**
NATX	**Nacogdoches**	**70.24**	**341**	P	**P**	**00 20 46.3**	**+0.9**
NATX	**Nacogdoches**	**70.24**	**341**	P	**P**	**00 20 45.8**	**+0.3**
	baz=162						
143A	**Socs Landing,**	**70.32**	**344**	P	**P**	**00 20 46.9**	**+1.0**
JCT	**Junction City**	**70.60**	**336**	P	**P**	**00 20 48.2**	**+0.5**
JCT				pmax	pmax		
	comp=Z,27nm,1.0s						
JCT	**Junction City**	**70.60**	**336**	P	**P**	**00 20 48.2**	**+0.5**
JCT				IAmb	IAmb	00 21 14.9	
	comp=Z,27nm,1.0s						
JCT	**Junction City**	**70.60**	**336**	P	**P**	**00 20 47.7**	**0.0**
	baz=157						
PAULI	**Pauline**	**70.78**	**352**	P	**P**	**00 20 49.5**	**+0.8**
PAULI				IAmb	IAmb	00 20 50.4	
	comp=Z,27nm,1.1s						
CNNC	**Cliffs of the**	**70.87**	**356**	P	**P**	**00 20 49.5**	**+0.4**
	baz=176						
X51A	**Calhoun**	**70.91**	**350**	P	**P**	**00 20 49.6**	**+0.1**
TXAR	**Lajitas Array**	**70.94**	**332**	P	**P**	**00 20 50.5**	**+0.6**
	comp=Z,3.8nm,0.6s,baz=152,slow=8.5,SNR=58						
TXAR				LR	LR	00 47 32.4	
	comp=Z,1μm,18.0s,baz=0.0,slow=32						
TXAR	**Lajitas Array**	**70.94**	**332**	P	**P**	**00 20 50.4**	**+0.4**
TX32	**Lajitas Array**	**70.94**	**332**	P	**P**	**00 20 50.4**	**+0.4**
FPAL	**Fort Paine**	**71.00**	**349**	P	**P**	**00 20 50.3**	**+0.3**
KMSC	**Kings Mountain**	**71.05**	**353**	P	**P**	**00 20 50.5**	**+0.2**
KMSC				IAmb	IAmb	00 20 51.8	
	comp=Z,21nm,1.0s						
KMSC	**Kings Mountain**	**71.05**	**353**	P	**P**	**00 20 50.8**	**+0.5**
	baz=173						
BG3	**Lake Jocassee**	**71.08**	**351**	P	**P**	**00 20 50.9**	**+0.4**
BG3				IAmb	IAmb	00 21 02.8	
	comp=Z,21nm,0.9s						
Z41A	**Richland Creek**	**71.18**	**343**	P	**P**	**00 20 52.1**	**+0.9**
	baz=163						
WHTX	**Lake Whitney,**	**71.25**	**338**	P	**P**	**00 20 51.9**	**+0.3**
WHTX	**Lake Whitney,**	**71.25**	**338**	P	**P**	**00 20 51.7**	**0.0**
	baz=160						
MAW	**Mawson**	**71.65**	**164**	P	**P**	**00 20 53.9**	**+0.2**
	comp=Z,29nm,1.0s,baz=238,slow=6.8,SNR=14						
MAW				LR	LR	00 52 25.2	
	comp=Z,1μm,19.2s,baz=229,slow=36						
MAW	**Mawson**	**71.65**	**164**	P	**P**	**00 20 54.4**	**+0.8**
MAW				pmax	pmax		
	comp=Z,12nm,1.2s						
MAW	**Mawson**	**71.65**	**164**	P	**P**	**00 20 54.4**	**+0.8**
WLAR	**White Oak Lake**	**71.67**	**342**	P	**P**	**00 20 55.0**	**+0.9**
WLAR				IAmb	IAmb	00 21 07.8	
	comp=Z,39nm,1.0s						
SWET	**Sewanee**	**71.71**	**349**	P	**P**	**00 20 54.7**	**+0.4**
TKL	**Tuckaleechee C**	**71.84**	**351**	P	**P**	**00 20 54.8**	**-0.3**
TKL				pmax	pmax		
	comp=Z,16nm,0.9s						
TKL	**Tuckaleechee C**	**71.84**	**351**	P	**P**	**00 20 54.8**	**-0.3**
PLAL	**Pickwick Lake**	**71.84**	**347**	P	**P**	**00 20 55.1**	**0.0**
PLAL				IAmb	IAmb	00 21 07.1	
	comp=Z,24nm,0.8s						
V51A	**Loudon**	**72.06**	**350**	P	**P**	**00 20 56.6**	**+0.2**
V51A				IAmb	IAmb	00 21 08.3	
	comp=Z,25nm,1.0s						
V48A	**Smith Brothers**	**72.36**	**348**	P	**P**	**00 20 58.0**	**-0.3**
X40A	**Basin Creek Fa**	**72.36**	**343**	P	**P**	**00 20 58.6**	**+0.4**
	baz=164						
ABTX	**Abilene, Hawle**	**72.52**	**337**	P	**P**	**00 20 59.5**	**+0.2**
ABTX				IAmb	IAmb	00 21 12.0	
	comp=Z,31nm,0.8s						
ABTX	**Abilene, Hawle**	**72.52**	**337**	P	**P**	**00 20 59.3**	**+0.1**
	baz=158						
MIAR	**Mount Ida**	**72.60**	**342**	P	**P**	**00 20 59.8**	**+0.2**
MIAR				pmax	pmax		
	comp=Z,35nm,1.7s						
MIAR	**Mount Ida**	**72.60**	**342**	P	**P**	**00 20 59.8**	**+0.2**
MIAR				IAmb	IAmb	00 21 12.6	
	comp=Z,35nm,1.6s						
MIAR	**Mount Ida**	**72.60**	**342**	P	**P**	**00 21 00.7**	**+1.0**
	baz=163,SNR=7.1						
CLTN	**Cedars of Leba**	**72.63**	**349**	P	**P**	**00 20 59.9**	**+0.1**
CLTN				IAmb	IAmb	00 21 11.7	
	comp=Z,53nm,1.2s						
TZTN	**Tazewell**	**72.68**	**351**	P	**P**	**00 21 00.4**	**+0.3**
TZTN				IAmb	IAmb	00 21 02.1	
	comp=Z,31nm,1.1s						
TZTN	**Tazewell**	**72.68**	**351**	P	**P**	**00 21 00.3**	**+0.3**
	baz=171						
T60A	**Surry**	**72.70**	**357**	P	**P**	**00 21 01.1**	**+0.9**
MBO	**M'Bour**	**72.85**	**57**	P	**P**	**00 21 02.6**	**+1.0**
W41B	**Gary Mavity, V**	**72.89**	**344**	P	**P**	**00 21 01.7**	**+0.4**
	baz=164,SNR=10.0						
WVT	**Waverly**	**72.92**	**348**	P	**P**	**00 21 01.2**	**-0.3**
WVT				pmax	pmax		
	comp=Z,60nm,1.0s						
WVT	**Waverly**	**72.92**	**348**	P	**P**	**00 21 01.2**	**-0.3**
WVT	**Waverly**	**72.92**	**348**	P	**P**	**00 21 01.2**	**-0.3**
	baz=168						
WHAR	**Wooly Hollow**	**73.01**	**344**	P	**P**	**00 21 02.1**	**0.0**
WHAR				IAmb	IAmb	00 21 13.9	
	comp=Z,44nm,1.1s						
BLA	**Blacksburg**	**73.01**	**354**	P	**P**	**00 21 02.9**	**+0.8**
	baz=174						
LOOK	**Love County**	**73.04**	**339**		**P**	**00 21 02.8**	**+0.5**
LOOK				IAmb	IAmb	00 21 16.4	
	comp=Z,25nm,1.0s						
W39A	**Magazine**	**73.27**	**342**	P	**P**	**00 21 04.3**	**+0.7**
	baz=163,SNR=18						
T50A	**Nancy**	**73.32**	**350**	P	**P**	**00 21 03.2**	**-0.6**
S57A	**Dark Hollow, R**	**73.44**	**355**	P	**P**	**00 21 04.4**	**-0.2**
S57A				IAmb	IAmb	00 21 06.4	
	comp=Z,29nm,1.1s						
LCAR	**Lake Charles**	**73.50**	**345**	P	**P**	**00 21 04.8**	**-0.2**
LCAR				IAmb	IAmb	00 21 16.9	
	comp=Z,34nm,0.8s						
R58B	**Mineral**	**73.58**	**356**	P	**P**	**00 21 06.0**	**+0.7**
R58B				IAmb	IAmb	00 21 08.5	
	comp=Z,25nm,1.1s						
MNTX	**Cornudas Mount**	**73.71**	**332**	P	**P**	**00 21 05.9**	**-0.5**
MNTX				IAMs_20	IAMs_20	00 48 53.0	
	comp=Z,2μm,19.0s						
MNTX	**Cornudas Mount**	**73.71**	**332**	P	**P**	**00 21 06.1**	**-0.2**
	baz=153						
S51A	**Beattyville**	**73.77**	**351**	P	**P**	**00 21 06.6**	**+0.2**
S51A				IAmb	IAmb	00 21 18.0	
	comp=Z,39nm,1.1s						
X34A	**Smith Ranch, M**	**73.80**	**339**		**P**	**00 21 07.5**	**+0.7**
X34A				IAmb	IAmb	00 21 19.4	
	comp=Z,36nm,0.9s						
PBMO	**Poplar Bluff**	**74.04**	**346**	P	**P**	**00 21 08.1**	**0.0**
PBMO				IAmb	IAmb	00 21 19.6	
	comp=Z,26nm,0.8s						
U40A	**Yellville**	**74.16**	**344**	P	**P**	**00 21 08.9**	**+0.1**
U40A				IAmb	IAmb	00 21 20.9	
	comp=Z,24nm,0.8s						
U40A	**Yellville**	**74.16**	**344**	P	**P**	**00 21 09.2**	**+0.4**
	baz=164,SNR=16						
EPT	**El Paso**	**74.22**	**331**	IAMs_20	IAMs_20	00 48 18.3	
	comp=Z,1μm,21.0s						
R53A	**Hurricane**	**74.27**	**353**	P	**P**	**00 21 09.9**	**+0.5**
R53A				IAmb	IAmb	00 21 20.9	
	comp=Z,23nm,0.9s						
HHAR	**Hobbs**	**74.34**	**343**	P	**P**	**00 21 09.9**	**0.0**
TUL1	**Leonard**	**74.46**	**341**	P	**P**	**00 21 10.8**	**+0.2**
	baz=161,SNR=8.1						
SUR	**Sutherland**	**74.69**	**119**	P	**P**	**00 21 13.6**	**+1.0**
SUR				IAmb	IAmb	00 21 16.9	
	comp=Z,44nm,1.1s						
SUR	**Sutherland**	**74.69**	**119**	IAMs_20	IAMs_20	00 49 25.2	
	comp=Z,3μm,21.0s						
S44A	**Carbondale**	**74.69**	**347**	P	**P**	**00 21 12.2**	**+0.3**
S44A				IAmb	IAmb	00 21 23.4	
	comp=Z,20nm,0.8s						
WCI	**Wyandotte Cave**	**74.72**	**349**	P	**P**	**00 21 12.0**	**0.0**
WCI				pmax	pmax		
	comp=Z,34nm,1.6s						
WCI	**Wyandotte Cave**	**74.72**	**349**	P	**P**	**00 21 12.0**	**0.0**
WCI	**Wyandotte Cave**	**74.72**	**349**	P	**P**	**00 21 12.0**	**0.0**
	baz=169						
MSTX	**Muleshoe**	**74.80**	**335**	P	**P**	**00 21 12.7**	**-0.1**
MSTX				IAmb	IAmb	00 21 25.6	
	comp=Z,24nm,0.8s						
MSTX	**Muleshoe**	**74.80**	**335**	P	**P**	**00 21 12.9**	**+0.1**
	baz=156						
Q54A	**Coxs Mills**	**74.81**	**354**	P	**P**	**00 21 12.7**	**+0.2**
Q54A				IAmb	IAmb	00 21 58.0	
	comp=Z,53nm,1.9s						
319A	**Douglas**	**75.01**	**328**	P	**P**	**00 21 14.4**	**+0.3**
FVM	**French Village**	**75.20**	**346**	P	**P**	**00 21 14.8**	**0.0**
FVM				pmax	pmax		
	comp=Z,24nm,0.9s						
FVM	**French Village**	**75.20**	**346**	P	**P**	**00 21 14.8**	**0.0**
FVM				IAmb	IAmb	00 21 26.5	
	comp=Z,24nm,0.8s						

AMTX	Amarillo	75.26	336	P	P	00 21 15.9	+0.6
	baz=156						
P60A	Greenville	75.33	358	P	P	00 21 16.8	+1.4
	baz=178						
MCWV	Mont Chateau	75.39	355	P	P	00 21 17.0	+1.2
	baz=174						
121A	Cookes Peak, D	75.40	330	P	P	00 21 16.6	+0.3
121A	Cookes Peak, D	75.40	330	P	P	00 21 17.0	+0.7
	baz=152						
CCM	Cathedral Cave	75.44	345	P	P	00 21 16.4	+0.3
CCM				pmax	pmax		
	comp=Z,53nm,0.9s						
CCM	Cathedral Cave	75.44	345	P	P	00 21 16.4	+0.3
CCM	Cathedral Cave	75.44	345	P	P	00 21 15.7	-0.4
	baz=165						
S39A	Bolivar	75.54	344	P	P	00 21 17.3	+0.5
P52A	Corning	75.57	353	P	P	00 21 16.9	0.0
P52A				IAmb	IAmb	00 21 28.3	
	comp=Z,55nm,1.1s						
P52A	Corning	75.57	353	P	P	00 21 16.9	0.0
	baz=173						
P49A	Miami Univ. Ec	75.78	351	P	P	00 21 17.6	-0.5
P49A				IAmb	IAmb	00 21 29.1	
	comp=Z,21nm,1.0s						
P49A	Miami Univ. Ec	75.78	351	P	P	00 21 17.8	-0.3
	baz=170						
P48A	Milroy	75.80	350	P	P	00 21 18.1	-0.2
P48A				IAmb	IAmb	00 21 29.1	
	comp=Z,31nm,0.8s						
O56A	Blue Knob Stat	75.91	356	P	P	00 21 19.2	+0.3
	baz=176						
O52A	Adamsville	76.02	353	P	P	00 21 19.8	+0.3
O52A				IAmb	IAmb	00 21 30.8	
	comp=Z,29nm,0.9s						
O53A	New Philadelph	76.09	354	P	P	00 21 20.2	+0.3
	baz=173						
KAN01	Argonia South	76.16	340	P	P	00 21 20.9	+0.5
KAN01				IAmb	IAmb	00 21 33.1	
	comp=Z,37nm,0.9s						
LIC	Lamto	76.17	72	*e*P	P	00 21 21.9	+1.0
	comp=Z,74nm,1.1s						
SSPA	Standing Stone	76.24	356	P	P	00 21 21.2	+0.5
SSPA	Standing Stone	76.24	356	P	P	00 21 21.3	+0.6
	baz=176						
ACSO	Alum Creek Sta	76.26	352	P	P	00 21 20.5	-0.3
ACSO				IAmb	IAmb	00 21 22.2	
	comp=Z,34nm,0.8s						
ACSO	Alum Creek Sta	76.26	352	P	P	00 21 21.4	+0.7
	baz=172						
BNM	Barren Site	76.37	332	P	P	00 21 22.7	+0.8
O49A	Covington	76.37	351	P	P	00 21 21.7	+0.3
O49A				IAmb	IAmb	00 21 23.2	
	comp=Z,31nm,1.1s						
N59A	State Game Lan	76.43	358	P	P	00 21 22.7	+0.8
	baz=178						
TIC	Toumodi	76.44	71	*e*P	P	00 21 23.7	+1.2
TUC	Tucson	76.46	328	P	P	00 21 22.7	+0.5
TUC				pmax	pmax		
	comp=Z,15nm,1.3s						
TUC	Tucson	76.46	328	P	P	00 21 22.7	+0.5
TUC	Tucson	76.46	328	P	P	00 21 23.5	+1.3
	baz=150						
KIC	Kosan Boka	76.47	72	*e*P	P	00 21 23.8	+1.1
	comp=Z,57nm,0.8s						
PAL	Palisades	76.48	359	P	P	00 21 21.6	-0.4
	baz=180						
LENM	Lemitar	76.51	332	P	P	00 21 23.7	+1.1
ODNJ	Ogdensburg	76.57	359	P	P	00 21 23.3	+0.8
ODNJ				IAmb	IAmb	00 22 25.6	
	comp=Z,42nm,1.5s						
DBIC	Dimbokro	76.58	72	P	P	00 21 24.0	+0.7
	comp=Z,28nm,0.9s,baz=221,slow=6.2,SNR=26						
DBIC				LR	LR	00 54 11.6	
	comp=Z,2µm,18.1s,baz=234,slow=35						
DBIC	Dimbokro	76.58	72	P	P	00 21 23.9	+0.7
DBIC				IAmb	IAmb	00 21 27.2	
	comp=Z,25nm,0.8s						
P43A	Skaggs, Pawnee	76.63	347	P	P	00 21 22.7	-0.2
N54A	Moraine State	76.70	355	P	P	00 21 23.6	+0.3
N54A				IAmb	IAmb	00 21 24.9	
	comp=Z,24nm,1.1s						
N54A	Moraine State	76.70	355	P	P	00 21 23.8	+0.5
	baz=174						
O44A	Mansfield	76.95	348	P	P	00 21 24.5	-0.2
O44A				IAmb	IAmb	00 21 36.1	
	comp=Z,27nm,0.8s						
ANMO	Albuquerque	77.01	332	LR	LR	00 51 09.2	
	comp=Z,1µm,18.1s,baz=177,slow=32						
ANMO	Albuquerque	77.01	332	*d i*P	P	00 21 26.4	+1.0
ANMO				pmax	pmax		
	comp=Z,23nm,1.4s						
ANMO	Albuquerque	77.01	332	P	P	00 21 25.9	+0.5
ANMO	Albuquerque	77.01	332	IAMs_20	IAMs_20	00 51 34.3	
	comp=Z,1µm,19.0s						
ANMO	Albuquerque	77.01	332	P	P	00 21 25.9	+0.5
	baz=153						
P40A	Paris	77.02	345	P	P	00 21 25.1	-0.1
214A	Organ Pipe Nat	77.06	326	P	P	00 21 26.5	+0.9
	baz=148						
M54A	Oil Creek Stat	77.22	355	P	P	00 21 25.4	-0.8
	baz=175						
M53A	WI Miller and	77.23	354	P	P	00 21 25.9	-0.3
	baz=174						
WIN	Windhoek	77.28	109	P	P	00 21 27.6	+0.1
WIN				pmax	pmax		
	comp=Z,26nm,1.0s						
WIN	Windhoek	77.28	109	P	P	00 21 27.6	+0.1
WIN				IAmb	IAmb	00 21 32.1	
	comp=Z,26nm,1.0s						
HDIL	Hopedale	77.48	347	P	P	00 21 27.6	-0.1
HDIL	Hopedale	77.48	347	P	P	00 21 27.3	-0.4
	baz=167						
KSU1	Kansas State U	77.68	341	P	P	00 21 29.0	+0.1
	baz=161						
BINY	Binghamton	77.72	358	P	P	00 21 29.8	+0.7
	baz=178						
L56A	Greenwood	77.72	357	P	P	00 21 28.8	-0.2
L56A				IAmb	IAmb	00 21 48.0	
	comp=Z,27nm,1.0s						
QUA2	Belchertown	77.76	1	P	P	00 21 30.0	+0.8
QUA2				IAmb	IAmb	00 21 31.8	
	comp=Z,26nm,1.1s						
ERPA	Erie	77.85	355	P	P	00 21 30.5	+0.8
	baz=174						
N41A	Harden Midland	77.92	346	P	P	00 21 29.9	-0.2
L61B	Northampton	77.92	0	P	P	00 21 31.0	+0.9
	baz=180						
HRV	Adam Dziewonsk	77.99	1	P	P	00 21 31.7	+1.2
	baz=181						
X18A	Snowflake	78.02	330	P	P	00 21 31.0	-0.1
WVNY	West Valley, N	78.04	356	P	P	00 21 31.5	+0.7
WVNY				IAmb	IAmb	00 21 32.9	
	comp=Z,24nm,0.9s						
M44A	Midewin, Midew	78.08	349	P	P	00 21 30.7	-0.3
CASY	Casey	78.16	181	P	P	00 21 31.7	+0.4
CASY				IAmb	IAmb	00 21 33.0	
	comp=Z,33nm,1.0s						
CASY	Casey	78.16	181	IAMs_20	IAMs_20	00 58 46.5	
	comp=Z,1µm,18.0s						
TRY	Troy	78.21	360	P	P	00 21 32.6	+1.0
TRY				IAmb	IAmb	00 21 35.0	
	comp=Z,41nm,1.2s						
T25A	Trinidad	78.23	335	P	P	00 21 33.0	+0.7
T25A				IAmb	IAmb	00 21 45.9	
	comp=Z,28nm,0.8s						
T25A	Trinidad	78.23	335	P	P	00 21 33.1	+0.8
	baz=155,SNR=19						
CBKS	Cedar Bluff	78.27	339	P	P	00 21 32.8	+0.6
CBKS				pmax	pmax		
	comp=Z,37nm,0.8s						
CBKS	Cedar Bluff	78.27	339	P	P	00 21 32.8	+0.6
CBKS				IAmb	IAmb	00 21 44.7	
	comp=Z,37nm,0.8s						
CBKS	Cedar Bluff	78.27	339	P	P	00 21 32.6	+0.4
	baz=158,SNR=5.6						
AAM	Ann Arbor	78.38	352	P	P	00 21 34.1	+1.5
	baz=171						
W18A	Petrified Fore	78.44	330	P	P	00 21 34.2	+0.9
W18A				IAmb	IAmb	00 21 44.4	
	comp=Z,29nm,1.2s						
W18A	Petrified Fore	78.44	330	P	P	00 21 34.3	+0.9
	baz=151,SNR=5.1						
X16A	Lo Mia Camp, P	78.55	328	P	P	00 21 34.6	+0.5
L44A	Lake County Fo	78.83	349	P	P	00 21 35.4	+0.2
	baz=168						
ACCN	Adirondack Com	78.86	360	P	P	00 21 36.0	+0.7
ACCN				IAmb	IAmb	00 21 37.7	
	comp=Z,24nm,1.1s						
GLA	Glamis	78.90	325	P	P	00 21 36.8	+1.0
GLA				pmax	pmax		
	comp=Z,29nm,1.6s						
GLA	Glamis	78.90	325	P	P	00 21 36.8	+1.0
GLA	Glamis	78.90	325	P	P	00 21 36.9	+1.0
	baz=147						
N35A	Tabor	79.10	343	P	P	00 21 36.6	-0.1
N35A				IAmb	IAmb	00 21 48.6	
	comp=Z,44nm,0.8s						
SDCO	Great Sand Dun	79.15	334	P	P	00 21 37.3	-0.1
SDCO	Great Sand Dun	79.15	334	P	P	00 21 38.9	+1.5
	baz=154,SNR=7.9						
IKP	In-Ko-Pah, Jac	79.17	324	P	P	00 21 38.3	+1.0
	baz=146						
SWSC	Sam W. Stewart	79.26	325	P	P	00 21 39.1	+1.4
	baz=146						
KSCO	Kaye Shedlock’	79.33	337	P	P	00 21 38.2	+0.1
KSCO	Kaye Shedlock’	79.33	337	P	P	00 21 39.2	+1.0
	baz=156						
WUAZ	Wupatki	79.46	329	P	P	00 21 39.9	+0.9
WUAZ	Wupatki	79.46	329	P	P	00 21 40.3	+1.3
	baz=149						
MONP2	Monument Peak	79.52	324	P	P	00 21 40.8	+1.4
	baz=146						
TSUM	Tsumeb	79.53	106	P	P	00 21 40.2	+0.4
TSUM				IAmb	IAmb	00 21 53.0	
	comp=Z,34nm,1.4s						
TSUM	Tsumeb	79.53	106	IAMs_20	IAMs_20	00 52 57.8	
	comp=Z,2µm,20.0s						
SCIA	State Center	79.55	345	P	P	00 21 39.6	+0.6
	baz=164						
S22A	4UR Ranch, Cre	79.63	333	P	P	00 21 41.1	+1.1
	baz=153,SNR=7.0						
PDMCI	Parker Dam,Lak	79.63	326	P	P	00 21 41.1	+1.4
	baz=147						
BC3	Big Chuckawall	79.69	325	P	P	00 21 41.3	+1.1
	baz=146,SNR=6.2						
LBNH	Lisbon	79.72	1	P	P	00 21 41.3	+1.3
LBNH				pmax	pmax		
	comp=Z,24nm,1.2s						
LBNH	Lisbon	79.72	1	P	P	00 21 41.3	+1.3
LBNH	Lisbon	79.72	1	P	P	00 21 41.4	+1.5
	baz=181						
MVCO	Mesa Verde	79.78	332	P	P	00 21 41.5	+0.7
MVCO	Mesa Verde	79.78	332	P	P	00 21 41.4	+0.7
	baz=152,SNR=8.0						
JFWS	Jewell Farm	79.94	347	P	P	00 21 41.0	-0.2
JFWS				pmax	pmax		
	comp=Z,59nm,1.5s						
JFWS	Jewell Farm	79.94	347	P	P	00 21 41.0	-0.2
JFWS				IAmb	IAmb	00 21 50.8	
	comp=Z,59nm,1.4s						
JFWS	Jewell Farm	79.94	347	P	P	00 21 41.6	+0.4
	baz=166						
IRM	Iron Mountain	79.96	326	P	P	00 21 43.2	+1.6
	baz=147,SNR=5.8						
BOSA	Boshof	79.97	118	P	P	00 21 42.4	+0.3
	comp=Z,30nm,0.9s,baz=231,slow=4.8,SNR=36						
BOSA	Boshof	79.97	118	P	P	00 21 42.2	+0.1
BOSA				IAmb	IAmb	00 21 45.8	
	comp=Z,47nm,1.1s						
LONY	Lake Ozonia	80.11	359	P	P	00 21 42.5	+0.4
LONY	Lake Ozonia	80.11	359	P	P	00 21 42.8	+0.7
	baz=179						
TPFO	Pinon Flats	80.12	324	P	P	00 21 43.9	+1.4
	baz=146						
Q24A	Divide	80.12	335	P	P	00 21 43.6	+0.9
	baz=154,SNR=8.6						
PFO	Pinyon Flats O	80.12	324	LR	LR	00 51 05.3	
	comp=Z,972nm,18.1s,baz=145,slow=31						
PFO	Pinyon Flats O	80.12	324	*e*P	P	00 21 44.8	+2.2
PFO	Pinyon Flats O	80.12	324	P	P	00 21 43.3	+0.7
PFO	Pinyon Flats O	80.12	324	P	P	00 21 44.1	+1.5
	baz=146,SNR=5.6						
BELC	Belle Mtn. Jos	80.23	325	P	P	00 21 44.6	+1.4
	baz=146						
BGNE	Belgrade	80.25	341	P	P	00 21 43.3	+0.4
	baz=160						
FRNY	Flat Rock	80.31	360	P	P	00 21 43.9	+0.7
EMMW	East Machias	80.34	4	P	P	00 21 43.8	+0.6
EMMW				IAmb	IAmb	00 21 46.8	
	comp=Z,72nm,1.5s						
MURC	Murrieta	80.47	324	P	P	00 21 45.9	+1.6
	baz=145						
GMRC	Granite Mounta	80.72	326	P	P	00 21 47.0	+1.2
	baz=146,SNR=6.5						
PKME	Peaks-Kenny Pk	80.81	3	P	P	00 21 47.2	+1.4
	baz=183						
MQZ	McQueen’s Vall	80.83	222	IAMs_20	IAMs_20	00 50 30.7	
	comp=Z,1µm,20.0s						
BBRC	Big Bear Solar	80.88	324	P	P	00 21 47.6	+0.8
	baz=146						
CIS	Catalina Islan	80.89	323	P	P	00 21 47.4	+0.8
	baz=144						
OGNE	Ogallala	80.92	338	P	P	00 21 47.8	+1.2
	baz=157						
ODZ	Otahua Downs	81.01	220	IAMs_20	IAMs_20	00 50 17.3	
	comp=Z,2µm,20.0s						
ISCO	Idaho Springs	81.03	335	P	P	00 21 48.2	+0.7
ISCO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ISCO	Idaho Springs	81.03	335	P	P	00 21 48.2	+0.7
ISCO	Idaho Springs	81.03	335	P	P	00 21 48.5	+0.9
	baz=154						
BFSC	Mount Baldy Ra	81.21	324	P	P	00 21 49.3	+0.9
	baz=145						
TUQ	Turquoise Moun	81.38	326	P	P	00 21 50.9	+1.7
	baz=146						
MXZ	Matakaoa Point	81.50	230	IAMs_20	IAMs_20	00 50 39.5	
	comp=Z,2µm,19.0s						
K31A	O'Neill	81.54	341	P	P	00 21 50.4	+0.6
BKZ	Black Stump Fm	81.59	227	P	P	00 21 50.6	+0.1
BKZ				IAmb	IAmb	00 21 52.3	
	comp=Z,27nm,1.1s						
BKZ				IAMs_20	IAMs_20	00 50 24.8	
	comp=Z,1µm,20.0s						
I37A	Lemond, Waseca	81.61	345	P	P	00 21 49.8	-0.2
GSC	Goldstone, Bar	81.67	325	P	P	00 21 52.0	+1.2
	baz=146						
RPZ	Rata Peaks	81.69	221	IAMs_20	IAMs_20	00 50 47.4	
	comp=Z,2µm,19.0s						
LBZ	Lake Benmore	81.70	220	IAMs_20	IAMs_20	00 51 13.5	
	comp=Z,2µm,19.0s						
URZ	Urewera	81.79	228	P	P	00 21 51.3	-0.2
URZ				IAmb	IAmb	00 22 02.6	
	comp=Z,26nm,0.9s						
URZ				IAMs_20	IAMs_20	00 50 03.2	
	comp=Z,2µm,19.0s						
EDW2	Edwards Air Fo	81.89	324	P	P	00 21 52.6	+0.7
	baz=145						
MTPU	Mount Pierson	81.95	330	P	P	00 21 52.8	+0.2
MTPU				IAmb	IAmb	00 22 30.6	
	comp=Z,13nm,0.6s						
THZ	Tophouse	81.98	224	P	P	00 21 52.9	+0.4
THZ				IAmb	IAmb	00 22 06.9	
	comp=Z,27nm,0.9s						
ECSD	EROS Data Cent	82.05	343	P	P	00 21 52.7	+0.2
ECSD	EROS Data Cent	82.05	343	P	P	00 21 53.4	+0.9
	baz=161						
N23A	Red Feather La	82.12	335	P	P	00 21 54.7	+1.4
	baz=154						
E62A	Clayton Lake	82.16	2	P	P	00 21 53.9	+1.0
E62A				IAmb	IAmb	00 21 55.6	
	comp=Z,27nm,1.1s						
KOWA	Kowa	82.17	66	P	P	00 21 54.4	+0.6
KOWA				IAMs_20	IAMs_20	00 57 39.9	
	comp=Z,2µm,19.0s						
LRMC	Laurel Mtn Rad	82.23	325	P	P	00 21 54.0	+0.3
	baz=145						
O20A	White River Ci	82.25	334	P	P	00 21 55.0	+1.1
	baz=152						
LBTB	Lobatse	82.30	115	P	P	00 21 54.3	-0.2
LBTB				pmax	pmax		
	comp=Z,34nm,1.0s						
LBTB	Lobatse	82.30	115	P	P	00 21 54.3	-0.2
LBTB				IAmb	IAmb	00 22 07.0	
	comp=Z,34nm,0.9s						
E46A	Sault Ste Mari	82.46	352	P	P	00 21 54.3	-0.2
FOZ	Fox Glacier	82.48	221	IAMs_20	IAMs_20	00 51 12.1	
	comp=Z,2µm,20.0s						
P18A	Preston Nutter	82.55	332	P	P	00 21 55.6	0.0
P18A				IAmb	IAmb	00 22 13.3	
	comp=Z,20nm,0.9s						
P17A	Butcher Ranch,	82.61	332	P	P	00 21 56.2	+0.5
P17A				IAmb	IAmb	00 22 06.2	
	comp=Z,28nm,1.4s						
MPMC	Manual Prospec	82.61	325	P	P	00 21 57.0	+1.2
	baz=145						
SPMN	Marine on St.	82.65	346	P	P	00 21 55.4	-0.2
SPMN				IAmb	IAmb	00 22 06.6	
	comp=Z,14nm,0.7s						
FURC	Furnace Creek,	82.66	326	P	P	00 21 56.8	+1.1
	baz=146						
ISA	Isabella, Lake	82.75	324	P	P	00 21 58.1	+1.7
	baz=145						
PKM	Mcpherson Peak	82.78	323	P	P	00 21 57.7	+1.0
	baz=144						
QRZ	Quartz Range	82.81	224	P	P	00 21 56.7	-0.1
VES	Vestal, Richgr	83.19	324	P	P	00 21 59.6	+1.1
	baz=144						
CWC	Cottonwood Cre	83.20	325	P	P	00 22 00.1	+1.2
	baz=145						
SUSD	Miller	83.30	342	P	P	00 21 59.2	+0.3
	baz=159						
NLU	North Lily Min	83.55	331	P	P	00 22 01.1	+0.5
NLU				IAmb	IAmb	00 22 14.9	
	comp=Z,51nm,1.8s						
R11A	Troy Canyon, C	83.65	328	P	P	00 22 02.4	+1.3
	baz=147						
TIN	Tinemaha, Big	83.77	325	P	P	00 22 02.4	+0.8
	baz=145						
JLU	Jordanelle	83.86	332	P	P	00 22 02.6	+0.4
K22A	Casper	83.89	336	P	P	00 22 02.3	+0.1
K22A				IAmb	IAmb	00 22 15.3	
	comp=Z,39nm,1.4s						
K22A	Casper	83.89	336	P	P	00 22 02.9	+0.7
	baz=153						
F33A	5 Mile Ranch,	83.97	344	P	P	00 22 01.8	-0.5
F33A				IAmb	IAmb	00 22 14.1	
	comp=Z,23nm,1.0s						
DUG	Dugway, Tooele	84.05	331	P	P	00 22 04.4	+1.4
	baz=149						
TPH	Tonopah	84.14	326	P	P	00 22 03.2	-0.4
TPH				pmax	pmax		
	comp=Z,119nm,1.2s						
TPH	Tonopah	84.14	326	P	P	00 22 03.2	-0.4
RSSD	Black Hills	84.42	338	P	P	00 22 04.9	0.0
RSSD				pmax	pmax		
	comp=Z,11nm,1.0s						
RSSD	Black Hills	84.42	338	P	P	00 22 04.9	0.0
RSSD	Black Hills	84.42	338	P	P	00 22 05.4	+0.5
	baz=155						
MLAC	Mammoth, Mammo	84.52	325	P	P	00 22 06.1	+0.5
	baz=144						
HWUT	Hardware Ranch	84.77	332	P	P	00 22 06.9	+0.2
HWUT				IAMs_20	IAMs_20	00 54 28.7	
	comp=Z,1µm,20.0s						
SPUT	South Promonto	84.85	331	P	P	00 22 07.7	+0.5
SPUT				IAmb	IAmb	00 22 20.8	
	comp=Z,24nm,1.1s						
NV11	Mina Array Sit	84.86	326	P	P	00 22 07.8	+0.6
NV11				IAmb	IAmb	00 22 40.8	
	comp=Z,35nm,1.8s						
NVAR	Mina Array Bea	84.92	326	P	P	00 22 08.4	+0.8
	comp=Z,3.8nm,0.8s,baz=155,slow=6.0,SNR=19						
NVAR				LR	LR	00 53 27.7	
	comp=Z,429nm,19.7s,baz=126,slow=31						
NVAR	Mina Array Bea	84.92	326	P	P	00 22 08.1	+0.4
EYMN	Ely	85.03	348	P	P	00 22 08.2	+0.6
	baz=165						
BW06	Boulder Array	85.03	334	P	P	00 22 08.2	+0.1
	baz=151						
PD31	Pinedale Array	85.03	334	P	P	00 22 08.2	+0.1
PDAR	Pinedale Array	85.03	334	P	P	00 22 08.7	+0.6
	comp=Z,3.7nm,1.1s,baz=159,slow=4.5,SNR=18						
PDAR	Pinedale Array	85.03	334	P	P	00 22 08.1	+0.1
KVN	Kaiserville	85.34	326	P	P	00 22 10.3	+0.6
KVN				pmax	pmax		
	comp=Z,13nm,1.1s						
KVN	Kaiserville	85.34	326	P	P	00 22 10.3	+0.6
ELK	Elko	85.50	329	P	P	00 22 11.1	+0.6
ELK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ELK	Elko	85.50	329	P	P	00 22 11.1	+0.6
AHID	Auburn Hatcher	85.59	333	P	P	00 22 11.4	+0.5
AHID				IAmb	IAmb	00 22 24.3	
	comp=Z,44nm,1.6s						
TORD	Torodi Ar. Bea	85.64	71	P	P	00 22 11.3	-0.2
	comp=Z,7.1nm,0.9s,baz=254,slow=3.7,SNR=33						
TORD				LR	LR	01 00 02.1	
	comp=Z,2µm,18.2s,baz=240,slow=35						
TORD	Torodi Ar. Bea	85.64	71	P	P	00 22 11.6	+0.1
TORD				IAmb	IAmb	00 22 21.8	
	comp=Z,25nm,1.3s						
LOHW	Long Hollow	86.14	334	IAMs_20	IAMs_20	00 57 03.2	
	comp=Z,2µm,19.0s						
AGMN	Agassiz Nation	86.21	345	P	P	00 22 13.1	-0.3
AGMN	Agassiz Nation	86.21	345	P	P	00 22 13.6	+0.1
	baz=162						
PAHR	Pah Rah Range	86.45	326	P	P	00 22 15.7	+0.6
PAHR				IAmb	IAmb	00 22 25.6	
	comp=Z,22nm,1.4s						
FLWY	Flagg Ranch	86.59	334	IAMs_20	IAMs_20	00 57 54.0	
	comp=Z,1µm,18.0s						
MDND	Maddock	86.64	342	P	P	00 22 14.8	-0.8
MDND	Maddock	86.64	342	P	P	00 22 16.0	+0.4
	baz=159						
RLMT	Red Lodge	86.99	335	P	P	00 22 17.2	-0.5
RLMT				IAmb	IAmb	00 22 27.8	
	comp=Z,49nm,1.9s						
RLMT	Red Lodge	86.99	335	P	P	00 22 18.0	+0.3
	baz=152						
YMR	Madison River	87.19	334	P	P	00 22 19.3	+0.6
YHH	Holmes Hill	87.25	334	P	P	00 22 19.6	+0.5
YHH				IAmb	IAmb	00 22 32.9	
	comp=Z,22nm,1.2s						
ORV	Oroville	87.31	325	P	P	00 22 20.2	+1.1
ORV				pmax	pmax		
	comp=Z,53nm,1.7s						
ORV	Oroville	87.31	325	P	P	00 22 20.2	+1.1
HLID	Hailey	87.53	331	P	P	00 22 20.8	+0.5
HLID	Hailey	87.53	331	P	P	00 22 21.6	+1.3
	baz=148						
MCMT	McKenzie Canyo	88.01	333	P	P	00 22 23.6	+0.9
O03E	Paynes Creek	88.03	325	P	P	00 22 22.9	+0.3
	baz=143						
ULM	Lac du Bonnet	88.06	346	P	P	00 22 22.3	-0.1
	comp=Z,19nm,1.1s,baz=162,slow=3.1,SNR=10.0						
ULM	Lac du Bonnet	88.06	346	P	P	00 22 22.4	0.0
ULM				pmax	pmax		
	comp=Z,18nm,0.8s						
ULM	Lac du Bonnet	88.06	346	P	P	00 22 22.4	0.0
ULM				IAmb	IAmb	00 22 34.3	
	comp=Z,18nm,0.8s						
BOZ	Bozeman (W)	88.23	334	P	P	00 22 24.2	+0.7
	baz=150						
DLMT	Dillon	88.38	333	IAMs_20	IAMs_20	00 58 34.3	
	comp=Z,1µm,20.0s						
DGMT	Dagmar	88.41	340	P	P	00 22 24.4	+0.2
DGMT	Dagmar	88.41	340	P	P	00 22 25.0	+0.8
	baz=155						
MOD	Modoc Plateau	88.63	327	IAMs_20	IAMs_20	00 57 33.6	
	comp=Z,1µm,18.0s						
J08A	Circle Bar Ran	89.01	329	P	P	00 22 28.3	+1.0
J08A				IAmb	IAmb	00 22 40.6	
	comp=Z,23nm,0.8s						
M04C	Macdoel	89.23	326	P	P	00 22 29.0	+0.7
	baz=143						
PLID	Pearl Lake	89.43	331	P	P	00 22 29.1	-0.3
PLID				IAmb	IAmb	00 22 43.3	
	comp=Z,58nm,1.9s						
PLID				IAMs_20	IAMs_20	00 59 29.1	
	comp=Z,1µm,19.0s						
K05A	Summer Lake	89.55	327	P	P	00 22 31.3	+1.4
YBH	Yreka Blue Hor	89.59	325	LR	LR	00 56 19.9	
	comp=Z,407nm,20.1s,baz=152,slow=31						
LSZ	Lusaka	90.03	109	P	P	00 22 33.7	+0.9
LSZ				pmax	pmax		
	comp=Z,14nm,1.1s						
LSZ	Lusaka	90.03	109	P	P	00 22 33.7	+0.9
MSO	Missoula	90.11	333	P	P	00 22 34.0	+1.7
	baz=148						
J05D	Fort Rock, OR	90.15	327	P	P	00 22 34.0	+1.4
	baz=143						
SCHQ	Schefferville	90.48	4	P	P	00 22 33.7	0.0
	comp=Z,3.9nm,0.9s,baz=70,slow=3.1,SNR=3.0						
NEW	Newport	92.50	332	P	P	00 22 43.8	+0.5
	baz=146						
B05A	Bryant	94.46	330	P	P	00 22 54.7	+2.5
	baz=142						

ESDC	Sonseca Array	98.47	47	P	Pdif	00 23 11.8	+1.0
	comp=Z,1.0nm,0.9s,baz=258,slow=4.8,SNR=4.5						
ESDC				LR	LR	01 06 24.3	
	comp=Z,816nm,20.2s,baz=255,slow=35						
CART	Cartagena	98.95	50	IAMs_20	IAMs_20	01 10 02.8	
	comp=Z,996nm,20.0s						
VOI	Vohitsoka	99.18	125	IAMs_20	IAMs_20	01 01 35.3	
	comp=Z,911nm,20.0s						
DZM	Mont Dzumac	99.46	234	*e*PS	PS	00 36 18.4	+2.3
	comp=Z,219nm,23.6s						
DZM				*e*SS	SS	00 41 42.3	+4.6
	comp=Z,304nm,24.5s						
DZM	Mont Dzumac	99.46	234	*e*LR	LR	00 55 37.9	
	comp=Z,1µm,24.4s						
BBB	Bella Bella	99.95	329	LR	LR	01 08 49.6	
	comp=Z,201nm,18.7s,baz=154,slow=36						
MBAR	Mbarara	100.83	99	IAMs_20	IAMs_20	01 11 37.0	
	comp=Z,1µm,18.0s						
ABPO	Ambohimpanom	101.48	124	IAMs_20	IAMs_20	01 04 19.3	
	comp=Z,1µm,20.0s						
LODK	Lodwar	106.92	98	IAMs_20	IAMs_20	01 09 26.5	
	comp=Z,1µm,19.0s						
AQU	L'Aquila	110.76	52	IAMs_20	IAMs_20	01 14 29.5	
	comp=Z,1µm,20.0s						
STU	Stuttgart	111.41	45	IAMs_20	IAMs_20	01 17 57.1	
	comp=Z,1µm,18.0s						
GERES	GERESS Array B	114.05	46	PKP	PKPdf	00 28 11.2	-0.1
	comp=Z,0.4nm,0.6s,baz=198,slow=0.4,SNR=5.3						
GERES				PKKP	PKKPdf	00 39 10.1	-6.0
	comp=Z,0.3nm,0.7s,baz=46,slow=3.9,SNR=3.8						
CLL	Collm	114.77	44	*e*PP	PP	00 29 06.0	-5.2
CLL				*e*SKSac	SKSac	00 34 54.0	-6.0
CLL				*e*Sdif	Sdif	00 36 48.0	-6.7
CLL				*e*PS	PS	00 38 44.0	-5.6
CLL				*e*PPS	PPS	00 40 06.0	
CLL				*e*SS	SS	00 45 00.0	-5.9
CLL				*e*SSS	SSS	00 49 06.0	
CLL				Lm	MLR	01 16 00.0	
	comp=N,600nm,20.1s						
CLL				Lm	MLR	01 16 00.0	
	comp=E,400nm,20.7s						
CLL				Lm	MLR	01 16 00.0	
	comp=Z,800nm,20.8s						
ILAR	Eielson Array	115.45	333	PKP	PKPdf	00 28 13.1	-0.4
	comp=Z,0.7nm,0.9s,baz=187,slow=2.5,SNR=6.7						
ASAR	Alice Springs	115.54	207	PKP	PKiKP	00 28 15.3	+0.2
	comp=Z,0.6nm,0.8s,baz=154,slow=2.8,SNR=5.1						
SANT	Santorini	116.21	63	IAMs_20	IAMs_20	01 20 09.2	
	comp=Z,704nm,20.0s						
MSEY	Mahe Island	117.23	119	IAMs_20	IAMs_20	01 11 52.3	
	comp=Z,823nm,20.0s						
COLD	Coldfoot	117.81	335	P	PKiKP	00 28 19.9	+2.0
	baz=117						
TOLK	Toolik Lake Re	118.23	336	PKPdf	PKiKP	00 28 19.4	+0.7
TOLK	Toolik Lake Re	118.23	336	P	PKiKP	00 28 19.5	+0.7
	baz=116						
IMAR	Indian Mountai	118.56	333	PKPdf	PKiKP	00 28 20.2	+0.8
WB2	Warramunga Arr	118.73	210	PKPdf	PKPdf	00 28 20.6	-0.7
WRA	Warramunga Arr	118.73	210	PKP	PKPdf	00 28 20.4	-0.9
	comp=Z,1.0nm,0.8s,baz=172,slow=1.7,SNR=6.6						
WRA	Warramunga Arr	118.73	210		PKPdf	00 28 20.2	-1.1
WRAB	Tennant Creek	118.74	210	IAMs_20	IAMs_20	01 10 08.8	
	comp=Z,1µm,22.0s						
ISP	Isparta	120.49	63	IAMs_20	IAMs_20	01 20 52.5	
	comp=Z,926nm,21.0s						
BURAR	Bucovina Array	120.58	51	PKPdf	PKiKP	00 28 24.4	+0.3
PMG	Port Moresby	121.15	228	IAMs_20	IAMs_20	01 09 36.8	
	comp=Z,629nm,20.0s						
CSS	Mathiatis	121.41	67		PKiKP	00 28 26.2	+0.2
CSS				IAMs_20	IAMs_20	01 31 34.1	
	comp=Z,464nm,18.0s						
GHAJ	Ghor Haditha	121.59	72	IAMs_20	IAMs_20	01 21 27.0	
	comp=Z,804nm,19.0s						
TNA	Tin City	123.97	330	P	PKiKP	00 28 30.8	+0.8
	baz=103						
AKASG	Malin Array Be	124.06	49	PKP	PKPdf	00 28 28.6	-1.7
	comp=Z,0.3nm,0.4s,baz=263,slow=2.2,SNR=5.8						
AKASG	Malin Array Be	124.06	49	PKIKP	PKPdf	00 28 29.9	-0.5
AKASG	Malin Array Be	124.06	49		PKPdf	00 28 29.9	-0.5
AKBB	Malin Array Si	124.06	49	⇑*i*PKIKP	PKPdf	00 28 30.7	+0.3
MNK	Minsk	124.31	44	*i* PKIKP	PKPdf	00 28 30.6	-0.1
MNK				*i*		00 30 14.7	
MNK				*i* PPP	PPP	00 32 52.7	
MNK				*i*		00 35 37.7	
MNK				*i* PS	PS	00 40 12.7	-2.6
MNK				*i* SSS	SSS	00 51 44.9	
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,10.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MNK				MLR	MLR		
	comp=N,116nm,16.0s						
MNK				MLR	MLR		
	comp=Z,645nm,20.0s						
MNK				MLR	MLR		
	comp=E,84nm,19.0s						
MNK	Minsk	124.31	44	*i* PKP	PKPdf	00 28 30.7	0.0
	comp=E,2.0nm,0.8s						
MNK				*i* PKP	PKPdf	00 28 30.7	0.0
	comp=N,10.0nm,1.0s						
MNK				*i* PKP	PKPdf	00 28 30.7	0.0
	comp=Z,7.0nm,0.7s,baz=255						
MNK				*i* PP	PP	00 30 14.8	-2.0
MNK				*i* SKP		00 32 06.1	
MNK				*i* PKS	PKSdf	00 32 07.3	+0.3
MNK				*i* PPP	PPP	00 32 52.8	
MNK				*i* SKS	SKSdf	00 35 37.7	-4.7
MNK				*i* PS	PS	00 40 12.7	-2.6
MNK				*i* SS	SS	00 47 16.0	+7.3
MNK				*i* SSS	SSS	00 51 44.9	
MNK				*i* LR	LR	01 19 15.8	
MNK				*i* LRM	MLR	01 22 08.0	
	comp=N,116nm,16.0s						
MNK				*i* LRM	MLR	01 22 35.4	
	comp=Z,645nm,20.4s						
MNK				*i* LRM	MLR	01 22 50.8	
	comp=E,84nm,19.2s						
VSU	Vasula	124.67	39	⇓*i*PKIKP	PKPdf	00 28 30.5	-0.8
SPITS	Spitsbergen Ar	124.67	15	PKIKP	PKPdf	00 28 31.0	+0.1
H11S2	WAKE ISLAND Hy	124.88	268	T	T	02 45 41.2	
	baz=117,slow=74,SNR=61						
H11S1	WAKE ISLAND Hy	124.89	268	T	T	02 45 41.9	
	baz=117,slow=74,SNR=49						
H11S3	WAKE ISLAND Hy	124.89	268	T	T	02 45 42.2	
	baz=117,slow=74,SNR=35						
H11N3	WAKE ISLAND Hy	125.34	270	T	T	02 46 09.0	
	SNR=9.0						
H11N1	WAKE ISLAND Hy	125.35	270	T	T	02 46 07.7	
	SNR=20						
H11N2	WAKE ISLAND Hy	125.35	270	T	T	02 46 10.7	
	SNR=23						
SIRT	Sirnak	129.18	68	PKPdf	PKiKP	00 28 41.4	-0.1
OBN	Obninsk	129.36	44	⇑*e*PKIKP	PKPdf	00 28 39.3	-1.0
OBN				*e*		00 30 48.7	
OBN				pmax	pmax		
	comp=Z,30nm,1.5s						
KIV	Kislovodsk	131.17	60	*i* PKIKP	PKPdf	00 28 44.8	+0.5
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,364nm,23.0s						
KBZ	Khabaz	131.27	60	⇓*i*PKIKP	PKiKP	00 28 45.2	-0.1
KLMR	Klimovskoe	131.40	37	*e*PKIKP	PKPdf	00 28 39.5	-4.5
KLMR				pmax	pmax		
	comp=Z,34nm,1.5s						
KLMR	Klimovskoe	131.40	37	*e*PKPdf	PKPdf	00 28 39.5	-4.5
KLMR				AMP		00 28 41.5	
	comp=Z,34nm,1.5s						
GNI	Garni	131.69	65	IAMs_20	IAMs_20	01 31 30.2	
	comp=Z,628nm,20.0s						
NCK	Nalchik	131.71	61	⇓*e*PKIKP	PKPdf	00 28 42.9	-2.4
SOEI	Soe	131.78	203	IAMs_20	IAMs_20	01 27 38.3	
	comp=Z,938nm,18.0s						
BILL	Bilibino	134.11	333	⇑*e*PKIKP	PKPdf	00 28 47.6	-1.4
BILL				*e*		00 31 22.1	
BILL				*e*PPP	PPP	00 34 26.2	
BILL				pmax	pmax		
	comp=Z,17nm,2.0s						
PRGR	Permogore	134.32	36	*e*PKIKP	PKPdf	00 28 50.2	+0.7
PRGR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MAK	Makhachkala	134.38	62	*i* PKIKP	PKPdf	00 28 45.1	-5.1
MAK				pmax	pmax		
	comp=Z,96nm,1.3s						
KIRV	Kirov	136.49	40	⇓*e*PKIKP	PKPdf	00 28 52.0	-1.7
KAPI	Kappang	137.61	199	IAMs_20	IAMs_20	01 29 39.7	
	comp=Z,410nm,19.0s						
PETK	Petropavlovsk-	140.80	312	PKP	PKPdf	00 29 03.0	+1.3
	comp=Z,3.6nm,0.9s,baz=258,slow=39,SNR=3.1						
ARU	Arti	141.69	42	*i* PKIKP	PKPdf	00 28 59.3	-4.0
TIXI	Tiksi	142.35	349	PKIKP	PKPdf	00 29 04.4	+0.4
TIXI	Tiksi	142.35	349	PKPdf	PKPdf	00 29 04.4	+0.4
PALK	Pallekele	142.79	134	IAMs_20	IAMs_20	01 28 17.4	
	comp=Z,717nm,22.0s						
MA2	Magadan	143.14	324	⇑*e*PKIKP	PKPdf	00 29 06.1	+0.3
AB31	Akbulak array	143.48	54	*i* PKIKP	PKPab	00 29 03.6	+0.6
HRA	Herat	143.66	79	PKPdf	PKPbc	00 29 06.5	+1.2
BKNI	Bangkinang	144.24	170	IAMs_20	IAMs_20	01 30 56.8	
	comp=Z,658nm,18.0s						
GSI	Gunungsitoli	144.55	164	PKPdf	PKPab	00 29 08.2	+0.2
NRIK	Noril'sk	144.80	12	PKP	PKPab	00 29 07.1	-0.2
	comp=Z,20nm,0.9s,baz=26,slow=2.3,SNR=32						
NRIK	Noril'sk	144.80	12	*d i*PKIKP	PKPab	00 29 07.5	+0.2
NRIK	Noril'sk	144.80	12	PKPdf	PKPab	00 29 07.6	+0.3
MYKOM	Kota Tinggi	145.99	175	PKPdf	PKPdf	00 29 12.2	0.0
MYKOM				IAMs_20	IAMs_20	01 30 03.0	
	comp=Z,526nm,19.0s						
POO	Poona	146.11	112	*e*P	PKPdf	00 29 08.0	-4.2
SBUM	Sibu	146.41	190		PKPdf	00 29 12.9	+0.1
IPM	Ipoh	148.31	169	PKPdf	PKPdf	00 29 15.7	-0.4
HYB	Hyderabad	148.87	119	*i* PKP	PKPbc	00 29 21.0	+0.3
KULM	Kulim	149.04	168		PKPdf	00 29 15.5	-1.7
KULM				IAMs_20	IAMs_20	01 32 31.5	
	comp=Z,744nm,20.0s						
BRVK	Borovoye	149.13	45	⇑*e*PKIKP	PKPdf	00 29 17.1	+1.0
BRVK	Borovoye	149.13	45		PKPdf	00 29 17.4	+1.3
YAK	Yakutsk	150.16	338	*d i*PKIKP	PKPbc	00 29 22.1	-0.4
YAK				*e*		00 33 03.1	
YAK				pmax	pmax		
	comp=Z,93nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,12nm,1.1s						
YAK				pmax	pmax		
	comp=Z,242nm,4.4s						
YAK				pmax	pmax		
	comp=N,214nm,3.3s						
YAK				pmax	pmax		
	comp=E,91nm,3.8s						
YAK	Yakutsk	150.16	338		PKPbc	00 29 22.3	-0.2
YAK				IAMs_20	IAMs_20	01 37 46.5	
	comp=Z,364nm,20.0s						
YSS	Yuzh-Sakhalins	151.16	304	⇓*i*PKIKP	PKPbc	00 29 25.7	+0.3
YSS	Yuzh-Sakhalins	151.16	304	IAMs_20	IAMs_20	01 28 25.4	
	comp=Z,546nm,21.0s						
KURK	Kurchatov	154.80	45	PKIKP	PKPdf	00 29 25.1	+0.5
KURK						00 29 33.4	
KURK	Kurchatov	154.80	45	PKPdf	PKPdf	00 29 25.1	+0.5
KURK					PKPbc	00 29 33.4	+0.1
INU	Inuyama	155.56	278	IAMs_20	IAMs_20	01 26 30.1	
	comp=Z,771nm,21.0s						
ZAA0	Zalesovo Array	156.24	34	PKPdf	PKPdf	00 29 25.8	-0.7
ZALV	Zalesovo Beam	156.24	34	PKP	PKPdf	00 29 26.4	-0.1
	comp=Z,6.1nm,0.9s,baz=298,slow=3.2,SNR=9.9						
ZALV	Zalesovo Beam	156.24	34	PKPdf	PKPdf	00 29 26.0	-0.5
ZEA	Zeya	157.16	328	*i* PKP2	PKPab	00 29 59.5	+1.0
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BOD	Bodaibo	157.52	350	*e*PKP2	PKPab	00 29 59.9	+0.1
BOD				pmax	pmax		
	comp=Z,22nm,1.2s						
MAKZ	Makanchi	158.39	52	PKIKP	PKPdf	00 29 28.6	-0.9
MAKZ	Makanchi	158.39	52	PKPdf	PKPdf	00 29 28.6	-0.9
MK31	Makanchi Array	158.60	52	*ce*PKIKP	PKPdf	00 29 30.0	+0.2
MK31	Makanchi Array	158.60	52	PKPdf	PKPdf	00 29 29.2	-0.6
MKAR	Makanchi Array	158.60	52	PKP	PKPdf	00 29 29.8	+0.1
	comp=Z,2.8nm,0.9s,baz=319,slow=0.8,SNR=16						
MKAR	Makanchi Array	158.60	52	PKPdf	PKPdf	00 29 28.6	-1.2
CMAR	Chiang Mai Arr	161.29	156	PKP	PKPdf	00 29 33.8	+0.2
	comp=Z,0.7nm,0.3s,baz=247,slow=2.0,SNR=5.9						
CMAR				PKPab	PKPab	00 30 16.2	-1.0
	comp=Z,1.3nm,0.8s,baz=220,slow=4.4,SNR=5.7						
CMAR	Chiang Mai Arr	161.29	156	PKPdf	PKPdf	00 29 32.6	-1.0
CMAR					PKPab	00 30 16.1	-1.1
QIZ	Qiongzhong	163.05	190	PKP	PKPdf	00 29 34.7	-0.7
QIZ				PP	PP	00 34 09.6	+1.1
QIZ				SS	SS	00 54 35.8	+3.3
QIZ				LR	LR		
	comp=Z,390nm,24.7s						
QIZ				LR	LR		
	comp=Z,370nm,14.5s						
WMQ	Urumqi	163.25	56	*e*PKP	PKPdf	00 29 35.6	+0.7
WMQ				LR	LR		
	comp=Z,600nm,20.3s						
WMQ				LR	LR		
	comp=Z,690nm,22.3s						
WMQ				LR	LR		
	comp=Z,670nm,21.3s						
ZAK	Zakamensk	165.24	9	*e*PKP2	PKPab	00 30 32.4	-1.5
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SONM	Songino Array	168.02	2	PKP	PKPdf	00 29 38.9	+0.1
	comp=Z,0.2nm,0.3s,baz=172,slow=32,SNR=3.2						
SONM				PKPab	PKPab	00 30 47.3	+1.0
	comp=Z,3.7nm,0.9s,baz=338,slow=3.9,SNR=11						
KMI	Kunming	168.72	160	⇑PKP	PKPdf	00 29 38.6	-1.5
KMI				LR	LR		
	comp=Z,560nm,22.2s						
KMI				LR	LR		
	comp=Z,430nm,17.6s						
KMI				LR	LR		
	comp=Z,450nm,23.0s						
NJ2	Nanjing	169.39	253	*e*PKP	PKPdf	00 29 40.6	+0.6
GYA	Guiyang	170.64	179	⇑PKP	PKPdf	00 29 41.1	0.0
GYA				PP	PP	00 34 51.6	+3.9
GYA				SKKS		00 41 35.9	
GYA				AMB	AMB		
	comp=Z,190nm,7.3s						
GYA				LR	LR		
	comp=Z,330nm,15.6s						
GTA	Gaotai	173.33	56	*e*PKPbc	PKPdf	00 29 41.8	-0.1
GTA				PKPab	pPKPab	00 31 12.2	-1.3
GTA				PP	PP	00 35 03.1	+0.8
HHC	Hu-ho-hao-te	173.82	325	*e*PKP	PKPdf	00 29 37.8	-4.2
HHC				PP	PP	00 35 04.1	+0.1
HHC				SS	SS	00 56 16.0	-5.6
HHC				AMB	AMB		
	comp=Z,180nm,10.2s						
HHC				LR	LR		
	comp=Z,810nm,18.0s						
HHC				LR	LR		
	comp=Z,310nm,15.5s						
HHC				LR	LR		
	comp=Z,560nm,16.1s						
CD2	Chengdu	174.41	151	PKP	PKPdf	00 29 43.7	+1.2
CD2				PP	PP	00 35 06.8	+0.2
CD2				SS	SS	00 56 25.5	-1.4
CD2				AMB	AMB		
	comp=Z,340nm,9.8s						
CD2				LR	LR		
	comp=Z,720nm,19.6s						
CD2				LR	LR		
	comp=Z,550nm,21.3s						
CD2				LR	LR		
	comp=Z,820nm,18.1s						
BTO	Baotou	174.66	334	*e*PKP	PKPdf	00 29 36.8	-5.5
BTO				PP	PP	00 35 09.3	+1.5
BTO				SS	SS	00 56 23.7	-5.6
BTO				LR	LR		
	comp=Z,2µm,17.6s						
BTO				LR	LR		
	comp=Z,2µm,17.4s						
LZH	Lanzhou	177.49	84	*e*PKP	PKPdf	00 29 39.3	-3.9
LZH				pPKP	pPKPdf	00 29 46.4	-0.1
LZH				sPKP		00 29 48.7	
LZH				PP	PP	00 35 23.5	+0.7
LZH				SKKS		00 42 03.9	
LZH				SS	SS	00 56 57.8	-1.2
LZH				AMB	AMB		
	comp=Z,540nm,9.5s						
LZH				LR	LR		
	comp=Z,850nm,17.8s						
LZH				LR	LR		
	comp=Z,560nm,18.2s						
LZH				LR	LR		
	comp=Z,520nm,20.1s						

IDC 10 00:11:37.6±1.6**, 4°.27S**×**130°.47E, h0km, mb3.8**/1**,**
mb1 3.8/4**, mb1mx3.3**/34**, mbtmp3.6**/4**, ML3.3**/3**, Error**
ellipse: s-maj=67.6km s-min=23.9km az=87.0, Banda
Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.47	13	Pn	Pn	00 12 32.7	-0.3
	4.9nm,0.3s,baz=168,slow=22,SNR=9.6						
SIJI				Sn	Sn	00 13 15.9	+1.1
	4.3nm,0.3s,baz=223,slow=22,SNR=2.1						
WRA	Warramunga Arr	16.03	167	Pn	Pn	00 15 24.0	-0.6
	0.1nm,0.3s,baz=349,slow=12,SNR=1.6						
ASAR	Alice Springs	19.57	171	P	P	00 16 07.5	+0.2
	0.3nm,0.3s,baz=349,slow=11,SNR=7.7						
MKAR	Makanchi Array	66.22	326	P	P	00 22 27.5	+0.1
	0.7nm,0.7s,baz=120,slow=7.2,SNR=5.7						

IDC ***10*** *00:14:03.1±1.5, 4°.17S×129°.42E, h0km, mb4.0/1,*
mb1 3.8/5, mb1mx3.4/37, mbtmp3.7/5, ML3.5/4, Error
ellipse: s-maj=52.6km s-min=24.2km az=84.0
DJA ***10*** *00:14:05.7±1.2, 4°S±13°×12°9E±°, h10km, M3.7/7,*
MLv3.7/7
ISC 10 00:14:06.8±1.0**, 4°.22S**±0°.07×**129°.40E**±0°.07**, h36km, n9,**
σ**3s.06**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.99	331	P	Pn	00 14 22.8	-1.3
AAI	Ambon	1.32	294	P	Pn	00 14 28.9	+0.3
FAKI	Fak Fak	3.12	66	P	Pn	00 14 54.8	+1.4
SIJI	Sorong	3.81	29	Pn	Pn	00 15 03.6	+0.7
	6.0nm,0.3s,baz=180,slow=22,SNR=11						
SIJI				Sn	Sn	00 15 43.3	-3.3
	6.7nm,0.3s,baz=241,slow=23,SNR=6.0						
SWI	Sorong	3.81	29	P	Pn	00 15 04.4	+1.4
FITZ	Fitzroy Crossi	14.28	195	Pn	Pn	00 17 28.1	+1.7
	0.1nm,0.3s,baz=20,slow=10,SNR=1.2						
WRA	Warramunga Arr	16.35	163	Pn	Pn	00 17 52.7	-1.0
	0.1nm,0.3s,baz=349,slow=13,SNR=4.8						
WRA				Sn	Sn	00 20 47.3	-6.8
	baz=352,slow=24,SNR=1.8						
ASAR	Alice Springs	19.82	168	P	P	00 18 36.7	+2.3
	0.3nm,0.3s,baz=350,slow=9.8,SNR=6.8						
MKAR	Makanchi Array	65.59	326	P	P	00 24 48.4	+1.4
	1.2nm,0.6s,baz=110,slow=7.5,SNR=16						

GUC ***10*** *00:17:07.1±0.6, 36°.12S×73°.28W, h13km±7km, ML4.0*
NEIC ***10*** *00:17:07.4±1.4, 35°.859S±0°.010×73°.7W±0°.1, h22km±7km,*
Error ellipse: s-maj=12.9km s-min=1.0km az=94.0
ISC 10 00:17:05.8±1.1**, 35°.88S**±0°.05×**73°.65W**±0°.09**, h10km, n45,**
σ**1s.11**/62**, 1C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Huala	1.65	59	⇑*e*P	Pn	00 17 33.3	-1.5
GO05				*i* S	Sn	00 17 53.4	-2.6
GO05				IAML		00 17 56.5	
	comp=N,2µm,0.1s						
GO05	Huala	1.65	59	Pn	Pn	00 17 33.6	-1.2
GO05				Sn	Sn	00 17 55.7	-0.3
BO01	Tunca	2.57	56	*e*P	Pn	00 17 47.9	+0.5
BO01				*i* S	Sn	00 18 19.0	+0.2
BO01				IAML		00 18 30.0	
	comp=N,561nm,0.6s						
BO01	Tunca	2.57	56	Pn	Pn	00 17 47.7	+0.2
BO02	Sierra Bellavi	2.58	66	*e*P	Pn	00 17 47.2	-0.4
BO02				*i* S	Sn	00 18 17.1	-2.0
BO02				IAML		00 18 25.4	
	comp=N,2µm,0.3s						
BO02	Sierra Bellavi	2.58	66	Pn	Pn	00 17 47.3	-0.4
VA05	Santo Domingo	2.77	38	*e*P	Pn	00 17 50.5	+0.3
VA05				*i* S	Sn	00 18 24.3	+0.5
VA05				IAML		00 18 42.5	
	comp=E,610nm,0.3s						
VA05	Santo Domingo	2.77	38	Pn	Pn	00 17 50.5	+0.3
MT01	Popeta	2.81	45	*e*P	Pn	00 17 50.7	-0.1
MT01				*i* S	Sn	00 18 26.4	+1.6
MT01				IAML		00 18 40.8	
	comp=E,407nm,0.5s						
MT01	Popeta	2.81	45	Pn	Pn	00 17 50.2	-0.6
MT09	Talagante	3.03	47	*e*P	Pn	00 17 54.5	+0.6
MT09				*i* S	Sn	00 18 31.3	+1.0
MT09	Talagante	3.03	47	Pn	Pn	00 17 54.2	+0.3
BO04	La Punta	3.12	54	*e*P	Pn	00 17 55.5	+0.4
BO04				*i* S	Sn	00 18 32.7	+0.1
BO04				IAML		00 18 43.8	
	comp=N,538nm,0.3s						
LC01	Cunco	3.33	155	*e*P	Pn	00 17 57.5	-0.5
LC01				*i* S	Sn	00 18 39.2	+1.7
LC01				IAML		00 19 01.9	
	comp=E,153nm,0.2s						
LC01	Cunco	3.33	155	Pn	Pn	00 17 58.3	+0.4
MT02	Curacav	3.33	39	*e*P	Pn	00 17 57.6	-0.3
MT02				*i* S	Sn	00 18 39.9	+2.4
MT02				IAML		00 18 56.3	
	comp=E,200nm,0.6s						
MT02	Curacav	3.33	39	Pn	Pn	00 17 57.4	-0.5
MT05	Renca	3.45	45	*e*P	Pn	00 18 00.2	+0.6
MT05				*i* S	Sn	00 18 41.2	+0.7
MT05	Renca	3.45	45	Pn	Pn	00 17 60.0	+0.4
LMEL	Las Melosas	3.48	55	*e*P	Pn	00 18 00.8	+0.7
LMEL				*i* S	Sn	00 18 41.1	-0.4
LMEL				IAML		00 18 55.8	
	comp=N,427nm,0.5s						
ROCH	El Roble	3.62	38	*e*P	Pn	00 18 02.9	+0.7
ROCH				*e*P	Pb	00 18 02.9	-7.1
ROCH				*i* S	Sn	00 18 47.0	+1.9
PEL	Peldehue	3.66	43	*e*P	Pn	00 18 02.7	+0.2
PEL				*i* S	Sn	00 18 48.4	+2.6
PEL	Peldehue	3.66	43	Pn	Pn	00 18 03.0	+0.5
FCH	Farellones	3.76	48	*e*P	Pn	00 18 04.3	+0.3
FCH				*e*S	Sn	00 18 49.8	+1.2
VA06	Catapilco	3.84	31	*e*P	Pn	00 18 05.0	+0.1
VA06				*e*S	Sn	00 18 53.1	+3.1
VA06				IAML		00 19 26.4	
LR03	Panguipulli	3.89	165	Pn	Pn	00 18 06.0	+0.4
VA03	San Esteban	4.02	40	⇓*i*P	Pn	00 18 08.2	+0.7
VA03				*i* S	Sn	00 18 52.9	-1.9
VA03	San Esteban	4.02	40	Pn	Pn	00 18 07.9	+0.3
LL04	Puerto Octay	5.12	169	Pn	Pn	00 18 21.9	-0.7
PLCA	Paso Flores	5.43	154	Pn	Pn	00 18 26.8	0.0
CO06	Fray Jorge	5.45	19	Pn	Pn	00 18 26.6	-0.5
LL05	Los Muermos	5.52	179	Pn	Pn	00 18 27.6	-0.5
CO03	El Pedregal	5.60	27	Pn	Pn	00 18 29.5	+0.3
ZON	Zonda	5.98	45	Pn	Pn	00 18 35.1	+0.7
GO04	Tololo Observa	6.17	24	Pn	Pn	00 18 36.5	-0.6
CO05	La Serena	6.28	19	Pn	Pn	00 18 37.8	-0.6
LL02	Futaleuf	7.44	170	Pn	Pn	00 18 54.9	+0.5
AC04	Llanos de Chal	7.95	17	Pn	Pn	00 18 59.2	-2.3
GO03	Copiap	8.75	20	Pn	Pn	00 19 12.6	+0.1
TRQA	Tornquist	9.59	107	Pn	Pn	00 19 26.2	+2.3
AC02	Maricunga	9.80	24	Pn	Pn	00 19 26.5	-0.8
LPAZ	La Paz	20.12	16	P	P	00 21 41.0	+0.4
LPAZ				IAmb	IAmb	00 22 01.6	
	comp=Z,7.4nm,1.4s						
ETMB	Extrema	26.81	16	P	P	00 22 45.7	-0.5
ETMB				IAmb	IAmb	00 22 52.4	
	comp=Z,2.7nm,1.0s						
TXAR	Lajitas Array	70.75	332	P	P	00 28 21.8	-0.4
TX32	Lajitas Array	70.75	332	P	P	00 28 21.5	-0.7
TX32				IAmb	IAmb	00 28 47.4	
	comp=Z,3.1nm,1.4s						

HEL ***10*** *00:24:09.2, 67°.86N×20°.07E, h0km, ML1.7, Explosion*
UPP 10 00:24:09.7±0.0**, 67°.82N**×**20°.21E, h0km, ML1.6,**
Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	21	P	Pg	00 24 12.6	+0.2
KUA				S	Sg	00 24 14.5	+0.3
KUA	Kurravaara	0.14	21	*i* P	Pg	00 24 12.6	+0.2
KUA				*i* S	Sg	00 24 14.5	+0.3
RATU	Laukkuluspa	0.23	270	P	Pg	00 24 14.3	+0.2
RATU	Laukkuluspa	0.23	270	*i* P	Pg	00 24 14.3	+0.2
NIKU	Nikkaluokta	0.45	276	P	Pg	00 24 18.2	0.0
NIKU	Nikkaluokta	0.45	276	*i* P	Pg	00 24 18.2	0.0
LANU	Lannavaara	0.71	71	P	Pg	00 24 23.1	-0.1

LANU	Lannavaara	0.71	71	eP	Pg	00 24 22.9	-0.4
	baz=264						
DUNU	Dundret	0.72	169	P	Pg	00 24 23.2	-0.3
DUNU	Dundret	0.72	169	iP	Pg	00 24 23.2	-0.3
MASU	Masugnsbyn	0.78	117	P	Pg	00 24 24.4	-0.2
MASU	Masugnsbyn	0.78	117	iP	Pg	00 24 24.4	-0.2
SALU	Saltoluokta	0.79	236	P	Pg	00 24 24.5	-0.3
SALU	Saltoluokta	0.79	236	iP	Pg	00 24 24.5	-0.3
KIF	Kilpisjarvi	1.21	10	eP	Pg	00 24 33.0	+0.2
KIF	Kilpisjarvi	1.21	10	ePB	Pg	00 24 32.9	+0.1
KIF				MSG		00 24 46.0	
	comp=Z,8.4nm,0.2s						
KIF				eSB	Sb	00 24 49.0	-0.5
PAJU	Pajala	1.38	124	P	Pg	00 24 35.0	-1.1
PAJU	Pajala	1.38	124	eP	Pg	00 24 35.0	-1.1
HEF	Hetta	1.42	64	eP	Pn	00 24 35.9	-0.8
HEF	Hetta	1.42	64	eP	Pn	00 24 35.6	-1.1
	baz=245						
HEF				MSG		00 24 52.8	
	comp=Z,4.7nm,0.2s						
ERTU	Ertsjaerv	1.49	148	P	Pn	00 24 36.9	-0.8
ERTU	Ertsjaerv	1.49	148	eP	Pn	00 24 36.9	-0.8
	baz=323						
KLF	Kolari	1.56	111	eP	Pn	00 24 38.1	-0.5
	baz=301						
HARU	Harads	1.69	169	P	Pn	00 24 40.6	+0.1
HARU	Harads	1.69	169	eP	Pn	00 24 40.6	+0.1
SGF	Sodankyl	2.45	96	ePB	Pb	00 24 52.8	-1.7
	baz=290						
RNF	Rovaniemi	2.57	116	ePB	Pn	00 24 54.4	+1.9
RNF				eSG	Sb	00 25 28.9	+0.3
ARA0	ARCESS Array S	2.59	46	eP	Pn	00 24 53.9	+1.1
	baz=227						
ARA0				eSB	Sb	00 25 28.1	-1.1
OBF0	Syolatti, Pyha	3.72	152	e	Sn	00 25 46.9	-5.8
KU6	Riekki	4.22	111	eSB	Sb	00 26 14.2	-1.9

UPP 10 00:24:18.6±0.0**, 67°.83N×20°.20E, h0^{km}, ML1.8, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	23	P	Pg	00 24 21.4	+0.3
KUA				S	Sg	00 24 23.3	+0.4
RATU	Laukkuluspa	0.23	268	P	Pg	00 24 23.1	+0.2
RATU				S	Sg	00 24 26.4	+0.4
NIKU	Nikkaluokta	0.44	275	P	Pg	00 24 27.1	0.0
LANU	Lannavaara	0.71	71	P	Pg	00 24 32.0	-0.2
LANU	Lannavaara	0.71	71	eS	Pg	00 24 31.8	-0.3
MASU	Masugnsbyn	0.79	118	P	Pg	00 24 33.4	-0.2
SALU	Saltoluokta	0.79	236	P	Pg	00 24 33.5	-0.2
PAJU	Pajala	1.39	124	P	Pg	00 24 43.8	-1.3

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*IDC **10** 00:25:03.6±2.1, 23°.79S×179°.90W, h510^{km}±18^{km}, mb3.6/4, mb1 3.7/6, mb1mx3.0/45, mbtmp4.4/6, Error ellipse: s-maj=38.5km s-min=23.5km az=155.0*

*NEIC **10** 00:25:04.2±1.0, 23°.8S±0°.2×179°.9W±0°.1, h519^{km}±12^{km}, mb4.1/14, Error ellipse: s-maj=23.6km s-min=15.0km az=193.0*

ISC 10 00:25:04.0±0.8**, 23°.8S**±0°.1×**179°.9W**±0°.1**, h518^{km}, n27, σ0^{s}.91**/29**, mb4.1**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.31	342	P	P	00 26 44.5	+0.3
	1.5nm,0.3s,baz=179,slow=22,SNR=8.3						
MSVF	Nonsavu	6.31	342	P	P	00 26 44.2	0.0
URZ	Urewera	14.68	189	P	P	00 28 10.1	-0.3
	1.0nm,0.3s,baz=298,slow=24,SNR=9.4						
THZ	Tophouse	18.94	197	P	P	00 28 51.0	-0.9
MLZ	Mavora Lakes	23.66	201	P	P	00 29 35.5	+1.1
EIDS	Eidsvold	26.45	260	P	P	00 29 59.7	+0.4
EIDS				IAmb	IAmb	00 30 13.8	
	comp=Z,4.0nm,1.1s						
CTA	Charters Tower	31.60	270	P	P	00 30 44.8	+0.6
	comp=Z,12nm,0.4s,baz=92,slow=11,SNR=11						
CTAO	Charters Tower	31.60	270	P	P	00 30 44.4	+0.2
COEN	Coen	36.22	279	P	P	00 31 23.1	+0.1
COEN				IAmb	IAmb	00 31 50.7	
	comp=Z,20nm,1.5s						
AS31	Alice Springs	42.18	260	P	P	00 32 10.6	-0.6
ASAR	Alice Springs	42.18	260	P	P	00 32 10.9	-0.3
	comp=Z,2.4nm,0.6s,baz=99,slow=7.3,SNR=26						
ASAR				ScP	ScP	00 36 56.2	+1.5
	comp=Z,0.7nm,0.8s,baz=112,slow=4.5,SNR=4.5						
ASAR	Alice Springs	42.18	260	P	P	00 32 10.5	-0.7
WB2	Warramunga Arr	42.53	266	P	P	00 32 13.1	-0.8
WB2				IAmb	IAmb	00 32 13.7	
	comp=Z,6.1nm,0.8s						
WB0	Warramunga Arr	42.53	266	P	P	00 32 13.1	-0.9
WB0				IAmb	IAmb	00 32 13.7	
	comp=Z,6.7nm,0.7s						
WRA	Warramunga Arr	42.54	266	P	P	00 32 13.2	-0.9
	comp=Z,4.0nm,0.5s,baz=99,slow=8.5,SNR=87						
WRA				ScP	ScP	00 36 58.1	+1.8
	comp=Z,0.4nm,0.7s,baz=91,slow=4.2,SNR=2.9						
WRA	Warramunga Arr	42.54	266	P	P	00 32 12.8	-1.3
KNRA	Kununurra	48.81	270	P	P	00 33 01.5	-0.5
KNRA				IAmb	IAmb	00 33 03.8	
	comp=Z,6.5nm,1.1s						
VNDA	Vanda	54.53	185	P	P	00 33 42.9	+0.6
QSPA	South Pole Qui	66.32	180	P	P	00 35 01.2	+0.5
QSPA				IAmb	IAmb	00 35 01.9	
	comp=Z,3.6nm,0.8s						
SMAI	San Martin Ant	76.19	159	P	P	00 35 58.4	+0.1
SMAI				IAmb	IAmb	00 36 18.8	
	comp=Z,15nm,1.5s						
SNAA	Sanae	84.80	179	P	P	00 36 41.6	-1.5
SNAA	Sanae	84.80	179	P	P	00 36 41.6	-1.5
SNAA				IAmb	IAmb	00 37 04.4	
	comp=Z,4.7nm,1.4s						
VNA3	Neumayer Olymp	85.00	177	P	P	00 36 42.8	-1.3
VNA2	Neumayer--Watz	85.42	178	P	P	00 36 45.4	-0.7
	baz=185,slow=3.0						
VNA1	Neumayer--Stat	85.66	177	P	P	00 36 46.3	-0.9
TXAR	Lajitas Array	90.25	58	P	P	00 37 09.4	-0.1
	comp=Z,0.5nm,0.8s,baz=217,slow=6.3,SNR=6.1						
TXAR	Lajitas Array	90.25	58	P	P	00 37 09.6	0.0

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*IDC **10** 00:29:20.6±7.9, 4°.53S×103°.22E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.0/35, mbtmp3.3/3, Error ellipse: s-maj=412.9km s-min=30.7km az=51.0*

*DJA **10** 00:29:28.4±1.3, 5°S±6°×10°3E±°, h32^{km}±29^{km}, M3.4/10, MLv3.4/10*

ISC 10 00:29:27.6±1.3**, 5°.01S**±0°.09×**102°.93E**±0°.09**, h59^{km}, n14, σ0^{s}.84**/14**, mb3.5**/3**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	1.12	90	P	Pn	00 29 47.7	+0.4
LWLI				S	Sn	00 30 01.8	-0.2
LHSI	Lahat	1.32	27	P	Pn	00 29 50.5	+0.7
MDSI	Maura Dua	1.35	67	P	Pn	00 29 50.5	+0.3
MDSI				S	Sn	00 30 07.7	+0.5
KSI	Kapahiang	1.39	346	P	Pn	00 29 51.4	+0.5
KSI				S	Sn	00 30 09.0	+0.7
KASI	Kota Agung	1.64	108	P	Pn	00 29 54.3	+0.1
KLSI		1.82	80	P	Pn	00 29 56.9	+0.3
MASI	Maura Aman, Be	1.98	340	P	Pn	00 29 59.7	+0.8
CGJI	Cibinong	3.18	120	P	Pn	00 30 16.3	+1.2
H08S2	Diego Garcia H	30.36	263	T	T	01 07 48.9	
	baz=78,slow=76,SNR=19						
H08S3	Diego Garcia H	30.37	264	T	T	01 07 48.9	
	baz=78,slow=76,SNR=29						
H08S1	Diego Carcia H	30.38	263	T	T	01 07 48.9	
	baz=78,slow=76,SNR=17						
WRA	Warramunga Arr	33.97	119	P	P	00 36 06.3	+0.5
	0.3nm,0.5s,baz=292,slow=13,SNR=6.2						
ASAR	Alice Springs	35.13	125	P	P	00 36 16.2	+0.4
	0.1nm,0.3s,baz=301,slow=7.7,SNR=2.1						
MKAR	Makanchi Array	54.73	343	P	P	00 38 49.1	-1.9
	0.4nm,0.6s,baz=151,slow=7.8,SNR=3.8						

IDC 10 00:32:11.7±2.3**, 0°.80N×127°.16E, h0^{km}, mb3.3**/3**, mb1 3.5**/3**, mb1mx2.9**/38**, mbtmp3.3**/3**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.9**/13**, Error ellipse: s-maj=171.9km s-min=28.5km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.78	162	P	P	00 37 06.4	+1.0
	0.5nm,0.5s,baz=340,slow=11,SNR=7.8						
ASAR	Alice Springs	25.19	165	P	P	00 37 38.4	-0.8
	0.6nm,0.7s,baz=347,slow=10,SNR=7.8						
ASAJ	Asahikawa	45.27	16	LR	LR	00 59 52.5	
	comp=Z,60nm,19.6s,baz=169,slow=37						
MKAR	Makanchi Array	60.20	326	P	P	00 42 21.7	0.0
	0.5nm,1.0s,baz=106,slow=8.8,SNR=2.4						

WEL 10 00:35:29.0±1.5**, 39°S**±8°×**17°9E**±°**, h23^{km}**±7^{km}**, M2.1**/5**, ML2.5**/8**, MLv2.1**/5**, Error ellipse: s-maj=0.0km s-min=0.0km az=141.9, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.36	281	P	Pn	00 35 38.5	-0.2
PUZ	Puketiti	0.57	327	P	Pb	00 35 40.8	+0.4
TWGZ	Tauwhareparae	0.65	305	P	Pn	00 35 42.4	-0.4
WMGZ	Waiomatatini S	0.75	345	P	Pn	00 35 43.9	-0.3
PKGZ	Pakihiroa	0.80	325	P	Pb	00 35 44.5	+0.2
PKGZ				S	Sn	00 35 55.9	-0.3
MWZ	Matawai	0.91	283	P	Pb	00 35 45.7	-0.4
MWZ				S	Sb	00 35 57.8	-0.1
RUGZ	Raukumara Rang	0.97	307	P	Pb	00 35 46.7	-0.4
MXZ	Matakaoa Point	1.02	344	S	Sn	00 36 02.5	+1.0
URZ	Urewera	1.25	283	S	Sb	00 36 08.1	+0.6

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*IDC **10** 00:37:29.9±1.3, 31°.26S×71°.28W, h0^{km}, mb4.1/4, mb1 4.1/8, mb1mx3.9/31, mbtmp4.0/8, ML4.0/4, Error ellipse: s-maj=35.5km s-min=30.2km az=130.0*

*SJA **10** 00:37:34.5±0.9, 30°.95S×71°.57W, h25^{km}±3^{km}, ML4.2, MW4.1*

*GUC **10** 00:37:37.5±0.9, 30°.98S×71°.33W, h59^{km}±4^{km}, ML4.3*

*NEIC **10** 00:37:38.1±1.3, 30°.99S±0°.03×71°.37W±0°.07, h49^{km}±5^{km}, mb4.4/15, ML4.3(GUC), Error ellipse: s-maj=9.1km s-min=4.2km az=92.0*

ISC 10 00:37:37.5±0.7**, 30°.98S**±0°.03×**71°.36W**±0°.03**, h48^{km}**±7^{km}**, n119, σ2^{s}.34**/146**, mb4.3**/9**, 3C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.39	321	⇑iP	Pn	00 37 48.0	+0.7
CO06				iS	Sn	00 37 56.6	+2.3
CO06				IAML		00 37 57.2	
	comp=N,16µm,0.3s						
CO06				IAML		00 37 57.8	
	comp=E,35µm,0.3s						
CO06				IAML		00 37 57.8	
	comp=N,17µm,0.1s						
CO06				IAML		00 37 58.9	
	comp=N,17µm,0.2s						
CO06	Fray Jorge	0.39	321		Pn	00 37 47.9	+0.6
CO06					Sn	00 37 56.5	+2.2
CO03	El Pedregal	0.59	77	⇓iP	Pn	00 37 50.2	+0.4
CO03				iS	Sn	00 37 59.5	+0.8
CO03				IAML		00 37 59.9	
	comp=E,40µm,0.1s						
CO03	El Pedregal	0.59	77		Pn	00 37 50.1	+0.2
CO03					Sn	00 37 59.4	+0.7
CO03	El Pedregal	0.59	77	eP	Pn	00 37 50.1	+0.2
CO03				eS	Sn	00 37 59.8	+1.1
CO03				IAML		00 38 01.0	
	comp=Z,9µm,0.5s						
GO04	Tololo Observa	0.93	31	eP	Pn	00 37 55.1	+0.5
GO04				iS	Sn	00 38 08.3	+1.4
GO04				IAML		00 38 10.0	
	comp=N,22µm,0.5s						
GO04	Tololo Observa	0.93	31		Pn	00 37 55.0	+0.5
GO04				Sn	Sn	00 38 08.0	+1.1
GO04	Tololo Observa	0.93	31	eP	Pn	00 37 55.2	+0.7
GO04				eS	Sn	00 38 08.6	+1.7
CO05	La Serena	1.06	6	eP	Pn	00 37 56.1	+0.1
CO05				iS	Sn	00 38 10.8	+1.2
CO05				IAML		00 38 15.4	
	comp=N,6µm,0.3s						
CO05	La Serena	1.06	6		Pn	00 37 56.8	+0.8
CO05				Sn	Sn	00 38 10.8	+1.2
VA06	Catapilco	1.58	178	⇓iP	Pn	00 38 04.0	+0.9
VA06				iS	Sn	00 38 23.4	+1.1
VA06				IAML		00 38 28.1	
	comp=E,5µm,0.3s						
AROD	Rodeo	1.81	64	eP	Pn	00 38 09.7	+3.1
AROD				eS	Sn	00 38 34.5	+6.0
VA03	San Esteban	1.91	159	⇑iP	Pn	00 38 08.8	+1.1
VA03				iS	Sn	00 38 32.1	+1.6
VA03				IAML		00 38 38.0	
	comp=E,5µm,0.2s						
VA03	San Esteban	1.91	159		Pn	00 38 08.8	+1.1
VA03	San Esteban	1.91	159	eP	Pn	00 38 08.8	+1.1
VA03				eS	Sn	00 38 34.2	+3.7
VA03				IAML		00 38 39.9	
	comp=Z,2µm,0.5s						
RTLS	Leoncito	1.94	115	eP	Pn	00 38 11.0	+2.7
RTLS				eP	Pn	00 38 11.1	+2.7
RTLS				eS	Sn	00 38 26.4	-5.3
RTLS				IAML		00 38 40.7	
	comp=Z,939nm,0.3s						
ACCO	Cerro Coronel	2.01	79	eP	Pn	00 38 12.5	+3.3
ROCH	El Roble	2.01	172	eP	Pn	00 38 09.8	+0.6
ROC1	El Roble	2.01	172	eP	Pn	00 38 10.0	+0.8
ROC1				eS	Sn	00 38 37.0	+3.7
LCO	Las Campanas	2.04	16	⇓iP	Pn	00 38 10.8	+1.2
LCO				iS	Sn	00 38 35.8	+1.8
LCO	Las Campanas	2.04	16	Pn	Pn	00 38 10.8	+1.2
LCO	Las Campanas	2.04	16	eP	Pn	00 38 11.0	+1.4
VA01	Torpederas	2.06	187	eP	Pn	00 38 09.6	+0.1
VA01				IAML		00 38 41.3	
	comp=E,2µm,0.5s						
VA01	Torpederas	2.06	187	Pn	Pn	00 38 09.6	+0.1
ACDV	Cuesta del Vie	2.09	68	eP	Pn	00 38 14.0	+3.8
ACDV				eS	Sn	00 38 28.6	-6.5
AUSP	Uspallata	2.09	127	eP	Pn	00 38 13.1	+2.8
AUSP				eS	Sn	00 38 42.2	+6.9
PEL	Peldehue	2.23	165	⇑iP	Pn	00 38 12.6	+0.5
PEL				IAML		00 38 46.3	
	comp=E,1µm,0.5s						
PEL	Peldehue	2.23	165	Pn	Pn	00 38 12.8	+0.7
PEL	Peldehue	2.23	165	eP	Pn	00 38 13.1	+1.0
PEL				eP	Pn	00 38 13.3	+1.2
PEL				eS	Sn	00 38 28.9	-10
MT02	Curacav	2.28	175	eP	Pn	00 38 13.1	+0.4
MT02				IAML		00 38 56.9	
	comp=E,1µm,0.7s						
MT02	Curacav	2.28	175		Pn	00 38 13.5	+0.8
MT02	Curacav	2.28	175	eP	Pn	00 38 13.3	+0.6
MT02				eS	Sn	00 38 43.0	+3.4
ZON	Zonda	2.36	105	Pn	Pn	00 38 16.6	+2.8
ZON	Zonda	2.36	105	eP	Pn	00 38 17.0	+3.2
ZON				eS	Sn	00 38 34.5	-7.1
ZON				eS	Sn	00 38 34.9	-6.7
ZON				IAML		00 38 37.0	
	comp=Z,858nm,0.6s						
MT05	Renca	2.46	168	eP	Pn	00 38 16.7	+1.5
MT05				iS	Sn	00 38 46.6	+2.4
MT05				IAML		00 38 58.8	
	comp=E,4µm,0.5s						
MT05	Renca	2.46	168		Pn	00 38 16.2	+1.0
MT05	Renca	2.46	168	eP	Pn	00 38 16.5	+1.2
MT05				eP	Pn	00 38 17.0	+1.8
MT05				eS	Sn	00 38 51.0	+6.9
MT05				IAML		00 38 57.9	
	comp=Z,1µm,0.7s						
FCH	Farellones	2.51	159	⇓iP	Pn	00 38 17.5	+1.3
FCH				IAML		00 38 55.2	
	comp=N,1µm,0.2s						
RTCV	Cerro Valdivia	2.56	111	eP	Pn	00 38 19.7	+3.1
RTCV				eS	Sn	00 38 37.4	-9.2
VA05	Santo Domingo	2.68	185	IAML		00 39 09.7	
	comp=E,2µm,0.5s						
VA05	Santo Domingo	2.68	185		Pn	00 38 18.0	-0.2
ASAL	Salagasta	2.68	128	eP	Pn	00 38 16.3	-2.0
ASAL				eP	Pn	00 38 21.0	+2.7
ASAL				eS	Sn	00 38 39.0	-11
AC04	Llanos de Chal	2.77	5	Pn	Pn	00 38 20.5	+1.1
AC04	Llanos de Chal	2.77	5	eP	Pn	00 38 20.0	+0.6
AC04				eS	Sn	00 38 51.8	+0.1
AC04				IAML		00 39 06.2	
	comp=Z,578nm,0.3s						
ARCO	CERRO ARCO	2.78	133	eP	Pn	00 38 23.0	+3.4
ARCO				eS	Sn	00 39 06.7	+15
ARCO				IAML		00 39 07.9	
	comp=Z,854nm,0.4s						
MT09	Talagante	2.81	174	eP	Pn	00 38 21.1	+1.1
MT09				iS	Sn	00 38 54.2	+1.4
MT09				IAML		00 39 08.3	
	comp=N,1µm,0.5s						
MT09	Talagante	2.81	174		Pn	00 38 21.1	+1.1
MT01	Popeta	2.88	178		Pn	00 38 21.3	+0.4
MT01	Popeta	2.88	178	eP	Pn	00 38 21.0	+0.1
MT01				eP	Pn	00 38 21.5	+0.6
MT01				eS	Sn	00 38 54.8	+0.5
MT01				IAML		00 39 08.0	
	comp=Z,769nm,0.3s						
AAGR	Agrelo	3.00	135	eP	Pn	00 38 26.0	+3.3
AAGR				eS	Sn	00 38 45.5	-12
LMEL	Las Melosas	3.02	162	IAML		00 39 12.2	
	comp=N,1µm,0.2s						
AVFE	Valle Fertil	3.37	86	eP	Pn	00 38 30.0	+2.3
AVFE				eS	Sn	00 39 14.2	+7.7
AVFE				IAML		00 39 17.3	
	comp=Z,511nm,0.4s						
BO01	Tunca	3.41	176		Pn	00 38 29.5	+1.3
BO01	Tunca	3.41	176	eP	Pn	00 38 29.0	+0.8
BO01				eS	Sn	00 39 10.8	+3.4
BO01				IAML		00 39 27.9	
	comp=Z,298nm,0.8s						
GO03	Copiap	3.51	16	Pn	Pn	00 38 30.8	+1.2
GO03	Copiap	3.51	16	eP	Pn	00 38 31.0	+1.4
GO03				eS	Sn	00 39 10.8	+0.9
GO03				eS	Sn	00 39 13.3	+3.4
VCA	Vinchina	3.53	52	eP	Pn	00 38 29.3	-0.7
VCA				eP	Pn	00 38 34.0	+4.0
VCA				eP	Pn	00 38 34.5	+4.5
VCA				eS	Sn	00 39 16.3	+5.7
VCA				IAML		00 39 26.6	
	comp=Z,819nm,0.6s						
BO02	Sierra Bellavi	3.84	173	Pn	Pn	00 38 35.0	+0.9
GO05	Huala	4.05	187		Pn	00 38 36.1	-0.9
GO05	Huala	4.05	187	eP	Pn	00 38 36.0	-0.9
GO05				eS	Sn	00 39 35.8	+13
ACLC	CERRO LA CRUZ	4.11	69	eP	Pn	00 38 40.4	+2.4
ACLC				eS	Sn	00 39 29.3	+4.3
ACLC				IAML		00 39 35.1	
	comp=Z,1µm,0.8s						
APLL	PUNTA DE LOS L	4.20	83	eP	Pn	00 38 41.1	+2.0
APLL				eS	Sn	00 39 42.8	+16
AC02	Maricunga	4.56	26	Pn	Pn	00 38 46.1	+1.7
AC02	Maricunga	4.56	26	eP	Pn	00 38 46.0	+1.5
MRA	San Martin	5.02	108	eP	Pn	00 38 51.7	+1.4
PB14	IPOC Station P	6.38	8	Pn	Pn	00 39 08.6	-0.6
H03N1	Juan Fernandez	6.86	247	T	T	00 45 56.9	
	baz=76,slow=72,SNR=1152						
H03N3	Juan Fernandez	6.87	247	T	T	00 45 56.8	
	baz=76,slow=72,SNR=1080						
H03N2	Juan Fernandez	6.87	247	T	T	00 45 60.0	
	baz=76,slow=72,SNR=1329						
H03S3	Juan Fernandez	6.99	244	T	T	00 46 44.9	
	SNR=6.2						
H03S1	Juan Fernandez	6.99	244	T	T	00 46 44.9	
	SNR=11						
H03S2	Juan Fernandez	7.01	244	T	T	00 46 44.9	
	SNR=10.0						
LC01	Cunco	7.91	183	Pn	Pn	00 39 30.2	+0.3
PB15	IPOC Station P	7.92	13	Pn	Pn	00 39 29.5	-0.7
LVC	Limon Verde	8.61	15	Pn	Pn	00 39 38.2	-1.7
	comp=Z,0.7nm,0.3s,baz=201,slow=5.1,SNR=2.3						
LVC				Sn	Sn	00 41 21.0	+5.1
	comp=Z,1.1nm,0.3s,baz=195,slow=11,SNR=3.2						
LVC	Limon Verde	8.61	15		Pn	00 39 37.5	-2.4
PB09	IPOC Station P	9.34	12	Pn	Pn	00 39 49.7	+0.1
PLCA	Paso Flores	9.76	176	Pn	Pn	00 39 54.4	-0.8
	comp=Z,0.1nm,0.3s,baz=231,slow=8.3,SNR=1.3						
PLCA	Paso Flores	9.76	176	Pn	Pn	00 39 56.0	+0.8
TRQA	Tornquist	10.47	135	Pn	Pn	00 40 05.0	+0.1
ITQB	Itaqui	12.79	88	Pn	Pn	00 40 34.7	-2.0
CPUP	Villa Florida	13.16	73	Pn	Pn	00 40 39.0	-2.6
	comp=Z,0.2nm,0.3s,baz=235,slow=14,SNR=2.4						
CPUP				Sn	Sn	00 43 02.8	-3.7
	comp=Z,0.1nm,0.3s,baz=350,slow=3.3,SNR=1.9						
LPAZ	La Paz	14.92	12	Pn	Pn	00 41 07.9	+2.0
	comp=Z,0.3nm,0.3s,baz=182,slow=7.2,SNR=7.1						
LPAZ	La Paz	14.92	12	Pn	Pn	00 41 07.5	+1.6
PLTB	Pedras Altas	15.19	98	Pn	Pn	00 41 09.2	+0.3
ITAB	Concordia	17.21	82	Pn	Pn	00 41 33.6	-0.8
ITAB				IAmb	IAmb	00 41 35.7	
	comp=Z,49nm,1.5s						
SIV	San Ignacio	17.63	35	P	P	00 41 40.3	+0.1
	comp=Z,0.6nm,0.3s,baz=224,slow=10,SNR=12						
PTLB	Pontes e Lacer	19.08	39	P	P	00 41 55.8	-0.3
ETMB	Extrema	21.59	14	P	P	00 42 23.7	+0.4
BDFB	Brasilia	26.23	60	P	P	00 43 07.3	-0.9
	comp=Z,2.2nm,0.5s,baz=239,slow=7.2,SNR=5.8						
BDFB	Brasilia	26.23	60	P	P	00 43 07.4	-0.8
BDFB				IAmb	IAmb	00 43 09.9	
	comp=Z,6.7nm,1.1s						
BAUV	El Baul	39.82	5	P	P	00 45 05.9	-0.3
VNA3	Neumayer Olymp	51.95	159	P	P	00 46 41.2	+0.1
VNA1	Neumayer--Stat	52.24	158	P	P	00 46 44.2	+1.0
VNA2	Neumayer--Watz	52.58	158	P	P	00 46 46.0	+0.2
	baz=289,slow=8.0						
SNAA	Sanae	54.17	159	P	P	00 46 57.6	+0.1
SNAA	Sanae	54.17	159	P	P	00 46 57.5	-0.1
SNAA				IAmb	IAmb	00 47 19.4	
	comp=Z,3.9nm,1.1s						
QSPA	South Pole Qui	59.25	180	P	P	00 47 34.2	+0.4
TKL	Tuckaleechee C	67.30	349	P	P	00 48 26.4	-0.7
TKL				IAmb	IAmb	00 48 45.6	
	comp=Z,6.4nm,1.2s						
TXAR	Lajitas Array	67.40	330	P	P	00 48 29.1	+1.1
	comp=Z,0.3nm,0.6s,baz=158,slow=8.1,SNR=4.0						
TXAR	Lajitas Array	67.40	330	P	P	00 48 28.6	+0.6
LCAR	Lake Charles	69.24	343	P	P	00 48 39.2	+0.1
LCAR				IAmb	IAmb	00 48 40.0	
	comp=Z,2.3nm,0.6s						
DBIC	Dimbokro	73.67	72	P	P	00 49 05.8	-0.7
	comp=Z,3.3nm,0.9s,baz=244,slow=5.2,SNR=2.1						
DBIC	Dimbokro	73.67	72	P	P	00 49 06.2	-0.2
DBIC				IAmb	IAmb	00 49 06.7	
	comp=Z,12nm,1.4s						
KOWA	Kowa	78.87	66	P	P	00 49 35.8	-0.2
KOWA				IAmb	IAmb	00 49 36.7	
	comp=Z,3.4nm,0.8s						
BOSA	Boshof	80.96	118	P	P	00 49 47.2	-0.2
BOSA				IAmb	IAmb	00 50 02.2	
	comp=Z,11nm,1.4s						
TORD	Torodi Ar. Bea	82.64	70	P	P	00 49 55.7	-0.3
	comp=Z,2.3nm,0.6s,baz=278,slow=5.4,SNR=21						
TORD	Torodi Ar. Bea	82.64	70	P	P	00 49 55.9	-0.1
TORD				IAmb	IAmb	00 49 56.8	
	comp=Z,1.7nm,0.8s						
LBTB	Lobatse	83.05	115	P	P	00 49 58.1	-0.2
WRA	Warramunga Arr	123.67	209	PKP	PKPdf	00 56 29.7	-0.8
	comp=Z,0.2nm,0.5s,baz=174,slow=1.6,SNR=4.5						
H11S2	WAKE ISLAND Hy	126.34	271	T	T	03 15 25.2	
	baz=115,slow=75,SNR=44						
H11S1	WAKE ISLAND Hy	126.36	271	T	T	03 15 26.0	
	baz=115,slow=75,SNR=61						
H11S3	WAKE ISLAND Hy	126.36	271	T	T	03 15 27.1	
	baz=115,slow=75,SNR=48						
H11N3	WAKE ISLAND Hy	126.68	272	T	T	03 15 52.2	
	baz=116,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	126.70	272	T	T	03 15 53.8	
	baz=116,slow=75,SNR=5.0						
H11N2	WAKE ISLAND Hy	126.70	272	T	T	03 15 51.7	
	baz=116,slow=75,SNR=20						
ZALV	Zalesovo Beam	151.34	30	PKPbc	PKPbc	00 57 24.8	-0.5
	comp=Z,1.4nm,0.5s,baz=298,slow=4.5,SNR=5.4						
ZALV	Zalesovo Beam	151.34	30	PKPbc	PKPbc	00 57 25.1	-0.2
MKAR	Makanchi Array	154.28	45	PKPab	PKPab	00 57 47.1	+0.8
	comp=Z,0.4nm,0.7s,baz=293,slow=3.5,SNR=4.7						

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*TEH **10** 00:39:33.4, 35°.23N×44°.68E, h10^{km}, ML3.8*

*ISN **10** 00:39:34.4±0.9, 35°.34N×44°.77E, h11^{km}±78^{km}, ML4.1*

*DDA **10** 00:39:35.7, 35°.32N×44°.43E, h16^{km}±5^{km}, MW3.9*

ISC 10 00:39:35.1±0.8**, 35°.30N**±0°.03×**44°.68E**±0°.04**, h10^{km}, n44, σ1^{s}.50**/57**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKRK	Kirkuk	0.29	290	ePg	Pg	00 39 41.0	-0.1

IKRK				*e*Sg	**Sb**	**00 39 47.0**	**-0.5**
IKRK				AML	AML	00 39 50.5	
	comp=E,28µm,0.6s						
IKRK				AML	AML	00 39 52.4	
	comp=N,32µm,0.5s						
IDHR	**Dehrash**	**1.52**	**113**	*e*Pg	**Pn**	**00 40 02.2**	**-0.4**
IDHR				*e*Sg	**Sb**	**00 40 23.9**	**+0.8**
IDHR				*e*		00 40 27.6	
	comp=Z,11µm,0.3s						
MAHB	**Mahabad**	**1.68**	**29**	*e*Pg	**Pn**	**00 40 05.7**	**+0.9**
IGHG	**Ghaleghazi**	**1.83**	**121**	*e*		00 40 56.5	
	comp=Z,8µm,0.8s						
IGHG				*e*Pg	**Pn**	**00 40 07.4**	**+0.5**
ILIN	**Lien**	**1.91**	**101**	*e*		00 40 38.2	
	comp=Z,8µm,1.1s						
ILIN				*e*Pg	**Pn**	**00 40 09.2**	**+1.2**
BHD	**Baghdad**	**2.04**	**187**	*e*Pn	**Pn**	**00 40 11.0**	**+1.5**
BHD				*e*Sn	**Sb**	**00 40 38.0**	**+0.3**
BHD				AML	AML	00 40 40.4	
	comp=E,429nm,0.4s						
CUKT	**Cukurca**	**2.13**	**336**	*i* P	**Pn**	**00 40 11.2**	**+0.3**
CUKT				*i* S	**Sn**	**00 40 38.7**	**+1.3**
CUKT	**Cukurca**	**2.13**	**336**	*e*Pn	**Pn**	**00 40 11.1**	**+0.3**
KCHF	**Cheshme Sefid,**	**2.20**	**117**	*e*Pn	**Pn**	**00 40 13.0**	**+1.1**
KER	**Kermanshah**	**2.21**	**114**	*e*Pn	**Pn**	**00 40 13.2**	**+1.1**
YOVA	**Hakkari_Yksek**	**2.30**	**352**	*i* P	**Pn**	**00 40 14.8**	**+1.4**
YOVA				*i* S	**Sb**	**00 40 45.8**	**+0.3**
YOVA	**Hakkari_Yksek**	**2.30**	**352**	*e*Pn	**Pn**	**00 40 14.8**	**+1.4**
HAKT	**HAKKARI**	**2.38**	**341**	*i* P	**Pn**	**00 40 15.4**	**+0.8**
HAKT				*i* S	**Sn**	**00 40 46.1**	**+2.2**
HAKT	**HAKKARI**	**2.38**	**341**	*e*Pn	**Pn**	**00 40 15.3**	**+0.8**
IBDR	**Badra**	**2.42**	**154**	*e*Pn	**Pn**	**00 40 16.0**	**+1.3**
IBDR				*e*Sn	**Sn**	**00 40 46.0**	**+1.6**
IAZR	**Azarshahr**	**2.59**	**23**	*e*Pn	**Pn**	**00 40 19.1**	**+1.7**
SIRN	**Sırnak**	**2.85**	**321**	*i* P	**Pn**	**00 40 21.8**	**+1.0**
SIRN				*i* S	**Sb**	**00 41 03.6**	**+2.3**
SIRN	**Sırnak**	**2.85**	**321**	*e*Pn	**Pn**	**00 40 21.8**	**+1.0**
IALM	**Almabolaq**	**2.89**	**98**	*e*Pn	**Pn**	**00 40 22.8**	**+1.2**
IBST	**Bostanabad**	**2.98**	**36**	*e*Pn	**Pn**	**00 40 23.7**	**+0.9**
IBST				*e*		00 41 17.6	
	comp=Z,3µm,0.6s						
ISHB	**Shabestar**	**3.07**	**14**	*e*Pn	**Pn**	**00 40 24.3**	**+0.4**
ISHB				*e*		00 41 22.5	
	comp=Z,5µm,0.8s						
PERV	**Siirt/Pervari-**	**3.15**	**328**	*i* P	**Pn**	**00 40 26.6**	**+1.7**
PERV				*i* S	**Sg**	**00 41 14.5**	**-1.9**
ITBZ	**Tabriz**	**3.15**	**21**	*e*Pn	**Pn**	**00 40 26.2**	**+1.2**
ITBZ				*e*		00 41 25.5	
	comp=Z,2µm,0.5s						
IKFM	**Kafar-mosalman**	**3.16**	**123**	*e*Pn	**Pn**	**00 40 25.2**	**+0.3**
IDOB	**Doab**	**3.26**	**117**	*e*Pn	**Pn**	**00 40 26.6**	**+0.1**
MIDY	**Mardin/Midyat-**	**3.38**	**309**	*i* P	**Pn**	**00 40 29.2**	**+1.2**
OZAP	**Van, Ozalp-Mer**	**3.40**	**351**	*i* P	**Pn**	**00 40 30.9**	**+2.4**
HSAM	**Samen**	**3.41**	**107**	*e*Pn	**Pn**	**00 40 29.5**	**+0.9**
ISRB	**Sarab**	**3.48**	**43**	*e*Pn	**Pn**	**00 40 31.1**	**+1.5**
ISRB				*e*		00 41 33.6	
	comp=Z,2µm,1.0s						
IMRD	**Marand**	**3.50**	**13**	*e*Pn	**Pn**	**00 40 32.0**	**+2.2**
IMRD				*e*		00 41 41.3	
	comp=Z,3µm,0.5s						
IHRS	**Heris**	**3.56**	**31**	*e*Pn	**Pn**	**00 40 31.8**	**+1.2**
HAGD	**Aghdareh**	**3.69**	**96**	*e*Pn	**Pn**	**00 40 34.1**	**+1.6**
RAFI	**Al-Rafai**	**3.77**	**161**	*e*Pn	**Pn**	**00 40 35.0**	**+1.8**
RAFI				*e*Sn	**Sn**	**00 41 18.0**	**+0.4**
BTMN	**Batman**	**3.77**	**314**	*i* P	**Pg**	**00 40 46.3**	**-1.0**
BTMN				*i* S	**Sb**	**00 41 29.8**	**+2.2**
VMUR	**Van-Muradiye**	**3.79**	**347**	*i* P	**Pg**	**00 40 46.2**	**-1.5**
BMDN	**Meydan**	**3.79**	**114**	*e*Pn	**Pn**	**00 40 33.6**	**-0.2**
ADCV	**BITLIS_Adilcev**	**3.83**	**337**	*i* P	**Pg**	**00 40 47.2**	**-1.4**
CLDR	**Caldiran**	**3.88**	**351**	*i* P	**Pn**	**00 40 39.8**	**+4.7**
SVAN	**Silvan-Diyarba**	**3.99**	**317**	*i* P	**Pb**	**00 40 44.1**	**-1.4**
SVAN				*i* S	**Sg**	**00 41 39.1**	**-4.1**
JIR1	**Jirandeh**	**4.38**	**70**	*e*Pn	**Pn**	**00 40 42.2**	**+0.3**
HANI	**Diyarbakir_Han**	**4.63**	**313**	*i* P	**Pn**	**00 40 45.6**	**+0.4**
HANI				*i* S	**Sg**	**00 42 03.0**	**-0.8**
SLHN	**Bingol, Solhan**	**4.67**	**322**	*i* P	**Pn**	**00 40 45.6**	**-0.3**
QAMS	**Qamsar**	**5.76**	**104**	*e*Pn	**Pn**	**00 41 01.7**	**+0.8**
IKLH	**Kolahrood**	**6.04**	**107**	*e*Pn	**Pn**	**00 41 06.1**	**+1.3**

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*ISN **10** 00:41:24.9±0.6, 35°.30N×44°.74E, h11^{km}±33^{km}, ML4.3*
*TEH **10** 00:41:24.6, 35°.30N×44°.76E, h9^{km}, ML4.1*
ISC 10 00:41:26.9±1.2**, 35°.29N**±0°.05×**44°.62E**±0°.06**, h14**^{km}±12^{km}**,**
n17, σ1^{s}.21/23**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKRK	**Kirkuk**	**0.26**	**296**	*e*Pg	**Pg**	**00 41 31.5**	**-1.0**
IKRK				*e*Sg	**Sg**	**00 41 37.0**	**+0.8**
IKRK				AML	AML	00 41 38.7	
	comp=E,30µm,0.4s						
IKRK				AML	AML	00 41 38.8	
	comp=N,34µm,0.6s						
IDHR	**Dehrash**	**1.56**	**112**	*e*Pg	**Pn**	**00 41 53.1**	**-1.4**
IDHR				*e*Sg	**Sb**	**00 42 14.2**	**-1.3**
IDHR				*e*		00 42 17.8	
	comp=Z,31µm,0.3s						
MAHB	**Mahabad**	**1.72**	**30**	*e*Pg	**Pn**	**00 41 55.8**	**-0.8**
MAHB				*e*		00 42 21.8	
	comp=Z,40µm,0.8s						
IGHG	**Ghaleghazi**	**1.86**	**120**	*e*Pg	**Pn**	**00 41 58.9**	**+0.2**
IGHG				*e*Sg	**Sb**	**00 42 23.7**	**-0.5**
IGHG				*e*		00 42 30.7	
	comp=Z,25µm,0.7s						
ILIN	**Lien**	**1.95**	**100**	*e*Pg	**Pn**	**00 41 59.7**	**-0.2**
ILIN				*e*		00 42 29.7	
	comp=Z,17µm,0.5s						
BHD	**Baghdad**	**2.02**	**186**	*e*Pn	**Pn**	**00 42 01.0**	**+0.4**
BHD				*e*Sn	**Sn**	**00 42 27.5**	**+1.8**
BHD				AML	AML	00 42 30.7	
	comp=E,2µm,0.6s						
KCHF	**Cheshme Sefid,**	**2.23**	**116**	*e*Pn	**Pn**	**00 42 02.9**	**-0.8**
KCHF				*e*		00 42 42.7	
	comp=Z,17µm,0.5s						
KER	**Kermanshah**	**2.25**	**113**	*e*Pn	**Pn**	**00 42 03.4**	**-0.5**
IBDR	**Badra**	**2.43**	**153**	*e*Pn	**Pn**	**00 42 06.0**	**-0.2**
IBDR				*e*Sn	**Sn**	**00 42 36.0**	**+0.3**
IAZR	**Azarshahr**	**2.63**	**24**	*e*Pn	**Pn**	**00 42 09.7**	**+0.5**
IBZA	**Bozab**	**2.78**	**106**	*e*Pn	**Pn**	**00 42 10.8**	**-0.6**
IBZA				*e*		00 42 57.4	
	comp=Z,5µm,0.6s						
IBST	**Bostanabad**	**3.02**	**37**	*e*Pn	**Pn**	**00 42 14.3**	**-0.3**
IBST				*e*		00 43 02.6	
	comp=Z,2µm,0.9s						
ISHB	**Shabestar**	**3.10**	**15**	*e*Pn	**Pn**	**00 42 14.4**	**-1.2**
ISHB				*e*		00 43 12.5	
	comp=Z,5µm,0.8s						
IKFM	**Kafar-mosalman**	**3.19**	**122**	*e*Pn	**Pn**	**00 42 15.7**	**-1.0**
ISRB	**Sarab**	**3.52**	**43**	*e*	**Sg**	**00 43 23.8**	**+3.6**
	comp=Z,2µm,0.9s						
RAFI	**Al-Rafai**	**3.77**	**160**	*e*Pn	**Pn**	**00 42 25.0**	**+0.4**
RAFI				*e*Sn	**Sn**	**00 43 08.0**	**-0.7**
QAMS	**Qamsar**	**5.80**	**104**	*e*Pn	**Pn**	**00 42 52.4**	**-0.4**

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*DJA **10** 00:51:41.6±1.0, 4°S±11°×13°0E±°, h58^{km}±30^{km}, M3.4/6,*
MLv3.4/6
*IDC **10** 00:52:15.5±4.6, 6°.40S×131°.88E, h0^{km}, mb3.5/1,*
mb1 3.7/3, mb1mx2.9/33, mbtmp3.5/3, ML3.3/2, Error
ellipse: s-maj=314.6km s-min=32.8km az=74.0
ISC 10 00:51:43.5±1.2**, 4°.0S**±0°.1×**130°.08E**±0°.07**, h35**^{km}**, n7,**
σ1^{s}.87/8**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.30**	**299**	P	**Pn**	**00 52 05.0**	**-0.2**
MSAI				S	**Sn**	**00 52 21.9**	**+0.5**
AAI	**Ambon**	**1.90**	**279**	P	**Pn**	**00 52 11.8**	**-1.6**
FAKI	**Fak Fak**	**2.41**	**64**	P	**Pn**	**00 52 19.0**	**-1.4**
SWI	**Sorong**	**3.31**	**21**	P	**Pn**	**00 52 33.0**	**+0.2**
LBMI	**Labuha**	**4.20**	**322**	P	**Pn**	**00 52 44.2**	**-0.8**
WRA	**Warramunga Arr**	**16.41**	**166**	Pn	**P**	**00 55 32.1**	**-1.6**
	0.1nm,0.3s,baz=351,slow=13,SNR=3.0						
ASAR	**Alice Springs**	**19.92**	**170**	P	**Pn**	**00 56 17.3**	**+3.1**
	0.3nm,0.3s,baz=350,slow=11,SNR=18						

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*IDC **10** 00:59:17.2±1.6, 4°.14S×129°.62E, h0^{km}, mb3.5/1,*
mb1 3.9/4, mb1mx3.4/34, mbtmp3.7/4, ML3.6/3, Error
ellipse: s-maj=48.3km s-min=24.2km az=92.0
*DJA **10** 00:59:18.8±1.5, 4°S±15°×12°9E±°, h10^{km}, M3.6/6,*
MLv3.6/6
ISC 10 00:59:21.3±1.1**, 4°.17S**±0°.09×**129°.39E**±0°.07**, h36**^{km}**, n8,**
σ1^{s}.53/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.94**	**331**	P	**Pn**	**00 59 37.9**	**-0.1**
AAI	**Ambon**	**1.28**	**292**	P	**Pn**	**00 59 42.6**	**-0.1**
FAKI	**Fak Fak**	**3.12**	**67**	P	**Pn**	**01 00 08.8**	**+0.8**
SIJI	**Sorong**	**3.78**	**30**	Pn	**Pn**	**01 00 17.1**	**-0.1**
	11nm,0.3s,baz=238,slow=23,SNR=17						
SIJI				Sn	**Sn**	**01 00 58.8**	**-1.6**
	7.1nm,0.3s,baz=223,slow=22,SNR=7.8						
LBMI	**Labuha**	**3.98**	**332**	P	**Pn**	**01 00 20.4**	**+0.5**
WRA	**Warramunga Arr**	**16.40**	**163**	Pn	**Pn**	**01 03 06.3**	**-2.6**
	0.1nm,0.3s,baz=346,slow=11,SNR=8.4						
ASAR	**Alice Springs**	**19.86**	**168**	P	**P**	**01 03 51.0**	**+1.5**
	0.3nm,0.3s,baz=347,slow=10,SNR=28						
MKAR	**Makanchi Array**	**65.54**	**326**	P	**P**	**01 10 02.6**	**+1.3**
	0.3nm,0.7s,baz=113,slow=7.8,SNR=4.3						

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*IDC **10** 01:06:15.8±1.6, 4°.22S×130°.33E, h0^{km}, mb3.4/1,*
mb1 3.5/5, mb1mx3.4/35, mbtmp3.4/5, ML3.2/4, MS4.1/1,
Ms1 4.1/1, ms1mx2.9/28, Error ellipse: s-maj=62.6km
s-min=22.5km az=90.0
ISC 10 01:06:17.6±1.1**, 4°.26S**±0°.09×**130°.5E**±0°.3**, h10**^{km}**, n6,**
σ1^{s}.25/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.45**	**12**	Pn	**Pn**	**01 07 11.8**	**+0.4**
	3.2nm,0.3s,baz=92,slow=22,SNR=3.8						
SIJI				Sn	**Sn**	**01 07 53.2**	**+0.8**
	2.3nm,0.3s,baz=270,slow=20,SNR=2.1						
FITZ	**Fitzroy Crossi**	**14.56**	**199**	Pn	**Pn**	**01 09 44.8**	**+0.8**
	0.1nm,0.3s,baz=23,slow=13,SNR=2.1						
WRA	**Warramunga Arr**	**16.02**	**167**	Pn	**Pn**	**01 10 02.2**	**-1.0**
	0.1nm,0.3s,baz=349,slow=13,SNR=2.4						
ASAR	**Alice Springs**	**19.56**	**171**	P	**P**	**01 10 46.4**	**+0.5**
	0.1nm,0.3s,baz=347,slow=11,SNR=8.6						
KSRS	**Korea Array**	**41.58**	**357**	LR	LR	01 32 15.7	
	comp=Z,245nm,19.5s,baz=84,slow=38						
MKAR	**Makanchi Array**	**66.26**	**326**	P	**P**	**01 17 04.7**	**-1.4**
	0.1nm,0.3s,baz=123,slow=5.9,SNR=4.5						

WEL 10 01:19:34.7±1.4**, 31°S**±25°×**17°9E**±7°0**, h410**^{km}±42^{km}**,**
M4.5/5**, mB4.4**/1**, ML4.6**/6**, MLv4.5**/5**, Mw(mB)3.5**/1**, Error**
ellipse: s-maj=0.1km s-min=0.0km az=108.0, Kermadec
Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**6.30**	**188**	P	P	01 21 10.4	-0.1
WMGZ	**Waiomatatini S**	**6.54**	**187**	P	P	01 21 13.5	-0.4
WMGZ				S	S	01 22 34.5	+0.5
HAZ	**Te Kaha**	**6.57**	**192**	P	P	01 21 15.2	+1.1
HAZ				S	S	01 22 36.6	+2.1
PKGZ	**Pakihiroa**	**6.65**	**189**	P	P	01 21 15.5	+0.4
RUGZ	**Raukumara Rang**	**6.79**	**192**	P	P	01 21 15.8	-0.9
RUGZ				S	S	01 22 37.3	-2.0
MWZ	**Matawai**	**7.17**	**192**	P	P	01 21 21.2	+0.4
MWZ				S	S	01 22 46.4	-0.5
URZ	**Urewera**	**7.18**	**195**	P	P	01 21 19.3	-1.5
URZ				S	S	01 22 46.6	-0.4
CNGZ	**Carnagh Statio**	**7.22**	**188**	P	P	01 21 20.2	-1.1
MTHZ	**Maungataniwha**	**7.81**	**195**	P	P	01 21 27.5	-0.4
MTHZ				S	S	01 23 01.8	+1.7
NMHZ	**Naumai**	**8.05**	**195**	P	P	01 21 30.5	0.0
KAHZ	**Kahuranaki**	**8.71**	**193**	P	P	01 21 36.6	-1.1
KAHZ				S	S	01 23 19.6	+0.8

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*IDC **10** 01:20:03.0±1.6, 38°.41N×72°.88E, h0^{km}, mb3.8/6,*
mb1 3.9/13, mb1mx3.6/51, mbtmp3.8/13, ML3.2/7, Error
ellipse: s-maj=28.6km s-min=17.8km az=148.0
*KRNET **10** 01:20:04.4±0.1, 38°.45N×72°.89E, mb4.3*
*NNC **10** 01:20:07.7±1.7, 38°.56N×73°.15E, h0^{km}, mb4.6, mpv4.2,*
Error ellipse: s-maj=12.4km s-min=8.0km az=177.0
ISC 10 01:20:05.4±0.8**, 38°.38N**±0°.05×**72°.80E**±0°.04**, h10**^{km}**, n42,**
σ2^{s}.21/54**, mb3.6**/6**, 17C-16D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**1.35**	**325**	⇑*i*P	**Pn**	**01 20 29.2**	**-1.4**
	baz=21						
DRK				⇑*i*S	**Sg**	**01 20 48.0**	**-0.9**
	baz=21						
GAR	**Garm**	**2.04**	**289**	⇑*i*P	**Pb**	**01 20 42.1**	**-0.5**
	baz=86						
GAR				⇑*e*S	**Sg**	**01 21 09.7**	**-1.3**
	baz=86						
OHH	**Osh**	**2.14**	**360**	⇓*e*P	**Pn**	**01 20 41.8**	**+0.5**
	baz=58						
OHH				⇓*i*S	**Sn**	**01 21 09.1**	**+1.1**
	baz=58						
BTK	**Batken**	**2.28**	**318**	⇑*i*P	**Pn**	**01 20 44.9**	**+1.8**
	baz=16						
BTK				⇑*i*S	**Sb**	**01 21 14.0**	**-0.9**
	baz=16						
TRKS	**Terek-Say**	**3.40**	**338**	⇑*e*P	**Pn**	**01 20 58.8**	**+0.2**
	baz=37						
TRKS				⇑*e*S	**Sn**	**01 21 38.4**	**-0.6**
	baz=37						
AML	**Almayashu**	**3.81**	**10**	⇑*e*P	**Pn**	**01 21 05.2**	**+0.7**
	baz=9.0						
AML				⇑*i*S	**Sn**	**01 21 49.5**	**-0.1**
	baz=9.0						
UCH	**Uchtor**	**4.06**	**18**	⇓*e*P	**Pn**	**01 21 08.4**	**+0.4**
	baz=18						
UCH				⇓*i*S	**Sn**	**01 21 55.3**	**-0.5**
	baz=18						
IUG	**Iuzhnay**	**4.32**	**332**	Pg	**Pg**	**01 21 26.0**	**-2.1**
	1µm,0.8s						
IUG				Lg	Lg	01 22 22.7	
	304nm,0.7s						
MRKS	**Merke**	**4.38**	**4**	Pg	**Pb**	**01 21 22.6**	**+0.2**
	37nm,0.4s						
MRKS				Lg	Lg	01 22 16.9	
	61nm,0.7s						
AAK	**Ala-Archa**	**4.45**	**16**	Pn	**Pn**	**01 21 14.7**	**+1.7**
	1.2nm,0.3s,baz=189,slow=11,SNR=18						
AAK				Sn	**Sn**	**01 22 06.8**	**+1.9**
	2.8nm,0.3s,baz=131,slow=22,SNR=3.6						
AAK	**Ala-Archa**	**4.45**	**16**	⇑Pn	**Pn**	**01 21 13.8**	**+0.8**
	26nm,0.6s						
AAK				⇑Lg	Lg	01 22 22.3	
	192nm,0.9s						
AAK	**Ala-Archa**	**4.45**	**16**	⇓*i*P	**Pn**	**01 21 13.6**	**+0.6**
	baz=16						
AAK				⇓*i*S	**Sn**	**01 22 04.0**	**-0.9**
	baz=16						
CEP	**Cherat**	**4.60**	**189**	P	**Pn**	**01 21 19.0**	**+3.9**
CHCP	**Chirah Chowk**	**4.72**	**175**	P	**Pn**	**01 21 20.8**	**+4.1**
TKM2	**Tokmak 2**	**5.01**	**24**	⇑Pg	**Pb**	**01 21 33.6**	**+0.3**
	27nm,0.9s						
TKM2				⇓Lg	Lg	01 22 39.8	
	148nm,1.4s						
KK02	**Karatay Array**	**5.03**	**341**	⇑Pn	**Pn**	**01 21 22.4**	**+1.5**
	21nm,0.6s						
KK02				⇓Sn	**Sn**	**01 22 24.8**	**+5.7**
	29nm,0.7s						
KK02				⇓Lg	Lg	01 22 46.8	
	25nm,0.6s						
BRLS	**Borolday**	**5.17**	**335**	Pg	**Pb**	**01 21 40.0**	**+4.2**
	14nm,0.5s						
BRLS				Lg	Lg	01 22 47.2	
	32nm,0.8s						
KST	**Kastek**	**5.24**	**26**	Pg	**Pb**	**01 21 37.9**	**+0.7**
	32nm,1.1s						
KST				Lg	Lg	01 22 43.6	
	67nm,0.8s						
SGDS	**Sogindy**	**5.25**	**15**	Pg	**Pb**	**01 21 37.5**	**+0.2**
	20nm,0.6s						
SGDS				Lg	Lg	01 22 42.9	
	37nm,0.4s						
DGS	**Degeres**	**5.36**	**24**	Pg	**Pb**	**01 21 40.4**	**+1.3**
	35nm,0.5s						
DGS				Lg	Lg	01 22 47.9	
	83nm,0.8s						
MTBS	**Maitube**	**5.49**	**29**	Pg	**Pb**	**01 21 42.1**	**+0.8**
	19nm,0.8s						
MTBS				Lg	Lg	01 22 50.9	
	31nm,1.0s						
THW	**Thamme Wali**	**5.64**	**189**	P	**Pn**	**01 21 32.3**	**+3.0**
KRBS	**Karabastau**	**5.74**	**21**	Pg	**Pb**	**01 21 46.7**	**+1.1**
	7.3nm,0.5s						
KRBS				Lg	Lg	01 22 58.9	
	25nm,1.4s						
MDOK	**Medeo**	**5.76**	**33**	⇓Pg	**Pb**	**01 21 50.2**	**+4.1**
	37nm,0.9s						
MDOK				⇑Lg	Lg	01 23 03.6	
	124nm,1.3s						
KNDC	**Almaty**	**5.78**	**32**	⇓Pg	**Pb**	**01 21 48.8**	**+2.6**
	24nm,0.5s						
KNDC				⇓Lg	Lg	01 23 02.3	
	306nm,1.1s						
KOTS	**Kotyrbulak**	**5.85**	**33**	Pg	**Pb**	**01 21 50.5**	**+2.9**
	14nm,0.9s						
KOTS				Lg	Lg	01 23 05.5	
	111nm,0.6s						
KTBS	**Karatobe**	**6.08**	**28**	Pg	**Pb**	**01 21 53.8**	**+2.4**
	7.9nm,0.7s						
KTBS				Lg	Lg	01 23 11.2	
	53nm,1.3s						
PDGK	**Podgornoye**	**7.08**	**44**	⇑Pn	**Pn**	**01 21 48.0**	**-1.2**
	15nm,0.8s						
PDGK				⇑Lg	Lg	01 23 46.0	
	31nm,0.8s						
MKAR	**Makanchi Array**	**10.93**	**37**	Pn	**Pn**	**01 22 42.2**	**+0.4**
	0.1nm,0.3s,baz=214,slow=13,SNR=7.7						
GEYT	**Alibeck**	**11.57**	**272**	Pn	**Pn**	**01 22 51.1**	**+0.4**
	0.4nm,0.3s,baz=79,slow=16,SNR=2.0						
KURBB	**Kurchatov Arra**	**12.90**	**17**	Pn	**Pn**	**01 23 05.9**	**-2.8**
	0.1nm,0.3s,baz=206,slow=12,SNR=4.0						
AB31	**Akbulak array**	**14.27**	**324**	⇓Pn	**Pn**	**01 23 28.8**	**+1.4**
	1.7nm,0.6s,baz=136,slow=13,SNR=32						
AB31				⇓Sn	**Sn**	**01 26 10.5**	**+4.8**
	1.6nm,0.6s,baz=135,slow=21,SNR=4.4						
BVAR	**Borovoye Array**	**14.74**	**354**	Pn	**Pn**	**01 23 31.0**	**-2.9**
	0.1nm,0.3s,baz=200,slow=13,SNR=5.9						
AKTO	**Aktyubinsk**	**15.99**	**324**	Pn	**Pn**	**01 23 48.2**	**-2.1**
	0.1nm,0.3s,baz=127,slow=12,SNR=2.6						
AKTO	**Aktyubinsk**	**15.99**	**324**	⇓Pn	**P**	**01 23 53.0**	**-0.9**
	7.9nm,1.0s						
AKTO				⇓Sn	**Sn**	**01 26 52.3**	**+4.8**
	4.3nm,1.1s						
ZALV	**Zalesovo Beam**	**17.62**	**24**	P	**Pn**	**01 24 08.0**	**-2.8**
	0.3nm,0.3s,baz=214,slow=12,SNR=4.6						
BELG	**Belogornoye**	**22.41**	**317**	P	**P**	**01 25 02.8**	**-1.1**
	12nm,0.9s,baz=213,slow=3.3,SNR=6.2						
SONM	**Songino Array**	**26.11**	**58**	P	**P**	**01 25 39.7**	**+0.3**
	1.3nm,0.9s,baz=256,slow=12,SNR=6.6						
FINES	**FINESS Array B**	**36.76**	**324**	P	**P**	**01 27 12.0**	**-0.7**
	6.0nm,1.0s,baz=119,slow=11,SNR=3.4						
TORD	**Torodi Ar. Bea**	**67.19**	**269**	P	**P**	**01 30 59.1**	**-0.9**
	0.2nm,0.7s,baz=56,slow=47,SNR=1.8						
INK	**Inuvik**	**71.82**	**10**	P	**P**	**01 31 25.7**	**-2.0**
	0.2nm,0.5s,baz=7.1,slow=8.1,SNR=1.0						
ILAR	**Eielson Array**	**72.58**	**17**	P	**P**	**01 31 30.0**	**-2.3**
	0.4nm,0.8s,baz=324,slow=4.5,SNR=4.6						

IDC 10 01:28:14.8±2.7**, 4°.18S**×**130°.42E, h0**^{km}**, mb3.2**/1**,**
mb1 3.4/3**, mb1mx2.8**/45**, mbtmp3.2**/3**, ML2.9**/2**, MS3.7**/2**,**
Ms1 3.7/2**, ms1mx3.2**/17**, Error ellipse: s-maj=165.2km**
s-min=32.5km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.13**	**167**	Pn	Pn	01 32 02.3	-0.8
	0.0nm,0.3s,baz=350,slow=13,SNR=2.0						
PMG	**Port Moresby**	**17.41**	**108**	LR	LR	01 39 24.7	
	comp=Z,106nm,19.5s,baz=208,slow=38						
ASAR	**Alice Springs**	**19.66**	**170**	P	P	01 32 46.0	+0.4
	0.1nm,0.3s,baz=350,slow=9.6,SNR=5.0						
KSRS	**Korea Array**	**41.48**	**357**	LR	LR	01 53 08.4	
	comp=Z,188nm,20.5s,baz=308,slow=36						
MKAR	**Makanchi Array**	**66.12**	**326**	P	P	01 39 04.1	0.0
	0.1nm,0.5s,baz=130,slow=6.9,SNR=2.3						

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*NEIC **10** 01:34:17.6±1.7, 24°.66S±0°.10×177°.2W±0°.2, h129^{km}±12^{km},*
mb4.3/11, Error ellipse: s-maj=22.9km s-min=14.3km
az=92.0
*IDC **10** 01:34:24.3±5.4, 24°.76S×177°.59W, h164^{km}±47^{km}, mb3.9/6,*
mb1 4.0/7, mb1mx3.6/44, mbtmp4.4/7, MS3.5/2, Ms1 3.5/2,
ms1mx3.0/36, Error ellipse: s-maj=39.9km s-min=36.1km
az=149.0
ISC 10 01:34:18.0±0.7**, 24°.71S**±0°.09×**177°.2W**±0°.1**, h132**^{km}**, n30,**
σ1^{s}.32/28**, mb4.3**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.57**	**188**	Pn	**Pn**	**01 35 25.7**	**+0.4**
MSVF	**Nonsavu**	**8.25**	**326**	P	Pn	01 36 18.7	+3.8
	1.6nm,0.3s,baz=301,slow=20,SNR=12						
MSVF				LR	LR	01 38 45.6	
	comp=Z,78nm,19.3s,baz=8.4,slow=32						
MSVF	**Nonsavu**	**8.25**	**326**		**Pn**	**01 36 15.5**	**+0.6**
NIUE	**Niue**	**8.75**	**52**	Pn	**Pn**	**01 36 20.0**	**-1.5**
URZ	**Urewera**	**14.36**	**198**		**P**	**01 37 36.6**	**-1.6**
EIDS	**Eidsvold**	**28.74**	**262**	P	**P**	**01 40 01.0**	**-2.1**
EIDS				IAmb	IAmb	01 40 06.0	
	comp=Z,6.2nm,0.7s						
CTA	**Charters Tower**	**34.06**	**270**	P	**P**	**01 40 51.9**	**+2.0**
	comp=Z,5.0nm,0.3s,baz=93,slow=12,SNR=6.2						
STKA	**Stephens Creek**	**36.84**	**249**	P	**P**	**01 41 13.8**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=75,slow=11,SNR=3.6						
STKA	**Stephens Creek**	**36.84**	**249**	P	**P**	**01 41 13.1**	**-0.4**
STKA				IAmb	IAmb	01 41 54.4	
	comp=Z,3.1nm,1.6s						
BBOO	**Buckleboo**	**41.52**	**248**	P	**P**	**01 41 51.2**	**-1.2**
AS31	**Alice Springs**	**44.45**	**261**	P	**P**	**01 42 15.9**	**-0.2**
ASAR	**Alice Springs**	**44.45**	**261**	P	**P**	**01 42 15.1**	**-1.1**
	comp=Z,1.7nm,0.4s,baz=88,slow=7.3,SNR=28						
ASAR	**Alice Springs**	**44.45**	**261**	P	**P**	**01 42 15.3**	**-0.8**
WR0	**Warramunga Arr**	**44.74**	**266**	P	**P**	**01 42 17.1**	**-1.4**
WR0				IAmb	IAmb	01 43 38.1	
	comp=Z,12nm,1.6s						
WB2	**Warramunga Arr**	**44.92**	**266**	P	**P**	**01 42 19.5**	**-0.3**
WB2				IAmb	IAmb	01 42 21.1	
	comp=Z,18nm,1.8s						
WB0	**Warramunga Arr**	**44.93**	**266**	P	**P**	**01 42 18.8**	**-1.1**
WB0				IAmb	IAmb	01 42 21.2	
	comp=Z,17nm,1.6s						
WRA	**Warramunga Arr**	**44.93**	**266**	P	**P**	**01 42 19.5**	**-0.4**
	comp=Z,2.8nm,0.5s,baz=103,slow=8.0,SNR=70						
WRA	**Warramunga Arr**	**44.93**	**266**	P	**P**	**01 42 18.4**	**-1.5**
FORT	**Forrest**	**48.46**	**250**	P	**P**	**01 42 45.2**	**-2.1**
FITZ	**Fitzroy Crossi**	**53.34**	**265**	P	**P**	**01 43 24.0**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=90,slow=4.0,SNR=38						
VNDA	**Vanda**	**53.81**	**186**	P	**P**	**01 43 26.7**	**+0.3**
VNDA				IAmb	IAmb	01 44 08.7	
	comp=Z,3.8nm,1.2s						
MAW	**Mawson**	**77.88**	**200**	P	**P**	**01 46 02.4**	**+1.8**
	comp=Z,4.3nm,0.5s,baz=122,slow=7.8,SNR=11						
MAW	**Mawson**	**77.88**	**200**	P	**P**	**01 46 02.0**	**+1.3**
MAW				IAmb	IAmb	01 47 35.3	
	comp=Z,3.4nm,0.9s						
SNAA	**Sanae**	**83.80**	**178**	P	**P**	**01 46 32.8**	**+0.6**
VNA3	**Neumayer Olymp**	**83.91**	**176**	P	**P**	**01 46 33.3**	**+0.6**
VNA2	**Neumayer--Watz**	**84.36**	**177**	P	**P**	**01 46 36.0**	**+1.1**
	baz=190,slow=4.5						
VNA1	**Neumayer--Stat**	**84.58**	**176**	P	**P**	**01 46 36.9**	**+0.9**
KDAK	**Kodiak Island**	**84.72**	**13**	LR	LR	02 14 53.2	
	comp=Z,97nm,21.5s,baz=269,slow=29						
AKASG	**Malin Array Be**	**147.03**	**329**	PKPbc	**PKiKP**	**01 53 46.5**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=44,slow=4.3,SNR=7.3						
CLL	**Collm**	**152.32**	**346**	*e*PKPbc	**PKiKP**	**01 54 01.0**	**+2.8**

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*IDC **10** 01:39:59.9±1.0, 4°.22S×129°.48E, h0^{km}, mb4.1/4,*
mb1 4.2/7, mb1mx3.8/43, mbtmp4.0/7, ML3.6/3, Error
ellipse: s-maj=41.0km s-min=22.8km az=73.0
*DJA **10** 01:40:02.7±0.7, 4°S±6°×12°9E±°, h10^{km}, M3.8/6, MLv3.8/6*
ISC 10 01:40:05.1±0.8**, 4°.16S**±0°.08×**129°.43E**±0°.05**, h36**^{km}**, n13,**
σ1^{s}.61/18**, mb4.1**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.95**	**328**	P	**Pn**	**01 40 20.4**	**-1.5**
MSAI				S	**Sn**	**01 40 33.0**	**-1.3**
AAI	**Ambon**	**1.32**	**291**	P	**Pn**	**01 40 25.7**	**-1.2**
AAI				S	**Sn**	**01 40 44.1**	**+0.8**
FAKI	**Fak Fak**	**3.08**	**66**	P	**Pn**	**01 40 51.3**	**+0.2**
FAKI				S	**Sn**	**01 41 27.2**	**+0.5**
SIJI	**Sorong**	**3.75**	**29**	Pn	**Pn**	**01 41 00.6**	**+0.2**
	5.5nm,0.3s,baz=236,slow=22,SNR=16						
SIJI				Sn	**Sn**	**01 41 39.9**	**-3.5**

	9.2nm,0.3s,baz=256,slow=14,SNR=7.1						
SWI	Sorong	3.75	29	P	Pn	01 41 01.8	+1.3
SANI	Sanana	4.03	301	P	Pn	01 41 05.1	+0.9
WRA	Warramunga Arr	16.40	163	Pn	Pn	01 43 49.4	-3.2
	0.1nm,0.3s,baz=338,slow=13,SNR=5.4						
ASAR	Alice Springs	19.87	168	P	P	01 44 34.1	+0.8
	0.5nm,0.3s,baz=347,slow=10,SNR=22						
ASAR				PcP	PcP	01 48 48.5	-1.4
	0.1nm,0.3s,baz=7.8,slow=2.5,SNR=4.3						
CMAR	Chiang Mai Arr	37.52	308	P	P	01 47 17.5	+1.6
	0.8nm,0.3s,baz=137,slow=11,SNR=6.1						
MKAR	Makanchi Array	65.56	326	P	P	01 50 45.9	+0.7
	1.5nm,0.6s,baz=114,slow=8.1,SNR=27						
ZALV	Zalesovo Beam	68.80	334	P	P	01 51 06.0	+0.5
	0.6nm,0.3s,baz=115,slow=6.5,SNR=2.5						
ILAR	Eielson Array	91.04	25	P	P	01 53 06.3	+0.9
	0.9nm,1.2s,baz=279,slow=5.3,SNR=3.6						
TORD	Torodi Ar. Bea	127.65	283	PKP	PKPdf	01 59 08.1	+0.5
	0.4nm,0.8s,baz=73,slow=4.2,SNR=2.0						

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*IDC **10** 01:43:21.4±2.8, 13°.32N×88°.06W, h0^{km}, mb3.6/6, mb1 4.0/8, mb1mx3.7/33, mbtmp3.6/8, ML3.5/2, MS2.5/2, Ms1 2.5/2, ms1mx2.5/41, Error ellipse: s-maj=80.1km s-min=40.1km az=26.0*

*INET **10** 01:43:31.1, 13°.00N×89°.19W, h15^{km}, MW3.9*

*SNET **10** 01:43:31.9±1.2, 13°.05N×89°.20W, h44^{km}±12^{km}, ML4.3*

*UCR **10** 01:43:32.0±1.2, 13°.05N×89°.20W, h43^{km}±12^{km}, ML4.2, mb4.1(NEIC)*

*NEIC **10** 01:43:32.8±1.8, 13°.09N±0°.07×89°.22W±0°.09, h54^{km}±8^{km}, mb4.1/9, Md4.3(SNET), Error ellipse: s-maj=15.1km s-min=7.4km az=54.0*

*GCG **10** 01:43:33.4±0.3, 13°.10N×89°.20W, h41^{km}±210^{km}, MD4.0*

ISC 10 01:43:32.3±0.9, **13°.13N**±0°.06×**89°.15W**±0°.03, **h57**^{km}±6^{km}, **n99**, σ**1^s.09**/152, **mb4.0**/11, **3C-8D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.39	335	iP	Pn	01 43 42.5	-0.5
LALI				eS	Sn	01 43 50.7	0.0
LALI	Alcalda de L	0.39	335	iP	Pn	01 43 42.5	-0.5
LALI				eS	Sn	01 43 50.7	0.0
LFRS	El Faro	0.50	10	⇓iP	Pn	01 43 43.9	-0.3
LFRS	El Faro	0.50	10	⇓iP	Pn	01 43 43.9	-0.3
SJTE	Alcalda de S	0.50	16	iP	Pn	01 43 43.9	-0.3
SJTE				eS	Sn	01 43 53.2	+0.4
SJTE				IAML		01 43 55.1	
	comp=Z,6µm,0.3s						
SJTE	Alcalda de S	0.50	16	iP	Pn	01 43 43.9	-0.3
SJTE				eS	Sn	01 43 53.2	+0.4
SJTE				IAML		01 43 55.1	
	comp=Z,6µm,0.3s						
COEG	Centro de Oper	0.55	28	⇓iP	Pn	01 43 44.6	-0.2
COEG				eS	Sn	01 43 54.4	+0.6
COEG				IAML		01 43 60.0	
	comp=Z,11µm,0.3s						
COEG	Centro de Oper	0.55	28	⇓iP	Pn	01 43 44.6	-0.2
COEG				eS	Sn	01 43 54.4	+0.6
COEG				IAML		01 43 60.0	
	comp=Z,11µm,0.3s						
ITCA	Escuela Especi	0.55	347	eP	Pn	01 43 44.7	-0.1
ITCA				eS	Sn	01 43 54.2	+0.4
ITCA	Escuela Especi	0.55	347	eP	Pn	01 43 44.7	-0.1
ITCA				eS	Sn	01 43 54.2	+0.4
SNET	Serv Nac Est T	0.56	352	eP	Pn	01 43 44.8	-0.1
SNET				eS	Sn	01 43 54.7	+0.8
SNET				IAML		01 43 56.0	
	comp=Z,14µm,0.2s						
SNET	Serv Nac Est T	0.56	352	eP	Pn	01 43 44.8	-0.1
SNET				eS	Sn	01 43 54.7	+0.8
SNET				IAML		01 43 56.0	
	comp=Z,14µm,0.2s						
SNET	Serv Nac Est T	0.56	352		Pn	01 43 44.6	-0.2
SNET				Sn	Sn	01 43 54.3	+0.4
AEIL	Aeropuerto Ilo	0.56	3	eP	Pn	01 43 45.1	+0.2
AEIL				eS	Sn	01 43 56.4	+2.4
AEIL				IAML		01 43 58.4	
	comp=Z,14µm,0.3s						
AEIL	Aeropuerto Ilo	0.56	3	eP	Pn	01 43 45.1	+0.2
AEIL				eS	Sn	01 43 56.4	+2.4
AEIL				IAML		01 43 58.4	
	comp=Z,14µm,0.3s						
SEMO	Seminario San	0.57	353	eP	Pn	01 43 45.0	-0.1
SEMO				eS	Sn	01 43 55.0	+0.8
IGN	Direccin Gen	0.58	358	eP	Pn	01 43 45.2	+0.1
IGN				eS	Sn	01 43 55.3	+1.0
IGN	Direccin Gen	0.58	358	eP	Pn	01 43 45.2	+0.1
IGN				eS	Sn	01 43 55.3	+1.0
OPAM	Oficina de Pla	0.58	355	eP	Pn	01 43 45.1	+0.1
OPAM				eS	Sn	01 43 55.4	+1.1
OPAM	Oficina de Pla	0.58	355	eP	Pn	01 43 45.1	+0.1
OPAM				eS	Sn	01 43 55.4	+1.1
UDBS	Universidad Do	0.58	359	eP	Pn	01 43 45.2	+0.1
UDBS				eS	Sn	01 43 55.2	+0.9
UDBS				IAML		01 43 57.8	
	comp=Z,13µm,0.2s						
UDBS	Universidad Do	0.58	359	eP	Pn	01 43 45.2	+0.1
UDBS				eS	Sn	01 43 55.2	+0.9
UDBS				IAML		01 43 57.8	
	comp=Z,13µm,0.2s						
UEES	Universidad Ev	0.59	351	iP	Pn	01 43 45.1	-0.1
UEES				eS	Sn	01 43 55.8	+1.3
UEES	Universidad Ev	0.59	351	iP	Pn	01 43 45.1	-0.1
UEES				eS	Sn	01 43 55.8	+1.3
ALJI	Alcalda de J	0.59	71	eP	Pn	01 43 45.3	+0.1
ALJI				eS	Sn	01 43 55.6	+1.1
ALJI	Alcalda de J	0.59	71	eP	Pn	01 43 45.3	+0.1
ALJI				eS	Sn	01 43 55.6	+1.1
PMON	Piamonte	0.60	344	⇓iP	Pn	01 43 45.3	0.0
PMON				eS	Sn	01 43 56.1	+1.3
PMON	Piamonte	0.60	344	⇓iP	Pn	01 43 45.3	0.0
PMON				eS	Sn	01 43 56.1	+1.3
LBRS	Las Brisas	0.61	10	iP	Pn	01 43 45.8	+0.3
LBRS	Las Brisas	0.61	10	iP	Pn	01 43 45.8	+0.3
BOQS	Boqueron	0.61	348	⇓iP	Pn	01 43 45.8	+0.1
BOQS	Boqueron	0.61	348	⇓iP	Pn	01 43 45.8	+0.1
LFU	La Fuente	0.61	3	⇑iP	Pn	01 43 45.8	+0.3
LFU	La Fuente	0.61	3	⇑iP	Pn	01 43 45.8	+0.3
PAVA	Las Pavas	0.61	20	eP	Pn	01 43 45.6	+0.1
PAVA				eS	Sn	01 43 56.1	+1.0
PAVA	Las Pavas	0.61	20	eP	Pn	01 43 45.6	+0.1
PAVA				eS	Sn	01 43 56.1	+1.0
COEB	Comit de Eme	0.70	59	iP	Pn	01 43 46.7	+0.1
COEB				eS	Sn	01 43 58.1	+1.1
COEB				IAML		01 44 00.5	
	comp=Z,13µm,0.3s						
COEB	Comit de Eme	0.70	59	iP	Pn	01 43 46.7	+0.1
COEB				eS	Sn	01 43 58.1	+1.1
COEB				IAML		01 44 00.5	
	comp=Z,13µm,0.3s						
CEDA	San Andres	0.71	340	eP	Pn	01 43 46.7	+0.1
CEDA				eS	Sn	01 43 58.2	+1.2
CEDA				IAML		01 44 07.5	
	comp=Z,11µm,0.5s						
CEDA	San Andres	0.71	340	eP	Pn	01 43 46.7	+0.1
CEDA				eS	Sn	01 43 58.2	+1.2
CEDA				IAML		01 44 07.5	
	comp=Z,11µm,0.5s						
PQSS	Presa 15 de Se	0.75	49	eP	Pn	01 43 47.5	+0.4
PQSS				eS	Sn	01 43 59.5	+1.6
CEVE	Cerro Verde	0.83	326	eP	Pn	01 43 48.4	0.0
CEVE				eS	Sn	01 44 01.1	+1.0
CEVE				IAML		01 44 04.2	
	comp=Z,29µm,0.3s						
CEVE	Cerro Verde	0.83	326	eP	Pn	01 43 48.4	0.0
CEVE				eS	Sn	01 44 01.1	+1.0
CEVE				IAML		01 44 04.2	
	comp=Z,29µm,0.3s						
SBLS	San Blas	0.84	327	eP	Pn	01 43 48.5	+0.1
SBLS	San Blas	0.84	327	eP	Pn	01 43 48.5	+0.1
SNJE	San Jose	0.86	329	eP	Pn	01 43 48.6	0.0
SNJE	San Jose	0.86	329	eP	Pn	01 43 48.6	0.0
TACO	Tacachico	0.86	347	iP	Pn	01 43 48.6	+0.1
TACO				eS	Sn	01 44 01.8	+1.5
TACO	Tacachico	0.86	347	iP	Pn	01 43 48.6	+0.1
TACO				eS	Sn	01 44 01.8	+1.5
PACA	Pacayal	0.87	67	eP	Pn	01 43 49.2	+0.5
PACA				eS	Sn	01 44 02.7	+1.9
PACA	Pacayal	0.87	67	eP	Pn	01 43 49.2	+0.5
PACA				eS	Sn	01 44 02.7	+1.9
VSM	San Miguel	0.90	71	eP	Pn	01 43 49.6	+0.4
VSM	San Miguel	0.90	71	eP	Pn	01 43 49.6	+0.4
RTR	El Retiro	0.90	328	eP	Pn	01 43 49.5	+0.3
RTR	El Retiro	0.90	328	eP	Pn	01 43 49.5	+0.3
UNIC	Universidad Ca	0.93	335	eP	Pn	01 43 50.0	+0.5
UNIC				eS	Sn	01 44 04.0	+2.0
UNIC	Universidad Ca	0.93	335	eP	Pn	01 43 50.0	+0.5
UNIC				eS	Sn	01 44 04.0	+2.0
CNRM	Centro Naciona	1.01	70	eP	Pn	01 43 50.8	+0.4
CNRM				eS	Sn	01 44 06.3	+2.5
CNRM	Centro Naciona	1.01	70	eP	Pn	01 43 50.8	+0.4
CNRM				eS	Sn	01 44 06.3	+2.5
SLOZ	Alcaldia de Sa	1.08	325	eP	Pn	01 43 51.8	+0.3
SLOZ				eS	Sn	01 44 07.7	+2.1
SLOZ				IAML		01 44 12.0	
	comp=Z,2µm,0.5s						
LCND	La Caada	1.24	82	eP	Pn	01 43 53.7	+0.3
LCND				eS	Sn	01 44 10.5	+1.3
LCND				IAML		01 44 12.1	
	comp=Z,7µm,0.4s						
LCND	La Caada	1.24	82	eP	Pn	01 43 53.7	+0.3
LCND				eS	Sn	01 44 10.5	+1.3
LCND				IAML		01 44 12.1	
	comp=Z,7µm,0.4s						
MTO3	Montecristo	1.28	351	Pn	Pn	01 43 54.6	+0.4
MTO3				Sn	Sn	01 44 11.1	+0.6
ESQI	Esquipulas	1.43	353	Pn	Pn	01 43 57.1	+0.9
ESQI				Sn	Sn	01 44 15.2	+1.1
NBG	Las Nubes	1.86	321	eP	Pn	01 44 03.8	+1.7
MRL	Marmol	2.01	345	⇑eP	Pn	01 44 06.0	+1.9
TGUH	Tegucigalpa,Un	2.04	63	Pn	Pn	01 44 05.0	+0.5
CRIN	San Cristobal	2.09	102	Pn	Pn	01 44 04.8	-0.2
FUG	Fuego 3	2.10	309	eP	Pn	01 44 06.6	+1.3
FUG				eS	Sn	01 44 32.4	+1.9
APG	El Apazote	2.26	326	Pn	Pn	01 44 08.4	+0.9
	comp=Z,5.7nm,0.3s,baz=146,slow=4.0,SNR=16						
APG				LR	LR	01 44 40.7	
	comp=Z,26nm,19.2s,baz=38,slow=28						
STG3	Santiaguito 3,	2.83	304	eP	Pn	01 44 16.6	+1.4
STG3				eS	Sn	01 44 50.5	+2.2
MATN	Matagalpa	3.15	93		Pn	01 44 18.1	-1.4
BOAB	BOACO BROADBAN	3.46	101	Pn	Pn	01 44 21.8	-2.0
ACON	Acoyapa	4.05	106		Pn	01 44 32.1	+0.3
HZTE	Horizontes, Gu	4.23	124	Pn	Pn	01 44 35.2	+1.0
CCIG	Comitan	4.26	318		Pn	01 44 35.0	+0.1
ORTG	Ortega, Santa	4.54	127		Pn	01 44 39.3	+0.6
JTS	Las Juntas de	4.99	124	Pn	Pn	01 44 45.9	+1.2
JACO	JACO, Garabito	5.59	128	Pn	Pn	01 44 54.4	+1.5
RIMA	Rio Macho	6.17	122		Pn	01 45 02.3	+1.3
CMIG	Matias Romero	6.79	306	Pn	Pn	01 45 11.9	+2.4
	comp=Z,1.1nm,0.3s,baz=140,slow=8.1,SNR=11						
CMIG				Sn	Sn	01 46 23.7	-1.8
	comp=Z,1.0nm,0.3s,baz=143,slow=20,SNR=1.7						
CMIG				LR	LR	01 48 28.8	
	comp=Z,107nm,19.7s,baz=82,slow=40						
SRBA	San Rafael, Bu	6.88	124		Pn	01 45 11.9	+1.2
SOR	Soroa	11.24	30		Pn	01 46 11.8	+1.5
TXAR	Lajitas Array	21.01	322	P	P	01 48 12.8	+1.5
	comp=Z,0.8nm,0.6s,baz=142,slow=9.6,SNR=19						
TXAR	Lajitas Array	21.01	322	P	P	01 48 12.3	+1.0
TX31	Lajitas Ar. Si	21.01	322	P	P	01 48 11.2	-0.1
TX32	Lajitas Array	21.01	322	P	P	01 48 12.2	+0.9
NHSC	New Hope	21.51	21	P	P	01 48 14.9	-1.5
MIAR	Mount Ida	21.69	350	P	P	01 48 19.9	+1.4
MIAR				IAmb	IAmb	01 48 38.9	
	comp=Z,12nm,1.5s						
SWET	Sewanee	22.18	7	P	P	01 48 24.4	+0.7
SWET				IAmb	IAmb	01 48 40.5	
	comp=Z,9.3nm,1.5s						
X34A	Smith Ranch, M	22.78	341	P	P	01 48 31.1	+1.0
CCM	Cathedral Cave	24.89	356	P	P	01 48 49.7	-0.1
CCM				IAmb	IAmb	01 49 07.5	
	comp=Z,7.7nm,1.2s						
R40A	Maddies Statio	25.21	354	P	P	01 48 51.5	-1.2
R40A				IAmb	IAmb	01 48 55.8	
	comp=Z,3.4nm,0.8s						
ETMB	Extrema	32.22	134	P	P	01 49 55.0	-0.4
ETMB				IAmb	IAmb	01 49 57.1	
	comp=Z,3.0nm,0.7s						
PDAR	Pinedale Array	34.40	333	P	P	01 50 14.7	+0.3
	comp=Z,0.2nm,0.5s,baz=126,slow=11,SNR=2.8						
PDAR				PcP	PcP	01 52 47.0	-2.1
	comp=Z,0.3nm,0.5s,baz=134,slow=3.9,SNR=4.6						
NVAR	Mina Array Bea	36.11	320	P	P	01 50 31.2	+2.1
	comp=Z,0.4nm,0.5s,baz=142,slow=7.6,SNR=2.7						
NVAR				PcP	PcP	01 52 54.0	-0.1
	comp=Z,0.2nm,0.5s,baz=161,slow=3.6,SNR=4.5						
YKA	Yellowknife Ar	52.53	345	P	P	01 52 38.0	-1.6
	comp=Z,0.7nm,0.4s,baz=131,slow=8.4,SNR=6.8						
INK	Inuvik	62.07	343	P	P	01 53 43.4	-3.2
	comp=Z,1.2nm,0.7s,baz=146,slow=3.6						
ILAR	Eielson Array	64.73	336	P	P	01 54 01.4	-2.9
	comp=Z,0.4nm,0.6s,baz=167,slow=4.4,SNR=6.6						

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*FUNV **10** 01:44:51.4, 8°.43N×71°.41W, h5^{km}, MW3.3*

ISC 10 01:44:50.9±1.1, **8°.48N**±0°.04×**71°.41W**±0°.02, **h11**^{km}±10^{km}, **n19**, σ**1^s.99**/37, **1C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	Socops	0.58	110	eP	Pg	01 45 02.0	-0.2
SOCV				eS	Sg	01 45 10.3	+0.5
SOCV	Socops	0.58	110	⇑eP	Pg	01 45 02.1	0.0
SOCV				eS	Sg	01 45 09.6	-0.2
SDV	Santo Domingo	0.86	62	eP	Pg	01 45 07.7	0.0
SDV				eS	Sg	01 45 18.5	-0.4
SDV				i		01 45 19.8	
	comp=Z,157nm,0.4s						
CAPV	Capacho	1.09	236	eP	Pg	01 45 11.2	-0.7
CAPV				eS	Sg	01 45 25.7	-0.4
PAMC	Pamplona, Colo	1.71	229	eP	Pg	01 45 23.6	-0.2
PAMC				eS	Sg	01 45 48.4	+2.3
PAMC				i		01 45 50.4	
	comp=Z,140nm,0.3s						
OCAC	Ocana	1.91	263	eP	Pb	01 45 25.2	-0.7
OCAC				eS	Sb	01 45 50.1	+0.3
TAMC	Tame, Arauca	2.07	191	eP	Pb	01 45 28.4	-0.1
TAMC				eS	Sg	01 45 58.6	+1.1
ELOV	Elorza	2.41	128	eP	Pg	01 45 38.0	+0.9
ELOV				eS	Sb	01 46 05.4	+1.4
BARC	Barichara	2.57	223	eP	Pg	01 45 38.9	-1.4
BARC				eS	Sg	01 46 12.9	-0.9
SMLC	San Martn de	2.66	277	eP	Pn	01 45 34.8	+1.0
SMLC				eS	Sb	01 46 10.9	-0.3
SIQV	Siquisique	2.67	36	eP	Pn	01 45 35.6	+1.6
SIQV				eS	Sn	01 46 06.0	-0.3
CRJC	Cerrejon, Guaj	2.91	330	eP	Pn	01 45 38.3	+1.0
CRJC				eS	Sn	01 46 13.6	+1.2
RUSC	La Rusia	3.06	213	eP	Pn	01 45 42.3	+2.5
RUSC				eS	Sg	01 46 28.4	-1.1
MAPV	Macapo	3.21	65	eP	Pn	01 45 41.9	+0.6
MAPV				eS	Sn	01 46 19.8	+0.2
MONV	Montecano	3.73	22	eP	Pn	01 45 49.7	+1.2
MONV				eS	Sn	01 46 30.6	-1.8
SJCC	San Jacinto, C	3.98	291	eP	Pn	01 45 54.9	+2.9
SJCC				eS	Sn	01 46 41.4	+2.6
BENV	Beln	4.04	68	eS	Sn	01 46 38.9	-1.2
GUY2C	Guyana, Caldas	5.09	231	eP	Pn	01 46 11.1	+3.4
GUY2C				eS	Sb	01 47 14.2	-7.6
BIRV	Birongo	5.44	68	eP	Pn	01 46 12.5	+0.5
BIRV				eS	Sn	01 47 11.4	-3.3

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*IDC **10** 01:52:38.0±1.6, 4°.23S×129°.63E, h0^{km}, mb3.4/1, mb1 4.1/4, mb1mx3.7/32, mbtmp3.9/4, ML3.6/3, Error ellipse: s-maj=52.1km s-min=24.5km az=90.0*

*DJA **10** 01:52:40.5±0.8, 4°S±7°×12°9E±°, h10^{km}, M3.6/7, MLv3.6/7*

ISC 10 01:52:39.8±0.9, **4°.26S**±0°.07×**129°.48E**±0°.06, **h10**^{km}, **n15**, σ**2^s.10**/16, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	1.06	329	P	Pg	01 52 59.5	-0.8
MSAI				S	Sg	01 53 13.4	-0.7
AAI	Ambon	1.40	294	P	Pn	01 53 04.7	-0.8
FAKI	Fak Fak	3.07	64	P	Pn	01 53 28.4	0.0
SIJI	Sorong	3.81	28	Pn	Pn	01 53 36.6	-2.0
	4.8nm,0.3s,baz=334,slow=19,SNR=4.4						
SIJI				Sn	Sn	01 54 23.5	-0.1
	3.0nm,0.3s,baz=282,slow=12,SNR=4.5						
SWI	Sorong	3.81	28	P	Pn	01 53 41.5	+2.8
LBMI	Labuha	4.11	331	P	Pn	01 53 43.2	+0.5
SANI	Sanana	4.12	302	P	Pn	01 53 42.5	-0.4
WRA	Warramunga Arr	16.29	163	Pn	Pn	01 56 26.1	-2.8
	0.2nm,0.3s,baz=348,slow=13,SNR=10						
PCJI	Pacitan	18.61	257	P	Pn	01 57 02.8	+5.0
WOJI	Wonogiri, Jawa	18.79	258	P	Pn	01 57 08.9	+8.9
UGM	Wanagama	19.19	258	P	Pn	01 57 06.5	+1.5
YOGI	Yogyakarta	19.40	259	P	Pn	01 57 09.9	+2.5
ASAR	Alice Springs	19.76	168	P	P	01 57 10.8	+0.7
	0.4nm,0.3s,baz=347,slow=11,SNR=32						
CMJI	Cimerak	21.20	259	P	P	01 57 24.7	-1.2
MKAR	Makanchi Array	65.67	326	P	P	02 03 24.5	0.0
	0.2nm,0.4s,baz=112,slow=8.0,SNR=5.0						

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*IDC **10** 01:56:48.3±0.6, 4°.15S×129°.59E, h0^{km}, mb4.2/9, mb1 4.4/12, mb1mx4.2/28, mbtmp4.2/12, ML4.1/3, Error ellipse: s-maj=33.4km s-min=14.8km az=69.0*

*NEIC **10** 01:56:52.4±1.2, 4°.05S±0°.06×129°.68E±0°.10, h23^{km}±5^{km}, mb4.2/11, Error ellipse: s-maj=14.6km s-min=7.7km az=105.0*

*DJA **10** 01:56:53.1±0.4, 4°S±3°×13°0E±°, h10^{km}, M4.4/9, mb4.5/5, mB5.0/2, MLv4.3/9, Mw(mB)4.4/2*

ISC 10 01:56:53.4±0.5, **4°.10S**±0°.05×**129°.64E**±0°.05, **h36**^{km}, **n68**, σ**1^s.59**/72, **mb4.2**/9, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.50	148	P	Pn	01 57 02.6	-1.3
MSAI	Masohi	1.03	316	P	Pn	01 57 09.3	-2.0
MSAI				S	Sn	01 57 22.1	-2.4
AAI	Ambon	1.50	286	P	Pn	01 57 15.6	-2.2
AAI				S	Sn	01 57 32.9	-3.2
FAKI	Fak Fak	2.85	66	P	Pn	01 57 38.4	+2.1
FAKI	Fak Fak	2.85	66	Pn	Pn	01 57 36.0	-0.4
FAKI				Sn	Sn	01 58 08.5	-1.0
FAKI	Fak Fak	2.85	66	P	Pn	01 57 38.5	+2.1
SIJI	Sorong	3.59	27	Pn	Pn	01 57 46.9	+0.2
	24nm,0.3s,baz=212,slow=14,SNR=19						
SIJI				Sn	Sn	01 58 25.9	-1.9
	8.0nm,0.3s,baz=50,slow=22,SNR=4.0						
SWI	Sorong	3.60	27	P	Pn	01 57 47.6	+1.0
LBMI	Labuha	4.05	328	P	Pn	01 57 53.4	+0.6
LBMI				S	Sn	01 58 38.7	-0.3
SANI	Sanana	4.18	299	P	Pn	01 57 54.7	+0.1
SANI	Sanana	4.18	299	P	Pn	01 57 55.3	+0.7
SOEI	Soe	7.75	223	P	Pn	01 58 52.4	+8.6
GTOI	Gorontalo	8.13	305	P	Pn	01 58 52.6	+3.7
	13nm,1.1s						
BATI	Baumata	8.49	224	Pn	Pn	01 58 56.5	+2.7
	13nm,0.3s,baz=126,slow=3.0,SNR=5.9						
MTN	Manton Dam	8.81	170	Pn	Pn	01 58 59.3	+1.0
MTN	Manton Dam	8.81	170	P	Pn	01 58 59.1	+0.8
KDU	Kakadu	8.98	162	P	Pn	01 58 59.9	-0.7
EDFI	Ende, Flores	9.15	239	P	Pn	01 59 05.8	+2.7
BKSI	Bulukumba	9.57	262	P	Pn	01 59 14.4	+5.8
KAPI	Kappang	9.90	264	Pn	Pn	01 59 17.5	+4.2
	1.9nm,0.3s,baz=101,slow=17,SNR=4.0						
KNRA	Kununurra	11.54	184	Pn	Pn	01 59 36.0	+0.4
KNRA	Kununurra	11.54	184	P	Pn	01 59 35.0	-0.7
FITZ	Fitzroy Crossi	14.46	195	Pn	Pn	02 00 12.2	-3.4
	0.2nm,0.3s,baz=32,slow=12,SNR=2.5						
WB0	Warramunga Arr	16.25	164	Pn	Pn	02 00 36.1	-3.0
WB0				IAmb	IAmb	02 00 53.1	
	comp=Z,21nm,1.4s						
WRA	Warramunga Arr	16.40	164	Pn	Pn	02 00 36.5	-4.5
	comp=Z,0.7nm,0.3s,baz=338,slow=12,SNR=18						
WRA	Warramunga Arr	16.40	164	Pn	Pn	02 00 38.0	-3.0
WB2	Warramunga Arr	16.41	164	Pn	Pn	02 00 37.5	-3.6
WB2				IAmb	IAmb	02 00 49.1	
	comp=Z,11nm,0.9s						
WR0	Warramunga Arr	16.47	164	Pn	Pn	02 00 39.5	-2.4
WR0				IAmb	IAmb	02 00 57.1	
	comp=Z,7.5nm,0.9s						
COEN	Coen	16.56	127	Pn	Pn	02 00 41.2	-1.7
COEN				IAmb	IAmb	02 00 46.4	
	comp=Z,17nm,0.8s						
COEN	Coen	16.56	127	P	Pn	02 00 43.9	+0.9
QIS	Mount Isa	19.02	150	P	P	02 01 12.5	+0.2
MBWA	Marble Bar	19.50	209	P	P	02 01 18.0	+0.4
PSA00	Pilbara Seismi	19.80	208	P	P	02 01 21.1	+0.2
PSA00				IAmb	IAmb	02 01 22.4	
	comp=Z,14nm,0.8s						
PSA00	Pilbara Seismi	19.80	208	P	Pn	02 01 21.8	-0.9
PSA00				IAmb	IAmb	02 01 22.4	
	comp=Z,29nm,0.7s						
PSA00	Pilbara Seismi	19.80	208	P	Pn	02 01 21.7	-0.9
AS31	Alice Springs	19.88	168	P	P	02 01 22.2	+0.4
AS31				IAmb	IAmb	02 01 24.5	
	comp=Z,8.4nm,0.6s						
ASAR	Alice Springs	19.89	168	P	P	02 01 21.4	-0.4
	comp=Z,3.0nm,0.3s,baz=348,slow=9.9,SNR=98						
ASAR				PcP	PcP	02 05 38.2	-0.1
	comp=Z,0.3nm,0.3s,baz=9.4,slow=1.4,SNR=7.2						
ASAR	Alice Springs	19.89	168	P	P	02 01 22.2	+0.4
CTA	Charters Tower	22.68	136	P	P	02 01 52.5	+0.4
	comp=Z,6.4nm,0.5s,baz=311,slow=14,SNR=19						
CTAO	Charters Tower	22.68	136	P	P	02 01 51.6	-0.4
CTAO	Charters Tower	22.68	136	P	P	02 01 52.4	+0.4
GIRL	Giralia	23.72	218	P	P	02 02 02.8	+0.6
OOD	Oodnadatta	24.26	167	P	P	02 02 07.3	+0.1
XMI	Christmas Isla	24.57	254	P	P	02 02 08.8	-1.4
INKA	Innaminka	25.79	157	P	P	02 02 20.9	-0.2
MULG	Mulgathing	26.38	171	P	P	02 02 26.3	-0.1
FORT	Forrest	26.58	183	P	P	02 02 27.7	-0.5
LCRK	Leigh Creek	27.43	164	P	P	02 02 35.8	-0.1
BBOO	Buckleboo	29.19	169	P	P	02 02 51.2	-0.3
STKA	Stephens Creek	29.83	159	P	P	02 02 56.9	-0.3
	comp=Z,2.2nm,0.5s,baz=335,slow=10,SNR=8.8						
STKA	Stephens Creek	29.83	159	P	P	02 02 57.3	+0.1
STKA	Stephens Creek	29.83	159	P	P	02 02 57.7	+0.5
CMAR	Chiang Mai Arr	37.65	307	P	P	02 04 06.0	+0.7
	comp=Z,1.4nm,0.3s,baz=137,slow=7.7,SNR=9.7						
CMAR	Chiang Mai Arr	37.65	307	P	P	02 04 05.6	+0.3
KSRS	Korea Array	41.37	358	P	P	02 04 37.1	+1.2
	comp=Z,0.9nm,0.5s,baz=170,slow=8.7,SNR=4.9						
SONM	Songino Array	55.60	341	P	P	02 06 26.5	+0.9
	comp=Z,1.4nm,1.0s,baz=152,slow=6.7,SNR=5.4						
MKAR	Makanchi Array	65.62	326	P	P	02 07 34.2	+0.3
	comp=Z,4.4nm,0.7s,baz=122,slow=8.1,SNR=38						
MKAR	Makanchi Array	65.62	326	P	P	02 07 34.0	+0.2
ZALV	Zalesovo Beam	68.84	333	P	P	02 07 54.2	+0.2
	comp=Z,0.8nm,0.3s,baz=106,slow=5.2,SNR=4.8						
ZALV	Zalesovo Beam	68.84	333	P	P	02 07 54.1	0.0
NRIK	Noril'sk	78.68	346	P	P	02 08 51.9	+0.5
	comp=Z,1.4nm,0.4s,baz=114,slow=7.0,SNR=5.1						
NRIK	Noril'sk	78.68	346	P	P	02 08 51.9	+0.5
NRIK				IAmb	IAmb	02 08 53.3	
	comp=Z,4.1nm,0.9s						
ILAR	Eielson Array	90.89	25	P	P	02 09 52.0	-1.1
	comp=Z,0.7nm,1.0s,baz=258,slow=4.6,SNR=4.2						
TXAR	Lajitas Array	123.71	57	PKP	PKiKP	02 15 49.3	+0.8
	comp=Z,0.3nm,0.7s,baz=322,slow=1.2,SNR=4.6						
TORD	Torodi Ar. Bea	127.85	283	PKP	PKiKP	02 15 56.6	-0.2
	comp=Z,0.8nm,0.7s,baz=55,slow=1.9,SNR=6.8						
TORD	Torodi Ar. Bea	127.85	283	PKPdf	PKPdf	02 15 56.1	-0.2
CPUP	Villa Florida	149.01	168	PKPbc	PKPbc	02 16 38.5	+0.1
	comp=Z,1.5nm,0.6s,baz=292,slow=5.4,SNR=3.8						
LPAZ	La Paz	153.18	139	PKPbc	PKiKP	02 16 50.1	+0.7
	comp=Z,0.8nm,0.4s,baz=124,slow=3.6,SNR=6.1						

IDC 10 02:03:40.1±1.6, **4°.20S**×**129°.47E**, **h0**^{km}, **mb3.8**/1, **mb1 3.7**/4, **mb1mx3.3**/36, **mbtmp3.5**/4, **ML3.2**/3, **Error ellipse: s-maj=58.6km s-min=27.0km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	3.77	29	Pn	Pn	02 04 40.0	+0.4
	3.8nm,0.3s,baz=181,slow=19,SNR=4.5						
WRA	Warramunga Arr	16.35	164	Pn	Pn	02 07 29.4	-1.8
	0.1nm,0.3s,baz=348,slow=12,SNR=1.9						
ASAR	Alice Springs	19.82	168	P	Pn	02 08 13.3	-0.7
	0.2nm,0.3s,baz=348,slow=9.7,SNR=8.6						
MKAR	Makanchi Array	65.61	326	P	P	02 14 25.9	-0.1
	0.7nm,0.6s,baz=118,slow=8.1,SNR=7.4						

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*IDC **10** 02:04:11.1±1.1, 4°.13S×129°.50E, h0^{km}, mb4.1/6, mb1 4.2/10, mb1mx3.9/38, mbtmp4.0/10, ML3.8/4, Error ellipse: s-maj=38.9km s-min=20.5km az=86.0*

ISC 10 02:04:16.3±0.8, **4°.15S**±0°.09×**129°.6E**±0°.2, **h36**^{km}, **n11**,

σ0^{s}63/11, mb4.1/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.69	28	Pn	Pn	02 05 11.1	+0.4
	12nm,0.3s,baz=64,slow=22,SNR=9.3						
FITZ	Fitzroy Crossi	14.38	195	Pn	Pn	02 07 37.5	+0.2
	0.2nm,0.3s,baz=46,slow=16,SNR=3.2						
WRA	Warramunga Arr	16.38	164	Pn	Pn	02 08 04.2	+0.6
	0.3nm,0.3s,baz=349,slow=12,SNR=6.9						
ASAR	Alice Springs	19.85	168	P	P	02 08 44.0	-0.4
	0.5nm,0.3s,baz=350,slow=11,SNR=13						
CMAR	Chiang Mai Arr	37.61	308	P	P	02 11 28.4	+0.5
	1.0nm,0.3s,baz=138,slow=11,SNR=6.0						
MJAR	Matsushiro Arr	41.28	11	P	P	02 11 57.3	-0.9
	2.7nm,0.7s,baz=184,slow=9.5,SNR=5.2						
USRK	Ussuriysk Ar.	48.18	2	P	P	02 12 53.6	+0.5
	1.3nm,0.7s,baz=184,slow=9.4,SNR=5.0						
SONM	Songino Array	55.62	341	P	P	02 13 49.0	+0.4
	1.4nm,1.1s,baz=150,slow=9.8,SNR=3.6						
MKAR	Makanchi Array	65.62	326	P	P	02 14 56.6	-0.1
	1.7nm,0.6s,baz=121,slow=8.3,SNR=10						
ZALV	Zalesovo Beam	68.85	334	P	P	02 15 16.2	-0.7
	1.2nm,0.5s,baz=108,slow=4.8,SNR=4.5						
TORD	Torodi Ar. Bea	127.77	283	PKP	PKPdf	02 23 18.4	-0.7
	0.4nm,0.7s,baz=56,slow=1.6,SNR=3.2						

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*IDC **10** 02:04:38.5±0.4, 4.°18S×129.°56E, h0^{km}, mb5.0/23, mb1 5.0/29, mb1mx4.8/40, mbtmp4.9/29, ML4.3/5, MS4.2/3, Ms1 4.2/3, ms1mx3.7/16, Error ellipse: s-maj=16.0km s-min=10.9km az=72.0*

*BJI **10** 02:04:39.5±0.0, 4.°10S×129.°70E, h10^{km}, mB5.3/34, mb5.1/62, Ms4.7/18, Ms7 4.3/19*

*GCMT **10** 02:04:40.7±0.2, 4.°26S±0.°01×129.°45E±0.°02, h12^{km}, MW5.0/107, Moment Tensor Solution. s53,c64; s107,c157; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.98±.08; $M_{\theta\theta}$-3.09±.06; $M_{\phi\phi}$0.11±.09; $M_{r\theta}$1.46±.21; $M_{\theta\phi}$0.45±.06; $M_{\phi r}$-0.52±.31; Best double couple: $M_0$3.43600×10^{16} NP1:ϕ_s272.00000°, δ32.00000°, λ80.00000°. NP2:ϕ_s103.00000°, δ58.00000°, λ96.00000°. Principal axes: T 3.3640, Plg76.0000°, Azm31.0000°; N 0.1460, Plg5.0000°, Azm280.0000°; P -3.5070, Plg13.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **10** 02:04:41.2±1.1, 4.°25S×129.°48E, h31^{km}, mb5.4/52 Error ellipse: s-maj=10.5km s-min=5.2km az=115.4*

*NEIC **10** 02:04:43.7±1.6, 4.°23S±0.°06×129.°54E±0.°06, h30^{km}±3^{km}, mb5.2/100, Error ellipse: s-maj=9.3km s-min=8.7km az=163.0*

*DJA **10** 02:04:44.9±0.2, 4°S±2°×13°0E±°, h48^{km}±5^{km}, M4.8/37, mb5.0/37, mB5.4/28, MLv5.0/13, Mw(mB)4.8/28, MwMwp4.4/1, Mwp4.8/1*

*KLM **10** 02:04:47, 4.°11S×129.°69E, h63^{km}, mb5.3*

ISC 10 02:04:43.6±0.3, **4.°23S**±0.°04×**129.°56E**±0.°04, **h36**^{km}±2^{km}, **n448**, σ**1^{s}28**/473, **mb5.2**/115, **MS4.3**/15, **15C-16D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.08	324	P	Pn	02 05 00.7	-1.5
AAI	Ambon	1.47	291	P	Pn	02 05 05.8	-1.7
FAKI	Fak Fak	2.98	64	P	Pn	02 05 28.5	+0.2
FAKI	Fak Fak	2.98	64	Pn	Pn	02 05 28.5	+0.2
FAKI				Sn	Sn	02 06 05.2	+2.3
SIJI	Sorong	3.75	27	Pn	Pn	02 05 38.1	-0.8
	94nm,0.3s,baz=219,slow=6.8,SNR=27						
SIJI				Sn	Sn	02 06 19.4	-2.4
	99nm,0.3s,baz=60,slow=21,SNR=3.9						
SIJI				LR	LR	02 07 31.9	
	comp=Z,5µm,21.9s,baz=178,slow=47						
SWI	Sorong	3.75	27	P	Pn	02 05 37.6	-1.3
SAUI	Saumlaki	4.11	155	P	Pn	02 05 47.6	+3.7
SAUI	Saumlaki	4.11	155		Pn	02 05 44.8	+0.9
LBMI	Labuha	4.12	330	P	Pn	02 05 44.3	+0.3
SANI	Sanana	4.17	301	P	Pn	02 05 43.8	-0.9
SANI	Sanana	4.17	301	P	Pn	02 05 46.0	+1.3
TNTI	Ternate	5.43	336	P	Pn	02 06 02.1	+0.1
	0.5nm2µm118nm,0.9s						
KMSI	Cibinong	7.34	310	P	Pn	02 06 29.1	+0.8
	2.0nm392nm,0.6s						
SOEI	Soe	7.60	223	P	Pn	02 06 34.9	+2.9
	0.7nm3µm100nm,1.9s						
BATI	Baumata	8.34	224	Pn	Pn	02 06 42.4	+0.4
	16nm,0.3s,baz=183,slow=1.1,SNR=9.8						
BATI				LR	LR	02 10 12.0	
	comp=Z,3µm,21.3s,baz=34,slow=40						
BATI	Baumata	8.34	224	P	Pn	02 06 45.0	+3.0
	78nm,0.9s						
APSI	Ampana	8.56	292	P	Pn	02 06 47.2	+2.1
	2µm190nm,0.9s						
MTN	Manton Dam	8.70	170		Pn	02 06 47.4	+0.4
MRSI	Marisa	8.93	301	P	Pn	02 06 51.1	+0.9
	1µm94nm,0.4s						
EDFI	Ende, Flores	9.02	240	P	Pn	02 06 55.3	+3.9
	547nm43nm,0.8s						
BSSI	Bau Bau, Buton	9.23	258	P	Pn	02 06 57.4	+3.1
	902nm48nm,0.9s						
BNSI	Bone	9.43	269	P	Pn	02 07 00.2	+3.2
	927nm89nm,1.1s						
BKSI	Bulukumba	9.47	263	P	Pn	02 07 01.1	+3.6
	1µm71nm,0.8s						
SPSI	Sidrap Palu	9.77	271	P	Pn	02 07 04.2	+2.5
	1µm62nm,0.8s						
TTSI	Tana Toraja	9.79	277	P	Pn	02 07 05.3	+3.3
	2µm54nm,0.9s						
KAPI	Kappang	9.81	265	Pn	Pn	02 07 05.9	+3.7
	4.4nm,0.3s,baz=92,slow=6.3,SNR=13						
KAPI	Kappang	9.81	265	P	Pn	02 07 02.9	+0.7
KAPI	Kappang	9.81	265		Pn	02 07 02.9	+0.7
TOLI2	Tolitoli	10.25	301	Pn	Pn	02 07 09.0	+0.7
TOLI2	Tolitoli	10.25	301	P	Pn	02 07 08.1	-0.1
MPSI	Mapaga	10.67	295	P	Pn	02 07 15.9	+2.0
	33nm,1.0s						
KNRA	Kununurra	11.40	184		Pn	02 07 25.1	+1.1
KNRA	Kununurra	11.40	184	P	Pn	02 07 26.0	+2.0
PLAI	Plampang	12.57	248	P	Pn	02 07 43.6	+3.7
	2µm125nm,0.9s						
PLAI	Plampang	12.57	248	P	Pn	02 07 42.1	+2.2
FITZ	Fitzroy Crossi	14.31	195	Pn	Pn	02 08 03.6	-0.1
	0.3nm,0.3s,baz=29,slow=13,SNR=2.3						
BBKI	Banjar Baru	14.71	272	P	Pn	02 08 11.6	+2.4
	3µm51nm,1.2s						
SRBI	Singaraja	14.77	254	P	P	02 08 12.8	-2.7
	3µm282nm,1.1s						
IGBI	Denpasar	15.03	252	P	P	02 08 16.6	-1.8
	86nm,0.7s						
ABJI	Asem Bagus	15.65	256	P	P	02 08 24.9	-0.4
	4µm214nm,2.0s						
KMMI	Kalianget	15.77	259	P	P	02 08 26.6	0.0
	3µm126nm,1.5s						
SPMM	Sapulut	15.81	304	P	P	02 08 26.0	-1.1
JAGI	Jajag, Banyuwa	15.88	254	P	P	02 08 27.5	-0.4
	2µm91nm,1.0s						
JAGI	Jajag, Banyuwa	15.88	254	Pn	Pn	02 08 25.3	+0.7
BLJI	Banyuglugur	16.26	257	P	P	02 08 32.7	+0.6
	2µm81nm,0.8s						
WRAB	Tennant Creek	16.29	164	⇓eP	Pn	02 08 27.7	-2.1
WRAB	Tennant Creek	16.29	164	P	Pn	02 08 28.4	-1.4
WRA	Warramunga Arr	16.30	164	Pn	Pn	02 08 28.1	-1.8
	1.2nm,0.3s,baz=343,slow=13,SNR=23						
WRA				Sn	Sn	02 11 22.9	-6.8
	baz=346,slow=20,SNR=5.1						
WRA	Warramunga Arr	16.30	164	P	Pn	02 08 28.8	-1.1
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WRA	Warramunga Arr	16.30	164	P	Pn	02 08 28.8	-1.1
WB2	Warramunga Arr	16.30	164	Pn	Pn	02 08 28.1	-1.8
WR0	Warramunga Arr	16.37	163	Pn	Pn	02 08 29.0	-1.8
GMJI	Gumukmas	16.52	255	P	P	02 08 36.2	+1.3
	comp=Z,2µmcomp=Z,94nm,1.3s						
COEN	Coen	16.55	127	P	Pn	02 08 32.2	-0.8
COEN	Coen	16.55	127	P	Pn	02 08 31.6	-1.4
KKM	Kota Kinabalu	16.78	307		Pn	02 08 32.6	-3.6
MANU	Manus Island	17.91	84	P	P	02 08 50.8	+0.4
PMG	Port Moresby	18.21	107	P	P	02 08 51.8	-1.9
	comp=Z,1.5nm,0.3s,baz=303,slow=9.9,SNR=12						
PMG	Port Moresby	18.21	107	P	P	02 08 53.4	-0.3
PMG				pmax	pmax		
	comp=Z,126nm,1.5s						
PMG	Port Moresby	18.21	107		P	02 08 53.4	-0.3
SBUM	Sibu	18.55	291	P	Pn	02 09 00.0	+2.1
SBUM	Sibu	18.55	291		Pn	02 08 57.9	0.0
STKI	Sintang	18.56	283	P	Pn	02 09 00.7	+2.7
PCJI	Pacitan	18.69	257	P	Pn	02 08 59.6	0.0
	comp=Z,110nm,1.3s						
WOJI	Wonogiri, Jawa	18.88	258	P	Pn	02 09 02.4	+0.6
	comp=Z,113nm,1.3s						
QIS	Mount Isa	18.95	150	P	P	02 09 01.9	+0.1
MBWA	Marble Bar	19.35	209	P	Pn	02 09 07.1	-0.4
PSA00	Pilbara Seismi	19.65	208	P	P	02 09 09.6	+0.2
PSA00				IAmb	IAmb	02 09 12.7	
	comp=Z,111nm,0.8s						
PSA00	Pilbara Seismi	19.65	208	P	P	02 09 09.7	+0.2
PSA00				IAmb	IAmb	02 09 12.7	
	comp=Z,79nm,1.0s						
PSA00	Pilbara Seismi	19.65	208	P	Pn	02 09 10.5	-0.5
AS31	Alice Springs	19.77	168		P	02 09 10.5	-0.3
ASAR	Alice Springs	19.78	168	P	P	02 09 10.8	-0.1
	comp=Z,0.5nm,0.3s,baz=353,slow=9.1,SNR=4.4						
ASAR				S	S	02 12 49.8	-2.1
	comp=Z,0.2nm,0.3s,baz=352,slow=26,SNR=3.9						
ASAR				PcP	PcP	02 13 27.5	-0.9
	comp=Z,0.6nm,0.3s,baz=351,slow=1.3,SNR=7.8						
ASAR				ScP	ScP	02 17 03.9	+1.8
	comp=Z,0.1nm,0.3s,baz=347,slow=3.8,SNR=3.1						
ASAR				PKiKP	PKiKP	02 21 17.8	-0.1
	comp=Z,0.1nm,0.3s,baz=351,slow=0.5,SNR=5.0						
MTSU	Mount Surprise	19.99	135	P	P	02 09 12.3	-0.9
KSM	Kuching	20.05	286	P	Pn	02 09 16.0	+0.1
KSM	Kuching	20.05	286	P	P	02 09 14.3	+0.3
KSM				IAmb	IAmb	02 09 16.4	
	comp=Z,115nm,0.9s						
WRKA	Warakurna	20.73	183	P	P	02 09 22.0	+0.9
CTA	Charters Tower	22.65	135	P	P	02 09 40.6	-1.2
	comp=Z,23nm,0.7s,baz=317,slow=14,SNR=19						
CTAO	Charters Tower	22.65	135	P	P	02 09 42.1	+0.3
CTAO				pmax	pmax		
	comp=Z,45nm,0.9s						
CTAO	Charters Tower	22.65	135	P	P	02 09 42.1	+0.3
CTAO	Charters Tower	22.65	135	P	P	02 09 41.7	-0.1
GIRL	Giralia	23.56	218	P	P	02 09 53.4	+2.4
MULG	Mulgathing	26.26	171	P	P	02 10 15.7	+0.1
FORT	Forrest	26.45	183	P	P	02 10 17.5	+0.2
FORT				IAmb	IAmb	02 10 25.4	
	comp=Z,57nm,0.9s						
FORT	Forrest	26.45	183	P	P	02 10 18.1	+0.8
LCRK	Leigh Creek	27.33	164	P	P	02 10 26.0	+0.8
KRJI	Kerinci	28.14	273	P	P	02 10 27.5	-5.2
JRMM	Jerantut	28.24	286	P	P	02 10 35.0	+1.5
BBOO	Buckleboo	29.08	169	P	P	02 10 41.1	+0.3
SSLB	Suanglung	29.08	344	P	P	02 10 40.9	0.0
SSLB				IAmb	IAmb	02 10 44.4	
	comp=Z,62nm,1.1s						
STKA	Stephens Creek	29.74	159	P	P	02 10 46.8	+0.1
	comp=Z,8.9nm,0.7s,baz=341,slow=8.4,SNR=16						
STKA	Stephens Creek	29.74	159	P	P	02 10 47.1	+0.5
STKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
STKA	Stephens Creek	29.74	159	P	P	02 10 47.1	+0.5
STKA	Stephens Creek	29.74	159	P	P	02 10 47.2	+0.6
IPM	Ipoh	29.79	287	P	P	02 10 49.0	+1.6
IPM	Ipoh	29.79	287	P	P	02 10 47.5	+0.2
IPM				IAmb	IAmb	02 10 48.9	
	comp=Z,61nm,0.9s						
HTT	Hallett	30.34	164	P	P	02 10 52.8	+0.8
MNSI	Mandailing Nat	30.37	279	P	P	02 10 53.7	+1.2
	comp=Z,40nm,0.5s						
KULM	Kulim	30.39	288	P	P	02 10 53.0	+0.4
KULM	Kulim	30.39	288	P	P	02 10 50.6	-2.0
KULM				IAmb	IAmb	02 10 54.0	
	comp=Z,62nm,1.3s						
UBPT	Khong Chiam	30.74	310	P	P	02 10 56.1	+0.5
UBPT				IAmb	IAmb	02 10 57.7	
	comp=Z,32nm,1.3s						
RPSI	Rantau Prapat	31.38	282	P	P	02 11 01.4	0.0
PSI	Prapat	31.40	282	P	P	02 11 01.4	-0.3
	comp=Z,8.7nm,0.7s,baz=118,slow=5.2,SNR=10.0						
JSU	Suzuyama	35.54	1	P	P	02 11 37.9	+0.5
SLVN	Son La	35.74	316	P	P	02 11 39.0	-0.4
SLVN				IAmb	IAmb	02 11 42.2	
	comp=Z,37nm,1.5s						
CAN	Canberra	35.78	152	P	P	02 11 40.7	+1.2
CAN				pmax	pmax		
	comp=Z,15nm,0.7s						
CAN	Canberra	35.78	152	P	P	02 11 40.7	+1.2
CAN				IAmb	IAmb	02 11 42.7	
	comp=Z,15nm,0.7s						
JNU	Nakatsue	37.17	2	P	P	02 11 51.4	+0.2
	comp=Z,42nm,0.9s,baz=201,slow=5.4,SNR=11						
JNU	Nakatsue	37.17	2	P	P	02 11 51.2	0.0
NJ2	Nanjing	37.49	345	eP	P	02 11 54.7	+0.8
NJ2				pmax	pmax		
	comp=Z,27nm,0.7s						
CMAR	Chiang Mai Arr	37.66	308	P	P	02 11 55.8	+0.1
	comp=Z,14nm,0.7s,baz=137,slow=7.4,SNR=43						
CMAR				PcP	PcP	02 14 14.4	+1.7
	comp=Z,5.9nm,0.7s,baz=159,slow=2.7,SNR=8.2						
CMAR	Chiang Mai Arr	37.66	308	i P	P	02 11 57.2	+1.5
CMAR				pmax	pmax		
	comp=Z,16nm,0.7s						
GYA	Guiyang	37.71	325	⇑P	P	02 11 57.9	+1.8
GYA				pmax	pmax		
	comp=Z,26nm,0.6s						
CHTO	Chiang Mai	37.86	308	P	P	02 11 57.6	+0.3
CHTO				pmax	pmax		
	comp=Z,42nm,0.9s						
CHTO	Chiang Mai	37.86	308	P	P	02 11 57.6	+0.3
CHTO				IAmb	IAmb	02 11 59.7	
	comp=Z,42nm,0.8s						
JMN	Monobe	37.97	6	P	P	02 11 58.5	+0.5
SANVU	Saraoutou	38.65	109	P	P	02 12 04.1	0.0
KMI	Kunming	39.12	320	⇑P	P	02 12 09.7	+1.7
KMI				pmax	pmax		
	comp=Z,32nm,1.0s						
KMI				LR	LR		
	comp=Z,260nm,17.1s						
JHS	Saijyo	39.16	5	P	P	02 12 07.5	-0.5
JHS				IAmb	IAmb	02 12 10.5	
	comp=Z,74nm,1.1s						
JWT	Wachi	39.68	7	P	P	02 12 12.6	+0.3
JWT				IAmb	IAmb	02 12 14.2	
	comp=Z,44nm,0.8s						
DZM	Mont Dzumac	39.89	120	eP	P	02 12 16.5	+2.1
	comp=Z,69nm,1.4s						
DZM	Mont Dzumac	39.89	120	eLR	LR	02 23 11.0	
	comp=Z,227nm,25.6s						
DZM	Mont Dzumac	39.89	120	P	P	02 12 15.9	+1.5
	comp=Z,10.0nm,0.8s,baz=74,slow=6.6,SNR=3.6						
INU	Inuyama	39.98	10	P	P	02 12 15.5	+0.7
INU				IAmb	IAmb	02 12 16.5	
	comp=Z,30nm,0.8s						
JGF	Kuroka	40.29	10	P	P	02 12 16.8	-0.6
TJN	Taejon	40.45	357	ceP	P	02 12 19.4	+0.8
MJAR	Matsushiro Arr	41.35	11	P	P	02 12 24.6	-1.6
	comp=Z,32nm,0.8s,baz=190,slow=9.9,SNR=38						
MJAR	Matsushiro Arr	41.35	11	P	P	02 12 25.5	-0.7
MJAR				pmax	pmax		
	comp=Z,23nm,1.2s						
MJAR	Matsushiro Arr	41.35	11	P	P	02 12 25.5	-0.7
MAJO	Matsushiro	41.36	11	c iP	P	02 12 25.6	-0.5
MAJO				pmax	pmax		
	comp=Z,49nm,0.8s						
MAJO	Matsushiro	41.36	11	P	P	02 12 25.7	-0.5
MAJO				IAmb	IAmb	02 12 27.8	
	comp=Z,50nm,0.8s						
MAT	Matsushiro	41.36	11	P	P	02 12 25.3	-0.9
MAT				eS	S	02 18 39.0	+0.5
JYT	Yasato	41.46	13	P	P	02 12 27.6	+0.6
KSAR	Wonju Array Be	41.48	358	P	P	02 12 27.2	0.0
KSAR	Wonju Array Be	41.48	358	P	P	02 12 27.2	0.0
KSRS	Korea Array	41.49	358	P	P	02 12 27.1	-0.2
	comp=Z,13nm,0.8s,baz=175,slow=9.8,SNR=34						
KS19	Wonju Array Si	41.55	358	P	P	02 12 28.0	+0.3
CD2	Chengdu	42.75	327	P	P	02 12 37.7	0.0
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
CD2				LR	LR		
	comp=Z,480nm,9.6s						
CD2				LR	LR		
	comp=Z,230nm,8.0s						
CD2				LR	LR		
	comp=Z,360nm,18.7s						
XAN	Xi'an	42.76	334	P	P	02 12 37.4	-0.3
XAN				pP	pP	02 12 42.4	-4.5
XAN				pmax	pmax		
	comp=Z,20nm,1.0s						
JSD	Sado	42.82	10	P	P	02 12 38.6	+0.5
JSD				IAmb	IAmb	02 12 39.4	
	comp=Z,26nm,0.7s						
JMM	Marumori	43.16	13	P	P	02 12 41.5	+0.7
KOHI	KOHIMA	45.47	313	eP	P	02 12 59.1	-0.6
KOHI				IAmb	IAmb	02 13 01.4	
	comp=Z,78nm,0.9s						
MOKO	MOKOCHONG	45.53	314	eP	P	02 13 00.6	+0.4
MOKO				IAmb	IAmb	02 13 04.1	
	comp=Z,18nm,0.9s						
BJT	Baijiatuau	45.72	346	P	P	02 13 01.6	+0.3
BJT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BJT	Baijiatuau	45.72	346	P	P	02 13 01.6	+0.3
BJI	Beijing	45.74	346	P	P	02 13 01.4	0.0
BJI				pmax	pmax		
	comp=Z,17nm,1.7s						
BJI				pmax	pmax		
	comp=Z,260nm,4.2s						
LZH	Lanzhou	46.77	331	⇑P	P	02 13 10.9	+1.1
LZH				sS	sS	02 20 16.1	+3.0
LZH				pmax	pmax		
	comp=Z,35nm,1.3s						
LZH				pmax	pmax		
	comp=Z,170nm,5.6s						
LZH				LR	LR		
	comp=Z,340nm,14.0s						
LZH				LR	LR		
	comp=Z,280nm,13.5s						
LZH				LR	LR		
	comp=Z,370nm,16.3s						
VLA	Vladivostok	47.17	2	⇓eP	P	02 13 13.9	+1.3
VLA				pmax	pmax		
	comp=Z,50nm,1.1s						
HHC	Hu-ho-hao-te	47.79	342	eP	P	02 13 21.4	+3.8
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,220nm,8.3s						
CN2	Changchun	47.95	356	eP	P	02 13 20.0	+1.4
CN2				PcP	PcP	02 14 47.8	+1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,300nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
CN2				LR	LR		
	comp=Z,300nm,23.0s						
BTO	Baotou	48.08	340	eP	P	02 13 25.5	+5.7
BTO				S	S	02 20 22.7	+6.7
BTO				LR	LR		
	comp=Z,640nm,13.1s						
BTO				LR	LR		
	comp=Z,940nm,15.6s						
USA0B	Ussuriysk Arra	48.26	2	P	P	02 13 20.8	-0.2
USA0B				pmax	pmax		
	comp=Z,24nm,0.8s						
USA0B	Ussuriysk Arra	48.26	2	P	P	02 13 20.8	-0.2
USA0B				IAmb	IAmb	02 13 22.8	
	comp=Z,24nm,0.8s						
USRK	Ussuriysk Ar.	48.26	2	P	P	02 13 20.8	-0.2
	comp=Z,26nm,0.8s,baz=173,slow=4.6,SNR=49						
USRK	Ussuriysk Ar.	48.26	2	P	P	02 13 20.2	-0.8
USRK	Ussuriysk Ar.	48.26	2	P	P	02 13 20.2	-0.8
MDJ	Mudanjiang	48.62	0	P	P	02 13 25.2	+1.4
MDJ				pmax	pmax		
	comp=Z,32nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,310nm,4.0s						
MDJ				LR	LR		
	comp=Z,310nm,19.2s						
MDJ				LR	LR		
	comp=Z,310nm,17.8s						
MDJ				LR	LR		
	comp=Z,460nm,20.0s						
MDJ	Mudanjiang	48.62	0	P	P	02 13 24.5	+0.7
MDJ				IAmb	IAmb	02 13 26.3	
	comp=Z,27nm,0.9s						
LSA	Lhasa	49.92	315	P	P	02 13 34.7	+0.1
LSA				pmax	pmax		
	comp=Z,18nm,0.8s						
LSA	Lhasa	49.92	315	P	P	02 13 34.7	+0.1
LSA				IAmb	IAmb	02 13 36.9	
	comp=Z,18nm,0.8s						
ODAN	Odare	51.14	310	eP	P	02 13 43.6	0.0
TAPN	Taplejung	51.15	310	eP	P	02 13 43.3	-0.4
GTA	Gaotai	51.35	331	⇑P	P	02 13 42.9	-1.9
GTA				pP	pP	02 13 53.0	-1.2
GTA				sP	sP	02 13 58.1	0.0
GTA				PcP	PcP	02 15 01.3	+2.0
GTA				pmax	pmax		
	comp=Z,130nm,4.7s						
GTA				LR	LR		
	comp=Z,140nm,16.7s						
GTA				LR	LR		
	comp=Z,240nm,18.2s						
GTA				LR	LR		
	comp=Z,230nm,19.3s						
RAMN	Ramite	51.80	309	eP	P	02 13 48.2	-0.3
	comp=Z,75nm,0.5s						
PKI	Pulchoki	53.02	309	eP	P	02 13 56.9	-0.8
PKIN	Phulchoki	53.03	309	eP	P	02 13 56.5	-1.2
KKN	Kakani	53.23	309	eP	P	02 13 59.0	-0.1
KLR	Kul'dur	53.27	2	ceP	P	02 13 59.9	+1.2
KLR				pmax	pmax		
	comp=Z,41nm,1.3s						
DMN	Daman	53.27	309	eP	P	02 13 59.4	-0.1
GKN	Gorkha	53.83	309	eP	P	02 14 03.2	-0.2
KOLN	Koldanda	54.52	309	eP	P	02 14 07.3	-1.2
DANN	Dangsing	54.67	309	eP	P	02 14 08.2	-1.5
HYB	Hyderabad	54.74	295	i P	P	02 14 09.0	-1.0
	comp=Z,75nm,1.0s						
HYB				e		02 14 45.0	
BKZ	Black Stump Fm	54.87	136	P	P	02 14 10.8	+0.2
BKZ				IAmb	IAmb	02 14 13.3	
	comp=Z,17nm,0.8s						
GRNR	Gornyy	55.10	5	⇑iP	P	02 14 13.5	+1.5
GRNR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PYUN	Piuthan	55.15	309	eP	P	02 14 11.7	-1.4
	comp=Z,204nm,1.1s						
ULN	Ulaanbaatar	55.51	342	c iP	P	02 14 16.5	+1.3
ULN				pmax	pmax		
	comp=Z,75nm,2.5s						
ULN	Ulaanbaatar	55.51	342	P	P	02 14 14.8	-0.4
ULN				IAmb	IAmb	02 14 17.1	
	comp=Z,21nm,0.8s						
SONM	Songino Array	55.69	341	P	P	02 14 17.1	+0.6
	comp=Z,15nm,1.1s,baz=151,slow=7.3,SNR=39						
SONM				LR	LR	02 42 40.7	
	comp=Z,117nm,18.0s,baz=130,slow=41						
SONM	Songino Array	55.69	341	P	P	02 14 16.8	+0.3
SONM				pmax	pmax		
	comp=Z,27nm,1.3s						
SONM	Songino Array	55.69	341	P	P	02 14 16.8	+0.3
SONM				IAmb	IAmb	02 14 18.9	
	comp=Z,27nm,1.3s						
BHPL	Bhopal	57.70	301	eP	P	02 14 30.3	-0.8
BHPL				IAmb	IAmb	02 14 31.4	
	comp=Z,32nm,1.3s						
ZEA	Zeya	57.79	358	eP	P	02 14 31.6	+0.5
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ZAK	Zakamensk	58.92	341	eP	P	02 14 39.2	0.0
ZAK				pmax	pmax		
	comp=Z,12nm,1.1s						
POO	Poona	59.34	294	eP	P	02 14 39.0	-3.6
MOY	Mondy	60.78	340	eP	P	02 14 53.4	+1.5
MOY				pmax	pmax		
	comp=Z,74nm,3.0s						
WMQ	Urumqi	60.85	326	P	P	02 14 53.9	+1.3
WMQ				pP	sP	02 15 06.0	-0.1
WMQ				pmax	pmax		
	comp=Z,63nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,210nm,3.9s						
WMQ				LR	LR		
	comp=Z,170nm,21.3s						
SMLA	Simla	61.04	309	eP	P	02 14 53.4	-0.5
SMLA				IAmb	IAmb	02 14 57.2	
	comp=Z,24nm,0.8s						

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PETK Petropavlovsk-   61.85  19   P       P        02 15 00.1 +1.1
     comp=Z,11nm,0.9s,baz=204,slow=12,SNR=9.5
PETK Petropavlovsk-   61.85  19   P       P        02 14 59.8 +0.7
PETK Petropavlovsk-   61.85  19   P       P        02 14 59.8 +0.7
PET  Petropavlovsk    62.09  19⇓iP        P        02 15 02.7 +2.1
PET                               pmax    pmax
     comp=Z,40nm,1.2s
DHRM DHARAMSHALA      62.19 310  eP       P        02 15 01.8 -0.2
DHRM                              IAmb    IAmb     02 15 05.4
     comp=Z,25nm,0.6s
BOD  Bodaibo          63.11 351  eP       P        02 15 08.5 +1.2
BOD                               pmax    pmax
     comp=Z,39nm,1.5s
ZSN  Zaisan           64.70 328  eP       P        02 15 17.1 -0.9
     baz=328
ZSN  Zaisan           64.70 328  eP       P        02 15 17.1 -0.9
DGZ  Jazzator, Alta   64.88 331⇓eP        P        02 15 18.6 -0.7
DGZ                               pmax    pmax
     comp=Z,47nm,1.1s
NIL  Nilore           65.10 310   P       P        02 15 20.8 -0.2
NIL                               pmax    pmax
     comp=Z,13nm,1.0s
NIL  Nilore           65.10 310   P       P        02 15 20.8 -0.2
NIL                               IAmb    IAmb     02 15 21.4
     comp=Z,13nm,0.9s
PDGK Podgornoye       65.35 322   P       P        02 15 22.2 -0.3
UZB  Uzynbulak        65.54 322  eP       P        02 15 22.9 -0.9
     comp=Z,21nm,1.1s,baz=322
UZB  Uzynbulak        65.54 322  eP       P        02 15 22.9 -0.9
UZB                               pmax    pmax
     comp=Z,21nm,1.1s
MK31 Makanchi Array   65.69 326deP        P        02 15 23.6 -0.9
MK31 Makanchi Array   65.69 326   P       P        02 15 23.4 -1.1
MK31                              IAmb    IAmb     02 15 26.2
     comp=Z,22nm,0.8s
MKAR Makanchi Array   65.69 326   P       P        02 15 23.7 -0.8
     comp=Z,23nm,0.5s,baz=117,slow=8.8,SNR=85
MKAR Makanchi Array   65.69 326   P       P        02 15 23.9 -0.6
MKAR Makanchi Array   65.69 326   P       P        02 15 23.9 -0.6
KSH  Kashi            65.70 317   P       P        02 15 25.2 +0.3
KSH                               pP      sP       02 15 37.2 -1.1
KSH                               PcP     PcP      02 15 58.1 +2.1
KSH                               pmax    pmax
     comp=Z,16nm,1.2s
MA2  Magadan          65.78  12ceP        P        02 15 26.4 +1.6
MA2                               pmax    pmax
     comp=Z,32nm,1.7s
MA2  Magadan          65.78  12   P       P        02 15 25.4 +0.6
MAKZ Makanchi         65.87 326   P       P        02 15 24.4 -1.3
MAKZ Makanchi         65.87 326   P       P        02 15 24.3 -1.3
SATY Saty             65.88 321  eP       P        02 15 25.2 -0.8
     comp=Z,18nm,0.9s,baz=321
SATY Saty             65.88 321  eP       P        02 15 25.1 -0.8
SATY                              pmax    pmax
     comp=Z,18nm,0.9s
YAK  Yakutsk          66.07   0c iP       P        02 15 27.4 +0.8
YAK                              e*PP     pwP      02 15 41.1 +0.8
YAK                              e                 02 15 57.0
YAK                              e                 02 17 53.4
YAK                              ePPP     PPP      02 19 28.4
YAK                              eS       S        02 24 11.6 -0.4
YAK                              e*SS     sS       02 24 39.6 +8.8
YAK                              e                 02 25 15.6
YAK                              eSS      SS       02 28 28.0 -0.2
YAK                               pmax    pmax
     comp=Z,99nm,0.9s
YAK                               pmax    pmax
     comp=N,31nm,1.3s
YAK                               pmax    pmax
     comp=E,13nm,1.1s
YAK                               pmax    pmax
     comp=Z,141nm,4.0s
YAK                               pmax    pmax
     comp=N,143nm,3.4s
YAK                               pmax    pmax
     comp=E,108nm,3.8s
YAK                               smax    smax
     comp=E,102nm,3.0s
YAK                               smax    smax
     comp=N,125nm,3.0s
YAK  Yakutsk          66.07   0   P       P        02 15 27.2 +0.7
MDOK Medeo            66.78 321  eP       P        02 15 30.8 -1.0
     baz=321
MDOK Medeo            66.78 321  eP       P        02 15 30.8 -1.0
TNSS Tian-Shan        66.78 321  eP       P        02 15 30.9 -1.2
     baz=321
TKM2 Tokmak 2         67.59 320   P       P        02 15 37.7 +0.8
     SNR=6.2
TKM2 Tokmak 2         67.59 320 i P       P        02 15 36.2 -0.7
TKM2                              pmax    pmax
     comp=Z,17nm,0.8s
KUU  Kurty            67.60 321  eP       P        02 15 35.6 -1.2
     comp=Z,32nm,0.9s,baz=321
KUU  Kurty            67.60 321  eP       P        02 15 35.5 -1.2
KUU                               pmax    pmax
     comp=Z,32nm,0.9s
UCH  Uchtor           67.95 319   P       P        02 15 41.1 +1.6
     SNR=7.6
AAK  Ala-Archa        68.16 319⇑eP        P        02 15 41.4 +0.9
AAK                               pmax    pmax
     comp=Z,108nm,2.5s
AAK  Ala-Archa        68.16 319   P       P        02 15 40.4 -0.1
AAK                               IAmb    IAmb     02 15 42.7
     comp=Z,16nm,1.1s
AML  Almayashu        68.45 319   P       P        02 15 43.6 +1.0
     SNR=10
USP  Ospenovka        68.46 320   P       P        02 15 42.9 +0.7
     SNR=9.6
SGDS Sogindy          68.46 320  eP       P        02 15 40.5 -1.7
     baz=320
EKS2 Erkin-Say        68.64 319   P       P        02 15 44.6 +1.2
     SNR=6.7
KBL  Kabul            68.66 310   P       P        02 15 43.0 -0.9
KBL                               pmax    pmax
     comp=Z,13nm,1.0s
KBL  Kabul            68.66 310   P       P        02 15 43.0 -0.9
KBL                               IAmb    IAmb     02 15 44.4
     comp=Z,13nm,1.0s
SEM  Semipalatinsk    68.91 329  eP       P        02 15 44.1 -1.1
     comp=Z,12nm,0.8s,baz=329
SEM  Semipalatinsk    68.91 329  eP       P        02 15 44.0 -1.1
SEM                               pmax    pmax
     comp=Z,12nm,0.8s
ZAA0 Zalesovo Array   68.92 334   P       P        02 15 44.9 +0.1
ZALV Zalesovo Beam    68.92 334   P       P        02 15 43.8 -1.0
     comp=Z,38nm,0.9s,baz=120,slow=5.5,SNR=51
ZALV Zalesovo Beam    68.92 334   P       P        02 15 43.6 -1.2
ZALV Zalesovo Beam    68.92 334   P       P        02 15 43.6 -1.2
GAR  Garm             69.42 314   P       P        02 15 48.5 +0.1
BTK  Batken           69.50 316   P       P        02 15 49.1 +0.3
BTK                               pmax    pmax
     comp=Z,26nm,1.4s
BTK  Batken           69.50 316   P       P        02 15 49.1 +0.3
BTK                               IAmb    IAmb     02 15 50.6
     comp=Z,26nm,1.4s
BTLS Baital           69.59 321  eP       P        02 15 48.4 -0.7
     baz=322
BTLS Baital           69.59 321  eP       P        02 15 48.4 -0.7
KURBB Kurchatov Arra  69.94 328   P       P        02 15 49.8 -1.3
KURK Kurchatov        69.94 328deP        P        02 15 50.3 -0.8
KURK                              pmax    pmax
     comp=Z,124nm,1.0s
KURK Kurchatov        69.94 328   P       P        02 15 50.5 -0.6
IUG  Iuzhnay          70.91 317  eP       P        02 15 56.9 -0.6
     baz=317
IUG  Iuzhnay          70.91 317  eP       P        02 15 56.8 -0.6
KKAR Karatay Array    70.98 318   P       P        02 15 56.9 -0.8
KKAR Karatay Array    70.98 318   P       P        02 15 56.9 -0.8
BRLS Borolday         71.40 318  eP       P        02 15 59.6 -0.7
     baz=318
BRLS Borolday         71.40 318  eP       P        02 15 59.5 -0.7
HRA  Herat            73.92 307   P       P        02 16 15.7  0.0
HRA                               IAmb    IAmb     02 16 17.1
     comp=Z,26nm,1.4s
WSAR Wadi Sarin       74.28 295   P       P        02 16 18.1 +0.3
     comp=Z,13nm,0.9s,baz=127,slow=6.1,SNR=6.6
VNDA Vanda            75.23 173   P       P        02 16 21.6 -0.6
VNDA                              pmax    pmax
     comp=Z,7.0nm,0.8s
VNDA Vanda            75.23 173   P       P        02 16 21.6 -0.6
BRVK Borovoye         75.57 328   P       P        02 16 23.7 -0.8
BRVK                              pmax    pmax
     comp=Z,53nm,1.0s
BRVK Borovoye         75.57 328   P       P        02 16 23.7 -0.8
TIXI Tiksi            75.73 360⇓eP        P        02 16 25.5 +0.4
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TIXI                              pmax    pmax
     comp=Z,30nm,1.2s
TIXI Tiksi            75.73 360   P       P        02 16 24.5 -0.5
TIXI                              IAmb    IAmb     02 16 26.7
     comp=Z,40nm,1.3s
BILL Bilibino         76.53  13⇓eP        P        02 16 31.4 +1.7
BILL                             e                 02 19 25.5
BILL                             eS       S        02 26 05.9 -7.0
BILL                              pmax    pmax
     comp=Z,30nm,4.4s
BILL                              MLR     MLR
     comp=Z,120nm,18.0s
MAW  Mawson           77.36 201   P       P        02 16 34.6 +0.2
     comp=Z,4.6nm,0.7s,baz=77,slow=8.1,SNR=3.9
GEYT Alibeck          78.10 310   P       P        02 16 39.6 +0.4
     comp=Z,7.9nm,0.9s,baz=87,slow=9.2,SNR=7.8
UNV  Unalaska Valle   78.42  33   P       P        02 16 41.1 +0.6
     baz=246
NRIK Noril'sk         78.78 346   P       P        02 16 43.1 +0.9
     comp=Z,21nm,1.0s,baz=135,slow=5.7,SNR=26
NRIK Noril'sk         78.78 346⇓eP        P        02 16 42.0 -0.2
NRIK                              pmax    pmax
     comp=Z,42nm,1.3s
NRIK Noril'sk         78.78 346   P       P        02 16 43.3 +1.1
NRIK                              IAmb    IAmb     02 16 44.8
     comp=Z,46nm,1.2s
AB31 Akbulak array    80.08 321   P       P        02 16 48.0 -1.7
ABKAR Akbulak array   80.08 321   P       P        02 16 49.0 -0.7
ABKAR Akbulak array   80.08 321   P       P        02 16 48.7 -1.0
GAMB Gambell          80.54  23   P       P        02 16 52.6 +0.8
     baz=240
OPO  Ambohidratompo   81.45 252   P       P        02 16 58.9 +1.0
     comp=Z,1.8nm,0.6s,baz=351,slow=7.0,SNR=3.4
SVE  Sverdlovsk       82.18 329  eP       P        02 17 01.4 +0.7
SVE                               pmax    pmax
     comp=Z,51nm,1.0s
SDPT Sand Point       82.24  33   P       P        02 17 01.9 +0.9
     baz=251
ARU  Arti             83.14 328c iP       P        02 17 06.2 +0.5
ARU                                                02 20 11.0
ARU                               S       S        02 27 24.0 +1.0
ARU                               SS      SS       02 32 44.4 -3.3
ARU                               pmax    pmax
     comp=Z,55nm,1.9s
ARU  Arti             83.14 328   P       P        02 17 06.2 +0.5
ARU                               IAmb    IAmb     02 17 06.7
     comp=Z,20nm,0.9s
QRN  Al-Qurain        84.71 299  eP       P        02 17 13.9 -0.5
UMR  Umm Al-Rimmam    84.99 300  eP       P        02 17 15.5 -0.3
MIB  Mutribah         85.35 300  eP       P        02 17 17.4 -0.1
RST  Umm Al-Ruwaisa   85.60 300  eP       P        02 17 17.7 -1.1
SII  Sitkinak Islan   85.97  33   P       P        02 17 20.5 +0.4
     baz=256
P18K Big Mountain,    86.14  30   P       P        02 17 21.3 +0.4
     baz=255
RAYN Ar Rayn          86.23 294   P       P        02 17 21.5 -0.7
RAYN                              pmax    pmax
     comp=Z,41nm,0.8s
RAYN Ar Rayn          86.23 294   P       P        02 17 21.5 -0.7
OHAK Old Harbor       86.61  32   P       P        02 17 23.9 +0.8
     baz=257
TTA  Tatalina         86.71  26   P       P        02 17 24.5 +0.9
TTA                               pmax    pmax
     comp=Z,16nm,0.8s
TTA  Tatalina         86.71  26   P       P        02 17 24.5 +0.9
TTA                               IAmb    IAmb     02 17 26.5
     comp=Z,16nm,0.8s
TTA  Tatalina         86.71  26   P       P        02 17 24.1 +0.4
     baz=254
GCSA Galena City Sc   86.85  24   P       P        02 17 25.5 +1.4
     baz=253
N19K Bonanza Creek    86.86  28   P       P        02 17 25.2 +0.7
N19K Bonanza Creek    86.86  28   P       P        02 17 26.2 +1.8
     baz=256
L19K White Mountain   87.03  27   P       P        02 17 27.0 +1.8
     baz=255
M19K Big River Lodg   87.17  27   P       P        02 17 26.1 +0.3
M19K                              IAmb    IAmb     02 17 29.0
     comp=Z,26nm,1.1s
M19K Big River Lodg   87.17  27   P       P        02 17 27.7 +1.8
     baz=256
L20K Farewell, AK     87.54  27   P       P        02 17 29.4 +1.8
     baz=256
RSO  Redoubt South    87.60  29   P       P        02 17 29.1 +0.9
ATD  Arta Tunnel      87.62 282   P       P        02 17 31.1 +2.1
     comp=Z,18nm,0.9s,baz=307,slow=7.4,SNR=5.3
ATD  Arta Tunnel      87.62 282   P       P        02 17 29.0 -0.1
ATD                               IAmb    IAmb     02 17 32.2
     comp=Z,19nm,0.9s
K20K Telida           87.67  26   P       P        02 17 28.2  0.0
K20K                              IAmb    IAmb     02 17 37.3
     comp=Z,14nm,1.5s
K20K Telida           87.67  26   P       P        02 17 29.3 +1.1
     baz=256
J20K Nowinta River    87.84  25   P       P        02 17 29.6 +0.6
J20K Nowinta River    87.84  25   P       P        02 17 29.9 +1.0
     baz=256
SPCR Spurr Chakacha   88.03  28   P       P        02 17 31.3 +1.2
     baz=258
BELG Belogornoye      88.40 323c iP       P        02 17 33.0 +1.2
BELG                              pmax    pmax
     comp=Z,9.0nm,1.3s
KIRV Kirov            88.45 329⇓eP        P        02 17 31.8 -0.1
SKT  Skwentna         88.51  28   P       P        02 17 32.6 +0.4
     baz=258
GNI  Garni            88.74 310⇓eP        P        02 17 35.6 +1.6
GNI                               pmax    pmax
     comp=Z,14nm,1.1s
GNI  Garni            88.74 310   P       P        02 17 34.5 +0.5
GNI                               IAmb    IAmb     02 17 41.4
     comp=Z,15nm,1.1s
H21K Melozitna Rive   88.75  24   P       P        02 17 34.3 +1.1
     baz=257
SUA  Susitna One      88.77  28   P       P        02 17 34.6 +1.0
     baz=259
A21K Barrow           88.84  18   P       P        02 17 34.3 +0.8
     baz=253
M22K Willow           89.12  28   P       P        02 17 36.2 +1.2
     baz=260
RC01 Rabbit Creek A   89.18  29   P       P        02 17 36.2 +0.8
RC01 Rabbit Creek A   89.18  29   P       P        02 17 36.2 +0.8
     baz=260
TRF  Thorofare Moun   89.36  26   P       P        02 17 36.7 +0.4
     baz=259
MLY  Manley           89.46  25   P       P        02 17 37.5 +0.8
MLY  Manley           89.46  25   P       P        02 17 37.7 +1.0
     baz=259
PMR  Palmer           89.56  28   P       P        02 17 38.0 +0.9
     baz=260
TAOE Nuku Hiva Isla   89.64  99  eLR      LR       02 46 13.9
     comp=Z,137nm,23.2s
ZEI  Tsey             89.66 313  eP       P        02 17 35.5 -2.8
ZEI                               pmax    pmax
     comp=Z,5.0nm,1.0s
PWL  Port Wells       89.82  29   P       P        02 17 38.3 -0.1
     baz=261
KNK  Knik Glacier     89.84  28   P       P        02 17 39.4 +0.9
KNK  Knik Glacier     89.84  28   P       P        02 17 39.1 +0.6
     baz=261
NCK  Nalchik          89.95 313⇓iP        P        02 17 40.4 +1.0
NCK                               pmax    pmax
     comp=Z,14nm,0.8s
SML  Sawmill          89.97  28   P       P        02 17 39.7 +0.6
     baz=261
RND  Reindeer         89.98  26   P       P        02 17 39.4 +0.2
RND                               pmax    pmax
     comp=Z,18nm,0.9s
RND  Reindeer         89.98  26   P       P        02 17 39.4 +0.2
RND                               IAmb    IAmb     02 17 41.3
     comp=Z,18nm,0.9s
MCK  McKinley         90.00  26   P       P        02 17 39.9 +0.7
MCK                               pmax    pmax
     comp=Z,24nm,1.2s
MCK  McKinley         90.00  26   P       P        02 17 39.9 +0.7
MCK                               IAmb    IAmb     02 17 41.0
     comp=Z,24nm,1.2s
MCK  McKinley         90.00  26   P       P        02 17 39.6 +0.4
     baz=261
KARS Kars             90.05 311   P       P        02 17 40.1  0.0
KARS                              pmax    pmax
     comp=Z,76nm,1.3s
KARS Kars             90.05 311   P       P        02 17 40.1  0.0
I23K Minto, Yukon-K   90.06  25   P       P        02 17 38.7 -0.6
I23K                              IAmb    IAmb     02 17 40.9
     comp=Z,12nm,0.9s
I23K Minto, Yukon-K   90.06  25   P       P        02 17 39.4  0.0
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     baz=260
COLD Coldfoot         90.09  23   P       P        02 17 39.6 +0.1
COLD                              IAmb    IAmb     02 17 43.1
     comp=Z,18nm,1.2s
COLD Coldfoot         90.09  23   P       P        02 17 39.7 +0.2
     baz=259
SIRT Sirnak           90.26 307   P       P        02 17 40.4 -0.7
SCM  Sheep Creek Mo   90.44  28   P       P        02 17 41.5 +0.1
     baz=262
KBZ  Khabaz           90.48 314   P       P        02 17 42.1 +0.3
     comp=Z,6.7nm,1.1s,baz=128,slow=3.7,SNR=9.7
KBZ  Khabaz           90.48 314⇓iP        P        02 17 42.6 +0.8
KBZ                               pmax    pmax
     comp=Z,11nm,1.3s
WRH  Wood River Hil   90.48  25   P       P        02 17 40.9 -0.5
WRH                               IAmb    IAmb     02 17 44.5
     comp=Z,13nm,1.1s
MDM  Murphy Dome      90.50  25   P       P        02 17 41.0 -0.4
TOLK Toolik Lake Re   90.58  21   P       P        02 17 42.2 +0.4
TOLK                              IAmb    IAmb     02 17 43.5
     comp=Z,23nm,1.4s
TOLK Toolik Lake Re   90.58  21   P       P        02 17 42.4 +0.6
     baz=260
DHY  Denali Highway   90.59  27   P       P        02 17 42.4 +0.3
DHY                               IAmb    IAmb     02 17 43.5
     comp=Z,10nm,1.0s
DHY  Denali Highway   90.59  27   P       P        02 17 42.5 +0.3
     baz=262
CCB  Clear Creek Bu   90.63  25   P       P        02 17 41.5 -0.5
CCB                               IAmb    IAmb     02 17 44.6
     comp=Z,19nm,1.3s
COLA College          90.65  25⇓eP        P        02 17 43.5 +1.4
COLA                              pmax    pmax
     comp=Z,6.0nm,0.9s
KIV  Kislovodsk       90.65 314  eP       P        02 17 40.5 -2.3
KIV                               pmax    pmax
     comp=Z,6.0nm,1.1s
GURO Guroymak-BITLI   90.67 308   P       P        02 17 43.6 +0.6
H24K Noodor Dome      90.78  24   P       P        02 17 40.9 -1.9
H24K                              IAmb    IAmb     02 17 44.9
     comp=Z,13nm,0.9s
H24K Noodor Dome      90.78  24   P       P        02 17 43.5 +0.7
     baz=262
HDA  Harding Lake     90.97  26   P       P        02 17 43.0 -0.7
HDA                               IAmb    IAmb     02 17 45.0
     comp=Z,8.0nm,0.8s
HDA  Harding Lake     90.97  26   P       P        02 17 43.3 -0.4
     baz=262
M24K Tolsona, Glenn   91.02  28   P       P        02 17 45.5 +1.5
     baz=263
IL31                  91.04  25   P       P        02 17 42.5 -1.4
ILAR Eielson Array    91.04  25   P       P        02 17 42.5 -1.4
     comp=Z,2.5nm,0.7s,baz=265,slow=4.2,SNR=22
ILAR Eielson Array    91.04  25   P       P        02 17 43.0 -1.0
ILAR Eielson Array    91.04  25   P       P        02 17 43.0 -1.0
KLU  Klutina          91.06  29   P       P        02 17 45.7 +1.4
     baz=263
PAX  Paxson           91.44  27   P       P        02 17 46.7 +0.7
PAX                               pmax    pmax
     comp=Z,9.0nm,0.8s
PAX  Paxson           91.44  27   P       P        02 17 46.7 +0.7
PAX                               IAmb    IAmb     02 17 48.2
     comp=Z,9.2nm,0.8s
PAX  Paxson           91.44  27   P       P        02 17 46.7 +0.7
     baz=264
J25K Salcha River,    91.67  25   P       P        02 17 46.8 -0.2
     baz=264
RIDG Independent Ri   91.80  26   P       P        02 17 47.4 -0.2
     baz=264
DOT  Dot Lake         92.14  26   P       P        02 17 49.9 +0.8
SCRK Sand Creek       92.21  26   P       P        02 17 50.0 +0.5
     baz=265
KMBO Kilima Mbogo     92.22 269   P       P        02 17 51.1 +0.2
     comp=Z,4.1nm,1.0s,baz=67,slow=7.6,SNR=6.3
KMBO Kilima Mbogo     92.22 269 i P       P        02 17 52.2 +1.3
KMBO                              pmax    pmax
     comp=Z,4.0nm,1.0s
BMAR Burnt Mountain   92.28  23   P       P        02 17 49.9 +0.2
L26K Log Cabin Wild   92.41  27   P       P        02 17 51.3 +0.9
     baz=266
J26L Joseph Creek     92.43  26   P       P        02 17 51.1 +0.5
     baz=265
SOC  Sochi            92.77 313  eP       P        02 17 50.4 -2.0
SOC                              ePPP     PPP      02 23 32.0
SOC                              eS       SKSac    02 28 21.2 -2.5
SOC                              eSS      SS       02 35 05.9 -2.9
SOC                              eSSS     SSS      02 38 49.9
SOC                               MLR     MLR
     comp=Z,79nm,14.0s
M27K Edge Creek, AK   93.04  28   P       P        02 17 54.9 +1.4
     baz=267
L27K Beaver Creek,    93.11  27   P       P        02 17 53.7  0.0
L27K Beaver Creek,    93.11  27   P       P        02 17 55.0 +1.4
     baz=267
BCAR Beaver Creek A   93.12  27   P       P        02 17 53.7  0.0
EGAK Eagle            93.48  25   P       P        02 17 55.4 +0.1
EGAK                              IAmb    IAmb     02 17 56.6
     comp=Z,17nm,1.2s
KLMR Klimovskoe       93.68 331  eP       P        02 17 52.5 -3.7
KLMR                              pmax    pmax
     comp=Z,14nm,0.9s
KLMR Klimovskoe       93.68 331  eP       P        02 17 52.5 -3.7
KLMR                              AMP              02 17 55.4
     comp=Z,14nm,0.9s
DAWY Dawson           94.23  26   P       P        02 17 58.7  0.0
DAWY Dawson           94.23  26   P       P        02 18 00.0 +1.2
     baz=269
OBN  Obninsk          95.16 325⇓eP        P        02 18 02.1 -1.0
OBN                              e                 02 22 00.0
OBN                              eS       SKSac    02 28 37.1 +1.0
OBN                               pmax    pmax
     comp=Z,10.0nm,0.5s
EPYK Eagle Plains     95.34  24   P       P        02 18 04.4 +0.5
EPYK Eagle Plains     95.34  24   P       P        02 18 03.8  0.0
     baz=272
M30M Minto, Yukon     95.41  28   P       P        02 18 04.9 +0.7
     baz=271
INK  Inuvik           96.47  22   P       P        02 18 08.7  0.0
     baz=275
BRTR Keskin Array B   97.24 309 i P       P        02 18 12.8 -0.4
BRTR                              pmax    pmax
     comp=Z,2.0nm,0.8s
CSS  Mathiatis        97.51 305   P       P        02 18 13.3 -1.1
CSS                               IAmb    IAmb     02 18 29.4
     comp=Z,6.6nm,0.9s
SNAA Sanae            98.24 194   P       Pdif     02 18 17.5 +0.5
SNAA Sanae            98.24 194c iP       Pdif     02 18 17.7 +0.8
SNAA                              pmax    pmax
     comp=Z,12nm,2.5s
SNAA Sanae            98.24 194   P       P        02 18 16.8 -0.1
SNAA                              IAmb    IAmb     02 18 19.0
     comp=Z,7.6nm,1.2s
ARCES ARCESS Array B  98.84 340   P       P        02 18 18.9 -0.7
     comp=Z,5.4nm,0.7s,baz=64,slow=5.5,SNR=10
AKBB Malin Array Si   99.81 321⇓eP        Pdif     02 18 25.5 +1.3
AKBB                              pmax    pmax
     comp=Z,48nm,5.1s
VNA2 Neumayer--Watz   99.81 193   P       Pdif     02 18 24.9 +1.0
     baz=125,slow=4.0
VNA3 Neumayer Olymp  100.08 192   P       Pdif     02 18 25.6 +0.5
FINES FINESS Array B 100.13 332   P       Pdif     02 18 24.3 -1.1
     comp=Z,2.6nm,0.8s,baz=35,slow=7.0,SNR=7.2
FINES FINESS Array B 100.13 332 i P       Pdif     02 18 25.2 -0.2
FINES                             pmax    pmax
     comp=Z,3.0nm,0.8s
MNK  Minsk           100.21 325 i P       Pdif     02 18 25.0 -0.9
MNK                             i                  02 22 30.4
MNK                             i PPP     PPP      02 24 38.3
MNK                             i S       SKSac    02 29 01.1 -0.9
MNK                             i PS      PS       02 31 31.6 -0.5
MNK                             i SS      SS       02 36 53.7 +0.5
MNK                             i SSS     SSS      02 40 44.1
MNK                               pmax    pmax
     comp=N,8.0nm,0.9s
MNK                               pmax    pmax
     comp=Z,15nm,1.0s
MNK                               pmax    pmax
     comp=E,3.0nm,0.9s
MNK                               MLR     MLR
     comp=Z,152nm,15.0s
MNK                               MLR     MLR
     comp=N,47nm,9.0s
MNK                               MLR     MLR
     comp=E,7.0nm,8.0s
MNK  Minsk           100.21 325 i P       Pdif     02 18 25.1 -0.8
     comp=E,3.0nm,0.9s
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MNK				*i* P	**Pdif**	**02 18 25.1**	**-0.8**
	comp=N,8.0nm,0.9s						
MNK				*i* P	**Pdif**	**02 18 25.1**	**-0.8**
	comp=Z,15nm,1.0s,baz=263						
MNK				*i* PP	**PP**	**02 22 30.5**	**-1.4**
MNK				*i* PPP	PPP	02 24 38.4	
MNK				*i* S	**SKSac**	**02 29 01.1**	**-0.8**
MNK				*i* PS	**PS**	**02 31 31.7**	**-0.4**
MNK				*i* SS	**SS**	**02 36 53.7**	**+0.5**
MNK				*i* SSS	SSS	02 40 44.1	
MNK				*i* LQ	LQ	02 57 45.0	
MNK				*i* LR	LR	03 01 45.0	
MNK				*i* LRM	MLR	03 03 53.1	
	comp=Z,152nm,15.2s						
MNK				*i* LRM	MLR	03 04 27.8	
	comp=N,47nm,8.7s						
MNK				*i* LRM	MLR	03 04 53.9	
	comp=E,7.0nm,7.6s						
VNA1	**Neumayer--Stat**	**100.21**	**193**	P	**Pdif**	**02 18 26.8**	**+1.2**
BOSA	**Boshof**	**100.47**	**240**	P	**Pdif**	**02 18 26.5**	**-1.4**
	comp=E,3.6nm,1.1s,baz=53,slow=5.9,SNR=3.8						
CRVS	**Cervenica-Dubn**	**105.04**	**320**	*e*P	**Pdif**	**02 18 49.0**	**+1.4**
CRVS	**Cervenica-Dubn**	**105.04**	**320**	*e*PDIFF	**Pdif**	**02 18 49.0**	**+1.4**
HFS	**Hagfors**	**106.33**	**332**	Pdiff	**Pdif**	**02 18 52.5**	**-0.5**
	comp=E,3.2nm,0.8s,baz=117,slow=5.4,SNR=6.3						
NVAR	**Mina Array Bea**	**109.91**	**51**	PKiKP	**PKiKP**	**02 23 12.8**	**+1.0**
	comp=E,0.3nm,0.6s,baz=180,slow=3.6,SNR=3.8						
GERES	**GERESS Array B**	**110.02**	**321**	PKiKP	**PKiKP**	**02 23 12.1**	**+0.6**
	comp=E,0.3nm,0.5s,baz=90,slow=2.7,SNR=6.0						
PDAR	**Pinedale Array**	**115.24**	**44**	PKP	**PKPdf**	**02 23 22.2**	**+0.3**
	comp=E,0.9nm,0.8s,baz=172,slow=1.1,SNR=8.6						
PDAR				PKKPbc	**PKKPbc**	**02 33 56.1**	**-1.9**
	comp=E,0.9nm,0.9s,baz=60,slow=5.3,SNR=5.0						
WUAZ	**Wupatki**	**115.95**	**52**		**PKPdf**	**02 23 22.6**	**-0.7**
O20A	**White River Ci**	**117.03**	**47**		**PKiKP**	**02 23 25.5**	**+0.1**
RSSD	**Black Hills**	**118.49**	**41**	PKIKP	**PKPdf**	**02 23 27.3**	**-0.8**
RSSD	**Black Hills**	**118.49**	**41**	PKPdf	**PKPdf**	**02 23 27.3**	**-0.8**
MNTX	**Cornudas Mount**	**121.78**	**55**	PKPdf	**PKPdf**	**02 23 34.5**	**0.0**
F33A	**5 Mile Ranch,**	**122.54**	**37**		**PKiKP**	**02 23 35.9**	**+0.1**
K31A	**O'Neill**	**122.61**	**41**	PKPdf	**PKiKP**	**02 23 36.1**	**+0.1**
ECSD	**EROS Data Cent**	**123.44**	**39**	PKPdf	**PKiKP**	**02 23 37.8**	**+0.2**
TXAR	**Lajitas Array**	**123.85**	**57**	PKP	**PKPdf**	**02 23 38.7**	**0.0**
	comp=E,1.9nm,0.9s,baz=282,slow=1.4,SNR=16						
F36A	**Milaca**	**124.15**	**35**		**PKiKP**	**02 23 39.1**	**+0.2**
R32A	**Long Quarter,**	**124.52**	**45**		**PKPdf**	**02 23 39.6**	**0.0**
ESDC	**Sonseca Array**	**125.21**	**317**	PKP	**PKiKP**	**02 23 41.2**	**-0.1**
	comp=E,0.5nm,0.7s,baz=48,slow=1.9,SNR=3.0						
JCT	**Junction City**	**126.70**	**55**	PKIKP	**PKPdf**	**02 23 43.5**	**-0.5**
JCT	**Junction City**	**126.70**	**55**	PKPdf	**PKPdf**	**02 23 43.5**	**-0.5**
T35A	**Sooner Cattle**	**126.75**	**46**		**PKPdf**	**02 23 42.8**	**-1.1**
P38A	**Dawn**	**127.52**	**42**	PKPdf	**PKPdf**	**02 23 44.7**	**-0.5**
JFWS	**Jewell Farm**	**127.77**	**37**	PKIKP	**PKPdf**	**02 23 45.1**	**-0.5**
JFWS	**Jewell Farm**	**127.77**	**37**	PKPdf	**PKPdf**	**02 23 45.1**	**-0.5**
TORD	**Torodi Ar. Bea**	**127.80**	**283**	PKP	**PKPdf**	**02 23 46.4**	**0.0**
	comp=E,5.8nm,0.9s,baz=63,slow=1.9,SNR=30						
TORD	**Torodi Ar. Bea**	**127.80**	**283**	PKPdf	**PKPdf**	**02 23 45.9**	**-0.5**
SCHQ	**Schefferville**	**127.83**	**12**	PKP	**PKPdf**	**02 23 45.6**	**+0.2**
	comp=E,0.9nm,0.4s,baz=276,slow=6.6,SNR=6.1						
U38A	**Gravette**	**128.49**	**46**		**PKPdf**	**02 23 47.4**	**+0.2**
S39A	**Bolivar**	**128.63**	**44**		**PKPdf**	**02 23 47.1**	**-0.4**
HHAR	**Hobbs**	**128.88**	**46**	PKPdf	**PKPdf**	**02 23 48.3**	**+0.3**
R40A	**Maddies Statio**	**129.05**	**43**		**PKPdf**	**02 23 48.1**	**-0.1**
W39A	**Magazine**	**129.50**	**47**		**PKPdf**	**02 23 48.5**	**-0.7**
U40A	**Yellville**	**129.61**	**45**	PKPdf	**PKPdf**	**02 23 49.2**	**-0.2**
DBIC	**Dimbokro**	**134.57**	**275**	PKP	**PKiKP**	**02 24 00.5**	**-0.3**
	comp=E,3.3nm,0.7s,baz=128,slow=1.8,SNR=4.2						
T50A	**Nancy**	**134.63**	**39**		**PKPdf**	**02 23 57.7**	**-1.1**
BOAB	**BOACO BROADBA**	**144.24**	**75**	PKPdf	**PKPab**	**02 24 14.3**	**-0.4**
SRBA	**San Rafael, Bu**	**146.94**	**80**	PKPab	**PKPbc**	**02 24 24.1**	**+0.4**
LVC	**Limon Verde**	**147.79**	**147**	PKPbc	**PKiKP**	**02 24 27.1**	**-0.9**
	comp=E,16nm,0.7s,baz=288,slow=2.9,SNR=14						
LVC	**Limon Verde**	**147.79**	**147**	PKP2	**PKiKP**	**02 24 27.3**	**-0.8**
LVC	**Limon Verde**	**147.79**	**147**	PKPab	**PKiKP**	**02 24 27.3**	**-0.8**
PB07	**IPOC Station P**	**147.94**	**144**		**PKiKP**	**02 24 27.8**	**-0.3**
PB09	**IPOC Station P**	**148.25**	**145**	PKPab	**PKPab**	**02 24 29.5**	**-0.5**
CPUP	**Villa Florida**	**148.90**	**168**	PKPbc	**PKiKP**	**02 24 29.6**	**-0.1**
	comp=E,11nm,0.8s,baz=214,slow=1.2,SNR=11						
CPUP	**Villa Florida**	**148.90**	**168**	PKP2	**PKiKP**	**02 24 29.8**	**+0.1**
CPUP	**Villa Florida**	**148.90**	**168**	PKPab	**PKiKP**	**02 24 29.8**	**+0.1**
ATAH	**Atahualpa**	**149.90**	**112**	PKPbc	**PKiKP**	**02 24 34.2**	**+1.5**
	comp=E,13nm,1.0s,baz=180,slow=6.0,SNR=11						
LPAZ	**La Paz**	**153.14**	**140**	PKPbc	**PKiKP**	**02 24 40.4**	**+0.9**
	comp=E,4.8nm,0.7s,baz=195,slow=7.0,SNR=8.4						

AUST 10 02:08:43.5±1.1**, 25°.61S**×**117°.86E, h10^{km}, Error ellipse: s-maj=16.5km s-min=9.9km az=96.0, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEEK	**Meekatharra**	**1.23**	**147**	P	Pb	02 09 06.8	0.0
	baz=1.2,SNR=186						
MEEK				S	Sn	02 09 24.0	+0.6
	baz=1.2						
MORW	**Morawa**	**3.81**	**205**	P	Pn	02 09 43.0	+0.9
	baz=3.8						
MORW				S	Sn	02 10 27.3	+0.3
	baz=3.8						
GIRL	**Giralia**	**4.44**	**311**	P	Pn	02 09 50.1	-0.7
	baz=4.4,SNR=6.5						
GIRL				S	Sn	02 10 37.9	-4.7
	baz=4.4						
GIRL	**Giralia**	**4.44**	**311**	P	Pn	02 09 50.3	-0.5
BLDU	**Ballidu**	**5.09**	**191**	P	Pn	02 10 00.7	+0.9
	baz=5.1						
BLDU				S	Sn	02 10 57.2	-1.5
	baz=5.1						
KLBR	**Kellerberrin**	**5.96**	**181**	P	Pn	02 10 13.3	+1.5
	baz=6.0,SNR=5.4						
KLBR				S	Sn	02 11 17.2	-2.9
	baz=6.0						
MUN	**Mundaring**	**6.51**	**192**	P	Pn	02 10 19.5	+0.2
	baz=6.5						
MUN				S	Sn	02 11 31.5	-2.1
	baz=6.5						
FORT	**Forrest**	**10.37**	**122**	P	Pn	02 11 10.5	-1.7
	baz=10,SNR=21						
FORT				S	Sn	02 12 58.5	-10
	baz=10						

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*NEIC **10** 02:11:08.8±1.8, 3°.39N±0°.06×97°.18E±0°.10, h104^{km}±4^{km}, mb4.2/11, Error ellipse: s-maj=14.1km s-min=8.3km az=85.0*

*DJA **10** 02:11:12.8±0.5, 4°N±3°×9°7E±°, h98^{km}±4^{km}, M4.2/9, mB5.1/2, mb4.5/4, MLv4.1/9, Mw(mB)4.5/2*

*IDC **10** 02:11:12.4±1.4, 3°.82N×97°.45E, h125^{km}±14^{km}, mb3.8/12, mb1 3.9/12, mb1mx3.5/58, mbtmp4.2/12, Error ellipse: s-maj=28.0km s-min=14.9km az=58.0*

ISC 10 02:11:11.5±0.7**, 3°.68N**±0°.05×**97°.27E**±0°.06**, h121**^{km}±6^{km}**, n42, σ0^{s}.95**/48**, mb4.0**/19**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPTI		**0.42**	**192**	P	**Pn**	**02 11 29.0**	**-0.1**
TPTI				S	**Sn**	**02 11 41.5**	**-0.9**
KCSI	**Kotacane, Aceh**	**0.52**	**107**	P	**Pn**	**02 11 29.2**	**-0.5**
KCSI				S	**Sn**	**02 11 42.1**	**-1.3**
TSI	**Tuntungan**	**1.30**	**98**	P	**Pn**	**02 11 39.5**	**+2.8**
TSI				S	**Sn**	**02 11 55.9**	**0.0**
LHMI	**Lhok Sumawe**	**1.58**	**348**	P	**Pn**	**02 11 40.6**	**+0.7**
LHMI				S	**Sn**	**02 12 02.1**	**+0.5**
LHMI	**Lhok Sumawe**	**1.58**	**348**	Pn	**Pn**	**02 11 40.4**	**+0.5**
LHMI				Sn	**Sn**	**02 12 02.0**	**+0.5**
PSI	**Prapat**	**1.86**	**118**	P	**Pn**	**02 11 44.5**	**+1.1**
	46nm,0.3s,baz=304,slow=8.1,SNR=166						
PSI				S	**Sn**	**02 12 09.2**	**+1.3**
	34nm,0.3s,baz=138,slow=18,SNR=24						
GSI	**Gunungsitoli**	**2.38**	**173**	P	**Pn**	**02 11 50.6**	**+0.9**
GSI	**Gunungsitoli**	**2.38**	**173**	Pn	Pn	02 11 42.2	-7.6
MNSI	**Mandailing Nat**	**3.67**	**141**	P	**Pn**	**02 12 07.1**	**+0.4**
KULM	**Kulim**	**3.73**	**64**	Pn	**Pn**	**02 12 07.2**	**-0.3**
IPM	**Ipoh**	**3.83**	**78**	Pn	**Pn**	**02 12 07.7**	**-1.1**
PPI	**Padang Panjang**	**5.16**	**143**	P	**Pn**	**02 12 27.5**	**+0.9**
	561nm20nm,0.5s						
SISI	**Saibi**	**5.29**	**160**	P	**Pn**	**02 12 27.5**	**-0.9**
	14nm,0.6s						
PDSI	**Padang**	**5.56**	**145**	P	**Pn**	**02 12 32.4**	**+0.3**
	0.4nm9µm49nm,0.4s						
PPSI	**Pulau Pagai**	**6.96**	**157**	P	**Pn**	**02 12 50.6**	**-0.3**
GAR	**Garm**	**42.86**	**329**	P	**P**	**02 18 57.5**	**-0.3**
GAR				IAmb	IAmb	02 19 04.9	
	comp=Z,5.2nm,0.8s						
WB0	**Warramunga Arr**	**43.28**	**124**	P	**P**	**02 19 01.4**	**0.0**
WB0				IAmb	IAmb	02 19 08.2	
	comp=Z,2.8nm,0.9s						
WRA	**Warramunga Arr**	**43.32**	**124**	P	**P**	**02 19 02.2**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=308,slow=9.4,SNR=18						
WRA				PcP	**PcP**	**02 20 49.1**	**+0.5**
	comp=Z,0.6nm,1.0s,baz=314,slow=2.9,SNR=4.9						
WRA	**Warramunga Arr**	**43.32**	**124**	P	**P**	**02 19 00.9**	**-0.9**
WB2	**Warramunga Arr**	**43.33**	**124**	P	**P**	**02 19 01.3**	**-0.5**
WB2				IAmb	IAmb	02 19 05.4	
	comp=Z,3.1nm,0.8s						
SONM	**Songino Array**	**44.69**	**9**	P	**P**	**02 19 11.5**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=190,slow=8.9,SNR=5.9						
SONM	**Songino Array**	**44.69**	**9**	P	**P**	**02 19 11.4**	**-1.0**
ASAR	**Alice Springs**	**44.86**	**129**	P	**P**	**02 19 13.8**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=301,slow=7.6,SNR=5.1						
MK31	**Makanchi Array**	**44.88**	**345**	P	**P**	**02 19 14.4**	**+0.6**
MK31				IAmb	IAmb	02 19 23.4	
	comp=Z,2.4nm,1.2s						
MKAR	**Makanchi Array**	**44.88**	**345**	P	**P**	**02 19 14.3**	**+0.5**
	comp=Z,1.2nm,0.4s,baz=171,slow=7.7,SNR=12						
MAKZ	**Makanchi**	**44.97**	**345**	P	**P**	**02 19 15.1**	**+0.5**
MAKZ				IAmb	IAmb	02 19 15.9	
	comp=Z,1.8nm,0.6s						
KKAR	**Karatay Array**	**45.89**	**333**	P	**P**	**02 19 21.1**	**-0.7**
GEYT	**Alibeck**	**49.39**	**319**	P	**P**	**02 19 50.1**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=121,slow=14,SNR=3.9						
GYA0B	**ALIBECK ARRAY**	**49.39**	**319**	P	**P**	**02 19 49.5**	**+0.5**
GYA0B				IAmb	IAmb	02 19 50.4	
	comp=Z,4.5nm,0.9s						
ZALV	**Zalesovo Beam**	**51.14**	**351**	P	**P**	**02 20 01.6**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=179,slow=7.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**51.14**	**351**	P	**P**	**02 20 00.8**	**-1.0**
ABKAR	**Akbulak array**	**55.39**	**331**	P	**P**	**02 20 32.6**	**-0.3**
ABKAR	**Akbulak array**	**55.39**	**331**	P	**P**	**02 20 32.5**	**-0.5**
ABKAR				IAmb	IAmb	02 20 33.9	
	comp=Z,3.4nm,0.9s						
MLR	**Muntele Rosu**	**74.33**	**316**	P	**P**	**02 22 37.1**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=148,slow=13,SNR=3.7						
BOSA	**Boshof**	**76.08**	**239**	P	**P**	**02 22 48.4**	**+2.1**
	comp=Z,1.5nm,0.5s,baz=110,slow=4.9,SNR=12						
BOSA	**Boshof**	**76.08**	**239**	P	**P**	**02 22 47.0**	**+0.6**
FINES	**FINESS Array B**	**77.85**	**332**	P	**P**	**02 22 54.9**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=102,slow=7.3,SNR=9.4						
FINES	**FINESS Array B**	**77.85**	**332**	P	**P**	**02 22 55.4**	**0.0**
ARCES	**ARCESS Array B**	**80.25**	**340**	P	**P**	**02 23 08.3**	**-0.1**
	comp=Z,4.7nm,0.8s,baz=90,slow=5.4,SNR=16						
GERES	**GERESS Array B**	**83.01**	**319**	P	**P**	**02 23 23.9**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=102,slow=6.2,SNR=6.3						
DAVOX	**Davos/Dischmat**	**85.56**	**316**	P	**P**	**02 23 36.8**	**+0.3**
	comp=Z,4.0nm,0.6s,baz=177,slow=3.3,SNR=9.9						
TXAR	**Lajitas Array**	**141.52**	**30**	PKP	**PKPdf**	**02 30 26.6**	**-2.6**
	comp=Z,0.2nm,0.7s,baz=0.0,slow=2.7,SNR=2.6						

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*ISN **10** 02:18:22.8±1.6, 35°.31N×44°.91E, h9^{km}±73^{km}, ML3.3*

*TEH **10** 02:18:26.0, 35°.29N×44°.75E, h10^{km}, ML3.7*

ISC 10 02:18:26.6±1.3**, 35°.16N**±0°.04×**44°.47E**±0°.08**, h17**^{km}±11^{km}**, n16, σ0^{s}.97**/22**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKRK	**Kirkuk**	**0.26**	**336**	*e*Pg	**Pg**	**02 18 32.5**	**+0.1**
IKRK				*e*Sg	**Sb**	**02 18 38.5**	**+1.4**
IDHR	**Dehrash**	**1.65**	**106**	*e*Pg	**Pn**	**02 18 54.4**	**-0.6**
IDHR				*e*Sg	**Sn**	**02 19 15.5**	**-0.4**
MAHB	**Mahabad**	**1.89**	**32**	*e*Pg	**Pn**	**02 18 57.2**	**-1.1**
MAHB				*e*Sg	**Sn**	**02 19 22.1**	**+0.3**
BHD	**Baghdad**	**1.89**	**182**	*e*Pn	**Pn**	**02 18 59.0**	**+0.8**
BHD				*e*Sn	**Sg**	**02 19 27.0**	**-0.5**
BHD				AML	AML	02 19 32.9	
	comp=E,271nm,0.5s						
IGHG	**Ghaleghazi**	**1.92**	**115**	*e*Pg	**Pn**	**02 19 00.1**	**+1.3**
IGHG				*e*		02 19 41.7	
	comp=Z,4µm,1.2s						
KER	**Kermanshah**	**2.33**	**109**	*e*Pn	**Pn**	**02 19 05.1**	**+0.8**
IBDR	**Badra**	**2.38**	**149**	*e*Pn	**Pn**	**02 19 03.0**	**-1.9**
IBDR				*e*Sn	**Sn**	**02 19 34.0**	**+0.2**
IAZR	**Azarshahr**	**2.79**	**26**	*e*Pn	**Pn**	**02 19 11.0**	**+0.2**
IBST	**Bostanabad**	**3.20**	**37**	*e*Pn	**Pn**	**02 19 15.5**	**-0.9**
IBST				*e*		02 20 09.4	
	comp=Z,1µm,0.7s						
IKFM	**Kafar-mosalman**	**3.24**	**119**	*e*Pn	**Pn**	**02 19 17.1**	**+0.4**
ISHB	**Shabestar**	**3.25**	**16**	*e*Pn	**Pn**	**02 19 15.8**	**-1.3**
ISHB				*e*		02 20 07.5	
	comp=Z,2µm,0.4s						
HSAM	**Samen**	**3.54**	**104**	*e*Pn	**Pn**	**02 19 22.1**	**+1.0**
IMRD	**Marand**	**3.68**	**15**	*e*Pn	**Pn**	**02 19 23.4**	**+0.4**
IMRD				*e*		02 20 26.3	
	comp=Z,2µm,0.6s						
RAFI	**Al-Rafai**	**3.70**	**158**	*e*Pn	**Pn**	**02 19 23.0**	**0.0**
RAFI				*e*Sn	**Sn**	**02 20 05.0**	**-1.2**
ISRB	**Sarab**	**3.70**	**43**	*e*Pn	**Pn**	**02 19 22.9**	**-0.4**
ISRB				*e*		02 20 23.1	
	comp=Z,2µm,0.9s						
IHRS	**Heris**	**3.77**	**33**	*e*Pn	**Pn**	**02 19 23.5**	**-0.7**
IHRS				*e*		02 20 38.2	
	comp=Z,2µm,1.2s						

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*NEIC **10** 02:19:49.7±1.1, 35°.94S±0°.06×73°.47W±0°.08, h18^{km}±4^{km}, mb4.4/8, Mwr4.0/25, ML4.4(GUC), Error ellipse: s-maj=11.8km s-min=5.2km az=128.0*

*IDC **10** 02:19:49.0±1.5, 36°.02S×73°.19W, h0^{km}, mb3.9/5, mb1 4.1/6, mb1mx4.0/21, mbtmp4.0/6, ML3.9/1, MS3.3/3, Ms1 3.3/3, ms1mx3.1/26, Error ellipse: s-maj=46.4km s-min=19.0km az=73.0*

*NEIC **10** 02:19:50.5, 35°.92S×73°.47W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.44; M$_{\theta\theta}$-0.11; M$_{\phi\phi}$-1.32; M$_{r\theta}$0.04; M$_{\theta\phi}$-0.44; M$_{\phi r}$-0.03; Fault plane solution: M$_0$1.45000×10^{15} NP1:φ$_s$196.04000°, δ45.42000°, λ87.26000°. NP2:φ$_s$19.94000°, δ44.65000°, λ92.78000°. Principal axes: T 1.4392, Plg88.0000°, Azm29.0000°; N 0.0276, Plg2.0000°, Azm198.0000°; P -1.4668, Plg0.0000°, Azm288.0000°;*

*GUC **10** 02:19:51.0±0.6, 35°.57S×73°.59W, h9^{km}±7^{km}, ML4.4*

ISC 10 02:19:48.3±4.5**, 35°.90S**±0°.06×**73°.43W**±0°.08**, h5**^{km}±29^{km}**, n64, σ1^{s}.07**/68**, mb4.1**/5**, 7C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	**Huala**	**1.51**	**55**⇓	*e*P	**Pn**	**02 20 15.7**	**-0.3**
GO05				*i* S	**Sn**	**02 20 34.8**	**-1.3**
GO05				IAML		02 20 39.4	
	comp=N,5µm,0.3s						
GO05	**Huala**	**1.51**	**55**	Pn	**Pn**	**02 20 15.3**	**-0.7**
GO05				Sn	**Sb**	**02 20 36.3**	**0.0**
BO02	**Sierra Bellavi**	**2.43**	**64**⇑	*e*P	**Pn**	**02 20 30.8**	**+2.2**
BO02				*i* S	**Sb**	**02 21 02.0**	**-0.7**
BO02				IAML		02 21 07.5	
	comp=E,5µm,0.4s						
BO02	**Sierra Bellavi**	**2.43**	**64**	Pn	**Pn**	**02 20 28.6**	**0.0**
BO01	**Tunca**	**2.44**	**53**	*e*P	**Pn**	**02 20 30.3**	**+1.6**
BO01				*i* S	**Sn**	**02 21 00.3**	**+1.3**
BO01				IAML		02 21 14.7	
	comp=E,1µm,0.4s						
BO01	**Tunca**	**2.44**	**53**	Pn	**Pn**	**02 20 28.8**	**+0.1**
BO01					**Sb**	**02 21 04.2**	**+1.3**
VA05	**Santo Domingo**	**2.69**	**34**		**Pn**	**02 20 32.8**	**+0.6**
MT01	**Popeta**	**2.71**	**42**⇑	*e*P	**Pn**	**02 20 32.7**	**+0.3**
MT01				*i* S	**Sn**	**02 21 02.2**	**-3.4**
MT01				IAML		02 21 19.8	
	comp=E,1µm,0.4s						
MT01	**Popeta**	**2.71**	**42**		**Pn**	**02 20 33.1**	**+0.7**
MT09	**Talagante**	**2.92**	**44**⇑	*e*P	**Pn**	**02 20 36.5**	**+1.1**
MT09				*i* S	**Sn**	**02 21 10.5**	**-0.5**
MT09				IAML		02 21 26.6	
	comp=N,2µm,0.3s						
MT09	**Talagante**	**2.92**	**44**		**Pn**	**02 20 36.3**	**+0.8**
BO04	**La Punta**	**3.00**	**51**	*e*P	**Pn**	**02 20 38.0**	**+1.5**
BO04				*i* S	**Sn**	**02 21 13.6**	**+0.8**
BO04				IAML		02 21 26.9	
	comp=N,1µm,0.5s						
VA01	**Torpederas**	**3.22**	**28**		**Pn**	**02 20 40.0**	**+0.5**
MT02	**Curacav**	**3.24**	**36**⇑	*e*P	**Pn**	**02 20 39.7**	**-0.1**
MT02				*i* S	**Sn**	**02 21 16.8**	**-2.0**
MT02				IAML		02 21 40.4	
	comp=E,501nm,0.5s						
MT02	**Curacav**	**3.24**	**36**		**Pn**	**02 20 40.2**	**+0.4**
LC01	**Cunco**	**3.24**	**158**	Pn	**Pn**	**02 20 39.0**	**-0.8**
MT05	**Renca**	**3.34**	**42**	*e*P	**Pn**	**02 20 42.4**	**+1.2**
MT05				*i* S	**Sn**	**02 21 20.1**	**-1.2**
MT05				IAML		02 21 41.5	
	comp=E,2µm,0.5s						
MT05	**Renca**	**3.34**	**42**		**Pn**	**02 20 41.9**	**+0.7**
ROCH	**El Roble**	**3.54**	**35**⇑	*e*P	**Pn**	**02 20 44.9**	**+0.9**
ROCH				*i* S	**Sn**	**02 21 25.1**	**-1.3**
ROCH				IAML		02 21 50.3	
	comp=N,2µm,0.5s						
PEL	**Peldehue**	**3.56**	**40**	Pn	**Pn**	**02 20 45.3**	**+1.0**
FCH	**Farellones**	**3.64**	**46**⇑	*i*P	**Pn**	**02 20 46.9**	**+1.3**
FCH				*i* S	**Sn**	**02 21 29.2**	**+0.1**
FCH				IAML		02 21 47.8	
	comp=E,590nm,0.4s						
VA06	**Catapilco**	**3.77**	**29**	*e*P	**Pn**	**02 20 46.9**	**-0.1**
LR03	**Panguipulli**	**3.83**	**167**		**Pn**	**02 20 47.9**	**+0.1**
VA03	**San Esteban**	**3.93**	**38**⇑	*e*P	**Pn**	**02 20 50.1**	**+0.8**
VA03				*i* S	**Sn**	**02 21 34.3**	**-1.6**
VA03				IAML		02 21 58.0	
	comp=E,744nm,0.7s						
VA03	**San Esteban**	**3.93**	**38**		**Pn**	**02 20 50.2**	**+0.9**
H03S1	**Juan Fernandez**	**4.95**	**293**	T	T	02 26 23.4	
	baz=113,SNR=2273						
H03S3	**Juan Fernandez**	**4.96**	**293**	T	T	02 26 18.9	
	baz=113,SNR=1759						
H03S2	**Juan Fernandez**	**4.96**	**293**	T	T	02 26 19.7	
	baz=113,SNR=1831						
LL04	**Puerto Octay**	**5.07**	**171**	Pn	**Pn**	**02 21 04.2**	**-0.7**
H03N1	**Juan Fernandez**	**5.14**	**297**	T	T	02 26 37.9	
	baz=110,slow=76,SNR=20						
H03N3	**Juan Fernandez**	**5.14**	**297**	T	T	02 26 35.0	
	baz=110,slow=76,SNR=27						
H03N2	**Juan Fernandez**	**5.15**	**297**	T	T	02 26 36.2	
	baz=110,slow=76,SNR=27						
PLCA	**Paso Flores**	**5.33**	**156**	Pn	**Pn**	**02 21 09.3**	**+0.7**
	comp=E,1.1nm,0.3s,baz=327,slow=11,SNR=38						
PLCA				Lg	Lg	02 22 31.6	
	comp=E,2.2nm,0.3s,baz=26,slow=13,SNR=4.7						
PLCA	**Paso Flores**	**5.33**	**156**	Pn	**Pn**	**02 21 08.0**	**-0.6**
CO06	**Fray Jorge**	**5.42**	**17**		**Pn**	**02 21 09.2**	**-0.5**
LL05	**Los Muermos**	**5.50**	**180**		**Pn**	**02 21 10.4**	**-0.4**
CO03	**El Pedregal**	**5.54**	**25**		**Pn**	**02 21 12.2**	**+0.7**
GO04	**Tololo Observa**	**6.12**	**22**		**Pn**	**02 21 18.0**	**-1.6**
CO05	**La Serena**	**6.24**	**18**		**Pn**	**02 21 21.0**	**0.0**
AC04	**Llanos de Chal**	**7.92**	**15**	Pn	**Pn**	**02 21 43.5**	**-0.6**
GO03	**Copiap**	**8.71**	**19**		**Pn**	**02 21 55.4**	**+0.4**
TRQA	**Tornquist**	**9.41**	**107**	Pn	**Pn**	**02 22 04.4**	**-0.2**
AC02	**Maricunga**	**9.75**	**23**	Pn	**Pn**	**02 22 08.9**	**-0.7**
LVC	**Limon Verde**	**13.81**	**18**	LR	LR	02 29 06.9	
	comp=E,111nm,19.1s,baz=210,slow=40						
PB01	**IPOC Station P**	**15.20**	**14**	Pn	**Pn**	**02 23 23.4**	**-0.3**
PB01				IAmb	IAmb	02 23 33.7	
	comp=Z,9.5nm,0.7s						
CPUP	**Villa Florida**	**16.74**	**60**	LR	LR	02 29 43.1	
	comp=Z,83nm,21.1s,baz=230,slow=36						
LPAZ	**La Paz**	**20.09**	**15**	P	Pn	02 24 27.2	+2.0
	comp=Z,2.6nm,0.6s,baz=197,slow=8.5,SNR=13						
LPAZ	**La Paz**	**20.09**	**15**		**P**	**02 24 22.8**	**-0.7**
AQDB	**Aquidauana**	**21.86**	**50**	P	**P**	**02 24 41.3**	**-0.6**
AQDB				IAmb	IAmb	02 24 42.8	
	comp=Z,26nm,1.3s						
SIV	**San Ignacio**	**22.68**	**32**	P	**P**	**02 24 51.8**	**+1.0**
	comp=Z,5.1nm,0.9s,baz=219,slow=13,SNR=17						
SIV				LR	LR	02 34 39.0	
	comp=Z,107nm,19.4s,baz=275,slow=39						
SIV	**San Ignacio**	**22.68**	**32**	P	**P**	**02 24 51.8**	**+1.0**
PTLB	**Pontes e Lacer**	**24.04**	**36**	P	**P**	**02 25 03.2**	**-1.1**
VILB	**Vilhena**	**25.77**	**31**	P	**P**	**02 25 21.1**	**+1.0**
VNA3	**Neumayer Olymp**	**48.05**	**157**	P	**P**	**02 28 28.9**	**+0.7**
VNA1	**Neumayer--Stat**	**48.39**	**156**	P	**P**	**02 28 31.9**	**+1.1**
VNA2	**Neumayer--Watz**	**48.72**	**156**	P	**P**	**02 28 34.0**	**+0.7**
	baz=291,slow=9.0						
SNAA	**Sanae**	**50.27**	**157**	P	**P**	**02 28 45.9**	**+0.7**
SNAA	**Sanae**	**50.27**	**157**	P	**P**	**02 28 45.0**	**-0.2**
TXAR	**Lajitas Array**	**70.85**	**332**	P	**P**	**02 31 08.8**	**+2.7**
	comp=Z,0.5nm,0.5s,baz=153,slow=8.4,SNR=11						
TXAR	**Lajitas Array**	**70.85**	**332**	P	**P**	**02 31 07.0**	**+0.9**
BOSA	**Boshof**	**80.19**	**118**	P	**P**	**02 32 00.2**	**+0.1**
	comp=Z,2.9nm,0.9s,baz=207,slow=5.5,SNR=4.5						
BOSA	**Boshof**	**80.19**	**118**	P	**P**	**02 31 58.1**	**-2.0**
BOSA				IAmb	IAmb	02 32 16.8	
	comp=Z,6.1nm,1.2s						
TORD	**Torodi Ar. Bea**	**85.92**	**71**	P	**P**	**02 32 30.1**	**+0.5**
	comp=Z,1.0nm,1.1s,baz=224,slow=6.0,SNR=3.8						
TORD	**Torodi Ar. Bea**	**85.92**	**71**	P	**P**	**02 32 29.6**	**0.0**
TORD				IAmb	IAmb	02 32 41.0	
	comp=Z,3.4nm,1.4s						

IDC 10 02:20:21.8±3.8**, 8°.01S**×**116°.02E, h0**^{km}**, mb3.0**/3**, mb1 3.3**/3**, mb1mx3.2**/30**, mbtmp3.1**/3**, Error ellipse: s-maj=284.0km s-min=28.8km az=50.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.34**	**126**	P	P	02 25 11.1	+0.3
	0.3nm,0.6s,baz=302,slow=12,SNR=5.0						
ASAR	**Alice Springs**	**23.16**	**134**	P	P	02 25 29.8	-0.3
	0.3nm,0.4s,baz=310,slow=8.9,SNR=5.7						
MKAR	**Makanchi Array**	**62.27**	**334**	P	P	02 30 45.7	0.0
	0.1nm,0.5s,baz=132,slow=6.0,SNR=1.4						

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*IDC **10** 02:33:18.8±1.5, 4°.22S×129°.36E, h0^{km}, mb4.0/1, mb1 4.1/4, mb1mx3.7/34, mbtmp4.0/4, ML3.7/3, Error ellipse: s-maj=53.1km s-min=25.8km az=79.0*

*DJA **10** 02:33:21.2±0.4, 4°S±4°×12°9E±°, h10^{km}, M4.3/9, mb5.1/1, MLv3.9/9*

ISC 10 02:33:23.2±1.0**, 4°.20S**±0°.06×**129°.42E**±0°.06**, h36**^{km}**, n11, σ1^{s}.18**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.98**	**330**	P	**Pn**	**02 33 40.0**	**-0.4**
MSAI				S	**Sn**	**02 33 53.0**	**-0.1**
AAI	**Ambon**	**1.32**	**293**	P	**Pn**	**02 33 45.5**	**+0.3**
FAKI	**Fak Fak**	**3.10**	**66**	P	**Pn**	**02 34 10.2**	**+0.6**
SIJI	**Sorong**	**3.79**	**29**	Pn	**Pn**	**02 34 19.5**	**+0.4**
	11nm,0.3s,baz=211,slow=22,SNR=18						
SIJI				Sn	**Sn**	**02 35 00.5**	**-2.0**
	8.6nm,0.3s,baz=215,slow=22,SNR=8.0						
SWI	**Sorong**	**3.79**	**29**	P	**Pn**	**02 34 20.3**	**+1.2**
LBMI	**Labuha**	**4.02**	**332**	P	**Pn**	**02 34 22.8**	**+0.5**
SANI	**Sanana**	**4.04**	**302**	P	**Pn**	**02 34 22.7**	**+0.2**
SAUI	**Saumlaki**	**4.20**	**154**	P	**Pn**	**02 34 25.1**	**+0.4**
WRA	**Warramunga Arr**	**16.37**	**163**	Pn	**Pn**	**02 37 08.1**	**-2.3**
	0.1nm,0.3s,baz=347,slow=12,SNR=5.2						
ASAR	**Alice Springs**	**19.83**	**168**	P	**P**	**02 37 52.1**	**+1.1**
	0.5nm,0.3s,baz=348,slow=11,SNR=48						
MKAR	**Makanchi Array**	**65.58**	**326**	P	**P**	**02 44 04.4**	**+1.0**
	1.2nm,0.6s,baz=122,slow=7.5,SNR=15						

IDC 10 02:38:09.0±31.0**, 16°.19S**×**175°.73W, h0**^{km}**, mb4.2**/4**, mb1 4.3**/4**, mb1mx3.8**/44**, mbtmp4.2**/4**, Error ellipse: s-maj=607.5km s-min=146.6km az=83.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.70**	**240**	P	P	02 46 00.1	+0.4
	1.5nm,0.5s,baz=84,slow=8.0,SNR=9.0						
WRA	**Warramunga Arr**	**47.48**	**258**	P	P	02 46 45.8	-0.4
	0.7nm,0.4s,baz=95,slow=7.2,SNR=42						
ASAR	**Alice Springs**	**47.74**	**253**	P	P	02 46 47.8	-0.4
	6.6nm,0.4s,baz=88,slow=8.5,SNR=119						
FITZ	**Fitzroy Crossi**	**55.86**	**259**	P	P	02 47 48.7	-0.1
	0.4nm,0.4s,baz=86,slow=13,SNR=1.1						

IDC 10 02:43:58.0±1.6**, 4°.21S**×**129°.32E, h0**^{km}**, mb3.7**/1**, mb1 3.8**/4**, mb1mx3.5**/34**, mbtmp3.7**/4**, ML3.6**/2**, Error ellipse: s-maj=56.2km s-min=26.4km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.85**	**30**	Pn	Pn	02 44 58.6	+0.2
	5.6nm,0.3s,baz=261,slow=23,SNR=21						
SIJI				Sn	Sn	02 45 40.2	-4.2
	5.4nm,0.3s,baz=233,slow=23,SNR=8.1						
WRA	**Warramunga Arr**	**16.38**	**163**	Pn	Pn	02 47 47.4	-2.1
	baz=346,slow=12,SNR=2.9						
ASAR	**Alice Springs**	**19.84**	**168**	P	Pn	02 48 31.6	-0.6
	0.1nm,0.3s,baz=347,slow=10,SNR=20						
MKAR	**Makanchi Array**	**65.54**	**326**	P	P	02 54 43.3	-0.1
	0.5nm,0.6s,baz=122,slow=8.0,SNR=6.9						

IDC **10** *02:47:33.2±0.6, 11°.41N×86°.63W, h0^{km}, mb4.3/14, mb1 4.5/15, mb1mx4.2/34, mbtmp4.3/15, ML3.6/2, MS3.9/12, Ms1 3.9/12, ms1mx3.6/43, Error ellipse: s-maj=28.9km s-min=12.7km az=49.0*

NEIC **10** *02:47:36.6±1.6, 11°.21N±0°.05×86°.79W±0°.06, h18^{km}±4^{km}, mb4.7/200, Error ellipse: s-maj=10.0km s-min=4.6km az=54.0*

INET **10** *02:47:37.3, 11°.15N×86°.91W, h15^{km}, MW4.6*

UCR **10** *02:47:38.0±2.1, 11°.13N×86°.80W, h10^{km}, MW4.9, mb4.7(NEIC)*

ISC 10 02:47:37.2±1.3**, 11°.26N**±0°.05×**86°.78W**±0°.06**, h28^{km}**±9^{km}**, n350, σ1^{s}.13**/303**, mb4.7**/106**, MS4.0**/11**, 1C-9D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	Horizontes, Gu	1.28	115		Pb	02 47 59.9	-0.8
HZTE				Sn	Sb	02 48 16.4	-0.4
LAPC	Finca la Perla	1.41	110	⇑*i*P	Pb	02 48 01.5	-1.3
GB1A	Borinquen Arri	1.42	108	⇓*i*P	Pb	02 48 02.4	-0.7
CRIN	San Cristobal	1.46	349	Pn	Pb	02 48 03.0	-0.8
CRIN				Sn	Sb	02 48 22.2	+0.3
BUAI	Buenos Aires	1.47	105	*i* P	Pb	02 48 03.2	-0.6
BOAB	BOACO BROADBAN	.60	42		Pb	02 48 05.7	-0.5
CUI	Cuipilapa	1.69	111	*i* P	Pb	02 48 06.2	-1.5
CUI				*i* S	Sb	02 48 30.8	+2.2
ACON	Acoyapa	1.72	66		Pb	02 48 06.8	-1.3
DUNO	Dulce Nombre,	1.72	133		Pn	02 48 04.2	-1.1
MATN	Matagalpa	1.86	27		Pn	02 48 08.3	+1.1
JTS	Las Juntas de	2.03	118	Pn	Pn	02 48 09.9	+0.2
CAO2	Cobano, Puntar	2.27	133		Pn	02 48 14.5	+1.7
COVE	Coope Vega, Sa	2.39	103	*e*P	Pb	02 48 18.4	-1.2
COVE	Coope Vega, Sa	2.39	103		Pn	02 48 15.9	+1.4
ESPN	Las Esperanzas	2.60	69		Pn	02 48 19.7	+2.4
JACO	JACO, Garabito	2.62	127	Pn	Pn	02 48 19.2	+1.5
TGUH	Tegucigalpa,Un	2.82	350		Pn	02 48 22.6	+2.0
HDC	Heredia	2.90	115		Pn	02 48 21.5	-0.2
EDPN	Palmar Norte	3.99	125	*e*P	Pn	02 48 37.9	+1.5
MTO3	Montecristo	4.01	321		Pn	02 48 40.4	+3.4
EDBA	Buenos Aires	4.03	121	*e*P	Pn	02 48 39.3	+2.2
ESQI	Esquipulas	4.12	323		Pn	02 48 40.8	+2.3
CDITO	Canoas	4.68	124		Pn	02 48 47.1	+1.0
BRU2	Volcan	4.71	121		Pn	02 48 47.7	+1.1
APG	El Apazote	5.17	316	Pn	Pn	02 48 52.9	-0.1
	1.0nm,0.3s,baz=144,slow=16,SNR=7.8						
PETF	Flores	6.37	332		Pn	02 49 10.8	+1.5
CCIG	Comitan	7.21	314		Pn	02 49 22.7	+1.7
CMIG	Matias Romero	9.77	307	Pn	Pn	02 49 56.3	+0.5
	1.3nm,0.3s,baz=128,slow=10,SNR=12						
SJCC	San Jacinto, C	11.48	96	Pn	Pn	02 50 20.4	+1.0
SOR	Soroa	12.02	17		Pn	02 50 27.6	+0.9
TLIG	Tlapa	13.02	300	Pn	Pn	02 50 42.6	+2.0
ROSC	El Rosal	13.88	116	Pn	Pn	02 50 55.4	+2.9
	1.2nm,0.3s,baz=60,slow=20,SNR=1.7						
ROSC				LR	LR	02 56 12.1	
	comp=Z,410nm,19.7s,baz=320,slow=38						
ROSC	El Rosal	13.88	116		P	02 51 00.1	-0.4
SDV	Santo Domingo	16.07	97		Pn	02 51 21.3	-0.2
BAUV	El Baul	18.59	95	P	Pn	02 51 52.9	+0.2
ZAIG	Zacatecas	18.93	309	P	Pn	02 51 56.9	-0.2
BRAL	Brewton	19.81	359	P	Pn	02 52 07.2	-0.1
	baz=179						
ATAH	Atahualpa	20.09	155	LR	LR	02 58 58.7	
	comp=Z,525nm,19.5s,baz=330,slow=34						
352A	Blakely	20.19	5	P	P	02 52 09.1	-0.6
352A				IAmb	IAmb	02 52 28.3	
	comp=Z,45nm,1.2s						
441A	DeRidder	20.29	344	P	P	02 52 10.8	+0.1
TIGA	Tifton	20.30	8	P	Pn	02 52 12.4	-0.6
TIGA	Tifton	20.30	8	P	Pn	02 52 12.9	-0.1
	baz=189,SNR=9.7						
HKT	Hockley	20.42	337		P	02 52 12.7	+0.6
HKT				IAmb	IAmb	02 52 22.1	
	comp=Z,80nm,1.5s						
344A	Westbrook Farm	20.43	350	P	P	02 52 13.0	+0.7
344A				IAmb	IAmb	02 52 18.4	
	comp=Z,40nm,0.9s						
250A	Grady	20.62	1	P	P	02 52 13.8	-0.6
250A				IAmb	IAmb	02 52 17.6	
	comp=Z,46nm,1.2s						
833A	Chaparral WMA,	20.68	327	P	P	02 52 15.3	+0.2
	baz=143						
VBMS	Vicksburg	21.14	351	P	P	02 52 20.6	+0.6
VBMS				IAmb	IAmb	02 52 24.4	
	comp=Z,32nm,0.8s						
VBMS	Vicksburg	21.14	351	P	P	02 52 20.1	+0.1
	baz=170						
146A	Union	21.38	355	P	P	02 52 22.8	+0.3
146A				IAmb	IAmb	02 52 26.9	
	comp=Z,58nm,1.1s						
152A	Waverly Hall	21.39	5	P	P	02 52 23.2	+0.5
152A				IAmb	IAmb	02 52 28.0	
	comp=Z,49nm,0.9s						
154A	Montrose	21.52	8	P	P	02 52 25.0	+0.9
154A				IAmb	IAmb	02 52 42.0	
	comp=Z,31nm,0.9s						
NATX	Nacogdoches	21.66	342	P	P	02 52 26.2	+0.6
NATX				IAmb	IAmb	02 52 29.3	
	comp=Z,41nm,0.9s						
NATX	Nacogdoches	21.66	342	P	P	02 52 25.4	-0.2
	baz=159						
PCRV	Puerto La Cruz	21.78	91	P	P	02 52 27.7	+0.6
	comp=Z,15nm,0.8s,baz=229,slow=4.3,SNR=7.8						
PLCV	Puerto La Cruz	21.83	91	P	P	02 52 27.7	+0.1
435B	Jarrell	21.86	334	P	P	02 52 27.7	0.0
435B				IAmb	IAmb	02 52 33.3	
	comp=Z,19nm,0.8s						
435B	Jarrell	21.86	334	P	P	02 52 27.9	+0.1
	baz=151						
Z47A	Carrollton	21.87	357	P	P	02 52 28.7	+0.9
Z51A	Franklin	22.00	4	P	P	02 52 29.1	-0.1
Z51A				IAmb	IAmb	02 52 33.1	
	comp=Z,24nm,0.8s						
GOGA	Godfrey	22.26	7	P	P	02 52 32.8	+0.8
GOGA				IAmb	IAmb	02 52 35.3	
	comp=Z,17nm,0.8s						
GOGA	Godfrey	22.26	7	P	P	02 52 32.3	+0.3
	baz=189,SNR=10						
237A	Washetta, Mont	22.26	339	P	P	02 52 33.0	+1.0
237A				IAmb	IAmb	02 52 40.1	
	comp=Z,39nm,0.8s						
Y49A	Blount Mountai	22.50	1	P	P	02 52 35.0	+0.4
Y49A				IAmb	IAmb	02 52 37.2	
	comp=Z,25nm,1.1s						
NHSC	New Hope	22.57	15	P	P	02 52 37.0	+1.7
	baz=197						
Z41A	Richland Creek	22.58	347	P	P	02 52 35.3	-0.2
	baz=165						
JCT	Junction City	22.63	330	P	P	02 52 36.3	+0.3
JCT	Junction City	22.63	330	P	P	02 52 35.6	-0.4
	baz=145						
Y52A	Lilburn	22.64	6	P	P	02 52 36.8	+0.8
Y52A				IAmb	IAmb	02 52 40.5	
	comp=Z,17nm,0.8s						
Y45A	Yeager Farm, C	22.64	354	P	P	02 52 36.9	+0.8
Y45A				IAmb	IAmb	02 52 39.0	
	comp=Z,53nm,1.1s						
WHTX	Lake Whitney,	22.86	336	P	P	02 52 37.6	-0.9
	baz=152						
X48A	Hartselle	23.09	359	P	P	02 52 40.6	-0.1
Z38A	Mt. Pleasant	23.16	342	P	P	02 52 41.4	0.0
FPAL	Fort Paine	23.20	2	P	P	02 52 42.5	+0.6
HODGE	Hodges	23.23	10	P	P	02 52 43.0	+0.9
X51A	Calhoun	23.27	4	P	P	02 52 42.1	-0.4
X51A				IAmb	IAmb	02 52 44.8	
	comp=Z,29nm,0.8s						
JSC	Jenkinsville	23.46	12	P	P	02 52 44.9	+0.4
CZSB	Cruzeiro do Su	23.49	143	*e*P	P	02 52 46.9	+2.0
CZSB	Cruzeiro do Su	23.49	143	P	P	02 52 44.4	-0.5
PLAL	Pickwick Lake	23.64	357	P	P	02 52 46.0	-0.2
PLAL				IAmb	IAmb	02 52 47.3	
	comp=Z,16nm,0.8s						
X40A	Basin Creek Fa	23.77	348	P	P	02 52 47.2	-0.3
X40A				IAmb	IAmb	02 52 48.1	
	comp=Z,29nm,1.4s						
X40A	Basin Creek Fa	23.77	348	P	P	02 52 46.3	-1.1
	baz=165,SNR=8.0						
SWET	Sewanee	23.86	2	P	P	02 52 48.3	0.0
SWET				IAmb	IAmb	02 52 50.0	
	comp=Z,22nm,1.0s						
W52A	Murphy	23.87	6	P	P	02 52 48.8	+0.5
W52A				IAmb	IAmb	02 52 50.2	
	comp=Z,13nm,0.6s						
W50A	Signal Mountai	23.87	3	P	P	02 52 48.8	+0.5
W50A				IAmb	IAmb	02 52 50.4	
	comp=Z,17nm,0.7s						
BG3	Lake Jocassee	23.88	8	P	P	02 52 49.3	+0.8
PAULI	Pauline	23.89	10	P	P	02 52 49.4	+0.9
W45A	Hickory Valley	23.89	355	P	P	02 52 47.9	-0.7
W45A				IAmb	IAmb	02 52 49.1	
	comp=Z,32nm,0.9s						
TX31	Lajitas Ar. Si	23.91	321	P	P	02 52 49.1	+0.2
TX31				IAmb	IAmb	02 53 01.7	
	comp=Z,29nm,0.8s						
TX32	Lajitas Array	23.91	321	P	P	02 52 48.8	-0.1
TXAR	Lajitas Array	23.91	321	P	P	02 52 49.0	+0.1
	comp=Z,7.9nm,0.8s,baz=136,slow=10,SNR=74						
TXAR				PcP	PcP	02 56 32.9	+1.6
	comp=Z,2.9nm,0.9s,baz=143,slow=4.8,SNR=12						
TXAR				ScP	ScP	03 00 13.8	+5.9
	comp=Z,0.2nm,0.6s,baz=137,slow=4.4,SNR=4.2						
TXAR	Lajitas Array	23.91	321	P	P	02 52 48.9	+0.1
Z35A	Perchaven, San	23.98	338	P	P	02 52 49.7	+0.3
Z35A				IAmb	IAmb	02 52 51.5	
	comp=Z,22nm,0.7s						
MIAR	Mount Ida	24.00	346	P	P	02 52 49.4	-0.1
MIAR				IAmb	IAmb	02 52 58.3	
	comp=Z,32nm,1.3s						
MIAR	Mount Ida	24.00	346	P	P	02 52 48.6	-0.9
	baz=164,SNR=16						
CPCT	Cooper Cave	24.17	4	P	P	02 52 51.7	+0.6
CPCT				IAmb	IAmb	02 52 54.0	
	comp=Z,25nm,0.9s						
KMSC	Kings Mountain	24.28	11	P	P	02 52 52.3	+0.1
KMSC				IAmb	IAmb	02 52 54.1	
	comp=Z,15nm,1.0s						
KMSC	Kings Mountain	24.28	11	P	P	02 52 52.6	+0.4
	baz=193,SNR=5.1						
W41B	Gary Mavity, V	24.32	349	P	P	02 52 51.6	-0.9
	baz=167,SNR=6.5						
ABTX	Abilene, Hawle	24.34	333	P	P	02 52 51.6	-1.1
ABTX				IAmb	IAmb	02 53 07.0	
	comp=Z,13nm,0.7s						
ABTX	Abilene, Hawle	24.34	333	P	P	02 52 51.9	-0.8
	baz=148						
V48A	Smith Brothers	24.37	360	P	P	02 52 52.3	-0.7
V48A				IAmb	IAmb	02 52 54.6	
	comp=Z,13nm,0.8s						
TKL	Tuckaleechee C	24.44	6	P	P	02 52 53.9	+0.3
	comp=Z,13nm,0.9s,baz=180,slow=12,SNR=14						
TKL	Tuckaleechee C	24.44	6	P	P	02 52 52.9	-0.8
TKL				IAmb	IAmb	02 52 56.7	
	comp=Z,19nm,1.0s						
WHAR	Wooly Hollow	24.44	349	P	P	02 52 52.5	-1.1
WHAR				IAmb	IAmb	02 52 54.9	
	comp=Z,18nm,1.0s						
HBAR	Harrisburg	24.44	352	P	P	02 52 52.9	-0.7
HBAR				IAmb	IAmb	02 52 53.4	
	comp=Z,24nm,0.8s						
H06E1	SOCORRO T-PHAS	24.47	291	T	T	03 18 06.0	
	SNR=31						
X37A	Clayton	24.51	343		P	02 52 53.5	-0.7
V51A	Loudon	24.53	5	P	P	02 52 54.9	+0.4
V51A				IAmb	IAmb	02 53 04.5	
	comp=Z,16nm,0.8s						
LOOK	Love County	24.55	339		P	02 52 55.0	+0.4
LOOK				IAmb	IAmb	02 52 58.1	
	comp=Z,28nm,0.8s						
V53A	Saluda	24.57	8	P	P	02 52 55.0	+0.2
V53A				IAmb	IAmb	02 52 58.2	
	comp=Z,14nm,0.8s						
W39A	Magazine	24.67	346	P	P	02 52 54.8	-0.8
W39A				IAmb	IAmb	02 52 56.5	
	comp=Z,14nm,0.9s						
W39A	Magazine	24.67	346	P	P	02 52 54.8	-0.8
	baz=164,SNR=6.8						
CLTN	Cedars of Leba	24.73	1	P	P	02 52 56.3	+0.1
CLTN				IAmb	IAmb	02 52 58.7	
	comp=Z,21nm,0.8s						
WVT	Waverly	24.78	358	P	P	02 52 55.5	-1.1
WVT	Waverly	24.78	358	P	P	02 52 55.5	-1.1
	baz=178						
FCAR	Ozark Folk Cen	25.00	350	P	P	02 52 57.4	-1.2
FCAR				IAmb	IAmb	02 52 58.4	
	comp=Z,13nm,0.9s						
V55A	Taylorsville	25.00	11	P	P	02 52 58.9	+0.3
LCAR	Lake Charles	25.02	352	P	P	02 52 57.6	-1.2
LCAR				IAmb	IAmb	02 52 58.6	
	comp=Z,14nm,0.9s						
U49A	Red Boiling Sp	25.16	2	P	P	02 53 00.1	0.0
U49A				IAmb	IAmb	02 53 03.1	
	comp=Z,42nm,1.4s						
X34A	Smith Ranch, M	25.33	338	P	P	02 53 02.0	+0.3
TZTN	Tazewell	25.34	6	P	P	02 53 01.7	0.0
	baz=187						
V58A	Windy Hill, Pi	25.39	15	P	P	02 53 02.2	0.0
V58A				IAmb	IAmb	02 53 13.2	
	comp=Z,16nm,0.7s						
U54A	Nelsons Funny	25.55	9	P	P	02 53 03.5	-0.2
U54A				IAmb	IAmb	02 53 08.3	
	comp=Z,18nm,0.9s						
U40A	Yellville	25.58	349	P	P	02 53 02.4	-1.5
U40A				IAmb	IAmb	02 53 04.2	
	comp=Z,20nm,0.8s						
U40A	Yellville	25.58	349	P	P	02 53 01.9	-2.0
	baz=166,SNR=16						
T47A	Sharon Grove	25.62	359	P	P	02 53 03.7	-0.6
T47A				IAmb	IAmb	02 53 04.7	
	comp=Z,18nm,0.8s						
PBMO	Poplar Bluff	25.62	353	P	P	02 53 02.9	-1.3
PBMO				IAmb	IAmb	02 53 04.3	
	comp=Z,18nm,1.1s						
U56A	King	25.64	12	P	P	02 53 03.5	-1.0
U56A				IAmb	IAmb	02 53 09.5	
	comp=Z,20nm,1.1s						
T50A	Nancy	25.71	4	P	P	02 53 04.5	-0.6
HHAR	Hobbs	25.74	347	P	P	02 53 04.4	-1.0
HHAR					PcP	02 56 34.5	-0.5
LPIG	La Paz	25.75	303	LR	LR	03 03 48.4	
	comp=Z,146nm,19.6s,baz=151,slow=38						
FNO	Franklin	25.77	340		P	02 53 04.0	-1.6
TUL1	Leonard	25.86	343		P	02 53 05.8	-0.7
TUL1				IAmb	IAmb	02 53 06.4	
	comp=Z,18nm,0.8s						
TUL1	Leonard	25.86	343	P	P	02 53 05.5	-1.0
	baz=160						
U38A	Gravette	26.00	346	IAmb	IAmb	02 53 07.6	
	comp=Z,17nm,1.1s						
OK029	Liberty Lake	26.28	340	IAmb	IAmb	02 53 13.0	
	comp=Z,17nm,0.9s						
S44A	Carbondale	26.41	356	IAmb	IAmb	02 53 11.7	
	comp=Z,19nm,0.9s						
SIUC	Southern Illin	26.43	356	IAmb	IAmb	02 53 11.8	
	comp=Z,18nm,0.9s						
BLA	Blacksburg	26.46	11	IAmb	IAmb	02 53 14.0	
	comp=Z,18nm,1.1s						
BLA	Blacksburg	26.46	11	P	P	02 53 12.2	+0.2
	baz=194						
T57A	Hurt	26.51	14	IAmb	IAmb	02 53 14.0	
	comp=Z,16nm,1.1s						
MNTX	Cornudas Mount	26.63	323	P	P	02 53 13.9	+0.4
	baz=136						
WCI	Wyandotte Cave	26.86	1	P	P	02 53 14.8	-0.7
WCI				IAmb	IAmb	02 53 16.0	
	comp=Z,17nm,1.1s						
WCI	Wyandotte Cave	26.86	1	P	P	02 53 14.6	-0.9
	baz=181						
MSTX	Muleshoe	26.92	330	IAmb	IAmb	02 53 27.1	
	comp=Z,12nm,0.8s						
MSTX	Muleshoe	26.92	330	P	P	02 53 15.2	-1.1
	baz=144						
R49A	Shelbyville	26.96	3	IAmb	IAmb	02 53 17.1	
	comp=Z,16nm,0.9s						
S39A	Bolivar	26.97	348	IAmb	IAmb	02 53 16.3	
	comp=Z,20nm,0.8s						
CCM	Cathedral Cave	26.98	352	P	P	02 53 14.8	-1.8
	baz=170						
R50A	Paris	27.00	4	IAmb	IAmb	02 53 17.8	
	comp=Z,17nm,1.1s						
AMTX	Amarillo	27.15	332	IAmb	IAmb	02 53 33.0	
	comp=Z,17nm,1.1s						
R55A	Marlinton	27.56	11	IAmb	IAmb	02 53 23.8	
	comp=Z,18nm,0.9s						
Q52A	Bidwell	27.88	8	IAmb	IAmb	02 53 25.9	
	comp=Z,26nm,1.0s						
P48A	Milroy	28.11	2	IAmb	IAmb	02 53 26.8	
	comp=Z,21nm,0.8s						
Q54A	Coxs Mills	28.11	10	IAmb	IAmb	02 53 28.1	
	comp=Z,16nm,0.8s						
P49A	Miami Univ. Ec	28.22	3	IAmb	IAmb	02 53 28.2	
	comp=Z,15nm,0.8s						
P49A	Miami Univ. Ec	28.22	3	P	P	02 53 26.4	-1.2
	baz=184,SNR=5.8						
P51A	Williamsport	28.30	6	IAmb	IAmb	02 53 29.2	
	comp=Z,12nm,0.9s						
P52A	Corning	28.56	8	P	P	02 53 30.2	-0.4
	baz=190,SNR=8.2						
121A	Cookes Peak, D	28.67	321	P	P	02 53 32.3	+0.4
	baz=133						
P38A	Dawn	28.88	349	IAmb	IAmb	02 53 33.0	
	comp=Z,16nm,0.7s						
O49A	Covington	28.89	4	IAmb	IAmb	02 53 34.1	
	comp=Z,24nm,1.1s						
MCWV	Mont Chateau	28.94	11	P	P	02 53 33.7	-0.4
	baz=194						
SFIN	Lafayette	29.00	359	IAmb	IAmb	02 53 33.9	
	comp=Z,16nm,0.9s						
SFIN	Lafayette	29.00	359	P	P	02 53 33.1	-1.5
	baz=179,SNR=5.5						
ACSO	Alum Creek Sta	29.05	6	P	P	02 53 34.0	-1.0
	baz=188						
KSU1	Kansas State U	29.08	344	P	P	02 53 33.9	-1.4
	baz=160						
R32A	Long Quarter,	29.08	340	IAmb	IAmb	02 53 35.9	
	comp=Z,7.3nm,0.7s						
P57A	Homestead Farm	29.17	14	IAmb	IAmb	02 53 38.3	
	comp=Z,14nm,0.8s						
PTGA	Pitinga	29.19	112	P	P	02 53 37.3	+0.7
	comp=Z,1.4nm,0.3s,baz=318,slow=7.9,SNR=6.8						
PTGA				LR	LR	03 07 22.3	
	comp=Z,179nm,19.9s,baz=290,slow=41						
HDIL	Hopedale	29.26	356	P	P	02 53 35.7	-1.2
	baz=175,SNR=5.1						
ETMB	Extrema	29.27	135	*e*P	P	02 53 38.1	+1.0
ETMB	Extrema	29.27	135	P	P	02 53 37.4	+0.2
ETMB				IAmb	IAmb	02 53 42.4	
	comp=Z,9.5nm,0.7s						
O53A	New Philadelph	29.29	9	P	P	02 53 36.9	-0.3
	baz=191,SNR=7.0						
Q61A	Milford	29.34	18	P	P	02 53 38.8	+1.2
	baz=203						
N47A	Urbana	29.52	2	IAmb	IAmb	02 53 39.2	
	comp=Z,12nm,0.9s						
ANMO	Albuquerque	29.61	326	P	P	02 53 41.3	+1.1
	comp=Z,2.4nm,0.9s,baz=149,slow=9.0,SNR=9.3						
ANMO				PcP	PcP	02 56 46.1	+1.4
	comp=Z,0.7nm,0.6s,baz=173,slow=6.0,SNR=5.4						
ANMO	Albuquerque	29.61	326	P	P	02 53 40.6	+0.4
ANMO	Albuquerque	29.61	326	P	P	02 53 40.9	+0.6
	baz=138						
MACA	Manacapuru-AM	29.65	117	*e*P	P	02 53 40.7	+0.1
MACA	Manacapuru-AM	29.65	117	P	P	02 53 40.2	-0.5
O56A	Blue Knob Stat	29.79	13	P	P	02 53 42.1	+0.4
	baz=196						
N54A	Moraine State	30.18	10	P	P	02 53 44.9	-0.2
	baz=193						
T25A	Trinidad	30.26	331	P	P	02 53 46.5	+0.4
	baz=144						
SSPA	Standing Stone	30.29	13	P	P	02 53 46.5	+0.4
SSPA				IAmb	IAmb	02 53 47.5	
	comp=Z,14nm,0.8s						
SSPA	Standing Stone	30.29	13	P	P	02 53 46.2	+0.2
	baz=197						
M53A	WI Miller and	30.54	9	P	P	02 53 47.3	-0.9
	baz=192,SNR=5.4						
N58A	Sunbury	30.77	15	IAmb	IAmb	02 53 51.8	
	comp=Z,13nm,0.8s						
M54A	Oil Creek Stat	30.77	10	P	P	02 53 50.4	+0.1
	baz=194						
N59A	State Game Lan	31.09	16	P	P	02 53 53.5	+0.4
	baz=201,SNR=5.9						
SDCO	Great Sand Dun	31.27	331	P	P	02 53 54.7	-0.4
	baz=143,SNR=9.5						
ERPA	Erie	31.31	10	P	P	02 53 54.8	-0.2
	baz=193						
W18A	Petrified Fore	31.61	322	IAmb	IAmb	02 54 02.4	
	comp=Z,9.4nm,0.9s						
W18A	Petrified Fore	31.61	322	P	P	02 53 58.7	+0.7
	baz=133						
214A	Organ Pipe Nat	31.63	315	P	P	02 53 59.5	+1.5
	baz=125						
BGNE	Belgrade	31.65	344	P	P	02 53 56.7	-1.3
	baz=158						
JFWS	Jewell Farm	31.68	355	P	P	02 53 56.7	-1.6
	baz=174,SNR=5.6						
L56A	Greenwood	31.80	13	IAmb	IAmb	02 54 00.5	
	comp=Z,16nm,1.1s						
S22A	4UR Ranch, Cre	31.92	329	P	P	02 54 00.6	-0.2
	baz=141						
X16A	Lo Mia Camp, P	32.20	320	P	P	02 54 02.5	-0.7
BINY	Binghamton	32.23	15	P	P	02 54 03.4	+0.2
	baz=200						
MVCO	Mesa Verde	32.39	327	P	P	02 54 04.9	0.0
	baz=138						
WUAZ	Wupatki	32.87	321	IAmb	IAmb	02 54 13.4	
	comp=Z,11nm,1.3s						
WUAZ	Wupatki	32.87	321	P	P	02 54 11.0	+2.0
	baz=131						
ISCO	Idaho Springs	32.97	333	P	P	02 54 10.6	+0.6
	baz=145						
LPAZ	La Paz	33.01	146	LR	LR	03 07 59.8	
	comp=Z,196nm,18.0s,baz=326,slow=37						
LPAZ	La Paz	33.01	146	*e*P	P	02 54 10.5	-0.3
L61B	Northampton	33.42	19	P	P	02 54 13.2	-0.2
	baz=206						
ECSD	EROS Data Cent	33.46	347	IAmb	IAmb	02 54 13.0	
	comp=Z,14nm,0.9s						
ECSD	EROS Data Cent	33.46	347	P	P	02 54 11.7	-2.1
	baz=162,SNR=14						
GLMI	Grayling	33.50	3	P	P	02 54 12.4	-1.7
	baz=184						
GLA	Glamis	33.65	315	P	P	02 54 16.4	+0.7
	baz=124						
PDMCI	Parker Dam,Lak	33.90	317	P	P	02 54 18.9	+1.2
	baz=126						
N23A	Red Feather La	34.01	334	P	P	02 54 17.3	-1.6
	baz=145						
G40A	Rib Lake	34.02	356	IAmb	IAmb	02 54 17.9	
	comp=Z,11nm,0.8s						
SPMN	Marine on St.	34.24	352	P	P	02 54 18.2	-2.3
	baz=170,SNR=9.7						
SWSC	Sam W. Stewart	34.28	314	P	P	02 54 23.0	+1.9
	baz=122						
IKP	In-Ko-Pah, Jac	34.35	313	P	P	02 54 24.2	+2.4
	baz=122						
BC3	Big Chuckawall	34.42	315	P	P	02 54 24.4	+1.9
	baz=124						
O20A	White River Ci	34.46	330	IAmb	IAmb	02 54 30.0	
	comp=Z,7.1nm,0.8s						
O20A	White River Ci	34.46	330	P	P	02 54 23.9	+1.0
	baz=141						
IRM	Iron Mountain	34.49	316	P	P	02 54 24.4	+1.4
	baz=125						
ITTB	Itaituba	34.57	115	*e*P	P	02 54 23.2	-0.6
TKX	Tecate	34.66	312	P	P	02 54 24.5	0.0
SUSD	Miller	34.69	345	P	P	02 54 23.0	-1.5
	baz=159						
PKCU	Pink Cliffs	34.72	323	IAmb	IAmb	02 54 39.2	
	comp=Z,12nm,0.9s						
KNB	Kanab	34.74	322	IAmb	IAmb	02 54 38.9	
	comp=Z,14nm,1.5s						
MALB	Monte Alegre	34.85	110	*e*P	P	02 54 26.1	-0.2
LONY	Lake Ozonia	34.86	15	P	P	02 54 25.5	-0.4
	baz=201						
SRU	San Rafael Swe	34.87	327	IAmb	IAmb	02 54 32.6	
	comp=Z,6.5nm,0.7s						
F36A	Milaca	34.96	352	IAmb	IAmb	02 54 25.7	
	comp=Z,13nm,0.8s						
BELC	Belle Mtn. Jos	34.99	315	P	P	02 54 29.0	+1.6
	baz=124						
MTPU	Mount Pierson	35.05	324	IAmb	IAmb	02 54 42.7	
	comp=Z,8.7nm,1.2s						
TPFO	Pinon Flats	35.10	314	P	P	02 54 30.6	+2.3
	baz=122						
GMRC	Granite Mounta	35.20	316	P	P	02 54 30.3	+1.1
	baz=125						
P17A	Butcher Ranch,	35.24	327	IAmb	IAmb	02 54 31.6	
	comp=Z,7.8nm,0.8s						
TCRU	Three Creeks R	35.58	324	IAmb	IAmb	02 54 44.3	
	comp=Z,7.9nm,0.5s						
MURC	Murrieta	35.62	313	P	P	02 54 34.9	+2.2
	baz=122						
HEC	Hector,Ludlow	35.68	316	P	P	02 54 36.0	+2.7
	baz=124						
VILB	Vilhena	35.70	132	*e*P	P	02 54 34.6	+1.1
VILB	Vilhena	35.70	132	IAmb	IAmb	02 54 39.8	

	comp=Z,13nm,0.8s						
BBRC	Big Bear Solar	35.77	315	P	P	02 54 36.3	+2.1
	baz=123						
MNTQ	Montreal, Queb	35.93	16	IAmb	IAmb	02 54 48.9	
	comp=Z,16nm,1.0s						
BFSC	Mount Baldy Ra	36.28	314	P	P	02 54 40.5	+2.0
	baz=122						
EYMN	Ely	36.78	355	P	P	02 54 39.8	-2.6
	baz=172						
DUG	Dugway, Tooele	36.88	326	P	P	02 54 43.6	+0.1
	baz=134						
PKME	Peaks-Kenny Pk	37.05	21	P	P	02 54 45.4	+0.8
	baz=209						
BW06	Boulder Array	37.13	332	P	P	02 54 44.7	-1.0
	baz=141						
PDAR	Pinedale Array	37.13	332	P	P	02 54 45.1	-0.6
	comp=Z,1.7nm,0.7s,baz=128,slow=10,SNR=16						
PDAR				PcP	PcP	02 57 05.8	+0.1
	comp=Z,1.1nm,0.8s,baz=180,slow=4.5,SNR=4.7						
MPMC	Manual Prospec	37.15	317	P	P	02 54 46.8	+0.9
	baz=124						
HWUT	Hardware Ranch	37.23	329	IAmb	IAmb	02 54 52.4	
	comp=Z,7.4nm,0.8s						
PDRB	Porto dos Gac	37.51	126	*e*P	P	02 54 49.0	0.0
AGMN	Agassiz Nation	37.70	350	IAmb	IAmb	02 54 49.4	
	comp=Z,22nm,1.1s						
AGMN	Agassiz Nation	37.70	350	P	P	02 54 48.0	-2.2
	baz=165,SNR=12						
CLDB	Colider	37.83	124	*e*P	P	02 54 52.1	+0.3
MDND	Maddock	38.03	346	P	P	02 54 51.6	-1.4
	baz=159,SNR=7.7						
PTLB	Pontes e Lacer	38.12	134	*e*P	P	02 54 54.5	+0.4
PTLB	Pontes e Lacer	38.12	134	P	P	02 54 53.6	-0.5
REDW	Red Top Meadow	38.19	331	IAmb	IAmb	02 55 05.4	
	comp=Z,8.6nm,0.7s						
SNOW	Snow King Moun	38.22	331	IAmb	IAmb	02 54 59.5	
	comp=Z,7.6nm,0.8s						
NVAR	Mina Array Bea	39.03	319	P	P	02 55 02.8	+1.0
	comp=Z,2.3nm,0.9s,baz=129,slow=6.8,SNR=11						
NVAR				PcP	PcP	02 57 12.8	+1.1
	comp=Z,4.2nm,0.7s,baz=135,slow=3.7,SNR=20						
NVAR	Mina Array Bea	39.03	319	P	P	02 55 02.3	+0.5
ULM	Lac du Bonnet	39.59	351	P	P	02 55 03.6	-2.4
	comp=Z,14nm,0.9s,baz=170,slow=8.9,SNR=15						
ULM	Lac du Bonnet	39.59	351	IAmb	IAmb	02 55 04.7	
	comp=Z,13nm,0.8s						
HLID	Hailey	40.09	328	P	P	02 55 10.4	-0.1
HLID	Hailey	40.09	328	P	P	02 55 10.5	-0.1
	baz=135						
BOZ	Bozeman (W)	40.26	333	P	P	02 55 11.8	-0.1
	baz=140						
TMAB	Tom-Au,PA,Br	40.78	107	*e*P	P	02 55 16.1	-0.3
SALV	Santo Antonio	40.92	131	*e*P	P	02 55 17.9	+0.4
SNDB	Serra Nova Dou	42.12	122	*e*P	P	02 55 27.1	-0.3
PP1B	Ponte de Pedra	42.60	132	*e*P	P	02 55 32.3	+1.1
ARAG	Araguaiana, MT	43.77	127	*e*P	P	02 55 40.4	-0.2
SMTB	Santa Maria do	43.80	116	*e*P	P	02 55 39.5	-1.5
AQDB	Aquidauana	43.92	136	*e*P	P	02 55 43.6	+1.8
I05D	Terrebonne, OR	44.37	324	P	P	02 55 45.1	-0.2
	baz=127						
ROSB	Rosrio	44.69	106	*e*P	P	02 55 46.5	-1.7
PEXB	Peixe	44.71	120	*e*P	P	02 55 47.3	-1.0
E07A	Sunnyside	44.96	328	P	P	02 55 50.1	+0.3
E07A				IAmb	IAmb	02 55 51.0	
	comp=Z,9.1nm,0.8s						
H03N2	Juan Fernandez	45.07	171	T	T	03 43 51.0	
	baz=349,slow=76,SNR=24						
H03N1	Juan Fernandez	45.08	171	T	T	03 43 52.3	
	baz=349,slow=76,SNR=22						
H03N3	Juan Fernandez	45.09	171	T	T	03 43 50.6	
	baz=349,slow=76,SNR=19						
SCHQ	Schefferville	46.23	16	P	P	02 55 57.8	-2.0
	comp=Z,6.9nm,0.9s,baz=214,slow=7.5,SNR=9.5						
SCHQ				LR	LR	03 15 20.9	
	comp=Z,245nm,18.0s,baz=178,slow=36						
BDFB	Brasilia	46.77	124	P	P	02 56 04.3	-0.3
	comp=Z,6.1nm,0.7s,baz=274,slow=9.9,SNR=12						
BDFB	Brasilia	46.77	124	P	P	02 56 04.3	-0.3
BDFB				IAmb	IAmb	02 56 05.8	
	comp=Z,12nm,1.0s						
EDM	Edmonton	46.95	338	IAmb	IAmb	02 56 05.7	
	comp=Z,10.0nm,0.9s						
CPUP	Villa Florida	47.07	143	P	P	02 56 06.0	-0.7
	comp=Z,1.9nm,0.8s,baz=301,slow=13,SNR=2.2						
ITRB	Iturama	47.25	130	*e*P	P	02 56 08.7	+0.5
SDBA	SAO DESIDERIO	47.76	118	*e*P	P	02 56 10.8	-1.6
PCMB	Pacaembu	47.77	133	*e*P	P	02 56 12.4	+0.1
IPMB	Ipameri, GO	47.89	127	*e*P	P	02 56 12.8	-0.5
BB19B	Bebedouro	49.44	130	*e*P	P	02 56 24.5	-0.7
JANB	Januaria	49.53	121	*e*P	P	02 56 25.1	-0.8
MC01	Montes Claros	50.66	123	*e*P	P	02 56 33.8	-0.6
ITAB	Concordia	50.93	139	*e*P	P	02 56 37.1	+0.8
RCLB	Rio Claro- Sao	50.99	131	*e*P	P	02 56 36.4	-0.5
DIAM	Diamantina, MG	51.69	124	*e*P	P	02 56 41.9	-0.4
VAO	Valinhos	51.76	131	*e*P	P	02 56 42.6	0.0
BSCB	Bom Sucesso	52.26	128	*e*P	P	02 56 45.5	-0.9
PLTB	Pedras Altas	53.29	144	*e*P	P	02 56 55.0	+1.2
CMC01	Camacan, BA	53.75	119	*e*P	P	02 56 57.3	-0.1
PLCA	Paso Flores	53.87	165	P	P	02 56 58.1	+0.2
	comp=Z,3.7nm,0.9s,baz=33,slow=7.2,SNR=3.7						
PLCA	Paso Flores	53.87	165	*e*P	P	02 56 58.8	+0.9
SJMB	Sao Joao De Ma	53.92	123	*e*P	P	02 56 58.4	-0.3
VAS01	Vassouras-RJ	54.00	128	*e*P	P	02 56 59.3	+0.2
GUA01	Guaratinga, BA	54.06	120	*e*P	P	02 56 59.2	-0.5
BSFB	Barra de Sao F	54.27	123	*e*P	P	02 57 01.6	+0.5
YKA	Yellowknife Ar	54.93	345	P	P	02 57 03.2	-2.0
	comp=Z,3.4nm,1.0s,baz=136,slow=7.8,SNR=8.4						
YKA				PcP	PcP	02 58 06.1	-0.8
	comp=Z,0.5nm,0.5s,baz=147,slow=3.6,SNR=5.9						
CAM01	Campos-RJ	55.15	127	*e*P	P	02 57 07.1	-0.3
CRAG	Craig	56.97	331	P	P	02 57 19.7	-0.2
	baz=122						
EPYK	Eagle Plains	64.40	340	P	P	02 58 09.9	-0.7
	baz=124						
INK	Inuvik	64.53	343	P	P	02 58 10.0	-1.2
	baz=128						
L27K	Beaver Creek,	64.62	336	P	P	02 58 11.0	-1.0
	baz=117						
A36M	Sachs Harbour	64.95	348	IAmb	IAmb	02 58 12.6	
	comp=Z,7.3nm,1.1s						
A36M				P	P	02 58 13.2	-0.7
A36M	Sachs Harbour	64.95	348	P	P	02 58 12.0	-1.9
	baz=138						
J26L	Joseph Creek	65.95	337	P	P	02 58 19.6	-1.1
	baz=116						
DHY	Denali Highway	66.92	334	P	P	02 58 25.4	-1.6
	baz=112						
HDA	Harding Lake	67.25	336	P	P	02 58 27.5	-1.3
	baz=113						
ILAR	Eielson Array	67.37	336	P	P	02 58 28.2	-1.3
	comp=Z,1.4nm,0.9s,baz=137,slow=4.6,SNR=14						
MCK	McKinley	67.81	335	P	P	02 58 31.8	-0.6
	baz=110						
H24K	Noodor Dome	68.16	337	P	P	02 58 34.4	-0.3
	baz=112						
NEA2	Nenana	68.17	336	P	P	02 58 33.4	-1.3
	baz=111						
BWN	Browne	68.19	335	P	P	02 58 33.7	-1.0
TRF	Thorofare Moun	68.29	334	P	P	02 58 35.2	-0.4
	baz=109						
SKT	Skwentna	68.37	333	P	P	02 58 35.8	-0.1
	baz=107						
MLY	Manley	69.00	336	P	P	02 58 39.2	-0.7
	baz=109						
COLD	Coldfoot	69.54	338	P	P	02 58 41.7	-1.5
	baz=111						
L20K	Farewell, AK	69.57	333	P	P	02 58 41.2	-2.2
	baz=105						
TOLK	Toolik Lake Re	69.83	340	P	P	02 58 44.8	-0.2
	baz=112						
H21K	Melozitna Rive	70.02	336	P	P	02 58 45.4	-0.7
	baz=108						
J20K	Nowinta River	70.14	335	P	P	02 58 45.0	-1.9
	baz=106						
TTA	Tatalina	70.63	333	P	P	02 58 48.7	-1.3
	baz=104						
KOWA	Kowa	80.33	77	LR	LR	03 33 56.3	
	comp=Z,62nm,18.0s,baz=240,slow=35						
BMRD	Maredsous	82.42	40	*d*P	P	02 59 57.9	+1.0
BMRD				*d*PcP	PcP	03 00 02.7	+0.7
BGES	Gesves	82.61	40	*d*P	P	02 59 58.8	+1.0
BCLA	Clavier	82.74	40	κP	P	02 59 59.4	+0.9
BTNL	Ternell	83.24	40	*d*P	P	03 00 00.9	-0.2
BTNL				*d*PcP	PcP	03 00 05.4	-0.2
WLF	Walferdange	83.40	41	*d*P	P	03 00 01.1	-0.9
NOA	NORSAR Array B	84.08	29	LR	LR	03 38 07.8	
	comp=Z,46nm,18.0s,baz=280,slow=36						
HFS	Hagfors	85.48	30	LR	LR	03 38 33.4	
	comp=Z,69nm,18.4s,baz=325,slow=36						
DAVOX	Davos/Dischmat	86.40	43	LR	LR	03 36 26.4	
	comp=Z,83nm,18.2s,baz=274,slow=34						
PETK	Petropavlovsk-	95.74	327	LR	LR	03 48 16.3	
	comp=Z,48nm,18.2s,baz=73,slow=38						
AKASG	Malin Array Be	97.11	35	LR	LR	03 45 47.7	
	comp=Z,41nm,18.1s,baz=345,slow=36						
SONM	Songino Array	120.01	350	PKP	PKPdf	03 06 25.0	-0.6
	comp=Z,1.4nm,0.9s,baz=162,slow=1.4,SNR=4.1						
MKAR	Makanchi Array	121.39	9	PKP	PKPdf	03 06 26.7	-1.4
	comp=Z,0.2nm,0.4s,baz=304,slow=3.8,SNR=2.4						
KSRS	Korea Array	121.63	328	PKP	PKiKP	03 06 29.1	+0.2
	comp=Z,2.9nm,0.8s,baz=14,slow=1.9,SNR=8.9						
BTO	Baotou	126.10	344	*e*PKP	PKPdf	03 06 34.1	-3.3
ASAR	Alice Springs	139.43	247	PKhKP	PKPpre	03 06 57.5	
	comp=Z,0.4nm,0.8s,baz=110,slow=3.3,SNR=3.0						
ASAR				PKP	PKPdf	03 07 02.8	0.0
	comp=Z,0.7nm,0.7s,baz=120,slow=2.6,SNR=6.1						
WRA	Warramunga Arr	139.56	252	PKP	PKPdf	03 07 01.8	-1.3
	comp=Z,0.7nm,0.7s,baz=96,slow=2.9,SNR=6.1						
CMAR	Chiang Mai Arr	149.94	349	PKP	PKPdf	03 07 21.9	+0.9
	comp=Z,4.8nm,0.7s,baz=355,slow=2.1,SNR=7.8						
CMAR				PKPbc	PKPbc	03 07 26.3	+0.4
	comp=Z,5.1nm,0.7s,baz=337,slow=3.1,SNR=5.2						
CMAR	Chiang Mai Arr	149.94	349	PKPdf	PKPdf	03 07 19.7	-1.3

IDC 10 02:51:00.1±2.8**,3°.91S**×**130°.16E,h0^{km},mb3.6**/1,
mb1 3.5/3**,mb1mx3.3**/29**,mbtmp3.3**/3**,ML3.1**/2**,Error
ellipse: s-maj=198.0km s-min=30.3km az=70.0,Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.45	166	Pn	Pn	02 54 50.5	-2.0
	0.1nm,0.3s,baz=349,slow=13,SNR=1.7						
ASAR	Alice Springs	19.98	170	P	Pn	02 55 35.1	-0.8
	0.1nm,0.3s,baz=346,slow=9.7,SNR=7.2						
MKAR	Makanchi Array	65.75	326	P	P	03 01 46.9	0.0
	0.4nm,0.6s,baz=129,slow=7.4,SNR=4.8						

IDC 10 02:55:37.8±7.1**,6°.90S**×**111°.97E,h541^{km}**±73^{km}**,mb2.6**/4,
mb1 2.7/5**,mb1mx2.6**/27**,mbtmp3.6**/5**,Error ellipse:
s-maj=160.0km s-min=25.5km az=55.0,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	17.36	131	P	P	02 59 11.4	+1.0
	baz=180,slow=20						
WRA	Warramunga Arr	25.28	123	P	P	03 00 20.3	-1.4
	0.3nm,0.3s,baz=297,slow=9.6,SNR=5.6						
WRA				PcP	PcP	03 03 35.7	-0.9
	0.2nm,0.7s,baz=294,slow=4.5,SNR=1.2						
ASAR	Alice Springs	26.87	131	P	P	03 00 35.9	+0.3
	0.6nm,0.5s,baz=315,slow=9.1,SNR=8.8						
ASAR				PcP	PcP	03 03 40.4	+0.1
	0.2nm,0.4s,baz=316,slow=2.1,SNR=4.7						
STKA	Stephens Creek	37.16	136	P	P	03 02 03.2	+0.2
	0.7nm,0.5s,baz=299,slow=10,SNR=2.8						
MKAR	Makanchi Array	59.60	337	P	P	03 04 49.6	-0.1
	0.5nm,0.8s,baz=129,slow=7.0,SNR=3.8						

IDC 10 03:24:25.1±2.6**,4°.19S**×**129°.52E,h0^{km},mb3.8**/1,
mb1 3.7/3**,mb1mx3.1**/35**,mbtmp3.6**/3**,ML3.2**/2**,Error
ellipse: s-maj=198.5km s-min=28.9km az=69.0,Banda
Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.35	164	Pn	Pn	03 28 15.0	-1.2
	0.1nm,0.3s,baz=346,slow=13,SNR=3.1						
ASAR	Alice Springs	19.82	168	P	P	03 28 58.0	+0.5
	0.1nm,0.3s,baz=346,slow=10,SNR=15						
MKAR	Makanchi Array	65.63	326	P	P	03 35 11.1	0.0
	0.5nm,0.5s,baz=115,slow=8.0,SNR=7.2						

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*IDC **10** 03:24:33.6±1.1, 34°.47N×24°.73E, h0^{km}, mb3.9/4,
mb1 4.0/10, mb1mx3.6/58, mbtmp3.9/10, ML3.8/6, MS3.0/3,
Ms1 3.0/3, ms1mx2.6/56, Error ellipse: s-maj=18.5km
s-min=10.9km az=101.0*
*ISK **10** 03:24:36.9, 34°.54N×24°.78E, h12^{km}, ML3.5/8*
*THE **10** 03:24:37.8, 34°.61N×24°.77E, h0^{km}±1^{km}, ML3.2/14, Error
ellipse: s-maj=2.1km s-min=0.8km az=184.0*
*ATH **10** 03:24:38.2, 34°.66N×24°.78E, h32^{km}±2^{km}, ML3.4/5, Error
ellipse: s-maj=5.1km s-min=1.9km az=345.0*
*HLW **10** 03:24:39.4, 34°.39N×25°.12E, h9^{km}±22^{km}, Md3.9*
ISC 10 03:24:36.4±1.3**,34°.51N**±0°.04×**24°.77E**±0°.02**,h11^{km}**±9^{km}**,
n56,**σ1^{s}.**17**/71**,mb4.0**/4**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.51	4	P	Pg	03 24 46.4	0.0
SIVA				S	Sg	03 24 51.8	-1.4
	30µm,0.3s						
TMBK	Timbaki Herakl	0.57	360	P	Pg	03 24 47.5	+0.1
TMBK				S	Sb	03 24 54.8	-1.6
	3µm,0.5s						
GVD	Gavdhos	0.65	301	P	Pg	03 24 50.3	+1.2
GVD				S	Sb	03 24 59.3	+0.3
	8µm,0.5s						
GVD	Gavdhos	0.65	301	P	Pg	03 24 50.2	+1.2
GVD				S	Sb	03 25 00.3	+1.3
GVD				AML	AML	03 25 04.7	
	comp=N,14132µm,0.6s						
GVD				AML	AML	03 25 07.7	
	comp=E,16130µm,0.4s						
GVD	Gavdhos	0.65	301	PG	Pg	03 24 49.9	+0.8
GVD				SG	Sb	03 24 59.4	+0.4
IDI	Anoyia	0.79	7	Pg	Pg	03 24 50.7	-1.0
	comp=E,61nm,0.3s,baz=198,slow=6.9,SNR=320						
IDI				Lg	Lg	03 25 01.1	
	comp=E,249nm,0.3s,baz=108,slow=20,SNR=22						
IDI	Anoyia	0.79	7	P	Pg	03 24 50.5	-1.1
IDI				S	Sb	03 25 01.7	-1.2
	comp=E,2µm,0.6s						
IDI	Anoyia	0.79	7	P	Pg	03 24 50.6	-1.0
IDI				S	Sb	03 25 01.4	-1.6
IDI				AML	AML	03 25 06.8	
	comp=E,4345µm,0.4s						
IDI				AML	AML	03 25 08.5	
	comp=N,3667µm,0.5s						
KSTL	Kastelli Herak	0.83	17	P	Pg	03 24 52.3	-0.2
KSTL				S	Sb	03 25 05.0	+0.8
	comp=N,2µm,0.6s						
HRKL	Herakleio	0.85	19	P	Pg	03 24 52.6	-0.2
HRKL				S	Sb	03 25 04.7	+0.1
	comp=N,6µm,0.8s						
PRNS	Prines Rethymn	0.89	346	P	Pg	03 24 52.3	-1.2
PRNS				S	Sb	03 25 05.2	-0.5
	comp=N,1µm,0.8s						
FRMA	Ierapetra Chan	0.94	57	P	Pb	03 24 56.6	+1.8
FRMA				S	Sn	03 25 12.6	+3.5
	comp=N,1µm,0.5s						
VAM	Vamos	1.01	333	P	Pg	03 24 54.9	-1.0
VAM				S	Sb	03 25 10.2	+0.8
	comp=N,3µm,0.7s						
VAM	Vamos	1.01	333	P	Pg	03 24 54.8	-1.0
VAM				AML	AML	03 25 11.6	
	comp=E,4565µm,0.5s						
VAM				AML	AML	03 25 14.6	
	comp=N,5477µm,0.7s						
NPS	Neapolis	1.03	42	P	Pg	03 24 56.3	+0.2
NPS				S	Sb	03 25 10.6	+0.9
	comp=N,2µm,0.5s						
NPS	Neapolis	1.03	42	P	Pg	03 24 56.4	+0.2
KNDR	Palaiochora Ch	1.15	310	P	Pg	03 24 58.9	+0.4
KNDR				S	Sn	03 25 16.1	+1.9
	comp=N,575nm,0.5s						
IMMV	Iera Moni Meta	1.15	326	P	Pg	03 24 57.7	-0.9
IMMV				S	Sb	03 25 14.4	+1.1
	comp=N,2µm,0.7s						
IMMV	Iera Moni Meta	1.15	326	P	Pg	03 24 57.6	-0.9
IMMV				AML	AML	03 25 20.9	
	comp=N,4132µm,0.5s						
IMMV				AML	AML	03 25 32.2	
	comp=E,3482µm,1.2s						
IMMV	Iera Moni Meta	1.15	326	PN	Pb	03 24 58.9	+0.5
IMMV				SN	Sn	03 25 15.1	+0.8
STIA	Sitia Lasithi	1.29	57	P	Pb	03 25 02.0	+1.3
STIA				S	Sb	03 25 18.1	+0.8
ZKR	Zakros	1.34	63	P	Pg	03 25 01.8	-0.3
ZKR				S	Sg	03 25 19.5	0.0
	comp=E,1µm,0.5s						
ZKR	Zakros	1.34	63	P	Pg	03 25 01.8	-0.3
ZKR				AML	AML	03 25 28.9	
	comp=E,3365µm,0.5s						
ZKR				AML	AML	03 25 29.9	
	comp=N,1255µm,0.4s						
ZKR	Zakros	1.34	63	PN	Pg	03 25 01.8	-0.3
RODP	Rodopos	1.34	322	P	Pg	03 25 01.6	-0.5
RODP				S	Sn	03 25 19.9	+0.9
	comp=N,250nm,0.6s						
ANKY	Antikythira Is	1.81	319	P	Pn	03 25 08.3	+0.7
THR6	Thira Island,	1.92	15	P	Pn	03 25 08.6	-0.4
SANT	Santorini	1.94	17	PN	Pn	03 25 10.2	+0.8
THR5	Thira Island,	1.97	14	P	Pn	03 25 09.9	+0.2
THR3	Thira Island,	1.97	15	P	Pn	03 25 10.9	+1.2
KTHA	Kythira Island	2.24	322	P	Pn	03 25 14.5	+1.1
VLI	Veliai	2.67	326	P	Pn	03 25 18.5	-0.8
SLUM	Salum	3.03	173	P	Pn	03 25 25.4	+1.1
	baz=178						
SLUM				S	Sn	03 25 58.3	-2.2
	baz=178						
DAT	Datca	3.19	45	PN	Pn	03 25 28.1	+1.5
ARG	Arkhangelos	3.23	57	P	Pn	03 25 28.0	+1.0
ARG	Arkhangelos	3.23	57	PN	Pn	03 25 28.6	+1.5
BODT	Bodrum	3.28	38	PN	Pn	03 25 29.5	+1.7
ITM	Ithomi	3.53	320	PN	Pn	03 25 32.9	+1.7
SWA2		5.28	173	P	Pn	03 25 56.2	+1.0
	baz=176						
RYAN	Fayoum	7.15	138	P	Pn	03 26 21.2	+0.2
	baz=138						
HFRF	Wahat Farafira	7.94	157	P	Pn	03 26 31.4	-0.4
	baz=158						
SUZ	Suez	8.27	122	P	Pn	03 26 35.6	-0.6
	baz=122						
BRTR	Keskin Array B	8.79	51	Sn	Sn	03 28 15.0	-7.7
	comp=N,0.2nm,0.3s,baz=335,slow=16,SNR=1.4						
MMAI	Mount Meron Ar	8.98	97	Pn	Pn	03 26 45.4	-0.7
	comp=N,1.8nm,0.3s,baz=283,slow=11,SNR=10						
MMAI				Sn	Sn	03 28 18.6	-8.7
	comp=N,1.0nm,0.3s,baz=265,slow=11,SNR=1.5						
EIL	Elat	9.89	116	Pn	Pn	03 26 57.5	-1.0
	comp=N,0.8nm,0.3s,baz=302,slow=2.7,SNR=26						
EIL				Sn	Sn	03 28 39.5	-10
	comp=N,0.5nm,0.3s,baz=60,slow=20,SNR=1.9						
ASF	Jabal al Asfar	10.41	100	Pn	Pn	03 27 04.5	-1.2
	comp=N,0.2nm,0.3s,baz=2.5,slow=7.6,SNR=4.5						
ASF				Sn	Sn	03 28 54.1	-8.3
	comp=N,0.3nm,0.3s,baz=137,slow=18,SNR=2.1						
MLR	Muntele Rosu	11.01	4	LR	LR	03 31 37.6	
	comp=N,88nm,21.2s,baz=258,slow=38						
AKASG	Malin Array Be	16.51	10	Pn	Pn	03 28 26.6	-1.3
	comp=N,1.1nm,0.3s,baz=200,slow=10,SNR=16						
GERES	GERESS Array B	16.52	334	Pn	Pn	03 28 28.4	+0.4
	comp=N,0.2nm,0.3s,baz=144,slow=12,SNR=15						
KBZ	Khabaz	16.79	51	Pn	Pn	03 28 33.5	+2.1
	comp=N,0.1nm,0.3s,baz=245,slow=6.0,SNR=7.2						
GNI	Garni	16.84	65	LR	LR	03 36 29.6	
	comp=N,72nm,18.6s,baz=280,slow=42						
OBN	Obninsk	22.18	18	LR	LR	03 39 23.6	
	comp=N,21nm,18.6s,baz=196,slow=40						
ESDC	Sonseca Array	23.44	291	P	P	03 29 43.3	-2.4
	comp=N,0.7nm,0.7s,baz=84,slow=9.4,SNR=6.2						
TORD	Torodi Ar. Bea	29.82	230	P	P	03 30 43.5	-0.1
	comp=N,0.7nm,0.4s,baz=34,slow=9.0,SNR=11						
MKAR	Makanchi Array	44.41	56	P	P	03 32 45.4	-1.7
	comp=N,1.6nm,0.5s,baz=270,slow=7.7,SNR=22						
SCHQ	Schefferville	63.48	320	P	P	03 35 04.0	-2.2
	comp=N,2.3nm,0.9s,baz=63,slow=14,SNR=1.6						

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*IDC **10** 03:31:39.0±1.5, 4°.21S×129°.37E, h0^{km}, mb4.0/1,
mb1 4.0/4, mb1mx3.4/39, mbtmp3.8/4, ML3.6/3, MS3.2/1,
Ms1 3.2/1, ms1mx2.4/46, Error ellipse: s-maj=55.6km
s-min=26.1km az=80.0*
*DJA **10** 03:31:40.2±1.2, 4°S±13°×12°9E±°, h10^{km}, M4.1/8, mb4.8/1,
MLv3.7/8*
ISC 10 03:31:42.7±0.8**,4°.24S**±0°.06×**129°.41E**±0°.05**,h36^{km},n19,**
σ1^{s}.**20**/18**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.57	119	P	Pn	03 31 53.6	-0.8
MSAI	Masohi	1.01	332	P	Pn	03 31 59.3	-1.0
AAI	Ambon	1.33	294	P	Pn	03 32 04.5	-0.2
FAKI	Fak Fak	3.13	65	P	Pn	03 32 29.5	0.0
FAKI	Fak Fak	3.13	65	P	Pn	03 32 29.7	+0.2
SIJI	Sorong	3.83	29	Pn	Pn	03 32 39.3	+0.1
	4.8nm,0.3s,baz=71,slow=23,SNR=16						
SIJI				Sn	Sn	03 33 21.0	-2.0
	3.6nm,0.3s,baz=203,slow=23,SNR=3.9						
SWI	Sorong	3.83	29	P	Pn	03 32 39.4	+0.2
SANI	Sanana	4.05	302	P	Pn	03 32 42.8	+0.7
LBMI	Labuha	4.05	332	P	Pn	03 32 42.8	+0.6
PLAI	Plampang	12.42	248	P	Pn	03 34 34.8	-2.2
WRAB	Tennant Creek	16.32	163	P	P	03 35 32.7	+0.8
WRA	Warramunga Arr	16.33	163	Pn	Pn	03 35 28.2	-1.2
	0.2nm,0.3s,baz=346,slow=13,SNR=4.9						
QIS	Mount Isa	19.02	149	P	Pn	03 36 03.3	+0.8
ASAR	Alice Springs	19.79	168	P	Pn	03 36 12.4	+0.6
	0.4nm,0.3s,baz=348,slow=9.7,SNR=28						
WRKA	Warakurna	20.70	183	P	Pn	03 36 23.0	+0.5
OOD	Oodnadatta	24.18	166	P	P	03 36 57.7	+2.0
FORT	Forrest	26.43	183	P	P	03 37 17.1	+0.9
ASAJ	Asahikawa	49.58	12	LR	LR	04 00 50.9	
	comp=Z,27nm,20.3s,baz=28,slow=35						
MKAR	Makanchi Array	65.61	326	P	P	03 42 24.6	+1.5
	1.0nm,0.6s,baz=118,slow=8.4,SNR=12						

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*IDC **10** 03:45:03.0±0.9, 8°.40N×127°.74E, h0^{km}, mb4.0/9,
mb1 4.1/10, mb1mx3.9/36, mbtmp4.0/10, ML4.1/1, MS3.1/1,
Ms1 3.1/1, ms1mx2.4/47, Error ellipse: s-maj=33.8km
s-min=17.0km az=72.0*
*MAN **10** 03:45:04.7, 8°.47N×127°.72E, h33^{km}, mb4.5, ML3.4, MS3.2*
ISC 10 03:45:04.8±0.8**,8°.20N**±0°.08×**127°.48E**±0°.07**,h10^{km},n15,**
σ1^{s}.**29**/17**,mb3.7**/9**,1C-2D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	1.11	269	⇓*i*P	Pb	03 45 26.5	+0.3
BIPH				*i* S	Sg	03 45 40.7	0.0
DAV	Davao City (W)	2.20	239	Pn	Pg	03 45 47.0	0.0
	40nm,0.3s,baz=19,slow=1.3,SNR=7.2						
DAV				Sn	Sg	03 46 14.9	-0.6
	128nm,0.3s,baz=53,slow=5.1,SNR=2.6						
DMPH	Davao City--Mi	2.25	241	⇑*i*P	Pb	03 45 46.8	+1.2
DMPH				*i* S	Sn	03 46 07.7	-2.4
KCP	Kidapawan	2.65	244	⇓*e*P	Pb	03 45 52.4	-0.1
TBP	Tagbilaran	3.87	293	*e*P	Pn	03 46 07.1	+2.6
GUMO	Guam	17.89	71	LR	LR	03 55 21.8	
	comp=Z,63nm,20.4s,baz=92,slow=35						
WRA	Warramunga Arr	28.77	167	P	P	03 51 03.8	+0.8
	0.7nm,0.8s,baz=16,slow=8.5,SNR=5.3						
CMAR	Chiang Mai Arr	29.54	293	P	P	03 51 09.9	0.0
	0.9nm,0.3s,baz=120,slow=7.7,SNR=5.3						
ASAR	Alice Springs	32.29	169	P	P	03 51 34.6	+0.6
	0.7nm,0.7s,baz=2.1,slow=7.2,SNR=8.3						
STKA	Stephens Creek	42.07	162	P	P	03 52 57.8	+0.8
	0.8nm,0.6s,baz=351,slow=13,SNR=2.9						
SONM	Songino Array	43.36	339	P	P	03 53 07.8	+0.3
	0.6nm,0.4s,baz=150,slow=6.7,SNR=5.2						
MKAR	Makanchi Array	54.39	323	P	P	03 54 30.4	-1.7
	2.5nm,0.7s,baz=121,slow=7.7,SNR=23						
ZALV	Zalesovo Beam	57.00	331	P	P	03 54 51.3	+0.6
	3.4nm,0.6s,baz=134,slow=6.4,SNR=12						
ILAR	Eielson Array	80.77	26	P	P	03 57 16.9	-1.5
	0.3nm,0.8s,baz=248,slow=5.2,SNR=1.8						
FINES	FINESS Array B	88.27	332	P	P	03 57 54.9	-1.5
	2.0nm,0.8s,baz=106,slow=4.9,SNR=4.0						

IDC 10 03:49:10.6±1.7**,4°.05S**×**129°.53E,h0^{km},mb3.5**/1,
mb1 3.6/4**,mb1mx3.4**/41**,mbtmp3.5**/4**,ML3.3**/3**,Error
ellipse: s-maj=52.5km s-min=25.1km az=91.0,Banda
Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.60	29	Pn	Pn	03 50 08.5	+0.8
	2.7nm,0.3s,baz=252,slow=20,SNR=2.2						
SIJI				Sn	Sn	03 50 50.9	-0.1
	0.9nm,0.3s,baz=198,slow=19,SNR=1.5						
WRA	Warramunga Arr	16.48	164	Pn	Pn	03 53 03.2	-0.1
	0.1nm,0.3s,baz=348,slow=12,SNR=1.1						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
ASAR	Alice Springs	19.96	168	P	P	03 53 44.5	0.0
	0.3nm,0.3s,baz=348,slow=11,SNR=11						
MKAR	Makanchi Array	65.52	326	P	P	03 59 55.7	-0.1
	0.3nm,0.6s,baz=116,slow=8.4,SNR=3.6						

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*JMA **10** 03:56:04.1±0.2, 42.°83N×146.°80E, h50^{km}±4^{km}, M3.7*
*NIED **10** 03:56:04.2, 42.°83N×146.°80E, h50^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.88; $M_{\theta\theta}$0.13; $M_{\phi\phi}$0.76; $M_{r\theta}$0.84; $M_{\theta\phi}$-0.59; $M_{\phi r}$2.98; Fault plane solution: $M_0$3.24000×10^{14} NP1: ϕ_s192.00000°, δ84.00000°, λ-78.00000°. NP2: ϕ_s309.00000°, δ14.00000°, λ-152.00000°.*
*SKHL **10** 03:56:05.2±0.4, 42.°80N×146.°80E, h34^{km}±2^{km}, mb4.6/4*
ISC 10 03:56:03.9±2.3, **42.°84N**±0.°09×**146.°75E**±0.°07, **h19**^{km}±3^{km}, **n18**, σ**0^{s}80**/30, **Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.90	306	P	Pg	03 56 21.2	-0.3
NEM2				eS	Sg	03 56 33.7	+0.3
NMR	Nemuro--Hokkai	0.91	306	iP	Pg	03 56 21.3	-0.4
NMR				eS	Sg	03 56 33.6	-0.2
SHO	Shikotan	1.03	3	iP	Pb	03 56 23.0	-0.1
SHO				AMB	AMB	03 56 23.8	
	220nm,0.3s						
SHO				iS	Sb	03 56 36.5	+0.3
SHO				A	A	03 56 39.8	
	3μm,0.5s						
SHO				A	A	03 56 39.8	
	3μm,0.5s						
JKHN	Kushirohamanak	1.19	282	P	Pn	03 56 25.6	+0.1
JKHN				eS	Sb	03 56 41.4	+0.6
GLVR	Golovnino	1.27	315	iP	Pn	03 56 26.6	0.0
GLVR				AMB	AMB	03 56 28.0	
	410nm,0.4s						
GLVR				eS	Sb	03 56 42.5	-0.6
GLVR				A	A	03 56 46.0	
	2μm,0.4s						
GLVR				A	A	03 56 46.0	
	1μm,0.4s						
YUK	Yuzh-Kuril'sk	1.36	332	eP	Pn	03 56 28.1	+0.3
YUK				AMB	AMB	03 56 28.6	
	310nm,0.3s						
YUK				iS	Sn	03 56 44.8	-0.4
YUK				A	A	03 56 47.4	
	2μm,0.5s						
YUK				A	A	03 56 47.4	
	1μm,0.5s						
AKK	Akkeshi	1.41	278	iP	Pn	03 56 28.4	-0.1
AKK				eS	Sn	03 56 45.9	-0.7
JAK	Akkeshi	1.51	277	P	Pn	03 56 29.9	0.0
JAK				eS	Sn	03 56 48.8	-0.3
JNSB	Nemuroshibetsu	1.58	307	P	Pn	03 56 30.8	0.0
JRA	Rausu	1.61	313	P	Pn	03 56 31.2	-0.1
JRA				eS	Sn	03 56 51.3	-0.3
JNK	Nakash	1.66	297	P	Pn	03 56 31.7	-0.3
JNK				eS	Sn	03 56 51.4	-1.3
JOB	Onbets	2.14	273	P	Pn	03 56 38.8	+0.2
JAR	Ashorobuto	2.23	283	P	Pn	03 56 40.0	+0.2
JAR				eS	Sn	03 57 06.9	+0.1
JTKR	Abashiri--Toko	2.36	300	P	Pn	03 56 42.3	+0.8
KUR	Kuril'sk	2.52	18	eP	Pn	03 56 44.0	+0.2
KUR				AMB	AMB	03 56 47.8	
	50nm,0.4s						
KUR				eS	Sn	03 57 13.1	-0.9
KUR				A	A	03 57 17.5	
	80nm,0.4s						
KUR				A	A	03 57 17.5	
	80nm,0.4s						
JKK2	Kamakawa 2	3.09	291	P	Pn	03 56 53.4	+1.7
JBT2	Biratori 2	3.23	270	P	Pn	03 56 54.3	+0.8
YSS	Yuzh-Sakhalins	4.99	327	eP	Pn	03 57 20.5	+2.7
YSS				AMB	AMB	03 57 23.0	
	10.0nm,0.4s						

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*IDC **10** 03:56:33.6±1.4, 2.°09N×92.°46E, h0^{km}, mb4.1/6, mb1 4.2/9, mb1mx3.7/44, mbtmp4.1/9, ML4.1/2, MS3.0/2, Ms1 3.0/2, ms1mx2.6/39, Error ellipse: s-maj=42.2km s-min=17.8km az=55.0*
*NEIC **10** 03:56:39.5±0.8, 2.°26N±0.°08×92.°55E±0.°09, h30^{km}±6^{km}, mb4.0/6, Error ellipse: s-maj=15.3km s-min=9.6km az=52.0*
ISC 10 03:56:39.2±1.0, **2.°2N**±0.°1×**92.°61E**±0.°08, **h35**^{km}, **n34**, σ**1^{s}35**/30, **mb4.2**/7, **MS3.1**/3, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	5.05	100		Pn	03 57 54.0	+1.6
GSI				Sn	Sn	03 58 46.0	-3.6
LHMI	Lhok Sumawe	5.25	55	Pn	Pn	03 57 58.0	+2.7
PSI	Prapat	6.33	85	Pn	Pn	03 58 12.2	+2.0
	3.7nm,0.3s,baz=282,slow=5.0,SNR=24						
PSI				Sn	Sn	03 59 18.6	-3.0
	baz=90,slow=20						
KULM	Kulim	8.58	69		Pn	03 58 42.0	+1.0
IPM	Ipoh	8.69	75		Pn	03 58 43.7	+1.1
PBA	Port Blair	9.37	1	Pn	Pn	03 58 51.2	-0.7
SRIT	Nakonsritamara	9.40	47	Pn	Pn	03 58 52.8	+0.5
PALK	Pallekele	12.88	293	Pn	Pn	03 59 38.3	-1.7
	1.0nm,0.3s,baz=208,slow=14,SNR=2.0						
PALK				Sn	Sn	04 01 49.1	-13
	3.5nm,0.3s,baz=42,slow=6.0,SNR=11						
PALK	Pallekele	12.88	293	Pn	Pn	03 59 38.9	-1.1
CM31	Chiang Mai Arr	17.28	21	Pn	Pn	04 00 37.7	-0.3
CM31				IAmb	IAmb	04 00 50.5	
	comp=Z,6.1nm,0.9s						
CMAR	Chiang Mai Arr	17.28	21	P	Pn	04 00 38.0	0.0
	baz=218,slow=13,SNR=10						
CMAR	Chiang Mai Arr	17.28	21	P	Pn	04 00 37.3	-0.7
SBUM	Sibu	19.59	89	P	P	04 01 05.8	+1.2
SBUM				IAmb	IAmb	04 01 08.0	
	comp=Z,2.4nm,0.7s						
H08S2	Diego Garcia H	22.34	244	T	T	04 23 36.4	
	baz=63,slow=75,SNR=3.4						
H08S3	Diego Garcia H	22.34	244	T	T	04 23 40.0	
	baz=63,slow=75,SNR=5.8						
H08S1	Diego Carcia H	22.35	244	T	T	04 23 35.2	
	baz=63,slow=75,SNR=5.5						
FITZ	Fitzroy Crossi	38.29	123	P	P	04 03 55.2	-1.5
	baz=306,slow=9.5						
MKAR	Makanchi Array	45.29	350	P	P	04 04 53.8	+0.2
	comp=Z,1.2nm,0.7s,baz=166,slow=8.6,SNR=9.6						
MKAR	Makanchi Array	45.29	350	P	P	04 04 53.6	0.0
WB0	Warramunga Arr	46.47	120	P	P	04 05 03.5	+0.2
WB0				IAmb	IAmb	04 05 04.0	
	comp=Z,1.8nm,0.6s						
WRA	Warramunga Arr	46.49	120	P	P	04 05 03.7	+0.3
	comp=Z,2.3nm,0.6s,baz=299,slow=8.5,SNR=26						
WRA	Warramunga Arr	46.49	120	P	P	04 05 03.8	+0.3
WB2	Warramunga Arr	46.50	120	P	P	04 05 03.6	+0.1
SONM	Songino Array	46.97	13	P	P	04 05 07.9	+1.0
	comp=Z,3.3nm,0.8s,baz=192,slow=8.9,SNR=9.8						
SONM	Songino Array	46.97	13	P	P	04 05 07.2	+0.3
SONM				IAmb	IAmb	04 05 08.8	
	comp=Z,3.5nm,1.0s						
ASAR	Alice Springs	47.70	125	P	P	04 05 12.9	0.0
	comp=Z,0.4nm,0.4s,baz=299,slow=7.5,SNR=6.4						
KSRS	Korea Array	47.76	38	LR	LR	04 27 31.5	
	comp=Z,15nm,19.5s,baz=280,slow=39						
ZALV	Zalesovo Beam	51.95	354	P	P	04 05 44.6	0.0
	comp=Z,1.6nm,0.4s,baz=192,slow=8.7,SNR=7.8						
ZALV	Zalesovo Beam	51.95	354	P	P	04 05 44.9	+0.3
KLR	Kul'dur	57.51	29	P	P	04 06 25.7	+0.7
	comp=Z,0.6nm,0.4s,baz=307,slow=5.1,SNR=4.3						
MMAI	Mount Meron Ar	61.60	307	LR	LR	04 35 07.5	
	comp=Z,13nm,19.8s,baz=300,slow=38						
TIXI	Tiksi	73.03	11	LR	LR	04 43 15.9	
	comp=Z,631nm,21.9s,baz=39,slow=38						
TXAR	Lajitas Array	144.96	25	PKPbc	PKPbc	04 16 13.2	+0.3
	comp=Z,0.7nm,0.8s,baz=252,slow=0.8,SNR=8.7						
TXAR	Lajitas Array	144.96	25		PKPbc	04 16 13.0	+0.1

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*IDC **10** 04:05:50.9±3.6, 13.°67N×92.°33W, h0^{km}, mb3.5/3, mb1 3.8/6, mb1mx3.6/36, mbtmp3.5/6, ML3.6/3, Error ellipse: s-maj=73.3km s-min=33.2km az=6.0*
*GCG **10** 04:05:57.4±0.5, 14.°10N×92.°26W, h18^{km}±11^{km}, MD3.9*
*SNET **10** 04:06:01.2±0.9, 14.°31N×92.°02W, h65^{km}±8^{km}, ML4.2*
*UCR **10** 04:06:01.0±1.1, 14.°30N×92.°04W, h61^{km}±10^{km}, ML3.9*
ISC 10 04:05:58.1±2.7, **14.°09N**±0.°09×**92.°29W**±0.°06, **h32**^{km}±19^{km}, **n43**, σ**0^{s}93**/52, **mb3.3**/3, **1D**, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.72	53	eP	Pn	04 06 11.4	-0.7
RTAL				eS	Sb	04 06 21.4	-0.6
STG3	Santiaguito 3,	0.94	48	⇓eP	Pn	04 06 14.3	-0.9
HUEH	Huehuetenango	1.44	32	eP	Pn	04 06 21.8	-0.4
HUEH				eP	Pn	04 06 22.1	0.0
FUG	Fuego 3	1.45	76	eP	Pn	04 06 22.3	0.0
PCG	Pacaya	1.66	79	eP	Pn	04 06 25.8	+0.6
NBG	Las Nubes	1.95	75	eP	Pn	04 06 31.0	+1.8
NBG				eS	Sn	04 06 55.2	+2.5
APG	El Apazote	1.99	63	Pn	Pn	04 06 30.0	+0.3
	37nm,0.3s,baz=298,slow=9.6,SNR=162						
APG				Sn	Sn	04 06 54.8	+1.1
	28nm,0.3s,baz=298,slow=16,SNR=7.2						
SLOZ	Alcaldia de Sa	2.44	91	eP	Pn	04 06 36.2	+0.6
RTR	El Retiro	2.58	94	eP	Pn	04 06 38.5	+0.7
RTR	El Retiro	2.58	94	eP	Pn	04 06 38.5	+0.7
CEVE	Cerro Verde	2.60	95	eS	Sn	04 07 08.1	-0.8
CEVE				IAML		04 07 16.8	
	comp=Z,749nm,0.2s						
CEVE	Cerro Verde	2.60	95	eS	Sn	04 07 08.1	-0.8
CEVE				IAML		04 07 16.8	
	comp=Z,749nm,0.2s						
SBLS	San Blas	2.60	95	eP	Pn	04 06 38.7	+0.5
SBLS	San Blas	2.60	95	eP	Pn	04 06 38.7	+0.5
SNJE	San Jose	2.62	94	eP	Pn	04 06 39.1	+0.8
SNJE	San Jose	2.62	94	eP	Pn	04 06 39.1	+0.8
MRL	Marmol	2.71	68	eP	Pn	04 06 40.5	+0.9
JAYA	Jayaque - finc	2.79	99	eP	Pn	04 06 41.0	+0.3
JAYA	Jayaque - finc	2.79	99	eP	Pn	04 06 41.0	+0.3
TACO	Tacachico	2.85	92	eP	Pn	04 06 41.3	-0.2
TACO				eS	Sn	04 07 13.3	-1.5
TACO	Tacachico	2.85	92	eP	Pn	04 06 41.3	-0.2
TACO				eS	Sn	04 07 13.3	-1.5
MTO3	Montecristo	2.86	83	eP	Pn	04 06 41.4	-0.3
MTO3	Montecristo	2.86	83	eP	Pn	04 06 41.4	-0.3
PMON	Piamonte	2.92	97	eP	Pn	04 06 42.8	+0.4
PMON				eS	Sn	04 07 14.8	-1.5
PMON	Piamonte	2.92	97	eP	Pn	04 06 42.8	+0.4
PMON				eS	Sn	04 07 14.8	-1.5
LALI	Alcalda de L	2.95	101	eP	Pn	04 06 42.8	+0.1
LALI				eS	Sn	04 07 16.2	-0.8
LALI	Alcalda de L	2.95	101	eP	Pn	04 06 42.8	+0.1
LALI				eS	Sn	04 07 16.2	-0.8
LFRS	El Faro	3.17	98	eP	Pn	04 06 46.9	+1.0
LFRS	El Faro	3.17	98	eP	Pn	04 06 46.9	+1.0
SJTE	Alcalda de S	3.23	98	eP	Pn	04 06 47.3	+0.7
SJTE	Alcalda de S	3.23	98	eP	Pn	04 06 47.3	+0.7
SCLA	Alcaldia de Sa	3.48	96	eP	Pn	04 06 51.3	+1.2
SCLA	Alcaldia de Sa	3.48	96	eP	Pn	04 06 51.3	+1.2
COEB	Comit de Eme	3.70	99	eP	Pn	04 06 53.3	+0.2
COEB	Comit de Eme	3.70	99	eP	Pn	04 06 53.3	+0.2
CMIG	Matias Romero	3.89	320	Pn	Pn	04 06 55.1	-0.6
	comp=Z,1.3nm,0.3s,baz=155,slow=12,SNR=27						
CMIG				Sn	Sn	04 07 40.5	+0.1
	comp=Z,9.2nm,0.3s,baz=200,slow=14,SNR=5.4						
CAHU	Cacacuatique	3.98	94	IAML		04 07 22.5	
	comp=Z,578nm,0.2s						
CAHU	Cacacuatique	3.98	94	IAML		04 07 22.5	
	comp=Z,578nm,0.2s						
TXAR	Lajitas Array	18.47	327	P	Pn	04 10 13.0	+1.3
	comp=Z,0.1nm,0.3s,baz=140,slow=11,SNR=5.5						
ANMO	Albuquerque	24.39	331	P	P	04 11 14.1	+0.4
	comp=Z,0.7nm,0.7s,baz=156,slow=12,SNR=5.5						
NVAR	Mina Array Bea	33.43	321	P	P	04 12 35.6	+1.4
	comp=Z,0.3nm,0.7s,baz=130,slow=7.0,SNR=5.4						
ILAR	Eielson Array	62.65	337	P	P	04 16 18.1	-1.1
	comp=Z,0.2nm,0.6s,baz=95,slow=7.1,SNR=2.4						
CMAR	Chiang Mai Arr	145.82	341	PKPbc	PKPdf	04 25 33.2	-1.2
	comp=Z,1.8nm,0.4s,baz=337,slow=3.9,SNR=4.0						

IDC 10 04:12:38.5±2.3, **4.°11S**×**129.°53E**, **h0**^{km}, **mb3.7**/2, **mb1 3.6**/4, **mb1mx3.4**/42, **mbtmp3.5**/4, **ML2.9**/2, **MS3.6**/3, **Ms1 3.6**/3, **ms1mx2.9**/32, **Error ellipse: s-maj=182.7km s-min=28.4km az=70.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.42	164	Pn	Pn	04 16 28.7	-1.8
	0.0nm,0.3s,baz=346,slow=14,SNR=2.4						
ASAR	Alice Springs	19.90	168	P	Pn	04 17 12.7	-0.6
	0.1nm,0.3s,baz=356,slow=11,SNR=2.6						
KLR	Kul'dur	53.16	2	LR	LR	04 42 25.1	
	comp=Z,30nm,19.9s,baz=44,slow=34						
MKAR	Makanchi Array	65.57	326	P	P	04 23 24.4	+0.2
	0.3nm,0.4s,baz=114,slow=7.8,SNR=6.7						
KURBB	Kurchatov Arra	69.82	328	P	P	04 23 50.6	-0.3
	0.4nm,0.4s,baz=134,slow=6.0,SNR=5.0						
BELG	Belogornoye	88.29	323	LR	LR	05 09 18.2	
	comp=Z,36nm,18.2s,baz=133,slow=38						
KIRV	Kirov	88.34	329	LR	LR	05 08 11.7	
	comp=Z,39nm,18.6s,baz=329,slow=38						

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*IDC **10** 04:16:28.4±4.7, 3.°43S×131.°95E, h0^{km}, mb4.0/4, mb1 4.0/5, mb1mx3.6/41, mbtmp3.9/5, ML3.0/1, Error ellipse: s-maj=354.7km s-min=25.1km az=74.0*
*DJA **10** 04:16:39.4±1.3, 4°S±8°×12°9E±°, h11^{km}±7^{km}, M3.6/7, MLv3.6/7*
ISC 10 04:16:38.0±0.9, **4.°22S**±0.°09×**129.°32E**±0.°07, **h35**^{km}, **n12**, σ**2^{s}19**/14, **mb4.3**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.95	335	P	Pn	04 16 54.2	-0.7
MSAI				S	Sn	04 17 04.6	-2.7
AAI	Ambon	1.24	295	P	Pn	04 16 59.9	+1.0
AAI				S	Sn	04 17 17.3	+2.8
FAKI	Fak Fak	3.19	66	P	Pn	04 17 28.9	+3.1
SWI	Sorong	3.85	30	P	Pn	04 17 35.7	+0.8
SANI	Sanana	3.97	303	P	Pn	04 17 38.9	+2.5
LBMI	Labuha	4.00	333	P	Pn	04 17 37.4	+0.6
WRA	Warramunga Arr	16.38	163	Pn	Pn	04 20 21.3	-4.1
	0.1nm,0.3s,baz=352,slow=12,SNR=5.6						
ASAR	Alice Springs	19.83	168	P	P	04 21 05.9	-0.1
	1.8nm,0.6s,baz=350,slow=11,SNR=18						
MKAR	Makanchi Array	65.55	326	P	P	04 27 19.0	+0.9
	1.5nm,0.6s,baz=121,slow=8.2,SNR=14						
KURBB	Kurchatov Arra	69.80	328	P	P	04 27 45.8	+0.9
	1.9nm,0.6s,baz=129,slow=5.4,SNR=12						
BVAR	Borovoye Array	75.37	328	P	P	04 28 18.2	+0.3
	0.7nm,0.6s,baz=183,slow=12,SNR=4.7						
TORD	Torodi Ar. Bea	127.57	283	PKP	PKPdf	04 35 39.7	-0.9
	0.3nm,0.8s,baz=109,slow=4.0,SNR=1.9						

NOU 10 04:34:58.7, **14.°63S**×**167.°30E**, **h142**^{km}, **MLv4.5**/9, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.82	187	P	Pn	04 35 21.5	+0.3
DVP	Devils Point	3.19	165	P	Pn	04 35 48.2	0.0
YATNC	Mamie plateau,	7.40	183	P	Pn	04 36 43.2	-0.9
	14nm,0.7s						
DZM	Mont Dzumac	7.45	186	P	Pn	04 36 45.8	+1.0
	16nm,1.6s						
OUENC	Ouen Island, N	7.76	183	P	Pn	04 36 48.8	-0.1

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*KRNET **10** 04:42:28.3±0.1, 39.°07N×73.°36E, h1^{km}, mb3.5*
*NNC **10** 04:42:33.2±3.1, 39.°12N×73.°47E, h0^{km}±12^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=22.5km s-min=13.9km az=169.0*
ISC 10 04:42:33.9±1.6, **39.°23N**±0.°08×**73.°18E**±0.°05, **h10**^{km}, **n19**, σ**2^{s}03**/30, **17C-7D**, **Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.82	18	⇑eP	Pg	04 42 46.3	-3.5
	baz=7.0						
SFK				⇑eS	Sg	04 42 59.8	-0.8
	baz=7.0						
DRK	Karamyk	1.10	284	⇑eP	Pg	04 42 52.9	-2.2
	baz=89						
DRK				⇑iS	Sb	04 43 10.3	+0.6
	baz=89						
OHH	Osh	1.33	347	⇓iP	Pn	04 42 57.5	-1.1
	baz=43						
OHH				⇓iS	Sg	04 43 17.9	+1.2
	baz=43						
BTK	Batken	2.00	295	⇑eP	Pn	04 43 07.9	0.0
	baz=97						
BTK				⇑iS	Sg	04 43 37.5	-0.8
	baz=97						
GAR	Garm	2.24	265	⇓eP	Pn	04 43 10.4	-0.8
	baz=69						
GAR				⇓iS	Sb	04 43 41.6	-0.7
	baz=69						
TRKS	Terek-Say	2.78	327	⇑iP	Pn	04 43 18.6	0.0
	baz=26						
TRKS				⇑iS	Sn	04 43 54.7	+2.4
	baz=26						
AML	Almayashu	2.93	8	⇓eP	Pn	04 43 20.4	-0.4
	baz=5.0						
AML				⇓iS	Sn	04 43 58.5	+2.2
	baz=5.0						
UCH	Uchtor	3.16	18	⇑eP	Pn	04 43 23.3	-0.9
	baz=15						
UCH				⇑iS	Sn	04 44 03.4	+1.2
	baz=15						
MNAS	Manas	3.29	351	⇑eP	Pn	04 43 26.1	+0.4
	baz=50						
MNAS				⇑iS	Sn	04 44 08.2	+3.2
	baz=50						
AAK	Ala-Archa	3.55	16	Pn	Pn	04 43 31.2	+2.0
	9.3nm,0.6s						
AAK				Lg	Lg	04 44 23.5	
	29nm,1.1s						
AAK	Ala-Archa	3.55	16	⇑eP	Pn	04 43 28.7	-0.5
	baz=13						
AAK				⇑eS	Sn	04 44 13.0	+1.7
	baz=13						
IUG	Iuzhnay	3.77	322	Pg	Pg	04 43 44.9	-1.2
	100nm,0.5s						
IUG				Lg	Lg	04 44 40.6	
	56nm,1.1s						
TKM2	Tokmak 2	4.12	26	⇑Pg	Pg	04 43 50.7	-2.1
	3.6nm,0.6s						
TKM2				⇑Lg	Lg	04 44 45.7	
	7.6nm,0.8s						
KST	Kastek	4.35	28	Pg	Pb	04 43 51.8	+1.2
	11nm,1.2s						
KST				Lg	Lg	04 44 52.1	
	7.7nm,0.5s						
KK02	Karatay Array	4.36	333	⇑Pn	Pn	04 43 42.1	+1.8
	1.8nm,0.7s,baz=142,slow=13						
KK02				⇓Sn	Sb	04 44 38.5	-4.8
	5.4nm,0.5s,baz=149,slow=24						
DGS	Degeres	4.46	25	Pg	Pb	04 43 55.3	+2.9
	3.3nm,0.7s						
DGS				Lg	Lg	04 44 58.1	
	5.0nm,0.8s						
BRLS	Borolday	4.56	327	Pg	Pg	04 43 58.6	-2.6
	3.3nm,0.3s						
BRLS				Lg	Lg	04 45 04.0	
	9.0nm,0.5s						
KRBS	Karabastau	4.84	22	Pg	Pb	04 44 01.5	+2.7
	2.9nm,0.5s						
KRBS				Lg	Lg	04 45 09.1	
	2.0nm,0.7s						
KTBS	Karatobe	5.19	29	Pg	Pb	04 44 06.0	+1.2
	1.9nm,0.7s						
KTBS				Lg	Lg	04 45 16.6	
	5.0nm,0.7s						

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*INET **10** 04:49:10.7, 13.°06N×89.°65W, h35^{km}, MW3.7*
*SNET **10** 04:49:11.4±1.0, 13.°16N×89.°64W, h39^{km}±14^{km}, ML3.2*
*GCG **10** 04:49:13.6±0.5, 13.°15N×89.°87W, h64^{km}±71^{km}, MD3.5*
ISC 10 04:49:12.1±3.8, **13.°15N**±0.°08×**89.°61W**±0.°04, **h39**^{km}±8^{km}, **n26**, σ**0^{s}69**/42, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.43	40	eP	Pn	04 49 21.5	-0.4
LALI				eS	Sn	04 49 28.6	-0.2
JAYA	Jayaque - finc	0.52	17	eP	Pn	04 49 22.6	-0.7
JAYA				eS	Sn	04 49 31.3	+0.2
JAYA				IAML		04 49 33.0	
	comp=Z,2μm,0.2s						
PMON	Piamonte	0.62	27	eP	Pn	04 49 24.0	-0.7
SNET	Serv Nac Est T	0.64	34	eP	Pn	04 49 24.5	-0.4
SNET				eS	Sn	04 49 34.3	+0.3
SNET				IAML		04 49 36.7	
	comp=Z,791nm,0.1s						
BOQS	Boqueron	0.66	29	eP	Pn	04 49 24.7	-0.5
CEVE	Cerro Verde	0.67	358	eP	Pn	04 49 25.0	-0.5
CEVE				eS	Sn	04 49 35.0	+0.2
CEDA	San Andres	0.68	18	eP	Pn	04 49 24.8	-0.5
CEDA				eS	Sn	04 49 35.3	+0.6
CEDA				IAML		04 49 41.5	
	comp=Z,1μm,0.2s						
OPAM	Oficina de Pla	0.68	36	eP	Pn	04 49 25.0	-0.4
OPAM				eS	Sn	04 49 35.5	+0.7
OPAM				IAML		04 49 38.2	
	comp=Z,890nm,0.1s						
SBLS	San Blas	0.68	359	eP	Pn	04 49 25.1	-0.5
LFRS	El Faro	0.71	49	eP	Pn	04 49 25.2	-0.5
SNJE	San Jose	0.71	0	eP	Pn	04 49 25.9	0.0
UDBS	Universidad Do	0.71	38	eP	Pn	04 49 25.3	-0.5
UDBS				eS	Sn	04 49 36.1	+0.5
UDBS				IAML		04 49 37.1	
	comp=Z,2μm,0.2s						
RTR	El Retiro	0.74	357	eP	Pn	04 49 25.9	-0.4
SJTE	Alcalda de S	0.74	52	eP	Pn	04 49 25.7	-0.5
SJTE				eS	Sn	04 49 37.0	+0.7
SJTE				IAML		04 49 38.8	
	comp=Z,961nm,0.2s						
LFU	La Fuente	0.76	39	eP	Pn	04 49 26.3	-0.2
COEG	Centro de Oper	0.84	57	eP	Pn	04 49 27.1	-0.5
TACO	Tacachico	0.85	17	eP	Pn	04 49 27.1	-0.5
TACO				eS	Sn	04 49 39.4	+0.5
PAVA	Las Pavas	0.86	49	eP	Pn	04 49 27.9	0.0
UESV	Universidad de	0.93	59	eP	Pn	04 49 28.3	-0.4
UESV				eS	Sn	04 49 41.5	+0.6
ALJI	Alcalda de J	1.02	80	eP	Pn	04 49 29.3	-0.7
ALJI				eS	Sn	04 49 44.4	+1.3
COEB	Comit de Eme	1.10	72	eP	Pn	04 49 30.6	-0.5
COEB				eS	Sn	04 49 45.2	0.0
PQSS	Presa 15 de Se	1.12	65	eP	Pn	04 49 30.9	-0.4
NBG	Las Nubes	1.60	333	eP	Pn	04 49 39.2	+1.1
NBG				eS	Sn	04 49 59.7	+2.0
LCND	La Caada	1.68	85	eP	Pn	04 49 38.8	-0.2
LCND				eS	Sn	04 50 00.7	+1.5
LCND				IAML		04 50 07.1	
	comp=Z,326nm,0.3s						
FUG	Fuego 3	1.76	317	eP	Pn	04 49 40.3	0.0
FUG				eS	Sn	04 50 01.3	-0.3
STG3	Santiaguito 3,	2.46	309	eP	Pn	04 49 49.9	0.0
STG3				eS	Sn	04 50 17.5	-1.3

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*IDC **10** 04:56:51.2±1.6, 4.°24S×129.°56E, h0^{km}, mb3.6/1, mb1 4.0/4, mb1mx3.5/35, mbtmp3.8/4, ML3.5/3, MS3.5/1, Ms1 3.5/1, ms1mx2.5/34, Error ellipse: s-maj=50.0km s-min=24.3km az=89.0*
*DJA **10** 04:56:55.9±1.1, 4°S±6°×12°9E±°, h26^{km}±11^{km}, M4.0/8, mb4.7/1, MLv3.7/8*
ISC 10 04:56:55.5±1.1, **4.°23S**±0.°08×**129.°43E**±0.°06, **h36**^{km}, **n11**, σ**1^{s}02**/13, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.01	330	P	Pn	04 57 12.6	-0.6
MSAI				S	Sn	04 57 25.0	-1.1
AAI	Ambon	1.35	293	P	Pn	04 57 17.8	0.0
AAI				S	Sn	04 57 35.1	+0.7
FAKI	Fak Fak	3.10	65	P	Pn	04 57 42.4	+0.5
SIJI	Sorong	3.81	29	Pn	Pn	04 57 52.0	+0.3
	3.4nm,0.3s,baz=240,slow=20,SNR=3.7						
SIJI				Sn	Sn	04 58 35.2	0.0
	4.0nm,0.3s,baz=37,slow=20,SNR=2.2						
SWI	Sorong	3.81	29	P	Pn	04 57 51.0	-0.7
LBMI	Labuha	4.05	332	P	Pn	04 57 54.6	-0.5
SANI	Sanana	4.06	302	P	Pn	04 57 55.4	+0.2
WRA	Warramunga Arr	16.34	163	Pn	Pn	05 00 40.0	-2.2
	0.1nm,0.3s,baz=350,slow=13,SNR=8.0						
ASAR	Alice Springs	19.80	168	P	P	05 01 23.6	+0.5
	0.3nm,0.3s,baz=347,slow=11,SNR=30						
TLY	Talaya	59.88	342	LR	LR	05 34 01.8	
	comp=Z,45nm,21.4s,baz=53,slow=37						
MKAR	Makanchi Array	65.61	326	P	P	05 07 37.4	+1.4
	0.3nm,0.4s,baz=116,slow=8.0,SNR=7.7						

IDC 10 04:57:46.3±2.7**,4°.02S**×**129°.73E,h0^{km},mb3.6**/1**, mb1 3.9**/3**,mb1mx3.3**/31**,mbtmp3.7**/3**,ML3.5**/2**,Error ellipse: s-maj=175.9km s-min=31.9km az=69.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.45	165	Pn	Pn	05 01 38.8	0.0
	0.2nm,0.3s,baz=348,slow=12,SNR=2.1						
ASAR	Alice Springs	19.95	169	P	P	05 02 20.1	0.0
	0.3nm,0.3s,baz=349,slow=12,SNR=5.8						
MKAR	Makanchi Array	65.60	326	P	P	05 08 32.2	0.0
	0.4nm,0.5s,baz=122,slow=7.9,SNR=2.3						

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*SJA **10** 05:00:17.6±0.5,23°.86S×66°.89W,h208^{km}±4^{km},ML4.3, MW4.2*

*VAO **10** 05:00:18.3±0.3,23°.79S×66°.79W,h191^{km},mb4.3*

*NEIC **10** 05:00:18.4±1.3,23°.84S±0°.06×66°.83W±0°.08,h190^{km}±6^{km}, mb4.3/33,Error ellipse: s-maj=11.7km s-min=7.7km az=60.0*

*IDC **10** 05:00:18.0±1.0,23°.81S×66°.71W,h184^{km}±9^{km},mb3.6/10, mb1 3.9/16,mb1mx3.8/24,mbtmp4.2/16,MS2.8/1, Ms1 2.8/1,ms1mx2.4/18,Error ellipse: s-maj=17.3km s-min=12.3km az=23.0*

*GUC **10** 05:00:19.7±0.5,23°.71S×67°.27W,h244^{km}±5^{km},ML4.9*

ISC 10 05:00:18.3±0.6**,23°.82S**±0°.04×**66°.90W**±0°.04**,h195^{km}**±6^{km}**, n162,σ1^{s}.11**/189**,mb4.2**/21**,13C,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	Humahuaca	1.50	66	eP	Pn	05 00 52.9	+0.9
SLA	San Lorenzo	1.56	126	eP	Pn	05 00 53.5	+1.1
SLA				eS	Sn	05 01 19.2	+0.4
AZAP	Zapla	1.73	104	eP	Pn	05 00 54.5	+0.5
YJA	Yavi	2.07	38	eP	Pn	05 00 59.2	+1.4
YJA				eS	Sn	05 01 30.2	+1.9
LVC	Limon Verde	2.20	303	P	Pn	05 01 00.3	+1.2
	156nm,0.3s,baz=131,slow=6.0,SNR=668						
LVC				S	Sn	05 01 31.8	+1.1
	165nm,0.3s,baz=241,slow=16,SNR=32						
LVC	Limon Verde	2.20	303	⇑iP	Pn	05 01 00.3	+1.2
LVC				i S	Sn	05 01 31.7	+1.0
LVC	Limon Verde	2.20	303	eP	Pn	05 01 00.3	+1.2
LVC				eS	Sn	05 01 30.7	0.0
LVC	Limon Verde	2.20	303	eP	Pn	05 01 00.3	+1.2
LVC				eS	Sn	05 01 31.6	+0.9
LVC				IAML		05 01 35.2	
	comp=Z,448nm,0.8s						
ASTB	Santa Barbara	2.25	94	eP	Pn	05 00 59.7	+0.4
FSA	Cafayete	2.43	160	eP	Pn	05 01 01.7	+0.4
FSA				eS	Sn	05 01 49.0	+14
PB15	IPOC Station P	2.44	284	⇑iP	Pn	05 01 02.5	+1.0
PB15				i S	Sn	05 01 35.4	+0.4
PB15	IPOC Station P	2.44	284		Pn	05 01 02.5	+1.0
PB15				Sn	Sn	05 01 35.3	+0.4
PB06	IPOC Station P	2.69	294	⇑iP	Pn	05 01 05.4	+1.1
PB06				i S	Sn	05 01 39.8	-0.4
PB06				IAML		05 01 41.7	
	comp=N,4μm,0.1s						
PB06	IPOC Station P	2.69	294		Pn	05 01 05.2	+0.9
PB06				Sn	Sn	05 01 39.6	-0.5
PB06	IPOC Station P	2.69	294	eP	Pn	05 01 05.2	+0.9
PB06				eS	Sn	05 01 40.4	+0.2
PB06				IAML		05 01 43.2	
	comp=Z,1μm,0.4s						
PB09	IPOC Station P	2.95	312	⇑iP	Pn	05 01 08.7	+1.4
PB09				i S	Sn	05 01 45.6	+0.1
PB09	IPOC Station P	2.95	312	Pn	Pn	05 01 08.6	+1.2
PB09	IPOC Station P	2.95	312	eP	Pn	05 01 08.4	+1.1
PB09				eS	Sn	05 01 45.9	+0.3
PB09				IAML		05 01 49.4	
	comp=Z,583nm,0.2s						
PB03	IPOC Station P	3.16	303	⇑iP	Pn	05 01 10.5	+0.7
PB03				i S	Sn	05 01 48.7	-1.4
PB03				IAML		05 01 51.0	
	comp=N,2μm,0.5s						
PB05	IPOC Station P	3.18	287	⇑iP	Pn	05 01 10.3	+0.2
PB05				i S	Sn	05 01 48.5	-1.9
PB05				IAML		05 01 53.0	
	comp=N,955nm,0.3s						
AHML	Horco Molle	3.28	155	eP	Pn	05 01 11.2	+0.1
AHML				eS	Sn	05 01 50.5	-2.0
PB14	IPOC Station P	3.30	255	Pn	Pn	05 01 11.6	-0.1
PB14	IPOC Station P	3.30	255	eP	Pn	05 01 12.0	+0.4
PB14				eS	Sn	05 01 52.3	-0.9
PB14				IAML		05 01 55.5	
	comp=Z,501nm,0.5s						
PB04	IPOC Station P	3.33	296	i P	Pn	05 01 12.2	+0.2
PB04				i S	Sn	05 01 52.1	-1.8
PB04	IPOC Station P	3.33	296		Pn	05 01 12.6	+0.6
PB10	IPOC Station P	3.36	274	⇑iP	Pn	05 01 12.7	+0.6
PB10				i S	Sn	05 01 52.0	-2.2
PB10	IPOC Station P	3.36	274	Pn	Pn	05 01 12.6	+0.5
PB10	IPOC Station P	3.36	274	eP	Pn	05 01 12.8	+0.6
PB10				eS	Sn	05 01 53.4	-0.8
PB10				IAML		05 01 54.7	
	comp=Z,646nm,0.3s						
PB07	IPOC Station P	3.45	306	⇑iP	Pn	05 01 13.9	+0.5
PB07				i S	Sn	05 01 54.5	-1.9
PB07	IPOC Station P	3.45	306		Pn	05 01 13.8	+0.4
AC02	Maricunga	3.62	213	Pn	Pn	05 01 16.3	+0.6
PB01	IPOC Station P	3.65	319	⇑iP	Pn	05 01 16.0	+0.3
PB01				i S	Sn	05 01 59.1	-1.6
PB01	IPOC Station P	3.65	319		Pn	05 01 16.0	+0.3
PB02	IPOC Station P	3.72	311	⇑iP	Pn	05 01 16.7	+0.1
PB02				i S	Sn	05 01 59.7	-2.5
PB08	IPOC Station P	4.21	330	⇑iP	Pn	05 01 24.1	+1.0
PB08				i S	Sn	05 02 13.7	-0.1
PB08	IPOC Station P	4.21	330		Pn	05 01 23.8	+0.8
PATCX	Punta Patache	4.24	314	⇑iP	Pn	05 01 22.5	-0.6
PATCX				i S	Sn	05 02 11.1	-2.8
PATCX	Punta Patache	4.24	314		Pn	05 01 22.2	-0.9
TA01	Diego Aracena	4.44	316	eP	Pn	05 01 25.0	-0.5
TA01				i S	Sn	05 02 15.3	-2.9
TA01	Diego Aracena	4.44	316	Pn	Pn	05 01 25.3	-0.2
HMBC	Humberstone	4.48	321	⇑iP	Pn	05 01 25.2	-1.0
HMBC				i S	Sn	05 02 16.2	-3.3
PB11	IPOC Station P	4.78	327	Pn	Pn	05 01 29.1	-0.9
GO03	Copiap	4.82	218	Pn	Pn	05 01 28.7	-1.6
AC04	Llanos de Chal	5.76	220	Pn	Pn	05 01 41.4	-1.0
PB16	IPOC Station P	5.97	335		Pn	05 01 45.9	+0.1
PB12	IPOC Station P	6.08	328	Pn	Pn	05 01 46.7	-0.1
LCO	Las Campanas	6.19	213	Pn	Pn	05 01 46.3	-2.0
CO05	La Serena	7.21	212	Pn	Pn	05 02 01.1	-0.1
GO04	Tololo Observa	7.22	208	Pn	Pn	05 02 01.3	-0.3
LPAZ	La Paz	7.58	351	P	Pn	05 02 07.5	+0.8
	comp=Z,3.2nm,0.3s,baz=163,slow=6.6,SNR=66						
LPAZ				S	Sn	05 03 32.5	-0.2
	comp=Z,0.8nm,0.3s,baz=323,slow=16,SNR=5.1						
LPAZ	La Paz	7.58	351	eP	Pn	05 02 06.7	-0.1
LPAZ	La Paz	7.58	351	Pn	Pn	05 02 07.9	+1.1
CPUP	Villa Florida	9.03	108	P	Pn	05 02 23.4	-1.6
	comp=Z,0.5nm,0.3s,baz=285,slow=11,SNR=15						
CPUP				LR	LR	05 05 59.4	
	comp=Z,55nm,19.0s,baz=3.0,slow=38						
CPUP	Villa Florida	9.03	108	eP	Pn	05 02 23.9	-1.1
CPUP	Villa Florida	9.03	108	Pn	Pn	05 02 23.3	-1.7
VA03	San Esteban	9.48	199		Pn	05 02 31.9	+1.0
SIV	San Ignacio	9.52	36	P	Pn	05 02 30.0	-1.6
	comp=Z,4.6nm,0.3s,baz=227,slow=11,SNR=51						
SIV				S	Sn	05 04 03.0	-15
	baz=223,slow=15,SNR=5.7						
MT02	Curacav	10.12	201	Pn	Pn	05 02 38.4	-0.7
ITQB	Itaqui	10.88	125	eP	Pn	05 02 47.6	-1.4
PTLB	Pontes e Lacer	11.08	43	eP	Pn	05 02 50.5	-1.1
PTLB	Pontes e Lacer	11.08	43	Pn	Pn	05 02 50.7	-0.9
PP1B	Ponte de Pedra	12.83	63	eP	Pn	05 03 12.8	-1.1
SALV	Santo Antonio	13.15	55	eP	Pn	05 03 17.1	-0.9
CPSB	Cacapava Do Su	13.66	122	eP	Pn	05 03 23.0	-1.3
ETMB	Extrema	13.94	3	eP	Pn	05 03 27.3	-0.5
ETMB	Extrema	13.94	3	Pn	Pn	05 03 27.8	+0.1
PLTB	Pedras Altas	14.18	127	eP	Pn	05 03 29.3	-1.3
PLTB	Pedras Altas	14.18	127		Pn	05 03 29.5	-1.1
PCMB	Pacaembu	14.60	84	eP	Pn	05 03 35.0	-1.0
TRQA	Tornquist	14.81	165	eP	Pn	05 03 38.1	-0.3
TRQA	Tornquist	14.81	165	Pn	Pn	05 03 36.6	-1.7
CNLB	Canela	15.36	114	eP	Pn	05 03 44.3	-1.0
PDRB	Porto dos Gac	15.52	40	eP	Pn	05 03 46.9	-0.4
LC01	Cunco	15.62	195		P	05 03 49.0	+0.7
LC01				IAmb	IAmb	05 03 52.9	
	comp=Z,14nm,1.1s						
ITRB	Iturama	15.90	78	eP	P	05 03 51.1	-0.5
FRTB	Fartura	15.90	92	eP	P	05 03 50.9	-0.7
ARAG	Araguaiana, MT	16.32	63	eP	Pn	05 03 56.6	-0.3
TIJ01	Guaruva-PR	16.35	99	eP	P	05 03 56.4	-0.2
TER01	Tubaro-SC	16.63	110	eP	P	05 03 59.3	-0.2
CLDB	Colider	16.66	41	eP	P	05 03 59.4	-0.6
PLCA	Paso Flores	17.14	189	P	P	05 04 06.0	+0.9
	comp=Z,0.3nm,0.3s,baz=10,slow=10,SNR=14						
PLCA	Paso Flores	17.14	189	eP	P	05 04 06.0	+0.9
PLCA	Paso Flores	17.14	189		P	05 04 05.2	0.0
PLCA				IAmb	IAmb	05 04 14.2	
	comp=Z,6.2nm,0.8s						
BB19B	Bebedouro	17.20	84	eP	Pn	05 04 06.6	-0.8
LL04	Puerto Octay	17.66	194	P	P	05 04 11.2	+0.6
LL04				IAmb	IAmb	05 04 11.8	
	comp=Z,12nm,0.7s						
RCLB	Rio Claro- Sao	17.87	89	eP	P	05 04 12.5	-0.8
PET01	Itanhaem-SP	17.93	96	eP	P	05 04 13.4	-0.4
VAO	Valinhos	18.32	91	eP	P	05 04 17.9	-0.2
LL05	Los Muermos	18.38	196	P	P	05 04 19.5	+1.0
IPMB	Ipameri, GO	18.39	75	eP	P	05 04 18.8	-0.2
SNDB	Serra Nova Dou	18.93	54	eP	P	05 04 24.0	-0.7
PARB	Paraibuna	19.51	93	eP	P	05 04 30.8	-0.2
BDFB	Brasilia	19.54	69	P	P	05 04 31.1	-0.2
	comp=Z,2.1nm,0.3s,baz=238,slow=12,SNR=66						
BDFB	Brasilia	19.54	69	P	P	05 04 31.4	+0.1
NPGB	Novo Progresso	20.02	35	eP	P	05 04 34.0	-2.4
GO07	Milladeo Hill,	20.04	195	P	P	05 04 36.6	+0.2
BSCB	Bom Sucesso	20.65	87	eP	P	05 04 42.2	-0.9
MAN01	Angra dos Reis	21.08	92	eP	P	05 04 47.2	-0.5
PEXB	Peixe	21.15	60	eP	P	05 04 47.0	-1.4
MACA	Manacapuru-AM	21.39	17	eP	P	05 04 49.6	-1.4
MACA	Manacapuru-AM	21.39	17	P	P	05 04 49.7	-1.2
VAS01	Vassouras-RJ	21.64	91	eP	P	05 04 53.5	+0.1
COYC	Coyhaique	22.11	190	P	P	05 04 58.1	+0.3
COYC				IAmb	IAmb	05 05 02.4	
	comp=Z,19nm,1.2s						
ITTB	Itaituba	22.13	31	eP	P	05 04 56.7	-1.7
DIAM	Diamantina, MG	22.35	80	eP	P	05 04 59.8	-0.8
DUB01	Friburgo-RJ	22.65	91	eP	P	05 05 02.9	-0.2
MC01	Montes Claros	22.65	76	eP	P	05 05 01.7	-1.5
JANB	Januaria	22.99	72	eP	P	05 05 05.0	-1.2
CAM01	Campos-RJ	23.34	90	eP	P	05 05 08.5	-0.8
SMTB	Santa Maria do	23.71	54	eP	P	05 05 11.8	-1.0
SDBA	SAO DESIDERIO	23.75	65	eP	P	05 05 11.8	-1.3
PTGA	Pitinga	23.91	17	P	P	05 05 14.0	-0.5
	comp=Z,3.9nm,0.6s,baz=197,slow=11,SNR=10						
PRPB	Parauapebas	24.03	46	eP	P	05 05 14.0	-1.6
ALF01	Guarapari-ES	24.43	88	eP	P	05 05 18.5	-0.7
SJMB	Sao Joao De Ma	24.48	83	eP	P	05 05 19.5	-0.3
BSFB	Barra de Sao F	24.76	83	eP	P	05 05 21.2	-1.0
MALB	Monte Alegre	25.03	31	eP	P	05 05 24.2	-0.5
RIB01	Linhares ES	25.04	85	eP	P	05 05 23.3	-1.5
NAN01	Guarapari, ES	25.70	82	eP	P	05 05 29.4	-1.3
GUA01	Guaratinga, BA	26.40	79	eP	P	05 05 36.2	-0.8
BOAV	Boa Vista	26.78	14	eP	P	05 05 40.8	+0.4
BOAV	Boa Vista	26.78	14	P	P	05 05 40.5	+0.1
BOAV				IAmb	IAmb	05 05 42.6	
	comp=Z,4.2nm,1.1s						
CMC01	Camacan, BA	27.10	77	eP	P	05 05 42.0	-1.2
GDU01	Guandu, BA	27.70	74	eP	P	05 05 47.1	-1.5
VNA3	Neumayer Olymp	57.30	161	P	P	05 09 46.8	+1.4
VNA1	Neumayer--Stat	57.49	160	P	P	05 09 50.2	+3.6
VNA2	Neumayer--Watz	57.86	160	P	P	05 09 50.5	+1.3
	baz=285,slow=8.0						
SNAA	Sanae	59.49	161	P	P	05 10 01.6	+1.0
SNAA	Sanae	59.49	161	P	P	05 10 01.7	+1.2
SNAA				IAmb	IAmb	05 10 05.2	
	comp=Z,6.1nm,1.4s						
WVT	Waverly	62.82	341	P	P	05 10 23.4	+0.3
WVT				IAmb	IAmb	05 10 24.5	
	comp=Z,4.1nm,0.9s						
TX31	Lajitas Ar. Si	63.58	324	P	P	05 10 30.3	+1.8
TX31				IAmb	IAmb	05 10 55.5	
	comp=Z,13nm,1.4s						
TXAR	Lajitas Array	63.58	324	P	P	05 10 30.1	+1.6
	comp=Z,0.5nm,0.7s,baz=150,slow=8.5,SNR=9.4						
TXAR	Lajitas Array	63.58	324	P	P	05 10 30.3	+1.8
CCM	Cathedral Cave	65.66	339	P	P	05 10 41.8	+0.2
CCM				IAmb	IAmb	05 10 42.9	
	comp=Z,4.8nm,0.7s						
S39A	Bolivar	66.03	337	P	P	05 10 45.0	+1.0
S39A				IAmb	IAmb	05 10 47.0	
	comp=Z,3.1nm,0.8s						
R40A	Maddies Statio	66.21	338	P	P	05 10 46.2	+1.1
R40A				IAmb	IAmb	05 10 46.3	
	comp=Z,2.1nm,0.6s						
MNTX	Cornudas Mount	66.35	325	P	P	05 10 46.9	+0.7
DBIC	Dimbokro	67.66	72	P	P	05 10 53.8	-1.0
	comp=Z,3.6nm,0.6s,baz=251,slow=8.9,SNR=6.7						
DBIC	Dimbokro	67.66	72	P	P	05 10 54.3	-0.4
DBIC				IAmb	IAmb	05 10 54.8	
	comp=Z,6.1nm,0.8s						
P38A	Dawn	67.84	338	P	P	05 10 56.1	+0.8
P38A				IAmb	IAmb	05 10 56.3	
	comp=Z,5.6nm,0.6s						
ANMO	Albuquerque	69.44	326	P	P	05 11 05.9	+0.3
CBKS	Cedar Bluff	69.48	333	P	P	05 11 05.0	-0.6
CBKS				IAmb	IAmb	05 11 05.1	
	comp=Z,8.7nm,0.9s						
SCIA	State Center	69.78	339	P	P	05 11 07.6	+0.3
BGNE	Belgrade	71.07	336	P	P	05 11 12.7	-2.5
SDCO	Great Sand Dun	71.18	328	P	P	05 11 16.5	+0.3
SFX	San Felipe	71.31	318	P	P	05 11 17.4	+0.7
SFX				IAmb	IAmb	05 11 20.5	
	comp=Z,5.4nm,1.0s						
MVCO	Mesa Verde	72.24	326	P	P	05 11 21.9	-0.6
ECSD	EROS Data Cent	72.54	338	P	P	05 11 24.8	+1.0
ISCO	Idaho Springs	72.87	330	P	P	05 11 26.1	-0.1
F36A	Milaca	73.45	341	P	P	05 11 30.0	+0.9
TORD	Torodi Ar. Bea	76.42	69	P	P	05 11 46.5	-0.3
	comp=Z,4.2nm,0.7s,baz=258,slow=5.4,SNR=27						
TORD	Torodi Ar. Bea	76.42	69	P	P	05 11 46.0	-0.8
TORD				IAmb	IAmb	05 11 48.7	
	comp=Z,3.8nm,0.9s						
PDAR	Pinedale Array	77.04	329	P	P	05 11 51.6	+1.7
	comp=Z,0.4nm,0.5s,baz=124,slow=6.2,SNR=5.6						
SCHQ	Schefferville	78.33	0	P	P	05 11 57.4	+0.9
	comp=Z,1.6nm,0.8s,baz=236,slow=7.3,SNR=2.7						
NVAR	Mina Array Bea	78.45	321	P	P	05 11 59.9	+2.1
	comp=Z,0.3nm,0.6s,baz=148,slow=6.2,SNR=4.1						
BOSA	Boshof	80.74	117	P	P	05 12 10.1	-0.3
	comp=Z,1.1nm,0.3s,baz=249,slow=4.0,SNR=11						
BOSA	Boshof	80.74	117	IAmb	IAmb	05 12 17.6	
	comp=Z,12nm,1.5s						
PLID	Pearl Lake	81.87	327	P	P	05 12 16.7	+0.7
ESDC	Sonseca Array	86.20	44	P	P	05 12 39.0	+1.3
	comp=Z,0.6nm,0.7s,baz=244,slow=4.3,SNR=3.6						
YKA	Yellowknife Ar	93.98	340	P	P	05 13 14.5	+1.0
	comp=Z,0.6nm,0.6s,baz=133,slow=4.6,SNR=6.6						
WRA	Warramunga Arr	131.83	207	PKP	PKiKP	05 19 10.2	+0.2
	comp=Z,0.8nm,0.6s,baz=153,slow=1.8,SNR=3.0						
MKAR	Makanchi Array	146.33	39	PKPbc	PKPbc	05 19 36.5	+0.5
	comp=Z,1.3nm,0.6s,baz=314,slow=2.5,SNR=12						

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*IDC **10** 05:11:23.8±1.5,4°.16S×129°.40E,h0^{km},mb3.5/2, mb1 3.4/5,mb1mx3.3/38,mbtmp3.3/5,ML3.2/1,Error ellipse: s-maj=46.8km s-min=25.8km az=90.0*

ISC 10 05:11:28.2±1.1**,4°.20S**±0°.10×**129°.4E**±0°.2**,h36^{km},n6, σ1^{s}.61**/7**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	3.78	29	Pn	Pn	05 12 23.8	-0.2
	1.7nm,0.3s,baz=127,slow=20,SNR=4.0						
SIJI				Sn	Sn	05 13 07.6	+0.4
	0.9nm,0.3s,baz=217,slow=20,SNR=1.5						
WRA	Warramunga Arr	16.36	163	Pn	Pn	05 15 13.7	-1.6
	baz=346,slow=13,SNR=2.2						
ASAR	Alice Springs	19.83	168	P	P	05 15 57.6	+1.7
	baz=356,slow=11,SNR=2.5						
HHC	Hu-ho-hao-te	47.73	342	eP	P	05 20 00.5	-1.2
MKAR	Makanchi Array	65.60	326	P	P	05 22 08.2	-0.3
	0.1nm,0.5s,baz=126,slow=7.3,SNR=1.9						
KURBB	Kurchatov Arra	69.85	328	P	P	05 22 37.0	+1.8
	0.2nm,0.3s,baz=125,slow=5.8,SNR=1.7						

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*IDC **10** 05:12:53.5±1.0,4°.19S×129°.43E,h0^{km},mb4.1/5, mb1 4.3/9,mb1mx3.8/42,mbtmp4.2/9,ML3.9/4,MS2.9/1, Ms1 2.9/1,ms1mx2.2/36,Error ellipse: s-maj=44.4km s-min=20.5km az=75.0*

*NEIC **10** 05:12:54.5±2.4,4°.31S±0°.07×129°.46E±0°.08,h10^{km}±1^{km}, mb4.4/26,Error ellipse: s-maj=13.6km s-min=11.5km az=288.0*

*DJA **10** 05:12:58.8±0.8,4°S±9°×12°9E±$^{\circ}$,h63^{km}±8^{km},M4.5/10, mb5.1/2,mB5.5/1,MLv4.1/10,Mw(mB)5.0/1*

ISC 10 05:12:57.2±0.5**,4°.18S**±0°.05×**129°.40E**±0°.05**,h36^{km},n70, σ1^{s}.56**/70**,mb4.3**/13**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	0.95	331	P	Pn	05 13 13.9	-0.2
MSAI				S	Sn	05 13 25.3	-1.1
AAI	Ambon	1.29	292	P	Pn	05 13 18.4	-0.4
FAKI	Fak Fak	3.11	66	P	Pn	05 13 44.9	+1.1
FAKI	Fak Fak	3.11	66		Pn	05 13 45.0	+1.1
FAKI	Fak Fak	3.11	66	P	Pn	05 13 45.5	+1.7
SIJI	Sorong	3.78	30	Pn	Pn	05 13 54.4	+1.3
	28nm,0.3s,baz=236,slow=23,SNR=43						
SIJI				Sn	Sn	05 14 34.2	-2.2
	7.7nm,0.3s,baz=233,slow=20,SNR=1.3						
SWI	Sorong	3.79	30	P	Pn	05 13 53.0	-0.1
LBMI	Labuha	4.00	332	P	Pn	05 13 53.4	-2.6
SANI	Sanana	4.01	302	P	Pn	05 13 54.7	-1.4
SANI	Sanana	4.01	302	P	Pn	05 14 00.3	+4.2
SAUI	Saumlaki	4.22	153	Pn	Pn	05 13 57.1	-2.0
KMSI	Cibinong	7.18	311	P	Pn	05 14 37.1	-2.7
SOEI	Soe	7.52	222	Pn	Pn	05 14 44.8	+0.2
GTOI	Gorontalo	7.97	307	P	Pn	05 14 42.7	-8.0
MTN	Manton Dam	8.78	169		Pn	05 14 59.8	-1.9
KDU	Kakadu	8.98	160	P	Pn	05 15 05.2	+0.7
KNRA	Kununurra	11.44	183	Pn	Pn	05 15 36.2	-1.9
KNRA	Kununurra	11.44	183	P	Pn	05 15 39.2	+1.0
FITZ	Fitzroy Crossi	14.31	195	Pn	Pn	05 16 17.6	+0.2
	0.1nm,0.3s,baz=77,slow=20,SNR=2.2						
MTKI	Muara Teweh, K	14.84	282	P	Pn	05 16 17.9	-6.6
WB0	Warramunga Arr	16.24	163		Pn	05 16 41.3	-1.5
WRAB	Tennant Creek	16.39	163	Pn	Pn	05 16 42.3	-2.3
WRAB				IAmb	IAmb	05 17 10.8	
	comp=Z,5.4nm,0.6s						
WRAB	Tennant Creek	16.39	163	P	Pn	05 16 44.2	-0.4
WRA	Warramunga Arr	16.39	163	Pn	Pn	05 16 43.0	-1.7
	comp=Z,0.4nm,0.3s,baz=348,slow=13,SNR=17						
WRA				LR	LR	05 22 33.5	
	comp=Z,41nm,21.4s,baz=105,slow=35						
WRA	Warramunga Arr	16.39	163		Pn	05 16 43.8	-0.9
WB2	Warramunga Arr	16.39	163		Pn	05 16 43.5	-1.2
WR0	Warramunga Arr	16.47	163		Pn	05 16 44.9	-0.8
COEN	Coen	16.71	126	Pn	Pn	05 16 47.1	-1.6
COEN				IAmb	IAmb	05 17 24.6	
	comp=Z,23nm,1.4s						
COEN	Coen	16.71	126	P	P	05 16 50.2	-0.5
PMG	Port Moresby	18.38	107	P	P	05 17 07.5	-1.8
PMG				IAmb	IAmb	05 17 55.5	
	comp=Z,20nm,1.1s						
SBUM	Sibu	18.38	291	P	Pn	05 17 09.8	+0.4
QIS	Mount Isa	19.07	149	P	Pn	05 17 18.8	+1.0
MBWA	Marble Bar	19.31	208	P	Pn	05 17 22.7	+2.1
PSA00	Pilbara Seismi	19.62	207	P	P	05 17 22.9	+0.2
PSA00				IAmb	IAmb	05 17 27.0	
	comp=Z,20nm,0.9s						
PSA00	Pilbara Seismi	19.62	207	P	P	05 17 22.8	+0.1
PSA00				IAmb	IAmb	05 17 26.9	
	comp=Z,12nm,1.0s						
PSA00	Pilbara Seismi	19.62	207	P	Pn	05 17 26.3	+2.0
AS31	Alice Springs	19.86	168	P	P	05 17 24.8	-0.5
ASAR	Alice Springs	19.86	168	P	Pn	05 17 27.6	+0.5
	comp=Z,1.1nm,0.3s,baz=348,slow=9.8,SNR=39						
ASAR				PcP	PcP	05 21 43.5	+1.4
	comp=Z,0.1nm,0.3s,baz=4.6,slow=2.3,SNR=4.8						
ASAR	Alice Springs	19.86	168	P	P	05 17 24.0	-1.3
KSM	Kuching	19.88	286	P	P	05 17 25.7	0.0
KSM				IAmb	IAmb	05 17 41.7	
	comp=Z,8.6nm,0.8s						
WRKA	Warakurna	20.76	183	P	Pn	05 17 38.3	+0.6
CTAO	Charters Tower	22.80	135	P	P	05 17 56.0	-1.0
CTAO				IAmb	IAmb	05 18 34.0	
	comp=Z,11nm,1.2s						
OOD	Oodnadatta	24.24	166	P	P	05 18 12.3	+1.4
MULG	Mulgathing	26.33	171	P	P	05 18 31.5	+1.6
FORT	Forrest	26.49	183	P	P	05 18 30.3	-1.0
FORT				IAmb	IAmb	05 18 53.3	
	comp=Z,14nm,0.8s						
FORT	Forrest	26.49	183	P	P	05 18 34.5	+3.3
LCRK	Leigh Creek	27.42	163	P	P	05 18 42.6	+2.9
JSU	Suzuyama	35.50	2	P	P	05 19 50.1	-0.5
CMAR	Chiang Mai Arr	37.50	308	P	P	05 20 10.8	+2.9
	comp=Z,1.4nm,0.4s,baz=128,slow=9.3,SNR=6.7						
CMAR	Chiang Mai Arr	37.50	308	P	P	05 20 09.8	+1.9
ENH	Enshi	39.20	332	P	P	05 20 22.1	0.0
ENH				IAmb	IAmb	05 21 39.5	
	comp=Z,20nm,1.4s						
DZM	Mont Dzumac	40.05	120	P	P	05 20 27.5	-1.9
DZM				IAmb	IAmb	05 20 29.0	
	comp=Z,37nm,1.3s						
MJAR	Matsushiro Arr	41.34	11	P	P	05 20 39.5	-0.2
MJAR				IAmb	IAmb	05 21 14.2	
	comp=Z,18nm,1.9s						
KSAR	Wonju Array Be	41.43	358	P	P	05 20 39.5	-0.9
TAU	Tasmania Unive	41.73	160	P	P	05 20 41.2	-1.5
PYZ	Puysegur Point	52.88	148	P	P	05 22 09.5	0.0
MK31	Makanchi Array	65.56	326	P	P	05 23 38.4	+1.1
MK31				IAmb	IAmb	05 24 20.1	
	comp=Z,2.4nm,1.1s						
MKAR	Makanchi Array	65.56	326	P	P	05 23 39.3	+2.0
	comp=Z,0.8nm,0.4s,baz=114,slow=7.7,SNR=18						
MKAR	Makanchi Array	65.56	326	P	P	05 23 38.5	+1.2
MAKZ	Makanchi	65.74	326	P	P	05 23 40.0	+1.5
MAKZ				IAmb	IAmb	05 25 27.7	
	comp=Z,3.8nm,1.1s						
ZALV	Zalesovo Beam	68.81	334	P	P	05 23 59.3	+1.6
	comp=Z,0.5nm,0.4s,baz=72,slow=4.8,SNR=4.0						
ZALV	Zalesovo Beam	68.81	334	P	P	05 23 58.1	+0.4
BTK	Batken	69.35	316	P	P	05 24 01.9	+0.4
KURBB	Kurchatov Arra	69.81	328	P	P	05 24 05.2	+1.2
	comp=Z,1.7nm,0.5s,baz=130,slow=5.5,SNR=13						
KURK	Kurchatov	69.81	328	P	P	05 24 05.7	+1.7
KURK				IAmb	IAmb	05 24 07.2	
	comp=Z,5.8nm,1.1s						
BVAR	Borovoye Array	75.37	328	P	P	05 24 38.9	+1.8
	comp=Z,1.2nm,0.8s,baz=185,slow=15,SNR=4.5						
SBA	Scott Base	76.19	172	P	P	05 24 41.5	+0.2
ABKAR	Akbulak array	79.94	321	P	P	05 25 03.3	+0.7
QSPA	South Pole Qui	85.78	180	P	P	05 25 31.1	-1.6
TORD	Torodi Ar. Bea	127.63	283	PKP	PKiKP	05 32 01.0	+0.7
	comp=Z,0.6nm,0.8s,baz=79,slow=2.1,SNR=3.7						

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*IDC **10** 05:20:47.8±1.5,11°.25S×118°.88E,h0^{km},mb3.9/3, mb1 4.2/8,mb1mx3.7/41,mbtmp4.0/8,ML3.9/5,MS3.2/2, Ms1 3.2/2,ms1mx2.6/39,Error ellipse: s-maj=49.4km s-min=20.3km az=47.0*

*DJA **10** 05:20:50.8±0.6,11°S±7°×11°9E±$^{\circ}$,h10^{km},M4.5/19, mb4.6/8,mB5.2/6,MLv4.4/19,Mw(mB)4.5/6*

*NEIC **10** 05:20:51.8±1.9,11°.14S±0°.05×119°.01E±0°.06,h26^{km}±5^{km}, mb4.2/20,Error ellipse: s-maj=9.8km s-min=5.8km az=117.0*

ISC 10 05:20:51.6±0.5**,11°.09S**±0°.05×**119°.11E**±0°.05**,h27^{km},n79, σ1^{s}.74**/80**,mb4.2**/10**,South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	1.46	11	P	Pn	05 21 17.4	+1.1
BASI	Baing, Sumba	1.68	59	P	Pn	05 21 20.3	+1.1
PLAI	Plampang	2.60	330	P	Pn	05 21 33.3	+1.4
PLAI				S	Sn	05 22 01.7	-0.9
PLAI	Plampang	2.60	330	P	Pb	05 21 36.1	-1.4
TWSI	Taliwang, Sumb	3.20	317	P	Pn	05 21 41.3	+1.1
EDFI	Ende, Flores	3.44	48	P	Pn	05 21 44.6	+1.0
MMRI	Maumere	3.93	52	P	Pn	05 21 51.7	+1.5
MMRI	Maumere	3.93	52	Pn	Pn	05 21 49.2	-0.9
MMRI				Sn	Sn	05 22 33.3	-2.2
MMRI	Maumere	3.93	52	P	Pn	05 21 50.6	+0.4
IGBI	Denpasar	4.51	300	P	Pn	05 21 58.9	+0.8
DNP	Denpasar	4.53	302	P	Pn	05 21 59.6	+1.2
BATI	Baumata	4.56	79	Pn	Pn	05 22 00.8	+1.9
	20nm,0.3s,baz=290,slow=2.0,SNR=8.5						
BATI				Sn	Sn	05 22 50.7	-0.4
	16nm,0.3s,baz=106,slow=18,SNR=3.5						
BATI	Baumata	4.56	79	P	Pn	05 22 00.2	+1.3
SRBI	Singaraja	4.86	307	P	Pn	05 22 04.4	+1.4

BSSI	Bau Bau, Buton	5.10	16	P	Pn	05 22 08.3	+2.0
	0.2nm608nm33nm,0.7s						
SOEI	Soe	5.25	76	P	Pn	05 22 10.9	+2.5
	0.4nm1µm122nm,0.8s						
SOEI	Soe	5.25	76	Pn	Pn	05 22 11.4	+3.1
JAGI	Jajag, Banyuwa	5.53	298	P	Pn	05 22 13.4	+1.2
	0.8nm3µm31nm,0.5s						
JAGI	Jajag, Banyuwa	5.53	298	Pn	Pn	05 22 11.2	-1.0
ABJI	Asem Bagus	5.81	304	P	Pn	05 22 16.8	+0.7
BKSI	Bulukumba	5.81	10	P	Pn	05 22 18.2	+2.1
	0.2nm622nm73nm,0.6s						
KAPI	Kappang	6.07	6	Pn	Pn	05 22 23.4	+3.9
	2.3nm,0.3s,baz=222,slow=2.7,SNR=5.4						
KAPI				Sn	Sn	05 23 24.6	-3.5
	0.5nm,0.3s,baz=18,slow=20,SNR=1.7						
KAPI				LR	LR	05 25 14.5	
	comp=Z,83nm,19.1s,baz=174,slow=43						
KAPI	Kappang	6.07	6	Pn	Pn	05 22 21.2	+1.7
KAPI	Kappang	6.07	6	P	Pn	05 22 23.8	+4.2
GMJI	Gumukmas	6.25	296	P	Pn	05 22 22.9	+0.9
	0.3nm24nm,1.6s						
BLJI	Banyuglugur	6.37	301	P	Pn	05 22 24.2	+0.4
	0.3nm23nm,0.7s						
BNSI	Bone	6.72	9	P	Pn	05 22 30.0	+1.5
	0.1nm20nm,0.7s						
PCJI	Pacitan	8.33	289	P	Pn	05 22 52.2	+1.5
UGM	Wanagama	9.04	290	Pn	Pn	05 22 59.1	-1.3
UGM	Wanagama	9.04	290	P	Pn	05 23 05.6	+5.2
FITZ	Fitzroy Crossi	9.41	139	Pn	Pn	05 23 05.2	-0.3
	0.3nm,0.3s,baz=346,slow=18,SNR=77						
FITZ				Sn	Sn	05 24 43.8	-6.6
	1.3nm,0.3s,baz=128,slow=15,SNR=6.1						
MBWA	Marble Bar	10.03	177	P	Pn	05 23 14.4	+0.4
KNRA	Kununurra	10.44	117	Pn	Pn	05 23 20.1	+0.5
PSA00	Pilbara Seismi	10.45	176	Pn	Pn	05 23 19.5	-0.2
PSA00	Pilbara Seismi	10.45	176		Pn	05 23 17.8	-1.9
PSA00	Pilbara Seismi	10.45	176	P	Pn	05 23 19.8	+0.1
MTN	Manton Dam	11.89	100	Pn	Pn	05 23 40.6	+1.1
GIRL	Giralia	12.40	201	Pn	Pn	05 23 47.1	+0.8
GIRL	Giralia	12.40	201	P	Pn	05 23 48.1	+1.7
KSM	Kuching	15.24	324	Pn	Pn	05 24 25.4	+0.3
KSM				IAmb	IAmb	05 24 26.6	
	comp=Z,5.9nm,0.6s						
FAKI	Fak Fak	15.35	59	Pn	Pn	05 24 28.0	+1.4
FAKI				IAmb	IAmb	05 24 34.5	
	comp=Z,13nm,0.6s						
MEEK	Meekatharra	15.48	182	P	Pn	05 24 28.8	+0.7
WB0	Warramunga Arr	17.06	122	P	Pn	05 24 46.9	-1.5
WRA	Warramunga Arr	17.10	123	P	Pn	05 24 47.9	-1.0
	comp=Z,0.3nm,0.3s,baz=298,slow=13,SNR=19						
WRA				S	Sn	05 27 42.8	-16
	comp=Z,0.2nm,0.3s,baz=299,slow=24,SNR=5.0						
WRA	Warramunga Arr	17.10	123	P	Pn	05 24 47.6	-1.3
WRAB	Tennant Creek	17.11	123	P	P	05 24 49.7	-0.8
WRAB	Tennant Creek	17.11	123	P	Pn	05 24 48.6	-0.3
WB2	Warramunga Arr	17.11	123		Pn	05 24 48.3	-0.7
WR0	Warramunga Arr	17.28	123	P	Pn	05 24 50.4	-0.7
MORW	Morawa	18.12	189	P	P	05 25 01.3	-0.2
MORW				IAmb	IAmb	05 25 05.5	
	comp=Z,23nm,1.4s						
MORW	Morawa	18.12	189	P	P	05 25 02.0	+0.4
ASAR	Alice Springs	18.84	134	P	Pn	05 25 11.8	+1.6
	comp=Z,0.9nm,0.3s,baz=312,slow=10,SNR=57						
ASAR				S	Sn	05 28 28.1	-12
	comp=Z,0.2nm,0.3s,baz=300,slow=22,SNR=4.8						
BLDU	Ballidu	19.56	186	P	Pn	05 25 20.2	+1.4
KLBR	Kellerberrin	20.44	183	P	Pn	05 25 30.4	+1.2
MUN	Mundaring	20.96	187	P	Pn	05 25 36.1	+0.8
FORT	Forrest	21.28	158	P	P	05 25 38.6	+2.6
NWAO	Narrogin (SRO)	21.80	184	P	P	05 25 45.3	+3.7
QIS	Mount Isa	21.83	118	P	P	05 25 44.4	+2.3
OOD	Oodnadatta	22.77	139	P	P	05 25 54.2	+2.2
MULG	Mulgathing	23.62	146	P	P	05 26 03.1	+2.5
COEN	Coen	23.66	99	P	P	05 26 01.9	+0.8
COEN				IAmb	IAmb	05 26 18.3	
	comp=Z,10nm,1.1s						
BBOO	Buckleboo	26.65	147	P	P	05 26 28.5	+0.3
DZM	Mont Dzumac	46.49	110	LR	LR	05 49 42.5	
	comp=Z,68nm,19.2s,baz=40,slow=37						
PINNC	Pines Island,	47.47	110	P	P	05 29 24.4	-0.1
USA0B	Ussuriysk Arra	56.26	11	P	P	05 30 30.9	+1.4
USA0B				IAmb	IAmb	05 30 32.0	
	comp=Z,4.2nm,0.9s						
JEW	Eniwo	57.43	19	P	P	05 30 38.8	+0.9
MK31	Makanchi Array	66.36	333	P	P	05 31 36.5	-1.4
MK31				IAmb	IAmb	05 31 37.9	
	comp=Z,1.9nm,1.0s						
MKAR	Makanchi Array	66.36	333	P	P	05 31 39.2	+1.3
	comp=Z,0.7nm,0.6s,baz=155,slow=6.9,SNR=7.0						
MKAR	Makanchi Array	66.36	333	P	P	05 31 38.7	+0.8
MAKZ	Makanchi	66.50	333	P	P	05 31 39.2	+0.4
MAKZ				IAmb	IAmb	05 32 06.0	
	comp=Z,2.7nm,1.0s						
MAW	Mawson	67.32	200	P	P	05 31 43.3	-0.4
MAW				IAmb	IAmb	05 31 47.9	
	comp=Z,1.9nm,1.1s						
GAR	Garm	67.41	321	P	P	05 31 44.0	-1.0
KNTN	Kanton	69.04	89	P	P	05 31 55.8	+0.3
KURBB	Kurchatov Arra	70.88	334	P	P	05 32 06.2	+0.2
	comp=Z,0.4nm,0.4s,baz=142,slow=5.8,SNR=6.1						
ZALV	Zalesovo Beam	71.02	339	P	P	05 32 07.3	+0.5
	comp=Z,0.6nm,0.4s,baz=126,slow=2.6,SNR=3.9						
ZALV	Zalesovo Beam	71.02	339	P	P	05 32 06.8	0.0
ABKAR	Akbulak array	79.32	325	P	P	05 32 54.9	+0.1
RAYN	Ar Rayn	79.72	297	P	P	05 32 55.5	-2.0
RAYN				IAmb	IAmb	05 33 17.5	
	comp=Z,3.1nm,1.4s						
KMBO	Kilima Mbogo	81.79	270	P	P	05 33 06.4	-2.8
KMBO				IAmb	IAmb	05 33 29.9	
	comp=Z,4.2nm,1.3s						

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*IDC **10** 05:26:13.5±1.4, 4°.20S×129°.39E, h0^{km}, mb4.0/3, mb1 4.1/6, mb1mx3.6/39, mbtmp3.9/6, ML3.7/2, MS3.2/6, Ms1 3.2/6, ms1mx2.8/41, Error ellipse: s-maj=38.9km s-min=23.9km az=82.0*

*NEIC **10** 05:26:15.3±1.1, 4°.35S±0°.08×129°.42E±0°.06, h20^{km}±6^{km}, mb4.4/15, Error ellipse: s-maj=12.1km s-min=8.6km az=192.0*

*DJA **10** 05:26:15.7±1.7, 4°S±12°×12°9E±°, h14^{km}±11^{km}, M4.2/8, mb5.0/1, MLv3.8/8*

ISC 10 05:26:16.7±0.5**, 4°.37S**±0°.06×**129°.40E**±0°.07**, h35^{km}, n40,** σ**0^{s}97**/37**, mb4.2**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.12	335	P	Pn	05 26 33.8	-2.1
AAI	Ambon	1.38	300	P	Pn	05 26 39.2	-0.3
FAKI	Fak Fak	3.19	63	P	Pn	05 27 04.2	-0.3
FAKI	Fak Fak	3.19	63		Pn	05 27 03.4	-1.0
SIJI	Sorong	3.95	28	Pn	Pn	05 27 14.1	-0.8
	5.7nm,0.3s,baz=154,slow=23,SNR=9.2						
SIJI				Sn	Sn	05 28 00.1	+0.1
	baz=77,slow=10,SNR=4.3						
SWI	Sorong	3.95	28	P	Pn	05 27 13.6	-1.3
SANI	Sanana	4.11	304	P	Pn	05 27 16.5	-0.6
LBMI	Labuha	4.16	333	P	Pn	05 27 16.3	-1.5
SOEI	Soe	7.38	223	Pn	Pn	05 28 01.0	-1.2
BATI	Baumata	8.12	224	LR	LR	05 31 20.4	
	comp=Z,225nm,20.4s,baz=68,slow=37						
KAPI	Kappang	9.63	266	Pn	Pn	05 28 32.8	-0.2
KNRA	Kununurra	11.25	183	Pn	Pn	05 28 55.4	+0.2
DAV	Davao City (W)	11.99	341	LR	LR	05 34 35.8	
	comp=Z,68nm,18.7s,baz=162,slow=42						
WRA	Warramunga Arr	16.21	163	Pn	P	05 30 04.3	-0.4
	baz=345,slow=13,SNR=3.4						
WRA				LR	LR	05 36 35.2	
	comp=Z,78nm,19.4s,baz=325,slow=38						
WB2	Warramunga Arr	16.21	163	Pn	Pn	05 30 02.5	+0.6
WB2				IAmb	IAmb	05 30 19.3	
	comp=Z,6.6nm,1.0s						
WR0	Warramunga Arr	16.29	162	Pn	Pn	05 30 03.0	+0.2
COEN	Coen	16.59	126		P	05 30 07.7	-1.3
COEN				IAmb	IAmb	05 30 18.4	
	comp=Z,11nm,0.9s						
PSA00	Pilbara Seismi	19.45	208	P	P	05 30 39.4	-1.0
AS31	Alice Springs	19.67	168	P	P	05 30 41.9	-1.0
ASAR	Alice Springs	19.67	168	P	Pn	05 30 46.5	+2.1
	comp=Z,0.2nm,0.3s,baz=345,slow=10,SNR=16						
ASAR				LR	LR	05 38 40.1	
	comp=Z,94nm,19.9s,baz=356,slow=38						
ASAR	Alice Springs	19.67	168	P	P	05 30 42.4	-0.5
LEM	Lembang	21.81	263	LR	LR	05 39 46.7	
	comp=Z,78nm,18.5s,baz=125,slow=37						
CTAO	Charters Tower	22.66	135	P	P	05 31 14.7	-0.5
CTAO				IAmb	IAmb	05 31 30.2	
	comp=Z,15nm,1.4s						
BBOO	Buckleboo	28.97	168	P	P	05 32 13.0	0.0
BBOO				IAmb	IAmb	05 32 26.4	
	comp=Z,25nm,1.5s						
EIDS	Eidsvold	29.48	137	P	P	05 32 17.4	-0.3
EIDS				IAmb	IAmb	05 32 28.1	
	comp=Z,2.2nm,1.0s						
JNU	Nakatsue	37.31	2	P	P	05 33 25.8	+0.1
CMAR	Chiang Mai Arr	37.62	308	P	P	05 33 30.7	+2.2
	comp=Z,0.8nm,0.3s,baz=132,slow=9.1,SNR=4.2						
SANVU	Saraoutou	38.76	109	P	P	05 33 37.5	-0.7
SANVU				IAmb	IAmb	05 33 39.8	
	comp=Z,24nm,0.9s						
PBA	Port Blair	39.78	294	P	P	05 33 45.9	-0.8
PINNC	Pines Island,	41.02	120	P	P	05 33 56.2	-0.7
KLR	Kul'dur	53.42	2	LR	LR	05 55 34.6	
	comp=Z,20nm,20.4s,baz=14,slow=33						
TLY	Talaya	60.01	342	P	P	05 36 20.4	+0.6
TLY				IAmb	IAmb	05 36 39.3	
	comp=Z,5.7nm,0.9s						
MK31	Makanchi Array	65.71	326	P	P	05 36 58.6	+0.7
MK31				IAmb	IAmb	05 37 01.6	
	comp=Z,2.4nm,1.0s						
MKAR	Makanchi Array	65.71	326	P	P	05 36 58.8	+0.9
	comp=Z,0.5nm,0.5s,baz=112,slow=6.6,SNR=3.0						
MKAR	Makanchi Array	65.71	326	P	P	05 36 58.0	+0.1
MAKZ	Makanchi	65.89	326	P	P	05 37 00.2	+1.1
MAKZ				IAmb	IAmb	05 37 18.8	
	comp=Z,5.5nm,1.0s						
ZALV	Zalesovo Beam	68.98	334	P	P	05 37 19.0	+0.6
KURBB	Kurchatov Arra	69.97	328	P	P	05 37 25.0	+0.5
	comp=Z,0.8nm,0.3s,baz=127,slow=5.9,SNR=7.8						
KKAR	Karatay Array	70.98	318	P	P	05 37 31.2	+0.3
ABKAR	Akbulak array	80.09	321	P	P	05 38 23.4	+0.4

IDC 10 05:35:10.0±1.7**, 4°.11S×129°.33E, h0^{km}, mb3.7**/1**, mb1 3.5**/4**, mb1mx2.9**/41**, mbtmp3.4**/4**, ML2.9**/3**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.4**/38**, Error ellipse: s-maj=59.4km s-min=28.9km az=82.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.75	31	Pn	Pn	05 36 09.2	-0.1
	2.4nm,0.3s,baz=253,slow=19,SNR=1.9						
WRA	Warramunga Arr	16.48	163	Pn	Pn	05 39 03.4	+0.6
	0.0nm,0.3s,baz=346,slow=13,SNR=2.0						
ASAR	Alice Springs	19.94	168	P	P	05 39 43.4	-0.3
	0.1nm,0.3s,baz=349,slow=9.4,SNR=2.9						
KSRS	Korea Array	41.37	358	LR	LR	06 00 25.0	
	comp=Z,29nm,18.4s,baz=176,slow=37						
MKAR	Makanchi Array	65.46	326	P	P	05 45 55.0	0.0
	0.3nm,0.4s,baz=111,slow=8.1,SNR=4.2						

IDC 10 05:37:47.5±1.8**, 4°.73S×130°.04E, h0^{km}, mb3.7**/1**, mb1 3.5**/4**, mb1mx3.2**/38**, mbtmp3.4**/4**, ML2.9**/3**, Error ellipse: s-maj=81.7km s-min=28.8km az=82.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.03	18	Pn	Pn	05 38 51.1	+0.6
	2.6nm,0.3s,baz=127,slow=20,SNR=2.1						
WRA	Warramunga Arr	15.69	165	Pn	Pn	05 41 28.9	-1.1
	0.0nm,0.3s,baz=351,slow=13,SNR=2.6						
ASAR	Alice Springs	19.19	169	P	Pn	05 42 13.5	-0.3
	0.1nm,0.3s,baz=355,slow=9.3,SNR=3.2						
MKAR	Makanchi Array	66.37	326	P	P	05 48 38.0	-0.2
	0.8nm,0.9s,baz=112,slow=8.0,SNR=2.7						

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*IDC **10** 05:38:40.9±0.7, 4°.50S×129°.56E, h0^{km}, mb4.3/11, mb1 4.4/14, mb1mx4.0/39, mbtmp4.3/14, ML4.3/3, MS3.3/5, Ms1 3.3/5, ms1mx3.0/28, Error ellipse: s-maj=32.3km s-min=15.0km az=71.0*

*NEIC **10** 05:38:44.4±1.6, 4°.45S±0°.06×129°.65E±0°.05, h28^{km}±6^{km}, mb4.5/33, Error ellipse: s-maj=8.7km s-min=6.5km az=189.0*

*DJA **10** 05:38:44.2±0.2, 4°S±2°×13°0E±°, h10^{km}, M4.4/14, mB5.1/4, mb4.5/14, MLv4.3/9, Mw(mB)4.4/4*

ISC 10 05:38:41.4±0.4**, 4°.49S**±0°.04×**129°.63E**±0°.06**, h10^{km}, n89,** σ**1^{s}54**/86**, mb4.5**/22**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.33	328	P	Pn	05 39 04.2	-1.9
MSAI				S	Sb	05 39 19.4	-4.3
AAI	Ambon	1.64	299	P	Pn	05 39 08.6	-1.7
FAKI	Fak Fak	3.04	59	P	Pn	05 39 30.2	+0.6
FAKI	Fak Fak	3.04	59	Pn	Pn	05 39 30.1	+0.6
SAUI	Saumlaki	3.85	155	Pn	Pn	05 39 42.1	+1.4
SIJI	Sorong	3.94	24	Pn	Pn	05 39 42.8	+0.7
	22nm,0.3s,baz=211,slow=15,SNR=14						
SIJI				Sn	Sn	05 40 25.4	-3.1
	9.1nm,0.3s,baz=233,slow=20,SNR=1.6						
SIJI				LR	LR	05 41 48.5	
	comp=Z,546nm,21.4s,baz=40,slow=47						
SWI	Sorong	3.95	24	P	Pn	05 39 42.9	+0.8
SANI	Sanana	4.37	303	P	Pn	05 39 47.7	-0.2
LBMI	Labuha	4.38	331	P	Pn	05 39 47.2	-0.8
TNTI	Ternate	5.69	336	Pn	Pn	05 40 06.5	+0.4
SOEI	Soe	7.47	225	P	Pg	05 41 01.8	-2.7
SOEI	Soe	7.47	225	Pn	Pn	05 40 32.2	+1.6
BATI	Baumata	8.21	226	Pn	Pn	05 40 44.0	+3.3
	3.4nm,0.3s,baz=297,slow=2.3,SNR=3.5						
BATI				LR	LR	05 44 09.6	
	comp=Z,472nm,21.4s,baz=38,slow=40						
BATI	Baumata	8.21	226	P	Pb	05 40 54.3	-9.5
GTOI	Gorontalo	8.35	307	P	Pn	05 40 46.7	+4.1
	10nm,0.7s						
MTN	Manton Dam	8.44	170	Pn	Pn	05 40 44.4	+0.6
EDFI	Ende, Flores	8.96	241	P	Pn	05 40 54.8	+3.8
	832nm14nm,1.0s						
KAPI	Kappang	9.86	267	Pn	Pn	05 41 03.9	+0.6
TOLI2	Tolitoli	10.45	302	Pn	Pn	05 41 13.6	+2.2
KNRA	Kununurra	11.15	184		Pn	05 41 21.0	0.0
DAV	Davao City (W)	12.17	341	LR	LR	05 46 34.1	
	comp=Z,142nm,21.6s,baz=113,slow=39						
FITZ	Fitzroy Crossi	14.08	196	Pn	Pn	05 42 01.6	+0.5
	0.6nm,0.3s,baz=34,slow=12,SNR=14						
MYLDM	Lahad Datu	14.69	311	Pn	Pn	05 42 10.8	+1.3
BBKI	Banjar Baru	14.79	273	P	P	05 42 23.2	+6.4
JAGI	Jajag, Banyuwa	15.88	255	Pn	Pn	05 42 23.8	-1.5
WB0	Warramunga Arr	15.88	163		Pn	05 42 23.2	-2.0
WB0				IAmb	IAmb	05 42 35.7	
	comp=Z,29nm,0.8s						
WRAB	Tennant Creek	16.03	164		Pn	05 42 27.2	+0.1
WRAB				IAmb	IAmb	05 42 37.3	
	comp=Z,27nm,1.0s						
WRA	Warramunga Arr	16.03	164	Pn	Pn	05 42 25.4	-1.7
	comp=Z,0.4nm,0.3s,baz=345,slow=13,SNR=13						
WRA	Warramunga Arr	16.03	164		Pn	05 42 24.3	-2.9
WB2	Warramunga Arr	16.04	164		Pn	05 42 23.0	-4.2
WB2				IAmb	IAmb	05 42 37.4	
	comp=Z,29nm,0.9s						
WR0	Warramunga Arr	16.11	163	Pn	Pn	05 42 26.2	-1.9
COEN	Coen	16.34	126		Pn	05 42 30.2	-0.9
PMG	Port Moresby	18.07	107	LR	LR	05 50 36.6	
	comp=Z,75nm,18.4s,baz=148,slow=40						
SBUM	Sibu	18.71	291	P	P	05 42 59.4	-0.9
UGM	Wanagama	19.30	259	P	P	05 43 06.8	+0.1
PSA00	Pilbara Seismi	19.46	208	P	Pn	05 43 09.7	+0.1
PSA00	Pilbara Seismi	19.46	208	P	P	05 43 08.1	-0.3
PSA00				IAmb	IAmb	05 43 17.5	
	comp=Z,38nm,1.3s						
AS31	Alice Springs	19.51	168		P	05 43 07.4	-1.6
ASAR	Alice Springs	19.51	168	P	Pn	05 43 10.6	+0.3
	comp=Z,1.8nm,0.3s,baz=348,slow=9.4,SNR=34						
ASAR	Alice Springs	19.51	168		Pn	05 43 11.8	+1.5
KSM	Kuching	20.20	287	P	P	05 43 16.3	-0.2
KSM				IAmb	IAmb	05 43 22.1	
	comp=Z,21nm,1.2s						
CTA	Charters Tower	22.42	135	P	P	05 43 40.7	+0.2
	comp=Z,8.2nm,0.7s,baz=316,slow=10,SNR=7.8						
CTAO	Charters Tower	22.42	135	P	P	05 43 39.9	-0.6
CTAO				IAmb	IAmb	05 43 49.9	
	comp=Z,14nm,1.1s						
STKA	Stephens Creek	29.47	159	P	P	05 44 45.2	-0.5
	comp=Z,3.4nm,0.9s,baz=325,slow=10,SNR=3.1						
NACB	Ninganchiao	29.54	345	P	P	05 44 46.3	-0.1
TOO	Toolangi	35.98	158	P	P	05 45 42.2	-0.4
CMAR	Chiang Mai Arr	37.88	308	P	P	05 45 59.6	+0.7
	comp=Z,3.1nm,0.8s,baz=139,slow=7.2,SNR=14						
CMAR	Chiang Mai Arr	37.88	308	P	P	05 45 59.0	+0.1
CHTO	Chiang Mai	38.08	308	P	P	05 45 59.9	-0.7
CHTO				IAmb	IAmb	05 46 04.3	
	comp=Z,9.9nm,0.9s						
MARNC	Mare, Loyalty	40.89	118	P	P	05 46 23.1	-0.9
MJAR	Matsushiro Arr	41.59	10	LR	LR	06 02 27.0	
	comp=Z,19nm,21.4s,baz=25,slow=34						
KSRS	Korea Array	41.75	358	P	P	05 46 32.2	+1.4
	comp=Z,1.2nm,0.6s,baz=186,slow=7.3,SNR=5.1						
KS19	Wonju Array Si	41.80	358	P	P	05 46 31.7	+0.4
JSD	Sado	43.06	10	P	P	05 46 41.3	-0.2
BJT	Baijiatuau	45.99	346	P	P	05 47 04.1	-0.8
BJT				IAmb	IAmb	05 47 15.9	
	comp=Z,5.1nm,0.9s						
LZH	Lanzhou	47.03	331	*e*P	P	05 47 15.3	+1.9
LZH				pP	sP	05 47 21.3	+4.1
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC	Hu-ho-hao-te	48.06	342	*e*P	P	05 47 24.0	+2.8
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,8.3s						
USRK	Ussuriysk Ar.	48.51	2	P	P	05 47 26.3	+1.8
	comp=Z,1.1nm,0.5s,baz=207,slow=6.0,SNR=1.5						
GTA	Gaotai	51.61	331	*e*P	P	05 47 49.8	+1.5
GTA				pP	sP	05 48 00.7	+8.6
GTA				sP	pP	05 48 05.1	+14
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,60nm,4.7s						
GTA				LR	LR		
	comp=N,91nm,14.9s						
GTA				LR	LR		
	comp=E,170nm,15.6s						
GTA				LR	LR		
	comp=Z,130nm,14.5s						
HYB	Hyderabad	54.91	295	*i* P	P	05 48 13.0	+0.1
MCQ	Macquarie Isla	55.24	160	P	P	05 48 15.2	+0.7
ULN	Ulaanbaatar	55.78	342	P	P	05 48 18.8	0.0
ULN				IAmb	IAmb	05 48 21.6	
	comp=Z,6.4nm,0.9s						
SONM	Songino Array	55.96	341	P	P	05 48 21.1	+1.1
	comp=Z,4.4nm,1.0s,baz=162,slow=7.3,SNR=13						
SONM	Songino Array	55.96	341	P	P	05 48 20.6	+0.6
SONM				IAmb	IAmb	05 48 23.2	
	comp=Z,7.1nm,1.2s						
TLY	Talaya	60.19	342	P	P	05 48 47.8	-1.6
WMQ	Urumqi	61.10	326	*e*P	P	05 48 58.1	+2.2
MK31	Makanchi Array	65.94	326	P	P	05 49 26.9	-0.9
MK31				IAmb	IAmb	05 49 30.0	
	comp=Z,3.5nm,0.9s						
MKAR	Makanchi Array	65.94	326	P	P	05 49 27.4	-0.4
	comp=Z,3.4nm,0.8s,baz=123,slow=8.4,SNR=19						
MKAR	Makanchi Array	65.94	326	P	P	05 49 26.9	-0.9
MAKZ	Makanchi	66.12	326	P	P	05 49 27.4	-1.6
MAKZ				IAmb	IAmb	05 49 31.6	
	comp=Z,5.9nm,1.1s						
YAK	Yakutsk	66.33	0	P	P	05 49 29.9	+0.1
ZAA0	Zalesovo Array	69.18	334	P	P	05 49 48.3	+0.2
ZAA0				IAmb	IAmb	05 49 51.8	
	comp=Z,7.2nm,1.1s						
ZALV	Zalesovo Beam	69.18	334	P	P	05 49 48.2	+0.1
	comp=Z,4.4nm,0.9s,baz=116,slow=5.1,SNR=9.6						
ZALV	Zalesovo Beam	69.18	334	P	P	05 49 47.6	-0.5
SEY	Seymchan	69.42	11	P	P	05 49 51.2	+1.8
	comp=Z,3.0nm,0.5s,baz=212,slow=1.7,SNR=4.0						
KURK	Kurchatov	70.20	328	P	P	05 49 54.1	-0.3
KKAR	Karatay Array	71.22	318	P	P	05 49 59.8	-1.1
BRVK	Borovoye	75.83	328	P	P	05 50 28.1	+0.3
BRVK				IAmb	IAmb	05 50 30.0	
	comp=Z,10nm,1.2s						
TIXI	Tiksi	75.99	360	P	P	05 50 28.9	+0.6
	comp=Z,1.4nm,0.4s,baz=147,slow=3.7,SNR=4.8						
TIXI	Tiksi	75.99	360	P	P	05 50 28.4	+0.1
TIXI				IAmb	IAmb	05 50 29.9	
	comp=Z,4.8nm,1.2s						
GYA0B	ALIBECK ARRAY	78.32	310	P	P	05 50 41.4	-0.8
GYA0B				IAmb	IAmb	05 50 47.7	
	comp=Z,3.7nm,0.8s						
NRIK	Noril'sk	79.05	346	P	P	05 50 46.9	+1.4
	comp=Z,1.3nm,0.4s,baz=129,slow=6.9,SNR=4.3						
NRIK	Noril'sk	79.05	346	P	P	05 50 45.0	-0.4
NRIK				IAmb	IAmb	05 50 47.5	
	comp=Z,7.2nm,1.2s						
ABKAR	Akbulak array	80.33	321	P	P	05 50 51.6	-1.2
TXAR	Lajitas Array	123.92	58	PKP	PKiKP	05 57 43.1	+2.1
	comp=Z,0.2nm,0.7s,baz=292,slow=4.8,SNR=2.4						
TORD	Torodi Ar. Bea	127.93	283	PKP	PKiKP	05 57 50.3	+1.1
	comp=Z,0.7nm,0.7s,baz=80,slow=2.3,SNR=5.1						
CPUP	Villa Florida	148.63	168	PKPbc	PKiKP	05 58 31.9	+0.8
	comp=Z,1.7nm,0.8s,baz=225,slow=1.4,SNR=4.0						
CPUP	Villa Florida	148.63	168		PKiKP	05 58 32.1	+0.9
LPAZ	La Paz	152.89	140	PKPbc	PKiKP	05 58 42.0	+1.0
	comp=Z,1.6nm,0.7s,baz=198,slow=6.4,SNR=3.1						

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*IDC **10** 05:44:15.3±1.8, 4°.28S×129°.36E, h0^{km}, mb3.7/1, mb1 3.8/4, mb1mx3.2/35, mbtmp3.6/4, ML3.3/3, Error ellipse: s-maj=58.3km s-min=28.2km az=83.0*

*DJA **10** 05:44:19.8±1.8, 4°S±9°×12°9E±°, h28^{km}±16^{km}, M3.6/6, MLv3.6/6*

ISC 10 05:44:19.4±1.1**, 4°.21S**±0°.08×**129°.45E**±0°.06**, h36^{km}, n9,** σ**1^{s}17**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.01	329	P	Pn	05 44 38.1	+1.1
MSAI				S	Sn	05 44 48.0	-2.0
AAI	Ambon	1.36	292	P	Pn	05 44 41.6	-0.3
AAI				S	Sn	05 44 58.6	-0.1
FAKI	Fak Fak	3.07	65	P	Pn	05 45 05.5	+0.1
SIJI	Sorong	3.78	29	Pn	Pn	05 45 16.1	+0.9
	6.7nm,0.3s,baz=205,slow=22,SNR=7.7						
SIJI				Sn	Sn	05 45 57.4	-1.2
	2.5nm,0.3s,baz=239,slow=19,SNR=1.4						
SWI	Sorong	3.78	29	P	Pn	05 45 15.2	-0.1
LBMI	Labuha	4.05	331	P	Pn	05 45 18.6	-0.3
WRA	Warramunga Arr	16.34	163	Pn	Pn	05 48 04.7	-1.6
	0.1nm,0.3s,baz=344,slow=12,SNR=2.2						
ASAR	Alice Springs	19.81	168	P	P	05 48 47.8	+0.7
	0.2nm,0.3s,baz=344,slow=9.5,SNR=4.7						
MKAR	Makanchi Array	65.61	326	P	P	05 55 01.2	+1.4
	0.6nm,0.7s,baz=116,slow=8.5,SNR=3.4						

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*IDC **10** 05:56:09.3±1.7, 4°.07S×129°.40E, h0^{km}, mb3.6/1, mb1 3.7/4, mb1mx3.1/37, mbtmp3.5/4, ML3.2/3, Error ellipse: s-maj=51.3km s-min=25.2km az=92.0*

*DJA **10** 05:56:13.5±1.5, 4°S±9°×12°9E±°, h17^{km}±12^{km}, M3.5/8, MLv3.5/8*

ISC 10 05:56:14.1±1.1**, 4°.07S**±0°.08×**129°.28E**±0°.06**, h36^{km}, n11,** σ**1^{s}37**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.80	334	P	Pn	05 56 28.8	-0.1
AAI	Ambon	1.15	289	P	Pn	05 56 34.0	+0.4
FAKI	Fak Fak	3.18	69	P	Pn	05 57 03.3	+1.7
SIJI	Sorong	3.75	32	Pn	Pn	05 57 08.5	-1.0
	3.0nm,0.3s,baz=319,slow=20,SNR=2.3						
SIJI				Sn	Sn	05 57 51.5	-0.9
	4.8nm,0.3s,baz=37,slow=20,SNR=4.5						
SWI	Sorong	3.75	32	P	Pn	05 57 10.3	+0.8
LBMI	Labuha	3.84	332	P	Pn	05 57 11.3	+0.5
SANI	Sanana	3.85	301	P	Pn	05 57 12.1	+1.3
KMPI	Kaimana, Papua	4.43	85	P	Pn	05 57 19.8	+0.9
WRA	Warramunga Arr	16.53	163	Pn	Pn	06 00 00.6	-2.7
	0.1nm,0.3s,baz=347,slow=12,SNR=2.3						
ASAR	Alice Springs	19.99	168	P	P	06 00 44.0	+0.4
	0.2nm,0.3s,baz=345,slow=9.6,SNR=15						
MKAR	Makanchi Array	65.40	326	P	P	06 06 54.1	+1.0
	0.2nm,0.4s,baz=112,slow=8.4,SNR=1.7						

IDC 10 05:58:30.9±2.7**, 4°.67N×124°.11E, h0^{km}, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.1**/42**, mbtmp3.6**/3**, Error ellipse: s-maj=329.2km s-min=28.7km az=64.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.45	158	P	P	06 04 10.2	+0.4
	0.5nm,0.3s,baz=337,slow=9.8,SNR=8.3						
ASAR	Alice Springs	29.75	162	P	P	06 04 38.8	-0.5
	0.3nm,0.5s,baz=340,slow=7.3,SNR=5.3						
MKAR	Makanchi Array	55.31	326	P	P	06 08 06.3	-0.1
	0.4nm,0.5s,baz=124,slow=7.5,SNR=3.2						

IDC 10 06:03:35.3±2.3, 1°.08S×127°.69E, h0^{km}, mb3.4/2, mb1 3.4/3, mb1mx2.9/35, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=180.6km s-min=28.6km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.85	161	P	P	06 08 07.5	-0.6
	0.1nm,0.3s,baz=340,slow=11,SNR=1.9						
ASAR	Alice Springs	23.25	165	P	P	06 08 45.0	+0.4
	0.3nm,0.3s,baz=349,slow=12,SNR=6.3						
MKAR	Makanchi Array	62.05	326	P	P	06 13 57.7	-0.1
	0.5nm,0.5s,baz=122,slow=7.4,SNR=3.6						

TUL 10 06:22:40.2±1.4, 36°.75N±0°.01×98°.03W±0°.02, h6^{km}±5^{km}, ML2.7, ML2.5/44(NEIC), Error ellipse: s-maj=2.3km s-min=1.9km az=76.0

NEIC 10 06:22:40.4±0.7, 36°.73N±0°.01×98°.01W±0°.02, h5^{km}±1^{km}, Error ellipse: s-maj=3.0km s-min=2.6km az=284.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.17	45	Pg	Pg	06 22 44.1	+0.3
GC02				Sg	Sg	06 22 46.9	+0.8
OK032	Salt Plains WL	0.18	295	Pg	Pg	06 22 43.8	-0.2
OK032				Sg	Sg	06 22 46.4	+0.1
OK032				IAML		06 22 46.6	
	1μm,0.1s						
CROK	Carrier	0.23	175		Pg	06 22 45.3	+0.5
CROK				Sg	Sg	06 22 48.9	+1.1
CROK				IAML		06 22 52.0	
	comp=E,752nm,0.3s						
CROK				IAML		06 22 53.1	
	comp=N,890nm,0.3s						
KAN14	Manchester OK	0.23	9		Pg	06 22 44.9	0.0
KAN14				Sg	Sg	06 22 48.1	+0.2
KAN17	Caldwell West	0.37	32	Pg	Pg	06 22 47.6	0.0
KAN17				Sg	Sg	06 22 52.6	+0.2
KAN17				IAML		06 22 53.0	
	comp=E,748nm,0.2s						
KAN17				IAML		06 22 53.0	
	comp=N,730nm,0.3s						
KAN05	Bluff City Nor	0.39	16	Pg	Pg	06 22 48.0	-0.1
KAN05				Sg	Sg	06 22 53.4	+0.2
KAN05				IAML		06 22 53.6	
	comp=E,481nm,0.3s						
KAN05				IAML		06 22 53.9	
	comp=N,732nm,0.2s						
KAN10	Anthony SW Sta	0.40	350	Pg	Pg	06 22 48.0	-0.2
KAN10				Sg	Sg	06 22 53.3	-0.1
KAN01	Argonia South	0.47	25	Pg	Pg	06 22 49.3	-0.1
KAN01				Sg	Sg	06 22 55.9	+0.3
KAN01				IAML		06 22 56.0	
	comp=E,216nm,0.6s						
KAN01				IAML		06 22 56.1	
	comp=N,267nm,0.2s						
KAN08	Anthony NE Sta	0.50	4		Pg	06 22 49.9	-0.1
KAN08				IAML		06 22 58.7	
	comp=E,248nm,0.4s						
KAN16	Harper SW Stat	0.50	355	Pg	Pg	06 22 49.8	-0.2
KAN13	South Haven SW	0.51	56	Pg	Pg	06 22 50.2	-0.1
KAN13				Sg	Sg	06 22 57.5	+0.5
KAN13				IAML		06 22 57.7	
	comp=E,263nm,0.3s						
KAN13				IAML		06 23 03.8	
	comp=N,258nm,0.2s						
KAN09	Caldwell North	0.51	38	Pg	Pg	06 22 50.2	-0.1
KAN09				Sg	Sg	06 22 57.3	+0.3
KAN06	Argonia West S	0.53	13		Pg	06 22 50.5	-0.2
KAN06				Sg	Sg	06 22 57.7	+0.1
KAN12	Harper NE Stat	0.57	1	Pg	Pg	06 22 51.1	-0.2
KAN12				Sg	Sg	06 22 58.7	0.0
BLOK	Blackwell	0.64	87	Pg	Pg	06 22 52.7	0.0
BLOK				IAML		06 23 05.6	
	comp=N,179nm,0.2s						
BLOK				IAML		06 23 10.8	
	comp=E,232nm,0.2s						
U32A	Winter Ranch,	0.87	247	Pg	Pg	06 22 56.5	-0.6
U32A				IAML		06 23 18.1	
	comp=N,96nm,0.1s						
OK029	Liberty Lake	1.03	154		Pg	06 22 60.0	-0.3
BCOK	Bluff Creek, N	1.12	163	Pg	Pg	06 23 01.5	-0.4
BCOK				IAML		06 23 17.6	
	comp=N,70nm,0.3s						
T35A	Sooner Cattle	1.22	81	Pg	Pg	06 23 03.2	-0.6
T35A				IAML		06 23 23.8	
	comp=N,106nm,0.2s						
T35A				IAML		06 23 23.9	
	comp=E,66nm,0.4s						
OK031	S. Brethren Rd	1.22	129	Pg	Pg	06 23 03.5	-0.4
OK031				IAML		06 23 21.6	
	comp=E,130nm,0.1s						
OK025	Westminster Rd	1.27	154	Pn	Pg	06 23 04.3	-0.4
OK025				IAML		06 23 24.0	
	comp=E,74nm,0.2s						
OK025				IAML		06 23 25.0	
	comp=E,125nm,0.4s						
OK034	N. Norfolk Rd.	1.27	124	Pn	Pg	06 23 04.4	-0.3
FNO	Franklin	1.55	161	Pn	Pn	06 23 08.8	+0.1
R32A	Long Quarter,	1.78	342	Pn	Pn	06 23 12.5	+0.6
TUL1	Leonard	1.97	114	Pn	Pb	06 23 15.8	-0.9
X34A	Smith Ranch, M	2.13	176	Pn	Pn	06 23 16.3	-0.4

NEIC 10 06:23:50.2±2.3, 4°.13S±0°.06×129°.53E±0°.07, h12^{km}±1^{km}, mb4.2/24, Error ellipse: s-maj=9.7km s-min=9.1km az=120.0

DJA 10 06:23:50.4±1.0, 4°S±11°×12°9E±°, h10^{km}, M4.3/8, mb5.1/1, mB5.5/1, MLv3.9/8, Mw(mB)4.9/1

IDC 10 06:23:55.7±3.0, 4°.03S×129°.53E, h57^{km}±29^{km}, mb3.7/6, mb1 3.9/9, mb1mx3.7/28, mbtmp4.0/9, ML3.9/3, MS3.1/2, Ms1 3.1/2, ms1mx2.5/44, Error ellipse: s-maj=33.4km s-min=16.6km az=96.0

ISC 10 06:23:52.7±0.4, 4°.13S±0°.05×129°.44E±0°.06, h36^{km}, n54, σ1^s.06/54, mb4.1/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.93	327	P	Pn	06 24 06.7	-2.6
AAI	Ambon	1.32	289	P	Pn	06 24 12.1	-2.5
FAKI	Fak Fak	3.05	67	P	Pn	06 24 39.8	+1.4
FAKI	Fak Fak	3.05	67		Pn	06 24 36.6	-1.8
SIJI	Sorong	3.72	29	P	Pn	06 24 47.8	+0.2
	14nm,0.3s,baz=257,slow=23,SNR=17						
SIJI				S	Sn	06 25 30.7	+0.5
SWI	Sorong	3.72	29	P	Pn	06 24 47.8	+0.2
LBMI	Labuha	3.98	331	P	Pn	06 24 50.7	-0.4
SANI	Sanana	4.02	301	P	Pn	06 24 51.1	-0.7
SOEI	Soe	7.59	222	Pn	Pn	06 25 41.2	+0.2
BATI	Baumata	8.32	223	LR	LR	06 29 20.2	
	comp=Z,131nm,18.0s,baz=74,slow=38						
MTN	Manton Dam	8.82	169	Pn	Pn	06 25 57.0	-0.7
KAPI	Kappang	9.70	264	Pn	Pn	06 26 11.3	+1.5
TOLI2	Tolitoli	10.10	301	Pn	Pn	06 26 16.0	+0.7
KNRA	Kununurra	11.49	183		Pn	06 26 35.4	+1.0
MYLDM	Lahad Datu	14.32	310		Pn	06 27 13.9	+0.9
FITZ	Fitzroy Crossi	14.37	195	P	P	06 27 19.7	-0.4
	0.3nm,0.3s,baz=35,slow=10,SNR=7.6						
WB0	Warramunga Arr	16.27	163		Pn	06 27 38.6	0.0
WB0				IAmb	IAmb	06 27 51.5	
	comp=Z,8.1nm,0.8s						
WRAB	Tennant Creek	16.42	163		Pn	06 27 39.5	-1.0
WRA	Warramunga Arr	16.43	164	P	Pn	06 27 37.0	-3.5
	comp=Z,0.2nm,0.3s,baz=350,slow=13,SNR=15						
WRA	Warramunga Arr	16.43	164		Pn	06 27 40.0	-0.6
WB2	Warramunga Arr	16.43	163		Pn	06 27 39.6	-1.0
WR0	Warramunga Arr	16.50	163	Pn	Pn	06 27 41.7	+0.2
COEN	Coen	16.70	127		Pn	06 27 44.4	+0.3
COEN				IAmb	IAmb	06 27 47.9	
	comp=Z,14nm,1.0s						
PMG	Port Moresby	18.35	108	P	P	06 28 02.0	-2.3
PMG				IAmb	IAmb	06 28 09.6	
	comp=Z,14nm,1.0s						
PSA00	Pilbara Seismi	19.68	207	P	Pn	06 28 20.7	+0.2
PSA00				IAmb	IAmb	06 28 28.5	
	comp=Z,8.6nm,1.0s						
AS31	Alice Springs	19.89	168	P	Pn	06 28 22.2	-0.8
ASAR	Alice Springs	19.89	168	P	Pn	06 28 22.9	0.0
	comp=Z,0.6nm,0.3s,baz=340,slow=9.7,SNR=48						
ASAR				PcP	PcP	06 32 37.4	-0.3
	comp=Z,0.1nm,0.3s,baz=337,slow=2.1,SNR=2.9						
ASAR	Alice Springs	19.89	168	P	Pn	06 28 23.1	0.0
KSM	Kuching	19.92	286	P	P	06 28 22.6	+1.2
KSM				IAmb	IAmb	06 28 34.4	
	comp=Z,8.0nm,0.6s						
LEM	Lembang	21.89	262	LR	LR	06 36 59.3	
	comp=Z,39nm,21.3s,baz=150,slow=36						
CTAO	Charters Tower	22.80	135	P	P	06 28 51.5	-1.0
CTAO				IAmb	IAmb	06 28 56.0	
	comp=Z,6.3nm,1.2s						
FORT	Forrest	26.54	183	P	P	06 29 27.6	+0.4
MORW	Morawa	27.87	206	P	P	06 29 39.4	+0.2
CMAR	Chiang Mai Arr	37.51	308	P	P	06 31 04.7	+1.2
	comp=Z,1.0nm,0.4s,baz=143,slow=8.7,SNR=6.0						
CHTO	Chiang Mai	37.71	308	P	P	06 31 05.6	+0.5
CHTO				IAmb	IAmb	06 31 14.6	
	comp=Z,6.4nm,0.8s						
ONTNC	Ouen Toro	40.13	120	P	P	06 31 24.8	-0.6
MJAR	Matsushiro Arr	41.28	11	P	P	06 31 34.2	-0.4
	comp=Z,1.3nm,0.6s,baz=191,slow=8.8,SNR=4.1						
KSRS	Korea Array	41.40	358	P	P	06 31 36.6	+1.2
	comp=Z,0.9nm,0.5s,baz=167,slow=10,SNR=4.4						
WAKE	Wake Island	43.38	56	P	P	06 31 51.5	-0.5
SONM	Songino Array	55.56	341	P	P	06 33 24.9	+0.2
	comp=Z,0.5nm,0.5s,baz=159,slow=8.7,SNR=2.5						
PEA0B	Petropavlovsk-	61.80	19	P	P	06 34 06.6	-1.2
MK31	Makanchi Array	65.54	326	P	P	06 34 32.5	-0.1
MK31				IAmb	IAmb	06 34 41.8	
	comp=Z,1.6nm,0.7s						
MKAR	Makanchi Array	65.54	326	P	P	06 34 32.7	+0.1
	comp=Z,1.2nm,0.7s,baz=124,slow=8.0,SNR=10						
MKAR	Makanchi Array	65.54	326	P	P	06 34 32.5	-0.1
MAKZ	Makanchi	65.72	326	P	P	06 34 32.8	-1.0
MAKZ				IAmb	IAmb	06 34 33.8	
	comp=Z,3.9nm,0.9s						
ZAA0	Zalesovo Array	68.78	334	P	P	06 34 52.0	-1.0
ZAA0				IAmb	IAmb	06 35 00.8	
	comp=Z,4.9nm,1.2s						
ZALV	Zalesovo Beam	68.78	334	P	P	06 34 52.4	-0.6
	comp=Z,1.4nm,0.6s,baz=115,slow=5.7,SNR=6.1						
KURK	Kurchatov	69.80	328	P	P	06 34 59.9	+0.6
RER	Riviere de l'E	73.32	249	P	P	06 35 21.3	0.0
MSEY	Mahe Island	73.72	266	P	P	06 35 22.8	-0.9
NRIK	Noril'sk	78.66	346	P	P	06 35 51.5	+0.8
NRIK				IAmb	IAmb	06 35 53.0	
	comp=Z,5.6nm,1.4s						
ABKAR	Akbulak array	79.93	321	P	P	06 35 58.0	+0.1
TXAR	Lajitas Array	123.89	57	PKP	PKiKP	06 42 48.5	+0.4
	comp=Z,0.6nm,1.0s,baz=289,slow=2.8,SNR=4.1						
TORD	Torodi Ar. Bea	127.66	283	PKP	PKiKP	06 42 55.5	-0.3
	comp=Z,0.4nm,0.7s,baz=72,slow=4.7,SNR=2.1						

NEIC 10 06:24:44.5±0.3, 19°.17N±0°.08×66°.56W±0°.03, h36^{km}±53^{km}, Error ellipse: s-maj=12.0km s-min=3.7km az=171.0

RSPR 10 06:24:45.3, 19°.18N×66°.54W, h42^{km}±3^{km}, MD3.3/17

OSPL 10 06:24:47.8±1.2, 18°.91N×66°.55W, h27^{km}±12^{km}, ML2.9

ISC 10 06:24:44.4±1.6, 19°.13N±0°.08×66°.54W±0°.03, h28^{km}, n54, σ0^s.75/61, 8C-9D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.65	179	⇓*e*P	Pb	06 24 57.7	+0.5
EMPR	Esperanza - Ma	0.65	179	*e*S	Sn	06 25 07.8	+0.8
EMPR	Esperanza - Ma	0.65	179		Pb	06 24 57.8	+0.5
EMPR					Sn	06 25 07.8	+0.8
EMPR				IAML		06 25 08.2	
	comp=N,1μm,0.5s						
EMPR				IAML		06 25 08.8	
	comp=E,2μm,0.4s						
AOPR	Arecibo Observ	0.80	195	⇑*e*P	Pn	06 24 59.6	-0.3
AOPR	Arecibo Observ	0.80	195	*e*S	Sb	06 25 10.9	+0.6
AOPR	Arecibo Observ	0.80	195		Pn	06 24 59.6	-0.3
AOPR					Sb	06 25 10.9	+0.6
AOPR				IAML		06 25 11.7	
	comp=N,2μm,0.5s						
AGPR	Aguadilla, PR	0.85	219	⇑*e*P	Pn	06 24 59.5	-1.0
AGPR	Aguadilla, PR	0.85	219	*e*S	Sb	06 25 11.4	-0.3
AGPR	Aguadilla, PR	0.85	219		Pn	06 24 59.4	-1.0
AGPR				IAML		06 25 20.5	
	comp=N,469nm,0.7s						
AGPR				IAML		06 25 21.9	
	comp=E,565nm,0.4s						
AGPR	Aguadilla, PR	0.85	219	*i* P	Pn	06 24 59.6	-1.0
AGPR				*e*S	Sb	06 25 09.8	-1.8
AGPR				IAML		06 25 22.7	
	comp=Z,261nm,0.2s						
GCPR	Guaynabo City	0.92	152	⇓*e*P	Pn	06 25 00.9	-0.7
GCPR	Guaynabo City	0.92	152	*e*S	Sn	06 25 13.7	-0.1
GCPR	Guaynabo City	0.92	152		Pn	06 25 01.4	-0.1
GCPR				Sn	Sn	06 25 14.0	+0.1
GCPR				IAML		06 25 17.8	
	comp=E,374nm,0.3s						
CELP	Cerrillos	1.05	182	⇓*e*P	Pn	06 25 03.2	-0.1
CELP	Cerrillos	1.05	182	*e*S	Sn	06 25 17.4	+0.4
CELP	Cerrillos	1.05	182		Pn	06 25 03.2	-0.1
CELP					Sn	06 25 17.4	+0.4
CELP				IAML		06 25 25.9	
	comp=N,293nm,0.4s						
CBYP	Canovanas	1.07	143	⇑*e*P	Pn	06 25 03.4	-0.3
CBYP	Canovanas	1.07	143	*e*S	Sn	06 25 17.4	-0.1
CBYP	Canovanas	1.07	143		Pn	06 25 03.4	-0.3
CBYP					Sn	06 25 17.5	-0.1
PRSN	Puerto Rico Se	1.07	212		Pn	06 25 03.2	-0.3
SJG	San Juan	1.08	160		Pn	06 25 03.8	+0.1
SJG				IAML		06 25 20.9	
	comp=N,331nm,0.3s						
SJG				IAML		06 25 23.1	
	comp=N,374nm,0.4s						
OBIP	Obispado Ponce	1.08	183	⇓*e*P	Pn	06 25 03.8	+0.1
OBIP	Obispado Ponce	1.08	183	*e*S	Sn	06 25 17.8	+0.1
OBIP	Obispado Ponce	1.08	183		Pn	06 25 03.8	+0.1
OBIP				IAML		06 25 28.8	
	comp=N,274nm,0.4s						
IDE	Isla Desecheo	1.15	230	⇓*e*P	Pn	06 25 04.1	-0.6
IDE	Isla Desecheo	1.15	230	*e*S	Sn	06 25 18.7	-0.9
HUMP	Col San Antoni	1.18	146		Pn	06 25 05.0	-0.1
GBPR	Guanica, Bosqu	1.19	196	⇓*e*P	Pn	06 25 05.5	+0.3
GBPR	Guanica, Bosqu	1.19	196	*e*S	Sn	06 25 20.2	-0.3
PDPR	Patillas Dam,	1.21	156		Pn	06 25 05.5	0.0
IGPR	InterUniversit	1.23	160	⇑*e*P	Pn	06 25 05.9	+0.1
IGPR	InterUniversit	1.23	160	*e*S	Sn	06 25 21.4	0.0
IGPR	InterUniversit	1.23	160		Sn	06 25 21.4	0.0
CRPR	Cabo Rojo, PR	1.24	206	⇓*e*P	Pn	06 25 05.8	0.0
CRPR	Cabo Rojo, PR	1.24	206	*e*S	Sn	06 25 21.5	-0.2
CRPR	Cabo Rojo, PR	1.24	206		Pn	06 25 06.0	+0.1
CRPR				IAML		06 25 24.7	
	comp=E,306nm,0.4s						
CRPR				IAML		06 25 31.6	
	comp=N,253nm,0.9s						
CRPR	Cabo Rojo, PR	1.24	206	*i* P	Pn	06 25 06.0	+0.1
CRPR				*e*S	Sn	06 25 17.8	-3.8
CRPR				IAML		06 25 22.9	
	comp=Z,281nm,0.7s						
MLPR	Magueyes Islan	1.25	203	⇑*e*P	Pn	06 25 06.0	0.0
MLPR	Magueyes Islan	1.25	203	*e*S	Sn	06 25 21.9	0.0
MLPR	Magueyes Islan	1.25	203		Pn	06 25 06.2	+0.3
MLPR				IAML		06 25 28.6	
	comp=N,277nm,0.4s						
MLPR				IAML		06 25 28.8	
	comp=E,294nm,0.4s						
MTP	Monte Pirata	1.39	137	⇓*e*P	Pn	06 25 07.7	-0.3
MTP	Monte Pirata	1.39	137	*e*S	Sn	06 25 25.2	-0.2
MTP	Monte Pirata	1.39	137		Pn	06 25 07.9	-0.1
CUPR	Culebra, Puert	1.45	124	⇑*e*P	Pn	06 25 08.1	-0.6
CUPR	Culebra, Puert	1.45	124	*e*S	Sn	06 25 26.1	-0.6
CUPR	Culebra, Puert	1.45	124		Pn	06 25 08.1	-0.6
STVI	Saint Thomas	1.69	117	⇑*e*P	Pn	06 25 11.7	-0.4
STVI	Saint Thomas	1.69	117	*e*S	Sn	06 25 32.3	-0.6
STVI	Saint Thomas	1.69	117		Pn	06 25 11.9	-0.2
STVI				IAML		06 25 36.9	
	comp=N,168nm,0.2s						
TBVI	Tortola	1.96	111	⇓*e*P	Pn	06 25 15.5	-0.2
TBVI	Tortola	1.96	111	*e*S	Sn	06 25 38.7	-0.7
CDVI	St. Croix	2.17	129	⇑*e*P	Pn	06 25 18.4	-0.3
CDVI	St. Croix	2.17	129	*e*S	Sn	06 25 44.4	-0.3
SDDR	Presa de Saban	4.49	269	*i* P	Pn	06 25 52.6	+1.9
SDDR				IAML		06 27 09.1	
	comp=Z,22nm,0.8s						

NNC 10 06:45:37.7±7.3, 37°.79N×73°.41E, h0^{km}, mb3.7, mpv3.3, 4C-2D, Error ellipse: s-maj=54.5km s-min=37.6km az=161.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.91	9	⇓Pg	Pg	06 47 08.9	-2.9
	3.4nm,0.7s						
AAK				⇑Lg	Lg	06 48 12.8	
	6.0nm,0.8s						
TKM2	Tokmak 2	5.39	17	⇑Pg	Pb	06 47 13.9	+1.0
	1.8nm,0.7s						
TKM2				⇑Lg	Lg	06 48 32.5	
	3.9nm,0.8s						
KK02	Karatay Array	5.75	338	⇓Pn	Pn	06 47 04.5	+0.2
	3.6nm,0.8s,baz=151,slow=12						
KK02				⇑Sn	Sn	06 48 11.8	+0.8
	3.6nm,0.8s,baz=157,slow=24						

INET 10 06:48:33.1, 11°.16N×86°.88W, h15^{km}, MW3.8

UCR 10 06:48:21.5±1.7, 11°.39N×87°.74W, h35^{km}±804^{km}, MW4.5, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAPC	Finca la Perla	2.35	105	*i* P	Pn	06 48 57.1	-0.6
BUAI	Buenos Aires	2.42	102	*i* P	Pn	06 48 59.1	+0.4
CUI	Cuipilapa	2.63	106	*i* P	Pn	06 49 01.9	+0.3
INDI	Punta indio, G	2.67	124	*e*P	Pn	06 49 01.7	-0.4
LAFE	Finca La Fe, P	3.20	119	*e*P	Pn	06 49 08.2	-1.1
JACO	JACO, Garabito	3.48	119	*e*P	Pn	06 49 14.8	+1.6
LCR2	La Lucha 2	4.02	114	*e*P	Pn	06 49 20.6	-0.2
RIMA	Rio Macho	4.14	113	*e*P	Pn	06 49 23.4	+1.0

IDC 10 07:09:45.1±2.6, 16°.11S×173°.79W, h69^{km}±24^{km}, mb4.0/10, mb1 4.3/13, mb1mx4.0/37, mbtmp4.3/13, MS3.1/3, Ms1 3.1/3, ms1mx2.8/41, Error ellipse: s-maj=32.6km s-min=13.7km az=150.0

NEIC 10 07:09:45.4±0.9, 16°.03S±0°.09×173°.8W±0°.1, h64^{km}±7^{km}, mb4.6/16, Error ellipse: s-maj=18.0km s-min=12.5km az=89.0

ISC 10 07:09:43.3±0.5, 16°.01S±0°.07×173°.83W±0°.06, h50^{km}, n42, σ1^s.05/39, mb4.4/18, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.88	44	P	Pn	07 10 29.3	+2.4
	54nm,0.3s,baz=211,slow=2.5,SNR=32						
AFI				S	Sn	07 10 58.2	-2.2
	176nm,0.3s,baz=235,slow=17,SNR=17						
AFI				LR	LR	07 11 45.4	
	comp=Z,138nm,19.6s,baz=166,slow=41						
NIUE	Niue	4.81	130		Pn	07 10 55.1	+1.8
RAR	Rarotonga	14.29	113	P	Pn	07 13 03.8	+0.8
	1.8nm,0.3s,baz=263,slow=7.9,SNR=4.3						
RAR				S	Sn	07 15 37.1	-3.1
	0.6nm,0.3s,baz=311,slow=23,SNR=1.5						
DZM	Mont Dzumac	19.59	249	P	Pn	07 14 09.0	-0.2
	0.3nm,0.3s,baz=76,slow=18,SNR=7.6						
DZM				LR	LR	07 20 22.0	
	comp=Z,125nm,20.6s,baz=34,slow=32						
PPT	Papeete	23.27	97	LR	LR	07 22 26.1	
	comp=Z,56nm,18.4s,baz=180,slow=33						
BKZ	Black Stump Fm	24.58	198	P	P	07 14 58.3	-0.4
BKZ				IAmb	IAmb	07 15 19.2	
	comp=Z,15nm,1.1s						
H11S2	WAKE ISLAND Hy	39.27	330	T	T	07 58 18.8	
	baz=146,slow=75,SNR=11						
H11S3	WAKE ISLAND Hy	39.29	330	T	T	07 58 19.7	
	baz=146,slow=75,SNR=6.5						
H11S1	WAKE ISLAND Hy	39.29	330	T	T	07 58 22.5	
	baz=146,slow=75,SNR=6.8						
H11N3	WAKE ISLAND Hy	40.24	331	T	T	08 00 03.7	
	baz=143						
H11N1	WAKE ISLAND Hy	40.24	331	T	T	08 00 01.5	
	baz=143						
H11N2	WAKE ISLAND Hy	40.25	331	T	T	08 00 07.3	
	baz=143						
COEN	Coen	41.53	267	P	P	07 17 26.9	+0.6
COEN				IAmb	IAmb	07 17 28.9	
	comp=Z,4.9nm,0.8s						
STKA	Stephens Creek	43.37	240	P	P	07 17 40.6	-0.4
	comp=Z,5.5nm,0.8s,baz=78,slow=10,SNR=11						
STKA	Stephens Creek	43.37	240	P	P	07 17 40.7	-0.3
BBOO	Buckleboo	48.15	240	P	P	07 18 17.9	-0.8
WRAB	Tennant Creek	49.29	257	P	P	07 18 27.5	-0.2
WRAB				IAmb	IAmb	07 18 28.2	
	comp=Z,7.1nm,0.9s						
WRA	Warramunga Arr	49.30	257	P	P	07 18 26.9	-0.9
	comp=Z,3.7nm,0.7s,baz=92,slow=6.7,SNR=14						
WRA				PcP	PcP	07 19 48.9	-1.1
	comp=Z,0.6nm,0.7s,baz=99,slow=3.1,SNR=1.6						
WRA	Warramunga Arr	49.30	257	P	P	07 18 26.7	-1.0
AS31	Alice Springs	49.53	252	P	P	07 18 29.1	-0.4
AS31				IAmb	IAmb	07 18 30.4	
	comp=Z,2.7nm,0.7s						
ASAR	Alice Springs	49.53	252	P	P	07 18 28.8	-0.7
	comp=Z,8.9nm,0.7s,baz=89,slow=7.7,SNR=40						
ASAR				PcP	PcP	07 19 50.0	-0.8
	comp=Z,0.7nm,0.5s,baz=105,slow=5.0,SNR=0.7						
KNRA	Kununurra	55.06	262	P	P	07 19 09.9	-0.6
FITZ	Fitzroy Crossi	57.68	258	P	P	07 19 29.4	+0.2
	comp=Z,2.3nm,0.6s,baz=94,slow=5.1,SNR=3.7						
PSA00	Pilbara Seismi	62.63	254	P	P	07 20 02.7	-0.4
PSA00				IAmb	IAmb	07 20 03.5	
	comp=Z,7.0nm,0.8s						
PSA00	Pilbara Seismi	62.63	254	P	P	07 20 02.6	-0.4
PSA00				IAmb	IAmb	07 20 03.5	
	comp=Z,13nm,0.8s						
VNDA	Vanda	62.73	186	P	P	07 20 04.4	+1.6
VNDA				IAmb	IAmb	07 20 17.6	
	comp=Z,4.5nm,1.2s						
CASY	Casey	69.68	205	P	P	07 20 47.4	0.0
CASY				IAmb	IAmb	07 21 11.5	
	comp=Z,22nm,1.4s						
PETK	Petropavlovsk-	73.08	343	P	P	07 21 07.8	-0.2
	comp=Z,3.9nm,0.8s,baz=161,slow=9.4,SNR=6.0						
PETK	Petropavlovsk-	73.08	343	P	P	07 21 08.7	+0.7
WDC	Whiskeytown Da	73.71	38	P	P	07 21 13.0	+1.0
QSPA	South Pole Qui	74.04	180	P	P	07 21 14.6	+0.8
NVAR	Mina Array Bea	75.06	42	P	P	07 21 20.6	+0.4
	comp=Z,1.7nm,1.0s,baz=230,slow=8.2,SNR=5.5						
GHO	Glory Hole Cre	80.00	12	P	P	07 21 47.0	-0.1
GHO				IAmb	IAmb	07 21 47.8	
	comp=Z,8.1nm,0.8s						
DIV	Divide	80.08	13	P	P	07 21 47.4	-0.1
TXAR	Lajitas Array	81.30	56	P	P	07 21 55.0	+0.2
	comp=Z,1.1nm,1.0s,baz=216,slow=9.0,SNR=8.0						
PDAR	Pinedale Array	83.00	42	P	P	07 22 03.1	-0.5
	comp=Z,2.1nm,0.8s,baz=207,slow=3.3,SNR=18						
ILAR	Eielson Array	83.12	11	P	P	07 22 02.7	-0.7
	comp=Z,1.2nm,0.8s,baz=233,slow=5.8,SNR=9.0						
CMAR	Chiang Mai Arr	92.41	288	P	P	07 22 50.0	+0.8
	comp=Z,0.9nm,0.3s,baz=81,slow=2.3,SNR=4.5						
ARCES	ARCESS Array B	125.15	352	PKP	PKPdf	07 28 36.5	-1.1
	comp=Z,2.7nm,0.8s,baz=336,slow=2.0,SNR=5.1						
KMBO	Kilima Mbogo	144.89	244	PKP	PKPab	07 29 14.9	-0.5
	comp=Z,3.2nm,0.7s,baz=75,slow=6.1,SNR=7.0						
BRTR	Keskin Array B	146.36	320	PKPbc	PKPdf	07 29 18.4	+0.6
	comp=Z,5.1nm,0.8s,baz=132,slow=1.8,SNR=10						
GERES	GERESS Array B	146.68	351	PKPbc	PKPbc	07 29 18.9	-0.8
	comp=Z,1.4nm,0.7s,baz=38,slow=2.4,SNR=8.5						

DJA 10 07:12:06.1±0.3, 4°S±3°×12°9E±°, h10^{km}, M4.4/10, mb4.6/5, mB5.8/1, MLv4.3/10, Mw(mB)5.3/1

IDC 10 07:12:09.7±3.3, 4°.06S×129°.67E, h53^{km}±35^{km}, mb3.7/7, mb1 4.0/10, mb1mx3.8/33, mbtmp4.1/10, ML4.0/2, MS3.0/6, Ms1 3.0/6, ms1mx2.7/33, Error ellipse: s-maj=43.6km s-min=16.9km az=98.0

ISC 10 07:12:07.0±0.7, 4°.19S±0°.07×129°.43E±0°.05, h36^{km}, n20, σ1^s.53/21, mb4.1/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.97	329	P	Pn	07 12 22.3	-1.9

MSAI				S	Sn	07 12 34.7	-2.0
AAI	Ambon	1.32	292	P	Pn	07 12 28.5	-0.5
AAI				S	Sn	07 12 45.3	-0.1
FAKI	Fak Fak	3.09	66	P	Pn	07 12 53.5	+0.2
SIJI	Sorong	3.77	29	P	Pn	07 13 03.1	+0.4
	8.4nm,0.3s,baz=225,slow=18,SNR=18						
SIJI				S	Sn	07 13 43.2	-2.7
	6.4nm,0.3s,baz=266,slow=5.9,SNR=4.3						
SIJI				LR	LR	07 14 52.6	
	comp=Z,176nm,19.3s,baz=92,slow=46						
SWI	Sorong	3.78	29	P	Pn	07 13 04.3	+1.5
SANI	Sanana	4.04	302	P	Pn	07 13 07.3	+1.0
KMSI	Cibinong	7.21	311	P	Pn	07 13 49.6	-0.4
	2.0nm6μm133nm,0.4s						
BATI	Baumata	8.27	223	LR	LR	07 17 26.2	
	comp=Z,123nm,21.4s,baz=25,slow=37						
FITZ	Fitzroy Crossi	14.31	195	P	P	07 15 32.8	-1.0
	baz=20,slow=11						
FITZ				LR	LR	07 21 03.9	
	comp=Z,37nm,18.4s,baz=18,slow=37						
WRA	Warramunga Arr	16.38	163	P	Pn	07 15 50.7	-3.6
	0.2nm,0.3s,baz=347,slow=13,SNR=22						
WRA				LR	LR	07 22 48.7	
	comp=Z,47nm,20.1s,baz=30,slow=39						
ASAR	Alice Springs	19.84	168	P	P	07 16 36.6	+1.6
	0.7nm,0.3s,baz=353,slow=12,SNR=79						
ASAR				LR	LR	07 23 54.9	
	comp=Z,52nm,20.5s,baz=28,slow=35						
STKA	Stephens Creek	29.82	159	LR	LR	07 33 03.7	
	comp=Z,67nm,18.2s,baz=24,slow=42						
CMAR	Chiang Mai Arr	37.53	308	P	P	07 19 19.2	+1.3
	0.6nm,0.3s,baz=138,slow=8.5,SNR=5.6						
MJAR	Matsushiro Arr	41.34	11	P	P	07 19 48.6	-0.9
	3.4nm,0.8s,baz=192,slow=10,SNR=4.3						
KSRS	Korea Array	41.45	358	P	P	07 19 51.0	+0.7
	0.7nm,0.5s,baz=171,slow=18,SNR=2.4						
SONM	Songino Array	55.61	341	P	P	07 21 39.3	0.0
	0.6nm,0.6s,baz=145,slow=8.8,SNR=2.3						
MKAR	Makanchi Array	65.58	326	P	P	07 22 48.4	+1.1
	1.6nm,0.8s,baz=126,slow=7.3,SNR=14						
ZALV	Zalesovo Beam	68.83	334	P	P	07 23 08.1	+0.5
	0.7nm,0.4s,baz=122,slow=5.2,SNR=5.0						
AKTO	Aktyubinsk	81.51	322	P	P	07 24 22.1	+1.3
	1.4nm,0.7s,baz=111,slow=9.7,SNR=4.7						
TORD	Torodi Ar. Bea	127.66	283	PKP	PKPdf	07 31 10.4	+0.8
	0.3nm,0.7s,baz=10,slow=0.8,SNR=1.7						

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*IDC **10** 07:36:11.5±1.8, 4°.29S×130°.63E, h0km, mb4.1/1, mb1 4.0/5, mb1mx3.3/49, mbtmp3.8/5, ML3.5/4, Error ellipse: s-maj=69.6km s-min=20.8km az=94.0*
*DJA **10** 07:36:18.5±0.9, 3°S±8°×12°9E±°, h60km±9km, M4.3/6, mB5.4/1, mb5.5/1, MLv3.7/6, Mw(mB)4.9/1*
ISC 10 07:36:11.9±0.9**, 4°.10S**±0°.08×**129°.32E**±0°.08**, h35**km**, n12, σ2s.62**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.85	332	P	Pn	07 36 28.2	+0.8
MSAI	Masohi	0.85	332	P	Pn	07 36 27.2	-0.2
AAI	Ambon	1.20	290	P	Pn	07 36 33.0	+0.9
AAI	Ambon	1.20	290	P	Pn	07 36 33.1	+0.9
SIJI	Sorong	3.75	31	Pn	Pn	07 37 08.0	+0.6
	7.2nm,0.3s,baz=190,slow=22,SNR=21						
SIJI				Sn	Sn	07 37 47.5	-2.8
	10nm,0.3s,baz=186,slow=23,SNR=7.1						
SWI	Sorong	3.75	31	P	Pn	07 37 09.2	+1.9
SANI	Sanana	3.91	301	P	Pn	07 37 09.2	-0.2
TNTI	Ternate	5.22	338	P	Pn	07 37 23.6	-3.9
FITZ	Fitzroy Crossi	14.37	194	Pn	P	07 39 40.5	+1.1
	0.2nm,0.3s,baz=49,slow=8.5,SNR=3.1						
WRA	Warramunga Arr	16.48	163	Pn	Pn	07 39 55.9	-4.7
	0.1nm,0.3s,baz=347,slow=13,SNR=9.0						
ASAR	Alice Springs	19.95	168	P	P	07 40 41.0	-0.1
	0.4nm,0.3s,baz=349,slow=11,SNR=26						
MJAR	Matsushiro Arr	41.28	11	P	P	07 43 57.8	+3.9
	1.1nm,0.3s,baz=172,slow=9.8,SNR=4.2						

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*DJA **10** 07:36:21.0±0.3, 7°N±3°×12°6E±°, h10km, M4.9/27, mb4.9/27, mB5.4/10, MLv5.1/9, Mw(mB)4.8/10*
*MAN **10** 07:36:24.6, 6°.51N×125°.99E, h44km, mb4.7, ML3.6, MS3.5*
*IDC **10** 07:36:25.6±0.9, 6°.60N×126°.14E, h62km±7km, mb4.2/27, mb1 4.3/30, mb1mx4.0/56, mbtmp4.6/30, MS3.4/16, Ms1 3.4/16, ms1mx3.2/42, Error ellipse: s-maj=17.4km s-min=7.7km az=77.0*
*NEIC **10** 07:36:26.3±1.6, 6°.59N±0°.05×126°.07E±0°.09, h57km±6km, mb4.8/43, Error ellipse: s-maj=14.8km s-min=3.4km az=64.0*
*KLM **10** 07:36:27, 6°.72N×126°.15E, h61km, mb4.8*
ISC 10 07:36:26.9±0.8**, 6°.55N**±0°.04×**126°.14E**±0°.06**, h67**km±7km**, n167, σ1s.69**/174**, mb4.7**/65**, 7C-7D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.76	313	P	Pn	07 36 40.6	-1.7
	6μm,0.3s,baz=129,slow=1.1,SNR=344						
DAV				S	Sn	07 36 52.5	-1.2
	3μm,0.3s,baz=261,slow=21,SNR=7.0						
DAV				LR	LR	07 37 16.5	
	comp=Z,1μm,20.4s,baz=246,slow=70						
DAV	Davao City (W)	0.76	313	P	Pn	07 36 41.1	-1.2
DMPH	Davao City--Mi	0.82	310	⇓eP	Pn	07 36 40.5	-2.5
DMPH				eS	Sn	07 36 58.3	+3.3
KCP	Kidapawan	1.14	294	⇓iP	Pn	07 36 43.5	-3.6
KCP				i S	Sn	07 36 59.5	-2.6
GSPH	General Santos	1.27	249	⇓eP	Pn	07 36 44.2	-4.6
GSPH				eS	Sn	07 36 59.5	-5.8
BIPH	Bislig	1.64	8	⇓iP	Pn	07 36 52.8	-0.9
BIPH				i S	Sn	07 37 13.8	0.0
SGSI	Sangihe	2.91	192	P	Pn	07 37 10.1	-0.7
SCPH	Surigao	3.28	349	⇓iP	Pn	07 37 12.4	-3.4
DCPH	Dipolog City	3.42	306	⇓eP	Pn	07 37 19.5	+1.7
TBP	Tagbilaran	3.85	324	⇓iP	Pn	07 37 21.9	-1.8
TBP				i S	Sn	07 38 05.5	-2.3
LLP	Lapu-Lapu	4.32	330	eP	Pn	07 37 28.5	-1.6
LLP				eS	Sn	07 38 18.3	-0.9
TNTI	Ternate	5.87	168	P	Pn	07 37 49.4	-1.9
	0.8nm3μm189nm,0.6s						
TNTI	Ternate	5.87	168	Pn	Pn	07 37 51.8	+0.4
TNTI	Ternate	5.87	168	P	Pn	07 37 49.9	-1.4
RCP	Roxas	6.00	326	⇑eP	Pn	07 37 52.9	-0.3
KMSI	Cibinong	6.31	200	P	Pn	07 37 55.8	-1.6
	1.0nm4μm184nm,0.7s						
GTOI	Gorontalo	6.65	208	P	Pn	07 37 59.6	-2.4
	0.3nm859nm65nm,0.6s						
MRSI	Marisa	7.34	215	P	Pn	07 38 11.2	-0.3
	0.8nm2μm161nm,0.5s						
TOLI2	Tolitoli	7.60	225		Pn	07 38 13.8	-1.2
MYLDM	Lahad Datu	7.72	260	Pn	Pn	07 38 16.4	-0.3
LUWI	Luwuk	8.26	204		Pn	07 38 25.0	+1.0
LUWI	Luwuk	8.26	204	P	Pn	07 38 24.5	+0.5
SANI	Sanana	8.54	181	P	Pn	07 38 25.8	-2.1
SANI	Sanana	8.54	181	P	Pn	07 38 28.0	+0.1
APSI	Ampana	8.66	211	P	Pn	07 38 29.5	0.0
	924nm61nm,0.8s						
MPSI	Mapaga	8.77	226	P	Pn	07 38 31.2	+0.2
	21nm,0.8s						
LQP	Lukban	8.77	329	⇑eP	Pn	07 38 34.3	+3.1
SIJI	Sorong	8.97	145	P	Pn	07 38 33.1	-0.6
	baz=324,slow=19,SNR=1.0						
TTSI	Tana Toraja	11.43	214	P	Pn	07 39 08.1	+0.7
	30nm,0.7s						
SPSI	Sidrap Palu	12.23	212	P	Pn	07 39 18.4	+0.1
	20nm,0.9s						
BNSI	Bone	12.43	209	P	Pn	07 39 20.5	-0.6
	26nm,1.6s						
KAPI	Kappang	13.14	209	P	Pn	07 39 31.5	+0.9
	0.9nm,0.3s,baz=38,slow=9.1,SNR=6.3						
KAPI				LR	LR	07 44 59.7	
	comp=Z,49nm,19.3s,baz=66,slow=39						
KAPI	Kappang	13.14	209	Pn	Pn	07 39 29.3	-1.3
KAPI	Kappang	13.14	209	P	Pn	07 39 34.0	+3.4
KBKI	Kotabaru	13.96	226	P	P	07 39 53.7	+6.2
SBUM	Sibu	14.46	254	Pn	Pn	07 39 48.7	+0.5
BBKI	Banjar Baru	15.04	229	P	P	07 40 07.0	+7.5
SMPI	Sarmi	15.15	124	P	P	07 40 11.1	+10
EDFI	Ende, Flores	15.83	196	P	P	07 40 12.6	+4.2
SOEI	Soe	16.30	187	P	P	07 40 22.5	+8.8
KSM	Kuching	16.57	253	P	P	07 40 16.9	+0.4
BATI	Baumata	16.83	188	P	Pn	07 40 18.7	+0.5
	10nm,0.3s,baz=346,slow=4.2,SNR=2.9						
BATI				S	S	07 43 28.9	-2.8
	4.6nm,0.3s,baz=33,slow=5.9,SNR=1.3						
BATI				LR	LR	07 46 53.7	
	comp=Z,115nm,21.9s,baz=338,slow=37						
BATI	Baumata	16.83	188	P	P	07 40 32.4	+13
JAY	Jayapura	17.10	121	LR	LR	07 46 53.4	
	comp=Z,141nm,20.9s,baz=338,slow=37						
DRS	Darwin Rock St	19.44	166	P	P	07 40 48.4	+0.3
	65nm,0.9s						
GUMO	Guam	19.71	68	LR	LR	07 49 16.7	
	comp=Z,29nm,19.2s,baz=118,slow=39						
MTN	Manton Dam	19.89	166	P	P	07 40 52.8	-0.2
MTN				IAmb	IAmb	07 40 56.1	
	comp=Z,40nm,1.0s						
MTN	Manton Dam	19.89	166	P	P	07 40 54.0	+1.0
KDU	Kakadu	20.12	162	P	P	07 40 56.0	+0.5
UBPT	Khong Chiam	22.05	295	P	P	07 41 17.3	+1.0
UBPT				IAmb	IAmb	07 41 48.9	
	comp=Z,31nm,1.4s						
KNRA	Kununurra	22.23	173	P	P	07 41 17.9	-0.3
KNRA				IAmb	IAmb	07 41 31.6	
	comp=Z,40nm,0.8s						
KNRA	Kununurra	22.23	173	P	P	07 41 19.8	+1.6
LEM	Lembang	22.76	235	LR	LR	07 51 21.9	
	comp=Z,66nm,18.6s,baz=232,slow=39						
JRMM	Jerantut	23.71	265	P	P	07 41 35.0	+2.0
KLSI		24.11	243	P	P	07 41 40.0	+3.4
	comp=Z,11nm,1.1s						
FITZ	Fitzroy Crossi	24.50	181	P	P	07 41 40.5	+0.5
	comp=Z,5.7nm,0.5s,baz=5.5,slow=12,SNR=11						
MDSI	Maura Dua	24.51	244	P	P	07 41 43.2	+3.0
	comp=Z,11nm,1.0s						
IPM	Ipoh	25.08	267	P	P	07 41 47.0	+1.6
IPM	Ipoh	25.08	267	P	P	07 41 45.7	+0.2
IPM				IAmb	IAmb	07 41 48.3	
	comp=Z,22nm,0.6s						
IPM	Ipoh	25.08	267	P	P	07 41 48.5	+3.1
KULM	Kulim	25.38	269	P	P	07 41 50.0	+1.8
KULM	Kulim	25.38	269	P	P	07 41 49.1	+0.9
KULM				IAmb	IAmb	07 41 51.4	
	comp=Z,40nm,1.5s						
JCJ	Chichijima	25.50	35	P	P	07 41 46.5	-2.6
	comp=Z,94nm,0.4s,baz=281,slow=10,SNR=8.2						
SLVN	Son La	26.05	307	P	P	07 41 55.0	+0.8
NJ2	Nanjing	26.27	346	eP	P	07 41 57.0	+1.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
WHN	Wuhan	26.31	337	⇑P	P	07 41 59.8	+3.4
COEN	Coen	26.48	140	P	P	07 41 58.0	0.0
JNU	Nakatsue	26.80	9	P	P	07 42 01.1	+0.3
JNU	Nakatsue	26.80	9	P	P	07 42 01.4	+0.6
	comp=Z,143nm,0.9s						
WB0	Warramunga Arr	27.38	163	P	P	07 42 06.4	+0.3
WB0				IAmb	IAmb	07 42 14.3	
	comp=Z,17nm,0.9s						
WRAB	Tennant Creek	27.53	163	P	P	07 42 07.4	0.0
WRAB	Tennant Creek	27.53	163	P	P	07 42 09.8	+2.4
WRA	Warramunga Arr	27.53	163	P	P	07 42 06.3	-1.2
	comp=Z,2.1nm,0.6s,baz=340,slow=10,SNR=18						
WRA				PcP	PcP	07 45 24.3	0.0
	comp=Z,1.4nm,0.6s,baz=333,slow=2.3,SNR=1.4						
WRA				S	S	07 46 44.4	+0.5
	comp=Z,0.8nm,0.9s,baz=347,slow=13,SNR=2.7						
WRA				ScP	ScP	07 49 00.3	+1.2
	comp=Z,0.5nm,0.7s,baz=345,slow=3.0,SNR=2.8						
WRA				LR	LR	07 55 32.2	
	comp=Z,62nm,20.2s,baz=35,slow=42						
WRA	Warramunga Arr	27.53	163	P	P	07 42 07.9	+0.4
ENH	Enshi	28.32	328	P	P	07 42 15.3	+0.9
PSA00	Pilbara Seismi	28.62	192	P	P	07 42 16.5	-0.6
PSA00				IAmb	IAmb	07 42 52.3	
	comp=Z,22nm,1.4s						
CMAR	Chiang Mai Arr	29.02	297	P	P	07 42 20.4	-0.4
	comp=Z,1.0nm,0.3s,baz=118,slow=9.5,SNR=9.0						
CMAR				LR	LR	07 56 17.6	
	comp=Z,60nm,18.4s,baz=162,slow=41						
CMAR	Chiang Mai Arr	29.02	297	P	P	07 42 21.3	+0.6
KMI	Kunming	29.02	312	⇑P	P	07 42 23.0	+2.0
KMI				pP	pP	07 42 31.3	-5.8
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
QIS	Mount Isa	30.01	154	P	P	07 42 29.8	+0.3
KSRS	Korea Array	30.81	3	P	P	07 42 35.2	-1.0
	comp=Z,0.8nm,0.4s,baz=183,slow=11,SNR=2.8						
KSRS				LR	LR	07 56 02.6	
	comp=Z,21nm,18.9s,baz=183,slow=38						
AS31	Alice Springs	30.97	166	P	P	07 42 37.9	0.0
ASAR	Alice Springs	30.97	166	P	P	07 42 37.8	-0.2
	comp=Z,3.7nm,0.4s,baz=345,slow=6.9,SNR=22						
ASAR				PcP	PcP	07 45 32.9	-0.1
	comp=Z,1.5nm,0.6s,baz=342,slow=2.3,SNR=6.7						
ASAR				S	S	07 47 35.5	-2.5
	comp=Z,0.9nm,1.0s,baz=355,slow=19,SNR=4.0						
ASAR				ScP	ScP	07 49 11.4	+1.3
	comp=Z,2.0nm,1.1s,baz=323,slow=2.5,SNR=5.7						
ASAR	Alice Springs	30.97	166	P	P	07 42 38.0	0.0
XAN	Xi'an	31.66	332	P	P	07 42 44.9	+1.0
XAN				pP	pP	07 42 48.1	-12
XAN				pmax	pmax		
	comp=Z,31nm,0.8s						
MJAR	Matsushiro Arr	31.83	19	LR	LR	07 55 12.9	
	comp=Z,33nm,19.6s,baz=205,slow=36						
CD2	Chengdu	32.05	322	P	P	07 42 50.7	+3.3
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CTAO	Charters Tower	33.05	144	P	P	07 42 58.4	+2.2
BJT	Baijiatuau	34.51	346	P	P	07 43 08.4	-0.2
BJT				IAmb	IAmb	07 43 10.4	
	comp=Z,19nm,0.7s						
BJI	Beijing	34.53	346	P	P	07 43 08.8	+0.1
BJI				pmax	pmax		
	comp=Z,39nm,1.2s						
LZH	Lanzhou	35.80	328	eP	P	07 43 23.3	+3.3
LZH				pP	pP	07 43 40.1	+3.8
LZH				sP	sP	07 43 45.0	+0.9
LZH				pmax	pmax		
	comp=Z,42nm,1.3s						
LZH				LR	LR		
	comp=N,230nm,14.1s						
LZH				LR	LR		
	comp=E,210nm,13.0s						
LZH				LR	LR		
	comp=Z,170nm,16.3s						
HHC	Hu-ho-hao-te	36.56	341	eP	P	07 43 28.1	+1.8
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,8.8s						
MORW	Morawa	36.72	195	P	P	07 43 27.5	-0.2
MORW				IAmb	IAmb	07 43 30.2	
	comp=Z,21nm,1.3s						
BTO	Baotou	36.85	339	eP	P	07 43 32.2	+3.4
FORT	Forrest	37.16	177	P	P	07 43 31.2	-0.2
FORT	Forrest	37.16	177	P	P	07 43 34.6	+3.2
QLP	Quilpie	37.32	153	P	P	07 43 34.0	+1.2
	comp=Z,17nm,0.6s						
USA0B	Ussuriysk Arra	37.85	7	P	P	07 43 36.6	-0.4
USA0B				IAmb	IAmb	07 44 18.7	
	comp=Z,20nm,1.6s						
USRK	Ussuriysk Ar.	37.85	7	P	P	07 43 36.4	-0.6
	comp=Z,2.8nm,0.5s,baz=179,slow=7.3,SNR=11						
USRK	Ussuriysk Ar.	37.85	7	P	P	07 43 36.9	-0.2
MDJ	Mudanjiang	38.04	4	P	P	07 43 40.4	+1.7
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,150nm,5.3s						
RK1H	Rockhampton Ha	38.10	142	P	P	07 43 40.9	+1.5
LCRK	Leigh Creek	38.56	163	P	P	07 43 44.0	+0.8
ASAJ	Asahikawa	40.10	18	P	P	07 43 55.6	-0.3
	comp=Z,4.0nm,0.4s,baz=236,slow=7.1,SNR=7.1						
ASAJ				LR	LR	07 58 14.0	
	comp=Z,42nm,21.0s,baz=228,slow=33						
JKA	Kamikawa-asahi	40.10	18	P	P	07 43 55.6	-0.3
BBOO	Buckleboo	40.26	167	P	P	07 43 57.7	+0.3
BBOO				IAmb	IAmb	07 44 01.3	
	comp=Z,20nm,1.1s						
GTA	Gaotai	40.40	328	⇑P	P	07 44 01.6	+3.0
GTA				pP	sP	07 44 20.8	-2.1
GTA				sP	pP	07 44 29.0	+14
GTA				pmax	pmax		
	comp=Z,30nm,0.8s						
GTA				pmax	pmax		
	comp=Z,91nm,6.2s						
GTA				LR	LR		
	comp=N,130nm,14.5s						
GTA				LR	LR		
	comp=E,200nm,17.5s						
GTA				LR	LR		
	comp=Z,180nm,15.3s						
STKA	Stephens Creek	40.96	160	P	P	07 44 03.5	+0.4
	comp=Z,5.7nm,0.7s,baz=341,slow=8.5,SNR=13						
STKA				PP	PP	07 45 35.9	-3.0
	comp=Z,6.1nm,0.8s,baz=337,slow=12,SNR=3.1						
STKA				LR	LR	08 03 31.7	
	comp=Z,39nm,18.3s,baz=18,slow=40						
STKA	Stephens Creek	40.96	160	P	P	07 44 03.0	-0.1
STKA	Stephens Creek	40.96	160	P	P	07 44 05.4	+2.3
KLR	Kul'dur	42.80	5	P	P	07 44 16.9	-1.0
	comp=Z,4.1nm,0.4s,baz=190,slow=8.3,SNR=22						
KLR				PcP	PcP	07 46 07.8	-0.3
	comp=Z,2.6nm,0.8s,baz=164,slow=18,SNR=4.2						
ARMA	Armidale	44.14	148	P	P	07 44 30.7	+1.6
ULN	Ulaanbaatar	44.27	342	P	P	07 44 31.0	+1.0
ULN				IAmb	IAmb	07 44 31.9	
	comp=Z,12nm,0.7s						
SONM	Songino Array	44.46	341	P	P	07 44 31.9	+0.5
	comp=Z,4.3nm,0.7s,baz=156,slow=8.1,SNR=24						
SONM				PcP	PcP	07 46 13.7	-0.3
	comp=Z,1.9nm,0.6s,baz=169,slow=2.5,SNR=6.2						
SONM				LR	LR	08 03 22.4	
	comp=Z,43nm,18.2s,baz=53,slow=36						
SONM	Songino Array	44.46	341	P	P	07 44 32.1	+0.6
SONM				IAmb	IAmb	07 44 33.3	
	comp=Z,13nm,1.3s						
TOO	Toolangi	47.46	159	P	P	07 44 56.8	+1.7
TOO				IAmb	IAmb	07 45 01.8	
	comp=Z,25nm,1.5s						
DZM	Mont Dzumac	48.66	127	P	P	07 45 05.3	+0.6
	comp=Z,8.1nm,0.9s,baz=300,slow=20,SNR=2.2						
TLY	Talaya	48.69	342	P	P	07 45 03.9	-0.4
	comp=Z,3.4nm,0.4s,baz=146,slow=7.3,SNR=2.4						
WMQ	Urumqi	50.10	324	eP	P	07 45 19.4	+4.1
WMQ				pP	pP	07 45 33.4	+1.2
WMQ				sP	sP	07 45 37.1	-2.7
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.9s						
PETK	Petropavlovsk-	53.07	23	P	P	07 45 36.0	-1.2
	comp=Z,1.9nm,0.5s,baz=221,slow=6.7,SNR=5.3						
MK31	Makanchi Array	54.93	324	P	P	07 45 50.0	-0.9
MK31				IAmb	IAmb	07 45 54.4	
	comp=Z,5.9nm,0.6s						
MKAR	Makanchi Array	54.93	324	P	P	07 45 49.8	-1.1
	comp=Z,7.0nm,0.4s,baz=116,slow=7.1,SNR=40						
MKAR				PcP	PcP	07 46 52.1	0.0
	comp=Z,2.5nm,0.7s,baz=117,slow=4.6,SNR=4.2						
MKAR				LR	LR	08 11 01.2	
	comp=Z,50nm,18.2s,baz=63,slow=38						
MKAR	Makanchi Array	54.93	324	P	P	07 45 50.0	-0.9
MAKZ	Makanchi	55.12	324	P	P	07 45 51.6	-0.6
MAKZ				IAmb	IAmb	07 45 55.7	
	comp=Z,8.8nm,0.7s						
ZAA0	Zalesovo Array	57.83	333	P	P	07 46 11.8	+0.5
ZAA0				IAmb	IAmb	07 46 13.2	
	comp=Z,10.0nm,0.8s						
ZALV	Zalesovo Beam	57.83	333	P	P	07 46 09.6	-1.7
	comp=Z,6.1nm,0.4s,baz=130,slow=6.4,SNR=27						
ZALV				LR	LR	08 11 57.3	
	comp=Z,53nm,18.1s,baz=76,slow=37						
ZALV	Zalesovo Beam	57.83	333	P	P	07 46 10.3	-1.0
KURK	Kurchatov	59.07	327	P	P	07 46 19.2	-0.8
KKAR	Karatay Array	60.79	316	P	P	07 46 30.8	-1.2
LBZ	Lake Benmore	64.34	146	P	P	07 46 56.6	+1.0
BRVK	Borovoye	64.73	326	P	P	07 46 56.9	-1.1
BRVK				IAmb	IAmb	07 47 01.0	
	comp=Z,11nm,0.8s						
TIXI	Tiksi	65.05	1	P	P	07 46 58.8	-0.9
	comp=Z,4.3nm,0.4s,baz=174,slow=4.3,SNR=12						
TIXI	Tiksi	65.05	1	P	P	07 46 59.0	-0.7
TIXI				IAmb	IAmb	07 47 00.0	
	comp=Z,7.0nm,0.9s						
BKZ	Black Stump Fm	65.07	139	P	P	07 47 00.9	+0.4
NRIK	Noril'sk	67.57	346	P	P	07 47 15.4	-0.5
	comp=Z,14nm,0.7s,baz=127,slow=6.8,SNR=21						
NRIK	Noril'sk	67.57	346	P	P	07 47 16.2	+0.3
NRIK				IAmb	IAmb	07 47 17.0	
	comp=Z,12nm,0.8s						
ABKAR	Akbulak array	69.61	320	P	P	07 47 27.7	-1.3
AKTO	Aktyubinsk	71.10	321	P	P	07 47 36.3	-1.8
	comp=Z,4.3nm,0.6s,baz=98,slow=10.0,SNR=13						
ARU	Arti	72.26	327	P	P	07 47 42.6	-2.3
	comp=Z,3.1nm,0.4s,baz=133,slow=8.2,SNR=8.3						
CASY	Casey	73.53	187	P	P	07 47 52.4	+0.3
BELG	Belogornoye	77.83	322	P	P	07 48 17.8	+0.7
	comp=Z,16nm,0.8s,baz=98,slow=5.0,SNR=4.1						
RAYN	Ar Rayn	78.85	293	P	P	07 48 20.9	-2.5
I23K	Minto, Yukon-K	81.78	25	P	P	07 48 38.2	0.0
I23K				IAmb	IAmb	07 48 40.2	
	comp=Z,40nm,1.9s						
TOLK	Toolik Lake Re	81.86	22	P	P	07 48 39.0	+0.4
TOLK				IAmb	IAmb	07 48 42.7	
	comp=Z,5.1nm,0.8s						
PWL	Port Wells	82.14	30	P	P	07 48 40.1	-0.1
IL31		82.83	26	P	P	07 48 43.1	-0.5
IL31				IAmb	IAmb	07 49 49.1	
	comp=Z,25nm,1.9s						
ILAR	Eielson Array	82.83	26	P	P	07 48 41.8	-1.9
	comp=Z,1.5nm,0.7s,baz=241,slow=4.9,SNR=16						
ILAR	Eielson Array	82.83	26	P	P	07 48 43.1	-0.6
ARCES	ARCESS Array B	87.62	340	P	P	07 49 06.0	-1.5
	comp=Z,3.3nm,0.6s,baz=70,slow=5.8,SNR=17						
INK	Inuvik	87.77	21	P	P	07 49 06.6	-1.6
	comp=Z,1.1nm,0.7s,baz=274,slow=9.5,SNR=4.2						
FINES	FINESS Array B	89.09	332	P	P	07 49 12.4	-2.2
	comp=Z,2.4nm,0.5s,baz=72,slow=4.5,SNR=16						
AKASG	Malin Array Be	89.35	321	P	P	07 49 13.2	-2.8
	comp=Z,0.8nm,0.6s,baz=65,slow=4.9,SNR=1.6						
NOR	Nord	90.25	355	i P	P	07 49 17.7	-1.9
NOR				IAmb	IAmb	07 49 20.8	
	comp=Z,3.6nm,0.8s						
DAG	Danmarks Havn	94.40	352	i P	P	07 49 36.0	-2.9
DAG				IAmb	IAmb	07 49 38.8	
	comp=Z,7.7nm,0.8s						
SYO	Syowa Base	94.83	201	⇑eP	P	07 49 43.0	+2.1
SYO	Syowa Base	94.83	201	⇑eX	pP	07 49 56.0	-2.9
HFS	Hagfors	95.27	332	LR	LR	08 39 00.6	
	comp=Z,102nm,20.0s,baz=343,slow=39						
NOA	NORSAR Array B	96.02	334	P	P	07 49 44.8	-1.8
	comp=Z,0.7nm,0.7s,baz=54,slow=1.9,SNR=1.2						
NOA				LR	LR	08 36 10.2	
	comp=Z,62nm,19.4s,baz=275,slow=37						
NEEM	North Greenlan	96.12	359	eP	P	07 49 46.3	-0.8
NEEM				IAmb	IAmb	07 49 47.3	
	comp=Z,8.2nm,0.6s						
DBG	Daneborg	96.67	351	i P	P	07 49 48.2	-1.0
DBG				IAmb	IAmb	07 49 49.5	
	comp=Z,2.9nm,0.8s						
YKA	Yellowknife Ar	97.19	24	P	P	07 49 49.5	-2.3
	comp=Z,2.2nm,1.0s,baz=296,slow=4.5,SNR=3.2						
CLL	Collm	99.02	324	eP	Pdif	07 50 01.0	+0.7
SCHQ	Schefferville	117.89	8	PKP	PKPdf	07 55 05.2	-0.5
	comp=Z,1.8nm,0.7s,baz=260,slow=6.1,SNR=1.9						
TXAR	Lajitas Array	120.31	51	PKP	PKiKP	07 55 12.1	+0.7
	comp=Z,0.5nm,0.8s,baz=291,slow=2.5,SNR=5.0						
TORD	Torodi Ar. Bea	121.45	290	PKP	PKPdf	07 55 12.1	-1.6
	comp=Z,1.7nm,0.6s,baz=69,slow=1.6,SNR=12						
PLCA	Paso Flores	142.83	159	PKP	PKPdf	07 55 51.7	-1.5
	comp=Z,1.8nm,0.8s,baz=191,slow=2.1,SNR=3.4						
SIV	San Ignacio	168.25	144	PKP	PKPdf	07 56 27.6	+0.7
	comp=Z,1.0nm,0.7s,baz=28,slow=3.8,SNR=3.9						

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*IDC **10** 07:50:01.6±2.1, 20°.53S×69°.18W, h97km±18km, mb3.6/7, mb1 3.7/9, mb1mx3.5/29, mbtmp4.0/9, MS2.7/1, Ms1 2.8/1, ms1mx2.4/21, Error ellipse: s-maj=31.2km s-min=15.5km az=106.0*
*VAO **10** 07:50:02.6±0.5, 20°.63S×69°.46W, h130km±5km, mb4.1*
*NEIC **10** 07:50:03.5±1.5, 20°.66S±0°.01×69°.22W±0°.10, h107km±7km, mb4.1/8, ML4.2(GUC), Error ellipse: s-maj=13.0km s-min=1.7km az=91.0*
*GUC **10** 07:50:03.8±0.5, 20°.66S×69°.19W, h105km±2km, ML4.2*
ISC 10 07:50:02.5±0.6**, 20°.64S**±0°.03×**69°.24W**±0°.06**, h115**km±6km**, n93, σ1s.35**/102**, mb4.1**/6**, 9C-7D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	IPOC Station P	0.47	210	⇓iP	Pn	07 50 19.5	-0.3
PB01				i S	Sn	07 50 31.6	-1.3
PB01				IAML		07 50 32.5	

	comp=N,31µm,0.2s						
PB01	IPOC Station P	0.47	210		Pn	07 50 19.6	-0.3
PB08	IPOC Station P	0.50	9	⇓*i*P	Pn	07 50 20.5	+0.1
PB08				*i* S	Sn	07 50 33.5	-0.3
PB08				IAML		07 50 33.9	
	comp=E,12µm,0.2s						
PB08	IPOC Station P	0.50	9		Pn	07 50 20.6	+0.2
HMBC	Humberstone	0.71	300	⇓*i*P	Pn	07 50 21.6	0.0
HMBC				*i* S	Sn	07 50 35.6	-0.3
HMBC				IAML		07 50 36.9	
	comp=N,10µm,0.5s						
PATCX	Punta Patache	0.88	258	⇓*i*P	Pn	07 50 23.2	+0.2
PATCX				*i* S	Sn	07 50 38.0	-0.5
PATCX				IAML		07 50 38.9	
	comp=E,5µm,0.2s						
PATCX				IAML		07 50 42.2	
	comp=N,6µm,0.2s						
PATCX	Punta Patache	0.88	258		Pn	07 50 23.6	+0.6
TA01	Diego Aracena	0.89	274	⇓*i*P	Pn	07 50 23.1	+0.1
TA01				*i* S	Sn	07 50 38.0	-0.4
TA01	Diego Aracena	0.89	274		Pn	07 50 23.3	+0.3
TA02	Huaiquique	0.91	293	⇓*i*P	Pn	07 50 23.5	+0.2
TA02				*i* S	Sn	07 50 38.6	-0.2
TA02				IAML		07 50 39.7	
	comp=E,17µm,0.1s						
TA02	Huaiquique	0.91	293	Pn	Pn	07 50 23.6	+0.4
PB11	IPOC Station P	0.95	336	⇓*i*P	Pn	07 50 24.3	+0.4
PB11				*i* S	Sn	07 50 40.0	+0.1
PB11	IPOC Station P	0.95	336		Pn	07 50 24.4	+0.5
PB09	IPOC Station P	1.16	180	⇑*i*P	Pn	07 50 26.2	+0.3
PB09				*i* S	Sn	07 50 43.3	-0.4
PB09				IAML		07 50 45.9	
	comp=E,6µm,0.4s						
PB09	IPOC Station P	1.16	180	Pn	Pn	07 50 26.5	+0.5
PB07	IPOC Station P	1.24	209	⇑*i*P	Pn	07 50 27.1	+0.1
PB07				*i* S	Sn	07 50 44.6	-0.8
PB07				IAML		07 50 46.4	
	comp=E,5µm,0.3s						
PB07	IPOC Station P	1.24	209		Pn	07 50 27.2	+0.3
PB03	IPOC Station P	1.49	199	⇑*i*P	Pn	07 50 29.8	+0.1
PB03				*i* S	Sn	07 50 49.0	-1.2
PB03				IAML		07 50 50.9	
	comp=E,2µm,0.3s						
PB04	IPOC Station P	1.89	207	⇑*i*P	Pn	07 50 34.5	-0.1
PB04				*e*S	Sn	07 50 57.7	-1.3
PB04				IAML		07 50 58.8	
	comp=E,2µm,0.2s						
PB04	IPOC Station P	1.89	207		Pn	07 50 34.9	+0.4
LVC	Limon Verde	1.99	171	P	Pn	07 50 36.4	+0.5
	comp=E,99nm,0.3s,baz=4.4,slow=11,SNR=155						
LVC				S	Sn	07 51 01.7	+0.2
	comp=E,198nm,0.3s,baz=129,slow=18,SNR=9.9						
LVC	Limon Verde	1.99	171	⇑*e*P	Pn	07 50 36.5	+0.5
LVC				*e*S	Sn	07 51 01.8	+0.2
LVC	Limon Verde	1.99	171	*e*P	Pn	07 50 37.0	+1.0
LVC	Limon Verde	1.99	171	Pn	Pn	07 50 36.9	+1.0
PB06	IPOC Station P	2.08	189	*e*P	Pn	07 50 35.5	-1.5
PB06				*e*S	Sn	07 51 00.9	-2.4
PB06	IPOC Station P	2.08	189		Pn	07 50 37.3	+0.3
PB12	IPOC Station P	2.26	333	⇑*i*P	Pn	07 50 39.1	0.0
PB12				*e*S	Sn	07 51 04.8	-2.4
PB12				IAML		07 51 08.9	
	comp=E,2µm,0.2s						
PB12	IPOC Station P	2.26	333		Pn	07 50 39.4	+0.2
PB16	IPOC Station P	2.30	354	⇑*i*P	Pn	07 50 41.8	+1.6
PB16				IAML		07 51 13.2	
	comp=N,646nm,0.2s						
PB16	IPOC Station P	2.30	354		Pn	07 50 42.0	+1.8
PB05	IPOC Station P	2.38	202	⇑*e*P	Pn	07 50 40.4	-0.4
PB05				*e*S	Sn	07 51 04.8	-5.2
PB05				IAML		07 51 09.2	
	comp=E,1µm,0.2s						
PB15	IPOC Station P	2.57	185	⇑*e*P	Pn	07 50 43.5	+0.2
PB15	IPOC Station P	2.57	185		Pn	07 50 43.7	+0.5
PB10	IPOC Station P	3.11	203	*e*P	Pn	07 50 49.2	-1.0
PB10	IPOC Station P	3.11	203		Pn	07 50 49.4	-0.8
PB14	IPOC Station P	4.12	195	Pn	Pn	07 51 02.5	-1.4
LPAZ	La Paz	4.45	14	P	Pn	07 51 11.4	+2.8
	comp=E,11nm,0.3s,baz=198,slow=8.5,SNR=363						
LPAZ				S	Sn	07 51 52.9	-6.9
	comp=E,1.7nm,0.3s,baz=198,slow=12,SNR=6.0						
LPAZ				LR	LR	07 52 46.6	
	comp=E,80nm,18.1s,baz=244,slow=38						
LPAZ	La Paz	4.45	14	Pn	Pn	07 51 11.6	+3.0
AC02	Maricunga	6.17	179	Pn	Pn	07 51 30.9	-0.9
GO03	Copiap	6.99	187	Pn	Pn	07 51 39.7	-2.7
SIV	San Ignacio	9.02	61	P	Pn	07 52 07.5	-2.5
	comp=E,1.9nm,0.3s,baz=250,slow=11,SNR=49						
SIV				S	Sn	07 53 36.5	-13
	baz=254,slow=15,SNR=1.7						
ETMB	Extrema	11.14	16	*e*P	Pn	07 52 37.8	-0.8
ETMB	Extrema	11.14	16		Pn	07 52 38.0	-0.7
CZSB	Cruzeiro do Su	13.26	345	*e*P	Pn	07 53 05.2	-1.2
SALV	Santo Antonio	13.70	72	*e*P	P	07 53 15.7	-1.1
PP1B	Ponte de Pedra	13.90	80	*e*P	P	07 53 17.8	-1.3
ITQB	Itaqui	14.53	131	*e*P	P	07 53 24.8	-1.2
PDRB	Porto dos Gac	14.99	55	*e*P	P	07 53 31.1	-0.2
TRCB	Terra Rica	15.58	101	*e*P	P	07 53 37.5	-0.3
PTGB	Pitanga	16.36	108	*e*P	P	07 53 47.9	+1.4
TBTG	Tabatinga, AM	16.36	358	*e*P	Pn	07 53 44.9	-0.8
PCMB	Pacaembu	16.80	97	*e*P	P	07 53 51.2	-0.1
CPSB	Cacapava Do Su	17.24	127	*e*P	P	07 53 56.3	+0.2
ARAG	Araguaiana, MT	17.26	76	*e*P	Pn	07 53 58.2	+1.6
ITRB	Iturama	17.75	90	*e*P	Pn	07 54 02.4	-0.1
TRQA	Tornquist	18.46	162	*e*P	P	07 54 09.3	-0.1
TRQA	Tornquist	18.46	162	P	Pn	07 54 10.7	-0.2
TRQA				IAmb	IAmb	07 54 33.5	
	comp=Z,6.5nm,1.1s						
NPGB	Novo Progresso	19.06	47	*e*P	P	07 54 15.5	-0.6
SNDB	Serra Nova Dou	19.24	66	*e*P	P	07 54 17.7	-0.3
MACA	Manacapuru-AM	19.26	27	*e*P	P	07 54 18.5	+0.2
MACA	Manacapuru-AM	19.26	27	P	P	07 54 17.9	-0.4
BB19B	Bebedouro	19.36	95	*e*P	P	07 54 19.6	+0.3
TER01	Tubaro-SC	19.89	117	*e*P	Pn	07 54 27.2	-0.4
IPMB	Ipameri, GO	20.02	86	*e*P	P	07 54 27.1	+0.6
PLCA	Paso Flores	20.07	183	P	P	07 54 28.1	+1.2
	comp=Z,1.9nm,0.8s,baz=342,slow=12,SNR=4.3						
PLCA	Paso Flores	20.07	183	*e*P	P	07 54 25.5	-1.3
RCLB	Rio Claro- Sao	20.27	99	*e*P	P	07 54 28.7	-0.5
BDFB	Brasilia	20.76	80	P	P	07 54 34.9	+0.2
	comp=Z,1.9nm,0.3s,baz=248,slow=5.4,SNR=4.0						
BDFB	Brasilia	20.76	80	IAmb	IAmb	07 54 38.6	
	comp=Z,3.0nm,0.7s						
ITTB	Itaituba	20.83	41	*e*P	P	07 54 34.5	-0.7
PTGA	Pitinga	21.76	26	P	P	07 54 44.0	-1.1
	comp=Z,3.4nm,0.3s,baz=210,slow=14,SNR=14						
MALB	Monte Alegre	23.71	40	*e*P	P	07 55 03.1	-1.0
SMTB	Santa Maria do	23.95	64	*e*P	P	07 55 07.3	+0.9
DIAM	Diamantina, MG	24.21	89	*e*P	P	07 55 10.3	+1.4
MC01	Montes Claros	24.27	85	*e*P	P	07 55 09.8	+0.5
JANB	Januaria	24.35	81	*e*P	P	07 55 10.3	+0.2
BOAV	Boa Vista	24.43	21	*e*P	P	07 55 12.1	+1.4
BOAV	Boa Vista	24.43	21	P	P	07 55 12.1	+1.4
BOAV				IAmb	IAmb	07 55 14.0	
	comp=Z,8.0nm,0.9s						
SDBA	SAO DESIDERIO	24.70	74	*e*P	P	07 55 14.4	+1.2
MCPB	Macapa, AP	26.23	42	*e*P	P	07 55 26.4	-0.7
GDU01	Guandu, BA	29.13	81	*e*P	P	07 55 54.0	+1.1
TXAR	Lajitas Array	59.75	325	P	P	07 59 56.1	+0.5
	comp=Z,0.2nm,0.8s,baz=135,slow=9.0,SNR=2.1						
SNAA	Sanae	63.19	161	P	P	08 00 19.9	+1.7
	comp=Z,1.0nm,0.7s,baz=278,slow=8.8,SNR=6.0						
SNAA	Sanae	63.19	161	P	P	08 00 20.3	+2.1
SNAA				IAmb	IAmb	08 00 21.0	
	comp=Z,2.1nm,0.9s						
DBIC	Dimbokro	68.78	74	P	P	08 00 55.3	+0.5
	comp=Z,2.2nm,0.5s,baz=238,slow=3.8,SNR=4.3						
TORD	Torodi Ar. Bea	77.36	71	P	P	08 01 45.6	+0.3
	comp=Z,1.5nm,0.6s,baz=252,slow=5.4,SNR=14						
TORD	Torodi Ar. Bea	77.36	71	IAmb	IAmb	08 01 46.5	
	comp=Z,0.7nm,0.7s						
H11S2	WAKE ISLAND Hy	127.46	278	T	T	10 28 49.7	
	baz=101,slow=74,SNR=29						
H11S1	WAKE ISLAND Hy	127.47	278	T	T	10 28 47.9	
	baz=101,slow=74,SNR=57						
H11S3	WAKE ISLAND Hy	127.48	278	T	T	10 28 49.8	
	baz=101,slow=74,SNR=44						
H11N3	WAKE ISLAND Hy	127.52	279	T	T	10 28 53.6	
	baz=102,slow=75,SNR=9.0						
H11N2	WAKE ISLAND Hy	127.53	279	T	T	10 28 54.7	
	baz=102,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	127.54	279	T	T	10 28 55.5	
	baz=102,slow=75,SNR=5.8						

NNC 10 08:03:57.5±2.1**, 53°.64N**×**88°.11E, h0^{km}, mb3.8, mpv3.4, 6C-8D, Error ellipse: s-maj=16.4km s-min=8.7km az=59.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.98	280	⇑Pn	Pn	08 04 31.3	-1.0
	5.7nm,0.6s						
ZAA0				⇓Sn	Sb	08 04 59.2	-0.3
	29nm,0.8s						
KURK	Kurchatov	6.53	247	⇑Pn	Pn	08 05 34.6	-0.2
	2.6nm,0.6s						
KURK				⇑Sn	Sn	08 06 50.4	+0.6
	3.0nm,0.5s						
KURK				⇑Lg	Lg	08 07 23.8	
	8.0nm,0.7s						
KURBB	Kurchatov Arra	6.63	247	⇑Pn	Pn	08 05 36.5	+0.4
	5.1nm,0.4s						
KURBB				⇓Sn	Sn	08 06 51.2	-1.0
	11nm,0.6s						
KURBB				⇓Lg	Lg	08 07 26.5	
	15nm,0.9s						
MK31	Makanchi Array	7.80	211	⇑Pn	Pn	08 05 53.4	+1.2
	0.7nm,0.5s,baz=30,slow=13,SNR=27						
MK31				⇓Sn	Sn	08 07 23.0	+1.8
	2.0nm,0.8s,baz=36,slow=25,SNR=7.4						
MK31				⇓Lg	Lg	08 08 06.5	
	3.4nm,0.9s,baz=24,slow=34,SNR=3.9						
MAKZ	Makanchi	7.89	212	⇓Pn	Pn	08 05 55.1	+1.7
	1.7nm,0.9s						
MAKZ				⇓Sn	Sn	08 07 24.6	+1.3
	2.3nm,1.1s						
MAKZ				⇓Lg	Lg	08 08 09.2	
	7.6nm,1.1s						

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*IDC **10** 08:16:31.8±1.2, 4°.20S×129°.42E, h0^{km}, mb3.9/3, mb1 4.2/6, mb1mx3.7/27, mbtmp4.0/6, ML4.0/3, MS3.0/3, Ms1 3.0/3, ms1mx2.5/44, Error ellipse: s-maj=53.5km s-min=20.4km az=75.0*

*DJA **10** 08:16:36.6±1.3, 4°S±4°×12°9E±°, h22^{km}±13^{km}, M4.2/9, mb4.4/3, mB5.0/1, MLv4.0/9, Mw(mB)4.3/1*

ISC 10 08:16:36.7±0.7**, 4°.09S**±0°.05×**129°.53E**±0°.05**, h36^{km}, n22, σ1^{s}50**/23**, mb3.9**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.57	139	P	Pn	08 16 47.3	-1.1
MSAI	Masohi	0.95	321	P	Pn	08 16 52.5	-1.1
MSAI				S	Sn	08 17 04.5	-1.5
AAI	Ambon	1.39	287	P	Pn	08 17 01.1	+1.5
AAI				S	Sn	08 17 14.9	-1.9
FAKI	Fak Fak	2.96	67	P	Pn	08 17 22.5	+1.4
FAKI	Fak Fak	2.96	67	P	Pn	08 17 22.9	+1.8
SIJI	Sorong	3.64	28	Pn	Pn	08 17 31.2	+0.5
	26nm,0.3s,baz=59,slow=4.0,SNR=85						
SIJI				Sn	Sn	08 18 09.9	-2.5
	4.3nm,0.3s,baz=235,slow=22,SNR=1.3						
SIJI				LR	LR	08 19 23.5	
	comp=Z,161nm,18.4s,baz=22,slow=45						
SWI	Sorong	3.65	28	P	Pn	08 17 31.7	+1.1
LBMI	Labuha	3.99	329	P	Pn	08 17 34.5	-0.8
SANI	Sanana	4.08	300	P	Pn	08 17 37.2	+0.6
SANI	Sanana	4.08	300	P	Pn	08 17 38.3	+1.7
KNRA	Kununurra	11.54	184	P	Pn	08 19 19.9	+1.0
WRA	Warramunga Arr	16.44	164	Pn	Pn	08 20 21.0	-3.8
	0.2nm,0.3s,baz=343,slow=13,SNR=15						
WRA				Sn	Sn	08 23 11.2	-15
	0.1nm,0.3s,baz=342,slow=22,SNR=1.4						
WRA				LR	LR	08 26 14.0	
	comp=Z,47nm,21.0s,baz=335,slow=36						
QIS	Mount Isa	19.08	150	P	Pn	08 20 56.9	-0.4
MBWA	Marble Bar	19.45	208	P	Pn	08 21 01.9	+0.1
PSA00	Pilbara Seismi	19.75	208	P	Pn	08 21 04.9	-0.5
ASAR	Alice Springs	19.91	168	P	P	08 21 05.7	+0.3
	1.5nm,0.3s,baz=345,slow=10.0,SNR=96						
ASAR				LR	LR	08 28 06.2	
	comp=Z,47nm,21.6s,baz=36,slow=35						
MTSU	Mount Surprise	20.10	135	P	Pn	08 21 08.8	-0.8
WRKA	Warakurna	20.86	183	P	Pn	08 21 16.8	-1.5
CTAO	Charters Tower	22.77	136	P	P	08 21 37.2	+1.0
STKA	Stephens Creek	29.87	159	P	P	08 22 40.2	-0.7
	0.9nm,0.4s,baz=321,slow=9.9,SNR=4.3						
SONM	Songino Array	55.56	341	P	P	08 26 08.8	+0.2
	0.3nm,0.4s,baz=162,slow=5.9,SNR=2.2						
MKAR	Makanchi Array	65.56	326	P	P	08 27 17.8	+1.1
	0.6nm,0.4s,baz=111,slow=8.1,SNR=16						

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*ANF **10** 08:17:32.5±0.1, 34°.31N×116°.86W, h11^{km}, ML3.0/30, Error ellipse: s-maj=0.8km s-min=0.8km az=49.0*

*NEIC **10** 08:17:33.2±1.1, 34°.32N±0°.01×116°.84W±0°.02, h5^{km}±8^{km}, Error ellipse: s-maj=2.0km s-min=1.8km az=129.0*

*PAS **10** 08:17:33.3±0.8, 34°.32N±0°.01×116°.85W±0°.03, h4^{km}±7^{km}, ML3.0/213, ML2.8/34(NEIC), Error ellipse: s-maj=3.0km s-min=1.6km az=73.0*

ISC 10 08:17:33.0±0.9**, 34°.31N**±0°.02×**116°.85W**±0°.02**, h8^{km}**±7^{km}**, n50, σ0^{s}54**/79**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBRC	Big Bear Solar	0.08	232	P	Pg	08 17 35.3	-0.1
	baz=44,SNR=1000						
BBRC				S	Sg	08 17 36.8	-0.2
	baz=44						
CFSC	Central Fire S	0.42	241		Pg	08 17 41.6	+0.5
CFSC					Sg	08 17 47.3	+0.7
RSBC	Riverside Bore	0.52	230		Pg	08 17 43.3	+0.2
RSBC					Sg	08 17 50.1	+0.1
RRX	Edison Barstow	0.58	348	P	Pg	08 17 44.2	0.0
	baz=168,SNR=6.8						
RRX				S	Sg	08 17 52.2	+0.4
	baz=168						
GVDA	Garner Valley	0.66	167		Pg	08 17 45.7	0.0
GVDA					Sg	08 17 54.7	+0.4
HEC	Hector,Ludlow	0.67	39	P	Pg	08 17 46.0	+0.1
	baz=220,SNR=183						
HEC				S	Sg	08 17 55.1	+0.5
	baz=220						
BFSC	Mount Baldy Ra	0.68	264	P	Pg	08 17 45.9	-0.2
	baz=83,SNR=102						
BFSC				S	Sg	08 17 54.8	-0.1
	baz=83						
MURC	Murrieta	0.77	202	P	Pg	08 17 47.5	-0.3
	baz=21,SNR=34						
MURC				S	Sg	08 17 57.9	+0.1
	baz=21						
BELC	Belle Mtn. Jos	0.77	114	P	Pg	08 17 48.0	+0.2
	baz=295,SNR=116						
BELC				S	Sg	08 17 58.5	+0.6
	baz=295						
PFO	Pinyon Flats O	0.77	155		Pg	08 17 47.8	-0.1
PFO				IAML		08 17 59.7	
	266nm,0.4s						
PFO				IAML		08 18 02.8	
	255nm,0.2s						
PFO	Pinyon Flats O	0.77	155	P	Pg	08 17 47.7	-0.1
	baz=335,SNR=37						
PFO				S	Sg	08 17 57.9	0.0
	baz=335						
GSC	Goldstone, Bar	0.99	2		Pg	08 17 51.8	-0.2
GSC	Goldstone, Bar	0.99	2	P	Pg	08 17 51.6	-0.4
	baz=182,SNR=179						
GSC				S	Sg	08 18 05.1	+0.2
	baz=182						
MWC	Mount Wilson	1.01	265		Pg	08 17 51.4	-1.0
MWC				IAML		08 18 06.3	
	comp=E,301nm,0.2s						
MWC				IAML		08 18 11.3	
	comp=N,372nm,0.3s						
GMRC	Granite Mounta	1.09	64	P	Pg	08 17 53.3	-0.6
	baz=245,SNR=93						
GMRC				S	Sg	08 18 08.1	+0.1
	baz=245						
GVRC	Garvey Reservo	1.09	256		Pg	08 17 53.7	-0.2
EDW2	Edwards Air Fo	1.10	301	P	Pg	08 17 53.5	-0.8
	baz=120,SNR=67						
EDW2				S	Sg	08 18 07.8	-0.8
	baz=120						
PASC	Pasadena Art C	1.12	263		Pg	08 17 53.7	-0.8
PASC	Pasadena Art C	1.12	263	IAML		08 18 10.7	
	comp=E,137nm,0.5s						
PASC				IAML		08 18 12.1	
	comp=N,203nm,0.4s						
DECC	Green Verdugo	1.23	268	P	Pg	08 17 56.0	-0.7
	baz=86,SNR=7.8						
DECC				S	Sg	08 18 12.5	-0.2
	baz=86						
BC3	Big Chuckawall	1.33	119	P	Pn	08 17 57.3	-0.6
	baz=300,SNR=123						
BC3				S	Sg	08 18 15.8	0.0
	baz=300						
FMP	Fort Macarthur	1.34	244	Pg	Pn	08 17 58.1	0.0
	baz=63						
FMP				S	Sb	08 18 15.2	-0.5
	baz=63						
LRMC	Laurel Mtn Rad	1.35	330	Pg	Pn	08 17 58.7	+0.4
	baz=149						
LRMC				S	Sg	08 18 16.4	-0.1
	baz=149						
TUQ	Turquoise Moun	1.35	34	P	Pn	08 17 57.5	-0.8
	baz=215,SNR=19						
TUQ				S	Sg	08 18 16.0	-0.6
	baz=215						
IRM	Iron Mountain	1.42	96	P	Pn	08 17 58.2	-0.9
	baz=277,SNR=118						
IRM				S	Sb	08 18 17.0	-1.0
	baz=277						
109C	Camp Elliot, M	1.44	189		Pn	08 17 58.8	-0.5
109C				IAML		08 18 18.4	
	comp=N,192nm,0.3s						
109C	Camp Elliot, M	1.44	189	P	Pn	08 17 58.7	-0.6
	baz=8.3						
109C				S	Sb	08 18 17.5	-0.9
	baz=8.3						
MONP2	Monument Peak	1.46	166	Pg	Pn	08 18 00.5	+0.7
	baz=346						
MONP2				S	Sb	08 18 18.7	-0.6
	baz=346						
OSI	Osito Audit: C	1.58	282		Pn	08 18 01.7	+0.3
OSI				IAML		08 18 27.6	
	comp=E,110nm,0.7s						
OSI				IAML		08 18 29.2	
	comp=N,115nm,0.8s						
OSI	Osito Audit: C	1.58	282	Pb	Pn	08 18 01.7	+0.3
	baz=100						
OSI				Sb	Sn	08 18 23.0	+1.0
	baz=100						
CIS	Catalina Islan	1.59	236	Pb	Pn	08 18 01.7	+0.2
	baz=54						
CIS				Sb	Sn	08 18 23.0	+0.8
	baz=54						
SWSC	Sam W. Stewart	1.62	147	P	Pn	08 18 00.9	-0.9
	baz=328,SNR=19						
SWSC				S	Sn	08 18 22.7	-0.2
	baz=328						
BAR	Barrett	1.63	175		Pn	08 18 02.4	+0.3
BAR				IAML		08 18 24.8	
	comp=N,149nm,0.2s						
BAR				IAML		08 18 25.2	
	comp=E,140nm,0.2s						
SHOC	Shoshone, Teco	1.65	16	Pg	Pb	08 18 03.9	+0.2
	baz=197						
SHOC				Sb	Sg	08 18 26.0	-0.2
	baz=197						
IKP	In-Ko-Pah, Jac	1.77	159	P	Pn	08 18 03.4	-0.5
	baz=340						
IKP				Sb	Sb	08 18 28.8	+0.7
	baz=340						
MPMC	Manual Prospec	1.82	343	Pb	Pb	08 18 06.5	-0.2
	baz=163						
MPMC				Sb	Sg	08 18 31.0	-0.6
	baz=163						
ARVC	Arvin	1.83	297	Pb	Pb	08 18 06.2	-0.4
	baz=116						
ARVC				Sb	Sb	08 18 30.1	+0.5
	baz=116						
GWY	Greenwater Val	1.88	4	Pn	Pn	08 18 05.1	-0.4
NEE2	Needles Airpor	1.89	75	Pb	Pb	08 18 07.7	-0.1
	baz=257						
NEE2				Sb	Sb	08 18 32.6	+1.0
	baz=257						
ISA	Isabella, Lake	1.90	316	Pb	Pb	08 18 07.8	-0.2
	baz=135						
ISA				Sb	Sb	08 18 32.4	+0.6
	baz=135						
CBX	Cerro Bola	2.00	176		Pn	08 18 08.3	+1.1
CBX				IAML		08 18 36.0	
	comp=E,88nm,0.5s						
GLA	Glamis	2.10	126		Pn	08 18 08.0	-0.5
GLA				IAML		08 18 44.3	
	comp=N,86nm,0.5s						
GLA				IAML		08 18 48.4	
	comp=E,90nm,0.9s						
GLA	Glamis	2.10	126	P	Pn	08 18 08.0	-0.5
	baz=308,SNR=30						
PDMCI	Parker Dam,Lak	2.24	89	Pb	Pb	08 18 13.5	-0.1
	baz=271						
CWC	Cottonwood Cre	2.35	335	Pg	Pg	08 18 17.5	-0.6
	baz=154						
SHPR	Sheep Range	2.59	32	Pn	Pn	08 18 15.7	+0.3
LCH	Last Change Ra	2.99	348		Pn	08 18 21.3	+0.5
LCMT	Little Creek M	3.98	46		Pn	08 18 35.1	+0.7
KNB	Kanab	4.24	49	Pn	Pn	08 18 38.9	+0.8
KNB				IAML		08 19 51.2	
	comp=E,11nm,0.9s						
CCUT	Cedar City	4.29	40		Pn	08 18 39.5	+0.7
CCUT				IAML		08 19 52.1	
	comp=E,10.0nm,4.8s						

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*IDC **10** 08:28:58.9±0.8, 2°.28N×128°.68E, h0^{km}, mb4.0/11, mb1 4.2/13, mb1mx4.0/38, mbtmp4.1/13, ML4.5/2, MS3.1/7, Ms1 3.1/7, ms1mx2.8/47, Error ellipse: s-maj=29.8km s-min=14.1km az=79.0*

*DJA **10** 08:29:03.1±0.5, 2°N±5°×12°9E±°, h10^{km}, M4.4/11, mb4.6/4, mB4.4/2, MLv4.2/11, Mw(mB)3.5/2, MwMwp4.8/1, Mwp5.1/1*

*NEIC **10** 08:29:04.9±1.7, 2°.25N±0°.09×128°.65E±0°.08, h43^{km}±8^{km}, mb4.3/12, Error ellipse: s-maj=14.5km s-min=10.5km az=214.0*

ISC 10 08:29:03.8±0.6**, 2°.23N**±0°.07×**128°.67E**±0°.08**, h35^{km}, n46, σ0^{s}78**/36**, mb4.2**/15**, MS3.0**/6**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.95	222	P	Pn	08 29 34.7	+0.3
TNTI	Ternate	1.95	222		Pn	08 29 34.8	+0.4
LBMI	Labuha	3.08	202	P	Pn	08 29 50.7	+0.7
SWI	Sorong	4.02	140	P	Pn	08 30 03.8	+1.0
SIJI	Sorong	4.03	140	Pn	Pn	08 30 04.0	+1.1
	35nm,0.3s,baz=350,slow=22,SNR=41						
SIJI				Sn	Sn	08 30 48.1	-0.8
	6.6nm,0.3s,baz=36,slow=23,SNR=5.9						
KMSI	Cibinong	4.97	251	P	Pn	08 30 15.8	-0.2
SANI	Sanana	5.03	212	P	Pn	08 30 16.2	-0.6
GTOI	Gorontalo	5.88	254	P	Pn	08 30 30.2	+1.8
	0.1nm218nm18nm,0.7s						
FAKI	Fak Fak	6.24	145	P	Pn	08 30 34.5	+1.1
	0.1nm26nm,0.6s						
FAKI	Fak Fak	6.24	145	Pn	Pn	08 30 33.6	+0.2
TOLI2	Tolitoli	7.97	262	Pn	Pn	08 30 57.4	+0.3
KAPI	Kappang	11.46	231	Pn	Pn	08 31 46.1	+1.1
	2.3nm,0.3s,baz=89,slow=6.1,SNR=5.5						
KNRA	Kununurra	17.79	180	P	P	08 33 09.8	+0.5
GUMO	Guam	19.59	54	LR	LR	08 39 52.9	
	comp=Z,131nm,18.6s,baz=108,slow=33						
FITZ	Fitzroy Crossi	20.42	188	P	P	08 33 37.4	-0.6
	2.8nm,0.6s,baz=164,slow=11,SNR=4.2						
PMG	Port Moresby	21.75	122	LR	LR	08 42 15.1	
	comp=Z,26nm,19.8s,baz=258,slow=37						
WB0	Warramunga Arr	22.57	166	P	P	08 34 01.5	+0.3
WB0				IAmb	IAmb	08 34 07.0	
	comp=Z,9.2nm,0.6s						
WRA	Warramunga Arr	22.73	166	P	P	08 34 03.0	+0.1
	comp=Z,6.9nm,0.4s,baz=344,slow=10,SNR=20						
WRA				LR	LR	08 44 42.3	
	comp=Z,62nm,18.8s,baz=125,slow=41						
WRA	Warramunga Arr	22.73	166	P	P	08 34 03.4	+0.6
WR0	Warramunga Arr	22.79	166	P	P	08 34 04.0	+0.5
WR0				IAmb	IAmb	08 34 07.6	
	comp=Z,5.6nm,0.8s						
LEM	Lembang	22.86	247	LR	LR	08 43 25.7	
	comp=Z,84nm,18.6s,baz=328,slow=38						
PSA00	Pilbara Seismi	25.18	200	P	P	08 34 25.5	-0.6
PSA00				IAmb	IAmb	08 34 35.3	
	comp=Z,15nm,1.2s						
AS31	Alice Springs	26.24	169	P	P	08 34 36.6	+0.9
ASAR	Alice Springs	26.24	169	P	P	08 34 35.7	-0.1
	comp=Z,1.7nm,0.6s,baz=350,slow=7.4,SNR=20						

ASAR				LR	LR	08 48 03.1	
	comp=Z,66nm,18.3s,baz=340,slow=44						
ASAR	**Alice Springs**	**26.24**	**169**	P	**P**	**08 34 36.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**33.30**	**301**	P	**P**	**08 35 38.2**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=130,slow=8.4,SNR=5.4						
KSRS	**Korea Array**	**35.06**	**359**	LR	LR	08 49 37.1	
	comp=Z,7.6nm,20.0s,baz=195,slow=35						
MJAR	**Matsushiro Arr**	**35.26**	**13**	P	**P**	**08 35 54.0**	**-1.2**
	comp=Z,1.7nm,0.7s,baz=167,slow=11,SNR=2.4						
MJAR				LR	LR	08 50 28.0	
	comp=Z,24nm,18.5s,baz=70,slow=37						
MJAR	**Matsushiro Arr**	**35.26**	**13**	IAmb	IAmb	08 36 17.7	
	comp=Z,4.9nm,1.2s						
BBOO	**Buckleboo**	**35.55**	**169**	P	**P**	**08 35 57.2**	**-0.4**
STKA	**Stephens Creek**	**36.07**	**161**	P	**P**	**08 36 02.9**	**+0.7**
	comp=Z,3.3nm,0.4s,baz=322,slow=8.5,SNR=6.9						
H11S3	**WAKE ISLAND Hy**	**40.60**	**64**	T	T	09 19 55.8	
	baz=251,slow=75,SNR=102						
H11S2	**WAKE ISLAND Hy**	**40.61**	**64**	T	T	09 20 03.9	
	baz=251,slow=75,SNR=91						
H11S1	**WAKE ISLAND Hy**	**40.61**	**64**	T	T	09 20 01.6	
	baz=251,slow=75,SNR=91						
H11N1	**WAKE ISLAND Hy**	**41.19**	**62**	T	T	09 20 42.4	
	baz=250,slow=75,SNR=343						
H11N2	**WAKE ISLAND Hy**	**41.20**	**62**	T	T	09 20 40.9	
	baz=250,slow=75,SNR=288						
H11N3	**WAKE ISLAND Hy**	**41.20**	**62**	T	T	09 20 43.7	
	baz=250,slow=75,SNR=247						
KLR	**Kul'dur**	**46.90**	**3**	P	**P**	**08 37 31.4**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=188,slow=11,SNR=2.3						
SONM	**Songino Array**	**49.34**	**340**	P	**P**	**08 37 51.2**	**+1.5**
	comp=Z,0.3nm,0.4s,baz=151,slow=9.2,SNR=2.3						
PETK	**Petropavlovsk-**	**56.11**	**21**	P	**P**	**08 38 40.0**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=198,slow=4.4,SNR=4.6						
MK31	**Makanchi Array**	**59.89**	**325**	P	**P**	**08 39 05.7**	**-0.5**
MK31				IAmb	IAmb	08 39 19.7	
	comp=Z,1.8nm,1.0s						
MKAR	**Makanchi Array**	**59.89**	**325**	P	**P**	**08 39 05.7**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=122,slow=7.6,SNR=5.9						
BKZ	**Black Stump Fm**	**60.18**	**138**	P	**P**	**08 39 08.5**	**+0.2**
VNDA	**Vanda**	**81.71**	**173**	P	**P**	**08 41 17.7**	**-0.4**
VNDA				IAmb	IAmb	08 41 37.9	
	comp=Z,4.6nm,1.3s						
ILAR	**Eielson Array**	**85.62**	**25**	P	**P**	**08 41 37.8**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=256,slow=5.6,SNR=5.5						
QSPA	**South Pole Qui**	**92.15**	**180**	P	**P**	**08 42 08.4**	**-1.1**

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*IDC **10** 08:43:27.6±3.0, 36°.42N×70°.62E, h205^{km}±26^{km}, mb3.5/9, mb1 3.5/15, mb1mx3.2/55, mbtmp4.1/15, Error ellipse: s-maj=22.1km s-min=17.3km az=178.0*

*NEIC **10** 08:43:27.7±2.8, 36°.50N±0°.06×70°.32E±0°.09, h204^{km}±4^{km}, mb4.3/9, Error ellipse: s-maj=9.9km s-min=8.2km az=88.0*

*NNC **10** 08:43:32.5±3.6, 37°.02N×70°.07E, h182^{km}±51^{km}, mb3.5, mpv4.4, Error ellipse: s-maj=32.6km s-min=21.0km az=33.0*

ISC 10 08:43:26.8±0.6, **36°.48N**±0°.05×**70°.35E**±0°.06, **h204**^{km}, **n75**, σ**2^{s}.20**/85, **mb3.8**/8, **3C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.21**	**209**	Pn	**Pn**	**08 44 08.6**	**+0.6**
KBL				Sn	**S**	**08 44 38.4**	**-1.2**
CHGR	**Chuyangaron**	**2.37**	**337**	Pn	**Pn**	**08 44 09.0**	**-0.6**
GAR	**Garm**	**2.51**	**359**	Pn	**Pn**	**08 44 11.4**	**+0.2**
CEP	**Cherat**	**2.95**	**154**	P	**Pn**	**08 44 17.4**	**+1.2**
CEP				S	**S**	**08 44 54.0**	**-0.2**
DRK	**Karamyk**	**3.21**	**21**		**Pn**	**08 44 20.4**	**+1.1**
BTK	**Batken**	**3.59**	**6**	Pn	**Pn**	**08 44 25.2**	**+1.5**
BTK				Sn	**S**	**08 45 07.2**	**-0.7**
CHCP	**Chirah Chowk**	**3.70**	**139**	P	**Pn**	**08 44 26.6**	**+1.6**
NIL	**Nilore**	**3.70**	**139**		**Pn**	**08 44 26.7**	**+1.7**
NIL				Sn	**S**	**08 45 10.3**	**+0.2**
THW	**Thamme Wali**	**3.85**	**162**	P	**Pn**	**08 44 27.8**	**+0.8**
TAS	**Tashkent**	**4.90**	**351**	Pn	**Pn**	**08 44 40.9**	**+0.9**
AML	**Almayashu**	**6.21**	**24**	P	**Pn**	**08 44 57.5**	**+0.4**
	SNR=280						
DHRM	**DHARAMSHALA**	**6.48**	**129**	*e*P	**Pn**	**08 45 00.9**	**+0.3**
DHRM				*e*S	**S**	**08 46 11.8**	**-2.9**
DHRM				IAML		08 46 13.6	
	comp=N,354nm,0.3s						
DHRM				IAML		08 46 14.2	
	comp=E,408nm,0.3s						
UCH	**Uchtor**	**6.58**	**28**	P	**Pn**	**08 45 02.4**	**+0.4**
	SNR=43						
KK02	**Karatay Array**	**6.61**	**1**	⇓P	**Pn**	**08 45 01.3**	**-0.6**
	comp=E,14nm,0.5s						
KK02				⇓S	**S**	**08 46 10.1**	**-7.2**
	comp=E,16nm,0.5s						
KKAR	**Karatay Array**	**6.61**	**1**	Pn	**Pn**	**08 45 01.9**	**-0.1**
EKS2	**Erkin-Say**	**6.71**	**22**	P	**Pn**	**08 45 04.1**	**+0.7**
	SNR=7.6						
AAK	**Ala-Archa**	**6.93**	**26**	P	**Pn**	**08 45 07.1**	**+0.9**
	comp=E,6.0nm,0.3s,baz=103,slow=5.1,SNR=50						
AAK				S	**S**	**08 46 22.6**	**-2.5**
	comp=E,6.8nm,0.3s,baz=1.6,slow=21,SNR=28						
AAK	**Ala-Archa**	**6.93**	**26**	P	**Pn**	**08 45 07.1**	**+0.9**
	SNR=20						
AAK	**Ala-Archa**	**6.93**	**26**	⇓P	**Pn**	**08 45 06.9**	**+0.7**
	comp=E,8.1nm,0.4s						
AAK				⇓S	**S**	**08 46 22.9**	**-2.1**
	comp=E,54nm,0.5s						
AAK	**Ala-Archa**	**6.93**	**26**	Pn	**Pn**	**08 45 06.8**	**+0.6**
KBK	**Karagaybulak**	**7.12**	**29**	P	**Pn**	**08 45 10.1**	**+1.5**
	SNR=6.2						
CHMS	**Chumysh**	**7.34**	**26**	P	**Pn**	**08 45 12.4**	**+1.0**
	SNR=6.0						
BOOM	**Boomskoye usch**	**7.39**	**34**	Pn	**Pn**	**08 45 14.0**	**+1.8**
USP	**Ospenovka**	**7.49**	**24**	P	**Pn**	**08 45 14.3**	**+1.0**
	SNR=8.4						
TKM2	**Tokmak 2**	**7.59**	**31**	P	**Pn**	**08 45 15.7**	**+0.8**
	SNR=7.6						
TKM2	**Tokmak 2**	**7.59**	**31**	⇓P	**Pn**	**08 45 15.3**	**+0.4**
	comp=E,16nm,0.5s						
TKM2				⇓S	**S**	**08 46 38.1**	**-2.7**
	comp=E,28nm,1.0s						
SMLA	**Simla**	**7.79**	**131**	*e*P	**Pn**	**08 45 17.6**	**+0.2**
SMLA				*e*S	**S**	**08 46 38.6**	**-6.7**
SMLA				IAML		08 46 45.8	
	comp=E,146nm,0.3s						
SMLA				IAML		08 46 48.7	
	comp=N,123nm,0.3s						
NDI	**New Delhi**	**9.70**	**141**	*e*P	**Pn**	**08 45 41.0**	**-1.1**
NDI				*e*S	S	08 47 22.0	-8.8
KUDL	**Kundal**	**9.80**	**146**	*e*P	**Pn**	**08 45 42.0**	**-1.5**
KUDL				*e*S	S	08 47 24.9	-8.4
AYAN	**Aya Nagar**	**9.82**	**142**	*e*S	S	08 47 25.2	-8.4
GEYT	**Alibeck**	**9.86**	**282**	P	**P**	**08 45 49.7**	**-2.4**
	baz=82,slow=20,SNR=1.6						
SONA	**Sohna**	**9.99**	**143**	*e*S	S	08 47 28.9	-8.8
MAKZ	**Makanchi**	**13.48**	**36**	Pn	**Pn**	**08 46 30.7**	**+0.8**
PYUN	**Piuthan**	**13.56**	**124**	*e*P	**P**	**08 46 34.8**	**+1.1**
	comp=N,12nm,0.3s						
MK31	**Makanchi Array**	**13.62**	**37**	Pn	**Pn**	**08 46 31.9**	**+0.2**
MKAR	**Makanchi Array**	**13.62**	**37**	P	**Pn**	**08 46 32.0**	**+0.3**
	comp=N,0.2nm,0.3s,baz=213,slow=9.9,SNR=15						
MKAR				S	**S**	**08 49 03.1**	**+0.1**
	baz=240,slow=20,SNR=1.4						
MKAR	**Makanchi Array**	**13.62**	**37**	Pn	**Pn**	**08 46 31.7**	**0.0**
DANN	**Dangsing**	**13.92**	**122**	*e*P	**P**	**08 46 40.1**	**+2.3**
	comp=N,22nm,0.3s						
KOLN	**Koldanda**	**14.19**	**124**	*e*P	**P**	**08 46 43.1**	**+2.5**
	comp=N,14nm,0.3s						
BHPL	**Bhopal**	**14.55**	**153**	*e*S	**S**	**08 49 17.2**	**-7.7**
GKN	**Gorkha**	**14.74**	**121**	*e*P	**P**	**08 46 50.1**	**+3.3**
	comp=N,40nm,0.3s						
AB31	**Akbulak array**	**14.85**	**333**	⇑P	**Pn**	**08 46 46.4**	**-0.4**
	comp=N,3.4nm,0.6s,baz=149,slow=12,SNR=127						
AB31				⇑S	**S**	**08 49 25.5**	**-5.9**
	comp=N,1.7nm,0.7s,baz=156,slow=23,SNR=3.0						
ABKAR	**Akbulak array**	**14.85**	**333**		**Pn**	**08 46 46.6**	**-0.2**
ABKAR	**Akbulak array**	**14.85**	**333**	P	**Pn**	**08 46 46.6**	**-0.2**
DMN	**Daman**	**15.31**	**121**	*e*P	**P**	**08 46 56.5**	**+3.3**
KURBB	**Kurchatov Arra**	**15.31**	**20**	P	**Pn**	**08 46 52.0**	**-0.4**
	comp=N,0.1nm,0.3s,baz=212,slow=10,SNR=11						
KKN	**Kakani**	**15.32**	**120**	*e*P	**P**	**08 46 56.5**	**+3.3**
	comp=N,33nm,0.3s						
KURK	**Kurchatov**	**15.42**	**20**	P	**Pn**	**08 46 52.0**	**-1.7**
KURK	**Kurchatov**	**15.42**	**20**	IAmb	IAmb	08 46 57.2	
	comp=Z,4.0nm,1.1s						
PKIN	**Phulchoki**	**15.53**	**121**	*e*P	**Pn**	**08 46 59.1**	**+3.5**
	comp=Z,39nm,0.3s						
PKI	**Pulchoki**	**15.54**	**121**	*e*P	**Pn**	**08 46 59.1**	**+3.3**
	comp=Z,78nm,0.5s						
GUN	**Gumba**	**15.67**	**119**	*e*P	**Pn**	**08 47 00.2**	**+2.9**
	comp=Z,38nm,0.4s						
AKTO	**Aktyubinsk**	**16.54**	**331**	P	**Pn**	**08 47 08.3**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=140,slow=11,SNR=32						
AKTO	**Aktyubinsk**	**16.54**	**331**	⇑P	**Pn**	**08 47 07.5**	**+0.3**
	comp=Z,17nm,0.9s						
AKTO				⇓S	**S**	**08 50 04.1**	**-4.5**
	comp=Z,2.6nm,0.8s						
BVAR	**Borovoye Array**	**16.54**	**0**	P	**Pn**	**08 47 07.3**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=189,slow=18,SNR=13						
BRVK	**Borovoye**	**16.57**	**360**		**Pn**	**08 47 08.0**	**+0.4**
BRVK				IAmb	IAmb	08 47 10.9	
	comp=Z,7.2nm,0.6s						
RAMN	**Ramite**	**16.76**	**120**	*e*P	**Pn**	**08 47 12.6**	**+2.3**
	comp=Z,31nm,0.4s						
TAPN	**Taplejung**	**17.30**	**117**	*e*P	**Pn**	**08 47 17.1**	**+0.3**
	comp=Z,14nm,0.3s						
ODAN	**Odare**	**17.37**	**119**	*e*P	**Pn**	**08 47 18.5**	**+1.0**
	comp=Z,36nm,0.6s						
ZAA0	**Zalesovo Array**	**20.15**	**25**	P	**P**	**08 47 46.2**	**+1.0**
ZAA0				IAmb	IAmb	08 47 49.8	
	comp=Z,7.5nm,0.5s						
ZALV	**Zalesovo Beam**	**20.15**	**25**	P	**P**	**08 47 46.3**	**+1.1**
	comp=Z,7.0nm,0.4s,baz=211,slow=10,SNR=22						
ZALV	**Zalesovo Beam**	**20.15**	**25**	P	**P**	**08 47 46.0**	**+0.8**
SHL	**Shillong**	**21.38**	**115**	P	**P**	**08 47 59.4**	**+0.7**
ARU	**Arti**	**21.48**	**342**	P	**P**	**08 48 01.3**	**+2.1**
	comp=Z,1.9nm,0.5s,baz=126,slow=6.3,SNR=8.5						
ARU	**Arti**	**21.48**	**342**	P	**P**	**08 48 00.8**	**+1.6**
ARU				IAmb	IAmb	08 48 03.1	
	comp=Z,19nm,1.3s						
NRIK	**Noril'sk**	**34.24**	**11**	P	**P**	**08 49 54.8**	**+2.0**
	comp=Z,4.0nm,0.5s,baz=206,slow=5.7,SNR=5.5						
NRIK	**Noril'sk**	**34.24**	**11**	P	**P**	**08 49 55.3**	**+2.5**
NRIK				IAmb	IAmb	08 49 56.0	
	comp=Z,7.1nm,1.1s						
FINES	**FINESS Array B**	**37.20**	**326**	P	**P**	**08 50 19.8**	**+1.7**
	comp=Z,2.4nm,0.6s,baz=120,slow=11,SNR=6.6						
KEV	**Kevo**	**40.62**	**338**	P	**P**	**08 50 47.9**	**+1.6**
ARCES	**ARCESS Array B**	**40.96**	**338**	P	**P**	**08 50 50.9**	**+1.8**
	comp=Z,4.5nm,0.6s,baz=109,slow=7.4,SNR=19						
ARCES	**ARCESS Array B**	**40.96**	**338**	P	**P**	**08 50 50.1**	**+1.0**
ARCES				IAmb	IAmb	08 51 07.0	
	comp=Z,12nm,1.4s						
NOA	**NORSAR Array B**	**44.08**	**323**	P	**P**	**08 51 15.1**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=99,slow=8.4,SNR=2.5						
TORD	**Torodi Ar. Bea**	**65.19**	**268**	P	**P**	**08 53 48.4**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=34,slow=6.0,SNR=3.7						
WRA	**Warramunga Arr**	**82.43**	**121**	P	**P**	**08 55 25.8**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=323,slow=4.9,SNR=3.0						
ASAR	**Alice Springs**	**84.68**	**124**	P	**P**	**08 55 36.8**	**-1.0**
	comp=Z,0.4nm,0.9s,baz=300,slow=5.1,SNR=4.8						

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*KRNET **10** 08:45:04.7±0.1, 42°.41N×78°.38E, h15^{km}, mb2.7*

*SOME **10** 08:45:05.0, 42°.47N×78°.35E, h10^{km}*

ISC 10 08:45:04.4±1.0, **42°.43N**±0°.03×**78°.38E**±0°.03, **h16**^{km}±6^{km}, **n19**, σ**0^{s}.86**/38, **12C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.06**	**12**	⇑*e*P	**Pg**	**08 45 07.6**	**-0.1**
	baz=12						
PRZ				⇑*i*S	**Sg**	**08 45 10.2**	**+0.4**
	baz=12						
SATY	**Saty**	**0.63**	**1**	*e*P	**Pg**	**08 45 16.1**	**-0.8**
	2.7nm,0.1s						
SATY				*e*S	**Sg**	**08 45 23.7**	**-1.6**
	22nm,0.2s						
ANVS	**Anan'yevo**	**0.64**	**304**	⇑*i*P	**Pg**	**08 45 16.6**	**-0.4**
	baz=6.0						
ANVS				⇑*i*S	**Sg**	**08 45 25.5**	**0.0**
	baz=6.0						
ZHN	**Zhinishke**	**0.74**	**3**	*e*P	**Pg**	**08 45 18.0**	**-0.9**
	6.6nm,0.2s						
ZHN				*e*S	**Sg**	**08 45 27.7**	**-1.0**
	62nm,0.1s						
TARG	**Taragay, Kyrgy**	**0.82**	**212**	⇑*e*P	**Pg**	**08 45 19.8**	**-0.7**
	baz=12						
TARG				⇑*i*S	**Sg**	**08 45 30.5**	**-0.9**
	baz=12						
UZB	**Uzynbulak**	**0.86**	**33**	*e*P	**Pg**	**08 45 20.5**	**-0.7**
	1.8nm,0.0s						
UZB				*e*S	**Sg**	**08 45 31.4**	**-1.1**
	9.0nm,0.1s						
KDJ	**Kajisay**	**0.94**	**252**	⇑*i*P	**Pg**	**08 45 21.9**	**-0.8**
	baz=52						
KDJ				⇑*i*S	**Sg**	**08 45 34.5**	**-0.6**
	baz=52						
KURS	**Kuram**	**1.07**	**352**	*e*P	**Pb**	**08 45 24.4**	**-0.3**
	1.1nm,0.1s						
KURS				*e*S	**Sb**	**08 45 38.4**	**-0.1**
	4.4nm,0.2s						
TNSS	**Tian-Shan**	**1.22**	**300**	*e*P	**Pb**	**08 45 26.9**	**-0.5**
	4.1nm,0.2s						
TNSS				*e*S	**Sb**	**08 45 42.8**	**-0.3**
	3.1nm,0.3s						
MDOK	**Medeo**	**1.23**	**307**	*e*P	**Pn**	**08 45 27.2**	**+0.1**
	5.0nm,0.3s						
MDOK				*e*S	**Sb**	**08 45 43.4**	**+0.4**
	5.1nm,0.2s						
KOTS	**Kotyrbulak**	**1.23**	**311**	*e*P	**Pn**	**08 45 27.7**	**+0.4**
	1.2nm,0.1s						
KOTS				*e*S	**Sb**	**08 45 43.8**	**+0.5**
	21nm,0.2s						
IZV	**Izvestkoviy**	**1.44**	**296**	*e*P	**Pb**	**08 45 31.6**	**+0.6**
	0.3nm,0.0s						
IZV				*e*S	**Sg**	**08 45 50.4**	**-0.5**
	8.0nm,0.0s						
ULHL	**Ulahol**	**1.60**	**264**	⇑*e*P	**Pb**	**08 45 34.1**	**+0.3**
	baz=65						
ULHL				⇑*i*S	**Sg**	**08 45 55.1**	**-0.9**
	baz=65						
KTMS	**Ketmen**	**1.77**	**54**	*e*P	**Pb**	**08 45 36.9**	**+0.3**
	1.1nm,0.2s						
KTMS				*e*S	**Sb**	**08 45 59.8**	**+1.2**
	4.5nm,0.3s						
KTBS	**Karatobe**	**1.79**	**316**	*e*P	**Pb**	**08 45 37.9**	**+1.0**
	4.1nm,0.3s						
KTBS				*e*S	**Sg**	**08 46 01.3**	**-0.8**
	11nm,0.2s						
BOOM	**Boomskoye usch**	**1.81**	**273**	⇑*e*P	**Pb**	**08 45 37.9**	**+0.6**
	baz=73						
BOOM				⇑*i*S	**Sg**	**08 46 01.8**	**-0.9**
	baz=73						
ARXS	**Arharly**	**1.83**	**347**	*e*P	**Pb**	**08 45 38.0**	**+0.4**
	3.7nm,0.1s						
ARXS				*e*S	**Sb**	**08 46 01.5**	**+1.2**
	3.8nm,0.2s						
DJR	**Jarkent**	**2.16**	**28**	*e*P	**Pb**	**08 45 43.5**	**+0.3**
	2.1nm,0.1s						
DJR				*e*S	**Sb**	**08 46 11.0**	**+1.2**
	5.4nm,0.3s						
KRBS	**Karabastau**	**2.35**	**303**	*e*P	**Pb**	**08 45 47.5**	**+0.9**
	2.6nm,0.3s						
KRBS				*e*S	**Sb**	**08 46 17.7**	**+2.3**
	6.3nm,0.4s						

IDC 10 08:45:32.9±2.4, **1°.53N**×**126°.54E**, **h0**^{km}, **mb3.2**/3, **mb1 3.4**/3, **mb1mx3.2**/33, **mbtmp3.2**/3, **Error ellipse: s-maj=199.9km s-min=28.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.67**	**161**	P	P	08 50 36.1	+0.1
	0.5nm,0.5s,baz=339,slow=11,SNR=6.6						
ASAR	**Alice Springs**	**26.05**	**164**	P	P	08 51 08.1	-0.1
	0.2nm,0.7s,baz=351,slow=9.4,SNR=2.9						
MKAR	**Makanchi Array**	**59.25**	**326**	P	P	08 55 36.2	0.0
	0.1nm,0.4s,baz=113,slow=8.8,SNR=1.4						

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*IDC **10** 08:53:09.4±2.1, 15°.53S×173°.60W, h0^{km}, mb3.8/6, mb1 4.1/7, mb1mx3.9/33, mbtmp3.8/7, ML3.6/1, MS3.2/4, Ms1 3.2/4, ms1mx2.9/40, Error ellipse: s-maj=136.0km s-min=19.8km az=146.0*

ISC 10 08:53:10.9±2.0, **15°.5S**±0°.7×**173°.5W**±0°.5, **h10**^{km}, **n16**, σ**1^{s}.52**/8, **mb3.9**/6, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.30**	**48**	Pn	**Pn**	**08 53 48.4**	**-0.6**
	16nm,0.3s,baz=11,slow=3.2,SNR=14						
AFI				Sn	**Sn**	**08 54 16.3**	**-1.1**
	54nm,0.3s,baz=58,slow=23,SNR=12						
AFI				LR	LR	08 54 19.5	
	comp=Z,125nm,19.1s,baz=202,slow=29						
MSVF	**Nonsavu**	**8.38**	**253**	LR	LR	08 58 04.1	
	comp=Z,159nm,21.8s,baz=136,slow=36						
DZM	**Mont Dzumac**	**20.05**	**248**	LR	LR	09 03 48.0	
	comp=Z,126nm,18.0s,baz=212,slow=32						
HNR	**Honiara**	**26.57**	**280**	LR	LR	09 07 51.3	
	comp=Z,87nm,18.3s,baz=101,slow=33						
H11S2	**WAKE ISLAND Hy**	**38.96**	**329**	T	T	09 42 54.2	
	baz=149,slow=76,SNR=4.4						
H11S3	**WAKE ISLAND Hy**	**38.97**	**329**	T	T	09 42 53.8	
	baz=149,slow=76,SNR=4.3						
H11S1	**WAKE ISLAND Hy**	**38.97**	**329**	T	T	09 42 51.7	
	baz=149,slow=76,SNR=4.2						
H11N3	**WAKE ISLAND Hy**	**39.91**	**331**	T	T	09 44 05.0	
	baz=149,slow=76,SNR=3.0						
H11N1	**WAKE ISLAND Hy**	**39.91**	**331**	T	T	09 44 05.6	
	baz=149,slow=76,SNR=3.5						
H11N2	**WAKE ISLAND Hy**	**39.92**	**331**	T	T	09 44 06.6	
	baz=149,slow=76,SNR=3.7						
STKA	**Stephens Creek**	**43.89**	**240**	P	**P**	**09 01 18.6**	**+0.6**
	1.6nm,0.7s,baz=167,slow=20,SNR=2.9						
WRA	**Warramunga Arr**	**49.70**	**257**	P	**P**	**09 02 02.6**	**-1.0**
	0.6nm,0.7s,baz=97,slow=6.2,SNR=5.1						
ASAR	**Alice Springs**	**49.97**	**252**	P	**P**	**09 02 03.6**	**-2.0**
	1.0nm,0.6s,baz=93,slow=8.1,SNR=5.8						
NVAR	**Mina Array Bea**	**74.46**	**42**	P	**P**	**09 04 51.4**	**+1.5**
	0.9nm,0.8s,baz=224,slow=11,SNR=5.1						
PDAR	**Pinedale Array**	**82.40**	**42**	P	**P**	**09 05 33.8**	**+0.1**
	0.5nm,0.7s,baz=222,slow=2.0,SNR=6.0						
ILAR	**Eielson Array**	**82.54**	**11**	P	**P**	**09 05 35.0**	**+1.5**
	0.6nm,0.7s,baz=226,slow=6.3,SNR=8.6						

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*IDC **10** 08:57:09.0±2.7, 3°.92S×130°.28E, h0^{km}, mb3.7/1, mb1 4.0/3, mb1mx3.6/41, mbtmp3.8/3, ML3.4/2, Error ellipse: s-maj=185.5km s-min=28.8km az=71.0*

*DJA **10** 08:57:11.6±1.0, 4°S±6°×12°9E±°, h14^{km}±7^{km}, M4.0/8, mb4.6/1, MLv3.7/8*

ISC 10 08:57:14.2±1.1, **4°.21S**±0°.09×**129°.42E**±0°.07, **h35**^{km}, **n9**, σ**1^{s}.49**/11, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.99**	**330**	P	**Pn**	**08 57 30.2**	**-1.3**
MSAI				S	**Sn**	**08 57 43.8**	**-0.5**
AAI	**Ambon**	**1.32**	**293**	P	**Pn**	**08 57 35.7**	**-0.5**
AAI				S	**Sn**	**08 57 53.4**	**+0.8**
FAKI	**Fak Fak**	**3.10**	**66**	P	**Pn**	**08 58 00.2**	**-0.5**
SWI	**Sorong**	**3.80**	**29**	P	**Pn**	**08 58 09.6**	**-0.6**
LBMI	**Labuha**	**4.03**	**332**	P	**Pn**	**08 58 13.0**	**-0.4**
SANI	**Sanana**	**4.04**	**302**	P	**Pn**	**08 58 12.3**	**-1.2**
WRA	**Warramunga Arr**	**16.36**	**163**	Pn	**Pn**	**09 00 58.7**	**-2.6**
	0.1nm,0.3s,baz=349,slow=12,SNR=8.5						
ASAR	**Alice Springs**	**19.82**	**168**	P	**P**	**09 01 43.7**	**+1.7**
	0.3nm,0.3s,baz=347,slow=11,SNR=29						
MKAR	**Makanchi Array**	**65.59**	**326**	P	**P**	**09 07 56.3**	**+1.8**
	0.4nm,0.5s,baz=116,slow=6.6,SNR=6.6						

ISC 10 09:07:45.4±1.0, **48°.99N**±0°.05×**18°.11E**±0°.04, **h10**^{km}, **n8**, σ**0^{s}.59**/12, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAVC	**Velka Javorina**	**0.32**	**246**	*e*PG	**Pg**	**09 07 51.8**	**+0.1**
JAVC				*e*SG	**Sg**	**09 07 57.0**	**+1.1**
KOLL	**Kolacno**	**0.45**	**154**	*e*PG	**Pg**	**09 07 54.6**	**+0.4**
KOLL				*e*SG	**Sb**	**09 08 01.5**	**-0.7**
VYHS	**Vyhne**	**0.69**	**135**	*e*PG	**Pb**	**09 07 58.8**	**-0.7**
VYHS				*e*SG	**Sb**	**09 08 09.5**	**+0.4**
MODS	**Modra-Piesok**	**0.82**	**222**	*e*PG	**Pn**	**09 08 02.7**	**-0.3**
MODS				*e*SG	**Sn**	**09 08 15.0**	**-0.3**
MORC	**Moravsky Berou**	**0.87**	**335**	*e*PG	**Pg**	**09 08 02.0**	**-0.2**
LANS	**Liptovska Anna**	**0.91**	**79**	*e*PG	**Pn**	**09 08 04.7**	**+0.4**
VRAC	**Vranov**	**1.04**	**289**	*e*PG	**Pg**	**09 08 05.7**	**+0.3**
KRUC	**Moravsky**	**1.13**	**274**	*e*PG	**Pb**	**09 08 06.7**	**-0.3**

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*IDC **10** 09:08:08.8±1.4, 4°.15S×129°.43E, h0^{km}, mb4.0/2, mb1 3.9/5, mb1mx3.6/41, mbtmp3.8/5, ML3.3/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/35, Error ellipse: s-maj=54.1km s-min=25.8km az=80.0*

*DJA **10** 09:08:12.9±1.0, 4°S±7°×12°9E±°, h26^{km}±9^{km}, M3.7/6, MLv3.7/6*

ISC 10 09:08:13.3±1.0, **4°.12S**±0°.08×**129°.41E**±0°.06, **h36**^{km}, **n11**, σ**1^{s}.02**/13, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.90**	**328**	P	**Pn**	**09 08 28.9**	**-0.6**
MSAI				S	**Sn**	**09 08 40.6**	**-0.7**
AAI	**Ambon**	**1.28**	**289**	P	**Pn**	**09 08 34.2**	**-0.5**
AAI				S	**Sn**	**09 08 51.0**	**+0.4**
FAKI	**Fak Fak**	**3.08**	**67**	P	**Pn**	**09 09 00.0**	**+0.6**
SIJI	**Sorong**	**3.72**	**30**	Pn	**Pn**	**09 09 08.5**	**+0.2**
	5.8nm,0.3s,baz=25,slow=22,SNR=27						
SIJI				Sn	**Sn**	**09 09 50.7**	**-0.2**
	3.7nm,0.3s,baz=142,slow=23,SNR=1.7						
SWI	**Sorong**	**3.72**	**30**	P	**Pn**	**09 09 06.4**	**-1.9**
LBMI	**Labuha**	**3.94**	**331**	P	**Pn**	**09 09 11.7**	**+0.4**
SANI	**Sanana**	**3.98**	**301**	P	Pn	09 08 59.7	-12
WRA	**Warramunga Arr**	**16.45**	**163**	Pn	**Pn**	**09 11 60.0**	**-1.6**
	0.1nm,0.3s,baz=349,slow=13,SNR=2.2						
ASAR	**Alice Springs**	**19.92**	**168**	P	**P**	**09 12 42.3**	**+0.2**
	0.2nm,0.3s,baz=349,slow=11,SNR=15						
ASAR				LR	LR	09 21 39.9	
	comp=Z,44nm,19.7s,baz=86,slow=41						
MKAR	**Makanchi Array**	**65.51**	**326**	P	**P**	**09 18 54.0**	**+1.0**
	0.3nm,0.3s,baz=114,slow=8.4,SNR=5.0						
KURBB	**Kurchatov Arra**	**69.76**	**328**	P	**P**	**09 19 21.0**	**+1.3**
	1.0nm,0.3s,baz=141,slow=6.0,SNR=2.6						

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*IDC **10** 09:19:51.5±0.8, 4°.17S×129°.39E, h0^{km}, mb4.1/7, mb1 4.3/10, mb1mx3.7/47, mbtmp4.2/10, ML4.0/3, MS3.2/3, Ms1 3.2/3, ms1mx2.7/37, Error ellipse: s-maj=39.1km s-min=17.7km az=70.0*

*DJA **10** 09:19:54.4±0.3, 4°S±3°×12°9E±°, h10^{km}, M4.4/12, mb4.3/4, MLv4.4/12*

*NEIC **10** 09:19:54.4±3.0, 4°.15S±0°.08×129°.39E±0°.08, h10^{km}±1^{km}, mb4.0/13, Error ellipse: s-maj=14.6km s-min=12.8km az=236.0*

ISC 10 09:19:56.8±0.6, **4°.15S**±0°.06×**129°.40E**±0°.05, **h36**^{km}, **n48**, σ**1^{s}.32**/48, **mb4.0**/7, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.63**	**127**	P	**Pn**	**09 20 07.4**	**-1.8**
MSAI	**Masohi**	**0.92**	**329**	P	**Pn**	**09 20 11.3**	**-1.9**
MSAI				S	**Sn**	**09 20 24.6**	**-0.7**
AAI	**Ambon**	**1.29**	**291**	P	**Pn**	**09 20 17.3**	**-0.9**
AAI				S	**Sn**	**09 20 34.0**	**-0.2**
FAKI	**Fak Fak**	**3.09**	**67**	P	**Pn**	**09 20 43.7**	**+0.6**
FAKI	**Fak Fak**	**3.09**	**67**		**Pn**	**09 20 43.7**	**+0.6**
FAKI	**Fak Fak**	**3.09**	**67**	P	**Pn**	**09 20 44.0**	**+0.9**
SIJI	**Sorong**	**3.75**	**30**	Pn	**Pn**	**09 20 53.2**	**+1.0**
	20nm,0.3s,baz=234,slow=5.5,SNR=20						
SIJI				Sn	**Sn**	**09 21 33.9**	**-1.2**
	15nm,0.3s,baz=312,slow=19,SNR=9.1						
SWI	**Sorong**	**3.75**	**30**	P	**Pn**	**09 20 53.6**	**+1.5**
LBMI	**Labuha**	**3.97**	**331**	P	**Pn**	**09 20 56.1**	**+1.0**
SANI	**Sanana**	**3.99**	**301**	P	**Pn**	**09 20 54.7**	**-0.7**
SANI	**Sanana**	**3.99**	**301**	P	**Pn**	**09 20 58.7**	**+3.3**
SAUI	**Saumlaki**	**4.25**	**154**	P	**Pn**	**09 20 59.5**	**+0.5**
KMPI	**Kaimana, Papua**	**4.32**	**84**	P	**Pn**	**09 21 01.2**	**+1.3**
SOEI	**Soe**	**7.55**	**222**	P	**Pn**	**09 21 43.8**	**-0.7**
	0.2nm17nm,0.6s						
GTOI	**Gorontalo**	**7.96**	**307**	P	**Pn**	**09 21 51.9**	**+1.9**
DRS	**Darwin Rock St**	**8.36**	**170**	P	**Pn**	**09 21 57.7**	**+2.2**
KDU	**Kakadu**	**9.01**	**160**	P	**Pn**	**09 22 05.1**	**+0.7**
KNRA	**Kununurra**	**11.47**	**183**	Pn	**Pn**	**09 22 38.7**	**+0.6**
KNRA	**Kununurra**	**11.47**	**183**	P	**Pn**	**09 22 40.0**	**+1.8**
DAV	**Davao City (W)**	**11.78**	**341**	LR	LR	09 28 09.9	
	comp=Z,51nm,19.7s,baz=152,slow=42						
FITZ	**Fitzroy Crossi**	**14.35**	**195**	Pn	**Pn**	**09 23 18.6**	**+1.2**
	0.1nm,0.3s,baz=250,slow=17,SNR=1.8						
WB0	**Warramunga Arr**	**16.27**	**163**		**Pn**	**09 23 40.7**	**-2.0**
WB0				IAmb	IAmb	09 23 58.9	
	comp=Z,6.3nm,0.8s						
WRAB	**Tennant Creek**	**16.42**	**163**		**Pn**	**09 23 42.6**	**-1.9**
WRAB				IAmb	IAmb	09 24 02.1	
	comp=Z,7.8nm,0.8s						
WRA	**Warramunga Arr**	**16.42**	**163**	Pn	**Pn**	**09 23 41.4**	**-3.2**

	comp=Z,0.4nm,0.3s,baz=346,slow=12,SNR=14						
WB2	Warramunga Arr	16.43	163	Pn	Pn	09 23 42.6	-2.0
WB2				IAmb	IAmb	09 23 49.2	
	comp=Z,30nm,1.5s						
WR0	Warramunga Arr	16.50	163		Pn	09 23 44.1	-1.5
COEN	Coen	16.72	127		P	09 23 49.8	-0.6
COEN				IAmb	IAmb	09 23 51.1	
	comp=Z,8.8nm,0.7s						
COEN	Coen	16.72	127	P	P	09 23 49.8	-0.6
QIS	Mount Isa	19.10	150	P	Pn	09 24 17.4	-0.2
PSA00	Pilbara Seismi	19.65	207	P	Pn	09 24 23.9	-0.3
PSA00				IAmb	IAmb	09 24 25.1	
	comp=Z,12nm,1.1s						
PSA00	Pilbara Seismi	19.65	207	P	Pn	09 24 24.9	+0.7
AS31	Alice Springs	19.89	168		Pn	09 24 26.5	-0.5
AS31				IAmb	IAmb	09 24 30.1	
	comp=Z,5.9nm,0.8s						
ASAR	Alice Springs	19.89	168	P	Pn	09 24 26.2	-0.8
	comp=Z,0.9nm,0.3s,baz=348,slow=11,SNR=115						
ASAR				LR	LR	09 32 44.8	
	comp=Z,56nm,18.8s,baz=3.5,slow=39						
WRKA	Warakurna	20.80	183	P	Pn	09 24 37.0	-0.6
CTAO	Charters Tower	22.82	135	P	P	09 24 57.9	+1.1
STKA	Stephens Creek	29.87	159	P	P	09 26 00.3	-0.6
	comp=Z,1.0nm,0.5s,baz=330,slow=12,SNR=3.2						
STKA				LR	LR	09 39 05.1	
	comp=Z,85nm,18.4s,baz=23,slow=39						
CMAR	Chiang Mai Arr	37.49	308	P	P	09 27 07.4	+0.1
	comp=Z,1.8nm,0.3s,baz=134,slow=7.8,SNR=4.7						
MJAR	Matsushiro Arr	41.31	11	P	P	09 27 37.2	-1.7
	comp=Z,1.7nm,0.5s,baz=196,slow=7.6,SNR=2.4						
MJAR	Matsushiro Arr	41.31	11	IAmb	IAmb	09 27 47.9	
	comp=Z,2.7nm,1.0s						
JMM	Marumori	43.12	13	P	P	09 27 54.5	+0.9
MKAR	Makanchi Array	65.53	326	P	P	09 30 37.5	+0.9
	comp=Z,1.0nm,0.7s,baz=119,slow=7.8,SNR=8.4						
ZALV	Zalesovo Beam	68.78	334	P	P	09 30 57.5	+0.5
	comp=Z,0.6nm,0.3s,baz=123,slow=5.3,SNR=2.0						
KURBB	Kurchatov Arra	69.78	328	P	P	09 31 03.8	+0.5
	comp=Z,2.4nm,0.9s,baz=128,slow=5.4,SNR=17						
KURK	Kurchatov	69.79	328	P	P	09 31 03.7	+0.4
BVAR	Borovoye Array	75.35	328	P	P	09 31 36.7	+0.3
	comp=Z,0.9nm,0.8s,baz=216,slow=12,SNR=3.9						
TXAR	Lajitas Array	123.94	57	PKP	PKiKP	09 38 52.6	+0.3
	comp=Z,0.3nm,0.9s,baz=243,slow=0.6,SNR=2.6						
CPUP	Villa Florida	149.01	168	PKPbc	PKPbc	09 39 40.6	-1.1
	comp=Z,2.1nm,0.7s,baz=170,slow=10,SNR=2.9						
LPAZ	La Paz	153.30	140	PKPbc	PKiKP	09 39 54.1	+1.1
	comp=Z,1.4nm,0.9s,baz=32,slow=3.9,SNR=4.4						

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*IDC **10** 09:21:10.9±0.7, 4°.18S×129°.54E, h0^{km}, mb4.1/15, mb1 4.2/19, mb1mx3.9/47, mbtmp4.1/19, ML4.1/4, MS3.3/2, Ms1 3.3/2, ms1mx2.6/39, Error ellipse: s-maj=25.7km s-min=14.8km az=73.0*

*NEIC **10** 09:21:13.8±2.6, 4°.10S±0°.03×129°.50E±0°.08, h10^{km}±1^{km}, mb4.2/15, Error ellipse: s-maj=14.1km s-min=3.3km az=287.0*

*DJA **10** 09:21:21.3±0.4, 4°S±4°×12°9E±°, h37^{km}±10^{km}, M4.6/9, mb5.0/4, mB5.2/1, MLv4.3/9, Mw(mB)4.5/1*

ISC 10 09:21:16.4±0.5**, 4°.16S**±0°.05×**129°.42E**±0°.06**, h36**^{km}**, n55, σ1^s.61**/54**, mb4.1**/17**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.60	127	P	Pn	09 21 25.4	-3.2
MSAI	Masohi	0.94	328	P	Pn	09 21 31.8	-1.4
AAI	Ambon	1.31	291	P	Pn	09 21 37.5	-0.7
FAKI	Fak Fak	3.08	67	P	Pn	09 22 10.3	+7.8
FAKI	Fak Fak	3.08	67	Pn	Pn	09 22 02.7	+0.2
FAKI	Fak Fak	3.08	67	P	Pn	09 22 03.4	+0.9
SIJI	Sorong	3.75	29	Pn	Pn	09 22 11.4	-0.4
	9.3nm,0.3s,baz=230,slow=22,SNR=1.9						
SIJI				Sn	Sn	09 22 55.0	+0.3
	22nm,0.3s,baz=228,slow=23,SNR=2.2						
SIJI				LR	LR	09 24 01.5	
	comp=Z,258nm,20.0s,baz=196,slow=46						
SWI	Sorong	3.75	29	P	Pn	09 22 14.7	+2.9
LBMI	Labuha	3.99	331	P	Pn	09 22 12.0	-3.1
SANI	Sanana	4.02	301	P	Pn	09 22 12.2	-3.3
SANI	Sanana	4.02	301	P	Pn	09 22 16.8	+1.3
SAUI	Saumlaki	4.23	154	P	Pn	09 22 31.3	+13
BATI	Baumata	8.29	223	LR	LR	09 26 36.9	
	comp=Z,252nm,18.5s,baz=65,slow=39						
DRS	Darwin Rock St	8.35	170	P	Pn	09 23 16.9	+1.9
MTN	Manton Dam	8.79	169		Pn	09 23 21.8	+0.7
KAPI	Kappang	9.68	265	Pn	Pn	09 23 33.7	+0.4
	0.7nm,0.3s,baz=185,slow=17,SNR=1.2						
KAPI	Kappang	9.68	265	Pn	Pn	09 23 35.6	+2.4
KNRA	Kununurra	11.47	183		Pn	09 23 57.9	+0.2
KNRA	Kununurra	11.47	183	P	Pn	09 23 59.1	+1.4
WB0	Warramunga Arr	16.25	163	Pn	Pn	09 24 59.3	-2.8
WB0				IAmb	IAmb	09 25 26.2	
	comp=Z,12nm,1.0s						
WRAB	Tennant Creek	16.40	163	Pn	Pn	09 25 01.2	-2.8
WRAB				IAmb	IAmb	09 25 08.6	
	comp=Z,9.5nm,0.8s						
WRAB	Tennant Creek	16.40	163	P	Pn	09 25 03.9	-0.1
WRA	Warramunga Arr	16.41	163	Pn	Pn	09 25 00.1	-4.0
	comp=Z,0.7nm,0.3s,baz=348,slow=13,SNR=7.4						
WRA	Warramunga Arr	16.41	163	Pn	Pn	09 25 01.1	-2.9
WB2	Warramunga Arr	16.41	163	Pn	Pn	09 25 01.0	-3.1
WB2				IAmb	IAmb	09 25 01.2	
	comp=Z,9.6nm,0.8s						
WR0	Warramunga Arr	16.48	163	Pn	Pn	09 25 04.0	-1.0
COEN	Coen	16.70	127	Pn	Pn	09 25 07.0	-0.8
COEN				IAmb	IAmb	09 25 09.2	
	comp=Z,10nm,0.8s						
QIS	Mount Isa	19.08	150	P	P	09 25 36.0	0.0
PSA00	Pilbara Seismi	19.65	207	P	Pn	09 25 43.9	0.0
PSA00				IAmb	IAmb	09 25 45.2	
	comp=Z,40nm,0.8s						
PSA00	Pilbara Seismi	19.65	207	P	Pn	09 25 44.1	+0.2
AS31	Alice Springs	19.87	168	P	P	09 25 45.4	+0.7
AS31				IAmb	IAmb	09 25 48.4	
	comp=Z,6.6nm,0.8s						
ASAR	Alice Springs	19.87	168	P	P	09 25 43.5	-1.2
	comp=Z,1.7nm,0.3s,baz=350,slow=11,SNR=13						
ASAR				PcP	PcP	09 30 00.9	-0.4
	comp=Z,0.2nm,0.3s,baz=17,slow=1.3,SNR=5.9						
CTA	Charters Tower	22.80	135	P	P	09 26 15.4	-0.7
	comp=Z,2.9nm,0.3s,baz=296,slow=12,SNR=5.7						
CTAO	Charters Tower	22.80	135	P	P	09 26 16.1	-0.1
CTAO				IAmb	IAmb	09 26 31.6	
	comp=Z,6.9nm,0.8s						
FORT	Forrest	26.51	183	P	P	09 26 51.5	+0.8
STKA	Stephens Creek	29.85	159	P	P	09 27 20.4	0.0
	comp=Z,2.1nm,0.9s,baz=329,slow=10,SNR=4.3						
CMAR	Chiang Mai Arr	37.51	308	P	P	09 28 27.7	+0.5
	comp=Z,0.7nm,0.3s,baz=138,slow=8.0,SNR=4.7						
JWT	Wachi	39.63	8	P	P	09 28 44.5	-0.2
MJAR	Matsushiro Arr	41.31	11	P	P	09 28 56.7	-2.0
	comp=Z,2.1nm,0.7s,baz=176,slow=11,SNR=3.1						
KSRS	Korea Array	41.42	358	P	P	09 28 58.3	-1.1
	comp=Z,1.0nm,0.7s,baz=207,slow=39,SNR=3.0						
JMM	Marumori	43.12	13	P	P	09 29 14.1	+0.8
USRK	Ussuriysk Ar.	48.19	2	P	P	09 29 52.9	-0.4
	comp=Z,1.3nm,0.5s,baz=183,slow=6.9,SNR=4.4						
KLR	Kul'dur	53.21	2	P	P	09 30 31.9	+0.9
	comp=Z,1.9nm,1.0s,baz=111,slow=3.6,SNR=2.5						
SONM	Songino Array	55.58	341	P	P	09 30 50.5	+2.0
	comp=Z,0.5nm,0.5s,baz=37,slow=30,SNR=2.4						
MK31	Makanchi Array	65.55	326	P	P	09 31 57.2	+0.7
MK31				IAmb	IAmb	09 32 04.1	
	comp=Z,2.9nm,0.8s						
MKAR	Makanchi Array	65.55	326	P	P	09 31 57.2	+0.8
	comp=Z,1.4nm,0.4s,baz=113,slow=7.4,SNR=16						
MKAR	Makanchi Array	65.55	326	P	P	09 31 56.7	+0.2
MAKZ	Makanchi	65.73	326	P	P	09 31 57.2	-0.4
MAKZ				IAmb	IAmb	09 32 05.2	
	comp=Z,3.6nm,0.8s						
ZALV	Zalesovo Beam	68.80	334	P	P	09 32 16.9	+0.1
	comp=Z,0.6nm,0.3s,baz=111,slow=7.9,SNR=2.3						
KURBB	Kurchatov Arra	69.80	328	P	P	09 32 23.8	+0.7
	comp=Z,3.0nm,0.7s,baz=126,slow=5.6,SNR=11						
BVAR	Borovoye Array	75.37	328	P	P	09 32 57.0	+0.8
	comp=Z,1.9nm,0.8s,baz=210,slow=12,SNR=5.4						
TIXI	Tiksi	75.66	360	P	P	09 32 58.9	+1.4
	comp=Z,0.7nm,0.3s,baz=158,slow=2.0,SNR=1.9						
AKTO	Aktyubinsk	81.49	322	P	P	09 33 30.2	+0.2
	comp=Z,1.5nm,0.7s,baz=215,slow=21,SNR=2.6						
ILAR	Eielson Array	91.03	25	P	P	09 34 14.9	-1.9
	comp=Z,0.6nm,1.1s,baz=243,slow=4.0,SNR=2.1						
TORD	Torodi Ar. Bea	127.65	283	PKP	PKPdf	09 40 17.7	-1.3
	comp=Z,0.5nm,0.6s,baz=93,slow=2.0,SNR=2.0						

IDC 10 09:22:42.2±3.2**, 13°.92S**×**174°.79E, h0**^{km}**, mb4.0**/3**, mb1 4.3**/3**, mb1mx3.2**/40**, mbtmp4.0**/3**, MS3.7**/4**, Ms1 3.7**/4**, ms1mx3.2**/32**, Error ellipse: s-maj=139.0km s-min=38.9km az=139.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	15.20	285	LR	LR	09 31 13.8	
	comp=Z,183nm,18.2s,baz=102,slow=34						
H11S2	WAKE ISLAND Hy	33.18	346	T	T	10 04 24.1	
	baz=168						
H11S3	WAKE ISLAND Hy	33.19	346	T	T	10 04 29.5	
	baz=168						
H11S1	WAKE ISLAND Hy	33.20	346	T	T	10 04 27.5	
	baz=168						
H11N1	WAKE ISLAND Hy	34.32	347	T	T	10 06 00.6	
	baz=171						
H11N3	WAKE ISLAND Hy	34.32	347	T	T	10 05 50.8	
	baz=171						
H11N2	WAKE ISLAND Hy	34.33	347	T	T	10 05 50.8	
	baz=171						
ASAR	Alice Springs	39.78	250	P	P	09 30 16.8	-0.4
	1.7nm,0.9s,baz=81,slow=10,SNR=6.8						
ASAR				PcP	PcP	09 32 23.8	0.0
	0.4nm,0.9s,baz=106,slow=3.3,SNR=4.2						
PETK	Petropavlovsk-	68.36	349	LR	LR	10 01 20.1	
	comp=Z,36nm,19.8s,baz=133,slow=34						
NVAR	Mina Array Bea	81.31	47	LR	LR	10 04 37.5	
	comp=Z,60nm,19.4s,baz=116,slow=31						
CMAR	Chiang Mai Arr	81.37	291	P	P	09 35 01.7	+0.3
	0.8nm,0.3s,baz=126,slow=4.6,SNR=6.7						
ILAR	Eielson Array	83.66	16	P	P	09 35 12.1	-0.2
	1.9nm,0.9s,baz=236,slow=4.9,SNR=6.7						
ILAR				LR	LR	10 07 38.7	
	comp=Z,51nm,21.7s,baz=154,slow=32						

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*IDC **10** 09:31:33.8±1.3, 4°.19S×129°.58E, h0^{km}, mb4.1/4, mb1 4.3/7, mb1mx3.8/36, mbtmp4.1/7, ML3.9/3, MS3.0/3, Ms1 3.0/3, ms1mx2.6/47, Error ellipse: s-maj=43.8km s-min=23.8km az=80.0*

*DJA **10** 09:31:37.8±0.3, 4°S±3°×12°9E±°, h10^{km}, M4.3/10, mb4.5/5, MLv4.1/10*

ISC 10 09:31:38.8±0.7**, 4°.19S**±0°.06×**129°.47E**±0°.06**, h35**^{km}**, n28, σ1^s.96**/28**, mb4.1**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.54	127	P	Pn	09 31 48.0	-2.0
MSAI	Masohi	1.00	327	P	Pn	09 31 55.3	-1.1
AAI	Ambon	1.37	291	P	Pn	09 31 59.9	-1.6
FAKI	Fak Fak	3.04	66	P	Pn	09 32 24.7	+0.2
FAKI	Fak Fak	3.04	66	P	Pn	09 32 26.0	+1.5
SIJI	Sorong	3.76	29	Pn	Pn	09 32 34.0	-0.3
	8.8nm,0.3s,baz=34,slow=23,SNR=15						
SIJI				Sn	Sn	09 33 15.1	-2.2
	12nm,0.3s,baz=95,slow=21,SNR=6.8						
SIJI				LR	LR	09 34 47.0	
	comp=Z,63nm,18.8s,baz=210,slow=52						
SWI	Sorong	3.76	28	P	Pn	09 32 34.3	0.0
LBMI	Labuha	4.04	331	P	Pn	09 32 38.7	+0.4
SANI	Sanana	4.08	301	P	Pn	09 32 38.9	+0.2
SANI	Sanana	4.08	301	P	Pn	09 32 39.8	+1.1
MTN	Manton Dam	8.75	169	P	Pn	09 33 44.9	+2.0
KDU	Kakadu	8.94	161	P	Pn	09 33 45.1	-0.5
KNRA	Kununurra	11.43	183	P	Pn	09 34 18.6	-1.1
WRA	Warramunga Arr	16.36	164	Pn	Pn	09 35 22.6	-3.3
	0.4nm,0.3s,baz=347,slow=13,SNR=18						
WRA				Sn	Sn	09 38 20.2	-6.2
	baz=334,slow=28,SNR=2.5						
QIS	Mount Isa	19.02	150	P	Pn	09 35 58.7	-0.1
MBWA	Marble Bar	19.34	208	P	Pn	09 36 02.5	-0.1
PSA00	Pilbara Seismi	19.64	208	P	Pn	09 36 06.8	+0.6
ASAR	Alice Springs	19.83	168	P	Pn	09 36 07.2	-1.2
	1.0nm,0.3s,baz=350,slow=11,SNR=47						
ASAR				LR	LR	09 44 50.8	
	comp=Z,74nm,18.8s,baz=26,slow=40						
WRKA	Warakurna	20.75	183	P	Pn	09 36 18.5	-0.8
OOD	Oodnadatta	24.21	166	P	P	09 36 53.2	+1.0
MEEK	Meekatharra	24.62	204	P	P	09 36 58.5	+2.4
MULG	Mulgathing	26.31	171	P	P	09 37 14.8	+3.5
FORT	Forrest	26.48	183	P	P	09 37 13.1	+0.3
CMAR	Chiang Mai Arr	37.57	308	P	P	09 38 51.7	+1.5
	0.8nm,0.3s,baz=119,slow=14,SNR=1.7						
MJAR	Matsushiro Arr	41.34	11	P	P	09 39 20.3	-1.0
	2.4nm,0.8s,baz=193,slow=10,SNR=2.7						
MKAR	Makanchi Array	65.61	326	P	P	09 42 19.9	+0.6
	1.4nm,0.6s,baz=115,slow=7.5,SNR=13						
ZALV	Zalesovo Beam	68.85	334	P	P	09 42 39.7	+0.1
	1.9nm,0.9s,baz=125,slow=7.2,SNR=1.8						
KVAR	Kislovodsk Arr	90.56	314	LR	LR	10 31 02.8	
	comp=Z,17nm,21.8s,baz=88,slow=39						

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*NEIC **10** 09:31:53.9±0.8, 19°.18N±0°.03×64°.89W±0°.05, h26^{km}±12^{km}, Error ellipse: s-maj=7.0km s-min=4.6km az=69.0*

*RSPR **10** 09:31:54.9, 19°.24N×64°.87W, h18^{km}±5^{km}, MD3.3/11*

ISC 10 09:31:52.8±1.7**, 19°.23N**±0°.09×**64°.86W**±0°.04**, h25**^{km}**, n52, σ0^s.52**/55**, 7C-5D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	Tortola	0.84	164	⇓*e*P	Pb	09 32 08.9	+0.2
TBVI	Tortola	0.84	164	*e*S	Sn	09 32 20.3	-0.1
STVI	Saint Thomas	0.88	186	⇓*e*P	Pb	09 32 09.2	-0.1
STVI	Saint Thomas	0.88	186	*e*S	Sb	09 32 20.8	+0.2
STVI	Saint Thomas	0.88	186		Pb	09 32 09.2	-0.1
STVI					Sb	09 32 20.8	+0.2
STVI	Saint Thomas	0.88	186	IAML		09 32 21.0	
	comp=N,305nm,0.2s						
CUPR	Culebra, Puert	1.00	204	⇓*e*P	Pn	09 32 10.9	-0.2
CUPR	Culebra, Puert	1.00	204	*e*S	Sb	09 32 24.1	0.0
CUPR	Culebra, Puert	1.00	204		Pn	09 32 10.9	-0.2
CUPR					Sb	09 32 24.1	0.0
CUPR	Culebra, Puert	1.00	204	IAML		09 32 25.6	
	comp=E,118nm,0.4s						
CUPR				IAML		09 32 25.8	
	comp=N,227nm,0.3s						
MTP	Monte Pirata	1.30	211	⇓*i*P	Pn	09 32 15.7	+0.3
MTP	Monte Pirata	1.30	211	*e*S	Sn	09 32 31.5	-0.5
MTP	Monte Pirata	1.30	211		Pn	09 32 15.7	+0.3
MTP					Sn	09 32 31.5	-0.5
MTP	Monte Pirata	1.30	211	IAML		09 32 34.0	
	comp=E,147nm,0.3s						
MTP				IAML		09 32 35.2	
	comp=N,138nm,0.1s						
CBYP	Canovanas	1.34	225	⇑*e*P	Pn	09 32 15.6	-0.4
CBYP	Canovanas	1.34	225	*e*S	Sn	09 32 32.8	-0.2
CBYP	Canovanas	1.34	225		Pn	09 32 15.6	-0.4
CBYP					Sn	09 32 32.8	-0.2
HUMP	Col San Antoni	1.43	221		Pn	09 32 17.1	0.0
CDVI	St. Croix	1.47	177	⇑*e*P	Pn	09 32 18.2	+0.5
CDVI	St. Croix	1.47	177	*e*S	Sb	09 32 38.5	+0.8
CDVI	St. Croix	1.47	177		Pn	09 32 18.2	+0.5
CDVI					Sb	09 32 38.5	+0.8
GCPR	Guaynabo City	1.48	232		Sn	09 32 35.1	-1.3
PDPR	Patillas Dam,	1.63	223	Pn	Pn	09 32 20.1	+0.2
PDPR				IAML		09 32 51.8	
	comp=E,81nm,1.1s						
SJG	San Juan	1.65	228	Pn	Pn	09 32 20.0	-0.2
IGPR	InterUniversit	1.73	224	⇓*e*P	Pn	09 32 21.2	0.0
IGPR	InterUniversit	1.73	224	*e*S	Sn	09 32 42.2	-0.2
IGPR	InterUniversit	1.73	224		Sn	09 32 42.2	-0.2
EMPR	Esperanza - Ma	1.75	245	⇑*e*P	Pn	09 32 22.0	+0.4
EMPR	Esperanza - Ma	1.75	245	*e*S	Sn	09 32 42.7	-0.4
EMPR	Esperanza - Ma	1.75	245		Pn	09 32 22.0	+0.4
EMPR					Sn	09 32 42.7	-0.4
EMPR	Esperanza - Ma	1.75	245	IAML		09 32 47.3	
	comp=E,158nm,1.1s						
EMPR				IAML		09 33 16.5	
	comp=N,117nm,2.9s						
CELP	Cerrillos	2.00	235	⇑*e*P	Pn	09 32 25.2	+0.2
CELP	Cerrillos	2.00	235	*e*S	Sn	09 32 48.9	-0.2
CELP	Cerrillos	2.00	235		Pn	09 32 25.2	+0.2
CELP					Sn	09 32 48.9	-0.2
AOPR	Arecibo Observ	2.00	244	Pn	Pn	09 32 25.6	+0.7
AOPR				IAML		09 32 56.8	
	comp=N,86nm,0.4s						
AOPR				IAML		09 32 59.5	
	comp=E,124nm,0.3s						
OBIP	Obispado Ponce	2.04	235	⇑*e*P	Pn	09 32 25.7	+0.3
OBIP	Obispado Ponce	2.04	235	*e*S	Sn	09 32 49.7	-0.4
OBIP	Obispado Ponce	2.04	235		Pn	09 32 25.7	+0.3
OBIP	Obispado Ponce	2.04	235		Sn	09 32 49.7	-0.4
OBIP	Obispado Ponce	2.04	235	Pn	Pn	09 32 25.4	-0.1
OBIP	Obispado Ponce	2.04	235	IAML		09 32 45.2	
	comp=N,30nm,2.7s						
SMRT	St. Maarten	2.06	124	Pn	Pn	09 32 27.0	+1.2
SMRT				IAML		09 33 36.8	
	comp=N,101nm,0.1s						
MLPR	Magueyes Islan	2.42	239	⇑*e*P	Pn	09 32 31.2	+0.5
MLPR	Magueyes Islan	2.42	239	*e*S	Sn	09 32 59.0	-0.6
MLPR	Magueyes Islan	2.42	239		Pn	09 32 31.2	+0.5
MLPR					Sn	09 32 59.0	-0.6
MLPR	Magueyes Islan	2.42	239	IAML		09 33 13.9	
	comp=E,31nm,3.0s						
MLPR				IAML		09 33 17.6	
	comp=N,24nm,2.7s						
CRPR	Cabo Rojo, PR	2.46	241	⇑*e*P	Pn	09 32 31.8	+0.6
CRPR	Cabo Rojo, PR	2.46	241	*e*S	Sn	09 33 00.1	-0.4
CRPR	Cabo Rojo, PR	2.46	241		Pn	09 32 31.8	+0.6
CRPR					Sn	09 33 00.1	-0.4
CRPR	Cabo Rojo, PR	2.46	241	IAML		09 33 11.9	
	comp=N,50nm,2.4s						
CRPR				IAML		09 33 32.8	
	comp=E,38nm,2.1s						
ANWB	Willy Bob	3.30	118	*e*P	Pn	09 32 38.5	-4.3
ANWB				*e*S	Sn	09 33 19.8	-1.5
ANBD	Bethesda, Anti	3.65	126	*e*P	Pn	09 32 47.3	-0.4
ANBD				*e*S	Sn	09 33 28.9	-1.1

NNC 10 09:32:41.4±1.6**, 51°.89N**×**75°.49E, h0**^{km}**, mb3.2, mpv2.8, 5C-2D, Error ellipse: s-maj=37.7km s-min=10.7km az=27.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	2.29	120	⇑Pn	Pn	09 33 21.1	+0.8
	2.6nm,0.5s						
KURK				⇑Sn	Sn	09 33 49.3	+0.2
	11nm,0.6s						
KURBB	Kurchatov Arra	2.29	122	⇑Pn	Pn	09 33 21.9	+1.5
	2.3nm,0.5s,baz=301,slow=17						
KURBB				⇑Sn	Sn	09 33 50.0	+0.8
	32nm,0.6s,baz=307,slow=28						
BRVK	Borovoye	3.40	292	⇓Pg	Pb	09 33 42.5	+0.2
	3.1nm,0.8s						
BRVK				⇑Lg	Lg	09 34 26.6	
	13nm,0.9s						
MK31	Makanchi Array	6.76	136	⇓Lg	Lg	09 36 17.7	
	4.2nm,0.7s,baz=324,slow=28,SNR=8.2						

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*IDC **10** 09:34:20.7±2.5, 38°.65N×73°.40E, h0^{km}, mb3.8/4, mb1 4.0/8, mb1mx3.6/52, mbtmp3.9/8, ML3.5/4, MS3.3/2, Ms1 3.3/2, ms1mx2.7/47, Error ellipse: s-maj=37.6km s-min=23.5km az=163.0*

*KRNET **10** 09:34:21.8±0.1, 38°.76N×73°.25E, mb4.1*

*NNC **10** 09:34:24.9±2.3, 38°.89N×73°.26E, h0^{km}, mb4.6, mpv4.2, Error ellipse: s-maj=17.6km s-min=10.8km az=177.0*

ISC 10 09:34:24.3±0.8**, 38°.78N**±0°.05×**73°.06E**±0°.04**, h10**^{km}**, n44, σ1^s.69**/58**, mb4.0**/4**, 24C-9D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.20	306	⇑*i*P	Pg	09 34 47.4	-0.1
	baz=3.0						
DRK				⇑*i*S	Sn	09 35 05.7	+1.6
	baz=3.0						
OHH	Osh	1.76	353	⇑*i*P	Pn	09 34 55.4	+0.5
	baz=49						
OHH				⇑*i*S	Sb	09 35 19.5	+0.7
	baz=49						
BTK	Batken	2.16	307	⇑*i*P	Pb	09 35 02.6	-0.9
	baz=5.0						
BTK				⇑*i*S	Sg	09 35 32.7	-0.9
	baz=5.0						
TRKS	Terek-Say	3.12	332	⇓*i*P	Pn	09 35 13.8	+0.1
	baz=30						
TRKS				⇓*i*S	Sn	09 35 53.0	+1.9
	baz=30						
AML	Almayashu	3.38	8	P	Pn	09 35 17.9	+0.3
	SNR=18						
AML	Almayashu	3.38	8	⇑*i*P	Pn	09 35 18.1	+0.5
	baz=6.0						
AML				⇑*i*S	Sn	09 35 59.3	+1.3
	baz=6.0						
UCH	Uchtor	3.62	17	P	Pn	09 35 21.6	+0.8
	SNR=38						
UCH	Uchtor	3.62	17	⇑*i*P	Pn	09 35 21.2	+0.4
	baz=15						
UCH				⇑*i*S	Sn	09 36 04.4	+0.5
	baz=15						
EKS2	Erkin-Say	3.92	8	P	Pn	09 35 26.8	+2.2
	SNR=11						
EKS2	Erkin-Say	3.92	8	⇑*e*P	Pn	09 35 25.3	+0.7
	baz=6.0						
EKS2				⇑*i*S	Sn	09 36 11.6	+0.9
	baz=6.0						
MRKS	Merke	3.96	2	Pg	Pb	09 35 33.4	-1.0
	18nm,0.4s						
MRKS				Lg	Lg	09 36 27.3	
	31nm,0.5s						
AAK	Ala-Archa	4.01	15	Pn	Pn	09 35 27.0	+1.2
	6.3nm,0.3s,baz=175,slow=6.1,SNR=35						
AAK				Sn	Sb	09 36 20.3	-3.3
	3.3nm,0.3s,baz=336,slow=21,SNR=5.7						
AAK				LR	LR	09 37 15.8	
	comp=Z,124nm,20.3s,baz=240,slow=43						
AAK	Ala-Archa	4.01	15	P	Pn	09 35 27.1	+1.2
	SNR=18						
AAK	Ala-Archa	4.01	15	⇑Pn	Pn	09 35 26.8	+0.9
	48nm,0.8s						
AAK				⇑Lg	Lg	09 36 28.8	
	39nm,0.6s						
AAK	Ala-Archa	4.01	15	⇑*i*P	Pn	09 35 26.6	+0.7
	baz=13						
AAK				⇑*i*S	Sn	09 36 13.6	+0.6
	baz=13						
IUG	Iuzhnay	4.08	326	Pg	Pb	09 35 36.7	+0.4
	2µm,0.9s						
IUG				Lg	Lg	09 36 33.2	
	311nm,1.2s						
KBK	Karagaybulak	4.13	20	P	Pn	09 35 29.6	+2.0
	SNR=16						
CHMS	Chumysh	4.41	16	P	Pn	09 35 34.4	+3.1
	SNR=5.9						
TKM2	Tokmak 2	4.56	24	⇓Pn	Pn	09 35 34.3	+0.7
	5.0nm,0.5s						
TKM2				⇓Pg	Pb	09 35 47.0	+2.4
	18nm,0.6s						
TKM2				⇓Lg	Lg	09 36 46.1	
	36nm,1.0s						
KK02	Karatay Array	4.73	337	⇑Pn	Pn	09 35 36.8	+1.1
	9.0nm,0.5s,baz=147,slow=13						
KK02				⇑Sn	Sn	09 36 33.8	+3.1
	26nm,0.7s,baz=142,slow=22						
KK02				⇑Lg	Lg	09 36 54.2	
	15nm,0.5s						
KST	Kastek	4.79	26	Pg	Pb	09 35 49.7	+1.3
	21nm,0.4s						
KST				Lg	Lg	09 36 55.6	
	23nm,0.5s						
SGDS	Sogindy	4.82	14	Pg	Pb	09 35 48.8	0.0
	17nm,0.6s						
SGDS				Lg	Lg	09 36 54.0	
	29nm,0.7s						
BRLS	Borolday	4.90	331	Pg	Pb	09 35 48.0	-2.2
	3.9nm,0.2s						
BRLS				Lg	Lg	09 36 52.3	
	22nm,0.4s						
DGS	Degeres	4.91	24	Pg	Pb	09 35 51.1	+0.7
	41nm,0.4s						
DGS				Lg	Lg	09 36 58.1	
	50nm,0.7s						
CEP	Cherat	5.03	191	P	Pn	09 35 39.1	-0.9
CEP				S	Sb	09 36 56.0	+2.9
MTBS	Maitube	5.04	29	Pg	Pb	09 35 53.8	+1.1
	20nm,0.5s						
MTBS				Lg	Lg	09 37 02.6	
	38nm,1.1s						
CHCP	Chirah Chowk	5.11	178	P	Pn	09 35 40.4	-0.6
TNSS	Tian-Shan	5.17	33	Pg	Pb	09 35 55.6	+0.4
	23nm,0.5s						

TNSS				Lg	Lg	09 37 05.4	
	10nm,0.6s						
KRBS	Karabastau	5.29	21	Pg	Pb	09 35 57.1	+0.1
	20nm,0.6s						
KRBS				Lg	Lg	09 37 08.3	
	20nm,0.7s						
MDOK	Medeo	5.32	33	Pg	Pb	09 35 58.2	+0.8
	34nm,0.7s						
MDOK				Lg	Lg	09 37 06.0	
	28nm,0.7s						
MDOK	Medeo	5.32	33	Pg	Pb	09 35 58.6	+1.2
	33nm,0.5s						
MDOK				Lg	Lg	09 37 10.7	
	43nm,1.1s						
KNDC	Almaty	5.33	32	⇑Pg	Pb	09 35 58.2	+0.7
	39nm,0.6s						
KNDC				⇓Lg	Lg	09 37 05.4	
	67nm,0.6s						
KTBS	Karatobe	5.63	28	Pg	Pb	09 36 04.0	+1.3
	14nm,0.7s						
KTBS				Lg	Lg	09 37 20.3	
	26nm,0.5s						
PDGK	Podgornoye	6.65	45	⇑Pn	Pn	09 36 00.8	-1.4
	7.8nm,0.8s						
PDGK				⇑Pg	Pb	09 36 20.9	+0.7
	14nm,0.8s						
PDGK				⇑Lg	Lg	09 37 49.5	
	22nm,0.9s						
MKAR	Makanchi Array	10.49	37	Pn	Pn	09 36 54.2	-0.5
	0.1nm,0.3s,baz=218,slow=14,SNR=7.8						
AB31	Akbulak array	14.08	322	⇓Pn	Pn	09 37 45.4	+1.7
	1.2nm,0.4s,baz=154,slow=32,SNR=61						
AB31				⇓Sn	Sn	09 40 23.7	+3.9
	4.3nm,1.0s,baz=129,slow=24,SNR=4.9						
AKTO	Aktyubinsk	15.79	322	Pn	Pn	09 38 06.6	-0.1
	0.3nm,0.3s,baz=111,slow=12,SNR=4.8						
AKTO	Aktyubinsk	15.79	322	⇓Pn	Pn	09 38 07.8	+1.2
	3.6nm,0.6s						
AKTO				⇑Sn	S	09 41 11.5	-4.9
	3.1nm,0.8s						
ZALV	Zalesovo Beam	17.17	24	P	Pn	09 38 21.1	-3.0
	0.7nm,0.3s,baz=213,slow=12,SNR=8.1						
SONM	Songino Array	25.72	59	P	P	09 39 51.4	-3.5
	1.4nm,0.7s,baz=263,slow=12,SNR=4.1						
FINES	FINESS Array B	36.56	324	P	P	09 41 28.5	-1.4
	4.5nm,1.0s,baz=118,slow=8.9,SNR=5.1						
ARCES	ARCESS Array B	39.70	336	P	P	09 41 56.6	+0.3
	3.9nm,0.8s,baz=99,slow=10,SNR=6.9						
NOA	NORSAR Array B	43.58	322	P	P	09 42 29.1	+0.8
	0.4nm,0.6s,baz=93,slow=7.7,SNR=1.2						
ASAR	Alice Springs	84.25	126	LR	LR	10 30 28.6	
	comp=Z,37nm,18.0s,baz=66,slow=40						

IDC 10 09:35:01.0±1.8**, 4°.17S**×**129°.41E, h0^{km}, mb3.4**/1**, mb1 3.7**/4**, mb1mx3.3**/33**, mbtmp3.5**/4**, ML3.3**/3**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.2**/30**, Error ellipse: s-maj=54.0km s-min=26.1km az=92.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.77	30	Pn	Pn	09 36 00.8	+0.3
	3.0nm,0.3s,baz=219,slow=22,SNR=3.4						
SIJI				Sn	Sn	09 36 46.2	+0.6
	1.9nm,0.3s,baz=248,slow=23,SNR=1.6						
WRA	Warramunga Arr	16.40	163	Pn	Pn	09 38 50.9	-1.8
	0.1nm,0.3s,baz=343,slow=9.6,SNR=1.0						
ASAR	Alice Springs	19.86	168	P	Pn	09 39 34.7	-0.7
	0.2nm,0.3s,baz=348,slow=11,SNR=4.4						
KSRS	Korea Array	41.44	358	LR	LR	10 02 06.5	
	comp=Z,9.4nm,18.5s,baz=20,slow=39						
MKAR	Makanchi Array	65.55	326	P	P	09 45 46.4	-0.1
	0.3nm,0.6s,baz=123,slow=6.6,SNR=1.5						

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*NEIC **10** 09:43:59.7±1.5, 8°.37S±0°.10×120°.57E±0°.09, h183^{km}±9^{km}, mb4.2/16, Error ellipse: s-maj=14.6km s-min=11.6km az=208.0*

*DJA **10** 09:44:00.8±0.3, 9°S±2°×12°1E±°, h163^{km}±4^{km}, M4.2/18, mb4.5/6, mB5.3/1, MLv4.0/18, Mw(mB)4.7/1*

*IDC **10** 09:44:01.2±1.6, 8°.28S×120°.90E, h202^{km}±13^{km}, mb3.8/3, mb1 3.7/8, mb1mx3.4/45, mbtmp4.2/8, Error ellipse: s-maj=57.0km s-min=7.7km az=55.0*

ISC 10 09:43:59.2±0.7**, 8°.53S**±0°.04×**120°.57E**±0°.05**, h181^{km}**±6^{km}**, n58, σ1^{s}.39**/69**, mb4.4**/6**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	1.13	101	P	Pn	09 44 28.4	+0.3
EDFI				S	Sn	09 44 49.6	-0.8
WBSI	Waikabubak, Su	1.61	226	P	Pn	09 44 32.6	+0.3
WBSI				S	Sn	09 44 56.8	-1.2
MMRI	Maumere	1.65	94	P	Pn	09 44 33.8	+1.1
MMRI				S	Sn	09 44 58.9	+0.3
MMRI	Maumere	1.65	94		Pn	09 44 33.7	+1.0
MMRI	Maumere	1.65	94	P	Pn	09 44 34.0	+1.3
BASI	Baing, Sumba	1.68	180	P	Pn	09 44 33.9	+0.9
BASI				S	Sn	09 45 00.0	+0.7
BSSI	Bau Bau, Buton	2.37	358	P	Pn	09 44 39.4	-1.1
BSSI				S	Sn	09 45 12.2	-0.5
PLAI	Plampang	2.78	264	P	Pn	09 44 46.0	+0.8
PLAI	Plampang	2.78	264	P	Pn	09 44 46.8	+1.6
BKSI	Bulukumba	3.22	352	P	Pn	09 44 51.5	+0.9
BATI	Baumata	3.48	119	P	Pn	09 44 55.2	+1.4
	29nm,0.3s,baz=284,slow=1.2,SNR=11						
BATI				S	Sn	09 45 37.6	+1.1
	29nm,0.3s,baz=289,slow=10,SNR=4.6						
BATI	Baumata	3.48	119	P	Pn	09 44 55.8	+2.0
KAPI	Kappang	3.58	347	P	Pn	09 44 55.2	+0.1
	2.0nm,0.3s,baz=137,slow=14,SNR=1.1						
KAPI				S	Sn	09 45 39.6	+0.6
	baz=145,slow=19,SNR=0.7						
TWSI	Taliwang, Sumb	3.65	266	P	Pn	09 44 56.6	+0.6
SOEI	Soe	3.85	109	P	Pn	09 44 59.8	+1.3
SOEI	Soe	3.85	109		Pn	09 44 59.5	+1.0
SOEI	Soe	3.85	109	P	Pn	09 44 59.9	+1.4
BNSI	Bone	4.13	354	P	Pn	09 45 03.1	+1.1
DNP	Denpasar	5.30	268	P	Pn	09 45 18.5	+1.4
	3.2nm176nm,0.5s						
SRBI	Singaraja	5.32	274	P	Pn	09 45 18.8	+1.4
	0.2nm5µm28nm,1.2s						
IGBI	Denpasar	5.37	267	P	Pn	09 45 18.8	+0.8
	1.2nm59nm,0.4s						
TTSI	Tana Toraja	5.50	352	P	Pn	09 45 25.8	+6.1
ABJI	Asem Bagus	6.32	276	P	Pn	09 45 31.9	+1.5
	0.2nm39nm,0.8s						
JAGI	Jajag, Banyuwa	6.35	270	P	Pn	09 45 31.9	+1.1
	0.4nm26nm,1.2s						
JAGI	Jajag, Banyuwa	6.35	270	Pn	Pn	09 45 32.1	+1.3
UGM	Wanagama	9.96	273	Pn	Pn	09 46 18.1	-0.2
KNRA	Kununurra	10.70	132		Pn	09 46 27.4	-0.6
KNRA	Kununurra	10.70	132	P	Pn	09 46 27.4	-0.5
FITZ	Fitzroy Crossi	10.71	153	P	Pn	09 46 29.7	+1.7
	0.8nm,0.3s,baz=329,slow=11,SNR=11						
FITZ				S	Sn	09 48 24.1	-3.1
	1.3nm,0.3s,baz=185,slow=13,SNR=4.5						
MTN	Manton Dam	11.23	113		Pn	09 46 35.0	+0.3
MTN	Manton Dam	11.23	113	P	Pn	09 46 35.1	+0.3
PSA00	Pilbara Seismi	12.99	183	Pn	P	09 46 59.7	-1.3
WB0	Warramunga Arr	17.43	131	P	P	09 47 50.5	+0.3
WB0					S	09 51 00.0	-2.3
WRA	Warramunga Arr	17.50	132	P	P	09 47 51.6	+0.7
	1.0nm,0.3s,baz=310,slow=10,SNR=34						
WRA				S	S	09 50 58.3	-5.4
	0.3nm,0.3s,baz=307,slow=23,SNR=2.9						
WRA	Warramunga Arr	17.50	132	P	P	09 47 51.4	+0.4
WRAB	Tennant Creek	17.50	132	P	P	09 47 51.4	+0.4
WRAB				IAmb	IAmb	09 47 59.5	
	comp=Z,4.6nm,0.7s						
WRAB	Tennant Creek	17.50	132	P	Pn	09 47 52.0	-0.5
WB2	Warramunga Arr	17.51	132	P	P	09 47 51.8	+0.7
WB2				IAmb	IAmb	09 47 59.8	
	comp=Z,5.6nm,0.7s						
WR0	Warramunga Arr	17.66	132	P	Pn	09 47 53.8	-0.5
WR0				IAmb	IAmb	09 47 55.4	
	comp=Z,4.2nm,0.6s						
WR0					S	09 51 04.3	-2.5
WRKA	Warakurna	18.00	157	P	Pn	09 47 58.6	+0.3
AS31	Alice Springs	19.74	141	P	P	09 48 16.6	+1.3
AS31				IAmb	IAmb	09 48 20.1	
	comp=Z,4.3nm,0.4s						
ASAR	Alice Springs	19.74	141	P	P	09 48 15.8	+0.6
	comp=Z,1.5nm,0.3s,baz=318,slow=8.9,SNR=51						
ASAR				S	S	09 51 46.4	-1.6
	baz=305,slow=17,SNR=6.6						
QIS	Mount Isa	21.93	125	P	P	09 48 39.4	+0.9
COEN	Coen	22.81	106	P	P	09 48 47.2	+0.5
COEN				IAmb	IAmb	09 48 51.1	
	comp=Z,13nm,1.1s						
FORT	Forrest	23.22	163	P	P	09 48 51.3	+1.2
OOD	Oodnadatta	23.90	145	P	P	09 48 58.3	+1.9
BBOO	Buckleboo	28.10	151	P	P	09 49 35.5	+1.4
STKA	Stephens Creek	30.36	143	P	P	09 49 55.8	+1.6
	comp=Z,7.3nm,0.4s,baz=327,slow=8.2,SNR=37						
STKA	Stephens Creek	30.36	143	P	P	09 49 55.7	+1.6
STKA				IAmb	IAmb	09 49 56.1	
	comp=Z,1.7nm,0.5s						
ARMA	Armidale	36.28	131	P	P	09 50 47.3	+1.7
ARMA				IAmb	IAmb	09 51 16.4	
	comp=Z,17nm,1.4s						
TOO	Toolangi	36.66	146	P	P	09 50 49.5	+1.0
TOO				IAmb	IAmb	09 51 12.1	
	comp=Z,12nm,1.4s						
CAN	Canberra	37.24	140	P	P	09 50 55.1	+1.6
BKZ	Black Stump Fm	58.43	131	P	P	09 53 37.2	+1.0
MK31	Makanchi Array	64.76	332	P	P	09 54 16.7	-1.5
MKAR	Makanchi Array	64.76	332	P	P	09 54 17.4	-0.8
	comp=Z,0.8nm,0.5s,baz=150,slow=7.6,SNR=19						
ZALV	Zalesovo Beam	69.17	338	P	P	09 54 44.8	-1.0
	comp=Z,0.8nm,0.4s,baz=161,slow=5.3,SNR=2.4						
VNDA	Vanda	72.21	171	P	P	09 55 05.4	+1.4
ABKAR	Akbulak array	78.08	324	P	P	09 55 36.8	-1.1

IDC 10 09:49:35.6±1.6**, 4°.10S**×**129°.30E, h0^{km}, mb4.0**/1**, mb1 3.7**/4**, mb1mx3.6**/35**, mbtmp3.6**/4**, ML3.3**/1**, Error ellipse: s-maj=55.2km s-min=27.1km az=82.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.76	31	Pn	Pn	09 50 34.0	-0.9
	2.3nm,0.3s,baz=223,slow=18,SNR=14						
SIJI				Sn	Sn	09 51 15.3	-4.6
	2.2nm,0.3s,baz=218,slow=22,SNR=1.7						
WRA	Warramunga Arr	16.50	163	Pn	Pn	09 53 27.2	-1.5
	baz=338,slow=13,SNR=2.0						
ASAR	Alice Springs	19.96	168	P	P	09 54 10.1	+0.5
	baz=348,slow=10.0,SNR=7.2						
MKAR	Makanchi Array	65.44	326	P	P	10 00 20.6	+0.2
	1.0nm,0.6s,baz=112,slow=8.7,SNR=6.8						

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*ISN **10** 09:51:12.2±1.1, 35°.28N×44°.73E, h13^{km}±58^{km}, ML3.4*

*TEH **10** 09:51:12.0, 35°.15N×44°.60E, h14^{km}, ML3.6*

ISC 10 09:51:13.5±0.9**, 35°.18N**±0°.04×**44°.60E**±0°.07**, h10^{km}, n25, σ0^{s}.82**/29**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKRK	Kirkuk	0.30	316	*e*Pg	Pg	09 51 19.5	-0.1
IKRK				*e*Sg	Sg	09 51 24.0	+0.3
IKRK				AML	AML	09 51 27.5	
	comp=N,3µm,0.6s						
IKRK				AML	AML	09 51 32.2	
	comp=E,2µm,0.6s						
IDHR	Dehrash	1.55	108	*e*Pg	Pn	09 51 40.7	-0.7
IDHR				*e*Sg	Sn	09 52 02.5	+0.9
IDHR				*e*		09 52 06.2	
	comp=Z,17µm,0.3s						
MAHB	Mahabad	1.82	29	*e*Pn	Pn	09 51 44.2	-0.9
MAHB				*e*		09 52 13.5	
	comp=Z,6µm,0.5s						
IGHG	Ghaleghazi	1.83	117	*e*Pg	Pn	09 51 46.3	+1.0
IGHG				*e*		09 52 19.2	
	comp=Z,9µm,0.7s						
BHD	Baghdad	1.92	185	*e*Pn	Pb	09 51 48.0	-0.5
BHD				*e*Sn	Sg	09 52 14.0	-1.1
BHD				AML	AML	09 52 19.1	
	comp=E,1µm,0.5s						
ILIN	Lien	1.96	97	*e*Pn	Pn	09 51 47.4	+0.3
ILIN				*e*		09 52 19.2	
	comp=Z,6µm,0.8s						
KER	Kermanshah	2.23	110	*e*Pn	Pn	09 51 51.5	+0.8
IBDR	Badra	2.34	151	*e*Pn	Pn	09 51 53.0	+0.9
IBDR				*e*Sn	Sn	09 52 23.0	+2.1
IAZR	Azarshahr	2.73	24	*e*Pn	Pn	09 51 58.2	+0.5
IBZA	Bozab	2.78	104	*e*Pn	Pn	09 51 59.0	+0.7
IBZA				*e*		09 52 45.8	
	comp=Z,2µm,0.7s						
IALM	Almabolaq	2.95	95	*e*Pn	Pn	09 52 00.7	0.0
IBST	Bostanabad	3.12	36	*e*Pn	Pn	09 52 02.7	-0.3
IKFM	Kafar-mosalman	3.16	121	*e*Pn	Pn	09 52 02.9	-0.4
IDOB	Doab	3.27	114	*e*Pn	Pn	09 52 04.5	-0.6
HSAM	Samen	3.44	105	*e*Pn	Pn	09 52 07.3	-0.1
IMRD	Marand	3.63	14	*e*	Pg	09 52 36.8	+14
	comp=Z,491nm,0.8s						
RAFI	Al-Rafai	3.67	159	*e*Pn	Pn	09 52 11.0	+0.6
RAFI				*e*Sn	Sn	09 52 54.0	+0.2
IHRS	Heris	3.70	31	*e*Pn	Pn	09 52 11.5	+0.6
HAGD	Aghdareh	3.75	94	*e*Pn	Pn	09 52 11.3	-0.3
HAGD				*e*		09 53 24.1	
	comp=Z,483nm,1.0s						
BMDN	Meydan	3.81	112	*e*Pn	Pn	09 52 11.5	-0.9
AMIS	Naft Sefid	5.26	130	*e*Pn	Pn	09 52 31.2	-1.1
IPIR	Pirpir	5.80	114	*e*Pn	Pn	09 52 41.3	+1.4
IPIR				*e*		09 53 52.3	
	comp=Z,289nm,0.5s						
KRSH	Karshahi	6.34	99	*e*Pn	Pn	09 52 47.0	-0.2
IGAR	Gharneh	6.79	112	*e*Pn	Pn	09 52 52.7	-0.7
KLNJ	Kolanjah	7.20	123	*e*Pn	Pn	09 52 58.4	-0.7

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*IDC **10** 09:54:22.7±4.4, 20°.11S×168°.67E, h0^{km}, mb3.6/2, mb1 3.8/3, mb1mx3.6/33, mbtmp3.5/3, ML2.5/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/31, Error ellipse: s-maj=119.2km s-min=45.3km az=129.0*

ISC 10 09:54:22.6±3.3**, 20°.7S**±0°.7×**168°.9E**±0°.6**, h10^{km}, n6, σ1^{s}.41**/7**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.63	239	*e*Pn	Pb	09 55 10.4	+0.5
	14nm,0.2s						
DZM				*e*Sn	Sg	09 55 45.5	-1.6
	32nm,0.3s						
DZM	Mont Dzumac	2.63	239	Pn	Pb	09 55 10.4	+0.5
	0.7nm,0.3s,baz=114,slow=15,SNR=25						
DZM				Sn	Sb	09 55 42.8	+0.6
	12nm,0.3s,baz=313,slow=23,SNR=14						
MSVF	Nonsavu	9.17	73	LR	LR	09 59 43.8	
	comp=Z,67nm,18.1s,baz=355,slow=35						
WRA	Warramunga Arr	32.35	265	P	P	10 00 52.5	-0.1
	0.3nm,0.7s,baz=91,slow=8.8,SNR=4.5						
ASAR	Alice Springs	32.46	258	P	P	10 00 54.9	+1.4
	1.1nm,0.6s,baz=87,slow=9.2,SNR=15						
GERES	GERESS Array B	145.62	331	PKPbc	PKPdf	10 13 59.8	-1.6
	0.4nm,0.4s,baz=29,slow=2.2,SNR=1.6						

IDC 10 09:54:25.5±5.2**, 3°.22S**×**131°.78E, h0^{km}, mb3.2**/2**, mb1 3.3**/3**, mb1mx3.2**/34**, mbtmp3.2**/3**, ML2.5**/1**, Error ellipse: s-maj=346.4km s-min=32.6km az=73.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.81	172	Pn	Pn	09 58 21.1	-1.4
	0.0nm,0.3s,baz=353,slow=13,SNR=1.7						
ASAR	Alice Springs	20.43	174	P	P	09 59 05.3	+0.7
	0.2nm,0.6s,baz=357,slow=8.9,SNR=2.6						
MKAR	Makanchi Array	66.10	325	P	P	10 05 14.6	0.0
	0.3nm,0.4s,baz=104,slow=7.8,SNR=3.1						

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*IDC **10** 10:00:03.7±1.1, 6°.61N×126°.27E, h58^{km}±9^{km}, mb4.1/16, mb1 4.3/18, mb1mx4.1/39, mbtmp4.4/18, MS3.4/11, Ms1 3.5/11, ms1mx3.2/39, Error ellipse: s-maj=20.5km s-min=9.3km az=68.0*

*DJA **10** 10:00:03.3±0.7, 7°N±4°×12°6E±°, h40^{km}±6^{km}, M4.8/30, mB5.2/11, mb4.8/30, MLv5.1/8, Mw(mB)4.5/11*

*MAN **10** 10:00:05.3, 6°.69N×126°.06E, h25^{km}, mb5.4, ML4.4, MS4.6*

*NEIC **10** 10:00:05.0±2.6, 6°.57N±0°.07×126°.13E±0°.09, h66^{km}±7^{km}, mb4.6/39, Error ellipse: s-maj=15.0km s-min=7.3km az=53.0*

ISC 10 10:00:05.3±0.7**, 6°.52N**±0°.04×**126°.08E**±0°.05**, h71^{km}**±7^{km}**, n153, σ1^{s}.89**/146**, mb4.6**/50**, 6C-8D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.74	318	P	Pn	10 00 19.3	-1.6
	4µm,0.3s,baz=125,slow=1.1,SNR=421						
DAV				S	Sn	10 00 32.0	-0.2
	3µm,0.3s,baz=227,slow=20,SNR=9.9						
DAV	Davao City (W)	0.74	318		Pn	10 00 19.1	-1.8
DMPH	Davao City--Mi	0.80	315	⇓*i*P	Pn	10 00 19.3	-2.2
DMPH				*i* S	Sn	10 00 39.2	+5.7
KCP	Kidapawan	1.10	296	⇓*e*P	Pn	10 00 22.1	-3.1
KCP				*i* S	Sn	10 00 38.1	-1.9
GSPH	General Santos	1.20	249	⇓*e*P	Pn	10 00 22.8	-3.9
GSPH				*i* S	Sn	10 00 38.1	-4.5
BIPH	Bislig	1.68	10	⇓*i*P	Pn	10 00 31.4	-1.3
BIPH				*i* S	Sn	10 00 52.2	-1.3
SGSI	Sangihe	2.87	191	P	Pn	10 00 52.3	+3.5
SCPH	Surigao	3.29	350	⇓*e*P	Pn	10 00 54.5	-0.2
DCPH	Dipolog City	3.40	307	⇓*e*P	Pn	10 00 57.7	+1.8
TBP	Tagbilaran	3.84	325	⇑*e*P	Pn	10 01 00.2	-1.8
TBP				*i* S	Sn	10 01 45.5	-0.5
SNPH	Sibulan	3.98	315	⇓*e*P	Pn	10 01 03.8	-0.2
LLP	Lapu-Lapu	4.32	331	⇓*e*P	Pn	10 01 07.6	-1.0
LLP				*i* S	Sn	10 01 42.5	-15
TNTI	Ternate	5.85	167	P	Pn	10 01 30.1	+0.5
	0.6nm2µm140nm,0.9s						
TNTI	Ternate	5.85	167	Pn	Pn	10 01 29.9	+0.3
RCP	Roxas	6.00	327	⇑*e*P	Pn	10 01 31.5	-0.1
KMSI	Cibinong	6.27	200	P	Pn	10 01 39.0	+3.8
	2.0nm238nm,0.5s						
GTOI	Gorontalo	6.60	208	P	Pn	10 01 37.6	-2.2
LBMI	Labuha	7.25	169	P	Pn	10 01 49.9	+1.2
	0.4nm1µm68nm,0.6s						
MRSI	Marisa	7.29	215	P	Pn	10 01 49.9	+0.7
	0.6nm2µm100nm,0.7s						
TOLI2	Tolitoli	7.54	225		Pn	10 01 49.7	-2.9
TOLI2	Tolitoli	7.54	225	P	Pn	10 01 49.4	-3.2
	34nm,0.8s						
MYLDM	Lahad Datu	7.66	260		Pn	10 01 53.9	-0.3
SANI	Sanana	8.51	181	P	Pn	10 02 05.1	-0.9
SANI	Sanana	8.51	181	P	Pn	10 02 04.2	-1.8
MPSI	Mapaga	8.70	225	P	Pn	10 02 13.6	+5.0
	960nm18nm,0.9s						
LQP	Lukban	8.77	330	⇑*e*P	Pn	10 02 11.4	+1.8
SWI	Sorong	8.97	145	P	Pn	10 02 17.1	+4.9
SIJI	Sorong	8.98	145	P	Pn	10 02 10.7	-1.7
	4.9nm,0.3s,baz=344,slow=13,SNR=9.0						
SIJI				S	Sn	10 03 49.1	-2.9
	0.6nm,0.3s,baz=182,slow=23,SNR=1.2						
SIJI				LR	LR	10 05 55.7	
	comp=Z,171nm,20.4s,baz=335,slow=39						
MSAI	Masohi	10.20	164	P	Pn	10 02 30.7	+1.6
	6.0nm,0.5s						
FAKI	Fak Fak	11.22	147	P	Pn	10 02 41.3	-1.6
	23nm,1.0s						
FAKI	Fak Fak	11.22	147	Pn	Pn	10 02 41.7	-1.3
TTSI	Tana Toraja	11.37	214	P	Pn	10 02 51.8	+6.8
	567nm27nm,0.8s						
SPSI	Sidrap Palu	12.17	211	P	P	10 03 05.8	0.0
BNSI	Bone	12.38	209	P	P	10 03 06.3	-1.8
	22nm,0.6s						
KAPI	Kappang	13.08	209	P	Pn	10 03 10.8	+2.5
	2.4nm,0.3s,baz=106,slow=9.5,SNR=2.1						
BKSI	Bulukumba	13.18	207	P	P	10 03 15.5	-1.5
	16nm,1.2s						
MTKI	Muara Teweh, K	13.40	237	P	P	10 03 29.9	+10
SBUM	Sibu	14.39	254	Pn	Pn	10 03 26.8	+1.1
BBKI	Banjar Baru	14.97	229	P	P	10 03 43.2	+6.2
EDFI	Ende, Flores	15.79	196	P	P	10 03 50.6	+4.5
	8.8nm,0.7s						
BATI	Baumata	16.79	188	P	P	10 03 59.4	+2.3
	5.8nm,0.3s,baz=28,slow=3.6,SNR=4.7						
BATI	Baumata	16.79	188	P	P	10 04 03.9	+6.8
JAY	Jayapura	17.14	121	LR	LR	10 10 21.7	
	comp=Z,122nm,21.7s,baz=316,slow=36						
PLAI	Plampang	17.35	209	P	P	10 04 14.3	+11
TPUB	Ta-pu	17.49	343		Pn	10 04 03.2	-1.5
TPUB				IAmb	IAmb	10 04 04.8	
	comp=Z,48nm,1.4s						
DRS	Darwin Rock St	19.43	166	P	Pn	10 04 27.2	-0.7
MTN	Manton Dam	19.88	165	P	Pn	10 04 32.1	-1.1
MTN				IAmb	IAmb	10 04 40.8	
	comp=Z,27nm,0.6s						
KDU	Kakadu	20.11	162	P	P	10 04 34.2	+0.7
UBPT	Khong Chiam	22.01	295	P	P	10 04 55.5	+1.5
UBPT				IAmb	IAmb	10 04 56.6	
	comp=Z,26nm,1.2s						
KNRA	Kununurra	22.21	173	P	P	10 04 56.2	+0.1
KNRA	Kununurra	22.21	173	P	P	10 04 56.5	+0.4
KLSI		24.05	243	P	P	10 05 18.3	+4.2
	comp=Z,13nm,1.1s						
MDSI	Maura Dua	24.45	244	P	P	10 05 21.8	+4.1
	comp=Z,968nmcomp=Z,12nm,1.1s						
FITZ	Fitzroy Crossi	24.46	181	P	P	10 05 18.7	+0.9
	comp=Z,4.1nm,0.3s						
IPM	Ipoh	25.02	267	P	P	10 05 23.1	+0.1
IPM				IAmb	IAmb	10 05 27.0	
	comp=Z,17nm,0.7s						
KULM	Kulim	25.32	269	P	P	10 05 26.1	+0.3
KULM				IAmb	IAmb	10 05 30.1	
	comp=Z,21nm,1.0s						
JCJ	Chichijima	25.56	35	P	P	10 05 25.3	-2.4
	comp=Z,59nm,0.4s,baz=277,slow=6.9,SNR=8.6						
SLVN	Son La	26.02	307	P	P	10 05 33.1	+1.0
NJ2	Nanjing	26.28	346	*e*P	P	10 05 34.2	0.0
NJ2				pmax	pmax		
	comp=Z,24nm,0.8s						
PMG	Port Moresby	26.30	127	LR	LR	10 17 37.2	
	comp=Z,59nm,18.2s,baz=322,slow=40						
WHN	Wuhan	26.32	337	⇑P	P	10 05 38.7	+4.2
COEN	Coen	26.49	140	P	P	10 05 36.5	+0.3
PPI	Padang Panjang	26.55	256	P	P	10 05 39.3	+2.5
	comp=Z,11nm,0.4s						
WB0	Warramunga Arr	27.37	163	P	P	10 05 43.1	-1.0
WB0				IAmb	IAmb	10 05 52.4	
	comp=Z,11nm,0.7s						
WRAB	Tennant Creek	27.52	163	P	P	10 05 44.7	-0.7
WRAB				IAmb	IAmb	10 06 05.6	
	comp=Z,11nm,0.9s						
WRAB	Tennant Creek	27.52	163	P	P	10 05 46.1	+0.7
WRA	Warramunga Arr	27.52	163	P	P	10 05 44.8	-0.7
	comp=Z,2.9nm,0.6s,baz=343,slow=10.0,SNR=26						
WRA				LR	LR	10 19 30.8	
	comp=Z,73nm,18.8s,baz=340,slow=42						
WRA	Warramunga Arr	27.52	163	P	P	10 05 45.1	-0.3
WB2	Warramunga Arr	27.53	163	P	P	10 05 45.0	-0.5
WB2				IAmb	IAmb	10 06 05.7	
	comp=Z,18nm,1.2s						
WR0	Warramunga Arr	27.60	163	P	P	10 05 46.6	+0.5
WR0				IAmb	IAmb	10 06 13.5	
	comp=Z,13nm,1.1s						
MBWA	Marble Bar	28.20	193	P	P	10 05 51.9	+0.4
ENH	Enshi	28.31	329	P	P	10 05 51.8	-0.7
ENH				IAmb	IAmb	10 05 59.3	
	comp=Z,28nm,1.1s						
PSA00	Pilbara Seismi	28.58	192	P	P	10 05 55.7	+0.8
PSA00				IAmb	IAmb	10 06 10.4	
	comp=Z,14nm,1.1s						
PSA00	Pilbara Seismi	28.58	192	P	P	10 05 54.9	+0.1
CMAR	Chiang Mai Arr	28.98	297	P	P	10 05 59.8	+1.3
	comp=Z,2.2nm,0.4s,baz=114,slow=6.5,SNR=10						
CMAR				LR	LR	10 16 59.8	
	comp=Z,56nm,21.3s,baz=160,slow=35						
CMAR	Chiang Mai Arr	28.98	297	P	P	10 05 59.1	+0.7
JWT	Wachi	29.88	15	P	P	10 06 04.8	-1.5
JWT				IAmb	IAmb	10 06 29.4	
	comp=Z,21nm,1.3s						
QIS	Mount Isa	30.01	154	P	P	10 06 07.8	+0.2
KSRS	Korea Array	30.84	3	P	P	10 06 14.2	-0.4
	comp=Z,0.8nm,0.5s,baz=188,slow=9.8,SNR=2.5						
KSRS				PcP	PcP	10 09 11.1	+0.9
	comp=Z,2.0nm,0.7s,baz=192,slow=1.9,SNR=6.5						
KSRS				LR	LR	10 19 21.4	
	comp=Z,25nm,19.7s,baz=182,slow=38						
ASAR	Alice Springs	30.96	166	P	P	10 06 15.9	0.0
	comp=Z,2.7nm,0.6s,baz=345,slow=7.2,SNR=51						
ASAR				PcP	PcP	10 09 11.5	+0.6
	comp=Z,2.5nm,0.6s,baz=345,slow=2.4,SNR=11						
ASAR	Alice Springs	30.96	166	P	P	10 06 16.4	+0.5
XAN	Xi'an	31.66	332	P	P	10 06 23.4	+1.4
XAN				pP	sP	10 06 51.1	+4.1
XAN				pmax	pmax		
	comp=Z,31nm,0.9s						
MJAR	Matsushiro Arr	31.88	19	LR	LR	10 17 01.2	
	comp=Z,29nm,21.8s,baz=235,slow=32						
CD2	Chengdu	32.04	322	P	P	10 06 30.3	+4.9

CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CTAO	Charters Tower	33.06	144	P	P	10 06 36.2	+1.8
MEEK	Meekatharra	33.74	192	P	P	10 06 40.6	+0.3
BJT	Baijiatuau	34.52	347	P	P	10 06 47.0	+0.2
BJI	Beijing	34.54	347	P	P	10 06 48.4	+1.4
BJI				pmax	pmax		
	comp=Z,31nm,1.3s						
LZH	Lanzhou	35.80	328	⇑P	P	10 07 02.2	+4.2
LZH				pP	pP	10 07 17.7	+2.8
LZH				pmax	pmax		
	comp=Z,39nm,1.1s						
HHC	Hu-ho-hao-te	36.56	341	*e*P	P	10 07 06.1	+1.6
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,7.9s						
JTM	Tenmabayashi	36.66	19	P	P	10 07 02.0	-3.1
BTO	Baotou	36.86	339	*e*P	P	10 07 10.6	+3.6
FORT	Forrest	37.13	177	P	P	10 07 10.5	+1.3
MULG	Mulgathing	37.38	169	P	P	10 07 13.5	+2.1
SHL	Shillong	37.75	304	P	P	10 07 15.0	+0.2
USRK	Ussuriysk Ar.	37.89	7	P	P	10 07 14.4	-1.0
	comp=Z,2.1nm,0.5s,baz=174,slow=7.3,SNR=11						
BLDU	Ballidu	38.00	193	P	P	10 07 17.1	+0.5
LCRK	Leigh Creek	38.55	163	P	P	10 07 22.8	+1.6
	comp=Z,23nm,0.9s						
KLBR	Kellerberrin	38.72	191	P	P	10 07 23.4	+0.8
MUN	Mundaring	39.42	193	P	P	10 07 29.2	+0.7
EIDS	Eidsvold	39.95	143	P	P	10 07 32.4	-0.6
EIDS				IAmb	IAmb	10 07 34.3	
	comp=Z,4.5nm,0.7s						
NWAO	Narrogin (SRO)	40.12	192	P	P	10 07 35.2	+1.0
BBOO	Buckleboo	40.25	167	P	P	10 07 36.0	+0.6
BBOO	Buckleboo	40.25	167	P	P	10 07 36.2	+0.9
GTA	Gaotai	40.40	328	⇑P	P	10 07 40.2	+3.5
GTA				pP	pP	10 07 51.7	-2.1
GTA				sP	sP	10 07 57.9	-4.0
GTA				pmax	pmax		
	comp=Z,26nm,0.8s						
STKA	Stephens Creek	40.95	160	P	P	10 07 41.2	+0.1
	comp=Z,8.1nm,0.7s,baz=338,slow=7.7,SNR=18						
STKA	Stephens Creek	40.95	160	P	P	10 07 40.2	-0.9
STKA	Stephens Creek	40.95	160	P	P	10 07 41.8	+0.7
H11S3	WAKE ISLAND Hy	41.28	69	T	T	10 51 47.2	
	SNR=43						
H11S1	WAKE ISLAND Hy	41.30	69	T	T	10 51 45.4	
	SNR=14						
H11S2	WAKE ISLAND Hy	41.30	69	T	T	10 51 46.2	
	SNR=26						
HTT	Hallett	41.56	164	P	P	10 07 48.0	+1.9
CMSA	Cobar Meteorol	42.23	155	P	P	10 07 53.0	+1.4
ULN	Ulaanbaatar	44.28	342	P	P	10 08 08.2	+0.1
ULN				IAmb	IAmb	10 08 10.5	
	comp=Z,13nm,0.9s						
SONM	Songino Array	44.47	341	P	P	10 08 10.3	+0.8
	comp=Z,4.8nm,0.9s,baz=160,slow=8.4,SNR=13						
SONM	Songino Array	44.47	341	P	P	10 08 10.0	+0.4
SONM				IAmb	IAmb	10 08 12.0	
	comp=Z,11nm,1.2s						
CAN	Canberra	46.88	154	P	P	10 08 30.6	+1.9
WMQ	Urumqi	50.09	324	*e*P	P	10 08 57.9	+4.6
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.3s						
PETK	Petropavlovsk-	53.12	23	P	P	10 09 14.7	-1.0
	comp=Z,1.7nm,0.6s,baz=192,slow=3.7,SNR=6.6						
MK31	Makanchi Array	54.92	324	P	P	10 09 27.7	-1.2
MK31				IAmb	IAmb	10 09 33.0	
	comp=Z,5.0nm,0.8s						
MKAR	Makanchi Array	54.92	324	P	P	10 09 28.7	-0.2
	comp=Z,4.7nm,0.5s,baz=115,slow=7.8,SNR=23						
MKAR	Makanchi Array	54.92	324	P	P	10 09 28.4	-0.5
MAKZ	Makanchi	55.11	324	P	P	10 09 29.7	-0.5
MAKZ				IAmb	IAmb	10 09 34.3	
	comp=Z,6.2nm,0.8s						
YAK	Yakutsk	55.46	2	P	P	10 09 31.3	-1.1
ZAA0	Zalesovo Array	57.83	333	P	P	10 09 48.0	-1.4
ZALV	Zalesovo Beam	57.83	333	P	P	10 09 48.1	-1.3
	comp=Z,10nm,0.7s,baz=116,slow=6.8,SNR=25						
ZALV				LR	LR	10 34 49.3	
	comp=Z,64nm,19.0s,baz=127,slow=36						
ZALV	Zalesovo Beam	57.83	333	P	P	10 09 48.0	-1.4
KURK	Kurchatov	59.06	327	P	P	10 09 57.2	-0.8
KKAR	Karatay Array	60.77	316	P	P	10 10 07.9	-2.1
BRVK	Borovoye	64.72	326	P	P	10 10 34.9	-1.1
TIXI	Tiksi	65.08	1	P	P	10 10 36.7	-1.2
TIXI				IAmb	IAmb	10 10 38.7	
	comp=Z,5.8nm,0.8s						
NRIK	Noril'sk	67.58	346	P	P	10 10 54.2	+0.2
	comp=Z,8.5nm,0.7s,baz=124,slow=7.1,SNR=12						
NRIK	Noril'sk	67.58	346	P	P	10 10 54.0	0.0
NRIK				IAmb	IAmb	10 10 55.7	
	comp=Z,10nm,0.9s						
ABKAR	Akbulak array	69.60	320	P	P	10 11 06.1	-0.9
RAYN	Ar Rayn	78.81	293	P	P	10 11 59.5	-1.6
RAYN				IAmb	IAmb	10 12 03.0	
	comp=Z,9.1nm,1.2s						
MLY	Manley	81.25	25	P	P	10 12 12.3	-1.1
I23K	Minto, Yukon-K	81.83	25	P	P	10 12 17.2	+0.7
I23K				IAmb	IAmb	10 12 24.7	
	comp=Z,13nm,1.4s						
KLMR	Klimovskoe	82.67	330	*e*P	P	10 12 17.0	-3.9
KLMR				AMP		10 12 19.1	
	comp=Z,21nm,1.3s						
HDA	Harding Lake	82.85	26	P	P	10 12 20.9	-1.0
ILAR	Eielson Array	82.88	26	P	P	10 12 20.8	-1.2
	comp=Z,1.0nm,0.6s,baz=239,slow=5.0,SNR=26						
ARCES	ARCESS Array B	87.62	340	P	P	10 12 44.8	-0.8
	comp=Z,2.2nm,0.6s,baz=347,slow=5.0,SNR=11						
FINES	FINESS Array B	89.08	332	P	P	10 12 51.6	-1.0
	comp=Z,1.6nm,0.5s,baz=66,slow=4.3,SNR=8.0						
AKASG	Malin Array Be	89.33	321	P	P	10 12 53.3	-0.7
	comp=Z,0.1nm,0.2s,baz=6.8,slow=34,SNR=1.8						
NOR	Nord	90.27	355	*i* P	P	10 12 56.6	-1.1
NOR				IAmb	IAmb	10 12 59.4	
	comp=Z,2.6nm,0.7s						
MLR	Muntele Rosu	92.45	316	LR	LR	10 58 30.8	
	comp=Z,41nm,18.3s,baz=296,slow=38						
DAG	Danmarks Havn	94.42	352	*i* P	P	10 13 15.4	-1.5
DAG				IAmb	IAmb	10 13 17.0	
	comp=Z,6.6nm,0.8s						
NOA	NORSAR Array B	96.02	334	LR	LR	10 59 47.7	
	comp=Z,66nm,18.4s,baz=345,slow=37						
NEEM	North Greenlan	96.15	359	*i* P	P	10 13 25.3	+0.1
NEEM				IAmb	IAmb	10 13 25.9	
	comp=Z,7.5nm,0.6s						
DBG	Daneborg	96.69	351	*e*P	P	10 13 26.8	-0.6
DBG				IAmb	IAmb	10 13 28.1	
	comp=Z,2.7nm,0.9s						
VRAC	Vranov	97.57	322	LR	LR	11 01 33.0	
	comp=Z,33nm,18.1s,baz=332,slow=38						
TORD	Torodi Ar. Bea	121.41	290	PKP	PKPdf	10 18 50.4	-1.2
	comp=Z,2.0nm,0.8s,baz=36,slow=1.7,SNR=12						
TORD	Torodi Ar. Bea	121.41	290		PKPdf	10 18 50.5	-1.1
PLCA	Paso Flores	142.82	159	PKP	PKPdf	10 19 32.0	+0.8
	comp=Z,2.2nm,0.7s,baz=244,slow=7.3,SNR=6.3						

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*KRNET **10** 10:04:18.6±0.1, 38°.88N×73°.18E, h7^{km}, mb4.0*
*NNC **10** 10:04:25.5±3.0, 39°.09N×73°.30E, h0^{km}, mb4.4, mpv3.9, Error ellipse: s-maj=23.4km s-min=13.8km az=169.0*
ISC 10 10:04:19.1±1.4**, 39°.04N**±0°.04×**73°.17E**±0°.04**, h17**^{km}±11^{km}**, n29,** σ**2**^{s}.**12**/41**, 22C-9D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.01	15	⇓*e*P	Pn	10 04 40.0	+1.2
	baz=12						
SFK				⇓*e*S	Sn	10 04 56.6	+3.9
	baz=12						
DRK	Karamyk	1.15	293	⇑*i*P	Pg	10 04 42.3	+0.9
	baz=0.0						
DRK				⇑*i*S	Sn	10 04 58.9	+2.7
	baz=0.0						
OHH	Osh	1.51	349	⇑*e*P	Pg	10 04 50.1	+1.9
	baz=50						
OHH				⇑*i*S	Sg	10 05 12.8	+4.9
	baz=50						
BTK	Batken	2.08	300	⇑*i*P	Pg	10 04 58.1	-1.0
	baz=3.0						
BTK				⇑*i*S	Sg	10 05 26.2	+0.1
	baz=3.0						
TRKS	Terek-Say	2.93	329	⇑*e*P	Pb	10 05 09.5	-1.5
	baz=30						
TRKS				⇑*i*S	Sb	10 05 46.3	-0.3
	baz=30						
AML	Almayashu	3.11	7	⇑*i*P	Pb	10 05 13.2	-1.1
	baz=7.0						
AML				⇑*i*S	Sb	10 05 53.7	+1.5
	baz=7.0						
UCH	Uchtor	3.34	17	⇑*i*P	Pb	10 05 16.4	-1.9
	baz=16						
UCH				⇑*i*S	Sb	10 05 58.6	-0.3
	baz=16						
EKS2	Erkin-Say	3.65	7	⇓*i*P	Pb	10 05 20.6	-2.6
	baz=7.0						
EKS2				⇓*i*S	Sb	10 06 05.7	-1.5
	baz=7.0						
MRKS	Merke	3.70	1	Pg	Pg	10 05 29.3	-0.7
	20nm,0.5s						
MRKS				Lg	Lg	10 06 18.8	
	49nm,0.5s						
AAK	Ala-Archa	3.73	15	⇑Pn	Pb	10 05 24.4	-0.3
	31nm,0.7s						
AAK				⇓Lg	Lg	10 06 23.8	
	54nm,0.8s						
AAK	Ala-Archa	3.73	15	⇑*i*P	Pb	10 05 21.7	-3.0
	baz=14						
AAK				⇑*i*S	Sb	10 06 07.7	-2.0
	baz=14						
KBK	Karagaybulak	3.86	20	⇑*e*P	Pb	10 05 23.3	-3.5
	baz=19						
KBK				⇑*i*S	Sb	10 06 10.5	-2.8
	baz=19						
IUG	Iuzhnay	3.91	323	P	Pg	10 05 33.7	-0.4
TKM2	Tokmak 2	4.29	25	⇑Pg	Pg	10 05 42.9	+1.6
	14nm,0.7s						
TKM2				⇓Lg	Lg	10 06 39.7	
	35nm,1.1s						
KST	Kastek	4.52	27	Pg	Pg	10 05 47.0	+1.2
	18nm,0.7s						
KST				Lg	Lg	10 06 49.4	
	41nm,1.0s						
KK02	Karatay Array	4.53	335	⇑Pn	Pb	10 05 33.4	-4.8
	16nm,0.6s,baz=161,slow=15						
KK02				⇓Sn	Sb	10 06 30.3	-2.1
	25nm,0.7s,baz=158,slow=26						
KK02				⇓Lg	Lg	10 06 51.4	
	18nm,0.7s						
SGDS	Sogindy	4.54	14	Pg	Pg	10 05 45.6	-0.5
	19nm,0.7s						
SGDS				Lg	Lg	10 06 47.3	
	14nm,0.9s						
DGS	Degeres	4.64	24	Pg	Pg	10 05 48.1	+0.2
	14nm,0.7s						
DGS				Lg	Lg	10 06 51.3	
	24nm,1.1s						
BRLS	Borolday	4.71	329	Pg	Pg	10 05 46.2	-3.2
	5.8nm,0.3s						
BRLS				Lg	Lg	10 06 48.2	
	21nm,0.6s						
MTBS	Maitube	4.77	30	Pg	Pg	10 05 50.1	-0.4
	10nm,0.4s						
MTBS				Lg	Lg	10 06 54.9	
	13nm,0.8s						
TNSS	Tian-Shan	4.91	34	Pg	Pg	10 05 52.3	-0.9
	11nm,0.5s						
TNSS				Lg	Lg	10 06 58.8	
	17nm,1.0s						
KRBS	Karabastau	5.02	21	Pg	Pg	10 05 53.9	-1.4
	6.1nm,0.6s						
KRBS				Lg	Lg	10 07 01.4	
	15nm,0.5s						
MDOK	Medeo	5.06	34	Pg	Pg	10 05 54.1	-1.8
	12nm,0.6s						
MDOK				Lg	Lg	10 07 03.5	
	22nm,0.7s						
MDOK	Medeo	5.06	34	Pg	Pg	10 05 54.8	-1.1
	14nm,0.9s						
MDOK				Lg	Lg	10 07 03.1	
	26nm,1.3s						
KNDC	Almaty	5.06	33	⇑Pg	Pg	10 05 56.2	+0.1
	30nm,0.5s						
KNDC				⇑Lg	Lg	10 07 03.5	
	164nm,1.1s						
CEP	Cherat	5.30	191	P	Pn	10 05 38.6	+0.8
CEP				S	Sb	10 06 57.0	+2.0
KTBS	Karatobe	5.36	28	Pg	Pg	10 06 00.5	-1.3
	6.8nm,0.6s						
KTBS				Lg	Lg	10 07 12.6	
	19nm,0.4s						
CHCP	Chirah Chowk	5.37	179	P	Pn	10 05 39.2	+0.6
PDGK	Podgornoye	6.41	46	⇑Pg	Pg	10 06 20.1	-1.7
	9.3nm,0.8s						
PDGK				⇓Lg	Lg	10 07 43.8	
	20nm,1.1s						

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*KRNET **10** 10:16:02.2±0.1, 39°.24N×73°.14E, h21^{km}, mb2.8*
*NNC **10** 10:16:03.3±5.1, 39°.03N×73°.15E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=40.6km s-min=27.2km az=174.0*
ISC 10 10:16:05.5±2.1**, 39°.5N**±0°.1×**73°.02E**±0°.06**, h10**^{km}**, n8,** σ**1**^{s}.**69**/14**, 12C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.68	34	⇑*e*P	Pg	10 16 17.9	-0.7
	baz=20						
SFK				⇑*e*S	Sb	10 16 29.3	+0.2
	baz=20						
DRK	Karamyk	0.94	272	⇓*i*P	Pg	10 16 22.3	-1.4
	baz=84						
DRK				⇓*i*S	Sg	10 16 37.0	+1.0
	baz=84						
BTK	Batken	1.80	290	⇑*i*P	Pn	10 16 38.1	+1.4
	baz=95						
BTK				⇑*i*S	Sg	10 17 03.8	+0.4
	baz=95						
TRKS	Terek-Say	2.52	326	⇑*i*P	Pn	10 16 47.8	+1.1
	baz=27						
TRKS				⇑*i*S	Sb	10 17 21.6	-0.5
	baz=27						
MNAS	Manas	3.06	353	⇑*i*P	Pn	10 16 56.4	+2.3
	baz=52						
MNAS				⇑*i*S	Sb	10 17 35.5	-2.0
	baz=52						
AAK	Ala-Archa	3.37	19	⇑Pn	Pb	10 17 03.5	-2.0
	7.9nm,0.7s						
AAK				⇓Lg	Lg	10 18 00.9	
	6.3nm,0.7s						
TKM2	Tokmak 2	3.98	28	⇑Pg	Pg	10 17 21.4	-0.2
	4.8nm,1.1s						
TKM2				⇑Lg	Lg	10 18 21.6	
	7.6nm,1.0s						
KK02	Karatay Array	4.11	333	⇓Pn	Pn	10 17 11.5	+3.2
	1.5nm,0.4s,baz=147,slow=12						
KK02				⇑Sn	Sb	10 18 08.0	+0.4
	3.6nm,0.6s,baz=153,slow=27						

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*TUL **10** 10:16:19.4±0.9, 36°.48N±0°.02×98°.75W±0°.02, h3^{km}±6^{km}, ML2.7, mb_Lg2.4/14(NEIC), Error ellipse: s-maj=3.1km s-min=2.2km az=140.0*
NEIC 10 10:16:19.9±1.3**, 36°.47N**±0°.02×**98°.72W**±0°.02**, h3**^{km}±6^{km}**, Error ellipse: s-maj=3.1km s-min=2.2km az=145.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.24	249	Pg	Pg	10 16 24.1	-0.5
U32A				Sg	Sg	10 16 27.8	0.0
OK032	Salt Plains WL	0.53	51	Pg	Pg	10 16 30.1	0.0
OK032				Sg	Sg	10 16 37.8	+0.9
CROK	Carrier	0.59	86	Pg	Pg	10 16 31.5	+0.2
KAN14	Manchester OK	0.78	51	Pg	Pg	10 16 34.6	-0.2
KAN14				Sg	Sg	10 16 45.6	+0.7
GC02	Grant County #	0.79	61	Pg	Pg	10 16 34.9	-0.1
GC02				Sg	Sg	10 16 45.8	+0.5
KAN10	Anthony SW Sta	0.82	37	Sg	Sg	10 16 46.5	+0.1
KAN16	Harper SW Stat	0.92	35	Sg	Sg	10 16 49.4	-0.1
KAN05	Bluff City Nor	0.93	47	Sg	Sg	10 16 49.8	-0.1
KAN17	Caldwell West	0.96	53	Pg	Pg	10 16 38.0	-0.3
KAN17				Sg	Sg	10 16 50.6	-0.1
KAN08	Anthony NE Sta	0.97	38	Sg	Sg	10 16 51.1	+0.1
KAN01	Argonia South	1.03	48		Pg	10 16 38.6	-1.0
KAN01				Sg	Sg	10 16 52.9	-0.1
KAN06	Argonia West S	1.04	41	Pg	Pg	10 16 39.3	-0.5
KAN06				Sg	Sg	10 16 53.2	-0.1
KAN09	Caldwell North	1.11	53	Pg	Pg	10 16 40.5	-0.6
KAN09				Sg	Sg	10 16 55.6	+0.2
KAN13	South Haven SW	1.14	61	Pg	Pg	10 16 41.1	-0.6
BCOK	Bluff Creek, N	1.21	132	Sg	Sg	10 16 59.0	+0.2
OK029	Liberty Lake	1.22	123	Pg	Pg	10 16 42.5	-0.9
OK029				Sg	Sb	10 16 59.9	0.0
BLOK	Blackwell	1.25	76	Pg	Pg	10 16 43.0	-0.7
BLOK				Sn	Sg	10 17 00.0	+0.1
OK025	Westminster Rd	1.43	128	Pn	Pn	10 16 46.1	-0.6
OK025					Sn	10 17 06.1	+0.1
OKCFA	Oklahoma City	1.47	135	Pn	Pn	10 16 46.7	-0.6
OKCSW	OKLAHOMA CITY	1.49	135	Pn	Pn	10 16 46.6	-0.9
OKCSW					Sn	10 17 07.5	+0.1
OK031	S. Brethren Rd	1.61	108		Pn	10 16 49.1	-0.1
FNO	Franklin	1.61	138	Pn	Pn	10 16 49.2	-0.1
OK030	Cody Creek RV	1.66	108		Pn	10 16 50.2	+0.4
OK034	N. Norfolk Rd.	1.69	105		Pn	10 16 50.1	-0.1
T35A	Sooner Cattle	1.83	75		Pn	10 16 52.7	+0.5
T35A				IAmb_Lg		10 17 20.4	
	comp=Z,20nm,1.0s						
R32A	Long Quarter,	1.95	0		Pn	10 16 54.4	+0.5
X34A	Smith Ranch, M	2.00	159	Pn	Pn	10 16 55.7	+1.2
TUL1	Leonard	2.43	102	Pn	Pn	10 17 00.9	+0.4
TUL1				IAmb_Lg		10 17 36.6	
	comp=Z,12nm,0.9s						
CBKS	Cedar Bluff	2.48	341	Pn	Pn	10 17 01.0	-0.2
LOOK	Love County	2.77	153	Pn	Pn	10 17 05.9	+0.7
LOOK				IAmb_Lg		10 17 49.8	
	comp=Z,7.7nm,0.8s						
AMTX	Amarillo	2.88	238	IAmb_Lg		10 17 56.1	
	comp=Z,10nm,0.7s						
KSCO	Kaye Shedlock’	4.00	311	IAmb_Lg		10 18 33.0	
	comp=Z,11nm,0.8s						
S39A	Bolivar	4.49	73	IAmb_Lg		10 18 54.8	
	comp=Z,7.3nm,0.9s						
T25A	Trinidad	4.62	280	IAmb_Lg		10 18 47.7	
	comp=Z,11nm,0.9s						
U40A	Yellville	4.73	90	IAmb_Lg		10 18 50.5	
	comp=Z,8.8nm,0.7s						

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*IDC **10** 10:24:14.5±2.3, 6°.03S×130°.47E, h118^{km}±23^{km}, mb3.8/4, mb1 3.9/9, mb1mx3.6/35, mbtmp4.2/9, Error ellipse: s-maj=25.7km s-min=16.3km az=83.0*
*DJA **10** 10:24:26.5±0.4, 5°S±3°×13°1E±°, h155^{km}±10^{km}, M4.5/11, mb4.5/5, mB5.4/1, MLv4.4/11, Mw(mB)4.9/1*
ISC 10 10:24:15.7±0.7**, 5°.98S**±0°.06×**130°.67E**±0°.07**, h150**^{km}**, n28,** σ**2**^{s}.**23**/30**, mb3.9**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.64	332	P	Pn	10 24 47.8	+1.0
MSAI	Masohi	3.14	326	P	Pn	10 25 05.4	+0.5
FAKI	Fak Fak	3.43	28	P	Pn	10 25 08.5	-0.1
FAKI				S	Sn	10 25 45.4	-4.2
FAKI	Fak Fak	3.43	28	P	Pn	10 25 08.5	-0.1
SIJI	Sorong	5.11	7	P	Pn	10 25 30.5	-0.2
	11nm,0.3s,baz=188,slow=23,SNR=34						
SIJI				S	Sn	10 26 21.3	-8.0
	11nm,0.3s,baz=214,slow=16,SNR=6.7						
SWI	Sorong	5.12	7	P	Pn	10 25 29.2	-1.6
SANI	Sanana	6.08	310	P	Pn	10 25 44.3	+0.7
	0.1nm10nm,0.8s						
SANI	Sanana	6.08	310	P	Pn	10 25 45.3	+1.7
	10.0nm,0.9s						
LBMI	Labuha	6.18	329	P	Pn	10 25 44.0	-0.8
DRS	Darwin Rock St	6.41	178	P	Pn	10 25 48.0	0.0
KDU	Kakadu	6.90	165	P	Pn	10 25 53.7	-0.8
SOEI	Soe	7.36	239	P	Pn	10 26 02.5	+1.7
BATI	Baumata	8.10	238	P	Pn	10 26 06.3	-4.3
	5.8nm,0.3s,baz=312,slow=4.3,SNR=1.9						
BATI				S	Sn	10 27 36.6	-4.3
	3.6nm,0.3s,baz=210,slow=4.6,SNR=1.7						
KNRA	Kununurra	9.81	191	P	Pn	10 26 31.9	-1.4
FITZ	Fitzroy Crossi	13.01	202	P	Pn	10 27 12.6	-2.4
	0.9nm,0.3s,baz=24,slow=7.9,SNR=14						
WRA	Warramunga Arr	14.33	166	P	Pn	10 27 30.3	-1.6
	0.8nm,0.3s,baz=349,slow=11,SNR=18						
WRA				S	Sn	10 30 01.6	-9.3
	1.2nm,0.3s,baz=334,slow=19,SNR=12						
COEN	Coen	14.64	124	P	P	10 27 38.5	+0.4
QIS	Mount Isa	16.89	150	P	Pn	10 28 05.3	+1.9
ASAR	Alice Springs	17.86	170	P	Pn	10 28 15.9	+0.9
	1.0nm,0.3s,baz=346,slow=9.0,SNR=137						
ASAR				S	S	10 31 26.5	-4.7
	0.3nm,0.3s,baz=355,slow=25,SNR=6.9						
WRKA	Warakurna	19.08	187	P	Pn	10 28 29.0	-0.4
OOD	Oodnadatta	22.21	168	P	P	10 29 01.7	+1.6
INKA	Innaminka	23.67	157	P	P	10 29 17.2	+3.6
MULG	Mulgathing	24.38	173	P	P	10 29 23.3	+3.2
LCRK	Leigh Creek	25.35	165	P	P	10 29 32.6	+3.7
STKA	Stephens Creek	27.72	160	P	P	10 29 52.1	+2.0
	1.5nm,0.5s,baz=334,slow=8.2,SNR=5.5						
CMAR	Chiang Mai Arr	39.60	308	P	P	10 31 33.2	+0.4
	0.8nm,0.4s,baz=138,slow=7.3,SNR=1.8						
MKAR	Makanchi Array	67.75	326	P	P	10 34 59.5	+2.3
	2.9nm,0.5s,baz=124,slow=7.7,SNR=37						
ZALV	Zalesovo Beam	70.97	333	P	P	10 35 17.9	+1.1
	0.4nm,0.4s,baz=92,slow=4.3,SNR=1.7						

DJA 10 10:25:54.4±0.7**, 2°S**±8°×**13°0E**±°**, h41**^{km}±12^{km}**, M4.5**/5**, mb6.1**/4**, mB6.6**/1**, MLv3.6**/5**, Mw(mB)6.4**/1**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	1.85	39	P	Pn	10 26 23.2	-0.5
LBMI	Labuha	3.08	303	P	Pn	10 26 40.6	+0.1
TNG	Tangerang	23.69	260	P	P	10 31 03.4	+0.8
	760nm,0.5s						
TNG				P	P	10 31 01.8	-0.8
	1µm,0.5s						
BKNI	Bangkinang	29.16	275	P	P	10 31 51.9	-0.2

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*SOME **10** 10:35:36.8, 43°.65N×69°.63E*
*KRNET **10** 10:35:37.5±0.1, 43°.71N×69°.58E, mb3.0*
*NNC **10** 10:35:39.0±1.6, 43°.68N×69°.83E, h0^{km}, mb3.9, mpv3.3, Error ellipse: s-maj=8.6km s-min=5.3km az=136.0, Suspected Mining explosion.*
ISC 10 10:35:41.9±1.9**, 43°.55N**±0°.07×**69°.82E**±0°.08**, h0**^{km}**, n16,** σ**1**^{s}.**16**/23**, 11C-3D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday	0.52	179	P	Pb	10 35 54.5	+0.5
	1.0nm,0.2s						
BRLS				S	Sn	10 36 06.9	+0.6
	17nm,0.2s						
KK02	Karatay Array	0.68	132	⇑P	Pg	10 35 53.6	-1.2
	4.1nm,0.4s,baz=321,slow=17						
KK02				⇓S	Sg	10 36 04.6	+1.1
	28nm,0.5s,baz=326,slow=34						
IUG	Iuzhnay	1.42	174	P	Pg	10 36 07.7	-1.3
	251nm,0.6s						
IUG				S	Sn	10 36 29.0	+0.6
	91nm,0.5s						
MNAS	Manas	2.24	118	⇑*i*P	Pn	10 36 21.2	+0.8
	baz=19						
MNAS				⇑*i*S	Sg	10 36 53.3	-0.5
	baz=19						
TRKS	Terek-Say	2.25	154	⇓*i*P	Pb	10 36 22.0	-1.4
	baz=52						
TRKS				⇓*i*S	Sg	10 36 54.9	+0.9
	baz=52						
TAS	Tashkent	2.26	190	⇑*i*P	Pn	10 36 20.4	-0.2
	baz=85						
TAS				⇑*i*S	Sb	10 36 51.4	-0.7
	baz=85						
MRKS	Merke	2.62	107	Pg	Pb	10 36 28.4	-1.3
	4.3nm,0.6s						
MRKS				Lg	Lg	10 37 05.1	
	13nm,0.3s						
BTLS	Baital	3.38	62	Pg	Pb	10 36 42.3	-0.3
	19nm,0.8s						
BTLS				Lg	Lg	10 37 29.2	
	5.2nm,0.6s						
SGDS	Sogindy	3.50	90	Pg	Pb	10 36 44.9	+0.1
	3.2nm,0.4s						
SGDS				Lg	Lg	10 37 33.3	
	5.4nm,0.3s						
AAK	Ala-Archa	3.54	103	⇑Pg	Pb	10 36 44.0	-1.5
	6.1nm,0.5s						
AAK				⇑Lg	Lg	10 37 34.0	
	13nm,1.1s						
BTK	Batken	3.57	168	⇑*i*P	Pn	10 36 39.3	+0.7

	baz=65						
BTK				⇑*i*S	Sn	10 37 24.9	+3.3
	baz=65						
KRBS	Karabastau	4.25	86	Pg	Pb	10 36 57.1	-0.5
	4.3nm,0.7s						
KRBS				Lg	Lg	10 37 54.7	
	15nm,0.7s						
TKM2	Tokmak 2	4.27	97	⇑Pg	Pb	10 36 57.3	-0.6
	7.3nm,0.9s						
TKM2				⇑Lg	Lg	10 37 57.3	
	8.0nm,1.1s						
DGS	Degeres	4.35	92	Pg	Pb	10 36 58.7	-0.6
	4.3nm,1.0s						
DGS				Lg	Lg	10 37 57.2	
	18nm,0.6s						
KST	Kastek	4.51	94	Pg	Pb	10 37 02.6	+0.6
	18nm,0.8s						
KST				Lg	Lg	10 38 04.0	
	12nm,0.9s						
KTBS	Karatobe	4.98	86	Pg	Pb	10 37 10.7	+0.7
	2.0nm,0.7s						
KTBS				Lg	Lg	10 38 18.3	
	16nm,0.5s						

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*IDC **10** 10:51:01.8±0.9, 63°.35N×22°.66E, h0^{km}, mb1 3.0/3, mb1mx2.9/48, mbtmp3.0/3, ML2.1/3, Error ellipse: s-maj=10.3km s-min=7.6km az=58.0*

ISC 10 10:51:05.3±1.4**, 63°.46N**±0°.07×**22°.36E**±0°.08**, h35^{km}, n4,** σ**2.^{s}10**/6**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FINES	FINESS Array B	2.66	138	Pg	Pn	10 51 45.0	-0.7
	1.4nm,0.3s,baz=316,slow=14,SNR=32						
FINES				Lg	Lg	10 52 20.8	
	0.6nm,0.3s,baz=318,slow=28,SNR=6.5						
HFS	Hagfors	5.29	235	Pn	Pn	10 52 21.3	-0.4
	0.2nm,0.3s,baz=106,slow=38,SNR=1.1						
HFS				Sn	Sn	10 53 23.8	+2.3
	0.8nm,0.3s,baz=60,slow=28,SNR=6.7						
NOA	NORSAR Array B	5.75	250	Pn	Pn	10 52 25.4	-2.6
	0.0nm,0.3s,baz=355,slow=5.4,SNR=1.2						
ARCES	ARCESS Array B	6.23	10	Pn	Pn	10 52 35.3	+0.7
	baz=190,slow=13,SNR=5.6						
ARCES				Sn	Sn	10 53 44.3	-0.1
	baz=191,slow=22,SNR=1.5						
ARCES				Lg	Lg	10 54 21.7	
	baz=185,slow=29,SNR=3.1						

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*IDC **10** 10:58:19.1±1.5, 4°.22S×129°.36E, h0^{km}, mb4.0/1, mb1 4.0/4, mb1mx3.7/33, mbtmp3.8/4, ML3.7/3, Error ellipse: s-maj=55.0km s-min=26.0km az=80.0*

*DJA **10** 10:58:20.1±0.7, 4°S±7°×12°9E±°, h10^{km}, M4.2/9, mb4.8/2, MLv3.8/9*

ISC 10 10:58:22.5±0.8**, 4°.27S**±0°.06×**129°.48E**±0°.05**, h35^{km}, n20,** σ**2.^{s}72**/21**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.50	121	P	Pn	10 58 34.0	+0.9
MSAI	Masohi	1.07	329	P	Pn	10 58 39.6	-1.4
MSAI				S	Sn	10 58 55.0	+0.4
AAI	Ambon	1.40	294	P	Pn	10 58 44.6	-1.0
AAI				S	Sn	10 59 05.6	+2.7
FAKI	Fak Fak	3.08	64	P	Pn	10 59 09.6	+1.0
FAKI	Fak Fak	3.08	64	P	Pn	10 59 09.8	+1.2
SIJI	Sorong	3.82	28	Pn	Pn	10 59 20.4	+1.5
	5.7nm,0.3s,baz=360,slow=24,SNR=8.2						
SIJI				Sn	Sn	10 59 58.6	-4.0
	9.7nm,0.3s,baz=240,slow=23,SNR=8.0						
SWI	Sorong	3.82	28	P	Pn	10 59 19.0	+0.1
LBMI	Labuha	4.11	331	P	Pn	10 59 22.0	-0.9
SANI	Sanana	4.12	302	P	Pn	10 59 22.6	-0.4
SANI	Sanana	4.12	302	P	Pn	10 59 24.6	+1.6
KDU	Kakadu	8.87	161	P	Pn	11 00 30.6	+2.3
KNRA	Kununurra	11.36	183	P	Pn	11 01 06.8	+4.4
WRAB	Tennant Creek	16.28	163	P	P	11 02 12.5	+1.2
WRA	Warramunga Arr	16.29	163	Pn	P	11 02 08.6	-2.8
	0.2nm,0.3s,baz=349,slow=12,SNR=8.8						
WRA				Sn	Sn	11 04 59.7	-8.7
	baz=326,slow=24,SNR=1.5						
COEN	Coen	16.59	126	P	P	11 02 15.3	+0.5
QIS	Mount Isa	18.96	150	P	Pn	11 02 43.8	+2.1
ASAR	Alice Springs	19.75	168	P	Pn	11 02 52.5	+1.2
	0.4nm,0.3s,baz=348,slow=11,SNR=28						
WRKA	Warakurna	20.68	183	P	Pn	11 03 03.6	+1.4
OOD	Oodnadatta	24.13	166	P	P	11 03 37.7	+2.4
MKAR	Makanchi Array	65.67	326	P	P	11 09 04.5	+1.0
	1.0nm,0.6s,baz=116,slow=8.0,SNR=13						

IDC 10 11:25:32.7±2.6**, 3°.92S**×**130°.19E, h0^{km}, mb3.4**/1**, mb1 3.2**/3**, mb1mx3.1**/21**, mbtmp3.1**/3**, ML2.8**/2**, Error ellipse: s-maj=174.7km s-min=30.6km az=70.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.43	166	Pn	Pn	11 29 23.8	-1.0
	0.0nm,0.3s,baz=349,slow=13,SNR=1.4						
ASAR	Alice Springs	19.95	170	P	P	11 30 07.0	+0.5
	0.1nm,0.3s,baz=351,slow=11,SNR=5.6						
MKAR	Makanchi Array	65.78	326	P	P	11 36 19.7	0.0
	0.2nm,0.4s,baz=107,slow=7.8,SNR=4.8						

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*NNC **10** 11:31:19.3±6.5, 37°.72N×71°.42E, h211^{km}±103^{km}, mb2.5, mpv3.6, Error ellipse: s-maj=67.2km s-min=36.1km az=13.0*

ISC 10 11:31:13.0±1.2**, 37°.32N**±0°.09×**71°.4E**±0°.1**, h200^{km}, n8,** σ**2.^{s}00**/12**, 4C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	5.82	23	⇓P	Pn	11 32 39.3	+1.4
	4.0nm,0.4s						
AAK				⇑S	Sn	11 33 43.6	-1.5
	12nm,1.1s						
KK02	Karatay Array	5.82	353	⇑P	Pn	11 32 39.4	+1.6
	2.6nm,0.5s,baz=178,slow=13						
KK02				⇓S	Sn	11 33 42.8	-2.3
	3.4nm,0.5s,baz=168,slow=22						
TKM2	Tokmak 2	6.45	28	⇑P	Pn	11 32 47.2	+1.0
	5.5nm,0.7s						
TKM2				⇑S	Sn	11 34 00.7	+0.7
	5.2nm,1.2s						
PYUN	Piuthan	13.38	130	*e*P	Pn	11 34 14.0	-1.5
	10nm,0.4s						
DANN	Dangsing	13.69	127	*e*P	Pn	11 34 19.1	-0.2
	6.6nm,0.4s						
KOLN	Koldanda	13.99	129	*e*P	Pn	11 34 22.8	-0.3
	7.7nm,0.4s						
GKN	Gorkha	14.48	126	*e*P	P	11 34 29.6	-0.8
	7.5nm,0.3s						
AB31	Akbulak array	14.55	329	⇓P	P	11 34 33.4	+2.7
	0.3nm,0.3s,baz=167,slow=9.6,SNR=18						
AB31				⇓S	S	11 37 07.5	-3.5
	0.8nm,0.6s,baz=154,slow=23,SNR=4.3						

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*IDC **10** 11:37:05.2±2.5, 3°.71S×130°.30E, h0^{km}, mb3.6/2, mb1 3.9/3, mb1mx3.6/21, mbtmp3.7/3, ML3.4/1, Error ellipse: s-maj=162.6km s-min=28.8km az=71.0*

*DJA **10** 11:37:10.3±1.2, 4°S±5°×12°9E±°, h21^{km}±11^{km}, M3.8/9, mb3.7/1, MLv3.8/9*

ISC 10 11:37:11.6±1.0**, 4°.08S**±0°.07×**129°.29E**±0°.06**, h35^{km}, n11,** σ**0.^{s}58**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.81	334	P	Pn	11 37 26.2	-0.3
MSAI				S	Sn	11 37 36.8	-0.5
AAI	Ambon	1.16	290	P	Pn	11 37 31.6	+0.3
AAI				S	Sn	11 37 46.3	+0.4
FAKI	Fak Fak	3.17	69	P	Pn	11 37 58.6	-0.4
SWI	Sorong	3.75	32	P	Pn	11 38 07.5	+0.5
LBMI	Labuha	3.85	332	P	Pn	11 38 08.8	+0.4
SANI	Sanana	3.86	301	P	Pn	11 38 07.5	-1.0
SAUI	Saumlaki	4.37	153	P	Pn	11 38 15.4	0.0
TNTI	Ternate	5.19	338	P	Pn	11 38 26.1	-0.6
WRA	Warramunga Arr	16.52	163	Pn	Pn	11 41 00.4	-0.3
	0.1nm,0.3s,baz=347,slow=12,SNR=4.6						
ASAR	Alice Springs	19.98	168	P	P	11 41 40.8	-0.3
	2.8nm,0.7s,baz=348,slow=11,SNR=40						
MKAR	Makanchi Array	65.41	326	P	P	11 47 51.5	+0.7
	0.3nm,0.4s,baz=108,slow=8.6,SNR=6.4						

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*DJA **10** 11:39:34.1±0.5, 3°S±5°×13°0E±°, h57^{km}±18^{km}, M3.4/8, MLv3.4/8*

*IDC **10** 11:39:44.9±2.5, 4°.41S×128°.95E, h0^{km}, mb3.4/1, mb1 3.6/3, mb1mx3.4/22, mbtmp3.4/3, ML3.5/2, MS3.1/1, Ms1 3.1/1, ms1mx2.3/18, Error ellipse: s-maj=167.8km s-min=31.3km az=68.0*

ISC 10 11:39:34.3±1.3**, 2°.78S**±0°.08×**129°.59E**±0°.06**, h50^{km}, n10,** σ**0.^{s}98**/9**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.87	230	P	Pn	11 39 50.2	-0.1
MSAI				S	Sn	11 40 03.3	+1.3
AAI	Ambon	1.66	237	P	Pn	11 40 01.3	+0.3
SWI	Sorong	2.53	41	P	Pn	11 40 13.8	+0.8
FAKI	Fak Fak	2.66	93	P	Pn	11 40 13.8	-0.9
LBMI	Labuha	2.99	316	P	Pn	11 40 19.1	-0.1
SANI	Sanana	3.67	281	P	Pn	11 40 27.2	-1.5
BATI	Baumata	9.44	218	LR	LR	11 45 01.2	
	comp=Z,120nm,19.0s,baz=224,slow=41						
WRA	Warramunga Arr	17.67	165	Pn	Pn	11 43 36.6	-0.5
	0.1nm,0.3s,baz=344,slow=13,SNR=2.9						
ASAR	Alice Springs	21.18	169	P	P	11 44 15.8	+0.2
	0.4nm,0.3s,baz=346,slow=9.9,SNR=13						
MKAR	Makanchi Array	64.51	326	P	P	11 50 30.1	+24
	0.3nm,0.8s,baz=108,slow=4.7,SNR=1.9						

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*EAF **10** 11:41:06.8±2.7, 21°.35S×25°.76E, h10^{km}, MD4.3*

BUL 10 11:40:57.7±0.8**, 17°.66S**×**30°.32E, h10^{km}, MD3.6, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATP	Matopo	3.25	212	*i* P	Pn	11 41 48.0	-0.9
MATP				*i* S	Sn	11 42 25.7	-2.0
MATP	Matopo	3.25	212	*i* P	Pn	11 41 50.4	+1.5
MATP				*i* Sg	Sb	11 42 31.9	-3.3
MSNA	Messina	4.67	183	*i* P	Pn	11 42 08.7	+0.3
MSNA				*i* S	Sn	11 42 59.1	-3.7
MSNA	Messina	4.67	183	*i* P	Pn	11 42 07.8	-0.6
MSNA				*i* Sg	Sb	11 43 12.2	-4.0
MOPA	Mopani	5.92	170	*i* P	Pn	11 42 29.6	+4.1
MOPA				*i* S	Sn	11 43 37.0	+3.5
MOPA	Mopani	5.92	170	*i* P	Pn	11 42 28.9	+3.3
MOPA				*i* S	Sn	11 43 33.2	-0.2
CNG	Changalane	8.77	169	*i* P	Pn	11 43 02.8	-1.8

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*NEIC **10** 11:43:49.3±1.1, 55°.9N±0°.1×161°.2W±0°.1, h193^{km}±10^{km}, Error ellipse: s-maj=20.0km s-min=8.9km az=152.0*

AEIC 10 11:43:50±1.5**, 56°.0N**±0°.1×**161°.2W**±0°.1**, h186^{km}**±7^{km}**, ML3.0**/11**, ML3.8**/20(NEIC)**, Error ellipse: s-maj=16.5km s-min=8.8km az=155.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDPT	Sand Point	0.75	146		Pn	11 44 16.7	0.0
SDPT	Sand Point	0.75	146		Sn	11 44 36.7	-0.5
SDPT	Sand Point	0.75	146	IAML		11 44 25.1	
	comp=N,104nm,4.7s						
DT1	Dutton Round H	1.06	215		Pn	11 44 19.0	+0.2
CNBA	Chernabura Isl	1.48	141		Pn	11 44 22.2	-0.1
CNBA	Chernabura Isl	1.48	141	IAML		11 44 27.2	
	comp=E,77nm,3.9s						
CNBA				IAML		11 45 04.6	
	comp=N,86nm,3.0s						
CHGN	Chignik	1.60	77	Pn	Pn	11 44 23.0	-0.3
CHGN				IAML		11 44 55.1	
	comp=E,279nm,0.1s						
FALS	False Pass	1.68	229		Pn	11 44 23.8	-0.4
FALS					Sn	11 44 51.0	+0.4
ISLZ	Isanotski Laza	1.90	230		Pn	11 44 26.2	-0.3
ISLZ					Sn	11 44 54.3	-0.3
CHIR	Chirikof Islan	3.15	90		Pn	11 44 40.7	0.0
CHIR	Chirikof Islan	3.15	90	IAML		11 46 11.2	
	comp=E,304nm,3.5s						
CHIR				IAML		11 46 11.9	
	comp=N,235nm,4.5s						
AKUT	Akutan	3.21	237	Pn	Pn	11 44 41.0	-0.3
AKUT				IAML		11 45 02.6	
	comp=E,195nm,4.1s						
AKUT				IAML		11 45 37.3	
	comp=N,294nm,3.4s						
UNV	Unalaska Valle	3.73	237		Pn	11 44 46.8	-0.9
MSW	Makushin Switc	3.82	240		Pn	11 44 48.0	-0.9
SII	Sitkinak Islan	3.96	79	Pn	Pn	11 44 50.5	-0.3
OHAK	Old Harbor	4.56	71	Pn	Pn	11 44 57.5	-0.7
OHAK				IAML		11 45 53.6	
	comp=E,108nm,4.0s						
OHAK				IAML		11 47 56.3	
	comp=N,102nm,3.9s						
O18K	Koktuh Hills	5.04	37	Pn	Pn	11 45 04.3	-0.1
O18K				IAML		11 46 07.7	
	comp=N,65nm,3.8s						
O18K				IAML		11 47 48.6	
	comp=E,40nm,3.5s						
Q19K	Cape Douglas,	5.05	51	Pn	Pn	11 45 04.8	+0.3
KDAK	Kodiak Island	5.07	65	Pn	Pn	11 45 03.9	-0.9
KDAK				IAML		11 45 46.5	
	comp=E,89nm,3.5s						
SVW2	Sparrevohn	5.92	28	Pn	Pn	11 45 16.3	+0.4
N19K	Bonanza Creek	6.00	33	Pn	Pn	11 45 16.8	-0.2
SEW	Seward	7.49	52	Pn	Pn	11 45 35.2	-1.1
SKT	Skwentna	7.82	36	Pn	Pn	11 45 41.2	+0.5
RC01	Rabbit Creek A	7.89	45	Pn	Pn	11 45 40.3	-1.3
PWL	Port Wells	8.34	49	Pn	Pn	11 45 46.4	-1.2
FID	Port Fidalgo	9.09	52	Pn	Pn	11 45 55.7	-1.7
M24K	Tolsona, Glenn	9.87	45	Pn	Pn	11 46 06.5	-1.1

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*DJA **10** 11:48:19.8±0.6, 8°S±7°×12°9E±°, h220^{km}±14^{km}, M4.5/8, mB4.9/5, mb4.7/8, MLv4.7/8, Mw(mB)4.2/5*

*IDC **10** 11:48:25.1±1.9, 7°.39S×128°.76E, h146^{km}±19^{km}, mb3.7/5, mb1 3.8/7, mb1mx3.4/24, mbtmp4.2/7, Error ellipse: s-maj=25.7km s-min=15.8km az=92.0*

ISC 10 11:48:22.9±0.6**, 7°.58S**±0°.05×**128°.86E**±0°.07**, h131^{km}, n47,** σ**2.^{s}61**/49**, mb4.5**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.45	99	P	Pn	11 49 00.3	-2.2
MSAI	Masohi	4.21	1	P	Pn	11 49 29.6	+4.1
SOEI	Soe	5.02	244	P	Pn	11 49 38.5	+2.0
	3.1nm13μm616nm,0.7s						
DRS	Darwin Rock St	5.22	157	P	Pn	11 49 44.0	+5.0
MTN	Manton Dam	5.69	157	P	Pn	11 49 49.9	+4.7
FAKI	Fak Fak	5.73	36	P	Pn	11 49 44.0	-1.9
	0.2nm982nm57nm,0.8s						
BATI	Baumata	5.75	243	P	Pn	11 49 48.3	+2.1
	184nm,0.3s,baz=114,slow=4.4,SNR=91						
BATI				S	Sn	11 50 50.6	-0.5
	31nm,0.3s,baz=43,slow=22,SNR=2.1						
BATI	Baumata	5.75	243	P	Pn	11 49 47.3	+1.1
	1.7nm6μm367nm,0.6s						
KDU	Kakadu	6.20	145	P	Pn	11 49 56.7	+4.6
SIJI	Sorong	7.09	20	P	Pn	11 50 05.6	+1.5
	5.3nm,0.3s,baz=208,slow=23,SNR=16						
SIJI				S	Sn	11 51 21.9	-1.5
	1.7nm,0.3s,baz=237,slow=23,SNR=1.8						
SWI	Sorong	7.09	20	P	Pn	11 50 04.4	+0.2
EDFI	Ende, Flores	7.19	260	P	Pn	11 50 06.2	+0.7
	0.1nm378nm13nm,0.6s						
KNRA	Kununurra	8.04	181	P	Pn	11 50 19.7	+2.7
BASI	Baing, Sumba	8.59	252	P	Pn	11 50 23.4	-0.9
	57nm,0.7s						
WBSI	Waikabubak, Su	9.58	257	P	Pn	11 50 36.7	-1.0
	62nm,0.5s						
FITZ	Fitzroy Crossi	10.91	196	P	Pn	11 50 55.0	-0.4
	2.2nm,0.3s,baz=2.2,slow=10,SNR=66						
FITZ				S	Sn	11 52 49.5	-6.2
	3.6nm,0.3s,baz=64,slow=23,SNR=6.1						
PLAI	Plampang	11.04	263	P	Pn	11 50 56.5	-0.6
	30nm,0.7s						
PLAI	Plampang	11.04	263	P	Pn	11 50 57.0	-0.1
TWSI	Taliwang, Sumb	11.91	264	P	Pn	11 51 07.7	-1.0
WRA	Warramunga Arr	13.39	157	P	P	11 51 28.1	-4.5
	0.8nm,0.3s,baz=342,slow=12,SNR=52						
WRA				S	Sn	11 53 50.9	-4.7
	2.7nm,0.3s,baz=338,slow=22,SNR=8.3						
COEN	Coen	15.42	115	P	P	11 51 58.3	+3.1
MBWA	Marble Bar	16.12	212	P	P	11 52 03.6	+0.7
PSA00	Pilbara Seismi	16.40	211	P	P	11 52 07.6	+1.6
QIS	Mount Isa	16.57	142	P	P	11 52 12.0	+4.1
ASAR	Alice Springs	16.71	164	P	P	11 52 12.8	+3.3
	0.6nm,0.3s,baz=339,slow=9.9,SNR=85						
ASAR				S	Sn	11 55 11.6	-4.1
	0.8nm,0.3s,baz=318,slow=15,SNR=6.1						
WRKA	Warakurna	17.36	182	P	Pn	11 52 20.5	+3.2
OOD	Oodnadatta	21.12	163	P	P	11 53 00.8	+3.5
MEEK	Meekatharra	21.30	206	P	P	11 53 01.9	+2.5
INKA	Innaminka	22.99	152	P	P	11 53 20.4	+4.1
MULG	Mulgathing	23.10	168	P	P	11 53 20.6	+3.3
LCRK	Leigh Creek	24.38	160	P	P	11 53 32.5	+3.5
MORW	Morawa	24.55	208	P	P	11 53 32.6	+2.1
BBOO	Buckleboo	25.98	166	P	P	11 53 46.5	+3.1
STKA	Stephens Creek	26.93	156	P	P	11 53 54.8	+2.8
	2.1nm,0.6s,baz=330,slow=10,SNR=5.2						
HTT	Hallett	27.36	161	P	P	11 53 59.3	+3.5
NWAO	Narrogin (SRO)	27.43	202	P	P	11 53 58.5	+2.1
CMAR	Chiang Mai Arr	39.25	312	P	P	11 55 38.0	-0.9
	1.2nm,0.7s,baz=145,slow=6.4,SNR=6.3						
ODAN	Odare	52.79	312	*e*P	P	11 57 23.8	-1.4
	5.3nm,0.4s						
RAMN	Ramite	53.43	312	*e*P	P	11 57 28.8	-1.1
	14nm,0.6s						
GUN	Gumba	54.49	312	*e*P	P	11 57 36.3	-1.4
	14nm,0.5s						
PKI	Pulchoki	54.65	312	*e*P	P	11 57 37.2	-1.6
	6.9nm,0.5s						
GKN	Gorkha	55.46	312	*e*P	P	11 57 43.1	-1.3
	16nm,0.3s						
KOLN	Koldanda	56.11	311	*e*P	P	11 57 47.8	-1.3
	16nm,0.8s						
PYUN	Piuthan	56.74	311	*e*P	P	11 57 52.5	-1.1
SONM	Songino Array	58.64	342	P	P	11 58 05.5	-1.0
	0.6nm,0.5s,baz=180,slow=5.9,SNR=3.7						
MKAR	Makanchi Array	68.10	327	P	P	11 59 08.4	-0.2
	2.0nm,0.5s,baz=118,slow=8.2,SNR=35						
ZALV	Zalesovo Beam	71.61	334	P	P	11 59 28.7	-1.2
	2.0nm,0.6s,baz=124,slow=5.1,SNR=8.9						

WEL 10 11:51:37.6, 44°S±2°×**17°3E**±°**, h6^{km}**±2^{km}**, M3.4**/8**, ML3.6**/8**, MLv3.4**/8**, Error ellipse: s-maj=0.0km s-min=0.0km az=39.6, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MQZ	McQueen's Vall	0.20	195	P	Pg	11 51 43.7	+2.1
MQZ				S	Sg	11 51 46.9	+2.5
OKCZ	Okains Bay	0.32	131	P	Pb	11 51 45.6	-0.2
AMCZ	Amberley	0.34	351	P	Pb	11 51 46.4	+0.4
AMCZ				S	Sb	11 51 51.4	-0.3
AKCZ	Akaroa Harbour	0.38	160	P	Pb	11 51 46.8	0.0
RACZ	Rakaia	0.48	243	P	Pn	11 51 49.7	-1.2
OXZ	Oxford	0.53	290	P	Pb	11 51 50.2	+0.9
OXZ				S	Sb	11 51 58.6	+1.3
GVZ	Greta Valley S	0.59	23	P	Pb	11 51 50.9	+0.6
GVZ				S	Sb	11 51 59.6	+0.8
WACZ	Wakanui South	0.77	236	P	Pn	11 51 55.4	+0.4
WACZ				S	Sn	11 52 07.3	+0.4
LTZ	Lake Taylor	0.80	335	P	Pn	11 51 55.1	-0.3
LTZ				S	Sn	11 52 06.7	-1.0
MHCZ	Mount Hutt	0.84	268	P	Pn	11 51 56.4	+0.4
MHCZ				S	Sn	11 52 09.5	+0.8
ARCZ	Arundel	1.20	248	P	Pn	11 52 01.5	+0.5
ARCZ				S	Sn	11 52 17.7	+0.1
INZ	Inchbonnie	1.23	310	P	Pn	11 52 01.8	+0.6
RPZ	Rata Peaks	1.23	260	P	Pn	11 52 02.0	+0.6
RPZ				S	Sn	11 52 18.9	+0.7
KHZ	Kahutara	1.25	29	P	Pb	11 52 01.2	-0.3
WVZ	Waitaha Valley	1.52	286	P	Pg	11 52 08.0	+1.4
TMZ	Timaru	1.52	234	P	Pb	11 52 06.0	-0.1
THZ	Tophouse	1.75	4	P	Pn	11 52 08.4	-0.1
GCSZ	Gaunt Creek Bo	1.76	276	P	Pg	11 52 11.1	-0.2
DSZ	Denniston Nort	1.89	339	P	Pn	11 52 11.0	+0.5
BSWZ	Blackbirch Sta	1.99	26	P	Pn	11 52 11.7	0.0
LBZ	Lake Benmore	2.03	244	P	Pn	11 52 13.4	+1.1
FOZ	Fox Glacier	2.12	268	P	Pb	11 52 15.9	-0.4
ODZ	Otahua Downs	2.14	224	P	Pn	11 52 14.2	+0.4
TUWZ	Tuamarina	2.27	24	P	Pn	11 52 15.1	-0.5
NNZ	Nelson	2.34	12	P	Pn	11 52 16.9	+0.3
TCW	Tory Channel	2.57	27	P	Pn	11 52 18.8	-0.9
BHW	Baring Head	2.63	38	P	Pn	11 52 19.8	-0.8
QRZ	Quartz Range	2.69	357	P	Pn	11 52 21.7	+0.4
PLWZ	Palliser	2.69	45	P	Pn	11 52 20.3	-1.2
HHSZ	Highcliff Hill	2.81	212	P	Pn	11 52 23.7	+0.6
DUWZ	D'Urville Isla	2.85	19	P	Pn	11 52 24.0	+0.4
JCZ	Jackson Bay	2.91	258	P	Pn	11 52 26.1	+1.6
CAW	Cannon Point	2.96	37	P	Pn	11 52 24.3	-0.9
WKZ	Wanaka	2.97	242	P	Pn	11 52 26.3	+1.0
EAZ	Earnscleugh	2.99	234	P	Pn	11 52 26.3	+0.8
KIW	Kapiti Island	3.11	32	P	Pn	11 52 26.5	-0.6
MTW	Mount Morrison	3.13	42	P	Pn	11 52 25.7	-1.7
OGWZ	Otaki Gorge	3.25	35	P	Pn	11 52 28.3	-0.8
TUZ	Tuapeka	3.29	221	P	Pn	11 52 30.2	+0.7
MRZ	Mangatainoka R	3.55	38	P	Pn	11 52 31.9	-1.3
MLZ	Mavora Lakes	3.78	239	P	Pn	11 52 36.8	+0.4
SYZ	Scrubby Hill	3.95	219	P	Pn	11 52 39.6	+0.9
WHZ	Wether Hill Ro	4.16	233	P	Pn	11 52 41.2	-0.3
PREZ	Palmer Road	4.30	15	P	Pn	11 52 45.4	+1.9
KHEZ	Kahui Hut	4.32	13	P	Pn	11 52 45.9	+1.9
NBEZ	Newall Road No	4.33	12	P	Pn	11 52 45.2	+1.4
NEZ	North Egmont	4.36	14	P	Pn	11 52 46.2	+1.8
PKE	Pukeiti	4.42	13	P	Pn	11 52 46.8	+1.6
VRZ	Vera Road	4.64	20	P	Pn	11 52 49.7	+1.4
PKVZ	Pokaka	4.66	26	P	Pn	11 52 49.6	+1.1
MOVZ	Moawhango	4.69	30	P	Pn	11 52 50.0	+1.1
WNVZ	Wahianoa	4.71	28	P	Pn	11 52 50.0	+0.8
TRVZ	Turoa	4.71	28	P	Pn	11 52 50.3	+0.9
TUVZ	Tukino	4.78	28	P	Pn	11 52 51.1	+0.9
NGZ	Ngauruhoe	4.84	28	P	Pn	11 52 51.4	+0.3
NNVZ	North Ngauruho	4.89	27	P	Pn	11 52 52.2	+0.5
ETVZ	East Tongariro	4.92	28	P	Pn	11 52 52.3	+0.3
TMVZ	Te Maari	4.93	28	P	Pn	11 52 52.5	+0.2
HIZ	Hauiti	5.25	19	P	Pn	11 52 57.1	+0.6
TOZ	Tahuroa Road	6.15	21	P	Pn	11 53 08.6	-0.3
WMGZ	Waiomatatini S	7.14	39	P	Pn	11 53 20.6	-2.0

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*BUL **10** 11:53:02.6±1.0, 23°.48S×28°.06E, h37^{km}±13^{km}, MD4.0*

EAF 10 11:52:58.7±4.0**, 23°.53S**×**27°.97E, h0^{km}**±45^{km}**, MD3.8, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSNA	Messina	2.23	59	*i* P	Pn	11 53 34.9	-2.0
MSNA				*i* Sg	Sb	11 54 06.7	-1.3
MSNA	Messina	2.23	59	*i* P	Pn	11 53 34.9	-2.0
MSNA				*i* Sg	Sb	11 54 06.7	-1.3
MATP	Matopo	3.12	9	*i* P	Pn	11 53 48.8	-0.6
MATP	Matopo	3.12	9	*i* P	Pn	11 53 48.8	-0.6
MOPA	Mopani	3.14	91	*i* P	Pn	11 53 51.4	+1.8
MOPA				*i* S	Sn	11 54 28.1	+0.3
MOPA	Mopani	3.14	91	*i* P	Pn	11 53 51.4	+1.8
MOPA				*i* S	Sn	11 54 28.1	+0.3
CNG	Changalane	4.71	127	*i* P	Pn	11 54 10.8	-0.3
CNG				*i* S	Sn	11 54 60.0	-6.6
CNG	Changalane	4.71	127	*i* P	Pn	11 54 10.8	-0.3
CNG				*i* S	Sn	11 54 60.0	-6.6

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*IDC **10** 12:05:12.7±0.3, 58°.96S×23°.84W, h0^{km}, mb5.5/19, mb1 5.5/20, mb1mx5.3/23, mbtmp5.4/20, ML5.6/2, MS5.1/20, Ms1 5.1/20, ms1mx5.1/20, Error ellipse: s-maj=14.1km s-min=12.8km az=64.0*

*NEIC **10** 12:05:14.7, 58°.88S×23°.85W, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.69; $M_{\theta\theta}$-3.32; $M_{\phi\phi}$4.01; $M_{r\theta}$-0.13; $M_{\theta\phi}$1.43; $M_{\phi r}$0.46; Fault plane solution: $M_0$4.01000×10^{17} NP1:ϕ_s55.71000°, δ83.58000°, λ0.46000°. NP2:ϕ_s325.65000°, δ89.55000°, λ173.58000°. Principal axes: T 4.3188, Plg5.0000°, Azm281.0000°; N -0.7119, Plg84.0000°, Azm142.0000°; P -3.6068, Plg4.0000°, Azm11.0000°;*

*NEIC **10** 12:05:14.7±2.1, 58°.88S±0°.08×23°.91W±0°.05, h10^{km}±1^{km}, mb5.9/162, Ms_20 5.4/149, Mwb5.7/27, Mww5.7 Error ellipse: s-maj=14.6km s-min=3.0km az=194.0*

*MOS **10** 12:05:15.5±1.0, 58°.90S×24°.00W, h24^{km}, mb5.8/25,* *MS5.2/9, Error ellipse: s-maj=18.5km s-min=10.3km az=105.5*

*NEIC **10** 12:05:18, 58°.92S×23°.11W, h14^{km}, Moment Tensor Solution. Duration: 6^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-3.26; M$_{\theta\theta}$-1.66; M$_{\phi\phi}$4.92; M$_{r\theta}$2.00; M$_{\theta\phi}$1.81; M$_{\phi r}$0.52; Fault plane solution: M$_0$5.14000×10^{17} NP1: ϕ_s343.00000°, δ49.00000°, λ-139.00000°. NP2: ϕ_s224.00000°, δ61.00000°, λ-48.00000°. Principal axes: T 5.5101, Plg7.0000°, Azm286.0000°; N -0.8505, Plg35.0000°, Azm21.0000°; P -4.6596, Plg54.0000°, Azm186.0000°;*

*GCMT **10** 12:05:19.7±0.1, 59°.16S±0°.01×23°.26W±0°.01, h12^{km}, MW5.7/133, Moment Tensor Solution. s126,c215; s133,c260; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-2.81±.06; M$_{\theta\theta}$-2.57±.06; M$_{\phi\phi}$5.38±.05; M$_{r\theta}$0.39±.16; M$_{\theta\phi}$2.13±.04; M$_{\phi r}$1.40±.13; Best double couple: M$_0$4.63700×10^{17} NP1: ϕ_s330.00000°, δ65.00000°, λ-167.00000°. NP2: ϕ_s234.00000°, δ79.00000°, λ-26.00000°. Principal axes: T 6.1500, Plg9.0000°, Azm284.0000°; N -3.0260, Plg62.0000°, Azm32.0000°; P -3.1240, Plg26.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 12:05:14.1±0.2, **59°.04S**±0°.05×**24°.02W**±0°.05, **h10^{km}, n715, σ1^{s}55**/626, **mb5.9**/102, **MS5.3**/114, **13C-10D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	8.36	299	P	Pn	12 07 16.0	+0.9
HOPE	Hope Point	8.36	299		Pn	12 07 16.0	+0.9
ORCD	Orcadas	10.54	252		Pn	12 07 51.6	+6.7
VNA1	Neumayer--Stat	13.37	157	P	Pn	12 08 23.9	+0.4
VNA1				S	Sn	12 10 45.7	-6.2
VNA3	Neumayer Olymp	13.59	160	P	Pn	12 08 26.1	-0.5
VNA3				S	Sn	12 10 45.6	-12
VNA2	Neumayer--Watz	13.76	157	P	Pn	12 08 29.1	+0.2
	baz=320,slow=15						
VNA2				S	Sn	12 10 50.1	-12
SNAA	Sanae	15.30	154	P	Pn	12 08 49.0	-0.9
SNAA				S	Sn	12 11 25.8	-13
SNAA	Sanae	15.30	154	Pn	Pn	12 08 48.8	-1.0
	170nm,0.3s,baz=328,slow=15,SNR=710						
SNAA				Sn	Sn	12 11 24.5	-15
	6.5nm,0.3s,baz=340,slow=17,SNR=4.0						
SNAA				LR	LR	12 12 59.9	
	comp=Z,4µm,19.5s,baz=319,slow=30						
SNAA	Sanae	15.30	154	P	Pn	12 08 49.5	-0.3
SNAA				pmax	pmax		
	comp=Z,3µm,1.6s						
SNAA	Sanae	15.30	154	Pn	Pn	12 08 49.5	-0.3
ESPZ	Base Esperanza	16.34	241	P	P	12 09 06.9	+0.7
NVL	N'lazarevskaya	18.82	143	⇓iP	Pn	12 09 37.6	+3.6
NVL				pmax	pmax		
	comp=Z,401nm,1.6s						
PMSA	Palmer Station	19.43	236	P	Pn	12 09 42.8	+1.5
	comp=Z,2.8nm,0.3s,baz=92,slow=9.5,SNR=8.6						
PMSA				LR	LR	12 16 41.5	
	comp=Z,14µm,19.4s,baz=88,slow=35						
PMSA	Palmer Station	19.43	236	P	Pn	12 09 45.6	+4.3
EFI	East Falkland	20.52	276	ceP	Pn	12 09 53.9	-0.5
EFI				pmax	pmax		
	comp=Z,2µm,1.3s						
EFI	East Falkland	20.52	276	P	P	12 09 53.3	+1.1
SMAI	San Martin Ant	20.75	226	P	Pn	12 09 58.9	+2.0
SMAI				IAmb	IAmb	12 10 29.0	
	comp=Z,291nm,0.8s						
MG01	Puerto William	23.78	261	P	P	12 10 28.8	+2.3
USHA	Ushuaia	24.24	260	P	P	12 10 32.0	+1.3
	comp=Z,329nm,0.8s,baz=127,slow=9.2,SNR=56						
USHA				LR	LR	12 18 12.8	
	comp=Z,5µm,20.3s,baz=111,slow=32						
DSPA	Despedida	24.58	262	P	P	12 10 34.3	+0.4
MG02	Cerro Sombrero	25.68	264	P	P	12 10 44.1	+0.3
GO10	Punta Arenas	26.42	262	P	P	12 10 52.2	+1.6
GO10				IAmb	IAmb	12 11 19.1	
	comp=Z,394nm,0.9s						
MG04	Isla Riesco	26.84	262	P	P	12 10 55.5	+1.1
MG04				IAmb	IAmb	12 10 59.8	
	comp=Z,236nm,0.8s						
MG05	Puerto Natales	27.97	264	P	P	12 11 04.6	+0.2
MG05				IAmb	IAmb	12 11 06.1	
	comp=Z,177nm,0.8s						
GO09	Cerro Castillo	28.12	265	P	P	12 11 05.8	0.0
GO09				IAmb	IAmb	12 11 09.1	
	comp=Z,128nm,0.8s						
SYO	Syowa Base	28.20	137	⇓ipP	P	12 11 06.4	+0.1
SYO	Syowa Base	28.20	137	⇓isP	sP	12 11 08.2	+0.4
SYO	Syowa Base	28.20	137	⇓isP	sP	12 11 15.0	+7.2
SYO	Syowa Base	28.20	137	⇓ePcP	PcP	12 14 20.3	+0.9
QSPA	South Pole Qui	31.20	180	P	P	12 11 35.9	+2.7
	comp=Z,252nm,1.1s,baz=206,slow=4.1,SNR=412						
QSPA				LR	LR	12 24 36.1	
	comp=Z,2µm,18.1s,baz=192,slow=37						
QSPA	South Pole Qui	31.20	180	P	P	12 11 35.7	+2.5
COYC	Coyhaique	31.58	274	P	P	12 11 37.5	+1.0
COYC				IAmb	IAmb	12 11 39.3	
	comp=Z,181nm,1.1s						
COYC	Coyhaique	31.58	274	IAMs_20	IAMs_20	12 22 53.1	
	comp=Z,7µm,22.0s						
TRQA	Tornquist	32.09	294	P	P	12 11 40.5	-0.6
TRQA				pmax	pmax		
	comp=Z,60nm,1.1s						
TRQA				MLR	MLR		
	comp=Z,9µm,22.0s						
TRQA	Tornquist	32.09	294	eP	P	12 11 42.0	+1.0
TRQA	Tornquist	32.09	294	P	P	12 11 40.5	-0.6
TRQA				IAMs_20	IAMs_20	12 23 10.8	
	comp=Z,9µm,22.0s						
LL02	Futaleuf	33.11	277	P	P	12 11 50.3	+0.4
LL02				IAmb	IAmb	12 12 04.8	
	comp=Z,162nm,1.4s						
PLTB	Pedras Altas	33.76	311	eP	P	12 11 55.3	-0.4
PLTB	Pedras Altas	33.76	311	P	P	12 11 55.0	-0.7
PLTB				IAmb	IAmb	12 12 09.4	
	comp=Z,218nm,1.0s						
GO07	Milladeo Hill,	34.10	276	P	P	12 11 58.2	-0.3
GO07				IAmb	IAmb	12 12 13.1	
	comp=Z,206nm,1.0s						
PLCA	Paso Flores	34.24	281	P	P	12 12 00.5	+0.6
	comp=Z,148nm,0.8s,baz=144,slow=8.2,SNR=218						
PLCA				ScP	ScP	12 18 24.1	+3.2
	comp=Z,7.9nm,0.8s,baz=125,slow=4.3,SNR=8.7						
PLCA				LR	LR	12 26 37.0	
	comp=Z,4µm,18.0s,baz=128,slow=37						
PLCA	Paso Flores	34.24	281	eP	P	12 12 00.8	+0.8
PLCA	Paso Flores	34.24	281	P	P	12 11 60.0	0.0
LL03	Petrohue	34.88	279	P	P	12 12 05.4	0.0
CPSB	Cacapava Do Su	34.91	312	eP	P	12 12 05.6	0.0
CNLB	Canela	34.94	316	eP	P	12 12 06.8	+0.8
TER01	Tubaro-SC	35.05	319	eP	P	12 12 07.6	+0.7
LL04	Puerto Octay	35.06	279	IAmb	IAmb	12 12 08.2	
	comp=Z,102nm,0.8s						
LL05	Los Muermos	35.24	278	IAmb	IAmb	12 12 31.8	
	comp=Z,124nm,0.8s						
LR03	Panguipulli	35.98	281	IAmb	IAmb	12 12 20.3	
	comp=Z,214nm,1.1s						
LC01	Cunco	36.30	282	P	P	12 12 17.1	-0.4
LC01				IAmb	IAmb	12 12 32.6	
	comp=Z,258nm,0.9s						
MAW	Mawson	36.73	140	P	P	12 12 21.8	+1.0
	comp=Z,117nm,1.0s,baz=234,slow=8.3,SNR=70						
MAW				PcP	PcP	12 14 44.2	+1.3
	comp=Z,35nm,0.9s,baz=260,slow=2.7,SNR=6.1						
MAW				LR	LR	12 25 05.0	
	comp=Z,3µm,21.1s,baz=252,slow=32						
MAW	Mawson	36.73	140	P	P	12 12 21.2	+0.4
ITQB	Itaqui	36.81	308	eP	P	12 12 21.2	-0.8
ITAB	Concordia	37.29	316	eP	P	12 12 26.6	+0.6
ITAB	Concordia	37.29	316	IAmb	IAmb	12 12 40.7	
	comp=Z,306nm,1.2s						
PET01	Itanhaem-SP	38.41	325	eP	P	12 12 36.3	+0.8
PARB	Paraibuna	38.84	327	eP	P	12 12 40.8	+1.6
MAN01	Angra dos Reis	38.84	330	eP	P	12 12 39.9	+0.7
BO02	Sierra Bellavi	38.95	287	IAmb	IAmb	12 12 56.3	
	comp=Z,195nm,1.1s						
BO02					S	12 18 38.2	-0.3
DUB01	Friburgo-RJ	39.20	332	eP	P	12 12 43.8	+1.6
VAS01	Vassouras-RJ	39.27	331	eP	P	12 12 43.9	+1.2
CAM01	Campos-RJ	39.27	334	eP	P	12 12 43.3	+0.6
GO05	Huala	39.35	286	IAmb	IAmb	12 12 59.0	
	comp=Z,466nm,1.1s						
VAO	Valinhos	39.54	326	eP	P	12 12 46.8	+1.7
PTGB	Pitanga	39.57	318	eP	P	12 12 45.5	+0.1
SUR	Sutherland	39.96	68	LR	LR	12 27 02.9	
	comp=Z,3µm,18.0s,baz=214,slow=33						
SUR	Sutherland	39.96	68	P	P	12 12 48.9	+0.2
SUR				P	P	12 12 48.9	+0.2
SUR	Sutherland	39.96	68	P	P	12 12 48.7	0.0
SUR	Sutherland	39.96	68	IAMs_20	IAMs_20	12 24 35.5	
	comp=Z,4µm,20.0s						
FRTB	Fartura	40.01	322	eP	P	12 12 49.6	+0.7
ALF01	Guarapari-ES	40.23	335	eP	P	12 12 51.9	+1.2
PEL	Peldehue	40.23	289	IAMs_20	IAMs_20	12 28 02.5	
	comp=Z,5µm,21.0s						
RCLB	Rio Claro- Sao	40.25	325	eP	P	12 12 52.9	+1.9
VA01	Torpederas	40.80	288	IAmb	IAmb	12 13 13.6	
	comp=Z,267nm,1.1s						
BSCB	Bom Sucesso	40.83	330	eP	P	12 12 56.4	+0.5
RIB01	Linhares ES	41.42	336	eP	P	12 13 01.4	+0.8
BB19B	Bebedouro	41.83	324	eP	P	12 13 04.9	+1.0
BSFB	Barra de Sao F	41.99	336	eP	P	12 13 06.5	+1.3
CO03	El Pedregal	42.12	291	IAmb	IAmb	12 13 20.3	
	comp=Z,212nm,1.5s						
PCMB	Pacaembu	42.18	321	eP	P	12 13 07.2	+0.4
SJMB	Sao Joao De Ma	42.19	335	eP	P	12 13 07.6	+0.8
DIAM	Diamantina, MG	43.15	332	eP	P	12 13 14.6	-0.2
CO05	La Serena	43.15	291	IAmb	IAmb	12 13 28.4	
	comp=Z,319nm,1.1s						
SBA	Scott Base	43.19	183	P	P	12 13 17.5	+3.1
SBA				pmax	pmax		
	comp=Z,300nm,1.3s						
SBA	Scott Base	43.19	183	P	P	12 13 17.5	+3.1
SBA				IAmb	IAmb	12 13 19.9	
	comp=Z,300nm,1.3s						
VNDA	Vanda	43.64	182	P	P	12 13 20.6	+2.6
VNDA				pmax	pmax		
	comp=Z,152nm,1.1s						
VNDA	Vanda	43.64	182	P	P	12 13 20.6	+2.6
VNDA				IAmb	IAmb	12 13 22.7	
	comp=Z,152nm,1.1s						
LCO	Las Campanas	43.65	293	P	P	12 13 19.0	+0.1
LCO				pmax	pmax		
	comp=Z,119nm,0.9s						
LCO	Las Campanas	43.65	293	P	P	12 13 19.0	+0.1
LCO				IAmb	IAmb	12 13 32.7	
	comp=Z,119nm,0.9s						
LCO	Las Campanas	43.65	293	IAMs_20	IAMs_20	12 30 12.8	
	comp=Z,6µm,22.0s						
ITRB	Iturama	43.67	323	eP	P	12 13 19.4	+0.5
GUA01	Guaratinga, BA	43.96	338	eP	P	12 13 22.4	+1.2
IPMB	Ipameri, GO	44.65	326	eP	P	12 13 27.8	+1.0
AC02	Maricunga	44.74	296	IAmb	IAmb	12 13 42.6	
	comp=Z,158nm,0.9s						
MC01	Montes Claros	44.74	332	eP	P	12 13 28.1	+0.6
AQDB	Aquidauana	44.76	316	eP	P	12 13 26.5	-1.0
AQDB	Aquidauana	44.76	316	P	P	12 13 26.2	-1.3
AQDB				IAmb	IAmb	12 13 40.5	
	comp=Z,94nm,0.8s						
SHEL	Horse Pasture	45.08	25	P	P	12 13 29.2	-1.0
SHEL				pmax	pmax		
	comp=Z,331nm,1.1s						
SHEL	Horse Pasture	45.08	25	P	P	12 13 29.2	-1.0
CMC01	Camacan, BA	45.10	339	eP	P	12 13 31.4	+1.1
BOSA	Boshof	45.22	70	P	P	12 13 30.2	-1.1
	comp=Z,41nm,0.7s,baz=210,slow=7.8,SNR=98						
BOSA				LR	LR	12 27 57.1	
	comp=Z,2µm,21.6s,baz=217,slow=30						
BOSA	Boshof	45.22	70	P	P	12 13 29.6	-1.8
JANB	Januaria	46.42	332	eP	P	12 13 41.5	+0.7
WIN	Windhoek	46.64	57	P	P	12 13 41.7	-0.9
WIN				pmax	pmax		
	comp=Z,155nm,1.7s						
WIN	Windhoek	46.64	57	P	P	12 13 41.7	-0.9
WIN				IAmb	IAmb	12 13 46.1	
	comp=Z,155nm,1.7s						
GDU01	Guandu, BA	46.71	339	eP	P	12 13 43.4	+0.4
BDFB	Brasilia	46.82	327	P	P	12 13 45.1	+1.1
	comp=Z,55nm,0.8s,baz=129,slow=4.2,SNR=57						
BDFB				LR	LR	12 30 56.5	
	comp=Z,2µm,21.6s,baz=156,slow=33						
BDFB	Brasilia	46.82	327	P	P	12 13 45.0	+1.0
PP1B	Ponte de Pedra	47.12	318	eP	P	12 13 46.6	+0.4
ARAG	Araguaiana, MT	47.88	323	eP	P	12 13 53.1	+1.0
PB15	IPOC Station P	48.01	298	IAmb	IAmb	12 14 11.8	
	comp=Z,89nm,1.0s						
PB10	IPOC Station P	48.24	297	IAmb	IAmb	12 14 08.1	
	comp=Z,130nm,1.1s						
LVC	Limon Verde	48.27	299	P	P	12 13 55.3	-0.3
LVC				pmax	pmax		
	comp=Z,95nm,1.0s						
LVC				MLR	MLR		
	comp=Z,3µm,20.0s						
LVC	Limon Verde	48.27	299	eP	P	12 13 56.1	+0.5
LVC	Limon Verde	48.27	299	P	P	12 13 55.3	-0.3
LVC				IAmb	IAmb	12 14 11.7	
	comp=Z,95nm,0.9s						
LBTB	Lobatse	48.40	68	IAmb	IAmb	12 13 59.0	
	comp=Z,172nm,1.4s						
PB06	IPOC Station P	48.49	298	IAmb	IAmb	12 14 10.2	
	comp=Z,94nm,1.0s						
SALV	Santo Antonio	48.98	318	eP	P	12 14 00.9	+0.4
SDBA	SAO DESIDERIO	49.11	333	eP	P	12 14 02.5	+0.8
PB09	IPOC Station P	49.13	299	IAmb	IAmb	12 14 16.7	
	comp=Z,263nm,1.2s						
PB07	IPOC Station P	49.48	299	IAmb	IAmb	12 14 18.5	
	comp=Z,169nm,1.0s						
TSUM	Tsumeb	49.82	55	P	P	12 14 06.2	-1.0
TSUM	Tsumeb	49.82	55	IAMs_20	IAMs_20	12 29 32.3	
	comp=Z,3µm,22.0s						
PB01	IPOC Station P	49.90	299	IAmb	IAmb	12 14 21.8	
	comp=Z,150nm,0.9s						
PEXB	Peixe	50.27	328	eP	P	12 14 12.1	+1.6
PATCX	Punta Patache	50.39	299	IAmb	IAmb	12 14 24.9	
	comp=Z,137nm,1.0s						
H10S2	ASCENSION HYDR	50.48	12	T	T	13 08 44.7	
	baz=186,slow=74,SNR=11						
H10S3	ASCENSION HYDR	50.49	12	T	T	13 08 51.5	
	baz=34,slow=74,SNR=40						
CASY	Casey	50.49	158	P	P	12 14 13.3	+1.7
CASY	Casey	50.49	158	IAMs_20	IAMs_20	12 34 38.7	
	comp=Z,4µm,21.0s						
PB08	IPOC Station P	50.53	300	IAmb	IAmb	12 14 27.4	
	comp=Z,79nm,0.9s						
PTLB	Pontes e Lacer	50.63	314	eP	P	12 14 13.4	+0.2
PTLB	Pontes e Lacer	50.63	314	IAmb	IAmb	12 14 27.1	
	comp=Z,177nm,0.9s						
PB11	IPOC Station P	51.09	300	P	P	12 14 16.1	-0.7
PB11				IAmb	IAmb	12 14 30.8	
	comp=Z,229nm,1.2s						
SNDB	Serra Nova Dou	51.24	325	eP	P	12 14 19.4	+1.6
PAF	Port-aux-Franc	51.49	124	IAMs_20	IAMs_20	12 40 18.0	
	comp=Z,3µm,19.0s						
H10N1	ASCENSION HYDR	51.60	12	T	T	13 10 08.8	
	baz=192,slow=74,SNR=11						
H10N3	ASCENSION HYDR	51.60	12	T	T	13 10 13.7	
	baz=192,slow=74,SNR=31						
H10N2	ASCENSION HYDR	51.62	12	T	T	13 09 57.4	
	baz=192,slow=74,SNR=35						
SMTB	Santa Maria do	53.19	330	eP	P	12 14 33.4	+1.1
VILB	Vilhena	53.32	314	eP	P	12 14 32.5	-0.7
PDRB	Porto dos Gac	53.32	319	eP	P	12 14 33.7	+0.4
LPAZ	La Paz	53.49	304	P	P	12 14 35.2	+0.1
	comp=Z,41nm,0.8s,baz=146,slow=6.0,SNR=45						
LPAZ				LR	LR	12 38 58.6	
	comp=Z,653nm,20.3s,baz=137,slow=38						
LPAZ	La Paz	53.49	304	eP	P	12 14 35.2	+0.1
LPAZ	La Paz	53.49	304	IAmb	IAmb	12 14 48.9	
	comp=Z,130nm,0.9s						
CLDB	Colider	53.70	320	eP	P	12 14 35.4	-0.6
PRPB	Parauapebas	56.35	329	eP	P	12 14 56.1	+1.0
NPGB	Novo Progresso	57.15	322	eP	P	12 15 01.4	+0.6
LSZ	Lusaka	58.00	64	P	P	12 15 05.2	-1.8
LSZ				pmax	pmax		
	comp=Z,57nm,1.2s						
LSZ	Lusaka	58.00	64	P	P	12 15 05.2	-1.8
LSZ	Lusaka	58.00	64	IAMs_20	IAMs_20	12 37 03.9	
	comp=Z,3µm,19.0s						
ROSB	Rosrio	58.15	336	eP	P	12 15 08.8	+1.0
ETMB	Extrema	58.51	309	eP	P	12 15 09.7	-0.7
ETMB	Extrema	58.51	309	IAmb	IAmb	12 15 24.1	
	comp=Z,153nm,1.0s						
TMAB	Tom-Au,PA,Br	59.55	332	eP	P	12 15 18.4	+0.8
ITTB	Itaituba	59.79	323	eP	P	12 15 19.8	+0.6
NNA	Nana	61.17	297	ceP	P	12 15 30.2	+1.5
NNA				pmax	pmax		
	comp=Z,130nm,1.7s						
NNA	Nana	61.17	297	P	P	12 15 28.6	-0.1
NNA				IAmb	IAmb	12 15 43.3	
	comp=Z,126nm,1.1s						
VOI	Vohitsoka	61.62	85	P	P	12 15 32.6	+0.7
VOI	Vohitsoka	61.62	85	P	P	12 15 31.1	-0.8
VOI	Vohitsoka	61.62	85	P	P	12 15 34.3	+2.4
MALB	Monte Alegre	61.72	325	eP	P	12 15 34.0	+1.6
MCPB	Macapa, AP	62.51	328	eP	P	12 15 39.3	+1.6
MACA	Manacapuru-AM	62.55	318	eP	P	12 15 36.4	-1.6
MACA	Manacapuru-AM	62.55	318	P	P	12 15 36.8	-1.2
MACA				IAmb	IAmb	12 15 50.9	
	comp=Z,143nm,1.0s						
CZSB	Cruzeiro do Su	63.09	303	eP	P	12 15 41.0	-0.6
CZSB	Cruzeiro do Su	63.09	303	P	P	12 15 40.6	-1.1
CZSB				IAmb	IAmb	12 15 54.6	
	comp=Z,126nm,1.1s						
ABPO	Ambohimpanom	64.24	84	P	P	12 15 50.3	+0.9
ABPO				pmax	pmax		
	comp=Z,98nm,1.9s						
ABPO	Ambohimpanom	64.24	84	P	P	12 15 50.3	+0.9
ABPO				IAmb	IAmb	12 15 51.8	
	comp=Z,98nm,1.9s						
ABPO	Ambohimpanom	64.24	84	IAMs_20	IAMs_20	12 41 12.7	
	comp=Z,2µm,18.0s						
TBTG	Tabatinga, AM	65.11	308	eP	P	12 15 54.4	-0.4
LIC	Lamto	66.81	21	eP	P	12 16 05.0	-0.7
	comp=Z,340nm,1.2s						
RER	Riviere de l'E	66.86	93	P	P	12 16 07.4	+1.2
RER	Riviere de l'E	66.86	93	P	P	12 16 05.7	-0.5
RER				IAmb	IAmb	12 16 08.5	
	comp=Z,103nm,1.0s						
KIC	Kosan Boka	67.00	21	eP	P	12 16 05.8	-1.1
	comp=Z,122nm,0.9s						
TIC	Toumodi	67.22	21	eP	P	12 16 07.9	-0.5
DBIC	Dimbokro	67.28	21	P	P	12 16 08.5	-0.2
	comp=Z,32nm,0.6s,baz=189,slow=7.1,SNR=27						
DBIC				LR	LR	12 40 17.2	
	comp=Z,1µm,18.2s,baz=186,slow=31						
DBIC				PKP2ab		12 44 38.4	
	comp=Z,1.3nm,0.6s,baz=357,slow=1.0,SNR=3.0						
DBIC	Dimbokro	67.28	21	P	P	12 16 08.1	-0.5
DBIC				IAmb	IAmb	12 16 12.3	
	comp=Z,64nm,0.9s						
BOAV	Boa Vista	67.69	320	eP	P	12 16 11.6	+0.2
SBV	Sambava	70.30	83	P	P	12 16 29.1	+1.5
	SNR=5.4						
MBAR	Mbarara	72.11	59	P	P	12 16 39.3	+0.5
	comp=Z,6.0nm,0.3s,baz=153,slow=3.9,SNR=12						
MBAR	Mbarara	72.11	59	i P	P	12 16 40.5	+1.8
MBAR	Mbarara	72.11	59	P	P	12 16 40.9	+2.1
MBAR				P	P	12 16 40.9	+2.1
MBAR	Mbarara	72.11	59	P	P	12 16 40.8	+2.1
MBAR	Mbarara	72.11	59	IAMs_20	IAMs_20	12 43 23.0	
	comp=Z,2µm,22.0s						
MACC	Macarena, Meta	72.46	307	eP	P	12 16 38.5	-2.2
FLOC	Florencia	72.71	305	eP	P	12 16 40.5	-1.7
OTAV	Otavalo	72.72	302	P	P	12 16 43.7	+1.0
OTAV				pmax	pmax		
	comp=Z,120nm,1.2s						
OTAV				MLR	MLR		
	comp=Z,1µm,20.0s						
OTAV	Otavalo	72.72	302	eP	P	12 16 41.3	-1.4
OTAV	Otavalo	72.72	302	eP	P	12 16 44.7	+2.0
OTAV	Otavalo	72.72	302	P	P	12 16 43.7	+1.0
OTAV				IAmb	IAmb	12 16 59.9	
	comp=Z,120nm,1.1s						
BETC	Betania	73.61	306	eP	P	12 17 00.3	+13
SOTA	Rioblanco	73.61	304	eP	P	12 16 45.8	-2.2
KIBK	Kibwezi	73.94	67	P	P	12 16 52.4	+2.9
	SNR=34						
KIBK				S	S	12 26 29.5	+7.9
KIBK	Kibwezi	73.94	67	P	P	12 16 51.7	+2.2
KIBK				IAmb	IAmb	12 16 57.2	
	comp=Z,149nm,1.6s						
MARP	Paez Belalcaza	73.97	305	eP	P	12 16 44.1	-5.8
POPC	Popayan, Colom	74.01	304	eP	P	12 16 45.4	-4.7
PRAC	Prado	74.31	306	eP	P	12 16 50.1	-1.5
KMBO	Kilima Mbogo	74.62	65	P	P	12 16 56.2	+2.5
	comp=Z,4.9nm,0.8s,baz=210,slow=4.2,SNR=22						
KMBO				LR	LR	12 46 08.0	
	comp=Z,1µm,21.9s,baz=222,slow=33						
KMBO	Kilima Mbogo	74.62	65	i P	P	12 16 56.5	+2.8
KMBO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KMBO	Kilima Mbogo	74.62	65	P	P	12 16 56.8	+3.2
KMBO				P	P	12 16 56.8	+3.2
KMBO				S	S	12 26 33.2	+3.7
KMBO				S	S	12 26 33.2	+3.7
KMBO	Kilima Mbogo	74.62	65	P	P	12 16 55.8	+2.1
KMBO	Kilima Mbogo	74.62	65	IAMs_20	IAMs_20	12 45 21.8	
	comp=Z,3µm,22.0s						
ORTC	Ortega, Tolima	74.63	306	eP	P	12 16 51.2	-2.2
TORD	Torodi Ar. Bea	74.92	26	P	P	12 16 55.0	+0.1
	comp=Z,60nm,0.5s,baz=195,slow=5.7,SNR=315						
TORD				LR	LR	12 44 00.4	
	comp=Z,1µm,19.6s,baz=185,slow=31						
TORD	Torodi Ar. Bea	74.92	26	P	P	12 16 54.8	-0.2
TORD				IAmb	IAmb	12 16 57.6	
	comp=Z,101nm,1.0s						
WHZ	Wether Hill Ro	74.96	189	IAmb	IAmb	12 16 57.5	
	comp=Z,82nm,1.1s						
KOWA	Kowa	75.08	20	P	P	12 16 56.0	+0.2
	comp=Z,30nm,0.9s,baz=198,slow=6.4,SNR=44						
KOWA	Kowa	75.08	20	P	P	12 16 55.4	-0.4
KOWA				IAMs_20	IAMs_20	12 45 20.6	
	comp=Z,2µm,18.0s						
ROSC	El Rosal	75.09	307	P	P	12 16 56.8	+0.3
	comp=Z,9.6nm,0.4s,baz=118,slow=4.6,SNR=9.1						
ROSC				LR	LR	12 54 15.5	
	comp=Z,634nm,18.1s,baz=188,slow=39						
ROSC	El Rosal	75.09	307	eP	P	12 16 54.9	-1.7
ROSC	El Rosal	75.09	307	IAmb	IAmb	12 17 11.2	
	comp=Z,73nm,1.1s						
ANIL	Santa Ana	75.22	306	eP	P	12 16 55.7	-1.4
MLZ	Mavora Lakes	75.47	189	IAmb	IAmb	12 17 00.5	
	comp=Z,82nm,1.2s						
TAMC	Tame, Arauca	75.53	311	eP	P	12 16 58.1	-0.5
RUSC	La Rusia	75.55	309	eP	P	12 16 53.3	-6.0
ODZ	Otahua Downs	75.57	191	IAmb	IAmb	12 17 02.2	
	comp=Z,254nm,1.9s						
SPBC	San Pablo de B	75.73	308	eP	P	12 16 55.6	-4.2
GUY2C	Guyana, Caldas	75.87	307	eP	P	12 16 60.0	-1.1
PLMC	San Jos del P	75.97	306	eP	P	12 16 56.9	-4.3
NORC	Norcasia	75.97	307	eP	P	12 16 56.9	-4.3
LBZ	Lake Benmore	76.27	190	IAmb	IAmb	12 17 06.0	
	comp=Z,133nm,1.2s						
PTBC	PUERTO BERRIO,	76.69	308	eP	P	12 16 59.6	-5.6
CBOC	Ciudad Bolivar	76.72	306	eP	P	12 17 03.4	-2.2
RPZ	Rata Peaks	76.85	191	IAmb	IAmb	12 17 09.1	
	comp=Z,94nm,1.0s						
SOCV	Socops	76.86	312	eP	P	12 17 03.0	-3.1
BRRC	Barranca, Sant	76.90	309	eP	P	12 17 00.3	-6.0
OXZ	Oxford	77.13	192	IAmb	IAmb	12 17 10.7	
	comp=Z,115nm,1.3s						
GRGR	Grenville	77.20	322	IAMs_20	IAMs_20	12 50 29.4	
	comp=Z,2µm,20.0s						
SDV	Santo Domingo	77.32	313	eP	P	12 17 06.0	-3.0
SDV	Santo Domingo	77.32	313	eP	P	12 17 09.6	+0.6
SDV	Santo Domingo	77.32	313	P	P	12 17 09.5	+0.6
SDV				IAmb	IAmb	12 17 23.6	
	comp=Z,76nm,1.0s						
LTZ	Lake Taylor	77.64	192	IAmb	IAmb	12 17 13.7	
	comp=Z,112nm,1.1s						
ZARC	Zaragoza, Cauc	77.72	308	eP	P	12 17 06.6	-4.3
LODK	Lodwar	77.75	62	P	P	12 17 14.1	+2.8
	SNR=17						
LODK	Lodwar	77.75	62	P	P	12 17 12.1	+0.9
OCAC	Ocana	77.77	310	eP	P	12 17 06.8	-4.6
DBBC	Dabeiba	77.84	307	eP	P	12 17 12.6	+0.9
KHZ	Kahutara	77.86	193	IAmb	IAmb	12 17 14.4	
	comp=Z,78nm,1.1s						
TAU	Tasmania Unive	78.16	174	P	P	12 17 12.6	-0.5
TAU				pmax	pmax		
	comp=Z,150nm,1.1s						
TAU	Tasmania Unive	78.16	174	P	P	12 17 12.6	-0.5
TAU				IAmb	IAmb	12 17 15.3	
	comp=Z,150nm,1.1s						
UREC	San Jos de Ur	78.22	308	eP	P	12 17 07.9	-5.9
THZ	Tophouse	78.58	193	IAmb	IAmb	12 17 21.4	
	comp=Z,80nm,1.0s						
THZ				IAMs_20	IAMs_20	12 49 35.3	
	comp=Z,1µm,20.0s						
SMLC	San Martn de	78.58	309	eP	P	12 17 10.7	-5.0
SNZO	South Karori	78.81	194	P	P	12 17 18.2	+1.5

SNZO	South Karori	78.81	194	IAMs_20	IAMs_20	12 48 13.2	
	comp=Z,2µm,20.0s						
BFZ	Birch Farm	79.22	196	IAMs_20	IAMs_20	12 55 33.4	
	comp=Z,2µm,18.0s						
QRZ	Quartz Range	79.55	193	IAMs_20	IAMs_20	12 54 37.6	
	comp=Z,2µm,18.0s						
ARGC	Ariguani, Magd	79.62	310	eP	P	12 17 14.0	-7.3
SJCC	San Jacinto, C	80.03	309	eP	P	12 17 20.2	-3.4
SJCC	San Jacinto, C	80.03	309	IAmb	IAmb	12 17 39.0	
	comp=Z,133nm,1.1s						
CRJC	Cerrejon, Guaj	80.14	311⇑	eP	P	12 17 21.4	-2.8
MSEY	Mahe Island	80.61	83	IAMs_20	IAMs_20	12 45 46.2	
	comp=Z,2µm,20.0s						
BKZ	Black Stump Fm	80.67	196	IAmb	IAmb	12 17 30.7	
	comp=Z,164nm,1.5s						
BKZ				IAMs_20	IAMs_20	12 47 54.5	
	comp=Z,1µm,20.0s						
SMRC	Santa Marta, M	80.80	310	eP	P	12 17 25.0	-2.7
URZ	Urewera	81.47	197	P	P	12 17 31.8	+0.7
	comp=Z,49nm,1.1s,baz=305,slow=0.2,SNR=9.2						
URZ	Urewera	81.47	197	IAmb	IAmb	12 17 34.4	
	comp=Z,164nm,1.4s						
URZ				IAMs_20	IAMs_20	12 52 36.0	
	comp=Z,1µm,19.0s						
HIZ	Hauiti	81.54	195	IAMs_20	IAMs_20	12 49 47.8	
	comp=Z,1µm,20.0s						
SEUS	St. Eustatius	82.66	323	IAMs_20	IAMs_20	12 52 56.0	
	comp=Z,1µm,21.0s						
NWAO	Narrogin (SRO)	82.87	148	P	P	12 17 38.7	+0.1
SRBA	San Rafael, Bu	82.89	301	IAmb	IAmb	12 17 54.2	
	comp=Z,66nm,1.3s						
PEZE	Perez Zeledon,	83.17	301	IAmb	IAmb	12 17 55.8	
	comp=Z,54nm,1.1s						
RIMA	Rio Macho	83.59	301	IAmb	IAmb	12 17 58.0	
	comp=Z,80nm,1.5s						
MTP	Monte Pirata	84.05	321	P	P	12 17 44.4	-0.2
MTP				IAmb	IAmb	12 17 59.2	
	comp=Z,131nm,1.2s						
STVI	Saint Thomas	84.09	321	P	P	12 17 45.3	+0.5
FURI	Furi	84.10	62	IAMs_20	IAMs_20	12 50 10.8	
	comp=Z,1µm,20.0s						
PDPR	Patillas Dam,	84.13	320	IAmb	IAmb	12 17 59.1	
	comp=Z,89nm,0.9s						
CUPR	Culebra, Puert	84.15	321	P	P	12 17 45.0	-0.1
CUPR				IAmb	IAmb	12 18 00.3	
	comp=Z,106nm,0.9s						
HUMP	Col San Antoni	84.19	320	IAmb	IAmb	12 18 00.8	
	comp=Z,98nm,0.9s						
SJG	San Juan	84.26	320	P	P	12 17 44.5	-1.1
SJG				pmax	pmax		
	comp=Z,124nm,1.3s						
SJG				MLR	MLR		
	comp=Z,1µm,22.0s						
SJG	San Juan	84.26	320	P	P	12 17 44.5	-1.1
SJG				IAmb	IAmb	12 17 59.7	
	comp=Z,124nm,1.3s						
OBIP	Obispado Ponce	84.34	320	IAmb	IAmb	12 18 00.0	
	comp=Z,64nm,1.0s						
GCPR	Guaynabo City	84.42	320	IAmb	IAmb	12 18 00.7	
	comp=Z,115nm,1.1s						
JTS	Las Juntas de	84.54	300c	i P	P	12 17 48.5	+1.3
JTS				pmax	pmax		
	comp=Z,61nm,1.9s						
JTS	Las Juntas de	84.54	300	P	P	12 17 48.4	+1.2
JTS				IAmb	IAmb	12 18 02.7	
	comp=Z,116nm,1.4s						
COVE	Coope Vega, Sa	84.67	301	IAmb	IAmb	12 18 02.9	
	comp=Z,128nm,1.2s						
OUZ	Omahuta	84.95	194	IAmb	IAmb	12 17 51.7	
	comp=Z,127nm,1.2s						
ESPN	Las Esperanzas	85.94	302	IAmb	IAmb	12 18 08.4	
	comp=Z,59nm,1.1s						
ACON	Acoyapa	86.12	301	IAmb	IAmb	12 18 09.5	
	comp=Z,77nm,1.1s						
MORW	Morawa	86.17	146	P	P	12 17 54.8	-0.6
TBI	Tubuai	86.45	229	eP	P	12 17 58.2	+1.4
	comp=Z,186nm,1.3s						
TBI	Tubuai	86.45	229	eS	S	12 28 28.4	-4.4
	comp=Z,1µm,26.8s						
TBI	Tubuai	86.45	229	eLQ	LQ	12 41 44.8	
	comp=Z,1µm,35.0s						
TBI				eLR	LR	12 45 23.2	
	comp=Z,2µm,24.2s,baz=151						
SDDR	Presa de Saban	86.84	316	IAMs_20	IAMs_20	12 54 57.3	
	comp=Z,1µm,22.0s						
BBOO	Buckleboo	87.00	163	P	P	12 17 58.4	-0.9
DGAR	Diego Garcia	87.02	99	i P	P	12 17 59.3	-0.3
DGAR				pmax	pmax		
	comp=Z,79nm,1.0s						
JAWL	J.Aulia	87.03	54	i P	P	12 18 02.2	+2.7
JAWL				i		12 18 08.4	
	baz=192,slow=9.3						
FORT	Forrest	87.55	156	P	P	12 18 02.7	+0.7
ATD	Arta Tunnel	88.33	64	P	P	12 18 07.4	+1.6
	SNR=5.1						
STKA	Stephens Creek	88.63	168	P	P	12 18 08.0	+0.9
	comp=Z,34nm,1.0s,baz=166,slow=6.4,SNR=37						
STKA				PP	PP	12 21 34.1	-0.6
	comp=Z,3.1nm,1.0s,baz=174,slow=11,SNR=3.7						
STKA				LR	LR	12 56 48.3	
	comp=Z,3µm,18.0s,baz=186,slow=35						
GRTK	Grand Turk	89.11	317	IAMs_20	IAMs_20	13 01 18.4	
	comp=Z,1µm,21.0s						
ESQI	Esquipulas	90.28	298	IAmb	IAmb	12 20 46.1	
	comp=Z,60nm,0.6s						
PPT2	Papeete2	91.70	231	eS	S	12 29 16.9	-5.4
	comp=Z,840nm,26.8s						
PPT2	Papeete2	91.70	231	eLR	LR	12 47 48.9	
	comp=Z,3µm,24.8s,baz=152						
PPT	Papeete	91.72	231	LR	LR	12 53 16.7	
	comp=Z,2µm,18.0s,baz=140,slow=31						
MDT	Midelt	92.93	16	P	P	12 18 27.5	+0.6
	comp=Z,4.2nm,1.0s,baz=22,slow=2.0,SNR=5.9						
VAH	Vaihoa	93.02	234	eP	P	12 18 29.0	+1.3
	comp=Z,87nm,1.1s						
PMOR	Pomariorio Ree	93.34	233	eP	P	12 18 30.8	+1.6
	comp=Z,133nm,1.2s						
MQOL	MQOL	93.79	55	i P	P	12 18 33.4	+2.4
SOCY	Socotra	94.27	74	IAMs_20	IAMs_20	12 55 03.4	
	comp=Z,1µm,21.0s						
PSA00	Pilbara Seismi	94.34	147	IAmb	IAmb	12 18 34.3	
	comp=Z,23nm,1.2s						
MBWA	Marble Bar	94.70	146	IAMs_20	IAMs_20	12 54 47.3	
	comp=Z,997nm,19.0s						
SOR	Soroa	94.82	307	IAmb	IAmb	12 18 51.5	
	comp=Z,30nm,1.0s						
TAOE	Nuku Hiva Isla	95.40	243	eS	S	12 29 48.3	-6.7
	comp=Z,250nm,27.8s						
TAOE	Nuku Hiva Isla	95.40	243	eLQ	LQ	12 45 29.6	
	comp=Z,2µm,29.2s						
TAOE				eLR	LR	12 49 33.8	
	comp=Z,3µm,25.3s,baz=165						
ASAR	Alice Springs	95.60	160	P	P	12 18 39.4	-0.2
	comp=Z,19nm,0.9s,baz=194,slow=4.3,SNR=114						
ASAR				PP	PP	12 22 16.3	-13
	comp=Z,4.9nm,0.9s,baz=187,slow=6.5,SNR=5.0						
ASAR				PKKPbc	PKKPbc	12 35 28.9	+1.5
	comp=Z,1.8nm,0.9s,baz=8.8,slow=2.8,SNR=8.6						
ASAR				PKPPKP	P'P'df	12 43 37.0	-12
	comp=Z,1.0nm,1.0s,baz=64,slow=2.2,SNR=5.1						
ASAR				LR	LR	12 59 24.4	
	comp=Z,1µm,19.6s,baz=192,slow=34						
KEST	Kesra	98.42	27	PP	PP	12 22 51.1	-1.5
	comp=Z,4.3nm,1.0s,baz=144,slow=8.7,SNR=4.7						
KEST				LR	LR	12 59 19.5	
	comp=Z,654nm,19.0s,baz=166,slow=33						
DZM	Mont Dzumac	98.73	190	eLR	LR	12 51 07.5	
	comp=Z,2µm,22.2s						
UNM	Universidad Na	99.01	292	IAMs_20	IAMs_20	13 01 09.1	
	comp=Z,1µm,21.0s						
FITZ	Fitzroy Crossi	99.21	151	P	Pdif	12 18 56.2	+0.4
	comp=Z,2.5nm,1.1s,baz=226,slow=6.8,SNR=4.6						
FITZ				PP	PP	12 22 53.6	-4.0
	comp=Z,0.8nm,0.4s,baz=171,slow=7.3,SNR=3.6						
FITZ				PKKP	PKKPdf	12 35 19.7	-0.1
	comp=Z,1.8nm,0.9s,baz=101,slow=5.2,SNR=2.8						
WRA	Warramunga Arr	99.31	159	P	Pdif	12 18 55.7	-0.7
	comp=Z,5.6nm,1.0s,baz=198,slow=3.9,SNR=24						
WRA				PP	PP	12 22 46.3	-12
	comp=Z,3.7nm,1.1s,baz=194,slow=6.0,SNR=3.9						
WRA				PKKPbc	PKKPbc	12 35 16.3	-1.0
	comp=Z,1.0nm,0.9s,baz=349,slow=3.2,SNR=3.0						
WRA				LR	LR	13 03 51.0	
	comp=Z,748nm,18.1s,baz=210,slow=35						
WB2	Warramunga Arr	99.31	159	IAmb	IAmb	12 22 58.8	
	comp=Z,30nm,1.5s						
WRAB	Tennant Creek	99.32	159c	eP	Pdif	12 18 56.4	0.0
WRAB				pmax	pmax		
	comp=Z,22nm,1.9s						
WRAB	Tennant Creek	99.32	159	P	Pdif	12 18 55.0	-1.4
WRAB	Tennant Creek	99.32	159	IAMs_20	IAMs_20	13 01 50.2	
	comp=Z,1µm,19.0s						
ESDC	Sonseca Array	99.76	16	P	Pdif	12 18 57.3	-0.4
	comp=Z,0.7nm,0.9s,baz=182,slow=4.9,SNR=2.0						
ESDC				LR	LR	13 01 37.9	
	comp=Z,391nm,18.2s,baz=220,slow=34						
RAYN	Ar Rayn	100.00	61	IAMs_20	IAMs_20	13 02 15.3	
	comp=Z,1µm,18.0s						
MTE	Manteigas	100.03	13	IAMs_20	IAMs_20	12 56 41.0	
	comp=Z,867nm,20.0s						
NHSC	New Hope	102.93	314	IAMs_20	IAMs_20	13 05 53.6	
	comp=Z,1µm,20.0s						
PALK	Pallekele	103.77	99	IAMs_20	IAMs_20	12 54 37.6	
	comp=Z,951nm,22.0s						
BRAL	Brewton	103.88	308	IAMs_20	IAMs_20	13 05 18.3	
	comp=Z,893nm,20.0s						
CNNC	Cliffs of the	104.02	317	IAMs_20	IAMs_20	13 07 28.2	
	comp=Z,1µm,19.0s						
GOGA	Godfrey	104.44	312	IAMs_20	IAMs_20	13 05 45.8	
	comp=Z,1µm,22.0s						
AQU	L'Aquila	105.68	28	IAMs_20	IAMs_20	13 08 03.0	
	comp=Z,808nm,19.0s						
UOSS	Minazif	106.22	69	IAMs_20	IAMs_20	13 07 58.2	
	comp=Z,871nm,19.0s						
BLA	Blacksburg	106.69	316	IAMs_20	IAMs_20	13 09 18.7	
	comp=Z,1µm,21.0s						
TZTN	Tazewell	107.24	313	IAMs_20	IAMs_20	13 09 55.8	
	comp=Z,951nm,20.0s						
TZTN	Tazewell	107.24	313	P	PKiKP	12 23 41.2	+1.4
	baz=152						
BKNI	Bangkinang	107.56	121	IAMs_20	IAMs_20	12 59 03.5	
	comp=Z,1µm,21.0s						
W41B	Gary Mavity, V	109.50	306	P	PKiKP	12 23 45.1	+1.1
	baz=149						
TXAR	Lajitas Array	109.64	294	PKiKP	PKiKP	12 23 44.5	-0.2
	comp=Z,1.5nm,1.1s,baz=164,slow=3.7,SNR=4.5						
TXAR				PP	PP	12 24 12.0	-4.2
	comp=Z,1.9nm,1.0s,baz=130,slow=5.4,SNR=4.0						
TXAR				PKKPbc	PKKPbc	12 34 46.4	-0.5
	comp=Z,0.8nm,0.8s,baz=263,slow=1.2,SNR=7.4						
TXAR				SKKPbc	SKKPbc	12 38 27.0	-3.7
	comp=Z,0.8nm,0.9s,baz=345,slow=1.0,SNR=3.9						
LHMI	Lhok Sumawe	110.02	115	IAMs_20	IAMs_20	12 59 51.0	
	comp=Z,1µm,20.0s						
W39A	Magazine	110.17	305	IAMs_20	IAMs_20	13 05 19.9	
	comp=Z,1µm,22.0s						
SAUI	Saumlaki	110.31	154	IAMs_20	IAMs_20	13 08 45.2	
	comp=Z,1µm,21.0s						
M53A	WI Miller and	110.54	318	P	PKiKP	12 23 47.5	+1.8
	baz=152						
ABTX	Abilene, Hawle	110.55	299	P	PKiKP	12 23 47.3	+1.2
	baz=148						
IPM	Ipoh	111.24	119	IAMs_20	IAMs_20	13 02 42.0	
	comp=Z,942nm,19.0s						
PMG	Port Moresby	111.41	171	IAMs_20	IAMs_20	13 09 15.9	
	comp=Z,1µm,19.0s						
CCM	Cathedral Cave	111.56	308	P	PKiKP	12 23 49.6	+1.8
	baz=149						
TUL1	Leonard	111.63	304	IAMs_20	IAMs_20	13 10 35.7	
	comp=Z,869nm,21.0s						
HNR	Honiara	111.68	184	IAMs_20	IAMs_20	13 18 36.3	
	comp=Z,805nm,19.0s						
KULM	Kulim	111.79	118	IAMs_20	IAMs_20	13 00 18.9	
	comp=Z,927nm,21.0s						
GERES	GERESS Array B	111.87	26	PKiKP	PKiKP	12 23 48.1	-0.1
	comp=Z,0.3nm,0.2s,baz=160,slow=3.1,SNR=3.9						
GERES				PP	PP	12 24 30.4	-1.7
	comp=Z,0.3nm,0.2s,baz=188,slow=3.9,SNR=5.2						
MLR	Muntele Rosu	112.00	36	IAMs_20	IAMs_20	13 12 03.1	
	comp=Z,810nm,21.0s						
OK034	N. Norfolk Rd.	112.11	303	IAMs_20	IAMs_20	13 09 31.3	
	comp=Z,740nm,20.0s						
OK031	S. Brethren Rd	112.12	303	IAMs_20	IAMs_20	13 08 39.7	
	comp=Z,832nm,22.0s						
KRUC	Moravsky	112.70	28	ePP	PP	12 24 36.6	-1.3
JAVC	Velka Javorina	112.82	28	ePP	PP	12 24 38.4	-0.5
VRAC	Vranov	112.98	28	PP	PP	12 24 39.1	-0.8
	comp=Z,1.5nm,0.3s,baz=222,slow=7.4,SNR=6.2						
VRAC	Vranov	112.98	28	ePP	PP	12 24 39.2	-0.8
AMTX	Amarillo	113.36	299	P	PKiKP	12 23 53.0	+1.5
	baz=147						
U32A	Winter Ranch,	113.42	302	IAMs_20	IAMs_20	13 05 17.2	
	comp=Z,759nm,18.0s						
OK032	Salt Plains WL	113.43	303	IAMs_20	IAMs_20	13 13 43.4	
	comp=Z,818nm,18.0s						
MORC	Moravsky Berou	113.64	28	ePP	PP	12 24 43.0	-1.7
UZH	Uzhgorod	113.81	32	ePKIKP	PKiKP	12 23 56.0	+4.3
UZH				e		12 24 03.5	
GNI	Garni	113.97	51	IAMs_20	IAMs_20	13 10 35.7	
	comp=Z,1µm,21.0s						
CLL	Collm	114.04	24	eP	Pdif	12 19 58.0	-2.7
CLL				MLR	MLR		
	comp=Z,400nm,19.3s						
CLL	Collm	114.04	24	ePdif	Pdif	12 19 58.0	-2.7
CLL				ePP	PP	12 24 44.0	-3.4
CLL				ePS	PKKPbc	12 34 30.0	-2.7
CLL				ePPS	PPS	12 35 30.0	
CLL				eSS	SS	12 40 48.0	+11
CLL				e		12 42 30.0	
CLL				eSSS	SSS	12 44 48.0	
CLL				Lm	MLR	13 09 00.0	
	comp=N,400nm,20.1s						
CLL				Lm	MLR	13 09 00.0	
	comp=E,400nm,20.4s						
CLL				Lm	MLR	13 09 00.0	
	comp=Z,400nm,19.3s						
121A	Cookes Peak, D	114.25	293	P	PKiKP	12 23 54.1	+0.7
	baz=146						
GLMI	Grayling	114.89	317	IAMs_20	IAMs_20	13 12 29.7	
	comp=Z,1µm,22.0s						
SOC	Sochi	114.95	46	i PKIKP	PKPdf	12 23 51.0	-3.1
SOC				e		12 24 54.9	
SOC				ePS	PKKPbc	12 34 28.4	-0.9
SOC				MLR	MLR		
	comp=Z,258nm,15.0s						
ANN	Anapa	115.17	44	i PKIKP	PKiKP	12 23 54.8	+0.4
ANN				pmax	pmax		
	comp=Z,40nm,1.4s						
FAKI	Fak Fak	115.42	154	IAMs_20	IAMs_20	13 08 34.7	
	comp=Z,832nm,18.0s						
TUC	Tucson	115.51	290	PKIKP	PKPdf	12 23 55.4	-0.3
TUC	Tucson	115.51	290		PKPdf	12 23 55.4	-0.3
TUC	Tucson	115.51	290	P	PKiKP	12 23 57.3	+1.6
	baz=145						
ANMO	Albuquerque	115.61	295c	i PKIKP	PKiKP	12 23 56.7	+0.8
ANMO				pmax	pmax		
	comp=Z,7.0nm,2.5s						
ANMO	Albuquerque	115.61	295		PKiKP	12 23 56.0	+0.1
ANMO	Albuquerque	115.61	295	P	PKiKP	12 23 57.0	+1.0
	baz=145						
CBKS	Cedar Bluff	115.77	303	IAMs_20	IAMs_20	13 06 00.4	
	comp=Z,988nm,22.0s						
KBZ	Khabaz	116.28	48	i PKIKP	PKiKP	12 23 57.2	+0.6
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KIV	Kislovodsk	116.39	48	i PKIKP	PKiKP	12 23 57.4	+0.4
KIV				e		12 25 02.7	
KIV				ePS	PS	12 34 44.5	-0.9
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,787nm,22.0s						
T25A	Trinidad	116.47	298	P	PKiKP	12 23 58.4	+0.9
	baz=145,SNR=6.0						
W18A	Petrified Fore	117.30	293	P	PKiKP	12 24 00.3	+1.1
	baz=144						
MAK	Makhachkala	117.45	52	eP	Pdif	12 20 09.0	-7.1
MAK				pmax	pmax		
	comp=Z,374nm,1.9s						
SDCO	Great Sand Dun	117.46	298	IAMs_20	IAMs_20	13 15 07.3	
	comp=Z,918nm,22.0s						
SDCO	Great Sand Dun	117.46	298	P	PKiKP	12 24 00.4	+0.8
	baz=145,SNR=5.9						
AKASG	Malin Array Be	117.64	35	PKP	PKPdf	12 23 58.3	-0.7
	comp=Z,0.3nm,0.3s,baz=223,slow=1.9,SNR=7.6						
AKASG				PP	PP	12 25 09.4	-3.2
	comp=Z,1.1nm,0.7s,baz=201,slow=6.7,SNR=8.7						
AKASG				PKKPbc	PKKPab	12 34 20.8	-0.6
	comp=Z,0.1nm,0.2s,baz=33,slow=4.2,SNR=5.2						
AKASG	Malin Array Be	117.64	35	PKIKP	PKPdf	12 23 58.5	-0.5
AKASG	Malin Array Be	117.64	35		PKPdf	12 23 58.5	-0.5
S22A	4UR Ranch, Cre	118.07	297	P	PKiKP	12 24 01.4	+0.7
	baz=144						
GLA	Glamis	118.09	288	P	PKiKP	12 24 01.2	+0.6
	baz=144						
SPMN	Marine on St.	118.26	312	P	PKiKP	12 24 02.2	+1.7
	baz=147						
Q24A	Divide	118.29	299	P	PKiKP	12 24 02.4	+1.3
	baz=144						
IKP	In-Ko-Pah, Jac	118.40	287	P	PKiKP	12 24 02.6	+1.3
	baz=144						
WUAZ	Wupatki	118.40	292	P	PKiKP	12 24 02.2	+0.9
	baz=144						
MVCO	Mesa Verde	118.41	295	P	PKiKP	12 24 02.2	+0.8
	baz=144						
SWSC	Sam W. Stewart	118.48	287	P	PKiKP	12 24 02.4	+1.1
	baz=144						
OGNE	Ogallala	118.53	303	P	PKiKP	12 24 02.7	+1.4
	baz=145						
ECSD	EROS Data Cent	118.53	308	P	PKiKP	12 24 01.3	+0.2
	baz=146						
SCHQ	Schefferville	118.61	333	PKP	PKPdf	12 24 00.7	-0.1
	comp=Z,7.2nm,0.7s,baz=145,slow=1.0,SNR=15						
SCHQ	Schefferville	118.61	333	PKPdf	PKPdf	12 24 00.4	-0.4
MONP2	Monument Peak	118.75	287	P	PKiKP	12 24 02.7	+0.6
	baz=144						
PDMCI	Parker Dam,Lak	118.76	289	P	PKiKP	12 24 03.1	+1.3
	baz=144						
BC3	Big Chuckawall	118.88	288	P	PKiKP	12 24 03.5	+1.3
	baz=144						
IRM	Iron Mountain	119.14	288	P	PKiKP	12 24 04.0	+1.4
	baz=144						
ISCO	Idaho Springs	119.18	299	IAMs_20	IAMs_20	13 12 25.0	
	comp=Z,738nm,21.0s						
ISCO	Idaho Springs	119.18	299	P	PKiKP	12 24 03.8	+0.9
	baz=144,SNR=6.9						
TPFO	Pinon Flats	119.34	287	P	PKiKP	12 24 04.1	+0.9
	baz=144						
PFO	Pinyon Flats O	119.34	287	PKIKP	PKiKP	12 24 03.9	+0.8
PFO	Pinyon Flats O	119.34	287		PKiKP	12 24 03.9	+0.8
BELC	Belle Mtn. Jos	119.43	288	P	PKiKP	12 24 04.6	+1.3
	baz=144						
MURC	Murrieta	119.70	286	P	PKiKP	12 24 05.0	+1.3
	baz=144						
SCI2	San Clemente I	119.88	285	P	PKiKP	12 24 05.4	+1.4
	baz=144						
GMRC	Granite Mounta	119.89	288	P	PKiKP	12 24 05.4	+1.2
	baz=143						
EYMN	Ely	120.04	314	P	PKiKP	12 24 04.9	+1.0
	baz=146						
BBRC	Big Bear Solar	120.09	287	P	PKiKP	12 24 05.3	+0.6
	baz=143						
CIS	Catalina Islan	120.15	285	P	PKiKP	12 24 05.3	+0.7
	baz=143						
N23A	Red Feather La	120.22	300	P	PKiKP	12 24 04.9	+0.1
	baz=144,SNR=7.2						
HEC	Hector,Ludlow	120.26	288	P	PKiKP	12 24 05.6	+0.8
	baz=143						
PHWY	Pilot Hill	120.33	300	IAMs_20	IAMs_20	13 14 20.3	
	comp=Z,827nm,21.0s						
FMP	Fort Macarthur	120.33	286	P	PKiKP	12 24 06.4	+1.6
	baz=143						
BFSC	Mount Baldy Ra	120.44	286	P	PKiKP	12 24 07.2	+1.9
	baz=143						
MNK	Minsk	120.62	32	i PKIKP	PKiKP	12 24 04.9	+0.2
MNK				i		12 25 32.8	
MNK				i PPP	PPP	12 28 04.3	
MNK				i		12 31 16.9	
MNK				i PS	PS	12 35 22.0	-1.1
MNK				i SS	SS	12 42 01.6	-1.2
MNK				i SSS	SSS	12 46 28.5	
MNK				pmax	pmax		
	comp=N,40nm,0.8s						
MNK				pmax	pmax		
	comp=Z,21nm,1.0s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,361nm,16.0s						
MNK				MLR	MLR		
	comp=E,52nm,20.0s						
MNK				MLR	MLR		
	comp=N,272nm,16.0s						
MNK	Minsk	120.62	32	i PKP	PKiKP	12 24 04.9	+0.2
	comp=E,4.0nm,0.9s						
MNK				i PKP	PKiKP	12 24 04.9	+0.2
	comp=N,40nm,0.8s						
MNK				i PKP	PKiKP	12 24 04.9	+0.2
	comp=Z,21nm,1.0s,baz=28						
MNK				i PP	PP	12 25 32.8	-0.4
MNK				i SKP		12 27 40.3	
MNK				i PKS	PKSdf	12 27 41.6	+0.7
MNK				i PPP	PPP	12 28 04.4	
MNK				i SKS	SKSdf	12 31 16.9	+1.0
MNK				i PS	PS	12 35 22.1	-1.0
MNK				i SS	SS	12 42 01.6	-1.2
MNK				i SSS	SSS	12 46 28.5	
MNK				i LR	LR	13 11 48.9	
MNK				i LRM	MLR	13 15 27.9	
	comp=E,52nm,19.7s						
MNK				i LRM	MLR	13 15 27.9	
	comp=N,272nm,16.3s						
MNK				i LRM	MLR	13 15 27.9	
	comp=Z,361nm,16.3s						
O20A	White River Ci	120.65	298	P	PKiKP	12 24 06.6	+1.0
	baz=143						
NACGM	Naroch	120.67	31	i PKP	PKiKP	12 24 05.9	+1.1
GSC	Goldstone, Bar	120.87	288	P	PKiKP	12 24 07.5	+1.4
	baz=143						
SHOC	Shoshone, Teco	121.08	289	P	PKiKP	12 24 07.4	+1.1
	baz=143						
EDW2	Edwards Air Fo	121.12	287	P	PKiKP	12 24 07.4	+0.9
	baz=143,SNR=6.4						
DLV	T Lat	121.18	123	IAMs_20	IAMs_20	13 06 51.2	
	comp=Z,1µm,22.0s						
VSR	Storozhevoye	121.25	41	ePKIKP	PKPdf	12 24 03.8	-2.2
VSR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SBC	Santa Barbara	121.62	285	P	PKiKP	12 24 08.3	+0.9
	baz=143						
ARVC	Arvin	121.73	286	P	PKiKP	12 24 08.8	+1.2
	baz=143						
NIL	Nilore	121.78	77	PKIKP	PKPdf	12 24 07.7	0.0
NIL	Nilore	121.78	77	PKPdf	PKPdf	12 24 07.7	0.0
NIL	Nilore	121.78	77	IAMs_20	IAMs_20	13 13 02.9	
	comp=Z,784nm,20.0s						
MPMC	Manual Prospec	121.81	288	P	PKiKP	12 24 08.8	+0.8
	baz=143,SNR=9.4						
FURC	Furnace Creek,	121.82	289	P	PKiKP	12 24 09.1	+1.4
	baz=142,SNR=5.6						
K22A	Casper	121.88	301	P	PKiKP	12 24 07.9	+0.1
	baz=143						
RSSD	Black Hills	121.96	303	PKIKP	PKPdf	12 24 07.3	-0.6
RSSD				MLR	MLR		
	comp=Z,1µm,20.0s						
RSSD	Black Hills	121.96	303	PKPdf	PKPdf	12 24 07.3	-0.6
RSSD	Black Hills	121.96	303	P	PKiKP	12 24 08.1	0.0
	baz=143						
ISA	Isabella, Lake	121.98	287	P	PKiKP	12 24 09.1	+0.9
	baz=143,SNR=6.8						
AGMN	Agassiz Nation	121.98	312	P	PKiKP	12 24 08.0	+0.4
	baz=144						
VRH	Novokhopyorsk	122.12	43	ePKIKP	PKPdf	12 24 05.5	-2.1
VRH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PYUN	Piuthan	122.32	89	eP	PKPdf	12 24 07.5	-1.6
	comp=Z,56nm,1.0s						
LPSR	Galich'ya Gora	122.34	40	ePKIKP	PKPdf	12 24 06.5	-1.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KOLN	Koldanda	122.37	89	eP	PKPdf	12 24 08.0	-1.2
	comp=Z,142nm,1.3s						
CWC	Cottonwood Cre	122.40	288	P	PKiKP	12 24 09.6	+0.5
	baz=142						
VES	Vestal, Richgr	122.42	287	P	PKiKP	12 24 10.1	+1.2
	baz=142						
CMAR	Chiang Mai Arr	122.43	109	PKP	PKPdf	12 24 09.4	+0.1
	comp=Z,11nm,0.8s,baz=232,slow=3.9,SNR=51						
CMAR				PKKPab	PKKPab	12 34 03.2	-1.3
	comp=Z,2.3nm,0.8s,baz=12,slow=3.3,SNR=14						
CMAR				SKKPbc	SKKPbc	12 37 48.7	-0.1
	comp=Z,0.4nm,0.3s,baz=14,slow=4.5,SNR=1.3						
HFS	Hagfors	122.44	21	PKP	PKPdf	12 24 05.5	-2.4
	comp=Z,6.2nm,0.9s,baz=233,slow=0.7,SNR=4.2						
SMMC	Simmler	122.46	285	P	PKiKP	12 24 10.4	+1.3
	baz=142						
R11A	Troy Canyon, C	122.69	291	P	PKiKP	12 24 10.5	+0.8
	baz=142,SNR=6.6						
CHTO	Chiang Mai	122.74	109	PKIKP	PKPdf	12 24 07.4	-2.5
CHTO	Chiang Mai	122.74	109	PKPdf	PKPdf	12 24 07.4	-2.5
UBPT	Khong Chiam	122.78	118	PKPdf	PKPdf	12 24 09.0	-1.0

DUG	Dugway, Tooele	122.82	294	P	PKiKP	12 24 11.1	+1.3
	baz=142						
NB2	NORSAR Subarra	122.84	20	PKPdf	PKPdf	12 24 08.5	-0.3
	comp=Z,5.6nm,1.1s,baz=202,slow=1.9						
NOA	NORSAR Array B	122.84	20	PKP	PKPdf	12 24 08.3	-0.5
	comp=Z,7.2nm,1.0s,baz=200,slow=1.7,SNR=5.6						
DANN	Dangsing	122.92	89	eP	PKPdf	12 24 09.4	-0.9
	comp=Z,86nm,0.9s						
DMN	Daman	123.02	91	eP	PKPdf	12 24 09.7	-0.8
GKN	Gorkha	123.09	90	eP	PKPdf	12 24 09.2	-1.3
	comp=Z,100nm,1.3s						
MDND	Maddock	123.10	309	P	PKiKP	12 24 10.0	+0.1
	baz=143						
PKIN	Phulchoki	123.14	91	eP	PKPdf	12 24 09.6	-1.2
	comp=Z,34nm,0.8s						
PKI	Pulchoki	123.14	91	eP	PKPdf	12 24 09.6	-1.2
	comp=Z,91nm,1.3s						
KKN	Kakani	123.25	91	eP	PKPdf	12 24 09.8	-1.1
	comp=Z,29nm,0.8s						
RAMN	Ramite	123.25	92	eP	PKPdf	12 24 10.6	-0.4
	comp=Z,24nm,0.6s						
PDAR	Pinedale Array	123.34	299	PKP	PKPdf	12 24 10.1	-0.5
	comp=Z,2.6nm,0.8s,baz=142,slow=3.4,SNR=16						
PDAR				PKKPbc	PKKPbc	12 33 58.6	-0.2
	comp=Z,0.5nm,0.8s,baz=300,slow=1.2,SNR=3.7						
BW06	Boulder Array	123.34	299	P	PKiKP	12 24 11.3	+0.4
	baz=142						
ULM	Lac du Bonnet	123.57	313	PKP	PKPdf	12 24 10.2	-0.3
	comp=Z,8.9nm,0.8s,baz=136,slow=2.3,SNR=11						
ULM				PP	PP	12 25 54.2	+0.8
	comp=Z,4.2nm,0.8s,baz=147,slow=9.7,SNR=2.1						
ULM				PKKPbc	PKKPbc	12 33 57.2	-0.5
	comp=Z,5.2nm,1.0s,baz=303,slow=6.3,SNR=3.5						
ODAN	Odare	123.59	93	eP	PKPdf	12 24 11.3	-0.3
GUN	Gumba	123.66	91	eP	PKPdf	12 24 10.9	-0.9
	comp=Z,62nm,0.9s						
OBN	Obninsk	123.69	37	⇑ePKIKP	PKPdf	12 24 09.7	-0.8
OBN				e		12 25 55.1	
OBN				e		12 31 18.7	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MLAC	Mammoth, Mammo	123.71	288	P	PKiKP	12 24 12.5	+0.8
	baz=142						
NVAR	Mina Array Bea	124.07	289	PKP	PKiKP	12 24 12.8	+0.4
	comp=Z,6.7nm,1.0s,baz=148,slow=3.2,SNR=15						
NVAR				PP	PP	12 25 57.1	0.0
	comp=Z,0.5nm,0.4s,baz=150,slow=3.8,SNR=2.0						
FLWY	Flagg Ranch	124.88	299	IAMs_20	IAMs_20	13 17 10.7	
	comp=Z,1µm,21.0s						
LAO	LASA Array	124.94	304	P	PKiKP	12 24 14.3	+0.7
	baz=141						
RLMT	Red Lodge	125.05	300	P	PKiKP	12 24 14.8	+0.6
	baz=141						
H17A	Grant Village	125.07	299	P	PKiKP	12 24 14.9	+0.7
	baz=141						
BELG	Belogornoye	125.22	45	PKP	PKPdf	12 24 13.1	-0.4
	comp=Z,6.7nm,0.7s,baz=254,slow=15,SNR=2.8						
BELG				PP	PP	12 26 03.0	-1.2
	comp=Z,39nm,1.0s,baz=49,slow=3.1,SNR=13						
DGMT	Dagmar	125.47	306	P	PKiKP	12 24 15.3	+0.7
	baz=141						
HLID	Hailey	126.19	296	P	PKiKP	12 24 17.0	+0.6
	baz=140,SNR=6.5						
FINES	FINESS Array B	126.25	27	PKP	PKPdf	12 24 14.8	-0.4
	comp=Z,5.2nm,0.6s,baz=154,slow=2.5,SNR=29						
FINES				SKP		12 27 49.1	
	comp=Z,2.8nm,0.8s,baz=191,slow=3.9,SNR=4.6						
DY2G	Dye2	126.30	349	i P	PKiKP	12 24 16.6	+0.7
BOZ	Bozeman (W)	126.47	299	P	PKiKP	12 24 18.1	+1.3
	baz=140,SNR=10						
IUG	Iuzhnay	126.83	68	ePKP	PKPdf	12 24 15.9	-1.2
	baz=68						
IUG	Iuzhnay	126.83	68	ePKIKP	PKPdf	12 24 15.9	-1.2
O03E	Paynes Creek	127.23	288	P	PKiKP	12 24 19.7	+1.2
	baz=140						
SFJD	Kangerlussuaq	127.26	347	PKP	PKPdf	12 24 16.8	-0.2
	comp=Z,18nm,0.9s,baz=263,slow=4.2,SNR=5.0						
SFJD	Kangerlussuaq	127.26	347	PKPdf	PKPdf	12 24 16.2	-0.8
SLVN	Son La	127.29	112	PKPdf	PKPdf	12 24 18.2	-0.4
SLVN				IAMs_20	IAMs_20	13 17 37.2	
	comp=Z,700nm,19.0s						
BRLS	Borolday	127.41	67	ePKP	PKPdf	12 24 16.3	-1.8
	baz=67						
BRLS	Borolday	127.41	67	ePKIKP	PKPdf	12 24 16.3	-1.8
EGMT	Eagleton	127.50	302	P	PKiKP	12 24 19.4	+0.7
	baz=139,SNR=11						
O02D	Mt. Diablo Mer	127.63	287	P	PKiKP	12 24 20.3	+1.1
	baz=140						
AB31	Akbulak array	127.67	55	i PKIKP	PKPdf	12 24 17.2	-1.1
KSH	Kashi	127.72	74	PKP	PKPdf	12 24 18.4	-0.6
KSH				LR	LR		
	comp=Z,900nm,19.1s						
KSH				LR	LR		
	comp=Z,750nm,17.7s						
KSH				LR	LR		
	comp=Z,720nm,17.2s						
AKTO	Aktyubinsk	127.75	53	PKP	PKPdf	12 24 18.4	-0.1
	comp=Z,23nm,1.0s,baz=174,slow=1.6,SNR=32						
LSA	Lhasa	127.82	94	IAMs_20	IAMs_20	13 11 04.6	
	comp=Z,633nm,22.0s						
DZA	Taraz	128.02	68	ePKP	PKPdf	12 24 18.4	-1.0
	baz=68						
DZA	Taraz	128.02	68	ePKIKP	PKPdf	12 24 18.3	-1.0
QIZ	Qiongzhong	128.04	120	PKP	PKiKP	12 24 20.8	+0.2
QIZ				PP	PP	12 26 24.3	+1.3
QIZ				SS	SS	12 43 39.7	+3.3
QIZ				LR	LR		
	comp=Z,580nm,19.2s						
QIZ				LR	LR		
	comp=Z,290nm,13.4s						
QIZ				LR	LR		
	comp=Z,660nm,17.7s						
QIZ	Qiongzhong	128.04	120	IAMs_20	IAMs_20	13 15 42.8	
	comp=Z,879nm,19.0s						
N02D	Trinity Center	128.19	288	P	PKiKP	12 24 21.2	+0.8
	baz=139						
ICESG	Greenland Ices	128.34	353	i P	PKPdf	12 24 19.1	-0.3
M04C	Macdoel	128.38	289	P	PKiKP	12 24 21.7	+1.0
	baz=139						
MSO	Missoula	128.45	299	P	PKiKP	12 24 21.3	+0.6
	baz=139,SNR=32						
M02C	Callahan	128.58	288	P	PKiKP	12 24 22.3	+1.2
	baz=139						
AML	Almayashu	128.59	71	P	PKPdf	12 24 21.2	+0.3
	SNR=8.1						
L04D	Klamath Falls	128.94	289	P	PKiKP	12 24 22.6	+0.7
	baz=139						
EKS2	Erkin-Say	129.03	70	P	PKPdf	12 24 21.7	+0.4
	SNR=5.9						
UCH	Uchtor	129.06	71	P	PKPdf	12 24 21.6	-0.3
	SNR=7.5						
J05D	Fort Rock, OR	129.22	291	P	PKiKP	12 24 23.2	+0.8
	baz=138						
KLMR	Klimovskoe	129.32	35	ePKIKP	PKPdf	12 24 19.4	-1.6
KLMR				e		12 26 29.5	
KLMR				pmax	pmax		
	comp=Z,82nm,1.4s						
KLMR	Klimovskoe	129.32	35	ePKPdf	PKPdf	12 24 19.5	-1.6
KLMR				AMP		12 24 22.1	
	comp=Z,82nm,1.4s						
KLMR				ePP	PP	12 26 29.6	-1.7
KLMR				eSKP		12 27 54.6	
AAK	Ala-Archa	129.36	71	P	PKPdf	12 24 22.4	+0.4
	SNR=10						
AAK	Ala-Archa	129.36	71	c iPKIKP	PKiKP	12 24 22.7	0.0
AAK				pmax	pmax		
	comp=Z,114nm,1.7s						
AAK	Ala-Archa	129.36	71	PKPdf	PKPdf	12 24 21.2	-0.8
FFC	Flin Flon	129.40	313	PKIKP	PKPdf	12 24 21.3	-0.2
FFC	Flin Flon	129.40	313	PKPdf	PKPdf	12 24 21.3	-0.2
J04D	Umpqua Nationa	129.61	290	P	PKiKP	12 24 24.6	+1.3
	baz=138						
USP	Ospenovka	129.83	70	P	PKPdf	12 24 22.7	-0.1
	SNR=5.7						
KMI	Kunming	129.93	109	⇑PKP	PKiKP	12 24 24.3	-0.2
KMI				LR	LR		
	comp=Z,470nm,18.1s						
KMI				LR	LR		
	comp=Z,360nm,16.9s						
KMI				LR	LR		
	comp=Z,410nm,18.1s						
K02D	Willamette Mer	129.96	289	P	PKiKP	12 24 25.4	+1.6
	baz=138						
SGDS	Sogindy	130.03	70	ePKP	PKPdf	12 24 21.7	-1.4
	baz=70						
I05D	Terrebonne, OR	130.05	292	P	PKiKP	12 24 25.8	+1.9
	baz=138						
I03D	Drain, OR	130.55	290	P	PKiKP	12 24 25.5	+0.6
	baz=138						
KIRV	Kirov	130.69	41	PKP	PKPdf	12 24 23.4	-0.4
	comp=Z,8.6nm,0.4s,baz=191,slow=6.8,SNR=5.3						
KIRV	Kirov	130.69	41	c iPKIKP	PKiKP	12 24 24.4	-0.2
BTLS	Baital	130.93	68	ePKP	PKPdf	12 24 23.3	-1.4
	baz=68						
BTLS	Baital	130.93	68	ePKIKP	PKPdf	12 24 23.2	-1.4
NEW	Newport	130.97	298	PKP	PKPdf	12 24 24.9	+0.2
	comp=Z,4.6nm,0.9s,baz=142,slow=4.6,SNR=5.0						
NEW				SKPbc	SKPbc	12 27 48.9	+0.2
	comp=Z,7.7nm,1.1s,baz=115,slow=4.4,SNR=6.2						
NEW	Newport	130.97	298	P	PKiKP	12 24 26.5	+0.9
	baz=137						
KUU	Kurty	131.19	71	ePKP	PKPdf	12 24 23.9	-1.4
	baz=71						
KUU	Kurty	131.19	71	ePKIKP	PKPdf	12 24 23.9	-1.4
SUMG	Summit	131.72	354	PKIKP	PKPdf	12 24 25.7	-0.2
SUMG	Summit	131.72	354	i P	PKPdf	12 24 26.0	+0.1
SUMG	Summit	131.72	354	PKPdf	PKPdf	12 24 25.7	-0.2
PRGR	Permogore	131.78	37	ePKIKP	PKPdf	12 24 24.6	-1.1
PRGR				pmax	pmax		
	comp=Z,25nm,1.4s						
UZB	Uzynbulak	131.96	74	ePKP	PKPdf	12 24 25.9	-1.0
	baz=73						
UZB	Uzynbulak	131.96	74	ePKIKP	PKPdf	12 24 25.9	-1.0
PDGK	Podgornoye	132.33	74	PKIKP	PKPdf	12 24 26.7	-0.9
ARU	Arti	132.43	48	PKP	PKPdf	12 24 27.1	-0.1
	comp=Z,1.1nm,0.5s,baz=193,slow=1.7,SNR=7.1						
ARU				PP	PP	12 26 50.3	-1.2
	comp=Z,0.4nm,0.3s,baz=233,slow=4.9,SNR=3.7						
ARU	Arti	132.43	48	i PKIKP	PKPdf	12 24 26.2	-0.9
ARU						12 26 49.3	
ARU				SS	SS	12 44 31.4	+1.0
ARU	Arti	132.43	48	PKPdf	PKPdf	12 24 26.8	-0.4
GYA	Guiyang	132.95	112	⇑PKP	PKiKP	12 24 31.3	+0.8
GYA				PP	PP	12 26 55.1	0.0
GYA				AMB	AMB		
	comp=Z,310nm,4.7s						
GYA				LR	LR		
	comp=Z,370nm,3.8s						
GYA				LR	LR		
	comp=Z,280nm,3.9s						
ARCES	ARCESS Array B	133.10	21	PKhKP	PKPpre	12 24 15.6	
	comp=Z,10.0nm,1.2s,baz=180,slow=1.2,SNR=5.3						
ARCES				PKP	PKPdf	12 24 27.2	-0.8
	comp=Z,7.1nm,0.7s,baz=174,slow=1.2,SNR=10						
ARCES				SKP		12 28 07.2	
	comp=Z,4.8nm,0.6s,baz=197,slow=1.9,SNR=7.3						
DBG	Daneborg	133.10	1	eP	PKPdf	12 24 27.0	-0.9
APA	Apatity	133.13	26	⇓iPKIKP	PKiKP	12 24 29.0	-0.3
APA				MLR	MLR		
	comp=Z,3µm,23.0s						
D03D	Eldon	133.22	293	P	PKiKP	12 24 30.5	+0.3
	baz=135						
B05A	Bryant	133.27	295	P	PKiKP	12 24 30.8	+0.6
	baz=135						
BRVK	Borovoye	134.90	58	c iPKIKP	PKPdf	12 24 32.6	+0.7
BRVK				pmax	pmax		
	comp=Z,21nm,1.3s						
BRVK	Borovoye	134.90	58	PKPdf	PKPdf	12 24 31.1	-0.8
BVAR	Borovoye Array	134.93	58	PKhKP	PKPpre	12 24 15.7	
	comp=Z,1.4nm,0.7s,baz=224,slow=12,SNR=5.2						
BVAR				PKP	PKPdf	12 24 31.6	-0.3
	comp=Z,9.4nm,0.8s,baz=223,slow=10,SNR=18						
BVAR				SKP		12 28 07.2	
	comp=Z,3.0nm,1.0s,baz=204,slow=6.3,SNR=2.2						
CD2	Chengdu	135.21	105	PKP	PKiKP	12 24 35.3	+0.5
CD2				PKS	PKSdf	12 28 07.8	-1.9
CD2				LR	LR		
	comp=Z,390nm,14.5s						
CD2				LR	LR		
	comp=Z,410nm,17.0s						
CD2				LR	LR		
	comp=Z,540nm,17.9s						
DAG	Danmarks Havn	135.60	2	i P	PKPdf	12 24 31.0	-1.5
MAKZ	Makanchi	136.05	72	IAMs_20	IAMs_20	13 26 13.1	
	comp=Z,551nm,20.0s						
MK31	Makanchi Array	136.19	72	d iPKIKP	PKPdf	12 24 33.4	-1.2
MKAR	Makanchi Array	136.19	72	PKhKP	PKPpre	12 24 21.8	
	comp=Z,1.7nm,0.7s,baz=221,slow=4.8,SNR=9.0						
MKAR				PKP	PKPdf	12 24 33.4	-1.2
	comp=Z,7.5nm,1.0s,baz=250,slow=3.5,SNR=11						
MKAR				SKKPbc	SKKPbc	12 37 01.0	-1.6
	comp=Z,1.2nm,0.9s,baz=55,slow=5.5,SNR=4.0						
WMQ	Urumqi	136.81	79	ePKP	PKPdf	12 24 36.2	+0.3
WMQ				LR	LR		
	comp=Z,920nm,21.3s						
WMQ				LR	LR		
	comp=Z,500nm,22.1s						
KURBB	Kurchatov Arra	137.01	66	PKhKP	PKPpre	12 24 20.7	
	comp=Z,0.6nm,0.6s,baz=229,slow=3.4,SNR=1.8						
KURBB				PKP	pPKPdf	12 24 36.6	-0.8
	comp=Z,7.8nm,0.9s,baz=235,slow=2.3,SNR=19						
KURBB				PP	PP	12 27 19.9	-0.7
	comp=Z,1.9nm,1.1s,baz=232,slow=6.0,SNR=7.5						
KURBB				SKKPbc	SKKPbc	12 37 02.4	+2.6
	comp=Z,1.3nm,0.2s,baz=43,slow=4.2,SNR=1.9						
KURK	Kurchatov	137.11	66	PKIKP	PKPdf	12 24 36.8	+0.7
KURK	Kurchatov	137.11	66	IAMs_20	IAMs_20	13 29 25.8	
	comp=Z,578nm,19.0s						
ENH	Enshi	137.49	112	IAMs_20	IAMs_20	13 23 10.0	
	comp=Z,666nm,22.0s						
ZSN	Zaisan	137.92	73	ePKP	PKPdf	12 24 36.7	-1.1
	baz=73						
ZSN	Zaisan	137.92	73	ePKIKP	PKPdf	12 24 36.6	-1.1
SPITS	Spitsbergen Ar	139.15	12	PKP	PKPdf	12 24 39.5	+0.4
	comp=Z,20nm,0.9s,baz=67,slow=3.7,SNR=4.0						
LZH	Lanzhou	139.37	101	ePKP	PKiKP	12 24 43.5	+0.2
LZH				PKS	PKSdf	12 28 19.0	+1.9
LZH				LR	LR		
	comp=Z,610nm,18.1s						
LZH				LR	LR		
	comp=Z,520nm,18.4s						
LZH				LR	LR		
	comp=Z,640nm,20.3s						
YKA	Yellowknife Ar	139.52	314	PKhKP	PKPpre	12 24 32.6	
	comp=Z,2.0nm,0.8s,baz=127,slow=3.4,SNR=6.0						
YKA				PKP	PKPdf	12 24 40.4	+0.2
	comp=Z,24nm,0.9s,baz=125,slow=2.1,SNR=22						
YKA				PP	PP	12 27 36.0	+0.1
	comp=Z,3.4nm,0.9s,baz=123,slow=6.1,SNR=5.5						
YKA				SKPbc	SKPbc	12 28 14.9	-0.4
	comp=Z,6.4nm,1.0s,baz=111,slow=2.7,SNR=1.7						
GTA	Gaotai	139.84	94	ePKPbc	PKPdf	12 24 34.6	-7.1
GTA				LR	LR		
	comp=N,540nm,20.7s						
GTA				LR	LR		
	comp=E,410nm,21.1s						
GTA				LR	LR		
	comp=Z,590nm,22.9s						
XAN	Xi'an	140.30	108	P	PKPdf	12 24 37.2	-5.4
XAN				pP	PKiKP	12 24 45.0	-0.1
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
XAN				AMB	AMB		
	comp=Z,410nm,7.0s						
XAN				LR	LR		
	comp=N,440nm,21.3s						
XAN				LR	LR		
	comp=E,500nm,19.1s						
XAN				LR	LR		
	comp=Z,840nm,22.2s						
RES	Resolute Bay	141.28	336	PKhKP	PKPpre	12 24 36.5	
	comp=Z,12nm,1.0s,baz=141,slow=3.2,SNR=28						
RES				SKPbc	SKPbc	12 28 18.9	-0.6
	comp=Z,13nm,1.4s,baz=119,slow=2.1,SNR=3.8						
ZALV	Zalesovo Beam	142.10	66	PKhKP	PKPpre	12 24 39.1	
	comp=Z,7.5nm,0.7s,baz=242,slow=3.2,SNR=26						
ZALV				SKKPbc	SKKPbc	12 36 41.3	+1.5
	comp=Z,0.8nm,0.4s,baz=64,slow=3.4,SNR=4.9						
NJ2	Nanjing	143.33	121	ePKP	PKPdf	12 24 49.4	+1.4
DLBC	Dease Lake	143.42	302	PKP	PKPdf	12 24 46.2	-1.1
	comp=Z,16nm,0.9s,baz=165,slow=0.8,SNR=14						
WTLY	Watson Lake, Y	143.80	305	P	PKPdf	12 24 49.6	+1.7
	baz=122						
TIY	Taiyuan	144.94	108	ePKP	PKPbc	12 24 50.1	+0.1
TIY				PP	PP	12 28 13.2	+4.1
TIY				AMB	AMB		
	comp=Z,340nm,5.7s						
TIY				LR	LR		
	comp=Z,570nm,18.8s						
SIT	Sitka	145.04	297	P	PKPdf	12 24 51.6	+1.6
	baz=123						
P33M	Teslin, Yukon	145.57	303	P	PKPab	12 24 52.6	+1.0
	baz=120,SNR=37						
BTO	Baotou	145.95	102	ePKPbc	PKPbc	12 24 53.3	+0.1
BTO				SS	SS	12 47 08.7	-1.3
BTO				LR	LR		
	comp=Z,1µm,16.1s						
BTO				LR	LR		
	comp=Z,990nm,18.3s						
TIA	Tai'an	146.00	115	⇓PKPbc	PKPab	12 24 53.7	-0.2
SKAG	Skagway	146.30	301	P	PKPab	12 24 54.5	+0.3
	baz=120,SNR=33						
FARO	Faro, Yukon	146.77	306	P	PKPab	12 24 55.6	-0.5
	baz=117,SNR=15						
HHC	Hu-ho-hao-te	146.91	103	ePKPbc	PKPdf	12 24 52.2	-1.8
HHC				PP	PP	12 28 23.0	+2.1
HHC				SS	SS	12 47 18.0	-2.9
HHC				AMB	AMB		
	comp=Z,190nm,9.1s						
HHC				LR	LR		
	comp=Z,310nm,13.6s						
HHC				LR	LR		
	comp=Z,320nm,17.0s						
HHC				LR	LR		
	comp=Z,420nm,17.6s						
M31M	Drury Creek, Y	147.19	306	P	PKPbc	12 24 56.0	0.0
	baz=116,SNR=33						
N31M	Braeburn, Yuko	147.46	304	P	PKPbc	12 24 56.1	-0.7
	baz=117,SNR=13						
A36M	Sachs Harbour	147.66	325	PKPdf	PKPdf	12 24 53.0	-1.1
A36M	Sachs Harbour	147.66	325	P	PKPbc	12 24 56.8	-0.1
	baz=108						
HYT	Haines Junctio	147.91	302	P	PKPbc	12 24 58.2	+0.1
	baz=117,SNR=11						
PNL	Peninsula	148.22	299	P	PKPbc	12 24 59.3	+0.5
	baz=117						
YUK6	Outpost Mounta	148.34	302	P	PKPbc	12 24 59.9	+0.6
	baz=116						
M30M	Minto, Yukon	148.37	306	P	PKPbc	12 24 59.2	0.0
	baz=114,SNR=28						
MAYO	Mayo, Yukon	148.41	308	P	PKPbc	12 24 59.3	+0.1
	baz=114,SNR=13						
BJT	Baijiatuau	148.56	109	IAMs_20	IAMs_20	13 45 10.1	
	comp=Z,474nm,18.0s						
YUK4	Talbot Arm	148.63	303	P	PKPbc	12 25 00.5	+0.4
	baz=115,SNR=17						
MOY	Mondy	148.70	79	ePKIKP	PKPdf	12 24 56.0	-0.6
MOY				pmax	pmax		
	comp=Z,324nm,2.4s						
PINM	Pinnacle	148.80	300	P	PKPbc	12 25 00.8	+0.4
	baz=116						
ZAK	Zakamensk	149.11	83	ePKIKP	PKPdf	12 24 56.7	-0.6
ZAK				pmax	pmax		
	comp=Z,167nm,1.4s						
SONM	Songino Array	149.13	89	PKP	PKPdf	12 24 55.1	-2.4
	comp=Z,86nm,1.1s,baz=192,slow=4.1,SNR=8.3						
SONM				PKPbc	PKPbc	12 25 01.0	-0.7
	comp=Z,78nm,1.1s,baz=215,slow=3.1,SNR=68						
SONM	Songino Array	149.13	89	PKPdf	PKPdf	12 24 57.5	+0.1
JNU	Nakatsue	149.13	136	PKPbc	PKPbc	12 25 01.8	-0.2
	comp=Z,38nm,0.9s,baz=190,slow=3.4,SNR=7.7						
INK	Inuvik	149.19	317	PKPbc	PKPbc	12 25 01.5	+0.5
	comp=Z,69nm,0.8s,baz=96,slow=2.6,SNR=80						
INK	Inuvik	149.19	317	P	PKPbc	12 25 01.3	+0.4
	baz=108,SNR=10.0						
ULN	Ulaanbaatar	149.49	90	i PKHKP	PKPpre	12 24 58.1	
ULN	Ulaanbaatar	149.49	90	P	PKPbc	12 25 02.3	-0.3
ULN	Ulaanbaatar	149.49	90	PKPdf	PKPdf	12 24 58.0	0.0
ULN	Ulaanbaatar	149.49	90	IAMs_20	IAMs_20	13 40 32.8	
	comp=Z,665nm,18.0s						
MESA	MESA	149.60	299	P	PKPbc	12 25 02.7	+0.2
	baz=115						
YUK3	Moose Creek	149.60	303	P	PKiKP	12 25 03.2	-0.4
	baz=114,SNR=15						
CTG	Chitna Glacier	149.66	301	P	PKPbc	12 25 02.9	+0.4
	baz=114,SNR=7.9						
J29M	Klondike Camp	149.68	308	P	PKPbc	12 25 02.1	-0.3
	baz=111,SNR=11						
DAWY	Dawson	150.03	307	P	PKPbc	12 25 03.5	+0.2
	baz=111,SNR=26						
BVCY	Beaver Creek	150.03	304	P	PKiKP	12 25 04.4	+0.3
	baz=112,SNR=10						
I29M	Ogilvie Camp,	150.03	310	P	PKPbc	12 25 03.0	-0.2
	baz=109						
TLY	Talaya	150.06	81	i PKIKP	PKPdf	12 24 58.5	-0.2
TLY				e		12 25 04.3	
TLY				pmax	pmax		
	comp=Z,284nm,1.1s						
TLY	Talaya	150.06	81	P	PKPbc	12 25 03.9	+0.3
TLY	Talaya	150.06	81		PKPbc	12 25 03.7	0.0
TLY				IAMs_20	IAMs_20	13 37 10.1	
	comp=Z,580nm,19.0s						
NRIK	Noril'sk	150.20	42	PKPbc	PKPbc	12 25 02.7	-0.7
	comp=Z,41nm,1.1s,baz=235,slow=0.7,SNR=28						
NRIK	Noril'sk	150.20	42		PKPbc	12 25 03.4	0.0
DL2	Dalian	150.27	117	PKPbc	PKPbc	12 25 04.8	+0.3
CRQE	Cirque	150.35	300	P	PKiKP	12 25 05.0	0.0
	baz=114,SNR=5.7						
M27K	Edge Creek, AK	150.45	303	P	PKiKP	12 25 05.6	+0.5
	baz=112						
MCARA	McCarthy VSAT	150.57	301	P	PKiKP	12 25 06.1	+0.8
	baz=113,SNR=7.4						
TJN	Taejon	150.66	128	c iPKIKP	PKiKP	12 25 06.0	-0.2
L27K	Beaver Creek,	150.69	305	P	PKiKP	12 25 06.3	+0.8
	baz=111						
IRK	Irkutsk	150.69	80	ePKIKP	PKPdf	12 24 59.0	-0.6
IRK				pmax	pmax		
	comp=Z,244nm,2.2s						
M26K	Nabesna, AK	150.95	303	P	PKiKP	12 25 05.9	-0.2
	baz=111						
EGAK	Eagle	150.99	308	P	PKiKP	12 25 05.9	-0.1
	baz=108,SNR=14						
BMRM	Bremner River	151.12	300	P	PKiKP	12 25 07.4	+1.0
	baz=113,SNR=8.9						
INCN	Inchon	151.30	126	PKIKP	PKPbc	12 25 07.0	0.0
INCN	Inchon	151.30	126	P	PKPbc	12 25 07.2	+0.1
INCN	Inchon	151.30	126		PKPbc	12 25 07.0	0.0
L26K	Log Cabin Wild	151.32	304	P	PKiKP	12 25 07.7	+0.9
	baz=110,SNR=22						
N25K	Chitina, Valde	151.36	301	P	PKiKP	12 25 08.2	+1.2
	baz=112,SNR=12						
EYAK	Cordova Ski Ar	151.47	298	P	PKiKP	12 25 08.2	+1.1
	baz=113						
JHS	Saijyo	151.62	138	PKPdf	PKPdf	12 25 00.4	-1.2
KSRS	Korea Array	151.81	128	PKP	PKPdf	12 25 01.7	-0.1
	comp=Z,2.3nm,1.0s,baz=169,slow=1.3,SNR=7.1						
KSRS				PKPbc	PKPbc	12 25 08.2	0.0
	comp=Z,22nm,0.8s,baz=199,slow=2.1,SNR=42						
HARP	HAARP	151.89	302	P	PKiKP	12 25 08.9	+0.9
	baz=110,SNR=5.1						
J26L	Joseph Creek	151.89	307	P	PKiKP	12 25 08.9	+0.9
	baz=107						
KLU	Klutina	151.90	300	P	PKiKP	12 25 09.5	+1.4
	baz=111,SNR=9.3						
SCRK	Sand Creek	151.90	306	P	PKiKP	12 25 09.0	+0.9
	baz=108,SNR=28						
GLI	Glacier Island	152.21	298	P	PKiKP	12 25 09.8	+1.1
	baz=112						
PAX	Paxson	152.22	303	P	PKiKP	12 25 09.1	+0.3
	baz=109,SNR=12						
M24K	Tolsona, Glenn	152.23	301	P	PKiKP	12 25 10.1	+1.4
	baz=110,SNR=7.9						
SCM	Sheep Creek Mo	152.65	300	P	PKiKP	12 25 10.7	+1.1
	baz=110						
PWL	Port Wells	152.76	298	P	PKiKP	12 25 10.9	+1.1
	baz=111						
SEW	Seward	153.00	296	P	PKiKP	12 25 11.2	+0.9
	baz=112						
KNK	Knik Glacier	153.02	299	P	PKiKP	12 25 11.7	+1.4
	baz=110						
BMAR	Burnt Mountain	153.02	313	PKPdf	PKPdf	12 25 03.2	+0.5
DHY	Denali Highway	153.07	303	P	PKiKP	12 25 11.6	+1.0
	baz=107						
WAT6	Susitna Watana	153.08	302	P	PKiKP	12 25 11.1	+0.5
	baz=108						
SML	Sawmill	153.09	300	P	PKiKP	12 25 12.4	+1.9
	baz=109						
O22K	Cooper Landing	153.27	297	P	PKiKP	12 25 12.6	+1.8
	baz=111						
HDA	Harding Lake	153.27	306	P	PKiKP	12 25 11.4	+0.6
	baz=105,SNR=7.9						
ILAR	Eielson Array	153.34	307	PKP	PKPdf	12 25 02.7	-0.5
	comp=Z,5.5nm,1.1s,baz=319,slow=2.5,SNR=14						
ILAR				PKPbc	PKiKP	12 25 11.4	+0.6
	comp=Z,46nm,1.0s,baz=127,slow=1.1,SNR=62						
PMR	Palmer	153.38	299	P	PKiKP	12 25 12.0	+1.0
	baz=109						
BRSE	Bradley Lake S	153.47	295	P	PKiKP	12 25 12.1	+0.7
	baz=112						
RC01	Rabbit Creek A	153.49	298	P	PKiKP	12 25 13.2	+1.9

	baz=110						
WAT1	Susitna Watana	153.51	302	P	PKiKP	12 25 12.1	+0.8
	baz=107						
KDAK	Kodiak Island	153.57	290	PKPbc	PKiKP	12 25 12.9	+1.4
	comp=Z,20nm,0.6s,baz=198,slow=1.6,SNR=14						
KDAK	Kodiak Island	153.57	290	P	PKiKP	12 25 12.8	+1.3
	baz=114						
POKR	Poker Plat Res	153.65	307	P	PKiKP	12 25 12.8	+1.3
	baz=103,SNR=15						
OHAK	Old Harbor	153.68	288	P	PKiKP	12 25 13.5	+1.8
	baz=115						
COLA	College	153.76	307	PKIKP	PKPdf	12 25 04.8	+1.1
COLA	College	153.76	307		PKPdf	12 25 04.8	+1.1
TCOL	CIGO, UAF Yank	153.77	307	P	PKiKP	12 25 12.2	+0.5
	baz=104,SNR=6.7						
M22K	Willow	153.88	299	P	PKiKP	12 25 12.7	+0.7
	baz=108,SNR=9.4						
MCK	McKinley	153.93	304	P	PKiKP	12 25 13.3	+1.1
	baz=105,SNR=7.8						
CUT	Chulitna	154.15	301	P	PKiKP	12 25 13.8	+1.2
	baz=107						
NEA2	Nenana	154.21	306	P	PKiKP	12 25 14.1	+1.4
	baz=103,SNR=8.4						
TRF	Thorofare Moun	154.44	303	P	PKiKP	12 25 16.0	+2.6
	baz=105						
I23K	Minto, Yukon-K	154.45	307	P	PKiKP	12 25 14.8	+1.6
	baz=102						
O20K	Slope Mountain	154.48	295	P	PKiKP	12 25 15.7	+2.3
	baz=110						
Q19K	Cape Douglas,	154.54	292	P	PKiKP	12 25 15.8	+2.3
	baz=112						
SPCR	Spurr Chakacha	154.66	297	P	PKiKP	12 25 16.2	+2.4
	baz=108						
MJAR	Matsushiro Arr	154.68	145	PKPbc	PKiKP	12 25 14.7	+0.2
	comp=Z,14nm,1.1s,baz=183,slow=3.7,SNR=14						
MJAR				PKPab	PKPab	12 25 29.3	-0.1
	comp=Z,22nm,0.9s,baz=186,slow=4.5,SNR=14						
MAJO	Matsushiro	154.68	145	PKIKP	PKiKP	12 25 14.8	+0.2
MAJO	Matsushiro	154.68	145		PKiKP	12 25 14.8	+0.2
MAT	Matsushiro	154.68	145	PKP	PKPdf	12 25 04.3	-1.7
BPAW	Bear Paw Mtn.	154.90	304	P	PKiKP	12 25 16.6	+2.5
	baz=103						
MLY	Manley	155.00	306	P	PKPbc	12 25 16.4	+2.1
	baz=101						
TOLK	Toolik Lake Re	155.04	315	P	PKPbc	12 25 16.1	
	baz=94						
PPLA	Purkeypile	155.13	301	P	PKPab	12 25 32.2	+1.3
	baz=105						
COLD	Coldfoot	155.14	312	P	PKPbc	12 25 16.2	
	baz=97,SNR=8.3						
CAST	Castle Rocks	155.22	302	P	PKPab	12 25 32.0	+0.9
	baz=104						
O19K	Port Alsworth	155.31	294	P	PKPab	12 25 32.2	+0.8
	baz=109						
CHUM	Lake Minchumin	155.43	303	P	PKPab	12 25 32.6	+0.7
	baz=102						
P18K	Big Mountain,	155.47	292	P	PKPab	12 25 33.9	+1.7
	baz=110						
N19K	Bonanza Creek	155.59	296	P	PKPab	12 25 34.0	+1.2
	baz=108						
O18K	Koktuh Hills	155.62	293	P	PKPab	12 25 34.2	+1.4
	baz=109						
L20K	Farewell, AK	155.78	300	P	PKPab	12 25 34.4	+0.9
	baz=104						
M19K	Big River Lodg	155.86	298	P	PKPab	12 25 35.2	+1.4
	baz=105						
CN2	Changchun	155.90	116	*e*PKP	PKPdf	12 25 07.3	-0.1
CN2				PP	PP	12 29 19.1	+7.1
CN2				AMB	AMB		
	comp=Z,400nm,5.0s						
CN2				LR	LR		
	comp=Z,500nm,16.0s						
CN2				LR	LR		
	comp=Z,500nm,16.0s						
CN2				LR	LR		
	comp=Z,700nm,17.0s						
H21K	Melozitna Rive	155.96	308	P	PKPab	12 25 35.6	+1.4
	baz=98						
JSD	Sado	156.07	144	PKPab	PKPab	12 25 34.7	-0.6
L19K	White Mountain	156.15	299	PKPab	PKPab	12 25 34.9	-0.2
L19K	White Mountain	156.15	299	P	PKPab	12 25 37.5	+2.5
	baz=104						
J20K	Nowinta River	156.28	304	P	PKPab	12 25 38.8	+3.3
	baz=100						
A21K	Barrow	157.39	322	P	PKPab	12 25 42.4	+2.3
	baz=81						
GCSA	Galena City Sc	157.53	305	P	PKPab	12 25 43.2	+2.3
	baz=97,SNR=11						
BOD	Bodaibo	158.25	75	*e*PKIKP	PKPdf	12 25 08.6	-1.3
BOD				pmax	pmax		
	comp=Z,50nm,1.5s						
MDJ	Mudanjiang	158.42	120	PKP	PKPdf	12 25 10.3	-0.3
MDJ	Mudanjiang	158.42	120	IAMs_20	IAMs_20	13 30 45.5	
	comp=Z,628nm,20.0s						
UNV	Unalaska Valle	158.83	272	P	PKPab	12 25 48.6	+1.7
	baz=119						
USRK	Ussuriysk Ar.	159.13	125	PKPab	PKPab	12 25 48.2	-0.2
	comp=Z,14nm,1.0s,baz=242,slow=4.1,SNR=19						
USRK				PP	PP	12 29 31.6	+1.9
	comp=Z,0.8nm,0.5s,baz=214,slow=6.5,SNR=6.1						
TEY	Ternei	161.69	131	⇓*e*PKP2	PKPab	12 25 59.7	+0.2
TEY				pmax	pmax		
	comp=N,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=Z,20nm,1.2s						
TNA	Tin City	162.22	307	P	PKPab	12 26 02.5	+1.2
	baz=85						
KLR	Kul'dur	162.83	114	PKP	PKPdf	12 25 14.8	-0.4
	comp=Z,4.2nm,1.0s,baz=216,slow=2.4,SNR=4.3						
KLR				PKPab	PKPab	12 26 03.6	-0.8
	comp=Z,34nm,1.3s,baz=239,slow=3.5,SNR=7.4						
TIXI	Tiksi	163.27	30	PKPab	PKPab	12 26 06.3	+0.5
	comp=Z,15nm,0.9s,baz=327,slow=4.4,SNR=20						
TIXI				PP	PP	12 29 52.3	+0.7
	comp=Z,1.1nm,0.7s,baz=35,slow=3.3,SNR=4.2						
TIXI	Tiksi	163.27	30	PKPab	PKPab	12 26 06.6	+0.8
ZEA	Zeya	163.31	96	*i* PKIKP	PKPdf	12 25 09.8	-5.7
ZEA				*e*		12 26 05.9	
ZEA				*e*		12 51 23.0	
ZEA				pmax	pmax		
	comp=Z,10.0nm,2.1s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,200nm,8.6s						
YSS	Yuzh-Sakhalins	165.54	141	*i* PKIKP	PKPdf	12 25 17.0	-0.7
YSS				*e*		12 30 02.0	
GRNR	Gornyy	166.07	118	⇓*i*PKP2	PKPab	12 26 18.3	-0.4
GRNR				pmax	pmax		
	comp=Z,20nm,1.2s						
YAK	Yakutsk	166.75	66	*e*PKP2	PKPab	12 26 20.8	-0.6
YAK				*e*SS	SS	12 51 52.4	+59
YAK				pmax	pmax		
	comp=Z,24nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.6s						
YAK				pmax	pmax		
	comp=Z,223nm,5.3s						
YAK				pmax	pmax		
	comp=N,67nm,2.9s						
YAK				pmax	pmax		
	comp=E,205nm,2.9s						
NKL	Nikolayevsk	169.62	118	*e*PKIKP	PKPdf	12 25 18.9	-1.5
NKL				*e*		12 30 22.3	
BILL	Bilibino	169.89	338	PKPdf	PKPdf	12 25 17.6	-2.5
PET	Petropavlovsk	173.78	195	*i* PKIKP	PKPdf	12 25 24.9	+2.5
PET				*e*		12 30 44.3	
PET				*e*SS	SS	12 51 58.4	-3.4
PEA0B	Petropavlovsk-	173.97	190	PKP2	PKPab	12 26 54.5	+1.0
PEA0B	Petropavlovsk-	173.97	190	PKPab	PKPab	12 26 54.5	+1.0
PETK	Petropavlovsk-	173.97	190	PKP	PKPdf	12 25 21.4	-1.1
	comp=E,7.8nm,1.1s,baz=103,slow=6.5,SNR=6.0						
PETK				PKPab	PKPab	12 26 54.0	+0.5
	comp=E,22nm,1.0s,baz=119,slow=5.2,SNR=12						
PETK	Petropavlovsk-	173.97	190		PKPdf	12 25 21.0	-1.5
SEY	Seymchan	175.72	23	PKP	PKPdf	12 25 20.4	-2.3
	comp=E,6.0nm,1.0s,baz=295,slow=4.1,SNR=3.8						
SEY				PKPab	PKPab	12 27 01.1	0.0
	comp=E,6.7nm,1.1s,baz=360,slow=23,SNR=12						

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*ECX **10** 12:07:21.7±0.5, 32°.35N×115°.25W, h7^{km}±2^{km}, MD2.3, ML2.5*

*MEX **10** 12:07:23.5±1.0, 32°.44N×115°.07W, h5^{km}, MD3.5*

ISC 10 12:07:22.8±0.9**, 32°.34N**±0°.05×**115°.23W**±0°.03**, h12**^{km}±5^{km}**, n20, σ0^{s}.31**/32**, 4C-3D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.07	23	*i* P	Pg	12 07 25.1	-0.3
MBIG				*e*P	Pg	12 07 25.2	-0.1
MBIG				*i* S	Sg	12 07 27.1	-0.1
MBIG				*e*S	Sg	12 07 27.6	+0.5
CPBX	Cerro Prieto	0.10	322	*e*P	Pg	12 07 25.7	0.0
CPBX				*e*S	Sg	12 07 27.7	0.0
CPBX				IAML		12 07 32.6	
	comp=E,13µm,0.4s						
CPBX				⇓*e*		12 07 32.6	
CTLX	Tlaxcala, TLX	0.15	29	*e*P	Pb	12 07 27.2	-0.4
YUCAX	Ej. Yucat¡n	0.29	24	⇓*i*P	Pb	12 07 29.7	-0.2
YUCAX				*i* S	Sb	12 07 35.1	+0.3
EMSC	East Mesa	0.45	28	⇑*i*P	Pb	12 07 32.5	-0.2
DREC	Desert Rsrch C	0.50	339	*e*P	Pb	12 07 33.4	-0.2
DREC				*e*S	Sb	12 07 41.6	+0.8
SGL	Mount Signal	0.52	307	⇑*i*P	Pg	12 07 33.1	+0.2
COA	Coachella	0.53	10	*e*P	Pb	12 07 33.8	-0.3
YMD	Yuma Desert	0.62	70	*e*P	Pb	12 07 35.3	-0.3
YUH2	Yuha Desert	0.66	298	⇑*e*P	Pg	12 07 35.4	-0.2
IKP	In-Ko-Pah, Jac	0.80	293	⇑*i*P	Pg	12 07 38.2	-0.2
CRR	Carrizo Plain	0.83	311	*e*P	Pg	12 07 38.1	-0.8
ECBX	El Chinero	0.88	170	*e*P	Pn	12 07 41.1	+0.1
ECBX				*e*S	Sn	12 07 54.0	+0.3
ECBX				⇓*e*		12 07 55.1	
ECBX				IAML		12 07 55.1	
	comp=E,41nm,0.2s						
MONP2	Monument Peak	1.15	299	*e*P	Pb	12 07 44.7	0.0
CBX	Cerro Bola	1.21	269	*i* P	Pn	12 07 45.7	0.0
CBX				*i* S	Sb	12 08 01.7	+0.2
CBX	Cerro Bola	1.21	269	*e*P	Pn	12 07 45.7	0.0
CBX				*e*S	Sb	12 08 01.9	+0.4
TJIG	Tijuana	1.22	275	*i* P	Pn	12 07 45.7	-0.1
TJIG				*i* S	Sn	12 08 02.6	+0.3
TJIG	Tijuana	1.22	275	*e*P	Pn	12 07 45.6	-0.1
TJIG				*e*S	Sb	12 08 01.5	-0.2
BAR	Barrett	1.26	286	*e*P	Pn	12 07 46.5	+0.1
BAR				*e*S	Sb	12 08 02.8	-0.1
EML	El Monte Cty P	1.47	292	*e*P	Pb	12 07 49.8	-0.3

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*IDC **10** 12:10:09.8±1.3, 2°.87S×126°.91E, h0^{km}, mb3.5/3, mb1 3.7/6, mb1mx3.4/55, mbtmp3.6/6, ML3.5/3, MS3.7/2, Ms1 3.7/2, ms1mx2.7/36, Error ellipse: s-maj=27.7km s-min=23.0km az=42.0*

*DJA **10** 12:10:12.9±0.2, 3°S±2°×12°7E±°, h10^{km}, M4.0/15, mb4.3/8, mB4.8/4, MLv3.9/15, Mw(mB)4.1/4*

ISC 10 12:10:14.6±0.9**, 2°.72S**±0°.08×**126°.75E**±0°.06**, h35**^{km}**, n21, σ1^{s}.88**/22**, mb3.8**/3**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANI	Sanana	1.02	311	P	Pn	12 10 29.8	-2.6
SANI				S	Sn	12 10 43.0	-2.5
AAI	Ambon	1.73	124	P	Pn	12 10 44.7	+2.5
LBMI	Labuha	2.20	20	P	Pn	12 10 48.9	+0.1
LBMI				S	Sn	12 11 14.2	-0.6
MSAI	Masohi	2.26	106	P	Pn	12 10 50.7	+1.2
KMSI	Cibinong	4.29	320	P	Pn	12 11 16.9	-0.6
SWI	Sorong	4.87	68	P	Pn	12 11 23.7	-1.7
SIJI	Sorong	4.87	68	Pn	Pn	12 11 25.1	-0.4
	3.9nm,0.3s,baz=201,slow=22,SNR=11						
SIJI				Sn	Sn	12 12 19.4	-1.3
	3.8nm,0.3s,baz=179,slow=23,SNR=13						
GTOI	Gorontalo	5.01	312	P	Pn	12 11 30.7	+3.3
	0.1nm378nm15nm,0.5s						
APSI	Ampana	5.41	289	P	Pn	12 11 33.6	+0.7
	0.6nm2µm186nm,0.9s						
FAKI	Fak Fak	5.49	92	P	Pn	12 11 35.0	+1.0
	0.1nm13nm,1.1s						
MRSI	Marisa	5.77	303	P	Pn	12 11 37.5	-0.3
	0.2nm948nm43nm,0.6s						
BKSI	Bulukumba	7.10	248	P	Pn	12 11 58.1	+2.0
	0.1nm9.5nm,0.6s						
KAPI	Kappang	7.35	252	Pn	Pn	12 12 00.5	+1.0
	1.1nm,0.3s,baz=37,slow=20,SNR=1.7						
MPSI	Mapaga	7.50	294	P	Pn	12 12 02.8	+1.2
	0.1nm38nm,0.8s						
EDFI	Ende, Flores	7.82	220	P	Pn	12 12 07.4	+1.2
BATI	Baumata	8.04	202	LR	LR	12 16 05.8	
	comp=Z,123nm,18.4s,baz=22,slow=45						
WRA	Warramunga Arr	18.65	157	P	P	12 14 26.9	-2.7
	0.1nm,0.3s,baz=338,slow=12,SNR=7.8						
ASAR	Alice Springs	21.94	162	P	P	12 15 02.7	-2.6
	0.5nm,0.6s,baz=346,slow=11,SNR=8.1						
CMAR	Chiang Mai Arr	34.54	309	P	P	12 17 02.4	+2.3
	0.4nm,0.3s,baz=139,slow=7.2,SNR=4.8						
MKAR	Makanchi Array	62.90	327	P	P	12 20 38.7	+1.3
	0.5nm,0.7s,baz=115,slow=6.8,SNR=3.9						
AKASG	Malin Array Be	96.87	321	LR	LR	13 10 46.3	
	comp=Z,132nm,21.9s,baz=180,slow=38						

IDC 10 12:10:20.2±1.3**, 30°.68N**×**140°.58E, h0**^{km}**, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.5**/63**, mbtmp3.7**/5**, ML2.6**/1**, Error ellipse: s-maj=44.6km s-min=26.1km az=110.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.17	342	Pn	Pn	12 11 52.5	-0.2
	0.1nm,0.3s,baz=158,slow=13,SNR=6.9						
H11N2	WAKE ISLAND Hy	26.13	108	T	T	12 43 31.5	
	baz=301,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	26.13	109	T	T	12 43 30.3	
	baz=301,slow=75,SNR=9.8						
H11N3	WAKE ISLAND Hy	26.14	108	T	T	12 43 37.0	
	baz=301,slow=75,SNR=11						
H11S3	WAKE ISLAND Hy	26.59	111	T	T	12 44 07.2	
	baz=303,slow=75,SNR=47						
H11S1	WAKE ISLAND Hy	26.59	111	T	T	12 44 08.2	
	baz=303,slow=75,SNR=62						
H11S2	WAKE ISLAND Hy	26.61	111	T	T	12 44 05.6	
	baz=303,slow=75,SNR=36						
CMAR	Chiang Mai Arr	39.56	262	P	P	12 17 53.1	-0.1
	0.5nm,0.4s,baz=60,slow=7.8,SNR=2.0						
WRA	Warramunga Arr	50.68	188	P	P	12 19 21.5	-0.1
	1.4nm,0.7s,baz=6.0,slow=7.7,SNR=6.2						
ILAR	Eielson Array	55.29	30	P	P	12 19 55.4	+0.3
	0.4nm,0.8s,baz=277,slow=6.1,SNR=2.6						
INK	Inuvik	60.38	25	P	P	12 20 30.4	-0.4
	0.6nm,0.7s,baz=276,slow=3.8,SNR=2.4						
H03N2	Juan Fernandez	146.54	105	T	T	15 14 03.2	
	baz=281,slow=75,SNR=8.1						
H03N3	Juan Fernandez	146.55	105	T	T	15 14 04.6	
	baz=281,slow=75,SNR=9.9						
H03N1	Juan Fernandez	146.56	105	T	T	15 14 05.2	
	baz=281,slow=75,SNR=7.7						

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*KRNET **10** 12:14:06.1±0.1, 38°.99N×73°.24E, mb2.6*

*NNC **10** 12:14:13.3±8.9, 39°.20N×73°.55E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=71.7km s-min=47.0km az=169.0*

ISC 10 12:14:10.3±2.5**, 39°.3N**±0°.1×**73°.16E**±0°.07**, h10**^{km}**, n7, σ1^{s}.73**/12**, 7C-7D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.81	19	⇑*e*P	Pg	12 14 26.2	+0.2
	baz=11						
SFK				⇑*e*S	Sn	12 14 40.9	+0.6
	baz=11						
DRK	Karamyk	1.08	283	⇑*i*P	Pg	12 14 29.4	-1.6
	baz=94						
DRK				⇑*i*S	Sb	12 14 46.4	+0.9
	baz=94						
BTK	Batken	1.98	295	⇓*i*P	Pn	12 14 45.6	+1.6
	baz=0.0						
BTK				⇓*i*S	Sg	12 15 14.2	+0.3
	baz=0.0						
TRKS	Terek-Say	2.75	327	⇓*i*P	Pn	12 14 56.7	+2.0
	baz=28						
TRKS				⇓*i*S	Sb	12 15 32.8	-0.8
	baz=28						
AAK	Ala-Archa	3.54	16	⇑Pn	Pb	12 15 10.9	-2.2
	4.5nm,0.6s						
AAK				⇑Lg	Lg	12 16 03.4	
	6.1nm,1.1s						
TKM2	Tokmak 2	4.11	26	⇓Pg	Pg	12 15 27.8	-1.2
	0.8nm,0.5s						
TKM2				⇑Lg	Lg	12 16 21.9	
	4.0nm,0.9s						
KK02	Karatay Array	4.34	333	⇓Pn	Pn	12 15 19.3	+3.0
	3.0nm,0.9s,baz=142,slow=14						
KK02				⇓Sn	Sb	12 16 18.4	-0.7
	4.5nm,0.6s,baz=146,slow=26						

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*DJA **10** 12:19:00.8±0.7, 2°S±2°×12°8E±°, h18^{km}±7^{km}, M3.9/13, mb4.1/3, mB4.8/1, MLv3.8/13, Mw(mB)4.1/1*

*IDC **10** 12:19:04.7±2.3, 1°.92S×128°.24E, h85^{km}±29^{km}, mb3.3/2, mb1 3.6/5, mb1mx3.1/59, mbtmp3.8/5, Error ellipse: s-maj=24.6km s-min=18.8km az=142.0*

ISC 10 12:19:00.9±0.9**, 2°.03S**±0°.06×**128°.06E**±0°.05**, h33**^{km}**, n13, σ0^{s}.87**/17**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	1.49	338	P	Pn	12 19 26.3	+0.9
LBMI				S	Sn	12 19 44.3	+0.5
MSAI	Masohi	1.57	146	P	Pb	12 19 29.6	+0.2
MSAI				S	Sb	12 19 49.9	+1.1
AAI	Ambon	1.65	175	P	Pb	12 19 30.7	0.0
SANI	Sanana	2.07	269	P	Pn	12 19 33.6	+0.3
SANI				S	Sn	12 19 57.5	-0.5
TNTI	Ternate	2.87	346	P	Pn	12 19 44.6	+0.2
SWI	Sorong	3.41	70	P	Pn	12 19 52.3	+0.6
SWI				S	Sn	12 20 30.8	-0.2
SIJI	Sorong	3.41	70	P	Pn	12 19 52.6	+0.8
	20nm,0.3s,baz=202,slow=15,SNR=41						
SIJI				S	Sn	12 20 30.8	-0.3
	6.1nm,0.3s,baz=200,slow=22,SNR=10						
FAKI	Fak Fak	4.28	102	P	Pn	12 20 03.7	-0.1
APSI	Ampana	6.50	280	P	Pn	12 20 35.9	+1.5
KAPI	Kappang	8.80	250	P	Pn	12 21 12.4	+6.5
	1.4nm,0.3s,baz=149,slow=2.9,SNR=7.1						
WRA	Warramunga Arr	18.83	161	P	P	12 23 17.6	-0.5
	0.1nm,0.3s,baz=340,slow=11,SNR=7.2						
ASAR	Alice Springs	22.24	166	P	P	12 23 56.0	+0.9
	0.7nm,0.5s,baz=347,slow=11,SNR=8.1						
MKAR	Makanchi Array	63.04	326	P	P	12 29 23.0	-1.9
	1.0nm,0.7s,baz=118,slow=7.4,SNR=5.2						

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*IDC **10** 12:22:41.4±1.0, 4°.17S×129°.47E, h0^{km}, mb4.3/6, mb1 4.2/10, mb1mx3.9/54, mbtmp4.1/10, ML3.7/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/37, Error ellipse: s-maj=39.7km s-min=20.3km az=78.0*

*DJA **10** 12:22:45.4±1.0, 4°S±6°×12°9E±°, h28^{km}±9^{km}, M3.8/6, MLv3.8/6*

ISC 10 12:22:45.9±0.6**, 4°.17S**±0°.05×**129°.50E**±0°.05**, h36**^{km}**, n25, σ2^{s}.13**/28**, mb4.2**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.54	131	P	Pn	12 22 56.6	-0.5
MSAI	Masohi	0.99	325	P	Pn	12 23 01.7	-1.6
MSAI				S	Sn	12 23 13.7	-2.4
AAI	Ambon	1.39	290	P	Pn	12 23 07.6	-1.1
AAI				S	Sn	12 23 25.1	-0.6
FAKI	Fak Fak	3.01	66	P	Pn	12 23 30.4	-0.7
FAKI	Fak Fak	3.01	66	P	Pn	12 23 31.3	+0.2
SIJI	Sorong	3.72	28	Pn	Pn	12 23 40.1	-0.7
	5.4nm,0.3s,baz=207,slow=10.0,SNR=17						
SIJI				Sn	Sn	12 24 20.9	-2.5
	16nm,0.3s,baz=268,slow=9.5,SNR=5.3						
SWI	Sorong	3.72	28	P	Pn	12 23 40.1	-0.7
SWI				S	Sn	12 24 22.0	-1.5
LBMI	Labuha	4.03	330	P	Pn	12 23 43.7	-1.4
BATI	Baumata	8.34	224	LR	LR	12 27 47.8	
	comp=Z,182nm,18.2s,baz=63,slow=37						
KAPI	Kappang	9.75	265	P	Pn	12 25 14.9	+11
	14nm,0.4s						
KNRA	Kununurra	11.46	184	P	Pn	12 25 31.0	+3.9
FITZ	Fitzroy Crossi	14.35	195	Pn	Pn	12 26 06.9	+0.3
	baz=22,slow=13						
WRAB	Tennant Creek	16.37	164	P	P	12 26 33.9	-1.6
WRA	Warramunga Arr	16.38	164	Pn	Pn	12 26 31.6	-1.5
	0.2nm,0.3s,baz=344,slow=13,SNR=7.8						
WRA				Sn	Sn	12 29 26.4	-7.4
	0.0nm,0.3s,baz=350,slow=23,SNR=2.8						
WRA				LR	LR	12 32 55.1	
	comp=Z,142nm,19.4s,baz=240,slow=38						
QIS	Mount Isa	19.03	150	P	Pn	12 27 06.3	+0.4
ASAR	Alice Springs	19.85	168	P	Pn	12 27 14.9	-0.7
	0.4nm,0.3s,baz=348,slow=10.0,SNR=33						
ASAR				S	S	12 30 52.8	-2.8
	baz=347,slow=23,SNR=3.1						
ASAR				PcP	PcP	12 31 31.3	+0.5
	0.1nm,0.3s,baz=6.6,slow=1.4,SNR=6.9						
WRKA	Warakurna	20.78	183	P	Pn	12 27 26.8	+0.2
OOD	Oodnadatta	24.23	167	P	P	12 28 00.8	+1.4
CMAR	Chiang Mai Arr	37.58	308	P	P	12 29 57.9	+0.7
	0.9nm,0.3s,baz=140,slow=7.2,SNR=6.5						
USRK	Ussuriysk Ar.	48.20	2	P	P	12 31 24.0	+1.2
	1.2nm,0.5s,baz=190,slow=7.3,SNR=3.0						
MKAR	Makanchi Array	65.60	326	P	P	12 33 27.0	+0.8
	3.4nm,0.6s,baz=114,slow=8.3,SNR=42						
KURBB	Kurchatov Arra	69.85	328	P	P	12 33 53.8	+0.9
	2.8nm,0.5s,baz=128,slow=5.5,SNR=23						
BVAR	Borovoye Array	75.42	328	P	P	12 34 26.9	+1.0
	1.3nm,0.6s,baz=178,slow=8.9,SNR=5.5						
GEYT	Alibeck	78.02	310	LR	LR	13 15 44.0	
	comp=Z,724nm,18.2s,baz=65,slow=41						
AKTO	Aktyubinsk	81.54	322	P	P	12 35 01.0	+1.2
	1.8nm,0.6s,baz=137,slow=8.0,SNR=5.9						

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*JMA **10** 12:37:15.8±0.2, 30°.16N×141°.53E, h47^{km}, M4.5*

*IDC **10** 12:37:17.4±1.4, 30°.06N×141°.43E, h76^{km}±14^{km}, mb3.6/14, mb1 3.7/18, mb1mx3.5/53, mbtmp4.0/18, MS4.4/2, Ms1 4.4/2, ms1mx3.0/42, Error ellipse: s-maj=27.3km s-min=10.0km az=75.0*

*NEIC **10** 12:37:18.2±1.5, 30°.09N±0°.07×141°.5E±0°.1, h78^{km}±9^{km}, mb4.3/11, Error ellipse: s-maj=18.2km s-min=9.1km az=70.0*

ISC 10 12:37:16.9±0.6**, 30°.14N**±0°.05×**141°.53E**±0°.09**, h74**^{km}**, n62, σ1^{s}.72**/58**, mb4.1**/17**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.09	169	P	Pn	12 38 04.1	+0.7
CBIJ				*e*S	Sn	12 38 38.3	-1.0
JCJ	Chichijima	3.09	169	P	Pn	12 38 04.4	+1.0
	17nm,0.3s,baz=349,slow=24,SNR=11						
JCJ				S	Sn	12 38 38.3	-0.9
	46nm,0.3s,baz=279,slow=22,SNR=10						
JHCJ	Hachijojimakas	3.27	334	*e*S	Sn	12 38 41.6	-2.0
JHJ2	Mitsune	3.30	334	*e*S	Sn	12 38 43.2	-1.1
JHJ2	Mitsune	3.30	334	Pn	Pn	12 38 07.5	+1.3
JHJ	Hachijo jima 2	3.32	334	P	Pn	12 38 07.5	+1.0
	20nm,0.3s,baz=96,slow=22,SNR=9.1						
JHJ				S	Sn	12 38 42.8	-2.0
	77nm,0.3s,baz=256,slow=22,SNR=13						
JMKN	Mikurajimanish	4.08	337	S	Sn	12 39 02.4	-1.1
BSO1	Boso 1	4.52	354	P	Pn	12 38 24.1	+1.7
BSO3	Boso 3	4.72	350	P	Pn	12 38 27.0	+1.6
TTO1	TONANKAI O.B.S	5.32	312	P	Pn	12 38 36.1	+2.6
JOD2	Odawara 2	5.50	339	P	Pn	12 38 39.0	+2.7
JHU	Hanno	6.00	342	P	Pn	12 38 44.8	+1.8
JYT	Yasato	6.17	350	*e*S	Sn	12 39 52.8	-1.7
JYT	Yasato	6.17	350	Pn	Pn	12 38 47.1	+1.7
JRY	Ryogami san	6.26	340	P	Pn	12 38 48.9	+2.3
JHO	Hitachi	6.50	353	P	Pn	12 38 50.6	+0.7
JHO				*e*S	Sn	12 39 59.0	-3.6
JAG	Ashikaga	6.50	345	P	Pn	12 38 50.7	+0.8
MJAR	Matsushiro Arr	6.96	337	P	Pn	12 38 58.2	+2.0
	0.3nm,0.3s,baz=163,slow=12,SNR=9.5						
MJAR				S	Sn	12 40 06.4	-7.5
	0.1nm,0.3s,baz=140,slow=17,SNR=1.5						
MAJO	Matsushiro	6.96	337	Pn	Pn	12 38 58.7	+2.5
JWT	Wachi	7.27	316	Pn	Pn	12 39 03.6	+3.1
JMM	Marumori	7.73	356	Pn	Pn	12 39 07.5	+0.9
JSD	Sado	8.33	342	Pn	Pn	12 39 14.1	-0.7
JNU	Nakatsue	9.55	291	Pn	Pn	12 39 31.1	-0.6
KSRS	Korea Array	13.45	306	P	Pn	12 40 28.0	+3.5
	0.1nm,0.3s,baz=115,slow=11,SNR=3.0						
ASAJ	Asahikawa	13.97	3	P	Pn	12 40 31.6	+0.3
	0.5nm,0.3s,baz=245,slow=10,SNR=6.4						
JKA	Kamikawa-asahi	13.97	3		Pn	12 40 31.6	+0.3
YHNB	Yeheng	18.70	258	P	P	12 41 29.2	-0.3

YHNB				IAmb	IAmb	12 41 53.3	
	comp=Z,38nm,1.3s						
YULB	Yu-li	19.26	254	P	P	12 41 35.8	+0.2
YULB				IAmb	IAmb	12 41 40.5	
	comp=Z,20nm,0.9s						
SSLB	Suanglung	19.39	256	P	Pn	12 41 37.7	-1.1
SSLB				IAmb	IAmb	12 41 52.5	
	comp=Z,21nm,1.2s						
KLR	Kul'dur	20.46	341	P	Pn	12 41 53.1	+2.0
	comp=Z,2.4nm,0.5s,baz=175,slow=8.9,SNR=12						
H11N2	WAKE ISLAND Hy	25.18	108	T	T	13 10 27.7	
	baz=300,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	25.18	108	T	T	13 10 26.4	
	baz=300,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	25.20	108	T	T	13 10 33.7	
	baz=300,slow=75,SNR=15						
H11S3	WAKE ISLAND Hy	25.63	111	T	T	13 11 05.7	
	baz=302						
H11S1	WAKE ISLAND Hy	25.63	111	T	T	13 11 05.7	
	baz=302,slow=74						
H11S2	WAKE ISLAND Hy	25.65	111	T	T	13 11 04.3	
	baz=302,slow=74						
SONM	Songino Array	32.17	313	P	P	12 43 37.5	-0.1
	comp=Z,1.0nm,0.6s,baz=126,slow=9.5,SNR=3.0						
CMAR	Chiang Mai Arr	40.30	263	P	P	12 44 47.0	-0.2
	comp=Z,0.5nm,0.3s,baz=57,slow=6.6,SNR=1.9						
KAPI	Kappang	40.71	215	LR	LR	13 01 28.9	
	comp=Z,307nm,21.5s,baz=227,slow=36						
BATI	Baumata	43.65	206	LR	LR	13 03 58.4	
	comp=Z,764nm,18.9s,baz=192,slow=37						
ZALV	Zalesovo Beam	46.84	317	P	P	12 45 39.1	-0.1
	comp=Z,1.0nm,0.4s,baz=97,slow=7.6,SNR=4.5						
ZALV				PcP	PcP	12 47 11.6	+0.5
	comp=Z,1.5nm,0.6s,baz=116,slow=3.8,SNR=5.8						
MK31	Makanchi Array	48.13	308	P	P	12 45 49.5	+0.1
MKAR	Makanchi Array	48.13	308	P	P	12 45 49.3	-0.1
	comp=Z,1.1nm,0.6s,baz=88,slow=9.2,SNR=15						
MKAR				PcP	PcP	12 47 15.3	-0.6
	comp=Z,0.3nm,0.5s,baz=76,slow=8.1,SNR=4.2						
MKAR	Makanchi Array	48.13	308	P	P	12 45 48.5	-0.9
WB0	Warramunga Arr	50.09	189	P	P	12 46 04.5	-0.1
WB0				IAmb	IAmb	12 46 31.2	
	comp=Z,2.8nm,1.1s						
WR0	Warramunga Arr	50.27	189	P	P	12 46 06.0	+0.2
WR0				IAmb	IAmb	12 46 09.9	
	comp=Z,5.9nm,1.4s						
WB2	Warramunga Arr	50.27	189	P	P	12 46 05.7	-0.2
WRA	Warramunga Arr	50.27	189	P	P	12 46 05.6	-0.3
	comp=Z,0.5nm,0.3s,baz=6.2,slow=7.7,SNR=12						
WRA	Warramunga Arr	50.27	189	P	P	12 46 05.3	-0.6
KURK	Kurchatov	50.47	313	P	P	12 46 07.5	+0.4
KURK	Kurchatov	50.47	313	IAmb	IAmb	12 46 08.0	
	comp=Z,3.4nm,0.4s						
KURBB	Kurchatov Arra	50.53	313	P	P	12 46 07.5	-0.1
	comp=Z,1.7nm,0.3s,baz=92,slow=9.9,SNR=20						
ASAR	Alice Springs	54.00	189	P	P	12 46 33.5	0.0
	comp=Z,0.6nm,0.4s,baz=0.8,slow=5.2,SNR=27						
BVAR	Borovoye Array	55.44	316	P	P	12 46 43.7	+0.1
	comp=Z,1.5nm,0.6s,baz=147,slow=3.0,SNR=7.2						
INK	Inuvik	60.52	25	P	P	12 47 20.4	+1.5
	comp=Z,0.2nm,0.4s,baz=291,slow=4.9,SNR=4.7						
ARU	Arti	61.68	321	P	P	12 47 27.7	+0.7
	comp=Z,0.7nm,0.4s,baz=344,slow=4.4,SNR=4.5						
ABKAR	Akbulak array	62.58	313	P	P	12 47 33.6	+0.5
ABKAR				IAmb	IAmb	12 47 34.3	
	comp=Z,3.5nm,1.0s						
ARCES	ARCESS Array B	70.48	340	P	P	12 48 23.9	+0.8
	comp=Z,7.1nm,1.1s,baz=56,slow=7.4,SNR=6.2						
FINES	FINESS Array B	74.97	333	P	P	12 48 50.7	+0.9
	comp=Z,0.8nm,0.3s,baz=86,slow=4.0,SNR=8.0						
AKASG	Malin Array Be	79.83	323	P	P	12 49 16.6	-0.5
	comp=Z,0.3nm,0.3s,baz=48,slow=5.5,SNR=4.2						
AKASG	Malin Array Be	79.83	323	IAmb	IAmb	12 49 27.8	
	comp=Z,4.1nm,1.5s						
TXAR	Lajitas Array	94.23	53	P	P	12 50 28.3	0.0
	comp=Z,0.1nm,0.5s,baz=356,slow=3.8,SNR=2.2						

IDC 10 13:01:36.2±6.9, 4°.25S×129°.37E, h0^{km}, mb4.0/1, mb1 3.5/4, mb1mx3.1/34, mbtmp3.3/4, ML3.0/2, Error ellipse: s-maj=196.6km s-min=25.6km az=103.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.86	29	Pn	Pn	13 02 37.6	+0.7
	1.4nm,0.3s,baz=41,slow=21,SNR=14						
SIJI				Sn	Sn	13 03 22.3	-0.7
	0.9nm,0.3s,baz=248,slow=22,SNR=1.8						
WRA	Warramunga Arr	16.33	163	Pn	Pn	13 05 27.2	+0.1
	baz=345,slow=12,SNR=1.8						
ASAR	Alice Springs	19.79	168	P	P	13 06 08.8	+0.5
	0.0nm,0.3s,baz=349,slow=10.0,SNR=3.7						
STKA	Stephens Creek	29.78	159	P	P	13 07 44.4	-0.4
	1.3nm,0.7s,baz=322,slow=12,SNR=3.4						

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*NEIC **10** 13:07:22.8±1.4, 4°.23S±0°.02×129°.60E±0°.07, h29^{km}±6^{km}, mb4.5/31, Error ellipse: s-maj=9.7km s-min=1.7km az=79.0*

*DJA **10** 13:07:22.8±0.3, 4°S±3°×13°0E±°, h10^{km}, M4.4/13, mB5.2/6, mb4.4/13, MLv4.2/11, Mw(mB)4.6/6*

*IDC **10** 13:07:25.5±1.8, 4°.14S×129°.69E, h52^{km}±17^{km}, mb3.8/10, mb1 4.0/15, mb1mx3.8/36, mbtmp4.1/15, ML3.9/4, Error ellipse: s-maj=19.0km s-min=10.2km az=94.0*

ISC 10 13:07:23.2±0.4, 4°.25S±0°.05×129°.57E±0°.05, h35^{km}, n95, σ1^{s}.82/96, mb4.4/21, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.10	325	P	Pn	13 07 39.3	-2.8
MSAI				S	Sn	13 07 50.2	-5.9
AAI	Ambon	1.48	292	P	Pn	13 07 44.5	-2.8
AAI				S	Sn	13 08 01.7	-3.7
FAKI	Fak Fak	2.99	64	P	Pn	13 08 09.7	+1.6
FAKI	Fak Fak	2.99	64	Pn	Pn	13 08 08.3	+0.2
SIJI	Sorong	3.76	27	P	Pn	13 08 19.2	+0.4
	12nm,0.3s,baz=278,slow=23,SNR=25						
SIJI				S	Sn	13 09 01.2	-0.7
	12nm,0.3s,baz=87,slow=23,SNR=8.0						
SWI	Sorong	3.76	27	P	Pn	13 08 19.1	+0.3
SAUI	Saumlaki	4.09	155	Pn	Pn	13 08 23.5	+0.2
LBMI	Labuha	4.14	330	P	Pn	13 08 25.2	+1.2
SANI	Sanana	4.19	301	P	Pn	13 08 23.8	-0.8
TNTI	Ternate	5.45	336	P	Pn	13 08 41.4	-0.6
	0.2nm43nm,0.9s						
TNTI	Ternate	5.45	336	Pn	Pn	13 08 41.4	-0.6
SOEI	Soe	7.59	224	P	Pn	13 09 15.5	+4.0
	0.3nm62nm,1.0s						
SOEI	Soe	7.59	224	Pn	Pn	13 09 10.9	-0.6
BATI	Baumata	8.32	224	P	Pn	13 09 27.7	+6.2
	2.1nm,0.3s,baz=82,slow=8.0,SNR=5.2						
BATI	Baumata	8.32	224	P	Pn	13 09 33.5	+12
MMRI	Maumere	8.48	239	P	Pn	13 09 28.1	+4.4
MMRI	Maumere	8.48	239	Pn	Pn	13 09 24.6	+0.9
APSI	Ampana	8.57	293	P	Pn	13 09 25.7	+0.8
	925nm62nm,0.9s						
MTN	Manton Dam	8.68	170		Pn	13 09 25.0	-1.4
SGSI	Sangihe	8.85	333	P	Pn	13 09 28.4	-0.4
	240nm,0.4s						
MRSI	Marisa	8.95	301	P	Pn	13 09 30.9	+0.8
	25nm,1.4s						
EDFI	Ende, Flores	9.01	240	P	Pn	13 09 31.0	0.0
	17nm,1.4s						
SMPI	Sarmi	9.40	76	P	Pn	13 09 37.5	+1.2
	14nm,1.5s						
BNSI	Bone	9.43	269	P	Pn	13 09 39.5	+2.8
	21nm,0.5s						
BKSI	Bulukumba	9.47	263	P	Pn	13 09 38.9	+1.7
	18nm,1.4s						
SPSI	Sidrap Palu	9.78	271	P	Pn	13 09 44.9	+3.5
	1μm16nm,1.7s						
TTSI	Tana Toraja	9.80	277	P	Pn	13 09 39.9	-1.8
	702nm6.1nm,0.4s						
KAPI	Kappang	9.81	265	P	Pn	13 09 44.3	+2.4
	0.3nm,0.3s,baz=125,slow=17,SNR=2.0						
KAPI	Kappang	9.81	265	Pn	Pn	13 09 42.6	+0.7
TOLI2	Tolitoli	10.27	301	Pn	Pn	13 09 47.9	-0.2
KNRA	Kununurra	11.38	184	Pn	Pn	13 10 03.2	-0.3
FITZ	Fitzroy Crossi	14.29	195	P	Pn	13 10 46.2	+3.0
	baz=22,slow=12,SNR=1.3						
SRBI	Singaraja	14.77	254	P	P	13 10 58.8	+3.6
KMMI	Kalianget	15.77	259	P	Pn	13 11 00.1	-2.7
JAGI	Jajag, Banyuwa	15.88	254	P	P	13 11 13.5	+5.9
JAGI	Jajag, Banyuwa	15.88	254	P	P	13 11 07.0	-0.6
JAGI				IAmb	IAmb	13 11 16.7	
	comp=Z,66nm,1.2s						
WB0	Warramunga Arr	16.13	163		Pn	13 11 06.2	-1.2
WB0				IAmb	IAmb	13 11 18.1	
	comp=Z,28nm,1.1s						
BLJI	Banyuglugur	16.26	257	P	P	13 11 21.2	+9.4
WRAB	Tennant Creek	16.27	164		Pn	13 11 09.1	-0.2
WRAB				IAmb	IAmb	13 11 19.8	
	comp=Z,38nm,1.3s						
WRA	Warramunga Arr	16.28	164	P	Pn	13 11 06.5	-2.9
	comp=Z,0.2nm,0.3s,baz=348,slow=13,SNR=9.8						
WRA				S	Sn	13 14 02.5	-6.5
	baz=345,slow=21,SNR=2.6						
WRA	Warramunga Arr	16.28	164		Pn	13 11 08.3	-1.0
WB2	Warramunga Arr	16.28	164	Pn	Pn	13 11 07.5	-1.9
WB2				IAmb	IAmb	13 11 31.3	
	comp=Z,29nm,1.1s						
WR0	Warramunga Arr	16.35	163	Pn	Pn	13 11 09.0	-1.3
COEN	Coen	16.53	127		Pn	13 11 12.2	-0.4
PMG	Port Moresby	18.20	107	P	P	13 11 32.8	-0.5
PMG				IAmb	IAmb	13 11 41.8	
	comp=Z,46nm,1.3s						
SBUM	Sibu	18.57	291		Pn	13 11 38.6	+0.8
PSA00	Pilbara Seismi	19.64	208		Pn	13 11 50.3	-0.3
PSA00				IAmb	IAmb	13 11 57.0	
	comp=Z,21nm,0.8s						
PSA00	Pilbara Seismi	19.64	208	P	Pn	13 11 50.2	-0.4
PSA00				IAmb	IAmb	13 11 57.0	
	comp=Z,24nm,1.4s						
AS31	Alice Springs	19.75	168		Pn	13 11 51.8	-0.2
ASAR	Alice Springs	19.75	168	P	Pn	13 11 51.9	-0.1
	comp=Z,0.4nm,0.3s,baz=347,slow=9.3,SNR=64						
ASAR				S	Sn	13 15 33.5	+0.5
	baz=352,slow=20,SNR=4.3						
ASAR	Alice Springs	19.75	168	P	Pn	13 11 52.3	+0.3
CTAO	Charters Tower	22.63	135	P	P	13 12 23.3	+1.9
CTAO				IAmb	IAmb	13 12 29.6	
	comp=Z,16nm,1.0s						
DBJI	Dramaga	22.83	263	P	P	13 12 36.4	+13
STKA	Stephens Creek	29.72	159	P	P	13 13 27.0	+0.8
	comp=Z,2.4nm,0.8s,baz=321,slow=9.8,SNR=3.6						
STKA	Stephens Creek	29.72	159	P	P	13 13 26.1	-0.1
IPM	Ipoh	29.80	287	P	P	13 13 27.1	-0.1
SRIT	Nakonsritamara	32.49	293	P	P	13 13 51.1	+0.3
ARMA	Armidale	33.34	144	P	P	13 13 57.0	-1.2
ARMA				IAmb	IAmb	13 14 17.5	
	comp=Z,13nm,1.4s						
CM31	Chiang Mai Arr	37.68	308	P	P	13 14 34.8	-0.7
CM31				IAmb	IAmb	13 14 42.9	
	comp=Z,6.9nm,0.9s						
CMAR	Chiang Mai Arr	37.68	308	P	P	13 14 36.3	+0.8
	comp=Z,1.5nm,0.8s,baz=138,slow=7.0,SNR=16						
CMAR	Chiang Mai Arr	37.68	308	P	P	13 14 34.3	-1.2
CHTO	Chiang Mai	37.88	308	P	P	13 14 36.4	-0.8
CHTO				IAmb	IAmb	13 14 44.4	
	comp=Z,9.0nm,1.0s						
MJAR	Matsushiro Arr	41.37	11	P	P	13 15 04.6	-1.5
	comp=Z,2.2nm,0.8s,baz=183,slow=9.8,SNR=4.4						
MAT	Matsushiro	41.38	11	P	P	13 15 05.9	-0.2
KSRS	Korea Array	41.52	358	P	P	13 15 05.6	-1.6
	comp=Z,0.7nm,0.7s,baz=173,slow=11,SNR=3.0						
LZH	Lanzhou	46.79	331	*e*P	P	13 15 50.0	+0.3
LZH				pP	sP	13 16 00.7	-1.8
LZH				sP	pwP	13 16 07.0	+2.6
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
HHC	Hu-ho-hao-te	47.81	342	*e*P	P	13 16 00.6	+3.1
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,80nm,9.2s						
USRK	Ussuriysk Ar.	48.28	2	P	P	13 16 00.9	+0.1
ASAJ	Asahikawa	49.55	12	P	P	13 16 09.6	-1.0
	comp=Z,11nm,1.1s,baz=94,slow=14,SNR=3.2						
GTA	Gaotai	51.37	331	⇓P	P	13 16 25.1	+0.4
GTA				pP	pP	13 16 31.2	-2.7
GTA				sP	sP	13 16 36.5	-1.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,140nm,7.6s						
GTA				LR	LR		
	comp=N,260nm,18.2s						
GTA				LR	LR		
	comp=E,280nm,17.8s						
GTA				LR	LR		
	comp=Z,430nm,17.1s						
ULN	Ulaanbaatar	55.53	342	P	P	13 16 55.0	-0.1
ULN				IAmb	IAmb	13 17 05.2	
	comp=Z,4.2nm,0.9s						
SONM	Songino Array	55.71	341	P	P	13 16 56.9	+0.6
	comp=Z,1.7nm,0.8s,baz=158,slow=4.7,SNR=7.2						
SONM	Songino Array	55.71	341	P	P	13 16 56.7	+0.4
SONM				IAmb	IAmb	13 16 58.8	
	comp=Z,4.4nm,1.2s						
WMQ	Urumqi	60.87	326	*e*P	P	13 17 35.6	+3.2
MK31	Makanchi Array	65.70	326	P	P	13 18 04.4	+0.1
MK31				IAmb	IAmb	13 18 11.0	
	comp=Z,2.9nm,0.9s						
MKAR	Makanchi Array	65.70	326	P	P	13 18 04.7	+0.4
	comp=Z,1.1nm,0.6s,baz=113,slow=7.2,SNR=14						
MKAR	Makanchi Array	65.70	326	P	P	13 18 04.4	+0.1
MAKZ	Makanchi	65.89	326	P	P	13 18 04.9	-0.6
ZAA0	Zalesovo Array	68.94	334	P	P	13 18 24.6	0.0
ZALV	Zalesovo Beam	68.94	334	P	P	13 18 24.5	-0.1
	comp=Z,3.2nm,0.9s,baz=116,slow=5.0,SNR=11						
ZALV	Zalesovo Beam	68.94	334	P	P	13 18 24.6	0.0
KURK	Kurchatov	69.96	328	P	P	13 18 30.0	-1.0
KKAR	Karatay Array	71.00	318	P	P	13 18 37.6	0.0
BRVK	Borovoye	75.59	328	P	P	13 19 04.6	+0.2
BRVK				IAmb	IAmb	13 19 12.7	
	comp=Z,7.4nm,1.1s						
TIXI	Tiksi	75.75	360	P	P	13 19 05.1	+0.2
TIXI				IAmb	IAmb	13 19 12.2	
	comp=Z,4.2nm,1.1s						
MAW	Mawson	77.34	201	P	P	13 19 14.8	+0.8
NRIK	Noril'sk	78.80	346	P	P	13 19 22.0	-0.1
	comp=Z,2.8nm,0.9s,baz=89,slow=8.4,SNR=4.3						
NRIK	Noril'sk	78.80	346	P	P	13 19 22.2	+0.1
NRIK				IAmb	IAmb	13 19 29.4	
	comp=Z,4.0nm,0.8s						
ABKAR	Akbulak array	80.10	321	P	P	13 19 29.7	+0.1
ABKAR	Akbulak array	80.10	321	P	P	13 19 29.0	-0.6
ABKAR				IAmb	IAmb	13 19 36.6	
	comp=Z,16nm,1.5s						
RAYN	Ar Rayn	86.24	294	P	P	13 20 02.2	+0.3
ILAR	Eielson Array	91.06	25	P	P	13 20 22.6	-1.2
	comp=Z,0.3nm,0.7s,baz=280,slow=5.4,SNR=2.7						
ULM	Lac du Bonnet	120.37	32	PKP	PKiKP	13 26 12.2	+1.1
	comp=Z,1.6nm,0.4s,baz=315,slow=1.4,SNR=2.9						
TORD	Torodi Ar. Bea	127.81	283	PKP	PKPdf	13 26 26.3	+0.1
	comp=Z,0.4nm,0.8s,baz=126,slow=2.5,SNR=3.8						
CPUP	Villa Florida	148.88	168	PKPbc	PKPbc	13 27 08.5	+0.4
	baz=162,slow=6.4						

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*JMA **10** 13:08:35.3, 30°.75N×130°.84E, h51^{km}±1^{km}, M3.0*

*IDC **10** 13:08:37.5±5.7, 30°.82N×131°.02E, h82^{km}±45^{km}, mb3.4/2, mb1 3.3/5, mb1mx3.0/45, mbtmp3.4/5, ML2.7/3, MS4.3/1, Ms1 4.3/1, ms1mx3.0/30, Error ellipse: s-maj=58.0km s-min=39.4km az=46.0*

ISC 10 13:08:35.4±1.0, 30°.73N±0°.04×130°.81E±0°.06, h49^{km}±9^{km}, n21, σ0^{s}.93/30, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTN	Tanegashima 3	0.16	119	P	Pn	13 08 43.3	-0.1
JTN				S	Sn	13 08 49.5	+0.4
JMTN	Minamitane	0.34	167	P	Pn	13 08 45.0	+0.1
JMTN				S	Sn	13 08 52.7	+1.1
JTSR	Tashiro 2	0.44	12	P	Pn	13 08 45.6	-0.4
JTSR				S	Sn	13 08 53.3	-0.2
JYAK	Yakushimahirau	0.56	208	P	Pn	13 08 47.5	+0.2
JYAK				S	Sn	13 08 56.7	+0.8
JKC	Kuchinoerabu	0.60	243	P	Pn	13 08 48.1	+0.3
JKC				S	Sn	13 08 57.7	+1.0
JSU	Suzuyama	0.83	338	P	Pn	13 08 50.8	-0.1
JSU				S	Sn	13 09 02.5	+0.4
JNAR	Kushima--Naru	0.88	26	P	Pn	13 08 51.9	+0.4
JNAR				*e*S	Sn	13 09 04.0	+0.7
JNKG	Nichinankitago	1.04	27	P	Pn	13 08 54.3	+0.6
JNKG				*e*S	Sn	13 09 08.8	+1.6
JTZ	Takazaki	1.19	11	P	Pn	13 08 55.5	-0.2
JTZ				*e*S	Sn	13 09 11.0	+0.3
JNN	Nakanoshima	1.21	223	P	Pn	13 08 56.2	+0.3
JNN				S	Sn	13 09 12.1	+1.0
JSJ	Shimokoshiki	1.33	315	P	Pn	13 08 57.0	-0.6
JSJ				S	Sn	13 09 14.1	-0.1
JZO	Okuchi	1.42	353	P	Pn	13 08 59.0	+0.2
JZO				*e*S	Sn	13 09 16.5	+0.2
JNU	Nakatsue	2.38	1	P	Pn	13 09 13.3	+1.3
	4.6nm,0.3s,baz=341,slow=3.5,SNR=36						
JNU				S	Sn	13 09 41.7	+1.7
	4.3nm,0.3s,baz=127,slow=8.9,SNR=7.8						
KSRS	Korea Array	7.12	341	P	Pn	13 10 19.4	+2.5
	0.2nm,0.3s,baz=169,slow=15,SNR=2.6						
MJAR	Matsushiro Arr	8.46	45	P	Pn	13 10 34.6	-0.7
	0.1nm,0.3s,baz=244,slow=13,SNR=2.5						
H11N2	WAKE ISLAND Hy	34.29	100	T	T	13 51 20.8	
	baz=294,slow=75,SNR=8.8						
H11N1	WAKE ISLAND Hy	34.30	100	T	T	13 51 25.3	
	baz=294,slow=75,SNR=6.0						
H11N3	WAKE ISLAND Hy	34.31	100	T	T	13 51 20.7	
	baz=294,slow=75,SNR=7.9						
MKAR	Makanchi Array	40.42	307	P	P	13 16 08.5	-0.3
	0.2nm,0.4s,baz=89,slow=7.7,SNR=5.1						
ARU	Arti	55.34	320	LR	LR	13 42 22.3	
	comp=Z,305nm,20.8s,baz=238,slow=37						
FINES	FINESS Array B	70.08	330	P	P	13 19 40.3	-1.7
	1.2nm,0.5s,baz=64,slow=6.5,SNR=5.6						

IDC 10 13:16:36.5±1.8, 4°.18S×130°.22E, h0^{km}, mb3.1/1, mb1 3.3/4, mb1mx3.0/27, mbtmp3.1/4, ML2.8/3, Error ellipse: s-maj=61.5km s-min=24.4km az=90.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.45	18	Pn	Pn	13 17 32.0	+0.4
	0.9nm,0.3s,baz=211,slow=22,SNR=9.2						
SIJI				Sn	Sn	13 18 12.7	-0.6
	baz=240,slow=20						
WRA	Warramunga Arr	16.17	166	Pn	Pn	13 20 26.6	+1.3
	0.0nm,0.3s,baz=346,slow=11,SNR=1.9						
ASAR	Alice Springs	19.69	170	P	P	13 21 06.8	-0.7
	0.1nm,0.3s,baz=350,slow=11,SNR=5.5						
MKAR	Makanchi Array	66.01	326	P	P	13 27 25.1	+0.1
	0.1nm,0.5s,baz=121,slow=6.0,SNR=1.0						

NNC 10 13:27:39.3±4.0, 39°.04N×73°.30E, h0^{km}, mb3.6, mpv3.4, 2C-6D, Error ellipse: s-maj=32.3km s-min=21.3km az=172.0, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	3.71	14	⇓Pn	Pn	13 28 38.8	+0.8
	8.6nm,0.6s						
AAK				⇑Lg	Lg	13 29 38.5	
	14nm,0.9s						
TKM2	Tokmak 2	4.25	23	⇓Pg	Pb	13 28 56.1	+1.0
	3.4nm,0.7s						
TKM2				⇓Lg	Lg	13 29 56.9	
	5.3nm,0.8s						
KK02	Karatay Array	4.58	334	⇓Pn	Pn	13 28 49.3	-0.4
	4.2nm,0.8s,baz=147,slow=14						
KK02				⇑Sn	Sn	13 29 44.7	+1.0
	14nm,0.7s,baz=149,slow=24						
AB31	Akbulak array	13.99	321	⇓Pn	Pn	13 30 56.3	-2.3
	0.2nm,0.4s,baz=131,slow=12,SNR=10						
AB31				⇓Sn	Sn	13 33 35.0	+0.4
	1.1nm,0.8s,baz=144,slow=19,SNR=4.1						

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*IDC **10** 13:34:17.6±0.7, 43°.29N×87°.37E, h0^{km}, mb3.9/12, mb1 4.0/18, mb1mx3.7/52, mbtmp3.9/18, ML3.4/6, Error ellipse: s-maj=21.9km s-min=11.6km az=45.0*

*BJI **10** 13:34:22.0±0.0, 43°.40N×87°.40E, h10^{km}, mB4.7/5, mb4.3/12, ML4.3/10, Ms3.9/4*

*NNC **10** 13:34:22.6±2.4, 43°.70N×87°.37E, h8^{km}±9^{km}, mb4.4, mpv4.2, Error ellipse: s-maj=16.4km s-min=10.8km az=130.0*

*SOME **10** 13:34:23.5, 43°.40N×86°.77E, h5^{km}*

ISC 10 13:34:20.4±0.5, 43°.52N±0°.04×87°.45E±0°.04, h10^{km}, n53, σ2^{s}.24/70, mb4.0/13, 13C-10D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	0.35	30	⇓*i*Pg	Pn	13 34 31.3	-0.4
WMQ				Sg	Sb	13 34 39.1	+4.6
WMQ				smax	smax		
	comp=N,20μm,0.7s						
WMQ				smax	smax		
	comp=E,36μm,0.5s						
ZSN	Zaisan	4.33	336	*e*P	Pg	13 35 43.5	+0.2
	28nm,0.2s						
ZSN				*e*S	Sg	13 36 39.7	+0.3
	453nm,0.2s						
ZSN	Zaisan	4.33	336	Pg	Pg	13 35 46.9	+3.5
	63nm,0.8s						
ZSN				Lg	Lg	13 36 47.8	
	827nm,0.8s						
MK31	Makanchi Array	4.90	314	⇓Pn	Pn	13 35 35.7	+1.6
	3.9nm,0.3s,baz=133,slow=14,SNR=511						
MK31				⇑Lg	Lg	13 36 53.2	
	24nm,0.5s,baz=131,slow=27,SNR=3.7						
MKAR	Makanchi Array	4.90	314	Pn	Pn	13 35 36.2	+2.0
	4.5nm,0.3s,baz=134,slow=14,SNR=224						
MKAR				Sn	Sn	13 36 31.7	+0.8
	7.1nm,0.3s,baz=134,slow=15,SNR=5.7						
MKAR				Lg	Lg	13 36 53.6	
	11nm,0.3s,baz=131,slow=33,SNR=5.2						
MAKZ	Makanchi	5.08	312	⇑Pn	Pn	13 35 38.5	+2.0
	10.0nm,0.5s						
MAKZ				⇓Sn	Sn	13 36 36.8	+1.5
	35nm,0.6s						
MAKZ				⇓Lg	Lg	13 36 59.2	
	49nm,0.6s						
KTMS	Ketmen	5.16	272	*e*P	Pb	13 35 51.7	+0.9
	27nm,0.3s						
KTMS				*e*S	Sb	13 36 54.0	+1.0
	157nm,0.9s						
DJR	Jarkent	5.59	281	*e*P	Pb	13 35 58.6	+0.5
	10nm,0.1s						
DJR				*e*S	Sb	13 37 05.6	+0.4
	32nm,0.2s						
DJR	Jarkent	5.59	281	Pg	Pb	13 35 60.0	+1.9
	28nm,0.5s						
DJR				Lg	Lg	13 37 10.3	
	98nm,0.8s						
PDGK	Podgornoye	5.80	271	Pg	Pb	13 36 04.2	+2.6
	10.0nm,0.6s						
PDGK				Lg	Lg	13 37 17.5	
	56nm,0.5s						
PDGK	Podgornoye	5.80	271	⇑Pn	Pn	13 35 47.8	+1.2
	9.6nm,0.6s						
PDGK				⇓Sn	Sn	13 36 55.6	+2.4
	74nm,0.6s						
PDGK				⇓Lg	Lg	13 37 26.8	
	116nm,0.7s						
KAPS	Kapalarasan	6.06	290	*e*P	Pb	13 36 07.7	+1.6
	8.3nm,0.2s						
KAPS				*e*S	Sb	13 37 20.8	+2.2
	42nm,0.2s						
KAPS	Kapalarasan	6.06	290	Pg	Pb	13 36 11.1	+5.0
	24nm,0.4s						
KAPS				Lg	Lg	13 37 29.2	
	67nm,0.7s						
UZB	Uzynbulak	6.16	269	*e*P	Pb	13 36 08.6	+0.8
	7.2nm,0.1s						
UZB				*e*S	Sb	13 37 22.2	+0.6
	24nm,0.3s						
UZB	Uzynbulak	6.16	269	Pg	Pb	13 36 10.4	+2.6
	12nm,0.5s						
UZB				Lg	Lg	13 37 27.8	
	79nm,0.9s						
SATY	Saty	6.62	269	*e*P	Pb	13 36 18.5	+2.9
	8.4nm,0.3s						
SATY				*e*S	Sb	13 37 39.7	+5.0
	51nm,0.4s						
SATY	Saty	6.62	269	Pg	Pb	13 36 20.0	+4.4
	15nm,0.7s						
SATY				Lg	Lg	13 37 44.5	
	75nm,1.2s						
TDK	Taldyqorghan	6.66	286	*e*P	Pb	13 36 19.8	+3.5
	36nm,0.2s						
TDK				*e*S	Sb	13 37 41.9	+6.0
	363nm,0.5s						
TDK	Taldyqorghan	6.66	286	Pg	Pb	13 36 23.0	+6.7

	61nm,0.3s						
TDK				Lg	Lg	13 37 51.0	
	748nm,1.2s						
MDOK	**Medeo**	**7.59**	**271**	⇑Lg	Lg	13 38 21.3	
	116nm,1.0s						
TKM2	**Tokmak 2**	**8.68**	**270**	⇑Pn	**Pn**	**13 36 28.2**	**+2.1**
	2.0nm,0.5s						
TKM2				⇑Sn	**Sn**	**13 38 04.5**	**+0.3**
	35nm,1.1s						
TKM2				⇑Lg	Lg	13 39 00.9	
	38nm,0.9s						
KURBB	**Kurchatov Arra**	**9.35**	**323**	Pn	**Pn**	**13 36 35.4**	**+0.3**
	0.3nm,0.3s,baz=128,slow=13,SNR=14						
KURBB				Sn	**Sn**	**13 38 17.0**	**-3.2**
	0.4nm,0.3s,baz=127,slow=28,SNR=2.8						
KURBB				Lg	Lg	13 39 15.4	
	0.5nm,0.3s,baz=149,slow=31,SNR=5.9						
KURBB	**Kurchatov Arra**	**9.35**	**323**	⇓Pn	**Pn**	**13 36 34.0**	**-1.1**
	20nm,0.8s						
KURBB				⇓Sn	**Sn**	**13 38 19.0**	**-1.3**
	52nm,0.7s						
KURBB				⇓Lg	Lg	13 39 14.6	
	150nm,0.8s						
KURK	**Kurchatov**	**9.38**	**323**	⇑Pn	**Pn**	**13 36 36.0**	**+0.5**
	16nm,1.0s						
KURK				⇑Sn	**Sn**	**13 38 17.0**	**-4.0**
	27nm,0.9s						
KURK				⇑Lg	Lg	13 39 14.9	
	124nm,1.1s						
KSH	**Kashi**	**9.49**	**249**	P	Pn	13 36 50.3	+13
KSH				S	Sn	13 38 45.2	+21
KSH				LR	LR		
	comp=N,470nm,8.2s						
AAK	**Ala-Archa**	**9.52**	**269**	Pn	**Pn**	**13 36 36.1**	**-1.6**
	0.3nm,0.3s,baz=271,slow=20,SNR=2.1						
AAK				Lg	Lg	13 39 15.8	
	0.4nm,0.3s,baz=326,slow=6.8,SNR=4.2						
AAK	**Ala-Archa**	**9.52**	**269**	⇑Pg	Pg	13 37 13.2	
	4.4nm,0.8s						
AAK				Lg	Lg	13 39 24.7	
	45nm,1.2s						
GTA	**Gaotai**	**10.15**	**110**	*e*P	**Pn**	**13 36 49.2**	**+3.0**
GTA				pP		13 36 53.6	
GTA				sP		13 36 56.6	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZAA0	**Zalesovo Array**	**10.58**	**352**	⇑Pn	**Pn**	**13 36 50.5**	**-1.4**
	0.9nm,0.8s						
ZAA0				⇑Sn	**Sn**	**13 38 46.5**	**-3.9**
	4.6nm,0.7s						
ZAA0				⇓Lg	Lg	13 39 55.2	
	16nm,1.0s						
ZALV	**Zalesovo Beam**	**10.58**	**352**	Pn	**Pn**	**13 36 52.3**	**+0.3**
	1.0nm,0.3s,baz=168,slow=13,SNR=14						
ZALV				Sn	**Sn**	**13 38 47.0**	**-3.4**
	1.6nm,0.3s,baz=165,slow=28,SNR=8.3						
ZALV				Lg	Lg	13 40 00.9	
	baz=171,slow=28,SNR=1.8						
TLY	**Talaya**	**13.62**	**48**	Lg	Lg	13 41 33.7	
	0.0nm,0.3s,baz=40,slow=19,SNR=3.5						
SONM	**Songino Array**	**13.93**	**65**	Pn	**Pn**	**13 37 38.8**	**+1.0**
	0.1nm,0.3s,baz=270,slow=14,SNR=8.8						
SONM				Sn	**Sn**	**13 40 16.2**	**+3.7**
	0.2nm,0.3s,baz=240,slow=28,SNR=2.9						
SONM				Lg	Lg	13 41 44.3	
	0.2nm,0.3s,baz=260,slow=30,SNR=2.2						
LSA	**Lhasa**	**14.11**	**167**	P	**P**	**13 37 48.3**	**-0.2**
LSA				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH	**Lanzhou**	**14.61**	**115**	*e*P	**P**	**13 37 53.5**	**-0.3**
LZH				pP	Pn	13 37 56.7	+9.4
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
BVAR	**Borovoye Array**	**14.78**	**316**	Pn	**Pn**	**13 37 47.5**	**-1.8**
	0.2nm,0.3s,baz=144,slow=12,SNR=3.2						
BVAR				Sn	Sn	13 40 24.5	-8.6
	0.4nm,0.3s,baz=284,slow=24,SNR=2.8						
BVAR				Lg	Lg	13 42 08.2	
	baz=154,slow=27,SNR=2.0						
GKN	**Gorkha**	**15.65**	**189**	*e*P	**Pn**	**13 38 03.7**	**+2.6**
	15nm,0.5s						
KKN	**Kakani**	**15.79**	**187**	*e*P	**Pn**	**13 38 04.6**	**+1.5**
	42nm,0.7s						
DMN	**Daman**	**15.99**	**188**	*e*P	**Pn**	**13 38 05.9**	**+0.3**
	308nm,1.5s						
PKIN	**Phulchoki**	**15.99**	**187**	*e*P	**Pn**	**13 38 07.0**	**+1.3**
	33nm,0.6s						
PKI	**Pulchoki**	**16.00**	**187**	*e*P	**Pn**	**13 38 07.0**	**+1.2**
	40nm,0.7s						
AKTO	**Aktyubinsk**	**21.14**	**299**	P	**P**	**13 39 04.9**	**-0.4**
	1.1nm,0.6s,baz=73,slow=11,SNR=3.3						
ARU	**Arti**	**22.43**	**315**	P	**P**	**13 39 19.4**	**+0.4**
	1.1nm,0.5s,baz=182,slow=1.7,SNR=8.2						
NRIK	**Noril'sk**	**25.89**	**0**	P	**P**	**13 39 52.9**	**+0.9**
	6.0nm,0.6s,baz=171,slow=7.3,SNR=11						
CMAR	**Chiang Mai Arr**	**26.80**	**155**	P	**P**	**13 39 58.6**	**-2.1**
	2.2nm,0.7s,baz=332,slow=8.6,SNR=20						
KSRS	**Korea Array**	**31.14**	**87**	P	**P**	**13 40 38.2**	**-1.0**
	0.5nm,0.5s,baz=290,slow=8.8,SNR=2.1						
MNK	**Minsk**	**39.44**	**308**	*i* P	**P**	**13 41 47.8**	**-2.6**
	comp=E,4.0nm,0.9s						
MNK				*i* P	**P**	**13 41 47.8**	**-2.6**
	comp=N,26nm,1.0s						
MNK				*i* P	**P**	**13 41 47.8**	**-2.6**
	comp=Z,7.0nm,0.8s,baz=259						
MNK				*i* PP	**PP**	**13 43 18.7**	**-1.9**
MNK				*i* PPP	PPP	13 43 41.1	
MNK				*i* S	**S**	**13 47 50.4**	**-1.5**
MNK				*i* SS	**SnSn**	**13 50 47.1**	**+0.5**
MNK				*i* SSS	SSS	13 51 06.5	
MNK				*i* LQ	LQ	13 55 05.7	
MNK				*i* LR	LR	13 58 14.8	
MNK				*i* LRM	MLR	13 59 59.7	
	comp=Z,80nm,13.0s						
MNK				*i* LRM	MLR	14 00 08.9	
	comp=E,24nm,13.8s						
MNK				*i* LRM	MLR	14 00 12.5	
	comp=N,90nm,13.0s						
FINES	**FINESS Array B**	**39.72**	**319**	P	**P**	**13 41 52.2**	**-0.4**
	comp=N,4.1nm,1.1s,baz=93,slow=3.8,SNR=4.9						
ARCES	**ARCESS Array B**	**40.30**	**331**	P	**P**	**13 41 58.2**	**+0.9**
	comp=N,5.3nm,1.1s,baz=96,slow=9.2,SNR=1.2						
ILAR	**Eielson Array**	**64.01**	**23**	P	**P**	**13 44 53.0**	**-0.7**
	comp=N,0.4nm,0.7s,baz=313,slow=4.6,SNR=4.5						
WRA	**Warramunga Arr**	**76.41**	**135**	P	**P**	**13 46 08.2**	**-1.8**
	comp=N,0.4nm,0.5s,baz=331,slow=4.9,SNR=11						
TORD	**Torodi Ar. Bea**	**78.02**	**277**	P	**P**	**13 46 17.3**	**-2.0**
	comp=N,0.8nm,0.6s,baz=38,slow=3.9,SNR=5.4						
ASAR	**Alice Springs**	**79.30**	**137**	P	**P**	**13 46 24.7**	**-1.4**
	comp=N,0.4nm,0.6s,baz=329,slow=5.3,SNR=9.5						
DBIC	**Dimbokro**	**87.13**	**276**	P	**P**	**13 47 04.3**	**-2.5**
	comp=N,2.3nm,0.7s,baz=14,slow=4.9,SNR=2.4						

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*IDC **10** 13:46:47.2±2.5, 39°.46N×52°.33E, h0^{km}, mb3.6/2, mb1 3.7/6, mb1mx3.4/44, mbtmp3.7/6, ML3.8/4, Error ellipse: s-maj=37.1km s-min=26.9km az=26.0*

*TEH **10** 13:46:49.3, 39°.51N×52°.48E, h10^{km}, ML3.7*

*NNC **10** 13:47:00.0±11.0, 40°.10N×53°.80E, h0^{km}, mb3.7, Error ellipse: s-maj=137.9km s-min=34.0km az=65.0*

ISC 10 13:46:49.0±0.9**, 39°.71N**±0°.06×**52°.49E**±0°.05**, h10^{km}, n34, σ1^{s}.74**/38**, 4C-2D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGLO	**Ghaloghah**	**3.38**	**161**	*e*Pn	**Pn**	**13 47 41.5**	**-0.5**
IGLO				*e*		13 48 20.2	
	comp=Z,2µm,0.1s						
IPRN	**Peran**	**3.47**	**182**	*e*Pn	**Pn**	**13 47 42.1**	**-1.1**
QALM	**Alamut, Qazvin**	**3.58**	**204**	*e*Pn	**Pn**	**13 47 43.7**	**-1.2**
ISHM	**Shahmirzad**	**3.95**	**170**	*e*Pn	**Pn**	**13 47 50.7**	**+0.7**
IFIR	**Firoozkooh**	**4.07**	**177**	*e*Pn	**Pn**	**13 47 52.3**	**+0.7**
IFIR				*e*		13 48 40.0	
	comp=Z,713nm,0.2s						
IDMV	**Damavand**	**4.14**	**185**	*e*Pn	**Pn**	**13 47 53.8**	**+1.2**
ISRB	**Sarab**	**4.21**	**245**	*e*Pn	**Pn**	**13 47 54.4**	**+0.9**
ISRB				*e*		13 48 45.5	
	comp=Z,996nm,0.3s						
IMHD	**Mahdasht**	**4.27**	**200**	*e*Pn	**Pn**	**13 47 55.6**	**+1.4**
IMHD				*e*		13 47 57.2	
	comp=Z,742nm,0.2s						
ILAS	**Lasjerd**	**4.34**	**175**	*e*Pn	**Pn**	**13 47 55.5**	**+0.2**
ILAS				*e*		13 48 46.4	
	comp=Z,512nm,0.2s						
IANJ	**Anjilo**	**4.39**	**165**	*e*Pn	**Pn**	**13 47 57.5**	**+1.6**
IHRS	**Heris**	**4.46**	**254**	*e*Pn	**Pn**	**13 47 59.1**	**+2.1**
IHRS				*e*		13 48 51.8	
	comp=Z,1µm,0.3s						
QABG	**Abgarm-Qazvin**	**4.61**	**211**	*e*Pn	**Pn**	**13 47 58.4**	**-0.6**
GEYT	**Alibeck**	**4.74**	**110**	Pn	**Pn**	**13 48 01.4**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=287,slow=15,SNR=5.6						
GEYT				Sn	**Sn**	**13 48 52.0**	**-3.7**
	comp=Z,1.1nm,0.3s,baz=296,slow=28,SNR=6.2						
GYA0B	**ALIBECK ARRAY**	**4.74**	**110**	⇑Pn	**Pn**	**13 48 01.4**	**+0.8**
GYA0B				⇓Sn	**Sn**	**13 48 52.2**	**-3.5**
IVRN	**Varamin**	**4.75**	**188**	*e*Pn	**Pn**	**13 48 01.5**	**+0.8**
IRAZ	**Razeghan**	**4.76**	**206**	*e*Pn	**Pn**	**13 48 01.0**	**0.0**
IBST	**Bostanabad**	**4.82**	**247**	*e*Pn	**Pn**	**13 48 03.5**	**+1.7**
ISFR	**Sfrayin**	**5.08**	**120**	*e*Pn	**Pn**	**13 48 06.9**	**+1.4**
ISFR				*e*		13 49 07.7	
	comp=Z,702nm,0.2s						
SBZV	**Sabzevar**	**5.23**	**128**	*e*Pn	**Pn**	**13 48 09.2**	**+1.7**
IEMG	**Emamgholi**	**5.35**	**113**	*e*		13 48 11.6	
	comp=Z,503nm,0.2s						
IEMG				*e*Pn	**Pn**	**13 48 09.6**	**+0.4**
ISFB	**Sefidab**	**5.35**	**182**	*e*		13 45 37.1	
	comp=Z,0.0nm,99.9s						
ISFB				*e*Pn	**Pn**	**13 48 09.8**	**+0.7**
KRSH	**Karshahi**	**5.74**	**183**	*e*Pn	**Pn**	**13 48 14.7**	**+0.3**
IAKL	**Akhelmad**	**5.83**	**120**	*e*Pn	**Pn**	**13 48 16.9**	**+1.0**
IPAY	**Payeh**	**6.08**	**120**	*e*Pn	**Pn**	**13 48 19.4**	**+0.2**
IPAY				*e*		13 49 30.9	
	comp=Z,454nm,0.2s						
IKRD	**Kardeh**	**6.26**	**116**	*e*Pn	**Pn**	**13 48 22.5**	**+0.8**
IKRD				*e*		13 49 34.8	
	comp=Z,324nm,0.2s						
TPRV	**Parvadeh(Tabas**	**7.48**	**152**	*e*Pn	**Pn**	**13 48 39.7**	**+1.4**
KBZ	**Khabaz**	**8.22**	**302**	Sn	**Sn**	**13 50 17.8**	**-3.3**
	comp=Z,0.4nm,0.3s,baz=328,slow=8.4,SNR=1.8						
AB31	**Akbulak array**	**10.92**	**27**	⇑Pn	**Pn**	**13 49 28.2**	**+2.9**
	comp=Z,0.6nm,0.5s,baz=207,slow=14,SNR=12						
AB31				⇑Sn	**Sn**	**13 51 24.1**	**-3.4**
	comp=Z,1.5nm,0.5s,baz=198,slow=23,SNR=15						
AKTO	**Aktyubinsk**	**11.41**	**18**	Pn	**Pn**	**13 49 31.9**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=208,slow=12,SNR=6.8						
AKTO	**Aktyubinsk**	**11.41**	**18**	⇑Pn	**Pn**	**13 49 33.1**	**+1.2**
	comp=Z,1.3nm,0.8s						
AKTO				⇓Sn	**Sn**	**13 51 36.6**	**-2.8**
	comp=Z,7.7nm,0.6s						
BELG	**Belogornoye**	**13.12**	**347**	Pn	**Pn**	**13 49 57.2**	**+1.9**
	comp=Z,1.0nm,0.3s,baz=163,slow=14,SNR=4.4						
AKASG	**Malin Array Be**	**19.65**	**312**	P	**P**	**13 51 18.9**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=102,slow=9.6,SNR=4.0						
MKAR	**Makanchi Array**	**22.74**	**62**	P	**P**	**13 51 53.1**	**+1.9**
	comp=Z,0.2nm,0.5s,baz=263,slow=11,SNR=1.5						
FINES	**FINESS Array B**	**27.12**	**332**	P	**P**	**13 52 33.2**	**+1.3**
	comp=Z,7.1nm,1.0s,baz=138,slow=11,SNR=4.6						

MAN 10 13:52:17.7, 9°.85N×123°.96E, h10^{km}, mb4.0, ML2.7, MS2.3, Negros

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*IDC **10** 13:57:31.7±1.1, 24°.75N×141°.38E, h189^{km}±11^{km}, mb3.2/9, mb1 3.4/12, mb1mx3.1/48, mbtmp3.8/12, Error ellipse: s-maj=22.6km s-min=12.2km az=91.0*

ISC 10 13:57:32.7±0.8**, 24°.78N**±0°.09×**141°.4E**±0°.2**, h200^{km}, n13, σ0^{s}.67**/16**, mb3.4**/10**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.42**	**17**	P	**Pn**	**13 58 16.2**	**+0.6**
	126nm,0.3s,baz=164,slow=5.6,SNR=58						
JCJ				S	**Sn**	**13 58 47.6**	**-1.7**
	181nm,0.3s,baz=291,slow=23,SNR=35						
MJAR	**Matsushiro Arr**	**12.04**	**348**	P	**Pn**	**14 00 17.6**	**-0.5**
	0.1nm,0.3s,baz=174,slow=12,SNR=2.3						
KSRS	**Korea Array**	**17.08**	**321**	P	**P**	**14 01 19.0**	**+0.6**
	0.1nm,0.3s,baz=136,slow=11,SNR=4.1						
CMAR	**Chiang Mai Arr**	**39.84**	**269**	P	**P**	**14 04 47.0**	**0.0**
	0.5nm,0.5s,baz=67,slow=6.9,SNR=1.6						
WRA	**Warramunga Arr**	**44.98**	**189**	P	**P**	**14 05 27.9**	**-0.3**
	9.3nm,0.5s,baz=9.1,slow=8.7,SNR=55						
WRA				PcP	**PcP**	**14 07 06.2**	**+0.3**
	0.6nm,0.6s,baz=359,slow=3.5,SNR=5.1						
TIXI	**Tiksi**	**47.44**	**355**	P	**P**	**14 05 46.3**	**-0.4**
	2.3nm,0.3s,baz=334,slow=11,SNR=11						
ASAR	**Alice Springs**	**48.70**	**189**	P	**P**	**14 05 56.4**	**-0.7**
	0.2nm,0.5s,baz=6.8,slow=5.1,SNR=12						
ASAR				PcP	**PcP**	**14 07 18.8**	**-0.3**
	0.3nm,0.4s,baz=8.1,slow=2.9,SNR=6.5						
MKAR	**Makanchi Array**	**51.43**	**311**	P	**P**	**14 06 17.5**	**+0.2**
	0.2nm,0.4s,baz=87,slow=9.5,SNR=8.5						
KURBB	**Kurchatov Arra**	**54.17**	**316**	P	**P**	**14 06 37.1**	**-0.1**
	0.2nm,0.3s,baz=92,slow=7.6,SNR=5.4						
STKA	**Stephens Creek**	**56.34**	**180**	P	**P**	**14 06 52.5**	**-0.3**
	1.0nm,0.4s,baz=7.8,slow=9.2,SNR=4.1						
ILAR	**Eielson Array**	**60.08**	**28**	P	**P**	**14 07 18.9**	**+0.5**
	0.4nm,0.8s,baz=239,slow=5.7,SNR=5.7						
INK	**Inuvik**	**65.42**	**24**	P	**P**	**14 07 54.0**	**+0.4**
	0.4nm,0.5s,baz=298,slow=4.7,SNR=1.8						
YKA	**Yellowknife Ar**	**74.51**	**28**	P	**P**	**14 08 49.8**	**+0.9**
	1.0nm,0.9s,baz=295,slow=5.8,SNR=1.8						

BUL 10 14:01:26.9±1.1**, 22°.04S×25°.33E, h10^{km}, MD4.3, Botswana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATP	**Matopo**	**3.36**	**62**	*i* P	Pn	14 02 19.8	+0.1
MATP	**Matopo**	**3.36**	**62**	*i* P	Pn	14 02 19.8	+0.1
MSNA	**Messina**	**4.36**	**95**	*i* P	Pn	14 02 32.0	-1.3
MSNA				*i* S	Sn	14 03 20.2	-4.0
MSNA	**Messina**	**4.36**	**95**	*i* P	Pn	14 02 32.0	-1.3
MSNA				*i* S	Sn	14 03 20.2	-4.0
MOPA	**Mopani**	**5.79**	**106**	*i* P	Pn	14 02 56.4	+3.6
MOPA				*i* S	Sn	14 04 02.7	+3.4
MOPA	**Mopani**	**5.79**	**106**	*i* P	Pn	14 02 56.4	+3.6
MOPA				*i* S	Sn	14 04 02.7	+3.4

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*SKHL **10** 14:17:46.5±0.4, 46°.50N×141°.70E, h8^{km}±2^{km}, mb4.1/5*

*JMA **10** 14:17:46.1±0.2, 46°.72N×141°.53E, h13^{km}, M2.6*

ISC 10 14:17:46.9±1.5**, 46°.61N**±0°.06×**141°.6E**±0°.1**, h11^{km}, n5, σ0^{s}.81**/9**, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHLM	**Kholmsk**	**0.53**	**33**	*e*Pg	**Pb**	**14 17 58.2**	**0.0**
KHLM				AMB	AMB	14 17 59.0	
	70nm,0.2s						
KHLM				*e*Sg	**Sb**	**14 18 06.6**	**+0.7**
KHLM				A	A	14 18 07.7	
	1µm,0.4s						
KHLM				A	A	14 18 07.7	
	600nm,0.4s						
YSS	**Yuzh-Sakhalins**	**0.84**	**65**	*e*Pg	**Pg**	**14 18 02.7**	**-0.5**
YSS				AMB	AMB	14 18 04.1	
	10.0nm,0.3s						
YSS				*e*Sg	**Sg**	**14 18 14.2**	**0.0**
YSS				A	A	14 18 15.4	
	160nm,0.3s						
YSS				A	A	14 18 15.4	
	90nm,0.3s						
JRBN	**Rebuntou**	**1.25**	**199**	P	**Pg**	**14 18 10.4**	**-0.5**
JRBN				*e*S	**Sg**	**14 18 27.3**	**+0.2**
JWK2	**Keihoku**	**1.31**	**172**	P	**Pg**	**14 18 12.0**	**+0.1**
JWK2				*e*S	**Sg**	**14 18 30.4**	**+1.5**
JSE	**Soyaes**	**1.78**	**158**	P	**Pb**	**14 18 18.7**	**-0.8**

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*IDC **10** 14:20:33.7±2.8, 7°.50S×148°.02E, h150^{km}±28^{km}, mb3.2/6, mb1 3.4/8, mb1mx3.3/26, mbtmp3.6/8, Error ellipse: s-maj=54.3km s-min=25.3km az=124.0*

ISC 10 14:20:34.2±1.5**, 7°.4S**±0°.1×**148°.0E**±0°.3**, h150^{km}, n9, σ2^{s}.04**/10**, mb3.6**/6**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.20**	**202**	P	**Pn**	**14 21 09.8**	**-1.8**
	4.4nm,0.3s,baz=329,slow=15,SNR=4.2						
PMG				S	**Sn**	**14 21 44.3**	**+3.7**
	10nm,0.3s,baz=3.9,slow=10,SNR=5.3						
WRA	**Warramunga Arr**	**18.21**	**225**	P	**P**	**14 24 33.4**	**-2.6**
	0.1nm,0.3s,baz=44,slow=12,SNR=14						
ASAR	**Alice Springs**	**21.11**	**218**	P	**P**	**14 25 06.4**	**-0.8**
	2.0nm,0.6s,baz=32,slow=10,SNR=37						
FITZ	**Fitzroy Crossi**	**24.24**	**242**	P	**P**	**14 25 36.7**	**-0.6**
	1.4nm,0.6s,baz=79,slow=10,SNR=55						
CMAR	**Chiang Mai Arr**	**54.74**	**299**	P	**P**	**14 29 49.0**	**+0.4**
	0.7nm,0.3s,baz=111,slow=4.9,SNR=1.9						
SONM	**Songino Array**	**66.05**	**331**	P	**P**	**14 31 04.3**	**-0.7**
	0.3nm,0.5s,baz=136,slow=5.2,SNR=1.9						
MKAR	**Makanchi Array**	**79.15**	**320**	P	**P**	**14 32 24.2**	**+1.8**
	0.3nm,0.7s,baz=108,slow=6.1,SNR=2.3						
ILAR	**Eielson Array**	**86.34**	**23**	P	**P**	**14 32 59.3**	**+0.3**
	0.6nm,0.9s,baz=269,slow=5.3,SNR=5.3						
TORD	**Torodi Ar. Bea**	**146.35**	**283**	PKPbc	**PKPdf**	**14 39 56.7**	**-0.3**
	1.5nm,0.7s,baz=88,slow=1.2,SNR=9.9						

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*IDC **10** 14:34:51.2±0.9, 16°.93S×175°.18E, h0^{km}, mb4.1/7, mb1 4.4/8, mb1mx4.1/26, mbtmp4.1/8, ML4.8/1, MS4.0/5, Ms1 4.0/5, ms1mx3.5/31, Error ellipse: s-maj=29.5km s-min=22.5km az=167.0*

*NEIC **10** 14:34:54.6±0.9, 17°.0S±0°.1×175°.21E±0°.09, h18^{km}±4^{km}, mb4.3/7, Error ellipse: s-maj=16.2km s-min=11.9km az=164.0*

ISC 10 14:34:56.3±0.7**, 17°.0S**±0°.1×**175°.18E**±0°.10**, h35^{km}, n27, σ0^{s}.97**/19**, mb4.2**/12**, MS4.0**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.83**	**105**	Pn	**Pn**	**14 35 38.8**	**-0.3**
	6.0nm,0.3s,baz=258,slow=18,SNR=36						
MSVF	**Nonsavu**	**2.83**	**105**		**Pn**	**14 35 38.5**	**-0.7**
DZM	**Mont Dzumac**	**9.66**	**237**	*e*Pn	Pn	14 37 18.3	+5.4
	83nm,1.4s						
DZM				*e*LR	LR	14 39 28.0	
	comp=Z,2µm,25.3s						
DZM	**Mont Dzumac**	**9.66**	**237**	Pn	Pn	14 37 17.1	+4.2
	0.2nm,0.3s,baz=78,slow=16,SNR=2.6						
DZM				LR	LR	14 40 29.9	
	comp=Z,1µm,19.9s,baz=30,slow=35						
DZM	**Mont Dzumac**	**9.66**	**237**	Pn	**Pn**	**14 37 12.3**	**-0.6**
AFI	**Afiamalu**	**12.94**	**78**	LR	LR	14 41 51.9	
	comp=Z,776nm,21.5s,baz=248,slow=33						
RAO	**Raoul Island**	**13.74**	**154**	LR	LR	14 42 24.4	
	comp=Z,573nm,19.1s,baz=302,slow=33						
URZ	**Urewera**	**21.25**	**176**	P	**P**	**14 39 39.8**	**+0.5**
	10nm,1.1s,baz=319,slow=19,SNR=2.5						
PPT2	**Papeete2**	**33.62**	**96**	*e*LR	LR	14 50 40.7	
	comp=Z,246nm,25.8s						
JAY	**Jayapura**	**36.81**	**289**	LR	LR	14 57 20.9	
	comp=Z,97nm,18.2s,baz=304,slow=37						
WB2	**Warramunga Arr**	**38.77**	**259**	P	**P**	**14 42 17.9**	**+0.1**
WB2				IAmb	IAmb	14 42 42.0	
	comp=Z,6.0nm,1.4s						
WRA	**Warramunga Arr**	**38.79**	**259**	P	**P**	**14 42 17.9**	**0.0**
	comp=Z,1.0nm,0.8s,baz=92,slow=9.0,SNR=7.3						
WRA	**Warramunga Arr**	**38.79**	**259**	P	**P**	**14 42 17.9**	**0.0**
AS31	**Alice Springs**	**39.17**	**253**	P	**P**	**14 42 19.2**	**-1.9**
AS31				IAmb	IAmb	14 42 29.8	
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**39.17**	**253**	P	**P**	**14 42 20.7**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=83,slow=8.8,SNR=20						
ASAR	**Alice Springs**	**39.17**	**253**	P	**P**	**14 42 18.4**	**-2.7**
MTN	**Manton Dam**	**42.70**	**269**	P	**P**	**14 42 50.1**	**-0.1**
MTN				IAmb	IAmb	14 42 59.4	
	comp=Z,7.8nm,1.1s						
TAOE	**Nuku Hiva Isla**	**44.20**	**85**	*e*LR	LR	14 55 46.8	
	comp=Z,390nm,25.4s						
VNDA	**Vanda**	**60.91**	**183**	P	**P**	**14 45 05.7**	**+0.5**
VNDA				IAmb	IAmb	14 45 25.3	
	comp=Z,5.7nm,1.4s						
PETK	**Petropavlovsk-**	**71.44**	**349**	P	**P**	**14 46 13.2**	**+0.3**
	comp=Z,8.0nm,1.1s,baz=163,slow=11,SNR=4.8						
QSPA	**South Pole Qui**	**73.04**	**180**	P	**P**	**14 46 23.3**	**+0.8**
QSPA				IAmb	IAmb	14 46 42.9	
	comp=Z,7.2nm,1.4s						
KDAK	**Kodiak Island**	**79.15**	**17**	LR	LR	15 18 27.5	
	comp=Z,130nm,19.4s,baz=59,slow=33						
CMAR	**Chiang Mai Arr**	**82.84**	**292**	P	**P**	**14 47 18.8**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=111,slow=4.9,SNR=11						
IL31		**86.51**	**15**	P	**P**	**14 47 34.8**	**-0.3**
ILAR	**Eielson Array**	**86.51**	**15**	P	**P**	**14 47 34.6**	**-0.5**
	comp=Z,2.2nm,0.8s,baz=229,slow=5.0,SNR=12						
TXAR	**Lajitas Array**	**90.75**	**60**	P	**P**	**14 47 56.0**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=224,slow=5.0,SNR=4.4						
GERES	**GERESS Array B**	**144.84**	**339**	PKP	**PKPdf**	**14 54 29.4**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=343,slow=2.0,SNR=2.1						

IDC 10 14:39:59.5±6.0**, 7°.66S×148°.89E, h146^{km}**±34^{km}**, mb2.4**/1**, mb1 2.8**/3**, mb1mx2.3**/47**, mbtmp3.1**/3**, Error ellipse: s-maj=132.7km s-min=55.4km az=122.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.44**	**225**	P	Pn	14 40 38.4	-1.3
	5.3nm,0.3s,baz=354,slow=7.2,SNR=13						
PMG				S	Sn	14 41 12.3	+1.6
	2.9nm,0.3s,baz=288,slow=20,SNR=1.8						
WRA	**Warramunga Arr**	**18.65**	**228**	P	P	14 44 05.2	-1.2
	0.1nm,0.3s,baz=52,slow=11,SNR=2.6						
ASAR	**Alice Springs**	**21.45**	**220**	P	P	14 44 35.5	-0.9
	0.2nm,0.6s,baz=51,slow=9.6,SNR=1.9						
TORD	**Torodi Ar. Bea**	**147.30**	**282**	PKPbc	PKPbc	14 59 27.5	+0.5
	0.2nm,0.4s,baz=75,slow=3.9,SNR=1.7						

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*IDC **10** 14:44:31.7±1.3, 30°.41S×177°.44W, h0^{km}, mb4.7/5, mb1 4.8/6, mb1mx4.1/35, mbtmp4.6/6, ML3.7/1, MS3.5/1, Ms1 3.5/1, ms1mx3.0/27, Error ellipse: s-maj=32.2km s-min=24.1km az=101.0*

*NEIC **10** 14:44:34.8±1.0, 30°.38S±0°.07×177°.7W±0°.2, h10^{km}±2^{km}, mb4.7/10, Error ellipse: s-maj=29.3km s-min=11.2km az=94.0*

ISC 10 14:44:34.2±0.8**, 30°.42S**±0°.04×**177°.8W**±0°.2**, h10^{km}, n60, σ1^{s}.47**/60**, mb4.7**/10**, 1C-1D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.16**	**354**	P	**Pb**	**14 44 56.9**	**+0.6**
GLKZ				S	**Sb**	**14 45 09.1**	**-2.3**
RAO	**Raoul Island**	**1.17**	**354**	Pn	**Pn**	**14 44 56.6**	**0.0**
	282nm,0.3s,baz=68,slow=13,SNR=18						
RAO				Sn	**Sb**	**14 45 09.9**	**-1.8**
	2µm,0.3s,baz=90,slow=20,SNR=16						
RAO	**Raoul Island**	**1.17**	**354**		**Pg**	**14 44 57.3**	**+0.6**
RIZ	**Raoul Island**	**1.18**	**353**	P	**Pg**	**14 44 57.4**	**+0.5**
RIZ				S	**Sb**	**14 45 10.0**	**-1.9**
MXZ	**Matakaoa Point**	**7.83**	**204**	P	**Pn**	**14 46 27.9**	**-0.3**
MXZ				S	**Sn**	**14 47 58.4**	**+1.4**
WMGZ	**Waiomatatini S**	**8.03**	**202**	P	**Pn**	**14 46 30.3**	**-0.6**
WMGZ				S	**Sn**	**14 48 00.7**	**-1.1**
HAZ	**Te Kaha**	**8.20**	**206**	P	**Pn**	**14 46 33.1**	**0.0**
HAZ				S	**Sn**	**14 48 06.7**	**+0.9**
PKGZ	**Pakihiroa**	**8.21**	**204**	P	**Pn**	**14 46 32.2**	**-1.2**
PKGZ				S	**Sn**	**14 48 06.7**	**+0.5**
PUZ	**Puketiti**	**8.31**	**202**	P	**Pn**	**14 46 32.9**	**-2.0**
PUZ				S	**Sn**	**14 48 05.8**	**-2.9**
RUGZ	**Raukumara Rang**	**8.42**	**205**	P	**Pn**	**14 46 34.8**	**-1.6**
RUGZ				S	**Sn**	**14 48 11.3**	**-0.2**
TWGZ	**Tauwhareparae**	**8.50**	**203**	P	**Pn**	**14 46 36.6**	**-0.8**
TWGZ				S	**Sn**	**14 48 13.2**	**-0.3**
WCZ	**Waipu Caves**	**8.60**	**228**	P	Pn	14 46 48.5	+10
OUZ	**Omahuta**	**8.70**	**234**	P	Pn	14 46 49.0	+8.8
OUZ	**Omahuta**	**8.70**	**234**		Pn	14 46 48.8	+8.7
CNGZ	**Carnagh Statio**	**8.70**	**201**	S	**Sn**	**14 48 16.6**	**-1.7**
TKGZ	**Te Karaka**	**8.78**	**203**	P	Pn	14 46 33.7	-7.5
TKGZ				S	**Sn**	**14 48 19.2**	**-1.0**
MWZ	**Matawai**	**8.80**	**205**	P	**Pn**	**14 46 40.0**	**-1.6**
MWZ				S	**Sn**	**14 48 19.4**	**-1.4**
URZ	**Urewera**	**8.89**	**207**	Pn	**Pn**	**14 46 44.5**	**+1.7**
	0.8nm,0.3s,baz=296,slow=22,SNR=12						
URZ				Sn	**Sn**	**14 48 21.1**	**-1.8**
	3.5nm,0.3s,baz=315,slow=20,SNR=4.2						
URZ	**Urewera**	**8.89**	**207**	P	**Pn**	**14 46 41.3**	**-1.5**
URZ				S	**Sn**	**14 48 21.2**	**-1.8**
RIGZ	**Rimuhau**	**9.05**	**203**	P	**Pn**	**14 46 42.8**	**-2.1**
RIGZ				S	**Sn**	**14 48 24.8**	**-2.1**
PRGZ	**Paritu Road**	**9.21**	**202**	P	**Pn**	**14 46 45.4**	**-1.7**
PRGZ				S	**Sn**	**14 48 28.4**	**-2.3**
MHGZ	**Mahia Peninsul**	**9.41**	**201**	P	**Pn**	**14 46 47.5**	**-2.4**
RAR	**Rarotonga**	**18.60**	**65**	LR	LR	14 54 18.2	
	comp=Z,148nm,19.0s,baz=278,slow=32						
CAN	**Canberra**	**28.25**	**251**	P	**P**	**14 50 27.9**	**+0.2**
CAN				IAmb	IAmb	14 50 53.2	
	comp=Z,33nm,1.4s						
CTA	**Charters Tower**	**34.00**	**279**	P	**P**	**14 51 20.3**	**+1.9**
	comp=Z,13nm,0.6s,baz=102,slow=13,SNR=15						
CTAO	**Charters Tower**	**34.00**	**279**	P	**P**	**14 51 18.2**	**-0.1**

STKA	**Stephens Creek**	**34.67**	**257**	P	**P**	**14 51 26.5**	**+2.4**
	comp=Z,15nm,0.7s,baz=94,slow=9.4,SNR=36						
STKA	**Stephens Creek**	**34.67**	**257**	P	**P**	**14 51 26.0**	**+2.0**
STKA				IAmb	IAmb	14 51 27.4	
	comp=Z,3.8nm,0.8s						
AS31	**Alice Springs**	**43.30**	**267**	P	**P**	**14 52 37.2**	**+0.7**
ASAR	**Alice Springs**	**43.30**	**267**	P	**P**	**14 52 37.0**	**+0.4**
	comp=Z,3.3nm,0.6s,baz=104,slow=7.2,SNR=46						
ASAR	**Alice Springs**	**43.30**	**267**	P	**P**	**14 52 36.3**	**-0.2**
WB2	**Warramunga Arr**	**44.28**	**272**	P	**P**	**14 52 44.1**	**-0.3**
WB2				IAmb	IAmb	14 52 45.9	
	comp=Z,10nm,0.7s						
WRA	**Warramunga Arr**	**44.30**	**272**	P	**P**	**14 52 44.5**	**0.0**
	comp=Z,8.6nm,0.6s,baz=111,slow=7.9,SNR=57						
WRA	**Warramunga Arr**	**44.30**	**272**	P	**P**	**14 52 44.3**	**-0.2**
WB0	**Warramunga Arr**	**44.32**	**272**	P	**P**	**14 52 44.5**	**-0.2**
WB0				IAmb	IAmb	14 52 46.1	
	comp=Z,10nm,0.6s						
MTN	**Manton Dam**	**50.18**	**279**	P	**P**	**14 53 28.0**	**-2.4**
MTN				IAmb	IAmb	14 53 31.1	
	comp=Z,7.4nm,1.1s						
KNRA	**Kununurra**	**50.90**	**274**	P	**P**	**14 53 35.8**	**-0.1**
KNRA				IAmb	IAmb	14 53 46.1	
	comp=Z,7.3nm,0.9s						
QSPA	**South Pole Qui**	**59.69**	**180**	P	**P**	**14 54 41.4**	**+2.7**
SYO	**Syowa Base**	**77.14**	**193**	⇓*e*P	**P**	**14 56 26.8**	**-0.8**
SYO	**Syowa Base**	**77.14**	**193**	⇑*e*X	P	14 56 35.0	+7.4
SNAA	**Sanae**	**78.13**	**178**	P	**P**	**14 56 34.4**	**+1.2**
VNA3	**Neumayer Olymp**	**78.27**	**176**	P	**P**	**14 56 35.0**	**+1.1**
VNA2	**Neumayer--Watz**	**78.71**	**177**	P	**P**	**14 56 37.9**	**+1.6**
	baz=184,slow=5.3						
VNA1	**Neumayer--Stat**	**78.94**	**176**	P	**P**	**14 56 39.2**	**+1.6**
H03S2	**Juan Fernandez**	**80.29**	**123**	T	T	16 26 08.4	
	baz=238						
H03S1	**Juan Fernandez**	**80.30**	**123**	T	T	16 26 16.2	
	baz=238						
H03S3	**Juan Fernandez**	**80.31**	**123**	T	T	16 25 54.9	
	baz=238						
H03N3	**Juan Fernandez**	**80.48**	**123**	T	T	16 26 11.2	
	baz=242,slow=72						
H03N2	**Juan Fernandez**	**80.48**	**123**	T	T	16 26 05.9	
	baz=242,slow=72						
H03N1	**Juan Fernandez**	**80.50**	**123**	T	T	16 26 06.4	
	baz=242,slow=72						
NVAR	**Mina Array Bea**	**88.12**	**43**	PP	PP	15 00 49.0	-3.7
	comp=Z,2.9nm,0.3s,baz=248,slow=11,SNR=6.3						
CMAR	**Chiang Mai Arr**	**93.59**	**289**	P	**P**	**14 57 51.8**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=130,slow=3.1,SNR=2.1						
MKAR	**Makanchi Array**	**117.94**	**310**	PKP	**PKPdf**	**15 03 19.2**	**-1.7**
	comp=Z,0.4nm,0.6s,baz=166,slow=1.2,SNR=4.6						
H10N3	**ASCENSION HYDR**	**138.71**	**154**	T	T	17 39 52.9	
	baz=204,slow=75						
H10N1	**ASCENSION HYDR**	**138.71**	**154**	T	T	17 39 57.3	
	baz=204,slow=75						
H10N2	**ASCENSION HYDR**	**138.73**	**154**	T	T	17 39 48.9	
	baz=204,slow=75						
FINES	**FINESS Array B**	**145.23**	**340**	PKPbc	**PKPbc**	**15 04 10.1**	**-1.0**
	comp=Z,10nm,0.8s,baz=49,slow=4.2,SNR=23						
FINES	**FINESS Array B**	**145.23**	**340**		**PKPbc**	**15 04 09.6**	**-1.5**
AKASG	**Malin Array Be**	**151.43**	**323**	PKPbc	**PKPbc**	**15 04 27.2**	**-0.7**
	comp=Z,4.1nm,0.6s,baz=52,slow=2.7,SNR=17						
TORD	**Torodi Ar. Bea**	**162.81**	**178**	PKPab	**PKPab**	**15 05 24.9**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=199,slow=2.9,SNR=6.5						

IDC ***10*** *14:45:06.6±1.3, 17°.01S×175°.17E, h0^{km}, mb4.0/5, mb1 4.3/5, mb1mx3.7/40, mbtmp4.0/5, ML4.3/1, MS4.0/12, Ms1 4.0/12, ms1mx3.8/28, Error ellipse: s-maj=49.6km s-min=27.0km az=179.0*

GCMT ***10*** *14:45:33.0±0.3, 16°.72S±0°.02×175°.17E±0°.02, h17^{km}±2^{km}, MW4.8/73, Moment Tensor Solution. s11,c14; s73,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.30±.13; $M_{\theta\theta}$1.32±.13; $M_{\phi\phi}$-1.02±.11; $M_{r\theta}$-0.08±.28; $M_{\theta\phi}$1.84±.09; $M_{\phi r}$0.22±.29; Best double couple: $M_0$2.19600×10^{16} NP1:ϕ_s106.00000°, δ84.00000°, λ-5.00000°. NP2: ϕ_s196.00000°, δ85.00000°, λ-174.00000°. Principal axes: T 2.3310, Plg1.0000°, Azm331.0000°; N -0.2700, Plg82.0000°, Azm235.0000°; P -2.0620, Plg8.0000°, Azm61.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 10 14:45:11.7±1.1**, 17°.1S**±0°.3×**175°.2E**±0°.1**, h35**^{km}**, n20, σ**$1^{s}.$**31**/6**, mb3.8**/5**, MS4.0**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.78**	**103**	Pn	**Pn**	**14 45 53.7**	**-0.1**
	1.9nm,0.3s,baz=258,slow=18,SNR=13						
DZM	**Mont Dzumac**	**9.61**	**238**	*e*Pn	Pn	14 47 45.4	+18
	118nm,1.4s						
DZM				*e*LR	LR	14 49 57.4	
	comp=Z,3µm,24.6s						
DZM	**Mont Dzumac**	**9.61**	**238**	LR	LR	14 49 54.0	
	comp=Z,182nm,18.9s,baz=34,slow=30						
AFI	**Afiamalu**	**12.95**	**78**	LR	LR	14 52 07.5	
	comp=Z,826nm,21.6s,baz=258,slow=32						
RAO	**Raoul Island**	**13.62**	**154**	LR	LR	14 52 51.2	
	comp=Z,2µm,21.9s,baz=318,slow=34						
HNR	**Honiara**	**16.69**	**295**	LR	LR	14 55 22.0	
	comp=Z,189nm,19.0s,baz=130,slow=37						
URZ	**Urewera**	**21.13**	**176**	LR	LR	14 56 34.6	
	comp=Z,492nm,19.1s,baz=31,slow=32						
PPT2	**Papeete2**	**33.59**	**96**	*e*LQ	LQ	14 59 49.4	
	838nm,26.5s						
PPT2				*e*LR	LR	15 01 17.7	
	comp=Z,366nm,24.0s,baz=263						
PPT	**Papeete**	**33.59**	**96**	LR	LR	15 02 21.9	
	comp=Z,167nm,21.5s,baz=259,slow=31						
TBI	**Tubuai**	**33.67**	**107**	*e*LQ	LQ	14 59 50.9	
	1µm,26.5s						
TBI				*e*LR	LR	15 01 17.5	
	comp=Z,182nm,26.5s						
STKA	**Stephens Creek**	**33.77**	**238**	LR	LR	15 04 53.2	
	comp=Z,352nm,19.6s,baz=37,slow=35						
WRA	**Warramunga Arr**	**38.78**	**259**	P	**P**	**14 52 32.6**	**-0.7**
	1.3nm,0.9s,baz=91,slow=8.9,SNR=6.2						
WRA				LR	LR	15 07 30.6	
	comp=Z,200nm,20.9s,baz=100,slow=35						
ASAR	**Alice Springs**	**39.15**	**253**	LR	LR	15 07 31.5	
	comp=Z,499nm,21.7s,baz=92,slow=34						
GUMO	**Guam**	**42.76**	**314**	LR	LR	15 11 19.9	
	comp=Z,90nm,18.1s,baz=156,slow=37						
ASAJ	**Asahikawa**	**67.84**	**335**	LR	LR	15 20 11.8	
	comp=Z,241nm,21.1s,baz=156,slow=31						
PETK	**Petropavlovsk-**	**71.56**	**349**	P	**P**	**14 56 29.2**	**+0.3**
	7.5nm,1.1s,baz=207,slow=8.9,SNR=4.7						
SEY	**Seymchan**	**81.78**	**350**	LR	LR	15 26 51.9	
	comp=Z,92nm,21.6s,baz=146,slow=31						
CMAR	**Chiang Mai Arr**	**82.91**	**292**	P	**P**	**14 57 34.6**	**+1.2**
	0.6nm,0.8s,baz=123,slow=3.3,SNR=1.8						
ILAR	**Eielson Array**	**86.62**	**15**	P	**P**	**14 57 49.5**	**-1.5**
	0.6nm,0.9s,baz=228,slow=6.5,SNR=4.4						
TXAR	**Lajitas Array**	**90.79**	**60**	P	**P**	**14 58 12.7**	**+0.9**
	0.5nm,0.9s,baz=272,slow=4.4,SNR=3.6						

IDC ***10*** *14:48:05.0±0.6, 44°.88N×100°.40E, h0^{km}, mb3.9/19, mb1 4.0/25, mb1mx3.9/63, mbtmp3.9/25, ML3.1/5, MS4.0/25, Ms1 4.0/25, ms1mx3.9/46, Error ellipse: s-maj=14.4km s-min=12.6km az=7.0*

BJI ***10*** *14:48:04.8±0.0, 44°.89N×100°.39E, h11^{km}, mB4.9/26, mb4.4/40, ML4.9/9, Ms4.7/45, Ms7 4.3/42*

MOS ***10*** *14:48:05.3±1.4, 44°.80N×100°.39E, h14^{km}, mb4.6/17, MS4.1/8, Error ellipse: s-maj=8.4km s-min=6.7km az=95.4*

NEIC ***10*** *14:48:06.4±1.8, 44°.63N±0°.09×100°.48E±0°.09, h18^{km}±5^{km}, mb4.5/13, Error ellipse: s-maj=15.3km s-min=5.8km az=147.0*

ISC 10 14:48:06.5±0.3**, 44°.76N**±0°.03×**100°.61E**±0°.03**, h10**^{km}**, n118, σ**$2^{s}.$**53**/130**, mb4.4**/40**, MS4.0**/29**, 7C-3D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**5.05**	**50**	Pn	**Pn**	**14 49 23.6**	**+1.2**
	16nm,0.3s,baz=236,slow=15,SNR=167						
SONM				Pg	**Pb**	**14 49 38.1**	**+3.1**
	70nm,0.3s,baz=223,slow=19,SNR=28						
SONM				Sn	**Sn**	**14 50 24.8**	**+4.0**
	54nm,0.3s,baz=227,slow=28,SNR=4.3						
SONM				Lg	Lg	14 50 45.5	
	72nm,0.3s,baz=282,slow=15,SNR=4.0						
SONM				LR	LR	14 51 43.8	
	comp=Z,2µm,18.9s,baz=240,slow=43						
GTA	**Gaotai**	**5.38**	**187**	Pn	**Pn**	**14 49 29.9**	**+3.0**
GTA				Pg	**Pg**	**14 49 46.8**	**-2.8**
GTA				Sn	**Sn**	**14 50 35.6**	**+6.6**
GTA				Sg	**Sg**	**14 50 58.7**	**-0.5**
GTA				smax	smax		
	comp=N,810nm,1.5s						
GTA				smax	smax		
	comp=E,2µm,1.1s						
GTA				LR	LR		
	comp=N,2µm,8.7s						
GTA				LR	LR		
	comp=E,2µm,10.5s						
GTA				LR	LR		
	comp=Z,3µm,9.5s						
ULN	**Ulaanbaatar**	**5.43**	**53**	*d i*P	**Pn**	**14 49 28.8**	**+1.2**
ULN	**Ulaanbaatar**	**5.43**	**53**	Pn	**Pn**	**14 49 28.9**	**+1.2**
ZAK	**Zakamensk**	**5.90**	**17**	*e*P	**Pn**	**14 49 33.8**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,248nm,0.9s						
MOY	**Mondy**	**6.91**	**2**	*e*P	**Pn**	**14 49 46.6**	**-1.3**
TLY	**Talaya**	**7.21**	**15**	Pn	**Pn**	**14 49 51.8**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=51,slow=4.1,SNR=3.8						
TLY				Pg	**Pb**	**14 50 11.6**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=218,slow=8.6,SNR=11						
TLY				Lg	Lg	14 51 47.9	
	comp=Z,0.2nm,0.3s,baz=280,slow=22,SNR=11						
TLY				LR	LR	14 52 48.4	
	comp=Z,2µm,18.6s,baz=193,slow=40						
TLY	**Talaya**	**7.21**	**15**	*i* P	**Pn**	**14 49 53.6**	**+1.7**
TLY				pmax	pmax		
	comp=Z,1.0nm,0.2s						
TLY	**Talaya**	**7.21**	**15**	Pn	**Pn**	**14 49 53.5**	**+1.5**
BTO	**Baotou**	**8.08**	**118**	*e*P	**Pn**	**14 50 04.5**	**+0.6**
BTO				S	**Sn**	**14 51 37.6**	**+2.2**
HHC	**Hu-ho-hao-te**	**8.95**	**112**	*e*P	**Pn**	**14 50 14.8**	**-1.1**
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,220nm,8.8s						
LZH	**Lanzhou**	**9.01**	**163**	⇑P	Pn	14 50 21.6	+4.8
LZH				sP		14 50 27.0	
LZH				PP	**PnPn**	**14 50 31.0**	**+6.7**
LZH				S	**Sn**	**14 51 56.3**	**-2.0**
LZH				pmax	pmax		
	comp=Z,27nm,1.2s						
LZH				pmax	pmax		
	comp=Z,170nm,4.1s						
LZH				LR	LR		
	comp=Z,3µm,7.0s						
LZH				LR	LR		
	comp=Z,3µm,6.8s						
LZH				LR	LR		
	comp=Z,2µm,8.1s						
WMQ	**Urumqi**	**9.31**	**269**	*e*P	**Pn**	**14 50 19.0**	**-1.8**
WMQ				pP		14 50 25.0	
WMQ				S	**Sn**	**14 52 08.8**	**+3.2**
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,160nm,3.7s						
WMQ				LR	LR		
	comp=Z,2µm,8.1s						
WMQ				LR	LR		
	comp=Z,3µm,10.5s						
WMQ				LR	LR		
	comp=Z,1µm,12.9s						
DGZ	**Jazzator, Alta**	**10.23**	**304**	*i* P	**Pn**	**14 50 33.0**	**-0.4**
BJI	**Beijing**	**12.43**	**107**	P	**Pn**	**14 51 01.1**	**-2.3**
BJI				S	**Sn**	**14 53 15.6**	**-6.3**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,220nm,5.3s						
XAN	**Xi'an**	**12.48**	**146**	P	**Pn**	**14 51 08.4**	**+4.2**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,250nm,4.3s						
XAN				LR	LR		
	comp=Z,2µm,13.5s						
XAN				LR	LR		
	comp=Z,4µm,16.4s						
XAN				LR	LR		
	comp=Z,1µm,14.8s						
MK31	**Makanchi Array**	**12.95**	**285**	P	**Pn**	**14 51 09.7**	**-0.8**
MK31	**Makanchi Array**	**12.95**	**285**		**Pn**	**14 51 09.7**	**-0.8**
MKAR	**Makanchi Array**	**12.95**	**285**	Pn	**Pn**	**14 51 08.5**	**-2.0**
	comp=Z,0.0nm,0.3s,baz=77,slow=16,SNR=4.9						
MKAR				Lg	Lg	14 54 45.1	
	comp=Z,0.9nm,0.3s,baz=95,slow=26,SNR=4.1						
MKAR				LR	LR	14 56 24.3	
	comp=Z,330nm,18.9s,baz=87,slow=39						
MKAR	**Makanchi Array**	**12.95**	**285**	*i* P	**Pn**	**14 51 11.6**	**+1.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MKAR	**Makanchi Array**	**12.95**	**285**	Pn	**Pn**	**14 51 08.3**	**-2.2**
ZALV	**Zalesovo Beam**	**13.77**	**317**	Pn	**Pn**	**14 51 19.8**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=134,slow=8.3,SNR=1.9						
ZALV				Sn	Sn	14 53 44.8	-10
	comp=Z,0.3nm,0.3s,baz=120,slow=15,SNR=2.6						
ZALV				Lg	Lg	14 55 09.2	
	comp=Z,0.4nm,0.3s,baz=130,slow=18,SNR=9.8						
ZALV	**Zalesovo Beam**	**13.77**	**317**	*i* P	**P**	**14 51 26.2**	**-4.0**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CD2	**Chengdu**	**14.05**	**169**	P	**P**	**14 51 31.3**	**-2.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,2µm,10.0s						
CD2				LR	LR		
	comp=Z,1µm,9.4s						
CD2				LR	LR		
	comp=Z,2µm,10.8s						
BOD	**Bodaibo**	**15.48**	**28**	*e*P	**Pn**	**14 51 45.4**	**+0.7**
BOD				pmax	pmax		
	comp=Z,35nm,1.7s						
KURK	**Kurchatov**	**15.92**	**300**	P	**Pn**	**14 51 50.7**	**+0.3**
KURK				pmax	pmax		
	comp=Z,16nm,0.6s						
KURK	**Kurchatov**	**15.92**	**300**		**Pn**	**14 51 50.7**	**+0.3**
KURK				IAmb	IAmb	14 52 10.9	
	comp=Z,16nm,0.6s						
KURBB	**Kurchatov Arra**	**15.95**	**299**	Pn	**Pn**	**14 51 49.2**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=104,slow=12,SNR=7.3						
KURBB				Lg	Lg	14 56 14.9	
	comp=Z,0.0nm,0.3s,baz=101,slow=32,SNR=7.0						
ENH	**Enshi**	**16.07**	**151**	P	**Pn**	**14 51 54.0**	**+1.5**
CN2	**Changchun**	**17.80**	**84**	*e*P	P	14 52 22.6	+7.7
CN2				*e*S	**S**	**14 55 39.2**	**-0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,900nm,10.0s						
CN2				LR	LR		
	comp=E,2µm,10.0s						
CN2				LR	LR		
	comp=Z,2µm,10.0s						
WHN	**Wuhan**	**17.85**	**138**	⇓P	P	14 52 23.4	+7.9
WHN				LR	LR		
	comp=N,3µm,4.3s						
WHN				LR	LR		
	comp=E,2µm,9.8s						
WHN				LR	LR		
	comp=Z,1µm,13.0s						
KSH	**Kashi**	**18.98**	**263**	P	**Pn**	**14 52 33.2**	**+4.4**
KSH				sP	sP	14 52 40.9	+7.8
KSH				PP	**PnPn**	**14 52 50.7**	**+10**
KSH				S	**S**	**14 56 05.1**	**+1.5**
KSH				sS	sS	14 56 11.6	+2.6
KSH				SS	SnSn	14 56 31.1	+16
KSH				ScS	**ScS**	**15 04 14.4**	**+3.9**
KSH				LR	LR		
	comp=Z,820nm,14.4s						
KSH				LR	LR		
	comp=Z,680nm,13.9s						
KSH				LR	LR		
	comp=Z,680nm,11.7s						
AAK	**Ala-Archa**	**18.98**	**273**	P	**P**	**14 52 25.7**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=18,slow=6.4,SNR=3.0						
AAK				LR	LR	15 00 20.9	
	comp=Z,675nm,19.8s,baz=76,slow=39						
AAK	**Ala-Archa**	**18.98**	**273**	*i* P	**P**	**14 52 26.3**	**-1.8**
AAK				pmax	pmax		
	comp=Z,27nm,1.0s						
AAK	**Ala-Archa**	**18.98**	**273**		**P**	**14 52 25.7**	**-2.4**
NJ2	**Nanjing**	**19.06**	**126**	*e*P	**P**	**14 52 26.7**	**-2.2**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ZEA	**Zeya**	**19.47**	**53**	*e*P	**Pn**	**14 52 36.5**	**+2.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA				MLR	MLR		
	comp=E,700nm,17.0s						
ZEA				MLR	MLR		
	comp=Z,900nm,11.0s						
TAPN	**Taplejung**	**20.22**	**215**	*e*P	**P**	**14 52 43.0**	**+1.1**
GUN	**Gumba**	**20.53**	**220**	*e*P	**P**	**14 52 46.1**	**+0.8**
	comp=Z,62nm,0.7s						
MDJ	**Mudanjiang**	**20.56**	**80**	P	**P**	**14 52 47.2**	**+2.0**
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,200nm,4.0s						
ODAN	**Odare**	**20.79**	**215**	*e*P	Pn	14 52 49.8	-0.6
KKN	**Kakani**	**20.91**	**221**	*e*P	**P**	**14 52 49.6**	**+0.3**
	comp=Z,49nm,0.5s						
PKI	**Pulchoki**	**21.03**	**220**	*e*P	**P**	**14 52 50.9**	**+0.1**
	comp=Z,20nm,0.6s						
GKN	**Gorkha**	**21.04**	**223**	*e*P	**P**	**14 52 50.6**	**0.0**
	comp=Z,24nm,0.6s						
PKIN	**Phulchoki**	**21.04**	**220**	*e*P	**P**	**14 52 50.9**	**+0.2**
	comp=Z,9.6nm,0.4s						
RAMN	**Ramite**	**21.04**	**217**	*e*P	**P**	**14 52 51.7**	**+1.0**
	comp=Z,29nm,0.5s						
DANN	**Dangsing**	**21.18**	**225**	*e*P	**P**	**14 52 52.5**	**+0.2**
	comp=Z,37nm,0.8s						
BVAR	**Borovoye Array**	**21.39**	**304**	P	**P**	**14 52 51.0**	**-3.1**
	comp=Z,4.6nm,0.5s,baz=134,slow=6.4,SNR=13						
BVAR	**Borovoye Array**	**21.39**	**304**	P	**P**	**14 52 51.0**	**-3.1**
BRVK	**Borovoye**	**21.46**	**304**	*i* P	**P**	**14 52 53.9**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,19nm,0.9s						
BRVK	**Borovoye**	**21.46**	**304**	P	**P**	**14 52 52.1**	**-2.7**
BRVK				IAmb	IAmb	14 53 08.4	
	comp=Z,22nm,1.0s						
KLR	**Kul'dur**	**21.62**	**67**	P	**P**	**14 52 57.7**	**+1.2**
	comp=Z,4.3nm,0.8s,baz=267,slow=11,SNR=13						
KLR				LR	LR	15 02 24.0	
	comp=Z,294nm,18.4s,baz=270,slow=40						
KLR	**Kul'dur**	**21.62**	**67**	*i* P	**P**	**14 52 58.0**	**+1.5**
KLR				pmax	pmax		
	comp=Z,18nm,2.2s						
KOLN	**Koldanda**	**21.74**	**224**	*e*P	**P**	**14 52 58.8**	**+0.6**
KSRS	**Korea Array**	**21.77**	**100**	P	**P**	**14 53 00.7**	**+2.5**
	comp=Z,0.4nm,0.3s,baz=293,slow=11,SNR=4.8						
KSRS				LR	LR	15 02 17.9	
	comp=Z,371nm,18.8s,baz=302,slow=39						
PYUN	**Piuthan**	**21.78**	**226**	*e*P	**P**	**14 52 58.7**	**+0.1**
	comp=Z,35nm,0.7s						
USRK	**Ussuriysk Ar.**	**22.33**	**80**	P	**P**	**14 53 05.7**	**+1.5**
	comp=Z,2.5nm,0.6s,baz=267,slow=8.7,SNR=2.4						
USRK				LR	LR	15 02 50.8	
	comp=Z,508nm,18.6s,baz=286,slow=39						
USRK	**Ussuriysk Ar.**	**22.33**	**80**	P	**P**	**14 53 00.6**	**-3.6**
BTK	**Batken**	**22.43**	**268**	P	**P**	**14 53 01.4**	**-4.0**
BTK				pmax	pmax		
	comp=Z,17nm,0.9s						
BTK	**Batken**	**22.43**	**268**	P	**P**	**14 53 01.4**	**-4.0**
BTK				IAmb	IAmb	14 53 13.4	
	comp=Z,17nm,0.9s						
YAK	**Yakutsk**	**24.15**	**34**	P	**P**	**14 53 22.0**	**-0.5**
	comp=Z,2.5nm,0.5s,baz=194,slow=0.4,SNR=1.7						
YAK				LR	LR	15 03 30.5	
	comp=Z,422nm,19.2s,baz=250,slow=38						
YAK	**Yakutsk**	**24.15**	**34**	*e*P	**P**	**14 53 22.2**	**-0.2**
YAK				*e*		14 53 51.3	
YAK				*e*		14 57 03.0	
YAK				*e*S	**S**	**14 57 41.1**	**+1.1**
YAK				pmax	pmax		
	comp=Z,15nm,1.7s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,102nm,3.1s						
YAK				pmax	pmax		
	comp=N,90nm,3.8s						
YAK				pmax	pmax		
	comp=E,141nm,4.2s						
YAK				smax	smax		
	comp=E,170nm,3.9s						
YAK				smax	smax		
	comp=N,118nm,3.7s						
YAK				MLR	MLR		
	comp=Z,411nm,23.0s						
CHGR	**Chuyangaron**	**24.16**	**266**	P	**P**	**14 53 20.2**	**-2.7**
CHGR	**Chuyangaron**	**24.16**	**266**	P	**P**	**14 53 20.2**	**-2.7**
NRIK	**Noril'sk**	**25.52**	**349**	P	**P**	**14 53 33.7**	**-1.1**
	comp=Z,5.6nm,1.0s,baz=158,slow=11,SNR=2.5						
NRIK				LR	LR	15 03 44.8	
	comp=Z,389nm,20.8s,baz=162,slow=37						
NRIK	**Noril'sk**	**25.52**	**349**	*ce*P	**P**	**14 53 34.6**	**-0.2**
NRIK				pmax	pmax		
	comp=Z,21nm,1.1s						
CHTO	**Chiang Mai**	**25.91**	**184**	P	**P**	**14 53 34.2**	**-4.5**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHTO	**Chiang Mai**	**25.91**	**184**	P	**P**	**14 53 34.2**	**-4.5**
CHTO				IAmb	IAmb	14 53 41.7	
	comp=Z,7.2nm,0.8s						
KBL	**Kabul**	**26.21**	**258**	P	**P**	**14 53 38.8**	**-2.9**
KBL				pmax	pmax		
	comp=Z,11nm,1.0s						
KBL	**Kabul**	**26.21**	**258**	P	**P**	**14 53 38.8**	**-2.9**
KBL				IAmb	IAmb	14 53 48.5	
	comp=Z,11nm,0.9s						
CMAR	**Chiang Mai Arr**	**26.27**	**184**	P	**P**	**14 53 43.9**	**+2.0**
	comp=Z,8.8nm,0.8s,baz=354,slow=9.2,SNR=70						
CMAR				LR	LR	15 05 25.2	
	comp=Z,289nm,19.8s,baz=34,slow=39						
QIZ	**Qiongzhong**	**26.79**	**160**	P	**P**	**14 53 44.3**	**-2.4**
QIZ				S	**S**	**14 58 20.5**	**-2.2**
QIZ				LR	LR		
	comp=Z,820nm,12.9s						
QIZ				LR	LR		
	comp=Z,280nm,9.9s						
QIZ				LR	LR		
	comp=Z,1µm,11.3s						
ABKAR	**Akbulak array**	**27.85**	**294**	P	**P**	**14 53 53.9**	**-1.9**
ABKAR	**Akbulak array**	**27.85**	**294**	P	**P**	**14 53 54.0**	**-1.9**
JOW	**Kunigami**	**28.49**	**120**	LR	LR	15 05 42.8	
	comp=Z,234nm,19.6s,baz=205,slow=37						
ARU	**Arti**	**28.67**	**309**	LR	LR	15 06 15.1	
	comp=Z,439nm,19.1s,baz=98,slow=38						
ARU	**Arti**	**28.67**	**309**	*d i*P	**P**	**14 54 04.8**	**+1.6**
ARU						14 54 53.1	
ARU				S	**S**	**14 58 56.5**	**+4.8**
ARU				SS	**SnSn**	**15 00 16.9**	**+5.3**
ARU				pmax	pmax		
	comp=Z,30nm,3.8s						
AKTO	**Aktyubinsk**	**28.97**	**297**	P	**P**	**14 54 05.2**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=90,slow=19,SNR=3.4						
AKTO				LR	LR	15 06 03.4	
	comp=Z,282nm,19.9s,baz=88,slow=38						
TIXI	**Tiksi**	**30.18**	**17**	LR	LR	15 05 48.7	
	comp=Z,115nm,20.6s,baz=258,slow=35						
TIXI	**Tiksi**	**30.18**	**17**	*ce*P	**P**	**14 54 19.6**	**+3.2**
TIXI				pmax	pmax		
	comp=Z,14nm,2.4s						
GEYT	**Alibeck**	**32.33**	**273**	LR	LR	15 09 36.4	
	comp=Z,190nm,19.7s,baz=220,slow=40						
SEY	**Seymchan**	**34.34**	**40**	P	**P**	**14 54 53.4**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=255,slow=16,SNR=4.2						
BELG	**Belogornoye**	**35.18**	**302**	*i* P	**P**	**14 55 00.1**	**-0.2**
BELG				pmax	pmax		
	comp=Z,21nm,5.6s						
PRGR	**Permogore**	**35.73**	**318**	*e*P	**P**	**14 55 05.7**	**+0.8**
PRGR				pmax	pmax		
	comp=Z,13nm,1.3s						
PETK	**Petropavlovsk-**	**37.51**	**56**	LR	LR	15 12 20.1	
	comp=Z,293nm,19.7s,baz=279,slow=39						
MAK	**Makhachkala**	**37.77**	**287**	*e*P	P	14 55 13.3	-9.2
MAK				pmax	pmax		
	comp=Z,253nm,1.4s						
MAK				MLR	MLR		
	comp=Z,351nm,16.0s						
KLMR	**Klimovskoe**	**38.69**	**317**	*e*P	**P**	**14 55 31.5**	**+1.4**
KLMR				pmax	pmax		
	comp=Z,19nm,1.3s						

KLMR	Klimovskoe	38.69	317	eP	P	14 55 31.5	+1.4
KLMR				AMP		14 55 36.1	
	comp=Z,19nm,1.3s						
KULM	Kulim	39.32	180	P	P	14 55 33.9	-1.9
KULM				IAmb	IAmb	14 55 38.4	
	comp=Z,8.0nm,0.8s						
BILL	Bilibino	40.48	32⇑	eP	P	14 55 48.0	+3.1
BILL				e		14 57 21.1	
BILL				pmax	pmax		
	comp=Z,17nm,3.0s						
BILL				MLR	MLR		
	comp=Z,263nm,16.0s						
KBZ	Khabaz	40.60	290	LR	LR	15 13 22.1	
	comp=Z,304nm,18.3s,baz=119,slow=38						
KIV	Kislovodsk	40.66	290	eP	P	14 55 45.0	-1.8
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,266nm,16.0s						
OBN	Obninsk	41.10	308⇑	eP	P	14 55 50.3	+0.2
OBN				e		14 57 28.9	
OBN				pmax	pmax		
	comp=Z,12nm,1.6s						
OBN				MLR	MLR		
	comp=Z,253nm,17.0s						
SOC	Sochi	42.78	291	eP	P	14 56 00.1	-4.0
SOC				e		14 57 37.4	
SOC				eS	S	15 02 24.3	-3.6
SOC				eSS	SS	15 05 35.4	-3.0
SOC				eSSS	SSS	15 06 12.4	
SOC				MLR	MLR		
	comp=Z,248nm,16.0s						
ARCES	ARCESS Array B	43.83	331	LR	LR	15 16 25.7	
	comp=Z,121nm,18.7s,baz=235,slow=39						
FINES	FINESS Array B	45.03	319	P	P	14 56 20.5	-1.3
	comp=Z,3.5nm,0.9s,baz=77,slow=7.6,SNR=3.3						
FINES				LR	LR	15 15 43.3	
	comp=Z,260nm,18.1s,baz=68,slow=37						
FINES	FINESS Array B	45.03	319	ceP	P	14 56 21.2	-0.6
FINES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MNK	Minsk	46.10	309	i P	P	14 56 31.5	+1.1
MNK				i		14 58 19.6	
MNK				i PPP	PPP	14 59 00.4	
MNK				i S	S	15 03 16.6	+0.8
MNK				i		15 06 27.3	
MNK				i SSS	SSS	15 07 35.6	
MNK				pmax	pmax		
	comp=Z,15nm,0.8s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,19nm,0.9s						
MNK				MLR	MLR		
	comp=Z,112nm,15.0s						
MNK				MLR	MLR		
	comp=N,102nm,13.0s						
MNK				MLR	MLR		
	comp=E,10.0nm,10.0s						
MNK	Minsk	46.10	309	i P	P	14 56 31.5	+1.1
	comp=E,3.0nm,0.9s						
MNK				i P	P	14 56 31.5	+1.1
	comp=N,19nm,0.8s						
MNK				i P	P	14 56 31.5	+1.1
	comp=Z,15nm,0.8s,baz=70						
MNK				i PP	PP	14 58 19.6	+1.4
MNK				i PPP	PPP	14 59 00.4	
MNK				i S	S	15 03 16.7	+0.9
MNK				i SS	SS	15 06 44.5	+4.1
MNK				i SSS	SSS	15 07 35.7	
MNK				i LQ	LQ	15 12 31.3	
MNK				i LR	LR	15 15 31.4	
MNK				i LRM	MLR	15 17 50.3	
	comp=Z,112nm,14.8s						
MNK				i LRM	MLR	15 17 54.6	
	comp=N,102nm,13.0s						
MNK				i LRM	MLR	15 17 57.9	
	comp=E,10.0nm,9.8s						
AKASG	Malin Array Be	46.67	304	P	P	14 56 32.9	-2.0
	comp=E,0.2nm,0.3s,baz=84,slow=7.0,SNR=2.8						
AKASG				LR	LR	15 16 11.0	
	comp=E,181nm,20.6s,baz=300,slow=36						
BRTR	Keskin Array B	48.57	289	P	P	14 56 48.1	-2.0
	comp=E,1.5nm,0.9s,baz=51,slow=14,SNR=4.8						
BRTR				LR	LR	15 21 03.0	
	comp=E,145nm,18.8s,baz=56,slow=41						
BRTR	Keskin Array B	48.57	289	ceP	P	14 56 52.5	+2.4
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MLR	Muntele Rosu	50.85	299	P	P	14 57 05.8	-1.5
MLR				pmax	pmax		
	comp=Z,12nm,1.4s						
MLR	Muntele Rosu	50.85	299	P	P	14 57 05.8	-1.5
MLR				IAmb	IAmb	14 57 18.2	
	comp=Z,12nm,1.4s						
NOA	NORSAR Array B	51.92	322	LR	LR	15 19 48.1	
	comp=Z,299nm,18.2s,baz=55,slow=37						
CLL	Collm	55.60	311	eP	P	14 57 39.0	-3.0
CLL	Collm	55.60	311	eP	P	14 57 39.0	-3.0
GERES	GERESS Array B	56.48	308	LR	LR	15 22 15.9	
	comp=Z,186nm,19.4s,baz=72,slow=36						
BMAR	Burnt Mountain	57.86	24		P	14 57 58.8	+0.8
ILAR	Eielson Array	58.85	28	P	P	14 58 04.7	-0.2
	comp=Z,0.6nm,0.8s,baz=302,slow=6.1,SNR=5.9						
ILAR				LR	LR	15 24 24.2	
	comp=Z,108nm,18.8s,baz=286,slow=37						
ATD	Arta Tunnel	59.22	255	LR	LR	15 27 26.3	
	comp=Z,69nm,19.1s,baz=58,slow=40						
INK	Inuvik	60.24	20	P	P	14 58 12.9	-1.4
	comp=Z,1.9nm,1.2s,baz=350,slow=6.5,SNR=3.6						
RES	Resolute Bay	60.39	5	P	P	14 58 13.8	-1.4
	comp=Z,0.3nm,0.4s,baz=45,slow=14,SNR=1.7						
PSA00	Pilbara Seismi	68.31	161	P	P	14 59 04.8	-2.9
YKA	Yellowknife Ar	69.43	17	P	P	14 59 13.3	-0.9
	comp=Z,2.2nm,0.8s,baz=330,slow=6.2,SNR=4.4						
WRA	Warramunga Arr	71.37	147	P	P	14 59 27.1	+0.5
	comp=Z,1.1nm,0.8s,baz=345,slow=7.0,SNR=11						
ASAR	Alice Springs	74.58	149	P	P	14 59 46.4	+0.8
	comp=Z,1.4nm,0.5s,baz=340,slow=5.3,SNR=30						
TORD	Torodi Ar. Bea	87.07	286	P	P	15 00 53.6	+0.9
	comp=Z,0.2nm,0.5s,baz=6.4,slow=2.7,SNR=1.9						

IDC 10 14:49:37.8±4.2**, 30°.84N**×**141°.40E, h0^{km}, mb3.6**/2**, mb1 3.7**/5**, mb1mx3.2**/57**, mbtmp3.7**/5**, ML3.0**/3**, Error ellipse: s-maj=198.9km s-min=21.5km az=74.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.65	329	Pn	Pn	14 50 22.1	+0.3
	12nm,0.3s,baz=61,slow=7.6,SNR=1.3						
JHJ				Sn	Sn	14 50 43.6	-11
	24nm,0.3s,baz=74,slow=20,SNR=1.7						
JCJ	Chichijima	3.79	169	Pn	Pn	14 50 38.1	+0.6
	2.4nm,0.3s,baz=282,slow=20,SNR=1.4						
JCJ				Sn	Sn	14 51 25.6	+2.7
	5.6nm,0.3s,baz=116,slow=15,SNR=1.4						
MJAR	Matsushiro Arr	6.28	336	Pn	Pn	14 51 11.4	-0.3
	0.1nm,0.3s,baz=150,slow=14,SNR=4.7						
H11N2	WAKE ISLAND Hy	25.51	110	T	T	15 22 50.9	
	baz=301,slow=75						
H11N1	WAKE ISLAND Hy	25.52	110	T	T	15 22 50.1	
	baz=301,slow=75						
H11N3	WAKE ISLAND Hy	25.53	110	T	T	15 22 50.7	
	baz=301,slow=75						
H11S3	WAKE ISLAND Hy	25.99	112	T	T	15 23 26.0	
	baz=303,slow=75						
H11S1	WAKE ISLAND Hy	26.00	112	T	T	15 23 26.3	
	baz=303,slow=75						
H11S2	WAKE ISLAND Hy	26.01	112	T	T	15 23 27.4	
	baz=303,slow=75						
WRA	Warramunga Arr	50.94	189	P	P	14 58 41.6	+0.5
	0.9nm,0.7s,baz=5.0,slow=7.7,SNR=7.4						
ASAR	Alice Springs	54.67	188	P	P	14 59 07.7	-1.0
	0.2nm,0.5s,baz=23,slow=12,SNR=12						
H03N2	Juan Fernandez	145.90	105	T	T	17 53 22.6	
	baz=279,slow=75						
H03N3	Juan Fernandez	145.91	105	T	T	17 53 23.6	
	baz=279,slow=75						
H03N1	Juan Fernandez	145.92	105	T	T	17 53 24.8	
	baz=279,slow=75						

IDC ***10*** *14:50:17.6±1.3, 16°.64S×174°.98E, h0^{km}, mb3.9/4, mb1 4.1/5, mb1mx3.6/36, mbtmp3.8/5, ML4.5/1, Error ellipse: s-maj=40.2km s-min=24.8km az=180.0*

ISC 10 14:50:19.2±1.1**, 16°.6S**±0°.2×**174°.9E**±0°.1**, h10^{km}, n6, σ0ˢ.65**/6**, mb3.8**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.17	111	Pn	Pn	14 51 08.6	-0.7
	2.1nm,0.3s,baz=311,slow=11,SNR=3.5						
MSVF				Sn	Sn	14 51 48.1	+0.8
	0.6nm,0.3s,baz=25,slow=18,SNR=1.8						
DZM	Mont Dzumac	9.68	235	Pn	Pn	14 52 45.8	+7.1
	0.1nm,0.3s,baz=83,slow=16,SNR=3.7						
WRA	Warramunga Arr	38.63	259	P	P	14 57 43.0	-0.1
	0.5nm,1.0s,baz=96,slow=8.5,SNR=2.4						
ASAR	Alice Springs	39.05	253	P	P	14 57 46.9	+0.2
	1.0nm,0.9s,baz=84,slow=8.6,SNR=4.2						
PETK	Petropavlovsk-	71.02	349	P	P	15 01 37.4	+0.3
	2.5nm,0.9s,baz=131,slow=8.0,SNR=2.0						
ILAR	Eielson Array	86.21	15	P	P	15 03 00.3	-0.2
	1.7nm,0.9s,baz=230,slow=4.2,SNR=12						

IDC ***10*** *14:55:13.9±0.8, 16°.72S×175°.13E, h0^{km}, mb4.1/8, mb1 4.4/10, mb1mx4.2/34, mbtmp4.2/10, ML4.9/1, Error ellipse: s-maj=27.6km s-min=19.8km az=154.0*

ISC 10 14:55:19.1±0.7**, 16°.8S**±0°.1×**175°.2E**±0°.1**, h35^{km}, n15, σ1ˢ.38**/13**, mb4.2**/8**, MS3.9**/3**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.88	109	Pn	Pn	14 56 01.5	-1.0
	6.2nm,0.3s,baz=268,slow=16,SNR=12						
DZM	Mont Dzumac	9.79	236	ePn	Pn	14 57 39.2	+1.7
	121nm,1.3s						
DZM				eLR	LR	14 59 50.3	
	comp=Z,2µm,25.5s						
DZM	Mont Dzumac	9.79	236	Pn	Pn	14 57 35.5	-2.0
	0.1nm,0.3s,baz=71,slow=17,SNR=5.8						
URZ	Urewera	21.45	176	P	P	15 00 05.4	+1.1
	15nm,0.9s,baz=118,slow=22,SNR=5.2						
PPT2	Papeete2	33.63	97	eLQ	LQ	15 09 41.6	
	759nm,25.8s						
PPT2				eLR	LR	15 11 04.6	
	comp=Z,246nm,23.8s						
TBI	Tubuai	33.76	107	eLQ	LQ	15 09 44.9	
	494nm,29.5s						
TBI				eLR	LR	15 11 10.5	
	comp=Z,270nm,28.2s						
STKA	Stephens Creek	33.94	238	P	P	15 01 59.9	+0.7
	3.6nm,1.0s,baz=43,slow=4.9,SNR=3.1						
WRA	Warramunga Arr	38.84	259	P	P	15 02 39.5	-1.6
	2.0nm,1.1s,baz=90,slow=9.4,SNR=5.4						
ASAR	Alice Springs	39.25	253	P	P	15 02 43.0	-1.5
	1.7nm,0.6s,baz=83,slow=9.1,SNR=12						
ASAR				PcP	PcP	15 04 54.9	+1.6
	1.1nm,0.9s,baz=94,slow=2.9,SNR=5.2						
TAOE	Nuku Hiva Isla	44.16	85	eLR	LR	15 15 55.8	
	comp=Z,312nm,27.9s						
MJAR	Matsushiro Arr	63.52	327	P	P	15 05 46.1	+0.2
	4.4nm,1.1s,baz=145,slow=6.7,SNR=4.3						
ILAR	Eielson Array	86.30	15	P	P	15 07 56.6	-0.3
	1.7nm,0.9s,baz=236,slow=5.6,SNR=9.2						
TXAR	Lajitas Array	90.63	60	P	P	15 08 18.1	-0.4
	0.8nm,1.0s,baz=236,slow=4.9,SNR=4.6						
PDAR	Pinedale Array	90.83	45	P	P	15 08 20.5	+1.3
	1.1nm,1.1s,baz=225,slow=5.5,SNR=4.0						
GERES	GERESS Array B	144.65	339	PKP	PKPab	15 14 50.6	-0.2
	0.2nm,0.2s,baz=50,slow=3.1,SNR=5.1						

IDC ***10*** *15:03:25.1±0.7, 16°.80S×175°.07E, h0^{km}, mb4.4/12, mb1 4.6/14, mb1mx4.4/29, mbtmp4.4/14, ML4.8/1, MS4.3/24, Ms1 4.3/24, ms1mx4.3/25, Error ellipse: s-maj=21.5km s-min=17.2km az=153.0*

NEIC ***10*** *15:03:26.4±2.0, 17°.02S±0°.08×175°.28E±0°.07, h16^{km}±3^{km}, mb5.1/63, Error ellipse: s-maj=11.8km s-min=9.8km az=158.0*

GCMT ***10*** *15:03:30.4±0.2, 16°.71S±0°.01×175°.11E±0°.01, h16^{km}, MW5.1/120, Moment Tensor Solution. s52,c65; s120,c185; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.40±.12; $M_{\theta\theta}$1.31±.11; $M_{\phi\phi}$-0.91±.10; $M_{r\theta}$1.02±.31; $M_{\theta\phi}$5.17±.10; $M_{\phi r}$-0.30±.29; Best double couple: $M_0$5.39800×10^{16} NP1:ϕ_s6.00000°,δ79.00000°, λ-177.00000°. NP2:ϕ_s276.00000°,δ87.00000°, λ-11.00000°. Principal axes: T 5.5500, Plg6.0000°, Azm322.0000°; N -0.3000, Plg78.0000°, Azm81.0000°; P -5.2470, Plg10.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 15:03:29.3±0.4**, 16°.96S**±0°.08×**175°.18E**±0°.06**, h35^{km}, n128, σ1ˢ.57**/117**, mb4.9**/45**, MS4.3**/22**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.85	106	Pn	Pn	15 04 12.3	0.0
	5.0nm,0.3s,baz=273,slow=10,SNR=20						
MSVF				Sn	Sn	15 04 50.4	+4.8
	8.7nm,0.3s,baz=98,slow=12,SNR=4.4						
MSVF				LR	LR	15 05 10.9	
	comp=Z,4µm,21.3s,baz=283,slow=35						
MSVF	Nonsavu	2.85	106		Pn	15 04 11.5	-0.9
PINNC	Pines Island,	9.19	231		Pn	15 05 39.3	-0.1
PINNC	Pines Island,	9.19	231	P	Pn	15 05 42.8	+3.4
OUENC	Ouen Island, N	9.54	234		Pn	15 05 44.1	-0.1
OUENC	Ouen Island, N	9.54	234	P	Pn	15 05 47.3	+3.1
DZM	Mont Dzumac	9.68	237	ePn	Pn	15 05 48.4	+2.3
	206nm,1.4s						
DZM				eLR	LR	15 07 57.4	
	comp=Z,7µm,25.6s						
DZM	Mont Dzumac	9.68	237	Pn	Pn	15 05 46.6	+0.4
	0.2nm,0.3s,baz=76,slow=13,SNR=11						
DZM				LR	LR	15 09 03.1	
	comp=Z,5µm,20.1s,baz=37,slow=35						
DZM	Mont Dzumac	9.68	237		Pn	15 05 48.2	+2.1
DZM	Mont Dzumac	9.68	237	P	Pn	15 05 48.9	+2.8
ONTNC	Ouen Toro	9.79	236		Pn	15 05 48.0	+0.4
ONTNC	Ouen Toro	9.79	236	P	Pn	15 05 50.6	+3.0
NOUC	Port Laguerre	9.80	237	P	Pn	15 05 51.5	+3.7
AFI	Afiamalu	12.94	78	LR	LR	15 10 26.3	
	comp=Z,3µm,21.3s,baz=254,slow=32						
RAO	Raoul Island	13.78	154	LR	LR	15 10 57.6	
	comp=Z,3µm,19.4s,baz=348,slow=32						
HNR	Honiara	16.60	295	LR	LR	15 12 42.6	
	comp=Z,522nm,18.2s,baz=130,slow=34						
OUZ	Omahuta	18.24	184		P	15 07 37.5	-2.1
KNTN	Kanton	19.09	44	P	P	15 07 47.1	-2.0
KNTN				IAmb	IAmb	15 08 34.2	
	comp=Z,366nm,2.0s						
URZ	Urewera	21.29	176	P	P	15 08 15.6	+2.8
	comp=Z,23nm,1.0s,baz=118,slow=21,SNR=7.0						
URZ				LR	LR	15 14 31.4	
	comp=Z,1µm,19.3s,baz=31,slow=31						
URZ	Urewera	21.29	176	P	P	15 08 09.7	-3.1
URZ				IAmb	IAmb	15 08 20.8	
	comp=Z,153nm,1.6s						
BKZ	Black Stump Fm	22.16	177		P	15 08 19.7	-2.5
BKZ				IAmb	IAmb	15 08 52.2	
	comp=Z,85nm,1.6s						
QRZ	Quartz Range	23.89	185	P	P	15 08 38.5	-1.2
QRZ				IAmb	IAmb	15 09 29.4	
	comp=Z,131nm,1.6s						
EIDS	Eidsvold	23.95	245	P	P	15 08 40.2	-0.1
RAR	Rarotonga	24.04	104	LR	LR	15 15 57.0	
	comp=Z,556nm,19.3s,baz=280,slow=31						
NNZ	Nelson	24.22	183	P	P	15 08 40.9	-1.8
NNZ				IAmb	IAmb	15 09 14.9	
	comp=Z,80nm,1.1s						
THZ	Tophouse	24.80	184	P	P	15 08 47.0	-1.0
THZ				IAmb	IAmb	15 08 53.0	
	comp=Z,118nm,1.6s						
ARMA	Armidale	25.32	234	P	P	15 08 53.2	+0.3
ARMA				IAmb	IAmb	15 09 25.6	
	comp=Z,50nm,1.8s						
KHZ	Kahutara	25.41	183	P	P	15 08 52.7	-0.8
LTZ	Lake Taylor	25.86	185	P	P	15 08 56.6	-1.0
LTZ				IAmb	IAmb	15 09 18.9	
	comp=Z,93nm,1.5s						
FOZ	Fox Glacier	26.88	189	P	P	15 09 05.9	-0.8
RPZ	Rata Peaks	26.90	187	P	P	15 09 06.4	-0.5
RPZ				IAmb	IAmb	15 09 54.7	
	comp=Z,97nm,1.8s						
CTAO	Charters Tower	27.58	259	P	P	15 09 12.2	-1.2
LBZ	Lake Benmore	27.66	188	P	P	15 09 11.5	-2.3
LBZ				IAmb	IAmb	15 09 21.9	
	comp=Z,31nm,1.2s						
ODZ	Otahua Downs	28.26	187	P	P	15 09 18.2	-0.9
MLZ	Mavora Lakes	28.93	190	P	P	15 09 23.7	-1.5
PPT2	Papeete2	33.64	96	eLQ	LQ	15 17 46.8	
	comp=Z,2µm,27.0s						
PPT2				eLR	LR	15 19 14.5	
	comp=Z,802nm,23.2s,baz=261						
PPT	Papeete	33.64	96	LR	LR	15 20 37.8	
	comp=Z,366nm,19.9s,baz=258,slow=31						
PPTF	Pamatai, Papee	33.65	96	P	P	15 10 04.3	-2.7
TBI	Tubuai	33.74	107	eLQ	LQ	15 17 48.5	
	comp=Z,2µm,28.2s						
TBI				eLR	LR	15 19 19.4	
	comp=Z,878nm,30.5s						
STKA	Stephens Creek	33.83	238	P	P	15 10 09.0	+0.6
	comp=Z,5.9nm,1.1s,baz=7.8,slow=8.9,SNR=5.3						
STKA				LR	LR	15 22 38.8	
	comp=Z,906nm,20.2s,baz=58,slow=34						
STKA	Stephens Creek	33.83	238	P	P	15 10 08.6	+0.2
WB0	Warramunga Arr	38.74	259	P	P	15 10 49.1	-1.4
WB2	Warramunga Arr	38.77	259	P	P	15 10 49.0	-1.8
WRA	Warramunga Arr	38.78	259	P	P	15 10 49.5	-1.4
	comp=Z,1.3nm,0.9s,baz=91,slow=8.0,SNR=6.9						
WRA				LR	LR	15 25 28.3	
	comp=Z,282nm,19.5s,baz=105,slow=34						
WRA	Warramunga Arr	38.78	259	P	P	15 10 49.2	-1.7
AS31	Alice Springs	39.17	253	P	P	15 10 52.5	-1.6
ASAR	Alice Springs	39.17	253	P	P	15 10 53.6	-0.5
	comp=Z,2.7nm,0.8s,baz=84,slow=9.2,SNR=31						
ASAR				PcP	PcP	15 13 05.0	+1.8
	comp=Z,0.9nm,0.9s,baz=102,slow=3.2,SNR=2.5						
ASAR				LR	LR	15 27 01.2	
	comp=Z,471nm,18.4s,baz=92,slow=36						
ASAR	Alice Springs	39.17	253	P	P	15 10 52.9	-1.2
MTN	Manton Dam	42.69	269	P	P	15 11 21.4	-1.8
TAOE	Nuku Hiva Isla	44.20	85	eLR	LR	15 24 06.0	
	comp=Z,1µm,28.2s,baz=262						
FAKI	Fak Fak	44.39	284	P	P	15 11 36.6	-0.2
FAKI				IAmb	IAmb	15 11 42.4	
	comp=Z,36nm,1.1s						
KNRA	Kununurra	44.48	265	P	P	15 11 37.4	-0.1
PSA00	Pilbara Seismi	52.21	256	P	P	15 12 36.5	-0.6
PSA00				IAmb	IAmb	15 12 44.0	
	comp=Z,19nm,1.1s						
PSA00	Pilbara Seismi	52.21	256	P	P	15 12 36.5	-0.6
MBWA	Marble Bar	52.36	256	P	P	15 12 37.7	-0.5
MBWA				IAmb	IAmb	15 12 44.6	
	comp=Z,30nm,1.4s						
KAPI	Kappang	55.51	276	P	P	15 13 00.5	-0.9
KAPI				IAmb	IAmb	15 13 08.2	
	comp=Z,19nm,1.1s						
TOLI2	Tolitoli	56.53	283	P	P	15 13 07.0	-1.6
TOLI2				IAmb	IAmb	15 13 14.1	
	comp=Z,17nm,1.3s						
MYLDM	Lahad Datu	60.15	286	P	P	15 13 33.2	-0.7
MJAR	Matsushiro Arr	63.64	327	P	P	15 13 56.8	-0.1
	comp=Z,7.4nm,1.1s,baz=161,slow=7.7,SNR=7.2						
MJAR				LR	LR	15 36 58.0	
	comp=Z,138nm,21.5s,baz=100,slow=32						
MJAR	Matsushiro Arr	63.64	327	P	P	15 13 57.2	+0.2
JSD	Sado	64.77	328	P	P	15 14 05.1	+0.9
SBUM	Sibu	65.01	281	P	P	15 14 06.9	+0.5
NACB	Ninganchiao	66.36	307	P	P	15 14 15.5	+0.6
YSS	Yuzh-Sakhalins	69.99	337	P	P	15 14 37.8	+0.7
KSRS	Korea Array	70.04	322	LR	LR	15 43 41.7	
	comp=Z,120nm,18.9s,baz=138,slow=35						
KSAR	Wonju Array Be	70.05	322	P	P	15 14 38.4	+0.7
PEA0B	Petropavlovsk-	71.39	349	P	P	15 14 45.8	+0.3
PETK	Petropavlovsk-	71.39	349	P	P	15 14 45.8	+0.2
	comp=Z,12nm,1.1s,baz=128,slow=4.0,SNR=6.4						
PETK				LR	LR	15 43 41.0	
	comp=Z,84nm,18.5s,baz=170,slow=34						
PETK	Petropavlovsk-	71.39	349	P	P	15 14 45.6	0.0
USRK	Ussuriysk Ar.	72.51	329	LR	LR	15 41 37.9	
	comp=Z,136nm,20.9s,baz=135,slow=32						
USRK	Ussuriysk Ar.	72.51	329	P	P	15 14 52.2	-0.2
AKUT	Akutan	72.67	12	P	P	15 14 54.0	+0.9
QSPA	South Pole Qui	73.08	180	P	P	15 14 55.3	-0.5
QSPA				IAmb	IAmb	15 15 07.0	
	comp=Z,16nm,1.2s						
CN2	Changchun	75.64	325	eP	P	15 15 13.2	+2.5
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
IPM	Ipoh	76.22	279	P	P	15 15 13.7	-1.1
IPM				IAmb	IAmb	15 15 24.1	
	comp=Z,14nm,1.1s						
ENH	Enshi	78.73	306	P	P	15 15 29.2	+0.8
BJT	Baijiatuau	78.89	318	P	P	15 15 29.3	+0.3
BJT				IAmb	IAmb	15 15 40.1	
	comp=Z,50nm,1.9s						
SRIT	Nakonsritamara	78.89	283	P	P	15 15 29.5	-0.1
SRIT				IAmb	IAmb	15 15 40.8	
	comp=Z,33nm,1.2s						
SLVN	Son La	79.53	296	P	P	15 15 30.3	-2.8
SLVN				IAmb	IAmb	15 18 06.6	
	comp=Z,33nm,2.0s						
O18K	Koktuh Hills	80.23	15	P	P	15 15 34.7	-1.2
SEY	Seymchan	81.61	350	P	P	15 15 43.5	+0.3
	comp=Z,6.3nm,1.0s,baz=178,slow=6.3,SNR=4.7						
L19K	White Mountain	82.36	14	P	P	15 15 48.0	+0.8
L19K				IAmb	IAmb	15 15 54.6	
	comp=Z,17nm,0.9s						
MAW	Mawson	82.61	201	LR	LR	15 47 48.8	
	comp=Z,66nm,20.5s,baz=70,slow=32						
TTA	Tatalina	82.77	13	P	P	15 15 49.4	0.0
TTA				IAmb	IAmb	15 15 55.0	
	comp=Z,20nm,1.4s						
CMAR	Chiang Mai Arr	82.82	292	P	P	15 15 51.6	+1.1
	comp=Z,0.7nm,0.6s,baz=115,slow=3.8,SNR=6.2						
CMAR				LR	LR	15 49 21.4	
	comp=Z,91nm,21.9s,baz=164,slow=33						
CMAR	Chiang Mai Arr	82.82	292	P	P	15 15 51.0	+0.4
CHTO	Chiang Mai	82.94	292	P	P	15 15 52.4	+1.2
CHTO				IAmb	IAmb	15 16 01.9	
	comp=Z,23nm,1.7s						
NVAR	Mina Array Bea	83.11	47	LR	LR	15 45 08.8	
	comp=Z,268nm,20.2s,baz=268,slow=30						
J20K	Nowinta River	84.27	13	P	P	15 15 56.4	-0.5
J20K				IAmb	IAmb	15 17 27.7	
	comp=Z,17nm,1.4s						
RND	Reindeer	84.85	15	P	P	15 15 59.0	-0.9
RND				IAmb	IAmb	15 16 06.2	
	comp=Z,18nm,1.0s						
BILL	Bilibino	85.01	357	P	P	15 16 00.7	+0.2
BILL				IAmb	IAmb	15 16 07.7	
	comp=Z,10.0nm,1.4s						
LZH	Lanzhou	85.52	310	eP	P	15 16 07.4	+3.3
LZH				sP	pP	15 16 13.7	-0.7
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
I21K	Tanana	85.61	13	P	P	15 16 03.1	-0.5
I21K				IAmb	IAmb	15 18 37.0	
	comp=Z,11nm,1.1s						
IL31		86.47	15	P	P	15 16 05.6	-2.2
IL31				IAmb	IAmb	15 16 13.8	
	comp=Z,5.6nm,0.8s						
ILAR	Eielson Array	86.47	15	P	P	15 16 07.9	0.0
	comp=Z,4.3nm,0.8s,baz=232,slow=4.2,SNR=18						
ILAR				LR	LR	15 49 36.9	
	comp=Z,88nm,20.6s,baz=228,slow=32						
ILAR	Eielson Array	86.47	15	P	P	15 16 06.4	-1.5
HVU	Hansel Valley	88.39	45	P	P	15 16 15.9	-2.0
TMUT	Trail Mountain	88.48	48	P	P	15 16 13.1	-5.5
TMUT				IAmb	IAmb	15 16 29.8	
	comp=Z,6.3nm,1.1s						
ULN	Ulaanbaatar	88.52	321	P	P	15 16 16.8	-1.6
ULN				IAmb	IAmb	15 16 27.5	
	comp=Z,16nm,1.6s						
SONM	Songino Array	88.90	321	P	P	15 16 20.0	-0.1
	comp=Z,1.0nm,0.8s,baz=112,slow=3.9,SNR=3.2						
SONM				LR	LR	15 55 18.7	
	comp=Z,122nm,19.6s,baz=119,slow=35						
SONM	Songino Array	88.90	321	P	P	15 16 19.2	-0.9
SONM				IAmb	IAmb	15 16 29.2	
	comp=Z,14nm,1.6s						
GTA	Gaotai	89.77	311	eP	P	15 16 28.0	+3.6
GTA				pP	pP	15 16 34.3	-0.5
GTA				sP	sP	15 16 38.6	+0.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
REDW	Red Top Meadow	90.32	45	P	P	15 16 26.2	-0.8
REDW				IAmb	IAmb	15 16 38.5	
	comp=Z,19nm,1.4s						
ANMO	Albuquerque	90.39	54	P	P	15 16 27.0	-0.5
TX31	Lajitas Ar. Si	90.74	60	P	P	15 16 28.8	-0.4

TX32	Lajitas Array	90.74	60	P	P	15 16 28.2	-0.9
TX32				IAmb	IAmb	15 16 37.8	
	comp=Z,6.9nm,1.1s						
TXAR	Lajitas Array	90.74	60	P	P	15 16 31.0	+1.9
	comp=Z,1.7nm,1.1s,baz=234,slow=3.0,SNR=7.4						
TXAR				LR	LR	15 49 28.0	
	comp=Z,284nm,20.0s,baz=0.0,slow=30						
PDAR	Pinedale Array	90.97	45	P	P	15 16 31.0	+0.9
	comp=Z,0.3nm,0.4s,baz=242,slow=3.2,SNR=4.8						
PDAR				LR	LR	15 54 40.6	
	comp=Z,125nm,19.0s,baz=300,slow=34						
PDAR	Pinedale Array	90.97	45	P	P	15 16 29.1	-1.0
SNAA	Sanae	91.58	181	P	P	15 16 31.9	-0.3
VNA3	Neumayer Olymp	91.96	178	P	P	15 16 33.5	-0.4
SDCO	Great Sand Dun	92.07	51	P	P	15 16 34.0	-1.3
VNA2	Neumayer--Watz	92.32	179	P	P	15 16 35.0	-0.6
YKA	Yellowknife Ar	96.11	26	LR	LR	15 57 56.2	
	comp=Z,88nm,18.0s,baz=0.0,slow=34						
PLCA	Paso Flores	96.35	136	LR	LR	15 51 09.1	
	comp=Z,159nm,21.4s,baz=231,slow=30						
ARCES	ARCESS Array B	124.19	348	PKP	PKiKP	15 22 25.0	+1.1
	comp=Z,5.4nm,0.9s,baz=36,slow=1.7,SNR=1.8						
MOA	Molln	145.43	337	*e*P	PKiKP	15 23 07.2	-0.4
	comp=Z,21nm,1.3s						
ARSA	Arzberg	145.44	335	*e*P	PKiKP	15 23 08.3	+0.6
	comp=Z,16nm,1.4s						
KBA	Koelnbreinsper	146.42	337	*e*P	PKPab	15 23 08.4	+0.6
	comp=Z,10nm,1.2s						
WTTA	Wattenberg	146.87	339	*e*P	PKiKP	15 23 11.5	+0.7
	comp=Z,19nm,1.5s						
RETA	Reutte	146.96	340	*e*P	PKiKP	15 23 12.1	+1.3
	comp=Z,9.8nm,1.5s						
MOTA	Moosalm	146.97	340	*e*P	PKiKP	15 23 13.3	+2.3
SQTA	Sankt Quirin	147.05	340	*e*P	PKiKP	15 23 13.5	+2.4
	comp=Z,25nm,1.6s						
FETA	Feichten	147.38	340	*e*P	PKiKP	15 23 13.6	+1.8
	comp=Z,12nm,1.1s						
DAVA	Damuels	147.41	341	*e*P	PKiKP	15 23 12.8	+0.9
	comp=Z,18nm,1.2s						
DAVOX	Davos/Dischmat	147.86	341	PKPbc	PKiKP	15 23 11.9	-0.9
	comp=Z,4.9nm,0.7s,baz=30,slow=5.5,SNR=7.5						
TORD	Torodi Ar. Bea	172.65	240	PKP	PKPdf	15 23 38.1	+2.5
	comp=Z,2.1nm,1.2s,baz=268,slow=1.2,SNR=6.7						
TORD				PKPab	PKPab	15 25 03.6	+2.5
	comp=Z,1.5nm,1.1s,baz=106,slow=3.1,SNR=4.9						
TORD	Torodi Ar. Bea	172.65	240		PKPdf	15 23 35.2	-0.3
TORD				PKPab	PKPab	15 24 58.9	-2.3

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*IDC **10** 15:25:08.8±2.5,3°.95S×129°.90E,h0^{km},mb3.4/1,mb1 3.4/3,mb1mx3.3/30,mbtmp3.2/3,ML3.1/2,Error ellipse: s-maj=144.9km s-min=31.3km az=70.0*

*DJA **10** 15:25:10.7±1.5,4°S±8°×12°9E±°,h14^{km}±9^{km},M3.3/7,MLv3.3/7*

ISC 10 15:25:13.9±1.1,4°.12S±0°.09×129°.35E±0°.06,h36^{km},n9,σ1^s.29/11,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.88	332	P	Pn	15 25 28.9	-0.8
MSAI				S	Sn	15 25 40.8	-0.5
AAI	Ambon	1.23	291	P	Pn	15 25 33.5	-1.0
AAI				S	Sn	15 25 51.7	+1.8
FAKI	Fak Fak	3.13	68	P	Pn	15 25 59.8	-0.9
SWI	Sorong	3.76	31	P	Pn	15 26 09.1	-0.3
LBMI	Labuha	3.92	332	P	Pn	15 26 10.2	-1.4
SANI	Sanana	3.94	301	P	Pn	15 26 10.3	-1.5
WRA	Warramunga Arr	16.46	163	Pn	Pn	15 29 01.4	-0.8
	0.1nm,0.3s,baz=345,slow=10,SNR=2.9						
ASAR	Alice Springs	19.92	168	P	P	15 29 43.0	+0.3
	0.1nm,0.3s,baz=346,slow=10,SNR=13						
MKAR	Makanchi Array	65.48	326	P	P	15 35 54.9	+1.5
	0.1nm,0.3s,baz=125,slow=7.1,SNR=1.7						

IDC 10 15:26:57.4±2.7,3°.74S×130°.13E,h0^{km},mb3.2/2,mb1 3.4/3,mb1mx3.3/25,mbtmp3.2/3,ML3.0/1,Error ellipse: s-maj=167.6km s-min=31.6km az=70.0,Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.62	166	Pn	Pn	15 30 52.3	+0.4
	0.1nm,0.3s,baz=349,slow=13,SNR=1.9						
ASAR	Alice Springs	20.14	170	P	P	15 31 33.1	-0.2
	0.7nm,0.8s,baz=348,slow=8.7,SNR=6.8						
MKAR	Makanchi Array	65.60	326	P	P	15 37 43.2	0.0
	0.3nm,0.8s,baz=127,slow=8.2,SNR=2.0						

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*IDC **10** 16:11:00.3±0.9,4°.08S×129°.71E,h0^{km},mb4.0/9,mb1 4.1/13,mb1mx3.9/45,mbtmp4.0/13,ML3.9/4,MS3.2/6,Ms1 3.2/6,ms1mx2.7/35,Error ellipse: s-maj=27.2km s-min=17.0km az=85.0*

*DJA **10** 16:11:02.8±0.7,4°S±4°×13°0E±°,h13^{km}±4^{km},M4.0/10,mb4.2/4,MLv4.0/10*

*NEIC **10** 16:11:02.0±1.3,4°.04S±0°.06×129°.66E±0°.07,h10^{km}±1^{km},mb4.2/18,Error ellipse: s-maj=11.7km s-min=9.5km az=117.0*

ISC 10 16:11:04.7±0.5,4°.10S±0°.05×129°.58E±0°.05,h36^{km},n69,σ1^s.57/70,mb4.1/12,MS3.6/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.53	142	P	Pn	16 11 14.3	-1.6
MSAI	Masohi	0.99	319	P	Pn	16 11 20.9	-1.2
MSAI				S	Sn	16 11 32.7	-2.1
AAI	Ambon	1.44	287	P	Pn	16 11 27.3	-0.9
AAI				S	Sn	16 11 42.8	-3.1
FAKI	Fak Fak	2.92	66	P	Pn	16 11 49.4	+0.8
FAKI	Fak Fak	2.92	66		Pn	16 11 49.1	+0.5
FAKI	Fak Fak	2.92	66	P	Pn	16 11 49.9	+1.3
SIJI	Sorong	3.63	28	Pn	Pn	16 11 58.8	+0.4
	9.0nm,0.3s,baz=161,slow=22,SNR=50						
SIJI				Sn	Sn	16 12 39.4	-0.6
	5.8nm,0.3s,baz=105,slow=23,SNR=1.8						
SIJI				LR	LR	16 13 49.7	
	comp=Z,142nm,20.6s,baz=245,slow=48						
SWI	Sorong	3.63	28	P	Pn	16 11 58.6	+0.2
LBMI	Labuha	4.01	329	P	Pn	16 12 04.7	+1.0
LBMI				S	Sn	16 12 51.5	+1.9
SANI	Sanana	4.12	300	P	Pn	16 12 05.7	+0.5
SANI				S	Sn	16 12 52.3	+0.2
SANI	Sanana	4.12	300	P	Pn	16 12 07.1	+1.9
SAUI	Saumlaki	4.22	156	Pn	Pn	16 12 08.8	+2.3
TNTI	Ternate	5.32	335	P	Pn	16 12 20.7	-1.0
	0.1nm22nm,0.8s						
SOEI	Soe	7.70	223	P	Pn	16 12 54.0	-0.5
	0.1nm17nm,1.1s						
SOEI	Soe	7.70	223	Pn	Pn	16 12 57.6	+3.1
DRS	Darwin Rock St	8.38	171	P	Pn	16 13 04.4	+0.7
BATI	Baumata	8.44	224	Pn	Pn	16 13 07.6	+3.0
	2.5nm,0.3s,baz=212,slow=2.1,SNR=4.2						
BATI				LR	LR	16 16 14.1	
	comp=Z,127nm,19.5s,baz=64,slow=37						
MTN	Manton Dam	8.82	170		Pn	16 13 10.0	+0.1
MTN	Manton Dam	8.82	170	P	Pn	16 13 10.8	+1.0
KDU	Kakadu	9.00	162	P	Pn	16 13 12.1	-0.1
KAPI	Kappang	9.83	264		Pn	16 13 24.4	+0.7
TOLI2	Tolitoli	10.20	300	Pn	Pn	16 13 29.6	+1.0
KNRA	Kununurra	11.53	184		Pn	16 13 45.9	-1.0
KNRA	Kununurra	11.53	184	P	Pn	16 13 47.7	+0.8
FITZ	Fitzroy Crossi	14.44	195	Pn	Pn	16 14 26.1	-0.5
	0.2nm,0.3s,baz=118,slow=22,SNR=1.3						
FITZ				LR	LR	16 20 03.5	
	comp=Z,50nm,19.6s,baz=46,slow=38						
JAGI	Jajag, Banyuwa	15.93	253	Pn	Pn	16 14 46.8	+0.5
JAGI				IAmb	IAmb	16 15 12.9	
	comp=Z,34nm,1.2s						
WB0	Warramunga Arr	16.27	164	P	Pn	16 14 47.1	-3.5
WRA	Warramunga Arr	16.42	164	Pn	Pn	16 14 48.6	-3.9
	comp=Z,0.4nm,0.3s,baz=348,slow=12,SNR=18						
WB2	Warramunga Arr	16.42	164	P	Pn	16 14 48.4	-4.1
COEN	Coen	16.61	127	Pn	Pn	16 14 51.5	-3.5
COEN				IAmb	IAmb	16 14 58.4	
	comp=Z,13nm,0.9s						
QIS	Mount Isa	19.05	150	P	Pn	16 15 25.0	0.0
MBWA	Marble Bar	19.47	209	P	Pn	16 15 30.7	+0.7
PSA00	Pilbara Seismi	19.77	208	P	Pn	16 15 32.7	-0.9
PSA00				IAmb	IAmb	16 15 34.8	
	comp=Z,11nm,1.3s						
PSA00	Pilbara Seismi	19.77	208	P	Pn	16 15 32.9	-0.7
PSA00				IAmb	IAmb	16 15 42.2	
	comp=Z,16nm,0.6s						
PSA00	Pilbara Seismi	19.77	208	P	Pn	16 15 34.0	+0.4
AS31	Alice Springs	19.90	168		Pn	16 15 33.7	-1.4
AS31				IAmb	IAmb	16 15 36.5	
	comp=Z,3.8nm,0.5s						
ASAR	Alice Springs	19.90	168	P	Pn	16 15 34.0	-1.0
	comp=Z,1.2nm,0.3s,baz=345,slow=10.0,SNR=112						
ASAR	Alice Springs	19.90	168		Pn	16 15 33.8	-1.3
MTSU	Mount Surprise	20.07	135	P	Pn	16 15 36.3	-0.8
WRKA	Warakurna	20.85	183	P	Pn	16 15 45.0	-1.3
LEM	Lembang	22.02	262	LR	LR	16 25 07.2	
	comp=Z,36nm,18.0s,baz=190,slow=38						
RABL	Rabaul	22.53	91	P	P	16 15 58.8	-3.0
CTA	Charters Tower	22.73	136	P	P	16 16 03.0	-0.8
	comp=Z,6.2nm,0.7s,baz=318,slow=10,SNR=7.7						
CTAO	Charters Tower	22.73	136	P	P	16 16 03.2	-0.7
CTAO				IAmb	IAmb	16 16 05.2	
	comp=Z,6.4nm,0.7s						
CTAO	Charters Tower	22.73	136	P	P	16 16 04.8	+1.0
OOD	Oodnadatta	24.27	167	P	P	16 16 19.6	+0.9
INKA	Innaminka	25.81	157	P	P	16 16 34.8	+2.2
MULG	Mulgathing	26.39	171	P	P	16 16 39.3	+1.5
ARMA	Armidale	33.45	144	P	P	16 17 39.2	-1.4
CAN	Canberra	35.89	152	P	P	16 18 00.9	-0.7
CMAR	Chiang Mai Arr	37.60	308	P	P	16 18 18.1	+1.9
	comp=Z,0.5nm,0.3s,baz=135,slow=8.0,SNR=6.5						
CMAR	Chiang Mai Arr	37.60	308	P	P	16 18 15.0	-1.2
MJAR	Matsushiro Arr	41.23	11	P	P	16 18 47.2	+0.9
	comp=Z,3.1nm,1.1s,baz=193,slow=10.0,SNR=4.0						
MJAR	Matsushiro Arr	41.23	11	P	P	16 18 45.7	-0.5
MJAR				IAmb	IAmb	16 18 52.7	
	comp=Z,5.9nm,1.5s						
KSRS	Korea Array	41.37	358	P	P	16 18 48.1	+0.8
	comp=Z,1.2nm,0.7s,baz=179,slow=9.4,SNR=2.6						
USRK	Ussuriysk Ar.	48.13	2	P	P	16 19 40.6	-0.5
	comp=Z,1.4nm,0.5s,baz=184,slow=8.0,SNR=4.5						
SONM	Songino Array	55.58	341	P	P	16 20 39.0	+2.2
	comp=Z,0.2nm,0.4s,baz=150,slow=9.9,SNR=1.6						
MK31	Makanchi Array	65.59	326	P	P	16 21 45.6	+0.6
MK31				IAmb	IAmb	16 22 19.6	
	comp=Z,4.0nm,1.4s						
MKAR	Makanchi Array	65.59	326	P	P	16 21 46.2	+1.2
	comp=Z,1.1nm,0.6s,baz=118,slow=8.4,SNR=22						
MKAR				LR	LR	16 52 53.8	
	comp=Z,38nm,18.2s,baz=308,slow=38						
MKAR	Makanchi Array	65.59	326	P	P	16 21 45.7	+0.7
MAKZ	Makanchi	65.77	326	P	P	16 21 46.4	+0.3
MAKZ				IAmb	IAmb	16 22 05.8	
	comp=Z,2.9nm,1.1s						
KURBB	Kurchatov Arra	69.83	328	P	P	16 22 12.9	+1.3
	comp=Z,2.6nm,0.8s,baz=128,slow=5.7,SNR=22						
KURK	Kurchatov	69.84	328	P	P	16 22 12.8	+1.1
VNDA	Vanda	75.36	173	P	P	16 22 43.8	-0.3
VNDA				IAmb	IAmb	16 23 13.0	
	comp=Z,1.7nm,0.9s						
BVAR	Borovoye Array	75.40	328	P	P	16 22 45.6	+0.9
	comp=Z,1.6nm,1.0s,baz=186,slow=13,SNR=4.6						
GEYT	Alibeck	78.03	310	LR	LR	17 02 22.2	
	comp=Z,53nm,18.8s,baz=330,slow=39						
ABKAR	Akbulak array	79.99	321	P	P	16 23 10.6	+0.3
ABKAR	Akbulak array	79.99	321	P	P	16 23 11.1	+0.8
ABKAR				IAmb	IAmb	16 23 21.8	
	comp=Z,1.5nm,1.2s						
TORD	Torodi Ar. Bea	127.78	283	PKP	PKiKP	16 30 08.3	+0.2
	comp=Z,0.3nm,0.4s,baz=95,slow=2.3,SNR=1.9						

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*TUL **10** 16:13:17.7±1.4,36°.17N±0°.01×97°.35W±0°.02,h5^{km}±6^{km},ML2.8,mb_Lg2.7/28(NEIC),Error ellipse: s-maj=1.8km s-min=1.5km az=92.0*

NEIC 10 16:13:17.7±1.2,36°.171N±0°.007×97°.37W±0°.01,h7^{km}±6^{km},Error ellipse: s-maj=2.0km s-min=0.6km az=62.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	Liberty Lake	0.38	190	Pg	Pg	16 13 25.4	+0.3
OK029				Sg	Sg	16 13 28.0	-2.1
OK031	S. Brethren Rd	0.48	117		Pg	16 13 26.9	-0.2
OK031				Sg	Sg	16 13 33.5	+0.1
OK030	Cody Creek RV	0.53	117		Pg	16 13 28.1	0.0
OK030				Sg	Sg	16 13 35.0	0.0
BCOK	Bluff Creek, N	0.55	201	Pg	Pg	16 13 28.6	+0.3
BCOK				Sg	Sg	16 13 36.3	+0.9
OK034	N. Norfolk Rd.	0.56	107	Pg	Pg	16 13 28.4	-0.1
OK034				Sg	Sg	16 13 36.0	+0.3
OK025	Westminster Rd	0.59	177	Pg	Pg	16 13 29.3	+0.2
OK025				Sg	Sg	16 13 37.7	+0.9
CROK	Carrier	0.60	304	Pg	Pg	16 13 29.5	+0.3
CROK				Sg	Sg	16 13 37.8	+0.8
BLOK	Blackwell	0.60	12	Pg	Pg	16 13 29.1	-0.3
BLOK				Sg	Sg	16 13 37.4	+0.1
OKCFA	Oklahoma City	0.76	185		Pg	16 13 32.4	+0.1
OKCSW	OKLAHOMA CITY	0.77	184		Pg	16 13 31.7	-0.7
GC02	Grant County #	0.79	330	Pg	Pg	16 13 32.7	-0.1
GC02				Sg	Sg	16 13 43.1	+0.1
KAN13	South Haven SW	0.84	354	Pg	Pg	16 13 33.6	-0.4
KAN13				Sg	Sg	16 13 45.2	+0.2
FNO	Franklin	0.91	182		Pg	16 13 34.9	-0.3
KAN14	Manchester OK	0.92	329		Pg	16 13 35.3	-0.1
KAN14				Sg	Sg	16 13 47.3	0.0
OK032	Salt Plains WL	0.93	313		Pg	16 13 35.7	+0.2
OK032				Sg	Sg	16 13 47.8	+0.2
KAN17	Caldwell West	0.93	340		Pg	16 13 34.8	-0.7
KAN17				Sg	Sb	16 13 48.3	-0.4
KAN09	Caldwell North	0.98	348		Pg	16 13 35.9	-0.8
KAN09					Sn	16 13 51.9	-0.4
T35A	Sooner Cattle	1.02	43		Pg	16 13 36.8	-0.4
T35A				Sg	Sg	16 13 50.4	-0.1
KAN05	Bluff City Nor	1.02	337	Pg	Pb	16 13 38.0	+0.2
KAN05				Sg	Sg	16 13 50.9	+0.3
KAN01	Argonia South	1.03	342	Pg	Pg	16 13 37.1	-0.4
KAN01				Sg	Sb	16 13 51.5	-0.1
KAN10	Anthony SW Sta	1.11	329	Pg	Pg	16 13 38.9	-0.2
KAN10				Sg	Sg	16 13 53.7	+0.1
KAN06	Argonia West S	1.14	340		Pg	16 13 39.3	-0.4
KAN06				Sg	Sg	16 13 54.4	-0.1
KAN08	Anthony NE Sta	1.16	336	Pg	Pg	16 13 39.9	0.0
KAN08				Sg	Sg	16 13 55.2	+0.1
KAN16	Harper SW Stat	1.19	332	Pg	Pg	16 13 40.3	-0.3
KAN16				Sg	Sb	16 13 56.5	+0.1
KAN12	Harper NE Stat	1.23	336		Pg	16 13 41.0	-0.4
TUL1	Leonard	1.31	101		Pn	16 13 40.8	-1.7
U32A	Winter Ranch,	1.33	279	Pn	Pn	16 13 42.4	-0.4
X34A	Smith Ranch, M	1.61	194		Pn	16 13 46.3	-0.3
LOOK	Love County	2.18	176		Pn	16 13 55.3	+0.9
X37A	Clayton	2.27	133	Pn	Pn	16 13 55.6	-0.1
X37A				IAmb_Lg		16 14 32.6	
	comp=Z,22nm,0.7s						
U38A	Gravette	2.43	83		Pn	16 13 58.4	+0.5
HHAR	Hobbs	2.78	87		Pn	16 14 01.8	-0.9
Z35A	Perchaven, San	2.83	178	Pn	Pn	16 14 03.1	-0.4
KSU1	Kansas State U	2.99	11		Pn	16 14 06.2	+0.7
W39A	Magazine	3.08	107		Pn	16 14 08.0	+1.2
MIAR	Mount Ida	3.50	116	Pn	Pn	16 14 11.3	-1.3
Z38A	Mt. Pleasant	3.51	145	Pn	Pn	16 14 13.0	+0.4
S39A	Bolivar	3.58	64		Pn	16 14 13.7	0.0
S39A				IAmb_Lg		16 15 20.5	
	comp=Z,11nm,0.8s						
U40A	Yellville	3.66	86		Pn	16 14 15.0	+0.2
AMTX	Amarillo	3.74	251		Pn	16 14 18.4	+2.4
AMTX				IAmb_Lg		16 15 25.1	
	comp=Z,16nm,1.0s						
ABTX	Abilene, Hawle	4.00	209		Pn	16 14 20.1	+0.6
X40A	Basin Creek Fa	4.07	113		Pn	16 14 19.0	-1.5
MGMO	Mountain Grove	4.22	75	Pn	Pn	16 14 23.5	+1.0
MGMO				IAmb_Lg		16 15 35.0	
	comp=Z,19nm,0.8s						
WHAR	Wooly Hollow	4.23	101		Pn	16 14 23.1	+0.5
WHAR				IAmb_Lg		16 15 42.4	
	comp=Z,10nm,0.8s						
FCAR	Ozark Folk Cen	4.26	92	Pn	Pn	16 14 22.7	-0.3
R40A	Maddies Statio	4.59	61	Pn	Pn	16 14 28.3	+0.8
P38A	Dawn	4.59	40	IAmb_Lg		16 15 45.3	
	comp=Z,13nm,0.8s						
MSTX	Muleshoe	4.94	245	Pn	Pn	16 14 32.5	0.0
CCM	Cathedral Cave	5.25	67	Pn	Pn	16 14 34.2	-2.4
CCM				IAmb_Lg		16 16 03.8	
	comp=Z,14nm,0.9s						
P40A	Paris	5.38	50	Pn	Pn	16 14 39.1	+0.6
P40A				IAmb_Lg		16 16 17.4	
	comp=Z,17nm,0.8s						
PBMO	Poplar Bluff	5.63	82	Pn	Pn	16 14 42.2	+0.4
PBMO				IAmb_Lg		16 16 22.5	
	comp=Z,17nm,0.9s						
N38A	Joes South For	5.64	34	IAmb_Lg		16 16 31.8	
	comp=Z,15nm,0.7s						
T25A	Trinidad	5.74	282	IAmb_Lg		16 16 30.0	
	comp=Z,6.6nm,0.9s						
FVM	French Village	5.84	70	IAmb_Lg		16 16 28.3	
	comp=Z,19nm,1.0s						
S44A	Carbondale	6.68	74	IAmb_Lg		16 16 52.8	
	comp=Z,23nm,0.9s						
SIUC	Southern Illin	6.71	74	IAmb_Lg		16 16 52.6	
	comp=Z,24nm,0.8s						

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*IDC **10** 16:31:35.5±9.2,21°.94S×176°.25W,h399^{km}±65^{km},mb3.1/5,mb1 3.4/6,mb1mx3.0/32,mbtmp3.9/6,Error ellipse: s-maj=130.2km s-min=25.4km az=134.0*

ISC 10 16:31:35.1±1.5,22°.0S±0°.2×176°.2W±0°.2,h400^{km},n9,σ1^s.35/10,mb3.3/5,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.89	307	P	Pn	16 33 18.4	+0.7
	4.7nm,0.3s,baz=56,slow=23,SNR=26						
AFI	Afiamalu	9.05	28	S	S	16 35 26.7	0.0
	4.6nm,0.3s,baz=5.0,slow=23,SNR=5.6						
STKA	Stephens Creek	38.72	246	P	P	16 38 22.7	-0.1
	0.7nm,0.5s,baz=324,slow=9.4,SNR=2.8						
ASAR	Alice Springs	45.86	258	P	P	16 39 19.9	+0.2
	1.4nm,0.6s,baz=92,slow=8.1,SNR=34						
ASAR				PcP	PcP	16 40 51.5	+2.2
	0.4nm,0.5s,baz=101,slow=4.1,SNR=8.0						
WRA	Warramunga Arr	46.11	263	P	P	16 39 19.8	-1.8
	0.4nm,0.4s,baz=99,slow=7.5,SNR=9.1						
ILAR	Eielson Array	89.39	12	P	P	16 43 47.0	0.0
	0.3nm,0.6s,baz=216,slow=6.7,SNR=5.9						
CMAR	Chiang Mai Arr	92.22	289	P	P	16 44 01.2	+0.1
	0.6nm,0.6s,baz=130,slow=2.5,SNR=6.8						
AKASG	Malin Array Be	145.13	332	PKPbc	PKPab	16 50 24.6	-2.0
	3.5nm,0.6s,baz=41,slow=4.6,SNR=8.3						
GERES	GERESS Array B	152.07	346	PKPbc	PKiKP	16 50 44.5	+0.5
	0.5nm,0.7s,baz=57,slow=3.6,SNR=3.7						

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*ROM **10** 16:31:57.0±0.1,44°.561N±0°.007×7°.16E±0°.01,h11^{km},ML1.9/4,Error ellipse: s-maj=1.1km s-min=0.5km az=238.0*

*GEN **10** 16:31:57,44°.57N×7°.19E,h6^{km}±1^{km},ML1.5*

*LDG **10** 16:31:57.5±0.1,44°.58N×7°.21E,h2^{km},Md2.5/2,Ml2.5/7,Error ellipse: s-maj=1.5km s-min=0.9km az=67.0*

*STR **10** 16:31:57.5±0.6,45°N±3°×°±°,h2^{km},MLv1.7/9,preliminary*

ISC 10 16:31:57.5±0.9,44°.58N±0°.01×7°.21E±0°.02,h8^{km}±6^{km},n58,σ0^s.86/100,2C-1D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PZZ	Stroppo	0.10	224	P	Pg	16 31 59.9	0.0
PZZ				S	Sg	16 32 01.4	-0.3
PZZ	Stroppo	0.10	224⇑	*i*P	Pg	16 31 59.9	0.0
PZZ				S	Sg	16 32 01.4	-0.3
BHB	Bricherasio	0.27	8	P	Pg	16 32 03.2	+0.4
BHB				S	Sg	16 32 06.7	+0.2
BHB	Bricherasio	0.27	8	P	Pg	16 32 03.3	+0.4
BHB				S	Sg	16 32 07.7	+1.2
SURF	Saint Ours	0.30	252	Pg	Pg	16 32 03.5	0.0
SURF				Sg	Sg	16 32 07.3	-0.2
MBDF	Montbardon	0.35	296	*e*Pg	Pg	16 32 04.3	-0.1
MBDF				*e*Sg	Sg	16 32 09.3	+0.3
	45nm,0.2s						
ENR	Entracque	0.38	157	P	Pg	16 32 05.2	+0.2
ENR				S	Sg	16 32 10.1	+0.1
ENR	Entracque	0.38	157	P	Pg	16 32 05.2	+0.2
ENR				S	Sg	16 32 10.0	+0.1
ISO	Isola	0.41	196	Pg	Pg	16 32 05.5	0.0
ISO				Sg	Sg	16 32 10.8	-0.1
RRL	Rocca Remolon	0.46	319	P	Pg	16 32 06.5	+0.1
RRL				S	Sg	16 32 12.6	+0.2
RRL	Rocca Remolon	0.46	319	P	Pg	16 32 06.5	+0.1
OGAG	Argentiere	0.49	256	Pg	Pb	16 32 07.8	-0.7
SPIF	crte de Spivo	0.52	178	Pg	Pg	16 32 07.8	+0.2
SPIF				Sg	Sg	16 32 14.6	+0.1
GBOS	Grotte di Boss	0.56	126	P	Pg	16 32 08.3	0.0
GBOS				S	Sg	16 32 15.9	+0.2
GBOS	Grotte di Boss	0.56	126	P	Pg	16 32 08.4	0.0
RSP	Reno Superiore	0.57	4	P	Pg	16 32 08.4	-0.2
RSP				S	Sg	16 32 15.5	-0.6
RSP	Reno Superiore	0.57	4	P	Pg	16 32 08.3	-0.2
RSP				S	Sg	16 32 16.9	+0.7
BNI	Bardonecchia	0.61	322	P	Pg	16 32 09.2	0.0
BNI				S	Sg	16 32 16.6	-0.6
TURF	col de Turini	0.62	168	Pg	Pg	16 32 09.4	0.0
TURF				Sg	Sg	16 32 17.4	0.0
SAOF	Saorge	0.64	157	Pg	Pg	16 32 09.7	-0.1
SAOF				Sg	Sg	16 32 17.8	-0.3
SAOF	Saorge	0.64	157	P	Pg	16 32 09.8	-0.1
SAOF				S	Sg	16 32 17.8	-0.3
SAOF	Saorge	0.64	157	AML	AML		
	comp=E,119µm,1.1s						
SAOF				AML	AML		
	comp=N,95µm,0.9s						
MVIF	Mont Vial	0.68	184	Pg	Pg	16 32 10.8	+0.2
MVIF				Sg	Sg	16 32 19.8	+0.3
MGRO	Montegrosso	0.69	141	P	Pg	16 32 10.6	-0.1
MGRO				S	Sg	16 32 19.7	+0.1
MGRO	Montegrosso	0.69	141	P	Pg	16 32 10.8	+0.2
MONC	Moncucco Torin	0.71	45	P	Pg	16 32 11.4	+0.2
MONC				AML	AML		
	comp=E,152µm,0.3s						
MONC				AML	AML		
	comp=N,138µm,0.4s						
SBF	Sospel	0.73	167	*e*Pg	Pg	16 32 11.7	+0.2
SBF				*e*Sg	Sg	16 32 21.4	+0.3
	comp=N,20nm,0.2s						
ESCA	l'Escarene	0.76	171	Pg	Pg	16 32 12.1	+0.1
ESCA				Sg	Sg	16 32 21.9	+0.1
RORO	Rocca Rossa	0.77	127	P	Pg	16 32 12.0	-0.2
RORO				S	Sg	16 32 21.9	-0.3
RORO	Rocca Rossa	0.77	127	P	Pg	16 32 12.1	-0.2
OGDI	Digne	0.80	235	Pg	Pn	16 32 15.5	+0.4
OGDI				Sg	Sn	16 32 26.8	-0.5
CANO	Canova, Maglio	0.82	116	P	Pg	16 32 13.2	-0.1
CANO				S	Sg	16 32 23.9	0.0
IMI	Imperia	0.83	143	P	Pg	16 32 13.2	-0.2
IMI				S	Sg	16 32 24.1	-0.1
IMI	Imperia	0.83	143	P	Pg	16 32 13.2	-0.2
IMI				S	Sg	16 32 24.0	-0.1
IMI				AML	AML		
	comp=E,97µm,1.2s						
IMI				AML	AML		
	comp=N,136µm,0.6s						
IMI				AML	AML		
	comp=E,97µm,1.2s						
BURY	Giardini Botan	0.83	163	P	Pg	16 32 13.6	+0.2
BURY				S	Sg	16 32 23.9	-0.4
CALF	Calern	0.85	194	Pg	Pb	16 32 14.1	-0.4
QLNO	Quiliano	0.85	107	P	Pg	16 32 13.7	-0.1
QLNO				S	Sg	16 32 25.2	+0.3
LSD	Lago del Serru	0.88	356	P	Pg	16 32 14.5	0.0
LSD				S	Sg	16 32 25.4	-0.6
LSD	Lago del Serru	0.88	356	P	Pg	16 32 14.5	0.0
LSD				S	Sg	16 32 25.4	-0.6
LSD				AML	AML		
	comp=E,67µm,1.4s						
LSD				AML	AML		
	comp=N,40µm,1.1s						
PCP	Piancastagn	0.95	92	P	Pg	16 32 15.4	-0.4
PCP				S	Sb	16 32 29.6	+0.5
LPG	La Plagne	0.98	341	*e*Pg	Pg	16 32 16.2	-0.1
LPG				*e*Sg	Sg	16 32 28.9	-0.1
	comp=N,16nm,0.3s						
LPL	La Plagne	1.00	340	*e*Pg	Pb	16 32 17.0	-0.1
LPL				*e*Sg	Sg	16 32 29.9	+0.2
	comp=N,13nm,0.3s						
ORIF	Oris-en-Rattie	1.01	290	*e*Pg	Pg	16 32 16.8	0.0
ORIF	Oris-en-Rattie	1.01	290	*e*P	Pg	16 32 16.9	+0.1
ORIF				*e*Sg	Sg	16 32 28.1	-1.8
	comp=N,9.5nm,0.2s						
ORIF	Oris-en-Rattie	1.01	290	Pg	Pg	16 32 16.7	-0.2
ORIF				Sg	Sg	16 32 29.5	-0.5
CIRO	Champorcher	1.05	14	P	Pg	16 32 15.6	-2.1
FRF	La Foret Royal	1.09	202	*e*Pg	Pg	16 32 18.3	-0.2
FRF				*e*Sg	Sb	16 32 33.1	+0.1
	comp=N,17nm,0.2s						

MLYF	Mely	1.19	241	Pg	Pn	16 32 21.7	+1.3
MLYF				Sg	Sn	16 32 37.9	+1.1
SMRF	Simiane la Rot	1.32	243	*e*Pg	Pb	16 32 22.4	-0.1
SMRF				*e*Sg	Sb	16 32 39.0	-0.6
	comp=N,10nm,0.3s						
LMR	La Mourre	1.34	202	*e*Pg	Pb	16 32 22.7	-0.1
LMR				*e*Sg	Sb	16 32 39.8	-0.3
	comp=N,15nm,0.2s						
RUSF	Rustrel	1.40	243	Pn	Pg	16 32 24.7	+0.5
RUSF				Sg	Sg	16 32 45.4	+3.1
ARTF	Artigues	1.42	226	Pn	Pg	16 32 24.4	-0.2
ARTF				Sn	Sg	16 32 44.0	+1.0
CAPR	Capriolo	2.20	60	P	Pn	16 32 33.5	-0.8
PGF	Pioggiola	2.41	147	*e*Pn	Pn	16 32 36.1	-1.1
PGF				*e*Sn	Sn	16 33 04.3	-2.6
CSNT	Castellina Chi	3.14	109	S	Sb	16 33 29.0	-3.0
IMOL	Imola, Italy	3.25	92	⇑P	Pg	16 33 01.0	+1.3
CTI	Castel Tesino	3.46	63	P	Pg	16 33 06.8	+3.0
FRON	Frontone	4.11	103	⇓P	Pn	16 33 04.3	+3.7

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*IDC **10** 16:36:53.6±1.5, 4°.21S×129°.60E, h0^{km}, mb3.5/1, mb1 3.7/5, mb1mx3.4/41, mbtmp3.6/5, ML3.3/4, MS2.9/3, Ms1 2.9/3, ms1mx2.6/24, Error ellipse: s-maj=49.7km s-min=22.5km az=92.0*

*DJA **10** 16:36:57.3±1.0, 4°S±6°×13°0E±°, h28^{km}±10^{km}, M3.9/8, mb4.6/1, MLv3.6/8*

ISC 10 16:36:57.9±0.9**, 4°.19S**±0°.07×**129°.60E**±0°.05**, h36**^{km}**, n14,** σ1^{s}.**18**/18**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.07	321	P	Pn	16 37 15.8	-0.6
MSAI				S	Sn	16 37 29.2	-0.9
AAI	Ambon	1.49	289	P	Pn	16 37 21.3	-0.9
AAI				S	Sn	16 37 40.0	-0.4
FAKI	Fak Fak	2.93	65	P	Pn	16 37 42.4	+0.5
FAKI				S	Sn	16 38 15.6	-0.3
SIJI	Sorong	3.69	27	Pn	Pn	16 37 52.8	+0.3
	4.0nm,0.3s,baz=222,slow=22,SNR=19						
SIJI				Sn	Sn	16 38 35.9	+1.1
	1.9nm,0.3s,baz=174,slow=23,SNR=1.7						
SIJI				LR	LR	16 39 57.1	
	comp=Z,69nm,21.5s,baz=147,slow=50						
SWI	Sorong	3.69	27	P	Pn	16 37 51.6	-0.9
SWI				S	Sn	16 38 33.0	-1.8
LBMI	Labuha	4.10	329	P	Pn	16 37 56.9	-1.2
LBMI				S	Sn	16 38 45.9	+1.0
SANI	Sanana	4.19	300	P	Pn	16 37 59.1	-0.2
SANI				S	Sn	16 38 48.7	+1.7
TNTI	Ternate	5.41	336	P	Pn	16 38 05.2	-11
BATI	Baumata	8.39	224	LR	LR	16 42 06.6	
	comp=Z,96nm,18.1s,baz=50,slow=37						
FITZ	Fitzroy Crossi	14.36	195	Pn	Pn	16 40 18.7	0.0
	0.1nm,0.3s,baz=37,slow=9.8,SNR=1.9						
WRA	Warramunga Arr	16.33	164	Pn	Pn	16 40 42.1	-2.4
	0.1nm,0.3s,baz=345,slow=13,SNR=4.8						
ASAR	Alice Springs	19.81	168	P	P	16 41 26.1	+0.7
	0.2nm,0.3s,baz=348,slow=11,SNR=17						
PETK	Petropavlovsk-	61.80	19	LR	LR	17 12 33.7	
	comp=Z,15nm,20.9s,baz=339,slow=35						
MKAR	Makanchi Array	65.67	326	P	P	16 47 40.0	+1.2
	0.2nm,0.4s,baz=111,slow=8.3,SNR=6.2						

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*NEIC **10** 16:38:22.2±1.8, 5°.48S±0°.06×147°.26E±0°.07, h204^{km}±5^{km}, mb4.8/118, Error ellipse: s-maj=10.3km s-min=9.2km az=78.0*

*IDC **10** 16:38:22.9±1.2, 5°.50S×147°.22E, h213^{km}±11^{km}, mb4.5/23, mb1 4.5/29, mb1mx4.3/41, mbtmp5.0/29, Error ellipse: s-maj=8.8km s-min=6.8km az=95.0*

*GCMT **10** 16:38:25.2±0.4, 5°.58S±0°.03×147°.16E±0°.04, h215^{km}±4^{km}, MW4.9/69, Moment Tensor Solution. s16,c16; s69,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.66±.19; M$_{\theta\theta}$-2.22±.18; M$_{\phi\phi}$-0.43±.22; M$_{r\theta}$1.30±.13; M$_{\theta\phi}$0.55±.19; M$_{\phi r}$-1.68±.17; Best double couple: M$_0$3.26000×10^{16} NP1:φ$_s$273.00000°,δ29.00000°,λ60.00000°. NP2: φ$_s$126.00000°,δ65.00000°,λ105.00000°. Principal axes: T 3.5660, Plg66.0000°, Azm65.0000°; N -0.6090, Plg14.0000°, Azm300.0000°; P -2.9550, Plg19.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 16:38:22.4±0.7**, 5°.48S**±0°.04×**147°.20E**±0°.04**, h211**^{km}±7^{km}**, n300,** σ1^{s}.**20**/317**, mb4.8**/97**, 2C-11D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	3.42	3		Pn	16 39 18.4	+0.9
PMG	Port Moresby	3.90	181	P	Pn	16 39 22.0	-1.4
	94nm,0.3s,baz=329,slow=6.6,SNR=402						
PMG				S	S	16 40 06.8	-4.3
	147nm,0.3s,baz=72,slow=14,SNR=13						
PMG	Port Moresby	3.90	181	Pn	Pn	16 39 21.8	-1.6
PMG	Port Moresby	3.90	181	P	Pn	16 39 22.2	-1.2
PMG	Port Moresby	3.90	181	P	Pn	16 39 22.3	-1.2
RABL	Rabaul	5.11	76	Pn	Pn	16 39 37.4	-1.1
JAY	Jayapura	7.12	294	P	Pn	16 40 04.5	+0.2
	1.3nm,0.3s,baz=100,slow=3.1,SNR=30						
JAY				S	S	16 41 20.6	-4.7
	0.7nm,0.3s,baz=93,slow=18,SNR=2.4						
COEN	Coen	9.31	205	Pn	Pn	16 40 33.9	+1.2
COEN	Coen	9.31	205	P	Pn	16 40 34.2	+1.5
MTSU	Mount Surprise	12.89	192	P	P	16 41 20.1	-1.2
HNR	Honiara	13.23	108	P	Pn	16 41 21.8	-0.8
	25nm,0.3s,baz=160,slow=1.3,SNR=6.0						
HNR				S	S	16 43 51.7	+2.4
	baz=65,slow=5.7,SNR=1.3						
HNR	Honiara	13.23	108		P	16 41 24.1	-1.0
CTA	Charters Tower	14.55	184	P	P	16 41 39.6	-0.1
	1.4nm,0.3s,baz=3.5,slow=14,SNR=26						
CTAO	Charters Tower	14.55	184		P	16 41 39.9	+0.2
CTAO	Charters Tower	14.55	184	P	P	16 41 40.4	+0.7
FAKI	Fak Fak	15.12	279	P	P	16 41 48.4	+2.3
FAKI				IAmb	IAmb	16 42 15.9	
	comp=Z,43nm,1.5s						
KDU	Kakadu	16.20	243	P	Pn	16 41 58.5	-0.2
SIJI	Sorong	16.55	286	P	P	16 42 01.6	-0.2
	comp=Z,1.4nm,0.3s,baz=54,slow=6.6,SNR=4.7						
QIS	Mount Isa	16.71	206	P	Pn	16 42 04.9	+0.2
MTN	Manton Dam	17.46	244	P	P	16 42 12.2	+0.5
MTN	Manton Dam	17.46	244	P	Pn	16 42 12.9	-0.7
DRS	Darwin Rock St	17.51	246	P	Pn	16 42 13.6	-0.6
RK1H	Rockhampton Ha	18.09	170	P	Pn	16 42 19.9	-1.0
WB0	Warramunga Arr	18.90	220	P	P	16 42 27.8	+0.5
WR0	Warramunga Arr	18.94	219	P	P	16 42 28.2	+0.4
WR0					S	16 45 51.5	-0.3
WRAB	Tennant Creek	19.05	220	P	P	16 42 29.3	+0.4
WRAB	Tennant Creek	19.05	220	P	P	16 42 29.7	+0.8
WB2	Warramunga Arr	19.05	220	P	P	16 42 29.6	+0.6
WRA	Warramunga Arr	19.06	220	P	P	16 42 29.9	+0.8
	comp=Z,14nm,0.3s,baz=43,slow=12,SNR=250						
WRA				S	S	16 45 53.1	-1.0
	baz=42,slow=20,SNR=10						
WRA				PcP	PcP	16 46 45.0	+0.5
	baz=31,slow=2.0,SNR=2.9						
WRA	Warramunga Arr	19.06	220	P	P	16 42 29.7	+0.6
WRA				IAmb	IAmb	16 42 34.2	
	comp=Z,22nm,1.0s						
EIDS	Eidsvold	20.13	170	P	P	16 42 40.8	+0.4
EIDS				IAmb	IAmb	16 42 42.1	
	comp=Z,22nm,0.8s						
EIDS	Eidsvold	20.13	170	P	P	16 42 41.6	+1.2
KNRA	Kununurra	20.74	239	P	P	16 42 46.2	-0.9
KNRA	Kununurra	20.74	239	P	P	16 42 47.2	+0.1
RMQ	Roma	20.94	176	P	P	16 42 50.5	+1.4
QLP	Quilpie	21.18	187	P	P	16 42 52.4	+0.9
AS31	Alice Springs	22.16	214	P	P	16 43 01.8	+0.5
AS31				IAmb	IAmb	16 43 03.8	
	comp=Z,27nm,0.9s						
ASAR	Alice Springs	22.16	214	P	P	16 43 02.4	+1.1
	comp=Z,93nm,0.9s,baz=48,slow=8.5,SNR=286						
ASAR				S	S	16 46 51.0	+1.2
	comp=Z,16nm,0.8s,baz=32,slow=18,SNR=7.1						
ASAR				ScP	ScP	16 50 09.8	+2.0
	comp=Z,1.8nm,0.9s,baz=35,slow=3.4,SNR=5.1						
ASAR	Alice Springs	22.16	214	P	P	16 43 02.1	+0.8
INKA	Innaminka	22.98	195	P	P	16 43 09.9	+1.3
SOEI	Soe	23.12	258	P	P	16 43 10.5	+0.3
SOEI	Soe	23.12	258	P	P	16 43 11.6	+1.4
BATI	Baumata	23.78	257	P	P	16 43 17.9	+1.8
	comp=Z,30nm,0.5s,baz=98,slow=3.9,SNR=18						
FITZ	Fitzroy Crossi	24.51	237	P	P	16 43 23.7	+1.1
	comp=Z,104nm,0.5s,baz=51,slow=9.8,SNR=219						
LIFNC	LIFOU	24.69	130	P	P	16 43 23.5	-0.8
LIFNC	LIFOU	24.69	130	P	P	16 43 25.4	+1.2
OOD	Oodnadatta	24.75	205	P	P	16 43 25.7	+1.0
DZM	Mont Dzumac	24.87	133	P	P	16 43 25.6	-0.4
	comp=Z,13nm,0.6s,baz=264,slow=7.7,SNR=14						
DZM	Mont Dzumac	24.87	133	P	P	16 43 23.7	-2.3
DZM				IAmb	IAmb	16 43 29.1	
	comp=Z,47nm,1.2s						
DZM	Mont Dzumac	24.87	133	P	P	16 43 25.9	-0.1
ARMA	Armidale	25.16	171	P	P	16 43 29.3	+0.8
ARMA				IAmb	IAmb	16 43 32.5	
	comp=Z,25nm,0.7s						
ARMA	Armidale	25.16	171	P	P	16 43 29.9	+1.4
CMSA	Cobar Meteorol	25.96	183	P	P	16 43 36.4	+0.8
LCRK	Leigh Creek	26.24	198	P	P	16 43 38.6	+0.5
WRKA	Warakurna	26.59	221	P	P	16 43 41.8	+0.5
STKA	Stephens Creek	26.78	191	P	P	16 43 43.0	+0.1
	comp=Z,4.8nm,0.6s,baz=358,slow=9.7,SNR=11						
STKA	Stephens Creek	26.78	191	P	P	16 43 43.0	+0.1
STKA	Stephens Creek	26.78	191	P	P	16 43 43.3	+0.4
MULG	Mulgathing	27.61	205	P	P	16 43 50.8	+0.5
NAPP	Napperby	28.83	196	P	P	16 44 01.8	+0.8
HTT	Hallett	28.86	194	P	P	16 44 02.0	+0.6
BBOO	Buckleboo	29.11	200	P	P	16 44 03.7	+0.2
BBOO				IAmb	IAmb	16 44 15.0	
	comp=Z,29nm,1.2s						
BBOO	Buckleboo	29.11	200	P	P	16 44 03.8	+0.2
CAN	Canberra	29.75	177	P	P	16 44 10.5	+1.3
CAN				IAmb	IAmb	16 44 23.3	
	comp=Z,16nm,1.2s						
MBWA	Marble Bar	30.86	237	P	P	16 44 19.5	+0.4
FORT	Forrest	30.94	213	P	P	16 44 20.2	+0.6
FORT	Forrest	30.94	213	P	P	16 44 20.3	+0.6
PSA00	Pilbara Seismi	30.95	236	P	P	16 44 19.7	-0.1
PSA00	Pilbara Seismi	30.95	236	P	P	16 44 19.8	-0.1
PSA00				IAmb	IAmb	16 44 20.5	
	comp=Z,33nm,1.5s						
PSA00	Pilbara Seismi	30.95	236	P	P	16 44 20.2	+0.3
TOO	Toolangi	31.98	183	P	P	16 44 29.7	+0.9
MSVF	Nonsavu	32.52	115	P	P	16 44 34.8	+1.1
	comp=Z,4.4nm,0.5s,baz=281,slow=13,SNR=9.1						
MSVF	Nonsavu	32.52	115	P	P	16 44 34.2	+0.5
MSVF				IAmb	IAmb	16 44 35.1	
	comp=Z,26nm,1.3s						
MSVF	Nonsavu	32.52	115	P	P	16 44 34.8	+1.1
JCJ	Chichijima	32.74	352	P	P	16 44 35.2	-0.2
	comp=Z,85nm,0.7s,baz=262,slow=18,SNR=5.6						
JCJ	Chichijima	32.74	352	P	P	16 44 35.4	0.0
JCJ	Chichijima	32.74	352	P	P	16 44 35.5	0.0
MEEK	Meekatharra	34.44	229	P	P	16 44 50.7	+0.5
GIRL	Giralia	36.11	239	P	P	16 45 06.1	+1.7
GIRL	Giralia	36.11	239	P	P	16 45 06.5	+2.1
UGM	Wanagama	36.50	264	P	P	16 45 09.0	+1.1
MORW	Morawa	37.67	228	P	P	16 45 18.1	+0.6
MORW				IAmb	IAmb	16 45 41.3	
	comp=Z,40nm,1.4s						
MORW	Morawa	37.67	228	P	P	16 45 18.0	+0.6
KLBR	Kellerberrin	37.89	223	P	P	16 45 19.5	+0.2
BLDU	Ballidu	38.04	225	P	P	16 45 21.0	+0.4
YULB	Yu-li	38.25	320	P	P	16 45 22.9	+0.5
OUZ	Omahuta	38.32	144	P	P	16 45 22.4	-0.4
	comp=Z,34nm,1.6s						
NACB	Ninganchiao	38.62	321	P	P	16 45 26.2	+0.8
TPUB	Ta-pu	38.62	319	P	P	16 45 25.4	-0.1
TPUB	Ta-pu	38.62	319	P	P	16 45 25.4	-0.1
SSLB	Suanglung	38.75	320	P	P	16 45 26.6	0.0
SSLB				IAmb	IAmb	16 45 30.0	
	comp=Z,19nm,0.7s						
SSLB	Suanglung	38.75	320	P	P	16 45 27.1	+0.5
YHNB	Yeheng	39.12	321	P	P	16 45 30.7	+1.1
YHNB	Yeheng	39.12	321	P	P	16 45 31.1	+1.5
MUN	Mundaring	39.18	224	P	P	16 45 29.7	-0.3
KNMB	Chin-men Tao	40.90	318	P	P	16 45 45.0	+0.7
KNTN	Kanton	41.05	88	P	P	16 45 45.8	+0.2
KNTN				IAmb	IAmb	16 45 48.6	
	comp=Z,38nm,0.8s						
QZH	Quanzhou	41.09	319	⇓*i*P	P	16 45 47.3	+1.5
QZH				pmax	pmax		
	comp=Z,41nm,0.6s						
AFI	Afiamalu	41.24	105	P	P	16 45 47.8	+0.6
	comp=Z,89nm,0.9s,baz=108,slow=1.7,SNR=8.8						
QRZ	Quartz Range	41.88	151	P	P	16 45 52.5	+0.6
QRZ				IAmb	IAmb	16 46 17.4	
	comp=Z,53nm,1.2s						
JGF	Kuroka	41.90	348	P	P	16 45 52.5	+0.4
JGF				IAmb	IAmb	16 46 16.6	
	comp=Z,27nm,1.4s						
JWT	Wachi	42.04	346	P	P	16 45 53.8	+0.5
JHS	Saijyo	42.39	343	P	P	16 45 57.0	+0.8
JHS				IAmb	IAmb	16 46 17.3	
	comp=Z,47nm,1.5s						
URZ	Urewera	42.46	144	P	P	16 45 57.5	+0.8
	comp=Z,3.7nm,0.3s,baz=299,slow=23,SNR=8.1						
URZ	Urewera	42.46	144	P	P	16 45 57.4	+0.7
URZ	Urewera	42.46	144	P	P	16 45 57.5	+0.8
MJAR	Matsushiro Arr	42.64	349	P	P	16 45 58.0	-0.1
	comp=Z,19nm,1.1s,baz=168,slow=8.4,SNR=16						
MJAR				PcP	PcP	16 47 46.9	+0.8
	comp=Z,6.1nm,0.9s,baz=141,slow=2.7,SNR=6.9						
MJAR	Matsushiro Arr	42.64	349	P	P	16 45 57.5	-0.7
MAJO	Matsushiro	42.64	349	P	P	16 45 56.9	-1.3
MAJO	Matsushiro	42.64	349	P	P	16 45 58.7	+0.6
MAT	Matsushiro	42.64	349	P	P	16 45 57.4	-0.7
MXZ	Matakaoa Point	42.70	143	P	P	16 45 59.5	+0.8
TUWZ	Tuamarina	43.03	150	P	P	16 46 02.0	+0.8
RPZ	Rata Peaks	43.49	155	P	P	16 46 06.2	+1.3
RPZ				IAmb	IAmb	16 46 08.6	
	comp=Z,31nm,1.1s						
JMM	Marumori	43.53	353	P	P	16 46 06.0	+0.8
JMM				IAmb	IAmb	16 46 25.8	
	comp=Z,37nm,1.1s						
JSD	Sado	44.08	350	P	P	16 46 10.0	+0.4
JSD				PcP	PcP	16 47 51.3	+0.3
MQZ	McQueen’s Vall	44.18	153	P	P	16 46 11.1	+0.8
NJ2	Nanjing	46.06	326	*e*P	P	16 46 25.7	+0.5
NJ2				pmax	pmax		
	comp=Z,25nm,0.9s						
UBPT	Khong Chiam	46.20	297	P	P	16 46 27.8	+1.2
KSRS	Korea Array	46.34	339	P	P	16 46 28.1	+0.8
	comp=Z,10nm,0.9s,baz=153,slow=9.3,SNR=20						
KSRS				PcP	PcP	16 47 59.4	+0.6
	comp=Z,4.4nm,0.9s,baz=169,slow=3.6,SNR=6.0						
KSAR	Wonju Array Be	46.34	339	P	P	16 46 27.8	+0.4
JTM	Tenmabayashi	46.38	354	P	P	16 46 28.4	+0.9
JTM				IAmb	IAmb	16 46 29.6	
	comp=Z,62nm,1.2s						
KS19	Wonju Array Si	46.40	339	P	P	16 46 27.7	-0.1
WHN	Wuhan	47.66	321	⇓P	P	16 46 39.6	+2.0
GYA	Guiyang	50.49	311	⇓P	P	16 47 01.0	+1.6
GYA				pmax	pmax		
	comp=Z,11nm,1.1s						
ENH	Enshi	50.67	317	P	P	16 47 00.6	0.0
ENH				IAmb	IAmb	16 47 02.3	
	comp=Z,41nm,1.1s						
USA0B	Ussuriysk Arra	51.31	346	P	P	16 47 05.7	+0.7
USRK	Ussuriysk Ar.	51.31	346	P	P	16 47 06.3	+1.3
	comp=Z,6.0nm,0.6s,baz=175,slow=7.7,SNR=13						
USRK				PcP	PcP	16 48 17.9	+1.1
	comp=Z,2.3nm,0.6s,baz=200,slow=5.0,SNR=5.2						
USRK	Ussuriysk Ar.	51.31	346	P	P	16 47 05.4	+0.4
MDJ	Mudanjiang	52.32	344	P	P	16 47 12.9	+0.5
MDJ				pmax	pmax		
	comp=Z,12nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,170nm,4.6s						
YSS	Yuzh-Sakhalins	52.35	356	P	P	16 47 13.3	+0.7
YSS				IAmb	IAmb	16 47 14.8	
	comp=Z,20nm,0.9s						
KMI	Kunming	52.84	307	⇓P	P	16 47 19.5	+2.6
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
CMAR	Chiang Mai Arr	53.18	298	P	P	16 47 20.2	+1.0
	comp=Z,1.5nm,0.6s,baz=119,slow=5.5,SNR=13						
CMAR				PcP	PcP	16 48 25.8	+1.4
	comp=Z,2.9nm,0.4s,baz=120,slow=2.3,SNR=13						
CMAR	Chiang Mai Arr	53.18	298	P	P	16 47 18.7	-0.5
CHTO	Chiang Mai	53.31	298	P	P	16 47 20.1	-0.1
CHTO				PcP	PcP	16 48 25.8	+0.8
XAN	Xi'an	53.41	320	P	P	16 47 21.2	+0.5
XAN				pmax	pmax		
	comp=Z,40nm,1.0s						
BJT	Baijiatuau	53.53	331	P	P	16 47 21.1	-0.3
RAR	Rarotonga	53.65	112	P	P	16 47 21.7	-0.9
RAR				IAmb	IAmb	16 47 24.5	
	comp=Z,48nm,1.1s						
HHC	Hu-ho-hao-te	56.50	328	*e*P	P	16 47 45.5	+2.8
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,220nm,7.5s						
BTO	Baotou	57.15	327	*e*P	P	16 47 49.7	+2.4
LZH	Lanzhou	57.95	319	⇓P	P	16 47 54.8	+1.8
LZH				pP	PcP	16 48 43.3	+0.5
LZH				pmax	pmax		
	comp=Z,38nm,1.3s						
PEA0B	Petropavlovsk-	59.04	7	P	P	16 48 01.0	+1.0
PETK	Petropavlovsk-	59.04	7	P	P	16 48 01.2	+1.2
	comp=Z,16nm,0.9s,baz=193,slow=12,SNR=17						
PETK	Petropavlovsk-	59.04	7	P	P	16 48 00.8	+0.8
HIA	Hailar	59.54	339	P	P	16 48 04.0	+0.5
HIA				IAmb	IAmb	16 48 05.5	
	comp=Z,35nm,1.2s						
GTA	Gaotai	62.47	320	⇑P	P	16 48 24.6	+1.0
GTA				pP	pwP	16 49 14.1	+0.2
GTA				sP	sP	16 49 37.3	+3.0
GTA				pmax	pmax		
	comp=Z,24nm,0.9s						
ULN	Ulaanbaatar	63.75	331	P	P	16 48 32.6	+0.7
SONM	Songino Array	64.05	331	P	P	16 48 34.9	+1.1
	comp=Z,24nm,1.0s,baz=151,slow=6.2,SNR=51						
SONM	Songino Array	64.05	331	P	P	16 48 34.1	+0.3
SONM				PcP	PcP	16 49 06.7	-0.4
LSA	Lhasa	64.09	307	P	P	16 48 35.2	+0.4
TAPN	Taplejung	66.03	303	*e*P	P	16 48 47.3	+0.1
	comp=Z,11nm,0.7s						
ODAN	Odare	66.13	302	*e*P	P	16 48 48.4	+0.6
	comp=Z,12nm,0.6s						
RAMN	Ramite	66.83	302	*e*P	P	16 48 52.6	+0.4
	comp=Z,5.5nm,0.4s						
GUN	Gumba	67.75	303	*e*P	P	16 48 58.6	+0.5
	comp=Z,23nm,0.8s						
TLY	Talaya	67.98	332	P	P	16 48 59.4	+0.8
TLY				IAmb	IAmb	16 49 00.9	
	comp=Z,14nm,0.8s						
PKI	Pulchoki	68.03	302	*e*P	P	16 48 59.8	0.0
PKIN	Phulchoki	68.05	302	*e*P	P	16 48 59.7	-0.1
KKN	Kakani	68.21	303	*e*P	P	16 49 00.9	+0.1
	comp=Z,21nm,0.8s						
DMN	Daman	68.30	302	*e*P	P	16 49 01.8	+0.4
YAK	Yakutsk	68.66	351	P	P	16 49 02.5	0.0
GKN	Gorkha	68.82	303	*e*P	P	16 49 04.5	0.0
	comp=Z,27nm,0.8s						
KOLN	Koldanda	69.62	302	*e*P	P	16 49 09.5	+0.1
	comp=Z,32nm,0.7s						
DANN	Dangsing	69.66	303	*e*P	P	16 49 09.5	-0.3
	comp=Z,24nm,0.7s						
PYUN	Piuthan	70.23	302	*e*P	P	16 49 12.8	-0.4
	comp=Z,33nm,0.8s						
VNDA	Vanda	72.42	177	P	P	16 49 25.2	+0.1
WMQ	Urumqi	72.53	319	⇓P	P	16 49 27.7	+1.3
WMQ				pP	pP	16 50 17.7	+1.8
WMQ				pmax	pmax		
	comp=Z,26nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,210nm,5.3s						
BILL	Bilibino	74.57	7	P	P	16 49 38.2	+0.6
MK31	Makanchi Array	77.22	320	P	P	16 49 52.7	-0.5
MK31				IAmb	IAmb	16 49 55.1	
	comp=Z,14nm,1.1s						
MKAR	Makanchi Array	77.22	320	P	P	16 49 53.5	+0.4
	comp=Z,16nm,0.9s,baz=109,slow=6.6,SNR=57						
MKAR	Makanchi Array	77.22	320	P	P	16 49 52.8	-0.3
MAKZ	Makanchi	77.43	320	P	P	16 49 54.4	+0.1
MAKZ				IAmb	IAmb	16 49 55.7	
	comp=Z,26nm,1.0s						
TIXI	Tiksi	77.91	354	P	P	16 49 55.4	-1.0
TIXI				IAmb	IAmb	16 49 59.9	
	comp=Z,15nm,1.1s						
ZAA0	Zalesovo Array	78.68	328	P	P	16 50 00.0	-0.9
ZAA0				IAmb	IAmb	16 50 01.2	
	comp=Z,19nm,0.7s						
ZALV	Zalesovo Beam	78.68	328	P	P	16 50 00.3	-0.6
	comp=Z,21nm,0.6s,baz=110,slow=5.6,SNR=77						
ZALV	Zalesovo Beam	78.68	328	P	P	16 50 00.0	-0.9
KSH	Kashi	79.18	312	P	P	16 50 05.9	+1.7
KSH				pmax	pmax		
	comp=Z,18nm,0.9s						
NIL	Nilore	79.79	305	P	P	16 50 07.2	-0.3
L19K	White Mountain	80.55	24	P	P	16 50 11.6	+0.7
L19K				IAmb	IAmb	16 50 13.8	
	comp=Z,13nm,0.9s						
CNPM	China Poot	80.79	27	P	P	16 50 13.2	+1.0
KURK	Kurchatov	80.91	323	P	P	16 50 12.7	-0.3
KURK				IAmb	IAmb	16 50 14.1	
	comp=Z,17nm,1.0s						
AAK	Ala-Archa	81.12	315	P	P	16 50 13.5	-1.0
AAK				IAmb	IAmb	16 50 16.2	
	comp=Z,14nm,0.9s						
J20K	Nowinta River	81.86	22	P	P	16 50 18.5	+0.8
J20K				IAmb	IAmb	16 50 20.7	
	comp=Z,15nm,1.0s						
CAST	Castle Rocks	82.28	23	P	P	16 50 20.2	+0.3
CAST				IAmb	IAmb	16 50 21.6	
	comp=Z,17nm,0.7s						
PWL	Port Wells	82.68	26	P	P	16 50 22.7	+0.6
PWL				IAmb	IAmb	16 50 25.6	
	comp=Z,23nm,0.8s						
MAW	Mawson	82.80	203	P	P	16 50 22.9	+0.3
	comp=Z,2.5nm,0.7s,baz=324,slow=7.6,SNR=2.3						
MAW	Mawson	82.80	203	P	P	16 50 22.5	0.0
IMAR	Indian Mountai	82.93	21	P	P	16 50 23.5	+0.2
TRF	Thorofare Moun	83.00	24	P	P	16 50 23.8	0.0
H21K	Melozitna Rive	83.11	21	P	P	16 50 24.6	+0.5
I21K	Tanana	83.17	22	P	P	16 50 25.2	+0.8
I21K				IAmb	IAmb	16 50 27.2	
	comp=Z,17nm,1.1s						
KBL	Kabul	83.39	306	P	P	16 50 25.7	-0.8
MLY	Manley	83.56	22	P	P	16 50 26.0	-0.5
MLY				IAmb	IAmb	16 50 28.6	
	comp=Z,18nm,0.9s						
RND	Reindeer	83.56	24	P	P	16 50 25.7	-0.9
RND				IAmb	IAmb	16 50 27.7	
	comp=Z,21nm,0.8s						
MCK	McKinley	83.67	24	P	P	16 50 27.0	-0.1
MCK				IAmb	IAmb	16 50 28.3	
	comp=Z,24nm,1.0s						
NEA2	Nenana	84.00	23	P	P	16 50 28.8	+0.1
KLU	Klutina	84.01	26	P	P	16 50 29.1	+0.2
DHY	Denali Highway	84.03	25	P	P	16 50 29.3	+0.2
DHY				IAmb	IAmb	16 50 30.9	
	comp=Z,14nm,0.8s						
KKAR	Karatay Array	84.07	314	P	P	16 50 29.4	-0.1
I23K	Minto, Yukon-K	84.14	22	P	P	16 50 29.6	+0.3
WRH	Wood River Hil	84.33	23	P	P	16 50 29.7	-0.6
WRH				IAmb	IAmb	16 50 31.5	
	comp=Z,12nm,1.0s						
QSPA	South Pole Qui	84.49	180	P	P	16 50 31.2	-0.1
	comp=Z,6.4nm,0.8s,baz=287,slow=0.7						
QSPA	South Pole Qui	84.49	180	P	P	16 50 31.2	-0.1
CCB	Clear Creek Bu	84.52	23	P	P	16 50 30.6	-0.6
CCB				IAmb	IAmb	16 50 32.1	
	comp=Z,16nm,1.0s						
TCOL	CIGO, UAF Yank	84.59	23	P	P	16 50 30.5	-1.1
TCOL				IAmb	IAmb	16 50 32.5	
	comp=Z,22nm,0.8s						
COLA	College	84.59	23	P	P	16 50 30.5	-1.1
COLA				IAmb	IAmb	16 50 32.5	
	comp=Z,24nm,0.8s						
HDA	Harding Lake	84.75	23	P	P	16 50 31.7	-0.7
COLD	Coldfoot	84.78	20	P	P	16 50 31.9	-0.7
NRIK	Noril'sk	84.84	342	P	P	16 50 32.8	0.0
	comp=Z,11nm,0.7s,baz=123,slow=5.8,SNR=21						
NRIK	Noril'sk	84.84	342	P	P	16 50 32.4	-0.4
NRIK				IAmb	IAmb	16 50 34.0	
	comp=Z,16nm,0.9s						
A21K	Barrow	84.91	16	P	P	16 50 33.1	0.0
A21K				IAmb	IAmb	16 50 35.9	
	comp=Z,19nm,0.8s						
IL31		84.92	23	P	P	16 50 31.0	-2.3
IL31				IAmb	IAmb	16 50 33.8	
	comp=Z,15nm,0.7s						
ILAR	Eielson Array	84.92	23	P	P	16 50 32.1	-1.2
	comp=Z,14nm,0.8s,baz=252,slow=4.8,SNR=154						
ILAR	Eielson Array	84.92	23	P	P	16 50 31.4	-1.9
H24K	Noodor Dome	84.99	22	P	P	16 50 33.9	+0.2

DOT	Dot Lake	85.63	25	P	P	16 50 36.7	-0.1
DOT				IAmb	IAmb	16 50 38.8	
	comp=Z,12nm,0.9s						
TOLK	Toolik Lake Re	85.64	19	P	P	16 50 37.1	+0.2
L26K	Log Cabin Wild	85.70	25	P	P	16 50 37.5	+0.3
L26K				IAmb	IAmb	16 50 40.1	
	comp=Z,14nm,1.3s						
BARN	Barnard Glacie	85.78	27	P	P	16 50 38.0	+0.2
BARN				IAmb	IAmb	16 50 41.0	
	comp=Z,16nm,0.8s						
SCRK	Sand Creek	85.78	24	P	P	16 50 38.0	+0.3
M27K	Edge Creek, AK	86.11	26	P	P	16 50 39.6	+0.3
M27K				IAmb	IAmb	16 50 42.1	
	comp=Z,17nm,0.8s						
BCAR	Beaver Creek A	86.38	26	P	P	16 50 41.0	+0.4
BRVK	Borovoye	86.54	324	P	P	16 50 40.4	-1.1
BMAR	Burnt Mountain	86.84	21	P	P	16 50 43.2	+0.5
EGAK	Eagle	87.21	24	P	P	16 50 44.3	-0.2
EGAK				IAmb	IAmb	16 50 46.2	
	comp=Z,9.6nm,0.9s						
SKAG	Skagway	88.35	30	P	P	16 50 51.4	+1.5
SKAG				IAmb	IAmb	16 50 57.1	
	comp=Z,31nm,1.4s						
HRA	Herat	88.91	305	P	P	16 50 52.6	-0.8
HRA				IAmb	IAmb	16 50 54.5	
	comp=Z,17nm,1.2s						
SYO	Syowa Base	91.15	200	⇑*e*P	P	16 51 02.6	-0.2
ABKAR	Akbulak array	92.32	319	P	P	16 51 06.5	-2.1
ABKAR	Akbulak array	92.32	319	P	P	16 51 06.9	-1.7
ABKAR				IAmb	IAmb	16 51 08.2	
	comp=Z,8.6nm,1.1s						
GEYT	Alibeck	92.60	308	P	P	16 51 10.3	0.0
	comp=Z,5.5nm,0.8s,baz=72,slow=11,SNR=8.2						
GEYT	Alibeck	92.60	308	P	P	16 51 09.8	-0.5
GEYT				IAmb	IAmb	16 51 10.6	
	comp=Z,4.8nm,0.8s						
WDC	Whiskeytown Da	93.72	50	P	P	16 51 14.5	-0.8
WDC				IAmb	IAmb	16 51 17.5	
	comp=Z,9.1nm,0.8s						
ARU	Arti	93.77	326	P	P	16 51 13.2	-2.0
ARU				IAmb	IAmb	16 51 14.7	
	comp=Z,6.8nm,0.9s						
A36M	Sachs Harbour	94.41	18	P	P	16 51 17.2	-0.5
A36M				IAmb	IAmb	16 51 19.1	
	comp=Z,9.2nm,0.8s						
B08A	Colville Reser	96.36	42	P	P	16 51 27.4	+0.2
WVOR	Wild Horse Val	96.73	48	P	P	16 51 28.9	-0.2
WVOR				IAmb	IAmb	16 51 44.3	
	comp=Z,4.7nm,1.1s						
J08A	Circle Bar Ran	96.87	47	P	P	16 51 29.6	-0.2
J08A				IAmb	IAmb	16 51 31.5	
	comp=Z,5.6nm,0.7s						
NVAR	Mina Array Bea	96.89	52	P	P	16 51 30.3	+0.2
	comp=Z,3.0nm,0.7s,baz=259,slow=5.8,SNR=7.8						
NVAR	Mina Array Bea	96.89	52	P	P	16 51 30.1	-0.1
BMO	Blue Mountains	97.73	46	P	Pdif	16 51 33.8	+0.2
F10A	Beach Ranch, E	97.78	44	P	Pdif	16 51 34.1	+0.3
NEW	Newport	97.84	42	P	Pdif	16 51 34.6	+0.7
KLMR	Klimovskoe	103.34	331	*e*Pdif	Pdif	16 51 56.4	-1.6
KLMR				AMP		16 52 07.5	
	comp=Z,16nm,1.4s						
PDAR	Pinedale Array	103.42	47	Pdiff	Pdif	16 51 59.9	+0.7
	comp=Z,2.2nm,0.8s,baz=232,slow=2.2,SNR=18						
ARCES	ARCESS Array B	105.83	342	PKiKP	PKiKP	16 56 19.9	-0.5
	comp=Z,7.3nm,1.1s,baz=93,slow=1.9,SNR=9.2						
ARCES	ARCESS Array B	105.83	342	Pdif	Pdif	16 52 07.2	-1.7
FINES	FINESS Array B	109.29	334	PKiKP	PKiKP	16 56 26.0	-1.0
	comp=Z,3.7nm,0.9s,baz=114,slow=1.7,SNR=5.1						
FINES	FINESS Array B	109.29	334	Pdif	Pdif	16 52 21.5	-3.0
FINES					PKiKP	16 56 26.7	-0.3
TXAR	Lajitas Array	109.34	61	PKiKP	PKiKP	16 56 26.1	-2.2
	comp=Z,0.1nm,0.3s,baz=196,slow=1.3,SNR=3.5						
MNK	Minsk	111.18	327	*i* P	Pdif	16 52 34.9	+1.8
	comp=E,3.0nm,1.1s						
MNK				*i* P	Pdif	16 52 34.9	+1.8
	comp=N,19nm,1.1s						
MNK				*i* P	Pdif	16 52 34.9	+1.8
	comp=Z,7.0nm,0.6s,baz=70						
MNK				*i* PP	PP	16 57 02.4	-11
MNK				*i* PPP	PPP	16 59 24.4	
MNK				*i* SKS	SKSdf	17 03 12.5	-10
MNK				*i* SS	SS	17 12 21.1	-7.7
MNK				*i* SSS	SSS	17 16 31.7	
MNK				*i* LRM	MLR	17 43 49.7	
	comp=E,57nm,18.1s						
MNK				*i* LRM	MLR	17 43 49.7	
	comp=Z,209nm,16.1s						
MNK				*i* LRM	MLR	17 44 02.2	
	comp=N,118nm,16.8s						
AKASG	Malin Array Be	111.72	323	PKiKP	PKiKP	16 56 30.2	-1.7
	comp=N,1.1nm,0.5s,baz=50,slow=2.6,SNR=3.1						
NOA	NORSAR Array B	115.55	338	PKP	PKPdf	16 56 37.7	-1.3
	comp=N,1.3nm,0.7s,baz=48,slow=2.0,SNR=2.6						
LANS	Liptovska Anna	118.13	324	*e*PKP	PKiKP	16 56 45.2	+0.8
ZAPS	Zavoj	118.51	317	*e*P	PKiKP	16 56 45.3	0.0
BOSS	Bosilegrad	118.89	316	*e*P	PKPdf	16 56 45.5	-0.5
BARS	Barje	119.23	317	*e*P	PKPdf	16 56 46.3	-0.3
KRLC	Kraliky	119.23	326	*e*PKPDF	PKPdf	16 56 46.2	-0.2
DPC	Dobruska-Polom	119.35	326	*e*PKPDF	PKPdf	16 56 46.2	-0.5
GRUS	Gruza	119.57	318	*e*P	PKPdf	16 56 47.1	-0.1
TRUS	Trudelj	119.64	319	*e*P	PKPdf	16 56 47.0	-0.3
MODS	Modra-Piesok	119.78	324	*e*PKP	PKPdf	16 56 47.0	-0.5
DIVS	Divibare	119.97	319	*e*P	PKPdf	16 56 47.9	-0.2
IVAS	Ivanjica	120.07	318	*e*P	PKPdf	16 56 47.5	-0.8
BRG	Berggiesshubel	120.37	328	*e*PKP	PKiKP	16 56 48.7	+0.1
BRG				Amp		16 56 49.5	
	comp=Z,8.0nm,0.8s						
BBLS	Lazići	120.45	318	*e*P	PKPdf	16 56 49.0	0.0
PRU	Pruhonice	120.52	327	*e*PKPDF	PKPdf	16 56 48.7	-0.1
CLL	Collm	120.63	328	*i* PKiKP	PKPdf	16 56 48.5	-0.5
	comp=Z,10.0nm,0.9s						
CONA	Conrad Observa	120.82	324	P	PKPdf	16 56 49.3	-0.3
	comp=Z,4.2nm,0.6s,SNR=4.8						
CKRC	Cesky Krumlov	121.26	325	*e*PKPDF	PKiKP	16 56 51.3	+0.8
KHC	Kasperske Hory	121.51	326	*e*PKPDF	PKPdf	16 56 50.7	-0.1
NKC	Novy Kostel	121.52	328	*e*PKPDF	PKiKP	16 56 50.9	-0.1
GERES	GERESS Array B	121.59	326	PKP	PKPdf	16 56 50.7	-0.4
	comp=Z,4.6nm,0.6s,baz=78,slow=2.1,SNR=47						
MOA	Molln	121.79	325	*e*P	PKPdf	16 56 50.8	-0.6
SOKA	Soboth	121.93	323	*e*P	PKPdf	16 56 51.3	-0.5
	comp=Z,0.9nm,0.2s						
PLCA	Paso Flores	122.45	147	PKP	PKPdf	16 56 53.1	+0.1
	comp=Z,3.4nm,0.7s,baz=232,slow=3.6,SNR=6.1						
MYKA	Terra Mystica	122.78	324	*e*P	PKPdf	16 56 52.6	-0.8
	comp=Z,2.5nm,0.4s						
ABTA	Abfaltersbach	123.38	324	*i* P	PKPdf	16 56 53.8	-0.8
	comp=Z,5.6nm,0.7s,SNR=5.0						
WATA	Walderalm	123.61	325	*e*P	PKPdf	16 56 54.6	-0.5
	comp=Z,3.5nm,0.4s						
WTTA	Wattenberg	123.61	325	P	PKPdf	16 56 54.8	-0.3
	comp=Z,7.0nm,0.5s,SNR=7.3						
MOTA	Moosalm	123.87	325	*i* P	PKPdf	16 56 55.2	-0.4
	comp=Z,7.0nm,0.5s,SNR=8.8						
SQTA	Sankt Quirin	123.88	325	P	PKPdf	16 56 55.4	-0.2
	comp=Z,4.3nm,0.4s,SNR=4.3						
FETA	Feichten	124.26	325	P	PKPdf	16 56 56.4	0.0
	comp=Z,6.5nm,0.8s,SNR=10.0						
BTNL	Ternell	124.52	331	*d*PKP	PKPdf	16 56 56.6	+0.1
MEM	Membach	124.57	331	*d*PKP	PKPdf	16 56 56.4	-0.2
DAVA	Damuels	124.59	326	*i* P	PKPdf	16 56 56.9	-0.1
	comp=Z,11nm,0.7s,SNR=7.0						
WLF	Walferdange	125.11	330	*d*PKP	PKiKP	16 56 57.9	-0.1
BMRD	Maredsous	125.36	331	*d*PKP	PKPdf	16 56 58.0	-0.1
SNF	Seneffe	125.45	332	*d*PKP	PKiKP	16 56 58.7	+0.1
KEST	Kesra	130.97	314	PKP	PKPdf	16 57 09.1	-0.3
	comp=Z,5.0nm,1.0s,baz=356,slow=2.9,SNR=3.8						
ESDC	Sonseca Array	137.17	327	PKP	PKPdf	16 57 20.2	-0.6
	comp=Z,0.2nm,0.5s,baz=45,slow=2.5,SNR=5.6						
LPAZ	La Paz	138.90	122	PKhKP	PKPpre	16 57 16.0	
	comp=Z,1.4nm,0.6s,baz=291,slow=3.2,SNR=6.7						
CPUP	Villa Florida	140.44	144	PKhKP	PKPpre	16 57 19.6	
	comp=Z,1.5nm,0.5s,baz=151,slow=4.0,SNR=3.3						
CPUP				PKP	PKPdf	16 57 28.0	+0.8
	comp=Z,1.9nm,0.6s,baz=28,slow=5.1,SNR=4.2						
TORD	Torodi Ar. Bea	145.15	285	PKPbc	PKPab	16 57 36.0	0.0
	comp=Z,28nm,0.7s,baz=74,slow=4.4,SNR=127						
TORD	Torodi Ar. Bea	145.15	285	PKPdf	PKPdf	16 57 35.1	-0.6
KIC	Kosan Boka	152.08	273	*e*PKIKP	PKPbc	16 57 53.7	-0.1
	comp=Z,8.5nm,0.6s						
DBIC	Dimbokro	152.19	274	PKPbc	PKPbc	16 57 51.9	-2.1
	comp=Z,5.6nm,0.7s,baz=106,slow=1.6,SNR=8.8						
TIC	Toumodi	152.35	274	*e*PKIKP	PKPbc	16 57 54.2	-0.2
LIC	Lamto	152.36	273	*e*PKIKP	PKPbc	16 57 54.1	-0.3
	comp=Z,38nm,1.0s						
BDFB	Brasilia	154.17	145	PKPbc	PKPbc	16 57 58.1	-0.3
	comp=Z,6.6nm,0.7s,baz=188,slow=4.0,SNR=7.6						
BDFB				PKPab	PKPab	16 58 12.5	-0.3
	comp=Z,6.3nm,0.8s,baz=235,slow=6.2,SNR=4.5						
BDFB	Brasilia	154.17	145		PKiKP	16 57 58.7	+0.3

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*NEIC **10** 16:43:43.4±2.8, 6°.99S±0°.07×104°.07E±0°.08, h10km±1km, mb4.4/15, Error ellipse: s-maj=14.8km s-min=11.0km az=237.0*

*DJA **10** 16:43:48.7±0.8, 7°S±4°×10°5E±°, h32km±15km, M4.2/15, mb4.6/1, MLv3.9/15*

*IDC **10** 16:43:52.2±6.5, 6°.78S×104°.35E, h75km±51km, mb3.7/7, mb1 3.8/8, mb1mx3.4/41, mbtmp4.0/8, ML3.4/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/37, Error ellipse: s-maj=56.5km s-min=19.5km az=57.0*

ISC 10 16:43:44.3±1.7**, 6°.75S**±0°.05×**104°.43E**±0°.05**, h9**km±10km**, n53, σ1ˢ.49**/59**, mb4.4**/13**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.23	3	P	Pg	16 44 10.4	+2.5
KASI				S	Sn	16 44 26.1	+1.8
CGJI	Cibinong	1.26	84	P	Pg	16 44 09.0	+0.4
CGJI				S	Sb	16 44 23.5	-1.1
BLSI	Bandar Lampung	1.60	30	P	Pg	16 44 15.2	+0.2
BLSI				S	Sg	16 44 35.0	-0.8
LWLI	Liwa	1.77	348	P	Pg	16 44 19.1	+0.9
LWLI				S	Sg	16 44 43.3	+2.2
SBJI	Serang	1.80	70	P	Pn	16 44 13.9	-1.7
SBJI				S	Sb	16 44 39.6	-0.6
KLI	Kotabumi	1.93	13	P	Pg	16 44 20.8	-0.5
KLI				S	Sb	16 44 44.2	+0.4
KLSI		2.07	8	P	Pg	16 44 23.0	-1.1
KLSI				S	Sg	16 44 49.3	-1.7
SKJI	Sukabumi	2.12	97	P	Pn	16 44 20.2	+0.2
MDSI	Maura Dua	2.27	354	P	Pb	16 44 26.0	+0.5
DBJI	Dramaga	2.31	85	P	Pn	16 44 24.0	+1.4
DBJI				S	Sn	16 44 51.7	+0.5
CBJI	Citeko	2.43	82	P	Pb	16 44 27.1	-1.1
CBJI				S	Sn	16 44 55.6	+1.6
CNJI	Cibinong	2.73	102	P	Pn	16 44 29.1	+0.7
LHSI	Lahat	3.05	343	P	Pb	16 44 37.2	-1.5
LEM	Lembang	3.17	91	P	Pb	16 44 40.9	+0.1
	4.2nm,0.3s,baz=348,slow=20,SNR=4.3						
LEM				S	Sb	16 45 19.5	-0.1
	6.6nm,0.3s,baz=8.9,slow=20,SNR=4.4						
LEM				LR	LR	16 46 14.0	
	comp=Z,113nm,19.4s,baz=320,slow=44						
LEM	Lembang	3.17	91	P	Pn	16 44 35.9	+1.4
KSI	Kapahiang	3.58	329	P	Pb	16 44 44.8	-3.2
PMBI	Palembang	3.82	5	Pn	Pn	16 44 46.0	+2.7
XMIS	Christmas Isla	3.89	162	Pn	Pn	16 44 41.9	-2.5
MASI	Maura Aman, Be	4.20	329	P	Pn	16 44 53.4	+4.8
PPBI	Pangkal Pinang	4.87	21	P	Pn	16 44 54.2	-3.6
KRJI	Kerinci	5.50	327	P	Pn	16 45 08.0	+1.5
UGM	Wanagama	6.15	101	Pn	Pn	16 45 18.2	+2.7
PCJI	Pacitan	6.84	102	P	Pn	16 45 24.9	0.0
JAGI	Jajag, Banyuwa	9.79	101	Pn	Pn	16 46 07.0	+1.6
GSI	Gunungsitoli	10.53	319	Pn	Pn	16 46 14.4	-1.2
KULM	Kulim	12.55	342	Pn	Pn	16 46 36.5	-6.6
KKM	Kota Kinabalu	17.32	43	P	P	16 47 47.7	-0.3
TOLI2	Tolitoli	18.09	65	P	P	16 47 56.5	0.0
MYLDM	Lahad Datu	18.38	50	P	Pn	16 47 59.4	-0.2
MYLDM				IAmb	IAmb	16 48 13.4	
	comp=Z,14nm,1.1s						
GIRL	Giralia	18.41	150	P	P	16 47 57.8	-2.1
SOEI	Soe	19.85	100	P	P	16 48 15.7	-0.3
SOEI				IAmb	IAmb	16 48 27.5	
	comp=Z,28nm,1.1s						
KNRA	Kununurra	25.43	112	P	P	16 49 10.3	-2.4
MTN	Manton Dam	26.98	105	P	P	16 49 27.1	+0.3
H08S2	Diego Garcia H	31.70	266	T	T	17 24 01.9	
	baz=88,slow=74						
H08S3	Diego Garcia H	31.70	266	T	T	17 24 02.1	
	baz=88						
H08S1	Diego Carcia H	31.71	266	T	T	17 24 05.2	
	baz=88,slow=74						
WB0	Warramunga Arr	31.83	117	P	P	16 50 09.8	+0.1
WB0				IAmb	IAmb	16 50 26.9	
	comp=Z,8.1nm,1.1s						
WRA	Warramunga Arr	31.84	117	P	P	16 50 09.8	-0.1
	comp=Z,1.3nm,0.5s,baz=288,slow=10.0,SNR=6.8						
WB2	Warramunga Arr	31.85	117	P	P	16 50 10.3	+0.4
ASAR	Alice Springs	32.92	124	P	P	16 50 19.8	+0.4
	comp=Z,0.6nm,1.0s,baz=304,slow=8.0,SNR=1.5						
STKA	Stephens Creek	42.71	131	P	P	16 51 42.8	+0.8
	comp=Z,0.9nm,0.5s,baz=288,slow=13,SNR=1.7						
SONM	Songino Array	54.38	2	P	P	16 53 11.1	-0.6
	comp=Z,0.4nm,0.3s,baz=167,slow=6.8,SNR=2.5						
USRK	Ussuriysk Ar.	56.49	24	P	P	16 53 26.0	-0.7
	comp=Z,2.0nm,0.5s,baz=208,slow=5.3,SNR=5.7						
MK31	Makanchi Array	56.83	342	P	P	16 53 29.4	+0.2
MK31				IAmb	IAmb	16 53 30.2	
	comp=Z,2.2nm,0.9s						
MKAR	Makanchi Array	56.83	342	P	P	16 53 29.1	-0.1
	comp=Z,1.3nm,0.4s,baz=152,slow=9.0,SNR=26						
MAKZ	Makanchi	56.94	342	P	P	16 53 30.0	+0.1
MAKZ				IAmb	IAmb	16 53 41.1	
	comp=Z,12nm,1.6s						
KURK	Kurchatov	61.43	342	P	P	16 54 01.1	+0.2
KURK				IAmb	IAmb	16 54 01.7	
	comp=Z,3.2nm,0.9s						
ZAA0	Zalesovo Array	62.69	347	P	P	16 54 08.6	-0.8
ZAA0				IAmb	IAmb	16 54 09.6	
	comp=Z,1.9nm,0.6s						
ZALV	Zalesovo Beam	62.69	347	P	P	16 54 08.9	-0.4
	comp=Z,1.6nm,0.3s,baz=151,slow=5.6,SNR=8.6						
ZALV	Zalesovo Beam	62.69	347	P	P	16 54 08.8	-0.5
ABKAR	Akbulak array	67.92	330	P	P	16 54 43.6	+0.2
ABKAR				IAmb	IAmb	16 54 45.0	
	comp=Z,3.9nm,1.1s						
ABKAR	Akbulak array	67.92	330	P	P	16 54 43.5	+0.2
TXAR	Lajitas Array	145.28	46	PKPbc	PKPdf	17 03 23.7	+0.3
	comp=Z,0.7nm,0.6s,baz=308,slow=3.3,SNR=2.3						

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*IDC **10** 16:54:21.0±1.3, 4°.14S×129°.33E, h0km, mb3.6/2, mb1 3.8/5, mb1mx3.4/29, mbtmp3.7/5, ML3.4/3, Error ellipse: s-maj=45.7km s-min=24.9km az=80.0*

*DJA **10** 16:54:23.3±1.2, 4°S±4°×12°9E±°, h29km±13km, M3.6/8, MLv3.6/8*

ISC 10 16:54:24.6±0.8**, 4°.20S**±0°.05×**129°.48E**±0°.04**, h36**km**, n13, σ1ˢ.55**/22**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.01	327	P	Pn	16 54 40.5	-1.8
MSAI				S	Sn	16 54 54.0	-1.2
AAI	Ambon	1.38	291	P	Pn	16 54 46.1	-1.3
AAI				S	Sn	16 55 03.6	-0.8
FAKI	Fak Fak	3.04	65	P	Pn	16 55 11.4	+1.2
FAKI				S	Sn	16 55 42.7	-2.7
SIJI	Sorong	3.75	28	Pn	Pn	16 55 21.3	+1.2
	4.2nm,0.3s,baz=224,slow=21,SNR=22						
SIJI				Sn	Sn	16 56 02.5	-0.6
	4.5nm,0.3s,baz=301,slow=9.3,SNR=5.3						
SWI	Sorong	3.76	28	P	Pn	16 55 19.4	-0.7
SWI				S	Sn	16 55 59.7	-3.4
LBMI	Labuha	4.05	331	P	Pn	16 55 24.5	+0.4
LBMI				S	Sn	16 56 10.2	-0.2
SANI	Sanana	4.09	301	P	Pn	16 55 23.8	-0.8
SANI				S	Sn	16 56 10.4	-0.9
SAUI	Saumlaki	4.17	154	P	Pn	16 55 24.2	-1.6
FITZ	Fitzroy Crossi	14.32	195	Pn	Pn	16 57 46.3	+1.4
	0.1nm,0.3s,baz=12,slow=9.3,SNR=1.3						
WRA	Warramunga Arr	16.35	164	Pn	Pn	16 58 09.3	-2.3
	0.1nm,0.3s,baz=347,slow=13,SNR=9.3						
WRA				Sn	Sn	17 01 11.9	-0.1
	0.0nm,0.3s,baz=340,slow=26,SNR=3.1						
ASAR	Alice Springs	19.82	168	P	Pn	16 58 54.5	+0.4
	0.3nm,0.3s,baz=347,slow=11,SNR=36						
ASAR				PcP	PcP	17 03 10.7	+1.2
	0.0nm,0.3s,baz=347,slow=1.6,SNR=4.7						
CMAR	Chiang Mai Arr	37.58	308	P	P	17 01 35.4	-0.6
	0.2nm,0.4s,baz=110,slow=7.8,SNR=1.3						
MKAR	Makanchi Array	65.62	326	P	P	17 05 06.7	+1.6
	0.7nm,0.7s,baz=115,slow=7.2,SNR=10						

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*IDC **10** 17:14:24.2±1.4, 4°.18S×129°.53E, h0km, mb3.6/2, mb1 3.7/6, mb1mx3.5/26, mbtmp3.5/6, ML3.2/4, Error ellipse: s-maj=45.3km s-min=23.2km az=79.0*

*DJA **10** 17:14:26.8±0.8, 4°S±5°×13°0E±°, h19km±8km, M3.9/10, mb4.6/2, MLv3.6/10*

ISC 10 17:14:28.3±0.8**, 4°.15S**±0°.06×**129°.59E**±0°.05**, h36**km**, n13, σ1ˢ.54**/20**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.04	320	P	Pn	17 14 44.9	-1.4
MSAI				S	Sn	17 14 57.9	-1.7
AAI	Ambon	1.47	288	P	Pn	17 14 51.0	-1.2
AAI				S	Sn	17 15 10.5	+0.3
FAKI	Fak Fak	2.92	65	P	Pn	17 15 13.0	+0.8
SIJI	Sorong	3.66	27	Pn	Pn	17 15 23.0	+0.6
	2.5nm,0.3s,baz=209,slow=19,SNR=12						
SIJI				Sn	Sn	17 16 02.5	-1.9
	2.8nm,0.3s,baz=240,slow=7.1,SNR=4.8						
SWI	Sorong	3.66	27	P	Pn	17 15 22.5	+0.1
SWI				S	Sn	17 16 02.2	-2.2
LBMI	Labuha	4.07	329	P	Pn	17 15 26.3	-1.7
LBMI				S	Sn	17 16 16.1	+1.7
KMPI	Kaimana, Papua	4.13	83	P	Pn	17 15 29.5	+0.7
SANI	Sanana	4.16	300	P	Pn	17 15 29.7	+0.4
SANI				S	Sn	17 16 18.1	+1.4
FITZ	Fitzroy Crossi	14.39	195	Pn	Pn	17 17 49.6	+0.1
	0.0nm,0.3s,baz=24,slow=9.3,SNR=1.6						
WRA	Warramunga Arr	16.36	164	Pn	Pn	17 18 13.5	-1.9
	0.1nm,0.3s,baz=341,slow=14,SNR=5.0						
WRA				Sn	Sn	17 21 13.6	-2.4
	0.0nm,0.3s,baz=340,slow=20,SNR=1.6						
ASAR	Alice Springs	19.84	168	P	Pn	17 18 57.2	-0.8
	0.2nm,0.3s,baz=346,slow=10,SNR=21						
CMAR	Chiang Mai Arr	37.64	308	P	P	17 21 42.6	+2.5
	0.3nm,0.4s,baz=140,slow=8.1,SNR=4.1						
MKAR	Makanchi Array	65.64	326	P	P	17 25 09.1	+0.2
	0.4nm,0.5s,baz=120,slow=8.0,SNR=7.6						

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*IDC **10** 17:22:38.4±1.1, 4°.10S×129°.30E, h0km, mb3.6/3, mb1 3.8/7, mb1mx3.7/32, mbtmp3.6/7, ML3.5/4, Error ellipse: s-maj=36.5km s-min=20.9km az=84.0*

*DJA **10** 17:22:42.6±0.9, 4°S±5°×12°9E±°, h23km±6km, M3.6/7, mb4.0/1, MLv3.5/7*

ISC 10 17:22:43.1±0.8**, 4°.08S**±0°.07×**129°.31E**±0°.06**, h36**km**, n14, σ1ˢ.04**/19**, mb3.7**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.83	332	P	Pn	17 22 57.1	-1.1
MSAI				S	Sn	17 23 08.3	-1.0
AAI	Ambon	1.18	289	P	Pn	17 23 03.1	0.0
AAI				S	Sn	17 23 18.0	0.0
FAKI	Fak Fak	3.15	69	P	Pn	17 23 30.6	+0.4
SIJI	Sorong	3.74	31	Pn	Pn	17 23 39.2	+0.8
	9.7nm,0.3s,baz=212,slow=13,SNR=49						
SIJI				Sn	Sn	17 24 22.1	+0.9
	4.2nm,0.3s,baz=241,slow=19,SNR=6.9						
SWI	Sorong	3.74	31	P	Pn	17 23 36.7	-1.7
SWI				S	Sn	17 24 20.7	-0.5
LBMI	Labuha	3.87	332	P	Pn	17 23 40.5	+0.4
SANI	Sanana	3.89	301	P	Pn	17 23 41.3	+1.0
APSI	Ampana	8.28	292	P	Pn	17 24 40.3	-0.4
FITZ	Fitzroy Crossi	14.39	194	Pn	Pn	17 26 03.3	-1.0
	0.1nm,0.3s,baz=24,slow=10.0,SNR=1.9						
WRA	Warramunga Arr	16.51	163	Pn	Pn	17 26 30.0	-2.1
	0.1nm,0.3s,baz=348,slow=12,SNR=8.9						
ASAR	Alice Springs	19.97	168	P	P	17 27 13.1	+0.6
	0.2nm,0.3s,baz=349,slow=10,SNR=25						
ASAR				PcP	PcP	17 31 28.9	+0.7
	0.0nm,0.3s,baz=3.8,slow=2.0,SNR=4.9						
CMAR	Chiang Mai Arr	37.38	308	P	P	17 29 53.2	+0.4
	0.4nm,0.3s,baz=140,slow=7.5,SNR=4.0						
MKAR	Makanchi Array	65.43	326	P	P	17 33 23.9	+1.6
	0.3nm,0.5s,baz=117,slow=7.4,SNR=7.3						
ZALV	Zalesovo Beam	68.68	334	P	P	17 33 42.1	-0.6
	0.3nm,0.4s,baz=124,slow=9.4,SNR=2.0						

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*IDC **10** 17:37:20.0±1.0, 17°.04S×177°.21W, h404km±9km, mb3.7/11, mb1 3.9/14, mb1mx3.7/30, mbtmp4.5/14, Error ellipse: s-maj=19.8km s-min=10.4km az=154.0*

*NOU **10** 17:37:20.3, 16°.90S×177°.24W, h427km, mb4.8/12, Fiji Islands Region*

*NEIC **10** 17:37:21.4±1.5, 17°.0S±0°.1×177°.2W±0°.1, h412km±4km, mb4.2/26, Error ellipse: s-maj=21.3km s-min=16.2km az=166.0*

ISC 10 17:37:19.7±0.5**, 16°.95S**±0°.10×**177°.26W**±0°.06**, h400**km**, n55, σ1ˢ.45**/59**, mb4.1**/24**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVE	Taveuni	2.55	275	P	Pn	17 38 22.3	+2.8
DGTI	Dogotuki	2.95	282	P	Pn	17 38 24.8	+2.2
MSVF	Nonsavu	4.55	259	P	Pn	17 38 39.7	+2.4
	16nm,0.3s,baz=121,slow=12,SNR=110						
MSVF				S	S	17 39 43.5	+3.2
	baz=163,slow=23,SNR=6.7						
MSVF	Nonsavu	4.55	259	P	Pn	17 38 40.6	+3.3
AFI	Afiamalu	6.09	61	P	Pn	17 38 53.5	0.0
	19nm,0.3s,baz=220,slow=2.4,SNR=18						
AFI				S	S	17 40 08.1	-1.7
	3.6nm,0.3s,baz=221,slow=20,SNR=1.5						
NIUE	Niue	7.29	108	P	Pn	17 39 06.8	+0.1
NIUE	Niue	7.29	108	P	P	17 39 07.9	+0.7
SANVU	Saraoutou	15.00	274	P	P	17 40 32.9	+0.5
LIFNC	LIFOU	15.16	253	P	P	17 40 33.1	-0.9
LIFNC	LIFOU	15.16	253	P	P	17 40 33.5	-0.5
DZM	Mont Dzumac	16.19	249	P	P	17 40 45.3	+0.1
	0.4nm,0.3s,baz=88,slow=18,SNR=2.3						
URZ	Urewera	21.80	192	P	P	17 41 38.9	-1.5
	4.3nm,0.3s,baz=307,slow=20,SNR=10						
URZ	Urewera	21.80	192	IAmb	IAmb	17 41 40.0	
	comp=Z,11nm,0.9s						
URZ	Urewera	21.80	192	P	P	17 41 39.5	-1.0
HNR	Honiara	23.40	286	P	P	17 41 56.4	+1.1
	comp=Z,73nm,0.6s,baz=162,slow=3.2,SNR=2.3						
QRZ	Quartz Range	25.38	198	P	P	17 42 12.2	-0.4
FOZ	Fox Glacier	28.68	200	P	P	17 42 41.4	-0.3
WKZ	Wanaka	30.10	200	P	P	17 42 53.5	-0.8
MLZ	Mavora Lakes	30.87	200	P	P	17 43 01.1	+0.2
ARMA	Armidale	31.37	239	P	P	17 43 05.9	+0.2
ARMA				IAmb	IAmb	17 43 30.6	
	comp=Z,5.3nm,1.2s						
WHZ	Wether Hill Ro	31.39	200	P	P	17 43 04.9	-0.5
PMG	Port Moresby	35.40	278	P	P	17 43 39.9	-0.2
	comp=Z,19nm,0.8s,baz=109,slow=6.1,SNR=6.4						
PMG	Port Moresby	35.40	278	P	P	17 43 40.5	+0.4
PMG				IAmb	IAmb	17 43 43.2	
	comp=Z,22nm,0.8s						
COEN	Coen	38.21	269	P	P	17 44 03.4	-0.1
COEN				IAmb	IAmb	17 44 05.1	
	comp=Z,10.0nm,0.6s						
TOO	Toolangi	38.63	230	P	P	17 44 06.5	-0.1
TOO				IAmb	IAmb	17 44 08.4	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	40.06	240	P	P	17 44 18.5	+0.2
	comp=Z,6.0nm,0.6s,baz=98,slow=9.7,SNR=15						
STKA	Stephens Creek	40.06	240	P	P	17 44 18.6	+0.3
BBOO	Buckleboo	44.83	240	P	P	17 44 55.9	-0.3
BBOO				IAmb	IAmb	17 45 20.8	
	comp=Z,21nm,1.5s						
WR0	Warramunga Arr	45.70	258	P	P	17 45 02.1	-1.1
WB0	Warramunga Arr	45.86	259	P	P	17 45 03.3	-1.1
WB2	Warramunga Arr	45.88	258	P	P	17 45 03.0	-1.6
WB2				IAmb	IAmb	17 45 09.1	
	comp=Z,3.5nm,0.9s						
WRA	Warramunga Arr	45.89	258	P	P	17 45 03.3	-1.4
	comp=Z,1.3nm,0.3s,baz=86,slow=7.5,SNR=31						
WRA				ScP	ScP	17 49 48.2	-0.2
	comp=Z,1.1nm,0.9s,baz=92,slow=4.0,SNR=5.4						
WRA				S	S	17 51 12.9	-5.7
	comp=Z,0.7nm,1.1s,baz=86,slow=9.7,SNR=1.6						
WRA	Warramunga Arr	45.89	258	IAmb	IAmb	17 45 04.5	
	comp=Z,0.4nm,1.3s						
AS31	Alice Springs	46.11	253	P	P	17 45 05.6	-0.7
AS31				IAmb	IAmb	17 45 06.9	
	comp=Z,5.1nm,0.8s						
ASAR	Alice Springs	46.11	253	P	P	17 45 05.7	-0.7
	comp=Z,17nm,0.6s,baz=89,slow=7.9,SNR=412						
ASAR				ScP	ScP	17 49 49.4	+0.1
	comp=Z,0.6nm,0.6s,baz=98,slow=4.5,SNR=5.0						
ASAR				S	S	17 51 18.1	-3.6
	comp=Z,0.5nm,1.0s,baz=81,slow=15,SNR=1.6						
ASAR	Alice Springs	46.11	253	P	P	17 45 05.2	-1.2
MTN	Manton Dam	49.93	267	P	P	17 45 34.5	-0.8

MTN				IAmb	IAmb	17 45 36.3	
	comp=Z,8.2nm,0.7s						
FORT	Forrest	51.41	244	P	P	17 45 45.7	-0.2
FORT				IAmb	IAmb	17 46 13.9	
	comp=Z,32nm,1.1s						
KNRA	Kununurra	51.69	263	P	P	17 45 47.5	-0.6
KNRA				IAmb	IAmb	17 45 49.3	
	comp=Z,13nm,0.7s						
SOEI	Soe	57.18	269	P	P	17 46 28.0	+0.7
BATI	Baumata	57.65	269	P	P	17 46 30.9	+0.4
	comp=Z,12nm,0.5s,baz=135,slow=11						
PSA00	Pilbara Seismi	59.22	255	P	P	17 46 40.4	-0.6
PSA00				IAmb	IAmb	17 46 42.4	
	comp=Z,8.6nm,1.5s						
VNDA	Vanda	61.49	185	P	P	17 46 54.8	-0.4
MJAR	Matsushiro Arr	67.81	322	P	P	17 47 35.4	-0.9
	comp=Z,1.2nm,0.9s,baz=156,slow=7.0,SNR=1.9						
QSPA	South Pole Qui	73.10	180	P	P	17 48 08.9	+1.4
TX31	Lajitas Ar. Si	84.55	57	P	P	17 49 10.0	+0.4
TX31				IAmb	IAmb	17 49 15.0	
	comp=Z,12nm,1.3s						
TX32	Lajitas Array	84.55	57	P	P	17 49 09.7	+0.1
TX32				IAmb	IAmb	17 49 15.0	
	comp=Z,4.3nm,1.4s						
TXAR	Lajitas Array	84.55	57	P	P	17 49 11.4	+1.7
	comp=Z,1.9nm,0.8s,baz=215,slow=7.3,SNR=17						
ILAR	Eielson Array	84.71	13	P	P	17 49 09.3	-0.2
	comp=Z,1.2nm,0.4s,baz=223,slow=5.3,SNR=28						
PDAR	Pinedale Array	85.90	43	P	P	17 49 17.1	+1.0
	comp=Z,0.2nm,0.5s,baz=210,slow=4.0,SNR=4.1						
CMAR	Chiang Mai Arr	89.60	289	P	P	17 49 32.7	-1.1
	comp=Z,0.8nm,0.3s,baz=108,slow=2.9,SNR=4.8						
MKAR	Makanchi Array	109.26	314	PKiKP	PKiKP	17 55 02.7	-0.3
	comp=Z,0.1nm,0.5s,baz=49,slow=0.9,SNR=1.4						
ARCES	ARCESS Array B	125.56	350	PKP	PKPdf	17 55 33.5	-0.1
	comp=Z,1.7nm,0.8s,baz=27,slow=3.0,SNR=4.3						
GERES	GERESS Array B	146.96	347	PKPbc	PKPbc	17 56 15.8	-0.3
	comp=Z,0.5nm,0.5s,baz=56,slow=2.4,SNR=4.2						
TORD	Torodi Ar. Bea	176.09	165	PKPab	PKPab	17 58 26.6	+1.0
	comp=Z,0.2nm,0.4s,baz=219,slow=3.4,SNR=2.5						

*NEIC **10** 17:46:18.0±1.2, 14°.7S±0°.1×166°.1E±0°.1, h10^{km}±2^{km}, mb4.2/4, Error ellipse: s-maj=19.9km s-min=17.4km az=23.0*

*IDC **10** 17:46:22.8±11.0, 15°.15S×165°.33E, h0^{km}, mb4.0/4, mb1 4.1/5, mb1mx3.6/39, mbtmp3.9/5, ML3.5/1, Error ellipse: s-maj=205.6km s-min=33.8km az=54.0*

ISC 10 17:46:20.4±1.7, **14°.7S**±0°.1×**166°.2E**±0°.1, **h35**^{km}**, n12, σ0^{s}.62**/13, **mb4.0**/6, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.25	126	Pn	Pn	17 46 41.7	+0.3
LIFNC	LIFOU	6.13	170	Pn	Pn	17 47 48.0	-0.4
DZM	Mont Dzumac	7.33	178	Pn	Pn	17 48 06.3	+1.1
	1.0nm,0.3s,baz=342,slow=20,SNR=17						
DZM				Sn	Sn	17 49 26.8	-0.4
	0.2nm,0.3s,baz=309,slow=11,SNR=1.3						
ONTNC	Ouen Toro	7.57	178	Pn	Pn	17 48 09.2	+1.0
PINNC	Pines Island,	7.96	171	Pn	Pn	17 48 13.5	-0.1
STKA	Stephens Creek	28.20	228	P	P	17 52 09.4	-0.4
	1.9nm,0.4s,baz=47,slow=8.7,SNR=10						
WB0	Warramunga Arr	30.73	256	P	P	17 52 33.0	+0.6
WB0				IAmb	IAmb	17 52 46.3	
	comp=Z,7.4nm,1.4s						
WB2	Warramunga Arr	30.78	256	P	P	17 52 32.7	-0.2
WB2				IAmb	IAmb	17 52 53.0	
	comp=Z,2.9nm,1.1s						
WRA	Warramunga Arr	30.79	256	P	P	17 52 32.3	-0.7
	comp=Z,0.6nm,0.8s,baz=83,slow=7.8,SNR=5.3						
ASAR	Alice Springs	31.68	249	P	P	17 52 40.5	-0.3
	comp=Z,0.9nm,0.4s,baz=77,slow=8.7,SNR=16						
BBOO	Buckleboo	32.75	231	P	P	17 52 50.0	-0.1
FITZ	Fitzroy Crossi	38.96	259	P	P	17 53 43.7	+0.2
	comp=Z,0.9nm,0.4s,baz=82,slow=6.6,SNR=6.1						

*IDC **10** 17:47:02.1±2.5, 4°.42S×101°.86E, h0^{km}, mb3.7/9, mb1 3.9/9, mb1mx3.6/49, mbtmp3.7/9, MS2.9/1, Ms1 2.9/1, ms1mx2.4/49, Error ellipse: s-maj=98.8km s-min=17.2km az=55.0*

*DJA **10** 17:47:10.8±0.2, 4°S±2°×10°2E±°, h48^{km}±7^{km}, M4.1/18, mb4.5/1, MLv3.9/18*

ISC 10 17:47:10.2±1.2, **4°.35S**±0°.06×**102°.03E**±0°.06, **h59**^{km}±12^{km}, **n38, σ1^{s}.30**/41, **mb3.7**/9, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	Kapahiang	0.90	39	P	Pn	17 47 26.8	-0.1
KSI				S	Sn	17 47 38.1	-1.1
MASI	Maura Aman, Be	1.22	10	P	Pn	17 47 32.0	+0.8
MASI				S	Sn	17 47 46.1	-0.7
LHSI	Lahat	1.58	71	P	Pn	17 47 37.0	+1.0
LWLI	Liwa	2.13	108	P	Pn	17 47 44.3	+0.7
LWLI				S	Sn	17 48 09.2	+0.2
MDSI	Maura Dua	2.15	94	P	Pn	17 47 44.8	+1.1
MDSI				S	Sn	17 48 10.1	+0.8
KRJI	Kerinci	2.31	346	P	Pn	17 47 46.3	+0.3
KRJI				S	Sn	17 48 13.6	+0.2
PPSI	Pulau Pagai	2.56	308	P	Pn	17 47 49.2	0.0
PPSI				S	Sn	17 48 19.3	+0.1
KLSI		2.72	97	P	Pn	17 47 52.8	+1.4
KLSI				S	Sn	17 48 25.2	+2.0
KASI	Kota Agung	2.73	115	P	Pn	17 47 52.3	+0.8
KASI				S	Sn	17 48 22.1	-1.2
KLI	Kotabumi	2.87	100	P	Pn	17 47 51.4	-2.1
JMBI	JAMBI	3.15	31	P	Pn	17 47 55.1	-2.2
BLSI	Bandar Lampung	3.36	108	P	Pn	17 47 59.7	-0.6
PDSI	Padang	3.76	335	P	Pn	17 48 04.4	-1.3
PDSI				S	Sn	17 48 48.3	-0.4
PPI	Padang Panjang	4.20	337	P	Pn	17 48 12.3	+0.6
SISI	Saibi	4.20	316	P	Pn	17 48 12.2	+0.5
SISI				S	Sn	17 48 59.8	+0.3
CGJI	Cibinong	4.29	122	P	Pn	17 48 13.5	+0.5
CGJI				S	Sn	17 48 57.1	-4.6
SBJI	Serang	4.45	113	P	Pn	17 48 14.7	-0.5
DSRI	Dabo	4.61	34	P	Pn	17 48 17.7	+0.3
BKNI	Bangkinang	4.75	348	P	Pn	17 48 20.3	+1.0
CBJI	Citeko	5.22	113	P	Pn	17 48 29.2	+3.4
PSI	Prapat	7.75	336	LR	LR	17 52 00.2	
	comp=Z,74nm,18.3s,baz=206,slow=39						
STKI	Sintang	10.41	65	P	Pn	17 49 29.9	-7.0
BATI	Baumata	22.23	106	P	P	17 52 02.5	+0.2
	6.4nm,0.7s,baz=239,slow=16,SNR=2.0						
CMAR	Chiang Mai Arr	22.87	352	P	P	17 52 08.3	-0.6
	0.3nm,0.3s,baz=180,slow=9.5,SNR=2.1						
FITZ	Fitzroy Crossi	26.84	122	P	P	17 52 45.5	0.0
	1.6nm,0.8s,baz=346,slow=8.3,SNR=3.7						
H08S2	Diego Garcia H	29.55	262	T	T	18 23 30.5	
	baz=85,slow=75,SNR=5.6						
H08S3	Diego Garcia H	29.55	262	T	T	18 23 30.9	
	baz=85,slow=75,SNR=5.5						
H08S1	Diego Carcia H	29.57	262	T	T	18 23 31.5	
	baz=85,slow=75,SNR=4.6						
H01W3	Cape Leeuwin H	32.39	161	T	T	18 27 34.6	
	baz=338,slow=76,SNR=4.7						
H01W2	Cape Leeuwin H	32.40	161	T	T	18 27 35.6	
	baz=338,slow=76,SNR=4.9						
H01W1	Cape Leeuwin H	32.40	161	T	T	18 27 37.4	
	baz=338,slow=76,SNR=3.7						
WRA	Warramunga Arr	35.08	119	P	P	17 53 57.6	-0.4
	0.5nm,0.4s,baz=302,slow=8.9,SNR=12						
ASAR	Alice Springs	36.25	125	P	P	17 54 08.4	+0.4
	0.3nm,0.5s,baz=296,slow=7.9,SNR=4.9						
STKA	Stephens Creek	46.09	131	P	P	17 55 29.2	+0.5
	1.3nm,0.5s,baz=306,slow=7.0,SNR=5.0						
SONM	Songino Array	52.11	4	P	P	17 56 14.7	+0.2
	0.4nm,0.5s,baz=190,slow=6.0,SNR=2.2						
MKAR	Makanchi Array	53.83	343	P	P	17 56 26.9	-0.2
	0.3nm,0.5s,baz=163,slow=8.9,SNR=6.1						
ZALV	Zalesovo Beam	59.85	348	P	P	17 57 09.0	-0.6
	0.6nm,0.5s,baz=167,slow=6.4,SNR=2.9						
TXAR	Lajitas Array	145.22	42	PKPbc	PKPbc	18 06 42.1	+0.3
	1.2nm,0.4s,baz=285,slow=0.7,SNR=27						

*IDC **10** 17:59:31.6±1.1, 36°.30N×76°.69E, h0^{km}, mb3.7/7, mb1 3.8/12, mb1mx3.5/56, mbtmp3.7/12, ML3.5/5, MS3.2/1, Ms1 3.2/1, ms1mx2.4/68, Error ellipse: s-maj=27.3km s-min=20.6km az=57.0*

*NNC **10** 17:59:47.6±1.4, 37°.00N×78°.22E, h0^{km}, mb4.0, mpv3.9, Error ellipse: s-maj=41.2km s-min=10.3km az=100.0*

ISC 10 17:59:50.0±1.1, **37°.00N**±0°.09×**77°.1E**±0°.1, **h150**^{km}**, n16, σ1^{s}.43**/20, **mb3.5**/7, **3C-3D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.97	341	Pn	Pn	18 01 15.6	-0.8
	0.9nm,0.3s,baz=149,slow=7.2,SNR=12						
AAK				Sn	Sn	18 02 24.3	+0.2
	0.4nm,0.3s,baz=167,slow=18,SNR=5.8						
PDGK	Podgornoye	6.59	16	⇓Pn	Pn	18 01 23.2	-1.4
	5.7nm,0.5s						
PDGK				⇓Sn	Sn	18 02 38.4	-0.3
	12nm,0.8s						
MAKZ	Makanchi	10.46	19	⇑Pn	Pn	18 02 15.6	-0.3
	1.6nm,0.5s						
MAKZ				⇑Sn	Sn	18 04 11.5	-0.1
	4.0nm,1.3s						
MK31	Makanchi Array	10.53	20	⇑Pn	Pn	18 02 15.6	-1.3
	0.5nm,0.3s,baz=199,slow=12,SNR=65						
MK31				⇓Sn	Sn	18 04 12.6	-0.7
	0.8nm,0.5s,baz=202,slow=23,SNR=8.6						
MKAR	Makanchi Array	10.53	20	Pn	Pn	18 02 15.5	-1.4
	0.9nm,0.3s,baz=200,slow=12,SNR=56						
MKAR				Sn	Sn	18 04 10.9	-2.4
	0.4nm,0.3s,baz=201,slow=23,SNR=2.5						
BVAR	Borovoye Array	16.70	346	P	Pn	18 03 36.1	+1.2
	0.1nm,0.3s,baz=183,slow=13,SNR=3.9						
ZALV	Zalesovo Beam	17.78	15	P	Pn	18 03 49.2	+1.3
	0.2nm,0.3s,baz=212,slow=11,SNR=2.8						
AKTO	Aktyubinsk	19.17	320	P	P	18 04 01.2	-0.6
	0.4nm,0.3s,baz=111,slow=8.1,SNR=4.8						
SONM	Songino Array	24.06	54	P	P	18 04 54.8	+3.4
	0.2nm,0.3s,baz=282,slow=6.0,SNR=2.3						
FINES	FINESS Array B	39.87	324	P	P	18 07 09.4	+0.8
	0.8nm,0.3s,baz=114,slow=9.5,SNR=11						
ARCES	ARCESS Array B	42.62	336	P	P	18 07 32.3	+1.4
	4.6nm,1.0s,baz=106,slow=8.7,SNR=5.1						
NOA	NORSAR Array B	46.94	323	P	P	18 08 05.7	+0.4
	0.8nm,0.7s,baz=100,slow=7.2,SNR=1.9						
LEM	Lembang	52.12	140	LR	LR	18 33 12.0	
	comp=Z,23nm,18.4s,baz=172,slow=39						
TORD	Torodi Ar. Bea	70.60	272	P	P	18 10 47.5	-1.8
	0.4nm,0.4s,baz=46,slow=5.9,SNR=7.5						
WRA	Warramunga Arr	78.22	126	P	P	18 11 33.0	-0.1
	0.5nm,1.0s,baz=312,slow=8.3,SNR=1.5						
ASAR	Alice Springs	80.65	129	P	P	18 11 45.1	-1.1
	0.2nm,0.8s,baz=325,slow=5.7,SNR=2.0						

*NEIC **10** 18:11:11.2±2.1, 39°.60N±0°.06×142°.5E±0°.1, h51^{km}±10^{km}, mb4.2/15, Error ellipse: s-maj=14.8km s-min=7.9km az=106.0*

*JMA **10** 18:11:12.1, 39°.69N×142°.23E, h47^{km}±1^{km}, M4.0*

JMA Felt II J1.

*NIED **10** 18:11:12.2, 39°.69N×142°.23E, h47^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.59; $M_{\theta\theta}$4.79; $M_{\phi\phi}$-6.38; $M_{r\theta}$-2.44; $M_{\theta\phi}$3.95; $M_{\phi r}$0.14; Fault plane solution: $M_0$7.37000×10^{14} NP1: ϕ_s300.00000°, δ78.00000°, λ21.00000°. NP2: ϕ_s205.00000°, δ70.00000°, λ167.00000°.*

*IDC **10** 18:11:13.4±2.2, 39°.70N×142°.44E, h71^{km}±20^{km}, mb3.6/10, mb1 3.7/14, mb1mx3.4/61, mbtmp3.9/14, MS2.6/3, Ms1 2.6/3, ms1mx2.4/37 Error ellipse: s-maj=23.3km s-min=12.6km az=103.0*

ISC 10 18:11:11.4±1.1, **39°.66N**±0°.03×**142°.33E**±0°.09, **h48**^{km}±9^{km}, **n74, σ1^{s}.41**/80, **mb4.2**/24, **5C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.40	259	⇓P	Pn	18 11 21.4	+0.1
MIYJ				S	Sn	18 11 27.5	-0.9
JTH	Tanohata	0.46	308	⇑P	Pn	18 11 21.8	-0.2
JTH				S	Sn	18 11 28.4	-1.1
JKEN	Kujiedanarisaw	0.73	319	⇑P	Pn	18 11 25.0	-0.4
JKEN				S	Sn	18 11 34.6	-0.9
OFUJ	Ofunato	0.77	222	⇓P	Pn	18 11 26.2	+0.2
OFUJ				*e*S	Sn	18 11 36.1	-0.4
JOM	Ohasama	0.82	258	⇓P	Pn	18 11 26.8	+0.1
JOM				S	Sn	18 11 36.6	-1.2
JKZ	Kuzumaki	0.84	293	⇑P	Pn	18 11 26.7	-0.2
JKZ				S	Sn	18 11 37.2	-1.0
JANG	Nango	0.95	319	⇑P	Pn	18 11 28.0	-0.4
JANG				S	Sn	18 11 39.5	-1.4
JMK	Ichinoseki	1.11	231	P	Pn	18 11 30.9	+0.4
JMK				*e*S	Sn	18 11 44.7	0.0
JRG	Rokugo	1.34	259	⇓P	Pn	18 11 33.7	+0.1
JRG				*e*S	Sn	18 11 48.8	-1.4
JAH	Hinai	1.41	293	⇓P	Pn	18 11 34.7	+0.1
JAH				S	Sn	18 11 51.8	-0.2
JIO	Ouri	1.42	213	⇓P	Pn	18 11 35.2	+0.4
JIO				S	Sn	18 11 52.7	+0.4
JTM	Tenmabayashi	1.49	320	⇑P	Pn	18 11 35.5	-0.2
JTM				*e*S	Sn	18 11 52.9	-1.0
JTM	Tenmabayashi	1.49	320		Pn	18 11 35.6	-0.1
JTM				Sn	Sn	18 11 54.0	0.0
JMM	Marumori	2.15	214	Pn	Pn	18 11 45.2	+0.4
ERM	Erimo	2.44	15		Pn	18 11 49.2	+0.5
JEW	Eniwo	3.25	349		Pn	18 12 01.8	+2.0
JSD	Sado	3.56	244		Pn	18 12 04.6	+0.5
JYT	Yasato	3.81	207	Pn	Pn	18 12 07.2	-0.4
ASAJ	Asahikawa	4.46	2	P	Pn	18 12 18.9	+2.4
	5.7nm,0.3s,baz=214,slow=11,SNR=54						
ASAJ				S	Sn	18 13 07.9	+0.8
	3.3nm,0.3s,baz=223,slow=13,SNR=1.1						
ASAJ				LR	LR	18 14 24.5	
	comp=Z,79nm,18.9s,baz=158,slow=43						
JKA	Kamikawa-asahi	4.46	3		Pn	18 12 16.2	-0.3
JKA	Kamikawa-asahi	4.46	3		Sn	18 13 07.9	+0.8
MJAR	Matsushiro Arr	4.50	228	P	Pn	18 12 19.2	+2.2
	1.4nm,0.3s,baz=30,slow=14,SNR=62						
MJAR				LR	LR	18 14 18.2	
	comp=Z,63nm,19.0s,baz=45,slow=40						
MJAR	Matsushiro Arr	4.50	228		Pn	18 12 18.8	+1.8
MAJO	Matsushiro	4.50	228		Pn	18 12 18.9	+2.0
MAT	Matsushiro	4.50	228	P	Pn	18 12 18.9	+1.9
MAT				*e*S	Sn	18 13 12.1	+4.1
JGF	Kuroka	5.65	226		Pn	18 12 34.6	+1.8
INU	Inuyama	6.03	226		Pn	18 12 36.8	-1.1
JHJ	Hachijo jima 2	6.84	198	P	Pn	18 12 47.8	-1.3
	9.1nm,0.3s,baz=68,slow=19,SNR=1.2						
JHJ				S	Sn	18 14 00.3	-5.3
	18nm,0.3s,baz=41,slow=21,SNR=1.5						
JHJ2	Mitsune	6.84	198	Pn	Pn	18 12 48.0	-1.0
JWT	Wachi	7.03	234		Pn	18 12 51.7	0.0
JHS	Saijyo	8.68	241	Pn	Pn	18 13 15.7	+1.2
USRK	Ussuriysk Ar.	8.94	304	P	Pn	18 13 20.6	+2.8
	baz=107,slow=16,SNR=4.1						
MDJ	Mudanjiang	10.68	302	Pn	Pn	18 13 43.8	+2.2
KSRS	Korea Array	11.49	264	P	Pn	18 13 57.6	+4.9
	1.4nm,0.3s,baz=73,slow=14,SNR=20						
KSRS				LR	LR	18 18 19.3	
	comp=Z,21nm,18.9s,baz=135,slow=37						
KS19	Wonju Array Si	11.52	264	Pn	Pn	18 13 57.7	+4.5
KSAR	Wonju Array Be	11.53	264	Pn	Pn	18 13 56.7	+3.4
KLR	Kul'dur	12.19	325	P	Pn	18 14 07.6	+5.5
	0.1nm,0.3s,baz=121,slow=11,SNR=2.1						
YAK	Yakutsk	23.70	345	P	P	18 16 18.4	-0.1
	2.5nm,0.4s,baz=145,slow=6.7,SNR=4.2						
YAK	Yakutsk	23.70	345	IAmb	IAmb	18 16 19.0	
	comp=Z,8.4nm,0.9s						
SEY	Seymchan	24.08	11	P	P	18 16 20.1	-1.9
	comp=Z,1.4nm,0.3s,baz=145,slow=5.2,SNR=16						
SONM	Songino Array	27.02	300	P	P	18 16 49.4	+0.4
	comp=Z,0.4nm,0.5s,baz=98,slow=10,SNR=2.7						
SONM	Songino Array	27.02	300	IAmb	IAmb	18 16 52.5	
	comp=Z,1.7nm,1.3s						
H11N2	WAKE ISLAND Hy	28.99	126	T	T	18 47 38.3	
	baz=318,slow=75,SNR=682						
H11N1	WAKE ISLAND Hy	29.00	126	T	T	18 47 41.5	
	baz=318,slow=75,SNR=272						
H11N3	WAKE ISLAND Hy	29.01	126	T	T	18 47 40.7	
	baz=318,slow=75,SNR=264						
H11S1	WAKE ISLAND Hy	29.79	128	T	T	18 48 40.6	
	baz=318,slow=76,SNR=54						
H11S3	WAKE ISLAND Hy	29.79	128	T	T	18 48 45.6	
	baz=318,slow=76,SNR=54						
H11S2	WAKE ISLAND Hy	29.81	128	T	T	18 48 42.8	
	baz=318,slow=76,SNR=41						
ZAA0	Zalesovo Array	40.73	310	P	P	18 18 47.3	0.0
ZAA0				IAmb	IAmb	18 19 03.3	
	comp=Z,3.5nm,1.4s						
ZALV	Zalesovo Beam	40.73	310	P	P	18 18 47.2	0.0
	comp=Z,1.3nm,0.4s,baz=94,slow=7.8,SNR=8.5						
ZALV	Zalesovo Beam	40.73	310	P	P	18 18 47.0	-0.3
CMAR	Chiang Mai Arr	42.90	253	P	P	18 19 05.3	-0.1
	comp=Z,0.2nm,0.3s,baz=32,slow=5.8,SNR=4.5						
MK31	Makanchi Array	43.39	300	P	P	18 19 08.7	-0.4
MK31				IAmb	IAmb	18 19 13.5	
	comp=Z,4.0nm,1.4s						
MKAR	Makanchi Array	43.39	300	P	P	18 19 08.6	-0.5
	comp=Z,0.6nm,0.4s,baz=83,slow=11,SNR=20						
MKAR	Makanchi Array	43.39	300	P	P	18 19 08.2	-0.9
MAKZ	Makanchi	43.59	300	P	P	18 19 10.5	-0.2
MAKZ				IAmb	IAmb	18 19 33.7	
	comp=Z,6.0nm,1.4s						
KURK	Kurchatov	44.92	306	P	P	18 19 20.9	-0.3
KURK				IAmb	IAmb	18 19 34.2	
	comp=Z,2.5nm,0.9s						
ILAR	Eielson Array	46.91	34	P	P	18 19 36.4	-0.3
	comp=Z,0.4nm,0.8s,baz=263,slow=7.2,SNR=3.1						
RAMN	Ramite	47.58	272	*e*P	P	18 19 42.4	-0.3
	comp=Z,6.1nm,0.4s						
GUN	Gumba	47.66	274	*e*P	P	18 19 43.5	0.0
	comp=Z,9.2nm,0.5s						
KKN	Kakani	48.18	274	*e*P	P	18 19 46.6	-0.7
	comp=Z,4.8nm,0.5s						
GKN	Gorkha	48.57	275	*e*P	P	18 19 50.7	+0.4
	comp=Z,4.6nm,0.4s						
DANN	Dangsing	49.07	276	*e*P	P	18 19 54.5	+0.2
	comp=Z,3.5nm,0.2s						
PYUN	Piuthan	49.79	276	*e*P	P	18 19 58.4	-1.3
	comp=Z,3.5nm,0.5s						
MTN	Manton Dam	53.26	194	P	P	18 20 24.8	-0.5
KNRA	Kununurra	56.48	196	P	P	18 20 46.5	-2.1
ABKAR	Akbulak array	56.83	309	P	P	18 20 50.8	+0.1
ABKAR				IAmb	IAmb	18 21 04.2	
	comp=Z,1.4nm,0.6s						
WB0	Warramunga Arr	59.57	189	P	P	18 21 10.1	-0.1
WB0				IAmb	IAmb	18 21 15.0	
	comp=Z,2.4nm,0.8s						
WR0	Warramunga Arr	59.75	188	P	P	18 21 10.9	-0.4
WR0				IAmb	IAmb	18 21 36.2	
	comp=Z,3.1nm,0.8s						
WB2	Warramunga Arr	59.75	189	P	P	18 21 10.1	-1.4
WB2				IAmb	IAmb	18 21 25.9	
	comp=Z,5.5nm,1.4s						
WRA	Warramunga Arr	59.75	189	P	P	18 21 11.0	-0.5
	comp=Z,1.0nm,0.5s,baz=5.7,slow=7.0,SNR=21						
AS31	Alice Springs	63.48	189	P	P	18 21 36.1	-0.4
ASAR	Alice Springs	63.48	189	P	P	18 21 36.5	0.0
	comp=Z,0.6nm,0.4s,baz=358,slow=6.3,SNR=25						
AKASG	Malin Array Be	72.67	322	P	P	18 22 33.7	-0.1
	comp=Z,0.6nm,0.4s,baz=46,slow=6.1,SNR=9.2						

*ATH **10** 18:15:56.9, 36°.58N×23°.75E, h128^{km}±6^{km}, ML3.5/21, Error ellipse: s-maj=6.0km s-min=1.1km az=193.0*

*IDC **10** 18:16:02.7±2.2, 36°.58N×23°.95E, h85^{km}±25^{km}, mb3.7/6, mb1 3.7/9, mb1mx3.3/56, mbtmp4.0/9, Error ellipse: s-maj=25.9km s-min=18.1km az=134.0*

*THE **10** 18:16:04.7, 36°.61N×23°.79E, h69^{km}±2^{km}, ML3.3/20, Error ellipse: s-maj=2.9km s-min=0.6km az=252.0*

ISC 10 18:16:03.5±0.7, **36°.59N**±0°.03×**23°.79E**±0°.03, **h86**^{km}±6^{km}, **n107, σ0^{s}.95**/113, **mb4.1**/8, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHLO	Agia Marina, M	0.50	79	P	Pn	18 16 18.0	+0.2
MHLO				S	Sn	18 16 27.6	-0.8
	5μm,0.7s						
MHLO	Agia Marina, M	0.50	79	P	Pn	18 16 17.8	+0.1
MHLO				AML	AML	18 16 33.3	
	comp=E,10480μm,0.3s						
MHLO				AML	AML	18 16 33.4	
	comp=N,7844μm,0.5s						
MNVA	Monemvasia	0.61	279	P	Pn	18 16 19.0	+0.3
MNVA				AML	AML	18 16 30.0	
	comp=E,6721μm,0.7s						
MNVA				AML	AML	18 16 30.3	
	comp=N,8900μm,0.2s						
KTHA	Kythira Island	0.68	240	P	Pn	18 16 19.6	+0.3
KTHA				S	Sn	18 16 30.6	-0.6
	comp=N,7μm,0.3s						
KTHA	Kythira Island	0.68	240	P	Pn	18 16 19.7	+0.4
KTHA				AML	AML	18 16 31.7	
	comp=N,11689μm,0.2s						
KTHA				AML	AML	18 16 31.7	
	comp=E,14596μm,0.4s						
VLI	Veliai	0.69	281	P	Pn	18 16 19.5	0.0
VLI				S	Sn	18 16 30.0	-1.5
	comp=E,3μm,0.3s						
VLI	Veliai	0.69	281	P	Pn	18 16 19.5	0.0
VLI				AML	AML	18 16 31.0	
	comp=N,5179μm,0.2s						
VLI				AML	AML	18 16 33.6	
	comp=E,6585μm,0.4s						
KTHR	Kythira	0.71	243	P	Pn	18 16 20.2	+0.5
KTHR				S	Sn	18 16 31.9	+0.1
	comp=E,4μm,0.3s						
ANKY	Antikythira Is	0.82	209	P	Pn	18 16 20.8	-0.1
ANKY				S	Sn	18 16 32.6	-1.3
	comp=E,702nm,0.4s						
ANKY	Antikythira Is	0.82	209	P	Pn	18 16 20.6	-0.3
ANKY				AML	AML	18 16 35.6	
	comp=E,1032μm,0.3s						
ANKY				AML	AML	18 16 38.0	
	comp=N,1658μm,0.3s						
RODP	Rodopos	1.03	181	P	Pn	18 16 23.6	+0.4
RODP				S	Sn	18 16 37.4	-0.6
	comp=N,750nm,0.5s						
IMMV	Iera Moni Meta	1.14	172	P	Pn	18 16 24.7	+0.2
IMMV				S	Sn	18 16 40.1	-0.2
	comp=N,2μm,0.3s						
IMMV	Iera Moni Meta	1.14	172	P	Pn	18 16 24.4	-0.1
IMMV				AML	AML	18 16 41.5	
	comp=N,3816μm,0.3s						
IMMV				AML	AML	18 16 43.1	
	comp=E,2467μm,0.3s						
EPID	Epidavros	1.15	333	P	Pn	18 16 25.5	+0.8
VAM	Vamos	1.23	164	P	Pn	18 16 25.7	+0.1
VAM				S	Sn	18 16 41.1	-1.2
	comp=E,1μm,0.3s						
VAM	Vamos	1.23	164	P	Pn	18 16 25.8	+0.1
VAM				AML	AML	18 16 44.1	
	comp=N,2528μm,0.3s						
VAM				AML	AML	18 16 44.6	
	comp=E,2372μm,0.3s						
VLY	Voula,Athens	1.26	0	P	Pn	18 16 26.3	+0.3
VLY				S	Sn	18 16 42.6	-0.3
	comp=E,725nm,0.3s						
VLY	Voula,Athens	1.26	0	P	Pn	18 16 26.2	+0.3
VLY				AML	AML	18 16 44.8	
	comp=N,1397μm,0.4s						
VLY				AML	AML	18 16 45.7	
	comp=E,1462μm,0.2s						
THR5	Thira Island,	1.27	97	P	Pn	18 16 26.9	+0.8
THR5	Thira Island,	1.27	97	P	Pn	18 16 26.9	+0.8
SAP4	Santorini-Oia	1.28	95	P	Pn	18 16 26.6	+0.4
THR9	Santorini-Faro	1.29	100	P	Pn	18 16 27.0	+0.8
CMBO	Columbo, Santo	1.31	95	P	Pn	18 16 27.3	+0.7
CMBO				S	Sn	18 16 44.1	+0.1
	comp=E,2μm,0.4s						
CMBO	Columbo, Santo	1.31	95	P	Pn	18 16 27.3	+0.7
THR3	Thira Island,	1.31	98	P	Pn	18 16 27.3	+0.7
THR3	Thira Island,	1.31	98	P	Pn	18 16 27.5	+0.9
STAX	Taxiarchis Har	1.32	98	P	Pn	18 16 27.5	+0.8
THR6	Thira Island,	1.32	100	P	Pn	18 16 27.4	+0.7
THR6	Thira Island,	1.32	100	P	Pn	18 16 27.5	+0.8
THT2	Imerovigli	1.33	96	P	Pn	18 16 28.0	+1.2
THR2	Thira island,	1.33	96	P	Pn	18 16 28.0	+1.1
KNDR	Palaiochora Ch	1.36	184	P	Pn	18 16 28.7	+1.5
KNDR				S	Sn	18 16 46.4	+1.3
	comp=E,325nm,0.7s						
SANT	Santorini	1.36	99	P	Pn	18 16 27.9	+0.6
SANT				AML	AML	18 16 47.1	
	comp=N,938μm,0.4s						
SANT				AML	AML	18 16 47.7	
	comp=E,1952μm,0.2s						
ATHU	Athens Univers	1.37	360	P	Pn	18 16 27.8	+0.4
ATHU				S	Sn	18 16 44.6	-0.8
	comp=E,398nm,0.5s						
ATHU	Athens Univers	1.37	360	P	Pn	18 16 27.6	+0.2
THR8	Santorini-Mono	1.38	97	P	Pn	18 16 28.0	+0.6
THR8	Santorini-Mono	1.38	97	P	Pn	18 16 28.0	+0.6
ATH	Athens Observa	1.38	358	P	Pn	18 16 27.9	+0.5

ATH				S	Sn	18 16 44.8	-0.7
	comp=E,868nm,0.5s						
ATH	Athens Observa	1.38	358	P	Pn	18 16 27.9	+0.5
ATH				AML	AML	18 16 46.5	
	comp=E,1481µm,0.3s						
ATH				AML	AML	18 16 46.6	
	comp=N,1985µm,0.8s						
TNSA	Tinos	1.45	49	P	Pn	18 16 28.8	+0.4
PTL	Penteli	1.45	2	P	Pn	18 16 29.1	+0.6
PTL				S	Sn	18 16 46.7	-0.6
	comp=N,608nm,0.4s						
PTL	Penteli	1.45	2	P	Pn	18 16 29.0	+0.6
PTL				AML	AML	18 16 48.0	
	comp=E,1509µm,0.6s						
PTL				AML	AML	18 16 52.6	
	comp=N,894µm,0.3s						
APE	Apeiranthos	1.48	71	P	Pn	18 16 29.5	+0.8
APE				S	Sn	18 16 47.2	-0.7
	comp=N,622nm,0.8s						
APE	Apeiranthos	1.48	71	P	Pn	18 16 29.5	+0.8
APE				AML	AML	18 16 49.5	
	comp=E,1461µm,0.6s						
APE				AML	AML	18 16 49.6	
	comp=N,1074µm,0.4s						
DION	Dionisos Attik	1.49	4	P	Pn	18 16 29.6	+0.7
DION				S	Sn	18 16 47.7	-0.3
	comp=N,3µm,0.4s						
DION	Dionisos Attik	1.49	4	P	Pn	18 16 29.5	+0.7
DION				AML	AML	18 16 48.2	
	comp=E,3750µm,0.4s						
DION				AML	AML	18 16 49.3	
	comp=N,5166µm,0.6s						
KARY	Karystos	1.53	20	P	Pn	18 16 29.8	+0.5
LTK	Loutraki	1.57	336	P	Pn	18 16 30.6	+0.7
LTK				S	Sn	18 16 48.1	-1.8
	comp=N,1µm,0.5s						
LTK	Loutraki	1.57	336	P	Pn	18 16 30.7	+0.7
LTK				AML	AML	18 16 51.1	
	comp=N,1833µm,0.5s						
LTK				AML	AML	18 16 51.2	
	comp=E,1958µm,0.2s						
IDI	Anoyia	1.58	145	P	Pn	18 16 29.5	-0.7
	comp=E,17nm,0.3s,baz=261,slow=19,SNR=278						
IDI				S	Sn	18 16 47.6	-2.6
	comp=E,89nm,0.3s,baz=298,slow=18,SNR=29						
IDI	Anoyia	1.58	145	P	Pn	18 16 29.4	-0.7
IDI	Anoyia	1.58	145	P	Pn	18 16 29.3	-0.8
IDI				AML	AML	18 16 49.5	
	comp=N,1782µm,0.2s						
IDI				AML	AML	18 16 50.0	
	comp=E,1165µm,0.4s						
ITM	Ithomi	1.60	292	P	Pn	18 16 31.9	+1.6
ITM	Ithomi	1.60	292	P	Pn	18 16 31.6	+1.2
IACM	Heraklion	1.65	141	P	Pn	18 16 31.1	+0.2
VIL2	Platees	1.67	346	P	Pn	18 16 30.7	-0.5
VIL2				AML	AML	18 16 52.8	
	comp=N,1922µm,0.4s						
VIL2				AML	AML	18 16 55.9	
	comp=E,1523µm,0.4s						
PYL	PYLOS	1.67	281	P	Pn	18 16 31.5	+0.3
PYL	PYLOS	1.67	281	P	Pn	18 16 31.5	+0.3
THAL	Thalero	1.70	328	P	Pn	18 16 32.3	+0.8
THAL				AML	AML	18 17 01.7	
	comp=E,2990µm,0.2s						
THAL				AML	AML	18 17 02.6	
	comp=N,2246µm,0.4s						
GVDS	Gavdos	1.76	172	P	Pn	18 16 33.1	+0.7
GVDS				S	Sn	18 16 55.3	+0.9
	comp=N,518nm,0.2s						
GVD	Gavdhos	1.77	172	P	Pn	18 16 33.1	+0.6
GVD				S	Sn	18 16 55.8	+1.3
	comp=N,768nm,0.3s						
GVD	Gavdhos	1.77	172	P	Pn	18 16 33.0	+0.6
GVD				AML	AML	18 16 56.6	
	comp=E,1780µm,0.3s						
GVD				AML	AML	18 17 00.5	
	comp=N,1259µm,0.3s						
KLV	Kalavryta, Ach	1.95	318	P	Pn	18 16 35.5	+0.6
KLV	Kalavryta, Ach	1.95	318	P	Pn	18 16 35.5	+0.6
KLV				AML	AML	18 17 02.2	
	comp=N,449µm,0.4s						
KLV				AML	AML	18 17 03.5	
	comp=E,347µm,0.2s						
NPS	Neapolis	1.99	131	P	Pn	18 16 35.3	-0.1
NPS				S	Sn	18 16 59.3	-0.4
	comp=E,488nm,0.5s						
NPS	Neapolis	1.99	131	P	Pn	18 16 35.2	-0.2
NPS				AML	AML	18 17 00.9	
	comp=E,741µm,0.3s						
NPS				AML	AML	18 17 02.6	
	comp=N,1036µm,0.3s						
KYMI	Kymi, Euboea I	2.05	7	P	Pn	18 16 36.8	+0.6
ALIK	Aliki, Aigiali	2.13	322	P	Pn	18 16 38.3	+1.1
DRO	Drossia	2.14	310	P	Pn	18 16 38.8	+1.4
DRO	Drossia	2.14	310	P	Pn	18 16 38.8	+1.4
DLFA	Delphi	2.14	332	P	Pn	18 16 38.1	+0.6
LKR	Lokris	2.15	343	P	Pn	18 16 38.3	+0.9
LAKA	Lakka	2.19	319	P	Pn	18 16 38.7	+0.7
LAKA				AML	AML	18 17 12.8	
	comp=N,909µm,0.4s						
LAKA				AML	AML	18 17 14.8	
	comp=E,694µm,0.4s						
TRIZ	Trizonia	2.23	323	P	Pn	18 16 39.2	+0.7
TRIZ	Trizonia	2.23	323	P	Pn	18 16 39.3	+0.7
SERG	Sergoula	2.28	323	P	Pn	18 16 39.8	+0.5
RLS	Riolos of Patr	2.36	309	P	Pn	18 16 42.3	+2.1
EFP	Efpalio	2.36	321	P	Pn	18 16 41.1	+0.8
ZKR	Zakros	2.46	126	P	Pn	18 16 42.7	+1.0
LTHK	Lithakia	2.61	296	P	Pn	18 16 42.9	-0.7
STON	Ston	7.83	325	*e*Pn	Pn	18 17 50.6	-3.9
STON				Sn	Sn	18 19 09.7	-12
LSTV	Lastovo	8.14	321	*e*Pn	Pn	18 17 53.8	-5.0
LSTV				Sn	Sn	18 19 15.9	-13
BRTR	Keskin Array B	8.37	65	P	Pn	18 18 06.8	+4.8
	comp=E,0.1nm,0.3s,baz=249,slow=14,SNR=2.0						
MAKA	Makarska	8.47	324	*e*Pn	Pn	18 17 58.4	-4.8
MAKA				Sn	Sn	18 19 25.1	-12
RICI	Ricice	8.57	326	*e*Pn	Pn	18 18 00.7	-4.0
RICI				Sn	Sn	18 19 28.8	-11
HVAR	Hvar	8.66	322	*e*Pn	Pn	18 18 01.5	-4.4
HVAR				Sn	Sn	18 19 29.5	-12
ZIRJ	Zirje	9.41	321	*e*Pn	Pn	18 18 11.6	-4.5
ZIRJ				Sn	Sn	18 19 48.1	-12
MORI	Morici	9.53	322	*e*Pn	Pn	18 18 13.7	-4.0
MORI				Sn	Sn	18 19 51.5	-12
DUGI	Dugi Otok	9.95	321	*e*Pn	Pn	18 18 19.6	-3.9
DUGI				Sn	Sn	18 20 00.1	-13
UDBI	Udbina	10.00	325	*e*Pn	Pn	18 18 20.7	-3.5
UDBI				Sn	Sn	18 20 03.7	-11
MMAI	Mount Meron Ar	10.19	107	P	Pn	18 18 22.5	-4.4
	comp=E,2.6nm,0.3s,baz=306,slow=12,SNR=18						
MMAI				S	Sn	18 20 10.5	-8.9
	comp=E,1.1nm,0.3s,baz=335,slow=44,SNR=2.5						
NVLJ	Novalja	10.45	322	*e*Pn	Pn	18 18 26.3	-4.0
NVLJ				Sn	Sn	18 20 13.5	-12
RABC	Rab	10.63	323	*e*Pn	Pn	18 18 28.5	-4.2
RABC				Sn	Sn	18 20 17.8	-12
BRJN	Brijuni	11.26	321	*e*Pn	Pn	18 18 36.9	-4.3
BRJN				Sn	Sn	18 20 32.8	-12
EIL	Elat	11.62	123	P	Pn	18 18 42.2	-4.1
	comp=E,1.1nm,0.3s,baz=346,slow=1.9,SNR=22						
EIL				S	Sn	18 20 44.7	-9.5
	comp=E,0.8nm,0.3s,baz=236,slow=5.5,SNR=5.9						
ASF	Jabal al Asfar	11.69	108	P	Pn	18 18 43.7	-3.6
	comp=E,0.4nm,0.3s,baz=293,slow=14,SNR=2.5						
GERES	GERESS Array B	14.30	332	P	Pn	18 19 25.4	+3.7
	comp=E,0.1nm,0.3s,baz=135,slow=13,SNR=5.3						
FINES	FINESS Array B	24.91	3	P	P	18 21 16.2	-1.9
	comp=E,4.2nm,1.0s,baz=164,slow=11,SNR=0.9						
EKA	Eskdalemuir Ar	26.23	324	P	P	18 21 31.1	+0.9
	comp=E,1.2nm,0.6s,baz=124,slow=9.7,SNR=1.7						
TORD	Torodi Ar. Bea	30.62	226	P	P	18 22 09.6	0.0
	comp=E,0.9nm,0.5s,baz=36,slow=9.4,SNR=6.6						
DBIC	Dimbokro	39.64	228	P	P	18 23 26.3	-0.7
	comp=E,1.6nm,0.4s,baz=40,slow=8.6,SNR=5.5						
TIC	Toumodi	39.76	228	*e*P	P	18 23 27.7	-0.3
KIC	Kosan Boka	39.82	228	*e*P	P	18 23 28.2	-0.3
	comp=E,2.5nm,0.3s						
LIC	Lamto	40.10	228	*e*P	P	18 23 30.5	-0.3
	comp=E,15nm,0.4s						
MKAR	Makanchi Array	43.93	58	P	P	18 24 01.1	-0.7
	comp=E,0.4nm,0.3s,baz=271,slow=7.9,SNR=22						
SCHQ	Schefferville	61.38	319	P	P	18 26 09.9	-0.2
	comp=E,3.3nm,0.8s,baz=27,slow=4.5,SNR=3.2						
ASAR	Alice Springs	119.39	99	PKP	PKPdf	18 34 42.3	-0.9
	comp=E,0.1nm,0.3s,baz=310,slow=1.8,SNR=5.0						

NEIC ***10*** *18:18:19.4±1.7, 4°01S±0°06×129°55E±0°08, h10^{km}±1^{km}, mb4.3/7, Error ellipse: s-maj=15.2km s-min=6.0km az=56.0*

DJA ***10*** *18:18:20.5±0.8, 4°S±6°×12°9E±°, h33^{km}±9^{km}, M3.5/7, MLv3.5/7*

IDC ***10*** *18:18:22.6±2.1, 4°06S×129°66E, h45^{km}±23^{km}, mb3.7/3, mb1 3.8/7, mb1mx3.4/46, mbtmp3.8/7, ML3.4/4, Error ellipse: s-maj=31.3km s-min=15.1km az=102.0*

ISC 10 18:18:21.3±0.7, **4°05S**±0°06×**129°48E**±0°05, **h36**^{km}**, n24,** σ**1^{s}80**/30, **mb4.4**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.89	322	P	Pn	18 18 36.1	-1.2
MSAI				S	Sn	18 18 45.7	-3.3
AAI	Ambon	1.33	286	P	Pn	18 18 42.3	-1.0
AAI				S	Sn	18 18 58.8	-1.0
FAKI	Fak Fak	2.99	68	P	Pn	18 19 05.9	-0.3
FAKI				S	Sn	18 19 39.2	-1.6
FAKI	Fak Fak	2.99	68	Pn	Pn	18 19 06.7	+0.5
FAKI	Fak Fak	2.99	68	P	P	18 19 06.8	-2.1
SIJI	Sorong	3.63	30	P	Pn	18 19 15.9	+0.8
	3.7nm,0.3s,baz=235,slow=22,SNR=3.2						
SIJI				S	Sn	18 19 56.5	-0.3
	7.7nm,0.3s,baz=43,slow=22,SNR=6.4						
SWI	Sorong	3.64	29	P	Pn	18 19 14.6	-0.5
SWI				S	Sn	18 19 55.8	-1.0
LBMI	Labuha	3.92	330	P	Pn	18 19 13.1	-6.0
SANI	Sanana	4.01	300	P	Pn	18 19 16.0	-4.3
SANI				S	Sn	18 20 05.3	-0.7
BATI	Baumata	8.40	223	P	Pn	18 20 23.5	+2.9
	1.0nm,0.3s,baz=93,slow=21,SNR=1.6						
MTN	Manton Dam	8.89	169	Pn	Pn	18 20 28.0	+0.8
KNRA	Kununurra	11.57	183	Pn	Pn	18 21 05.4	+1.3
WRA	Warramunga Arr	16.49	164	P	P	18 22 08.8	-3.5
	0.1nm,0.3s,baz=347,slow=13,SNR=3.5						
WB2	Warramunga Arr	16.49	164	Pn	P	18 22 09.8	-2.5
WB2				IAmb	IAmb	18 23 07.2	
	comp=Z,8.0nm,1.4s						
AS31	Alice Springs	19.96	168	P	Pn	18 22 51.1	-1.3
AS31				IAmb	IAmb	18 23 14.7	
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	19.96	168	P	Pn	18 22 51.0	-1.5
	comp=Z,0.3nm,0.3s,baz=348,slow=10,SNR=25						
ASAR				PcP	PcP	18 27 06.5	+0.1
	comp=Z,0.1nm,0.3s,baz=8.4,slow=1.7,SNR=9.9						
CMAR	Chiang Mai Arr	37.49	308	P	P	18 25 33.8	+1.8
	comp=Z,0.5nm,0.3s,baz=131,slow=6.9,SNR=6.1						
CHTO	Chiang Mai	37.69	308	P	P	18 25 35.6	+2.0
CHTO				IAmb	IAmb	18 25 36.0	
	comp=Z,10nm,1.7s						
MKAR	Makanchi Array	65.50	326	P	P	18 29 02.0	+1.1
	comp=Z,1.1nm,0.4s,baz=115,slow=8.1,SNR=30						
MAKZ	Makanchi	65.68	326	P	P	18 29 03.0	+0.8
MAKZ				IAmb	IAmb	18 31 18.1	
	comp=Z,13nm,1.8s						
ZALV	Zalesovo Beam	68.73	334	P	P	18 29 21.3	+0.1
	comp=Z,0.3nm,0.3s,baz=117,slow=6.6,SNR=3.9						
GAR	Garm	69.24	314	P	P	18 29 26.4	+1.4
KURK	Kurchatov	69.75	328	P	P	18 29 28.7	+1.0
KURK				IAmb	IAmb	18 29 30.7	
	comp=Z,22nm,1.9s						
TORD	Torodi Ar. Bea	127.67	283	PKP	PKiKP	18 37 24.3	-0.2
	comp=Z,0.3nm,0.7s,baz=90,slow=2.9,SNR=2.2						

IDC ***10*** *18:37:07.5±2.5, 6°46S×130°45E, h0^{km}, mb3.4/1, mb1 3.6/3, mb1mx3.4/26, mbtmp3.4/3, ML3.7/2, Error ellipse: s-maj=160.4km s-min=31.5km az=70.0*

ISC 10 18:37:21.8±1.2, **7°0S**±0°1×**129°6E**±0°1, **h100**^{km}**, n14,** σ**1^{s}95**/13, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.92	120	P	Pn	18 37 56.9	+3.6
FAKI	Fak Fak	4.83	33	P	Pn	18 38 32.9	+0.6
DRS	Darwin Rock St	5.53	167	P	Pn	18 38 43.4	+1.7
SOEI	Soe	5.96	242	P	Pn	18 38 50.6	+2.9
MTN	Manton Dam	5.98	166	P	Pn	18 38 48.6	+0.7
KDU	Kakadu	6.30	154	P	Pn	18 38 51.6	-0.5
KNRA	Kununurra	8.65	186	P	Pn	18 39 23.1	-1.1
WRAB	Tennant Creek	13.64	161	P	Pn	18 40 29.5	-1.6
WRA	Warramunga Arr	13.64	161	Pn	Pn	18 40 26.1	-5.1
	0.4nm,0.3s,baz=348,slow=13,SNR=28						
WRA				Sn	Sn	18 42 48.9	-12
	0.9nm,0.3s,baz=333,slow=22,SNR=14						
COEN	Coen	15.00	118	P	Pn	18 40 49.1	+0.5
QIS	Mount Isa	16.58	145	P	Pn	18 41 06.7	-1.6
ASAR	Alice Springs	17.06	167	P	Pn	18 41 12.5	-1.7
	0.2nm,0.3s,baz=348,slow=9.5,SNR=22						
ASAR				S	Sn	18 44 10.8	-13
	0.1nm,0.3s,baz=319,slow=13,SNR=4.2						
WRKA	Warakurna	17.97	184	P	P	18 41 24.8	+0.4
MKAR	Makanchi Array	68.03	327	P	P	18 48 08.8	-1.7
	0.1nm,0.3s,baz=121,slow=7.7,SNR=6.2						

BJI ***10*** *18:55:28.3±0.0, 5°66S×129°59E, h260^{km}, mB4.8/34, mb4.8/67*

DJA ***10*** *18:55:31.5±0.1, 5°S±2°×12°9E±°, h269^{km}±2^{km}, M4.8/99, mB5.3/70, mb5.2/99, MLv5.6/17, Mw(mB)4.7/70, MwMwp5.2/3, Mwp5.4/3*

NEIC ***10*** *18:55:31.9±1.7, 5°43S±0°06×129°43E±0°06, h254^{km}±4^{km}, mb5.0/140, Error ellipse: s-maj=9.2km s-min=8.8km az=193.0*

GCMT ***10*** *18:55:32.9±0.4, 5°42S±0°03×129°53E±0°02, h266^{km}±3^{km}, MW5.0/65, Moment Tensor Solution. s24,c34; s65,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.01±.18; $M_{\theta\theta}$-0.33±.18; $M_{\phi\phi}$0.34±.20; $M_{r\theta}$-0.88±.16; $M_{\theta\phi}$1.00±.15; $M_{\phi r}$4.17±.16; Best double couple: $M_0$4.39000×10^{16} NP1:ϕ_s79.00000°, δ14.00000°, λ1.00000°. NP2: ϕ_s348.00000°, δ90.00000°, λ104.00000°. Principal axes: T 4.3430, Plg44.0000°, Azm272.0000°; N 0.0920, Plg14.0000°, Azm168.0000°; P -4.4360, Plg43.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***10*** *18:55:32.2±0.9, 5°42S×129°41E, h262^{km}±8^{km}, mb4.6/27, mb1 4.6/35, mb1mx4.4/39, mbtmp5.2/35 Error ellipse: s-maj=9.1km s-min=6.9km az=61.0*

KLM ***10*** *18:55:34, 5°35S×129°50E, h288^{km}, mb5.0*

ISC 10 18:55:31.7±0.2, **5°45S**±0°03×**129°42E**±0°04, **h262**^{km}**, n520,** σ**1^{s}31**/537, **mb5.0**/137, **64C-25D, Fault plane solution: NP1:**ϕ_s127.63114°, δ22.24556°, λ24.31475°. **NP2:** ϕ_s14.93657°, δ81.03224°, λ110.44239°. **Principal axes:** T Plg49.8803°, Azm307.4724°; N Plg20.1816°, Azm191.6113°; P Plg32.9737°, Azm87.8157°; **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.04	28	P	Pn	18 56 10.2	+1.9
AAI	Ambon	2.14	325	P	Pn	18 56 18.0	+1.5
AAI				S	S	18 56 49.1	-2.8
MSAI	Masohi	2.15	347	P	Pn	18 56 17.1	+0.5
MSAI				S	S	18 56 49.3	-2.9
SAUI	Saumlaki	3.13	143	P	Pn	18 56 27.2	+0.8
SAUI				S	S	18 57 09.1	-0.8
SAUI	Saumlaki	3.13	143		Pn	18 56 27.0	+0.6
SAUI	Saumlaki	3.13	143	P	Pn	18 56 28.5	+2.1
FAKI	Fak Fak	3.78	48	P	Pn	18 56 33.7	+0.1
FAKI				S	S	18 57 19.2	-3.8
FAKI	Fak Fak	3.78	48	Pn	Pn	18 56 33.8	+0.1
FAKI	Fak Fak	3.78	48	P	Pn	18 56 34.4	+0.7
SANI	Sanana	4.81	315	P	Pn	18 56 46.1	+0.4
SANI	Sanana	4.81	315	P	Pn	18 56 46.6	+0.9
SIJI	Sorong	4.91	22	P	Pn	18 56 46.8	-0.2
	70nm,0.3s,baz=44,slow=23,SNR=226						
SIJI				S	S	18 57 42.9	-4.2
	388nm,0.3s,baz=86,slow=23,SNR=39						
SWI	Sorong	4.92	22	P	Pn	18 56 46.6	-0.4
LBMI	Labuha	5.15	338	P	Pn	18 56 50.7	+0.9
	5.2nm7µm371nm,0.8s						
TNTI	Ternate	6.51	342	P	Pn	18 57 04.8	-1.8
	0.4nm1µm75nm,0.7s						
TNTI	Ternate	6.51	342	Pn	Pn	18 57 07.7	+1.2
TNTI	Ternate	6.51	342	P	Pn	18 57 09.2	+2.6
SOEI	Soe	6.66	230	P	Pn	18 57 09.1	+0.7
	2.4nm5µm314nm,0.8s						
SOEI	Soe	6.66	230	Pn	Pn	18 57 09.2	+0.7
SOEI	Soe	6.66	230	P	Pn	18 57 10.1	+1.7
DRS	Darwin Rock St	7.09	168	P	Pn	18 57 14.3	+0.6
BATI	Baumata	7.40	230	P	Pn	18 57 18.4	+0.7
	145nm,0.3s,baz=94,slow=1.8,SNR=96						
BATI				S	S	18 58 39.0	-3.9
	97nm,0.3s,baz=327,slow=21,SNR=11						
BATI	Baumata	7.40	230	P	Pn	18 57 17.9	+0.2
	1.8nm1µm5µm310nm,0.8s						
MTN	Manton Dam	7.54	167	P	Pn	18 57 19.2	-0.1
	baz=7.6,SNR=432						
MTN				S	S	18 58 41.3	-4.7
	baz=7.6						
MTN	Manton Dam	7.54	167	Pn	Pn	18 57 19.1	-0.1
MTN	Manton Dam	7.54	167	P	Pn	18 57 19.5	+0.2
SRPI	Serui, Papua	7.68	63	P	Pn	18 57 21.1	-0.1
	2.9nm7µm793nm,0.6s						
MMRI	Maumere	7.79	246	P	Pn	18 57 23.3	+0.7
	0.6nm3µm154nm,0.9s						
MMRI	Maumere	7.79	246	Pn	Pn	18 57 23.6	+1.0
MMRI	Maumere	7.79	246	P	Pn	18 57 23.3	+0.7
KDU	Kakadu	7.79	157	P	Pn	18 57 21.8	-0.7
	baz=7.8,SNR=1000						
KDU	Kakadu	7.79	157	P	Pn	18 57 22.3	-0.2
KMSI	Cibinong	8.08	318	P	Pn	18 57 26.8	+0.6
	3µm164nm,0.4s						
EDFI	Ende, Flores	8.34	246	P	Pn	18 57 30.2	+0.7
	936nm89nm,0.7s						
BSSI	Bau Bau, Buton	8.91	265	P	Pn	18 57 38.1	+1.5
	1µm124nm,0.7s						
APSI	Ampana	8.97	300	P	Pn	18 57 38.8	+1.4
	1µm110nm,0.9s						
BKSI	Bulukumba	9.25	270	P	Pn	18 57 42.6	+1.7
	4µm477nm,0.7s						
BNSI	Bone	9.34	276	P	Pn	18 57 43.1	+1.2
	3µm274nm,0.8s						
MRSI	Marisa	9.51	308	P	Pn	18 57 44.8	+0.7
	2µm264nm,0.7s						
KAPI	Kappang	9.63	272	P	Pn	18 57 47.8	+2.1
	3.0nm,0.3s,baz=120,slow=8.8,SNR=21						
KAPI				S	S	18 59 32.5	-1.9
	2.4nm,0.3s,baz=192,slow=18,SNR=5.8						
KAPI	Kappang	9.63	272	Pn	Pn	18 57 47.3	+1.6
KAPI	Kappang	9.63	272	P	Pn	18 57 47.7	+2.0
SPSI	Sidrap Palu	9.73	278	P	Pn	18 57 48.1	+1.2
	3µm241nm,0.5s						
TTSI	Tana Toraja	9.87	284	P	Pn	18 57 51.1	+2.5
	3µm222nm,0.8s						
SGSI	Sangihe	9.87	337	P	Pn	18 57 49.4	+0.7
SMPI	Sarmi	9.89	70	P	Pn	18 57 48.2	-0.7
	1µm161nm,1.0s						
BASI	Baing, Sumba	9.95	241	P	Pn	18 57 50.2	+0.5
	3µm175nm,0.6s						
KNRA	Kununurra	10.18	184	P	Pn	18 57 52.1	-0.5
	baz=10,SNR=982						
KNRA	Kununurra	10.18	184	Pn	Pn	18 57 52.0	-0.5
KNRA	Kununurra	10.18	184	P	Pn	18 57 53.0	+0.5
WBSI	Waikabubak, Su	10.77	247	P	Pn	18 57 57.4	-2.6
	4µm237nm,0.8s						
TOLI2	Tolitoli	10.81	307	Pn	Pn	18 58 01.4	+0.9
TOLI2	Tolitoli	10.81	307	P	Pn	18 58 02.3	+1.9
GENI	Genyem	11.09	76	P	Pn	18 58 04.6	+0.7
	3µm282nm,1.0s						
GENI	Genyem	11.09	76	P	Pn	18 58 05.5	+1.6
MPSI	Mapaga	11.11	301	P	Pn	18 58 05.5	+1.4
	3µm163nm,0.6s						
MMPI	Merauke	11.29	106	P	Pn	18 58 05.9	-0.5
	11µm995nm,0.6s						
JAY	Jayapura	11.63	76	P	Pn	18 58 11.4	+0.8
	5.8nm,0.3s,baz=220,slow=7.5,SNR=8.7						
JAY				S	S	19 00 19.3	-1.4
	0.1nm,0.3s,baz=72,slow=14,SNR=1.3						
JAY	Jayapura	11.63	76	P	Pn	18 58 11.2	+0.5
	623nm49nm,1.7s						
PLAI	Plampang	12.03	253	P	Pn	18 58 15.2	-0.3
	5µm472nm,0.7s						
PLAI	Plampang	12.03	253	P	Pn	18 58 15.8	+0.3
TWSI	Taliwang, Sumb	12.86	255	P	Pn	18 58 24.5	-1.2
	1µm122nm,1.0s						
DAV	Davao City (W)	13.02	343	P	Pn	18 58 26.8	-0.8
	31nm,0.3s,baz=94,slow=6.8,SNR=1.5						
DAV				S	S	19 00 51.0	-1.3
	34nm,0.3s,baz=231,slow=20,SNR=1.8						
FITZ	Fitzroy Crossi	13.10	196	P	Pn	18 58 28.1	-0.5
	9.4nm,0.3s,baz=26,slow=8.5,SNR=153						
FITZ				S	S	19 00 45.2	-8.8
	11nm,0.3s,baz=125,slow=21,SNR=6.1						
KCP	Kidapawan	13.11	341	⇓*i*P	P	18 58 29.7	-0.4
KCP				*i* S	S	19 00 57.9	+3.4
SMKI	Samarinda	13.16	292	P	P	18 58 30.4	-0.3
	15µm322nm,0.9s						
BKB	Balikpapan	13.17	288	P	P	18 58 33.0	+2.2
	6µm422nm,1.3s						
BKB	Balikpapan	13.17	288	P	P	18 58 32.7	+2.0
BKB	Balikpapan	13.17	288	P	P	18 58 30.6	-0.2
KBKI	Kotabaru	13.38	279	P	P	18 58 33.9	+0.8
	3µm430nm,0.7s						
SRBI	Singaraja	14.35	259	P	Pn	18 58 43.2	-0.6
	4µm420nm,0.8s						
DNP	Denpasar	14.46	256	P	Pn	18 58 46.2	+1.1
	14µm380nm,0.6s						
IGBI	Denpasar	14.55	256	P	P	18 58 44.4	-1.6
	4µm189nm,0.4s						
BBKI	Banjar Baru	14.66	277	P	Pn	18 58 49.4	+1.8
	10µm785nm,1.1s						
WB0	Warramunga Arr	15.03	162	P	P	18 58 51.3	0.0
WB0				IAmb	IAmb	18 59 01.5	
	comp=Z,70nm,0.8s						
MTKI	Muara Teweh, K	15.17	287	P	Pn	18 58 54.1	+0.4
	comp=Z,4µmcomp=Z,136nm,0.9s						
WRAB	Tennant Creek	15.17	162	P	P	18 58 52.9	0.0
WRAB				IAmb	IAmb	18 59 02.4	
	comp=Z,33nm,0.6s						
WRAB	Tennant Creek	15.17	162	P	P	18 58 53.4	+0.5
WRA	Warramunga Arr	15.18	162	P	P	18 58 53.2	+0.3
	comp=Z,5.7nm,0.3s,baz=342,slow=12,SNR=311						
WRA				S	S	19 01 32.4	-7.9
	comp=Z,2.8nm,0.3s,baz=334,slow=22,SNR=5.1						
WRA	Warramunga Arr	15.18	162	P	P	18 58 52.9	-0.1
MYLDM	Lahad Datu	15.18	314	Pn	Pn	18 58 55.5	+1.8
WB2	Warramunga Arr	15.18	162	P	P	18 58 53.2	+0.2
WB2				IAmb	IAmb	18 59 03.8	
	comp=Z,36nm,0.7s						
WR0	Warramunga Arr	15.26	161	P	P	18 58 54.0	+0.2
WR0				IAmb	IAmb	18 59 14.0	
	comp=Z,32nm,0.7s						
ABJI	Asem Bagus	15.26	260	P	Pn	18 58 54.7	0.0
	comp=Z,4µmcomp=Z,457nm,1.0s						
KMMI	Kalianget	15.44	263	P	Pn	18 58 57.5	+0.6
	comp=Z,3µmcomp=Z,27µmcomp=Z,3µm,0.8s						
JAGI	Jajag, Banyuwa	15.44	258	P	P	18 58 54.2	-1.7
	comp=Z,4µmcomp=Z,205nm,0.7s						
JAGI	Jajag, Banyuwa	15.44	258	P	P	18 58 55.5	-0.4
JAGI	Jajag, Banyuwa	15.44	258	P	P	18 58 55.8	-0.1
BLJI	Banyuglugur	15.88	261	P	P	18 59 01.6	+0.9
	comp=Z,3µmcomp=Z,321nm,0.8s						
SNPH	Sibulan	15.94	337	*e*P	Pn	18 59 02.7	0.0
COEN	Coen	15.97	123		P	18 59 02.9	+1.2
COEN	Coen	15.97	123	P	Pn	18 59 03.2	+0.1
TBP	Tagbilaran	16.03	340	⇑*e*P	Pn	18 59 04.1	+0.3
GMJI	Gumukmas	16.10	259	P	P	18 59 00.4	-2.7
	comp=Z,3µmcomp=Z,141nm,0.7s						
LLP	Lapu-Lapu	16.58	341	*e*P	Pn	18 59 09.7	-0.5
BWJI	Bawean	16.68	268	P	P	18 59 08.5	-1.0
	comp=Z,3µmcomp=Z,253nm,1.1s						
KKM	Kota Kinabalu	17.44	311	P	P	18 59 19.1	+1.3
KKM	Kota Kinabalu	17.44	311	P	Pn	18 59 20.1	-0.4
PBKI	Pangkalan Bun	17.91	278	P	P	18 59 22.9	+0.1
	comp=Z,3µmcomp=Z,267nm,1.0s						
QIS	Mount Isa	17.98	148	P	P	18 59 24.3	+0.8
	baz=18,SNR=152						
QIS	Mount Isa	17.98	148	P	P	18 59 24.9	+1.3
PMG	Port Moresby	18.02	104	P	P	18 59 22.2	-1.9
	comp=Z,6.8nm,0.3s,baz=33,slow=5.1,SNR=22						
PMG	Port Moresby	18.02	104	P	P	18 59 22.6	-1.4
PMG	Port Moresby	18.02	104	P	P	18 59 25.5	+1.4
PMG	Port Moresby	18.02	104	P	P	18 59 25.4	+1.4
RCP	Roxas	18.16	339	⇑*e*P	P	18 59 26.6	+1.1
MBWA	Marble Bar	18.22	210	P	P	18 59 26.9	+0.8
PCJI	Pacitan	18.31	260	P	P	18 59 25.7	-1.4
	comp=Z,164nm,0.8s						
UWJI	Ujung Watu	18.39	266	P	P	18 59 27.0	-1.0
	comp=Z,263nm,0.7s						

PPR	Puerto Princes	18.50	325	⇑eP	Pn	18 59 31.4	-1.3
PSA00	Pilbara Seismi	18.51	209	P	P	18 59 29.7	+0.5
PSA00	Pilbara Seismi	18.51	209	P	P	18 59 29.5	+0.2
PSA00				IAmb	IAmb	18 59 31.4	
	comp=Z,366nm,1.1s						
PSA00	Pilbara Seismi	18.51	209	P	P	18 59 30.5	+1.3
WOJI	Wonogiri, Jawa	18.52	262	P	P	18 59 27.6	-1.8
	comp=Z,75nm,1.0s						
AS31	Alice Springs	18.62	167	P	P	18 59 31.6	+1.2
AS31				IAmb	IAmb	18 59 32.6	
	comp=Z,29nm,0.7s						
ASAR	Alice Springs	18.62	167	P	P	18 59 31.6	+1.2
	comp=Z,11nm,0.3s,baz=352,slow=12,SNR=925						
ASAR				S	S	19 02 41.8	-6.8
	baz=345,slow=10,SNR=2.2						
ASAR	Alice Springs	18.62	167	P	P	18 59 31.3	+0.9
STKI	Sintang	18.73	286	P	P	18 59 31.1	-0.6
	comp=Z,79nm,1.0s						
SBUM	Sibu	18.89	294	P	P	18 59 34.6	+1.3
UGM	Wanagama	18.92	262	P	P	18 59 31.1	-2.6
	comp=Z,237nm,1.4s						
UGM	Wanagama	18.92	262	P	P	18 59 33.7	0.0
SMRI	Semarang	18.93	264	P	P	18 59 34.3	+0.5
	comp=Z,386nm,1.0s						
SMRI	Semarang	18.93	264	P	P	18 59 35.2	+1.4
YOGI	Yogyakarta	19.14	262	P	P	18 59 36.5	+0.5
	comp=Z,2µmcomp=Z,184nm,0.7s						
MTSU	Mount Surprise	19.25	132	P	P	18 59 38.0	+0.8
	baz=19,SNR=164						
MTSU	Mount Surprise	19.25	132	P	P	18 59 38.2	+1.0
WRKA	Warakurna	19.50	183	P	P	18 59 40.6	+0.8
	baz=20,SNR=51						
WRKA	Warakurna	19.50	183	P	P	18 59 41.0	+1.2
KSM	Kuching	20.29	289	P	P	18 59 47.7	-0.6
KSM	Kuching	20.29	289	P	P	18 59 49.0	+0.7
PGP	Puerto Galera	20.62	336	⇑eP	P	18 59 52.6	+0.9
LEM	Lembang	21.72	265	P	P	19 00 01.9	-0.7
	comp=Z,205nm,1.0s,baz=60,slow=9.0,SNR=35						
LEM	Lembang	21.72	265	P	P	19 00 00.5	-2.1
	comp=Z,1µmcomp=Z,106nm,0.7s						
CTA	Charters Tower	21.90	133	P	P	19 00 04.1	+0.1
	comp=Z,17nm,0.7s,baz=304,slow=13,SNR=17						
CTAO	Charters Tower	21.90	133	P	P	19 00 04.3	+0.3
CTAO				IAmb	IAmb	19 00 06.8	
	comp=Z,66nm,1.1s						
CTAO	Charters Tower	21.90	133	P	P	19 00 05.5	+1.5
CNJI	Cibinong	22.22	264	P	P	19 00 02.9	-4.1
	comp=Z,4µmcomp=Z,369nm,0.9s						
CBJI	Citeko	22.47	266	P	P	19 00 06.4	-2.8
	comp=Z,3µmcomp=Z,348nm,0.7s						
GIRL	Giralia	22.52	219	P	P	19 00 11.1	+1.5
	baz=23,SNR=12						
GIRL	Giralia	22.52	219	P	P	19 00 11.1	+1.5
GIRL	Giralia	22.52	219	P	P	19 00 10.0	+0.4
DBJI	Dramaga	22.57	266	P	P	19 00 07.0	-3.2
	comp=Z,74nm,1.1s						
RABL	Rabaul	22.70	88	P	P	19 00 11.5	+0.1
SKJI	Sukabumi	22.78	265	P	P	19 00 09.9	-2.1
	comp=Z,2µmcomp=Z,190nm,0.8s						
OOD	Oodnadatta	23.01	166	P	P	19 00 14.5	+0.6
SBJI	Serang	23.18	267	P	P	19 00 14.8	-0.9
	comp=Z,111nm,0.4s						
MEEK	Meekatharra	23.45	205	P	P	19 00 18.1	0.0
	baz=24,SNR=79						
MEEK	Meekatharra	23.45	205	P	P	19 00 18.5	+0.4
PPBI	Pangkal Pinang	23.45	277	P	P	19 00 16.2	-2.0
	comp=Z,178nm,0.8s						
CGJI	Cibinong	23.62	266	P	P	19 00 16.2	-3.5
	comp=Z,2µmcomp=Z,130nm,0.8s						
XMIS	Christmas Isla	24.05	257	P	P	19 00 22.6	-1.0
BLSI	Bandar Lampung	24.06	269	P	P	19 00 23.2	-0.6
	comp=Z,52nm,0.5s						
GUMO	Guam	24.36	39	P	P	19 00 25.9	-0.4
	comp=Z,275nm,0.6s,baz=214,slow=6.4,SNR=11						
GUMO	Guam	24.36	39	P	P	19 00 25.9	-0.4
GUMO	Guam	24.36	39	P	P	19 00 27.2	+0.9
KLSI		24.60	271	P	P	19 00 27.9	-0.7
	comp=Z,30nm,0.6s						
INKA	Innaminka	24.65	155	P	P	19 00 30.0	+1.2
PMBI	Palembang	24.70	275	P	P	19 00 32.9	+3.4
KASI	Kota Agung	24.80	269	P	P	19 00 26.7	-3.7
	comp=Z,1µmcomp=Z,100nm,0.7s						
MULG	Mulgathing	25.08	170	P	P	19 00 33.8	+1.1
MDSI	Maura Dua	25.16	271	P	P	19 00 30.3	-3.3
	comp=Z,15nm,1.0s						
FORT	Forrest	25.23	183	P	P	19 00 34.4	+0.5
FORT				IAmb	IAmb	19 00 45.7	
	comp=Z,34nm,0.8s						
FORT	Forrest	25.23	183	P	P	19 00 34.5	+0.5
LWLI	Liwa	25.25	270	P	P	19 00 33.3	-1.3
	comp=Z,1µmcomp=Z,95nm,0.7s						
DSRI	Dabo	25.29	280	P	P	19 00 33.6	-1.2
	comp=Z,380nmcomp=Z,49nm,0.9s						
QLP	Quilpie	25.33	148	P	P	19 00 35.7	+0.7
	baz=25,SNR=6.3						
LHSI	Lahat	25.86	272	P	P	19 00 38.4	-1.5
	comp=Z,1µmcomp=Z,101nm,0.8s						
LCRK	Leigh Creek	26.21	163	P	P	19 00 44.4	+1.6
MYKOM	Kota Tinggi	26.53	285	P	P	19 00 46.0	+0.1
MYKOM	Kota Tinggi	26.53	285	P	P	19 00 44.9	-1.0
MYKOM				IAmb	IAmb	19 00 49.8	
	comp=Z,56nm,1.3s						
MORW	Morawa	26.68	207	P	P	19 00 47.2	+0.1
	baz=27,SNR=11						
MORW	Morawa	26.68	207	P	P	19 00 47.1	+0.1
MORW				IAmb	IAmb	19 00 48.0	
	comp=Z,25nm,0.6s						
MORW	Morawa	26.68	207	P	P	19 00 47.5	+0.4
KSI	Kapahiang	26.80	273	P	P	19 00 47.4	-1.0
	comp=Z,50nm,0.9s						
RK1H	Rockhampton Ha	27.03	133	P	P	19 00 51.6	+1.4
	comp=Z,26nm,0.9s						
MASI	Maura Aman, Be	27.20	274	P	P	19 00 51.6	-0.3
	comp=Z,37µmcomp=Z,81nm,0.8s						
BLDU	Ballidu	27.74	204	P	P	19 00 56.9	+0.5
	baz=28,SNR=16						
BLDU	Ballidu	27.74	204	P	P	19 00 56.9	+0.5
RMQ	Roma	27.90	141	P	P	19 00 58.9	+1.0
	baz=28,SNR=4.7						
BBOO	Buckleboo	27.91	168	P	P	19 00 58.5	+0.5
	baz=28,SNR=7.8						
BBOO	Buckleboo	27.91	168	P	P	19 00 58.5	+0.5
BBOO	Buckleboo	27.91	168	P	P	19 00 58.5	+0.5
KRJI	Kerinci	28.09	276	P	P	19 00 58.2	-1.7
	comp=Z,2µmcomp=Z,355nm,1.0s						
KLBR	Kellerberrin	28.21	201	P	P	19 01 01.2	+0.7
	baz=28,SNR=17						
KLBR	Kellerberrin	28.21	201	P	P	19 01 01.1	+0.5
JRMM	Jerantut	28.46	288	P	P	19 01 03.0	0.0
STKA	Stephens Creek	28.66	158	P	P	19 01 05.4	+0.9
	comp=Z,6.3nm,0.3s,baz=327,slow=9.4,SNR=76						
STKA	Stephens Creek	28.66	158	P	P	19 01 05.3	+0.9
	baz=29,SNR=42						
STKA	Stephens Creek	28.66	158	P	P	19 01 05.2	+0.7
STKA	Stephens Creek	28.66	158	P	P	19 01 05.2	+0.7
EIDS	Eidsvold	28.69	136	P	P	19 01 05.2	+0.3
	baz=29,SNR=3.1						
EIDS	Eidsvold	28.69	136	P	P	19 01 04.2	-0.7
BKNI	Bangkinang	28.91	281	P	P	19 01 07.1	+0.1
	comp=Z,218nm,0.9s						
BKNI	Bangkinang	28.91	281	P	P	19 01 06.5	-0.5
MUN	Mundaring	29.14	204	P	P	19 01 09.1	+0.3
	baz=29,SNR=5.3						
MUN	Mundaring	29.14	204	P	P	19 01 09.3	+0.5
HTT	Hallett	29.21	164	P	P	19 01 10.5	+1.0
	baz=29,SNR=12						
HTT	Hallett	29.21	164	P	P	19 01 10.4	+1.0
PDSI	Padang	29.25	278	P	P	19 01 07.6	-2.5
	comp=Z,870nmcomp=Z,45nm,0.6s						
PPI	Padang Panjang	29.39	279	P	P	19 01 09.7	-1.6
	comp=Z,1µmcomp=Z,133nm,0.9s						
NWAO	Narrogin (SRO)	29.60	201	P	P	19 01 13.4	+0.6
TPUB	Ta-pu	29.84	344	P	P	19 01 14.8	-0.3
IPM	Ipoh	30.02	289	P	P	19 01 17.0	+0.2
IPM	Ipoh	30.02	289	P	P	19 01 16.0	-0.8
IPM				IAmb	IAmb	19 01 18.6	
	comp=Z,17nm,0.7s						
IPM	Ipoh	30.02	289	P	P	19 01 17.6	+0.8
CMSA	Cobar Meteorol	30.10	152	P	P	19 01 18.3	+1.0
	baz=30,SNR=25						
CMSA	Cobar Meteorol	30.10	152	P	P	19 01 18.7	+1.4
SSLB	Suanglung	30.21	344	P	P	19 01 16.0	-2.3
SSLB				IAmb	IAmb	19 01 18.7	
	comp=Z,30nm,1.3s						
MNSI	Mandailing Nat	30.44	281	P	P	19 01 19.0	-1.4

	comp=Z,2µmcomp=Z,248nm,0.8s						
HNR	Honiara	30.52	99	P	P	19 01 21.0	-0.2
	comp=Z,131nm,0.7s,baz=182,slow=5.1,SNR=4.1						
HNR	Honiara	30.52	99	IAmb	IAmb	19 01 24.9	
	comp=Z,130nm,0.8s						
SISI	Saibi	30.54	277	P	P	19 01 17.8	-3.6
	comp=Z,62nm,0.7s						
KULM	Kulim	30.64	290	P	P	19 01 22.0	-0.3
KULM	Kulim	30.64	290	P	P	19 01 20.6	-1.6
QIZ	Qiongzhong	31.04	322	P	P	19 01 26.5	+0.8
UBPT	Khong Chiam	31.42	311	P	P	19 01 29.4	+0.4
RPSI	Rantau Prapat	31.52	284	P	P	19 01 28.5	-1.4
PSI	Prapat	31.54	284	P	P	19 01 28.5	-1.7
	comp=Z,31nm,0.8s,baz=112,slow=5.7,SNR=33						
JOW	Kunigami	32.11	358	P	P	19 01 35.6	+0.7
	comp=Z,27nm,0.7s,baz=254,slow=1.4,SNR=4.6						
ARMA	Armidale	32.47	143	P	P	19 01 39.8	+1.7
	baz=32,SNR=15						
ARMA	Armidale	32.47	143	P	P	19 01 39.5	+1.4
ARMA				IAmb	IAmb	19 01 40.6	
	comp=Z,26nm,0.8s						
ARMA	Armidale	32.47	143	P	P	19 01 38.5	+0.4
GSI	Gunungsitoli	32.50	281	P	P	19 01 35.4	-3.1
	comp=Z,110nm,0.8s						
GSI	Gunungsitoli	32.50	281	P	P	19 01 36.3	-2.2
GSI	Gunungsitoli	32.50	281	P	P	19 01 38.6	+0.1
KCSI	Kotacane, Aceh	32.84	285	P	P	19 01 38.5	-2.9
	comp=Z,24nm,1.3s						
SRIT	Nakonsritamara	32.84	295	P	P	19 01 41.3	-0.1
ARPS	Mount Arapiles	33.18	162	P	P	19 01 45.7	+1.6
	baz=33,SNR=27						
ARPS	Mount Arapiles	33.18	162	P	P	19 01 44.5	+0.5
TPTI		33.34	284	P	P	19 01 42.6	-3.1
	comp=Z,14nm,0.6s						
LHMI	Lhok Sumawe	34.12	288	P	P	19 01 51.2	-1.2
	comp=Z,388nm,0.7s						
LHMI	Lhok Sumawe	34.12	288	P	P	19 01 51.6	-0.8
LHMI	Lhok Sumawe	34.12	288	P	P	19 01 51.7	-0.7
	comp=Z,387nm,0.7s						
MGCD	Mangrove Creek	34.21	147	P	P	19 01 55.2	+2.3
	baz=34,SNR=16						
MGCD	Mangrove Creek	34.21	147	P	P	19 01 55.5	+2.6
JCJ	Chichijima	34.63	20	P	P	19 01 56.5	-0.2
	comp=Z,91nm,0.5s,baz=244,slow=4.2,SNR=11						
JCJ	Chichijima	34.63	20	P	P	19 01 57.4	+0.8
CAN	Canberra	34.78	151	P	P	19 01 59.6	+1.8
CAN				IAmb	IAmb	19 02 00.6	
	comp=Z,34nm,0.8s						
CAN	Canberra	34.78	151	P	P	19 01 59.9	+2.1
CNB	Canberra Magne	34.95	151	P	P	19 02 01.2	+1.9
	baz=35,SNR=6.6						
CNB	Canberra Magne	34.95	151	P	P	19 01 59.7	+0.4
TOO	Toolangi	35.17	158	P	P	19 02 03.4	+2.3
	baz=35,SNR=6.2						
TOO	Toolangi	35.17	158	P	P	19 02 03.4	+2.3
TOO	Toolangi	35.17	158	P	P	19 02 03.8	+2.7
SLVN	Son La	36.53	318	P	P	19 02 13.6	+0.7
CM31	Chiang Mai Arr	38.31	309	P	P	19 02 28.6	+0.9
CM31				IAmb	IAmb	19 02 29.8	
	comp=Z,107nm,1.1s						
CM31					ScP	19 07 59.0	+0.4
CMAR	Chiang Mai Arr	38.31	309	P	P	19 02 28.8	+1.0
	comp=Z,49nm,0.7s,baz=136,slow=7.3,SNR=257						
CMAR				PcP	PcP	19 04 37.3	+1.4
	comp=Z,3.0nm,0.8s,baz=159,slow=2.8,SNR=4.4						
CMAR				ScP	ScP	19 07 58.7	0.0
	comp=Z,6.4nm,0.8s,baz=152,slow=3.1,SNR=20						
CMAR	Chiang Mai Arr	38.31	309	P	P	19 02 28.7	+1.0
CMAR					ScP	19 07 57.6	-1.0
SANVU	Saraoutou	38.40	108	P	P	19 02 29.4	+0.9
SANVU	Saraoutou	38.40	108	P	P	19 02 29.2	+0.7
CHTO	Chiang Mai	38.51	310	P	P	19 02 29.5	+0.1
CHTO				ScP	ScP	19 07 59.4	0.0
CHTO	Chiang Mai	38.51	310	P	P	19 02 30.5	+1.1
WHN	Wuhan	38.59	339	⇓P	P	19 02 31.4	+1.6
WHN				pmax	pmax		
	comp=Z,120nm,1.1s						
WHN				pmax	pmax		
	comp=Z,120nm,1.1s						
NJ2	Nanjing	38.63	346	eP	P	19 02 32.7	+2.6
NJ2				pmax	pmax		
	comp=Z,13nm,0.8s						
GYA	Guiyang	38.63	326	⇓P	P	19 02 31.2	+0.8
GYA				pmax	pmax		
	comp=Z,38nm,0.5s						
DZM	Mont Dzumac	39.42	118	P	P	19 02 37.6	+0.6
	comp=Z,7.9nm,0.5s,baz=252,slow=10.0,SNR=22						
DZM	Mont Dzumac	39.42	118	P	P	19 02 35.7	-1.3
DZM	Mont Dzumac	39.42	118	P	P	19 02 37.9	+0.9
LIFNC	LIFOU	39.72	116	P	P	19 02 38.9	-0.5
LIFNC				IAmb	IAmb	19 02 40.9	
	comp=Z,90nm,0.8s						
YATNC	Mamie plateau,	39.81	118	P	P	19 02 42.1	+2.0
KMI	Kunming	39.96	321	⇑P	P	19 02 43.0	+1.5
KMI				pP	pP	19 03 32.6	-1.7
KMI				pmax	pmax		
	comp=Z,37nm,0.6s						
ENH	Enshi	40.33	333	P	P	19 02 43.1	-1.1
JHS	Saijyo	40.39	5	P	P	19 02 45.0	+0.4
JWT	Wachi	40.91	7	P	P	19 02 48.8	0.0
INU	Inuyama	41.21	9	P	P	19 02 50.3	-0.9
MAJO	Matsushiro	42.58	10	P	P	19 03 01.4	-0.8
MAJO				IAmb	IAmb	19 03 02.4	
	comp=Z,34nm,0.8s						
MAJO	Matsushiro	42.58	10	P	P	19 03 02.0	-0.3
MAT	Matsushiro	42.58	10	P	P	19 03 01.4	-0.9
MJAR	Matsushiro Arr	42.58	10	P	P	19 03 00.5	-1.7
	comp=Z,23nm,0.7s,baz=182,slow=9.2,SNR=39						
MJAR	Matsushiro Arr	42.58	10	P	P	19 03 00.6	-1.7
JYT	Yasato	42.68	13	P	P	19 03 01.5	-1.5
KSRS	Korea Array	42.71	358	P	P	19 03 04.0	+0.7
	comp=Z,8.5nm,0.6s,baz=174,slow=9.0,SNR=43						
KS19	Wonju Array Si	42.76	358	P	P	19 03 04.4	+0.7
CD2	Chengdu	43.70	327	P	P	19 03 11.5	+0.2
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
XAN	Xi'an	43.80	335	P	P	19 03 11.9	-0.2
XAN				pmax	pmax		
	comp=Z,42nm,0.8s						
JSD	Sado	44.04	10	P	P	19 03 13.8	-0.1
JSD				IAmb	IAmb	19 03 15.0	
	comp=Z,27nm,0.5s						
JMM	Marumori	44.38	13	P	P	19 03 16.4	-0.1
JMM				IAmb	IAmb	19 03 17.8	
	comp=Z,54nm,0.9s						
BJI	Beijing	46.88	346	P	P	19 03 36.7	+0.7
BJI				pmax	pmax		
	comp=Z,23nm,1.1s						
JTM	Tenmabayashi	47.24	12	P	P	19 03 38.8	0.0
JTM				IAmb	IAmb	19 03 40.2	
	comp=Z,68nm,1.1s						
SHL	Shillong	47.74	312	P	P	19 03 42.7	-0.4
SHL				IAmb	IAmb	19 03 45.2	
	comp=Z,58nm,0.8s						
SHL				ScP	ScP	19 08 36.1	-0.8
LZH	Lanzhou	47.78	332	⇑P	P	19 03 44.1	+0.9
LZH				sP	PcP	19 05 11.5	+3.7
LZH				pmax	pmax		
	comp=Z,56nm,1.3s						
LZH				pmax	pmax		
	comp=Z,190nm,5.4s						
HHC	Hu-ho-hao-te	48.90	342	eP	P	19 03 54.8	+3.2
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,70nm,8.7s						
MSVF	Nonsavu	49.03	109	P	P	19 03 54.6	+1.6
	comp=Z,17nm,0.8s,baz=274,slow=9.0,SNR=10.0						
MSVF	Nonsavu	49.03	109	P	P	19 03 53.7	+0.7
CN2	Changchun	49.16	356	eP	P	19 03 53.4	+0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
JEW	Eniwo	49.29	12	P	P	19 03 54.9	+0.5
JEW				IAmb	IAmb	19 03 56.1	
	comp=Z,99nm,1.2s						
USA0B	Ussuriysk Arra	49.48	2	P	P	19 03 56.4	+0.7
USRK	Ussuriysk Ar.	49.48	2	P	P	19 03 56.4	+0.7
	comp=Z,16nm,0.6s,baz=182,slow=7.2,SNR=40						
USRK	Ussuriysk Ar.	49.48	2	P	P	19 03 56.2	+0.5
MDJ	Mudanjiang	49.84	0	P	P	19 03 59.3	+0.9
MDJ				pmax	pmax		
	comp=Z,23nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,380nm,4.4s						
PALK	Pallekele	50.23	284	P	P	19 04 01.4	-0.6

OUZ	Omahuta	50.30	132	P	P	19 04 03.5	+1.4
DGTI	Dogotuki	50.45	107	P	P	19 04 04.2	+0.7
LSA	Lhasa	50.69	316	i P	P	19 04 06.8	+1.2
	SNR=40						
JKA	Kamikawa-asahi	50.75	12	P	P	19 04 05.5	+0.3
JKA				IAmb	IAmb	19 04 06.8	
	comp=Z,40nm,0.9s						
DCZ	Deep Cove	51.60	147	P	P	19 04 11.9	+0.4
DCZ				IAmb	IAmb	19 04 31.2	
	comp=Z,46nm,1.4s						
ODAN	Odare	51.81	310	eP	P	19 04 14.0	+0.2
	comp=Z,189nm,0.7s						
TAPN	Taplejung	51.83	311	eP	P	19 04 14.3	+0.3
	comp=Z,131nm,0.4s						
FOZ	Fox Glacier	51.96	143	P	P	19 04 15.5	+1.3
FOZ				IAmb	IAmb	19 04 23.5	
	comp=Z,46nm,1.2s						
MLZ	Mavora Lakes	52.07	146	P	P	19 04 16.1	+0.9
QRZ	Quartz Range	52.19	139	P	P	19 04 18.0	+1.9
QRZ				IAmb	IAmb	19 04 18.8	
	comp=Z,55nm,0.6s						
QRZ	Quartz Range	52.19	139	P	P	19 04 18.2	+2.2
WKZ	Wanaka	52.25	145	P	P	19 04 17.1	+0.6
WKZ				IAmb	IAmb	19 04 28.9	
	comp=Z,47nm,1.3s						
WHZ	Wether Hill Ro	52.30	147	P	P	19 04 17.6	+0.8
WHZ				IAmb	IAmb	19 04 17.9	
	comp=Z,25nm,0.7s						
GTA	Gaotai	52.35	331	⇑P	P	19 04 17.9	+0.6
GTA				pP	pwP	19 05 16.7	+0.9
GTA				ScP	ScP	19 08 56.5	+0.2
GTA				S	S	19 11 20.6	-1.7
GTA				ScS	ScS	19 13 38.7	-1.0
GTA				pmax	pmax		
	comp=Z,35nm,1.0s						
GTA				pmax	pmax		
	comp=Z,190nm,4.4s						
GTA				LR	LR		
	comp=Z,150nm,13.1s						
GTA				LR	LR		
	comp=Z,180nm,15.3s						
GTA				LR	LR		
	comp=Z,180nm,16.4s						
RAMN	Ramite	52.46	310	eP	P	19 04 19.3	+0.8
	comp=Z,390nm,0.5s						
LBZ	Lake Benmore	52.67	144	P	P	19 04 20.6	+1.1
RPZ	Rata Peaks	52.81	143	P	P	19 04 21.6	+1.1
RPZ				IAmb	IAmb	19 04 22.6	
	comp=Z,36nm,0.8s						
RPZ	Rata Peaks	52.81	143	P	P	19 04 22.0	+1.5
THZ	Tophouse	52.91	140	P	P	19 04 22.4	+1.1
NNZ	Nelson	52.95	139	P	P	19 04 22.0	+0.5
LTZ	Lake Taylor	53.05	141	P	P	19 04 23.4	+1.1
OXZ	Oxford	53.19	142	P	P	19 04 24.0	+0.7
TUWZ	Tuamarina	53.42	139	P	P	19 04 25.5	+0.5
YSS	Yuzh-Sakhalins	53.50	11	P	P	19 04 25.9	+0.6
YSS				IAmb	IAmb	19 04 26.5	
	comp=Z,25nm,0.7s						
YSS	Yuzh-Sakhalins	53.50	11	P	P	19 04 26.0	+0.6
	comp=Z,40nm,0.7s						
GUN	Gumba	53.51	311	eP	P	19 04 26.6	+0.4
	comp=Z,392nm,0.7s						
BSWZ	Blackbirch Sta	53.52	139	P	P	19 04 26.1	+0.5
KHZ	Kahutara	53.66	140	P	P	19 04 27.4	+0.8
KHZ				IAmb	IAmb	19 04 28.0	
	comp=Z,33nm,0.8s						
KHZ	Kahutara	53.66	140	P	P	19 04 27.4	+0.8
PKI	Pulchoki	53.69	310	eP	P	19 04 27.4	-0.1
PKIN	Phulchoki	53.70	310	eP	P	19 04 27.5	-0.1
MQZ	McQueen’s Vall	53.77	142	P	P	19 04 28.3	+0.9
SNZO	South Karori	53.86	138	P	P	19 04 28.2	+0.1
SNZO	South Karori	53.86	138	P	P	19 04 28.7	+0.6
KKN	Kakani	53.90	310	eP	P	19 04 29.0	+0.1
DMN	Daman	53.94	310	eP	P	19 04 29.6	+0.3
	comp=Z,188nm,0.8s						
BHW	Baring Head	54.02	139	P	P	19 04 29.2	0.0
BKZ	Black Stump Fm	54.09	135	P	P	19 04 30.8	+0.8
BKZ				IAmb	IAmb	19 04 31.6	
	comp=Z,53nm,1.0s						
BKZ	Black Stump Fm	54.09	135	P	P	19 04 30.8	+0.8
URZ	Urewera	54.15	134	P	P	19 04 30.7	+0.5
	comp=Z,31nm,0.5s,baz=120,slow=23,SNR=12						
URZ	Urewera	54.15	134	P	P	19 04 30.7	+0.5
URZ				IAmb	IAmb	19 04 36.0	
	comp=Z,35nm,0.5s						
URZ	Urewera	54.15	134	P	P	19 04 31.0	+0.8
MSWZ	Moikau Station	54.27	138	P	P	19 04 30.7	-0.5
PLWZ	Palliser	54.35	139	P	P	19 04 31.8	+0.1
GKN	Gorkha	54.50	310	eP	P	19 04 33.5	+0.4
BFZ	Birch Farm	54.60	137	P	P	19 04 33.7	+0.2
BFZ				IAmb	IAmb	19 04 54.6	
	comp=Z,74nm,1.3s						
MXZ	Matakaoa Point	54.73	133	P	P	19 04 35.6	+1.2
MXZ				IAmb	IAmb	19 04 48.1	
	comp=Z,89nm,1.3s						
HYB	Hyderabad	55.12	295	i P	P	19 04 37.0	-0.6
	comp=Z,70nm,1.0s						
KOLN	Koldanda	55.17	309	eP	P	19 04 38.5	+0.5
DANN	Dangsing	55.34	310	eP	P	19 04 39.5	+0.2
PYUN	Piuthan	55.81	309	eP	P	19 04 43.0	+0.5
DGAR	Diego Garcia	56.61	265	P	P	19 04 48.8	+0.6
ULN	Ulaanbaatar	56.62	342	P	P	19 04 48.2	+0.4
SONM	Songino Array	56.80	342	P	P	19 04 50.2	+1.2
	comp=Z,3.2nm,0.4s,baz=157,slow=7.2,SNR=22						
SONM	Songino Array	56.80	342	P	P	19 04 50.0	+0.9
POO	Poona	59.72	295	ex	x	19 05 06.0	
NDI	New Delhi	60.59	307	eP	P	19 05 14.5	-0.8
WMQ	Urumqi	61.79	327	P	P	19 05 24.6	+1.5
WMQ				pmax	pmax		
	comp=Z,85nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,230nm,7.5s						
PEA0B	Petropavlovsk-	63.05	19	P	P	19 05 31.8	+0.7
PEA0B				IAmb	IAmb	19 05 33.1	
	comp=Z,41nm,1.0s						
PETK	Petropavlovsk-	63.05	19	P	P	19 05 31.5	+0.4
	comp=Z,23nm,0.8s,baz=196,slow=8.5,SNR=23						
PETK				PcP	PcP	19 06 06.2	-0.2
	comp=Z,3.9nm,0.5s,baz=192,slow=4.2,SNR=5.1						
ZSN	Zaisan	65.66	328	eP	P	19 05 48.3	+0.2
	baz=328						
NIL	Nilore	65.78	311	P	P	19 05 49.3	+0.1
NIL				IAmb	IAmb	19 05 50.4	
	comp=Z,40nm,0.8s						
UZB	Uzynbulak	66.41	322	eP	P	19 05 53.3	+0.1
	baz=322						
KSH	Kashi	66.49	317	P	P	19 05 55.1	+1.4
KSH				pmax	pmax		
	comp=Z,36nm,0.7s						
MK31	Makanchi Array	66.62	327	P	P	19 05 55.3	+1.1
MK31				IAmb	IAmb	19 05 56.1	
	comp=Z,37nm,0.8s						
MKAR	Makanchi Array	66.62	327	P	P	19 05 55.2	+0.9
	comp=Z,42nm,0.7s,baz=114,slow=9.1,SNR=421						
SATY	Saty	66.74	322	eP	P	19 05 55.4	+0.2
	comp=Z,26nm,0.8s,baz=322						
MAKZ	Makanchi	66.80	327	P	P	19 05 56.1	+0.7
MAKZ				IAmb	IAmb	19 05 57.1	
	comp=Z,44nm,0.9s						
KDJ	Kajisay	67.02	320	P	P	19 05 57.8	+0.8
KDJ				IAmb	IAmb	19 06 22.8	
	comp=Z,31nm,1.3s						
YAK	Yakutsk	67.29	0	P	P	19 05 58.6	+0.6
TNSS	Tian-Shan	67.64	321	eP	P	19 06 02.3	+1.1
	baz=321						
TDK	Taldyqorghan	67.80	323	eP	P	19 06 01.7	0.0
	comp=Z,31nm,0.9s,baz=323						
BOOM	Boomskoye usch	67.99	320	P	P	19 06 04.3	+1.2
BOOM				IAmb	IAmb	19 06 25.1	
	comp=Z,39nm,1.4s						
KUU	Kurty	68.46	322	eP	P	19 06 06.3	+0.5
	comp=Z,41nm,0.7s,baz=322						
AAK	Ala-Archa	68.99	320	i P	P	19 06 10.6	+1.3
	SNR=12						
AAK	Ala-Archa	68.99	320	P	P	19 06 10.8	+1.6
AAK				IAmb	IAmb	19 06 11.7	
	comp=Z,18nm,0.8s						
AML	Almayashu	69.27	319	i P	P	19 06 12.5	+1.2
	SNR=13						
SGDS	Sogindy	69.31	321	eP	P	19 06 11.0	-0.1
	baz=320						
KBL	Kabul	69.33	310	P	P	19 06 12.1	+0.5
KBL				IAmb	IAmb	19 06 13.1	
	comp=Z,15nm,0.8s						
DRK	Karamyk	69.34	316	P	P	19 06 12.3	+0.7

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DRK                                   IAmb    IAmb     19 06 13.2
      comp=Z,16nm,0.6s
SEM   Semipalatinsk      69.88 329 eP      P        19 06 14.0  -0.6
      baz=329
ZAA0  Zalesovo Array     69.95 334 P       P        19 06 14.7  +0.1
ZAA0                               IAmb    IAmb     19 06 15.6
      comp=Z,24nm,1.0s
ZALV  Zalesovo Beam      69.95 334 P       P        19 06 14.6   0.0
      comp=Z,15nm,0.8s,baz=120,slow=5.1,SNR=60
ZALV  Zalesovo Beam      69.95 334 P       P        19 06 14.7  +0.1
GAR   Garm               70.17 315 P       P        19 06 17.1  +0.6
BTK   Batken             70.27 316 P       P        19 06 18.0  +1.0
BTK                                IAmb    IAmb     19 06 19.1
      comp=Z,42nm,1.5s
CHGR  Chuyangaron        70.86 314 P       P        19 06 20.6   0.0
KURK  Kurchatov          70.90 329 P       P        19 06 21.1  +0.7
DZA   Taraz              71.17 319 eP      P        19 06 22.9  +0.6
      baz=319
IUG   Iuzhnay            71.70 318 eP      P        19 06 26.2  +0.6
      baz=318
KKAR  Karatay Array      71.80 319 P       P        19 06 26.3  +0.3
BRLS  Borolday           72.22 318 eP      P        19 06 29.0  +0.5
      comp=Z,5.5nm,0.5s,baz=318
VNDA  Vanda              74.04 173 P       P        19 06 39.0  +0.5
HRA   Herat              74.55 308 P       P        19 06 42.9  +0.4
HRA                                IAmb    IAmb     19 06 44.2
      comp=Z,28nm,1.0s
BSY   Bisya              75.85 295 P       P        19 06 50.3  +0.4
MAW   Mawson             76.17 201 P       P        19 06 51.6  +0.9
      comp=Z,7.7nm,0.8s,baz=92,slow=5.0,SNR=8.3
MAW   Mawson             76.17 201 P       P        19 06 51.9  +1.2
SHAO  Shalim             76.39 290 P       P        19 06 53.6  +0.6
SHAO  Shalim             76.39 290 P       P        19 06 52.9   0.0
      SNR=13
BRVK  Borovoye           76.53 328 P       P        19 06 53.3  +0.3
BRVK                               IAmb    IAmb     19 06 54.5
      comp=Z,18nm,0.8s
ARQ   Araqi              76.59 295 P       P        19 06 55.2  +1.2
      SNR=9.8
SOHO  SOHO               76.74 296 i P     P        19 06 55.2  +0.4
      SNR=14
SOHO  SOHO               76.74 296 P       P        19 06 55.5  +0.7
TIXI  Tiksi              76.95 360 P       P        19 06 54.8  -0.1
TIXI                               IAmb    IAmb     19 06 55.8
      comp=Z,21nm,0.6s
DMTO  DMTO               76.97 289 P       P        19 06 56.5  +0.4
      SNR=7.1
SOCY  Socotra            76.99 284 P       P        19 06 56.5   0.0
SOCY                               IAmb    IAmb     19 06 57.4
      comp=Z,38nm,0.7s
UOSS  Minazif            77.21 297 P       P        19 06 57.9  +0.5
UOSS  Minazif            77.21 297 P       P        19 06 57.8  +0.5
UOSS                               IAmb    IAmb     19 06 58.7
      comp=Z,26nm,0.8s
HATD  Hatta, Dubai       77.25 297 i P     P        19 06 58.4  +0.8
      SNR=6.8
ASHO  Ashiyiah           77.28 297 i P     P        19 06 58.5  +0.7
      SNR=8.5
ASHO  Ashiyiah           77.28 297 P       P        19 06 58.6  +0.7
BANOM Banah              77.33 298 i P     P        19 06 59.1  +1.0
      SNR=8.3
MSFE  Esma-Masafi        77.33 297 i P     P        19 06 59.1  +1.0
      SNR=10.0
ALNE  Al Ain             77.43 296 i P     P        19 06 59.4  +0.7
      SNR=13
SHME  Shamm              77.50 298 i P     P        19 07 00.1  +1.1
      SNR=8.7
RBK   Rabkut             77.63 289 P       P        19 07 00.2  +0.3
UMZA  Um Al Zommool      77.69 295 P       P        19 07 00.4  +0.3
FAQ   Al Faqa, Dubai     77.71 297 i P     P        19 07 00.5  +0.4
      SNR=12
DOK   Doka               77.89 290 P       P        19 07 01.3   0.0
      SNR=15
ASUD  Al Ashush, Dub     77.92 296 P       P        19 07 02.6  +1.3
WHFO  Wadi Hawf          78.11 290 P       P        19 07 02.3  -0.2
      SNR=30
AJN   Ajban              78.21 296 P       P        19 07 03.5  +0.5
ABTO  Aybut              78.46 289 P       P        19 07 05.0  +0.5
      SNR=26
GEYT  Alibeck            78.78 310 P       P        19 07 06.8  +1.0
      comp=Z,5.7nm,0.6s,baz=185,slow=7.0,SNR=20
GEYT  Alibeck            78.78 310 P       P        19 07 06.0  +0.2
GYA0B ALIBECK ARRAY      78.78 310 P       P        19 07 06.0  +0.2
NRIK  Noril'sk           79.93 346 P       P        19 07 12.3  +1.0
      comp=Z,8.1nm,0.8s,baz=140,slow=9.1,SNR=8.6
NRIK  Noril'sk           79.93 346 P       P        19 07 11.5  +0.3
ABKAR Akbulak array      80.94 322 P       P        19 07 17.3  +0.2
ABKAR Akbulak array      80.94 322 P       P        19 07 17.3  +0.2
ABKAR                              IAmb    IAmb     19 07 20.0
      comp=Z,11nm,0.8s
VOI   Vohitsoka          81.16 249 P       P        19 07 19.4  +0.5
VOI                                IAmb    IAmb     19 07 20.3
      comp=Z,31nm,0.6s
VOI   Vohitsoka          81.16 249 P       P        19 07 19.5  +0.5
SDPT  Sand Point         83.34  33 P       P        19 07 29.5  +0.2
SYO   Syowa Base         84.89 201⇓eP      P        19 07 37.8  +1.0
SYO   Syowa Base         84.89 201⇑ePcP    PcP      19 07 41.8  +2.1
QRN   Al-Qurain          85.18 299 eP      P        19 07 38.5  -0.7
KBD   Kabd               85.44 300 eP      P        19 07 39.6  -0.8
UMR   Umm Al-Rimmam      85.48 300 eP      P        19 07 40.0  -0.6
MIB   Mutribah           85.84 300 eP      P        19 07 41.8  -0.6
RST   Umm Al-Ruwaisa     86.09 300 eP      P        19 07 42.0  -1.6
RAYN  Ar Rayn            86.59 294 i P     P        19 07 46.8  +0.5
      SNR=47
RAYN  Ar Rayn            86.59 294 P       P        19 07 47.0  +0.8
TTA   Tatalina           87.87  26 P       P        19 07 51.6  +0.2
L19K  White Mountain     88.18  27 P       P        19 07 53.6  +0.7
L19K                               IAmb    IAmb     19 07 55.7
      comp=Z,19nm,1.1s
J20K  Nowinta River      89.00  25 P       P        19 07 57.3  +0.7
J20K                               IAmb    IAmb     19 07 59.0
      comp=Z,11nm,0.9s
A21K  Barrow             90.05  18 P       P        19 08 01.4  +0.1
A21K                               IAmb    IAmb     19 08 03.3
      comp=Z,18nm,1.2s
MLY   Manley             90.63  25 P       P        19 08 04.2  -0.1
MLY                                IAmb    IAmb     19 08 05.0
      comp=Z,9.9nm,0.8s
SIRT  Sirnak             90.89 307 P       P        19 08 06.9  +0.8
RND   Reindeer           91.14  26 P       P        19 08 05.7  -1.0
KIBK  Kibwezi            91.14 268 P       P        19 08 08.6  +0.8
MCK   McKinley           91.16  26 P       P        19 08 06.0  -0.7
MCK                                IAmb    IAmb     19 08 06.8
      comp=Z,14nm,1.0s
KBZ   Khabaz             91.22 314 P       P        19 08 07.2  -0.2
      comp=Z,1.9nm,0.8s,baz=147,slow=3.8,SNR=4.6
I23K  Minto, Yukon-K     91.22  25 P       P        19 08 07.2  +0.2
I23K                               IAmb    IAmb     19 08 07.9
      comp=Z,19nm,0.8s
I23K                                       pP       19 09 09.1  -0.7
NEA2  Nenana             91.25  25 P       P        19 08 07.0  -0.1
GURO  Guroymak-BITLI     91.32 308 P       P        19 08 09.4  +1.2
GURO                               IAmb    IAmb     19 08 10.3
      comp=Z,13nm,0.9s
WRH   Wood River Hil     91.65  25 P       P        19 08 08.2  -0.8
WRH                                IAmb    IAmb     19 08 09.3
      comp=Z,11nm,0.8s
DHY   Denali Highway     91.75  27 P       P        19 08 09.6  -0.1
DHY                                IAmb    IAmb     19 08 10.3
      comp=Z,14nm,0.8s
TOLK  Toolik Lake Re     91.77  21 P       P        19 08 08.9  -0.6
TOLK                               IAmb    IAmb     19 08 10.8
      comp=Z,13nm,1.4s
CCB   Clear Creek Bu     91.80  25 P       P        19 08 08.4  -1.2
CCB                                IAmb    IAmb     19 08 09.3
      comp=Z,18nm,0.9s
H24K  Noodor Dome        91.95  24 P       P        19 08 09.7  -0.6
H24K                               IAmb    IAmb     19 08 11.4
      comp=Z,15nm,0.8s
KMBO  Kilima Mbogo       92.05 269 P       P        19 08 12.3  +0.1
      comp=Z,4.5nm,0.7s,baz=56,slow=5.0,SNR=13
KMBO  Kilima Mbogo       92.05 269 P       P        19 08 12.9  +0.7
KMBO  Kilima Mbogo       92.05 269 P       P        19 08 10.8  -1.5
HDA   Harding Lake       92.13  26 P       P        19 08 09.9  -1.2
HDA                                IAmb    IAmb     19 08 11.4
      comp=Z,12nm,0.8s
IL31                     92.20  25 P       P        19 08 09.5  -2.0
ILAR  Eielson Array      92.20  25 P       P        19 08 09.9  -1.6
      comp=Z,4.5nm,0.8s,baz=268,slow=4.2,SNR=38
ILAR                               PP      PP       19 11 52.8  -2.8
      comp=Z,1.0nm,1.0s,baz=263,slow=5.3,SNR=4.2
PAX   Paxson             92.59  27 P       P        19 08 13.2  -0.3
PAX                                IAmb    IAmb     19 08 14.5
      comp=Z,9.3nm,0.8s
DOT   Dot Lake           93.30  26 P       P        19 08 16.3  -0.3
DOT                                IAmb    IAmb     19 08 17.2
      comp=Z,12nm,0.7s
SCRK  Sand Creek         93.36  26 P       P        19 08 16.3  -0.7
BMAR  Burnt Mountain     93.46  23 P       P        19 08 17.6  +0.3
L26K  Log Cabin Wild     93.56  27 P       P        19 08 17.8   0.0
L26K                               IAmb    IAmb     19 08 18.8
      comp=Z,9.4nm,0.8s
BCAR  Beaver Creek A     94.28  27 P       P        19 08 21.7  +0.6
TABL  Table Mountain     94.43  30         pP       19 09 23.3  -1.2
KLMR  Klimovskoe         94.67 331 eP      P        19 08 19.9  -3.0
KLMR                               AMP              19 08 26.9
      comp=Z,25nm,1.4s
BRTR  Keskin Array B     97.90 309 P       P        19 08 36.9  -1.3
      comp=Z,1.6nm,0.7s,baz=104,slow=5.2,SNR=4.7
BRTR                               PP      PP       19 12 35.9  -4.6
      comp=Z,0.4nm,0.4s,baz=68,slow=5.3,SNR=1.9
BOSA  Boshof             99.74 240 P       Pdif     19 08 46.8  +0.1
      comp=Z,4.5nm,0.9s,baz=144,slow=3.8,SNR=6.8
ARCES ARCESS Array B     99.94 340 P       Pdif     19 08 45.8  -0.6
      comp=Z,5.8nm,1.0s,baz=80,slow=6.5,SNR=7.7
YKA   Yellowknife Ar    106.62  26 PKiKP   PKiKP    19 13 25.0  -0.4
      comp=Z,1.3nm,0.6s,baz=292,slow=1.9,SNR=6.8
VYHS  Vyhne             107.65 319 ePP     PP       19 13 56.8  +4.3
GERES GERESS Array B    110.87 320 PKiKP   PKiKP    19 13 33.4  -0.5
      comp=Z,0.3nm,0.5s,baz=82,slow=3.0,SNR=5.5
GERES                              SKP              19 16 43.0
      comp=Z,0.6nm,0.6s,baz=66,slow=3.2,SNR=6.0
GERES GERESS Array B    110.87 320         PKiKP    19 13 32.7  -1.2
WTTA  Wattenberg        112.65 319 eP      PKiKP    19 13 37.3  -0.1
      comp=Z,4.0nm,0.3s
DAVA  Damuels           113.78 320 eP      PKiKP    19 13 39.6  +0.1
      comp=Z,2.1nm,0.3s
PDAR  Pinedale Array    116.21  45 PKP     PKPdf    19 13 44.8  +0.3
      comp=Z,0.7nm,0.7s,baz=240,slow=0.9,SNR=7.5
KEST  Kesra             117.44 308 PP      PP       19 15 00.1  -2.2
RSSD  Black Hills       119.50  42         PKPdf    19 13 50.0  -0.7
ULM   Lac du Bonnet     121.47  32 PKP     PKPdf    19 13 53.4  -0.6
      comp=Z,2.4nm,0.5s,baz=260,slow=5.9,SNR=3.7
T25A  Trinidad          121.76  49 PKPdf   PKiKP    19 13 56.0  +0.6
MNTX  Cornudas Mount    122.58  56 PKPdf   PKiKP    19 13 57.4  +0.4
ECSD  EROS Data Cent    124.47  39         PKPdf    19 13 59.7  -0.3
TXAR  Lajitas Array     124.62  58 PKP     PKiKP    19 14 01.6  +0.4
      comp=Z,1.5nm,0.7s,baz=218,slow=1.1,SNR=16
TXAR                               SKPbc   SKPbc    19 16 50.2
      comp=Z,0.7nm,0.8s,baz=270,slow=2.7,SNR=4.0
TXAR                               SKP              19 17 11.6
      comp=Z,0.7nm,0.7s,baz=249,slow=2.1,SNR=3.9
TXAR                               PKKPbc  PKKPab   19 23 44.1  +0.5
      comp=Z,0.9nm,1.0s,baz=116,slow=5.8,SNR=5.5
F36A  Milaca            125.23  36         PKPdf    19 14 01.1  -0.3
ESDC  Sonseca Array     126.00 316 PP      PP       19 15 59.0  -0.9
      comp=Z,2.4nm,1.0s,baz=57,slow=7.2,SNR=9.1
JCT   Junction City     127.52  56 PKPdf   PKPdf    19 14 06.1  -0.2
TORD  Torodi Ar. Bea    127.93 282 PKP     PKPdf    19 14 06.8  -0.6
      comp=Z,1.7nm,0.8s,baz=84,slow=2.8,SNR=9.2
TORD                               SKPbc   SKPbc    19 17 00.3
      comp=Z,12nm,0.8s,baz=70,slow=3.4,SNR=30
TORD                               SKP              19 17 17.3
      comp=Z,2.2nm,0.7s,baz=70,slow=1.5,SNR=3.7
P38A  Dawn              128.52  42 PKPdf   PKPdf    19 14 08.0  +0.2
SCHQ  Schefferville     129.05  12 PKP     PKPdf    19 14 06.4  -2.0
      comp=Z,1.2nm,0.4s,baz=315,slow=1.5,SNR=4.1
SCHQ                               SKPbc   SKPab    19 17 03.3  -0.7
      comp=Z,4.1nm,0.6s,baz=343,slow=2.5,SNR=10
S39A  Bolivar           129.61  44         PKPdf    19 14 09.6  -0.4
E46A  Sault Ste Mari    129.90  30 SKPbc   SKPab    19 17 07.5  -0.3
U40A  Yellville         130.57  46 PKPdf   PKPdf    19 14 12.3  +0.4
U40A                               SKPbc   SKPbc    19 17 09.8  -1.0
CCM   Cathedral Cave    130.85  43 SKPbc   SKPbc    19 17 11.8   0.0
SFIN  Lafayette         132.23  38 SKPbc   SKPbc    19 17 15.5  -1.0
N47A  Urbana            132.77  36 SKPbc   SKPbc    19 17 17.2  -1.2
L48A  N Adams           132.82  35 SKPbc   SKPbc    19 17 17.4  -1.1
KOWA  Kowa              133.35 285 SKPbc   SKPbc    19 17 19.9  -1.2
WCI   Wyandotte Cave    134.01  40 SKPbc   SKPbc    19 17 20.5  -2.1
Y45A  Yeager Farm, C    134.15  47 SKPbc   SKPbc    19 17 23.7  +0.5
WVT   Waverly           134.19  43 SKPbc   SKPbc    19 17 22.5  -0.8
DBIC  Dimbokro          134.52 274 SKPbc   SKPbc    19 17 23.8  -1.2
      comp=Z,13nm,0.8s,baz=101,slow=4.0,SNR=16
DBIC  Dimbokro          134.52 274 SKPbc   SKPbc    19 17 23.6  -1.4
D62A  Allapoint, All    135.58  18 SKPbc   SKPbc    19 17 26.7  -0.6
X48A  Hartselle         135.63  45 SKPbc   SKPbc    19 17 26.5  -1.3
T50A  Nancy             135.66  40 SKPbc   SKPbc    19 17 26.4  -1.5
X51A  Calhoun           137.07  43 SKPbc   SKPbc    19 17 31.2  -1.0
TKL   Tuckaleechee C    137.16  41 SKPbc   SKPbc    19 17 31.8  -0.7
V52A  Sevierville       137.16  41 SKPbc   SKPbc    19 17 31.8  -0.7
P57A  Homestead Farm    138.04  32 PKPdf   PKPdf    19 14 22.3  -3.5
KMSC  Kings Mountain    139.05  40 SKPbc   SKPbc    19 17 36.8  -1.1
AC02  Maricunga         143.22 152         PKPbc    19 14 34.3  +0.5
CRIN  San Cristobal     143.31  76         PKPbc    19 14 33.9   0.0
SOR   Soroa             144.28  58 PKPdf   PKPbc    19 14 36.9  +0.5
061Z  Ochoppi           144.61  52         PKPbc    19 14 37.9  +0.6
BOAB  BOACO BROADBAN144.68  76 PKPdf   PKPbc    19 14 37.9  +0.1
HZTE  Horizontes, Gu    144.96  79         PKPbc    19 14 37.1  -1.5
JTS   Las Juntas de     145.63  80         PKPbc    19 14 40.9  +0.1
LVC   Limon Verde       146.84 148 PKPab   PKPbc    19 14 45.5  +1.0
SRBA  San Rafael, Bu    147.29  81         PKPdf    19 14 44.0  +1.1
CPUP  Villa Florida     147.74 169 PKPbc   PKPbc    19 14 46.6  +0.3
      comp=Z,3.1nm,0.4s,baz=200,slow=2.2,SNR=8.7
LPAZ  La Paz            152.29 141 PKPbc   PKiKP    19 14 59.0  +0.5
      comp=Z,2.4nm,0.4s,baz=346,slow=1.3,SNR=15
LPAZ                               PKPab   PKPab    19 15 10.7  +1.6
      comp=Z,9.8nm,0.7s,baz=213,slow=5.3,SNR=20
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*IDC **10** 19:14:56.9±1.5, 52°.31N×159°.40E, h0^{km}, mb3.5/2, mb1 3.9/2, mb1mx3.3/33, mbtmp3.5/2 Error ellipse: s-maj=44.7km s-min=16.3km az=40.0*

*KRSC **10** 19:15:01.1±1.1, 52°.44N×159°.30E, h60^{km}±13^{km}, ML4.3*

*MOS **10** 19:15:02.3±0.7, 52°.40N×159°.32E, h45^{km}, mb3.9/1, Error ellipse: s-maj=11.8km s-min=5.7km az=88.4*

ISC 10 19:15:03.4±1.0, **52°.44N**±0°.04×**159°.28E**±0°.04, **h46**^{km}±10^{km}, **n65**, σ0^{s}.**91**/94, **Off east coast of Kamchatka Peninsula**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                   Op      ISC       h  m  s     ISC
RUS   Russkaya            0.47 270 PN      Pn       19 15 14.3  +0.2
RUS                                S       Sn       19 15 22.2  +0.6
RUS   Russkaya            0.47 270 eP      Pn       19 15 14.3  +0.2
RUS                                eS      Sn       19 15 22.2  +0.6
MTVR  Mutnovka            0.68 274 PN      Pn       19 15 17.0  +0.2
MTVR                               S       Sn       19 15 26.5  +0.1
MTVR  Mutnovka            0.68 274 i P     Pn       19 15 17.0  +0.2
MTVR                               eS      Sn       19 15 26.5  +0.1
DALK  Dalny               0.68 332 PN      Pn       19 15 16.4  -0.3
DALK                               S       Sn       19 15 25.4  -0.9
DALK  Dalny               0.68 332 eP      Pn       19 15 16.4  -0.3
DALK                               eS      Sn       19 15 25.4  -0.9
PET   Petropavlovsk       0.70 327 ePN     Pn       19 15 16.7  -0.3
PET                                eS      Sn       19 15 25.9  -0.9
PET                                pmax    pmax
      comp=Z,474nm,0.2s
PET                                smax    smax
      comp=E,2μm,0.3s
PET                                smax    smax
      comp=N,3μm,0.7s
PET   Petropavlovsk       0.70 327 eP      Pn       19 15 16.8  -0.3
PET                                eS      Sn       19 15 26.0  -0.9
NLC   Nalytchevo          0.74   3 PN      Pn       19 15 17.1  -0.4
NLC                                S       Sn       19 15 26.9  -0.8
NLC   Nalytchevo          0.74   3 eP      Pn       19 15 17.1  -0.4
NLC                                eS      Sn       19 15 26.9  -0.8
SPN   Mys Shipunski       0.80  34 PN      Pn       19 15 18.8  +0.4
SPN                                S       Sn       19 15 30.2  +1.0
SPN   Mys Shipunski       0.80  34 i P     Pn       19 15 18.8  +0.4
SPN                                eS      Sn       19 15 30.2  +1.0
KRMR  Karymshinskiy       0.81 300 PN      Pn       19 15 18.1  -0.3
KRMR                               S       Sn       19 15 28.9  -0.4
KRMR  Karymshinskiy       0.81 300 eP      Pn       19 15 18.1  -0.3
KRMR                               eS      Sn       19 15 28.9  -0.4
UGLR  Uglovaya            0.82 340 PN      Pn       19 15 18.8   0.0
UGLR                               S       Sn       19 15 29.7  -0.2
UGLR  Uglovaya            0.82 340 eP      Pn       19 15 18.8   0.0
UGLR                               eS      Sn       19 15 29.7  -0.2
ASAK  Asacha              0.85 267 PN      Pn       19 15 19.5  +0.4
ASAK                               S       Sn       19 15 31.4  +0.9
ASAK  Asacha              0.85 267 eP      Pn       19 15 19.5  +0.4
ASAK                               eS      Sn       19 15 31.4  +0.9
SDLR  Sedlovina           0.88 344 PN      Pn       19 15 19.2  -0.3
SDLR                               S       Sn       19 15 30.5  -0.8
SDLR  Sedlovina           0.88 344 eP      Pn       19 15 19.2  -0.3
SDLR                               eS      Sn       19 15 30.5  -0.8
SMAR  Somma               0.88 341 PN      Pn       19 15 18.8  -0.8
SMAR  Somma               0.88 341 eP      Pn       19 15 18.8  -0.8
AVH   Avacha              0.89 339 PN      Pn       19 15 19.8  +0.1
AVH   Avacha              0.89 339 eP      Pn       19 15 19.8  +0.1
KRER  Koryakskii          0.93 340 PN      Pn       19 15 20.2  -0.1
KRER                               S       Sn       19 15 32.6   0.0
KRER  Koryakskii          0.93 340 i P     Pn       19 15 20.2  -0.1
KRER                               eS      Sn       19 15 32.6   0.0
KOK   Koryaka             0.94 336 PN      Pn       19 15 20.4   0.0
KOK                                S       Sn       19 15 33.0  +0.2
KOK   Koryaka             0.94 336 i P     Pn       19 15 20.4   0.0
KOK                                eS      Sn       19 15 33.0  +0.2
KDTR  Khodutka, Kamc      0.97 230 PN      Pn       19 15 20.8  +0.1
KDTR                               S       Sn       19 15 33.3   0.0
KDTR  Khodutka, Kamc      0.97 230 eP      Pn       19 15 20.8  +0.1
KDTR                               eS      Sn       19 15 33.3   0.0
PETK  Petropavlovsk-      1.18 306 Pg      Pn       19 15 22.8  -0.6
      comp=N,112nm,0.3s,baz=119,slow=18,SNR=2298
PETK                               Lg      Lg       19 15 38.4
      comp=N,36nm,0.3s,baz=98,slow=33,SNR=8.5
APC   Apacha              1.38 292 PN      Pn       19 15 26.5  +0.2
APC   Apacha              1.38 292 eP      Pn       19 15 26.5  +0.2
GNL   Ganaly              1.50 328 PN      Pn       19 15 28.0   0.0
GNL                                S       Sn       19 15 46.3  -0.1
GNL   Ganaly              1.50 328 eP      Pn       19 15 28.0   0.0
GNL                                eS      Sn       19 15 46.3  -0.1
MIPR  Malaya Ipel'ka      1.56 265 PN      Pn       19 15 29.2  +0.5
MIPR  Malaya Ipel'ka      1.56 265 eP      Pn       19 15 29.2  +0.5
KII   Karymskiy           1.61   3 PN      Pn       19 15 30.5  +1.1
KII                                S       Sn       19 15 50.2  +1.2
KII   Karymskiy           1.61   3 eP      Pn       19 15 30.5  +1.1
KII                                eS      Sn       19 15 50.2  +1.2
PAU   Pauzhetka           1.81 239 PN      Pn       19 15 32.7  +0.6
PAU   Pauzhetka           1.81 239 eP      Pn       19 15 32.7  +0.6
MKZ   Mys Kozlova         2.58  34 PN      Pn       19 15 43.1  +0.5
MKZ                                S       Sn       19 16 13.0  +0.3
MKZ   Mys Kozlova         2.58  34 eP      Pn       19 15 43.1  +0.5
MKZ                                eS      Sn       19 16 13.0  +0.3
SKR   Severo-Kuril’s      2.64 230 PN      Pn       19 15 44.1  +0.6
SKR                                S       Sn       19 16 13.4  -0.9
SKR   Severo-Kuril’s      2.64 230 eP      Pn       19 15 44.1  +0.6
SKR                                eS      Sn       19 16 13.4  -0.9
TUMD  Tumrok D            2.85  13 eP      Pn       19 15 48.2  +1.8
TUMR  Tumrok              2.90  10 PN      Pn       19 15 48.2  +1.1
BDR   Baidarnaya          4.29  14 PN      Pn       19 16 08.3  +2.1
BDR   Baidarnaya          4.29  14 eP      Pn       19 16 08.3  +2.1
KBTR  Krutoberegovo       4.31  27 PN      Pn       19 16 07.6  +1.2
KBTR  Krutoberegovo       4.31  27 eP      Pn       19 16 07.6  +1.2
SMKR  Semkarok            4.35  16 PN      Pn       19 16 09.1  +2.2
SMKR  Semkarok            4.35  16 eP      Pn       19 16 09.1  +2.2
SRKR  Sorokina            4.37  14 PN      Pn       19 16 08.9  +1.7
SRKR  Sorokina            4.37  14 eP      Pn       19 16 08.9  +1.7
BKI   Bering              4.84  52 PN      Pn       19 16 13.5  -0.1
BKI   Bering              4.84  52 eP      Pn       19 16 13.5  -0.1
BKI                                eS      Sn       19 17 03.9  -4.3
H11N2 WAKE ISLAND Hy 33.18 167 T       T        19 56 40.7
      baz=347
H11N3 WAKE ISLAND Hy 33.19 167 T       T        19 56 42.4
      baz=347,slow=74
H11N1 WAKE ISLAND Hy 33.19 167 T       T        19 56 45.2
      baz=347,slow=74
H11S1 WAKE ISLAND Hy 34.35 167 T       T        19 58 08.9
      baz=351,slow=76,SNR=13
H11S3 WAKE ISLAND Hy 34.37 167 T       T        19 58 09.8
      baz=351,slow=76,SNR=68
H11S2 WAKE ISLAND Hy 34.37 167 T       T        19 58 10.3
      baz=351,slow=76,SNR=12
TXAR  Lajitas Array      71.35  66 P       P        19 26 18.2  -0.3
      comp=N,0.3nm,0.6s,baz=295,slow=2.8,SNR=2.8
ASAR  Alice Springs      78.96 204 P       P        19 27 01.6  -0.5
      comp=N,0.3nm,0.6s,baz=1.2,slow=7.0,SNR=6.1
```

IDC 10 19:22:46.2±1.9, **3°.95S**×**130°.10E**, **h0**^{km}, **mb3.9**/3, **mb1 3.9**/5, **mb1mx3.5**/33, **mbtmp3.7**/5, **ML3.4**/2, **MS3.0**/3, **Ms1 3.0**/3, **ms1mx2.7**/30, **Error ellipse: s-maj=106.6km s-min=25.2km az=68.0, Seram**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                   Op      ISC       h  m  s     ISC
WRA   Warramunga Arr     16.42 166 Pn      Pn       19 26 36.3  -1.9
      0.1nm,0.3s,baz=347,slow=13,SNR=6.9
WRA                                Sn      Sn       19 29 28.4   -13
      0.1nm,0.3s,baz=336,slow=24,SNR=2.5
ASAR  Alice Springs      19.94 170 P       Pn       19 27 20.9  -0.7
      0.2nm,0.3s,baz=349,slow=11,SNR=15
CMAR  Chiang Mai Arr     37.92 307 P       P        19 30 06.5  +0.8
      0.4nm,0.3s,baz=140,slow=7.2,SNR=2.0
CMAR                               LR      LR       19 47 28.7
      comp=Z,14nm,18.1s,baz=305,slow=39
KSRS  Korea Array        41.24 357 LR      LR       19 47 30.2
      comp=Z,5.5nm,18.9s,baz=70,slow=36
MKAR  Makanchi Array     65.75 326 P       P        19 33 33.3  +0.2
      0.6nm,0.6s,baz=120,slow=8.4,SNR=7.6
KURBB Kurchatov Arra     69.99 328 P       P        19 33 58.9  -0.7
      0.9nm,0.7s,baz=128,slow=5.5,SNR=11
GNI   Garni              88.97 310 LR      LR       20 25 09.1
      comp=Z,27nm,18.2s,baz=342,slow=42
```

IDC 10 19:34:55.9±30.0, **20°.66S**×**173°.66W**, **h0**^{km}, **mb4.0**/4, **mb1 4.1**/4, **mb1mx3.6**/27, **mbtmp4.0**/4, **Error ellipse: s-maj=551.6km s-min=169.5km az=77.0, Tonga Islands**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                   Op      ISC       h  m  s     ISC
CTA   Charters Tower     37.52 264 P       P        19 42 12.6  +0.7
      2.3nm,0.3s,baz=99,slow=5.9,SNR=2.0
STKA  Stephens Creek     41.39 245 P       P        19 42 43.3  -0.8
      2.7nm,1.0s,baz=69,slow=14,SNR=3.2
ASAR  Alice Springs      48.44 256 P       P        19 43 40.0  -0.4
      0.8nm,0.7s,baz=93,slow=6.6,SNR=11
WRA   Warramunga Arr     48.60 261 P       P        19 43 41.8  +0.1
      0.3nm,0.3s,baz=96,slow=8.5,SNR=28
```

DJA 10 19:41:52.1±0.3, **1°S**±3°×**12°6E**±°, **h44**^{km}±12^{km}, **M3.8**/11, **mb4.2**/3, **mB4.8**/1, **MLv3.6**/11, **Mw(mB)4.0**/1, **Southern Molucca Sea**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                   Op      ISC       h  m  s     ISC
SANI  Sanana              0.70 202 P       Pn       19 42 07.1  +1.5
SANI                               S       Sn       19 42 16.7  +1.4
LBMI  Labuha              1.46  59 P       Pn       19 42 16.6  +0.6
LBMI                               S       Sn       19 42 35.1  +1.1
TNTI  Ternate             2.43  27 P       Pn       19 42 28.2  -1.1
TNTI                               S       Sn       19 42 57.3  -0.5
KMSI  Cibinong            3.00 311 P       Pn       19 42 38.7  +1.5
KMSI                               S       Sn       19 43 13.0  +1.1
MSAI  Masohi              3.30 126 P       Pn       19 42 41.4  +0.1
APSI  Ampana              4.63 276 P       Pn       19 42 59.8  +0.3
MRSI  Marisa              4.70 293 P       Pn       19 42 59.8  -0.7
SWI   Sorong              5.04  84 P       Pn       19 42 58.4  -6.8
TTSI  Tana Toraja         6.63 256 P       Pn       19 43 27.7  +0.6
      0.0nm7.6nm,0.7s
SPSI  Sidrap Palu         6.96 248 P       Pn       19 43 33.1  +1.6
      0.2nm620nm26nm,0.6s
BKSI  Bulukumba           7.25 237 P       Pn       19 43 32.6  -3.0
```

IDC 10 19:45:54.6±584.0, **15°.29S**×**31°.31E**, **h0**^{km}, **Error ellipse: s-maj=219.8km s-min=198.2km az=56.0, Mozambique**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                   Op      ISC       h  m  s     ISC
I35NA TSUMEB INFRASO13.68 252 i                21 11 00.0
      baz=76,slow=315,SNR=1.2
I47ZA BOSHOF INFRASO14.41 202 i                21 17 00.0
      baz=24,slow=319,SNR=1.5
I32KE NAIROBI INFRAS 14.98  22 i                21 20 20.0
      baz=200,slow=328,SNR=1.0
```

KRSC 10 19:47:37.4±1.0, **52°.79N**×**160°.02E**, **h92**^{km}±10^{km}, **ML3.6**, **Off east coast of Kamchatka Peninsula**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                   Op      ISC       h  m  s     ISC
SPN   Mys Shipunski       0.31   0 i P     Pn       19 47 53.3  +2.2
SPN                                eS      Sn       19 48 02.8  +1.5
NLC   Nalytchevo          0.56 314 eP      Pn       19 47 54.4  +1.6
NLC                                eS      Sn       19 48 05.1  +0.8
DALK  Dalny               0.81 288 eP      Pn       19 47 56.4  +1.3
DALK                               eS      Sn       19 48 09.1  +0.8
SDLR  Sedlovina           0.85 306 i P     Pn       19 47 57.5  +1.9
```

SDLR				eS	Sn	19 48 10.6	+1.3
PET	Petropavlovsk	0.86	287	eP	Pn	19 47 57.1	+1.5
PET				eS	Sn	19 48 09.7	+0.3
SMAR	Somma	0.88	304	i P	Pn	19 47 57.8	+1.7
AVH	Avacha	0.91	302	eP	Pn	19 47 58.3	+2.0
AVH				eS	Sn	19 48 12.4	+1.9
KRER	Koryakskii	0.93	305	eP	Pn	19 47 58.7	+2.1
KRER				eS	Sn	19 48 12.6	+1.6
KOK	Koryaka	0.98	302	eP	Pn	19 47 59.1	+2.1
RUS	Russkaya	0.98	250	eP	Pn	19 47 58.8	+1.8
RUS				eS	Sn	19 48 12.6	+0.9
KRMR	Karymshinskiy	1.15	273	eP	Pn	19 48 00.4	+1.5
KRMR				eS	Sn	19 48 15.5	+0.4
MTVR	Mutnovka	1.16	256	eP	Pn	19 48 01.3	+2.1
MTVR				eS	Sn	19 48 16.8	+1.2
KII	Karymskiy	1.30	345	eP	Pn	19 48 02.8	+2.0
KII				eS	Sn	19 48 20.0	+1.5
ASAK	Asacha	1.35	254	eP	Pn	19 48 03.9	+2.4
ASAK				eS	Sn	19 48 22.3	+2.6
KDTR	Khodutka, Kamc	1.54	231	eP	Pn	19 48 05.8	+2.1
KDTR				eS	Sn	19 48 24.3	+0.7
GNL	Ganaly	1.55	307	eP	Pn	19 48 05.4	+1.5
GNL				eS	Sn	19 48 24.3	+0.3
APC	Apacha	1.74	276	eP	Pn	19 48 07.9	+1.7
APC				eS	Sn	19 48 29.7	+1.5
MKZ	Mys Kozlova	2.05	29	eP	Pn	19 48 12.7	+2.5
MKZ				eS	Sn	19 48 36.4	+1.2
MIPR	Malaya Ipel'ka	2.06	257	eP	Pn	19 48 12.9	+2.6
TUMD	Tumrok D	2.43	5	i P	Pn	19 48 17.9	+2.6
TUMD				eS	Sn	19 48 45.7	+1.3
SKR	Severo-Kuril's	3.21	231	eP	Pn	19 48 28.4	+2.7
SKR				eS	Sn	19 49 03.8	+0.8
KBTR	Krutoberegovo	3.80	24	eP	Pn	19 48 36.5	+2.9
BKI	Bering	4.27	53	eP	Pn	19 48 41.8	+1.9
BKI				eS	Sn	19 49 26.8	-1.7

TEH ***10*** *19:48:14.8, 28.°28N×57.°40E, h8^{km}, ML3.7*
DSN ***10*** *19:48:15.9±1.6, 28.°03N×57.°72E, h10^{km}, ML3.6/11, Error ellipse: s-maj=50.6km s-min=14.2km az=125.0*
THR ***10*** *19:48:15.9±0.5, 28.°22N×57.°36E, h14^{km}±8^{km}, ML3.6*
OMAN ***10*** *19:48:19.9±0.5, 28.°03N×57.°59E, h35^{km}, ml3.7/15, Error ellipse: s-maj=13.7km s-min=7.6km az=250.0*
KISR ***10*** *19:48:20.7±0.6, 27.°87N×56.°68E, h42^{km}±999^{km}, ML4.8*
ISC 10 19:48:17.4±1.0, **28.°14N**±0.°03×**57.°45E**±0.°05, **h26**^{km}±10^{km}, **n73,** σ1§**91**/91, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.30	130	ePg	Pb	19 48 23.5	-1.1
KHNJ				eSg	Sb	19 48 29.3	-0.2
IBND	Bandar-abas	1.06	229	ePg	Pb	19 48 37.1	0.0
IBND				eSg	Sn	19 48 53.8	+3.3
IBND				e		19 49 01.0	
	comp=Z,31μm,0.3s						
KBAM	BAM	1.32	42	ePg	Pn	19 48 38.6	-1.7
GENO	Geno	1.35	237	ePg	Pn	19 48 41.7	+1.0
GENO				eSg	Sb	19 49 01.1	+2.0
GENO				e		19 49 03.3	
	comp=Z,27μm,0.2s						
NGRK	Negar Kerman	1.62	337	ePg	Pn	19 48 43.5	-1.1
NGRK				e		19 48 48.1	
	comp=Z,7μm,0.2s						
CHMN	Cheshme madani	1.71	3	ePg	Pn	19 48 45.1	-0.8
KRBR	Kerman	1.93	342	ePg	Pn	19 48 49.4	+0.6
KRBR				eSg	Sn	19 49 14.2	+1.8
KRBR				IAML		19 49 25.9	
	comp=N,301nm,0.5s						
KRBR	Kerman	1.93	342	ePg	Pn	19 48 49.4	+0.6
TVBK	TV Kerman	1.93	342	ePn	Pn	19 48 48.9	0.0
TVBK				e		19 48 54.1	
	comp=Z,6μm,0.2s						
KHGB	Koh Gabri	2.38	339	ePn	Pn	19 48 55.5	+0.6
KHGB				e		19 49 34.8	
	comp=Z,3μm,0.8s						
SHME	Shamm	2.39	209	eP	Pn	19 48 54.9	+0.1
	SNR=24						
SHME	Shamm	2.39	209	P	Pn	19 48 55.0	+0.2
	SNR=12						
SHME				S	Sn	19 49 25.3	+2.0
BANOM	Banah	2.44	205	eP	Pn	19 48 56.0	+0.5
	SNR=19						
BANOM				S	Sn	19 49 27.2	+2.6
BANOM	Banah	2.44	205	P	Pn	19 48 56.1	+0.5
	SNR=66						
LAR1	LAR	2.76	261	ePn	Pn	19 49 01.5	+1.5
MASF	Masafi	2.99	203	P	Pn	19 49 05.9	+2.7
MSFE	Esma-Masafi	3.00	203	P	Pn	19 49 03.6	+0.3
MDH	Madha	3.01	200	P	Pn	19 49 02.8	-0.7
MDH	Madha	3.01	200	P	Pn	19 49 03.0	-0.4
ZHDN	Zahedan	3.21	66	ePn	Pn	19 49 08.1	+1.9
ZHSF	Zahedan	3.26	63	ePn	Pn	19 49 09.1	+2.1
ZHSF	Zahedan	3.26	63	ePn	Pn	19 49 09.1	+2.1
UOSS	Minazif	3.38	200	P	Pn	19 49 09.1	+0.7
HATD	Hatta, Dubai	3.51	200	P	Pn	19 49 09.5	-0.8
NAZ	Nazwa, Dubai	3.53	207	P	Pn	19 49 12.0	+1.5
ASHO	Ashiyiah	3.66	200	P	Pn	19 49 14.1	+1.6
ASHO	Ashiyiah	3.66	200	P	Pn	19 49 14.7	+2.2
FAQ	Al Faqa, Dubai	3.77	207	P	Pn	19 49 14.8	+0.9
FAQ	Al Faqa, Dubai	3.77	207	P	Pn	19 49 15.5	+1.6
	SNR=6.7						
QIR1	Qir	3.90	276	ePn	Pn	19 49 17.3	+1.7
GHIR	Ghir-Karzin	3.94	273	ePn	Pn	19 49 17.1	+0.8
GHIR				IAML		19 50 08.6	
	comp=N,68nm,0.4s						
GHIR				IAML		19 50 11.4	
	comp=E,54nm,0.4s						
GHIR	Ghir-Karzin	3.94	273	ePn	Pn	19 49 17.1	+0.8
NHDN	Nehbandan	3.95	34	ePn	Pn	19 49 17.5	+1.1
ASUD	Al Ashush, Dub	3.98	209	i P	Pn	19 49 18.2	+1.4
	SNR=9.9						
ASUD	Al Ashush, Dub	3.98	209	P	Pn	19 49 18.9	+2.1
	SNR=9.9						
IMEH	Mehriz	4.07	323	ePn	Pn	19 49 18.9	+0.8
BSRN	Basiran	4.08	21	ePn	Pn	19 49 19.8	+1.6
BSRN				eSg	Sb	19 50 21.3	+3.9
BSRN	Basiran	4.08	21	ePn	Pn	19 49 19.8	+1.6
SOHO	SOHO	4.08	192	P	Pn	19 49 16.9	-1.1
SOHO				S	Sn	19 50 02.6	-2.3
AJN	Ajban	4.19	212	i P	Pn	19 49 20.0	+0.3
	SNR=26						
AJN	Ajban	4.19	212	P	Pn	19 49 20.6	+0.9
	SNR=26						
SRVN	Saravan	4.45	98	ePn	Pn	19 49 26.1	+2.8
IKOO	Kooshah	4.47	17	ePn	Pn	19 49 25.0	+1.2
HOQ	Hoqain	4.54	182	P	Pn	19 49 23.1	-1.4
	SNR=28						
HOQ				S	Sn	19 50 14.2	-2.3
BIDO	Bidbid	4.64	172	P	Pn	19 49 25.0	-0.9
BIDO				S	Sn	19 50 15.5	-3.4
ARQ	Araqi	4.86	190	P	Pn	19 49 30.9	+2.1
	SNR=52						
ARQ				P	Pn	19 49 30.9	+2.1
ARQ				S	Sn	19 50 25.5	+1.2
ICHK	Chekchek	4.86	328	ePn	Pn	19 49 30.0	+1.0
ITEG	Tejag	4.87	13	ePn	Pn	19 49 29.4	+0.3
YZKH	Yazd	4.90	330	ePn	Pn	19 49 30.5	+1.0
YZKH	Yazd	4.90	330	ePn	Pn	19 49 30.5	+1.0
TPRV	Parvadeh(Tabas	4.91	353	ePn	Pn	19 49 31.2	+1.6
ISAD	Sadrabad	4.97	320	ePn	Pn	19 49 31.9	+1.2
WSAR	Wadi Sarin	5.00	167	P	Pn	19 49 31.5	+0.7
	SNR=52						
WSAR				S	Sn	19 50 24.9	-2.9
SMDO	Samad	5.09	174	P	Pn	19 49 32.0	-0.1
SMDO				S	Sn	19 50 27.2	-2.9
BSY	Bisya	5.38	182	P	Pn	19 49 38.0	+2.0
	SNR=14						
BSY				S	Sn	19 50 37.4	+0.2
AFRZ	Afriz	5.43	14	ePn	Pn	19 49 38.1	+1.2
TKDS	Koohdasht(Taba	5.46	357	ePn	Pn	19 49 38.1	+0.9
AHBU	AHRAM	5.46	279	ePn	Pn	19 49 37.5	+0.4
WBK	Wadi Bani Khal	5.68	166	P	Pn	19 49 40.8	+0.7
	SNR=7.4						
WBK				S	Sn	19 50 41.4	-3.2
IRAM	Ramesheh	5.71	311	ePn	Pn	19 49 41.0	+0.2
KLNJ	Kolanjah	5.84	301	ePn	Pn	19 49 43.0	+0.3
ANAR	Anarak	5.96	328	ePn	Pn	19 49 44.8	+0.7
IZEF	Zefreh	6.47	318	ePn	Pn	19 49 51.5	+0.3
IPIR	Pirpir	7.25	310	ePn	Pn	19 50 02.6	+0.7
KRSH	Karshahi	7.38	323	ePn	Pn	19 50 04.9	+1.3
ISFB	Sefidab	7.62	326	ePn	Pn	19 50 08.1	+1.2
AMIS	Naft Sefid	7.90	298	ePn	Pn	19 50 12.2	+1.5
QRN	Al-Qurain	8.41	276	eP	Pn	19 50 16.4	-1.2
QRN				eS	Sn	19 51 42.7	-9.0
KBD	Kabd	8.63	279	eP	Pn	19 50 20.1	-0.5
KBD				eS	Sn	19 51 49.6	-7.5
KBD				IAML		19 51 51.9	
	comp=Z,79nm,0.5s						
MIB	Mutribah	9.01	283	eP	Pn	19 50 25.6	-0.1
MIB				eS	Sn	19 51 59.1	-7.2
RST	Umm Al-Ruwaisa	9.27	281	eP	Pn	19 50 28.9	-0.5
RST				eS	Sn	19 52 05.0	-7.7
WHFO	Wadi Hawf	10.72	199	P	Pn	19 50 48.9	-0.5
	SNR=10						
ABTO	Aybut	11.40	200	P	Pn	19 50 56.6	-2.1
	SNR=7.9						

IDC ***10*** *19:52:44.5±2.5, 3.°84S×130.°18E, h0^{km}, mb3.5/2, mb1 3.6/3, mb1mx3.4/26, mbtmp3.5/3, ML3.0/1, Error ellipse: s-maj=176.9km s-min=28.0km az=70.0*
DJA ***10*** *19:52:48.7±0.8, 4°S±5°×12°9E±°, h16^{km}±6^{km}, M3.3/7, MLv3.3/7*
ISC 10 19:52:49.6±1.1, **4.°11S**±0.°08×**129.°47E**±0.°05, **h35**^{km}, **n9,** σ1§**10**/15, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.93	325	P	Pn	19 53 03.6	-2.7
MSAI				S	Sn	19 53 17.6	-0.8
AAI	Ambon	1.34	288	P	Pn	19 53 11.7	-0.2
AAI				S	Sn	19 53 29.1	+0.6
FAKI	Fak Fak	3.02	67	P	Pn	19 53 35.4	+0.4
FAKI				S	Sn	19 54 09.0	-0.9
SWI	Sorong	3.69	29	P	Pn	19 53 44.6	+0.4
SWI				S	Sn	19 54 26.3	-0.2
LBMI	Labuha	3.97	330	P	Pn	19 53 48.4	+0.3
LBMI				S	Sn	19 54 34.3	+0.8
SANI	Sanana	4.04	300	P	Pn	19 53 49.1	+0.1
SANI				S	Sn	19 54 35.5	+0.5
WRA	Warramunga Arr	16.43	164	Pn	Pn	19 56 36.2	-1.5
	0.1nm,0.3s,baz=350,slow=13,SNR=2.6						
ASAR	Alice Springs	19.91	168	P	Pn	19 57 19.9	-0.3
	1.0nm,0.6s,baz=342,slow=9.7,SNR=20						
MKAR	Makanchi Array	65.54	326	P	P	20 03 31.0	+1.3
	0.4nm,0.4s,baz=111,slow=8.2,SNR=11						

IDC ***10*** *20:02:39.3±2.4, 4.°02S×129.°88E, h0^{km}, mb3.6/1, mb1 3.4/3, mb1mx3.2/32, mbtmp3.2/3, ML2.9/2, Error ellipse: s-maj=172.0km s-min=28.7km az=70.0*
DJA ***10*** *20:02:42.4±0.7, 4°S±7°×12°9E±°, h10^{km}, M3.1/7, MLv3.1/7*
ISC 10 20:02:43.7±1.1, **4.°01S**±0.°09×**129.°44E**±0.°07, **h36**^{km}, **n7,** σ1§**79**/9, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.83	322	P	Pn	20 02 57.8	-1.2
MSAI				S	Sn	20 03 08.4	-1.7
AAI	Ambon	1.28	285	P	Pn	20 03 05.2	+0.1
AAI				S	Sn	20 03 21.9	+0.9
FAKI	Fak Fak	3.01	69	P	Pn	20 03 29.5	+0.7
SWI	Sorong	3.62	30	P	Pn	20 03 36.5	-0.7
WRA	Warramunga Arr	16.54	164	Pn	Pn	20 06 30.6	-2.4
	0.0nm,0.3s,baz=348,slow=13,SNR=2.5						
ASAR	Alice Springs	20.01	168	P	P	20 07 13.0	-0.5
	0.1nm,0.3s,baz=350,slow=11,SNR=7.5						
MKAR	Makanchi Array	65.44	326	P	P	20 13 25.7	+2.7
	0.2nm,0.4s,baz=115,slow=8.2,SNR=10						

IDC ***10*** *20:27:18.6±0.6, 6.°28S×103.°73E, h0^{km}, mb4.6/21, mb1 4.7/22, mb1mx4.5/41, mbtmp4.6/22, ML4.1/1, MS3.8/11, Ms1 3.8/11, ms1mx3.4/38, Error ellipse: s-maj=23.1km s-min=11.8km az=43.0*
NEIC ***10*** *20:27:22.7±2.0, 6.°33S±0.°07×103.°63E±0.°07, h28^{km}±5^{km}, mb4.8/44, Error ellipse: s-maj=11.3km s-min=9.6km az=222.0*
DJA ***10*** *20:27:23.2±0.2, 6°S±2°×10°4E±°, h50^{km}±3^{km}, M4.5/49, mB5.0/19, mb4.7/49, MLv4.8/30, Mw(mB)4.4/19*
ISC 10 20:27:19.2±1.4, **6.°42S**±0.°04×**103.°75E**±0.°04, **h8**^{km}±8^{km}, **n201,** σ1§**76**/208, **mb4.8**/61, **MS4.0**/13, **2C-11D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.16	40	P	Pn	20 27 42.4	+0.7
KASI				S	Sn	20 27 57.4	-0.3
LWLI	Liwa	1.43	12	P	Pg	20 27 46.9	+0.3
LWLI				S	Sn	20 28 04.7	+0.1
BLSI	Bandar Lampung	1.82	55	P	Pb	20 27 52.4	-0.3
BLSI				S	Sn	20 28 14.2	+0.2
KLI	Kotabumi	1.90	35	P	Pb	20 27 54.5	+0.4
CGJI	Cibinong	1.94	96	P	Pb	20 27 54.4	-0.4
CGJI				S	Sn	20 28 17.2	+0.2
MDSI	Maura Dua	1.97	12	P	Pb	20 27 55.0	-0.3
MDSI				S	Sb	20 28 19.2	-0.8
KLSI		1.98	30	P	Pb	20 27 55.2	-0.2
SBJI	Serang	2.38	83	P	Pb	20 28 00.8	-1.6
LHSI	Lahat	2.59	355	P	Pb	20 28 03.9	-1.9
SKJI	Sukabumi	2.84	102	P	Pn	20 28 07.0	+2.1
TNG	Tangerang	2.89	85	P	Pb	20 28 08.8	-2.2
DBJI	Dramaga	2.98	93	P	Pn	20 28 09.6	+2.8
KSI	Kapahiang	2.98	337	P	Pn	20 28 07.9	+1.0
CBJI	Citeko	3.08	90	P	Pb	20 28 13.4	-0.8
CBJI				S	Sn	20 28 48.2	+3.0
CNJI	Cibinong	3.47	105	P	Pn	20 28 14.9	+1.4
CNJI				S	Sn	20 28 50.1	-4.7
MASI	Maura Aman, Be	3.59	335	P	Pn	20 28 16.9	+1.7
PMBI	Palembang	3.62	16	P	Pn	20 28 16.9	+1.4
PMBI	Palembang	3.62	16		Pn	20 28 16.5	+1.0
LEM	Lembang	3.86	96	Pn	Pn	20 28 21.9	+2.8
	12nm,0.3s,baz=191,slow=16,SNR=25						
LEM				Sn	Sb	20 29 12.0	-2.7
	14nm,0.3s,baz=63,slow=18,SNR=4.7						
LEM				LR	LR	20 30 15.5	
	comp=Z,1μm,19.9s,baz=288,slow=45						
LEM	Lembang	3.86	96	P	Pn	20 28 22.7	+3.6
XMI	Christmas Isla	4.44	155	P	Pn	20 28 24.8	-2.1
XMIS	Christmas Isla	4.45	155	Pn	Pn	20 28 24.2	-2.8
XMIS	Christmas Isla	4.45	155	P	Pn	20 28 24.7	-2.4
JMBI	JAMBI	4.76	359	P	Pn	20 28 34.1	+2.9
PPBI	Pangkal Pinang	4.85	29	P	Pn	20 28 35.4	+2.8
KRJI	Kerinci	4.87	332	P	Pn	20 28 35.1	+2.2
PPSI	Pulau Pagai	5.21	314	P	Pn	20 28 38.2	+0.8
	4.9nm4μm222nm,1.3s						
DSRI	Dabo	5.96	8	P	Pn	20 28 49.8	+2.0
	0.2nm501nm44nm,0.8s						
RGRI	Rengat	6.20	347	P	Pn	20 28 52.6	+1.6
PDSI	Padang	6.38	329	P	Pn	20 28 52.2	-1.4
	0.5nm42nm,0.4s						
YOGI	Yogyakarta	6.64	102	P	Pn	20 28 55.8	-1.3
	0.4nm100nm,1.0s						
PPI	Padang Panjang	6.80	330	P	Pn	20 29 02.3	+2.9
	0.3nm382nm32nm,0.5s						
UGM	Wanagama	6.88	103	P	Pn	20 29 04.2	+3.7
	0.9nm183nm,0.5s						
UGM	Wanagama	6.88	103	Pn	Pn	20 29 04.5	+4.1
UGM	Wanagama	6.88	103	P	Pn	20 29 04.9	+4.4
UWJI	Ujung Watu	7.15	90	P	Pn	20 29 06.0	+1.8
	0.2nm1μm50nm,0.7s						
BKNI	Bangkinang	7.23	338	P	Pn	20 29 02.9	-2.3
	0.6nm1μm49nm,1.0s						
BKNI	Bangkinang	7.23	338		Pn	20 29 02.4	-2.8
BKNI	Bangkinang	7.23	338	P	Pn	20 29 04.4	-0.8
WOJI	Wonogiri, Jawa	7.25	102	P	Pn	20 29 09.1	+3.5
	0.2nm22nm,0.9s						
PCJI	Pacitan	7.57	104	P	Pn	20 29 12.9	+2.9
	0.5nm136nm,0.7s						
MYKOM	Kota Tinggi	8.16	1		Pn	20 29 19.8	+1.8
BWJI	Bawean	8.87	87	P	Pn	20 29 24.2	-3.6
	142nm,1.2s						
COCO	West Island	8.91	229		Pn	20 29 28.9	+0.5
GMJI	Gumukmas	9.79	101	P	Pn	20 29 43.6	+3.2
	31nm,1.0s						
GSI	Gunungsitoli	9.84	321	Pn	Pn	20 29 39.5	-1.6
GSI	Gunungsitoli	9.84	321	P	Pn	20 29 40.4	-0.8
BLJI	Banyuglugur	9.86	98	P	Pn	20 29 43.6	+2.3
	34nm,0.8s						
STKI	Sintang	10.05	50	P	Pn	20 29 39.7	-4.2
	22nm,0.5s						
KMMI	Kalianget	10.16	94	P	Pn	20 29 44.4	-1.1
	37nm,1.4s						
ABJI	Asem Bagus	10.49	98	P	Pn	20 29 53.2	+3.2
	2μm213nm,0.8s						
JAGI	Jajag, Banyuwa	10.51	102	P	Pn	20 29 51.3	+1.0
	2μm99nm,1.0s						
JAGI	Jajag, Banyuwa	10.51	102	Pn	Pn	20 29 52.4	+2.1
JAGI	Jajag, Banyuwa	10.51	102	P	Pn	20 29 51.8	+1.5
SRBI	Singaraja	11.49	99	P	Pn	20 30 05.9	+2.2
	62nm,0.6s						
IGBI	Denpasar	11.54	103	P	Pn	20 30 05.7	+1.3
	42nm,0.8s						
DNP	Denpasar	11.58	102	P	Pn	20 30 06.2	+1.3
KBKI	Kotabaru	12.75	77	P	Pn	20 30 23.5	+2.5
	13nm,0.9s						
TWSI	Taliwang, Sumb	13.22	101	P	Pn	20 30 26.4	-0.9
	446nm15nm,0.7s						
PLAI	Plampang	14.10	101	P	Pn	20 30 37.3	-2.2
	60nm,0.9s						
KAPI	Kappang	15.98	86	LR	LR	20 37 57.9	
	comp=Z,217nm,18.9s,baz=270,slow=40						
SPSI	Sidrap Palu	16.14	82	P	Pn	20 30 59.7	-6.8
BKSI	Bulukumba	16.32	87	P	Pn	20 31 09.9	+1.0
	378nm45nm,1.0s						
TTSI	Tana Toraja	16.36	79	P	P	20 31 11.6	-0.7
	13nm,0.9s						
BNSI	Bone	16.40	84	P	P	20 31 11.7	-1.1
	565nm44nm,1.4s						
BSSI	Bau Bau, Buton	16.64	90	P	Pn	20 31 13.7	+0.7
	12nm,0.9s						
MPSI	Mapaga	17.46	68	P	P	20 31 26.1	+1.6
	14nm,0.8s						
EDFI	Ende, Flores	17.93	99	P	Pn	20 31 25.8	-3.5
	8.7nm,0.6s						
MMRI	Maumere	18.46	98	P	P	20 31 32.7	-2.9
	73nm,0.6s						
MMRI	Maumere	18.46	98	P	P	20 31 32.4	-3.1
MMRI				IAmb	IAmb	20 31 38.1	
	comp=Z,48nm,0.6s						
TOLI2	Tolitoli	18.57	67	P	Pn	20 31 37.8	+0.8
TOLI2	Tolitoli	18.57	67	P	Pn	20 31 38.8	+1.8
APSI	Ampana	18.67	74	P	Pn	20 31 39.2	+1.0
	comp=Z,510nmcomp=Z,60nm,1.1s						
MYLDM	Lahad Datu	18.70	52		Pn	20 31 39.7	+1.2
GIRL	Giralia	19.04	149	P	Pn	20 31 42.3	-0.3
MRSI	Marisa	19.40	70	P	P	20 31 45.7	-0.2
	comp=Z,630nmcomp=Z,64nm,0.6s						
BATI	Baumata	20.05	102	P	Pn	20 31 54.6	-0.2
	comp=Z,116nm,0.8s,baz=262,slow=1.5,SNR=37						
BATI				S	S	20 35 38.0	-0.9
	comp=Z,20nm,0.7s,baz=13,slow=20,SNR=4.1						
BATI	Baumata	20.05	102	P	P	20 31 53.7	+0.6
	comp=Z,1μmcomp=Z,82nm,0.9s						
GTOI	Gorontalo	20.46	71	P	P	20 31 58.1	+0.6
	comp=Z,8.8nm,0.8s						
SOEI	Soe	20.58	101	P	P	20 31 58.5	-0.4
	comp=Z,2μmcomp=Z,244nm,0.9s						
SOEI	Soe	20.58	101	P	P	20 31 58.5	-0.4
SOEI	Soe	20.58	101	P	P	20 31 59.7	+0.8
UBPT	Khong Chiam	21.63	5	P	P	20 32 08.1	-2.0
SANI	Sanana	22.59	80	P	P	20 32 18.8	-1.7
	comp=Z,6.1nm,0.9s						
FITZ	Fitzroy Crossi	24.30	120	P	P	20 32 39.2	+1.8
	comp=Z,2.8nm,0.7s,baz=263,slow=4.2,SNR=5.6						
FITZ				LR	LR	20 43 13.8	
	comp=Z,181nm,19.7s,baz=358,slow=39						
LBMI	Labuha	24.38	77	P	P	20 32 36.8	-1.4
	comp=Z,594nmcomp=Z,25nm,0.9s						
CM31	Chiang Mai Arr	25.17	349	P	P	20 32 44.2	-1.0
CM31				IAmb	IAmb	20 32 46.6	
	comp=Z,32nm,0.8s						
CMAR	Chiang Mai Arr	25.17	349	P	P	20 32 44.2	-1.1
	comp=Z,22nm,0.8s,baz=182,slow=9.0,SNR=142						
CMAR				PcP	PcP	20 36 20.6	+1.2
	comp=Z,0.3nm,0.3s,baz=210,slow=3.3,SNR=4.9						
CMAR				LR	LR	20 44 03.0	
	comp=Z,155nm,18.4s,baz=213,slow=40						
CMAR	Chiang Mai Arr	25.17	349	P	P	20 32 44.0	-1.3
CHTO	Chiang Mai	25.52	349	P	P	20 32 46.8	-1.6
CHTO				IAmb	IAmb	20 32 49.3	
	comp=Z,15nm,0.8s						
CHTO	Chiang Mai	25.52	349	P	P	20 32 48.7	+0.3
QIZ	Qiongzhong	25.99	13	P	P	20 32 54.6	+1.9
QIZ				S	S	20 37 24.5	+0.8
QIZ				LR	LR		
	comp=N,340nm,12.6s						
QIZ				LR	LR		
	comp=E,180nm,3.8s						
QIZ				LR	LR		
	comp=Z,370nm,17.7s						
KNRA	Kununurra	26.18	113	P	P	20 32 54.1	-0.4
KNRA				IAmb	IAmb	20 32 57.6	
	comp=Z,16nm,1.0s						
KNRA	Kununurra	26.18	113	P	P	20 32 54.9	+0.4
PALK	Pallekele	26.72	300	LR	LR	20 43 06.0	
	comp=Z,121nm,19.2s,baz=223,slow=36						
MTN	Manton Dam	27.72	105	P	P	20 33 08.5	+0.1
SIJI	Sorong	28.00	80	LR	LR	20 46 47.2	
	comp=Z,76nm,19.4s,baz=139,slow=42						
H01W3	Cape Leeuwin H	29.90	163	T	T	21 04 50.2	
	baz=340,slow=76,SNR=25						
H01W2	Cape Leeuwin H	29.91	163	T	T	21 04 51.0	
	baz=340,slow=76,SNR=33						
H01W1	Cape Leeuwin H	29.91	163	T	T	21 04 45.4	
	baz=340,slow=76,SNR=28						
H08S2	Diego Garcia H	31.05	266	T	T	21 06 07.8	
	baz=90,slow=75,SNR=61						
H08S3	Diego Garcia H	31.05	266	T	T	21 06 08.4	
	baz=90,slow=75,SNR=58						
H08S1	Diego Carcia H	31.06	266	T	T	21 06 09.1	
	baz=90,slow=75,SNR=50						
KMI	Kunming	31.37	358	⇑P	P	20 33 44.2	+3.3
KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WB0	Warramunga Arr	32.58	117	P	P	20 33 51.6	+0.2
WRA	Warramunga Arr	32.59	117	P	P	20 33 52.4	+0.8
	comp=Z,5.3nm,0.8s,baz=287,slow=12,SNR=56						
WRA				LR	LR	20 48 28.0	
	comp=Z,150nm,20.0s,baz=290,slow=39						
WRA	Warramunga Arr	32.59	117	P	P	20 33 51.9	+0.4
WRAB	Tennant Creek	32.60	117	P	P	20 33 52.8	+1.2
WRAB				IAmb	IAmb	20 33 53.3	
	comp=Z,7.7nm,0.7s						
WRAB	Tennant Creek	32.60	117	P	P	20 33 52.8	+1.2
WB2	Warramunga Arr	32.60	117	P	P	20 33 52.8	+1.2
WB2				IAmb	IAmb	20 33 53.3	
	comp=Z,8.1nm,0.7s						
WR0	Warramunga Arr	32.78	117	P	P	20 33 53.2	+0.1
WR0				IAmb	IAmb	20 33 55.0	
	comp=Z,7.8nm,0.8s						
ASAR	Alice Springs	33.67	124	P	P	20 34 02.2	+1.3
	comp=Z,4.9nm,0.9s,baz=301,slow=7.9,SNR=34						
ASAR				PcP	PcP	20 36 41.5	+0.5
	comp=Z,0.7nm,0.8s,baz=247,slow=1.9,SNR=4.0						
AS31	Alice Springs	33.67	124	P	P	20 34 00.5	-0.5
SHL	Shillong	33.82	341	P	P	20 33 58.3	-4.0
SHL				IAmb	IAmb	20 34 02.0	
	comp=Z,9.7nm,0.4s						
ODAN	Odare	36.69	335	eP	P	20 34 27.0	-0.1
	comp=Z,93nm,0.7s						
ENH	Enshi	36.90	8	P	P	20 34 27.1	-1.4
ENH				IAmb	IAmb	20 34 28.6	
	comp=Z,12nm,0.6s						
TAPN	Taplejung	36.99	336	eP	P	20 34 29.6	-0.1
	comp=Z,110nm,0.8s						
OOD	Oodnadatta	36.99	129	P	P	20 34 31.0	+1.6
RAMN	Ramite	37.10	334	eP	P	20 34 30.6	0.0
	comp=Z,42nm,0.4s						
LSA	Lhasa	37.90	342	P	P	20 34 37.1	-0.5
LSA				IAmb	IAmb	20 34 39.1	
	comp=Z,14nm,0.6s						
PKI	Pulchoki	38.16	333	eP	P	20 34 39.3	-0.4
	comp=Z,23nm,0.6s						
PKIN	Phulchoki	38.17	333	eP	P	20 34 39.3	-0.4
	comp=Z,23nm,0.6s						
GUN	Gumba	38.25	334	eP	P	20 34 40.6	+0.2
	comp=Z,145nm,0.5s						
DMN	Daman	38.33	333	eP	P	20 34 40.8	-0.2
KKN	Kakani	38.41	333	eP	P	20 34 41.5	-0.1
	comp=Z,59nm,0.6s						
GKN	Gorkha	38.88	333	eP	P	20 34 45.6	0.0
KOLN	Koldanda	39.17	331	eP	P	20 34 48.2	+0.2
	comp=Z,99nm,0.9s						
DANN	Dangsing	39.59	332	eP	P	20 34 51.7	+0.1
	comp=Z,149nm,0.7s						
PYUN	Piuthan	39.74	331	eP	P	20 34 52.8	0.0
	comp=Z,45nm,0.5s						
LCRK	Leigh Creek	40.22	131	P	P	20 34 58.1	+1.6

XAN	Xi'an	40.54	7	P	P	20 34 57.8	-1.3
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NJ2	Nanjing	40.88	20	eP	P	20 35 03.7	+1.8
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
PMG	Port Moresby	43.08	97	P	P	20 35 20.4	+0.2
	comp=Z,34nm,0.9s,baz=286,slow=3.4,SNR=7.9						
PMG	Port Moresby	43.08	97	P	P	20 35 20.1	-0.1
STKA	Stephens Creek	43.44	131	P	P	20 35 24.6	+1.7
	comp=Z,5.6nm,0.6s,baz=305,slow=7.6,SNR=27						
STKA	Stephens Creek	43.44	131	P	P	20 35 23.2	+0.3
STKA	Stephens Creek	43.44	131	P	P	20 35 24.6	+1.7
GTA	Gaotai	45.74	356	⇑P	P	20 35 40.8	-0.5
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,130nm,5.1s						
GTA				LR	LR		
	comp=N,170nm,14.9s						
GTA				LR	LR		
	comp=E,200nm,18.2s						
GTA				LR	LR		
	comp=Z,260nm,16.7s						
BTO	Baotou	47.15	7	eP	P	20 35 56.7	+4.5
BTO				S	S	20 42 48.5	+3.4
BTO				LR	LR		
	comp=N,1µm,12.5s						
BTO				LR	LR		
	comp=E,870nm,12.8s						
KSRS	Korea Array	49.13	26	P	P	20 36 07.6	+0.1
	comp=E,9.1nm,0.7s,baz=221,slow=7.7,SNR=19						
NIL	Nilore	49.23	326	P	P	20 36 07.4	-1.0
WMQ	Urumqi	52.08	345	eP	P	20 36 30.2	+0.5
WMQ				pP	pwP	20 36 43.6	+10
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,290nm,4.9s						
KSH	Kashi	52.43	333	P	P	20 36 30.7	-1.8
KSH				pP	pwP	20 36 45.0	+8.4
KSH				pmax	pmax		
	comp=Z,19nm,0.7s						
MAT	Matsushiro	53.55	34	P	P	20 36 38.8	-1.9
MJAR	Matsushiro Arr	53.55	35	P	P	20 36 38.8	-1.9
	comp=Z,0.7nm,0.5s,baz=209,slow=7.1,SNR=6.2						
MJAR	Matsushiro Arr	53.55	35	IAmb	IAmb	20 36 47.9	
	comp=Z,1.9nm,0.9s						
CN2	Changchun	53.70	19	eP	P	20 36 40.2	-1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SONM	Songino Array	54.07	2	P	P	20 36 44.4	-0.1
	comp=Z,14nm,0.8s,baz=179,slow=9.1,SNR=86						
SONM				LR	LR	21 02 59.6	
	comp=Z,112nm,18.9s,baz=206,slow=40						
SONM	Songino Array	54.07	2	P	P	20 36 44.1	-0.3
ULN	Ulaanbaatar	54.13	3	P	P	20 36 44.7	-0.2
ULN				IAmb	IAmb	20 36 45.8	
	comp=Z,9.4nm,0.8s						
DRK	Karamyk	54.39	330	P	P	20 36 46.6	-0.5
DRK				IAmb	IAmb	20 37 03.2	
	comp=Z,14nm,0.8s						
GAR	Garm	54.79	328	P	P	20 36 47.9	-1.9
CHGR	Chuyangaron	55.15	327	P	P	20 36 50.9	-1.6
BTK	Batken	55.32	330	P	P	20 36 53.2	-0.4
BTK				IAmb	IAmb	20 37 08.4	
	comp=Z,14nm,0.8s						
MDJ	Mudanjiang	55.87	22	P	P	20 36 59.4	+2.0
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,180nm,7.2s						
MK31	Makanchi Array	56.31	342	P	P	20 36 59.6	-0.9
MK31				IAmb	IAmb	20 37 01.4	
	comp=Z,5.9nm,0.7s						
MKAR	Makanchi Array	56.31	342	P	P	20 37 00.1	-0.4
	comp=Z,6.6nm,0.6s,baz=149,slow=8.4,SNR=125						
MKAR	Makanchi Array	56.31	342	P	P	20 36 59.5	-1.0
MAKZ	Makanchi	56.41	342	P	P	20 36 59.3	-1.9
MAKZ				IAmb	IAmb	20 37 15.3	
	comp=Z,11nm,1.4s						
HRA	Herat	56.42	319	P	P	20 37 02.1	+0.2
USRK	Ussuriysk Ar.	56.46	24	P	P	20 37 01.0	-0.6
	comp=Z,11nm,0.6s,baz=208,slow=5.5,SNR=23						
KURK	Kurchatov	60.91	342	P	P	20 37 31.8	-0.7
KURK				IAmb	IAmb	20 37 33.6	
	comp=Z,13nm,0.9s						
GEYT	Alibeck	61.22	320	P	P	20 37 35.2	+0.3
	comp=Z,4.9nm,0.8s,baz=185,slow=12,SNR=13						
GEYT	Alibeck	61.22	320	P	P	20 37 34.8	-0.1
GYA0B	ALIBECK ARRAY	61.22	320	P	P	20 37 34.4	-0.5
GYA0B				IAmb	IAmb	20 37 36.1	
	comp=Z,11nm,1.1s						
ZAA0	Zalesovo Array	62.22	347	P	P	20 37 39.7	-1.5
ZALV	Zalesovo Beam	62.22	347	P	P	20 37 40.6	-0.7
	comp=Z,6.6nm,0.3s,baz=152,slow=4.4,SNR=57						
ZALV	Zalesovo Beam	62.22	347	P	P	20 37 39.7	-1.5
BRVK	Borovoye	65.68	339	P	P	20 38 02.9	-1.1
BRVK				IAmb	IAmb	20 38 04.2	
	comp=Z,6.2nm,0.7s						
MAW	Mawson	67.01	196	LR	LR	21 02 42.5	
	comp=Z,114nm,18.3s,baz=58,slow=32						
ABKAR	Akbulak array	67.30	331	P	P	20 38 13.7	-0.8
ABKAR	Akbulak array	67.30	331	P	P	20 38 13.8	-0.6
ABKAR				IAmb	IAmb	20 38 15.0	
	comp=Z,27nm,1.2s						
GURO	Guroymak-BITLI	72.53	314	P	P	20 38 46.1	-1.0
KARS	Kars	72.64	316	P	P	20 38 48.0	+0.3
ARU	Arti	72.74	336	P	P	20 38 47.5	-0.2
ARU				IAmb	IAmb	20 38 48.7	
	comp=Z,13nm,1.0s						
ONI	Oni	73.22	318	P	P	20 38 51.3	+0.3
ONI				IAmb	IAmb	20 39 02.0	
	comp=Z,7.7nm,1.0s						
KBZ	Khabaz	74.08	319	P	P	20 38 56.5	+0.6
	comp=Z,8.8nm,0.9s,baz=136,slow=5.0,SNR=15						
NRIK	Noril'sk	76.42	354	P	P	20 39 07.8	-1.0
	comp=Z,2.6nm,0.4s,baz=167,slow=4.5,SNR=6.0						
NRIK	Noril'sk	76.42	354	P	P	20 39 07.3	-1.6
NRIK				IAmb	IAmb	20 39 08.8	
	comp=Z,9.8nm,1.1s						
BOSA	Boshof	76.87	242	P	P	20 39 12.3	-0.3
	comp=Z,1.0nm,0.5s,baz=39,slow=3.2,SNR=4.5						
BOSA				LR	LR	21 08 04.6	
	comp=Z,57nm,18.9s,baz=28,slow=32						
BRTR	Keskin Array B	79.05	312	P	P	20 39 24.4	0.0
	comp=Z,1.0nm,0.6s,baz=142,slow=6.6,SNR=5.1						
BRTR				LR	LR	21 16 45.6	
	comp=Z,86nm,18.0s,baz=38,slow=38						
KLMR	Klimovskoe	83.42	334	eP	P	20 39 47.2	+0.3
KLMR				AMP		20 39 48.9	
	comp=Z,27nm,1.4s						
SORM	Soroca	85.11	319	⇓P	P	20 39 56.6	+0.8
AKASG	Malin Array Be	85.25	322	P	P	20 39 56.6	+0.1
	comp=Z,1.3nm,0.5s,baz=91,slow=4.5,SNR=11						
VRI	Vrincioaia	85.62	317	⇓P	P	20 39 59.4	+1.0
PLOR	Plostina	85.67	317	⇓P	P	20 40 01.6	+2.8
TESR	Tescani	85.82	318	⇓P	P	20 40 00.2	+0.7
MLR	Muntele Rosu	86.06	316	⇓P	P	20 40 02.3	+1.5
PRAR	RASCA	86.30	318	⇓P	P	20 40 03.1	+1.3
BURAR	Bucovina Array	87.03	318	⇓P	P	20 40 07.7	+2.2
BUR08	Bucovina Ar. S	87.05	318	P	P	20 40 02.5	-3.1
BUR08				IAmb	IAmb	20 40 10.4	
	comp=Z,8.1nm,1.1s						
MNK	Minsk	87.06	326	i P	P	20 40 06.3	+1.0
	comp=E,2.0nm,0.9s						
MNK				i P	P	20 40 06.3	+1.0
	comp=N,13nm,1.1s						
MNK				i P	P	20 40 06.3	+1.0
	comp=Z,14nm,1.0s,baz=285						
MNK				i PP	PP	20 43 29.0	+0.3
MNK				i PPP	PPP	20 45 23.2	
MNK				i SKS	SKSac	20 50 31.9	-1.0
MNK				i S	ScS	20 50 51.5	-0.7
MNK				i SS	SS	20 56 24.8	-3.1
MNK				i SSS	SSS	20 59 57.7	
MNK				i LQ	LQ	21 13 21.7	
MNK				i LR	LR	21 19 13.9	
MNK				i LRM	MLR	21 20 12.9	
	comp=Z,23nm,6.5s						
MNK				i LRM	MLR	21 20 15.6	
	comp=E,23nm,15.2s						
MNK				i LRM	MLR	21 20 15.6	
	comp=N,127nm,11.6s						
HERR	Herculane	88.38	315	⇓P	P	20 40 12.7	+0.8
DRGR		88.53	317	⇓P	P	20 40 13.6	+0.9
BZS	Buzias	89.07	316	⇓P	P	20 40 15.8	+0.7
SIRR	Siria	89.15	317	⇓P	P	20 40 17.0	+1.5
KOLS	Kolonicke sedl	89.22	319	eP	P	20 40 17.8	+2.0
FINES	FINESS Array B	89.74	332	P	P	20 40 18.6	+0.8
	comp=N,7.6nm,0.9s,baz=117,slow=6.6,SNR=12						
ARCES	ARCESS Array B	91.88	340	P	P	20 40 28.6	+0.9
	comp=N,1.8nm,0.8s,baz=98,slow=5.4,SNR=5.9						
TXAR	Lajitas Array	145.53	45	PKPbc	PKPab	20 46 59.8	+0.6
	comp=N,7.5nm,0.7s,baz=281,slow=1.0,SNR=55						
TXAR	Lajitas Array	145.53	45		PKPdf	20 46 58.8	-0.1

IDC 10 20:31:44.2±6.3, 5°.95S×155°.25E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.5/32, mbtmp3.8/4, Error ellipse: s-maj=165.8km s-min=36.1km az=104.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.63	234	P	P	20 37 07.0	+0.3
	1.2nm,0.5s,baz=63,slow=11,SNR=9.0						
ASAR	Alice Springs	27.06	227	P	P	20 37 28.4	-0.4
	0.7nm,0.5s,baz=58,slow=9.2,SNR=7.9						
CMAR	Chiang Mai Arr	60.57	295	P	P	20 41 57.4	+0.3
	0.7nm,0.7s,baz=108,slow=5.1,SNR=5.3						
MKAR	Makanchi Array	82.79	319	P	P	20 44 10.2	-0.2
	0.6nm,0.6s,baz=103,slow=5.8,SNR=7.5						

IDC 10 20:35:33.6±0.7, 4°.37S×130°.28E, h0^{km}, mb3.4/1, mb1 3.5/4, mb1mx3.1/28, mbtmp3.3/4, ML3.1/3, MS3.1/1, Ms1 3.1/1, ms1mx2.5/24, Error ellipse: s-maj=33.2km s-min=4.8km az=96.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	3.61	16	Pn	Pn	20 36 31.1	+0.2
	4.9nm,0.3s,baz=266,slow=6.7,SNR=15						
SIJI				Sn	Sn	20 37 14.3	+0.1
	3.6nm,0.3s,baz=140,slow=23,SNR=6.9						
WRA	Warramunga Arr	15.98	166	Pn	Pn	20 39 18.5	-1.4
	0.0nm,0.3s,baz=347,slow=13,SNR=1.7						
ASAR	Alice Springs	19.50	170	P	P	20 40 02.8	+0.2
	0.1nm,0.3s,baz=347,slow=10,SNR=7.5						
MJAR	Matsushiro Arr	41.37	10	LR	LR	21 00 35.6	
	comp=Z,22nm,18.3s,baz=305,slow=36						
MKAR	Makanchi Array	66.20	326	P	P	20 46 22.2	-1.1
	0.2nm,0.4s,baz=120,slow=5.5,SNR=0.8						

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*GUC **10** 20:42:35.1±0.8, 20°.01S×69°.14W, h96^{km}±3^{km}, ML3.6*

*IDC **10** 20:42:36.6±0.3, 20°.13S×68°.77W, h125^{km}±7^{km}, mb3.2/1, mb1 3.3/4, mb1mx3.1/21, mbtmp3.7/4, MS2.6/1, Ms1 2.6/1, ms1mx2.3/8, Error ellipse: s-maj=4.6km s-min=1.7km az=93.0*

ISC 10 20:42:34.3±1.0**, 20°.02S**±0°.04×**69°.21W**±0°.08**, h98**^{km}±8^{km}**, n20, σ**1^{s}**19**/32**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.13	157	eP	Pn	20 42 48.9	+0.3
PB08				i S	Sn	20 42 59.8	+0.5
PB08				IAML		20 43 01.0	
	comp=E,2µm,0.2s						
PB11	IPOC Station P	0.49	301	eP	Pn	20 42 50.5	+0.4
PB11				i S	Sn	20 43 02.9	+1.1
HMBC	Humberstone	0.69	248	eP	Pn	20 42 51.8	+0.2
HMBC				i S	Sn	20 43 05.1	+0.6
HMBC				IAML		20 43 07.4	
	comp=E,2µm,0.7s						
TA02	Huaiquique	0.90	254	eP	Pn	20 42 54.0	+0.5
TA02				i S	Sn	20 43 09.3	+1.4
TA02				IAML		20 43 10.2	
	comp=N,3µm,0.1s						
PB01	IPOC Station P	1.05	194	eP	Pn	20 42 55.5	+0.2
PB01				i S	Sn	20 43 11.4	+0.4
PB01				IAML		20 43 12.2	
	comp=N,2µm,0.2s						
TA01	Diego Aracena	1.06	239	eP	Pn	20 42 55.4	+0.1
TA01				i S	Sn	20 43 11.5	+0.4
TA01				IAML		20 43 15.5	
	comp=E,873nm,0.3s						
PATCX	Punta Patache	1.19	228	eP	Pn	20 42 57.1	+0.2
PATCX				i S	Sn	20 43 14.5	+0.6
PATCX				IAML		20 43 18.3	
	comp=N,945nm,0.3s						
PB02	IPOC Station P	1.45	206	eP	Pn	20 43 00.3	+0.3
PB02				IAML		20 43 26.7	
	comp=E,3µm,0.2s						
PB12	IPOC Station P	1.75	323	eP	Pn	20 43 04.5	+0.8
PB12				i S	Sn	20 43 27.1	+1.0
PB12				IAML		20 43 32.2	
	comp=N,338nm,0.3s						
PB09	IPOC Station P	1.77	181	eP	Pn	20 43 04.8	+0.7
PB09				i S	Sn	20 43 28.2	+1.6
PB09				IAML		20 43 32.8	
	comp=E,412nm,0.4s						
PB07	IPOC Station P	1.81	200	eP	Pn	20 43 04.9	+0.3
PB07				i S	Sn	20 43 28.7	+1.1
PB07				IAML		20 43 36.5	
	comp=E,902nm,0.4s						
PB03	IPOC Station P	2.08	194	eP	Pn	20 43 08.2	+0.1
PB03				i S	Sn	20 43 34.7	+0.9
PB03				IAML		20 43 42.6	
	comp=N,373nm,0.2s						
PB04	IPOC Station P	2.47	201	eP	Pn	20 43 14.3	+1.2
PB04				IAML		20 43 53.6	
	comp=E,489nm,0.5s						
LVC	Limon Verde	2.59	174	P	Pn	20 43 16.5	+1.5
	comp=E,11nm,0.3s,baz=360,slow=10,SNR=88						
LVC				S	Sn	20 43 48.1	+2.0
	comp=E,13nm,0.3s,baz=334,slow=9.7,SNR=7.6						
PB06	IPOC Station P	2.70	187	eP	Pn	20 43 16.8	+0.6
PB06				i S	Sn	20 43 49.3	+1.1
PB06				IAML		20 43 56.3	
	comp=E,268nm,0.3s						
LPAZ	La Paz	3.85	16	P	Pn	20 43 35.1	+3.1
	comp=E,1.5nm,0.3s,baz=183,slow=7.5,SNR=21						
SIV	San Ignacio	8.71	64	P	Pn	20 44 35.5	-2.1
	comp=E,1.2nm,0.3s,baz=260,slow=9.5,SNR=18						
NNA	Nana	10.84	316	LR	LR	20 49 13.4	
	comp=E,29nm,20.0s,baz=345,slow=35						
TORD	Torodi Ar. Bea	77.13	71	P	P	20 54 15.8	-1.8
	comp=E,0.2nm,0.4s,baz=250,slow=4.0,SNR=2.2						
MKAR	Makanchi Array	144.59	34	PKP	PKPab	21 01 57.2	-0.9
	comp=E,0.7nm,1.0s,baz=323,slow=3.7,SNR=4.0						

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*ARE **10** 21:03:46±5.4, 15°.74S±0°.07×71°.82W±0°.10, h5^{km}±5^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=186.0*

*NEIC **10** 21:03:54.4±2.8, 15°.79S±0°.07×71°.19W±0°.08, h36^{km}±8^{km}, mb4.3/14, ML4.5(ARE), Error ellipse: s-maj=11.7km s-min=9.7km az=73.0*

*IDC **10** 21:03:57.0±2.4, 15°.74S×70°.95W, h68^{km}±22^{km}, mb3.7/5, mb1 3.9/9, mb1mx3.7/31, mbtmp4.0/9, MS3.5/7, Ms1 3.5/7, ms1mx3.3/22, Error ellipse: s-maj=24.6km s-min=19.8km az=53.0*

ISC 10 21:03:53.5±0.6**, 15°.71S**±0°.06×**71°.2W**±0°.1**, h35**^{km}**, n53, σ**1^{s}**39**/49**, mb4.3**/9**, MS3.8**/4**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	Chacalluta	2.77	163	Pn	Pn	21 04 36.1	+0.7
PB12	IPOC Station P	3.01	164	Pn	Pn	21 04 39.1	+0.4
LPAZ	La Paz	3.02	101	P	Pn	21 04 46.4	+7.1
	0.2nm,0.3s,baz=277,slow=14,SNR=9.2						
LPAZ				LR	LR	21 06 03.7	
	comp=Z,113nm,18.8s,baz=288,slow=46						
LPAZ	La Paz	3.02	101		Pn	21 04 40.4	+1.1
PB16	IPOC Station P	3.08	148		Pn	21 04 40.3	+0.2
PB11	IPOC Station P	4.29	160	Pn	Pn	21 04 57.1	+0.7
TA02	Huaiquique	4.65	167	Pn	Pn	21 05 00.2	-1.0
PB08	IPOC Station P	4.82	156	Pn	Pn	21 05 04.0	+0.1
TA01	Diego Aracena	4.92	169	Pn	Pn	21 05 02.7	-2.4
PATCX	Punta Patache	5.18	169	Pn	Pn	21 05 08.2	-0.4
PB01	IPOC Station P	5.55	163	Pn	Pn	21 05 13.1	-0.6
PB07	IPOC Station P	6.11	168	Pn	Pn	21 05 19.6	-1.9
PB09	IPOC Station P	6.33	163	Pn	Pn	21 05 25.3	+0.8
NNA	Nana	6.61	303	P	Pn	21 05 35.9	+7.7
	2.2nm,0.3s,baz=118,slow=12,SNR=4.3						
NNA	Nana	6.61	303		Pn	21 05 31.7	+3.5
PB04	IPOC Station P	6.66	172	Pn	Pn	21 05 26.3	-2.8
PB06	IPOC Station P	7.13	168	Pn	Pn	21 05 34.2	-1.2
LVC	Limon Verde	7.20	163	P	Pn	21 05 36.8	+0.2
	4.1nm,0.3s,baz=335,slow=8.6,SNR=21						
LVC				S	Sn	21 07 00.8	+3.5
	1.1nm,0.3s,baz=180,slow=15,SNR=6.0						
LVC				LR	LR	21 08 21.5	
	comp=Z,634nm,20.0s,baz=343,slow=37						
LVC	Limon Verde	7.20	163		Pn	21 05 36.4	-0.1
ETMB	Extrema	7.62	40		Pn	21 05 42.5	+0.4
PB15	IPOC Station P	7.63	168	Pn	Pn	21 05 40.2	-2.2
PB10	IPOC Station P	7.79	176	Pn	Pn	21 05 42.7	-1.7
SIV	San Ignacio	9.76	93	P	Pn	21 06 13.1	+1.6
	0.3nm,0.3s,baz=275,slow=14,SNR=8.5						
AC02	Maricunga	11.24	170	Pn	Pn	21 06 29.2	-2.9
CO03	El Pedregal	15.06	178	P	P	21 07 27.9	-0.9
ZON	Zonda	15.93	172	Pn	Pn	21 07 35.4	+0.3
ZON				IAmb	IAmb	21 07 40.2	
	comp=Z,22nm,1.2s						
CPUP	Villa Florida	16.70	131	LR	LR	21 15 26.8	
	comp=Z,119nm,19.3s,baz=320,slow=42						
MT02	Curacav	17.47	180		P	21 07 56.0	+0.7
MT02				IAmb	IAmb	21 07 56.5	
	comp=Z,34nm,1.3s						
MT01	Popeta	18.07	180		Pn	21 08 01.4	-0.4
PTGA	Pitinga	18.57	38	P	P	21 08 07.7	+0.1
	comp=Z,0.5nm,0.3s,baz=231,slow=14,SNR=5.7						
BO02	Sierra Bellavi	19.00	179	P	Pn	21 08 12.5	-0.7
BO02				IAmb	IAmb	21 08 15.7	
	comp=Z,15nm,0.9s						
ROSC	El Rosal	20.65	351	LR	LR	21 16 49.9	
	comp=Z,400nm,20.6s,baz=196,slow=37						
LC01	Cunco	23.10	181	P	P	21 08 56.2	-0.1
LC01				IAmb	IAmb	21 08 58.2	
	comp=Z,12nm,1.1s						
ZARC	Zaragoza, Cauc	23.34	351	P	P	21 08 58.7	-0.1
SDV	Santo Domingo	24.45	1	P	P	21 09 08.9	-0.5
SDV				IAmb	IAmb	21 09 23.4	
	comp=Z,7.4nm,0.8s						
PLCA	Paso Flores	24.94	179	P	P	21 09 14.0	+0.5
	comp=Z,8.4nm,0.9s,baz=3.3,slow=14,SNR=9.3						
PLCA				LR	LR	21 18 42.4	
	comp=Z,32nm,18.7s,baz=354,slow=36						
PLCA	Paso Flores	24.94	179		P	21 09 13.7	+0.2
PLCA				IAmb	IAmb	21 09 16.8	
	comp=Z,12nm,1.0s						
SJCC	San Jacinto, C	25.75	351	P	P	21 09 20.5	-0.6
SJCC				IAmb	IAmb	21 09 24.6	
	comp=Z,12nm,1.1s						
TXAR	Lajitas Array	54.66	325	P	P	21 13 18.8	-0.4
	comp=Z,0.6nm,0.8s,baz=158,slow=7.4,SNR=4.0						
Q56A	Snyder Ridge,	54.98	352	P	P	21 13 22.1	+0.9
SDCO	Great Sand Dun	62.18	330	P	P	21 14 12.1	+0.4
SDCO				IAmb	IAmb	21 14 12.9	
	comp=Z,2.4nm,0.8s						
PDAR	Pinedale Array	68.03	330	P	P	21 14 49.7	+0.1
	comp=Z,0.3nm,0.6s,baz=148,slow=9.4,SNR=3.1						
PDAR				LR	LR	21 47 47.8	
	comp=Z,133nm,18.2s,baz=298,slow=39						
PDAR	Pinedale Array	68.03	330	P	P	21 14 50.3	+0.7
BGU	Big Grassy Mou	68.39	327	P	P	21 14 53.2	+1.4
DBIC	Dimbokro	69.35	77	P	P	21 14 56.6	-1.5
	comp=Z,2.0nm,0.9s,baz=244,slow=4.6,SNR=3.1						
TORD	Torodi Ar. Bea	77.59	72	P	P	21 15 44.1	-2.5
	comp=Z,1.4nm,0.9s,baz=259,slow=6.0,SNR=7.0						
TORD	Torodi Ar. Bea	77.59	72	P	P	21 15 44.6	-2.0
BOSA	Boshof	88.12	119	LR	LR	21 51 56.9	
	comp=Z,41nm,20.6s,baz=294,slow=33						
WRA	Warramunga Arr	136.57	216	PKP	PKPdf	21 23 11.8	-1.1
	comp=Z,0.8nm,1.0s,baz=147,slow=1.8,SNR=4.7						
ZALV	Zalesovo Beam	137.50	21	PKP	PKPdf	21 23 14.3	+0.9
	comp=Z,1.1nm,0.7s,baz=289,slow=5.8,SNR=4.6						
MJAR	Matsushiro Arr	146.63	314	PKPbc	PKPbc	21 23 32.2	+0.4
	comp=Z,3.7nm,0.9s,baz=104,slow=1.9,SNR=5.5						
SONM	Songino Array	147.91	3	PKPbc	PKPbc	21 23 33.9	-1.3
	comp=Z,2.2nm,0.8s,baz=310,slow=1.5,SNR=10						
KSRS	Korea Array	152.51	326	PKPbc	PKiKP	21 23 47.5	+0.8
	comp=Z,4.6nm,1.1s,baz=50,slow=2.1,SNR=5.2						

NEIC 10 21:22:43.5±0.9**, 36°.46N**±0°.01×**96°.88W**±0°.02**, h5**^{km}±2^{km}**, mb_Lg2.8**/15**, Error ellipse: s-maj=3.0km s-min=2.8km az=71.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLOK	Blackwell	0.41	318	Pg	Pg	21 22 51.5	+0.1
BLOK				Sg	Sg	21 22 57.2	+0.4
OK034	N. Norfolk Rd.	0.47	163	Pg	Pg	21 22 52.3	-0.2
OK031	S. Brethren Rd	0.50	177		Pg	21 22 53.0	-0.2
OK031				Sg	Sg	21 23 01.0	+1.2
OK030	Cody Creek RV	0.53	172		Pg	21 22 53.5	-0.3
OK030				Sg	Sg	21 23 00.7	0.0
T35A	Sooner Cattle	0.54	32	Pg	Pg	21 22 54.0	0.0
T35A				Sg	Sg	21 23 01.5	+0.4
KAN13	South Haven SW	0.74	319	Pg	Pg	21 22 57.7	0.0
KAN13				Sg	Sg	21 23 07.8	+0.5
GC02	Grant County #	0.88	297	Pg	Pg	21 23 00.5	0.0
GC02				Sg	Sg	21 23 12.2	+0.3
CROK	Carrier	0.89	273		Pg	21 23 00.3	-0.3
KAN09	Caldwell North	0.90	319	Pg	Pg	21 23 00.7	-0.2
KAN09				Sg	Sb	21 23 13.4	-0.6
OK025	Westminster Rd	0.95	203	Pg	Pg	21 23 01.6	-0.2
KAN01	Argonia South	0.99	315	Pg	Pg	21 23 02.5	-0.1
KAN14	Manchester OK	1.01	300	Pg	Pg	21 23 02.8	-0.1
KAN05	Bluff City Nor	1.03	309	Pg	Pg	21 23 03.3	0.0
TUL1	Leonard	1.03	122	Pg	Pg	21 23 02.8	-0.5
KAN06	Argonia West S	1.12	315	Pg	Pg	21 23 04.6	-0.3
OK032	Salt Plains WL	1.13	288	Pg	Pg	21 23 04.5	-0.7
KAN08	Anthony NE Sta	1.17	312	Pg	Pn	21 23 06.7	+0.2
FNO	Franklin	1.27	200	Pg	Pg	21 23 06.5	-1.4
U32A	Winter Ranch,	1.72	268	Pn	Pn	21 23 13.8	-0.3
U38A	Gravette	2.01	90		Pn	21 23 18.9	+0.8
U38A				IAmb_Lg		21 23 47.2	
	comp=Z,27nm,0.8s						
X34A	Smith Ranch, M	2.01	203	Pn	Pn	21 23 18.8	+0.7
X37A	Clayton	2.23	146	Pn	Pn	21 23 20.5	-0.6
HHAR	Hobbs	2.38	93		Pn	21 23 23.6	+0.5
R32A	Long Quarter,	2.45	324	Pn	Pn	21 23 24.4	+0.3
LOOK	Love County	2.47	186	Pn	Pn	21 23 25.0	+0.5
KSU1	Kansas State U	2.65	5	Pn	Pn	21 23 28.7	+1.8
CBKS	Cedar Bluff	3.27	317	Pn	Pn	21 23 35.3	-0.2
X40A	Basin Creek Fa	3.84	120	IAmb_Lg		21 24 50.0	
	comp=Z,8.8nm,1.2s						
S44A	Carbondale	6.22	76	IAmb_Lg		21 26 06.8	
	comp=Z,11nm,0.7s						
SIUC	Southern Illin	6.25	76	IAmb_Lg		21 26 07.0	
	comp=Z,13nm,0.7s						
P43A	Skaggs, Pawnee	6.62	59	IAmb_Lg		21 26 30.0	
	comp=Z,11nm,0.8s						
T45A	Paducah	6.63	83	IAmb_Lg		21 26 28.7	
	comp=Z,28nm,0.7s						
WVT	Waverly	7.31	90	IAmb_Lg		21 26 53.5	
	comp=Z,17nm,1.2s						
O44A	Mansfield	7.57	58	IAmb_Lg		21 26 39.7	
	comp=Z,11nm,0.7s						

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*IDC **10** 21:27:43.2±1.1, 31°.82N×104°.61E, h0^{km}, mb4.0/8, mb1 4.0/11, mb1mx3.6/55, mbtmp3.9/11, ML3.7/3, MS2.8/2, Ms1 2.9/2, ms1mx2.6/40, Error ellipse: s-maj=33.6km s-min=19.0km az=62.0*

*BJI **10** 21:27:46.6±0.0, 32°.00N×104°.50E, h16^{km}, mb4.1/3, ML4.0/20, Ms3.6/6, Ms7 3.4/4*

*NEIC **10** 21:27:48.5±1.6, 32°.02N±0°.08×104°.5E±0°.1, h33^{km}±5^{km}, Error ellipse: s-maj=14.7km s-min=12.0km az=97.0*

ISC 10 21:27:46.0±0.5**, 32°.06N**±0°.04×**104°.48E**±0°.05**, h15**^{km}**, n33, σ**1^{s}**68**/39**, mb4.0**/10**, 1C-1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.30	209	⇑Pg	Pn	21 28 09.6	-0.1
CD2				Sg	Sg	21 28 29.5	+1.4
CD2				smax	smax		
	comp=N,5µm,0.9s						
CD2				smax	smax		
	comp=E,3µm,0.8s						
LZH	Lanzhou	4.05	353	Pn	Pn	21 28 51.8	+4.2
LZH				Pg	Pg	21 29 03.4	-0.2
LZH				Sn	Sb	21 29 42.3	-3.7
LZH				Sg	Sg	21 29 54.8	-1.3
LZH				smax	smax		
	comp=N,570nm,1.0s						
LZH				smax	smax		
	comp=E,480nm,1.0s						

LZH				LR	LR		
	comp=N,930nm,6.8s						
LZH				LR	LR		
	comp=Z,890nm,7.6s						
XAN	Xi'an	4.22	61	Pn	Pn	21 28 50.0	+0.2
XAN				Pg	Pb	21 29 00.6	+0.7
XAN				Sn	Sn	21 29 36.2	-2.6
XAN				Sg	Sb	21 29 52.6	+1.9
XAN				smax	smax		
	comp=N,330nm,0.6s						
XAN				smax	smax		
	comp=E,500nm,0.8s						
ENH	Enshi	4.65	111		Pn	21 28 57.1	+1.4
GYA	Guiyang	5.90	161	⇓Pn	Pn	21 29 12.8	-0.2
GYA				Sn	Sn	21 30 19.7	-0.7
GYA				smax	smax		
	comp=N,220nm,1.0s						
GYA				smax	smax		
	comp=E,300nm,1.4s						
GYA				LR	LR		
	comp=N,380nm,3.8s						
GTA	Gaotai	8.26	334	*e*P	Pn	21 29 47.4	+2.1
GTA				LR	LR		
	comp=N,150nm,12.4s						
GTA				LR	LR		
	comp=E,250nm,13.1s						
GTA				LR	LR		
	comp=Z,190nm,13.1s						
CM31	Chiang Mai Arr	14.44	202	Pn	Pn	21 31 09.7	-0.3
CMAR	Chiang Mai Arr	14.44	202	Pn	Pn	21 31 08.0	-2.0
	0.3nm,0.3s,baz=9.3,slow=10,SNR=7.8						
CMAR				LR	LR	21 36 09.4	
	comp=Z,28nm,20.0s,baz=346,slow=36						
CMAR	Chiang Mai Arr	14.44	202		Pn	21 31 09.5	-0.4
SONM	Songino Array	15.82	5	Pn	P	21 31 31.9	-0.2
	0.1nm,0.3s,baz=177,slow=10,SNR=11						
SONM	Songino Array	15.82	5		Pn	21 31 26.6	-1.7
ULN	Ulaanbaatar	15.91	6		Pn	21 31 29.5	+0.1
WMQ	Urumqi	17.66	316	*e*P	P	21 31 53.5	+1.1
TLY	Talaya	19.61	358	LR	LR	21 39 31.8	
	comp=Z,46nm,20.7s,baz=46,slow=36						
KSAR	Wonju Array Be	19.95	68	P	P	21 32 14.8	-2.6
KSRS	Korea Array	19.98	68	P	P	21 32 17.3	-0.5
	0.2nm,0.3s,baz=247,slow=12,SNR=2.5						
MKAR	Makanchi Array	22.48	317	P	P	21 32 47.5	+2.8
	0.6nm,0.6s,baz=119,slow=12,SNR=8.0						
MKAR	Makanchi Array	22.48	317	P	P	21 32 43.1	-1.6
ZAA0	Zalesovo Array	26.01	333	P	P	21 33 18.8	+0.6
ZAA0				IAmb	IAmb	21 33 23.1	
	comp=Z,2.3nm,0.8s						
ZALV	Zalesovo Beam	26.01	333	P	P	21 33 19.4	+1.2
	comp=Z,1.6nm,0.5s,baz=128,slow=9.6,SNR=8.0						
ZALV	Zalesovo Beam	26.01	333	P	P	21 33 18.6	+0.4
NIL	Nilore	26.24	282	P	P	21 33 19.9	-0.7
KURBB	Kurchatov Arra	26.68	322	P	P	21 33 26.1	+1.8
	comp=Z,0.3nm,0.6s,baz=124,slow=10,SNR=4.9						
GYA0B	ALIBECK ARRAY	38.12	292	P	P	21 35 03.8	-0.8
GYA0B				IAmb	IAmb	21 35 06.9	
	comp=Z,2.6nm,0.8s						
NRIK	Noril'sk	38.54	350	P	P	21 35 09.7	+2.1
	comp=Z,1.8nm,0.6s,baz=156,slow=9.7,SNR=4.4						
NRIK	Noril'sk	38.54	350	P	P	21 35 08.9	+1.3
NRIK				IAmb	IAmb	21 35 13.0	
	comp=Z,2.3nm,0.8s						
TIXI	Tiksi	41.75	11	P	P	21 35 34.8	+0.6
	comp=Z,0.9nm,0.7s,baz=214,slow=3.0,SNR=5.6						
TIXI	Tiksi	41.75	11	IAmb	IAmb	21 35 40.1	
	comp=Z,5.2nm,1.5s						
KNRA	Kununurra	52.87	150	P	P	21 37 00.0	-1.3
ARCES	ARCESS Array B	56.52	336	P	P	21 37 28.2	+1.0
	comp=Z,2.5nm,0.9s,baz=93,slow=6.1,SNR=5.7						
FINES	FINESS Array B	56.96	326	P	P	21 37 31.6	+1.2
	comp=Z,7.9nm,1.1s,baz=80,slow=7.8,SNR=2.2						
FINES	FINESS Array B	56.96	326	P	P	21 37 30.5	+0.1
WRA	Warramunga Arr	59.09	147	P	P	21 37 43.4	-2.5
	comp=Z,0.9nm,0.3s,baz=338,slow=7.4,SNR=22						

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*IDC **10** 21:32:59.1±1.3, 4.°08S×129.°62E, h0^{km}, mb3.8/2, mb1 3.7/6, mb1mx3.6/32, mbtmp3.6/6, ML3.4/4, Error ellipse: s-maj=44.7km s-min=21.3km az=88.0*

*NEIC **10** 21:33:00.9±2.8, 4.°13S±0.°05×129.°6E±0.°1, h10^{km}±1^{km}, mb4.4/5, Error ellipse: s-maj=18.9km s-min=8.0km az=281.0*

ISC 10 21:33:03.3±0.7**, 4.°14S**±0.°07×**129.°7E**±0.°1**, h36**^{km}**, n18, σ1^{s}05**/19**, mb3.9**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.85	65		Pn	21 33 48.1	+1.7
SIJI	Sorong	3.62	26	Pn	Pn	21 33 56.9	-0.1
	4.2nm,0.3s,baz=185,slow=23,SNR=34						
SIJI				Sn	Sn	21 34 39.7	+1.3
	2.7nm,0.3s,baz=197,slow=23,SNR=9.1						
SAUI	Saumlaki	4.15	157	Pn	Pn	21 34 04.9	+0.6
KNRA	Kununurra	11.50	184	Pn	Pn	21 35 47.3	+2.2
FITZ	Fitzroy Crossi	14.42	196	Pn	Pn	21 36 25.1	0.0
	0.1nm,0.3s,baz=36,slow=9.9,SNR=1.8						
WRA	Warramunga Arr	16.36	164	Pn	Pn	21 36 50.0	-0.4
	0.2nm,0.3s,baz=349,slow=11,SNR=17						
PSA00	Pilbara Seismi	19.78	208	P	P	21 37 30.9	+0.4
PSA00				IAmb	IAmb	21 37 45.4	
	comp=Z,9.1nm,1.1s						
AS31	Alice Springs	19.84	168	P	Pn	21 37 32.5	-0.6
ASAR	Alice Springs	19.84	168	P	Pn	21 37 33.0	-0.1
	comp=Z,0.2nm,0.3s,baz=350,slow=10,SNR=18						
ASAR	Alice Springs	19.84	168	P	P	21 37 31.4	+0.1
KSM	Kuching	20.13	286	P	P	21 37 34.8	+0.4
KSM				IAmb	IAmb	21 37 45.0	
	comp=Z,15nm,1.1s						
MQZ	McQueen’s Vall	54.66	143	P	P	21 42 27.1	-1.6
MSWZ	Moikau Station	55.09	139	P	P	21 42 31.3	-0.6
KNTN	Kanton	58.52	91	P	P	21 42 55.4	-1.3
KNTN				IAmb	IAmb	21 43 05.3	
	comp=Z,10nm,0.8s						
CASY	Casey	63.46	189	P	P	21 43 28.2	-1.0
MKAR	Makanchi Array	65.67	326	P	P	21 43 44.8	+0.7
	comp=Z,0.5nm,0.4s,baz=115,slow=7.8,SNR=14						
MKAR	Makanchi Array	65.67	326	P	P	21 43 44.3	+0.2
KURBB	Kurchatov Arra	69.91	328	P	P	21 44 11.5	+0.8
	comp=Z,0.8nm,0.7s,baz=128,slow=5.6,SNR=9.9						

KRSC 10 21:39:10.2±2.2**, 49.°42N×156.°62E, h42**^{km}±26^{km}**, ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	1.30	346	*e*P	Pn	21 39 31.8	-0.1
SKR				*e*S	Sn	21 39 48.6	+0.5
KDTR	Khodutka, Kamc	2.57	21	*e*P	Pn	21 39 53.0	+3.8
KDTR				*e*S	Sn	21 40 24.2	+5.0
ASAK	Asacha	3.08	15	*e*P	Pn	21 40 00.6	+4.3
MTVR	Mutnovka	3.22	17	*e*P	Pn	21 40 02.4	+4.0
MTVR				*e*S	Sn	21 40 41.0	+5.4
RUS	Russkaya	3.25	21	*e*P	Pn	21 40 01.6	+3.0
RUS				*e*S	Sn	21 40 40.4	+4.5
UGLR	Uglovaya	4.04	19	*e*P	Pn	21 40 14.8	+5.2
AVH	Avacha	4.07	18	*e*P	Pn	21 40 14.8	+4.8
KOK	Koryaka	4.08	17	*e*P	Pn	21 40 15.0	+4.9
SMAR	Somma	4.08	19	*e*P	Pn	21 40 14.9	+4.6
KRER	Koryakskii	4.11	18	*e*P	Pn	21 40 15.0	+4.3
SDLR	Sedlovina	4.12	19	*e*P	Pn	21 40 14.3	+3.7
NLC	Nalytchevo	4.13	23	*e*S	Sn	21 41 01.0	+3.4
SPN	Mys Shipunski	4.26	29	*e*P	Pn	21 40 17.5	+5.0
SPN				*e*S	Sn	21 41 06.9	+6.1
GNL	Ganaly	4.36	10	*e*P	Pn	21 40 18.6	+4.6
MKZ	Mys Kozlova	6.03	30	*e*P	Pn	21 40 39.4	+2.6
KBTR	Krutoberegovo	7.76	27	*e*P	Pn	21 41 04.9	+4.4

IDC 10 21:48:58.8±2.3**, 4.°46S×129.°48E, h0**^{km}**, mb3.4**/2**, mb1 3.6**/4**, mb1mx3.4**/36**, mbtmp3.5**/4**, ML3.3**/2**, Error ellipse: s-maj=190.7km s-min=27.9km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.10	163	Pn	Pn	21 52 44.8	-1.9
	0.1nm,0.3s,baz=346,slow=12,SNR=7.4						
ASAR	Alice Springs	19.56	168	P	Pn	21 53 29.2	-0.4
	0.2nm,0.3s,baz=350,slow=10,SNR=16						
MKAR	Makanchi Array	65.83	326	P	P	21 59 46.4	+0.2
	0.6nm,1.0s,baz=127,slow=6.6,SNR=2.2						
KURBB	Kurchatov Arra	70.09	328	P	P	22 00 12.6	-0.2
	0.3nm,0.6s,baz=130,slow=5.5,SNR=3.0						

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*ROM **10** 22:22:19.5±0.3, 42.°42N±0.°02×15.°18E±0.°02, h11^{km}, ML2.7/12, Error ellipse: s-maj=2.8km s-min=1.0km az=40.0*

ISC 10 22:22:18.8±1.3**, 42.°43N**±0.°03×**15.°22E**±0.°03**, h9**^{km}±11^{km}**, n44, σ0^{s}57**/61**, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRES	Fresagrandinar	0.62	222	P	Pg	22 22 30.5	-0.2
CAFR	Castel Frentan	0.68	253	P	Pg	22 22 32.4	+0.5
MELA	Melanico ??? S	0.73	185	P	Pg	22 22 32.6	-0.2
SGRT	San Giovanni R	0.78	150	P	Pg	22 22 34.7	+0.8
SGRT				S	Sb	22 22 46.0	+0.6
SGRT				AML	AML		
	comp=E,1830μm,0.6s						
SGRT				AML	AML		
	comp=N,1206μm,0.7s						
CIGN	Sant’Elia a Pi	0.81	197	P	Pg	22 22 33.8	-0.6
TRIV	Trivento	0.83	217	P	Pg	22 22 34.2	-0.5
LPEL	Lama dei Pelig	0.86	244	P	Pg	22 22 35.6	+0.3
LPEL				AML	AML		
	comp=N,570μm,0.2s						
LPEL				AML	AML		
	comp=E,566μm,0.2s						
MSAG	Monte S. Angel	0.89	144	P	Pg	22 22 35.1	-0.7
MSAG				S	Sb	22 22 48.8	+0.5
MSAG				AML	AML		
	comp=E,1106μm,0.7s						
MSAG				AML	AML		
	comp=E,1105μm,0.7s						
MSAG				AML	AML		
	comp=N,1720μm,0.3s						
MSAG				AML	AML		
	comp=N,1770μm,0.3s						
MSAG				AML	AML		
	comp=E,1165μm,0.7s						
GATE	Gambatesa	0.95	194	P	Pb	22 22 37.9	+0.5
BSSO	Busso	1.00	208	P	Pg	22 22 37.3	-0.7
BSSO				AML	AML		
	comp=N,105μm,1.6s						
BSSO				AML	AML		
	comp=E,110μm,0.6s						
TRTR	Tortoreto Alta	1.03	292	P	Pg	22 22 38.1	-0.5
T0110	Collepietro	1.09	259	P	Pb	22 22 39.4	-0.4
T0110				AML	AML		
	comp=N,449μm,0.6s						
T0110				AML	AML		
	comp=E,595μm,0.4s						
HVAR	Hvar	1.17	50	*e*Pg	Pn	22 22 40.8	-0.5
HVAR				Sg	Sb	22 22 57.0	+0.5
TERO	Teramo	1.21	280	P	Pb	22 22 40.1	-1.8
TERO				AML	AML		
	comp=N,130μm,0.4s						
TERO				AML	AML		
	comp=E,90μm,1.3s						
FAGN	Fagnano	1.22	263	P	Pb	22 22 41.0	-1.1
FAGN				AML	AML		
	comp=E,634μm,0.9s						
FAGN				AML	AML		
	comp=N,720μm,0.4s						
CERA	Filignano	1.23	227	P	Pb	22 22 41.6	-0.5
CERA				AML	AML		
	comp=E,166μm,1.6s						
CERA				AML	AML		
	comp=N,159μm,1.0s						
OFFI	Offida	1.24	294	P	Pg	22 22 43.4	+0.9
ZIRJ	Zirje	1.26	14	*e*Pn	Pn	22 22 41.9	-0.7
ZIRJ				Sg	Sb	22 22 58.7	-0.3
LSTV	Lastovo	1.28	74	*e*Pn	Pn	22 22 42.2	-0.6
LSTV				Sg	Sb	22 22 59.5	-0.1
VVLD	Villa Vallelon	1.31	245	AML	AML		
	comp=E,72μm,1.3s						
VVLD				AML	AML		
	comp=N,55μm,1.0s						
CAMP	Campotosto	1.34	275	P	Pn	22 22 43.6	-0.2
SMA1	SAN MARTINO	1.41	279	P	Pn	22 22 44.4	-0.3
PTQR	Pietraquaria	1.41	254	P	Pn	22 22 44.6	-0.2
AQT1	Arquata del Tr	1.46	284	P	Pn	22 22 45.8	+0.4
MORI	Morici	1.48	14	*e*Pn	Pn	22 22 45.1	-0.4
MORI				Sn	Sn	22 23 05.7	+0.7
RM33	Pellescritta (	1.48	274	P	Pn	22 22 45.6	-0.2
RM33				AML	AML		
	comp=N,146μm,1.4s						
RM33				AML	AML		
	comp=E,208μm,1.2s						
DUGI	Dugi Otok	1.56	356	*e*Pn	Pn	22 22 46.3	-0.4
DUGI				Sn	Sn	22 23 07.5	+0.4
FIAM	Fiamignano	1.57	265	P	Pn	22 22 47.3	+0.4
FIAM				AML	AML		
	comp=N,122μm,0.6s						
FIAM				AML	AML		
	comp=E,146μm,0.9s						
MAKA	Makarska	1.57	57	*e*Pn	Pn	22 22 46.3	-0.6
MAKA				Sn	Sn	22 23 08.2	+0.8
RICI	Ricice	1.76	52	*e*Pn	Pn	22 22 48.9	-0.5
RICI				Sn	Sn	22 23 12.0	0.0
STON	Ston	1.88	76	*e*Pn	Pn	22 22 51.0	-0.1
STON				Sn	Sn	22 23 15.1	+0.2
ASSB	Assisi San Ben	1.98	289	P	Pn	22 22 53.4	+0.9
ASSB				AML	AML		
	comp=E,88μm,1.4s						
ASSB				AML	AML		
	comp=N,76μm,1.4s						
SSFR	Montelago di S	2.05	300	P	Pn	22 22 53.6	+0.1
SSFR				AML	AML		
	comp=N,85μm,1.5s						
SSFR				AML	AML		
	comp=E,96μm,0.3s						
UDBI	Udbina	2.13	11	*e*Pn	Pn	22 22 55.2	+0.6
UDBI				Sn	Sn	22 23 21.7	+0.5
NVLJ	Novalja	2.14	353	*e*Pn	Pn	22 22 54.6	-0.1
NVLJ				Sn	Sn	22 23 21.6	+0.2
RABC	Rab	2.34	352	*e*Pn	Pn	22 22 57.3	-0.1
RABC				Sn	Sn	22 23 26.2	0.0
PE3	Peglio	2.36	303	AML	AML		
	comp=N,170μm,0.6s						
PE3				AML	AML		
	comp=E,3μm,1.3s						
PLIT	Plitvice	2.46	7	*e*Pn	Pn	22 22 59.5	+0.3
PLIT				Sn	Sn	22 23 29.7	+0.3
BRJN	Brijuni	2.69	337	*e*Pn	Pn	22 23 01.9	-0.4
BRJN				Sn	Sn	22 23 34.6	-0.3
SMRN	Sveta Marina	2.71	344	*e*Pn	Pn	22 23 02.7	+0.2
SMRN				Sn	Sn	22 23 34.6	-0.8
OZLJ	Ozalj	3.19	3	*e*Pn	Pn	22 23 09.4	+0.4
OZLJ				Sn	Sn	22 23 46.7	-0.4
MOSL	Moslavina	3.37	19	*e*Pn	Pn	22 23 12.2	+0.6
MOSL				Sn	Sn	22 23 51.3	-0.3
OBKA	Obir	4.10	354	*i* Pn	Pn	22 23 22.1	+0.3
	comp=E,0.7nm,0.2s						
OBKA				*e*Sn	Sg	22 24 31.6	+1.1
	comp=E,9.8nm,0.7s						
FETA	Feichten	5.59	327	*e*Sn	Sn	22 24 47.1	+0.4
	comp=E,1.6nm,0.4s						

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*KRNET **10** 22:22:43.6±0.1, 41.°66N×74.°70E, h17^{km}, mb3.5*

*SOME **10** 22:22:44.2, 41.°68N×74.°72E, h10^{km}*

*KNET **10** 22:22:45.0±0.6, 41.°73N×74.°61E, h18^{km}±1^{km}, ml2.8, Error ellipse: s-maj=3.9km s-min=2.4km az=133.0*

*NNC **10** 22:22:46.2±1.4, 41.°70N×74.°78E, h0^{km}, mb4.0, mpv3.8, Error ellipse: s-maj=12.8km s-min=5.5km az=172.0*

ISC 10 22:22:44.3±1.2**, 41.°69N**±0.°03×**74.°72E**±0.°02**, h8**^{km}±10^{km}**, n71, σ1^{s}19**/115**, 43C-16D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	Uchtor	0.56	345	⇓P	Pg	22 22 55.3	+0.1
	312nm,0.1s,SNR=62						
UCH				⇑S	Sg	22 23 03.7	+1.0
	402nm,0.2s						
UCH	Uchtor	0.56	345	⇓*i*P	Pg	22 22 55.2	-0.1
	baz=47						
UCH				⇓*i*S	Sg	22 23 03.5	+0.8
	baz=47						
AML	Almayashu	0.88	301	⇓P	Pb	22 23 00.3	-1.8
	102nm,0.1s,SNR=517						
AML				⇑S	Sb	22 23 12.2	-2.1
	122nm,0.2s						
AML	Almayashu	0.88	301	⇑*i*P	Pb	22 23 00.3	-1.8
	baz=3.0						
AML				⇑*i*S	Sb	22 23 12.8	-1.4
	baz=3.0						
KBK	Karagaybulak	0.99	10	P	Pb	22 23 03.1	-0.6
	252nm,0.1s,SNR=21						
KBK				⇓S	Sg	22 23 16.9	+0.9
	318nm,0.1s						
KBK	Karagaybulak	0.99	10	⇑*i*P	Pb	22 23 02.9	-0.9
	baz=10.0						
KBK				⇑*i*S	Sg	22 23 17.0	+0.9
	baz=10.0						
FRU1	Bishkek	1.13	357	⇑*i*P	Pb	22 23 05.9	-0.2
	baz=57						
FRU1				⇑*i*S	Sg	22 23 22.1	+1.6
	baz=57						
EKS2	Erkin-Say	1.20	325	⇓P	Pn	22 23 06.5	-1.1
	17nm,0.1s,SNR=155						
EKS2				⇓S	Sb	22 23 22.2	-0.9
	31nm,0.1s						
EKS2	Erkin-Say	1.20	325	⇑*i*P	Pn	22 23 06.4	-1.1
	baz=26						
EKS2				⇑*i*S	Sn	22 23 23.2	-0.9
	baz=26						
BOOM	Boomskoye usch	1.22	48	⇑*i*P	Pn	22 23 07.0	-0.8
	baz=48						
BOOM				⇑*i*S	Sg	22 23 24.1	+0.7
	baz=48						
ULHL	Ulahol	1.27	63	⇑*i*P	Pn	22 23 07.8	-0.7
	baz=62						
ULHL				⇑*i*S	Sg	22 23 25.5	+0.4
	baz=62						
CHMS	Chumysh	1.31	1	⇓P	Pb	22 23 08.9	-0.3
	21nm,0.1s,SNR=52						
CHMS				⇑S	Sg	22 23 27.1	+0.5
	60nm,0.2s						
CHMS	Chumysh	1.31	1	⇓*i*P	Pn	22 23 08.7	-0.3
	baz=2.0						
CHMS				⇓*i*S	Sg	22 23 26.9	+0.4
	baz=2.0						
MRKS	Merke	1.53	314	*e*P	Pb	22 23 12.3	-0.7
	61nm,0.2s						
MRKS				*e*S	Sb	22 23 32.6	-0.1
	105nm,0.2s						
MRKS	Merke	1.53	314	P	Pb	22 23 12.3	-0.7
	61nm,0.2s						
MRKS				S	Sb	22 23 32.6	-0.1
	105nm,0.2s						
USP	Ospenovka	1.59	354	⇓P	Pb	22 23 13.8	-0.1
	42nm,0.1s,SNR=180						
USP				⇑S	Sg	22 23 35.3	-0.1
	74nm,0.2s						
USP	Ospenovka	1.59	354	⇑*i*P	Pb	22 23 13.6	-0.3
	baz=55						
USP				⇑*i*S	Sg	22 23 35.3	-0.1
	baz=55						
KST	Kastek	1.64	34	*e*P	Pg	22 23 15.8	+0.1
	16nm,0.1s						
KST				*e*S	Sg	22 23 37.9	+0.8
	97nm,0.3s						
KST	Kastek	1.64	34	P	Pg	22 23 15.8	+0.1
	16nm,0.1s						
KST				S	Sg	22 23 37.9	+0.8
	97nm,0.3s						
DGS	Degeres	1.74	26	*e*P	Pg	22 23 17.6	-0.1
	42nm,0.3s						
DGS				*e*S	Sg	22 23 41.7	+1.4
	114nm,0.4s						
DGS	Degeres	1.74	26	P	Pg	22 23 17.6	-0.1
	42nm,0.3s						
DGS				S	Sg	22 23 41.7	+1.4
	114nm,0.4s						
SGDS	Sogindy	1.77	358	P	Pb	22 23 17.3	+0.3
	30nm,0.1s						
SGDS				S	Sg	22 23 41.0	-0.1
	68nm,0.3s						
MNAS	Manas	1.83	297	⇑*i*P	Pb	22 23 17.4	-0.7
	baz=98						
MNAS				⇑*i*S	Sb	22 23 42.2	+0.9
	baz=98						
OHH	Osh	1.86	232	⇑*i*P	Pn	22 23 17.2	+0.6
	baz=33						
OHH				⇑*i*S	Sb	22 23 42.0	-0.1
	baz=33						
KDJ	Kajisay	1.89	76	⇑*i*P	Pb	22 23 18.9	-0.3
	baz=75						
KDJ				⇑*i*S	Sg	22 23 44.7	-0.4
	baz=75						
SFK	Sufi-Kurgan	1.91	209	⇑*e*P	Pn	22 23 18.2	+0.9
	baz=9.0						
SFK				⇑*e*S	Sb	22 23 43.4	-0.1
	baz=9.0						
MTBS	Maitube	1.92	41	*e*P	Pg	22 23 21.0	-0.1
	34nm,0.2s						
MTBS				*e*S	Sg	22 23 46.7	+0.7
	114nm,0.4s						
MTBS	Maitube	1.92	41	P	Pg	22 23 21.0	-0.1
	34nm,0.2s						
MTBS				S	Sg	22 23 46.7	+0.7
	114nm,0.4s						
KRBS	Karabastau	2.13	19	*e*P	Pb	22 23 23.9	+0.7
	15nm,0.1s						
KRBS				*e*S	Sg	22 23 52.3	-0.4
	196nm,0.3s						
KRBS	Karabastau	2.13	19	Pg	Pb	22 23 23.9	+0.7
	15nm,0.1s						
KRBS				Lg	Lg	22 23 52.3	
	196nm,0.3s						
TNSS	Tian-Shan	2.14	50	*e*P	Pg	22 23 25.1	-0.1
	14nm,0.3s						
TNSS				*e*S	Sg	22 23 53.9	+1.0
	36nm,0.2s						
TNSS	Tian-Shan	2.14	50	Pg	Pg	22 23 25.1	-0.1
	14nm,0.3s						
TNSS				Lg	Lg	22 23 53.9	
	36nm,0.2s						
AAA	Alma-Ata	2.23	46	*e*P	Pg	22 23 26.2	-0.8
	39nm,0.2s						
AAA				*e*S	Sg	22 23 56.6	+0.7
	140nm,0.3s						
AAA	Alma-Ata	2.23	46	Pg	Pg	22 23 26.2	-0.8
	39nm,0.2s						
AAA				Lg	Lg	22 23 56.6	
	140nm,0.3s						
KNDC	Almaty	2.26	47	⇑Pg	Pb	22 23 26.4	+1.0
	38nm,0.6s						
KNDC				⇑Lg	Lg	22 23 57.6	
	102nm,0.5s						
MDOK	Medeo	2.27	49	*e*P	Pb	22 23 26.3	+0.6
	9.6nm,0.3s						
MDOK				*e*S	Sg	22 23 57.5	+0.2
	58nm,0.3s						
MDOK	Medeo	2.27	49	Pg	Pb	22 23 25.9	+0.3
	23nm,0.6s						
MDOK				Lg	Lg	22 23 58.1	
	65nm,0.6s						
MDOK	Medeo	2.27	49	Pg	Pb	22 23 26.3	+0.6
	9.6nm,0.3s						
MDOK				Lg	Lg	22 23 57.5	
	58nm,0.3s						
TARG	Taragay, Kyrgy	2.31	88	⇑*i*P	Pb	22 23 24.6	-1.9
	baz=87						
TARG				⇑*i*S	Sb	22 23 54.7	-0.7
	baz=87						
KOTS	Kotyrbulak	2.35	48	*e*P	Pg	22 23 29.1	-0.3
	27nm,0.2s						
KOTS				*e*S	Sg	22 24 00.9	+1.0
	94nm,0.5s						
KOTS	Kotyrbulak	2.35	48	Pg	Pg	22 23 29.1	-0.3
	27nm,0.2s						
KOTS				Lg	Lg	22 24 00.9	
	94nm,0.5s						
ANVS	Anan'yevo	2.45	62	⇓*i*P	Pb	22 23 26.6	-2.1
	baz=62						
ANVS				⇓*i*S	Sb	22 23 58.1	-1.1
	baz=62						
KTBS	Karatobe	2.49	35	*e*P	Pb	22 23 30.6	+1.3
	14nm,0.2s						
KTBS				*e*S	Sg	22 24 03.7	-0.6
	154nm,0.5s						
KTBS	Karatobe	2.49	35	Pg	Pb	22 23 30.7	+1.3
	14nm,0.2s						
KTBS				Lg	Lg	22 24 03.7	
	154nm,0.5s						
TRKS	Terek-Say	2.69	268	⇑*e*P	Pn	22 23 29.1	+1.1
	baz=67						
TRKS				⇑*i*S	Sn	22 24 02.3	+1.5
	baz=67						
DZA	Taraz	2.79	297	*e*P	Pb	22 23 34.8	+0.4
	30nm,0.2s						

DZA				*e*S	Sb	22 24 10.8	+2.2
	153nm,0.3s						
DZA	Taraz	2.79	297	Pg	Pb	22 23 34.8	+0.4
	30nm,0.2s						
DZA				Lg	Lg	22 24 10.9	
	153nm,0.3s						
PRZ	Przheval'sk	2.86	73	⇑*i*P	Pn	22 23 32.1	+1.8
	baz=72						
PRZ				⇑*i*S	Sb	22 24 07.8	-3.0
	baz=72						
SATY	Saty	3.06	62	*e*P	Pb	22 23 40.6	+1.5
	3.5nm,0.2s						
SATY				*e*S	Sg	22 24 21.3	-1.2
	46nm,0.3s						
SATY	Saty	3.06	62	Pg	Pb	22 23 40.6	+1.5
	3.5nm,0.2s						
SATY				Lg	Lg	22 24 21.3	
	46nm,0.3s						
KURS	Kuram	3.12	54	*e*P	Pb	22 23 42.0	+1.9
	14nm,0.7s						
KURS				*e*S	Sg	22 24 23.2	-1.4
	16nm,0.9s						
KURS	Kuram	3.12	54	Pg	Pb	22 23 42.0	+1.9
	14nm,0.7s						
KURS				Lg	Lg	22 24 23.2	
	16nm,0.9s						
ZHN	Zhinishke	3.13	60	*e*P	Pb	22 23 41.2	+1.0
	5.1nm,0.2s						
ZHN				*e*S	Sg	22 24 22.6	-2.1
	47nm,0.2s						
ZHN	Zhinishke	3.13	60	Pg	Pb	22 23 41.2	+1.0
	5.1nm,0.2s						
ZHN				Lg	Lg	22 24 22.6	
	47nm,0.2s						
BTK	Batken	3.37	242	⇑*e*P	Pn	22 23 38.6	+1.3
	baz=43						
BTK				⇑*e*S	Sn	22 24 18.7	+1.1
	baz=43						
ARXS	Arharly	3.41	41	*e*P	Pb	22 23 46.0	+1.1
	6.5nm,0.3s						
ARXS				*e*S	Sg	22 24 31.2	-2.4
	53nm,0.4s						
ARXS	Arharly	3.41	41	Pg	Pb	22 23 46.0	+1.1
	6.5nm,0.3s						
ARXS				Lg	Lg	22 24 31.2	
	53nm,0.4s						
KK02	Karatay Array	3.42	296	⇑Pn	Pb	22 23 44.7	-0.5
	3.8nm,0.3s						
KK02				⇓Sn	Sb	22 24 28.9	+2.0
	13nm,0.4s						
UZB	Uzynbulak	3.51	64	*e*P	Pb	22 23 47.9	+1.2
	7.8nm,0.3s						
UZB				*e*S	Sg	22 24 33.9	-3.0
	25nm,0.4s						
UZB	Uzynbulak	3.51	64	Pg	Pb	22 23 47.9	+1.2
	7.8nm,0.3s						
UZB				Lg	Lg	22 24 33.9	
	25nm,0.4s						
IUG	Iuzhnay	3.53	279	*e*P	Pb	22 23 49.4	+2.4
	188nm,0.4s						
IUG				*e*S	Sg	22 24 35.6	-1.9
	59nm,0.5s						
IUG	Iuzhnay	3.53	279	Pg	Pb	22 23 49.4	+2.4
	188nm,0.4s						
IUG				Lg	Lg	22 24 35.6	
	59nm,0.5s						
BLB	Baldybastay	3.67	48	Pg	Pb	22 23 51.2	+1.7
	19nm,0.5s						
BLB				Lg	Lg	22 24 38.8	
	28nm,0.3s						
BRLS	Borolday	3.86	292	*e*P	Pg	22 23 56.0	-2.1
	3.3nm,0.2s						
BRLS				*e*S	Sg	22 24 47.0	-1.2
	16nm,0.2s						
BRLS	Borolday	3.86	292	Pg	Pg	22 23 56.0	-2.1
	3.3nm,0.2s						
BRLS				Lg	Lg	22 24 47.0	
	16nm,0.2s						
PDGK	Podgornoye	3.89	63	Pg	Pb	22 23 54.8	+1.6
	1.3nm,0.3s						
PDGK				Lg	Lg	22 24 45.2	
	8.8nm,0.4s						
PDGK	Podgornoye	3.89	63	⇑Pg	Pb	22 23 54.2	+0.9
	4.7nm,0.8s						
PDGK				⇓Lg	Lg	22 24 46.0	
	17nm,0.7s						
MAKZ	Makanchi	7.31	43	⇓Pn	Pn	22 24 37.8	+6.5
	0.5nm,0.7s						
MAKZ				⇑Lg	Lg	22 26 38.5	
	2.2nm,0.8s						
MK31	Makanchi Array	7.46	44	⇑Pn	Pn	22 24 39.0	+5.6
	0.8nm,0.7s,baz=225,slow=15,SNR=5.6						
MK31				⇑Lg	Lg	22 26 39.2	
	1.5nm,0.7s,baz=224,slow=28						
KURBB	Kurchatov Arra	9.32	15	⇑Lg	Lg	22 27 43.8	
	9.5nm,0.8s						
KURK	Kurchatov	9.43	15	⇑Lg	Lg	22 27 48.3	
	6.0nm,0.8s						

IDC 10 22:25:54.4±2.2**, 4°.23S×128°.81E, h0^{km}, mb3.6**/1**, mb1 3.4**/3**, mb1mx3.3**/26**, mbtmp3.3**/3**, ML2.9**/2**, Error ellipse: s-maj=171.0km s-min=28.7km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.52	161	Pn	Pn	22 29 47.2	-0.5
	0.0nm,0.3s,baz=343,slow=13,SNR=2.5						
ASAR	Alice Springs	19.94	166	P	P	22 30 28.4	+0.2
	0.1nm,0.3s,baz=352,slow=10,SNR=6.1						
MKAR	Makanchi Array	65.28	327	P	P	22 36 38.2	0.0
	0.3nm,0.4s,baz=113,slow=7.8,SNR=11						

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*IDC **10** 22:33:04.7±2.0, 4°.46S×145°.72E, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.4/25, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=116.9km s-min=28.5km az=124.0*

*NEIC **10** 22:33:05.8±1.7, 4°.0S±0°.1×145°.4E±0°.2, h10^{km}±1^{km}, mb4.0/12, Error ellipse: s-maj=27.7km s-min=20.1km az=270.0*

ISC 10 22:33:09.3±0.8**, 4°.1S**±0°.1×**145°.3E**±0°.1**, h35^{km}, n17, σ1$\overset{s}{.}$11**/17**, mb4.1**/6**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COEN	Coen	10.01	192	Pn	Pn	22 35 32.1	+1.5
WB0	Warramunga Arr	18.86	214	P	Pn	22 37 27.6	+0.4
WB0				IAmb	IAmb	22 37 43.5	
	comp=Z,2.6nm,1.1s						
WR0	Warramunga Arr	18.93	213	P	Pn	22 37 27.4	-0.7
WRAB	Tennant Creek	19.01	213	P	Pn	22 37 28.7	-0.4
WRAB				IAmb	IAmb	22 37 29.4	
	comp=Z,2.4nm,0.8s						
WB2	Warramunga Arr	19.02	213	P	Pn	22 37 29.0	-0.2
WRA	Warramunga Arr	19.03	213	P	P	22 37 28.0	-0.4
	comp=Z,0.3nm,0.3s,baz=36,slow=11,SNR=30						
WRA	Warramunga Arr	19.03	213	P	Pn	22 37 28.4	-0.9
KNRA	Kununurra	19.93	234	P	Pn	22 37 39.5	-0.6
KNRA				IAmb	IAmb	22 37 58.4	
	comp=Z,3.3nm,0.8s						
ASAR	Alice Springs	22.34	209	P	P	22 38 03.3	-1.0
	comp=Z,0.8nm,0.4s,baz=44,slow=7.4,SNR=15						
FITZ	Fitzroy Crossi	23.75	233	P	P	22 38 19.7	+1.1
	comp=Z,2.6nm,0.3s,baz=45,slow=11,SNR=28						
TOLI2	Tolitoli	25.06	281	P	P	22 38 29.4	-1.2
TOLI2				IAmb	IAmb	22 38 45.7	
	comp=Z,3.6nm,0.9s						
LIFNC	LIFOU	27.00	130	P	P	22 38 46.2	-1.9
DZM	Mont Dzumac	27.17	133	P	P	22 38 48.7	-1.0
DZM				IAmb	IAmb	22 38 55.5	
	comp=Z,7.2nm,1.0s						
QRZ	Quartz Range	43.98	150	P	P	22 41 13.5	+0.3
QRZ				IAmb	IAmb	22 41 31.7	
	comp=Z,17nm,1.2s						
TIXI	Tiksi	76.38	355	P	P	22 44 54.2	-0.4
ILAR	Eielson Array	84.42	23	P	P	22 45 39.9	+2.0
	comp=Z,0.5nm,0.8s,baz=253,slow=4.6,SNR=4.1						
WVOR	Wild Horse Val	97.22	48	P	P	22 46 38.4	-0.4

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*NEIC **10** 22:36:55.4±0.9, 61°.42N±0°.04×151°.67W±0°.08, h89^{km}, Error ellipse: s-maj=6.5km s-min=4.5km az=132.0*

*AEIC **10** 22:36:56±1.1, 61°.42N±0°.03×151°.65W±0°.03, h88^{km}±5^{km}, ML3.0, ML3.3/156(NEIC), Error ellipse: s-maj=4.9km s-min=1.4km az=202.0*

*IDC **10** 22:36:57.4±1.0, 61°.59N×151°.66W, h107^{km}±14^{km}, mb3.4/3, mb1 3.3/4, mb1mx3.1/36, mbtmp3.6/4, Error ellipse: s-maj=41.4km s-min=10.5km az=122.0*

ISC 10 22:36:55.1±0.9**, 61°.42N**±0°.03×**151°.66W**±0°.03**, h94^{km}**±5^{km}**, n178, σ0$\overset{s}{.}$68**/173**, mb3.7**/3**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCG	Spurr Capps Gl	0.21	233		Pn	22 37 08.2	-0.5
SPCG					Sn	22 37 17.8	-1.0
SPU	Mount Spurr	0.30	218		Pn	22 37 08.8	-0.2
SPCN	Chakachatna No	0.32	232		Pn	22 37 09.0	0.0
SPCN					Sn	22 37 19.4	-0.1
SPCR	Spurr Chakacha	0.34	230		Pn	22 37 08.8	-0.4
SPCR	Spurr Chakacha	0.34	230	P	Pn	22 37 08.8	-0.4
	baz=51						
SPBG	Spurr Blockage	0.38	245		Pn	22 37 09.1	-0.3
SPBG					Sn	22 37 19.0	-1.1
SUA	Susitna One	0.44	84		Sn	22 37 20.6	-0.3
SUA	Susitna One	0.44	84		Pn	22 37 10.2	+0.3
SUA	Susitna One	0.44	84	IAML		22 37 10.9	
	comp=N,617nm,0.2s						
SUA				IAML		22 37 11.1	
	comp=E,592nm,0.2s						
SUA	Susitna One	0.44	84	P	Pn	22 37 10.2	+0.3
	baz=264						
SUA				S	Sn	22 37 20.6	-0.3
	baz=264						
SKT	Skwentna	0.56	6		Pn	22 37 10.4	-0.3
SKT					Sn	22 37 21.7	-0.7
SKT				IAML		22 37 22.4	
	comp=N,1µm,0.3s						
SKT				IAML		22 37 22.4	
	comp=E,1µm,0.3s						
SKT	Skwentna	0.56	6	P	Pn	22 37 10.4	-0.3
	baz=186						
SKT				S	Sn	22 37 21.8	-0.7
	baz=186						
CAPN	Captain Cook N	0.70	159		Pn	22 37 13.6	+1.8
CAPN				IAML		22 37 29.0	
	comp=N,1µm,0.8s						
CAPN				IAML		22 37 31.6	
	comp=E,2µm,0.4s						
CAPN	Captain Cook N	0.70	159	P	Pn	22 37 13.6	+1.8
	baz=340						
FIS	Fire Island	0.75	111		Pn	22 37 13.5	+1.2
FIS				IAML		22 37 28.4	
	comp=E,1µm,0.6s						
FIS				IAML		22 37 28.5	
	comp=N,860nm,0.6s						
M22K	Willow	0.81	65		Pn	22 37 13.7	+0.8
M22K					Sn	22 37 27.3	+1.0
M22K	Willow	0.81	65	P	Pn	22 37 13.7	+0.8
	baz=246						
M22K				S	Sn	22 37 27.3	+1.0
	baz=246						
DFR	Drift River	0.97	211		Pn	22 37 14.9	+0.1
DFR					Sn	22 37 29.7	+0.2
RC01	Rabbit Creek A	0.99	109		Pn	22 37 15.0	+0.1
RC01	Rabbit Creek A	0.99	109	IAML		22 37 32.2	
	comp=N,896nm,0.3s						
RC01				IAML		22 37 32.5	
	comp=E,613nm,0.2s						
RC01	Rabbit Creek A	0.99	109	P	Pn	22 37 15.0	+0.1
	baz=291						
NCT	North Crescent	1.06	216		Pn	22 37 16.1	+0.3
RDWB	Redoubt West	1.10	212		Pn	22 37 16.3	+0.1
RDWB					Sn	22 37 32.1	-0.1
RSO	Redoubt South	1.10	209		Pn	22 37 16.8	+0.5
RED	Redoubt Volcan	1.14	209		Pn	22 37 16.9	+0.2
SLKM	Skilak Lake	1.15	142		Pn	22 37 16.6	-0.2
CUT	Chulitna	1.19	33		Pn	22 37 17.8	+0.6
CUT	Chulitna	1.19	33	P	Pn	22 37 17.8	+0.6
	baz=214						
PMR	Palmer	1.23	81		Pn	22 37 17.4	-0.2
PMR					Sn	22 37 34.0	-0.6
PMR	Palmer	1.23	81	IAML		22 37 36.9	
	comp=N,364nm,0.3s						
PMR	Palmer	1.23	81	P	Pn	22 37 17.4	-0.2
	baz=263						
PMR				S	Sn	22 37 34.0	-0.6
	baz=263						
O22K	Cooper Landing	1.33	134		Pn	22 37 19.0	+0.1
O22K	Cooper Landing	1.33	134	P	Pn	22 37 19.0	+0.1
	baz=316						
GHO	Glory Hole Cre	1.36	74		Pn	22 37 19.1	-0.1
GHO					Sn	22 37 37.2	-0.4
GHO	Glory Hole Cre	1.36	74	IAML		22 37 42.2	
	comp=E,547nm,0.4s						
M19K	Big River Lodg	1.39	292		Pn	22 37 19.9	+0.3
M19K	Big River Lodg	1.39	292	P	Pn	22 37 19.9	+0.3
	baz=109						
O20K	Slope Mountain	1.42	200		Pn	22 37 20.7	+0.6
O20K	Slope Mountain	1.42	200	P	Pn	22 37 20.7	+0.6
	baz=19						
L20K	Farewell, AK	1.49	316		Pn	22 37 20.9	0.0
L20K	Farewell, AK	1.49	316	P	Pn	22 37 20.9	0.0
	baz=134						
N19K	Bonanza Creek	1.50	247		Pn	22 37 21.5	+0.5
PPLA	Purkeypile	1.50	351		Pn	22 37 21.1	0.0
KNK	Knik Glacier	1.54	89		Pn	22 37 21.6	+0.1
KNK	Knik Glacier	1.54	89	IAML		22 37 42.3	
	comp=E,520nm,0.3s						
KNK	Knik Glacier	1.54	89	P	Pn	22 37 21.5	+0.1
	baz=272						
ILSW	Iliamna Southw	1.61	207		Pn	22 37 22.9	+0.4
ILS	Iliamna Low So	1.62	206		Pn	22 37 23.3	+0.7
SML	Sawmill	1.64	75		Pn	22 37 22.4	-0.3
SML	Sawmill	1.64	75	IAML		22 37 44.3	
	comp=N,227nm,0.3s						
SML				IAML		22 37 50.4	
	comp=E,206nm,0.5s						
SML	Sawmill	1.64	75	P	Pn	22 37 22.4	-0.3
	baz=258						
L19K	White Mountain	1.70	298		Pn	22 37 23.9	+0.5
L19K	White Mountain	1.70	298	P	Pn	22 37 24.0	+0.5
	baz=115						
BRLK	Bradley Lake	1.71	167		Pn	22 37 23.8	+0.2
BRLK	Bradley Lake	1.71	167	IAML		22 37 48.8	
	comp=E,213nm,0.8s						
BRLK				IAML		22 37 52.7	
	comp=N,258nm,0.6s						
SEW	Seward	1.71	140		Pn	22 37 23.1	-0.5
SEW	Seward	1.71	140	P	Pn	22 37 23.0	-0.5
	baz=322						
PWL	Port Wells	1.71	108		Pn	22 37 23.2	-0.4
PWL	Port Wells	1.71	108	IAML		22 37 46.2	
	comp=E,534nm,0.4s						
BRSE	Bradley Lake S	1.74	164		Pn	22 37 24.1	0.0
BRSE	Bradley Lake S	1.74	164	P	Pn	22 37 24.1	0.0
	baz=346						
HOM	Homer	1.77	180	Pn	Pn	22 37 23.4	-0.9
HOM				IAML		22 37 54.4	
	comp=E,477nm,0.5s						
HOM				IAML		22 37 59.2	
	comp=N,435nm,0.5s						
CNPM	China Poot	1.91	173		Pn	22 37 26.2	0.0
CNPM	China Poot	1.91	173	IAML		22 37 54.2	
	comp=N,141nm,0.5s						
CNPM				IAML		22 37 56.7	
	comp=E,171nm,0.8s						
P19K	Oil Pt	1.94	204		Pn	22 37 27.1	+0.6
P19K				IAML		22 37 56.5	
	comp=E,294nm,0.4s						
P19K				IAML		22 37 57.7	
	comp=N,162nm,0.4s						
WAT7	Susitna Watana	1.94	42		Pn	22 37 26.8	+0.1
CAST	Castle Rocks	2.02	355		Pn	22 37 27.7	+0.1
WAT1	Susitna Watana	2.04	45		Pn	22 37 28.1	+0.2
WAT1	Susitna Watana	2.04	45	P	Pn	22 37 28.1	+0.2
	baz=227						
SCM	Sheep Creek Mo	2.11	77		Pn	22 37 28.2	-0.6
SCM				IAML		22 38 04.1	
	comp=N,244nm,0.6s						
TRF	Thorofare Moun	2.14	17		Pn	22 37 29.6	+0.3
TRF	Thorofare Moun	2.14	17	IAML		22 37 58.4	
	comp=E,253nm,0.3s						
TRF	Thorofare Moun	2.14	17	P	Pn	22 37 29.6	+0.3
	baz=198						
KTH	Kantishna Hill	2.17	9		Pn	22 37 29.9	+0.3
KTH				IAML		22 37 59.0	
	comp=E,166nm,0.7s						
WAT6	Susitna Watana	2.19	56		Pn	22 37 29.9	-0.1
WAT6	Susitna Watana	2.19	56	P	Pn	22 37 29.8	-0.1
	baz=239						
K20K	Telida	2.24	331		Pn	22 37 30.6	0.0
K20K				IAML		22 37 57.9	
	comp=E,110nm,0.6s						
GLI	Glacier Island	2.28	102		Pn	22 37 29.6	-1.4
GLI	Glacier Island	2.28	102	P	Pn	22 37 29.6	-1.4
	baz=286						
O18K	Koktuh Hills	2.35	230	Pn	Pn	22 37 31.9	-0.1
RND	Reindeer	2.38	32		Pn	22 37 32.7	+0.3
JPK	Jack Peak	2.48	96		Pn	22 37 32.7	-1.0
CHUM	Lake Minchumin	2.49	353		Pn	22 37 34.0	+0.2
CHUM	Lake Minchumin	2.49	353	P	Pn	22 37 34.0	+0.2
	baz=173						
TT01	Tatalina	2.53	308		Pn	22 37 34.4	+0.1
TTA	Tatalina	2.54	309		Pn	22 37 34.5	-0.1
TTA	Tatalina	2.54	309	P	Pn	22 37 34.5	-0.1
	baz=125						
DHY	Denali Highway	2.60	48		Pn	22 37 35.7	+0.3
DHY				IAML		22 38 16.1	
	comp=N,72nm,0.4s						
DHY	Denali Highway	2.60	48	P	Pn	22 37 35.7	+0.3
	baz=232						
FID	Port Fidalgo	2.61	103		Pn	22 37 33.6	-1.7
MCK	McKinley	2.64	27		Pn	22 37 36.6	+0.8
MCK	McKinley	2.64	27	P	Pn	22 37 36.6	+0.8
	baz=210						
Q19K	Cape Douglas,	2.69	202	Pn	Pn	22 37 36.2	-0.3
Q19K				IAML		22 38 51.6	
	comp=N,196nm,1.2s						
P18K	Big Mountain,	2.70	223		Pn	22 37 36.7	+0.2
P18K	Big Mountain,	2.70	223	P	Pn	22 37 37.3	+0.7
	baz=40						
M24K	Tolsona, Glenn	2.70	73		Pn	22 37 36.9	+0.3
M24K				IAML		22 38 20.3	
	comp=N,143nm,0.8s						
M24K				IAML		22 38 27.0	
	comp=E,166nm,0.9s						
M24K	Tolsona, Glenn	2.70	73	P	Pn	22 37 37.1	+0.5
	baz=258						
BPAW	Bear Paw Mtn.	2.71	6	Pn	Pn	22 37 36.2	-0.5
BPAW				IAML		22 38 10.9	
	comp=E,71nm,0.4s						
HIN	Hinchinbrook I	2.72	110		Pn	22 37 35.6	-1.3
KLU	Klutina	2.76	86		Pn	22 37 36.6	-0.8
KLU	Klutina	2.76	86	IAML		22 38 10.2	
	comp=E,104nm,0.2s						
KLU				IAML		22 38 13.2	
	comp=N,143nm,0.4s						
KLU	Klutina	2.76	86	P	Pn	22 37 36.6	-0.8
	baz=271						
DIV	Divide	2.86	93		Pn	22 37 37.6	-1.2
BWN	Browne	2.94	19		Pn	22 37 41.1	+1.3
BWN	Browne	2.94	19	IAML		22 38 21.1	
	comp=N,79nm,1.0s						
BWN				IAML		22 38 53.7	
	comp=E,65nm,2.5s						
J20K	Nowinta River	2.99	339		Pn	22 37 40.5	+0.1
J20K	Nowinta River	2.99	339	IAML		22 38 17.2	
	comp=N,57nm,0.8s						
J20K	Nowinta River	2.99	339	P	Pn	22 37 40.6	+0.1
	baz=156						
EYAK	Cordova Ski Ar	3.01	104	Pn	Pn	22 37 40.7	0.0
PAX	Paxson	3.29	59		Pn	22 37 45.5	+0.9
PAX	Paxson	3.29	59	P	Pn	22 37 45.5	+0.9
	baz=244						
N25K	Chitina, Valde	3.39	84	Pn	Pn	22 37 45.8	-0.1
N25K				IAML		22 38 27.1	
	comp=E,50nm,0.5s						
N25K				IAML		22 38 39.4	
	comp=N,54nm,0.5s						
NEA2	Nenana	3.40	19		Pn	22 37 45.7	-0.2
NEA2	Nenana	3.40	19	P	Pn	22 37 45.7	-0.2
	baz=201						
BMRM	Bremner River	3.45	94		Pn	22 37 47.4	+0.7
BMRM				IAML		22 38 31.2	
	comp=N,62nm,0.4s						
BMRM				IAML		22 38 39.5	
	comp=E,66nm,0.9s						
WRH	Wood River Hil	3.47	26		Pn	22 37 46.8	-0.1
WRH	Wood River Hil	3.47	26	IAML		22 38 32.8	
	comp=E,43nm,0.5s						
WRH				IAML		22 38 32.8	
	comp=N,41nm,0.5s						
RAGM	Ragged Mountai	3.57	104	Pn	Pn	22 37 46.4	-1.9
MLY	Manley	3.65	6		Pn	22 37 49.3	-0.1
MLY				IAML		22 38 31.1	
	comp=N,28nm,1.2s						
MLY	Manley	3.65	6	P	Pn	22 37 49.6	+0.2
	baz=187						
KDAK	Kodiak Island	3.68	188	Pn	Pn	22 37 49.9	+0.2
KDAK				IAML		22 38 36.2	
	comp=N,87nm,3.9s						
KDAK				IAML		22 39 48.5	
	comp=N,96nm,3.9s						
CCB	Clear Creek Bu	3.69	27		Pn	22 37 49.6	-0.1
HDA	Harding Lake	3.69	34		Pn	22 37 50.5	+0.5
HDA	Harding Lake	3.69	34	IAML		22 38 41.9	
	comp=E,49nm,0.4s						
HDA				IAML		22 38 44.0	
	comp=N,60nm,0.6s						
HDA	Harding Lake	3.69	34	P	Pn	22 37 50.5	+0.5
	baz=218						
GLB	Gilahina Butte	3.77	86		Pn	22 37 50.1	-1.0
GLB	Gilahina Butte	3.77	86	IAML		22 38 35.2	
	comp=E,26nm,0.6s						
GLB				IAML		22 38 48.2	
	comp=N,47nm,0.9s						
HMT	Hamilton	3.78	103	Pn	Pn	22 37 51.7	+0.6
I21K	Tanana	3.78	358	IAML		22 38 33.4	
	comp=E,27nm,1.3s						
I21K				IAML		22 38 38.3	
	comp=N,32nm,4.1s						
PS08	TAPS Pump Stn8	3.83	33		Pn	22 37 52.0	+0.2
TCOL	CIGO, UAF Yank	3.87	25	Pn	Pn	22 37 53.1	+0.8
COLA	College	3.87	25	Pn	Pn	22 37 53.3	+1.0
MDM	Murphy Dome	3.88	22		Pn	22 37 53.4	+1.0
I23K	Minto, Yukon-K	3.88	15		Pn	22 37 51.1	-1.3
I23K	Minto, Yukon-K	3.88	15	P	Pn	22 37 51.1	-1.3
	baz=196						
VRDI	Verde Repeater	3.96	89		Pn	22 37 52.5	-1.3
VRDI	Verde Repeater	3.96	89	IAML		22 38 51.1	
	comp=N,27nm,1.9s						
VRDI				IAML		22 40 23.0	
	comp=E,22nm,5.0s						
ILAR	Eielson Array	4.00	31	P	Pn	22 37 54.5	+0.5
	comp=E,1.5nm,0.3s,baz=221,slow=14,SNR=38						
ILAR				S	Sn	22 38 39.5	-0.3
	comp=E,3.2nm,0.3s,baz=217,slow=22,SNR=10.0						
BERG	Berg Lake	4.02	101	Pn	Pn	22 37 53.3	-1.1
MCARA	McCarthy VSAT	4.15	87	Pn	Pn	22 37 56.8	+0.7
MCARA				IAML		22 39 09.8	
	comp=E,67nm,1.3s						
MCARA				IAML		22 39 10.4	
	comp=N,60nm,0.9s						
DOT	Dot Lake	4.17	54	Pn	Pn	22 37 56.2	-0.2
POKR	Poker Plat Res	4.17	25	Pn	Pn	22 37 57.6	+1.2
CRQM	Cirque	4.19	95		Pn	22 37 57.1	+0.3
CRQM				IAML		22 39 06.1	
	comp=N,55nm,1.2s						
CRQM				IAML		22 39 06.7	
	comp=E,52nm,1.5s						
L26K	Log Cabin Wild	4.21	64	Pn	Pn	22 37 57.5	+0.5
L26K				IAML		22 39 02.6	
	comp=E,40nm,0.4s						
L26K				IAML		22 39 08.5	
	comp=N,44nm,0.5s						
CRQE	Cirque	4.21	95	P	Pn	22 37 56.2	-0.9
	baz=283						
M26K	Nabesna, AK	4.21	73	Pn	Pn	22 37 57.5	+0.5
M26K				IAML		22 39 16.0	
	comp=E,26nm,2.2s						
M26K				IAML		22 39 26.3	
	comp=N,20nm,3.2s						
H21K	Melozitna Rive	4.29	354		Pn	22 37 58.0	+0.1
TGL	Tana Glacier	4.34	95	Pn	Pn	22 37 58.8	0.0
TGL				IAML		22 39 09.0	
	comp=N,37nm,0.6s						
TGL				IAML		22 39 10.8	
	comp=E,41nm,0.5s						
SCRK	Sand Creek	4.37	51		Pn	22 37 59.2	+0.1
SCRK	Sand Creek	4.37	51	IAML		22 38 58.9	
	comp=N,25nm,0.7s						
SCRK				IAML		22 38 59.2	
	comp=E,22nm,1.8s						
SCRK	Sand Creek	4.37	51	P	Pn	22 37 59.2	+0.1
	baz=237						

WAX	Waxell Ridge	4.41	99	Pn	Pn	22 38 00.6	+0.9
PTPK	Patty Peak	4.44	89		Pn	22 37 59.7	-0.6
SNH	Sunshine Point	4.50	102	Pn	Pn	22 38 01.8	+0.9
BALM	Baldy	4.52	91		Pn	22 38 00.2	-1.0
KIAG	Kiagna River	4.53	92		Pn	22 38 00.2	-1.2
ISLE	Juniper Island	4.61	96	Pn	Pn	22 38 01.9	-0.5
IM03		4.67	349		Pn	22 38 03.0	-0.1
IMAR	Indian Mountai	4.67	349	Pn	Pn	22 38 03.0	-0.2
M27K	Edge Creek, AK	4.72	74	Pn	Pn	22 38 04.5	+0.5
M27K				IAML		22 39 28.2	
	comp=E,21nm,4.0s						
M27K				IAML		22 39 36.0	
	comp=N,28nm,4.4s						
H24K	Noodor Dome	4.74	19		Pn	22 38 05.5	+1.3
H24K				IAML		22 39 08.1	
	comp=N,17nm,4.8s						
H24K				IAML		22 39 35.8	
	comp=E,15nm,4.6s						
BARN	Barnard Glacie	4.85	90	Pn	Pn	22 38 06.1	+0.4
BARN				IAML		22 38 51.3	
	comp=N,26nm,3.7s						
BARN				IAML		22 39 29.3	
	comp=E,21nm,2.3s						
L27K	Beaver Creek,	4.88	66	Pn	Pn	22 38 06.4	+0.3
L27K				IAML		22 39 25.3	
	comp=N,15nm,3.7s						
L27K				IAML		22 39 38.9	
	comp=E,11nm,3.5s						
BCAR	Beaver Creek A	4.91	66	Pn	Pn	22 38 07.4	+1.1
MESA	MESA	4.92	100	Pn	Pn	22 38 07.6	+0.9
YAH	Yahtse	4.96	98	Pn	Pn	22 38 07.7	+0.4
CTGM	Chitina Glacie	5.02	91	Pn	Pn	22 38 08.0	-0.1
CTGM				IAML		22 39 07.9	
	comp=E,22nm,2.7s						
CTGM				IAML		22 39 36.6	
	comp=N,30nm,3.9s						
SII	Sitkinak Islan	5.05	196	Pn	Pn	22 38 09.7	+1.4
LOGN	Logan Glacier	5.20	92	Pn	Pn	22 38 10.5	0.0
LOGN				IAML		22 38 56.5	
	comp=E,23nm,4.5s						
LOGN				IAML		22 39 55.9	
	comp=N,21nm,4.6s						
TABL	Table Mountain	5.22	96	Pn	Pn	22 38 12.0	+1.1
PCA	Pinnacle	5.75	98	Pn	Pn	22 38 18.7	+0.9
COLD	Coldfoot	5.87	6	Pn	Pn	22 38 20.4	+1.0
BM03	Burnt Mountain	6.75	24		Pn	22 38 31.6	+0.2
BMAR	Burnt Mountain	6.76	24	Pn	Pn	22 38 31.9	+0.3
BM01	Burnt Mountain	6.79	24		Pn	22 38 32.0	+0.1
SONM	Songino Array	54.49	306	P	P	22 46 14.0	+1.3
	comp=N,0.5nm,0.6s,baz=48,slow=6.7,SNR=4.4						
MKAR	Makanchi Array	63.73	322	P	P	22 47 15.4	-0.9
	comp=N,0.2nm,0.4s,baz=31,slow=7.0,SNR=6.3						
AKASG	Malin Array Be	68.23	359	P	P	22 47 44.8	-0.3
	comp=N,0.9nm,0.3s,baz=2.1,slow=6.2,SNR=7.2						

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*IDC **10** 22:49:02.9±5.8, 7°.80S×127°.13E, h184^{km}±62^{km}, mb3.3/5, mb1 3.4/8, mb1mx3.1/25, mbtmp3.7/8, Error ellipse: s-maj=66.0km s-min=16.6km az=48.0*

*DJA **10** 22:49:02.0±0.4, 8°S±7°×12°7E±°, h180^{km}±9^{km}, M4.2/9, mb3.9/7, mB4.3/2, MLv4.4/9, Mw(mB)3.4/2*

ISC 10 22:49:02.7±0.8, **7°.94S**±0°.06×**127°.16E**±0°.05, **h200**^{km}, **n20**, σ**1^s.86**/28, **mb3.6**/5, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	3.38	238	P	Pn	22 49 58.1	+1.0
SOEI				S	Sn	22 50 37.1	-2.6
SAUI	Saumlaki	4.10	91	P	Pn	22 50 03.3	-2.5
SAUI				S	Sn	22 50 54.1	-1.1
BATI	Baumata	4.13	237	P	Pn	22 50 07.7	+1.5
	101nm,0.3s,baz=90,slow=2.8,SNR=68						
BATI				S	Sn	22 50 56.1	+0.2
	41nm,0.3s,baz=138,slow=21,SNR=13						
BATI	Baumata	4.13	237	P	Pn	22 50 07.7	+1.5
BATI				S	Sn	22 50 53.2	-2.8
MMRI	Maumere	4.92	262	P	Pn	22 50 15.4	-0.8
EDFI	Ende, Flores	5.48	261	P	Pn	22 50 23.4	0.0
	0.0nm299nm5.6nm,0.5s						
EDFI				S	Sn	22 51 25.6	-1.4
	0.0nm299nm5.6nm,0.5s						
BASI	Baing, Sumba	6.89	250	P	Pn	22 50 41.1	-0.5
	0.2nm52nm,1.1s						
BKSI	Bulukumba	7.46	290	P	Pn	22 50 48.2	-0.8
	0.0nm5.5nm,1.3s						
WBSI	Waikabubak, Su	7.87	257	P	Pn	22 50 54.0	-0.4
	0.1nm31nm,0.5s						
SPSI	Sidrap Palu	8.35	298	P	Pn	22 50 57.0	-3.6
PLAI	Plampang	9.33	264	P	Pn	22 51 11.0	-2.4
	18nm,0.8s						
TWSI	Taliwang, Sumb	10.21	265	P	Pn	22 51 22.9	-1.8
FITZ	Fitzroy Crossi	10.21	188	P	Pn	22 51 25.8	+1.1
	0.5nm,0.3s,baz=19,slow=12,SNR=6.0						
FITZ				S	Sn	22 53 16.6	-2.2
	baz=93,slow=19						
WRA	Warramunga Arr	13.81	151	P	P	22 52 12.2	-0.4
	0.3nm,0.3s,baz=346,slow=12,SNR=18						
WRA				S	S	22 54 41.9	-2.5
	1.0nm,0.3s,baz=332,slow=22,SNR=7.6						
ASAR	Alice Springs	16.92	158	P	Pn	22 52 49.5	+1.3
	0.3nm,0.3s,baz=334,slow=10,SNR=24						
ASAR				S	Sn	22 55 57.1	-1.9
	0.3nm,0.3s,baz=310,slow=19,SNR=6.2						
STKA	Stephens Creek	27.35	153	P	P	22 54 33.0	+3.7
	1.8nm,0.7s,baz=335,slow=11,SNR=3.9						
CMAR	Chiang Mai Arr	38.25	314	P	P	22 56 05.0	+1.1
	1.0nm,0.3s,baz=138,slow=5.9,SNR=5.2						
SONM	Songino Array	58.49	344	P	P	22 58 38.7	+0.7
	0.4nm,0.7s,baz=158,slow=4.7,SNR=2.5						
MKAR	Makanchi Array	67.50	328	P	P	22 59 38.2	+0.9
	0.2nm,0.5s,baz=124,slow=8.0,SNR=5.0						
ZALV	Zalesovo Beam	71.21	335	P	P	22 59 59.8	+0.1
	0.5nm,0.4s,baz=111,slow=6.3,SNR=4.2						

IDC 10 22:59:36.7±1.4, **38°.16N×72°.69E**, **h0**^{km}, **mb3.4**/2, **mb1 3.4**/4, **mb1mx3.3**/30, **mbtmp3.4**/4, **ML2.6**/2, **Error ellipse: s-maj=41.3km s-min=15.7km az=144.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	11.16	36	Pn	Pn	23 02 17.4	-0.1
	0.0nm,0.3s,baz=218,slow=16,SNR=5.0						
ZALV	Zalesovo Beam	17.85	24	P	Pn	23 03 46.5	+0.2
	0.2nm,0.3s,baz=215,slow=14,SNR=2.0						
SONM	Songino Array	26.30	58	P	P	23 05 14.1	+0.1
	0.7nm,0.7s,baz=260,slow=11,SNR=5.4						
TORD	Torodi Ar. Bea	67.10	269	P	P	23 10 32.3	0.0
	0.1nm,0.4s,baz=45,slow=4.4,SNR=3.6						

IDC 10 23:09:42.3±2.1, **4°.01S×130°.04E**, **h0**^{km}, **mb3.3**/1, **mb1 3.7**/3, **mb1mx3.5**/30, **mbtmp3.5**/3, **ML3.1**/2, **Error ellipse: s-maj=152.5km s-min=15.1km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.38	166	Pn	Pn	23 13 32.9	-0.9
	0.0nm,0.3s,baz=347,slow=13,SNR=5.0						
ASAR	Alice Springs	19.89	170	P	P	23 14 15.7	+0.1
	0.2nm,0.3s,baz=347,slow=11,SNR=13						
MKAR	Makanchi Array	65.77	326	P	P	23 20 29.0	-0.2
	0.2nm,0.5s,baz=111,slow=7.5,SNR=2.1						

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*IDC **10** 23:10:43.5±1.8, 4°.10S×129°.67E, h0^{km}, mb3.8/1, mb1 3.7/3, mb1mx3.5/31, mbtmp3.6/3, ML3.3/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/37, Error ellipse: s-maj=157.5km s-min=13.2km az=69.0*

*NEIC **10** 23:10:44.4±2.5, 4°.27S±0°.10×129°.8E±0°.1, h10^{km}±1^{km}, mb4.3/11, Error ellipse: s-maj=19.6km s-min=13.4km az=312.0*

ISC 10 23:10:53.7±0.8, **4°.22S**±0°.10×**130°.1E**±0°.1, **h100**^{km}, **n18**, σ**0^s.69**/17, **mb4.6**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.47	59	Pn	Pn	23 11 32.0	-0.4
KNRA	Kununurra	11.47	187	Pn	Pn	23 13 33.6	-0.7
WB0	Warramunga Arr	16.00	165		Pn	23 14 33.4	+0.3
WRA	Warramunga Arr	16.16	166	Pn	Pn	23 14 35.5	+0.4
	0.1nm,0.3s,baz=348,slow=13,SNR=1.5						
WRA	Warramunga Arr	16.16	166	P	Pn	23 14 34.8	-0.2
WB2	Warramunga Arr	16.16	166		Pn	23 14 34.7	-0.4
WB2				IAmb	IAmb	23 14 45.3	
	comp=Z,3.2nm,0.9s						
ASAR	Alice Springs	19.68	170	P	P	23 15 16.2	+1.2
	comp=Z,0.2nm,0.3s,baz=348,slow=11,SNR=1.8						
PSA00	Pilbara Seismi	19.94	209	P	P	23 15 17.6	-0.3
PSA00				IAmb	IAmb	23 15 22.2	
	comp=Z,9.3nm,1.1s						
TOO	Toolangi	36.05	159	P	P	23 17 44.3	-1.3
TOO				IAmb	IAmb	23 17 58.3	
	comp=Z,8.7nm,1.0s						
DZM	Mont Dzumac	39.39	120	P	P	23 18 14.5	+0.5
DZM				IAmb	IAmb	23 18 15.6	
	comp=Z,8.6nm,1.0s						
KLR	Kul'dur	53.25	1	LR	LR	23 42 02.9	
	comp=Z,19nm,21.2s,baz=14,slow=35						
OXZ	Oxford	53.72	143	P	P	23 20 06.7	+1.1
OXZ				IAmb	IAmb	23 20 17.2	
	comp=Z,9.7nm,0.9s						
ODZ	Otahua Downs	53.91	145	P	P	23 20 06.7	-0.1
ODZ				IAmb	IAmb	23 20 22.6	
	comp=Z,12nm,1.1s						
URZ	Urewera	54.49	135	P	P	23 20 10.7	-0.5
SONM	Songino Array	55.87	341	P	P	23 20 21.1	0.0
SONM				IAmb	IAmb	23 20 25.5	
	comp=Z,1.2nm,1.1s						
CASY	Casey	63.46	189	P	P	23 21 13.2	+0.6
MKAR	Makanchi Array	66.00	326	P	P	23 21 29.6	0.0
	comp=Z,0.5nm,0.5s,baz=120,slow=8.0,SNR=6.5						
MKAR	Makanchi Array	66.00	326	P	P	23 21 29.8	+0.3

IDC 10 23:11:49.7±1.9, **4°.14S×129°.45E**, **h0**^{km}, **mb3.6**/1, **mb1 3.7**/3, **mb1mx3.4**/31, **mbtmp3.5**/3, **ML3.1**/2, **MS3.5**/1, **Ms1 3.5**/1, **ms1mx2.5**/36, **Error ellipse: s-maj=165.1km s-min=15.2km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.41	164	Pn	Pn	23 15 41.4	-0.3
	0.1nm,0.3s,baz=346,slow=13,SNR=1.8						
ASAR	Alice Springs	19.89	168	P	P	23 16 23.2	+0.3
	0.2nm,0.3s,baz=347,slow=11,SNR=2.2						
URZ	Urewera	55.04	135	LR	LR	23 47 27.2	
	comp=Z,44nm,18.1s,baz=31,slow=39						
MKAR	Makanchi Array	65.55	326	P	P	23 22 35.2	0.0
	0.4nm,0.5s,baz=121,slow=8.2,SNR=4.3						

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*NEIC **10** 23:20:02.6±2.0, 4°.12S±0°.08×129°.43E±0°.09, h10^{km}±2^{km}, mb4.0/8, Error ellipse: s-maj=20.1km s-min=5.2km az=311.0*

*IDC **10** 23:20:04.7±1.2, 4°.07S×129°.55E, h23^{km}±5^{km}, mb3.5/5, mb1 3.8/10, mb1mx3.4/51, mbtmp3.8/10, ML3.6/5, Error ellipse: s-maj=32.0km s-min=20.0km az=88.0*

ISC 10 23:20:05.8±0.7, **4°.16S**±0°.08×**129°.54E**±0°.09, **h36**^{km}, **n24**, σ**1^s.43**/28, **mb3.9**/5, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.97	66		Pn	23 20 53.1	+2.7
SIJI	Sorong	3.70	28	Pn	Pn	23 21 00.1	-0.3
	6.7nm,0.3s,baz=147,slow=22,SNR=13						
SIJI				Sn	Sn	23 21 43.2	+0.5
	5.0nm,0.3s,baz=63,slow=24,SNR=7.3						
MTN	Manton Dam	8.77	170	Pn	Pn	23 22 12.5	+2.4
KAPI	Kappang	9.80	265	Pn	Pn	23 22 25.5	+1.3
	1.9nm,0.3s,baz=108,slow=12,SNR=2.6						
KNRA	Kununurra	11.47	184	Pn	Pn	23 22 50.2	+3.1
FITZ	Fitzroy Crossi	14.37	195	Pn	Pn	23 23 29.3	+2.6
	0.1nm,0.3s,baz=20,slow=12,SNR=2.5						
WB0	Warramunga Arr	16.22	163	Pn	Pn	23 23 49.9	-1.1
WB0				IAmb	IAmb	23 24 04.9	
	comp=Z,5.3nm,1.1s						
WRA	Warramunga Arr	16.37	164	Pn	Pn	23 23 52.4	-0.6
	comp=Z,0.2nm,0.3s,baz=348,slow=12,SNR=15						
WRA	Warramunga Arr	16.37	164		Pn	23 23 51.6	-1.4
WB2	Warramunga Arr	16.37	164	Pn	Pn	23 23 52.6	-0.4
WB2				IAmb	IAmb	23 24 23.0	
	comp=Z,20nm,1.6s						
WR0	Warramunga Arr	16.44	163	Pn	Pn	23 23 53.9	0.0
WR0				IAmb	IAmb	23 23 58.5	
	comp=Z,27nm,2.0s						
COEN	Coen	16.60	127	Pn	P	23 23 56.4	-1.7
COEN				IAmb	IAmb	23 24 13.5	
	comp=Z,38nm,1.7s						
AS31	Alice Springs	19.84	168	P	Pn	23 24 36.0	+0.5
ASAR	Alice Springs	19.84	168	P	Pn	23 24 35.8	+0.2
	comp=Z,0.8nm,0.3s,baz=338,slow=9.3,SNR=28						
ASAR	Alice Springs	19.84	168	P	Pn	23 24 35.0	-0.6
CMAR	Chiang Mai Arr	37.61	308	P	P	23 27 17.4	+0.1
	comp=Z,0.6nm,0.4s,baz=126,slow=6.8,SNR=1.7						
CMAR				pP	pP	23 27 25.2	-1.3
	comp=Z,0.8nm,0.5s,baz=131,slow=6.8,SNR=1.6						
URZ	Urewera	54.95	135	P	P	23 29 33.3	-0.1
PLWZ	Palliser	55.23	139	P	P	23 29 36.0	+0.6
SONM	Songino Array	55.62	341	P	P	23 29 38.5	+0.3
	comp=Z,0.2nm,0.6s,baz=135,slow=7.1,SNR=1.7						
MKAR	Makanchi Array	65.62	326	P	P	23 30 46.1	-0.1
	comp=Z,0.3nm,0.4s,baz=116,slow=7.6,SNR=7.7						
MKAR				pP	pP	23 30 53.3	-2.6
	comp=Z,0.8nm,0.7s,baz=126,slow=7.6,SNR=5.6						
MKAR	Makanchi Array	65.62	326	P	P	23 30 45.8	-0.5
ZALV	Zalesovo Beam	68.85	334	P	P	23 31 06.8	+0.3
	comp=Z,0.8nm,0.6s,baz=99,slow=15,SNR=3.6						
KURBB	Kurchatov Arra	69.87	328	P	P	23 31 12.7	-0.2
	comp=Z,0.2nm,0.5s,baz=134,slow=5.7,SNR=7.2						
KURBB				pP	pP	23 31 20.7	-1.9
	comp=Z,1.0nm,0.7s,baz=125,slow=5.7,SNR=9.1						
KURK	Kurchatov	69.88	328	P	P	23 31 12.6	-0.3

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*IDC **10** 23:21:01.3±2.1, 25°.55S×179°.67E, h452^{km}±22^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.4/49, mbtmp4.5/12, Error ellipse: s-maj=22.9km s-min=18.2km az=7.0*

*NEIC **10** 23:21:08.7±1.2, 25°.6S±0°.1×179°.4E±0°.1, h519^{km}±11^{km}, mb4.2/22, Error ellipse: s-maj=18.8km s-min=17.5km az=127.0*

*NOU **10** 23:21:11.3, 25°.37S×179°.21E, h473^{km}, mb4.5/8, South of Fiji Islands*

ISC 10 23:21:08.0±0.5, **25°.52S**±0°.07×**179°.18E**±0°.08, **h500**^{km}, **n64**, σ**2^s.00**/64, **mb4.0**/17, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.53	146	P	P	23 22 18.1	-13
	93nm,0.3s,baz=111,slow=22,SNR=5.0						
RAO	Raoul Island	4.53	146	P	P	23 22 32.0	+1.3
RAO				S	S	23 23 44.8	+6.6
RAO	Raoul Island	4.53	146	P	P	23 22 33.3	+2.6
LKBA	Tubou, Lakemba	7.48	15	P	P	23 23 00.3	+1.1
TAVE	Taveuni	8.81	6	P	P	23 23 14.7	+1.8
DGTI	Dogotuki	9.18	3	P	P	23 23 18.4	+1.5
OUZ	Omahuta	10.80	205	P	P	23 23 34.7	+1.0
MARNC	Mare, Loyalty	10.99	289	P	P	23 23 38.5	+2.5
PINNC	Pines Island,	11.11	283	P	P	23 23 39.8	+2.6
PINNC	Pines Island,	11.11	283	P	P	23 23 40.5	+3.4
OUENC	Ouen Island, N	11.70	283	P	P	23 23 44.0	+0.6
YATNC	Mamie plateau,	11.77	284	P	P	23 23 47.5	+3.3
NIUE	Niue	11.94	60	P	P	23 23 43.4	-2.7
LIFNC	LIFOU	11.96	291	P	P	23 23 48.1	+1.9
MXZ	Matakaoa Point	12.03	183	P	P	23 23 45.3	-1.4
DZM	Mont Dzumac	12.16	284	P	P	23 23 50.4	+2.0
	0.9nm,0.3s,baz=101,slow=12,SNR=19						
DZM	Mont Dzumac	12.16	284	P	P	23 23 50.8	+2.5
DZM	Mont Dzumac	12.16	284	P	P	23 23 51.6	+3.2
NOUC	Port Laguerre	12.27	283	P	P	23 23 52.7	+3.2
URZ	Urewera	12.83	187	P	P	23 23 50.7	-4.4
	1.4nm,0.3s,baz=121,slow=23,SNR=9.9						
URZ				S	S	23 26 12.6	-0.3
	0.6nm,0.3s,baz=304,slow=23,SNR=3.7						
URZ	Urewera	12.83	187	P	P	23 23 53.1	-2.0
BKZ	Black Stump Fm	13.80	189	P	P	23 24 05.2	-0.3
QRZ	Quartz Range	16.24	198	P	P	23 24 30.2	-0.8
QRZ				IAmb	IAmb	23 24 33.0	
	comp=Z,8.4nm,0.7s						
NNZ	Nelson	16.39	196	P	P	23 24 31.6	-0.8
LTZ	Lake Taylor	18.14	197	P	P	23 24 47.5	-1.9
LHI	Lord Howe Isla	18.66	247	P	P	23 24 55.6	+1.3
OXZ	Oxford	18.70	196	P	P	23 24 52.1	-2.5
OXZ				IAmb	IAmb	23 25 01.2	
	comp=Z,7.4nm,0.9s						
RPZ	Rata Peaks	19.33	198	P	P	23 24 59.9	-0.4
RPZ				IAmb	IAmb	23 25 14.3	
	comp=Z,14nm,1.1s						
ARMA	Armidale	24.79	252	P	P	23 25 50.7	+0.9
EIDS	Eidsvold	25.36	264	P	P	23 25 55.6	+0.9
EIDS				IAmb	IAmb	23 25 56.5	
	comp=Z,8.1nm,0.8s						
CTA	Charters Tower	30.78	273	P	P	23 26 43.2	+1.0
	comp=Z,4.0nm,0.3s,baz=106,slow=12,SNR=5.8						
CTAO	Charters Tower	30.78	273	P	P	23 26 43.0	+0.8
CTAO				IAmb	IAmb	23 26 44.0	
	comp=Z,6.3nm,0.7s						
TOO	Toolangi	30.96	239	P	P	23 26 44.2	+0.6
TOO				IAmb	IAmb	23 26 56.6	
	comp=Z,4.7nm,0.8s						
STKA	Stephens Creek	33.46	250	P	P	23 27 04.0	-1.0
	comp=Z,2.2nm,0.5s,baz=101,slow=15,SNR=8.4						
STKA	Stephens Creek	33.46	250	P	P	23 27 04.5	-0.4
BBOO	Buckleboo	38.15	249	P	P	23 27 43.5	-0.5
BBOO				IAmb	IAmb	23 27 44.1	
	comp=Z,5.9nm,1.0s						
AS31	Alice Springs	41.06	263	P	P	23 28 08.2	+0.6
ASAR	Alice Springs	41.06	263	P	P	23 28 07.8	+0.2
	comp=Z,1.5nm,0.3s,baz=94,slow=8.3,SNR=26						
ASAR				S	S	23 33 43.0	-0.9
	comp=Z,1.4nm,0.6s,baz=98,slow=15,SNR=10						
WB2	Warramunga Arr	41.57	268	P	P	23 28 11.6	-0.1
WB2				IAmb	IAmb	23 28 12.1	
	comp=Z,5.1nm,0.8s						
WRAB	Tennant Creek	41.58	268	P	P	23 28 11.7	0.0
WRAB				IAmb	IAmb	23 28 12.9	
	comp=Z,7.0nm,0.8s						
WB0	Warramunga Arr	41.59	268	P	P	23 28 11.6	-0.2
WB0				IAmb	IAmb	23 28 12.2	
	comp=Z,5.8nm,0.9s						
WRA	Warramunga Arr	41.59	268	P	P	23 28 11.4	-0.4
	comp=Z,1.2nm,0.4s,baz=100,slow=6.1,SNR=18						
WRA				S	S	23 33 47.9	-3.6
	comp=Z,7.1nm,0.9s,baz=98,slow=15,SNR=27						
WRA	Warramunga Arr	41.59	268	P	P	23 28 11.6	-0.2
FORT	Forrest	45.07	251	P	P	23 28 36.5	-2.3
FORT				IAmb	IAmb	23 28 39.5	
	comp=Z,15nm,0.9s						
KNRA	Kununurra	47.96	272	P	P	23 29 01.0	0.0
FITZ	Fitzroy Crossi	49.99	267	P	P	23 29 15.6	-0.3
	comp=Z,4.6nm,0.7s,baz=137,slow=7.7,SNR=8.9						
QSPA	South Pole Qui	64.57	180	P	P	23 30 53.5	-1.7
	comp=Z,1.9nm,1.0s,baz=47,slow=3.5,SNR=4.2						
QSPA	South Pole Qui	64.57	180	P	P	23 30 54.3	-0.9
MJAR	Matsushiro Arr	72.82	326	P	P	23 31 44.3	-1.0
	comp=Z,5.0nm,1.0s,baz=161,slow=5.4,SNR=6.5						
MJAR	Matsushiro Arr	72.82	326	IAmb	IAmb	23 31 45.1	
	comp=Z,2.3nm,0.6s						
USRK	Ussuriysk Ar.	81.72	328	P	P	23 32 34.0	+0.4
	comp=Z,3.0nm,0.6s,baz=149,slow=4.4,SNR=4.2						
KLR	Kul'dur	85.57	331	P	P	23 32 52.7	0.0
	comp=Z,1.8nm,0.8s,baz=170,slow=12,SNR=5.7						
PSUT	Pine Spring	89.34	46	P	P	23 33 12.1	+1.1
CMAR	Chiang Mai Arr	89.39	291	P	P	23 33 11.9	+0.6
	comp=Z,1.7nm,0.3s,baz=148,slow=2.7,SNR=5.9						
KURBB	Kurchatov Arra	115.89	316	PKP	PKPdf	23 38 50.5	-2.6
	comp=Z,0.6nm,0.7s,baz=115,slow=1.9,SNR=5.3						
BVAR	Borovoye Array	121.15	318	PKP	PKPdf	23 39 01.4	-1.8
	comp=Z,1.0nm,0.5s,baz=219,slow=8.6,SNR=6.6						
FINES	FINESS Array B	139.72	340	PKhKP	PKPpre	23 39 29.4	
	comp=Z,2.0nm,0.8s,baz=91,slow=7.6,SNR=3.8						
FINES				PKP	PKPdf	23 39 37.0	-1.0
	comp=Z,2.6nm,0.9s,baz=41,slow=3.5,SNR=4.3						
NB2	NORSAR Subarra	143.55	350	PKP	PKPab	23 39 41.7	-1.6
	comp=Z,2.5nm,0.6s,baz=19,slow=3.7						
NOA	NORSAR Array B	143.55	350	PKP	PKPab	23 39 41.1	-2.2
	comp=Z,1.9nm,0.8s,baz=22,slow=3.8,SNR=10						
AKASG	Malin Array Be	145.90	325	PKPbc	PKPdf	23 39 49.0	-0.1
	comp=Z,3.6nm,0.7s,baz=43,slow=4.3,SNR=14						
BRTR	Keskin Array B	147.92	305	PKPbc	PKPdf	23 39 55.9	+2.8
	comp=Z,0.6nm,0.4s,baz=129,slow=2.0,SNR=4.0						
CLL	Collm	152.16	341	*e*PKPbc	PKPbc	23 40 05.0	-1.2
ESDC	Sonseca Array	165.64	10	PKPab	PKPab	23 41 14.2	-3.0
	comp=Z,0.3nm,0.6s,baz=336,slow=3.3,SNR=4.2						
TORD	Torodi Ar. Bea	167.47	191	PKPab	PKPab	23 41 23.2	-2.6
	comp=Z,0.8nm,0.9s,baz=168,slow=2.8,SNR=4.6						

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*TUL **10** 23:21:45.3±1.5, 36°.26N±0°.02×97°.36W±0°.02, h8^{km}±6^{km}, ML3.3, mb_Lg3.4/83(NEIC), Error ellipse: s-maj=3.0km s-min=2.2km az=225.0*

*NEIC **10** 23:21:45.3±1.1, 36°.27N±0°.02×97°.36W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=3.0km az=59.0*

*ANF **10** 23:21:45.5±0.3, 36°.27N×97°.36W, h8^{km}, ML3.9/16, Error ellipse: s-maj=3.4km s-min=2.9km az=135.0*

ISC 10 23:21:45.9±1.1, **36°.25N**±0°.02×**97°.38W**±0°.02, **h3**^{km}±11^{km}, **n107**, σ**1^s.13**/104, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.46	188	Pg	Pg	23 21 54.4	-0.3
OK029				Sg	Sg	23 22 01.0	+0.3
BLOK	Blackwell	0.52	14	Pg	Pg	23 21 55.1	-0.8
BLOK				Sg	Sg	23 22 02.4	-0.4
OK031	S. Brethren Rd	0.53	124		Pg	23 21 55.3	-0.7
OK031				Sg	Sg	23 22 02.5	-0.4
QUOK	Quay	0.55	98	Pg	Pg	23 21 55.6	-0.8
QUOK				Sg	Sg	23 22 02.7	-0.8
CROK	Carrier	0.55	297	Pg	Pg	23 21 56.1	-0.4
CROK				Sg	Sg	23 22 03.5	-0.1
OK030	Cody Creek RV	0.58	124		Pg	23 21 56.3	-0.7
OK030				Sg	Sg	23 22 04.2	-0.4
OK034	N. Norfolk Rd.	0.59	114	Pg	Pg	23 21 56.5	-0.8
OK034				Sg	Sg	23 22 04.5	-0.4
BCOK	Bluff Creek, N	0.62	198	Pg	Pg	23 21 57.4	-0.4
BCOK				Sg	Sg	23 22 06.2	+0.3
OK009	Oakdale Elemen	0.67	183		Pg	23 21 58.5	-0.3
OK025	Westminster Rd	0.67	177	Pg	Pg	23 21 58.2	-0.6
OK025				IAmb_Lg		23 22 07.4	
	comp=Z,302nm,0.8s						
OK025				Sg	Sg	23 22 07.7	+0.3
OK001	Jones High Sch	0.69	174		Pg	23 21 59.0	-0.2
GC02	Grant County #	0.71	327	Pg	Pg	23 21 58.8	-0.8
KAN13	South Haven SW	0.76	354	Pg	Pg	23 21 59.7	-0.9
OKCFA	Oklahoma City	0.84	184		Pg	23 22 01.2	-0.8
OKCFA				IAmb_Lg		23 22 13.1	
	comp=Z,221nm,0.8s						
OKCFA	Oklahoma City	0.84	184	P	Pg	23 22 01.2	-0.8
	baz=5.1						
OKCFA				S	Sg	23 22 13.0	+0.2
	baz=5.1						
KAN14	Manchester OK	0.85	326		Pg	23 22 01.2	-0.9
OKCSW	OKLAHOMA CITY	0.85	183	Pg	Pg	23 22 01.5	-0.7
KAN17	Caldwell West	0.85	339	Pg	Pg	23 22 01.2	-1.0
OK032	Salt Plains WL	0.87	310		Pg	23 22 01.7	-0.8
KAN09	Caldwell North	0.90	348	Pg	Pg	23 22 02.2	-1.1
KAN05	Bluff City Nor	0.94	335		Pg	23 22 02.7	-1.3
KAN01	Argonia South	0.95	341		Pg	23 22 03.1	-1.1
T35A	Sooner Cattle	0.96	46		Pg	23 22 03.0	-1.4
T35B	Sooner Cattle	0.96	46	P	Pg	23 22 03.0	-1.4
	baz=226,SNR=173						
T35B				S	Sg	23 22 15.5	-1.3
	baz=226						
FNO	Franklin	0.99	181	Pg	Pg	23 22 03.8	-1.2
KAN10	Anthony SW Sta	1.04	327	Pg	Pg	23 22 04.9	-1.0
KAN06	Argonia West S	1.07	339		Pg	23 22 05.1	-1.2
KAN08	Anthony NE Sta	1.08	334		Pg	23 22 05.5	-1.2
KAN16	Harper SW Stat	1.12	331	Pg	Pg	23 22 06.2	-1.2
KAN12	Harper NE Stat	1.16	335	Pg	Pg	23 22 06.8	-1.3
U32A	Winter Ranch,	1.32	276		Pn	23 22 09.5	-1.7
U32A	Winter Ranch,	1.32	276	P	Pn	23 22 09.6	-1.6
	baz=95						
U32A				S	Sg	23 22 28.1	-0.1
	baz=95						
TUL1	Leonard	1.33	104		Pn	23 22 09.1	-2.3
TUL1	Leonard	1.33	104	P	Pn	23 22 09.1	-2.3
	baz=286,SNR=104						
TUL1				S	Sb	23 22 27.2	-1.7
	baz=286						
X34A	Smith Ranch, M	1.69	193		Pb	23 22 16.4	-1.2
LOOK	Love County	2.26	176		Pn	23 22 24.1	-0.1
LOOK				IAmb_Lg		23 23 02.3	
	comp=Z,80nm,0.9s						
X37A	Clayton	2.33	135		Pn	23 22 24.1	-1.1
X37A	Clayton	2.33	135	P	Pn	23 22 24.9	-0.3
	baz=316,SNR=15						
R32A	Long Quarter,	2.41	334		Pn	23 22 25.9	-0.4
R32A	Long Quarter,	2.41	334	S	Sn	23 22 56.2	-0.2
	baz=153						

U38A	Gravette	2.42	85		Pn	23 22 25.2	-1.2
HHAR	Hobbs	2.78	88		Pn	23 22 30.6	-0.7
KSU1	Kansas State U	2.91	12		Pn	23 22 32.2	-0.9
KSU1	Kansas State U	2.91	12	P	Pn	23 22 32.4	-0.7
	baz=192						
Z35A	Perchaven, San	2.92	178		Pn	23 22 32.8	-0.4
Z35A	Perchaven, San	2.92	178	P	Pn	23 22 32.4	-0.8
	baz=358						
W39A	Magazine	3.11	109		Pn	23 22 35.0	-0.8
W39A				IAmb_Lg		23 23 31.1	
	comp=Z,88nm,0.9s						
W39A	Magazine	3.11	109	P	Pn	23 22 35.0	-0.8
	baz=291						
CBKS	Cedar Bluff	3.17	324		Pn	23 22 35.3	-1.5
CBKS				IAmb_Lg		23 23 29.7	
	comp=Z,76nm,0.7s						
MIAR	Mount Ida	3.54	118		Pn	23 22 41.4	-0.4
MIAR				IAmb_Lg		23 23 40.3	
	comp=Z,49nm,0.7s						
MIAR	Mount Ida	3.54	118	P	Pn	23 22 41.5	-0.3
	baz=300,SNR=17						
MIAR				S	Sn	23 23 24.3	+0.1
	baz=300						
S39A	Bolivar	3.55	65		Pn	23 22 41.5	-0.4
S39A				IAmb_Lg		23 23 40.0	
	comp=Z,101nm,0.9s						
S39A	Bolivar	3.55	65	P	Pn	23 22 41.4	-0.5
	baz=247,SNR=10						
Z38A	Mt. Pleasant	3.58	146		Pn	23 22 41.7	-0.6
Z38A				IAmb_Lg		23 23 47.9	
	comp=Z,141nm,0.8s						
U40A	Yellville	3.66	87		Pn	23 22 41.9	-1.5
U40A	Yellville	3.66	87	P	Pn	23 22 42.3	-1.1
	baz=270,SNR=6.1						
U40A				P	Pn	23 22 42.3	-1.1
	baz=270,SNR=6.1						
AMTX	Amarillo	3.76	250		Pn	23 22 44.8	-0.2
AMTX				IAmb_Lg		23 23 50.4	
	comp=Z,88nm,0.7s						
AMTX	Amarillo	3.76	250	P	Pn	23 22 45.0	+0.1
	baz=67						
ABTX	Abilene, Hawle	4.08	208		Pb	23 22 59.7	+1.4
X40A	Basin Creek Fa	4.11	114		Pn	23 22 48.3	-1.3
X40A				IAmb_Lg		23 24 02.9	
	comp=Z,67nm,0.9s						
X40A	Basin Creek Fa	4.11	114	P	Pn	23 22 49.4	-0.2
	baz=297,SNR=10						
X40A				P	Pn	23 22 49.4	-0.2
	baz=297,SNR=10						
MGMO	Mountain Grove	4.20	76		Pn	23 22 50.3	-0.6
MGMO				IAmb_Lg		23 23 59.1	
	comp=Z,73nm,0.9s						
WHAR	Wooly Hollow	4.25	102		Pn	23 22 50.8	-0.7
WHAR				IAmb_Lg		23 24 06.3	
	comp=Z,68nm,0.9s						
WHTX	Lake Whitney,	4.25	181		Pn	23 22 50.7	-0.9
WHTX	Lake Whitney,	4.25	181	P	Pn	23 22 51.2	-0.4
	baz=1.1						
FCAR	Ozark Folk Cen	4.27	93		Pn	23 22 50.9	-0.9
FCAR				IAmb_Lg		23 23 59.0	
	comp=Z,45nm,0.7s						
W41B	Gary Mavity, V	4.31	103	P	Pn	23 22 51.4	-1.0
	baz=286,SNR=15						
WLAR	White Oak Lake	4.34	125		Pn	23 22 51.2	-1.5
WLAR				IAmb_Lg		23 24 04.6	
	comp=Z,50nm,0.8s						
237A	Washetta, Mont	4.44	162	Pn	Pn	23 22 52.7	-1.4
N33A	J Bar K, Exete	4.48	359	Pn	Pn	23 22 53.4	-1.3
P38A	Dawn	4.54	41		Pn	23 22 54.5	-0.9
P38A				IAmb_Lg		23 24 07.9	
	comp=Z,51nm,0.8s						
R40A	Maddies Statio	4.55	62		Pn	23 22 54.9	-0.8
R40A	Maddies Statio	4.55	62	P	Pn	23 22 55.0	-0.7
	baz=245,SNR=11						
N35A	Tabor	4.80	16		Pg	23 23 16.5	-1.3
MSTX	Muleshoe	4.97	244		Pb	23 23 15.5	+1.8
KSCO	Kaye Shedlock’	4.99	305	Pg	Pg	23 23 18.1	-3.5
LCAR	Lake Charles	5.04	90	Pn	Pn	23 23 01.8	-0.6
LCAR				IAmb_Lg		23 24 22.2	
	comp=Z,47nm,1.0s						
CCAR	Cane Creek	5.15	115	Pn	Pn	23 23 03.3	-0.7
CCAR				IAmb_Lg		23 24 35.5	
	comp=Z,66nm,0.7s						
BGNE	Belgrade	5.18	354		Pn	23 23 02.8	-1.6
BGNE				IAmb_Lg		23 24 43.0	
	comp=Z,78nm,1.0s						
CCM	Cathedral Cave	5.22	68	Pg	Pb	23 23 20.2	+2.4
CCM				IAmb_Lg		23 24 29.9	
	comp=Z,65nm,0.9s						
P40A	Paris	5.33	51	IAmb_Lg		23 24 38.2	
	comp=Z,83nm,0.9s						
435B	Jarrell	5.46	182	Pn	Pn	23 23 07.0	-1.2
PBMO	Poplar Bluff	5.62	83	IAmb_Lg		23 24 50.4	
	comp=Z,39nm,0.7s						
T25A	Trinidad	5.72	281		Pn	23 23 11.4	-0.5
T25A				Pg	Pg	23 23 33.6	-1.9
T25A				IAmb_Lg		23 24 55.0	
	comp=Z,26nm,0.7s						
L34A	Svendsen Farm,	5.76	7	Pg	Pb	23 23 29.4	+2.5
L34A				IAmb_Lg		23 24 58.1	
	comp=Z,71nm,0.8s						
LPAR	Lepanto	5.78	94	IAmb_Lg		23 24 55.8	
	comp=Z,83nm,1.0s						
OGNE	Ogallala	5.94	324	IAmb_Lg		23 25 02.0	
	comp=Z,56nm,0.8s						
GNAR	Gosnell	5.97	91	IAmb_Lg		23 24 59.2	
	comp=Z,74nm,0.9s						
JCT	Junction City	6.10	200	Pn	Pn	23 23 16.1	-1.0
JCT				IAmb_Lg		23 25 06.7	
	comp=Z,42nm,0.7s						
PARMO	Parma	6.16	84	IAmb_Lg		23 24 59.5	
	comp=Z,78nm,0.8s						
PENMO	Penman	6.26	86	IAmb_Lg		23 25 07.1	
	comp=Z,60nm,0.7s						
LNXT	Lenox	6.38	89	IAmb_Lg		23 25 24.8	
	comp=Z,70nm,0.9s						
K31A	O'Neill	6.45	351	IAmb_Lg		23 25 17.4	
	comp=Z,68nm,0.8s						
SCIA	State Center	6.51	29	IAmb_Lg		23 25 16.3	
	comp=Z,62nm,0.8s						
GLAT	Glass	6.54	87	IAmb_Lg		23 25 28.9	
	comp=Z,73nm,0.7s						
SDCO	Great Sand Dun	6.67	285	IAmb_Lg		23 25 18.4	
	comp=Z,22nm,1.1s						
W45A	Hickory Valley	6.75	97	IAmb_Lg		23 25 23.3	
	comp=Z,56nm,0.7s						
K38A	Parkersburg	7.31	28	IAmb_Lg		23 25 57.4	
	comp=Z,54nm,0.9s						
ECSD	EROS Data Cent	7.50	4	Pn	Pn	23 23 34.1	-2.0
L40A	Anamosa	7.52	38	Pn	Pn	23 23 34.9	-1.5
L40A				IAmb_Lg		23 25 50.5	
	comp=Z,35nm,0.8s						
PLAL	Pickwick Lake	7.68	97	IAmb_Lg		23 25 55.9	
	comp=Z,25nm,1.1s						
O44A	Mansfield	8.02	58	IAmb_Lg		23 26 00.1	
	comp=Z,58nm,0.9s						
LENM	Lemitar	8.12	258		Pn	23 23 43.0	-1.9
L42A	Oliver, Polo	8.30	44	IAmb_Lg		23 26 13.2	
	comp=Z,38nm,0.8s						
JFWS	Jewell Farm	8.63	37	IAmb_Lg		23 26 19.3	
	comp=Z,45nm,0.7s						
I40A	Norwalk	9.22	32	IAmb_Lg		23 26 39.5	
	comp=Z,19nm,0.8s						
K22A	Casper	9.53	315	IAmb_Lg		23 26 57.2	
	comp=Z,22nm,1.0s						

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*IDC **10** 23:35:05.9±1.7, 4°.02S×129°.30E, h0^{km}, mb3.1/2, mb1 3.5/5, mb1mx3.0/42, mbtmp3.3/5, ML3.0/3, Error ellipse: s-maj=49.1km s-min=23.6km az=97.0*

ISC 10 23:35:10.6±1.2, **4°.1S**±0°.1×**129°.3E**±0°.2, **h35^{km}, n5,** σ**0^{s}.35**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.72	32	Pn	Pn	23 36 05.8	+0.2
	2.9nm,0.3s,baz=184,slow=23,SNR=9.3						
SIJI				Sn	Sn	23 36 47.9	-0.3
	2.3nm,0.3s,baz=55,slow=19,SNR=3.8						
FITZ	Fitzroy Crossi	14.42	194	Pn	Pn	23 38 32.3	0.0
	0.1nm,0.3s,baz=21,slow=8.6,SNR=2.8						
WRA	Warramunga Arr	16.55	163	Pn	Pn	23 39 00.5	+0.3
	0.0nm,0.3s,baz=349,slow=13,SNR=1.9						
ASAR	Alice Springs	20.00	168	P	P	23 39 40.1	-0.3
	0.3nm,0.4s,baz=347,slow=10,SNR=5.4						
MKAR	Makanchi Array	65.39	326	P	P	23 45 49.8	+0.1
	0.2nm,0.7s,baz=120,slow=8.5,SNR=1.6						

IDC 10 23:39:39.8±1.7, **4°.05S**×**129°.35E, h0^{km}, mb3.3**/1, **mb1 3.2**/4, **mb1mx3.0**/36, **mbtmp3.0**/4, **ML2.8**/3, **Error ellipse: s-maj=54.6km s-min=28.0km az=80.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.69	31	Pn	Pn	23 40 37.9	-0.3
	1.3nm,0.3s,baz=217,slow=23,SNR=1.9						
SIJI				Sn	Sn	23 41 14.2	-8.2
	0.9nm,0.3s,baz=219,slow=22,SNR=1.5						
WRA	Warramunga Arr	16.53	163	Pn	Pn	23 43 33.6	+0.3
	0.0nm,0.3s,baz=344,slow=10,SNR=1.6						
ASAR	Alice Springs	20.00	168	P	P	23 44 13.7	-0.5
	0.1nm,0.3s,baz=353,slow=9.7,SNR=4.5						
MKAR	Makanchi Array	65.42	326	P	P	23 50 24.7	+0.2
	0.3nm,0.8s,baz=114,slow=7.9,SNR=4.5						

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*MDD **10** 23:40:55.2±1.6, 38°.54N×18°.11W, h0^{km}, mb4.5/3, Error ellipse: s-maj=19.3km s-min=10.9km az=135.0, PRXIMO*

*CNRM **10** 23:40:59.2, 38°.29N×17°.95W, h28^{km}*

*INMG **10** 23:40:59.4±2.0, 38°.61N×18°.39W, h10^{km}, ML3.1, Error ellipse: s-maj=8.0km s-min=5.0km az=124.0*

ISC 10 23:40:55.4±2.3, **38°.53N**±0°.07×**17°.9W**±0°.1, **h10^{km}, n76,** σ**2^{s}.79**/128, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPS	Porto Santo	5.60	167	ePn	Pn	23 42 18.8	+0.1
PMPS				eSn	Sn	23 43 17.8	-5.3
PMPS	Porto Santo	5.60	167	P	Pn	23 42 18.8	+0.1
PMPS				S	Sn	23 43 17.8	-5.3
PMOZ	Porto Moniz, M	5.72	174	ePn	Pn	23 42 19.7	-0.8
PMOZ				eSn	Sn	23 43 17.9	-8.3
PMOZ				A	A	23 43 24.8	
	24nm,0.6s						
PMOZ	Porto Moniz, M	5.72	174	P	Pn	23 42 19.3	-1.2
	12nm,0.2s,SNR=7.9						
PMOZ				S	Sn	23 43 18.2	-8.0
	7.3nm,0.3s,SNR=7.9						
PMOZ	Porto Moniz, M	5.72	174	P	Pn	23 42 20.4	-0.1
PMOZ				S	Sn	23 43 22.5	-3.7
PMAR	Madeira	5.84	172	ePn	Pn	23 42 21.9	-0.3
PMAR				eSn	Sn	23 43 20.9	-8.5
PMAR				A	A	23 43 25.6	
	12nm,0.3s						
PMAR	Madeira	5.84	172	P	Pn	23 42 21.9	-0.3
PMAR				S	Sn	23 43 20.9	-8.5
	6.0nm,0.3s						
PMAR	Madeira	5.84	172	P	Pn	23 42 22.0	-0.3
PMAR				S	Sn	23 43 26.1	-3.3
PMAFR	Mafra	6.74	84	ePn	Pn	23 42 37.9	+3.6
PMAFR				eSn	Sn	23 43 51.8	+0.7
PMAFR				A	A	23 43 54.9	
	10.0nm,0.4s						
PMAFR	Mafra	6.74	84	P	Pn	23 42 37.6	+3.3
	2.3nm,0.1s,SNR=7.9						
PMAFR				S	Sn	23 43 50.5	-0.5
	2.1nm,0.1s,SNR=7.9						
PSBE	So Bento	7.14	79	ePn	Pn	23 42 43.4	+3.5
PSBE				eSn	Sn	23 44 02.0	+0.9
PTEO	Sao Teotonio	7.29	95	ePn	Pn	23 42 45.6	+3.6
PTEO				eSn	Sn	23 44 03.8	-1.0
PTEO	Sao Teotonio	7.29	95	P	Pn	23 42 45.6	+3.6
PTEO				S	Sn	23 44 03.8	-1.0
PFVI	Vila Bisbo	7.30	98	eSn	Sn	23 44 01.8	-3.2
PFVI	Vila Bisbo	7.30	98	S	Sn	23 44 01.8	-3.2
	1.2nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	7.30	98	P	Pn	23 42 43.7	+1.7
PFVI				S	Sn	23 44 05.7	+0.7
PNCL	Nicolau / Gran	7.37	90	ePn	Pn	23 42 45.7	+2.8
PNCL				eSn	Sn	23 44 05.6	-0.9
PNCL	Nicolau / Gran	7.37	90	P	Pn	23 42 45.7	+2.8
PNCL				S	Sn	23 44 05.6	-0.9
MORF	Marmelete	7.40	97	ePn	Pn	23 42 48.2	+4.7
MORF				eSn	Sn	23 44 07.2	-0.3
MORF	Marmelete	7.40	97	P	Pn	23 42 48.2	+4.7
MORF				S	Sn	23 44 07.2	-0.3
PCAS	Casmilo, Conde	7.44	75	ePn	Pn	23 42 47.0	+3.1
PCAS				eSn	Sn	23 44 08.2	-0.1
PCAS	Casmilo, Conde	7.44	75	P	Pn	23 42 47.0	+3.1
PCAS				S	Sn	23 44 08.2	-0.1
PMTG	Montargil	7.56	83	ePn	Pn	23 42 48.4	+2.8
PMTG				eSn	Sn	23 44 10.8	-0.6
PMTG	Montargil	7.56	83	P	Pn	23 42 48.4	+2.8
PMTG				S	Sn	23 44 10.8	-0.6
MESJ	Messejana	7.64	92	ePn	Pn	23 42 50.8	+4.1
MESJ				eSn	Sn	23 44 12.8	-0.5
MESJ	Messejana	7.64	92	P	Pn	23 42 50.8	+4.1
MESJ				S	Sn	23 44 12.8	-0.5
EVO	Evora	7.74	87	eSn	Sn	23 44 14.7	-1.0
EVO	Evora	7.74	87	S	Sn	23 44 14.7	-1.0
PCVE	Castro Verde	7.81	94	ePn	Pn	23 42 53.0	+3.9
PCVE				eSn	Sn	23 44 17.3	-0.3
PCVE	Castro Verde	7.81	94	P	Pn	23 42 53.0	+3.9
PCVE				S	Sn	23 44 17.3	-0.3
PBEJ	Beja	7.89	91	eSn	Sn	23 44 18.8	-0.8
PBEJ	Beja	7.89	91	S	Sn	23 44 18.8	-0.8
PBDV	Barranco-do-Ve	7.97	96	ePn	Pn	23 42 55.6	+4.3
PBDV				eSn	Sn	23 44 20.8	-0.8
PBDV	Barranco-do-Ve	7.97	96	P	Pn	23 42 55.6	+4.3
PBDV				S	Sn	23 44 20.8	-0.8
PVIS	Viseu	8.01	71	eSn	Sn	23 44 20.4	-2.2
PVIS	Viseu	8.01	71	S	Sn	23 44 20.4	-2.2
PESTR	Estremoz	8.06	84	ePn	Pn	23 42 57.2	+4.8
PESTR				eSn	Sn	23 44 22.6	-1.0
PESTR	Estremoz	8.06	84	P	Pn	23 42 54.3	+1.9
PESTR				S	Sn	23 44 27.5	+3.9
EMAZ	Mazaricos	8.07	54	P	Pn	23 42 53.3	+0.6
	2.9nm,0.2s,SNR=7.9						
EMAZ				S	Sn	23 44 18.9	-5.1
	1.4nm,0.1s,SNR=7.9						
PVAQ	Vaqueiros	8.11	95	ePn	Pn	23 43 00.2	+7.1
PVAQ				eSn	Sn	23 44 23.2	-1.6
PVAQ	Vaqueiros	8.11	95	P	Pn	23 43 00.2	+7.1
PVAQ				S	Sn	23 44 23.2	-1.6
PVAQ	Vaqueiros	8.11	95	P	Pn	23 42 52.3	-0.8
PVAQ				S	Sn	23 44 29.4	+4.6
PGAV	Gavieira, Arco	8.11	62	ePn	Pn	23 42 54.8	+1.5
PGAV				eSn	Sn	23 44 21.5	-3.6
PGAV	Gavieira, Arco	8.11	62	P	Pn	23 42 54.8	+1.5
PGAV				S	Sn	23 44 21.5	-3.6
PCBR	Castelo Branco	8.19	78	ePn	Pn	23 42 57.0	+2.8
PCBR				eSn	Sn	23 44 23.8	-3.0
PCBR	Castelo Branco	8.19	78	P	Pn	23 42 57.0	+2.8
PCBR				S	Sn	23 44 23.8	-3.0
PCAB	Cabril	8.19	64	ePn	Pn	23 42 56.6	+2.3
PCAB				eSn	Sn	23 44 24.0	-2.9
PCAB	Cabril	8.19	64	P	Pn	23 42 56.6	+2.3
PCAB				S	Sn	23 44 24.0	-2.9
MTE	Manteigas	8.21	74	eSn	Sn	23 44 25.4	-2.1
MTE	Manteigas	8.21	74	S	Sn	23 44 25.4	-2.1
PMRV	Marv??o	8.22	80	ePn	Pn	23 42 57.8	+3.1
PMRV				eSn	Sn	23 44 26.9	-0.7
PMRV	Marv??o	8.22	80	P	Pn	23 42 57.8	+3.1
PMRV				S	Sn	23 44 26.9	-0.7
ELOB	Lobios	8.22	63	P	Pn	23 42 55.7	+0.9
	0.6nm,0.1s,SNR=7.9						
ELOB				S	Sn	23 44 23.3	-4.5
	1.3nm,0.2s,SNR=6.6						
POLO	Lamas de Olo	8.25	67	ePn	Pn	23 42 57.8	+2.6
POLO				eSn	Sn	23 44 25.8	-2.7
POLO	Lamas de Olo	8.25	67	P	Pn	23 42 57.8	+2.6
POLO				S	Sn	23 44 25.8	-2.7
EGRO	El Granado	8.27	94	P	Pn	23 42 58.0	+2.7
	0.3nm,0.1s,SNR=7.9						
EGRO				S	Sn	23 44 26.6	-2.1
	1.9nm,0.1s,SNR=6.7						
PVRL	Vila Real	8.28	67	eSn	Sn	23 44 26.5	-2.7
PVRL	Vila Real	8.28	67	S	Sn	23 44 26.5	-2.7
EBAD	Badajoz	8.51	85	P	Pn	23 43 00.8	+2.1
	0.2nm,0.1s,SNR=7.9						
EBAD				S	Sn	23 44 32.1	-2.6
	1.2nm,0.1s,SNR=8.3						
EAGO	Agolada(Pontev	8.58	57	P	Pn	23 43 00.8	+1.2
	1.4nm,0.2s,SNR=7.9						
EAGO				S	Sn	23 44 31.4	-5.0
	1.9nm,0.1s,SNR=7.9						
MVO	Moncorvo	8.75	69	P	Pn	23 43 03.2	+1.1
	0.3nm,0.1s,SNR=7.9						
MVO				S	Sn	23 44 36.4	-4.4
	0.8nm,0.1s,SNR=7.2						
EMIN	Mina Concepcio	8.87	91	P	Pn	23 43 06.3	+2.8
	0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	23 44 39.4	-4.1
	1.1nm,0.2s,SNR=8.0						
PBRG	Braganca	9.13	65	eS	Sn	23 44 46.8	-3.3
PBRG	Braganca	9.13	65	S	Sn	23 44 46.8	-3.3
ECAL	Calabor	9.18	65	P	Pn	23 43 10.3	+2.5
	0.9nm,0.2s,SNR=7.9						
ECAL				S	Sn	23 44 47.1	-4.2
	3.0nm,0.2s,SNR=5.0						
EPLA	Plasencia	9.28	77	S	Sn	23 44 50.9	-2.7
	1.2nm,0.2s,SNR=7.9						
EPON	Pontenova	9.43	56	P	Pn	23 43 11.9	+0.7
	0.4nm,0.1s,SNR=7.9						
EPON				S	Sn	23 44 51.6	-5.7
	0.5nm,0.2s,SNR=7.9						
ESPR	Espera	9.68	96	S	Sn	23 45 00.4	-2.9
	0.9nm,0.1s,SNR=5.9						
ECAB	El Cabril	9.81	89	P	Pn	23 43 18.8	+2.4
	0.3nm,0.1s,SNR=6.8						
ECAB				S	Sn	23 45 01.4	-5.3
	0.1nm,0.2s,SNR=5.8						
ZHG	ZHG	10.42	116	P	Pn	23 43 27.0	+2.1
ZHG				S	Sn	23 45 22.2	+0.4
EADA	Adamuz	10.46	88	S	Sn	23 45 19.3	-3.3
	0.1nm,0.1s,SNR=7.9						
PAB	San Pablo	10.58	80	S	Sn	23 45 21.6	-4.1
	0.1nm,0.2s,SNR=7.9						
OUK	Oukaimeden	10.99	129	P	Pn	23 43 32.8	-0.3
OUK				S	Sn	23 45 34.8	-1.5
TTIG	Tnine Tigouga,	11.13	133	P	Pn	23 43 35.1	+0.4
TTIG				S	Sn	23 45 37.8	-1.5
MD31	MD31	12.07	114	P	Pn	23 43 50.2	+2.8
MD31				S	Sn	23 46 02.4	+0.3
MDT	Midelt	12.20	114	P	Pn	23 43 50.7	+1.4
MDT				S	Sn	23 46 05.6	+0.1

IDC 10 23:50:49.6±3.1, **28°.03N**×**96°.83E, h0^{km}, mb3.2**/3, **mb1 3.5**/3, **mb1mx3.2**/39, **mbtmp3.3**/3, **MS3.5**/1, **Ms1 3.5**/1, **ms1mx2.6**/36, **Error ellipse: s-maj=455.3km s-min=8.4km az=57.0, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	21.94	333	P	P	23 55 44.7	0.0
	0.5nm,0.5s,baz=145,slow=8.8,SNR=14						
EIL	Elat	53.64	288	LR	LR	00 24 46.9	
	comp=Z,37nm,18.3s,baz=146,slow=38						
WRA	Warramunga Arr	59.92	139	P	P	00 00 57.5	-0.1
	0.2nm,0.6s,baz=324,slow=8.2,SNR=6.5						
ASAR	Alice Springs	62.60	141	P	P	00 01 16.0	+0.2
	0.2nm,0.6s,baz=331,slow=7.4,SNR=1.4						

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*TUL **11** 00:00:35.8±1.4, 36°.279N±0°.010×96°.93W±0°.01, h8^{km}±6^{km}, ML2.5, mb_Lg2.6/3(NEIC), Error ellipse: s-maj=1.7km s-min=1.1km az=137.0*

NEIC 11 00:00:35.0±1.1, **36°.29N**±0°.01×**96°.96W**±0°.01, **h5^{km}**±2^{km}, **Error ellipse: s-maj=3.0km s-min=1.8km az=102.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	Quay	0.23	120	Pg	Pg	00 00 39.8	+0.2
QUOK				Sg	Sg	00 00 43.0	+0.4
OK034	N. Norfolk Rd.	0.34	145	Pg	Pg	00 00 41.9	+0.3
OK034				Sg	Sg	00 00 46.4	+0.3
OK031	S. Brethren Rd	0.35	164		Pg	00 00 42.0	+0.3
OK031				Sg	Sg	00 00 46.7	+0.4
OK030	Cody Creek RV	0.39	159		Pg	00 00 42.7	+0.2
OK030				Sg	Sg	00 00 47.9	+0.4
BLOK	Blackwell	0.52	336	Pg	Pg	00 00 45.5	+0.5
BLOK					Sg	00 00 52.9	+1.1
OK029	Liberty Lake	0.64	220	Pg	Pg	00 00 47.5	+0.3
OK029				Sg	Sg	00 00 56.2	+0.7
T35A	Sooner Cattle	0.72	30	Pg	Pg	00 00 48.9	0.0
T35A				Sg	Sg	00 00 58.4	+0.1
OK025	Westminster Rd	0.77	204	Pg	Pg	00 00 49.7	-0.1
OK025				Sg	Sg	00 01 00.6	+0.8
BCOK	Bluff Creek, N	0.82	220		Pg	00 00 50.8	-0.1
KAN13	South Haven SW	0.84	330	Pg	Pg	00 00 51.5	+0.4
CROK	Carrier	0.86	285		Pg	00 00 51.4	-0.1
GC02	Grant County #	0.92	308		Pg	00 00 52.9	+0.2
OKCFA	Oklahoma City	0.96	205		Pg	00 00 53.3	-0.1
KAN17	Caldwell West	1.00	319		Pg	00 00 53.9	-0.3
KAN09	Caldwell North	1.00	328		Pg	00 00 53.8	-0.5
TUL1	Leonard	1.01	111		Pg	00 00 54.1	-0.4
KAN14	Manchester OK	1.05	310		Pg	00 00 55.2	0.0
KAN01	Argonia South	1.08	323		Pg	00 00 55.8	+0.1
FNO	Franklin	1.09	200		Pg	00 00 55.5	-0.5
KAN05	Bluff City Nor	1.10	318		Pg	00 00 55.9	-0.2
OK032	Salt Plains WL	1.13	297	Pn	Pg	00 00 56.5	-0.3
KAN06	Argonia West S	1.20	323	Pn	Pg	00 00 57.5	-0.6
KAN10	Anthony SW Sta	1.24	313	Pn	Pg	00 00 58.2	-0.6
KAN08	Anthony NE Sta	1.24	319	Pn	Pg	00 00 58.6	-0.3
KAN16	Harper SW Stat	1.29	317	Pn	Pn	00 00 58.7	-1.1
U32A	Winter Ranch,	1.65	274	Pn	Pn	00 01 03.6	-1.2
X34A	Smith Ranch, M	1.83	203	Pn	Pn	00 01 06.8	-0.4
U38A	Gravette	2.08	85	Pn	Pn	00 01 09.9	-0.7
X37A	Clayton	2.13	142	Pn	Pn	00 01 10.8	-0.5
WMOK	Wichita Mounta	2.15	224	IAmb_Lg		00 01 45.2	
	comp=Z,3.2nm,0.8s						
HALT	Halls	6.18	91	IAmb_Lg		00 04 08.6	
	comp=Z,27nm,0.9s						
146A	Union	7.47	117	IAmb_Lg		00 04 40.7	
	comp=Z,8.4nm,0.7s						

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*IDC **11** 00:07:32.6±3.0, 36°.24N×70°.53E, h167^{km}±26^{km}, mb3.4/8, mb1 3.4/14, mb1mx3.1/56, mbtmp3.9/14, Error ellipse: s-maj=23.8km s-min=16.7km az=8.0*

*NEIC **11** 00:07:37.1±0.9, 36°.51N±0°.07×70°.29E±0°.06, h198^{km}±7^{km}, mb4.1/9, Error ellipse: s-maj=10.2km s-min=6.5km az=166.0*

ISC 11 00:07:36.3±0.6, **36°.40N**±0°.05×**70°.40E**±0°.06, **h204^{km}, n63,** σ**2^{s}.06**/66, **mb4.1**/11, **1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.16	211	Pn	Pn	00 08 17.9	+0.8
CHGR	Chuyangaron	2.46	337	Pn	Pn	00 08 18.8	-1.3
GAR	Garm	2.60	359		Pn	00 08 20.6	-1.1
CEP	Cherat	2.85	154	P	Pn	00 08 26.3	+1.6
CEP				S	S	00 09 03.0	+1.2
DRK	Karamyk	3.27	19		Pn	00 08 29.1	-0.5
NIL	Nilore	3.60	139	Pn	Pn	00 08 35.7	+2.2
BTK	Batken	3.67	5	Pn	Pn	00 08 34.0	-0.2
THW	Thamme Wali	3.76	163	⇓P	Pn	00 08 36.8	+1.4
TAS	Tashkent	4.99	350	Pn	Pn	00 08 49.9	-0.8
KSH	Kashi	5.39	53	P	Pn	00 08 53.5	-2.4
KSH				sP		00 09 32.2	
KSH				S	S	00 09 48.6	-10
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSH				smax	smax		
	comp=N,130nm,0.5s						
KSH				smax	smax		
	comp=E,52nm,0.6s						
KKAR	Karatay Array	6.70	1	Pn	Pn	00 09 11.6	-0.9
HRA	Herat	6.96	256	Pn	Pn	00 09 14.7	-1.6
AAK	Ala-Archa	6.99	26	P	Pn	00 09 15.6	-0.8
	comp=E,1.5nm,0.3s,baz=176,slow=6.9,SNR=20						
AAK				S	S	00 10 30.6	-5.3
	comp=E,1.1nm,0.3s,baz=240,slow=6.3,SNR=4.1						
AAK	Ala-Archa	6.99	26	Pn	Pn	00 09 16.0	-0.5
BHK	Bhakra	7.05	133	eS	S	00 10 33.8	-3.5
BHK				IAML		00 10 38.7	
	comp=Z,476nm,0.3s						
BOOM	Boomskoye usch	7.44	33	Pn	Pn	00 09 22.4	+0.1
SMLA	Simla	7.70	131	eS	S	00 10 49.1	-3.6
NDI	New Delhi	9.60	141	eS	S	00 11 28.3	-10
NDI				eS	S	00 11 30.0	-8.1
NDI				IAML		00 11 32.1	
	comp=N,242nm,0.2s						
KUDL	Kundal	9.71	146	eP	Pn	00 09 51.3	-0.5
KUDL				eS	S	00 11 34.0	-6.6

SONA	Sohna	9.89	143	eS	S	00 11 37.9	-7.1
GEYT	Alibeck	9.93	283	P	Pn	00 09 53.6	-1.0
	comp=N,0.2nm,0.3s,baz=102,slow=12,SNR=1.7						
GEYT				S	S	00 11 43.1	-2.6
	comp=N,0.4nm,0.3s,baz=131,slow=31,SNR=3.2						
JHNI	Jhansi	12.94	145	eP	P	00 10 39.2	+3.1
JHNI				eS	S	00 12 45.7	-11
PYUN	Piuthan	13.48	124	eP	P	00 10 40.7	-1.7
	comp=N,2.6nm,0.3s						
MAKZ	Makanchi	13.52	36	Pn	Pn	00 10 40.5	+0.5
MK31	Makanchi Array	13.66	37	Pn	Pn	00 10 41.6	-0.1
MKAR	Makanchi Array	13.66	37	P	Pn	00 10 41.0	-0.7
	comp=N,0.3nm,0.3s,baz=211,slow=12,SNR=18						
MKAR	Makanchi Array	13.66	37	Pn	Pn	00 10 41.9	+0.2
DANN	Dangsing	13.84	122	eP	P	00 10 45.4	-1.1
	comp=N,10nm,0.5s						
KOLN	Koldanda	14.10	124	eP	P	00 10 48.8	-0.5
	comp=N,2.3nm,0.3s						
GKN	Gorkha	14.66	121	eP	P	00 10 54.9	-0.5
	comp=N,22nm,0.7s						
ABKAR	Akbulak array	14.95	333		Pn	00 10 56.5	-1.0
ABKAR	Akbulak array	14.95	333	Pn	Pn	00 10 55.3	-2.2
WMQ	Urumqi	15.15	55	eP	P	00 11 02.8	+2.2
KKN	Kakani	15.24	120	eP	P	00 11 02.2	+0.3
KURBB	Kurchatov Arra	15.38	20	P	Pn	00 11 00.9	-1.8
	comp=N,0.1nm,0.3s,baz=209,slow=9.9,SNR=6.7						
PKIN	Phulchoki	15.45	120	eP	P	00 11 05.2	+0.9
PKI	Pulchoki	15.46	120	eP	P	00 11 04.9	+0.4
KURK	Kurchatov	15.48	20		Pn	00 11 03.7	-0.3
BVAR	Borovoye Array	16.62	360	P	Pn	00 11 18.0	+0.2
	comp=N,0.7nm,0.3s,baz=198,slow=14,SNR=6.4						
AKTO	Aktyubinsk	16.63	331	P	Pn	00 11 18.2	+0.4
	comp=N,1.0nm,0.3s,baz=149,slow=12,SNR=38						
BRVK	Borovoye	16.66	360	P	Pn	00 11 17.7	-0.4
BRVK				IAmb	IAmb	00 11 19.5	
	comp=Z,3.4nm,0.6s						
RAMN	Ramite	16.68	120	eP	Pn	00 11 19.3	+0.4
	comp=Z,14nm,0.6s						
TAPN	Taplejung	17.23	117	eP	Pn	00 11 25.0	-0.4
	comp=Z,4.9nm,0.4s						
ODAN	Odare	17.29	119	eP	Pn	00 11 26.5	+0.4
	comp=Z,12nm,0.6s						
ZAA0	Zalesovo Array	20.21	25	P	P	00 11 56.0	+0.6
ZAA0				IAmb	IAmb	00 11 56.9	
	comp=Z,2.3nm,0.6s						
ZALV	Zalesovo Beam	20.21	25	P	P	00 11 55.7	+0.3
	comp=Z,1.6nm,0.3s,baz=221,slow=11,SNR=13						
ZALV	Zalesovo Beam	20.21	25	P	P	00 11 55.9	+0.5
ARU	Arti	21.57	342	P	P	00 12 11.6	+1.9
	comp=Z,1.4nm,0.6s,baz=144,slow=6.7,SNR=9.0						
ARU	Arti	21.57	342	P	P	00 12 11.0	+1.3
BELG	Belogornoye	22.67	322	P	P	00 12 20.9	+0.8
	comp=Z,8.2nm,0.7s,baz=120,slow=20,SNR=2.5						
LZH	Lanzhou	26.90	81	eP	P	00 13 04.1	+5.4
LZH				pP	pP	00 13 27.0	-14
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
HHC	Hu-ho-hao-te	32.25	69	eP	P	00 13 47.0	+1.3
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,190nm,7.6s						
SLVN	Son La	32.76	108	P	P	00 13 50.8	+0.5
FIA1	FINESS Array S	37.30	326	P	P	00 14 28.4	0.0
FIA1				IAmb	IAmb	00 14 43.6	
	comp=Z,8.9nm,1.1s						
FINES	FINESS Array B	37.30	326	P	P	00 14 29.2	+0.8
	comp=Z,1.8nm,0.6s,baz=106,slow=6.8,SNR=7.5						
FINES	FINESS Array B	37.30	326	P	P	00 14 29.5	+1.1
ARCES	ARCESS Array B	41.05	338	P	P	00 15 00.4	+1.0
	comp=Z,5.5nm,0.9s,baz=112,slow=7.0,SNR=11						
NC303	NORSAR Array S	44.12	323	P	P	00 15 24.9	+0.7
NC303				IAmb	IAmb	00 15 44.4	
	comp=Z,8.5nm,1.1s						
NB201	NORSAR Array S	44.13	323	P	P	00 15 22.9	-1.4
NOA	NORSAR Array B	44.17	323	P	P	00 15 25.5	+0.9
	comp=Z,1.6nm,1.0s,baz=103,slow=7.3,SNR=2.1						
JHS	Saijyo	50.13	72	P	P	00 16 14.2	+3.3
WRA	Warramunga Arr	82.35	121	P	P	00 19 34.6	-0.9
	comp=Z,0.2nm,0.6s,baz=325,slow=4.1,SNR=5.2						
ASAR	Alice Springs	84.59	124	P	P	00 19 46.5	-0.5
	comp=Z,0.3nm,0.6s,baz=309,slow=5.6,SNR=4.6						

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*GUC **11** 00:18:35.6±0.7, 30°.49S×72°.20W, h30^{km}±5^{km}, ML3.8*
*NEIC **11** 00:18:36.4±1.2, 30°.42S±0°.05×72°.10W±0°.06, h12^{km}±3^{km}, mb4.2/5, Mwr4.1/46, ML3.8(GUC), Error ellipse: s-maj=8.7km s-min=6.8km az=127.0*
*NEIC **11** 00:18:37.2, 30°.42S×72°.04W, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.12; M$_{\theta\theta}$0.32; M$_{\phi\phi}$-1.44; M$_{r\theta}$0.59; M$_{\theta\phi}$-0.19; M$_{\phi r}$-0.92; Fault plane solution: M$_0$1.72000×10^{15} NP1:φ$_s$161.58000°, δ66.71000°, λ64.73000°. NP2:φ$_s$31.62000°, δ33.84000°, λ134.75000°. Principal axes: T 1.6963, Plg60.0000°, Azm34.0000°; N 0.0402, Plg23.0000°, Azm172.0000°; P -1.7365, Plg18.0000°, Azm270.0000°;*
*IDC **11** 00:18:38.6±1.1, 30°.63S×70°.83W, h0^{km}, mb4.3/5, mb1 4.3/8, mb1mx4.0/23, mbtmp4.2/8, ML3.6/3, MS3.3/3, Ms1 3.3/3, ms1mx3.0/24 Error ellipse: s-maj=34.4km s-min=23.1km az=96.0*
ISC 11 00:18:37.2±1.3, **30°.41S**±0°.04×**72°.07W**±0°.06, **h19**^{km}±4^{km}, **n60,** σ**1^s.15**/60, **mb4.2**/6, **3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.46	125	⇓iP	Pg	00 18 45.9	-0.7
CO06				eS	Sg	00 18 53.0	+0.1
CO06	Fray Jorge	0.46	125	Pg	Pg	00 18 45.9	-0.7
CO05	La Serena	0.87	56	⇓eP	Pb	00 18 53.5	-0.2
CO05				eS	Sn	00 19 06.7	+0.2
CO05				IAML		00 19 09.2	
	comp=E,3µm,0.4s						
CO05	La Serena	0.87	56		Pb	00 18 53.5	-0.2
GO04	Tololo Observa	1.12	78	eP	Pn	00 18 57.5	-0.6
GO04				eS	Sg	00 19 14.6	+0.7
GO04				IAML		00 19 19.8	
	comp=N,5µm,0.2s						
GO04	Tololo Observa	1.12	78		Pn	00 18 57.2	-0.9
CO03	El Pedregal	1.26	110	⇓eP	Pn	00 18 59.1	-0.8
CO03				eS	Sb	00 19 17.1	+0.8
CO03				IAML		00 19 21.8	
	comp=N,2µm,0.6s						
CO03	El Pedregal	1.26	110		Pn	00 18 59.1	-0.8
LCO	Las Campanas	1.84	41	eP	Pn	00 19 07.8	-0.1
LCO				eS	Sn	00 19 31.5	+0.8
LCO	Las Campanas	1.84	41	Pn	Pn	00 19 08.0	+0.1
VA06	Catapilco	2.24	163	eP	Pn	00 19 12.2	-1.0
VA06				eS	Sn	00 19 39.2	-1.1
AC04	Llanos de Chal	2.37	22	eP	Pn	00 19 14.2	-0.8
AC04	Llanos de Chal	2.37	22		Pn	00 19 14.4	-0.6
VA01	Torpederas	2.63	172	Pn	Pn	00 19 18.9	+0.4
VA03	San Esteban	2.68	151	eP	Pn	00 19 19.7	+0.4
VA03				eS	Sn	00 19 51.4	+0.2
VA03				IAML		00 20 06.9	
	comp=N,466nm,0.5s						
VA03	San Esteban	2.68	151		Pn	00 19 19.4	+0.1
ROCH	El Roble	2.71	161	eP	Pn	00 19 18.9	-0.9
ROCH				eP		00 19 18.9	
ROCH				eS	Sn	00 19 50.2	-1.9
ROCH				IAML		00 20 07.0	
	comp=E,349nm,0.6s						
ROCH				IAML		00 20 10.5	
	comp=N,602nm,0.7s						
MT02	Curacav	2.94	165		Pn	00 19 24.3	+1.4
PEL	Peldehue	2.97	157	eP	Pn	00 19 23.4	+0.2
PEL				eS	Sn	00 19 58.3	0.0
PEL				IAML		00 20 25.7	
	comp=N,442nm,0.8s						
PEL	Peldehue	2.97	157	Pn	Pn	00 19 23.5	+0.2
ZON	Zonda	3.12	112	Pn	Pn	00 19 27.2	+1.8
MT05	Renca	3.18	159	IAML		00 20 25.2	
	comp=E,306nm,0.7s						
MT05	Renca	3.18	159		Pn	00 19 26.8	+0.6
GO03	Copiap	3.24	30	Pn	Pn	00 19 26.8	-0.2
VA05	Santo Domingo	3.26	173		Pn	00 19 25.9	-1.2
MT09	Talagante	3.48	165	IAML		00 20 42.7	
	comp=N,173nm,0.7s						
MT09	Talagante	3.48	165		Pn	00 19 30.1	-0.2
MT01	Popeta	3.51	169		Pn	00 19 29.9	-0.8
BO01	Tunca	4.05	168		Pn	00 19 38.4	+0.2
AC02	Maricunga	4.40	37	Pn	Pn	00 19 43.8	+0.4
BO02	Sierra Bellavi	4.50	166		Pn	00 19 44.0	-0.3
GO05	Huala	4.58	179	Pn	Pn	00 19 44.1	-1.4
H03N1	Juan Fernandez	6.55	241	T	T	00 27 09.8	
	baz=71,slow=72,SNR=310						
H03N2	Juan Fernandez	6.57	241	T	T	00 27 11.0	
	baz=71,slow=72,SNR=375						
H03N3	Juan Fernandez	6.57	241	T	T	00 27 09.6	
	baz=71,slow=72,SNR=286						
LVC	Limon Verde	8.27	21	Pn	Pn	00 20 34.2	-2.2
	comp=N,0.4nm,0.3s,baz=153,slow=9.0,SNR=3.4						
LVC				Sn	Sn	00 22 06.3	-3.3
	comp=N,0.2nm,0.3s,baz=188,slow=5.2,SNR=3.6						
LVC				LR	LR	00 24 33.7	
	comp=N,118nm,20.1s,baz=200,slow=44						
PLCA	Paso Flores	10.37	174	Pn	Pn	00 21 04.4	-0.5
	comp=N,0.2nm,0.3s,baz=329,slow=9.9,SNR=3.6						
PB12	IPOC Station P	11.86	8	Pn	Pn	00 21 25.8	+0.5
CPUP	Villa Florida	13.60	76	LR	LR	00 27 24.7	
	comp=N,201nm,20.0s,baz=260,slow=42						
LPAZ	La Paz	14.52	15	Pn	Pn	00 22 04.6	+2.4
	comp=N,0.1nm,0.3s,baz=172,slow=9.9,SNR=4.5						
LPAZ	La Paz	14.52	15		Pn	00 22 02.2	0.0
PLTB	Pedras Altas	15.88	100	Pn	Pn	00 22 19.5	-0.1
SIV	San Ignacio	17.54	38	P	Pn	00 22 39.2	-1.5
	comp=N,0.2nm,0.3s,baz=218,slow=11,SNR=27						
SIV				LR	LR	00 30 32.4	
	comp=N,105nm,18.9s,baz=264,slow=42						
ITAB	Concordia	17.76	85		Pn	00 22 42.9	-0.4
ITAB				IAmb	IAmb	00 22 44.7	
	comp=Z,21nm,1.2s						
ETMB	Extrema	21.21	16	P	P	00 23 25.3	+3.5
ETMB				IAmb	IAmb	00 23 27.1	
	comp=Z,11nm,1.1s						
BDFB	Brasilia	26.50	62	P	P	00 24 10.8	-2.8
	comp=Z,1.7nm,0.4s,baz=226,slow=8.0,SNR=5.5						
BDFB	Brasilia	26.50	62	P	P	00 24 13.3	-0.2
BDFB				IAmb	IAmb	00 24 14.3	
	comp=Z,5.4nm,0.8s						
PMSA	Palmer Station	34.74	174	P	P	00 25 28.0	+2.2
	comp=Z,6.2nm,0.5s,baz=0.5,slow=9.5,SNR=6.2						
VNA3	Neumayer Olymp	52.69	159	P	P	00 27 50.3	+0.4
VNA1	Neumayer--Stat	52.99	158	P	P	00 27 52.4	+0.3
VNA2	Neumayer--Watz	53.33	158	P	P	00 27 55.0	+0.4
	baz=291,slow=7.6						
SNAA	Sanae	54.92	159	P	P	00 28 06.6	+0.3
SNAA	Sanae	54.92	159	P	P	00 28 06.7	+0.5
TXAR	Lajitas Array	66.61	330	P	P	00 29 36.6	+10
	comp=Z,0.7nm,0.7s,baz=151,slow=8.6,SNR=10						
DBIC	Dimbokro	74.08	72	P	P	00 30 12.0	-0.3
	comp=Z,6.2nm,1.1s,baz=225,slow=5.7,SNR=3.2						
TORD	Torodi Ar. Bea	83.03	70	P	P	00 31 01.9	+0.3
	comp=Z,1.6nm,0.8s,baz=255,slow=4.4,SNR=13						
H11S2	WAKE ISLAND Hy	125.72	272	T	T	02 56 19.5	
	baz=114,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	125.73	272	T	T	02 56 22.8	
	baz=114,slow=75,SNR=13						
H11S3	WAKE ISLAND Hy	125.73	272	T	T	02 56 21.0	
	baz=114,slow=75,SNR=8.8						
ZALV	Zalesovo Beam	151.16	29	PKPbc	PKiKP	00 38 29.7	+0.6
	comp=Z,5.2nm,0.7s,baz=299,slow=3.2,SNR=17						

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*IDC **11** 00:20:29.9±1.2, 35°.71N×26°.53E, h0^{km}, mb3.5/3, mb1 3.4/5, mb1mx3.2/36, mbtmp3.4/5, ML3.1/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/41, Error ellipse: s-maj=42.2km s-min=16.7km az=162.0*
*ISK **11** 00:20:32.5, 35°.66N×26°.55E, h22^{km}, ML2.9/11*
*ATH **11** 00:20:32.5, 35°.65N×26°.58E, h34^{km}±3^{km}, ML3.0/7, Error ellipse: s-maj=3.1km s-min=1.0km az=182.0*
*DDA **11** 00:20:33.2, 35°.56N×26°.98E, h5^{km}±3^{km}, ML2.4*
*THE **11** 00:20:33.7, 35°.62N×26°.58E, h13^{km}±2^{km}, ML2.9/7, Error ellipse: s-maj=2.4km s-min=0.6km az=154.0*
ISC 11 00:20:32.8±1.4, **35°.66N**±0°.03×**26°.57E**±0°.02, **h17**^{km}±11^{km}, **n75,** σ**0^s.94**/99, **mb3.4**/3, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STIA	Sitia Lasithi	0.60	221	P	Pb	00 20 44.9	+0.2
STIA				S	Sb	00 20 53.6	+0.7
ZKR	Zakros	0.61	208	P	Pb	00 20 45.4	+0.3
ZKR				S	Sb	00 20 54.2	+1.0
	1µm,0.3s						
ZKR	Zakros	0.61	208	P	Pb	00 20 45.3	+0.3
ZKR				S	Sb	00 20 54.3	+1.0
ZKR				AML	AML	00 20 55.0	
	comp=E,4162µm,0.4s						
ZKR				AML	AML	00 20 56.7	
	comp=N,1638µm,0.2s						
ZKR	Zakros	0.61	208	PG	Pb	00 20 45.3	+0.3
ZKR				SG	Sb	00 20 54.3	+1.0
NPS	Neapolis	0.87	244	P	Pb	00 20 50.0	+0.5
NPS				S	Sb	00 21 01.7	+0.8
	comp=N,2µm,0.2s						
NPS	Neapolis	0.87	244	P	Pb	00 20 50.0	+0.5
NPS				S	Sb	00 21 01.6	+0.8
NPS				AML	AML	00 21 04.0	
	comp=E,5787µm,0.3s						
NPS				AML	AML	00 21 04.2	
	comp=N,3217µm,0.2s						
FRMA	Ierapetra Chan	0.94	227	P	Pb	00 20 49.6	-0.9
FRMA				S	Sg	00 21 01.5	-1.8
	comp=N,580nm,0.4s						
NISR	Nisiros	1.06	25	P	Pn	00 20 53.5	+0.7
NISR				S	Sn	00 21 08.8	+1.7
	comp=N,2µm,0.5s						
NISR	Nisiros	1.06	25	P	Pb	00 20 52.1	-0.5
NISR				S	Sb	00 21 06.6	+0.5
NISR				AML	AML	00 21 09.5	
	comp=N,2354µm,0.4s						
NISR				AML	AML	00 21 11.7	
	comp=E,4385µm,0.5s						
SANT	Santorini	1.15	309	P	Pn	00 20 54.5	+0.5
SANT				AML	AML	00 21 13.3	
	comp=N,584µm,0.3s						
SANT				AML	AML	00 21 13.8	
	comp=E,2053µm,0.3s						
SANT	Santorini	1.15	309	PN	Pb	00 20 53.6	-0.6
SANT				SN	Sb	00 21 08.9	+0.1
THR8	Santorini-Mono	1.16	311	P	Pn	00 20 54.5	+0.4
THR8	Santorini-Mono	1.16	311	P	Pn	00 20 54.5	+0.4
THR6	Thira Island,	1.18	307	P	Pn	00 20 54.8	+0.4
THR6	Thira Island,	1.18	307	P	Pb	00 20 55.1	+0.4
SFIR	Foira Santorin	1.20	310	P	Pb	00 20 55.4	+0.4
STAX	Taxiarchis Har	1.20	309	P	Pn	00 20 55.0	+0.2
THR3	Thira Island,	1.21	309	P	Pn	00 20 55.3	+0.4
THR3	Thira Island,	1.21	309	P	Pn	00 20 55.2	+0.4
THR2	Thira island,	1.21	311	P	Pn	00 20 55.2	+0.3
THR2	Thira island,	1.21	311	P	Pn	00 20 55.2	+0.3
THT2	Imerovigli	1.21	310	P	Pn	00 20 55.3	+0.4
THT2				S	Sg	00 21 12.4	+0.4
	comp=E,468nm,0.5s						
THT2	Imerovigli	1.21	310	P	Pn	00 20 55.4	+0.5
CMBO	Columbo, Santo	1.24	311	P	Pn	00 20 55.9	+0.5
CMBO	Columbo, Santo	1.24	311	P	Pn	00 20 55.8	+0.5
THR5	Thira Island,	1.25	308	P	Pb	00 20 56.0	+0.2
THR5	Thira Island,	1.25	308	P	Pb	00 20 56.0	+0.2
IACM	Heraklion	1.27	254	P	Pb	00 20 56.8	+0.6
KSTL	Kastelli Herak	1.27	254	P	Pn	00 20 53.8	-1.9
KSTL				S	Sb	00 21 08.4	-3.9
	comp=E,325nm,0.3s						
DAT	Datca	1.35	37	P	Pn	00 20 56.3	-0.6
DAT				S	Sg	00 21 16.1	-0.3
DAT	Datca	1.35	37	iP	Pn	00 20 56.5	-0.4
DAT				iS	Sg	00 21 18.8	+2.4
DAT				IAML		00 21 23.0	
	comp=N,103nm,0.2s						
DAT				IAML		00 21 26.0	
	comp=E,74nm,0.2s						
DAT	Datca	1.35	37	PN	Pn	00 20 56.9	0.0
ARG	Arkhangelos	1.38	66	P	Pn	00 20 57.7	+0.4
ARG				S	Sn	00 21 14.8	-0.3
	comp=E,385nm,0.3s						
ARG	Arkhangelos	1.38	66	P	Pn	00 20 57.7	+0.4
ARG				S	Sn	00 21 14.8	-0.3
ARG				AML	AML	00 21 15.3	
	comp=N,592µm,0.3s						
ARG				AML	AML	00 21 20.4	
	comp=E,940µm,0.3s						
ARG	Arkhangelos	1.38	66	PN	Pn	00 20 57.4	+0.1
ARG				SN	Sn	00 21 14.9	-0.3
IDI	Anoyia	1.42	255	Pn	Pn	00 20 57.4	-0.4
	comp=E,9.3nm,0.3s,baz=16,slow=5.7,SNR=91						
IDI				Sn	Sn	00 21 15.5	-0.6
	comp=E,18nm,0.3s,baz=202,slow=15,SNR=6.6						
IDI	Anoyia	1.42	255	P	Pn	00 20 57.3	-0.5
IDI	Anoyia	1.42	255	P	Pn	00 20 57.5	-0.4
IDI				AML	AML	00 21 19.8	
	comp=N,586µm,0.3s						
IDI				AML	AML	00 21 20.7	
	comp=E,494µm,0.2s						
BODT	Bodrum	1.53	23	P	Pn	00 20 58.7	-0.6
BODT	Bodrum	1.53	23	PN	Pn	00 20 59.0	-0.3
SIVA	Sivas	1.57	247	P	Pb	00 21 01.2	-0.2
SIVA				AML	AML	00 21 26.6	
	comp=E,983µm,0.3s						
SIVA				AML	AML	00 21 28.1	
	comp=N,703µm,0.3s						
BDRM	Kayabasi	1.57	26	iP	Pn	00 20 59.9	0.0
BDRM				iS	Sg	00 21 24.8	+1.2
TMBK	Timbaki Herakl	1.58	249	P	Pn	00 21 00.9	+0.9
APE	Apeiranthos	1.64	330	P	Pn	00 21 00.8	-0.1
APE	Apeiranthos	1.64	330	P	Pn	00 21 00.9	+0.1
APE	Apeiranthos	1.64	330	PN	Pn	00 21 00.8	-0.1
APE				SN	Sn	00 21 20.3	-1.3
TURN	Turunc	1.76	50	iP	Pn	00 21 02.3	-0.1
TURN				iS	Sb	00 21 26.2	0.0
TURN				IAML		00 21 27.0	
	comp=N,45nm,0.2s						
TURN				IAML		00 21 29.0	
	comp=E,45nm,0.2s						
TURN	Turunc	1.76	50	PN	Pn	00 21 02.8	+0.4
MLSB	Milas	1.90	30	PN	Pn	00 21 04.7	+0.2
VAM	Vamos	1.95	263	P	Pn	00 21 04.8	-0.2
MHLO	Agia Marina, M	2.03	301	P	Pn	00 21 06.1	-0.1
DALY	Dalyan (Mula)	2.05	55	iP	Pn	00 21 07.8	+1.5
DALY				iS	Sn	00 21 32.8	+1.3
DALY				IAML		00 21 36.0	
	comp=N,57nm,0.3s						
DALY				IAML		00 21 39.0	
	comp=E,41nm,0.5s						
DALY	Dalyan (Mula)	2.05	55	PN	Pn	00 21 06.9	+0.5
SMG	Samos	2.06	6	P	Pn	00 21 06.2	-0.4
SMG	Samos	2.06	6	P	Pn	00 21 06.2	-0.4
IMMV	Iera Moni Meta	2.12	265	P	Pn	00 21 07.6	+0.3
IMMV	Iera Moni Meta	2.12	265	PN	Pn	00 21 07.5	+0.1
GVD	Gavdhos	2.19	249	P	Pn	00 21 08.5	+0.2
FETY	Fethiye	2.26	64	P	Pn	00 21 10.6	+1.2
FETY	Fethiye	2.26	64	iP	Pn	00 21 10.4	+1.1
FETY				iS	Sn	00 21 38.8	+2.0
FETY				IAML		00 21 46.0	
	comp=E,29nm,0.4s						
FETY				IAML		00 21 48.0	
	comp=N,50nm,0.6s						
FETY	Fethiye	2.26	64	PN	Pn	00 21 10.1	+0.7
KSL	Kastellorizon	2.50	78	P	Pn	00 21 13.9	+1.3
TAVA	DENIZLI_Tavas	2.61	46	iP	Pb	00 21 16.8	-2.4
TAVA				iS	Sn	00 21 47.2	+1.6
TAVA				IAML		00 21 50.0	
	comp=E,27nm,0.4s						
TAVA				IAML		00 21 50.0	
	comp=N,27nm,0.7s						
CAEL	Denizli, Camel	2.66	56	iP	Pb	00 21 17.8	-2.2
ANKY	Antikythira Is	2.66	275	P	Pn	00 21 15.1	+0.2
GOLH	Golhisar	2.88	56	iP	Pn	00 21 20.3	+2.3
GOLH				iS	Sb	00 21 57.6	-1.2
GOLH				IAML		00 22 00.0	
	comp=N,27nm,0.4s						
GOLH				IAML		00 22 01.0	
	comp=E,30nm,0.5s						
KTHA	Kythira Island	2.91	283	P	Pn	00 21 18.6	+0.3
VLI	Veliai	3.12	291	P	Pn	00 21 22.1	+0.9
DION	Dionisos Attik	3.21	320	P	Pn	00 21 23.0	+0.6
MMAI	Mount Meron Ar	7.77	107	Pn	Pn	00 22 25.8	+0.6
	comp=E,0.3nm,0.3s,baz=303,slow=13,SNR=6.8						
EIL	Elat	9.25	128	Pn	Pn	00 22 44.3	-1.0
	comp=E,0.1nm,0.3s,baz=249,slow=8.6,SNR=2.5						
MDT	Midelt	25.88	273	LR	LR	00 36 16.3	
	comp=E,32nm,19.2s,baz=11,slow=37						
TORD	Torodi Ar. Bea	31.69	231	P	P	00 26 55.4	-0.1
	comp=E,0.5nm,0.9s,baz=30,slow=9.6,SNR=2.7						
MKAR	Makanchi Array	42.54	57	P	P	00 28 27.4	0.0
	comp=E,0.3nm,0.5s,baz=274,slow=8.1,SNR=7.0						
ZALV	Zalesovo Beam	43.83	47	P	P	00 28 36.6	-1.0
	comp=E,0.6nm,0.5s,baz=267,slow=10,SNR=1.5						

IDC 11 01:12:55.7±1.0, **27°.93N**×**104°.48E, h0**^{km}, **mb3.7**/5, **mb1 3.7**/6, **mb1mx3.5**/34, **mbtmp3.6**/6, **ML3.3**/1, **Error ellipse: s-maj=77.4km s-min=19.0km az=59.0, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	19.92	4	P	P	01 17 28.9	-0.1
	0.1nm,0.3s,baz=186,slow=12,SNR=3.8						
MKAR	Makanchi Array	25.65	323	P	P	01 18 27.1	+0.1
	1.9nm,0.8s,baz=126,slow=10.0,SNR=10						
KURBB	Kurchatov Arra	30.00	326	P	P	01 19 06.0	0.0
	1.1nm,0.7s,baz=132,slow=9.4,SNR=11						
WRA	Warramunga Arr	55.67	145	P	P	01 22 33.4	-0.5
	0.3nm,0.4s,baz=324,slow=6.0,SNR=12						
ASAR	Alice Springs	58.63	148	P	P	01 22 55.2	+0.4
	0.4nm,0.6s,baz=333,slow=6.9,SNR=6.1						
GERES	GERESS Array B	70.01	315	P	P	01 24 09.2	-0.1
	0.1nm,0.3s,baz=61,slow=8.2,SNR=1.4						

IDC 11 01:34:33.5±1.6, **4°.17S**×**129°.42E, h0**^{km}, **mb3.5**/1, **mb1 3.5**/4, **mb1mx3.2**/27, **mbtmp3.4**/4, **ML3.2**/3, **Error ellipse: s-maj=48.3km s-min=24.9km az=90.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.76	29	Pn	Pn	01 35 34.5	+1.7
	4.1nm,0.3s,baz=229,slow=22,SNR=6.5						
SIJI				Sn	Sn	01 36 17.4	-0.4
	3.4nm,0.3s,baz=213,slow=23,SNR=2.2						
WRA	Warramunga Arr	16.40	163	Pn	Pn	01 38 23.6	-1.6
	0.1nm,0.3s,baz=349,slow=12,SNR=5.0						
ASAR	Alice Springs	19.86	168	P	Pn	01 39 07.2	-0.7
	0.1nm,0.3s,baz=350,slow=11,SNR=7.8						
MKAR	Makanchi Array	65.56	326	P	P	01 45 18.7	-0.4
	0.2nm,0.3s,baz=112,slow=8.0,SNR=6.7						

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*ANF **11** 01:40:22.6±0.3, 37°.21N×115°.83W, h0^{km}±3^{km}, ML3.1/12, Error ellipse: s-maj=3.3km s-min=2.1km az=88.0*
*NEIC **11** 01:40:23.2±1.2, 37°.20N±0°.04×115°.86W±0°.03, h6^{km}±8^{km}, Error ellipse: s-maj=5.6km s-min=3.1km az=200.0*
*REN **11** 01:40:23.5±1.4, 37°.20N±0°.04×115°.88W±0°.04, h8^{km}±7^{km}, ML3.1/19, ML3.0/78(NEIC), Error ellipse: s-maj=6.0km s-min=4.1km az=149.0*
ISC 11 01:40:23.3±1.2, **37°.20N**±0°.02×**115°.86W**±0°.03, **h8**^{km}±11^{km}, **n63,** σ**0^s.69**/72, **Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
S11A	Rachel	0.45	11		Pg	01 40 32.3	+0.2
PRN	Pahroc Range	0.67	72		Pg	01 40 36.8	+0.5
PRN				IAML		01 40 49.6	
	comp=N,772nm,0.3s						
PRN				IAML		01 40 52.0	
	comp=E,1µm,0.4s						
SHPR	Sheep Range	0.89	141	Pg	Pg	01 40 39.9	-0.5
FURC	Furnace Creek,	1.09	228	P	Pb	01 40 44.3	0.0
	baz=47,SNR=80						
FURC				S	Sg	01 40 58.4	0.0
	baz=47						
R11A	Troy Canyon, C	1.17	10		Pg	01 40 45.3	-0.4
R11A				IAML		01 41 03.9	
	comp=N,220nm,0.2s						
R11A				IAML		01 41 04.0	
	comp=E,287nm,0.2s						
R11A	Troy Canyon, C	1.17	10	P	Pg	01 40 45.0	-0.7
	baz=192,SNR=64						
R11A				S	Sb	01 41 01.0	-0.2
	baz=192						
GWY	Greenwater Val	1.21	213		Pn	01 40 46.6	0.0
GWY				IAML		01 41 07.7	
	comp=N,198nm,0.4s						
GWY				IAML		01 41 11.4	
	comp=E,187nm,0.6s						
MCA	Marble Canyon	1.27	245		Pn	01 40 47.2	-0.1
SHOC	Shoshone, Teco	1.34	195	S	Sn	01 41 06.5	+0.1
	baz=14						
TPH	Tonopah	1.39	309		Pn	01 40 49.2	0.0
TPH	Tonopah	1.39	309	Pn	Pn	01 40 48.5	-0.8
TPH				IAML		01 41 10.6	
	comp=E,2µm,0.4s						

TPH				IAML		01 41 11.2	
	comp=N,2µm,0.4s						
LCH	**Last Change Ra**	**1.43**	**272**		**Pn**	**01 40 49.7**	**0.0**
LCH				IAML		01 41 11.8	
	comp=E,311nm,0.3s						
LCH				IAML		01 41 15.0	
	comp=N,180nm,0.3s						
QSM	**Queen of Sheba**	**1.48**	**214**	Pn	**Pn**	**01 40 50.2**	**0.0**
ICU	**Indian Springs**	**1.54**	**91**		**Pn**	**01 40 51.1**	**-0.1**
V12A	**Nelson**	**1.68**	**151**		**Pn**	**01 40 53.4**	**+0.4**
DSP	**Deep Springs**	**1.69**	**276**		**Pn**	**01 40 53.4**	**+0.3**
MPMC	**Manual Prospec**	**1.74**	**230**	P	**Pn**	**01 40 54.5**	**+0.6**
	baz=48,SNR=23						
MPMC				S	**Sb**	**01 41 17.5**	**-0.1**
	baz=48						
TUQ	**Turquoise Moun**	**1.76**	**182**	Pb	**Pb**	**01 40 56.1**	**+0.2**
	baz=1.0						
TUQ				S	**Sb**	**01 41 18.6**	**+0.4**
	baz=1.0						
TIN	**Tinemaha, Big**	**1.90**	**266**	Pb	**Pb**	**01 40 58.3**	**0.0**
	baz=85						
TIN				Sb	**Sg**	**01 41 24.5**	**0.0**
	baz=85						
CWC	**Cottonwood Cre**	**1.94**	**248**	Pb	**Pb**	**01 40 59.3**	**+0.4**
	baz=66						
CWC				S	**Sb**	**01 41 23.7**	**+0.3**
	baz=66						
POCCA	**Poleta Canyon**	**1.94**	**276**		**Pn**	**01 40 57.2**	**+0.4**
CCUT	**Cedar City**	**2.02**	**79**		**Pn**	**01 40 57.6**	**-0.2**
MLNR	**Milner Canyon**	**2.02**	**282**		**Pb**	**01 41 00.4**	**0.0**
GSC	**Goldstone, Bar**	**2.04**	**202**		**Pn**	**01 40 57.5**	**-0.5**
GSC				IAML		01 41 31.4	
	comp=E,113nm,0.6s						
GSC	**Goldstone, Bar**	**2.04**	**202**	Pg	**Pg**	**01 41 02.3**	**-0.1**
	baz=21						
GSC				S	**Sb**	**01 41 25.7**	**-0.6**
	baz=21						
PSUT	**Pine Spring**	**2.07**	**49**		**Pn**	**01 40 58.8**	**+0.3**
PSUT				IAML		01 41 32.7	
	comp=N,87nm,0.7s						
PSUT				IAML		01 41 33.9	
	comp=E,100nm,0.5s						
LCMT	**Little Creek M**	**2.10**	**94**		**Pn**	**01 40 59.6**	**+0.8**
SPR3	**Spring Creek 3**	**2.16**	**33**	Pn	**Pn**	**01 40 59.0**	**-0.9**
SPR3				IAML		01 41 29.7	
	comp=E,91nm,0.9s						
SPR3				IAML		01 41 31.9	
	comp=N,110nm,0.8s						
NV11	**Mina Array Sit**	**2.20**	**305**		**Pn**	**01 41 00.1**	**-0.2**
NV11				IAML		01 41 34.6	
	comp=N,110nm,0.4s						
NV11				IAML		01 41 34.8	
	comp=E,71nm,0.7s						
SZCU	**Shurtz Canyon**	**2.24**	**79**	Pn	**Pn**	**01 41 00.9**	**+0.1**
SZCU					Lg	01 41 37.5	
SZCU				IAML		01 41 41.4	
	comp=E,88nm,0.3s						
SZCU				IAML		01 41 41.8	
	comp=N,75nm,0.3s						
NVAR	**Mina Array Bea**	**2.29**	**303**	Pn	**Pn**	**01 41 01.8**	**+0.1**
RCCR	**Rock Creek Can**	**2.30**	**278**		**Pn**	**01 41 03.1**	**+1.3**
LHV	**Little Huntoon**	**2.35**	**297**		**Pn**	**01 41 02.6**	**+0.5**
HEC	**Hector,Ludlow**	**2.40**	**189**	Pg	**Pg**	**01 41 08.9**	**-0.3**
	baz=8.6						
HEC				Sb	**Sg**	**01 41 39.9**	**-0.4**
	baz=8.6						
MLAC	**Mammoth, Mammo**	**2.41**	**281**	Sg	**Sg**	**01 41 42.5**	**+1.7**
	baz=100						
GMRC	**Granite Mounta**	**2.42**	**176**	P	**Pn**	**01 41 03.4**	**+0.2**
	baz=356,SNR=24						
GMRC				Sb	**Sg**	**01 41 40.2**	**-0.7**
	baz=356						
KNB	**Kanab**	**2.43**	**93**	Pn	**Pn**	**01 41 04.4**	**+0.9**
KNB				IAML		01 41 51.2	
	comp=N,48nm,1.0s						
RYN	**Ryan**	**2.55**	**305**	Pn	**Pn**	**01 41 04.6**	**-0.5**
RYN				IAML		01 41 48.0	
	comp=E,93nm,0.3s						
KVN	**Kaiserville**	**2.56**	**317**	Pn	**Pn**	**01 41 05.6**	**+0.3**
KVN				IAML		01 41 45.5	
	comp=E,74nm,0.5s						
ISA	**Isabella, Lake**	**2.61**	**235**	Pn	**Pn**	**01 41 05.7**	**-0.1**
ISA	**Isabella, Lake**	**2.61**	**235**	P	**Pn**	**01 41 06.7**	**+0.9**
	baz=53						
PKCU	**Pink Cliffs**	**2.84**	**84**	Pn	**Pn**	**01 41 08.3**	**-0.8**
PKCU				IAML		01 41 58.8	
	comp=N,51nm,0.5s						
U15A	**North Rim**	**2.96**	**104**	Pn	**Pn**	**01 41 10.8**	**0.0**
U15A				IAML		01 42 00.2	
	comp=N,36nm,0.9s						
U15A				IAML		01 42 03.0	
	comp=E,50nm,0.7s						
TCRU	**Three Creeks R**	**3.04**	**61**	Pn	**Pn**	**01 41 10.3**	**-1.6**
TCRU					LR	01 42 01.1	
TCRU				IAML		01 42 06.0	
	comp=N,28nm,0.5s						
TCRU				IAML		01 42 08.4	
	comp=E,33nm,0.6s						
IRM	**Iron Mountain**	**3.09**	**169**	Pg	**Pg**	**01 41 21.7**	**-0.8**
	baz=349						
MVU	**Marysvale**	**3.16**	**65**	Pn	**Pn**	**01 41 14.1**	**+0.5**
MSU	**Marysvale**	**3.19**	**65**	Pn	**Pn**	**01 41 13.7**	**-0.2**
YERR	**Yerington**	**3.21**	**305**	Pn	**Pn**	**01 41 14.2**	**0.0**
YERR				IAML		01 42 10.9	
	comp=N,49nm,0.5s						
BMN	**Battle Mountai**	**3.40**	**342**	Pn	**Pn**	**01 41 17.2**	**+0.5**
BMN				IAML		01 42 16.3	
	comp=E,43nm,4.4s						
BMN				IAML		01 42 17.5	
	comp=N,35nm,1.4s						
PNTR	**Pine Nut**	**3.50**	**304**	Pn	**Pn**	**01 41 15.9**	**-2.4**
PNTR				IAML		01 42 19.6	
	comp=N,39nm,0.8s						
ELK	**Elko**	**3.57**	**8**	Pn	**Pn**	**01 41 19.2**	**0.0**
ELK				IAML		01 42 18.4	
	comp=N,19nm,0.5s						
PFO	**Pinyon Flats O**	**3.61**	**188**	Pn	**Pn**	**01 41 20.0**	**+0.3**
VCNR	**Virginia City**	**3.65**	**306**	Pn	**Pn**	**01 41 19.2**	**-1.0**
VCNR				IAML		01 42 23.2	
	comp=N,39nm,0.5s						
CMB	**Columbia Colle**	**3.69**	**284**	Pn	**Pn**	**01 41 20.3**	**-0.4**
CMB					LR	01 42 21.2	
DUG	**Dugway, Tooele**	**3.82**	**38**	Pn	**Pn**	**01 41 23.6**	**+1.1**
DUG				IAML		01 42 25.2	
	comp=N,32nm,0.8s						
DUG				IAML		01 42 29.2	
	comp=N,28nm,0.9s						
WUAZ	**Wupatki**	**3.99**	**114**	Pn	**Pn**	**01 41 25.7**	**+0.9**
NLU	**North Lily Min**	**4.04**	**46**	Pn	**Pn**	**01 41 25.9**	**+0.2**
TMUT	**Trail Mountain**	**4.21**	**59**	Pn	**Pn**	**01 41 29.6**	**+1.5**
TMUT				IAML		01 42 47.1	
	comp=E,16nm,3.5s						
TMUT				IAML		01 42 48.0	
	comp=N,17nm,4.8s						
GLA	**Glamis**	**4.22**	**168**	Pn	**Pn**	**01 41 27.7**	**-0.3**
GLA					Lg	01 42 40.0	
GLA				IAML		01 42 48.0	
	comp=N,17nm,0.8s						
BGU	**Big Grassy Mou**	**4.32**	**30**	Pn	**Pn**	**01 41 28.5**	**-0.9**
BGU				IAML		01 42 48.1	
	comp=E,15nm,2.4s						
BGU				IAML		01 42 51.5	
	comp=N,14nm,3.7s						
X16A	**Lo Mia Camp, P**	**4.54**	**126**	Pn	**Pn**	**01 41 33.5**	**+1.1**
SRU	**San Rafael Swe**	**4.62**	**64**	Pn	**Pn**	**01 41 33.0**	**-0.5**
SRU				IAML		01 42 53.2	
	comp=E,11nm,2.6s						
SRU				IAML		01 42 57.2	
	comp=N,7.7nm,2.0s						
X18A	**Snowflake**	**5.49**	**117**	Pn	**Pn**	**01 41 44.4**	**-1.0**

IDC 11 01:40:44.6±1.8**, 3°.99S×129°.56E, h0**^{km}**, mb3.2**/2**, mb1 3.4**/4**, mb1mx3.1**/38**, mbtmp3.3**/4**, ML3.1**/2**, Error ellipse: s-maj=63.0km s-min=27.8km az=85.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.54**	**29**	Pn	Pn	01 41 41.2	+0.3
	3.2nm,0.3s,baz=1.0,slow=24,SNR=7.1						
WRA	**Warramunga Arr**	**16.53**	**164**	Pn	Pn	01 44 39.4	+1.4
	0.1nm,0.3s,baz=348,slow=12,SNR=1.8						
ASAR	**Alice Springs**	**20.01**	**168**	P	P	01 45 18.6	-0.6
	0.4nm,0.5s,baz=348,slow=9.7,SNR=6.0						
MKAR	**Makanchi Array**	**65.48**	**326**	P	P	01 51 29.6	-0.1
	0.2nm,0.6s,baz=118,slow=6.9,SNR=1.3						

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*BUT **11** 01:50:33.9±0.7, 44°.55N±0°.04×114°.28W±0°.04, h7^{km}±7^{km}, ML2.7/10, ML2.9/32(NEIC), Error ellipse: s-maj=6.1km s-min=3.1km az=140.0*

NEIC 11 01:50:33.7±0.9**, 44°.56N**±0°.04×**114°.29W**±0°.04**, h8**^{km}±7^{km}**, Error ellipse: s-maj=6.1km s-min=2.8km az=144.0, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCYI	**Bear Canyon**	**0.68**	**111**		Pg	01 50 46.5	-0.3
ICI	**Italian Canyon**	**0.99**	**103**		Pg	01 50 52.5	-0.2
HLID	**Hailey**	**1.00**	**185**		Pg	01 50 52.5	-0.4
HLID	**Hailey**	**1.00**	**185**	IAML		01 51 05.9	
	261nm,0.2s						
MCMT	**McKenzie Canyo**	**1.06**	**75**		Pg	01 50 53.8	-0.2
EMI	**Eightmile Cany**	**1.09**	**116**		Pg	01 50 54.3	-0.3
PLID	**Pearl Lake**	**1.33**	**294**		Pn	01 50 58.6	-0.1
DLMT	**Dillon**	**1.44**	**56**		Pn	01 51 00.4	+0.1
MFID	**Camas Ranch**	**1.60**	**225**		Pn	01 51 02.8	+0.6
LRM	**Limekiln Ridge**	**1.81**	**45**		Pn	01 51 05.3	0.0
CMI	**Centennial Mou**	**1.91**	**90**		Pn	01 51 07.3	+0.7
BOZ	**Bozeman (W)**	**2.15**	**60**	Pn	Pn	01 51 10.4	+0.5
BOZ				IAML		01 51 42.1	
	112nm,0.4s						
BMO	**Blue Mountains**	**2.17**	**279**		Pn	01 51 10.6	+0.4
BMO	**Blue Mountains**	**2.17**	**279**	IAML		01 52 11.8	
	47nm,0.5s						
MSO	**Missoula**	**2.28**	**6**	Pn	Pn	01 51 11.6	-0.1
MSO				IAML		01 52 38.4	
	111nm,0.5s						
YMR	**Madison River**	**2.37**	**86**	Pn	Pn	01 51 13.7	+0.7
YMR					LR	01 51 49.5	
YHH	**Holmes Hill**	**2.46**	**83**	Pn	Pn	01 51 14.2	-0.2
YHH					LR	01 51 51.3	
FXWY	**Fox Creek**	**2.52**	**110**	Pn	Pb	01 51 17.9	-1.4
FXWY				IAML		01 52 45.4	
	33nm,0.9s						
FLWY	**Flagg Ranch**	**2.62**	**99**	Pn	Pn	01 51 15.7	-0.7
FLWY				IAML		01 52 55.8	
	47nm,1.4s						
FLWY				IAML		01 52 55.9	
	77nm,1.4s						
HRY	**Holter Researc**	**2.76**	**38**	Pn	Pn	01 51 18.1	-0.2
LOHW	**Long Hollow**	**2.82**	**108**	Pn	Pn	01 51 17.7	-1.5
LOHW				IAML		01 52 57.1	
	32nm,0.8s						
LOHW				IAML		01 52 57.2	
	42nm,0.8s						
AHID	**Auburn Hatcher**	**2.92**	**127**	Pn	Pn	01 51 20.7	+0.1
J08A	**Circle Bar Ran**	**3.25**	**250**	Pn	Pn	01 51 25.2	+0.1
J08A				IAML		01 53 21.4	
	comp=E,49nm,0.6s						
ELK	**Elko**	**3.88**	**191**	Pn	Pn	01 51 33.3	-0.4
JLU	**Jordanelle**	**4.47**	**151**	Pn	Pn	01 51 42.3	+0.3
JLU				IAML		01 53 55.7	
	comp=N,14nm,1.3s						
JLU				IAML		01 53 57.1	
	comp=E,14nm,4.0s						

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*BUT **11** 01:51:26.5±3.4, 44°.54N±0°.04×114°.28W±0°.05, h7^{km}±7^{km}, ML3.5/21, ML3.2/96(NEIC), Error ellipse: s-maj=5.6km s-min=5.3km az=200.0*

NEIC 11 01:51:27.2±2.3**, 44°.52N**±0°.04×**114°.37W**±0°.06**, h1**^{km}±7^{km}**, Error ellipse: s-maj=6.1km s-min=5.2km az=108.0, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCYI	**Bear Canyon**	**0.72**	**107**	Pg	Pg	01 51 39.0	-2.0
HLID	**Hailey**	**0.96**	**182**	Pg	Pg	01 51 45.0	-0.6
HLID				Sg	Sg	01 51 57.3	-0.7
HLID				IAML		01 51 58.7	
	606nm,0.2s						
HLID				IAML		01 51 58.9	
	1µm,0.2s						
ICI	**Italian Canyon**	**1.04**	**100**		Pg	01 51 45.0	-2.1
MCMT	**McKenzie Canyo**	**1.13**	**74**	Pg	Pg	01 51 46.4	-2.3
EMI	**Eightmile Cany**	**1.13**	**113**		Pg	01 51 46.6	-2.2
PLID	**Pearl Lake**	**1.29**	**296**		Pg	01 51 50.8	-1.1
PLID				IAML		01 52 12.0	
	656nm,0.5s						
DLMT	**Dillon**	**1.51**	**56**	Pn	Pn	01 51 53.2	-2.3
DLMT				IAML		01 52 14.1	
	604nm,0.7s						
MFID	**Camas Ranch**	**1.53**	**224**	Pn	Pn	01 51 55.6	-0.2
MFID				IAML		01 52 20.1	
	736nm,0.3s						
MFID				IAML		01 52 21.0	
	894nm,0.3s						
LRM	**Limekiln Ridge**	**1.88**	**46**	Pn	Pn	01 51 59.4	-1.2
CMI	**Centennial Mou**	**1.96**	**89**		Pn	01 52 01.1	-0.8
QLMT	**Earthquake Lak**	**2.12**	**81**		Pn	01 52 03.9	0.0
BMO	**Blue Mountains**	**2.12**	**280**	Pn	Pn	01 52 04.6	+0.7
BMO				IAML		01 52 35.9	
	137nm,0.8s						
BMO				IAML		01 52 40.9	
	96nm,0.3s						
BOZ	**Bozeman (W)**	**2.22**	**60**	Pn	Pn	01 52 06.2	+1.0
MCID	**Moose Creek**	**2.31**	**97**		Pn	01 52 05.1	-1.5
MSO	**Missoula**	**2.33**	**7**	Pn	Pn	01 52 06.8	+0.1
MSO				IAML		01 52 42.7	
	145nm,0.8s						
MSO				IAML		01 52 46.8	
	162nm,0.6s						
YMR	**Madison River**	**2.44**	**85**		Pn	01 52 09.7	+1.4
F10A	**Beach Ranch, E**	**2.49**	**307**	Pn	Pn	01 52 08.8	-0.1
YHH	**Holmes Hill**	**2.52**	**83**		Pn	01 52 10.6	+1.0
YHH	**Holmes Hill**	**2.52**	**83**	IAML		01 52 45.4	
	comp=E,144nm,0.8s						
FXWY	**Fox Creek**	**2.57**	**109**	Pn	Pn	01 52 11.2	+1.2
YPP	**Pitchstone Pla**	**2.57**	**94**		Pn	01 52 12.2	+2.0
ECR	**Eagle Creek**	**2.62**	**123**		Pn	01 52 12.1	+1.3
YNR	**Norris Junctio**	**2.64**	**85**		Pn	01 52 11.1	0.0
YNR				IAML		01 52 49.0	
	comp=E,74nm,0.9s						
YNR				IAML		01 52 50.3	
	comp=N,146nm,0.9s						
FLWY	**Flagg Ranch**	**2.67**	**98**		Pn	01 52 11.4	-0.1
FLWY				IAML		01 53 01.1	
	comp=N,76nm,1.4s						
TPAW	**Teton Pass**	**2.67**	**112**		Pn	01 52 11.7	+0.1
TPAW				IAML		01 52 54.9	
	comp=N,96nm,0.7s						
TPAW				IAML		01 52 58.0	
	comp=N,74nm,1.1s						
H17A	**Grant Village**	**2.72**	**91**	Pn	Pn	01 52 12.8	+0.6
MOOW	**Moose Ponds**	**2.72**	**105**		Pn	01 52 12.6	+0.3
YUF	**Upper Falls**	**2.76**	**85**	Pn	Pn	01 52 13.8	+1.1
REDW	**Red Top Meadow**	**2.79**	**113**		Pn	01 52 13.6	+0.4
REDW				IAML		01 53 04.6	
	comp=N,66nm,1.5s						
REDW				IAML		01 53 08.8	
	comp=N,58nm,0.8s						
SNOW	**Snow King Moun**	**2.82**	**111**		Pn	01 52 13.6	+0.1
HRY	**Holter Researc**	**2.82**	**38**	Pn	Pn	01 52 13.3	-0.2
LOHW	**Long Hollow**	**2.86**	**107**		Pn	01 52 14.5	+0.4
AHID	**Auburn Hatcher**	**2.95**	**125**	Pn	Pn	01 52 15.9	+0.5
AHID				IAML		01 53 04.7	
	comp=N,66nm,1.1s						
AHID				IAML		01 53 06.1	
	comp=N,58nm,0.8s						
YMP	**Mirror Lake Pl**	**3.02**	**84**	Pn	Pn	01 52 16.6	+0.2
YMP				IAML		01 53 07.2	
	comp=E,60nm,1.0s						
YMP				IAML		01 53 26.3	
	comp=N,53nm,0.6s						
J08A	**Circle Bar Ran**	**3.19**	**250**		Pn	01 52 17.3	-1.2
J08A				IAML		01 53 19.2	
	comp=N,46nm,0.8s						
J08A				IAML		01 53 34.8	
	comp=E,50nm,3.2s						
JTMT	**Jette**	**3.22**	**1**		Pn	01 52 18.0	-1.1
JTMT				IAML		01 53 12.6	
	comp=N,97nm,0.7s						
G08A	**Pilot Rock**	**3.35**	**285**	Pn	Pn	01 52 19.0	-1.8
G08A				IAML		01 53 12.1	
	comp=E,53nm,0.8s						
G08A				IAML		01 53 15.3	
	comp=N,44nm,1.4s						
SPUT	**South Promonto**	**3.51**	**156**	Pn	Pn	01 52 23.3	+0.3
SPUT				IAML		01 53 20.3	
	comp=N,31nm,1.1s						
GCMT	**Greycliff**	**3.56**	**68**	Pn	Pn	01 52 21.3	-2.3
HWUT	**Hardware Ranch**	**3.57**	**144**		Pn	01 52 25.2	+1.4
RLMT	**Red Lodge**	**3.68**	**79**	Pn	Pn	01 52 24.7	-0.7
RLMT				IAML		01 53 23.9	
	comp=N,74nm,0.7s						
RLMT				IAML		01 53 31.6	
	comp=N,63nm,0.6s						
I07A	**Izee**	**3.71**	**265**		Pn	01 52 25.2	-0.6
I07A				IAML		01 53 18.6	
	comp=N,34nm,4.4s						
I07A				IAML		01 53 36.0	
	comp=E,32nm,3.7s						
BGU	**Big Grassy Mou**	**3.73**	**164**		Pn	01 52 27.3	+1.2
BGU				IAML		01 53 28.2	
	comp=E,35nm,0.9s						
WVOR	**Wild Horse Val**	**3.74**	**238**		Pn	01 52 26.6	+0.4
WVOR				IAML		01 53 05.2	
	comp=E,26nm,4.5s						
ELK	**Elko**	**3.83**	**190**		Pn	01 52 28.3	+0.8
ELK				IAML		01 53 29.4	
	comp=E,22nm,0.8s						
E08A	**Dider Farm, El**	**3.84**	**302**	Pn	Pn	01 52 27.7	+0.3
E08A				IAML		01 53 47.2	
	comp=N,36nm,4.3s						
E08A				IAML		01 54 48.3	
	comp=E,41nm,4.9s						
BW06	**Boulder Array**	**3.91**	**115**		Pn	01 52 30.0	+1.5
PD31	**Pinedale Array**	**3.91**	**115**		Pn	01 52 29.0	+0.4
PDAR	**Pinedale Array**	**3.91**	**115**	Pn	Pn	01 52 29.8	+1.2
D08A	**Wollman Farm,**	**4.07**	**310**	Pn	Pn	01 52 30.3	-0.2
D08A				IAML		01 53 37.9	
	comp=N,33nm,2.2s						
D08A				IAML		01 53 48.6	
	comp=E,40nm,4.6s						
F07A	**Phinny Hill Vi**	**4.16**	**291**	Pn	Pn	01 52 32.0	+0.2
F07A				IAML		01 53 52.3	
	comp=E,36nm,0.8s						
F07A				IAML		01 54 03.3	
	comp=N,45nm,4.1s						
NEW	**Newport**	**4.20**	**334**	Pn	Pn	01 52 30.9	-1.5
NEW				IAML		01 53 41.5	
	comp=N,37nm,1.7s						
C09A	**Chrisman Ranch**	**4.25**	**322**	Pn	Pn	01 52 32.8	-0.3
CTU	**Camp Tracy**	**4.29**	**152**	Pn	Pn	01 52 32.6	-1.2
CTU					Lg	01 53 45.1	
DUG	**Dugway, Tooele**	**4.48**	**165**		Pn	01 52 35.7	-0.5
DUG				IAML		01 53 53.8	
	comp=N,26nm,1.4s						
DUG				IAML		01 54 06.8	
	comp=N,25nm,1.7s						
WALA	**Waterton Lakes**	**4.55**	**4**	Pn	Pn	01 52 36.8	-0.4
WALA				IAML		01 53 53.7	
	comp=N,31nm,0.8s						
BMN	**Battle Mountai**	**4.60**	**208**	Pn	Pn	01 52 37.8	-0.2
BMN				IAML		01 54 05.7	
	comp=E,19nm,3.7s						
BMN				IAML		01 54 15.5	
	comp=N,16nm,3.2s						
EGMT	**Eagleton**	**4.74**	**41**		Pn	01 52 37.4	-2.4
NLU	**North Lily Min**	**4.87**	**159**	Pn	Pn	01 52 41.7	-0.1
NLU				IAML		01 54 12.4	
	comp=E,13nm,2.4s						
MOD	**Modoc Plateau**	**5.07**	**241**	Pn	Pn	01 52 45.5	+1.1
B08A	**Colville Reser**	**5.14**	**320**	Pn	Pn	01 52 46.6	+1.3
RDMU	**Red Mountain**	**5.31**	**136**	Pn	Pn	01 52 47.8	0.0
RDMU					LR	01 54 14.8	
RDMU				IAML		01 54 17.8	
	comp=N,12nm,3.5s						
SPR3	**Spring Creek 3**	**5.52**	**180**	Pn	Pn	01 52 50.1	-0.6
TMUT	**Trail Mountain**	**5.73**	**155**	Pn	Pn	01 52 52.4	-1.3
PAHR	**Pah Rah Range**	**6.09**	**219**	Pn	Pn	01 52 58.8	+0.3
LAO	**LASA Array**	**6.11**	**66**	Pn	Pn	01 52 58.1	-0.5
SRU	**San Rafael Swe**	**6.12**	**151**	Pn	Pn	01 53 00.7	+1.7
KVN	**Kaiserville**	**6.14**	**208**	Pn	Pn	01 52 59.5	+0.4
R11A	**Troy Canyon, C**	**6.24**	**189**	Pn	Pn	01 52 59.5	-1.0
RYN	**Ryan**	**6.66**	**209**	Pn	Pn	01 53 05.6	-0.7
NV11	**Mina Array Sit**	**6.72**	**206**	Pn	Pn	01 53 04.5	-2.6
NVAR	**Mina Array Bea**	**6.77**	**207**	Pn	Pn	01 53 07.8	0.0
TPH	**Tonopah**	**6.79**	**199**	Pn	Pn	01 53 05.9	-2.2
PRN	**Pahroc Range**	**7.13**	**184**	Pn	Pn	01 53 11.4	-1.3
PRN					LR	01 55 14.8	
RSSD	**Black Hills**	**7.42**	**90**	Pn	Pn	01 53 14.2	-2.6
RSSD					Lg	01 55 26.2	
LCMT	**Little Creek M**	**7.55**	**173**	Pn	Pn	01 53 17.3	-1.2
LCH	**Last Change Ra**	**7.69**	**200**	Pn	Pn	01 53 20.2	-0.3
KAN06	**Argonia West S**	**14.44**	**115**		Pn	01 54 49.3	-3.3

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*IDC **11** 01:51:32.2±1.4, 4°.20S×129°.50E, h0^{km}, mb3.7/2, mb1 4.0/5, mb1mx3.6/38, mbtmp3.8/5, ML3.6/3, Error ellipse: s-maj=43.9km s-min=23.7km az=86.0*

*DJA **11** 01:51:33.8±1.4, 4°S±13°×12°9E±°, h10^{km}, M3.7/4, MLv3.7/4*

ISC 11 01:51:36.1±1.2**, 4°.2S**±0°.1×**129°.47E**±0°.08**, h36**^{km}**, n7,** σ**1^s.38**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**1.39**	**293**	P	**Pn**	**01 51 58.5**	**-0.4**
AAI				S	**Sn**	**01 52 15.0**	**-1.0**
SIJI	**Sorong**	**3.80**	**28**	Pn	**Pn**	**01 52 32.6**	**+0.5**
	9.7nm,0.3s,baz=204,slow=23,SNR=27						
SIJI				Sn	**Sn**	**01 53 15.8**	**+0.1**
	8.4nm,0.3s,baz=240,slow=22,SNR=8.0						
SWI	**Sorong**	**3.80**	**28**	P	**Pn**	**01 52 30.0**	**-2.2**
WRA	**Warramunga Arr**	**16.31**	**163**	Pn	**Pn**	**01 55 21.4**	**-1.1**
	0.1nm,0.3s,baz=348,slow=12,SNR=11						
ASAR	**Alice Springs**	**19.78**	**168**	P	**Pn**	**01 56 05.5**	**+0.4**
	0.5nm,0.3s,baz=347,slow=10,SNR=38						
MKAR	**Makanchi Array**	**65.65**	**326**	P	**P**	**02 02 18.4**	**+1.7**
	0.1nm,0.3s,baz=114,slow=8.0,SNR=4.7						
KURBB	**Kurchatov Arra**	**69.90**	**328**	P	**P**	**02 02 44.4**	**+0.9**
	0.4nm,0.4s,baz=127,slow=5.8,SNR=4.9						

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*IDC **11** 01:54:55.9±1.3, 41°.33N×50°.12E, h0^{km}, mb3.5/5, mb1 3.6/11, mb1mx3.4/47, mbtmp3.5/11, ML2.8/5, MS3.3/1, Ms1 3.3/1, ms1mx2.3/50, Error ellipse: s-maj=23.0km s-min=10.5km az=4.0*

*MOS **11** 01:55:03.2±1.8, 41°.68N×50°.37E, h40^{km}, mb3.6/1, Error ellipse: s-maj=8.4km s-min=5.9km az=22.8*

*AZER **11** 01:55:04.4±0.1, 41°.47N×50°.25E, h61^{km}, ml3.4/32, Error ellipse: s-maj=2.2km s-min=1.0km az=260.0*

*DRS **11** 01:55:06.4±0.0, 41°.95N×50°.36E, h22^{km}, ML3.5/5*

ISC 11 01:55:03.7±0.8**, 41°.57N**±0°.03×**50°.38E**±0°.05**, h78**^{km}±10^{km}**, n87,** σ**1^s.80**/154**, mb3.5**/6**, 1C-3D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GALA	**Gala**	**1.17**	**189**	S	**Sn**	**01 55 34.3**	**-6.0**
SIZA	**Siyzn**	**1.22**	**247**	P	**Pn**	**01 55 26.0**	**+0.5**
	SNR=5.6						
SIZA				S	**Sn**	**01 55 41.9**	**+0.2**
GOBA	**Gobu**	**1.26**	**203**	P	**Pn**	**01 55 28.6**	**+2.7**
	SNR=10.0						
GOBA				S	**Sn**	**01 55 43.9**	**+1.3**
ATGJ	**Altiaghaj**	**1.30**	**238**	P	**Pn**	**01 55 27.6**	**+1.2**
	SNR=19						
ATGJ				S	**Sn**	**01 55 44.2**	**+0.7**
QUBA	**Quba, Azerbaij**	**1.44**	**262**	P	**Pn**	**01 55 28.8**	**+0.6**
	SNR=13						
QUBA				S	**Sn**	**01 55 46.4**	**-0.2**
GBS	**Qobustan**	**1.50**	**227**	Pg	**Pn**	**01 55 31.3**	**+2.3**
	SNR=14						
GBS				Sg	**Sn**	**01 55 52.3**	**+4.2**
PQL	**Pirkuli**	**1.56**	**241**	Pn	**Pn**	**01 55 32.7**	**+2.8**
	SNR=10						
PQL				Sn	**Sn**	**01 55 49.3**	**-0.3**
QSAR	**Qusar**	**1.59**	**269**	Pn	**Pn**	**01 55 30.5**	**+0.3**
	SNR=169						
QSAR				Sn	**Sn**	**01 55 50.1**	**-0.1**
DRN	**Derbent**	**1.60**	**288**	*e*P	**Pn**	**01 55 29.3**	**-0.9**
DRN				*e*S	**Sn**	**01 55 48.0**	**-2.3**
DRN				pmax	pmax		
	comp=Z,171nm,0.3s						
DRN	**Derbent**	**1.60**	**288**	*e*Pg	**Pn**	**01 55 29.4**	**-0.9**
	comp=Z,171nm,0.3s						
DRN				*i* Sg	**Sn**	**01 55 48.1**	**-2.3**
	comp=Z,2µm,1.9s						
KSMR	**Kasumkent**	**1.69**	**272**	*e*P	**Pn**	**01 55 31.8**	**+0.3**
KSMR				*e*S	**Sn**	**01 55 52.6**	**0.0**
KSMR				pmax	pmax		
	comp=Z,83nm,0.2s						

KSMR	Kasumkent	1.69	272	ePg	Pn	01 55 31.8	+0.3
	comp=Z,83nm,0.2s						
KSMR				i Sg	Sn	01 55 52.6	0.0
	comp=Z,2µm,0.4s						
XNQ	Khinaliq	1.73	258	Pn	Pn	01 55 32.0	-0.2
	SNR=6.6						
XNQ				Sn	Sn	01 55 53.0	-0.8
IML	Ismayilli	1.83	246	Pn	Pn	01 55 31.8	-1.5
	SNR=5.5						
IML				Sn	Sn	01 55 55.3	-0.5
ALIB	Äli-Bayra	1.92	213	Pn	Pn	01 55 34.7	+0.3
ALIB				Sn	Sn	01 55 55.8	-1.9
AKT	Akhty	1.99	268	eP	Pn	01 55 35.5	0.0
AKT				eS	Sn	01 55 59.1	-0.7
AKT				pmax	pmax		
	comp=Z,202nm,0.2s						
AKT	Akhty	1.99	268	ePg	Pn	01 55 35.5	0.0
	comp=Z,202nm,0.2s						
AKT				i Sg	Sn	01 55 59.1	-0.7
	comp=Z,370nm,0.2s						
QBL	Gabala	2.02	253	Pn	Pn	01 55 38.5	+2.7
	SNR=5.6						
QBL				Sn	Sn	01 55 58.4	-1.8
KDMR	Kurdemir	2.04	235	Pn	Pn	01 55 36.5	+0.4
KDMR				Sn	Sn	01 56 01.0	+0.2
URKR	Urkarakh	2.14	287	eP	Pn	01 55 37.7	+0.2
URKR				eS	Sn	01 56 03.3	0.0
URKR				pmax	pmax		
	comp=Z,104nm,0.3s						
URKR	Urkarakh	2.14	287	ePg	Pn	01 55 37.7	+0.2
	comp=Z,104nm,0.3s						
URKR				eSg	Sn	01 56 03.3	0.0
	comp=Z,186nm,0.3s						
SGKR	Sergokala	2.22	295	eP	Pn	01 55 37.9	-0.5
SGKR				eS	Sn	01 56 03.9	-1.1
SGKR				pmax	pmax		
	comp=Z,57nm,0.3s						
SGKR	Sergokala	2.22	295	ePg	Pn	01 55 38.0	-0.5
	comp=Z,57nm,0.3s						
SGKR				eSg	Sn	01 56 03.9	-1.1
	comp=Z,344nm,0.2s						
SAAT	Saatly	2.26	222	Pn	Pn	01 55 40.7	+1.7
SAAT				Sn	Sn	01 56 06.5	+0.4
ZRD	Zardab	2.41	239	Pn	Pn	01 55 41.4	+0.4
	SNR=6.2						
ZRD				Sn	Sn	01 56 09.8	+0.1
SEKA	Sheki	2.42	263	Pn	Pn	01 55 41.6	+0.4
	SNR=12						
SEKA				Sn	Sn	01 56 09.0	-1.0
SEKA	Sheki	2.42	263	P	Pn	01 55 41.6	+0.4
KMKR	Kumukh	2.52	284	eP	Pn	01 55 44.0	+1.4
KMKR				eS	Sn	01 56 14.9	+2.4
KMKR				pmax	pmax		
	comp=Z,72nm,0.4s						
KMKR	Kumukh	2.52	284	ePn	Pn	01 55 44.1	+1.4
	comp=Z,72nm,0.4s						
KMKR				eSn	Sn	01 56 14.9	+2.4
	comp=Z,222nm,0.5s						
MAK	Makhachkala	2.55	304	eP	Pn	01 55 43.1	+0.2
MAK				eS	Sn	01 56 13.0	+0.1
MAK				pmax	pmax		
	comp=Z,79nm,0.4s						
MAK				smax	smax		
	comp=N,300nm,1.7s						
MAK				smax	smax		
	comp=N,236nm,0.4s						
MAK				MLR	MLR		
	comp=Z,3µm,2.0s						
MNGR	Mingechevir, A	2.61	253	Pn	Pn	01 55 42.6	-1.1
MNGR				Sn	Sn	01 56 14.1	-0.4
GNBR	Gunib	2.68	289	eP	Pn	01 55 46.2	+1.5
GNBR				eS	Sn	01 56 18.6	+2.5
GNBR				pmax	pmax		
	comp=Z,41nm,0.6s						
GNBR	Gunib	2.68	289	ePn	Pn	01 55 46.2	+1.5
	comp=Z,41nm,0.6s						
GNBR				eSn	Sn	01 56 18.7	+2.5
	comp=Z,201nm,0.4s						
ARKR	Arakani	2.73	293	eP	Pn	01 55 46.5	+1.2
ARKR				eS	Sn	01 56 19.4	+2.1
ARKR				pmax	pmax		
	comp=Z,29nm,0.3s						
ARKR	Arakani	2.73	293	ePn	Pn	01 55 46.6	+1.2
	comp=Z,29nm,0.3s						
ARKR				i Sn	Sn	01 56 19.4	+2.1
	comp=Z,98nm,0.4s						
BUJR	Buynaksk	2.74	298	eP	Pn	01 55 46.6	+1.1
BUJR				eS	Sn	01 56 19.2	+1.6
BUJR				i S	Sn	01 56 19.4	+1.8
BUJR				pmax	pmax		
	comp=Z,50nm,0.3s						
BUJR				smax	smax		
	comp=N,201nm,0.4s						
BUJR				smax	smax		
	comp=E,219nm,0.4s						
BUJR				smax	smax		
	comp=E,190nm,0.4s						
BUJR	Buynaksk	2.74	298	ePn	Pn	01 55 46.5	+1.1
	comp=E,50nm,0.3s						
BUJR				eSn	Sn	01 56 19.2	+1.6
	comp=E,111nm,0.4s						
BRDA	Brd	2.75	243	Pn	Pn	01 55 47.2	+1.5
BRDA				Sn	Sn	01 56 18.3	+0.4
GLBA	Clilabad	2.77	214	Pn	Pn	01 55 46.3	+0.4
GLBA				Sn	Sn	01 56 17.3	-1.1
ZKTA	Zakatala	2.82	273	Pn	Pn	01 55 46.5	-0.1
	SNR=3.7						
ZKTA				Sn	Sn	01 56 18.4	-1.1
BLQ	Beylaqan	2.83	230	Pn	Pn	01 55 47.5	+0.8
BLQ				Sn	Sn	01 56 17.2	-2.6
KRNR	Karanay	2.87	297	eP	Pn	01 55 47.7	+0.3
KRNR				eS	Sn	01 56 21.7	+0.7
KRNR				pmax	pmax		
	comp=Z,39nm,0.2s						
KRNR	Karanay	2.87	297	ePn	Pn	01 55 47.7	+0.3
	comp=Z,39nm,0.2s						
KRNR				eSn	Sn	01 56 21.7	+0.7
	comp=Z,180nm,0.4s						
AGDM	Agdam	2.88	241	Pn	Pn	01 55 47.0	-0.4
	SNR=4.1						
AGDM				Sn	Sn	01 56 18.9	-2.1
UNCR	Uncukul	2.90	294	eP	Pn	01 55 48.1	+0.4
UNCR				eS	Sn	01 56 22.5	+0.9
UNCR				pmax	pmax		
	comp=Z,56nm,0.4s						
UNCR	Uncukul	2.90	294	ePn	Pn	01 55 48.1	+0.4
	comp=Z,56nm,0.4s						
UNCR				eSn	Sn	01 56 22.5	+0.9
	comp=Z,46nm,0.1s						
XNZR	Khunzakh	2.91	291	eP	Pn	01 55 48.5	+0.6
XNZR				eS	Sn	01 56 22.9	+1.0
XNZR				pmax	pmax		
	comp=Z,41nm,0.4s						
XNZR	Khunzakh	2.91	291	ePn	Pn	01 55 48.6	+0.6
	comp=Z,41nm,0.4s						
XNZR				eSn	Sn	01 56 22.9	+1.0
	comp=Z,67nm,0.4s						
DBC	Dubki	3.01	300	eP	Pn	01 55 48.8	-0.3
DBC				eS	Sn	01 56 23.5	-0.7
DBC				pmax	pmax		
	comp=Z,43nm,0.4s						
DBC	Dubki	3.01	300	ePn	Pn	01 55 48.9	-0.3
	comp=Z,43nm,0.5s						
DBC				i Sn	Sn	01 56 23.5	-0.7
	comp=Z,62nm,0.4s						
LKRN	Lenkeran, Azer	3.10	204	Pn	Pn	01 55 50.8	+0.4
	SNR=3.1						
LKRN				Sn	Sn	01 56 25.7	-0.8
LKRN	Lenkeran, Azer	3.10	204	P	Pn	01 55 50.8	+0.4
YRD	Yardimli	3.11	212	Pn	Pn	01 55 50.3	-0.4
	SNR=29						
YRD				Sn	Sn	01 56 24.0	-3.0
QRD	Qoradiz	3.14	229	Pn	Pn	01 55 52.5	+1.6
QRD				Sn	Sn	01 56 24.2	-3.1
DLMR	Dylym	3.16	300	eP	Pn	01 55 51.3	+0.1
DLMR				eS	Sn	01 56 27.9	0.0
DLMR				i S	Sn	01 56 28.1	+0.2
DLMR				pmax	pmax		
	comp=Z,49nm,0.3s						
DLMR				smax	smax		
	comp=E,401nm,0.4s						
DLMR				smax	smax		
	comp=N,351nm,0.4s						
DLMR				smax	smax		
	comp=E,331nm,0.4s						
DLMR	Dylym	3.16	300	ePn	Pn	01 55 51.3	+0.1
	comp=E,48nm,0.3s						
DLMR				eSn	Sn	01 56 27.9	0.0
	comp=E,400nm,0.4s						
GANJ	Ganja	3.20	255	Pn	Pn	01 55 50.4	-1.3
	SNR=4.2						
GANJ				Sn	Sn	01 56 23.6	-5.2
GANJ	Ganja	3.20	255	P	Pn	01 55 50.1	-1.7
ASTR	Astara	3.24	203	Pn	Pn	01 55 52.2	-0.1
ASTR				Sn	Sn	01 56 28.2	-1.5
LRK	Lerik	3.31	209	Pn	Pn	01 55 53.5	+0.1
	SNR=4.7						
LRK				Sn	Sn	01 56 29.7	-2.1
DVE	Vedeno	3.45	295	eP	Pn	01 55 55.8	+0.6
DVE				pmax	pmax		
	comp=Z,58nm,0.4s						
GDB	GEDABAY	3.59	258	Pn	Pn	01 55 55.4	-1.8
	SNR=5.4						
GDB				Sn	Sn	01 56 33.1	-5.6
GROC	Groznyy	3.77	297	eP	Pn	01 56 00.5	+1.1
GROC				e		01 56 45.4	
GROC				pmax	pmax		
	comp=Z,35nm,0.5s						
GROC				smax	smax		
	comp=E,29nm,0.6s						
GROC				smax	smax		
	comp=N,44nm,0.8s						
GROC				smax	smax		
	comp=N,36nm,0.5s						
ORD	Ordubad	4.27	233	Pn	Pn	01 56 06.6	+0.2
	SNR=5.4						
ORD				Sn	Sn	01 56 52.4	-2.5
SBZ	Shahbuz	4.27	241	Pn	Pn	01 56 06.5	+0.1
	SNR=3.3						
SBZ				Sn	Sn	01 56 54.6	-0.5
NAX	Nakhchivan	4.43	239	Pn	Pn	01 56 09.3	+0.7
	SNR=2.8						
NAX				Sn	Sn	01 56 57.0	-1.9
NAX	Nakhchivan	4.43	239	P	Pn	01 56 09.2	+0.7
GNI	Garni	4.50	254	i P	Pn	01 56 12.8	+3.2
KBZ	Khabaz	5.93	294	Pn	Pn	01 56 26.1	-2.7
	comp=N,0.4nm,0.3s,baz=112,slow=4.9,SNR=14						
KBZ				Sn	Sn	01 57 33.1	-2.2
	comp=N,0.9nm,0.3s,baz=337,slow=20,SNR=4.8						
KBZ	Khabaz	5.93	294	eP	Pn	01 56 27.1	-1.7
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KVAR	Kislovodsk Arr	6.14	295	Pn	Pn	01 56 29.8	-2.1
	baz=156,slow=18,SNR=2.1						
KVAR				Sn	Sn	01 57 37.8	-2.9
	baz=173,slow=6.6,SNR=5.2						
KIV	Kislovodsk	6.15	295	eP	Pn	01 56 31.0	-0.9
KIV				eS	Sn	01 57 39.5	-1.3
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GEYT	Alibeck	6.98	119	Pn	Pn	01 56 41.5	-1.7
	comp=Z,0.2nm,0.3s,baz=291,slow=16,SNR=1.2						
GEYT				Sn	Sn	01 58 04.8	+3.7
	comp=Z,0.5nm,0.3s,baz=301,slow=15,SNR=1.3						
AB31	Akbulak array	10.21	38	⇓P	Pn	01 57 28.6	+1.4
	comp=Z,0.9nm,0.7s,baz=230,slow=15,SNR=13						
AB31				⇓S	Sn	01 59 15.4	-4.3
	comp=Z,1.3nm,0.6s,baz=225,slow=24,SNR=4.1						
AKTO	Aktyubinsk	10.33	28	Pn	Pn	01 57 27.9	-1.0
	comp=Z,0.3nm,0.3s,baz=191,slow=11,SNR=7.1						
AKTO				Sn	Sn	01 59 18.6	-4.3
	comp=Z,0.4nm,0.3s,baz=328,slow=22,SNR=6.6						
AKTO	Aktyubinsk	10.33	28	⇑P	Pn	01 57 27.7	-1.2
	comp=Z,4.0nm,1.2s						
AKTO				⇓S	Sn	01 59 17.5	-5.3
	comp=Z,8.7nm,1.4s						
BELG	Belogornoye	10.99	351	LR	LR	02 03 32.3	
	comp=Z,143nm,18.1s,baz=268,slow=46						
BELG	Belogornoye	10.99	351	i P	Pn	01 57 38.7	+0.9
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARU	Arti	15.80	17	Pn	Pn	01 58 39.3	-2.0
	comp=Z,0.0nm,0.3s,baz=157,slow=4.3,SNR=3.9						
AKASG	Malin Array Be	17.23	309	P	Pn	01 58 58.7	-0.3
	comp=Z,1.1nm,0.3s,baz=114,slow=13,SNR=6.3						
BRVK	Borovoye	17.66	43	i P	Pn	01 59 09.2	+4.9
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	Kurchatov	21.49	55	i P	P	01 59 53.2	+7.5
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MKAR	Makanchi Array	23.37	66	P	P	02 00 08.9	+3.6
	comp=Z,0.2nm,0.4s,baz=261,slow=8.3,SNR=5.8						
FINES	FINESS Array B	24.73	332	P	P	02 00 18.8	+1.4
	comp=Z,7.0nm,1.1s,baz=127,slow=12,SNR=5.1						
ZALV	Zalesovo Beam	25.98	50	P	P	02 00 31.9	+3.1
	comp=Z,0.7nm,0.5s,baz=230,slow=12,SNR=3.7						
ESDC	Sonseca Array	40.72	286	P	P	02 02 35.8	-0.9
	comp=Z,0.2nm,0.4s,baz=58,slow=8.9,SNR=1.9						
TORD	Torodi Ar. Bea	50.80	251	P	P	02 03 56.1	-0.2
	comp=Z,0.6nm,1.2s,baz=38,slow=7.1,SNR=1.6						

NNC 11 01:56:16.9±3.2**, 38°.35N×72°.96E, h0km, mb4.4, mpv3.8, 2C-1D, Error ellipse: s-maj=22.4km s-min=16.4km az=175.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	Merke	4.39	3	Pg	Pg	01 57 38.1	-3.0
	7.9nm,0.4s						
MRKS				Lg	Lg	01 58 36.1	
	15nm,0.6s						
IUG	Iuzhnay	4.41	330	Pg	Pb	01 57 37.8	+2.6
	307nm,0.6s						
IUG				Lg	Lg	01 58 35.0	
	61nm,0.8s						
KK07	Karatay Array	5.09	339	⇓Pn	Pn	01 57 33.2	-1.3
	2.0nm,0.4s,baz=154,slow=13						
KK07				⇑Sn	Sn	01 58 35.9	+2.0
	9.1nm,0.6s,baz=160,slow=26						
KK07				⇑Lg	Lg	01 59 00.6	
	9.3nm,0.6s						
KST	Kastek	5.21	25	Pg	Pb	01 57 52.9	+3.8
	2.5nm,0.3s						
KST				Lg	Lg	01 59 01.2	
	6.3nm,0.6s						
BRLS	Borolday	5.24	334	Pg	Pb	01 57 50.2	+0.7
	4.2nm,0.6s						
BRLS				Lg	Lg	01 58 56.2	
	6.3nm,0.4s						
SGDS	Sogindy	5.25	13	Pg	Pb	01 57 52.3	+2.7
	3.2nm,0.8s						
SGDS				Lg	Lg	01 59 00.4	
	7.6nm,0.8s						

IPEC ***11*** *02:05:45.9±0.3, 51°.49N×16°.22E, h0km, ML3.5/3, Error ellipse: s-maj=3.2km s-min=1.7km az=64.0*

DNK ***11*** *02:05:45.4±2.3, 51°.53N×16°.45E, h0km±84km, ML2.9*

LDG ***11*** *02:05:45.8±0.1, 51°.44N×16°.22E, h1km, Ml3.7/14, Error ellipse: s-maj=3.4km s-min=2.2km az=7.0, Suspected Mining induced.*

IDC ***11*** *02:05:47.0±0.5, 51°.45N×16°.18E, h0km, mb3.7/6, mb1 3.9/15, mb1mx3.6/47, mbtmp3.7/15, ML3.3/9, Error ellipse: s-maj=10.0km s-min=5.9km az=114.0*

BGR ***11*** *02:05:47.8±0.2, 51°.41N×16°.20E, h1km, ML3.5/19, Error ellipse: s-maj=3.3km s-min=2.2km az=37.0*

PRU ***11*** *02:05:47.7±0.0, 51°.42N×16°.17E, h0km*

VIE ***11*** *02:05:49.1±0.9, 51°.24N×16°.15E, h0km, mb3.2/19, ml3.3/15, ms3.9/3, Error ellipse: s-maj=6.2km s-min=4.8km az=160.0 62 km WNW of Wroclaw Suspected Mining induced.*

UPP ***11*** *02:05:49.2±3.0, 51°.50N×15°.11E, h0km, ML3.1, Suspected explosion*

ISC 11 02:05:44.7±0.5**, 51°.46N**±0°.02×**16°.18E**±0°.02**, h0km, n151, σ2^{s}.38**/258**, mb3.7**/6**, 4C-17D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.62	174	i Pg	Pb	02 05 58.8	+0.3
KSP				eSg	Sg	02 06 06.2	+1.6
KSP	Ksiaz	0.62	174	ePg	Pb	02 05 58.8	+0.3
KSP				eSg	Sg	02 06 06.4	+1.8
CHVC	Chvalec	0.88	185	⇓iPG	Pb	02 06 03.9	+1.1
CHVC				eSG	Sg	02 06 14.9	+2.1
OSTC	Ostas	0.90	179	⇓iPG	Pb	02 06 04.4	+1.1
OSTC				eSG	Sg	02 06 15.9	+2.2
UPC	Upice	0.96	187	⇓iPG	Pb	02 06 05.1	+0.9
UPC				eSG	Sg	02 06 17.0	+1.5
	comp=Z,663nm,0.4s						
DPC	Dobruska-Polom	1.11	175	⇓iPG	Pb	02 06 07.6	+0.7
DPC				eSG	Sg	02 06 22.1	+1.6
	comp=Z,321nm,0.5s						
DPC	Dobruska-Polom	1.11	175	ePg	Pb	02 06 07.8	+0.9
DPC				eSg	Sb	02 06 23.4	+1.5
PVCC	Panska Ves	1.38	228	⇓ePG	Pb	02 06 13.4	+2.0
PVCC				eSG	Sn	02 06 31.8	+1.6
	comp=Z,1µm,0.3s						
PVCC	Panska Ves	1.38	228	ePn	Pb	02 06 13.0	+1.6
PVCC				eSg	Sn	02 06 32.0	+1.8
KRLC	Kraliky	1.44	164	⇓ePG	Pb	02 06 13.3	+0.9
KRLC				eSG	Sg	02 06 31.9	+1.1
	comp=Z,150nm,0.3s						
BRG	Berggiesshubel	1.53	248	ePn	Pb	02 06 14.5	+0.5
BRG				ePg	Pg	02 06 16.2	+2.2
BRG				eSg	Sg	02 06 35.8	+2.0
BRG	Berggiesshubel	1.53	248	Pn	Pb	02 06 14.4	+0.5
BRG				Pg	Pg	02 06 16.6	+2.6
BRG				Sg	Sg	02 06 36.6	+2.8
BRG				Amp		02 06 40.2	
	comp=Z,167nm,0.4s						
PRA	Prague	1.78	219	⇓eSG	Sg	02 06 43.1	+1.2
PRU	Pruhonice	1.80	216	⇓ePN	Pn	02 06 18.3	+1.2
PRU				ePG	Pg	02 06 20.4	+1.1
PRU				eSG	Sg	02 06 43.7	+1.0
	comp=Z,194nm,0.6s						
PRU	Pruhonice	1.80	216	ePn	Pn	02 06 18.4	+1.4
PRU				ePg	Pg	02 06 20.6	+1.3
PRU				eSg	Sg	02 06 44.2	+1.5
RUE	Ruedersdorf	1.80	305	eP	Pb	02 06 18.2	-0.5
RUE				IAmb	IAmb	02 06 48.7	
	comp=Z,258nm,0.8s						
RUE	Ruedersdorf	1.80	305	ePn	Pb	02 06 18.5	-0.1
RUE				ePg	Pg	02 06 22.5	+3.2
RUE				eSg	Sg	02 06 46.1	+3.4
FBE	Freiberg	1.86	254	eSg	Sg	02 06 47.3	+2.8
RAC	Raciborz	1.88	136	ePG	Pg	02 06 22.4	+1.7
RAC				eSG	Sg	02 06 46.6	+1.6
MORC	Moravsky Berou	1.89	152	⇓P	Pn	02 06 19.5	+1.2
MORC	Moravsky Berou	1.89	152	ePn	Pn	02 06 19.4	+1.0
	baz=334						
MORC				eSg	Sb	02 06 45.8	+1.4
	comp=Z,334nm,1.2s,baz=334						
MORC	Moravsky Berou	1.89	152	ePn	Pn	02 06 19.6	+1.2
MORC				eSg	Sb	02 06 45.6	+1.2
GKP	Gorka Klasztor	1.93	19	eP	Pg	02 06 23.4	+1.8
CLL	Collm	2.00	267	ePn	Pn	02 06 21.0	+1.3
CLL				ePg	Pg	02 06 24.0	+1.0
CLL				eSg	Sg	02 06 52.0	+3.1
	comp=Z,112nm,0.6s						
CLL	Collm	2.00	267	ePn	Pn	02 06 21.2	+1.4
CLL				ePg	Pg	02 06 24.2	+1.2
CLL				eSg	Sg	02 06 51.8	+2.9
OKC	Ostrava-Krasne	2.05	142	ePn	Pn	02 06 21.5	+1.1
OKC				ePg	Pg	02 06 25.3	+1.3
OKC				eSg	Sb	02 06 50.5	+1.7
VRAC	Vranov	2.17	173	⇑P	Pn	02 06 23.9	+1.8
VRAC				⇓S	Sg	02 06 54.9	+0.5
VRAC	Vranov	2.17	173	Pn	Pn	02 06 24.1	+2.0
	comp=Z,9.8nm,0.3s,baz=347,slow=12,SNR=56						
VRAC				Lg	Lg	02 06 55.2	
	comp=Z,21nm,0.3s,baz=103,slow=16,SNR=12						
VRAC	Vranov	2.17	173	ePn	Pn	02 06 23.6	+1.5
	baz=354						
VRAC				eSg	Sg	02 06 54.8	+0.5
	comp=Z,236nm,1.1s,baz=354						
VRAC	Vranov	2.17	173	ePn	Pn	02 06 23.9	+1.8
VRAC				eSg	Sg	02 06 55.0	+0.6
TREC	Trest	2.21	192	⇓ePG	Pg	02 06 27.8	+0.7
TREC				eSG	Sg	02 06 56.2	+0.5
	comp=Z,92nm,0.3s						
TREC	Trest	2.21	192	ePn	Pn	02 06 24.4	+1.7
TREC				eSg	Sg	02 06 56.6	+0.9
ABG1	Leinawald	2.32	259	ePg	Pg	02 06 30.8	+1.5
ABG1				eSg	Sg	02 07 02.2	+2.8
LNIZ	Loecknitz	2.37	330	ePn	Pn	02 06 25.9	+1.1
LNIZ				ePg	Pg	02 06 34.0	+3.9
MODW	Modelwitz	2.39	259	ePn	Pn	02 06 27.1	+1.9
MODW				ePg	Pg	02 06 33.5	+2.9
MODW				eSg	Sg	02 07 04.6	+3.1
KRUC	Moravsky	2.40	177	ePN	Pn	02 06 27.1	+1.7
KRUC				eSG	Sg	02 07 02.1	+0.1
KRUC	Moravsky	2.40	177	ePn	Pn	02 06 27.0	+1.7
	baz=357						
KRUC				eSg	Sg	02 07 02.0	+0.1
	comp=Z,221nm,1.1s,baz=357						
KRUC	Moravsky	2.40	177	ePn	Pn	02 06 27.4	+2.1
KRUC				ePg	Pg	02 06 31.3	+0.5
KRUC				eSg	Sg	02 07 02.5	+0.6
TANN	Tannenbergstha	2.58	248	ePn	Pn	02 06 30.0	+2.3
TANN				ePg	Pg	02 06 36.2	+2.1
TANN				eSg	Sg	02 07 08.6	+1.1
OJC	Ojcow	2.61	117	ePn	Pn	02 06 27.9	-0.2
OJC				ePg	Pg	02 06 36.3	+1.7
OJC				eSg	Sg	02 07 10.2	+1.8
NKC	Novy Kostel	2.67	244	⇓ePN	Pn	02 06 30.9	+1.9
NKC				ePG	Pg	02 06 37.8	+2.0
NKC				eSG	Sg	02 07 13.0	+2.6
	comp=Z,111nm,0.3s						
JAVC	Velka Javorina	2.77	159	ePN	Pn	02 06 32.2	+1.8
KHC	Kasperske Hory	2.87	217	⇓ePN	Pn	02 06 33.2	+1.5
KHC				ePG	Pg	02 06 39.6	-0.1
KHC				eSG	Sg	02 07 16.7	-0.1
	comp=Z,92nm,0.8s						
BEL	Belsk	2.89	81	ePn	Pb	02 06 36.1	-1.1
CKRC	Cesky Krumlov	2.90	205	⇓ePN	Pn	02 06 35.6	+3.4
CKRC				eSG	Sg	02 07 19.5	+1.5
	comp=Z,173nm,0.9s						
MOX	Moxa	3.00	256	ePn	Pn	02 06 35.4	+1.9
MOX				ePg	Pg	02 06 44.0	+1.9
MOX				eSg	Sg	02 07 22.5	+1.6
SMOL	Smolenice	3.06	164	ePN	Pb	02 06 38.1	-1.9
SMOL				ePG	Pg	02 06 45.0	+1.7
SMOL				eSG	Sg	02 07 25.9	+3.0
GEC2	GERESS Array S	3.06	212	ePn	Pn	02 06 37.2	+2.7
GEC2				ePg	Pg	02 06 43.4	0.0
GEC2				eSg	Sg	02 07 23.5	+0.3
GERES	GERESS Array B	3.06	212	Pn	Pn	02 06 36.4	+1.9
	comp=Z,3.6nm,0.3s,baz=36,slow=13,SNR=95						
GERES				Pg	Pg	02 06 43.0	-0.4
	comp=Z,34nm,0.3s,baz=30,slow=17,SNR=87						
GERES				Sn	Sn	02 07 14.8	+2.9
	comp=Z,8.9nm,0.3s,baz=30,slow=22,SNR=6.1						
GERES				Lg	Lg	02 07 24.1	
	comp=Z,22nm,0.3s,baz=30,slow=29,SNR=8.2						
LANS	Liptovska Anna	3.13	136	ePN	Pn	02 06 36.9	+1.6
LANS				ePG	Pg	02 06 46.0	+1.4
LANS				eSG	Sg	02 07 25.7	+0.6
WET	Wettzell	3.14	224	ePn	Pn	02 06 37.7	+2.3
WET				ePg	Pb	02 06 43.9	+2.5
WET				eSg	Sg	02 07 26.7	+1.2
MODS	Modra-Piesok	3.17	167	ePN	Pn	02 06 37.9	+2.0
MODS				ePG	Pg	02 06 46.0	+0.6
MODS				eSG	Sg	02 07 27.8	+1.3
KOLL	Kolacno	3.22	153	ePN	Pn	02 06 38.2	+1.7
KOLL				eSG	Sg	02 07 29.8	+1.7
ZST	Bratislava	3.32	169	ePG	Pg	02 06 48.6	+0.3
ZST				eSG	Sg	02 07 32.2	+0.9
NIE	Niedzica	3.33	126	ePn	Pn	02 06 40.7	+2.6
NIE				ePg	Pg	02 06 50.4	+1.8
NIE				eSg	Sg	02 07 33.9	+2.2
VYHS	Vyhne	3.43	149	ePN	Pn	02 06 40.6	+1.2
VYHS				ePG	Pg	02 06 52.1	+1.7
VYHS				eSG	Sg	02 07 37.0	+2.2
CONA	Conrad Observa	3.54	184	i Pn	Pn	02 06 43.2	+2.2
	comp=Z,5.0nm,0.4s,SNR=12						
CONA				ePg	Pg	02 06 52.2	-0.3
	comp=Z,7.6nm,0.3s						
CONA				eSg	Sg	02 07 39.6	+1.2
	comp=Z,81nm,0.4s						
GRF	Grafenberg Arr	3.62	243	ePn	Pn	02 06 44.7	+2.6
BSD	Bornholm Skovb	3.74	349	eP	Pn	02 06 44.2	+0.5
BSD	Bornholm Skovb	3.74	349	i P	Pn	02 06 44.0	+0.3
BSD				i S	Sn	02 07 27.5	-0.8
BSD				IAML		02 07 30.4	
	comp=Z,13nm,0.5s						
MOA	Molln	3.82	200	i Pn	Pn	02 06 46.9	+2.1
	comp=Z,12nm,0.4s,SNR=11						
MOA				ePg	Pg	02 06 59.2	+1.3
	comp=Z,24nm,0.3s						

MOA				*i* Sg	Sg	02 07 49.3	+1.8
	comp=Z,58nm,0.7s						
STHS	Stebnicka Huta	3.83	120	*e*PG	Pg	02 07 00.2	+2.2
STHS				*e*SG	Sg	02 07 50.3	+2.7
SRO	Srobarova	3.90	158	*e*PG	Pg	02 07 01.7	+2.2
KECS	Kecovo	4.07	135	*e*PN	Pn	02 06 49.8	+1.6
KECS				*e*PG	Pg	02 07 06.5	+3.8
KECS				*e*SG	Sg	02 07 58.0	+2.5
ARSA	Arzberg	4.23	186	*i* Pn	Pn	02 06 54.8	+4.3
	comp=Z,3.8nm,0.3s						
ARSA				*e*Sg	Sg	02 08 02.1	+1.4
	comp=Z,44nm,0.7s						
CRVS	Cervenica-Dubn	4.25	125	*e*PN	Pn	02 06 52.6	+1.9
CRVS				*e*PG	Pg	02 07 07.6	+1.5
CRVS				*e*SG	Sg	02 08 02.9	+1.7
PSZ	Piszkesteto	4.29	144	⇑P	Pn	02 06 53.3	+2.1
PSZ	Piszkesteto	4.29	144	*e*PN	Pn	02 06 52.7	+1.5
PSZ	Piszkesteto	4.29	144	*e*P	Pn	02 06 53.6	+2.4
MPLH	Magyarpolny	4.38	168	*e*PN	Pn	02 06 54.0	+1.5
MPLH	Magyarpolny	4.38	168	*e*P	Pn	02 06 58.0	+5.5
MPLH	Magyarpolny	4.38	168	*e*SN	Sb	02 07 57.5	+1.5
LUNU	Lund	4.49	340	*i* P	Pn	02 06 55.2	+1.3
LUNU				*i* S	Sn	02 07 44.3	-2.5
LUNU	Lund	4.49	340	P	Pn	02 06 54.0	+0.1
LUNU				S	Sn	02 07 45.9	-0.9
KOLS	Kolonicke sedl	4.66	121	*e*PN	Pn	02 06 55.5	-0.8
KOLS				*e*PG	Pg	02 07 17.8	+3.9
KOLS				*e*SG	Sg	02 08 16.8	+2.5
KBA	Koelnbreinsper	4.76	204	*i* Pn	Pn	02 07 00.2	+2.3
	comp=Z,8.4nm,0.5s,SNR=15						
KBA				*e*Sg	Sg	02 08 19.7	+2.1
	comp=Z,65nm,0.8s						
SOKA	Soboth	4.84	189	*i* Pn	Pn	02 07 01.9	+3.0
	comp=Z,2.1nm,0.5s						
SOKA				*e*Sg	Sg	02 08 20.8	+0.5
	comp=Z,9.7nm,0.4s						
BLEU	Blekinge	4.86	358	*i* P	Pn	02 06 59.4	+0.4
BLEU				*i* S	Sn	02 07 52.6	-3.3
OBKA	Obir	5.07	193	*i* Pn	Pn	02 07 04.8	+2.7
	comp=Z,3.0nm,0.4s						
OBKA				*e*Sg	Sg	02 08 33.7	+6.2
	comp=Z,11nm,0.4s						
WATA	Walderalm	5.11	218	*e*Pn	Pn	02 07 05.6	+3.0
	comp=Z,5.8nm,0.3s,SNR=11						
WATA				*e*Sg	Sg	02 08 31.0	+2.3
	comp=Z,26nm,0.4s						
MYKA	Terra Mystica	5.11	200	*e*Sg	Sg	02 08 32.4	+3.5
	comp=Z,12nm,0.4s						
WTTA	Wattenberg	5.14	217	*i* Pn	Pn	02 07 06.3	+3.2
	comp=Z,7.5nm,0.5s,SNR=9.6						
WTTA				*e*Sg	Sg	02 08 31.1	+1.3
	comp=Z,38nm,0.6s						
DEL	Delary	5.20	346	*i* P	Pn	02 07 03.6	-0.2
DEL	Delary	5.20	346	P	Pn	02 07 04.2	+0.5
DEL				S	Sn	02 08 01.2	-3.2
MOTA	Moosalm	5.29	221	*e*Pn	Pn	02 07 07.0	+1.9
	comp=Z,2.9nm,0.4s,SNR=4.5						
MOTA				*e*Sg	Sg	02 08 37.0	+2.5
	comp=Z,46nm,0.8s						
ABTA	Abfaltersbach	5.29	208	*i* Pn	Pn	02 07 07.9	+2.7
	comp=Z,4.0nm,0.4s,SNR=10						
ABTA				*e*Sg	Sg	02 08 33.5	-1.2
	comp=Z,37nm,0.8s						
TRPA	Tarpa	5.29	127	⇑P	Pn	02 07 05.7	+0.7
RETA	Reutte	5.32	224	*i* Pn	Pn	02 07 07.3	+1.8
	comp=Z,6.0nm,0.4s,SNR=16						
RETA				*e*Sg	Sg	02 08 36.8	+1.3
	comp=Z,19nm,0.5s						
SQTA	Sankt Quirin	5.34	219	*i* Pn	Pn	02 07 08.9	+3.1
	comp=Z,3.9nm,0.2s,SNR=17						
SQTA				*e*Sg	Sg	02 08 36.1	-0.2
	comp=Z,41nm,0.7s						
FETA	Feichten	5.70	221	*i* Pn	Pn	02 07 13.0	+2.2
	comp=Z,2.4nm,0.5s,SNR=6.4						
DAVA	Damuels	5.86	227	*i* Pn	Pn	02 07 14.5	+1.5
	comp=Z,4.2nm,0.5s						
DAVA				Sg	Sg	02 09 00.4	+7.5
	comp=Z,34nm,0.6s						
FABU	Falkenberg	5.91	341	*i* P	Pn	02 07 13.2	-0.3
FABU				*e*S	Sn	02 08 18.9	-2.9
FABU	Falkenberg	5.91	341	P	Pn	02 07 13.9	+0.5
GNOU	Gnosjoe	6.01	347	P	Pn	02 07 15.7	+0.8
GNOU				S	Sn	02 08 22.2	-2.1
DAVOX	Davos/Dischmat	6.25	224	Pn	Pn	02 07 19.7	+1.4
	comp=Z,0.2nm,0.3s,baz=269,slow=4.0,SNR=3.3						
SIRR	Siria	6.33	143	⇑P	Pn	02 07 20.8	+1.6
DRGR		6.34	135	⇓P	Pn	02 07 21.6	+2.2
ONAU	Onsala	6.45	339	*e*S	Sn	02 08 32.7	-2.3
MUD	Monsted U'grnd	6.49	323	*e*S	Sn	02 08 32.7	-3.4
BORU	Boraas	6.50	344	*i* P	Pn	02 07 23.1	+1.5
BORU	Boraas	6.50	344	P	Pn	02 07 22.8	+1.2
CDF	Champ du Feu	6.51	246	*e*Pn	Pn	02 07 21.4	-0.4
CDF				*e*Sg	Sg	02 09 10.6	-3.0
	comp=Z,21nm,0.8s						
FKPU	Falk	6.86	349	P	Pn	02 07 27.9	+1.4
BZS	Buzias	6.87	146	⇓P	Pn	02 07 28.7	+2.0
BURAR	Bucovina Array	7.02	120	⇓P	Pn	02 07 30.1	+1.2
HINF	Hinteralfeld	7.07	243	*e*Pn	Pn	02 07 28.1	-1.3
HINF	Hinteralfeld	7.07	243	*e*P	Pn	02 07 32.7	+3.3
HINF	Hinteralfeld	7.07	243	*e*Pg	Pg	02 07 57.4	-2.7
HINF				*e*Sg	Sg	02 09 28.0	-3.7
SLIT	Slitere, Latvi	7.13	27	IAmb	IAmb	02 06 46.8	
	comp=Z,474nm,1.0s						
NACGM	Naroch	7.24	57	*i* P	Pn	02 07 33.5	+1.7
HAU	Haudompre	7.25	245	*e*Pn	Pn	02 07 30.7	-1.2
HAU	Haudompre	7.25	245	*e*P	Pn	02 07 35.5	+3.6
HAU	Haudompre	7.25	245	*e*Pg	Pg	02 08 01.6	-2.0
HAU				*e*Sg	Sg	02 09 34.5	-2.9
PAGF	Fort de Pagny	7.34	251	*e*Pn	Pn	02 07 32.4	-0.7
PAGF				*e*Sg	Sg	02 09 35.9	-4.4
	comp=Z,1.7nm,0.5s						
MEZF	Maizieres J'vi	7.76	252	*e*Sg	Sg	02 09 48.1	-5.7
	comp=Z,4.8nm,0.6s						
CABF	La Chapelle	8.21	238	*e*Pg	Pg	02 08 17.5	-4.5
CABF				*e*Sg	Sg	02 10 01.5	-6.9
	comp=Z,87nm,1.2s						
AKASG	Malin Array Be	8.25	90	Pn	Pn	02 07 44.9	-0.7
	comp=Z,2.0nm,0.3s,baz=280,slow=12,SNR=12						
AKASG				Sn	Sn	02 09 13.3	-6.1
	comp=Z,1.7nm,0.3s,baz=265,slow=25,SNR=4.4						
AKASG				Lg	Lg	02 10 12.7	
	comp=Z,0.6nm,0.3s,baz=273,slow=27,SNR=5.1						
UPP	Uppsala	8.46	5	*e*P	Pn	02 07 49.4	+1.1
LPL	La Plagne	8.64	230	*e*Pn	Pn	02 07 50.9	-0.3
LPL	La Plagne	8.64	230	*e*P	Pn	02 07 54.3	+3.1
LPL				*e*Sn	Sn	02 09 22.2	-7.2
LPL				*e*Sg	Sg	02 10 16.0	-6.1
	comp=Z,98nm,1.7s						
LPG	La Plagne	8.65	230	*e*Pn	Pn	02 07 49.9	-1.4
LPG	La Plagne	8.65	230	*e*P	Pn	02 07 54.4	+3.1
LPG				*e*Sn	Sn	02 09 22.4	-7.2
LPG				*e*Sg	Sg	02 10 16.3	-5.9
	comp=Z,19nm,1.0s						
HFS	Hagfors	8.81	352	Pn	Pn	02 07 53.3	+0.2
	comp=Z,0.5nm,0.3s,baz=168,slow=15,SNR=10						
AAL	Aland	9.00	12	*e*P	Pn	02 07 57.4	+1.7
LOR	Lormes	9.07	247	*e*Pn	Pn	02 07 55.3	-1.5
	baz=66						
MBDF	Montbardon	9.22	227	*e*Pn	Pn	02 07 57.3	-1.7
MBDF	Montbardon	9.22	227	*e*P	Pn	02 08 03.7	+4.7
MBDF				*e*Sn	Sn	02 09 37.0	-6.4
	comp=Z,0.3nm,0.3s						
VSU	Vasula	9.27	37	*e*P	Pn	02 08 01.8	+2.3
SSF	Saint Saulge	9.38	247	*e*Pg	Pg	02 08 38.4	
SSF				*e*Sg	Sg	02 10 39.7	
	comp=Z,143nm,2.0s						
ORIF	Oris-en-Rattie	9.49	230	*e*Pn	Pn	02 08 01.8	-0.9
ORIF				*e*Sn	Sn	02 09 41.3	-8.7
ORIF				*e*Sg	Sg	02 10 42.6	
	comp=Z,1.3nm,0.3s						
SBF	Sospel	9.62	221	*e*Pn	Pn	02 08 02.8	-1.6
SBF	Sospel	9.62	221	*e*P	Pn	02 08 07.0	+2.6
SBF				*e*Sn	Sn	02 09 45.8	-7.3
	comp=Z,1.1nm,0.3s						
AVF	Avril sur Loir	9.62	246	*e*Pg	Pg	02 08 43.6	
AVF				*e*Sg	Sg	02 10 47.3	
	comp=Z,190nm,2.2s						
NOA	NORSAR Array B	9.99	346	Pn	Pn	02 08 08.0	-1.4
	comp=Z,0.1nm,0.3s,baz=179,slow=11,SNR=5.4						
BGF	Bois d'Agland	10.04	246	*e*Pg	Pg	02 08 51.6	
BGF				*e*Sg	Sg	02 11 00.5	
	comp=Z,34nm,1.0s						
VIVF	Saint-Julien-l	10.13	234	*e*Pn	Pn	02 08 09.7	-1.7
VIVF				*e*Sg	Sg	02 11 02.9	
	comp=Z,82nm,1.9s						
FRF	La Foret Royal	10.19	223	*e*Pn	Pn	02 08 10.4	-1.8
FRF	La Foret Royal	10.19	223	*e*P	Pn	02 08 14.4	+2.2
FRF				*e*Sg	Sg	02 11 04.0	
	comp=Z,0.3nm,0.3s						
SMRF	Simiane la Rot	10.34	228	*e*Pn	Pn	02 08 13.0	-1.3
LASF	Ste Croix	11.10	233	*e*Pn	Pn	02 08 24.1	-0.5
FINES	FINESS Array B	11.39	25	Pn	Pn	02 08 27.6	-0.9
	comp=Z,0.7nm,0.3s,baz=207,slow=11,SNR=21						
FINES				Sn	Sn	02 10 29.6	-6.8
	comp=Z,0.7nm,0.3s,baz=210,slow=19,SNR=6.0						
EKA	Eskdalemuir Ar	12.17	296	Pn	Pn	02 08 37.8	-1.4
	baz=101,slow=14,SNR=6.4						
MTLF	Montolieu	12.45	235	*e*Pn	Pn	02 08 41.7	-1.4
ARCES	ARCESS Array B	18.66	10	Pn	P	02 10 00.4	-3.5
	baz=194,slow=9.7,SNR=19						
BELG	Belogornoye	19.34	75	P	Pn	02 10 12.7	+0.3
	comp=Z,0.6nm,0.3s,baz=332,slow=2.3,SNR=4.9						
ARU	Arti	25.12	62	P	P	02 11 11.7	+0.7
	comp=Z,0.5nm,0.3s,baz=239,slow=8.5,SNR=5.4						
AKTO	Aktyubinsk	26.12	76	P	P	02 11 21.2	+1.1
	comp=Z,1.2nm,0.7s,baz=286,slow=11,SNR=4.6						
TORD	Torodi Ar. Bea	39.97	202	P	P	02 13 22.3	+1.4
	comp=Z,1.4nm,0.9s,baz=4.8,slow=8.0,SNR=7.0						
YKA	Yellowknife Ar	59.92	336	P	P	02 15 54.3	+2.3
	comp=Z,1.2nm,0.9s,baz=27,slow=7.3,SNR=1.3						
PDAR	Pinedale Array	75.01	322	P	P	02 17 30.5	+2.5
	comp=Z,0.3nm,0.6s,baz=46,slow=6.4,SNR=3.7						
TXAR	Lajitas Array	83.78	310	P	P	02 18 18.8	+2.9
	comp=Z,0.2nm,0.6s,baz=34,slow=6.6,SNR=3.0						

DDA 11 02:42:36.6, 38°.83N×37°.82E, h7^{km}±3^{km}, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEKM	Malatya_Hekimh	0.12	67	*i* P	Pg	02 42 39.5	+0.2
HEKM				IAML		02 42 42.0	
	comp=N,116nm,0.4s						
HEKM				*i* S	Sg	02 42 42.1	+0.8
HEKM				IAML		02 42 44.0	
	comp=E,157nm,0.3s						
AKCD	Akcadag	0.54	171	*i* P	Pg	02 42 46.8	-0.3
AKCD				*i* S	Sb	02 42 56.2	-0.3
AKCD				IAML		02 42 57.0	
	comp=N,26nm,0.1s						
AKCD				IAML		02 42 58.0	
	comp=E,28nm,0.2s						
CUKAN	kangal_SIVAS	0.56	331	*i* P	Pg	02 42 47.4	0.0
CUKAN				IAML		02 42 55.0	
	comp=N,14nm,0.3s						
CUKAN				*i* S	Sg	02 42 55.7	+1.0
CUKAN				IAML		02 42 56.0	
	comp=E,12nm,0.3s						
KEMA	Kemaliye	0.68	50	*i* P	Pg	02 42 49.6	-0.2
KEMA				*i* S	Sg	02 42 59.0	+0.3
KEMA				IAML		02 43 00.0	
	comp=N,5.4nm,0.6s						
KEMA				IAML		02 43 00.0	
	comp=E,7.8nm,0.1s						

ISK 11 02:42:55.3, 39°.27N×40°.24E, h5^{km}, ML2.0/8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YEDI	Yedisu-Bingol	0.28	55	PG	Pg	02 43 01.5	+0.6
YEDI				SG	Sg	02 43 05.9	+1.2
BNGB	Bingl	0.44	130	PG	Pg	02 43 04.2	+0.4
BNGB				SG	Sb	02 43 11.1	-1.4
ERZN	Erzincan	0.51	308	PG	Pg	02 43 05.6	+0.4
KARO	Karliova-Bingo	0.63	86	PG	Pg	02 43 07.9	+0.5
KARO				SG	Sb	02 43 17.1	-0.9
VRTB	Varto-Mus	0.95	96	PG	Pb	02 43 14.1	-0.2
BAYT	Aydıntepe-Bayb	1.12	356	PN	Pb	02 43 17.2	-0.1
SVRC	Sivrice-ELAZID	1.16	220	PN	Pn	02 43 18.1	-0.2
AGRB	Hanur-Agry	2.15	81	PN	Pn	02 43 33.2	+1.2

IDC 11 02:50:40.4±1.6, 4°.34S×129°.44E, h0^{km}, mb3.5/1, mb1 3.9/4, mb1mx3.7/34, mbtmp3.8/4, ML3.6/3, Error ellipse: s-maj=59.0km s-min=26.7km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.90	28	Pn	Pn	02 51 41.0	-0.7
	9.1nm,0.3s,baz=238,slow=23,SNR=43						
SIJI				Sn	Sn	02 52 24.1	-4.1
	4.7nm,0.3s,baz=198,slow=23,SNR=6.1						
WRA	Warramunga Arr	16.22	163	Pn	Pn	02 54 28.1	-1.8
	0.1nm,0.3s,baz=343,slow=12,SNR=9.6						
ASAR	Alice Springs	19.69	168	P	P	02 55 12.1	+0.7
	0.4nm,0.3s,baz=346,slow=8.9,SNR=22						
MKAR	Makanchi Array	65.71	326	P	P	03 01 27.2	+0.2
	0.2nm,0.3s,baz=107,slow=7.9,SNR=4.9						

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*IDC **11** 02:58:12.9±1.9, 18°.21S×174°.93W, h174^{km}±18^{km}, mb3.9/11, mb1 4.1/13, mb1mx4.0/25, mbtmp4.5/13, Error ellipse: s-maj=18.6km s-min=10.7km az=123.0*

*NEIC **11** 02:58:12.4±1.4, 18°.15S±0°.09×174°.97W±0°.09, h167^{km}±7^{km}, mb4.5/26, Error ellipse: s-maj=14.0km s-min=12.7km az=147.0*

*NOU **11** 02:58:16.1, 18°.00S×174°.55W, h236^{km}, mb4.8/43, Tonga Islands*

ISC 11 02:58:16.0±0.4, 18°.33S±0°.06×174°.84W±0°.05, h205^{km}, n172, σ2^{s}44/194, mb4.5/28, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.71	100		Pn	02 59 26.1	-0.9
NIUE				Sn	S	03 00 19.5	-2.8
NIUE	Niue	4.71	100	P	Pn	02 59 26.5	-0.4
TAVE	Taveuni	5.10	288	P	Pn	02 59 35.0	+3.2
AFI	Afiamalu	5.29	34	P	Pn	02 59 29.4	-4.9
	314nm,0.3s,baz=179,slow=1.4,SNR=238						
AFI				S	S	03 00 24.0	-12
	148nm,0.3s,baz=37,slow=22,SNR=7.3						
DGTI	Dogotuki	5.56	290	P	Pn	02 59 40.3	+2.5
MSVF	Nonsavu	6.79	274	P	Pn	02 59 56.8	+3.0
	22nm,0.3s,baz=99,slow=10,SNR=139						
MSVF	Nonsavu	6.79	274	P	Pn	02 59 57.5	+3.8
RIZ	Raoul Island	11.23	194	P	Pn	03 00 48.9	-2.0
RAO	Raoul Island	11.23	194	P	Pn	03 00 49.9	-1.1
	58nm,0.3s,baz=90,slow=20,SNR=2.9						
RAO				S	S	03 02 50.7	-5.0
	44nm,0.3s,baz=72,slow=23,SNR=3.8						
RAO	Raoul Island	11.23	194	Pn	Pn	03 00 48.6	-2.3
GLKZ	Green Lake	11.24	194	P	Pn	03 00 49.1	-2.0
GLKZ				S	S	03 02 50.0	-6.0
RAR	Rarotonga	14.47	104	P	Pn	03 01 32.1	+0.5
	2.2nm,0.3s,baz=262,slow=6.8,SNR=12						
RAR	Rarotonga	14.47	104		Pn	03 01 30.7	-0.8
YATNC	Mamie plateau,	17.55	255	P	P	03 02 07.7	+1.0
DZM	Mont Dzumac	17.96	255	P	P	03 02 11.2	0.0
	0.3nm,0.3s,baz=79,slow=16,SNR=3.3						
DZM	Mont Dzumac	17.96	255	P	P	03 02 08.5	-2.7
DZM	Mont Dzumac	17.96	255	P	Pn	03 02 12.9	-0.6
OUZ	Omahuta	19.71	209	P	P	03 02 31.4	+1.5
OUZ	Omahuta	19.71	209	P	P	03 02 31.9	+2.0
GRZ	Great Barrier	19.80	204	P	P	03 02 31.7	+0.9
WCZ	Waipu Caves	19.98	206	P	P	03 02 34.8	+2.0
MXZ	Matakaoa Point	20.08	196	P	P	03 02 32.4	-1.5
HAZ	Te Kaha	20.41	197	P	P	03 02 39.9	+2.6
PUZ	Puketiti	20.57	196	P	P	03 02 39.9	+0.8
TWGZ	Tauwhareparae	20.75	196	P	P	03 02 42.7	+1.8
TWGZ				S	S	03 06 20.7	-0.1
TKGZ	Te Karaka	21.03	196	P	P	03 02 45.9	+2.1
TKGZ				S	S	03 06 26.4	+0.8
EDRZ	Edgecumbe	21.04	199	P	P	03 02 46.9	+2.9
KMRZ	Kaimai	21.05	201	P	P	03 02 47.8	+3.6
URZ	Urewera	21.07	198	P	P	03 02 44.6	+0.3
	121nm,0.4s,baz=78,slow=1.4,SNR=85						
URZ				S	S	03 06 29.6	+3.3
	17nm,0.5s,baz=171,slow=24,SNR=5.8						
URZ	Urewera	21.07	198	P	P	03 02 44.6	+0.3
URZ				S	S	03 06 27.6	+1.3
URZ	Urewera	21.07	198	P	P	03 02 44.9	+0.6
KARZ	Kaharoa	21.11	200	P	P	03 02 48.5	+3.7
OMRZ	Omania	21.15	200	P	P	03 02 48.4	+3.2
RAGZ	Rawiri	21.20	197	P	P	03 02 47.9	+2.1
TARZ	Mount Tarawera	21.23	199	P	P	03 02 49.2	+3.1
UTU	Utuhina	21.27	200	P	P	03 02 51.6	+5.2
HLRZ	Highlands Stat	21.29	199	P	P	03 02 50.4	+3.8
RIGZ	Rimuhau	21.30	196	P	P	03 02 49.1	+2.3
RIGZ				S	S	03 06 33.0	+2.6
RRRZ	Republican Roa	21.32	199	P	P	03 02 48.3	+1.4
MUGZ	Murupara	21.37	198	P	P	03 02 47.2	-0.3
MUGZ				S	S	03 06 31.9	+0.5
HSRZ	Hossack Road	21.38	200	P	P	03 02 51.7	+4.1
RTZ	Ruatahuna	21.43	198	P	P	03 02 50.0	+1.8
PRGZ	Paritu Road	21.47	196	P	P	03 02 50.8	+2.2
PRRZ	Plateau Road	21.50	199	P	P	03 02 49.0	+0.2
ALRZ	Allen Road	21.58	199	P	P	03 02 51.2	+1.6
KNZ	Kokohu	21.62	196	P	P	03 02 52.6	+2.7
MHGZ	Mahia Peninsul	21.68	195	P	P	03 02 52.8	+2.1
MHGZ				S	S	03 06 39.3	+2.7
MTHZ	Maungataniwha	21.69	198	P	P	03 02 51.8	+1.0
MTHZ				S	S	03 06 38.3	+1.5
MRHZ	Matea Rd	21.80	199	P	P	03 02 52.9	+1.0
NMHZ	Naumai	21.93	198	P	P	03 02 54.2	+1.1
HIZ	Hauiti	22.03	202	P	P	03 02 57.4	+3.4
HIZ	Hauiti	22.03	202	P	P	03 02 55.2	+1.2
ARHZ	Aropaoanui	22.03	197	P	P	03 02 55.0	+1.0
BKZ	Black Stump Fm	22.09	198	P	P	03 02 54.3	-0.3
BKZ				S	S	03 06 45.9	+2.9
BKZ	Black Stump Fm	22.09	198	P	P	03 02 54.9	+0.3
TMVZ	Te Maari	22.28	200	P	P	03 02 56.6	+0.1
KRVZ	Karewarewa	22.28	200	P	P	03 02 58.5	+1.9
MCHZ	McNeill Hill	22.28	197	P	P	03 02 59.3	+2.9
MCHZ				S	S	03 06 53.4	+7.4
ETVZ	East Tongariro	22.30	200	P	P	03 02 56.9	+0.2
WTVZ	West Tongariro	22.32	200	P	P	03 02 57.1	+0.3
NNVZ	North Ngauruho	22.33	200	P	P	03 02 57.9	+1.0
TWVZ	Taurewa	22.33	200	P	P	03 02 57.5	+0.6
OTVZ	Oturere	22.34	200	P	P	03 02 57.0	-0.1
KWHZ	Kaweka Forest	22.34	198	P	P	03 02 57.0	0.0
KWHZ				S	S	03 06 51.2	+4.0
SNVZ	South Ngauruho	22.37	200	P	P	03 02 58.0	+0.6
NGZ	Ngauruhoe	22.37	200	P	P	03 02 58.1	+0.7
CKHZ	Cape Kidnapper	22.38	197	P	P	03 02 58.9	+1.7
CKHZ				S	S	03 06 53.0	+5.5
TUVZ	Tukino	22.44	200	P	P	03 02 58.2	+0.2
FWVZ	Far West T-bar	22.46	200	P	P	03 02 58.8	+0.5
TRVZ	Turoa	22.50	200	P	P	03 02 58.8	+0.1
WNVZ	Wahianoa	22.51	200	P	P	03 02 58.6	-0.1
WNVZ				S	S	03 07 01.2	+11
BHHZ	Black Hill Sta	22.51	199	P	P	03 02 57.9	-0.6
BHHZ				S	S	03 06 53.8	+3.9
MOVZ	Moawhango	22.53	199	P	P	03 02 58.4	-0.3
MOVZ				S	S	03 07 00.2	+10
PKVZ	Pokaka	22.56	200	P	P	03 02 60.0	+1.0
KAHZ	Kahuranaki	22.56	197	P	P	03 03 01.1	+2.1
KAHZ				S	S	03 06 56.0	+5.4
KRHZ	Kereru	22.56	198	P	P	03 02 59.0	0.0
KRHZ				S	S	03 06 56.5	+5.8
VRZ	Vera Road	22.61	201	P	P	03 03 02.5	+3.2
PXZ	Pawanui	22.78	197	P	P	03 03 02.7	+1.8
PXZ				S	S	03 06 59.4	+5.3
PNHZ	Pukenui	22.86	198	P	P	03 03 02.8	+1.1
PNHZ				S	S	03 07 03.7	+8.2
NEZ	North Egmont	22.97	202	P	P	03 03 07.4	+4.7
KHEZ	Kahui Hut	23.02	203	P	P	03 03 07.0	+3.9
PRHZ	Porangahau	23.07	197	P	P	03 03 05.9	+2.5
TSZ	Takapari Road	23.07	198	P	P	03 03 04.4	+0.9
WAZ	Wanganui	23.10	200	P	P	03 03 06.0	+2.3
NMEZ	Namu Road	23.18	203	P	P	03 03 08.4	+4.0
DVHZ	Dannevirke	23.23	198	P	P	03 03 07.3	+2.4
DVHZ				S	S	03 07 11.6	+10
POWZ	Post Office Ro	23.43	198	P	P	03 03 11.0	+4.2
PRWZ	Pori Road	23.52	198	P	P	03 03 07.5	-0.1
BFZ	Birch Farm	23.56	197	P	P	03 03 08.9	+1.0
BFZ	Birch Farm	23.56	197	P	P	03 03 09.5	+1.6
HOWZ	Holdsworth Sta	23.97	198	P	P	03 03 12.2	+0.5
OGWZ	Otaki Gorge	24.00	199	P	P	03 03 12.4	+0.5
MTW	Mount Morrison	24.21	198	P	P	03 03 15.4	+1.5
CAW	Cannon Point	24.30	199	P	P	03 03 15.7	+1.1
BHW	Baring Head	24.63	199	P	P	03 03 19.6	+1.9
QRZ	Quartz Range	24.91	203	P	P	03 03 22.0	+1.8
TUWZ	Tuamarina	24.95	200	P	P	03 03 20.9	+0.5
KHZ	Kahutara	25.97	200	P	P	03 03 30.2	+0.6
RPZ	Rata Peaks	27.96	202	P	P	03 03 48.8	+1.3
ODZ	Otahua Downs	29.27	201	P	P	03 03 59.8	+0.9
EIDS	Eidsvold	32.34	251	P	P	03 04 24.2	-2.0
EIDS				IAmb	IAmb	03 04 26.4	
	comp=Z,5.0nm,0.8s						
EIDS	Eidsvold	32.34	251	P	P	03 04 26.6	+0.4
ARMA	Armidale	32.71	242	P	P	03 04 28.6	-0.9
ARMA				IAmb	IAmb	03 04 31.0	
	comp=Z,16nm,1.3s						
ARMA	Armidale	32.71	242	P	P	03 04 30.1	+0.6
RMQ	Roma	34.53	250	P	P	03 04 45.9	+0.8
CTA	Charters Tower	36.73	261	P	P	03 05 02.9	-1.1
	comp=Z,4.0nm,0.3s,baz=86,slow=12,SNR=9.1						
CTAO	Charters Tower	36.73	261	P	P	03 05 02.7	-1.2
CTAO				IAmb	IAmb	03 05 07.5	
	comp=Z,6.4nm,0.5s						
CTAO	Charters Tower	36.73	261	P	P	03 05 04.2	+0.3
CMSA	Cobar Meteorol	37.93	242	P	P	03 05 14.0	+0.2
QLP	Quilpie	38.58	250	P	P	03 05 19.5	+0.2
TOO	Toolangi	39.58	233	P	P	03 05 26.4	-1.2
TOO				IAmb	IAmb	03 05 28.0	
	comp=Z,13nm,0.8s						
COEN	Coen	40.50	270	P	P	03 05 34.1	-1.2
COEN				IAmb	IAmb	03 05 35.6	
	comp=Z,5.7nm,0.6s						
COEN	Coen	40.50	270	P	P	03 05 34.8	-0.5
STKA	Stephens Creek	41.42	242	P	P	03 05 42.1	-0.6
	comp=Z,9.0nm,0.7s,baz=75,slow=9.9,SNR=12						
STKA	Stephens Creek	41.42	242	P	P	03 05 41.7	-1.0
STKA	Stephens Creek	41.42	242	P	P	03 05 42.5	-0.2
QIS	Mount Isa	42.91	259	P	P	03 05 54.7	-0.2
HTT	Hallett	43.88	241	P	P	03 06 02.4	0.0
LCRK	Leigh Creek	44.14	245	P	P	03 06 04.9	+0.4
NAPP	Napperby	44.49	241	P	P	03 06 07.9	+0.7
BBOO	Buckleboo	46.19	242	P	P	03 06 19.7	-0.9
BBOO	Buckleboo	46.19	242	P	P	03 06 20.4	-0.2
OOD	Oodnadatta	46.23	249	P	P	03 06 21.8	+0.9
MULG	Mulgathing	47.72	246	P	P	03 06 32.0	-0.4
WB0	Warramunga Arr	47.87	260	P	P	03 06 31.8	-1.9
WB2	Warramunga Arr	47.88	259	P	P	03 06 32.7	-1.1
WB2				IAmb	IAmb	03 06 33.4	
	comp=Z,12nm,0.5s						
WRAB	Tennant Creek	47.89	259	P	P	03 06 31.9	-2.0
WRAB				IAmb	IAmb	03 06 33.3	
	comp=Z,10nm,0.5s						
WRAB	Tennant Creek	47.89	259	P	P	03 06 33.6	-0.3
WRA	Warramunga Arr	47.90	259	P	P	03 06 33.0	-0.9
	comp=Z,8.3nm,0.4s,baz=98,slow=6.1,SNR=359						
WRA				S	S	03 13 09.0	-6.7
	comp=Z,2.3nm,0.9s,baz=98,slow=13,SNR=7.3						
AS31	Alice Springs	47.95	254	P	P	03 06 32.6	-1.8
ASAR	Alice Springs	47.95	254	P	P	03 06 33.8	-0.6
	comp=Z,18nm,0.6s,baz=89,slow=8.3,SNR=272						
ASAR				S	S	03 13 11.4	-5.0
	comp=Z,4.8nm,0.8s,baz=91,slow=15,SNR=34						
ASAR	Alice Springs	47.95	254	P	P	03 06 33.2	-1.1
MTN	Manton Dam	52.18	268	P	P	03 07 04.2	-2.0
MTN				IAmb	IAmb	03 07 05.9	
	comp=Z,8.5nm,0.8s						
FORT	Forrest	52.90	245	P	P	03 07 10.1	-1.2
FORT	Forrest	52.90	245	P	P	03 07 10.5	-0.8
WRKA	Warakurna	52.95	252	P	P	03 07 11.2	-0.6
KNRA	Kununurra	53.82	264	P	P	03 07 16.8	-1.3
KNRA				IAmb	IAmb	03 07 18.2	
	comp=Z,6.4nm,0.8s						
KNRA	Kununurra	53.82	264	P	P	03 07 18.0	-0.1
BNDI	Bandanaira	55.66	277	P	P	03 07 29.9	-1.4
SBA	Scott Base	60.24	184	P	P	03 08 05.1	+3.0
SBA				IAmb	IAmb	03 08 07.3	
	comp=Z,14nm,1.2s						
VNDA	Vanda	60.34	186	P	P	03 08 04.9	+2.1
VNDA				IAmb	IAmb	03 08 06.6	
	comp=Z,9.2nm,1.1s						
PSA00	Pilbara Seismi	61.09	255	P	P	03 08 07.5	-1.3
PSA00				IAmb	IAmb	03 08 08.9	
	comp=Z,6.0nm,1.1s						
MBWA	Marble Bar	61.26	255	P	P	03 08 09.1	-0.9
MEEK	Meekatharra	61.46	249	P	P	03 08 10.1	-1.2
BLDU	Ballidu	62.67	245	P	P	03 08 18.4	-0.8
MORW	Morawa	63.42	246	P	P	03 08 23.7	-0.5
MORW				IAmb	IAmb	03 08 39.2	
	comp=Z,15nm,1.2s						
CASY	Casey	67.19	205	P	P	03 08 48.7	+1.1

QSPA	South Pole Qui	71.73	180	P	P	03 09 16.8	+1.2
PETK	Petropavlovsk-	75.00	343	P	P	03 09 34.0	-0.7
	comp=Z,2.6nm,0.7s,baz=118,slow=9.0,SNR=6.7						
KSRS	Korea Array	77.31	317	P	P	03 09 48.5	+0.6
	comp=Z,1.2nm,0.5s,baz=128,slow=5.2,SNR=2.9						
NJ2	Nanjing	80.85	308	*e*P	P	03 10 08.2	+0.9
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
TXAR	Lajitas Array	83.38	56	P	P	03 10 22.1	+1.4
	comp=Z,0.3nm,0.7s,baz=225,slow=10,SNR=4.9						
SKAG	Skagway	83.94	19	P	P	03 10 22.2	-0.4
MAW	Mawson	84.59	199	P	P	03 10 26.5	+0.6
	comp=Z,7.0nm,0.6s,baz=145,slow=7.1,SNR=16						
PDAR	Pinedale Array	85.35	42	P	P	03 10 30.1	-0.3
	comp=Z,0.6nm,0.9s,baz=181,slow=7.4,SNR=3.9						
IL31		85.57	12	P	P	03 10 31.5	+0.9
ILAR	Eielson Array	85.57	12	P	P	03 10 29.6	-1.0
	comp=Z,1.0nm,0.5s,baz=224,slow=5.3,SNR=16						
IPM	Ipoh	85.84	276	P	P	03 10 33.3	0.0
XAN	Xi'an	89.23	306	P	P	03 10 49.2	+0.2
XAN				pP	pP	03 11 28.9	-10
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
HHC	Hu-ho-hao-te	90.01	313	*e*P	P	03 10 53.6	+1.1
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,9.1s						
HHC				LR	LR		
	comp=N,550nm,17.0s						
HHC				LR	LR		
	comp=E,260nm,17.0s						
HHC				LR	LR		
	comp=Z,560nm,17.9s						
SNAA	Sanae	90.06	177	P	P	03 10 52.5	+0.3
VNA3	Neumayer Olymp	90.07	175	P	P	03 10 52.9	+0.7
VNA2	Neumayer--Watz	90.55	176	P	P	03 10 55.4	+0.9
	baz=192,slow=3.6						
VNA1	Neumayer--Stat	90.76	176	P	P	03 10 56.3	+1.0
INK	Inuvik	91.43	14	P	P	03 10 56.8	-1.5
	comp=Z,0.7nm,0.8s,baz=179,slow=2.4,SNR=2.0						
INK	Inuvik	91.43	14	IAmb	IAmb	03 11 02.2	
	comp=Z,4.0nm,1.4s						
LZH	Lanzhou	93.85	307	⇑P	P	03 11 10.1	-0.4
LZH				pP	PcP	03 11 28.8	+18
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
ARCES	ARCESS Array B	127.29	351	PKP	PKiKP	03 16 56.3	+0.3
	comp=Z,3.9nm,0.9s,baz=35,slow=3.0,SNR=5.4						
CLL	Collm	146.51	351	*e*PKPbc	PKPab	03 17 34.0	-0.3
BRTR	Keskin Array B	147.45	317	PKPbc	PKPbc	03 17 36.1	0.0
	comp=Z,1.3nm,0.7s,baz=153,slow=2.1,SNR=3.6						
GERES	GERESS Array B	148.78	349	PKPbc	PKPbc	03 17 39.1	-0.2
	comp=Z,0.4nm,0.6s,baz=58,slow=2.4,SNR=2.4						
MMAI	Mount Meron Ar	149.21	304	PKPbc	PKPbc	03 17 41.6	+0.8
	comp=Z,0.6nm,0.4s,baz=89,slow=8.6,SNR=4.0						

STR ***11*** *03:05:08.7±3.0, 44°N±16°×1°1E±2°4, h5^{km}, MLv3.1/6*
GEN ***11*** *03:05:17, 44°.46N×9°.68E, h12^{km}, ML2.9*
ROM ***11*** *03:05:18.1±0.1, 44°.475N±0°.006×9°.644E±0°.005, h12^{km}, ML3.0/35, Error ellipse: s-maj=0.8km s-min=0.3km az=24.0*
PRU ***11*** *03:05:19.8±0.0, 44°.42N×9°.77E, h12^{km}*
LDG ***11*** *03:05:19.3±0.1, 44°.44N×9°.63E, h11^{km}, Md3.3/1, Ml3.3/12, Error ellipse: s-maj=3.1km s-min=2.2km az=17.0*
ISC 11 03:05:18.0±0.9, **44°.43N**±0°.02×**9°.66E**±0°.01, **h13**^{km}±7^{km}, **n179,** σ**1^{s}.57**/229, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSSA	Maissana	0.15	224	P	Pb	03 05 22.5	-0.2
MSSA				S	Sb	03 05 26.1	+0.3
MSSA				AML	AML		
	comp=E,3885µm,1.4s						
MSSA				AML	AML		
	comp=N,5440µm,0.3s						
GRAM	Graiana	0.29	77	P	Pg	03 05 24.8	+0.7
GRAM				S	Sg	03 05 27.8	-0.5
GRAM	Graiana	0.29	77	P	Pg	03 05 24.0	-0.1
GRAM				S	Sg	03 05 28.7	+0.4
GORR	Gorreto	0.32	305	P	Pg	03 05 24.0	-0.6
GORR				S	Sg	03 05 28.6	-0.4
BOB	Bobbio (Coli)	0.38	336	P	Pg	03 05 24.6	-1.0
BOB				S	Sg	03 05 29.7	-1.0
BOB				AML	AML		
	comp=E,7110µm,1.3s						
BOB				AML	AML		
	comp=E,7115µm,1.3s						
BOB				AML	AML		
	comp=N,6095µm,1.1s						
BOB				AML	AML		
	comp=N,6290µm,1.1s						
BOB				AML	AML		
	comp=E,8080µm,1.3s						
PLMA	Palmaria, Port	0.40	160	P	Pb	03 05 27.0	+0.2
PLMA				S	Sb	03 05 33.6	+0.8
PLMA				AML	AML		
	comp=E,3310µm,0.3s						
PLMA				AML	AML		
	comp=N,3560µm,0.8s						
EQUI	Equi	0.44	126	P	Pb	03 05 27.3	-0.3
EQUI				S	Sb	03 05 34.0	0.0
RNCA	Ronca, Sant'Ol	0.51	275	P	Pg	03 05 28.1	+0.1
RNCA				S	Sg	03 05 35.5	+0.6
PRMA	PARMA	0.57	54	AML	AML		
	comp=N,4525µm,0.3s						
PRMA				AML	AML		
	comp=E,3625µm,0.3s						
SARO	Sassorosso	0.58	114	P	Pg	03 05 29.7	+0.4
SARO				S	Sb	03 05 38.1	-0.1
SARO	Sassorosso	0.58	114	P	Pg	03 05 29.8	+0.4
SARO				S	Sb	03 05 39.0	+0.7
SARO				AML	AML		
	comp=E,522µm,1.4s						
SARO				AML	AML		
	comp=N,884µm,0.5s						
VLC	Villacollemand	0.58	117	P	Pb	03 05 29.9	-0.2
VLC				S	Sb	03 05 39.2	+1.0
VLC				AML	AML		
	comp=E,562µm,0.7s						
VLC				AML	AML		
	comp=N,929µm,0.9s						
VLC				AML	AML		
	comp=N,918µm,0.9s						
VLC				AML	AML		
	comp=E,562µm,0.7s						
VLC				AML	AML		
	comp=N,930µm,0.9s						
VLC				AML	AML		
	comp=N,930µm,0.9s						
VLC				AML	AML		
	comp=E,618µm,1.0s						
CARD	Cardoso	0.71	124	P	Pb	03 05 32.3	+0.1
CARD				S	Sn	03 05 42.8	-1.7
CARD	Cardoso	0.71	124	P	Pb	03 05 32.3	+0.1
BDI	Bagni Di Lucca	0.76	118	P	Pg	03 05 32.9	+0.1
BDI				AML	AML		
	comp=E,2170µm,0.3s						
BDI				AML	AML		
	comp=N,1690µm,0.3s						
BDI				AML	AML		
	comp=N,1745µm,0.5s						
BDI				AML	AML		
	comp=N,1685µm,0.3s						
BDI				AML	AML		
	comp=E,2175µm,0.3s						
BDI				AML	AML		
	comp=E,2380µm,0.3s						
MAIM	Mastiano	0.79	130	P	Pg	03 05 33.5	+0.3
MAIM				S	Sg	03 05 44.4	+0.9
PCP	Piancastagn	0.81	279	P	Pb	03 05 33.2	-0.7
PCP				S	Sb	03 05 44.6	-0.1
CTL8	Castelleone	0.85	5	AML	AML		
	comp=E,2175µm,0.5s						
CTL8				AML	AML		
	comp=N,562µm,1.5s						
CTL8				AML	AML		
	comp=N,1710µm,0.5s						
CTL8				AML	AML		
	comp=N,562µm,1.5s						
CTL8				AML	AML		
	comp=E,656µm,0.6s						
PII	Pisa	0.94	138	P	Pn	03 05 36.4	-0.4
PII				S	Sn	03 05 50.6	+0.6
PII				AML	AML		
	comp=N,1920µm,0.2s						
PII				AML	AML		
	comp=E,1440µm,1.0s						
QLNO	Quiliano	0.95	264	P	Pb	03 05 35.8	-0.5
QLNO				AML	AML		
	comp=N,450µm,0.5s						
QLNO				AML	AML		
	comp=E,358µm,0.4s						
GROG	Isola di Gorgo	1.01	171	P	Pg	03 05 38.2	+0.7
GROG				S	Sn	03 05 52.9	+1.0
GROG				AML	AML		
	comp=N,1745µm,0.5s						
GROG				AML	AML		
	comp=E,1840µm,0.6s						
MTCR	Monte La Croce	1.04	112	P	Pg	03 05 38.4	+0.4
CANO	Canova, Maglio	1.05	258	P	Pb	03 05 37.5	-0.4
CANO				S	Sg	03 05 52.1	+0.2
CAVE	Cavezzo	1.05	65	AML	AML		
	comp=E,2660µm,1.0s						
CAVE				AML	AML		
	comp=E,2665µm,1.0s						
CAVE				AML	AML		
	comp=N,1980µm,0.4s						
FNVD	Fontana Vidola	1.08	103	P	Pg	03 05 39.0	+0.2
FNVD				AML	AML		
	comp=E,790µm,0.5s						
FNVD				AML	AML		
	comp=N,678µm,1.1s						
RAVA	Ravarino	1.09	72	AML	AML		
	comp=E,5785µm,0.7s						
RAVA				AML	AML		
	comp=N,2330µm,0.3s						
MILN	Milano	1.10	344	AML	AML		
	comp=N,1595µm,0.6s						
MILN				AML	AML		
	comp=E,1365µm,0.7s						
MILN				AML	AML		
	comp=E,2805µm,0.7s						
MILN				AML	AML		
	comp=N,3095µm,0.6s						
MPPT	Montemurlo	1.13	114	AML	AML		
	comp=E,386µm,1.6s						
MPPT				AML	AML		
	comp=E,386µm,1.6s						
MPPT				AML	AML		
	comp=N,404µm,0.9s						
CRMI	Carmignano	1.14	124	P	Pg	03 05 40.4	+0.6
CRMI				AML	AML		
	comp=N,458µm,1.5s						
CRMI				AML	AML		
	comp=E,304µm,1.2s						
RORO	Rocca Rossa	1.19	255	P	Pn	03 05 39.5	-0.7
RORO				S	Sg	03 05 57.1	+0.8
SEI	Scarperia	1.27	106	P	Pg	03 05 42.8	+0.4
SEI				AML	AML		
	comp=N,1310µm,0.4s						
SEI				AML	AML		
	comp=E,740µm,0.4s						
MTRZ	Monterenzio	1.29	92	AML	AML		
	comp=E,739µm,0.7s						
MTRZ				AML	AML		
	comp=N,561µm,0.7s						
GBOS	Grotte di Boss	1.32	263	P	Pn	03 05 41.8	-0.4
GBOS				S	Sb	03 06 00.1	+0.6
SALO	Salr	1.34	27	AML	AML		
	comp=N,1520µm,1.1s						
SALO				AML	AML		
	comp=N,1680µm,1.1s						
SALO				AML	AML		
	comp=E,930µm,0.5s						
SALO				AML	AML		
	comp=E,762µm,0.5s						
MDI	Monti di Nese	1.35	1	AML	AML		
	comp=N,1510µm,1.4s						
MDI				AML	AML		
	comp=E,1600µm,1.4s						
MDI				AML	AML		
	comp=N,1585µm,1.4s						
MDI				AML	AML		
	comp=E,1560µm,0.4s						
BRIS	BRISIGHELLA	1.35	101	AML	AML		
	comp=E,174µm,1.4s						
BRIS				AML	AML		
	comp=N,402µm,0.6s						
IMI	Imperia	1.37	249	P	Pn	03 05 42.2	-0.6
IMI	Imperia	1.37	249	P	Pn	03 05 42.4	-0.5
IMI				S	Sb	03 06 01.0	0.0
IMI				AML	AML		
	comp=E,315µm,0.6s						
IMI				AML	AML		
	comp=N,530µm,0.3s						
ZONE	Zone	1.38	13	P	Pn	03 05 42.5	-0.5
ZONE				AML	AML		
	comp=N,194µm,1.4s						
ZONE				AML	AML		
	comp=E,665µm,0.3s						
ZONE				AML	AML		
	comp=E,221µm,1.3s						
ZONE				AML	AML		
	comp=N,553µm,0.7s						
ZONE				AML	AML		
	comp=E,666µm,0.3s						
ZONE				AML	AML		
	comp=N,194µm,1.4s						
MGRO	Montegrosso	1.39	255	P	Pn	03 05 42.6	-0.6
OPPE	Oppeano	1.39	50	AML	AML		
	comp=E,1755µm,0.7s						
OPPE				AML	AML		
	comp=N,1395µm,0.5s						
MONC	Moncucco Torin	1.40	298	AML	AML		
	comp=N,876µm,0.6s						
MONC				AML	AML		
	comp=E,764µm,0.6s						
RUFI	Rufina	1.45	113	P	Pb	03 05 44.6	-0.2
RUFI				AML	AML		
	comp=E,835µm,1.6s						
RUFI				AML	AML		
	comp=N,252µm,0.7s						
OSSC	Osservatorio P	1.46	128	P	Pb	03 05 44.7	-0.2
OSSC				AML	AML		
	comp=N,269µm,0.6s						
OSSC				AML	AML		
	comp=E,280µm,0.6s						
LMD	Lutirano	1.51	103	AML	AML		
	comp=N,216µm,0.8s						
LMD				AML	AML		
	comp=E,167µm,1.3s						
CSNT	Castellina Chi	1.51	128	P	Pb	03 05 45.7	-0.2
CSNT				AML	AML		
	comp=N,187µm,0.3s						
CSNT				AML	AML		
	comp=E,144µm,0.5s						
MAGA	Magasa	1.51	26	P	Pn	03 05 44.2	-0.7
MAGA				AML	AML		
	comp=E,1083µm,0.5s						
MAGA				AML	AML		
	comp=N,770µm,0.4s						
MAGA				AML	AML		
	comp=E,1084µm,0.5s						
MUGIO	Muggio	1.56	344	AML	AML		
	comp=N,228µm,1.5s						
MUGIO				AML	AML		
	comp=E,226µm,0.4s						
VARE	Varese	1.57	337	AML	AML		
	comp=E,336µm,1.1s						
VARE				AML	AML		
	comp=N,227µm,0.5s						
ROVR	Rover Verones	1.58	39	P	Pn	03 05 46.3	+0.5
ROVR				AML	AML		
	comp=N,400µm,0.2s						
ROVR				AML	AML		
	comp=E,973µm,1.2s						
ROVR				AML	AML		
	comp=N,994µm,0.2s						
ROVR				AML	AML		
	comp=E,190µm,0.5s						
SAOF	Saorge	1.58	255	P	Pn	03 05 45.5	-0.2
SAOF	Saorge	1.58	255	P	Pn	03 05 45.7	0.0
SAOF				S	Sb	03 06 06.2	-0.7
SAOF	Saorge	1.58	255	AML	AML		
	comp=E,238µm,0.4s						
SAOF				AML	AML		
	comp=N,223µm,1.4s						
SAOF				AML	AML		
	comp=N,224µm,1.4s						
SFI	Santa Sofia	1.66	108	P	Pb	03 05 47.9	-0.5
SFI				AML	AML		
	comp=E,139µm,0.5s						
SFI				AML	AML		
	comp=N,216µm,0.7s						
TURF	col de Turini	1.69	255	P	Pn	03 05 47.5	+0.1
SBF	Sospel	1.70	251	*e*Pn	Pn	03 05 47.4	0.0
SBF	Sospel	1.70	251	*e*Pg	Pb	03 05 49.6	+0.5
SBF				*e*Sn	Sb	03 06 10.0	-0.4
	comp=N,61nm,0.3s						
TEOL	Teolo	1.71	56	P	Pn	03 05 48.3	+0.9
TEOL				AML	AML		
	comp=E,1650µm,0.5s						
TEOL				AML	AML		
	comp=N,1635µm,0.4s						
CELB	S.Piero in Cam	1.72	166	P	Pb	03 05 48.4	-1.1
CELB				AML	AML		
	comp=E,96µm,0.9s						
CELB				AML	AML		
	comp=N,85µm,0.8s						
MABI	Malga Bissina	1.74	20	P	Pn	03 05 48.5	+0.5
MABI				AML	AML		
	comp=E,175µm,0.4s						
MABI				AML	AML		
	comp=N,136µm,0.3s						
DOSS	Dosso del Somm	1.81	36	P	Pn	03 05 49.6	+0.6
DOSS				AML	AML		
	comp=N,564µm,0.5s						
DOSS				AML	AML		
	comp=N,584µm,0.4s						
DOSS				AML	AML		
	comp=E,597µm,0.5s						
DOSS				AML	AML		
	comp=E,570µm,0.4s						
CRE	Caprese Michel	1.84	115	P	Pb	03 05 50.6	-0.9
CRE				AML	AML		
	comp=N,239µm,0.3s						
CRE				AML	AML		
	comp=E,154µm,1.3s						
CASP	Castiglione de	1.85	151	P	Pn	03 05 50.3	+0.9
CASP				AML	AML		
	comp=E,111µm,0.3s						
CASP				AML	AML		
	comp=N,138µm,0.3s						
ISO	Isola	1.89	264	P	Pn	03 05 51.0	+1.0
PGF	Pioggiola	1.94	195	*e*Pn	Pn	03 05 51.3	+0.6
PGF	Pioggiola	1.94	195	*e*P	Pb	03 05 53.1	-0.1
PGF				*e*Sn	Sn	03 06 15.1	+0.2
	comp=N,28nm,0.2s						
CAFI	Castiglion Fio	1.99	123	P	Pb	03 05 52.6	-1.4
CAFI				AML	AML		
	comp=E,69µm,0.6s						
CAFI				AML	AML		
	comp=N,70µm,1.1s						
PARC	Parchiule	2.01	112	AML	AML		
	comp=N,92µm,0.7s						
PARC				AML	AML		
	comp=E,100µm,1.5s						
MMK	Mattmark	2.02	324	AML	AML		
	comp=N,133µm,0.4s						
MMK				AML	AML		
	comp=E,94µm,0.5s						
SURF	Saint Ours	2.04	273	P	Pn	03 05 52.6	+0.4
BADI	Badiali	2.08	115	P	Pb	03 05 54.2	-1.3
BADI				AML	AML		
	comp=N,106µm,0.5s						
BADI				AML	AML		
	comp=E,107µm,1.4s						
CALF	Calern	2.09	252	P	Pn	03 05 53.3	+0.6
MBDF	Montbardon	2.09	279	*e*P	Pn	03 05 54.3	+1.5
MBDF	Montbardon	2.09	279	*e*Pg	Pb	03 05 56.9	+1.1
MBDF				*e*Sg	Sg	03 06 24.2	-0.9
	comp=E,70nm,0.6s						
CGRP	Cima Grappa	2.10	45	P	Pn	03 05 53.5	+0.6
CGRP				AML	AML		
	comp=N,391µm,0.7s						
CGRP				AML	AML		
	comp=E,325µm,1.4s						
CTI	Castel Tesino	2.15	40	P	Pn	03 05 54.1	+0.6
CTI				AML	AML		
	comp=E,289µm,0.6s						
CTI				AML	AML		
	comp=N,468µm,0.7s						
FUSIO	Fusio	2.15	341	AML	AML		
	comp=N,99µm,0.5s						
FUSIO				AML	AML		
	comp=E,112µm,0.7s						
APEC	Apecchio	2.17	113	P	Pb	03 05 55.7	-1.4
APEC				AML	AML		
	comp=N,118µm,0.4s						
APEC				AML	AML		
	comp=E,140µm,1.4s						
EMBD	Embd, Matterta	2.21	325	P	Pb	03 05 58.1	+0.3
LPG	La Plagne	2.33	298	*e*P	Pb	03 05 58.2	-1.8
LPG	La Plagne	2.33	298	*e*Pg	Pg	03 06 01.7	-0.9
LPG				*e*Sg	Sb	03 06 28.8	+0.1
	comp=E,32nm,0.4s						
FRF	La Foret Royal	2.34	249	*e*Pn	Pn	03 05 56.1	0.0
FRF	La Foret Royal	2.34	249	*e*P	Pn	03 05 57.9	+1.8
FRF	La Foret Royal	2.34	249	*e*Pg	Pb	03 06 01.4	+1.4
FRF				*e*Sn	Sn	03 06 24.4	-0.4
	comp=E,45nm,0.2s						
LPL	La Plagne	2.35	299	*e*P	Pn	03 05 58.0	+1.5
LPL	La Plagne	2.35	299	*e*Pg	Pb	03 06 01.0	+0.7
LPL				*e*Sg	Sb	03 06 28.8	-0.5
	comp=E,35nm,0.4s						
DAVOX	Davos/Dischmat	2.36	4	AML	AML		
	comp=N,124µm,0.5s						
DAVOX				AML	AML		
	comp=E,72µm,1.3s						
RSL	Roselend	2.50	301	P	Pb	03 06 02.9	+0.1
LMR	La Mourre	2.53	246	*e*Pn	Pn	03 05 58.3	-0.4
LMR	La Mourre	2.53	246	*e*P	Pn	03 06 00.5	+1.8
LMR				*e*Sn	Sn	03 06 28.2	-1.1
	comp=E,69nm,0.4s						
ABSI	Aberstueckl	2.58	26	AML	AML		
	comp=E,190µm,0.6s						
ABSI				AML	AML		
	comp=N,196µm,0.7s						
BNALP	Bannalp	2.59	341	AML	AML		
	comp=E,108µm,0.6s						
BNALP				AML	AML		
	comp=N,67µm,1.1s						
PLONS	Plons/SG	2.63	356	AML	AML		
	comp=N,87µm,0.8s						
PLONS				AML	AML		
	comp=E,74µm,0.8s						
BLAF	les Blancs	2.65	261	P	Pb	03 06 04.8	-0.4
FETA	Feichten	2.70	16	*e*Pn	Pn	03 06 03.0	+1.7
	comp=E,3.9nm,0.5s,SNR=12						
FETA				*e*Sn	Sb	03 06 39.7	+0.4
	comp=E,6.8nm,0.4s						
ORIF	Oris-en-Rattie	2.74	282	*e*P	Pb	03 06 04.4	-2.5
ORIF	Oris-en-Rattie	2.74	282	*e*Pn	Pb	03 06 04.5	-2.5
ORIF	Oris-en-Rattie	2.74	282	*e*Pg	Pb	03 06 07.6	+0.7
ORIF				*e*Sg	Sg	03 06 44.2	-1.9
	comp=E,23nm,0.4s						
ROSI	Rosskopf	2.79	25	AML	AML		
	comp=E,157µm,0.8s						
ROSI				AML	AML		
	comp=N,137µm,1.4s						
FDMO	Fiordimonte	2.84	118	P	Pn	03 06 04.6	+1.5
DAVA	Damuels	2.87	3	Pn	Pn	03 06 05.8	+2.3
	comp=N,15nm,0.4s,SNR=26						
DAVA				*e*Sn	Sn	03 06 40.6	+2.7
	comp=N,23nm,0.3s						
ARTF	Artigues	2.91	255	P	Pn	03 06 01.4	-2.6
BRJN	Brijuni	2.96	79	*e*Pn	Pn	03 06 05.1	+0.6
BRJN				Sn	Sn	03 06 37.9	-1.9
SMRF	Simiane la Rot	2.98	263	*e*P	Pn	03 06 06.2	+1.3
SMRF				*e*Sn	Sn	03 06 38.3	-2.1
SMRF				*e*Sg	Sg	03 06 54.5	+1.0
	comp=N,24nm,0.5s						
SQTA	Sankt Quirin	3.00	21	Pn	Pn	03 06 07.8	+2.5
	comp=N,16nm,0.4s,SNR=29						
SQTA				*i* Sn	Sb	03 06 45.1	-2.7
	comp=N,22nm,0.4s						
RISI	Rein	3.04	33	AML	AML		
	comp=E,292µm,0.4s						
RISI				AML	AML		
	comp=N,202µm,0.5s						
RUSF	Rustrel	3.05	262	P	Pn	03 06 07.2	+1.3
ABTA	Abfaltersbach	3.06	40	*i* Pn	Pn	03 06 08.2	+2.0
	comp=N,5.1nm,0.3s,SNR=12						
ABTA				*i* Sn	Sn	03 06 45.3	+2.6

	comp=N,11nm,0.4s						
MOTA	Moosalm	3.09	18	ePn	Pn	03 06 09.1	+2.6
	comp=N,12nm,0.3s,SNR=33						
MOTA				eSn	Sb	03 06 47.2	-3.2
	comp=N,16nm,0.6s						
WTTA	Wattenberg	3.16	25	Pn	Pn	03 06 10.2	+2.7
	comp=N,9.9nm,0.2s,SNR=18						
WTTA	Wattenberg	3.16	25	AML	AML		
	comp=E,97µm,0.7s						
WTTA				AML	AML		
	comp=N,96µm,0.8s						
RETA	Reutte	3.16	14	Pn	Pn	03 06 09.8	+2.4
	comp=N,9.7nm,0.5s,SNR=12						
WATA	Walderalm	3.20	24	i Pn	Pn	03 06 10.9	+2.8
	comp=N,5.2nm,0.3s,SNR=12						
BALST	Balsthal	3.22	335	P	Pn	03 06 09.6	+1.4
SMRN	Sveta Marina	3.26	78	ePn	Pn	03 06 09.1	+0.4
SMRN				Sn	Sn	03 06 45.0	-2.3
UBR	Ueberruh	3.27	5	ePn	Pn	03 06 10.6	+1.7
UBR				eSn	Sn	03 06 49.7	+1.9
SULZ	Cheisacher	3.29	341	P	Pn	03 06 10.2	+1.1
CABF	La Chapelle	3.33	312	eP	Pn	03 06 12.1	+2.3
BOURR	Bourrignon	3.42	331	P	Pn	03 06 13.6	+2.6
SLE	Schleitheim	3.44	347	P	Pn	03 06 11.6	+0.4
RIY	Rijeka	3.54	74	ePn	Pn	03 06 14.0	+1.4
RIY				Sn	Sn	03 06 52.5	-1.8
VIVF	Saint-Julien-l	3.59	279	ePn	Pn	03 06 15.0	+1.7
VIVF				eS	Sn	03 06 58.7	+3.1
GUT	Gutenstein	3.67	354	P	Pn	03 06 14.5	+0.1
RABC	Rab	3.67	83	ePn	Pn	03 06 15.8	+1.4
RABC				Sn	Sn	03 06 56.3	-1.2
KBA	Koelnbreinsper	3.70	43	i Pn	Pn	03 06 17.1	+2.2
	comp=N,1.9nm,0.3s						
NVLJ	Novalja	3.73	86	ePn	Pn	03 06 16.6	+1.4
NVLJ				Sn	Sn	03 06 58.0	-0.9
KIZ	Kirchzarten	3.73	342	P	Pn	03 06 15.6	+0.3
RONF	Ronchamp	3.90	328	P	Pn	03 06 19.3	+1.7
DUGI	Dugi Otok	3.90	94	ePn	Pn	03 06 19.4	+1.8
DUGI				Sn	Sn	03 07 02.0	-1.2
HINF	Hinteralfeld	3.92	331	ePn	Pn	03 06 17.3	-0.5
HINF	Hinteralfeld	3.92	331	eP	Pn	03 06 20.3	+2.5
HINF				eS	Sn	03 07 05.4	+1.8
BFO	Black Forest	4.01	347	ePn	Pn	03 06 19.3	+0.2
OBKA	Obir	4.02	57	i Pn	Pn	03 06 21.4	+2.1
	comp=N,0.9nm,0.2s						
LIK	San Giovanni I	4.08	134	P	Pb	03 06 26.4	-3.3
LASF	Ste Croix	4.19	267	ePn	Pn	03 06 21.0	-0.5
LASF	Ste Croix	4.19	267	eP	Pn	03 06 24.0	+2.5
LASF				eSn	Sn	03 07 07.1	-3.2
	comp=N,5.9nm,0.3s						
HAU	Haudompre	4.26	328	eP	Pn	03 06 23.7	+1.2
HAU				eS	Sn	03 07 12.4	+0.4
PLIT	Plitvice	4.28	82	ePn	Pn	03 06 24.5	+1.8
PLIT				Sn	Sn	03 07 10.5	-2.0
OZLJ	Ozalj	4.28	72	ePn	Pn	03 06 24.3	+1.5
OZLJ				Sn	Sn	03 07 11.0	-1.6
WLS	Welschbruch	4.30	339	P	Pn	03 06 23.8	+0.8
CDF	Champ du Feu	4.32	338	ePn	Pn	03 06 22.7	-0.7
CDF	Champ du Feu	4.32	338	eP	Pn	03 06 26.3	+3.0
CDF				eS	Sn	03 07 12.1	-1.5
UDBI	Udbina	4.37	87	ePn	Pn	03 06 25.7	+1.7
UDBI				Sn	Sn	03 07 13.4	-1.4
ZIRJ	Zirje	4.38	98	ePn	Pn	03 06 25.3	+1.2
ZIRJ				Sn	Sn	03 07 13.2	-1.8
MORI	Morici	4.38	95	ePn	Pn	03 06 26.2	+2.0
MORI				Sn	Sn	03 07 13.3	-1.8
SOKA	Soboth	4.39	57	i Pn	Pn	03 06 26.1	+1.7
	comp=N,0.7nm,0.2s						
SMF	Signal de Mont	4.66	301	eP	Pn	03 06 29.6	+1.7
SMF	Signal de Mont	4.66	301	ePg	Pb	03 06 42.4	+3.0
SMF				eSn	Sn	03 07 17.2	-4.6
	comp=N,11nm,0.4s						
SMF				eS	Sn	03 07 22.8	+1.0
MOA	Molln	4.69	41	i Pn	Pn	03 06 30.0	+1.7
	comp=N,1.8nm,0.3s,SNR=6.5						
PTJ	Puntijarka	4.70	69	ePn	Pn	03 06 29.7	+1.1
PTJ				Sn	Sn	03 07 21.1	-1.8
LOBO	Lobor	4.84	67	ePn	Pn	03 06 32.0	+1.6
LOBO				Sn	Sn	03 07 23.6	-2.7
PAGF	Fort de Pagny	4.95	328	eP	Pn	03 06 33.4	+1.5
PAGF				eS	Sn	03 07 28.9	0.0
LOR	Lormes	4.95	307	eP	Pn	03 06 34.5	+2.5
LOR				eS	Sn	03 07 30.1	+1.0
SFTF	Sexfontaines	4.96	321	eP	Pn	03 06 33.4	+1.4
SFTF				eS	Sn	03 07 31.9	+2.7
ARSA	Arzberg	4.97	53	i Pn	Pn	03 06 34.0	+1.7
	comp=N,1.7nm,0.2s						
AVF	Avril sur Loir	5.02	300	eP	Pn	03 06 35.1	+2.2
AVF				eS	Sn	03 07 32.2	+1.4
SSF	Saint Saulge	5.05	304	eP	Pn	03 06 35.2	+1.8
SSF				eS	Sn	03 07 32.4	+0.8
HVAR	Hvar	5.07	102	ePn	Pn	03 06 35.5	+2.0
HVAR				Sn	Sn	03 07 29.9	-2.0
KALN	Kalnik	5.09	68	ePn	Pn	03 06 35.1	+1.2
KALN				Sn	Sn	03 07 29.8	-2.7
MOSL	Moslavina	5.17	74	ePn	Pn	03 06 36.0	+1.1
MOSL				Sn	Sn	03 07 31.8	-2.6
WET	Wettzell	5.21	24	ePn	Pn	03 06 36.0	+0.4
GEC2	GERESS Array S	5.22	31	ePn	Pn	03 06 36.0	+0.2
GEC2				eSn	Sn	03 07 34.6	-1.3
SAVF	Savonnieres en	5.23	325	eP	Pn	03 06 37.2	+1.4
SAVF				eS	Sn	03 07 40.0	+4.0
BGF	Bois d'Agland	5.25	296	eP	Pn	03 06 37.9	+1.9
BGF				eS	Sn	03 07 37.2	+0.8
KHC	Kasperske Hory	5.42	28	ePN	Pn	03 06 38.6	+0.1
KHC				eSN	Sn	03 07 37.5	-3.2
CKRC	Cesky Krumlov	5.44	34	ePN	Pn	03 06 39.6	+0.9
CKRC				eSN	Sn	03 07 40.2	-0.9
MAKA	Makarska	5.44	100	ePn	Pn	03 06 40.5	+1.8
MAKA				Sn	Sn	03 07 39.5	-1.6
CAF	Calviac	5.44	278	eP	Pn	03 06 41.9	+3.1
RICI	Ricice	5.47	97	ePn	Pn	03 06 41.2	+2.0
RICI				Sn	Sn	03 07 40.7	-1.2
MTLF	Montolieu	5.49	261	ePn	Pn	03 06 39.3	-0.1
MTLF				eSn	Sn	03 07 39.0	-3.4
	comp=N,11nm,0.6s						
LSTV	Lastovo	5.50	105	ePn	Pn	03 06 41.3	+1.7
LSTV				Sn	Sn	03 07 41.2	-1.4
CONA	Conrad Observa	5.55	49	i Pn	Pn	03 06 41.7	+1.4
	comp=N,1.0nm,0.2s						
TCF	Toulx Ste Croi	5.57	292	eP	Pn	03 06 44.1	+3.5
TCF				eS	Sn	03 07 47.4	+2.9
HYF	Humbligny	5.67	303	ePn	Pn	03 06 39.8	-2.1
HYF	Humbligny	5.67	303	eP	Pn	03 06 44.3	+2.4
RJF	Les Rejaudoux	5.86	281	eP	Pn	03 06 48.0	+3.5
STON	Ston	6.03	102	ePn	Pn	03 06 48.5	+1.7
STON				Sn	Sn	03 07 54.2	-1.5
MODS	Modra-Piesok	6.58	50	ePN	Pn	03 06 54.4	0.0
SMOL	Smolenice	6.74	50	ePN	Pn	03 06 57.9	+1.3

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*MOS **11** 03:20:46.9±1.0, 4°.78S×103°.07E, h48km, mb5.8/75, MS4.3/6, Error ellipse: s-maj=7.6km s-min=4.2km az=116.1*

*BGR **11** 03:20:47.5±0.0, 4°.56S×104°.32E, h57km, mb5.2*

*BJI **11** 03:20:47.0±0.0, 5°.00S×102°.90E, h54km, mB5.3/40, mb5.6/75, Ms4.8/40, Ms7 4.5/42*

*DJA **11** 03:20:48.7±0.2, 5°S±2°×10°3E±°, h66km±3km, M5.1/46, mb5.4/46, mB5.5/35, MLv5.6/28, Mw(mB)5.0/35, MwMwp4.8/4, Mwp5.1/4*

*NEIC **11** 03:20:48.8±1.9, 4°.96S±0°.06×102°.97E±0°.06, h49km±3km, mb5.5/160, Mww5.1, Error ellipse: s-maj=9.5km s-min=8.6km az=53.0*

*IDC **11** 03:20:49.8±0.6, 4°.81S×103°.08E, h58km±5km, mb5.1/34, mb1 5.1/37, mb1mx4.9/43, mbtmp5.4/37, MS4.0/32, Ms1 4.0/32, ms1mx3.9/42, Error ellipse: s-maj=12.2km s-min=8.4km az=39.0*

*GCMT **11** 03:20:50.8±0.2, 5°.29S±0°.02×102°.78E±0°.02, h58km±1km, MW5.1/95, Moment Tensor Solution. s73,c98; s95,c141; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.15±.16; $M_{\theta\theta}$-3.10±.13; $M_{\phi\phi}$-1.06±.15; $M_{r\theta}$2.08±.12; $M_{\theta\phi}$3.60±.12; $M_{\phi r}$-0.89±.12; Best double couple: $M_0$5.49600×10^{16} NP1:ϕ_s319.00000°,δ34.00000°,λ107.00000°. NP2: ϕ_s118.00000°,δ58.00000°,λ79.00000°. Principal axes: T 4.7050, Plg75.0000°, Azm357.0000°; N 1.5700, Plg10.0000°, Azm124.0000°; P -6.2860, Plg12.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*KLM **11** 03:20:51, 5°.07S×102°.89E, h90km, mb5.4*

*NEIC **11** 03:20:52, 5°.16S×102°.97E, h50km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.30; $M_{\theta\theta}$-2.23; $M_{\phi\phi}$-2.07; $M_{r\theta}$2.08; $M_{\theta\phi}$2.14; $M_{\phi r}$-1.06; Fault plane solution: $M_0$4.89000×10^{16} NP1: ϕ_s321.00000°,δ32.00000°,λ103.00000°. NP2: ϕ_s126.00000°,δ59.00000°,λ82.00000°. Principal axes: T 4.9301, Plg74.0000°, Azm15.0000°; N -0.0915, Plg7.0000°, Azm130.0000°; P -4.8386, Plg14.0000°, Azm222.0000°;*

ISC 11 03:20:48.3±0.3, **5°.01S**±0°.04×**102°.99E**±0°.03, **h53**km±2km, **h53**km**:pP-P, n1013,** σ1s**26**/1032, **mb5.5**/257, **MS4.2**/47, **173C-76D, Fault plane solution: NP1:**ϕ_s130.86928°, δ52.91083°, λ85.61842°. **NP2:**ϕ_s318.11029°, δ37.31011°, λ95.77053°. **Principal axes:** T Plg81.4302°, Azm19.6138°; N Plg3.4939°, Azm133.5149°; P Plg7.8155°, Azm223.9951°; **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	Liwa	1.07	91	P	Pn	03 21 07.8	+0.7
LWLI				S	Sn	03 21 23.0	+2.0
LHSI	Lahat	1.29	24	P	Pn	03 21 12.0	+2.0
LHSI				S	Sn	03 21 31.0	+4.8
MDSI	Maura Dua	1.29	67	P	Pn	03 21 11.6	+1.5
MDSI				S	Sn	03 21 29.4	+3.1
KSI	Kapahiang	1.40	344	P	Pn	03 21 13.2	+1.6
KSI				S	Sn	03 21 33.1	+4.0
KASI	Kota Agung	1.59	109	P	Pn	03 21 14.9	+0.8
KLSI		1.76	80	P	Pn	03 21 18.3	+1.8
KLI	Kotabumi	1.87	86	P	Pn	03 21 19.5	+1.6
MASI	Maura Aman, Be	2.00	338	P	Pn	03 21 21.6	+1.9
BLSI	Bandar Lampung	2.28	99	P	Pn	03 21 25.3	+1.8
PMBI	Palembang	2.73	41	P	Pn	03 21 32.0	+2.3
PMBI	Palembang	2.73	41		Pn	03 21 30.4	+0.7
PMBI	Palembang	2.73	41	P	Pn	03 21 32.4	+2.7
CGJI	Cibinong	3.13	121	P	Pn	03 21 36.0	+0.8
KRJI	Kerinci	3.27	332	P	Pn	03 21 40.0	+2.8
SBJI	Serang	3.32	110	P	Pn	03 21 39.0	+1.2
JMBI	JAMBI	3.41	11	P	Pn	03 21 42.0	+2.9
PPSI	Pulau Pagai	3.71	307	P	Pn	03 21 44.8	+1.6
TNG	Tangerang	3.82	108	P	Pn	03 21 47.4	+2.7
TNG				P	Pn	03 21 47.8	+3.1
DBJI	Dramaga	4.04	113	P	Pn	03 21 49.3	+1.5
SKJI	Sukabumi	4.07	119	P	Pn	03 21 49.6	+1.5
CBJI	Citeko	4.09	110	P	Pn	03 21 53.1	+4.7
PPBI	Pangkal Pinang	4.22	48	P	Pn	03 21 52.4	+2.2
RGRI	Rengat	4.67	352	P	Pn	03 21 59.8	+3.4
CNJI	Cibinong	4.71	119	P	Pn	03 21 57.1	+0.2
DSRI	Dabo	4.77	19	P	Pn	03 22 00.8	+3.1
PDSI	Padang	4.79	328	P	Pn	03 21 59.7	+1.7
LEM	Lembang	4.95	112	P	Pn	03 22 02.9	+2.6
	15nm,0.3s,baz=189,slow=11,SNR=54						
LEM				S	Sn	03 22 56.3	0.0
	31nm,0.3s,baz=318,slow=13,SNR=4.3						
LEM				LR	LR	03 23 31.0	
	comp=Z,393nm,21.1s,baz=278,slow=33						
SISI	Saibi	5.34	313	P	Pn	03 22 06.4	+0.9
	6.0nm9µm904nm,0.9s						
BKNI	Bangkinang	5.64	340	P	Pn	03 22 11.9	+2.2
	7.6nm3µm14µm2µm,0.8s						
BKNI	Bangkinang	5.64	340		Pn	03 22 11.2	+1.5
BKNI	Bangkinang	5.64	340	P	Pn	03 22 12.7	+3.0
	2µm,0.8s						
XMI	Christmas Isla	6.03	154	P	Pn	03 22 10.0	-5.1
	274nm,0.8s						
XMIS	Christmas Isla	6.05	154	P	Pn	03 22 09.8	-5.4
	277nm,0.9s						
CMJI	Cimerak	6.09	117	P	Pn	03 22 16.5	+0.7
	1.1nm4µm214nm,0.8s						
MNSI	Mandailing Nat	6.69	329	P	Pn	03 22 24.9	+0.8
	1.8nm7µm234nm,0.7s						
MYKOM	Kota Tinggi	6.80	7	P	Pn	03 22 29.0	+3.4
MYKOM	Kota Tinggi	6.80	7	Pn	Pn	03 22 27.4	+1.8
SMRI	Semarang	7.68	106	P	Pn	03 22 37.2	-0.5
	1.6nm256nm,0.8s						
SMRI	Semarang	7.68	106	Pn	Pn	03 22 38.7	+1.0
UGM	Wanagama	8.02	111	P	Pn	03 22 44.7	+2.3
	456nm,1.0s						
UGM	Wanagama	8.02	111	Pn	Pn	03 22 43.2	+0.8
UGM	Wanagama	8.02	111	P	Pn	03 22 44.9	+2.5
	456nm,0.9s						
UWJI	Ujung Watu	8.04	100	P	Pn	03 22 43.1	+0.5
	3µm183nm,0.8s						
GSI	Gunungsitoli	8.28	319	P	Pn	03 22 45.7	-0.1
	4µm290nm,0.8s						
GSI	Gunungsitoli	8.28	319	Pn	Pn	03 22 44.8	-1.0
GSI	Gunungsitoli	8.28	319	P	Pn	03 22 46.4	+0.6
	319nm,0.8s						
WOJI	Wonogiri, Jawa	8.37	110	P	Pn	03 22 49.4	+2.3
	80nm,0.8s						
RPSI	Rantau Prapat	8.66	332		Pn	03 22 51.1	+0.1
PCJI	Pacitan	8.73	112	P	Pn	03 22 53.8	+1.8
	3µm204nm,1.2s						
PSI	Prapat	8.75	332	P	Pn	03 22 51.1	-1.3
	2.9nm,0.3s,baz=132,slow=11,SNR=7.3						
PSI				LR	LR	03 26 46.6	
	comp=Z,820nm,21.3s,baz=149,slow=42						
JRMM	Jerantut	8.85	357	P	Pn	03 22 57.0	+3.4
COCO	West Island	9.38	220	P	Pn	03 22 58.8	-2.1
COCO	West Island	9.38	220		Pn	03 22 58.8	-2.1
COCO	West Island	9.38	220	P	Pn	03 22 52.6	-8.3
	52nm,1.0s						
IPM	Ipoh	9.62	348	P	Pn	03 23 10.0	+5.7
IPM	Ipoh	9.62	348	Pn	Pn	03 23 05.2	+0.9
KSM	Kuching	9.74	49	P	Pn	03 23 08.0	+2.1
KSM	Kuching	9.74	49	Pn	Pn	03 23 07.9	+2.1
STKI	Sintang	9.86	60	P	Pn	03 23 11.1	+3.6
	75nm,0.8s						
TPTI		10.05	325	P	Pn	03 23 07.9	-2.3
	19nm,0.7s						
KULM	Kulim	10.49	347	P	Pn	03 23 17.0	+0.9
KULM	Kulim	10.49	347	Pn	Pn	03 23 16.3	+0.1
GMJI	Gumukmas	10.88	108	P	Pn	03 23 22.9	+1.5
	2µm146nm,0.9s						
BLJI	Banyuglugur	10.89	105	P	Pn	03 23 23.5	+2.0
	2µm95nm,0.9s						
ABJI	Asem Bagus	11.51	105	P	Pn	03 23 32.2	+2.1
	4µm521nm,0.8s						
JAGI	Jajag, Banyuwa	11.61	108	P	Pn	03 23 32.5	+1.1
	4µm322nm,0.8s						
JAGI	Jajag, Banyuwa	11.61	108	Pn	Pn	03 23 31.7	+0.2
JAGI	Jajag, Banyuwa	11.61	108	P	Pn	03 23 32.8	+1.4
	316nm,0.9s						
LHMI	Lhok Sumawe	11.82	329	Pn	Pn	03 23 34.3	0.0
LHMI	Lhok Sumawe	11.82	329	P	Pn	03 23 35.0	+0.7
	103nm,0.8s						
SBUM	Sibu	11.83	51	P	Pn	03 23 39.0	+4.6
SBUM	Sibu	11.83	51	Pn	Pn	03 23 36.6	+2.2
BBKI	Banjar Baru	11.92	83	P	Pn	03 23 39.2	+3.5
	5µm77nm,1.1s						
SRBI	Singaraja	12.52	105	P	Pn	03 23 44.1	+0.2
	196nm,0.7s						
MTKI	Muara Teweh, K	12.55	72	P	Pn	03 23 48.0	+3.6
IGBI	Denpasar	12.65	108	P	Pn	03 23 44.0	-1.6
	3µm222nm,0.7s						
DNP	Denpasar	12.67	107	P	Pn	03 23 46.6	+0.7
KBKI	Kotabaru	13.25	83	P	Pn	03 23 56.8	+2.9
	2µm286nm,0.9s						
SRIT	Nakonsritamara	13.93	346	Pn	Pn	03 24 00.5	-2.6
TWSI	Taliwang, Sumb	14.28	106	P	Pn	03 24 05.5	-2.3
BKB	Balikpapan	14.37	75	P	P	03 24 12.3	-2.3
	254nm,0.8s						
BKB	Balikpapan	14.37	75	Pn	Pn	03 24 08.4	-0.6
PLAI	Plampang	15.16	105	P	Pn	03 24 16.3	-3.0
	3µm248nm,1.0s						
PLAI	Plampang	15.16	105	P	Pn	03 24 19.3	0.0
	245nm,1.0s						
KAPI	Kappang	16.70	91	P	Pn	03 24 38.4	-0.5
	1.6nm,0.3s,baz=281,slow=9.7,SNR=14						
KAPI				LR	LR	03 31 23.5	
	comp=Z,775nm,21.7s,baz=292,slow=38						
KAPI	Kappang	16.70	91	P	Pn	03 24 38.9	+0.1
KAPI				pmax	pmax		
	comp=Z,44nm,0.9s						
KAPI	Kappang	16.70	91	Pn	Pn	03 24 38.9	+0.1
SPSI	Sidrap Palu	16.76	87	P	P	03 24 41.6	+0.4
	comp=Z,2µmcomp=Z,226nm,0.9s						
TTSI	Tana Toraja	16.90	84	P	P	03 24 43.9	+1.2
	comp=Z,2µmcomp=Z,210nm,0.9s						
WBSI	Waikabubak, Su	16.90	107	P	Pn	03 24 36.1	-5.4
BKSI	Bulukumba	17.07	92	P	P	03 24 44.2	-0.3
	comp=Z,1µmcomp=Z,216nm,1.0s						
BNSI	Bone	17.07	89	P	P	03 24 44.3	-0.3
	comp=Z,4µmcomp=Z,342nm,1.1s						
KKM	Kota Kinabalu	17.17	50	Pn	Pn	03 24 44.5	-0.4
KKM	Kota Kinabalu	17.17	50	P	P	03 24 48.6	+2.8
	comp=Z,122nm,1.7s						
BSSI	Bau Bau, Buton	17.45	95	P	P	03 24 49.1	+0.2
	comp=Z,637nmcomp=Z,45nm,1.2s						
DLV	T Lat	17.70	18		Pn	03 24 51.4	0.0
MPSI	Mapaga	17.70	73	P	P	03 24 53.2	+1.6
	comp=Z,3µmcomp=Z,171nm,1.0s						
BASI	Baing, Sumba	18.18	108	P	P	03 24 55.6	-1.3
	comp=Z,5µmcomp=Z,488nm,1.4s						
MYLDM	Lahad Datu	18.50	57		Pn	03 25 02.6	+1.5
MYLDM				IAmb	IAmb	03 25 25.6	
	comp=Z,245nm,1.0s						
TOLI2	Tolitoli	18.78	72		Pn	03 25 05.1	+0.6
TOLI2				IAmb	IAmb	03 25 07.7	
	comp=Z,344nm,0.9s						
TOLI2	Tolitoli	18.78	72	P	Pn	03 25 05.5	+1.1
	comp=Z,437nm,0.8s						
EDFI	Ende, Flores	18.93	102	P	P	03 25 04.6	-0.6
	comp=Z,677nmcomp=Z,54nm,0.8s						
APSI	Ampana	19.07	78	P	Pn	03 25 08.9	+1.0
	comp=Z,3µmcomp=Z,366nm,1.0s						
MMRI	Maumere	19.45	102	P	P	03 25 10.1	-0.7
	comp=Z,5µmcomp=Z,215nm,0.7s						
MMRI	Maumere	19.45	102	P	P	03 25 09.6	-1.1
MMRI				IAmb	IAmb	03 25 14.8	
	comp=Z,138nm,0.6s						
MRSI	Marisa	19.70	74	P	Pn	03 25 14.6	-0.7
	comp=Z,2µmcomp=Z,279nm,0.8s						
LUWI	Luwuk	20.14	79	P	P	03 25 18.6	+0.3
UBPT	Khong Chiam	20.30	7	P	P	03 25 19.6	-0.4
GIRL	Giralia	20.63	149	P	Pn	03 25 26.3	+0.1
	baz=21,SNR=5.6						
GIRL	Giralia	20.63	149	P	P	03 25 23.4	-0.1
GIRL				IAmb	IAmb	03 25 42.2	
	comp=Z,346nm,1.5s						
GIRL	Giralia	20.63	149	P	Pn	03 25 24.9	-1.4
	comp=Z,141nm,1.2s						
DGPR	DIGLIPUR	20.64	331	eP	P	03 25 22.6	-1.1
DGPR				IAmb	IAmb	03 25 24.9	
	comp=Z,230nm,0.7s						
GTOI	Gorontalo	20.77	75	P	P	03 25 24.7	-0.4
	comp=Z,619nmcomp=Z,90nm,0.8s						
BATI	Baumata	21.13	105	P	P	03 25 28.8	-0.3
	comp=Z,144nm,0.5s,baz=320,slow=1.0,SNR=13						
BATI				S	S	03 29 18.1	-3.3
	comp=Z,118nm,0.7s,baz=322,slow=18,SNR=5.7						
BATI	Baumata	21.13	105	P	P	03 25 28.7	-0.3
	comp=Z,2µmcomp=Z,152nm,0.9s						
SOEI	Soe	21.62	104	P	P	03 25 32.5	-1.8
	comp=Z,2µmcomp=Z,238nm,0.7s						
SOEI	Soe	21.62	104	P	P	03 25 32.5	-1.8
SOEI				IAmb	IAmb	03 25 52.0	
	comp=Z,200nm,1.0s						
KMSI	Cibinong	21.69	76	P	P	03 25 36.4	+1.4
	comp=Z,177nm,0.7s						
MBWA	Marble Bar	22.84	136	P	P	03 25 49.6	+2.4
	comp=Z,48nm,1.1s						
SANI	Sanana	23.14	84	P	P	03 25 49.8	-0.5
	comp=Z,2µmcomp=Z,165nm,1.1s						
PSA00	Pilbara Seismi	23.20	137	P	P	03 25 49.9	-0.9
PSA00					PcP	03 29 37.2	-0.5
PSA00	Pilbara Seismi	23.20	137	P	P	03 25 52.0	+1.2
	comp=Z,65nm,1.2s						
CM31	Chiang Mai Arr	23.65	350	P	P	03 25 55.1	0.0
CM31				IAmb	IAmb	03 25 55.5	
	comp=Z,146nm,0.9s						
CMAR	Chiang Mai Arr	23.65	350	P	P	03 25 54.8	-0.4
	comp=Z,72nm,0.6s,baz=182,slow=8.7,SNR=330						
CMAR				PcP	PcP	03 29 40.3	+1.6
	comp=Z,7.9nm,0.7s,baz=208,slow=3.5,SNR=8.7						
CMAR				ScP	ScP	03 33 12.7	0.0
	comp=Z,1.4nm,0.4s,baz=208,slow=3.3,SNR=9.5						
CMAR				LR	LR	03 35 01.2	
	comp=Z,530nm,21.9s,baz=212,slow=36						
CMAR	Chiang Mai Arr	23.65	350	ceP	P	03 25 54.7	-0.4
CMAR				pmax	pmax		
	comp=Z,100nm,0.6s						
CMAR	Chiang Mai Arr	23.65	350	P	P	03 25 53.8	-1.3
CMAR					PcP	03 29 38.5	-0.1
CHTO	Chiang Mai	24.00	351	P	P	03 25 57.5	-0.8
CHTO				IAmb	IAmb	03 25 58.5	
	comp=Z,108nm,0.8s						
CHTO					PcP	03 29 39.7	+0.3
CHTO	Chiang Mai	24.00	351	P	P	03 25 58.0	-0.3
	comp=Z,91nm,1.0s						
PAGZ	Pagadian	24.02	58	⇑eP	P	03 25 59.7	+1.2
QIZ	Qiongzhong	24.82	16	P	P	03 26 06.3	+0.6
QIZ				pP	pP	03 26 21.8	+2.9
QIZ				S	S	03 30 29.7	+4.8
QIZ				LR	LR		
	comp=Z,330nm,23.5s						
QIZ				LR	LR		
	comp=Z,350nm,18.6s						
QIZ				LR	LR		
	comp=Z,510nm,23.2s						
QIZ	Qiongzhong	24.82	16	P	P	03 26 05.5	-0.2
LBMI	Labuha	24.86	81	P	P	03 26 07.5	+1.3
	comp=Z,3µmcomp=Z,447nm,0.9s						
TNTI	Ternate	25.02	77	P	P	03 26 06.6	-1.1
KCP	Kidapawan	25.08	62	⇓iP	P	03 26 10.0	+1.7
PALK	Pallekele	25.36	299	P	P	03 26 12.9	+2.0
	comp=Z,15nm,0.8s,baz=213,slow=12,SNR=5.5						
DMPH	Davao City--Mi	25.48	62	⇑eP	P	03 26 13.9	+2.1
DAV	Davao City (W)	25.54	62	P	P	03 26 13.3	+1.0
	comp=Z,206nm,0.4s,baz=88,slow=5.0,SNR=8.0						
DAV				LR	LR	03 37 13.2	
	comp=Z,393nm,20.1s,baz=292,slow=39						
DAV	Davao City (W)	25.54	62	P	P	03 26 13.7	+1.3
PGP	Puerto Galera	25.62	44	⇑eP	P	03 26 13.4	+0.3
RCP	Roxas	25.64	50	⇑eP	P	03 26 13.6	+0.4
FITZ	Fitzroy Crossi	25.68	122	P	P	03 26 14.2	+0.6
	comp=Z,115nm,0.9s,baz=305,slow=4.1						
FITZ				LR	LR	03 38 01.3	
	comp=Z,228nm,20.0s,slow=40						
MEEK	Meekatharra	26.18	147	P	P	03 26 19.1	+1.0
	baz=26,SNR=6.2						
MEEK	Meekatharra	26.18	147	P	P	03 26 19.4	+1.3
	comp=Z,22nm,1.3s						
SLVN	Son La	26.19	2	P	P	03 26 18.3	0.0
SLVN				IAmb	IAmb	03 26 19.9	
	comp=Z,93nm,0.9s						
BNDI	Bandanaira	26.83	90	P	P	03 26 26.6	+2.6
	comp=Z,307nm,0.6s						
MORW	Morawa	26.94	154	P	P	03 26 25.8	+1.0
KNRA	Kununurra	27.45	115	P	P	03 26 29.2	-0.3
	baz=28,SNR=34						
KNRA	Kununurra	27.45	115	P	P	03 26 28.8	-0.8
KNRA				IAmb	IAmb	03 26 30.2	
	comp=Z,143nm,0.8s						
KNRA	Kununurra	27.45	115	P	P	03 26 29.3	-0.2
	comp=Z,196nm,0.8s						
SWI	Sorong	28.52	83	P	P	03 26 38.9	-0.3
	comp=Z,70nm,1.0s						
SIJI	Sorong	28.53	83	P	P	03 26 39.1	-0.2
	comp=Z,46nm,1.0s,baz=283,slow=4.5,SNR=8.8						
SIJI				LR	LR	03 38 36.2	
	comp=Z,238nm,20.8s,baz=272,slow=38						
MTN	Manton Dam	28.85	108	P	P	03 26 41.9	-0.2
FAKI	Fak Fak	29.26	87	P	P	03 26 45.0	-0.8
FAKI	Fak Fak	29.26	87	P	P	03 26 44.6	-1.2
FAKI	Fak Fak	29.26	87	P	P	03 26 44.8	-1.0
	comp=Z,76nm,0.9s						
KMI	Kunming	29.95	360	⇓P	P	03 26 53.4	+1.5
KMI				pP	pP	03 27 07.5	+2.3
KMI				pmax	pmax		
	comp=Z,90nm,0.8s						
KMI				LR	LR		
	comp=Z,760nm,18.0s						
KMI				LR	LR		
	comp=Z,330nm,11.2s						
KMI				LR	LR		
	comp=Z,770nm,17.2s						
KDU	Kakadu	30.09	107	P	P	03 26 51.4	-1.7
	baz=30,SNR=39						
KDU	Kakadu	30.09	107	P	P	03 26 51.7	-1.4
	comp=Z,57nm,0.6s						
H08S2	Diego Garcia H	30.42	263	T	T	03 59 10.1	
	baz=86,slow=76,SNR=69						
H08S3	Diego Garcia H	30.43	263	T	T	03 59 15.4	
	baz=86,slow=76,SNR=55						
H08S1	Diego Carcia H	30.44	263	T	T	03 59 16.2	
	baz=86,slow=76,SNR=50						

IMP	**Imphal**	**30.93**	**344**	eP	**P**	**03 26 59.2**	**-1.2**
IMP				IAmb	IAmb	03 27 01.7	
	comp=Z,36nm,0.6s						
WRKA	**Warakurna**	**31.41**	**132**	P	**P**	**03 27 05.5**	**+0.8**
	baz=32,SNR=7.0						
WRKA	**Warakurna**	**31.41**	**132**	P	**P**	**03 27 05.6**	**+0.9**
	comp=Z,19nm,0.8s						
H01W3	**Cape Leeuwin H**	**31.47**	**162**	T	T	04 00 37.1	
	baz=339,slow=76,SNR=238						
GYA	**Guiyang**	**31.48**	**6**	⇓P	**P**	**03 27 05.6**	**+0.3**
GYA				pmax	pmax		
	comp=Z,25nm,1.1s						
H01W2	**Cape Leeuwin H**	**31.48**	**162**	T	T	04 00 44.7	
	baz=339,slow=76,SNR=257						
H01W1	**Cape Leeuwin H**	**31.48**	**162**	T	T	04 00 47.2	
	baz=339,slow=76,SNR=277						
KOHI	**KOHIMA**	**31.74**	**345**	eP	**P**	**03 27 06.3**	**-1.3**
MOKO	**MOKOCHONG**	**32.20**	**346**	eP	**P**	**03 27 10.4**	**-1.3**
MOKO				IAmb	IAmb	03 27 12.3	
	comp=Z,214nm,0.9s						
SHL	**Shillong**	**32.25**	**341**	P	**P**	**03 27 11.1**	**-1.1**
SHL				pmax	pmax		
	comp=Z,85nm,0.5s						
SHL	**Shillong**	**32.25**	**341**	eP	**P**	**03 27 11.0**	**-1.1**
SHL				IAmb	IAmb	03 27 11.6	
	comp=Z,61nm,0.5s						
SHL	**Shillong**	**32.25**	**341**	P	**P**	**03 27 11.1**	**-1.1**
TWG	**Pinlang**	**32.82**	**32**	P	**P**	**03 27 16.9**	**-0.1**
TWG				IAmb	IAmb	03 27 23.9	
	comp=Z,41nm,0.7s						
HYB	**Hyderabad**	**32.84**	**313**	i P	**P**	**03 27 18.0**	**+0.7**
	comp=Z,31nm,0.8s						
HYB				ePcP	**PcP**	**03 30 02.5**	**+1.1**
HYB				e		03 30 20.0	
HYB	**Hyderabad**	**32.84**	**313**	eP	**P**	**03 27 18.0**	**+0.7**
TPUB	**Ta-pu**	**32.99**	**31**	IAmb	IAmb	03 27 20.0	
	comp=Z,79nm,1.0s						
TPUB	**Ta-pu**	**32.99**	**31**	P	**P**	**03 27 19.8**	**+1.3**
	comp=Z,64nm,1.2s						
BOK	**Bokaro**	**33.13**	**330**	eP	**P**	**03 27 21.0**	**+1.3**
BOK				IAmb	IAmb	03 27 22.6	
	comp=Z,221nm,0.7s						
YULB	**Yu-li**	**33.41**	**32**	P	**P**	**03 27 22.0**	**-0.1**
YULB				IAmb	IAmb	03 27 33.0	
	comp=Z,35nm,0.8s						
SSLB	**Suanglung**	**33.56**	**31**	IAmb	IAmb	03 27 27.5	
	comp=Z,34nm,0.8s						
WB0	**Warramunga Arr**	**33.91**	**118**	IAmb	IAmb	03 27 27.6	
	comp=Z,62nm,0.7s						
WRA	**Warramunga Arr**	**33.92**	**119**	P	**P**	**03 27 26.4**	**-0.3**
	comp=Z,63nm,0.7s,baz=290,slow=13,SNR=570						
WRA				PcP	**PcP**	**03 30 05.1**	**+0.7**
	comp=Z,14nm,0.7s,baz=303,slow=1.9,SNR=7.0						
WRA				S	**S**	**03 32 46.3**	**-1.7**
	comp=Z,3.9nm,0.9s,baz=291,slow=16,SNR=4.8						
WRA				LR	LR	03 43 25.4	
	comp=Z,238nm,20.7s,baz=275,slow=40						
WRA				P3KPbc		03 58 34.6	
	comp=Z,1.3nm,0.7s,baz=109,slow=4.3,SNR=23						
WRAB	**Tennant Creek**	**33.93**	**119**	ceP	**P**	**03 27 27.0**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,100nm,0.7s						
WRAB	**Tennant Creek**	**33.93**	**119**	P	**P**	**03 27 26.2**	**-0.5**
WRAB	**Tennant Creek**	**33.93**	**119**	P	**P**	**03 27 27.4**	**+0.6**
	comp=Z,146nm,0.7s						
WB2	**Warramunga Arr**	**33.93**	**119**	P	**P**	**03 27 27.0**	**+0.2**
	baz=34						
WB2	**Warramunga Arr**	**33.93**	**119**	P	**P**	**03 27 26.4**	**-0.4**
NACB	**Ninganchiao**	**34.20**	**31**	IAmb	IAmb	03 27 40.6	
	comp=Z,63nm,1.0s						
YHNB	**Yeheng**	**34.50**	**30**	P	**P**	**03 27 33.5**	**+1.8**
	comp=Z,54nm,1.0s						
FORT	**Forrest**	**34.84**	**140**	P	**P**	**03 27 34.8**	**+0.4**
FORT				IAmb	IAmb	03 27 56.5	
	comp=Z,58nm,0.9s						
FORT	**Forrest**	**34.84**	**140**	P	**P**	**03 27 34.4**	**-0.1**
	comp=Z,68nm,0.9s						
ASPA	**Alice Springs**	**35.09**	**125**	P	**P**	**03 27 37.9**	**+1.1**
	baz=35						
ASAR	**Alice Springs**	**35.09**	**125**	P	**P**	**03 27 37.5**	**+0.8**
	comp=Z,91nm,0.9s,baz=303,slow=8.1,SNR=517						
ASAR				PcP	**PcP**	**03 30 08.7**	**+0.9**
	comp=Z,16nm,0.8s,baz=305,slow=2.9,SNR=13						
ASAR				S	**S**	**03 33 03.4**	**-2.6**
	comp=Z,4.5nm,0.9s,baz=294,slow=15,SNR=8.9						
ASAR				ScP	**ScP**	**03 33 49.5**	**+0.4**
	comp=Z,5.4nm,0.8s,baz=310,slow=3.6,SNR=8.1						
ASAR				LR	LR	03 43 14.8	
	comp=Z,246nm,20.5s,baz=300,slow=38						
ASAR				P3KPbc		03 58 28.7	
	comp=Z,0.7nm,0.7s,baz=117,slow=4.1,SNR=12						
ODAN	**Odare**	**35.09**	**335**	eP	**P**	**03 27 37.0**	**+0.1**
	comp=Z,221nm,0.6s						
TAPN	**Taplejung**	**35.39**	**336**	eP	**P**	**03 27 39.9**	**+0.3**
RAMN	**Ramite**	**35.51**	**334**	eP	**P**	**03 27 40.9**	**+0.4**
	comp=Z,133nm,0.6s						
ENH	**Enshi**	**35.62**	**10**	P	**P**	**03 27 40.2**	**-1.0**
ENH				IAmb	IAmb	03 27 46.0	
	comp=Z,33nm,0.5s						
CD2	**Chengdu**	**35.72**	**1**	P	**P**	**03 27 41.2**	**-0.8**
CD2				S	**S**	**03 33 14.1**	**-1.3**
CD2				pmax	pmax		
	comp=Z,200nm,0.7s						
CD2				pmax	pmax		
	comp=Z,210nm,4.9s						
CD2				LR	LR		
	comp=Z,1µm,15.9s						
CD2				LR	LR		
	comp=Z,870nm,17.5s						
CD2				LR	LR		
	comp=Z,1µm,14.9s						
LSA	**Lhasa**	**36.33**	**342**	P	**P**	**03 27 48.0**	**+0.2**
LSA				pmax	pmax		
	comp=Z,310nm,0.9s						
LSA	**Lhasa**	**36.33**	**342**	P	**P**	**03 27 47.8**	**+0.1**
LSA	**Lhasa**	**36.33**	**342**	P	**P**	**03 27 47.0**	**-0.8**
LSA				pmax	pmax		
	comp=Z,68nm,0.9s						
LSA	**Lhasa**	**36.33**	**342**	P	**P**	**03 27 47.0**	**-0.8**
LSA				IAmb	IAmb	03 27 49.4	
	comp=Z,68nm,0.9s						
PKI	**Pulchoki**	**36.57**	**333**	eP	**P**	**03 27 49.5**	**-0.2**
PKIN	**Phulchoki**	**36.58**	**333**	eP	**P**	**03 27 49.5**	**-0.2**
	comp=Z,134nm,0.7s						
JMJ	**Miyako jima 2**	**36.73**	**35**	P	**P**	**03 27 52.0**	**+1.3**
	comp=Z,2µm,0.9s						
DMN	**Daman**	**36.74**	**333**	eP	**P**	**03 27 51.1**	**+0.1**
KKN	**Kakani**	**36.81**	**333**	eP	**P**	**03 27 51.8**	**+0.2**
	comp=Z,336nm,0.7s						
WHN	**Wuhan**	**36.98**	**16**	⇓P	**P**	**03 27 53.4**	**+0.7**
POO	**Poona**	**37.04**	**310**	eP	**P**	**03 27 55.1**	**+1.7**
POO				IAmb	IAmb	03 27 55.9	
	comp=Z,53nm,0.8s						
GKN	**Gorkha**	**37.29**	**333**	eP	**P**	**03 27 55.7**	**+0.1**
	comp=Z,277nm,0.6s						
BHPL	**Bhopal**	**37.57**	**319**	eP	**P**	**03 27 58.7**	**+0.8**
BHPL				IAmb	IAmb	03 28 01.4	
	comp=Z,83nm,0.8s						
KOLN	**Koldanda**	**37.58**	**331**	eP	**P**	**03 27 58.7**	**+0.6**
	comp=Z,521nm,0.8s						
JAY	**Jayapura**	**37.71**	**88**	P	**P**	**03 27 59.5**	**+0.3**
	comp=Z,16nm,0.6s,baz=210,slow=8.8,SNR=7.7						
JAY				LR	LR	03 45 51.1	
	comp=Z,131nm,20.4s,baz=256,slow=40						
DANN	**Dangsing**	**37.99**	**332**	eP	**P**	**03 28 02.0**	**+0.3**
	comp=Z,485nm,0.5s						
PYUN	**Piuthan**	**38.15**	**331**	eP	**P**	**03 28 03.4**	**+0.5**
	comp=Z,345nm,0.8s						
OOD	**Oodnadatta**	**38.47**	**130**	P	**P**	**03 28 06.8**	**+1.4**
	comp=Z,186nm,0.7s						
MULG	**Mulgathing**	**38.59**	**134**	P	**P**	**03 28 07.8**	**+1.4**
	comp=Z,84nm,0.8s						
QIS	**Mount Isa**	**38.78**	**117**	P	**P**	**03 28 08.5**	**+0.4**
	baz=39,SNR=53						
QIS	**Mount Isa**	**38.78**	**117**	P	**P**	**03 28 08.8**	**+0.6**
	comp=Z,64nm,0.8s						
XAN	**Xi'an**	**39.24**	**8**	P	**P**	**03 28 11.2**	**-0.6**
XAN				pP	pP	03 28 23.3	-2.1
XAN				S	**S**	**03 34 10.4**	**+1.8**
XAN				pmax	pmax		
	comp=Z,140nm,0.9s						
XAN				LR	LR		
	comp=Z,390nm,15.8s						
XAN				LR	LR		
	comp=Z,480nm,16.5s						
XAN				LR	LR		
	comp=Z,560nm,13.1s						
NJ2	**Nanjing**	**39.83**	**21**	eP	**P**	**03 28 20.0**	**+3.4**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JOW	**Kunigami**	**40.01**	**36**	P	**P**	**03 28 18.1**	**-0.1**
	comp=Z,60nm,0.8s,baz=270,slow=9.7,SNR=5.3						
JOW				LR	LR	03 44 25.8	
	comp=Z,153nm,21.8s,baz=288,slow=36						
JOW	**Kunigami**	**40.01**	**36**	IAmb	IAmb	03 28 20.7	
	comp=Z,83nm,1.1s						
JOW	**Kunigami**	**40.01**	**36**	P	**P**	**03 28 19.1**	**+0.9**
	comp=Z,74nm,1.0s						
COEN	**Coen**	**40.56**	**106**	P	**P**	**03 28 22.0**	**-1.1**
COEN				PcP	**PcP**	**03 30 24.1**	**-0.6**
COEN	**Coen**	**40.56**	**106**	P	**P**	**03 28 22.4**	**-0.7**
	comp=Z,23nm,0.8s						
LZH	**Lanzhou**	**40.88**	**1**	⇓P	**P**	**03 28 26.2**	**+0.7**
LZH				pP	pP	03 28 41.1	+1.9
LZH				sP	sP	03 28 47.3	+2.1
LZH				pmax	pmax		
	comp=Z,140nm,1.3s						
LZH				LR	LR		
	comp=Z,530nm,13.8s						
LZH				LR	LR		
	comp=Z,460nm,14.2s						
LZH				LR	LR		
	comp=Z,620nm,16.5s						
BBOO	**Buckleboo**	**41.43**	**136**	P	**P**	**03 28 30.5**	**+0.6**
	baz=42,SNR=11						
BBOO	**Buckleboo**	**41.43**	**136**	P	**P**	**03 28 30.0**	**+0.1**
BBOO	**Buckleboo**	**41.43**	**136**	P	**P**	**03 28 31.0**	**+1.1**
	comp=Z,40nm,1.0s						
NDI	**New Delhi**	**41.68**	**325**	eP	**P**	**03 28 32.0**	**0.0**
LCRK	**Leigh Creek**	**41.71**	**132**	P	**P**	**03 28 33.8**	**+1.5**
	comp=Z,81nm,0.8s						
MTSU	**Mount Surprise**	**42.42**	**111**	P	**P**	**03 28 38.9**	**+0.6**
	baz=42,SNR=176						
MTSU	**Mount Surprise**	**42.42**	**111**	P	**P**	**03 28 39.2**	**+1.0**
	comp=Z,175nm,0.8s						
TIA	**Tai'an**	**43.09**	**17**	⇑P	**P**	**03 28 42.3**	**-1.0**
TIA				pmax	pmax		
	comp=Z,35nm,0.8s						
NAPP	**Napperby**	**43.09**	**135**	P	**P**	**03 28 45.1**	**+1.6**
	comp=Z,40nm,0.8s						
TIY	**Taiyuan**	**43.40**	**11**	⇓iP	**P**	**03 28 46.1**	**+0.2**
TIY				pmax	pmax		
	comp=Z,68nm,0.8s						
TIY				LR	LR		
	comp=Z,570nm,16.5s						
SMLA	**Simla**	**43.58**	**327**	eP	**P**	**03 28 47.1**	**-0.2**
SMLA				IAmb	IAmb	03 28 51.6	
	comp=Z,53nm,0.5s						
HTT	**Hallett**	**43.77**	**135**	P	**P**	**03 28 50.7**	**+1.7**
	comp=Z,37nm,0.7s						
PMG	**Port Moresby**	**44.01**	**98**	P	**P**	**03 28 50.2**	**-0.9**
PMG				pmax	pmax		
	comp=Z,51nm,0.7s						
PMG	**Port Moresby**	**44.01**	**98**	P	**P**	**03 28 50.2**	**-0.9**
PMG				IAmb	IAmb	03 28 51.6	
	comp=Z,51nm,0.7s						
GTA	**Gaotai**	**44.29**	**356**	⇑P	**P**	**03 28 53.1**	**0.0**
GTA				pP	pP	03 29 02.4	-4.5
GTA				PcP	**PcP**	**03 30 36.9**	**+0.2**
GTA				pmax	pmax		
	comp=Z,62nm,0.8s						
GTA				pmax	pmax		
	comp=Z,220nm,9.2s						
GTA				LR	LR		
	comp=Z,640nm,17.1s						
GTA				LR	LR		
	comp=Z,300nm,16.3s						
GTA				LR	LR		
	comp=Z,870nm,19.5s						
TWOA	**Tennyson Woods**	**44.41**	**137**	P	**P**	**03 28 56.1**	**+2.1**
	comp=Z,43nm,0.9s						
CTA	**Charters Tower**	**44.65**	**114**	P	**P**	**03 28 57.0**	**+0.9**
	comp=Z,62nm,0.9s,baz=282,slow=12,SNR=35						
CTAO	**Charters Tower**	**44.65**	**114**	P	**P**	**03 28 56.0**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,126nm,1.1s						
CTAO	**Charters Tower**	**44.65**	**114**	P	**P**	**03 28 56.0**	**-0.1**
CTAO				IAmb	IAmb	03 28 58.1	
	comp=Z,126nm,1.1s						
CTAO	**Charters Tower**	**44.65**	**114**	P	**P**	**03 28 57.1**	**+0.9**
	comp=Z,123nm,1.1s						
JSU	**Suzuyama**	**44.77**	**34**	P	**P**	**03 28 56.9**	**0.0**
JSU				IAmb	IAmb	03 28 57.5	
	comp=Z,95nm,1.0s						
QLP	**Quilpie**	**44.82**	**123**	P	**P**	**03 28 59.0**	**+1.6**
	baz=45,SNR=3.7						
STKA	**Stephens Creek**	**44.94**	**131**	P	**P**	**03 28 59.5**	**+1.2**
	comp=Z,46nm,0.5s,baz=304,slow=8.4,SNR=192						
STKA				pP	**sP**	**03 29 16.5**	**-1.1**
	comp=Z,39nm,0.5s,baz=309,slow=9.3,SNR=7.4						
STKA				LR	LR	03 50 08.5	
	comp=Z,147nm,20.2s,baz=314,slow=39						
STKA	**Stephens Creek**	**44.94**	**131**	P	**P**	**03 28 59.4**	**+1.1**
	baz=45,SNR=106						
STKA	**Stephens Creek**	**44.94**	**131**	P	**P**	**03 28 58.4**	**+0.1**
STKA	**Stephens Creek**	**44.94**	**131**	P	**P**	**03 28 59.9**	**+1.6**
	comp=Z,18nm,0.7s						
GUMO	**Guam**	**45.49**	**66**	LR	LR	03 49 04.7	
	comp=Z,26nm,21.9s,baz=198,slow=37						
GUMO	**Guam**	**45.49**	**66**	P	**P**	**03 29 01.3**	**-1.6**
	comp=Z,229nm,1.2s						
BTO	**Baotou**	**45.84**	**7**	eP	**P**	**03 29 04.5**	**-0.9**
JNU	**Nakatsue**	**46.23**	**33**	IAmb	IAmb	03 29 11.2	
	comp=Z,76nm,0.9s						
HHC	**Hu-ho-hao-te**	**46.30**	**9**	eP	**P**	**03 29 08.7**	**-0.3**
HHC				S	**S**	**03 35 52.8**	**+0.4**
HHC				pmax	pmax		
	comp=Z,98nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
HHC				LR	LR		
	comp=Z,470nm,14.5s						
HHC				LR	LR		
	comp=Z,260nm,15.3s						
HHC				LR	LR		
	comp=Z,560nm,15.3s						
BJT	**Baijiatuau**	**46.42**	**14**	P	**P**	**03 29 09.1**	**-0.6**
BJT				pmax	pmax		
	comp=Z,54nm,0.7s						
BJT	**Baijiatuau**	**46.42**	**14**	P	**P**	**03 29 09.1**	**-0.6**
BJT				IAmb	IAmb	03 29 10.7	
	comp=Z,54nm,0.7s						
BJI	**Beijing**	**46.44**	**14**	P	**P**	**03 29 09.8**	**-0.1**
BJI				PcP	**PcP**	**03 30 44.2**	**+0.3**
BJI				pmax	pmax		
	comp=Z,93nm,0.8s						
BJI				LR	LR		
	comp=Z,630nm,20.4s						
BJI				LR	LR		
	comp=Z,430nm,24.4s						
BJI				LR	LR		
	comp=Z,630nm,21.1s						
DL2	**Dalian**	**46.98**	**20**	eP	**P**	**03 29 13.4**	**-0.7**
DL2				pmax	pmax		
	comp=Z,55nm,0.8s						
ARPS	**Mount Arapiles**	**47.57**	**137**	P	**P**	**03 29 21.2**	**+2.3**
	baz=48,SNR=6.1						
NIL	**Nilore**	**47.64**	**326**	P	**P**	**03 29 19.1**	**-0.4**
NIL				pmax	pmax		
	comp=Z,166nm,0.7s						
NIL	**Nilore**	**47.64**	**326**	P	**P**	**03 29 19.1**	**-0.4**
CMSA	**Cobar Meteorol**	**47.91**	**129**	P	**P**	**03 29 23.3**	**+1.6**
	baz=48,SNR=49						
CMSA	**Cobar Meteorol**	**47.91**	**129**	P	**P**	**03 29 23.3**	**+1.6**
	comp=Z,84nm,1.2s						
KSAR	**Wonju Array Be**	**48.18**	**27**	P	**P**	**03 29 23.5**	**0.0**
KSAR						03 30 50.3	
KSAR	**Wonju Array Be**	**48.18**	**27**	P	**P**	**03 29 23.5**	**0.0**
KSAR				PcP	**PcP**	**03 30 50.3**	**+0.1**
KSRS	**Korea Array**	**48.21**	**27**	P	**P**	**03 29 23.6**	**-0.1**
	comp=Z,23nm,0.6s,baz=224,slow=7.3,SNR=61						
KSRS				PcP	**PcP**	**03 30 50.6**	**+0.3**
	comp=Z,9.2nm,0.8s,baz=228,slow=2.9,SNR=8.3						
RMQ	**Roma**	**48.60**	**121**	P	**P**	**03 29 28.7**	**+1.7**
	baz=49,SNR=6.6						
RMQ	**Roma**	**48.60**	**121**	P	**P**	**03 29 28.2**	**+1.1**
	comp=Z,22nm,0.7s						
JCJ	**Chichijima**	**49.53**	**48**	P	**P**	**03 29 32.2**	**-1.9**
	comp=Z,111nm,0.5s,baz=290,slow=22,SNR=7.0						
JCJ	**Chichijima**	**49.53**	**48**	P	**P**	**03 29 32.8**	**-1.3**
	comp=Z,404nm,1.4s						
EIDS	**Eidsvold**	**50.29**	**119**	P	**P**	**03 29 41.1**	**+1.2**
	baz=50,SNR=6.7						
EIDS	**Eidsvold**	**50.29**	**119**	P	**P**	**03 29 40.0**	**+0.1**
EIDS	**Eidsvold**	**50.29**	**119**	P	**P**	**03 29 41.1**	**+1.2**
	comp=Z,24nm,0.9s						
JWT	**Wachi**	**50.34**	**35**	P	**P**	**03 29 39.4**	**-0.7**
JWT				IAmb	IAmb	03 29 40.1	
	comp=Z,47nm,0.8s						
TOO	**Toolangi**	**50.49**	**136**	P	**P**	**03 29 43.0**	**+1.7**
TOO				pmax	pmax		
	comp=Z,15nm,1.0s						
TOO	**Toolangi**	**50.49**	**136**	P	**P**	**03 29 43.0**	**+1.7**
WMQ	**Urumqi**	**50.52**	**346**	eP	**P**	**03 29 41.6**	**+0.2**
WMQ				pP	pP	03 29 57.3	+2.0
WMQ				sP	sP	03 30 05.3	+4.0
WMQ				PcP	**PcP**	**03 31 00.1**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,140nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,260nm,4.1s						
KBL	**Kabul**	**50.70**	**323**	P	**P**	**03 29 42.3**	**-0.8**
KBL				pmax	pmax		
	comp=Z,40nm,1.0s						
KBL	**Kabul**	**50.70**	**323**	P	**P**	**03 29 42.3**	**-0.8**
KBL				IAmb	IAmb	03 29 44.1	
	comp=Z,40nm,0.9s						
KSH	**Kashi**	**50.83**	**333**	P	**P**	**03 29 42.3**	**-1.6**
KSH				pP	pP	03 29 55.8	-2.0
KSH				sP	sP	03 29 59.8	-3.9
KSH				pmax	pmax		
	comp=Z,100nm,0.7s						
INU	**Inuyama**	**51.32**	**36**	P	**P**	**03 29 46.7**	**-0.7**
INU				IAmb	IAmb	03 29 50.0	
	comp=Z,76nm,1.1s						
CAN	**Canberra**	**52.00**	**132**	P	**P**	**03 29 53.8**	**+1.2**
CAN				pmax	pmax		
	comp=Z,76nm,1.0s						
CAN	**Canberra**	**52.00**	**132**	P	**P**	**03 29 53.8**	**+1.2**
CAN				IAmb	IAmb	03 29 55.6	
	comp=Z,76nm,1.0s						
ARMA	**Armidale**	**52.24**	**125**	P	**P**	**03 29 56.9**	**+2.3**
	baz=52,SNR=17						
ARMA	**Armidale**	**52.24**	**125**	P	**P**	**03 29 56.2**	**+1.6**
ARMA				IAmb	IAmb	03 29 58.1	
	comp=Z,36nm,0.9s						
ARMA	**Armidale**	**52.24**	**125**	P	**P**	**03 29 55.3**	**+0.7**
	comp=Z,43nm,1.1s						
CNB	**Canberra Magne**	**52.27**	**132**	P	**P**	**03 29 56.5**	**+1.8**
	baz=52,SNR=5.6						
KDJ	**Kajisay**	**52.47**	**336**	P	**P**	**03 29 56.9**	**+0.8**
KDJ				pmax	pmax		
	comp=Z,198nm,0.6s						
KDJ	**Kajisay**	**52.47**	**336**	P	**P**	**03 29 56.9**	**+0.8**
UZB	**Uzynbulak**	**52.61**	**338**	eP	**P**	**03 29 56.5**	**-0.6**
	comp=Z,47nm,0.6s,baz=338						
UZB	**Uzynbulak**	**52.61**	**338**	eP	**P**	**03 29 56.5**	**-0.6**
UZB				pmax	pmax		
	comp=Z,47nm,0.6s						
CN2	**Changchun**	**52.64**	**20**	eP	**P**	**03 29 55.7**	**-1.4**
CN2				pmax	pmax		
	comp=Z,50nm,0.9s						
SONM	**Songino Array**	**52.70**	**3**	P	**P**	**03 29 58.1**	**+0.4**
	comp=Z,84nm,0.8s,baz=181,slow=8.1,SNR=380						
SONM				PcP	**PcP**	**03 31 07.0**	**+0.2**
	comp=Z,16nm,0.5s,baz=187,slow=4.0,SNR=21						
SONM				LR	LR	03 54 51.8	
	comp=Z,232nm,19.4s,baz=176,slow=39						
SONM	**Songino Array**	**52.70**	**3**	P	**P**	**03 29 58.1**	**+0.4**
ULN	**Ulaanbaatar**	**52.77**	**3**	ceP	**P**	**03 29 58.4**	**+0.3**
ULN				pmax	pmax		
	comp=Z,63nm,1.0s						
ULN	**Ulaanbaatar**	**52.77**	**3**	P	**P**	**03 29 58.4**	**+0.3**
ULN				IAmb	IAmb	03 30 00.1	
	comp=Z,48nm,0.8s						
SATY	**Saty**	**52.77**	**337**	eP	**P**	**03 29 57.7**	**-0.5**
	comp=Z,25nm,0.6s,baz=338						
SATY	**Saty**	**52.77**	**337**	eP	**P**	**03 29 57.7**	**-0.5**
SATY				pmax	pmax		
	comp=Z,25nm,0.6s						
MGCD	**Mangrove Creek**	**52.78**	**128**	P	**P**	**03 29 59.9**	**+1.4**
	baz=53,SNR=11						
MGCD	**Mangrove Creek**	**52.78**	**128**	P	**P**	**03 30 00.5**	**+2.1**
	comp=Z,61nm,0.7s						
MAJO	**Matsushiro**	**52.84**	**36**	P	**P**	**03 29 57.2**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,52nm,1.0s						
MAJO	**Matsushiro**	**52.84**	**36**	P	**P**	**03 29 57.2**	**-1.6**
MAJO				IAmb	IAmb	03 30 01.4	
	comp=Z,52nm,1.0s						
MAT	**Matsushiro**	**52.84**	**36**	P	**P**	**03 29 56.9**	**-1.8**
MAT				eS	**S**	**03 37 25.6**	**+1.9**
MJAR	**Matsushiro Arr**	**52.84**	**36**	P	**P**	**03 29 57.4**	**-1.3**
	comp=Z,56nm,1.0s,baz=211,slow=7.2,SNR=53						
MJAR				PcP	**PcP**	**03 31 08.0**	**+0.5**
	comp=Z,19nm,1.0s,baz=196,slow=4.2,SNR=5.7						
MJAR				LR	LR	03 55 09.2	
	comp=Z,47nm,18.1s,baz=210,slow=39						
MJAR	**Matsushiro Arr**	**52.84**	**36**	P	**P**	**03 29 57.0**	**-1.7**
BOOM	**Boomskoye usch**	**53.28**	**335**	P	**P**	**03 30 01.6**	**-0.5**
BOOM				pmax	pmax		
	comp=Z,64nm,0.8s						
BOOM	**Boomskoye usch**	**53.28**	**335**	P	**P**	**03 30 01.6**	**-0.5**
BOOM				IAmb	IAmb	03 30 03.1	
	comp=Z,64nm,0.8s						
TNSS	**Tian-Shan**	**53.32**	**336**	eP	**P**	**03 30 01.7**	**-1.0**
	baz=336						
MDOK	**Medeo**	**53.39**	**336**	eP	**P**	**03 30 02.0**	**-0.9**
	baz=336						
MDOK	**Medeo**	**53.39**	**336**	eP	**P**	**03 30 01.9**	**-0.9**
AAA	**Alma-Ata**	**53.48**	**336**	eP	**P**	**03 30 03.4**	**0.0**
	comp=Z,70nm,0.6s,baz=336						
AAA	**Alma-Ata**	**53.48**	**336**	eP	**P**	**03 30 03.3**	**0.0**
AAA				pmax	pmax		
	comp=Z,70nm,0.6s						
UCH	**Uchtor**	**53.67**	**334**	P	**P**	**03 30 05.6**	**+0.3**
	SNR=8.4						
SOHO	**SOHO**	**53.72**	**305**	P	**P**	**03 30 06.8**	**+1.4**
BTK	**Batken**	**53.72**	**330**	IAmb	IAmb	03 30 06.7	
	comp=Z,80nm,1.1s						
TKM2	**Tokmak 2**	**53.78**	**335**	P	**P**	**03 30 05.9**	**+0.2**
	SNR=45						
KBK	**Karagaybulak**	**53.83**	**335**	P	**P**	**03 30 06.8**	**+0.7**
	SNR=39						
JSD	**Sado**	**53.91**	**34**	IAmb	IAmb	03 30 07.5	
	comp=Z,74nm,0.8s						
AML	**Almayashu**	**53.96**	**333**	P	**P**	**03 30 07.3**	**0.0**
	SNR=30						
AML	**Almayashu**	**53.96**	**333**	i P	**P**	**03 30 07.1**	**-0.3**
	SNR=30						
ARXS	**Arharly**	**53.97**	**338**	eP	**P**	**03 30 06.3**	**-0.7**
AAK	**Ala-Archa**	**54.01**	**334**	i P	**P**	**03 30 07.4**	**-0.1**
	SNR=15						
AAK	**Ala-Archa**	**54.01**	**334**	ceP	**P**	**03 30 08.0**	**+0.6**
AAK				pmax	pmax		
	comp=Z,55nm,0.8s						
AAK	**Ala-Archa**	**54.01**	**334**	P	**P**	**03 30 07.2**	**-0.2**
CHMS	**Chumysh**	**54.20**	**335**	P	**P**	**03 30 08.0**	**-0.6**
	SNR=13						
KUU	**Kurty**	**54.28**	**336**	eP	**P**	**03 30 08.3**	**-0.8**
	comp=Z,83nm,0.6s,baz=336						
KUU	**Kurty**	**54.28**	**336**	eP	**P**	**03 30 08.3**	**-0.8**
KUU				pmax	pmax		
	comp=Z,83nm,0.6s						
ALNE	**Al Ain**	**54.32**	**304**	i P	**P**	**03 30 11.7**	**+1.8**
	SNR=13						
UOSS	**Minazif**	**54.34**	**305**	P	**P**	**03 30 11.6**	**+1.6**
ASHO	**Ashiyiah**	**54.35**	**305**	P	**P**	**03 30 11.8**	**+1.8**
EKS2	**Erkin-Say**	**54.35**	**334**	P	**P**	**03 30 10.2**	**+0.4**
	SNR=70						
HATD	**Hatta, Dubai**	**54.35**	**305**	P	**P**	**03 30 11.8**	**+1.8**
MDH	**Madha**	**54.43**	**306**	P	**P**	**03 30 12.0**	**+1.5**
TDK	**Taldyqorghan**	**54.43**	**339**	eP	**P**	**03 30 09.5**	**-0.8**
	comp=Z,58nm,0.6s,baz=339						
TDK	**Taldyqorghan**	**54.43**	**339**	eP	**P**	**03 30 09.4**	**-0.8**
TDK				pmax	pmax		
	comp=Z,58nm,0.6s						
USP	**Ospenovka**	**54.52**	**335**	P	**P**	**03 30 10.9**	**-0.1**
	SNR=26						
MSFE	**Esma-Masafi**	**54.57**	**306**	P	**P**	**03 30 13.8**	**+2.2**
SGDS	**Sogindy**	**54.62**	**335**	eP	**P**	**03 30 10.7**	**-1.0**
	baz=335						
SGDS	**Sogindy**	**54.62**	**335**	eP	**P**	**03 30 11.3**	**-0.4**
ZSN	**Zaisan**	**54.62**	**345**	eP	**P**	**03 30 11.2**	**-0.5**
	comp=Z,35nm,0.9s,baz=345						
ZSN	**Zaisan**	**54.62**	**345**	eP	**P**	**03 30 11.1**	**-0.5**
ZSN				pmax	pmax		
	comp=Z,35nm,0.9s						
MK31	**Makanchi Array**	**54.74**	**343**	i P	**P**	**03 30 11.8**	**-0.6**

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MK31  Makanchi Array    54.74 343   P      P      03 30 11.9 -0.5
MK31                                IAmb   IAmb   03 30 13.1
      comp=Z,61nm,0.7s
MKAR  Makanchi Array    54.74 343   P      P      03 30 12.0 -0.4
      comp=Z,83nm,0.6s,baz=146,slow=8.0,SNR=732
MKAR                                LR     LR     03 57 57.8
      comp=Z,154nm,19.5s,baz=148,slow=41
FAQ   Al Faqa, Dubai    54.75 305 i P      P      03 30 14.4 +1.5
      SNR=7.6
NAZ   Nazwa, Dubai      54.80 305 i P      P      03 30 15.1 +1.8
      SNR=5.9
MAKZ  Makanchi          54.84 342   P      P      03 30 12.3 -0.9
MAKZ                                pmax   pmax
      comp=Z,31nm,0.9s
MAKZ  Makanchi          54.84 342   P      P      03 30 12.3 -0.9
MAKZ                                IAmb   IAmb   03 30 13.7
      comp=Z,31nm,0.9s
MDJ   Mudanjiang        54.87  23   P      P      03 30 13.1 -0.2
MDJ                                 pmax   pmax
      comp=Z,35nm,1.1s
MDJ                                 pmax   pmax
      comp=Z,300nm,3.9s
MDJ   Mudanjiang        54.87  23   P      P      03 30 12.9 -0.5
MDJ                                 IAmb   IAmb   03 30 15.5
      comp=Z,28nm,0.9s
HRA   Herat             54.87 319   P      P      03 30 12.7 -1.1
SHME  Shamm             54.90 307   P      P      03 30 15.7 +1.7
ZAK   Zakamensk         55.16   0  eP      P      03 30 15.0 -0.5
ZAK                                e              03 31 15.7
ZAK                                 pmax   pmax
      comp=Z,31nm,0.9s
ZAK                                 pmax   pmax
      comp=Z,16nm,1.1s
TAS   Tashkent          55.44 330   P      P      03 30 17.2 -0.4
TAS                                 pmax   pmax
      comp=Z,193nm,1.2s
TAS   Tashkent          55.44 330   P      P      03 30 17.2 -0.4
USA0B Ussuriysk Arra    55.49  25   P      P      03 30 17.5 -0.4
USA0B                               pmax   pmax
      comp=Z,114nm,1.0s
USA0B Ussuriysk Arra    55.49  25   P      P      03 30 17.5 -0.4
USRK  Ussuriysk Ar.     55.49  25   P      P      03 30 17.5 -0.4
      comp=Z,93nm,0.9s,baz=218,slow=6.1,SNR=86
USRK                                LR     LR     03 55 10.3
      comp=Z,134nm,18.0s,baz=198,slow=37
DZA   Taraz             55.64 332  eP      P      03 30 18.5 -0.5
      baz=332
DZA   Taraz             55.64 332  eP      P      03 30 18.5 -0.5
IUG   Iuzhnay           55.69 331  eP      P      03 30 18.8 -0.7
      baz=331
IUG   Iuzhnay           55.69 331  eP      P      03 30 18.8 -0.7
HIA   Hailar            55.98  13   P      P      03 30 21.1 -0.3
HIA                                 pmax   pmax
      comp=Z,34nm,1.0s
HIA   Hailar            55.98  13   P      P      03 30 21.1 -0.3
HIA                                 IAmb   IAmb   03 30 22.0
      comp=Z,34nm,1.0s
DGZ   Jazzator, Alta    56.13 348c iP      P      03 30 22.6  0.0
DGZ                                 pmax   pmax
      comp=Z,184nm,0.8s
BTLS  Baital            56.15 336  eP      P      03 30 21.4 -1.2
      baz=336
BTLS  Baital            56.15 336  eP      P      03 30 21.4 -1.2
KKAR  Karatay Array     56.18 332   P      P      03 30 22.0 -0.9
KKAR  Karatay Array     56.18 332   P      P      03 30 22.0 -0.9
BRLS  Borolday          56.45 331  eP      P      03 30 22.4 -2.4
      baz=331
BRLS  Borolday          56.45 331  eP      P      03 30 22.4 -2.4
TLY   Talaya            56.47   0   LR     LR     03 57 00.9
      comp=Z,197nm,19.4s,baz=175,slow=39
TLY   Talaya            56.47   0  eP      P      03 30 25.2 +0.5
TLY                                 pmax   pmax
      comp=Z,119nm,0.8s
TLY                                 MLR    MLR
      comp=Z,391nm,15.0s
TLY   Talaya            56.47   0   P      P      03 30 25.4 +0.7
TLY                                 IAmb   IAmb   03 30 27.1
      comp=Z,44nm,0.8s
MOY   Mondy             56.48 359  eP      P      03 30 25.5 +0.6
MOY                                 pmax   pmax
      comp=Z,40nm,2.3s
VOI   Vohitsoka         56.85 247   P      P      03 30 29.0 +0.8
VOI                                 IAmb   IAmb   03 30 47.2
      comp=Z,27nm,0.9s
SEM   Semipalatinsk     58.58 343  eP      P      03 30 38.7 -1.2
      comp=Z,26nm,0.6s,baz=343
SEM   Semipalatinsk     58.58 343  eP      P      03 30 38.7 -1.2
SEM                                 pmax   pmax
      comp=Z,25nm,0.6s
KURBB Kurchatov Arra    59.28 342   P      P      03 30 43.3 -1.1
KURK  Kurchatov         59.34 342ceP      P      03 30 44.3 -0.5
KURK                                pmax   pmax
      comp=Z,111nm,0.8s
KURK  Kurchatov         59.34 342   P      P      03 30 44.4 -0.4
ERM   Erimo             59.37  34ceP      P      03 30 46.6 +1.4
ERM                                 pmax   pmax
      comp=Z,110nm,1.7s
ERM   Erimo             59.37  34   P      P      03 30 44.9 -0.3
      comp=Z,76nm,0.9s
OTUK  Ortayu            59.44 337   P      P      03 30 44.4 -1.3
KLR   Kul'dur           59.53  21   LR     LR     03 56 53.6
      comp=Z,208nm,21.6s,baz=198,slow=36
KLR   Kul'dur           59.53  21ceP      P      03 30 45.3 -0.9
KLR                                 pmax   pmax
      comp=Z,49nm,0.7s
GEYT  Alibeck           59.65 320   P      P      03 30 47.8 +0.4
      comp=Z,57nm,0.8s,baz=210,slow=14,SNR=67
GEYT                                LR     LR     03 58 01.3
      comp=Z,100nm,21.9s,baz=240,slow=38
GEYT  Alibeck           59.65 320   P      P      03 30 47.8 +0.4
GEYT                                IAmb   IAmb   03 30 48.8
      comp=Z,67nm,0.9s
GYA0B ALIBECK ARRAY     59.65 320   P      P      03 30 47.8 +0.4
ASAJ  Asahikawa         60.48  32   P      P      03 30 52.6 -0.2
ASAJ                                pmax   pmax
      comp=Z,66nm,0.8s
JKA   Kamikawa-asahi    60.48  32   P      P      03 30 52.6 -0.2
ZAA0  Zalesovo Array    60.69 348   P      P      03 30 53.2 -0.8
ZALV  Zalesovo Beam     60.69 348   P      P      03 30 53.3 -0.7
      comp=Z,48nm,0.5s,baz=160,slow=4.7,SNR=181
ZALV                                S      S      03 39 05.1 -1.6
      comp=Z,1.6nm,0.7s,baz=163,slow=11,SNR=4.1
ZALV                                LR     LR     04 00 12.8
      comp=Z,421nm,20.6s,baz=114,slow=39
ZALV  Zalesovo Beam     60.69 348   P      P      03 30 53.2 -0.8
ZEA   Zeya              61.98  16  eP      P      03 31 02.5 -0.2
ZEA                                 pmax   pmax
      comp=E,30nm,1.1s
ZEA                                 pmax   pmax
      comp=N,40nm,1.0s
ZEA                                 pmax   pmax
      comp=Z,80nm,0.9s
ZEA                                 MLR    MLR
      comp=N,200nm,12.0s
ZEA                                 MLR    MLR
      comp=Z,200nm,12.0s
YSS   Yuzh-Sakhalins    62.52  30  eP      P      03 31 06.1 -0.4
YSS                                e              03 31 44.6
YSS                                 pmax   pmax
      comp=Z,120nm,0.7s
YSS   Yuzh-Sakhalins    62.52  30   P      P      03 31 06.0 -0.5
GRNR  Gornyy            62.55  23⇑iP      P      03 31 06.3 -0.4
GRNR                                pmax   pmax
      comp=Z,30nm,1.1s
GRNR                                MLR    MLR
      comp=E,50nm,19.0s
GRNR                                MLR    MLR
      comp=N,110nm,15.0s
GRNR                                MLR    MLR
      comp=Z,90nm,17.0s
QRN   Al-Qurain         62.65 306  eP      P      03 31 08.4 +0.6
RAYN  Ar Rayn           62.80 300 i P      P      03 31 10.0 +1.1
      SNR=22
RAYN  Ar Rayn           62.80 300   P      P      03 31 08.7 -0.2
RAYN                                pmax   pmax
      comp=Z,15nm,0.8s
RAYN  Ar Rayn           62.80 300   P      P      03 31 08.7 -0.2
KBD   Kabd              63.00 306  eP      P      03 31 10.8 +0.7
UMR   Umm Al-Rimmam     63.13 307  eP      P      03 31 11.5 +0.6
BOD   Bodaibo           63.25   7  eP      P      03 31 10.6 -0.5
BOD                                 pmax   pmax
      comp=Z,83nm,1.0s
MIB   Mutribah          63.53 307  eP      P      03 31 14.2 +0.6
DZM   Mont Dzumac       63.55 112  eP      P      03 31 14.0  0.0
      comp=Z,46nm,1.5s
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DZM   Mont Dzumac       63.55 112  eLR     LR     03 50 18.8
      comp=Z,292nm,24.8s
DZM   Mont Dzumac       63.55 112   P      P      03 31 14.6 +0.6
      comp=Z,9.2nm,0.8s,baz=256,slow=8.6,SNR=11
DZM   Mont Dzumac       63.55 112   P      P      03 31 14.9 +0.9
DZM   Mont Dzumac       63.55 112   P      P      03 31 15.1 +1.1
      comp=Z,21nm,1.5s
RST   Umm Al-Ruwaisa    63.69 306  eP      P      03 31 14.8 +0.2
SANVU Saraoutou         63.84 105   P      P      03 31 15.9  0.0
SANVU                               IAmb   IAmb   03 31 17.4
      comp=Z,82nm,0.9s
YATNC Mamie plateau,    63.97 112   P      P      03 31 18.1 +1.5
      comp=Z,44nm,0.8s
BRVK  Borovoye          64.10 339ceP      P      03 31 16.1 -0.7
BRVK                                pmax   pmax
      comp=Z,46nm,0.6s
BRVK  Borovoye          64.10 339   P      P      03 31 15.8 -1.1
BRVK                                IAmb   IAmb   03 31 17.1
      comp=Z,64nm,0.7s
AB31  Akbulak array     65.70 331 i P      P      03 31 26.9 -0.4
ABKAR Akbulak array     65.70 331   P      P      03 31 26.9 -0.5
KMBO  Kilima Mbogo      65.73 271   P      P      03 31 30.1 +1.5
      comp=Z,3.9nm,0.9s,baz=48,slow=9.8,SNR=7.3
KMBO                                LR     LR     03 56 30.5
      comp=Z,115nm,20.6s,baz=94,slow=32
KMBO  Kilima Mbogo      65.73 271   P      P      03 31 30.9 +2.3
KMBO  Kilima Mbogo      65.73 271ceP      P      03 31 30.7 +2.1
KMBO                                pmax   pmax
      comp=Z,3.0nm,0.8s
KMBO  Kilima Mbogo      65.73 271   P      P      03 31 27.0 -1.6
LODK  Lodwar            68.08 276   P      P      03 31 43.9 +0.6
MAW   Mawson            68.16 195   P      P      03 31 44.6 +2.0
      comp=Z,5.3nm,0.8s,baz=41,slow=7.3,SNR=6.0
MAW                                 pP     sP     03 32 01.1 -1.5
      comp=Z,15nm,0.9s,baz=46,slow=5.3,SNR=7.8
MAW                                 LR     LR     03 55 30.6
      comp=Z,470nm,21.7s,baz=54,slow=30
GNI   Garni             69.75 316   P      P      03 31 54.4 +1.2
GNI   Garni             69.75 316ceP      P      03 31 54.5 +1.2
GNI                                 pmax   pmax
      comp=Z,29nm,1.0s
GNI   Garni             69.75 316   P      P      03 31 53.3  0.0
YAK   Yakutsk           69.93  13  eP      P      03 31 51.3 -2.3
YAK                                 pmax   pmax
      comp=E,17nm,1.3s
YAK                                 pmax   pmax
      comp=Z,75nm,0.9s
YAK                                 pmax   pmax
      comp=N,20nm,1.1s
YAK                                 MLR    MLR
      comp=Z,149nm,16.0s
YAK                                 MLR    MLR
      comp=N,295nm,24.0s
YAK                                 MLR    MLR
      comp=E,82nm,15.0s
YAK   Yakutsk           69.93  13   P      P      03 31 51.9 -1.8
TARA  Tarawa            70.14  87   P      P      03 31 55.4 -0.6
SIRT  Sirnak            70.31 313   P      P      03 31 56.5 -0.2
SIRT                                IAmb   IAmb   03 32 21.5
      comp=Z,48nm,0.8s
GROC  Groznyy           70.39 319  eP      P      03 31 56.9  0.0
GROC                               e*PP    pP     03 32 11.0 -0.4
GROC                               e              03 32 18.8
GROC                               e              03 34 32.3
GROC                                pmax   pmax
      comp=Z,56nm,0.6s
SVE   Sverdlovsk        70.59 337deP      P      03 31 58.2 +0.4
SVE                                 pmax   pmax
      comp=Z,133nm,1.0s
RPZ   Rata Peaks        70.76 135   P      P      03 32 00.4 +1.2
      comp=Z,148nm,1.9s
AKH   Akhalkalaki       71.14 317 ⇓P      P      03 32 03.2 +1.4
ARU   Arti              71.14 336c iP      P      03 32 01.0 -0.2
ARU                                 *PP    pP     03 32 15.8  0.0
ARU                                 S      S      03 41 15.9 +2.0
ARU                                 SS     SS     03 45 46.3 -2.3
ARU                                 pmax   pmax
      comp=Z,116nm,0.9s
ARU   Arti              71.14 336   P      P      03 32 01.1 -0.1
ARU                                 IAmb   IAmb   03 32 02.2
      comp=Z,99nm,0.9s
QRZ   Quartz Range      71.29 131   P      P      03 32 04.1 +1.6
      comp=Z,56nm,1.4s
ZEI   Tsey              71.45 318  eP      P      03 32 04.0 +0.4
ZEI                                 pmax   pmax
      comp=Z,17nm,0.9s
THZ   Tophouse          71.73 132   P      P      03 32 05.3 +0.1
THZ                                 IAmb   IAmb   03 32 07.3
      comp=Z,35nm,0.8s
KHZ   Kahutara          72.31 133   P      P      03 32 09.0 +0.5
      comp=Z,38nm,1.2s
NEY   Neytrino          72.43 318 i P      P      03 32 08.8 -0.7
NEY                                 pmax   pmax
      comp=Z,11nm,0.9s
BCA   Borcka            72.44 316 ⇑P      P      03 32 10.0 +0.6
KBZ   Khabaz            72.52 319   P      P      03 32 10.5 +0.8
      comp=Z,57nm,0.8s,baz=124,slow=5.5,SNR=92
KBZ   Khabaz            72.52 319ceP      P      03 32 10.6 +0.9
KBZ                                 pmax   pmax
      comp=Z,70nm,0.9s
KIV   Kislovodsk        72.75 319 ⇓P      P      03 32 12.0 +0.8
KIV   Kislovodsk        72.75 319 i P      P      03 32 12.0 +0.8
      SNR=11
KIV   Kislovodsk        72.75 319  eP      P      03 32 11.9 +0.7
KIV                                 pmax   pmax
      comp=Z,46nm,1.1s
KIV   Kislovodsk        72.75 319   P      P      03 32 11.7 +0.5
KIV                                 IAmb   IAmb   03 32 13.4
      comp=Z,33nm,0.8s
GOF   Gofitskoye        72.99 320⇑eP      P      03 32 13.2 +0.7
GOF                                 pmax   pmax
      comp=Z,66nm,1.1s
GHAJ  Ghor Haditha      73.58 305   P      P      03 32 16.9 +0.6
GHAJ                                IAmb   IAmb   03 32 19.1
      comp=Z,69nm,0.8s
BELG  Belogornoye       73.83 328 i P      P      03 32 17.0 -0.2
BELG                                pmax   pmax
      comp=Z,26nm,0.9s
PETK  Petropavlovsk-    73.87  31   P      P      03 32 16.3 -1.2
      comp=Z,15nm,0.8s,baz=218,slow=11,SNR=16
PETK                                LR     LR     04 06 21.3
      comp=Z,32nm,19.2s,baz=242,slow=37
PETK  Petropavlovsk-    73.87  31   P      P      03 32 16.5 -1.0
PETK  Petropavlovsk-    73.87  31   P      P      03 32 16.5 -1.0
LSZ   Lusaka            74.05 256   P      P      03 32 19.8 +0.3
LSZ                                 pmax   pmax
      comp=Z,24nm,0.9s
LSZ   Lusaka            74.05 256   P      P      03 32 19.8 +0.3
BFZ   Birch Farm        74.07 131   P      P      03 32 19.1 +0.2
BFZ                                 IAmb   IAmb   03 32 21.2
      comp=Z,62nm,0.8s
BFZ   Birch Farm        74.07 131   P      P      03 32 20.1 +1.1
      comp=Z,87nm,0.8s
BKZ   Black Stump Fm    74.07 129   P      P      03 32 20.0 +0.9
      comp=Z,412nm,0.9s
GAZ   Gaziantep         74.08 311   IAmb   IAmb   03 32 20.4
      comp=Z,60nm,0.9s
PET   Petropavlovsk     74.31  31  eP      P      03 32 19.0 -1.0
PET                                 pmax   pmax
      comp=Z,93nm,0.8s
PET                                 MLR    MLR
      comp=Z,100nm,17.0s
PET   Petropavlovsk     74.31  31   P      P      03 32 19.3 -0.7
PET                                 IAmb   IAmb   03 32 19.9
      comp=Z,46nm,0.7s
URZ   Urewera           74.45 128   LR     LR     04 07 26.4
      comp=Z,148nm,19.6s,baz=211,slow=38
MA2   Magadan           74.57  23ceP      P      03 32 23.3 +1.9
MA2                                 pmax   pmax
      comp=Z,52nm,1.7s
MA2   Magadan           74.57  23   P      P      03 32 21.4 -0.1
MA2                                 IAmb   IAmb   03 32 23.2
      comp=Z,41nm,1.0s
SOC   Sochi             74.57 318  eP      P      03 32 20.8 -1.0
SOC                                e              03 35 08.0
SOC                                ePPP    PPP    03 36 49.7
SOC                                eS      S      03 41 54.0 +0.6
SOC                                eSS     SS     03 46 37.1 -4.3
SOC                                 pmax   pmax
      comp=Z,41nm,0.6s
NRIK  Noril'sk          74.94 354   P      P      03 32 22.6 -0.8
      comp=Z,39nm,0.4s,baz=136,slow=4.7,SNR=58
NRIK                                LR     LR     04 07 35.8
      comp=Z,230nm,21.7s,baz=162,slow=38
NRIK  Noril'sk          74.94 354ceP      P      03 32 22.4 -1.0
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NRIK                                pmax   pmax
      comp=Z,76nm,1.0s
NRIK  Noril'sk          74.94 354   P      P      03 32 22.5 -0.8
NRIK                                IAmb   IAmb   03 32 23.5
      comp=Z,98nm,1.1s
BNN   Bunyan            75.64 312   IAmb   IAmb   03 32 29.8
      comp=Z,58nm,0.8s
SYO   Syowa Base        76.02 199⇑eP      P      03 32 31.0 +1.4
SYO   Syowa Base        76.02 199⇑epP     pP     03 32 45.4 +1.4
KIRV  Kirov             76.35 334ceP      P      03 32 32.2 +0.6
VRH   Novokhopyorsk     76.47 325  eP      P      03 32 32.0 -0.5
VRH                                eS      S      03 42 09.2 -4.9
VRH                                 pmax   pmax
      comp=Z,160nm,0.6s
VRH                                 pmax   pmax
      comp=Z,160nm,0.7s
VRH                                 smax   smax
      comp=N,120nm,1.3s
LBTB  Lobatse           76.48 246   P      P      03 32 33.8 +0.5
LBTB                                pmax   pmax
      comp=Z,22nm,0.9s
LBTB  Lobatse           76.48 246   P      P      03 32 33.8 +0.5
LEF   Lefka             76.80 308 ⇑P      P      03 32 35.6 +0.9
BOSA  Boshof            76.86 242   P      P      03 32 36.9 +1.5
      comp=Z,3.7nm,0.7s,baz=98,slow=3.1,SNR=8.6
BOSA                                LR     LR     04 00 26.5
      comp=Z,242nm,19.8s,baz=106,slow=31
BOSA  Boshof            76.86 242   P      P      03 32 35.4  0.0
BOSA                                IAmb   IAmb   03 32 54.0
      comp=Z,30nm,0.9s
SEY   Seymchan          77.32  21   P      P      03 32 36.8 -0.2
      comp=Z,8.7nm,0.6s,baz=242,slow=6.2,SNR=32
BR131 Keskin Array S    77.54 312   P      P      03 32 38.5 -0.5
BR131                               pmax   pmax
      comp=Z,61nm,0.7s
BR131 Keskin Array S    77.54 312   P      P      03 32 38.5 -0.5
BR131                               IAmb   IAmb   03 32 40.0
      comp=Z,61nm,0.7s
BRTR  Keskin Array B    77.54 312   P      P      03 32 38.9 -0.1
      comp=Z,34nm,0.7s,baz=132,slow=7.1,SNR=118
BRTR                                LR     LR     04 09 57.3
      comp=Z,108nm,18.8s,baz=114,slow=38
VORD  Divnogorie        77.76 325  eP      P      03 32 39.0 -0.7
VORD                                pmax   pmax
      comp=Z,40nm,0.6s
VSR   Storozhevoye      77.94 325  eP      P      03 32 39.9 -0.8
VSR                                eS      S      03 42 24.9 -5.1
VSR                                 pmax   pmax
      comp=Z,100nm,0.6s
VSR                                 pmax   pmax
      comp=Z,90nm,0.5s
VSR                                 smax   smax
      comp=N,40nm,1.1s
BZK   Bozkurt           77.95 315 ⇓P      P      03 32 42.2 +1.2
RAO   Raoul Island      78.06 119   LR     LR     04 05 32.8
      comp=N,73nm,19.5s,baz=344,slow=34
VORR  Voronezh          78.10 325  eP      P      03 32 41.0 -0.6
VORR                                pmax   pmax
      comp=Z,300nm,1.2s
ANTO  Ankara            78.20 312   P      P      03 32 42.2 -0.4
ANTO                                pmax   pmax
      comp=Z,41nm,1.0s
ANTO  Ankara            78.20 312   P      P      03 32 42.1 -0.4
ANTO                                IAmb   IAmb   03 32 44.0
      comp=Z,41nm,0.9s
BR231 Keskin MP Arra    78.21 312   IAmb   IAmb   03 32 44.1
      comp=Z,37nm,0.9s
TIXI  Tiksi             78.36   8   P      P      03 32 40.7 -2.0
      baz=165,slow=3.8
TIXI  Tiksi             78.36   8 i P      P      03 32 40.7 -2.0
TIXI                                pmax   pmax
      comp=Z,22nm,0.7s
TIXI  Tiksi             78.36   8   P      P      03 32 40.6 -2.0
LPSR  Galich'ya Gora    78.63 326  eP      P      03 32 44.4 -0.1
LPSR                               eS      S      03 42 35.9 -1.5
LPSR                                pmax   pmax
      comp=Z,110nm,0.8s
LPSR                                pmax   pmax
      comp=Z,110nm,0.9s
LPSR                                smax   smax
      comp=N,20nm,1.5s
VNDA  Vanda             78.66 169   P      P      03 32 44.6 +0.3
VNDA                                pmax   pmax
      comp=Z,17nm,0.9s
VNDA  Vanda             78.66 169   P      P      03 32 44.6 +0.3
SIM   Simferopol'       78.82 318c iP      P      03 32 45.2 -0.5
SIM                                 pmax   pmax
      comp=Z,168nm,1.1s
MDUB  Mudurnu           79.55 313   P      P      03 32 49.8 -0.2
PRGR  Permogore         79.61 336  eP      P      03 32 49.9 +0.3
PRGR                                pmax   pmax
      comp=Z,355nm,0.8s
SBA   Scott Base        79.75 169   P      P      03 32 52.2 +2.0
SBA   Scott Base        79.75 169   P      P      03 32 52.1 +2.0
MOS   Moscow            80.60 329  eP      P      03 32 54.5 -0.6
MOS                                e*PP    pP     03 33 09.8  0.0
MOS                                eS      S      03 42 54.4 -3.6
MOS                                 pmax   pmax
      comp=Z,228nm,0.8s
MOS                                 pmax   pmax
      comp=Z,300nm,0.9s
SUR   Sutherland        80.74 238   P      P      03 32 56.2 -0.5
SUR                                 IAmb   IAmb   03 33 16.5
      comp=Z,37nm,0.9s
OBN   Obninsk           80.91 328 ⇓P      P      03 32 57.3 +0.5
OBN   Obninsk           80.91 328c iP      P      03 32 57.4 +0.6
OBN                                i              03 33 09.9
OBN                                i              03 36 01.4
OBN                                 pmax   pmax
      comp=Z,115nm,0.9s
OBN   Obninsk           80.91 328   P      P      03 32 56.8 +0.1
BALB  Balikesir         81.80 311   IAmb   IAmb   03 33 03.8
      comp=Z,74nm,1.0s
KLMR  Klimovskoe        81.82 334  eP      P      03 32 58.3 -3.2
KLMR                               e              03 36 03.8
KLMR                                pmax   pmax
      comp=Z,192nm,1.3s
KLMR  Klimovskoe        81.82 334  eP      P      03 32 58.4 -3.1
KLMR                                AMP           03 33 02.9
      comp=Z,192nm,1.3s
KLMR                               ePP     PP     03 36 03.8 -5.5
PURM  Purcari           82.12 318 ⇑P      P      03 33 04.3 +0.9
JURR  Jurilovca         82.33 316 ⇓P      P      03 33 05.6 +1.1
TLCR                    82.48 317 ⇓P      P      03 33 06.0 +0.7
TIRR  Tirgusor          82.57 316 ⇓P      P      03 33 06.8 +1.0
TIRR  Tirgusor          82.57 316   IAmb   IAmb   03 33 07.5
      comp=Z,58nm,0.7s
TPGR  Topolog           82.67 316 ⇓P      P      03 33 07.2 +0.9
TLBR  Topalu            82.85 316 ⇓P      P      03 33 08.3 +1.1
ICOR  Ion Corvin        82.92 315 ⇓P      P      03 33 09.0 +1.4
MILM  Milestii Mici     82.93 318 ⇑P      P      03 33 07.7 +0.2
CFR   Carcaliu          82.94 317 ⇑P      P      03 33 08.5 +0.8
HARR  Harsova           82.97 316 ⇓P      P      03 33 08.9 +1.1
SANT  Santorini         82.97 307 ⇓P      P      03 33 08.8 +0.6
SANT  Santorini         82.97 307   IAmb   IAmb   03 33 09.1
      comp=Z,62nm,0.7s
APE   Apeiranthos       83.05 308 ⇓P      P      03 33 09.4 +0.9
VLDR  Vladesti          83.15 317 ⇓P      P      03 33 10.1 +1.4
SCTR  Scanteiesti       83.16 317 ⇓P      P      03 33 10.0 +1.2
LEOM  Leova             83.19 318 ⇓P      P      03 33 10.3 +1.3
VARL  Varlezi           83.32 317 ⇑P      P      03 33 11.0 +1.4
RASA  Rasa              83.39 315 ⇓P      P      03 33 11.4 +1.4
VASR  Vaslui            83.54 318 ⇓P      P      03 33 11.8 +1.0
SORM  Soroca            83.54 319 ⇑P      P      03 33 11.2 +0.4
GHRR                    83.65 317 ⇑P      P      03 33 12.4 +1.0
AKASG Malin Array Be    83.67 322   P      P      03 33 11.2 -0.1
      comp=Z,25nm,0.7s,baz=85,slow=5.0,SNR=71
AKASG                               pP     pP     03 33 26.6 +0.5
      comp=Z,12nm,0.9s,baz=86,slow=4.9,SNR=4.8
AKASG                               PP     PP     03 36 21.7 -3.1
      comp=Z,3.5nm,0.8s,baz=91,slow=6.5,SNR=4.6
AKASG Malin Array Be    83.67 322   P      P      03 33 11.2 -0.1
AKBB  Malin Array Si    83.67 322ceP      P      03 33 11.2 -0.1
AKBB  Malin Array Si    83.67 322   IAmb   IAmb   03 33 12.3
      comp=Z,31nm,0.8s
RAZG  Razgrad           83.70 315 ⇓P      P      03 33 12.8 +1.1
ODBI  Odobesti          83.82 317 ⇓P      P      03 33 14.8 +2.6
IAS   Iasi              83.83 318 ⇓P      P      03 33 13.3 +1.1
ISR   Istrita           84.03 316 ⇓P      P      03 33 15.5 +2.2
TSUM  Tsumeb            84.05 251   P      P      03 33 13.1 -1.0
TSUM                                       pP     03 33 29.2 +0.4
VRI   Vrincioaia        84.07 317 ⇑P      P      03 33 15.1 +1.5
PLOR  Plostina          84.12 317 ⇑P      P      03 33 15.1 +1.3
NEHR  Nehoiu            84.27 316 ⇓P      P      03 33 16.1 +1.5
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TESR	Tescani	84.27	318	⇑P	P	03 33 15.8	+1.2
WIN	Windhoek	84.31	248	P	P	03 33 14.8	-0.7
WIN				pmax	pmax		
	comp=Z,26nm,0.9s						
WIN	Windhoek	84.31	248	P	P	03 33 14.8	-0.7
WIN				IAmb	IAmb	03 33 35.0	
	comp=Z,26nm,0.9s						
SECR		84.33	316	⇑P	P	03 33 16.1	+1.2
COVR	Voineasa-Covas	84.42	317	⇑P	P	03 33 16.2	+0.9
MLR	Muntele Rosu	84.52	316	⇑P	P	03 33 17.4	+1.4
MLR	Muntele Rosu	84.52	316	IAmb	IAmb	03 33 18.4	
	comp=Z,86nm,1.2s						
ZIMR		84.53	315	⇑P	P	03 33 16.4	+0.6
COPA	Copaceanca	84.73	315	⇓P	P	03 33 18.1	+1.2
PRAR	RASCA	84.75	318	⇑P	P	03 33 17.9	+0.9
OZUR		84.76	317	⇑P	P	03 33 18.1	+1.0
BILL	Bilibino	84.94	20	c iP	P	03 33 16.0	-1.4
BILL				i		03 36 36.7	
BILL				pmax	pmax		
	comp=Z,15nm,1.3s						
BILL	Bilibino	84.94	20	P	P	03 33 16.5	-0.9
QSPA	South Pole Qui	84.97	180	P	P	03 33 19.0	+1.1
DOPR	Dopca	85.00	317	⇓P	P	03 33 19.2	+1.0
VOIR		85.12	316	⇓P	P	03 33 19.5	+0.6
VLAD	Vladila	85.28	315	⇑P	P	03 33 20.7	+1.0
ARR	Arges	85.40	316	⇑P	P	03 33 21.1	+0.8
MNK	Minsk	85.47	326	i P	P	03 33 17.8	-2.5
MNK				i *PP	pP	03 33 32.4	-2.8
MNK				i *SP	sP	03 33 38.2	-2.7
MNK				i		03 36 36.6	
MNK				i PPP	PPP	03 38 30.1	
MNK				i S	SKSac	03 43 37.8	-3.2
MNK				pmax	pmax		
	comp=E,1.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,9.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,14nm,0.8s						
MNK				MLR	MLR		
	comp=E,27nm,20.0s						
MNK				MLR	MLR		
	comp=Z,143nm,20.0s						
MNK				MLR	MLR		
	comp=N,153nm,20.0s						
MNK	Minsk	85.47	326	i P	P	03 33 17.8	-2.5
	comp=E,1.0nm,0.8s						
MNK				i P	P	03 33 17.8	-2.5
	comp=N,9.0nm,0.8s						
MNK				i P	P	03 33 17.8	-2.5
	comp=Z,14nm,0.8s,baz=105						
MNK				i pP	pP	03 33 32.4	-2.8
MNK				i sP	sP	03 33 38.2	-2.6
MNK				i sP	sP	03 33 38.2	-2.6
MNK				i PP	PP	03 36 36.7	-2.6
MNK				i PPP	PPP	03 38 30.1	
MNK				i S	SKSac	03 43 37.9	-3.1
MNK				i sS	pS	03 44 03.8	-2.6
MNK				i SSS	SSS	03 53 30.8	
MNK				i LR	LR	04 06 27.3	
MNK				i LRM	MLR	04 13 55.6	
	comp=E,27nm,19.8s						
MNK				i LRM	MLR	04 14 48.7	
	comp=Z,143nm,19.7s						
MNK				i LRM	MLR	04 14 54.6	
	comp=N,153nm,19.7s						
BURAR	Bucovina Array	85.47	318	⇓P	P	03 33 22.5	+1.8
BURAR	Bucovina Array	85.47	318	IAmb	IAmb	03 33 23.3	
	comp=Z,44nm,0.7s						
BUR08	Bucovina Ar. S	85.49	318	P	P	03 33 21.5	+0.8
BUR08				IAmb	IAmb	03 33 23.5	
	comp=Z,31nm,0.8s						
PUL	Pulkovo	85.67	331	eP	P	03 33 22.6	+1.4
PUL	Pulkovo	85.67	331	ceP	P	03 33 21.4	+0.2
PUL				pmax	pmax		
	comp=Z,75nm,0.4s						
TGMR	Targu Mures	85.71	317	⇑P	P	03 33 23.9	+2.2
VTS	Vitosha	85.85	313	⇑P	P	03 33 23.7	+0.9
VTS	Vitosha	85.85	313	IAmb	IAmb	03 33 24.5	
	comp=Z,28nm,0.8s						
ARCR	ARCALIA	85.94	318	⇓P	P	03 33 24.8	+2.0
LOT	Lotru	86.01	316	⇓P	P	03 33 24.2	+0.8
BAIL	Bailesti	86.03	315	⇓P	P	03 33 25.2	+1.8
NACGM	Naroch	86.19	326	i P	P	03 33 24.4	+0.5
CJR	Cluj-Napoca	86.37	317	⇓P	P	03 33 27.4	+2.3
BOSS	Bosilegrad	86.38	313	eP	P	03 33 26.1	+0.9
ZAPS	Zavoj	86.41	314	eP	P	03 33 26.5	+1.2
STIP	Stip	86.46	312	i P	P	03 33 25.0	-0.5
IIGN	Ignalina	86.61	326	eP	P	03 33 27.4	+1.4
LVZ	Lovozero	86.62	339	ceP	P	03 33 25.9	+0.1
LVZ				pmax	pmax		
	comp=Z,66nm,0.8s						
LVZ	Lovozero	86.62	339	P	P	03 33 24.7	-1.1
BMR	Baia Mare	86.62	318	⇑P	P	03 33 28.2	+2.0
LVV	L'vov	86.70	320	eP	P	03 33 26.7	+0.2
LVV				e		03 36 52.8	
LVV				pmax	pmax		
	comp=Z,70nm,1.1s						
ISAL	Salakas	86.72	326	eP	P	03 33 27.8	+1.4
ZAGS	Zajecar	86.79	314	eP	P	03 33 27.1	0.0
HERR	Herculane	86.84	315	⇑P	P	03 33 28.5	+1.2
MESR	Meseseni	86.89	318	⇑P	P	03 33 28.7	+1.1
BARS	Barje	86.92	313	eP	P	03 33 27.9	+0.1
DRGR		86.98	317	⇑P	P	03 33 29.4	+1.3
VSU	Vasula	87.09	329	eP	P	03 33 29.4	+1.2
BOVS	Bovan	87.13	314	⇑P	P	03 33 29.0	+0.2
MDVR	Moldovita	87.32	315	⇑P	P	03 33 30.9	+1.2
TRPA	Tarpa	87.34	319	⇑P	P	03 33 30.6	+1.0
SELS	Selova	87.49	314	eP	P	03 33 31.0	+0.5
BZS	Buzias	87.53	316	⇓P	P	03 33 31.7	+1.1
UZH	Uzhgorod	87.59	319	eP	P	03 33 31.5	+0.6
UZH				e		03 33 48.5	
SIRR	Siria	87.61	317	⇑P	P	03 33 32.4	+1.4
KOLS	Kolonicke sedl	87.66	319	eP	P	03 33 32.8	+1.6
KOLS				pmax	pmax		
	comp=Z,99nm,1.0s						
KOLS	Kolonicke sedl	87.66	319	eP	P	03 33 32.8	+1.6
GRUS	Gruza	87.88	314	eP	P	03 33 33.6	+1.2
SUW	Suwalki	88.05	324	eP	P	03 33 33.3	+0.4
SUW	Suwalki	88.05	324	eP	P	03 33 33.8	+0.9
TIR	Tirane	88.12	312	⇓P	P	03 33 35.9	+2.4
FINES	FINESS Array B	88.14	332	P	P	03 33 34.0	+0.8
	comp=Z,46nm,0.7s,baz=108,slow=5.1,SNR=165						
FINES	FINESS Array B	88.14	332	ceP	P	03 33 34.0	+0.8
FINES				pmax	pmax		
	comp=Z,46nm,0.7s						
FINES	FINESS Array B	88.14	332	P	P	03 33 33.4	+0.2
TRUS	Trudelj	88.15	314	eP	P	03 33 34.6	+0.9
CRVS	Cervenica-Dubn	88.18	319	eP	P	03 33 34.9	+1.2
CRVS	Cervenica-Dubn	88.18	319	eP	P	03 33 34.9	+1.2
IVAS	Ivanjica	88.24	314	eP	P	03 33 34.7	+0.5
DIVS	Divibare	88.43	314	⇑iP	P	03 33 36.2	+1.1
DIVS	Divibare	88.43	314	IAmb	IAmb	03 33 37.5	
	comp=Z,51nm,1.3s						
DIVS	Divibare	88.43	314	eP	P	03 33 36.2	+1.1
MTSE	Matsula	88.64	329	eP	P	03 33 36.4	+0.8
FRGS	Fruska Gora	88.71	315	⇓P	P	03 33 37.4	+1.1
FRGS	Fruska Gora	88.71	315	⇑iP	P	03 33 36.9	+0.6
FRGS	Fruska Gora	88.71	315	eP	P	03 33 37.1	+0.8
PDG	Podgorica	88.73	313	⇓P	P	03 33 36.8	+0.5
PDG	Podgorica	88.73	313	⇑iP	P	03 33 36.9	+0.5
PDG	Podgorica	88.73	313	IAmb	IAmb	03 33 38.2	
	comp=Z,47nm,0.9s						
DRME	Dracevica, Mon	88.74	312	⇑iP	P	03 33 37.0	+0.5
KECS	Kecovo	88.75	319	eP	P	03 33 37.7	+1.3
KECS				pmax	pmax		
	comp=Z,12nm,0.7s						
KECS	Kecovo	88.75	319	eP	P	03 33 37.6	+1.2
RUDO	Rudo	88.81	314	⇑iP	P	03 33 37.4	+0.6
BBLS	Lazići	88.82	314	⇑iP	P	03 33 38.2	+1.3
BBLS	Lazići	88.82	314	eP	P	03 33 37.8	+0.9
TEKS	Tekeris	88.82	315	⇑iP	P	03 33 37.1	+0.3
PSZ	Piszkesteto	89.06	318	eP	P	03 33 37.7	-0.3
PSZ	Piszkesteto	89.06	318	IAmb	IAmb	03 33 39.6	
	comp=Z,16nm,0.7s						
BEL	Belsk	89.09	322	eP	P	03 33 38.9	+1.1
HCY	Herceg Novi	89.29	313	eP	P	03 33 39.7	+0.7
TREB	Trebinje	89.43	313	eP	P	03 33 40.1	+0.4
OJC	Ojcow	89.46	320	IAmb	IAmb	03 33 41.9	
	comp=Z,27nm,1.3s						
LANS	Liptovska Anna	89.52	319	eP	P	03 33 41.2	+1.2
LANS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LANS	Liptovska Anna	89.52	319	eP	P	03 33 41.2	+1.2
MORH	Mrgy, Hungar	89.67	316	⇑iP	P	03 33 41.7	+1.0
VYHS	Vyhne	89.84	319	eP	P	03 33 42.5	+1.0
VYHS				pmax	pmax		
	comp=Z,31nm,1.5s						
VYHS	Vyhne	89.84	319	eP	P	03 33 42.5	+1.0
KEV	Kevo	89.84	340	P	P	03 33 40.3	-0.7
KEV				pmax	pmax		
	comp=Z,51nm,0.9s						
KEV	Kevo	89.84	340	P	P	03 33 40.3	-0.7
STON	Ston	89.92	313	⇑iP	P	03 33 42.2	+0.3
KOVH	Kovagotottos	90.03	316	eP	P	03 33 42.2	-0.2
CSKK	Cskako	90.08	317	eP	P	03 33 42.4	-0.2
SRO	Srobarova	90.10	318	eP	P	03 33 44.5	+1.8
SRO				pmax	pmax		
	comp=Z,28nm,1.0s						
SRO	Srobarova	90.10	318	eP	P	03 33 44.5	+1.8
KOLL	Kolacno	90.14	319	eP	P	03 33 44.3	+1.4
TIP	Timpagrande	90.21	309	⇑P	P	03 33 44.8	+1.2
TIP	Timpagrande	90.21	309	IAmb	IAmb	03 34 05.5	
	comp=Z,20nm,1.0s						
SNAA	Sanae	90.22	198	P	P	03 33 44.9	+2.0
SNAA	Sanae	90.22	198	P	P	03 33 44.0	+1.1
SNAA				pmax	pmax		
	comp=Z,25nm,1.1s						
SNAA	Sanae	90.22	198	P	P	03 33 44.0	+1.1
SNAA				IAmb	IAmb	03 34 02.9	
	comp=Z,25nm,1.1s						
TIH	Tihany	90.27	317	eP	P	03 33 45.1	+1.6
ARA0	ARCESS Array S	90.30	340	eP	P	03 33 43.8	+0.6
ARCES	ARCESS Array B	90.30	340	P	P	03 33 43.4	+0.2
	comp=Z,38nm,0.7s,baz=106,slow=5.5,SNR=139						
ARCES				LR	LR	04 22 17.8	
	comp=Z,161nm,18.2s,baz=250,slow=41						
BLY	Banja Luka	90.51	315	⇑iP	P	03 33 46.1	+1.4
MPLH	Magyarpolny	90.54	317	eP	P	03 33 45.3	+0.5
MGRS	Mrkonjic Grad	90.54	314	⇑iP	P	03 33 45.9	+1.0
JAVC	Velka Javorina	90.65	319	eP	P	03 33 47.1	+1.8
EGYH	Egyhazaskeszo	90.71	317	eP	P	03 33 46.6	+1.1
SMOL	Smolenice	90.77	318	eP	P	03 33 46.9	+1.1
SMOL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SMOL	Smolenice	90.77	318	eP	P	03 33 46.9	+1.1
AAL	Aland	90.82	330	eP	P	03 33 47.1	+1.3
MORC	Moravsky Berou	90.84	320	eP	P	03 33 47.3	+1.1
MORC	Moravsky Berou	90.84	320	IAmb	IAmb	03 33 48.6	
	comp=Z,17nm,0.9s						
MODS	Modra-Piesok	90.86	318	eP	P	03 33 46.5	+0.3
MODS				pmax	pmax		
	comp=Z,36nm,1.3s						
MODS	Modra-Piesok	90.86	318	eP	P	03 33 46.5	+0.3
ZST	Bratislava	90.95	318	eP	P	03 33 48.0	+1.3
ZST	Bratislava	90.95	318	eP	P	03 33 48.0	+1.3
KTK1	Kautokeino	90.97	339	eP	P	03 33 46.5	+0.2
HAMF	Hammerfest	91.15	341	eP	P	03 33 46.7	-0.4
KOGS	Kog	91.34	316	i P	P	03 33 49.8	+1.3
KRLC	Kraliky	91.36	320	eP	P	03 33 50.2	+1.6
KRLC				e		03 34 07.0	
KRLC	Kraliky	91.36	320	eP	P	03 33 50.2	+1.6
KRLC				ex	x	03 34 07.0	
VRAC	Vranov	91.41	319	eP	P	03 33 49.1	+0.3
KRUC	Moravsky	91.51	319	eP	P	03 33 49.7	+0.5
DPC	Dobruska-Polom	91.69	320	eP	P	03 33 51.5	+1.4
DPC	Dobruska-Polom	91.69	320	eP	P	03 33 51.5	+1.4
GOLS	Golise	91.73	316	i P	P	03 33 51.9	+1.5
CONA	Conrad Observa	91.75	318	eP	P	03 33 51.1	+0.6
	comp=Z,1.8nm,0.7s						
KSP	Ksiaz	91.75	321	eP	P	03 33 51.6	+1.3
OSTC	Ostas	91.78	320	eP	P	03 33 52.0	+1.5
CRES	Cresnjev	91.83	316	⇑iP	P	03 33 51.9	+1.1
VNA2	Neumayer--Watz	91.85	198	P	P	03 33 53.1	+2.7
CHVC	Chvalec	91.88	320	eP	P	03 33 52.4	+1.4
ARSA	Arzberg	91.92	317	i P	P	03 33 52.0	+0.8
	comp=Z,5.0nm,0.7s,SNR=5.0						
BOJS	Bojanci	91.95	315	i P	P	03 33 52.5	+1.1
UPP	Uppsala	91.96	330	eP	P	03 33 51.4	+0.4
JETT	Jettan, Norway	92.06	340	eP	P	03 33 52.5	+1.1
TREC	Trest	92.13	319	eP	P	03 33 53.2	+1.1
TREC	Trest	92.13	319	eP	P	03 33 53.2	+1.1
SOKA	Soboth	92.20	316	i P	P	03 33 53.6	+1.0
	comp=Z,8.6nm,0.8s,SNR=12						
GAMB	Gambell	92.38	26	P	P	03 33 53.0	+0.1
	baz=264						
VNA3	Neumayer Olymp	92.42	197	P	P	03 33 57.2	+4.1
LJU	Ljubljana	92.50	316	i P	P	03 33 55.2	+1.4
LJU	Ljubljana	92.50	316	⇑iP	P	03 33 55.1	+1.2
OBKA	Obir	92.52	316	i P	P	03 33 55.1	+1.1
	comp=Z,3.9nm,0.8s,SNR=4.4						
TRO	Tromso	92.58	340	eP	P	03 33 53.7	0.0
PRU	Pruhonice	92.80	320	eP	P	03 33 56.4	+1.2
PRU	Pruhonice	92.80	320	eP	P	03 33 56.4	+1.2
MOA	Molln	92.81	318	eP	P	03 33 56.4	+1.1
	comp=Z,1.9nm,0.5s						
NIKH	Nikolski High	92.84	37	P	P	03 33 55.0	-0.3
	baz=266						
CKRC	Cesky Krumlov	92.86	319	eP	P	03 33 57.4	+1.9
PRED	Cave del Predi	93.19	316	IAmb	IAmb	03 33 58.9	
	comp=Z,17nm,0.9s						
BRG	Berggiesshubel	93.24	321	eP	P	03 33 58.2	+1.0
	comp=Z,15nm,0.8s,baz=91,slow=4.5						
BRG	Berggiesshubel	93.24	321	i P	P	03 33 58.5	+1.4
BRG				Amp		03 33 59.8	
	comp=Z,12nm,0.8s						
GEC2	GERESS Array S	93.26	319	eP	P	03 33 58.4	+0.9
	comp=Z,9.7nm,0.9s,baz=91,slow=4.5						
GERES	GERESS Array B	93.26	319	P	P	03 33 58.6	+1.1
	comp=Z,4.4nm,0.7s,baz=94,slow=4.0,SNR=35						
GERES				PP	PP	03 37 42.1	+0.5
	comp=Z,1.3nm,0.9s,baz=96,slow=6.7,SNR=5.1						
GERES				LR	LR	04 21 51.6	
	comp=Z,47nm,18.4s,baz=63,slow=39						
GERES	GERESS Array B	93.26	319	P	P	03 33 57.2	-0.2
KHC	Kasperske Hory	93.36	319	eP	P	03 33 58.8	+1.0
KHC				e		03 34 14.9	
KHC	Kasperske Hory	93.36	319	eP	P	03 33 58.8	+1.0
KHC				epP	pP	03 34 14.9	+2.1
KBA	Koelnbreinsper	93.39	317	i P	P	03 33 58.2	0.0
	comp=Z,1.5nm,0.6s						
RUE	Ruedersdorf	93.45	322	eP	P	03 33 59.0	+1.0
	comp=Z,31nm,1.3s,baz=91,slow=4.5						
FBE	Freiberg	93.62	321	eP	P	03 34 00.2	+1.3
	comp=Z,14nm,0.8s,baz=91,slow=4.5						
FAUS	Fauske	93.70	337	eP	P	03 33 59.4	+0.5
STEI	Steigen	93.75	338	eP	P	03 33 59.3	+0.2
STAL	STALIGIAL	93.77	316	IAmb	IAmb	03 34 01.4	
	comp=Z,28nm,1.1s						
WET	Wettzell	93.82	319	eP	P	03 34 00.9	+1.0
	comp=Z,13nm,1.0s,baz=91,slow=4.5						
CLL	Collm	93.86	321	eP	P	03 34 00.0	0.0
CLL	Collm	93.86	321	eP	P	03 34 00.0	0.0
CLL				e(PP)		03 37 39.0	
ABTA	Abfaltersbach	93.94	316	eP	P	03 34 01.2	+0.6
	comp=Z,2.7nm,0.9s						
MOR8	Moi Rana	93.95	336	eP	P	03 33 59.8	-0.4
CIMO	Cimolais	93.96	316	IAmb	IAmb	03 34 02.4	
	comp=Z,28nm,1.2s						
NKC	Novy Kostel	94.16	320	eP	P	03 34 02.6	+1.1
NKC	Novy Kostel	94.16	320	eP	P	03 34 02.6	+1.1
TANN	Tannenbergstha	94.16	320	eP	P	03 34 02.4	+0.9
	comp=Z,11nm,1.2s,baz=91,slow=4.5						
SPA0	Spitsbergen Ar	94.17	348	eP	P	03 34 00.1	-0.8
WERN	Wernitzgruen	94.20	320	eP	P	03 34 02.8	+1.1
	comp=Z,5.8nm,1.0s,baz=91,slow=4.5						
GUNZ	Gunzen	94.24	320	eP	P	03 34 02.9	+1.0
	comp=Z,7.4nm,0.9s,baz=91,slow=4.5						
WERD	Werda	94.26	320	eP	P	03 34 02.9	+1.0
	comp=Z,12nm,0.8s,baz=91,slow=4.5						
ROTZ	Rotzenmuhle	94.29	319	eP	P	03 34 03.2	+1.1
	comp=Z,2.0nm,0.9s,baz=91,slow=4.5						
PLN	Plauen	94.35	320	eP	P	03 34 03.2	+0.9
	comp=Z,8.4nm,0.9s,baz=91,slow=4.5						
MANZ	Manzenberg	94.36	320	eP	P	03 34 03.8	+1.3
	comp=Z,2.9nm,0.9s,baz=91,slow=4.5						
LOF	Lofoten	94.40	338	⇑eP	P	03 34 03.3	+1.2
CTI	Castel Tesino	94.50	316	IAmb	IAmb	03 34 05.3	
	comp=Z,15nm,1.0s						
WTTA	Wattenberg	94.56	317	i P	P	03 34 04.1	+0.5
	comp=Z,13nm,1.3s						
WATA	Walderalm	94.60	317	eP	P	03 34 03.8	+0.1
	comp=Z,4.0nm,0.6s						
NEUB	Neuenburg	94.63	321	eP	P	03 34 04.2	+0.6
	comp=Z,32nm,1.0s,baz=91,slow=4.5						
MOX	Moxa	94.71	320	eP	P	03 34 04.8	+0.8
	comp=Z,8.9nm,1.4s,baz=91,slow=4.5						
SQTA	Sankt Quirin	94.85	317	i P	P	03 34 05.2	+0.3
	comp=Z,4.4nm,0.5s,SNR=4.6						
ZCCA	Zocca	94.90	314	IAmb	IAmb	03 34 14.9	
	comp=Z,25nm,1.2s						
MOTA	Moosalm	94.92	317	eP	P	03 34 05.4	+0.1
	comp=Z,1.6nm,0.5s						
GRF	Grafenberg Arr	94.93	319	eP	P	03 34 05.9	+1.0
	comp=Z,14nm,0.9s,baz=91,slow=4.5						
GRF				epP	pP	03 34 22.2	+2.2
NC602	NORSAR Array S	95.04	330	eP	P	03 34 05.8	+0.6
RETA	Reutte	95.16	317	i P	P	03 34 06.5	+0.3
	comp=Z,3.9nm,0.6s,SNR=4.4						
NB2	NORSAR Subarra	95.20	331	P	P	03 34 05.9	-0.1
	comp=Z,2.7nm,0.7s,baz=92,slow=4.6						
NB2	NORSAR Subarra	95.20	331	P	P	03 34 05.9	-0.1
	baz=92,slow=4.6						
NOA	NORSAR Array B	95.20	331	P	P	03 34 05.2	-0.8
	comp=Z,4.6nm,0.8s,baz=95,slow=5.0,SNR=12						
NOA				PP	PP	03 37 58.4	+2.0
	comp=Z,1.4nm,0.8s,baz=101,slow=7.0,SNR=3.6						
NOA				LR	LR	04 21 31.0	
	comp=Z,65nm,18.5s,baz=95,slow=38						
DAVA	Damuels	95.75	317	eP	P	03 34 09.0	0.0
	comp=Z,12nm,1.2s						
KEST	Kesra	95.85	305	P	P	03 34 11.0	+1.4
	comp=Z,7.3nm,0.9s,baz=216,slow=5.9,SNR=5.8						
DOMB	Dombas	96.23	332	eP	P	03 34 11.7	+1.0
TNS	Taunus Mts	96.72	320	eP	P	03 34 14.1	+0.9
	comp=Z,15nm,1.0s,baz=91,slow=4.5						
A21K	Barrow	98.05	19	P	P	03 34 18.0	-0.6
A21K	Barrow	98.05	19	P	P	03 34 18.1	-0.5
	baz=278						
TTA	Tatalina	99.44	27	P	Pdif	03 34 24.9	-0.2
	baz=278						
IMAR	Indian Mountai	99.94	24	Pdif	Pdif	03 34 26.7	-0.5
L19K	White Mountain	100.08	28	P	Pdif	03 34 28.5	+0.6
	baz=278						
J20K	Nowinta River	100.08	26	P	Pdif	03 34 28.1	+0.2
	baz=280						
K20K	Telida	100.25	27	P	Pdif	03 34 29.2	+0.5
	baz=279						
M19K	Big River Lodg	100.33	28	P	Pdif	03 34 28.4	-0.7
	baz=279						
H21K	Melozitna Rive	100.38	24	P	Pdif	03 34 29.4	+0.2
	baz=281						
N19K	Bonanza Creek	100.45	29	P	Pdif	03 34 29.6	-0.1
	baz=279						
L20K	Farewell, AK	100.48	27	P	Pdif	03 34 30.2	+0.5
	baz=280						
CHIR	Chirikof Islan	100.52	34	P	Pdif	03 34 30.4	+0.4
	baz=277						
I21K	Tanana	100.81	25	P	Pdif	03 34 31.7	+0.7
	baz=282						
CHUM	Lake Minchumin	100.93	26	P	Pdif	03 34 32.0	+0.4
	baz=281						
TOLK	Toolik Lake Re	100.95	21	Pdif	Pdif	03 34 31.5	-0.2
TOLK	Toolik Lake Re	100.95	21	P	Pdif	03 34 31.9	+0.1
	baz=285						
COLD	Coldfoot	101.07	22	P	Pdif	03 34 32.5	+0.3
	baz=284						
PPLA	Purkeypile	101.17	27	P	Pdif	03 34 33.2	+0.3
	baz=281						
SII	Sitkinak Islan	101.22	33	P	Pdif	03 34 34.2	+1.1
	baz=278						
P19K	Oil Pt	101.25	30	P	Pdif	03 34 34.1	+0.8
	baz=280						
MLY	Manley	101.36	25	P	Pdif	03 34 34.0	+0.4
	baz=283						
TRF	Thorofare Moun	101.90	26	P	Pdif	03 34 36.5	+0.2
	baz=283						
TORD	Torodi Ar. Bea	102.10	282	PKKPbc	PKKPbc	03 50 42.6	+1.3
	comp=Z,1.4nm,0.9s,baz=318,slow=2.5,SNR=6.3						
H24K	Noodor Dome	102.32	23	P	Pdif	03 34 39.0	+1.1
	baz=286						
M22K	Willow	102.35	28	P	Pdif	03 34 38.3	+0.4
	baz=283						
MCK	McKinley	102.42	26	P	Pdif	03 34 38.2	-0.2
	baz=284						
ILAR	Eielson Array	103.02	24	P	Pdif	03 34 39.4	-1.5
	comp=Z,0.6nm,0.7s,baz=286,slow=4.1,SNR=7.0						
ILAR				PP	PP	03 38 54.9	-0.8
	comp=Z,1.0nm,0.8s,baz=290,slow=7.6,SNR=6.6						
BMAR	Burnt Mountain	103.10	21	Pdif	Pdif	03 34 42.1	+0.8
SML	Sawmill	103.17	28	P	Pdif	03 34 41.4	-0.4
	baz=284						
KNK	Knik Glacier	103.20	28	P	Pdif	03 34 42.0	+0.1
	baz=284						
PAX	Paxson	104.14	26	P	Pdif	03 34 46.1	0.0
	baz=287						
RIDG	Independent Ri	104.17	25	P	Pdif	03 34 46.5	+0.3
	baz=288						
KLU	Klutina	104.36	28	P	Pdif	03 34 47.7	+0.6
	baz=286						
HARP	HAARP	104.44	27	P	Pdif	03 34 47.8	+0.4
	baz=287						
SCRK	Sand Creek	104.46	25	P	Pdif	03 34 48.6	+1.1
	baz=289						
EYAK	Cordova Ski Ar	104.71	28	P	Pdif	03 34 50.0	+1.5
	baz=286						
Q23K	Middleton Isla	104.72	30	P	Pdif	03 34 49.9	+1.3
	baz=286						
N25K	Chitina, Valde	104.93	27	P	PKiKP	03 39 05.7	+1.3
	baz=288						
PPT2	Papeete2	104.99	110	eLR	LR	04 09 32.7	
	comp=Z,160nm,23.5s						
L26K	Log Cabin Wild	105.04	26	P	PKiKP	03 39 05.6	+1.2
	baz=289						
BMRM	Bremner River	105.12	28	P	PKiKP	03 39 05.9	+1.3
	baz=288						
KAIM	Kayak Island	105.52	29	P	PKiKP	03 39 06.2	+0.9
	baz=287						
DAWY	Dawson	106.32	24	P	PKiKP	03 39 07.0	+0.2
	baz=293						
INK	Inuvik	106.55	19	Pdiff	Pdif	03 34 55.0	-1.5
	comp=Z,0.8nm,0.7s,baz=311,slow=4.9,SNR=4.2						
INK				PKiKP	PKiKP	03 39 06.7	-0.3
	comp=Z,4.3nm,1.1s,baz=326,slow=1.0,SNR=8.5						
INK	Inuvik	106.55	19	P	PKiKP	03 39 07.5	+0.5
	baz=300						
RES	Resolute Bay	109.60	5	PKiKP	PKiKP	03 39 13.0	+0.5
	comp=Z,1.7nm,0.8s,baz=230,slow=1.2,SNR=3.8						
DLBC	Dease Lake	112.89	27	PKiKP	PKiKP	03 39 19.8	+0.4
	comp=Z,1.1nm,0.6s,baz=246,slow=2.5,SNR=3.4						
TAOE	Nuku Hiva Isla	115.57	102	eLR	LR	04 14 24.6	
	comp=Z,87nm,23.9s						
YKA	Yellowknife Ar	116.31	18	PKP	PKPdf	03 39 24.8	-0.9
	comp=Z,4.0nm,0.8s,baz=354,slow=1.8,SNR=12						
YKA	Yellowknife Ar	116.31	18		PKPdf	03 39 25.1	-0.5
D03D	Eldon	122.14	35	P	PKPdf	03 39 37.3	0.0
	baz=302						
B05A	Bryant	122.31	34	P	PKiKP	03 39 38.4	+0.6
	baz=304						
E04D	Cinebar	122.96	36	P	PKiKP	03 39 39.2	+0.1
	baz=302						
G03D	McMinnville, O	123.25	38	P	PKiKP	03 39 39.9	+0.1
	baz=301						
LTY	Liberty	123.67	34		PKPdf	03 39 39.7	-0.7
J01E	Myrtle Point	123.85	40	P	PKiKP	03 39 41.2	+0.2
	baz=299						
H04D	Lebanon	123.92	38	P	PKiKP	03 39 41.5	+0.4
	baz=301						
I03D	Drain, OR	123.95	39	P	PKPdf	03 39 41.0	+0.1
	baz=300						
K02D	Willamette Mer	124.24	40	P	PKPdf	03 39 41.8	+0.1
	baz=299						
G05D	Wamic, OR	124.40	37	P	PKiKP	03 39 42.2	+0.1
	baz=303						
I04A	Tendick Farm,	124.49	39	P	PKPdf	03 39 42.1	+0.1
	baz=301						
HAWA	Hanford	124.80	35	PKPdf	PKiKP	03 39 43.2	+0.4
I05D	Terrebonne, OR	124.87	38	P	PKiKP	03 39 43.3	+0.2
	baz=302						
J04D	Umpqua Nationa	124.97	39	P	PKiKP	03 39 43.7	+0.2
	baz=301						
NEW	Newport	125.00	32	PKIKP	PKPdf	03 39 42.5	-0.4
NEW	Newport	125.00	32	PKPdf	PKPdf	03 39 42.5	-0.4
NEW	Newport	125.00	32	P	PKiKP	03 39 43.4	+0.2
	baz=309						
L04D	Klamath Falls	125.35	40	P	PKiKP	03 39 44.1	-0.1
	baz=300						
M02C	Callahan	125.40	41	P	PKiKP	03 39 44.1	-0.2
	baz=299						
J05D	Fort Rock, OR	125.49	39	P	PKiKP	03 39 44.7	+0.2
	baz=302						
N02D	Trinity Center	125.70	42	P	PKiKP	03 39 45.6	+0.7
	baz=299						
M04C	Macdoel	125.87	41	P	PKiKP	03 39 45.7	+0.4
	baz=300						
O02D	Mt. Diablo Mer	126.02	43	P	PKiKP	03 39 46.1	+0.5

	baz=298						
FFC	**Flin Flon**	**126.48**	**18**	PKIKP	**PKPdf**	**03 39 45.1**	**-0.4**
FFC	**Flin Flon**	**126.48**	**18**	PKPdf	**PKPdf**	**03 39 45.0**	**-0.4**
O03E	**Paynes Creek**	**126.63**	**42**	P	**PKiKP**	**03 39 46.6**	**-0.2**
	baz=299						
PLID	**Pearl Lake**	**127.57**	**34**	PKPdf	**PKPdf**	**03 39 47.1**	**-1.0**
MSO	**Missoula**	**127.58**	**31**	P	**PKiKP**	**03 39 48.3**	**-0.2**
	baz=311						
CMB	**Columbia Colle**	**128.68**	**44**	PKIKP	**PKiKP**	**03 39 50.6**	**-0.3**
CMB	**Columbia Colle**	**128.68**	**44**		**PKiKP**	**03 39 50.6**	**-0.3**
EGMT	**Eagleton**	**128.81**	**28**	P	**PKiKP**	**03 39 50.9**	**0.0**
	baz=316						
HLID	**Hailey**	**129.41**	**35**	P	**PKiKP**	**03 39 53.0**	**+0.6**
	baz=309						
BOZ	**Bozeman (W)**	**129.59**	**31**	P	**PKiKP**	**03 39 52.9**	**+0.2**
	baz=313						
SCHQ	**Schefferville**	**129.64**	**352**	PKP	**PKiKP**	**03 39 52.0**	**-0.3**
	comp=Z,9.3nm,0.8s,baz=326,slow=1.2,SNR=16						
RYN	**Ryan**	**129.66**	**42**	PKPdf	**PKiKP**	**03 39 54.6**	**+1.6**
NVAR	**Mina Array Bea**	**129.91**	**43**	PKP	**PKiKP**	**03 39 53.8**	**+0.3**
	comp=Z,7.0nm,0.8s,baz=296,slow=1.9,SNR=23						
NVAR				SKPbc	SKPab	03 43 10.4	-0.3
	comp=Z,1.5nm,0.6s,baz=266,slow=3.8,SNR=6.9						
YMR	**Madison River**	**130.57**	**32**	PKPdf	**PKiKP**	**03 39 55.2**	**+0.5**
VES	**Vestal, Richgr**	**130.64**	**46**	P	**PKiKP**	**03 39 54.6**	**-0.2**
	baz=298						
DGMT	**Dagmar**	**130.88**	**24**	P	**PKiKP**	**03 39 55.2**	**+0.3**
	baz=323						
CWC	**Cottonwood Cre**	**131.06**	**45**	P	**PKiKP**	**03 39 56.1**	**+0.2**
	baz=300						
RLMT	**Red Lodge**	**131.12**	**30**	P	**PKiKP**	**03 39 55.5**	**-0.3**
	baz=315						
ISA	**Isabella, Lake**	**131.17**	**46**	P	**PKiKP**	**03 39 55.7**	**-0.3**
	baz=299						
LAO	**LASA Array**	**131.41**	**27**		**PKiKP**	**03 39 56.0**	**-0.1**
LAO	**LASA Array**	**131.41**	**27**	P	**PKiKP**	**03 39 56.5**	**+0.3**
	baz=320						
MPMC	**Manual Prospec**	**131.67**	**45**	P	**PKiKP**	**03 39 57.1**	**-0.1**
	baz=300,SNR=8.8						
R11A	**Troy Canyon, C**	**131.75**	**41**	P	**PKiKP**	**03 39 57.4**	**+0.2**
	baz=304						
EDW2	**Edwards Air Fo**	**131.88**	**46**	P	**PKiKP**	**03 39 57.4**	**0.0**
	baz=299						
FURC	**Furnace Creek,**	**131.90**	**44**	P	**PKiKP**	**03 39 57.6**	**+0.3**
	baz=301						
ULM	**Lac du Bonnet**	**132.20**	**16**	PKP	**PKPdf**	**03 39 56.1**	**-0.3**
	comp=Z,12nm,0.7s,baz=341,slow=3.6,SNR=16						
ULM				SKPbc	**SKPbc**	**03 43 17.1**	**-1.6**
	comp=Z,4.3nm,0.6s,baz=325,slow=6.7,SNR=4.5						
ULM	**Lac du Bonnet**	**132.20**	**16**	PKPdf	**PKPdf**	**03 39 56.3**	**-0.2**
DUG	**Dugway, Tooele**	**132.43**	**37**	P	**PKiKP**	**03 39 59.2**	**+0.7**
	baz=308						
GSC	**Goldstone, Bar**	**132.53**	**45**	P	**PKiKP**	**03 39 59.2**	**+0.4**
	baz=300,SNR=7.1						
BW06	**Boulder Array**	**132.61**	**33**	P	**PKiKP**	**03 39 58.9**	**0.0**
	baz=313						
PD31	**Pinedale Array**	**132.61**	**33**		**PKPdf**	**03 39 56.0**	**-1.8**
PDAR	**Pinedale Array**	**132.61**	**33**	PKhKP	PKPpre	03 39 46.3	
	comp=Z,0.9nm,0.7s,baz=347,slow=3.2,SNR=8.5						
PDAR				PKP	**PKPdf**	**03 39 57.6**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=155,slow=1.5,SNR=13						
PDAR				SKPbc	**SKPbc**	**03 43 19.9**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=297,slow=1.3,SNR=6.4						
MURC	**Murrieta**	**133.08**	**48**	P	**PKiKP**	**03 39 59.7**	**-0.1**
	baz=298						
HEC	**Hector,Ludlow**	**133.10**	**46**	P	**PKiKP**	**03 39 60.0**	**+0.1**
	baz=300						
MDND	**Maddock**	**133.13**	**21**	P	**PKiKP**	**03 39 59.3**	**-0.2**
	baz=329						
109C	**Camp Elliot, M**	**133.48**	**48**	P	**PKiKP**	**03 40 00.8**	**+0.2**
	baz=298						
GMRC	**Granite Mounta**	**133.60**	**45**	P	**PKiKP**	**03 40 01.2**	**+0.2**
	baz=301,SNR=22						
PFO	**Pinyon Flats O**	**133.61**	**47**	P	**PKiKP**	**03 40 00.8**	**-0.3**
	baz=299						
TPFO	**Pinon Flats**	**133.62**	**47**	P	**PKiKP**	**03 40 00.7**	**-0.3**
	baz=299						
BELC	**Belle Mtn. Jos**	**133.75**	**46**	P	**PKiKP**	**03 40 00.9**	**-0.5**
	baz=300						
AGMN	**Agassiz Nation**	**133.95**	**17**	P	**PKiKP**	**03 40 00.6**	**-0.5**
	baz=334						
MONP2	**Monument Peak**	**133.98**	**48**	P	**PKiKP**	**03 40 01.7**	**-0.3**
	baz=299						
LCMT	**Little Creek M**	**134.04**	**41**		**PKPdf**	**03 39 59.3**	**-1.3**
PLCA	**Paso Flores**	**134.10**	**187**	*e*P	**PKiKP**	**03 40 02.5**	**+0.7**
K22A	**Casper**	**134.28**	**31**	P	**PKPdf**	**03 40 01.5**	**+0.7**
	baz=317						
IRM	**Iron Mountain**	**134.29**	**46**	P	**PKiKP**	**03 40 02.6**	**+0.3**
	baz=301,SNR=7.2						
BC3	**Big Chuckawall**	**134.32**	**46**	P	**PKiKP**	**03 40 03.0**	**+0.5**
	baz=300						
IKP	**In-Ko-Pah, Jac**	**134.33**	**48**	P	**PKiKP**	**03 40 02.9**	**+0.4**
	baz=299						
NEE2	**Needles Airpor**	**134.34**	**45**	P	**PKiKP**	**03 40 02.5**	**+0.2**
	baz=302						
RSSD	**Black Hills**	**134.37**	**27**	P	**PKiKP**	**03 40 01.9**	**-0.5**
	baz=321						
SWSC	**Sam W. Stewart**	**134.41**	**48**	P	**PKiKP**	**03 40 03.0**	**+0.5**
	baz=299						
PDMCI	**Parker Dam,Lak**	**134.92**	**45**	P	**PKiKP**	**03 40 03.6**	**+0.1**
	baz=302						
TRQA	**Tornquist**	**134.94**	**197**	*e*P	**PKiKP**	**03 40 04.2**	**+0.6**
GLA	**Glamis**	**135.07**	**47**	PKIKP	**PKPdf**	**03 40 03.2**	**+0.8**
GLA	**Glamis**	**135.07**	**47**	PKPdf	**PKPdf**	**03 40 03.2**	**+0.8**
GLA	**Glamis**	**135.07**	**47**	P	**PKiKP**	**03 40 04.1**	**+0.2**
	baz=300						
O20A	**White River Ci**	**135.13**	**34**	P	**PKiKP**	**03 40 03.5**	**-0.5**
	baz=313						
EYMN	**Ely**	**135.45**	**14**	P	**PKiKP**	**03 40 03.8**	**-0.4**
	baz=339						
N23A	**Red Feather La**	**135.85**	**32**	P	**PKiKP**	**03 40 04.9**	**-0.7**
	baz=316						
LC01	**Cunco**	**136.06**	**186**	PKPdf	**PKPdf**	**03 40 03.0**	**-1.1**
NBRF	**Rio Formoso -**	**136.08**	**252**	*e*P	**PKPdf**	**03 40 04.6**	**-0.2**
WUAZ	**Wupatki**	**136.14**	**42**	P	**PKPdf**	**03 40 05.3**	**+0.8**
	baz=306						
ALF01	**Guarapari-ES**	**136.21**	**233**	*e*P	**PKiKP**	**03 40 07.4**	**+0.9**
SUSD	**Miller**	**136.25**	**23**	P	**PKiKP**	**03 40 05.4**	**-0.5**
	baz=328						
X16A	**Lo Mia Camp, P**	**136.72**	**43**	PKPdf	**PKPdf**	**03 40 06.0**	**+0.3**
ISCO	**Idaho Springs**	**136.81**	**33**	P	**PKiKP**	**03 40 07.1**	**-0.5**
	baz=316						
214A	**Organ Pipe Nat**	**137.10**	**47**	P	**PKPdf**	**03 40 07.1**	**+0.9**
	baz=301						
W18A	**Petrified Fore**	**137.45**	**41**	P	**PKiKP**	**03 40 08.2**	**-0.7**
	baz=307,SNR=10						
S22A	**4UR Ranch, Cre**	**137.56**	**36**	P	**PKPdf**	**03 40 08.2**	**+0.9**
	baz=313						
CNLB	**Canela**	**137.62**	**215**	*e*P	**PKiKP**	**03 40 09.5**	**+0.2**
SPMN	**Marine on St.**	**137.63**	**17**	P	**PKiKP**	**03 40 08.4**	**-0.3**
	baz=336						
Q24A	**Divide**	**137.66**	**33**	P	**PKiKP**	**03 40 08.4**	**-1.0**
	baz=316						
CMC01	**Camacan, BA**	**137.71**	**241**	*e*P	**PKiKP**	**03 40 11.0**	**+1.3**
ECSD	**EROS Data Cent**	**137.73**	**21**	PKPdf	**PKPdf**	**03 40 06.8**	**-0.2**
ECSD	**EROS Data Cent**	**137.73**	**21**	P	**PKiKP**	**03 40 08.7**	**-0.3**
	baz=330						
NBIT	**Itapeh - BA**	**137.82**	**241**	*e*P	**PKiKP**	**03 40 10.5**	**+0.6**
NBLA	**Lagarto - SE**	**137.85**	**248**	*e*P	**PKiKP**	**03 40 10.2**	**+0.2**
NBLV	**Livramento - P**	**138.15**	**253**	*e*P	**PKiKP**	**03 40 11.6**	**+0.8**
SDCO	**Great Sand Dun**	**138.32**	**35**	P	**PKPdf**	**03 40 09.7**	**+1.0**
	baz=315						
PARB	**Paraibuna**	**138.38**	**226**	*e*P	**PKiKP**	**03 40 11.4**	**+0.5**
I37A	**Lemond, Waseca**	**138.55**	**18**	PKPdf	**PKPdf**	**03 40 07.5**	**-1.0**
BGNE	**Belgrade**	**139.12**	**24**	P	**PKPdf**	**03 40 09.5**	**-0.2**
	baz=327						
PKME	**Peaks-Kenny Pk**	**139.34**	**352**	P	**PKiKP**	**03 40 11.1**	**-1.1**
	baz=12						
T25A	**Trinidad**	**139.37**	**34**	P	**PKPdf**	**03 40 11.0**	**+0.5**
	baz=316						
ANMO	**Albuquerque**	**139.65**	**39***c*	*i*PKIKP	**PKPdf**	**03 40 10.1**	**-1.0**
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ANMO	**Albuquerque**	**139.65**	**39**	PKPdf	**PKPdf**	**03 40 11.4**	**+0.3**
ANMO	**Albuquerque**	**139.65**	**39**	P	**PKPdf**	**03 40 11.8**	**+0.7**
	baz=311						
NBCL	**Cascavel-CE**	**140.25**	**257**	*e*P	**PKiKP**	**03 40 15.2**	**+0.2**
121A	**Cookes Peak, D**	**140.30**	**43**	PKPdf	**PKPdf**	**03 40 11.2**	**-1.0**
121A	**Cookes Peak, D**	**140.30**	**43**	P	**PKPdf**	**03 40 12.9**	**+0.6**
	baz=307						
ITQB	**Itaqui**	**140.36**	**208**	*e*P	**PKiKP**	**03 40 16.1**	**+1.3**
JFWS	**Jewell Farm**	**140.47**	**15**	PKIKP	**PKPdf**	**03 40 11.3**	**-0.8**
JFWS	**Jewell Farm**	**140.47**	**15**	PKPdf	**PKPdf**	**03 40 11.2**	**-0.8**
JFWS	**Jewell Farm**	**140.47**	**15**	P	**PKPdf**	**03 40 13.1**	**+1.0**
	baz=339						
AMTX	**Amarillo**	**142.52**	**34**		**PKPdf**	**03 40 13.9**	**-2.2**
SLBS	**Sierra La Lagu**	**143.24**	**56**		PKPbc	03 40 16.0	+1.3
NBPS	**Pedro II - PI**	**143.27**	**256**	*e*P	**PKiKP**	**03 40 19.8**	**-1.5**
PCMB	**Pacaembu**	**143.44**	**223**	*e*P	**PKiKP**	**03 40 19.8**	**-1.6**
CPUP	**Villa Florida**	**143.47**	**211**	PKP	**PKPdf**	**03 40 19.4**	**+1.5**
	comp=Z,5.2nm,0.9s,baz=106,slow=2.3,SNR=6.1						
CPUP	**Villa Florida**	**143.47**	**211**	PKIKP	**PKPdf**	**03 40 16.8**	**-1.1**
CPUP	**Villa Florida**	**143.47**	**211**	*e*P	**PKiKP**	**03 40 19.8**	**-1.5**
CPUP	**Villa Florida**	**143.47**	**211**		**PKPdf**	**03 40 16.8**	**-1.1**
IPMB	**Ipameri, GO**	**143.54**	**230**	*e*P	**PKiKP**	**03 40 21.7**	**0.0**
SDBA	**SAO DESIDERIO**	**143.70**	**241**	*e*P	**PKiKP**	**03 40 21.2**	**-0.8**
CO03	**El Pedregal**	**143.85**	**189**		**PKPdf**	**03 40 17.4**	**-1.1**
ODNJ	**Ogdensburg**	**144.01**	**357**		**PKPab**	**03 40 15.8**	**0.0**
OKCFA	**Oklahoma City**	**144.34**	**29**		PKPbc	03 40 17.6	+0.1
SSPA	**Standing Stone**	**144.52**	**1**	PKPdf	**PKPab**	**03 40 17.6**	**-0.1**
CCM	**Cathedral Cave**	**144.64**	**20**	PKIKP	**PKPab**	**03 40 17.7**	**-0.5**
CCM	**Cathedral Cave**	**144.64**	**20**	PKPdf	**PKPab**	**03 40 17.7**	**-0.5**
CCM	**Cathedral Cave**	**144.64**	**20**	P	**PKPab**	**03 40 17.8**	**-0.5**
	baz=335						
O53A	**New Philadelph**	**144.71**	**6**	P	**PKPab**	**03 40 17.9**	**-0.5**
	baz=353,SNR=19						
BDFB	**Brasilia**	**144.71**	**234**	PKP	**PKPdf**	**03 40 20.7**	**+0.3**
	comp=Z,12nm,0.6s,baz=144,slow=3.0,SNR=25						
TUL1	**Leonard**	**144.72**	**27**	P	**PKPab**	**03 40 18.2**	**-0.3**
	baz=326,SNR=66						
O56A	**Blue Knob Stat**	**144.87**	**2**	P	**PKPab**	**03 40 18.7**	**-0.3**
	baz=358						
P48A	**Milroy**	**144.87**	**11**	PKPdf	**PKPab**	**03 40 18.3**	**-0.7**
P49A	**Miami Univ. Ec**	**144.93**	**10**	P	**PKPab**	**03 40 18.3**	**-0.9**
	baz=347,SNR=24						
HPIG		**145.03**	**48**	PKPbc	**PKPbc**	**03 40 19.9**	**-0.4**
TXAR	**Lajitas Array**	**145.05**	**43**	PKP	**PKPdf**	**03 40 20.7**	**0.0**
	comp=Z,50nm,0.7s,baz=276,slow=1.5,SNR=624						
TXAR				SKPbc	**SKPbc**	**03 43 56.0**	**0.0**
	comp=Z,1.2nm,0.7s,baz=258,slow=1.1,SNR=5.2						
TXAR	**Lajitas Array**	**145.05**	**43**	PKPbc	**PKPdf**	**03 40 20.4**	**-0.2**
WUPA	**West Chester U**	**145.21**	**358**		**PKPbc**	**03 40 19.4**	**-0.7**
P52A	**Corning**	**145.22**	**7**	P	**PKPbc**	**03 40 19.3**	**-0.9**
	baz=351,SNR=30						
P60A	**Greenville**	**145.33**	**358**		**PKPbc**	**03 40 19.9**	**-0.6**
P60A	**Greenville**	**145.33**	**358**	P	**PKPbc**	**03 40 19.9**	**-0.6**
	baz=2.6,SNR=22						
ABTX	**Abilene, Hawle**	**145.33**	**35**	P	**PKPab**	**03 40 21.0**	**0.0**
	baz=318,SNR=73						
MCWV	**Mont Chateau**	**145.41**	**4**	P	**PKPdf**	**03 40 20.8**	**0.0**
	baz=355						
U40A	**Yellville**	**145.57**	**23**	P	**PKPdf**	**03 40 20.7**	**-0.5**
	baz=332,SNR=236						
WCI	**Wyandotte Cave**	**145.87**	**13**	PKP2	**PKPdf**	**03 40 21.8**	**+0.1**
WCI	**Wyandotte Cave**	**145.87**	**13**	PKPbc	**PKPdf**	**03 40 21.8**	**+0.1**
WCI	**Wyandotte Cave**	**145.87**	**13**	P	**PKPbc**	**03 40 22.1**	**-0.2**
	baz=344						
W39A	**Magazine**	**146.19**	**25**	P	**PKPdf**	**03 40 22.8**	**+0.5**
	baz=329,SNR=16						
R53A	**Hurricane**	**146.53**	**7**		**PKPdf**	**03 40 23.2**	**+0.4**
WHAR	**Wooly Hollow**	**146.72**	**23**	PKPbc	**PKPbc**	**03 40 24.4**	**-0.6**
JCT	**Junction City**	**146.79**	**38**	P	**PKPdf**	**03 40 23.9**	**+0.4**
	baz=315						
MIAR	**Mount Ida**	**146.84**	**25**	PKP2	**PKPbc**	**03 40 24.5**	**-0.8**
MIAR	**Mount Ida**	**146.84**	**25**		**PKPbc**	**03 40 24.5**	**-0.8**
MIAR	**Mount Ida**	**146.84**	**25**	P	**PKPbc**	**03 40 24.9**	**-0.3**
	baz=329,SNR=156						
W41B	**Gary Mavity, V**	**146.84**	**23**	P	**PKPbc**	**03 40 24.5**	**-0.8**
	baz=332,SNR=28						
GO03	**Copiap**	**146.94**	**191**	PKPbc	**PKPdf**	**03 40 24.6**	**+0.7**
CBN	**Corbin Frederi**	**146.95**	**1**	P	**PKPbc**	**03 40 24.9**	**-0.5**
	baz=360,SNR=6.2						
WHTX	**Lake Whitney,**	**147.02**	**33**	P	**PKPbc**	**03 40 25.6**	**-0.3**
	baz=320,SNR=8.4						
AQDB	**Aquidauana**	**147.15**	**219**		**PKPdf**	**03 40 25.0**	**+0.7**
X40A	**Basin Creek Fa**	**147.20**	**25**	P	**PKPbc**	**03 40 26.0**	**-0.3**
	baz=330,SNR=22						
AC02	**Maricunga**	**147.44**	**193**		**PKPbc**	**03 40 27.0**	**-0.8**
WVT	**Waverly**	**147.47**	**16**	PKP2	**PKPbc**	**03 40 25.9**	**-1.1**
WVT	**Waverly**	**147.47**	**16**		**PKPbc**	**03 40 25.9**	**-1.1**
WVT	**Waverly**	**147.47**	**16**	P	**PKPbc**	**03 40 26.8**	**-0.1**
	baz=340						
BLA	**Blacksburg**	**147.79**	**5**	P	**PKPbc**	**03 40 27.1**	**-0.8**
	baz=354						
435B	**Jarrell**	**147.87**	**35**	P	**PKPbc**	**03 40 28.4**	**+0.2**
	baz=319						
T60A	**Surry**	**148.02**	**360**		**PKPdf**	**03 40 26.1**	**+0.8**
TZTN	**Tazewell**	**148.04**	**10**	P	**PKPbc**	**03 40 28.1**	**-0.4**
	baz=348,SNR=33						
Z41A	**Richland Creek**	**148.27**	**26**	P	**PKPbc**	**03 40 29.2**	**0.0**
	baz=329,SNR=11						
PLAL	**Pickwick Lake**	**148.46**	**18**		**PKPbc**	**03 40 28.6**	**-1.1**
833A	**Chaparral WMA,**	**148.54**	**40**	P	**PKiKP**	**03 40 30.9**	**-0.7**
	baz=314						
NATX	**Nacogdoches**	**148.66**	**30**	P	**PKPbc**	**03 40 30.6**	**+0.3**
	baz=325,SNR=8.8						
PP1B	**Ponte de Pedra**	**148.66**	**224**	*e*P	**PKPbc**	**03 40 30.0**	**-0.7**
W50A	**Signal Mountai**	**148.99**	**13**	PKPbc	**PKPbc**	**03 40 30.5**	**-0.6**
HKT	**Hockley**	**149.48**	**33**	PKP2	**PKPbc**	**03 40 31.0**	**-1.3**
HKT	**Hockley**	**149.48**	**33**		**PKPbc**	**03 40 31.0**	**-1.3**
ZAIG	**Zacatecas**	**149.65**	**52**	PKPbc	**PKiKP**	**03 40 34.0**	**-0.5**
KMSC	**Kings Mountain**	**149.75**	**7**	P	**PKPbc**	**03 40 32.3**	**-0.6**
	baz=352,SNR=27						
CNNC	**Cliffs of the**	**149.90**	**1**	P	**PKPbc**	**03 40 33.5**	**+0.3**
	baz=358						
VBMS	**Vicksburg**	**150.12**	**23**	P	**PKPbc**	**03 40 34.1**	**+0.2**
	baz=332,SNR=18						
PRPB	**Parauapebas**	**150.67**	**248**	*e*P	**PKPdf**	**03 40 32.1**	**+1.9**
GOGA	**Godfrey**	**151.10**	**11**	P	**PKPbc**	**03 40 36.0**	**-0.2**
	baz=347,SNR=12						
Y60A	**Bolivia**	**151.12**	**2**		**PKPbc**	**03 40 35.6**	**-0.6**
LVC	**Limon Verde**	**151.43**	**196**	*e*P	**PKPdf**	**03 40 33.9**	**+2.3**
NHSC	**New Hope**	**151.89**	**6**	P	**PKPbc**	**03 40 37.9**	**-0.1**
	baz=354						
BRAL	**Brewton**	**152.31**	**19**	P	**PKiKP**	**03 40 39.4**	**+0.1**
	baz=338						
352A	**Blakely**	**152.63**	**15**		**PKPbc**	**03 40 39.3**	**-0.4**
TIGA	**Tifton**	**152.99**	**12**	P	**PKiKP**	**03 40 40.7**	**0.0**
	baz=346						
PTLB	**Pontes e Lacer**	**153.05**	**221**	*e*P	**PKPdf**	**03 40 36.6**	**+2.9**
CLDB	**Colider**	**153.64**	**233**	*e*P	**PKPdf**	**03 40 37.0**	**+2.4**
456A	**Hilliard**	**153.98**	**10**	PKPdf	**PKPdf**	**03 40 35.4**	**+0.8**
456A					**PKPab**	**03 40 55.8**	**-0.1**
MCPB	**Macapa, AP**	**154.51**	**259**	*e*P	**PKPdf**	**03 40 39.0**	**+3.1**
NPGB	**Novo Progresso**	**155.30**	**241**	*e*P	**PKPdf**	**03 40 40.4**	**+3.5**
DWPF	**Disney Wildern**	**156.64**	**10**	P	**PKPab**	**03 41 06.8**	**-0.5**
	baz=349						
LPAZ	**La Paz**	**157.09**	**202**	PKP	**PKPdf**	**03 40 40.9**	**+0.9**
	comp=Z,3.8nm,0.8s,baz=120,slow=3.6,SNR=14						
CZSB	**Cruzeiro do Su**	**166.64**	**199**	*e*P	**PKPdf**	**03 40 52.2**	**+3.1**
TBTG	**Tabatinga, AM**	**168.44**	**218**	*e*P	**PKPdf**	**03 40 52.2**	**+1.8**
SJCC	**San Jacinto, C**	**174.81**	**340**	PKPdf	**PKPdf**	**03 40 52.9**	**-0.5**
SJCC				PKPab	**PKPab**	**03 42 27.2**	**-0.4**

KMA 11 03:24:38.1±0.4**, 36°.06N**×**127°.05E, h2**^{km}±3^{km} **Error ellipse: s-maj=5.0km s-min=2.3km az=149.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
IKSA	**Iksan Acc Bore**	**0.01**	**84**	P	Pg	03 24 38.4	-0.1
KSJEO	**Jeonju**	**0.23**	**122**	P	Pg	03 24 42.7	+0.2
	SNR=32						
KSJEO	**Jeonju**	**0.23**	**122**	P	Pg	03 24 42.7	+0.2
	SNR=32						
SMKB	**Mukjeong-gil**	**0.55**	**228**	P	Pg	03 24 48.8	+0.2
	SNR=6.8						
SMKB	**Mukjeong-gil**	**0.55**	**228**	P	Pg	03 24 48.8	+0.2
	SNR=6.8						
KSJEU	**Jeongeup**	**0.57**	**190**	P	Pg	03 24 48.8	-0.3
	SNR=6.2						
KSJEU	**Jeongeup**	**0.57**	**190**	P	Pg	03 24 48.8	-0.3
	SNR=6.2						
KSBON	**Boeun**	**0.75**	**54**	P	Pg	03 24 52.8	+0.4
	SNR=7.2						
KSBON	**Boeun**	**0.75**	**54**	P	Pg	03 24 52.8	+0.4
	SNR=7.2						

IDC 11 03:28:20.2±2.0**, 3°.27S**×**151°.53E, h0**^{km}**, mb4.0**/3**, mb1 4.3**/3**, mb1mx3.2**/45**, mbtmp4.0**/3**, Error ellipse: s-maj=112.1km s-min=26.8km az=126.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.59**	**224**	P	P	03 33 33.0	+0.2
	3.7nm,0.3s,baz=52,slow=10,SNR=21						
ASAR	**Alice Springs**	**26.49**	**219**	P	P	03 33 59.5	0.0
	1.4nm,0.6s,baz=42,slow=7.8,SNR=4.3						
FITZ	**Fitzroy Crossi**	**29.34**	**238**	P	P	03 34 26.1	+1.2
	baz=53,slow=20						
ILAR	**Eielson Array**	**81.23**	**22**	P	P	03 40 37.7	-0.1
	0.5nm,0.8s,baz=243,slow=6.0,SNR=2.3						
TORD	**Torodi Ar. Bea**	**148.62**	**290**	PKPbc	PKPbc	03 48 08.8	-1.6
	0.7nm,0.4s,baz=76,slow=2.3,SNR=21						

KRNET ***11*** *03:32:22.3±0.1, 38°.79N×73°.87E, h9^{km}, mb4.4*
IDC ***11*** *03:32:27.4±0.7, 38°.68N×73°.28E, h0^{km}, mb3.9/4, mb1 3.9/7, mb1mx3.3/59, mbtmp3.8/7, ML3.1/3, Error ellipse: s-maj=21.1km s-min=9.1km az=156.0*
SOME ***11*** *03:32:32.7, 39°.20N×73°.27E, h5^{km}*
NNC ***11*** *03:32:33.7±2.2, 39°.16N×73°.40E, h0^{km}, mb4.9, mpv4.6, Error ellipse: s-maj=16.4km s-min=8.1km az=177.0*
ISC 11 03:32:28.2±1.5**, 39°.03N**±0°.05×**73°.58E**±0°.03**, h4**^{km}±9^{km}**, n64, σ2^{s}08**/101**, mb3.9**/4**, 31C-12D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.99**	**356**	⇑*e*P	**Pg**	**03 32 47.0**	**-0.2**
	baz=47						
SFK				⇑*e*S	**Sn**	**03 33 03.1**	**-0.6**
	baz=47						
DRK	**Karamyk**	**1.46**	**289**	⇑*i*P	**Pn**	**03 32 55.1**	**-0.5**
	baz=94						
DRK				⇑*i*S	**Sg**	**03 33 19.3**	**+4.3**
	baz=94						
OHH	**Osh**	**1.62**	**338**	⇑*i*P	**Pb**	**03 32 58.2**	**-0.5**
	baz=35						
OHH				⇑*i*S	**Sg**	**03 33 24.5**	**+4.3**
	baz=35						
BTK	**Batken**	**2.37**	**297**	⇑*i*P	**Pn**	**03 33 08.8**	**+0.8**
	baz=99						
BTK				⇑*i*S	**Sg**	**03 33 42.9**	**-1.5**
	baz=99						
GAR	**Garm**	**2.54**	**270**	⇑*i*P	**Pn**	**03 33 10.2**	**-0.2**
	baz=76						
GAR				⇑*i*S	**Sb**	**03 33 45.2**	**-1.0**
	baz=76						
AML	**Almayashu**	**3.10**	**2**	P	**Pb**	**03 33 23.7**	**-0.6**
	SNR=46						
AML	**Almayashu**	**3.10**	**2**	⇑*i*P	**Pn**	**03 33 18.4**	**0.0**
	baz=58						
AML				⇑*i*S	**Sb**	**03 33 59.4**	**-3.2**
	baz=58						
TRKS	**Terek-Say**	**3.12**	**324**	⇓*i*P	**Pn**	**03 33 18.6**	**+0.2**
	baz=23						
TRKS				⇓*i*S	**Sb**	**03 33 59.8**	**-3.1**
	baz=23						
UCH	**Uchtor**	**3.28**	**12**	P	**Pb**	**03 33 26.6**	**-0.6**
	SNR=19						
UCH	**Uchtor**	**3.28**	**12**	⇑*e*P	**Pn**	**03 33 20.2**	**-0.6**
	baz=8.0						
UCH				⇑*i*S	**Sn**	**03 34 02.4**	**+1.9**
	baz=8.0						
CHGR	**Chuyangaron**	**3.47**	**265**	⇑*e*P	**Pn**	**03 33 22.8**	**-0.4**
	baz=70						
CHGR				⇑*i*S	**Sn**	**03 34 06.9**	**+2.1**
	baz=70						
MNAS	**Manas**	**3.55**	**347**	⇑*e*P	**Pn**	**03 33 25.1**	**+0.8**
	baz=45						
MNAS				⇑*i*S	**Sb**	**03 34 11.0**	**-4.3**
	baz=45						
EKS2	**Erkin-Say**	**3.63**	**2**	P	**Pb**	**03 33 31.1**	**-2.0**
	SNR=9.0						
EKS2	**Erkin-Say**	**3.63**	**2**	⇓*e*P	**Pn**	**03 33 25.5**	**+0.1**
	baz=59						
EKS2				⇓*i*S	**Sn**	**03 34 11.6**	**+2.7**
	baz=59						
MRKS	**Merke**	**3.73**	**356**	*e*P	**Pg**	**03 33 39.5**	**-0.1**
	40nm,0.4s						
MRKS				*e*S	**Sg**	**03 34 27.7**	**-0.2**
	117nm,0.6s						
MRKS	**Merke**	**3.73**	**356**	Pg	**Pg**	**03 33 39.5**	**-0.1**
	40nm,0.4s						
MRKS				Lg	Lg	03 34 27.7	
	117nm,0.6s						
KBK	**Karagaybulak**	**3.77**	**16**	P	**Pb**	**03 33 34.4**	**-1.1**
	SNR=8.0						
KBK	**Karagaybulak**	**3.77**	**16**	⇑*e*P	**Pn**	**03 33 26.6**	**-0.8**
	baz=12						
KBK				⇑*i*S	**Sn**	**03 34 13.7**	**+1.4**
	baz=12						
ULHL	**Ulahol**	**3.80**	**31**	⇑*e*P	**Pn**	**03 33 25.8**	**-2.0**
	baz=27						
ULHL				⇑*i*S	**Sn**	**03 34 12.4**	**-0.7**
	baz=27						
FRU1	**Bishkek**	**3.86**	**12**	⇑*e*P	**Pn**	**03 33 28.3**	**-0.2**
	baz=8.0						
FRU1				⇑*e*S	**Sn**	**03 34 16.4**	**+2.0**
	baz=8.0						
BOOM	**Boomskoye usch**	**3.90**	**27**	⇑*i*P	**Pn**	**03 33 27.5**	**-1.6**
	baz=22						
BOOM				⇑*i*S	**Sn**	**03 34 15.3**	**-0.1**
	baz=22						
TAS	**Tashkent**	**4.01**	**306**	⇑*i*P	**Pn**	**03 33 31.6**	**+1.2**
	baz=7.0						
TAS				⇑*i*S	**Sn**	**03 34 22.3**	**+4.4**
	baz=7.0						
CHMS	**Chumysh**	**4.07**	**12**	P	**Pb**	**03 33 38.1**	**-2.4**
	SNR=11						
CHMS	**Chumysh**	**4.07**	**12**	⇓*e*P	**Pn**	**03 33 30.8**	**-0.5**
	baz=9.0						
CHMS				⇓*i*S	**Sn**	**03 34 20.7**	**+1.3**
	baz=9.0						
IUG	**Iuzhnay**	**4.13**	**320**	*e*P	**Pg**	**03 33 45.4**	**-1.9**
	1µm,0.6s						
IUG				*e*S	**Sg**	**03 34 38.0**	**-2.8**
	318nm,0.7s						
IUG	**Iuzhnay**	**4.13**	**320**	Pg	**Pg**	**03 33 45.4**	**-1.9**
	3µm,0.8s						
IUG				Lg	Lg	03 34 38.0	
	318nm,0.7s						
KDJ	**Kajisay**	**4.14**	**40**	⇑*e*P	**Pn**	**03 33 29.8**	**-2.6**
	baz=36						
KDJ				⇑*i*S	**Sn**	**03 34 19.1**	**-2.2**
	baz=36						
TKM2	**Tokmak 2**	**4.18**	**21**	P	**Pb**	**03 33 38.0**	**-4.5**
	SNR=7.2						
DZA	**Taraz**	**4.22**	**337**	*e*P	**Pb**	**03 33 44.1**	**+1.1**
	108nm,0.1s						
DZA				*e*S	**Sb**	**03 34 35.6**	**+1.2**
	271nm,0.9s						
DZA	**Taraz**	**4.22**	**337**	Pg	**Pb**	**03 33 43.4**	**+0.3**
	110nm,0.1s						
DZA				Lg	Lg	03 34 34.4	
	271nm,0.9s						
USP	**Ospenovka**	**4.29**	**9**	P	**Pb**	**03 33 40.6**	**-3.7**
	SNR=9.1						
USP	**Ospenovka**	**4.29**	**9**	⇓*e*P	**Pn**	**03 33 34.1**	**-0.3**
	baz=6.0						
USP				⇓*i*S	**Sn**	**03 34 26.6**	**+1.6**
	baz=6.0						
KST	**Kastek**	**4.40**	**23**	*e*P	**Pg**	**03 33 53.5**	**+1.0**
	32nm,0.5s						
KST				*e*S	**Sg**	**03 34 51.4**	**+1.9**
	81nm,0.7s						
KST	**Kastek**	**4.40**	**23**	Pg	**Pg**	**03 33 53.5**	**+1.0**
	32nm,0.5s						
KST				Lg	Lg	03 34 51.4	
	81nm,0.7s						
CHM	**Chimkent**	**4.47**	**319**	*e*P	**Pg**	**03 33 51.8**	**-2.0**
	155nm,0.4s						
CHM				*e*S	**Sg**	**03 34 48.8**	**-3.0**
	317nm,0.0s						
DGS	**Degeres**	**4.53**	**21**	*e*P	**Pg**	**03 33 56.7**	**+1.8**
	30nm,0.3s						
DGS				*e*S	**Sg**	**03 34 57.4**	**+3.8**
	66nm,0.6s						
DGS	**Degeres**	**4.53**	**21**	Pg	**Pg**	**03 33 56.7**	**+1.8**
	30nm,0.3s						
DGS				Lg	Lg	03 34 57.4	
	66nm,0.6s						
IZV	**Izvestkoviy**	**4.62**	**29**	*e*P	**Pg**	**03 33 56.5**	**-0.2**
	28nm,0.5s						
IZV				*e*S	**Sg**	**03 34 56.8**	**+0.3**
	140nm,0.6s						
IZV	**Izvestkoviy**	**4.62**	**29**	Pg	**Pg**	**03 33 56.5**	**-0.2**
	28nm,0.5s						
IZV				Lg	Lg	03 34 56.8	
	140nm,0.6s						
MTBS	**Maitube**	**4.63**	**27**	*e*P	**Pg**	**03 33 58.6**	**+1.6**
	26nm,0.7s						
MTBS				*e*S	**Sg**	**03 35 00.3**	**+3.3**
	35nm,0.6s						

KK09	**Karatay Array**	**4.71**	**331**	⇓Pn	**Pn**	**03 33 43.5**	**+3.4**
	25nm,0.4s,baz=149,slow=13						
KK09				⇑Sn	**Sn**	**03 34 40.2**	**+5.0**
	34nm,0.6s,baz=149,slow=25						
KK09				⇓Lg	Lg	03 34 58.5	
	28nm,0.5s						
TNSS	**Tian-Shan**	**4.75**	**31**	*e*P	**Pg**	**03 33 59.9**	**+0.8**
	28nm,0.5s						
TNSS				*e*S	**Sg**	**03 35 02.3**	**+1.6**
	46nm,0.6s						
AAA	**Alma-Ata**	**4.88**	**30**	*e*P	**Pg**	**03 34 03.8**	**+2.1**
	50nm,0.4s						
AAA				*e*S	**Sg**	**03 35 09.1**	**+4.2**
	149nm,0.3s						
MDOK	**Medeo**	**4.89**	**31**	*e*P	**Pg**	**03 34 03.3**	**+1.3**
	37nm,0.7s						
MDOK				*e*S	**Sg**	**03 35 08.6**	**+3.3**
	55nm,0.4s						
MDOK	**Medeo**	**4.89**	**31**	Pg	**Pg**	**03 34 01.2**	**-0.8**
	98nm,1.1s						
MDOK				Lg	Lg	03 35 08.6	
	106nm,1.2s						
BRLS	**Borolday**	**4.90**	**326**	*e*P	**Pb**	**03 33 55.4**	**+0.7**
BRLS				*e*S	**Sb**	**03 34 55.4**	**+1.4**
BRLS	**Borolday**	**4.90**	**326**	Pg	**Pb**	**03 33 55.4**	**+0.7**
BRLS				Lg	Lg	03 34 55.4	
KRBS	**Karabastau**	**4.92**	**18**	*e*P	**Pg**	**03 34 01.7**	**-0.9**
	20nm,0.5s						
KRBS				*e*S	**Sg**	**03 35 06.3**	**-0.1**
	49nm,0.7s						
KRBS	**Karabastau**	**4.92**	**18**	Pg	**Pg**	**03 34 01.7**	**-0.9**
	20nm,0.5s						
KRBS				Lg	Lg	03 35 06.3	
	49nm,0.7s						
KOTS	**Kotyrbulak**	**4.98**	**31**	*e*P	**Pg**	**03 34 04.3**	**+0.7**
	20nm,0.8s						
KOTS				*e*S	**Sg**	**03 35 10.3**	**+2.2**
	189nm,0.6s						
KOTS	**Kotyrbulak**	**4.98**	**31**	Pg	**Pg**	**03 34 04.3**	**+0.7**
	20nm,0.8s						
KOTS				Lg	Lg	03 35 10.3	
	189nm,0.6s						
KTBS	**Karatobe**	**5.23**	**25**	*e*P	**Pg**	**03 34 08.9**	**+0.5**
	16nm,0.8s						
KTBS				*e*S	**Sg**	**03 35 17.8**	**+1.6**
	84nm,0.8s						
KUU	**Kurty**	**5.29**	**22**	*e*P	**Pg**	**03 34 09.2**	**-0.2**
	15nm,0.4s						
KUU				*e*S	**Sg**	**03 35 18.8**	**+0.8**
	86nm,0.6s						
CEP	**Cherat**	**5.36**	**195**	P	**Pn**	**03 33 52.6**	**+3.4**
KURS	**Kuram**	**5.64**	**36**	*e*P	**Pg**	**03 34 18.1**	**+1.8**
	10nm,0.6s						
KURS				*e*S	**Sg**	**03 35 34.1**	**+4.8**
	23nm,1.6s						
BTLS	**Baital**	**6.02**	**3**	*e*P	**Pg**	**03 34 22.0**	**-1.6**
	7.5nm,0.5s						
BTLS				*e*S	**Sg**	**03 35 40.6**	**-0.9**
	12nm,1.2s						
PDGK	**Podgornoye**	**6.19**	**44**	⇓Pg	**Pg**	**03 34 27.3**	**+0.5**
	24nm,0.9s						
PDGK				⇓Lg	Lg	03 35 49.9	
	58nm,1.1s						
MKAR	**Makanchi Array**	**10.05**	**37**	Pn	Pn	03 35 00.3	+7.0
	0.1nm,0.3s,baz=236,slow=15,SNR=2.4						
GEYT	**Alibeck**	**12.17**	**270**	Pn	**Pn**	**03 35 19.2**	**-3.2**
	0.4nm,0.3s,baz=104,slow=12,SNR=1.6						
ZALV	**Zalesovo Beam**	**16.78**	**24**	P	**P**	**03 36 26.9**	**+0.6**
	0.3nm,0.3s,baz=222,slow=13,SNR=3.0						
SONM	**Songino Array**	**25.25**	**59**	P	**P**	**03 37 58.6**	**+3.2**
	1.0nm,0.6s,baz=272,slow=9.0,SNR=6.9						
FINES	**FINESS Array B**	**36.60**	**324**	P	**P**	**03 39 36.1**	**+1.0**
	8.0nm,1.1s,baz=120,slow=8.5,SNR=2.0						
TORD	**Torodi Ar. Bea**	**67.81**	**269**	P	**P**	**03 43 25.9**	**-1.8**
	0.7nm,0.6s,baz=50,slow=5.0,SNR=8.9						
WRA	**Warramunga Arr**	**81.64**	**124**	P	**P**	**03 44 47.3**	**-0.5**
	0.6nm,1.0s,baz=328,slow=5.1,SNR=3.0						

NEIC ***11*** *03:45:09.5±1.5,46.°86N±0.°02×71.°23W±0.°04,h18^{km}±5^{km}, Error ellipse: s-maj=4.3km s-min=2.6km az=133.0*

OTT ***11*** *03:45:09.5±0.1,46.°78N×71.°20W,h18^{km},MN2.7/20*

OTT 5km southeast from Quebec, Qc. Felt Eastern Background Seismic Zone. Felt at Quebec City.

ISC 11 03:45:09.1±1.0,**46.°81N**±0.°03×**71.°23W**±0.°02,**h19**^{km}±2^{km}, **n51**,σ**1.^{s}14**/86,**1C-1D,Southern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QCQ	**Quebec**	**0.04**	**227**		**Pg**	**03 45 13.1**	**+0.5**
QCQ	**Quebec**	**0.04**	**227**	⇑PG	**Pg**	**03 45 11.9**	**-0.6**
QCQ				SG	**Pg**	**03 45 13.1**	**+0.5**
QCQ				Trac		03 45 13.8	
	comp=Z,343nm,0.1s						
BCLQ	**Boischatel**	**0.12**	**19**	Pg	**Pg**	**03 45 13.2**	**-0.1**
BCLQ				Sg	**Sg**	**03 45 15.7**	**-0.4**
BCLQ	**Boischatel**	**0.12**	**19**	⇓PG	**Pg**	**03 45 13.2**	**-0.1**
BCLQ				SG	**Sg**	**03 45 15.7**	**-0.4**
BCLQ				Trac		03 45 15.8	
	comp=Z,154nm,0.0s						
A11	**Saint Roch-des**	**0.83**	**58**	Pg	**Pb**	**03 45 24.2**	**-0.7**
A11				Sg	**Sb**	**03 45 35.3**	**-0.3**
A11	**Saint Roch-des**	**0.83**	**58**	PG	**Pb**	**03 45 24.2**	**-0.7**
A11				SG	**Sb**	**03 45 35.3**	**-0.3**
A11				Trac		03 45 35.5	
	comp=Z,20nm,0.1s						
A54	**Misere**	**0.86**	**40**	Pg	**Pb**	**03 45 24.8**	**-0.5**
A54				Sg	**Sb**	**03 45 36.4**	**0.0**
A54	**Misere**	**0.86**	**40**	PG	**Pb**	**03 45 24.8**	**-0.5**
A54				SG	**Sb**	**03 45 36.4**	**0.0**
A54				Trac		03 45 37.3	
	comp=Z,31nm,0.1s						
LMQ	**La Malbaie**	**0.96**	**39**		**Pb**	**03 45 26.5**	**-0.7**
LMQ				Sg	**Sb**	**03 45 39.9**	**+0.4**
LMQ	**La Malbaie**	**0.96**	**39**	PG	**Pb**	**03 45 26.5**	**-0.7**
LMQ				SG	**Sb**	**03 45 39.9**	**+0.4**
LMQ				Trac		03 45 40.1	
	comp=Z,73nm,0.1s						
A16	**Riviere Ouelle**	**1.07**	**51**		**Pb**	**03 45 28.2**	**-0.7**
A16					**Sb**	**03 45 42.6**	**+0.1**
A16	**Riviere Ouelle**	**1.07**	**51**	PG	**Pb**	**03 45 28.2**	**-0.7**
A16				SG	**Sb**	**03 45 42.6**	**+0.1**
A16				Trac		03 45 43.2	
	comp=Z,18nm,0.1s						
DPQ	**Saint Jean**	**1.07**	**264**		**Pb**	**03 45 29.1**	**+0.1**
DPQ					**Sb**	**03 45 43.6**	**+1.1**
DPQ	**Saint Jean**	**1.07**	**264**	PG	**Pb**	**03 45 29.1**	**+0.1**
DPQ				SG	**Sb**	**03 45 43.6**	**+1.1**
DPQ				Trac		03 45 48.4	
	comp=Z,47nm,0.1s						
A61	**Sainte Mathild**	**1.18**	**41**		**Pn**	**03 45 30.2**	**-0.3**
A61					**Sn**	**03 45 46.3**	**+0.2**
A61	**Sainte Mathild**	**1.18**	**41**	PG	**Pn**	**03 45 30.2**	**-0.3**
A61				SG	**Sn**	**03 45 46.3**	**+0.2**
A61				Trac		03 45 46.8	
	comp=Z,12nm,0.1s						
E62A	**Clayton Lake**	**1.19**	**98**		**Pn**	**03 45 30.8**	**+0.1**
E62A				Sn	**Sb**	**03 45 45.5**	**-0.5**
E62A				IAML		03 45 49.7	
	comp=N,75nm,0.3s						
A64	**Saint Simeon**	**1.37**	**41**	PG	**Pn**	**03 45 33.2**	**+0.1**
A64				SG	**Sb**	**03 45 51.8**	**+0.7**
A64				Trac		03 45 53.0	
	comp=N,11nm,0.1s						
A21	**Saint Andre**	**1.38**	**49**	PG	**Pn**	**03 45 33.7**	**+0.4**
A21				SG	**Sb**	**03 45 52.2**	**+0.7**
A21				Trac		03 45 55.6	
	comp=N,20nm,0.1s						
STUQ	**Sainte-Ursule**	**1.38**	**249**	SG	**Sb**	**03 45 52.9**	**+1.4**
D62A	**Allapoint, All**	**1.52**	**79**	Pn	**Pn**	**03 45 36.1**	**+0.9**
D62A				Sn	**Sb**	**03 45 56.2**	**+0.7**
D62A				IAML		03 45 59.4	
	comp=E,48nm,0.2s						
D62A				IAML		03 45 59.6	
	comp=N,46nm,0.2s						
MOQ	**Mont Orford**	**1.66**	**206**	PN	**Pn**	**03 45 37.5**	**+0.3**
MOQ				SN	**Sn**	**03 45 57.9**	**-0.1**
MOQ				Trac		03 46 04.3	
	comp=N,3.9nm,0.0s						
G62A	**West of Eustis**	**1.66**	**163**	Pn	**Pn**	**03 45 38.5**	**+1.3**
G62A				Sn	**Sn**	**03 45 59.6**	**+1.6**
G62A				IAML		03 46 05.2	
	comp=N,18nm,1.6s						
BSCQ	**Baie-Sainte-Ca**	**1.67**	**37**	PN	**Pn**	**03 45 37.4**	**+0.1**
BSCQ				PG	**Pb**	**03 45 38.7**	**-0.5**
BSCQ				SN	**Sn**	**03 45 58.6**	**+0.5**
BSCQ				LG	Lg	03 46 01.6	
BSCQ				Trac		03 46 02.9	
	comp=N,20nm,0.1s						
F63A	**Nahmakanta, Br**	**1.84**	**126**	Pn	**Pn**	**03 45 40.6**	**+0.9**
F63A					**Sb**	**03 46 04.3**	**-0.5**
LESQ	**Les-Escoumins**	**1.95**	**38**	PN	**Pn**	**03 45 42.3**	**+1.2**
LESQ				SN	**Sn**	**03 46 05.3**	**+0.3**
LESQ				LG	Lg	03 46 10.4	
LESQ				Trac		03 46 13.1	
	comp=N,7.0nm,0.1s						
PKME	**Peaks-Kenny Pk**	**2.05**	**138**		**Pn**	**03 45 43.6**	**+1.1**
PKME				Sn	**Sn**	**03 46 09.1**	**+1.5**
PKME	**Peaks-Kenny Pk**	**2.05**	**138**	PN	**Pn**	**03 45 42.4**	**-0.2**
PKME				SN	**Sn**	**03 46 06.6**	**-0.9**
PKME				LG	Lg	03 46 11.6	
PKME				Trac		03 46 24.2	
	comp=N,10nm,0.3s						
MNTQ	**Montreal, Queb**	**2.12**	**233**	PN	**Pn**	**03 45 45.0**	**+1.6**
MNTQ				SN	**Sn**	**03 46 08.5**	**-0.6**
MNTQ				LG	Lg	03 46 15.6	
MNTQ				Trac		03 46 15.9	
	comp=N,7.5nm,0.1s						
F64A	**Sherman**	**2.21**	**114**	Pn	**Pn**	**03 45 45.5**	**+0.8**
PQI	**Presque Isle**	**2.21**	**92**	Pn	**Pn**	**03 45 45.6**	**+0.8**
DMCQ	**Dolbeau-Mistas**	**2.23**	**346**	PN	**Pn**	**03 45 46.2**	**+1.2**
DMCQ				SN	**Sn**	**03 46 12.6**	**+0.7**
DMCQ				LG	Lg	03 46 20.6	
DMCQ				Trac		03 46 20.9	
	comp=N,4.4nm,0.1s						
H62A	**Milan**	**2.23**	**179**	Pn	**Pn**	**03 45 46.9**	**+1.8**
TRQ	**Mont Tremblant**	**2.37**	**257**	Pn	**Pb**	**03 45 50.0**	**-1.2**
TRQ	**Mont Tremblant**	**2.37**	**257**	PN	**Pn**	**03 45 49.0**	**+2.1**
TRQ				SN	**Sn**	**03 46 15.8**	**+0.3**
TRQ				LG	Lg	03 46 22.2	
TRQ				Trac		03 46 26.2	
	comp=N,4.4nm,0.1s						
FORQ	**Forestville**	**2.42**	**35**	PN	**Pn**	**03 45 47.9**	**+0.5**
FORQ				SN	**Sn**	**03 46 16.1**	**-0.4**
FORQ				LG	Lg	03 46 25.0	
FORQ				Trac		03 46 27.2	
	comp=N,2.9nm,0.1s						
FRNY	**Flat Rock**	**2.57**	**221**	Pn	**Pn**	**03 45 50.4**	**+0.8**
LBNH	**Lisbon**	**2.61**	**191**	Pn	**Pn**	**03 45 51.4**	**+1.1**
LBNH	**Lisbon**	**2.61**	**191**	PN	**Pn**	**03 45 50.7**	**+0.4**
LBNH				SN	**Sn**	**03 46 20.9**	**-0.6**
LBNH				LG	Lg	03 46 30.1	
I63A	**Otisfield**	**2.79**	**170**	Pn	**Pn**	**03 45 53.8**	**+1.0**
I62A	**Tamworth**	**2.94**	**181**	Pn	**Pn**	**03 45 56.4**	**+1.8**
G65A	**Princeton**	**3.02**	**121**	Pn	**Pn**	**03 45 56.1**	**+0.3**
GAC	**Glen Almond**	**3.15**	**251**	PN	**Pn**	**03 45 58.0**	**+0.5**
GAC				PN	Pb	03 45 58.3	-6.1
GAC				SN	**Sn**	**03 46 34.6**	**+0.1**
GAC				SN	**Sb**	**03 46 34.8**	**-7.5**
GAC				LG	Lg	03 46 46.1	
GAC				Trac		03 46 47.3	
	comp=N,2.5nm,0.1s						
GAC				Trac		03 46 48.3	
	comp=N,7.9nm,0.1s						
VABQ	**Val Des Bois**	**3.16**	**255**	PN	**Pn**	**03 45 58.9**	**+1.1**
VABQ				SN	**Sn**	**03 46 35.0**	**+0.1**
VABQ				LG	Lg	03 46 48.1	
VABQ				Trac		03 46 52.8	
	comp=N,8.4nm,0.2s						
GRQ	**Grand Remous**	**3.19**	**268**	PN	**Pn**	**03 45 59.2**	**+1.0**
GRQ				SN	**Sn**	**03 46 35.9**	**+0.2**
GRQ				Trac		03 46 54.0	
	comp=N,6.4nm,0.1s						
LONY	**Lake Ozonia**	**3.21**	**228**	Pn	**Pn**	**03 45 59.5**	**+1.0**
NCB	**Newcomb**	**3.53**	**218**	Pn	**Pn**	**03 46 03.7**	**+0.8**
BATG	**Bathurst New B**	**3.57**	**81**	Pn	**Pn**	**03 46 03.2**	**-0.1**
J59A	**Piesco**	**4.07**	**216**	Pn	**Pn**	**03 46 10.9**	**+0.6**
VLDQ	**Val d'Or**	**4.42**	**289**	Pn	Pn	03 46 20.6	+5.6
J58A	**Remsen**	**4.49**	**221**	Pn	**Pn**	**03 46 16.4**	**+0.3**

IDC ***11*** *03:50:17.3±2.9,41.°44N×73.°00E,h0^{km},mb4.0/3, mb1 3.8/7,mb1mx3.5/45,mbtmp3.7/7,ML3.1/4,Error ellipse: s-maj=44.5km s-min=12.1km az=160.0*

NNC ***11*** *03:50:19.3±0.9,41.°57N×72.°99E,h0^{km},mb4.6,mpv4.3, Error ellipse: s-maj=8.0km s-min=3.7km az=174.0*

ISU ***11*** *03:50:20,41.°40N×73.°10E,h5^{km}*

KRNET ***11*** *03:50:20.1±0.1,41.°56N×73.°02E,h19^{km},mb3.9*

SOME ***11*** *03:50:20.5,41.°52N×73.°02E,h15^{km}*

KNET ***11*** *03:50:21.4±0.6,41.°67N×73.°07E,h13^{km}±3^{km},ml3.7,Error ellipse: s-maj=5.4km s-min=3.9km az=129.0*

NEIC ***11*** *03:50:23.7±0.8,41.°76N±0.°05×72.°72E±0.°06,h32^{km}±9^{km}, mb4.2/2,Error ellipse: s-maj=7.2km s-min=6.5km az=132.0*

ISC 11 03:50:19.2±1.0,**41.°54N**±0.°02×**73.°05E**±0.°02,**h11**^{km}±8^{km}, **n108**,σ**1.^{s}62**/154,**mb4.3**/3,**44C-16D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**0.76**	**39**	⇑P	**Pb**	**03 50 34.8**	**+0.1**
	220nm,0.1s,SNR=691						
AML				⇓S	**Sg**	**03 50 44.6**	**+0.6**
	1µm,0.2s						
AML	**Almayashu**	**0.76**	**39**	*i* P	**Pb**	**03 50 34.8**	**+0.1**
	baz=41						
AML				*i* S	**Sb**	**03 50 45.3**	**0.0**
	baz=41						
SALK	**Salom-Alik**	**0.88**	**138**	⇑*e*P	**Pb**	**03 50 37.1**	**+0.5**
	baz=38						
SALK				⇑*e*S	**Sb**	**03 50 49.2**	**+0.8**
	baz=38						
ANR	**Andizhan**	**0.94**	**214**	*e*P	**Pn**	**03 50 39.0**	**+0.6**
ANR				*e*S	**Sn**	**03 50 53.0**	**+1.1**
MNAS	**Manas**	**1.03**	**337**	⇑*i*P	**Pg**	**03 50 39.0**	**-0.1**
	baz=38						
MNAS				⇑*i*S	**Sg**	**03 50 52.6**	**+0.1**
	baz=38						
OHH	**Osh**	**1.04**	**191**	*e*P	**Pg**	**03 50 39.0**	**-0.2**
OHH				*e*S	**Sb**	**03 50 53.0**	**+0.1**
OHH	**Osh**	**1.04**	**191**	⇑*i*P	**Pn**	**03 50 39.6**	**-0.2**
	baz=90						
OHH				⇑*i*S	**Sn**	**03 50 53.7**	**-0.6**
	baz=90						
MRKS	**Merke**	**1.21**	**6**	⇑*e*P	**Pg**	**03 50 42.9**	**+0.4**
	259nm,0.2s						
MRKS				*e*S	**Sn**	**03 50 59.0**	**+0.3**
	2µm,0.2s						
MRKS	**Merke**	**1.21**	**6**	P	**Pg**	**03 50 42.9**	**+0.4**
	266nm,0.3s						
MRKS				S	**Sn**	**03 50 59.0**	**+0.3**
	2µm,0.2s						
EKS2	**Erkin-Say**	**1.24**	**26**	⇑P	**Pg**	**03 50 43.2**	**0.0**
	129nm,0.1s,SNR=319						
EKS2				⇓S	**Sb**	**03 50 59.0**	**+0.2**
	254nm,0.2s						
EKS2	**Erkin-Say**	**1.24**	**26**	⇑*i*P	**Pg**	**03 50 43.1**	**0.0**
	baz=27						
EKS2				⇑*i*S	**Sn**	**03 50 59.9**	**+0.4**
	baz=27						
UCH	**Uchtor**	**1.29**	**57**	P	**Pg**	**03 50 44.3**	**+0.3**
	194nm,0.1s,SNR=98						
UCH				⇓S	**Sn**	**03 51 02.1**	**+1.0**
	734nm,0.2s						
UCH	**Uchtor**	**1.29**	**57**	⇓*i*P	**Pg**	**03 50 44.4**	**+0.3**
	baz=59						
UCH				⇓*i*S	**Sn**	**03 51 01.9**	**+0.8**
	baz=59						
TRKS	**Terek-Say**	**1.43**	**270**	⇓*i*P	**Pb**	**03 50 45.7**	**-0.4**
	baz=67						
TRKS				⇓*i*S	**Sb**	**03 51 04.7**	**+0.3**
	baz=67						
FRG	**Fergana**	**1.51**	**220**	*e*P	**Pg**	**03 50 49.0**	**+0.8**
FRG				*e*S	**Sg**	**03 51 10.0**	**+2.2**
AAK	**Ala-Archa**	**1.53**	**44**	Pg	**Pg**	**03 50 48.6**	**-0.1**
	33nm,0.3s,baz=212,slow=3.4,SNR=352						
AAK				Lg	Lg	03 51 09.0	
	120nm,0.3s,baz=156,slow=23,SNR=14						
AAK	**Ala-Archa**	**1.53**	**44**	Pn	**Pg**	**03 50 48.5**	**-0.2**
SFK	**Sufi-Kurgan**	**1.57**	**167**	⇑*e*P	**Pg**	**03 50 49.6**	**+0.3**
	baz=66						
SFK				⇑*e*S	**Sg**	**03 51 10.4**	**+0.8**
	baz=66						
FRU1	**Bishkek**	**1.73**	**42**		**Pg**	**03 50 52.7**	**+0.3**
FRU1	**Bishkek**	**1.73**	**42**	⇑*i*P	**Pg**	**03 50 51.9**	**-0.5**
	baz=42						
FRU1				⇑*i*S	**Sg**	**03 51 15.2**	**+0.4**
	baz=42						
KBK	**Karagaybulak**	**1.80**	**51**	P	**Pg**	**03 50 53.5**	**-0.3**
	163nm,0.2s,SNR=652						
KBK				⇓S	**Sg**	**03 51 17.5**	**+0.5**
	2µm,0.4s						
KBK	**Karagaybulak**	**1.80**	**51**	⇑*i*P	**Pb**	**03 50 53.0**	**+0.7**
	baz=52						
KBK				⇑*i*S	**Sg**	**03 51 17.3**	**+0.2**
	baz=52						
DZA	**Taraz**	**1.86**	**317**	*e*P	**Pg**	**03 50 54.5**	**-0.4**
	243nm,0.1s						
DZA				*e*S	**Sg**	**03 51 18.6**	**-0.3**
	2µm,0.3s						
DZA	**Taraz**	**1.86**	**317**	*e*Pn	**Pn**	**03 50 51.7**	**+0.7**
	baz=319						
DZA	**Taraz**	**1.86**	**317**	P	**Pg**	**03 50 54.1**	**-0.8**
	388nm,0.6s						
DZA				S	**Sg**	**03 51 18.6**	**-0.3**
	2µm,0.3s						
CHMS	**Chumysh**	**1.93**	**40**	⇑P	**Pb**	**03 50 54.7**	**+0.3**
	102nm,0.2s,SNR=40						
CHMS				⇑S	**Sg**	**03 51 21.1**	**-0.1**
	460nm,0.3s						
CHMS	**Chumysh**	**1.93**	**40**	⇑*e*P	**Pb**	**03 50 55.0**	**+0.6**
	baz=41						
CHMS				⇑*i*S	**Sg**	**03 51 20.5**	**-0.7**
	baz=41						
USP	**Ospenovka**	**2.03**	**31**	⇑P	**Pb**	**03 50 55.9**	**-0.3**
	155nm,0.2s,SNR=55						
USP				⇓S	**Sg**	**03 51 23.9**	**-0.6**
	820nm,0.2s						
USP	**Ospenovka**	**2.03**	**31**	⇑*i*P	**Pb**	**03 50 56.4**	**+0.2**
	baz=32						
USP				⇑*i*S	**Sb**	**03 51 22.9**	**+1.4**
	baz=32						
SGDS	**Sogindy**	**2.24**	**31**	*e*Pn	**Pn**	**03 50 57.4**	**+1.0**
	baz=31						
BTK	**Batken**	**2.25**	**230**	*e*P	**Pb**	**03 51 00.0**	**0.0**
BTK				*e*S	**Sb**	**03 51 28.0**	**+0.1**
BTK	**Batken**	**2.25**	**230**		**Pb**	**03 50 58.4**	**-1.5**
BTK	**Batken**	**2.25**	**230**	⇑*i*P	**Pb**	**03 50 59.3**	**-0.7**
	baz=29						
BTK				⇑*i*S	**Sb**	**03 51 27.9**	**+0.1**
	baz=29						
DRK	**Karamyk**	**2.27**	**205**		**Pb**	**03 51 00.9**	**+0.5**
DRK	**Karamyk**	**2.27**	**205**	⇑*i*P	**Pb**	**03 50 59.9**	**-0.5**
	baz=4.0						
DRK				⇑*i*S	**Sb**	**03 51 28.7**	**+0.1**
	baz=4.0						
CHMG	**Chimgan**	**2.28**	**271**	*e*P	**Pg**	**03 51 02.0**	**-1.0**
CHMG				*e*S	**Sg**	**03 51 31.0**	**-1.6**
IUG	**Iuzhnay**	**2.34**	**286**	*e*P	**Pg**	**03 51 02.9**	**-1.1**
	1µm,0.2s						
IUG				*e*S	**Sg**	**03 51 33.5**	**-0.8**
	804nm,0.3s						
IUG	**Iuzhnay**	**2.34**	**286**	*e*Pn	**Pn**	**03 50 57.6**	**-0.1**
	baz=288						
BOOM	**Boomskoye usch**	**2.35**	**65**	Pn	**Pb**	**03 51 02.1**	**+0.4**
BOOM	**Boomskoye usch**	**2.35**	**65**	⇑*i*P	**Pb**	**03 51 01.3**	**-0.4**
	baz=66						
BOOM				⇑*i*S	**Sb**	**03 51 31.2**	**+0.4**
	baz=66						
KKAR	**Karatay Array**	**2.44**	**310**	Pn	**Pn**	**03 50 57.4**	**-1.7**
KK09	**Karatay Array**	**2.46**	**311**	⇓Pn	**Pn**	**03 51 01.1**	**+1.7**
	22nm,0.3s,baz=124,slow=12						
KK09				⇓Lg	Lg	03 51 36.0	
	175nm,0.4s,baz=131,slow=28						
ULHL	**Ulahol**	**2.48**	**72**	⇑*i*P	**Pb**	**03 51 03.2**	**-0.8**
	baz=73						
ULHL				⇑*i*S	**Sb**	**03 51 34.4**	**-0.3**
	baz=73						
KST	**Kastek**	**2.63**	**54**	*e*P	**Pg**	**03 51 08.6**	**-1.0**
	86nm,0.3s						
KST				*e*S	**Sg**	**03 51 42.9**	**-0.9**
	397nm,0.3s						
KST	**Kastek**	**2.63**	**54**	Pg	**Pg**	**03 51 08.6**	**-1.0**
	86nm,0.3s						
KST				Lg	Lg	03 51 42.9	
	397nm,0.3s						
DGS	**Degeres**	**2.64**	**49**	*e*P	**Pg**	**03 51 08.3**	**-1.5**
	26nm,0.3s						
DGS				*e*S	**Sg**	**03 51 42.3**	**-1.7**
	329nm,0.5s						
DGS	**Degeres**	**2.64**	**49**	Pg	**Pg**	**03 51 08.3**	**-1.5**
	42nm,0.3s						
DGS				Lg	Lg	03 51 42.3	
	329nm,0.5s						
CHM	**Chimkent**	**2.69**	**288**	*e*P	**Pg**	**03 51 09.9**	**-0.8**
	134nm,0.2s						
CHM				*e*S	**Sg**	**03 51 45.3**	**-0.3**
	943nm,0.4s						
BRLS	**Borolday**	**2.81**	**303**	*e*P	**Pb**	**03 51 10.8**	**+1.3**
	44nm,0.3s						
BRLS				*e*S	**Sg**	**03 51 47.1**	**-2.4**
	366nm,0.5s						
BRLS	**Borolday**	**2.81**	**303**	*e*Pb	**Pb**	**03 51 08.9**	**-0.5**
	baz=299						
BRLS	**Borolday**	**2.81**	**303**	Pg	**Pb**	**03 51 10.8**	**+1.3**
	44nm,0.3s						
BRLS				Lg	Lg	03 51 47.1	
	366nm,0.5s						
TAS	**Tashkent**	**2.83**	**267**	*e*S	**Sg**	**03 51 52.0**	**+1.8**
TAS	**Tashkent**	**2.83**	**267**	Pn	**Pn**	**03 51 02.5**	**-1.9**
TAS	**Tashkent**	**2.83**	**267**	⇑*i*P	**Pn**	**03 51 07.0**	**+2.6**
	baz=67						
TAS				⇑*i*S	**Sn**	**03 51 41.1**	**+2.6**
	baz=67						
KRBS	**Karabastau**	**2.90**	**41**	*e*P	**Pb**	**03 51 12.1**	**+1.2**
	23nm,0.2s						
KRBS				*e*S	**Sb**	**03 51 48.9**	**+2.5**
	159nm,0.4s						
KRBS	**Karabastau**	**2.90**	**41**	Pg	**Pb**	**03 51 12.1**	**+1.2**
	23nm,0.2s						
KRBS				Lg	Lg	03 51 48.9	
	159nm,0.4s						
KSH	**Kashi**	**3.01**	**131**	P	**Pb**	**03 51 11.0**	**-1.9**
KSH				S	**Sb**	**03 51 49.9**	**+0.2**
KSH				pmax	pmax		
	comp=Z,10.0nm,0.3s						
KSH				smax	smax		
	comp=N,130nm,0.8s						
KSH				smax	smax		
	comp=E,89nm,0.8s						
IZV	**Izvestkoviy**	**3.04**	**59**	*e*P	**Pb**	**03 51 15.4**	**+2.0**
	comp=E,48nm,0.3s						
IZV				*e*S	**Sg**	**03 51 54.5**	**-2.3**
	comp=E,188nm,0.6s						
IZV	**Izvestkoviy**	**3.04**	**59**	Pg	**Pb**	**03 51 15.4**	**+2.0**
	comp=E,48nm,0.3s						
IZV				Lg	Lg	03 51 54.5	
	comp=E,188nm,0.6s						
KDJ	**Kajisay**	**3.14**	**78**	⇑*i*P	**Pb**	**03 51 12.5**	**-2.7**
	baz=78						
KDJ				⇑*i*S	**Sb**	**03 51 50.6**	**-2.9**
	baz=78						
TNSS	**Tian-Shan**	**3.25**	**61**	*e*P	**Pb**	**03 51 18.8**	**+1.6**
	comp=E,36nm,0.4s						
TNSS				*e*S	**Sb**	**03 52 00.3**	**+3.3**
	comp=E,46nm,0.5s						
TNSS	**Tian-Shan**	**3.25**	**61**	*e*Pg	**Pg**	**03 51 20.3**	**-1.3**
	baz=61						
TNSS	**Tian-Shan**	**3.25**	**61**	Pg	**Pb**	**03 51 18.8**	**+1.6**
	comp=E,36nm,0.4s						
TNSS				Lg	Lg	03 52 00.3	
	comp=E,46nm,0.5s						
GAR	**Garm**	**3.29**	**220**	Pn	**Pn**	**03 51 13.6**	**+2.8**
AAA	**Alma-Ata**	**3.31**	**59**	*e*Pg	**Pg**	**03 51 21.0**	**-1.7**
	baz=58						
KNDC	**Almaty**	**3.35**	**59**	⇑Pg	**Pb**	**03 51 20.8**	**+2.1**
	comp=E,90nm,0.8s						
KNDC				⇓Lg	Lg	03 52 05.1	
	comp=E,622nm,0.9s						
KUU	**Kurty**	**3.38**	**45**	*e*P	**Pg**	**03 51 21.7**	**-2.2**
	comp=E,16nm,0.2s						
KUU				*e*S	**Sg**	**03 52 05.3**	**-2.3**
	comp=E,223nm,0.4s						
KUU	**Kurty**	**3.38**	**45**	*e*Pb	**Pb**	**03 51 21.2**	**+2.2**
	baz=44						
KUU	**Kurty**	**3.38**	**45**	Pg	**Pg**	**03 51 21.7**	**-2.2**
	comp=E,16nm,0.2s						
KUU				Lg	Lg	03 52 05.3	
	comp=E,223nm,0.4s						
MDOK	**Medeo**	**3.38**	**60**	*e*Pb	**Pb**	**03 51 21.0**	**+1.8**
	baz=59						
MDOK	**Medeo**	**3.38**	**60**	⇓Pg	**Pb**	**03 51 21.5**	**+2.3**
	comp=E,46nm,0.8s						
MDOK				⇓Lg	Lg	03 52 06.1	
	comp=E,179nm,0.8s						
KTBS	**Karatobe**	**3.45**	**50**	*e*P	**Pb**	**03 51 22.7**	**+2.4**
	comp=E,21nm,0.3s						

KTBS				*e*S	Sg	03 52 07.8	-2.1
	comp=E,572nm,0.4s						
KTBS	Karatobe	3.45	50	Pg	Pb	03 51 22.7	+2.4
	comp=E,21nm,0.3s						
KTBS				Lg	Lg	03 52 07.8	
	comp=E,572nm,0.4s						
KOTS	Kotyrbulak	3.45	59	*e*P	Pg	03 51 24.0	-1.3
	comp=E,46nm,0.4s						
KOTS				*e*S	Sg	03 52 09.3	-0.8
	comp=E,265nm,0.5s						
KOTS	Kotyrbulak	3.45	59	Pg	Pg	03 51 24.0	-1.3
	comp=E,46nm,0.4s						
KOTS				Lg	Lg	03 52 09.3	
	comp=E,265nm,0.5s						
BTLS	Baital	3.57	11	*e*P	Pb	03 51 25.1	+2.6
	comp=E,30nm,0.4s						
BTLS				*e*S	Sg	03 52 10.6	-3.3
	comp=E,67nm,0.3s						
BTLS	Baital	3.57	11	*e*Pb	Pb	03 51 23.6	+1.2
	baz=12						
BTLS	Baital	3.57	11	Pg	Pb	03 51 25.0	+2.6
	comp=E,30nm,0.4s						
BTLS				Lg	Lg	03 52 10.6	
	comp=E,67nm,0.3s						
ANVS	Anan'yevo	3.65	69	⇑*i*P	Pn	03 51 18.7	+2.9
	baz=69						
ANVS				⇑*i*S	Sn	03 52 01.7	+2.8
	baz=69						
CHGR	Chuyangaron	4.15	227	Pn	Pn	03 51 23.7	+1.1
SATY	Saty	4.25	67	*e*P	Pg	03 51 38.3	-2.4
	comp=E,37nm,0.9s						
SATY				*e*S	Sg	03 52 34.0	-1.8
	comp=E,57nm,0.5s						
SATY	Saty	4.25	67	*e*Pb	Pb	03 51 36.1	+2.0
	baz=67						
SATY				*e*Pg	Pg	03 51 40.0	-0.7
	baz=67						
SATY	Saty	4.25	67	Pg	Pg	03 51 37.8	-2.9
	comp=E,14nm,0.3s						
SATY				Lg	Lg	03 52 33.3	
	comp=E,50nm,0.2s						
ARXS	Arharly	4.41	51	*e*P	Pb	03 51 40.2	+3.5
	comp=E,15nm,0.2s						
ARXS				*e*S	Sg	03 52 37.0	-3.7
	comp=E,150nm,0.5s						
ARXS	Arharly	4.41	51	Pg	Pb	03 51 40.2	+3.5
	comp=E,15nm,0.2s						
ARXS				Lg	Lg	03 52 37.0	
	comp=E,149nm,0.5s						
UZB	Uzynbulak	4.71	68	*e*Pb	Pb	03 51 43.7	+1.9
	baz=68						
UZB				*e*Pg	Pg	03 51 47.7	-1.7
	baz=68						
BLB	Baldybastay	4.74	56	Pg	Pb	03 51 45.8	+3.4
	comp=E,32nm,0.5s						
BLB				Lg	Lg	03 52 46.6	
	comp=E,66nm,0.3s						
PDGK	Podgornoye	5.09	67	⇑Pg	Pb	03 51 52.2	+3.9
	comp=E,30nm,1.2s						
PDGK				⇓Lg	Lg	03 52 58.7	
	comp=E,40nm,0.7s						
TDK	Taldyqorghan	5.22	47	*e*Pg	Pg	03 51 56.9	-2.3
	baz=46						
OTUK	Ortayu	6.72	356	⇑Lg	Lg	03 53 50.8	
	comp=E,20nm,0.7s						
MAKZ	Makanchi	8.30	48	⇑Lg	Lg	03 54 42.9	
	comp=E,6.2nm,0.7s						
MK31	Makanchi Array	8.46	49	Pn	Pn	03 52 24.0	+2.2
	comp=E,0.8nm,0.3s,baz=231,slow=14,SNR=16						
MK31				⇑Lg	Lg	03 54 49.5	
	comp=E,2.1nm,0.5s,baz=236,slow=28,SNR=4.2						
MK31	Makanchi Array	8.46	49	Pn	Pn	03 52 24.5	+2.8
MKAR	Makanchi Array	8.46	49	Pn	Pn	03 52 24.3	+2.5
	comp=E,0.3nm,0.3s,baz=232,slow=15,SNR=17						
MKAR				Lg	Lg	03 54 45.7	
	comp=E,0.8nm,0.3s,baz=234,slow=28,SNR=5.9						
MKAR	Makanchi Array	8.46	49	Pn	Pn	03 52 24.5	+2.8
KURBB	Kurchatov Arra	9.84	21	Pn	Pn	03 52 42.4	+1.8
	comp=E,0.1nm,0.3s,baz=214,slow=12,SNR=1.8						
KURBB				Lg	Lg	03 55 26.0	
	comp=E,0.1nm,0.3s,baz=207,slow=29,SNR=8.0						
KURBB	Kurchatov Arra	9.84	21	⇓Lg	Lg	03 55 30.0	
	comp=E,36nm,0.8s						
KURK	Kurchatov	9.95	21	⇑Lg	Lg	03 55 35.5	
	comp=E,26nm,1.1s						
KURK	Kurchatov	9.95	21		Pn	03 52 42.4	+0.4
ABKAR	Akbulak array	12.00	314	Pn	Pn	03 53 08.0	-2.2
AKTO	Aktyubinsk	13.70	316	Pn	Pn	03 53 33.5	+0.2
	comp=E,0.2nm,0.3s,baz=124,slow=15,SNR=4.6						
ZAA0	Zalesovo Array	14.69	28	Pn	Pn	03 53 47.5	+0.6
ZALV	Zalesovo Beam	14.69	28	Pn	Pn	03 53 49.4	+2.5
	comp=E,0.3nm,0.3s,baz=222,slow=17,SNR=6.4						
ARU	Arti	17.61	333	Pn	Pn	03 54 21.4	-3.1
ARU				IAmb	IAmb	03 54 24.4	
	comp=Z,10nm,1.4s						
FINES	FINESS Array B	34.36	322	P	P	03 57 04.6	-1.2
	comp=Z,5.3nm,0.9s,baz=123,slow=10,SNR=5.0						
ARCES	ARCESS Array B	37.19	335	P	P	03 57 28.8	-1.1
	comp=Z,2.8nm,1.0s,baz=114,slow=10.0,SNR=1.6						
ARCES	ARCESS Array B	37.19	335	IAmb	IAmb	03 57 29.7	
	comp=Z,16nm,1.4s						
NOA	NORSAR Array B	41.45	320	P	P	03 58 04.4	-1.2
	comp=Z,0.3nm,0.4s,baz=93,slow=7.6,SNR=1.7						

RSNC 11 04:15:09.1±2.2, 6°.96N×76°.44W, h9^{km}±10^{km}, ML2.5, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBBC	Dabeiba	0.24	76	⇑*e*P	Pg	04 15 11.5	-2.5
DBBC				*e*S	Sg	04 15 13.9	-3.4
CBOC	Ciudad Bolivar	1.17	159	*e*P	Pb	04 15 28.9	-2.7
CBOC				*e*S	Sg	04 15 44.5	-2.3
CBOC				*i*		04 15 48.4	
	comp=Z,53nm,0.2s						
CBOC	Ciudad Bolivar	1.17	159	*e*P	Pb	04 15 29.0	-2.6
CBOC				*e*S	Sg	04 15 44.7	-2.1
CBOC				*i*		04 15 48.1	
	comp=Z,64nm,0.6s						
HELC	Santa Helena	1.19	130	*e*P	Pg	04 15 27.5	-4.5
HELC				*e*S	Sg	04 15 42.1	-5.3
HELC				*i*		04 15 45.6	
	comp=Z,49nm,0.3s						
UREC	San Jos de Ur	1.20	49	*e*P	Pb	04 15 30.6	-1.3
UREC				*e*S	Sb	04 15 46.2	-1.3
UREC				*i*		04 15 47.7	
	comp=Z,183nm,0.5s						
MOTC	Monteria, Cord	1.96	23	*e*P	Pn	04 15 40.1	-2.4
MOTC				*e*S	Sn	04 16 06.6	-0.7
PTBC	PUERTO BERRIO,	2.02	102	*e*P	Pn	04 15 41.5	-1.7
PTBC				*e*S	Sn	04 16 05.9	-2.7
PTBC				*i*		04 16 09.4	
	comp=Z,61nm,0.6s						
PTBC	PUERTO BERRIO,	2.02	102	*e*P	Pn	04 15 41.5	-1.7
PTBC				*e*S	Sn	04 16 06.5	-2.1
GUY2C	Guyana, Caldas	2.03	148	*e*P	Pn	04 15 43.5	-0.4
GUY2C				*e*S	Sn	04 16 09.4	-0.2
PLMC	San Jos del P	2.05	176	*e*P	Pn	04 15 43.2	-0.6
PLMC				*e*S	Sg	04 16 14.4	-0.5
NORC	Norcasia	2.09	131	*e*S	Sn	04 16 08.0	-2.5
ANIL	Santa Ana	2.66	157	*e*P	Pn	04 15 52.0	-0.5
SPBC	San Pablo de B	2.69	119	*e*P	Pn	04 15 52.4	-0.3
SPBC				*e*S	Sn	04 16 26.2	+0.8
SPBC				*i*		04 16 34.0	
	comp=Z,13nm,0.4s						
BRRC	Barranca, Sant	2.71	87	*e*P	Pn	04 15 53.5	+0.6
BRRC				*e*S	Sn	04 16 26.2	+0.4
BRRC				*i*		04 16 31.9	
	comp=Z,15nm,0.3s						
SMLC	San Martn de	2.98	52	*e*S	Sn	04 16 29.4	-3.0
SMLC				*i*		04 16 40.3	
	comp=Z,13nm,0.5s						
BARC	Barichara	3.26	96	*e*P	Pn	04 16 00.8	+0.2
BARC				*e*S	Sn	04 16 39.3	-0.3
BARC				*i*		04 16 44.5	
	comp=Z,22nm,0.5s						
OCAC	Ocana	3.35	67	*e*S	Sn	04 16 37.9	-3.8

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*KRNET **11** 04:17:04.0±0.1, 40°.99N×74°.84E, h16^{km}, mb3.4*
*NNC **11** 04:17:04.5±1.0, 41°.01N×74°.80E, h0^{km}, mb4.1, mpv3.7,*
Error ellipse: s-maj=8.2km s-min=4.5km az=165.0
*SOME **11** 04:17:04.9, 41°.05N×74°.82E, h10^{km}*
*KNET **11** 04:17:05.3±0.9, 41°.08N×74°.82E, h10^{km}±7^{km}, ml3.0, Error ellipse: s-maj=7.0km s-min=5.3km az=3.0*
ISC 11 04:17:05.1±1.1, 40°.98N±0°.03×74°.62E±0°.03, h17^{km}±9^{km}, n70, σ1^{s}.25/108, 51C-16D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALK	Salom-Alik	0.61	260	⇑*e*P	Pn	04 17 18.9	-0.3
	baz=62						
SALK				⇑*e*S	Sn	04 17 29.3	+0.6
	baz=62						
UCH	Uchtor	1.25	356	⇓P	Pn	04 17 27.7	-0.5
	29nm,0.2s,SNR=61						
UCH				⇓S	Sg	04 17 45.8	+0.3
	83nm,0.2s						
UCH	Uchtor	1.25	356	⇑*i*P	Pn	04 17 27.8	-0.4
	baz=49						
UCH				⇑*i*S	Sn	04 17 45.0	+0.2
	baz=49						
SFK	Sufi-Kurgan	1.29	222	⇑*e*P	Pg	04 17 30.1	+0.1
	baz=27						
SFK				⇑*e*S	Sg	04 17 49.4	+2.6
	baz=27						
AML	Almayashu	1.34	329	P	Pg	04 17 30.4	-0.6
	23nm,0.2s,SNR=48						
AML				⇓S	Sg	04 17 49.5	+1.0
	160nm,0.4s						
AML	Almayashu	1.34	329	⇑*i*P	Pg	04 17 30.5	-0.5
	baz=23						
AML				⇑*i*S	Sg	04 17 50.0	+1.5
	baz=23						
OHH	Osh	1.47	252	⇑*i*P	Pg	04 17 34.1	+0.8
	baz=54						
OHH				⇑*i*S	Sg	04 17 56.0	+3.6
	baz=54						
KBK	Karagaybulak	1.69	8	⇑P	Pb	04 17 35.4	-0.4
	27nm,0.1s,SNR=92						
KBK				⇑S	Sb	04 17 57.7	+0.8
	247nm,0.2s						
KBK	Karagaybulak	1.69	8	⇓*i*P	Pn	04 17 34.7	+0.7
	baz=3.0						
KBK				⇓*i*S	Sb	04 17 57.3	+0.4
	baz=3.0						
ULHL	Ulahol	1.75	43	⇑P	Pn	04 17 34.3	-0.6
	28nm,0.2s,SNR=6.0						
ULHL				⇑S	Sn	04 17 56.2	-0.8
	70nm,0.1s						
ULHL	Ulahol	1.75	43	⇑*i*P	Pn	04 17 34.3	-0.6
	baz=40						
ULHL				⇑*i*S	Sn	04 17 56.1	-0.8
	baz=40						
EKS2	Erkin-Say	1.79	340	⇑P	Pg	04 17 38.2	-1.3
	10.0nm,0.3s,SNR=16						
EKS2	Erkin-Say	1.79	340	⇑*e*P	Pb	04 17 38.0	+0.5
	baz=35						
EKS2				⇑*i*S	Sg	04 18 02.7	-0.1
	baz=35						
BOOM	Boomskoye usch	1.80	33	⇓*i*P	Pn	04 17 35.5	-0.1
	baz=29						
BOOM				⇓*i*S	Sn	04 17 58.5	+0.4
	baz=29						
FRU1	Bishkek	1.82	0	⇑*i*P	Pb	04 17 37.9	-0.2
	baz=55						
FRU1				⇑*i*S	Sg	04 18 02.6	-1.3
	baz=55						
CHMS	Chumysh	2.02	3	⇑P	Pb	04 17 41.3	0.0
	19nm,0.2s,SNR=13						
CHMS				⇑S	Sb	04 18 08.2	+2.1
	100nm,0.3s						
CHMS	Chumysh	2.02	3	⇑*i*P	Pb	04 17 40.2	-1.1
	baz=58						
CHMS				⇑*i*S	Sb	04 18 06.7	+0.6
	baz=58						
MRKS	Merke	2.04	330	⇑*e*P	Pg	04 17 43.1	-1.2
	16nm,0.3s						
MRKS				*e*S	Sg	04 18 11.0	+0.1
	176nm,0.6s						
MRKS	Merke	2.04	330	Pg	Pg	04 17 43.1	-1.2
	45nm,0.5s						
MRKS				Lg	Lg	04 18 10.2	
	177nm,0.7s						
TKM2	Tokmak 2	2.07	20	⇑P	Pb	04 17 41.1	-1.3
	22nm,0.1s,SNR=52						
TKM2				⇓S	Sb	04 18 08.5	+0.7
	119nm,0.1s						
TKM2	Tokmak 2	2.07	20	⇑Pg	Pb	04 17 41.0	-1.3
	26nm,0.7s						
TKM2				⇑Lg	Lg	04 18 08.7	
	60nm,0.3s						
TKM2	Tokmak 2	2.07	20	⇑*i*P	Pn	04 17 40.4	+1.1
	baz=16						
TKM2				⇑*i*S	Sb	04 18 07.0	-0.8
	baz=16						
MNAS	Manas	2.18	314	⇑*i*P	Pb	04 17 44.3	+0.1
	baz=11						
MNAS				⇑*i*S	Sg	04 18 13.9	-1.4
	baz=11						
KDJ	Kajisay	2.24	58	⇑*i*P	Pn	04 17 41.6	0.0
	baz=57						
KDJ				⇑*i*S	Sn	04 18 09.2	+0.3
	baz=57						
USP	Ospenovka	2.28	358	⇓P	Pb	04 17 45.2	-0.7
	28nm,0.2s,SNR=41						
USP	Ospenovka	2.28	358	⇓*i*P	Pb	04 17 44.1	-1.8
	baz=54						
USP				⇓*i*S	Sb	04 18 13.5	-0.3
	baz=54						
KST	Kastek	2.29	26	*e*P	Pb	04 17 45.3	-0.7
	40nm,0.3s						
KST				*e*S	Sb	04 18 14.5	+0.4
	184nm,0.4s						
KST	Kastek	2.29	26	Pg	Pb	04 17 45.3	-0.7
	40nm,0.3s						
KST				Lg	Lg	04 18 14.6	
	184nm,0.6s						
DGS	Degeres	2.42	20	*e*P	Pb	04 17 47.8	-0.3
	23nm,0.4s						
DGS				*e*S	Sb	04 18 18.7	+1.0
	158nm,0.4s						
DGS	Degeres	2.42	20	Pg	Pb	04 17 47.8	-0.3
	41nm,0.4s						
DGS				Lg	Lg	04 18 19.3	
	151nm,0.2s						
SGDS	Sogindy	2.47	0	Pg	Pb	04 17 50.2	+1.2
	31nm,0.5s						
SGDS				Lg	Lg	04 18 22.6	
	166nm,0.4s						
IZV	Izvestkoviy	2.53	35	*e*P	Pb	04 17 49.4	-0.8
	16nm,1.0s						
IZV				*e*S	Sb	04 18 21.4	+0.3
	89nm,0.2s						
IZV	Izvestkoviy	2.53	35	Pg	Pb	04 17 49.5	-0.7
	22nm,0.5s						
IZV				Lg	Lg	04 18 21.4	
	89nm,0.2s						
MTBS	Maitube	2.53	32	*e*P	Pb	04 17 49.5	-0.7
	22nm,0.4s						
MTBS				*e*S	Sb	04 18 21.2	+0.2
	131nm,0.4s						
MTBS	Maitube	2.53	32	Pg	Pb	04 17 49.4	-0.7
	15nm,0.2s						
MTBS				Lg	Lg	04 18 21.2	
	141nm,0.3s						
DRK	Karamyk	2.63	236	⇑*i*P	Pb	04 17 50.9	-1.0
	baz=38						
DRK				⇑*i*S	Sg	04 18 25.8	-3.8
	baz=38						
TRKS	Terek-Say	2.68	283	⇑*i*P	Pb	04 17 51.5	-1.1
	baz=81						
TRKS				⇑*i*S	Sb	04 18 26.1	+0.8
	baz=81						
TNSS	Tian-Shan	2.69	39	*e*P	Pb	04 17 51.8	-1.2
	11nm,0.2s						
TNSS				*e*S	Sb	04 18 25.3	-0.5
	38nm,0.4s						
TNSS	Tian-Shan	2.69	39	Pg	Pb	04 17 52.1	-0.9
	10nm,0.2s						
TNSS				Lg	Lg	04 18 25.8	
	38nm,0.4s						
KRBS	Karabastau	2.82	16	*e*P	Pb	04 17 55.2	+0.1
	21nm,0.4s						
KRBS				*e*S	Sb	04 18 31.2	+1.9
	193nm,0.5s						
KRBS	Karabastau	2.82	16	Pg	Pb	04 17 55.2	+0.1
	21nm,0.4s						
KRBS				Lg	Lg	04 18 31.2	
	193nm,0.5s						
MDOK	Medeo	2.83	39	*e*P	Pb	04 17 54.0	-1.3
	20nm,0.7s						
MDOK				*e*S	Sb	04 18 28.8	-0.9
	60nm,0.9s						
MDOK	Medeo	2.83	39	⇑Pg	Pb	04 17 53.7	-1.5
	26nm,0.6s						
MDOK				⇑Lg	Lg	04 18 30.5	
	66nm,0.7s						
MDOK	Medeo	2.83	39	Pg	Pb	04 17 54.0	-1.3
	14nm,0.4s						
MDOK				Lg	Lg	04 18 29.3	
	46nm,0.4s						
KNDC	Almaty	2.83	37	⇑Pg	Pb	04 17 53.8	-1.5
	26nm,0.3s						
KNDC				⇑Lg	Lg	04 18 31.7	
	175nm,0.5s						
ANVS	Anan'yevo	2.90	51	⇑*i*P	Pn	04 17 50.9	+0.2
	baz=49						
ANVS				⇑*i*S	Sn	04 18 25.3	0.0
	baz=49						
KOTS	Kotyrbulak	2.92	39	*e*P	Pb	04 17 56.9	+0.2
	14nm,0.3s						
KOTS				*e*S	Sb	04 18 34.2	+2.0
	179nm,0.5s						
KOTS	Kotyrbulak	2.92	39	Pg	Pb	04 17 56.9	+0.2
	14nm,0.3s						
KOTS				Lg	Lg	04 18 34.2	
	179nm,0.5s						
BTK	Batken	3.04	254	⇑*i*P	Pb	04 17 56.8	-2.0
	baz=54						
BTK				⇑*i*S	Sb	04 18 35.1	-0.5
	baz=54						
KTBS	Karatobe	3.13	29	*e*P	Pb	04 18 00.1	-0.2
	17nm,0.3s						
KTBS				*e*S	Sb	04 18 39.7	+1.6
	169nm,0.4s						
KTBS	Karatobe	3.13	29	Pg	Pb	04 18 00.1	-0.2
	17nm,0.3s						
KTBS				Lg	Lg	04 18 39.7	
	169nm,0.4s						
KUU	Kurty	3.17	23	*e*P	Pb	04 18 01.0	-0.1
	6.8nm,0.3s						
KUU				*e*S	Sb	04 18 41.4	+1.9
	159nm,0.4s						
KUU	Kurty	3.17	23	Pg	Pb	04 18 01.0	-0.1
	6.8nm,0.3s						
KUU				Lg	Lg	04 18 41.4	
	159nm,0.4s						
SATY	Saty	3.50	52	*e*P	Pb	04 18 06.6	-0.1
	5.7nm,0.4s						
SATY				*e*S	Sb	04 18 50.4	+1.4
	43nm,0.7s						
SATY	Saty	3.50	52	Pg	Pb	04 18 06.6	-0.1
	6.4nm,0.2s						
SATY				Lg	Lg	04 18 50.5	
	23nm,0.2s						
IUG	Iuzhnay	3.63	290	*e*P	Pg	04 18 14.1	-0.6
	104nm,0.6s						
IUG				*e*S	Sg	04 19 03.8	+2.1
	40nm,0.5s						
IUG	Iuzhnay	3.63	290	Pg	Pg	04 18 14.1	-0.6
	105nm,0.6s						
IUG				Lg	Lg	04 19 03.9	
	25nm,0.4s						
KK09	Karatay Array	3.74	306	⇑Pg	Pg	04 18 13.5	-3.2
	2.5nm,0.5s,baz=123,slow=16						
KK09				⇑Lg	Lg	04 19 03.1	
	14nm,0.6s,baz=128,slow=30						
UZB	Uzynbulak	3.93	55	*e*P	Pb	04 18 14.2	+0.2
	6.7nm,0.4s						
UZB				*e*S	Sb	04 19 03.4	+2.2
	20nm,0.7s						
UZB	Uzynbulak	3.93	55	Pg	Pb	04 18 14.2	+0.2
	7.0nm,0.4s						
UZB				Lg	Lg	04 19 03.6	
	15nm,0.4s						
BTLS	Baital	4.08	354	*e*P	Pb	04 18 18.1	+1.7
	1.6nm,0.4s						
BTLS				*e*S	Sb	04 19 10.3	+4.9
	22nm,1.0s						
BRLS	Borolday	4.11	301	*e*P	Pg	04 18 22.4	-1.3
	1.3nm,0.5s						
BRLS				*e*S	Sg	04 19 17.6	+0.7
	11nm,1.0s						
BRLS	Borolday	4.11	301	Pg	Pg	04 18 22.4	-1.3
	2.8nm,0.6s						
BRLS				Lg	Lg	04 19 18.0	
	8.5nm,0.6s						
BLB	Baldybastay	4.22	41	Pg	Pb	04 18 19.1	+0.1
	11nm,0.6s						
BLB				Lg	Lg	04 19 12.0	
	45nm,0.3s						
PDGK	Podgornoye	4.31	55	Pg	Pb	04 18 20.1	-0.4
	3.0nm,0.8s						
PDGK				Lg	Lg	04 19 13.7	
	7.5nm,0.5s						
PDGK	Podgornoye	4.31	55	⇓Pg	Pb	04 18 22.2	+1.6
	14nm,0.9s						
PDGK				⇓Lg	Lg	04 19 17.2	
	21nm,0.7s						
OTUK	Ortayu	7.44	348	⇓Lg	Lg	04 21 00.5	
	17nm,0.8s						
MK31	Makanchi Array	8.03	41	⇑Pn	Pn	04 19 00.2	-0.6
	1.3nm,0.8s,baz=218,slow=14,SNR=3.9						
MK31				⇑Lg	Lg	04 21 15.8	
	2.1nm,0.6s						
KURBB	Kurchatov Arra	10.02	14	⇓Lg	Lg	04 22 19.1	
	11nm,0.7s						
KURK	Kurchatov	10.12	15	⇓Lg	Lg	04 22 21.0	
	13nm,1.0s						

IDC 11 04:18:45.9±1.0, 26°.60N×91°.50E, h0^{km}, mb3.7/6, mb1 3.9/6, mb1mx3.3/54, mbtmp3.7/6, MS3.2/2, Ms1 3.2/2, ms1mx2.8/31, Error ellipse: s-maj=76.9km s-min=21.4km az=50.0, Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	21.43	342	P	P	04 23 36.5	+0.9
	0.4nm,0.5s,baz=155,slow=13,SNR=3.0						
LEM	Lembang	36.72	153	LR	LR	04 44 59.5	
	comp=Z,38nm,20.1s,baz=188,slow=43						
MJAR	Matsushiro Arr	40.67	64	LR	LR	04 42 58.0	
	comp=Z,28nm,18.2s,baz=320,slow=36						
FINES	FINESS Array B	55.28	328	P	P	04 28 19.7	-1.1
	2.6nm,0.9s,baz=104,slow=8.0,SNR=4.6						
WRA	Warramunga Arr	62.19	134	P	P	04 29 08.7	-0.7
	0.6nm,0.7s,baz=322,slow=7.4,SNR=7.0						
GERES	GERESS Array B	62.65	313	P	P	04 29 12.7	+0.3
	0.9nm,0.6s,baz=77,slow=7.1,SNR=5.5						
ASAR	Alice Springs	64.64	137	P	P	04 29 26.4	+0.8
	0.2nm,0.5s,baz=324,slow=6.9,SNR=5.7						
TORD	Torodi Ar. Bea	84.05	282	P	P	04 31 19.1	+0.1
	1.0nm,0.9s,baz=54,slow=4.0,SNR=4.8						

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*PAS **11** 04:21:34.9±1.6, 32°.31N±0°.03×115°.40W±0°.02, h15^{km}±2^{km},*
Error ellipse: s-maj=3.8km s-min=2.2km az=192.0
*NEIC **11** 04:21:34.6±2.0, 32°.35N±0°.02×115°.45W±0°.02, h15^{km}±2^{km},*
Error ellipse: s-maj=3.4km s-min=2.0km az=211.0
*ECX **11** 04:21:34.2±0.5, 32°.36N×115°.42W, h14^{km}±3^{km}, MD2.8, ML3.1*
*MEX **11** 04:21:37.2±1.2, 32°.42N×115°.33W, h28^{km}±10^{km}, MD4.1*
ISC 11 04:21:34.2±0.9, 32°.35N±0°.03×115°.41W±0°.02, h14^{km}±7^{km}, n43, σ0^{s}.89/60, 5C-4D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.11	54		Pg	04 21 38.0	+0.6
CPBX				IAML		04 21 39.6	
	comp=E,5µm,0.2s						
CPBX	Cerro Prieto	0.11	54	⇑*e*P	Pb	04 21 38.5	+0.3
CPBX				⇓*e*		04 21 41.9	
CPBX				IAML		04 21 41.9	
	comp=N,12µm,0.1s						
CPBX				⇑*e*		04 21 43.1	
CPBX				IAML		04 21 43.1	
	comp=E,14µm,0.2s						
MBIG	Mexicali	0.19	74		Pb	04 21 40.4	+0.9
MBIG					Sb	04 21 44.9	+1.8
MBIG	Mexicali	0.19	74	*i* P	Pg	04 21 38.4	-0.1
MBIG				*i* P	Pb	04 21 40.4	+0.9
MBIG				*i* S	Sg	04 21 41.0	-0.4
MBIG				*i* S	Sb	04 21 44.9	+1.8
CTLX	Tlaxcala, TLX	0.26	62	*e*P	Pb	04 21 41.9	+1.3
POT2	Potabilizadora	0.27	5	*e*P	Pb	04 21 41.8	+0.8

POT2				iS	Sb	04 21 46.6	+1.1
UABX	UABC, Campus M	0.28	355	Pg	Pg	04 21 40.4	+0.3
GUVIX	Guadalupe Vict	0.29	100		Pg	04 21 40.5	+0.3
CEA0	Mexicali	0.37	324	eP	Pb	04 21 42.9	+0.4
RITX	Riito Sonora	0.43	116	eP	Pb	04 21 44.8	+1.2
RITX				eS	Sb	04 21 51.9	+2.0
WESC	Westside Schoo	0.49	326	⇓iP	Pb	04 21 45.3	+0.7
YUH2	Yuha Desert	0.52	304	⇓iP	Pg	04 21 45.3	+0.9
EMSC	East Mesa	0.53	43	eP	Pb	04 21 46.0	+0.8
RMX	La Rumorosa	0.61	294	Pg	Pg	04 21 45.0	-1.3
RMX	comp=N,1µm,0.2s			IAML		04 21 54.3	
RMX	comp=E,823nm,0.2s			IAML		04 21 54.0	
IKP	In-Ko-Pah, Jac	0.66	297	⇓eP	Pg	04 21 48.0	+0.9
SWSC	Sam W. Stewart	0.67	331	eP	Pg	04 21 47.9	+0.6
SUP	Superstition M	0.69	330		Pg	04 21 48.3	+0.6
SUP					Sb	04 21 58.3	+0.7
YMD	Yuma Desert	0.76	74	⇑eP	Pg	04 21 49.3	+0.4
GLA	Glamis	0.85	35		Pb	04 21 50.5	-0.4
GLA	comp=N,219nm,0.3s			IAML		04 22 02.5	
GLA	Glamis	0.85	35	⇑iP	Pb	04 21 50.5	-0.4
ECBX	El Chinero	0.93	161	eP	Pb	04 21 52.1	-0.1
ECBX				eS	Sb	04 22 04.5	+0.1
MONP2	Monument Peak	1.01	302	eP	Pb	04 21 54.3	+0.7
MONP2				eS	Sb	04 22 07.3	+0.5
TKX	Tecate	1.03	282		Pb	04 21 54.7	+0.8
TKX	comp=N,649nm,0.2s			IAML		04 22 08.3	
CBX	Cerro Bola	1.06	268		Pb	04 21 54.9	+0.4
CBX					Sb	04 22 08.7	+0.5
CBX	Cerro Bola comp=N,282nm,0.3s	1.06	268	IAML		04 22 10.1	
CBX	Cerro Bola	1.06	268	eP	Pb	04 21 54.9	+0.4
CBX				eS	Sb	04 22 08.7	+0.5
CBX	Cerro Bola	1.06	268	⇑eP	Pb	04 21 55.2	+0.7
CBX				eS	Sb	04 22 09.3	+1.0
TJIG	Tijuana	1.07	275		Pb	04 21 55.0	+0.4
TJIG					Sb	04 22 08.8	+0.3
TJIG	Tijuana	1.07	275	eP	Pb	04 21 55.0	+0.4
TJIG				eS	Sb	04 22 08.8	+0.3
BAR	Barrett	1.11	287		Pb	04 21 55.8	+0.5
BAR	Barrett	1.11	287	eP	Pb	04 21 55.5	+0.2
CCX	Cicese	1.17	246		Pn	04 21 55.9	-0.2
CCX	comp=N,174nm,0.3s			IAML		04 22 13.0	
CCX	comp=E,192nm,0.3s			IAML		04 22 13.2	
SPIG	San Pedro Mart	1.30	182		Pn	04 21 58.5	+0.1
SPIG					Sb	04 22 14.9	-0.6
SPIG	San Pedro Mart	1.30	182	eP	Pn	04 21 58.5	+0.1
SPIG				eS	Sb	04 22 14.9	-0.6
SFX	San Felipe	1.40	160		Pn	04 21 59.1	-0.2
TJX	Tijuana	1.40	277	Pn	Pn	04 21 59.8	+0.5
TJX	comp=E,446nm,0.5s			IAML		04 22 20.9	
TJX	comp=N,444nm,0.6s			IAML		04 22 21.2	
109C	Camp Elliot, M	1.52	291		Pn	04 22 01.6	+0.5
109C	comp=E,312nm,0.2s			IAML		04 22 23.1	
PFO	Pinyon Flats O	1.53	325		Pn	04 22 00.2	-1.1
214A	Organ Pipe Nat	2.24	100		Pn	04 22 10.0	-1.0
214A					Sg	04 22 45.0	-1.3
214A	Organ Pipe Nat	2.24	100	eP	Pn	04 22 10.0	-1.0
214A				eS	Sg	04 22 45.0	-1.3
MWC	Mount Wilson	2.90	311	Pn	Pn	04 22 18.8	-1.4
MWC	comp=E,24nm,0.5s			IAML		04 23 07.4	
QSM	Queen of Sheba	3.80	342	Pn	Pn	04 22 30.9	-1.5
QSM	comp=E,10nm,2.4s			IAML		04 22 59.4	
QSM	comp=N,11nm,4.7s			IAML		04 23 27.2	
X16A	Lo Mia Camp, P	3.91	57	Pn	Pn	04 22 32.2	-1.9

IDC 11 04:30:39.0±1.5, **4°.14S**×**129°.51E, h0^{km}, mb4.1**/1, **mb1 3.8**/4, **mb1mx3.6**/30, **mbtmp3.7**/4, **ML3.4**/3, **Error ellipse: s-maj=46.4km s-min=24.1km az=89.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong 4.9nm,0.3s,baz=231,slow=20,SNR=14	3.69	28	Pn	Pn	04 31 38.1	+0.8
SIJI	6.4nm,0.3s,baz=228,slow=23,SNR=7.9			Sn	Sn	04 32 20.8	-0.8
WRA	Warramunga Arr 0.1nm,0.3s,baz=347,slow=13,SNR=4.7	16.40	164	Pn	Pn	04 34 29.4	-1.3
ASAR	Alice Springs 0.3nm,0.3s,baz=344,slow=9.1,SNR=12	19.87	168	P	P	04 35 12.4	+0.5
MKAR	Makanchi Array 0.9nm,0.4s,baz=113,slow=7.8,SNR=28	65.59	326	P	P	04 41 24.7	0.0

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*JMA **11** 05:11:25.5±0.1, 24°.33N×121°.88E, h43^{km}±3^{km}, M3.2*
*TAP **11** 05:11:25.7, 24°.41N×121°.92E, h25^{km}, ML3.9, B*
ISC 11 05:11:25.8±0.9, **24°.39N**±0°.02×**121°.94E**±0°.02, **h23**^{km}±5^{km}, **n121**, σ**0^{s}.69**/200, **8C-10D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	Wuta baz=285	0.15	291	⇓iP	Pb	05 11 30.6	-0.1
EWUT	baz=285			iS	Sb	05 11 34.0	0.0
ENA	Nanau baz=275	0.18	282	iP	Pb	05 11 31.0	-0.1
ENA	baz=275			iS	Sb	05 11 34.8	+0.2
EHP	Heping Village baz=236	0.20	246	eP	Pb	05 11 31.3	0.0
EHP	baz=236			eS	Sb	05 11 35.9	+1.0
TWC	Suao baz=345	0.23	340	⇓iP	Pb	05 11 31.6	-0.1
TWC	baz=345			iS	Sb	05 11 35.4	-0.3
NDS	Dongshan baz=320	0.31	320	⇓iP	Pb	05 11 32.8	-0.1
NDS	baz=320			iS	Sb	05 11 37.5	-0.3
ETL	Fush Village baz=227	0.37	231	P	Pb	05 11 34.0	+0.3
ETL	baz=227			eS	Sn	05 11 40.7	-1.6
NACB	Ninganchiao baz=231	0.38	235	P	Pb	05 11 34.0	0.0
NACB	baz=231			eS	Sb	05 11 40.7	+1.2
TWE	Neicheng baz=325	0.41	323	⇓iP	Pb	05 11 34.4	0.0
TWE	baz=325			eS	Sb	05 11 40.2	-0.1
ILA	Ilan baz=337	0.41	335	⇓iP	Pb	05 11 34.8	+0.3
ILA	baz=337			eS	Sn	05 11 41.4	-1.9
ENTT	Nioudou baz=306	0.42	306	⇑iP	Pb	05 11 34.6	0.0
ENTT	baz=306			eS	Sb	05 11 40.5	-0.1
NDT	Datong Townshi baz=297	0.44	299	⇑iP	Pb	05 11 35.0	+0.1
NDT	baz=297			eS	Sb	05 11 41.4	+0.2
TWD	Chiawan baz=221	0.44	225	⇓iP	Pb	05 11 35.0	+0.1
TWD	baz=221			eS	Sn	05 11 42.7	-1.3
EGS	baz=3.0	0.45	360	P	Pb	05 11 35.4	+0.2
EGS	baz=3.0			eS	Sb	05 11 41.9	+0.3
ETLH	Xiulin Townshi baz=243	0.45	246	P	Pb	05 11 35.1	-0.2
ETLH	baz=243			eS	Sb	05 11 42.6	+1.0
NTC	Toucheng baz=350	0.47	348	⇓iP	Pb	05 11 35.4	-0.1
NTC	baz=350			eS	Sb	05 11 42.2	+0.1
HWA	Hwalien baz=213	0.51	216	eP	Pn	05 11 37.0	-0.8
HWA	baz=213			eS	Sn	05 11 46.6	+0.8
NNS	Nan Shan baz=273	0.52	276	⇑P	Pb	05 11 36.2	-0.2
NNS	baz=273			eS	Sb	05 11 43.8	+0.4
NWLT	Wulai baz=314	0.55	314	⇑iP	Pb	05 11 36.7	-0.2
NWLT	baz=314			eS	Sb	05 11 44.2	-0.2
YHNB	Yeheng baz=297	0.58	299	⇑P	Pb	05 11 37.3	-0.1
YHNB	baz=297			eS	Sb	05 11 45.2	-0.1
ETM	Tongmen baz=221	0.58	224	eP	Pb	05 11 37.4	-0.1
ETM	baz=221			eS	Sn	05 11 46.8	-0.9
TIPB	Shuangxi baz=351	0.59	350	⇓iP	Pb	05 11 37.4	-0.1
TIPB	baz=351			S	Sb	05 11 45.7	+0.2
NSK	Sanguang baz=297	0.60	298	⇑iP	Pb	05 11 37.4	-0.3
NSK	baz=297			eS	Sb	05 11 45.7	-0.1
TEYL	Yanliau Villag baz=210	0.60	211	eP	Pb	05 11 37.9	+0.2
TEYL	baz=210			eS	Sn	05 11 48.6	+0.5
TWB1	Santiao Chiao baz=7.0	0.62	4	eP	Pb	05 11 38.1	+0.1
TWB1	baz=7.0			eS	Sb	05 11 46.5	+0.2
FUSS	Fushou baz=255	0.65	257	⇑iP	Pb	05 11 38.8	+0.1
FUSS	baz=255			iS	Sn	05 11 48.3	-1.2
WHF	Hehuan Shan baz=246	0.66	248	P	Pb	05 11 39.1	+0.1
WHF	baz=246			eS	Sn	05 11 48.6	-1.5
TWA	Mucha baz=332	0.67	331	P	Pn	05 11 39.2	-0.8
TWA	baz=332			eS	Sb	05 11 47.5	-0.2
NHDH	Xindian Distri baz=327	0.68	327	eP	Pn	05 11 39.5	-0.6
NHDH	baz=327			eS	Sn	05 11 48.4	-1.6
NWF	Wu-fen Shan baz=349	0.69	348	⇓iP	Pn	05 11 39.5	-0.8
NWF	baz=349			eS	Sn	05 11 49.0	-1.4
WFSB	Wu-fen Shan baz=349	0.69	348	⇓eP	Pn	05 11 39.6	-0.7
WFSB	baz=349			eS	Sn	05 11 49.0	-1.2
TWT	Tachien baz=257	0.71	259	eP	Pn	05 11 40.0	-0.6
TWT	baz=257			eS	Sn	05 11 50.1	-0.8
TATO	Taipei baz=326	0.71	325	eP	Pn	05 11 39.8	-0.7
TATO	baz=326			eS	Sn	05 11 49.2	-1.5
TDCB	Techi baz=257	0.72	259	eP	Pn	05 11 40.1	-0.7
TDCB	baz=257			eS	Sn	05 11 50.1	-1.1
NHY	Taipei baz=333	0.73	333	eP	Pn	05 11 40.3	-0.4
NHY	baz=333			eS	Sn	05 11 50.9	-0.3
ESL	Shilin baz=216	0.73	219	P	Pb	05 11 39.8	-0.2
ESL	baz=216			eS	Sn	05 11 50.8	-0.5
TAP1	Taipei baz=329	0.75	330	eP	Pn	05 11 41.7	+0.7
TAP1	baz=329			eS	Sn	05 11 51.6	0.0
TAP	Taipei baz=329	0.75	329	eP	Pn	05 11 40.9	-0.2
TAP	baz=329			eS	Sn	05 11 51.4	-0.4
CHGB	Renai baz=243	0.77	245	eP	Pn	05 11 41.0	-0.6
CHGB	baz=243			eS	Sn	05 11 51.8	-0.7
TEGC	Jichi Village baz=206	0.77	208	eP	Pn	05 11 41.0	-0.3
TNOU	National Taiwa baz=350	0.77	349	eP	Pn	05 11 40.9	-0.5
OWD	Renai baz=236	0.82	238	eP	Pb	05 11 41.4	-0.1
OWD	baz=236			eS	Sn	05 11 53.0	-0.6
YM01	YM01 baz=337	0.82	336	P	Pn	05 11 42.1	0.0
YM01	baz=337			eS	Sn	05 11 53.2	-0.3
NJD	Zhudong baz=293	0.84	294	eP	Pn	05 11 43.1	+0.7
TWS1	Kuangyinshan baz=327	0.85	326	eP	Pn	05 11 42.7	+0.3
TWS1	baz=327			eS	Sn	05 11 55.1	+0.9
YM08	YM08 baz=339	0.85	338	eP	Pn	05 11 42.3	-0.2
EGFH	Guangfu baz=211	0.86	213	eP	Pb	05 11 42.0	0.0
EGFH	baz=211			eS	Sn	05 11 54.3	0.0
LIOB	Emei baz=286	0.88	287	⇑eP	Pn	05 11 43.1	+0.4
LIOB	baz=286			eS	Sn	05 11 55.1	+0.2
ANP	Anpu baz=335	0.88	335	eP	Pn	05 11 42.7	-0.2
ANP	baz=335			eS	Sn	05 11 54.5	-0.5
NSTT	Nanjuang baz=285	0.88	286	eP	Pn	05 11 43.1	+0.2
NSTT	baz=285			eS	Sn	05 11 55.1	+0.1
NTST	Danshui baz=330	0.89	330	eP	Pn	05 11 43.6	+0.7
NTST	baz=330			eS	Sn	05 11 55.9	+0.8
NCU	National Centr baz=310	0.89	310	eP	Pn	05 11 43.5	+0.5
NCUH	Zhongli baz=310	0.89	310	eP	Pn	05 11 43.3	+0.3
WHP	Taichung City baz=261	0.91	263	eP	Pn	05 11 43.4	0.0
WHP	baz=261			eS	Sn	05 11 55.6	-0.2
JYNG	Yonagunijimaku	0.92	86	P	Pb	05 11 43.4	+0.2
JYNG				eS	Sn	05 11 56.1	+0.1
TWY	Chenhua baz=342	0.93	341	eP	Pn	05 11 44.2	+0.6
TWY	baz=342			eS	Sn	05 11 56.1	-0.1
SBCB	Hsinchu baz=294	0.95	295	eP	Pn	05 11 44.4	+0.6
VWDT	VWDT baz=227	0.96	229	eP	Pn	05 11 43.6	-0.4
VWDT	baz=227			eS	Sn	05 11 57.3	+0.4
HSN	Hsinchu baz=297	0.97	295	eP	Pb	05 11 44.4	+0.5
WPL	Puli Township baz=246	0.97	247	eP	Pb	05 11 44.1	+0.2
YOJ	Yonaguni jima baz=87	0.98	86	iP	Pb	05 11 44.4	+0.1
YOJ	baz=87			S	Sn	05 11 57.4	-0.1
YOJ	Yonaguni jima	0.98	86	P	Pn	05 11 43.8	-0.4
YOJ				eS	Sb	05 11 57.1	+0.4
DPDB	Guoxing baz=247	0.99	249	eP	Pb	05 11 44.5	+0.2
DPDB	baz=247			eS	Sn	05 11 58.2	+0.6
WCS	Beigang Elemen baz=249	0.99	251	eP	Pb	05 11 44.6	+0.3
WCS	baz=249			eS	Sn	05 11 57.8	+0.2
HGSD	Ruisui baz=206	1.01	208	eP	Pn	05 11 44.2	-0.4
HGSD	baz=206			eS	Sn	05 11 59.4	+1.2
NHW	Xinwu Township baz=307	1.01	307	eP	Pb	05 11 44.9	+0.1
EHY	Hungye baz=211	1.04	213	eP	Pn	05 11 43.6	-1.6
NMLH	Miaoli baz=277	1.05	278	eP	Pb	05 11 46.5	+1.1
TWQ1	Liyutan baz=266	1.06	268	eP	Pb	05 11 46.3	+0.8
TWQ1	baz=266			eS	Sn	05 12 00.6	+1.2
NSY	Sanyi baz=270	1.07	272	eP	Pb	05 11 46.8	+1.1
SMLT	Sun Moon Lake baz=240	1.07	242	eP	Pb	05 11 45.6	-0.2
SMLT	baz=240			eS	Sn	05 12 00.2	+0.4
SSLB	Suanglung baz=235	1.08	236	eP	Pn	05 11 45.5	-0.1
SSLB	baz=235			eS	Sn	05 11 59.6	-0.3
TYC	Yuchr baz=242	1.10	244	eP	Pb	05 11 46.0	-0.1
TYC	baz=242			eS	Sb	05 12 00.7	+0.7
YULB	Yu-li baz=209	1.15	211	eP	Pn	05 11 45.7	-0.9
YULB	baz=209			eS	Sn	05 12 00.9	-0.8
ECBN	Changbin baz=201	1.16	203	eP	Pb	05 11 47.2	+0.1
TCU	Taichung baz=257	1.17	258	eP	Pb	05 11 48.4	+0.9
WDJ	Dajia District baz=267	1.18	268	eP	Pb	05 11 48.0	+0.5
WWF	Wufeng baz=252	1.18	253	eP	Pb	05 11 48.7	+1.1
EYUL	Yuli baz=207	1.18	209	eP	Pn	05 11 46.8	-0.2
TWF1	Yuli baz=208	1.19	210	eP	Pn	05 11 45.6	-1.5
TWF1	baz=208			eS	Sb	05 12 02.8	+0.1
WJS	Zhushan baz=242	1.24	243	eP	Pb	05 11 49.2	+0.6
WNT	Mingjian baz=245	1.25	246	eP	Pb	05 11 49.5	+0.8
YUS	Yu-Shan baz=224	1.27	225	eP	Pn	05 11 48.6	0.0
YUS	baz=224			eS	Sb	05 12 05.6	+0.1
WCHH	Zhanghua baz=255	1.29	256	eP	Pb	05 11 49.6	+0.1
FULB	Fuli baz=205	1.32	206	eP	Pn	05 11 49.2	+0.2
ALS	Alishan baz=228	1.36	230	eP	Pb	05 11 50.1	-0.6
ALS	baz=228			eS	Sb	05 12 08.7	+1.0
CHKT	Chengkung baz=201	1.39	202	eP	Pn	05 11 48.8	-1.0
CHN5	Tsauling baz=234	1.40	236	eP	Pb	05 11 51.1	-0.2
CHN5	baz=234			eS	Sb	05 12 09.9	+1.2
WDLH	Douliu baz=240	1.46	242	eP	Pb	05 11 52.5	+0.3
ELDTW	Lidau baz=214	1.46	215	eP	Pn	05 11 50.0	-1.0
ELDTW	baz=214			eS	Sb	05 12 10.2	-0.5
WRL	Guolierlin Hig baz=250	1.50	251	eP	Pb	05 11 52.3	-0.8
WRL	baz=250			eS	Sb	05 12 12.4	+0.6
EDH	Donghe baz=201	1.53	202	eP	Pn	05 11 50.5	-1.2
EDH	baz=201			eS	Sn	05 12 10.3	-0.6
WTK	Tuku baz=243	1.58	244	eP	Pb	05 11 53.9	-0.4
CHN4	Tsaushan baz=229	1.61	230	eP	Pn	05 11 52.7	-0.2
CHN4	baz=229			eS	Sb	05 12 15.1	+0.4
STYH	Taoyuan baz=220	1.61	221	eP	Pn	05 11 53.7	+0.8
TPUB	Ta-pu baz=227	1.61	228	eP	Pb	05 11 54.7	-0.3
TPUB	baz=227			eS	Sb	05 12 16.4	+1.4
IRIF	Iriomote-Funau	1.64	92	P	Pn	05 11 53.3	0.0
IRIF				eS	Sn	05 12 14.1	+0.5
CHY	Chiayi baz=236	1.64	238	eP	Pb	05 11 55.4	0.0
LONT	Longtian baz=206	1.65	207	eP	Pn	05 11 52.7	-0.8
WTP	Ta-pu baz=226	1.66	227	eP	Pb	05 11 55.2	-0.6
TWK	Hsinying baz=229	1.73	230	eP	Pn	05 11 54.6	0.0
TWK	baz=229			eS	Sb	05 12 19.5	+1.1
HATJ	Hateruma jima	1.74	101	P	Pn	05 11 54.7	0.0
TWG	Pinlang baz=206	1.75	207	eP	Pn	05 11 55.1	+0.2
TWG	baz=206			eS	Sn	05 12 15.8	-0.7
TWGBT	Beinan baz=206	1.75	207	eP	Pn	05 11 54.7	-0.1
TWGBT	baz=206			eS	Sn	05 12 15.4	-1.0
CHN1	Nanshi baz=226	1.76	227	eP	Pb	05 11 56.7	-0.8
LDUT	Ludao baz=193	1.76	194	eP	Pn	05 11 55.0	0.0
SGST	Jiashian baz=223	1.80	224	eP	Pn	05 11 56.4	+0.9
SLGT	Liugui baz=220	1.82	221	eP	Pb	05 11 57.5	-1.1
SLGT	baz=220			eS	Sb	05 12 21.6	+0.6
ICHU	Yijhu baz=235	1.83	236	eP	Pb	05 11 57.7	-0.9
ICHU	baz=235			eS	Sb	05 12 22.9	+1.7
JKRS	Kuro-shima	1.90	94	P	Pn	05 11 57.6	+0.8
JKRS				S	Sn	05 12 20.1	0.0
ECL	Taimali baz=206	2.00	207	eP	Pn	05 11 58.1	-0.1
JIJ	Ishigaki jima	2.01	90	P	Pn	05 11 58.9	+0.5
JIJ				eS	Sn	05 12 22.1	-0.8
SSD	Sandimen baz=215	2.03	216	eP	Pb	05 12 00.4	-1.6
TSMG	Majia baz=215	2.05	215	eP	Pb	05 12 00.7	-1.8
MASBT	Mashibuluo baz=213	2.14	214	eP	Pn	05 12 01.2	+1.0
MASBT	baz=213			eS	Sb	05 12 28.8	-1.2
JISG	Ishigakijimahi	2.17	84	S	Sn	05 12 26.8	0.0
EAST	Anshuo baz=206	2.23	207	eP	Pn	05 12 02.3	+0.7
PNG	Penghu baz=249	2.33	250	eP	Pn	05 12 02.9	+0.1
PHUB	P'eng-hu baz=247	2.33	248	eP	Pn	05 12 03.0	+0.2
PHUB	baz=247			eS	Sn	05 12 31.4	+0.6
LAY	Lan-yu baz=188	2.37	189	eP	Pn	05 12 02.6	-0.7
SLIU	Shizi baz=205	2.40	206	eP	Pn	05 12 04.6	+0.7
JTJ	Tarama	2.53	84	eS	Sn	05 12 36.8	+1.1

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*BUL **11** 05:27:12.4±0.6, 23°.55S×34°.30E, h10^{km}, MD3.6*
*EAF **11** 05:27:12.4±0.6, 23°.55S×34°.30E, h10^{km}, MD3.5*
*IDC **11** 05:27:27.9±5.3, 25°.98S×29°.43E, h0^{km}, mb1 3.0/3, mb1mx2.8/32, mbtmp3.0/3, ML2.3/3, Error ellipse: s-maj=40.4km s-min=30.6km az=69.0*
ISC 11 05:27:24.2±1.0, **25°.89S**±0°.06×**29°.57E**±0°.06, **h10**^{km}, **n11,**

σ2^{s}.20/12, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNG	**Changalane**	**2.39**	**100**	*i* P	**Pn**	**05 28 04.2**	**+0.8**
CNG	**Changalane**	**2.39**	**100**	*i* P	**Pn**	**05 28 04.2**	**+0.8**
MSNA	**Messina**	**3.55**	**7**	*i* P	Pn	05 28 15.6	-3.9
MSNA				*i* S	**Sn**	**05 29 00.9**	**-0.6**
MSNA	**Messina**	**3.55**	**7**	*i* P	Pn	05 28 15.6	-3.9
MSNA				*i* S	**Sn**	**05 29 00.9**	**-0.6**
LBTB	**Lobatse**	**3.70**	**283**	Pn	**Pn**	**05 28 24.5**	**+3.0**
	0.2nm,0.3s,baz=101,slow=7.3,SNR=1.9						
LBTB				Lg	Lg	05 29 22.9	
	2.1nm,0.3s,baz=10,slow=19,SNR=9.6						
BOSA	**Boshof**	**4.70**	**234**	Pn	**Pn**	**05 28 37.6**	**+2.3**
	0.1nm,0.3s,baz=55,slow=14,SNR=2.9						
BOSA				Pg	**Pg**	**05 28 51.9**	**-2.4**
	0.3nm,0.3s,baz=60,slow=12,SNR=7.0						
BOSA				Sn	**Sn**	**05 29 30.0**	**0.0**
	0.4nm,0.3s,baz=56,slow=17,SNR=4.9						
BOSA				Lg	Lg	05 29 52.1	
	1.3nm,0.3s,baz=162,slow=20,SNR=9.0						
I47ZA	**BOSHOF INFRASO**	**4.72**	**234**	*i*		05 57 10.0	
	baz=54,slow=326,SNR=2.1						
MATP	**Matopo**	**5.53**	**350**	*i* P	Pn	05 28 43.4	-3.3
MATP				*i* S	**Sn**	**05 29 49.7**	**-0.7**
MATP	**Matopo**	**5.53**	**350**	*i* P	Pn	05 28 43.4	-3.3
MATP				*i* S	**Sn**	**05 29 49.7**	**-0.7**
SUR	**Sutherland**	**10.02**	**228**	Pn	**Pn**	**05 29 51.9**	**+3.5**
	0.1nm,0.3s,baz=56,slow=18,SNR=0.8						
SUR				Sn	**Sn**	**05 31 38.1**	**-2.9**
	0.2nm,0.3s,baz=104,slow=5.4,SNR=1.3						
SUR				Lg	Lg	05 32 39.7	
	0.2nm,0.3s,baz=107,slow=18,SNR=2.3						
I35NA	**TSUMEB INFRASO**	**12.93**	**299**	*i*		06 44 40.0	
	baz=123,slow=319,SNR=0.8						

IDC 11 05:34:03.1±0.9**, 43°.00S**×**83°.42E, h0^{km}, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.6**/32**, mbtmp4.0**/4**, MS3.7**/8**, Ms1 3.6**/8**, ms1mx3.4**/25**, Error ellipse: s-maj=28.6km s-min=10.4km az=118.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**25.11**	**82**	T	T	06 05 27.8	
	baz=242,slow=74,SNR=11						
H01W3	**Cape Leeuwin H**	**25.12**	**82**	T	T	06 05 28.4	
	baz=242,slow=74,SNR=9.8						
H01W1	**Cape Leeuwin H**	**25.13**	**82**	T	T	06 05 29.1	
	baz=242,slow=74,SNR=11						
MAW	**Mawson**	**27.02**	**197**	LR	LR	05 48 29.2	
	comp=Z,109nm,18.3s,baz=54,slow=32						
H08S2	**Diego Garcia H**	**36.50**	**342**	T	T	06 19 32.9	
	baz=166,slow=76,SNR=8.0						
H08S1	**Diego Carcia H**	**36.51**	**342**	T	T	06 19 29.7	
	baz=166,slow=76,SNR=7.5						
H08S3	**Diego Garcia H**	**36.52**	**342**	T	T	06 19 34.5	
	baz=166,slow=76,SNR=10						
ASAR	**Alice Springs**	**45.63**	**82**	P	P	05 42 25.2	-0.2
	0.6nm,0.8s,baz=229,slow=8.6,SNR=5.2						
ASAR				LR	LR	05 59 14.8	
	comp=Z,197nm,21.1s,baz=214,slow=33						
STKA	**Stephens Creek**	**46.66**	**96**	LR	LR	05 59 12.0	
	comp=Z,66nm,18.2s,baz=206,slow=32						
QSPA	**South Pole Qui**	**47.16**	**180**	P	P	05 42 36.9	-0.1
	1.2nm,0.6s,baz=24,slow=0.3,SNR=11						
WRA	**Warramunga Arr**	**48.27**	**78**	P	P	05 42 46.0	-0.1
	1.3nm,0.9s,baz=228,slow=7.3,SNR=7.6						
WRA				LR	LR	06 00 40.1	
	comp=Z,132nm,21.8s,baz=330,slow=33						
BOSA	**Boshof**	**48.40**	**267**	LR	LR	05 58 40.6	
	comp=Z,111nm,21.5s,baz=174,slow=30						
CMAR	**Chiang Mai Arr**	**62.80**	**17**	P	P	05 44 30.4	0.0
	1.9nm,0.3s,baz=222,slow=6.7,SNR=5.3						
CMAR				LR	LR	06 08 19.2	
	comp=Z,28nm,19.5s,baz=198,slow=33						
PLCA	**Paso Flores**	**93.40**	**200**	LR	LR	06 27 51.3	
	comp=Z,31nm,20.5s,baz=181,slow=35						
MJAR	**Matsushiro Arr**	**93.56**	**41**	LR	LR	06 27 15.6	
	comp=Z,12nm,19.7s,baz=25,slow=34						

IDC 11 05:49:48.3±1.8**, 3°.91S**×**130°.58E, h0^{km}, mb3.5**/1**, mb1 3.6**/3**, mb1mx3.4**/40**, mbtmp3.4**/3**, ML3.2**/2**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.7**/19**, Error ellipse: s-maj=116.0km s-min=14.9km az=71.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.35**	**167**	Pn	Pn	05 53 39.3	-0.2
	0.1nm,0.3s,baz=348,slow=12,SNR=1.7						
ASAR	**Alice Springs**	**19.90**	**171**	P	P	05 54 21.6	0.0
	0.2nm,0.3s,baz=349,slow=10.0,SNR=17						
GUMO	**Guam**	**22.44**	**39**	LR	LR	06 03 57.0	
	comp=Z,89nm,20.8s,baz=108,slow=38						
MKAR	**Makanchi Array**	**65.99**	**326**	P	P	06 00 36.7	0.0
	0.5nm,0.9s,baz=112,slow=8.7,SNR=3.1						

IDC ***11*** *05:57:55.8±2.0, 18°.90N×145°.53E, h224^{km}±20^{km}, mb3.7/20, mb1 3.9/24, mb1mx3.7/39, mbtmp4.4/24, Error ellipse: s-maj=16.5km s-min=9.2km az=91.0*

NEIC ***11*** *05:57:55.5±1.7, 18°.87N±0°.07×145°.6E±0°.1, h215^{km}±3^{km}, mb4.4/34, Error ellipse: s-maj=19.4km s-min=9.9km az=88.0*

ISC 11 05:57:55.0±0.4**, 18°.88N**±0°.05×**145°.5E**±0°.1**, h214^{km}, n65, σ1^{s}.12**/61**, mb4.2**/31**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANA2	**Anatahan**	**2.53**	**174**	Pn	**Pn**	**05 58 40.3**	**+0.1**
GUMO	**Guam**	**5.29**	**186**	P	**Pn**	**05 59 14.3**	**+0.9**
	26nm,0.3s,baz=95,slow=5.9,SNR=6.0						
GUMO				S	**S**	**06 00 12.1**	**-3.2**
	22nm,0.3s,baz=184,slow=22,SNR=1.6						
JCJ	**Chichijima**	**8.72**	**340**	P	**Pn**	**05 59 57.6**	**+0.1**
	10nm,0.3s,baz=264,slow=12,SNR=1.2						
JCJ				S	**S**	**06 01 31.2**	**-4.5**
	36nm,0.3s,baz=280,slow=22,SNR=7.6						
JOW	**Kunigami**	**17.69**	**300**	P	**Pn**	**06 01 48.4**	**-0.3**
	7.0nm,0.3s,baz=129,slow=12,SNR=8.3						
JOW	**Kunigami**	**17.69**	**300**	P	**Pn**	**06 01 49.5**	**+0.8**
INU	**Inuyama**	**18.03**	**337**	P	**P**	**06 01 51.7**	**+1.6**
JGF	**Kuroka**	**18.14**	**338**	P	**P**	**06 01 52.8**	**+1.5**
JGF				IAmb	IAmb	06 02 11.7	
	comp=Z,26nm,1.1s						
MJAR	**Matsushiro Arr**	**18.72**	**342**	P	**P**	**06 01 57.6**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=164,slow=9.9,SNR=8.8						
MJAR	**Matsushiro Arr**	**18.72**	**342**	IAmb	IAmb	06 02 02.2	
	comp=Z,6.4nm,1.1s						
MAJO	**Matsushiro**	**18.72**	**342**	P	**P**	**06 01 58.2**	**+0.5**
MAJO				IAmb	IAmb	06 02 06.4	
	comp=Z,28nm,1.1s						
MAT	**Matsushiro**	**18.72**	**342**	P	**P**	**06 01 57.6**	**0.0**
JMM	**Marumori**	**19.36**	**349**	P	**P**	**06 02 06.4**	**+2.1**
JSD	**Sado**	**20.10**	**343**	P	**P**	**06 02 13.3**	**+1.0**
MANU	**Manus Island**	**20.87**	**175**	P	**P**	**06 02 20.1**	**-0.7**
MANU				IAmb	IAmb	06 02 22.1	
	comp=Z,18nm,0.7s						
JAY	**Jayapura**	**21.76**	**193**	P	**P**	**06 02 30.1**	**+0.1**
	comp=Z,18nm,0.9s,baz=334,slow=10,SNR=4.5						
JTM	**Tenmabayashi**	**22.16**	**351**	P	**P**	**06 02 34.2**	**+0.8**
YHNB	**Yeheng**	**23.08**	**289**	P	**P**	**06 02 43.8**	**+1.8**
KSRS	**Korea Array**	**24.04**	**324**	P	**P**	**06 02 50.2**	**-0.3**
	comp=Z,6.3nm,0.8s,baz=146,slow=9.2,SNR=9.6						
JKA	**Kamikawa-asahi**	**25.28**	**355**	P	**P**	**06 03 03.1**	**+1.5**
JKA	**Kamikawa-asahi**	**25.28**	**355**	IAmb	IAmb	06 03 08.1	
	comp=Z,26nm,1.1s						
ASAJ	**Asahikawa**	**25.28**	**355**	P	**P**	**06 03 03.1**	**+1.5**
	comp=Z,12nm,0.8s,baz=198,slow=9.1,SNR=4.2						
KLR	**Kul'dur**	**32.23**	**343**	P	**P**	**06 04 02.9**	**-0.2**
	comp=Z,4.7nm,0.5s,baz=144,slow=7.7,SNR=14						
COEN	**Coen**	**32.70**	**184**	P	**P**	**06 04 06.6**	**-0.9**
COEN				IAmb	IAmb	06 04 07.3	
	comp=Z,4.5nm,0.7s						
PETK	**Petropavlovsk-**	**35.47**	**13**	P	**P**	**06 04 31.0**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=213,slow=8.5,SNR=7.1						
WB0	**Warramunga Arr**	**39.91**	**196**	P	**P**	**06 05 08.5**	**+0.2**
WB0				IAmb	IAmb	06 05 09.3	
	comp=Z,16nm,0.8s						
WRAB	**Tennant Creek**	**40.08**	**196**	P	**P**	**06 05 10.0**	**+0.3**
WRAB				IAmb	IAmb	06 05 10.8	
	comp=Z,20nm,0.7s						
WRA	**Warramunga Arr**	**40.09**	**196**	P	**P**	**06 05 10.0**	**+0.2**
	comp=Z,14nm,0.7s,baz=19,slow=8.9,SNR=146						
WRA	**Warramunga Arr**	**40.09**	**196**	P	**P**	**06 05 09.2**	**-0.7**
SONM	**Songino Array**	**42.86**	**321**	P	**P**	**06 05 32.1**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=136,slow=9.2,SNR=9.9						
SONM	**Songino Array**	**42.86**	**321**	IAmb	IAmb	06 05 32.9	
	comp=Z,0.8nm,0.7s						
AS31	**Alice Springs**	**43.76**	**195**	P	**P**	**06 05 39.2**	**-0.3**
ASAR	**Alice Springs**	**43.76**	**195**	P	**P**	**06 05 39.5**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=19,slow=8.0,SNR=17						
CMAR	**Chiang Mai Arr**	**43.97**	**277**	P	**P**	**06 05 43.4**	**+2.1**
	comp=Z,0.6nm,0.3s,baz=66,slow=7.0,SNR=6.3						
EIDS	**Eidsvold**	**44.32**	**173**	P	**P**	**06 05 44.5**	**+0.6**
YAK	**Yakutsk**	**44.51**	**349**	P	**P**	**06 05 45.1**	**+0.2**
	comp=Z,13nm,0.6s,baz=31,slow=1.1,SNR=4.9						
YAK	**Yakutsk**	**44.51**	**349**	IAmb	IAmb	06 05 45.7	
	comp=Z,27nm,0.6s						
DZM	**Mont Dzumac**	**45.58**	**152**	P	**P**	**06 05 54.1**	**+0.1**
DZM				IAmb	IAmb	06 05 57.6	
	comp=Z,20nm,1.5s						
PSA00	**Pilbara Seismi**	**47.37**	**213**	P	**P**	**06 06 08.7**	**+0.9**
PSA00				IAmb	IAmb	06 06 16.0	
	comp=Z,20nm,1.4s						
PSA00	**Pilbara Seismi**	**47.37**	**213**	P	**P**	**06 06 07.9**	**0.0**
PSA00				IAmb	IAmb	06 06 26.6	
	comp=Z,5.4nm,1.4s						
UNV	**Unalaska Valle**	**50.64**	**35**	P	**P**	**06 06 32.4**	**+0.2**
BILL	**Bilibino**	**50.89**	**10**	P	**P**	**06 06 34.4**	**+0.6**
BILL				IAmb	IAmb	06 06 36.1	
	comp=Z,8.0nm,0.9s						
TIXI	**Tiksi**	**53.67**	**354**	P	**P**	**06 06 53.7**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=136,slow=7.1,SNR=4.9						
SDPT	**Sand Point**	**54.46**	**35**	P	**P**	**06 07 00.8**	**+0.7**
MK31	**Makanchi Array**	**58.17**	**314**	P	**P**	**06 07 26.6**	**0.0**
MKAR	**Makanchi Array**	**58.17**	**314**	P	**P**	**06 07 26.6**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=97,slow=9.7,SNR=8.0						
TTA	**Tatalina**	**59.20**	**27**	P	**P**	**06 07 34.1**	**+0.7**
IMAR	**Indian Mountai**	**61.15**	**24**	P	**P**	**06 07 47.1**	**+0.6**
NRIK	**Noril'sk**	**61.37**	**340**	P	**P**	**06 07 46.7**	**-1.1**
	comp=Z,1.5nm,0.4s,baz=101,slow=10,SNR=4.0						
MLY	**Manley**	**62.06**	**26**	P	**P**	**06 07 53.3**	**+0.6**
MLY				IAmb	IAmb	06 07 54.2	
	comp=Z,3.6nm,0.8s						
A21K	**Barrow**	**62.20**	**18**	P	**P**	**06 07 54.0**	**+0.7**
A21K				IAmb	IAmb	06 07 55.1	
	comp=Z,4.6nm,0.7s						
TOLK	**Toolik Lake Re**	**63.52**	**22**	P	**P**	**06 08 03.2**	**+1.0**
TOLK				IAmb	IAmb	06 08 04.1	
	comp=Z,3.6nm,0.7s						
IL31		**63.59**	**26**	P	**P**	**06 08 02.0**	**-0.5**
ILAR	**Eielson Array**	**63.59**	**26**	P	**P**	**06 08 01.8**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=254,slow=5.3,SNR=19						
ILAR	**Eielson Array**	**63.59**	**26**	P	**P**	**06 08 02.2**	**-0.5**
INK	**Inuvik**	**69.30**	**23**	P	**P**	**06 08 38.1**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=284,slow=4.8,SNR=14						
INK	**Inuvik**	**69.30**	**23**	IAmb	IAmb	06 08 39.6	
	comp=Z,3.0nm,0.8s						
A36M	**Sachs Harbour**	**71.99**	**19**	P	**P**	**06 08 55.0**	**+0.2**
A36M				IAmb	IAmb	06 08 56.1	
	comp=Z,5.6nm,1.0s						
ABKAR	**Akbulak array**	**73.05**	**317**	P	**P**	**06 09 00.8**	**-0.8**
YKA	**Yellowknife Ar**	**77.94**	**28**	P	**P**	**06 09 28.9**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=287,slow=5.4,SNR=9.1						
ARCES	**ARCESS Array B**	**82.25**	**342**	P	**P**	**06 09 51.1**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=80,slow=7.5,SNR=7.1						
ARCES	**ARCESS Array B**	**82.25**	**342**	IAmb	IAmb	06 09 52.9	
	comp=Z,12nm,1.4s						
NVAR	**Mina Array Bea**	**83.21**	**52**	P	**P**	**06 09 58.8**	**+1.0**
	comp=Z,1.6nm,0.5s,baz=276,slow=5.5,SNR=10						
FINES	**FINESS Array B**	**86.63**	**335**	P	**P**	**06 10 12.0**	**-2.0**
	comp=Z,2.9nm,0.8s,baz=67,slow=5.0,SNR=9.8						
PDAR	**Pinedale Array**	**87.87**	**45**	P	**P**	**06 10 19.4**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=189,slow=2.0,SNR=5.8						
LPAZ	**La Paz**	**147.91**	**91**	PKPbc	**PKPbc**	**06 17 16.7**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=315,slow=1.4,SNR=3.0						

MDD ***11*** *06:02:24.9±0.7, 37°.13N×3°.05E, h20^{km}±10^{km}, mb3.5/3, Error ellipse: s-maj=12.6km s-min=8.2km az=68.0, PRXIMO*

CRAAG ***11*** *06:02:25.3, 37°.04N×3°.13E, Ml2.4*

ISC 11 06:02:21.8±1.1**, 37°.16N**±0°.05×**3°.14E**±0°.08**, h12^{km}, n16, σ2^{s}.17**/22**, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.37**	**193**	P	**Pb**	**06 02 31.3**	**+1.0**
ABA	**Alger-Bouzarea**	**0.37**	**193**	P	**Pb**	**06 02 31.3**	**+1.0**
ABMS	**Boumerdes**	**0.49**	**146**	P	**Pn**	**06 02 34.7**	**+0.1**
ABMS	**Boumerdes**	**0.49**	**146**	P	**Pn**	**06 02 34.7**	**+0.1**
EMHD	**Djebel Mahouad**	**0.97**	**189**	P	**Pb**	**06 02 41.5**	**+0.9**
EMHD	**Djebel Mahouad**	**0.97**	**189**	P	**Pb**	**06 02 41.5**	**+0.9**
ADJB	**Djebel Djouab**	**1.03**	**166**	P	**Pn**	**06 02 43.2**	**+1.1**
ADJB	**Djebel Djouab**	**1.03**	**166**	P	**Pn**	**06 02 43.2**	**+1.1**
EIBI	**Ibiza**	**2.34**	**323**	P	**Pn**	**06 03 01.2**	**+1.1**
	1.3nm,0.1s,SNR=11						
EIBI				S	**Sn**	**06 03 26.3**	**-2.6**
	10.0nm,0.2s,SNR=11						
ETOS	**Mallorca**	**2.62**	**354**	P	**Pn**	**06 03 05.9**	**+2.0**
	1.8nm,0.1s,SNR=17						
ETOS				S	**Sn**	**06 03 34.6**	**-1.1**
	8.5nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**3.99**	**293**	P	**Pn**	**06 03 24.5**	**+1.6**
	0.8nm,0.2s,SNR=9.2						
ETOB				S	**Sn**	**06 04 07.2**	**-2.5**
	4.8nm,0.7s,SNR=4.1						
ECHE	**Chera**	**4.04**	**308**	P	**Pn**	**06 03 25.5**	**+2.1**
	0.3nm,0.1s,SNR=7.9						
ECHE				S	**Sn**	**06 04 07.4**	**-3.3**
	3.8nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**4.27**	**320**	P	**Pn**	**06 03 28.3**	**+1.6**
	0.2nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**06 04 13.1**	**-3.5**
	6.5nm,0.8s,SNR=7.9						
EPOB	**Poblet**	**4.48**	**340**	S	**Sn**	**06 04 18.1**	**-3.6**
	3.8nm,0.5s,SNR=7.9						
CFON	**Fontmartina**	**4.63**	**353**	P	**Pn**	**06 03 33.7**	**+2.0**
	1.0nm,0.2s,SNR=7.9						
CFON				S	**Sn**	**06 04 22.1**	**-3.2**
	7.8nm,0.7s,SNR=7.9						
CSOR	**Sort**	**5.43**	**344**	P	**Pn**	**06 03 44.8**	**+2.1**
	0.4nm,0.2s,SNR=7.9						

SSS ***11*** *06:13:51.7, 11°.96N×87°.06W, h173^{km}, ML3.0*

SNET ***11*** *06:13:51.7±1.1, 11°.96N×87°.06W, h173^{km}±62^{km}, ML3.0*

INET ***11*** *06:13:54.5, 12°.33N×86°.86W, h165^{km}, ML4.5*

UCR ***11*** *06:13:55.2±2.8, 11°.96N×87°.08W, h0^{km}±6^{km}, ML2.7, MW3.4*

ISC 11 06:13:58.9±1.3**, 12°.0N**±0°.2×**87°.1W**±0°.2**, h100^{km}, n21, σ1^{s}.80**/25**, 1C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.47**	**331**	*e*P	**Pn**	**06 14 23.4**	**-1.5**
CNCH	**Conchagua**	**1.47**	**331**	*e*P	**Pn**	**06 14 23.4**	**-1.5**
LCND	**La Caada**	**1.52**	**330**	*e*P	**Pn**	**06 14 23.8**	**-1.7**
LCND				IAML		06 14 24.4	
	comp=Z,70nm,0.3s						
LCND	**La Caada**	**1.52**	**330**	*e*P	**Pn**	**06 14 23.8**	**-1.7**
LCND				IAML		06 14 24.4	
	comp=Z,70nm,0.3s						
ALJI	**Alcalda de J**	**1.96**	**313**	*e*S	**Sn**	**06 14 57.9**	**+2.6**
ALJI	**Alcalda de J**	**1.96**	**313**	*e*S	**Sn**	**06 14 57.9**	**+2.6**
GBS3	**Finca Las Img**	**2.01**	**126**	*e*P	**Pn**	**06 14 30.6**	**-1.1**
LAPC	**Finca la Perla**	**2.04**	**126**	*i* P	**Pn**	**06 14 30.8**	**-1.2**
BUEV	**Buena Vista**	**2.04**	**125**	*i* P	**Pn**	**06 14 31.0**	**-1.1**
COEB	**Comit de Eme**	**2.05**	**318**	*e*P	**Pn**	**06 14 30.9**	**-1.3**
COEB				*e*S	**Sn**	**06 15 00.8**	**+3.2**
COEB				IAML		06 15 07.8	
	comp=Z,71nm,0.5s						
COEB	**Comit de Eme**	**2.05**	**318**	*e*P	**Pn**	**06 14 30.9**	**-1.3**
COEB				*e*S	**Sn**	**06 15 00.8**	**+3.2**
COEB				IAML		06 15 07.8	
	comp=Z,71nm,0.5s						
BUAI	**Buenos Aires**	**2.06**	**122**	*e*P	**Pn**	**06 14 31.1**	**-1.2**
COLC	**Colonia**	**2.28**	**125**	*e*P	**Pn**	**06 14 34.8**	**-0.4**
GUAI	**GUAI**	**2.31**	**137**	⇑*i*P	**Pn**	**06 14 35.5**	**-0.1**
CUI	**Cuipilapa**	**2.32**	**124**	*i* P	**Pn**	**06 14 34.3**	**-1.4**
ACAL	**Aguas Claras**	**2.44**	**123**	*e*P	**Pn**	**06 14 36.1**	**-1.1**
LFRS	**El Faro**	**2.51**	**311**	*e*P	**Pn**	**06 14 36.0**	**-2.3**
LFRS				*e*S	**Sn**	**06 15 09.7**	**+1.2**
LFRS	**El Faro**	**2.51**	**311**	*e*P	**Pn**	**06 14 36.0**	**-2.3**
LFRS				*e*S	**Sn**	**06 15 09.7**	**+1.2**
INDI	**Punta indio, G**	**2.63**	**143**	*e*S	**Sn**	**06 15 12.3**	**+1.2**
ARE1	**Arenal 1**	**2.79**	**123**	*e*S	**Sn**	**06 15 15.5**	**+0.5**
JAYA	**Jayaque - finc**	**2.82**	**306**	*e*S	**Sn**	**06 15 15.9**	**-0.1**

KRNET ***11*** *06:17:57.6±0.1, 41°.65N×74°.67E, h19^{km}, mb3.3*

KNET ***11*** *06:17:58.4±0.6, 41°.72N×74°.63E, h18^{km}±2^{km}, ml2.3, Error ellipse: s-maj=4.2km s-min=2.7km az=172.0*

SOME ***11*** *06:17:58.3, 41°.75N×74°.68E, h5^{km}*

NNC ***11*** *06:17:59.7±1.3, 41°.78N×74°.67E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=9.7km s-min=5.5km az=168.0*

ISC 11 06:17:58.2±1.1**, 41°.65N**±0°.03×**74°.54E**±0°.02**, h15^{km}**±10^{km}**, n63, σ1^{s}.02**/109**, 26C-27D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**0.57**	**358**	⇑P	**Pb**	**06 18 09.0**	**-1.2**
	145nm,0.1s,SNR=590						
UCH				⇑S	**Sb**	**06 18 17.5**	**-0.9**
	158nm,0.2s						
UCH	**Uchtor**	**0.57**	**358**	⇓*i*P	**Pb**	**06 18 09.0**	**-1.2**
	baz=48						
UCH				⇓*i*S	**Sb**	**06 18 17.3**	**-1.1**
	baz=48						
AML	**Almayashu**	**0.79**	**308**	⇓P	**Pb**	**06 18 13.9**	**+0.1**
	56nm,0.1s,SNR=20						
AML				⇓S	**Sn**	**06 18 25.8**	**-1.1**
	73nm,0.2s						
AML	**Almayashu**	**0.79**	**308**	⇑*i*P	**Pb**	**06 18 13.9**	**+0.1**
	baz=4.0						
AML				⇑*i*S	**Sn**	**06 18 26.0**	**-0.8**
	baz=4.0						
KBK	**Karagaybulak**	**1.05**	**17**	⇓P	**Pb**	**06 18 16.9**	**-1.3**
	50nm,0.1s,SNR=12						
KBK				⇓S	**Sb**	**06 18 30.8**	**-1.0**
	128nm,0.1s						
KBK	**Karagaybulak**	**1.05**	**17**	⇑*i*P	**Pb**	**06 18 16.8**	**-1.3**
	baz=11						
KBK				⇑*i*S	**Sb**	**06 18 30.6**	**-1.2**
	baz=11						
EKS2	**Erkin-Say**	**1.16**	**331**	⇓P	**Pb**	**06 18 20.2**	**+0.3**
	11nm,0.1s,SNR=61						
EKS2				⇓S	**Sg**	**06 18 36.3**	**+0.7**
	36nm,0.2s						
EKS2	**Erkin-Say**	**1.16**	**331**	⇓*i*P	**Pn**	**06 18 19.8**	**-0.1**
	baz=27						
EKS2				⇓*i*S	**Sg**	**06 18 36.4**	**+0.8**
	baz=27						
BOOM	**Boomskoye usch**	**1.34**	**51**	⇑*i*P	**Pn**	**06 18 21.1**	**-1.4**
	baz=48						
BOOM				⇑*i*S	**Sn**	**06 18 38.1**	**-2.0**
	baz=48						
CHMS	**Chumysh**	**1.35**	**7**	⇓P	**Pn**	**06 18 22.6**	**0.0**
	9.7nm,0.2s,SNR=21						
CHMS				⇑S	**Sb**	**06 18 40.7**	**+0.2**
	23nm,0.1s						
CHMS	**Chumysh**	**1.35**	**7**	⇑*i*P	**Pn**	**06 18 22.2**	**-0.4**
	baz=2.0						
CHMS				⇑*i*S	**Sn**	**06 18 40.5**	**+0.2**
	baz=2.0						
ULHL	**Ulahol**	**1.40**	**64**	⇑*i*P	**Pn**	**06 18 21.6**	**-1.8**
	baz=63						
ULHL				⇑*i*S	**Sn**	**06 18 39.4**	**-2.3**
	baz=63						
MRKS	**Merke**	**1.46**	**319**	*e*P	**Pb**	**06 18 26.1**	**+0.9**
	26nm,0.3s						
MRKS				*e*S	**Sg**	**06 18 46.1**	**+0.7**
	77nm,0.3s						
MRKS	**Merke**	**1.46**	**319**	P	**Pb**	**06 18 26.0**	**+0.9**
	26nm,0.3s						
MRKS				S	**Sg**	**06 18 46.1**	**+0.7**
	77nm,0.3s						
MRKS	**Merke**	**1.46**	**319**	*e*P	**Pb**	**06 18 26.1**	**+0.9**
	baz=16						
MRKS				*e*S	**Sg**	**06 18 46.1**	**+0.7**
	baz=16						
TKM2	**Tokmak 2**	**1.49**	**31**	⇑P	**Pn**	**06 18 24.1**	**-0.5**
	11nm,0.1s,SNR=27						
TKM2				⇓S	**Sn**	**06 18 43.3**	**-0.6**
	50nm,0.1s						
TKM2	**Tokmak 2**	**1.49**	**31**	⇑P	**Pn**	**06 18 24.0**	**-0.6**
	9.9nm,0.6s						
TKM2				⇓S	**Sn**	**06 18 42.8**	**-1.1**
	30nm,0.6s						
TKM2	**Tokmak 2**	**1.49**	**31**	⇓*i*P	**Pn**	**06 18 24.0**	**-0.6**
	baz=28						
TKM2				⇓*i*S	**Sn**	**06 18 43.5**	**-0.4**
	baz=28						
USP	**Ospenovka**	**1.61**	**359**	⇓P	**Pb**	**06 18 27.5**	**-0.2**
	28nm,0.2s,SNR=101						
USP				⇑S	**Sb**	**06 18 49.2**	**+1.3**
	44nm,0.2s						
USP	**Ospenovka**	**1.61**	**359**	⇑*i*P	**Pn**	**06 18 27.0**	**+0.9**
	baz=56						
USP				⇑*i*S	**Sb**	**06 18 48.8**	**+0.9**
	baz=56						
MNAS	**Manas**	**1.73**	**300**	⇓*i*P	**Pg**	**06 18 31.0**	**-0.4**
	baz=98						
MNAS				⇓*i*S	**Sg**	**06 18 55.0**	**+1.2**
	baz=98						
OHH	**Osh**	**1.74**	**230**	⇓*i*P	**Pg**	**06 18 30.6**	**-1.0**
	baz=32						
OHH				⇓*i*S	**Sg**	**06 18 54.5**	**+0.3**
	baz=32						
KST	**Kastek**	**1.75**	**37**	*e*P	**Pb**	**06 18 29.9**	**-0.1**
	7.2nm,0.1s						
KST				*e*S	**Sb**	**06 18 52.1**	**+0.3**
	45nm,0.3s						
KST	**Kastek**	**1.75**	**37**	P	**Pb**	**06 18 29.9**	**-0.1**
	18nm,0.4s						
KST				S	**Sb**	**06 18 52.1**	**+0.3**
	40nm,0.3s						
SGDS	**Sogindy**	**1.80**	**2**	P	**Pb**	**06 18 30.6**	**-0.2**
	13nm,0.2s						
SGDS				S	**Sb**	**06 18 53.8**	**+0.6**
	28nm,0.2s						
SFK	**Sufi-Kurgan**	**1.81**	**206**	⇑*e*P	**Pb**	**06 18 31.4**	**+0.2**
	baz=9.0						
SFK				⇑*e*S	**Sg**	**06 18 56.0**	**-0.7**
	baz=9.0						
DGS	**Degeres**	**1.83**	**30**	*e*P	**Pb**	**06 18 30.7**	**-0.7**
	11nm,0.3s						
DGS				*e*S	**Sb**	**06 18 54.2**	**0.0**
	46nm,0.4s						
DGS	**Degeres**	**1.83**	**30**	P	**Pb**	**06 18 30.8**	**-0.7**
	19nm,0.5s						
DGS				S	**Sb**	**06 18 54.2**	**0.0**
	46nm,0.4s						
DGS	**Degeres**	**1.83**	**30**	*e*P	**Pb**	**06 18 30.7**	**-0.7**
	baz=27						
DGS				*e*S	**Sb**	**06 18 54.2**	**0.0**
	baz=27						
KDJ	**Kajisay**	**2.03**	**76**	⇑*i*P	**Pn**	**06 18 32.6**	**+0.6**
	baz=75						
KDJ				⇑*i*S	**Sn**	**06 18 58.4**	**+1.2**
	baz=75						
MTBS	**Maitube**	**2.04**	**43**	*e*P	**Pb**	**06 18 34.8**	**-0.1**
	26nm,0.4s						
MTBS				*e*S	**Sb**	**06 19 00.5**	**+0.4**
	46nm,0.3s						
MTBS	**Maitube**	**2.04**	**43**	Pg	**Pb**	**06 18 34.8**	**-0.1**
	13nm,0.3s						
MTBS				Lg	Lg	06 19 00.6	
	44nm,0.3s						
IZV	**Izvestkoviy**	**2.07**	**47**	*e*P	**Pb**	**06 18 35.0**	**-0.5**
	17nm,0.4s						
IZV				*e*S	**Sb**	**06 19 01.1**	**0.0**
	46nm,0.3s						
IZV	**Izvestkoviy**	**2.07**	**47**	Pg	**Pb**	**06 18 35.0**	**-0.5**
	17nm,0.4s						
IZV				Lg	Lg	06 19 01.1	
	46nm,0.3s						
KRBS	**Karabastau**	**2.21**	**22**	*e*P	**Pb**	**06 18 37.9**	**0.0**
	13nm,0.4s						
KRBS				*e*S	**Sb**	**06 19 05.9**	**+0.9**
	123nm,0.5s						
KRBS	**Karabastau**	**2.21**	**22**	Pg	**Pb**	**06 18 37.9**	**0.0**
	13nm,0.4s						
KRBS				Lg	Lg	06 19 05.9	
	123nm,0.5s						
MDOK	**Medeo**	**2.40**	**50**	*e*P	**Pb**	**06 18 41.0**	**-0.1**
	12nm,0.3s						
MDOK				*e*S	**Sb**	**06 19 11.2**	**+0.8**
	24nm,0.3s						
MDOK	**Medeo**	**2.40**	**50**	⇓Pg	**Pb**	**06 18 39.5**	**-1.5**
	31nm,1.0s						
MDOK				⇓Lg	Lg	06 19 11.6	
	60nm,1.4s						
MDOK	**Medeo**	**2.40**	**50**	Pg	**Pb**	**06 18 39.9**	**-1.2**
	8.4nm,0.3s						

MDOK	25nm,0.5s			Lg	Lg	06 19 09.6	
TARG	**Taragay, Kyrgy** baz=87	**2.45**	**87**	⇑*i*P	**Pn**	**06 18 38.4**	**+0.5**
TARG	baz=87			⇑*i*S	**Sn**	**06 19 08.3**	**+0.5**
KOTS	**Kotyrbulak** 11nm,0.2s	**2.48**	**49**	*e*P	**Pb**	**06 18 42.3**	**-0.1**
KOTS	51nm,0.4s			*e*S	**Sb**	**06 19 13.8**	**+1.0**
KOTS	**Kotyrbulak** 11nm,0.2s	**2.48**	**49**	Pg	**Pb**	**06 18 42.3**	**-0.1**
KOTS	51nm,0.4s			Lg	Lg	06 19 13.8	
TRKS	**Terek-Say** baz=67	**2.55**	**268**	⇓*e*P	**Pb**	**06 18 42.2**	**-1.5**
TRKS	baz=67			⇓*i*S	**Sb**	**06 19 14.9**	**0.0**
ANVS	**Anan'yevo** baz=62	**2.59**	**63**	⇓*i*P	**Pn**	**06 18 40.1**	**+0.5**
ANVS	baz=62			⇓*i*S	**Sn**	**06 19 11.4**	**+0.5**
KTBS	**Karatobe** 4.3nm,0.2s	**2.60**	**37**	*e*P	**Pb**	**06 18 43.8**	**-0.6**
KTBS	72nm,0.7s			*e*S	**Sb**	**06 19 16.5**	**+0.4**
KTBS	**Karatobe** 4.3nm,0.2s	**2.60**	**37**	Pg	**Pb**	**06 18 43.8**	**-0.6**
KTBS	72nm,0.7s			Lg	Lg	06 19 16.5	
KUU	**Kurty** 12nm,0.3s	**2.60**	**30**	*e*P	**Pb**	**06 18 43.9**	**-0.6**
KUU	105nm,0.4s			*e*S	**Sb**	**06 19 16.2**	**-0.1**
KUU	**Kurty** 12nm,0.2s	**2.60**	**30**	Pg	**Pb**	**06 18 43.9**	**-0.6**
KUU	105nm,0.4s			Lg	Lg	06 19 17.2	
SATY	**Saty** 4.0nm,0.8s	**3.19**	**63**	*e*P	**Pb**	**06 18 55.0**	**+0.3**
SATY	22nm,0.3s			*e*S	**Sb**	**06 19 35.0**	**+1.6**
SATY	**Saty** 2.8nm,0.2s	**3.19**	**63**	Pg	**Pb**	**06 18 54.9**	**+0.3**
SATY	17nm,0.3s			Lg	Lg	06 19 34.8	
KURS	**Kuram** 3.5nm,0.5s	**3.25**	**54**	*e*P	**Pb**	**06 18 56.2**	**+0.6**
KURS	13nm,0.6s			*e*S	**Sb**	**06 19 37.2**	**+2.2**
KURS	**Kuram** 2.2nm,0.7s	**3.25**	**54**	Pg	**Pb**	**06 18 56.2**	**+0.6**
KURS	7.2nm,0.5s			Lg	Lg	06 19 37.3	
KK09	**Karatay Array** 4.0nm,0.7s,baz=106,slow=16	**3.33**	**298**	⇑Pg	**Pg**	**06 18 60.0**	**-2.0**
KK09	7.0nm,0.4s,baz=104,slow=28			⇑Lg	Lg	06 19 43.2	
IUG	**Iuzhnay** 38nm,0.3s	**3.40**	**280**	*e*P	**Pg**	**06 19 02.9**	**-0.4**
IUG	26nm,0.6s			*e*S	**Sg**	**06 19 49.0**	**+1.7**
BTLS	**Baital** 1.8nm,0.2s	**3.41**	**354**	*e*P	**Pb**	**06 18 59.4**	**+1.2**
BTLS	18nm,0.6s			*e*S	**Sb**	**06 19 43.2**	**+3.8**
UZB	**Uzynbulak** 4.3nm,0.3s	**3.64**	**64**	*e*P	**Pb**	**06 19 02.6**	**+0.3**
UZB	15nm,1.0s			*e*S	**Sb**	**06 19 48.2**	**+1.9**
UZB	**Uzynbulak** 1.9nm,0.1s	**3.64**	**64**	Pg	**Pb**	**06 19 02.7**	**+0.3**
UZB	10.0nm,0.5s			Lg	Lg	06 19 48.3	
BRLS	**Borolday** 2.4nm,0.2s	**3.75**	**293**	*e*P	**Pg**	**06 19 09.2**	**-0.7**
BRLS	9.8nm,0.5s			*e*S	**Sg**	**06 19 59.9**	**+1.5**
BLB	**Baldybastay** 11nm,0.6s	**3.79**	**49**	Pg	**Pb**	**06 19 04.7**	**-0.2**
BLB	19nm,0.2s			Lg	Lg	06 19 52.1	
PDGK	**Podgornoye** 0.8nm,0.6s	**4.03**	**64**	Pg	**Pb**	**06 19 08.7**	**-0.1**
PDGK	3.6nm,0.5s			Lg	Lg	06 19 58.8	
PDGK	**Podgornoye** 27nm,1.4s	**4.03**	**64**	⇓Lg	Lg	06 20 04.6	
DJR	**Jarkent** 1.2nm,0.6s	**4.69**	**53**	*e*P	**Pb**	**06 19 20.8**	**+0.6**
DJR	6.8nm,0.9s			*e*S	**Sb**	**06 20 20.2**	**+3.8**
DJR	**Jarkent** 1.8nm,0.3s	**4.69**	**53**	Pg	**Pb**	**06 19 20.5**	**+0.4**
DJR	6.4nm,0.5s			Lg	Lg	06 20 19.5	

IDC 11 06:19:01.4±0.7,4°.27S×129°.49E,h0^{km},mb3.5/1,mb1 3.3/4,mb1mx3.2/42,mbtmp3.2/4,ML3.0/3,MS4.1/1,Ms1 4.1/1,ms1mx2.5/35,Error ellipse: s-maj=19.8km s-min=8.0km az=101.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong** 2.1nm,0.3s,baz=213,slow=21,SNR=2.0	**3.82**	**28**	Pn	Pn	06 20 02.8	+1.3
SIJI	1.5nm,0.3s,baz=241,slow=23,SNR=1.4			Sn	Sn	06 20 47.5	+0.4
WRA	**Warramunga Arr** 0.0nm,0.3s,baz=346,slow=11,SNR=1.5	**16.28**	**164**	Pn	Pn	06 22 50.3	-1.3
ASAR	**Alice Springs** 0.1nm,0.3s,baz=352,slow=9.7,SNR=4.5	**19.75**	**168**	P	Pn	06 23 33.9	-0.6
JNU	**Nakatsue** comp=Z,298nm,21.3s,baz=232,slow=36	**37.21**	**2**	LR	LR	06 41 39.1	
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=114,slow=7.2,SNR=6.3	**65.68**	**326**	P	P	06 29 47.5	-0.2

IDC 11 06:21:49.7±0.9,4°.10S×129°.54E,h0^{km},mb3.5/1,mb1 3.5/4,mb1mx3.3/52,mbtmp3.4/4,ML3.2/3,Error ellipse: s-maj=27.0km s-min=5.6km az=102.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong** 3.0nm,0.3s,baz=31,slow=24,SNR=11	**3.65**	**28**	Pn	Pn	06 22 47.9	+0.4
SIJI	2.2nm,0.3s,baz=226,slow=23,SNR=2.1			Sn	Sn	06 23 30.4	-0.8
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=347,slow=13,SNR=2.7	**16.43**	**164**	Pn	Pn	06 25 39.9	-1.9
ASAR	**Alice Springs** 0.2nm,0.3s,baz=345,slow=8.8,SNR=8.5	**19.90**	**168**	P	P	06 26 23.4	+0.4
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=119,slow=8.2,SNR=1.0	**65.57**	**326**	P	P	06 32 34.2	-1.1

IDC 11 06:25:02.6±14.0,0°.48S×136°.66E,h0^{km},mb3.8/2,mb1 3.9/3,mb1mx3.5/55,mbtmp3.7/3,ML3.7/1,MS3.4/1,Ms1 3.4/1,ms1mx2.3/40,Error ellipse: s-maj=224.5km s-min=114.2km az=166.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=8.5,slow=11,SNR=14	**19.48**	**187**	P	P	06 29 31.3	0.0
ASAR	**Alice Springs** 1.2nm,0.6s,baz=13,slow=11,SNR=15	**23.21**	**186**	P	P	06 30 11.5	+0.1
STKA	**Stephens Creek** 1.2nm,0.4s,baz=349,slow=11,SNR=5.4	**31.58**	**172**	P	P	06 31 26.9	-0.1
SONM	**Songino Array** comp=Z,29nm,18.5s,baz=141,slow=38	**54.84**	**335**	LR	LR	06 59 28.7	

IDC 11 06:27:24.4±14.0,32°.85N×143°.12E,h0^{km},mb3.6/3,mb1 3.8/3,mb1mx3.2/73,mbtmp3.6/3,Error ellipse: s-maj=515.3km s-min=36.9km az=67.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array** 0.5nm,0.8s,baz=94,slow=6.2,SNR=3.3	**47.61**	**306**	P	P	06 36 01.9	-0.2
WRA	**Warramunga Arr** 1.4nm,1.1s,baz=12,slow=8.5,SNR=6.2	**53.16**	**190**	P	P	06 36 44.1	-0.1
ASAR	**Alice Springs** 0.5nm,0.8s,baz=20,slow=8.2,SNR=2.3	**56.88**	**190**	P	P	06 37 11.2	+0.1

IDC 11 06:34:42.0±8.8,23°.24S×179°.02E,h602^{km}±86^{km},mb3.1/5,mb1 3.3/6,mb1mx2.8/37,mbtmp4.0/6,Error ellipse: s-maj=212.7km s-min=23.4km az=158.0

ISC 11 06:34:35.3±1.3,25°.0S±0°.3×179°.6E±0°.2,h550^{km},n9,σ0ˢ.47/8,mb3.6/5,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu** 1.2nm,0.3s,baz=113,slow=23,SNR=8.1	**7.35**	**348**	P	P	06 36 19.6	-7.3
CTA	**Charters Tower** 3.2nm,0.4s,baz=99,slow=6.1,SNR=2.0	**31.15**	**272**	P	**P**	**06 40 09.6**	**-0.2**
ASAR	**Alice Springs** 0.5nm,0.4s,baz=95,slow=7.7,SNR=6.9	**41.53**	**262**	P	**P**	**06 41 35.5**	**+0.2**
WRA	**Warramunga Arr** 1.6nm,0.5s,baz=101,slow=8.4,SNR=24	**42.00**	**267**	P	**P**	**06 41 38.8**	**-0.2**
FITZ	**Fitzroy Crossi** 1.4nm,0.6s,baz=107,slow=11,SNR=4.4	**50.41**	**267**	P	**P**	**06 42 43.2**	**+0.5**
SNAA	**Sanae**	**83.60**	**179**	P	**P**	**06 46 05.1**	**-0.6**
VNA3	**Neumayer Olymp**	**83.83**	**177**	P	**P**	**06 46 06.8**	**0.0**
VNA2	**Neumayer--Watz**	**84.24**	**178**	P	**P**	**06 46 09.3**	**+0.6**
TXAR	**Lajitas Array** 0.3nm,0.7s,baz=216,slow=6.2,SNR=6.1	**91.29**	**58**	P	**P**	**06 46 42.7**	**0.0**

IDC 11 06:34:56.8±1.6,4°.11S×129°.47E,h0^{km},mb3.7/1,mb1 3.8/4,mb1mx3.4/60,mbtmp3.7/4,ML3.7/3,MS2.9/1,Ms1 3.1/1,ms1mx2.4/30,Error ellipse: s-maj=47.0km s-min=24.3km az=92.0

DJA 11 06:34:59.3±2.2,4°S±10°×12°9E±°,h22^{km}±18^{km},M3.6/7,MLv3.6/7

ISC 11 06:35:00.2±1.1,4°.13S±0°.08×129°.39E±0°.06,h36^{km},n10,σ1ˢ.93/12,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.91**	**329**	P	**Pn**	**06 35 15.8**	**-0.6**
MSAI				S	**Sn**	**06 35 28.1**	**-0.1**
AAI	**Ambon**	**1.27**	**290**	P	**Pn**	**06 35 21.9**	**+0.5**
AAI				S	**Sn**	**06 35 37.7**	**+0.5**
FAKI	**Fak Fak**	**3.10**	**67**	P	**Pn**	**06 35 46.7**	**+0.2**
SIJI	**Sorong** 5.9nm,0.3s,baz=87,slow=24,SNR=45	**3.74**	**30**	Pn	**Pn**	**06 35 56.2**	**+0.8**
SIJI	7.7nm,0.3s,baz=270,slow=23,SNR=8.3			Sn	**Sn**	**06 36 39.9**	**+1.6**
SWI	**Sorong**	**3.75**	**30**	P	**Pn**	**06 35 51.0**	**-4.4**
SANI	**Sanana**	**3.98**	**301**	P	**Pn**	**06 35 56.6**	**-2.0**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=345,slow=11,SNR=14	**16.44**	**163**	Pn	**P**	**06 38 49.5**	**-1.2**
ASAR	**Alice Springs** 0.5nm,0.3s,baz=340,slow=11,SNR=17	**19.91**	**168**	P	**Pn**	**06 39 30.1**	**-0.5**
CMAR	**Chiang Mai Arr** comp=Z,20nm,21.6s,baz=5.5,slow=37	**37.47**	**308**	LR	LR	06 58 02.1	
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=114,slow=7.8,SNR=4.8	**65.51**	**326**	P	**P**	**06 45 41.9**	**+2.0**

IDC 11 06:39:12.6±1.1,38°.38N×73°.37E,h0^{km},mb4.0/13,mb1 4.0/20,mb1mx3.7/76,mbtmp4.0/20,ML3.4/7,MS3.3/10,Ms1 3.3/10,ms1mx3.0/51,Error ellipse: s-maj=20.5km s-min=16.4km az=165.0

SOME 11 06:39:16.7,38°.75N×73°.17E,h5^{km}

NNC 11 06:39:19.5±2.7,38°.86N×73°.28E,h0^{km},mb4.8,mpv4.4,Error ellipse: s-maj=20.1km s-min=11.2km az=170.0

ISC 11 06:39:17.2±0.7,38°.76N±0°.05×73°.22E±0°.04,h10^{km},n59,σ2ˢ.59/65,mb4.0/12,MS3.3/7,4C-3D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	**Merke** 23nm,0.6s	**3.98**	**0**	*e*P	**Pb**	**06 40 30.7**	**+3.1**
MRKS	50nm,0.5s			*e*S	**Sg**	**06 41 24.4**	**-0.8**
MRKS	**Merke**	**3.98**	**0**	Pg	**Pg**	**06 40 31.1**	**-2.4**
MRKS				Lg	Lg	06 41 24.4	
AAK	**Ala-Archa** 2.8nm,0.3s,baz=172,slow=7.6,SNR=24	**4.00**	**14**	Pn	Pn	06 40 23.8	+5.1
AAK	1.9nm,0.3s,baz=346,slow=17,SNR=4.7			Sn	**Sb**	**06 41 19.7**	**+3.5**
AAK	comp=Z,115nm,20.1s,baz=194,slow=41			LR	LR	06 42 10.5	
IUG	**Iuzhnay** 1μm,0.4s	**4.17**	**325**	*e*P	**Pb**	**06 40 33.5**	**+2.8**
IUG	193nm,0.1s			*e*S	**Sg**	**06 41 28.5**	**-2.5**
IUG	**Iuzhnay** 5μm,0.9s	**4.17**	**325**	Pg	**Pb**	**06 40 34.0**	**+3.3**
IUG	181nm,0.7s			Lg	Lg	06 41 28.9	
DZA	**Taraz** 129nm,0.1s	**4.37**	**342**	*e*P	**Pb**	**06 40 36.4**	**+2.3**
DZA	175nm,0.5s			*e*S	**Sg**	**06 41 33.5**	**-4.1**
CHM	**Chimkent** 90nm,0.1s	**4.50**	**323**	*e*P	**Pb**	**06 40 40.4**	**+4.2**
CHM	334nm,0.5s			*e*S	**Sg**	**06 41 40.6**	**-1.0**
TKM2	**Tokmak 2** 32nm,0.8s	**4.54**	**23**	⇓Pg	**Pb**	**06 40 39.3**	**+2.3**
TKM2	33nm,0.8s			⇑Lg	Lg	06 41 39.0	
KST	**Kastek** 30nm,0.4s	**4.76**	**25**	*e*P	**Pg**	**06 40 45.5**	**-2.8**
KST	39nm,0.7s			*e*S	**Sg**	**06 41 49.5**	**-0.5**
KST	**Kastek** 27nm,0.7s	**4.76**	**25**	Pg	**Pg**	**06 40 46.3**	**-2.1**
KST	41nm,0.7s			Lg	Lg	06 41 49.5	
KK07	**Karatay Array** 25nm,0.7s,baz=141,slow=12	**4.79**	**335**	⇓Pn	**Pn**	**06 40 30.5**	**+1.1**
KK07	41nm,0.8s,baz=147,slow=23			⇑Sn	**Sn**	**06 41 28.2**	**+3.1**
KK07	23nm,0.5s			⇑Lg	Lg	06 41 51.3	
SGDS	**Sogindy** 23nm,0.5s	**4.81**	**12**	Pg	**Pg**	**06 40 48.2**	**-1.2**
SGDS	18nm,0.7s			Lg	Lg	06 41 53.4	
DGS	**Degeres** 36nm,0.5s	**4.88**	**23**	*e*P	**Pg**	**06 40 49.3**	**-1.3**
DGS	34nm,0.8s			*e*S	**Sg**	**06 41 56.1**	**+2.3**
DGS	**Degeres** 36nm,0.5s	**4.88**	**23**	Pg	**Pb**	**06 40 46.6**	**+3.8**
DGS	21nm,0.4s			Lg	Lg	06 41 50.3	
IZV	**Izvestkoviy** 22nm,0.6s	**4.99**	**30**	*e*P	**Pg**	**06 40 49.5**	**-3.3**
IZV	41nm,1.2s			*e*S	**Sg**	**06 41 56.1**	**-1.3**
IZV	**Izvestkoviy** 29nm,0.5s	**4.99**	**30**	Pg	**Pb**	**06 40 48.3**	**+3.6**
IZV	28nm,0.6s			Lg	Lg	06 41 53.1	
CEP	**Cherat**	**5.04**	**193**	⇓P	**Pn**	**06 40 33.4**	**+0.5**
CEP				S	**Sn**	**06 41 33.0**	**+1.8**
TNSS	**Tian-Shan** 28nm,0.5s	**5.12**	**32**	*e*P	**Pb**	**06 40 51.3**	**+4.1**
TNSS	13nm,0.8s			*e*S	**Sg**	**06 41 59.5**	**-2.3**
TNSS	**Tian-Shan** 29nm,0.5s	**5.12**	**32**	Pg	**Pb**	**06 40 51.3**	**+4.1**
TNSS	10nm,0.7s			Lg	Lg	06 41 59.3	
KRBS	**Karabastau** 23nm,0.6s	**5.27**	**20**	*e*P	**Pg**	**06 40 54.7**	**-3.5**
KRBS	25nm,0.6s			*e*S	**Sg**	**06 42 05.0**	**-1.4**
KRBS	**Karabastau** 23nm,0.6s	**5.27**	**20**	Pg	**Pg**	**06 40 54.7**	**-3.5**
KRBS	25nm,0.6s			Lg	Lg	06 42 04.0	
MDOK	**Medeo** 51nm,1.3s	**5.27**	**32**	Pg	**Pb**	**06 40 53.5**	**+4.0**
MDOK	74nm,1.4s			Lg	Lg	06 42 00.4	
KOTS	**Kotyrbulak** 18nm,0.6s	**5.36**	**32**	*e*P	**Pg**	**06 40 55.7**	**-4.0**
KOTS	56nm,0.6s			*e*S	**Sg**	**06 42 07.1**	**-2.1**
KOTS	**Kotyrbulak** 18nm,0.6s	**5.36**	**32**	Pg	**Pg**	**06 40 55.7**	**-4.0**
KOTS	56nm,0.6s			Lg	Lg	06 42 06.7	
KTBS	**Karatobe** 16nm,0.1s	**5.60**	**27**	*e*P	**Pg**	**06 41 02.3**	**-2.0**
KTBS	36nm,0.9s			*e*S	**Sg**	**06 42 18.0**	**+1.2**
KUU	**Kurty** 12nm,0.7s	**5.64**	**24**	*e*P	**Pg**	**06 41 01.0**	**-4.3**
KUU	56nm,1.3s			*e*S	**Sg**	**06 42 16.2**	**-2.1**
KUU	**Kurty** 18nm,0.8s	**5.64**	**24**	Pg	**Pg**	**06 41 01.0**	**-4.3**
KUU	56nm,1.3s			Lg	Lg	06 42 15.6	
THW	**Thamme Wali**	**6.07**	**192**	P	Pn	06 40 44.6	-2.4
BTLS	**Baital** 4.9nm,1.0s	**6.31**	**5**	*e*P	**Pg**	**06 41 13.7**	**-4.2**
BTLS	7.1nm,1.8s			*e*S	**Sg**	**06 42 38.3**	**-1.4**
ARXS	**Arharly** 23nm,0.8s	**6.46**	**31**	*e*P	**Pg**	**06 41 17.2**	**-3.6**
ARXS	17nm,0.7s			*e*S	**Sg**	**06 42 44.2**	**-0.2**
ARXS	**Arharly** 23nm,0.8s	**6.46**	**31**	Pg	**Pg**	**06 41 16.5**	**-4.3**
ARXS	17nm,0.7s			Lg	Lg	06 42 41.7	
BLB	**Baldybastay** 22nm,0.6s	**6.64**	**35**	Pg	Pb	06 41 18.4	+5.7
BLB	21nm,0.7s			Lg	Lg	06 42 45.3	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=223,slow=14,SNR=13	**10.43**	**37**	Pn	**Pn**	**06 41 48.0**	**+1.2**
GEYT	**Alibeck** 0.6nm,0.3s,baz=106,slow=11,SNR=2.6	**11.89**	**271**	Pn	Pn	06 42 04.1	-2.7
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=204,slow=12,SNR=4.6	**12.45**	**16**	Pn	**Pn**	**06 42 16.1**	**+1.8**
AB31	**Akbulak array** 3.8nm,0.5s,baz=131,slow=12,SNR=116	**14.17**	**322**	Pn	**Pn**	**06 42 37.7**	**-0.1**
BVAR	**Borovoye Array** 0.2nm,0.3s,baz=181,slow=23,SNR=3.9	**14.40**	**353**	Pn	**Pn**	**06 42 42.0**	**+0.9**
AKTO	**Aktyubinsk** 1.0nm,0.3s,baz=118,slow=11,SNR=15	**15.88**	**322**	Pn	**Pn**	**06 42 59.6**	**-1.1**
AKTO	comp=Z,134nm,18.9s,baz=136,slow=38			LR	LR	06 49 33.0	
AKTO	**Aktyubinsk** 12nm,0.7s	**15.88**	**322**	⇑Pn	**Pn**	**06 43 02.6**	**+1.8**
ZALV	**Zalesovo Beam** 0.5nm,0.3s,baz=216,slow=11,SNR=11	**17.14**	**24**	P	**Pn**	**06 43 15.9**	**-0.7**
WSAR	**Wadi Sarin** comp=Z,18nm,21.7s,baz=78,slow=41	**19.85**	**223**	LR	LR	06 52 36.3	
ARU	**Arti** 2.1nm,0.2s,baz=280,slow=5.2,SNR=5.4	**20.18**	**336**	P	**P**	**06 43 52.7**	**+1.0**
BELG	**Belogornoye** 17nm,0.6s,baz=9.3,slow=0.9,SNR=5.7	**22.36**	**316**	P	**P**	**06 44 14.5**	**-0.7**
BELG	comp=Z,78nm,20.1s,baz=148,slow=37			LR	LR	06 53 13.7	
TLY	**Talaya** comp=Z,28nm,18.5s,baz=2.0,slow=38	**24.82**	**49**	LR	LR	06 54 51.8	
KIRV	**Kirov** comp=Z,143nm,18.4s,baz=77,slow=40	**25.07**	**330**	LR	LR	06 56 04.7	
SONM	**Songino Array** 3.3nm,0.9s,baz=270,slow=8.7,SNR=13	**25.63**	**58**	P	**P**	**06 44 46.2**	**-0.7**
BRTR	**Keskin Array B** comp=Z,58nm,18.8s,baz=30,slow=44	**30.50**	**285**	LR	LR	07 01 39.3	
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=79,slow=7.8,SNR=5.0	**32.98**	**306**	P	**P**	**06 45 52.2**	**+0.2**
FINES	**FINESS Array B** 2.7nm,0.9s,baz=108,slow=8.9,SNR=1.2	**36.65**	**324**	P	**P**	**06 46 23.1**	**-0.5**
ARCES	**ARCESS Array B** 2.4nm,0.7s,baz=98,slow=7.5,SNR=12	**39.77**	**336**	P	**P**	**06 46 49.0**	**-0.7**
HFS	**Hagfors** 2.0nm,0.6s,baz=91,slow=12,SNR=1.7	**42.42**	**320**	P	**P**	**06 47 10.8**	**-0.9**
TIXI	**Tiksi** 1.4nm,0.4s,baz=126,slow=1.6,SNR=5.3	**43.02**	**23**	P	**P**	**06 47 14.9**	**-1.5**
NOA	**NORSAR Array B** 0.9nm,0.7s,baz=110,slow=7.7,SNR=1.8	**43.67**	**322**	P	**P**	**06 47 23.2**	**+1.3**
NOA	comp=Z,38nm,19.1s,baz=345,slow=39			LR	LR	07 07 54.0	
SIJI	**Sorong** comp=Z,36nm,18.0s,baz=176,slow=39	**66.15**	**112**	LR	LR	07 21 42.6	
SFJD	**Kangerlussuaq** comp=Z,180nm,21.2s,baz=14,slow=37	**66.29**	**339**	LR	LR	07 20 36.5	
TORD	**Torodi Ar. Bea** 0.4nm,0.5s,baz=49,slow=5.1,SNR=4.1	**67.52**	**269**	P	**P**	**06 50 13.3**	**-0.5**
INK	**Inuvik** 0.7nm,0.5s,baz=336,slow=7.1,SNR=9.4	**71.39**	**10**	P	**P**	**06 50 35.3**	**-1.6**
YKA	**Yellowknife Ar** 0.7nm,0.6s,baz=347,slow=5.4,SNR=2.2	**78.90**	**4**	P	**P**	**06 51 18.2**	**-2.1**
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=322,slow=5.2,SNR=5.3	**81.73**	**124**	P	P	06 51 30.9	-5.2

IDC 11 06:45:30.0±0.8,0°.21S×19°.60W,h0^{km},mb4.1/11,mb1 4.3/12,mb1mx4.0/46,mbtmp4.1/12,ML4.8/1,MS3.5/18,Ms1 3.5/18,ms1mx3.4/42,Error ellipse: s-maj=28.7km s-min=17.2km az=139.0

NEIC 11 06:45:31.9±1.1,0°.39S±0°.09×19°.40W±0°.09,h10^{km}±1^{km},mb4.5/12,Error ellipse: s-maj=18.7km s-min=11.7km az=222.0

ISC 11 06:45:31.4±0.6,0°.32S±0°.10×19°.45W±0°.09,h10^{km},n47,σ0ˢ.86/29,mb4.2/14,MS3.5/17,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR** baz=324,slow=74,SNR=390	**8.95**	**147**	T	T	06 56 54.5	
H10N3	**ASCENSION HYDR** baz=324,slow=74,SNR=85	**8.95**	**147**	T	T	06 56 56.1	
H10N1	**ASCENSION HYDR** baz=324,slow=74,SNR=75	**8.97**	**147**	T	T	06 56 39.5	
ASCN	**Ascension**	**9.11**	**146**	Pn	**Pn**	**06 47 41.9**	**-1.1**
H10S3	**ASCENSION HYDR** baz=329,slow=74,SNR=52	**9.81**	**151**	T	T	06 57 47.0	
H10S2	**ASCENSION HYDR** baz=251,slow=74,SNR=19	**9.83**	**151**	T	T	06 58 01.1	
LIC	**Lamto** 46nm,1.0s	**15.80**	**65**	*e*P	**Pn**	**06 49 14.4**	**+0.3**
TIC	**Toumodi**	**15.98**	**64**	*e*P	**Pn**	**06 49 15.8**	**-0.7**
KIC	**Kosan Boka** 38nm,0.9s	**16.11**	**65**	*e*P	**Pn**	**06 49 17.4**	**-0.8**
DBIC	**Dimbokro** 3.3nm,0.3s,baz=254,slow=12,SNR=35	**16.14**	**64**	Pn	**Pn**	**06 49 17.9**	**-0.6**
DBIC	comp=Z,137nm,20.1s,baz=249,slow=33			LR	LR	06 54 23.3	
DBIC	**Dimbokro**	**16.14**	**64**		**Pn**	**06 49 18.2**	**-0.2**
KOWA	**Kowa** 21nm,0.6s,baz=228,slow=9.2,SNR=90	**21.22**	**45**	P	**P**	**06 50 17.7**	**+0.2**
KOWA	comp=Z,206nm,19.2s,baz=208,slow=35			LR	LR	06 57 52.6	
KOWA	**Kowa**	**21.22**	**45**	P	**P**	**06 50 17.5**	**-0.1**
TORD	**Torodi Ar. Bea** 7.2nm,1.0s,baz=235,slow=9.3,SNR=25	**24.87**	**57**	P	**P**	**06 50 54.2**	**-0.3**
TORD	comp=Z,71nm,21.7s,baz=300,slow=33			LR	LR	06 59 12.5	
TORD	**Torodi Ar. Bea**	**24.87**	**57**	P	**P**	**06 50 53.8**	**-0.7**
TORD	comp=Z,6.7nm,1.1s			IAmb	IAmb	06 50 56.4	
BDFB	**Brasilia** comp=Z,101nm,19.0s,baz=97,slow=33	**32.04**	**240**	LR	LR	07 03 00.9	
MDT	**Midelt** comp=Z,1.7nm,0.7s,baz=132,slow=5.6,SNR=4.2	**35.81**	**22**	P	**P**	**06 52 31.0**	**-0.2**
MDT	comp=Z,86nm,20.8s,baz=232,slow=35			LR	LR	07 06 17.2	
BOAV	**Boa Vista**	**41.15**	**274**	P	**P**	**06 53 16.5**	**+0.2**
BOAV	comp=Z,9.1nm,1.2s			IAmb	IAmb	06 53 17.3	
ESDC	**Sonseca Array** comp=Z,0.2nm,0.5s,baz=206,slow=10,SNR=8.1	**42.25**	**18**	P	**P**	**06 53 26.0**	**+1.0**
ESDC	comp=Z,50nm,18.0s,baz=225,slow=34			LR	LR	07 09 25.9	
SIV	**San Ignacio** comp=Z,0.6nm,0.5s,baz=63,slow=13,SNR=4.7	**43.90**	**247**	P	**P**	**06 53 38.1**	**-0.6**
CPUP	**Villa Florida** comp=Z,72nm,18.4s,baz=52,slow=34	**44.70**	**232**	LR	LR	07 10 50.1	
ETMB	**Extrema**	**47.46**	**257**	P	**P**	**06 54 05.7**	**-1.2**
ETMB	comp=Z,4.3nm,1.0s			IAmb	IAmb	06 54 10.7	
BAUV	**El Baul**	**49.26**	**282**	P	**P**	**06 54 21.2**	**+0.5**
LPAZ	**La Paz** comp=Z,1.4nm,0.7s,baz=126,slow=5.2,SNR=7.6	**50.53**	**249**	P	**P**	**06 54 30.4**	**-0.8**
LPAZ	comp=Z,46nm,21.0s,baz=85,slow=33			LR	LR	07 13 29.8	
LPAZ	**La Paz** comp=Z,3.1nm,1.1s	**50.53**	**249**	IAmb	IAmb	06 54 38.3	
BOSA	**Boshof**	**51.14**	**127**	P	**P**	**06 54 37.7**	**+2.7**

	comp=Z,3.9nm,1.1s,baz=258,slow=6.9,SNR=3.9						
BOSA				LR	LR	07 12 44.3	
	comp=Z,46nm,20.0s,baz=304,slow=32						
BOSA	**Boshof**	**51.14**	**127**	P	**P**	**06 54 35.1**	**+0.1**
BOSA				IAmb	IAmb	06 54 38.9	
	comp=Z,9.4nm,1.2s						
GERES	**GERESS Array B**	**56.71**	**26**	P	**P**	**06 55 15.8**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=202,slow=6.8,SNR=6.5						
PLCA	**Paso Flores**	**61.26**	**222**	LR	LR	07 19 16.6	
	comp=Z,33nm,20.7s,baz=76,slow=33						
BRTR	**Keskin Array B**	**62.64**	**44**	LR	LR	07 24 46.5	
	comp=Z,27nm,19.3s,baz=286,slow=38						
AKASG	**Malin Array Be**	**65.44**	**32**	P	**P**	**06 56 14.1**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=236,slow=6.3,SNR=7.2						
AKASG	**Malin Array Be**	**65.44**	**32**	IAmb	IAmb	06 56 14.6	
	comp=Z,3.1nm,1.2s						
NOA	**NORSAR Array B**	**65.56**	**16**	LR	LR	07 25 51.2	
	comp=Z,24nm,18.8s,baz=350,slow=37						
KBZ	**Khabaz**	**70.58**	**43**	LR	LR	07 30 39.2	
	comp=Z,36nm,18.1s,baz=338,slow=38						
VNA2	**Neumayer--Watz**	**70.93**	**176**	P	**P**	**06 56 50.0**	**+1.5**
	baz=352,slow=7.6						
SNAA	**Sanae**	**72.03**	**175**	P	**P**	**06 56 56.2**	**+1.0**
ARCES	**ARCESS Array B**	**75.90**	**15**	P	**P**	**06 57 17.7**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=237,slow=6.3,SNR=4.3						
BELG	**Belogornoye**	**76.45**	**35**	LR	LR	07 32 41.3	
	comp=Z,32nm,19.6s,baz=111,slow=37						
MGMO	**Mountain Grove**	**76.54**	**308**	P	**P**	**06 57 22.0**	**-0.2**
MGMO				IAmb	IAmb	06 57 24.1	
	comp=Z,12nm,1.4s						
ULM	**Lac du Bonnet**	**81.58**	**321**	LR	LR	07 30 11.5	
	comp=Z,60nm,21.2s,baz=279,slow=33						
ARU	**Arti**	**83.64**	**33**	LR	LR	07 36 45.1	
	comp=Z,32nm,19.9s,baz=224,slow=37						
TXAR	**Lajitas Array**	**85.11**	**299**	P	**P**	**06 58 07.9**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=103,slow=5.5,SNR=4.5						
MAW	**Mawson**	**86.77**	**158**	LR	LR	07 29 40.0	
	comp=Z,47nm,18.4s,baz=244,slow=30						
ZALV	**Zalesovo Beam**	**98.64**	**35**	LR	LR	07 47 10.1	
	comp=Z,24nm,18.7s,baz=42,slow=38						
ASAR	**Alice Springs**	**144.81**	**134**	PKPbc	**PKPab**	**07 05 08.3**	**-0.2**
	comp=Z,4.0nm,0.9s,baz=224,slow=2.6,SNR=26						
ASAR	**Alice Springs**	**144.81**	**134**		**PKPab**	**07 05 08.0**	**-0.5**
WRA	**Warramunga Arr**	**147.37**	**130**	PKPbc	**PKPbc**	**07 05 15.7**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=235,slow=2.8,SNR=5.0						

*TEH **11** 06:53:32.7, 30°.81N×50°.51E, h8^{km}, ML3.3*
*THR **11** 06:53:33.0±0.6, 30°.73N×50°.49E, h15^{km}±9^{km}, ML3.1*
*KISR **11** 06:53:33.2±0.9, 30°.66N×50°.07E, h0^{km}±108^{km}, ML3.6*
*DSN **11** 06:53:35.5±2.0, 30°.21N×50°.50E, h10^{km}, ML3.5/5, Error ellipse: s-maj=27.3km s-min=9.5km az=12.0*
ISC 11 06:53:33.0±0.8**, 30°.72N**±0°.04×**50°.53E**±0°.03**, h10^{km}, n68, σ1^{s}.76**/74**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABEH	**Behbahan**	**0.26**	**243**	*e*Pg	**Pg**	**06 53 38.6**	**+0.2**
ABEH				*e*Sg	**Sg**	**06 53 44.1**	**+2.1**
ABEH				*e*		06 53 50.4	
	comp=Z,2µm,0.6s						
KLNJ	**Kolanjah**	**0.96**	**72**	*e*Pg	**Pg**	**06 53 51.4**	**-0.1**
KLNJ				*e*		06 54 16.7	
	comp=Z,11µm,0.3s						
IBRJ	**Brojen**	**1.34**	**28**	*e*Pg	**Pn**	**06 53 57.5**	**-0.5**
IBRJ				*e*		06 54 20.5	
	comp=Z,4µm,0.5s						
AMIS	**Naft Sefid**	**1.42**	**312**	*e*Pg	**Pn**	**06 53 58.4**	**-0.5**
AMIS				*e*Sg	**Sn**	**06 54 17.4**	**-0.2**
AMIS				*e*		06 54 30.8	
	comp=Z,6µm,0.5s						
KAZ1	**Kazerun**	**1.46**	**138**	*e*Pg	**Pb**	**06 54 01.8**	**+1.5**
SHK1	**Shahrekord**	**1.63**	**11**	*e*Pn	**Pn**	**06 54 01.9**	**-0.1**
SHK1				*e*		06 54 29.1	
	comp=Z,3µm,0.8s						
AHWZ	**Ahwaz**	**1.73**	**291**	*e*Pg	**Pg**	**06 54 05.4**	**-0.7**
IRAM	**Ramesheh**	**1.92**	**55**	*e*		06 54 40.1	
	comp=Z,3µm,0.2s						
IRAM				*e*Pn	**Pn**	**06 54 08.6**	**+2.6**
AHBU	**AHRAM**	**1.97**	**160**	*e*Pn	**Pn**	**06 54 08.1**	**+1.7**
IPIR	**Pirpir**	**1.98**	**9**	*e*		06 54 39.0	
	comp=Z,3µm,0.6s						
IPIR				*e*Pn	**Pn**	**06 54 08.0**	**+1.1**
SHI	**Shiraz**	**2.03**	**122**	*e*Pn	**Pb**	**06 54 11.2**	**+1.1**
IGAR	**Gharneh**	**2.12**	**37**	*e*Pn	**Pn**	**06 54 10.4**	**+1.7**
IGAR				*e*		06 54 44.8	
	comp=Z,2µm,0.4s						
IZEF	**Zefreh**	**2.66**	**35**	*e*Pn	**Pn**	**06 54 17.8**	**+1.7**
UMR	**Umm Al-Rimmam**	**2.70**	**245**	*e*P	**Pn**	**06 54 16.8**	**+0.3**
IKLH	**Kolahrood**	**2.74**	**19**	*e*Pn	**Pn**	**06 54 18.8**	**+1.5**
IKLH				*e*		06 55 04.6	
	comp=Z,810nm,0.6s						
NASN	**Na'in**	**2.84**	**43**	*e*Pn	**Pn**	**06 54 20.4**	**+1.7**
NASN				IAML		06 55 08.1	
	comp=N,22nm,0.3s						
NASN	**Na'in**	**2.84**	**43**	*e*Pn	**Pn**	**06 54 20.4**	**+1.7**
KBD	**Kabd**	**2.90**	**239**	*e*P	**Pn**	**06 54 19.6**	**+0.3**
KBD				*e*S	**Sn**	**06 54 53.7**	**-0.5**
KBD				IAML		06 55 03.4	
	comp=Z,289nm,0.4s						
MIB	**Mutribah**	**2.91**	**252**	*e*P	**Pn**	**06 54 19.1**	**-0.1**
ISAD	**Sadrabad**	**2.95**	**65**	*e*Pn	**Pn**	**06 54 22.6**	**+2.4**
ISAD				*e*		06 54 29.8	
	comp=Z,1µm,0.3s						
QRN	**Al-Qurain**	**3.00**	**230**	*e*P	**Pn**	**06 54 20.7**	**+0.1**
QRN				*e*S	**Sn**	**06 54 57.8**	**+1.0**
QRN				IAML		06 55 02.7	
	comp=Z,225nm,0.3s						
KHMZ	**Khomeyn**	**3.05**	**351**	*e*Pn	**Pn**	**06 54 22.7**	**+1.2**
KHMZ				IAML		06 55 15.9	
	comp=N,19nm,0.3s						
KHMZ	**Khomeyn**	**3.05**	**351**	*e*Pn	**Pn**	**06 54 22.7**	**+1.2**
QAMS	**Qamsar**	**3.09**	**14**	*e*Pn	**Pn**	**06 54 24.1**	**+2.0**
GHIR	**Ghir-Karzin**	**3.24**	**138**	*e*Pn	**Pn**	**06 54 25.6**	**+1.6**
GHIR				IAML		06 55 09.9	
	comp=E,44nm,0.4s						
GHIR				IAML		06 55 09.9	
	comp=N,57nm,0.3s						
GHIR	**Ghir-Karzin**	**3.24**	**138**	*e*Pn	**Pn**	**06 54 25.6**	**+1.6**
BMDN	**Meydan**	**3.27**	**334**	*e*Pn	**Pn**	**06 54 25.0**	**+0.5**
RST	**Umm Al-Ruwaisa**	**3.29**	**249**	*e*P	**Pn**	**06 54 24.3**	**-0.3**
RST				*e*S	**Sn**	**06 55 03.0**	**-0.8**
RST				IAML		06 55 12.8	
	comp=Z,195nm,0.4s						
DHL1	**Dehloran**	**3.38**	**306**	*e*Pn	**Pn**	**06 54 28.5**	**+2.6**
KRSH	**Karshahi**	**3.51**	**22**	*e*Pn	**Pn**	**06 54 29.3**	**+1.5**
IMEH	**Mehriz**	**3.57**	**78**	*e*Pn	**Pn**	**06 54 31.1**	**+2.4**
IDOB	**Doab**	**3.65**	**328**	*e*Pn	**Pn**	**06 54 30.6**	**+0.9**
ICHK	**Chekchek**	**3.65**	**64**	*e*Pn	**Pn**	**06 54 31.7**	**+2.0**
ANAR	**Anarak**	**3.67**	**47**	*e*Pn	**Pn**	**06 54 31.5**	**+1.6**
GHVR	**GHOM**	**3.80**	**10**	*e*Pn	**Pn**	**06 54 33.5**	**+1.8**
GHVR				IAML		06 55 46.0	
	comp=E,26nm,0.8s						
GHVR	**GHOM**	**3.80**	**10**	*e*Pn	**Pn**	**06 54 33.5**	**+1.8**
ASAO	**Ashtian**	**3.84**	**354**	*e*Pn	**Pn**	**06 54 33.6**	**+1.2**
ASAO				IAML		06 55 23.1	
	comp=N,13nm,0.5s						
ASAO				IAML		06 55 25.7	
	comp=E,15nm,0.6s						
ASAO	**Ashtian**	**3.84**	**354**	*e*Pn	**Pn**	**06 54 33.6**	**+1.2**
HSAM	**Samen**	**3.84**	**335**	*e*Pn	**Pn**	**06 54 32.5**	**+0.1**
YZKH	**Yazd**	**3.85**	**63**	*e*Pn	**Pn**	**06 54 34.6**	**+2.2**
YZKH				IAML		06 55 23.4	
	comp=N,64nm,0.3s						
YZKH				IAML		06 55 24.2	
	comp=E,30nm,0.5s						
YZKH	**Yazd**	**3.85**	**63**	*e*Pn	**Pn**	**06 54 34.6**	**+2.2**
ISFB	**Sefidab**	**3.90**	**21**	*e*Pn	**Pn**	**06 54 34.0**	**+1.0**
IQOM	**Qom**	**4.13**	**6**	*e*Pn	**Pn**	**06 54 37.0**	**+0.6**
HAGD	**Aghdareh**	**4.25**	**344**	*e*Pn	**Pn**	**06 54 38.7**	**+0.7**
IVRN	**Varamin**	**4.38**	**13**	*e*Pn	**Pn**	**06 54 40.7**	**+1.1**
IRAZ	**Razeghan**	**4.70**	**354**	*e*Pn	**Pn**	**06 54 44.3**	**+0.2**
IDMV	**Damavand**	**5.00**	**14**	*e*Pn	**Pn**	**06 54 49.2**	**+0.8**
DAMV	**Damavand**	**5.04**	**14**	*e*Pn	**Pn**	**06 54 50.0**	**+1.1**
DAMV	**Damavand**	**5.04**	**14**	*e*Pn	**Pn**	**06 54 50.0**	**+1.1**
SNGE	**Sanandaj**	**5.11**	**329**	*e*Pn	**Pn**	**06 54 46.9**	**-2.9**
SNGE				IAML		06 55 47.7	
	comp=N,18nm,0.5s						
IFIR	**Firoozkooh**	**5.25**	**20**	*e*Pn	**Pn**	**06 54 52.9**	**+1.1**
KRBR	**Kerman**	**5.44**	**96**	*e*Pn	**Pn**	**06 54 56.5**	**+2.1**
KRBR	**Kerman**	**5.44**	**96**	*e*Pn	**Pn**	**06 54 56.5**	**+2.1**
IANJ	**Anjilo**	**5.52**	**30**	*e*Pn	**Pn**	**06 54 56.7**	**+1.2**
ISHM	**Shahmirzad**	**5.58**	**24**	*e*Pn	**Pn**	**06 54 57.6**	**+1.3**
TABS	**Tabas**	**6.30**	**61**	*e*Pn	**Pn**	**06 55 08.1**	**+2.0**
TABS	**Tabas**	**6.30**	**61**	*e*Pn	**Pn**	**06 55 08.1**	**+2.0**
IGLO	**Ghaloghah**	**6.39**	**25**	*e*Pn	**Pn**	**06 55 09.2**	**+1.8**
SHRO	**Shahrood**	**6.97**	**40**	*e*Pn	**Pn**	**06 55 16.9**	**+1.6**
SHRO	**Shahrood**	**6.97**	**40**	*e*Pn	**Pn**	**06 55 16.9**	**+1.6**
BANOM	**Banah**	**6.98**	**132**	P	Pn	06 55 12.0	-3.4
BANOM				S	**Sn**	**06 56 30.4**	**-4.5**
MSFE	**Esma-Masafi**	**7.30**	**136**	P	**Pn**	**06 55 17.1**	**-2.6**
BSRN	**Basiran**	**7.46**	**78**	*e*Pn	**Pn**	**06 55 23.8**	**+1.8**
BSRN	**Basiran**	**7.46**	**78**	*e*Pn	**Pn**	**06 55 23.8**	**+1.8**
HATD	**Hatta, Dubai**	**7.69**	**138**	P	**Pn**	**06 55 24.6**	**-0.5**
ASHO	**Ashiyiah**	**7.76**	**139**	P	**Pn**	**06 55 24.6**	**-1.5**
ASHO				S	**Sn**	**06 56 49.0**	**-5.1**
ALNE	**Al Ain**	**8.10**	**144**	P	**Pn**	**06 55 28.5**	**-2.2**
RAYN	**Ar Rayn**	**8.45**	**213**	P	**Pn**	**06 55 31.9**	**-3.7**

IDC 11 07:04:41.3±2.0**, 4°.04S×129°.71E, h0^{km}, mb3.3**/1**, mb1 3.7**/3**, mb1mx3.5**/29**, mbtmp3.5**/3**, ML3.2**/2**, Error ellipse: s-maj=153.6km s-min=15.1km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.44**	**164**	Pn	Pn	07 08 33.1	-0.4
	0.1nm,0.3s,baz=347,slow=13,SNR=4.0						
ASAR	**Alice Springs**	**19.93**	**169**	P	P	07 09 14.9	0.0
	0.2nm,0.3s,baz=343,slow=9.1,SNR=15						
MKAR	**Makanchi Array**	**65.61**	**326**	P	P	07 15 27.1	-0.1
	0.1nm,0.4s,baz=123,slow=7.8,SNR=1.9						

*IDC **11** 07:08:39.4±2.9, 17°.82S×168°.87E, h234^{km}±40^{km}, mb3.6/6, mb1 3.9/8, mb1mx3.6/35, mbtmp4.3/8, MS3.1/1, Ms1 3.1/1, ms1mx2.5/26, Error ellipse: s-maj=55.3km s-min=17.2km az=147.0*
*NOU **11** 07:08:41.1, 18°.03S×168°.89E, h220^{km}, MLv4.7/16, Vanuatu Islands*
ISC 11 07:08:40.2±0.8**, 17°.98S**±0°.07×**168°.9E**±0°.1**, h250^{km}, n22, σ1^{s}.19**/22**, mb3.8**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**0.53**	**291**	P	**Pn**	**07 09 11.4**	**-1.8**
DVP	**Devils Point**	**0.76**	**289**	P	**Pn**	**07 09 12.3**	**-1.8**
SANVU	**Saraoutou**	**3.02**	**326**	P	**Pn**	**07 09 32.1**	**-0.9**
LIFNC	**LIFOU**	**3.21**	**210**	P	**Pn**	**07 09 32.8**	**-2.2**
MARNC	**Mare, Loyalty**	**3.59**	**194**	P	**Pn**	**07 09 37.6**	**-1.6**
YATNC	**Mamie plateau,**	**4.49**	**205**	P	**Pn**	**07 09 47.8**	**-2.1**
DZM	**Mont Dzumac**	**4.70**	**210**	*e*Pn	**Pn**	**07 09 51.6**	**-0.8**
	380nm,1.2s						
DZM	**Mont Dzumac**	**4.70**	**210**	P	**Pn**	**07 09 51.6**	**-0.8**
	3.6nm,0.3s,baz=53,slow=19,SNR=57						
DZM	**Mont Dzumac**	**4.70**	**210**	P	**Pn**	**07 09 51.9**	**-0.5**
NOUC	**Port Laguerre**	**4.79**	**211**	P	**Pn**	**07 09 52.9**	**-0.6**
OUENC	**Ouen Island, N**	**4.84**	**204**	P	**Pn**	**07 09 53.4**	**-0.6**
ONTNC	**Ouen Toro**	**4.90**	**208**	P	**Pn**	**07 09 54.4**	**-0.4**
MSVF	**Nonsavu**	**8.68**	**90**	P	**Pn**	**07 10 43.1**	**+0.9**
	0.7nm,0.3s,baz=250,slow=11,SNR=16						
STKA	**Stephens Creek**	**28.30**	**236**	P	**P**	**07 14 12.5**	**+1.6**
	3.4nm,0.6s,baz=64,slow=8.0,SNR=11						
WRA	**Warramunga Arr**	**32.75**	**261**	P	**P**	**07 14 49.8**	**-0.3**
	0.3nm,0.3s,baz=80,slow=6.1,SNR=16						
WRA				LR	LR	07 27 14.6	
	comp=Z,34nm,19.0s,baz=250,slow=34						
ASAR	**Alice Springs**	**33.18**	**254**	P	**P**	**07 14 54.0**	**+0.3**
	4.5nm,0.4s,baz=84,slow=8.6,SNR=117						
MJAR	**Matsushiro Arr**	**61.51**	**332**	P	**P**	**07 18 31.1**	**+0.2**
	1.4nm,0.4s,baz=177,slow=8.5,SNR=4.5						
SONM	**Songino Array**	**86.05**	**323**	P	**P**	**07 20 53.6**	**+0.7**
	0.7nm,0.7s,baz=123,slow=5.3,SNR=4.6						
ILAR	**Eielson Array**	**89.12**	**17**	P	**P**	**07 21 05.8**	**-1.0**
	0.5nm,0.8s,baz=233,slow=4.9,SNR=7.2						
SNAA	**Sanae**	**90.40**	**183**	P	**P**	**07 21 13.1**	**+0.1**
VNA3	**Neumayer Olymp**	**91.00**	**180**	P	**P**	**07 21 16.0**	**+0.3**
VNA2	**Neumayer--Watz**	**91.29**	**181**	P	**P**	**07 21 16.4**	**-0.6**
	baz=75,slow=0.8						

*LDG **11** 07:20:41.9±0.1, 61°.89N×4°.14E, h11^{km}, Ml4.0/16, Error ellipse: s-maj=4.0km s-min=2.4km az=139.0*
*IDC **11** 07:20:43.3±1.6, 61°.94N×4°.58E, h0^{km}, mb3.8/2, mb1 3.9/8, mb1mx3.5/61, mbtmp3.9/8, ML3.8/6, MS3.5/1, Ms1 3.5/1, ms1mx2.6/48, Error ellipse: s-maj=23.1km s-min=13.2km az=20.0*
*DNK **11** 07:20:43.4±2.2, 61°.84N×4°.61E, h0^{km}±82^{km}, ML3.2*
*NAO **11** 07:20:45.4±1.5, 61°.92N×4°.57E, h20^{km}±7^{km}, ML3.5*
*BGS **11** 07:20:45.8±1.3, 61°.84N×4°.30E, h11^{km}±5^{km}, ML3.8*
*BER **11** 07:20:46.4±2.5, 61°.88N×4°.38E, h16^{km}±4^{km}, ML3.4, MW3.6, ML3.8(BGS)*
*HEL **11** 07:20:46.0±0.5, 61°.92N×4°.51E, h15^{km}, ML3.5, ML3.2(UPP), Confirmed Earthquake*
*UPP **11** 07:20:48.1±2.1, 61°.64N×5°.10E, h0^{km}, ML3.2, Suspected explosion*
ISC 11 07:20:42.6±0.6**, 61°.82N**±0°.02×**4°.49E**±0°.03**, h17^{km}, n191, σ2^{s}.41**/287**, 3C-8D, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FOO	**Floro**	**0.35**	**130**	⇓*i*P	**Pn**	**07 20 54.1**	**+1.4**
FOO				*e*S	**Sn**	**07 20 59.6**	**+0.4**
FOO				IAML		07 20 59.9	
	comp=N,4µm,0.2s						
FOO				IAML		07 21 00.3	
	comp=E,5µm,0.2s						
FOO	**Floro**	**0.35**	**130**	Pg	**Pn**	**07 20 54.2**	**+1.4**
FOO				Lg	Lg	07 20 59.7	
FOO	**Floro**	**0.35**	**130**	⇓*i*P	**Pn**	**07 20 54.1**	**+1.4**
FOO				*e*S	**Sn**	**07 20 59.7**	**+0.4**
FOO				IAML		07 21 00.1	
	comp=Z,14µm,0.2s						
FOO	**Floro**	**0.35**	**130**	*i* P	**Pn**	**07 20 54.2**	**+1.4**
FOO				*i* S	**Sn**	**07 20 59.5**	**+0.1**
SUE	**Sulen**	**0.78**	**170**	⇑*i*P	**Pn**	**07 21 01.4**	**+2.7**
SUE				*e*S	**Sn**	**07 21 12.8**	**+2.9**
SUE				IAML		07 21 15.0	
	comp=Z,3µm,0.4s						
SUE	**Sulen**	**0.78**	**170**	*i* P	**Pn**	**07 21 01.4**	**+2.7**
SUE				*i* S	**Sn**	**07 21 12.7**	**+2.7**
HYA	**Hoyanger**	**1.05**	**128**	Pg	**Pg**	**07 21 05.4**	**+2.6**
HYA				Lg	Lg	07 21 20.1	
HYA	**Hoyanger**	**1.05**	**128**	⇓*i*P	**Pg**	**07 21 05.3**	**+2.6**
HYA				*e*S	**Sn**	**07 21 20.2**	**+3.6**
HYA				IAML		07 21 20.5	
	comp=Z,11µm,0.2s						
AKN	**Aaknes**	**1.24**	**72**	Pg	**Pg**	**07 21 07.5**	**+1.1**
AKN				Lg	Lg	07 21 23.5	
AKN	**Aaknes**	**1.24**	**72**	⇓*i*P	**Pg**	**07 21 07.4**	**+1.0**
AKN				*e*S	**Sg**	**07 21 23.5**	**+0.9**
AKN				IAML		07 21 25.6	
	comp=Z,3µm,0.1s						
AKN	**Aaknes**	**1.24**	**72**	*e*P	**Pg**	**07 21 07.4**	**+1.0**
AKN				*e*S	**Sg**	**07 21 23.3**	**+0.7**
ASK	**Askoy**	**1.39**	**165**	*e*P	**Pg**	**07 21 10.6**	**+1.4**
ASK				*e*S	**Sg**	**07 21 28.5**	**+1.3**
ASK				*e*		07 21 30.9	
ASK				IAML		07 21 32.7	
	comp=Z,4µm,0.1s						
BER	**Bergen**	**1.50**	**164**	*e*P	**Pg**	**07 21 12.0**	**+0.6**
BER				*e*S	**Sb**	**07 21 30.8**	**+2.2**
BER				IAML		07 21 35.7	
	comp=N,891nm,0.1s						
BER				IAML		07 21 36.9	
	comp=E,740nm,0.2s						
BER	**Bergen**	**1.50**	**164**	Pn	**Pg**	**07 21 13.1**	**+1.7**
BER				Sn	**Sg**	**07 21 31.1**	**+0.3**
BER	**Bergen**	**1.50**	**164**	*e*P	**Pg**	**07 21 12.0**	**+0.6**
BER				*e*		07 21 13.4	
BER				*e*S	**Sg**	**07 21 31.3**	**+0.4**
BER				*e*		07 21 33.8	
BER				IAML		07 21 34.9	
	comp=Z,3µm,0.2s						
BER	**Bergen**	**1.50**	**164**	*e*P	**Pg**	**07 21 13.5**	**+2.1**
BER				*e*S	**Sg**	**07 21 33.6**	**+2.8**
MOL	**Molde**	**1.62**	**61**	*e*P	**Pg**	**07 21 13.4**	**-0.3**
MOL				*e*S	**Sg**	**07 21 34.0**	**-0.8**
MOL				IAML		07 21 35.6	
	comp=E,2µm,0.3s						
MOL				IAML		07 21 38.8	
	comp=N,2µm,0.3s						
MOL	**Molde**	**1.62**	**61**	Pg	**Pg**	**07 21 13.3**	**-0.3**
MOL				Lg	Lg	07 21 33.9	
MOL	**Molde**	**1.62**	**61**	⇓*i*P	**Pg**	**07 21 13.3**	**-0.3**
MOL				*e*Sg	**Sg**	**07 21 34.1**	**-0.6**
MOL				IAML		07 21 37.6	
	comp=Z,1µm,0.6s						
MOL	**Molde**	**1.62**	**61**	*e*P	**Pg**	**07 21 13.4**	**-0.3**
MOL				*e*S	**Sg**	**07 21 33.8**	**-1.0**
SKAR	**Skarslia**	**2.17**	**120**	⇓*i*P	**Pb**	**07 21 21.4**	**0.0**
SKAR				*e*S	**Sb**	**07 21 47.6**	**-0.3**
SKAR				*e*Sg	**Sg**	**07 21 54.0**	**+1.7**
SKAR				IAML		07 21 57.6	
	comp=Z,2µm,0.2s						
DOMB	**Dombas**	**2.18**	**82**	⇑*i*P	**Pb**	**07 21 21.3**	**-0.2**
DOMB				*e*Pg	**Pg**	**07 21 23.2**	**-1.1**
DOMB				*e*S	**Sb**	**07 21 46.8**	**-1.4**
DOMB				IAML		07 21 53.9	
	comp=Z,662nm,0.2s						
ODD1	**Odda**	**2.18**	**150**	⇓*i*P	**Pb**	**07 21 22.0**	**+0.4**
ODD1				*e*S	**Sb**	**07 21 48.6**	**+0.3**
ODD1				*e*Sg	**Sg**	**07 21 54.3**	**+1.6**
ODD1				IAML		07 21 59.7	
	comp=Z,1µm,0.3s						
BLS5	**Blasjo**	**2.59**	**157**	⇓*i*P	**Pb**	**07 21 27.4**	**-1.2**
BLS5				*e*S	**Sn**	**07 21 57.0**	**+2.2**
BLS5				IAML		07 22 12.2	
	comp=Z,1µm,0.3s						
KMY	**Karmoy**	**2.64**	**171**	*e*P	**Pb**	**07 21 27.7**	**-1.7**
KMY				*e*S	**Sn**	**07 21 57.2**	**+1.3**
KMY				*e*Sg	**Sg**	**07 22 07.8**	**+0.4**
KMY				IAML		07 22 13.2	
	comp=Z,435nm,0.3s						
KMY				IAML		07 22 13.3	
	comp=Z,432nm,0.3s						
TBLU	**Trondheim**	**3.04**	**59**	*e*Pg	**Pg**	**07 21 40.4**	**-0.3**
TBLU				*e*Sg	**Sg**	**07 22 19.2**	**-0.8**
TBLU				IAML		07 22 23.1	
	comp=Z,304nm,0.4s						
LRW	**Lerwick**	**3.24**	**241**	*e*P	**Pn**	**07 21 34.8**	**+2.3**
LRW				*e*S	**Sn**	**07 22 10.0**	**-0.5**
LRW				IAML		07 22 13.6	
	comp=E,80nm,0.3s						
LRW				IAML		07 22 15.8	
	comp=N,51nm,0.2s						
LRW	**Lerwick**	**3.24**	**241**	*e*P	**Pn**	**07 21 34.8**	**+2.3**
LRW				*e*S	**Sn**	**07 22 10.0**	**-0.5**
LRW				IAML		07 22 13.6	
	comp=E,80nm,0.3s						
LRW				IAML		07 22 15.8	
	comp=N,51nm,0.2s						
KONO	**Kongsberg**	**3.32**	**129**	*e*P	**Pn**	**07 21 36.5**	**+2.8**
KONO	**Kongsberg**	**3.32**	**129**	*e*P	**Pn**	**07 21 36.4**	**+2.8**
KONO				*e*S	**Sn**	**07 22 14.1**	**+1.4**
KONO				*e*Sg	**Sg**	**07 22 27.6**	**-1.6**
NB2	**NORSAR Subarra**	**3.33**	**101**	Pn	**Pn**	**07 21 36.0**	**+2.2**
NB2				Sn	**Sn**	**07 22 15.4**	**+2.5**
	baz=283,slow=28						
NB2				Lg	Lg	07 22 23.9	
NB2	**NORSAR Subarra**	**3.33**	**101**	Pn	**Pn**	**07 21 36.4**	**+2.5**
NB2				Sn	**Sn**	**07 22 15.8**	**+2.9**
NB2				Sg	**Sg**	**07 22 28.8**	**-0.5**
NOA	**NORSAR Array B**	**3.33**	**101**	Pn	**Pn**	**07 21 36.3**	**+2.5**
	comp=N,2.5nm,0.3s,baz=287,slow=12,SNR=156						
NOA				Lg	Lg	07 22 27.1	
	comp=N,10nm,0.3s,baz=267,slow=18,SNR=4.9						
NRA0	**NORESS Array S**	**3.58**	**105**	Pn	**Pn**	**07 21 39.3**	**+2.2**
	baz=293,slow=12						
NRA0				Sn	**Sn**	**07 22 20.3**	**+1.4**
	baz=299,slow=22						
NRA0				Lg	Lg	07 22 36.2	
	baz=295,slow=28						
NRA0	**NORESS Array S**	**3.58**	**105**	Pn	**Pn**	**07 21 39.6**	**+2.4**
	baz=293,slow=12						
NRA0				Sn	**Sn**	**07 22 19.7**	**+0.7**
	baz=299,slow=22						
NRA0				Sg	**Sg**	**07 22 35.6**	**-1.6**
	baz=297,slow=37						
OSL	**Oslo**	**3.59**	**119**	*e*P	**Pn**	**07 21 40.5**	**+3.2**
OSL				*e*S	**Sn**	**07 22 21.8**	**+2.7**
OSL				IAML		07 22 45.1	
	comp=Z,729nm,0.5s						
SNART	**Snartemo**	**3.75**	**157**	*i* P	**Pn**	**07 21 42.6**	**+3.1**
SNART				*i* S	**Sn**	**07 22 25.1**	**+1.9**
SNART	**Snartemo**	**3.75**	**157**	⇑*e*P	**Pn**	**07 21 42.9**	**+3.4**
SNART				*e*S	**Sn**	**07 22 25.5**	**+2.3**
SNART				IAML		07 22 43.6	
	comp=Z,603nm,0.4s						
HOMB	**Homborsund**	**4.09**	**149**	*i* P	**Pn**	**07 21 47.3**	**+3.1**
HOMB				*i* S	**Sn**	**07 22 32.8**	**+1.1**
HOMB	**Homborsund**	**4.09**	**149**	*e*P	**Pn**	**07 21 47.7**	**+3.5**
HOMB				*e*S	**Sn**	**07 22 33.0**	**+1.3**
HOMB				IAML		07 22 57.9	
	comp=Z,176nm,0.4s						
STRU	**Stroemstad**	**4.34**	**127**	P	**Pn**	**07 21 49.4**	**+1.8**
STRU				S	**Sn**	**07 22 36.8**	**-0.9**
STRU	**Stroemstad**	**4.34**	**127**	P	**Pn**	**07 21 49.4**	**+1.8**
STRU				S	**Sn**	**07 22 36.8**	**-0.9**
NSS	**Namsos**	**4.34**	**48**	*e*P	**Pn**	**07 21 50.2**	**+2.5**
NSS				*e*Sg	**Sb**	**07 22 54.3**	**+3.9**
NSS				IAML		07 23 01.2	
	comp=Z,193nm,0.6s						
FINU	**Finntorp**	**4.62**	**118**	P	**Pn**	**07 21 53.9**	**+2.3**
FINU				S	**Sn**	**07 22 43.8**	**-1.0**
FINU	**Finntorp**	**4.62**	**118**	P	**Pn**	**07 21 53.9**	**+2.3**
FINU				S	**Sn**	**07 22 43.8**	**-1.0**
UDD	**Uddeholm**	**4.77**	**107**	P	**Pn**	**07 21 56.1**	**+2.5**
UDD				S	**Sn**	**07 22 47.6**	**-0.8**
HFC2	**Hagfors New Ar**	**4.79**	**107**	*e*P	**Pn**	**07 21 56.5**	**+2.6**
HFC2				*e*S	**Sn**	**07 22 47.0**	**-1.9**
HFC2	**Hagfors New Ar**	**4.79**	**107**	*e*P	**Pn**	**07 21 56.6**	**+2.8**
HFC2				*e*S	**Sn**	**07 22 48.8**	**-0.1**
HFS	**Hagfors**	**4.79**	**107**	Pn	**Pn**	**07 21 56.5**	**+2.6**
	comp=Z,14nm,0.3s,baz=282,slow=12,SNR=331						
HFS				Sn	**Sn**	**07 22 48.4**	**-0.5**
	comp=Z,17nm,0.3s,baz=291,slow=25,SNR=6.9						
HFS				Lg	Lg	07 23 13.6	
	comp=Z,29nm,0.3s,baz=302,slow=27,SNR=5.5						
HFS	**Hagfors**	**4.79**	**107**	Pn	**Pn**	**07 21 56.3**	**+2.4**
	baz=291,slow=11						
HFS				Pg	**Pb**	**07 22 08.8**	**+2.8**
HFS				Sn	**Sn**	**07 22 48.4**	**-0.5**
	baz=299,slow=22						
HFS				Lg	Lg	07 23 10.1	
	baz=292,slow=37						
HFS	**Hagfors**	**4.79**	**107**	Pn	**Pn**	**07 21 56.2**	**+2.4**
	baz=291,slow=11						
HFS				Sn	**Sn**	**07 22 48.4**	**-0.5**
	baz=299,slow=22						
HFS				Sg	**Sb**	**07 23 10.1**	**+6.7**
	baz=292,slow=37						
VANU	**Vaenersborg**	**5.05**	**128**	P	**Pn**	**07 21 59.4**	**+2.0**
VANU				S	**Sn**	**07 22 53.9**	**-1.3**
VANU	**Vaenersborg**	**5.05**	**128**	P	**Pn**	**07 21 59.4**	**+2.0**
VANU				S	**Sn**	**07 22 53.9**	**-1.3**
NASU	**Vaermlandsnaes**	**5.20**	**120**	P	**Pn**	**07 22 01.3**	**+1.9**
NASU				S	**Sn**	**07 22 57.5**	**-1.4**
NASU	**Vaermlandsnaes**	**5.20**	**120**	P	**Pn**	**07 22 01.3**	**+1.9**
NASU				S	**Sn**	**07 22 57.5**	**-1.4**
TJOU	**Tjoern**	**5.23**	**133**	*i* P	**Pn**	**07 22 02.0**	**+2.2**
TJOU	**Tjoern**	**5.23**	**133**	P	**Pn**	**07 22 01.9**	**+2.2**
TJOU				S	**Sn**	**07 22 57.5**	**-2.0**
TJOU	**Tjoern**	**5.23**	**133**	P	**Pn**	**07 22 01.9**	**+2.2**
TJOU				S	**Sn**	**07 22 57.5**	**-2.0**
MLA1	**Latheron**	**5.28**	**232**	*e*P	**Pn**	**07 22 02.5**	**+2.0**
MLA1	**Latheron**	**5.28**	**232**	*e*P	**Pn**	**07 22 02.5**	**+2.0**
BIGH	**Upper Bighouse**	**5.36**	**235**	*e*P	**Pn**	**07 22 03.4**	**+1.8**
BIGH				*e*S	**Sn**	**07 22 59.9**	**-2.9**
BIGH				IAML		07 23 04.8	
	comp=N,108nm,0.1s						
BIGH				IAML		07 23 06.0	
	comp=E,139nm,0.3s						
BIGH	**Upper Bighouse**	**5.36**	**235**	*e*P	**Pn**	**07 22 03.4**	**+1.8**
BIGH				*e*S	**Sn**	**07 22 59.9**	**-2.9**
BIGH				IAML		07 23 04.8	
	comp=N,108nm,0.1s						
BIGH				IAML		07 23 06.0	
	comp=E,139nm,0.3s						
GOET	**G??ttrup**	**5.37**	**151**	*e*P	**Pn**	**07 22 05.5**	**+3.7**
GOET				IAML		07 22 07.4	
	comp=Z,26nm,0.2s						
GOET				*e*S	**Sn**	**07 23 05.8**	**+2.6**
GOET	**G??ttrup**	**5.37**	**151**	*e*P	**Pn**	**07 22 05.5**	**+3.7**
GOET				IAML		07 22 07.4	
	comp=Z,26nm,0.2s						
GOET				*e*S	**Sn**	**07 23 05.8**	**+2.6**
ROTU	**Roteberg**	**5.42**	**89**	P	**Pn**	**07 22 04.5**	**+2.1**

ROTU	Roteberg	5.42	89	P	Pn	07 22 04.5	+2.1
ROTU	Roteberg	5.42	89	*e*P	Pn	07 22 04.5	+2.1
FALU	Falun	5.65	99	P	Pn	07 22 08.0	+2.4
FALU	Falun	5.65	99	P	Pn	07 22 08.0	+2.4
NRAU	Nora	5.65	109	P	Pn	07 22 08.4	+2.7
NRAU	Nora	5.65	109	P	Pn	07 22 08.4	+2.7
NRAU	Nora	5.65	109	*e*P	Pn	07 22 08.4	+2.7
HASU	Hassela	5.73	81	P	Pn	07 22 09.5	+2.9
HASU				S	Sn	07 23 12.3	+0.4
HASU	Hassela	5.73	81	P	Pn	07 22 09.5	+2.9
HASU				S	Sn	07 23 12.3	+0.4
HASU	Hassela	5.73	81	*e*P	Pn	07 22 09.5	+2.9
HASU				*e*S	Sn	07 23 12.3	+0.4
MCD	Coleburn Disti	5.78	226	*e*P	Pn	07 22 09.3	+1.9
MCD	Coleburn Disti	5.78	226	*e*P	Pn	07 22 09.3	+1.9
ONAU	Onsala	5.82	136	*i* P	Pn	07 22 10.0	+2.0
ONAU	Onsala	5.82	136	P	Pn	07 22 10.2	+2.2
ONAU				S	Sn	07 23 11.6	-2.7
ONAU	Onsala	5.82	136	*i* P	Pn	07 22 10.0	+2.0
ONAU				P	Pn	07 22 10.2	+2.2
ONAU				S	Sn	07 23 11.6	-2.7
STOK	Stokkvaagen	5.87	36	Pn	Pn	07 22 10.5	+1.9
STOK				Sn	Sn	07 23 14.7	-0.7
STOK	Stokkvaagen	5.87	36	*e*P	Pn	07 22 09.6	+1.0
STOK				*e*S	Sn	07 23 14.7	-0.7
MUD	Monsted U'grnd	5.90	154	*i* P	Pn	07 22 12.9	+3.9
MUD				IAML		07 22 14.3	
	comp=Z,6.6nm,0.1s						
MUD				*e*S	Sn	07 23 15.4	-0.6
MUD	Monsted U'grnd	5.90	154	*i* P	Pn	07 22 12.9	+3.9
MUD				IAML		07 22 14.3	
	comp=Z,6.6nm,0.1s						
MUD				*e*S	Sn	07 23 15.4	-0.6
ASKU	Askersund	5.91	115	P	Pn	07 22 11.3	+2.1
ASKU	Askersund	5.91	115	P	Pn	07 22 11.3	+2.1
FKPU	Falk	5.91	124	P	Pn	07 22 10.9	+1.7
FKPU	Falk	5.91	124	P	Pn	07 22 10.9	+1.7
BORU	Boraas	5.93	131	*i* P	Pn	07 22 11.5	+2.0
BORU	Boraas	5.93	131	P	Pn	07 22 11.6	+2.2
BORU	Boraas	5.93	131	P	Pn	07 22 11.6	+2.2
KONS	Konsvik	6.02	35	Pn	Pn	07 22 11.9	+1.3
KONS	Konsvik	6.02	35	*e*P	Pn	07 22 12.0	+1.3
KONS				*e*S	Sn	07 23 17.7	-1.4
KONS				IAML		07 23 56.2	
	comp=Z,34nm,0.6s						
DRUM	Mains of Drumt	6.08	219	*e*P	Pn	07 22 13.3	+1.9
DRUM				*e*S	Sn	07 23 17.4	-3.1
DRUM	Mains of Drumt	6.08	219	*e*P	Pn	07 22 13.3	+1.9
DRUM				*e*S	Sn	07 23 17.4	-3.1
MOR8	Moi Rana	6.18	41	*e*P	Pn	07 22 17.1	+4.3
MOR8				*e*S	Sn	07 23 26.1	+3.0
MOR8				IAML		07 24 07.3	
	comp=Z,106nm,0.6s						
MDO	Dochfour	6.28	230	*e*P	Pn	07 22 16.0	+1.8
MDO	Dochfour	6.28	230	*e*P	Pn	07 22 16.0	+1.8
HEMU	Hemsoen	6.39	76	*e*P	Pn	07 22 18.0	+2.3
HEMU				*e*S	Sn	07 23 25.1	-3.1
HEMU	Hemsoen	6.39	76	*e*P	Pn	07 22 18.1	+2.3
HEMU				*e*S	Sn	07 23 27.8	-0.4
FABU	Falkenberg	6.40	135	*i* P	Pn	07 22 17.5	+1.6
FABU				*i* S	Sn	07 23 26.6	-1.9
FABU	Falkenberg	6.40	135	*i* P	Pn	07 22 17.5	+1.6
FABU				*i* S	Sn	07 23 26.6	-1.9
NBB30	Finnes	6.54	34	*e*P	Pn	07 22 18.7	+1.0
KAC	Achnashellach	6.58	233	*e*P	Pn	07 22 19.5	+1.1
KAC	Achnashellach	6.58	233	*e*P	Pn	07 22 19.5	+1.1
UPP	Uppsala	6.72	101	*e*P	Pn	07 22 23.4	+3.2
LEWI	Lewis, Hebride	6.78	242	*e*P	Pn	07 22 23.1	+1.9
LEWI	Lewis, Hebride	6.78	242	*e*P	Pn	07 22 23.1	+1.9
KPL	Plockton	6.83	233	*e*P	Pn	07 22 24.2	+2.4
KPL				IAML		07 23 37.2	
	comp=E,15nm,0.2s						
KPL				IAML		07 23 39.0	
	comp=N,22nm,0.4s						
KPL	Plockton	6.83	233	*e*P	Pn	07 22 24.2	+2.4
KPL				IAML		07 23 37.2	
	comp=E,15nm,0.2s						
KPL				IAML		07 23 39.0	
	comp=N,22nm,0.4s						
INVG	Invergeldie, C	6.96	223	*e*P	Pn	07 22 25.2	+1.6
INVG				IAML		07 23 41.2	
	comp=N,23nm,0.3s						
INVG				IAML		07 23 41.4	
	comp=E,17nm,0.2s						
INVG	Invergeldie, C	6.96	223	*e*P	Pn	07 22 25.2	+1.6
INVG				IAML		07 23 41.2	
	comp=N,23nm,0.3s						
INVG				IAML		07 23 41.4	
	comp=E,17nm,0.2s						
ESY	Stoneypath	6.97	215	*e*P	Pn	07 22 25.1	+1.3
ESY	Stoneypath	6.97	215	*e*P	Pn	07 22 25.1	+1.3
EDI	Edinburgh	7.12	217	*e*P	Pn	07 22 27.6	+1.7
EDI				IAML		07 23 46.7	
	comp=N,32nm,0.4s						
EDI				IAML		07 23 47.8	
	comp=E,36nm,0.3s						
EDI	Edinburgh	7.12	217	*e*P	Pn	07 22 27.6	+1.7
EDI				IAML		07 23 46.7	
	comp=N,32nm,0.4s						
EDI				IAML		07 23 47.8	
	comp=E,36nm,0.3s						
DEL	Delary	7.21	134	*i* P	Pn	07 22 29.0	+2.0
DEL				*e*S	Sn	07 23 46.4	-2.0
DEL	Delary	7.21	134	*i* P	Pn	07 22 29.0	+2.0
DEL				*e*S	Sn	07 23 46.4	-2.0
EBL	Broad Law	7.21	216	*e*P	Pn	07 22 29.4	+2.3
EBL	Broad Law	7.21	216	*e*P	Pn	07 22 29.4	+2.3
FAUS	Fauske	7.25	35	*e*P	Pn	07 22 28.8	+1.3
FAUS				*e*S	Sn	07 23 47.7	-1.7
LAWE	Loch Awe, Argy	7.55	227	*e*S	Sn	07 23 52.1	-4.6
LAWE				IAML		07 23 54.2	
	comp=E,26nm,0.2s						
LAWE				IAML		07 23 58.4	
	comp=N,20nm,0.5s						
LAWE	Loch Awe, Argy	7.55	227	*e*S	Sn	07 23 52.1	-4.6
LAWE				IAML		07 23 54.2	
	comp=E,26nm,0.2s						
LAWE				IAML		07 23 58.4	
	comp=N,20nm,0.5s						
EKA	Eskdalemuir Ar	7.63	215	Pn	Pn	07 22 35.0	+2.3
	baz=20,slow=13,SNR=31						
EKA				Sn	Sn	07 23 56.0	-2.8
	baz=37,slow=24,SNR=9.4						
EKA	Eskdalemuir Ar	7.63	215	Pn	Pn	07 22 37.0	+4.2
EKA				Sn	Sn	07 23 56.1	-2.6
EKA	Eskdalemuir Ar	7.63	215	Pn	Pn	07 22 34.5	+1.7
STEI	Steigen	7.64	32	*e*P	Pn	07 22 33.5	+0.6
ESK	Eskdalemuir	7.66	215	*e*P	Pn	07 22 34.9	+1.8
ESK				IAML		07 24 00.5	
	comp=N,26nm,0.3s						
ESK				IAML		07 24 02.4	
	comp=E,24nm,0.4s						
ESK	Eskdalemuir	7.66	215	*e*P	Pn	07 22 34.9	+1.8
ESK				IAML		07 24 00.5	
	comp=N,26nm,0.3s						
ESK				IAML		07 24 02.4	
	comp=E,24nm,0.4s						
N2VI	Vinje	7.70	28	*e*P	Pn	07 22 34.7	+1.0
N2VI				*e*S	Sn	07 23 54.0	-6.3
AAL	Aland	7.71	95	*e*P	Pn	07 22 37.7	+3.8
AAL	Aland	7.71	95	*e*P	Pn	07 22 34.7	+0.8
LUNU	Lund	7.76	139	*i* P	Pn	07 22 36.5	+2.0
LUNU	Lund	7.76	139	*i* P	Pn	07 22 36.5	+2.0
N2IH	Innhavet	7.85	33	*e*P	Pn	07 22 37.0	+1.3
BLEU	Blekinge	8.03	128	*i* P	Pn	07 22 37.6	-0.7
BLEU				*i* S	Sn	07 24 05.0	-3.7
BLEU	Blekinge	8.03	128	*i* P	Pn	07 22 37.6	-0.7
BLEU				*i* S	Sn	07 24 05.0	-3.7
NEWG	New Galloway	8.12	218	*e*P	Pn	07 22 41.8	+2.3
NEWG	New Galloway	8.12	218	*e*P	Pn	07 22 41.8	+2.3
RAF	Rauma	8.32	88	*e*P	Pn	07 22 43.3	+1.1
RAF				*e*S	Sn	07 24 10.7	-5.0
RAF				MSG		07 24 35.8	
	comp=Z,11nm,0.2s						
RAF	Rauma	8.32	88	*e*P	Pn	07 22 43.6	+1.4
RAF				*e*S	Sn	07 24 12.1	-3.5
BSD	Bornholm Skovb	8.66	136	*i* P	Pn	07 22 48.4	+1.6
BSD				IAmb	IAmb	07 22 50.2	
	comp=Z,2.2nm,0.1s						
BSD	Bornholm Skovb	8.66	136	*i* P	Pn	07 22 48.4	+1.6
BSD				IAmb	IAmb	07 22 50.2	
	comp=Z,2.2nm,0.1s						
KEF	Keuruu	9.59	79	*e*P	Pn	07 22 59.9	+0.3
KEF				*e*S	Sn	07 24 39.9	-6.9
KEF				MSG		07 25 00.6	
	comp=Z,5.8nm,0.2s						
KEF	Keuruu	9.59	79	*e*P	Pn	07 23 01.4	+1.9
KEF				MSN		07 24 47.2	
	comp=Z,8.2nm,0.2s						
LANU	Lannavaara	9.67	42	*e*P	Pn	07 23 02.0	+1.3
TOF	Tornio	9.69	55	*e*P	Pn	07 23 02.9	+1.9
MEF	Metsahovi	9.79	91	*e*S	Sn	07 24 45.4	-6.3
MEF				MSG		07 25 06.6	
	comp=Z,7.8nm,0.2s						
MEF	Metsahovi	9.79	91	*e*P	Pn	07 23 02.8	+0.5
MEF				MSN		07 24 50.2	
	comp=Z,7.3nm,0.2s						
TRO	Tromso	9.81	31	*e*P	Pn	07 23 04.4	+1.9
NUR	Nurmijrvi	9.82	89	*e*P	Pn	07 23 02.7	-0.1
NUR				*e*S	Sn	07 24 46.3	-6.2
KIF	Kilpisjarvi	9.87	36	*e*P	Pn	07 23 04.6	+1.2
KIF				*e*P	Pn	07 23 05.0	+1.5
KIF	Kilpisjarvi	9.87	36	*e*P	Pn	07 23 05.2	+1.7
SLIT	Slitere, Latvi	9.91	107	*e*P	Pn	07 23 01.7	-2.3
MTSE	Matsula	10.08	99	*e*P	Pn	07 23 06.4	+0.1
SUF	Sumiainen	10.13	75	MSN		07 25 02.6	
	comp=Z,7.1nm,0.2s						
JETT	Jettan, Norway	10.13	33	*e*P	Pn	07 23 08.0	+1.0
KAF	Kangasniemi	10.26	79	MSN		07 25 03.7	
	comp=Z,7.8nm,0.3s						
FIA0	FINESS Array S	10.27	83	Pn	Pn	07 23 09.9	+1.0
	baz=286,slow=12						
FIA0				Sn	Sn	07 24 58.6	-4.8
	baz=282,slow=22						
FIA0	FINESS Array S	10.27	83	Pn	Pn	07 23 09.9	+1.0
	baz=286,slow=12						
FIA0				Sn	Sn	07 24 58.6	-4.8
	baz=282,slow=22						
FINES	FINESS Array B	10.27	83	Pn	Pn	07 23 09.6	+0.7
	comp=Z,0.9nm,0.3s,baz=289,slow=12,SNR=28						
FINES				Sn	Sn	07 25 00.3	-3.2
	comp=Z,2.6nm,0.3s,baz=283,slow=20,SNR=7.2						
FINES				Lg	Lg	07 26 01.7	
	comp=Z,3.4nm,0.3s,baz=280,slow=23,SNR=5.3						
HEF	Hetta	10.39	42	*e*P	Pn	07 23 11.7	+1.1
KTK1	Kautokeino	10.58	39	*e*P	Pn	07 23 14.4	+1.2
KTK1				IAML		07 26 19.0	
	comp=Z,13nm,0.7s						
ARA0	ARCESS Array S	11.55	39	Pn	Pn	07 23 25.9	-0.5
	baz=230,slow=14						
ARA0	ARCESS Array S	11.55	39	*e*P	Pn	07 23 25.2	-1.1
ARA0				Pn	Pn	07 23 25.9	-0.5
	baz=230,slow=14						
ARCES	ARCESS Array B	11.55	39	Pn	Pn	07 23 26.0	-0.4
	baz=233,slow=14,SNR=22						
ARCES				Sn	Sn	07 25 39.6	+4.9
	baz=232,slow=21,SNR=5.9						
ARCES				Lg	Lg	07 26 39.0	
	baz=226,slow=30,SNR=7.0						
VSU	Vasula	11.57	97	*e*P	Pn	07 23 31.6	+4.9
GIVF	Givet	11.75	179	*e*Pn	Pn	07 23 27.2	-2.0
GIVF	Givet	11.75	179	*e*P	Pn	07 23 33.7	+4.5
GIVF				*e*Sn	Sn	07 25 32.8	-7.0
	comp=Z,9.9nm,0.3s						
BAIF	Baives	11.79	181	*e*Pn	Pn	07 23 28.0	-1.8
BAIF				*e*Sn	Sn	07 25 33.1	-7.7
	comp=Z,2.5nm,0.2s						
KEV	Kevo	12.11	39	*e*P	Pn	07 23 33.4	-0.7
SAVF	Savonnieres en	13.24	178	*e*Pn	Pn	07 23 48.3	-1.3
	baz=356						
FLN	La Foliniere	13.38	194	*e*Pn	Pn	07 23 49.5	-2.0
	baz=8.3						
FLN				*e*Sn	Sn	07 26 10.3	-9.4
	comp=Z,1.7nm,0.1s						
APA0	Apatity Array	13.39	52	Pn	Pn	07 23 49.0	-2.5
	baz=259,slow=12						
LDF	La Druitiere	13.51	193	*e*Pn	Pn	07 23 51.1	-2.1
LDF				*e*Sn	Sn	07 26 13.7	-9.1
	comp=Z,3.4nm,0.2s						
GRR	Gorron	13.80	195	*e*Sn	Sn	07 26 18.9	-11
	comp=Z,5.6nm,0.2s						
SGMF	Saint Gilles	14.17	200	*e*P	Pn	07 24 05.1	+2.9
SGMF				*e*Sn	Sn	07 26 29.2	-10
	comp=Z,0.9nm,0.3s						
ROSF	Rostrenen	14.21	202	*e*Pn	Pn	07 24 00.2	-2.6
ROSF				*e*Sn	Sn	07 26 30.0	-10
	comp=Z,2.9nm,0.3s						
LOR	Lormes	14.59	182	*e*Pn	Pn	07 24 06.5	-1.5
	baz=356						
LOR				*e*Sn	Sn	07 26 40.9	-8.2
	comp=Z,3.5nm,0.3s						
QUIF	Quistinic	14.60	201	*e*P	Pn	07 24 10.8	+2.8
QUIF				*e*Sn	Sn	07 26 38.4	-11
	comp=Z,1.9nm,0.2s						
SSF	Saint Saulge	14.80	183	*e*Sn	Sn	07 26 45.2	-9.1
	comp=Z,1.3nm,0.2s						
AVF	Avril sur Loir	15.08	183	*e*Pn	Pn	07 24 13.1	-1.4
AVF				*e*Sn	Sn	07 26 51.4	-10
	comp=Z,0.3nm,0.2s						
SMF	Signal de Mont	15.21	182	*e*Sn	Sn	07 26 53.8	-10
	comp=Z,2.1nm,0.3s						
CABF	La Chapelle	15.27	176	*e*Pn	Pn	07 24 15.9	-1.3
MFF	Saint Martin d	15.48	192	*e*Sn	Sn	07 27 00.0	-11
	comp=Z,3.9nm,0.3s						
KLMR	Klimovskoe	16.71	78	*e*Pn	Pn	07 24 35.3	-0.2
KLMR				AMP		07 24 41.0	
	comp=Z,16nm,1.4s						
KLMR				*e*Sn	Sn	07 27 41.4	+0.9
KLMR				*e*Sn	Sn	07 27 41.4	+0.9
KLMR				*e*Lg	Lg	07 29 26.5	
KLMR				*e*Lg	Lg	07 29 26.5	
KLMR				*e*Lg	Lg	07 29 26.5	
SPITS	Spitsbergen Ar	16.86	8	Pn	P	07 24 41.1	+1.7
	baz=170,slow=15,SNR=19						
AKASG	Malin Array Be	17.55	118	Pn	Pn	07 24 44.0	-2.2
	comp=Z,1.2nm,0.3s,baz=310,slow=12,SNR=4.2						
AKASG				Lg	Lg	07 30 02.1	
	comp=Z,0.6nm,0.3s,baz=318,slow=27,SNR=6.2						
MLR	Muntele Rosu	20.55	133	LR	LR	07 34 22.0	
	comp=Z,128nm,18.5s,baz=330,slow=40						
ZALV	Zalesovo Beam	40.80	63	P	P	07 28 25.4	+3.0
	comp=Z,1.5nm,0.5s,baz=322,slow=9.4,SNR=5.0						
SONM	Songino Array	54.24	54	P	P	07 30 09.3	+2.2
	comp=Z,0.3nm,0.4s,baz=332,slow=8.6,SNR=2.4						

VAO ***11*** *07:26:16.6±0.7, 24.°80S×69.°54W, h80^{km}, mb4.1*

NEIC ***11*** *07:26:48.5±1.6, 24.°13S±0.°06×67.°1W±0.°2, h185^{km}±9^{km}, mb4.0/6, Md3.5(SJA), Error ellipse: s-maj=22.0km s-min=8.3km az=99.0*

IDC ***11*** *07:26:48.9±2.6, 23.°92S×66.°99W, h185^{km}±22^{km}, mb3.5/2, mb1 3.6/6, mb1mx3.3/24, mbtmp4.0/6, Error ellipse: s-maj=42.3km s-min=27.0km az=170.0*

GUC ***11*** *07:26:49.9±0.4, 23.°97S×67.°41W, h222^{km}±6^{km}, ML4.3*

ISC 11 07:26:48.5±0.8**, 24.°05S**±0.°06×**67.°24W**±0.°09**, h205**^{km}±11^{km}**, n70, σ1^{s}23**/77**, mb3.8**/4**, 5C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.10	313	P	Pn	07 27 29.4	+0.6
	10nm,0.3s,baz=140,slow=7.3,SNR=191						
LVC				S	S	07 27 59.8	+0.1
	49nm,0.3s,baz=15,slow=22,SNR=50						
LVC	Limon Verde	2.10	313	*i* P	Pn	07 27 29.4	+0.6
LVC				*i* S	S	07 27 59.8	+0.1
LVC	Limon Verde	2.10	313		Pn	07 27 29.8	+0.9
PB15	IPOC Station P	2.21	292	⇑*i*P	Pn	07 27 30.6	+0.8
PB15				*i* S	S	07 28 01.7	+0.3
PB15	IPOC Station P	2.21	292		Pn	07 27 30.8	+0.9
PB06	IPOC Station P	2.52	302	⇑*i*P	Pn	07 27 34.0	+0.8
PB06				*i* S	S	07 28 07.5	0.0
PB06				IAML		07 28 09.9	
	comp=E,979nm,0.2s						
PB06	IPOC Station P	2.52	302		Pn	07 27 33.9	+0.7
PB09	IPOC Station P	2.90	320	*i* P	Pn	07 27 38.9	+1.4
PB09				*i* S	S	07 28 16.3	+1.1
PB09				IAML		07 28 17.8	
	comp=N,300nm,0.3s						
PB09	IPOC Station P	2.90	320		Pn	07 27 39.2	+1.7
PB14	IPOC Station P	2.94	258		Pn	07 27 37.9	-0.1
PB05	IPOC Station P	2.97	293	⇑*i*P	Pn	07 27 38.6	+0.4
PB05				*i* S	S	07 28 15.5	-1.0
PB05				IAML		07 28 19.6	
	comp=E,313nm,0.4s						
PB03	IPOC Station P	3.05	310	⇑*i*P	Pn	07 27 39.7	+0.5
PB03				*i* S	S	07 28 17.6	-0.7
PB03				IAML		07 28 19.6	
	comp=N,651nm,0.2s						
PB10	IPOC Station P	3.08	279	⇑*i*P	Pn	07 27 40.1	+0.7
PB10				*i* S	S	07 28 18.2	-0.4
PB10				IAML		07 28 22.0	
	comp=E,257nm,0.3s						
PB10	IPOC Station P	3.08	279		Pn	07 27 40.4	+1.0
PB04	IPOC Station P	3.17	302	*i* P	Pn	07 27 41.2	+0.6
PB04				*i* S	S	07 28 20.0	-0.9
PB04	IPOC Station P	3.17	302		Pn	07 27 41.3	+0.6
AC02	Maricunga	3.26	211	Pn	Pn	07 27 41.8	-0.1
PB07	IPOC Station P	3.36	313	*i* P	Pn	07 27 43.3	+0.5
PB07				*i* S	S	07 28 23.9	-1.0
PB07	IPOC Station P	3.36	313		Pn	07 27 43.4	+0.5
PB01	IPOC Station P	3.64	325	⇓*i*P	Pn	07 27 46.4	+0.2
PB01				*i* S	S	07 28 30.3	-0.7
PB01	IPOC Station P	3.64	325		Pn	07 27 46.6	+0.4
PB08	IPOC Station P	4.28	335		Pn	07 27 54.8	+0.5
GO03	Copiap	4.44	217	Pn	Pn	07 27 54.5	-1.5
PB11	IPOC Station P	4.82	332	Pn	Pn	07 28 00.7	-0.3
AC04	Llanos de Chal	5.38	219		Pn	07 28 05.4	-2.5
PB16	IPOC Station P	6.07	339		Pn	07 28 17.9	+0.6
GO04	Tololo Observa	6.87	207	Pn	Pn	07 28 26.3	-1.0
LPAZ	La Paz	7.77	354	P	Pn	07 28 39.9	+0.5
	comp=E,1.4nm,0.3s,baz=148,slow=6.1,SNR=14						
CPUP	Villa Florida	9.26	106	*e*P	Pn	07 28 52.0	-6.1
SIV	San Ignacio	9.89	37	P	Pn	07 29 03.6	-2.8
	comp=E,0.7nm,0.3s,baz=220,slow=9.9,SNR=18						
ITQB	Itaqui	11.01	123	*e*P	Pn	07 29 12.6	-7.9
AQDB	Aquidauana	11.26	74	*e*P	Pn	07 29 25.4	+1.5
PTLB	Pontes e Lacer	11.46	43	*e*P	Pn	07 29 24.5	-2.0
VILB	Vilhena	12.90	32	*e*P	Pn	07 29 42.0	-2.7
TRCB	Terra Rica	13.47	88	P	Pn	07 29 53.8	+2.0
SALV	Santo Antonio	13.54	55	*e*P	Pn	07 29 53.5	+0.8
PCMB	Pacaembu	14.93	84	*e*P	Pn	07 30 11.0	+1.2
SAML	Samuel	15.51	15		P	07 30 16.4	-0.3
PDRB	Porto dos Gac	15.90	41	*e*P	P	07 30 20.1	-1.0
ITRB	Iturama	16.25	78	*e*P	P	07 30 25.8	+0.8
TIJ01	Guaruva-PR	16.62	98	*e*P	P	07 30 27.1	-2.0
ARAG	Araguaiana, MT	16.71	63	*e*P	P	07 30 30.9	+1.0
CLDB	Colider	17.04	42	*e*P	P	07 30 33.0	-0.7
LL04	Puerto Octay	17.36	193	P	P	07 30 36.8	-0.1
LL04				IAmb	IAmb	07 30 46.2	
	comp=Z,12nm,1.1s						
BB19B	Bebedouro	17.54	84	*e*P	P	07 30 39.9	+0.8
RCLB	Rio Claro- Sao	18.19	89	*e*P	P	07 30 45.7	-0.5
VAO	Valinhos	18.62	91	*e*P	P	07 30 49.3	-1.6
IPMB	Ipameri, GO	18.75	75	*e*P	P	07 30 51.9	-0.4
SNDB	Serra Nova Dou	19.32	54	*e*P	P	07 30 57.6	-0.7
PARB	Paraibuna	19.81	92	*e*P	P	07 31 04.3	+0.7
BDFB	Brasilia	19.91	69	P	P	07 31 04.3	-0.5
	comp=Z,1.4nm,0.3s,baz=249,slow=11,SNR=22						
NPGB	Novo Progresso	20.39	36	*e*P	P	07 31 06.9	-3.0
PEXB	Peixe	21.54	60	*e*P	P	07 31 20.5	-1.3
MACA	Manacapuru-AM	21.71	18	*e*P	P	07 31 15.3	-8.3
MACA	Manacapuru-AM	21.71	18	P	P	07 31 22.4	-1.2
MACA				IAmb	IAmb	07 31 37.8	
	comp=Z,5.1nm,0.7s						
ITTB	Itaituba	22.50	31	*e*P	P	07 31 27.1	-3.9
DIAM	Diamantina, MG	22.70	80	*e*P	P	07 31 32.7	-0.3
MC01	Montes Claros	23.01	76	*e*P	P	07 31 34.5	-1.2
JANB	Januaria	23.36	72	*e*P	P	07 31 37.8	-1.0
SMTB	Santa Maria do	24.10	54	*e*P	P	07 31 44.8	-0.7
SDBA	SAO DESIDERIO	24.13	65	*e*P	P	07 31 45.2	-0.6
PTGA	Pitinga	24.23	18	P	P	07 31 46.7	0.0
	comp=Z,0.8nm,0.4s,baz=151,slow=23,SNR=7.2						
PRPB	Parauapebas	24.42	46	*e*P	P	07 31 47.5	-1.0
GUA01	Guaratinga, BA	26.75	79	*e*P	P	07 32 08.5	-0.8
GDU01	Guandu, BA	28.07	74	*e*P	P	07 32 20.0	-1.1
SNAA	Sanae	59.38	161	P	P	07 36 30.8	+2.0
QSPA	South Pole Qui	66.15	180	P	P	07 37 16.0	+2.3
QSPA				IAmb	IAmb	07 37 35.9	
	comp=Z,3.2nm,1.2s						
TORD	Torodi Ar. Bea	76.79	69	P	P	07 38 18.5	+0.6
	comp=Z,0.9nm,0.5s,baz=260,slow=5.9,SNR=7.6						
TORD	Torodi Ar. Bea	76.79	69	IAmb	IAmb	07 38 19.6	
	comp=Z,1.2nm,1.0s						
MKAR	Makanchi Array	146.70	39	PKPbc	PKiKP	07 46 08.6	+0.1
	comp=Z,0.5nm,0.7s,baz=313,slow=2.6,SNR=4.0						

IDC 11 07:34:51.6±0.9**, 4.°21S**×**129.°48E, h0**^{km}**, mb3.4**/1**, mb1 3.5**/4**, mb1mx3.4**/35**, mbtmp3.3**/4**, ML3.2**/3**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.6**/21**, Error ellipse: s-maj=34.2km s-min=9.7km az=90.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.77	28	Pn	Pn	07 35 51.2	+0.1
	1.8nm,0.3s,baz=319,slow=19,SNR=1.6						
FITZ	Fitzroy Crossi	14.31	195	LR	LR	07 44 33.3	
	comp=Z,111nm,21.3s,baz=0.5,slow=41						
WRA	Warramunga Arr	16.34	164	Pn	Pn	07 38 40.7	-1.9
	0.1nm,0.3s,baz=347,slow=13,SNR=2.1						
ASAR	Alice Springs	19.81	168	P	P	07 39 24.1	+0.2
	0.2nm,0.3s,baz=348,slow=10,SNR=13						
LEM	Lembang	21.92	262	LR	LR	07 50 55.2	
	comp=Z,70nm,18.4s,baz=196,slow=44						
MKAR	Makanchi Array	65.63	326	P	P	07 45 37.2	-0.4
	0.3nm,0.8s,baz=120,slow=8.5,SNR=2.7						

TUL ***11*** *07:56:16.9±0.5, 36.°50N±0.°02×98.°34W±0.°02, h7^{km}±6^{km}, ML2.8, mb_Lg2.6/23(NEIC), Error ellipse: s-maj=2.9km s-min=2.2km az=180.0*

NEIC 11 07:56:16.8±0.8**, 36.°49N**±0.°02×**98.°34W**±0.°02**, h11**^{km}±6^{km}**, Error ellipse: s-maj=3.0km s-min=2.2km az=175.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.29	86	Pg	Pg	07 56 22.8	+0.2
CROK				Sg	Sg	07 56 27.1	+0.6
OK032	Salt Plains WL	0.33	18	Pg	Pg	07 56 23.4	-0.1
GC02	Grant County #	0.53	47	Pg	Pg	07 56 27.1	0.0
U32A	Winter Ranch,	0.54	259	Pg	Pg	07 56 27.4	0.0
U32A				Sg	Sg	07 56 35.1	+0.5
KAN14	Manchester OK	0.56	33		Pg	07 56 27.5	-0.1
KAN10	Anthony SW Sta	0.67	17	Pg	Pg	07 56 29.4	-0.2
KAN17	Caldwell West	0.72	40	Pg	Pg	07 56 30.5	-0.3
KAN16	Harper SW Stat	0.77	17	Pg	Pg	07 56 31.4	-0.3
KAN08	Anthony NE Sta	0.80	22		Pg	07 56 31.8	-0.3
KAN01	Argonia South	0.81	35		Pg	07 56 32.1	-0.3
KAN06	Argonia West S	0.85	27		Pg	07 56 32.9	-0.4
KAN12	Harper NE Stat	0.85	19	Pg	Pg	07 56 32.9	-0.3
KAN13	South Haven SW	0.87	53	Pg	Pg	07 56 33.2	-0.3
KAN09	Caldwell North	0.87	42	Pg	Pg	07 56 33.1	-0.4
BLOK	Blackwell	0.94	73	Pg	Pg	07 56 34.8	-0.2
BCOK	Bluff Creek, N	1.02	144	Pg	Pg	07 56 36.2	-0.1
OK025	Westminster Rd	1.22	138	Pg	Pn	07 56 39.6	-0.2
OKCSW	OKLAHOMA CITY	1.30	146	Pn	Pn	07 56 41.1	+0.1
OK031	S. Brethren Rd	1.32	113		Pb	07 56 41.7	0.0
QUOK	Quay	1.35	103	Pn	Pb	07 56 42.2	0.0
OK030	Cody Creek RV	1.38	113		Pb	07 56 42.5	-0.1
OK034	N. Norfolk Rd.	1.40	109	Pn	Pb	07 56 42.7	-0.2
FNO	Franklin	1.45	148	Pn	Pb	07 56 43.6	-0.1
T35A	Sooner Cattle	1.53	73		Pb	07 56 44.9	-0.3
X34A	Smith Ranch, M	1.93	167		Pb	07 56 51.4	-0.5
X34A				IAmb_Lg		07 57 22.4	
	comp=Z,21nm,0.9s						
R32A	Long Quarter,	1.95	351		Pb	07 56 52.0	-0.4
CBKS	Cedar Bluff	2.57	335	IAmb_Lg		07 57 41.8	
	comp=Z,16nm,0.8s						
KSU1	Kansas State U	2.95	27	IAmb_Lg		07 57 51.2	
	comp=Z,13nm,1.1s						
AMTX	Amarillo	3.15	241	IAmb_Lg		07 57 59.7	
	comp=Z,15nm,0.8s						
S39A	Bolivar	4.19	72	IAmb_Lg		07 58 29.9	
	comp=Z,9.7nm,0.9s						
KSCO	Kaye Shedlock'	4.23	308	IAmb_Lg		07 58 41.4	
	comp=Z,12nm,1.1s						
MIAR	Mount Ida	4.34	115	IAmb_Lg		07 58 45.6	
	comp=Z,7.8nm,0.9s						
MGMO	Mountain Grove	4.92	80	IAmb_Lg		07 58 52.5	
	comp=Z,8.1nm,0.8s						
P38A	Dawn	4.92	49	IAmb_Lg		07 59 02.1	
	comp=Z,12nm,0.9s						
OGNE	Ogallala	5.30	328	IAmb_Lg		07 59 11.0	
	comp=Z,15nm,0.9s						
L34A	Svendsen Farm,	5.68	15	IAmb_Lg		07 59 30.8	
	comp=Z,13nm,0.7s						
P40A	Paris	5.82	57	IAmb_Lg		07 59 26.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,8.7nm,0.8s						
N38A	Joes South For	5.87	41	IAmb_Lg		07 59 33.1	
	comp=Z,15nm,0.8s						

IDC 11 08:01:14.9±2.9**, 3°.82S×130°.12E, h0^{km}, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.3**/38**, mbtmp3.3**/3**, ML2.8**/1**, Error ellipse: s-maj=201.8km s-min=30.1km az=70.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.54	166	Pn	Pn	08 05 06.6	-1.8
	0.0nm,0.3s,baz=346,slow=9.4,SNR=3.1						
ASAR	Alice Springs	20.06	170	P	P	08 05 50.8	+0.8
	0.6nm,0.6s,baz=347,slow=10,SNR=9.0						
MKAR	Makanchi Array	65.66	326	P	P	08 12 01.1	0.0
	0.4nm,0.7s,baz=127,slow=9.2,SNR=4.3						

IDC 11 08:05:01.4±47.0**, 16°.36S×171°.08W, h0^{km}, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.8**/33**, mbtmp4.1**/3**, Error ellipse: s-maj=927.8km s-min=190.0km az=80.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	45.51	241	P	P	08 13 23.0	+0.1
	2.1nm,0.9s,baz=80,slow=10,SNR=5.4						
WRA	Warramunga Arr	51.81	257	P	P	08 14 10.8	-0.8
	0.5nm,0.6s,baz=97,slow=6.8,SNR=8.4						
ASAR	Alice Springs	51.95	253	P	P	08 14 13.0	+0.4
	5.5nm,0.6s,baz=89,slow=8.2,SNR=82						

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*IDC **11** 08:19:05.6±8.5, 31°.46S×179°.74W, h334^{km}±96^{km}, mb2.8/3, mb1 3.1/4, mb1mx2.7/28, mbtmp3.7/4, Error ellipse: s-maj=103.6km s-min=37.6km az=177.0*

ISC 11 08:19:03.4±1.0**, 31°.57S**±0°.08×**179°.2W**±0°.1**, h350^{km}, n49, σ2^{s}.23**/72**, mb2.7**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.54	26	P	Pn	08 20 02.3	+3.4
GLKZ				S	S	08 20 39.9	-3.6
RIZ	Raoul Island	2.56	26	S	S	08 20 39.4	-4.2
MXZ	Matakaoa Point	6.33	198	P	Pn	08 20 39.5	+1.7
MXZ				S	S	08 21 52.6	-1.9
WMGZ	Waiomatatini S	6.54	197	P	Pn	08 20 44.3	+4.0
WMGZ				S	S	08 21 59.7	+0.6
HAZ	Te Kaha	6.66	201	P	Pn	08 20 44.0	+2.4
HAZ				S	S	08 22 00.5	-1.0
PKGZ	Pakihiroa	6.70	199	P	Pn	08 20 45.4	+3.2
PKGZ				S	S	08 22 01.4	-1.0
PUZ	Puketiti	6.82	197	P	Pn	08 20 46.3	+2.8
PUZ				S	S	08 22 02.6	-2.4
RUGZ	Raukumara Rang	6.88	201	P	Pn	08 20 46.5	+2.1
RUGZ				S	S	08 22 02.3	-4.2
TWGZ	Tauwhareparae	6.99	199	P	Pn	08 20 49.2	+3.7
TWGZ				S	S	08 22 08.9	+0.2
OUZ	Omahuta	7.04	237	P	Pn	08 20 48.6	+2.4
OPRZ	Ohinepanea	7.17	208	P	Pn	08 20 52.9	+5.2
CNGZ	Carnagh Statio	7.22	196	P	Pn	08 20 52.5	+4.3
CNGZ				S	S	08 22 12.2	-1.4
TKGZ	Te Karaka	7.27	199	P	Pn	08 20 51.4	+2.6
TKGZ				S	S	08 22 11.9	-2.8
URZ	Urewera	7.33	203	P	Pn	08 20 51.9	+2.3
	4.5nm,0.3s,baz=262,slow=3.1,SNR=48						
URZ				S	S	08 22 13.7	-2.3
	4.7nm,0.3s,baz=135,slow=20,SNR=3.6						
URZ	Urewera	7.33	203	P	Pn	08 20 51.3	+1.8
URZ				S	S	08 22 14.2	-1.8
RAGZ	Rawiri	7.45	201	P	Pn	08 20 53.4	+2.4
RAGZ				S	S	08 22 18.0	-0.7
RIGZ	Rimuhau	7.55	198	P	Pn	08 20 54.8	+2.8
RIGZ				S	S	08 22 17.7	-2.9
MUGZ	Murupara	7.65	205	P	Pn	08 20 53.3	0.0
MUGZ				S	S	08 22 20.4	-2.4
RTZ	Ruatahuna	7.70	203	P	Pn	08 20 56.2	+2.3
SNGZ	Shannon Statio	7.74	201	P	Pn	08 20 56.8	+2.4
SNGZ				S	S	08 22 21.9	-2.8
KNZ	Kokohu	7.87	198	P	Pn	08 20 59.4	+3.6
KNZ				S	S	08 22 25.2	-2.2
ALRZ	Allen Road	7.88	206	P	Pn	08 20 57.9	+1.9
MHGZ	Mahia Peninsul	7.93	197	P	Pn	08 20 59.7	+3.2
MHGZ				S	S	08 22 24.3	-4.6
RAHZ	Arahi	7.94	201	P	Pn	08 20 59.1	+2.4
RAHZ				S	S	08 22 26.6	-2.5
MTHZ	Maungataniwha	7.96	203	P	Pn	08 20 58.4	+1.4
MTHZ				S	S	08 22 28.0	-1.6
NMHZ	Naumai	8.19	202	P	Pn	08 21 00.0	+0.3
NMHZ				S	S	08 22 33.3	-1.4
ARHZ	Aropaoanui	8.29	201	P	P	08 21 02.6	-1.0
ARHZ				S	S	08 22 35.4	-1.2
BKZ	Black Stump Fm	8.36	204	P	Pn	08 21 02.4	+0.7
BKZ				S	S	08 22 36.1	-2.2
MCHZ	McNeill Hill	8.54	202	P	Pn	08 21 05.3	+1.4
MCHZ				S	S	08 22 42.1	-0.1
NTVZ	North Tongarir	8.60	208	P	P	08 21 06.7	-0.6
TMVZ	Te Maari	8.61	208	P	P	08 21 06.4	-0.9
KWHZ	Kaweka Forest	8.62	203	P	Pn	08 21 05.6	+0.8
ETVZ	East Tongariro	8.62	207	P	P	08 21 06.7	-0.8
CKHZ	Cape Kidnapper	8.63	200	P	P	08 21 07.2	-0.1
WTVZ	West Tongariro	8.65	208	P	P	08 21 07.5	-0.4
NNVZ	North Ngauruho	8.66	208	P	P	08 21 07.4	-0.5
NGZ	Ngauruhoe	8.70	208	P	P	08 21 07.9	-0.5
TUVZ	Tukino	8.76	207	P	P	08 21 08.4	-0.6
KAHZ	Kahuranaki	8.81	200	P	Pn	08 21 08.2	+1.1
TRVZ	Turoa	8.83	208	P	P	08 21 09.1	-0.8
MOVZ	Moawhango	8.84	206	P	Pn	08 21 08.1	+0.7
PXZ	Pawanui	9.03	200	P	Pn	08 21 11.0	+1.3
NEZ	North Egmont	9.44	214	P	P	08 21 19.5	+3.0
DVHZ	Dannevirke	9.49	202	P	Pn	08 21 16.3	+1.2
ANWZ	Angora Road	9.54	200	P	P	08 21 17.2	-0.3
STKA	Stephens Creek	33.23	259	P	P	08 25 10.2	+1.3
	1.0nm,0.4s,baz=105,slow=16,SNR=3.2						
ASAR	Alice Springs	42.04	269	P	P	08 26 20.9	-1.2
	0.2nm,0.6s,baz=111,slow=7.9,SNR=1.9						
WRA	Warramunga Arr	43.13	274	P	P	08 26 29.7	-1.2
	0.2nm,0.4s,baz=111,slow=8.1,SNR=7.1						
FINES	FINESS Array B	145.87	339	PKPbc	PKPab	08 38 03.5	+1.1
	2.2nm,0.8s,baz=46,slow=4.0,SNR=17						

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*TUL **11** 08:22:40.5±0.7, 35°.99N±0°.02×96°.80W±0°.02, h5^{km}±4^{km}, ML2.7, mb_Lg2.3/20(NEIC), Error ellipse: s-maj=2.7km s-min=2.3km az=151.0*

NEIC 11 08:22:40.4±0.6**, 35°.99N**±0°.02×**96°.79W**±0°.02**, h6^{km}**±1^{km}**, Error ellipse: s-maj=3.0km s-min=2.4km az=146.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK031	S. Brethren Rd	0.06	225		Pg	08 22 42.0	+0.1
OK030	Cody Creek RV	0.07	175		Pg	08 22 42.3	+0.3
OK034	N. Norfolk Rd.	0.07	75	Pg	Pg	08 22 42.5	+0.5
QUOK	Quay	0.19	21	Pg	Pg	08 22 44.8	+0.5
OK029	Liberty Lake	0.57	250	Pg	Pg	08 22 51.6	+0.1
OK025	Westminster Rd	0.61	227	Pg	Pg	08 22 52.1	0.0
BCOK	Bluff Creek, N	0.74	243	Pg	Pg	08 22 54.8	0.0
OKCFA	Oklahoma City	0.79	223		Pg	08 22 55.3	-0.3
OKCSW	OKLAHOMA CITY	0.79	222	Pg	Pg	08 22 55.2	-0.3
TUL1	Leonard	0.81	96	Pg	Pg	08 22 56.1	0.0
BLOK	Blackwell	0.84	336		Pg	08 22 56.6	0.0
FNO	Franklin	0.89	214		Pg	08 22 56.9	-0.5
T35A	Sooner Cattle	0.95	14		Pg	08 22 58.6	0.0
CROK	Carrier	1.09	298		Pg	08 23 01.1	-0.2
KAN13	South Haven SW	1.16	332	Pg	Pg	08 23 02.5	-0.2
GC02	Grant County #	1.22	315		Pg	08 23 03.4	-0.4
KAN14	Manchester OK	1.35	316		Pn	08 23 05.6	-0.3
OK032	Salt Plains WL	1.40	306		Pn	08 23 06.5	-0.1
X34A	Smith Ranch, M	1.63	212		Pn	08 23 10.2	+0.5
X34A				IAmb_Lg		08 23 35.6	
	comp=Z,17nm,0.7s						
U32A	Winter Ranch,	1.83	283	IAmb_Lg		08 23 38.5	
	comp=Z,13nm,0.9s						
LOOK	Love County	2.02	189	IAmb_Lg		08 23 49.2	
	comp=Z,19nm,1.1s						
R32A	Long Quarter,	2.87	328	IAmb_Lg		08 24 11.5	
	comp=Z,4.7nm,0.9s						
S39A	Bolivar	3.26	58	IAmb_Lg		08 24 30.8	
	comp=Z,6.7nm,0.8s						
WLAR	White Oak Lake	3.80	126	IAmb_Lg		08 24 42.9	
	comp=Z,8.7nm,1.0s						
ABTX	Abilene, Hawle	4.11	216	IAmb_Lg		08 24 58.5	
	comp=Z,6.2nm,1.0s						
AMTX	Amarillo	4.14	256	IAmb_Lg		08 24 57.9	
	comp=Z,6.9nm,0.8s						
P38A	Dawn	4.45	34	IAmb_Lg		08 25 09.0	
	comp=Z,7.4nm,0.7s						
PBMO	Poplar Bluff	5.19	79	IAmb_Lg		08 25 30.4	
	comp=Z,5.8nm,0.7s						

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*NOU **11** 08:29:47.9, 19°.01S×168°.88E, h106^{km}, mb4.7/49, Vanuatu Islands*

*IDC **11** 08:29:47.7±2.5, 19°.02S×168°.85E, h114^{km}±23^{km}, mb4.1/8, mb1 4.3/10, mb1mx3.8/32, mbtmp4.5/10, MS2.8/1, Ms1 2.8/1, ms1mx2.4/36, Error ellipse: s-maj=27.8km s-min=16.4km az=159.0*

*NEIC **11** 08:29:48.4±2.7, 19°.02S±0°.05×168°.81E±0°.05, h108^{km}±7^{km}, mb4.6/21, Error ellipse: s-maj=10.6km s-min=1.7km az=221.0*

ISC 11 08:29:47.2±0.5**, 19°.00S**±0°.05×**168°.83E**±0°.07**, h100^{km}, n117, σ1^{s}.29**/116**, mb4.5**/20**, 1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.26	342	P	Pn	08 30 12.4	+1.9
DVP	Devils Point	1.40	334	P	Pn	08 30 14.2	+1.9
LIFNC	LIFOU	2.32	220		Pn	08 30 23.6	-0.3
LIFNC	LIFOU	2.32	220	P	Pn	08 30 23.7	-0.2
MARNC	Mare, Loyalty	2.58	197		Pn	08 30 27.0	-0.4
MARNC	Mare, Loyalty	2.58	197	P	Pn	08 30 27.0	-0.4
YATNC	Mamie plateau,	3.55	210	P	Pn	08 30 40.0	-0.3
DZM	Mont Dzumac	3.79	216	*e*Pn	Pn	08 30 44.7	+1.1
	337nm,1.0s						
DZM				*e*Sn	Sn	08 31 25.6	-1.7
	6µm,0.8s						
DZM	Mont Dzumac	3.79	216	P	Pn	08 30 44.7	+1.1
	35nm,0.3s,baz=74,slow=8.2,SNR=1282						
DZM				S	Sn	08 31 27.1	-0.2
	720nm,0.3s,baz=311,slow=19,SNR=22						
DZM				LR	LR	08 32 06.0	
	comp=Z,132nm,21.4s,baz=200,slow=37						
DZM	Mont Dzumac	3.79	216		Pn	08 30 44.8	+1.2
DZM	Mont Dzumac	3.79	216	P	Pn	08 30 45.2	+1.6
PINNC	Pines Island,	3.82	200		Pn	08 30 44.3	+0.4
PINNC	Pines Island,	3.82	200	P	Pn	08 30 45.0	+1.0
SANVU	Saraoutou	3.86	336		Pn	08 30 43.9	-0.5
SANVU	Saraoutou	3.86	336	P	Pn	08 30 44.4	-0.1
OUENC	Ouen Island, N	3.88	208		Pn	08 30 45.6	+0.8
OUENC	Ouen Island, N	3.88	208	P	Pn	08 30 46.5	+1.8
NOUC	Port Laguerre	3.89	217	P	Pn	08 30 46.8	+1.9
ONTNC	Ouen Toro	3.97	214		Pn	08 30 47.0	+1.0
ONTNC	Ouen Toro	3.97	214	P	Pn	08 30 48.1	+2.1
KOUNC	Koumac, New Ca	4.55	249	P	Pn	08 30 55.7	+1.9
MSVF	Nonsavu	8.85	83	P	Pn	08 31 54.3	+2.0
	baz=217,slow=11,SNR=5.9						
MSVF	Nonsavu	8.85	83	Pn	Pn	08 31 55.4	+3.1
NFK	Norfolk Island	10.03	184	P	Pn	08 32 10.1	+1.8
OUZ	Omahuta	16.70	166	P	P	08 33 35.8	0.0
OUZ	Omahuta	16.70	166	P	P	08 33 35.6	-0.1
EIDS	Eidsvold	17.61	246	P	Pn	08 33 47.8	+1.6
EIDS	Eidsvold	17.61	246	P	Pn	08 33 46.8	+0.6
ARMA	Armidale	19.30	231	P	Pn	08 34 06.9	+0.5
HIZ	Hauiti	20.14	166	P	P	08 34 14.6	+1.2
HIZ				IAmb	IAmb	08 34 18.4	
	comp=Z,77nm,1.0s						
HIZ	Hauiti	20.14	166	P	P	08 34 14.5	+1.2
HAZ	Te Kaha	20.26	159	P	P	08 34 15.1	+0.5
MXZ	Matakaoa Point	20.27	158	P	P	08 34 15.7	+1.0
RUGZ	Raukumara Rang	20.42	160	P	P	08 34 17.1	+0.7
URZ	Urewera	20.50	161	P	P	08 34 17.2	0.0
	comp=Z,19nm,0.7s,baz=121,slow=24,SNR=9.5						
URZ	Urewera	20.50	161	IAmb	IAmb	08 34 17.9	
	comp=Z,37nm,1.2s						
WMGZ	Waiomatatini S	20.54	158	P	P	08 34 17.6	0.0
PUZ	Puketiti	20.71	159	P	P	08 34 19.2	-0.2
TWGZ	Tauwhareparae	20.71	159	P	P	08 34 19.9	+0.4
TKGZ	Te Karaka	20.90	160	P	P	08 34 21.5	0.0
TMVZ	Te Maari	20.91	165	P	Pn	08 34 25.1	-0.1
OTVZ	Oturere	20.95	165	P	Pn	08 34 24.6	-1.1
SNVZ	South Ngauruho	20.97	165	P	P	08 34 24.2	+1.9
CNGZ	Carnagh Statio	21.06	159	P	P	08 34 23.3	+0.1
RIGZ	Rimuhau	21.12	160	P	P	08 34 23.4	-0.4
BKZ	Black Stump Fm	21.17	163	P	P	08 34 24.4	0.0
BKZ	Black Stump Fm	21.17	163	P	P	08 34 24.4	0.0
CTA	Charters Tower	21.30	263	P	P	08 34 27.6	+1.6
	comp=Z,10nm,0.4s,baz=88,slow=11,SNR=24						
CTAO	Charters Tower	21.30	263	P	P	08 34 27.2	+1.3
CTAO				IAmb	IAmb	08 34 29.2	
	comp=Z,15nm,0.5s						
CTAO	Charters Tower	21.30	263	P	P	08 34 27.3	+1.3
QRZ	Quartz Range	21.99	172	P	P	08 34 33.2	+0.2
BFZ	Birch Farm	22.53	165	P	P	08 34 37.0	-1.7
SNZO	South Karori	22.80	169	P	P	08 34 41.3	-0.1
MTSU	Mount Surprise	23.25	268	P	P	08 34 46.7	+0.7
CNB	Canberra Magne	23.68	223	P	P	08 34 51.1	+1.2
KHZ	Kahutara	23.68	171	P	P	08 34 48.2	-1.5
QLP	Quilpie	23.87	247	P	P	08 34 51.5	-0.1
CMSA	Cobar Meteorol	24.31	235	P	P	08 34 56.0	+0.6
KNTN	Kanton	24.94	52	P	P	08 35 02.7	+1.3
COEN	Coen	25.09	278	P	P	08 35 04.6	+1.8
COEN				IAmb	IAmb	08 35 05.8	
	comp=Z,18nm,1.1s						
COEN	Coen	25.09	278	P	P	08 35 04.9	+2.1
QIS	Mount Isa	27.53	262	P	P	08 35 24.5	-0.2
STKA	Stephens Creek	27.65	237	P	P	08 35 26.1	+0.5
	comp=Z,5.2nm,0.7s,baz=71,slow=9.5,SNR=21						
STKA				PcP	PcP	08 38 39.3	-1.3
	comp=Z,2.1nm,0.9s,baz=63,slow=4.5,SNR=3.0						
STKA	Stephens Creek	27.65	237	P	P	08 35 26.1	+0.5
STKA	Stephens Creek	27.65	237	P	P	08 35 26.2	+0.6
LCRK	Leigh Creek	29.96	242	P	P	08 35 46.4	+0.3
OOD	Oodnadatta	31.57	248	P	P	08 36 00.9	+0.6
WR0	Warramunga Arr	32.31	263	P	P	08 36 05.3	-1.6
WR0				IAmb	IAmb	08 36 06.0	
	comp=Z,4.7nm,0.6s						
BBOO	Buckleboo	32.38	238	P	P	08 36 07.8	+0.3
BBOO	Buckleboo	32.38	238	P	P	08 36 07.7	+0.3
WRAB	Tennant Creek	32.49	263	P	P	08 36 07.1	-1.4
WRAB				IAmb	IAmb	08 36 08.1	
	comp=Z,12nm,1.2s						
WRAB	Tennant Creek	32.49	263	P	P	08 36 07.3	-1.2
WRA	Warramunga Arr	32.50	263	P	P	08 36 07.2	-1.4
	comp=Z,3.8nm,0.4s,baz=86,slow=8.3,SNR=110						
WRA				PcP	PcP	08 38 51.8	-1.6
	comp=Z,0.5nm,0.6s,baz=98,slow=2.8,SNR=2.3						
WRA	Warramunga Arr	32.50	263	P	P	08 36 07.6	-1.0
AS31	Alice Springs	32.81	256	P	P	08 36 11.2	-0.2
AS31				IAmb	IAmb	08 36 11.3	
	comp=Z,12nm,0.5s						
ASAR	Alice Springs	32.81	256	P	P	08 36 10.9	-0.4
	comp=Z,19nm,0.5s,baz=84,slow=8.8,SNR=473						
ASAR	Alice Springs	32.81	256	P	P	08 36 10.7	-0.6
MULG	Mulgathing	33.42	244	P	P	08 36 16.6	+0.1
WRKA	Warakurna	37.95	253	P	P	08 36 54.9	-0.5
KNRA	Kununurra	38.33	269	P	P	08 36 57.9	-0.7
KNRA	Kununurra	38.33	269	P	P	08 36 58.1	-0.5
FORT	Forrest	38.60	244	P	P	08 37 00.3	-0.4
FAKI	Fak Fak	39.17	290	P	P	08 37 04.7	-0.9
FAKI				IAmb	IAmb	08 37 05.5	
	comp=Z,13nm,1.0s						
PSA00	Pilbara Seismi	45.87	258	P	P	08 37 60.0	+0.1
PSA00	Pilbara Seismi	45.87	258	P	P	08 37 59.9	+0.1
MBWA	Marble Bar	46.02	259	P	P	08 38 01.0	0.0
MEEK	Meekatharra	46.67	251	P	P	08 38 05.8	-0.2
GIRL	Giralia	50.93	256	P	P	08 38 39.3	+0.7
GIRL	Giralia	50.93	256	P	P	08 38 39.5	+0.9
KKM	Kota Kinabalu	57.48	290	P	P	08 39 26.8	+0.4
VNDA	Vanda	58.66	182	P	P	08 39 32.7	-0.9
VNDA				IAmb	IAmb	08 39 33.0	
	comp=Z,7.5nm,1.5s						
NJ2	Nanjing	69.77	316	*e*P	P	08 40 50.3	+3.6
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
QSPA	South Pole Qui	71.06	180	P	P	08 40 53.0	-1.3
QSPA				IAmb	IAmb	08 40 54.6	
	comp=Z,9.0nm,1.0s						
GYA	Guiyang	75.36	305	⇓P	P	08 41 20.8	+0.5
GYA				pmax	pmax		
	comp=Z,14nm,0.7s						
XAN	Xi'an	77.66	313	P	P	08 41 37.6	+4.6
XAN				pP	sP	08 42 14.8	+5.6
XAN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,330nm,4.4s						
CMAR	Chiang Mai Arr	78.05	294	P	P	08 41 34.9	-0.5
	comp=Z,1.4nm,0.3s,baz=134,slow=4.9,SNR=6.8						
HHC	Hu-ho-hao-te	79.79	320	*e*P	P	08 41 48.4	+3.9
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,5.6s						
LZH	Lanzhou	82.28	312	*e*P	P	08 42 05.7	+7.8
LZH				sP	sP	08 42 35.1	+0.8
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
SONM	Songino Array	86.79	323	P	P	08 42 18.8	-1.6
	comp=Z,1.6nm,0.7s,baz=157,slow=6.3,SNR=9.4						
SONM	Songino Array	86.79	323	IAmb	IAmb	08 42 20.3	
	comp=Z,3.5nm,1.0s						
SNAA	Sanae	89.39	183	P	P	08 42 31.3	-1.0
SNAA	Sanae	89.39	183	P	P	08 42 32.2	-0.1
SNAA				IAmb	IAmb	08 43 30.6	
	comp=Z,7.6nm,1.4s						
VNA3	Neumayer Olymp	89.99	180	P	P	08 42 33.9	-1.2
ILAR	Eielson Array	90.12	17	P	P	08 42 32.8	-2.7
	comp=Z,0.4nm,0.8s,baz=186,slow=5.3,SNR=1.7						
VNA2	Neumayer--Watz	90.28	181	P	P	08 42 35.6	-0.8
WMQ	Urumqi	96.76	314	*e*P	P	08 43 08.5	+1.8
ARCES	ARCESS Array B	124.74	345	PKP	PKPdf	08 48 32.0	-2.5
	comp=Z,3.3nm,0.8s,baz=54,slow=2.6,SNR=9.4						
CONA	Conrad Observa	143.74	329	*e*P	PKPab	08 49 08.0	+0.4
	comp=Z,3.4nm,0.7s						
GERES	GERESS Array B	144.10	332	PKP	PKPab	08 49 07.7	-1.3
	comp=Z,0.4nm,0.4s,baz=5.7,slow=5.4,SNR=5.2						
IDI	Anoyia	144.28	304	PKP	PKPab	08 49 09.7	-0.4
	comp=Z,3.8nm,0.4s,baz=342,slow=3.2,SNR=6.9						
MOA	Molln	144.56	330	*e*P	PKPab	08 49 10.2	-0.5
	comp=Z,5.7nm,0.6s						
WATA	Walderalm	146.17	332	*e*P	PKPbc	08 49 16.0	0.0
	comp=Z,1.9nm,0.4s						
MOTA	Moosalm	146.37	332	*e*P	PKPdf	08 49 14.8	-0.5
	comp=Z,3.9nm,0.6s						
SQTA	Sankt Quirin	146.42	332	*e*P	PKPdf	08 49 15.5	+0.2
	comp=Z,6.7nm,0.6s						
FETA	Feichten	146.79	332	*e*P	PKPdf	08 49 16.7	+0.7
	comp=Z,4.2nm,0.5s						
DAVOX	Davos/Dischmat	147.34	333	PKPbc	PKPbc	08 49 18.4	-1.1
	comp=Z,8.0nm,0.4s,baz=260,slow=6.1,SNR=13						
TORD	Torodi Ar. Bea	166.34	247	PKP	PKPdf	08 49 39.5	-2.0
	comp=Z,0.6nm,0.7s,baz=89,slow=1.8,SNR=3.9						
TORD				PKPab	PKPab	08 50 42.7	-0.7
	comp=Z,0.3nm,0.6s,baz=138,slow=1.9,SNR=2.3						

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*NEIC **11** 08:43:27.3±1.4, 17°.9S±0°.1×178°.1W±0°.1, h619^{km}±8^{km}, mb4.6/30, Error ellipse: s-maj=19.7km s-min=14.8km az=134.0*

*IDC **11** 08:43:27.3±1.3, 17°.88S×178°.13W, h618^{km}±14^{km}, mb3.7/13, mb1 3.9/16, mb1mx3.5/43, mbtmp4.6/16, Error ellipse: s-maj=31.2km s-min=11.3km az=154.0*

*NOU **11** 08:43:27.4, 18°.08S×178°.04W, h626^{km}, mb4.6/30, Fiji Islands Region*

ISC 11 08:43:29.0±0.5**, 17°.97S**±0°.09×**178°.11W**±0°.08**, h650^{km}, n90, σ1^{s}.20**/89**, mb4.5**/30**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVE	Taveuni	2.12	306	P	P	08 44 45.3	-3.1
DGTI	Dogotuki	2.64	309	P	P	08 44 46.9	-3.8
MSVF	Nonsavu	3.67	273	P	P	08 44 53.3	-2.9
	8.8nm,0.3s,baz=117,slow=3.4,SNR=48						
MSVF	Nonsavu	3.67	273	P	P	08 44 53.2	-3.0
MSVF	Nonsavu	3.67	273	P	P	08 44 53.8	-2.4
AFI	Afiamalu	7.31	57	P	P	08 45 18.8	-5.3
	12nm,0.3s,baz=293,slow=3.3,SNR=9.0						
NIUE	Niue	7.84	99	P	P	08 45 25.0	-3.7
LIFNC	LIFOU	14.11	256	P	P	08 46 25.9	-1.2
SANVU	Saraoutou	14.29	278	P	P	08 46 28.3	-0.5
DZM	Mont Dzumac	15.08	252	P	P	08 46 35.9	-0.2
	0.8nm,0.3s,baz=124,slow=21,SNR=11						
DZM	Mont Dzumac	15.08	252	P	P	08 46 35.7	-0.5
DZM	Mont Dzumac	15.08	252	P	P	08 46 36.5	+0.4
QRZ	Quartz Range	24.16	198	P	P	08 47 55.9	-1.5
KHZ	Kahutara	25.39	195	P	P	08 48 07.2	-0.9
FOZ	Fox Glacier	27.45	199	P	P	08 48 25.8	-0.3
EIDS	Eidsvold	29.52	250	P	P	08 48 43.8	-0.4
EIDS				IAmb	IAmb	08 48 44.5	
	comp=Z,9.5nm,0.6s						
EIDS	Eidsvold	29.52	250	P	P	08 48 43.6	-0.6
ARMA	Armidale	30.16	240	P	P	08 48 50.1	+0.4
ARMA				IAmb	IAmb	08 48 51.1	
	comp=Z,13nm,0.8s						
RMQ	Roma	31.75	249	P	P	08 49 03.6	+0.5
CTA	Charters Tower	33.72	261	P	P	08 49 18.6	-1.1
	comp=Z,5.7nm,0.3s,baz=95,slow=12,SNR=14						
CTAO	Charters Tower	33.72	261	P	P	08 49 19.2	-0.5
CTAO				IAmb	IAmb	08 49 20.4	
	comp=Z,11nm,0.7s						
CTAO	Charters Tower	33.72	261	P	P	08 49 19.7	0.0
CAN	Canberra	33.89	233	P	P	08 49 21.1	+0.1
CAN				IAmb	IAmb	08 49 22.3	
	comp=Z,17nm,0.7s						
PMG	Port Moresby	34.75	280	P	P	08 49 30.2	+1.9
	comp=Z,31nm,0.9s						
PMG	Port Moresby	34.75	280	P	P	08 49 30.2	+1.9
	comp=Z,31nm,0.9s						
CMSA	Cobar Meteorol	35.37	241	P	P	08 49 33.7	+0.5
MTSU	Mount Surprise	35.69	264	P	P	08 49 35.9	-0.1
QLP	Quilpie	35.78	249	P	P	08 49 36.8	+0.2
TOO	Toolangi	37.35	231	P	P	08 49 49.7	+0.4
COEN	Coen	37.39	270	P	P	08 49 50.5	+0.6
COEN	Coen	37.39	270	P	P	08 49 50.8	+0.9
STKA	Stephens Creek	38.85	241	P	P	08 50 02.1	+0.7
	comp=Z,10nm,0.7s,baz=92,slow=7.6,SNR=31						
STKA	Stephens Creek	38.85	241	IAmb	IAmb	08 50 03.0	
	comp=Z,3.2nm,0.9s						
STKA	Stephens Creek	38.85	241	P	P	08 50 02.1	+0.7
INKA	Innaminka	38.99	248	P	P	08 50 03.8	+1.3
QIS	Mount Isa	39.92	259	P	P	08 50 09.9	-0.2
JAY	Jayapura	43.20	286	P	P	08 50 35.5	-0.3
	comp=Z,22nm,0.6s,baz=156,slow=5.5,SNR=11						
RSD	Rainshed	43.43	32	P	P	08 50 37.1	-0.4
OOD	Oodnadatta	43.46	248	P	P	08 50 38.4	+0.8
BBOO	Buckleboo	43.63	241	P	P	08 50 39.0	+0.2
BBOO				IAmb	IAmb	08 50 39.8	
	comp=Z,17nm,0.9s						
HPAH	Hawaii Prepara	43.70	31	P	P	08 50 39.5	0.0
WR0	Warramunga Arr	44.71	260	P	P	08 50 46.8	-0.4
WR0				IAmb	IAmb	08 50 48.4	
	comp=Z,18nm,1.3s						
WRAB	Tennant Creek	44.89	260	P	P	08 50 47.7	-1.0
WRAB				IAmb	IAmb	08 50 48.8	
	comp=Z,23nm,1.1s						
WRAB	Tennant Creek	44.89	260	P	P	08 50 48.5	-0.2
WRA	Warramunga Arr	44.90	260	P	P	08 50 48.1	-0.7
	comp=Z,8.8nm,0.4s,baz=96,slow=7.0,SNR=245						
WRA	Warramunga Arr	44.90	260	P	P	08 50 47.9	-0.9
MULG	Mulgathing	45.04	245	P	P	08 50 49.8	+0.2
AS31	Alice Springs	45.05	254	P	P	08 50 49.7	-0.2
AS31				IAmb	IAmb	08 50 50.6	
	comp=Z,15nm,1.1s						
ASAR	Alice Springs	45.05	254	P	P	08 50 49.9	+0.1
	comp=Z,20nm,0.4s,baz=89,slow=8.0,SNR=276						
ASAR				PcP	PcP	08 52 16.8	+0.6
	comp=Z,2.2nm,0.4s,baz=104,slow=3.9,SNR=7.4						
KDU	Kakadu	47.84	269	P	P	08 51 10.7	-0.1
MTN	Manton Dam	49.08	268	P	P	08 51 19.4	-0.5
MTN				IAmb	IAmb	08 51 20.0	
	comp=Z,18nm,0.8s						
MTN	Manton Dam	49.08	268	P	P	08 51 19.5	-0.5
WRKA	Warakurna	50.10	252	P	P	08 51 27.5	+0.2
KNRA	Kununurra	50.77	264	P	P	08 51 31.6	-0.5
KNRA				IAmb	IAmb	08 51 32.7	
	comp=Z,15nm,0.7s						
FAKI	Fak Fak	50.87	281	P	P	08 51 32.6	-0.3
FAKI				IAmb	IAmb	08 51 49.2	
	comp=Z,23nm,0.6s						
SIJI	Sorong	52.53	283	P	P	08 51 45.2	+0.5
	baz=245,slow=9.4						
FITZ	Fitzroy Crossi	53.30	261	P	P	08 51 52.0	+1.9
	comp=Z,3.3nm,0.3s,baz=262,slow=0.9,SNR=20						
SANI	Sanana	57.03	279	P	P	08 52 17.6	+1.6
	comp=Z,18nm,0.8s						
PSA00	Pilbara Seismi	58.17	255	P	P	08 52 23.4	-0.1

PSA00				IAmb	IAmb	08 52 23.8	
	comp=Z,13nm,0.6s						
PSA00	Pilbara Seismi	58.17	255	P	P	08 52 22.8	-0.7
PSA00				IAmb	IAmb	08 52 24.2	
	comp=Z,7.2nm,0.8s						
KLBR	Kellerberrin	59.06	244	P	P	08 52 29.2	-0.1
VNDA	Vanda	60.41	185	P	P	08 52 39.0	+1.6
ERM	Erimo	69.58	330	P	P	08 53 35.3	+0.3
UGM	Wanagama	69.93	268	P	P	08 53 38.0	+0.2
ATKA	Atka Island	69.95	3	P	P	08 53 36.4	-0.5
QSPA	South Pole Qui	72.09	180	P	P	08 53 50.3	+0.9
QSPA				IAmb	IAmb	08 55 24.7	
	comp=Z,42nm,1.7s						
NVAR	Mina Array Bea	79.27	44	P	P	08 54 30.8	+1.3
	comp=Z,1.8nm,0.7s,baz=223,slow=8.3,SNR=12						
L19K	White Mountain	81.98	11	P	P	08 54 43.1	+0.5
L19K				IAmb	IAmb	08 57 26.6	
	comp=Z,58nm,2.0s						
MAW	Mawson	83.90	200	P	P	08 54 52.5	+0.4
	comp=Z,2.2nm,0.6s,baz=132,slow=7.6,SNR=2.9						
MAW	Mawson	83.90	200	P	P	08 54 53.1	+1.0
TRF	Thorofare Moun	84.01	12	P	P	08 54 52.5	-0.3
TRF				IAmb	IAmb	08 55 37.5	
	comp=Z,61nm,1.9s						
PSI	Prapat	84.17	275	P	P	08 54 54.3	-0.4
	comp=Z,3.6nm,0.6s,baz=27,slow=4.2,SNR=4.9						
HLID	Hailey	84.49	41	P	P	08 54 56.9	+1.3
TX31	Lajitas Ar. Si	85.79	58	P	P	08 55 04.1	+2.0
TX31				IAmb	IAmb	08 55 05.1	
	comp=Z,8.6nm,1.0s						
TXAR	Lajitas Array	85.79	58	P	P	08 55 04.4	+2.3
	comp=Z,1.7nm,0.8s,baz=220,slow=6.1,SNR=21						
TXAR	Lajitas Array	85.79	58	P	P	08 55 04.0	+1.9
ILAR	Eielson Array	85.88	13	P	P	08 55 01.1	-0.4
	comp=Z,0.9nm,0.4s,baz=220,slow=5.0,SNR=16						
PDAR	Pinedale Array	87.20	43	P	P	08 55 09.3	+0.8
	comp=Z,1.0nm,0.7s,baz=238,slow=2.5,SNR=13						
CMAR	Chiang Mai Arr	89.17	290	P	P	08 55 20.2	+2.2
	comp=Z,0.9nm,0.4s,baz=126,slow=3.8,SNR=6.1						
SNAA	Sanae	90.53	179	P	P	08 55 23.6	+0.3
VNA3	Neumayer Olymp	90.66	176	P	P	08 55 24.4	+0.5
VNA2	Neumayer--Watz	91.10	177	P	P	08 55 26.6	+0.7
VNA1	Neumayer--Stat	91.33	177	P	P	08 55 27.8	+0.9
MKAR	Makanchi Array	109.38	314	PKiKP	PKiKP	09 00 46.9	-0.4
	comp=Z,0.3nm,0.4s,baz=160,slow=0.7,SNR=6.7						
ARCES	ARCESS Array B	126.42	350	PKP	PKiKP	09 01 19.5	-0.2
	comp=Z,2.7nm,1.0s,baz=5.7,slow=0.9,SNR=1.4						
BRTR	Keskin Array B	145.03	315	PKP	PKPbc	09 01 55.9	+0.3
	comp=Z,1.7nm,0.6s,baz=151,slow=2.8,SNR=5.0						
ASF	Jabal al Asfar	145.45	301	PKPbc	PKPbc	09 01 57.5	+0.6
	comp=Z,2.0nm,0.7s,baz=111,slow=8.6,SNR=3.7						
MBAR	Mbarara	146.15	240	PKPbc	PKPbc	09 02 00.2	+0.7
	comp=Z,4.7nm,0.2s,baz=270,slow=5.1,SNR=4.4						
MMAI	Mount Meron Ar	146.41	303	PKPbc	PKPbc	09 02 00.2	+0.7
	comp=Z,3.1nm,0.5s,baz=67,slow=6.4,SNR=7.0						
GERES	GERESS Array B	147.74	345	PKPbc	PKiKP	09 02 03.3	-0.6
	comp=Z,0.6nm,0.4s,baz=9.9,slow=2.3,SNR=3.1						

IDC 11 08:44:23.0±1.6, 4°.22S×129°.36E, h0km, mb3.5/1, mb1 3.7/4, mb1mx3.3/50, mbtmp3.6/4, ML3.4/3, Error ellipse: s-maj=55.0km s-min=26.6km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.83	30	Pn	Pn	08 45 22.9	-0.3
	5.3nm,0.3s,baz=219,slow=23,SNR=9.0						
SIJI				Sn	Sn	08 46 02.5	-6.6
	2.2nm,0.3s,baz=204,slow=19,SNR=1.4						
WRA	Warramunga Arr	16.37	163	Pn	Pn	08 48 12.2	-2.1
	0.1nm,0.3s,baz=342,slow=10,SNR=6.1						
ASAR	Alice Springs	19.83	168	P	Pn	08 48 56.4	-0.6
	0.1nm,0.3s,baz=351,slow=11,SNR=14						
MKAR	Makanchi Array	65.57	326	P	P	08 55 08.7	0.0
	0.2nm,0.3s,baz=118,slow=7.3,SNR=6.4						

IDC 11 08:45:35.4±0.9, 25°.33S×179°.66E, h506km±8km, mb3.6/9, mb1 3.9/12, mb1mx3.5/36, mbtmp4.5/12, Error ellipse: s-maj=14.9km s-min=12.6km az=4.0

NEIC 11 08:45:36.9±2.0, 25°.4S±0°.1×179°.7E±0°.1, h514km±7km, mb4.3/13, Error ellipse: s-maj=19.5km s-min=17.3km az=75.0

ISC 11 08:45:35.5±0.5, 25°.37S±0°.07×179°.65E±0°.09, h507km, n43, σ1s.36/51, mb4.2/16, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.43	151	P	P	08 46 59.3	+1.5
	149nm,0.3s,baz=17,slow=17,SNR=4.7						
RAO				S	S	08 48 06.6	+1.5
	62nm,0.3s,baz=107,slow=20,SNR=1.6						
MSVF	Nonsavu	7.74	349	P	P	08 47 29.5	-0.2
	3.8nm,0.3s,baz=256,slow=21,SNR=7.9						
MSVF				S	S	08 49 01.7	-1.5
	baz=324,slow=19,SNR=1.7						
MARNC	Mare, Loyalty	11.35	288	P	P	08 48 09.1	+1.9
PINNC	Pines Island,	11.49	281	P	P	08 48 11.0	+2.3
DZM	Mont Dzumac	12.53	282	P	P	08 48 22.4	+2.6
	0.9nm,0.3s,baz=99,slow=16,SNR=10						
DZM	Mont Dzumac	12.53	282	P	P	08 48 22.0	+2.1
URZ	Urewera	13.03	189	P	P	08 48 24.4	-0.3
	3.8nm,0.3s,baz=287,slow=22,SNR=14						
URZ				S	S	08 50 41.9	-2.3
	0.7nm,0.3s,baz=311,slow=19,SNR=2.3						
EIDS	Eidsvold	25.79	264	P	P	08 50 26.9	+1.1
EIDS				IAmb	IAmb	08 51 25.5	
	comp=Z,17nm,1.6s						
CTA	Charters Tower	31.20	273	P	P	08 51 14.0	+1.1
	comp=Z,6.9nm,0.4s,baz=93,slow=11,SNR=11						
CTAO	Charters Tower	31.20	273	P	P	08 51 13.6	+0.6
COEN	Coen	36.06	281	P	P	08 51 54.8	+0.8
COEN				IAmb	IAmb	08 51 55.4	
	comp=Z,5.1nm,0.8s						
AS31	Alice Springs	41.50	262	P	P	08 52 38.1	-0.1
AS31				IAmb	IAmb	08 52 40.6	
	comp=Z,1.9nm,0.5s						
ASAR	Alice Springs	41.50	262	P	P	08 52 38.5	+0.3
	comp=Z,2.5nm,0.5s,baz=89,slow=6.7,SNR=9.8						
ASAR				ScP	ScP	08 57 27.3	+1.6
	comp=Z,0.5nm,0.7s,baz=91,slow=5.7,SNR=3.0						
ASAR				S	S	08 58 12.2	-4.8
	comp=Z,0.6nm,0.7s,baz=100,slow=14,SNR=3.0						
WB2	Warramunga Arr	42.00	268	P	P	08 52 41.9	-0.2
WB2				IAmb	IAmb	08 52 42.5	
	comp=Z,6.0nm,0.8s						
WB0	Warramunga Arr	42.01	268		P	08 52 41.9	-0.4
WB0				IAmb	IAmb	08 52 42.5	
	comp=Z,7.0nm,0.7s						
WRA	Warramunga Arr	42.01	268	P	P	08 52 42.0	-0.2
	comp=Z,4.3nm,0.5s,baz=103,slow=7.8,SNR=12						
WRA				ScP	ScP	08 57 29.9	+2.1
	comp=Z,0.5nm,0.9s,baz=100,slow=3.9,SNR=4.7						
WRA				S	S	08 58 25.2	+0.9
	comp=Z,0.5nm,0.8s,baz=106,slow=12,SNR=2.0						
WRA	Warramunga Arr	42.01	268	P	P	08 52 41.7	-0.5
KNRA	Kununurra	48.38	271		P	08 53 31.0	-0.1
KNRA				IAmb	IAmb	08 53 32.0	
	comp=Z,24nm,1.1s						
FITZ	Fitzroy Crossi	50.41	267	P	P	08 53 44.9	-1.3
	comp=Z,8.2nm,0.4s,baz=114,slow=2.7						
VNDA	Vanda	52.89	185	P	P	08 54 03.9	+0.8
CASY	Casey	58.66	206	P	P	08 54 42.7	-0.6
CASY				IAmb	IAmb	08 55 55.9	
	comp=Z,29nm,1.2s						
QSPA	South Pole Qui	64.72	180	P	P	08 55 23.8	+0.7
MAW	Mawson	76.27	201	P	P	08 56 31.1	-0.1
	comp=Z,2.8nm,0.5s,baz=142,slow=5.9,SNR=11						
SNAA	Sanae	83.21	179	P	P	08 57 07.0	-0.8
VNA3	Neumayer Olymp	83.43	177	P	P	08 57 08.3	-0.6
VNA2	Neumayer--Watz	83.84	178	P	P	08 57 10.8	-0.1
	baz=186,slow=4.9						
VNA1	Neumayer--Stat	84.08	177	P	P	08 57 11.9	-0.2
NVAR	Mina Array Bea	86.03	44	P	P	08 57 22.1	-0.2
	comp=Z,1.4nm,0.6s,baz=226,slow=9.4,SNR=9.0						
PLCA	Paso Flores	87.47	134	P	P	08 57 29.5	+0.4
	comp=Z,1.2nm,0.8s,baz=208,slow=3.7,SNR=4.1						
TXAR	Lajitas Array	91.48	58	P	P	08 57 48.5	+0.7
	comp=Z,1.2nm,0.8s,baz=213,slow=6.1,SNR=14						
PDAR	Pinedale Array	93.97	44	P	P	08 57 58.7	-0.4
	comp=Z,0.2nm,0.6s,baz=238,slow=4.7,SNR=3.7						
LSZ	Lusaka	130.95	218	SKPbc	SKPbc	09 06 26.0	-1.1
	comp=Z,2.5nm,0.6s,baz=149,slow=5.9,SNR=4.5						
ARCES	ARCESS Array B	133.25	348	PKP	PKPdf	09 03 51.6	-1.0
	comp=Z,4.9nm,1.0s,baz=59,slow=3.0,SNR=6.0						
ARCES				SKPbc	SKPbc	09 06 33.3	+0.2
	comp=Z,0.9nm,0.5s,baz=39,slow=3.8,SNR=16						
FINES	FINESS Array B	139.73	341	PKP	PKPdf	09 04 04.8	0.0
	comp=Z,4.2nm,0.9s,baz=75,slow=1.6,SNR=4.4						
FINES				SKPbc	SKPbc	09 06 51.5	-1.1
	comp=Z,1.6nm,0.5s,baz=51,slow=2.5,SNR=9.6						
NB2	NORSAR Subarra	143.48	351	PKP	PKPab	09 04 09.2	-0.7
	comp=Z,1.7nm,0.7s,baz=17,slow=3.4						
NOA	NORSAR Array B	143.48	351	PKP	PKPab	09 04 09.2	-0.7
	comp=Z,2.9nm,0.8s,baz=22,slow=3.9,SNR=8.8						
HFS	Hagfors	143.92	348	PKP	PKPbc	09 04 10.7	-0.7
	comp=Z,6.4nm,0.6s,baz=59,slow=3.9,SNR=15						
AKASG	Malin Array Be	146.02	326	PKPbc	PKPbc	09 04 18.8	+0.8
	comp=Z,0.7nm,0.3s,baz=46,slow=4.1,SNR=3.2						
BRTR	Keskin Array B	148.18	305	PKPbc	PKPbc	09 04 24.0	-0.4
	comp=Z,0.7nm,0.4s,baz=154,slow=3.1,SNR=2.4						
EKA	Eskdalemuir Ar	150.00	3	PKPbc	PKPbc	09 04 26.3	-1.7
	comp=Z,0.8nm,0.4s,baz=351,slow=3.2,SNR=6.5						
CLL	Collm	152.16	342	*e*PKPbc	PKPbc	09 04 33.0	-0.1
TORD	Torodi Ar. Bea	167.69	189	PKP	PKPdf	09 04 41.3	-2.8
	comp=Z,0.3nm,0.5s,baz=108,slow=0.5,SNR=2.7						
TORD				PKPab	PKPab	09 05 52.8	-0.9
	comp=Z,1.2nm,0.6s,baz=168,slow=4.3,SNR=8.0						
TORD	Torodi Ar. Bea	167.69	189	PKPdf	PKPdf	09 04 43.0	-1.1
TORD					PKPab	09 05 53.1	-0.5

DJA 11 08:50:47.8±0.8, 4°S±8°×13°0E±°, h10km, M3.5/6, MLv3.5/6

IDC 11 08:50:50.8±3.2, 4°.41S×128°.45E, h0km, mb4.1/1, mb1 3.7/3, mb1mx3.4/45, mbtmp3.5/3, ML3.2/1, Error ellipse: s-maj=344.7km s-min=28.2km az=67.0

ISC 11 08:50:52.0±1.0, 4°.05S±0°.10×129°.61E±0°.06, h36km, n9, σ1s.68/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.97	316	P	Pn	08 51 07.8	-1.3
MSAI				S	Sn	08 51 21.2	-0.4
AAI	Ambon	1.45	284	P	Pn	08 51 14.6	-1.1
AAI				S	Sn	08 51 31.4	-2.1
FAKI	Fak Fak	2.87	67	P	Pn	08 51 33.3	-1.9
FAKI	Fak Fak	2.87	67	P	Pn	08 51 33.0	-2.2
SWI	Sorong	3.57	28	P	Pn	08 51 44.9	+0.1
SANI	Sanana	4.12	299	P	Pn	08 51 51.6	-0.8
WRA	Warramunga Arr	16.46	164	Pn	P	08 54 42.6	-0.1
	baz=337,slow=14,SNR=1.8						
ASAR	Alice Springs	19.94	168	P	Pn	08 55 24.0	+1.2
	0.1nm,0.3s,baz=348,slow=9.7,SNR=6.1						
MKAR	Makanchi Array	65.56	326	P	P	09 01 34.2	+2.2
	0.8nm,0.3s,baz=113,slow=7.4,SNR=18						

IDC 11 08:59:38.1±2.0, 4°.12S×129°.76E, h0km, mb3.8/2, mb1 4.1/4, mb1mx3.7/39, mbtmp3.9/4, ML3.7/2, MS2.8/3, Ms1 2.8/3, ms1mx2.4/33, Error ellipse: s-maj=151.4km s-min=26.5km az=70.0

DJA 11 08:59:41.8±1.8, 4°S±8°×12°9E±°, h25km±16km, M3.7/7, MLv3.7/7

ISC 11 08:59:42.5±1.0, 4°.18S±0°.10×129°.45E±0°.06, h36km, n11, σ1s.63/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.98	328	P	Pn	08 59 58.5	-1.3
MSAI				S	Sn	09 00 12.0	-0.4
AAI	Ambon	1.35	291	P	Pn	09 00 04.7	-0.1
AAI				S	Sn	09 00 21.6	+0.1
FAKI	Fak Fak	3.06	66	P	Pn	09 00 29.0	+0.6
FAKI				S	Sn	09 01 02.1	-1.7
SANI	Sanana	4.06	301	P	Pn	09 00 41.1	-1.0
BATI	Baumata	8.29	223	LR	LR	09 04 59.5	
	comp=Z,75nm,18.0s,baz=43,slow=38						
WRA	Warramunga Arr	16.37	163	Pn	Pn	09 03 27.1	-2.7
	0.2nm,0.3s,baz=347,slow=13,SNR=16						
ASAR	Alice Springs	19.84	168	P	P	09 04 11.8	+1.3
	0.7nm,0.3s,baz=350,slow=11,SNR=41						
KSRS	Korea Array	41.45	358	LR	LR	09 27 06.6	
	comp=Z,4.3nm,18.0s,baz=340,slow=40						
MKAR	Makanchi Array	65.59	326	P	P	09 10 24.8	+2.0
	0.4nm,0.4s,baz=118,slow=7.8,SNR=6.4						
YAK	Yakutsk	66.03	0	LR	LR	09 41 41.6	
	comp=Z,14nm,18.9s,baz=250,slow=38						
KURBB	Kurchatov Arra	69.84	328	P	P	09 10 51.0	+1.6
	0.4nm,0.4s,baz=133,slow=5.1,SNR=4.7						

IDC 11 09:04:05.5±6.9, 30°.64S×178°.59W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.2/32, mbtmp3.4/2, Error ellipse: s-maj=281.4km s-min=60.8km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.59	267	P	P	09 12 02.4	-1.2
	0.3nm,0.7s,baz=112,slow=7.3,SNR=2.5						
WRA	Warramunga Arr	43.60	273	P	P	09 12 12.4	+0.6
	0.3nm,0.3s,baz=113,slow=7.7,SNR=7.1						
FINES	FINESS Array B	145.20	339	PKPbc	PKPbc	09 23 43.1	-0.9
	2.0nm,0.8s,baz=57,slow=5.1,SNR=5.1						

NEIC 11 09:15:58.7±0.4, 36°.75N±0°.01×97°.60W±0°.01, h5km±7km, Error ellipse: s-maj=1.8km s-min=1.1km az=221.0

TUL 11 09:15:58.5±1.3, 36°.76N±0°.01×97°.61W±0°.02, h6km±7km, ML2.8, mb_Lg2.6/28(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=111.0

ANF 11 09:15:58.8±0.4, 36°.70N×97°.60W, h5km, ML3.1/6, Error ellipse: s-maj=4.1km s-min=3.5km az=5.0

ISC 11 09:15:58.9±1.1, 36°.74N±0°.02×97°.61W±0°.02, h6km±10km, n48, σ0s.38/54, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.23	299	Pg	Pg	09 16 03.3	-0.1
GC02				Sg	Sg	09 16 06.6	+0.2
KAN13	South Haven SW	0.29	21	Pg	Pg	09 16 04.4	-0.2
KAN13				Sg	Sg	09 16 08.5	0.0
BLOK	Blackwell	0.32	86	Pg	Pg	09 16 05.1	0.0
KAN17	Caldwell West	0.33	338	Pg	Pg	09 16 05.1	-0.2
KAN17				Sg	Sg	09 16 09.5	-0.1
KAN14	Manchester OK	0.36	307		Pg	09 16 05.7	-0.2
KAN14				Sg	Sg	09 16 10.4	-0.1
CROK	Carrier	0.38	232	Pg	Pg	09 16 06.4	+0.2
CROK				Sg	Sg	09 16 12.0	+0.7
KAN09	Caldwell North	0.40	359	Pg	Pg	09 16 06.3	-0.3
KAN09				Sg	Sg	09 16 11.6	-0.2
KAN05	Bluff City Nor	0.42	330	Pg	Pg	09 16 06.8	-0.3
KAN05				Sg	Sg	09 16 12.5	-0.1
KAN01	Argonia South	0.43	344		Pg	09 16 06.9	-0.3
KAN01				Sg	Sg	09 16 12.8	0.0
OK032	Salt Plains WL	0.49	278	Pg	Pg	09 16 08.1	-0.1
KAN06	Argonia West S	0.55	339		Pg	09 16 09.1	-0.3
KAN10	Anthony SW Sta	0.55	315	Pg	Pg	09 16 09.2	-0.2
KAN10				Sg	Sg	09 16 16.5	0.0
KAN08	Anthony NE Sta	0.57	329	Pg	Pg	09 16 09.1	-0.7
KAN08				Sg	Sg	09 16 17.2	+0.1
KAN12	Harper NE Stat	0.64	331	Pg	Pg	09 16 10.8	-0.3
KAN12				Sg	Sg	09 16 19.4	0.0
T35A	Sooner Cattle	0.90	78	Pg	Pg	09 16 15.6	-0.5
T35B	Sooner Cattle	0.90	78	P	Pg	09 16 15.7	-0.4
	baz=259						
T35B				S	Sg	09 16 27.6	-0.1
	baz=259						
QUOK	Quay	0.92	128	Pg	Pg	09 16 16.0	-0.5
QUOK				Sg	Sg	09 16 28.6	+0.1
OK029	Liberty Lake	0.95	172	Pg	Pg	09 16 16.9	-0.1
OK029				Sg	Sg	09 16 30.0	+0.6
OK031	S. Brethren Rd	1.00	141		Pg	09 16 17.8	-0.2
OK034	N. Norfolk Rd.	1.03	135	Pg	Pg	09 16 18.3	-0.3
OK030	Cody Creek RV	1.05	140		Pg	09 16 18.7	-0.2
BCOK	Bluff Creek, N	1.08	180	Pg	Pg	09 16 19.3	-0.3
OK025	Westminster Rd	1.18	169	Pg	Pg	09 16 21.0	-0.4
U32A	Winter Ranch,	1.18	253	Pg	Pg	09 16 20.3	-1.1
U32A	Winter Ranch,	1.18	253	P	Pg	09 16 20.6	-0.8
	baz=72						
U32A				S	Sg	09 16 36.7	0.0
	baz=72						
OKCFA	Oklahoma City	1.33	174		Pn	09 16 23.7	-0.3
OKCFA	Oklahoma City	1.33	174	P	Pn	09 16 23.7	-0.3
	baz=355						
OKCFA				S	Sn	09 16 42.0	0.0
	baz=355						
OKCSW	OKLAHOMA CITY	1.34	174		Pn	09 16 23.9	-0.2
FNO	Franklin	1.49	173	Pn	Pn	09 16 26.3	+0.1
TUL1	Leonard	1.69	119	Pn	Pn	09 16 29.2	+0.4
TUL1				IAmb_Lg		09 16 56.4	
	comp=Z,35nm,0.9s						
TUL1	Leonard	1.69	119	P	Pn	09 16 29.3	+0.4
	baz=300						
TUL1				S	Sb	09 16 52.0	+0.3
	baz=300						
R32A	Long Quarter,	1.89	333	P	Pn	09 16 32.4	+0.7
	baz=152						
R32A				S	Sb	09 16 57.4	-0.4
	baz=152						
KSU1	Kansas State U	2.49	18	P	Pn	09 16 40.4	+0.5
	baz=199						
CBKS	Cedar Bluff	2.67	321	S	Sb	09 17 20.6	+0.5
	baz=140						
X37A	Clayton	2.81	139	IAmb_Lg		09 17 29.5	
	comp=Z,14nm,0.7s						
W39A	Magazine	3.46	115	IAmb_Lg		09 17 56.2	
	comp=Z,12nm,0.8s						
S39A	Bolivar	3.55	73	IAmb_Lg		09 17 55.3	
	comp=Z,14nm,0.9s						
U40A	Yellville	3.85	94	Pn	Pn	09 16 58.3	-0.3
U40A				IAmb_Lg		09 18 00.9	
	comp=Z,10nm,0.8s						
MIAR	Mount Ida	3.95	123	IAmb_Lg		09 18 10.4	
	comp=Z,11nm,0.7s						
Z38A	Mt. Pleasant	4.09	147	IAmb_Lg		09 18 11.5	
	comp=Z,17nm,0.8s						
MGMO	Mountain Grove	4.30	83	IAmb_Lg		09 18 13.2	
	comp=Z,13nm,0.8s						
P38A	Dawn	4.31	47	IAmb_Lg		09 18 20.8	
	comp=Z,11nm,0.9s						
N35A	Tabor	4.39	20	Pn	Pn	09 17 06.5	+0.4
R40A	Maddies Statio	4.52	68	IAmb_Lg		09 18 30.1	
	comp=Z,12nm,0.8s						
KSCO	Kaye Shedlock'	4.57	301	IAmb_Lg		09 18 23.9	
	comp=Z,13nm,0.8s						
CCM	Cathedral Cave	5.24	74	IAmb_Lg		09 18 50.0	
	comp=Z,15nm,0.8s						
LCAR	Lake Charles	5.25	95	IAmb_Lg		09 18 50.0	
	comp=Z,10.0nm,1.2s						
L34A	Svendsen Farm,	5.31	10	IAmb_Lg		09 18 57.7	
	comp=Z,13nm,0.7s						

IDC 11 09:36:19.0±1.6, 4°.10S×129°.40E, h0km, mb3.7/1, mb1 3.7/4, mb1mx3.2/38, mbtmp3.5/4, ML3.4/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/39, Error ellipse: s-maj=55.7km s-min=26.6km az=82.0

DJA 11 09:36:23.0±0.8, 4°S±9°×12°9E±°, h70km±10km, M3.5/7, MLv3.5/7

ISC 11 09:36:22.7±1.1, 4°.08S±0°.09×129°.49E±0°.06, h36km, n10, σ1s.52/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.92	322	P	Pn	09 36 38.9	-0.2
MSAI				S	Sn	09 36 50.4	-0.7
AAI	Ambon	1.35	287	P	Pn	09 36 44.4	-0.6
AAI				S	Sn	09 37 01.8	0.0
FAKI	Fak Fak	2.98	67	P	Pn	09 37 07.5	+0.1
SIJI	Sorong	3.65	29	Pn	Pn	09 37 17.5	+0.9
	6.2nm,0.3s,baz=200,slow=23,SNR=16						
SIJI				Sn	Sn	09 37 58.9	+0.5
	10nm,0.3s,baz=55,slow=23,SNR=7.5						
SWI	Sorong	3.65	29	P	Pn	09 37 13.2	-3.4
LBMI	Labuha	3.95	330	P	Pn	09 37 09.0	-12
JAY	Jayapura	11.30	82	LR	LR	09 44 31.9	
	comp=Z,55nm,18.2s,baz=339,slow=43						
WRA	Warramunga Arr	16.46	164	Pn	Pn	09 40 09.6	-1.4
	0.1nm,0.3s,baz=345,slow=13,SNR=5.4						
ASAR	Alice Springs	19.93	168	P	Pn	09 40 53.5	+0.1
	0.1nm,0.3s,baz=349,slow=11,SNR=11						
MKAR	Makanchi Array	65.52	326	P	P	09 47 04.2	+1.7
	0.4nm,0.5s,baz=112,slow=8.1,SNR=6.5						

IDC 11 09:44:11.5±2.8, 3°.74S×130°.41E, h0km, mb3.2/2, mb1 3.4/3, mb1mx2.9/33, mbtmp3.2/3, ML2.8/1, Error ellipse: s-maj=190.5km s-min=28.9km az=71.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.55	167	Pn	Pn	09 48 03.7	-1.5
	0.0nm,0.3s,baz=350,slow=13,SNR=2.5						
ASAR	Alice Springs	20.10	171	P	P	09 48 47.6	+0.6
	0.5nm,0.6s,baz=352,slow=10,SNR=9.6						
MKAR	Makanchi Array	65.75	326	P	P	09 54 58.3	0.0
	0.2nm,0.4s,baz=108,slow=7.7,SNR=3.0						

IDC 11 10:04:28.4±3.8, 5°.95S×150°.19E, h0km, mb3.1/2, mb1 3.5/2, mb1mx3.2/31, mbtmp3.3/2, Error ellipse: s-maj=161.8km s-min=46.8km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.76	226	P	P	10 09 11.3	+0.3
	0.3nm,0.7s,baz=52,slow=10,SNR=2.3						
ASAR	Alice Springs	23.58	220	P	P	10 09 40.3	-0.6
	0.8nm,0.7s,baz=53,slow=9.2,SNR=9.7						
TORD	Torodi Ar. Bea	148.15	285	PKPbc	PKPbc	10 24 17.0	-0.4
	0.3nm,0.8s,baz=53,slow=5.8,SNR=2.7						

NOU 11 10:13:40.1, 15°.44S×167°.60E, h103km, MLv4.3/15, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.38	269	P	Pn	10 13 56.3	+0.9
DVP	Devils Point	2.34	166	P	Pn	10 14 17.3	+0.1
LIFNC	LIFOU	5.32	184	P	Pn	10 14 56.3	-0.9
KOUNC	Koumac, New Ca	5.98	211	P	Pn	10 15 06.0	-0.2
MARNC	Mare, Loyalty	6.02	176	P	Pn	10 15 06.1	-0.6
YATNC	Mamie plateau,	6.62	186	P	Pn	10 15 14.4	-0.4
DZM	Mont Dzumac	6.69	189	P	Pn	10 15 15.5	-0.3
NOUC	Port Laguerre	6.74	190	P	Pn	10 15 17.1	+0.6
ONTNC	Ouen Toro	6.92	189	P	Pn	10 15 19.9	+1.0
OUENC	Ouen Island, N	6.98	186	P	Pn	10 15 19.9	+0.2
PINNC	Pines Island,	7.14	181	P	Pn	10 15 22.0	+0.1

WEL 11 10:15:53.0, 39°S±1°×17°5E±°, h15km±2km, M3.6/42, ML3.9/42, MLv3.6/42, Error ellipse: s-maj=0.0km s-min=0.0km az=79.0

NOU 11 10:15:52.6, 39°.07S×175°.22E, h5km, MLv4.0/10, North Island, New Zealand

ISC 11 10:15:52.9±0.9, 39°.10S±0°.02×175°.32E±0°.02, h18km±2km, n155, σ0s.75/169, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWVZ	Taurewa	0.10	73	P	Pg	10 15 56.7	0.0
TWVZ				S	Sg	10 15 59.3	+0.1
PKVZ	Pokaka	0.19	174	P	Pb	10 15 57.6	+0.1
PKVZ				S	Sb	10 16 01.0	+0.5
WTVZ	West Tongariro	0.21	94	P	Pb	10 15 58.3	+0.4
NGZ	Ngauruhoe	0.23	109	P	Pb	10 15 58.6	+0.2
NNVZ	North Ngauruho	0.23	98	P	Pb	10 15 58.8	+0.3
FWVZ	Far West T-bar	0.24	131	P	Pb	10 15 58.7	0.0
FWVZ				S	Sb	10 16 02.5	0.0
KRVZ	Karewarewa	0.25	89	P	Pb	10 15 59.0	+0.2
DRZ	Dome Shelter	0.26	133	P	Pb	10 15 59.1	0.0
SNVZ	South Ngauruho	0.26	109	P	Pb	10 15 59.3	+0.2
TRVZ	Turoa	0.27	138	P	Pb	10 15 59.1	-0.1
OTVZ	Oturere	0.28	103	P	Pb	10 15 59.5	+0.2
NTVZ	North Tongarir	0.28	90	P	Pb	10 15 59.5	+0.2
WHVZ	Whangaehu Hut	0.28	131	P	Pb	10 15 59.2	-0.1
TMVZ	Te Maari	0.30	93	P	Pb	10 15 59.9	+0.2
ETVZ	East Tongariro	0.31	97	P	Pb	10 16 00.0	+0.1
MTVZ	Mangateitei	0.31	158	P	Pg	10 15 59.3	-0.3
MTVZ				S	Sb	10 16 04.0	-0.6
TUVZ	Tukino	0.31	123	P	Pb	10 16 00.1	+0.1
TUVZ				S	Sb	10 16 04.3	-0.4
WNVZ	Wahianoa	0.31	136	P	Pb	10 15 59.9	-0.2
WNVZ				S	Sb	10 16 04.3	-0.5
KATZ	Kakaramea	0.32	67	P	Pb	10 16 00.2	+0.1
RATZ	Rangitukua	0.42	57	P	Pb	10 16 02.0	+0.1
RITZ	Rihia Road	0.44	74	P	Pb	10 16 02.5	+0.3
VRZ	Vera Road	0.44	267	P	Pg	10 16 01.7	-0.1

MOVZ	Moawhango	0.46	132	P	Pb	10 16 02.1	-0.3
MOVZ				S	Sg	10 16 08.0	-0.4
WATZ	Wairara	0.51	40	P	Pg	10 16 03.2	+0.1
HATZ	Hinemaiaia	0.64	71	P	Pb	10 16 05.8	+0.4
HATZ				S	Sb	10 16 14.4	+0.5
WHTZ	Whakaora	0.66	49	P	Pb	10 16 06.5	+0.7
HIZ	Hauiti	0.69	328	P	Pg	10 16 06.1	-0.4
HIZ	Hauiti	0.69	328	P	Pg	10 16 05.3	-1.1
BHHZ	Black Hill Sta	0.70	124	P	Pb	10 16 06.6	+0.1
WAZ	Wanganui	0.70	201	P	Pg	10 16 06.1	-0.6
KUTZ	Kaahu Road	0.73	33	P	Pg	10 16 06.8	-0.3
KUTZ				S	Sg	10 16 17.0	+0.2
MHEZ	Mangahewa	0.78	271	P	Pb	10 16 08.3	+0.5
MHEZ				S	Sn	10 16 20.0	-0.1
TLZ	Tolley Road	0.79	13	P	Pg	10 16 07.1	-1.2
LREZ	Lake Rotokare	0.80	243	P	Pg	10 16 08.2	-0.3
LREZ				S	Sb	10 16 20.0	+1.4
DREZ	Durham Road	0.87	264	P	Pb	10 16 09.8	+0.2
WPRZ	Whakapapatarin	0.88	49	P	Pb	10 16 10.0	+0.4
MRHZ	Matea Rd	0.90	73	P	Pg	10 16 10.3	0.0
MRHZ				S	Sg	10 16 22.3	+0.1
BKZ	Black Stump Fm	0.92	95	P	Pb	10 16 10.4	+0.2
BKZ	Black Stump Fm	0.92	95	P	Pn	10 16 11.0	+0.1
KWHZ	Kaweka Forest	0.92	111	P	Pn	10 16 10.8	-0.1
KWHZ				S	Sn	10 16 23.4	-0.2
PREZ	Palmer Road	0.93	255	P	Pb	10 16 11.0	+0.4
ALRZ	Allen Road	0.96	56	P	Pb	10 16 11.3	+0.3
NEZ	North Egmont	0.97	259	P	Pb	10 16 11.4	+0.3
GRRZ	Galatos Road	0.97	40	P	Pb	10 16 11.3	+0.2
KRHZ	Kereru	0.98	124	P	Pn	10 16 11.8	+0.1
KRHZ				S	Sg	10 16 24.7	-0.1
PRRZ	Plateau Road	1.03	55	P	Pb	10 16 12.3	+0.2
KHEZ	Kahui Hut	1.03	259	P	Pb	10 16 12.6	+0.4
HRRZ	Handcock Road	1.03	47	P	Pb	10 16 12.6	+0.3
PKE	Pukeiti	1.04	264	P	Pb	10 16 12.6	+0.2
PNHZ	Pukenui	1.06	140	P	Pg	10 16 13.2	-0.3
HSRZ	Hossack Road	1.07	43	P	Pb	10 16 13.1	+0.3
TSZ	Takapari Road	1.08	153	P	Pn	10 16 13.1	0.0
OHWZ	Ohakea	1.10	180	P	Pb	10 16 13.5	0.0
MCHZ	McNeill Hill	1.12	108	P	Pg	10 16 15.4	+0.8
NBEZ	Newall Road No	1.14	261	P	Pn	10 16 14.2	+0.3
UTU	Utuhina	1.15	37	P	Pn	10 16 14.1	+0.1
NMHZ	Naumai	1.16	90	P	Pg	10 16 15.3	0.0
NMEZ	Namu Road	1.16	254	P	Pn	10 16 14.7	+0.5
HLRZ	Highlands Stat	1.17	44	P	Pg	10 16 15.4	-0.1
RRRZ	Republican Roa	1.20	51	P	Pn	10 16 15.5	+0.6
NGRZ	Ngongotaha	1.21	35	P	Pn	10 16 15.0	+0.1
MTHZ	Maungataniwha	1.21	79	P	Pb	10 16 15.5	+0.2
TARZ	Mount Tarawera	1.27	47	P	Pb	10 16 17.1	+0.8
OMRZ	Omania	1.29	40	P	Pb	10 16 17.5	+0.8
MUGZ	Murupara	1.29	62	P	Pn	10 16 16.3	+0.2
WPHZ	Waipukurau	1.30	138	P	Pg	10 16 17.8	-0.1
KARZ	Kaharoa	1.30	34	P	Pn	10 16 16.9	+0.8
ARHZ	Aropaoanui	1.31	98	P	Pg	10 16 18.3	0.0
MKRZ	Makatiti	1.31	43	P	Pg	10 16 18.3	0.0
POWZ	Post Office Ro	1.34	165	P	Pb	10 16 17.5	+0.1
KMRZ	Kaimai	1.34	21	P	Pn	10 16 17.5	+0.7
DVHZ	Dannevirke	1.36	152	P	Pg	10 16 18.6	-0.6
TOZ	Tahuroa Road	1.37	6	P	Pn	10 16 16.5	-0.6
RTZ	Ruatahuna	1.38	70	P	Pn	10 16 17.8	+0.5
RAHZ	Arahi	1.39	83	P	Pb	10 16 18.1	-0.2
KAHZ	Kahuranaki	1.39	120	P	Pg	10 16 19.7	0.0
CKHZ	Cape Kidnapper	1.47	113	P	Pg	10 16 20.7	-0.6
PXZ	Pawanui	1.51	128	P	Pg	10 16 21.4	-0.6
PRWZ	Pori Road	1.54	161	P	Pg	10 16 21.9	-0.6
PRHZ	Porangahau	1.54	139	P	Pb	10 16 21.5	+0.6
TGRZ	Tauranga	1.56	29	P	Pn	10 16 19.1	-0.6
MRZ	Mangatainoka R	1.57	173	P	Pb	10 16 21.0	-0.4
OPRZ	Ohinepanea	1.58	38	P	Pb	10 16 21.7	+0.1
SNGZ	Shannon Statio	1.61	79	P	Pg	10 16 23.1	-0.7
ANWZ	Angora Road	1.62	147	P	Pb	10 16 22.8	+0.5
URZ	Urewera	1.63	60	P	Pb	10 16 22.6	+0.2
URZ	Urewera	1.63	60	P	Pb	10 16 23.1	+0.7
OGWZ	Otaki Gorge	1.72	184	P	Pn	10 16 22.6	+0.7
TIWZ	Tintock	1.73	166	P	Pb	10 16 23.7	-0.4
BFZ	Birch Farm	1.73	156	P	Pb	10 16 23.6	-0.6
BFZ	Birch Farm	1.73	156	P	Pb	10 16 24.3	+0.1
RAGZ	Rawiri	1.75	70	P	Pn	10 16 23.0	+0.6
KIW	Kapiti Island	1.79	190	P	Pn	10 16 23.3	+0.5
HOWZ	Holdsworth Sta	1.80	175	P	Pb	10 16 24.6	-0.7
KNZ	Kokohu	1.83	88	P	Pb	10 16 26.5	+0.7
CPWZ	Castlepoint	1.93	160	P	Pb	10 16 28.4	+0.9
RIGZ	Rimuhau	1.95	79	P	Pb	10 16 27.1	-0.7
MYRZ	Mayor Island	1.96	22	P	Pb	10 16 29.0	+1.0
PRGZ	Paritu Road	2.00	86	P	Pb	10 16 27.9	-0.9
DUWZ	D'Urville Isla	2.01	212	P	Pn	10 16 26.4	+0.5
MHGZ	Mahia Peninsul	2.01	92	P	Pb	10 16 28.5	-0.5
CAW	Cannon Point	2.02	185	P	Pn	10 16 27.3	+1.3
TMWZ	Te Maipa	2.05	168	P	Pn	10 16 27.7	+1.2
MTW	Mount Morrison	2.06	176	P	Pn	10 16 27.7	+1.1
TKGZ	Te Karaka	2.08	72	P	Pb	10 16 30.7	+0.6
AWAZ	Awhitu Peninsu	2.10	345	P	Pn	10 16 27.4	+0.2
ETAZ	East Tamaki Re	2.17	352	P	Pn	10 16 28.0	0.0
RUGZ	Raukumara Rang	2.17	59	P	Pn	10 16 29.2	+1.1
WEL	Wellington	2.22	191	P	Pn	10 16 30.6	+1.8
WTAZ	Waiatarua	2.24	345	P	Pn	10 16 29.6	+0.5
TCW	Tory Channel	2.25	200	P	Pn	10 16 30.2	+0.9
SNZO	South Karori	2.26	192	P	Pb	10 16 31.7	-1.4
EPAZ	Eden Park BICE	2.27	348	P	Pn	10 16 29.7	+0.3
TWGZ	Tauwhareparae	2.28	67	P	Pb	10 16 32.3	-1.2
PAWZ	Paruwai Farm	2.28	178	P	Pn	10 16 30.5	+0.8
HBAZ	Herne Bay Bore	2.29	348	P	Pn	10 16 29.7	0.0
WIAZ	Waiheke Island	2.31	356	P	Pn	10 16 30.2	+0.2
TRWZ	Traveller	2.31	173	P	Pn	10 16 31.3	+1.2
MSWZ	Moikau Station	2.31	181	P	Pn	10 16 31.0	+0.9
BHW	Baring Head	2.33	188	P	Pn	10 16 31.3	+1.0
MBAZ	Motutapu North	2.35	352	P	Pn	10 16 30.2	-0.4
HAZ	Te Kaha	2.35	56	P	Pn	10 16 31.9	+1.3
KUZ	Kuaotunu	2.37	8	P	Pn	10 16 29.8	-1.1
RVAZ	Riverhead Bore	2.40	346	P	Pn	10 16 31.6	+0.4
PLWZ	Palliser	2.47	181	P	Pn	10 16 32.8	+0.6
PKGZ	Pakihiroa	2.48	62	P	Pb	10 16 35.6	-1.3
ABAZ	Army Bay	2.52	351	P	Pn	10 16 33.0	+0.1
TUWZ	Tuamarina	2.55	204	P	Pn	10 16 34.6	+1.2
NNZ	Nelson	2.58	214	P	Pn	10 16 35.4	+1.6
WMGZ	Waiomatatini S	2.75	63	P	Pn	10 16 38.2	+2.2
QRZ	Quartz Range	2.75	230	P	Pn	10 16 36.1	0.0
QRZ	Quartz Range	2.75	230	P	Pn	10 16 36.4	+0.3
CMWZ	Cape Campbell	2.78	197	P	Pb	10 16 40.4	-1.6
MXZ	Matakaoa Point	2.81	58	P	Pb	10 16 40.2	-2.2
BSWZ	Blackbirch Sta	2.83	202	P	Pn	10 16 39.3	+2.0
GRZ	Great Barrier	2.85	2	P	Pn	10 16 36.3	-1.1
THZ	Tophouse	3.24	214	P	Pn	10 16 45.0	+2.2
WCZ	Waipu Caves	3.25	346	P	Pn	10 16 43.2	+0.3
KHZ	Kahutara	3.58	202	P	Pn	10 16 47.8	+0.4
KHZ	Kahutara	3.58	202	P	Pn	10 16 48.0	+0.6
DSZ	Denniston Nort	3.77	224	P	Pn	10 16 50.7	+0.7
OUZ	Omahuta	4.11	340	P	Pn	10 16 55.3	+0.5
OUZ	Omahuta	4.11	340	P	Pn	10 16 54.7	0.0
LTZ	Lake Taylor	4.34	211	P	Pn	10 16 58.0	0.0
INZ	Inchbonnie	4.66	218	P	Pn	10 17 03.8	+1.5
OXZ	Oxford	4.89	209	P	Pn	10 17 04.1	-1.4
OKCZ	Okains Bay	4.92	199	P	Pn	10 17 05.1	-0.8
WVZ	Waitaha Valley	5.27	220	P	Pn	10 17 13.3	+2.7
RPZ	Rata Peaks	5.62	213	P	Pn	10 17 16.4	+0.9
GCSZ	Gaunt Creek Bo	5.65	220	P	Pn	10 17 17.3	+1.4
FOZ	Fox Glacier	6.06	221	P	Pn	10 17 22.3	+0.7
ODZ	Otahua Downs	6.88	209	P	Pn	10 17 31.8	-1.0
ODZ	Otahua Downs	6.88	209	P	Pn	10 17 34.0	+1.2
JCZ	Jackson Bay	6.98	222	P	Pn	10 17 35.5	+1.3
CTZ	Chatham Island	7.62	130	P	Pn	10 17 43.2	+0.2

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*IDC **11** 10:29:26.7±9.2, 23°.61S×177°.42W, h88^{km}±82^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.6/21, mbtmp4.1/4, ML4.7/2, Error ellipse: s-maj=86.2km s-min=39.9km az=175.0*

*NEIC **11** 10:29:29.1±1.7, 23°.9S±0°.1×177°.28W±0°.06, h111^{km}±9^{km}, mb4.3/18, Error ellipse: s-maj=14.8km s-min=7.8km az=165.0*

ISC 11 10:29:28.2±0.8**, 23°.97S**±0°.07×**177°.3W**±0°.1**, h100**^{km}**, n28,** σ**1^{s}.51**/31**, mb4.2**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.29	186	P	Pn	10 30 48.1	+3.2
	72nm,0.3s,baz=18,slow=20,SNR=2.5						
RAO				S	Sn	10 31 41.2	-3.3
	106nm,0.3s,baz=68,slow=21,SNR=4.2						
RAO	Raoul Island	5.29	186	Pn	Pn	10 30 46.6	+1.8
MSVF	Nonsavu	7.55	324	Pn	Pn	10 31 15.7	-0.1
NIUE	Niue	8.44	56	Pn	Pn	10 31 27.6	-0.1
MARNC	Mare, Loyalty	13.73	277	Pn	Pn	10 32 39.8	+1.1
URZ	Urewera	15.01	197	P	Pn	10 32 57.4	+2.3
	1.2nm,0.3s,baz=120,slow=23,SNR=9.2						
URZ				S	Sn	10 35 29.9	-11
	0.7nm,0.3s,baz=121,slow=19,SNR=2.0						
DZM	Mont Dzumac	15.05	274	Pn	Pn	10 32 54.7	-1.1
SANVU	Saraoutou	16.83	297	P	Pn	10 33 17.3	-0.6
SANVU				IAmb	IAmb	10 33 27.7	
	comp=Z,28nm,0.8s						
ARMA	Armidale	28.29	250	P	P	10 35 14.4	+1.9
ARMA				IAmb	IAmb	10 35 27.0	
	comp=Z,13nm,1.3s						
CTAO	Charters Tower	33.91	269	P	P	10 36 03.1	+1.2
CTAO				IAmb	IAmb	10 36 09.9	
	comp=Z,8.3nm,1.3s						
STKA	Stephens Creek	36.96	248	P	P	10 36 28.7	+0.8
	comp=Z,1.7nm,0.4s,baz=100,slow=10,SNR=10						
COEN	Coen	38.54	278	P	P	10 36 42.7	+1.4
COEN				IAmb	IAmb	10 36 58.8	
	comp=Z,12nm,1.5s						
BBOO	Buckleboo	41.66	247	P	P	10 37 06.6	-0.4
AS31	Alice Springs	44.43	260	P	P	10 37 28.9	-0.5
ASAR	Alice Springs	44.43	260	P	P	10 37 28.8	-0.6
	comp=Z,1.0nm,0.3s,baz=95,slow=6.9,SNR=46						
ASAR				PcP	PcP	10 39 10.6	-1.0
	comp=Z,0.8nm,0.6s,baz=112,slow=4.0,SNR=8.0						
ASAR	Alice Springs	44.43	260	P	P	10 37 29.3	-0.1
WR0	Warramunga Arr	44.65	265	P	P	10 37 30.1	-1.1
WR0				IAmb	IAmb	10 37 53.1	
	comp=Z,4.9nm,1.2s						
WB2	Warramunga Arr	44.82	265	P	P	10 37 31.8	-0.8
WB2				IAmb	IAmb	10 37 54.9	
	comp=Z,3.6nm,1.1s						
WRAB	Tennant Creek	44.83	265	P	P	10 37 31.6	-1.0
WRAB				IAmb	IAmb	10 37 55.9	
	comp=Z,3.7nm,1.2s						
WB0	Warramunga Arr	44.83	266	P	P	10 37 31.9	-0.8
WB0				IAmb	IAmb	10 37 32.8	
	comp=Z,3.4nm,1.0s						
WRA	Warramunga Arr	44.83	265	P	P	10 37 31.6	-1.1
	comp=Z,0.6nm,0.3s,baz=102,slow=8.6,SNR=28						
WRA				PcP	PcP	10 39 12.4	-0.5
	comp=Z,0.3nm,0.8s,baz=103,slow=2.9,SNR=4.7						
FORT	Forrest	48.57	249	P	P	10 38 01.0	-0.7
KNRA	Kununurra	51.12	269	P	P	10 38 18.9	-2.3
MORW	Morawa	59.14	249	P	P	10 39 16.8	-1.9
MORW				IAmb	IAmb	10 39 17.8	
	comp=Z,9.3nm,1.1s						
CASY	Casey	61.12	206	P	P	10 39 29.9	-1.7
QSPA	South Pole Qui	66.12	180	P	P	10 40 03.8	-0.9
QSPA				IAmb	IAmb	10 40 04.4	
	comp=Z,2.1nm,0.9s						
AKASG	Malin Array Be	146.31	329	PKPbc	PKPdf	10 48 56.3	+0.6
	comp=Z,3.2nm,0.5s,baz=42,slow=4.4,SNR=18						
BRTR	Keskin Array B	149.55	308	PKPbc	PKPdf	10 49 03.6	+2.0
	comp=Z,0.7nm,0.5s,baz=109,slow=3.8,SNR=3.2						

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*BJI **11** 10:42:24.0±0.0, 38°.60N×72°.40E, h10^{km}, mb3.9/6, ML4.3/3*

*IDC **11** 10:42:29.8±0.9, 38°.79N×73°.42E, h0^{km}, mb4.0/10, mb1 4.0/16, mb1mx3.8/45, mbtmp3.9/16, ML3.6/4, MS3.4/11, Ms1 3.4/11, ms1mx3.2/42, Error ellipse: s-maj=17.4km s-min=14.9km az=62.0*

*MOS **11** 10:42:30.5±1.6, 38°.77N×73°.18E, h14^{km}, mb4.3/6, Error ellipse: s-maj=9.9km s-min=5.0km az=84.6*

*NEIC **11** 10:42:32.0±2.8, 38°.72N±0°.05×73°.19E±0°.06, h10^{km}±1^{km}, mb4.4/10, Error ellipse: s-maj=9.5km s-min=7.3km az=143.0*

*SOME **11** 10:42:34.8, 39°.00N×73°.23E, h5^{km}*

*NNC **11** 10:42:35.6±2.9, 38°.95N×73°.34E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=21.9km s-min=12.2km az=0.0*

ISC 11 10:42:31.5±0.4**, 38°.69N**±0°.03×**73°.06E**±0°.03**, h10**^{km}**, n141,** σ**2^{s}.76**/154**, mb4.1**/17**, MS3.3**/8**, 13C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.26	309		Pn	10 42 52.4	-3.0
GAR	Garm	2.17	279	Pn	Pn	10 43 09.4	+1.7
BTK	Batken	2.21	309	PN	Pn	10 43 10.6	+2.3
BTK	Batken	2.21	309		Pn	10 43 10.6	+2.3
KSH	Kashi	2.41	69	Pn	Pn	10 43 01.8	-9.3
KSH				smax	smax		
	comp=N,2μm,0.9s						
KSH				smax	smax		
	comp=E,1μm,0.8s						
CHGR	Chuyangaron	3.06	271	Pn	Pn	10 43 22.9	+3.0
TAS	Tashkent	3.91	313	PN	Pn	10 43 32.8	+1.2
TAS	Tashkent	3.91	313	Pn	Pn	10 43 32.8	+1.2
MRKS	Merke	4.05	2	eP	Pb	10 43 42.6	-0.3
	42nm,0.5s						
MRKS				eS	Sb	10 44 31.7	-0.3
	111nm,1.0s						
MRKS	Merke	4.05	2	Pg	Pb	10 43 45.8	+2.9
	71nm,1.0s						
MRKS				Lg	Lg	10 44 37.6	
	111nm,1.0s						
AAK	Ala-Archa	4.09	15	Pn	Pn	10 43 34.7	+0.5
	10.0nm,0.3s,baz=193,slow=5.9,SNR=99						
AAK				Sn	Sb	10 44 28.0	-5.2
	2.1nm,0.3s,baz=76,slow=15,SNR=5.6						
AAK	Ala-Archa	4.09	15	c ePN	Pn	10 43 35.4	+1.2
AAK				pmax	pmax		
	comp=Z,549nm,1.0s						
AAK	Ala-Archa	4.09	15	Pn	Pn	10 43 35.0	+0.8
IUG	Iuzhnay	4.15	327	eP	Pg	10 43 49.3	-1.8
	comp=Z,3μm,0.5s						
IUG				eS	Sg	10 44 43.5	-1.3
	comp=Z,850nm,1.1s						
IUG	Iuzhnay	4.15	327	ePb	Pn	10 43 36.7	+1.7
	baz=334						
IUG	Iuzhnay	4.15	327	ePN	Pn	10 43 36.7	+1.7
IUG	Iuzhnay	4.15	327	Pg	Pg	10 43 49.3	-1.8
	comp=Z,3μm,0.5s						
IUG				Lg	Lg	10 44 43.5	
	comp=Z,736nm,1.1s						
FRU1	Bishkek	4.28	16	PN	Pn	10 43 35.0	-1.8
FRU1	Bishkek	4.28	16		Pn	10 43 35.0	-1.8
BOOM	Boomskoye usch	4.38	29	PN	Pn	10 43 38.0	-0.2
BOOM	Boomskoye usch	4.38	29		Pn	10 43 38.0	-0.2
DZA	Taraz	4.40	343	eP	Pb	10 43 50.5	+1.7
	comp=Z,79nm,0.1s						
DZA				eS	Sb	10 44 45.2	+3.3
	comp=Z,265nm,0.7s						
DZA	Taraz	4.40	343	ePg	Pb	10 43 47.9	-0.9
	baz=350						
DZA	Taraz	4.40	343	ePN	Pb	10 43 47.9	-0.9
DZA	Taraz	4.40	343	Pg	Pb	10 43 50.5	+1.7
	comp=Z,79nm,0.1s						
DZA				Lg	Lg	10 44 45.2	
	comp=Z,313nm,0.7s						
CHM	Chimkent	4.48	325	eP	Pg	10 43 56.8	-0.5
	comp=Z,183nm,0.2s						
CHM				eS	Sg	10 44 56.0	+0.7
	comp=Z,337nm,1.1s						
TKM2	Tokmak 2	4.64	24	PN	Pn	10 43 43.6	+1.7
TKM2				P	Pb	10 43 56.8	+3.7
TKM2	Tokmak 2	4.64	24	⇑Pn	Pn	10 43 43.6	+1.7
	comp=Z,16nm,0.8s						
TKM2				⇑Pg	Pb	10 43 56.8	+3.7
	comp=Z,54nm,0.8s						
TKM2				⇑Lg	Lg	10 44 51.3	
	comp=Z,125nm,1.1s						
KDJ	Kajisay	4.66	41	PN	Pn	10 43 41.0	-1.0
KDJ	Kajisay	4.66	41	Pn	Pn	10 43 41.0	-1.0
TARG	Taragay, Kyrgy	4.73	49		Pn	10 43 40.8	-2.4
KKAR	Karatay Array	4.81	337	PN	Pn	10 43 45.0	+1.0
KKAR	Karatay Array	4.81	337	Pn	Pn	10 43 45.0	+1.0
KK09	Karatay Array	4.83	337	⇑Pn	Pn	10 43 45.3	+1.0
	comp=Z,92nm,1.1s,baz=149,slow=12						
KK09				⇑Sn	Sn	10 44 44.3	+4.0
	comp=Z,154nm,0.8s,baz=147,slow=25						
KST	Kastek	4.87	26	eP	Pb	10 43 59.8	+2.8
	comp=Z,72nm,2.2s						
KST				eS	Sb	10 45 01.5	+5.8
	comp=Z,81nm,1.8s						
SGDS	Sogindy	4.90	13	ePn	Pn	10 43 44.4	-0.9
	baz=19						
CEP	Cherat	4.95	191	P	Pn	10 43 50.7	+4.7
CEP				S	Sb	10 44 59.0	+1.1
BRLS	Borolday	4.97	332	eP	Pb	10 43 59.9	+1.3
	comp=Z,26nm,1.3s						
BRLS				eS	Sb	10 45 01.8	+3.2
	comp=Z,63nm,1.2s						
BRLS	Borolday	4.97	332	Pg	Pb	10 43 59.9	+1.3
	comp=Z,32nm,0.7s						
BRLS				Lg	Lg	10 45 01.8	
	comp=Z,63nm,1.2s						
DGS	Degeres	4.99	23	eP	Pb	10 44 01.0	+2.1
	comp=Z,72nm,1.0s						
DGS				eS	Sb	10 45 03.6	+4.6
	comp=Z,79nm,0.8s						
DGS	Degeres	4.99	23	Pg	Pb	10 44 01.0	+2.1
	comp=Z,72nm,1.0s						
DGS				Lg	Lg	10 45 04.1	
	comp=Z,79nm,0.8s						
NIL	Nilore	5.03	178	PN	Pn	10 43 49.9	+2.8
NIL	Nilore	5.03	178		Pn	10 43 49.9	+2.8
IZV	Izvestkoviy	5.11	31	eP	Pb	10 44 03.2	+2.2
	comp=Z,17nm,0.8s						
IZV				eS	Sb	10 45 07.4	+4.9
	comp=Z,94nm,1.2s						
MTBS	Maitube	5.12	29	eP	Pb	10 44 03.3	+2.2
	comp=Z,46nm,1.6s						
MTBS				eS	Sb	10 45 07.8	+5.2
	comp=Z,51nm,0.6s						
TNSS	Tian-Shan	5.25	33	eP	Pb	10 44 06.9	+3.4
	comp=Z,31nm,0.5s						
TNSS				eS	Sg	10 45 13.7	-6.2
	comp=Z,34nm,1.0s						
TNSS	Tian-Shan	5.25	33	ePn	Pn	10 43 50.5	+0.2
	baz=37						
TNSS				ePg	Pg	10 44 11.7	-0.3
	baz=37						
KBL	Kabul	5.25	219	PN	Pn	10 43 51.3	+1.0
KBL	Kabul	5.25	219	Pn	Pn	10 43 51.3	+1.0
AAA	Alma-Ata	5.37	32	ePn	Pn	10 43 50.3	-1.4
	baz=36						
AAA	Alma-Ata	5.37	32	ePN	Pn	10 43 50.3	-1.4
MDOK	Medeo	5.39	33	eP	Pb	10 44 09.2	+3.4
	comp=Z,26nm,0.4s						
MDOK				eS	Sb	10 45 17.7	+7.1
	comp=Z,56nm,0.8s						
MDOK	Medeo	5.39	33	ePg	Pg	10 44 13.8	-1.0
	baz=37						
MDOK	Medeo	5.39	33	ePG	Pg	10 44 13.7	-1.0
MDOK	Medeo	5.39	33	Pg	Pb	10 44 06.8	+1.0
	comp=Z,56nm,1.2s						
MDOK				⇓Lg	Lg	10 45 15.2	
	comp=Z,96nm,1.0s						
KOTS	Kotyrbulak	5.48	33	eP	Pb	10 44 09.7	+2.5
	comp=Z,41nm,1.8s						
KOTS				eS	Sb	10 45 17.5	+4.4
	comp=Z,110nm,1.0s						
KTBS	Karatobe	5.71	27	eP	Pb	10 44 16.4	+5.2
	comp=Z,18nm,1.2s						
KTBS				eS	Sg	10 45 28.9	-5.9
	comp=Z,66nm,0.9s						
KUU	Kurty	5.75	24	eP	Pb	10 44 14.4	+2.6
	comp=Z,20nm,0.5s						
KUU				eS	Sb	10 45 26.7	+5.8
	comp=Z,100nm,0.7s						
KUU	Kurty	5.75	24	ePn	Pn	10 43 56.5	-0.4
	baz=29						
KUU	Kurty	5.75	24	ePN	Pn	10 43 56.5	-0.4
KUU	Kurty	5.75	24	Pg	Pb	10 44 14.4	+2.6
	comp=Z,20nm,0.8s						
KUU				Lg	Lg	10 45 26.7	
	comp=Z,100nm,1.6s						
SATY	Saty	5.95	41	eP	Pb	10 44 19.7	+4.4
	comp=Z,12nm,0.6s						
SATY				eS	Sb	10 45 34.8	+8.0
	comp=Z,96nm,1.6s						
SATY	Saty	5.95	41	ePn	Pn	10 44 01.0	+1.2
	baz=44						
SATY	Saty	5.95	41	ePN	Pn	10 44 00.9	+1.2
THW	Thamme Wali	5.98	191	P	Pn	10 44 04.4	+4.3
KURS	Kuram	6.15	37	eP	Pb	10 44 21.7	+3.0
	comp=Z,27nm,0.9s						
KURS				eS	Sb	10 45 39.3	+6.9
	comp=Z,48nm,2.2s						
UZB	Uzynbulak	6.34	44	ePg	Pg	10 44 32.9	+0.1
	baz=46						
UZB	Uzynbulak	6.34	44	ePG	Pg	10 44 32.9	+0.1
BTLS	Baital	6.39	6	eP	Pg	10 44 30.1	-3.6
	comp=Z,12nm,0.9s						
BTLS				eS	Sg	10 45 53.5	-2.9
	comp=Z,24nm,1.3s						
BTLS	Baital	6.39	6	ePn	Pn	10 44 02.4	-3.2
	baz=11						
BTLS				ePg	Pb	10 44 28.6	+5.9
	baz=11						
BTLS	Baital	6.39	6	ePN	Pn	10 44 02.4	-3.2
BTLS				e		10 44 28.5	
BTLS	Baital	6.39	6	Pg	Pg	10 44 30.1	-3.6
	comp=Z,12nm,1.3s						
BTLS				Lg	Lg	10 45 53.5	
	comp=Z,30nm,1.0s						
PDGK	Podgornoye	6.71	44	⇑Pg	Pb	10 44 29.3	+1.0
	comp=Z,36nm,1.1s						
PDGK				⇓Lg	Lg	10 45 57.9	
	comp=Z,85nm,1.4s						
TDK	Taldyqorghan	7.46	31	ePg	Pg	10 44 51.4	-2.8
	baz=34						
SMLA	Simla	8.26	155	eP	Pn	10 44 31.9	+0.6
SMLA				eS	Sn	10 45 58.0	-6.7
SMLA				IAML		10 46 07.0	
	comp=N,47nm,0.9s						
HRA	Herat	9.71	247	Pn	Pn	10 44 51.4	+0.1
MK31	Makanchi Array	10.56	37	P	Pn	10 45 01.3	-1.5
MK31	Makanchi Array	10.56	37	Pn	Pn	10 45 01.3	-1.5
MKAR	Makanchi Array	10.56	37	Pn	Pn	10 45 02.2	-0.6
	comp=N,0.1nm,0.3s,baz=227,slow=14,SNR=7.7						
MKAR				LR	LR	10 48 49.8	
	comp=N,101nm,20.7s,baz=206,slow=37						
MKAR	Makanchi Array	10.56	37	Pn	Pn	10 45 03.3	+0.5
KUDL	Kundal	10.90	164	eP	Pn	10 45 06.2	-1.3
KUDL				eS	Sn	10 47 03.6	-5.9
GEYT	Alibeck	11.77	271	Sn	Sn	10 47 32.9	+2.1
	comp=N,0.3nm,0.3s,baz=101,slow=14,SNR=3.7						
GEYT				LR	LR	10 50 52.7	
	comp=N,95nm,18.7s,baz=285,slow=42						
WMQ	Urumqi	12.14	60	eP	Pn	10 45 22.2	-2.3
WMQ				sP		10 45 30.9	
WMQ				pmax	pmax		
	comp=N,15nm,0.9s						
KURBB	Kurchatov Arra	12.54	16	Pn	Pn	10 45 24.7	-5.2
	baz=200,slow=13,SNR=2.4						
KURBB				Lg	Lg	10 49 01.1	
	comp=N,0.1nm,0.3s,baz=200,slow=28,SNR=6.4						
KURK	Kurchatov	12.65	16	⇓eP	Pn	10 45 30.7	-0.6
KURK				pmax	pmax		
	comp=Z,12nm,2.5s						
JHNI	Jhansi	13.98	159	eS	Sn	10 48 16.7	-8.1
ABKAR	Akbulak array	14.14	323	Pn	Pn	10 45 51.1	-0.7
BVAR	Borovoye Array	14.45	354	Pn	Pn	10 45 52.8	-3.2
	comp=Z,0.3nm,0.3s,baz=188,slow=18,SNR=9.9						
BRVK	Borovoye	14.50	353	⇓eP	Pn	10 45 54.2	-2.4
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
BRVK	Borovoye	14.50	353	Pn	Pn	10 45 54.4	-2.2
DGZ	Jazzator, Alta	15.05	38	i P	Pn	10 46 07.3	+3.1
AKTO	Aktyubinsk	15.86	323	Pn	Pn	10 46 12.4	-2.3
	comp=Z,0.2nm,0.3s,baz=129,slow=14,SNR=9.4						
AKTO				Sn	Sn	10 49 04.6	-5.9
	comp=Z,0.1nm,0.3s,baz=32,slow=13,SNR=3.9						
ZALV	Zalesovo Beam	17.25	24	P	Pn	10 46 28.6	-3.6
	baz=206,slow=9.9,SNR=5.0						
ZALV				LR	LR	10 53 19.2	
	comp=Z,146nm,18.0s,baz=12,slow=38						
ZALV	Zalesovo Beam	17.25	24	P	Pn	10 46 29.8	-2.5
ZALV	Zalesovo Beam	17.25	24	Pn	Pn	10 46 29.8	-2.5
LSA	Lhasa	17.42	116	P	Pn	10 46 33.1	-2.0
LSA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
LSA	Lhasa	17.42	116	Pn	Pn	10 46 33.1	-2.0
ARU	Arti	20.19	336	c iP	P	10 46 59.0	-7.0
ARU				S	S	10 50 45.5	-6.9
ARU				pmax	pmax		
	comp=Z,50nm,5.2s						
GTA	Gaotai	20.77	80	eP	P	10 47 11.4	-1.2
GTA				pP	Pn	10 47 15.6	+0.6
GTA				sP	sP	10 47 18.5	-0.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GNI	Garni	21.89	283	⇑eP	P	10 47 15.6	-9.2
GNI				pmax	pmax		
	comp=Z,8.0nm,0.7s						

BELG	Belogornoye	22.32	316	P	P	10 47 31.1	+2.1
	comp=Z,15nm,0.9s,baz=354,slow=5.0,SNR=3.7						
KBZ	Khabaz	23.17	292	LR	LR	10 58 40.2	
	comp=Z,69nm,18.6s,baz=104,slow=42						
KIV	Kislovodsk	23.33	293	eP	P	10 47 28.6	-11
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SONM	Songino Array	25.77	58	P	P	10 48 00.9	-1.5
	comp=Z,3.4nm,0.7s,baz=270,slow=8.5,SNR=17						
SONM				LR	LR	10 59 08.8	
	comp=Z,80nm,21.0s,baz=248,slow=39						
SONM	Songino Array	25.77	58	P	P	10 48 01.1	-1.3
ULN	Ulaanbaatar	26.21	58	⇑eP	P	10 48 04.9	-1.6
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRTR	Keskin Array B	30.40	285	LR	LR	11 02 33.6	
	comp=Z,54nm,18.3s,baz=4.5,slow=39						
AKASG	Malin Array Be	32.92	306	LR	LR	11 05 48.3	
	comp=Z,35nm,18.5s,baz=320,slow=42						
AKASG	Malin Array Be	32.92	306	ceP	P	10 48 57.7	-8.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKBB	Malin Array Si	32.92	306	⇑eP	P	10 48 57.7	-8.1
FINES	FINESS Array B	36.63	324	P	P	10 49 38.3	+0.7
	comp=Z,3.9nm,1.0s,baz=122,slow=10,SNR=2.1						
FINES	FINESS Array B	36.63	324	P	P	10 49 38.6	+0.9
FINES	FINESS Array B	36.63	324	P	P	10 49 38.6	+0.9
SANT	Santorini	37.49	282	P	P	10 49 46.4	+1.1
ARCES	ARCESS Array B	39.78	336	P	P	10 50 05.0	+0.9
	comp=Z,1.7nm,0.7s,baz=112,slow=9.8,SNR=8.1						
ARCES				LR	LR	11 07 19.4	
	comp=Z,142nm,18.8s,baz=90,slow=37						
ARCES	ARCESS Array B	39.78	336	P	P	10 50 05.0	+0.9
ARCES	ARCESS Array B	39.78	336	P	P	10 50 05.6	+1.5
KLR	Kul'dur	42.55	56	⇓eP	P	10 50 28.1	+1.0
KLR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KSRS	Korea Array	42.66	74	LR	LR	11 09 53.5	
	comp=Z,57nm,19.8s,baz=290,slow=39						
TPUB	Ta-pu	43.09	97	P	P	10 50 32.4	+0.5
TIXI	Tiksi	43.13	23	⇑eP	P	10 50 30.9	-0.6
TIXI	Tiksi	43.13	23	P	P	10 50 30.7	-0.8
TIXI				IAmb	IAmb	10 50 32.9	
	comp=Z,3.0nm,0.8s						
NB2	NORSAR Subarra	43.65	322	P	P	10 50 37.5	+1.5
	comp=Z,0.8nm,0.6s,baz=89,slow=7.9						
NOA	NORSAR Array B	43.65	322	P	P	10 50 37.3	+1.3
	comp=Z,1.4nm,0.7s,baz=91,slow=7.9,SNR=4.4						
NOA				LR	LR	11 09 09.3	
	comp=Z,44nm,19.4s,baz=340,slow=37						
TORD	Torodi Ar. Bea	67.40	269	P	P	10 53 29.1	+1.7
	comp=Z,0.6nm,0.6s,baz=45,slow=5.0,SNR=6.5						
TORD	Torodi Ar. Bea	67.40	269	P	P	10 53 27.4	+0.1
TORD				IAmb	IAmb	10 53 29.5	
	comp=Z,2.3nm,1.2s						
TOLK	Toolik Lake Re	68.38	15	P	P	10 53 33.8	+0.9
TOLK				IAmb	IAmb	10 53 59.6	
	comp=Z,4.8nm,1.3s						
A36M	Sachs Harbour	68.87	6	P	P	10 53 36.0	+0.3
A36M				IAmb	IAmb	10 53 37.1	
	comp=Z,2.4nm,0.8s						
IMAR	Indian Mountai	69.58	19	P	P	10 53 40.5	+0.3
BMAR	Burnt Mountain	70.42	14	P	P	10 53 46.7	+1.3
J20K	Nowinta River	70.92	20	P	P	10 53 50.1	+1.6
J20K				IAmb	IAmb	10 53 54.2	
	comp=Z,6.0nm,1.4s						
ILAR	Eielson Array	72.22	17	P	P	10 53 53.7	-2.6
	comp=Z,0.6nm,0.8s,baz=322,slow=5.0,SNR=5.9						
ILAR	Eielson Array	72.22	17	eP	P	10 53 54.7	-1.6
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	72.22	17	P	P	10 53 56.1	-0.1
BCAR	Beaver Creek A	74.82	16	P	P	10 54 12.0	+0.3
YKA	Yellowknife Ar	78.97	4	P	P	10 54 35.1	+0.1
	comp=Z,1.0nm,0.7s,baz=349,slow=5.4,SNR=6.5						
WRA	Warramunga Arr	81.80	124	P	P	10 54 49.6	-1.2
	comp=Z,0.6nm,0.6s,baz=308,slow=4.0,SNR=15						
ASAR	Alice Springs	84.20	126	P	P	10 55 01.8	-1.4
	comp=Z,0.3nm,0.7s,baz=312,slow=5.2,SNR=6.8						
ASAR	Alice Springs	84.20	126	P	P	10 55 02.9	-0.3
ASAR	Alice Springs	84.20	126	P	P	10 55 02.9	-0.3
BBB	Bella Bella	87.63	13	LR	LR	11 42 08.9	
	comp=Z,123nm,18.3s,baz=186,slow=41						

*IDC **11** 11:11:57.0±1.1, 18°.02S×178°.46W, h580^{km}±13^{km}, mb4.1/23, mb1 4.2/25, mb1mx3.9/41, mbtmp4.9/25, Error ellipse: s-maj=15.3km s-min=8.7km az=142.0*

*BJI **11** 11:11:57.0±0.0, 18°.00S×178°.40W, h588^{km}, mB5.1/9, mb4.7/19*

*NEIC **11** 11:11:57.9±2.0, 18°.01S±0°.10×178°.42W±0°.09, h583^{km}±6^{km}, mb4.7/213, Error ellipse: s-maj=14.7km s-min=12.0km az=159.0*

*NOU **11** 11:11:57.8, 18°.02S×178°.31W, h599^{km}, mb5.0/89, Fiji Islands Region*

ISC 11 11:11:56.5±0.3**, 18°.19S**±0°.05×**178°.36W**±0°.05**, h579**^{km}**, n661, σ1^{s}.43**/681**, mb4.7**/153**, 1C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAVE	Taveuni	2.08	315	P	P	11 13 12.8	+3.5
DGTI	Dogotuki	2.61	316	P	P	11 13 14.4	+2.6
MSVF	Nonsavu	3.45	277	P	P	11 13 20.4	+3.6
	12nm,0.3s,baz=125,slow=11,SNR=174						
MSVF	Nonsavu	3.45	277	P	P	11 13 20.4	+3.6
AFI	Afiamalu	7.62	57	P	P	11 13 51.1	-0.6
	5.2nm,0.3s,baz=302,slow=4.8,SNR=10						
NIUE	Niue	8.04	98	P	P	11 13 58.0	+2.5
	baz=8.2,SNR=5.9						
NIUE	Niue	8.04	98	P	P	11 13 57.1	+1.6
NIUE	Niue	8.04	98	P	P	11 13 57.8	+2.2
FUNA	Funafuti	9.89	346	P	P	11 14 12.4	-1.5
GLKZ	Green Lake	11.04	178	P	P	11 14 23.6	-1.6
GLKZ				S	S	11 16 22.9	-4.6
RTV	Rentapao	12.58	270	P	P	11 14 42.2	+1.1
DVP	Devils Point	12.81	270	P	P	11 14 45.4	+1.9
MARNC	Mare, Loyalty	13.22	253	P	P	11 14 47.9	+0.3
MARNC	Mare, Loyalty	13.22	253	P	P	11 14 48.4	+0.8
LIFNC	LIFOU	13.82	257	P	P	11 14 53.8	-0.1
LIFNC	LIFOU	13.82	257	P	P	11 14 54.2	+0.4
PINNC	Pines Island,	14.02	249	P	P	11 14 56.0	+0.2
PINNC	Pines Island,	14.02	249	P	P	11 14 57.8	+2.0
SANVU	Saraoutou	14.09	279	P	P	11 14 56.3	-0.2
SANVU	Saraoutou	14.09	279	P	P	11 14 56.9	+0.3
YATNC	Mamie plateau,	14.38	252	P	P	11 15 00.6	+1.3
OUENC	Ouen Island, N	14.51	251	P	P	11 15 02.0	+1.4
OUENC	Ouen Island, N	14.51	251	P	P	11 15 02.2	+1.6
DZM	Mont Dzumac	14.78	252	eP	P	11 15 03.8	+0.4
	119nm,1.4s						
DZM				eLR	LR	11 40 48.0	
	comp=Z,244nm,24.4s						
DZM	Mont Dzumac	14.78	252	P	P	11 15 04.7	+1.4
	2.9nm,0.3s,baz=88,slow=18,SNR=28						
DZM	Mont Dzumac	14.78	252	P	P	11 15 04.4	+1.1
DZM	Mont Dzumac	14.78	252	P	P	11 15 04.8	+1.4
ONTNC	Ouen Toro	14.83	251	P	P	11 15 05.3	+1.6
ONTNC	Ouen Toro	14.83	251	P	P	11 15 05.1	+1.4
NOUC	Port Laguerre	14.92	252	P	P	11 15 05.9	+1.4
KOUNC	Koumac, New Ca	16.54	259	P	P	11 15 21.9	+2.1
KNTN	Kanton	16.64	24	P	P	11 15 18.7	-2.1
KNTN	Kanton	16.64	24	P	P	11 15 19.3	-1.5
OUZ	Omahuta	18.41	201	P	P	11 15 41.0	+4.4
OUZ				IAmb	IAmb	11 15 49.4	
	comp=Z,35nm,0.9s						
GRZ	Great Barrier	18.81	196	P	P	11 15 43.4	+3.2
WCZ	Waipu Caves	18.83	199	P	P	11 15 43.8	+3.4
KUZ	Kuaotunu	19.21	195	P	P	11 15 46.2	+2.3
MXZ	Matakaoa Point	19.53	188	P	P	11 15 48.7	+2.0
WMGZ	Waiomatatini S	19.77	188	P	P	11 15 44.9	-3.9
HAZ	Te Kaha	19.79	189	P	P	11 15 50.4	+1.3
HAZ				S	S	11 18 51.9	-5.5
RUGZ	Raukumara Rang	20.01	189	P	P	11 15 50.6	-0.6
RUGZ				S	S	11 18 58.9	-2.3
PUZ	Puketiti	20.03	188	P	P	11 15 53.3	+2.0
PUZ				S	S	11 19 01.6	+0.3
TGRZ	Tauranga	20.03	193	P	P	11 15 57.7	+6.4
TWGZ	Tauwhareparae	20.17	188	P	P	11 15 54.8	+2.2
TWGZ				S	S	11 19 00.5	-3.1
TOZ	Tahuroa Road	20.20	194	P	P	11 16 00.2	+7.4
URZ	Urewera	20.39	190	P	P	11 15 54.6	+0.1
	comp=Z,7.7nm,0.5s,baz=303,slow=22,SNR=14						
URZ				S	S	11 19 01.7	-5.1
	comp=Z,13nm,0.9s,baz=306,slow=19,SNR=2.9						
URZ	Urewera	20.39	190	P	P	11 15 54.2	-0.3
URZ				S	S	11 19 01.6	-5.2
URZ	Urewera	20.39	190	P	P	11 15 55.3	+0.8
URZ	Urewera	20.39	190	P	P	11 15 55.3	+0.8
TKGZ	Te Karaka	20.45	189	P	P	11 15 58.5	+3.4
RAGZ	Rawiri	20.57	189	P	P	11 15 58.9	+2.6
MUGZ	Murupara	20.66	191	P	P	11 15 58.1	+1.1
MUGZ				S	S	11 19 08.9	-2.3
RIGZ	Rimuhau	20.73	189	P	P	11 15 59.4	+1.8
RIGZ				S	S	11 19 08.6	-3.7
RTZ	Ruatahuna	20.76	190	P	P	11 15 58.2	+0.2
HIZ	Hauiti	21.10	195	P	P	11 16 02.7	+1.8
NMHZ	Naumai	21.26	190	P	P	11 16 04.6	+2.2
BKZ	Black Stump Fm	21.38	191	P	P	11 16 03.7	+0.3
BKZ				S	S	11 19 13.7	-8.9
BKZ	Black Stump Fm	21.38	191	P	P	11 16 03.1	-0.3
BKZ				IAmb	IAmb	11 16 16.9	
	comp=Z,8.7nm,0.6s						
BKZ	Black Stump Fm	21.38	191	P	P	11 16 03.8	+0.3
MCHZ	McNeill Hill	21.61	190	P	P	11 16 06.8	+1.3
MCHZ				S	S	11 19 24.5	-1.8
KWHZ	Kaweka Forest	21.64	191	P	P	11 16 07.2	+1.3
KWHZ				S	S	11 19 27.4	+0.6
LREZ	Lake Rotokare	22.11	195	P	P	11 16 18.0	+8.0
TSZ	Takapari Road	22.34	192	P	P	11 16 13.2	+1.1
TSZ				S	S	11 19 28.3	-9.5
HNR	Honiara	22.77	290	P	P	11 16 15.6	-0.5
	comp=Z,49nm,0.6s,baz=24,slow=1.3,SNR=5.0						
HNR	Honiara	22.77	290	P	P	11 16 13.3	-2.8
BFZ	Birch Farm	22.90	191	P	P	11 16 19.4	+2.4
BFZ	Birch Farm	22.90	191	P	P	11 16 19.6	+2.7
BFZ				IAmb	IAmb	11 16 30.1	
	comp=Z,32nm,1.1s						
BFZ	Birch Farm	22.90	191	P	P	11 16 19.4	+2.4
BHW	Baring Head	23.86	193	P	P	11 16 26.9	+1.4
QRZ	Quartz Range	23.89	197	P	P	11 16 28.6	+2.9
QRZ				IAmb	IAmb	11 16 35.1	
	comp=Z,25nm,0.9s						
QRZ	Quartz Range	23.89	197	P	P	11 16 27.4	+1.7
KHZ	Kahutara	25.12	194	P	P	11 16 37.1	+0.6
RPZ	Rata Peaks	26.97	197	P	P	11 16 54.3	+1.4
ODZ	Otahua Downs	28.31	197	P	P	11 17 05.7	+1.2
WKZ	Wanaka	28.59	199	P	P	11 17 07.9	+1.0
EIDS	Eidsvold	29.22	250	P	P	11 17 13.2	+0.5
	baz=29,SNR=20						
EIDS	Eidsvold	29.22	250	P	P	11 17 13.3	+0.6
EIDS	Eidsvold	29.22	250	P	P	11 17 13.4	+0.7
RK1H	Rockhampton Ha	29.54	255	P	P	11 17 16.1	+0.6
ARMA	Armidale	29.84	240	P	P	11 17 20.0	+1.8
	baz=30,SNR=34						
ARMA	Armidale	29.84	240	P	P	11 17 20.0	+1.8
ARMA	Armidale	29.84	240	P	P	11 17 19.9	+1.8
MGCD	Mangrove Creek	31.17	235	P	P	11 17 31.5	+2.2
	baz=31,SNR=12						
MGCD	Mangrove Creek	31.17	235	P	P	11 17 31.5	+2.2
RMQ	Roma	31.45	249	P	P	11 17 33.2	+1.5
	baz=32,SNR=58						
RMQ	Roma	31.45	249	P	P	11 17 33.3	+1.5
CNB	Canberra Magne	33.30	233	P	P	11 17 49.4	+2.0
	baz=34,SNR=78						
CNB	Canberra Magne	33.30	233	P	P	11 17 49.6	+2.2
CTA	Charters Tower	33.45	261	P	P	11 17 49.3	+0.5
CTAO	Charters Tower	33.45	261	P	P	11 17 49.3	+0.5
CTAO	Charters Tower	33.45	261	P	P	11 17 49.4	+0.5
CAN	Canberra	33.57	233	P	P	11 17 51.7	+2.0
CAN	Canberra	33.57	233	P	P	11 17 51.5	+1.8
PMG	Port Moresby	34.55	280	P	P	11 17 59.3	+1.2
PMG	Port Moresby	34.55	280	P	P	11 17 59.3	+1.2
PMG	Port Moresby	34.55	280	P	P	11 17 59.3	+1.2
CMSA	Cobar Meteorol	35.05	241	P	P	11 18 03.4	+1.3
	baz=35,SNR=75						
CMSA	Cobar Meteorol	35.05	241	P	P	11 18 03.4	+1.3
MTSU	Mount Surprise	35.42	264	P	P	11 18 05.6	+0.3
	baz=35,SNR=53						
MTSU	Mount Surprise	35.42	264	P	P	11 18 05.7	+0.3
QLP	Quilpie	35.48	250	P	P	11 18 06.6	+1.0
	baz=36,SNR=4.1						
QLP	Quilpie	35.48	250	P	P	11 18 06.5	+0.9
GLAD	Gladstone	36.69	225	P	P	11 18 17.0	+1.7
TOO	Toolangi	37.03	231	P	P	11 18 20.1	+1.8
	baz=37,SNR=23						
TOO	Toolangi	37.03	231	P	P	11 18 20.1	+1.8
TOO	Toolangi	37.03	231	P	P	11 18 20.0	+1.7
COEN	Coen	37.15	271	P	P	11 18 20.5	+1.0
COEN	Coen	37.15	271	P	P	11 18 20.2	+0.7
TAU	Tasmania Unive	38.07	222	P	P	11 18 28.0	+1.4
TAU				IAmb	IAmb	11 18 51.2	
	comp=Z,42nm,1.1s						
BRAT	Ballarat	38.18	232	P	P	11 18 30.0	+2.4
STKA	Stephens Creek	38.54	241	P	P	11 18 32.2	+1.7
	comp=Z,58nm,0.8s,baz=93,slow=10,SNR=79						
STKA	Stephens Creek	38.54	241	P	P	11 18 32.3	+1.7
	baz=39,SNR=64						
STKA	Stephens Creek	38.54	241	P	P	11 18 32.3	+1.7
STKA				IAmb	IAmb	11 18 33.1	
	comp=Z,15nm,0.9s						
STKA	Stephens Creek	38.54	241	P	P	11 18 32.1	+1.5
INKA	Innaminka	38.69	248	P	P	11 18 33.5	+1.7
ARPS	Mount Arapiles	39.52	234	P	P	11 18 39.8	+1.4
	baz=40,SNR=7.1						
ARPS	Mount Arapiles	39.52	234	P	P	11 18 39.5	+1.1
QIS	Mount Isa	39.65	260	P	P	11 18 39.4	-0.2
	baz=40,SNR=11						
QIS	Mount Isa	39.65	260	P	P	11 18 39.6	-0.1
HTT	Hallett	41.05	240	P	P	11 18 52.0	+1.4
	baz=41,SNR=24						
HTT	Hallett	41.05	240	P	P	11 18 52.0	+1.4
LCRK	Leigh Creek	41.18	244	P	P	11 18 52.6	+0.9
NAPP	Napperby	41.64	240	P	P	11 18 57.0	+1.8
TWOA	Tennyson Woods	41.65	237	P	P	11 18 56.1	+0.8
JAY	Jayapura	43.03	286	P	P	11 19 06.4	0.0
	comp=Z,670nmcomp=Z,83nm,0.9s						
OOD	Oodnadatta	43.16	249	P	P	11 19 08.5	+1.3
BBOO	Buckleboo	43.31	241	P	P	11 19 09.3	+1.0
	baz=43,SNR=51						
BBOO	Buckleboo	43.31	241	P	P	11 19 09.4	+1.0
BBOO	Buckleboo	43.31	241	P	P	11 19 09.2	+0.8
KHU	Kahuku	43.39	32	P	P	11 19 09.8	+0.4
GENI	Genyem	43.49	286	P	P	11 19 09.5	-0.4
	comp=Z,2µmcomp=Z,173nm,0.8s						
KHLU	Kahalu`u	43.54	32	P	P	11 19 10.9	+0.6
MLH	Mauna Loa	43.71	32	P	P	11 19 12.6	+0.8
HMH	Humu‘ula Sheep	43.76	32	P	P	11 19 12.4	+0.2
HPAH	Hawaii Prepara	44.01	31	P	P	11 19 14.0	+0.1
DHH	Diamond Head	44.08	28	P	P	11 19 14.8	+0.5
WMR	Waimanalo Ridg	44.18	28	P	P	11 19 15.2	+0.2
KHLH	Kahului Airpor	44.39	30	P	P	11 19 16.7	0.0
WR0	Warramunga Arr	44.44	260	P	P	11 19 16.6	-0.6
WR0				IAmb	IAmb	11 19 18.6	
	comp=Z,19nm,0.8s						
WB0	Warramunga Arr	44.59	260	P	P	11 19 18.1	-0.3
WB2	Warramunga Arr	44.62	260	P	P	11 19 17.8	-0.9
WRAB	Tennant Creek	44.62	260	P	P	11 19 18.2	-0.4
WRAB	Tennant Creek	44.62	260	P	P	11 19 18.2	-0.4
WRA	Warramunga Arr	44.63	260	P	P	11 19 17.9	-0.7
	comp=Z,40nm,0.7s,baz=96,slow=7.0,SNR=234						
WRA				PcP	PcP	11 20 48.7	-0.1
	comp=Z,5.0nm,0.7s,baz=93,slow=3.3,SNR=4.7						
WRA				ScP	ScP	11 23 46.5	+0.2
	comp=Z,2.7nm,1.1s,baz=96,slow=3.4,SNR=4.6						
WRA				S	S	11 25 07.8	-5.8
	comp=Z,1.0nm,0.7s,baz=102,slow=13,SNR=5.0						
WRA	Warramunga Arr	44.63	260	P	P	11 19 18.1	-0.6
MULG	Mulgathing	44.74	245	P	P	11 19 20.1	+0.7
AS31	Alice Springs	44.76	255	P	P	11 19 20.1	+0.5
ASAR	Alice Springs	44.76	254	P	P	11 19 20.1	+0.5
	comp=Z,209nm,0.7s,baz=88,slow=8.5,SNR=1936						
ASAR				PcP	PcP	11 20 49.4	+0.2
	comp=Z,7.2nm,0.6s,baz=104,slow=3.8,SNR=5.3						
ASAR				ScP	ScP	11 23 48.3	+1.4
	comp=Z,1.8nm,0.7s,baz=104,slow=4.3,SNR=4.8						
ASAR				S	S	11 25 12.6	-2.9
	comp=Z,1.5nm,0.6s,baz=88,slow=16,SNR=6.4						
SMPI	Sarmi	45.06	286	P	P	11 19 21.4	-0.6
	comp=Z,2µmcomp=Z,54nm,0.8s						
KDU	Kakadu	47.60	269	P	P	11 19 40.8	-0.3
	baz=48,SNR=72						
KDU	Kakadu	47.60	269	P	P	11 19 41.3	+0.1
GUMO	Guam	48.08	309	P	P	11 19 43.2	-1.5
	comp=Z,143nm,0.8s,baz=187,slow=10,SNR=3.6						
MTN	Manton Dam	48.84	269	P	P	11 19 49.7	-0.6
	baz=49,SNR=49						
MTN	Manton Dam	48.84	269	P	P	11 19 49.8	-0.6
MTN	Manton Dam	48.84	269	P	P	11 19 50.0	-0.4
DRS	Darwin Rock St	49.15	269	P	P	11 19 52.3	-0.4
WRKA	Warakurna	49.80	252	P	P	11 19 57.7	+0.3
	baz=50,SNR=510						
WRKA	Warakurna	49.80	252	P	P	11 19 57.6	+0.2
FORT	Forrest	49.93	245	P	P	11 19 58.3	0.0
	baz=50,SNR=53						
FORT	Forrest	49.93	245	P	P	11 19 58.1	-0.1
FORT	Forrest	49.93	245	P	P	11 19 58.2	0.0
KNRA	Kununurra	50.51	264	P	P	11 20 02.4	-0.1
	baz=50,SNR=47						
KNRA	Kununurra	50.51	264	P	P	11 20 02.2	-0.4
KNRA	Kununurra	50.51	264	P	P	11 20 02.5	-0.1
FAKI	Fak Fak	50.68	281	P	P	11 20 03.4	-0.5
	comp=Z,23nm,1.3s						
FAKI	Fak Fak	50.68	281	P	P	11 20 03.5	-0.5
FAKI				IAmb	IAmb	11 20 05.3	
	comp=Z,15nm,0.9s						
FAKI	Fak Fak	50.68	281	P	P	11 20 03.6	-0.3
SWI	Sorong	52.35	283	P	P	11 20 15.6	-0.3
	comp=Z,2µmcomp=Z,246nm,0.8s						
MSAI	Masohi	53.63	279	P	P	11 20 25.1	+0.1
	comp=Z,978nmcomp=Z,18nm,0.5s						
AAI	Ambon	54.20	279	P	P	11 20 27.4	-1.7
	comp=Z,2µmcomp=Z,114nm,0.5s						
LBMI	Labuha	55.92	282	P	P	11 20 40.8	-0.2
	comp=Z,49nm,0.8s						
SOEI	Soe	56.12	270	P	P	11 20 43.1	+0.6
	comp=Z,164nm,0.8s						
SOEI	Soe	56.12	270	P	P	11 20 43.2	+0.7
TNTI	Ternate	56.57	283	P	P	11 20 45.1	-0.4
BATI	Baumata	56.57	270	P	P	11 20 44.0	-1.5
	comp=Z,39nm,0.7s						
SANI	Sanana	56.83	280	P	P	11 20 46.8	-0.5
	comp=Z,793nmcomp=Z,85nm,0.8s						
SANI	Sanana	56.83	280	P	P	11 20 46.9	-0.4
PSA00	Pilbara Seismi	57.88	256	P	P	11 20 53.9	-0.4
PSA00				IAmb	IAmb	11 20 54.9	
	comp=Z,54nm,0.8s						
PSA00	Pilbara Seismi	57.88	256	P	P	11 20 53.6	-0.7
PSA00				IAmb	IAmb	11 20 55.0	
	comp=Z,28nm,0.8s						
PSA00	Pilbara Seismi	57.88	256	P	P	11 20 54.1	-0.2
MBWA	Marble Bar	58.05	256	P	P	11 20 55.3	-0.1
MMRI	Maumere	58.35	271	P	P	11 20 56.4	-1.1
MMRI				IAmb	IAmb	11 20 57.8	
	comp=Z,67nm,0.9s						
MEEK	Meekatharra	58.38	250	P	P	11 20 57.3	-0.3
	baz=58,SNR=18						
MEEK	Meekatharra	58.38	250	P	P	11 20 57.3	-0.3
KLBR	Kellerberrin	58.75	244	P	P	11 20 59.9	0.0
	baz=59,SNR=28						
KLBR	Kellerberrin	58.75	244	P	P	11 21 00.2	+0.2
EDFI	Ende, Flores	58.84	271	P	P	11 20 59.7	-1.2
	comp=Z,331nmcomp=Z,39nm,0.9s						
NWAO	Narrogin (SRO)	59.12	242	P	P	11 21 02.8	+0.4
KMSI	Cibinong	59.64	282	P	P	11 21 06.4	+0.3
	comp=Z,94nm,0.8s						
BLDU	Ballidu	59.70	245	P	P	11 21 06.2	-0.1
	baz=60,SNR=30						
BLDU	Ballidu	59.70	245	P	P	11 21 06.3	-0.1
MUN	Mundaring	60.04	243	P	P	11 21 09.2	+0.6
	baz=60,SNR=6.7						
MUN	Mundaring	60.04	243	P	P	11 21 09.3	+0.7
MORW	Morawa	60.41	246	P	P	11 21 11.1	0.0
	baz=60,SNR=4.9						
MORW	Morawa	60.41	246	P	P	11 21 11.1	0.0
MORW				IAmb	IAmb	11 21 11.8	
	comp=Z,19nm,0.8s						
MORW	Morawa	60.41	246	P	P	11 21 11.1	0.0
GTOI	Gorontalo	60.56	281	P	P	11 21 13.5	+1.2
	comp=Z,234nmcomp=Z,21nm,0.7s						
WBSI	Waikabubak, Su	60.78	269	P	P	11 21 13.2	-0.6
	comp=Z,42nm,0.8s						
APSI	Ampana	61.29	279	P	P	11 21 18.1	+1.0
	comp=Z,703nmcomp=Z,70nm,1.0s						
BKSI	Bulukumba	61.31	274	P	P	11 21 16.2	-1.0
	comp=Z,19nm,0.7s						
MRSI	Marisa	61.51	281	P	P	11 21 18.5	+0.1
	comp=Z,47nm,0.9s						
BNSI	Bone	61.61	275	P	P	11 21 19.7	+0.6
	comp=Z,514nmcomp=Z,43nm,1.1s						
KAPI	Kappang	61.76	274	P	P	11 21 19.9	-0.2
SPSI	Sidrap Palu	62.06	275	P	P	11 21 21.6	-0.5
	comp=Z,31nm,0.9s						
TTSI	Tana Toraja	62.31	276	P	P	11 21 24.7	+1.0
	comp=Z,12nm,0.8s						
PLAI	Plampang	62.54	269	P	P	11 21 24.8	-0.3
	comp=Z,968nmcomp=Z,114nm,0.9s						
PLAI	Plampang	62.54	269	P	P	11 21 24.8	-0.3
TOLI2	Tolitoli	62.81	281	P	P	11 21 26.5	-0.4
TOLI2				IAmb	IAmb	11 21 27.4	
	comp=Z,22nm,0.9s						
TOLI2	Tolitoli	62.81	281	P	P	11 21 26.6	-0.3
GIRL	Giralia	62.86	253	P	P	11 21 28.3	+1.2
	baz=63,SNR=10						
GIRL	Giralia	62.86	253	P	P	11 21 28.1	+1.0
MPSI	Mapaga	63.37	280	P	P	11 21 30.3	-0.1
	comp=Z,48nm,0.8s						
TWSI	Taliwang, Sumb	63.41	269	P	P	11 21 30.4	-0.3
	comp=Z,610nmcomp=Z,70nm,0.8s						
IGBI	Denpasar	65.04	269	P	P	11 21 41.2	+0.2
	comp=Z,105nm,0.7s						
SRBI	Singaraja	65.18	269	P	P	11 21 41.5	-0.4
JAGI	Jajag, Banyuwa	66.08	269	P	P	11 21 46.4	-1.1
JAGI	Jajag, Banyuwa	66.08	269	P	P	11 21 46.3	-1.2
MYLDM	Lahad Datu	66.42	284	P	P	11 21 50.2	+0.6
MYLDM				IAmb	IAmb	11 22 03.8	
	comp=Z,17nm,0.8s						
SPMM	Sapulut	68.13	283	P	P	11 22 01.0	+0.9
MJAR	Matsushiro Arr	68.16	323	P	P	11 21 58.8	-1.0
	comp=Z,3.4nm,0.6s,baz=157,slow=6.3,SNR=7.6						
MAT	Matsushiro	68.16	323	P	P	11 21 59.0	-0.8
MAT	Matsushiro	68.16	323	P	P	11 22 04.8	+5.0
KKM	Kota Kinabalu	68.85	284	P	P	11 22 04.5	-0.1
KKM				IAmb	IAmb	11 22 05.2	
	comp=Z,22nm,0.7s						
UGM	Wanagama	69.68	268	P	P	11 22 09.4	0.0
UGM	Wanagama	69.68	268	P	P	11 22 09.4	0.0
KIWB	Kanaga Island	69.75	1	P	P	11 22 08.1	-0.8
ADK	Adak	69.78	1	P	P	11 22 08.4	-0.6
ADK				IAmb	IAmb	11 22 17.9	
	comp=Z,31nm,0.9s						
ADK	Adak	69.78	1	P	P	11 22 08.0	-1.1
JHS	Saijyo	70.13	319	P	P	11 22 12.2	+0.5
JHS				IAmb	IAmb	11 22 12.7	
	comp=Z,41nm,1.0s						
ATKA	Atka Island	70.18	3	P	P	11 22 10.1	-1.3
ATKA	Atka Island	70.18	3	P	P	11 22 10.0	-1.4
SBUM	Sibu	71.29	279	P	P	11 22 20.0	+1.1
SBUM	Sibu	71.29	279	P	P	11 22 19.4	+0.5
TWG	Pinlang	71.86	302	P	P	11 22 20.4	-1.5
TWG				IAmb	IAmb	11 22 40.6	
	comp=Z,55nm,1.4s						
QSPA	South Pole Qui	71.87	180	P	P	11 22 23.7	+2.2
YULB	Yu-li	71.96	303	P	P	11 22 21.4	-1.2
YULB				IAmb	IAmb	11 22 33.0	
	comp=Z,22nm,1.0s						
SSLB	Suanglung	72.42	303	P	P	11 22 24.1	-1.1
SSLB				IAmb	IAmb	11 22 24.6	
	comp=Z,24nm,0.6s						
SSLB	Suanglung	72.42	303	P	P	11 22 24.0	-1.3
TPUB	Ta-pu	72.44	302	P	P	11 22 24.2	-1.2
TPUB	Ta-pu	72.44	302	P	P	11 22 24.1	-1.3
UNV	Unalaska Valle	72.46	7	P	P	11 22 23.5	-1.2
UNV				IAmb	IAmb	11 22 50.9	
	comp=Z,35nm,1.0s						
KSM	Kuching	72.77	277	P	P	11 22 28.0	+0.6
KSM	Kuching	72.77	277	P	P	11 22 28.1	+0.6
KSM	Kuching	72.77	277	P	P	11 22 28.3	+0.9
PEA0B	Petropavlovsk-	73.96	345	P	P	11 22 33.5	+0.2
PEA0B				IAmb	IAmb	11 22 56.4	
	comp=Z,28nm,1.2s						
PETK	Petropavlovsk-	73.96	345	P	P	11 22 33.0	-0.3
	comp=Z,4.8nm,0.7s,baz=125,slow=7.5,SNR=13						
KSRS	Korea Array	74.94	318	P	P	11 22 39.4	+0.3
	comp=Z,1.7nm,0.7s,baz=126,slow=5.9,SNR=2.8						
PKM	Mcpherson Peak	76.63	46	P	P	11 22 49.9	+1.1
	baz=237						
SII	Sitkinak Islan	77.18	13	P	P	11 22 50.2	-0.9
ARVC	Arvin	77.44	46	P	P	11 22 53.5	+0.5
	baz=237						
109C	Camp Elliot, M	77.47	49	P	P	11 22 54.0	+0.9
	baz=239						
CBX	Cerro Bola	77.49	50	P	P	11 22 54.9	+1.4

MWC	Mount Wilson	77.49	47	P	P	11 22 54.2	+0.7
MWC				IAmb	IAmb	11 22 54.9	
	comp=Z,22nm,0.7s						
VES	Vestal, Richgr	77.66	46	P	P	11 22 54.5	+0.4
	baz=237,SNR=8.2						
O02D	Mt. Diablo Mer	77.73	40	P	P	11 22 55.9	+1.4
	baz=234						
MURC	Murrieta	77.77	48	P	P	11 22 55.5	+0.7
	baz=239						
BFSC	Mount Baldy Ra	77.78	48	P	P	11 22 55.6	+0.6
	baz=238						
EDW2	Edwards Air Fo	77.89	47	P	P	11 22 56.3	+0.9
	baz=238,SNR=13						
MONP2	Monument Peak	77.96	49	P	P	11 22 57.2	+1.1
	baz=239						
ISA	Isabella, Lake	77.97	46	P	P	11 22 57.0	+1.0
ISA				IAmb	IAmb	11 22 57.8	
	comp=Z,24nm,0.9s						
ISA	Isabella, Lake	77.97	46	P	P	11 22 56.5	+0.5
	baz=238,SNR=17						
CMB	Columbia Colle	78.01	43	P	P	11 22 56.8	+0.7
IKP	In-Ko-Pah, Jac	78.06	50	P	P	11 22 57.7	+1.2
	baz=240						
NJ2	Nanjing	78.15	310	*e*P	P	11 22 58.0	+1.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ORV	Oroville	78.17	41	P	P	11 22 56.2	-0.6
SFX	San Felipe	78.18	52	P	P	11 22 58.3	+1.3
N02D	Trinity Center	78.26	40	P	P	11 22 58.5	+1.2
	baz=234						
PFO	Pinyon Flats O	78.30	49	P	P	11 22 58.9	+1.1
	baz=239						
TPFO	Pinon Flats	78.30	49	P	P	11 22 58.6	+0.8
	baz=239						
O03E	Paynes Creek	78.41	41	P	P	11 22 58.8	+0.7
	baz=234						
M02C	Callahan	78.42	39	P	P	11 22 59.3	+1.2
	baz=233						
LRMC	Laurel Mtn Rad	78.42	47	P	P	11 22 59.5	+1.1
	baz=238						
SWSC	Sam W. Stewart	78.44	50	P	P	11 22 59.4	+1.1
	baz=240						
L02E	Cave Junction	78.44	38	P	P	11 22 59.3	+1.1
	baz=233						
SLBS	Sierra La Lagu	78.66	60	P	P	11 23 01.6	+1.8
KDAK	Kodiak Island	78.66	14	P	P	11 22 58.4	-0.5
	comp=Z,15nm,0.7s,baz=236,slow=6.7,SNR=6.0						
CWC	Cottonwood Cre	78.66	46	P	P	11 23 00.6	+0.9
	baz=238						
YBH	Yreka Blue Hor	78.71	39	P	P	11 23 00.8	+1.1
	comp=Z,13nm,0.6s,baz=196,slow=2.8,SNR=27						
YBH	Yreka Blue Hor	78.71	39	P	P	11 23 01.0	+1.2
YBH				IAmb	IAmb	11 23 01.7	
	comp=Z,18nm,0.8s						
MLAC	Mammoth, Mammo	78.80	44	P	P	11 23 02.1	+1.6
	baz=237						
MPMC	Manual Prospec	78.86	46	P	P	11 23 01.3	+0.5
	baz=238,SNR=8.1						
TIN	Tinemaha, Big	78.89	45	P	P	11 23 02.2	+1.4
	baz=237						
GSC	Goldstone, Bar	78.94	47	P	P	11 23 02.0	+1.0
	baz=239						
HEC	Hector,Ludlow	79.02	48	P	P	11 23 02.5	+1.0
	baz=239						
BC3	Big Chuckawall	79.05	49	P	P	11 23 03.0	+1.2
	baz=240						
PNTR	Pine Nut	79.11	43	P	P	11 23 03.0	+0.9
PNTR				IAmb	IAmb	11 23 03.9	
	comp=Z,35nm,0.9s						
VCNR	Virginia City	79.19	42	P	P	11 23 03.0	+0.5
GLA	Glamis	79.20	50	P	P	11 23 03.8	+1.4
GLA				IAmb	IAmb	11 23 04.8	
	comp=Z,26nm,1.1s						
GLA	Glamis	79.20	50	P	P	11 23 04.1	+1.7
	baz=240						
QSM	Queen of Sheba	79.24	47	P	P	11 23 03.3	+0.7
L04D	Klamath Falls	79.24	39	P	P	11 23 03.4	+0.8
	baz=234						
M04C	Macdoel	79.26	39	P	P	11 23 03.7	+1.0
	baz=234						
YERR	Yerington	79.29	43	P	P	11 23 03.7	+0.7
YERR				IAmb	IAmb	11 23 04.7	
	comp=Z,34nm,1.1s						
LHV	Little Huntoon	79.36	44	P	P	11 23 04.0	+0.9
LHV				IAmb	IAmb	11 23 05.3	
	comp=Z,21nm,0.9s						
LCH	Last Change Ra	79.38	45	P	P	11 23 04.1	+0.6
GMRC	Granite Mounta	79.47	48	P	P	11 23 04.7	+0.8
	baz=240						
GWY	Greenwater Val	79.49	46	P	P	11 23 04.3	+0.2
FURC	Furnace Creek,	79.51	46	P	P	11 23 04.2	+0.3
	baz=238,SNR=5.2						
IRM	Iron Mountain	79.52	49	P	P	11 23 04.9	+0.8
	baz=240						
RYN	Ryan	79.56	44	P	P	11 23 05.4	+1.0
P18K	Big Mountain,	79.58	12	P	P	11 23 02.5	-1.3
P18K				IAmb	IAmb	11 23 03.5	
	comp=Z,29nm,0.8s						
P18K	Big Mountain,	79.58	12	P	P	11 23 03.3	-0.5
	baz=202,SNR=6.8						
NVAR	Mina Array Bea	79.59	44	P	P	11 23 05.3	+0.7
	comp=Z,12nm,0.8s,baz=224,slow=8.7,SNR=68						
PAHR	Pah Rah Range	79.60	42	P	P	11 23 05.3	+0.8
PAHR				IAmb	IAmb	11 23 06.2	
	comp=Z,24nm,1.2s						
SHOC	Shoshone, Teco	79.61	47	P	P	11 23 05.4	+0.8
	baz=239						
TUQ	Turquoise Moun	79.62	47	P	P	11 23 06.1	+1.3
	baz=239						
NV11	Mina Array Sit	79.69	44	P	P	11 23 05.8	+0.7
J04D	Umpqua Nationa	79.97	38	P	P	11 23 07.7	+1.2
	baz=234						
O18K	Koktuh Hills	80.01	12	P	P	11 23 05.3	-0.7
O18K				IAmb	IAmb	11 23 06.1	
	comp=Z,44nm,0.9s						
O18K	Koktuh Hills	80.01	12	P	P	11 23 05.4	-0.6
	baz=202						
KVN	Kaiserville	80.06	43	P	P	11 23 07.5	+0.4
TPH	Tonopah	80.12	45	P	P	11 23 08.2	+0.9
I04A	Tendick Farm,	80.12	38	P	P	11 23 07.5	+0.4
	baz=233						
214A	Organ Pipe Nat	80.15	52	P	P	11 23 08.8	+1.4
214A	Organ Pipe Nat	80.15	52	P	P	11 23 09.1	+1.7
	baz=242						
MOD	Modoc Plateau	80.27	40	P	P	11 23 08.7	+0.8
MOD				IAmb	IAmb	11 23 09.5	
	comp=Z,20nm,0.7s						
CN2	Changchun	80.27	322	*e*P	P	11 23 08.3	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PDMCI	Parker Dam,Lak	80.31	49	P	P	11 23 09.6	+1.4
	baz=240						
H04D	Lebanon	80.38	37	P	P	11 23 09.4	+1.2
	baz=233						
G03D	McMinnville, O	80.50	36	P	P	11 23 08.9	0.0
	baz=232						
O19K	Port Alsworth	80.50	12	P	P	11 23 07.6	-0.9
O19K	Port Alsworth	80.50	12	P	P	11 23 07.3	-1.2
	baz=203,SNR=8.7						
J05D	Fort Rock, OR	80.51	38	P	P	11 23 10.1	+0.9
	baz=234						
SHPR	Sheep Range	80.70	47	P	P	11 23 11.2	+0.8
BRSE	Bradley Lake S	80.84	14	P	P	11 23 09.9	-0.5
	baz=207						
JRMM	Jerantut	80.94	277	P	P	11 23 13.0	+1.1
PINE	Pine Mountain	80.98	38	P	P	11 23 12.5	+0.8
N19K	Bonanza Creek	81.04	12	P	P	11 23 10.3	-1.2
	baz=203						
I05D	Terrebonne, OR	81.07	38	P	P	11 23 12.3	+0.4
	baz=234						
F04D	Rainier, OR	81.17	35	P	P	11 23 12.5	+0.1
	baz=232						
R11A	Troy Canyon, C	81.36	45	P	P	11 23 14.1	+0.3
R11A	Troy Canyon, C	81.36	45	P	P	11 23 14.2	+0.5
	baz=239						
BMN	Battle Mountai	81.38	43	P	P	11 23 14.7	+0.9
BMN				IAmb	IAmb	11 23 15.5	
	comp=Z,21nm,0.9s						
WVOR	Wild Horse Val	81.59	40	P	P	11 23 15.4	+0.7
WVOR				IAmb	IAmb	11 23 16.5	
	comp=Z,31nm,1.1s						
G05D	Wamic, OR	81.61	37	P	P	11 23 15.3	+0.6
	baz=234						
E04D	Cinebar	81.70	35	P	P	11 23 15.9	+0.8
	baz=233						
TUC	Tucson	81.83	52	P	P	11 23 17.4	+1.2
TUC				IAmb	IAmb	11 23 18.9	
	comp=Z,19nm,1.1s						
TUC	Tucson	81.83	52	P	P	11 23 17.7	+1.6
	baz=243						
F05D	White Salmon	81.92	36	P	P	11 23 16.7	+0.5
	baz=234						
I07A	Izee	81.99	39	P	P	11 23 17.6	+0.9
I07A				IAmb	IAmb	11 23 18.5	
	comp=Z,21nm,0.8s						
D03D	Eldon	82.02	34	P	P	11 23 17.0	+0.4
	baz=232						
M19K	Big River Lodg	82.07	11	P	P	11 23 15.9	-0.7
	baz=203						
J08A	Circle Bar Ran	82.20	40	P	P	11 23 18.7	+0.8
J08A				IAmb	IAmb	11 23 19.5	
	comp=Z,42nm,1.2s						
L19K	White Mountain	82.24	11	P	P	11 23 17.1	-0.3
L19K	White Mountain	82.24	11	P	P	11 23 17.8	+0.3
	baz=203						
RC01	Rabbit Creek A	82.28	14	P	P	11 23 17.1	-0.5
	baz=208						
LCMT	Little Creek M	82.28	47	P	P	11 23 19.4	+1.0
LCMT				IAmb	IAmb	11 23 20.3	
	comp=Z,14nm,0.9s						
X16A	Lo Mia Camp, P	82.32	50	P	P	11 23 20.1	+1.4
X16A				IAmb	IAmb	11 23 21.1	
	comp=Z,18nm,1.0s						
PWL	Port Wells	82.39	14	P	P	11 23 17.1	-1.1
	baz=209						
CCUT	Cedar City	82.47	47	P	P	11 23 20.6	+1.2
CCUT				IAmb	IAmb	11 23 21.6	
	comp=Z,12nm,0.9s						
IPM	Ipoh	82.50	277	P	P	11 23 21.0	+1.1
IPM	Ipoh	82.50	277	P	P	11 23 20.1	+0.2
IPM				IAmb	IAmb	11 23 21.2	
	comp=Z,28nm,0.7s						
SPR3	Spring Creek 3	82.53	45	P	P	11 23 20.1	+0.2
BBB	Bella Bella	82.54	29	P	P	11 23 18.7	-0.4
	comp=Z,13nm,0.9s,baz=328,slow=5.0,SNR=3.5						
BBB	Bella Bella	82.54	29	P	P	11 23 19.4	+0.3
319A	Douglas	82.55	54	P	P	11 23 21.6	+1.7
319A				IAmb	IAmb	11 23 22.6	
	comp=Z,26nm,0.9s						
KNB	Kanab	82.58	47	P	P	11 23 21.1	+1.1
KNB				IAmb	IAmb	11 23 22.1	
	comp=Z,13nm,0.8s						
PSUT	Pine Spring	82.62	46	P	P	11 23 20.9	+0.7
PSUT				IAmb	IAmb	11 23 21.7	
	comp=Z,12nm,0.7s						
U15A	North Rim	82.67	48	P	P	11 23 21.9	+1.4
U15A				IAmb	IAmb	11 23 22.8	
	comp=Z,27nm,0.8s						
SZCU	Shurtz Canyon	82.68	47	P	P	11 23 21.4	+0.9
L20K	Farewell, AK	82.69	11	P	P	11 23 18.8	-0.9
	baz=204						
GLI	Glacier Island	82.71	15	P	P	11 23 18.9	-0.9
	baz=210						
TTA	Tatalina	82.74	10	P	P	11 23 19.7	-0.3
TTA				IAmb	IAmb	11 23 20.7	
	comp=Z,18nm,1.1s						
TTA	Tatalina	82.74	10	P	P	11 23 19.5	-0.5
	baz=202,SNR=5.3						
M22K	Willow	82.78	13	P	P	11 23 19.4	-0.7
	baz=207						
ELK	Elko	82.83	43	P	P	11 23 21.4	+0.3
KNK	Knik Glacier	82.85	14	P	P	11 23 19.8	-0.8
	baz=209						
PMR	Palmer	82.86	14	P	P	11 23 19.6	-0.9
PMR				IAmb	IAmb	11 23 20.2	
	comp=Z,36nm,1.4s						
PMR	Palmer	82.86	14	P	P	11 23 19.7	-0.8
	baz=208						
A04D	Lummi Island	82.95	33	P	P	11 23 21.7	+0.5
	baz=232						
B05A	Bryant	82.99	34	P	P	11 23 22.2	+0.7
	baz=233						
G08A	Pilot Rock	83.00	38	P	P	11 23 22.2	+0.4
G08A				IAmb	IAmb	11 23 23.2	
	comp=Z,40nm,1.4s						
GHO	Glory Hole Cre	83.06	14	P	P	11 23 21.0	-0.7
KULM	Kulim	83.12	278	P	P	11 23 24.0	+1.1
KULM	Kulim	83.12	278	P	P	11 23 23.4	+0.5
KULM				IAmb	IAmb	11 23 24.5	
	comp=Z,35nm,1.4s						
E07A	Sunnyside	83.21	36	P	P	11 23 23.6	+1.0
E07A				IAmb	IAmb	11 23 23.8	
	comp=Z,17nm,0.7s						
SML	Sawmill	83.23	14	P	P	11 23 21.5	-0.9
	baz=209						
DIV	Divide	83.25	15	P	P	11 23 22.1	-0.5
DIV				IAmb	IAmb	11 23 22.6	
	comp=Z,15nm,0.7s						
HAWA	Hanford	83.30	37	P	P	11 23 23.8	+0.7
HAWA				IAmb	IAmb	11 23 24.2	
	comp=Z,18nm,0.7s						
CUT	Chulitna	83.34	13	P	P	11 23 22.1	-0.8
CUT	Chulitna	83.34	13	P	P	11 23 21.6	-1.3
	baz=207,SNR=5.3						
PPLA	Purkeypile	83.39	12	P	P	11 23 22.4	-0.9
	baz=205						
BMRM	Bremner River	83.41	16	P	P	11 23 23.0	-0.4
	baz=212						
K20K	Telida	83.47	11	P	P	11 23 23.1	-0.5
K20K				IAmb	IAmb	11 23 23.8	
	comp=Z,19nm,0.8s						
K20K	Telida	83.47	11	P	P	11 23 22.9	-0.7
	baz=203						
X18A	Snowflake	83.47	51	P	P	11 23 25.4	+1.0
MESA	MESA	83.47	17	P	P	11 23 23.9	0.0
MESA	MESA	83.47	17	P	P	11 23 23.5	-0.3
	baz=215						
SCM	Sheep Creek Mo	83.48	14	P	P	11 23 23.0	-0.8
SCM	Sheep Creek Mo	83.48	14	P	P	11 23 22.8	-1.0
	baz=210,SNR=7.1						
KLU	Klutina	83.53	15	P	P	11 23 23.2	-0.7
	baz=211						
HPIG		83.53	59	P	P	11 23 25.7	+0.7
MAW	Mawson	83.62	200	P	P	11 23 25.8	+1.5
	comp=Z,3.8nm,0.5s,baz=147,slow=3.3,SNR=12						
MAW	Mawson	83.62	200	P	P	11 23 25.9	+1.5
	baz=84,SNR=9.4						
MAW	Mawson	83.62	200	P	P	11 23 25.7	+1.4
E08A	Dider Farm, El	83.62	37	P	P	11 23 25.2	+0.5
E08A				IAmb	IAmb	11 23 26.1	
	comp=Z,13nm,0.7s						
CRQE	Cirque	83.63	17	P	P	11 23 24.0	-0.6
	baz=214						
YAH	Yahtse	83.68	17	P	P	11 23 25.1	+0.1
YAH				IAmb	IAmb	11 23 25.7	
	comp=Z,21nm,0.8s						
TGL	Tana Glacier	83.70	17	P	P	11 23 24.7	-0.2
TGL				IAmb	IAmb	11 23 25.3	
	comp=Z,24nm,1.1s						
BMO	Blue Mountains	83.73	39	P	P	11 23 25.6	+0.2
WRAK	Wrangell Islan	83.74	24	P	P	11 23 24.7	-0.2
	baz=224						
MSU	Marysvale	83.75	46	P	P	11 23 26.9	+1.0
PNL	Peninsula	83.81	19	P	P	11 23 25.4	+0.1
	baz=217						
MFID	Camas Ranch	83.85	41	P	P	11 23 26.9	+0.8
CAST	Castle Rocks	83.89	12	P	P	11 23 23.6	-2.0
CAST				IAmb	IAmb	11 23 24.9	
	comp=Z,22nm,0.8s						
CAST	Castle Rocks	83.89	12	P	P	11 23 23.9	-1.7
	baz=205						
VRDI	Verde Repeater	83.93	16	P	P	11 23 25.4	-0.7
VRDI				IAmb	IAmb	11 23 26.3	
	comp=Z,22nm,1.2s						
N25K	Chitina, Valde	83.95	15	P	P	11 23 26.0	-0.1
N25K				IAmb	IAmb	11 23 26.0	
	comp=Z,17nm,0.7s						
N25K	Chitina, Valde	83.95	15	P	P	11 23 25.3	-0.7
	baz=212,SNR=6.5						
M24K	Tolsona, Glenn	83.99	15	P	P	11 23 26.5	+0.3
	baz=211						
GLB	Gilahina Butte	84.02	16	P	P	11 23 26.1	-0.2
GLB				IAmb	IAmb	11 23 26.5	
	comp=Z,16nm,0.6s						
D08A	Wollman Farm,	84.02	36	P	P	11 23 27.0	+0.3
D08A				IAmb	IAmb	11 23 27.7	
	comp=Z,15nm,0.8s						
WAT6	Susitna Watana	84.04	14	P	P	11 23 25.5	-1.1
	baz=209,SNR=8.7						
SEY	Seymchan	84.05	347	P	P	11 23 25.6	-0.8
	comp=Z,1.0nm,0.4s,baz=138,slow=5.9,SNR=17						
WAT1	Susitna Watana	84.08	13	P	P	11 23 25.7	-0.9
	baz=209						
DUG	Dugway, Tooele	84.14	45	P	P	11 23 27.8	+0.2
	baz=241						
MCARA	McCarthy VSAT	84.18	16	P	P	11 23 26.8	-0.3
	baz=214						
121A	Cookes Peak, D	84.20	53	P	P	11 23 29.5	+1.4
121A	Cookes Peak, D	84.20	53	P	P	11 23 29.2	+1.1
	baz=245,SNR=6.7						
J20K	Nowinta River	84.21	10	P	P	11 23 26.6	-0.5
J20K				IAmb	IAmb	11 23 27.6	
	comp=Z,9.8nm,0.8s						
J20K	Nowinta River	84.21	10	P	P	11 23 27.1	-0.1
	baz=203						
KTH	Kantishna Hill	84.24	12	P	P	11 23 25.8	-1.6
KTH				IAmb	IAmb	11 23 27.3	
	comp=Z,14nm,0.9s						
CHUM	Lake Minchumin	84.27	11	P	P	11 23 26.0	-1.4
	baz=205,SNR=6.4						
LOGN	Logan Glacier	84.27	17	P	P	11 23 27.1	-0.6
LOGN				IAmb	IAmb	11 23 28.1	
	comp=Z,18nm,1.0s						
TRF	Thorofare Moun	84.27	12	P	P	11 23 26.5	-1.2
TRF	Thorofare Moun	84.27	12	P	P	11 23 26.0	-1.7
	baz=207,SNR=17						
BARN	Barnard Glacie	84.28	17	P	P	11 23 27.4	-0.4
BARN				IAmb	IAmb	11 23 28.4	
	comp=Z,17nm,0.9s						
CTG	Chitna Glacier	84.29	17	P	P	11 23 27.1	-0.7
	baz=215,SNR=5.4						
CTGM	Chitina Glacie	84.29	17	P	P	11 23 27.6	-0.2
CTGM				IAmb	IAmb	11 23 28.2	
	comp=Z,15nm,0.9s						
GCSA	Galena City Sc	84.30	9	P	P	11 23 27.3	-0.3
	baz=201						
F10A	Beach Ranch, E	84.39	38	P	P	11 23 28.6	-0.1
F10A				IAmb	IAmb	11 23 30.2	
	comp=Z,28nm,0.9s						
ENH	Enshi	84.46	304	P	P	11 23 29.7	+0.4
ENH				IAmb	IAmb	11 23 30.7	
	comp=Z,21nm,0.8s						
HARP	HAARP	84.49	15	P	P	11 23 27.9	-0.7
	baz=212						
ZAIG	Zacatecas	84.49	64	P	P	11 23 31.7	+1.8
RND	Reindeer	84.53	13	P	P	11 23 27.9	-1.0
B08A	Colville Reser	84.54	35	P	P	11 23 29.0	-0.2
B08A				IAmb	IAmb	11 23 29.4	
	comp=Z,14nm,0.7s						
DHY	Denali Highway	84.56	14	P	P	11 23 28.4	-0.7
DHY				IAmb	IAmb	11 23 28.5	
	comp=Z,20nm,1.4s						
DHY	Denali Highway	84.56	14	P	P	11 23 28.1	-1.0
	baz=210						
PLID	Pearl Lake	84.64	39	P	P	11 23 30.0	0.0
Q16A	Castle Valley	84.64	46	P	P	11 23 29.4	-0.7
TMUT	Trail Mountain	84.79	46	P	P	11 23 32.0	+0.9
MCK	McKinley	84.80	13	P	P	11 23 28.8	-1.3
MCK				IAmb	IAmb	11 23 29.9	
	comp=Z,19nm,1.1s						
MCK	McKinley	84.80	13	P	P	11 23 28.6	-1.5
	baz=208,SNR=6.2						
C09A	Chrisman Ranch	84.81	36	P	P	11 23 30.4	-0.1
C09A				IAmb	IAmb	11 23 31.6	
	comp=Z,12nm,0.8s						
HLID	Hailey	84.81	41	P	P	11 23 31.5	+0.7
HLID				IAmb	IAmb	11 23 32.6	
	comp=Z,11nm,0.8s						
HLID	Hailey	84.81	41	P	P	11 23 30.9	+0.1
	baz=239,SNR=16						
PAX	Paxson	84.91	14	P	P	11 23 29.8	-1.0
PAX	Paxson	84.91	14	P	P	11 23 29.6	-1.1
	baz=211						
SKAG	Skagway	84.94	20	P	P	11 23 31.2	+0.4
	baz=221						
HVU	Hansel Valley	84.95	43	P	P	11 23 32.0	+0.4
M26K	Nabesna, AK	85.03	16	P	P	11 23 30.7	-0.6
M26K				IAmb	IAmb	11 23 32.4	
	comp=Z,17nm,1.1s						
M26K	Nabesna, AK	85.03	16	P	P	11 23 31.3	0.0
	baz=214						
CTU	Camp Tracy	85.09	44	P	P	11 23 32.9	+0.6
YUK6	Outpost Mounta	85.14	18	P	P	11 23 31.7	-0.4
	baz=218						
SRU	San Rafael Swe	85.17	46	P	P	11 23 33.3	+0.6
SRU				IAmb	IAmb	11 23 34.1	
	comp=Z,9.9nm,0.7s						
YUK3	Moose Creek	85.20	17	P	P	11 23 31.9	-0.4
	baz=216,SNR=13						
GYA	Guiyang	85.21	300	⇓P	P	11 23 34.2	+1.1
GYA				pmax	pmax		
	comp=Z,18nm,1.1s						
JLU	Jordanelle	85.25	45	P	P	11 23 33.5	+0.3
M27K	Edge Creek, AK	85.29	16	P	P	11 23 32.8	+0.2
M27K				IAmb	IAmb	11 23 33.5	
	comp=Z,28nm,1.2s						
M27K	Edge Creek, AK	85.29	16	P	P	11 23 32.5	-0.2
	baz=215						
HYT	Haines Junctio	85.30	19	P	P	11 23 32.8	+0.1
	baz=219						
YUK4	Talbot Arm	85.37	18	P	P	11 23 32.9	-0.2
	baz=218						
L26K	Log Cabin Wild	85.47	15	P	P	11 23 33.0	-0.4
L26K	Log Cabin Wild	85.47	15	P	P	11 23 32.8	-0.6
	baz=213						
I21K	Tanana	85.51	11	P	P	11 23 32.8	-0.6
	baz=205						
MLY	Manley	85.60	11	P	P	11 23 32.6	-1.4
MLY	Manley	85.60	11	P	P	11 23 32.1	-1.9
	baz=206,SNR=5.2						
P18A	Preston Nutter	85.61	46	P	P	11 23 35.3	+0.4
BVCY	Beaver Creek	85.61	17	P	P	11 23 33.7	-0.4
	baz=216,SNR=6.5						
WRH	Wood River Hil	85.63	13	P	P	11 23 33.4	-0.6
WRH				IAmb	IAmb	11 23 33.7	
	comp=Z,31nm,1.3s						
HWUT	Hardware Ranch	85.66	44	P	P	11 23 35.3	+0.3
MNTX	Cornudas Mount	85.70	55	P	P	11 23 36.2	+1.1
MNTX	Cornudas Mount	85.70	55	P	P	11 23 36.4	+1.2
	baz=246						
NEW	Newport	85.71	36	P	P	11 23 34.2	-0.6
	comp=Z,5.3nm,0.7s,baz=235,slow=4.6,SNR=16						
NEW	Newport	85.71	36	P	P	11 23 34.5	-0.4
NEW	Newport	85.71	36	P	P	11 23 34.7	-0.1
	baz=237						
RIDG	Independent Ri	85.71	14	P	P	11 23 33.7	-0.8
RIDG				IAmb	IAmb	11 23 34.6	
	comp=Z,15nm,1.0s						
H21K	Melozitna Rive	85.80	10	P	P	11 23 34.5	-0.4
	baz=204						
BCYI	Bear Canyon	85.82	41	P	P	11 23 36.5	+0.8
HDA	Harding Lake	85.82	13	P	P	11 23 34.0	-0.9
HDA				IAmb	IAmb	11 23 34.2	
	comp=Z,7.4nm,0.7s						
HDA	Harding Lake	85.82	13	P	P	11 23 33.6	-1.4
	baz=210,SNR=8.2						
DOT	Dot Lake	85.82	15	P	P	11 23 33.8	-1.2
DOT				IAmb	IAmb	11 23 35.1	
	comp=Z,8.1nm,0.8s						
CCB	Clear Creek Bu	85.84	13	P	P	11 23 33.5	-1.5
CCB				IAmb	IAmb	11 23 34.0	
	comp=Z,9.4nm,0.6s						
L27K	Beaver Creek,	85.89	16	P	P	11 23 35.0	-0.4
	baz=215						
I23K	Minto, Yukon-K	85.97	12	P	P	11 23 34.6	-1.0
	baz=208						
MDM	Murphy Dome	86.03	12	P	P	11 23 34.7	-1.3
MDM				IAmb	IAmb	11 23 35.4	
	comp=Z,15nm,1.1s						
TCOL	CIGO, UAF Yank	86.03	13	P	P	11 23 34.7	-1.2
TCOL	CIGO, UAF Yank	86.03	13	P	P	11 23 34.2	-1.7
	baz=209,SNR=5.2						
COLA	College	86.03	13	P	P	11 23 34.8	-1.1
COLA	College	86.03	13	P	P	11 23 34.9	-1.0
	baz=209						
DLBC	Dease Lake	86.07	23	P	P	11 23 35.7	-0.7
	comp=Z,4.7nm,0.7s,baz=238,slow=4.0,SNR=6.3						
TX31	Lajitas Ar. Si	86.10	58	P	P	11 23 38.9	+1.7
TX32	Lajitas Array	86.10	58	P	P	11 23 39.1	+1.8
TX32				IAmb	IAmb	11 23 40.1	
	comp=Z,20nm,0.9s						
TXAR	Lajitas Array	86.10	58	P	P	11 23 39.0	+1.7
	comp=Z,14nm,0.8s,baz=221,slow=5.8,SNR=62						
TXAR	Lajitas Array	86.10	58	P	P	11 23 38.9	+1.6
SCRK	Sand Creek	86.12	14	P	P	11 23 36.1	-0.5
SCRK	Sand Creek	86.12	14	P	P	11 23 35.8	-0.7
	baz=213						
IL31		86.14	13	P	P	11 23 35.3	-1.1

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IL31                                  IAmb      IAmb      11 23 36.1
       comp=Z,6.3nm,0.6s
ILAR   Eielson Array     86.14   13   P         P         11 23 35.0  -1.5
       comp=Z,3.9nm,0.4s,baz=220,slow=4.9,SNR=40
ILAR                                  PP        PP        11 27 01.6  -6.7
       comp=Z,1.0nm,0.9s,baz=216,slow=7.5,SNR=3.2
ANMO   Albuquerque       86.23   51   P         P         11 23 38.0  +0.2
ANMO   Albuquerque       86.23   51   P         P         11 23 38.4  +0.5
       baz=245
POKR   Poker Plat Res    86.33   13   P         P         11 23 35.8  -1.6
       baz=210,SNR=5.3
N31M   Braeburn, Yuko    86.34   19   P         P         11 23 37.6  +0.1
       baz=220
P33M   Teslin, Yukon     86.35   21   P         P         11 23 37.9  +0.2
       baz=223
MCMT   McKenzie Canyo    86.42   40   P         P         11 23 38.9  +0.4
XAN    Xi'an             86.46  307   P         P         11 23 39.8  +1.0
XAN                                   pmax      pmax
       comp=Z,21nm,1.2s
AHID   Auburn Hatcher    86.52   43   P         P         11 23 39.6  +0.6
J26L   Joseph Creek      86.66   14   P         P         11 23 38.9  -0.1
       baz=213
MSO    Missoula          86.77   38   P         P         11 23 40.3  +0.3
MSO    Missoula          86.77   38   P         P         11 23 40.5  +0.5
       baz=239,SNR=5.4
DLMT   Dillon            86.84   40   P         P         11 23 40.9  +0.5
DLMT                                  IAmb      IAmb      11 23 41.6
       comp=Z,9.7nm,0.8s
M30M   Minto, Yukon      86.88   18   P         P         11 23 39.8  -0.3
       baz=219
TPAW   Teton Pass        86.96   42   P         P         11 23 41.9  +0.8
TPAW                                  IAmb      IAmb      11 23 42.9
       comp=Z,12nm,1.1s
REDW   Red Top Meadow    86.96   42   P         P         11 23 41.7  +0.6
REDW                                  IAmb      IAmb      11 23 42.9
       comp=Z,19nm,1.1s
FXWY   Fox Creek         86.98   42   P         P         11 23 41.9  +0.7
SNOW   Snow King Moun    87.07   42   P         P         11 23 42.6  +0.9
SNOW                                  IAmb      IAmb      11 23 43.4
       comp=Z,21nm,1.1s
S22A   4UR Ranch, Cre    87.16   49   P         P         11 23 42.6  +0.3
       baz=245,SNR=5.1
LRM    Limekiln Ridge    87.16   40   P         P         11 23 42.2  +0.2
O20A   White River Ci    87.21   46   P         P         11 23 42.9  +0.6
O20A                                  IAmb      IAmb      11 23 44.0
       comp=Z,12nm,1.1s
O20A   White River Ci    87.21   46   P         P         11 23 42.8  +0.5
       baz=244,SNR=7.6
LOHW   Long Hollow       87.24   42   P         P         11 23 43.1  +0.7
LOHW                                  IAmb      IAmb      11 23 43.5
       comp=Z,6.9nm,0.7s
QLMT   Earthquake Lak    87.30   41   P         P         11 23 43.9  +1.2
M31M   Drury Creek, Y    87.32   19   P         P         11 23 41.6  -0.5
       baz=222
DAWY   Dawson            87.34   16   P         P         11 23 41.9  -0.3
       baz=217,SNR=7.0
FLWY   Flagg Ranch       87.40   42   P         P         11 23 44.1  +1.0
FLWY                                  IAmb      IAmb      11 23 45.2
       comp=Z,14nm,0.8s
EGAK   Eagle             87.47   15   P         P         11 23 42.5  -0.2
EGAK   Eagle             87.47   15   P         P         11 23 42.2  -0.4
       baz=215
HHC    Hu-ho-hao-te      87.50  314  eP         P         11 23 43.2  -0.3
HHC                                   pmax      pmax
       comp=Z,7.0nm,0.6s
HHC                                   pmax      pmax
       comp=Z,160nm,6.8s
YMR    Madison River     87.51   41   P         P         11 23 44.9  +1.2
YMR                                   IAmb      IAmb      11 23 46.0
       comp=Z,20nm,1.1s
BW06   Boulder Array     87.52   43   P         P         11 23 43.8   0.0
BW06                                  IAmb      IAmb      11 23 44.8
       comp=Z,8.5nm,0.7s
BW06   Boulder Array     87.52   43   P         P         11 23 43.5  -0.2
       baz=243,SNR=16
PD31   Pinedale Array    87.52   43   P         P         11 23 44.1  +0.4
PD31                                  IAmb      IAmb      11 23 44.8
       comp=Z,7.8nm,0.8s
PDAR   Pinedale Array    87.52   43   P         P         11 23 43.8   0.0
       comp=Z,7.0nm,0.6s,baz=221,slow=3.2,SNR=81
PDAR                                  PP        PP        11 27 17.5  -2.5
       comp=Z,0.7nm,0.7s,baz=235,slow=5.2,SNR=5.2
PDAR   Pinedale Array    87.52   43   P         P         11 23 43.6  -0.2
BOZ    Bozeman (W)       87.55   40   P         P         11 23 44.2  +0.5
BOZ                                   IAmb      IAmb      11 23 45.4
       comp=Z,12nm,1.2s
BOZ    Bozeman (W)       87.55   40   P         P         11 23 43.8  +0.1
       baz=241,SNR=8.7
H17A   Grant Village     87.63   42   P         P         11 23 46.5  +2.2
H17A                                  IAmb      IAmb      11 23 47.1
       comp=Z,15nm,0.8s
H17A   Grant Village     87.63   42   P         P         11 23 45.9  +1.7
       baz=242
YHH    Holmes Hill       87.64   41   P         P         11 23 45.1  +0.7
FARO   Faro, Yukon       87.67   19   P         P         11 23 43.3  -0.4
       baz=222
COLD   Coldfoot          87.68   11   P         P         11 23 43.3  -0.3
COLD                                  IAmb      IAmb      11 23 44.2
       comp=Z,11nm,1.0s
COLD   Coldfoot          87.68   11   P         P         11 23 43.5  -0.1
       baz=207
WTLY   Watson Lake, Y    87.69   22   P         P         11 23 44.3  +0.4
       baz=227
MAYO   Mayo, Yukon       87.93   18   P         P         11 23 45.1  +0.2
       baz=220,SNR=9.2
HRY    Holter Researc    87.97   39   P         P         11 23 46.4  +0.7
MMPY   Sheldon Lake,     88.61   20   P         P         11 23 47.8  -0.3
       baz=224,SNR=11
MSTX   Muleshoe          88.62   54   P         P         11 23 49.5  +0.6
MSTX   Muleshoe          88.62   54   P         P         11 23 49.7  +0.7
       baz=247
T25A   Trinidad          88.65   50   P         P         11 23 58.2  +9.0
       baz=246,SNR=5.2
I29M   Ogilvie Camp,     88.66   16   P         P         11 23 47.1  -1.2
       baz=218,SNR=5.2
RLMT   Red Lodge         88.79   41   P         P         11 23 49.7  +0.1
RLMT                                  IAmb      IAmb      11 23 51.5
       comp=Z,8.9nm,0.9s
RLMT   Red Lodge         88.79   41   P         P         11 23 49.7  +0.1
       baz=243,SNR=6.0
Q24A   Divide            88.86   48   P         P         11 23 51.1  +0.8
       baz=246
ISCO   Idaho Springs     88.89   47   P         P         11 23 51.1  +0.8
       baz=246
SYO    Syowa Base        88.90  193⇓ epP        pP        11 25 55.8  +1.4
BMAR   Burnt Mountain    88.92   12   P         P         11 23 49.5  +0.1
CMAR   Chiang Mai Arr    89.02  290   P         P         11 23 52.1  +1.1
       comp=Z,5.4nm,0.9s,baz=110,slow=2.8,SNR=38
CMAR   Chiang Mai Arr    89.02  290   P         P         11 23 51.7  +0.7
TOLK   Toolik Lake Re    89.05   10   P         P         11 23 49.5  -0.6
       baz=207
N23A   Red Feather La    89.12   46   P         P         11 23 51.9  +0.6
       baz=245,SNR=6.2
CHTO   Chiang Mai        89.14  290   P         P         11 23 51.9  +0.3
CHTO                                  IAmb      IAmb      11 23 53.1
       comp=Z,7.7nm,0.8s
K22A   Casper            89.47   45   P         P         11 23 53.1  +0.4
K22A                                  IAmb      IAmb      11 23 54.0
       comp=Z,11nm,1.2s
K22A   Casper            89.47   45   P         P         11 23 53.3  +0.5
       baz=245
JCT    Junction City     89.64   58   P         P         11 23 54.5  +0.8
JCT                                   IAmb      IAmb      11 23 55.0
       comp=Z,6.5nm,0.7s
JCT    Junction City     89.64   58   P         P         11 23 54.3  +0.7
       baz=249
AMTX   Amarillo          89.80   53   P         P         11 23 54.9  +0.5
       baz=248
EGMT   Eagleton          89.83   39   P         P         11 23 54.6  +0.4
       baz=242
EPYK   Eagle Plains      89.86   16   P         P         11 23 54.2  +0.4
EPYK                                  IAmb      IAmb      11 23 55.2
       comp=Z,8.5nm,0.8s
EPYK   Eagle Plains      89.86   16   P         P         11 23 52.9  -0.9
       baz=219,SNR=5.6
SNAA   Sanae             90.32  179   P         P         11 23 56.4  +0.3
SNAA   Sanae             90.32  179   P         P         11 23 56.9  +0.8
VNA3   Neumayer Olymp    90.46  176   P         P         11 23 57.5  +0.8
A21K   Barrow            90.53    7   P         P         11 23 56.1  -0.6
       baz=201
ABTX   Abilene, Hawle    90.54   56   P         P         11 23 58.3  +0.5
ABTX   Abilene, Hawle    90.54   56   P         P         11 23 58.5  +0.7
       baz=249
VNA2   Neumayer--Watz    90.90  177   P         P         11 23 59.5  +0.8
       baz=195,slow=3.8
LZH    Lanzhou           91.09  308  ⇑P         P         11 24 01.5  +1.1
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LZH                                   pP        pP        11 26 08.3  +2.0
LZH                                   sP        sP        11 27 05.3  +1.2
LZH                                   pmax      pmax
       comp=Z,20nm,1.4s
VNA1   Neumayer--Stat    91.13  177   P         P         11 24 01.3  +1.6
LAO    LASA Array        91.39   41   P         P         11 24 02.7  +1.3
LAO    LASA Array        91.39   41   P         P         11 24 02.4  +1.0
       baz=245,SNR=7.4
WRGLY  Wrigley           91.66   22   P         P         11 24 02.9  +0.7
       baz=231
RSSD   Black Hills       91.73   44   P         P         11 24 03.0  -0.2
RSSD                                  IAmb      IAmb      11 24 04.0
       comp=Z,8.2nm,0.8s
RSSD   Black Hills       91.73   44   P         P         11 24 03.6  +0.4
       baz=247
INK    Inuvik            92.14   15   P         P         11 24 03.4  -0.9
       comp=Z,5.7nm,0.7s,baz=221,slow=4.2,SNR=16
INK    Inuvik            92.14   15   P         P         11 24 03.3  -0.9
       baz=222
R32A   Long Quarter,     93.31   51   P         P         11 24 11.2  +0.8
DGMT   Dagmar            93.38   40   P         P         11 24 11.3  +0.9
DGMT   Dagmar            93.38   40   P         P         11 24 10.8  +0.4
       baz=247,SNR=7.3
SONM   Songino Array     93.79  319   P         P         11 24 11.3  -1.1
       comp=Z,0.3nm,0.4s,baz=148,slow=6.8,SNR=1.8
YKA    Yellowknife Ar    94.56   25   P         P         11 24 14.6  -0.9
       comp=Z,1.9nm,0.6s,baz=237,slow=4.7,SNR=15
BGNE   Belgrade          94.75   48   P         P         11 24 17.8  +1.0
       baz=250
KSU1   Kansas State U    95.09   51   P         P         11 24 19.2  +0.8
KSU1   Kansas State U    95.09   51   P         P         11 24 19.6  +1.2
       baz=251
ECSD   EROS Data Cent    96.59   46   P         P         11 24 24.8  -0.2
       baz=252
A36M   Sachs Harbour     96.73   15   P         P         11 24 24.9  -0.1
A36M                                  IAmb      IAmb      11 24 26.1
       comp=Z,5.1nm,0.8s
A36M   Sachs Harbour     96.73   15   P         P         11 24 25.2  +0.2
       baz=230
MKAR   Makanchi Array   109.36  314   PKiKP     PKiKP     11 29 20.2  -1.4
       comp=Z,0.5nm,0.5s,baz=142,slow=0.7,SNR=10.0
SFJD   Kangerlussuaq    120.93   21   PKP       PKPdf     11 29 43.0   0.0
       comp=Z,7.2nm,0.7s,baz=0.0,slow=3.0,SNR=4.6
SFJD   Kangerlussuaq    120.93   21             PKiKP     11 29 43.4  +0.2
ARCES  ARCESS Array B   126.59  350   PKP       PKPdf     11 29 53.5  -0.4
       comp=Z,2.7nm,1.0s,baz=89,slow=1.0,SNR=7.5
FINES  FINESS Array B   133.47  344   SKPbc     SKPbc     11 32 41.8  -0.1
       comp=Z,2.0nm,0.6s,baz=64,slow=4.4,SNR=7.0
AKASG  Malin Array Be   140.82  332   PKhKP     PKPpre    11 30 14.5
       comp=Z,0.6nm,0.4s,baz=42,slow=3.8,SNR=4.1
AKASG                                 PKP       PKPdf     11 30 20.9  -0.1
       comp=Z,0.3nm,0.3s,baz=42,slow=3.8,SNR=4.2
AKASG                                 SKPbc     SKPbc     11 33 01.9  -1.7
       comp=Z,0.1nm,0.3s,baz=37,slow=2.0,SNR=4.5
BNN    Bunyan           143.87  312   PKPbc     PKPab     11 30 26.5  +0.1
LODK   Lodwar           143.87  250             PKPab     11 30 27.3  +0.2
BUR08  Bucovina Ar. S   144.86  332   PKPdf     PKPdf     11 30 25.8  -2.5
BR131  Keskin Array S   145.01  315             PKPdf     11 30 27.4  -1.5
BRTR   Keskin Array B   145.01  315   PKP       PKPdf     11 30 29.1  +0.3
       comp=Z,2.5nm,0.5s,baz=114,slow=3.1,SNR=11
FLTG   Flechtingen      145.10  350  ePKPbc     PKiKP     11 30 35.1  +2.6
       baz=14,slow=2.6
OSTC   Ostas            145.67  343  ePKP       PKPab     11 30 33.2  +0.4
OSTC                                 ex         x         11 30 38.0
CLL    Collm            145.74  347  ePKPbc     PKPbc     11 30 31.0  -0.3
       comp=Z,9.0nm,0.6s
CLL                                  i PKPbc(2)           11 30 37.5
       comp=Z,18nm,0.8s
CLL                                  eSKPbc     SKiKP     11 33 17.0  +1.4
CLL    Collm            145.74  347  ePKPbc     PKiKP     11 30 37.6  +3.6
       baz=14,slow=2.6
CLL    Collm            145.74  347   PKPbc     PKPbc     11 30 31.2  -0.1
DPC    Dobruska-Polom   145.82  343  ePKP       PKPbc     11 30 31.5  -0.1
DPC                                  ex         x         11 30 38.2
MBAR   Mbarara          145.83  240   PKPbc     PKPbc     11 30 33.4  +0.5
       comp=Z,11nm,0.7s,baz=130,slow=14,SNR=15
BRG    Berggiesshubel   145.94  346  ePKPbc     PKiKP     11 30 38.3  +3.9
       baz=14,slow=2.6
BRG    Berggiesshubel   145.94  346  ePKP       PKiKP     11 30 38.3  +3.9
BRG                                   Amp                 11 30 40.6
       comp=Z,11nm,1.0s
KRLC   Kraliky          145.94  343  ePKP       PKPbc     11 30 32.3  +0.3
KRLC                                 ex         x         11 30 38.4
FBE    Freiberg         146.03  347  ePKPbc     PKiKP     11 30 38.9  +4.4
       baz=14,slow=2.6
PRU    Pruhonice        146.62  345  ePKP       PKPbc     11 30 33.9  +0.2
PRU                                  ex         x         11 30 40.0
VYHS   Vyhne            146.69  339  ePKP       PKPab     11 30 40.6  +3.7
TANN   Tannenbergstha   146.70  347  ePKPbc     PKPab     11 30 40.5  +3.5
       baz=14,slow=2.6
WERD   Werda            146.70  348  ePKPbc     PKPab     11 30 40.4  +3.5
       baz=14,slow=2.6
GUNZ   Gunzen           146.77  347  ePKPbc     PKPab     11 30 40.9  +3.6
       baz=14,slow=2.6
WERN   Wernitzgruen     146.84  347  ePKPbc     PKPab     11 30 41.1  +3.6
       baz=14,slow=2.6
MANZ   Manzenberg       147.18  348  ePKPbc     PKPab     11 30 41.8  +2.9
       baz=14,slow=2.6
ROTZ   Rotzenmuhle      147.37  347  ePKPbc     PKPab     11 30 42.3  +2.7
       baz=14,slow=2.6
GRF    Grafenberg Arr   147.63  348  ePKPbc     PKPab     11 30 43.0  +2.3
       baz=14,slow=2.6
KHC    Kasperske Hory   147.65  345  ePKP       PKPbc     11 30 36.8  +0.3
KHC                                  ex         x         11 30 43.2
CKRC   Cesky Krumlov    147.76  344  ePKP       PKiKP     11 30 38.0  -0.2
CKRC                                 ex         x         11 30 44.3
GEC2   GERESS Array S   147.89  345  ePKPbc     PKPab     11 30 43.6  +1.7
       baz=14,slow=2.6
GERES  GERESS Array B   147.89  345   PKPbc     PKPbc     11 30 37.1  -0.1
       comp=Z,1.1nm,0.5s,baz=48,slow=4.0,SNR=5.4
CONA   Conrad Observa   148.14  342  eP         PKPab     11 30 44.7  +1.7
       comp=Z,11nm,1.2s
RJOB   Jochberg         149.14  345  ePKPbc     PKPab     11 30 46.3  -0.8
       baz=14,slow=2.6
ZAPS   Zavoj            149.33  329  eP         PKPbc     11 30 40.8  -0.1
BFO    Black Forest     149.44  351  ePKPbc     PKPab     11 30 47.2  -1.0
       baz=14,slow=2.6
BFO    Black Forest     149.44  351   PKPdf     PKPdf     11 30 34.8  -0.9
BFO                                   PKPbc     PKPbc     11 30 41.2  +0.2
BFO                                             PKPab     11 30 47.3  -1.0
BOVS   Bovan            149.50  331  eP         PKPbc     11 30 40.4  -0.8
SOKA   Soboth           149.51  342  eP         PKPab     11 30 47.0  -1.7
       comp=Z,5.0nm,0.9s
KBA    Koelnbreinsper   149.62  344  eP         PKPab     11 30 47.9  -1.3
       comp=Z,5.0nm,0.6s
GRUS   Gruza            149.76  332  eP         PKPbc     11 30 41.7  -0.1
WATA   Walderalm        149.80  347  eP         PKPab     11 30 48.0  -2.0
       comp=Z,6.8nm,0.8s
OBKA   Obir             149.81  342  eP         PKPab     11 30 49.4  -0.5
       comp=Z,9.8nm,1.6s
RETA   Reutte           149.83  348  eP         PKPab     11 30 48.4  -1.5
       comp=Z,2.2nm,0.5s
WTTA   Wattenberg       149.86  346  i P        PKPab     11 30 48.2  -2.0
       comp=Z,12nm,0.6s,SNR=6.1
MOTA   Moosalm          149.90  347  eP         PKPab     11 30 48.4  -1.9
       comp=Z,14nm,1.2s
DIVS   Divibare         149.91  333             PKPbc     11 30 41.8  -0.4
DIVS                                  PKPab     PKPab     11 30 48.5  -1.9
DIVS   Divibare         149.91  333  eP         PKPbc     11 30 41.4  -0.9
MYKA   Terra Mystica    149.95  343  eP         PKPab     11 30 47.7  -2.8
       comp=Z,3.8nm,0.6s
BOSS   Bosilegrad       149.98  328  eP         PKPab     11 30 48.7  -2.0
SQTA   Sankt Quirin     149.99  347  i P        PKPab     11 30 48.6  -2.1
       comp=Z,8.1nm,0.6s,SNR=4.5
BARS   Barje            150.07  329  eP         PKPbc     11 30 42.4  -0.2
SELS   Selova           150.09  331  eP         PKPbc     11 30 42.3  -0.3
ABTA   Abfaltersbach    150.14  345   P         PKPab     11 30 48.4  -2.8
       comp=Z,12nm,0.7s
DAVA   Damuels          150.20  349  eP         PKPab     11 30 50.0  -1.6
       comp=Z,11nm,1.0s
IVAS   Ivanjica         150.25  332  eP         PKPbc     11 30 42.3  -0.7
FETA   Feichten         150.28  347  i P        PKPab     11 30 49.4  -2.6
       comp=Z,8.3nm,1.0s,SNR=4.7
SJES   Sjenica          150.58  332  eP         PKiKP     11 30 44.2  -0.1
DAVOX  Davos/Dischmat   150.68  348   PKPbc     PKPbc     11 30 42.2  -1.9
       comp=Z,2.8nm,0.6s,baz=49,slow=5.5,SNR=7.3
DAVOX                                 PKPab     PKPab     11 30 50.7  -3.0
       comp=Z,12nm,0.8s,baz=328,slow=0.5,SNR=16
ESDC   Sonseca Array    158.04   12   PKPab     PKPab     11 31 24.2  -1.0
       comp=Z,0.4nm,0.5s,baz=341,slow=4.4,SNR=6.0
TORD   Torodi Ar. Bea   174.99  181   PKPab     PKPab     11 32 40.2  -0.2
       comp=Z,0.3nm,0.6s,baz=188,slow=3.3,SNR=2.3
TORD   Torodi Ar. Bea   174.99  181             PKPab     11 32 40.9  +0.5
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*NEIC **11** 11:18:25.7±2.1, 18°.0S±0°.1×178°.4W±0°.1, h570km±6km, mb4.6/73, Error ellipse: s-maj=16.7km s-min=15.1km az=142.0*

*BJI **11** 11:18:26.0±0.0, 18°.00S×178°.50W, h594km, mB5.0/13, mb4.6/25*

*IDC **11** 11:18:29.2±0.9, 17°.87S×178°.65W, h615km±8km, mb3.9/22, mb1 4.1/24, mb1mx3.9/41, mbtmp4.8/24, Error ellipse: s-maj=20.9km s-min=8.9km az=148.0*

ISC 11 11:18:25.5±0.3**, 18°.07S**±0°.07×**178°.38W**±0°.06**, h579km, n410,** σ1s.00/427**, mb4.6**/62**, 11C-26D, Fiji Islands region**

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Code   Station Name         Δ°  AZ°   Phase ID               Time       Res
                                      Op        ISC        h  m  s      ISC
MSVF   Nonsavu            3.42  275   P         P         11 19 49.5  +3.9
       4.9nm,0.3s,baz=129,slow=9.5,SNR=56
MSVF                                  S         S         11 20 57.3  +6.5
       baz=129,slow=24,SNR=7.9
MSVF   Nonsavu            3.42  275   P         P         11 19 49.1  +3.4
AFI    Afiamalu           7.58   58   P         P         11 20 20.1  -0.1
       9.9nm,0.3s,baz=247,slow=3.4,SNR=18
NIUE   Niue               8.07   98   P         P         11 20 26.0  +1.2
MARNC  Mare, Loyalty     13.24  253   P         P         11 21 16.5  -0.3
LIFNC  LIFOU             13.83  256   P         P         11 21 22.1  -0.8
PINNC  Pines Island,     14.04  249   P         P         11 21 25.2  +0.2
SANVU  Saraoutou         14.06  279   P         P         11 21 25.4  +0.1
OUENC  Ouen Island, N    14.53  250   P         P         11 21 29.9  +0.1
DZM    Mont Dzumac       14.81  252   P         P         11 21 32.3  -0.3
       2.2nm,0.3s,baz=77,slow=18,SNR=27
DZM    Mont Dzumac       14.81  252   P         P         11 21 32.5  -0.1
ONTNC  Ouen Toro         14.85  251   P         P         11 21 33.1  +0.2
OUZ    Omahuta           18.51  201   P         P         11 22 09.2  +2.7
URZ    Urewera           20.50  190   P         P         11 22 22.3  -2.2
       13nm,0.7s,baz=303,slow=21,SNR=11
URZ                                   S         S         11 25 32.6  -5.0
       4.9nm,0.8s,baz=128,slow=20,SNR=1.5
URZ    Urewera           20.50  190   P         P         11 22 23.7  -0.8
URZ                                   IAmb      IAmb      11 22 24.7
       comp=Z,23nm,1.0s
EIDS   Eidsvold          29.24  250   P         P         11 23 41.5  -0.4
EIDS                                  IAmb      IAmb      11 23 42.6
       comp=Z,15nm,0.7s
MLZ    Mavora Lakes      29.46  200   P         P         11 23 44.4  +0.9
DCZ    Deep Cove         29.86  201   P         P         11 23 47.3  +0.5
ARMA   Armidale          29.89  240   P         P         11 23 48.2  +0.6
ARMA                                  IAmb      IAmb      11 23 49.4
       comp=Z,20nm,0.7s
CTAO   Charters Tower    33.45  261   P         P         11 24 17.9   0.0
CTAO                                  IAmb      IAmb      11 24 18.6
       comp=Z,14nm,0.7s
CAN    Canberra          33.63  233   P         P         11 24 19.6  +0.5
PMG    Port Moresby      34.52  280   P         P         11 24 28.2  +1.4
TOO    Toolangi          37.09  231   P         P         11 24 48.8  +1.0
COEN   Coen              37.14  271   P         P         11 24 48.9  +0.5
COEN                                  IAmb      IAmb      11 24 49.7
       comp=Z,22nm,0.8s
MANU   Manus Island      37.19  291   P         P         11 24 50.2  +1.3
MANU                                  IAmb      IAmb      11 25 13.2
       comp=Z,13nm,1.3s
STKA   Stephens Creek    38.58  241   P         P         11 25 00.8  +0.9
       comp=Z,24nm,0.8s,baz=94,slow=10,SNR=27
STKA   Stephens Creek    38.58  241   P         P         11 25 00.8  +0.9
BBOO   Buckleboo         43.35  241   P         P         11 25 38.1  +0.4
BBOO                                  IAmb      IAmb      11 25 39.1
       comp=Z,45nm,1.4s
WR0    Warramunga Arr    44.44  260   P         P         11 25 45.4  -0.9
WB0    Warramunga Arr    44.60  260   P         P         11 25 46.9  -0.6
WB0                                   IAmb      IAmb      11 25 47.5
       comp=Z,11nm,0.6s
WB2    Warramunga Arr    44.62  260   P         P         11 25 47.1  -0.5
WB2                                   IAmb      IAmb      11 25 47.7
       comp=Z,10nm,0.6s
WRAB   Tennant Creek     44.62  260   P         P         11 25 47.0  -0.7
WRAB                                  IAmb      IAmb      11 25 47.6
       comp=Z,9.3nm,0.7s
WRA    Warramunga Arr    44.63  260   P         P         11 25 47.0  -0.8
       comp=Z,7.1nm,0.7s,baz=97,slow=7.3,SNR=45
WRA                                   PcP       PcP       11 27 17.5  -0.3
       comp=Z,2.7nm,0.8s,baz=88,slow=4.4,SNR=5.7
WRA                                   S         S         11 31 37.4  -5.4
       comp=Z,0.9nm,0.6s,baz=107,slow=13,SNR=6.0
WRA    Warramunga Arr    44.63  260   P         P         11 25 47.2  -0.6
AS31   Alice Springs     44.78  254   P         P         11 25 48.9  +0.1
AS31                                  IAmb      IAmb      11 25 49.4
       comp=Z,11nm,0.8s
ASAR   Alice Springs     44.78  254   P         P         11 25 48.9   0.0
       comp=Z,41nm,0.7s,baz=87,slow=8.7,SNR=141
ASAR                                  PcP       PcP       11 27 17.9  -0.5
       comp=Z,3.6nm,0.7s,baz=96,slow=3.8,SNR=8.5
ASAR                                  ScP       ScP       11 30 15.7  -0.3
       comp=Z,0.7nm,0.6s,baz=91,slow=5.2,SNR=4.2
ASAR                                  S         S         11 31 41.5  -3.3
       comp=Z,1.9nm,0.8s,baz=88,slow=16,SNR=14
FORT   Forrest           49.97  245   P         P         11 26 26.9  -0.6
KNRA   Kununurra         50.50  264   P         P         11 26 31.1  -0.5
VNDA   Vanda             60.29  185   P         P         11 27 40.2  +1.8
MJAR   Matsushiro Arr    68.06  323   P         P         11 28 26.7  -1.4
       comp=Z,8.1nm,0.7s,baz=155,slow=6.5,SNR=15
MJAR   Matsushiro Arr    68.06  323   P         P         11 28 27.3  -0.9
MAJO   Matsushiro        68.06  323   P         P         11 28 27.9  -0.3
MAJO                                  IAmb      IAmb      11 28 52.2
       comp=Z,34nm,1.4s
MAT    Matsushiro        68.06  323   P         P         11 28 27.3  -0.9
ADK    Adak              69.67    1   P         P         11 28 37.0  -0.4
ADK                                   IAmb      IAmb      11 28 37.3
       comp=Z,23nm,0.7s
UGM    Wanagama          69.67  268   P         P         11 28 38.2  -0.2
JHS    Saijyo            70.04  319   P         P         11 28 40.7  +0.6
ATKA   Atka Island       70.07    3   P         P         11 28 38.7  -1.1
YULB   Yu-li             71.88  303   P         P         11 28 50.0  -1.2
YULB                                  IAmb      IAmb      11 28 58.1
       comp=Z,46nm,1.5s
QSPA   South Pole Qui    71.98  180   P         P         11 28 52.2  +1.1
UNV    Unalaska Valle    72.34    7   P         P         11 28 52.3  -0.8
SSLB   Suanglung         72.35  303   P         P         11 28 52.9  -0.9
TPUB   Ta-pu             72.37  302   P         P         11 28 52.7  -1.3
KSM    Kuching           72.74  277   P         P         11 28 57.0  +0.7
KSM                                   IAmb      IAmb      11 28 57.4
       comp=Z,14nm,0.8s
PET    Petropavlovsk     73.54  346   P         P         11 28 59.1  -0.7
PET                                   IAmb      IAmb      11 29 06.3
       comp=Z,12nm,0.8s
PEA0B  Petropavlovsk-    73.84  345   P         P         11 29 01.3  -0.4
PEA0B                                 IAmb      IAmb      11 29 01.7
       comp=Z,23nm,0.8s
PETK   Petropavlovsk-    73.84  345   P         P         11 29 01.0  -0.7
       comp=Z,10nm,0.6s,baz=119,slow=7.1,SNR=25
PETK   Petropavlovsk-    73.84  345   P         P         11 29 01.4  -0.2
CHNA   Chernabura Isl    74.36   11   P         P         11 29 07.3  +2.8
       baz=199
KSRS   Korea Array       74.84  318   P         P         11 29 07.3  -0.3
       comp=Z,2.1nm,0.7s,baz=123,slow=6.2,SNR=6.8
SII    Sitkinak Islan    77.07   13   P         P         11 29 19.6  +0.1
       baz=204
ARVC   Arvin             77.37   46   P         P         11 29 22.8  +1.2
       baz=237
VES    Vestal, Richgr    77.58   46   P         P         11 29 23.3  +0.5
       baz=237
O02D   Mt. Diablo Mer    77.66   40   P         P         11 29 24.7  +1.6
       baz=233
MURC   Murrieta          77.71   48   P         P         11 29 24.0  +0.5
       baz=238
BFSC   Mount Baldy Ra    77.71   48   P         P         11 29 23.6  -0.1
       baz=238
EDW2   Edwards Air Fo    77.82   47   P         P         11 29 24.8  +0.7
       baz=238,SNR=8.0
MONP2  Monument Peak     77.90   49   P         P         11 29 24.9  +0.1
       baz=239
ISA    Isabella, Lake    77.91   46   P         P         11 29 25.9  +1.4
ISA                                   IAmb      IAmb      11 29 26.5
       comp=Z,15nm,0.9s
ISA    Isabella, Lake    77.91   46   P         P         11 29 25.3  +0.7
       baz=237,SNR=8.5
CMB    Columbia Colle    77.94   43   P         P         11 29 25.7  +1.1
IKP    In-Ko-Pah, Jac    78.00   50   P         P         11 29 25.8  +0.6
       baz=239
NJ2    Nanjing           78.07  309  eP         P         11 29 27.0  +1.6
NJ2                                   pmax      pmax
       comp=Z,10.0nm,0.5s
N02D   Trinity Center    78.18   40   P         P         11 29 27.3  +1.4
       baz=233
O03E   Paynes Creek      78.33   41   P         P         11 29 27.6  +0.9
       baz=234
MDJ    Mudanjiang        78.34  325   P         P         11 29 27.2  +0.7
MDJ                                   IAmb      IAmb      11 29 28.1
       comp=Z,23nm,0.9s
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M02C	Callahan	78.34	39	P	P	11 29 28.1	+1.4
	baz=233						
SWSC	Sam W. Stewart	78.37	50	P	P	11 29 28.0	+1.0
	baz=240						
KDAK	Kodiak Island	78.55	14	P	P	11 29 27.2	-0.1
	comp=Z,29nm,1.1s,baz=223,slow=4.7,SNR=4.7						
CWC	Cottonwood Cre	78.59	46	P	P	11 29 29.5	+1.2
	baz=237						
SLBS	Sierra La Lagu	78.61	60	P	P	11 29 30.1	+1.4
YBH	Yreka Blue Hor	78.63	39	P	P	11 29 29.4	+1.1
	comp=Z,10.0nm,0.8s,baz=186,slow=3.1,SNR=15						
YBH	Yreka Blue Hor	78.63	39	P	P	11 29 29.6	+1.2
J01E	Myrtle Point	78.78	37	P	P	11 29 31.0	+2.1
	baz=232						
MPMC	Manual Prospec	78.79	46	P	P	11 29 30.1	+0.7
	baz=238,SNR=5.9						
TIN	Tinemaha, Big	78.82	45	P	P	11 29 30.9	+1.4
	baz=237						
PNTR	Pine Nut	79.04	43	P	P	11 29 31.8	+1.1
PNTR				IAmb	IAmb	11 29 32.6	
	comp=Z,20nm,0.8s						
GLA	Glamis	79.13	50	P	P	11 29 32.6	+1.4
	baz=240						
L04D	Klamath Falls	79.16	39	P	P	11 29 32.3	+1.1
	baz=234						
M04C	Macdoel	79.19	39	P	P	11 29 32.0	+0.7
	baz=234						
LCH	Last Change Ra	79.31	45	P	P	11 29 32.8	+0.7
FURC	Furnace Creek,	79.44	46	P	P	11 29 33.7	+1.2
	baz=238						
IRM	Iron Mountain	79.46	49	P	P	11 29 33.6	+0.8
	baz=240						
P18K	Big Mountain,	79.47	12	P	P	11 29 31.5	-0.8
	baz=202,SNR=6.6						
NVAR	Mina Array Bea	79.52	44	P	P	11 29 34.1	+0.8
	comp=Z,7.3nm,0.8s,baz=224,slow=9.0,SNR=40						
NVAR	Mina Array Bea	79.52	44	P	P	11 29 34.3	+1.1
J04D	Umpqua Nationa	79.89	38	P	P	11 29 35.6	+0.5
	baz=234						
O18K	Koktuh Hills	79.91	12	P	P	11 29 34.0	-0.5
	baz=202						
KVN	Kaiserville	79.99	43	P	P	11 29 35.9	+0.3
I04A	Tendick Farm,	80.04	38	P	P	11 29 36.3	+0.6
	baz=233						
214A	Organ Pipe Nat	80.09	52	P	P	11 29 36.6	+0.4
	baz=242						
CN2	Changchun	80.17	322	*e*P	P	11 29 36.4	+0.2
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
PDMCI	Parker Dam,Lak	80.25	49	P	P	11 29 38.6	+1.7
	baz=240						
KLR	Kul'dur	80.27	329	P	P	11 29 36.6	0.0
	comp=Z,2.1nm,0.7s,baz=99,slow=4.9,SNR=5.0						
O19K	Port Alsworth	80.39	12	P	P	11 29 36.3	-0.7
O19K	Port Alsworth	80.39	12	P	P	11 29 35.8	-1.2
	baz=203,SNR=7.3						
J05D	Fort Rock, OR	80.43	38	P	P	11 29 38.5	+0.7
	baz=234						
BRSE	Bradley Lake S	80.74	14	P	P	11 29 38.7	-0.1
	baz=207						
PINE	Pine Mountain	80.90	38	P	P	11 29 41.4	+1.1
PINE				IAmb	IAmb	11 29 41.9	
	comp=Z,22nm,0.9s						
N19K	Bonanza Creek	80.93	12	P	P	11 29 39.1	-0.8
	baz=203						
I05D	Terrebonne, OR	80.99	38	P	P	11 29 40.8	+0.3
	baz=234						
R11A	Troy Canyon, C	81.29	45	P	P	11 29 42.9	+0.5
	baz=239,SNR=5.5						
WVOR	Wild Horse Val	81.51	40	P	P	11 29 44.0	+0.7
WVOR				IAmb	IAmb	11 29 45.2	
	comp=Z,20nm,1.0s						
TUC	Tucson	81.77	52	P	P	11 29 46.6	+1.7
	baz=243						
F05D	White Salmon	81.83	36	P	P	11 29 45.4	+0.7
	baz=234						
D04E	Lakebay	81.89	35	P	P	11 29 45.3	+0.3
	baz=232						
I07A	Izee	81.91	39	P	P	11 29 46.2	+0.8
I07A				IAmb	IAmb	11 29 47.1	
	comp=Z,17nm,0.8s						
D03D	Eldon	81.93	34	P	P	11 29 45.7	+0.5
	baz=232						
M19K	Big River Lodg	81.96	11	P	P	11 29 44.6	-0.4
	baz=203						
L19K	White Mountain	82.13	11	P	P	11 29 46.5	+0.6
L19K				IAmb	IAmb	11 29 46.8	
	comp=Z,34nm,1.5s						
L19K	White Mountain	82.13	11	P	P	11 29 46.1	+0.2
	baz=203,SNR=5.0						
RC01	Rabbit Creek A	82.17	14	P	P	11 29 45.1	-0.9
	baz=207						
PWL	Port Wells	82.29	14	P	P	11 29 45.8	-0.9
	baz=209						
SPR3	Spring Creek 3	82.46	45	P	P	11 29 48.8	+0.3
KNB	Kanab	82.51	47	P	P	11 29 49.3	+0.7
KNB				IAmb	IAmb	11 29 50.8	
	comp=Z,8.8nm,0.8s						
PSUT	Pine Spring	82.55	46	P	P	11 29 49.4	+0.5
L20K	Farewell, AK	82.58	11	P	P	11 29 47.3	-0.9
	baz=204						
GLI	Glacier Island	82.60	15	P	P	11 29 47.3	-1.0
	baz=210						
U15A	North Rim	82.60	48	P	P	11 29 50.5	+1.3
U15A				IAmb	IAmb	11 29 51.5	
	comp=Z,17nm,0.8s						
TTA	Tatalina	82.63	10	P	P	11 29 48.1	-0.4
	baz=202						
M22K	Willow	82.68	13	P	P	11 29 47.7	-0.9
	baz=207,SNR=6.1						
KNK	Knik Glacier	82.75	14	P	P	11 29 48.1	-0.9
	baz=209						
PMR	Palmer	82.75	14	P	P	11 29 48.2	-0.8
	baz=208						
B05A	Bryant	82.91	34	P	P	11 29 50.0	-0.1
	baz=233						
GHO	Glory Hole Cre	82.96	14	P	P	11 29 49.8	-0.4
SML	Sawmill	83.12	14	P	P	11 29 50.2	-0.7
	baz=209						
PPLA	Purkeypile	83.28	12	P	P	11 29 50.3	-1.5
	baz=205						
BMRM	Bremner River	83.30	16	P	P	11 29 51.2	-0.6
	baz=212						
WAX	Waxell Ridge	83.34	17	P	P	11 29 51.8	-0.2
WAX				IAmb	IAmb	11 29 52.9	
	comp=Z,26nm,0.9s						
K20K	Telida	83.36	11	P	P	11 29 51.4	-0.6
	baz=203						
MESA	MESA	83.36	17	P	P	11 29 52.2	-0.1
MESA	MESA	83.36	17	P	P	11 29 51.9	-0.5
	baz=215						
SCM	Sheep Creek Mo	83.38	14	P	P	11 29 51.6	-0.6
	baz=210,SNR=7.5						
KLU	Klutina	83.42	15	P	P	11 29 52.1	-0.3
	baz=211						
CRQE	Cirque	83.52	17	P	P	11 29 52.4	-0.6
	baz=214						
YAH	Yahtse	83.58	17	P	P	11 29 53.3	-0.1
YAH				IAmb	IAmb	11 29 54.3	
	comp=Z,22nm,0.8s						
WRAK	Wrangell Islan	83.64	24	P	P	11 29 53.9	+0.4
	baz=224						
PNL	Peninsula	83.70	19	P	P	11 29 53.5	-0.3
	baz=217						
MAW	Mawson	83.72	200	P	P	11 29 54.4	+0.5
	comp=Z,0.8nm,0.4s,baz=135,slow=5.7,SNR=1.6						
MAW	Mawson	83.72	200	P	P	11 29 55.4	+1.6
CAST	Castle Rocks	83.78	12	P	P	11 29 52.1	-2.0
	baz=205						
VRDI	Verde Repeater	83.83	16	P	P	11 29 54.1	-0.5
VRDI				IAmb	IAmb	11 29 55.0	
	comp=Z,23nm,1.2s						
W18A	Petrified Fore	83.83	50	P	P	11 29 54.3	-0.9
	baz=243						
N25K	Chitina, Valde	83.85	16	P	P	11 29 54.0	-0.6
	baz=212,SNR=8.3						
M24K	Tolsona, Glenn	83.89	15	P	P	11 29 54.4	-0.3
	baz=211,SNR=5.4						
WAT6	Susitna Watana	83.94	14	P	P	11 29 54.2	-0.9
	baz=209,SNR=13						
SEY	Seymchan	83.94	347	P	P	11 29 54.2	-0.6
	comp=Z,19nm,0.8s,baz=145,slow=5.9,SNR=40						
WAT1	Susitna Watana	83.97	13	P	P	11 29 54.2	-0.9
	baz=208						
MCARA	McCarthy VSAT	84.07	16	P	P	11 29 55.1	-0.5
	baz=214						
DUG	Dugway, Tooele	84.07	45	P	P	11 29 56.0	-0.3

	baz=241						
J20K	Nowinta River	84.10	10	P	P	11 29 55.6	-0.1
	baz=203						
121A	Cookes Peak, D	84.14	53	P	P	11 29 58.3	+1.5
	baz=244						
CHUM	Lake Minchumin	84.16	11	P	P	11 29 54.5	-1.4
	baz=205						
TRF	Thorofare Moun	84.16	12	P	P	11 29 54.9	-1.3
TRF	Thorofare Moun	84.16	12	P	P	11 29 54.6	-1.6
	baz=207,SNR=18						
BARN	Barnard Glacie	84.17	17	P	P	11 29 56.4	0.0
BARN				IAmb	IAmb	11 29 57.0	
	comp=Z,15nm,0.8s						
CTG	Chitna Glacier	84.19	17	P	P	11 29 55.8	-0.5
	baz=215,SNR=5.7						
GCSA	Galena City Sc	84.19	9	P	P	11 29 55.9	-0.1
	baz=201						
HARP	HAARP	84.39	15	P	P	11 29 57.0	-0.1
	baz=212						
ENH	Enshi	84.39	304	P	P	11 29 58.3	+0.4
ENH				IAmb	IAmb	11 29 59.3	
	comp=Z,20nm,0.9s						
RND	Reindeer	84.42	13	P	P	11 29 56.3	-1.1
DHY	Denali Highway	84.45	14	P	P	11 29 56.1	-1.4
	baz=210,SNR=5.2						
B08A	Colville Reser	84.45	35	P	P	11 29 57.7	-0.1
B08A				IAmb	IAmb	11 29 58.5	
	comp=Z,10nm,0.8s						
ZAIG	Zacatecas	84.46	64	P	P	11 30 00.4	+1.7
MCK	McKinley	84.69	13	P	P	11 29 57.5	-1.1
	baz=208,SNR=7.5						
HLID	Hailey	84.73	41	P	P	11 29 59.4	-0.1
	baz=239,SNR=13						
PAX	Paxson	84.80	14	P	P	11 29 58.0	-1.2
	baz=211						
SKAG	Skagway	84.84	20	P	P	11 29 59.5	+0.2
	baz=221						
M26K	Nabesna, AK	84.93	16	P	P	11 29 59.4	-0.5
	baz=214						
YUK6	Outpost Mounta	85.03	18	P	P	11 29 59.6	-0.9
	baz=218						
YUK3	Moose Creek	85.09	17	P	P	11 30 00.6	-0.2
	baz=216,SNR=12						
GYA	Guiyang	85.14	300	⇓P	P	11 30 02.0	+0.2
GYA				pmax	pmax		
	comp=Z,14nm,1.2s						
M27K	Edge Creek, AK	85.19	16	P	P	11 30 01.1	0.0
	baz=215						
HYT	Haines Junctio	85.20	19	P	P	11 30 00.8	-0.5
	baz=219						
YUK4	Talbot Arm	85.27	18	P	P	11 30 01.7	0.0
	baz=218						
L26K	Log Cabin Wild	85.36	15	P	P	11 30 01.4	-0.4
	baz=213						
I21K	Tanana	85.40	11	P	P	11 30 00.8	-1.1
	baz=205						
NEA2	Nenana	85.43	12	P	P	11 30 00.1	-2.0
	baz=208						
MLY	Manley	85.49	11	P	P	11 30 00.8	-1.7
	baz=206						
BVCY	Beaver Creek	85.50	17	P	P	11 30 02.3	-0.2
	baz=216,SNR=8.1						
NEW	Newport	85.62	36	P	P	11 30 03.3	-0.2
	comp=Z,4.2nm,0.7s,baz=225,slow=3.0,SNR=12						
NEW	Newport	85.62	36	P	P	11 30 03.3	-0.2
NEW	Newport	85.62	36	P	P	11 30 03.2	-0.3
	baz=237						
MNTX	Cornudas Mount	85.64	55	P	P	11 30 04.8	+0.9
MNTX	Cornudas Mount	85.64	55	P	P	11 30 05.1	+1.1
	baz=246						
MVCO	Mesa Verde	85.66	49	P	P	11 30 03.8	-0.3
	baz=244						
H21K	Melozitna Rive	85.69	10	P	P	11 30 02.0	-1.3
	baz=204						
HDA	Harding Lake	85.71	13	P	P	11 30 02.2	-1.2
	baz=210,SNR=6.7						
L27K	Beaver Creek,	85.78	16	P	P	11 30 03.6	-0.2
	baz=215						
I23K	Minto, Yukon-K	85.86	12	P	P	11 30 03.1	-1.0
	baz=208						
TCOL	CIGO, UAF Yank	85.92	13	P	P	11 30 02.8	-1.6
	baz=209						
COLA	College	85.92	13	P	P	11 30 03.0	-1.4
	baz=209						
DLBC	Dease Lake	85.97	23	P	P	11 30 05.5	+0.6
	comp=Z,3.6nm,0.7s,baz=221,slow=6.1,SNR=8.4						
DLBC	Dease Lake	85.97	23	IAmb	IAmb	11 30 06.2	
	comp=Z,11nm,1.1s						
SCRK	Sand Creek	86.01	14	P	P	11 30 04.4	-0.6
	baz=213						
ILAR	Eielson Array	86.04	13	P	P	11 30 03.6	-1.3
	comp=Z,4.8nm,0.5s,baz=222,slow=4.9,SNR=45						
TX32	Lajitas Array	86.06	58	P	P	11 30 07.7	+1.7
TX32				IAmb	IAmb	11 30 08.8	
	comp=Z,13nm,0.9s						
TXAR	Lajitas Array	86.06	58	P	P	11 30 07.7	+1.7
	comp=Z,9.6nm,0.8s,baz=220,slow=6.1,SNR=124						
TXAR	Lajitas Array	86.06	58	P	P	11 30 07.5	+1.4
ANMO	Albuquerque	86.17	52	P	P	11 30 06.9	+0.3
	baz=245						
POKR	Poker Plat Res	86.22	13	P	P	11 30 04.4	-1.4
	baz=209						
N31M	Braeburn, Yuko	86.24	19	P	P	11 30 06.0	-0.1
	baz=220,SNR=6.1						
P33M	Teslin, Yukon	86.25	21	P	P	11 30 06.3	+0.1
	baz=223						
MCMT	McKenzie Canyo	86.34	40	P	P	11 30 08.5	+1.2
XAN	Xi'an	86.38	307	P	P	11 30 07.7	+0.3
XAN				pmax	pmax		
	comp=Z,22nm,1.2s						
J26L	Joseph Creek	86.55	14	P	P	11 30 07.4	-0.1
	baz=213						
MSO	Missoula	86.69	38	P	P	11 30 08.2	-0.5
	baz=239,SNR=5.2						
DLMT	Dillon	86.76	40	P	P	11 30 09.9	+0.8
DLMT				IAmb	IAmb	11 30 10.7	
	comp=Z,9.4nm,0.8s						
M30M	Minto, Yukon	86.78	18	P	P	11 30 08.5	-0.1
	baz=219						
S22A	4UR Ranch, Cre	87.09	49	P	P	11 30 11.5	+0.5
	baz=245						
O20A	White River Ci	87.14	46	P	P	11 30 11.5	+0.4
	baz=244						
M31M	Drury Creek, Y	87.22	19	P	P	11 30 09.9	-0.8
	baz=222						
DAWY	Dawson	87.23	16	P	P	11 30 10.4	-0.3
	baz=217,SNR=5.7						
EGAK	Eagle	87.36	15	P	P	11 30 10.9	-0.3
	baz=215						
HHC	Hu-ho-hao-te	87.41	314	*e*P	P	11 30 11.0	-1.1
HHC				pmax	pmax		
	comp=Z,25nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,6.6s						
BW06	Boulder Array	87.45	43	P	P	11 30 12.6	+0.1
BW06				IAmb	IAmb	11 30 13.5	
	comp=Z,7.1nm,0.8s						
BW06	Boulder Array	87.45	43	P	P	11 30 12.6	+0.1
	baz=243						
PDAR	Pinedale Array	87.45	43	P	P	11 30 12.8	+0.3
	comp=Z,5.1nm,0.6s,baz=220,slow=3.2,SNR=61						
BOZ	Bozeman (W)	87.47	40	P	P	11 30 12.2	-0.1
	baz=241,SNR=6.2						
H17A	Grant Village	87.55	42	P	P	11 30 13.3	+0.4
	baz=242						
FARO	Faro, Yukon	87.56	19	P	P	11 30 11.8	-0.4
	baz=222						
MAYO	Mayo, Yukon	87.83	18	P	P	11 30 13.5	+0.1
	baz=220,SNR=11						
J29M	Klondike Camp	87.86	16	P	P	11 30 13.7	+0.1
	baz=218						
MMPY	Sheldon Lake,	88.51	20	P	P	11 30 16.9	+0.2
	baz=224,SNR=12						
I29M	Ogilvie Camp,	88.55	16	P	P	11 30 16.3	-0.5
	baz=218,SNR=5.9						
MSTX	Muleshoe	88.56	54	P	P	11 30 17.9	+0.2
	baz=247						
RLMT	Red Lodge	88.72	41	P	P	11 30 19.2	+0.9
	baz=243						
ISCO	Idaho Springs	88.82	47	P	P	11 30 19.3	+0.2
	baz=245						
CMAR	Chiang Mai Arr	88.97	290	P	P	11 30 20.7	+0.9
	comp=Z,3.5nm,0.8s,baz=107,slow=2.9,SNR=22						
N23A	Red Feather La	89.05	46	P	P	11 30 20.6	+0.6
	baz=245						
833A	Chaparral WMA,	89.15	60	P	P	11 30 21.2	+0.8
	baz=249						
K22A	Casper	89.40	45	P	P	11 30 22.0	+0.5

	baz=245						
JCT	Junction City	89.59	58	P	P	11 30 22.5	+0.1
	baz=249						
AMTX	Amarillo	89.75	53	P	P	11 30 23.2	0.0
	baz=248						
A21K	Barrow	90.41	7	P	P	11 30 24.3	-0.9
	baz=201						
SNAA	Sanae	90.44	179	P	P	11 30 25.1	-0.6
SNAA	Sanae	90.44	179	P	P	11 30 25.4	-0.3
ABTX	Abilene, Hawle	90.49	56	P	P	11 30 26.7	+0.1
	baz=249						
VNA3	Neumayer Olymp	90.58	176	P	P	11 30 26.3	+0.1
LZH	Lanzhou	91.01	308	⇑P	P	11 30 29.4	+0.3
LZH				pP	pP	11 32 38.1	+3.0
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
VNA2	Neumayer--Watz	91.02	177	P	P	11 30 26.0	-2.3
VNA1	Neumayer--Stat	91.24	177	P	P	11 30 25.9	-3.3
LAO	LASA Array	91.31	41	P	P	11 30 30.5	+0.5
	baz=245						
WRGLY	Wrigley	91.56	22	P	P	11 30 31.9	+1.2
	baz=231						
RSSD	Black Hills	91.66	44	P	P	11 30 31.9	-0.1
	baz=246						
INK	Inuvik	92.03	15	P	P	11 30 31.7	-1.0
	comp=Z,7.4nm,0.7s,baz=227,slow=4.8,SNR=22						
INK	Inuvik	92.03	15	IAmb	IAmb	11 30 32.7	
	comp=Z,8.4nm,0.8s						
INK	Inuvik	92.03	15	P	P	11 30 31.8	-1.0
	baz=222						
DGMT	Dagmar	93.30	40	P	P	11 30 39.8	+0.7
	baz=246						
SONM	Songino Array	93.69	319	P	P	11 30 41.2	+0.2
	comp=Z,0.8nm,0.6s,baz=147,slow=5.5,SNR=4.3						
YKA	Yellowknife Ar	94.47	25	P	P	11 30 42.8	-1.2
	comp=Z,2.4nm,0.7s,baz=237,slow=4.7,SNR=12						
BGNE	Belgrade	94.69	48	P	P	11 30 45.6	+0.1
	baz=250						
KSU1	Kansas State U	95.03	51	P	P	11 30 47.6	+0.5
	baz=251						
TIXI	Tiksi	96.32	345	P	P	11 30 50.7	-1.5
	comp=Z,1.6nm,0.3s,baz=149,slow=4.7,SNR=7.1						
ECSD	EROS Data Cent	96.52	46	P	P	11 30 53.6	-0.2
	baz=251						
A36M	Sachs Harbour	96.63	15	P	P	11 30 53.4	-0.1
	baz=230						
L44A	Lake County Fo	102.24	50	P	Pdif	11 31 19.2	0.0
	baz=257						
SFIN	Lafayette	102.43	51	P	Pdif	11 31 19.8	-0.2
	baz=257						
ZALV	Zalesovo Beam	108.38	322	PKiKP	PKiKP	11 35 46.8	-1.7
	comp=Z,1.0nm,0.6s,baz=110,slow=1.7,SNR=4.9						
MKAR	Makanchi Array	109.27	314	PKiKP	PKiKP	11 35 48.7	-1.7
	comp=Z,1.3nm,0.5s,baz=218,slow=0.4,SNR=10						
MKAR	Makanchi Array	109.27	314	Pdif	Pdif	11 31 52.3	+1.8
ARCES	ARCESS Array B	126.48	350	PKP	PKPdf	11 36 21.8	-0.9
	comp=Z,3.0nm,0.6s,baz=37,slow=1.3,SNR=19						
FINES	FINESS Array B	133.35	344	PKhKP	PKPpre	11 36 25.8	
	comp=Z,2.9nm,0.9s,baz=46,slow=5.5,SNR=3.8						
FINES				PKP	PKPdf	11 36 34.0	-1.9
	comp=Z,4.0nm,0.6s,baz=101,slow=2.6,SNR=12						
FINES	FINESS Array B	133.35	344		PKPdf	11 36 33.9	-1.9
NB2	NORSAR Subarra	136.54	353	PKP	PKPdf	11 36 42.5	+0.6
	comp=Z,2.9nm,0.8s,baz=17,slow=2.6						
NOA	NORSAR Array B	136.54	353	PKhKP	PKPpre	11 36 33.9	
	comp=Z,0.6nm,0.6s,baz=22,slow=3.8,SNR=3.4						
NOA				PKP	PKPdf	11 36 41.0	-0.9
	comp=Z,1.3nm,0.7s,baz=14,slow=4.0,SNR=4.1						
TSUM	Tsumeb	139.78	204	PKP	PKPdf	11 36 49.9	+0.6
	comp=Z,2.4nm,0.3s,baz=123,slow=7.5,SNR=3.6						
AKASG	Malin Array Be	140.72	332	PKhKP	PKPpre	11 36 42.9	
	comp=Z,1.8nm,0.5s,baz=43,slow=4.5,SNR=14						
AKASG				PKP	PKPdf	11 36 50.0	+0.2
	comp=Z,1.9nm,0.4s,baz=44,slow=2.8,SNR=7.8						
EKA	Eskdalemuir Ar	142.62	5	PKhKP	PKPpre	11 36 49.0	
	comp=Z,1.0nm,0.4s,baz=348,slow=3.2,SNR=4.1						
SORM	Soroca	142.95	330	⇓P	PKPdf	11 36 50.9	-2.9
BSEG	Bad Segeberg	143.58	351	*e*PKPbc	PKPab	11 36 53.1	-0.5
	baz=15,slow=2.7						
KWP	Kalwaria Pacla	144.23	336	*e*PKP	PKPbc	11 36 55.5	-0.4
KWP	Kalwaria Pacla	144.23	336		PKPbc	11 36 55.7	-0.2
RUE	Ruedersdorf	144.36	347	*e*PKPbc	PKPbc	11 36 55.6	-0.5
	baz=15,slow=2.7						
BURAR	Bucovina Array	144.77	332	⇓P	PKPdf	11 36 55.8	-1.3
OJC	Ojcow	144.77	340	*e*PKP	PKPdf	11 36 57.1	+0.2
GHRR		144.86	328	⇓P	PKPab	11 36 58.9	+0.1
RETH	Rethem/Aller,	144.88	352	*e*PKPbc	PKPdf	11 36 57.4	+0.4
	baz=15,slow=2.7						
TESR	Tescani	144.91	329	⇓P	PKPbc	11 36 58.0	0.0
BRTR	Keskin Array B	144.92	315	PKP	PKPdf	11 36 58.0	+0.2
	comp=Z,4.9nm,0.5s,baz=134,slow=3.6,SNR=23						
FLTG	Flechtingen	144.99	350	*e*PKPbc	PKPdf	11 36 57.4	+0.2
	baz=15,slow=2.7						
NRDL	Niedersach Rie	145.01	351	*e*PKPbc	PKPdf	11 36 57.7	+0.5
	baz=15,slow=2.7						
KSP	Ksiaz	145.27	344	*e*PKP	PKPbc	11 36 59.1	+0.1
NIE	Niedzica	145.29	338	*e*PKP	PKPab	11 36 60.0	-0.4
CRVS	Cervenica-Dubn	145.30	337	*e*PKP	PKPbc	11 36 58.9	-0.2
VRI	Vrincioaia	145.33	329	⇓P	PKPbc	11 36 59.3	-0.1
PLOR	Plostina	145.38	329	⇑P	PKPbc	11 36 59.4	-0.1
TRPA	Tarpa	145.51	335	⇓P	PKPdf	11 36 59.1	+0.8
OSTC	Ostas	145.55	343	*e*PKP	PKPbc	11 37 00.3	+0.5
BISRR	Bisoca	145.57	328	⇑P	PKPbc	11 37 00.2	+0.2
CHVC	Chvalec	145.57	344	*e*PKP	PKPbc	11 36 59.7	-0.2
CLZ	Clausthal	145.60	350	*e*PKPbc	PKPbc	11 36 59.9	0.0
	baz=15,slow=2.7						
COVR	Voineasa-Covas	145.61	329	⇑P	PKPbc	11 36 59.9	-0.2
CLL	Collm	145.63	347	⇑*i*PKPbc	PKPbc	11 36 59.6	-0.3
	comp=Z,48nm,0.8s						
CLL				*e*pPKPdf	pPKPdf	11 39 15.0	+2.1
CLL	Collm	145.63	347	*e*PKPbc	PKPbc	11 36 59.6	-0.3
	baz=15,slow=2.7						
OZUR		145.63	330	⇓P	PKPbc	11 37 00.6	+0.4
UPC	Upice	145.65	344	*e*PKP	PKPbc	11 37 00.2	+0.1
DPC	Dobruska-Polom	145.71	343	*e*PKP	PKPbc	11 37 00.3	0.0
LANS	Liptovska Anna	145.80	339	*e*PKP	PKPbc	11 37 01.1	+0.5
BRG	Berggiesshubel	145.83	346	*e*PKPbc	PKPbc	11 37 00.4	-0.2
	baz=15,slow=2.7						
BRG				*e*PKPab	PKPab	11 37 02.1	-0.3
	baz=14,slow=4.2						
BRG	Berggiesshubel	145.83	346	*i* PKP	PKPbc	11 37 00.3	-0.2
BRG				Amp		11 37 01.3	
	comp=Z,18nm,0.8s						
KRLC	Kraliky	145.83	343	*e*PKP	PKPbc	11 37 00.5	-0.1
MORC	Moravsky Berou	145.87	342	⇑P	PKPbc	11 37 00.7	0.0
MORC	Moravsky Berou	145.87	342	*e*PKP	PKPbc	11 37 00.5	-0.3
MBAR	Mbarara	145.88	240	PKPbc	PKPbc	11 37 02.4	+0.4
	comp=Z,3.7nm,0.2s,baz=131,slow=14,SNR=6.4						
MBAR	Mbarara	145.88	240	PKPbc	PKPbc	11 37 02.2	+0.1
DOPR	Dopca	145.91	330	⇓P	PKPbc	11 37 01.6	+0.6
FBE	Freiberg	145.92	347	*e*PKPbc	PKPbc	11 37 01.0	+0.2
	baz=15,slow=2.7						
FBE				*e*PKPab	PKPab	11 37 02.7	0.0
	baz=14,slow=4.2						
ISR	Istrita	145.95	328	⇓P	PKPbc	11 37 01.3	+0.1
GTTG	Gottingen	145.95	351	*e*PKPbc	PKPbc	11 37 00.8	-0.1
	baz=15,slow=2.7						
NEUB	Neuenburg	145.97	349	*e*PKPbc	PKPbc	11 37 00.7	-0.2
	baz=15,slow=2.7						
MLR	Muntele Rosu	145.99	329	⇑P	PKPdf	11 37 00.1	+0.7
MLR	Muntele Rosu	145.99	329		PKPdf	11 37 00.5	+1.1
PVCC	Panska Ves	146.00	345	*e*PKP	PKPbc	11 37 01.3	+0.3
CJR	Cluj-Napoca	146.17	332	⇑P	PKPbc	11 37 01.8	0.0
VOIR		146.46	330	⇓P	PKPbc	11 37 02.3	-0.3
DRGR		146.50	333	⇑P	PKPbc	11 37 02.3	-0.4
PRU	Pruhonice	146.51	345	*e*PKP	PKPbc	11 37 02.2	-0.2
PRU				*e*x	x	11 37 04.9	
MOX	Moxa	146.53	348	*e*PKPbc	PKPbc	11 37 02.2	-0.3
	baz=15,slow=2.7						
MOX				*e*PKPab	PKiKP	11 37 04.6	0.0
	baz=14,slow=4.2						
VRAC	Vranov	146.57	342	PKPbc	PKPbc	11 37 02.7	0.0
	baz=5.6,slow=6.0						
VRAC	Vranov	146.57	342	*e*PKP	PKPbc	11 37 02.5	-0.2
PLN	Plauen	146.58	348	*e*PKPbc	PKPbc	11 37 02.4	-0.2
	baz=15,slow=2.7						
VYHS	Vyhne	146.58	339	*e*PKP	PKPbc	11 37 02.6	-0.1
TANN	Tannenbergstha	146.59	347	*e*PKPbc	PKPbc	11 37 02.5	-0.2
	baz=15,slow=2.7						
TANN				*e*PKPab	PKiKP	11 37 05.1	+0.3
	baz=14,slow=4.2						
WERD	Werda	146.59	348	*e*PKPbc	PKPbc	11 37 02.4	-0.3
	baz=15,slow=2.7						
WERD				*e*PKPab	PKiKP	11 37 05.1	+0.4
	baz=14,slow=4.2						
JAVC	Velka Javorina	146.65	341	*e*PKP	PKPbc	11 37 03.8	+0.9

UBBA	**Unterbreizbach**	146.65	350	*e*PKPbc	PKPbc	11 37 02.2	-0.4
	baz=15,slow=2.7						
GUNZ	**Gunzen**	146.66	347	*e*PKPbc	PKPbc	11 37 02.9	0.0
	baz=15,slow=2.7						
GUNZ				*e*PKPab	PKPab	11 37 05.5	-0.3
	baz=14,slow=4.2						
ARR	**Arges**	146.71	330	⇑P	PKPbc	11 37 03.6	+0.4
WERN	**Wernitzgruen**	146.72	347	*e*PKPbc	PKPbc	11 37 03.1	0.0
	baz=15,slow=2.7						
WERN				*e*PKPab	PKPab	11 37 05.9	-0.2
	baz=14,slow=4.2						
NKC	**Novy Kostel**	146.76	347	*e*PKP	PKPbc	11 37 03.0	-0.2
KRUC	**Moravsky**	146.85	342	*e*PKP	PKPbc	11 37 03.1	-0.3
MANZ	**Manzenberg**	147.06	348	*e*PKPbc	PKPbc	11 37 03.9	0.0
	baz=15,slow=2.7						
MODS	**Modra-Piesok**	147.20	341	*e*PKP	PKPbc	11 37 03.7	-0.7
ROTZ	**Rotzenmuhle**	147.25	347	*e*PKPbc	PKPbc	11 37 04.4	-0.1
	baz=15,slow=2.7						
MEM	**Membach**	147.35	355	*d*PKP	PKPbc	11 37 04.2	-0.5
SIRR	**Siria**	147.36	334	⇓P	PKPbc	11 37 05.0	+0.1
BTNL	**Ternell**	147.36	355	*d*PKP	PKPbc	11 37 04.2	-0.5
TNS	**Taunus Mts**	147.46	352	*e*PKPbc	PKPbc	11 37 04.8	-0.2
	baz=15,slow=2.7						
TNS				*e*PKPab	PKPab	11 37 08.5	-0.5
	baz=14,slow=4.2						
LEF	**Lefka**	147.47	308	⇓P	PKPbc	11 37 05.0	-0.5
GRF	**Grafenberg Arr**	147.52	348	*e*PKPbc	PKPbc	11 37 05.1	0.0
	baz=15,slow=2.7						
GRF				*e*PKPab	PKPab	11 37 09.2	-0.1
	baz=14,slow=4.2						
EIL	**Elat**	147.52	297	PKPbc	PKPbc	11 37 04.9	-0.9
	comp=Z,7.1nm,0.9s,baz=44,slow=20,SNR=4.4						
KHC	**Kasperske Hory**	147.54	345	*e*PKP	PKPbc	11 37 05.0	-0.3
KHC				*e*x	x	11 37 09.7	
SNF	**Seneffe**	147.57	357	*d*PKP	PKPbc	11 37 05.7	+0.5
BGES	**Gesves**	147.64	356	*d*PKP	PKPbc	11 37 04.2	-1.3
CKRC	**Cesky Krumlov**	147.65	344	*e*PKP	PKiKP	11 37 06.4	-0.6
WET	**Wettzell**	147.69	346	*e*PKPbc	PKPbc	11 37 05.4	-0.2
	baz=15,slow=2.7						
WET				*e*PKPab	PKPab	11 37 10.0	0.0
	baz=14,slow=4.2						
BMRD	**Maredsous**	147.75	356	*d*PKP	PKPbc	11 37 05.4	-0.3
GEC2	**GERESS Array S**	147.78	345	*e*PKPbc	PKPbc	11 37 05.7	-0.3
	baz=15,slow=2.7						
GERES	**GERESS Array B**	147.78	345	PKPbc	PKPbc	11 37 05.5	-0.4
	comp=Z,13nm,0.7s,baz=29,slow=3.0,SNR=49						
GERES	**GERESS Array B**	147.78	345		PKPbc	11 37 05.7	-0.3
BZS	**Buzias**	147.89	333	⇑P	PKPbc	11 37 05.5	-0.7
DOU	**Dourbes**	147.96	356	*d*PKP	PKPbc	11 37 06.0	-0.2
CONA	**Conrad Observa**	148.03	342	*i* P	PKPbc	11 37 06.5	0.0
	comp=Z,18nm,1.0s,SNR=7.1						
HERR	**Herculane**	148.11	331	⇓P	PKPbc	11 37 05.8	-1.0
WLF	**Walferdange**	148.27	354	*d*PKP	PKPbc	11 37 07.0	0.0
WLF	**Walferdange**	148.27	354	*e*PKPbc	PKPbc	11 37 07.3	+0.2
	baz=15,slow=2.7						
WLF				*e*PKPab	PKPab	11 37 12.1	-0.2
	baz=14,slow=4.2						
MDVR	**Moldovita**	148.50	332	⇓P	PKPbc	11 37 07.5	-0.3
MOA	**Molln**	148.55	344	*e*P	PKPbc	11 37 07.4	-0.4
	comp=Z,7.2nm,0.8s						
ARSA	**Arzberg**	148.74	342	*e*P	PKPbc	11 37 07.7	-0.6
	comp=Z,6.5nm,1.0s						
STU	**Stuttgart**	148.76	350	*e*PKPbc	PKPbc	11 37 08.1	-0.1
	baz=15,slow=2.7						
FUR	**Furstenfeldbru**	148.97	347	*e*PKPbc	PKPbc	11 37 08.6	-0.2
	baz=15,slow=2.7						
ZAGS	**Zajecar**	149.01	330	*e*P	PKPbc	11 37 07.3	-1.7
FRGS	**Fruska Gora**	149.02	335	⇓P	PKPbc	11 37 08.4	-0.7
FRGS	**Fruska Gora**	149.02	335	*e*P	PKPbc	11 37 08.1	-0.9
RJOB	**Jochberg**	149.03	345	*e*PKPbc	PKPbc	11 37 08.4	-0.6
	baz=15,slow=2.7						
RJOB				*e*PKPab	PKPab	11 37 15.8	+0.2
	baz=14,slow=4.2						
ZAPS	**Zavoj**	149.23	329	*e*P	PKPbc	11 37 09.2	-0.4
BFO	**Black Forest**	149.33	351	*e*PKPbc	PKPbc	11 37 09.3	-0.4
	baz=15,slow=2.7						
BFO				*e*PKPab	PKPab	11 37 16.0	-0.7
	baz=14,slow=4.2						
BOVS	**Bovan**	149.40	331	⇓P	PKPbc	11 37 08.7	-1.3
BOVS	**Bovan**	149.40	331	*e*P	PKPbc	11 37 08.4	-1.5
SOKA	**Soboth**	149.40	342	*i* P	PKPbc	11 37 09.1	-0.9
	comp=Z,16nm,1.1s,SNR=5.6						
VTS	**Vitosha**	149.41	328	⇓P	PKPbc	11 37 10.2	0.0
KBA	**Koelnbreinsper**	149.50	344	*e*P	PKPbc	11 37 09.0	-1.3
	comp=Z,12nm,0.8s						
TRUS	**Trudelj**	149.52	333	*e*P	PKPbc	11 37 09.7	-0.5
GRUS	**Gruza**	149.65	332	*e*P	PKPbc	11 37 10.1	-0.4
UBR	**Ueberruh**	149.66	349	*e*PKPbc	PKPbc	11 37 10.0	-0.5
	baz=15,slow=2.7						
WATA	**Walderalm**	149.69	347	*i* P	PKPbc	11 37 10.1	-0.7
	comp=Z,13nm,0.6s,SNR=6.2						
RETA	**Reutte**	149.72	348	*i* P	PKPbc	11 37 10.2	-0.5
	comp=Z,7.1nm,0.7s						
WTTA	**Wattenberg**	149.74	346	*i* P	PKPbc	11 37 10.4	-0.6
	comp=Z,26nm,0.6s,SNR=7.9						
MOTA	**Moosalm**	149.78	347	*i* P	PKPbc	11 37 10.3	-0.7
	comp=Z,22nm,1.0s,SNR=6.2						
DIVS	**Divibare**	149.80	333	*e*P	PKPbc	11 37 10.4	-0.6
MYKA	**Terra Mystica**	149.84	343	*e*P	PKPbc	11 37 09.8	-1.2
	comp=Z,13nm,0.6s						
BOSS	**Bosilegrad**	149.88	328	*e*P	PKPbc	11 37 10.7	-0.5
SQTA	**Sankt Quirin**	149.88	347	*e*P	PKPdf	11 37 05.4	-0.2
	comp=Z,3.0nm,0.5s						
SQTA				*i* P	PKPbc	11 37 10.6	-0.6
	comp=Z,19nm,0.6s,SNR=7.9						
PDKS	**Podkum**	149.96	341	*i* PKPbc	PKPbc	11 37 10.4	-0.8
BARS	**Barje**	149.97	330	*e*P	PKPbc	11 37 10.9	-0.4
SELS	**Selova**	149.99	331	*e*P	PKPbc	11 37 10.8	-0.6
ABTA	**Abfaltersbach**	150.02	345	*e*P	PKPdf	11 37 05.4	-0.4
	comp=Z,4.5nm,0.7s						
ABTA				*i* P	PKPbc	11 37 10.4	-1.1
	comp=Z,24nm,0.6s,SNR=8.9						
DAVA	**Damuels**	150.08	349	*e*P	PKPbc	11 37 11.0	-0.7
	comp=Z,24nm,1.1s,SNR=6.4						
IVAS	**Ivanjica**	150.15	332	*e*P	PKPbc	11 37 10.9	-0.9
CRNS	**Crni Vrh**	150.17	342	*i* PKPbc	PKPbc	11 37 10.8	-0.9
FETA	**Feichten**	150.17	347	*e*P	PKPdf	11 37 05.7	-0.4
	comp=Z,4.7nm,0.8s						
FETA				*i* P	PKPbc	11 37 11.4	-0.5
	comp=Z,26nm,1.1s,SNR=7.1						
BBLS	**Lazići**	150.24	334	*e*P	PKPbc	11 37 11.6	-0.4
BOJS	**Bojanci**	150.38	340	*i* PKPbc	PKPbc	11 37 11.8	-0.3
SJES	**Sjenica**	150.48	332	*e*P	PKPbc	11 37 12.6	0.0
DAVOX	**Davos/Dischmat**	150.57	348	PKP	PKPdf	11 37 06.8	0.0
	comp=Z,3.3nm,0.9s,baz=337,slow=1.0,SNR=4.6						
DAVOX				PKPbc	PKPbc	11 37 12.6	-0.2
	comp=Z,30nm,0.7s,baz=271,slow=0.2,SNR=45						
PDG	**Podgorica**	151.46	332	⇓P	PKPbc	11 37 14.1	-0.6
ESDC	**Sonseca Array**	157.93	12	PKPab	PKPab	11 37 53.0	-0.8
	comp=Z,1.9nm,0.8s,baz=335,slow=4.5,SNR=7.0						
DBIC	**Dimbokro**	167.03	150	PKP	PKPdf	11 37 25.4	-1.0
	comp=Z,2.2nm,0.7s,baz=180,slow=7.8,SNR=3.8						
KOWA	**Kowa**	173.52	122	PKP	PKPdf	11 37 28.3	-1.6
	comp=Z,1.0nm,0.6s,baz=51,slow=4.1,SNR=4.1						
TORD	**Torodi Ar. Bea**	175.10	181	PKP	PKPdf	11 37 28.3	-2.1
	comp=Z,1.3nm,0.9s,baz=4.6,slow=1.1,SNR=7.0						

EAF 11 11:28:56.9±1.4,25°.76S×29°.76E,h10^{km},MD3.7

BUL 11 11:28:57.1±1.3,25°.77S×29°.73E,h10^{km},MD3.9,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	**Changalane**	2.27	104	*i* P	Pn	11 29 34.4	-0.3
CNG	**Changalane**	2.27	104	*i* P	Pn	11 29 34.4	-0.3
MOPA	**Mopani**	2.71	34	*i* P	Pn	11 29 38.9	-1.8
MOPA	**Mopani**	2.71	34	*i* P	Pn	11 29 38.9	-1.8
MSNA	**Messina**	3.42	5	*i* P	Pn	11 29 49.9	-0.6
MSNA	**Messina**	3.42	5	*i* P	Pn	11 29 49.9	-0.6
LBTB	**Lobatse**	3.81	280	*i* P	Pn	11 29 55.3	-0.8
LBTB	**Lobatse**	3.81	280	*i* P	Pn	11 29 55.3	-0.8
BOSA	**Boshof**	4.89	234	*i* P	Pn	11 30 10.7	-0.1
BOSA	**Boshof**	4.89	234	*i* P	Pn	11 30 10.7	-0.1
MATP	**Matopo**	5.44	348	*i* P	Pn	11 30 18.0	-0.4
MATP				*i* S	Sn	11 31 17.3	-3.8
MATP	**Matopo**	5.44	348	*i* P	Pn	11 30 18.0	-0.4
MATP				*i* S	Sn	11 31 17.3	-3.8
BLWY	**Bulawayo**	5.70	349	*i* P	Pn	11 30 19.3	-2.6
BLWY				*i* S	Sn	11 31 22.5	-5.0
BLWY	**Bulawayo**	5.70	349	*i* P	Pn	11 30 19.3	-2.6
BLWY				*i* S	Sn	11 31 22.5	-5.0

IDC 11 11:36:03.4±1.2,16°.95S×174°.85E,h0^{km},mb3.8/4, mb1 4.1/5,mb1mx3.4/33,mbtmp3.8/5,ML4.4/1,MS3.3/8, Ms1 3.3/8,ms1mx3.0/33,Error ellipse: s-maj=57.1km s-min=23.5km az=167.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	3.16	105	Pn	Pn	11 36 53.5	-0.9
	1.6nm,0.3s,baz=277,slow=9.1,SNR=7.7						
DZM	**Mont Dzumac**	9.42	236	LR	LR	11 41 37.7	
	comp=Z,236nm,18.6s,baz=37,slow=36						
AFI	**Afiamalu**	13.25	79	LR	LR	11 42 57.5	
	comp=Z,108nm,21.6s,baz=232,slow=31						
RAO	**Raoul Island**	13.93	153	LR	LR	11 43 29.2	
	comp=Z,262nm,20.0s,baz=306,slow=32						
URZ	**Urewera**	21.32	175	LR	LR	11 48 00.7	
	comp=Z,115nm,18.0s,baz=31,slow=34						
STKA	**Stephens Creek**	33.57	238	LR	LR	11 55 15.5	
	comp=Z,58nm,20.7s,baz=28,slow=34						
WRA	**Warramunga Arr**	38.48	259	P	P	11 43 26.9	-0.6
	0.4nm,0.7s,baz=90,slow=9.0,SNR=6.1						
WRA				LR	LR	11 57 40.7	
	comp=Z,36nm,19.7s,baz=140,slow=34						
ASAR	**Alice Springs**	38.87	253	P	P	11 43 31.1	+0.2
	2.1nm,0.7s,baz=84,slow=8.9,SNR=29						
ASAR				LR	LR	11 58 23.6	
	comp=Z,61nm,20.1s,baz=78,slow=34						
KSRS	**Korea Array**	69.83	322	LR	LR	12 15 26.8	
	comp=Z,9.4nm,19.7s,baz=220,slow=34						
ILAR	**Eielson Array**	86.54	15	P	P	11 48 47.0	-0.9
	0.7nm,0.8s,baz=232,slow=4.8,SNR=7.6						
TXAR	**Lajitas Array**	91.00	60	P	P	11 49 11.4	+1.4
	0.6nm,0.9s,baz=222,slow=4.9,SNR=5.5						

NNC 11 11:46:05.9±2.6,45°.90N×83°.27E,h0^{km},mb2.6,mpv2.8, Error ellipse: s-maj=15.9km s-min=11.3km az=100.0

SOME 11 11:46:07.8,45°.83N×83°.00E,h5^{km}

ISC 11 11:46:08.2±1.3,45°.91N±0°.04×83°.12E±0°.06,h12^{km},n11, σ1^s.73/19,3C-1D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	1.06	327	⇓P	Pb	11 46 28.0	-0.5
	0.9nm,0.2s,baz=144,slow=17,SNR=466						
MK31				⇑S	Sb	11 46 42.3	-0.1
	1.6nm,0.2s,baz=137,slow=29,SNR=13						
MAKZ	**Makanchi**	1.20	319	⇑P	Pn	11 46 30.5	-0.4
	1.5nm,0.2s						
MAKZ				⇑S	Sg	11 46 47.6	+0.7
	3.9nm,0.5s						
ZSN	**Zaisan**	1.96	37	*e*P	Pb	11 46 43.5	-0.3
	5.4nm,0.6s						
ZSN				*e*S	Sb	11 47 09.8	+1.6
	21nm,0.5s						
KAPS	**Kapalarasan**	2.72	258	*e*P	Pb	11 46 55.9	-0.8
	0.8nm,0.5s						
KAPS				*e*S	Sb	11 47 30.8	+0.7
	8.2nm,0.4s						
KAPS	**Kapalarasan**	2.72	258	Pg	Pb	11 46 55.8	-1.0
	2.5nm,0.4s						
KAPS				Lg	Lg	11 47 31.2	
	10nm,0.3s						
KTMS	**Ketmen**	3.16	220	*e*P	Pb	11 47 03.7	-0.7
	3.2nm,0.5s						
KTMS				*e*S	Sb	11 47 43.8	+1.0
	6.5nm,0.4s						
PDGK	**Podgornoye**	3.66	226	Pg	Pb	11 47 12.7	-0.1
	0.5nm,0.3s						
PDGK				Lg	Lg	11 47 59.6	
	4.7nm,1.1s						
BLB	**Baldybastay**	3.76	243	Pg	Pb	11 47 15.1	+0.6
	4.0nm,0.3s						
BLB				Lg	Lg	11 48 04.1	
	6.3nm,0.3s						
UZB	**Uzynbulak**	4.03	228	*e*P	Pb	11 47 20.9	+1.7
	6.5nm,0.9s						
UZB				*e*S	Sg	11 48 13.2	-4.3
	5.4nm,0.5s						
ARXS	**Arharly**	4.12	248	*e*P	Pb	11 47 21.2	+0.6
	1.1nm,0.6s						
ARXS				*e*S	Sb	11 48 13.8	+3.5
	6.5nm,0.9s						
ZHN	**Zhinishke**	4.33	232	*e*P	Pb	11 47 24.3	0.0
ZHN				*e*S	Sb	11 48 19.0	+2.5
	9.2nm,0.1s						

GUC 11 11:47:28.8±0.7,30°.64S×71°.60W,h45^{km}±1^{km},ML3.8, 2C-1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	0.05	219	⇑*i*P	Pn	11 47 35.3	-0.6
CO06				*i* S	Sn	11 47 39.5	-1.3
CO06				IAML		11 47 41.3	
	comp=N,9µm,0.2s						
CO05	**La Serena**	0.78	24	*e*P	Pn	11 47 43.9	+0.5
CO05				*i* S	Sn	11 47 54.6	+0.6
CO03	**El Pedregal**	0.81	105	⇓*i*P	Pn	11 47 44.3	+0.3
CO03				*e*S	Sn	11 47 55.4	+0.5
CO03				IAML		11 47 56.4	
	comp=N,3µm,0.1s						
GO04	**Tololo Observa**	0.83	56	*i* P	Pn	11 47 44.9	+0.5
GO04				*i* S	Sn	11 47 56.6	+0.9
GO04				IAML		11 48 02.8	
	comp=N,10µm,0.5s						
LCO	**Las Campanas**	1.80	26	⇑*i*P	Pn	11 47 58.6	+1.0
LCO				*e*S	Sn	11 48 21.2	+1.9
VA06	**Catapilco**	1.94	172	*e*P	Pn	11 48 00.3	+1.1
VA06				*i* S	Sn	11 48 24.4	+2.1
VA06				IAML		11 48 33.6	
	comp=E,996nm,0.3s						
VA03	**San Esteban**	2.30	157	*e*P	Pn	11 48 06.8	+2.5
VA03				*e*S	Sn	11 48 36.0	+4.4
VA03				IAML		11 48 41.0	
	comp=E,985nm,0.2s						
ROCH	**El Roble**	2.38	168	*e*P		11 48 07.5	
ROCH				*e*P	Pn	11 48 06.9	+1.3
ROCH				*i* S	Sn	11 48 35.9	+2.2
ROCH				*e*S		11 48 36.1	
ROCH				IAML		11 48 43.9	
	comp=N,711nm,0.6s						
ROCH				IAML		11 48 44.2	
	comp=N,547nm,0.5s						
AC04	**Llanos de Chal**	2.47	11	*e*P	Pn	11 48 07.2	+0.7
AC04				IAML		11 48 56.4	
	comp=E,449nm,0.9s						
PEL	**Peldehue**	2.62	163	*e*P	Pn	11 48 10.8	+2.1
PEL				*i* S	Sn	11 48 41.5	+2.2
PEL				IAML		11 48 52.6	
	comp=N,348nm,0.5s						
PEL				IAML		11 48 57.0	
	comp=N,410nm,0.2s						
MT02	**Curacav**	2.64	172	*e*P	Pn	11 48 10.2	+1.2
MT02				IAML		11 48 55.7	
	comp=E,184nm,0.3s						
MT05	**Renca**	2.84	165	IAML		11 49 03.9	
	comp=E,635nm,0.3s						
VA05	**Santo Domingo**	3.01	180	*e*P	Pn	11 48 15.2	+1.2
VA05				IAML		11 49 04.2	
	comp=N,248nm,0.5s						
MT09	**Talagante**	3.17	171	*e*P	Pn	11 48 17.9	+1.5
MT09				*i* S	Sn	11 48 54.7	+1.7
MT09				IAML		11 49 12.2	
	comp=E,238nm,0.1s						
MT01	**Popeta**	3.23	175	*e*P	Pn	11 48 18.2	+1.1
MT01				IAML		11 49 08.8	
	comp=E,184nm,0.5s						
GO03	**Copiap**	3.26	22	*e*P	Pn	11 48 18.9	+1.5
GO03				*i* S	Sn	11 48 56.6	+1.6
GO03				IAML		11 49 11.8	
	comp=E,149nm,0.7s						
BO04	**La Punta**	3.45	166	*e*P	Pn	11 48 21.7	+1.7
BO04				IAML		11 49 15.3	
	comp=E,163nm,0.5s						
BO01	**Tunca**	3.77	174	*e*P	Pn	11 48 25.6	+1.2
BO02	**Sierra Bellavi**	4.20	171	*e*P	Pn	11 48 31.9	+1.5
AC02	**Maricunga**	4.37	30	*e*P	Pn	11 48 34.4	+1.4
AC02				*i* S	Sn	11 49 24.1	+1.2
GO05	**Huala**	4.37	184	*e*P	Pn	11 48 32.5	-0.2

EAF 11 11:48:00.2±3.1,26°.45S×29°.46E,h10^{km},MD4.0

BUL 11 11:48:00.7±1.5,26°.54S×29°.45E,h10^{km},MD4.2,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	**Changalane**	2.46	85	*i* P	Pn	11 48 41.0	0.0
CNG	**Changalane**	2.46	85	*i* P	Pn	11 48 41.0	0.0
MOPA	**Mopani**	3.49	31	*i* P	Pn	11 48 52.2	-2.9
MOPA				*i* P	Pb	11 48 52.7	-10
MOPA				*i* S	Sn	11 49 29.4	-7.0
MOPA	**Mopani**	3.49	31	*i* P	Pn	11 48 52.2	-2.9
MOPA				*i* P	Pb	11 48 52.7	-10
MOPA				*i* S	Sn	11 49 29.4	-7.0
LBTB	**Lobatse**	3.79	293	*i* P	Pn	11 48 59.5	+0.2
LBTB	**Lobatse**	3.79	293	*i* P	Pn	11 48 59.5	+0.2
BOSA	**Boshof**	4.26	240	*i* P	Pn	11 49 06.2	+0.5
BOSA				*i* Sg	Sb	11 50 11.8	+4.4
BOSA	**Boshof**	4.26	240	*i* P	Pn	11 49 06.2	+0.5
BOSA				*i* Sg	Sb	11 50 11.8	+4.4
MATP	**Matopo**	6.15	352	*i* P	Pn	11 49 31.6	-0.2
MATP	**Matopo**	6.15	352	*i* P	Pn	11 49 31.6	-0.2

EAF 11 12:04:38.3±1.9,25°.97S×29°.24E,h10^{km},MD3.5

BUL 11 12:04:38.3±0.8,25°.99S×29°.19E,h10^{km},MD3.7,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	**Changalane**	2.71	97	*i* P	Pn	12 05 22.1	+0.2
CNG	**Changalane**	2.71	97	*i* P	Pn	12 05 22.1	+0.2
MOPA	**Mopani**	3.17	40	*i* P	Pn	12 05 26.3	-2.0
MOPA				*i* S	Sn	12 06 01.8	-4.5
MOPA	**Mopani**	3.17	40	*i* P	Pn	12 05 26.3	-2.0
MOPA				*i* S	Sn	12 06 01.8	-4.5
LBTB	**Lobatse**	3.39	286	*i* P	Pn	12 05 31.0	-0.4
LBTB	**Lobatse**	3.39	286	*i* P	Pn	12 05 31.0	-0.4
MSNA	**Messina**	3.71	12	*i* P	Pn	12 05 34.8	-0.9
MSNA				*i* S	Sn	12 06 17.6	-1.8
MSNA	**Messina**	3.71	12	*i* P	Pn	12 05 34.8	-0.9
MSNA				*i* S	Sn	12 06 17.6	-1.8
MATP	**Matopo**	5.57	353	*i* S	Sn	12 07 00.8	-4.9
MATP	**Matopo**	5.57	353	*i* S	Sn	12 07 00.8	-4.9

IDC 11 12:15:44.4±1.7,4°.14S×129°.51E,h0^{km},mb3.3/1, mb1 3.6/4,mb1mx3.5/33,mbtmp3.4/4,ML3.4/3,Error ellipse: s-maj=60.2km s-min=27.2km az=85.0

DJA 11 12:15:45.7±1.9,4°S±9°×13°0E±°,h12^{km}±15^{km},M3.3/6, MLv3.3/6

ISC 11 12:15:48.3±1.1,4°.13S±0°.08×129°.51E±0°.07,h36^{km},n7, σ1^s.38/9,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	0.97	323	P	Pn	12 16 04.8	-0.5
MSAI				S	Sn	12 16 17.5	-0.3
AAI	**Ambon**	1.38	288	P	Pn	12 16 10.4	-0.6
FAKI	**Fak Fak**	2.99	66	P	Pn	12 16 32.6	-0.5
SIJI	**Sorong**	3.68	29	Pn	Pn	12 16 43.6	+0.9
	3.0nm,0.3s,baz=56,slow=16,SNR=46						
SIJI				Sn	Sn	12 17 23.1	-1.8
	4.6nm,0.3s,baz=222,slow=23,SNR=6.9						
WRA	**Warramunga Arr**	16.41	164	Pn	Pn	12 19 34.4	-1.6
	0.1nm,0.3s,baz=349,slow=12,SNR=2.5						
ASAR	**Alice Springs**	19.89	168	P	P	12 20 18.1	+1.4
	0.3nm,0.3s,baz=346,slow=10,SNR=25						
MKAR	**Makanchi Array**	65.57	326	P	P	12 26 29.8	+1.3
	0.2nm,0.6s,baz=123,slow=7.5,SNR=2.2						

IDC 11 12:25:58.1±2.2,24°.55N×96°.54E,h0^{km},mb3.3/3, mb1 3.5/3,mb1mx3.3/42,mbtmp3.3/3,Error ellipse: s-maj=98.1km s-min=28.0km az=66.0,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	24.52	16	P	P	12 31 19.4	0.0
	0.2nm,0.3s,baz=187,slow=10,SNR=1.3						
MKAR	**Makanchi Array**	24.95	336	P	P	12 31 23.1	0.0
	0.4nm,0.7s,baz=153,slow=8.6,SNR=4.6						
WRA	**Warramunga Arr**	57.53	137	P	P	12 35 49.6	-0.1
	0.4nm,0.6s,baz=325,slow=7.4,SNR=11						

THE 11 12:28:29.6,38°.53N×20°.47E,h0^{km}±2^{km},ML2.9/13,Error ellipse: s-maj=2.0km s-min=0.4km az=275.0

ATH 11 12:28:29.2,38°.52N×20°.56E,h18^{km}±1^{km},ML3.0/4,Error ellipse: s-maj=2.4km s-min=0.7km az=288.0

ISC 11 12:28:28.0±0.8,38°.54N±0°.02×20°.41E±0°.03,h17^{km}±5^{km}, n45,σ1^s.17/78,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	**Fiskardo**	0.14	124	P	Pg	12 28 32.1	+0.1
FSK				S	Sg	12 28 34.1	-0.6
	30µm,0.2s						
FSK	**Fiskardo**	0.14	124	P	Pg	12 28 32.2	+0.1
FSK				S	Sg	12 28 34.1	-0.6
FSK				AML	AML	12 28 34.2	
	comp=E,90649µm,0.2s						
FSK				AML	AML	12 28 34.4	
	comp=N,28403µm,0.3s						
DRAG	**Dragano-Lefkad**	0.19	42	P	Pb	12 28 33.2	+0.1
DRAG				S	Sg	12 28 36.3	+0.3
	comp=N,20µm,0.4s						
DRAG	**Dragano-Lefkad**	0.19	42	P	Pb	12 28 33.2	+0.1
DRAG				S	Sb	12 28 36.6	0.0
EVGI	**Lefkada island**	0.21	67	P	Pg	12 28 33.1	+0.1
EVGI				S	Sg	12 28 35.8	-0.6
	comp=N,12µm,0.3s						
EVGI	**Lefkada island**	0.21	67	P	Pg	12 28 33.1	+0.1
EVGI				S	Sg	12 28 36.0	-0.4
KEF4	**Livadi, Kephal**	0.28	178	P	Pb	12 28 35.1	+0.5
KEF4				S	Sb	12 28 39.7	+0.7
	comp=N,30µm,0.1s						
KEF4	**Livadi, Kephal**	0.28	178	P	Pb	12 28 35.1	+0.5
KEF4				S	Sb	12 28 39.9	+0.8
NYDR	**Nydri-Lefkada**	0.28	52	P	Pg	12 28 34.4	+0.2
NYDR				S	Sg	12 28 38.0	-0.4
NYDR	**Nydri-Lefkada**	0.28	52	P	Pg	12 28 34.4	+0.2
LKD2	**Lefkada island**	0.32	38	P	Pb	12 28 35.2	0.0
LKD2				S	Sg	12 28 39.5	+0.1
	comp=N,862nm,0.2s						
LKD2	**Lefkada island**	0.32	38	P	Pb	12 28 35.3	+0.1
LKD2				S	Sb	12 28 40.5	+0.4
LKD2				AML	AML	12 28 42.7	
	comp=E,1703µm,0.3s						
LKD2				AML	AML	12 28 43.9	
	comp=N,1737µm,0.3s						
KEF3	**Kipouria, Keph**	0.34	188	P	Pb	12 28 35.8	+0.2
KEF3				S	Sb	12 28 41.0	+0.3
	comp=N,11µm,0.1s						
KEF3	**Kipouria, Keph**	0.34	188	P	Pb	12 28 35.8	+0.2
KEF3				S	Sb	12 28 41.1	+0.4
LXRA	**Lixouri, Kepha**	0.34	176	P	Pb	12 28 36.2	+0.6
LXRA				S	Sb	12 28 41.8	+1.1
TSLK	**Tsoukalades, L**	0.34	34	P	Pb	12 28 36.0	+0.3
TSLK				S	Sb	12 28 41.3	+0.4
	comp=N,1µm,0.6s						
TSLK	**Tsoukalades, L**	0.34	34	P	Pb	12 28 36.1	+0.3
TSLK				S	Sb	12 28 41.4	+0.5
ARGA	**Argostoli. Kep**	0.37	171	P	Pb	12 28 37.2	+1.2
ARGA				S	Sb	12 28 42.6	+1.2
VLS	**Valsamata**	0.39	159	P	Pg	12 28 36.2	+0.2
VLS				S	Sg	12 28 41.7	+0.3
	comp=N,7µm,0.1s						
VLS	**Valsamata**	0.39	159	P	Pg	12 28 36.3	+0.2
VLS				S	Sb	12 28 42.0	-0.2
VLS				AML	AML	12 28 42.0	
	comp=N,12282µm,0.1s						
VLS				AML	AML	12 28 42.2	
	comp=E,10285µm,0.3s						
PSDA	**Pessada-Kefalo**	0.45	162	P	Pb	12 28 37.3	-0.1
PSDA				S	Sb	12 28 43.8	0.0
	comp=E,608nm,0.3s						
PSDA	**Pessada-Kefalo**	0.45	162	P	Pb	12 28 37.3	-0.1
PSDA				S	Sb	12 28 43.9	+0.1
VTN	**Vitineika**	0.87	135	P	Pg	12 28 44.9	-0.1
LTHK	**Lithakia**	0.90	158	P	Pb	12 28 44.7	-0.3
RLS	**Riolos of Patr**	0.96	120	P	Pb	12 28 46.0	-0.2
RLS				S	Sn	12 28 59.9	-0.1
	comp=E,255nm,0.3s						
RLS	**Riolos of Patr**	0.96	120	P	Pb	12 28 45.7	-0.5
IGT	**Igoumenitsa**	0.99	357	P	Pn	12 28 48.5	+1.3
IGT				S	Sn	12 29 03.6	+2.8

	comp=E,230nm,0.5s						
IGT	Igoumenitsa	0.99	357	P	Pn	12 28 48.2	+1.0
EFP	Efpalio	1.18	95	P	Pn	12 28 49.1	-0.6
DRO	Drossia	1.18	119	P	Pn	12 28 49.9	+0.1
DRO				S	Sg	12 29 07.3	+1.1
	comp=E,662nm,0.2s						
DRO	Drossia	1.18	119	P	Pn	12 28 49.9	+0.1
DRO				AML	AML	12 29 08.8	
	comp=N,1447µm,0.3s						
DRO				AML	AML	12 29 12.4	
	comp=E,1202µm,0.5s						
LAKA	Lakka	1.27	103	P	Pn	12 28 50.7	-0.3
TRIZ	Trizonia	1.32	97	P	Pn	12 28 51.6	0.0
MAKR	Makrakomi, Fth	1.43	70	P	Pb	12 28 54.5	+0.4
KLV	Kalavryta, Ach	1.46	109	P	Pn	12 28 53.8	+0.2
AGG	Agios Georgios	1.58	72	P	Pb	12 28 57.0	+0.2
AGG				S	Sg	12 29 20.1	+1.2
	comp=E,160nm,0.6s						
AGG	Agios Georgios	1.58	72	P	Pb	12 28 56.9	+0.2
STON	Ston	4.79	335	*e*Pn	Pn	12 29 40.9	+1.5
STON				Sn	Sn	12 30 33.5	-1.0
LSTV	Lastovo	5.00	329	*e*Pn	Pn	12 29 43.7	+1.5
LSTV				Sn	Sn	12 30 36.7	-2.9
MAKA	Makarska	5.39	333	*e*Pn	Pn	12 29 49.1	+1.5
MAKA				Sn	Sn	12 30 47.5	-1.7
HVAR	Hvar	5.52	328	*e*Pn	Pn	12 29 50.3	+0.9
HVAR				Sn	Sn	12 30 48.8	-3.6
RICI	Ricice	5.54	334	*e*Pn	Pn	12 29 50.9	+1.3
RICI				Sn	Sn	12 30 51.2	-1.6
ZIRJ	Zirje	6.25	326	*e*Pn	Pn	12 29 59.9	+0.5
ZIRJ				Sn	Sn	12 31 06.4	-4.0
MORI	Morici	6.39	328	*e*Pn	Pn	12 30 02.8	+1.4
MORI				Sn	Sn	12 31 11.3	-2.6
DUGI	Dugi Otok	6.78	325	*e*Pn	Pn	12 30 07.3	+0.7
DUGI				Sn	Sn	12 31 19.5	-3.9

*IDC **11** 12:33:16.4±2.5, 36°.88N×139°.51E, h0^{km}, mb3.3/2, mb1 3.6/2, mb1mx2.7/54, mbtmp3.3/2, Error ellipse: s-maj=39.8km s-min=15.4km az=179.0*

*JMA **11** 12:33:19.1, 36°.61N×139°.53E, h7^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s178.00000°, δ42.00000°, λ29.00000°. NP2: ϕ_s66.00000°, δ71.00000°, λ129.00000°. Principal axes: T Plg49.0000°, Azm18.0000°; N Plg36.0000°, Azm231.0000°; P Plg17.0000°, Azm128.0000°;*

JMA Felt II J1.

ISC 11 12:33:18.1±1.2**, 36°.61N**±0°.05×**139°.58E**±0°.05**, h11**^{km}±10^{km}**, n10, σ1^s.43**/14**, 4C-2D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAG	Ashikaga	0.20	209	⇑P	Pg	12 33 23.2	+0.8
JKT	Katashina	0.31	302	⇓P	Pb	12 33 24.8	-0.8
JKT				S	Sg	12 33 28.8	+0.3
JSB	Shiboa	0.46	37	⇑P	Pn	12 33 28.8	-1.8
JSB				S	Sb	12 33 35.4	+0.5
JYT	Yasato	0.63	127	⇓P	Pn	12 33 31.3	-1.6
JRY	Ryogami san	0.80	223	⇑P	Pn	12 33 33.7	-1.6
JFY	Yanaizu	0.81	7	⇑P	Pn	12 33 34.5	-0.9
JFY				S	Sg	12 33 44.6	+0.4
MJAR	Matsushiro Arr	1.10	267	Pg	Pb	12 33 38.0	-1.1
	10nm,0.3s,baz=69,slow=17,SNR=304						
MJAR				Lg	Lg	12 33 51.0	
	13nm,0.3s,baz=331,slow=26,SNR=25						
MAT	Matsushiro	1.10	267	P	Pn	12 33 39.2	-0.3
MAT				S	Sg	12 33 52.6	-1.0
WRA	Warramunga Arr	56.46	186	P	P	12 43 00.8	+0.8
	0.3nm,0.5s,baz=2.1,slow=7.6,SNR=8.2						
ASAR	Alice Springs	60.19	186	P	P	12 43 28.6	+2.6
	0.1nm,0.6s,baz=20,slow=8.3,SNR=3.6						

IDC 11 12:40:29.8±2.5**, 18°.42S**×**68°.85W, h0**^{km}**, mb3.9**/1**, mb1 4.1**/2**, mb1mx3.6**/32**, mbtmp4.0**/2**, ML4.0**/1**, MS3.2**/3**, Ms1 3.3**/3**, ms1mx3.0**/27**, Error ellipse: s-maj=75.8km s-min=37.0km az=97.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	2.23	18	Pn	Pn	12 41 09.1	+0.6
	44nm,0.3s,baz=202,slow=11,SNR=389						
LPAZ				Sn	Sn	12 41 37.2	0.0
	baz=233,slow=20						
LPAZ				LR	LR	12 42 17.3	
	comp=Z,424nm,21.9s,baz=192,slow=48						
CPUP	Villa Florida	13.24	129	LR	LR	12 50 12.6	
	comp=Z,59nm,21.6s,baz=312,slow=44						
TORD	Torodi Ar. Bea	76.29	71	P	P	12 52 20.9	-0.1
	1.1nm,0.9s,baz=262,slow=5.9,SNR=4.0						
ESDC	Sonseca Array	83.61	45	LR	LR	13 28 31.5	
	comp=Z,41nm,18.1s,baz=340,slow=34						
SONM	Songino Array	150.41	6	PKPbc	PKPbc	13 00 23.2	-0.3
	0.7nm,0.9s,baz=347,slow=3.3,SNR=4.1						

*ATH **11** 12:41:41.4, 38°.69N×20°.62E, h11^{km}±1^{km}, ML3.3/8, Error ellipse: s-maj=1.7km s-min=0.8km az=308.0*

*THE **11** 12:41:41.4, 38°.70N×20°.60E, h8^{km}, ML3.5/7, Error ellipse: s-maj=1.0km s-min=0.5km az=286.0*

ISC 11 12:41:40.3±0.8**, 38°.71N**±0°.02×**20°.57E**±0°.03**, h15**^{km}±4^{km}**, n67, σ1^s.58**/89**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.03	169	P	Pg	12 41 42.7	-0.3
DRAG				S	Sg	12 41 43.6	-1.3
	279µm,0.2s						
DRAG	Dragano-Lefkad	0.03	169	P	Pg	12 41 42.7	-0.3
LKD2	Lefkada island	0.10	43	P	Pg	12 41 43.8	+0.1
LKD2				S	Sg	12 41 45.5	-0.4
LKD2	Lefkada island	0.10	43	P	Pg	12 41 43.8	+0.1
LKD2				S	Sg	12 41 45.8	-0.1
LKD2				AML	AML	12 41 45.9	
	comp=E,83736µm,0.2s						
LKD2				AML	AML	12 41 46.2	
	comp=N,54963µm,0.2s						
NYDR	Nydri-Lefkada	0.10	90	P	Pg	12 41 43.5	-0.1
NYDR				S	Sg	12 41 45.1	-0.7
NYDR	Nydri-Lefkada	0.10	90	P	Pg	12 41 43.6	-0.1
NYDR				S	Sg	12 41 45.4	-0.4
EVGI	Lefkada island	0.12	143	P	Pg	12 41 43.9	+0.1
EVGI				S	Sg	12 41 46.0	-0.1
	comp=N,49µm,0.2s						
EVGI	Lefkada island	0.12	143	P	Pg	12 41 44.0	+0.1
EVGI				S	Sg	12 41 45.9	-0.1
TSLK	Tsoukalades, L	0.13	32	P	Pg	12 41 44.5	+0.5
TSLK				S	Sg	12 41 47.1	+0.7
	comp=N,40µm,0.3s						
TSLK	Tsoukalades, L	0.13	32	P	Pg	12 41 44.6	+0.5
TSLK				S	Sg	12 41 47.3	+0.8
TSLK				AML	AML	12 41 48.4	
	comp=E,83407µm,0.3s						
TSLK				AML	AML	12 41 49.3	
	comp=N,75682µm,0.3s						
FSK	Fiskardo	0.25	181	P	Pg	12 41 46.7	+0.9
FSK				S	Sg	12 41 50.6	+1.0
	comp=N,12µm,0.3s						
FSK	Fiskardo	0.25	181	P	Pg	12 41 46.8	+0.9
FSK				AML	AML	12 41 51.1	
	comp=N,15651µm,0.4s						
FSK				AML	AML	12 41 51.9	
	comp=E,33746µm,0.2s						
KEF4	Livadi, Kephal	0.47	194	P	Pg	12 41 50.2	+0.6
KEF4				S	Sb	12 41 57.6	+0.7
	comp=E,26µm,0.3s						
KEF4	Livadi, Kephal	0.47	194	P	Pg	12 41 50.0	+0.4
LXRA	Lixouri, Kepha	0.52	191	P	Pg	12 41 51.4	+0.8
VLS	Valsamata	0.54	178	P	Pg	12 41 51.3	+0.4
VLS				S	Sg	12 41 58.7	+0.6
	comp=E,3µm,0.2s						
VLS	Valsamata	0.54	178	P	Pg	12 41 51.2	+0.4
VLS				AML	AML	12 42 00.9	
	comp=E,7264µm,0.1s						
VLS				AML	AML	12 42 03.6	
	comp=N,5599µm,0.4s						
KEF3	Kipouria, Keph	0.54	199	P	Pg	12 41 50.9	0.0
KEF3	Kipouria, Keph	0.54	199	P	Pg	12 41 51.0	+0.1
ARGA	Argostoli. Kep	0.54	187	P	Pb	12 41 52.5	+1.1
PSDA	Pessada-Kefalo	0.60	179	P	Pg	12 41 52.4	+0.3
PSDA				S	Sb	12 42 01.6	+0.9
	comp=N,465nm,0.2s						
PSDA	Pessada-Kefalo	0.60	179	P	Pg	12 41 52.4	+0.3
IGT	Igoumenitsa	0.84	347	P	Pg	12 41 57.3	+0.7
IGT	Igoumenitsa	0.84	347	P	Pg	12 41 57.3	+0.7
VTN	Vitineika	0.93	148	P	Pb	12 41 59.1	+1.0
RLS	Riolos of Patr	0.96	133	P	Pg	12 41 59.2	+0.3
RLS	Riolos of Patr	0.96	133	P	Pg	12 41 59.0	+0.1
RLS				AML	AML	12 42 19.6	
	comp=N,1788µm,0.6s						
RLS				AML	AML	12 42 21.5	
	comp=E,3421µm,0.6s						
JAN	Janina	0.97	13	P	Pn	12 42 01.0	+1.7
EVR	Evrytania	0.99	78	P	Pg	12 42 00.0	+0.5
EVR	Evrytania	0.99	78	P	Pg	12 42 00.0	+0.5
EVR				AML	AML	12 42 27.4	
	comp=E,980µm,0.4s						
EVR				AML	AML	12 42 30.0	
	comp=N,1018µm,1.1s						
LTHK	Lithakia	1.02	168	P	Pg	12 41 59.8	-0.3
LTHK	Lithakia	1.02	168	P	Pg	12 41 59.8	-0.3
EFP	Efpalio	1.09	105	P	Pg	12 42 01.0	-0.3
EFP	Efpalio	1.09	105	P	Pg	12 42 01.0	-0.3
EFP				AML	AML	12 42 24.6	
	comp=N,3234µm,0.4s						
EFP				AML	AML	12 42 24.8	
	comp=E,2572µm,0.4s						
KASA	Kassiopi	1.14	335	P	Pb	12 42 03.7	+2.0
KEK	Kerkira	1.16	329	P	Pb	12 42 03.9	+1.8
KEK	Kerkira	1.16	329	P	Pn	12 42 04.2	+2.2
DRO	Drossia	1.18	130	P	Pb	12 42 02.6	+0.3
DRO	Drossia	1.18	130	P	Pb	12 42 02.6	+0.3
DRO				AML	AML	12 42 28.0	
	comp=N,3477µm,0.3s						
DRO				AML	AML	12 42 28.4	
	comp=E,4251µm,0.6s						
LAKA	Lakka	1.20	113	P	Pb	12 42 02.9	+0.1
LAKA	Lakka	1.20	113	P	Pb	12 42 02.6	-0.2
TRIZ	Trizonia	1.23	106	P	Pb	12 42 03.5	+0.3
MAKR	Makrakomi, Fth	1.26	76	P	Pn	12 42 04.3	+1.0
AGG	Agios Georgios	1.41	77	P	Pb	12 42 07.6	+1.3
THL	Klokotos Trika	1.41	52	P	Pb	12 42 07.6	+1.3
KLV	Kalavryta, Ach	1.41	118	P	Pn	12 42 06.1	+0.6
KLV	Kalavryta, Ach	1.41	118	P	Pn	12 42 06.1	+0.6
LTK	Loutraki	2.01	109	P	Pb	12 42 17.4	+0.9
OHR	Ohrid	2.40	4	*i* Pn	Pn	12 42 22.4	+3.3
STIP	Stip	3.23	22	*i* Pn	Pb	12 42 35.8	-1.4
BOSS	Bosilegrad	4.05	20	*e*Pn	Pn	12 42 45.3	+3.6
BARS	Barje	4.21	13	*e*Pn	Pn	12 42 46.6	+2.8
SELS	Selova	4.52	5	*e*Pn	Pn	12 42 50.3	+2.1
SJES	Sjenica	4.56	355	*e*Pn	Pn	12 42 51.9	+3.0
STON	Ston	4.69	333	*e*Pn	Pn	12 42 51.0	+0.6
STON				Sn	Sn	12 43 40.3	-4.2
ZAPS	Zavoj	4.82	18	*e*Pn	Pn	12 42 59.1	+6.8
LSTV	Lastovo	4.92	327	*e*Pn	Pn	12 42 54.1	+0.5
LSTV				Sn	Sn	12 43 47.0	-3.2
GRUS	Gruza	5.17	1	*e*Pn	Pn	12 42 59.1	+2.0
MAKA	Makarska	5.30	331	*e*Pn	Pn	12 42 59.1	+0.3
MAKA				Sn	Sn	12 43 56.1	-3.4
DIVS	Divibare	5.40	356	*e*Pn	Pn	12 43 02.0	+1.7
RICI	Ricice	5.43	333	*e*Pn	Pn	12 43 01.3	+0.6
RICI				Sn	Sn	12 43 59.7	-3.2
HVAR	Hvar	5.44	326	*e*Pn	Pn	12 43 01.7	+0.9
HVAR				Sn	Sn	12 44 00.0	-3.1
ZIRJ	Zirje	6.18	325	*e*Pn	Pn	12 43 10.9	0.0
ZIRJ				Sn	Sn	12 44 17.6	-3.6
MORI	Morici	6.32	326	*e*Pn	Pn	12 43 13.5	+0.7
MORI				Sn	Sn	12 44 21.6	-3.0
DUGI	Dugi Otok	6.71	324	*e*Pn	Pn	12 43 19.0	+0.8
DUGI				Sn	Sn	12 44 31.6	-2.6
SMRN	Sveta Marina	7.92	325	*e*Pn	Pn	12 43 35.7	+0.9
SMRN				Sn	Sn	12 45 00.2	-3.9
BRJN	Brijuni	8.01	323	*e*Pn	Pn	12 43 37.0	+1.0
BRJN				Sn	Sn	12 45 02.4	-3.9

*KRNET **11** 12:57:09.3±0.1, 40°.30N×73°.11E, h17^{km}, mb2.9*

*ISU **11** 12:57:09, 40°.10N×73°.00E, h5^{km}*

*SOME **11** 12:57:12.8, 40°.55N×73°.18E, h10^{km}*

*NNC **11** 12:57:14.3±2.5, 40°.61N×73°.29E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=21.3km s-min=10.2km az=167.0*

ISC 11 12:57:07.5±1.2**, 40°.41N**±0°.03×**73°.20E**±0°.02**, h1**^{km}±11^{km}**, n44, σ1^s.06**/74**, 23C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	Osh	0.34	291	⇓*i*P	Pb	12 57 16.1	-0.3
	baz=13						
OHH				⇓*i*S	Sb	12 57 21.0	-1.3
	baz=13						
SFK	Sufi-Kurgan	0.46	149	⇑*e*P	Pg	12 57 16.8	+0.6
	baz=33						
SFK				⇑*e*S	Sg	12 57 22.8	+0.7
	baz=33						
SALK	Salom-Alik	0.67	45	⇓*e*P	Pn	12 57 25.0	+0.7
	baz=43						
SALK				⇓*e*S	Sn	12 57 35.5	-0.1
	baz=43						
FRG	Fergana	1.08	269	*e*P	Pn	12 57 32.0	+2.2
FRG				*e*S	Sn	12 57 46.0	+0.5
DRK	Karamyk	1.42	230	⇑*i*P	Pn	12 57 33.2	-1.5
	baz=31						
DRK				⇑*i*S	Sg	12 57 51.1	-1.9
	baz=31						
BTK	Batken	1.86	260	*e*P	Pg	12 57 43.0	0.0
BTK				*e*S	Sg	12 58 20.0	+13
BTK	Batken	1.86	260	⇑*i*P	Pb	12 57 42.1	-0.2
	baz=63						
BTK				⇑*i*S	Sb	12 58 05.4	-0.6
	baz=63						
TRKS	Terek-Say	1.92	306	⇑*i*P	Pb	12 57 43.1	-0.3
	baz=9.0						
TRKS				⇑*i*S	Sb	12 58 07.7	-0.3
	baz=9.0						
MNAS	Manas	2.15	346	⇓*i*P	Pg	12 57 48.1	-0.5
	baz=48						
MNAS				⇓*i*S	Sg	12 58 16.7	+0.3
	baz=48						
EKS2	Erkin-Say	2.30	11	⇓*i*P	Pg	12 57 51.3	-0.2
	baz=12						
EKS2				⇓*i*S	Sg	12 58 21.1	-0.1
	baz=12						
MRKS	Merke	2.34	0	*e*P	Pg	12 57 54.7	+2.4
	23nm,0.4s						
MRKS				*e*S	Sg	12 58 24.2	+1.6
	132nm,0.4s						
MRKS	Merke	2.34	0	Pg	Pg	12 57 52.5	+0.2
	19nm,0.5s						
MRKS				Lg	Lg	12 58 24.2	
	132nm,0.4s						
KBK	Karagaybulak	2.60	30	⇑*i*P	Pb	12 57 55.9	+0.8
	baz=30						
KBK				⇑*i*S	Sb	12 58 29.1	+1.4
	baz=30						
GAR	Garm	2.63	239	⇑*e*P	Pn	12 57 52.5	+1.3
	baz=40						
GAR				⇑*i*S	Sn	12 58 23.5	-0.3
	baz=40						
CHMS	Chumysh	2.84	24	⇑*i*P	Pb	12 57 58.9	-0.1
	baz=24						
CHMS				⇑*i*S	Sb	12 58 34.2	-0.1
	baz=24						
DZA	Taraz	2.85	331	*e*P	Pg	12 58 03.2	+1.1
	301nm,0.2s						
DZA				*e*S	Sg	12 58 39.2	+0.1
	110nm,0.4s						
BOOM	Boomskoye usch	2.93	44	⇑*i*P	Pb	12 58 00.2	-0.4
	baz=43						
BOOM				⇑*i*S	Sb	12 58 37.1	+0.1
	baz=43						
ULHL	Ulahol	2.94	50	⇑*i*P	Pb	12 58 00.4	-0.4
	baz=49						
ULHL				⇑*i*S	Sb	12 58 36.9	-0.4
	baz=49						
IUG	Iuzhnay	2.96	307	*e*P	Pg	12 58 05.2	+1.1
	160nm,0.2s						
IUG				*e*S	Sg	12 58 43.0	+0.6
	73nm,0.3s						
IUG	Iuzhnay	2.96	307	Pg	Pg	12 58 03.6	-0.5
	277nm,0.4s						
IUG				Lg	Lg	12 58 43.0	
	73nm,0.3s						
USP	Ospenovka	3.02	18	⇑*i*P	Pb	12 58 01.2	-0.9
	baz=19						
USP				⇑*i*S	Sb	12 58 38.2	-1.3
	baz=19						
SGDS	Sogindy	3.23	19	Pg	Pg	12 58 08.7	-0.6
	4.5nm,0.3s						
SGDS				Lg	Lg	12 58 51.5	
	22nm,0.7s						
CHM	Chimkent	3.31	306	*e*P	Pg	12 58 12.8	+1.8
	64nm,0.1s						
CHM				*e*S	Sg	12 58 55.7	+1.8
	179nm,0.3s						
KST	Kastek	3.35	37	*e*P	Pg	12 58 12.6	+0.9
	11nm,0.8s						
KST				*e*S	Sg	12 58 55.7	+0.6
	16nm,0.9s						
KST	Kastek	3.35	37	Pg	Pg	12 58 11.1	-0.6
	9.3nm,0.5s						
KST				Lg	Lg	12 58 55.7	
	16nm,0.9s						
KK09	Karatay Array	3.38	324	⇓Pn	Pg	12 58 11.5	-0.8
	1.6nm,0.3s,baz=142,slow=15						
KK09				⇑Lg	Lg	12 58 54.9	
	6.3nm,0.4s,baz=138,slow=31						
DGS	Degeres	3.42	33	*e*P	Pg	12 58 14.6	+1.5
	7.0nm,0.6s						
DGS				*e*S	Sg	12 58 58.6	+1.1
	15nm,0.4s						
DGS	Degeres	3.42	33	Pg	Pg	12 58 12.8	-0.3
	6.0nm,0.5s						
DGS				Lg	Lg	12 58 58.0	
	15nm,0.4s						
CHGR	Chuyangaron	3.58	242	⇑*i*P	Pn	12 58 05.9	+1.7
	baz=43						
CHGR				⇑*i*S	Sn	12 58 46.6	-0.6
	baz=43						
BRLS	Borolday	3.64	317	*e*P	Pg	12 58 16.4	-0.7
	4.7nm,0.4s						
BRLS				*e*S	Sg	12 59 02.2	-2.1
	20nm,0.3s						
MTBS	Maitube	3.64	41	*e*P	Pg	12 58 17.4	+0.2
	3.5nm,0.6s						
MTBS				*e*S	Sg	12 59 03.9	-0.5
	7.5nm,0.4s						
MTBS	Maitube	3.64	41	Pg	Pg	12 58 16.2	-1.0
	7.0nm,0.5s						
MTBS				Lg	Lg	12 59 03.9	
	6.1nm,0.4s						
TNSS	Tian-Shan	3.84	46	*e*P	Pg	12 58 21.4	+0.3
	2.5nm,0.5s						
TNSS				*e*S	Sg	12 59 11.0	0.0
	7.8nm,0.9s						
TNSS	Tian-Shan	3.84	46	Pg	Pg	12 58 19.7	-1.5
	4.0nm,0.5s						
TNSS				Lg	Lg	12 59 10.2	
	7.8nm,0.9s						
MDOK	Medeo	3.98	45	*e*P	Pg	12 58 23.9	0.0
	2.9nm,0.4s						
MDOK				*e*S	Sg	12 59 15.0	-0.4
	17nm,0.6s						
MDOK	Medeo	3.98	45	Pg	Pg	12 58 23.1	-0.8
	22nm,1.0s						
MDOK				Lg	Lg	12 59 15.8	
	17nm,0.6s						
KOTS	Kotyrbulak	4.07	45	*e*P	Pg	12 58 26.1	+0.7
	3.2nm,0.4s						
KOTS				*e*S	Sg	12 59 19.2	+1.1
	28nm,0.7s						
KOTS	Kotyrbulak	4.07	45	Pg	Pg	12 58 25.1	-0.3
	4.9nm,0.6s						
KOTS				Lg	Lg	12 59 19.2	
	21nm,0.5s						
KUU	Kurty	4.20	33	*e*P	Pg	12 58 27.5	-0.4
	1.8nm,0.3s						
KUU				*e*S	Sg	12 59 21.3	-0.9
	14nm,0.4s						
KUU	Kurty	4.20	33	Pg	Pg	12 58 26.1	-1.8
	2.1nm,0.4s						
KUU				Lg	Lg	12 59 21.3	
	8.5nm,0.7s						
KTBS	Karatobe	4.20	37	*e*P	Pg	12 58 27.5	-0.5
	3.0nm,0.6s						
KTBS				*e*S	Sg	12 59 21.4	-1.0
	14nm,0.6s						
KTBS	Karatobe	4.20	37	Pg	Pg	12 58 26.4	-1.5
	3.1nm,0.8s						
KTBS				Lg	Lg	12 59 21.4	
	14nm,0.6s						
BTLS	Baital	4.68	7	*e*P	Pg	12 58 36.1	-0.9
	1.4nm,0.6s						
BTLS				*e*S	Sg	12 59 35.8	-1.8
	5.5nm,0.8s						
BTLS	Baital	4.68	7	Pg	Pg	12 58 34.7	-2.3
	3.2nm,0.6s						
BTLS				Lg	Lg	12 59 35.8	
	5.5nm,0.8s						

GUC 11 13:01:32.3±0.6**, 18°.01S**×**70°.65W, h14**^{km}±2^{km}**, ML3.7, 1C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	Chacalluta	0.47	141	⇓*i*P	Pg	13 01 40.9	-0.6
AP01				*i* S	Sg	13 01 47.7	-0.1
AP01				IAML		13 01 48.2	
	comp=E,17µm,0.3s						
PB12	IPOC Station P	0.68	153	*e*P	Pg	13 01 44.2	-1.4
PB12				*i* S	Sg	13 01 53.3	-1.2
PB16	IPOC Station P	1.13	107	*e*P	Pb	13 01 51.0	-3.0
PB16				*i* S	Sb	13 02 05.6	-3.3
PB18	Visviri	1.19	70	⇑*i*P	Pb	13 01 53.5	-1.4
PB18				*i* S	Sb	13 02 09.5	-0.9
PB11	IPOC Station P	1.98	152	*e*P	Pn	13 02 04.0	-1.7
PB11				*i* S	Sn	13 02 30.2	-0.2
PB11				IAML		13 02 32.0	
	comp=E,1µm,0.3s						
HMBC	Humberstone	2.37	163	*e*P	Pn	13 02 09.8	-1.2
HMBC				*i* S	Sn	13 02 41.1	+1.1
HMBC				IAML		13 02 46.5	
	comp=N,507nm,0.3s						
PB08	IPOC Station P	2.55	147	*e*P	Pn	13 02 12.7	-1.0
PB08				*i* S	Sn	13 02 45.6	+0.9
PB08				IAML		13 02 48.7	
	comp=E,223nm,0.2s						
TA01	Diego Aracena	2.58	170	*e*P	Pn	13 02 13.3	-0.5
TA01				IAML		13 02 53.7	
	comp=N,167nm,0.3s						
PATCX	Punta Patache	2.84	171	*e*P	Pn	13 02 17.0	-0.3
PATCX				IAML		13 03 05.1	
	comp=E,228nm,0.2s						
PB01	IPOC Station P	3.21	160	*e*P	Pn	13 02 21.8	-0.7
PB01				*i* S	Sn	13 03 00.6	-0.1
PB01				IAML		13 03 14.5	
	comp=N,129nm,0.4s						
PB02	IPOC Station P	3.37	168	*e*P	Pn	13 02 24.6	-0.1
PB02				*i* S	Sn	13 03 04.7	+0.1
PB02				IAML		13 03 20.4	
	comp=E,266nm,0.5s						
PB07	IPOC Station P	3.77	169	*e*P	Pn	13 02 29.6	-0.6
PB09	IPOC Station P	4.00	161	*e*P	Pn	13 02 35.2	+1.9
PB09				*i* S	Sn	13 03 21.1	+0.9
PB03	IPOC Station P	4.11	168	*e*P	Pn	13 02 33.9	-1.0
PB04	IPOC Station P	4.33	174	*e*P	Pn	13 02 36.5	-1.5
PB04				*i* S	Sn	13 03 28.0	-0.4
PB06	IPOC Station P	4.78	168	*e*P	Pn	13 02 42.8	-1.3
LVC	Limon Verde	4.86	161	*e*P	Pn	13 02 45.4	-0.1

*NEIC **11** 13:02:40.9±2.2, 4°.06S±0°.06×129°.52E±0°.05, h10^{km}±1^{km}, mb4.9/75, Error ellipse: s-maj=10.0km s-min=8.2km az=147.0*

*DJA **11** 13:02:42.5±0.2, 4°S±2°×12°9E±°, h10^{km}, M4.7/13, mB5.0/5, mb4.9/13, MLv4.7/12, Mw(mB)4.3/5*

*IDC **11** 13:02:43.2±0.6, 4°.09S×129°.53E, h29^{km}±3^{km}, mb4.6/17, mb1 4.6/23, mb1mx4.5/34, mbtmp4.7/23, ML4.5/5, MS3.4/10, Ms1 3.3/10, ms1mx3.1/38, Error ellipse: s-maj=17.2km s-min=11.4km az=81.0*

*BJI **11** 13:02:44.5±0.0, 4°.00S×129°.50E, h44^{km}, mB5.1/22, mb4.8/45, Ms4.4/2, Ms7 4.3/2*

ISC 11 13:02:40.2±0.3**, 4°.13S**±0°.04×**129°.48E**±0°.05**, h10**^{km}**, n190, σ1^s.62**/203**, mb4.9**/62**, MS3.4**/4**, 41C-15D, Fault plane solution: NP1:**ϕ_s126.15389°**,** δ48.74322°**,** λ114.14975°. **NP2:**ϕ_s271.94125°**,** δ46.68829°**,** λ64.99547°. **Principal axes:** T Plg72.0531°, Azm106.0139°**;** N Plg17.9124°, Azm289.6827°**;** P Plg1.0750°, Azm199.3352°**; Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.58	133	P	Pn	13 02 54.8	+0.3
MSAI	Masohi	0.95	325	P	Pg	13 02 58.1	-0.4
MSAI				S	Sg	13 03 09.6	-1.3
AAI	Ambon	1.35	289	P	Pn	13 03 04.2	-1.0
FAKI	Fak Fak	3.02	67	P	Pn	13 03 30.0	+2.0
FAKI	Fak Fak	3.02	67		Pn	13 03 29.7	+1.7
FAKI	Fak Fak	3.02	67	P	Pn	13 03 30.1	+2.0
SIJI	Sorong	3.70	29	Pn	Pn	13 03 38.2	+0.8
	109nm,0.3s,baz=62,slow=23,SNR=200						
SIJI				Sn	Sn	13 04 18.8	-2.3
	63nm,0.3s,baz=206,slow=23,SNR=8.8						
SIJI				LR	LR	13 05 30.7	
	comp=Z,1µm,18.3s,baz=144,slow=46						
SWI	Sorong	3.70	29	P	Pn	13 03 38.8	+1.3
LBMI	Labuha	3.99	330	P	Pn	13 03 42.4	+0.9
SANI	Sanana	4.05	301	P	Pn	13 03 42.4	+0.1
SANI	Sanana	4.05	301	P	Pn	13 03 43.0	+0.7
SAUI	Saumlaki	4.24	155	P	Pn	13 03 48.4	+3.6
SAUI	Saumlaki	4.24	155	Pn	Pn	13 03 47.2	+2.4
SAUI	Saumlaki	4.24	155	P	Pn	13 03 49.4	+4.6
TNTI	Ternate	5.31	337	P	Pn	13 04 00.3	+0.8
	0.2nm73nm,0.9s						
TNTI	Ternate	5.31	337		Pn	13 04 00.7	+1.1
KMSI	Cibinong	7.21	310	P	Pn	13 04 27.9	+2.2
	0.9nm124nm,0.7s						
SOEI	Soe	7.61	223	P	Pn	13 04 35.1	+3.7
	0.2nm50nm,1.1s						
SOEI	Soe	7.61	223	Pn	Pn	13 04 35.4	+4.0
SOEI	Soe	7.61	223	P	Pn	13 04 35.7	+4.3
BATI	Baumata	8.35	223	Pn	Pn	13 04 45.3	+3.9
	17nm,0.3s,baz=91,slow=2.3,SNR=16						
BATI	Baumata	8.35	223	P	Pn	13 04 45.1	+3.7
DRS	Darwin Rock St	8.37	170	P	Pn	13 04 44.6	+3.0
APSI	Ampana	8.45	292	P	Pn	13 04 45.6	+2.9
	768nm51nm,0.6s						
MMRI	Maumere	8.47	238	P	Pn	13 04 58.8	+16
MMRI	Maumere	8.47	238	Pn	Pn	13 04 46.2	+3.1
MTN	Manton Dam	8.81	169	Pn	Pn	13 04 50.2	+2.5
MTN	Manton Dam	8.81	169	P	Pn	13 04 51.5	+3.8
MRSI	Marisa	8.81	301	P	Pn	13 04 50.0	+2.3
	67nm,0.5s						
EDFI	Ende, Flores	9.00	239	P	Pn	13 04 52.6	+2.2
	12nm,0.8s						
SMPI	Sarmi	9.46	77	P	Pn	13 05 00.0	+3.4
	30nm,1.1s						
TTSI	Tana Toraja	9.70	276	P	Pn	13 04 59.6	-0.3
	20nm,0.8s						
KAPI	Kappang	9.73	264	Pn	Pn	13 05 03.7	+3.3
	1.4nm,0.3s,baz=143,slow=4.9,SNR=6.3						
KAPI				LR	LR	13 09 04.3	
	comp=Z,85nm,18.3s,baz=112,slow=39						
KAPI	Kappang	9.73	264	Pn	Pn	13 05 04.7	+4.3
TOLI2	Tolitoli	10.13	301	Pn	Pn	13 05 08.8	+3.0
TOLI2	Tolitoli	10.13	301	P	Pn	13 05 08.6	+2.8
KNRA	Kununurra	11.50	183		Pn	13 05 24.6	+0.1
KNRA	Kununurra	11.50	183	P	Pn	13 05 27.7	+3.2
DAV	Davao City (W)	11.79	341	LR	LR	13 11 02.2	
	comp=Z,137nm,19.9s,baz=50,slow=42						
MYLDM	Lahad Datu	14.34	310	Pn	Pn	13 06 05.8	+2.3
FITZ	Fitzroy Crossi	14.38	195	Pn	Pn	13 06 04.5	+0.5
	0.6nm,0.3s,baz=4.7,slow=7.7,SNR=3.7						
FITZ				LR	LR	13 12 19.6	
	comp=Z,95nm,19.0s,baz=18,slow=40						
JAGI	Jajag, Banyuwa	15.83	253	Pn	Pn	13 06 25.6	+2.3
WB0	Warramunga Arr	16.27	163	Pn	Pn	13 06 29.0	+0.1
WRAB	Tennant Creek	16.41	164	Pn	Pn	13 06 29.3	-1.5
WRA	Warramunga Arr	16.42	164	Pn	Pn	13 06 28.8	-2.0
	1.2nm,0.3s,baz=346,slow=12,SNR=31						
WRA				Sn	Sn	13 09 27.0	-6.2
	0.5nm,0.3s,baz=341,slow=22,SNR=4.5						
WRA				LR	LR	13 13 42.4	
	comp=Z,73nm,18.5s,baz=325,slow=40						
WRA	Warramunga Arr	16.42	164		Pn	13 06 28.7	-2.2
WB2	Warramunga Arr	16.42	164	Pn	Pn	13 06 28.5	-2.4
WR0	Warramunga Arr	16.49	163	Pn	Pn	13 06 29.6	-2.1
KKM	Kota Kinabalu	16.66	307		Pn	13 06 35.5	+1.5
KKM				IAmb	IAmb	13 06 36.3	
	comp=Z,54nm,1.1s						
COEN	Coen	16.67	127		Pn	13 06 32.5	-1.6
COEN				IAmb	IAmb	13 06 38.1	
	comp=Z,30nm,0.6s						
MANU	Manus Island	17.98	84		P	13 06 51.0	-0.1
PMG	Port Moresby	18.32	108	P	Pn	13 06 55.1	+0.4
	comp=Z,0.5nm,0.3s,baz=271,slow=5.7,SNR=3.9						
PMG	Port Moresby	18.32	108	P	Pn	13 06 55.2	+0.6
SBUM	Sibu	18.44	290		P	13 06 56.4	+0.3
PSA00	Pilbara Seismi	19.70	208	P	P	13 07 12.0	+2.1
PSA00				IAmb	IAmb	13 07 21.1	
	comp=Z,51nm,1.1s						
PSA00	Pilbara Seismi	19.70	208	P	P	13 07 11.2	+1.4
PSA00				IAmb	IAmb	13 07 21.5	
	comp=Z,18nm,0.9s						
AS31	Alice Springs	19.89	168		P	13 07 13.0	+1.1
ASAR	Alice Springs	19.89	168	P	P	13 07 13.1	+1.1
	comp=Z,2.7nm,0.3s,baz=347,slow=10.0,SNR=312						
ASAR				S	S	13 10 50.4	-5.6
	comp=Z,0.1nm,0.3s,baz=351,slow=28,SNR=2.3						
ASAR				PcP	PcP	13 11 28.7	-0.6
	comp=Z,0.8nm,0.3s,baz=8.1,slow=1.4,SNR=13						
ASAR				LR	LR	13 15 25.5	
	comp=Z,155nm,18.9s,baz=348,slow=38						
ASAR				PKiKP	PKiKP	13 19 17.0	-1.7
	comp=Z,0.0nm,0.3s,baz=65,slow=0.7,SNR=6.3						
KSM	Kuching	19.95	286	P	P	13 07 13.9	+1.3
KSM				IAmb	IAmb	13 07 14.9	
	comp=Z,43nm,0.7s						
LEM	Lembang	21.92	262	LR	LR	13 16 39.5	
	comp=Z,113nm,19.0s,baz=82,slow=38						
RABL	Rabaul	22.63	91	P	P	13 07 41.8	+0.2
RABL				IAmb	IAmb	13 07 44.6	
	comp=Z,46nm,0.8s						
CTA	Charters Tower	22.78	136	P	P	13 07 44.0	+1.0
	comp=Z,8.8nm,0.5s,baz=309,slow=12,SNR=12						
CTAO	Charters Tower	22.78	136	P	P	13 07 43.6	+0.6
CTAO				IAmb	IAmb	13 07 46.8	
	comp=Z,18nm,0.8s						
GIRL	Giralia	23.59	217	P	P	13 07 52.3	+1.0
MYKOM	Kota Tinggi	26.28	282	P	P	13 08 15.6	-0.5
MYKOM				IAmb	IAmb	13 08 28.8	
	comp=Z,13nm,0.7s						
FORT	Forrest	26.54	183	P	P	13 08 17.8	-0.5
FORT				IAmb	IAmb	13 08 39.2	
	comp=Z,50nm,0.9s						
MORW	Morawa	27.89	206	P	P	13 08 30.0	-0.4
MORW				IAmb	IAmb	13 08 35.8	
	comp=Z,21nm,1.4s						
BBOO	Buckleboo	29.19	169	P	P	13 08 42.2	+0.3
BBOO				IAmb	IAmb	13 08 56.0	
	comp=Z,18nm,1.1s						
IPM	Ipoh	29.68	286	P	P	13 08 47.0	+0.4
STKA	Stephens Creek	29.86	159	P	P	13 08 48.3	+0.4
	comp=Z,1.8nm,0.3s,baz=338,slow=8.5,SNR=11						
STKA				LR	LR	13 21 59.3	
	comp=Z,93nm,19.1s,baz=27,slow=39						
STKA	Stephens Creek	29.86	159	P	P	13 08 48.3	+0.4
KULM	Kulim	30.28	288	P	P	13 08 52.0	+0.2
KULM				IAmb	IAmb	13 09 02.3	
	comp=Z,13nm,0.8s						
ARMA	Armidale	33.48	144	P	P	13 09 22.9	+2.9
ARMA				IAmb	IAmb	13 09 25.3	
	comp=Z,18nm,1.2s						
SLVN	Son La	35.62	316	P	P	13 09 38.2	-0.3
CAN	Canberra	35.91	152	P	P	13 09 42.3	+1.5
CAN				IAmb	IAmb	13 09 57.0	
	comp=Z,29nm,1.3s						
NJ2	Nanjing	37.37	345	eP	P	13 09 55.1	+1.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CM31	Chiang Mai Arr	37.54	308	P	P	13 09 55.5	+0.7
CM31				IAmb	IAmb	13 09 56.6	
	comp=Z,30nm,1.2s						
CMAR	Chiang Mai Arr	37.54	308	P	P	13 09 55.7	+0.9
	comp=Z,9.7nm,0.6s,baz=136,slow=7.4,SNR=79						
CMAR				pP	pwP	13 10 04.5	+3.0
	comp=Z,11nm,0.6s,baz=135,slow=7.2,SNR=15						
CMAR				PcP	PcP	13 12 13.9	+0.9
	comp=Z,1.5nm,0.6s,baz=163,slow=2.8,SNR=6.0						
CMAR				ScP	ScP	13 15 58.6	-2.1
	comp=Z,0.9nm,0.9s,baz=181,slow=2.4,SNR=5.0						
CMAR	Chiang Mai Arr	37.54	308	P	P	13 09 55.1	+0.3
GYA	Guiyang	37.58	325	⇓P	P	13 09 55.7	+0.5
GYA				pmax	pmax		
	comp=Z,15nm,0.8s						
CHTO	Chiang Mai	37.73	308	P	P	13 09 56.5	+0.1
CHTO				IAmb	IAmb	13 09 58.1	
	comp=Z,24nm,0.8s						
JMN	Monobe	37.88	6	P	P	13 09 57.7	+0.2
SANVU	Saraoutou	38.77	110	P	P	13 10 06.2	+1.0
SANVU				IAmb	IAmb	13 10 24.6	
	comp=Z,48nm,1.1s						
JHS	Saijyo	39.07	5	P	P	13 10 08.4	+0.9
JWT	Wachi	39.60	8	P	P	13 10 12.3	+0.5
JWT				IAmb	IAmb	13 10 12.9	
	comp=Z,51nm,0.9s						
MAJO	Matsushiro	41.27	11	P	P	13 10 25.1	-0.7
MAT	Matsushiro	41.27	11	P	P	13 10 24.7	-1.1
MJAR	Matsushiro Arr	41.27	11	P	P	13 10 24.1	-1.6
	comp=Z,24nm,0.8s,baz=187,slow=9.5,SNR=32						
MJAR	Matsushiro Arr	41.27	11	P	P	13 10 24.7	-1.1
JYT	Yasato	41.38	13	P	P	13 10 25.8	-0.8
KSRS	Korea Array	41.40	358	P	P	13 10 27.1	+0.5
	comp=Z,6.4nm,0.7s,baz=174,slow=9.0,SNR=16						
KSRS				pP	pwP	13 10 35.7	+1.9
	comp=Z,5.2nm,0.9s,baz=195,slow=7.5,SNR=5.8						
KSRS				LR	LR	13 29 50.7	
	comp=Z,16nm,18.7s,baz=124,slow=39						
XAN	Xi'an	42.64	335	P	P	13 10 36.1	-0.9
XAN				pmax	pmax		
	comp=Z,11nm,0.6s						
JMM	Marumori	43.08	13	P	P	13 10 41.1	+0.7
LZH	Lanzhou	46.65	331	⇑P	P	13 11 09.5	+0.3
LZH				pP	pwP	13 11 17.6	+1.5
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
SHL	Shillong	46.91	311	P	P	13 11 11.4	-0.1
HHC	Hu-ho-hao-te	47.67	342	eP	P	13 11 19.2	+2.2
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,6.7s						
CN2	Changchun	47.85	356	eP	P	13 11 17.9	-0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
USRK	Ussuriysk Ar.	48.16	2	P	P	13 11 21.5	+0.9
	comp=Z,6.2nm,0.6s,baz=185,slow=6.9,SNR=8.2						
USRK				pP	pwP	13 11 30.3	+2.5
	comp=Z,7.0nm,0.6s,baz=188,slow=7.4,SNR=8.4						
USRK	Ussuriysk Ar.	48.16	2	P	P	13 11 21.1	+0.5
LSA	Lhasa	49.80	315	P	P	13 11 34.2	+0.3
LSA				IAmb	IAmb	13 11 44.3	
	comp=Z,11nm,0.7s						
ODAN	Odare	51.02	310	eP	P	13 11 42.4	-0.6
	comp=Z,12nm,0.5s						
TAPN	Taplejung	51.02	310	eP	P	13 11 42.5	-0.6
	comp=Z,21nm,0.5s						
GTA	Gaotai	51.23	331	⇑P	P	13 11 44.1	-0.1
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
RAMN	Ramite	51.67	309	eP	P	13 11 47.7	-0.2
	comp=Z,53nm,0.5s						
JIRN	Jiri	52.34	310	eP	P	13 11 52.4	-0.6
	comp=Z,21nm,0.6s						
GUN	Gumba	52.70	310	eP	P	13 11 55.1	-0.6
	comp=Z,40nm,0.5s						
PKI	Pulchoki	52.90	309	eP	P	13 11 56.1	-1.0
PKIN	Phulchoki	52.91	309	eP	P	13 11 56.1	-1.0
KKN	Kakani	53.10	309	eP	P	13 11 57.4	-1.1
DMN	Daman	53.15	309	eP	P	13 11 58.2	-0.7
GKN	Gorkha	53.70	309	eP	P	13 12 02.1	-0.8
TUWZ	Tuamarina	54.38	140	P	P	13 12 07.3	0.0
KOLN	Koldanda	54.40	309	eP	P	13 12 07.4	-0.6
DANN	Dangsing	54.55	309	eP	P	13 12 08.2	-1.0
	comp=Z,51nm,0.8s						
HYB	Hyderabad	54.62	295	i P	P	13 12 08.0	-1.6
HYB				e		13 12 17.0	
BKZ	Black Stump Fm	54.99	136	P	P	13 12 12.0	+0.1
BKZ				IAmb	IAmb	13 12 13.0	
	comp=Z,8.2nm,0.9s						
PYUN	Piuthan	55.03	309	eP	P	13 12 11.8	-0.8
	comp=Z,65nm,0.9s						
ULN	Ulaanbaatar	55.39	342	P	P	13 12 14.6	-0.2
ULN				IAmb	IAmb	13 12 15.7	
	comp=Z,8.8nm,0.7s						
SONM	Songino Array	55.57	341	P	P	13 12 16.2	+0.2
	comp=Z,2.8nm,0.6s,baz=156,slow=7.4,SNR=18						
SONM				PcP	PcP	13 13 15.3	-0.5
	comp=Z,1.9nm,0.7s,baz=164,slow=4.7,SNR=4.0						
SONM	Songino Array	55.57	341	P	P	13 12 16.4	+0.3
SONM				IAmb	IAmb	13 12 17.6	
	comp=Z,14nm,1.4s						
WMQ	Urumqi	60.73	326	eP	P	13 12 52.3	+0.2
WMQ				pP	pwP	13 13 06.4	+7.3
WMQ				sP	sP	13 13 11.0	+16
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.9s						
PETK	Petropavlovsk-	61.78	19	P	P	13 13 00.1	+1.1
	comp=Z,8.6nm,0.8s,baz=203,slow=10,SNR=8.8						
PETK	Petropavlovsk-	61.78	19	P	P	13 12 58.4	-0.7
PET	Petropavlovsk	62.03	19	P	P	13 12 58.2	-2.4
CASY	Casey	63.44	188	P	P	13 13 08.4	-1.5
ZSN	Zaisan	64.57	328	eP	P	13 13 16.9	-0.8
	baz=328						
NIL	Nilore	64.97	310	P	P	13 13 19.3	-1.3
NIL				IAmb	IAmb	13 13 30.2	
	comp=Z,5.5nm,0.7s						
UZB	Uzynbulak	65.42	322	eP	P	13 13 22.5	-0.9
	baz=322						
MK31	Makanchi Array	65.56	326	P	P	13 13 23.7	-0.4
MK31				IAmb	IAmb	13 13 24.7	
	comp=Z,15nm,0.8s						
MKAR	Makanchi Array	65.56	326	P	P	13 13 23.9	-0.2
	comp=Z,13nm,0.4s,baz=120,slow=8.2,SNR=174						
MKAR				pP	pwP	13 13 32.9	+1.7
	comp=Z,18nm,0.6s,baz=120,slow=8.0,SNR=25						
KSH	Kashi	65.57	317	P	P	13 13 24.7	+0.2
KSH				pP	pwP	13 13 36.3	+4.8
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAKZ	Makanchi	65.74	326	P	P	13 13 24.7	-0.6
SATY	Saty	65.75	321	eP	P	13 13 24.4	-1.1
	baz=321						
YAK	Yakutsk	65.97	0	P	P	13 13 26.6	+0.2
KUU	Kurty	67.47	321	eP	P	13 13 35.4	-1.0
	baz=321						
SGDS	Sogindy	68.33	320	eP	P	13 13 40.6	-1.3
	baz=320						
DRK	Karamyk	68.44	315	P	P	13 13 42.5	-0.4
DRK				IAmb	IAmb	13 14 06.8	
	comp=Z,9.1nm,0.6s						
KBL	Kabul	68.54	310	P	P	13 13 42.4	-1.2
KBL				IAmb	IAmb	13 13 52.4	
	comp=Z,5.3nm,0.8s						
SEM	Semipalatinsk	68.79	329	eP	P	13 13 43.3	-1.5
	baz=329						
ZAA0	Zalesovo Array	68.80	334	P	P	13 13 43.6	-0.8
ZAA0				IAmb	IAmb	13 13 44.6	
	comp=Z,13nm,0.8s						
ZALV	Zalesovo Beam	68.80	334	P	P	13 13 43.6	-0.8
	comp=Z,18nm,0.9s,baz=112,slow=5.7,SNR=42						
ZALV				pP	pwP	13 13 52.8	+1.2
	comp=Z,9.1nm,0.8s,baz=138,slow=7.0,SNR=9.1						
GAR	Garm	69.29	314	P	P	13 13 46.8	-1.3
GAR				IAmb	IAmb	13 13 58.1	
	comp=Z,10nm,0.7s						
KURK	Kurchatov	69.81	328	P	P	13 13 50.7	-0.2
CHGR	Chuyangaron	69.99	314	P	P	13 13 51.6	-0.7
CHGR				IAmb	IAmb	13 13 52.4	
	comp=Z,14nm,1.0s						
DZA	Taraz	70.22	318	eP	P	13 13 52.5	-1.1
	baz=318						
IUG	Iuzhnay	70.78	317	eP	P	13 13 56.2	-0.9
	baz=317						
KKAR	Karatay Array	70.86	318	P	P	13 13 56.7	-0.7
BRLS	Borolday	71.28	318	eP	P	13 13 59.0	-1.1
	baz=318						
HRA	Herat	73.80	307	P	P	13 14 14.5	-1.0
HRA				IAmb	IAmb	13 14 15.6	
	comp=Z,9.3nm,1.4s						
VNDA	Vanda	75.34	173	P	P	13 14 22.7	-0.7
BRVK	Borovoye	75.45	328	P	P	13 14 23.9	-0.5
TIXI	Tiksi	75.64	360	P	P	13 14 24.3	-0.8
TIXI				IAmb	IAmb	13 14 25.5	
	comp=Z,9.6nm,0.9s						
MAW	Mawson	77.42	201	P	P	13 14 35.0	-0.2
	comp=Z,4.5nm,1.1s,baz=41,slow=9.3,SNR=2.4						
MAW				LR	LR	13 46 17.4	
	comp=Z,32nm,18.6s,baz=59,slow=34						
MAW	Mawson	77.42	201	P	P	13 14 35.5	+0.2
GEYT	Alibeck	77.98	310	P	P	13 14 38.4	-0.6
NRIK	Noril'sk	78.67	346	P	P	13 14 42.5	+0.3
	comp=Z,4.9nm,0.5s,baz=124,slow=6.2,SNR=11						
NRIK	Noril'sk	78.67	346	P	P	13 14 41.8	-0.3
NRIK				IAmb	IAmb	13 14 42.8	
	comp=Z,7.6nm,0.7s						
ABKAR	Akbulak array	79.95	321	P	P	13 14 49.0	-0.6
ABKAR				IAmb	IAmb	13 14 50.0	
	comp=Z,15nm,0.9s						
OPO	Ambohidratompo	81.40	252	P	P	13 14 58.3	+0.1
	comp=Z,1.6nm,0.6s,baz=101,slow=10,SNR=4.1						
ARU	Arti	83.01	328	P	P	13 15 04.6	-1.0
ARU				IAmb	IAmb	13 15 15.2	
	comp=Z,12nm,0.8s						
MIB	Mutribah	85.23	300	eP	P	13 15 16.4	-1.1
RST	Umm Al-Ruwaisa	85.48	300	eP	P	13 15 17.6	-1.2
QSPA	South Pole Qui	85.83	180	P	P	13 15 19.1	-0.9
RAYN	Ar Rayn	86.12	294	P	P	13 15 21.9	-0.2
SYO	Syowa Base	86.13	201	⇓eP	P	13 15 20.6	-0.6
TTA	Tatalina	86.66	26	P	P	13 15 24.3	+0.3
TTA				IAmb	IAmb	13 15 25.5	
	comp=Z,7.1nm,0.8s						
N19K	Bonanza Creek	86.81	28	P	P	13 15 25.0	+0.2
CNPM	China Poot	88.11	30	P	P	13 15 30.6	-0.4
BRLK	Bradley Lake	88.33	30	P	P	13 15 31.8	-0.2
SML	Sawmill	89.92	28	P	P	13 15 39.3	-0.1
SML				IAmb	IAmb	13 16 04.2	
	comp=Z,12nm,1.1s						
COLD	Coldfoot	90.03	23	P	P	13 15 39.9	+0.1
COLD				IAmb	IAmb	13 15 41.5	
	comp=Z,3.1nm,0.7s						
KBZ	Khabaz	90.35	314	P	P	13 15 42.5	+0.7
	comp=Z,1.1nm,0.5s,baz=243,slow=2.3,SNR=1.8						
TOLK	Toolik Lake Re	90.52	21	P	P	13 15 42.4	+0.2
GURO	Guroymak-BITLI	90.55	308	P	P	13 15 43.0	0.0
GURO				IAmb	IAmb	13 15 44.6	
	comp=Z,11nm,0.9s						
ILAR	Eielson Array	90.99	25	P	P	13 15 42.5	-1.8
	comp=Z,0.9nm,0.6s,baz=290,slow=4.8,SNR=12						
SNAA	Sanae	98.31	194	P	P	13 16 17.7	-0.1
ARCES	ARCESS Array B	98.72	340	P	P	13 16 17.9	-1.6
	comp=Z,5.4nm,0.9s,baz=80,slow=5.7,SNR=12						
ARCES				pP	pwP	13 16 27.4	+0.5
	comp=Z,1.5nm,0.6s,baz=76,slow=6.4,SNR=1.9						
VNA2	Neumayer--Watz	99.89	193	P	Pdif	13 16 27.0	+2.2
FINES	FINESS Array B	100.01	332	P	Pdif	13 16 23.4	-2.0
	comp=Z,2.9nm,0.8s,baz=191,slow=5.8,SNR=3.7						
GERES	GERESS Array B	109.89	321	PKiKP	PKiKP	13 21 10.9	-1.2
	comp=Z,0.4nm,0.4s,baz=97,slow=3.3,SNR=2.8						
PDAR	Pinedale Array	115.23	44	PKP	PKiKP	13 21 22.0	-0.6
	comp=Z,0.3nm,0.6s,baz=45,slow=0.6,SNR=3.8						
TXAR	Lajitas Array	123.87	57	PKP	PKPdf	13 21 39.5	+0.1
	comp=Z,1.1nm,0.9s,baz=261,slow=1.3,SNR=9.9						
TXAR	Lajitas Array	123.87	57		PKPdf	13 21 38.8	-0.7
TORD	Torodi Ar. Bea	127.69	283	PKP	PKPdf	13 21 46.3	-0.7
	comp=Z,1.9nm,0.6s,baz=58,slow=1.9,SNR=15						
TORD	Torodi Ar. Bea	127.69	283	PKPdf	PKPdf	13 21 45.7	-1.3
PLCA	Paso Flores	131.73	160	PKP	PKPdf	13 21 55.0	+0.9
	comp=Z,6.5nm,1.3s,baz=320,slow=5.2,SNR=3.0						
CPUP	Villa Florida	149.01	168	PKPbc	PKPbc	13 22 29.1	-0.3
	comp=Z,5.5nm,0.7s,baz=171,slow=1.3,SNR=11						
CPUP	Villa Florida	149.01	168		PKPbc	13 22 28.8	-0.6
LPAZ	La Paz	153.26	140	PKP	PKPdf	13 22 33.2	+0.4
	comp=Z,1.7nm,0.8s,baz=11,slow=3.1,SNR=6.1						
LPAZ				PKPbc	PKPbc	13 22 40.1	-0.2
	comp=Z,2.3nm,0.6s,baz=298,slow=1.5,SNR=9.8						
LPAZ	La Paz	153.26	140		PKPdf	13 22 33.8	+0.9

IASPEI **11** *13:17:15.9±0.9, 36°.54N±0°.02×89°.61W±0°.02, h15^{km}±4^{km} Error ellipse: s-maj=3.3km s-min=2.8km az=114.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ANF **11** *13:17:15.6±0.5, 36°.52N×89°.60W, h7^{km}±3^{km}, ML2.7/9, Error ellipse: s-maj=3.1km s-min=2.8km az=60.0*

NEIC **11** *13:17:16.4±0.9, 36°.532N±0°.009×89°.595W±0°.007, h10^{km}±3^{km}, Error ellipse: s-maj=1.3km s-min=0.7km az=190.0*

SLM **11** *13:17:16±1.6, 36°.533N±0°.010×89°.60W±0°.02, h8^{km}±5^{km}, Md2.5/21, mb_Lg2.3/16(NEIC), Error ellipse: s-maj=2.1km s-min=1.4km az=82.0*

ISC 11 13:17:16.3±0.8,**36°.54N**±0°.02×**89°.60W**±0°.02,**h14**^{km}±4^{km}**,**
n69,σ**0°.72**/84**,New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NMEM	New Madrid Sch	0.04	21		Pg	13 17 19.6	+0.8
WALK	Watson Lake	0.05	87		Pg	13 17 18.0	-0.9
MARMO	Marston	0.05	263		Pg	13 17 19.8	+0.9
NMMO	New Madrid	0.07	39		Pg	13 17 20.1	+1.1
CATM	Catron	0.08	335		Pg	13 17 18.6	-0.6
CATM					Sg	13 17 20.6	-0.6
PENMO	Penman	0.09	193		Pg	13 17 18.4	-0.8
PENMO					Sg	13 17 20.5	-0.7
PGVM	Portageville	0.13	233		Pg	13 17 19.1	-0.6
PGVM					Sg	13 17 21.5	-0.5
PPLM	Point Pleasant	0.13	173		Pg	13 17 19.2	-0.6
PPLM					Sg	13 17 21.8	-0.4
POBM	Portage Bay	0.14	201		Pg	13 17 19.2	-0.6
POBM					Sg	13 17 21.9	-0.4
SJMO	Saint John's B	0.14	48		Pg	13 17 19.4	-0.5
SJMO					Sg	13 17 22.1	-0.2
KEWM	Kewanee	0.16	3		Pg	13 17 19.8	-0.4
KEWM					Sg	13 17 22.7	-0.2
PARMO	Parma	0.17	317		Pg	13 17 20.0	-0.4
PARMO					Sg	13 17 23.1	-0.1
COKM	Charter Oak	0.20	330		Pg	13 17 20.6	-0.2
COKM					Sg	13 17 23.8	0.0
HENM	Henderson Moun	0.21	30		Pg	13 17 20.5	-0.4
HENM					Sg	13 17 24.0	0.0
TOPM	Tallapoosa	0.23	267		Pg	13 17 20.9	-0.4
TOPM					Sg	13 17 24.8	+0.1
WADM	Wardell	0.23	222		Pg	13 17 20.9	-0.4
WADM					Sg	13 17 24.6	0.0
MATM	Matthews	0.24	360		Pg	13 17 21.1	-0.3
MATM					Sg	13 17 25.0	+0.1
EPRM	East Prairie	0.27	47		Pg	13 17 21.6	-0.3
EPRM					Sg	13 17 25.9	+0.1
HICK	Hickman	0.30	89		Pg	13 17 22.2	-0.3
HICK				Sg	Sg	13 17 26.9	+0.1
GLAT	Glass	0.37	136		Pg	13 17 23.5	-0.2
LNXT	Lenox	0.44	168		Pg	13 17 24.8	-0.3
LNXT	Lenox	0.44	168	P	Pg	13 17 24.8	-0.3
	baz=348						
LNXT				S	Sg	13 17 31.0	0.0
	baz=348						
UTMT	University of	0.63	108	Pg	Pg	13 17 28.2	-0.3
UTMT				Sg	Sg	13 17 36.8	0.0
HALT	Halls	0.66	161		Pg	13 17 29.3	+0.2
GNAR	Gosnell	0.66	211		Pg	13 17 28.7	-0.4
PBMO	Poplar Bluff	0.71	290		Pg	13 17 29.2	-0.8
PBMO	Poplar Bluff	0.71	290	P	Pg	13 17 29.3	-0.7
	baz=110						
PBMO				S	Sg	13 17 38.5	-0.9
	baz=110						
CGM3	Cape Girardeau	0.76	357		Pg	13 17 30.2	-0.8
T45B	Paducah	0.91	58	S	Sg	13 17 45.1	-0.6
	baz=238						
LPAR	Lepanto	1.09	211		Pb	13 17 36.3	-0.7
S44A	Carbondale	1.19	13		Pb	13 17 37.6	-1.0
S44A	Carbondale	1.19	13	P	Pb	13 17 37.8	-0.8
	baz=194						
SIUC	Southern Illin	1.22	15		Pn	13 17 38.3	-0.6
SFTN	Shelby Forest	1.22	196		Pn	13 17 38.8	-0.2
HBAR	Harrisburg	1.30	221		Pn	13 17 39.8	-0.3
HBAR	Harrisburg	1.30	221	P	Pn	13 17 39.7	-0.3
	baz=41						
HBAR				S	Sn	13 17 57.8	+0.6
	baz=41						
LCAR	Lake Charles	1.34	250		Pn	13 17 41.0	+0.5
LCAR	Lake Charles	1.34	250	P	Pn	13 17 40.1	-0.5
	baz=69						
EBZ	Ebenezer Churc	1.41	172		Pn	13 17 42.2	+0.7
W45A	Hickory Valley	1.42	166	S	Sn	13 18 00.7	+0.5
	baz=346						
WVT	Waverly	1.49	105		Pn	13 17 42.6	0.0
WVT	Waverly	1.49	105	P	Pn	13 17 42.6	0.0

	baz=286						
WVT				S	Sn	13 18 02.3	+0.4
	baz=286						
FVM	French Village	1.59	336		Pb	13 17 45.7	+0.3
FVM	French Village	1.59	336	P	Pn	13 17 44.4	+0.4
	baz=155						
FVM				S	Sn	13 18 05.1	+0.8
	baz=155						
PLAL	Pickwick Lake	1.99	141		Pn	13 17 51.0	+1.5
PWLA	Pickwick Lake	2.00	141		Pn	13 17 49.6	0.0
CCM	Cathedral Cave	2.00	320		Pn	13 17 49.9	+0.2
CCM	Cathedral Cave	2.00	320	P	Pn	13 17 51.1	+1.4
	baz=139						
T47A	Sharon Grove	2.06	77	S	Sb	13 18 18.5	-0.4
	baz=258						
FCAR	Ozark Folk Cen	2.14	253		Pn	13 17 53.1	+1.5
SLM	Saint Louis	2.15	347	S	Sb	13 18 22.3	+0.6
	baz=166						
MGMO	Mountain Grove	2.23	287		Pn	13 17 54.7	+1.9
V48A	Smith Brothers	2.39	109	Pn	Pn	13 17 55.8	+0.8
WHAR	Wooly Hollow	2.51	241	Pn	Pn	13 17 58.1	+1.5
WHAR				IAmb_Lg		13 18 34.1	
	comp=Z,9.9nm,0.9s						
U40A	Yellville	2.63	267		Pn	13 17 59.3	+1.0
Y45A	Yeager Farm, C	2.67	179	Pn	Pn	13 17 59.4	+0.6
CLTN	Cedars of Leba	2.68	99	Pn	Pn	13 17 59.4	+0.4
R40A	Maddies Statio	2.75	310	Pn	Pn	13 18 01.5	+1.5
X48A	Hartselle	2.95	134	IAmb_Lg		13 18 51.6	
	comp=Z,9.1nm,1.2s						
S39A	Bolivar	3.19	292		Pn	13 18 06.7	+0.6
X40A	Basin Creek Fa	3.34	233		Pn	13 18 07.6	-0.5
X40A				IAmb_Lg		13 19 01.6	
	comp=Z,9.6nm,0.9s						
P40A	Paris	3.56	328	IAmb_Lg		13 19 07.2	
	comp=Z,8.6nm,0.8s						
W50A	Signal Mountai	3.73	110		Pn	13 18 14.7	+1.2
MIAR	Mount Ida	3.80	240		Pn	13 18 16.3	+1.9
MIAR				IAmb_Lg		13 19 22.7	
	comp=Z,7.3nm,0.7s						
T50A	Nancy	3.85	81	IAmb_Lg		13 19 27.8	
	comp=Z,6.6nm,0.9s						
X51A	Calhoun	4.34	116	IAmb_Lg		13 19 35.8	
	comp=Z,7.0nm,0.8s						
P38A	Dawn	4.37	316		Pn	13 18 21.0	-1.3
V52A	Sevierville	4.91	96	IAmb_Lg		13 19 53.6	
	comp=Z,6.0nm,0.7s						
NATX	Nacogdoches	6.35	223		Pn	13 18 56.0	+6.5

IDC 11 13:24:17.4±10.0, 20°.85S×178°.03W, h596km±64km, mb3.0/3, mb1 3.3/4, mb1mx3.0/22, mbtmp3.9/4, Error ellipse: s-maj=233.4km s-min=30.4km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.83	309	P	P	13 25 49.0	0.0
	1.7nm,0.3s,baz=271,slow=23,SNR=11						
ASAR	Alice Springs	44.41	257	P	P	13 31 37.1	+0.2
	1.9nm,0.5s,baz=92,slow=7.7,SNR=48						
WRA	Warramunga Arr	44.53	262	P	P	13 31 37.2	-0.6
	0.7nm,0.3s,baz=102,slow=7.8,SNR=36						
ILAR	Eielson Array	88.66	13	P	P	13 36 07.0	-0.6
	0.5nm,1.0s,baz=202,slow=6.6,SNR=1.9						
AKASG	Malin Array Be	143.31	331	PKP	PKPdf	13 42 44.8	+0.2
	0.6nm,0.4s,baz=39,slow=4.1,SNR=6.3						

IDC 11 13:35:25.9±3.3, 28°.00N×103°.69E, h0km, mb3.9/3, mb1 3.9/4, mb1mx3.3/50, mbtmp3.7/4, ML3.7/1, MS2.4/1, Ms1 2.4/1, ms1mx2.3/43, Error ellipse: s-maj=206.1km s-min=24.9km az=74.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	19.92	5	P	P	13 39 58.6	-0.6
	0.2nm,0.3s,baz=187,slow=9.6,SNR=3.6						
KSRS	Korea Array	22.41	59	LR	LR	13 48 36.3	
	comp=Z,9.9nm,19.5s,baz=10.0,slow=35						
NRIK	Noril'sk	42.44	352	P	P	13 43 22.3	+0.3
	1.7nm,0.4s,baz=150,slow=8.7,SNR=3.7						
WRA	Warramunga Arr	56.12	145	P	P	13 45 07.4	+0.1
	0.7nm,0.4s,baz=332,slow=7.5,SNR=7.0						
ASAR	Alice Springs	59.05	147	P	P	13 45 27.8	-0.2
	0.5nm,0.6s,baz=329,slow=6.8,SNR=6.2						

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*NEIC **11** 13:37:14.9±0.9, 24°.2S±0°.3×179°.8W±0°.2, h520km±25km, mb4.0/11, Error ellipse: s-maj=51.8km s-min=24.8km az=198.0*

*IDC **11** 13:37:19.8±5.1, 23°.79S×179°.66E, h542km±51km, mb3.2/6, mb1 3.3/8, mb1mx3.0/34, mbtmp4.1/8, Error ellipse: s-maj=101.7km s-min=23.6km az=155.0*

ISC 11 13:37:14.9±1.0, 24°.4S±0°.1×180°.0W±0°.1, h500km, n24, σ0s.95/24, mb3.9/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.88	344	P	P	13 38 59.6	-0.5
	1.5nm,0.3s,baz=206,slow=20,SNR=10						
MSVF	Nonsavu	6.88	344	P	P	13 38 59.2	-0.9
MARNC	Mare, Loyalty	11.45	282		P	13 39 48.7	+1.0
PINNC	Pines Island,	11.70	276	P	P	13 39 51.1	+0.8
DZM	Mont Dzumac	12.72	278	P	P	13 40 02.9	+1.6
	0.2nm,0.3s,baz=84,slow=17,SNR=5.7						
DZM	Mont Dzumac	12.72	278	P	P	13 40 02.5	+1.2
CTA	Charters Tower	31.53	271	P	P	13 42 55.8	+0.2
	7.5nm,0.3s,baz=93,slow=10,SNR=18						
CTAO	Charters Tower	31.53	271	P	P	13 42 56.0	+0.4
STKA	Stephens Creek	34.59	249	P	P	13 43 21.6	+0.2
	0.5nm,0.2s,baz=91,slow=9.3,SNR=2.9						
BBOO	Buckleboo	39.30	247	P	P	13 43 59.4	-0.8
AS31	Alice Springs	42.00	261	P	P	13 44 21.2	-0.8
ASAR	Alice Springs	42.00	261	P	P	13 44 21.1	-0.9
	0.6nm,0.4s,baz=92,slow=7.1,SNR=19						
ASAR	Alice Springs	42.00	261	P	P	13 44 21.9	-0.1
WR0	Warramunga Arr	42.23	267	P	P	13 44 22.8	-1.1
WR0				IAmb	IAmb	13 44 24.3	
	comp=Z,7.3nm,1.4s						
WB2	Warramunga Arr	42.41	267	P	P	13 44 24.4	-0.9
WB2				IAmb	IAmb	13 44 24.7	
	comp=Z,5.5nm,1.1s						
WRAB	Tennant Creek	42.41	267	P	P	13 44 24.3	-0.9
WRAB				IAmb	IAmb	13 44 24.8	
	comp=Z,6.1nm,1.2s						
WB0	Warramunga Arr	42.42	267	P	P	13 44 24.2	-1.1
WB0				IAmb	IAmb	13 44 24.7	
	comp=Z,2.8nm,0.7s						
WRA	Warramunga Arr	42.42	267	P	P	13 44 24.1	-1.2
	comp=Z,1.9nm,0.3s,baz=100,slow=8.3,SNR=43						
WRA	Warramunga Arr	42.42	267	P	P	13 44 24.7	-0.7
KNRA	Kununurra	48.73	270	P	P	13 45 12.9	-0.7
KNRA				IAmb	IAmb	13 45 26.0	
	comp=Z,16nm,1.4s						
FITZ	Fitzroy Crossi	50.84	266	P	P	13 45 29.1	-0.1
	comp=Z,1.1nm,0.5s,baz=94,slow=5.9,SNR=2.3						
QSPA	South Pole Qui	65.70	180	P	P	13 47 10.1	+0.8
QSPA				IAmb	IAmb	13 47 11.2	
	comp=Z,2.6nm,0.8s						
SNAA	Sanae	84.18	179	P	P	13 48 51.4	-1.3
SNAA				IAmb	IAmb	13 49 06.1	
	comp=Z,3.7nm,1.4s						
TXAR	Lajitas Array	90.65	58	P	P	13 49 25.1	+1.1
	comp=Z,0.3nm,0.7s,baz=201,slow=6.7,SNR=4.4						

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*IDC **11** 13:43:23.9±1.6, 10°.63N×94°.28E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.2/44, mbtmp3.4/5, MS2.8/2, Ms1 2.8/2, ms1mx2.4/41, Error ellipse: s-maj=88.4km s-min=21.8km az=54.0*

ISC 11 13:43:27.5±1.6, 10°.6N±0°.4×94°.3E±0°.5, h24km, n8, σ0s.28/6, mb3.5/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	9.04	149	LR	LR	13 49 45.3	
	comp=Z,42nm,18.1s,baz=328,slow=42						
LEM	Lembang	21.84	142	LR	LR	13 56 11.8	
	comp=Z,40nm,20.9s,baz=261,slow=35						
MKAR	Makanchi Array	37.45	346	P	P	13 50 38.7	-0.3
	0.4nm,0.8s,baz=145,slow=6.6,SNR=4.4						
KURBB	Kurchatov Arra	41.93	345	P	P	13 51 16.1	-0.1
	0.2nm,0.2s,baz=146,slow=6.7,SNR=1.7						
GEYT	Alibeck	42.28	316	P	P	13 51 19.5	+0.1
	5.3nm,0.5s,baz=139,slow=9.7,SNR=8.6						
ZALV	Zalesovo Beam	43.86	352	P	P	13 51 32.1	+0.3
	0.6nm,0.3s,baz=171,slow=10,SNR=3.9						
WRA	Warramunga Arr	49.78	128	P	P	13 52 18.7	0.0
	0.6nm,1.0s,baz=308,slow=8.4,SNR=2.8						
ASAR	Alice Springs	51.61	132	P	P	13 52 32.4	-0.1
	0.4nm,0.8s,baz=314,slow=5.9,SNR=4.2						

IDC 11 13:50:04.3±1.7, 4°.35S×130°.54E, h0km, mb3.2/1, mb1 3.7/4, mb1mx3.3/33, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=78.5km s-min=26.2km az=83.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.54	12	Pn	Pn	13 51 00.0	-0.5
	4.1nm,0.3s,baz=254,slow=23,SNR=38						
SIJI				Sn	Sn	13 51 40.7	-2.4
	3.1nm,0.3s,baz=93,slow=22,SNR=4.6						
WRA	Warramunga Arr	15.93	167	Pn	Pn	13 53 48.7	-1.3
	0.1nm,0.3s,baz=349,slow=12,SNR=7.3						
ASAR	Alice Springs	19.47	171	P	P	13 54 33.2	+0.4
	0.3nm,0.3s,baz=345,slow=9.1,SNR=22						
MKAR	Makanchi Array	66.33	326	P	P	14 00 55.1	+0.3
	0.1nm,0.4s,baz=110,slow=8.4,SNR=1.4						

IDC 11 14:00:46.0±29.0, 22°.72S×173°.41W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.7/31, mbtmp4.1/4, Error ellipse: s-maj=548.3km s-min=162.0km az=79.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	37.56	266	P	P	14 08 02.9	+0.5
	3.7nm,0.4s,baz=88,slow=6.2,SNR=2.3						
STKA	Stephens Creek	40.77	247	P	P	14 08 28.4	-0.6
	0.8nm,0.3s,baz=102,slow=9.7,SNR=3.8						
ASAR	Alice Springs	48.20	258	P	P	14 09 28.4	-0.3
	0.7nm,0.8s,baz=97,slow=7.6,SNR=9.9						
WRA	Warramunga Arr	48.55	263	P	P	14 09 31.4	+0.1
	1.2nm,0.5s,baz=100,slow=8.2,SNR=22						

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*JMA **11** 14:17:47.1±0.3, 33°.59N×140°.99E, h40km, M3.3*

*IDC **11** 14:17:49.4±4.6, 33°.50N×140°.81E, h68km±45km, mb3.4/2, mb1 3.6/3, mb1mx3.1/37, mbtmp3.6/3, ML2.4/1, Error ellipse: s-maj=85.4km s-min=27.8km az=102.0*

ISC 11 14:17:46.9±1.5, 33°.51N±0°.08×141°.1E±0°.1, h48km, n13, σ0s.39/16, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.11	249	P	Pn	14 18 06.2	+0.2
JHJ2				*e*S	Sn	14 18 20.1	0.0
JHJ	Hachijo jima 2	1.13	250	P	Pn	14 18 06.3	0.0
	171nm,0.3s,baz=105,slow=21,SNR=53						
JHJ				S	Sn	14 18 20.4	-0.4
	109nm,0.3s,baz=58,slow=22,SNR=19						
JHCJ	Hachijojimakas	1.14	248	P	Pn	14 18 06.6	+0.2
JHCJ				*e*S	Sn	14 18 20.5	-0.4
BSO1	Boso 1	1.15	357	P	Pn	14 18 05.8	-0.3
JMKN	Mikurajimanish	1.28	288	P	Pn	14 18 08.6	+0.3
BSO3	Boso 3	1.37	341	P	Pn	14 18 09.5	+0.2
BSO4	Boso 4	1.59	338	P	Pn	14 18 13.0	+0.4
JIM2	Oshima 3	1.81	312	P	Pn	14 18 15.0	-0.6
JIZS	Izushimoda	2.17	304	P	Pn	14 18 20.9	+0.3
JOD2	Odawara 2	2.39	318	P	Pn	14 18 23.3	-0.3
MJAR	Matsushiro Arr	3.82	323	P	Pn	14 18 43.9	+0.7
	0.3nm,0.3s,baz=159,slow=11,SNR=11						
WRA	Warramunga Arr	53.53	188	P	P	14 27 02.5	-0.3
	0.9nm,0.4s,baz=5.4,slow=7.6,SNR=18						
ASAR	Alice Springs	57.26	188	P	P	14 27 29.9	+0.4
	0.2nm,0.5s,baz=2.1,slow=6.3,SNR=9.5						

IDC 11 14:26:19.2±4.1, 3°.81S×149°.37E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/30, mbtmp3.9/3, MS3.3/4, Ms1 3.3/4, ms1mx2.8/34, Error ellipse: s-maj=123.0km s-min=53.2km az=112.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.73	221	P	P	14 31 11.5	-0.8
	3.8nm,0.8s,baz=45,slow=12,SNR=15						
WRA				LR	LR	14 39 42.6	
	comp=Z,52nm,18.1s,baz=105,slow=37						
DZM	Mont Dzumac	24.57	139	LR	LR	14 39 57.8	
	comp=Z,108nm,18.9s,baz=42,slow=33						
ASAR	Alice Springs	24.76	216	P	P	14 31 42.9	0.0
	1.4nm,0.9s,baz=49,slow=8.2,SNR=7.2						
BATI	Baumata	26.28	255	LR	LR	14 45 15.8	
	comp=Z,73nm,18.2s,baz=81,slow=43						
FITZ	Fitzroy Crossi	27.23	237	P	P	14 32 06.0	+0.7
	5.6nm,1.0s,baz=64,slow=11,SNR=6.3						
FITZ				LR	LR	14 43 26.0	
	comp=Z,42nm,19.7s,baz=52,slow=38						
TORD	Torodi Ar. Bea	146.75	288	PKPbc	PKPdf	14 46 03.4	+0.7
	0.4nm,0.9s,baz=60,slow=2.0,SNR=2.1						

IDC 11 14:46:08.1±11.0, 10°.94N×93°.66E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.4/74, mbtmp3.7/6, ML3.8/1, MS2.7/4, Ms1 2.8/4, ms1mx2.6/40, Error ellipse: s-maj=205.2km s-min=45.6km az=161.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.05	34	Pn	Pn	14 48 20.4	+0.3
	0.3nm,0.3s,baz=220,slow=15,SNR=5.4						
CMAR				LR	LR	14 52 22.5	
	comp=Z,32nm,19.9s,baz=225,slow=41						
PSI	Prapat	9.63	147	LR	LR	14 51 49.4	
	comp=Z,52nm,19.0s,baz=330,slow=35						
PALK	Pallekele	13.30	255	LR	LR	14 53 43.3	
	comp=Z,30nm,20.1s,baz=40,slow=34						
LEM	Lembang	22.46	141	LR	LR	14 59 53.3	
	comp=Z,38nm,20.8s,baz=310,slow=37						
MKAR	Makanchi Array	37.01	347	P	P	14 53 19.3	-0.2
	0.6nm,0.9s,baz=152,slow=9.5,SNR=2.1						
SONM	Songino Array	38.30	14	P	P	14 53 30.5	-0.1
	0.4nm,0.7s,baz=182,slow=10,SNR=1.7						
KURBB	Kurchatov Arra	41.48	345	P	P	14 53 56.7	0.0
	0.4nm,0.6s,baz=156,slow=7.3,SNR=4.4						
GEYT	Alibeck	41.64	316	P	P	14 53 58.4	0.0
	5.8nm,0.7s,baz=124,slow=9.5,SNR=8.6						
ZALV	Zalesovo Beam	43.47	352	P	P	14 54 12.6	-0.3
	0.5nm,0.3s,baz=170,slow=9.9,SNR=4.4						

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*MEX **11** 14:49:24.9±0.7, 17°.98N×102°.77W, h9km±9km, MD4.7*

*IDC **11** 14:49:25.7±5.6, 18°.29N×102°.49W, h33km±41km, mb4.2/19, mb1 4.4/21, mb1mx4.3/45, mbtmp4.4/21, ML3.5/2, MS4.1/21, Ms1 4.1/21, ms1mx4.0/29, Error ellipse: s-maj=24.5km s-min=13.7km az=57.0*

*NEIC **11** 14:49:26.4±2.8, 18°.12N±0°.05×102°.60W±0°.05, h36km±6km, mb4.8/62, Md4.7/105(MEX), Error ellipse: s-maj=8.7km s-min=5.5km az=223.0*

ISC 11 14:49:25.6±0.3, 18°.03N±0°.04×102°.77W±0°.03, h39km±3km, n397, σ1s.68/420, mb4.7/52, MS4.1/20, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.60	295		Pn	14 49 36.0	-1.8
MMIG					Sn	14 49 44.5	-1.8
MMIG	Aquila	0.60	295	*e*P	Pn	14 49 36.0	-1.8
MMIG				*e*S	Sn	14 49 44.5	-1.8
UON	La Union	0.91	94	*e*P	Pn	14 49 40.0	-1.9
UON				*e*S	Sn	14 49 52.0	-1.8
ZIIG	Zihuatanejo	1.31	109		Pn	14 49 45.6	-1.8
ZIIG					Sn	14 50 01.4	-2.3
ZIIG	Zihuatanejo	1.31	109	*e*P	Pn	14 49 45.6	-1.8
ZIIG				*e*S	Sn	14 50 01.4	-2.3
COIG	Colima	1.44	323	*e*P	Pn	14 49 47.8	-1.4
COIG				*i* S	Sn	14 50 05.8	-1.1
CDAR	Ciudad de Arme	1.48	308	*e*P	Pn	14 49 48.1	-1.7
CDAR				*e*S	Sn	14 50 06.9	-1.0
URUA	Uruapan	1.53	25		Pn	14 49 48.6	-2.1
URUA					Sn	14 50 06.8	-2.7
URUA	Uruapan	1.53	25	*e*P	Pn	14 49 48.6	-2.1
URUA				*e*S	Sn	14 50 06.8	-2.7
COMA	Comala	1.59	324	*e*P	Pn	14 49 50.5	-0.8
COMA				*e*S	Sn	14 50 10.1	-0.6
R15V		1.61	315	*e*P	Pn	14 49 50.2	-1.5
R15V				*e*S	Sn	14 50 10.1	-1.2
MNGA	Volcan de Coli	1.64	331	*e*P	Pn	14 49 51.9	-0.3
MNGA				*e*S	Sn	14 50 11.6	-0.5
EZ5V		1.64	331	*e*P	Pn	14 49 52.3	+0.1
EZ5V				*e*S	Sn	14 50 12.0	-0.2
JUBC	Volcan de Coli	1.66	333	*e*P	Pn	14 49 52.1	-0.4
JUBC				*e*S	Sn	14 50 12.9	+0.2
MOIG	Morelia	2.22	42	Pn	Pn	14 49 58.4	-1.8
MOIG	Morelia	2.22	42		Sn	14 50 22.7	-3.8
MOIG	Morelia	2.22	42	*e*P	Pn	14 49 59.0	-1.1
MOIG				*e*S	Sn	14 50 22.7	-3.8
ARIG	Puente Sto Nin	2.32	83		Pn	14 50 00.1	-1.2
ARIG					Sn	14 50 29.6	+1.1
ARIG	Puente Sto Nin	2.32	83	*e*P	Pn	14 50 00.1	-1.2
ARIG				*e*S	Sn	14 50 29.6	+1.1
CAIG	El Cayaco	2.58	112		Pn	14 50 03.7	-1.2
CAIG					Sn	14 50 31.6	-3.4
CAIG	El Cayaco	2.58	112	*e*P	Pn	14 50 03.7	-1.2
CAIG				*e*S	Sn	14 50 31.6	-3.4
CJM	Chamela	2.60	304	*e*P	Pn	14 50 01.4	-3.7
CJM				*e*S	Sn	14 50 33.7	-1.9
ACP2	Acapulco	2.98	112		Pn	14 50 09.8	-0.6
ACP2	Acapulco	2.98	112	*e*P	Pn	14 50 09.8	-0.6
MEIG	Mezcala	3.00	92		Pn	14 50 10.1	-0.6
MEIG					Sn	14 50 51.6	+6.2
MEIG	Mezcala	3.00	92	*e*P	Pn	14 50 10.1	-0.6
MEIG				*e*S	Sn	14 50 51.6	+6.2
IGIG	Irapuato, Guan	3.03	26		Pn	14 50 10.0	-1.3
IGIG					Sn	14 50 51.2	+4.7
IGIG	Irapuato, Guan	3.03	26	*e*P	Pn	14 50 10.0	-1.3
IGIG				*e*S	Sn	14 50 51.2	+4.7
PLIG	Platanillo	3.13	83		Pn	14 50 12.2	-0.2
PLIG					Sn	14 50 52.2	+3.6
PLIG	Platanillo	3.13	83	*e*P	Pn	14 50 12.2	-0.2
PLIG				*e*S	Sn	14 50 52.2	+3.6
DAIG	Los Arroyos	3.14	108		Pn	14 50 11.8	-0.8
DAIG					Sn	14 50 44.9	-4.0
DAIG	Los Arroyos	3.14	108	*e*P	Pn	14 50 11.8	-0.8
DAIG				*e*S	Sn	14 50 44.9	-4.0
TOVM	TOLUCA	3.19	67		Pn	14 50 14.9	+1.4
TOVM	TOLUCA	3.19	67	*e*P	Pn	14 50 14.9	+1.4
TOVM				*e*S	Sn	14 50 52.4	+2.0
MAVM	Malinalco, Edo	3.24	73		Pn	14 50 15.1	+0.9
MAVM					Sn	14 50 57.5	+5.8
MAVM	Malinalco, Edo	3.24	73	*e*P	Pn	14 50 15.1	+0.9
MAVM				*e*S	Sn	14 50 57.5	+5.8
ACIG	Acambay	3.35	54	*e*P	Pn	14 50 14.4	-1.2
ACIG				*e*S	Sn	14 50 58.6	+4.3
JRQG	Juriquilla Cam	3.45	39		Pn	14 50 17.1	+0.1
JRQG					Sn	14 50 57.3	+0.6
JRQG	Juriquilla Cam	3.45	39	*e*P	Pn	14 50 17.1	+0.1
JRQG				*e*S	Sn	14 50 57.3	+0.6
PUVA	Puert Vallarta	3.47	319		Pn	14 50 22.0	+4.9
PUVA					Sn	14 51 03.0	+6.2
PUVA	Puert Vallarta	3.47	319	*e*P	Pn	14 50 22.0	+4.9
PUVA				*e*S	Sn	14 51 03.0	+6.2
AOVM	Tlapan	3.49	69	*e*P	Pn	14 50 18.2	+0.4
AOVM				*e*S	Sn	14 50 56.4	-1.8
CJVM	Cuajimalpa	3.56	68	*e*P	Pn	14 50 20.9	+2.4
CJVM				*e*S	Sn	14 51 05.4	+5.8
YAIG	Yautepec	3.61	76		Pn	14 50 19.1	-0.1
YAIG					Sn	14 51 09.5	+8.8
YAIG	Yautepec	3.61	76	*e*P	Pn	14 50 19.1	-0.1
YAIG				*e*S	Sn	14 51 09.5	+8.8
TLVM	San Miguel Top	3.62	71	*e*P	Pn	14 50 22.0	+2.5
TLVM				*e*S	Sn	14 51 05.6	+4.3
MHVM	Bosque de Chap	3.64	67	*e*P	Pn	14 50 21.2	+1.5
UNM	Universidad Na	3.64	69	Pn	Pn	14 50 22.5	+2.8
BJVM	Benito Juarez	3.66	68	*e*P	Pn	14 50 23.1	+3.1
BJVM				*e*S	Sn	14 51 09.5	+7.3
XCVM	Xochimilco	3.67	70	*e*P	Pn	14 50 21.2	+1.1
XCVM				*e*S	Sn	14 51 11.0	+8.7
CRIG	Cruz Grande	3.71	110		Pn	14 50 19.5	-0.8
CRIG	Cruz Grande	3.71	110	*e*P	Pn	14 50 19.5	-0.8
THVM	De Xico	3.82	70	*e*P	Pn	14 50 24.1	+2.0
THVM				*e*S	Sn	14 51 07.2	+1.3
TXVM	Universitario	3.91	68	*e*P	Pn	14 50 25.9	+2.5
TXVM				*e*S	Sn	14 51 10.8	+2.7
TXVM				*i* S	Sn	14 51 10.8	+2.7
AAIG	Aguscalientes	3.93	5	*e*P	Pn	14 50 22.5	-1.2
AAIG				*e*S	Sn	14 51 16.4	+7.6
MGIG	Malinaltepec	4.02	101	*e*P	Pn	14 50 25.7	+0.8
TLIG	Tlapa	4.03	96	Pn	Pn	14 50 25.4	+0.5
TLIG	Tlapa	4.03	96		Sn	14 51 15.7	+4.7
TLIG	Tlapa	4.03	96	*e*P	Pn	14 50 25.0	+0.1
TLIG				*e*S	Sn	14 51 15.7	+4.7
PPM	Popocatepetl	4.06	75	*e*P	Pn	14 50 26.0	+0.3
PPM				*e*S	Sn	14 51 19.7	+7.3
DEIG	Demacu	4.19	57	*e*P	Pn	14 50 28.1	+0.9
DEIG				*e*S	Sn	14 51 11.7	-3.4
FTIG	Fresnillo de T	4.42	91	*e*P	Pn	14 50 30.1	-0.1
FTIG				*e*S	Sn	14 51 25.5	+5.0
RPIG	Rio Verde	4.64	34	*e*P	Pn	14 50 32.2	-1.1
ZAIG	Zacatecas	4.72	2	Pn	Pn	14 50 33.8	-0.8
PNIG	Pinotepa	4.73	109		Pn	14 50 34.6	+0.2
PNIG	Pinotepa	4.73	109	*e*P	Pn	14 50 34.6	+0.2
HLIG	Huajuapan de L	4.73	92	*e*P	Pn	14 50 34.9	+0.3
HLIG				*e*S	Sn	14 51 32.7	+4.3
TXIG	Tlaxiaco	4.83	98	*e*P	Pn	14 50 34.7	-1.3
TXIG				*e*S	Sn	14 51 26.4	-4.6
YOIG	Yosondua	5.12	102	*e*P	Pn	14 50 41.2	+1.2
YOIG				*e*S	Sn	14 51 45.0	+6.9
THEZ	Tehuacan	5.14	84	*e*P	Pn	14 50 46.5	+6.2
TPIG	Tehuac#an	5.16	85		Pn	14 50 42.5	+2.1
TPIG	Tehuac#an	5.16	85	*e*P	Pn	14 50 42.5	+2.1
TOIG	Toxpalan	5.43	88	*e*P	Pn	14 50 44.6	+0.5
PEIG	Puerto Escondi	5.75	110	*e*P	Pn	14 50 47.7	-0.7
PEIG				*e*S	Sn	14 51 54.7	+1.6
JAUV	Jalcomulco	5.81	76	*e*P	Pn	14 50 53.4	+4.1
VHO	Vista Hermosa	5.84	98	*e*P	Pn	14 50 49.1	-0.7
VHO				*i* P	Pn	14 50 51.2	+1.4
GTIG	Gomez Farias	6.04	33	*e*P	Pn	14 50 53.4	+1.0
MAIG	Mazatlaan	6.17	327		Pn	14 50 54.6	+0.5
MAIG	Mazatlaan	6.17	327	*e*P	Pn	14 50 54.6	+0.5
NEUV	Arroyo Zacate	6.64	92	*e*P	Pn	14 51 00.4	-0.3
HUIG	Huatulco	6.76	108		Pn	14 51 02.8	+0.5
HUIG					Sn	14 52 15.5	-2.6
HUIG	Huatulco	6.76	108	*e*P	Pn	14 51 02.8	+0.5
HUIG				*e*S	Sn	14 52 15.5	-2.6
PDIG	Papasquiaro	7.39	341	*e*P	Pn	14 51 14.8	+3.7
CMIG	Matias Romero	7.58	96	Pn	Pn	14 51 14.5	+0.9
	3.1nm,0.3s,baz=260,slow=12,SNR=24						
CMIG				Lg	Lg	14 53 15.7	
	6.8nm,0.3s,baz=166,slow=13,SNR=7.7						
CMIG				LR	LR	14 54 25.4	
	comp=Z,1μm,19.1s,baz=288,slow=41						
CMIG	Matias Romero	7.58	96		Pn	14 51 13.9	+0.3
CMIG	Matias Romero	7.58	96	*e*P	Pn	14 51 13.9	+0.3
H06E1	SOCORRO T-PHAS	7.78	277	T	T	14 59 11.1	
	SNR=80						
H06S1	SOCORRO T	7.80	276	T	T	14 59 17.0	
	SNR=30						
UXUV	UXUV	8.25	94	*e*P	Pn	14 51 22.6	-0.2
SLBS	Sierra La Lagu	8.75	311	Pn	Pn	14 51 31.8	+2.1
LPIG	La Paz	9.27	312	LR	LR	14 54 45.4	
	comp=Z,1μm,18.3s,baz=150,slow=34						
PAVE	Pavencul	10.54	104	*e*P	Pn	14 51 56.0	+1.6
833A	Chaparral WMA,	10.70	16	P	Pn	14 51 58.2	+1.8
	baz=196						
TXAR	Lajitas Array	11.28	356	Pn	Pn	14 52 04.7	+0.3
	0.1nm,0.3s,baz=173,slow=11,SNR=80						
TXAR				Lg	Lg	14 55 14.4	
	0.2nm,0.3s,baz=182,slow=33,SNR=2.8						
TXAR				LR	LR	14 56 57.9	
	comp=Z,1μm,20.1s,baz=0.0,slow=41						
TXAR	Lajitas Array	11.28	356	Pn	Pn	14 52 06.7	+2.4
TX32	Lajitas Array	11.28	356	Pn	Pn	14 52 06.7	+2.4
APG	El Apazote	12.18	103	Pn	Pn	14 52 17.7	+0.9
	1.1nm,0.3s,baz=208,slow=1.4,SNR=2.1						
APG				Lg	Lg	14 55 45.3	
	0.8nm,0.3s,baz=182,slow=13,SNR=5.0						
APG				LR	LR	14 57 10.8	
	comp=Z,621nm,19.4s,baz=285,slow=39						
JCT	Junction City	12.68	12	Pn	Pn	14 52 24.5	+1.0
JCT	Junction City	12.68	12	P	Pn	14 52 25.2	+1.8
	baz=192,SNR=12						
MNTX	Cornudas Mount	13.81	351	Pn	Pn	14 52 37.5	-1.3
MNTX	Cornudas Mount	13.81	351	P	Pn	14 52 41.2	+2.3
	baz=168						
319A	Douglas	14.54	337		Pn	14 52 49.5	+0.7
WHTX	Lake Whitney,	14.71	18	P	Pn	14 52 51.4	+0.4

	baz=200						
ABTX	**Abilene, Hawle**	14.80	10		Pn	14 52 50.7	-1.5
ABTX	**Abilene, Hawle**	14.80	10	P	Pn	14 52 52.5	+0.3
	baz=191						
121A	**Cookes Peak, D**	15.13	344	Pn	Pn	14 52 57.3	+0.6
121A	**Cookes Peak, D**	15.13	344	P	Pn	14 52 59.1	+2.4
	baz=160						
TGUH	**Tegucigalpa,Un**	15.41	103	Pn	Pn	14 52 57.9	-2.5
TGUH				IAmb	IAmb	14 53 21.9	
	comp=Z,86nm,1.4s						
NATX	**Nacogdoches**	15.51	27	P	Pn	14 53 01.3	-0.2
	baz=210						
MSTX	**Muleshoe**	15.87	360	P	Pn	14 53 06.1	-0.2
	baz=179,SNR=8.0						
TUC	**Tucson**	15.95	335	P	Pn	14 53 08.9	+1.6
	baz=150						
LENM	**Lemitar**	16.50	348	P	Pn	14 53 14.5	+0.2
214A	**Organ Pipe Nat**	16.57	329	P	Pn	14 53 16.9	+1.9
	baz=143						
AMTX	**Amarillo**	16.81	3	P	Pn	14 53 17.6	-0.6
	baz=183						
X34A	**Smith Ranch, M**	17.08	14		Pn	14 53 21.3	-0.1
X34A				IAmb	IAmb	14 53 39.1	
	comp=Z,56nm,1.2s						
ANMO	**Albuquerque**	17.16	350	Pn	Pn	14 53 22.2	-0.4
	comp=Z,0.1nm,0.3s,baz=151,slow=13,SNR=6.7						
ANMO				LR	LR	15 00 30.6	
	comp=Z,2µm,18.2s,baz=168,slow=39						
ANMO	**Albuquerque**	17.16	350	P	P	14 53 23.7	-0.2
	baz=167						
W18A	**Petrified Fore**	18.11	341	P	P	14 53 35.1	+0.8
	baz=157						
MIAR	**Mount Ida**	18.38	25	P	P	14 53 35.5	-1.6
	baz=208,SNR=8.2						
GLA	**Glamis**	18.47	326	P	Pn	14 53 40.9	+2.3
	baz=140						
X40A	**Basin Creek Fa**	18.64	26	P	P	14 53 37.5	-2.4
	baz=210						
TUL1	**Leonard**	18.85	18	P	P	14 53 40.4	-1.9
TUL1				IAmb	IAmb	14 53 50.7	
	comp=Z,38nm,0.7s						
TUL1	**Leonard**	18.85	18	P	P	14 53 39.8	-2.5
	baz=200,SNR=6.1						
W39A	**Magazine**	18.87	23	P	P	14 53 41.1	-1.4
	baz=207						
SWSC	**Sam W. Stewart**	18.92	324	P	Pn	14 53 45.4	+1.5
	baz=137						
PDMCI	**Parker Dam,Lak**	19.13	330	P	P	14 53 46.6	+1.3
	baz=144						
OK032	**Salt Plains WL**	19.13	11		P	14 53 43.9	-1.4
MONP2	**Monument Peak**	19.23	323	P	Pn	14 53 48.7	+0.8
	baz=136						
BC3	**Big Chuckawall**	19.27	326	P	P	14 53 48.4	+1.4
	baz=140						
W41B	**Gary Mavity, V**	19.47	27	P	P	14 53 47.6	-1.4
	baz=211						
IRM	**Iron Mountain**	19.50	328	P	P	14 53 51.3	+1.9
	baz=141,SNR=7.1						
WHAR	**Wooly Hollow**	19.55	26	P	P	14 53 48.6	-1.4
T35A	**Sooner Cattle**	19.61	15		P	14 53 48.2	-2.3
T35A				IAmb	IAmb	14 54 00.8	
	comp=Z,54nm,1.1s						
KAN06	**Argonia West S**	19.63	12	P	P	14 53 49.1	-1.7
KAN06				IAmb	IAmb	14 53 58.2	
	comp=Z,34nm,0.8s						
MVCO	**Mesa Verde**	19.76	346	P	P	14 53 53.9	+1.4
	baz=163,SNR=8.6						
SDCO	**Great Sand Dun**	19.79	354	P	P	14 53 51.9	-1.0
	baz=171,SNR=9.1						
BELC	**Belle Mtn. Jos**	19.82	326	P	P	14 53 54.4	+1.3
	baz=139						
S22A	**4UR Ranch, Cre**	19.96	351	P	P	14 53 54.5	-0.3
	baz=168						
MURC	**Murrieta**	20.19	323	P	P	14 53 59.1	+2.1
	baz=135						
U40A	**Yellville**	20.25	24	P	P	14 53 55.8	-1.7
	baz=208						
GMRC	**Granite Mounta**	20.26	328	P	P	14 53 59.1	+1.3
	baz=141						
LCAR	**Lake Charles**	20.70	27	P	P	14 53 59.7	-2.7
CBKS	**Cedar Bluff**	20.88	7	P	P	14 54 02.9	-1.5
	baz=187						
KNB	**Kanab**	20.88	337	P	P	14 54 05.1	+0.5
KSCO	**Kaye Shedlock'**	20.91	0	P	P	14 54 03.8	-1.0
	baz=180						
BFSC	**Mount Baldy Ra**	20.91	323	P	Pn	14 54 07.7	+0.1
	baz=136						
GSC	**Goldstone, Bar**	21.25	327	P	P	14 54 09.7	+1.2
	baz=139						
EDW2	**Edwards Air Fo**	21.57	324	P	P	14 54 13.0	+1.1
	baz=136						
MTPU	**Mount Pierson**	21.57	339	P	P	14 54 13.1	+0.9
KSU1	**Kansas State U**	21.67	13	P	P	14 54 10.7	-2.1
	baz=195						
ISCO	**Idaho Springs**	21.83	354	P	P	14 54 13.0	-1.9
	baz=172						
R40A	**Maddies Statio**	22.18	22	P	P	14 54 15.8	-2.4
R40A				IAmb	IAmb	14 54 24.9	
	comp=Z,21nm,0.8s						
MPMC	**Manual Prospec**	22.18	327	P	P	14 54 21.2	+2.6
	baz=139,SNR=7.8						
WVT	**Waverly**	22.35	33	P	P	14 54 17.0	-3.2
WVT	**Waverly**	22.35	33	P	P	14 54 16.9	-3.2
	baz=220						
CCM	**Cathedral Cave**	22.36	24	P	P	14 54 17.7	-2.5
	baz=210						
ISA	**Isabella, Lake**	22.41	325	P	P	14 54 23.6	+2.6
	baz=136,SNR=7.7						
P18A	**Preston Nutter**	22.48	345	P	P	14 54 21.1	-0.8
O20A	**White River Ci**	22.53	349	P	P	14 54 22.1	-0.2
	baz=165						
PKM	**Mcpherson Peak**	22.63	321	P	P	14 54 24.9	+1.5
	baz=132						
CWC	**Cottonwood Cre**	22.78	327	P	P	14 54 26.3	+1.4
	baz=138						
VES	**Vestal, Richgr**	22.88	324	P	P	14 54 28.6	+2.9
	baz=136						
N23A	**Red Feather La**	22.95	354	P	P	14 54 25.5	-1.2
	baz=171						
W50A	**Signal Mountai**	23.09	39	P	P	14 54 24.9	-3.0
W50A				IAmb	IAmb	14 54 33.1	
	comp=Z,13nm,0.8s						
GOGA	**Godfrey**	23.11	45	P	P	14 54 24.9	-3.2
GOGA	**Godfrey**	23.11	45	P	P	14 54 25.2	-3.0
	baz=233						
R11A	**Troy Canyon, C**	23.13	334	P	P	14 54 29.1	+0.6
	baz=146,SNR=7.8						
SPR3	**Spring Creek 3**	23.19	337	P	P	14 54 29.4	+0.2
P40A	**Paris**	23.36	21	P	P	14 54 27.9	-2.6
P40A				IAmb	IAmb	14 54 49.4	
	comp=Z,33nm,0.9s						
BGNE	**Belgrade**	23.63	9	P	P	14 54 32.6	-0.6
	baz=190						
DUG	**Dugway, Tooele**	23.73	341	P	P	14 54 33.7	-0.6
	baz=155						
TKL	**Tuckaleechee C**	24.33	40	P	P	14 54 36.9	-2.7
	comp=Z,2.9nm,0.5s,baz=201,slow=9.3,SNR=7.5						
TKL				LR	LR	15 05 30.8	
	comp=Z,191nm,19.1s,baz=246,slow=40						
TKL	**Tuckaleechee C**	24.33	40	P	P	14 54 36.0	-3.6
TKL				IAmb	IAmb	14 54 56.4	
	comp=Z,19nm,1.1s						
NV11	**Mina Array Sit**	24.36	330	P	P	14 54 40.9	+0.8
BG3	**Lake Jocassee**	24.43	42	P	P	14 54 37.7	-2.9
BG3				IAmb	IAmb	14 55 03.0	
	comp=Z,18nm,1.1s						
NVAR	**Mina Array Bea**	24.43	329	P	P	14 54 41.6	+0.8
	comp=Z,4.8nm,0.8s,baz=150,slow=10,SNR=25						
WCI	**Wyandotte Cave**	24.75	32	P	P	14 54 40.8	-2.6
	baz=220						
K22A	**Casper**	24.75	353	P	P	14 54 42.5	-1.1
	baz=171						
KVN	**Kaiserville**	24.83	331	P	P	14 54 45.2	+0.8
KVN				IAmb	IAmb	14 54 48.0	
	comp=Z,25nm,1.0s						
V53A	**Saluda**	24.93	41	P	P	14 54 43.9	-1.3
V53A				IAmb	IAmb	14 54 53.5	
	comp=Z,14nm,0.8s						
TZTN	**Tazewell**	25.05	39	P	P	14 54 44.2	-2.0
	baz=228						
ELK	**Elko**	25.05	337	P	P	14 54 46.2	-0.2
	baz=161,slow=11,SNR=4.4						
ELK				PcP	PcP	14 58 20.8	+0.3
	comp=Z,1.6nm,0.8s,baz=181,slow=0.1,SNR=4.1						
ELK				LR	LR	15 05 32.6	
	comp=Z,623nm,18.3s,baz=166,slow=39						
ELK	**Elko**	25.05	337	P	P	14 54 46.2	-0.2
BW06	**Boulder Array**	25.32	348	P	P	14 54 47.6	-1.3
	baz=164,SNR=8.5						
PDAR	**Pinedale Array**	25.32	348	P	P	14 54 48.0	-0.8
	comp=Z,4.2nm,1.1s,baz=149,slow=6.9,SNR=20						
PDAR				PcP	PcP	14 58 21.1	0.0
	comp=Z,1.2nm,0.8s,baz=155,slow=5.0,SNR=4.8						
PDAR				LR	LR	15 05 42.9	
	comp=Z,847nm,19.2s,baz=180,slow=39						
KMSC	**Kings Mountain**	25.56	44		P	14 54 48.0	-2.9
KMSC				IAmb	IAmb	14 54 58.7	
	comp=Z,14nm,0.6s						
PNTR	**Pine Nut**	25.58	329	P	P	14 54 51.9	+0.6
PNTR				IAmb	IAmb	14 54 54.1	
	comp=Z,18nm,0.9s						
S51A	**Beattyville**	25.77	37	P	P	14 54 49.7	-3.1
S51A				IAmb	IAmb	14 55 05.2	
	comp=Z,14nm,0.9s						
SFIN	**Lafayette**	26.05	28	P	P	14 54 52.8	-2.4
	baz=216						
ECSD	**EROS Data Cent**	26.14	10	P	P	14 54 52.8	-3.3
	baz=193						
JFWS	**Jewell Farm**	26.99	21	P	P	14 55 00.7	-3.0
	baz=207						
HLID	**Hailey**	27.29	341	P	P	14 55 05.0	-1.6
	baz=154						
RLMT	**Red Lodge**	27.55	350	P	P	14 55 07.2	-1.8
	baz=166						
BOZ	**Bozeman (W)**	28.46	347	P	P	14 55 16.3	-0.7
BOZ	**Bozeman (W)**	28.46	347	P	P	14 55 16.0	-1.0
	baz=161,SNR=5.3						
LRM	**Limekiln Ridge**	28.86	346	P	P	14 55 19.5	-1.1
EGMT	**Eagleton**	30.45	351	P	P	14 55 34.0	-0.6
	baz=166						
I05D	**Terrebonne, OR**	30.52	333	P	P	14 55 35.6	+0.6
	baz=143						
AGMN	**Agassiz Nation**	30.71	9	P	P	14 55 34.5	-2.2
	baz=192,SNR=12						
J01E	**Myrtle Point**	30.80	329	P	P	14 55 38.3	+0.8
	baz=137						
EYMN	**Ely**	31.23	15	P	P	14 55 38.9	-2.4
	baz=201						
F05D	**White Salmon**	31.82	335	P	P	14 55 47.6	+1.2
	baz=144						
ULM	**Lac du Bonnet**	32.62	8	P	P	14 55 50.5	-2.9
	comp=Z,6.5nm,0.7s,baz=196,slow=7.9,SNR=8.4						
ULM				LR	LR	15 09 43.6	
	comp=Z,424nm,19.8s,baz=182,slow=38						
ULM	**Lac du Bonnet**	32.62	8	P	P	14 55 50.8	-2.6
ULM				IAmb	IAmb	14 55 52.2	
	comp=Z,26nm,1.5s						
E04D	**Cinebar**	32.81	334	P	P	14 55 56.4	+1.2
	baz=143						
YKA	**Yellowknife Ar**	45.18	352	P	P	14 57 36.4	-1.9
	comp=Z,4.8nm,0.7s,baz=163,slow=7.7,SNR=19						
YKA	**Yellowknife Ar**	45.18	352	P	P	14 57 36.8	-1.5
ETMB	**Extrema**	45.48	125	*e*P	P	14 57 39.0	-2.3
ETMB	**Extrema**	45.48	125	P	P	14 57 40.6	-0.7
TAOE	**Nuku Hiva Isla**	45.56	237	*e*S	S	15 04 25.9	+4.0
	comp=Z,50nm,24.8s						
TAOE				*e*LR	LR	15 10 31.5	
	comp=Z,176nm,22.6s						
TAOE	**Nuku Hiva Isla**	45.56	237	*e*T	T	15 46 11.1	
	comp=Z,69nm,0.2s						
SCHQ	**Schefferville**	45.84	28	P	P	14 57 41.0	-2.7
	comp=Z,6.3nm,0.8s,baz=250,slow=3.3,SNR=9.3						
SCHQ				LR	LR	15 18 49.0	
	comp=Z,63nm,18.0s,baz=200,slow=39						
SCHQ	**Schefferville**	45.84	28	P	P	14 57 41.5	-2.2
SCHQ				IAmb	IAmb	14 57 50.4	
	comp=Z,24nm,1.5s						
P33M	**Teslin, Yukon**	47.33	340	P	P	14 57 55.3	0.0
	baz=139						
WRGLY	**Wrigley**	47.36	347	P	P	14 57 54.5	-0.9
	baz=152						
LPAZ	**La Paz**	48.24	133	P	P	14 58 04.2	+0.7
	comp=Z,2.4nm,0.6s,baz=328,slow=5.9,SNR=9.4						
LPAZ				LR	LR	15 16 26.6	
	comp=Z,137nm,19.7s,baz=298,slow=34						
LPAZ	**La Paz**	48.24	133	P	P	14 58 03.5	0.0
MMPY	**Sheldon Lake,**	48.74	343	P	P	14 58 06.7	+0.5
	baz=142,SNR=11						
FARO	**Faro, Yukon**	49.04	342	P	P	14 58 08.9	+0.4
	baz=140						
N31M	**Braeburn, Yuko**	49.25	340	P	P	14 58 10.7	+0.6
	baz=136						
M31M	**Drury Creek, Y**	49.34	341	P	P	14 58 10.9	+0.2
	baz=138,SNR=5.7						
HYT	**Haines Junctio**	49.36	338	P	P	14 58 12.3	+1.3
	baz=134						
YUK4	**Talbot Arm**	50.12	338	P	P	14 58 18.4	+1.5
	baz=133,SNR=5.3						
M30M	**Minto, Yukon**	50.37	340	P	P	14 58 18.8	+0.2
	baz=136						
MAYO	**Mayo, Yukon**	50.84	342	P	P	14 58 22.3	+0.2
	baz=137						
YUK3	**Moose Creek**	51.05	338	P	P	14 58 24.0	+0.1
	baz=131						
PB09	**IPOC Station P**	51.42	139	P	P	14 58 29.4	+2.3
ITTB	**Itaituba**	51.44	111	*e*P	P	14 58 26.9	-0.4
MALB	**Monte Alegre**	51.67	107	*e*P	P	14 58 29.2	+0.2
M27K	**Edge Creek, AK**	51.94	338	P	P	14 58 31.1	+0.6
	baz=130						
VILB	**Vilhena**	52.08	123	*e*P	P	14 58 31.3	-0.7
VILB	**Vilhena**	52.08	123	P	P	14 58 32.2	+0.2
LVC	**Limon Verde**	52.23	139	*e*P	P	14 58 33.5	+0.1
LVC	**Limon Verde**	52.23	139	P	P	14 58 35.2	+1.8
LVC				IAmb	IAmb	14 58 37.3	
	comp=Z,13nm,1.2s						
DAWY	**Dawson**	52.26	341	P	P	14 58 32.5	-0.2
	baz=134						
M26K	**Nabesna, AK**	52.37	338	P	P	14 58 33.7	+0.2
	baz=129						
BCAR	**Beaver Creek A**	52.37	339	P	P	14 58 33.8	+0.3
L27K	**Beaver Creek,**	52.38	339	P	P	14 58 34.0	+0.3
	baz=130						
N25K	**Chitina, Valde**	52.47	336	P	P	14 58 35.2	+0.8
	baz=126						
L26K	**Log Cabin Wild**	52.89	338	P	P	14 58 37.9	+0.5
	baz=129						
NPGB	**Novo Progresso**	53.02	114	*e*P	P	14 58 38.1	-0.9
MCPB	**Macapa, AP**	53.09	105	*e*P	P	14 58 39.9	+0.4
EPYK	**Eagle Plains**	53.15	344	P	P	14 58 38.8	-0.4
	baz=138,SNR=6.8						
PAX	**Paxson**	53.62	337	P	P	14 58 42.8	-0.1
	baz=126						
SCRK	**Sand Creek**	53.71	339	P	P	14 58 44.3	+0.8
	baz=128						
INK	**Inuvik**	53.87	346	P	P	14 58 43.4	-1.0
	baz=142,SNR=17						
J26L	**Joseph Creek**	53.90	340	P	P	14 58 45.5	+0.6
	baz=129,SNR=12						
WAT6	**Susitna Watana**	54.24	336	P	P	14 58 47.3	-0.2
	baz=124						
PMR	**Palmer**	54.25	335	P	P	14 58 47.3	0.0
	baz=122						
PTLB	**Pontes e Lacer**	54.36	125	*e*P	P	14 58 48.9	+0.2
PTLB	**Pontes e Lacer**	54.36	125	P	P	14 58 48.9	+0.2
PTLB				IAmb	IAmb	14 58 49.6	
	comp=Z,9.2nm,1.1s						
DHY	**Denali Highway**	54.39	337	P	P	14 58 48.6	+0.1
	baz=124						
CLDB	**Colider**	54.54	118	*e*P	P	14 58 49.2	-1.0
WAT1	**Susitna Watana**	54.69	336	P	P	14 58 50.3	-0.2
	baz=123						
HDA	**Harding Lake**	55.01	338	P	P	14 58 52.6	-0.2
	baz=126						
ILAR	**Eielson Array**	55.20	339	P	P	14 58 54.1	-0.1
	comp=Z,4.0nm,0.9s,baz=144,slow=5.9,SNR=42						
ILAR				LR	LR	15 24 23.1	
	comp=Z,233nm,19.5s,baz=140,slow=38						
VAH	**Vaihoa**	55.20	236	*e*T	T	15 58 17.9	
	comp=Z,12nm,0.4s						
AC02	**Maricunga**	55.27	143	P	P	14 58 57.4	+1.6
AC02				IAmb	IAmb	14 58 59.3	
	comp=Z,7.5nm,0.9s						
PMOR	**Pomariorio Ree**	55.28	236	*e*T	T	15 58 24.6	
	comp=Z,8.5nm,0.3s						
MCK	**McKinley**	55.34	337	P	P	14 58 54.7	-0.5
	baz=123						
A36M	**Sachs Harbour**	55.53	352	P	P	14 58 55.2	-1.2
A36M				IAmb	IAmb	14 58 56.3	
	comp=Z,11nm,0.8s						
A36M	**Sachs Harbour**	55.53	352	P	P	14 58 55.1	-1.3
	baz=153,SNR=11						
POKR	**Poker Plat Res**	55.59	339	P	P	14 58 57.2	+0.2
	baz=125						
TRF	**Thorofare Moun**	55.69	336	P	P	14 58 57.8	-0.1
TRF	**Thorofare Moun**	55.69	336	P	P	14 58 58.0	0.0
	baz=121						
O19K	**Port Alsworth**	55.80	332	P	P	14 58 58.9	+0.4
	baz=115						
NEA2	**Nenana**	55.86	338	P	P	14 58 58.8	-0.1
	baz=123						
P18K	**Big Mountain,**	55.88	331	P	P	14 58 59.8	+0.7
	baz=114						
H03N2	**Juan Fernandez**	56.01	156	T	T	15 59 24.8	
	baz=333,slow=77,SNR=262						
H03N1	**Juan Fernandez**	56.02	156	T	T	15 59 26.2	
	baz=333,slow=77,SNR=521						
H03N3	**Juan Fernandez**	56.03	156	T	T	15 59 25.7	
	baz=333,slow=77,SNR=157						
BMAR	**Burnt Mountain**	56.11	342	P	P	14 59 00.6	-0.1
N19K	**Bonanza Creek**	56.14	332	P	P	14 59 01.4	+0.3
N19K	**Bonanza Creek**	56.14	332	P	P	14 59 01.5	+0.4
	baz=116						
PPLA	**Purkeypile**	56.15	335	P	P	14 59 01.1	0.0
	baz=119						
H24K	**Noodor Dome**	56.16	339	P	P	14 59 00.9	-0.3
H24K				IAmb	IAmb	14 59 02.3	
	comp=Z,8.8nm,0.9s						
H24K	**Noodor Dome**	56.16	339	P	P	14 59 01.4	+0.3
	baz=125						
I23K	**Minto, Yukon-K**	56.28	338	P	P	14 59 01.8	0.0
	baz=123						
M19K	**Big River Lodg**	56.59	334	P	P	14 59 05.4	+1.2
M19K				IAmb	IAmb	14 59 05.5	
	comp=Z,11nm,0.9s						
L20K	**Farewell, AK**	56.64	334	P	P	14 59 04.7	+0.2
	baz=117						
CHUM	**Lake Minchumin**	56.69	336	P	P	14 59 04.6	-0.2
	baz=120						
MLY	**Manley**	56.70	338	P	P	14 59 04.9	0.0
	baz=122						
L19K	**White Mountain**	56.91	334	P	P	14 59 07.2	+0.8
L19K	**White Mountain**	56.91	334	P	P	14 59 06.6	+0.1
	baz=116						
SALV	**Santo Antonio**	57.33	123	*e*P	P	14 59 10.5	+0.5
PRPB	**Parauapebas**	57.52	110	*e*P	P	14 59 12.0	+0.5
TTA	**Tatalina**	57.72	334	P	P	14 59 12.1	-0.1
TTA				IAmb	IAmb	14 59 13.2	
	comp=Z,12nm,1.0s						
TTA	**Tatalina**	57.72	334	P	P	14 59 11.5	-0.7
	baz=115						
COLD	**Coldfoot**	57.73	340	P	P	14 59 12.9	+0.8
COLD				IAmb	IAmb	14 59 13.6	
	comp=Z,7.0nm,1.0s						
COLD	**Coldfoot**	57.73	340	P	P	14 59 12.1	0.0
	baz=124,SNR=5.6						
H21K	**Melozitna Rive**	57.77	338	P	P	14 59 11.9	-0.5
	baz=120,SNR=7.9						
PPT	**Papeete**	58.06	235	LR	LR	15 17 33.1	
	comp=Z,103nm,20.6s,baz=58,slow=29						
PPT2	**Papeete2**	58.08	235	*e*LR	LR	15 15 56.0	
	comp=Z,134nm,22.0s						
TOLK	**Toolik Lake Re**	58.34	342	P	P	14 59 16.4	0.0
TOLK				IAmb	IAmb	14 59 22.1	
	comp=Z,17nm,1.5s						
TOLK	**Toolik Lake Re**	58.34	342	P	P	14 59 16.0	-0.5
	baz=125,SNR=5.4						
GCSA	**Galena City Sc**	58.85	336	P	P	14 59 20.2	+0.2
	baz=115						
SNDB	**Serra Nova Dou**	58.90	117	*e*P	P	14 59 21.8	+0.7
PP1B	**Ponte de Pedra**	58.93	124	*e*P	P	14 59 21.6	+0.4
AQDB	**Aquidauana**	59.96	128	*e*P	P	14 59 28.5	+0.3
AQDB	**Aquidauana**	59.96	128	P	P	14 59 28.9	+0.6
AQDB				IAmb	IAmb	14 59 29.1	
	comp=Z,8.3nm,0.8s						
UNV	**Unalaska Valle**	60.18	322	P	P	14 59 31.0	+1.8
	baz=100						
ARAG	**Araguaiana, MT**	60.37	121	*e*P	P	14 59 31.4	+0.3
SMTB	**Santa Maria do**	60.67	111	*e*P	P	14 59 33.9	+0.6
TULEG	**Thule**	61.05	9	*e*P	P	14 59 44.8	+10
TULEG				IAmb	IAmb	14 59 51.0	
	comp=Z,3.1nm,0.7s						
ROSB	**Rosrio**	61.38	104	*e*P	P	14 59 39.1	+1.0
TBI	**Tubuai**	61.41	230	*e*LR	LR	15 17 42.0	
	comp=Z,154nm,24.5s						
TBI	**Tubuai**	61.41	230	*e*T	T	16 06 04.4	
	comp=Z,3.4nm,0.3s						
NIKH	**Nikolski High**	61.43	321	P	P	14 59 38.1	+0.3
	baz=97						
PEXB	**Peixe**	61.53	115	*e*P	P	14 59 39.8	+0.6
A21K	**Barrow**	61.83	343	P	P	14 59 39.7	-0.5
A21K				IAmb	IAmb	14 59 40.8	
	comp=Z,8.1nm,1.0s						
A21K	**Barrow**	61.83	343	P	P	14 59 39.5	-0.7
	baz=119						
ANM	**Nome**	62.19	334	P	P	14 59 43.1	+0.3
	baz=107						
CPUP	**Villa Florida**	62.39	134	P	P	14 59 45.1	+0.4
	comp=Z,7.6nm,0.8s,baz=334,slow=8.7,SNR=13						
CPUP				LR	LR	15 25 51.7	
	comp=Z,73nm,18.9s,baz=330,slow=35						
CPUP	**Villa Florida**	62.39	134	*e*P	P	14 59 45.0	+0.4
CPUP	**Villa Florida**	62.39	134	P	P	14 59 44.7	+0.1
CPUP				IAmb	IAmb	14 59 46.0	
	comp=Z,8.9nm,0.9s						
BDFB	**Brasilia**	63.48	118	P	P	14 59 52.6	+0.4
	comp=Z,6.1nm,0.7s,baz=278,slow=5.9,SNR=9.0						
BDFB	**Brasilia**	63.48	118	P	P	14 59 51.8	-0.4
BDFB				IAmb	IAmb	14 59 53.4	
	comp=Z,7.7nm,0.8s						
LC01	**Cunco**	63.59	153	P	P	14 59 54.0	+1.6
NBPS	**Pedro II - PI**	64.42	104	*e*P	P	14 59 59.7	+1.2
IPMB	**Ipameri, GO**	64.49	121	*e*P	P	14 59 59.0	+0.3
NEEM	**North Greenlan**	64.58	11	*i* P	P	14 59 56.9	-1.9
SDBA	**SAO DESIDERIO**	64.61	114	*e*P	P	15 00 00.5	+0.9
ITQB	**Itaqui**	65.03	136	*e*P	P	15 00 03.4	+1.4
ITQB	**Itaqui**	65.03	136	P	P	15 00 02.6	+0.6
SUMG	**Summit**	65.32	17	*i* P	P	15 00 02.1	-1.7
SUMG				IAmb	IAmb	15 00 12.0	
	comp=Z,4.4nm,0.8s						
SUMG	**Summit**	65.32	17	P	P	15 00 03.2	-0.5
PLCA	**Paso Flores**	65.69	154	P	P	15 00 08.4	+2.4
	comp=Z,7.7nm,0.9s,baz=319,slow=9.4,SNR=8.2						
PLCA				LR	LR	15 23 18.0	
	comp=Z,112nm,18.4s,baz=350,slow=31						
PLCA	**Paso Flores**	65.69	154	*e*P	P	15 00 08.7	+2.6
PLCA	**Paso Flores**	65.69	154	P	P	15 00 07.5	+1.4
BB19B	**Bebedouro**	65.83	124	*e*P	P	15 00 08.0	+0.6
JANB	**Januaria**	66.33	116	*e*P	P	15 00 11.5	+0.8
NBPB	**Pedra_Branca-C**	66.56	104	*e*P	P	15 00 12.7	+0.5
MC01	**Montes Claros**	67.41	117	*e*P	P	15 00 18.6	+1.0
CPSB	**Cacapava Do Su**	67.62	135	*e*P	P	15 00 19.4	+0.9
TRQA	**Tornquist**	67.68	146	P	P	15 00 20.3	+1.5
TRQA				IAmb	IAmb	15 00 20.7	
	comp=Z,6.7nm,0.9s						
TIJ01	**Guaruva-PR**	67.78	128	*e*P	P	15 00 23.3	+3.4
NBMA	**Muriti-CE**	68.01	106	*e*P	P	15 00 22.6	+1.2
VAO	**Valinhos**	68.09	125	*e*P	P	15 00 22.8	+1.0
NBPN	**Ponto Novo - B**	68.10	110	*e*P	P	15 00 22.8	+0.9
PLTB	**Pedras Altas**	68.36	136	*e*P	P	15 00 24.5	+1.3
PLTB	**Pedras Altas**	68.36	136	P	P	15 00 24.2	+1.0
DIAM	**Diamantina, MG**	68.39	119	*e*P	P	15 00 24.8	+0.9
CNLB	**Canela**	68.73	132	*e*P	P	15 00 25.5	-0.2
BSCB	**Bom Sucesso**	68.80	122	*e*P	P	15 00 27.0	+0.7
NBPA	**Parau_RN**	68.92	104	*e*P	P	15 00 28.4	+1.3
TER01	**Tubaro-SC**	69.50	131	*e*P	P	15 00 31.8	+1.4
NBLV	**Livramento - P**	69.70	105	*e*P	P	15 00 33.6	+1.7
GDU01	**Guandu, BA**	69.85	112	*e*P	P	15 00 33.8	+1.1
NBLA	**Lagarto - SE**	70.32	109	*e*P	P	15 00 36.4	+0.7
VAS01	**Vassouras-RJ**	70.51	122	*e*P	P	15 00 38.0	+1.2
CMC01	**Camacan, BA**	70.60	114	*e*P	P	15 00 38.7	+1.4
NBPV	**Pedro Velho**	70.85	104	*e*P	P	15 00 40.4	+1.4
BSFB	**Barra de Sao F**	71.01	118	*e*P	P	15 00 40.3	+0.5
NBAN	**Anadia - AL**	71.17	107	*e*P	P	15 00 41.5	+0.7
DAG	**Danmarks Havn**	71.22	14	*i* P	P	15 00 37.9	-2.3
DAG				IAmb	IAmb	15 00 39.6	
	comp=Z,1.7nm,0.6s						
RIB01	**Linhares ES**	71.61	118	*e*P	P	15 00 43.9	+0.5
NOR	**Nord**	71.71	9	*i* P	P	15 00 41.5	-1.5
NOR				IAmb	IAmb	15 00 50.5	
	comp=Z,2.6nm,0.7s						
PETK	**Petropavlovsk-**	81.35	323	P	P	15 01 38.9	+0.9
	comp=Z,7.7nm,0.9s,baz=78,slow=9.2,SNR=5.6						
PETK	**Petropavlovsk-**	81.35	323	P	P	15 01 38.0	0.0
PCAS	**Casmilo, Conde**	81.79	51	*e*P	P	15 01 41.2	+0.6
	comp=Z,37nm,1.7s						
POLO	**Lamas de Olo**	81.92	49	*e*P	P	15 01 41.9	+0.5
	comp=Z,11nm,1.3s						
PVIS	**Viseu**	82.04	50	*e*P	P	15 01 42.0	0.0
	comp=Z,21nm,2.2s						

PMTG	Montargil	82.28	52	*e*P	P	15 01 43.5	+0.3
	comp=Z,36nm,1.8s						
PFVI	Vila Bisbo	82.38	54	*e*P	P	15 01 43.4	-0.4
	comp=Z,161nm,1.8s						
MTE	Manteigas	82.39	50	*e*P	P	15 01 44.2	+0.3
	comp=Z,25nm,1.2s						
MVO	Moncorvo	82.54	49	*e*P	P	15 01 45.2	+0.6
PCBR	Castelo Branco	82.60	51	*e*P	P	15 01 45.0	+0.1
	comp=Z,37nm,1.4s						
MESJ	Messejana	82.64	53	*e*P	P	15 01 45.6	+0.5
	comp=Z,37nm,1.5s						
PMRV	Marv??o	82.79	51	*e*P	P	15 01 45.1	-0.8
	comp=Z,31nm,1.3s						
TIXI	Tiksi	83.99	346	P	P	15 01 50.9	-0.4
ESDC	Sonseca Array	85.23	50	P	P	15 01 58.0	-0.4
	comp=Z,2.5nm,1.0s,baz=310,slow=4.6,SNR=11						
ESDC	Sonseca Array	85.23	50	P	P	15 01 57.4	-1.0
ESDC				IAmb	IAmb	15 02 08.0	
	comp=Z,16nm,1.4s						
ARCES	ARCESS Array B	85.37	16	LR	LR	15 41 28.4	
	comp=Z,146nm,18.4s,baz=245,slow=37						
ARCES	ARCESS Array B	85.37	16	P	P	15 01 58.0	-0.4
NOA	NORSAR Array B	85.38	26	P	P	15 01 58.0	-0.7
	comp=Z,1.3nm,0.8s,baz=303,slow=5.0,SNR=4.1						
NOA				LR	LR	15 39 45.6	
	comp=Z,50nm,18.5s,baz=345,slow=36						
MSVF	Nonsavu	85.58	250	P	P	15 02 04.1	+3.7
	comp=Z,8.1nm,0.9s,baz=128,slow=12,SNR=4.2						
MSVF	Nonsavu	85.58	250	P	P	15 02 01.6	+1.2
MDT	Midelt	87.01	57	P	P	15 02 06.8	-0.6
	comp=Z,1.2nm,0.4s,baz=353,slow=4.7,SNR=3.8						
PMSA	Palmer Station	87.70	164	*e*P	P	15 02 15.0	+5.5
FINES	FINESS Array B	90.97	22	LR	LR	15 42 12.8	
	comp=Z,153nm,20.2s,baz=316,slow=35						
NRIK	Noril'sk	92.56	356	P	P	15 02 32.6	+0.1
	comp=Z,2.6nm,0.6s,baz=5.7,slow=5.3,SNR=5.0						
NRIK				LR	LR	15 45 31.5	
	comp=Z,80nm,21.5s,baz=10.0,slow=36						
NRIK	Noril'sk	92.56	356	P	P	15 02 29.1	-3.4
GERES	GERESS Array B	92.82	36	P	P	15 02 34.2	0.0
	comp=Z,0.3nm,0.4s,baz=46,slow=4.2,SNR=2.2						
GERES				LR	LR	15 45 29.6	
	comp=Z,57nm,18.6s,baz=286,slow=36						
KLMR	Klimovskoe	95.75	18	*e*P	P	15 02 48.0	+0.7
KLMR				AMP		15 03 01.7	
	comp=Z,15nm,1.4s						
DZM	Mont Dzumac	97.30	249	*e*LR	LR	15 34 39.5	
	comp=Z,134nm,22.8s						
AKASG	Malin Array Be	99.64	29	LR	LR	15 48 10.3	
	comp=Z,54nm,19.2s,baz=310,slow=36						
STKA	Stephens Creek	120.79	243	PKP	PKPdf	15 08 14.7	+0.7
	comp=Z,2.7nm,0.8s,baz=81,slow=5.4,SNR=4.5						
GEYT	Alibeck	121.51	18	PKP	PKPdf	15 08 14.7	-0.7
	comp=Z,1.2nm,0.6s,baz=213,slow=12,SNR=4.0						
WRA	Warramunga Arr	126.19	258	PKP	PKPdf	15 08 24.5	-0.1
	comp=Z,3.5nm,0.7s,baz=81,slow=2.1,SNR=36						
WRA	Warramunga Arr	126.19	258		PKPdf	15 08 25.0	+0.4
ASAR	Alice Springs	127.02	254	PKP	PKPdf	15 08 26.8	+0.6
	comp=Z,2.7nm,0.8s,baz=85,slow=1.7,SNR=26						
ASAR	Alice Springs	127.02	254		PKPdf	15 08 26.4	+0.3
MAW	Mawson	129.60	173	PKP	PKPdf	15 08 30.5	+0.8
	comp=Z,4.0nm,0.9s,baz=248,slow=6.7,SNR=4.5						
BOSA	Boshof	131.45	112	PKP	PKPdf	15 08 34.6	0.0
	comp=Z,2.9nm,1.0s,baz=358,slow=4.5,SNR=4.1						
CMAR	Chiang Mai Arr	137.92	328	PKP	PKPdf	15 08 47.1	+0.3
	comp=Z,1.6nm,0.8s,baz=4.0,slow=1.6,SNR=12						
CMAR	Chiang Mai Arr	137.92	328		PKPdf	15 08 45.9	-1.0
HYB	Hyderabad	144.75	358	*i* PKP	PKPab	15 08 57.5	-0.4
HYB				*e*		15 09 06.0	

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*IDC **11** 14:49:59.9±0.8, 2°.29S×138°.34E, h0^{km}, mb3.9/8, mb1 4.1/10, mb1mx3.9/43, mbtmp4.0/10, ML3.9/2, Error ellipse: s-maj=19.5km s-min=15.2km az=25.0*

*NEIC **11** 14:50:06.8±1.4, 2°.4S±0°.1×138°.2E±0°.1, h46^{km}±8^{km}, mb4.1/15, Error ellipse: s-maj=17.5km s-min=14.9km az=71.0*

ISC 11 14:50:04.7±0.6, **2°.38S**±0°.08×**138°.31E**±0°.07, **h32**^{km}, **n41**, σ**1ˢ.25**/39, **mb4.1**/12, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.40	93	Pn	Pn	14 50 42.2	+0.5
	14nm,0.3s,baz=232,slow=10.0,SNR=61						
JAY				Lg	Lg	14 51 13.8	
	18nm,0.3s,baz=139,slow=16,SNR=6.7						
FAKI	Fak Fak	6.08	265	Pn	Pn	14 51 32.6	+0.2
KDU	Kakadu	11.76	209	P	Pn	14 52 49.8	-0.5
DRS	Darwin Rock St	12.39	216	P	Pn	14 53 01.6	+2.6
COEN	Coen	12.46	158	Pn	Pn	14 53 00.8	+0.8
MTN	Manton Dam	12.59	214	Pn	Pn	14 53 01.9	+0.3
MTN	Manton Dam	12.59	214	P	Pn	14 53 01.8	+0.1
KNRA	Kununurra	16.22	215	Pn	Pn	14 53 49.9	-0.4
KNRA				IAmb	IAmb	14 53 57.9	
	comp=Z,15nm,1.1s						
KNRA	Kununurra	16.22	215	P	P	14 53 51.7	-1.4
WB0	Warramunga Arr	17.70	192		Pn	14 54 07.5	-1.4
WB0				IAmb	IAmb	14 54 30.4	
	comp=Z,5.2nm,0.8s						
WRAB	Tennant Creek	17.87	192	P	Pn	14 54 09.8	-1.1
WB2	Warramunga Arr	17.88	192	P	Pn	14 54 10.7	-0.3
WB2				IAmb	IAmb	14 54 37.1	
	comp=Z,17nm,1.4s						
WRA	Warramunga Arr	17.88	192	P	Pn	14 54 09.9	-1.2
	comp=Z,0.6nm,0.3s,baz=17,slow=12,SNR=23						
WRA	Warramunga Arr	17.88	192	P	Pn	14 54 10.1	-1.0
QIS	Mount Isa	18.11	176	P	P	14 54 14.9	+0.8
CTAO	Charters Tower	19.23	157	P	Pn	14 54 27.3	-0.2
CTAO				IAmb	IAmb	14 54 43.4	
	comp=Z,6.5nm,1.0s						
CTAO	Charters Tower	19.23	157	P	Pn	14 54 36.0	+8.5
FITZ	Fitzroy Crossi	19.96	218	P	P	14 54 34.1	-0.3
	comp=Z,1.6nm,1.0s,baz=18,slow=16,SNR=1.7						
AS31	Alice Springs	21.58	191	P	P	14 54 51.8	-0.1
ASAR	Alice Springs	21.58	191	P	P	14 54 52.0	+0.1
	comp=Z,4.3nm,0.7s,baz=20,slow=11,SNR=90						
ASAR	Alice Springs	21.58	191	P	P	14 54 51.8	-0.1
WRKA	Warakurna	24.50	202	P	P	14 55 30.7	+9.4
OOD	Oodnadatta	25.39	185	P	P	14 55 39.5	+10
PSA00	Pilbara Seismi	26.20	222	P	P	14 55 37.6	+0.8
PSA00	Pilbara Seismi	26.20	222	P	P	14 55 37.4	+0.6
PSA00				IAmb	IAmb	14 55 37.9	
	comp=Z,2.6nm,0.7s						
STKA	Stephens Creek	29.50	174	P	P	14 56 07.9	+1.8
	comp=Z,1.7nm,0.5s,baz=340,slow=8.6,SNR=7.5						
STKA	Stephens Creek	29.50	174	P	P	14 56 07.1	+1.0
MORW	Morawa	33.96	216	P	P	14 56 44.5	-0.8
CMAR	Chiang Mai Arr	43.93	300	P	P	14 58 08.9	0.0
	comp=Z,0.5nm,0.4s,baz=126,slow=7.2,SNR=6.6						
CMAR				PcP	PcP	14 59 55.4	+0.7
	comp=Z,0.6nm,0.6s,baz=144,slow=2.3,SNR=4.9						
MKAR	Makanchi Array	69.29	322	P	P	15 01 08.9	0.0
	comp=Z,1.5nm,0.7s,baz=99,slow=8.4,SNR=8.7						
MKAR	Makanchi Array	69.29	322	P	P	15 01 08.0	-0.9
MAKZ	Makanchi	69.49	322	P	P	15 01 09.7	-0.5
ZALV	Zalesovo Beam	71.46	330	P	P	15 01 21.4	-0.6
	comp=Z,0.7nm,0.5s,baz=116,slow=6.6,SNR=1.9						
VNDA	Vanda	76.14	175	P	P	15 01 44.4	-4.6
VNDA				IAmb	IAmb	15 01 46.4	
	comp=Z,2.9nm,0.8s						
BVAR	Borovoye Array	78.82	325	P	P	15 02 04.6	+0.2
	comp=Z,2.5nm,0.5s,baz=166,slow=7.6,SNR=20						
BRVK	Borovoye	78.89	325	P	P	15 02 05.1	+0.3
BRVK				IAmb	IAmb	15 02 05.6	
	comp=Z,2.9nm,0.6s						
MAW	Mawson	82.28	202	P	P	15 02 25.1	+2.5
MAW				IAmb	IAmb	15 02 44.1	
	comp=Z,3.6nm,1.4s						
ABKAR	Akbulak array	84.22	320	P	P	15 02 32.8	-0.2
ILAR	Eielson Array	85.70	25	P	P	15 02 39.1	-1.1
	comp=Z,0.4nm,0.7s,baz=258,slow=4.6,SNR=4.3						
BMAR	Burnt Mountain	87.25	22	P	P	15 02 49.5	+1.7
QSPA	South Pole Qui	87.56	180	P	P	15 02 49.8	+0.4
QSPA				IAmb	IAmb	15 02 58.1	
	comp=Z,2.9nm,1.1s						

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*IDC **11** 15:26:50.7±0.6, 2°.91S×124°.30E, h0^{km}, mb3.4/2, mb1 3.6/3, mb1mx3.1/37, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=90.8km s-min=8.4km az=60.0*

*DJA **11** 15:26:53.3±0.5, 2°S±4°×12°6E±°, h19^{km}±4^{km}, M4.1/10, mb4.0/6, mB4.6/1, MLv4.1/10, Mw(mB)3.8/1*

ISC 11 15:26:54.2±1.1, **2°.1S**±0°.1×**125°.92E**±0°.10, **h35**^{km}, **n10**, σ**1ˢ.12**/10, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANI	Sanana	0.07	74	P	Pn	15 26 58.2	-1.9
APSI	Ampana	4.42	285	P	Pn	15 27 58.8	0.0
FAKI	Fak Fak	6.38	98	P	Pn	15 28 27.2	+1.4
	0.1nm8.3nm,1.2s						
SPSI	Sidrap Palu	6.42	253	P	Pn	15 28 26.8	+0.4
	0.4nm13nm,0.6s						
BKSI	Bulukumba	6.63	241	P	Pn	15 28 29.6	+0.5
	0.2nm449nm27nm,0.5s						
BSSI	Bau Bau, Buton	6.76	233	P	Pn	15 28 31.0	0.0
	0.6nm9.6nm,0.5s						
EDFI	Ende, Flores	7.86	212	P	Pn	15 28 47.1	+0.9
WRA	Warramunga Arr	19.58	156	P	Pn	15 31 20.3	-0.5
	0.1nm,0.3s,baz=332,slow=12,SNR=17						
ASAR	Alice Springs	22.82	161	P	P	15 31 53.4	-0.9
	0.4nm,0.6s,baz=347,slow=12,SNR=10						
MKAR	Makanchi Array	61.91	327	P	P	15 37 11.2	+0.9
	0.6nm,0.6s,baz=126,slow=7.3,SNR=7.1						

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*NEIC **11** 15:28:51.8±2.0, 7°.0S±0°.1×124°.8E±0°.2, h562^{km}±8^{km}, mb4.2/22, Error ellipse: s-maj=22.8km s-min=14.1km az=69.0*

*IDC **11** 15:28:52.1±0.9, 7°.05S×124°.87E, h558^{km}±11^{km}, mb3.4/10, mb1 3.5/15, mb1mx3.2/40, mbtmp4.4/15, Error ellipse: s-maj=21.8km s-min=8.7km az=69.0*

*DJA **11** 15:28:52.2±0.2, 7°S±3°×12°5E±°, h548^{km}±4^{km}, M4.0/20, mB4.4/7, mb4.1/20, MLv4.4/16, Mw(mB)3.5/7*

ISC 11 15:28:50.9±0.4, **7°.04S**±0°.06×**124°.82E**±0°.08, **h543**^{km}, **n81**, σ**1ˢ.45**/88, **mb4.1**/24, **1C**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	2.75	191	P	P	15 30 05.9	+1.9
SOEI				S	S	15 31 04.3	+0.8
SOEI	Soe	2.75	191	P	P	15 30 05.8	+1.7
BATI	Baumata	3.35	200	P	P	15 30 09.6	+2.0
	111nm,0.3s,baz=87,slow=1.2,SNR=177						
BATI				S	S	15 31 10.1	0.0
	7.8nm,0.3s,baz=136,slow=4.5,SNR=3.5						
BATI	Baumata	3.35	200	P	P	15 30 09.0	+1.4
EDFI	Ende, Flores	3.53	241	P	P	15 30 09.6	+0.6
BSSI	Bau Bau, Buton	4.39	281	P	P	15 30 17.9	+2.6
BKSI	Bulukumba	4.97	290	P	P	15 30 22.4	+2.3
SANI	Sanana	5.09	13	P	P	15 30 23.0	+1.8
	0.2nm836nm69nm,0.8s						
BNSI	Bone	5.37	299	P	P	15 30 26.2	+2.6
	0.4nm1µm139nm,0.8s						
KAPI	Kappang	5.43	292	P	P	15 30 27.1	+3.1
	5.4nm,0.3s,baz=143,slow=4.4,SNR=35						
KAPI	Kappang	5.43	292	P	P	15 30 26.6	+2.6
SPSI	Sidrap Palu	5.88	301	P	P	15 30 30.2	+2.1
	0.4nm926nm103nm,0.8s						
WBSI	Waikabubak, Su	5.96	244	P	P	15 30 28.8	-0.1
	0.7nm26nm,0.7s						
TTSI	Tana Toraja	6.37	308	P	P	15 30 36.0	+3.4
	0.2nm607nm53nm,0.8s						
APSI	Ampana	6.86	332	P	P	15 30 40.0	+2.7
	0.2nm604nm58nm,1.0s						
LBMI	Labuha	6.90	23	P	P	15 30 39.9	+2.2
	0.2nm40nm,0.8s						
PLAI	Plampang	7.20	255	P	P	15 30 40.8	+0.3
	0.2nm19nm,0.6s						
GTOI	Gorontalo	7.84	347	P	P	15 30 50.5	+3.6
	250nm23nm,0.8s						
MRSI	Marisa	8.00	339	P	P	15 30 50.4	+1.9
	44nm,0.6s						
TWSI	Taliwang, Sumb	8.04	257	P	P	15 30 48.8	-0.1
	12nm,0.5s						
TNTI	Ternate	8.17	18	P	P	15 30 49.7	-0.4
FAKI	Fak Fak	8.46	61	P	P	15 30 55.2	+2.1
	20nm,0.8s						
FAKI	Fak Fak	8.46	61		P	15 30 54.0	+0.9
MTN	Manton Dam	8.48	133	P	P	15 30 54.4	+1.2
MPSI	Mapaga	8.82	326	P	P	15 30 59.5	+2.7
	21nm,0.8s						
SIJI	Sorong	8.88	47	P	P	15 30 59.2	+1.8
	1.7nm,0.3s,baz=272,slow=5.5,SNR=7.4						
SWI	Sorong	8.88	47	P	P	15 30 59.7	+2.3
	0.1nm25nm,0.9s						
TOLI2	Tolitoli	9.04	333	P	P	15 30 60.0	+1.0
KNRA	Kununurra	9.41	156	P	P	15 31 04.2	+1.5
IGBI	Denpasar	9.74	259	P	P	15 31 07.6	+1.5
	52nm,0.6s						
JAGI	Jajag, Banyuwa	10.66	262	P	P	15 31 13.2	-2.4
FITZ	Fitzroy Crossi	11.02	176	P	P	15 31 20.1	+0.9
	1.2nm,0.3s,baz=351,slow=7.4,SNR=105						
FITZ				S	S	15 33 20.4	-0.8
	0.4nm,0.3s,baz=157,slow=20,SNR=11						
WB0	Warramunga Arr	15.70	145		P	15 32 07.3	-0.4
WB0				IAmb	IAmb	15 32 09.2	
	comp=Z,22nm,1.1s						
WRAB	Tennant Creek	15.80	145	P	P	15 32 06.7	-2.1
WRAB				IAmb	IAmb	15 32 09.8	
	comp=Z,9.9nm,0.7s						
WRA	Warramunga Arr	15.80	145	P	P	15 32 08.4	-0.4
	comp=Z,2.3nm,0.3s,baz=323,slow=11,SNR=77						
WRA				S	S	15 34 49.2	-1.6
	baz=320,slow=18,SNR=8.4						
WRA	Warramunga Arr	15.80	145	P	P	15 32 07.5	-1.3
WB2	Warramunga Arr	15.81	145		P	15 32 08.3	-0.6
WB2				IAmb	IAmb	15 32 09.9	
	comp=Z,8.5nm,0.7s						
WR0	Warramunga Arr	15.93	145		P	15 32 09.7	-0.3
AS31	Alice Springs	18.69	153	P	P	15 32 36.0	+0.5
AS31				IAmb	IAmb	15 32 39.8	
	comp=Z,4.1nm,0.5s						
ASAR	Alice Springs	18.69	153	P	P	15 32 36.3	+0.8
	comp=Z,2.0nm,0.3s,baz=341,slow=12,SNR=118						
ASAR				S	S	15 35 37.7	-0.5
	baz=341,slow=21,SNR=12						
ASAR				ScP	ScP	15 39 18.1	-2.3
	comp=Z,0.1nm,0.3s,baz=348,slow=2.2,SNR=12						
ASAR	Alice Springs	18.69	153	P	P	15 32 36.1	+0.6
CGJI	Cibinong	19.00	270	P	P	15 32 38.2	-0.1
	comp=Z,11nm,1.1s						
COEN	Coen	19.30	112		P	15 32 41.0	-0.1
COEN				IAmb	IAmb	15 32 42.2	
	comp=Z,9.3nm,0.8s						
BBOO	Buckleboo	27.69	159	P	P	15 33 56.0	+0.4
STKA	Stephens Creek	29.25	150	P	P	15 34 10.2	+1.0
	comp=Z,4.2nm,0.4s,baz=324,slow=8.3,SNR=25						
STKA	Stephens Creek	29.25	150	P	P	15 34 10.1	+0.8
STKA				IAmb	IAmb	15 34 11.0	
	comp=Z,2.1nm,0.8s						
TPUB	Ta-pu	30.43	352	P	P	15 34 18.9	-0.7
YULB	Yu-li	30.44	354	P	P	15 34 17.1	-2.6
TOO	Toolangi	35.73	151	P	P	15 35 04.9	+0.8
TOO				IAmb	IAmb	15 35 15.6	
	comp=Z,15nm,1.1s						
CAN	Canberra	35.85	145	P	P	15 35 06.2	+1.0
CMAR	Chiang Mai Arr	35.97	315	P	P	15 35 07.2	+0.9
	comp=Z,0.6nm,0.4s,baz=143,slow=6.9,SNR=7.3						
CMAR				ScP	ScP	15 40 12.6	-0.5
	comp=Z,0.3nm,0.3s,baz=164,slow=2.7,SNR=4.9						
XAN	Xi'an	43.55	341	P	P	15 36 06.5	-0.4
XAN				pP	P	15 36 09.0	+2.1
XAN				pmax	pmax		
	comp=Z,17nm,0.8s						
KSRS	Korea Array	44.36	4	P	P	15 36 13.9	+0.9
	comp=Z,3.5nm,0.9s,baz=186,slow=9.1,SNR=6.6						
MJAR	Matsushiro Arr	45.14	15	P	P	15 36 18.8	-0.4
	comp=Z,3.8nm,0.8s,baz=182,slow=10,SNR=5.3						
LZH	Lanzhou	47.21	337	⇑P	P	15 36 36.3	+1.2
LZH				pP	P	15 36 49.1	+14
LZH				pmax	pmax		
	comp=Z,27nm,1.4s						
RAMN	Ramite	50.12	314	*e*P	P	15 36 57.3	+0.4
	comp=Z,15nm,0.5s						
GUN	Gumba	51.21	314	*e*P	P	15 37 04.7	-0.2
	comp=Z,20nm,0.7s						
PKI	Pulchoki	51.34	314	*e*P	P	15 37 05.6	-0.3
	comp=Z,7.6nm,0.5s						
PKIN	Phulchoki	51.35	314	*e*P	P	15 37 05.5	-0.4
	comp=Z,9.0nm,0.5s						
USRK	Ussuriysk Ar.	51.41	7	P	P	15 37 05.5	-0.1
	comp=Z,3.0nm,0.6s,baz=190,slow=7.2,SNR=5.5						
GTA	Gaotai	51.69	335	*e*P	P	15 37 08.5	+0.5
GTA				pP	P	15 37 12.6	+4.6
GTA				sP	P	15 37 15.8	+7.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GKN	Gorkha	52.15	314	*e*P	P	15 37 11.3	-0.2
	comp=Z,14nm,0.5s						
KOLN	Koldanda	52.76	313	*e*P	P	15 37 16.0	+0.1
DANN	Dangsing	52.98	314	*e*P	P	15 37 17.5	-0.1
PYUN	Piuthan	53.39	313	*e*P	P	15 37 20.4	0.0
RPZ	Rata Peaks	54.43	140	P	P	15 37 27.5	+0.2
RPZ				IAmb	IAmb	15 37 28.8	
	comp=Z,13nm,0.6s						
BKZ	Black Stump Fm	56.28	133	P	P	15 37 40.3	0.0
KLR	Kul'dur	56.36	5	P	P	15 37 40.1	-0.4
	comp=Z,1.0nm,0.5s,baz=186,slow=7.5,SNR=4.8						
SONM	Songino Array	57.01	345	P	P	15 37 45.7	+0.5
	comp=Z,1.8nm,0.7s,baz=161,slow=8.5,SNR=12						
SONM	Songino Array	57.01	345	P	P	15 37 44.1	-1.1
MK31	Makanchi Array	65.54	329	P	P	15 38 40.8	0.0
MK31				IAmb	IAmb	15 38 41.5	
	comp=Z,2.8nm,0.8s						
MKAR	Makanchi Array	65.54	329	P	P	15 38 41.0	+0.1
	comp=Z,3.4nm,0.6s,baz=123,slow=7.9,SNR=35						
MKAR	Makanchi Array	65.54	329	P	P	15 38 40.6	-0.2
MAKZ	Makanchi	65.71	329	P	P	15 38 39.1	-2.8
MAKZ				IAmb	IAmb	15 38 56.6	
	comp=Z,4.9nm,1.1s						
PETK	Petropavlovsk-	66.08	21	P	P	15 38 43.6	-0.5
	comp=Z,3.5nm,0.7s,baz=197,slow=2.1,SNR=9.2						
PETK	Petropavlovsk-	66.08	21	P	P	15 38 43.0	-1.1
ZALV	Zalesovo Beam	69.44	336	P	P	15 39 03.7	-0.8
	comp=Z,3.0nm,0.5s,baz=130,slow=3.7,SNR=13						
KURK	Kurchatov	69.96	331	P	P	15 39 05.4	-2.2
KURK				IAmb	IAmb	15 39 08.1	
	comp=Z,4.4nm,0.7s						
VNDA	Vanda	73.07	172	P	P	15 39 25.4	-0.1
TIXI	Tiksi	78.58	1	P	P	15 39 55.3	-0.6
TIXI				IAmb	IAmb	15 39 56.1	
	comp=Z,3.3nm,0.5s						
QSPA	South Pole Qui	82.94	180	P	P	15 40 18.1	-0.7

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*NNC **11** 15:30:47.1±2.7, 41°.04N×80°.06E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=18.0km s-min=17.4km az=176.0*

*SOME **11** 15:30:47.9, 41°.10N×80°.12E, h10^{km}*

ISC 11 15:30:51.1±2.9, **41°.2N**±0°.1×**80°.13E**±0°.08, **h10**^{km}, **n21**, σ**1ˢ.58**/31, **4D**, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	2.13	338	*e*P	Pb	15 31 29.3	-0.7
	6.4nm,0.4s						
UZB				*e*S	Sg	15 31 59.0	-0.7
	4.7nm,0.5s						
UZB	Uzynbulak	2.13	338	Pg	Pb	15 31 28.8	-1.2
	6.4nm,0.4s						
UZB				Lg	Lg	15 31 58.7	
	4.7nm,0.5s						
PDGK	Podgornoye	2.20	348	Pg	Pb	15 31 29.9	-1.2
	5.4nm,0.3s						
PDGK				Lg	Lg	15 32 01.0	
	5.8nm,0.5s						
PDGK	Podgornoye	2.20	348	⇓Pg	Pb	15 31 29.4	-1.7
	5.4nm,0.4s						
PDGK				⇓Lg	Lg	15 32 01.3	
	14nm,0.8s						
KTMS	Ketmen	2.27	4	*e*P	Pb	15 31 31.1	-1.2
	3.3nm,0.2s						
KTMS				*e*S	Sb	15 32 02.3	+1.7
	13nm,0.3s						
KTMS	Ketmen	2.27	4	Pg	Pb	15 31 31.1	-1.2
	3.4nm,0.3s						
KTMS				Lg	Lg	15 32 02.5	
	13nm,0.3s						
SATY	Saty	2.28	326	*e*P	Pb	15 31 32.3	-0.1
	3.4nm,0.4s						
SATY				*e*S	Sg	15 32 04.0	-0.3
	9.6nm,0.3s						
SATY	Saty	2.28	326	Pg	Pb	15 31 31.8	-0.6
	3.4nm,0.4s						
SATY				Lg	Lg	15 32 03.7	
	9.6nm,0.6s						
ZHN	Zhinishke	2.36	328	*e*P	Pb	15 31 33.1	-0.7
	3.1nm,0.1s						
ZHN				*e*S	Sg	15 32 05.6	-1.2
	14nm,0.1s						
ZHN	Zhinishke	2.36	328	Pg	Pb	15 31 32.9	-0.9
	5.8nm,0.2s						
ZHN				Lg	Lg	15 32 05.8	
	8.0nm,0.2s						
KURS	Kuram	2.73	328	*e*P	Pb	15 31 39.4	-0.7
	6.1nm,0.6s						
KURS				*e*S	Sg	15 32 16.7	-2.1
	3.9nm,0.9s						
KURS	Kuram	2.73	328	Pg	Pb	15 31 39.4	-0.7
	6.1nm,0.6s						
KURS				Lg	Lg	15 32 16.7	
	3.9nm,0.9s						
TNSS	Tian-Shan	3.01	309	*e*P	Pb	15 31 43.6	-1.4
	4.9nm,1.2s						
TNSS				*e*S	Sb	15 32 23.9	+1.8
	3.1nm,1.0s						
TNSS	Tian-Shan	3.01	309	Pg	Pb	15 31 43.7	-1.4
TNSS				Lg	Lg	15 32 23.9	
MDOK	Medeo	3.03	312	*e*P	Pb	15 31 44.0	-1.3
	2.8nm,0.4s						
MDOK				*e*S	Sb	15 32 24.6	+2.2
	5.6nm,1.1s						
MDOK	Medeo	3.03	312	⇓Pg	Pn	15 31 40.1	+0.8
	7.9nm,1.0s						
MDOK				⇓Lg	Lg	15 32 24.2	
	16nm,1.2s						
MDOK	Medeo	3.03	312	Pg	Pb	15 31 44.0	-1.3
MDOK				Lg	Lg	15 32 24.5	
KOTS	Kotyrbulak	3.04	314	*e*P	Pb	15 31 44.3	-1.2
	2.0nm,0.2s						
KOTS				*e*S	Sb	15 32 24.6	+1.9
	8.3nm,0.5s						
BLB	Baldybastay	3.16	338	Pg	Pb	15 31 46.4	-1.1
	2.8nm,0.2s						
BLB				Lg	Lg	15 32 28.9	
	5.7nm,0.2s						
DJR	Jarkent	3.16	356	*e*P	Pb	15 31 47.0	-0.5
	0.4nm,1.0s						
DJR				*e*S	Sb	15 32 29.5	+3.4
	3.6nm,0.4s						
KAPS	Kapalarasan	4.14	352	*e*P	Pb	15 32 05.2	+1.0
	2.7nm,0.6s						
KAPS				*e*S	Sg	15 33 00.5	-3.7
	2.5nm,0.1s						

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*JMA **11** 15:54:37.6±0.1, 42°.75N×145°.48E, h42^{km}±1^{km}, M3.1*

*SKHL **11** 15:54:38.1±0.6, 42°.70N×145°.50E, h32^{km}±1^{km}, mb4.3/3*

ISC 11 15:54:37.9±1.9, **42°.77N**±0°.09×**145°.49E**±0°.06, **h33**^{km}±8^{km}, **n17**, σ**0ˢ.49**/24, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKHN	Kushirohamanak	0.40	323	P	Pb	15 54 47.3	+0.3
AKK	Akkeshi	0.54	298	*e*P	Pb	15 54 48.9	-0.2
AKK				*e*S	Sb	15 54 57.1	+0.3
NEM2	Nemuro 2	0.63	17	P	Pb	15 54 49.9	-0.6
NMR	Nemuro--Hokkai	0.63	16	*i* P	Pb	15 54 50.0	-0.5
NMR				*i* S	Sb	15 54 59.4	+0.3
JAK	Akkeshi	0.63	292	P	Pb	15 54 50.2	-0.3
JAK				*e*S	Sb	15 54 58.7	-0.5
GLVR	Golovnino	0.97	1	*e*P	Pn	15 54 55.1	-0.1
GLVR				*e*S	Sn	15 55 08.2	+0.3
GLVR				A	A	15 55 11.0	
	730nm,0.3s						
GLVR				A	A	15 55 11.0	
	360nm,0.3s						
JNK	Nakash	1.00	326	P	Pn	15 54 55.3	-0.3
JRA	Rausu	1.20	347	P	Pn	15 54 58.6	+0.2
JOB	Onbets	1.23	277	P	Pn	15 54 59.1	+0.4
GRPR	Tuman	1.24	9	*e*S	Sn	15 55 14.2	-0.4
YUK	Yuzh-Kuril'sk	1.30	12	*e*P	Pn	15 54 59.8	+0.1
YUK				AMB	AMB	15 55 01.0	
	50nm,0.3s						
YUK				AMB	AMB	15 55 01.0	
	50nm,0.3s						
YUK				AMB	AMB	15 55 01.0	
	110nm,0.3s						
YUK				*e*S	Sn	15 55 16.3	+0.4
YUK				A	A	15 55 19.0	
	230nm,0.2s						
YUK				A	A	15 55 19.0	
	510nm,0.2s						
JAR	Ashorobuto	1.37	293	P	Pn	15 55 00.4	-0.3
SHO	Shikotan	1.47	41	*e*P	Pn	15 55 02.2	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHO				AMB	AMB	15 55 04.2	
	70nm,0.2s						
SHO				*e*S	Sn	15 55 19.5	-0.8
SHO				A	A	15 55 25.1	
	880nm,0.4s						
SHO				A	A	15 55 25.1	
	480nm,0.4s						
JCH	**Churui**	1.58	265	P	Pn	15 55 03.4	-0.2
JTKR	**Abashiri--Toko**	1.67	317	P	Pn	15 55 05.6	+0.8
JTHR	**Tokachihiroo**	1.69	254	P	Pn	15 55 05.6	+0.5
KUR	**Kuril'sk**	3.00	34	*e*P	Pn	15 55 24.3	+1.2
KUR				AMB	AMB	15 55 25.2	
	50nm,0.7s						
KUR				*e*S	Sn	15 55 58.0	0.0
KUR				A	A	15 56 01.1	
	30nm,0.6s						
KUR				A	A	15 56 01.1	
	30nm,0.6s						

IDC 11 16:16:54.9±7.8**, 27°.71S**×**179°.41W, h0^{km}, mb3.3**/2**, mb1 3.6**/2**, mb1mx3.5**/30**, mbtmp3.3**/2**, Error ellipse: s-maj=372.0km s-min=115.2km az=163.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	42.07	265	P	P	16 24 50.3	+1.5
	0.4nm,1.0s,baz=106,slow=8.6,SNR=2.0						
WRA	**Warramunga Arr**	42.81	270	P	P	16 24 53.1	-1.7
	0.3nm,0.7s,baz=112,slow=7.8,SNR=2.5						
FINES	**FINESS Array B**	142.20	340	PKP	PKPdf	16 36 27.9	-0.6
	7.6nm,1.2s,baz=29,slow=3.2,SNR=9.2						

IDC ***11*** *16:21:20.7±2.0, 37°.41N×134°.91E, h364^{km}±28^{km}, mb2.4/1, mb1 2.9/4, mb1mx2.3/49, mbtmp3.5/4, Error ellipse: s-maj=61.6km s-min=27.2km az=173.0*

JMA ***11*** *16:21:20.3±0.2, 37°.27N×134°.98E, h389^{km}±2^{km}, M3.5*

ISC 11 16:21:20.8±1.5**, 37°.3N**±0°.1×**135°.0E**±0°.1**, h378^{km}, n13, σ0ˢ.94**/15**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKG	**Kaga**	1.48	132	P	Pn	16 22 12.4	+0.7
JWT	**Wachi**	2.02	170	P	Pn	16 22 15.5	+0.6
JYTA	**Yamagatataniai**	2.20	139	P	Pn	16 22 16.7	+0.6
JNG	**Nsakai**	2.65	108	P	Pn	16 22 20.1	+0.6
MAT	**Matsushiro**	2.69	105	P	Pn	16 22 20.6	+0.8
MAT				*e*S	S	16 23 05.4	-1.9
MAT	**Matsushiro**	2.69	105	P	Pn	16 22 20.2	+0.4
MJAR	**Matsushiro Arr**	2.69	105	P	Pn	16 22 19.7	-0.1
	0.3nm,0.3s,baz=285,slow=8.2,SNR=15						
JSD	**Sado**	2.71	73	P	Pn	16 22 20.8	+1.0
JMM	**Marumori**	4.65	81	P	Pn	16 22 38.8	+0.8
BSO1	**Boso 1**	5.52	117	P	Pn	16 22 47.1	+0.3
BSO1				*e*S	S	16 23 56.2	-0.6
KSRS	**Korea Array**	5.62	274	P	Pn	16 22 47.4	-1.1
	0.5nm,0.3s,baz=90,slow=12,SNR=14						
ASAJ	**Asahikawa**	8.95	38	P	Pn	16 23 25.1	-1.1
	2.1nm,0.3s,baz=226,slow=7.3,SNR=34						
ILAR	**Eielson Array**	52.03	32	P	P	16 29 53.2	+0.5
	0.1nm,0.5s,baz=291,slow=7.6,SNR=1.6						

IDC ***11*** *16:34:07.0±8.4, 10°.88N×87°.53W, h0^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.7/39, mbtmp3.6/6, ML3.3/2, Error ellipse: s-maj=167.3km s-min=45.0km az=10.0*

INET ***11*** *16:34:22.1, 12°.30N×87°.89W, h1^{km}, MW3.6*

SNET ***11*** *16:34:25.6±1.1, 12°.35N×88°.13W, h14^{km}±9^{km}, ML3.4*

ISC 11 16:34:20.6±1.6**, 12°.3N**±0°.1×**88°.0W**±0°.1**, h10^{km}, n15, σ1ˢ.60**/19**, mb3.7**/4**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JUCU	**Jucuar¡n**	0.98	343	*e*P	Pn	16 34 42.8	+2.3
JUCU				*e*S	Sn	16 34 54.9	+0.5
JUCU				IAML		16 35 04.7	
	comp=Z,1µm,0.3s						
LCND	**La Caada**	0.99	3	*e*P	Pn	16 34 43.1	+2.5
LCND				IAML		16 35 04.3	
	comp=Z,2µm,0.4s						
TECO	**Alcaldia de Te**	1.46	326	*e*S	Sg	16 35 07.5	-0.1
SCLA	**Alcaldia de Sa**	1.57	331	*e*P	Pg	16 34 50.7	-0.1
SCLA				*e*S	Sg	16 35 12.0	+0.7
SJTE	**Alcalda de S**	1.65	322	*e*P	Pg	16 34 51.8	-0.6
SJTE				*e*S	Sg	16 35 12.4	-1.4
PAVA	**Las Pavas**	1.69	325	*e*P	Pg	16 34 53.0	-0.1
PAVA				IAML		16 35 26.1	
	comp=Z,548nm,0.4s						
JAYA	**Jayaque - finc**	1.98	313	*e*P	Pb	16 34 55.9	-0.9
JAYA				*e*S	Sb	16 35 20.2	-1.4
JAYA				IAML		16 35 26.3	
	comp=Z,272nm,0.2s						
TACO	**Tacachico**	2.14	320	*e*P	Pb	16 34 59.2	-0.3
CEVE	**Cerro Verde**	2.22	313	*e*P	Pb	16 35 00.6	-0.4
APG	**El Apazote**	3.62	318	Pn	Pb	16 35 23.8	-1.1
	comp=Z,0.8nm,0.3s,baz=135,slow=10.0,SNR=2.6						
CMIG	**Matias Romero**	8.22	306	Pn	Pn	16 36 22.9	+2.9
	comp=Z,0.4nm,0.3s,baz=113,slow=7.7,SNR=2.6						
TXAR	**Lajitas Array**	22.37	322	P	P	16 39 21.6	+2.4
	comp=Z,2.2nm,0.7s,baz=138,slow=10,SNR=23						
PDAR	**Pinedale Array**	35.66	332	P	P	16 41 19.2	-0.1
	comp=Z,0.3nm,0.6s,baz=129,slow=11,SNR=3.3						
SCHQ	**Schefferville**	45.55	17	P	P	16 42 37.7	-2.8
	comp=Z,1.3nm,0.7s,baz=228,slow=12,SNR=3.4						
YKA	**Yellowknife Ar**	53.61	345	P	P	16 43 41.4	-0.5
	comp=Z,0.4nm,0.6s,baz=150,slow=6.2,SNR=3.9						

TIR ***11*** *16:53:54.4, 41°.11N×20°.11E, h17^{km}±1^{km}, Md3.4, Ml3.5*

PDG ***11*** *16:53:54.5±0.4, 41°.13N×20°.04E, h17^{km}, MD3.5/1, ML3.3/12, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

SKO ***11*** *16:53:54.5, 41°.06N×20°.03E, h16^{km}*

BEO ***11*** *16:53:54.5±0.6, 41°.07N×20°.03E, h15^{km}±2^{km}, ML3.0/12*

THE ***11*** *16:53:55.5, 41°.12N×20°.11E, h10^{km}±1^{km}, ML3.1/7, Error ellipse: s-maj=1.4km s-min=0.6km az=329.0*

IDC ***11*** *16:53:58.3±21.0, 40°.90N×21°.92E, h0^{km}, mb3.7/3, mb1 3.7/4, mb1mx3.4/29, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=460.5km s-min=24.5km az=27.0*

KRSZO ***11*** *16:54:39.7±2.6, 44°.49N×20°.09E, h5^{km}, ML2.7/4, Error ellipse: s-maj=27.0km s-min=13.2km az=171.0*

ISC 11 16:53:55.0±0.9**, 41°.12N**±0°.02×**20°.03E**±0°.02**, h24**^{km}±6^{km}**, n125, σ1ˢ.56**/189**, mb3.8**/3**, 21C-11D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	0.26	332	⇑P	Pb	16 54 01.0	-0.4
TIR				⇑S	Sb	16 54 06.5	+0.7
TIR	**Tirane**	0.26	332	P	Pb	16 54 01.0	-0.4
TIR				S	Sb	16 54 06.3	+0.5
	6µm,0.4s						
TIR	**Tirane**	0.26	332	⇑*i*Pg	Pb	16 54 01.0	-0.4
TIR	**Tirane**	0.26	332	P	Pb	16 54 01.0	-0.4
	baz=324						
TIR				S	Sb	16 54 06.3	+0.5
	baz=324						
TIR				AMP			
	comp=N,31nm,0.4s,baz=324						
TIR	**Tirane**	0.26	332	*e*Pg	Pb	16 54 01.0	-0.4
TIR				*e*Sg	Sb	16 54 06.4	+0.6
OHR	**Ohrid**	0.58	90	⇓*i*Pg	Pb	16 54 05.7	-0.9
OHR				*i* Sg	Sb	16 54 14.8	+0.3
OHR				*e*Lg	Lg	16 54 15.0	
	comp=N,363nm,0.9s						
OHR	**Ohrid**	0.58	90	*e*Pg	Pb	16 54 05.7	-0.9
OHR				*e*Sg	Sb	16 54 14.8	+0.3
PHP	**Peshkopia**	0.65	28	P	Pb	16 54 06.5	-1.2
PHP				S	Sb	16 54 16.6	+0.3
	comp=N,1µm,0.7s						
PHP	**Peshkopia**	0.65	28	P	Pb	16 54 06.5	-1.2
	baz=23						
PHP				S	Sb	16 54 16.7	+0.4
	baz=23						
PHP				AMP			
	comp=N,6.2nm,0.5s,baz=23						
KBN	**Korca**	0.76	130	P	Pb	16 54 08.9	-0.7
KBN				S	Sb	16 54 19.1	-0.4
	comp=N,1µm,0.7s						
KBN	**Korca**	0.76	130	P	Pb	16 54 08.9	-0.7
	baz=132						
KBN				S	Sb	16 54 19.1	-0.4
	baz=132						
KBN				AMP			
	comp=N,5.2nm,0.6s,baz=132						
VLO	**Vlora**	0.76	212	P	Pn	16 54 10.3	0.0
VLO				S	Sn	16 54 22.8	+1.8
	comp=N,7µm,0.4s						
VLO	**Vlora**	0.76	212	P	Pn	16 54 10.3	0.0
	baz=217						
VLO				S	Sn	16 54 21.9	+0.8
	baz=217						
VLO				AMP			
	comp=E,23nm,0.4s,baz=217						
ULC	**Ulcinj**	1.03	325	⇑*i*Pg	Pn	16 54 13.9	-0.1
ULC				*i* Sg	Sn	16 54 30.0	+2.3
NEST	**Nestorio**	1.04	132	P	Pb	16 54 14.5	0.0
LSK	**Leskovik**	1.06	156	P	Pn	16 54 14.0	-0.4
	baz=158						
LSK				S	Sn	16 54 29.5	+1.0
	baz=158						
LSK				AMP			
	comp=E,4.6nm,0.7s,baz=158						
FNA	**Florina**	1.07	108	P	Pn	16 54 14.4	-0.2
FNA				S	Sn	16 54 30.1	+1.3
	comp=E,1µm,0.5s						
FNA	**Florina**	1.07	108	⇓*i*Pg	Pn	16 54 14.3	-0.2
FNA				*i* Sg	Sn	16 54 29.1	+0.4
FNA	**Florina**	1.07	108	P	Pn	16 54 14.4	-0.2
	baz=108						
FNA				S	Sn	16 54 29.1	+0.4
	baz=108						
SRN	**Sarande**	1.24	181	P	Pb	16 54 17.9	+0.3
SRN	**Sarande**	1.24	181	P	Pb	16 54 18.2	+0.6
	baz=184						
SRN				S	Sb	16 54 35.2	+2.1
	baz=184						
SRN				AMP			
	comp=N,2.3nm,0.4s,baz=184						
DRME	**Dracevica, Mon**	1.24	330	*e*Pn	Pb	16 54 17.7	-0.1
DRME	**Dracevica, Mon**	1.24	330	⇓*i*Pg	Pb	16 54 17.7	-0.1
DRME				*i* Sg	Sb	16 54 36.7	+3.3
BCI	**Bajram Curri**	1.25	1	P	Pb	16 54 18.8	+0.9
	baz=359						
BCI				S	Sb	16 54 36.3	+2.7
	baz=359						
BCI				AMP			
	comp=E,11nm,0.5s,baz=359						
SKO	**Skopje**	1.36	51	*i* Pg	Pb	16 54 19.6	-0.1
SKO				*i* Sg	Sb	16 54 39.1	+2.4
KEK	**Kerkira**	1.41	187	P	Pn	16 54 19.8	+0.6
KEK				S	Sb	16 54 40.4	+2.1
	comp=E,555nm,0.5s						
PDG	**Podgorica**	1.44	336	⇑P	Pb	16 54 21.3	+0.2
PDG				⇑S	Sb	16 54 43.4	+4.5
PDG	**Podgorica**	1.44	336	*e*Pn	Pb	16 54 20.9	-0.1
PDG	**Podgorica**	1.44	336	*i* Pg	Pb	16 54 21.0	-0.1
PDG				*i* Sg	Sb	16 54 41.9	+3.0
PDG	**Podgorica**	1.44	336	*e*Pg	Pb	16 54 20.6	-0.5
PDG				*e*Sg	Sb	16 54 41.6	+2.7
TTG	**Podgorica**	1.44	336	⇓*i*Pg	Pb	16 54 20.8	-0.3
TTG				*i* Sg	Sb	16 54 41.4	+2.5
BUM	**Brajici-Budva**	1.46	325	⇓*i*Pg	Pb	16 54 21.1	-0.4
BUM				*i* Sg	Sb	16 54 42.0	+2.4
PVY	**Plav**	1.48	358	⇑*i*Pg	Pb	16 54 21.2	-0.7
PVY				*i* Sg	Sb	16 54 42.8	+2.5
KZN	**Kozani**	1.55	121	P	Pb	16 54 22.2	-0.9
IGT	**Igoumenitsa**	1.60	172	P	Pb	16 54 23.0	-0.9
IGT				S	Sb	16 54 44.5	+0.9
	comp=E,460nm,0.6s						
IGT	**Igoumenitsa**	1.60	172	P	Pb	16 54 23.0	-0.9
	baz=173						
CEME	**Cevo**	1.65	330	⇑*i*Pn	Pn	16 54 23.6	+1.0
CEME				*i* Sn	Sb	16 54 46.4	+1.1
HCY	**Herceg Novi**	1.76	320	*e*Pn	Pn	16 54 24.6	+0.6
HCY	**Herceg Novi**	1.76	320	⇓*i*Pn	Pn	16 54 25.0	+1.0
HCY				*i* Sn	Sb	16 54 49.6	+1.4
IVA	**Berane**	1.76	357	⇑*i*Pn	Pn	16 54 25.3	+1.3
IVA				*i* Sn	Sb	16 54 49.3	+1.0
KOME	**Kolasin**	1.77	348	⇑*i*Pn	Pb	16 54 26.2	-0.7
KOME				*i* Sn	Sb	16 54 49.4	+0.6
GRG	**Griva**	1.80	94	P	Pn	16 54 25.2	+0.6
GRG	**Griva**	1.80	94	*i* Pn	Pn	16 54 25.3	+0.7
NKME	**Niksic**	1.83	334	⇑*i*Pn	Pn	16 54 26.0	+0.9
NKME				*i* Sn	Sb	16 54 51.4	+0.9
VAY	**Valandovo**	1.93	83	*i* Pn	Pn	16 54 26.9	+0.6
VAY	**Valandovo**	1.93	83	*e*Pn	Pn	16 54 26.7	+0.4
VAY				*e*Sn	Sn	16 54 51.2	+1.5
TREB	**Trebinje**	2.03	322	*e*Pn	Pn	16 54 27.7	0.0
TREB	**Trebinje**	2.03	322	*e*Pn	Pn	16 54 27.9	+0.2
TREB				*e*Sn	Sn	16 54 53.5	+1.1
SJES	**Sjenica**	2.14	359	*e*Pn	Pb	16 54 31.7	-1.5
SJES				*e*Sn	Sb	16 54 58.0	-1.4
BARS	**Barje**	2.16	37	*i* Pn	Pn	16 54 30.5	+1.0
BARS	**Barje**	2.16	37	*e*Pn	Pn	16 54 30.3	+0.8
BARS	**Barje**	2.16	37	*e*Pn	Pb	16 54 45.8	+12
BARS				*e*Sn	Sn	16 54 57.3	+1.8
KNT	**Kendrikon**	2.17	88	P	Pn	16 54 30.3	+0.7
KNT	**Kendrikon**	2.17	88	*i* Pn	Pn	16 54 30.6	+1.0
UPM	**Unac-Piva**	2.25	339	*e*Pn	Pb	16 54 33.2	-1.8
UPM	**Unac-Piva**	2.25	339	⇓*i*Pn	Pn	16 54 32.3	+1.4
UPM				*i* Sn	Sb	16 55 01.2	-1.2
SELS	**Selova**	2.25	21	*e*Pn	Pn	16 54 31.9	+1.1
SELS				*e*Sn	Sn	16 54 59.6	+1.8
PLE	**Pljevlja**	2.26	348	⇑*i*Pn	Pn	16 54 32.8	+1.8
PLE				*i* Sn	Sb	16 55 01.6	-1.2
BOSS	**Bosilegrad**	2.29	52	*e*Pn	Pn	16 54 31.8	+0.5
BOSS				*e*Sn	Sn	16 54 59.2	+0.4
LKD2	**Lefkada island**	2.37	168	P	Pn	16 54 33.2	+0.7
IVAS	**Ivanjica**	2.46	2	*e*Pn	Pn	16 54 34.9	+1.2
IVAS				*e*Sn	Sb	16 55 06.1	-2.3
STON	**Ston**	2.47	316	*e*Pn	Pn	16 54 34.4	+0.7
STON	**Ston**	2.47	316	*e*Pn	Pn	16 54 34.3	+0.7
STON				Sn	Sn	16 55 01.8	-1.3
SOH	**Sokhos**	2.53	96	*i* Pn	Pn	16 54 36.5	+1.8
RUDO	**Rudo**	2.55	349	*e*Pn	Pn	16 54 35.5	+0.7
MATE	**Matera**	2.56	261	⇓P	Pb	16 54 41.3	+1.0
MATE				⇑S	Sb	16 55 18.6	+7.3
BBLS	**Lazići**	2.79	351	*e*Pn	Pn	16 54 39.8	+1.6
BBLS	**Lazići**	2.79	351	*e*Pn	Pn	16 54 40.0	+1.8
BOVS	**Bovan**	2.81	26	*e*Pn	Pn	16 54 39.2	+0.8
GRUS	**Gruza**	2.82	10	*e*Pn	Pn	16 54 40.3	+1.8
VTS	**Vitosha**	2.82	57	⇑P	Pn	16 54 39.9	+1.1
VTS				⇑S	Sn	16 55 11.9	-0.2
VTS	**Vitosha**	2.82	57	*i* Pn	Pn	16 54 39.8	+1.1
VTS	**Vitosha**	2.82	57	*e*Pn	Pn	16 54 39.6	+0.8
VTS				*e*Sn	Sn	16 55 13.2	+1.1
LSTV	**Lastovo**	2.87	306	*e*Pn	Pn	16 54 38.2	-1.0
LSTV				Sn	Sn	16 55 09.9	-3.0
ZAPS	**Zavoj**	2.90	41	*e*Pn	Pn	16 54 41.5	+1.8
DIVS	**Divibare**	2.98	359	*e*Pn	Pn	16 54 41.7	+0.8
DIVS	**Divibare**	2.98	359	*e*Pn	Pn	16 54 41.6	+0.7
MAKA	**Makarska**	3.12	315	*e*Pn	Pn	16 54 42.6	0.0
MAKA				Sn	Sn	16 55 17.1	-2.0
TRUS	**Trudelj**	3.12	5	*e*Pn	Pn	16 54 44.3	+1.6
ZAGS	**Zajecar**	3.15	30	*e*Pn	Pn	16 54 44.1	+1.0
ZAGS				*e*Sn	Sn	16 55 20.9	+1.0
TIP	**Timpagrande**	3.17	233	⇑P	Pn	16 54 42.8	-0.6
TIP				⇑S	Sn	16 55 21.3	+0.8
BLKB	**Belogradchik**	3.18	37	⇑S	Sn	16 55 24.4	+3.7
RICI	**Ricice**	3.20	319	*e*Pn	Pn	16 54 43.6	-0.2
RICI				Sn	Sn	16 55 20.7	-0.5
HVAR	**Hvar**	3.37	309	*e*Pn	Pn	16 54 44.8	-1.3
HVAR				Sn	Sn	16 55 22.9	-2.3
TEKS	**Tekeris**	3.45	354	*e*Pn	Pn	16 54 47.5	+0.2
KUBS	**Kucevo**	3.51	20	*e*Pn	Pn	16 54 48.2	+0.1
MDVR	**Moldovita**	3.87	18	⇓P	Pn	16 54 54.0	+1.0
MDVR				⇑S	Sn	16 55 38.6	+1.0
MGRS	**Mrkonjic Grad**	3.95	328	*e*Pn	Pn	16 54 55.1	+1.0
FRGS	**Fruska Gora**	4.04	358	⇑P	Pn	16 54 56.5	+1.1
FRGS	**Fruska Gora**	4.04	358	*e*Pn	Pn	16 54 56.1	+0.7
ZIRJ	**Zirje**	4.12	309	*e*Pn	Pn	16 54 55.3	-1.1
ZIRJ				Sn	Sn	16 55 41.0	-2.9
BLY	**Banja Luka**	4.19	331	*e*Pn	Pn	16 54 58.4	+1.0
BLY	**Banja Luka**	4.19	331	Pg	Pb	16 55 19.4	+11
MORI	**Morici**	4.21	312	*e*Pn	Pn	16 54 57.8	+0.1
MORI				Sn	Sn	16 55 44.0	-2.2
UDBI	**Udbina**	4.63	319	*e*Pn	Pn	16 55 03.8	+0.3
UDBI				Sn	Sn	16 55 56.0	-0.6
BZS	**Buzias**	4.64	14	⇓P	Pn	16 55 04.0	+0.4
BZS				⇓S	Sn	16 55 56.4	-0.3
BZS	**Buzias**	4.64	14	Pn	Pn	16 55 07.3	+3.6
	comp=Z,0.1nm,SNR=3.2						
DUGI	**Dugi Otok**	4.66	310	*e*Pn	Pn	16 55 03.0	-0.8
DUGI				Sn	Sn	16 55 54.7	-2.6
PLIT	**Plitvice**	4.96	321	*e*Pn	Pn	16 55 07.8	-0.1
PLIT				Sn	Sn	16 56 03.7	-0.9
NVLJ	**Novalja**	5.12	314	*e*Pn	Pn	16 55 09.6	-0.6
NVLJ				Sn	Sn	16 56 05.5	-3.0
KOVH	**Kovagotottos**	5.16	345	*e*PN	Pn	16 55 15.3	+4.5
KOVH	**Kovagotottos**	5.16	345	*e*P	Pb	16 55 18.7	-5.9
KOVH	**Kovagotottos**	5.16	345	Pn	Pn	16 55 15.3	+4.5
	comp=Z,0.1nm,SNR=1.8						
KOVH				Pg	Pb	16 55 18.7	-5.9
MORH	**Mrgy, Hungar**	5.20	349	⇑P	Pn	16 55 10.9	-0.3
MORH	**Mrgy, Hungar**	5.20	349	*e*PN	Pn	16 55 13.6	+2.5
MORH	**Mrgy, Hungar**	5.20	349	*e*Pn	Pn	16 55 10.3	-0.9
MORH	**Mrgy, Hungar**	5.20	349	Pn	Pn	16 55 13.6	+2.5
	comp=Z,0.2nm,SNR=1.8						
SIRR	**Siria**	5.28	12	Pg	Pb	16 55 32.2	+5.6
RABC	**Rab**	5.29	315	*e*Pn	Pn	16 55 11.7	-0.9
RABC				Sn	Sn	16 56 10.1	-2.6
CRES	**Cresnjev**	5.76	326	*e*Pn	Pn	16 55 18.8	-0.2
SMRN	**Sveta Marina**	5.82	314	*e*Pn	Pn	16 55 19.3	-0.5
SMRN				Sn	Sn	16 56 22.6	-3.1
BRJN	**Brijuni**	5.96	312	*e*Pn	Pn	16 55 20.9	-0.8
BRJN				Sn	Sn	16 56 25.7	-3.5
CEY	**Cerknica**	6.16	320	*e*Pn	Pn	16 55 24.7	+0.2
A269A	**Baj**	6.63	350	Pn	Pn	16 55 34.7	+3.9
	comp=Z,0.1nm,SNR=2.0						
SOKA	**Soboth**	6.63	329	*i* Pn	Pn	16 55 31.4	+0.5
	comp=Z,1.1nm,0.2s						
OBKA	**Obir**	6.69	326	*e*Pn	Pn	16 55 32.9	+1.0
	comp=Z,0.9nm,0.3s						
OBKA				*e*Sn	Sn	16 56 47.5	+0.2
	comp=Z,7.1nm,0.5s						
WTTA	**Wattenberg**	8.61	318	*e*Pn	Pn	16 55 59.5	+1.3
	comp=Z,1.3nm,0.3s						
WTTA				*e*Sn	Sn	16 57 34.2	-0.3
	comp=Z,7.2nm,0.6s						
WATA	**Walderalm**	8.69	319	*e*Pn	Pn	16 56 00.4	+1.2
	comp=Z,3.1nm,0.4s						
WATA				*e*Sn	Sn	16 57 36.1	-0.3
	comp=Z,5.7nm,0.6s						
SQTA	**Sankt Quirin**	8.79	317	*i* Pn	Pn	16 56 00.2	-0.5
	comp=Z,1.6nm,0.3s						
SQTA				*i* Sn	Sn	16 57 36.8	-2.3
	comp=Z,5.4nm,0.5s						
GERES	**GERESS Array B**	8.93	332	Pn	Pn	16 56 22.2	+20
	comp=Z,0.3nm,0.3s,baz=159,slow=14,SNR=4.9						
MOTA	**Moosalm**	8.93	317	*e*Pn	Pn	16 56 03.1	+0.5
	comp=Z,0.8nm,0.2s						
MOTA				*e*Sn	Sn	16 57 42.6	+0.2
	comp=Z,3.4nm,0.6s						
RETA	**Reutte**	9.20	317	*e*Sn	Sn	16 57 48.0	-1.0
	comp=Z,2.2nm,0.4s						
ZALV	**Zalesovo Beam**	44.06	50	P	P	17 01 59.6	-1.1
	comp=Z,1.8nm,0.7s,baz=269,slow=7.2,SNR=6.1						
MKAR	**Makanchi Array**	44.14	61	P	P	17 01 59.6	-1.9
	comp=Z,0.5nm,0.8s,baz=270,slow=9.4,SNR=2.1						
SONM	**Songino Array**	58.91	52	P	P	17 03 52.0	-0.1
	comp=Z,0.5nm,0.7s,baz=316,slow=6.0,SNR=3.4						

TIR 11 16:54:56.6, 41°.12N×**20°.12E, h5**^{km}±1^{km}**, Md2.5, Ml2.6, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	0.29	320	P	Pg	16 55 03.0	+0.6
	baz=320						
TIR				S	Sg	16 55 07.7	+1.4
	baz=320						
TIR				AMP			
	comp=E,3.2nm,0.3s,baz=320						
PHP	**Peshkopia**	0.61	23	P	Pg	16 55 09.0	+0.6
	baz=23						
PHP				S	Sb	16 55 18.3	-0.5
	baz=23						
PHP				AMP			
	comp=N,2.0nm,0.5s,baz=23						
KBN	**Korca**	0.71	134	S	Sb	16 55 21.6	0.0
	baz=134						
KBN				AMP			
	comp=E,1.1nm,0.8s,baz=134						
FNA	**Florina**	1.01	109	P	Pn	16 55 17.7	+0.2
	baz=109						

IDC ***11*** *17:22:45.7±2.5, 1°.04S×23°.39W, h0^{km}, mb3.7/1, mb1 3.7/1, mb1mx3.2/27, mbtmp3.9/1, MS3.2/3, Ms1 3.2/3, ms1mx2.9/30, Error ellipse: s-maj=69.9km s-min=56.5km az=156.0*

ISC 11 17:22:46.8±2.4**, 1°.1S**±0°.3×**23°.5W**±0°.3**, h13^{km}, n10, σ0ˢ.06**/6**, MS3.2**/3**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	**ASCENSION HYDR**	11.18	127	Pn	Pn	17 25 26.3	+0.1
	baz=294,slow=13,SNR=19						
H10N3				T	T	17 37 20.6	
	baz=306,slow=74,SNR=58						
H10N2	**ASCENSION HYDR**	11.18	127	Pn	Pn	17 25 26.2	-0.1
	baz=294,slow=13,SNR=15						
H10N2				T	T	17 37 18.2	
	baz=306,slow=74,SNR=59						
H10N1	**ASCENSION HYDR**	11.20	127	Pn	Pn	17 25 26.5	0.0
	baz=294,slow=13,SNR=16						
H10N1				T	T	17 37 16.5	
	baz=306,slow=74,SNR=50						
H10S3	**ASCENSION HYDR**	11.75	132	T	T	17 37 59.3	
H10S2	**ASCENSION HYDR**	11.77	132	T	T	17 38 04.3	
	SNR=5.5						
DBIC	**Dimbokro**	20.09	67	P	P	17 27 20.4	0.0
	3.5nm,0.8s,baz=234,slow=9.5,SNR=3.7						
DBIC				LR	LR	17 33 42.7	
	comp=Z,44nm,19.6s,baz=277,slow=33						
CPUP	**Villa Florida**	41.14	229	LR	LR	17 47 00.2	
	comp=Z,37nm,18.3s,baz=28,slow=35						
LPAZ	**La Paz**	46.53	248	LR	LR	17 49 31.8	
	comp=Z,26nm,18.3s,baz=11,slow=34						
ASAR	**Alice Springs**	147.01	140	PKPbc	PKPbc	17 42 30.3	0.0
	0.3nm,0.7s,baz=213,slow=2.2,SNR=6.4						
WRA	**Warramunga Arr**	149.84	135	PKPbc	PKiKP	17 42 38.7	0.0
	0.7nm,1.1s,baz=213,slow=1.6,SNR=2.9						

NIED ***11*** *17:23:55.5, 31°.08N×128°.66E, h3^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.13; $M_{\theta\theta}$0.77; $M_{\phi\phi}$-0.90; $M_{r\theta}$0.50; $M_{\theta\phi}$1.55; $M_{\phi r}$-0.74; Fault plane solution: $M_0$1.94000×10^{14} NP1: ϕ_s282.00000°, δ77.00000°, λ-17.00000°. NP2: ϕ_s16.00000°, δ74.00000°, λ-166.00000°.*

JMA 11 17:23:55.5±0.2**, 31°.08N**×**128°.66E, h3**^{km}±2^{km}**, M3.5, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	1.08	56	P	Pg	17 24 16.0	-0.3
JSJ				S	Sg	17 24 30.1	-0.2
JKC	**Kuchinoerabu**	1.46	115	P	Pn	17 24 22.5	-0.2
JKC				*e*S	Sg	17 24 42.5	+0.1
JFU	**Fukue jima 2**	1.57	3	P	Pn	17 24 24.4	+0.1
JFU				S	Sn	17 24 44.9	-0.3
JSU	**Suzuyama**	1.59	74	P	Pn	17 24 24.9	+0.3
JNN	**Nakanoshima**	1.62	139	P	Pn	17 24 25.1	+0.1
JYAK	**Yakushimahirau**	1.80	117	P	Pn	17 24 27.8	+0.3
JYAK				*e*S	Sb	17 24 51.7	-0.4
JTN	**Tanegashima 3**	2.04	101	P	Pn	17 24 30.7	0.0
JTZ	**Takazaki**	2.23	68	P	Pn	17 24 33.8	+0.4

IDC ***11*** *17:50:04.4±0.9, 47°.29N×153°.84E, h0^{km}, mb3.7/12, mb1 3.9/13, mb1mx3.7/47, mbtmp3.7/13, ML2.7/1, MS2.7/2, Ms1 2.7/2, ms1mx2.4/43, Error ellipse: s-maj=27.2km s-min=21.7km az=100.0*

ISC 11 17:50:09.1±1.0**, 47°.3N**±0°.2×**153°.9E**±0°.2**, h31^{km}, n21, σ0ˢ.63**/14**, mb3.8**/12**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	6.34	21	Pn	Pn	17 51 40.6	+0.3
	0.8nm,0.3s,baz=168,slow=10,SNR=17						
PETK				LR	LR	17 54 15.4	
	comp=Z,45nm,18.3s,baz=139,slow=40						
YAK	**Yakutsk**	20.17	326	LR	LR	18 03 10.4	
	comp=Z,32nm,19.0s,baz=100,slow=39						
H11N2	**WAKE ISLAND Hy**	29.46	154	T	T	18 27 20.4	
	baz=343,slow=76,SNR=60						

H11N1	**WAKE ISLAND Hy**	**29.47**	**154**	T	T	18 27 23.6	
	baz=343,slow=76,SNR=74						
H11N3	**WAKE ISLAND Hy**	**29.48**	**154**	T	T	18 27 20.7	
	baz=343,slow=76,SNR=54						
H11S1	**WAKE ISLAND Hy**	**30.56**	**156**	T	T	18 28 46.2	
	baz=343,slow=76,SNR=198						
H11S3	**WAKE ISLAND Hy**	**30.57**	**156**	T	T	18 28 47.1	
	baz=343,slow=76,SNR=256						
H11S2	**WAKE ISLAND Hy**	**30.58**	**156**	T	T	18 28 41.2	
	baz=343,slow=76,SNR=162						
ILAR	**Eielson Array**	**35.82**	**39**	P	**P**	**17 57 05.2**	**-0.1**
	0.3nm,0.7s,baz=248,slow=9.5,SNR=2.7						
ZALV	**Zalesovo Beam**	**42.72**	**306**	P	**P**	**17 58 02.9**	**0.0**
	0.4nm,0.3s,baz=54,slow=7.3,SNR=1.6						
MKAR	**Makanchi Array**	**47.16**	**297**	P	**P**	**17 58 37.2**	**-1.2**
	1.0nm,0.9s,baz=47,slow=10,SNR=5.1						
KURBB	**Kurchatov Arra**	**47.59**	**303**	P	**P**	**17 58 41.4**	**-0.3**
	1.5nm,0.8s,baz=70,slow=8.3,SNR=5.3						
FINES	**FINESS Array B**	**63.78**	**335**	P	**P**	**18 00 37.8**	**+0.2**
	1.3nm,0.4s,baz=34,slow=8.0,SNR=20						
NB2	**NORSAR Subarra**	**67.90**	**341**	P	**P**	**18 01 04.1**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**67.90**	**341**	P	**P**	**18 01 03.9**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=27,slow=6.4,SNR=5.9						
WRA	**Warramunga Arr**	**69.18**	**200**	P	**P**	**18 01 12.3**	**-0.2**
	comp=Z,0.6nm,1.1s,baz=18,slow=6.8,SNR=2.8						
AKASG	**Malin Array Be**	**71.39**	**326**	P	**P**	**18 01 25.6**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=33,slow=6.1,SNR=4.8						
ASAR	**Alice Springs**	**72.87**	**199**	P	**P**	**18 01 35.9**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=12,slow=5.0,SNR=8.0						
TXAR	**Lajitas Array**	**76.79**	**61**	P	**P**	**18 01 57.0**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=316,slow=3.8,SNR=3.7						
GERES	**GERESS Array B**	**78.21**	**334**	P	**P**	**18 02 06.2**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=56,slow=8.8,SNR=2.9						
BRTR	**Keskin Array B**	**78.36**	**317**	P	**P**	**18 02 06.7**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=62,slow=2.0,SNR=4.3						

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*IDC **11** 18:11:09.0±1.6, 4°.09S×129°.44E, h0^{km}, mb3.5/1, mb1 3.4/4, mb1mx2.9/39, mbtmp3.3/4, ML3.1/3, Error ellipse: s-maj=57.4km s-min=26.8km az=82.0*

*DJA **11** 18:11:12.2±0.7, 4°S±7°×12°9E±°, h10^{km}, M3.3/7, MLv3.3/7*

ISC 11 18:11:12.9±1.1**, 4°.06S**±0°.09×**129°.43E**±0°.06**, h36**^{km}**, n10, **σ**1^{s}.66**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.87**	**325**	P	**Pn**	**18 11 28.0**	**-0.6**
MSAI				S	**Sn**	**18 11 38.4**	**-1.6**
AAI	**Ambon**	**1.28**	**287**	P	**Pn**	**18 11 34.4**	**+0.1**
FAKI	**Fak Fak**	**3.04**	**68**	P	**Pn**	**18 11 59.5**	**+1.1**
SIJI	**Sorong**	**3.67**	**30**	Pn	**Pn**	**18 12 07.9**	**+0.8**
	4.2nm,0.3s,baz=46,slow=22,SNR=64						
SIJI				Sn	**Sn**	**18 12 46.5**	**-2.6**
	1.0nm,0.3s,baz=221,slow=16,SNR=3.5						
SWI	**Sorong**	**3.67**	**30**	P	**Pn**	**18 12 08.5**	**+1.4**
LBMI	**Labuha**	**3.91**	**330**	P	**Pn**	**18 12 11.6**	**+1.2**
SANI	**Sanana**	**3.97**	**300**	P	**Pn**	**18 12 13.0**	**+1.7**
WRA	**Warramunga Arr**	**16.50**	**164**	Pn	**Pn**	**18 14 59.6**	**-2.1**
	0.0nm,0.3s,baz=350,slow=10,SNR=1.9						
ASAR	**Alice Springs**	**19.96**	**168**	P	**Pn**	**18 15 43.6**	**-0.4**
	0.1nm,0.3s,baz=346,slow=10,SNR=7.1						
MKAR	**Makanchi Array**	**65.47**	**326**	P	**P**	**18 21 54.0**	**+1.6**
	0.2nm,0.4s,baz=118,slow=5.9,SNR=2.8						

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*MAN **11** 18:11:10.9, 16°.57N×119°.73E, h48^{km}, mb5.5, ML4.5, MS4.7*

*BJI **11** 18:11:11.9±0.0, 16°.65N×119°.67E, h42^{km}, mB4.8/17, mb4.5/37, ML4.2/2, Ms4.4/20, Ms7 4.1/21*

*NEIC **11** 18:11:12.5±2.2, 16°.58N±0°.06×119°.72E±0°.08, h56^{km}±5^{km}, mb4.9/129, Error ellipse: s-maj=11.0km s-min=8.4km az=80.0*

*IDC **11** 18:11:13.2±2.3, 16°.47N×119°.94E, h69^{km}±21^{km}, mb4.2/29, mb1 4.4/29, mb1mx4.1/43, mbtmp4.6/29, MS3.8/34, Ms1 3.8/34, ms1mx3.7/53, Error ellipse: s-maj=14.5km s-min=9.2km az=75.0*

ISC 11 18:11:12.9±0.8**, 16°.51N**±0°.04×**119°.76E**±0°.04**, h70**^{km}±7^{km}**, n305, **σ**1^{s}.51**/300**, mb4.9**/129**, 27C-31D, Fault plane solution: NP1:**ϕ_s194.84963°, δ78.76052°**,** λ-109.94898°. **NP2:**ϕ_s76.61387°**,** δ22.78439°, λ-30.21858°. **Principal axes:** T Plg30.9378°**,** Azm301.1857°**;** N Plg19.5506°**,** Azm198.8963°**;** P Plg52.1624°**,** Azm81.6904°**; Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**2.65**	**155**	P	**Pn**	**18 11 54.1**	**+0.6**
	baz=270,slow=3.1						
TGY				S	**Sn**	**18 12 30.6**	**+6.0**
	baz=270,slow=19						
TGY	**Tagaytay City**	**2.65**	**155**	⇑*e*P	**Pn**	**18 11 54.8**	**+1.3**
TGY				*i* S	**Sn**	**18 12 30.6**	**+6.0**
LUBP	**Lubang**	**2.80**	**170**	⇑*e*P	**Pn**	**18 11 56.4**	**+0.9**
LUBP				*e*S	**Sn**	**18 12 31.0**	**+2.8**
PGP	**Puerto Galera**	**3.21**	**159**	⇓*e*P	**Pn**	**18 12 01.5**	**+0.4**
PGP				*i* S	**Sn**	**18 12 39.9**	**+1.7**
JCNP	**Jose Panganiba**	**3.59**	**128**	⇑*e*P	**Pn**	**18 12 06.2**	**0.0**
JCNP				*e*S	**Sn**	**18 12 48.8**	**+1.4**
GQP	**Guinayangan**	**3.67**	**135**	⇓*e*P	**Pn**	**18 12 07.4**	**+0.1**
GQP				*e*S	**Sn**	**18 12 49.9**	**+0.6**
TWG	**Pinlang**	**6.39**	**11**		**Pn**	**18 12 43.0**	**-1.5**
TPUB	**Ta-pu**	**6.80**	**7**		**Pn**	**18 12 47.5**	**-2.6**
YULB	**Yu-li**	**6.99**	**12**	Pn	**Pn**	**18 12 51.0**	**-1.7**
SSLB	**Suanglung**	**7.32**	**9**	Pn	**Pn**	**18 12 55.8**	**-1.5**
HKPS	**Hong Kong Po S**	**7.81**	**318**	Pn	**Pn**	**18 13 01.1**	**-2.8**
NACB	**Ninganchiao**	**7.81**	**12**		**Pn**	**18 13 02.4**	**-1.6**
KNMB	**Chin-men Tao**	**8.01**	**351**	Pn	**Pn**	**18 13 04.2**	**-2.5**
YHNB	**Yeheng**	**8.25**	**10**	Pn	**Pn**	**18 13 10.6**	**+0.6**
TATO	**Taipei**	**8.57**	**11**	Pn	**Pn**	**18 13 13.4**	**-0.9**
QIZ	**Qiongzhong**	**9.78**	**286**		**Pn**	**18 13 27.9**	**-2.9**
KKM	**Kota Kinabalu**	**10.97**	**199**	Pn	**Pn**	**18 13 45.2**	**-2.1**
DAV	**Davao City (W)**	**10.97**	**148**	LR	LR	18 19 32.3	
	comp=Z,1μm,18.7s,baz=324,slow=46						
MYLDM	**Lahad Datu**	**11.33**	**186**	Pn	**Pn**	**18 13 53.4**	**+1.3**
DLV	**T Lat**	**11.84**	**249**	Pn	**Pn**	**18 13 58.8**	**-0.3**
DLV					**Sn**	**18 16 04.9**	**-4.8**
UBPT	**Khong Chiam**	**13.81**	**267**	Pn	**Pn**	**18 14 25.8**	**+0.3**
WHN	**Wuhan**	**14.82**	**341**	⇑P	**P**	**18 14 42.3**	**-0.5**
TOLI2	**Tolitoli**	**15.34**	**176**	P	**P**	**18 14 50.0**	**+1.2**
TOLI2				IAmb	IAmb	18 14 51.3	
	comp=Z,40nm,0.7s						
SLVN	**Son La**	**15.75**	**290**	Pn	**Pn**	**18 14 50.1**	**-0.7**
SBUM	**Sibu**	**15.82**	**209**	P	**Pn**	**18 14 51.4**	**-0.3**
MPSI	**Mapaga**	**16.07**	**180**	P	**P**	**18 14 56.2**	**-0.7**
	comp=Z,528nmcomp=Z,13nm,1.3s						
MRSI	**Marisa**	**16.08**	**172**	P	**P**	**18 14 56.2**	**-0.8**
	comp=Z,15nm,0.8s						
GTOI	**Gorontalo**	**16.10**	**168**	P	**Pn**	**18 14 50.9**	**-4.2**
	comp=Z,171nmcomp=Z,10nm,1.2s						
ENH	**Enshi**	**16.61**	**327**	P	**Pn**	**18 15 00.9**	**-0.6**
APSI	**Ampana**	**17.41**	**174**	P	**P**	**18 15 13.5**	**+1.8**
	comp=Z,28nm,0.6s						
LBMI	**Labuha**	**18.68**	**155**	P	**P**	**18 15 26.0**	**+0.4**
	comp=Z,28nm,1.1s						
TTSI	**Tana Toraja**	**19.43**	**180**	P	**Pn**	**18 15 35.3**	**-0.4**
	comp=Z,2μmcomp=Z,29nm,1.2s						
SANI	**Sanana**	**19.44**	**161**	P	**P**	**18 15 31.7**	**-2.2**
	comp=Z,21nm,0.6s						
SANI	**Sanana**	**19.44**	**161**	P	**P**	**18 15 31.8**	**-2.2**
TIA	**Tai'an**	**19.76**	**354**	⇓P	**Pn**	**18 15 39.0**	**-0.4**
TIA				pmax	pmax		
	comp=Z,15nm,1.1s						
CM31	**Chiang Mai Arr**	**19.95**	**279**	P	**P**	**18 15 39.1**	**-0.5**
CM31				IAmb	IAmb	18 15 46.4	
	comp=Z,42nm,1.0s						
CMAR	**Chiang Mai Arr**	**19.95**	**279**	P	**Pn**	**18 15 42.2**	**+0.4**
	comp=Z,26nm,0.9s,baz=101,slow=8.7,SNR=78						
CMAR				PcP	**PcP**	**18 19 56.3**	**+2.4**
	comp=Z,2.1nm,0.8s,baz=45,slow=0.6,SNR=11						
CMAR				LR	LR	18 23 22.9	
	comp=Z,469nm,20.6s,baz=162,slow=36						
CMAR	**Chiang Mai Arr**	**19.95**	**279**	P	**P**	**18 15 40.3**	**+0.7**
CHTO	**Chiang Mai**	**19.97**	**280**	P	**P**	**18 15 40.1**	**+0.3**
XAN	**Xi'an**	**19.99**	**333**	P	**Pn**	**18 15 41.2**	**-1.0**
XAN				pP	pP	18 15 53.0	-0.5
XAN				S	**S**	**18 19 19.2**	**-1.8**
XAN				pmax	pmax		
	comp=Z,24nm,1.2s						
XAN				LR	LR		
	comp=Z,400nm,15.8s						
XAN				LR	LR		
	comp=Z,420nm,16.5s						
XAN				LR	LR		
	comp=Z,500nm,15.9s						
SPSI	**Sidrap Palu**	**20.35**	**180**	P	**P**	**18 15 45.0**	**+1.2**
	comp=Z,23nm,1.5s						
BBKI	**Banjar Baru**	**20.44**	**194**	P	**P**	**18 15 46.0**	**+1.2**
	comp=Z,25nm,0.9s						
CD2	**Chengdu**	**20.46**	**317**	P	Pn	18 15 47.1	-0.6
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
CD2				pmax	pmax		
	comp=Z,300nm,4.9s						
CD2				LR	LR		
	comp=Z,660nm,15.3s						
CD2				LR	LR		
	comp=Z,590nm,14.5s						
CD2				LR	LR		
	comp=Z,790nm,17.9s						
SWI	**Sorong**	**20.66**	**146**	P	**P**	**18 15 46.9**	**-0.3**
	comp=Z,36nm,0.6s						
SIJI	**Sorong**	**20.67**	**146**	P	**P**	**18 15 47.5**	**+0.1**
	comp=Z,23nm,0.5s,baz=348,slow=11,SNR=23						
SIJI				LR	LR	18 24 13.4	
	comp=Z,174nm,20.9s,baz=266,slow=38						
SRIT	**Nakonsritamara**	**21.18**	**251**	P	**P**	**18 15 53.6**	**+0.8**
JMN	**Monobe**	**21.34**	**34**	P	**P**	**18 15 55.6**	**+1.2**
JMN				IAmb	IAmb	18 15 56.7	
	comp=Z,89nm,1.3s						
KAPI	**Kappang**	**21.39**	**180**	P	**P**	**18 15 55.8**	**+0.8**
	comp=Z,6.1nm,0.5s,baz=345,slow=4.9,SNR=5.4						
KAPI	**Kappang**	**21.39**	**180**	P	**P**	**18 15 54.6**	**-0.4**
MYKOM	**Kota Tinggi**	**21.44**	**229**	P	**P**	**18 15 55.7**	**+0.2**
BKSI	**Bulukumba**	**21.70**	**179**	P	**P**	**18 15 59.2**	**+0.9**
	comp=Z,18nm,0.8s						
AAI	**Ambon**	**21.73**	**157**	P	**P**	**18 16 00.2**	**+1.5**
	comp=Z,1μmcomp=Z,57nm,1.0s						
KULM	**Kulim**	**21.81**	**241**	P	**P**	**18 15 60.0**	**+0.5**
IPM	**Ipoh**	**21.94**	**239**	P	**P**	**18 16 00.6**	**-0.4**
JHS	**Saijyo**	**21.95**	**30**	P	**P**	**18 15 59.3**	**-1.6**
JHS				IAmb	IAmb	18 16 31.6	
	comp=Z,109nm,1.4s						
KSAR	**Wonju Array Be**	**22.05**	**17**	P	**P**	**18 15 60.0**	**-1.9**
KSRS	**Korea Array**	**22.07**	**17**	P	**P**	**18 16 02.6**	**+0.6**
	comp=Z,7.5nm,0.9s,baz=200,slow=11,SNR=14						
KSRS				LR	LR	18 26 09.8	
	comp=Z,118nm,18.7s,baz=193,slow=41						
BSSI	**Bau Bau, Buton**	**22.52**	**178**	P	**P**	**18 16 07.7**	**+0.5**
	comp=Z,22nm,1.1s						
DSRI	**Dabo**	**22.57**	**223**	P	**P**	**18 16 08.5**	**+0.7**
	comp=Z,10nm,0.9s						
FAKI	**Fak Fak**	**22.91**	**146**	P	**P**	**18 16 10.8**	**-0.5**
	comp=Z,790nmcomp=Z,82nm,1.2s						
FAKI	**Fak Fak**	**22.91**	**146**	P	**P**	**18 16 09.7**	**-1.6**
FAKI				IAmb	IAmb	18 16 11.7	
	comp=Z,104nm,1.3s						
FAKI	**Fak Fak**	**22.91**	**146**	P	**P**	**18 16 10.3**	**-1.0**
PPBI	**Pangkal Pinang**	**22.92**	**217**	P	**P**	**18 16 11.7**	**+0.3**
JCJ	**Chichijima**	**23.29**	**59**	LR	LR	18 25 43.0	
	comp=Z,154nm,18.4s,baz=160,slow=38						
JCJ	**Chichijima**	**23.29**	**59**	P	**P**	**18 16 12.7**	**-2.2**
BJT	**Baijiatuau**	**23.63**	**353**	P	**P**	**18 16 15.8**	**-2.0**
JMBI	**JAMBI**	**24.05**	**223**	P	**P**	**18 16 25.0**	**+3.2**
	comp=Z,106nm,0.9s						
LZH	**Lanzhou**	**24.09**	**327**	⇑P	**P**	**18 16 25.2**	**+3.0**
LZH				pP	pP	18 16 36.1	-1.8
LZH				sP	pwP	18 16 40.2	-0.7
LZH				pmax	pmax		
	comp=Z,96nm,1.3s						
LZH				pmax	pmax		
	comp=Z,200nm,4.8s						
LZH				LR	LR		
	comp=Z,580nm,12.1s						
LZH				LR	LR		
	comp=Z,510nm,12.0s						
LZH				LR	LR		
	comp=Z,660nm,14.2s						
INU	**Inuyama**	**24.27**	**36**	P	**P**	**18 16 23.2**	**-0.4**
INU				IAmb	IAmb	18 16 26.9	
	comp=Z,71nm,1.5s						
GUMO	**Guam**	**24.41**	**93**	LR	LR	18 23 59.2	
	comp=Z,241nm,21.8s,baz=279,slow=32						
SRPI	**Serui, Papua**	**24.46**	**137**	P	**P**	**18 16 24.8**	**-0.8**
	comp=Z,91nm,0.6s						
JHJ	**Hachijo jima 2**	**24.49**	**44**	P	**P**	**18 16 24.1**	**-1.6**
	comp=Z,304nm,1.0s,baz=238,slow=19,SNR=1.5						
PSI	**Prapat**	**24.61**	**239**	P	**P**	**18 16 28.1**	**+1.0**
	comp=Z,15nm,0.8s,baz=31,slow=6.8,SNR=11						
PSI				LR	LR	18 25 15.2	
	comp=Z,207nm,21.4s,baz=52,slow=34						
RPSI	**Rantau Prapat**	**24.67**	**238**	P	**P**	**18 16 28.1**	**+0.6**
SRBI	**Singaraja**	**24.85**	**191**	P	**P**	**18 16 31.2**	**+2.1**
	comp=Z,24nm,1.2s						
MMRI	**Maumere**	**25.11**	**174**	P	**P**	**18 16 31.8**	**+0.4**
MMRI				IAmb	IAmb	18 16 36.6	
	comp=Z,36nm,0.5s						
EDFI	**Ende, Flores**	**25.17**	**176**	P	**P**	**18 16 32.6**	**+0.5**
	comp=Z,253nmcomp=Z,30nm,1.0s						
TWSI	**Taliwang, Sumb**	**25.25**	**187**	P	**P**	**18 16 35.4**	**+2.7**
	comp=Z,21nm,1.3s						
PLAI	**Plampang**	**25.26**	**185**	P	**P**	**18 16 34.7**	**+1.9**
	comp=Z,831nmcomp=Z,108nm,1.2s						
PLAI	**Plampang**	**25.26**	**185**	P	**P**	**18 16 34.6**	**+1.8**
MNSI	**Mandailing Nat**	**25.29**	**234**	P	**P**	**18 16 35.2**	**+2.1**
	comp=Z,66nm,0.9s						
BTO	**Baotou**	**25.45**	**343**	*e*P	**P**	**18 16 37.1**	**+2.7**
PPI	**Padang Panjang**	**25.48**	**230**	P	**P**	**18 16 37.1**	**+2.2**
	comp=Z,15nm,0.8s						
MJAR	**Matsushiro Arr**	**25.80**	**36**	LR	LR	18 25 49.4	
	comp=Z,60nm,21.7s,baz=70,slow=34						
LHSI	**Lahat**	**25.81**	**220**	P	**P**	**18 16 41.0**	**+3.2**
	comp=Z,2μmcomp=Z,46nm,1.0s						
UGM	**Wanagama**	**25.94**	**201**	P	**P**	**18 16 39.4**	**+0.4**
MDSI	**Maura Dua**	**25.94**	**218**	P	**P**	**18 16 41.2**	**+2.2**
	comp=Z,9.2nm,1.0s						
WBSI	**Waikabubak, Su**	**25.99**	**181**	P	**P**	**18 16 41.0**	**+1.5**
	comp=Z,57nm,1.1s						
MASI	**Maura Aman, Be**	**26.10**	**223**	P	**P**	**18 16 43.0**	**+2.5**
	comp=Z,228nm,0.9s						
LEM	**Lembang**	**26.12**	**208**	LR	LR	18 27 09.3	
	comp=Z,102nm,21.1s,baz=354,slow=36						
LWLI	**Liwa**	**26.44**	**217**	P	**P**	**18 16 46.2**	**+2.6**
	comp=Z,67nm,0.9s						
SOEI	**Soe**	**26.48**	**170**	P	**P**	**18 16 43.7**	**-0.3**
GSI	**Gunungsitoli**	**26.57**	**238**	P	**P**	**18 16 44.9**	**+0.2**
GSI				IAmb	IAmb	18 17 13.6	
	comp=Z,53nm,1.1s						
BATI	**Baumata**	**26.83**	**171**	P	**P**	**18 16 46.1**	**-0.9**
	comp=Z,14nm,0.4s,baz=0.1,slow=1.8,SNR=4.7						
SHL	**Shillong**	**27.49**	**294**	P	**P**	**18 16 53.5**	**+0.4**
SHL				IAmb	IAmb	18 16 54.9	
	comp=Z,32nm,0.9s						
JAY	**Jayapura**	**28.02**	**131**	LR	LR	18 26 23.7	
	comp=Z,154nm,20.5s,baz=346,slow=33						
GTA	**Gaotai**	**28.70**	**327**	⇓P	**P**	**18 17 05.6**	**+2.0**
GTA				pP	pP	18 17 12.8	-6.8
GTA				pmax	pmax		
	comp=Z,18nm,1.3s						
GTA				pmax	pmax		
	comp=Z,67nm,8.4s						
GTA				LR	LR		
	comp=Z,280nm,17.5s						
GTA				LR	LR		
	comp=Z,290nm,14.3s						
GTA				LR	LR		
	comp=Z,520nm,16.3s						
LSA	**Lhasa**	**29.32**	**302**	P	**P**	**18 17 11.8**	**+2.2**
LSA				pmax	pmax		
	comp=Z,71nm,1.0s						
LSA	**Lhasa**	**29.32**	**302**	P	**P**	**18 17 10.4**	**+0.8**
LSA				IAmb	IAmb	18 17 13.2	
	comp=Z,21nm,1.1s						
USRK	**Ussuriysk Ar.**	**29.47**	**18**	LR	LR	18 28 21.2	
	comp=Z,64nm,22.0s,baz=193,slow=35						
MTN	**Manton Dam**	**31.26**	**158**	P	**P**	**18 17 24.2**	**-2.1**
MTN				IAmb	IAmb	18 17 32.0	
	comp=Z,19nm,1.1s						
TAPN	**Taplejung**	**31.54**	**296**	*e*P	**P**	**18 17 29.9**	**+0.8**
ODAN	**Odare**	**31.71**	**294**	*e*P	**P**	**18 17 31.6**	**+1.0**
	comp=Z,90nm,0.8s						
RAMN	**Ramite**	**32.42**	**294**	*e*P	**P**	**18 17 38.3**	**+1.5**
	comp=Z,47nm,0.5s						
JIRN	**Jiri**	**32.93**	**296**	*e*P	**P**	**18 17 42.5**	**+1.1**
ULN	**Ulaanbaatar**	**32.97**	**344**	P	**P**	**18 17 42.2**	**+1.0**
SONM	**Songino Array**	**33.12**	**343**	P	**P**	**18 17 44.1**	**+1.6**
	comp=Z,5.3nm,0.7s,baz=163,slow=10,SNR=41						
SONM				LR	LR	18 32 09.2	
	comp=Z,156nm,18.2s,baz=172,slow=38						
SONM	**Songino Array**	**33.12**	**343**	P	**P**	**18 17 42.9**	**+0.4**
KNRA	**Kununurra**	**33.20**	**164**	P	**P**	**18 17 41.6**	**-1.6**
KNRA				IAmb	IAmb	18 18 09.2	
	comp=Z,43nm,1.4s						
GUN	**Gumba**	**33.25**	**296**	*e*P	**P**	**18 17 45.2**	**+1.1**
	comp=Z,110nm,0.8s						
PKI	**Pulchoki**	**33.59**	**295**	*e*P	**P**	**18 17 47.5**	**+0.5**
	comp=Z,62nm,1.0s						
PKIN	**Phulchoki**	**33.60**	**295**	*e*P	**P**	**18 17 47.3**	**+0.2**
	comp=Z,62nm,1.0s						
KKN	**Kakani**	**33.74**	**295**	*e*P	**P**	**18 17 48.6**	**+0.3**
	comp=Z,55nm,0.9s						
DMN	**Daman**	**33.86**	**295**	*e*P	**P**	**18 17 50.1**	**+0.8**
	comp=Z,79nm,1.0s						
KLR	**Kul'dur**	**34.06**	**14**	P	**P**	**18 17 50.9**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=222,slow=7.7,SNR=11						
GKN	**Gorkha**	**34.34**	**296**	*e*P	**P**	**18 17 53.8**	**+0.4**
	comp=Z,74nm,0.8s						
DANN	**Dangsing**	**35.17**	**296**	*e*P	**P**	**18 18 01.2**	**+0.5**
	comp=Z,119nm,0.9s						
KOLN	**Koldanda**	**35.20**	**295**	*e*P	**P**	**18 18 01.4**	**+0.6**
	comp=Z,66nm,1.0s						
PYUN	**Piuthan**	**35.79**	**295**	*e*P	**P**	**18 18 06.6**	**+0.7**
	comp=Z,130nm,1.0s						
PMG	**Port Moresby**	**37.39**	**132**	P	**P**	**18 18 17.2**	**-2.2**
PMG				IAmb	IAmb	18 18 18.5	
	comp=Z,15nm,0.9s						
MBWA	**Marble Bar**	**37.44**	**180**	P	**P**	**18 18 18.7**	**-1.0**
PSA00	**Pilbara Seismi**	**37.85**	**180**	P	**P**	**18 18 21.8**	**-1.3**
PSA00	**Pilbara Seismi**	**37.85**	**180**	P	**P**	**18 18 21.8**	**-1.3**
PSA00				IAmb	IAmb	18 18 24.2	
	comp=Z,16nm,1.1s						
PSA00	**Pilbara Seismi**	**37.85**	**180**	P	**P**	**18 18 22.4**	**-0.7**
RABL	**Rabaul**	**38.07**	**120**	P	**P**	**18 18 23.9**	**-1.2**
COEN	**Coen**	**38.10**	**141**	P	**P**	**18 18 22.6**	**-2.7**
COEN				IAmb	IAmb	18 18 26.1	
	comp=Z,26nm,1.6s						
WB0	**Warramunga Arr**	**38.82**	**158**	P	**P**	**18 18 27.9**	**-3.4**
WRA	**Warramunga Arr**	**38.96**	**158**	P	**P**	**18 18 30.1**	**-2.4**
	comp=Z,20nm,0.6s,baz=328,slow=11,SNR=189						
WRA				PcP	**PcP**	**18 20 43.0**	**+1.1**
	comp=Z,2.1nm,0.6s,baz=349,slow=3.5,SNR=4.6						
WRA				S	**S**	**18 24 19.6**	**-6.7**
	comp=Z,1.1nm,0.8s,baz=340,slow=16,SNR=5.1						
WRA				LR	LR	18 35 52.6	
	comp=Z,34nm,21.6s,baz=165,slow=38						
WRA	**Warramunga Arr**	**38.96**	**158**	P	**P**	**18 18 28.9**	**-3.6**
WB2	**Warramunga Arr**	**38.96**	**158**	P	**P**	**18 18 29.6**	**-2.9**
WR0	**Warramunga Arr**	**39.05**	**158**	P	**P**	**18 18 30.6**	**-2.6**
PALK	**Pallekele**	**39.24**	**261**	P	**P**	**18 18 37.2**	**+2.2**
	comp=Z,11nm,0.8s,baz=174,slow=10.0,SNR=6.4						
PALK	**Pallekele**	**39.24**	**261**	P	**P**	**18 18 34.9**	**-0.2**
PALK				IAmb	IAmb	18 19 09.7	
	comp=Z,34nm,1.4s						
HYB	**Hyderabad**	**39.37**	**277**	*i* P	**P**	**18 18 37.0**	**+0.9**
QIS	**Mount Isa**	**41.67**	**151**	P	**P**	**18 18 53.4**	**-1.5**
MTSU	**Mount Surprise**	**42.07**	**144**	P	**P**	**18 18 57.1**	**-1.1**
ZSN	**Zaisan**	**42.15**	**325**	*e*P	**P**	**18 18 58.7**	**+0.2**
	baz=325						
AS31	**Alice Springs**	**42.26**	**161**	P	**P**	**18 18 57.8**	**-1.8**
AS31				PcP	**PcP**	**18 20 53.4**	**+0.8**
ASAR	**Alice Springs**	**42.26**	**161**	P	**P**	**18 18 58.4**	**-1.3**
	comp=Z,22nm,0.6s,baz=340,slow=6.7,SNR=271						
ASAR				PcP	**PcP**	**18 20 53.3**	**+0.8**
	comp=Z,4.1nm,0.8s,baz=341,slow=3.5,SNR=9.6						
ASAR				LR	LR	18 38 40.9	
	comp=Z,52nm,21.2s,baz=0.5,slow=39						
ASAR	**Alice Springs**	**42.26**	**161**	P	**P**	**18 18 58.0**	**-1.7**
ASAR					**PcP**	**18 20 52.5**	**0.0**
MEEK	**Meekatharra**	**42.91**	**182**	P	**P**	**18 19 04.2**	**-0.7**
MK31	**Makanchi Array**	**43.25**	**322**	P	**P**	**18 19 08.1**	**+0.6**
MK31				PcP	**PcP**	**18 20 56.0**	**+0.5**
MKAR	**Makanchi Array**	**43.25**	**322**	P	**P**	**18 19 09.0**	**+1.5**
	comp=Z,7.7nm,0.8s,baz=128,slow=8.8,SNR=58						
MKAR				PcP	**PcP**	**18 20 56.6**	**+1.0**
	comp=Z,2.4nm,0.8s,baz=113,slow=3.2,SNR=5.4						
MKAR				LR	LR	18 38 40.3	
	comp=Z,201nm,19.8s,baz=114,slow=38						
MKAR	**Makanchi Array**	**43.25**	**322**	P	**P**	**18 19 08.6**	**+1.1**
MKAR				PcP	**PcP**	**18 20 55.8**	**+0.2**
MAKZ	**Makanchi**	**43.44**	**322**	P	**P**	**18 19 08.1**	**-1.0**
MAKZ				PcP	**PcP**	**18 20 57.4**	**+1.2**
UZB	**Uzynbulak**	**43.58**	**316**	*e*P	**P**	**18 19 10.4**	**0.0**
	baz=316						
KSH	**Kashi**	**44.38**	**310**	P	**P**	**18 19 20.2**	**+3.4**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CTAO	**Charters Tower**	**44.72**	**143**	P	**P**	**18 19 18.6**	**-0.9**
CTAO				PcP	**PcP**	**18 21 02.2**	**+1.2**
CTAO	**Charters Tower**	**44.72**	**143**	P	**P**	**18 19 19.0**	**-0.5**
TDK	**Taldyqorghan**	**44.77**	**318**	*e*P	**P**	**18 19 20.1**	**+0.5**
	comp=Z,11nm,1.0s,baz=318						
NIL	**Nilore**	**45.05**	**301**	P	**P**	**18 19 21.9**	**-0.2**
MORW	**Morawa**	**45.46**	**185**	P	**P**	**18 19 24.5**	**-0.7**
MORW				IAmb	IAmb	18 20 09.9	
	comp=Z,35nm,1.6s						
KUU	**Kurty**	**45.66**	**316**	*e*P	**P**	**18 19 27.0**	**+0.2**
	comp=Z,16nm,0.9s,baz=316						
YAK	**Yakutsk**	**46.00**	**6**	P	**P**	**18 19 29.8**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=52,slow=2.3,SNR=1.8						
ZAA0	**Zalesovo Array**	**46.16**	**332**	P	**P**	**18 19 30.6**	**+0.1**
ZALV	**Zalesovo Beam**	**46.16**	**332**	P	**P**	**18 19 31.3**	**+0.8**
	comp=Z,3.1nm,0.8s,baz=116,slow=6.8,SNR=11						
ZALV				PcP	**PcP**	**18 21 05.6**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=108,slow=4.7,SNR=2.3						
ZALV				LR	LR	18 39 38.7	
	comp=Z,95nm,20.0s,baz=61,slow=37						
ZALV	**Zalesovo Beam**	**46.16**	**332**	P	**P**	**18 19 30.6**	**+0.1**
SEM	**Semipalatinsk**	**46.32**	**326**	*e*P	**P**	**18 19 31.7**	**-0.3**
	baz=326						
OOD	**Oodnadatta**	**46.67**	**160**	P	**P**	**18 19 33.4**	**-1.3**
BLDU	**Ballidu**	**46.95**	**184**	P	**P**	**18 19 40.0**	**+3.1**
	comp=Z,18nm,2.2s						
PETK	**Petropavlovsk-**	**47.04**	**30**	P	**P**	**18 19 38.0**	**+0.6**
	comp=Z,4.1nm,0.9s,baz=208,slow=8.8,SNR=2.4						
PETK				LR	LR	18 41 42.9	
	comp=Z,42nm,18.1s,baz=213,slow=39						
PETK	**Petropavlovsk-**	**47.04**	**30**	P	**P**	**18 19 37.6**	**+0.2**
KURK	**Kurchatov**	**47.37**	**325**	P	**P**	**18 19 40.5**	**+0.5**
KURBB	**Kurchatov Arra**	**47.37**	**325**	P	**P**	**18 19 41.3**	**+1.4**
	comp=Z,14nm,0.9s,baz=122,slow=8.1,SNR=62						
DRK	**Karamyk**	**47.47**	**309**	P	**P**	**18 19 41.8**	**+0.4**
DRK				IAmb	IAmb	18 19 44.2	
	comp=Z,12nm,0.9s						
BTLS	**Baital**	**47.62**	**317**	*e*P	**P**	**18 19 41.9**	**-0.1**
	baz=316						
FORT	**Forrest**	**47.69**	**170**	P	**P**	**18 19 41.4**	**-1.2**
FORT	**Forrest**	**47.69**	**170**	P	**P**	**18 19 41.8**	**-0.8**
BTK	**Batken**	**48.34**	**309**	P	**P**	**18 19 47.9**	**+0.1**
BTK				IAmb	IAmb	18 19 50.5	
	comp=Z,18nm,1.6s						
INKA	**Innaminka**	**48.47**	**155**	P	**P**	**18 19 48.6**	**-0.1**
GAR	**Garm**	**48.47**	**308**	P	**P**	**18 19 49.6**	**+0.8**
MULG	**Mulgathing**	**48.52**	**163**	P	**P**	**18 19 47.9**	**-1.1**
KBL	**Kabul**	**48.64**	**302**	P	**P**	**18 19 49.3**	**-1.0**
KBL				IAmb	IAmb	18 19 52.6	
	comp=Z,9.7nm,0.8s						
QLP	**Quilpie**	**49.00**	**151**	P	**P**	**18 19 51.6**	**-1.2**
CHGR	**Chuyangaron**	**49.28**	**307**	P	**P**	**18 19 55.0**	**0.0**
KKAR	**Karatay Array**	**49.39**	**313**	P	**P**	**18 19 55.9**	**+0.2**
KKAR				PcP	**PcP**	**18 21 17.4**	**+0.2**
IUG	**Iuzhnay**	**49.46**	**312**	*e*P	**P**	**18 19 56.9**	**+0.5**
	baz=312						
BRLS	**Boroldav**	**49.84**	**313**	*e*P	**P**	**18 19 59.5**	**+0.4**
	baz=312						
LCRK	**Leigh Creek**	**49.96**	**159**	P	**P**	**18 19 59.1**	**-0.9**
BBOO	**Buckleboo**	**51.46**	**162**	P	**P**	**18 20 09.9**	**-1.4**
BBOO	**Buckleboo**	**51.46**	**162**	P	**P**	**18 20 10.4**	**-0.9**
STKA	**Stephens Creek**	**52.47**	**156**	P	**P**	**18 20 17.7**	**-1.1**
	comp=Z,21nm,0.5s,baz=332,slow=7.5,SNR=73						
STKA				LR	LR	18 45 05.8	
	comp=Z,53nm,18.1s,baz=17,slow=39						
STKA	**Stephens Creek**	**52.47**	**156**	P	**P**	**18 20 17.2**	**-1.7**
STKA				IAmb	IAmb	18 20 18.7	
	comp=Z,6.0nm,0.7s						
BRVK	**Borovoye**	**53.03**	**325**	P	**P**	**18 20 22.9**	**+0.1**
BRVK				IAmb	IAmb	18 20 25.0	
	comp=Z,12nm,0.9s						
HRA	**Herat**	**54.21**	**301**	P	**P**	**18 20 29.7**	**-2.3**
TIXI	**Tiksi**	**55.39**	**3**	P	**P**	**18 20 39.2**	**-0.3**
NRIK	**Noril'sk**	**56.48**	**347**	P	**P**	**18 20 47.5**	**+0.1**
	comp=Z,5.7nm,0.8s,baz=129,slow=6.3,SNR=11						
NRIK				LR	LR	18 46 49.3	
	comp=Z,91nm,18.8s,baz=78,slow=38						
NRIK	**Noril'sk**	**56.48**	**347**	P	**P**	**18 20 47.2**	**-0.2**
NRIK				IAmb	IAmb	18 20 49.1	

	comp=Z,7.7nm,0.8s						
SANVU	Saraoutou	56.57	122	P	P	18 20 48.0	-0.9
GEYT	Alibeck	57.78	305	P	P	18 20 59.0	+1.8
	comp=Z,6.9nm,0.8s,baz=70,slow=18,SNR=9.5						
GEYT				LR	LR	18 47 42.5	
	comp=Z,188nm,21.2s,baz=60,slow=38						
GEYT	Alibeck	57.78	305	P	P	18 20 57.7	+0.5
GYA0B	ALIBECK ARRAY	57.78	305	P	P	18 20 57.8	+0.6
GYA0B				IAmb	IAmb	18 21 00.2	
	comp=Z,11nm,0.8s						
ABKAR	Akbulak array	58.04	318	P	P	18 20 57.8	-0.9
ABKAR				IAmb	IAmb	18 21 00.8	
	comp=Z,5.7nm,0.8s						
ABKAR	Akbulak array	58.04	318	P	P	18 20 58.4	-0.4
CAN	Canberra	58.54	152	P	P	18 21 01.2	-1.2
TOO	Toolangi	58.99	156	P	P	18 21 04.8	-0.7
BILL	Bilibino	59.33	18	P	P	18 21 07.9	+0.5
BILL				IAmb	IAmb	18 21 30.6	
	comp=Z,6.5nm,1.0s						
DZM	Mont Dzumac	59.67	129	*e*LR	LR	18 38 48.2	
	comp=Z,145nm,33.5s						
DZM	Mont Dzumac	59.67	129	LR	LR	18 46 59.5	
	comp=Z,45nm,18.6s,baz=346,slow=36						
DZM	Mont Dzumac	59.67	129	P	P	18 21 09.5	-1.0
DZM				IAmb	IAmb	18 21 16.7	
	comp=Z,10nm,1.2s						
ARU	Arti	60.55	326	P	P	18 21 16.1	+0.1
ARU				IAmb	IAmb	18 21 17.2	
	comp=Z,19nm,1.3s						
ATKA	Atka Island	62.46	39	P	P	18 21 29.3	+0.5
NIKH	Nikolski High	65.78	39	P	P	18 21 50.7	+0.1
MSVF	Nonsavu	66.73	118	P	P	18 21 58.5	+1.2
ONI	Oni	69.02	310	P	P	18 22 11.8	+0.5
KBZ	Khabaz	69.35	311	P	P	18 22 14.7	+1.4
	comp=Z,6.5nm,1.0s,baz=210,slow=3.4,SNR=9.0						
KBZ				LR	LR	18 56 45.0	
	comp=Z,104nm,18.6s,baz=56,slow=39						
RAYN	Ar Rayn	69.45	289	P	P	18 22 14.8	+0.4
RAYN				IAmb	IAmb	18 22 16.6	
	comp=Z,12nm,1.0s						
KIV	Kislovodsk	69.49	311	P	P	18 22 13.6	-0.8
KIV				IAmb	IAmb	18 22 16.6	
	comp=Z,14nm,1.0s						
SIRT	Sirnak	70.20	304	P	P	18 22 19.1	+0.3
GURO	Guroymak-BITLI	70.42	306	P	P	18 22 21.4	+1.2
GURO				IAmb	IAmb	18 22 23.2	
	comp=Z,10.0nm,0.9s						
KLMR	Klimovskoe	70.98	329	*e*P	P	18 22 21.1	-1.8
KLMR				AMP		18 22 24.0	
	comp=Z,14nm,1.2s						
TTA	Tatalina	72.82	28	P	P	18 22 35.6	+1.5
O18K	Koktuh Hills	73.39	32	P	P	18 22 38.9	+1.6
J20K	Nowinta River	73.58	27	P	P	18 22 39.9	+1.5
J20K				IAmb	IAmb	18 22 41.5	
	comp=Z,15nm,0.9s						
IMAR	Indian Mountai	73.63	25	P	P	18 22 39.5	+0.9
M19K	Big River Lodg	73.64	29	P	P	18 22 40.2	+1.4
M19K				IAmb	IAmb	18 22 41.8	
	comp=Z,8.6nm,0.8s						
K20K	Telida	73.67	28	P	P	18 22 38.7	-0.3
K20K				IAmb	IAmb	18 22 48.2	
	comp=Z,27nm,1.4s						
N19K	Bonanza Creek	73.68	31	P	P	18 22 41.5	+2.3
N19K				IAmb	IAmb	18 22 42.0	
	comp=Z,20nm,1.1s						
H21K	Melozitna Rive	74.04	26	P	P	18 22 42.6	+1.5
H21K				IAmb	IAmb	18 22 44.1	
	comp=Z,16nm,1.1s						
AFI	Afiamalu	74.07	110	LR	LR	18 53 02.6	
	comp=Z,57nm,18.6s,baz=156,slow=34						
I21K	Tanana	74.43	26	P	P	18 22 45.2	+1.9
I21K				IAmb	IAmb	18 22 47.0	
	comp=Z,14nm,1.1s						
RSO	Redoubt South	74.56	31	P	P	18 22 45.3	+0.9
CAST	Castle Rocks	74.56	28	P	P	18 22 44.5	+0.4
PPLA	Purkeypile	74.57	28	P	P	18 22 44.4	0.0
PPLA				IAmb	IAmb	18 23 20.5	
	comp=Z,32nm,1.4s						
KDAK	Kodiak Island	74.95	34	P	P	18 22 46.8	+0.3
MLY	Manley	74.97	26	P	P	18 22 47.8	+1.3
MLY				IAmb	IAmb	18 22 49.2	
	comp=Z,13nm,0.8s						
BPAW	Bear Paw Mtn.	74.97	27	P	P	18 22 46.2	-0.3
TOLK	Toolik Lake Re	75.00	22	P	P	18 22 47.4	+0.8
TOLK				IAmb	IAmb	18 23 03.0	
	comp=Z,15nm,1.4s						
TOLK	Toolik Lake Re	75.00	22		P	18 22 47.7	+1.1
KTH	Kantishna Hill	75.06	28	P	P	18 22 48.0	+0.9
KTH				IAmb	IAmb	18 23 03.5	
	comp=Z,19nm,1.2s						
TRF	Thorofare Moun	75.36	28	P	P	18 22 50.2	+1.2
TRF				IAmb	IAmb	18 22 52.8	
	comp=Z,9.0nm,0.8s						
CNPM	China Poot	75.43	32	P	P	18 22 49.1	-0.2
I23K	Minto, Yukon-K	75.53	26	P	P	18 22 50.4	+0.7
I23K				IAmb	IAmb	18 23 08.0	
	comp=Z,16nm,1.2s						
BRLK	Bradley Lake	75.57	32	P	P	18 22 50.5	+0.5
NEA2	Nenana	75.73	26	P	P	18 22 51.5	+0.7
NEA2				IAmb	IAmb	18 22 53.5	
	comp=Z,10nm,0.7s						
NNZ	Nelson	75.89	141	P	P	18 22 51.8	-0.2
MCK	McKinley	75.92	27	P	P	18 22 52.6	+0.6
MCK				IAmb	IAmb	18 22 54.3	
	comp=Z,22nm,0.9s						
RC01	Rabbit Creek A	75.94	30	P	P	18 22 52.5	+0.4
RND	Reindeer	76.00	28	P	P	18 22 53.0	+0.5
RND				IAmb	IAmb	18 22 54.0	
	comp=Z,19nm,0.8s						
MDM	Murphy Dome	76.03	26	P	P	18 22 53.5	+1.0
MDM				IAmb	IAmb	18 22 55.6	
	comp=Z,14nm,1.0s						
LBZ	Lake Benmore	76.04	145	P	P	18 22 53.2	+0.4
LBZ				IAmb	IAmb	18 22 53.9	
	comp=Z,32nm,1.3s						
H24K	Noodor Dome	76.04	25	P	P	18 22 54.2	+1.6
O22K	Cooper Landing	76.04	31	P	P	18 22 53.2	+0.6
RPZ	Rata Peaks	76.09	144	P	P	18 22 54.3	+1.2
RPZ				IAmb	IAmb	18 23 34.4	
	comp=Z,17nm,1.1s						
ARCES	ARCESS Array B	76.15	339	P	P	18 22 54.4	+1.3
	comp=Z,4.0nm,0.7s,baz=69,slow=6.9,SNR=13						
ARCES				LR	LR	19 00 06.2	
	comp=Z,91nm,18.7s,baz=260,slow=38						
ARCES	ARCESS Array B	76.15	339	P	P	18 22 53.2	0.0
ARCES				IAmb	IAmb	18 23 38.7	
	comp=Z,25nm,1.4s						
PMR	Palmer	76.16	30	P	P	18 22 53.0	-0.3
PMR				IAmb	IAmb	18 22 54.7	
	comp=Z,19nm,0.7s						
WRH	Wood River Hil	76.17	26	P	P	18 22 54.0	+0.7
URZ	Urewera	76.51	137	LR	LR	18 54 59.9	
	comp=Z,45nm,21.0s,baz=31,slow=34						
BKZ	Black Stump Fm	76.62	138	P	P	18 22 55.4	-0.9
BKZ				IAmb	IAmb	18 22 57.3	
	comp=Z,14nm,0.7s						
IL31		76.63	26	P	P	18 22 55.7	-0.2
ILAR	Eielson Array	76.63	26	P	P	18 22 55.6	-0.3
	comp=Z,1.1nm,0.6s,baz=264,slow=4.1,SNR=14						
ILAR				LR	LR	19 00 33.5	
	comp=Z,71nm,18.1s,baz=188,slow=39						
BRTR	Keskin Array B	76.71	308	P	P	18 22 57.3	+0.2
	comp=Z,0.6nm,0.6s,baz=143,slow=4.3,SNR=3.9						
BRTR				LR	LR	19 02 09.7	
	comp=Z,41nm,18.7s,baz=54,slow=40						
DHY	Denali Highway	76.72	28	P	P	18 22 57.9	+1.2
DHY				IAmb	IAmb	18 23 13.8	
	comp=Z,20nm,1.4s						
GHAJ	Ghor Haditha	76.76	299	IAmb	IAmb	18 23 00.0	
	comp=Z,9.9nm,0.9s						
BMAR	Burnt Mountain	77.05	23	P	P	18 23 00.2	+1.9
FINES	FINESS Array B	77.40	331	P	P	18 23 00.8	+0.5
	comp=Z,2.3nm,0.6s,baz=54,slow=5.9,SNR=15						
FINES				LR	LR	18 59 19.5	
	comp=Z,143nm,18.5s,baz=36,slow=37						
FINES	FINESS Array B	77.40	331	P	P	18 23 00.2	-0.1
PAX	Paxson	77.59	28	IAmb	IAmb	18 23 03.7	
	comp=Z,13nm,1.1s						
EIL	Elat	77.61	297	LR	LR	19 01 23.2	
	comp=Z,78nm,21.7s,baz=67,slow=39						
AKASG	Malin Array Be	77.74	319	P	P	18 23 02.5	+0.1
	comp=Z,2.0nm,0.8s,baz=60,slow=6.1,SNR=12						
DOT	Dot Lake	78.07	27	IAmb	IAmb	18 23 05.8	
	comp=Z,14nm,1.2s						
N25K	Chitina, Valde	78.28	29	P	P	18 23 06.4	+1.1
N25K				IAmb	IAmb	18 23 10.2	
	comp=Z,34nm,1.6s						
L26K	Log Cabin Wild	78.52	28	IAmb	IAmb	18 23 09.2	
	comp=Z,9.8nm,1.1s						
GLB	Gilahina Butte	78.69	29	IAmb	IAmb	18 23 09.9	
	comp=Z,16nm,1.0s						
M26K	Nabesna, AK	78.83	28	IAmb	IAmb	18 23 10.7	
	comp=Z,17nm,0.9s						
L27K	Beaver Creek,	79.19	27	P	P	18 23 11.3	+1.1
L27K				IAmb	IAmb	18 23 13.3	
	comp=Z,11nm,0.8s						
LOGN	Logan Glacier	80.16	29	IAmb	IAmb	18 23 21.1	
	comp=Z,22nm,1.2s						
EPYK	Eagle Plains	80.32	23	IAmb	IAmb	18 23 18.4	
	comp=Z,9.5nm,0.9s						
BURAR	Bucovina Array	80.99	317	⇓P	P	18 23 21.8	+1.5
BUR08	Bucovina Ar. S	81.00	317	P	P	18 23 20.6	+0.3
BUR08				IAmb	IAmb	18 23 47.6	
	comp=Z,15nm,1.5s						
MLR	Muntele Rosu	81.03	315	LR	LR	19 02 34.2	
	comp=Z,160nm,19.3s,baz=68,slow=38						
VOIR		81.66	315	⇑P	P	18 23 25.0	+1.1
KIBK	Kibwezi	82.73	265	P	P	18 23 29.7	-0.3
KMBO	Kilima Mbogo	83.14	267	P	P	18 23 34.7	+2.4
	comp=Z,4.0nm,0.9s,baz=55,slow=11,SNR=9.3						
KMBO	Kilima Mbogo	83.14	267	P	P	18 23 33.4	+1.1
HFS	Hagfors	83.59	331	LR	LR	19 06 13.3	
	comp=Z,97nm,18.6s,baz=66,slow=39						
LODK	Lodwar	83.68	272	P	P	18 23 33.9	-1.0
VTS	Vitosha	83.68	312	P	P	18 23 34.1	-0.4
PSZ	Piszkesteto	84.35	318	P	P	18 23 45.2	+7.5
NB2	NORSAR Subarra	84.36	332	P	P	18 23 37.2	-0.2
	comp=Z,3.5nm,0.8s,baz=67,slow=4.6						
NB2	NORSAR Subarra	84.36	332	P	P	18 23 37.2	-0.2
	baz=67,slow=4.6						
NOA	NORSAR Array B	84.36	332	P	P	18 23 37.6	+0.2
	comp=Z,4.0nm,0.9s,baz=66,slow=4.6,SNR=6.3						
NOA				LR	LR	19 03 40.4	
	comp=Z,104nm,19.7s,baz=355,slow=37						
MORH	Mrgy, Hungar	85.71	317	⇓P	P	18 23 45.3	+0.9
RES	Resolute Bay	86.41	9	P	P	18 23 48.6	+1.3
RES				IAmb	IAmb	18 23 54.9	
	comp=Z,7.1nm,1.2s						
BRG	Berggiesshubel	86.97	322	*e*P	P	18 23 51.2	+0.6
BRG				Amp		18 23 53.2	
	comp=Z,12nm,1.4s						
BRG	Berggiesshubel	86.97	322	P	P	18 23 59.3	+8.8
BRG				Amp		18 24 00.9	
	comp=Z,16nm,1.7s						
CLL	Collm	87.35	323	*e*P	P	18 23 51.0	-1.3
SOKA	Soboth	87.88	318	*e*P	P	18 23 55.6	+0.4
	comp=Z,3.3nm,1.0s						
GERES	GERESS Array B	87.89	321	P	P	18 23 54.8	-0.4
	comp=Z,0.3nm,0.4s,baz=31,slow=5.4,SNR=3.5						
GERES				LR	LR	19 03 29.7	
	comp=Z,42nm,18.2s,baz=63,slow=36						
MOA	Molln	87.93	319	*e*P	P	18 23 56.5	+1.2
	comp=Z,5.4nm,0.9s						
ABTA	Abfaltersbach	89.46	319	*e*P	P	18 24 02.3	-0.2
	comp=Z,0.5nm,0.4s						
WTTA	Wattenberg	89.80	320	*e*P	P	18 24 04.7	+0.5
	comp=Z,6.4nm,0.6s						
WATA	Walderalm	89.80	320	*e*P	P	18 24 04.5	+0.3
	comp=Z,5.2nm,0.9s						
SQTA	Sankt Quirin	90.08	320	*e*P	P	18 24 06.1	+0.7
	comp=Z,4.3nm,0.9s						
MOTA	Moosalm	90.09	320	*e*P	P	18 24 06.0	+0.4
	comp=Z,4.4nm,0.9s						
FETA	Feichten	90.46	320	*e*P	P	18 24 08.1	+0.8
	comp=Z,6.6nm,1.1s						
YKA	Yellowknife Ar	90.53	22	P	P	18 24 08.8	+1.8
	comp=Z,2.7nm,0.8s,baz=309,slow=4.4,SNR=16						
PPT	Papeete	95.47	107	LR	LR	18 58 25.0	
	comp=Z,35nm,22.0s,baz=270,slow=30						
PPT2	Papeete2	95.47	107	*e*LR	LR	18 55 18.7	
	comp=Z,174nm,30.5s						
TBI	Tubuai	97.08	112	*e*LR	LR	18 56 01.5	
	comp=Z,133nm,30.5s						
TORD	Torodi Ar. Bea	112.08	292	PKiKP	PKiKP	18 29 41.7	+0.3
	comp=Z,0.7nm,0.7s,baz=19,slow=1.9,SNR=5.4						
TORD				PP	PP	18 30 19.9	-6.1
	comp=Z,1.0nm,0.9s,baz=59,slow=5.9,SNR=5.2						
TORD				PKKPab	PKKPab	18 40 40.7	-2.0
	comp=Z,0.7nm,0.7s,baz=246,slow=3.4,SNR=6.0						
TXAR	Lajitas Array	118.07	43	PKP	PKPdf	18 29 51.9	-0.8
	comp=Z,0.2nm,0.7s,baz=350,slow=1.7,SNR=5.0						
DBIC	Dimbokro	120.58	288	PKP	PKPdf	18 29 56.9	-0.8
	comp=Z,2.9nm,0.6s,baz=114,slow=1.3,SNR=6.6						
PLCA	Paso Flores	154.27	162	PKPbc	PKiKP	18 31 07.9	+2.4
	comp=Z,2.9nm,0.7s,baz=297,slow=4.5,SNR=5.0						

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*EAF **11** 18:19:13.1±0.9, 20°.54S×32°.25E, h10^{km}, MD3.8*

BUL 11 18:19:13.8±1.7**, 20°.83S×32°.23E, h10^{km}, MD4.0, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	2.55	233	*i* P	Pn	18 19 56.5	+1.2
MSNA	Messina	2.55	233	*i* P	Pn	18 19 56.5	+1.2
MOPA	Mopani	2.79	196	*i* P	Pb	18 20 02.1	-1.6
MOPA				*i* S	Sb	18 20 36.4	-1.5
MOPA	Mopani	2.79	196	*i* P	Pb	18 20 02.1	-1.6
MOPA				*i* S	Sb	18 20 36.4	-1.5
MATP	Matopo	3.52	276	*i* P	Pn	18 20 07.3	-1.4
MATP				*i* S	Sn	18 20 47.9	-2.5
MATP	Matopo	3.52	276	*i* P	Pn	18 20 07.3	-1.4
MATP				*i* S	Sn	18 20 47.9	-2.5

MAN 11 18:31:48.0, 6°.83N×126°.22E, h1^{km}, mb4.2, ML3.0, MS2.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMPH	Davao City--Mi	0.75	290	⇑*e*P	Pg	18 32 02.4	0.0
DMPH				*e*S	Sb	18 32 14.4	-0.2

KRNET 11 18:40:27.2±0.1**, 40°.18N×76°.64E, mb2.9, 14C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.79	29	⇑*i*P	Pn	18 41 00.4	+0.7
	baz=29						
TARG				⇑*i*S	Sg	18 41 24.9	+0.3
	baz=29						
KDJ	Kajisay	2.00	12	⇑*i*P	Pb	18 41 04.1	-0.4
	baz=12						
KDJ				⇑*i*S	Sg	18 41 31.2	-0.2
	baz=12						
ULHL	Ulahol	2.09	352	⇑*i*P	Pb	18 41 05.5	-0.7
	baz=52						
ULHL				⇑*i*S	Sb	18 41 33.4	+0.6
	baz=52						
BOOM	Boomskoye usch	2.37	347	⇑*i*P	Pb	18 41 09.3	-1.7
	baz=47						
BOOM				⇑*i*S	Sb	18 41 40.2	-0.7
	baz=47						
UCH	Uchtor	2.60	323	⇑*i*P	Pn	18 41 12.8	+1.8
	baz=23						
UCH				⇑*i*S	Sb	18 41 46.0	-1.8
	baz=23						
PRZ	Przheval'sk	2.66	29	⇓*i*P	Pb	18 41 13.8	-2.1
	baz=29						
PRZ				⇓*i*S	Sb	18 41 47.2	-1.9
	baz=29						
ANVS	Anan'yevo	2.72	16	⇑*i*P	Pn	18 41 14.4	+2.1
	baz=16						
ANVS				⇑*i*S	Sb	18 41 48.9	-1.9
	baz=16						
KBK	Karagaybulak	2.79	333	⇑*i*P	Pn	18 41 15.1	+1.8
	baz=33						
KBK				⇑*i*S	Sn	18 41 50.1	+2.4
	baz=33						

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*SOME **11** 18:40:58.7, 40°.25N×76°.53E, h15^{km}*

*NNC **11** 18:40:59.2±1.4, 40°.31N×76°.53E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=9.7km s-min=7.0km az=174.0*

ISC 11 18:40:58.8±3.4**, 40°.1N**±0°.2×**76°.56E**±0°.06**, h28^{km}, n33, σ1^{s}.57**/46**, 4C-4D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKM2	Tokmak 2	2.94	346	⇑Pg	Pb	18 41 46.4	-4.2
	2.0nm,0.3s						
TKM2				⇑Lg	Lg	18 42 24.6	
	5.9nm,0.7s						
TNSS	Tian-Shan	2.98	6	*e*P	Pb	18 41 50.0	-1.5
	6.3nm,0.5s						
TNSS				*e*S	Sb	18 42 26.8	-0.7
	5.1nm,0.8s						
TNSS	Tian-Shan	2.98	6	Pg	Pb	18 41 50.1	-1.3
	6.3nm,0.5s						
TNSS				Lg	Lg	18 42 27.5	
	5.1nm,0.8s						
AAK	Ala-Archa	3.00	330	⇓Pg	Pb	18 41 49.8	-1.8
	3.3nm,0.4s						
AAK				⇓Lg	Lg	18 42 27.8	
	16nm,0.9s						
KST	Kastek	3.01	352	*e*P	Pb	18 41 51.2	-0.5
	5.1nm,0.4s						
KST				*e*S	Sb	18 42 28.8	+0.8
	7.5nm,0.8s						
KST	Kastek	3.01	352	Pg	Pb	18 41 50.4	-1.3
	5.1nm,0.4s						
KST				Lg	Lg	18 42 27.8	
	7.5nm,0.8s						
MTBS	Maitube	3.06	358	*e*P	Pb	18 41 51.6	-1.0
	2.9nm,0.1s						
MTBS				*e*S	Sb	18 42 29.6	+0.1
	5.4nm,0.4s						
MTBS	Maitube	3.06	358	Pg	Pb	18 41 51.7	-1.0
	3.7nm,0.5s						
MTBS				Lg	Lg	18 42 29.7	
	5.0nm,0.4s						
MDOK	Medeo	3.12	7	*e*P	Pb	18 41 51.9	-1.7
	4.5nm,0.5s						
MDOK				*e*S	Sb	18 42 30.3	-0.8
	15nm,0.6s						
MDOK	Medeo	3.12	7	⇓Pg	Pb	18 41 52.2	-1.4
	3.2nm,0.5s						
MDOK				⇓Lg	Lg	18 42 30.0	
	13nm,0.6s						
MDOK	Medeo	3.12	7	Pg	Pb	18 41 51.7	-1.9
	4.5nm,0.5s						
MDOK				Lg	Lg	18 42 29.8	
	15nm,0.6s						
KOTS	Kotyrbulak	3.19	7	*e*P	Pb	18 41 54.1	-0.8
	4.7nm,0.7s						
KOTS				*e*S	Sb	18 42 34.2	+0.8
	21nm,0.5s						
KOTS	Kotyrbulak	3.19	7	Pg	Pb	18 41 53.8	-1.0
	4.7nm,0.7s						
KOTS				Lg	Lg	18 42 34.2	
	21nm,0.5s						
DGS	Degeres	3.23	350	*e*P	Pb	18 41 55.4	0.0
	4.3nm,0.5s						
DGS				*e*S	Sb	18 42 36.0	+1.8
	8.3nm,0.7s						
DGS	Degeres	3.23	350	Pg	Pb	18 41 54.9	-0.5
	4.3nm,0.5s						
DGS				Lg	Lg	18 42 36.1	
	8.3nm,0.7s						
SATY	Saty	3.29	24	*e*P	Pb	18 41 55.7	-0.9
	4.2nm,0.3s						
SATY				*e*S	Sb	18 42 36.5	+0.2
	12nm,0.7s						
SATY	Saty	3.29	24	Pg	Pb	18 41 54.5	-2.1
	4.2nm,0.3s						
SATY				Lg	Lg	18 42 34.7	
	12nm,0.7s						
ZHN	Zhinishke	3.40	24	*e*P	Pb	18 41 57.4	-1.0
	4.1nm,0.2s						
ZHN				*e*S	Sb	18 42 39.6	+0.2
	9.3nm,0.5s						
ZHN	Zhinishke	3.40	24	Pg	Pb	18 41 57.4	-1.0
	4.1nm,0.2s						
ZHN				Lg	Lg	18 42 39.6	
	9.3nm,0.5s						
UZB	Uzynbulak	3.59	30	*e*P	Pb	18 42 01.4	-0.2
	3.2nm,0.3s						
UZB				*e*S	Sb	18 42 46.5	+1.7
	6.2nm,0.7s						
UZB	Uzynbulak	3.59	30	Pg	Pb	18 42 01.4	-0.2
	3.2nm,0.3s						
UZB				Lg	Lg	18 42 46.5	
	6.2nm,0.7s						
KTBS	Karatobe	3.64	1	*e*P	Pb	18 42 01.0	-1.5
	1.6nm,0.6s						
KTBS				*e*S	Sb	18 42 45.9	-0.3
	4.8nm,0.6s						
KTBS	Karatobe	3.64	1	Pg	Pb	18 42 01.0	-1.5
	1.6nm,0.6s						
KTBS				Lg	Lg	18 42 45.9	
	4.8nm,0.6s						
MRKS	Merke	3.66	318	*e*P	Pb	18 42 03.0	+0.1
	3.0nm,0.4s						
MRKS				*e*S	Sb	18 42 49.1	+2.3
	6.7nm,0.7s						
MRKS	Merke	3.66	318	Pg	Pb	18 42 03.0	+0.1
	3.0nm,0.4s						
MRKS				Lg	Lg	18 42 49.1	
	6.7nm,0.7s						
SGDS	Sogindy	3.67	338	Pg	Pb	18 42 01.3	-1.7
	3.8nm,0.6s						
SGDS				Lg	Lg	18 42 46.2	
	5.7nm,0.5s						
KUU	Kurty	3.83	358	*e*P	Pb	18 42 04.4	-1.2
	2.6nm,0.7s						
KUU				*e*S	Sb	18 42 52.0	+0.6
	4.7nm,0.7s						
KUU	Kurty	3.83	358	Pg	Pb	18 42 04.4	-1.2
	2.6nm,0.7s						
KUU				Lg	Lg	18 42 52.0	
	4.7nm,0.7s						
PDGK	Podgornoye	3.93	33	Pg	Pb	18 42 06.3	-1.1
	1.9nm,1.2s						
PDGK				Lg	Lg	18 42 55.4	
	3.4nm,1.0s						
PDGK	Podgornoye	3.93	33	⇑Pg	Pb	18 42 06.3	-1.1
	8.4nm,1.2s						
PDGK				⇑Lg	Lg	18 42 58.3	
	12nm,1.1s						
ARXS	Arharly	4.25	12	*e*P	Pb	18 42 14.5	+1.7
	2.4nm,0.7s						
ARXS				*e*S	Sb	18 43 08.8	+5.2
	3.8nm,0.6s						
ARXS	Arharly	4.25	12	Pg	Pb	18 42 14.5	+1.7
	2.4nm,0.7s						
ARXS				Lg	Lg	18 43 08.8	
	3.8nm,0.6s						
BLB	Baldybastay	4.27	19	Pg	Pb	18 42 12.3	-0.9
	4.9nm,0.4s						
BLB				Lg	Lg	18 43 05.5	
	8.2nm,0.3s						

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*EAF **11** 18:43:57.5±1.5, 21°.16S×33°.66E, h180^{km}±51^{km}, MD4.0*

*BUL **11** 18:43:57.8±1.8, 21°.22S×33°.59E, h24^{km}±29^{km}, MD4.3*

ISC 11 18:43:56.0±2.0**, 21°.30S**±0°.07×**33°.4E**±0°.1**, h10^{km}, n12, σ1^{s}.49**/18**, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	2.89	220	*i* P	Pb	18 44 48.0	+0.3
MOPA	Mopani	2.89	220	*i* P	Pb	18 44 48.0	+0.3
BLWY	Bulawayo	4.64	284	*i* P	Pn	18 45 07.4	+1.1
BLWY				*i* S	Sn	18 45 59.7	-0.6
BLWY	Bulawayo	4.64	284	*i* P	Pn	18 45 07.4	+1.1
BLWY				*i* S	Sn	18 45 59.7	-0.6
MATP	Matopo	4.67	280	*i* P	Pn	18 45 09.4	+2.6
MATP				*i* S	Sn	18 46 00.9	-0.3
MATP	Matopo	4.67	280	*i* P	Pn	18 45 09.4	+2.6
MATP				*i* S	Sn	18 46 00.9	-0.3
CNG	Changalane	5.09	192	*i* P	Pn	18 45 12.7	+0.3
CNG				*i* S	Sn	18 46 09.7	-1.6
CNG	Changalane	5.09	192	*i* P	Pn	18 45 12.7	+0.3
CNG				*i* S	Sn	18 46 09.7	-1.6
TETE	Tete	5.13	2	*i* P	Pn	18 45 10.8	-2.1
TETE	Tete	5.13	2	*i* P	Pn	18 45 10.8	-2.1
BOSA	Boshof	10.38	224	*i* P	Pn	18 46 24.2	-0.9
BOSA				*i* S	Sn	18 48 12.3	-9.3
BOSA	Boshof	10.38	224	*i* P	Pn	18 46 24.2	-0.9
BOSA				*i* S	Sn	18 48 12.3	-9.3

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*HLW **11** 18:54:11.8, 36°.09N×33°.34E, h10^{km}±45^{km}, Ml3.5*

*ISK **11** 18:54:23.7, 35°.00N×33°.10E, h25^{km}, ML3.5/44*

*IDC **11** 18:54:24.4±0.9, 35°.07N×32°.97E, h0^{km}, mb3.9/7, mb1 3.9/13, mb1mx3.7/44, mbtmp3.8/13, ML3.6/6, Error*

ellipse: s-maj=18.0km s-min=16.8km az=64.0
*NIC **11** 18:54:25.3±0.0, 35°.00N×33°.06E, h10^{km}±43^{km}, Ml3.7/8*
*GII **11** 18:54:25.6±0.0, 35°.13N×33°.08E, h20^{km}, MD3.0/6, Mm3.3/3*
*DDA **11** 18:54:25.3, 35°.16N×33°.05E, h5^{km}±2^{km}, MW3.7*
*NEIC **11** 18:54:26.5±2.6, 35°.13N±0°.05×33°.20E±0°.06, h21^{km}±9^{km}, mb4.0/12, Md3.6(NIC), Error ellipse: s-maj=8.3km s-min=5.7km az=128.0*
ISC 11 18:54:25.2±0.8**, 35°.11N**±0°.02×**33°.09E**±0°.02**, h12**^{km}±6^{km}**, n134,** σ1^{s}**18**/159**, mb3.9**/8**, 4C-2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEF	Lefka	0.16	272	PG	Pb	18 54 29.9	-0.2
AKDN	Akdeniz- Kıbrı	0.21	332	PG	Pb	18 54 32.2	+1.3
AKDN				SG	Sg	18 54 37.0	+4.3
CSS	Mathiatis	0.25	127	PG	Pg	18 54 30.4	0.0
CSS				SG	Sg	18 54 33.5	-0.4
CSS	Mathiatis	0.25	127	P	Pg	18 54 30.5	+0.1
CSS				S	Sg	18 54 33.6	-0.4
CSS				AML	AML	18 54 33.8	
	60nm,0.3s						
CSS				AML	AML	18 54 33.8	
	60nm,0.3s						
CSS				AML	AML	18 54 34.5	
	41nm,0.3s						
CSS				AML	AML	18 54 34.5	
	41nm,0.3s						
CSS	Mathiatis	0.25	127		Pg	18 54 30.1	-0.3
ATHAL	Athalassa	0.26	84	⇓P	Pb	18 54 32.2	+0.5
ATHAL				S	Sb	18 54 37.5	+1.4
ATHAL				AML	AML	18 54 42.1	
	146nm,0.5s						
ATHAL				AML	AML	18 54 42.1	
	146nm,0.5s						
ATHAL				AML	AML	18 54 46.4	
	128nm,1.1s						
ATHAL				AML	AML	18 54 46.4	
	128nm,1.1s						
AKIN	Akıncılar- Kıb	0.33	107	PG	Pg	18 54 30.6	-1.2
ASGA	Asgata	0.35	158	⇑P	Pg	18 54 31.4	-0.9
ASGA				S	Sg	18 54 34.9	-2.0
ASGA				AML	AML	18 54 38.3	
	67nm,0.3s						
ASGA				AML	AML	18 54 38.3	
	67nm,0.3s						
ASGA				AML	AML	18 54 39.3	
	61nm,0.4s						
ASGA				AML	AML	18 54 39.3	
	61nm,0.4s						
ALFC	Alefka	0.40	276	⇑P	Pg	18 54 32.7	-0.4
ALFC				S	Sg	18 54 37.6	-0.9
ALFC				AML	AML	18 54 38.6	
	52nm,0.4s						
ALFC				AML	AML	18 54 38.6	
	52nm,0.4s						
ALFC				AML	AML	18 54 38.8	
	68nm,0.3s						
ALFC				AML	AML	18 54 38.8	
	68nm,0.3s						
LFK	Lefkose	0.40	66	PG	Pb	18 54 34.8	+0.5
MVOU	Mavrovouni	0.46	102	⇑P	Pg	18 54 34.1	-0.1
MVOU				AML	AML	18 54 43.6	
	22nm,0.6s						
MVOU				AML	AML	18 54 45.9	
	16nm,0.4s						
NATA	Nata	0.54	232	⇓P	Pg	18 54 35.0	-0.7
NATA				S	Sg	18 54 42.2	-0.6
NATA				AML	AML	18 54 47.8	
	97nm,0.6s						
NATA				AML	AML	18 54 47.8	
	97nm,0.6s						
NATA				AML	AML	18 54 49.9	
	53nm,0.7s						
NATA				AML	AML	18 54 49.9	
	53nm,0.7s						
AKMS	Akamas	0.62	261	⇑P	Pg	18 54 36.6	-0.7
AKMS				S	Sb	18 54 45.9	-0.9
AKMS				AML	AML	18 54 49.2	
	11nm,0.7s						
AKMS				AML	AML	18 54 49.2	
	11nm,0.7s						
AKMS				AML	AML	18 54 50.5	
	18nm,0.5s						
AKMS				AML	AML	18 54 50.5	
	18nm,0.5s						
PARAL	Paralimni	0.79	98	P	Pb	18 54 41.4	+0.6
PARAL				AML	AML	18 55 02.6	
	8.5nm,0.7s						
PARAL				AML	AML	18 55 04.7	
	7.8nm,0.9s						
EREN	Erenkoy	0.98	65	PG	Pg	18 54 43.2	-0.8
BOZY	Bozyazi-Mersin	0.99	355	PN	Pg	18 54 44.1	-0.3
TEKE	Tekeli-Mersin	1.03	1	PN	Pg	18 54 44.2	-0.8
YORU	Yoruktepe-Mers	1.07	14	PN	Pb	18 54 44.6	-1.1
AKK2	Akkuyu-Mersin	1.09	20	PN	Pb	18 54 44.5	-1.4
AKK1	Akkuyu-Mersin	1.09	20	PN	Pb	18 54 44.9	-1.1
AKKU	Akkuyu-Mersin	1.11	20	PN	Pb	18 54 45.2	-1.1
GULN	MERSIN_Gulnar	1.13	19	i P	Pb	18 54 45.4	-1.2
GULN				i S	Sb	18 55 00.1	-1.3
OREN	Orenkoy-Mersin	1.13	15	PN	Pb	18 54 45.2	-1.5
TISA	Tisan-Mersin	1.15	25	PN	Pb	18 54 45.6	-1.4
TEPK	Tepekoy-MERSIN	1.17	19	PN	Pb	18 54 45.7	-1.7
YESI	Yesilovacik-Me	1.17	23	PN	Pb	18 54 45.7	-1.6
KARG	Kargicak-Mersi	1.20	25	PN	Pn	18 54 46.8	-1.0
IKL	Isikli	1.22	23	PN	Pn	18 54 46.5	-1.6
BERE	Bereket-Mersin	1.24	5	PN	Pn	18 54 47.5	-0.9
GAZI	Gazipasa	1.28	331	PN	Pn	18 54 47.3	-1.6
TEVE	Tevekalti-Mers	1.35	12	PN	Pn	18 54 49.2	-0.7
KEBE	Keben-Mersin	1.43	21	PN	Pn	18 54 50.5	-0.5
SILI	Silifke-Mersin	1.43	28	PN	Pn	18 54 50.1	-0.8
SLFK	Silifke-Mersin	1.46	28	PN	Pn	18 54 50.5	-0.8
HDMB	Hadim	1.91	345	PN	Pn	18 54 57.7	-0.1
KRMN	Karaman	2.06	4	PN	Pn	18 55 00.8	+1.1
MERS	Mersin	2.10	33	PN	Pn	18 54 59.9	-0.4
KKBE	Karaman, Kazim	2.10	357	i P	Pn	18 55 01.5	+1.2
KKBE				i S	Sn	18 55 27.0	+0.5
KKBE				IAML		18 55 31.0	
	comp=E,109nm,0.7s						
DED	Mersin	2.31	36	i P	Pn	18 55 02.7	-0.4
DED				IAML		18 55 42.0	
	comp=E,93nm,0.6s						
KRTS	Karatas	2.36	51	PN	Pn	18 55 02.9	-0.8
BHL	Bhannes	2.44	119	*e*P	Pn	18 55 04.9	-0.1
DQRL	Deir Qamar	2.49	124	*e*P	Pn	18 55 06.3	+0.7
HWQ	Hawqa	2.50	109	*e*P	Pn	18 55 06.4	+0.6
SEYD	Seydisehir-KON	2.50	337	PN	Pn	18 55 06.5	+0.7
AKUM	Antalya-Kumluc	2.54	299	i P	Pn	18 55 06.1	0.0
AKUM				IAML		18 56 00.0	
	comp=N,74nm,0.8s						
GULE	Gulek	2.56	32	i P	Pn	18 55 08.0	+1.4
GULE				i S	Sb	18 55 41.5	-1.2
GULE				IAML		18 56 06.0	
	comp=N,102nm,0.5s						
SEDI	Konya, Seydise	2.57	336	i P	Pn	18 55 08.8	+2.0
SEDI				i S	Sn	18 55 38.0	0.0
SEDI				IAML		18 55 42.0	
	comp=N,115nm,0.6s						
SEDI				IAML		18 55 52.0	
	comp=E,121nm,0.5s						
YAYL	Yayladag	2.63	69	PN	Pn	18 55 06.8	-0.7
HNTI	Hanita	2.67	139	Pn	Pn	18 55 07.6	-0.3
KARA	Karaisali	2.67	36	PN	Pn	18 55 07.6	-0.4
YURE	YUREGIR	2.68	50	i P	Pn	18 55 08.3	+0.1
KMER	Konya-Meram	2.71	348	i P	Pn	18 55 11.1	+2.4
KMER				IAML		18 55 49.0	
	comp=E,66nm,0.6s						
KMER				IAML		18 55 56.0	
	comp=N,83nm,0.7s						
YESY	Yesilyurt	2.72	11	PN	Pn	18 55 09.2	+0.5
RCY	Rachaya	2.79	125	*e*P	Pn	18 55 09.6	-0.1
TAHT	Tahtakopru-Hat	2.82	63	PN	Pn	18 55 09.9	-0.1
SHBL	Chebaa	2.82	128	*e*P	Pn	18 55 10.6	+0.4
MMA0B	Mount Meron ar	2.84	137	Pn	Pn	18 55 09.8	-0.6
MMA0B				Sn	Sn	18 55 44.1	-0.5
MMAI	Mount Meron Ar	2.84	137	Pn	Pn	18 55 10.4	0.0
	comp=N,32nm,0.3s,baz=312,slow=12,SNR=294						
MMAI				Sn	Sn	18 55 43.7	-0.9
	comp=N,39nm,0.3s,baz=314,slow=26,SNR=12						
GEM	Giv'at Ha'Em	2.86	131	Pn	Pn	18 55 10.0	-0.6
GEM				Sn	Sn	18 55 44.1	-0.8
CEYT	Ceyhan	2.87	48	PN	Pn	18 55 09.6	-1.1
NATI	Neve Ativ	2.87	129	Pn	Pn	18 55 10.4	-0.3
NATI				Sn	Sn	18 55 44.8	-0.4
KONT	Konya--Tatoy	2.89	349	PN	Pn	18 55 11.8	+0.8
KORT	Korkueli	2.91	311	PN	Pn	18 55 11.4	0.0
OFRI	`Ofer	2.95	147	Pn	Pn	18 55 10.9	-0.9
OFRI				Sn	Sn	18 55 47.0	-0.1
CMRD	Camardi-Nigde	2.97	31	PN	Pn	18 55 12.9	+0.6
AKAS	Kas	3.05	293	PN	Pn	18 55 12.2	-1.1
ELL	Elmali	3.05	303	PN	Pn	18 55 13.7	+0.3
ELL	Elmali	3.05	303		Pn	18 55 15.3	+2.0
SULT	Sultanhani-AKS	3.10	6	PN	Pn	18 55 13.9	-0.1
LADK	Ladik-KONYA	3.13	350	PN	Pn	18 55 14.6	+0.1
ALIN	Konya, Altinte	3.18	357	i P	Pn	18 55 13.2	-1.9
NIDE	Nigde/Merkez-G	3.19	25	i P	Pn	18 55 18.2	+3.0
NIDE				IAML		18 56 10.0	
	comp=E,59nm,0.4s						
NIDE				IAML		18 56 13.0	
	comp=N,44nm,0.4s						
DOGA	KONYA_Doganhis	3.20	340	i P	Pn	18 55 17.1	+1.7
DOGA				i S	Sn	18 55 52.9	-0.7
DOGA				IAML		18 56 12.0	
	comp=E,53nm,0.8s						
KOZT	Kozan	3.24	42	PN	Pn	18 55 15.9	+0.1
SLTI	Sal'it	3.30	150	Pn	Pn	18 55 16.6	0.0
MMLI	Mount Malkishu	3.30	143	Pn	Pn	18 55 16.5	-0.2
MMLI				Sn	Sn	18 55 56.0	+0.1
ISP	Isparta	3.40	323	Pn	Pn	18 55 18.8	+0.7
CHBY	Cihanbeyli	3.47	357	PN	Pn	18 55 19.4	+0.4
HMDT	Nahal Hemdat	3.50	144	Pn	Pn	18 55 19.6	+0.1
BRDR	BURDUR-Merkez	3.55	317	i P	Pn	18 55 22.9	+2.7
CAME	Cameli-Denizli	3.57	302	PN	Pn	18 55 20.1	-0.4
FETY	Fethiye	3.59	296	PN	Pn	18 55 20.3	-0.3
CAEL	Denizli, Camel	3.65	304	i P	Pn	18 55 23.9	+2.3
CAEL				IAML		18 56 34.0	
	comp=N,67nm,1.5s						
CAEL				IAML		18 56 45.0	
	comp=E,68nm,0.8s						
AMAZ	Amatzia	3.89	156	Pn	Pn	18 55 24.9	+0.2
GAZ	Gaziantep	3.92	57	Pn	Pn	18 55 23.0	-2.2
DSI	Dead Sea	4.02	151	Pn	Pn	18 55 26.7	+0.1
DSI				Sn	Sn	18 56 13.1	-0.5
YTIR	Yattir	4.11	155	Pn	Pn	18 55 28.4	+0.5
YTIR				Sn	Sn	18 56 16.3	+0.4
ASF	Jabal al Asfar	4.33	132	Pn	Pn	18 55 32.2	+1.4
	comp=E,3.1nm,0.3s,baz=323,slow=7.4,SNR=37						
ASF				Sn	Sn	18 56 25.1	+3.9
	comp=E,6.5nm,0.3s,baz=132,slow=17,SNR=8.2						
GHAJ	Ghor Haditha	4.33	151	Pn	Pn	18 55 30.9	+0.1
GHAJ	Ghor Haditha	4.33	151		Pn	18 55 29.7	-1.1
BNN	Bunyan	4.34	30	Pn	Pn	18 55 26.9	-4.1
KZIT	Kziot	4.34	165	Pn	Pn	18 55 31.2	+0.3
BRTR	Keskin Array B	4.62	5	Pn	Pn	18 55 37.2	+2.2
	comp=E,0.5nm,0.3s,baz=184,slow=15,SNR=12						
BRTR	Keskin Array B	4.62	5		Pn	18 55 36.6	+1.6
BR131	Keskin Array S	4.62	5		Pn	18 55 35.6	+0.6
ZFRI	Zfri	4.88	158	Pn	Pn	18 55 38.2	-0.1
PRNI	Paran	5.02	161	Pn	Pn	18 55 40.4	+0.1
PRNI				Sn	Sn	18 56 38.1	-0.1
SUZ	Suez	5.26	182	P	Pn	18 55 43.6	-0.1
	baz=185						
HRFI	Mount Harif	5.32	161	Pn	Pn	18 55 44.4	-0.1
HRFI				Sn	Sn	18 56 45.1	-0.7
MBRI	Mt Berech	5.52	163	Pn	Pn	18 55 47.3	0.0
MBRI				Sn	Sn	18 56 50.5	-0.3
EIL	Elat	5.65	163	Pn	Pn	18 55 48.5	-0.5
	comp=E,1.6nm,0.3s,baz=250,slow=1.0,SNR=43						
EIL				Sn	Sn	18 56 52.4	-1.5
	comp=E,3.6nm,0.3s,baz=87,slow=20,SNR=9.9						
EIL	Elat	5.65	163	Pn	Pn	18 55 48.8	-0.2
EIL				Sn	Sn	18 56 52.8	-1.1
RYAN	Fayoum	6.47	202	P	Pn	18 56 01.0	+0.8
	baz=202						
HKAT	Jabal Katrina	6.62	173	P	Pn	18 56 02.7	+0.2
	baz=175						
HKAT				AMP		18 57 00.0	
	baz=175						
IDI	Anoyia	6.71	274	Pn	Pn	18 56 03.3	-0.3
	comp=E,1.3nm,0.3s,baz=200,slow=4.5,SNR=9.8						
TR2	Tor 2	6.73	175	P	Pn	18 56 03.0	-0.8
	baz=177						
TR1	Tor 1	7.12	174	P	Pn	18 56 10.0	+0.8
	baz=176						
SWA2		8.72	230	P	Pn	18 56 29.7	-1.4
	baz=227						
ITM	Ithomi	9.26	286	Pn	Pn	18 56 38.5	0.0
AKASG	Malin Array Be	15.83	351	Pn	P	18 58 11.1	-0.5
	comp=E,0.7nm,0.3s,baz=180,slow=9.7,SNR=14						
CORL	Corleone	16.15	286	P	P	18 58 16.3	+1.1
ZOU	Zoufplan	18.98	313	P	P	18 58 46.7	+0.1
ZOU				IAmb	IAmb	18 58 48.9	
	comp=Z,12nm,1.6s						
KEST	Kesra	19.35	279	P	Pn	18 58 51.7	0.0
KEST				IAmb	IAmb	18 59 21.9	
	comp=Z,12nm,1.4s						
GEC2	GERESS Array S	19.82	320	P	Pn	18 58 57.6	+0.4
GEC2				IAmb	IAmb	18 59 02.2	
	comp=Z,5.0nm,0.7s						
GERES	GERESS Array B	19.82	320	P	Pn	18 58 57.1	-0.2
	comp=Z,0.2nm,0.3s,baz=124,slow=12,SNR=5.0						
GERES	GERESS Array B	19.82	320	P	P	18 58 55.4	-0.3
KHC	Kasperske Hory	20.06	320	P	P	18 58 58.4	+0.2
BNI	Bardonecchia	22.42	304	P	P	18 59 21.6	-2.3
SENIN	Lac Senin/Sane	22.44	308	P	P	18 59 22.8	-1.3
FIA1	FINESS Array S	26.73	353	P	P	19 00 02.3	-1.8
FINES	FINESS Array B	26.73	353	P	P	19 00 04.1	0.0
	comp=Z,5.3nm,1.1s,baz=148,slow=13,SNR=7.1						
FINES	FINESS Array B	26.73	353	P	P	19 00 02.5	-1.6
KKAR	Karatay Array	29.92	63	P	P	19 00 32.2	-0.7
ARCES	ARCESS Array B	34.73	355	P	P	19 01 15.9	+1.2
	comp=Z,2.7nm,0.9s,baz=188,slow=4.9,SNR=3.8						
TORD	Torodi Ar. Bea	35.79	240	P	P	19 01 24.5	+0.1
	comp=Z,0.6nm,0.5s,baz=44,slow=8.0,SNR=5.6						
TORD	Torodi Ar. Bea	35.79	240	IAmb	IAmb	19 01 33.0	
	comp=Z,3.0nm,1.6s						
MAKZ	Makanchi	38.15	57	P	P	19 01 44.0	-0.3
MAKZ				IAmb	IAmb	19 01 48.9	
	comp=Z,3.3nm,1.4s						
MK31	Makanchi Array	38.36	57	P	P	19 01 44.8	-1.3
MKAR	Makanchi Array	38.36	57	P	P	19 01 48.6	+2.5
	comp=Z,1.1nm,0.7s,baz=259,slow=8.4,SNR=8.0						
MKAR	Makanchi Array	38.36	57	P	P	19 01 45.1	-0.9
KOWA	Kowa	39.13	248	P	P	19 01 53.2	+0.5
	comp=Z,0.8nm,0.4s,baz=55,slow=9.1,SNR=3.7						
KOWA	Kowa	39.13	248	IAmb	IAmb	19 01 53.6	
	comp=Z,10nm,1.6s						
ZALV	Zalesovo Beam	40.36	46	P	P	19 02 03.8	+1.3
	comp=Z,0.6nm,0.4s,baz=284,slow=12,SNR=1.8						
SONM	Songino Array	54.42	53	P	P	19 03 55.1	+2.9
	comp=Z,0.3nm,0.5s,baz=318,slow=4.1,SNR=2.9						

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*IDC **11** 19:03:27.9±1.1, 17°.17S×174°.88E, h0^{km}, mb3.8/5, mb1 4.1/6, mb1mx3.8/25, mbtmp3.7/6, ML4.0/1, MS3.4/9, Ms1 3.3/9, ms1mx3.0/33, Error ellipse: s-maj=61.1km s-min=24.1km az=169.0*
ISC 11 19:03:32.8±0.9**, 17°.3S**±0°.4×**175°.0E**±0°.1**, h35**^{km}**, n13,** σ**1**^{s}**47**/7**, mb3.8**/5**, MS3.3**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.97	98	Pn	Pn	19 04 17.2	-0.5
	0.7nm,0.3s,baz=275,slow=8.2,SNR=5.1						
DZM	Mont Dzumac	9.30	238	LR	LR	19 08 26.7	
	comp=Z,95nm,18.1s,baz=24,slow=32						
RAO	Raoul Island	13.53	152	LR	LR	19 11 11.0	
	comp=Z,204nm,19.0s,baz=240,slow=34						
URZ	Urewera	20.92	175	LR	LR	19 14 08.1	
	comp=Z,82nm,18.8s,baz=31,slow=30						
STKA	Stephens Creek	33.45	238	LR	LR	19 22 26.5	
	comp=Z,54nm,20.1s,baz=26,slow=34						
PPT	Papeete	33.80	96	LR	LR	19 23 11.4	
	comp=Z,26nm,18.2s,baz=204,slow=35						
WRA	Warramunga Arr	38.51	260	P	P	19 10 51.0	-1.1
	0.8nm,0.8s,baz=90,slow=8.8,SNR=5.5						
WRA				LR	LR	19 25 23.5	
	comp=Z,42nm,19.0s,baz=45,slow=34						
ASAR	Alice Springs	38.87	254	P	P	19 10 54.9	-0.3
	2.7nm,0.8s,baz=86,slow=8.9,SNR=18						
ASAR				PcP	PcP	19 13 06.3	+0.5
	0.5nm,0.8s,baz=91,slow=3.7,SNR=4.1						
ASAR				LR	LR	19 25 56.2	
	comp=Z,54nm,19.6s,baz=86,slow=35						
ASAJ	Asahikawa	67.94	335	LR	LR	19 37 55.2	
	comp=Z,41nm,21.1s,baz=155,slow=30						
PSI	Prapat	77.54	277	LR	LR	19 51 23.0	
	comp=Z,32nm,19.0s,baz=310,slow=37						
CMAR	Chiang Mai Arr	82.77	292	P	P	19 15 55.0	+1.1
	0.5nm,0.7s,baz=124,slow=4.6,SNR=5.4						
ILAR	Eielson Array	86.89	15	P	P	19 16 11.9	-1.7
	0.6nm,1.1s,baz=228,slow=4.9,SNR=2.6						
TXAR	Lajitas Array	91.11	60	P	P	19 16 36.1	+1.7
	0.5nm,0.9s,baz=238,slow=3.1,SNR=2.9						

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*IDC **11** 19:21:21.0±1.0, 38°.74N×73°.30E, h0^{km}, mb3.8/14, mb1 3.9/21, mb1mx3.7/77, mbtmp3.8/21, ML3.4/7, MS3.2/10, Ms1 3.2/10, ms1mx2.9/53, Error ellipse: s-maj=17.8km s-min=13.6km az=150.0*
*MOS **11** 19:21:21.2±1.6, 38°.70N×73°.18E, h17^{km}, mb4.1/8, Error ellipse: s-maj=9.5km s-min=5.3km az=87.7*
*NEIC **11** 19:21:22.1, 38°.67N×73°.19E, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.50; M$_{\theta\theta}$-1.28; M$_{\phi\phi}$0.78; M$_{r\theta}$0.01; M$_{\theta\phi}$-0.49; M$_{\phi r}$0.96; Fault plane solution: M$_{0}$1.55000×10^{15} NP1:φ$_{s}$294.45000°, δ56.70000°, λ155.44000°. NP2:φ$_{s}$38.53000°, δ69.67000°, λ35.84000°. Principal axes: T 1.6567, Plg39.0000°, Azm261.0000°; N -0.2347, Plg49.0000°, Azm64.0000°; P -1.4220, Plg8.0000°, Azm164.0000°;*
*NEIC **11** 19:21:22.2±2.9, 38°.70N±0°.05×73°.19E±0°.07, h10^{km}±1^{km}, mb4.4/20, Mwr4.1/17 Error ellipse: s-maj=9.6km s-min=7.6km az=134.0*
*BJI **11** 19:21:23.3±0.0, 38°.85N×73°.51E, h9^{km}, mb4.1/12, ML3.7/3*
*SOME **11** 19:21:24.6, 38°.90N×73°.50E, h5^{km}*
*NNC **11** 19:21:27.1±6.0, 39°.04N×72°.95E, h0^{km}, mb4.7, mpv4.4, Error ellipse: s-maj=46.4km s-min=26.2km az=167.0*
ISC 11 19:21:21.7±0.5**, 38°.67N**±0°.03×**73°.16E**±0°.03**, h10**^{km}**, n143,** σ**2**^{s}**68**/154**, mb4.0**/22**, MS3.2**/7**, 14C-9D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.34	308		Pn	19 21 43.4	-3.3
GAR	Garm	2.25	279		Pn	19 22 00.5	+1.4
BTK	Batken	2.29	308	PN	Pn	19 22 00.4	+0.8
BTK	Batken	2.29	308	Pn	Pn	19 22 00.4	+0.8
KSH	Kashi	2.34	68	Pn	Pn	19 21 52.6	-7.8
KSH				Sn	Sn	19 22 18.1	-11
KSH				smax	smax		
	comp=N,1μm,0.7s						
KSH				smax	smax		
	comp=E,430nm,0.9s						
CHGR	Chuyangaron	3.14	271		Pn	19 22 13.2	+1.9
AML	Almayashu	3.48	6	P	Pn	19 22 18.6	+2.3
	SNR=97						
UCH	Uchtor	3.70	16	P	Pn	19 22 22.8	+3.5
	SNR=104						
TAS	Tashkent	3.98	313	PN	Pn	19 22 25.7	+2.9
TAS	Tashkent	3.98	313		Pn	19 22 25.7	+2.9
EKS2	Erkin-Say	4.02	6	P	Pn	19 22 25.8	+2.4
	SNR=25						
MRKS	Merke	4.07	1	*e*P	Pb	19 22 33.5	0.0
	36nm,0.0s						
MRKS				*e*S	Sb	19 23 23.3	+0.4
	134nm,0.8s						
AAK	Ala-Archa	4.09	14	Pn	Pn	19 22 26.3	+1.9
	7.2nm,0.3s,baz=190,slow=5.4,SNR=116						
AAK				Sn	Sn	19 23 16.8	+4.3
	4.2nm,0.3s,baz=6.1,slow=14,SNR=7.5						
AAK				LR	LR	19 23 45.4	
	comp=Z,53nm,19.4s,baz=216,slow=36						
AAK	Ala-Archa	4.09	14	P	Pn	19 22 28.2	+3.7
	SNR=100						
AAK	Ala-Archa	4.09	14	*ce*PN	Pn	19 22 26.1	+1.6
AAK				pmax	pmax		
	comp=Z,480nm,1.0s						
AAK	Ala-Archa	4.09	14	⇑Pn	Pn	19 22 26.1	+1.6
	comp=Z,106nm,0.7s						
AAK				⇓Sn	Sn	19 23 14.8	+2.3
	comp=Z,140nm,0.9s						
AAK	Ala-Archa	4.09	14		Pn	19 22 25.7	+1.3
KBK	Karagaybulak	4.21	18	P	Pn	19 22 29.1	+3.1
	SNR=19						
IUG	Iuzhnay	4.22	326	*e*P	Pg	19 22 41.0	-1.5
	comp=Z,3μm,2.0s						
IUG				*e*S	Sg	19 23 36.5	-0.7
	comp=Z,330nm,0.7s						
ULHL	Ulahol	4.28	32	P	Pb	19 22 36.3	-0.8
	SNR=5.6						
FRU1	Bishkek	4.29	15	PN	Pn	19 22 28.5	+1.5
FRU1	Bishkek	4.29	15		Pn	19 22 28.5	+1.5
BOOM	Boomskoye usch	4.36	28	PN	Pn	19 22 29.2	+1.0
BOOM	Boomskoye usch	4.36	28	Pn	Pn	19 22 29.2	+1.0
DZA	Taraz	4.44	342	*e*P	Pg	19 22 46.7	-0.1
	comp=Z,93nm,0.8s						
DZA				*e*S	Sg	19 23 46.3	+1.9
	comp=Z,234nm,0.5s						
CHMS	Chumysh	4.49	15	P	Pn	19 22 32.8	+3.0
	SNR=5.8						
CHM	Chimkent	4.55	324	*e*P	Pg	19 22 48.4	-0.4
	comp=Z,88nm,0.4s						
CHM				*e*S	Sg	19 23 48.8	+1.2
	comp=Z,358nm,0.4s						
KDJ	Kajisay	4.62	40	PN	Pn	19 22 33.3	+1.5
KDJ	Kajisay	4.62	40	Pn	Pn	19 22 33.3	+1.5
TKM2	Tokmak 2	4.63	23	P	Pn	19 22 34.7	+2.8
	SNR=7.2						
TKM2	Tokmak 2	4.63	23	⇑Pg	Pg	19 22 47.2	-3.3
	comp=Z,88nm,1.3s						
TKM2				⇓Lg	Lg	19 23 46.6	
	comp=Z,63nm,0.8s						
TARG	Taragay, Kyrgy	4.69	48	Pn	Pn	19 22 33.0	+0.1
USP	Ospenovka	4.71	12	P	Pn	19 22 35.4	+2.6
	SNR=7.2						
KST	Kastek	4.86	25	*e*P	Pb	19 22 49.9	+2.9
	comp=Z,42nm,0.0s						
KST				*e*S	Sg	19 23 51.7	-6.0
	comp=Z,52nm,1.3s						
KKAR	Karatay Array	4.87	336	PN	Pn	19 22 36.0	+1.1
KKAR	Karatay Array	4.87	336		Pn	19 22 36.0	+1.1
KK09	Karatay Array	4.89	336	⇑Pn	Pn	19 22 36.3	+1.0
	comp=Z,76nm,1.0s,baz=147,slow=12						
KK09				⇑Sn	Sn	19 23 28.9	-3.0
	comp=Z,195nm,0.8s,baz=146,slow=25						
CEP	Cherat	4.94	192	P	Pn	19 22 42.5	+6.4
DGS	Degeres	4.98	23	*e*P	Pb	19 22 52.1	+3.2
	comp=Z,33nm,1.1s						
DGS				*e*S	Sg	19 23 54.6	-6.8
	comp=Z,65nm,1.5s						
NIL	Nilore	5.01	179	PN	Pn	19 22 37.9	+1.0
NIL	Nilore	5.01	179	Pn	Pn	19 22 37.9	+1.0
BRLS	Borolday	5.04	331	*e*Pn	Pn	19 22 35.1	-2.2
	baz=326						
BRLS				*e*P	Pb	19 22 35.5	-14
	baz=326						
BRLS				*e*Pg	Pg	19 22 52.4	-5.8
	baz=326						
BRLS	Borolday	5.04	331	*e*PN	Pn	19 22 35.1	-2.2
BRLS				*e*		19 22 52.3	
MTBS	Maitube	5.10	28	*e*P	Pb	19 22 53.7	+2.7
	comp=Z,32nm,0.8s						
MTBS				*e*S	Sb	19 23 57.8	+5.4
	comp=Z,48nm,0.9s						
TNSS	Tian-Shan	5.22	32	*e*P	Pb	19 22 55.9	+2.6
	comp=Z,17nm,0.7s						
TNSS				*e*S	Sb	19 24 01.1	+4.8
	comp=Z,17nm,0.7s						
TNSS	Tian-Shan	5.22	32	*e*Pg	Pb	19 22 56.9	+3.6
	baz=33						
KBL	Kabul	5.29	220	PN	Pn	19 22 42.4	+1.5
KBL	Kabul	5.29	220	Pn	Pn	19 22 42.4	+1.5
AAA	Alma-Ata	5.35	31	*e*Pg	Pb	19 22 58.9	+3.5
	baz=32						
AAA	Alma-Ata	5.35	31	*e*PN	Pb	19 22 58.8	+3.5
MDOK	Medeo	5.37	32	*e*P	Pb	19 22 58.6	+3.0
	comp=Z,21nm,0.0s						
MDOK				*e*S	Sb	19 24 06.0	+5.8
	comp=Z,48nm,1.1s						
MDOK	Medeo	5.37	32	*e*Pg	Pb	19 22 58.7	+3.0
	baz=33						
MDOK	Medeo	5.37	32	*e*PN	Pb	19 22 58.7	+3.0
MDOK	Medeo	5.37	32	⇑Pg	Pb	19 22 59.1	+3.5
	comp=Z,37nm,0.9s						
MDOK				Lg	Lg	19 24 12.1	
	comp=Z,95nm,1.0s						
KOTS	Kotyrbulak	5.45	32	*e*P	Pb	19 23 00.6	+3.5
	comp=Z,27nm,0.6s						
KOTS				*e*S	Sg	19 24 09.3	-7.4
	comp=Z,72nm,0.9s						

PRZ	Przheval'sk	5.51	45	PN	Pn	19 22 42.9	-1.1
PRZ	Przheval'sk	5.51	45	Pn	Pn	19 22 42.9	-1.1
KUU	Kurty	5.74	24	*e*P	Pb	19 23 04.9	+3.0
	comp=Z,10nm,1.6s						
KUU				*e*S	Sb	19 24 17.3	+6.5
	comp=Z,83nm,0.8s						
SATY	Saty	5.92	40	*e*P	Pb	19 23 07.8	+2.8
	comp=Z,19nm,1.0s						
SATY				*e*S	Sb	19 24 22.1	+6.1
	comp=Z,81nm,1.2s						
BTLS	Baital	6.40	6	*e*P	Pg	19 23 19.2	-5.1
	comp=Z,7.6nm,0.5s						
BTLS				*e*S	Sg	19 24 41.3	-5.8
	comp=Z,14nm,1.6s						
BTLS	Baital	6.40	6	*e*Pg	Pg	19 23 18.8	-5.4
	baz=5.4						
TDK	Taldyqorghan	7.44	30	*e*Pg	Pg	19 23 38.1	-5.9
	baz=31						
SMLA	Simla	8.21	155	*e*P	Pn	19 23 24.0	+3.2
SMLA				*e*S	Sn	19 24 51.2	-2.4
SMLA				IAML		19 25 00.2	
	comp=E,46nm,0.5s						
HRA	Herat	9.77	247	Pn	Pn	19 23 41.1	-1.3
MAKZ	Makanchi	10.39	36	P	Pn	19 23 48.8	-2.0
MAKZ	Makanchi	10.39	36	Pn	Pn	19 23 48.8	-2.0
MK31	Makanchi Array	10.53	37	⇓*e*P	Pn	19 23 55.2	+2.6
MK31	Makanchi Array	10.53	37		Pn	19 23 49.4	-3.3
MKAR	Makanchi Array	10.53	37	Pn	Pn	19 23 54.1	+1.4
	comp=E,0.1nm,0.3s,baz=215,slow=14,SNR=5.2						
MKAR	Makanchi Array	10.53	37	P	Pn	19 23 50.9	-1.8
MKAR	Makanchi Array	10.53	37		Pn	19 23 50.9	-1.8
GEYT	Alibeck	11.85	271	Pn	Pn	19 24 12.7	+2.0
	comp=E,0.5nm,0.3s,baz=96,slow=12,SNR=7.2						
GEYT				Sn	Sn	19 26 23.1	+0.1
	comp=E,0.4nm,0.3s,baz=85,slow=21,SNR=5.9						
GEYT				LR	LR	19 29 25.4	
	comp=E,112nm,19.2s,baz=280,slow=40						
GEYT	Alibeck	11.85	271		Pn	19 24 08.3	-2.4
GYA0B	ALIBECK ARRAY	11.85	271	Pn	Pn	19 24 08.0	-2.7
WMQ	Urumqi	12.08	60	*e*P	Pn	19 24 14.6	+0.6
WMQ				pP		19 24 17.7	
WMQ				pmax	pmax		
	comp=E,16nm,0.7s						
KURBB	Kurchatov Arra	12.54	16	Pn	Pn	19 24 19.0	-1.1
	comp=E,0.1nm,0.3s,baz=210,slow=13,SNR=5.4						
KURK	Kurchatov	12.65	16	⇑*e*P	Pn	19 24 21.9	+0.3
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURK	Kurchatov	12.65	16		Pn	19 24 19.0	-2.6
AB31	Akbulak array	14.21	322	⇑Pn	Pn	19 24 43.5	+0.5
	comp=Z,2.4nm,0.5s,baz=130,slow=13,SNR=105						
AB31				⇓Sn	Sn	19 27 17.8	-2.7
	comp=Z,3.8nm,0.7s,baz=134,slow=24,SNR=7.5						
ABKAR	Akbulak array	14.21	322	Pn	Pn	19 24 39.8	-3.1
ABKAR	Akbulak array	14.21	322	Pn	Pn	19 24 39.8	-3.1
BVAR	Borovoye Array	14.49	353	Pn	Pn	19 24 44.7	-1.9
	comp=Z,0.2nm,0.3s,baz=182,slow=20,SNR=11						
BRVK	Borovoye	14.53	353	⇓*e*P	Pn	19 24 45.7	-1.5
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
BRVK	Borovoye	14.53	353	Pn	Pn	19 24 43.6	-3.6
DGZ	Jazzator, Alta	15.02	38	⇓*e*P	Pn	19 24 56.4	+2.4
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKTO	Aktyubinsk	15.93	322	Pn	Pn	19 25 04.4	-1.4
	comp=Z,0.5nm,0.3s,baz=127,slow=12,SNR=11						
AKTO				Sn	Sn	19 27 54.9	-7.5
	comp=Z,0.2nm,0.3s,baz=316,slow=20,SNR=6.8						
AKTO				LR	LR	19 31 46.3	
	comp=Z,51nm,20.9s,baz=140,slow=39						
AKTO	Aktyubinsk	15.93	322	⇓Pn	Pn	19 25 06.3	+0.5
	comp=Z,16nm,1.3s						
AKTO				⇑Sn	Sn	19 27 59.0	-3.4
	comp=Z,14nm,1.0s						
ZAA0	Zalesovo Array	17.24	24		Pn	19 25 19.6	-2.8
ZALV	Zalesovo Beam	17.24	24	P	Pn	19 25 20.6	-1.8
	comp=Z,0.4nm,0.3s,baz=213,slow=10,SNR=9.0						
ZALV				LR	LR	19 32 09.6	
	comp=Z,76nm,18.4s,baz=3.0,slow=38						
ZALV	Zalesovo Beam	17.24	24	*e*P	P	19 25 23.5	-0.4
ZALV	Zalesovo Beam	17.24	24	Pn	Pn	19 25 18.9	-3.4
ARU	Arti	20.24	336	P	P	19 25 56.5	-0.3
	comp=Z,1.1nm,0.5s,baz=126,slow=14,SNR=2.0						
ARU	Arti	20.24	336	*c i*P	P	19 25 56.2	-0.7
ARU				S	S	19 29 41.2	-2.5
ARU				pmax	pmax		
	comp=Z,27nm,3.8s						
GTA	Gaotai	20.69	80	*e*P	P	19 26 01.9	-0.1
GTA				pP	sP	19 26 07.4	-0.5
GTA				sP	pP	19 26 10.3	+4.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GNI	Garni	21.98	283	LR	LR	19 36 23.4	
	comp=Z,45nm,20.9s,baz=92,slow=41						
GNI	Garni	21.98	283	⇑*e*P	P	19 26 22.3	+6.4
GNI				pmax	pmax		
	comp=Z,13nm,1.1s						
GNI	Garni	21.98	283	P	P	19 26 13.8	-2.1
GNI				IAmb	IAmb	19 26 34.1	
	comp=Z,11nm,0.9s						
BELG	Belogornoye	22.40	316	P	P	19 26 19.4	-0.7
	comp=Z,5.1nm,0.5s,baz=336,slow=2.1,SNR=4.9						
BELG				LR	LR	19 35 57.0	
	comp=Z,77nm,19.7s,baz=185,slow=39						
BELG	Belogornoye	22.40	316	⇑*e*P	P	19 26 20.1	0.0
BELG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ONI	Oni	22.83	289	P	P	19 26 22.7	-2.2
ONI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ONI	Oni	22.83	289	P	P	19 26 22.7	-2.2
ONI				IAmb	IAmb	19 26 52.1	
	comp=Z,6.6nm,1.0s						
KBZ	Khabaz	23.26	292	P	P	19 26 30.8	+1.6
	comp=Z,1.7nm,0.9s,baz=125,slow=14,SNR=2.6						
KBZ	Khabaz	23.26	292	⇑*e*P	P	19 26 33.0	+3.9
KBZ				pmax	pmax		
	comp=Z,7.0nm,2.3s						
NEY	Neytrino	23.37	291	⇑*e*P	P	19 26 36.6	+6.1
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIV	Kislovodsk	23.42	293	*e*P	P	19 26 32.4	+1.5
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,32nm,14.0s						
KIV	Kislovodsk	23.42	293	P	P	19 26 30.3	-0.6
KIV				IAmb	IAmb	19 27 09.0	
	comp=Z,6.1nm,0.8s						
SONM	Songino Array	25.71	58	P	P	19 26 51.8	-0.4
	comp=Z,2.1nm,0.8s,baz=265,slow=9.7,SNR=15						
SONM				LR	LR	19 37 49.1	
	comp=Z,93nm,18.6s,baz=300,slow=39						
SONM	Songino Array	25.71	58	P	P	19 26 52.3	+0.1
ULN	Ulaanbaatar	26.15	58	*de*P	P	19 26 57.5	+1.3
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	Chiang Mai Arr	30.13	125	P	P	19 27 30.5	-1.2
CMAR	Chiang Mai Arr	30.13	125	P	P	19 27 30.5	-1.2
BRTR	Keskin Array B	30.48	285	P	P	19 27 37.0	+2.1
	comp=Z,0.5nm,0.5s,baz=78,slow=6.4,SNR=4.5						
BRTR	Keskin Array B	30.48	285	*e*P	P	19 27 40.8	+5.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	30.48	285	P	P	19 27 32.9	-2.0
SOCY	Socotra	31.41	218	P	P	19 27 39.7	-3.5
GHAJ	Ghor Haditha	31.50	268	P	P	19 27 43.1	-0.7
GHAJ				IAmb	IAmb	19 27 45.4	
	comp=Z,15nm,1.6s						
PALK	Pallekele	31.99	166	LR	LR	19 40 47.5	
	comp=Z,68nm,19.2s,baz=93,slow=36						
EIL	Elat	32.67	266	LR	LR	19 43 31.5	
	comp=Z,50nm,18.1s,baz=68,slow=41						
AKASG	Malin Array Be	33.00	306	P	P	19 27 58.1	+1.4
	comp=Z,0.4nm,0.4s,baz=77,slow=7.4,SNR=4.4						
AKASG	Malin Array Be	33.00	306	*e*P	P	19 27 59.6	+2.9
AKASG	Malin Array Be	33.00	306	P	P	19 27 56.7	0.0
FIA1	FINESS Array S	36.70	324	P	P	19 28 28.0	-0.4
FINES	FINESS Array B	36.70	324	P	P	19 28 27.9	-0.6
	comp=Z,4.5nm,1.0s,baz=132,slow=2.8,SNR=7.1						
FINES	FINESS Array B	36.70	324	*e*P	P	19 28 28.1	-0.3
FINES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DIVS	Divibare	39.68	295	P	P	19 28 54.0	0.0
DIVS				IAmb	IAmb	19 29 36.0	
	comp=Z,11nm,1.6s						
ARCES	ARCESS Array B	39.83	336	P	P	19 28 56.5	+1.7
	comp=Z,1.4nm,0.5s,baz=107,slow=7.7,SNR=11						
ARCES	ARCESS Array B	39.83	336	*e*P	P	19 28 55.8	+1.0
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	ARCESS Array B	39.83	336	P	P	19 28 54.5	-0.3
ARCES				IAmb	IAmb	19 29 13.7	
	comp=Z,13nm,1.4s						
TPUB	Ta-pu	43.00	97	P	P	19 29 20.1	-1.3
TIXI	Tiksi	43.12	23	⇓*e*P	P	19 29 21.5	-0.2
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TIXI	Tiksi	43.12	23	P	P	19 29 20.9	-0.7
TIXI				IAmb	IAmb	19 29 25.9	
	comp=Z,5.4nm,1.4s						
CLL	Collm	43.21	307	*e*(P)	P	19 29 26.0	+3.3
NC405	NORSAR Array S	43.48	322	P	P	19 29 23.6	-1.2
NC303	NORSAR Array S	43.65	322	P	P	19 29 28.1	+2.0
NC303				IAmb	IAmb	19 29 45.2	
	comp=Z,46nm,1.6s						
NOA	NORSAR Array B	43.72	322	P	P	19 29 27.9	+1.2
	comp=Z,0.6nm,0.6s,baz=93,slow=7.9,SNR=2.2						
NOA				LR	LR	19 48 01.6	
	comp=Z,38nm,19.4s,baz=340,slow=37						
NC204	NORSAR Array S	43.94	322	P	P	19 29 27.7	-0.9
ESDC	Sonseca Array	57.98	297	P	P	19 31 16.3	+1.9
	comp=Z,0.4nm,0.8s,baz=65,slow=7.1,SNR=4.8						
ESDC	Sonseca Array	57.98	297	IAmb	IAmb	19 31 23.0	
	comp=Z,1.2nm,1.4s						
TORD	Torodi Ar. Bea	67.48	269	P	P	19 32 19.5	+1.4
	comp=Z,0.6nm,0.5s,baz=45,slow=5.5,SNR=8.9						
TORD	Torodi Ar. Bea	67.48	269	IAmb	IAmb	19 32 24.3	
	comp=Z,3.2nm,1.6s						
ILAR	Eielson Array	72.22	17	P	P	19 32 46.5	0.0
	comp=Z,0.4nm,0.9s,baz=341,slow=5.0,SNR=4.7						
YKA	Yellowknife Ar	78.99	4	P	P	19 33 26.3	+1.0
	comp=Z,1.3nm,0.8s,baz=351,slow=5.5,SNR=8.2						
WRA	Warramunga Arr	81.72	124	P	P	19 33 40.6	+0.1
	comp=Z,0.5nm,0.8s,baz=321,slow=4.4,SNR=2.9						

IDC 11 19:23:14.9±2.2**, 38°.83N×73°.36E, h0^{km}, mb3.8**/4**, mb1 3.9**/6**, mb1mx3.2**/75**, mbtmp3.8**/6**, ML3.3**/2**, Error ellipse: s-maj=40.4km s-min=29.1km az=162.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	3.90	12	Pn	Pn	19 24 19.8	+3.6
	1.0nm,0.3s,baz=66,slow=20,SNR=1.2						
AKTO	Aktyubinsk	15.89	322	Pn	Pn	19 26 58.3	-1.5
	0.2nm,0.3s,baz=129,slow=12,SNR=1.3						
SONM	Songino Array	25.50	59	P	P	19 28 45.5	+0.6
	1.0nm,0.9s,baz=268,slow=10,SNR=4.6						
FINES	FINESS Array B	36.65	324	P	P	19 30 22.4	-0.4
	4.8nm,1.1s,baz=134,slow=12,SNR=1.4						
ARCES	ARCESS Array B	39.74	336	P	P	19 30 49.3	+0.5
	2.0nm,0.9s,baz=106,slow=9.5,SNR=1.7						
TORD	Torodi Ar. Bea	67.63	269	P	P	19 34 13.3	-0.6
	0.3nm,0.8s,baz=49,slow=6.4,SNR=2.1						

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*IDC **11** 19:24:53.6±3.9, 1°.85N×123°.97E, h332^{km}±45^{km}, mb3.2/8, mb1 3.2/10, mb1mx2.7/74, mbtmp3.8/10, Error ellipse: s-maj=44.4km s-min=14.4km az=87.0*

*DJA **11** 19:24:53.7±0.5, 2°N±6°×12°4E±°, h322^{km}±5^{km}, M3.5/12, mb3.4/2, MLv3.6/12*

*NEIC **11** 19:24:54.4±2.1, 1°.86N±0°.09×124°.0E±0°.1, h339^{km}±8^{km}, mb4.0/15, Error ellipse: s-maj=18.0km s-min=9.1km az=56.0*

ISC 11 19:24:52.7±0.6**, 1°.89N**±0°.07×**124°.04E**±0°.09**, h323^{km}, n36, σ1^{s}25**/39**, mb3.8**/14**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.30	183	P	Pn	19 25 38.5	+1.4
KMSI				S	S	19 26 12.3	-0.2
GTOI	Gorontalo	1.61	220	P	Pn	19 25 40.3	+1.4
GTOI				S	S	19 26 16.6	+0.9
MRSI	Marisa	2.52	236	P	Pn	19 25 48.1	+2.3
MRSI				S	S	19 26 29.4	+1.2
TOLI2	Tolitoli	3.35	257	Pn	Pn	19 25 55.1	+1.6
TNTI	Ternate	3.50	108	Pn	Pn	19 25 55.6	+0.5
APSI	Ampana	3.67	221	P	Pn	19 25 57.8	+1.1
LBMI	Labuha	4.27	126	P	Pn	19 26 03.5	+0.4
SANI	Sanana	4.37	154	P	Pn	19 26 03.0	-1.1
MPSI	Mapaga	4.42	250	P	Pn	19 26 06.4	+1.7
MYLDM	Lahad Datu	6.43	301	Pn	Pn	19 26 26.8	-0.9
SIJI	Sorong	7.72	111	P	Pn	19 26 44.6	+1.4
	0.3nm,0.3s,baz=298,slow=7.8,SNR=5.6						
KKM	Kota Kinabalu	8.83	298	Pn	Pn	19 26 55.1	-1.6
FAKI	Fak Fak	9.49	120	Pn	Pn	19 27 05.3	+0.6
MTN	Manton Dam	16.24	154	P	P	19 28 23.4	+1.1
MTN				IAmb	IAmb	19 28 23.8	
	comp=Z,16nm,1.2s						
KNRA	Kununurra	18.06	165	P	P	19 28 42.6	+0.8
FITZ	Fitzroy Crossi	19.92	176	P	P	19 29 01.4	-0.2
	comp=Z,0.1nm,0.3s,baz=25,slow=7.2,SNR=11						
YULB	Yu-li	21.54	353	P	P	19 29 18.9	+2.0
WB0	Warramunga Arr	23.80	155	P	P	19 29 37.4	0.0
WB0				IAmb	IAmb	19 29 57.3	
	comp=Z,8.2nm,1.4s						
WRA	Warramunga Arr	23.93	156	P	P	19 29 38.4	-0.2
	comp=Z,1.8nm,0.4s,baz=333,slow=10,SNR=3.4						
WRA	Warramunga Arr	23.93	156	P	P	19 29 37.0	-1.6
WB2	Warramunga Arr	23.94	155	P	P	19 29 38.5	-0.1
WB2				IAmb	IAmb	19 29 42.2	
	comp=Z,10.0nm,1.5s						
ASAR	Alice Springs	27.15	160	P	P	19 30 07.8	+0.5
	comp=Z,0.1nm,0.4s,baz=339,slow=7.0,SNR=5.6						
STKA	Stephens Creek	37.48	155	P	P	19 31 37.8	+1.4
USRK	Ussuriysk Ar.	42.72	8	P	P	19 32 19.9	+1.1
	comp=Z,0.9nm,0.4s,baz=197,slow=7.1,SNR=6.2						
KLR	Kul'dur	47.63	7	P	P	19 32 57.6	+0.6
	comp=Z,0.8nm,0.5s,baz=127,slow=4.9,SNR=3.6						
SONM	Songino Array	48.25	344	P	P	19 33 01.5	-0.4
	comp=Z,0.2nm,0.5s,baz=160,slow=9.2,SNR=2.0						
MK31	Makanchi Array	57.58	327	P	P	19 34 09.6	+0.1
MKAR	Makanchi Array	57.58	327	P	P	19 34 09.6	0.0
	comp=Z,0.3nm,0.3s,baz=122,slow=8.1,SNR=11						
MKAR				PcP	PcP	19 34 58.9	+0.1
	comp=Z,0.4nm,0.6s,baz=151,slow=3.2,SNR=4.0						
MAKZ	Makanchi	57.76	327	P	P	19 34 10.9	+0.1
MAKZ				IAmb	IAmb	19 34 31.8	
	comp=Z,5.7nm,1.6s						
YAK	Yakutsk	60.15	3	P	P	19 34 27.1	+0.5
YAK				IAmb	IAmb	19 34 28.3	
	comp=Z,6.9nm,0.7s						
DCZ	Deep Cove	60.64	147	P	P	19 34 26.8	-3.5
KURK	Kurchatov	61.89	329	P	P	19 34 38.3	-0.2
KURK				IAmb	IAmb	19 34 40.7	
	comp=Z,1.9nm,0.7s						
BRVK	Borovoye	67.50	328	P	P	19 35 12.5	-2.0
BRVK				IAmb	IAmb	19 35 25.5	
	comp=Z,2.8nm,1.6s						
TIXI	Tiksi	69.73	2	P	P	19 35 27.5	-0.2
	comp=Z,1.3nm,0.3s,baz=166,slow=6.2,SNR=14						
TIXI	Tiksi	69.73	2	IAmb	IAmb	19 35 28.4	
	comp=Z,1.7nm,0.4s						
ARCES	ARCESS Array B	91.24	340	P	P	19 37 20.4	-1.0
	comp=Z,2.0nm,0.8s,baz=89,slow=4.8,SNR=1.6						

IDC 11 19:28:25.9±5.4**, 12°.76S×168°.08E, h0^{km}, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.0**/48**, mbtmp3.7**/3**, Error ellipse: s-maj=273.4km s-min=32.4km az=140.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	33.10	253	P	P	19 35 03.4	-0.6
	0.4nm,0.5s,baz=86,slow=8.8,SNR=2.4						
ASAR	Alice Springs	34.14	247	P	P	19 35 13.3	+0.3
	0.5nm,0.6s,baz=74,slow=9.9,SNR=9.4						
ILAR	Eielson Array	84.42	18	P	P	19 41 00.0	0.0
	0.7nm,0.6s,baz=235,slow=5.2,SNR=11						

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*IDC **11** 19:30:31.4±3.6, 34°.76N×22°.68E, h0^{km}, mb3.9/6, mb1 3.7/9, mb1mx3.3/68, mbtmp3.7/9, ML3.5/3, Error ellipse: s-maj=64.3km s-min=24.8km az=22.0*

*NEIC **11** 19:30:41.0±1.8, 35°.0N±0°.1×23°.13E±0°.09, h44^{km}±16^{km}, mb4.0/5, ML3.1(THE), Error ellipse: s-maj=17.4km s-min=8.9km az=199.0*

*ATH **11** 19:30:42.1, 35°.08N×23°.17E, h34^{km}±6^{km}, ML3.3/7, Error ellipse: s-maj=8.6km s-min=2.3km az=50.0*

*THE **11** 19:30:44.3, 35°.13N×23°.24E, h42^{km}±4^{km}, ML3.1/5, Error ellipse: s-maj=4.6km s-min=1.6km az=52.0*

ISC 11 19:30:41.4±1.3**, 35°.08N**±0°.08×**23°.12E**±0°.08**, h47^{km}**±11^{km}**, n62, σ1^{s}69**/60**, mb3.8**/9**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDR	Palaiochora Ch	0.49	71	P	Pn	19 30 51.8	-0.5
KNDR				S	Sn	19 30 59.6	-0.5
	3μm,0.5s						
RODP	Rodopos	0.71	47	P	Pn	19 30 55.5	+0.4
RODP				S	Sn	19 31 06.0	+0.9
	772nm,0.6s						
ANKY	Antikythira Is	0.80	11	P	Pn	19 30 57.4	+1.1
ANKY	Antikythira Is	0.80	11	P	Pn	19 30 57.4	+1.1
ANKY				S	Sn	19 31 09.7	+2.5
ANKY				AML	AML	19 31 10.1	
	comp=N,4184μm,0.5s						
ANKY				AML	AML	19 31 14.9	
	comp=E,5799μm,0.7s						
IMMV	Iera Moni Meta	0.80	61	P	Pn	19 30 56.8	+0.5
IMMV				S	Sn	19 31 07.7	+0.5
	comp=E,3μm,0.8s						
IMMV	Iera Moni Meta	0.80	61	P	Pn	19 30 57.1	+0.8
IMMV				AML	AML	19 31 09.1	
	comp=N,5506μm,0.7s						
IMMV				AML	AML	19 31 14.5	
	comp=E,6184μm,0.8s						
GVD	Gavdhos	0.83	107	P	Pn	19 30 58.4	+1.7
GVD	Gavdhos	0.83	107	P	Pn	19 30 58.5	+1.7
GVD				AML	AML	19 31 20.0	
	comp=E,2514μm,0.5s						
GVD				AML	AML	19 31 24.7	
	comp=N,2743μm,0.5s						
GVDS	Gavdos	0.83	106	P	Pn	19 30 57.9	+1.2
VAM	Vamos	0.94	69	P	Pn	19 30 59.6	+1.4
VAM				S	Sn	19 31 10.2	-0.4
	comp=N,3μm,0.8s						
VAM	Vamos	0.94	69	P	Pn	19 30 59.7	+1.4
VAM				AML	AML	19 31 14.6	
	comp=N,6318μm,0.7s						
VAM				AML	AML	19 31 15.8	
	comp=E,4448μm,0.9s						
PRNS	Prines Rethymn	1.17	75	P	Pn	19 31 02.0	+0.7
KTHA	Kythira Island	1.18	358	P	Pn	19 31 03.5	+2.1
KTHA	Kythira Island	1.18	358	P	Pn	19 31 03.5	+2.1
KTHA				AML	AML	19 31 24.5	
	comp=E,3455μm,0.5s						
KTHA				AML	AML	19 31 28.5	
	comp=N,1245μm,0.4s						
KTHR	Kythira	1.18	355	P	Pn	19 31 03.3	+1.8
IDI	Anoyia	1.47	81	Pn	Pn	19 31 07.0	+1.6
	comp=N,8.5nm,0.3s,baz=244,slow=8.3,SNR=44						
IDI				Sn	Sn	19 31 29.4	+5.9
	comp=N,13nm,0.3s,baz=331,slow=18,SNR=5.6						
IDI				LR	LR	19 31 57.2	
	comp=N,89nm,21.5s,baz=336,slow=45						
IDI	Anoyia	1.47	81	P	Pn	19 31 06.9	+1.5
IDI				S	Sn	19 31 22.8	-0.7
	comp=N,345nm,0.8s						
IDI	Anoyia	1.47	81	P	Pn	19 31 07.1	+1.6
IDI				AML	AML	19 31 32.5	
	comp=N,843μm,0.8s						
IDI				AML	AML	19 31 41.8	
	comp=E,549μm,0.8s						
VLI	Veliai	1.64	355	P	Pn	19 31 09.7	+1.9
VLI	Veliai	1.64	355	P	Pn	19 31 11.2	+3.5
VLI				AML	AML	19 31 38.9	
	comp=N,1210μm,0.6s						
VLI				AML	AML	19 31 41.0	
	comp=E,1583μm,1.1s						
SANT	Santorini	2.30	55		Pn	19 31 16.9	+0.1
ITM	Ithomi	2.31	336		Pn	19 31 18.9	+2.0
ZKR	Zakros	2.54	88	P	Pn	19 31 22.2	+2.1
ZKR	Zakros	2.54	88	P	Pn	19 31 22.6	+2.5
AGG	Agios Georgios	3.98	351		Pn	19 31 42.0	+2.1
KBN	Korca	5.83	342	Pn	Pn	19 32 05.6	+0.2
FNA	Florina	5.86	347	Pn	Pn	19 32 05.2	-0.5
TIP	Timpagrande	6.52	311	Pn	Pn	19 32 15.0	+0.2
RAFF	Raffo Rosso	7.40	289	Pn	Pn	19 32 26.4	-0.4
MDUB	Mudurnu	8.36	48	Pn	Pn	19 32 36.9	-3.1
CSS	Mathiatis	8.38	88	Pn	Pn	19 32 36.8	-3.4
SGRT	San Giovanni R	8.82	321	Pn	Pn	19 32 45.3	-1.0
STON	Ston	8.85	333	*e*Pn	Pn	19 32 41.5	-5.0
STON				Sn	Sn	19 34 11.3	-13
LSTV	Lastovo	9.08	330	*e*Pn	Pn	19 32 46.0	-3.7
LSTV				Sn	Sn	19 34 17.7	-13
DIVS	Divibare	9.32	346	Pn	Pn	19 32 51.0	-2.2
MAKA	Makarska	9.46	332	*e*Pn	Pn	19 32 50.3	-4.7
MAKA				Sn	Sn	19 34 25.9	-14
BR131	Keskin Array S	9.57	58	Pn	Pn	19 32 56.3	-0.2
BRTR	Keskin Array B	9.57	58	Pn	Pn	19 32 58.3	+1.7
	comp=E,0.1nm,0.3s,baz=255,slow=16,SNR=3.7						
BRTR	Keskin Array B	9.57	58		Pn	19 32 56.8	+0.2
RICI	Ricice	9.60	333	*e*Pn	Pn	19 32 52.3	-4.5
RICI				Sn	Sn	19 34 30.4	-13
HVAR	Hvar	9.60	329	*i* Pn	Pn	19 32 53.2	-3.7
HVAR				Sn	Sn	19 34 31.1	-12
ZIRJ	Zirje	10.33	328	*e*Pn	Pn	19 33 03.0	-3.8
ZIRJ				Sn	Sn	19 34 48.8	-12
MMAI	Mount Meron Ar	10.40	98	Pn	Pn	19 33 06.5	-1.4
	comp=E,0.5nm,0.3s,baz=286,slow=10,SNR=6.3						
MORI	Morici	10.47	329	*e*Pn	Pn	19 33 04.2	-4.6
MORI				Sn	Sn	19 34 52.1	-13
GHAJ	Ghor Haditha	11.09	106	Pn	Pn	19 33 16.2	-1.0
KHC	Kasperske Hory	15.71	336	*e*P	P	19 34 24.6	+1.9
AKASG	Malin Array Be	16.23	14	Pn	Pn	19 34 26.5	+0.5
	comp=E,0.8nm,0.3s,baz=209,slow=9.8,SNR=5.9						
AKASG	Malin Array Be	16.23	14	IAmb	IAmb	19 34 33.7	
	comp=Z,0.6nm,0.8s						
HFS	Hagfors	25.81	349	P	P	19 36 07.2	-0.6
	comp=Z,1.2nm,0.5s,baz=139,slow=12,SNR=9.2						
FINES	FINESS Array B	26.45	3	P	P	19 36 11.4	-2.2
	comp=Z,5.5nm,1.1s,baz=134,slow=14,SNR=5.7						
FINES	FINESS Array B	26.45	3	P	P	19 36 12.4	-1.2
FIA1	FINESS Array S	26.45	3	P	P	19 36 12.5	-1.1
NC602	NORSAR Array S	26.74	347	P	P	19 36 15.5	-0.6
KURBB	Kurchatov Arra	42.47	51	P	P	19 38 31.1	-0.5
	comp=Z,0.3nm,0.3s,baz=271,slow=8.6,SNR=4.9						
KURK	Kurchatov	42.53	51	P	P	19 38 31.1	-1.0
KURK	Kurchatov	42.53	51	IAmb	IAmb	19 38 53.2	
	comp=Z,1.9nm,1.1s						
MAKZ	Makanchi	45.00	56	P	P	19 38 51.9	-0.2
MAKZ				IAmb	IAmb	19 39 05.1	
	comp=Z,5.1nm,1.4s						
MK31	Makanchi Array	45.21	56	P	P	19 38 53.7	-0.1
MK31				IAmb	IAmb	19 39 08.9	
	comp=Z,3.2nm,1.6s						
MKAR	Makanchi Array	45.21	56	P	P	19 38 53.7	0.0
	comp=Z,0.4nm,0.3s,baz=263,slow=7.9,SNR=13						
MKAR	Makanchi Array	45.21	56	P	P	19 38 53.9	+0.2
ZALV	Zalesovo Beam	46.27	46	P	P	19 39 01.4	-0.4
	comp=Z,1.0nm,0.4s,baz=229,slow=5.7,SNR=3.6						
SONM	Songino Array	60.82	50	P	P	19 40 49.2	+0.4
	comp=Z,0.2nm,0.4s,baz=285,slow=6.8,SNR=4.1						

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*IDC **11** 19:31:53.1±3.5, 4°.98N×126°.37E, h52^{km}±40^{km}, mb3.3/5, mb1 3.4/6, mb1mx2.8/65, mbtmp3.6/6, ML4.1/1, Error ellipse: s-maj=195.0km s-min=17.8km az=67.0*

*NEIC **11** 19:31:54.1±1.3, 5°.39N±0°.06×127°.01E±0°.06, h61^{km}±13^{km}, mb4.1/4, Error ellipse: s-maj=10.9km s-min=5.7km az=139.0*

ISC 11 19:31:52.3±1.2**, 5°.40N**±0°.10×**127°.1E**±0°.2**, h50^{km}, n13, σ1^{s}07**/12**, mb3.8**/7**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	2.21	319	P	Pn	19 32 27.5	+0.9
	49nm,0.3s,baz=133,slow=5.4,SNR=3.7						
TNTI	Ternate	4.61	176	Pn	Pn	19 33 01.2	+1.7
TOLI2	Tolitoli	7.58	236	Pn	Pn	19 33 40.7	+0.5
WB0	Warramunga Arr	26.03	164	P	P	19 37 19.8	-1.2
WB0				IAmb	IAmb	19 37 33.9	
	comp=Z,7.3nm,1.4s						
WRA	Warramunga Arr	26.18	164	P	P	19 37 21.6	-0.8
	comp=Z,0.4nm,0.4s,baz=342,slow=10,SNR=6.0						
ASAR	Alice Springs	29.65	167	P	P	19 37 51.5	-1.9
	comp=Z,0.1nm,0.3s,baz=354,slow=7.9,SNR=3.4						
MK31	Makanchi Array	56.38	324	P	P	19 41 28.9	+0.3
MKAR	Makanchi Array	56.38	324	P	P	19 41 28.9	+0.3

	comp=Z,0.4nm,0.4s,baz=122,slow=7.7,SNR=11						
MAKZ	Makanchi	56.57	324	P	P	19 41 29.4	-0.6
MAKZ				IAmb	IAmb	19 41 42.1	
	comp=Z,2.0nm,1.1s						
KURK	Kurchatov	60.52	327	P	P	19 41 57.5	+0.2
KURK	Kurchatov	60.52	327	IAmb	IAmb	19 41 58.1	
	comp=Z,1.6nm,0.6s						
KURBB	Kurchatov Arra	60.52	327	P	P	19 41 57.5	+0.2
	comp=Z,0.7nm,0.5s,baz=127,slow=7.0,SNR=5.5						
BVAR	Borovoye Array	66.11	326	P	P	19 42 34.6	+0.3
	comp=Z,0.6nm,0.7s,baz=185,slow=16,SNR=3.6						

IDC 11 19:41:37.4±5.4**,8°.27S×127°.80E,h211^{km}**±67^{km}**,mb3.4**/1**, mb1 3.0**/5**,mb1mx2.8**/30**,mbtmp3.4**/5**,MS2.1**/1**,Ms1 2.1**/1**, ms1mx1.8**/21**,Error ellipse: s-maj=70.1km s-min=47.7km az=69.0,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	4.52	244	P	Pn	19 42 46.2	+0.2
	2.5nm,0.3s,baz=135,slow=19,SNR=2.2						
FITZ	Fitzroy Crossi	10.00	192	P	Pn	19 43 55.5	-0.9
	0.1nm,0.3s,baz=33,slow=12,SNR=7.6						
FITZ				S	S	19 45 48.0	-0.5
	0.1nm,0.3s,baz=352,slow=16,SNR=1.2						
WRA	Warramunga Arr	13.22	152	P	Pn	19 44 38.4	+1.0
	0.1nm,0.3s,baz=332,slow=12,SNR=4.6						
WRA				S	S	19 46 53.9	-10
	0.1nm,0.3s,baz=334,slow=20,SNR=5.2						
ASAR	Alice Springs	16.39	160	P	Pn	19 45 15.9	-0.1
	0.1nm,0.3s,baz=344,slow=11,SNR=7.1						
LEM	Lembang	20.06	273	LR	LR	19 55 50.0	
	comp=Z,5.5nm,20.8s,baz=132,slow=42						
STKA	Stephens Creek	26.77	153	P	P	19 46 57.6	-0.2
	2.0nm,1.0s,baz=330,slow=14,SNR=2.9						

IDC 11 19:56:28.0±2.0**,5°.42N×124°.48E,h0^{km},mb3.5**/5**, mb1 3.7**/5**,mb1mx3.4**/44**,mbtmp3.5**/5**,Error ellipse: s-maj=261.5km s-min=19.9km az=64.0,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.00	159	P	P	20 02 12.8	+0.9
	0.3nm,0.4s,baz=338,slow=9.8,SNR=3.8						
ASAR	Alice Springs	30.34	163	P	P	20 02 41.2	-0.4
	0.3nm,0.6s,baz=339,slow=7.4,SNR=8.0						
STKA	Stephens Creek	40.52	157	P	P	20 04 08.1	-0.9
	2.4nm,1.1s,baz=326,slow=7.3,SNR=1.8						
MKAR	Makanchi Array	54.90	326	P	P	20 06 00.9	+0.3
	0.2nm,0.4s,baz=126,slow=7.8,SNR=11						
KURBB	Kurchatov Arra	59.12	328	P	P	20 06 29.7	-0.6
	0.2nm,0.4s,baz=131,slow=6.3,SNR=4.7						

*DNK **11** 20:11:53.1±2.4, 51°.60N×16°.07E, h0^{km}±146^{km}*
*PRU **11** 20:11:53.9±0.0, 51°.54N×16°.15E, h0^{km}*
*IDC **11** 20:11:54.4±0.9, 51°.49N×16°.13E, h0^{km}, mb1 3.4/6, mb1mx3.1/63, mbtmp3.3/6, ML2.5/6, Error ellipse: s-maj=17.3km s-min=7.8km az=106.0*
*BGR **11** 20:11:54.5±0.2, 51°.51N×16°.13E, h1^{km}, ML3.0/19, Error ellipse: s-maj=2.2km s-min=1.1km az=43.0*
*VIE **11** 20:11:55.0±0.8, 51°.42N×16°.12E, h0^{km}, mb2.7/8, ml2.7/8, Error ellipse: s-maj=7.9km s-min=4.2km az=29.0 72 km WNW of Wroclaw Suspected Mining induced.*
ISC 11 20:11:52.3±0.7**,51°.55N**±0°.02×**16°.15E**±0°.02**,h0^{km},n63, σ1^{s}27**/125**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.72	173	ePg	Pb	20 12 07.1	-0.5
KSP				eSg	Sg	20 12 16.3	+1.0
KSP	Ksiaz	0.72	173	ePg	Pb	20 12 07.2	-0.5
KSP				eSg	Sg	20 12 16.5	+1.2
CHVC	Chvalec	0.97	184	ePG	Pb	20 12 11.9	-0.1
CHVC				eSG	Sg	20 12 24.4	+1.0
	comp=Z,71nm,0.6s						
OSTC	Ostas	1.00	178	ePG	Pb	20 12 12.6	+0.1
OSTC				eSG	Sb	20 12 25.7	-0.5
	comp=Z,79nm,0.3s						
UPC	Upice	1.05	185	ePG	Pb	20 12 13.2	-0.2
UPC				eSG	Sb	20 12 27.4	-0.3
	comp=Z,84nm,0.2s						
DPC	Dobruska-Polom	1.21	175	ePG	Pb	20 12 16.0	-0.1
DPC				eSG	Sg	20 12 31.4	+0.3
	comp=Z,69nm,0.6s						
DPC	Dobruska-Polom	1.21	175	ePg	Pb	20 12 16.0	-0.1
DPC				eSg	Sg	20 12 31.8	+0.7
PVCC	Panska Ves	1.43	225	ePG	Pb	20 12 20.3	+0.4
PVCC				eSG	Sn	20 12 39.3	+0.2
	comp=Z,144nm,0.3s						
PVCC	Panska Ves	1.43	225	ePn	Pg	20 12 19.9	+0.2
PVCC				ePg	Pb	20 12 20.7	+0.8
PVCC				eSg	Sn	20 12 39.6	+0.5
KRLC	Kraliky	1.53	165	ePG	Pb	20 12 21.7	+0.1
KRLC				eSG	Sg	20 12 41.7	+0.2
	comp=Z,91nm,0.5s						
BRG	Berggiesshubel	1.55	245	ePn	Pb	20 12 21.8	0.0
BRG				eSg	Sg	20 12 42.7	+0.7
BRG	Berggiesshubel	1.55	245	Pg	Pg	20 12 22.6	+0.6
BRG				Sg	Sg	20 12 42.8	+0.8
BRG				Amp		20 12 43.7	
	comp=Z,59nm,0.3s						
RUE	Ruedersdorf	1.74	303	ePn	Pn	20 12 24.2	+0.5
RUE				eSn	Sn	20 12 46.7	+0.2
RUE				eSg	Sg	20 12 50.4	+2.3
GKP	Gorka Klasztor	1.84	21	eSg	Sg	20 12 55.7	+4.2
FBE	Freiberg	1.87	251	ePg	Pg	20 12 28.6	+0.5
FBE				eSg	Sg	20 12 52.4	+0.1
PRU	Pruhonice	1.87	214	ePN	Pn	20 12 25.5	-0.1
PRU				ePG	Pb	20 12 27.0	-0.3
PRU				eSG	Sb	20 12 51.8	+0.5
	comp=Z,49nm,0.4s						
PRU	Pruhonice	1.87	214	ePn	Pn	20 12 26.4	+0.8
PRU				eSg	Sg	20 12 52.1	-0.3
MORC	Moravsky Berou	1.99	153	ePN	Pn	20 12 27.7	+0.5
MORC				eSG	Sb	20 12 54.7	+0.1
MORC	Moravsky Berou	1.99	153	ePn	Pn	20 12 27.8	+0.6
MORC				eSg	Sg	20 12 56.3	+0.2
CLL	Collm	1.99	264	ePn	Pn	20 12 27.0	-0.1
CLL				i Pg	Pg	20 12 30.5	+0.2
CLL				i		20 12 33.3	
CLL				eSg	Sg	20 12 57.0	+0.9
	comp=Z,46nm,0.7s						
CLL	Collm	1.99	264	ePn	Pn	20 12 27.3	+0.2
CLL				ePg	Pg	20 12 30.5	+0.2
CLL				eSn	Sn	20 12 52.3	-0.4
CLL				eSg	Sg	20 12 56.2	+0.1
OKC	Ostrava-Krasne	2.13	143	ePg	Pg	20 12 34.0	+0.8
OKC				eSg	Sg	20 13 00.5	-0.3
VRAC	Vranov	2.27	173	Pn	Pn	20 12 32.0	+1.0
	comp=Z,0.9nm,0.3s,baz=355,slow=16,SNR=15						
VRAC				Lg	Lg	20 13 03.7	
	comp=Z,6.0nm,0.3s,baz=76,slow=17,SNR=9.6						
VRAC	Vranov	2.27	173	ePN	Pn	20 12 31.7	+0.7
VRAC				eSG	Sg	20 13 04.6	-0.4
VRAC	Vranov	2.27	173	ePn	Pn	20 12 31.9	+0.9
VRAC				eSg	Sg	20 13 05.2	+0.2
LNIZ	Loecknitz	2.28	329	ePn	Pn	20 12 32.1	+1.0
LNIZ				eSg	Sg	20 13 07.2	+1.8
TREC	Trest	2.30	191	eSg	Sg	20 13 06.0	-0.1
KRUC	Moravsky	2.50	176	ePN	Pn	20 12 35.0	+0.8
KRUC				eSG	Sg	20 13 12.5	0.0
KRUC	Moravsky	2.50	176	ePn	Pn	20 12 35.4	+1.2
KRUC				eSg	Sg	20 13 12.3	-0.2
TANN	Tannenbergstha	2.60	245	ePn	Pn	20 12 36.2	+0.6
TANN				ePg	Pg	20 12 42.7	+0.7
TANN				eSg	Sg	20 13 15.7	0.0
OJC	Ojcow	2.67	119	ePg	Pg	20 12 43.7	+0.3
OJC				eSn	Sn	20 13 08.2	-1.3
OJC				eSg	Sg	20 13 19.3	+1.4
OJC	Ojcow	2.67	119	ePg	Pg	20 12 43.8	+0.3
OJC				eSg	Sg	20 13 19.6	+1.7
WERD	Werda	2.67	247	ePn	Pn	20 12 37.5	+0.9
WERD				eSg	Sg	20 13 19.0	+0.9
NKC	Novy Kostel	2.69	242	ePN	Pn	20 12 37.6	+0.7
NKC				ePG	Pg	20 12 43.5	-0.4
NKC				eSG	Sg	20 13 21.3	+2.5
	comp=Z,58nm,0.5s						
NKC	Novy Kostel	2.69	242	ePn	Pn	20 12 37.6	+0.7
KHC	Kasperske Hory	2.93	215	ePN	Pn	20 12 40.6	+0.4
KHC				ePG	Pb	20 12 46.7	+1.2
KHC				eSN	Sn	20 13 15.5	-0.6
KHC				eSG	Sg	20 13 26.7	+0.2
	comp=Z,16nm,0.6s						
CKRC	Cesky Krumlov	2.98	204	ePN	Pn	20 12 43.1	+2.2
CKRC				ePG	Pg	20 12 49.1	-0.3
CKRC				eSG	Sg	20 13 28.6	+0.5
	comp=Z,24nm,0.4s						
MOX	Moxa	3.00	254	ePn	Pn	20 12 42.5	+1.4
MOX				ePg	Pg	20 12 49.7	-0.1
MOX				eSg	Sg	20 13 29.8	+1.1
GEC2	GERESS Array S	3.14	211	ePn	Pn	20 12 44.3	+1.2
GEC2				eSg	Sg	20 13 31.5	-1.5
GERES	GERESS Array B	3.14	211	Pn	Pn	20 12 44.6	+1.6
	comp=Z,1.0nm,0.3s,baz=34,slow=12,SNR=21						
GERES				Pg	Pb	20 12 50.4	+1.5
	comp=Z,2.3nm,0.3s,baz=28,slow=18,SNR=29						
GERES				Lg	Lg	20 13 31.2	
	comp=Z,6.6nm,0.3s,baz=30,slow=28,SNR=12						
SMOL	Smolenice	3.15	164	ePG	Pg	20 12 54.2	+1.5
SMOL				eSG	Sg	20 13 34.0	+0.5
WET	Wettzell	3.20	222	ePn	Pn	20 12 44.6	+0.8
LANS	Liptovska Anna	3.21	137	ePG	Pg	20 12 55.2	+1.4
LANS				eSG	Sg	20 13 37.5	+2.2
MODS	Modra-Piesok	3.27	167	ePG	Pg	20 12 55.5	+0.7
MODS				eSG	Sg	20 13 36.6	-0.5
VYHS	Vyhne	3.52	150	ePN	Pn	20 12 48.8	+0.6
VYHS				ePG	Pg	20 13 01.8	+2.1
VYHS				eSG	Sg	20 13 47.1	+1.9
CONA	Conrad Observa	3.63	183	i Pn	Pn	20 12 51.0	+1.1
	comp=Z,1.0nm,0.1s						
CONA				eSg	Sg	20 13 47.7	-1.3
	comp=Z,12nm,0.3s						
BSD	Bornholm Skovb	3.64	349	i S	Sn	20 13 31.0	-2.6
MOA	Molln	3.91	199	i Pn	Pn	20 12 54.6	+1.1
	comp=Z,0.7nm,0.1s						
MOA				eSg	Sg	20 13 57.3	-0.4
	comp=Z,24nm,0.7s						
ARSA	Arzberg	4.33	186	Sg	Sg	20 14 12.0	+0.7
	comp=Z,13nm,0.5s						
LUNU	Lund	4.39	340	i P	Pn	20 13 00.3	+0.1
LUNU				i S	Sn	20 13 49.4	-2.5
BLEU	Blekinge	4.76	358	i P	Pn	20 13 06.3	+1.1
KBA	Koelnbreinsper	4.84	203	ePn	Pn	20 13 07.7	+1.2
	comp=Z,2.2nm,0.3s						
KBA				Sg	Sg	20 14 28.7	+1.0
	comp=Z,11nm,0.5s						
SOKA	Soboth	4.94	189	eSg	Sg	20 14 30.4	-0.3
	comp=Z,1.3nm,0.3s						
DEL	Delary	5.11	346	i P	Pn	20 13 10.2	+0.2
DEL				i S	Sn	20 14 07.0	-2.6
WATA	Walderalm	5.17	217	ePn	Pn	20 13 11.7	+0.7
	comp=Z,0.6nm,0.1s						
WTTA	Wattenberg	5.21	216	i Pn	Pn	20 13 13.0	+1.4
	comp=Z,0.6nm,0.2s						
WTTA				Sg	Sg	20 14 41.7	+2.2
	comp=Z,4.1nm,0.4s						
SQTA	Sankt Quirin	5.41	219	ePn	Pn	20 13 15.7	+1.4
	comp=Z,2.0nm,0.2s						
DAVA	Damuels	5.91	226	i Pn	Pn	20 13 21.8	+0.5
	comp=Z,0.7nm,0.2s						
DAVA				eSg	Sg	20 15 04.4	+2.2
	comp=Z,3.4nm,0.4s						
DAVOX	Davos/Dischmat	6.30	223	Pn	Pn	20 13 28.5	+1.9
	comp=Z,0.2nm,0.3s,baz=41,slow=20,SNR=3.1						
DAVOX				Lg	Lg	20 15 09.3	
	comp=Z,0.3nm,0.3s,baz=143,slow=20,SNR=2.0						
BORU	Boraas	6.40	343	i S	Sn	20 14 39.3	-2.2
HFS	Hagfors	8.71	352	Pn	Pn	20 13 58.2	-1.2
	comp=Z,0.1nm,0.3s,baz=178,slow=14,SNR=1.7						
FINES	FINESS Array B	11.31	25	Pn	Pn	20 14 34.6	-0.4
	comp=Z,0.1nm,0.3s,baz=224,slow=11,SNR=1.1						
FINES				Sn	Sn	20 16 35.5	-6.5
	comp=Z,0.1nm,0.3s,baz=207,slow=18,SNR=1.6						
ARCES	ARCESS Array B	18.57	10	Pn	P	20 16 08.7	-1.8
	baz=196,slow=12,SNR=1.2						

*IDC **11** 20:18:05.6±2.8, 32°.34S×179°.41W, h0^{km}, mb3.3/2, mb1 3.6/3, mb1mx3.6/26, mbtmp3.5/3, ML3.9/1, Error ellipse: s-maj=67.3km s-min=44.5km az=112.0*
*WEL **11** 20:18:21.5±1.2, 33°S±23°×18°0W±3°8, h144^{km}±62^{km}, M3.9/10, mB4.3/6, ML4.4/6, MLv4.2/10, Mw(mB)3.5/6, Error ellipse: s-maj=0.1km s-min=0.0km az=118.4*
ISC 11 20:18:15.7±1.2**,32°.8S**±0°.2×**179°.5W**±0°.4**,h150^{km},n23, σ2^{s}76**/37**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.78	22	P	Pn	20 19 11.5	-1.5
GLKZ				S	Sn	20 19 55.9	-1.7
MXZ	Matakaoa Point	5.08	200	P	Pn	20 19 28.7	-1.3
MXZ				S	Sn	20 20 24.3	-3.8
WMGZ	Waiomatatini S	5.29	198	P	Pn	20 19 32.8	0.0
WMGZ				S	Sn	20 20 32.3	-0.9
HAZ	Te Kaha	5.42	203	P	Pn	20 19 35.1	+0.6
HAZ				S	Sn	20 20 36.6	+0.5
PKGZ	Pakihiroa	5.45	200	P	Pn	20 19 35.6	+0.6
PKGZ				S	Sn	20 20 34.5	-2.5
PUZ	Puketiti	5.57	198	P	Pn	20 19 39.5	+2.9
PUZ				S	Sn	20 20 35.3	-4.5
RUGZ	Raukumara Rang	5.64	203	P	Pn	20 19 39.1	+1.4
RUGZ				S	Sn	20 20 39.8	-2.0
TWGZ	Tauwhareparae	5.75	200	P	Pn	20 19 42.7	+3.7
TWGZ				S	Sn	20 20 42.4	-1.7
CNGZ	Carnagh Statio	5.97	197	P	Pn	20 19 44.5	+2.6
TKGZ	Te Karaka	6.03	200	P	Pn	20 19 44.4	+1.7
TKGZ				S	Sn	20 20 47.9	-2.9
URZ	Urewera	6.10	206	Pn	Pn	20 19 43.1	-0.5
	2.2nm,0.3s,baz=122,slow=22,SNR=14						
URZ				Sn	Sn	20 20 50.1	-2.4
	1.2nm,0.3s,baz=288,slow=19,SNR=2.3						
URZ	Urewera	6.10	206	P	Pn	20 19 43.8	+0.1
URZ				S	Sn	20 20 48.7	-3.8
RIGZ	Rimuhau	6.30	200	P	Pn	20 19 48.3	+2.0
RIGZ				S	Sn	20 20 53.5	-3.8
SNGZ	Shannon Statio	6.50	202	P	Pn	20 19 50.2	+1.3
KNZ	Kokohu	6.62	199	P	Pn	20 19 51.0	+0.5
KNZ				S	Sn	20 21 01.6	-3.3
RAHZ	Arahi	6.70	203	P	Pn	20 19 53.3	+1.7
RAHZ				S	Sn	20 21 04.9	-2.0
MTHZ	Maungataniwha	6.73	205	P	Pn	20 19 52.4	+0.4
MTHZ				S	Sn	20 21 06.8	-0.7
WHHZ	Waihua	6.80	202	S	Sn	20 21 17.3	+8.1
NMHZ	Naumai	6.96	204	P	Pn	20 19 56.2	+1.1
ARHZ	Aropaoanui	7.04	202	P	Pn	20 19 56.7	+0.5
ARHZ				S	Sn	20 21 13.0	-2.1
ASAR	Alice Springs	41.73	270	P	P	20 25 57.4	+7.3
	0.2nm,0.6s,baz=107,slow=7.6,SNR=1.5						
WRA	Warramunga Arr	42.94	276	P	P	20 26 07.0	+7.2
	0.6nm,0.9s,baz=115,slow=7.8,SNR=5.1						
FINES	FINESS Array B	146.89	338	PKPbc	PKiKP	20 37 47.3	+5.3
	1.3nm,0.6s,baz=43,slow=3.4,SNR=9.5						

*IDC **11** 20:21:26.0±10.0, 30°.51S×178°.80W, h80^{km}±96^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.4/22, mbtmp3.7/4, ML3.0/1, Error ellipse: s-maj=77.3km s-min=51.9km az=168.0*
ISC 11 20:21:38.0±1.0**,30°.60S**±0°.08×**179°.01E**±0°.10**,h35^{km},n36, σ2^{s}83**/55**,mb3.8**/3**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.98	64	P	Pn	20 22 22.6	0.0
RIZ	Raoul Island	2.98	64	P	Pn	20 22 22.9	+0.2
RIZ				S	Sn	20 22 57.7	+0.5
MXZ	Matakaoa Point	6.97	185	P	Pn	20 23 23.8	+6.2
MXZ				S	Sn	20 24 36.5	+0.8
HAZ	Te Kaha	7.21	188	P	Pn	20 23 23.6	+2.7
HAZ				S	Sn	20 24 44.8	+3.2
WMGZ	Waiomatatini S	7.22	184	P	Pn	20 23 21.7	+0.7
WMGZ				S	Sn	20 24 44.0	+2.2
PKGZ	Pakihiroa	7.32	186	P	Pn	20 23 23.6	+1.2
PKGZ				S	Sn	20 24 45.0	+0.8
RUGZ	Raukumara Rang	7.43	188	P	Pn	20 23 26.7	+2.6
RUGZ				S	Sn	20 24 48.7	+1.6
PUZ	Puketiti	7.48	185	P	Pn	20 23 26.9	+2.2
PUZ				S	Sn	20 24 47.5	-0.8
TWGZ	Tauwhareparae	7.61	186	S	Sn	20 24 52.5	+1.0
URZ	Urewera	7.80	191	P	Pn	20 23 26.5	-2.5
	0.2nm,0.3s,baz=127,slow=20,SNR=1.9						
URZ				S	Sn	20 24 57.6	+1.6
	3.4nm,0.3s,baz=122,slow=20,SNR=3.3						
URZ	Urewera	7.80	191	P	Pn	20 23 26.3	-2.7
URZ				S	Sn	20 24 57.9	+1.8
CNGZ	Carnagh Statio	7.90	185	P	Pn	20 23 30.6	+0.3
MUGZ	Murupara	8.08	193	P	Pn	20 23 39.7	+7.0
MUGZ				S	Sn	20 25 08.4	+5.6
RIGZ	Rimuhau	8.16	187	P	Pn	20 23 36.0	+2.1
RIGZ				S	Sn	20 24 58.3	-6.6
SNGZ	Shannon Statio	8.28	189	P	Pn	20 23 37.9	+2.3
SNGZ				S	Sn	20 25 08.0	+0.1
PRGZ	Paritu Road	8.36	186	P	Pn	20 23 40.6	+3.9
PRGZ				S	Sn	20 25 05.3	-4.5
KNZ	Kokohu	8.48	187	P	Pn	20 23 36.6	-1.6
KNZ				S	Sn	20 25 08.8	-3.8
MHGZ	Mahia Peninsul	8.59	186	P	Pn	20 23 41.0	+1.2
MHGZ				S	Sn	20 25 09.7	-5.7
HIZ	Hauiti	8.61	202	P	Pn	20 23 52.6	+13
BKZ	Black Stump Fm	8.80	193	P	Pn	20 23 47.0	+4.3
BKZ				S	Sn	20 25 23.4	+2.8
ARHZ	Aropaoanui	8.80	190	P	Pn	20 23 47.2	+4.5
ARHZ				S	Sn	20 25 18.7	-2.0
TMVZ	Te Maari	8.92	197	P	Pn	20 23 50.0	+5.5
ETVZ	East Tongariro	8.94	197	P	Pn	20 23 50.9	+6.2
KWHZ	Kaweka Forest	9.06	193	P	Pn	20 23 49.5	+3.2
KWHZ				S	Sn	20 25 28.3	+1.3
BHHZ	Black Hill Sta	9.20	194	P	Pn	20 23 51.2	+3.1
BHHZ				S	Sn	20 25 34.2	+3.8
KRHZ	Kereru	9.28	193	P	Pn	20 23 50.7	+1.4
KRHZ				S	Sn	20 25 33.7	+1.2
KAHZ	Kahuranaki	9.34	190	P	Pn	20 23 50.3	+0.1
KAHZ				S	Sn	20 25 30.0	-4.0
PNHZ	Pukenui	9.58	193	P	Pn	20 23 54.9	+1.5
PNHZ				S	Sn	20 25 37.0	-2.7
PXZ	Pawanui	9.58	190	P	Pn	20 23 54.3	+1.0
PXZ				S	Sn	20 25 34.8	-4.8
HOWZ	Holdsworth Sta	10.66	194	P	Pn	20 24 08.7	+0.5
HOWZ				S	Sn	20 25 53.3	-13
MTW	Mount Morrison	10.92	194	P	Pn	20 24 10.5	-1.1
MTW				S	Sn	20 26 06.6	-6.0
THZ	Tophouse	12.18	202	P	Pn	20 24 29.1	+0.1
THZ				S	Sn	20 26 42.3	-1.3
STKA	Stephens Creek	31.92	258	P	P	20 28 01.6	+1.3
	1.5nm,0.8s,baz=103,slow=14,SNR=3.6						
ASAR	Alice Springs	40.52	269	P	P	20 29 12.5	-1.5
	0.3nm,0.7s,baz=112,slow=9.1,SNR=2.8						
WRA	Warramunga Arr	41.53	274	P	P	20 29 20.4	-1.8
	0.6nm,0.3s,baz=111,slow=7.9,SNR=14						
FINES	FINESS Array B	144.40	338	PKPbc	PKPbc	20 40 51.7	-17
	6.2nm,0.8s,baz=60,slow=4.2,SNR=17						

*IDC **11** 20:24:54.8±1.7, 39°.22N×21°.63E, h0^{km}, mb3.7/3, mb1 3.5/5, mb1mx3.3/36, mbtmp3.5/5, ML2.7/2, Error ellipse: s-maj=38.4km s-min=24.7km az=133.0*
*ATH **11** 20:24:55.5, 39°.13N×21°.64E, h22^{km}±1^{km}, ML2.9/19, Error ellipse: s-maj=1.4km s-min=0.6km az=106.0*
*TIR **11** 20:24:55.5, 39°.15N×21°.62E, h9^{km}±2^{km}, Md3.2, Ml3.1*
*THE **11** 20:24:56.1, 39°.14N×21°.62E, h11^{km}±1^{km}, ML3.0/9, Error ellipse: s-maj=1.2km s-min=0.5km az=60.0*
*BEO **11** 20:24:58.8±0.9, 39°.36N×21°.98E, h0^{km}, ML2.7/5*
ISC 11 20:24:56.0±0.9**,39°.14N**±0°.01×**21°.63E**±0°.02**,h14^{km}**±7^{km}**, n95,σ1^{s}31**/144**,mb3.6**/3**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	Evrytania	0.27	149	P	Pg	20 25 01.4	-0.3
EVR				S	Sg	20 25 05.3	-0.2
	6µm,0.3s						
EVR	Evrytania	0.27	149	P	Pg	20 25 01.3	-0.3
EVR				S	Sg	20 25 05.8	+0.3
EVR				AML	AML	20 25 06.0	
	comp=N,11212µm,0.3s						
EVR				AML	AML	20 25 06.7	
	comp=E,11033µm,0.3s						
MAKR	Makrakomi, Fth	0.41	108	P	Pb	20 25 04.6	-0.5
MAKR				S	Sb	20 25 10.6	-0.6
MAKR	Makrakomi, Fth	0.41	108	P	Pb	20 25 04.4	-0.6
MAKR				S	Sb	20 25 10.2	-1.0
MAKR				AML	AML	20 25 13.1	
	comp=N,4553µm,0.4s						
MAKR				AML	AML	20 25 13.2	
	comp=E,5359µm,0.2s						
THL	Klokotos Trika	0.52	35	P	Pb	20 25 06.1	-0.7
THL				S	Sb	20 25 14.3	+0.1
	comp=E,1µm,0.3s						
THL	Klokotos Trika	0.52	35	P	Pg	20 25 05.9	-0.3
THL				S	Sb	20 25 13.6	-0.5
THL				AML	AML	20 25 15.2	
	comp=N,1707µm,0.3s						
THL				AML	AML	20 25 15.5	
	comp=E,2646µm,0.3s						
AGG	Agios Georgios	0.56	102	P	Pb	20 25 06.9	-0.7
AGG				S	Sb	20 25 15.5	+0.1
	comp=E,2µm,0.3s						
AGG	Agios Georgios	0.56	102	P	Pg	20 25 06.7	-0.2
AGG				S	Sb	20 25 15.0	-0.5
AGG				AML	AML	20 25 16.4	
	comp=N,4723µm,0.3s						
AGG				AML	AML	20 25 17.0	
	comp=E,5179µm,0.3s						
EFP	Efpalio	0.75	163	P	Pg	20 25 09.8	-0.7
EFP				S	Sb	20 25 21.3	+0.5
	comp=E,2µm,0.3s						
EFP	Efpalio	0.75	163	P	Pg	20 25 09.6	-0.9
EFP				S	Sb	20 25 20.4	-0.4
EFP				AML	AML	20 25 23.3	
	comp=N,3555µm,0.3s						
EFP				AML	AML	20 25 23.4	
	comp=E,3829µm,0.3s						
LRSO	Larissa Observ	0.79	48	P	Pb	20 25 11.1	-0.4
JAN	Janina	0.79	311	P	Pb	20 25 11.2	-0.4
JAN				S	Sb	20 25 23.0	+0.8
JAN				AML	AML	20 25 24.1	
	comp=E,1378µm,0.2s						
JAN				AML	AML	20 25 27.5	
	comp=N,2171µm,0.2s						
TSLK	Tsoukalades, L	0.82	248	P	Pb	20 25 12.1	0.0
TSLK				S	Sb	20 25 23.1	0.0
	comp=N,970nm,0.4s						
TSLK	Tsoukalades, L	0.82	248	P	Pb	20 25 11.9	-0.2
KPRO	Kipourio	0.84	346	P	Pg	20 25 11.5	-0.8
KPRO				S	Sb	20 25 24.0	+0.5
	comp=N,1µm,0.3s						
KPRO	Kipourio	0.84	346	P	Pg	20 25 11.4	-0.9
KPRO				S	Sb	20 25 24.4	+0.8
KPRO				AML	AML	20 25 26.0	
	comp=N,2166µm,0.3s						
KPRO				AML	AML	20 25 27.4	
	comp=E,2242µm,0.4s						
LKD2	Lefkada island	0.84	245	P	Pb	20 25 12.2	-0.2
LKD2	Lefkada island	0.84	245	P	Pb	20 25 12.1	-0.2
LKD2				AML	AML	20 25 29.2	
	comp=E,1756µm,0.4s						
LKD2				AML	AML	20 25 31.0	
	comp=N,2331µm,0.3s						
LKD2	Lefkada island	0.84	245	P	Pb	20 25 12.2	-0.2
	baz=245						
LKD2				S	Sb	20 25 23.9	+0.5
	baz=245						
NYDR	Nydri-Lefkada	0.84	240	P	Pg	20 25 12.0	-0.4
TRIZ	Trizonia	0.85	156	P	Pg	20 25 11.6	-0.8
TRIZ				S	Sb	20 25 24.4	+0.6
TRIZ	Trizonia	0.85	156	P	Pg	20 25 11.6	-0.8
TRIZ				S	Sb	20 25 23.8	+0.1
EVGI	Lefkada island	0.92	236	P	Pg	20 25 13.2	-0.6
EVGI	Lefkada island	0.92	236	P	Pg	20 25 12.9	-0.9
LAKA	Lakka	0.94	163	P	Pg	20 25 13.1	-1.1
LAKA	Lakka	0.94	163	P	Pg	20 25 13.0	-1.1
LAKA				S	Sb	20 25 26.9	+0.4
LAKA				AML	AML	20 25 32.4	
	comp=N,2492µm,0.5s						
LAKA				AML	AML	20 25 34.1	
	comp=E,2287µm,0.5s						
DRAG	Dragano-Lefkad	0.94	241	P	Pg	20 25 13.6	-0.7
DRAG				S	Sn	20 25 28.0	-0.1
DRAG	Dragano-Lefkad	0.94	241	P	Pg	20 25 13.5	-0.7
DLFA	Delphi	0.95	134	P	Pg	20 25 13.3	-1.0
DLFA				S	Sb	20 25 26.6	-0.1
DLFA				AML	AML	20 25 27.6	
	comp=E,1077µm,0.3s						
DLFA				AML	AML	20 25 30.4	
	comp=N,1546µm,0.3s						
ALIK	Aliki, Aigiali	0.96	157	P	Pg	20 25 13.7	-0.8
FSK	Fiskardo	1.08	231	P	Pg	20 25 15.6	-1.2

FSK				S	Sn	20 25 31.6	+0.2
	comp=N,725nm,0.4s						
FSK	Fiskardo	1.08	231	P	Pg	20 25 15.5	-1.2
IGT	Igoumenitsa	1.08	292	P	Pg	20 25 16.2	-0.6
IGT	Igoumenitsa	1.08	292	P	Pn	20 25 16.6	-0.1
	baz=292						
IGT				S	Sn	20 25 32.6	+1.0
	baz=292						
RLS	Riolos of Patr	1.09	187	P	Pn	20 25 16.8	-0.1
RLS				S	Sn	20 25 31.8	+0.1
	comp=N,388nm,0.5s						
RLS	Riolos of Patr	1.09	187	P	Pg	20 25 16.4	-0.6
RLS				S	Sn	20 25 31.7	-0.1
RLS				AML	AML	20 25 34.8	
	comp=E,769μm,0.4s						
RLS				AML	AML	20 25 37.0	
	comp=N,829μm,0.5s						
PENT	Pentalofos	1.12	340	P	Pg	20 25 16.9	-0.7
PENT				AML	AML	20 25 42.9	
	comp=E,462μm,0.4s						
PENT				AML	AML	20 25 43.6	
	comp=N,792μm,0.6s						
KZN	Kozani	1.17	5	P	Pb	20 25 17.6	-0.4
KZN	Kozani	1.17	5	P	Pb	20 25 17.2	-0.8
KZN				AML	AML	20 25 36.4	
	comp=E,2110μm,0.7s						
KZN				AML	AML	20 25 38.8	
	comp=N,1199μm,0.3s						
KLV	Kalavryta, Ach	1.17	160	P	Pb	20 25 17.1	-0.9
KLV				AML	AML	20 25 37.2	
	comp=N,430μm,0.5s						
KLV				AML	AML	20 25 43.4	
	comp=E,427μm,0.6s						
ATAL	Atalanti	1.17	112	P	Pb	20 25 17.9	-0.2
ATAL				AML	AML	20 25 35.6	
	comp=N,514μm,0.4s						
ATAL				AML	AML	20 25 36.8	
	comp=E,243μm,0.4s						
LKR	Lokris	1.18	114	P	Pb	20 25 17.7	-0.3
LKR				AML	AML	20 25 36.1	
	comp=N,598μm,0.2s						
LKR				AML	AML	20 25 38.8	
	comp=E,656μm,0.2s						
DRO	Drossia	1.19	177	P	Pb	20 25 18.3	-0.1
DRO				S	Sn	20 25 34.3	+0.1
	comp=E,848nm,0.6s						
DRO	Drossia	1.19	177	P	Pb	20 25 18.2	-0.2
VLS	Valsamata	1.26	221	P	Pn	20 25 18.5	-0.7
VLS				AML	AML	20 25 44.1	
	comp=N,788μm,0.4s						
VLS				AML	AML	20 25 44.2	
	comp=E,728μm,0.3s						
LSK	Leskovik	1.28	322	P	Pg	20 25 20.2	-0.5
	baz=323						
LSK				S	Sn	20 25 39.4	+2.8
	baz=323						
LSK				AMP			
	comp=E,1.9nm,0.7s,baz=323						
KEF4	Livadi, Kephal	1.29	227	P	Pn	20 25 19.4	-0.2
PSDA	Pessada-Kefalo	1.31	219	P	Pn	20 25 19.5	-0.5
NEST	Nestorio	1.35	341	P	Pb	20 25 20.8	-0.3
THAL	Thalero	1.37	143	P	Pb	20 25 21.3	0.0
THAL				AML	AML	20 25 44.0	
	comp=N,1014μm,0.2s						
THAL				AML	AML	20 25 44.9	
	comp=E,1570μm,0.5s						
KEF3	Kipouria, Keph	1.37	227	P	Pn	20 25 20.1	-0.6
SRN	Sarande	1.46	301	P	Pg	20 25 23.8	-0.3
	baz=301						
SRN				S	Sg	20 25 44.3	+1.2
	baz=301						
SRN				AMP			
	comp=N,0.7nm,0.4s,baz=301						
LTK	Loutraki	1.53	136	P	Pn	20 25 23.5	+0.5
LTHK	Lithakia	1.56	204	P	Pb	20 25 24.5	-0.2
VIL2	Platees	1.58	125	P	Pb	20 25 25.3	+0.2
VIL2				S	Sg	20 25 46.8	-0.1
VIL2				AML	AML	20 25 52.1	
	comp=N,416μm,0.3s						
VIL2				AML	AML	20 25 55.2	
	comp=E,856μm,0.4s						
KBN	Korca	1.61	337	P	Pg	20 25 27.9	+0.8
	baz=337						
KBN				S	Sg	20 25 49.1	+1.1
	baz=337						
KBN				AMP			
	comp=N,0.8nm,0.8s,baz=337						
FNA	Florina	1.65	353	P	Pb	20 25 25.5	-0.7
FNA	Florina	1.65	353	P	Pb	20 25 25.9	-0.3
	baz=354						
FNA				S	Sg	20 25 50.1	+0.9
	baz=354						
OHR	Ohrid	2.07	342	*i* Pn	Pg	20 25 35.0	-0.7
OHR	Ohrid	2.07	342	*e*Pn	Pb	20 25 33.2	-0.1
OHR				*e*Sn	Sb	20 25 58.8	-0.1
DION	Dionisos Attik	2.09	120	P	Pn	20 25 31.6	+0.9
KNT	Kendrikon	2.24	25	P	Pn	20 25 33.3	+0.7
VAY	Valandovo	2.29	18	*e*Pn	Pn	20 25 32.3	-1.1
VAY				*e*Sn	Sn	20 26 00.8	-0.6
STIP	Stip	2.58	9	*i* Pn	Pn	20 25 39.4	+2.0
PHP	Peshkopia	2.70	341	P	Pb	20 25 43.0	-1.1
	baz=341						
PHP				AMP			
	comp=N,0.2nm,0.9s,baz=341						
BOSS	Bosilegrad	3.41	11	*e*Pn	Pn	20 25 49.7	+0.9
BOSS				*e*Sn	Sn	20 26 27.5	-1.6
BCI	Bajram Curri	3.43	340	P	Pb	20 25 54.0	-2.6
	baz=341						
BARS	Barje	3.67	2	*e*Pn	Pn	20 25 53.8	+1.4
BARS				*e*Sn	Sn	20 26 34.2	-1.3
VTS	Vitosha	3.68	19	*e*Pn	Pn	20 25 52.8	+0.2
VTS				*e*Sn	Sn	20 26 32.5	-3.3
SELS	Selova	4.09	355	*e*Pn	Pn	20 25 58.7	+0.5
ZAPS	Zavoj	4.20	10	*e*Pn	Pn	20 26 01.1	+1.5
SJES	Sjenica	4.30	344	*e*Pn	Pn	20 26 04.2	+3.1
IVAS	Ivanjica	4.57	346	*e*Pn	Pn	20 26 06.2	+1.5
IDI	Anoyia	4.64	145	Pn	Pn	20 26 08.7	+2.9
	comp=N,0.3nm,0.3s,baz=328,slow=15,SNR=1.8						
IDI				Sn	Sn	20 27 01.2	+1.7
	comp=N,1.0nm,0.3s,baz=147,slow=18,SNR=2.0						
ZAGS	Zajecar	4.69	5	*e*Pn	Pn	20 26 07.3	+1.0
STON	Ston	4.77	323	*e*Pn	Pn	20 26 08.1	+0.8
STON				Sn	Sn	20 27 00.5	-1.8
GRUS	Gruza	4.79	352	*e*Pn	Pn	20 26 09.0	+1.3
BBLS	Lazići	5.01	341	*e*Pn	Pn	20 26 13.8	+3.0
LSTV	Lastovo	5.10	317	*e*Pn	Pn	20 26 11.9	0.0
LSTV				Sn	Sn	20 27 07.9	-2.7
DIVS	Divibare	5.10	347	*e*Pn	Pn	20 26 14.8	+2.7
MAKA	Makarska	5.41	321	*e*Pn	Pn	20 26 16.5	+0.3
MAKA				Sn	Sn	20 27 15.4	-2.8
RICI	Ricice	5.51	324	*e*Pn	Pn	20 26 18.4	+0.7
RICI				Sn	Sn	20 27 19.2	-1.6
HVAR	Hvar	5.62	318	*e*Pn	Pn	20 26 19.1	+0.1
HVAR				Sn	Sn	20 27 20.8	-2.5
ZIRJ	Zirje	6.37	317	*e*Pn	Pn	20 26 29.0	-0.4
ZIRJ				Sn	Sn	20 27 38.1	-3.8
MORI	Morici	6.48	319	*e*Pn	Pn	20 26 31.6	+0.6
MORI				Sn	Sn	20 27 41.7	-3.0
DUGI	Dugi Otok	6.91	317	*e*Pn	Pn	20 26 36.3	-0.5
DUGI				Sn	Sn	20 27 51.7	-3.5
UDBI	Udbina	6.94	323	*e*Pn	Pn	20 26 37.7	+0.5
UDBI				Sn	Sn	20 27 54.1	-1.9
PLIT	Plitvice	7.27	324	*e*Pn	Pn	20 26 41.8	0.0
PLIT				Sn	Sn	20 28 01.7	-2.4
NVLJ	Novalja	7.40	319	*e*Pn	Pn	20 26 43.2	-0.3
NVLJ				Sn	Sn	20 28 04.6	-2.6
RABC	Rab	7.58	320	*e*Pn	Pn	20 26 46.1	+0.1
RABC				Sn	Sn	20 28 08.2	-3.4
BRJN	Brijuni	8.22	317	*e*Pn	Pn	20 26 54.9	+0.2
BRJN				Sn	Sn	20 28 22.8	-4.5
BRTR	Keskin Array B	9.31	83	Pn	Pn	20 27 12.3	+2.4
	comp=N,0.1nm,0.3s,baz=254,slow=11,SNR=1.5						
TORD	Torodi Ar. Bea	31.33	220	P	P	20 31 17.2	+1.2
	comp=N,0.4nm,0.5s,baz=26,slow=9.4,SNR=6.8						
MKAR	Makanchi Array	44.06	59	P	P	20 33 04.0	+0.6
	comp=N,0.4nm,0.6s,baz=281,slow=7.5,SNR=6.5						
ZALV	Zalesovo Beam	44.40	49	P	P	20 33 06.4	+0.5
	comp=N,0.8nm,0.3s,baz=295,slow=11,SNR=2.2						

IDC 11 20:27:11.2±4.2, 3°.60S×130°.80E, h0km, mb3.3/2, mb1 3.4/3, mb1mx3.3/22, mbtmp3.3/3, ML2.7/1, Error ellipse: s-maj=313.3km s-min=29.9km az=72.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.61	168	Pn	Pn	20 31 04.0	-1.7
	0.0nm,0.3s,baz=349,slow=12,SNR=1.6						
ASAR	Alice Springs	20.18	172	P	P	20 31 48.2	+0.7
	0.6nm,0.6s,baz=344,slow=9.3,SNR=11						
MKAR	Makanchi Array	65.86	326	P	P	20 37 58.7	0.0
	0.2nm,0.4s,baz=105,slow=7.3,SNR=4.8						

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*SOF **11** 20:43:30.7, 42°.08N×25°.95E, h17km, MD2.4*
*ISK **11** 20:43:30.9, 42°.11N×25°.88E, h8km, ML2.7/13*
*DDA **11** 20:43:33.6, 42°.01N×26°.05E, h7km±3km, ML2.4*
ISC 11 20:43:30.9±1.3, 42°.12N±0°.03×25°.93E±0°.03, h10km±12km, n31, σ0ˢ75/37, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIM	Dimitrovgrad	0.30	257	Pg	Pg	20 43 37.2	+0.2
DIM	Dimitrovgrad	0.30	257	P	Pg	20 43 37.3	+0.2
JMB	Yambol	0.60	54	Pg	Pg	20 43 42.9	+0.4
JMB	Yambol	0.60	54	P	Pg	20 43 43.1	+0.6
KDZ	Kurdzhali	0.61	220	Pg	Pb	20 43 43.9	+0.3
KDZ	Kurdzhali	0.61	220	P	Pb	20 43 43.9	+0.3
EDRB	Edirne	0.66	114	PG	Pb	20 43 44.6	0.0
PLD	Plovdiv	0.92	270	PG	Pg	20 43 48.2	-0.3
KIRK	Kırklareli	0.93	111	*i* P	Pb	20 43 49.4	+0.2
KIRK				*i* S	Sb	20 44 01.3	-0.3
RZN	Rozhen	1.00	245	Pg	Pg	20 43 50.3	0.0
RZN	Rozhen	1.00	245	P	Pg	20 43 50.1	-0.2
RDO	Rodhopi	1.01	197	PG	Pb	20 43 50.5	-0.1
RDO				SG	Sn	20 44 04.8	-0.7
UKOP	Uzunkopru-Edir	1.12	152	PN	Pn	20 43 53.3	+0.7
ARMN	Kirklareli, Me	1.14	102	*i* P	Pn	20 43 53.0	0.0
ARMN				*i* S	Sn	20 44 08.3	-0.4
SZH	Strazhica	1.15	0	P	Pn	20 43 53.9	+0.8
SZH	Strazhica	1.15	0	P	Pn	20 43 53.8	+0.7
ALN	Alexandroupoli	1.22	176	PN	Pn	20 43 54.7	+0.7
ALN				SN	Sn	20 44 11.8	+1.2
ENEZ	Enez	1.39	173	PN	Pg	20 43 57.0	-0.6
KESN	Edirne-Kesan	1.41	156	*i* P	Pg	20 43 58.5	+0.6
KESN				*i* S	Sn	20 44 15.7	0.0
KESN				IAML		20 44 18.0	
	comp=N,92nm,0.3s						
KESN				IAML		20 44 20.0	
	comp=E,79nm,0.3s						
CAVK	Edirne/Enez-Ca	1.44	173	*i* P	Pg	20 43 59.0	+0.6
CAVK				IAML		20 44 24.0	
	comp=N,90nm,1.1s						
CAVK				IAML		20 44 32.0	
	comp=E,114nm,1.6s						
ERIK	Erikli-Kesan	1.51	163	PN	Pb	20 43 58.6	-0.4
VIZE	Kirklareli, Vi	1.52	110	*i* P	Pg	20 43 59.7	-0.5
VIZE				IAML		20 44 24.0	
	comp=N,28nm,0.3s						
MAR3	Marsite Statio	1.71	143	PN	Pb	20 44 01.9	-0.6
MAR6	Marsite Statio	1.73	144	PN	Pb	20 44 02.2	-0.6
MAR2	Marsite Statio	1.74	143	PN	Pb	20 44 02.1	-0.9
GELI	Tayfur-Gelibol	1.77	166	PN	Pb	20 44 02.7	-0.7
GELI				SN	Sb	20 44 25.5	-0.1
LPK	Lapseki	1.85	160	PN	Pb	20 44 03.8	-1.0
VTS	Vitosha	2.06	285	P	Pn	20 44 07.0	+1.2
CTKS	Kestanelik-??a	2.12	114	PN	Pb	20 44 07.9	-1.5
OUR	Ouranopolis	2.31	220	PN	Pn	20 44 09.8	+0.8
STIP	Stip	2.83	263	*i* Pn	Pb	20 44 19.4	-2.1

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*UPA **11** 20:48:45.8±0.7, 8°.64N×83°.05W, h39km±2km, MW4.1*
*UCR **11** 20:48:45.4±1.9, 8°.68N×83°.06W, h47km±9km, MW3.8*
ISC 11 20:48:45.7±1.3, 8°.64N±0°.04×83°.05W±0°.03, h42km±8km, n24, σ0ˢ68/40, 12C-8D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDITO	Canoas	0.19	110	⇑*i*P	Pn	20 48 52.7	-0.4
CDITO				*e*S	Sn	20 48 58.2	-0.2
CDITO	Canoas	0.19	110	⇑*i*P		20 48 52.7	
CDITO				*e*S		20 48 58.2	
EDSV	San Vito	0.20	24	*e*P	Pn	20 48 52.9	-0.4
EDSV				*e*S	Sn	20 49 00.2	+1.5
MLIR3	Monte Lirio, C	0.27	56	*e*P	Pn	20 48 53.2	-0.8
MLIR3				*e*S	Sn	20 49 00.3	+0.5
MLIR3	Monte Lirio, C	0.27	56	*e*P		20 48 53.2	
MLIR3				*e*S		20 49 00.3	
LESP3	La Esperanza,	0.35	131	*e*P	Pn	20 48 54.2	-0.5
LESP3	La Esperanza,	0.35	131	*e*P		20 48 54.2	
PIRO	Carate, Puerto	0.36	230	*e*P	Pn	20 48 54.1	-0.7
PIRO				*e*S	Sn	20 49 02.1	+0.8
PIRO	Carate, Puerto	0.36	230	⇓*i*P	Pn	20 48 54.3	-0.6
PIRO				*e*S	Sn	20 49 01.2	0.0
PIRO	Carate, Puerto	0.36	230	⇓*i*P		20 48 54.3	
PIRO				*e*S		20 49 01.2	
BRU2	Volcan	0.39	67	⇑*i*P	Pn	20 48 54.6	-0.7
BRU2				*e*S	Sn	20 49 02.8	+0.7
BRU2	Volcan	0.39	67	⇑*i*P		20 48 54.6	
BRU2				*e*S		20 49 02.8	
PTPM	Petroterminale	0.47	158	⇑*i*P	Pn	20 48 56.1	0.0
PTPM				*e*S	Sn	20 49 03.6	+0.2
PTPM	Petroterminale	0.47	158	⇑*i*P		20 48 56.1	
PTPM				*e*S		20 49 03.6	
BC3P	Paso Ancho	0.47	68	⇑*i*P	Pn	20 48 56.7	+0.3
BC3P				*e*S	Sn	20 49 04.0	+0.1
BC3P	Paso Ancho	0.47	68	⇑*i*P		20 48 56.7	
BC3P				*e*S		20 49 04.0	
BCO2	Palmira	0.53	81	⇑*i*P	Pn	20 48 56.5	-0.6
BCO2				*e*S	Sn	20 49 05.5	+0.4
BCO2	Palmira	0.53	81	⇑*i*P		20 48 56.5	
BCO2				*e*S		20 49 05.5	
LNBQ3	Los Naranjos,	0.62	76	*e*P	Pn	20 48 58.4	+0.1
LNBQ3				*e*S	Sn	20 49 07.5	+0.2
LNBQ3	Los Naranjos,	0.62	76	*e*P		20 48 58.4	
LNBQ3				*e*S		20 49 07.5	
DVD	David	0.63	109	*e*P	Pn	20 48 57.8	-0.4
DVD				*e*S	Sn	20 49 07.5	+0.3
DVD	David	0.63	109	*e*P		20 48 57.8	
DVD				*e*S		20 49 07.5	
SRBA	San Rafael, Bu	0.66	333	*e*P	Pn	20 48 57.3	-1.5
LOCO3	Loma Colorada,	0.67	110	⇓*e*P	Pn	20 48 58.4	-0.4
LOCO3				*e*S	Sn	20 49 08.5	+0.3
LOCO3	Loma Colorada,	0.67	110	⇓*e*P		20 48 58.4	
LOCO3				*e*S		20 49 08.5	
LOMA3	Las Lomas, Chi	0.69	107	*e*P	Pn	20 48 58.5	-0.5
LOMA3				*e*S	Sn	20 49 09.0	+0.4
LOMA3	Las Lomas, Chi	0.69	107	*e*P		20 48 58.5	
LOMA3				*e*S		20 49 09.0	
GUAL3	Gualaca, Chiri	0.76	98	*e*P	Pn	20 48 59.5	-0.4
GUAL3	Gualaca, Chiri	0.76	98	*e*P		20 48 59.5	
CHIR3	Chiriqui UPA,	0.76	109	⇓*e*P	Pn	20 48 59.5	-0.4
CHIR3	Chiriqui UPA,	0.76	109	⇓*e*P		20 48 59.5	
CHGR2	Aguacate	0.95	72	⇑*e*P	Pn	20 49 02.3	-0.2
CHGR2				*e*S	Sn	20 49 14.8	-0.2
CHGR2	Aguacate	0.95	72	⇑*e*P		20 49 02.3	
CHGR2				*e*S		20 49 14.8	
PEZE	Perez Zeledon,	0.96	320	*e*P	Pn	20 49 01.6	-1.3
EDDO	Dominical	1.01	307	*e*P	Pn	20 49 04.0	+0.6
RIMA	Rio Macho	1.38	325	*e*P	Pn	20 49 07.7	-1.0
LCR2	La Lucha 2	1.44	319	*e*P	Pn	20 49 08.4	-1.1
HDC	Heredia	1.71	322	*e*P	Pn	20 49 13.8	+0.7
HDC				*e*S	Sn	20 49 35.0	+1.1
HDC	Heredia	1.71	322	*e*P		20 49 13.8	
HDC				*e*S		20 49 35.0	
JTS	Las Juntas de	2.49	311	*e*P	Pn	20 49 23.9	+0.2
JTS				⇓*e*S	Sn	20 49 53.2	+0.2
JTS	Las Juntas de	2.49	311	*e*P		20 49 23.9	
JTS				⇓*e*S		20 49 53.2	

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*UPA **11** 20:56:15.8±0.8, 10°.11N×84°.14W, h1km±2km, MW4.1*
*NEIC **11** 20:56:16.3±1.4, 9°.98N±0°.02×84°.12W±0°.02, h10km±3km, ML3.3/20, ML3.3(UCR), Error ellipse: s-maj=3.7km s-min=0.9km az=214.0*
*INET **11** 20:56:16.3, 9°.98N×84°.02W, h13km, ML2.0, MW2.7*
ISC 11 20:56:15.5±1.0, 10°.02N±0°.06×84°.08W±0°.05, h15km±5km, n20, σ0ˢ69/31, 2C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HDC	Heredia	0.04	243		Pg	20 56 17.9	-0.5
HDC				Sg	Sg	20 56 20.4	-0.1
HDC	Heredia	0.04	243	*e*P	Pg	20 56 18.9	+0.4
HDC				*i* S	Sg	20 56 20.5	+0.1
HDC	Heredia	0.04	243	*e*P		20 56 18.9	
HDC				*i* S		20 56 20.5	
CVTR	Volcan Turrial	0.31	90		Pb	20 56 23.4	+0.4
CVTR				IAML		20 56 29.9	
	comp=E,3μm,0.5s						
RIMA	Rio Macho	0.33	140		Pb	20 56 23.2	+0.1
RIMA				Sg	Sg	20 56 27.8	+0.7
RIMA				IAML		20 56 28.2	
	comp=N,3μm,0.2s						
PEZE	Perez Zeledon,	0.75	148		Pg	20 56 29.9	-0.1
PEZE				IAML		20 56 44.7	
	comp=E,2μm,0.4s						
COVE	Coope Vega, Sa	0.77	335	Pg	Pn	20 56 31.4	-0.4
COVE				IAML		20 56 44.0	
	comp=N,1μm,0.3s						
JTS	Las Juntas de	0.90	287		Pg	20 56 33.2	+0.2
JTS	Las Juntas de	0.90	287	⇑*i*P	Pg	20 56 33.3	+0.2
JTS				*e*S	Sg	20 56 45.3	+0.4
JTS	Las Juntas de	0.90	287	⇑*i*P		20 56 33.3	
JTS				*e*S		20 56 45.3	
SRBA	San Rafael, Bu	1.05	138		Pb	20 56 35.3	-0.2
SRBA				IAML		20 56 50.1	
	comp=E,1μm,0.2s						
SRBA				IAML		20 56 50.5	
	comp=N,1μm,0.2s						
RIOS	Rincon, Osa	1.42	157	Pn	Pb	20 56 41.6	-0.1
HZTE	Horizontes, Gu	1.65	295	Pn	Pb	20 56 45.4	-0.1
CNI2	El Empalme, Bo	1.69	110	*e*P	Pb	20 56 46.0	-0.3
CNI2				*e*S	Sg	20 57 09.0	-1.0
CNI2	El Empalme, Bo	1.69	110	*e*P		20 56 46.0	
CNI2				*e*S		20 57 09.0	
MLIR3	Monte Lirio, C	1.74	134	*e*P	Pg	20 56 48.6	-0.3
MLIR3				*e*S	Sg	20 57 12.9	+1.5
MLIR3	Monte Lirio, C	1.74	134	*e*P		20 56 48.6	
MLIR3				*e*S		20 57 12.9	
PIRO	Carate, Puerto	1.76	155	*e*P	Pb	20 56 48.0	+0.5
PIRO				*e*S	Sg	20 57 13.1	+0.8
PIRO	Carate, Puerto	1.76	155	*e*P		20 56 48.0	
PIRO				*e*S		20 57 13.1	
BRU2	Volcan	1.83	132	Pn	Pb	20 56 48.8	+0.1
BRU2	Volcan	1.83	132	*e*P	Pb	20 56 49.7	+1.0
BRU2				*e*S	Sg	20 57 15.7	+1.1
BRU2	Volcan	1.83	132	*e*P		20 56 49.7	
BRU2				*e*S		20 57 15.7	
CDITO	Canoas	1.86	140	Pn	Pb	20 56 48.9	-0.4
CDITO	Canoas	1.86	140	*e*P	Pb	20 56 49.3	+0.1
CDITO				*e*S	Sg	20 57 15.1	-0.5
CDITO	Canoas	1.86	140	*e*P		20 56 49.3	
CDITO				*e*S		20 57 15.1	
BC3P	Paso Ancho	1.88	129	*e*P	Pb	20 56 50.6	+1.0
BC3P				*e*S	Sg	20 57 16.9	+0.9
BC3P	Paso Ancho	1.88	129	*e*P		20 56 50.6	
BC3P				*e*S		20 57 16.9	
PTPM	Petroterminale	2.16	147	*e*P	Pb	20 56 53.8	-0.4
PTPM				*e*S	Sg	20 57 23.4	-1.6
PTPM	Petroterminale	2.16	147	*e*P		20 56 53.8	
PTPM				*e*S		20 57 23.4	

NNC 11 21:03:17.0±7.9, 38°.54N×74°.77E, h0km, mb3.6, mpv3.2, 3C-2D, Error ellipse: s-maj=60.1km s-min=42.0km az=162.0, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.09	357	⇑Pg	Pb	21 04 30.6	+0.5
	2.0nm,0.4s						
AAK				⇑Lg	Lg	21 05 28.0	
	8.8nm,1.0s						
TKM2	Tokmak 2	4.42	8	⇑Pg	Pg	21 04 39.8	-1.9
	11nm,1.4s						
KK09	Karatay Array	5.60	326	⇓Pn	Pn	21 04 40.8	-0.8
	1.1nm,0.5s,baz=140,slow=13						
KK09				⇓Sn	Sn	21 05 47.8	+1.1
	2.1nm,0.5s,baz=141,slow=22						

RSNC 11 21:21:56.3±1.1, 6°.81N×73°.13W, h148km±4km, ML3.4, Mw3.7, 2C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	195	⇓*i*P	Pn	21 22 16.3	-0.5
BARC				*e*S	Sn	21 22 31.5	-0.8
BARC				*i*		21 22 34.0	
	comp=Z,431nm,0.2s						
BRRC	Barranca, Sant	0.65	297	⇑*i*P	Pn	21 22 18.2	-0.1
BRRC				*e*S	Sn	21 22 35.5	+0.4
BRRC				*i*		21 22 38.8	
	comp=Z,201nm,0.2s						
PAMC	Pamplona, Colo	0.67	39	*e*P	Pn	21 22 19.1	+0.1
PAMC				*e*S	Sn	21 22 36.6	+0.2
PAMC				*i*		21 22 38.2	
	comp=Z,299nm,0.5s						
RUSC	La Rusia	0.92	177	⇓*e*P	Pn	21 22 20.2	-0.7
RUSC				*e*S	Sn	21 22 38.8	-0.7
RUSC				*i*		21 22 40.0	
	comp=Z,122nm,0.3s						
PTBC	PUERTO BERRIO,	1.35	258	*e*P	Pn	21 22 23.2	-1.1
PTBC				*e*S	Sn	21 22 44.6	-0.9
PTBC				*i*		21 22 51.6	
	comp=Z,364nm,0.4s						
TAMC	Tame, Arauca	1.38	106	⇓*i*P	Pn	21 22 24.5	-0.1
TAMC				*i*		21 22 45.2	
	comp=Z,131nm,0.3s						
TAMC				*e*S	Sn	21 22 46.1	0.0
OCAC	Ocana	1.43	352	*e*P	Pn	21 22 25.0	-0.2
OCAC				*e*S	Sn	21 22 46.2	-1.2
OCAC				*i*		21 22 51.1	
	comp=Z,779nm,0.2s						
SPBC	San Pablo de B	1.49	219	*e*P	Pn	21 22 25.3	-0.5
SPBC				*e*S	Sn	21 22 47.1	-1.1
SPBC				*i*		21 22 54.5	
	comp=Z,432nm,0.2s						
ZARC	Zaragoza, Cauc	1.85	292	*e*P	Pn	21 22 28.8	-0.8
ZARC				*e*S	Sn	21 22 54.8	-0.3
ZARC				*i*		21 23 02.1	
	comp=Z,193nm,0.2s						
NORC	Norcasia	2.13	234	*e*P	Pn	21 22 32.4	-0.6
NORC				*e*S	Sn	21 22 60.0	-1.2
NORC				*i*		21 23 04.0	
	comp=Z,195nm,0.2s						
SMLC	San Martn de	2.19	335	*e*P	Pn	21 22 32.7	-0.8
SMLC				*e*S	Sn	21 23 02.0	-0.3
SMLC				*i*		21 23 04.4	
	comp=Z,336nm,0.3s						
ROSC	El Rosal	2.29	211	*e*P	Pn	21 22 36.0	+0.7
ROSC				*e*S	Sn	21 23 04.4	-0.7
ROSC				*i*		21 23 14.1	
	comp=Z,248nm,0.4s						
HELC	Santa Helena	2.47	256	*e*P	Pn	21 22 37.7	+0.4
HELC				*e*S	Sn	21 23 08.8	-0.1
HELC				*i*		21 23 15.5	
	comp=Z,184nm,0.3s						
UREC	San Jos de Ur	2.56	291	*e*P	Pn	21 22 36.2	-2.0
UREC				*e*S	Sn	21 23 07.1	-3.4
UREC				*i*		21 23 21.1	
	comp=Z,119nm,0.2s						
SOCV	Socops	2.68	57	*e*P	Pn	21 22 37.7	-1.9
SOCV				*e*S	Sn	21 23 09.4	-3.7
GUY2C	Guyana, Caldas	2.73	235	*e*P	Pn	21 22 40.8	+0.1
GUY2C				*e*S	Sn	21 23 15.7	+0.8
GUY2C				*i*		21 23 23.5	
	comp=Z,158nm,0.3s						
VILC	Villavicencio,	2.74	192	*e*P	Pn	21 22 39.8	-0.7
VILC				*e*S	Sn	21 23 14.3	-0.4
LL1C	La Loma 1 Cana	2.75	351	*e*P	Pn	21 22 41.7	+1.3
LL1C				*e*S	Sn	21 23 15.0	+0.5
PTGC	Puerto Gaitan,	2.78	159	*e*P	Pn	21 22 39.3	-1.6
PTGC				*e*S	Sn	21 23 12.3	-3.0
PTGC				*i*		21 23 13.7	
	comp=Z,59nm,0.3s						
CBOC	Ciudad Bolivar	3.02	252	*e*P	Pn	21 22 44.0	0.0
CBOC				*e*S	Sn	21 23 19.7	-1.2
CBOC				*i*		21 23 31.7	
	comp=Z,52nm,0.7s						
DBBC	Dabeiba	3.07	274	⇑*e*P	Pn	21 22 43.9	-0.7
DBBC				*i*		21 23 45.0	
	comp=Z,270nm,0.6s						
MOTC	Monteria, Cord	3.19	308	*e*P	Pn	21 22 43.5	-2.4
MOTC				*e*S	Sn	21 23 22.3	-2.2
MOTC				*i*		21 23 24.6	
	comp=Z,34nm,0.2s						

SDV	Santo Domingo	3.21	50	eP	Pn	21 22 45.6	-0.9
SDV				eS	Sn	21 23 23.3	-2.1
ANIL	Santa Ana	3.23	225	eP	Pn	21 22 47.4	+0.5
ANIL				eS	Sn	21 23 25.7	-0.3
ANIL				i		21 23 37.6	
	comp=Z,239nm,0.5s						
ORTC	Ortega, Tolima	3.58	216	eP	Pn	21 22 50.5	-0.5
ORTC				eS	Sn	21 23 33.9	+0.3
ORTC				i		21 23 38.7	
	comp=Z,49nm,0.2s						
PLMC	San Jos del P	3.67	239	eP	Pn	21 22 52.1	-0.2
PLMC				eS	Sn	21 23 35.4	-0.3
PLMC				i		21 23 40.9	
	comp=Z,42nm,0.4s						
CVALL	Valledupar, Ce	3.67	358	eP	Pn	21 22 50.9	-1.4
CVALL				eS	Sn	21 23 33.9	-1.9
SJCC	San Jacinto, C	3.68	327	eP	Pn	21 22 50.1	-2.3
SJCC				eS	Sn	21 23 31.9	-4.0
SJCC				i		21 23 35.9	
	comp=Z,60nm,0.6s						
CRJC	Cerrejon, Guaj	4.19	3	eP	Pn	21 22 56.5	-2.6
CRJC				eS	Sn	21 23 45.4	-2.5
CRJC				i		21 23 51.4	
	comp=Z,41nm,0.1s						
YOTC	Yotoco, Valle	4.26	229	eP	Pn	21 22 59.6	-0.5
YOTC				eS	Sn	21 23 49.8	0.0

IDC 11 21:32:09.6±1.6**,4°.53S×129°.45E,h0^{km},mb3.6**/1**, mb1 3.3**/4**,mb1mx3.0**/36**,mbtmp3.2**/4**,ML2.8**/3**,MS3.0**/2**, Ms1 3.0**/2**,ms1mx2.4**/30**,Error ellipse: s-maj=62.3km s-min=28.3km az=79.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.06	27	Pn	Pn	21 33 13.2	+0.1
	1.2nm,0.3s,baz=221,slow=19,SNR=2.4						
SIJI				Sn	Sn	21 33 51.5	-10
	1.6nm,0.3s,baz=253,slow=19,SNR=2.1						
WRA	Warramunga Arr	16.05	163	Pn	Pn	21 35 56.9	0.0
	0.0nm,0.3s,baz=346,slow=13,SNR=2.0						
WRA				LR	LR	21 41 56.6	
	comp=Z,30nm,19.8s,baz=115,slow=37						
ASAR	Alice Springs	19.51	168	P	P	21 36 38.6	0.0
	0.1nm,0.3s,baz=344,slow=9.0,SNR=1.7						
MKAR	Makanchi Array	65.87	326	P	P	21 42 57.2	0.0
	0.4nm,0.5s,baz=111,slow=8.0,SNR=9.8						
MKAR				LR	LR	22 14 23.6	
	comp=Z,18nm,18.3s,baz=326,slow=38						

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*IDC **11** 21:37:37.0±1.5,6°.69N×126°.69E,h0^{km},mb3.6/4, mb1 3.8/4,mb1mx3.3/44,mbtmp3.6/4,MS2.7/2,Ms1 2.8/2, ms1mx2.3/40,Error ellipse: s-maj=33.5km s-min=12.3km az=36.0*

*MAN **11** 21:37:44.2,6°.48N×126°.17E,h16^{km},mb4.5,ML3.3,MS3.2*

ISC 11 21:37:43.8±1.1**,6°.28N**±0°.07×**126°.12E**±0°.09**,h35^{km},n12, σ1^{s}.50**/13**,mb3.6**/4**,3C-2D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.95	326	Pg	Pn	21 38 00.6	-0.1
	378nm,0.3s,baz=116,slow=0.6,SNR=22						
DAV				Lg	Lg	21 38 14.7	
	146nm,0.3s,baz=234,slow=21,SNR=13						
DMPH	Davao City--Mi	1.00	323	⇑eP	Pn	21 38 00.6	-0.8
DMPH				eS	Sn	21 38 15.6	+1.3
GSPH	General Santos	1.18	261	⇓eP	Pn	21 38 03.0	-0.9
KCP	Kidapawan	1.25	305	⇓iP	Pn	21 38 04.5	-0.4
KCP				i S	Sn	21 38 20.4	-0.2
BIPH	Bislig	1.91	7	⇑eP	Pn	21 38 14.2	+0.4
BIPH				eS	Sn	21 38 36.5	-0.1
PAGZ	Pagadian	3.13	300	⇑eP	Pn	21 38 33.8	+3.1
SIJI	Sorong	8.77	144	LR	LR	21 43 23.4	
	comp=Z,48nm,18.9s,baz=212,slow=39						
FITZ	Fitzroy Crossi	24.23	181	P	P	21 42 57.8	+0.3
	0.8nm,0.4s,baz=359,slow=6.6,SNR=1.4						
WRA	Warramunga Arr	27.29	163	P	P	21 43 27.1	+1.9
	0.7nm,0.6s,baz=344,slow=10,SNR=8.2						
CMAR	Chiang Mai Arr	29.12	297	LR	LR	21 55 44.0	
	comp=Z,14nm,19.5s,baz=140,slow=37						
ASAR	Alice Springs	30.72	166	P	P	21 43 56.1	+0.4
	0.2nm,0.3s,baz=347,slow=7.2,SNR=6.7						
MKAR	Makanchi Array	55.13	325	P	P	21 47 10.4	-2.3
	0.6nm,0.5s,baz=112,slow=7.2,SNR=12						

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*IDC **11** 21:44:49.1±1.2,12°.63N×57°.88E,h0^{km},mb3.7/8, mb1 3.9/9,mb1mx3.6/41,mbtmp3.7/9,ML3.9/1,MS3.2/7, Ms1 3.2/7,ms1mx2.9/45,Error ellipse: s-maj=32.0km s-min=26.5km az=48.0*

*NEIC **11** 21:44:51.7±1.4,12°.77N±0°.08×58°.04E±0°.10,h10^{km}±1^{km}, mb4.7/4,Error ellipse: s-maj=17.4km s-min=11.2km az=56.0*

*OMAN **11** 21:44:54.9±0.2,12°.96N×57°.86E,h50^{km},Error ellipse: s-maj=5.5km s-min=1.6km az=314.0*

ISC 11 21:44:52.2±0.7**,12°.84N**±0°.07×**57°.94E**±0°.07**,h16^{km},n33, σ1^{s}.33**/32**,mb3.8**/10**,MS3.1**/6**,Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	3.91	261	P	Pn	21 45 50.9	-0.8
	SNR=40						
SOCY				S	Sn	21 46 34.8	-2.6
SOCY	Socotra	3.91	261	Pn	Pn	21 45 52.1	+0.4
SHAO	Shalim	5.62	337	P	Pn	21 46 15.0	-0.2
	SNR=12						
SHAO				S	Sn	21 47 15.6	-3.8
DMTO	DMTO	5.65	330	P	Pn	21 46 15.7	+0.2
RBK	Rabkut	5.88	323	P	Pn	21 46 17.7	-1.0
JLN	Jalan Bani Buh	9.37	8	P	Pn	21 47 06.1	-0.6
JMDO	Jabal Madar	9.48	1	P	Pn	21 47 08.1	-0.2
	SNR=7.1						
JMDO				S	Sn	21 48 53.4	-1.2
WBK	Wadi Bani Khal	9.77	6	P	Pn	21 47 11.8	-0.3
	SNR=20						
SMDO	Samad	10.17	1	P	Pn	21 47 17.0	-0.7
	SNR=22						
SMDO				S	Sn	21 49 10.5	-1.0
UMZA	Um Al Zommool	10.17	345	P	Pn	21 47 18.2	+0.6
WSAR	Wadi Sarin	10.37	4	Pn	Pn	21 47 20.1	-0.2
	0.8nm,0.3s,baz=226,slow=7.1,SNR=12						
WSAR				LR	LR	21 50 53.0	
	comp=Z,161nm,19.9s,baz=201,slow=34						
WSAR	Wadi Sarin	10.37	4	P	Pn	21 47 20.3	0.0
	SNR=11						
UOSS	Minazif	12.16	353	Pn	Pn	21 47 45.0	+0.2
ATD	Arta Tunnel	14.81	267	Pn	Pn	21 48 22.8	+1.6
MNCI	Minicoy	15.54	105	Pn	Pn	21 48 28.0	-2.7
GEYT	Alibeck	24.99	0	LR	LR	21 59 18.7	
	comp=Z,46nm,18.2s,baz=275,slow=34						
EIL	Elat	27.11	312	LR	LR	22 02 46.8	
	comp=Z,38nm,18.2s,baz=221,slow=40						
BRTR	Keskin Array B	34.30	326	LR	LR	22 06 06.4	
	comp=Z,27nm,19.0s,baz=272,slow=37						
ABKAR	Akbulak array	36.35	2	P	P	21 51 56.4	+1.0
MKAR	Makanchi Array	39.57	26	P	P	21 52 25.5	+2.8
	0.3nm,0.6s,baz=215,slow=6.5,SNR=1.3						
MKAR	Makanchi Array	39.57	26	P	P	21 52 22.6	0.0
CMAR	Chiang Mai Arr	39.81	77	P	P	21 52 26.2	+1.1
	0.5nm,0.4s,baz=271,slow=8.8,SNR=4.6						
ITM	Ithomi	40.27	313	P	P	21 52 29.7	+1.1
ITM				IAmb	IAmb	21 52 43.0	
	comp=Z,25nm,1.2s						
BURAR	Bucovina Array	44.13	328	P	P	21 53 00.3	+0.2
ZALV	Zalesovo Beam	46.19	22	P	P	21 53 16.5	+0.4
	comp=Z,0.5nm,0.4s,baz=198,slow=8.7,SNR=1.7						
ZALV				LR	LR	22 13 54.6	
	comp=Z,51nm,18.3s,baz=60,slow=38						
LBTB	Lobatse	49.09	220	LR	LR	22 11 52.9	
	comp=Z,27nm,19.2s,baz=0.5,slow=33						
SONM	Songino Array	53.21	39	P	P	21 54 10.4	+0.5
	comp=Z,0.4nm,0.8s,baz=225,slow=5.9,SNR=3.6						
FINES	FINESS Array B	53.73	342	P	P	21 54 13.4	+0.1
	comp=Z,5.6nm,1.2s,baz=196,slow=13,SNR=3.6						
TORD	Torodi Ar. Bea	54.70	277	P	P	21 54 21.1	-0.1
	comp=Z,0.4nm,0.8s,baz=79,slow=6.9,SNR=3.2						
SUR	Sutherland	57.29	217	LR	LR	22 18 40.5	
	comp=Z,19nm,19.1s,baz=4.5,slow=36						
SUR	Sutherland	57.29	217	P	P	21 54 39.5	-0.1
SUR				IAmb	IAmb	21 54 49.4	
	comp=Z,7.9nm,1.1s						
WRA	Warramunga Arr	81.90	113	P	P	21 57 10.3	-1.2
	comp=Z,0.7nm,0.8s,baz=300,slow=4.5,SNR=5.4						
ASAR	Alice Springs	82.60	116	P	P	21 57 14.2	-1.0
	comp=Z,0.9nm,0.8s,baz=295,slow=5.1,SNR=10						

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*SOF **11** 21:52:41.7,42°.41N×23°.52E,h10^{km},MD2.5*

*SKO **11** 21:52:42.9,42°.46N×23°.51E,h2^{km}*

*BEO **11** 21:52:42.7±0.3,42°.46N×23°.50E,h5^{km}±2^{km},ML2.2/12*

*ATH **11** 21:52:44.8,42°.27N×23°.44E,h22^{km}±3^{km},ML2.5/5,Error ellipse: s-maj=13.1km s-min=2.2km az=163.0*

*THE **11** 21:52:47.9,42°.12N×23°.46E,h5^{km},ML2.3/5,Error ellipse: s-maj=1.6km s-min=1.0km az=202.0*

ISC 11 21:52:41.1±1.1**,42°.43N**±0°.02×**23°.56E**±0°.02**,h3^{km}**±9^{km}**, n69,σ1^{s}.38**/98**,10C-12D,Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTS	Vitosha	0.31	308	P	Pg	21 52 47.8	+0.7
VTS	Vitosha	0.31	308	⇓iPg	Pg	21 52 47.8	+0.7
VTS				i Sg	Sg	21 52 51.7	+0.6
VTS	Vitosha	0.31	308	ePg	Pg	21 52 47.8	+0.7
VTS				eSg	Sg	21 52 51.8	+0.7
PGB	Panagyurishte	0.46	75	P	Pb	21 52 51.8	-0.1
KKB	Krupnik	0.67	213	P	Pg	21 52 54.7	+0.8
BOSS	Bosilegrad	0.81	275	ePg	Pg	21 52 56.7	+0.2
BOSS				eSg	Sg	21 53 07.1	+0.1
MMB	Musomiste	0.85	172	P	Pb	21 52 58.9	+0.4
PLD	Plovdiv	0.91	111	i Pg	Pn	21 53 00.2	-0.5
PLD				i Sg	Sb	21 53 11.9	0.0
PLD	Plovdiv	0.91	111	ePg	Pn	21 53 01.1	+0.4
PLD				eSg	Sb	21 53 11.9	0.0
ZAPS	Zavoj	1.09	321	ePg	Pg	21 53 01.9	0.0
ZAPS				eSg	Sb	21 53 16.8	-0.4
NVR	Nevrokopi	1.10	168	P	Pn	21 53 03.5	0.0
NVR				S	Sg	21 53 16.0	-0.5
	300nm,0.4s						
NVR	Nevrokopi	1.10	168	P	Pb	21 53 03.3	+0.5
NVR				AML	AML	21 53 21.3	
	comp=N,331μm,0.4s						
NVR				AML	AML	21 53 21.9	
	comp=E,864μm,0.5s						
RZN	Rozhen	1.13	130	P	Pn	21 53 04.2	+0.2
STIP	Stip	1.26	235	i Pg	Pg	21 53 00.9	-4.4
STIP				i Sg	Sg	21 53 16.9	-4.7
SRS	Serrai	1.31	179	P	Pg	21 53 06.8	+0.6
SRS				S	Sg	21 53 21.2	-2.0
	comp=E,130nm,0.3s						
SRS	Serrai	1.31	179	P	Pg	21 53 07.3	+1.1
SRS				AML	AML	21 53 28.3	
	comp=E,239μm,0.2s						
SRS				AML	AML	21 53 29.0	
	comp=N,264μm,0.4s						
SRS	Serrai	1.31	179	i Pg	Pg	21 53 07.4	+1.1
VAY	Valandovo	1.33	214	i Pg	Pg	21 53 07.4	+0.8
VAY				i Sg	Sn	21 53 26.5	+1.7
VAY				eLg	Lg	21 53 26.6	
	comp=E,29nm,0.4s						
VAY	Valandovo	1.33	214	ePg	Pg	21 53 07.4	+0.8
VAY				eSg	Sb	21 53 24.7	+0.5
BARS	Barje	1.35	287	i Pg	Pn	21 53 06.5	-0.3
BARS				i Sg	Sg	21 53 23.6	-0.8
BARS	Barje	1.35	287	ePg	Pn	21 53 06.6	-0.3
BARS	Barje	1.35	287	ePn	Pg	21 53 15.6	+8.7
BARS				eSg	Sg	21 53 23.4	-1.0
BARS				eSn	Sn	21 53 42.0	+17
BLKB	Belogradchik	1.36	332	⇑S	Sn	21 53 26.0	+0.4
KNT	Kendrikon	1.36	202	P	Pn	21 53 07.3	+0.3
KNT				S	Sb	21 53 23.1	-1.9
KNT	Kendrikon	1.36	202	P	Pn	21 53 07.1	+0.1
KNT	Kendrikon	1.36	202	i Pg	Pn	21 53 07.4	+0.3
KNT				i Sg	Sn	21 53 26.6	+1.0
KDZ	Kurdzhali	1.58	119	P	Pg	21 53 11.9	+0.4
BAIL	Bailesti	1.60	354	⇑P	Pg	21 53 13.9	+2.2
BAIL				⇑S	Sg	21 53 33.5	+1.1
KAVA	Kavala	1.60	153	P	Pg	21 53 12.0	+0.3
KAVA				S	Sb	21 53 32.4	+0.6
	comp=E,112nm,0.2s						
KAVA	Kavala	1.60	153	P	Pg	21 53 12.3	+0.5
KAVA				AML	AML	21 53 37.3	
	comp=N,349μm,0.2s						
KAVA				AML	AML	21 53 37.4	
	comp=E,220μm,0.5s						
KVLA	Kavala	1.61	157	P	Pg	21 53 12.6	+0.6
SOH	Sokhos	1.61	186	P	Pb	21 53 11.8	+0.3
SOH				S	Sn	21 53 30.2	-1.7
	comp=E,118nm,0.4s						
SOH	Sokhos	1.61	186	P	Pb	21 53 12.0	+0.4
SOH				AML	AML	21 53 35.4	
	comp=N,332μm,0.4s						
SOH				AML	AML	21 53 37.2	
	comp=E,249μm,0.5s						
SOH	Sokhos	1.61	186	i Pn	Pb	21 53 11.8	+0.3
KOKK	Kokkinochori,	1.64	168	P	Pb	21 53 12.7	+0.7
KOKK				S	Sn	21 53 32.5	0.0
KOKK	Kokkinochori,	1.64	168	P	Pb	21 53 12.5	+0.5
ZAGS	Zajecar	1.69	325	ePg	Pb	21 53 12.9	+0.1
ZAGS				eSg	Sb	21 53 33.9	-0.6
GRG	Griva	1.71	211	P	Pb	21 53 13.6	+0.4
GRG	Griva	1.71	211	i Pn	Pb	21 53 13.6	+0.4
BOVS	Bovan	1.82	312	⇑P	Pb	21 53 14.6	-0.4
BOVS				⇑S	Sn	21 53 36.7	-0.1
BOVS	Bovan	1.82	312	ePg	Pb	21 53 15.0	0.0
BOVS				eSg	Sb	21 53 38.1	-0.1
THE	Thessaloniki	1.85	194	P	Pn	21 53 14.8	+1.1
RDO	Rodhopi	1.96	130	P	Pg	21 53 19.1	+0.5
RDO				S	Sg	21 53 44.2	+0.3
	comp=E,78nm,0.2s						
RDO	Rodhopi	1.96	130	P	Pg	21 53 18.8	+0.3
RDO				AML	AML	21 53 49.5	
	comp=E,132μm,0.2s						
RDO				AML	AML	21 53 50.1	
	comp=N,170μm,0.3s						
SELS	Selova	1.96	294	ePn	Pn	21 53 15.3	0.0
SELS				eSn	Sn	21 53 41.3	+0.8
THAS	Thassos island	2.02	154	P	Pg	21 53 19.4	-0.4
THAS				S	Sn	21 53 41.9	+0.2
THAS	Thassos island	2.02	154	P	Pb	21 53 19.0	+0.6
PLG	Polygyros	2.06	183	P	Pb	21 53 18.4	-0.7
PLG				S	Sn	21 53 41.3	-1.5
PLG	Polygyros	2.06	183	P	Pb	21 53 18.4	-0.7
OUR	Ouranopolis	2.12	171	P	Pn	21 53 18.7	+1.3
OUR	Ouranopolis	2.12	171	P	Pn	21 53 18.6	+1.2
HUMR	Humele	2.34	26	⇑P	Pb	21 53 24.3	+0.4
ALN	Alexandroupoli	2.41	129	P	Pb	21 53 24.7	-0.4
RAZG	Razgrad	2.44	61	⇑P	Pg	21 53 29.0	+1.2
RAZG				⇓S	Sg	21 54 01.6	+2.2
PAIG	Paliouri	2.50	178	P	Pn	21 53 23.6	+0.9
SGRR	Singureni	2.51	44	⇓P	Pg	21 53 28.4	-0.8
GRUS	Gruza	2.54	306	ePn	Pn	21 53 23.6	+0.3
GRUS				eSn	Sn	21 53 54.7	0.0
HERR	Herculane	2.59	342	⇓P	Pn	21 53 24.0	+0.1
HERR				⇓S	Sn	21 53 55.3	-0.6
IVAS	Ivanjica	2.75	296	ePn	Pn	21 53 27.7	+1.5
IVAS				eSn	Sn	21 53 59.7	-0.3
ARR	Arges	3.04	14	⇓P	Pb	21 53 34.4	-1.4
DIVS	Divibare	3.10	304	ePn	Pn	21 53 31.0	+0.1
VOIR		3.19	19	⇓S	Sb	21 54 16.1	-1.7
BZS	Buzias	3.48	337	⇓P	Pn	21 53 36.9	+0.8
MLR	Muntele Rosu	3.51	29	⇓P	Pb	21 53 41.2	-2.7
MLR				⇓S	Sb	21 54 25.1	-1.9
PLOR	Plostina	4.08	32	⇓P	Pb	21 53 48.8	-4.7
VRI	Vrincioaia	4.12	32	⇑P	Pn	21 53 49.1	+4.2
TPGR	Topolog	4.28	54	⇓P	Pb	21 53 53.9	-3.0
CFR	Carcaliu	4.30	49	⇑P	Pb	21 53 52.9	-4.4
ARCR	ARCALIA	4.69	7	⇑S	Sn	21 54 52.0	+4.3

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*IDC **11** 22:05:35.1±0.5,47°.63S×85°.22E,h0^{km},mb4.5/18, mb1 4.5/18,mb1mx4.3/46,mbtmp4.4/18,MS4.0/15, Ms1 4.0/15,ms1mx3.9/24,Error ellipse: s-maj=20.0km s-min=13.9km az=160.0*

*BJI **11** 22:05:36.6±0.0,47°.54S×85°.17E,h10^{km},mB5.3/20, mb4.9/37*

*NEIC **11** 22:05:36.8±1.3,47°.62S±0°.08×85°.2E±0°.1,h10^{km}±1^{km}, mb5.0/46,Error ellipse: s-maj=15.3km s-min=12.1km az=131.0*

*GCMT **11** 22:05:40.8±0.3,47°.89S±0°.03×85°.24E±0°.04,h32^{km}, MW5.0/59,Moment Tensor Solution. s27,c32; s59,c71; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.96±.29; $M_{\theta\theta}$1.80±.23; $M_{\phi\phi}$2.16±.18; $M_{r\theta}$-0.34±.28; $M_{\theta\phi}$2.33±.15; $M_{\phi r}$1.47±.16; Best double couple: $M_0$4.41600×10^{16} NP1:ϕ_s59.00000°,δ42.00000°,λ-64.00000°. NP2: ϕ_s206.00000°,δ53.00000°,λ-111.00000°. Principal axes: T 4.4070, Plg6.0000°, Azm311.0000°; N 0.0180, Plg17.0000°, Azm219.0000°; P -4.4240, Plg72.0000°, Azm60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 22:05:36.6±0.3**,47°.69S**±0°.07×**85°.09E**±0°.06**,h10^{km},n149, σ1^{s}.39**/135**,mb4.9**/61**,MS4.2**/17**,4C-1D,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAF	Port-aux-Franc	10.01	255	Pn	Pn	22 07 56.7	-3.6
AIS	Amsterdam Isla	11.32	328	Pn	Pn	22 08 16.3	-2.1
CRZF	Crozet Islands	22.58	261	P	P	22 10 37.4	+0.5
CASY	Casey	22.92	153	P	P	22 10 41.9	+1.5
CASY				IAmb	IAmb	22 11 02.4	
	comp=Z,54nm,1.1s						
MAW	Mawson	22.98	202	P	P	22 10 41.9	+1.0
	comp=Z,10nm,0.8s,baz=34,slow=14,SNR=11						
MAW				LR	LR	22 17 59.1	
	comp=Z,723nm,20.6s,baz=54,slow=32						
MAW	Mawson	22.98	202	P	P	22 10 42.8	+1.9
H01W2	Cape Leeuwin H	25.12	70	T	T	22 37 05.4	
	baz=230,slow=75,SNR=6.1						
H01W3	Cape Leeuwin H	25.13	70	T	T	22 37 03.2	
	baz=230,slow=75,SNR=6.0						
H01W1	Cape Leeuwin H	25.14	70	T	T	22 37 00.9	
	baz=230,slow=75,SNR=6.8						
SYO	Syowa Base	30.86	210	⇓eP	P	22 11 52.5	0.0
PSA00	Pilbara Seismi	38.17	59	P	P	22 12 54.5	-1.7
PSA00				IAmb	IAmb	22 13 03.9	
	comp=Z,37nm,1.4s						
PSA00	Pilbara Seismi	38.17	59	P	P	22 12 53.8	-2.4
PSA00				IAmb	IAmb	22 13 03.9	
	comp=Z,16nm,1.4s						
WRKA	Warakurna	40.80	72	P	P	22 13 18.3	+0.2
BBOO	Buckleboo	40.90	88	P	P	22 13 18.0	-0.8
BBOO				IAmb	IAmb	22 13 19.2	
	comp=Z,15nm,0.8s						
VNDA	Vanda	41.12	161	P	P	22 13 20.9	+0.7
QSPA	South Pole Qui	42.46	180	P	P	22 13 31.9	+0.4
QSPA				IAmb	IAmb	22 13 37.8	
	comp=Z,16nm,0.8s						
FITZ	Fitzroy Crossi	44.28	62	P	P	22 13 46.2	-0.2
	comp=Z,6.3nm,0.8s,baz=216,slow=9.1,SNR=8.1						
SNAA	Sanae	45.00	207	P	P	22 13 52.6	+0.9
SNAA	Sanae	45.00	207	pP	pP	22 13 57.4	+3.8
SNAA	Sanae	45.00	207	P	P	22 13 52.4	+0.8
	comp=Z,1.1nm,0.8s,baz=151,slow=17,SNR=9.7						
SNAA	Sanae	45.00	207	P	P	22 13 52.7	+1.1
LEM	Lembang	45.03	33	P	P	22 13 54.4	+1.8
	comp=Z,31nm,1.4s						
STKA	Stephens Creek	45.20	91	P	P	22 13 53.4	-0.2
	comp=Z,5.3nm,0.4s,baz=235,slow=6.5,SNR=12						
STKA				PcP	PcP	22 15 33.1	-0.6
	comp=Z,3.0nm,0.8s,baz=315,slow=1.4,SNR=2.2						
STKA				LR	LR	22 28 42.7	
	comp=Z,382nm,21.2s,baz=209,slow=31						
STKA	Stephens Creek	45.20	91	P	P	22 13 52.5	-1.1
ASAR	Alice Springs	45.40	76	P	P	22 13 54.4	-1.0
	comp=Z,10nm,0.7s,baz=222,slow=7.2,SNR=102						
ASAR				PcP	PcP	22 15 33.2	-1.4
	comp=Z,1.6nm,0.7s,baz=215,slow=2.4,SNR=7.1						
ASAR				LR	LR	22 29 46.9	
	comp=Z,325nm,21.1s,baz=228,slow=32						
ASAR	Alice Springs	45.40	76	P	P	22 13 54.8	-0.6
AS31	Alice Springs	45.40	76	P	P	22 13 53.5	-1.8
KLSI		46.05	28	P	P	22 14 01.4	+0.9
	comp=Z,2μmcomp=Z,9.6nm,1.0s						
JAGI	Jajag, Banyuwa	46.21	42	P	P	22 14 02.6	+0.9
	comp=Z,28nm,1.0s						
JAGI	Jajag, Banyuwa	46.21	42	P	P	22 14 01.0	-0.8
JAGI				IAmb	IAmb	22 14 04.2	
	comp=Z,25nm,1.0s						
JAGI	Jajag, Banyuwa	46.21	42	P	P	22 14 03.5	+1.8
	comp=Z,28nm,1.1s						
VNA2	Neumayer--Watz	46.63	207	P	P	22 14 04.9	+0.4
	baz=105,slow=7.3						
VNA2	Neumayer--Watz	46.63	207	pP	pP	22 14 10.2	+3.7
ABJI	Asem Bagus	46.84	41	P	P	22 14 08.3	+1.6
	comp=Z,28nm,0.6s						
VNA1	Neumayer--Stat	47.01	207	P	P	22 14 08.6	+1.2
VNA1	Neumayer--Stat	47.01	207	pP	pP	22 14 13.2	+3.9
VNA3	Neumayer Olymp	47.20	206	P	P	22 14 10.3	+1.3
VNA3	Neumayer Olymp	47.20	206	pP	pP	22 14 14.6	+3.8
PLAI	Plampang	47.59	46	P	P	22 14 13.5	+1.0
	comp=Z,29nm,1.3s						
PLAI	Plampang	47.59	46	P	P	22 14 13.6	+1.0
WRA	Warramunga Arr	48.33	73	P	P	22 14 17.9	-0.4
	comp=Z,17nm,0.9s,baz=223,slow=7.3,SNR=52						
WRA				PcP	PcP	22 15 43.1	-1.9
	comp=Z,2.0nm,0.8s,baz=228,slow=3.4,SNR=6.6						
WRA				LR	LR	22 31 43.0	
	comp=Z,534nm,21.1s,baz=230,slow=32						
WRA	Warramunga Arr	48.33	73	P	P	22 14 17.2	-1.1
WB2	Warramunga Arr	48.33	73	P	P	22 14 16.9	-1.4
WB2				IAmb	IAmb	22 14 18.7	
	comp=Z,24nm,0.9s						
WRAB	Tennant Creek	48.34	73	P	P	22 14 17.3	-1.1
WRAB	Tennant Creek	48.34	73	P	P	22 14 18.4	0.0
WR0	Warramunga Arr	48.44	73	P	P	22 14 17.4	-1.8
WR0				IAmb	IAmb	22 14 19.4	
	comp=Z,21nm,0.9s						
WB0	Warramunga Arr	48.49	72	P	P	22 14 18.3	-1.3
BATI	Baumata	49.48	54	P	P	22 14 26.5	-0.6
	comp=Z,5.7nm,0.3s,baz=38,slow=3.9,SNR=6.8						
BOSA	Boshof	49.48	270	P	P	22 14 27.1	-0.1
	comp=Z,2.9nm,0.7s,baz=127,slow=4.5,SNR=6.6						
BOSA				LR	LR	22 30 37.7	
	comp=Z,306nm,21.4s,baz=170,slow=30						
BOSA	Boshof	49.48	270	P	P	22 14 25.4	-1.8
BOSA				IAmb	IAmb	22 14 38.5	
	comp=Z,8.3nm,0.9s						
EDFI	Ende, Flores	49.64	51	P	P	22 14 28.5	0.0
	comp=Z,21nm,1.4s						
GSI	Gunungsitoli	50.00	16	P	P	22 14 30.5	-0.5
SOEI	Soe	50.18	54	P	P	22 14 31.7	-0.9
SOEI				IAmb	IAmb	22 14 41.5	
	comp=Z,26nm,0.9s						
LBTB	Lobatse	51.60	274	P	P	22 14 44.4	+1.1
	comp=Z,1.8nm,0.6s,baz=153,slow=6.8,SNR=2.2						
LBTB	Lobatse	51.60	274	IAmb	IAmb	22 14 47.9	
	comp=Z,4.6nm,0.9s						
KAPI	Kappang	51.86	46	P	P	22 14 44.1	-1.0
KAPI				IAmb	IAmb	22 14 45.5	
	comp=Z,20nm,1.2s						
STKI	Sintang	52.82	34	P	P	22 14 53.6	+1.4
	comp=Z,6μmcomp=Z,21nm,0.9s						
ARMA	Armidale	52.86	96	P	P	22 14 52.0	-0.6
ARMA				IAmb	IAmb	22 15 06.3	
	comp=Z,21nm,0.8s						
TTSI	Tana Toraja	53.60	45	P	P	22 14 59.0	+1.0
	comp=Z,2μmcomp=Z,24nm,1.4s						
KSM	Kuching	53.69	32	P	P	22 14 57.4	-1.2
KSM				IAmb	IAmb	22 14 60.0	
	comp=Z,12nm,1.1s						
KSM	Kuching	53.69	32	P	P	22 14 59.8	+1.2
SBUM	Sibu	55.29	34	P	P	22 15 09.1	-1.1
EIDS	Eidsvold	55.75	91	P	P	22 15 12.1	-1.4
EIDS				IAmb	IAmb	22 15 14.5	
	comp=Z,14nm,0.9s						
CTA	Charters Tower	56.08	83	P	P	22 15 15.2	-0.8
	comp=Z,14nm,1.1s,baz=236,slow=8.4,SNR=4.9						
CTAO	Charters Tower	56.08	83	P	P	22 15 14.9	-1.0
CTAO				IAmb	IAmb	22 15 16.8	
	comp=Z,14nm,0.8s						
CTAO	Charters Tower	56.08	83	P	P	22 15 16.2	+0.2
LSZ	Lusaka	56.70	285	P	P	22 15 20.9	+0.3
LSZ				IAmb	IAmb	22 15 32.6	
	comp=Z,11nm,0.8s						
SRIT	Nakonsritamara	57.50	17	P	P	22 15 24.8	-1.1
SRIT				IAmb	IAmb	22 15 26.6	
	comp=Z,30nm,1.2s						
SANI	Sanana	57.55	51	P	P	22 15 27.0	+0.6
TOLI2	Tolitoli	57.70	44	P	P	22 15 25.9	-1.4
TOLI2	Tolitoli	57.70	44	P	P	22 15 28.3	+0.9
FAKI	Fak Fak	60.26	57	P	P	22 15 43.9	-1.3
FAKI	Fak Fak	60.26	57	P	P	22 15 45.6	+0.4
KIBK	Kibwezi	60.67	303	P	P	22 15 48.6	+0.5
TSUM	Tsumeb	60.97	273	P	P	22 15 51.2	+1.0
TSUM				IAmb	IAmb	22 16 02.7	

	comp=Z,9.7nm,1.1s						
SIJI	Sorong	61.39	55	P	P	22 15 52.9	0.0
	comp=Z,2.7nm,0.4s,baz=319,slow=8.1,SNR=5.3						
KMBO	Kilima Mbogo	62.11	303	P	P	22 15 59.5	+1.5
	comp=Z,0.5nm,0.4s,baz=157,slow=5.4,SNR=7.1						
KMBO	Kilima Mbogo	62.11	303	P	P	22 15 58.7	+0.7
SMAI	San Martin Ant	62.63	191	P	P	22 16 00.9	+0.4
BKZ	Black Stump Fm	63.20	119	P	P	22 16 02.9	-1.9
PMG	Port Moresby	64.41	75	P	P	22 16 12.4	-0.6
PMG	Port Moresby	64.41	75	P	P	22 16 14.8	+1.8
PMG	Port Moresby	64.41	75	P	P	22 16 14.7	+1.8
HYB	Hyderabad	65.07	353	*i* P	P	22 16 21.0	+3.8
LODK	Lodwar	66.91	304	P	P	22 16 28.9	-0.3
LODK				IAmb	IAmb	22 16 42.1	
	comp=Z,11nm,1.4s						
CMAR	Chiang Mai Arr	67.01	14	P	P	22 16 28.9	-0.6
	comp=Z,5.2nm,0.9s,baz=212,slow=6.2,SNR=31						
CMAR				LR	LR	22 40 02.5	
	comp=Z,37nm,21.0s,baz=193,slow=31						
CHTO	Chiang Mai	67.36	14	P	P	22 16 31.1	-0.6
CHTO				IAmb	IAmb	22 16 32.3	
	comp=Z,8.3nm,1.1s						
CHTO	Chiang Mai	67.36	14	P	P	22 16 32.6	+0.8
	comp=Z,4.2nm,1.9s						
DZM	Mont Dzumac	68.30	99	*e*P	P	22 16 38.0	0.0
	comp=Z,8.1nm,0.8s						
DZM	Mont Dzumac	68.30	99	*e*LR	LR	22 37 07.3	
	comp=Z,281nm,23.4s						
DZM	Mont Dzumac	68.30	99	P	P	22 16 38.6	+0.5
	comp=Z,5.4nm,0.8s,baz=178,slow=7.9,SNR=4.1						
SANVU	Saraoutou	73.47	95	P	P	22 17 10.4	+1.1
	comp=Z,55nm,1.1s						
KMI	Kunming	74.20	17	⇑P	P	22 17 19.3	+5.7
KMI				pmax	pmax		
	comp=Z,14nm,1.1s						
ODAN	Odare	74.23	2	*e*P	P	22 17 12.1	-1.7
	comp=Z,28nm,0.8s						
RAMN	Ramite	74.31	1	*e*P	P	22 17 11.9	-2.3
	comp=Z,11nm,0.6s						
TAPN	Taplejung	74.73	2	*e*P	P	22 17 15.4	-1.3
PKI	Pulchoki	74.91	0	*e*P	P	22 17 15.7	-2.1
PKIN	Phulchoki	74.92	0	*e*P	P	22 17 16.2	-1.6
DMN	Daman	74.95	0	*e*P	P	22 17 15.8	-2.1
KOLN	Koldanda	75.12	359	*e*P	P	22 17 17.0	-1.9
KKN	Kakani	75.13	0	*e*P	P	22 17 17.6	-1.3
	comp=Z,37nm,1.0s						
GUN	Gumba	75.26	1	*e*P	P	22 17 17.8	-2.0
GKN	Gorkha	75.34	360	*e*P	P	22 17 18.6	-1.5
PYUN	Piuthan	75.47	358	*e*P	P	22 17 19.3	-1.5
	comp=Z,32nm,0.7s						
DANN	Dangsing	75.70	359	*e*P	P	22 17 20.2	-2.1
GYA	Guiyang	76.32	20	⇑P	P	22 17 26.5	+0.9
GYA				pmax	pmax		
	comp=Z,13nm,1.0s						
LSA	Lhasa	77.23	5	P	P	22 17 30.2	-0.9
LSA				IAmb	IAmb	22 17 32.0	
	comp=Z,9.3nm,0.8s						
CD2	Chengdu	80.02	16	P	P	22 17 45.8	-0.2
CD2				pmax	pmax		
	comp=Z,20nm,1.4s						
ENH	Enshi	80.65	21	P	P	22 17 48.9	-0.4
ENH				IAmb	IAmb	22 17 56.3	
	comp=Z,19nm,1.0s						
NIL	Nilore	81.67	350	P	P	22 17 54.4	-0.3
NIL				IAmb	IAmb	22 18 00.6	
	comp=Z,14nm,1.1s						
KBL	Kabul	83.12	347	P	P	22 18 02.3	-0.2
JOW	Kunigami	83.73	38	LR	LR	22 56 19.9	
	comp=Z,27nm,18.8s,baz=145,slow=36						
HRA	Herat	84.24	341	IAmb	IAmb	22 18 19.6	
	comp=Z,7.7nm,0.9s						
NJ2	Nanjing	84.98	28	*e*P	P	22 18 16.2	+4.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
LZH	Lanzhou	85.08	15	*e*P	P	22 18 17.8	+5.5
LZH				pP	pwP	22 18 24.5	+5.1
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
KSH	Kashi	87.21	353	P	P	22 18 23.7	+1.0
KSH				sP	pwP	22 18 30.5	+0.7
KSH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GAR	Garm	87.31	349	P	P	22 18 22.5	-0.8
GTA	Gaotai	87.71	11	⇑P	P	22 18 25.3	+0.2
GTA				pP	pwP	22 18 30.8	-1.4
GTA				sP	sP	22 18 34.4	+6.4
GTA				pmax	pmax		
	comp=Z,14nm,1.1s						
TIA	Tai'an	88.31	25	⇑P	P	22 18 28.0	+0.1
TIA				pmax	pmax		
	comp=Z,14nm,1.0s						
PLCA	Paso Flores	89.34	198	LR	LR	22 59 30.6	
	comp=Z,85nm,18.0s,baz=172,slow=36						
AAK	Ala-Archa	90.43	352	P	P	22 18 38.5	+0.6
	comp=Z,1.6nm,0.7s,baz=176,slow=14,SNR=2.9						
WMQ	Urumqi	91.16	2	*e*P	P	22 18 46.8	+5.7
WMQ				sP	pwP	22 18 53.2	+5.0
WMQ				S	S	22 29 45.2	+6.3
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,97nm,3.9s						
HHC	Hu-ho-hao-te	91.24	20	*e*P	P	22 18 44.3	+2.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,6.7s						
KSRS	Korea Array	92.99	33	LR	LR	22 59 17.5	
	comp=Z,11nm,19.5s,baz=150,slow=35						
MKAR	Makanchi Array	94.13	358	P	P	22 18 53.9	-0.8
	comp=Z,0.5nm,0.8s,baz=152,slow=6.5,SNR=2.3						
DBIC	Dimbokro	94.85	275	LR	LR	22 56 53.9	
	comp=Z,134nm,19.3s,baz=159,slow=32						
TORD	Torodi Ar. Bea	95.22	284	P	P	22 19 02.0	+1.5
	comp=Z,1.1nm,0.9s,baz=133,slow=4.0,SNR=7.0						
TORD				LR	LR	22 58 52.8	
	comp=Z,124nm,19.7s,baz=130,slow=34						
SONM	Songino Array	96.94	14	P	P	22 19 07.7	+0.1
	comp=Z,0.6nm,0.8s,baz=175,slow=6.8,SNR=3.6						
SONM				LR	LR	23 02 06.5	
	comp=Z,58nm,19.6s,baz=192,slow=35						
BRTR	Keskin Array B	98.32	322	LR	LR	22 58 20.1	
	comp=Z,65nm,20.9s,baz=194,slow=32						
KBZ	Khabaz	98.34	331	LR	LR	22 59 26.4	
	comp=Z,111nm,18.9s,baz=166,slow=33						
PPT2	Papeete2	98.70	128	*e*LR	LR	22 51 18.5	
	comp=Z,64nm,22.5s						
CPUP	Villa Florida	98.93	214	LR	LR	23 01 38.8	
	comp=Z,38nm,19.3s,baz=132,slow=34						
CVTR	Volcan Turrial	141.29	198		PKPdf	22 25 06.9	-1.4
J20K	Nowinta River	144.50	40		PKPbc	22 25 10.9	+0.4
SUMG	Summit	144.64	334	PKPdf	PKPdf	22 25 11.9	-0.5
PPLA	Purkeypile	145.35	43		PKPbc	22 25 13.2	-0.3
ILAR	Eielson Array	147.62	39	PKPbc	PKPdf	22 25 18.0	+0.8
	comp=Z,2.2nm,0.6s,baz=279,slow=3.6,SNR=24						
TULEG	Thule	149.20	348		PKPbc	22 25 23.3	-0.3
CMIG	Matias Romero	149.48	180	PKPbc	PKPbc	22 25 26.2	+0.1
	comp=Z,3.4nm,0.8s,baz=64,slow=1.7,SNR=5.4						
BCAR	Beaver Creek A	150.08	42		PKPbc	22 25 25.7	-0.6
RES	Resolute Bay	152.91	360	PKPbc	PKPbc	22 25 30.8	-1.6
	comp=Z,2.1nm,0.8s,baz=352,slow=5.0,SNR=7.9						
RES				PKPab	PKPab	22 25 43.1	-0.6
	comp=Z,3.9nm,0.9s,baz=9.4,slow=3.9,SNR=8.8						
RES	Resolute Bay	152.91	360	PKPbc	PKiKP	22 25 32.6	0.0
TXAR	Lajitas Array	160.45	157	PKP	PKPdf	22 25 36.9	+0.5
	comp=Z,0.6nm,1.0s,baz=167,slow=6.2,SNR=4.3						
TXAR				PKPab	PKPab	22 26 16.9	-0.5
	comp=Z,1.0nm,1.1s,baz=182,slow=6.3,SNR=4.1						
TXAR	Lajitas Array	160.45	157	PKPab	PKPab	22 26 17.2	-0.2
NVAR	Mina Array Bea	160.62	110	PKPab	PKPab	22 26 18.3	+0.1
	comp=Z,0.3nm,0.2s,baz=243,slow=8.0,SNR=4.2						
NVAR	Mina Array Bea	160.62	110	PKPdf	PKPdf	22 25 37.0	+0.5
NVAR					PKPab	22 26 17.1	-1.2
YKA	Yellowknife Ar	161.50	30	PKPab	PKPab	22 26 20.3	-0.7
	comp=Z,1.7nm,1.1s,baz=321,slow=6.1,SNR=6.3						
YKA	Yellowknife Ar	161.50	30	PKPdf	PKPdf	22 25 35.6	-0.7
MNTX	Cornudas Mount	162.14	150	PKPdf	PKPdf	22 25 37.7	-0.4
MNTX				PKPab	PKPab	22 26 24.3	-0.4

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*IDC **11** 22:07:36.0±2.5, 19°.65S×69°.07W, h90^{km}±21^{km}, mb4.1/7, mb1 4.1/10, mb1mx3.8/40, mbtmp4.4/10, Error ellipse: s-maj=28.9km s-min=15.9km az=116.0*

*NEIC **11** 22:07:37.4±1.6, 19°.80S±0°.04×69°.30W±0°.07, h107^{km}±9^{km}, mb4.3/12, ML4.4(GUC), Error ellipse: s-maj=9.4km s-min=5.2km az=114.0*

*VAO **11** 22:07:37.6±0.7, 19°.68S×69°.29W, h111^{km}, mb4.2*

*GUC **11** 22:07:38.0±0.6, 19°.75S×69°.24W, h98^{km}±2^{km}, ML4.4*

ISC 11 22:07:36.5±0.6, **19°.76S**±0°.03×**69°.27W**±0°.05, **h103**^{km}±5^{km}, **n115,** σ**1**^{s}**12**/134, **mb4.4**/8, **5C-8D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.36	270	⇓*i*P	Pn	22 07 52.5	+0.5
PB11				*i* S	Sn	22 08 03.8	+0.3
PB11				IAML		22 08 04.8	
	comp=N,9µm,0.6s						
PB11	IPOC Station P	0.36	270		Pn	22 07 52.6	+0.7
PB08	IPOC Station P	0.39	164	⇓*i*P	Pn	22 07 53.1	+0.7
PB08				*i* S	Sn	22 08 04.8	+0.5
PB08				IAML		22 08 05.6	
	comp=E,40µm,0.3s						
PB08	IPOC Station P	0.39	164		Pn	22 07 53.1	+0.7
HMBC	Humberstone	0.78	228	⇓*i*P	Pn	22 07 55.5	+0.5
HMBC				*i* S	Sn	22 08 09.8	+0.9
HMBC				IAML		22 08 11.7	
	comp=E,6µm,0.3s						
TA02	Huaiquique	0.95	238	⇓*i*P	Pn	22 07 57.5	+0.9
TA02				*e*S	Sn	22 08 12.3	+0.4
TA02				IAML		22 08 13.0	
	comp=E,12µm,0.1s						
TA02	Huaiquique	0.95	238	Pn	Pn	22 07 57.5	+0.9
TA01	Diego Aracena	1.17	227	⇓*i*P	Pn	22 07 59.5	+0.5
TA01				*i* S	Sn	22 08 16.7	+0.6
TA01	Diego Aracena	1.17	227		Pn	22 07 59.7	+0.7
PB01	IPOC Station P	1.29	189	⇓*i*P	Pn	22 08 01.5	+1.0
PB01				*i* S	Sn	22 08 19.5	+0.8
PB01				IAML		22 08 21.0	
	comp=N,17µm,0.6s						
PB01	IPOC Station P	1.29	189		Pn	22 08 01.6	+1.0
PATCX	Punta Patache	1.34	218	⇓*i*P	Pn	22 08 01.6	+0.5
PATCX				*i* S	Sn	22 08 20.3	+0.6
PATCX				IAML		22 08 21.0	
	comp=E,3µm,0.3s						
PATCX	Punta Patache	1.34	218		Pn	22 08 01.7	+0.6
PB16	IPOC Station P	1.44	351	⇑*i*P	Pn	22 08 04.7	+1.9
PB16				*e*S	Sn	22 08 24.6	+2.1
PB16	IPOC Station P	1.44	351	Pn	Pn	22 08 04.4	+1.6
PB12	IPOC Station P	1.52	319	⇑*e*P	Pn	22 08 03.8	+0.6
PB12				*e*S	Sn	22 08 24.1	+0.6
PB12	IPOC Station P	1.52	319		Pn	22 08 04.0	+0.7
PB02	IPOC Station P	1.66	201	⇓*e*P	Pn	22 08 05.7	+0.7
PB02				*i* S	Sn	22 08 27.2	+0.7
PB02				IAML		22 08 34.0	
	comp=N,6µm,0.3s						
AP01	Chacalluta	1.71	324	⇑*e*P	Pn	22 08 06.6	+1.1
AP01				*e*S	Sn	22 08 28.1	+0.4
AP01				IAML		22 08 40.2	
	comp=E,4µm,0.4s						
AP01	Chacalluta	1.71	324		Pn	22 08 06.7	+1.1
PB09	IPOC Station P	2.02	179	⇑*e*P	Pn	22 08 11.1	+1.4
PB09				*e*S	Sn	22 08 37.4	+2.4
PB09				IAML		22 08 41.5	
	comp=E,2µm,0.6s						
PB09	IPOC Station P	2.02	179	Pn	Pn	22 08 11.2	+1.4
PB07	IPOC Station P	2.04	196	⇑*e*P	Pn	22 08 10.8	+1.0
PB07				*e*S	Sn	22 08 37.3	+2.0
PB07				IAML		22 08 39.1	
	comp=E,3µm,0.3s						
PB07	IPOC Station P	2.04	196	Pn	Pn	22 08 11.1	+1.2
PB03	IPOC Station P	2.32	191	*e*P	Pn	22 08 14.3	+0.7
PB03				*e*S	Sn	22 08 40.4	-1.4
PB03				IAML		22 08 47.0	
	comp=E,3µm,0.3s						
PB04	IPOC Station P	2.69	198	*e*P	Pn	22 08 19.6	+1.2
PB04				*e*S	Sn	22 08 53.2	+2.7
PB04				IAML		22 09 12.1	
	comp=N,1µm,0.5s						
PB04	IPOC Station P	2.69	198		Pn	22 08 19.4	+1.0
LVC	Limon Verde	2.85	173	P	Pn	22 08 22.2	+1.4
	comp=N,55nm,0.3s,baz=28,slow=11,SNR=155						
LVC				S	Sn	22 08 55.7	+1.0
	comp=N,72nm,0.3s,baz=12,slow=20,SNR=3.5						
LVC	Limon Verde	2.85	173	*e*P	Pn	22 08 22.3	+1.6
LVC				*e*S	Sn	22 08 55.7	+1.0
LVC	Limon Verde	2.85	173	*e*P	Pn	22 08 22.4	+1.7
LVC	Limon Verde	2.85	173		Pn	22 08 22.0	+1.2
PB06	IPOC Station P	2.94	185	*e*P	Pn	22 08 21.8	+0.1
PB06				*e*S	Sn	22 08 54.8	-1.7
PB06				IAML		22 09 05.7	
	comp=E,2µm,0.5s						
PB06	IPOC Station P	2.94	185		Pn	22 08 23.0	+1.3
PB05	IPOC Station P	3.20	196	*e*P	Pn	22 08 25.1	0.0
PB05				*e*S	Sn	22 09 02.5	-0.1
PB05				IAML		22 09 15.1	
	comp=E,954nm,0.5s						
PB15	IPOC Station P	3.44	183		Pn	22 08 29.2	+0.9
LPAZ	La Paz	3.62	18	P	Pn	22 08 34.9	+3.6
	comp=E,6.2nm,0.3s,baz=199,slow=6.0,SNR=31						
PB10	IPOC Station P	3.92	198	Pn	Pn	22 08 35.7	+1.1
PB14	IPOC Station P	4.95	192	Pn	Pn	22 08 50.1	+1.2
AC02	Maricunga	7.04	179	Pn	Pn	22 09 16.9	-0.5
SIV	San Ignacio	8.66	66	P	Pn	22 09 36.4	-2.6
	comp=E,3.5nm,0.3s,baz=252,slow=11,SNR=61						
ETMB	Extrema	10.32	17	*e*P	Pn	22 10 01.9	+0.3
ETMB	Extrema	10.32	17	Pn	Pn	22 10 01.9	+0.3
PTLB	Pontes e Lacer	10.57	68	Pn	Pn	22 10 04.0	-1.1
VILB	Vilhena	11.03	53	*e*P	Pn	22 10 10.4	-0.8
VILB	Vilhena	11.03	53		Pn	22 10 10.7	-0.6
CPUP	Villa Florida	12.79	123	P	Pn	22 10 33.4	-1.1
	comp=E,0.3nm,0.3s,baz=297,slow=12,SNR=8.0						
CPUP	Villa Florida	12.79	123		Pn	22 10 33.8	-0.7
SALV	Santo Antonio	13.48	76	*e*P	Pn	22 10 44.6	+0.9
MT02	Curacav	13.55	187	Pn	Pn	22 10 44.8	+0.4
MT09	Talagante	14.04	186	Pn	Pn	22 10 51.3	+0.3
MT01	Popeta	14.16	187	Pn	Pn	22 10 52.5	+0.2
PDRB	Porto dos Gac	14.53	58	*e*P	P	22 10 58.5	-2.5
BO02	Sierra Bellavi	15.03	185		Pn	22 11 03.6	+0.1
CLDB	Colider	15.71	58	*e*P	P	22 11 12.2	-1.8
PTGB	Pitanga	16.67	110	*e*P	P	22 11 26.5	+1.7
ARAG	Araguaiana, MT	17.11	79	*e*P	P	22 11 31.3	+1.8
ITAB	Concordia	17.38	119	*e*P	Pn	22 11 33.8	+1.1
ITAB	Concordia	17.38	119	P	Pn	22 11 32.3	-0.3
ITAB				IAmb	IAmb	22 11 47.0	
	comp=Z,12nm,1.0s						
PLTB	Pedras Altas	18.46	133	*e*P	Pn	22 11 46.8	+1.1
PLTB	Pedras Altas	18.46	133	P	P	22 11 44.2	-0.1
NPGB	Novo Progresso	18.50	49	*e*P	P	22 11 44.0	-0.8
MACA	Manacapuru-AM	18.51	28	*e*P	Pn	22 11 45.0	-1.2
SNDB	Serra Nova Dou	18.93	69	*e*P	P	22 11 49.0	-0.6
LC01	Cunco	19.20	186	P	P	22 11 51.4	-0.9
LC01				IAmb	IAmb	22 11 55.1	
	comp=Z,13nm,1.1s						
CNLB	Canela	19.24	123	*e*P	Pn	22 11 54.0	-0.9
TRQA	Tornquist	19.30	162	P	P	22 11 54.0	+0.6
TRQA				IAmb	IAmb	22 11 58.6	
	comp=Z,10nm,0.9s						
BB19B	Bebedouro	19.48	97	*e*P	P	22 11 55.0	-0.5
IPMB	Ipameri, GO	20.01	88	*e*P	P	22 12 00.9	-0.3
ITTB	Itaituba	20.20	43	*e*P	P	22 12 02.5	-0.8
BDFB	Brasilia	20.66	82	P	P	22 12 06.7	-1.6
	comp=Z,4.9nm,0.4s,baz=262,slow=7.2,SNR=10						
BDFB	Brasilia	20.66	82	P	P	22 12 08.8	+0.5
PTGA	Pitinga	20.99	27	P	P	22 12 09.7	-2.1
	comp=Z,2.6nm,0.3s,baz=326,slow=23,SNR=12						
PEXB	Peixe	21.54	72	*e*P	P	22 12 16.2	-1.4
LL05	Los Muermos	21.87	189	P	P	22 12 18.1	-2.8
PARB	Paraibuna	22.27	103	*e*P	P	22 12 26.0	+0.6
BSCB	Bom Sucesso	22.99	97	*e*P	P	22 12 32.7	0.0
MALB	Monte Alegre	23.07	41	*e*P	P	22 12 31.8	-1.6
PRPB	Parauapebas	23.24	57	*e*P	P	22 12 33.2	-1.8
SMTB	Santa Maria do	23.61	66	*e*P	P	22 12 38.6	+0.2
BOAV	Boa Vista	23.64	22	*e*P	P	22 12 38.4	-0.2
BOAV	Boa Vista	23.64	22	P	P	22 12 38.9	+0.3
BOAV				IAmb	IAmb	22 12 39.4	
	comp=Z,9.5nm,0.7s						
MAN01	Angra dos Reis	23.77	102	*e*P	P	22 12 40.4	+0.6
DIAM	Diamantina, MG	24.24	91	*e*P	P	22 12 44.2	+0.1
MC01	Montes Claros	24.24	87	*e*P	P	22 12 43.5	-0.7
JANB	Januaria	24.26	83	*e*P	P	22 12 44.1	-0.1
SDBA	SAO DESIDERIO	24.51	76	*e*P	P	22 12 46.0	-0.6
DUB01	Friburgo-RJ	25.22	100	*e*P	P	22 12 53.7	+0.7
MCPB	Macapa, AP	25.61	43	*e*P	P	22 12 58.0	+1.5
BSFB	Barra de Sao F	26.83	93	*e*P	P	22 13 07.5	0.0
ZARC	Zaragoza, Cauc	27.64	348	P	P	22 13 15.6	+0.9
PAYG	Puerto Ayora	27.99	310	P	P	22 13 17.3	-0.5
GUA01	Guaratinga, BA	28.16	88	*e*P	P	22 13 19.7	+0.3
NBIT	Itapeh - BA	28.86	85	*e*P	P	22 13 26.7	+1.1
GDU01	Guandu, BA	29.04	83	*e*P	P	22 13 26.8	-0.4
NBPN	Ponto Novo - B	29.37	77	*e*P	P	22 13 30.5	+0.3
SJCC	San Jacinto, C	30.04	348	P	P	22 13 35.9	-0.1
SJCC				IAmb	IAmb	22 13 44.5	
	comp=Z,5.8nm,0.9s						
BIRV	Birongo	30.19	6	P	P	22 13 37.1	-0.2
BIRV				IAmb	IAmb	22 13 46.0	
	comp=Z,19nm,1.1s						
BCIP	Isla Barro Col	30.57	339	P	P	22 13 39.0	-1.6
NBLA	Lagarto - SE	31.53	79	*e*P	P	22 13 48.9	-0.4
NBMA	Muriti-CE	32.04	72	*e*P	P	22 13 53.9	+0.2
NBPB	Pedra_Branca-C	32.15	68	*e*P	P	22 13 55.3	+0.7
NBAN	Anadia - AL	33.39	77	*e*P	P	22 14 05.6	+0.1
NBLV	Livramento - P	33.70	73	*e*P	P	22 14 08.9	+0.7
NBPA	Parau_RN	34.23	70	*e*P	P	22 14 13.0	+0.4
NBRF	Rio Formoso -	34.81	76	*e*P	P	22 14 18.4	+0.7
NBPV	Pedro Velho	35.56	73	*e*P	P	22 14 25.0	+0.9
SNAA	Sanae	64.03	161	P	P	22 18 00.5	+1.6
	comp=Z,2.5nm,1.2s,baz=328,slow=9.5,SNR=2.1						
DBIC	Dimbokro	68.58	74	P	P	22 18 28.5	-0.3
	comp=Z,3.7nm,0.5s,baz=250,slow=3.5,SNR=14						
TORD	Torodi Ar. Bea	77.10	71	P	P	22 19 18.6	-0.5
	comp=Z,4.3nm,0.5s,baz=253,slow=5.4,SNR=109						
FRB	Frobisher Bay	83.23	0	P	P	22 19 50.0	-1.0
	comp=Z,1.3nm,0.7s,baz=176,slow=7.4,SNR=3.7						
YKA	Yellowknife Ar	89.44	341	P	P	22 20 22.6	+1.3
	comp=Z,2.9nm,0.7s,baz=134,slow=4.7,SNR=19						
ASAR	Alice Springs	131.28	209	PKP	PKiKP	22 26 38.2	-0.2
	comp=Z,0.3nm,0.5s,baz=134,slow=1.9,SNR=7.9						
WRA	Warramunga Arr	134.26	212	PKP	PKiKP	22 26 44.4	-0.1
	comp=Z,0.4nm,0.4s,baz=152,slow=1.8,SNR=10						
MKAR	Makanchi Array	144.41	34	PKP	PKPdf	22 27 00.1	-0.6
	comp=Z,0.6nm,0.6s,baz=326,slow=2.6,SNR=14						
SONM	Songino Array	151.78	6	PKPbc	PKiKP	22 27 20.7	+1.0
	comp=Z,1.6nm,0.5s,baz=298,slow=1.2,SNR=21						

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*IDC **11** 22:08:49.9±2.1, 6°.09S×151°.57E, h0^{km}, mb4.0/5, mb1 4.3/5, mb1mx3.7/46, mbtmp4.1/5, MS3.3/1, Ms1 3.3/1, ms1mx2.6/23, Error ellipse: s-maj=107.1km s-min=25.6km az=122.0*

ISC 11 22:08:55.8±2.3, **6°.2S**±0°.4×**151°.5E**±0°.6, **h41**^{km}, **n7,** σ**0**^{s}**46**/6, **mb4.0**/5, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	21.40	139	LR	LR	22 20 35.7	
	comp=Z,87nm,19.9s,baz=268,slow=33						
WRA	Warramunga Arr	21.62	229	P	P	22 13 42.1	-0.4
	1.4nm,0.7s,baz=55,slow=10,SNR=6.5						
ASAR	Alice Springs	24.31	222	P	P	22 14 10.1	+0.3
	3.3nm,0.7s,baz=54,slow=9.7,SNR=15						
ZALV	Zalesovo Beam	81.58	327	P	P	22 21 09.6	+0.3
	0.4nm,0.3s,baz=108,slow=4.7,SNR=1.8						
ILAR	Eielson Array	83.87	22	P	P	22 21 20.8	-0.1
	1.3nm,0.7s,baz=245,slow=5.5,SNR=14						
NRIK	Noril'sk	86.83	341	P	P	22 21 35.2	-0.3
	1.6nm,0.5s,baz=164,slow=7.4,SNR=3.6						
TORD	Torodi Ar. Bea	149.49	285	PKPbc	PKPbc	22 28 42.0	+0.3
	1.5nm,0.6s,baz=45,slow=2.3,SNR=10						

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*NDI **11** 22:09:32.6±6.6, 30°.04N×95°.87E, h10^{km}±87^{km}, ML4.0, mb4.3(NEIC)*

*BJI **11** 22:09:35.8±0.0, 29°.52N×95°.59E, h7^{km}, mB4.4/9, mb4.3/23, ML4.3/5, Ms3.8/8, Ms7 3.6/6*

*IDC **11** 22:09:36.4±0.7, 29°.75N×95°.78E, h0^{km}, mb4.0/15, mb1 4.1/18, mb1mx3.8/63, mbtmp4.0/18, ML4.0/3, MS2.8/1, Ms1 2.8/1, ms1mx2.5/30, Error ellipse: s-maj=25.4km s-min=14.4km az=57.0*

*MOS **11** 22:09:38.8±1.3, 29°.73N×95°.78E, h30^{km}, mb4.3/7, Error ellipse: s-maj=11.0km s-min=6.4km az=114.9*

*NEIC **11** 22:09:40.2±1.5, 29°.63N±0°.09×95°.75E±0°.10, h25^{km}±5^{km}, mb4.3/35, ML4.0(BJI), Error ellipse: s-maj=13.8km s-min=11.0km az=215.0*

ISC 11 22:09:37.5±0.4, **29°.64N**±0°.04×**95°.74E**±0°.05, **h10**^{km}, **n103,** σ**1**^{s}**25**/105, **mb4.2**/31, **3C-5D, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKP	Lekhapani	2.30	178	*e*P	Pb	22 10 18.4	-0.6
LKP				*e*S	Sb	22 10 48.7	+1.3
LKP				IAML		22 10 54.5	
	comp=N,1µm,0.3s						
ITAN	ITANAGAR	3.05	216	*e*P	Pn	22 10 27.6	+1.8
ITAN				IAML		22 11 14.6	
	comp=N,2µm,0.3s						
MOKO	MOKOCHONG	3.48	198	*e*P	Pn	22 10 32.8	+1.0
MOKO				*e*S	Sn	22 11 15.1	+2.0
MOKO				IAML		22 11 18.7	
	comp=E,576nm,0.5s						
MOKO				IAML		22 11 21.1	
	comp=N,351nm,0.5s						
LSA	Lhasa	4.00	272	Pg	Pn	22 10 41.8	+2.6
LSA				smax	smax		
	comp=N,230nm,0.6s						
LSA				smax	smax		
	comp=N,250nm,0.6s						
LSA	Lhasa	4.00	272	P	Pn	22 10 41.0	+1.8
LSA	Lhasa	4.00	272		Pn	22 10 41.0	+1.8
KOHI	KOHIMA	4.16	201	*e*P	Pn	22 10 42.1	+0.9
KOHI				*e*S	Sn	22 11 31.9	+1.9
KOHI				IAML		22 11 36.7	
	comp=N,231nm,0.5s						
KOHI				IAML		22 11 37.4	
	comp=E,270nm,0.5s						
SHL	Shillong	5.30	221	P	Pn	22 10 57.4	+0.4
SHL	Shillong	5.30	221	*e*P	Pn	22 10 56.6	-0.4
SHL				*e*S	Sn	22 11 55.6	-2.7
SHL	Shillong	5.30	221	Pn	Pn	22 10 57.4	+0.4
KMI	Kunming	7.67	124	⇓Pn	Pn	22 11 25.0	-4.5
KMI				Sn	Sn	22 12 54.8	-1.9
KMI				LR	LR		
	comp=E,320nm,5.9s						
KMI				LR	LR		
	comp=E,220nm,7.6s						
KMI				LR	LR		
	comp=E,250nm,7.3s						
LZH	Lanzhou	9.37	45	*e*P	Pn	22 11 55.0	+2.3
LZH				pP		22 11 58.3	
LZH				pmax	pmax		
	comp=E,15nm,1.3s						
CMAR	Chiang Mai Arr	11.51	165	Pn	Pn	22 12 25.6	+3.7
	comp=E,0.3nm,0.3s,baz=337,slow=14,SNR=2.3						
ENH	Enshi	11.94	84		Pn	22 12 28.6	+0.8
WMQ	Urumqi	15.55	338	*e*P	P	22 13 21.0	-0.1
WMQ				pmax	pmax		
	comp=E,11nm,0.7s						
WMQ				pmax	pmax		
	comp=E,78nm,4.1s						
SMLA	Simla	16.10	280	*e*P	Pn	22 13 18.6	-5.4
SMLA				*e*S	Sn	22 16 21.8	-0.8
HHC	Hu-ho-hao-te	17.07	45	*e*P	Pn	22 13 36.2	-0.1
HHC				pmax	pmax		
	comp=E,19nm,0.7s						
HHC				pmax	pmax		
	comp=E,75nm,6.0s						
PBA	Port Blair	18.11	189		Pn	22 13 49.5	+0.3
TARG	Taragay, Kyrgy	18.88	315	P	Pn	22 13 59.0	+0.1
KSH	Kashi	19.00	307	P	Pn	22 14 04.0	+4.0
KSH				pmax	pmax		
	comp=E,5.0nm,0.9s						
KDJ	Kajisay	19.48	315	P	P	22 14 05.0	+0.2
KDJ				pmax	pmax		
	comp=Z,19nm,1.0s						
KDJ	Kajisay	19.48	315	P	P	22 14 05.0	+0.2
KDJ				IAmb	IAmb	22 14 16.2	
	comp=Z,19nm,0.9s						
NIL	Nilore	19.55	288	P	P	22 14 04.8	-0.6
NIL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NIL	Nilore	19.55	288		P	22 14 04.8	-0.6
NIL				IAmb	IAmb	22 14 07.7	
	comp=Z,7.4nm,0.7s						
SONM	Songino Array	19.95	21	P	P	22 14 09.7	0.0
	comp=Z,0.4nm,0.3s,baz=213,slow=12,SNR=13						
SONM	Songino Array	19.95	21	P	P	22 14 09.9	+0.2
MK31	Makanchi Array	20.08	332	*d i*P	P	22 14 10.6	-0.4
MK31	Makanchi Array	20.08	332	P	P	22 14 11.0	-0.1
MKAR	Makanchi Array	20.08	332	P	P	22 14 10.8	-0.3

	comp=Z,0.4nm,0.3s,baz=138,slow=13,SNR=26						
MKAR	Makanchi Array	20.08	332	P	P	22 14 10.6	-0.4
ULN	Ulaanbaatar	20.19	23	⇑eP	P	22 14 12.1	-0.3
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	Ulaanbaatar	20.19	23	P	P	22 14 12.5	+0.2
MAKZ	Makanchi	20.22	332	P	P	22 14 12.2	-0.3
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MAKZ	Makanchi	20.22	332	P	P	22 14 12.2	-0.3
BOOM	Boomskoye usch	20.45	314	P	Pn	22 14 16.8	-0.6
BOOM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BOOM	Boomskoye usch	20.45	314	P	Pn	22 14 16.8	-0.6
BOOM				IAmb	IAmb	22 14 22.1	
	comp=Z,6.7nm,0.8s						
DGZ	Jazzator, Alta	21.01	345	⇓eP	P	22 14 18.5	-2.7
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.5s						
AAK	Ala-Archa	21.44	313	P	P	22 14 27.6	+1.6
	comp=Z,9.7nm,0.8s,baz=135,slow=6.0,SNR=18						
AAK	Ala-Archa	21.44	313	⇓eP	P	22 14 26.8	+0.8
AAK				pmax	pmax		
	comp=Z,32nm,1.0s						
AAK	Ala-Archa	21.44	313	P	P	22 14 27.3	+1.3
AAK				IAmb	IAmb	22 14 34.2	
	comp=Z,10nm,0.8s						
FRU1	Bishkek	21.44	314	P	P	22 14 26.9	+1.0
FRU1				pmax	pmax		
	comp=Z,16nm,0.7s						
FRU1	Bishkek	21.44	314	P	P	22 14 26.9	+1.0
FRU1				IAmb	IAmb	22 14 30.0	
	comp=Z,16nm,0.7s						
ZAK	Zakamensk	21.49	13	eP	P	22 14 26.0	-0.3
ZAK				pmax	pmax		
	comp=Z,11nm,0.9s						
DRK	Karamyk	21.97	303	P	P	22 14 32.4	+0.6
DRK				IAmb	IAmb	22 14 37.7	
	comp=Z,6.7nm,0.8s						
BTK	Batken	22.88	304	P	P	22 14 42.4	+1.1
BTK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BTK	Batken	22.88	304	P	P	22 14 42.4	+1.1
BTK				IAmb	IAmb	22 14 49.8	
	comp=Z,9.2nm,1.1s						
GAR	Garm	22.92	301	P	P	22 14 42.0	+0.2
GAR				IAmb	IAmb	22 14 47.7	
	comp=Z,8.4nm,0.9s						
KBL	Kabul	23.11	289	P	P	22 14 43.7	-0.2
KBL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KBL	Kabul	23.11	289	P	P	22 14 43.7	-0.2
KBL				IAmb	IAmb	22 14 53.8	
	comp=Z,6.2nm,0.7s						
CHGR	Chuyangaron	23.70	299	P	P	22 14 49.6	-0.1
KKAR	Karatay Array	24.25	311	P	P	22 14 55.5	+0.8
KKAR	Karatay Array	24.25	311	P	P	22 14 55.5	+0.8
KURBB	Kurchatov Arra	24.64	333	P	P	22 14 58.4	+0.4
	comp=Z,1.7nm,0.4s,baz=143,slow=11,SNR=13						
KURK	Kurchatov	24.67	333	⇓eP	P	22 14 59.9	+1.5
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KURK	Kurchatov	24.67	333	P	P	22 14 58.6	+0.3
KURK				IAmb	IAmb	22 15 01.3	
	comp=Z,6.0nm,0.6s						
ZAA0	Zalesovo Array	25.56	345	P	P	22 15 05.8	-0.5
ZALV	Zalesovo Beam	25.56	345	P	P	22 15 05.8	-0.5
	comp=Z,1.9nm,0.6s,baz=166,slow=9.9,SNR=7.3						
ZALV	Zalesovo Beam	25.56	345	eP	P	22 15 06.1	-0.3
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSRS	Korea Array	27.83	65	LR	LR	22 27 31.9	
	comp=Z,20nm,19.3s,baz=0.0,slow=39						
MYLDM	Lahad Datu	32.47	134	P	P	22 16 08.2	0.0
ABKAR	Akbulak array	33.45	316	P	P	22 16 16.6	0.0
ABKAR	Akbulak array	33.45	316	P	P	22 16 16.0	-0.5
KLR	Kul'dur	33.57	44	P	P	22 16 18.1	+0.5
	comp=Z,1.0nm,0.7s,baz=258,slow=12,SNR=5.9						
KLR	Kul'dur	33.57	44	⇑eP	P	22 16 17.8	+0.2
KLR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
YAK	Yakutsk	39.25	25	⇑eP	P	22 17 05.5	-0.3
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TIXI	Tiksi	45.77	14	P	P	22 17 56.3	-2.4
	comp=Z,0.8nm,0.3s,baz=225,slow=4.9,SNR=7.2						
AKASG	Malin Array Be	53.11	313	P	P	22 18 54.5	-0.5
	comp=Z,0.4nm,0.4s,baz=78,slow=6.4,SNR=4.7						
AKASG	Malin Array Be	53.11	313	eP	P	22 18 55.9	+0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	54.77	327	P	P	22 19 07.2	+0.2
	comp=Z,1.9nm,0.6s,baz=96,slow=9.8,SNR=9.3						
KEV	Kevo	55.17	337	P	P	22 19 09.6	-0.2
KEV	Kevo	55.17	337	P	P	22 19 09.6	-0.2
KNRA	Kununurra	55.18	140	P	P	22 19 10.8	+0.3
ARCES	ARCESS Array B	55.66	336	P	P	22 19 13.0	-0.4
	comp=Z,2.3nm,0.9s,baz=82,slow=8.3,SNR=3.7						
BURAR	Bucovina Array	56.04	310	P	P	22 19 17.0	+0.5
OJC	Ojcow	59.15	313	P	P	22 19 38.5	+0.2
OJC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
OJC	Ojcow	59.15	313	P	P	22 19 38.5	+0.2
AGG	Agios Georgios	59.86	300	P	P	22 19 44.5	+1.1
AGG				pmax	pmax		
	comp=Z,12nm,1.1s						
AGG	Agios Georgios	59.86	300	P	P	22 19 44.5	+1.1
DIVS	Divibare	60.29	306	P	P	22 19 46.0	-0.4
DIVS				IAmb	IAmb	22 19 51.6	
	comp=Z,2.1nm,1.0s						
MORC	Moravsky Berou	60.66	313	P	P	22 19 50.1	+1.4
MORC				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MORC	Moravsky Berou	60.66	313	P	P	22 19 50.1	+1.4
MORC				IAmb	IAmb	22 19 50.8	
	comp=Z,1.5nm,0.7s						
MORW	Morawa	61.51	160	P	P	22 19 52.0	-2.6
WB0	Warramunga Arr	61.64	138	P	P	22 19 55.9	+0.2
WB0				IAmb	IAmb	22 20 00.1	
	comp=Z,3.7nm,0.8s						
NC405	NORSAR Array S	61.70	327	P	P	22 19 54.1	-1.5
WRA	Warramunga Arr	61.75	138	P	P	22 19 57.1	+0.7
	comp=Z,1.5nm,0.7s,baz=326,slow=7.5,SNR=13						
WB2	Warramunga Arr	61.76	138	P	P	22 19 56.5	+0.1
WB2				IAmb	IAmb	22 20 06.6	
	comp=Z,4.8nm,1.1s						
NC303	NORSAR Array S	61.84	327	P	P	22 19 56.6	+0.1
NC602	NORSAR Array S	61.85	326	P	P	22 19 56.2	-0.4
NB2	NORSAR Subarra	61.95	327	P	P	22 19 56.4	-0.9
	comp=Z,4.9nm,1.0s,baz=81,slow=6.5						
NOA	NORSAR Array B	61.95	327	P	P	22 19 56.6	-0.7
	comp=Z,0.3nm,0.5s,baz=75,slow=8.7,SNR=5.6						
NOA	NORSAR Array B	61.95	327	eP	P	22 19 56.7	-0.6
NC204	NORSAR Array S	62.12	327	P	P	22 19 58.1	-0.4
GEC2	GERESS Array S	63.32	313	P	P	22 20 07.1	+0.3
GEC2				IAmb	IAmb	22 20 09.3	
	comp=Z,2.1nm,0.6s						
GERES	GERESS Array B	63.32	313	P	P	22 20 06.8	+0.1
	comp=Z,1.2nm,0.6s,baz=78,slow=7.1,SNR=12						
GERES	GERESS Array B	63.32	313	P	P	22 20 06.5	-0.2
GERES	GERESS Array B	63.32	313	P	P	22 20 06.5	-0.2
ASAR	Alice Springs	64.45	141	P	P	22 20 15.2	+0.9
	comp=Z,1.6nm,0.6s,baz=325,slow=6.4,SNR=23						
CIMO	Cimolais	64.85	310	P	P	22 20 16.7	-0.1
CIMO				IAmb	IAmb	22 20 28.9	
	comp=Z,3.5nm,1.1s						
ILAR	Eielson Array	74.16	23	P	P	22 21 13.7	-0.2
	comp=Z,0.7nm,0.9s,baz=289,slow=4.7,SNR=6.1						
ILAR	Eielson Array	74.16	23	eP	P	22 21 15.5	+1.6
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	Inuvik	75.79	17	P	P	22 21 23.9	+0.7
	comp=Z,1.0nm,0.6s,baz=358,slow=3.4,SNR=3.1						
TORD	Torodi Ar. Bea	87.06	283	P	P	22 22 23.5	-0.4
	comp=Z,0.5nm,0.7s,baz=39,slow=3.7,SNR=3.6						
CPUP	Villa Florida	156.01	271	PKP	PKPdf	22 29 33.9	+1.4
	comp=Z,2.7nm,0.9s,baz=56,slow=3.6,SNR=3.2						

IDC 11 22:31:45.5±2.9**, 3°.88S×130°.33E, h0km, mb3.5**/1**, mb1 3.5**/3**, mb1mx3.3**/20**, mbtmp3.3**/3**, ML2.9**/2**, MS3.1**/2**, Ms1 3.1**/2**, ms1mx2.6**/20**, Error ellipse: s-maj=190.5km s-min=31.6km az=71.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.43	167	Pn	Pn	22 35 36.2	-1.5
	0.0nm,0.3s,baz=350,slow=13,SNR=2.3						
ASAR	Alice Springs	19.97	170	P	P	22 36 20.2	+0.6
	0.1nm,0.3s,baz=349,slow=11,SNR=9.6						
PSI	Prapat	32.08	281	LR	LR	22 54 37.6	
	comp=Z,22nm,18.2s,baz=124,slow=43						
ASAJ	Asahikawa	49.04	12	LR	LR	23 00 14.0	
	comp=Z,25nm,21.5s,baz=147,slow=35						
MKAR	Makanchi Array	65.83	326	P	P	22 42 32.8	0.0
	0.6nm,0.9s,baz=124,slow=9.2,SNR=1.5						

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*NEIC **11** 22:48:36.1±1.2, 10°.4N±0°.1×125°.4E±0°.2, h91km±6km, mb4.1/14, Error ellipse: s-maj=28.3km s-min=13.0km az=71.0*

*MAN **11** 22:48:37.0, 10°.49N×125°.52E, h61km, mb4.3, ML3.1, MS2.9*

*IDC **11** 22:48:38.2±9.5, 10°.53N×125°.68E, h123km±88km, mb3.6/8, mb1 3.8/8, mb1mx3.4/35, mbtmp4.0/8, Error ellipse: s-maj=61.7km s-min=14.7km az=62.0*

ISC 11 22:48:30.2±0.7**, 10°.76N**±0°.07×**125°.84E**±0°.08**, h49km, n31, σ1s.81**/32**, mb4.1**/15**, 3C-1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	1.03	200	⇓eP	Pn	22 48 52.5	+4.1
SCPH				eS	Sn	22 49 04.2	+2.5
LLP	Lapu-Lapu	1.90	257	⇑iP	Pn	22 49 02.6	+2.4
LLP				i S	Sn	22 49 22.6	-0.4
TBP	Tagbilaran	2.22	242	eP	Pn	22 49 07.7	+3.2
TBP				i S	Sn	22 49 28.9	-1.9
RCP	Roxas	3.14	285	⇑eP	Pn	22 49 21.0	+3.8
PAGZ	Pagadian	3.78	220	⇑eP	Pn	22 49 27.0	+1.1
TPUB	Ta-pu	13.43	339	Pn	P	22 51 44.4	-1.8
CMAR	Chiang Mai Arr	27.11	290	P	P	22 54 09.4	+0.7
	0.4nm,0.3s,baz=100,slow=6.4,SNR=6.2						
WB0	Warramunga Arr	31.48	164	P	P	22 54 45.4	-2.0
WB0				IAmb	IAmb	22 54 54.5	
	comp=Z,2.0nm,1.1s						
WRA	Warramunga Arr	31.64	165	P	P	22 54 47.3	-1.5
	comp=Z,0.7nm,0.6s,baz=348,slow=9.4,SNR=11						
WRA	Warramunga Arr	31.64	165	P	P	22 54 47.7	-1.1
WB2	Warramunga Arr	31.64	165	P	P	22 54 47.1	-1.8
PBA	Port Blair	32.47	275	P	P	22 54 53.8	-2.5
PSA00	Pilbara Seismi	32.67	190	P	P	22 54 55.8	-2.0
PSA00				IAmb	IAmb	22 54 59.3	
	comp=Z,6.6nm,1.1s						
USA0B	Ussuriysk Arra	33.74	8	P	P	22 55 12.8	+5.8
USA0B				IAmb	IAmb	22 55 13.3	
	comp=Z,3.6nm,0.9s						
AS31	Alice Springs	35.11	167	P	P	22 55 18.5	-0.6
AS31				IAmb	IAmb	22 55 34.2	
	comp=Z,0.6nm,0.9s						
ASAR	Alice Springs	35.11	167	P	P	22 55 18.3	-0.8
	comp=Z,0.6nm,0.5s,baz=354,slow=7.7,SNR=14						
ASAR	Alice Springs	35.11	167	P	P	22 55 18.6	-0.5
SONM	Songino Array	40.41	340	P	P	22 56 06.3	+2.5
	comp=Z,0.1nm,0.4s,baz=167,slow=9.2,SNR=2.3						
SONM				PcP	PcP	22 58 06.0	0.0
	comp=Z,0.4nm,0.7s,baz=131,slow=4.4,SNR=2.8						
H11N1	WAKE ISLAND Hy	40.50	72	T	T	23 39 44.5	
	baz=265,slow=74,SNR=8.1						
H11N2	WAKE ISLAND Hy	40.51	72	T	T	23 39 46.7	
	baz=265,slow=74,SNR=7.3						
H11N3	WAKE ISLAND Hy	40.52	72	T	T	23 39 43.9	
	baz=265,slow=74,SNR=5.9						
FORT	Forrest	41.36	177	P	P	22 56 10.8	-0.6
BBOO	Buckleboo	44.41	168	P	P	22 56 35.6	-0.6
STKA	Stephens Creek	45.00	161	P	P	22 56 40.9	0.0
	comp=Z,2.5nm,0.3s,baz=350,slow=6.8,SNR=8.8						
STKA	Stephens Creek	45.00	161	P	P	22 56 40.5	-0.4
STKA				IAmb	IAmb	22 56 41.5	
	comp=Z,0.7nm,0.8s						
MK31	Makanchi Array	51.38	323	P	P	22 57 30.7	+0.6
MK31				IAmb	IAmb	22 57 34.0	
	comp=Z,2.7nm,1.1s						
MKAR	Makanchi Array	51.38	323	P	P	22 57 30.7	+0.6
	comp=Z,1.1nm,0.6s,baz=127,slow=7.9,SNR=14						
MKAR				PcP	PcP	22 58 43.8	-0.4
	comp=Z,0.4nm,0.5s,baz=96,slow=4.6,SNR=5.9						
DZM	Mont Dzumac	51.48	130	P	P	22 57 32.3	+1.1
DZM				IAmb	IAmb	22 57 32.4	
	comp=Z,4.5nm,0.9s						
MAKZ	Makanchi	51.58	323	P	P	22 57 32.0	+0.5
MAKZ				IAmb	IAmb	22 57 48.7	
	comp=Z,4.4nm,1.1s						
ARCES	ARCESS Array B	83.59	340	P	P	23 00 52.9	-0.1
	comp=Z,1.6nm,0.7s,baz=74,slow=6.1,SNR=6.8						
FINES	FINESS Array B	85.26	332	P	P	23 01 00.9	-0.6
	comp=Z,4.7nm,1.1s,baz=79,slow=4.5,SNR=13						

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*IDC **11** 22:58:13.0±4.0, 18°.29S×71°.75W, h65km±35km, mb3.4/4, mb1 3.7/7, mb1mx3.5/26, mbtmp3.8/7, ML3.7/3, MS3.5/2, Ms1 3.5/2, ms1mx2.8/23, Error ellipse: s-maj=41.0km s-min=32.7km az=92.0*

*NEIC **11** 22:58:13.8±1.9, 18°.36S±0°.07×71°.41W±0°.09, h27km±10km, mb4.0/6, Mwr3.7/18, ML3.9(GUC), Error ellipse: s-maj=13.4km s-min=9.2km az=107.0*

*GUC **11** 22:58:14.1±0.7, 18°.28S×71°.39W, h43km±6km, ML3.9*

*NEIC **11** 22:58:16.8, 18°.51S×71°.30W, h26km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-3.93; $M_{\theta\theta}$2.85; $M_{\phi\phi}$1.08; $M_{r\theta}$-1.68; $M_{\theta\phi}$-1.89; $M_{\phi r}$0.51; Fault plane solution: $M_0$4.36000×10^{14} NP1:ϕ_s116.10000°, δ56.84000°, λ-97.05000°. NP2:ϕ_s308.85000°, δ33.82000°, λ-79.36000°. Principal axes: T 4.3982, Plg12.0000°, Azm211.0000°; N -0.0741, Plg6.0000°, Azm120.0000°; P -4.3241, Plg77.0000°, Azm3.0000°;*

ISC 11 22:58:12.5±1.9**, 18°.34S**±0°.06×**71°.6W**±0°.1**, h46km**±19km**, n52, σ1s.51**/63**, mb3.9**/5**, 5C-4D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	1.16	92	eP	Pn	22 58 31.2	-1.0
AP01				eS	Sn	22 58 44.7	-2.2
AP01				IAML		22 58 46.5	
	comp=N,12µm,0.4s						
AP01	Chacalluta	1.16	92		Pn	22 58 31.4	-0.8
AP01				Sn	Sn	22 58 44.9	-2.0
PB12	IPOC Station P	1.20	103	⇑iP	Pn	22 58 31.9	-1.0
PB12				eS	Sn	22 58 45.0	-3.1
PB12	IPOC Station P	1.20	103	Pn	Pn	22 58 31.9	-1.0
PB12				Sn	Sn	22 58 45.1	-3.0
PB16	IPOC Station P	1.95	90	⇑iP	Pn	22 58 43.8	+0.2
PB16				eS	Sn	22 59 06.7	-0.5
PB16				IAML		22 59 10.4	
	comp=N,2µm,0.6s						
PB16	IPOC Station P	1.95	90		Pn	22 58 43.6	-0.1
PB18	Visviri	2.12	70	⇑iP	Pn	22 58 48.2	+2.3
PB18				eS	Sn	22 59 15.8	+4.5
PB11	IPOC Station P	2.29	128	⇑iP	Pn	22 58 48.7	+0.8
PB11				eS	Sn	22 59 14.7	-0.3
PB11				IAML		22 59 19.5	
	comp=E,856nm,0.2s						
PB11	IPOC Station P	2.29	128	Pn	Pn	22 58 48.7	+0.8
TA02	Huaiquique	2.34	145	⇑eP	Pn	22 58 50.0	+1.5
TA02				eS	Sn	22 59 17.0	+0.9
TA02				IAML		22 59 18.7	
	comp=N,495nm,0.5s						
TA02	Huaiquique	2.34	145		Pn	22 58 49.7	+1.1
HMBC	Humberstone	2.49	141	eP	Pn	22 58 51.9	+1.3
HMBC				eS	Sn	22 59 19.6	-0.2
HMBC				IAML		22 59 21.7	
	comp=N,651nm,0.5s						
TA01	Diego Aracena	2.56	150	⇓iP	Pn	22 58 52.6	+1.1
TA01				i S	Sn	22 59 20.4	-1.2
TA01	Diego Aracena	2.56	150	Pn	Pn	22 58 52.7	+1.1
PATCX	Punta Patache	2.80	152	Pn	Pn	22 58 55.7	+0.9
PB08	IPOC Station P	2.89	129	eP	Pn	22 58 57.7	+1.3
PB08				eS	Sn	22 59 30.7	+0.6
PB08	IPOC Station P	2.89	129		Pn	22 58 57.5	+1.1
PB01	IPOC Station P	3.32	144	⇓eP	Pn	22 59 02.9	+0.9
PB01				eS	Sn	22 59 38.5	-1.7
PB01				IAML		22 59 42.6	
	comp=E,145nm,0.4s						
PB01	IPOC Station P	3.32	144		Pn	22 59 02.9	+0.9
PB02	IPOC Station P	3.35	152	⇓iP	Pn	22 59 03.6	+1.2
PB02				eS	Sn	22 59 38.6	-2.4
PB02				IAML		22 59 49.0	
	comp=E,311nm,0.3s						
PB07	IPOC Station P	3.71	155	eP	Pn	22 59 08.5	+1.0
PB07				eS	Sn	22 59 48.3	-1.9
PB07	IPOC Station P	3.71	155		Pn	22 59 08.5	+1.0
LPAZ	La Paz	3.86	59	P	Pn	22 59 13.7	+3.8
	comp=E,2.1nm,0.3s,baz=243,slow=9.4,SNR=38						
LPAZ				LR	LR	23 01 01.0	
	comp=E,189nm,19.1s,baz=227,slow=42						
LPAZ	La Paz	3.86	59	Pn	Pn	22 59 11.8	+1.9
PB03	IPOC Station P	4.06	156	⇓eP	Pn	22 59 13.2	+0.9
PB03				eS	Sn	22 59 57.6	-1.0
PB09	IPOC Station P	4.07	148		Pn	22 59 13.3	+0.9
PB04	IPOC Station P	4.18	162		Pn	22 59 14.4	+0.4
PB06	IPOC Station P	4.72	157		Pn	22 59 21.7	+0.3
LVC	Limon Verde	4.92	150	P	Pn	22 59 26.3	+2.1
	comp=E,4.1nm,0.3s,baz=346,slow=9.0,SNR=51						
LVC	Limon Verde	4.92	150	Pn	Pn	22 59 25.6	+1.4
PB15	IPOC Station P	5.22	158		Pn	22 59 28.4	+0.1
PB10	IPOC Station P	5.23	170	Pn	Pn	22 59 28.3	+0.2
PB14	IPOC Station P	6.34	170	Pn	Pn	22 59 43.1	-0.7
AC02	Maricunga	8.74	166		Pn	23 00 17.7	+0.9
ETMB	Extrema	9.94	32		Pn	23 00 33.6	+0.9
SIV	San Ignacio	10.29	78	P	Pn	23 00 39.0	+1.4
	comp=E,1.0nm,0.3s,baz=264,slow=13,SNR=21						
VILB	Vilhena	12.18	66	Pn	Pn	23 01 04.7	+1.2
PTLB	Pontes e Lacer	12.23	78	Pn	Pn	23 01 04.1	0.0
H03N1	Juan Fernandez	16.42	202	T	T	23 19 05.7	
	baz=27,slow=73,SNR=132						
H03N2	Juan Fernandez	16.42	202	T	T	23 19 05.9	
	baz=27,slow=73,SNR=106						
H03N3	Juan Fernandez	16.43	202	T	T	23 19 07.7	
	baz=27,slow=73,SNR=103						
MACA	Manacapuru-AM	18.47	36		P	23 02 24.2	-0.4
MACA				IAmb	IAmb	23 02 24.4	
	comp=Z,7.3nm,0.5s						
ITAB	Concordia	19.96	120	P	P	23 02 40.4	-0.5
PTGA	Pitinga	20.88	34	P	P	23 02 50.1	-0.8
	comp=Z,2.5nm,0.3s,baz=331,slow=23,SNR=9.7						
PLTB	Pedras Altas	21.01	133	P	P	23 02 53.6	+1.4
PLTB				IAmb	IAmb	23 03 07.5	
	comp=Z,10nm,1.4s						
TRQA	Tornquist	21.35	159	P	P	23 02 57.1	+1.3
BDFB	Brasilia	22.67	87	P	P	23 03 11.2	+0.9
	comp=Z,2.8nm,0.5s,baz=263,slow=10,SNR=6.1						
BDFB	Brasilia	22.67	87	P	P	23 03 10.9	+0.6
BDFB				IAmb	IAmb	23 03 11.3	
	comp=Z,3.4nm,0.6s						
BOAV	Boa Vista	23.30	29	P	P	23 03 16.9	+0.5
BOAV				IAmb	IAmb	23 03 27.2	
	comp=Z,5.6nm,1.3s						
PDAR	Pinedale Array	70.15	331	P	P	23 09 18.0	-2.5
	comp=Z,0.2nm,0.5s,baz=154,slow=6.7,SNR=1.6						
ULM	Lac du Bonnet	71.59	344	LR	LR	23 43 03.2	
	comp=Z,73nm,18.7s,baz=342,slow=38						
TORD	Torodi Ar. Bea	78.70	72	P	P	23 10 10.1	-0.4
	comp=Z,0.4nm,1.0s,baz=248,slow=5.5,SNR=1.8						

IDC 11 23:13:39.8±1.4**, 4°.19S**×**129°.31E, h0km, mb3.7**/2**, mb1 3.5**/5**, mb1mx3.2**/46**, mbtmp3.4**/5**, ML3.0**/3**, Error ellipse: s-maj=55.1km s-min=26.1km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.83	31	Pn	Pn	23 14 39.9	-0.3
	1.0nm,0.3s,baz=214,slow=22,SNR=1.8						
SIJI				Sn	Sn	23 15 22.9	-3.1
	0.9nm,0.3s,baz=204,slow=23,SNR=1.2						
WRA	Warramunga Arr	16.41	163	Pn	Pn	23 17 31.5	-0.1
	0.1nm,0.3s,baz=345,slow=13,SNR=1.4						
ASAR	Alice Springs	19.86	168	P	P	23 18 12.7	0.0
	0.1nm,0.3s,baz=346,slow=10.0,SNR=8.7						
MKAR	Makanchi Array	65.52	326	P	P	23 24 25.2	+0.2
	0.6nm,0.8s,baz=114,slow=8.2,SNR=5.7						
KURBB	Kurchatov Arra	69.77	328	P	P	23 24 51.8	0.0
	0.4nm,0.5s,baz=129,slow=5.1,SNR=4.5						

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*SJA **11** 23:13:56.8±0.7, 19°.92S×71°.27W, h16km±2km, ML3.9, MW4.0*

*GUC **11** 23:14:01.9±0.6, 19°.89S×71°.12W, h40km±8km, ML3.8*

*NEIC **11** 23:14:03.2±1.5, 19°.94S±0°.04×71°.05W±0°.06, h33km±8km, mb4.3/4, Mwr4.0/43, ML3.8(GUC), Error ellipse: s-maj=8.4km s-min=5.8km az=100.0*

*NEIC **11** 23:14:03.2, 19°.94S×71°.05W, h17km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.04; $M_{\theta\theta}$-0.17; $M_{\phi\phi}$1.21; $M_{r\theta}$0.34; $M_{\theta\phi}$0.03; $M_{\phi r}$-0.35; Fault plane solution: $M_0$1.23000×10^{15} NP1:ϕ_s199.08000°, δ39.33000°, λ-61.44000°. NP2:ϕ_s343.94000°, δ56.17000°, λ-111.39000°. Principal axes: T 1.2632, Plg9.0000°, Azm89.0000°; N -0.0596, Plg18.0000°, Azm356.0000°; P -1.2036, Plg70.0000°, Azm205.0000°;*

*IDC **11** 23:14:06.7±3.9, 19°.88S×70°.80W, h54km±31km, mb3.6/4, mb1 3.8/7, mb1mx3.5/36, mbtmp3.8/7, ML3.6/3, MS3.3/7, Ms1 3.3/7, ms1mx3.1/23 Error ellipse: s-maj=46.3km s-min=16.5km az=89.0*

ISC 11 23:14:02.9±1.4**, 19°.90S**±0°.02×**71°.08W**±0°.06**, h31km**±10km**, n86, σ1s.29**/115**, mb4.1**/5**, MS3.4**/3**, 14C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	Huaiquique	0.96	113	⇓eP	Pn	23 14 18.7	-1.6
TA02				i S	Sn	23 14 32.4	-0.5
TA02				IAML		23 14 35.8	
	comp=N,3µm,0.4s						
TA02	Huaiquique	0.96	113		Pn	23 14 19.0	-1.3
TA02				Sn	Sn	23 14 32.5	-0.5
TA02	Huaiquique	0.96	113	eP	Pn	23 14 19.0	-1.3
TA02				eP	Pb	23 14 28.3	+7.2
TA02				IAML		23 14 42.4	
	comp=Z,2µm,0.8s						
TA01	Diego Aracena	1.07	129	⇑iP	Pn	23 14 20.7	-1.1
TA01				i S	Sn	23 14 34.5	-1.1
TA01				IAML		23 14 38.3	
	comp=E,2µm,0.6s						
TA01	Diego Aracena	1.07	129		Pn	23 14 20.7	-1.1
TA01					Sn	23 14 34.4	-1.2
TA01	Diego Aracena	1.07	129	eP	Pn	23 14 20.0	-1.8
TA01				eS	Pb	23 14 24.1	+1.2
TA01				IAML		23 14 38.3	
	comp=Z,2µm,0.3s						
HMBC	Humberstone	1.18	109	⇑iP	Pn	23 14 22.3	-1.1
HMBC				i S	Sn	23 14 38.4	0.0
HMBC				IAML		23 14 43.9	
	comp=E,5µm,0.5s						
PATCX	Punta Patache	1.26	137	⇑iP	Pn	23 14 23.5	-1.0
PATCX				eS	Sn	23 14 39.6	-0.9
PATCX	Punta Patache	1.26	137	Pn	Pn	23 14 23.5	-1.0
PATCX				Sn	Sn	23 14 39.1	-1.4
PATCX	Punta Patache	1.26	137	eP	Pn	23 14 23.0	-1.5
PATCX				eS	Sb	23 14 43.2	+1.0
PATCX				IAML		23 14 53.9	
	comp=Z,737nm,0.7s						
PB11	IPOC Station P	1.34	85	⇑iP	Pn	23 14 24.7	-0.9
PB11				i S	Sn	23 14 42.5	0.0
PB11				IAML		23 14 47.3	
	comp=N,3µm,0.6s						
PB11	IPOC Station P	1.34	85	Pn	Pn	23 14 24.7	-0.9
PB11					Sn	23 14 41.6	-1.0
PB11	IPOC Station P	1.34	85	eP	Pn	23 14 24.9	-0.8
PB11				IAML		23 14 52.7	
	comp=Z,3µm,1.1s						
PB12	IPOC Station P	1.46	29	⇑iP	Pn	23 14 26.1	-1.1
PB12				i S	Sn	23 14 44.1	-1.2
PB12				IAML		23 14 54.0	
	comp=E,1µm,0.5s						
PB12	IPOC Station P	1.46	29	Pn	Pn	23 14 26.1	-1.1
PB12	IPOC Station P	1.46	29	eP	Pn	23 14 26.0	-1.1
PB12				eS	Sb	23 14 48.5	+0.8
PB12				IAML		23 14 54.6	
	comp=Z,912nm,0.5s						
AP01	Chacalluta	1.67	25	eP	Pn	23 14 30.5	+0.5
AP01				i S	Sn	23 14 49.5	-0.8
AP01				IAML		23 15 00.4	
	comp=E,3µm,0.4s						
AP01	Chacalluta	1.67	25		Pn	23 14 30.7	+0.8
AP01	Chacalluta	1.67	25	eP	Pb	23 14 32.0	-1.0
AP01				IAML		23 15 02.0	
	comp=Z,1µm,0.6s						

PB02	IPOC Station P	1.80	142	⇑*i*P	Pn	23 14 31.1	-0.7
PB02				*e*S	Sn	23 14 52.6	-1.0
PB02				IAML		23 15 08.2	
	comp=E,3μm,0.5s						
PB02	IPOC Station P	1.80	142	*e*P	Pn	23 14 31.0	-0.8
PB02				*e*S	Sb	23 14 57.0	-0.4
PB02				IAML		23 15 08.0	
	comp=Z,2μm,0.6s						
PB08	IPOC Station P	1.82	98	⇑*e*P	Pn	23 14 31.9	-0.6
PB08				*e*S	Sn	23 14 55.4	+0.7
PB08				IAML		23 14 59.0	
	comp=N,1μm,0.5s						
PB08	IPOC Station P	1.82	98		Pn	23 14 31.6	-0.9
PB08	IPOC Station P	1.82	98	*e*P	Pn	23 14 32.0	-0.4
PB08				*e*P	Pn	23 14 32.1	-0.4
PB08				*e*S	Sn	23 14 52.8	-2.0
PB08				IAML		23 14 58.5	
	comp=Z,726nm,0.5s						
PB01	IPOC Station P	1.88	128	⇑*e*P	Pn	23 14 32.5	-0.4
PB01				*e*S	Sn	23 14 55.9	+0.3
PB01				IAML		23 15 05.8	
	comp=E,1μm,0.7s						
PB01	IPOC Station P	1.88	128		Pn	23 14 32.6	-0.4
PB01	IPOC Station P	1.88	128	*e*P	Pn	23 14 32.0	-0.9
PB01				*e*P	Pn	23 14 32.5	-0.4
PB01				*e*S	Sb	23 14 59.8	+0.1
PB01				IAML		23 15 05.9	
	comp=Z,672nm,0.6s						
PB07	IPOC Station P	2.13	149	⇑*e*P	Pn	23 14 35.8	-0.8
PB07				*i* S	Sn	23 15 00.9	-1.2
PB07				IAML		23 15 17.2	
	comp=E,599nm,0.4s						
PB07	IPOC Station P	2.13	149		Pn	23 14 35.4	-1.1
PB07	IPOC Station P	2.13	149	*e*P	Pn	23 14 35.7	-0.8
PB07				*e*S	Sn	23 15 03.8	+1.7
PB07				IAML		23 15 18.5	
	comp=Z,486nm,0.3s						
PB16	IPOC Station P	2.15	44	⇑*e*P	Pn	23 14 36.7	-0.3
PB16				*e*S	Sn	23 15 04.3	+1.3
PB16				IAML		23 15 15.1	
	comp=N,1μm,0.6s						
PB16	IPOC Station P	2.15	44		Pn	23 14 36.6	-0.5
PB16	IPOC Station P	2.15	44	*e*P	Pn	23 14 36.9	-0.2
PB16				*e*S	Sb	23 15 06.8	-1.1
PB16				IAML		23 15 10.0	
	comp=Z,933nm,0.8s						
PB03	IPOC Station P	2.47	150	⇑*e*P	Pn	23 14 40.4	-0.8
PB03				*e*S	Sn	23 15 09.5	-1.0
PB03	IPOC Station P	2.47	150	*e*P	Pn	23 14 40.3	-0.9
PB03				*e*S	Sn	23 15 12.3	+1.8
PB03				IAML		23 15 24.3	
	comp=Z,310nm,0.7s						
PB09	IPOC Station P	2.55	138	⇑*i*P	Pn	23 14 42.8	+0.5
PB09				*e*S	Sn	23 15 12.8	+0.4
PB09				IAML		23 15 31.8	
	comp=E,748nm,0.6s						
PB09	IPOC Station P	2.55	138		Pn	23 14 42.7	+0.5
PB09	IPOC Station P	2.55	138	*e*P	Pn	23 14 42.9	+0.5
PB09				*e*S	Sb	23 15 15.3	-3.9
PB09				IAML		23 15 30.3	
	comp=Z,943nm,0.8s						
PB04	IPOC Station P	2.58	161	⇑*e*P	Pn	23 14 41.4	-1.2
PB04				*e*S	Sn	23 15 10.8	-2.2
PB04				IAML		23 15 38.6	
	comp=N,326nm,0.6s						
PB04	IPOC Station P	2.58	161		Pn	23 14 40.7	-1.9
PB04	IPOC Station P	2.58	161	*e*P	Pn	23 14 41.3	-1.3
PB04				*e*S	Sn	23 15 12.0	-1.0
PB04				IAML		23 15 36.1	
	comp=Z,548nm,0.9s						
PB18	Visviri	2.75	34	*e*P	Pn	23 14 47.1	+1.8
PB18				*e*S	Sb	23 15 24.6	-0.5
PB05	IPOC Station P	3.05	165	*e*P	Pn	23 14 47.6	-1.5
PB05				*e*S	Sn	23 15 20.8	-3.9
PB05				IAML		23 15 56.0	
	comp=E,135nm,0.5s						
PB05	IPOC Station P	3.05	165	*e*P	Pn	23 14 47.8	-1.4
PB05				*e*S	Sn	23 15 26.0	+1.3
PB05				IAML		23 15 52.0	
	comp=Z,121nm,0.8s						
PB06	IPOC Station P	3.13	154	⇑*i*P	Pn	23 14 49.1	-1.1
PB06				*e*S	Sn	23 15 25.9	-0.7
PB06				IAML		23 15 45.9	
	comp=N,223nm,0.5s						
PB06	IPOC Station P	3.13	154		Pn	23 14 49.3	-0.9
PB06	IPOC Station P	3.13	154	*e*P	Pn	23 14 49.0	-1.1
PB06				*e*S	Sn	23 15 28.3	+1.7
PB06				IAML		23 15 46.9	
	comp=Z,283nm,1.0s						
LVC	Limon Verde	3.37	144	P	Pn	23 14 54.8	+1.0
	comp=Z,2.7nm,0.3s,baz=16,slow=8.7,SNR=70						
LVC				S	Sn	23 15 33.5	+0.6
	comp=Z,13nm,0.3s,baz=133,slow=20,SNR=2.6						
LVC	Limon Verde	3.37	144	Pn	Pn	23 14 53.8	0.0
LVC	Limon Verde	3.37	144	*e*P	Pn	23 14 54.0	+0.2
LVC				*e*S	Sb	23 15 46.3	+3.3
PB15	IPOC Station P	3.62	156		Pn	23 14 57.3	+0.3
PB15	IPOC Station P	3.62	156	*e*P	Pn	23 14 56.3	-0.7
PB15				*e*S	Sn	23 15 43.3	+4.5
PB10	IPOC Station P	3.63	172	Pn	Pn	23 14 56.2	-0.8
PB10	IPOC Station P	3.63	172	*e*P	Pn	23 14 55.7	-1.3
PB10				*e*S	Sn	23 15 38.7	-0.1
LPAZ	La Paz	4.55	38	P	Pn	23 15 12.6	+2.4
	comp=Z,1.9nm,0.3s,baz=246,slow=7.6,SNR=23						
LPAZ				LR	LR	23 16 33.1	
	comp=Z,109nm,18.8s,baz=252,slow=33						
LPAZ	La Paz	4.55	38	Pn	Pn	23 15 13.3	+3.1
PB14	IPOC Station P	4.75	173	Pn	Pn	23 15 12.7	0.0
SLA	San Lorenzo	7.05	134	*e*P	Pn	23 15 44.0	-0.1
AC02	Maricunga	7.14	166	Pn	Pn	23 15 45.1	-0.5
AC02	Maricunga	7.14	166	*e*P	Pn	23 15 45.4	-0.1
NNA	Nana	9.62	324	LR	LR	23 19 53.0	
	comp=Z,81nm,19.1s,baz=158,slow=36						
SIV	San Ignacio	10.28	69	P	Pn	23 16 29.3	+0.9
	comp=Z,1.3nm,0.3s,baz=270,slow=7.5,SNR=15						
SIV				LR	LR	23 20 59.1	
	comp=Z,232nm,18.2s,baz=278,slow=41						
ETMB	Extrema	11.07	26	Pn	Pn	23 16 39.8	+0.8
PTLB	Pontes e Lacer	12.21	71	Pn	Pn	23 16 55.1	+0.4
VILB	Vilhena	12.51	58	Pn	Pn	23 16 58.8	0.0
CPUP	Villa Florida	14.17	119	LR	LR	23 23 56.7	
	comp=Z,78nm,18.2s,baz=298,slow=42						
H03N1	Juan Fernandez	15.19	206	T	T	23 33 22.3	
	baz=32,slow=72,SNR=45						
H03N2	Juan Fernandez	15.20	206	T	T	23 33 19.7	
	baz=32,slow=72,SNR=37						
H03N3	Juan Fernandez	15.21	206	T	T	23 33 26.6	
	baz=32,slow=72,SNR=11						
PLCA	Paso Flores	20.77	179	P	Pn	23 18 43.0	-0.9
	comp=Z,2.9nm,1.1s,baz=312,slow=14,SNR=1.8						
PTGA	Pitinga	21.93	31	P	P	23 18 52.2	-1.7
	comp=Z,2.3nm,0.3s,baz=201,slow=9.8,SNR=7.0						
BDFB	Brasilia	22.36	83	LR	LR	23 28 41.6	
	comp=Z,131nm,18.8s,baz=341,slow=40						
BOAV	Boa Vista	24.46	26	P	P	23 19 19.1	-0.1
BOAV				IAmb	IAmb	23 19 20.2	
	comp=Z,4.5nm,0.8s						
ZARC	Zaragoza, Cauc	27.47	352	P	P	23 19 46.1	-0.3
BAUV	El Baul	28.81	6	P	P	23 19 58.2	-0.2
BAUV				IAmb	IAmb	23 20 16.9	
	comp=Z,12nm,1.0s						
SJCC	San Jacinto, C	29.88	352	P	P	23 20 07.0	-0.9
MDP	Montagnes des	30.75	38	LR	LR	23 33 18.5	
	comp=Z,93nm,21.2s,baz=218,slow=38						
RPN	Rapa Nui	35.71	251	LR	LR	23 32 14.5	
	comp=Z,66nm,20.1s,baz=100,slow=30						
TORD	Torodi Ar. Bea	78.75	72	P	P	23 26 02.3	-0.7
	comp=Z,1.4nm,0.6s,baz=256,slow=5.3,SNR=12						
YKA	Yellowknife Ar	89.02	341	P	P	23 26 55.0	+0.7
	comp=Z,0.3nm,0.8s,baz=134,slow=4.5,SNR=2.4						
H11S2	WAKE ISLAND Hy	125.64	279	T	T	01 52 26.8	
	baz=101,slow=74,SNR=3.8						
H11S1	WAKE ISLAND Hy	125.65	279	T	T	01 52 27.3	
	baz=101,slow=74,SNR=2.8						
H11S3	WAKE ISLAND Hy	125.66	279	T	T	01 52 27.2	
	baz=101,slow=74,SNR=4.4						
MKAR	Makanchi Array	145.46	33	PKPbc	PKPab	23 33 39.1	+1.0
	comp=Z,1.4nm,1.0s,baz=331,slow=3.1,SNR=2.1						
KSH	Kashi	145.61	48	PKPbc	PKPab	23 33 40.4	+1.4
KSH				pPKP	sPKPbc	23 33 49.8	-1.0
SONM	Songino Array	152.05	4	PKPbc	PKiKP	23 33 56.5	+1.0
	comp=Z,0.5nm,0.7s,baz=359,slow=0.3,SNR=4.2						

WEL ***11*** *23:17:00, 42°.76S×174°.13E, h27^{km}, ML4.4, Mw4.4, Moment Tensor Solution. s6 Moment tensor: Scale 10^{15} Nm; M_{rr}-2.18; $M_{\theta\theta}$2.88; $M_{\phi\phi}$-0.70; $M_{r\theta}$1.42; $M_{\theta\phi}$0.94; $M_{\phi r}$2.76; Fault plane solution: $M_0$4.14000×10^{15} NP1: ϕ_s105.00000°, δ34.00000°, λ-33.00000°. NP2: ϕ_s223.00000°, δ72.00000°, λ-119.00000°. Principal axes: T 394.3700, Plg22.0000°, Azm335.0000°; N 39.6000, Plg28.0000°, Azm232.0000°; P -433.9700, Plg53.0000°, Azm97.0000°;*

IDC ***11*** *23:17:12.0±0.8, 42°.60S×174°.10E, h0^{km}, mb4.0/8, mb1 4.2/9, mb1mx4.0/38, mbtmp4.1/9, ML4.2/1, MS3.6/9, Ms1 3.6/9, ms1mx3.4/22 Error ellipse: s-maj=26.9km s-min=21.3km az=62.0*

NEIC ***11*** *23:17:14.7±1.2, 42°.78S±0°.04×174°.18E±0°.06, h18^{km}±6^{km}, mb4.2/5, Error ellipse: s-maj=6.3km s-min=5.9km az=157.0*

WEL ***11*** *23:17:15.4±0.8, 43°S±4°×17°4E±°, h26^{km}±5^{km}, M4.3/24, ML4.6/24, MLv4.3/24, Error ellipse: s-maj=0.0km s-min=0.0km az=128.9*

ISC 11 23:17:14.8±0.6, **42°.76S**±0°.04×**174°.14E**±0°.04, **h21**^{km}±4^{km}, **n226,** σ1^s**19**/224, **mb4.1**/10, **MS3.6**/10, **Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.56	307	P	Pb	23 17 26.3	+0.3
KHZ				S	Sb	23 17 33.5	-0.1
KHZ	Kahutara	0.56	307		Pb	23 17 26.5	+0.5
GVZ	Greta Valley S	0.84	255	P	Pn	23 17 31.4	-0.1
GVZ				S	Sb	23 17 42.3	+0.7
CMWZ	Cape Campbell	1.01	3	P	Pn	23 17 34.7	+1.0
CMWZ	Cape Campbell	1.01	3		Pn	23 17 34.6	+0.9
BSWZ	Blackbirch Sta	1.06	349	P	Pn	23 17 34.7	+0.3
BSWZ				S	Sn	23 17 48.1	-0.5
BSWZ	Blackbirch Sta	1.06	349		Pn	23 17 34.6	+0.2
AMCZ	Amberley	1.17	249	P	Pn	23 17 35.9	-0.1
OKCZ	Okains Bay	1.25	219	P	Pn	23 17 37.4	+0.3
OKCZ				S	Sn	23 17 53.0	-0.3
TUWZ	Tuamarina	1.33	354	P	Pn	23 17 38.2	-0.1
TUWZ	Tuamarina	1.33	354		Pn	23 17 38.1	-0.1
THZ	Tophouse	1.35	317	P	Pn	23 17 38.3	-0.3
THZ	Tophouse	1.35	317	Pn	Pn	23 17 38.2	-0.3
LTZ	Lake Taylor	1.38	268	P	Pn	23 17 38.6	-0.3
LTZ	Lake Taylor	1.38	268	Pn	Pn	23 17 38.5	-0.3
AKCZ	Akaroa Harbour	1.43	219	P	Pn	23 17 39.7	+0.1
AKCZ				S	Sn	23 17 56.9	-0.9
MQZ	McQueen's Vall	1.44	228	P	Pn	23 17 39.2	-0.5
MQZ				S	Sn	23 17 56.1	-1.9
MQZ	McQueen's Vall	1.44	228	Pn	Pn	23 17 39.2	-0.5
PLWZ	Palliser	1.45	35	P	Pn	23 17 40.2	+0.4
PLWZ	Palliser	1.45	35	Pn	Pn	23 17 40.0	+0.2
BHW	Baring Head	1.45	22	P	Pn	23 17 40.2	+0.4
BHW				S	Sn	23 17 56.8	-1.4
BHW	Baring Head	1.45	22	Pn	Pn	23 17 40.0	+0.2
SNZO	South Karori	1.50	16		Pn	23 17 40.8	+0.3
WEL	Wellington	1.54	18	P	Pn	23 17 41.7	+0.6
TCW	Tory Channel	1.55	4	P	Pn	23 17 41.2	0.0
MSWZ	Moikau Station	1.57	32	P	Pn	23 17 41.7	+0.2
MSWZ	Moikau Station	1.57	32		Pn	23 17 41.5	0.0
NNZ	Nelson	1.64	339	P	Pn	23 17 42.2	-0.2
NNZ	Nelson	1.64	339		Pn	23 17 42.0	-0.4
OXZ	Oxford	1.65	249	P	Pn	23 17 42.0	-0.5
OXZ				S	Sn	23 18 00.5	-2.6
OXZ	Oxford	1.65	249		Pn	23 17 42.1	-0.3
PAWZ	Paruwai Farm	1.67	35	P	Pn	23 17 43.2	+0.3
RACZ	Rakaia	1.76	236	P	Pn	23 17 43.8	-0.2
TRWZ	Traveller	1.78	41	P	Pn	23 17 44.7	+0.4
CAW	Cannon Point	1.79	23	P	Pn	23 17 44.8	+0.4
CAW				S	Sn	23 18 04.9	-1.5
MTW	Mount Morrison	1.89	33	P	Pn	23 17 45.8	0.0
DUWZ	D'Urville Isla	1.96	355	P	Pn	23 17 47.0	+0.2
KIW	Kapiti Island	1.98	17	P	Pn	23 17 47.6	+0.5
INZ	Inchbonnie	1.99	270	P	Pn	23 17 47.4	+0.2
DSZ	Denniston Nort	2.01	299	P	Pn	23 17 47.9	+0.3
MHCZ	Mount Hutt	2.04	247	P	Pn	23 17 47.6	-0.3
WACZ	Wakanui South	2.06	234	P	Pn	23 17 48.2	+0.1
OGWZ	Otaki Gorge	2.08	22	P	Pn	23 17 48.9	+0.4
TMWZ	Te Maipa	2.10	39	P	Pn	23 17 48.8	0.0
HOWZ	Holdsworth Sta	2.12	29	P	Pn	23 17 49.3	+0.3
QRZ	Quartz Range	2.28	327	P	Pn	23 17 51.7	+0.6
QRZ	Quartz Range	2.28	327		Pn	23 17 51.7	+0.6
MRZ	Mangatainoka R	2.35	28	P	Pn	23 17 52.4	+0.2
TIWZ	Tintock	2.37	34	P	Pn	23 17 53.0	+0.5
CPWZ	Castlepoint	2.40	40	P	Pn	23 17 53.1	+0.3
RPZ	Rata Peaks	2.45	246	P	Pn	23 17 53.4	-0.2
RPZ	Rata Peaks	2.45	246	Pn	Pn	23 17 53.4	-0.2
ARCZ	Arundel	2.47	240	P	Pn	23 17 53.5	-0.3
WVZ	Waitaha Valley	2.52	262	P	Pn	23 17 54.9	+0.4
PRWZ	Pori Road	2.59	33	P	Pn	23 17 55.7	+0.2
BFZ	Birch Farm	2.60	38	P	Pn	23 17 55.5	-0.1
BFZ	Birch Farm	2.60	38		Pn	23 17 55.5	-0.1
POWZ	Post Office Ro	2.66	28	P	Pn	23 17 57.0	+0.6
OHWZ	Ohakea	2.70	19	P	Pn	23 17 58.7	+1.8
TMZ	Timaru	2.80	233	P	Pn	23 17 58.6	+0.2
GCSZ	Gaunt Creek Bo	2.85	257	P	Pn	23 18 00.2	+1.1
ANWZ	Angora Road	2.88	38	P	Pn	23 17 59.3	-0.2
DVHZ	Dannevirke	2.89	32	P	Pn	23 17 59.2	-0.4
TSZ	Takapari Road	3.02	27	P	Pn	23 18 01.4	0.0
WAZ	Wanganui	3.07	12	P	Pn	23 18 04.3	+2.2
PRHZ	Porangahau	3.11	38	P	Pn	23 18 02.4	-0.2
WPHZ	Waipukurau	3.20	33	P	Pn	23 18 04.3	+0.5
PNHZ	Pukenui	3.23	29	P	Pn	23 18 04.1	-0.3
FOZ	Fox Glacier	3.26	255	P	Pn	23 18 05.7	+1.0
FOZ	Fox Glacier	3.26	255		Pn	23 18 05.6	+1.0
LREZ	Lake Rotokare	3.30	3	P	Pn	23 18 07.7	+2.5
LBZ	Lake Benmore	3.31	239	P	Pn	23 18 05.6	+0.3
LBZ	Lake Benmore	3.31	239	Pn	Pn	23 18 06.0	+0.7
NMEZ	Namu Road	3.35	356	P	Pn	23 18 08.6	+2.7
PXZ	Pawanui	3.41	38	P	Pn	23 18 06.1	-0.6
ODZ	Otahua Downs	3.41	227	P	Pn	23 18 07.1	+0.3
ODZ	Otahua Downs	3.41	227	Pn	Pn	23 18 07.3	+0.5
PREZ	Palmer Road	3.41	0	P	Pn	23 18 09.4	+2.6
KHEZ	Kahui Hut	3.46	358	P	Pn	23 18 09.7	+2.2
NEZ	North Egmont	3.48	359	P	Pn	23 18 09.9	+2.1
NBEZ	Newall Road No	3.49	356	P	Pn	23 18 09.8	+1.9
MTVZ	Mangateitei	3.52	17	P	Pn	23 18 11.0	+2.8
KRHZ	Kereru	3.54	29	P	Pn	23 18 08.2	-0.3
MOVZ	Moawhango	3.56	21	P	Pn	23 18 09.5	+0.6
PKE	Pukeiti	3.56	358	P	Pn	23 18 11.0	+2.1
DREZ	Durham Road	3.56	1	P	Pn	23 18 11.0	+2.1
BHHZ	Black Hill Sta	3.57	25	P	Pn	23 18 09.5	+0.4
PKVZ	Pokaka	3.58	15	P	Pn	23 18 11.0	+1.8
WNVZ	Wahianoa	3.60	18	P	Pn	23 18 10.5	+1.0
KAHZ	Kahuranaki	3.61	36	P	Pn	23 18 09.1	-0.4
TRVZ	Turoa	3.61	18	P	Pn	23 18 11.0	+1.3
WHVZ	Whangaehu Hut	3.64	18	P	Pn	23 18 11.4	+1.3
DRZ	Dome Shelter	3.64	18	P	Pn	23 18 12.5	+2.3
FWVZ	Far West T-bar	3.66	17	P	Pn	23 18 11.8	+1.4
VRZ	Vera Road	3.66	8	P	Pn	23 18 11.9	+1.7
TUVZ	Tukino	3.67	19	P	Pn	23 18 11.9	+1.5
MHEZ	Mangahewa	3.68	2	P	Pn	23 18 12.9	+2.4
SNVZ	South Ngauruho	3.74	18	P	Pn	23 18 12.9	+1.4
NGZ	Ngauruhoe	3.74	18	P	Pn	23 18 13.0	+1.5
KWHZ	Kaweka Forest	3.75	28	P	Pn	23 18 11.3	-0.1
OTVZ	Oturere	3.77	18	P	Pn	23 18 13.0	+1.2
NNVZ	North Ngauruho	3.79	18	P	Pn	23 18 13.3	+1.2
WTVZ	West Tongariro	3.80	17	P	Pn	23 18 13.4	+1.1
CKHZ	Cape Kidnapper	3.81	37	P	Pn	23 18 12.3	+0.1
ETVZ	East Tongariro	3.81	19	P	Pn	23 18 13.4	+1.1
TWVZ	Taurewa	3.81	15	P	Pn	23 18 13.4	+1.0
TMVZ	Te Maari	3.82	19	P	Pn	23 18 13.6	+1.0
KRVZ	Karewarewa	3.83	18	P	Pn	23 18 13.8	+1.1
MCHZ	McNeill Hill	3.83	31	P	Pn	23 18 13.0	+0.4
NTVZ	North Tongarir	3.83	18	P	Pn	23 18 13.8	+1.1
KATZ	Kakaramea	3.96	18	P	Pn	23 18 16.4	+2.0
RITZ	Rihia Road	3.99	20	P	Pn	23 18 17.1	+2.3
BKZ	Black Stump Fm	4.00	27	P	Pn	23 18 15.2	+0.3
BKZ	Black Stump Fm	4.00	27	Pn	Pn	23 18 15.0	0.0
HHSZ	Highcliff Hill	4.03	218	P	Pn	23 18 15.7	+0.4
RATZ	Rangitukua	4.08	18	P	Pn	23 18 17.8	+1.8
ARHZ	Aropaoanui	4.10	33	P	Pn	23 18 16.9	+0.6
JCZ	Jackson Bay	4.12	250	P	Pn	23 18 18.0	+1.4
HATZ	Hinemaiaia	4.13	22	P	Pn	23 18 18.3	+1.5
NMHZ	Naumai	4.17	30	P	Pn	23 18 18.2	+0.9
WKZ	Wanaka	4.25	239	P	Pn	23 18 18.4	+0.1
WKZ	Wanaka	4.25	239	Pn	Pn	23 18 18.7	+0.4
HIZ	Hauiti	4.27	8	P	Pn	23 18 20.0	+1.4
HIZ	Hauiti	4.27	8		Pn	23 18 20.0	+1.4
EAZ	Earnscleugh	4.28	233	P	Pn	23 18 18.8	+0.1
MRHZ	Matea Rd	4.28	25	P	Pn	23 18 19.3	+0.5
MTHZ	Maungataniwha	4.41	29	P	Pn	23 18 20.3	-0.2
RAHZ	Arahi	4.44	31	P	Pn	23 18 20.9	0.0
WPRZ	Whakapapatarin	4.50	21	P	Pn	23 18 23.1	+1.3
ALRZ	Allen Road	4.51	22	P	Pn	23 18 22.5	+0.6
TLZ	Tolley Road	4.55	14	P	Pn	23 18 23.9	+1.4
TUZ	Tuapeka	4.55	224	P	Pn	23 18 22.8	+0.4
KNZ	Kokohu	4.59	37	P	Pn	23 18 22.1	-0.9
MHGZ	Mahia Peninsul	4.59	40	P	Pn	23 18 22.0	-1.0
GRRZ	Galatos Road	4.65	19	P	Pn	23 18 24.9	+1.1
SNGZ	Shannon Statio	4.65	32	P	Pn	23 18 23.8	0.0
HRRZ	Handcock Road	4.66	21	P	Pn	23 18 24.9	+1.0
RTZ	Ruatahuna	4.67	28	P	Pn	23 18 24.7	+0.6
MUGZ	Murupara	4.72	26	P	Pn	23 18 25.8	+1.0
PRGZ	Paritu Road	4.76	38	P	Pn	23 18 23.8	-1.6
RRRZ	Republican Roa	4.77	23	P	Pn	23 18 25.4	-0.1
UTU	Utuhina	4.83	20	P	Pn	23 18 27.9	+1.6
TARZ	Mount Tarawera	4.86	23	P	Pn	23 18 27.4	+0.6
RIGZ	Rimuhau	4.89	35	P	Pn	23 18 26.3	-0.9
MSZ	Milford Sound	4.90	245	P	Pn	23 18 27.2	+0.1
RAGZ	Rawiri	4.93	31	P	Pn	23 18 26.9	-0.8
OMRZ	Omania	4.95	21	P	Pn	23 18 28.9	+1.0
KARZ	Kaharoa	5.00	19	P	Pn	23 18 29.7	+1.1
URZ	Urewera	5.03	28	Pn	Pn	23 18 28.2	-0.8
	9.0nm,0.3s,baz=299,slow=24,SNR=77						
URZ				Sn	Sn	23 19 22.5	-4.0
	51nm,0.3s,baz=84,slow=16,SNR=12						
URZ	Urewera	5.03	28	P	Pn	23 18 28.2	-0.8
EDRZ	Edgecumbe	5.05	24	P	Pn	23 18 29.6	+0.2
MLZ	Mavora Lakes	5.07	237	P	Pn	23 18 29.3	-0.2
MLZ	Mavora Lakes	5.07	237	Pn	Pn	23 18 29.4	-0.1
KMRZ	Kaimai	5.09	16	P	Pn	23 18 31.1	+1.2
TOZ	Tahuroa Road	5.13	12	P	Pn	23 18 31.1	+0.7
MARZ	Manawahe	5.14	23	P	Pn	23 18 30.9	+0.3
TKGZ	Te Karaka	5.15	34	P	Pn	23 18 29.9	-0.8
SYZ	Scrubby Hill	5.20	222	P	Pn	23 18 31.9	+0.6
OPRZ	Ohinepanea	5.24	21	P	Pn	23 18 31.8	-0.1
CNGZ	Carnagh Statio	5.27	37	P	Pn	23 18 32.0	-0.3
TGRZ	Tauranga	5.28	19	P	Pn	23 18 33.2	+0.8
WHRZ	Whale Island	5.35	25	P	Pn	23 18 36.3	+2.9
TWGZ	Tauwhareparae	5.43	34	P	Pn	23 18 34.5	-0.1
WHZ	Wether Hill Ro	5.44	233	P	Pn	23 18 33.8	-0.8
WHZ	Wether Hill Ro	5.44	233	Pn	Pn	23 18 34.0	-0.6
RUGZ	Raukumara Rang	5.49	31	P	Pn	23 18 34.6	-0.9
PUZ	Puketiti	5.63	35	P	Pn	23 18 38.8	+1.4
AWAZ	Awhitu Peninsu	5.70	4	P	Pn	23 18 39.6	+1.4
MYRZ	Mayor Island	5.70	17	P	Pn	23 18 39.7	+1.4
DCZ	Deep Cove	5.71	239	P	Pn	23 18 38.9	+0.5
DCZ	Deep Cove	5.71	239	Pn	Pn	23 18 37.8	-0.5
PKGZ	Pakihiroa	5.72	33	P	Pn	23 18 38.4	-0.1
HAZ	Te Kaha	5.72	30	P	Pn	23 18 38.6	+0.2
WTAZ	Waiatarua	5.83	3	P	Pn	23 18 41.8	+1.9
ETAZ	East Tamaki Re	5.83	6	P	Pn	23 18 41.5	+1.5
WMGZ	Waiomatatini S	5.91	35	P	Pn	23 18 39.6	-1.5
APZ	The Paps	5.98	225	P	Pn	23 18 42.0	-0.1
RVAZ	Riverhead Bore	5.99	3	P	Pn	23 18 43.4	+1.2
WIAZ	Waiheke Island	6.00	8	P	Pn	23 18 43.2	+0.8
MBAZ	Motutapu North	6.01	6	P	Pn	23 18 43.5	+1.0
MXZ	Matakaoa Point	6.09	33	P	Pn	23 18 42.5	-1.0
MXZ	Matakaoa Point	6.09	33	Pn	Pn	23 18 42.6	-1.0
KUZ	Kuaotunu	6.12	12	P	Pn	23 18 44.3	+0.3
ABAZ	Army Bay	6.17	5	P	Pn	23 18 45.8	+1.1
PYZ	Puysegur Point	6.33	235	P	Pn	23 18 49.3	+2.4
PYZ	Puysegur Point	6.33	235	Pn	Pn	23 18 47.2	+0.3
GRZ	Great Barrier	6.58	9	P	Pn	23 18 50.3	+0.1
WCZ	Waipu Caves	6.81	1	P	Pn	23 18 54.6	+1.2
CTZ	Chatham Island	6.82	101	P	Pn	23 18 54.6	+1.0
OUZ	Omahuta	7.54	357	P	Pn	23 19 04.2	+0.7
OUZ	Omahuta	7.54	357	Pn	Pn	23 19 03.5	+0.1
RAO	Raoul Island	14.92	28	LR	LR	23 26 36.6	
	comp=Z,204nm,19.9s,baz=10.0,slow=38						
OUENC	Ouen Island, N	21.18	341	P	P	23 21 59.5	+0.7
OUENC				IAmb	IAmb	23 22 03.7	
	comp=Z,15nm,1.1s						
DZM	Mont Dzumac	21.61	340	*e*S	S	23 25 55.2	-6.8
	comp=Z,135nm,26.1s						
DZM				*e*LR	LR	23 27 16.8	
	comp=Z,196nm,23.4s						
DZM	Mont Dzumac	21.61	340	P	P	23 22 01.3	-2.2
	comp=Z,3.5nm,0.9s,baz=148,slow=15,SNR=2.0						
DZM				LR	LR	23 29 09.3	
	comp=Z,150nm,19.0s,baz=250,slow=33						
DZM	Mont Dzumac	21.61	340	P	P	23 22 04.2	+0.8
DZM				IAmb	IAmb	23 22 12.1	
	comp=Z,11nm,1.1s						
MSVF	Nonsavu	25.16	9	P	P	23 22 37.8	-0.9
	comp=Z,7.5nm,1.0s,baz=158,slow=5.4,SNR=2.9						
MSVF				LR	LR	23 31 42.6	
	comp=Z,176nm,18.2s,baz=135,slow=35						
STKA	Stephens Creek	27.91	282	LR	LR	23 33 16.9	
	comp=Z,48nm,18.8s,baz=37,slow=35						
TBI	Tubuai	35.76	69	*e*T	T	00 01 56.5	
	comp=Z,18nm,0.3s						
ASAR	Alice Springs	38.23	287	P	P	23 24 33.2	-0.2
	comp=Z,1.5nm,0.9s,baz=131,slow=6.8,SNR=10						
ASAR				PcP	PcP	23 26 47.2	-0.4
	comp=Z,0.4nm,0.5s,baz=130,slow=3.9,SNR=3.1						
ASAR				LR	LR	23 40 31.0	
	comp=Z,97nm,18.2s,baz=126,slow=37						
PAE	Paea	39.64	62	*e*T	T	00 06 45.9	
	comp=Z,5.8nm,0.3s						
PPT2	Papeete2	39.69	62	*e*LR	LR	23 35 34.2	
	comp=Z,119nm,26.0s						
PPT	Papeete	39.71	62	LR	LR	23 35 52.7	
	comp=Z,101nm,21.2s,baz=220,slow=28						
WB2	Warramunga Arr	40.38	292	P	P	23 24 51.4	+0.1
WRA	Warramunga Arr	40.39	292	P	P	23 24 51.4	0.0
	comp=Z,2.2nm,0.5s,baz=128,slow=8.6,SNR=46						
WRA				PcP	PcP	23 26 53.8	-0.5
	comp=Z,0.6nm,0.8s,baz=136,slow=2.2,SNR=2.7						
WRA				LR	LR	23 41 29.0	
	comp=Z,91nm,18.0s,baz=115,slow=36						
WRA	Warramunga Arr	40.39	292	P	P	23 24 50.4	-1.0
WB0	Warramunga Arr	40.47	292	P	P	23 24 52.0	-0.1
WB0				IAmb	IAmb	23 24 54.0	
	comp=Z,2.2nm,0.7s						
VAH	Vaihoa	42.68	62	*e*T	T	00 10 32.4	
	comp=Z,3.3nm,0.2s						
QSPA	South Pole Qui	47.37	180	P	P	23 25 49.5	+2.3
	comp=Z,2.1nm,1.1s,baz=31,slow=4.5,SNR=2.7						
FITZ	Fitzroy Crossi	47.70	286	P	P	23 25 49.5	-0.5
	comp=Z,1.0nm,0.5s,baz=174,slow=20,SNR=1.7						
TAOE	Nuku Hiva Isla	52.29	63	*e*LR	LR	23 41 24.0	
	comp=Z,62nm,25.5s						
PLCA	Paso Flores	78.44	135	P	P	23 29 17.0	+2.9
	comp=Z,1.7nm,0.8s,baz=264,slow=9.2,SNR=3.6						
PLCA				LR	LR	23 55 02.5	
	comp=Z,50nm,20.7s,baz=180,slow=29						
H03S2	Juan Fernandez	78.67	126	T	T	00 54 51.0	
	baz=225						
H03S1	Juan Fernandez	78.68	126	T	T	00 54 53.9	
	baz=225						
H03S3	Juan Fernandez	78.69	126	T	T	00 54 59.4	
	baz=225						
H03N3	Juan Fernandez	78.94	125	T	T	00 54 39.6	
	baz=229,slow=72						
H03N2	Juan Fernandez	78.95	125	T	T	00 54 30.5	
	baz=229,slow=72						
H03N1	Juan Fernandez	78.96	125	T	T	00 54 39.3	
	baz=229,slow=72						
CMAR	Chiang Mai Arr	91.97	293	P	P	23 30 22.9	+0.9
	comp=Z,0.3nm,0.3s,baz=175,slow=3.5,SNR=4.1						
CMAR				LR	LR	00 14 42.8	
	comp=Z,16nm,19.9s,baz=150,slow=38						
HHC	Hu-ho-hao-te	100.57	317	*e*P	Pdif	23 31 03.2	+2.5
KBZ	Khabaz	144.88	289	PKP	PKPbc	23 36 49.0	+0.2
	comp=Z,2.0nm,0.8s,baz=104,slow=4.2,SNR=4.2						
ARCES	ARCESS Array B	148.69	339	PKPbc	PKPbc	23 36 59.1	0.0
	comp=Z,1.9nm,0.7s,baz=52,slow=2.1,SNR=7.7						
TORD	Torodi Ar. Bea	149.78	195	PKPbc	PKPbc	23 37 03.8	+0.3
	comp=Z,3.3nm,0.9s,baz=151,slow=1.2,SNR=18						
BRTR	Keskin Array B	150.33	278	PKPbc	PKPbc	23 37 04.2	-0.1
	comp=Z,0.9nm,0.7s,baz=139,slow=5.1,SNR=2.7						
BRTR				PKPab	sPKPbc	23 37 12.5	-0.5
	comp=Z,4.8nm,0.9s,baz=123,slow=3.4,SNR=11						
KOWA	Kowa	151.79	184	PKPbc	PKPbc	23 37 07.2	-1.0
	comp=Z,1.2nm,0.6s,baz=148,slow=3.0,SNR=6.1						
FINES	FINESS Array B	153.32	326	PKPbc	PKPbc	23 37 08.3	-1.9
	comp=Z,0.8nm,0.7s,baz=5.7,slow=1.4,SNR=0.9						

NEIC ***11*** *23:17:23.6±1.4, 18°.9S±0°.2×177°.47W±0°.06, h494^{km}±13^{km}, mb4.0/13, Error ellipse: s-maj=22.7km s-min=8.2km*

az=172.0

*IDC **11** 23:17:26.4±3.0, 19°.87S×177°.89W, h452^{km}±30^{km}, mb3.1/4, mb1 3.2/5, mb1mx2.6/39, mbtmp3.9/5, Error ellipse: s-maj=44.6km s-min=31.9km az=133.0*

ISC 11 23:17:23.3±0.7, **18°.9S**±0°.1×**177°.46W**±0°.10, **h500**^{km}, **n23**, σ**1^{s}.02**/21, **mb3.8**/11, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.42	284	P	P	23 18 45.3	0.0
	1.7nm,0.3s,baz=204,slow=22,SNR=12						
NIUE	Niue	7.13	93	P	P	23 19 10.8	-0.1
FUNA	Funafuti	10.80	342	P	P	23 19 49.6	+0.2
MARNC	Mare, Loyalty	13.86	257	P	P	23 20 19.5	-2.1
LIFNC	LIFOU	14.52	260	P	P	23 20 31.0	+2.5
PINNC	Pines Island,	14.59	253	P	P	23 20 28.4	-0.8
LTZ	Lake Taylor	25.35	198	P	P	23 22 09.2	-0.6
XMAS	Kiritimati	28.64	46	P	P	23 22 38.5	-0.6
ARMA	Armidale	30.25	242	P	P	23 22 52.5	-0.5
ARMA				IAmb	IAmb	23 22 53.1	
	comp=Z,1.2nm,0.5s						
CAN	Canberra	33.84	234	P	P	23 23 23.9	+0.3
CAN				IAmb	IAmb	23 23 41.5	
	comp=Z,7.9nm,1.0s						
CTAO	Charters Tower	34.19	262	P	P	23 23 26.1	-0.5
TOO	Toolangi	37.26	232	P	P	23 23 51.1	-0.9
TOO				IAmb	IAmb	23 24 09.2	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	38.96	242	P	P	23 24 05.8	-0.1
	comp=Z,1.4nm,0.4s,baz=54,slow=8.7,SNR=4.8						
STKA	Stephens Creek	38.96	242	IAmb	IAmb	23 24 06.7	
	comp=Z,1.0nm,1.1s						
MCQ	Macquarie Isla	39.86	201	P	P	23 24 12.8	+0.1
BBOO	Buckleboo	43.73	242	P	P	23 24 43.2	-0.6
BBOO				IAmb	IAmb	23 24 51.9	
	comp=Z,3.0nm,0.9s						
ASAR	Alice Springs	45.40	255	P	P	23 24 58.3	+1.4
	comp=Z,1.0nm,0.5s,baz=92,slow=7.8,SNR=10						
FORT	Forrest	50.41	245	P	P	23 25 34.4	+0.1
FORT				IAmb	IAmb	23 25 39.0	
	comp=Z,13nm,1.0s						
PSA00	Pilbara Seismi	58.54	256	P	P	23 26 31.8	0.0
PSA00				IAmb	IAmb	23 26 32.3	
	comp=Z,2.8nm,1.1s						
MBWA	Marble Bar	58.71	256	P	P	23 26 32.2	-0.7
MORW	Morawa	60.91	247	P	P	23 26 47.7	+0.2
MORW				IAmb	IAmb	23 26 48.7	
	comp=Z,8.4nm,1.1s						
QSPA	South Pole Qui	71.17	180	P	P	23 27 52.4	+1.5
	comp=Z,1.8nm,0.8s,baz=32,slow=6.5,SNR=3.7						
ILAR	Eielson Array	86.64	13	P	P	23 29 25.2	+12
	comp=Z,0.2nm,0.5s,baz=216,slow=4.5,SNR=4.2						

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*IDC **11** 23:25:24.9±9.0, 35°.08N×74°.24E, h0^{km}, mb3.8/3, mb1 3.7/6, mb1mx3.2/57, mbtmp3.7/6, ML3.5/3, Error ellipse: s-maj=144.8km s-min=54.4km az=152.0*

ISC 11 23:25:33.3±6.8, **35°.5N**±0°.7×**74°.1E**±0°.4, **h35**^{km}, **n6**, σ**0^{s}.62**/6, **Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	Kurchatov Arra	15.45	11	Pn	Pn	23 29 09.0	+0.6
	0.1nm,0.3s,baz=197,slow=11,SNR=4.6						
BVAR	Borovoye Array	17.71	353	P	Pn	23 29 37.2	+0.2
	0.2nm,0.3s,baz=168,slow=16,SNR=2.7						
AKTO	Aktyubinsk	18.95	327	P	Pn	23 29 51.6	-0.5
	0.2nm,0.3s,baz=135,slow=13,SNR=2.5						
ZALV	Zalesovo Beam	19.91	19	P	P	23 30 01.0	-0.7
	1.3nm,0.4s,baz=209,slow=12,SNR=5.2						
FINES	FINESS Array B	39.72	326	P	P	23 33 02.2	+0.3
	1.7nm,1.0s,baz=119,slow=8.6,SNR=1.1						
ARCES	ARCESS Array B	43.03	337	P	P	23 33 29.4	+0.3
	3.0nm,1.0s,baz=108,slow=8.6,SNR=6.8						

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*IDC **11** 23:46:54.0±27.0, 37°.71N×19°.78E, h0^{km}, mb3.9/3, mb1 3.9/3, mb1mx3.4/31, mbtmp3.9/3, Error ellipse: s-maj=514.7km s-min=70.7km az=43.0*

*ATH **11** 23:47:04.7, 38°.51N×20°.57E, h12^{km}±1^{km}, ML2.9/11, Error ellipse: s-maj=1.5km s-min=0.6km az=277.0*

*THE **11** 23:47:05.0, 38°.50N×20°.60E, h8^{km}±1^{km}, ML2.9/10, Error ellipse: s-maj=1.2km s-min=0.4km az=283.0*

ISC 11 23:47:04.0±0.8, **38°.52N**±0°.02×**20°.52E**±0°.02, **h18**^{km}±3^{km}, **n67**, σ**1^{s}.58**/107, **mb4.0**/3, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.07	149	P	Pg	23 47 06.9	-0.5
FSK				S	Sg	23 47 08.2	-1.4
FSK				AML	AML	23 47 08.5	
FSK				AML	AML	23 47 08.7	
EVGI	Lefkada island	0.15	47	P	Pg	23 47 08.0	-0.3
EVGI				S	Sg	23 47 10.6	-0.5
EVGI	Lefkada island	0.15	47	P	Pg	23 47 07.9	-0.3
EVGI				S	Sg	23 47 10.4	-0.8
DRAG	Dragano-Lefkad	0.17	15	P	Pg	23 47 08.6	0.0
DRAG				S	Sg	23 47 11.7	0.0
DRAG	Dragano-Lefkad	0.17	15	P	Pg	23 47 08.6	0.0
DRAG				S	Sg	23 47 11.6	0.0
NYDR	Nydri-Lefkada	0.24	36	P	Pg	23 47 09.5	-0.1
NYDR	Nydri-Lefkada	0.24	36	P	Pg	23 47 09.4	-0.1
KEF4	Livadi, Kephal	0.27	196	P	Pg	23 47 10.2	+0.2
KEF4				S	Sg	23 47 14.7	+0.5
KEF4	Livadi, Kephal	0.27	196	P	Pg	23 47 10.2	+0.2
KEF4				S	Sg	23 47 14.7	+0.5
LKD2	Lefkada island	0.29	22	P	Pg	23 47 10.5	+0.1
LKD2				S	Sg	23 47 14.6	-0.2
	2µm,0.5s						
LKD2	Lefkada island	0.29	22	P	Pg	23 47 10.2	-0.2
LKD2				S	Sg	23 47 14.8	0.0
LKD2				AML	AML	23 47 19.9	
	comp=N,4593µm,0.5s						
LKD2				AML	AML	23 47 20.6	
	comp=E,4672µm,0.5s						
TSLK	Tsoukalades, L	0.32	19	P	Pg	23 47 11.3	+0.3
TSLK				S	Sg	23 47 16.2	+0.5
	comp=E,2µm,0.6s						
TSLK	Tsoukalades, L	0.32	19	P	Pg	23 47 11.2	+0.2
TSLK				S	Sg	23 47 15.9	+0.2
TSLK				AML	AML	23 47 19.4	
	comp=N,5160µm,0.5s						
TSLK				AML	AML	23 47 22.1	
	comp=E,3986µm,0.6s						
LXRA	Lixouri, Kepha	0.33	191	P	Pg	23 47 11.1	+0.2
LXRA				S	Sg	23 47 16.2	+0.5
KEF3	Kipouria, Keph	0.34	203	P	Pg	23 47 11.0	-0.3
KEF3				S	Sg	23 47 16.4	+0.2
ARGA	Argostoli. Kep	0.34	185	P	Pb	23 47 12.1	+0.5
VLS	Valsamata	0.35	170	P	Pg	23 47 11.0	-0.3
VLS				S	Sg	23 47 16.5	+0.2
	comp=E,17µm,0.1s						
VLS	Valsamata	0.35	170	P	Pg	23 47 11.1	-0.3
VLS				S	Sg	23 47 16.5	+0.2
VLS				AML	AML	23 47 16.9	
	comp=N,22114µm,0.1s						
VLS				AML	AML	23 47 16.9	
	comp=E,44970µm,0.1s						
VTN	Vitineika	0.80	139	P	Pb	23 47 19.9	+0.6
LTHK	Lithakia	0.85	163	P	Pg	23 47 19.7	-0.8
LTHK				S	Sb	23 47 32.3	+1.2
	comp=E,2µm,0.2s						
LTHK	Lithakia	0.85	163	P	Pg	23 47 19.7	-0.8
LTHK				S	Sb	23 47 32.0	+0.9
RLS	Riolos of Patr	0.88	121	P	Pg	23 47 20.3	-0.8
RLS				S	Sb	23 47 32.4	+0.4
	comp=E,400nm,0.7s						
RLS	Riolos of Patr	0.88	121	P	Pg	23 47 20.5	-0.6
RLS				S	Sb	23 47 32.7	+0.7
RLS				AML	AML	23 47 39.3	
	comp=E,806µm,0.3s						
RLS				AML	AML	23 47 40.4	
	comp=N,655µm,0.4s						
IGT	Igoumenitsa	1.02	352	P	Pg	23 47 24.3	+0.5
IGT				S	Sn	23 47 40.7	+3.4
	comp=N,328nm,0.4s						
IGT	Igoumenitsa	1.02	352	P	Pg	23 47 24.0	+0.2
IGT				S	Sg	23 47 38.1	+0.8
IGT				AML	AML	23 47 42.3	
	comp=E,734µm,0.6s						
IGT				AML	AML	23 47 43.2	
	comp=N,584µm,0.3s						
UPR	University Cam	1.02	103	P	Pg	23 47 22.9	-1.0
EVR	Evrytania	1.09	68	P	Pg	23 47 24.1	-1.0
EVR				S	Sb	23 47 39.7	+1.5
	comp=N,258nm,0.7s						
EVR	Evrytania	1.09	68	P	Pg	23 47 24.1	-1.0
EVR				S	Sg	23 47 38.4	-1.0
EVR				AML	AML	23 47 56.6	
	comp=E,528µm,0.7s						
EVR				AML	AML	23 47 58.9	
	comp=N,501µm,0.7s						
EFP	Efpalio	1.09	94	P	Pg	23 47 23.5	-1.7
EFP				S	Sn	23 47 39.7	+0.7
	comp=N,732nm,0.5s						
EFP	Efpalio	1.09	94	P	Pg	23 47 23.5	-1.7
EFP				AML	AML	23 47 45.9	
	comp=N,1494µm,0.5s						
EFP				AML	AML	23 47 47.4	
	comp=E,1415µm,0.4s						
DRO	Drossia	1.10	121	P	Pg	23 47 24.2	-1.0
DRO				S	Sn	23 47 40.0	+0.8
	comp=E,770nm,0.4s						
DRO	Drossia	1.10	121	P	Pg	23 47 24.4	-0.8
DRO				S	Sb	23 47 38.9	+0.5
DRO				AML	AML	23 47 44.0	
	comp=N,1019µm,0.1s						
DRO				AML	AML	23 47 44.5	
	comp=E,1446µm,0.3s						
LAKA	Lakka	1.18	103	P	Pg	23 47 25.2	-1.7
LAKA				S	Sb	23 47 42.0	+1.1
	comp=E,1µm,0.8s						
LAKA	Lakka	1.18	103	P	Pg	23 47 25.1	-1.7
LAKA				S	Sg	23 47 41.3	-1.1
LAKA				AML	AML	23 47 48.5	
	comp=E,3947µm,0.7s						
LAKA				AML	AML	23 47 48.9	
	comp=N,2187µm,0.7s						
TRIZ	Trizonia	1.23	97	P	Pb	23 47 26.0	-0.7
ALIK	Aliki, Aigiali	1.28	101	P	Pn	23 47 26.9	0.0
KEK	Kerkira	1.32	335	P	Pn	23 47 29.8	+2.3
KEK	Kerkira	1.32	335	P	Pn	23 47 29.3	+1.8
MAKR	Makrakomi, Fth	1.35	68	P	Pn	23 47 28.9	+0.9
MAKR	Makrakomi, Fth	1.35	68	P	Pn	23 47 28.7	+0.7
KLV	Kalavryta, Ach	1.37	110	P	Pn	23 47 28.2	-0.1
KLV	Kalavryta, Ach	1.37	110	P	Pn	23 47 28.2	-0.1
KLV				AML	AML	23 47 54.9	
	comp=E,295µm,0.6s						
KLV				AML	AML	23 47 59.5	
	comp=N,352µm,0.8s						
AGG	Agios Georgios	1.50	70	P	Pn	23 47 31.5	+1.4
AGG	Agios Georgios	1.50	70	P	Pn	23 47 31.1	+1.0
THL	Klokotos Trika	1.56	48	P	Pn	23 47 32.6	+1.7
ITM	Ithomi	1.74	140	P	Pb	23 47 35.8	+0.3
BOSS	Bosilegrad	4.25	20	*e*Pn	Pn	23 48 11.0	+3.3
BARS	Barje	4.41	13	*e*Pn	Pn	23 48 12.3	+2.4
VTS	Vitosha	4.59	26	*e*Pn	Pn	23 48 15.2	+2.6
SJES	Sjenica	4.75	355	*e*Pn	Pn	23 48 19.3	+4.5
STON	Ston	4.85	335	*e*Pn	Pn	23 48 16.1	+0.2
STON				Sn	Sn	23 49 08.9	-2.7
IVAS	Ivanjica	5.06	357	*e*Pn	Pn	23 48 20.6	+1.6
LSTV	Lastovo	5.06	328	*e*Pn	Pn	23 48 19.3	+0.4
LSTV				Sn	Sn	23 49 14.0	-2.8
MAKA	Makarska	5.45	332	*e*Pn	Pn	23 48 25.2	+0.9
MAKA				Sn	Sn	23 49 23.4	-3.0
HVAR	Hvar	5.58	328	*e*Pn	Pn	23 48 26.6	+0.5
HVAR				Sn	Sn	23 49 27.1	-2.7
DIVS	Divibare	5.59	356	*e*Pn	Pn	23 48 26.8	+0.6
RICI	Ricice	5.59	334	*e*Pn	Pn	23 48 26.7	+0.4
RICI				Sn	Sn	23 49 27.3	-2.7
ZIRJ	Zirje	6.31	326	*e*Pn	Pn	23 48 35.5	-0.6
ZIRJ				Sn	Sn	23 49 43.6	-4.1
MORI	Morici	6.46	327	*e*Pn	Pn	23 48 38.6	+0.6
MORI				Sn	Sn	23 49 47.9	-3.4
DUGI	Dugi Otok	6.84	325	*e*Pn	Pn	23 48 43.5	+0.2
DUGI				Sn	Sn	23 49 56.6	-4.1
UDBI	Udbina	6.98	331	*e*Pn	Pn	23 48 45.1	-0.2
UDBI				Sn	Sn	23 50 00.5	-3.8
PLIT	Plitvice	7.33	332	*e*Pn	Pn	23 48 50.1	0.0
PLIT				Sn	Sn	23 50 09.4	-3.5
NVLJ	Novalja	7.37	327	*e*Pn	Pn	23 48 50.3	-0.4
NVLJ				Sn	Sn	23 50 09.3	-4.5
BRJN	Brijuni	8.14	324	*e*Pn	Pn	23 49 01.0	-0.2
BRJN				Sn	Sn	23 50 29.0	-3.7
FINES	FINESS Array B	23.21	7	P	P	23 52 10.8	+1.2
	comp=N,5.4nm,1.1s,baz=171,slow=9.6,SNR=4.1						
MKAR	Makanchi Array	45.13	59	P	P	23 55 19.1	-0.1
	comp=N,1.1nm,1.0s,baz=291,slow=6.9,SNR=5.8						
ZALV	Zalesovo Beam	45.47	48	P	P	23 55 22.3	+0.6
	comp=N,0.7nm,0.4s,baz=280,slow=8.5,SNR=2.5						

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*IDC **11** 23:52:45.5±0.8, 4°.38S×129°.54E, h0^{km}, mb3.9/6, mb1 4.0/10, mb1mx3.7/34, mbtmp3.9/10, ML3.2/4, MS3.0/3, Ms1 3.0/3, ms1mx2.5/38, Error ellipse: s-maj=34.8km s-min=12.4km az=75.0*

*DJA **11** 23:52:48.6±1.3, 4°S±14°×12°9E±°, h10^{km}, M3.6/6, MLv3.6/6*

ISC 11 23:52:50.1±0.7, **4°.38S**±0°.06×**129°.49E**±0°.05, **h35**^{km}, **n21**, σ**1^{s}.54**/24, **mb4.1**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.17	332	P	Pn	23 53 09.6	-0.4
MSAI	Masohi	1.17	332	P	Pn	23 53 08.2	-1.8
AAI	Ambon	1.46	298	P	Pn	23 53 13.2	-0.8
AAI				S	Sn	23 53 30.5	-1.4
AAI	Ambon	1.46	298	P	Pn	23 53 13.1	-0.9
FAKI	Fak Fak	3.12	62	P	Pn	23 53 37.3	+0.4
FAKI	Fak Fak	3.12	62	P	Pn	23 53 37.2	+0.4
SIJI	Sorong	3.92	27	Pn	Pn	23 53 47.0	-0.9
	3.6nm,0.3s,baz=155,slow=20,SNR=13						
SIJI				Sn	Sn	23 54 29.9	-2.7
	4.0nm,0.3s,baz=237,slow=23,SNR=2.1						
SWI	Sorong	3.92	27	P	Pn	23 53 47.6	-0.2
SWI	Sorong	3.92	27	P	Pn	23 53 46.9	-0.9
SANI	Sanana	4.19	303	P	Pn	23 53 51.9	+0.3
FITZ	Fitzroy Crossi	14.14	195	LR	LR	00 01 41.5	
	comp=Z,17nm,18.7s,baz=56,slow=38						
WRA	Warramunga Arr	16.17	163	Pn	Pn	23 56 34.5	-0.4
	0.1nm,0.3s,baz=348,slow=13,SNR=6.4						
WRA				Sn	Sn	23 59 28.6	-4.7
	0.0nm,0.3s,baz=343,slow=23,SNR=3.5						
WRA				LR	LR	00 02 57.0	
	comp=Z,35nm,21.6s,baz=35,slow=38						
PMG	Port Moresby	18.24	107	P	P	23 57 00.4	-0.2
	2.0nm,0.3s,baz=270,slow=8.1,SNR=1.4						
ASAR	Alice Springs	19.64	168	P	P	23 57 14.8	-1.2
	0.1nm,0.3s,baz=350,slow=9.9,SNR=4.3						
ASAR				S	Sn	00 00 59.0	+1.9
	0.1nm,0.3s,baz=352,slow=19,SNR=4.3						
ASAR				PcP	PcP	00 01 36.2	+1.4
	0.0nm,0.3s,baz=357,slow=1.9,SNR=1.6						
CMAR	Chiang Mai Arr	37.70	308	P	P	00 00 03.8	+1.2
	0.9nm,0.3s,baz=134,slow=7.8,SNR=4.2						
DZM	Mont Dzumac	39.88	120	LR	LR	00 16 22.6	
	comp=Z,102nm,18.8s,baz=142,slow=36						
USRK	Ussuriysk Ar.	48.41	2	P	P	00 01 29.6	+0.9
	1.9nm,0.5s,baz=200,slow=7.6,SNR=4.2						
SONM	Songino Array	55.81	341	P	P	00 02 25.0	+1.0
	0.5nm,0.8s,baz=164,slow=7.5,SNR=2.7						
MKAR	Makanchi Array	65.77	326	P	P	00 03 32.6	+0.9
	1.2nm,0.5s,baz=114,slow=7.5,SNR=30						
ZALV	Zalesovo Beam	69.03	334	P	P	00 03 52.6	+0.6
	0.7nm,0.4s,baz=104,slow=6.3,SNR=4.3						
ILAR	Eielson Array	91.21	25	P	P	00 05 50.9	-0.5
	0.3nm,0.8s,baz=261,slow=4.5,SNR=1.9						

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*IDC **12** 00:00:45.8±1.4, 4°.00S×130°.00E, h0^{km}, mb3.8/2, mb1 3.7/5, mb1mx3.3/35, mbtmp3.5/5, ML3.0/3, Error ellipse: s-maj=52.9km s-min=23.6km az=86.0*

*DJA **12** 00:00:52.3±5.6, 4°S±27°×12°9E±3°5, h10^{km}, M2.9/4, MLv2.9/4*

ISC 12 00:00:45.5±1.1, **4°.13S**±0°.09×**129°.9E**±0°.1, **h10**^{km}, **n7**, σ**2^{s}.29**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.24	309	P	Pn	00 01 08.1	-0.8
AAI	Ambon	1.76	284	P	Pn	00 01 13.5	-2.5
SIJI	Sorong	3.52	23	Pn	Pn	00 01 37.7	-2.6
	2.0nm,0.3s,baz=248,slow=23,SNR=1.7						
SIJI				Sn	Sn	00 02 23.0	+1.1
	2.1nm,0.3s,baz=169,slow=23,SNR=1.5						
WRA	Warramunga Arr	16.30	165	Pn	P	00 04 36.1	-1.6
	0.0nm,0.3s,baz=345,slow=12,SNR=3.6						
ASAR	Alice Springs	19.80	169	P	Pn	00 05 19.6	+1.8
	0.1nm,0.3s,baz=346,slow=9.9,SNR=12						
MKAR	Makanchi Array	65.79	326	P	P	00 11 32.8	+1.8
	0.4nm,0.4s,baz=116,slow=8.3,SNR=7.3						
ZALV	Zalesovo Beam	68.98	333	P	P	00 11 52.4	+1.5
	0.3nm,0.3s,baz=122,slow=5.4,SNR=1.3						

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*IDC **12** 00:03:25.5±1.0, 6°.36S×150°.68E, h0^{km}, mb4.1/7, mb1 4.4/8, mb1mx3.9/34, mbtmp4.1/8, ML1.9/1, MS3.2/4, Ms1 3.1/4, ms1mx2.8/39, Error ellipse: s-maj=46.6km s-min=18.1km az=127.0*

ISC 12 00:03:30.6±1.0, **6°.4S**±0°.2×**150°.7E**±0°.2, **h33**^{km}, **n11**, σ**0^{s}.89**/12, **mb4.0**/6, **MS3.1**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.59	229	Pn	Pn	00 04 38.7	+1.0
	4.4nm,0.3s,baz=43,slow=8.9,SNR=14						
PMG				Sn	Sn	00 05 29.6	-0.4
	9.6nm,0.3s,baz=97,slow=5.0,SNR=9.3						
PMG				LR	LR	00 06 25.7	
	comp=Z,190nm,18.1s,baz=340,slow=39						
WRA	Warramunga Arr	20.81	228	P	P	00 08 09.2	-0.2
	10nm,0.9s,baz=53,slow=11,SNR=43						
WRA				PcP	PcP	00 12 18.8	+1.0
	0.5nm,0.9s,baz=53,slow=1.8,SNR=2.7						
WRA				LR	LR	00 16 39.6	
	comp=Z,38nm,18.3s,baz=145,slow=38						
ASAR	Alice Springs	23.56	221	P	P	00 08 38.0	-0.4
	2.3nm,0.6s,baz=56,slow=8.8,SNR=20						
STKA	Stephens Creek	26.74	197	P	P	00 09 06.7	-0.6
	3.4nm,0.8s,baz=9.1,slow=11,SNR=5.0						
STKA				LR	LR	00 19 35.9	
	comp=Z,50nm,18.2s,baz=25,slow=36						
BATI	Baumata	26.98	260	LR	LR	00 22 03.5	
	comp=Z,63nm,18.5s,baz=112,slow=41						
FITZ	Fitzroy Crossi	27.04	242	P	P	00 09 09.4	-0.7
	1.7nm,0.5s,baz=44,slow=8.5,SNR=8.9						
KSRS	Korea Array	48.50	336	P	P	00 12 10.8	+0.4
	1.1nm,0.5s,baz=132,slow=6.2,SNR=2.0						
ILAR	Eielson Array	84.42	22	P	P	00 15 58.0	-1.5
	0.8nm,0.8s,baz=245,slow=5.3,SNR=6.2						
NVAR	Mina Array Bea	94.73	52	P	P	00 16 50.5	+1.2
	1.2nm,0.7s,baz=255,slow=5.9,SNR=5.7						
PDAR	Pinedale Array	101.48	48	P	Pdif	00 17 19.4	-0.2
	0.2nm,0.5s,baz=270,slow=2.7,SNR=3.1						
TORD	Torodi Ar. Bea	148.71	285	PKPbc	PKPbc	00 23 15.1	-0.5
	1.7nm,0.5s,baz=94,slow=1.8,SNR=20						

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*THE **12** 00:14:47.8, 37°.57N×19°.75E, h6^{km}, ML2.6/3, Error ellipse: s-maj=1.9km s-min=1.0km az=108.0*

*ATH **12** 00:14:47.5, 37°.53N×19°.77E, h12^{km}±3^{km}, ML2.7/1, Error ellipse: s-maj=5.1km s-min=2.4km az=30.0*

ISC 12 00:14:45.3±2.0, **37°.51N**±0°.07×**19°.63E**±0°.06, **h18**^{km}±4^{km}, **n39**, σ**1^{s}.52**/57, **Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	Kipouria, Keph	0.90	39	P	Pg	00 15 03.0	+0.2
KEF3				S	Sg	00 15 14.2	-0.4
KEF3	Kipouria, Keph	0.90	39	P	Pb	00 15 02.4	+0.2
DMLN	Damoulianata-K	0.94	39	P	Pb	00 15 03.5	+0.5
DMLN				S	Sg	00 15 15.3	-0.6
	640nm,0.3s						
PSDA	Pessada-Kefalo	0.97	51	P	Pb	00 15 03.1	-0.4
PSDA				S	Sn	00 15 16.9	-0.3
PSDA	Pessada-Kefalo	0.97	51	P	Pb	00 15 03.5	0.0
PSDA				S	Sg	00 15 15.5	-1.4
KEF4	Livadi, Kephal	0.98	40	P	Pg	00 15 04.4	+0.1
KEF4				S	Sn	00 15 16.8	-0.6
KEF4	Livadi, Kephal	0.98	40	P	Pn	00 15 04.9	+0.8
LTHK	Lithakia	0.98	78	P	Pg	00 15 04.1	-0.3
LTHK				S	Sn	00 15 17.5	0.0
LTHK	Lithakia	0.98	78	P	Pb	00 15 03.8	+0.1
LTHK				S	Sg	00 15 16.3	-1.0
VLS	Valsamata	1.01	49	P	Pb	00 15 04.2	-0.1
VLS				S	Sn	00 15 18.0	-0.3
	398nm,0.3s						
VLS	Valsamata	1.01	49	P	Pn	00 15 05.2	+0.7
VLS				S	Sn	00 15 17.5	-0.8
VLS				AML	AML	00 15 19.6	
	comp=E,800µm,0.5s						
VLS				AML	AML	00 15 19.6	
	comp=N,933µm,0.3s						
FSK	Fiskardo	1.20	38	P	Pb	00 15 08.0	+0.5
FSK				S	Sg	00 15 24.1	-0.2
FSK	Fiskardo	1.20	38	P	Pg	00 15 09.3	+0.8
EVGI	Lefkada island	1.37	36	P	Pg	00 15 12.0	+0.2
EVGI				S	Sg	00 15 29.2	-0.5
EVGI	Lefkada island	1.37	36	P	Pg	00 15 12.1	+0.3
DRAG	Dragano-Lefkad	1.39	32	P	Pg	00 15 12.3	+0.2
DRAG				S	Sg	00 15 30.7	+0.5
NYDR	Nydri-Lefkada	1.47	35	P	Pg	00 15 13.3	-0.3
NYDR				S	Sg	00 15 31.2	-1.5
	comp=N,142nm,0.4s						
NYDR	Nydri-Lefkada	1.47	35	P	Pg	00 15 13.3	-0.3
LKD2	Lefkada island	1.51	32	P	Pn	00 15 12.7	+1.2
LKD2				S	Sg	00 15 33.0	-1.2
LKD2	Lefkada island	1.51	32	P	Pg	00 15 14.3	-0.1
TSLK	Tsoukalades, L	1.54	31	P	Pb	00 15 13.6	+0.3
TSLK				S	Sb	00 15 33.2	+0.8
TSLK	Tsoukalades, L	1.54	31	P	Pg	00 15 15.3	+0.3
RLS	Riolos of Patr	1.56	69	P	Pb	00 15 13.2	-0.3
RLS	Riolos of Patr	1.56	69	P	Pg	00 15 15.1	-0.2
DRO	Drossia	1.71	74	P	Pb	00 15 15.8	-0.4
DRO	Drossia	1.71	74	P	Pg	00 15 17.2	-1.0
LAKA	Lakka	2.00	68	P	Pb	00 15 21.5	+0.5
EFP	Efpalio	2.02	62	P	Pn	00 15 19.6	+1.2
EFP	Efpalio	2.02	62	P	Pb	00 15 21.8	+0.3
KLV	Kalavryta, Ach	2.07	74	P	Pb	00 15 22.6	+0.2
IGT	Igoumenitsa	2.09	15	P	Pn	00 15 21.3	+1.9
KEK	Kerkira	2.20	3	P	Pn	00 15 24.0	+3.1
EVR	Evrytania	2.22	50	P	Pn	00 15 22.6	+1.4
MAKR	Makrakomi, Fth	2.48	52	P	Pb	00 15 29.1	-0.1
KPRO	Kipourio	2.79	29	P	Pn	00 15 31.8	+2.7
LSTV	Lastovo	5.65	339	*e*Pn	Pn	00 16 10.9	+2.6
LSTV				Sn	Sn	00 17 08.1	-4.6
HVAR	Hvar	6.16	338	*e*Pn	Pn	00 16 18.3	+3.0
HVAR				Sn	Sn	00 17 20.4	-4.7
RICI	Ricice	6.27	343	*e*Pn	Pn	00 16 18.0	+1.2
RICI				Sn	Sn	00 17 21.3	-6.7
MORI	Morici	7.01	336	*e*Pn	Pn	00 16 29.9	+3.0
MORI				Sn	Sn	00 17 42.6	-3.5

DJA 12 00:20:58.2±0.5, **9°S**±6°×**11°5E**±°, **h67**^{km}±6^{km}, **M3.8**/13, **mb4.1**/3, **MLv3.7**/13, **South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGBI	Denpasar	0.37	342	P	Pn	00 21 11.2	+1.6
IGBI				S	Sn	00 21 21.2	+3.4
DNP	Denpasar	0.49	354	P	Pn	00 21 12.5	+1.8
SRBI	Singaraja	1.08	358	P	Pn	00 21 17.7	+0.1
SRBI				S	Sn	00 21 32.4	+0.4
JAGI	Jajag, Banyuwa	1.30	302	P	Pn	00 21 20.4	0.0
JAGI				S	Sn	00 21 37.1	0.0
TWSI	Taliwang, Sumb	1.66	75	P	Pn	00 21 25.0	-0.2
ABJI	Asem Bagus	1.70	323	P	Pn	00 21 26.3	+0.5
GMJI	Gumukmas	2.00	296	P	Pn	00 21 29.8	0.0
BLJI	Banyuglugur	2.17	311	P	Pn	00 21 32.3	+0.2
PLAI	Plampang	2.51	82	P	Pn	00 21 37.2	+0.5
BSSI	Bau Bau, Buton	5.99	60	P	Pn	00 22 24.4	0.0
	0.1nm8.9nm,1.2s						
BKSI	Bulukumba	6.16	52	P	Pn	00 22 26.8	+0.2
	0.0nm8.9nm,0.5s						

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*IDC **12** 00:21:04.4±1.8, 7°.25S×129°.78E, h66^{km}±28^{km}, mb3.1/1, mb1 4.0/7, mb1mx3.5/41, mbtmp4.1/7, ML4.1/6, Error ellipse: s-maj=21.5km s-min=13.0km az=104.0*

*NEIC **12** 00:21:07.7±1.9, 7°.02S±0°.06×129°.50E±0°.07, h195^{km}±13^{km}, mb4.1/4, Error ellipse: s-maj=11.9km s-min=4.6km az=51.0*

ISC 12 00:21:06.9±0.8, **7°.03S**±0°.06×**129°.49E**±0°.06, **h200**^{km}, **n21**, σ**2^{s}.20**/27, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.02	118	Pn	Pn	00 21 47.2	+1.6

SAUI				Sn	Sn	00 22 15.8	0.0
FAKI	Fak Fak	4.92	34		Pn	00 22 20.0	-0.3
SOEI	Soe	5.84	242		Pn	00 22 32.5	+0.3
SOEI					Sn	00 23 40.3	+0.7
MTN	Manton Dam	6.00	165	Pn	Pn	00 22 34.9	+0.8
MTN					Sn	00 23 42.0	-1.3
SIJI	Sorong	6.37	16	P	Pn	00 22 38.5	-0.5
	1.7nm,0.3s,baz=245,slow=23,SNR=8.7						
SIJI				S	Sn	00 23 47.9	-4.2
	3.9nm,0.3s,baz=189,slow=23,SNR=7.2						
BATI	Baumata	6.57	241	P	Pn	00 22 42.1	+0.5
	23nm,0.3s,baz=66,slow=3.1,SNR=6.1						
BATI				S	Sn	00 23 53.6	-3.1
	15nm,0.3s,baz=269,slow=22,SNR=6.3						
KNRA	Kununurra	8.62	185	Pn	Pn	00 23 08.3	0.0
KAPI	Kappang	9.89	281	P	Pn	00 23 29.5	+4.6
	1.4nm,0.3s,baz=90,slow=20,SNR=7.3						
KAPI	Kappang	9.89	281		Pn	00 23 26.1	+1.3
FITZ	Fitzroy Crossi	11.62	198	P	Pn	00 23 47.5	+0.5
	0.6nm,0.3s,baz=34,slow=12,SNR=22						
FITZ				S	Sn	00 25 50.0	-6.7
	0.7nm,0.3s,baz=112,slow=18,SNR=3.7						
WB0	Warramunga Arr	13.53	160	Pn	Pn	00 24 10.7	-0.3
WRA	Warramunga Arr	13.67	160	P	Pn	00 24 12.2	-0.6
	0.8nm,0.3s,baz=340,slow=12,SNR=29						
WRA				S	S	00 26 36.2	-9.0
	0.2nm,0.3s,baz=337,slow=23,SNR=2.4						
WB2	Warramunga Arr	13.67	160	Pn	Pn	00 24 13.5	+0.6
COEN	Coen	15.11	118		P	00 24 32.1	+1.0
COEN				IAmb	IAmb	00 24 35.8	
	comp=Z,8.4nm,0.9s						
AS31	Alice Springs	17.07	166		Pn	00 24 56.4	+2.2
AS31				IAmb	IAmb	00 24 58.1	
	comp=Z,4.3nm,0.6s						
ASAR	Alice Springs	17.08	166	P	Pn	00 24 56.2	+2.1
	comp=Z,2.0nm,0.3s,baz=343,slow=10,SNR=167						
ASAR				S	S	00 27 60.0	-0.5
	comp=Z,0.1nm,0.3s,baz=347,slow=25,SNR=5.4						
ASAR	Alice Springs	17.08	166	P	Pn	00 24 55.9	+1.7
PSA00	Pilbara Seismi	17.20	212	P	Pn	00 24 55.5	-0.1
BBOO	Buckleboo	26.37	167	P	P	00 26 24.3	-0.4
STKA	Stephens Creek	27.18	157	P	P	00 26 32.7	+0.7
MKAR	Makanchi Array	67.98	327	P	P	00 31 59.8	+15
	comp=Z,0.2nm,0.5s,baz=126,slow=7.6,SNR=1.3						

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*IDC **12** 00:32:16.1±0.6, 19°.03N×69°.17W, h0^{km}, mb4.0/19, mb1 4.3/21, mb1mx4.1/37, mbtmp4.1/21, ML4.4/2, MS3.6/10, Ms1 3.6/10, ms1mx3.3/44, Error ellipse: s-maj=19.4km s-min=13.0km az=52.0*

*OSPL **12** 00:32:19.5±2.3, 19°.03N×69°.23W, h0^{km}±12^{km}, ML4.4*

*NEIC **12** 00:32:20.5, 19°.01N×69°.29W, h35^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.98; $M_{\theta\theta}$2.60; $M_{\phi\phi}$-0.62; $M_{r\theta}$5.82; $M_{\theta\phi}$2.58; $M_{\phi r}$-1.34; Fault plane solution: $M_0$6.92000×10^{15} NP1:ϕ_s25.98000°, δ26.82000°, λ-159.58000°. NP2:ϕ_s277.59000°, δ80.94000°, λ-64.65000°. Principal axes: T 6.8419, Plg31.0000°, Azm347.0000°; N 0.1565, Plg25.0000°, Azm93.0000°; P -6.9984, Plg48.0000°, Azm214.0000°;*

*NEIC **12** 00:32:21.1±1.4, 19°.02N±0°.07×69°.27W±0°.05, h29^{km}±2^{km}, mb4.4/152, Mwr4.5/27 Error ellipse: s-maj=10.1km s-min=6.0km az=198.0*

ISC 12 00:32:17.7±0.3**, 19°.02N**±0°.03×**69°.26W**±0°.03**, h10**^{km}**, n272, σ**1^{s}**33**/260**, mb4.5**/87**, MS3.3**/9**, 1C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LONA1	Toro Cenizo, N	0.68	302	⇓*i*P	Pg	00 32 31.6	+0.8
LONA1				*e*S	Sg	00 32 42.0	+2.3
LONA1				IAML		00 32 51.1	
	comp=Z,29µm,0.4s						
PCDR	Punta Cana, DR	0.97	121		Pg	00 32 35.0	-1.4
LOSC1	San Cristbal	1.01	233	*i* P	Pg	00 32 37.4	+0.2
LOSC1				*e*S	Sg	00 32 51.1	+0.8
LOSC1				IAML		00 32 55.5	
	comp=Z,10µm,0.8s						
SC01	Santiago de lo	1.45	286		Pn	00 32 44.4	+0.4
SC01	Santiago de lo	1.45	286	*i* P	Pn	00 32 45.7	+1.7
SC01				IAML		00 33 13.7	
	comp=Z,6µm,0.3s						
SDDR	Presa de Saban	1.92	269	*e*P	Pn	00 32 52.4	+1.9
SDDR	Presa de Saban	1.92	269	Pn	Pn	00 32 51.5	+1.0
SDDR	Presa de Saban	1.92	269	*i* P	Pn	00 32 52.1	+1.5
SDDR				IAML		00 33 26.7	
	comp=Z,2µm,0.4s						
LOBA2	Hotel Casa Bon	1.98	242	*i* P	Pn	00 32 46.2	-5.0
LOBA2				*e*S	Sn	00 33 12.6	-3.5
LOBA2				IAML		00 33 23.4	
	comp=Z,1µm,0.6s						
LOPP1	Punta Rusia, P	2.01	295	*i* P	Pn	00 32 53.7	+2.0
LOPP1				IAML		00 33 37.4	
	comp=Z,6µm,1.1s						
AGPR	Aguadilla, PR	2.11	105		Pn	00 32 53.9	+0.9
AGPR	Aguadilla, PR	2.11	105	*i* P	Pn	00 32 54.0	+0.9
AGPR				IAML		00 33 30.2	
	comp=Z,3µm,0.6s						
LONE2	Loma La Sidra	2.15	258	⇑*i*P	Pn	00 32 56.0	+2.3
LONE2				IAML		00 33 33.2	
	comp=Z,2µm,0.6s						
PRSN	Puerto Rico Se	2.16	111		Pn	00 32 54.0	+0.3
CRPR	Cabo Rojo, PR	2.27	116	Pn	Pn	00 32 55.7	+0.4
CRPR	Cabo Rojo, PR	2.27	116	*i* P	Pn	00 32 56.5	+1.2
CRPR				IAML		00 33 37.0	
	comp=Z,3µm,0.6s						
MLPR	Magueyes Islan	2.34	116		Pn	00 32 57.5	+1.2
AOPR	Arecibo Observ	2.46	105	*e*P	Pn	00 32 59.9	+1.9
AOPR				*e*S	Sb	00 33 34.3	+1.7
AOPR	Arecibo Observ	2.46	105		Pn	00 32 58.8	+0.8
EMPR	Esperanza - Ma	2.64	101		Pn	00 33 01.2	+0.9
OBIP	Obispado Ponce	2.70	111		Pn	00 33 02.2	+1.1
CELP	Cerrillos	2.71	110		Pn	00 33 02.7	+1.4
GRTK	Grand Turk	3.04	325	Pn	Pn	00 33 05.0	-0.8
GRTK	Grand Turk	3.04	325	*i* P	Pn	00 33 05.5	-0.4
GRTK				*e*S	Sn	00 33 42.0	-0.4
GRTK				IAML		00 34 02.6	
	comp=Z,898nm,1.1s						
SJG	San Juan	3.08	107	Pn	Pn	00 33 06.9	+0.5
	comp=Z,63nm,0.3s,baz=306,slow=11,SNR=87						
SJG				Sn	Sb	00 33 48.3	-2.0
	comp=Z,239nm,0.3s,baz=111,slow=23,SNR=18						
SJG				LR	LR	00 34 13.4	
	comp=Z,100nm,21.4s,baz=330,slow=39						
SJG	San Juan	3.08	107	*e*P	Pn	00 33 06.7	+0.2
SJG				*e*S	Sn	00 33 47.9	+4.6
SJG	San Juan	3.08	107	*e*P	Pn	00 33 09.0	+2.5
SJG				*e*S	Sn	00 33 48.0	+4.6
GCPR	Guaynabo City	3.09	103	Pn	Pn	00 33 07.0	+0.4
JAKH	Jacmel	3.19	256	Pn	Pn	00 33 09.9	+1.9
PDPR	Patillas Dam,	3.23	107		Pn	00 33 08.9	+0.5
CBYP	Canovanas	3.31	102		Pn	00 33 11.0	+1.4
HUMP	Col San Antoni	3.35	105		Pn	00 33 10.4	+0.3
MTP	Monte Pirata	3.63	104	Pn	Pn	00 33 14.5	+0.5
CUPR	Culebra, Puert	3.83	100	Pn	Pn	00 33 16.0	-0.7
STVI	Saint Thomas	4.13	99	Pn	Pn	00 33 21.7	+0.8
CDVI	St. Croix	4.45	106	*e*P	Pn	00 33 23.8	-1.4
CDVI	St. Croix	4.45	106	*e*S	Sb	00 34 26.1	-3.6
CDVI	St. Croix	4.45	106	Pn	Pn	00 33 27.1	+1.9
GTBY	Guantanamo Bay	5.60	280	Pn	Pn	00 33 41.3	+0.3
SABA	Saba	5.88	103	Pn	Pn	00 33 46.7	+1.8
SKI	Saint Kitts	6.42	104	*e*P	Pn	00 33 55.6	+3.2
HATO	Hato, Curacao	6.81	178	Pn	Pn	00 33 58.4	+0.7
ANWB	Willy Bob	7.22	100	*e*P	Pn	00 34 02.3	-1.0
ANWB	Willy Bob	7.22	100	Pn	Pn	00 34 04.5	+1.1
ANBD	Bethesda, Anti	7.39	104	*e*P	Pn	00 34 05.6	-0.1
ANBD	Bethesda, Anti	7.39	104	*e*S	Sn	00 35 27.8	-1.9
URIC	Uribia, Colomb	7.74	200	*e*P	Pn	00 34 10.8	+0.3
CBE	Ff, Capester	7.87	111	*e*P	Pn	00 34 14.9	+2.7
TBG	Guadaloupe-3	7.92	112	*e*P	Pn	00 34 14.1	+1.1
DABV	Dabajuro	8.16	190	*e*P	Pn	00 34 16.5	+0.2
MAGL	Barre de l’ile	8.20	111	*e*P	Pn	00 34 19.7	+2.9
DSLB	Salisbury	8.29	114	*e*P	Pn	00 34 20.2	+2.2
CRJC	Cerrejon, Guaj	8.69	204	*e*P	Pn	00 34 24.6	+0.9
BIRV	Birongo	8.97	161	Pn	Pn	00 34 26.6	-0.8
BIM	Bigot	9.03	119	*e*P	Pn	00 34 29.0	+0.7
SMRC	Santa Marta, M	9.17	212	*e*P	Pn	00 34 26.9	-3.2
MPOM	Morne Pois Mar	9.24	118	*e*P	Pn	00 34 33.8	+2.7
SLBI	Saint Lucia, B	9.37	121	*e*P	Pn	00 34 33.9	+1.1
SVV	Soufriere Volc	9.58	125	*e*P	Pn	00 34 37.6	+1.8
SVB	Belmont	9.58	125	*e*P	Pn	00 34 36.4	+0.6
SVB	Belmont	9.58	125	Pn	Pn	00 34 36.1	+0.3
SSV	Crater Summit	9.59	125	*e*P	Pn	00 34 35.5	-0.5
PCRV	Puerto La Cruz	9.86	152	Pn	Pn	00 34 40.9	+1.2
	comp=Z,2.8nm,0.3s,baz=333,slow=4.5,SNR=9.8						
PCRV				Sn	Sn	00 36 27.4	-3.2
	comp=Z,2.2nm,0.3s,baz=50,slow=21,SNR=3.1						
PLCV	Puerto La Cruz	9.89	152		Sn	00 36 27.4	-3.9
GCMP	Grenada, Carri	9.95	130	*e*P	Pn	00 34 40.9	+0.1
GRGR	Grenville	10.03	132	*e*P	Pn	00 34 42.1	+0.2
GRGR	Grenville	10.03	132	Pn	Pn	00 34 42.1	+0.2
BAUV	El Baul	10.09	173	Pn	Pn	00 34 43.3	+0.6
SDV	Santo Domingo	10.16	188	Pn	Pn	00 34 43.9	-0.1
SOCV	Socops	10.79	188	*e*P	Pn	00 34 52.7	+0.4
SMLC	San Martn de	11.18	205	*e*P	Pn	00 34 57.5	-0.2
TRN	Trinidad (W)	11.26	137	*e*P	Pn	00 35 00.9	+2.1
TOSP	Speyside	11.39	131	*e*P	Pn	00 35 03.8	+3.2
OCAC	Ocana	11.42	201	*e*P	Pn	00 35 00.4	-0.8
OCAC	Ocana	11.42	201		Pn	00 35 01.2	+0.1
PAMC	Pamplona, Colo	12.09	197	*e*P	Pn	00 35 06.1	-4.4
ZARC	Zaragoza, Cauc	12.69	206	*e*P	Pn	00 35 20.4	+2.1
ZARC	Zaragoza, Cauc	12.69	206	Pn	Pn	00 35 19.0	+0.6
UREC	San Jos de Ur	12.75	209	*e*P	Pn	00 35 20.4	+1.2
PTBC	PUERTO BERRIO,	13.40	203	*e*P	Pn	00 35 31.9	+3.8
RUSC	La Rusia	13.57	196	*e*P	Pn	00 35 29.0	-1.8
DBBC	Dabeiba	13.71	210	*e*P	Pn	00 35 38.6	+6.1
HELC	Santa Helena	14.14	206	*e*P	Pn	00 35 40.5	+2.0
NORC	Norcasia	14.45	203	*e*P	Pn	00 35 45.2	+2.7
ROSC	El Rosal	14.94	200	Pn	P	00 35 55.3	+0.2
	comp=Z,2.4nm,0.3s,baz=9.2,slow=19,SNR=8.9						
ROSC				Sn	Sn	00 38 41.6	+6.4
	comp=Z,0.9nm,0.3s,baz=189,slow=22,SNR=1.4						
ROSC				LR	LR	00 41 58.6	
	comp=Z,156nm,19.3s,baz=32,slow=39						
ROSC	El Rosal	14.94	200		Pn	00 35 49.1	-0.3
GUY2C	Guyana, Caldas	14.95	204	*e*P	Pn	00 35 53.8	+4.2
PLMC	San Jos del P	15.62	207	*e*P	Pn	00 36 00.5	+2.4
ORTC	Ortega, Tolima	16.12	202	*e*P	P	00 36 10.1	+2.2
PRAC	Prado	16.18	201	*e*P	P	00 36 09.1	+0.6
456A	Hilliard	16.41	318	Pn	Pn	00 36 07.1	-1.1
456A				IAmb	IAmb	00 36 12.7	
	comp=Z,49nm,1.2s						
Y60A	Bolivia	16.93	334	Pn	Pn	00 36 13.5	-1.1
Y60A				IAmb	IAmb	00 36 38.7	
	comp=Z,38nm,0.8s						
RGRS	Roger Stewart	16.95	327	Pn	Pn	00 36 15.7	+0.8
NHSC	New Hope	17.10	327	Pn	Pn	00 36 16.3	-0.5
NHSC				IAmb	IAmb	00 36 52.1	
	comp=Z,37nm,1.2s						
Y59A	Loris	17.20	332	Pn	Pn	00 36 18.1	0.0
Y59A				IAmb	IAmb	00 36 22.2	
	comp=Z,36nm,0.8s						
Y58A	Scranton	17.49	330		Pn	00 36 21.2	-0.6
Y58A				IAmb	IAmb	00 36 24.7	
	comp=Z,49nm,1.4s						
V61A	Roper	17.91	340		Pn	00 36 26.4	-0.5
BIRD	Birdtown, Kers	18.47	330	P	P	00 36 33.5	-0.2
JSC	Jenkinsville	18.58	327	P	P	00 36 35.5	+0.6
BOAV	Boa Vista	18.61	152	P	P	00 36 35.7	+0.3
BOAV				IAmb	IAmb	00 36 45.8	
	comp=Z,39nm,1.5s						
W57A	Gilead	18.67	332	P	P	00 36 36.1	+0.2
352A	Blakely	18.81	314	P	P	00 36 37.5	+0.1
352A				IAmb	IAmb	00 37 08.0	
	comp=Z,30nm,1.3s						
V58A	Windy Hill, Pi	18.84	334	P	P	00 36 38.5	+0.7
HODGE	Hodges	19.07	325	P	P	00 36 39.8	-0.4
GOGA	Godfrey	19.15	321	P	P	00 36 39.5	-1.6
GOGA				IAmb	IAmb	00 36 49.9	
	comp=Z,36nm,2.0s						
T60A	Surry	19.20	342	P	P	00 36 43.0	+1.3
PAULI	Pauline	19.28	327	P	P	00 36 43.2	+0.6
KMSC	Kings Mountain	19.30	329	P	P	00 36 42.8	0.0
T59A	Double "B" Far	19.31	340	P	P	00 36 43.7	+0.8
152A	Waverly Hall	19.42	317	P	P	00 36 43.8	-0.3
MTO3	Montecristo	19.79	260	P	P	00 36 48.2	-0.4
MTO3				IAmb	IAmb	00 37 05.5	
	comp=Z,21nm,0.8s						
V55A	Taylorsville	19.81	330	P	P	00 36 50.3	+1.9
U56A	King	19.85	333	P	P	00 36 49.6	+0.8
T57A	Hurt	19.94	336		P	00 36 49.9	0.0
BG3	Lake Jocassee	20.00	325	P	P	00 36 51.2	+0.7
250A	Grady	20.02	313	P	P	00 36 51.3	+0.6
250A				IAmb	IAmb	00 37 11.6	
	comp=Z,14nm,0.9s						
S57A	Dark Hollow, R	20.50	338	P	Pn	00 37 00.0	+1.9
BLA	Blacksburg	20.59	334	P	P	00 36 56.9	-0.1
BLA				IAmb	IAmb	00 37 35.0	
	comp=Z,13nm,0.8s						
U54A	Nelsons Funny	20.64	330	P	P	00 36 58.5	+1.0
APG	El Apazote	20.67	262	LR	LR	00 45 11.5	
	comp=Z,154nm,18.1s,baz=7.0,slow=37						
TKL	Tuckaleechee C	20.96	325	P	P	00 37 01.0	+0.2
	comp=Z,8.9nm,0.8s,baz=155,slow=12,SNR=16						
TKL				S	S	00 40 48.9	-5.5
	comp=Z,6.8nm,0.7s,baz=248,slow=23,SNR=6.8						
TKL				LR	LR	00 44 18.4	
	comp=Z,91nm,19.2s,baz=158,slow=34						
TKL	Tuckaleechee C	20.96	325		P	00 37 01.4	+0.6
TKL				IAmb	IAmb	00 37 02.0	
	comp=Z,9.5nm,0.8s						
CPCT	Cooper Cave	21.21	324	P	P	00 37 04.2	+0.5
CPCT				IAmb	IAmb	00 37 05.0	
	comp=Z,13nm,0.9s						
FPAL	Fort Paine	21.22	320	P	P	00 37 04.1	+0.4
FPAL				IAmb	IAmb	00 37 05.0	
	comp=Z,15nm,1.0s						
Y49A	Blount Mountai	21.27	317	P	P	00 37 04.7	+0.5
Y49A				IAmb	IAmb	00 37 05.5	
	comp=Z,11nm,0.8s						
SDMD	Soldier’s Deli	21.35	344	P	P	00 37 04.0	-1.1
V51A	Loudon	21.38	324	IAmb	IAmb	00 37 06.6	
	comp=Z,15nm,0.8s						
S54A	Dingess, Beckl	21.47	333	P	P	00 37 07.3	+0.9
S54A				IAmb	IAmb	00 37 07.7	
	comp=Z,11nm,0.7s						
W50A	Signal Mountai	21.49	322	P	P	00 37 06.8	+0.2
W50A				IAmb	IAmb	00 37 08.2	
	comp=Z,18nm,1.0s						
TZTN	Tazewell	21.51	327	P	P	00 37 07.0	+0.2
TZTN				IAmb	IAmb	00 37 08.0	
	comp=Z,16nm,0.8s						
WUPA	West Chester U	21.55	347	P	P	00 37 08.8	+1.7
PTGA	Pitinga	21.65	154	P	P	00 37 08.0	-0.4
	comp=Z,1.4nm,0.4s,baz=342,slow=12,SNR=5.8						
MVL	Millersville	21.78	345	P	P	00 37 10.3	+0.6
SWET	Sewanee	21.87	321	P	P	00 37 10.5	-0.2
SWET				IAmb	IAmb	00 37 11.9	
	comp=Z,12nm,1.0s						
Z47A	Carrollton	21.97	314	IAmb	IAmb	00 37 12.9	
	comp=Z,9.9nm,0.6s						
346A	Big Creek Wild	22.00	308	P	P	00 37 10.9	-1.3
X48A	Hartselle	22.05	318	P	P	00 37 11.5	-1.2
X48A				IAmb	IAmb	00 37 13.5	
	comp=Z,9.3nm,0.8s						
LUPA	Lehigh Univers	22.14	348	P	P	00 37 15.2	+1.6
LUPA				IAmb	IAmb	00 37 23.6	
	comp=Z,33nm,1.5s						
Q54A	Coxs Mills	22.28	336	P	P	00 37 16.0	+0.9
Q54A				IAmb	IAmb	00 37 16.7	
	comp=Z,11nm,0.9s						
S51A	Beattyville	22.38	329	IAmb	IAmb	00 37 36.1	
	comp=Z,16nm,1.1s						
ODNJ	Ogdensburg	22.46	349	P	P	00 37 18.9	+1.9
ODNJ				IAmb	IAmb	00 38 09.5	
	comp=Z,14nm,1.0s						
MCWV	Mont Chateau	22.51	338	P	P	00 37 17.7	+0.2
MCWV				IAmb	IAmb	00 37 34.4	
	comp=Z,27nm,1.6s						
T50A	Nancy	22.54	326	IAmb	IAmb	00 37 42.5	
	comp=Z,29nm,1.6s						
CLTN	Cedars of Leba	22.71	322	P	P	00 37 19.3	-0.3
V48A	Smith Brothers	22.76	321	P	P	00 37 21.1	+0.9
V48A				IAmb	IAmb	00 37 21.7	
	comp=Z,11nm,0.8s						
SSPA	Standing Stone	22.78	343	P	P	00 37 21.2	+0.8
SSPA				IAmb	IAmb	00 37 51.5	
	comp=Z,11nm,0.9s						
R50A	Paris	23.25	329	P	P	00 37 25.7	+0.4
R50A				IAmb	IAmb	00 37 28.3	
	comp=Z,8.4nm,0.8s						
O53A	New Philadelph	23.52	337	IAmb	IAmb	00 37 29.1	
	comp=Z,12nm,0.7s						
WVT	Waverly	23.62	320	P	P	00 37 29.1	+0.1
MMNY	Mt. Morris Dam	24.75	345	P	P	00 37 41.1	+1.8
O49A	Covington	24.77	332	P	P	00 37 40.3	+0.7
O49A				IAmb	IAmb	00 38 23.8	
	comp=Z,23nm,1.4s						
SIUC	Southern Illin	25.50	321	P	P	00 37 46.6	+0.3
S44A	Carbondale	25.51	321	P	P	00 37 46.5	+0.2
S44A				IAmb	IAmb	00 37 54.7	
	comp=Z,17nm,0.9s						
LCAR	Lake Charles	25.70	316	P	P	00 37 48.2	+0.1
LCAR				IAmb	IAmb	00 37 55.8	
	comp=Z,9.9nm,1.2s						
P46A	Rosedale	25.72	327	P	P	00 37 49.5	+1.3
P46A				IAmb	IAmb	00 37 56.7	
	comp=Z,11nm,0.9s						
WLAR	White Oak Lake	25.80	309	P	P	00 37 49.5	+0.4
WLAR				IAmb	IAmb	00 37 58.5	
	comp=Z,25nm,1.3s						
X40A	Basin Creek Fa	26.00	311	P	P	00 37 51.2	+0.4
X40A				IAmb	IAmb	00 37 52.6	
	comp=Z,10.0nm,0.8s						
WHAR	Wooly Hollow	26.03	313	P	P	00 37 51.8	+0.7
WHAR				IAmb	IAmb	00 37 54.5	
	comp=Z,14nm,1.0s						
NATX	Nacogdoches	26.15	304	P	P	00 37 52.5	+0.3
FCAR	Ozark Folk Cen	26.24	314	P	P	00 37 52.9	-0.2
FCAR				IAmb	IAmb	00 37 54.3	
	comp=Z,8.2nm,0.9s						
FVM	French Village	26.41	320	P	P	00 37 55.2	+0.7
MIAR	Mount Ida	26.55	310	P	P	00 37 56.1	+0.2
CCM	Cathedral Cave	26.95	319	P	P	00 37 59.7	+0.3
CCM				IAmb	IAmb	00 38 11.5	
	comp=Z,30nm,1.9s						
SADO	Sadowa	26.97	344	LR	LR	00 49 49.0	
	comp=Z,63nm,18.5s,baz=174,slow=39						
P43A	Skaggs, Pawnee	26.98	324	P	P	00 37 59.5	-0.1
P43A				IAmb	IAmb	00 38 05.9	
	comp=Z,28nm,1.4s						
U40A	Yellville	26.99	315	IAmb	IAmb	00 38 08.8	
	comp=Z,10nm,1.1s						
W39A	Magazine	27.03	312	P	P	00 38 00.1	0.0
W39A				IAmb	IAmb	00 38 55.2	
	comp=Z,30nm,1.6s						
MGMO	Mountain Grove	27.06	317	P	P	00 38 00.7	+0.3
MGMO				IAmb	IAmb	00 38 01.6	
	comp=Z,9.9nm,0.8s						
237A	Washetta, Mont	27.14	304	P	P	00 38 00.9	-0.3
HHAR	Hobbs	27.69	313	IAmb	IAmb	00 38 29.7	
	comp=Z,8.9nm,1.1s						
R40A	Maddies Statio	27.73	319	IAmb	IAmb	00 38 16.6	
	comp=Z,9.9nm,1.1s						
S39A	Bolivar	28.05	317	P	P	00 38 09.7	+0.4
S39A				IAmb	IAmb	00 38 16.0	
	comp=Z,10nm,1.2s						
SAML	Samuel	28.43	167	P	P	00 38 12.0	-0.8
TUL1	Leonard	28.80	311	P	P	00 38 16.1	+0.1
ETMB	Extrema	28.81	174	P	P	00 38 15.5	-0.6
ETMB				IAmb	IAmb	00 38 16.6	
	comp=Z,8.6nm,1.0s						
P38A	Dawn	29.32	320	P	P	00 38 20.1	-0.4
OK034	N. Norfolk Rd.	29.51	311	P	P	00 38 21.9	-0.3
OK034				IAmb	IAmb	00 38 23.5	
	comp=Z,10.0nm,1.0s						
OK030	Cody Creek RV	29.52	310	P	P	00 38 21.4	-1.0
OK030				IAmb	IAmb	00 38 48.8	
	comp=Z,7.2nm,0.6s						
QUOK	Quay	29.58	311	P	P	00 38 22.1	-0.7
QUOK				IAmb	IAmb	00 38 24.1	
	comp=Z,10nm,0.9s						
X34A	Smith Ranch, M	29.72	307	P	P	00 38 22.5	-1.6
T35A	Sooner Cattle	29.80	312	P	P	00 38 24.5	-0.3
BLOK	Blackwell	30.22	312	P	P	00 38 28.2	-0.3
ABTX	Abilene, Hawle	30.40	302	P	P	00 38 30.2	0.0
ABTX				IAmb	IAmb	00 38 31.7	
	comp=Z,7.1nm,0.8s						
KAN13	South Haven SW	30.52	312	P	P	00 38 30.5	-0.7
KAN17	Caldwell West	30.74	312	P	P	00 38 33.1	-0.1
KAN17				IAmb	IAmb	00 38 36.1	
	comp=Z,9.1nm,0.9s						
KAN01	Argonia South	30.79	312	P	P	00 38 33.1	-0.4
KAN01				IAmb	IAmb	00 38 34.9	
	comp=Z,11nm,0.9s						
OK032	Salt Plains WL	30.95	311	P	P	00 38 34.9	0.0
NNA	Nana	31.71	194	LR	LR	00 51 56.5	
	comp=Z,299nm,18.1s,baz=152,slow=37						
R32A	Long Quarter,	32.05	313	P	P	00 38 44.2	-0.5
TXAR	Lajitas Array	32.92	295	P	P	00 38 53.9	+1.3
	comp=Z,1.7nm,1.2s,baz=112,slow=9.1,SNR=5.9						
TXAR				LR	LR	00 55 42.5	
	comp=Z,56nm,18.2s,baz=0.0,slow=43						
TXAR	Lajitas Array	32.92	295	P	P	00 38 53.0	+0.5
CBKS	Cedar Bluff	32.95	313	P	P	00 38 52.4	-0.2
VILB	Vilhena	33.00	164	P	P	00 38 52.5	-0.7
ECSD	EROS Data Cent	33.67	323	IAmb	IAmb	00 39 05.0	
	comp=Z,5.8nm,1.0s						
MNTX	Cornudas Mount	34.84	298	P	P	00 39 09.3	+0.2
MNTX				IAmb	IAmb	00 39 27.4	
	comp=Z,7.0nm,1.1s						
LPAZ	La Paz	35.10	178	P	P	00 39 12.0	-0.1
	comp=Z,2.6nm,0.9s,baz=11,slow=8.1,SNR=3.8						
LPAZ	La Paz	35.10	178	P	P	00 39 11.8	-0.3
LPAZ				IAmb	IAmb	00 39 19.6	
	comp=Z,2.9nm,0.8s						
PTLB	Pontes e Lacer	35.67	163	P	P	00 39 15.4	-0.9
PTLB				IAmb	IAmb	00 39 16.0	
	comp=Z,6.1nm,0.8s						
SIV	San Ignacio	35.71	166	LR	LR	00 52 33.2	
	comp=Z,836nm,21.0s,baz=278,slow=34						
SCHQ	Schefferville	35.80	2	P	P	00 39 16.9	-0.1
	comp=Z,1.1nm,0.5s,baz=238,slow=18,SNR=1.8						
SCHQ				LR	LR	00 52 02.8	
	comp=Z,57nm,21.3s,baz=125,slow=33						
BNM	Barren Site	36.43	302	P	P	00 39 23.6	+0.5
ISCO	Idaho Springs	37.48	311	P	P	00 39 32.3	+0.3
K22A	Casper	39.27	315	P	P	00 39 47.3	+0.5
K22A				IAmb	IAmb	00 40 19.6	
	comp=Z,21nm,1.9s						
BDFB	Brasilia	40.29	147	P	P	00 39 55.5	+0.1
	comp=Z,1.7nm,0.5s,baz=347,slow=12,SNR=1.8						
RDMU	Red Mountain	40.59	311	P	P	00 39 57.8	-0.1
RDMU				IAmb	IAmb	00 41 02.8	
	comp=Z,8.1nm,1.5s						
DGMT	Dagmar	40.72	324	P	P	00 39 58.9	+0.3
LAO	LASA Array	40.95	321	P	P	00 40 01.1	+0.6
LAO				IAmb	IAmb	00 40 06.3	
	comp=Z,23nm,1.8s						
P17A	Butcher Ranch,	41.09	309	P	P	00 40 01.8	-0.1
BW06	Boulder Array	41.37	314	P	P	00 40 04.1	-0.2
PD31	Pinedale Array	41.37	314	P	P	00 40 03.7	-0.6
PDAR	Pinedale Array	41.37	314	P	P	00 40 04.2	-0.1
	comp=Z,0.9nm,0.7s,baz=113,slow=9.8,SNR=8.1						
PDAR				LR	LR	00 57 27.8	
	comp=Z,40nm,18.8s,baz=76,slow=36						
PDAR	Pinedale Array	41.37	314	P	P	00 40 03.8	-0.4
LVC	Limon Verde	41.38	180	P	P	00 40 02.1	-2.5
TMUT	Trail Mountain	41.38	308	P	P	00 40 05.1	+0.5
AQDB	Aquidauana	41.44	161	P	P	00 40 05.1	+0.4
AQDB				IAmb	IAmb	00 40 06.2	
	comp=Z,14nm,1.3s						
MSU	Marysvale	41.89	307	P	P	00 40 08.8	+0.2
RLMT	Red Lodge	42.12	317	P	P	00 40 10.8	+0.5
RLMT				IAmb	IAmb	00 40 11.4	
	comp=Z,4.3nm,0.7s						
LOHW	Long Hollow	42.39	315	IAmb	IAmb	00 40 13.8	
	comp=Z,5.1nm,0.7s						
AHID	Auburn Hatcher	42.42	313	P	P	00 40 12.5	-0.4
AHID				IAmb	IAmb	00 40 20.9	
	comp=Z,15nm,1.8s						
REDW	Red Top Meadow	42.47	314	P	P	00 40 12.8	-0.5
REDW				IAmb	IAmb	00 40 14.6	
	comp=Z,5.1nm,0.9s						
YMP	Mirror Lake Pl	42.53	316	P	P	00 40 13.8	-0.1
YMP				IAmb	IAmb	00 40 19.8	
	comp=Z,4.8nm,0.8s						
MOOW	Moose Ponds	42.54	315	P	P	00 40 14.1	+0.3
TPAW	Teton Pass	42.58	314	P	P	00 40 14.3	+0.1
TPAW				IAmb	IAmb	00 40 21.2	
	comp=Z,5.2nm,0.8s						
GCMT	Greycliff	42.65	318	P	P	00 40 14.9	+0.3
FXWY	Fox Creek	42.69	314	P	P	00 40 15.2	+0.1
YHH	Holmes Hill	43.01	316	P	P	00 40 18.2	+0.5
PSUT	Pine Spring	43.17	306	P	P	00 40 19.0	0.0
BGU	Big Grassy Mou	43.19	310	P	P	00 40 19.0	-0.1
QLMT	Earthquake Lak	43.40	316	P	P	00 40 21.4	+0.6
BOZ	Bozeman (W)	43.83	317	IAmb	IAmb	00 40 31.1	
	comp=Z,5.6nm,1.1s						
MCMT	McKenzie Canyo	44.34	315	P	P	00 40 28.9	+0.5
DLMT	Dillon	44.37	316	P	P	00 40 28.7	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DLMT				IAmb	IAmb	00 40 30.3	
	comp=Z,5.0nm,0.9s						
HRY	Holter Researc	44.40	318	P	P	00 40 28.7	0.0
LRM	Limekiln Ridge	44.45	317	P	P	00 40 30.1	+0.9
BCYI	Bear Canyon	44.53	315	P	P	00 40 30.3	+0.4
JTMT	Jette	46.34	319	IAmb	IAmb	00 40 51.5	
	comp=Z,12nm,1.4s						
PLID	Pearl Lake	46.53	315	IAmb	IAmb	00 40 54.8	
	comp=Z,12nm,1.7s						
CPUP	Villa Florida	46.55	165	P	P	00 40 44.7	-1.0
	comp=Z,3.9nm,1.0s,baz=328,slow=15,SNR=4.0						
NVAR	Mina Array Bea	46.56	305	P	P	00 40 46.7	+0.6
	comp=Z,0.9nm,0.6s,baz=90,slow=6.3,SNR=4.5						
NVAR				LR	LR	01 02 57.3	
	comp=Z,162nm,18.1s,baz=92,slow=40						
NVAR	Mina Array Bea	46.56	305	P	P	00 40 45.3	-0.8
NEW	Newport	48.31	318	P	P	00 40 59.9	+0.6
SFJD	Kangerlussuaq	49.44	10	P	P	00 41 07.6	0.0
	comp=Z,6.8nm,0.6s,baz=213,slow=17,SNR=3.3						
SFJD	Kangerlussuaq	49.44	10	IAmb	IAmb	00 41 15.0	
	comp=Z,28nm,1.4s						
ZON	Zonda	50.28	179	P	P	00 41 13.9	-0.6
YKA	Yellowknife Ar	53.44	336	P	P	00 41 36.5	-1.2
	comp=Z,1.4nm,1.0s,baz=121,slow=7.3,SNR=5.4						
SUMG	Summit	56.38	11	iP	P	00 41 58.0	-1.2
SUMG	Summit	56.38	11	P	P	00 41 59.6	+0.4
PAB	San Pablo	58.96	55	P	P	00 42 17.4	-0.2
ESDC	Sonseca Array	59.26	55	P	P	00 42 19.7	+0.1
	comp=Z,4.3nm,0.7s,baz=274,slow=7.3,SNR=37						
ESDC	Sonseca Array	59.26	55	P	P	00 42 19.4	-0.2
ESDC				IAmb	IAmb	00 42 20.7	
	comp=Z,2.6nm,0.8s						
ESBB	Sonseca Array	59.26	55	P	P	00 42 19.6	-0.1
A36M	Sachs Harbour	61.80	343	P	P	00 42 36.0	-0.3
KOWA	Kowa	62.33	83	P	P	00 42 40.8	0.0
INK	Inuvik	63.03	338	P	P	00 42 45.7	+1.1
INK				IAmb	IAmb	00 43 01.1	
	comp=Z,7.0nm,1.5s						
DBIC	Dimbokro	63.68	92	P	P	00 42 49.0	-0.8
	comp=Z,3.3nm,0.9s,baz=308,slow=6.5,SNR=4.5						
CLF	Chambon-Foret	63.80	45	P	P	00 42 50.7	+0.6
ILAR	Eielson Array	67.69	333	P	P	00 43 17.0	+2.1
	comp=Z,0.6nm,0.8s,baz=95,slow=5.5,SNR=3.2						
TORD	Torodi Ar. Bea	68.04	83	P	P	00 43 16.5	-1.4
	comp=Z,2.3nm,0.7s,baz=291,slow=6.4,SNR=18						
NOA	NORSAR Array B	68.95	31	P	P	00 43 22.2	-0.7
	comp=Z,0.8nm,0.8s,baz=283,slow=9.5,SNR=1.6						
RETA	Reutte	69.56	45	eP	P	00 43 27.0	+0.1
	comp=Z,6.8nm,1.0s						
FETA	Feichten	69.58	46	iP	P	00 43 27.7	+0.5
	comp=Z,5.1nm,0.7s						
MOTA	Moosalm	69.80	46	eP	P	00 43 28.6	0.0
	comp=Z,3.2nm,0.9s						
SQTA	Sankt Quirin	69.89	46	iP	P	00 43 29.3	+0.2
	comp=Z,3.1nm,0.6s						
ABTA	Abfaltersbach	70.83	46	iP	P	00 43 34.7	-0.1
	comp=Z,6.5nm,1.0s						
GERES	GERESS Array B	71.35	44	P	P	00 43 37.1	-0.8
	comp=Z,1.0nm,0.8s,baz=292,slow=5.2,SNR=5.6						
OBKA	Obir	72.25	46	eP	P	00 43 44.2	+0.8
	comp=Z,5.4nm,1.0s						
ARSA	Arzberg	72.79	45	eP	P	00 43 46.1	-0.5
	comp=Z,2.7nm,0.7s						
CONA	Conrad Observa	72.91	45	eP	P	00 43 47.3	0.0
	comp=Z,2.1nm,0.9s						
ARCES	ARCESS Array B	74.00	21	P	P	00 43 53.9	+0.8
	comp=Z,3.1nm,0.9s,baz=280,slow=2.7,SNR=2.1						
BRTR	Keskin Array B	87.51	49	P	P	00 45 06.0	-0.2
	comp=Z,0.7nm,0.8s,baz=276,slow=3.6,SNR=4.5						
WRA	Warramunga Arr	157.74	264	PKP	PKPdf	00 52 14.0	-1.3
	comp=Z,0.6nm,0.9s,baz=91,slow=1.0,SNR=3.2						
ASAR	Alice Springs	157.95	254	PKPab	PKPab	00 52 48.5	-0.2
	comp=Z,1.5nm,0.9s,baz=105,slow=4.8,SNR=4.2						

SOME ***12*** *00:36:39.6, 41°.45N×79°.37E, h10^{km}*
KRNET ***12*** *00:36:41.1±0.1, 41°.46N×79°.38E, h19^{km}, mb3.3*
NNC ***12*** *00:36:43.2±0.8, 41°.55N×79°.31E, h0^{km}, mb3.9, mpv3.8, Error ellipse: s-maj=5.5km s-min=3.6km az=158.0*
ISC 12 00:36:43.7±1.7**, 41°.53N**±0°.07×**79°.26E**±0°.05**, h10^{km}, n49, σ1^{s}31**/79**, 17C-7D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.11	281	⇑eP	Pg	00 37 03.8	-1.3
	baz=83						
TARG				⇑eS	Sb	00 37 20.2	+0.3
	baz=83						
PRZ	Przheval'sk	1.15	326	⇑eP	Pb	00 37 04.7	-1.1
	baz=25						
PRZ				⇑iS	Sn	00 37 22.1	+0.1
	baz=25						
UZB	Uzynbulak	1.63	354	eP	Pn	00 37 12.4	-0.2
	21nm,0.2s						
UZB				eS	Sg	00 37 36.0	-0.1
	53nm,0.2s						
UZB	Uzynbulak	1.63	354	P	Pn	00 37 12.4	-0.2
	21nm,0.2s						
UZB				S	Sb	00 37 34.8	+0.2
	53nm,0.2s						
SATY	Saty	1.66	338	eP	Pb	00 37 13.3	-1.1
	11nm,0.1s						
SATY				eS	Sg	00 37 37.7	+0.7
	62nm,0.1s						
SATY	Saty	1.66	338	P	Pb	00 37 13.7	-0.7
	11nm,0.1s						
SATY				S	Sg	00 37 37.1	+0.2
	62nm,0.1s						
KDJ	Kajisay	1.67	292	⇑eP	Pb	00 37 13.3	-1.3
	baz=93						
KDJ				⇑iS	Sg	00 37 37.3	0.0
	baz=93						
ANVS	Anan'yevo	1.72	317	⇑iP	Pb	00 37 14.9	-0.7
	baz=17						
ANVS				⇑iS	Sg	00 37 39.1	-0.1
	baz=17						
PDGK	Podgornoye	1.81	5	P	Pb	00 37 15.2	-1.8
	13nm,0.3s						
PDGK				S	Sb	00 37 39.7	-0.1
	111nm,0.2s						
PDGK	Podgornoye	1.81	5	⇑Pn	Pn	00 37 15.0	-0.1
	20nm,0.5s						
PDGK				⇑Sn	Sg	00 37 40.9	-1.0
	153nm,0.5s						
KTMS	Ketmen	2.08	23	eP	Pn	00 37 18.9	+0.1
	17nm,0.3s						
KTMS				eS	Sb	00 37 46.9	-0.8
	56nm,0.4s						
KTMS	Ketmen	2.08	23	Pg	Pb	00 37 19.7	-1.9
	17nm,0.3s						
KTMS				Lg	Lg	00 37 47.4	
	56nm,0.4s						
KURS	Kuram	2.12	338	eP	Pb	00 37 21.6	-0.7
	31nm,0.5s						
KURS				eS	Sg	00 37 51.4	-0.4
	34nm,0.3s						
KURS	Kuram	2.12	338	Pg	Pb	00 37 22.0	-0.2
	31nm,0.5s						
KURS				Lg	Lg	00 37 51.5	
	34nm,0.3s						
TNSS	Tian-Shan	2.28	312	eP	Pb	00 37 24.7	-0.6
	23nm,0.4s						
TNSS				eS	Sg	00 37 56.9	-0.2
	30nm,0.2s						
TNSS	Tian-Shan	2.28	312	Pg	Pb	00 37 24.8	-0.4
	23nm,0.4s						
TNSS				Lg	Lg	00 37 56.3	
	30nm,0.2s						
MDOK	Medeo	2.31	316	eP	Pb	00 37 25.2	-0.4
	14nm,0.3s						
MDOK				eS	Sg	00 37 57.8	-0.3
	47nm,0.4s						
MDOK	Medeo	2.31	316	Pn	Pb	00 37 24.4	-1.3
	13nm,0.5s						
MDOK				Lg	Lg	00 37 58.1	
	36nm,0.5s						
MDOK	Medeo	2.31	316	Pg	Pb	00 37 25.6	-0.1
	19nm,0.4s						
MDOK				Lg	Lg	00 37 57.7	
	47nm,0.4s						
KOTS	Kotyrbulak	2.33	318	eP	Pb	00 37 25.6	-0.3
	38nm,0.3s						
KOTS				eS	Sg	00 37 58.4	-0.3
	64nm,0.4s						
KOTS	Kotyrbulak	2.33	318	Pg	Pb	00 37 26.0	0.0
	38nm,0.3s						
KOTS				Lg	Lg	00 37 58.4	
	64nm,0.4s						
ULHL	Ulahol	2.36	289	⇓iP	Pn	00 37 23.7	+0.9
	baz=90						
ULHL				⇓iS	Sb	00 37 54.7	-1.2
	baz=90						
KNDC	Almaty	2.40	316	⇓Pg	Pg	00 37 28.1	-1.6
	59nm,0.8s						
KNDC				⇓Lg	Lg	00 38 00.1	
	79nm,0.7s						
AAA	Alma-Ata	2.42	315	Pg	Pb	00 37 27.9	+0.6
	32nm,0.3s						
AAA				Lg	Lg	00 38 01.6	
	3.3nm,0.1s						
BLB	Baldybastay	2.63	348	Pg	Pb	00 37 29.8	-1.2
	68nm,0.2s						
BLB				Lg	Lg	00 38 04.9	
	58nm,0.2s						
MTBS	Maitube	2.64	308	eP	Pb	00 37 30.7	-0.4
	16nm,0.4s						
MTBS				eS	Sg	00 38 07.5	-1.0
	31nm,0.3s						
MTBS	Maitube	2.64	308	Pg	Pb	00 37 31.2	0.0
	16nm,0.4s						
MTBS				Lg	Lg	00 38 07.1	
	31nm,0.3s						
BOOM	Boomskoye usch	2.65	292	⇑iP	Pn	00 37 27.7	+1.0
	baz=93						
BOOM				⇑iS	Sb	00 38 01.8	-2.3
	baz=93						
KST	Kastek	2.88	303	eP	Pb	00 37 33.2	-2.0
	13nm,0.3s						
KST				eS	Sb	00 38 11.7	+1.2
	58nm,0.3s						
KST	Kastek	2.88	303	Pg	Pb	00 37 35.2	0.0
	13nm,0.3s						
KST				Lg	Lg	00 38 14.1	
	58nm,0.3s						
ARXS	Arharly	2.88	339	eP	Pb	00 37 35.7	+0.4
	9.2nm,0.2s						
ARXS				eS	Sg	00 38 15.8	-0.5
	20nm,0.4s						
ARXS	Arharly	2.88	339	Pg	Pb	00 37 35.3	0.0
	9.2nm,0.2s						
ARXS				Lg	Lg	00 38 14.2	
	20nm,0.4s						
KTBS	Karatobe	2.90	320	eP	Pb	00 37 34.9	-0.6
	6.7nm,0.2s						
KTBS				eS	Sg	00 38 14.2	-2.5
	43nm,0.3s						
KTBS	Karatobe	2.90	320	Pg	Pb	00 37 35.5	+0.1
	6.7nm,0.2s						
KTBS				Lg	Lg	00 38 14.6	
	43nm,0.3s						
DGS	Degeres	3.10	305	eP	Pb	00 37 36.6	-2.4
	7.5nm,0.4s						
DGS				eS	Sb	00 38 17.8	+0.9
	15nm,0.2s						
DGS	Degeres	3.10	305	Pg	Pb	00 37 39.0	0.0
	7.5nm,0.4s						
DGS				Lg	Lg	00 38 20.8	
	15nm,0.2s						
KUU	Kurty	3.20	319	eP	Pb	00 37 40.3	-0.3
	3.1nm,0.4s						
KUU				eS	Sg	00 38 23.8	-2.6
	35nm,0.5s						
KUU	Kurty	3.20	319	Pg	Pb	00 37 41.0	+0.4
	3.1nm,0.4s						
KUU				Lg	Lg	00 38 24.0	
	35nm,0.5s						
KBK	Karagaybulak	3.40	291	⇑eP	Pn	00 37 38.2	+1.2
	baz=91						
KBK				⇑iS	Sn	00 38 19.9	+2.4
	baz=91						
KRBS	Karabastau	3.42	311	eP	Pb	00 37 44.1	-0.3
	2.7nm,0.4s						
KRBS				eS	Sg	00 38 30.1	-3.5
	12nm,0.3s						
KRBS	Karabastau	3.42	311	Pg	Pb	00 37 45.1	+0.7
	2.7nm,0.4s						
KRBS				Lg	Lg	00 38 31.0	
	12nm,0.3s						
TDK	Taldyqorghan	3.53	350	eP	Pb	00 37 45.5	-0.8
	37nm,0.2s						
TDK				eS	Sb	00 38 32.5	+3.3
	40nm,0.3s						
TDK	Taldyqorghan	3.53	350	Pg	Pb	00 37 46.5	+0.2
	37nm,0.2s						
TDK				Lg	Lg	00 38 33.5	
	40nm,0.3s						
AAK	Ala-Archa	3.71	289	⇑Pn	Pn	00 37 43.2	+1.8
	0.9nm,0.3s						
AAK				⇓Pg	Pg	00 37 53.3	-1.6
	2.6nm,0.6s						
AAK				⇓Lg	Lg	00 38 42.1	
	6.1nm,0.7s						
KAPS	Kapalarasan	3.76	1	eP	Pb	00 37 49.4	-0.8
	5.1nm,0.4s						
KAPS				eS	Sb	00 38 39.6	+3.8
	31nm,0.3s						
KAPS	Kapalarasan	3.76	1	Pg	Pb	00 37 50.6	+0.4
	5.1nm,0.4s						
KAPS				Lg	Lg	00 38 40.6	
	31nm,0.3s						
MRKS	Merke	4.65	287	Pg	Pb	00 38 08.0	+2.6
	3.3nm,0.6s						
MRKS				Lg	Lg	00 39 10.4	
	5.0nm,0.4s						
MAKZ	Makanchi	5.63	19	⇑Pn	Pn	00 38 08.3	+0.8
	4.2nm,1.0s						
MAKZ				⇓Sn	Sn	00 39 14.3	+2.1
	1.2nm,0.5s						
MK31	Makanchi Array	5.70	21	Pn	Pn	00 38 09.9	+1.5
	602nm,0.1s,baz=206,slow=14,SNR=8.6						
MK31				⇑Sn	Sn	00 39 15.5	+1.6
	1.7nm,0.7s,baz=205,slow=26,SNR=5.3						

SJA ***12*** *00:45:32.8±0.7, 19°.94S×71°.18W, h28^{km}±2^{km}, ML4.4, MW4.7*
NEIC ***12*** *00:45:35.3±1.3, 19°.94S±0°.03×71°.04W±0°.03, h15^{km}±4^{km}, mb4.6/36, Mwr4.5/48, ML4.2(GUC), Error ellipse: s-maj=5.1km s-min=3.6km az=222.0*
VAO ***12*** *00:45:35.2±0.4, 19°.94S×71°.05W, h15^{km}, mb4.4*
NEIC ***12*** *00:45:35.5, 19°.95S×71°.03W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-5.05; $M_{\theta\theta}$-2.55; $M_{\phi\phi}$7.60; $M_{r\theta}$3.04; $M_{\theta\phi}$0.35; $M_{\phi r}$-3.42; Fault plane solution: $M_0$8.12000×10^{15} NP1:ϕ_s334.83000°, δ65.57000°, λ-122.09000°. NP2:ϕ_s211.42000°, δ39.52000°, λ-40.53000°. Principal axes: T 8.4797, Plg15.0000°, Azm88.0000°; N -0.7779, Plg29.0000°, Azm349.0000°; P -7.7019, Plg57.0000°, Azm201.0000°;*
GUC ***12*** *00:45:36.4±0.6, 19°.88S×71°.10W, h42^{km}±5^{km}, ML4.2*
IDC ***12*** *00:45:44.8±2.4, 20°.04S×70°.28W, h71^{km}±21^{km}, mb3.6/8, mb1 3.9/12, mb1mx3.8/30, mbtmp4.0/12, MS3.7/12, Ms1 3.7/12, ms1mx3.6/21, Error ellipse: s-maj=23.4km s-min=20.4km az=83.0*
ISC 12 00:45:33.8±1.8**, 19°.92S**±0°.02×**71°.06W**±0°.05**, h9^{km}**±11^{km}**, n170, σ1^{s}04**/194**, mb4.5**/23**, MS3.9**/8**, 12C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	Huaiquique	0.94	112	⇑iP	Pn	00 45 53.2	0.0
TA02				iS	Sn	00 46 06.3	-0.6
TA02				IAML		00 46 08.1	
	comp=N,11μm,0.5s						
TA02	Huaiquique	0.94	112		Pb	00 45 52.8	+0.4
TA02					Sn	00 46 06.0	-0.9
TA02	Huaiquique	0.94	112	eP	Pn	00 45 53.1	-0.2
TA02				eS	Sn	00 46 07.6	+0.7
TA02				IAML		00 46 16.7	
	comp=Z,9μm,1.4s						
TA01	Diego Aracena	1.05	128	⇑iP	Pn	00 45 54.9	+0.2
TA01				iS	Sg	00 46 08.7	+1.1
TA01				IAML		00 46 09.7	
	comp=E,7μm,0.3s						
TA01	Diego Aracena	1.05	128		Pn	00 45 54.9	+0.2
TA01					Sg	00 46 08.5	+0.9
TA01	Diego Aracena	1.05	128	eP	Pn	00 45 55.0	+0.2
TA01				IAML		00 46 20.1	
	comp=Z,6μm,1.0s						
HMBC	Humberstone	1.16	108	⇓iP	Pb	00 45 56.3	+0.1
HMBC				iS	Sn	00 46 12.7	+0.2
HMBC				IAML		00 46 16.3	
	comp=N,13μm,0.5s						
PATCX	Punta Patache	1.24	136	⇑iP	Pb	00 45 57.7	+0.3
PATCX				iS	Sb	00 46 12.2	-1.3
PATCX				IAML		00 46 23.3	
	comp=E,5μm,0.6s						
PATCX	Punta Patache	1.24	136	Pn	Pb	00 45 57.7	+0.3
PATCX					Sb	00 46 13.3	-0.2
PATCX	Punta Patache	1.24	136	eP	Pn	00 45 57.0	-0.4
PATCX				eS	Sn	00 46 14.0	-0.3
PATCX				IAML		00 46 25.1	
	comp=Z,4μm,1.0s						
PB11	IPOC Station P	1.33	83	Pn	Pn	00 45 59.0	+0.1
PB11					Sb	00 46 16.2	-0.3
PB11	IPOC Station P	1.33	83	eP	Pn	00 45 59.0	+0.1
PB11				IAML		00 46 26.5	
	comp=Z,8μm,1.3s						
PB12	IPOC Station P	1.48	28	⇑iP	Pn	00 46 00.4	-0.4
PB12				iS	Sn	00 46 18.2	-2.1
PB12				IAML		00 46 27.9	
	comp=N,4μm,0.5s						
PB12	IPOC Station P	1.48	28	Pn	Pn	00 46 00.2	-0.5
PB12					Sn	00 46 19.8	-0.5
PB12	IPOC Station P	1.48	28	eP	Pn	00 46 00.4	-0.4
PB12				eS	Sg	00 46 21.7	+0.3
PB12				IAML		00 46 27.6	
	comp=Z,3μm,2.2s						
AP01	Chacalluta	1.69	24	⇑eP	Pn	00 46 03.2	-0.3
AP01				eS	Sn	00 46 23.8	-1.5
AP01				IAML		00 46 31.1	
	comp=N,8μm,0.4s						
AP01	Chacalluta	1.69	24		Pn	00 46 04.3	+0.8
AP01				Sn	Sb	00 46 26.8	+0.3
AP01	Chacalluta	1.69	24	eP	Pb	00 46 05.0	-0.1
AP01				IAML		00 46 37.4	
	comp=Z,4μm,0.8s						
PB02	IPOC Station P	1.77	142	⇑iP	Pn	00 46 05.3	+0.6
PB02				iS	Sn	00 46 26.7	-0.7
PB02	IPOC Station P	1.77	142	eP	Pn	00 46 05.0	+0.2
PB02				eS	Sb	00 46 28.2	-0.7
PB02				IAML		00 46 39.2	
	comp=Z,11μm,0.5s						
PB08	IPOC Station P	1.81	97	⇑iP	Pn	00 46 06.1	+0.5
PB08				iS	Sb	00 46 29.7	-0.7
PB08				IAML		00 46 32.8	
	comp=N,4μm,0.2s						
PB08	IPOC Station P	1.81	97		Pn	00 46 06.2	+0.5
PB08					Sb	00 46 30.1	-0.2
PB08	IPOC Station P	1.81	97	eP	Pn	00 46 06.0	+0.5
PB08				eP	Pb	00 46 06.3	-1.1
PB08				eS	Sn	00 46 26.4	-2.4
PB08				IAML		00 46 32.7	
	comp=Z,3μm,0.5s						
PB01	IPOC Station P	1.85	127	⇑iP	Pn	00 46 06.5	+0.7
PB01				iS	Sn	00 46 29.1	-0.4
PB01				IAML		00 46 39.0	
	comp=E,4μm,0.4s						
PB01	IPOC Station P	1.85	127		Pn	00 46 06.7	+0.8
PB01					Sn	00 46 29.6	+0.1
PB01	IPOC Station P	1.85	127	eP	Pn	00 46 06.0	+0.1
PB01				eS	Sb	00 46 30.9	-0.3
PB01				IAML		00 46 40.0	
	comp=Z,2μm,0.4s						
PB07	IPOC Station P	2.10	149	⇑eP	Pn	00 46 09.8	+0.3
PB07				eS	Sn	00 46 34.3	-1.6
PB07				IAML		00 46 53.8	
	comp=E,2μm,0.6s						
PB07	IPOC Station P	2.10	149		Pn	00 46 09.8	+0.3
PB07	IPOC Station P	2.10	149	eP	Pn	00 46 10.0	+0.5
PB07				eS	Sn	00 46 35.1	-0.8
PB07				IAML		00 47 01.2	
	comp=Z,2μm,0.5s						
PB16	IPOC Station P	2.16	43	⇑iP	Pn	00 46 11.0	+0.4
PB16				eS	Sn	00 46 38.1	+0.4
PB16				IAML		00 46 43.9	
	comp=E,2μm,0.5s						
PB16	IPOC Station P	2.16	43		Pn	00 46 10.9	+0.3
PB16	IPOC Station P	2.16	43	eP	Pn	00 46 11.0	+0.4
PB16				eS	Sb	00 46 40.8	+0.2
PB16				IAML		00 46 47.1	
	comp=Z,3μm,0.4s						
PB03	IPOC Station P	2.44	150	⇑eP	Pn	00 46 14.5	+0.4
PB03				eS	Sn	00 46 42.4	-1.8
PB03				IAML		00 47 03.8	
	comp=E,1μm,0.6s						
PB03	IPOC Station P	2.44	150	eP	Pn	00 46 14.0	-0.1
PB03				eS	Sn	00 46 43.2	-1.1
PB03				IAML		00 47 03.8	
	comp=Z,1μm,0.5s						
PB09	IPOC Station P	2.52	138	Pn	Pn	00 46 15.9	+0.7
PB09	IPOC Station P	2.52	138	eP	Pn	00 46 16.9	+1.7
PB09				eS	Sn	00 46 47.3	+1.1
PB09				IAML		00 47 03.2	
	comp=Z,3μm,0.4s						
PB04	IPOC Station P	2.55	161	⇑iP	Pn	00 46 15.6	+0.1
PB04				eS	Sn	00 46 44.1	-2.7
PB04				IAML		00 47 13.2	
	comp=E,2μm,0.5s						
PB04	IPOC Station P	2.55	161		Pn	00 46 15.7	+0.2
PB04	IPOC Station P	2.55	161	eP	Pn	00 46 15.4	-0.1
PB04				eS	Sn	00 46 45.0	-1.8
PB04				IAML		00 47 07.7	
	comp=Z,1μm,0.4s						
PB05	IPOC Station P	3.02	165	eP	Pn	00 46 21.9	-0.2
PB05	IPOC Station P	3.02	165	eP	Pn	00 46 21.7	-0.4
PB05				eP	Pn	00 46 22.0	0.0
PB05				eP	Pn	00 46 26.4	+4.4
PB05				eS	Sn	00 46 58.9	+0.4
PB05				IAML		00 47 27.2	
	comp=Z,579nm,1.2s						
PB06	IPOC Station P	3.10	154	eP	Pn	00 46 23.2	+0.1
PB06				eS	Sn	00 46 58.3	-2.1
PB06				IAML		00 47 20.6	
	comp=N,1μm,0.6s						
PB06	IPOC Station P	3.10	154		Pn	00 46 23.1	-0.1
PB06	IPOC Station P	3.10	154	eP	Pn	00 46 23.2	+0.1
PB06				eS	Sn	00 47 00.8	+0.4
PB06				IAML		00 47 21.8	
	comp=Z,845nm,0.5s						
LVC	Limon Verde	3.34	143	P	Pn	00 46 28.6	+2.0
	comp=Z,16nm,0.3s,baz=14,slow=8.0,SNR=116						
LVC				S	Sn	00 47 07.3	+0.6
	comp=Z,72nm,0.3s,baz=328,slow=12,SNR=5.1						
LVC				LR	LR	00 47 10.9	
	comp=Z,182nm,20.8s,baz=315,slow=30						
LVC	Limon Verde	3.34	143	Pn	Pn	00 46 28.5	+1.8
LVC	Limon Verde	3.34	143	eP	Pn	00 46 28.0	+1.3
LVC				eS	Sg	00 47 19.4	-1.9
LVC				IAML		00 47 26.4	
	comp=Z,314nm,0.6s						
PB15	IPOC Station P	3.59	156		Pn	00 46 29.9	0.0
PB15	IPOC Station P	3.59	156	eP	Pn	00 46 30.3	+0.4
PB15				eS	Sn	00 47 13.9	+1.3
PB15				IAML		00 47 40.1	
	comp=Z,1μm,0.4s						
PB10	IPOC Station P	3.60	173	Pn	Pn	00 46 29.4	-0.5
PB10	IPOC Station P	3.60	173	eP	Pn	00 46 29.7	-0.2
PB10				eS	Sn	00 47 09.9	-2.7
LPAZ	La Paz	4.57	38	P	Pn	00 46 47.1	+3.4
	comp=Z,4.8nm,0.3s,baz=157,slow=3.0,SNR=29						
LPAZ				LR	LR	00 48 39.3	
	comp=Z,1μm,18.7s,baz=234,slow=41						
LPAZ	La Paz	4.57	38	Pn	Pn	00 46 44.7	+1.0
LPAZ	La Paz	4.57	38		Pn	00 46 46.6	+2.9
PB14	IPOC Station P	4.72	173	Pn	Pn	00 46 44.8	-0.7
AC02	Maricunga	7.11	166	Pn	Pn	00 47 19.0	+0.5
SIV	San Ignacio	10.28	69	P	Pn	00 48 01.5	-0.2
	comp=Z,4.9nm,0.3s,baz=270,slow=9.3,SNR=43						
ETMB	Extrema	11.09	26	eP	Pn	00 48 12.7	0.0
ETMB	Extrema	11.09	26	Pn	Pn	00 48 12.6	-0.1
PTLB	Pontes e Lacer	12.21	71	eP	Pn	00 48 29.5	+1.5
PTLB	Pontes e Lacer	12.21	71	Pn	Pn	00 48 28.7	+0.7
CZSB	Cruzeiro do Su	12.23	352	eP	Pn	00 48 29.8	+1.5
VILB	Vilhena	12.51	58	eP	Pn	00 48 34.0	+1.8
VILB	Vilhena	12.51	58	Pn	Pn	00 48 33.9	+1.7
SAML	Samuel	13.31	36	Pn	Pn	00 48 42.9	-0.2
CPUP	Villa Florida	14.15	119	P	Pn	00 48 53.5	-1.1
	comp=Z,0.1nm,0.3s,baz=259,slow=10,SNR=1.8						
CPUP				LR	LR	00 54 58.3	
	comp=Z,334nm,18.8s,baz=298,slow=41						
CPUP	Villa Florida	14.15	119	eP	Pn	00 48 55.3	+0.8
CPUP	Villa Florida	14.15	119		Pn	00 48 53.1	-1.4
AQDB	Aquidauana	14.44	95	eP	Pn	00 48 59.2	+0.7
AQDB	Aquidauana	14.44	95	Pn	Pn	00 48 57.8	-0.7

ATAH	**Atahualpa**	**14.57**	**330**	LR	LR	00 54 17.8	
	comp=Z,118nm,21.5s,baz=335,slow=34						
SALV	**Santo Antonio**	**15.16**	**77**	*e*P	**Pn**	**00 49 09.7**	**+1.3**
H03N1	**Juan Fernandez**	**15.17**	**206**	T	T	01 04 53.0	
	baz=33,slow=72,SNR=60						
H03N2	**Juan Fernandez**	**15.18**	**206**	T	T	01 04 47.1	
	baz=33,slow=72,SNR=73						
H03N3	**Juan Fernandez**	**15.19**	**206**	T	T	01 04 54.6	
	baz=33,slow=72,SNR=75						
TBTG	**Tabatinga, AM**	**15.68**	**4**	*e*P	**P**	**00 49 17.7**	**-1.6**
PDRB	**Porto dos Gac**	**16.07**	**61**	*e*P	**Pn**	**00 49 21.0**	**+0.8**
PTGB	**Pitanga**	**18.21**	**109**	*e*P	**P**	**00 49 47.8**	**+0.4**
PCMB	**Pacaembu**	**18.59**	**99**	*e*P	**P**	**00 49 51.5**	**-0.1**
ARAG	**Araguaiana, MT**	**18.80**	**80**	*e*P	**P**	**00 49 54.1**	**+0.3**
ITAB	**Concordia**	**18.80**	**116**	P	**P**	**00 49 53.1**	**-0.7**
LC01	**Cunco**	**18.92**	**182**		**P**	**00 49 54.8**	**-0.2**
CPSB	**Cacapava Do Su**	**19.04**	**127**	*e*P	**Pn**	**00 49 57.7**	**+0.6**
ITRB	**Iturama**	**19.48**	**93**	*e*P	**Pn**	**00 50 02.1**	**-0.5**
MACA	**Manacapuru-AM**	**19.50**	**33**		**P**	**00 50 00.3**	**-1.1**
MACA				IAmb	IAmb	00 50 10.8	
	comp=Z,29nm,0.7s						
PLTB	**Pedras Altas**	**19.61**	**130**	*e*P	**P**	**00 50 02.9**	**+0.3**
TRQA	**Tornquist**	**19.72**	**158**	P	**P**	**00 50 03.4**	**-0.3**
NPGB	**Novo Progresso**	**19.90**	**52**	*e*P	**P**	**00 50 05.3**	**-0.6**
SNDB	**Serra Nova Dou**	**20.57**	**70**	*e*P	**P**	**00 50 11.8**	**-1.4**
CNLB	**Canela**	**20.59**	**121**	*e*P	**P**	**00 50 13.2**	**-0.1**
PLCA	**Paso Flores**	**20.75**	**179**	P	Pn	00 50 17.4	+0.1
	comp=Z,4.4nm,1.0s,baz=358,slow=12,SNR=4.7						
PLCA	**Paso Flores**	**20.75**	**179**	*e*P	**P**	**00 50 15.4**	**+0.5**
PLCA	**Paso Flores**	**20.75**	**179**		**P**	**00 50 15.8**	**+0.9**
TIJ01	**Guaruva-PR**	**21.05**	**109**	*e*P	**P**	**00 50 19.2**	**+0.8**
BB19B	**Bebedouro**	**21.14**	**97**	*e*P	**P**	**00 50 20.1**	**+0.7**
IPMB	**Ipameri, GO**	**21.70**	**89**	*e*P	**P**	**00 50 24.7**	**-0.7**
FLOC	**Florencia**	**21.84**	**348**	P	**P**	**00 50 28.4**	**+1.5**
FLOC				IAmb	IAmb	00 50 42.3	
	comp=Z,38nm,1.1s						
PTGA	**Pitinga**	**21.95**	**31**	P	**P**	**00 50 25.8**	**-2.3**
	comp=Z,7.3nm,0.5s,baz=204,slow=12,SNR=14						
PTGA				LR	LR	00 59 30.9	
	comp=Z,378nm,18.2s,baz=210,slow=38						
RCLB	**Rio Claro- Sao**	**22.08**	**101**	*e*P	**P**	**00 50 29.1**	**-0.3**
BDFB	**Brasilia**	**22.35**	**83**	P	**P**	**00 50 30.2**	**-2.3**
	comp=Z,2.8nm,0.5s,baz=252,slow=9.9,SNR=5.9						
BDFB	**Brasilia**	**22.35**	**83**	P	**P**	**00 50 31.9**	**-0.6**
PEXB	**Peixe**	**23.20**	**74**	*e*P	**P**	**00 50 41.8**	**+0.5**
MALB	**Monte Alegre**	**24.34**	**45**	*e*P	**P**	**00 50 51.2**	**-1.0**
BOAV	**Boa Vista**	**24.48**	**26**	*e*P	**P**	**00 50 53.5**	**0.0**
BOAV	**Boa Vista**	**24.48**	**26**	P	**P**	**00 50 53.1**	**-0.4**
ROSC	**El Rosal**	**24.82**	**352**	LR	LR	01 01 10.5	
	comp=Z,366nm,19.4s,baz=228,slow=37						
ROSC	**El Rosal**	**24.82**	**352**	P	**P**	**00 50 56.3**	**-0.7**
ROSC				IAmb	IAmb	00 51 08.5	
	comp=Z,9.4nm,0.8s						
SMTB	**Santa Maria do**	**25.22**	**68**	*e*P	**P**	**00 51 00.3**	**+0.1**
DIAM	**Diamantina, MG**	**25.92**	**91**	*e*P	**P**	**00 51 06.7**	**-0.1**
JANB	**Januaria**	**25.95**	**84**	*e*P	**P**	**00 51 05.7**	**-1.3**
MCPB	**Macapa, AP**	**26.91**	**46**	*e*P	**P**	**00 51 16.3**	**+0.7**
ZARC	**Zaragoza, Cauc**	**27.50**	**352**	P	**P**	**00 51 20.8**	**0.0**
ZARC				IAmb	IAmb	00 51 30.9	
	comp=Z,12nm,0.7s						
SDV	**Santo Domingo**	**28.63**	**1**	*e*P	**P**	**00 51 30.9**	**-0.2**
SDV	**Santo Domingo**	**28.63**	**1**	P	**P**	**00 51 29.7**	**-1.4**
SDV				IAmb	IAmb	00 51 43.9	
	comp=Z,5.1nm,0.6s						
BAUV	**El Baul**	**28.84**	**6**	P	**P**	**00 51 31.7**	**-1.1**
MOTC	**Monteria, Cord**	**28.88**	**351**	P	**P**	**00 51 33.3**	**+0.3**
SJCC	**San Jacinto, C**	**29.91**	**352**	P	**P**	**00 51 42.4**	**+0.1**
NBIT	**Itapeh - BA**	**30.55**	**86**	*e*P	**P**	**00 51 48.7**	**+0.6**
NBMA	**Muriti-CE**	**33.70**	**73**	*e*P	**P**	**00 52 15.9**	**+0.2**
NBPB	**Pedra_Branca-C**	**33.78**	**69**	*e*P	**P**	**00 52 15.8**	**-0.6**
NBCL	**Cascavel-CE**	**35.53**	**68**	*e*P	**P**	**00 52 32.2**	**+0.7**
NBPV	**Pedro Velho**	**37.23**	**74**	*e*P	**P**	**00 52 46.1**	**+0.1**
V52A	**Sevierville**	**56.72**	**348**	P	**P**	**00 55 18.3**	**+0.4**
V52A				IAmb	IAmb	00 55 29.5	
	comp=Z,8.2nm,1.1s						
237A	**Washetta, Mont**	**56.81**	**335**	P	**P**	**00 55 19.0**	**+0.3**
V51A	**Loudon**	**56.83**	**347**	P	**P**	**00 55 19.3**	**+0.6**
T59A	**Double "B" Far**	**56.92**	**354**	P	**P**	**00 55 19.7**	**+0.4**
WLAR	**White Oak Lake**	**57.31**	**338**	P	**P**	**00 55 22.8**	**+0.7**
V48A	**Smith Brothers**	**57.34**	**345**	P	**P**	**00 55 22.3**	**0.0**
V48A				IAmb	IAmb	00 55 32.9	
	comp=Z,7.9nm,1.1s						
TZTN	**Tazewell**	**57.39**	**348**	P	**P**	**00 55 22.9**	**+0.2**
TX31	**Lajitas Ar. Si**	**58.20**	**326**	P	**P**	**00 55 28.6**	**0.0**
TX31				IAmb	IAmb	00 55 41.5	
	comp=Z,5.7nm,1.1s						
TXAR	**Lajitas Array**	**58.20**	**326**	P	P	00 55 34.2	+5.5
	comp=Z,0.6nm,0.9s,baz=128,slow=6.9,SNR=4.8						
TXAR	**Lajitas Array**	**58.20**	**326**	P	**P**	**00 55 28.9**	**+0.3**
MIAR	**Mount Ida**	**58.25**	**338**	P	**P**	**00 55 29.2**	**+0.5**
MIAR				IAmb	IAmb	00 55 48.4	
	comp=Z,7.6nm,1.1s						
T47A	**Sharon Grove**	**58.59**	**345**	P	**P**	**00 55 31.1**	**0.0**
T47A				IAmb	IAmb	00 55 38.6	
	comp=Z,6.7nm,1.1s						
WCI	**Wyandotte Cave**	**59.59**	**346**	P	**P**	**00 55 37.3**	**-0.7**
WCI				IAmb	IAmb	00 55 39.4	
	comp=Z,4.4nm,0.9s						
U40A	**Yellville**	**59.65**	**340**	P	**P**	**00 55 37.9**	**-0.6**
U40A				IAmb	IAmb	00 55 49.5	
	comp=Z,4.2nm,0.9s						
WUPA	**West Chester U**	**59.70**	**356**	P	**P**	**00 55 38.8**	**+0.2**
WUPA				IAmb	IAmb	00 55 50.0	
	comp=Z,6.3nm,1.1s						
S44A	**Carbondale**	**59.81**	**343**	P	**P**	**00 55 39.9**	**+0.4**
SIUC	**Southern Illin**	**59.82**	**343**	P	**P**	**00 55 40.1**	**+0.5**
MCWV	**Mont Chateau**	**59.84**	**352**	P	**P**	**00 55 39.4**	**-0.3**
MCWV				IAmb	IAmb	00 55 41.2	
	comp=Z,7.0nm,0.9s						
VNA3	**Neumayer Olymp**	**62.21**	**161**	P	**P**	**00 55 56.4**	**+0.9**
VNA1	**Neumayer--Stat**	**62.44**	**160**	P	**P**	**00 55 58.0**	**+1.0**
VNA2	**Neumayer--Watz**	**62.80**	**161**	P	**P**	**00 56 01.0**	**+1.6**
	baz=292,slow=5.5						
SNAA	**Sanae**	**64.42**	**161**	P	**P**	**00 56 11.7**	**+1.5**
SNAA	**Sanae**	**64.42**	**161**	P	**P**	**00 56 11.8**	**+1.6**
G65A	**Princeton**	**64.89**	**3**	P	**P**	**00 56 12.0**	**-1.3**
MOQ	**Mont Orford**	**64.93**	**359**	P	**P**	**00 56 13.0**	**-0.7**
DBIC	**Dimbokro**	**70.25**	**75**	P	**P**	**00 56 46.5**	**-1.5**
	comp=Z,2.6nm,0.7s,baz=241,slow=3.8,SNR=3.3						
DBIC				LR	LR	01 26 11.0	
	comp=Z,86nm,19.8s,baz=242,slow=35						
DBIC	**Dimbokro**	**70.25**	**75**	IAmb	IAmb	00 56 47.4	
	comp=Z,4.3nm,0.9s						
PDAR	**Pinedale Array**	**71.75**	**331**	P	P	00 57 04.0	+7.3
	comp=Z,0.2nm,0.7s,baz=144,slow=3.2,SNR=1.8						
PDAR				LR	LR	01 29 49.8	
	comp=Z,51nm,18.0s,baz=314,slow=37						
NVAR	**Mina Array Bea**	**73.02**	**323**	P	P	00 57 10.8	+6.3
	comp=Z,0.5nm,0.5s,baz=158,slow=7.1,SNR=4.1						
KOWA	**Kowa**	**74.27**	**68**	P	**P**	**00 57 11.3**	**-0.7**
KOWA				IAmb	IAmb	00 57 20.1	
	comp=Z,6.7nm,1.1s						
TORD	**Torodi Ar. Bea**	**78.75**	**72**	P	**P**	**00 57 36.5**	**-0.9**
	comp=Z,4.7nm,0.7s,baz=251,slow=5.4,SNR=45						
TORD				LR	LR	01 30 46.4	
	comp=Z,116nm,20.9s,baz=260,slow=35						
TORD	**Torodi Ar. Bea**	**78.75**	**72**	P	**P**	**00 57 36.4**	**-0.9**
TORD				IAmb	IAmb	00 57 45.7	
	comp=Z,6.1nm,0.8s						
BOSA	**Boshof**	**85.97**	**119**	LR	LR	01 33 54.3	
	comp=Z,55nm,18.6s,baz=236,slow=34						
ESDC	**Sonseca Array**	**86.15**	**45**	P	**P**	**00 58 15.6**	**0.0**
	comp=Z,1.2nm,1.1s,baz=256,slow=3.8,SNR=4.5						
ESDC				LR	LR	01 36 47.2	
	comp=Z,44nm,18.3s,baz=10.0,slow=36						
MAW	**Mawson**	**86.40**	**164**	LR	LR	01 40 15.2	
	comp=Z,24nm,18.1s,baz=236,slow=38						
YKA	**Yellowknife Ar**	**89.05**	**341**	P	**P**	**00 58 29.3**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=140,slow=4.4,SNR=5.6						
H11S2	**WAKE ISLAND Hy**	**125.66**	**279**	T	T	03 23 59.2	
	baz=101,slow=74,SNR=32						
H11S1	**WAKE ISLAND Hy**	**125.67**	**279**	T	T	03 24 05.3	
	baz=101,slow=74,SNR=17						
H11S3	**WAKE ISLAND Hy**	**125.68**	**279**	T	T	03 24 00.6	
	baz=101,slow=74,SNR=17						
H11N3	**WAKE ISLAND Hy**	**125.71**	**280**	T	T	03 24 03.1	
	baz=102,slow=74						
H11N2	**WAKE ISLAND Hy**	**125.72**	**280**	T	T	03 24 01.9	
	baz=102,slow=74						
H11N1	**WAKE ISLAND Hy**	**125.73**	**280**	T	T	03 24 07.2	
	baz=102						
ASAR	**Alice Springs**	**130.30**	**210**	PKP	**PKiKP**	**01 04 50.4**	**+4.1**
	comp=Z,0.2nm,0.3s,baz=124,slow=2.0,SNR=2.4						
WRA	**Warramunga Arr**	**133.21**	**214**	PKP	**PKiKP**	**01 04 52.3**	**0.0**
	comp=Z,2.1nm,1.3s,baz=145,slow=2.0,SNR=2.3						
ZALV	**Zalesovo Beam**	**141.34**	**23**	PKP	**PKPdf**	**01 05 06.0**	**+1.1**
	comp=Z,1.1nm,0.4s,baz=298,slow=3.1,SNR=5.6						
MKAR	**Makanchi Array**	**145.48**	**33**	PKPbc	**PKPab**	**01 05 13.2**	**+0.5**
	comp=Z,4.4nm,1.1s,baz=318,slow=1.6,SNR=8.3						
MJAR	**Matsushiro Arr**	**149.52**	**309**	PKPbc	**PKPab**	**01 05 28.8**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=43,slow=1.4,SNR=2.0						
SONM	**Songino Array**	**152.08**	**4**	PKPbc	**PKiKP**	**01 05 31.0**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=339,slow=1.6,SNR=5.9						

IDC ***12*** *00:55:12.5±5.2, 24°.68S×179°.26W, h554^{km}±71^{km}, mb3.3/5, mb1 3.5/7, mb1mx3.2/34, mbtmp4.4/7, Error ellipse: s-maj=153.1km s-min=30.7km az=81.0*

NEIC ***12*** *00:55:16.5±1.3, 24°.80S±0°.09×180°.0E±0°.2, h527^{km}±19^{km}, mb4.4/19, Error ellipse: s-maj=23.0km s-min=12.8km az=102.0*

NOU ***12*** *00:55:17.0, 24°.71S×179°.97E, h551^{km}, mb4.2/12, South of Fiji Islands*

ISC 12 00:55:16.9±0.7**, 24°.77S**±0°.07×**179°.97W**±0°.10**, h550**^{km}**, n67, σ1^{s}.20**/74**, mb4.1**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.83**	**158**	P	**P**	**00 56 44.8**	**-0.3**
GLKZ				S	**S**	**00 57 56.0**	**-1.4**
MSVF	**Nonsavu**	**7.24**	**345**	P	**P**	**00 57 04.3**	**-3.0**
	3.4nm,0.3s,baz=152,slow=6.7,SNR=17						
MSVF	**Nonsavu**	**7.24**	**345**	P	**P**	**00 57 05.6**	**-1.8**
MSVF	**Nonsavu**	**7.24**	**345**	P	**P**	**00 57 05.4**	**-2.0**
TAVE	**Taveuni**	**8.02**	**0**	P	**P**	**00 57 15.9**	**+0.9**
DGTI	**Dogotuki**	**8.43**	**358**	P	**P**	**00 57 19.2**	**+0.1**
NIUE	**Niue**	**10.91**	**61**	P	**P**	**00 57 44.1**	**-0.1**
MARNC	**Mare, Loyalty**	**11.51**	**284**	P	**P**	**00 57 48.4**	**-2.0**
PINNC	**Pines Island,**	**11.73**	**278**	P	**P**	**00 57 51.6**	**-1.0**
OUZ	**Omahuta**	**11.81**	**207**	P	**P**	**00 57 53.1**	**-0.1**
OUZ	**Omahuta**	**11.81**	**207**	P	**P**	**00 57 54.6**	**+1.4**
	10nm,1.7s						
YATNC	**Mamie plateau,**	**12.36**	**280**	P	**P**	**00 57 58.7**	**-0.5**
KUZ	**Kuaotunu**	**12.49**	**196**	P	**P**	**00 58 00.2**	**-0.1**
ABAZ	**Army Bay**	**12.61**	**200**	P	P	00 58 14.4	+13
DZM	**Mont Dzumac**	**12.76**	**279**	P	**P**	**00 58 02.4**	**-1.0**
DZM	**Mont Dzumac**	**12.76**	**279**	P	**P**	**00 58 03.2**	**-0.2**
MXZ	**Matakaoa Point**	**12.84**	**186**	P	**P**	**00 58 04.4**	**+0.6**
MXZ	**Matakaoa Point**	**12.84**	**186**	P	**P**	**00 58 03.8**	**0.0**
WMGZ	**Waiomatatini S**	**13.08**	**186**	P	**P**	**00 58 06.9**	**+0.6**
RUGZ	**Raukumara Rang**	**13.30**	**188**	P	**P**	**00 58 09.5**	**+0.7**
RUGZ				S	**S**	**01 00 30.7**	**+0.3**
PUZ	**Puketiti**	**13.35**	**186**	P	**P**	**00 58 11.0**	**+1.9**
TWGZ	**Tauwhareparae**	**13.48**	**187**	P	**P**	**00 58 10.4**	**-0.1**
TWGZ				S	**S**	**01 00 32.5**	**-1.0**
URZ	**Urewera**	**13.67**	**190**	P	**P**	**00 58 10.2**	**-2.3**
	5.0nm,0.3s,baz=120,slow=23,SNR=33						
URZ				S	**S**	**01 00 35.9**	**-1.1**
	0.3nm,0.3s,baz=120,slow=24,SNR=2.3						
URZ	**Urewera**	**13.67**	**190**	P	**P**	**00 58 10.4**	**-2.1**
URZ				S	**S**	**01 00 34.9**	**-2.2**
URZ	**Urewera**	**13.67**	**190**	P	**P**	**00 58 10.9**	**-1.6**
URZ	**Urewera**	**13.67**	**190**	P	**P**	**00 58 12.6**	**+0.1**
RIGZ	**Rimuhau**	**14.03**	**187**	P	**P**	**00 58 17.0**	**+0.8**
RIGZ				S	**S**	**01 00 46.9**	**+3.1**
HIZ	**Hauiti**	**14.39**	**197**	P	**P**	**00 58 20.6**	**+0.8**
RATZ	**Rangitukua**	**14.51**	**193**	P	**P**	**00 58 22.7**	**+1.6**
RATZ				S	**S**	**01 00 54.6**	**+1.7**
BKZ	**Black Stump Fm**	**14.66**	**191**	P	**P**	**00 58 21.8**	**-0.9**
BKZ	**Black Stump Fm**	**14.66**	**191**	P	**P**	**00 58 23.4**	**+0.7**
TMVZ	**Te Maari**	**14.76**	**193**	P	**P**	**00 58 24.1**	**+0.3**
ETVZ	**East Tongariro**	**14.78**	**193**	P	**P**	**00 58 24.0**	**0.0**
KWHZ	**Kaweka Forest**	**14.92**	**191**	P	**P**	**00 58 24.5**	**-0.9**
KWHZ				S	**S**	**01 00 57.3**	**-3.4**
WNVZ	**Wahianoa**	**14.99**	**193**	P	**P**	**00 58 25.8**	**-0.4**
BFZ	**Birch Farm**	**16.18**	**190**	P	**P**	**00 58 36.7**	**-1.1**
BFZ	**Birch Farm**	**16.18**	**190**	P	**P**	**00 58 37.9**	**0.0**
BHW	**Baring Head**	**17.14**	**193**	P	**P**	**00 58 46.4**	**-0.2**
QRZ	**Quartz Range**	**17.19**	**200**	P	**P**	**00 58 47.4**	**+0.3**
QRZ	**Quartz Range**	**17.19**	**200**	P	**P**	**00 58 48.9**	**+1.8**
PLWZ	**Palliser**	**17.22**	**192**	P	**P**	**00 58 46.6**	**-0.8**
NNZ	**Nelson**	**17.31**	**197**	P	**P**	**00 58 48.0**	**-0.2**
BSWZ	**Blackbirch Sta**	**17.66**	**195**	P	**P**	**00 58 50.9**	**-0.4**
THZ	**Tophouse**	**17.95**	**198**	P	**P**	**00 58 53.7**	**-0.4**
THZ				IAmb	IAmb	00 58 58.9	
	comp=Z,8.8nm,0.6s						
KHZ	**Kahutara**	**18.40**	**195**	P	**P**	**00 58 58.1**	**0.0**
KHZ				IAmb	IAmb	00 59 06.7	
	comp=Z,11nm,1.0s						
KHZ	**Kahutara**	**18.40**	**195**	P	**P**	**00 58 57.3**	**-0.8**
LTZ	**Lake Taylor**	**19.07**	**198**	P	**P**	**00 59 04.7**	**+0.4**
LTZ				IAmb	IAmb	00 59 11.3	
	comp=Z,16nm,1.0s						
OXZ	**Oxford**	**19.64**	**198**	P	**P**	**00 59 09.6**	**+0.2**
OXZ				IAmb	IAmb	00 59 22.3	
	comp=Z,19nm,1.1s						
RPZ	**Rata Peaks**	**20.28**	**199**	P	**P**	**00 59 16.4**	**+1.1**
CTA	**Charters Tower**	**31.51**	**272**	P	**P**	**01 00 55.2**	**+0.8**
	comp=Z,11nm,0.4s,baz=93,slow=11,SNR=20						
CTAO	**Charters Tower**	**31.51**	**272**	P	**P**	**01 00 55.3**	**+0.8**
CTAO				IAmb	IAmb	01 00 55.8	
	comp=Z,10nm,0.6s						
TOO	**Toolangi**	**32.00**	**238**	P	**P**	**01 00 58.7**	**+0.3**
STKA	**Stephens Creek**	**34.43**	**249**	P	**P**	**01 01 19.6**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=101,slow=10,SNR=1.4						
STKA	**Stephens Creek**	**34.43**	**249**	P	**P**	**01 01 19.8**	**+0.9**
COEN	**Coen**	**36.28**	**280**	P	**P**	**01 01 35.5**	**+0.9**
COEN				IAmb	IAmb	01 01 39.5	
	comp=Z,7.4nm,1.1s						
BBOO	**Buckleboo**	**39.13**	**248**	P	**P**	**01 01 56.6**	**-0.9**
BBOO				IAmb	IAmb	01 01 59.4	
	comp=Z,5.7nm,1.1s						
AS31	**Alice Springs**	**41.92**	**262**	P	**P**	**01 02 20.5**	**+0.6**
ASAR	**Alice Springs**	**41.92**	**262**	P	**P**	**01 02 20.2**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=94,slow=7.0,SNR=23						
ASAR	**Alice Springs**	**41.92**	**262**	P	**P**	**01 02 20.1**	**+0.1**
WB2	**Warramunga Arr**	**42.37**	**267**	P	**P**	**01 02 23.4**	**0.0**
WB2				IAmb	IAmb	01 02 23.7	
	comp=Z,5.2nm,0.4s						
WB0	**Warramunga Arr**	**42.38**	**267**	P	**P**	**01 02 23.5**	**0.0**
WB0				IAmb	IAmb	01 02 24.0	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**42.38**	**267**	P	**P**	**01 02 23.2**	**-0.3**
	comp=Z,2.6nm,0.4s,baz=99,slow=6.8,SNR=79						
WRA	**Warramunga Arr**	**42.38**	**267**	P	**P**	**01 02 23.2**	**-0.3**
FORT	**Forrest**	**46.04**	**250**	P	**P**	**01 02 51.5**	**0.0**
FORT				IAmb	IAmb	01 02 52.1	
	comp=Z,8.6nm,0.8s						
KNRA	**Kununurra**	**48.71**	**271**	P	**P**	**01 03 12.5**	**+0.7**
KNRA				IAmb	IAmb	01 03 13.0	
	comp=Z,5.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**50.79**	**266**	P	**P**	**01 03 27.9**	**+0.9**
	comp=Z,2.3nm,0.7s,baz=96,slow=9.2,SNR=3.7						
CLL	**Collm**	**151.69**	**343**	*e*PKPbc	**PKiKP**	**01 14 12.0**	**+2.7**

IDC 12 00:57:16.6±1.6**, 4°.13S**×**129°.51E, h0**^{km}**, mb3.5**/1**, mb1 3.4**/4**, mb1mx3.3**/30**, mbtmp3.3**/4**, ML3.2**/3**, Error ellipse: s-maj=51.0km s-min=25.1km az=90.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.68**	**29**	Pn	Pn	00 58 15.9	+1.1
	3.2nm,0.3s,baz=180,slow=20,SNR=2.5						
SIJI				Sn	Sn	00 58 58.4	-0.6
	1.8nm,0.3s,baz=179,slow=23,SNR=1.6						
WRA	**Warramunga Arr**	**16.41**	**164**	Pn	Pn	01 01 07.8	-0.7
	0.1nm,0.3s,baz=348,slow=12,SNR=4.7						
ASAR	**Alice Springs**	**19.88**	**168**	P	P	01 01 50.0	+0.2
	0.1nm,0.3s,baz=346,slow=9.7,SNR=8.7						
MKAR	**Makanchi Array**	**65.57**	**326**	P	P	01 08 02.1	-0.1
	0.5nm,0.8s,baz=112,slow=8.1,SNR=4.8						

NNC 12 01:03:08.5±10.0**, 37°.75N**×**73°.27E, h0**^{km}**, mb3.8, mpv3.2, 3C-1D, Error ellipse: s-maj=309.5km s-min=73.9km az=77.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	**Karatay Array**	**5.75**	**339**	⇑P	Pn	01 04 35.1	-0.1
	1.0nm,0.3s						
KK02				⇓S	Sn	01 05 43.0	+1.2
	4.6nm,0.9s						
AB31	**Akbulak array**	**15.00**	**324**	⇑P	Pn	01 06 42.2	+0.5
	1.5nm,1.1s,baz=153,slow=10,SNR=5.0						
AKTO	**Aktyubinsk**	**16.72**	**324**	⇑P	Pn	01 07 03.9	-0.2
	3.5nm,1.1s						

IDC ***12*** *01:05:17.4±3.3, 5°.10S×133°.84E, h0^{km}, mb3.5/1, mb1 3.9/4, mb1mx3.3/41, mbtmp3.7/4, ML3.6/3, MS2.8/3, Ms1 2.8/3, ms1mx2.5/30, Error ellipse: s-maj=132.8km s-min=31.8km az=82.0*

ISC 12 01:05:28.9±1.8**, 5°.5S**±0°.1×**133°.7E**±0°.2**, h100**^{km}**, n5, σ1^{s}.41**/7**, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**13.93**	**271**	LR	LR	01 14 29.2	
	comp=Z,25nm,19.2s,baz=86,slow=39						
WRA	**Warramunga Arr**	**14.35**	**178**	Pn	**Pn**	**01 08 46.7**	**-0.8**
	0.1nm,0.3s,baz=355,slow=13,SNR=7.7						
WRA				Sn	**Sn**	**01 11 25.1**	**-0.6**
	0.1nm,0.3s,baz=359,slow=23,SNR=4.2						
WRA				LR	LR	01 15 08.3	
	comp=Z,31nm,18.7s,baz=20,slow=40						
FITZ	**Fitzroy Crossi**	**14.79**	**212**	Pn	**Pn**	**01 08 53.6**	**+0.6**
	0.5nm,0.3s,baz=36,slow=11,SNR=2.5						
FITZ				Sn	**Sn**	**01 11 34.5**	**-1.7**
	0.2nm,0.3s,baz=76,slow=23,SNR=2.4						
ASAR	**Alice Springs**	**18.04**	**179**	P	**Pn**	**01 09 35.0**	**+1.7**
	0.4nm,0.3s,baz=4.2,slow=10,SNR=32						
ASAR				S	**Sn**	**01 12 55.4**	**+0.7**
	0.0nm,0.3s,baz=2.1,slow=27,SNR=1.7						
ASAR				LR	LR	01 17 37.2	
	comp=Z,64nm,18.9s,baz=31,slow=40						
MKAR	**Makanchi Array**	**69.09**	**325**	P	**P**	**01 16 23.6**	**-0.6**
	0.3nm,0.6s,baz=108,slow=8.6,SNR=1.8						

UPA ***12*** *01:33:13.2±0.7, 5°.61N×77°.88W, h9^{km}±3^{km}, MW4.8*

RSNC ***12*** *01:33:14.0±0.8, 5°.56N×77°.81W, h21^{km}±2^{km}, ML3.7, Mw4.0, Fault plane solution: NP1:ϕ_s16.00000°, δ68.00000°, λ-122.00000°.*

NEIC ***12*** *01:33:18.6±1.6, 5°.60N±0°.06×77°.57W±0°.07, h38^{km}±5^{km}, mb4.5/56, Error ellipse: s-maj=10.4km s-min=8.5km az=53.0*

IDC ***12*** *01:33:20.9±2.5, 5°.39N×77°.76W, h72^{km}±23^{km}, mb3.8/19, mb1 4.0/23, mb1mx3.9/36, mbtmp4.1/23, MS3.6/16, Ms1 3.6/16, ms1mx3.4/31, Error ellipse: s-maj=18.8km s-min=12.0km az=47.0*

ISC 12 01:33:12.9±1.3**, 5°.57N**±0°.02×**77°.83W**±0°.03**, h8**^{km}±8^{km}**, n168, σ1^{s}.76**/197**, mb4.5**/41**, MS3.6**/11**, 10C-2D, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIZC	**Pizarro, Choco**	**0.76**	**142**	⇑*e*P	**Pg**	**01 33 27.6**	**0.0**
PIZC				*e*S	**Sg**	**01 33 37.9**	**+0.3**
PIZC				*i*		01 33 39.0	
	comp=Z,7μm,0.7s						
SOLC	**Bahia Solano**	**0.77**	**33**	*e*P	**Pg**	**01 33 27.8**	**0.0**
SOLC				*e*S	**Sb**	**01 33 38.3**	**-1.0**
SOLC				*i*		01 33 39.7	
	comp=Z,2μm,0.3s						
PTAC	**Punta Ardita,**	**1.57**	**1**	*e*P	**Pn**	**01 33 39.0**	**-2.1**
PTAC				*e*S	**Sn**	**01 33 56.8**	**-4.8**
PTAC				*i*		01 33 58.3	
	comp=Z,2μm,0.1s						
PTAC	**Punta Ardita,**	**1.57**	**1**	*e*P	**Pn**	**01 33 39.7**	**-1.4**
PTAC				*e*S	**Sn**	**01 33 59.9**	**-1.7**
PTAC	**Punta Ardita,**	**1.57**	**1**	*e*P		01 33 39.7	
PTAC				*e*S		01 33 59.9	
PLMC	**San Jos del P**	**1.67**	**113**	⇑*e*P	**Pn**	**01 33 40.5**	**-2.2**
PLMC				*e*S	**Sn**	**01 33 59.9**	**-4.5**
PLMC				*i*		01 34 04.2	
	comp=Z,1μm,0.3s						
CBOC	**Ciudad Bolivar**	**1.83**	**81**	⇑*e*P	**Pn**	**01 33 43.0**	**-1.8**
CBOC				*e*S	**Sn**	**01 34 03.3**	**-5.0**
CBOC				*i*		01 34 05.8	
	comp=Z,574nm,0.4s						
DBBC	**Dabeiba**	**2.16**	**48**	⇑*e*P	**Pn**	**01 33 48.5**	**-0.8**
DBBC				*e*S	**Sn**	**01 34 13.7**	**-2.6**
DBBC				*i*		01 34 21.1	
	comp=Z,2μm,0.5s						
YOTC	**Yotoco, Valle**	**2.16**	**137**	⇑*i*P	**Pn**	**01 33 47.5**	**-1.9**
YOTC				*e*S	**Sn**	**01 34 12.0**	**-4.4**
YOTC				*i*		01 34 16.4	
	comp=Z,323nm,0.4s						
HELC	**Santa Helena**	**2.37**	**75**	⇑*i*P	**Pn**	**01 33 51.9**	**-0.5**
HELC				*e*S	**Sn**	**01 34 19.5**	**-2.3**
HELC				*i*		01 34 23.4	
	comp=Z,190nm,0.6s						
HELC	**Santa Helena**	**2.37**	**75**	*e*P	**Pn**	**01 33 52.7**	**+0.2**
HELC				*e*S	**Sn**	**01 34 22.8**	**+0.9**
HELC	**Santa Helena**	**2.37**	**75**	*e*P		01 33 52.7	
HELC				*e*S		01 34 22.8	
GUY2C	**Guyana, Caldas**	**2.48**	**98**	*e*P	**Pn**	**01 33 53.6**	**-0.4**
GUY2C				*e*S	**Sn**	**01 34 22.3**	**-2.4**
GUY2C				*i*		01 34 27.4	
	comp=Z,306nm,0.8s						
ANIL	**Santa Ana**	**2.64**	**114**	*e*P	**Pn**	**01 33 56.1**	**0.0**
ANIL				*e*S	**Sn**	**01 34 25.9**	**-2.7**
ANIL				*i*		01 34 31.2	
	comp=Z,773nm,0.4s						
NORC	**Norcasia**	**2.94**	**90**	*e*P	**Pn**	**01 34 00.9**	**+0.8**
NORC				*e*S	**Sn**	**01 34 33.1**	**-2.6**
NORC				*i*		01 34 37.9	
	comp=Z,104nm,0.6s						
ORTC	**Ortega, Tolima**	**3.06**	**123**	⇑*e*P	**Pn**	**01 34 02.2**	**+0.6**
ORTC				*e*S	**Sn**	**01 34 37.4**	**-1.0**
ORTC				*i*		01 34 44.0	
	comp=Z,352nm,0.5s						
PCRI3	**Pocri, Los San**	**3.08**	**312**	*e*P	**Pn**	**01 34 00.1**	**-1.8**
PCRI3				*e*S	**Sn**	**01 34 36.5**	**-2.5**
PCRI3	**Pocri, Los San**	**3.08**	**312**	*e*P		01 34 00.1	
PCRI3				*e*S		01 34 36.5	
CAPC	**Capurgana**	**3.08**	**9**	*e*P	**Pn**	**01 34 01.8**	**-0.1**
CAPC				*e*S	**Sn**	**01 34 36.0**	**-3.0**
CAPC				*i*		01 34 55.4	
	comp=Z,89nm,0.4s						
CAP2	**Capurgana**	**3.09**	**9**	*e*P	**Pn**	**01 34 01.2**	**-0.9**
CAP2				*e*S	**Sn**	**01 34 37.7**	**-1.6**
CAP2	**Capurgana**	**3.09**	**9**	*e*P		01 34 01.2	
CAP2				*e*S		01 34 37.7	
UREC	**San Jos de Ur**	**3.14**	**46**	⇑*i*P	**Pn**	**01 34 03.5**	**+0.7**
UREC				*e*S	**Sn**	**01 34 39.5**	**-1.0**
UREC				*i*		01 34 43.5	
	comp=Z,270nm,0.4s						
UREC	**San Jos de Ur**	**3.14**	**46**	*e*P	**Pn**	**01 34 02.6**	**-0.2**
UREC				*e*S	**Sn**	**01 34 40.2**	**-0.3**
UREC	**San Jos de Ur**	**3.14**	**46**	*e*P		01 34 02.6	
UREC				*e*S		01 34 40.2	
POPC	**Popayan, Colom**	**3.22**	**159**	⇑*e*P	**Pn**	**01 34 03.1**	**-1.0**
POPC				*e*S	**Sn**	**01 34 39.6**	**-3.2**
POPC				*i*		01 34 45.8	
	comp=Z,57nm,0.6s						
AZU	**Azuero**	**3.28**	**312**	*e*P	**Pn**	**01 34 03.3**	**-1.4**
AZU				*e*S	**Sn**	**01 34 41.9**	**-2.0**
AZU	**Azuero**	**3.28**	**312**	*e*P		01 34 03.3	
AZU				*e*S		01 34 41.9	
MARP	**Paez Belalcaza**	**3.29**	**145**	*e*P	**Pn**	**01 34 05.1**	**+0.1**
MARP				*e*S	**Sn**	**01 34 43.6**	**-1.0**
MARP				*i*		01 34 47.1	
	comp=Z,58nm,0.7s						
PTBC	**PUERTO BERRIO,**	**3.49**	**74**	*e*P	**Pn**	**01 34 08.5**	**+1.0**
PTBC				*e*S	**Sn**	**01 34 46.6**	**-2.5**
PTBC				*i*		01 34 52.7	
	comp=Z,106nm,0.5s						
CACAO	**El Cacao, Vera**	**3.49**	**300**	*e*P	**Pn**	**01 34 06.3**	**-1.3**
CACAO				*e*S	**Sn**	**01 34 46.4**	**-2.8**
CACAO	**El Cacao, Vera**	**3.49**	**300**	*e*P		01 34 06.3	
CACAO				*e*S		01 34 46.4	
CHIT3	**Chitre**	**3.50**	**313**	*e*P	**Pn**	**01 34 06.3**	**-1.3**
CHIT3				*e*S	**Sn**	**01 34 47.0**	**-2.3**
CHIT3	**Chitre**	**3.50**	**313**	*e*P		01 34 06.3	
CHIT3				*e*S		01 34 47.0	
ZARC	**Zaragoza, Cauc**	**3.51**	**57**	*e*P	**Pn**	**01 34 08.6**	**+0.7**
ZARC				*e*S	**Sn**	**01 34 47.5**	**-2.2**
ZARC				*i*		01 34 54.0	
	comp=N,224nm,0.6s						
ZARC	**Zaragoza, Cauc**	**3.51**	**57**		**Pn**	**01 34 08.4**	**+0.5**
PCON	**Cinco Dias**	**3.52**	**156**	⇑*i*P	**Pn**	**01 34 09.0**	**+0.4**
PCON				*e*S	**Sn**	**01 34 48.4**	**-2.3**
PCON				*i*		01 34 53.8	
	comp=Z,90nm,0.4s						
ROSC	**El Rosal**	**3.57**	**102**	P	**Pb**	**01 34 13.8**	**-2.8**

	comp=Z,11nm,0.3s,baz=286,slow=19,SNR=9.3						
ROSC	El Rosal	3.57	102		Pn	01 34 08.9	-0.1
LCBC	Los crdobas,	3.57	24⇓	*i*P	Pn	01 34 10.8	+2.1
LCBC				*e*S	Sn	01 34 54.5	+3.4
LCBC				*i*		01 34 56.5	
	comp=Z,154nm,0.9s						
BBAC	Balboa, Cauca	3.57	171	*e*P	Pn	01 34 07.9	-1.0
PESE3	Pese, Herrera	3.61	310	*e*P	Pn	01 34 08.5	-0.8
PESE3				*e*S	Sn	01 34 49.7	-2.5
PESE3	Pese, Herrera	3.61	310	*e*P		01 34 08.5	
PESE3				*e*S		01 34 49.7	
SOTA	Rioblanco	3.62	160	*e*P	Pn	01 34 10.1	+0.3
SOTA				*e*S	Sn	01 34 50.3	-2.8
SOTA				*i*		01 34 59.3	
	comp=Z,108nm,0.6s						
TABO3	Taboga, Panama	3.63	332	*e*P	Pn	01 34 08.3	-1.2
TABO3				*e*S	Sn	01 34 50.5	-2.1
TABO3	Taboga, Panama	3.63	332	*e*P		01 34 08.3	
TABO3				*e*S		01 34 50.5	
BETC	Betania	3.73	140	*e*P	Pn	01 34 12.2	+1.3
BETC				*e*S	Sn	01 34 51.9	-3.1
BETC				*i*		01 35 02.0	
	comp=Z,251nm,0.7s						
SPBC	San Pablo de B	3.74	89	*e*P	Pn	01 34 12.1	+1.1
SPBC				*e*S	Sn	01 34 53.3	-2.1
SPBC				*i*		01 34 58.0	
	comp=Z,48nm,0.6s						
MARI3	Mariato, Verag	3.76	303	*e*P	Pn	01 34 09.8	-1.5
MARI3				*e*S	Sn	01 34 53.4	-2.4
MARI3	Mariato, Verag	3.76	303	*e*P		01 34 09.8	
MARI3				*e*S		01 34 53.4	
UPA	Univ. de Panam	3.79	334	*e*P		01 35 30.3	
UPA				*e*S		01 36 13.6	
CHPO	Chepo, Panama	3.80	340	*e*P	Pn	01 34 10.4	-1.4
CHPO				*e*S	Sn	01 34 54.3	-2.4
CHPO	Chepo, Panama	3.80	340	*e*P		01 34 10.4	
CHPO				*e*S		01 34 54.3	
PNME	Penonome	3.81	320	*e*P	Pn	01 34 10.8	-1.2
PNME				*e*S	Sn	01 34 53.6	-3.5
PNME	Penonome	3.81	320	*e*P		01 34 10.8	
PNME				*e*S		01 34 53.6	
ARRA3	Arraijan, Pana	3.83	332	*e*P	Pn	01 34 10.9	-1.3
ARRA3				*e*S	Sn	01 34 55.2	-2.3
ARRA3	Arraijan, Pana	3.83	332	*e*P		01 34 10.9	
ARRA3				*e*S		01 34 55.2	
MONA	Monteria	3.84	34	*e*P	Pn	01 34 12.0	-0.4
MONA				*e*S	Sn	01 34 56.8	-0.9
MONA	Monteria	3.84	34	*e*P		01 34 12.0	
MONA				*e*S		01 34 56.8	
MOTC	Monteria, Cord	3.84	34	*e*P	Pn	01 34 11.5	-0.9
MOTC				*e*S	Sn	01 34 55.1	-2.6
MOTC				*i*		01 34 59.1	
	comp=Z,50nm,0.4s						
MOTC	Monteria, Cord	3.84	34		Pn	01 34 12.5	+0.1
ZANG	Zanguenga, Cho	3.92	329	*e*P	Pn	01 34 13.1	-0.5
ZANG				*e*S	Sn	01 34 58.0	-1.8
ZANG	Zanguenga, Cho	3.92	329	*e*P		01 34 13.1	
ZANG				*e*S		01 34 58.0	
GAMB1	Gamboa	3.99	332	*e*P	Pn	01 34 13.2	-1.2
GAMB1				*e*S	Sn	01 34 58.7	-2.7
GAMB1	Gamboa	3.99	332	*e*P		01 34 13.2	
GAMB1				*e*S		01 34 58.7	
GMAL	Guarumal, Vera	4.02	303	*e*P	Pn	01 34 14.0	-0.9
GMAL				*e*S	Sn	01 35 01.0	-1.3
GMAL	Guarumal, Vera	4.02	303	*e*P		01 34 14.0	
GMAL				*e*S		01 35 01.0	
CALO3	Calobre, Verag	4.05	313	*e*P	Pn	01 34 14.4	-0.9
CALO3				*e*S	Sn	01 34 59.7	-3.3
CALO3	Calobre, Verag	4.05	313	*e*P		01 34 14.4	
CALO3				*e*S		01 34 59.7	
GARC	Garzon, Huila	4.09	145	*e*P	Pn	01 34 17.0	+0.9
GARC				*e*S	Sn	01 35 03.1	-1.2
GARC				*i*		01 35 05.6	
	comp=Z,214nm,0.3s						
BCIP	Isla Barro Col	4.09	331	*e*P	Pn	01 34 15.0	-0.8
BCIP				*e*S	Sn	01 35 02.6	-1.3
BCIP				*i*		01 35 10.0	
	comp=Z,50nm,0.3s						
BCIP	Isla Barro Col	4.09	331	Pn	Pn	01 34 17.9	+2.1
BCIP	Isla Barro Col	4.09	331	*e*P	Pn	01 34 14.4	-1.4
BCIP				*e*S	Sn	01 35 01.8	-2.1
BCIP	Isla Barro Col	4.09	331	*e*P		01 34 14.4	
BCIP				*e*S		01 35 01.8	
BRRC	Barranca, Sant	4.37	69	*e*P	Pn	01 34 18.9	-0.7
BRRC				*e*S	Sn	01 35 08.5	-2.2
BRRC				*i*		01 35 38.4	
	comp=Z,35nm,0.5s						
VILC	Villavicencio,	4.37	109	*e*P	Pn	01 34 23.7	+4.0
VILC				*e*S	Sn	01 35 13.6	+2.7
VILC				*i*		01 35 18.0	
	comp=Z,6µm,0.5s						
FLOC	Florencia	4.52	151	*e*P	Pn	01 34 22.7	+1.0
FLOC				*e*S	Sn	01 35 13.4	-1.1
FLOC				*i*		01 35 17.0	
	comp=Z,40nm,0.4s						
FLOC	Florencia	4.52	151		Pn	01 34 22.4	+0.7
BARC	Barichara	4.73	77	*e*P	Pn	01 34 27.1	+2.3
BARC				*e*S	Sn	01 35 17.9	-2.1
BARC				*i*		01 35 25.0	
	comp=Z,70nm,0.4s						
RUSC	La Rusia	4.73	86	*e*P	Pn	01 34 27.3	+2.2
RUSC				*e*S	Sn	01 35 21.5	+1.1
RUSC				*i*		01 35 29.6	
	comp=Z,30nm,0.8s						
SMLC	San Martn de	4.92	49	*e*P	Pn	01 34 28.1	+0.9
SMLC				*e*S	Sn	01 35 22.5	-1.8
SMLC				*i*		01 35 42.9	
	comp=Z,34nm,0.6s						
SJCC	San Jacinto, C	5.04	31⇓	*e*P	Pn	01 34 29.1	+0.2
SJCC				*e*S	Sn	01 35 24.3	-3.0
SJCC				*i*		01 35 30.2	
	comp=Z,18nm,0.4s						
SJCC	San Jacinto, C	5.04	31		Pn	01 34 27.9	-1.0
SJCC	San Jacinto, C	5.04	31	*e*P	Pn	01 34 29.2	+0.4
SJCC				*e*S	Sn	01 35 25.0	-2.3
SJCC	San Jacinto, C	5.04	31	*e*P		01 34 29.2	
SJCC				*e*S		01 35 25.0	
OCAC	Ocana	5.20	59	*e*P	Pn	01 34 33.0	+1.7
OCAC				*e*S	Sn	01 35 30.6	-0.9
OCAC				*i*		01 35 54.2	
	comp=Z,160nm,0.8s						
OCAC	Ocana	5.20	59		Pn	01 34 31.8	+0.5
MACC	Macarena, Meta	5.23	130	*e*P	Pn	01 34 31.7	+0.1
MACC				*e*S	Sn	01 35 29.0	-3.0
MACC				*i*		01 35 34.8	
	comp=Z,107nm,0.5s						
PAMC	Pamplona, Colo	5.39	71	*e*P	Pn	01 34 36.1	+1.9
PAMC				*e*S	Sn	01 35 36.9	+0.2
PAMC				*i*		01 35 41.5	
	comp=Z,40nm,0.5s						
BRU2	Volcan	5.79	304	Pn	Pn	01 34 45.6	+6.2
CDITO	Canoas	5.83	301		Pn	01 34 46.0	+6.3
SRBA	San Rafael, Bu	6.58	304		Pn	01 34 56.7	+6.5
PEZE	Perez Zeledon,	6.93	303	Pn	Pn	01 34 59.6	+4.7
SDV	Santo Domingo	7.86	65	Pn	Pn	01 35 07.0	-0.8
BAUV	El Baul	10.27	70		Pn	01 35 38.9	-1.8
ATAH	Atahualpa	12.63	183	P	Pn	01 36 16.4	+2.9
	comp=Z,0.3nm,0.3s,baz=19,slow=5.3,SNR=2.7						
ATAH				LR	LR	01 41 16.7	
	comp=Z,378nm,18.2s,baz=359,slow=38						
CZSB	Cruzeiro do Su	14.17	159	Pn	Pn	01 36 35.6	+1.5
SDDR	Presa de Saban	14.78	25		Pn	01 36 41.7	-0.7
APG	El Apazote	15.56	308	LR	LR	01 43 26.8	
	comp=Z,176nm,22.0s,baz=144,slow=38						
PETF	Flores	16.31	315	Pn	P	01 37 05.3	-0.2
SJG	San Juan	16.89	41	LR	LR	01 44 23.3	
	comp=Z,103nm,18.2s,baz=216,slow=39						
NNA	Nana	17.47	177	P	P	01 37 18.0	-0.4
	comp=Z,1.8nm,0.3s,baz=358,slow=12,SNR=5.9						
NNA				LR	LR	01 45 46.3	
	comp=Z,240nm,18.3s,baz=342,slow=43						
NNA	Nana	17.47	177	Pn	Pn	01 37 17.8	+0.6
NNA				IAmb	IAmb	01 37 24.7	
	comp=Z,32nm,1.1s						
PTGA	Pitinga	18.90	109	P	P	01 37 33.1	-1.1
	comp=Z,0.7nm,0.3s,baz=315,slow=19,SNR=5.1						
PTGA				LR	LR	01 45 27.0	
	comp=Z,162nm,18.8s,baz=288,slow=39						
ETMB	Extrema	19.17	143	P	P	01 37 36.0	-1.2
MACA	Manacapuru-AM	19.19	116		P	01 37 36.0	-1.4
CMIG	Matias Romero	20.24	306	P	Pn	01 37 53.8	+3.0
	comp=Z,0.6nm,0.4s,baz=101,slow=12,SNR=1.6						
CMIG				LR	LR	01 45 38.2	
	comp=Z,146nm,20.7s,baz=122,slow=36						
SAML	Samuel	20.52	135		P	01 37 50.6	-1.3
TLIG	Tlapa	23.52	302	P	P	01 38 25.3	+1.4
LPAZ	La Paz	23.74	156	P	P	01 38 25.7	-0.8
	comp=Z,1.0nm,0.6s,baz=330,slow=12,SNR=5.4						
LPAZ				LR	LR	01 48 33.0	
	comp=Z,244nm,18.3s,baz=308,slow=39						
LPAZ	La Paz	23.74	156	P	P	01 38 26.5	-0.1
MDP	Montagnes des	25.08	90	P	P	01 38 38.5	+0.2
	comp=Z,15nm,1.0s,baz=276,slow=9.2,SNR=1.5						
MDP				LR	LR	01 49 02.1	
	comp=Z,194nm,18.9s,baz=286,slow=38						
VILB	Vilhena	25.40	137	P	P	01 38 40.6	-0.6
PB11	IPOC Station P	26.43	162	P	P	01 38 50.8	+0.3
SIV	San Ignacio	27.09	142	P	P	01 38 54.7	-1.8
	comp=Z,1.6nm,0.4s,baz=308,slow=9.4,SNR=16						
SIV				LR	LR	01 50 05.4	
	comp=Z,174nm,19.1s,baz=284,slow=37						
LVC	Limon Verde	29.34	163	LR	LR	01 52 37.0	
	comp=Z,258nm,21.7s,baz=325,slow=40						
V48A	Smith Brothers	31.14	346	P	P	01 39 33.7	+1.4
T47A	Sharon Grove	32.40	346	P	P	01 39 43.1	-0.2
WCI	Wyandotte Cave	33.41	348	P	P	01 39 53.5	+1.4
TXAR	Lajitas Array	33.98	317	P	P	01 39 59.2	+1.8
	comp=Z,0.2nm,0.6s,baz=133,slow=9.0,SNR=2.5						
TXAR	Lajitas Array	33.98	317	P	P	01 39 59.0	+1.7
FNO	Franklin	34.62	331	P	P	01 40 03.8	+1.1
BDFB	Brasilia	36.27	126	LR	LR	01 56 08.9	
	comp=Z,171nm,20.0s,baz=308,slow=38						
CPUP	Villa Florida	37.42	149	LR	LR	01 57 27.8	
	comp=Z,114nm,18.5s,baz=327,slow=39						
TUC	Tucson	40.67	315	P	P	01 40 56.2	+2.2
TUC				IAmb	IAmb	01 41 08.5	
	comp=Z,8.8nm,0.9s						
X18A	Snowflake	41.38	318	IAmb	IAmb	01 41 14.6	
	comp=Z,8.5nm,1.1s						
214A	Organ Pipe Nat	41.93	313	P	P	01 41 05.6	+1.2
214A				IAmb	IAmb	01 41 18.8	
	comp=Z,9.5nm,0.9s						
MVCO	Mesa Verde	42.14	323	P	P	01 41 08.3	+2.1
SRU	San Rafael Swe	44.58	323	IAmb	IAmb	01 41 39.7	
	comp=Z,12nm,1.4s						
LCMT	Little Creek M	45.00	319	P	P	01 41 32.0	+2.7
PDAR	Pinedale Array	46.48	328	P	P	01 41 42.8	+1.9
	comp=Z,2.1nm,0.9s,baz=126,slow=12,SNR=9.4						
PDAR				LR	LR	02 03 21.2	
	comp=Z,44nm,20.0s,baz=118,slow=39						
PLCA	Paso Flores	46.56	172	P	P	01 41 39.1	-2.2
	comp=Z,3.5nm,0.9s,baz=356,slow=9.4,SNR=4.4						
PLCA	Paso Flores	46.56	172	IAmb	IAmb	01 41 43.3	
	comp=Z,7.9nm,1.1s						
DUG	Dugway, Tooele	46.64	323	IAmb	IAmb	01 41 55.5	
	comp=Z,4.9nm,0.9s						
HWUT	Hardware Ranch	46.80	325	IAmb	IAmb	01 41 55.9	
	comp=Z,5.8nm,0.9s						
SPR3	Spring Creek 3	46.85	321	P	P	01 41 45.7	+1.7
SPR3				IAmb	IAmb	01 41 57.1	
	comp=Z,5.2nm,1.1s						
ULM	Lac du Bonnet	47.04	344	P	P	01 41 45.5	+0.7
	comp=Z,2.4nm,0.7s,baz=162,slow=4.8,SNR=4.4						
ULM				LR	LR	02 02 45.3	
	comp=Z,55nm,18.7s,baz=208,slow=37						
ULM	Lac du Bonnet	47.04	344	IAmb	IAmb	01 41 54.6	
	comp=Z,5.1nm,0.9s						
SPUT	South Promonto	47.12	324	IAmb	IAmb	01 41 58.9	
	comp=Z,6.3nm,1.0s						
BGU	Big Grassy Mou	47.22	323	IAmb	IAmb	01 42 00.1	
	comp=Z,4.7nm,0.9s						
R11A	Troy Canyon, C	47.29	319	IAmb	IAmb	01 42 00.9	
	comp=Z,5.6nm,1.1s						
AHID	Auburn Hatcher	47.31	327	IAmb	IAmb	01 41 59.6	
	comp=Z,7.9nm,1.0s						
TPAW	Teton Pass	47.72	327	IAmb	IAmb	01 42 02.2	
	comp=Z,5.1nm,0.9s						
MOOW	Moose Ponds	47.78	328	P	P	01 41 52.2	+1.1
MOOW				IAmb	IAmb	01 42 03.4	
	comp=Z,5.5nm,1.0s						
FXWY	Fox Creek	47.86	328	IAmb	IAmb	01 42 04.5	
	comp=Z,5.0nm,0.9s						
YMR	Madison River	48.53	329	IAmb	IAmb	01 42 08.5	
	comp=Z,8.4nm,1.2s						
YHL	Hebgen Lake	48.77	329	IAmb	IAmb	01 42 12.2	
	comp=Z,7.9nm,1.0s						
LL02	Futaleuf	48.84	174	P	P	01 42 01.1	+2.2
NVAR	Mina Array Bea	49.13	318	P	P	01 42 03.2	+1.6
	comp=Z,1.4nm,0.7s,baz=122,slow=6.8,SNR=9.8						
NVAR	Mina Array Bea	49.13	318	P	P	01 42 02.9	+1.3
BOZ	Bozeman (W)	49.51	329	IAmb	IAmb	01 42 17.4	
	comp=Z,3.7nm,0.9s						
HLID	Hailey	49.67	325	P	P	01 42 07.9	+2.3
HLID				IAmb	IAmb	01 42 18.9	
	comp=Z,4.9nm,0.9s						
SCHQ	Schefferville	49.91	8	P	P	01 42 07.2	+0.2
	comp=Z,4.1nm,1.0s,baz=217,slow=10,SNR=4.3						
SCHQ				LR	LR	02 04 55.3	
	comp=Z,34nm,18.4s,baz=88,slow=38						
PLID	Pearl Lake	51.51	326	IAmb	IAmb	01 42 31.9	
	comp=Z,6.5nm,1.1s						
ORV	Oroville	51.85	317	IAmb	IAmb	01 42 34.3	
	comp=Z,8.8nm,1.1s						
YKA	Yellowknife Ar	62.90	342	P	P	01 43 39.5	+0.1
	comp=Z,2.8nm,0.7s,baz=131,slow=6.8,SNR=23						
ICESG	Greenland Ices	68.23	14	*e*P	P	01 44 10.3	-3.9
SUMG	Summit	71.11	12	*i* P	P	01 44 32.1	+0.1
SUMG	Summit	71.11	12	P	P	01 44 31.9	-0.1
A36M	Sachs Harbour	72.47	346	P	P	01 44 39.5	-0.2
DBIC	Dimbokro	72.50	85	P	P	01 44 40.2	-0.8
	comp=Z,2.7nm,0.7s,baz=268,slow=4.9,SNR=5.4						
DBIC	Dimbokro	72.50	85	IAmb	IAmb	01 44 41.5	
	comp=Z,4.0nm,0.8s						
INK	Inuvik	72.66	341	P	P	01 44 41.1	+0.3
	comp=Z,0.6nm,0.5s,baz=129,slow=8.3,SNR=5.6						
KOWA	Kowa	72.97	77	P	P	01 44 43.9	+0.1
	comp=Z,5.1nm,0.6s,baz=264,slow=7.0						
KOWA	Kowa	72.97	77	P	P	01 44 43.4	-0.4
KOWA				IAmb	IAmb	01 44 45.1	
	comp=Z,5.6nm,0.7s						
NEEM	North Greenlan	73.23	6	*i* P	P	01 44 44.7	+0.2
NEEM				IAmb	IAmb	01 44 45.7	
	comp=Z,8.1nm,0.7s						
BCAR	Beaver Creek A	73.45	335	P	P	01 44 47.1	+1.4
ESDC	Sonseca Array	74.05	50	P	P	01 44 50.5	+0.7
	comp=Z,2.4nm,0.9s,baz=262,slow=6.4,SNR=14						
DOT	Dot Lake	74.61	335	P	P	01 44 53.9	+1.4
DOT				IAmb	IAmb	01 44 55.0	
	comp=Z,8.2nm,1.0s						
ILAR	Eielson Array	76.14	336	P	P	01 45 01.9	+0.6
	comp=Z,1.0nm,0.8s,baz=109,slow=4.8,SNR=7.4						
ILAR	Eielson Array	76.14	336	P	P	01 45 01.6	+0.3
TORD	Torodi Ar. Bea	78.57	78	P	P	01 45 15.4	-0.4
	comp=Z,1.4nm,0.7s,baz=277,slow=6.7,SNR=20						
TORD	Torodi Ar. Bea	78.57	78	P	P	01 45 14.7	-1.2
CIMO	Cimolais	86.20	44	P	P	01 45 55.1	-0.1
CIMO				IAmb	IAmb	01 45 56.4	
	comp=Z,3.8nm,0.8s						
GERES	GERESS Array B	86.86	41	P	P	01 45 58.9	+0.4
	comp=Z,0.4nm,0.8s,baz=270,slow=1.0,SNR=5.1						
GERES	GERESS Array B	86.86	41	P	P	01 45 58.6	+0.2
VNA3	Neumayer Olymp	88.36	163	P	P	01 46 10.4	+5.4
VNA2	Neumayer--Watz	88.94	162	P	P	01 46 10.5	+2.8
	baz=304,slow=11						
ARCES	ARCESS Array B	89.45	20	P	P	01 46 10.0	-0.2
	comp=Z,1.5nm,0.6s,baz=293,slow=4.8,SNR=10						
ARCES				LR	LR	02 22 56.5	
	comp=Z,14nm,19.1s,baz=220,slow=33						
SNAA	Sanae	90.57	162	P	P	01 46 15.0	-0.4
KURK	Kurchatov	120.37	17		PKPdf	01 52 04.0	-1.0
KURBB	Kurchatov Arra	120.43	17	PKP	PKPdf	01 52 05.0	-0.1
	comp=Z,0.5nm,0.2s,baz=326,slow=1.9,SNR=4.1						
MKAR	Makanchi Array	124.96	17	PKP	PKPdf	01 52 12.7	-1.4
	comp=Z,0.6nm,0.7s,baz=85,slow=3.8,SNR=4.5						
SONM	Songino Array	126.69	356	PKP	PKPdf	01 52 17.5	0.0
	comp=Z,0.6nm,0.3s,baz=20,slow=0.6,SNR=4.6						
SONM	Songino Array	126.69	356		PKPdf	01 52 16.3	-1.2
AS31	Alice Springs	144.56	236	PKPdf	PKPab	01 52 49.1	-0.4
ASAR	Alice Springs	144.56	236	PKP	PKPab	01 52 48.6	-0.9
	comp=Z,4.7nm,0.9s,baz=120,slow=4.1,SNR=32						
ASAR	Alice Springs	144.56	236	PKPdf	PKPab	01 52 49.1	-0.4
WRA	Warramunga Arr	145.62	243	PKPbc	PKPdf	01 52 51.9	-1.0
	comp=Z,2.9nm,0.8s,baz=106,slow=3.6,SNR=24						
WRA	Warramunga Arr	145.62	243	PKPbc	PKPdf	01 52 52.5	-0.4
CMAR	Chiang Mai Arr	155.91	8	PKP	PKPdf	01 53 09.0	+0.2
	comp=Z,1.0nm,0.3s,baz=332,slow=3.1,SNR=1.8						

TUL 12 01:36:11.9±1.2,36°.269N±0°.005×97°.57W±0°.02,h5^{km}±8^{km}, ML2.6,mb_Lg2.7/49(NEIC),Error ellipse: s-maj=2.2km s-min=0.4km az=71.0

NEIC 12 01:36:12.0±1.1,36°.27N±0°.01×97°.56W±0°.02,h2^{km}±8^{km}, Error ellipse: s-maj=2.3km s-min=1.6km az=59.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	Carrier	0.41	304	Pg	Pg	01 36 20.0	0.0
CROK				Sg	Sg	01 36 25.9	+0.6
OK029	Liberty Lake	0.48	170	Pg	Pg	01 36 21.3	0.0
OK029				Sg	Sg	01 36 28.1	+0.5
BLOK	Blackwell	0.56	30	Pg	Pg	01 36 23.0	+0.2
BCOK	Bluff Creek, N	0.62	184	Pg	Pg	01 36 23.7	-0.1
BCOK				Sg	Sg	01 36 32.2	+0.4
GC02	Grant County #	0.62	337	Pg	Pg	01 36 23.9	-0.1
OK031	S. Brethren Rd	0.67	119		Pg	01 36 24.8	0.0
OK031				Sg	Sg	01 36 33.9	+0.5
QUOK	Quay	0.70	98	Pg	Pg	01 36 25.4	0.0
OK025	Westminster Rd	0.71	165	Pg	Pg	01 36 25.6	-0.1
OK025				Sg	Sg	01 36 35.5	+0.5
OK030	Cody Creek RV	0.72	119		Pg	01 36 25.8	0.0
OK030				Sg	Sg	01 36 35.6	+0.6
OK034	N. Norfolk Rd.	0.73	111	Pg	Pg	01 36 26.1	0.0
KAN13	South Haven SW	0.74	5	Pg	Pg	01 36 26.2	-0.1
OK032	Salt Plains WL	0.74	315	Pg	Pg	01 36 26.1	-0.2
OK032				Sg	Sg	01 36 36.2	+0.2
KAN17	Caldwell West	0.79	348	Pg	Pg	01 36 26.9	-0.2
KAN17				Sg	Sg	01 36 37.7	+0.4
KAN09	Caldwell North	0.86	357		Pg	01 36 28.3	-0.3
OKCFA	Oklahoma City	0.86	174		Pg	01 36 28.2	-0.3
KAN05	Bluff City Nor	0.87	343		Pg	01 36 28.4	-0.4
OKCSW	OKLAHOMA CITY	0.87	173	Pg	Pg	01 36 28.4	-0.4
KAN01	Argonia South	0.89	350		Pg	01 36 28.9	-0.3
KAN10	Anthony SW Sta	0.95	333	Pg	Pg	01 36 29.8	-0.5
KAN08	Anthony NE Sta	1.01	341		Pg	01 36 30.9	-0.5
FNO	Franklin	1.02	173		Pg	01 36 31.0	-0.6
T35A	Sooner Cattle	1.06	52	Pg	Pg	01 36 32.0	-0.4
KAN12	Harper NE Stat	1.08	341		Pg	01 36 32.2	-0.6
U32A	Winter Ranch,	1.17	276		Pg	01 36 33.5	-0.9
W35A	Tecumseh	1.25	153		Pg	01 36 34.8	-1.2
TUL1	Leonard	1.48	104		Pn	01 36 38.6	-1.0
TUL1				IAmb_Lg		01 37 00.8	
	comp=Z,28nm,0.8s						
X34A	Smith Ranch, M	1.68	188	IAmb_Lg		01 37 08.4	
	comp=Z,56nm,0.9s						
LOOK	Love County	2.30	172	Pn	Pn	01 36 51.6	+0.7
LOOK				IAmb_Lg		01 37 30.3	
	comp=Z,19nm,0.9s						
X37A	Clayton	2.45	133		Pn	01 36 53.9	+0.8
X37A				IAmb_Lg		01 37 32.9	
	comp=Z,19nm,0.8s						
U38A	Gravette	2.57	85		Pn	01 36 56.1	+1.4
HHAR	Hobbs	2.92	89		Pn	01 36 59.7	+0.1
W39A	Magazine	3.25	108	IAmb_Lg		01 37 59.9	
	comp=Z,21nm,0.8s						
AMTX	Amarillo	3.63	249	Pn	Pn	01 37 10.3	+0.8
AMTX				IAmb_Lg		01 38 13.4	
	comp=Z,13nm,0.7s						
S39A	Bolivar	3.67	66		Pn	01 37 10.4	+0.5
S39A				IAmb_Lg		01 38 13.7	
	comp=Z,18nm,0.7s						
MIAR	Mount Ida	3.68	117		Pn	01 37 10.5	+0.5
U40A	Yellville	3.80	87		Pn	01 37 11.7	0.0
U40A				IAmb_Lg		01 38 14.3	
	comp=Z,15nm,0.8s						
X40A	Basin Creek Fa	4.25	113	Pn	Pn	01 37 18.0	+0.1
X40A				IAmb_Lg		01 38 28.4	
	comp=Z,12nm,0.9s						
MGMO	Mountain Grove	4.34	77	IAmb_Lg		01 38 30.5	
	comp=Z,18nm,0.8s						
WHAR	Wooly Hollow	4.40	101		Pn	01 37 18.7	-1.1
P38A	Dawn	4.62	42	Pn	Pn	01 37 20.4	-2.5
P38A				IAmb_Lg		01 38 40.7	
	comp=Z,13nm,0.8s						
R40A	Maddies Statio	4.67	63	Pn	Pn	01 37 23.9	+0.2
KSCO	Kaye Shedlock’	4.86	306	IAmb_Lg		01 38 51.7	
	comp=Z,8.4nm,0.8s						
LCAR	Lake Charles	5.19	90	Pn	Pn	01 37 30.9	+0.2
LCAR				IAmb_Lg		01 38 57.9	
	comp=Z,7.8nm,0.9s						
CCM	Cathedral Cave	5.35	69	Pn	Pn	01 37 32.0	-0.9
CCM				IAmb_Lg		01 39 06.8	
	comp=Z,13nm,0.9s						
P40A	Paris	5.44	52	Pn	Pn	01 37 34.6	+0.5
P40A				IAmb_Lg		01 39 07.8	
	comp=Z,15nm,0.7s						
N38A	Joes South For	5.64	36	IAmb_Lg		01 39 19.6	
	comp=Z,20nm,0.8s						
PBMO	Poplar Bluff	5.76	83	IAmb_Lg		01 39 19.2	
	comp=Z,14nm,0.7s						
OGNE	Ogallala	5.83	324	IAmb_Lg		01 39 23.0	
	comp=Z,13nm,0.8s						
FVM	French Village	5.95	71	Pn	Pn	01 37 40.8	-0.4
FVM				IAmb_Lg		01 39 21.4	
	comp=Z,12nm,0.7s						
JCT	Junction City	6.08	199	IAmb_Lg		01 39 31.9	
	comp=Z,9.0nm,0.9s						
S44A	Carbondale	6.80	76	IAmb_Lg		01 39 50.2	
	comp=Z,14nm,0.7s						
SIUC	Southern Illin	6.83	75	IAmb_Lg		01 39 47.6	
	comp=Z,10nm,0.8s						
N41A	Harden Midland	6.87	48	IAmb_Lg		01 39 49.6	
	comp=Z,15nm,0.8s						
P43A	Skaggs, Pawnee	7.18	60	IAmb_Lg		01 40 05.5	
	comp=Z,12nm,0.8s						

TAP 12 01:52:46.3,23°.15N×121°.35E,h21^{km}±1^{km},ML1.9,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	Chengkung	0.05	165	P	Pb	01 52 50.3	+0.2
	baz=157						
CHKT				S	Sb	01 52 53.2	+0.6
	baz=157						
FULB	Fuli	0.08	315	P	Pb	01 52 50.6	+0.3
	baz=314						
FULB				*e*S	Sb	01 52 54.5	+1.5
	baz=314						
ECS	Chishang	0.13	248	*e*P	Pb	01 52 52.0	-0.6
	baz=248						
EDH	Donghe	0.18	194	P	Pb	01 52 51.7	-0.5
	baz=194						
EDH				S	Sb	01 52 55.8	-0.5
	baz=194						
ECBN	Changbin	0.19	28	*e*S	Sb	01 52 55.6	-0.8
	baz=28						
EYUL	Yuli	0.20	351	*e*P	Pb	01 52 52.4	+0.2
	baz=351						
EYUL				*e*S	Sb	01 52 57.1	+0.7
	baz=351						
TWF1	Yuli	0.21	346	*e*P	Pb	01 52 52.2	-0.1
	baz=348						
TWF1				*e*S	Sb	01 52 57.0	+0.6
	baz=348						
YULB	Yu-li	0.25	348	P	Pb	01 52 52.5	0.0
	baz=348						
YULB				*e*S	Sb	01 52 57.1	+0.2
	baz=348						
YULB	Yu-li	0.25	348		Pb	01 52 52.1	-0.5
ELDTW	Lidau	0.31	278	P	Pb	01 52 53.5	+0.2
	baz=277						
ELDTW				*e*S	Sb	01 52 58.6	+0.5
	baz=277						
LONT	Longtian	0.31	221	*e*P	Pb	01 52 53.9	+0.7
	baz=220						
LONT				*e*S	Sb	01 52 59.8	+1.8
	baz=220						
HGSD	Ruisui	0.35	11	*e*P	Pn	01 52 55.0	-1.2
	baz=10.0						
TWGBT	Beinan	0.41	218	*e*S	Sb	01 53 01.9	+1.3
	baz=217						
TWG	Pinlang	0.41	219	P	Pb	01 52 55.3	+0.4
	baz=217						
TWG				*e*S	Sb	01 53 02.0	+1.4
	baz=217						
YUS	Yu-Shan	0.50	313	*e*P	Pb	01 52 57.1	+0.3
	baz=313						
YUS				*e*S	Sb	01 53 04.1	+0.3
	baz=313						
STYH	Taoyuan	0.53	273	*e*P	Pb	01 52 57.4	+0.5
	baz=272						

STYH				*e*S	Sb	01 53 04.9	+0.7
	baz=272						
ALS	**Alishan**	**0.62**	**306**	*e*P	Pb	01 52 59.3	+0.5
	baz=306						
ALS				*e*S	Sb	01 53 07.9	+0.7
	baz=306						
VWDT	**VWDT**	**0.64**	**342**	*e*P	Pn	01 52 59.6	-0.5
	baz=342						
VWDT				*e*S	Sb	01 53 07.8	+0.4
	baz=342						
SLGT	**Liugui**	**0.67**	**257**	*e*S	Sn	01 53 09.4	-1.0
	baz=256						
TPUB	**Ta-pu**	**0.68**	**283**	*e*P	Pn	01 53 00.7	-0.1
	baz=283						
TPUB				*e*S	Sn	01 53 10.8	0.0
	baz=283						
SSLB	**Suanglung**	**0.74**	**330**	*e*S	Sb	01 53 10.4	+0.3
	baz=330						
CHN1	**Nanshi**	**0.76**	**273**	*e*P	Pn	01 53 01.5	-0.3
	baz=273						
CHN1				*e*S	Sn	01 53 12.7	0.0
	baz=273						
CHN5	**Tsauling**	**0.77**	**306**	*e*P	Pn	01 53 01.9	0.0
	baz=306						
CHN5				*e*S	Sn	01 53 13.2	+0.3
	baz=306						

KRSC 12 02:06:06.1±1.5,50°.70N×157°.05E,h132^{km}±14^{km},ML3.5,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.59**	**268**	*e*P	Pn	02 06 27.0	+1.1
SKR				*e*S	Sn	02 06 41.4	+0.6
PAU	**Pauzhetka**	**0.78**	**349**	*e*P	Pn	02 06 28.5	+1.3
PAU				*e*S	Sn	02 06 44.3	+1.0
KDTR	**Khodutka, Kamc**	**1.28**	**30**	*i* P	Pn	02 06 34.0	+2.1
KDTR				*e*S	Sn	02 06 53.1	+1.5
MIPR	**Malaya Ipel'ka**	**1.59**	**354**	*e*P	Pn	02 06 36.3	+1.1
ASAK	**Asacha**	**1.77**	**17**	*e*P	Pn	02 06 39.4	+2.0
ASAK				*e*S	Sn	02 07 04.7	+3.4
MTVR	**Mutnovka**	**1.92**	**21**	*e*P	Pn	02 06 41.2	+1.9
MTVR				*e*S	Sn	02 07 06.5	+1.8
RUS	**Russkaya**	**1.96**	**27**	*e*P	Pn	02 06 41.3	+1.7
RUS				*e*S	Sn	02 07 06.7	+1.4
APC	**Apacha**	**2.23**	**2**	*e*P	Pn	02 06 43.4	+0.5
KRMR	**Karymshinskiy**	**2.23**	**17**	*e*P	Pn	02 06 44.0	+1.1
KRMR				*e*S	Sn	02 07 12.9	+1.6
DALK	**Dalny**	**2.56**	**24**	*e*P	Pn	02 06 48.9	+1.9
DALK				*e*S	Sn	02 07 20.0	+1.4
UGLR	**Uglovaya**	**2.74**	**23**	*e*P	Pn	02 06 51.8	+2.3
AVH	**Avacha**	**2.77**	**21**	*e*P	Pn	02 06 52.6	+2.8
KOK	**Koryaka**	**2.77**	**20**	*e*P	Pn	02 06 52.6	+2.7
SMAR	**Somma**	**2.78**	**22**	*e*P	Pn	02 06 52.6	+2.5
KRER	**Koryakskii**	**2.81**	**21**	*e*P	Pn	02 06 52.9	+2.5
SDLR	**Sedlovina**	**2.82**	**23**	*e*P	Pn	02 06 52.4	+1.9
NLC	**Nalytchevo**	**2.85**	**29**	*e*P	Pn	02 06 51.6	+0.9
NLC				*e*S	Sn	02 07 24.2	-1.0
SPN	**Mys Shipunski**	**3.02**	**36**	*e*P	Pn	02 06 54.7	+1.7
SPN				*e*S	Sn	02 07 29.3	+0.1
GNL	**Ganaly**	**3.05**	**10**	*e*P	Pn	02 06 54.5	+1.1
MKZ	**Mys Kozlova**	**4.80**	**35**	*e*P	Pn	02 07 17.3	+0.9
KBTR	**Krutoberegovo**	**6.50**	**30**	P	Pn	02 07 40.7	+1.5

ANF 12 02:22:48.2±0.7,43°.00N×126°.12W,h0^{km},ML3.9/2,Error ellipse: s-maj=6.9km s-min=3.9km az=74.0,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
J01E	**Myrtle Point**	**1.61**	**83**	P	Pn	02 23 17.4	-0.5
	baz=265						
J01E				S	Sg	02 23 40.5	+0.5
	baz=265						
K02D	**Willamette Mer**	**1.83**	**99**	P	Pn	02 23 20.8	-0.2
	baz=280,SNR=56						
K02D				S	Sb	02 23 46.2	0.0
	baz=280						
I02E	**Swisshome, OR**	**1.99**	**55**	P	Pn	02 23 22.6	-0.5
	baz=237						
I02E				S	Sn	02 23 48.3	-0.5
	baz=237						
L02E	**Cave Junction**	**2.04**	**113**	P	Pn	02 23 24.0	+0.2
	baz=295,SNR=21						
I03D	**Drain, OR**	**2.14**	**70**	P	Pn	02 23 24.9	-0.3
	baz=252,SNR=66						
I03D				S	Sn	02 23 53.2	+0.7
	baz=252						
I04A	**Tendick Farm,**	**2.82**	**72**	P	Pn	02 23 34.9	+0.3
	baz=255						
H04D	**Lebanon**	**2.89**	**57**	P	Pn	02 23 35.7	+0.2
	baz=239,SNR=17						
H04D				S	Sn	02 24 12.2	+1.3
	baz=239						
L04D	**Klamath Falls**	**2.92**	**104**	P	Pn	02 23 38.0	+2.0
	baz=287,SNR=7.3						
J04D	**Umpqua Nationa**	**2.95**	**84**	P	Pn	02 23 38.4	+1.9
	baz=267,SNR=7.3						
F04D	**Rainier, OR**	**3.80**	**35**	P	Pn	02 23 47.8	-0.2
	baz=217						
E04D	**Cinebar**	**4.37**	**34**	P	Pn	02 23 55.7	0.0
	baz=217,SNR=15						
F05D	**White Salmon**	**4.42**	**48**	P	Pn	02 23 56.7	+0.3
	baz=231,SNR=8.6						
D04E	**Lakebay**	**4.81**	**28**	P	Pn	02 24 01.8	0.0
	baz=211						

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*TUL **12** 02:28:56.5±0.9,36°.28N±0°.01×97°.70W±0°.03,h5^{km}±7^{km},ML2.8,mb_Lg2.6/27(NEIC),Error ellipse: s-maj=3.3km s-min=1.3km az=71.0*

*ANF **12** 02:28:56.2±0.2,36°.28N×97°.70W,h4^{km}±1^{km},ML2.9/5,Error ellipse: s-maj=1.3km s-min=1.3km az=43.0*

*NEIC **12** 02:28:56.6±0.8,36°.278N±0°.006×97°.69W±0°.02,h4^{km}±7^{km},Error ellipse: s-maj=2.7km s-min=0.3km az=71.0*

ISC 12 02:28:56.5±1.1,36°.28N±0°.02×97°.68W±0°.03,h4^{km}±11^{km},n61,σ0ˢ.54/66,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.33**	**313**	Pg	**Pg**	**02 29 03.1**	**+0.2**
CROK				Sg	**Sg**	**02 29 08.0**	**+0.8**
OK029	**Liberty Lake**	**0.52**	**159**	Pg	**Pg**	**02 29 06.5**	**0.0**
OK029				Sg	**Sg**	**02 29 13.3**	**+0.1**
GC02	**Grant County #**	**0.59**	**346**	Pg	**Pg**	**02 29 08.0**	**+0.2**
GC02				Sg	**Sg**	**02 29 15.6**	**+0.1**
BLOK	**Blackwell**	**0.61**	**38**	Pg	**Pg**	**02 29 08.4**	**+0.1**
BCOK	**Bluff Creek, N**	**0.62**	**174**	Pg	**Pg**	**02 29 08.8**	**+0.3**
BCOK				Sg	**Sg**	**02 29 16.7**	**0.0**
OK032	**Salt Plains WL**	**0.67**	**321**	Pg	**Pg**	**02 29 09.5**	**0.0**
OK032				Sg	**Sg**	**02 29 18.3**	**+0.1**
KAN14	**Manchester OK**	**0.71**	**342**		**Pg**	**02 29 09.6**	**-0.6**
KAN14				Sg	**Sg**	**02 29 19.6**	**+0.1**
KAN13	**South Haven SW**	**0.75**	**13**	Pg	**Pg**	**02 29 10.6**	**-0.4**
KAN13				Sg	**Sg**	**02 29 21.4**	**+0.7**
OK025	**Westminster Rd**	**0.75**	**158**	Pg	**Pg**	**02 29 10.6**	**-0.4**
OK031	**S. Brethren Rd**	**0.76**	**115**		**Pg**	**02 29 10.7**	**-0.4**
KAN17	**Caldwell West**	**0.77**	**355**	Pg	**Pg**	**02 29 11.0**	**-0.2**
QUOK	**Quay**	**0.80**	**98**	Pg	**Pg**	**02 29 11.5**	**-0.3**
OK030	**Cody Creek RV**	**0.81**	**115**		**Pg**	**02 29 12.3**	**+0.3**
OK034	**N. Norfolk Rd.**	**0.83**	**109**	Pg	**Pg**	**02 29 12.1**	**-0.3**
KAN05	**Bluff City Nor**	**0.84**	**350**		**Pg**	**02 29 12.9**	**+0.2**
KAN09	**Caldwell North**	**0.86**	**4**	Pg	**Pg**	**02 29 12.8**	**-0.2**
KAN01	**Argonia South**	**0.87**	**356**		**Pg**	**02 29 12.8**	**-0.5**
OKCFA	**Oklahoma City**	**0.88**	**168**		**Pg**	**02 29 13.3**	**-0.1**
OKCFA	**Oklahoma City**	**0.88**	**168**	P	**Pg**	**02 29 13.4**	**-0.1**
	baz=347						
OKCFA				S	**Sb**	**02 29 25.7**	**-0.9**
	baz=347						
OKCSW	**OKLAHOMA CITY**	**0.90**	**167**	Pg	**Pg**	**02 29 13.6**	**-0.1**
KAN10	**Anthony SW Sta**	**0.90**	**339**	Pg	**Pg**	**02 29 13.8**	**-0.1**
KAN08	**Anthony NE Sta**	**0.97**	**346**		**Pg**	**02 29 15.1**	**-0.1**
KAN06	**Argonia West S**	**0.98**	**352**		**Pg**	**02 29 15.1**	**-0.2**
KAN16	**Harper SW Stat**	**0.99**	**342**	Pg	**Pg**	**02 29 15.7**	**+0.1**
FNO	**Franklin**	**1.05**	**167**	Pg	**Pg**	**02 29 16.4**	**-0.2**
KAN12	**Harper NE Stat**	**1.05**	**346**	Pg	**Pg**	**02 29 16.6**	**-0.1**
U32A	**Winter Ranch,**	**1.07**	**276**	Pg	**Pg**	**02 29 16.4**	**-0.7**
U32A	**Winter Ranch,**	**1.07**	**276**	P	**Pg**	**02 29 16.3**	**-0.7**
	baz=95						
U32A				S	**Sg**	**02 29 31.2**	**+0.3**
	baz=95						
T35A	**Sooner Cattle**	**1.14**	**56**		**Pg**	**02 29 18.5**	**+0.2**
T35B	**Sooner Cattle**	**1.14**	**56**	P	**Pg**	**02 29 18.2**	**-0.1**
	baz=236						
T35B				S	**Sb**	**02 29 34.0**	**+0.1**
	baz=236						
W35A	**Tecumseh**	**1.30**	**149**	Pn	**Pn**	**02 29 20.7**	**-0.9**
TUL1	**Leonard**	**1.58**	**103**	Pn	**Pn**	**02 29 25.0**	**-0.2**
TUL1				IAmb_Lg		02 29 48.4	
	comp=Z,22nm,0.8s						
TUL1	**Leonard**	**1.58**	**103**	P	**Pn**	**02 29 25.1**	**-0.2**
	baz=284						
TUL1				S	**Sg**	**02 29 47.1**	**-0.1**
	baz=284						
X34A	**Smith Ranch, M**	**1.68**	**184**		**Pn**	**02 29 27.0**	**+0.3**
R32A	**Long Quarter,**	**2.29**	**339**	Pn	**Pn**	**02 29 35.4**	**+0.2**
LOOK	**Love County**	**2.32**	**170**	Pn	**Pn**	**02 29 36.4**	**+0.9**
X37A	**Clayton**	**2.53**	**131**	Pn	**Pn**	**02 29 38.8**	**+0.3**
X37A					LR	02 30 15.9	
X37A	**Clayton**	**2.53**	**131**	S	**Sn**	**02 30 10.4**	**+0.6**
	baz=312						
U38A	**Gravette**	**2.67**	**86**		**Pn**	**02 29 39.7**	**-0.6**
KSU1	**Kansas State U**	**2.94**	**17**	S	**Sn**	**02 30 21.0**	**+1.1**
	baz=197						
CBKS	**Cedar Bluff**	**3.01**	**328**	Pn	**Pn**	**02 29 44.2**	**-0.9**
CBKS				IAmb_Lg		02 30 39.5	
	comp=Z,7.6nm,0.9s						
HHAR	**Hobbs**	**3.02**	**89**	Pn	**Pn**	**02 29 44.1**	**-1.2**
W39A	**Magazine**	**3.35**	**108**	IAmb_Lg		02 30 49.8	
	comp=Z,12nm,0.8s						
AMTX	**Amarillo**	**3.54**	**248**	IAmb_Lg		02 30 54.8	
	comp=Z,14nm,0.9s						
Z38A	**Mt. Pleasant**	**3.74**	**143**	IAmb_Lg		02 31 00.3	
	comp=Z,18nm,0.8s						
S39A	**Bolivar**	**3.77**	**67**	Pn	**Pn**	**02 29 55.6**	**+0.1**
S39A				IAmb_Lg		02 30 59.9	
	comp=Z,15nm,0.7s						
MIAR	**Mount Ida**	**3.77**	**116**		**Pn**	**02 29 55.4**	**-0.2**
MIAR					Lg	02 30 58.5	
U40A	**Yellville**	**3.90**	**87**	Pn	**Pn**	**02 29 56.7**	**-0.6**
X40A	**Basin Creek Fa**	**4.35**	**113**	Pn	**Pn**	**02 30 03.3**	**-0.1**
X40A					LR	02 31 14.4	
MGMO	**Mountain Grove**	**4.44**	**77**	Pn	**Pn**	**02 30 05.4**	**+0.7**
MGMO				IAmb_Lg		02 31 27.4	
	comp=Z,9.0nm,0.8s						
WHAR	**Wooly Hollow**	**4.50**	**101**	Pn	**Pn**	**02 30 06.4**	**+1.0**
WHAR					LR	02 31 20.4	
WHAR				IAmb_Lg		02 31 30.4	
	comp=Z,9.2nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.52**	**93**	Pn	**Pn**	**02 30 04.6**	**-1.2**
FCAR				IAmb_Lg		02 31 21.5	
	comp=Z,8.3nm,0.9s						
P38A	**Dawn**	**4.68**	**43**	Pn	**Pn**	**02 30 07.9**	**-0.1**
R40A	**Maddies Statio**	**4.76**	**63**	Pn	**Pn**	**02 30 08.0**	**-1.1**
R40A				IAmb_Lg		02 31 27.2	
	comp=Z,15nm,0.8s						
N35A	**Tabor**	**4.85**	**19**	Pn	**Pn**	**02 30 09.6**	**-0.7**
N35A					LR	02 31 32.4	
N35A				IAmb_Lg		02 31 40.1	
	comp=Z,16nm,0.9s						
LCAR	**Lake Charles**	**5.29**	**90**	Pn	**Pn**	**02 30 16.2**	**-0.1**
CCM	**Cathedral Cave**	**5.44**	**69**	Pn	**Pn**	**02 30 18.9**	**+0.5**
CCM				IAmb_Lg		02 31 54.3	
	comp=Z,10nm,0.9s						
P40A	**Paris**	**5.51**	**52**	Pn	**Pn**	**02 30 18.0**	**-1.4**
N38A	**Joes South For**	**5.70**	**36**	IAmb_Lg		02 32 04.7	
	comp=Z,12nm,0.7s						
HBAR	**Harrisburg**	**5.75**	**95**	IAmb_Lg		02 31 57.2	
	comp=Z,14nm,0.7s						
L34A	**Svendsen Farm,**	**5.77**	**10**	IAmb_Lg		02 32 06.8	
	comp=Z,14nm,0.7s						

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*BER **12** 02:41:56.5±0.5,71°.05N×7°.62W,h0^{km}±192^{km},ML2.8,Confirmed Earthquake*

ISC 12 02:41:57.7±1.1,71°.25N±0°.08×8°.7W±0°.2,h10^{km},n6,σ1ˢ.58/11,4C,Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**0.23**	**161**	⇑*i*P	**Pb**	**02 42 03.0**	**+0.7**
JNW				*e*S	**Sb**	**02 42 07.5**	**+2.0**
JNW				IAML		02 42 08.3	
	comp=Z,2μm,0.5s						
JMIC	**Jan Mayen**	**0.27**	**169**	⇑*i*P	**Pb**	**02 42 03.3**	**-1.2**
JMIC				*e*S	**Sb**	**02 42 08.4**	**-0.6**
JMIC				IAML		02 42 09.8	
	comp=Z,506nm,0.4s						
JNE	**Jan Mayen East**	**0.28**	**155**	⇑*i*P	**Pg**	**02 42 02.4**	**-0.9**
JNE				*e*S	**Sg**	**02 42 06.8**	**-0.3**
JNE				IAML		02 42 08.2	
	comp=Z,999nm,0.3s						
JMI	**Jan Mayen**	**0.32**	**184**	⇑*i*P	**Pb**	**02 42 04.9**	**-0.5**
JMI				*e*S	**Sb**	**02 42 11.3**	**+0.7**
JMI				IAML		02 42 12.6	
	comp=Z,713nm,0.3s						
DBG	**Daneborg**	**4.61**	**317**	*i* P	**Pn**	**02 43 09.2**	**+2.0**
DBG				*i* S	Sn	02 43 58.8	-1.9
DAG	**Danmarks Havn**	**6.19**	**338**	*i* P	**Pn**	**02 43 30.2**	**+1.3**
DAG				*e*S	**Sn**	**02 44 37.0**	**-2.5**

IDC 12 02:59:31.5±2.3,4°.85S×130°.08E,h0^{km},mb3.6/1,mb1 3.3/3,mb1mx2.7/38,mbtmp3.2/3,ML2.7/2,Error ellipse: s-maj=159.6km s-min=32.6km az=70.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.57**	**165**	Pn	Pn	03 03 12.7	+0.2
	0.0nm,0.3s,baz=349,slow=13,SNR=1.9						
ASAR	**Alice Springs**	**19.07**	**169**	P	P	03 03 54.9	-0.8
	0.1nm,0.3s,baz=350,slow=11,SNR=4.8						
ASAR				ScP	ScP	03 11 59.6	+1.4
	0.1nm,0.3s,baz=333,slow=2.9,SNR=3.1						
MKAR	**Makanchi Array**	**66.48**	**326**	P	P	03 10 22.7	-0.3
	0.4nm,0.6s,baz=118,slow=8.3,SNR=1.9						

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*NEIC **12** 02:59:46.2±1.9,1°.6N±0°.1×127°.3E±0°.1,h124^{km}±10^{km},mb4.2/6,Error ellipse: s-maj=19.6km s-min=16.6km az=76.0*

*IDC **12** 02:59:46.5±10.0,1°.50N×127°.28E,h124^{km}±99^{km},mb3.7/5,mb1 3.7/6,mb1mx3.1/45,mbtmp4.0/6,ML3.7/1,Error ellipse: s-maj=72.7km s-min=16.9km az=58.0*

ISC 12 02:59:47.6±0.8,1°.51N±0°.09×127°.2E±0°.1,h150^{km},n16,σ1ˢ.64/16,mb4.0/8,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.76**	**166**		**Pn**	**03 00 06.8**	**-3.8**
TOLI2	**Tolitoli**	**6.41**	**267**	Pn	**Pn**	**03 01 17.6**	**-2.3**
KAPI	**Kappang**	**9.85**	**229**	P	**Pn**	**03 02 07.6**	**+1.8**
	0.6nm,0.3s,baz=86,slow=19,SNR=2.3						
KAPI				S	**Sn**	**03 03 55.0**	**+0.1**
	1.3nm,0.3s,baz=238,slow=20,SNR=4.7						
WB0	**Warramunga Arr**	**22.30**	**162**	P	**P**	**03 04 32.2**	**-0.7**
WRA	**Warramunga Arr**	**22.45**	**162**	P	**P**	**03 04 34.9**	**+0.5**
	2.8nm,0.4s,baz=340,slow=11,SNR=43						
WB2	**Warramunga Arr**	**22.45**	**162**	P	**P**	**03 04 34.4**	**0.0**
WB2				IAmb	IAmb	03 04 42.8	
	comp=Z,13nm,0.8s						
ASAR	**Alice Springs**	**25.87**	**166**	P	**P**	**03 05 06.5**	**+0.9**
	comp=Z,0.8nm,0.4s,baz=349,slow=7.8,SNR=14						
CMAR	**Chiang Mai Arr**	**32.41**	**303**	P	**P**	**03 06 03.8**	**+0.2**
KSAR	**Wonju Array Be**	**35.76**	**1**	P	**P**	**03 06 31.2**	**-1.0**
STKA	**Stephens Creek**	**35.91**	**159**	P	**P**	**03 06 34.6**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=326,slow=8.7,SNR=6.1						
SONM	**Songino Array**	**49.53**	**342**	P	**P**	**03 08 24.9**	**+1.7**
	comp=Z,0.7nm,0.5s,baz=156,slow=8.4,SNR=2.8						
SONM	**Songino Array**	**49.53**	**342**	IAmb	IAmb	03 08 37.1	
	comp=Z,3.4nm,1.4s						
MK31	**Makanchi Array**	**59.63**	**326**	P	**P**	**03 09 37.2**	**+1.3**
MK31				IAmb	IAmb	03 09 38.5	
	comp=Z,1.5nm,0.8s						
MKAR	**Makanchi Array**	**59.63**	**326**	P	**P**	**03 09 37.8**	**+1.8**
	comp=Z,1.2nm,0.4s,baz=120,slow=7.8,SNR=22						
KURK	**Kurchatov**	**63.84**	**328**	P	**P**	**03 10 04.9**	**+0.9**
KURK				IAmb	IAmb	03 10 06.2	
	comp=Z,3.7nm,0.9s						
ABKAR	**Akbulak array**	**74.14**	**321**	P	**P**	**03 11 07.5**	**-0.2**

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*IDC **12** 03:29:39.0±4.5,37°.53N×73°.88E,h0^{km},mb3.8/4,mb1 3.9/8,mb1mx3.4/56,mbtmp3.8/8,ML3.4/4,MS2.6/1,Ms1 2.6/1,ms1mx2.2/40,Error ellipse: s-maj=73.8km s-min=31.9km az=128.0*

*NNC **12** 03:30:01.3±3.6,38°.83N×72°.52E,h16^{km}±15^{km},mb4.2,mpv4.0,Error ellipse: s-maj=26.3km s-min=17.0km az=179.0*

*SOME **12** 03:30:04.1,39°.02N×72°.38E,h15^{km}*

ISC 12 03:29:56.1±1.3,38°.75N±0°.08×72°.32E±0°.04,h10^{km},n39,σ2ˢ.10/55,mb3.9/4,7C-3D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.81**	**334**	*e*P	**Pg**	**03 31 09.2**	**0.0**
	670nm,0.3s						
IUG				*e*S	**Sg**	**03 31 55.6**	**-2.9**
	84nm,0.4s						
IUG	**Iuzhnay**	**3.81**	**334**	Pg	**Pg**	**03 31 09.2**	**0.0**
	670nm,0.3s						
IUG				Lg	Lg	03 31 55.6	
	84nm,0.4s						
MRKS	**Merke**	**4.05**	**10**	*e*P	**Pg**	**03 31 12.2**	**-1.5**
	17nm,0.4s						
MRKS				*e*S	**Sb**	**03 32 00.5**	**+3.9**
	20nm,0.7s						
MRKS	**Merke**	**4.05**	**10**	Pg	**Pg**	**03 31 12.2**	**-1.5**
	17nm,0.4s						
MRKS				Lg	Lg	03 32 00.5	
	20nm,0.7s						
DZA	**Taraz**	**4.20**	**350**	⇑*i*P	**Pg**	**03 31 16.1**	**-0.6**
	82nm,0.1s						
DZA				*e*S	**Sg**	**03 32 07.2**	**-3.8**
	124nm,0.4s						
DZA	**Taraz**	**4.20**	**350**	Pg	**Pg**	**03 31 16.1**	**-0.6**
	82nm,0.1s						
DZA				Lg	Lg	03 32 07.2	
	124nm,0.4s						
AAK	**Ala-Archa**	**4.22**	**22**	Pn	**Pn**	**03 31 01.0**	**+0.4**
	0.6nm,0.3s,baz=194,slow=14,SNR=9.5						
AAK				Sn	**Sb**	**03 32 02.7**	**+1.1**
	0.9nm,0.3s,baz=346,slow=15,SNR=5.3						
AAK				LR	LR	03 32 59.6	
	comp=Z,56nm,19.7s,baz=220,slow=39						
AAK	**Ala-Archa**	**4.22**	**22**	⇓Pn	**Pn**	**03 31 00.1**	**-0.5**
	4.1nm,0.6s						
AAK				⇑Pg	**Pb**	**03 31 13.7**	**+3.2**
	7.9nm,0.5s						
AAK				⇑Lg	Lg	03 32 11.6	
	28nm,0.8s						
KK02	**Karatay Array**	**4.55**	**343**	⇑Pn	**Pn**	**03 31 08.4**	**+3.3**
	5.4nm,0.5s						
KK02				⇑Sn	**Sb**	**03 32 07.0**	**-4.2**
	21nm,0.8s						
BRLS	**Borolday**	**4.67**	**337**	*e*P	**Pb**	**03 31 22.2**	**+4.1**
	5.0nm,0.3s						
BRLS				*e*S	**Sb**	**03 32 18.0**	**+3.6**
	16nm,0.4s						
BRLS	**Borolday**	**4.67**	**337**	Pg	**Pb**	**03 31 22.2**	**+4.1**
	5.0nm,0.3s						
BRLS				Lg	Lg	03 32 18.0	
	16nm,0.4s						
KST	**Kastek**	**5.10**	**32**	*e*P	**Pg**	**03 31 33.7**	**-0.1**
	11nm,0.6s						
KST				*e*S	**Sg**	**03 32 37.9**	**-1.9**
	17nm,0.7s						
KST	**Kastek**	**5.10**	**32**	Pg	**Pg**	**03 31 33.7**	**-0.1**
	11nm,0.6s						
KST				Lg	Lg	03 32 37.9	
	17nm,0.7s						
DGS	**Degeres**	**5.19**	**29**	*e*P	**Pg**	**03 31 35.2**	**-0.3**
	12nm,0.5s						
DGS				*e*S	**Sg**	**03 32 40.2**	**-2.5**
	15nm,0.4s						
DGS	**Degeres**	**5.19**	**29**	Pg	**Pg**	**03 31 35.2**	**-0.3**
	12nm,0.5s						
DGS				Lg	Lg	03 32 40.2	
	15nm,0.4s						
MTBS	**Maitube**	**5.37**	**34**	*e*P	**Pg**	**03 31 38.4**	**-0.5**
	5.3nm,0.3s						
MTBS				*e*S	**Sg**	**03 32 45.5**	**-2.9**
	8.1nm,0.6s						
MTBS	**Maitube**	**5.37**	**34**	Pg	**Pg**	**03 31 38.4**	**-0.5**
	5.3nm,0.3s						
MTBS				Lg	Lg	03 32 45.5	
	8.1nm,0.6s						
TNSS	**Tian-Shan**	**5.53**	**38**	*e*P	**Pg**	**03 31 42.1**	**0.0**
	3.3nm,0.5s						
TNSS				*e*S	**Sg**	**03 32 52.1**	**-1.7**
	4.6nm,0.9s						
TNSS	**Tian-Shan**	**5.53**	**38**	Pg	**Pg**	**03 31 42.1**	**0.0**
	3.3nm,0.5s						
TNSS				Lg	Lg	03 32 52.1	
	4.6nm,0.9s						
KRBS	**Karabastau**	**5.55**	**26**	*e*P	**Pg**	**03 31 41.7**	**-0.6**
	5.0nm,0.4s						
KRBS				*e*S	**Sg**	**03 32 51.6**	**-2.6**
KRBS	**Karabastau**	**5.55**	**26**	Pg	**Pg**	**03 31 41.7**	**-0.6**
	5.0nm,0.4s						
KRBS				Lg	Lg	03 32 51.6	
MDOK	**Medeo**	**5.68**	**38**	*e*P	**Pg**	**03 31 45.3**	**+0.5**
	5.1nm,0.5s						
MDOK				*e*S	**Sg**	**03 32 57.8**	**-0.6**
	18nm,0.7s						
MDOK	**Medeo**	**5.68**	**38**	⇑Pg	**Pb**	**03 31 39.8**	**+4.5**
	11nm,1.0s						
MDOK				⇑Lg	Lg	03 32 55.9	
	23nm,1.0s						
MDOK	**Medeo**	**5.68**	**38**	Pg	**Pg**	**03 31 45.3**	**+0.5**
	5.1nm,0.5s						
MDOK				Lg	Lg	03 32 57.8	
	18nm,0.7s						
KTBS	**Karatobe**	**5.95**	**32**	*e*P	**Pg**	**03 31 48.9**	**-1.1**
	3.9nm,0.3s						
KTBS				*e*S	**Sg**	**03 33 03.4**	**-3.5**
	15nm,0.5s						
KTBS	**Karatobe**	**5.95**	**32**	Pg	**Pg**	**03 31 48.9**	**-1.1**
	3.9nm,0.3s						
KTBS				Lg	Lg	03 33 03.4	
	15nm,0.5s						
KUU	**Kurty**	**5.96**	**29**	*e*P	**Pg**	**03 31 50.3**	**+0.1**
	3.1nm,0.4s						
KUU				*e*S	**Sg**	**03 33 06.3**	**-1.1**
	14nm,0.4s						
KUU	**Kurty**	**5.96**	**29**	Pg	**Pg**	**03 31 50.3**	**+0.1**
	3.1nm,0.4s						
KUU				Lg	Lg	03 33 06.3	
	14nm,0.4s						
BTLS	**Baital**	**6.41**	**11**	*e*P	**Pg**	**03 31 58.0**	**-0.9**
	1.4nm,0.3s						
BTLS				*e*S	**Sg**	**03 33 19.6**	**-2.4**
	5.6nm,0.7s						
BTLS	**Baital**	**6.41**	**11**	Pg	**Pg**	**03 31 58.0**	**-0.9**
	1.4nm,0.3s						
BTLS				Lg	Lg	03 33 19.6	
	5.6nm,0.7s						
AB31	**Akbulak array**	**13.75**	**324**	Pn	**Pn**	**03 33 10.2**	**-0.8**
	1.1nm,0.6s,baz=138,slow=13,SNR=13						
AB31				⇓Sn	**Sn**	**03 35 47.3**	**+3.7**
	1.6nm,0.8s,baz=134,slow=24,SNR=5.2						
BVAR	**Borovoye Array**	**14.34**	**355**	Pn	**Pn**	**03 33 18.1**	**-1.0**
	0.1nm,0.3s,baz=230,slow=48,SNR=1.8						
AKTO	**Aktyubinsk**	**15.46**	**324**	Pn	**P**	**03 33 38.9**	**+0.1**
	0.8nm,0.3s,baz=120,slow=11,SNR=15						
AKTO	**Aktyubinsk**	**15.46**	**324**	⇓Pn	**P**	**03 33 38.1**	**-0.6**
	4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**17.43**	**25**	P	Pn	03 33 51.9	-7.3
	0.3nm,0.3s,baz=203,slow=12,SNR=2.4						
AKASG	**Malin Array Be**	**32.41**	**306**	P	**P**	**03 36 24.7**	**-1.3**
	0.3nm,0.3s,baz=80,slow=8.0,SNR=2.8						
FINES	**FINESS Array B**	**36.24**	**324**	P	**P**	**03 36 57.5**	**-1.4**
	1.5nm,0.6s,baz=114,slow=8.9,SNR=12						
ARCES	**ARCESS Array B**	**39.48**	**336**	P	**P**	**03 37 24.7**	**-1.6**
	4.2nm,1.0s,baz=113,slow=9.7,SNR=7.1						
NOA	**NORSAR Array B**	**43.24**	**322**	P	**P**	**03 37 55.3**	**-2.0**
	0.7nm,0.6s,baz=92,slow=7.9,SNR=3.7						

IDC 12 03:47:45.0±4.0,16°.89S×175°.46W,h0^{km},mb3.9/3,mb1 4.3/3,mb1mx3.8/37,mbtmp3.9/3,MS3.6/17,Ms1 3.6/17,ms1mx3.5/25,Error ellipse: s-maj=280.2km s-min=31.2km az=151.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.63**	**51**	LR	LR	03 50 20.8	
	comp=Z,529nm,21.3s,baz=246,slow=34						
MSVF	**Nonsavu**	**6.25**	**261**	LR	LR	03 51 27.2	
	comp=Z,1μm,18.4s,baz=53,slow=36						
DZM	**Mont Dzumac**	**17.82**	**250**	*e*LR	LR	03 56 00.8	
	comp=Z,329nm,25.4s						
DZM	**Mont Dzumac**	**17.82**	**250**	LR	LR	03 57 44.1	

	comp=Z,165nm,19.2s,baz=86,slow=34						
URZ	Urewera	22.26	196	LR	LR	04 00 09.0	
	comp=Z,140nm,21.6s,baz=31,slow=33						
PPT2	Papeete2	24.73	95	*e*LR	LR	03 59 16.0	
	comp=Z,69nm,25.5s						
HNR	Honiara	25.05	284	LR	LR	04 00 58.6	
	comp=Z,138nm,19.9s,baz=122,slow=32						
TBI	Tubuai	25.22	109	*e*LR	LR	03 59 28.4	
	comp=Z,106nm,25.8s						
TAOE	Nuku Hiva Isla	35.29	81	*e*LR	LR	04 04 06.8	
	comp=Z,162nm,26.0s						
PMG	Port Moresby	37.10	277	LR	LR	04 07 36.0	
	comp=Z,80nm,20.1s,baz=144,slow=32						
WRA	Warramunga Arr	47.59	258	LR	LR	04 14 07.9	
	comp=Z,39nm,21.5s,baz=135,slow=33						
ASAR	Alice Springs	47.78	253	P	P	03 56 24.3	-0.1
	1.5nm,0.6s,baz=87,slow=8.4,SNR=19						
ASAR				LR	LR	04 15 43.3	
	comp=Z,60nm,19.1s,baz=78,slow=35						
MJAR	Matsushiro Arr	68.83	321	LR	LR	04 22 00.7	
	comp=Z,24nm,21.9s,baz=120,slow=30						
PETK	Petropavlovsk-	73.47	344	LR	LR	04 23 19.5	
	comp=Z,39nm,22.0s,baz=132,slow=29						
KSRS	Korea Array	75.86	317	LR	LR	04 27 53.6	
	comp=Z,22nm,19.9s,baz=128,slow=32						
NVAR	Mina Array Bea	76.76	43	P	P	03 59 39.3	+0.6
	1.0nm,1.0s,baz=209,slow=7.2,SNR=3.7						
USRK	Ussuriysk Ar.	77.41	324	LR	LR	04 25 58.6	
	comp=Z,74nm,21.5s,baz=108,slow=30						
TXAR	Lajitas Array	83.08	57	LR	LR	04 29 13.7	
	comp=Z,39nm,20.5s,baz=0.0,slow=30						
PDAR	Pinedale Array	84.69	42	P	P	04 00 20.6	-0.5
	0.6nm,0.7s,baz=243,slow=6.0,SNR=5.2						
MAW	Mawson	85.75	199	LR	LR	04 35 49.1	
	comp=Z,45nm,22.0s,baz=330,slow=34						
PLCA	Paso Flores	89.97	133	LR	LR	04 32 47.4	
	comp=Z,24nm,20.4s,baz=284,slow=30						
CMAR	Chiang Mai Arr	91.21	289	LR	LR	04 36 14.2	
	comp=Z,14nm,21.7s,baz=35,slow=32						
ULM	Lac du Bonnet	96.33	39	LR	LR	04 38 06.8	
	comp=Z,49nm,19.8s,baz=280,slow=31						
BRTR	Keskin Array B	146.00	318	PKPbc	PKPdf	04 07 26.3	-0.1
	1.2nm,0.8s,baz=29,slow=2.8,SNR=5.7						

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*SJA **12** 03:48:06.4±0.6, 25°.53S×71°.06W, h14^{km}, ML4.3, MW3.9*
*NEIC **12** 03:48:12.8±1.8, 25°.53S±0°.05×70°.5W±0°.1, h67^{km}±9^{km}, Error ellipse: s-maj=16.5km s-min=7.4km az=87.0*
*GUC **12** 03:48:13.3±0.6, 25°.54S×70°.48W, h58^{km}±28^{km}, ML4.3*
*IDC **12** 03:48:14.4±0.9, 25°.82S×69°.93W, h57^{km}±5^{km}, mb3.8/3, mb1 3.8/4, mb1mx3.5/25, mbtmp4.1/4, MS3.0/4, Ms1 3.0/4, ms1mx2.8/22, Error ellipse: s-maj=37.6km s-min=13.2km az=107.0*
ISC 12 03:48:13.0±0.7**, 25°.56S**±0°.03×**70°.52W**±0°.06**, h60**^{km}±7^{km}**, n87, **σ**2^s.18**/105**, mb4.1**/3**, 5C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB14	IPOC Station P	0.94	7	⇑*i*P	Pn	03 48 31.0	+0.5
PB14				*i* S	Sn	03 48 43.9	+0.5
PB14	IPOC Station P	0.94	7	Pn	Pn	03 48 30.8	+0.2
AC02	Maricunga	1.78	136	⇓*i*P	Pn	03 48 42.5	+0.5
AC02				*i* S	Sn	03 49 03.4	-0.5
AC02				IAML		03 49 04.8	
	comp=E,5μm,0.3s						
AC02	Maricunga	1.78	136	Pn	Pn	03 48 42.6	+0.5
PB10	IPOC Station P	2.04	359	⇑*i*P	Pn	03 48 45.6	+0.6
PB10	IPOC Station P	2.04	359	Pn	Pn	03 48 45.5	+0.6
PB10	IPOC Station P	2.04	359	*e*P	Pn	03 48 45.0	0.0
PB10				*e*S	Sn	03 48 57.6	-12
GO03	Copiap	2.04	173	*e*P	Pn	03 48 46.6	+1.5
GO03				*i* S	Sn	03 49 12.3	+2.8
GO03	Copiap	2.04	173	Pn	Pn	03 48 46.9	+1.8
PB15	IPOC Station P	2.53	22	⇓*i*P	Pn	03 48 52.4	+0.5
PB15				*i* S	Sn	03 49 23.0	+1.4
PB15	IPOC Station P	2.53	22		Pn	03 48 52.5	+0.5
PB15	IPOC Station P	2.53	22	*e*P	Pn	03 48 52.0	+0.1
PB15				*e*S	Sn	03 49 26.1	+4.5
PB15				*e*S	Sn	03 49 27.2	+5.5
PB15				IAML		03 49 30.4	
	comp=Z,4μm,0.2s						
AC04	Llanos de Chal	2.68	190	⇓*i*P	Pn	03 48 55.0	+1.3
AC04				IAML		03 49 42.0	
	comp=N,718nm,0.3s						
AC04	Llanos de Chal	2.68	190	Pn	Pn	03 48 54.1	+0.3
PB05	IPOC Station P	2.71	6	IAML		03 49 41.0	
	comp=E,598nm,0.7s						
PB05	IPOC Station P	2.71	6	*e*P	Pn	03 48 53.9	-0.4
PB05				*e*S	Sn	03 49 28.1	+2.2
PB05				*e*S	Sn	03 49 28.6	+2.7
PB06	IPOC Station P	2.97	17	IAML		03 49 49.7	
	comp=N,808nm,0.4s						
PB06	IPOC Station P	2.97	17		Pn	03 48 57.1	-0.7
PB06	IPOC Station P	2.97	17	*e*P	Pn	03 48 57.5	-0.3
PB06				*e*S	Sn	03 49 36.4	+4.0
PB06				IAML		03 49 41.8	
	comp=Z,658nm,0.8s						
PB04	IPOC Station P	3.23	6	⇑*i*P	Pn	03 49 00.8	-0.7
PB04				IAML		03 49 58.8	
	comp=N,911nm,0.5s						
PB04	IPOC Station P	3.23	6		Pn	03 49 00.2	-1.2
PB04	IPOC Station P	3.23	6	*e*P	Pn	03 49 00.5	-0.9
PB04				*e*S	Sn	03 49 42.6	+3.9
PB04				*e*S	Sn	03 49 48.5	+10
PB04				IAML		03 49 59.6	
	comp=Z,535nm,0.4s						
LVC	Limon Verde	3.28	27	P	Pn	03 49 02.4	0.0
	comp=Z,16nm,0.3s,baz=187,slow=9.8,SNR=142						
LVC				S	Sn	03 49 43.4	+3.0
	comp=Z,91nm,0.3s,baz=204,slow=22,SNR=9.0						
LVC				LR	LR	03 50 29.2	
	comp=Z,105nm,21.3s,baz=204,slow=41						
LVC	Limon Verde	3.28	27	⇑*i*P	Pn	03 49 02.3	0.0
LVC				*i* S	Sn	03 49 40.0	-0.4
LVC	Limon Verde	3.28	27	Pn	Pn	03 49 02.6	+0.2
LVC	Limon Verde	3.28	27	*e*P	Pn	03 49 02.5	+0.2
LVC				*e*S	Sn	03 49 46.6	+6.3
LVC				IAML		03 50 01.3	
	comp=Z,369nm,0.5s						
LCO	Las Campanas	3.44	183	*e*P	Pn	03 49 07.0	+2.6
PB03	IPOC Station P	3.56	12	⇑*i*P	Pn	03 49 05.0	-1.0
PB03				IAML		03 50 03.1	
	comp=E,552nm,0.5s						
PB03	IPOC Station P	3.56	12	*e*P	Pn	03 49 05.1	-0.9
PB03				*e*S	Sn	03 49 49.1	+2.1
PB03				IAML		03 49 59.1	
	comp=Z,539nm,0.3s						
VCA	Vinchina	3.78	147	*e*P	Pn	03 49 12.0	+3.1
VCA				*e*S	Sn	03 50 03.3	+11
PB07	IPOC Station P	3.86	9		Pn	03 49 08.6	-1.5
PB07	IPOC Station P	3.86	9	*e*P	Pn	03 49 09.1	-0.9
PB07				*e*S	Sn	03 49 57.6	+3.4
PB07				IAML		03 50 17.6	
	comp=Z,497nm,0.5s						
PB09	IPOC Station P	3.92	18		Pn	03 49 11.2	+0.2
PB09	IPOC Station P	3.92	18	*e*P	Pn	03 49 11.1	+0.2
PB09				*e*S	Sn	03 50 11.6	+16
PB09				IAML		03 50 16.1	
	comp=Z,479nm,0.3s						
PB02	IPOC Station P	4.26	8	*e*P	Pn	03 49 14.4	-1.0
PB02				*e*S	Sn	03 50 11.1	+7.2
PB02				*e*S	Sn	03 50 23.4	+19
PB02				IAML		03 50 31.2	
	comp=Z,582nm,0.4s						
PB01	IPOC Station P	4.59	12		Pn	03 49 18.9	-1.1
PB01	IPOC Station P	4.59	12	*e*P	Pn	03 49 19.1	-1.0
PB01				*e*S	Sn	03 50 19.6	+7.5
PB01				*e*S	Sn	03 50 28.9	+17
PB01				IAML		03 50 38.6	
	comp=Z,190nm,0.3s						
GO04	Tololo Observa	4.60	183	Pn	Pn	03 49 20.9	+0.6
GO04	Tololo Observa	4.60	183	*e*P	Pn	03 49 19.6	-0.6
GO04				*e*S	Sn	03 50 25.6	+13
PATCX	Punta Patache	4.73	4	Pn	Pn	03 49 19.7	-2.2
PATCX	Punta Patache	4.73	4	*e*P	Pn	03 49 20.1	-1.7
PATCX				*e*P	Pn	03 49 20.1	-1.7
PATCX				*e*P	Pn	03 49 20.3	-1.5
PATCX				*e*P	Pn	03 49 20.5	-1.3
PATCX				IAML		03 50 49.8	
	comp=Z,134nm,0.8s						
TA01	Diego Aracena	4.98	4	Pn	Pn	03 49 23.4	-1.8
ACLC	CERRO LA CRUZ	4.99	141	*e*P	Pn	03 49 27.0	+1.6
ACLC				*e*S	Sn	03 50 31.5	+10
CYA	Choya	5.09	125	*e*P	Pn	03 49 27.5	+0.7
CYA				*e*P	Pn	03 49 28.1	+1.3
CYA				*e*S	Sn	03 50 27.5	+3.2
ACCO	Cerro Coronel	5.17	166	*e*P	Pn	03 49 31.0	+2.9
ACCO				*e*S	Sn	03 50 37.6	+11
CO06	Fray Jorge	5.19	191	Pn	Pn	03 49 27.1	-1.0
CO03	El Pedregal	5.26	182		Pn	03 49 29.4	+0.2
PB08	IPOC Station P	5.54	13		Pn	03 49 31.8	-1.5
AVFE	Valle Fertil	5.76	153	*e*P	Pn	03 49 37.9	+1.9
AVFE				*e*S	Sn	03 50 41.9	+1.2
AVFE				IAML		03 50 50.3	
	comp=Z,180nm,0.9s						
APLL	PUNTA DE LOS L	5.97	145	*e*P	Pn	03 49 40.0	+1.1
APLL				*e*S	Sn	03 50 50.7	+4.7
ZON	Zonda	6.18	165	Pn	Pn	03 49 40.2	-1.5
ACHE	Chepes	6.53	150	*e*P	Pn	03 49 48.5	+1.9
ACHE				*e*S	Sn	03 51 02.4	+2.5
AUSP	Uspallata	6.71	172	*e*P	Pn	03 49 51.0	+1.8
AUSP				*e*S	Sn	03 51 25.6	+21
PB12	IPOC Station P	6.91	2		Pn	03 49 49.9	-1.9
ASAL	Salagasta	7.16	169	*e*P	Pn	03 49 54.1	-1.0
ASAL				*e*S	Sn	03 51 25.1	+10
ASAL				*e*S	Sn	03 51 26.1	+11
VA03	San Esteban	7.18	180	Pn	Pn	03 49 55.1	-0.4
MT02	Curacav	7.69	184	Pn	Pn	03 50 02.4	0.0
MRA	San Martin	8.03	150	*e*P	Pn	03 50 07.0	0.0
MRA				*e*P	Pn	03 50 07.6	+0.6
MRA				*e*S	Sn	03 51 40.7	+4.3
MT01	Popeta	8.30	184		Pn	03 50 10.4	-0.2
BO02	Sierra Bellavi	9.21	181	Pn	Pn	03 50 22.8	-0.3
H03N1	Juan Fernandez	10.72	221	T	T	04 01 46.9	
	baz=47,slow=72,SNR=192						
H03N2	Juan Fernandez	10.74	221	T	T	04 01 29.9	
	baz=47,slow=72,SNR=167						
H03N3	Juan Fernandez	10.74	221	T	T	04 01 28.8	
	baz=47,slow=72,SNR=113						
SIV	San Ignacio	12.98	45	P	Pn	03 51 08.4	-6.4
	comp=Z,0.8nm,0.3s,baz=234,slow=6.6,SNR=26						
SIV				S	Sn	03 53 32.3	-5.3
	comp=Z,0.1nm,0.3s,baz=231,slow=8.6,SNR=4.6						
PTLB	Pontes e Lacer	14.65	49		Pn	03 51 35.4	-1.6
NNA	Nana	14.76	335	LR	LR	03 56 55.0	
	comp=Z,27nm,18.8s,baz=254,slow=34						
ETMB	Extrema	16.18	15	Pn	Pn	03 51 55.3	-1.3
CZSB	Cruzeiro do Su	17.85	353		P	03 52 16.8	-0.5
CZSB				IAmb	IAmb	03 52 43.1	
	comp=Z,8.5nm,0.7s						
SAML	Samuel	17.93	24		P	03 52 16.6	-1.5
SAML				IAmb	IAmb	03 52 38.2	
	comp=Z,4.3nm,0.8s						
BDFB	Brasilia	23.23	69	P	P	03 53 12.6	-2.7
	comp=Z,1.5nm,0.6s,baz=261,slow=9.8,SNR=4.2						
BDFB	Brasilia	23.23	69	IAmb	IAmb	03 53 31.2	
	comp=Z,5.2nm,1.1s						
MACA	Manacapuru-AM	24.20	25	P	P	03 53 22.5	-1.5
PTGA	Pitinga	26.70	24	LR	LR	04 04 42.3	
	comp=Z,35nm,18.2s,baz=286,slow=37						
VNA3	Neumayer Olymp	56.75	160	P	P	03 57 51.5	+1.2
VNA2	Neumayer--Watz	57.35	160	P	P	03 57 54.8	+0.2
SNAA	Sanae	58.97	160	P	P	03 58 06.4	+0.5
DBIC	Dimbokro	71.32	73	P	P	03 59 26.1	-0.7
	comp=Z,1.6nm,0.6s,baz=215,slow=5.9,SNR=3.7						
DBIC	Dimbokro	71.32	73	IAmb	IAmb	03 59 41.0	
	comp=Z,2.5nm,0.9s						
PDAR	Pinedale Array	76.92	332	LR	LR	04 37 11.2	
	comp=Z,30nm,18.1s,baz=301,slow=38						
TORD	Torodi Ar. Bea	80.11	70	P	P	04 00 16.4	-0.6
	comp=Z,2.3nm,0.7s,baz=258,slow=5.1,SNR=20						
TORD				pP	pP	04 00 32.9	-1.1
	comp=Z,1.9nm,0.6s,baz=259,slow=5.0,SNR=8.1						
ASAR	Alice Springs	125.65	208	PKP	PKiKP	04 07 09.9	+1.2
	comp=Z,0.4nm,0.5s,baz=135,slow=1.8,SNR=7.3						
ASAR				pPKP	pPKPdf	04 07 26.2	0.0
	comp=Z,0.6nm,0.8s,baz=123,slow=1.9,SNR=4.1						
H11S2	WAKE ISLAND Hy	126.82	275	T	T	06 26 58.1	
	baz=108,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	126.83	275	T	T	06 26 58.1	
	baz=108,slow=75,SNR=18						
H11S3	WAKE ISLAND Hy	126.84	275	T	T	06 26 58.9	
	baz=108,slow=75,SNR=19						
WRA	Warramunga Arr	128.72	210	PKP	PKiKP	04 07 16.1	+1.1
	comp=Z,0.3nm,0.5s,baz=159,slow=1.5,SNR=6.3						
WRA				pPKP	pPKPdf	04 07 32.3	+0.2
	comp=Z,0.7nm,0.8s,baz=155,slow=2.2,SNR=4.1						
ZALV	Zalesovo Beam	146.24	26	PKPbc	PKPab	04 07 47.5	+0.3
	comp=Z,2.3nm,0.5s,baz=305,slow=4.4,SNR=12						
ZALV				pPKPbc	pPKPbc	04 08 04.0	0.0
	comp=Z,4.1nm,0.8s,baz=290,slow=2.9,SNR=5.5						
MKAR	Makanchi Array	149.75	39	PKPbc	PKiKP	04 07 57.1	+0.1
	comp=Z,1.0nm,0.5s,baz=307,slow=2.7,SNR=11						
MKAR				pPKPbc	pPKPbc	04 08 13.8	+0.1
	comp=Z,1.8nm,0.8s,baz=322,slow=2.1,SNR=11						

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*DJA **12** 03:52:41.1±1.0, 4°S±6°×12°9E±°, h28^{km}±7^{km}, M4.3/8, mb5.0/1, MLv4.0/8*
*IDC **12** 03:52:43.6±5.8, 4°.05S×129°.52E, h62^{km}±70^{km}, mb3.7/2, mb1 4.0/4, mb1mx3.5/29, mbtmp4.0/4, ML4.1/2, MS2.6/3, Ms1 2.7/3, ms1mx2.3/36, Error ellipse: s-maj=66.0km s-min=22.0km az=86.0*
ISC 12 03:52:40.6±0.9**, 4°.07S**±0°.07×**129°.24E**±0°.06**, h35**^{km}**, n14, **σ**1^s.91**/15**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.78	337	P	Pn	03 52 54.2	-1.0
MSAI				S	Sn	03 53 05.3	-0.4
AAI	Ambon	1.11	290	P	Pn	03 52 59.5	-0.1
AAI				S	Sn	03 53 14.2	+0.5
FAKI	Fak Fak	3.22	69	P	Pn	03 53 28.8	+0.2
SIJI	Sorong	3.77	33	P	Pn	03 53 36.9	+0.6
	10nm,0.3s,baz=54,slow=23,SNR=14						
SIJI				S	Sn	03 54 19.0	-0.5
	13nm,0.3s,baz=221,slow=19,SNR=8.0						
SWI	Sorong	3.77	32	P	Pn	03 53 37.0	+0.7
SANI	Sanana	3.81	302	P	Pn	03 53 37.7	+0.8
LBMI	Labuha	3.83	333	P	Pn	03 53 33.1	-3.9
BATI	Baumata	8.23	222	LR	LR	03 57 57.3	
	comp=Z,113nm,18.1s,baz=352,slow=37						
KAPI	Kappang	9.50	264	LR	LR	03 58 47.5	
	comp=Z,19nm,20.3s,baz=110,slow=37						
FITZ	Fitzroy Crossi	14.38	194	P	P	03 56 08.6	+0.3
	0.5nm,0.3s,baz=28,slow=10,SNR=17						
WRA	Warramunga Arr	16.54	163	P	Pn	03 56 25.7	-4.3
	0.1nm,0.3s,baz=349,slow=13,SNR=8.7						
ASAR	Alice Springs	20.00	167	P	P	03 57 10.8	+0.5
	0.9nm,0.3s,baz=345,slow=8.5,SNR=31						
CMAR	Chiang Mai Arr	37.31	308	P	P	03 59 52.2	+2.4
	1.5nm,0.3s,baz=130,slow=8.4,SNR=4.8						
CMAR				LR	LR	04 17 04.3	
	comp=Z,5.6nm,19.4s,baz=30,slow=39						
MKAR	Makanchi Array	65.38	326	P	P	04 03 20.3	+0.7
	0.5nm,0.5s,baz=122,slow=8.0,SNR=8.5						

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*IDC **12** 03:54:05.8±3.2, 4°.31S×129°.24E, h170^{km}±42^{km}, mb3.2/1, mb1 3.6/5, mb1mx3.3/31, mbtmp4.1/5, Error ellipse: s-maj=66.1km s-min=20.4km az=85.0*
ISC 12 03:54:06.3±0.9**, 4°.35S**±0°.07×**129°.6E**±0°.1**, h200**^{km}**, n13, **σ**2^s.45**/16**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.99	62	P	Pn	03 54 57.5	+1.6
SIJI	Sorong	3.83	26	P	Pn	03 55 06.1	0.0
	20nm,0.3s,baz=229,slow=15,SNR=7.6						
SIJI				S	Sn	03 55 49.3	-3.8
	30nm,0.3s,baz=47,slow=21,SNR=16						
SAUI	Saumlaki	3.98	155	P	Pn	03 55 06.6	-1.3
DRS	Darwin Rock St	8.13	171	P	Pn	03 56 01.2	-0.1
MTN	Manton Dam	8.57	170	P	Pn	03 56 06.9	-0.2
KDU	Kakadu	8.76	161	P	Pn	03 56 09.3	-0.1
KNRA	Kununurra	11.29	184	P	Pn	03 56 41.1	-1.1
PLAI	Plampang	12.57	249	P	Pn	03 56 58.1	-0.3
FITZ	Fitzroy Crossi	14.21	196	P	Pn	03 57 18.9	0.0
	0.3nm,0.3s,baz=32,slow=13,SNR=4.0						
WRA	Warramunga Arr	16.17	164	P	Pn	03 57 43.6	+0.8
	0.7nm,0.3s,baz=343,slow=11,SNR=11						
WRA				S	S	04 00 36.2	-5.4
	0.4nm,0.3s,baz=342,slow=19,SNR=5.6						
QIS	Mount Isa	18.82	150	P	Pn	03 58 19.1	+5.0
ASAR	Alice Springs	19.65	168	P	Pn	03 58 23.4	-0.5
	0.5nm,0.3s,baz=348,slow=10,SNR=1.6						
ASAR				S	S	04 01 51.1	+0.2
	0.1nm,0.3s,baz=346,slow=20,SNR=6.0						
MKAR	Makanchi Array	65.81	326	P	P	04 04 31.8	+1.6
	0.3nm,0.3s,baz=132,slow=5.7,SNR=5.3						

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*IDC **12** 04:16:27.8±5.3, 36°.11N×70°.35E, h195^{km}±54^{km}, mb3.2/6, mb1 3.2/9, mb1mx3.0/44, mbtmp3.8/9, MS2.8/1, Ms1 2.8/1, ms1mx2.2/30, Error ellipse: s-maj=55.9km s-min=40.7km az=127.0*
*NNC **12** 04:16:32.0±11.0, 36°.89N×70°.23E, h0^{km}, mb4.2, mpv4.0, Error ellipse: s-maj=97.9km s-min=82.6km az=139.0*
ISC 12 04:16:31.2±0.7**, 36°.51N**±0°.06×**70°.26E**±0°.10**, h204**^{km}**, n31, **σ**1^s.24**/34**, mb3.5**/5**, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.00	153	P	Pn	04 17 22.1	+0.9
CEP				S	S	04 17 59.0	-0.6
THW	Thamme Wali	3.90	161	P	Pn	04 17 32.3	+0.4
AML	Almayashu	6.22	24	P	Pn	04 18 01.9	+0.3
	SNR=49						
KK02	Karatay Array	6.59	2	⇑P	Pn	04 18 06.2	+0.1
	5.3nm,0.3s,baz=179,slow=12						
KK02				⇑S	S	04 19 18.4	-2.9
	4.8nm,0.6s						
UCH	Uchtor	6.59	29	P	Pn	04 18 06.9	+0.4
	SNR=12						
EKS2	Erkin-Say	6.72	23	P	Pn	04 18 08.5	+0.6
	SNR=7.3						
AAK	Ala-Archa	6.94	27	P	Pn	04 18 11.4	+0.7
	2.9nm,0.3s,baz=171,slow=5.4,SNR=17						
AAK				S	S	04 19 27.6	-2.0
	1.9nm,0.3s,baz=342,slow=20,SNR=15						
AAK	Ala-Archa	6.94	27	P	Pn	04 18 12.2	+1.5
	SNR=7.0						
AAK	Ala-Archa	6.94	27	⇓P	Pn	04 18 11.2	+0.5
	3.7nm,0.4s						
AAK				⇑S	S	04 19 27.1	-2.6
	19nm,0.5s						
KBK	Karagaybulak	7.13	29	P	Pn	04 18 14.3	+1.1
	SNR=5.9						
USP	Ospenovka	7.50	24	P	Pn	04 18 17.9	+0.1
	SNR=9.1						
TKM2	Tokmak 2	7.61	31	P	Pn	04 18 19.7	+0.2
	SNR=6.2						
PYUN	Piuthan	13.63	124	*e*P	Pn	04 19 35.4	-1.3
	9.3nm,0.4s						
MKAR	Makanchi Array	13.64	37	P	Pn	04 19 37.5	+1.1
	0.1nm,0.3s,baz=228,slow=18,SNR=4.3						
AB31	Akbulak array	14.80	333	⇓P	P	04 19 51.8	+0.4
	0.8nm,0.3s,baz=158,slow=12,SNR=7.9						
KKN	Kakani	15.39	120	*e*P	P	04 19 58.9	+0.5
	20nm,0.6s						
PKIN	Phulchoki	15.60	120	*e*P	P	04 20 00.6	-0.2
	24nm,0.6s						
PKI	Pulchoki	15.62	120	*e*P	P	04 20 01.1	+0.1
	25nm,0.7s						
JIRN	Jiri	16.11	119	*e*P	Pn	04 20 07.2	+0.2
	35nm,0.6s						
AKTO	Aktyubinsk	16.48	331	P	Pn	04 20 11.3	+0.3
	0.5nm,0.3s,baz=159,slow=7.5,SNR=6.5						
BVAR	Borovoye Array	16.52	0	P	Pn	04 20 14.6	+3.3
	0.3nm,0.3s,baz=194,slow=17,SNR=5.1						
RAMN	Ramite	16.83	120	*e*P	P	04 20 14.5	+0.2
	19nm,0.5s						
TAPN	Taplejung	17.38	117	*e*P	Pn	04 20 22.0	0.0
	7.0nm,0.3s						
ODAN	Odare	17.44	119	*e*P	Pn	04 20 22.2	-0.5
	25nm,0.6s						
ZALV	Zalesovo Beam	20.16	26	P	P	04 20 50.1	+0.4
	1.1nm,0.4s,baz=220,slow=11,SNR=3.8						
ARU	Arti	21.44	342	P	P	04 21 04.7	+1.5
	0.7nm,0.4s,baz=173,slow=9.0,SNR=4.2						
TLY	Talaya	28.07	47	LR	LR	04 33 18.8	
	comp=Z,18nm,19.0s,baz=88,slow=36						
FINES	FINESS Array B	37.15	326	P	P	04 23 22.7	+0.7
	3.0nm,1.1s,baz=96,slow=14,SNR=3.3						
ARCES	ARCESS Array B	40.91	338	P	P	04 23 53.7	+0.6
	2.2nm,0.7s,baz=114,slow=9.0,SNR=7.3						
NOA	NORSAR Array B	44.02	323	P	P	04 24 18.0	-0.2
	1.1nm,0.9s,baz=99,slow=7.8,SNR=2.5						
TORD	Torodi Ar. Bea	65.12	268	P	P	04 26 48.4	-2.0
	0.2nm,0.4s,baz=51,slow=6.3,SNR=4.3						

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*IDC **12** 04:23:52.5±1.2, 10°.12N×125°.78E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.4/29, mbtmp3.5/4, Error ellipse: s-maj=70.6km s-min=25.0km az=74.0*
*MAN **12** 04:24:00.7, 10°.04N×126°.03E, h15^{km}, mb4.6, ML3.5, MS3.4*
ISC 12 04:23:59.9±1.2**, 10°.1N**±0°.1×**126°.24E**±0°.10**, h54**^{km}**, n10, **σ**1^s.70**/13**, mb3.4**/4**, 2C-4D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.80	247	⇓*i*P	Pn	04 24 13.0	-2.1
SCPH				*i* S	Sn	04 24 23.7	-2.5
LLP	Lapu-Lapu	2.24	276	⇓*e*P	Pn	04 24 34.9	+0.2
LLP				*i* S	Sn	04 25 01.6	+0.4
TBP	Tagbilaran	2.37	260	⇓*e*P	Pn	04 24 36.7	+0.3
TBP				*i* S	Sn	04 25 06.9	+2.5
CNOP	Candoni, Negro	3.55	266	⇓*e*P	Pn	04 24 53.1	+0.6
PAGZ	Pagadian	3.59	232	⇑*e*P	Pn	04 24 55.0	+1.8
RCP	Roxas	3.73	293	⇑*e*P	Pn	04 24 55.9	+1.0
WRA	Warramunga Arr	30.90	165	P	P	04 30 11.4	-0.2
	0.7nm,1.0s,baz=341,slow=9.7,SNR=3.1						
ASAR	Alice Springs	34.38	167	P	P	04 30 43.2	+1.1
	0.4nm,0.8s,baz=346,slow=6.8,SNR=6.5						
MKAR	Makanchi Array	52.15	323	P	P	04 33 02.8	-2.2
	0.8nm,0.8s,baz=128,slow=7.9,SNR=7.3						
ILAR	Eielson Array	79.61	26	P	P	04 36 02.2	+1.0
	0.3nm,0.9s,baz=244,slow=5.2,SNR=5.2						

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*IDC **12** 04:42:53.6±1.4, 31°.21S×72°.66W, h0^{km}, mb3.9/3, mb1 4.2/6, mb1mx4.0/23, mbtmp4.0/6, ML4.0/3, MS3.0/6, Ms1 3.0/6, ms1mx2.9/21, Error ellipse: s-maj=38.8km s-min=32.4km az=90.0*
*NEIC **12** 04:42:53.6±1.7, 31°.20S±0°.04×72°.60W±0°.07, h3^{km}±5^{km}, mb4.4/11, ML3.7(GUC), Error ellipse: s-maj=9.3km s-min=6.2km az=98.0*
*GUC **12** 04:42:56.1±0.5, 31°.28S×72°.44W, h26^{km}±22^{km}, ML3.7*
ISC 12 04:42:54.3±0.7**, 31°.22S**±0°.04×**72°.54W**±0°.08**, h10**^{km}**, n53, **σ**0^s.93**/57**, mb4.3**/7**, 3C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.95	55		Pn	04 43 13.0	-0.7
CO03	El Pedregal	1.64	77		Pb	04 43 24.0	-0.6
CO05	La Serena	1.71	41	*e*P	Pn	04 43 23.9	-0.3
CO05	La Serena	1.71	41		Pn	04 43 23.9	-0.3
GO04	Tololo Observa	1.83	56	*e*P	Pb	04 43 26.5	-1.4
GO04				*i* S	Sb	04 43 50.1	-0.9
GO04				IAML		04 43 52.0	
	comp=N,2μm,0.5s						
GO04	Tololo Observa	1.83	56	Pn	Pn	04 43 25.9	-0.1
VA01	Torpederas	1.95	157		Pn	04 43 25.9	-1.5
ROCH	El Roble	2.18	144	⇑*i*P	Pb	04 43 31.5	-2.5
ROCH				⇑*e*P	Pn	04 43 31.2	+0.3
ROCH				*i* S	Sn	04 43 58.0	0.0
ROCH				*e*S	Sn	04 43 58.0	0.0
ROCH				IAML		04 44 03.3	
	comp=E,960nm,0.7s						
ROCH				IAML		04 44 03.5	
	comp=E,889nm,0.5s						
VA03	San Esteban	2.29	133		Pn	04 43 33.4	+1.1
MT02	Curacav	2.36	150		Pn	04 43 33.6	+0.5
PEL	Peldehue	2.48	141	⇓*i*P	Pn	04 43 35.1	+0.3
PEL				*i* S	Sn	04 44 05.2	0.0
PEL				IAML		04 44 13.7	
	comp=E,261nm,0.6s						
PEL	Peldehue	2.48	141		Pn	04 43 34.9	+0.1
VA05	Santo Domingo	2.56	162	*e*P	Pn	04 43 35.7	0.0
VA05				*i* S	Sn	04 44 05.2	-1.7
VA05				IAML		04 44 06.3	
	comp=N,728nm,0.5s						
VA05	Santo Domingo	2.56	162		Pn	04 43 35.8	0.0
MT05	Renca	2.65	145	*e*P	Pn	04 43 37.5	+0.3
MT05				*e*S	Sn	04 44 09.4	0.0
MT05				IAML		04 44 15.2	
	comp=E,446nm,0.3s						
MT05	Renca	2.65	145		Pn	04 43 38.1	+1.0
LCO	Las Campanas	2.72	36	⇓*i*P	Pn	04 43 38.1	-0.2

LCO	Las Campanas	2.72	36		Pn	04 43 37.8	-0.5
FCH	Farellones	2.84	138	⇑iP	Pn	04 43 41.4	+1.4
FCH				iS	Sn	04 44 15.1	+0.6
FCH				IAML		04 44 18.6	
	comp=E,131nm,0.1s						
MT01	Popeta	2.85	158		Pn	04 43 39.6	-0.3
MT09	Talagante	2.87	153	eP	Pn	04 43 41.1	+0.9
MT09				eS	Sn	04 44 14.9	0.0
MT09				IAML		04 44 19.2	
	comp=N,255nm,0.6s						
MT09	Talagante	2.87	153		Pn	04 43 40.2	-0.1
AC04	Llanos de Chal	3.26	23	Pn	Pn	04 43 43.5	-2.0
BO01	Tunca	3.39	159		Pn	04 43 47.2	-0.1
GO05	Huala	3.82	172		Pn	04 43 53.7	+0.5
BO02	Sierra Bellavi	3.86	158		Pn	04 43 54.7	+0.9
GO03	Copiap	4.13	30	Pn	Pn	04 43 57.9	+0.3
LC01	Cunco	7.68	176	Pn	Pn	04 44 46.2	-0.1
PLCA	Paso Flores	9.63	171	Pn	Pn	04 45 14.6	+1.5
	comp=N,0.5nm,0.3s,baz=340,slow=11,SNR=7.4						
PLCA				LR	LR	04 48 27.2	
	comp=N,21nm,19.7s,baz=348,slow=35						
CPUP	Villa Florida	14.20	74	LR	LR	04 51 29.7	
	comp=N,78nm,21.9s,baz=245,slow=36						
LPAZ	La Paz	15.40	16	Pn	Pn	04 46 34.1	+1.8
	comp=N,0.2nm,0.3s,baz=187,slow=6.5,SNR=16						
LPAZ	La Paz	15.40	16	Pn	Pn	04 46 30.6	-1.7
LPAZ				IAmb	IAmb	04 46 34.6	
	comp=Z,4.8nm,0.8s						
SIV	San Ignacio	18.42	37	P	P	04 47 10.4	+0.5
	comp=Z,0.3nm,0.3s,baz=218,slow=11,SNR=56						
SIV				LR	LR	04 54 01.5	
	comp=Z,43nm,20.7s,baz=278,slow=36						
NNA	Nana	19.55	347	LR	LR	04 52 30.2	
	comp=Z,39nm,20.7s,baz=306,slow=30						
PTLB	Pontes e Lacer	19.92	41	P	Pn	04 47 26.9	-1.0
VILB	Vilhena	21.44	35	P	P	04 47 42.7	-0.1
VILB				IAmb	IAmb	04 48 01.0	
	comp=Z,13nm,0.8s						
ETMB	Extrema	22.09	17	P	P	04 47 48.6	-1.2
CZSB	Cruzeiro do Su	23.37	360	P	P	04 48 02.4	-0.8
CZSB				IAmb	IAmb	04 48 10.6	
	comp=Z,10nm,0.6s						
SAML	Samuel	23.81	23	P	P	04 48 08.2	+0.7
SAML				IAmb	IAmb	04 48 46.2	
	comp=Z,13nm,1.9s						
BDFB	Brasilia	27.24	61	P	P	04 48 41.1	+2.3
	comp=Z,3.7nm,0.9s,baz=224,slow=9.9,SNR=5.6						
BDFB				LR	LR	05 01 15.0	
	comp=Z,108nm,20.3s,baz=34,slow=40						
BDFB	Brasilia	27.24	61	P	P	04 48 38.4	-0.4
BDFB				IAmb	IAmb	04 48 52.3	
	comp=Z,15nm,1.2s						
VNA3	Neumayer Olymp	52.09	159	P	P	04 52 03.9	-0.2
VNA2	Neumayer--Watz	52.74	158	P	P	04 52 09.4	+0.5
SNAA	Sanae	54.32	159	P	P	04 52 21.0	+0.5
QSPA	South Pole Qui	59.01	180	P	P	04 52 54.1	+0.1
TXAR	Lajitas Array	67.11	331	P	P	04 53 48.9	+0.7
	comp=Z,0.7nm,0.7s,baz=155,slow=6.9,SNR=5.7						
P40A	Paris	72.69	344	P	P	04 54 21.7	-0.4
ECSD	EROS Data Cent	77.78	342	P	P	04 54 51.9	+0.5
ECSD				IAmb	IAmb	04 54 54.1	
	comp=Z,2.8nm,0.9s						
BOSA	Boshof	81.75	118	LR	LR	05 27 06.9	
	comp=Z,20nm,18.2s,baz=216,slow=32						
TORD	Torodi Ar. Bea	83.68	71	P	P	04 55 24.4	+0.8
	comp=Z,0.4nm,0.5s,baz=272,slow=4.8,SNR=8.2						
TORD	Torodi Ar. Bea	83.68	71	IAmb	IAmb	04 57 31.7	
	comp=Z,5.1nm,1.8s						
ZALV	Zalesovo Beam	152.06	29	PKPbc	PKiKP	05 02 50.0	+0.4
	comp=Z,2.5nm,0.8s,baz=270,slow=3.0,SNR=8.1						
MKAR	Makanchi Array	155.16	44	PKPbc	PKPdf	05 02 56.7	+9.2
	comp=Z,0.3nm,0.6s,baz=48,slow=0.9,SNR=2.5						

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*IDC **12** 04:51:11.0±1.0, 28.°19N×105.°07E, h0^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.4/43, mbtmp3.8/7, ML4.3/2, MS2.9/1, Ms1 3.1/1, ms1mx2.4/46, Error ellipse: s-maj=43.8km s-min=18.4km az=66.0*

ISC 12 04:51:16.6±0.9**, 28.°2N**±0.°1×**105.°0E**±0.°2**, h35^{km}, n8, σ0.^{s}94**/8**, mb3.7**/6**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.17	211	Pn	Pn	04 53 54.4	+0.6
	1.2nm,0.3s,baz=21,slow=11,SNR=8.0						
CMAR				LR	LR	04 58 32.8	
	comp=Z,57nm,20.8s,baz=46,slow=40						
SONM	Songino Array	19.65	3	P	P	04 55 42.2	-0.1
	0.4nm,0.3s,baz=188,slow=12,SNR=8.7						
KSRS	Korea Array	21.32	58	P	P	04 56 00.9	+0.5
	0.9nm,0.4s,baz=247,slow=10,SNR=1.9						
MKAR	Makanchi Array	25.73	322	P	P	04 56 42.4	-1.2
	1.2nm,0.7s,baz=121,slow=12,SNR=11						
KURBB	Kurchatov Arra	30.06	325	P	P	04 57 22.1	-0.2
	0.9nm,0.6s,baz=132,slow=9.4,SNR=12						
WRA	Warramunga Arr	55.62	146	P	P	05 00 48.0	-1.1
	0.4nm,0.4s,baz=322,slow=6.1,SNR=14						
ASAR	Alice Springs	58.60	149	P	P	05 01 09.7	-0.5
	0.4nm,0.3s,baz=324,slow=6.5,SNR=9.1						
YKA	Yellowknife Ar	84.24	17	P	P	05 03 45.1	+0.9
	0.2nm,0.6s,baz=327,slow=5.1,SNR=2.7						

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*IDC **12** 05:08:09.6±2.4, 46.°64N×152.°93E, h0^{km}, mb3.9/7, mb1 4.0/8, mb1mx3.6/44, mbtmp3.9/8, ML2.0/1, MS2.9/4, Ms1 2.9/4, ms1mx2.5/38, Error ellipse: s-maj=64.0km s-min=29.2km az=175.0*

ISC 12 05:08:18.1±2.1**, 46.°9N**±0.°3×**153.°0E**±0.°2**, h50^{km}, n18, σ0.^{s}84**/9**, mb3.7**/7**, MS3.0**/3**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	Petropavlovsk-	6.91	24	Pn	Pn	05 09 56.4	-0.2
	0.1nm,0.3s,baz=182,slow=13,SNR=1.9						
MJAR	Matsushiro Arr	15.10	232	LR	LR	05 17 56.0	
	comp=Z,20nm,19.3s,baz=350,slow=39						
KSRS	Korea Array	20.76	252	LR	LR	05 19 25.1	
	comp=Z,23nm,21.7s,baz=110,slow=33						
H11N2	WAKE ISLAND Hy	29.41	153	T	T	05 45 44.8	
	baz=340,slow=76,SNR=23						
H11N1	WAKE ISLAND Hy	29.42	153	T	T	05 45 46.3	
	baz=340,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	29.42	152	T	T	05 45 32.1	
	baz=340,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	30.49	154	T	T	05 46 46.4	
	baz=341,slow=76,SNR=25						
H11S3	WAKE ISLAND Hy	30.50	154	T	T	05 47 05.7	
	baz=341,slow=76,SNR=27						
H11S2	WAKE ISLAND Hy	30.51	154	T	T	05 46 53.3	
	baz=341,slow=76,SNR=20						
INK	Inuvik	41.56	32	P	P	05 16 01.5	+1.2
	1.3nm,0.8s,baz=283,slow=5.8,SNR=5.1						
MKAR	Makanchi Array	46.78	297	P	P	05 16 43.1	+0.7
	0.4nm,0.7s,baz=60,slow=7.2,SNR=4.0						
MKAR				LR	LR	05 37 20.6	
	comp=Z,43nm,19.2s,baz=51,slow=37						
AKTO	Aktyubinsk	58.55	312	LR	LR	05 43 11.2	
	comp=Z,11nm,21.0s,baz=21,slow=36						
FINES	FINESS Array B	63.85	335	P	P	05 18 44.0	-0.8
	2.1nm,0.7s,baz=32,slow=7.8,SNR=12						
NB2	NORSAR Subarra	68.05	341	P	P	05 19 11.6	-0.2
	comp=Z,0.8nm,0.7s,baz=28,slow=6.5						
NOA	NORSAR Array B	68.05	341	P	P	05 19 11.7	-0.1
	comp=Z,1.1nm,0.7s,baz=28,slow=6.5,SNR=4.2						
AKASG	Malin Array Be	71.36	326	P	P	05 19 31.4	-0.9
	comp=Z,1.0nm,0.3s,baz=32,slow=6.1,SNR=12						
TXAR	Lajitas Array	77.49	60	P	P	05 20 07.9	-0.6
	comp=Z,0.4nm,0.5s,baz=300,slow=4.7,SNR=8.7						
BRTR	Keskin Array B	78.21	317	P	P	05 20 12.7	+0.4
	comp=Z,0.7nm,0.9s,baz=58,slow=4.7,SNR=4.2						

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*SOME **12** 05:20:01.0, 39.°00N×72.°78E, h0^{km}*

*NNC **12** 05:20:08.5±1.7, 39.°03N×73.°32E, h1^{km}±6^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=12.2km s-min=7.9km az=178.0*

ISC 12 05:20:07.8±2.3**, 39.°1N**±0.°1×**73.°33E**±0.°05**, h10^{km}, n17, σ2.^{s}90**/24**, 4C-1D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	3.68	13	⇑Pn	Pn	05 21 08.0	+3.1
	9.0nm,0.6s						
AAK				⇓Lg	Lg	05 22 05.9	
	18nm,0.9s						
MRKS	Merke	3.68	359	eP	Pb	05 21 13.9	+0.9
	8.4nm,0.3s						
MRKS				eS	Sg	05 22 07.5	+1.5
	14nm,0.3s						
MRKS	Merke	3.68	359	Pg	Pg	05 21 15.4	-2.9
	8.4nm,0.3s						
MRKS				Lg	Lg	05 22 05.6	
	14nm,0.3s						
IUG	Iuzhnay	3.98	322	eP	Pn	05 21 11.3	+2.4
	390nm,0.7s						
IUG				eS	Sb	05 22 02.6	-3.6
	70nm,0.5s						
IUG	Iuzhnay	3.98	322	Pg	Pg	05 21 22.4	-1.6
	390nm,0.7s						
IUG				Lg	Lg	05 22 17.8	
	70nm,0.5s						
KST	Kastek	4.45	26	eP	Pb	05 21 28.3	+2.2
	6.7nm,1.1s						
KST				eS	Sg	05 22 33.7	+3.2
	9.2nm,0.9s						
DGS	Degeres	4.56	23	eP	Pb	05 21 29.7	+1.7
	4.4nm,0.6s						
DGS				eS	Sg	05 22 35.9	+1.6
	8.1nm,0.6s						
KK02	Karatay Array	4.56	333	⇑Pn	Pn	05 21 18.5	+1.6
	2.0nm,0.6s						
KK02				⇑Sn	Sn	05 22 14.2	+4.2
	13nm,0.7s						
BRLS	Borolday	4.76	327	Pg	Pb	05 21 33.3	+1.9
	5.0nm,0.4s						
BRLS				Lg	Lg	05 22 36.6	
	7.8nm,0.4s						
TNSS	Tian-Shan	4.82	33	Pg	Pg	05 21 36.7	-3.4
	4.3nm,0.4s						
TNSS				Lg	Lg	05 22 42.4	
	3.7nm,0.8s						
KRBS	Karabastau	4.95	20	eP	Pb	05 21 36.0	+1.3
	3.2nm,0.4s						
KRBS				eS	Sg	05 22 47.3	+0.5
	7.4nm,0.5s						
KRBS	Karabastau	4.95	20	Pg	Pg	05 21 38.4	-4.3
	3.2nm,0.4s						
KRBS				Lg	Lg	05 22 45.2	
	7.4nm,0.5s						
KOTS	Kotyrbulak	5.05	33	Pg	Pg	05 21 41.0	-3.5
	3.5nm,0.5s						
KOTS				Lg	Lg	05 22 49.7	
	12nm,0.6s						
KTBS	Karatobe	5.28	27	Pg	Pg	05 21 45.6	-3.4
	2.6nm,0.5s						
KTBS				Lg	Lg	05 22 57.6	
	9.0nm,0.4s						
KUU	Kurty	5.33	24	Pg	Pg	05 21 47.0	-2.8
	2.4nm,0.4s						
KUU				Lg	Lg	05 23 00.2	
	9.6nm,1.0s						
ARXS	Arharly	6.15	32	Pg	Pg	05 22 02.2	-3.4
	4.0nm,0.6s						
ARXS				Lg	Lg	05 23 26.2	
	5.0nm,0.4s						
AB31	Akbulak array	13.98	321	⇑Pn	Pn	05 23 24.8	-1.1
	0.3nm,0.5s,baz=136,slow=13,SNR=9.0						
AB31				Sn	Sn	05 25 57.3	-3.8
	1.0nm,0.7s,baz=135,slow=22,SNR=3.9						

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*KRNET **12** 05:30:50.4±0.1, 39.°78N×72.°46E, h16^{km}, mb3.0*

*NNC **12** 05:30:58.3±2.6, 40.°17N×72.°56E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=20.1km s-min=10.1km az=178.0*

ISC 12 05:30:48.8±1.3**, 39.°87N**±0.°04×**72.°46E**±0.°04**, h9^{km}**±12^{km}**, n18, σ1.^{s}08**/29**, 17C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	0.64	233	⇓eP	Pb	05 31 01.6	-0.8
	baz=39						
DRK				⇓iS	Sg	05 31 09.7	0.0
	baz=39						
OHH	Osh	0.70	21	⇑eP	Pn	05 31 05.2	+0.1
	baz=19						
OHH				⇑iS	Sn	05 31 16.2	+0.1
	baz=19						
SFK	Sufi-Kurgan	0.81	79	⇑eP	Pn	05 31 06.4	-0.4
	baz=73						
SFK				⇑eS	Sb	05 31 17.8	+1.2
	baz=73						
BTK	Batken	1.28	279	⇑eP	Pg	05 31 14.9	+1.6
	baz=83						
BTK				⇑eS	Sn	05 31 32.2	+1.9
	baz=83						
GAR	Garm	1.87	243	⇑iP	Pg	05 31 24.4	-0.3
	baz=45						
GAR				⇑iS	Sg	05 31 48.6	-0.4
	baz=45						
TRKS	Terek-Say	1.94	329	⇑eP	Pg	05 31 26.0	-0.1
	baz=30						
TRKS				⇑eS	Sg	05 31 51.7	+0.5
	baz=30						
AML	Almayashu	2.45	22	⇑eP	Pb	05 31 34.1	+0.8
	baz=21						
AML				⇑iS	Sg	05 32 06.3	-1.2
	baz=21						
UCH	Uchtor	2.82	33	⇑iP	Pb	05 31 39.2	-0.5
	baz=32						
UCH				⇑eS	Sb	05 32 15.1	+0.5
	baz=32						
IUG	Iuzhnay	2.93	322	Pg	Pg	05 31 47.1	+2.2
	202nm,0.4s						
IUG				Lg	Lg	05 32 24.9	
	24nm,0.5s						
MRKS	Merke	2.93	11	Pg	Pg	05 31 46.6	+1.5
	7.5nm,0.3s						
MRKS				Lg	Lg	05 32 24.2	
	20nm,0.2s						
EKS2	Erkin-Say	2.96	19	⇓eP	Pb	05 31 41.1	-0.8
	baz=19						
EKS2				⇓iS	Sb	05 32 18.3	0.0
	baz=19						
AAK	Ala-Archa	3.16	28	Pn	Pb	05 31 45.5	+0.2
	3.4nm,0.7s						
AAK				Lg	Lg	05 32 27.1	
	12nm,1.0s						
AAK	Ala-Archa	3.16	28	⇑iP	Pb	05 31 44.0	-1.3
	baz=28						
AAK				⇑iS	Sb	05 32 23.1	-1.0
	baz=28						
KK02	Karatay Array	3.55	336	⇑Pn	Pb	05 31 51.1	-0.7
	0.5nm,0.5s						
KK02				⇓Sn	Sb	05 32 32.7	-2.3
	2.6nm,0.4s,baz=146,slow=24						
BRLS	Borolday	3.72	329	Pg	Pg	05 31 59.3	-0.9
	4.1nm,0.2s						
BRLS				Lg	Lg	05 32 46.0	
	7.5nm,0.3s						
DGS	Degeres	4.19	35	Pg	Pg	05 32 09.6	+0.5
	2.7nm,0.3s						
DGS				Lg	Lg	05 33 03.7	
	3.8nm,0.4s						
KRBS	Karabastau	4.52	31	Pg	Pg	05 32 15.7	+0.3
	1.9nm,0.3s						
KRBS				Lg	Lg	05 33 14.2	
	3.1nm,0.3s						
KUU	Kurty	4.96	34	Pg	Pg	05 32 23.5	-0.2
	1.4nm,0.5s						
KUU				Lg	Lg	05 33 27.7	
	3.2nm,0.2s						

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*IDC **12** 05:41:32.0±1.6, 0.°48N×123.°66E, h0^{km}, mb3.4/3, mb1 3.7/4, mb1mx3.1/46, mbtmp3.5/4, ML3.8/1, Error ellipse: s-maj=128.6km s-min=23.3km az=65.0*

*DJA **12** 05:41:51.3±0.5, 0°S±5°×12°3E±°, h156^{km}±7^{km}, M3.6/9, MLv3.6/9*

ISC 12 05:41:51.0±1.0**, 0.°17S**±0.°08×**123.°27E**±0.°06**, h157^{km}, n12, σ1.^{s}48**/14**, mb3.4**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	Gorontalo	0.84	342	P	Pn	05 42 17.1	+1.9
GTOI				S	Sn	05 42 35.5	+1.7
KMSI	Cibinong	1.03	44	P	Pn	05 42 18.5	+1.8
MRSI	Marisa	1.47	296	P	Pn	05 42 20.7	-0.1
APSI	Ampana	1.78	245	P	Pn	05 42 25.3	+1.2
APSI				S	Sn	05 42 49.2	-0.3
SANI	Sanana	3.30	125	P	Pn	05 42 42.3	-0.2
MPSI	Mapaga	3.40	278	P	Pn	05 42 43.6	-0.2
LBMI	Labuha	4.26	96	P	Pn	05 42 54.8	-0.1
TTSI	Tana Toraja	4.48	230	P	Pn	05 42 59.2	+1.5
FITZ	Fitzroy Crossi	17.97	173	P	P	05 45 51.0	+1.4
	0.2nm,0.3s,baz=2.2,slow=9.8,SNR=15						
WRA	Warramunga Arr	22.45	152	P	P	05 46 37.2	0.0
	1.3nm,0.5s,baz=329,slow=11,SNR=25						
ASAR	Alice Springs	25.54	157	P	P	05 47 05.8	+0.4
	0.2nm,0.4s,baz=337,slow=7.6,SNR=4.8						
MKAR	Makanchi Array	58.89	328	P	P	05 51 30.6	-2.9
	0.2nm,0.4s,baz=124,slow=8.6,SNR=7.7						

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*DJA **12** 05:44:36.9±0.9, 4°S±6°×12°9E±°, h14^{km}±5^{km}, M3.9/7, MLv3.9/7*

*IDC **12** 05:44:40.8±3.3, 4.°04S×129.°54E, h55^{km}±35^{km}, mb3.9/4, mb1 4.0/7, mb1mx3.6/43, mbtmp4.1/7, ML4.1/3, Error ellipse: s-maj=38.5km s-min=17.6km az=93.0*

ISC 12 05:44:38.5±0.7**, 4.°13S**±0.°06×**129.°37E**±0.°05**, h36^{km}, n29, σ1.^{s}47**/35**, mb4.2**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.66	126	P	Pn	05 44 49.0	-2.5
MSAI	Masohi	0.89	330	P	Pn	05 44 53.8	-0.7
MSAI				S	Sn	05 45 04.1	-2.2
MSAI	Masohi	0.89	330	P	Pn	05 44 53.8	-0.7
MSAI				S	Sn	05 45 05.2	-1.1
AAI	Ambon	1.25	290	P	Pn	05 44 58.5	-1.0
AAI				S	Sn	05 45 14.6	-0.5
AAI	Ambon	1.25	290	P	Pn	05 44 57.2	-2.3
AAI				S	Sn	05 45 14.7	-0.4
FAKI	Fak Fak	3.11	67	P	Pn	05 45 24.6	-0.5
FAKI	Fak Fak	3.11	67	P	Pn	05 45 23.8	-1.3
FAKI	Fak Fak	3.11	67	P	Pn	05 45 25.0	-0.1
SIJI	Sorong	3.75	30	P	Pn	05 45 34.2	+0.3
	26nm,0.3s,baz=230,slow=16,SNR=26						
SIJI				S	Sn	05 46 15.6	-1.1
	10nm,0.3s,baz=229,slow=22,SNR=2.6						
SWI	Sorong	3.75	30	P	Pn	05 45 34.9	+1.0
SWI	Sorong	3.75	30	P	Pn	05 45 34.4	+0.5
LBMI	Labuha	3.94	332	P	Pn	05 45 35.6	-0.8
LBMI	Labuha	3.94	332	P	Pn	05 45 34.0	-2.4
SANI	Sanana	3.96	301	P	Pn	05 45 37.1	+0.4
SANI	Sanana	3.96	301	P	Pn	05 45 36.7	0.0
KDU	Kakadu	9.04	160	P	Pn	05 46 46.1	-0.5
KNRA	Kununurra	11.49	183	P	Pn	05 47 22.8	+2.6
FITZ	Fitzroy Crossi	14.36	194	P	P	05 48 04.3	-1.6
	0.3nm,0.3s,baz=29,slow=13,SNR=9.8						
WRA	Warramunga Arr	16.45	163	P	Pn	05 48 22.8	-3.9
	0.2nm,0.3s,baz=349,slow=12,SNR=10						
QIS	Mount Isa	19.13	149	P	P	05 48 58.5	-0.2
ASAR	Alice Springs	19.91	168	P	P	05 49 07.5	+0.3
	0.8nm,0.3s,baz=346,slow=10,SNR=76						
ASAR				PcP	PcP	05 53 23.1	-0.4
	0.1nm,0.3s,baz=6.0,slow=1.3,SNR=4.7						
WRKA	Warakurna	20.82	183	P	P	05 49 18.3	+1.3
OOD	Oodnadatta	24.30	166	P	P	05 49 51.9	-0.7
MULG	Mulgathing	26.39	171	P	P	05 50 14.2	+2.6
LCRK	Leigh Creek	27.48	163	P	P	05 50 22.7	+1.3
CMAR	Chiang Mai Arr	37.45	308	P	P	05 51 50.4	+1.6
	1.3nm,0.3s,baz=131,slow=7.2,SNR=7.4						
MKAR	Makanchi Array	65.50	326	P	P	05 55 18.6	+0.4
	0.9nm,0.5s,baz=120,slow=8.2,SNR=14						
ZALV	Zalesovo Beam	68.75	334	P	P	05 55 38.5	0.0
	1.1nm,0.6s,baz=131,slow=5.9,SNR=4.5						
KURBB	Kurchatov Arra	69.75	328	P	P	05 55 45.4	+0.5
	2.2nm,0.6s,baz=128,slow=5.5,SNR=22						

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*FUNV **12** 05:46:44.5, 11.°76N×71.°82W, h14^{km}, MW3.9*

*RSNC **12** 05:46:44.9±0.7, 11.°82N×71.°85W, h61^{km}±4^{km}, ML3.7, Mw3.4*

ISC 12 05:46:45.3±1.5**, 11.°71N**±0.°07×**71.°82W**±0.°03**, h63^{km}**±11^{km}**, n50, σ1.^{s}56**/95**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URIC	Uribia, Colomb	0.17	268	eP	Pn	05 46 54.0	-1.0
URIC				eS	Sn	05 47 00.9	-1.1
URIC				i		05 47 01.7	
	comp=Z,1µm,0.3s						
CRJC	Cerrejon, Guaj	1.24	237	eP	Pn	05 47 06.6	-0.1
CRJC				eS	Sn	05 47 23.3	+0.5
CRJC				i		05 47 27.5	
	comp=Z,532nm,0.4s						
DABV	Dabajuro	1.40	124	eP	Pn	05 47 08.8	0.0
DABV				eS	Sn	05 47 27.5	+1.1
DABV				i		05 47 33.4	
	comp=Z,3µm,0.3s						
DABV	Dabajuro	1.40	124	eP	Pn	05 47 08.9	+0.2
DABV				eS	Sn	05 47 27.5	+1.1
MCQV	Machiques	1.79	203	eP	Pn	05 47 15.1	+1.2
MCQV				eS	Sn	05 47 37.5	+1.7
MONV	Montecano	1.83	82	eP	Pn	05 47 14.6	+0.1
MONV				eS	Sn	05 47 37.7	+1.0
CVALL	Valledupar, Ce	1.84	230	eP	Pn	05 47 15.1	+0.4
CVALL				eS	Sn	05 47 37.8	+0.7
SIQV	Siquisique	2.24	118	eP	Pn	05 47 20.6	+0.5
SIQV				eS	Sn	05 47 47.5	+0.8
SMRC	Santa Marta, M	2.42	257	eP	Pn	05 47 20.9	-1.5
SMRC				eS	Sn	05 47 49.0	-1.9
SMRC				i		05 47 56.4	
	comp=Z,223nm,0.5s						
LL6C	La Loma 6 Bece	2.42	216	eP	Pn	05 47 23.0	+0.4
LL6C				eS	Sn	05 47 52.5	+1.4
LL6C				i		05 47 57.4	
	comp=Z,2µm,0.3s						
CURV	Curarigua	2.49	132	eP	Pn	05 47 26.4	+2.9
CURV				eS	Sn	05 47 54.1	+1.3
TORV	Torococo	2.65	144	eP	Pn	05 47 25.9	+0.2
TORV				eS	Sn	05 47 56.7	-0.1
LL1C	La Loma 1 Cana	2.74	218	eP	Pn	05 47 27.1	+0.1
LL1C				eS	Sn	05 47 59.9	+1.0
LL1C				i		05 48 07.5	
	comp=Z,742nm,0.5s						
VIGV	El Vigia	2.89	171	eP	Pn	05 47 29.6	+0.7
VIGV				eS	Sn	05 48 03.0	+0.5
JACV	Jacura	3.00	102	eP	Pn	05 47 30.9	+0.5
JACV				eS	Sn	05 48 05.0	-0.2
EAV	Pico El Aguila	3.00	161	eS	Sn	05 48 07.0	+0.9
ARGC	Ariguani, Magd	3.01	233	eP	Pn	05 47 30.6	+0.1
ARGC				eS	Sn	05 48 05.1	-0.3
ARGC				i		05 48 18.3	
	comp=Z,35nm,0.4s						
SDV	Santo Domingo	3.04	157	eP	Pn	05 47 31.4	+0.2
SDV				eS	Sn	05 48 06.3	-0.2
SANV	Sanarito	3.14	134	eP	Pn	05 47 33.5	+1.0
SANV				eS	Sn	05 48 09.3	+0.4
SOCV	Socops	3.53	164	eP	Pn	05 47 37.7	-0.1
SOCV				eS	Sn	05 48 17.6	-0.8
SOCV				i		05 48 19.3	
	comp=Z,635nm,0.3s						
SOCV	Socops	3.53	164	eP	Pn	05 47 37.8	+0.1
SOCV				eS	Sn	05 48 17.6	-0.8
SMLC	San Martn de	3.64	218	eP	Pn	05 47 38.1	-1.1
SMLC				eS	Sn	05 48 18.7	-2.2
SMLC				i		05 48 22.3	
	comp=Z,52nm,0.4s						
OCAC	Ocana	3.75	203	eP	Pn	05 47 40.7	-0.1
OCAC				eS	Sn	05 48 24.1	+0.3
OCAC				i		05 48 28.9	
	comp=Z,443nm,0.4s						
SJCC	San Jacinto, C	3.76	242	eP	Pn	05 47 42.8	+2.0
SJCC				eS	Sn	05 48 24.7	+0.8
SJCC				i		05 48 33.0	
	comp=Z,61nm,0.6s						
MAPV	Macapo	3.80	119	eP	Pn	05 47 41.5	+0.2
MAPV				eS	Sn	05 48 23.3	-1.5
CAPV	Capacho	3.85	187	eP	Pn	05 47 42.8	+0.5
CAPV				eS	Sn	05 48 25.8	-0.6
TURV	Turiamo	4.11	107	eP	Pn	05 47 44.6	-0.9
TURV				eS	Sn	05 48 30.8	-1.5
PAMC	Pamplona, Colo	4.43	191	eP	Pn	05 47 50.7	+0.3
PAMC				eS	Sn	05 48 42.1	+1.2
PAMC				i		05 48 44.7	
	comp=Z,40nm,0.3s						
BENV	Beln	4.50	112	eP	Pn	05 47 51.5	+0.5
BENV				eS	Sn	05 48 41.5	-0.7
BAUV	El Baul	4.63	126	eP	Pn	05 47 53.4	+0.7
BAUV				eS	Sn	05 48 44.1	-1.1
BRRC	Barranca, Sant	4.94	202	eP	Pn	05 47 57.2	+0.3
BRRC				eS	Sn	05 48 53.0	+0.2
BRRC				i		05 48 59.0	

	comp=Z,26nm,0.4s						
FUNV	FUNVISIS	5.07	104	eP	Pn	05 47 57.7	-1.2
FUNV				eS	Sn	05 48 51.2	-5.0
ZARC	Zaragoza, Cauc	5.15	216	eP	Pn	05 48 00.0	+0.2
ZARC				eS	Sn	05 48 57.5	-0.4
ZARC				i		05 49 12.8	
	comp=Z,35nm,0.4s						
ELOV	Elorza	5.22	154	eP	Pn	05 48 00.9	+0.1
ELOV				eS	Sn	05 48 59.1	-0.5
ELOV	Elorza	5.22	154	eP	Pn	05 48 01.1	+0.3
ELOV				eS	Sn	05 48 57.4	-2.2
TAMC	Tame, Arauca	5.24	180	eP	Pn	05 48 01.5	+0.4
TAMC				eS	Sn	05 48 59.2	-1.1
TAMC				i		05 49 07.6	
	comp=Z,40nm,0.3s						
BARC	Barichara	5.26	195	eP	Pn	05 48 02.7	+1.2
BARC				eS	Sn	05 49 01.7	+0.7
BARC				i		05 49 09.2	
	comp=Z,38nm,0.6s						
UREC	San Jos de Ur	5.37	223	eP	Pn	05 48 03.7	+0.8
UREC				eS	Sn	05 49 02.5	-0.9
UREC				i		05 49 13.4	
	comp=Z,18nm,0.3s						
BIRV	Birongo	5.59	102	eP	Pn	05 48 04.5	-1.4
BIRV				eS	Sn	05 49 05.8	-2.9
PTBC	PUERTO BERRIO,	5.76	207	eP	Pn	05 48 08.0	-0.2
PTBC				eS	Sn	05 49 12.7	-0.2
PTBC				i		05 49 23.1	
	comp=Z,34nm,0.4s						
RUSC	La Rusia	5.91	192	eP	Pn	05 48 11.2	+0.5
MERV	Las Mercedes	5.96	114	eP	Pn	05 48 11.2	+0.2
MERV				eS	Sn	05 49 14.9	-3.0
DBBC	Dabeiba	6.36	223	eP	Pn	05 48 17.8	+1.2
SPBC	San Pablo de B	6.42	200	eP	Pn	05 48 17.2	-0.1
SPBC				eS	Sn	05 49 28.8	-0.4
SPBC				i		05 49 37.8	
	comp=Z,17nm,0.4s						
HELC	Santa Helena	6.59	214	eP	Pn	05 48 22.3	+2.3
HELC				eS	Sn	05 49 33.0	-0.9
HELC				i		05 49 48.9	
	comp=Z,19nm,0.5s						
CACV	CAICARA DEL OR	6.64	128	eP	Pn	05 48 26.4	+6.1
CACV				eS	Sn	05 49 41.8	+7.2
CBOC	Ciudad Bolivar	7.13	216	eP	Pn	05 48 28.7	+1.5
PCRV	Puerto La Cruz	7.22	101	eP	Pn	05 48 28.2	-0.1
PCRV				eS	Sn	05 49 45.2	-3.7
GUY2C	Guyana, Caldas	7.33	209	eP	Pn	05 48 31.7	+1.5
GUY2C				eS	Sn	05 49 52.8	+0.6
GUY2C				i		05 50 07.8	
	comp=Z,14nm,0.6s						
GUVC	San Jose del G	9.14	185	eP	Pn	05 48 53.1	-1.4
GUVC				eS	Sn	05 50 30.6	-5.3
GUVC				i		05 50 39.7	
	comp=Z,20nm,0.3s						

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*IDC **12** 06:22:04.2±0.8, 59°.60S×26°.09W, h0^{km}, mb4.1/5, mb1 4.3/6, mb1mx4.0/21, mbtmp4.1/6, ML4.4/1, Error ellipse: s-maj=34.7km s-min=23.8km az=65.0*

*NEIC **12** 06:22:16.6±1.1, 59°.6S±0°.1×26°.4W±0°.2, h93^{km}±6^{km}, mb4.7/21, Error ellipse: s-maj=18.4km s-min=15.5km az=175.0*

ISC 12 06:22:09.8±0.6**, 59°.7S**±0°.1×**26°.0W**±0°.1**, h40**^{km}**, n43, σ1^s.31**/39**, mb4.6**/13**, 1C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.84	309	Pn	Pn	06 24 09.0	+7.8
VNA1	Neumayer--Stat	13.24	154	P	Pn	06 25 13.5	-1.4
VNA1				S	Sn	06 27 28.5	-12
VNA3	Neumayer Olymp	13.40	157	P	Pn	06 25 15.1	-2.0
VNA3				S	Sn	06 27 33.1	-11
VNA2	Neumayer--Watz	13.64	154	P	Pn	06 25 18.0	-2.4
	baz=308,slow=15						
VNA2				S	Sn	06 27 39.5	-11
SNAA	Sanae	15.22	152	P	Pn	06 25 39.9	-1.8
SNAA				S	Sn	06 28 15.6	-13
SNAA	Sanae	15.22	152	Pn	Pn	06 25 39.9	-1.8
	1.7nm,0.3s,baz=314,slow=16,SNR=80						
SNAA				Sn	Sn	06 28 15.1	-14
	0.2nm,0.3s,baz=334,slow=15,SNR=2.1						
SNAA	Sanae	15.22	152		Pn	06 25 39.7	-1.9
PMSA	Palmer Station	18.23	238	Pn	Pn	06 26 22.0	+2.7
PMSA				IAmb	IAmb	06 26 47.2	
	comp=Z,97nm,1.4s						
EFI	East Falkland	19.58	280	P	Pn	06 26 35.1	-0.6
DSPA	Despedida	23.49	265	P	P	06 27 15.4	-0.2
MG02	Cerro Sombrero	24.60	267	P	P	06 27 24.6	-1.3
GO09	Cerro Castillo	27.04	267	P	P	06 27 45.4	-2.6
GO09				IAmb	IAmb	06 28 04.8	
	comp=Z,55nm,1.4s						
SYO	Syowa Base	28.46	136⇑	epP	pP	06 28 26.5	+16
QSPA	South Pole Qui	30.59	180	P	P	06 28 21.1	+1.6
	comp=Z,1.9nm,0.6s,baz=219,slow=1.6,SNR=28						
QSPA	South Pole Qui	30.59	180	P	P	06 28 20.8	+1.3
TRQA	Tornquist	31.42	297	P	P	06 28 27.9	+1.0
PLCA	Paso Flores	33.37	284	P	P	06 28 43.7	-0.4
	comp=Z,1.1nm,0.7s,baz=189,slow=9.8,SNR=2.9						
PLCA	Paso Flores	33.37	284	IAmb	IAmb	06 28 46.5	
	comp=Z,14nm,1.5s						
LC01	Cunco	35.43	285	P	P	06 29 01.5	-0.3
LC01				IAmb	IAmb	06 29 18.4	
	comp=Z,15nm,1.4s						
MT01	Popeta	39.15	291	P	P	06 29 32.9	-0.5
MT01				IAmb	IAmb	06 29 56.8	
	comp=Z,21nm,1.4s						
MT02	Curacav	39.60	291	P	P	06 29 36.9	-0.2
MT02				IAmb	IAmb	06 30 05.0	
	comp=Z,27nm,1.5s						
VNDA	Vanda	42.99	183	P	P	06 30 06.4	+2.0
LVC	Limon Verde	47.69	302	P	P	06 30 43.3	+0.7
LVC				IAmb	IAmb	06 31 10.9	
	comp=Z,14nm,1.3s						
PB07	IPOC Station P	48.89	301	P	P	06 30 51.7	0.0
PTLB	Pontes e Lacer	50.34	317	P	P	06 31 01.6	-0.9
PTLB				IAmb	IAmb	06 31 07.9	
	comp=Z,4.0nm,1.3s						
PB16	IPOC Station P	51.73	304	P	P	06 31 13.5	-0.1
PB16				IAmb	IAmb	06 31 20.1	
	comp=Z,13nm,1.5s						
LPAZ	La Paz	52.99	306	P	P	06 31 22.9	-0.1
	comp=Z,0.7nm,0.3s,baz=117,slow=4.5,SNR=9.5						
LPAZ	La Paz	52.99	306	IAmb	IAmb	06 31 44.5	
	comp=Z,3.9nm,1.3s						
LSZ	Lusaka	59.20	66	P	P	06 32 08.9	+2.0
LSZ				IAmb	IAmb	06 32 09.5	
	comp=Z,2.1nm,0.5s						
RPN	Rapa Nui	63.67	261	P	P	06 32 36.9	+0.1
TORD	Torodi Ar. Bea	75.93	28	P	P	06 33 53.1	+1.0
	comp=Z,0.8nm,0.4s,baz=198,slow=6.8,SNR=7.7						
ASAR	Alice Springs	95.36	162	P	P	06 35 29.3	-0.4
	comp=Z,0.5nm,0.6s,baz=186,slow=4.3,SNR=11						
FINES	FINESS Array B	127.28	28	PKP	PKPdf	06 41 08.1	-0.1
	comp=Z,3.4nm,1.0s,baz=263,slow=5.5,SNR=3.6						
ARCES	ARCESS Array B	134.06	23	PKP	PKiKP	06 41 21.6	-0.7
	comp=Z,1.2nm,0.7s,baz=192,slow=1.8,SNR=6.0						
YKA	Yellowknife Ar	139.21	315	PKP	PKPdf	06 41 30.4	-0.3
	comp=Z,0.4nm,0.6s,baz=125,slow=2.5,SNR=6.1						
A36M	Sachs Harbour	147.57	325		PKPbc	06 41 46.5	-1.3
INK	Inuvik	148.92	317		PKPbc	06 41 50.2	-1.2
DAWY	Dawson	149.57	307		PKPbc	06 41 51.8	-1.5
M27K	Edge Creek, AK	149.92	303	PKPbc	PKPbc	06 41 54.1	-0.2
SONM	Songino Array	150.16	92	PKPbc	PKiKP	06 41 55.7	-0.5
	comp=Z,2.3nm,0.7s,baz=222,slow=2.4,SNR=17						
SONM	Songino Array	150.16	92	PKPbc	PKiKP	06 41 55.9	-0.3
BCAR	Beaver Creek A	150.16	304	PKPbc	PKPbc	06 41 54.5	-0.3
ILAR	Eielson Array	152.87	306	PKPbc	PKPbc	06 41 59.9	-0.9
	comp=Z,0.3nm,0.4s,baz=127,slow=1.2,SNR=3.1						

IDC 12 06:37:12.1±2.6**, 3°.99S**×**130°.03E, h0**^{km}**, mb3.4**/1**, mb1 3.5**/3**, mb1mx2.9**/28**, mbtmp3.3**/3**, ML3.1**/2**, Error ellipse: s-maj=163.9km s-min=31.3km az=70.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.41	166	Pn	Pn	06 41 02.4	-1.5
	0.1nm,0.3s,baz=349,slow=13,SNR=3.5						
ASAR	Alice Springs	19.92	170	P	P	06 41 46.2	+0.6
	0.1nm,0.3s,baz=346,slow=10.0,SNR=16						
MKAR	Makanchi Array	65.75	326	P	P	06 47 58.8	0.0
	0.3nm,0.8s,baz=121,slow=9.5,SNR=2.2						

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*IDC **12** 06:55:34.6±1.5, 52°.53N×168°.18W, h0^{km}, mb3.7/12, mb1 3.9/13, mb1mx3.6/45, mbtmp3.7/13, ML3.3/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/41, Error ellipse: s-maj=38.6km s-min=19.1km az=3.0*

*AEIC **12** 06:55:37.0±1.7, 52°.26N±0°.05×168°.05W±0°.06, h32^{km}±2^{km}, ML3.4/43, mb3.8/9(NEIC), Error ellipse: s-maj=7.4km s-min=5.1km az=185.0*

*NEIC **12** 06:55:38.3±1.8, 52°.31N±0°.07×168°.11W±0°.06, h29^{km}±7^{km}, Error ellipse: s-maj=10.4km s-min=5.1km az=171.0*

ISC 12 06:55:36.9±1.5**, 52°.34N**±0°.07×**168°.09W**±0°.05**, h20**^{km}±5^{km}**, n61, σ0^s.89**/63**, mb3.7**/11**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.79	324		Pg	06 55 52.5	+0.2
NIKH					Sn	06 56 05.3	+1.2
OKSP	Okmok Steeple	0.92	353		Pg	06 55 54.6	-0.3
OKTU	Okmok Mt. Tuli	1.05	2		Pg	06 55 57.0	-0.3
OKCE	Okmok Cone E	1.09	358		Pn	06 55 57.6	+0.5
OKNC	Okmok New Cone	1.12	359		Pg	06 55 58.3	-0.3
MGOD	Makushin Gods	1.63	26		Pn	06 56 05.0	+0.4
MREP	Makushin Rep't	1.68	28		Pn	06 56 05.7	+0.4
MSW	Makushin Switc	1.76	26		Pn	06 56 07.0	+0.6
MSW					Sb	06 56 29.6	-0.6
MNAT	Makushin Natee	1.77	28		Pn	06 56 06.7	+0.4
MNAT					Sb	06 56 29.7	-0.6
UNV	Unalaska Valle	1.79	32		Pn	06 56 06.8	+0.2
UNV					Sb	06 56 30.1	-0.8
MTBL	Makushin Table	1.84	27		Pn	06 56 08.2	+0.7
AKMO	Akutan Morgan	2.15	35		Pn	06 56 12.4	+0.7
AKMO					Sn	06 56 39.4	+1.5
ZRO	Akutan Zero	2.17	35		Pn	06 56 12.7	+0.8
AKLV	Akutan Long Va	2.23	34		Pn	06 56 13.7	+0.9
AKSA	Akutan Strait	2.30	38		Pn	06 56 13.9	+0.2
WESP	Westdahl Peak	2.95	42		Pn	06 56 22.8	+0.1
WESP					Sn	06 56 58.7	+1.1
WECS	Westdahl Cape	2.96	41		Pn	06 56 23.6	+0.9
WESE	West Dahl East	2.99	43		Pn	06 56 24.0	+0.7
SSBA	Shishaldin	3.40	43		Pn	06 56 29.5	+0.7
KOFP	Korovin Flat P	3.69	271		Pn	06 56 33.9	+1.1
KOKL	Mount Kliuchef	3.75	272		Pn	06 56 34.8	+1.1
ATKA	Atka Island	3.75	270		Pn	06 56 34.2	+0.6
ATKA					Sn	06 57 17.3	+0.1
FALS	False Pass	3.76	46		Pn	06 56 34.1	+0.4
GSMY	Great Sitkin M	4.91	270		Pn	06 56 50.4	+0.9
GSTD	Great Sitkin T	4.96	270		Pn	06 56 50.9	+0.5
GSCK	Great Sitkin C	4.98	269		Pn	06 56 51.2	+0.7
SPIA	Saint Paul Isl	5.01	346		Pn	06 56 53.4	+2.5
ADK	Adak	5.32	268		Pn	06 56 55.8	+0.7
SDPT	Sand Point	5.42	53		Pn	06 56 57.9	+1.4
KIWB	Kanaga Island	5.61	269		Pn	06 56 59.8	+0.6
KIKV	Kanaga Island	5.62	269		Pn	06 57 00.5	+1.2
KIMD	Kanaga Island	5.67	268		Pn	06 57 00.8	+0.8
TASE	Tanaga Southea	6.15	269		Pn	06 57 07.9	+1.2
AMKA	Amchitka	7.87	268		Pn	06 57 30.6	+0.4
KDAK	Kodiak Island	10.42	52	Pn	Pn	06 58 04.0	-1.0
	0.6nm,0.3s,baz=186,slow=4.5,SNR=28						
H21K	Melozitna Rive	15.43	24	P	P	06 59 18.6	+1.0
H21K				IAmb	IAmb	06 59 19.6	
	comp=Z,8.3nm,1.0s						
MLY	Manley	15.51	28	P	P	06 59 18.0	-0.6
ILAR	Eielson Array	16.54	33	Pn	Pn	06 59 25.9	-1.6
	comp=Z,0.1nm,0.3s,baz=228,slow=11,SNR=7.9						
L26K	Log Cabin Wild	16.89	41	P	P	06 59 33.6	-0.2
L26K				IAmb	IAmb	06 59 34.0	
	comp=Z,5.7nm,0.6s						
DOT	Dot Lake	16.91	39	P	Pn	06 59 32.7	+0.5
H24K	Noodor Dome	16.93	29	P	P	06 59 33.6	-0.7
PETK	Petropavlovsk-	20.62	286	P	P	07 00 14.4	-0.4
	comp=Z,2.1nm,0.5s,baz=91,slow=13,SNR=12						
PETK				LR	LR	07 09 30.6	
	comp=Z,17nm,18.7s,baz=66,slow=41						
EPYK	Eagle Plains	20.96	36	P	P	07 00 17.7	-0.6
INK	Inuvik	22.94	33	P	P	07 00 37.8	-1.6
	comp=Z,1.1nm,0.5s,baz=229,slow=10,SNR=14						
INK	Inuvik	22.94	33	P	P	07 00 38.3	-1.2
INK				IAmb	IAmb	07 00 45.0	
	comp=Z,2.5nm,0.7s						
SEY	Seymchan	23.27	313	P	P	07 00 41.7	-1.1
	comp=Z,0.8nm,0.4s,baz=80,slow=13,SNR=4.0						
H11S1	WAKE ISLAND Hy	39.11	220	T	T	07 45 00.2	
	baz=23,slow=76,SNR=9.7						
H11S2	WAKE ISLAND Hy	39.13	220	T	T	07 45 12.9	
	baz=23,slow=76,SNR=7.3						
H11S3	WAKE ISLAND Hy	39.13	220	T	T	07 44 51.7	
	baz=23,slow=76,SNR=6.2						
PDAR	Pinedale Array	39.64	80	P	P	07 03 08.2	+0.8
	comp=Z,0.3nm,0.6s,baz=271,slow=4.7,SNR=4.2						
SUMG	Summit	50.58	17	iP	P	07 04 34.0	0.0
TXAR	Lajitas Array	51.96	90	P	P	07 04 45.6	+1.0
	comp=Z,0.5nm,0.7s,baz=283,slow=5.4,SNR=6.6						
SONM	Songino Array	51.99	302	P	P	07 04 44.6	0.0
	comp=Z,0.3nm,0.4s,baz=40,slow=6.6,SNR=3.0						
SONM	Songino Array	51.99	302	IAmb	IAmb	07 04 48.9	
	comp=Z,1.4nm,1.3s						
MKAR	Makanchi Array	64.39	314	P	P	07 06 10.5	-0.8
	comp=Z,0.2nm,0.4s,baz=44,slow=8.6,SNR=3.2						
FINES	FINESS Array B	66.00	353	P	P	07 06 20.6	-0.8
	comp=Z,1.9nm,0.7s,baz=343,slow=6.0,SNR=6.2						
NOA	NORSAR Array B	66.97	0	P	P	07 06 26.9	-0.7
	comp=Z,1.0nm,0.7s,baz=7.7,slow=6.6,SNR=1.4						
AKASG	Malin Array Be	76.29	349	P	P	07 07 22.9	-1.0
	comp=Z,0.8nm,0.5s,baz=17,slow=6.2,SNR=4.9						
AKASG	Malin Array Be	76.29	349	IAmb	IAmb	07 07 32.2	
	comp=Z,1.3nm,1.4s						
BRTR	Keskin Array B	86.38	343	P	P	07 08 18.6	+0.9
	comp=Z,0.8nm,0.6s,baz=350,slow=4.0,SNR=4.0						
ESDC	Sonseca Array	87.33	12	P	P	07 08 22.8	+0.6
	comp=Z,0.5nm,1.0s,baz=356,slow=4.9,SNR=4.2						

DJA 12 07:08:48.6±0.9**, 10°S**±5°×**12°5E**±°**, h10**^{km}**, M4.0**/6**, mb5.1**/1**, mB5.2**/1**, MLv3.5**/6**, Mw(mB)4.5**/1**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.67	334	P	Pg	07 09 01.0	-0.6
SOEI				S	Sb	07 09 11.6	-0.3
BATI	Baumata	0.91	280	P	Pg	07 09 05.7	-0.4
BATI				S	Sb	07 09 19.5	+0.9
EDFI	Ende, Flores	3.26	299	P	Pn	07 09 39.2	-0.7
BASI	Baing, Sumba	3.93	272	P	Pb	07 09 54.8	-3.3
WBSI	Waikabubak, Su	5.15	278	P	Pn	07 10 07.0	+1.1

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*IDC **12** 07:07:45.3±8.4, 3°.26S×116°.52E, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.4/28, mbtmp3.9/3, Error ellipse: s-maj=243.6km s-min=128.0km az=39.0*

*DJA **12** 07:09:09.2±0.7, 7°S±5°×12°0E±°, h430^{km}±9^{km}, M3.9/13, mb4.3/3, mB4.9/1, MLv3.6/13, Mw(mB)4.2/1*

ISC 12 07:09:09.5±1.1**, 7°.3S**±0°.1×**119°.8E**±0°.1**, h450**^{km}**, n15, σ2^s.23**/15**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSSI	Bau Bau, Buton	1.30	30	P	P	07 10 04.7	-2.1
BKSI	Bulukumba	1.96	8	P	P	07 10 08.7	-1.2
EDFI	Ende, Flores	2.34	129	P	P	07 10 08.0	-4.2
WBSI	Waikabubak, Su	2.39	191	P	P	07 10 09.1	-3.3
PLAI	Plampang	2.56	233	P	P	07 10 11.4	-2.1
BASI	Baing, Sumba	3.01	166	P	P	07 10 14.2	-2.4
TWSI	Taliwang, Sumb	3.27	243	P	P	07 10 17.3	-1.3
BATI	Baumata	4.77	128	P	P	07 10 30.4	-1.3
IGBI	Denpasar	4.90	251	P	P	07 10 32.3	-0.6
SOEI	Soe	5.02	120	P	P	07 10 32.6	-1.6
MPSI	Mapaga	7.56	0	P	P	07 11 00.4	+0.1
	0.4nm2µm83nm,0.6s						
PCJI	Pacitan	8.64	263	P	P	07 11 11.2	-0.7
WRA	Warramunga Arr	18.87	133	P	P	07 13 01.5	+0.8
	0.7nm,0.3s,baz=313,slow=11,SNR=8.3						
ASAR	Alice Springs	21.16	142	P	P	07 13 23.3	+1.7
	1.1nm,0.5s,baz=316,slow=8.2,SNR=13						
STKA	Stephens Creek	31.78	143	P	P	07 14 57.4	+2.0
	1.3nm,0.6s,baz=311,slow=11,SNR=2.9						

IDC 12 07:16:50.5±2.5**, 3°.95S**×**130°.25E, h0**^{km}**, mb3.4**/1**, mb1 3.7**/4**, mb1mx3.3**/32**, mbtmp3.5**/4**, ML3.2**/3**, Error ellipse: s-maj=115.1km s-min=29.8km az=74.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.77	197	Pn	Pn	07 20 20.5	-0.3
	0.1nm,0.3s,baz=29,slow=12,SNR=3.1						
WRA	Warramunga Arr	16.39	166	Pn	Pn	07 20 40.0	-2.2
	0.1nm,0.3s,baz=350,slow=13,SNR=3.3						
ASAR	Alice Springs	19.91	170	P	Pn	07 21 24.9	-0.6
	0.2nm,0.3s,baz=349,slow=11,SNR=20						
MKAR	Makanchi Array	65.84	326	P	P	07 27 37.9	-0.1
	0.2nm,0.5s,baz=121,slow=6.0,SNR=1.8						

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*NEIC **12** 07:34:02.5±2.0, 4°.16S±0°.07×129°.38E±0°.09, h6^{km}±5^{km}, mb4.4/21, Error ellipse: s-maj=13.3km s-min=10.1km az=88.0*

*DJA **12** 07:34:04.4±0.5, 4°S±4°×12°9E±°, h53^{km}±17^{km}, M4.0/8, mb4.1/1, MLv4.0/8*

*IDC **12** 07:34:05.3±0.8, 4°.17S×129°.19E, h26^{km}±3^{km}, mb4.0/8, mb1 4.1/11, mb1mx3.7/45, mbtmp4.2/11, ML4.1/3, MS2.9/2, Ms1 2.9/2, ms1mx2.3/36, Error ellipse: s-maj=35.5km s-min=17.9km az=78.0*

ISC 12 07:34:06.2±0.5**, 4°.14S**±0°.05×**129°.34E**±0°.05**, h36**^{km}**, n62, σ1^s.52**/66**, mb4.4**/16**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.89	333	P	Pn	07 34 20.6	-1.6
AAI	Ambon	1.23	292	P	Pn	07 34 25.5	-1.3
AAI				S	Sn	07 34 41.7	-0.4
FAKI	Fak Fak	3.15	67	P	Pn	07 34 53.5	+0.3
FAKI				S	Sn	07 35 29.0	-0.6
FAKI	Fak Fak	3.15	67	Pn	Pn	07 34 53.4	+0.1
SIJI	Sorong	3.78	31	Pn	Pn	07 35 02.2	+0.3
	22nm,0.3s,baz=253,slow=19,SNR=21						
SIJI				Sn	Sn	07 35 43.7	-1.4
	24nm,0.3s,baz=57,slow=22,SNR=9.4						
SWI	Sorong	3.78	31	P	Pn	07 35 02.5	+0.6
LBMI	Labuha	3.93	332	P	Pn	07 35 03.8	-0.2
SANI	Sanana	3.94	302	P	Pn	07 35 02.3	-1.8
SANI				S	Sn	07 35 47.2	-1.9
GTOI	Gorontalo	7.91	307	P	Pn	07 36 02.5	+3.9
DRS	Darwin Rock St	8.38	169	P	Pn	07 36 05.9	+0.8
MTN	Manton Dam	8.83	169		Pn	07 36 10.3	-1.0
MTN	Manton Dam	8.83	169	P	Pn	07 36 11.2	-0.1
KAPI	Kappang	9.60	264	LR	LR	07 40 05.1	
	comp=Z,39nm,18.4s,baz=121,slow=38						
KNRA	Kununurra	11.48	183	Pn	Pn	07 36 46.6	-1.0
KNRA	Kununurra	11.48	183	P	Pn	07 36 47.9	+0.3
FITZ	Fitzroy Crossi	14.34	194	Pn	Pn	07 37 25.1	-1.5
	0.2nm,0.3s,baz=29,slow=15,SNR=3.0						
WB0	Warramunga Arr	16.30	163		Pn	07 37 49.3	-3.0
WRAB	Tennant Creek	16.44	163	P	Pn	07 37 51.3	-2.9
WRA	Warramunga Arr	16.45	163	Pn	Pn	07 37 49.9	-4.4
	0.5nm,0.3s,baz=349,slow=13,SNR=28						
WRA	Warramunga Arr	16.45	163		Pn	07 37 50.2	-4.1
WB2	Warramunga Arr	16.45	163	Pn	Pn	07 37 50.9	-3.4
WB2				IAmb	IAmb	07 37 57.8	
	comp=Z,13nm,1.0s						
COEN	Coen	16.77	126	P	Pn	07 37 56.0	-2.5
COEN	Coen	16.77	126	P	P	07 38 00.5	+0.1
QIS	Mount Isa	19.14	149	P	P	07 38 25.3	-1.1
PSA00	Pilbara Seismi	19.63	207	P	Pn	07 38 32.5	-0.8
PSA00				IAmb	IAmb	07 38 33.8	
	comp=Z,14nm,0.8s						
PSA00	Pilbara Seismi	19.63	207	P	P	07 38 31.8	+0.1
PSA00				IAmb	IAmb	07 38 33.7	
	comp=Z,7.3nm,0.9s						
AS31	Alice Springs	19.91	168	Pn	Pn	07 38 35.7	-0.9
AS31				IAmb	IAmb	07 38 38.9	
	comp=Z,5.5nm,0.7s						
ASAR	Alice Springs	19.91	168	P	Pn	07 38 35.5	-1.2
	comp=Z,1.5nm,0.3s,baz=349,slow=10,SNR=126						
ASAR	Alice Springs	19.91	168	P	Pn	07 38 35.6	-1.0
MTSU	Mount Surprise	20.21	135	P	Pn	07 38 39.1	-1.1
WRKA	Warakurna	20.80	183	P	Pn	07 38 46.4	-0.7
LEM	Lembang	21.78	262	LR	LR	07 47 47.3	
	comp=Z,39nm,18.0s,baz=70,slow=38						
OOD	Oodnadatta	24.29	166	P	P	07 39 20.1	-0.1
MULG	Mulgathing	26.38	171	P	P	07 39 41.7	+2.5
	comp=Z,12nm,1.3s						
FORT	Forrest	26.52	182	P	P	07 39 41.1	+0.6
FORT	Forrest	26.52	182	P	P	07 39 41.4	+0.9
LCRK	Leigh Creek	27.48	163	P	P	07 39 51.8	+2.7
	comp=Z,15nm,1.6s						
BBOO	Buckleboo	29.21	168	P	P	07 40 04.5	0.0
STKA	Stephens Creek	29.90	159	P	P	07 40 11.1	+0.5
	comp=Z,1.2nm,0.4s,baz=358,slow=9.0,SNR=4.7						
STKA	Stephens Creek	29.90	159	IAmb	IAmb	07 40 17.8	
	comp=Z,4.5nm,1.9s						
CMAR	Chiang Mai Arr	37.43	308	P	P	07 41 17.4	+1.1
CHTO	Chiang Mai	37.63	308	P	P	07 41 19.0	+1.1
CHTO				IAmb	IAmb	07 41 20.1	
	comp=Z,5.7nm,0.7s						
SONM	Songino Array	55.54	341	P	P	07 43 38.7	+0.7
	comp=Z,0.5nm,0.5s,baz=155,slow=8.5,SNR=5.3						
SONM				pP	pP	07 43 47.3	-0.4
	comp=Z,0.8nm,0.6s,baz=161,slow=7.9,SNR=4.5						
SONM	Songino Array	55.54	341	IAmb	IAmb	07 43 39.2	
	comp=Z,8.7nm,1.9s						
MK31	Makanchi Array	65.49	326	P	P	07 44 46.3	+0.5
MK31				IAmb	IAmb	07 44 47.5	
	comp=Z,7.4nm,1.6s						
MKAR	Makanchi Array	65.49	326	P	P	07 44 46.1	+0.3
	comp=Z,1.1nm,0.5s,baz=123,slow=7.6,SNR=14						
MKAR				pP	pP	07 44 53.9	-1.6
	comp=Z,2.4nm,0.7s,baz=127,slow=8.1,SNR=12						
MAKZ	Makanchi	65.67	326	P	P	07 44 47.5	+0.6
MAKZ				IAmb	IAmb	07 44 50.0	
	comp=Z,3.0nm,1.0s						
ZAA0	Zalesovo Array	68.75	334	P	P	07 45 06.5	+0.3
ZAA0				IAmb	IAmb	07 45 07.8	
	comp=Z,2.7nm,0.8s						
ZALV	Zalesovo Beam	68.75	334	P	P	07 45 05.7	-0.5
	comp=Z,2.2nm,0.8s,baz=128,slow=6.3,SNR=7.1						
ZALV				pP	pP	07 45 14.2	-1.9
	comp=Z,2.6nm,0.8s,baz=104,slow=6.3,SNR=4.3						
ZALV	Zalesovo Beam	68.75	334	P	P	07 45 06.2	0.0
SEY	Seymchan	69.14	11	P	P	07 45 09.9	+1.4
	comp=Z,1.0nm,0.2s,baz=202,slow=2.0,SNR=8.3						
SEY				pP	pP	07 45 18.1	0.0
	comp=Z,2.5nm,0.6s,baz=191,slow=7.6,SNR=2.6						
KURBB	Kurchatov Arra	69.75	328	P	P	07 45 12.6	+0.1
	comp=Z,3.0nm,0.8s,baz=127,slow=5.5,SNR=32						
KURBB				pP	pP	07 45 20.8	-1.5
	comp=Z,4.8nm,0.9s,baz=128,slow=5.5,SNR=13						
KURK	Kurchatov	69.75	328	P	P	07 45 12.9	+0.4
BVAR	Borovoye Array	75.31	328	P	P	07 45 46.5	+0.9
	comp=Z,1.2nm,0.6s,baz=163,slow=16,SNR=5.5						
BVAR				pP	pP	07 45 54.5	-1.0
	comp=Z,2.1nm,0.8s,baz=172,slow=12,SNR=4.8						
VNDA	Vanda	75.35	173	P	P	07 45 45.5	+0.1
TIXI	Tiksi	75.65	360	P	P	07 45 47.6	+0.5
	comp=Z,1.1nm,0.5s,baz=175,slow=3.7,SNR=4.2						
TIXI				pP	pP	07 45 55.8	-1.1
	comp=Z,0.9nm,0.5s,baz=170,slow=4.8,SNR=2.3						
TIXI	Tiksi	75.65	360	IAmb	IAmb	07 45 58.7	
	comp=Z,14nm,1.8s						
SBA	Scott Base	76.24	172	P	P	07 45 50.9	+0.4
ABKAR	Akbulak array	79.88	321	P	P	07 46 11.5	+0.4
ABKAR				IAmb	IAmb	07 46 20.1	
	comp=Z,5.2nm,1.3s						
ABKAR	Akbulak array	79.88	321	P	P	07 46 11.0	-0.2
QSPA	South Pole Qui	85.82	180	P	P	07 46 41.1	-0.8
QSPA				IAmb	IAmb	07 47 38.7	
	comp=Z,10.0nm,1.7s						
TORD	Torodi Ar. Bea	127.56	283	PKP	PKiKP	07 53 08.9	-0.2
	comp=Z,0.6nm,0.7s,baz=26,slow=2.2,SNR=4.8						

IDC 12 07:42:06.6±2.1**, 2°.15N**×**127°.14E, h0**^{km}**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/40**, mbtmp3.5**/4**, Error ellipse: s-maj=113.8km s-min=26.7km az=69.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.18	184	P	P	07 46 43.6	+0.7
	1.1nm,0.5s,baz=20,slow=10,SNR=5.6						
WRA	Warramunga Arr	23.07	162	P	P	07 47 13.7	-0.3
	1.4nm,0.4s,baz=340,slow=11,SNR=42						
ASAR	Alice Springs	26.50	166	P	P	07 47 45.9	0.0
	0.2nm,0.4s,baz=344,slow=7.7,SNR=7.2						
MKAR	Makanchi Array	59.08	326	P	P	07 52 08.6	-0.1
	0.1nm,0.4s,baz=116,slow=7.7,SNR=2.0						

*IDC **12** 07:44:24.2±5.5, 19°.69S×178°.60W, h625^{km}±31^{km}, mb3.0/4, mb1 3.3/5, mb1mx2.9/36, mbtmp3.9/5, Error ellipse: s-maj=164.1km s-min=22.6km az=146.0*

ISC 12 07:44:19.9±1.9, 20°.4S±0°.5×178°.1W±0°.3, h600^{km}, n8, σ0ˢ.94/7, mb3.6/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.52	305	P	P	07 45 50.0	+0.7
	5.5nm,0.3s,baz=223,slow=21,SNR=31						
ASAR	Alice Springs	44.46	257	P	P	07 51 39.7	+0.2
	1.2nm,0.5s,baz=90,slow=8.1,SNR=17						
WRA	Warramunga Arr	44.53	262	P	P	07 51 39.6	-0.4
	0.9nm,0.5s,baz=98,slow=8.3,SNR=9.3						
ILAR	Eielson Array	88.24	13	P	P	07 56 06.7	-1.2
	0.5nm,0.4s,baz=215,slow=5.4,SNR=12						
PDAR	Pinedale Array	88.95	43	P	P	07 56 13.1	+1.1
	0.3nm,0.5s,baz=238,slow=5.2,SNR=3.3						
AKASG	Malin Array Be	142.89	331	PKhKP	PKPpre	08 02 42.4	
	1.4nm,0.5s,baz=41,slow=4.3,SNR=18						
BRTR	Keskin Array B	146.72	312	PKPbc	PKPbc	08 02 55.5	-0.5
	1.0nm,0.6s,baz=129,slow=5.1,SNR=4.7						
GERES	GERESS Array B	150.09	344	PKPbc	PKPbc	08 03 03.7	-0.2
	0.6nm,0.6s,baz=69,slow=4.4,SNR=5.4						

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*IDC **12** 07:45:28.1±13.0, 2°.84N×128°.87E, h171^{km}±122^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.1/37, mbtmp3.7/4, MS2.6/1, Ms1 2.6/1, ms1mx2.1/19, Error ellipse: s-maj=121.0km s-min=29.0km az=63.0*

*DJA **12** 07:46:01.5±0.9, 1°N±4°×12°7E±°, h11^{km}±10^{km}, M4.0/10, mb4.6/1, mB5.3/1, MLv3.8/10, Mw(mB)4.7/1*

ISC 12 07:45:12.1±1.6, 3°.2N±0°.2×129°.9E±0°.2, h35^{km}, n11, σ2ˢ.42/11, mb3.7/4, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	Labuha	4.52	212	P	Pn	07 46 28.5	+10
KMSI	Cibinong	6.46	246	P	Pn	07 46 45.9	+1.2
SANI	Sanana	6.53	217	P	Pn	07 46 46.3	+0.5
GTOI	Gorontalo	7.33	249	P	Pn	07 47 00.3	+3.6
APSI	Ampana	9.20	244	P	Pn	07 47 19.9	-2.5
	0.1nm28nm,0.4s						
TTSI	Tana Toraja	11.83	238	P	Pn	07 47 54.4	-4.1
SPSI	Sidrap Palu	12.38	235	P	P	07 48 18.5	+1.0
FITZ	Fitzroy Crossi	21.61	191	P	P	07 49 59.0	-0.2
	1.8nm,0.8s,baz=3.2,slow=14,SNR=5.1						
FITZ				LR	LR	08 00 30.0	
	comp=Z,17nm,18.8s,baz=91,slow=43						
WRA	Warramunga Arr	23.45	169	P	P	07 50 20.5	+2.0
	2.2nm,0.7s,baz=347,slow=10.0,SNR=20						
ASAR	Alice Springs	27.03	172	P	P	07 50 52.4	+1.2
	1.8nm,0.5s,baz=354,slow=7.9,SNR=53						
ASAR				PcP	PcP	07 54 10.4	-1.8
	0.3nm,0.4s,baz=358,slow=2.5,SNR=5.0						
MKAR	Makanchi Array	59.77	324	P	P	07 55 13.4	-0.3
	0.2nm,0.4s,baz=111,slow=8.8,SNR=2.6						

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*IGIL **12** 07:52:20.2, 37°.03N×5°.34W, h5^{km}, ML2.6*

*CNRM **12** 07:52:20.4, 36°.62N×5°.78W, h0^{km}, ml2.5*

*MDD **12** 07:52:20.7±0.3, 37°.03N×5°.33W, h11^{km}, mbLg2.5/20, Error ellipse: s-maj=3.2km s-min=2.3km az=176.0, PRXIMO*

*SFS **12** 07:52:20.0, 37°.00N×5°.30W, h11^{km}, ML2.6, CORIPE (SEVILLA)*

*LDG **12** 07:52:21.2±0.1, 37°.02N×5°.34W, h11^{km}, Ml2.7/3, Error ellipse: s-maj=2.8km s-min=2.0km az=157.0*

*INMG **12** 07:52:21.3±1.8, 37°.03N×5°.35W, h16^{km}±3^{km}, ML2.4, Error ellipse: s-maj=2.4km s-min=2.3km az=163.0*

ISC 12 07:52:18.7±0.9, 37°.03N±0°.02×5°.29W±0°.02, h14^{km}±8^{km}, n86, σ1ˢ.47/157, 1D, Spain

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIJA	Lijar	0.16	217	P	Pb	07 52 24.2	+0.6
LIJA				S	Sg	07 52 25.2	-0.1
LIJA	Lijar	0.16	217	Pg	Pb	07 52 24.2	+0.6
ESPR	Espera	0.48	250	Pg	Pb	07 52 29.5	+0.4
	23nm,0.2s,SNR=29						
ESPR				Lg	Lg	07 52 36.5	
	115nm,0.2s						
EJIF	Jimena Fronter	0.60	194	Pg	Pg	07 52 30.5	+0.1
	33µm,0.3s,SNR=7.9						
EJIF				Lg	Lg	07 52 40.5	
	170µm,0.3s,SNR=7.9						
EMAL	Malaga-Limoner	0.74	111	P	Pg	07 52 33.0	-0.1
EMAL				S	Sg	07 52 37.6	-5.2
EMAL	Malaga-Limoner	0.74	111	Pg	Pg	07 52 33.0	-0.1
EMAL				Lg	Lg	07 52 37.6	
EGOR	Sierra Gorda,	0.94	85	Pg	Pn	07 52 38.6	+0.9
	3.5nm,0.1s,SNR=7.9						
EGOR				Lg	Lg	07 52 53.1	
	42nm,0.3s,SNR=7.9						
ECAB	El Cabril	1.05	354	Pg	Pn	07 52 39.7	+0.6
	20nm,0.2s,SNR=268						
ECAB				Lg	Lg	07 52 54.5	
	75nm,0.2s,SNR=29						
ECEU	Ceuta	1.14	184	Pg	Pg	07 52 41.7	+1.1
	2.7nm,0.2s,SNR=4.0						
ARNO	Arenosillo	1.16	274	S	Sn	07 52 57.7	+1.5
EADA	Adamuz	1.27	26	Pn	Pg	07 52 43.3	+0.2
	3.3nm,0.2s,SNR=63						
EADA				Sn	Sg	07 53 00.3	+0.7
	17nm,0.1s,SNR=7.9						
EADA				Lg	Lg	07 53 02.3	
	119nm,0.2s						
EMIN	Mina Concepcio	1.32	304	Pn	Pb	07 52 43.2	-0.2
	3.7nm,0.1s,SNR=29						
EMIN				Pg	Pg	07 52 44.3	+0.1
	8.3nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	07 53 01.9	
	17nm,0.1s						
ELGU	Los Guajares,	1.34	97	Pg	Pg	07 52 45.4	+0.8
	1.0nm,0.2s,SNR=7.9						
ELGU				Lg	Lg	07 53 06.0	
	57nm,0.4s,SNR=7.9						
PBAR	Barrancos	1.80	310	eSg	Sg	07 53 18.8	+2.2
PBAR	Barrancos	1.80	310	Lg	Lg	07 53 18.8	
EGRO	El Granado	1.82	287	Pn	Pn	07 52 49.8	+0.1
	2.7nm,0.3s,SNR=13						
EGRO				Sn	Sn	07 53 11.4	-1.2
	6.3nm,0.2s,SNR=7.9						
EGRO				Lg	Lg	07 53 15.6	
	26nm,0.2s,SNR=11						
EQES	Quesada	1.92	66	Pg	Pg	07 52 56.3	+0.7
	1.5nm,0.1s,SNR=5.3						
EQES				Lg	Lg	07 53 22.5	
	14nm,0.2s,SNR=11						
EBER	Berja	1.93	93	Pg	Pg	07 52 56.9	+1.3
	1.1nm,0.2s,SNR=5.9						
EBER				Lg	Lg	07 53 22.0	
	2.4nm,0.2s,SNR=4.0						
PVAQ	Vaqueiros	1.98	282	⇓ePn	Pn	07 52 51.8	0.0
PVAQ	Vaqueiros	1.98	282	ePg	Pg	07 52 56.2	-0.4
PVAQ				eSn	Sn	07 53 15.3	-1.0
PVAQ				eSg	Sg	07 53 20.8	-1.5
PVAQ				A	A	07 53 24.1	
	24nm,0.3s						
PVAQ	Vaqueiros	1.98	282	Pn	Pn	07 52 51.8	0.0
PVAQ				Pg	Pg	07 52 56.2	-0.4
PVAQ				Sn	Sn	07 53 15.3	-1.0
PVAQ				Lg	Lg	07 53 20.8	
	24nm,0.3s						
PVAQ	Vaqueiros	1.98	282	P	Pn	07 52 51.7	-0.1
PVAQ				S	Sn	07 53 14.8	-1.6
PBDV	Barranco-do-Ve	2.12	276	ePn	Pn	07 52 54.2	+0.4
PBDV				eSn	Sn	07 53 18.5	-1.6
PBDV				A	A	07 53 32.6	
	14nm,0.5s						
PBDV	Barranco-do-Ve	2.12	276	Pn	Pn	07 52 54.2	+0.4
PBDV				Sn	Sn	07 53 18.5	-1.6
	14nm,0.5s						
EBAD	Badajoz	2.20	322	Pn	Pn	07 52 55.4	+0.6
	4.7nm,0.1s,SNR=22						
EBAD				Sn	Sn	07 53 21.4	-0.5
	12nm,0.2s,SNR=7.9						
EBAD				Lg	Lg	07 53 28.6	
	22nm,0.2s,SNR=6.0						
PCVE	Castro Verde	2.27	286	ePn	Pn	07 52 56.1	+0.2
PCVE				eSn	Sn	07 53 23.6	-0.1
PCVE				eSg	Sg	07 53 30.0	-1.8
PCVE				A	A	07 53 35.2	
	16nm,0.2s						
PCVE	Castro Verde	2.27	286	Pn	Pn	07 52 56.1	+0.2
PCVE				Sn	Sn	07 53 23.6	-0.1
PCVE				Lg	Lg	07 53 30.0	
	16nm,0.2s						
PBEJ	Beja	2.28	297	ePn	Pn	07 52 54.4	-1.5
PBEJ	Beja	2.28	297	ePg	Pg	07 53 02.2	-0.2
PBEJ				eSg	Sb	07 53 29.1	+1.4
PBEJ				A	A	07 53 38.3	
	12nm,0.3s						
PBEJ	Beja	2.28	297	Pn	Pn	07 52 54.4	-1.5
PBEJ				Pg	Pg	07 53 02.2	-0.2
PBEJ				Lg	Lg	07 53 29.1	
	6.2nm,0.3s						
SESP	Santiago Espad	2.43	63	Pn	Pn	07 53 00.3	+2.1
	0.3nm,0.1s,SNR=7.9						
SESP				Sn	Sn	07 53 30.1	+2.2
	5.6nm,0.3s,SNR=7.9						
SESP				Lg	Lg	07 53 37.3	
	16nm,0.2s,SNR=7.9						
MESJ	Messejana	2.47	290	eP	Pn	07 52 58.8	+0.2
MESJ	Messejana	2.47	290	ePn	Pn	07 52 59.0	+0.4
MESJ	Messejana	2.47	290	ePg	Pg	07 53 06.9	+0.8
MESJ				eSn	Sn	07 53 28.9	+0.4
MESJ				eSg	Sg	07 53 36.7	-1.4
MESJ				A	A	07 53 41.2	
	11nm,0.3s						
MESJ	Messejana	2.47	290	Pn	Pn	07 52 59.0	+0.4
MESJ				Pg	Pg	07 53 06.9	+0.8
MESJ				Sn	Sn	07 53 28.9	+0.4
MESJ				Lg	Lg	07 53 36.7	
	11nm,0.3s						
PESTR	Estremoz	2.58	316	ePn	Pn	07 53 00.9	+0.7
PESTR	Estremoz	2.58	316	ePg	Pg	07 53 07.3	-0.9
PESTR				eSn	Sn	07 53 31.4	0.0
PESTR				eSg	Sg	07 53 41.9	+0.2
PESTR				A	A	07 53 46.0	
	8.9nm,0.4s						
PESTR	Estremoz	2.58	316	P	Pb	07 53 04.9	+0.1
PESTR				S	Sg	07 53 39.7	-2.0
PAB	San Pablo	2.62	16	Pn	Pn	07 53 03.1	+2.4
	1.0nm,0.2s,SNR=7.9						
PAB				Lg	Lg	07 53 41.9	
	6.6nm,0.2s,SNR=7.9						
EVO	Evora	2.63	306	P	Pn	07 53 01.4	+0.7
EVO				S	Sn	07 53 31.2	-1.2
EVO	Evora	2.63	306	ePn	Pn	07 53 01.4	+0.7
EVO				eSn	Sn	07 53 34.3	+1.8
EVO	Evora	2.63	306	Pn	Pn	07 53 01.4	+0.7
EVO				Sn	Sn	07 53 34.3	+1.8
MORF	Marmelete	2.70	277	eS	Sn	07 53 32.5	-1.9
MORF				IAML		07 53 33.8	
	comp=N,27nm,0.2s						
MORF	Marmelete	2.70	277	ePn	Pn	07 53 02.6	+0.8
MORF	Marmelete	2.70	277	ePg	Pg	07 53 09.4	-1.1
MORF				eSn	Sn	07 53 33.5	-0.8
MORF				A	A	07 53 34.8	
	comp=N,13nm,0.4s						
MORF				eSg	Sg	07 53 47.6	+2.1
MORF	Marmelete	2.70	277	Pn	Pn	07 53 02.6	+0.8
MORF				Pg	Pg	07 53 09.4	-1.1
MORF				Sn	Sn	07 53 33.5	-0.8
	comp=N,13nm,0.4s						
MORF				Lg	Lg	07 53 47.6	
PTEO	Sao Teotonio	2.79	282	ePn	Pn	07 53 03.4	+0.5
PTEO				eSn	Sn	07 53 35.8	-0.6
PTEO				eSg	Sg	07 53 48.0	-0.3
PTEO				A	A	07 53 55.5	
	comp=N,16nm,0.7s						
PTEO	Sao Teotonio	2.79	282	Pn	Pn	07 53 03.4	+0.5
PTEO				Sn	Sn	07 53 35.8	-0.6
PTEO				Lg	Lg	07 53 48.0	
	comp=N,7.8nm,0.7s						
PNCL	Nicolau / Gran	2.79	294	ePn	Pn	07 53 03.5	+0.5
PNCL	Nicolau / Gran	2.79	294	ePg	Pg	07 53 11.9	-0.3
PNCL				eSn	Sn	07 53 36.5	0.0
PNCL				eSg	Sg	07 53 45.4	-3.0
PNCL				A	A	07 53 50.8	
	comp=N,11nm,0.6s						
PNCL	Nicolau / Gran	2.79	294	Pn	Pn	07 53 03.5	+0.5
PNCL				Pg	Pg	07 53 11.9	-0.3
PNCL				Sn	Sn	07 53 36.5	0.0
PNCL				Lg	Lg	07 53 45.4	
	comp=N,11nm,0.6s						
PFVI	Vila Bisbo	2.83	273	ePn	Pn	07 53 03.6	0.0
PFVI				eSn	Sn	07 53 36.4	-1.1
PFVI				A	A	07 53 44.5	
	comp=N,18nm,0.5s						
PFVI	Vila Bisbo	2.83	273	P	Pn	07 53 00.7	-2.9
PFVI				S	Sn	07 53 34.6	-2.9
ESDC	Sonseca Array	2.84	21	Pn	Pn	07 53 05.3	+1.7
	comp=N,0.9nm,0.1s,baz=202,slow=13,SNR=9.3						
ESDC				Pg	Pg	07 53 12.4	-0.7
	comp=N,0.3nm,0.1s,baz=204,slow=16,SNR=6.6						
ESDC				Sn	Sn	07 53 38.7	+1.0
	comp=N,0.7nm,0.2s,baz=201,slow=23,SNR=7.6						
ESDC				Lg	Lg	07 53 49.8	
	comp=N,19nm,0.4s,baz=208,slow=28,SNR=29						
PMRV	Marv??o	2.91	326	ePn	Pn	07 53 05.3	+0.6
PMRV	Marv??o	2.91	326	ePg	Pb	07 53 11.9	+1.5
PMRV				eSn	Sn	07 53 40.4	+0.9
PMRV				eSg	Sg	07 53 51.3	-0.9
PMRV				A	A	07 54 02.0	
	comp=N,9.4nm,0.4s						
PMRV	Marv??o	2.91	326	Pn	Pn	07 53 05.3	+0.6
PMRV				Pg	Pb	07 53 11.9	+1.5
PMRV				Sn	Sn	07 53 40.4	+0.9
PMRV				Lg	Lg	07 53 51.3	
	comp=N,9.4nm,0.4s						
PMTG	Montargil	3.08	312	ePn	Pn	07 53 07.6	+0.6
PMTG				eSn	Sn	07 53 44.4	+0.7
PMTG				eSg	Sg	07 53 54.7	-3.1
PMTG				A	A	07 54 07.7	
	comp=N,7.5nm,0.4s						
PMTG	Montargil	3.08	312	Pn	Pn	07 53 07.6	+0.6
PMTG				Sn	Sn	07 53 44.4	+0.7
PMTG				Lg	Lg	07 53 54.7	
	comp=N,7.5nm,0.4s						
EPLA	Plasencia	3.09	349	Pn	Pn	07 53 07.9	+0.7
	comp=N,0.5nm,0.1s,SNR=5.6						
EPLA				Sn	Sn	07 53 43.5	-0.4
	comp=N,2.5nm,0.2s,SNR=5.6						
EPLA				Lg	Lg	07 53 57.1	
	comp=N,5.1nm,0.2s,SNR=7.2						
PCBR	Castelo Branco	3.29	329	ePn	Pn	07 53 10.9	+1.1
PCBR				eSn	Sn	07 53 48.2	-0.6
PCBR				eSg	Sg	07 54 05.5	+1.1
PCBR				A	A	07 54 18.1	
	comp=N,3.1nm,0.5s						
PCBR	Castelo Branco	3.29	329	Pn	Pn	07 53 10.9	+1.1
PCBR				Sn	Sn	07 53 48.2	-0.6
PCBR				Lg	Lg	07 54 05.5	
	comp=N,1.6nm,0.5s						
UCM	Universidad Co	3.64	25	S	Sg	07 54 11.3	-4.3
PMAFR	Mafra	3.69	303	ePn	Pn	07 53 15.6	+0.2
PMAFR				eSn	Sn	07 53 59.0	+0.2
PSBE	So Bento	3.71	313	ePn	Pn	07 53 16.9	+1.2
PSBE				eSn	Sn	07 53 58.6	-0.6
PSBE				eSg	Sg	07 54 18.0	+0.1
PSBE				A	A	07 54 25.2	
	comp=N,12nm,0.5s						
GUD	Guadarrama	3.71	13	Pn	Pn	07 53 17.8	+2.0
	comp=N,0.4nm,0.1s,SNR=7.9						
GUD				Sn	Sn	07 53 58.0	-1.4
	comp=N,0.2nm,0.1s,SNR=7.9						
GUD				Lg	Lg	07 54 12.9	
	comp=N,0.9nm,0.3s,SNR=6.3						
ZHG	ZHG	3.75	198	P	Pn	07 53 14.8	-1.4
ZHG				S	Sn	07 53 58.2	-1.9
MTE	Manteigas	3.80	333	eSn	Sn	07 53 55.2	-6.2
MTE				eSg	Sg	07 54 21.8	+1.1
PCAS	Casmilo, Conde	3.93	321	ePn	Pn	07 53 20.2	+1.6
MD31	MD31	4.18	174	P	Pn	07 53 20.9	-1.3
MD31				S	Sn	07 54 07.2	-3.6
PVIS	Viseu	4.20	332	ePn	Pn	07 53 23.8	+1.3
PVIS				eSn	Sn	07 54 11.3	-0.1
PVIS				A	A	07 54 47.5	
	comp=N,3.0nm,0.7s						
ECHE	Chera	4.25	52	Sn	Sn	07 54 11.2	-1.3
	comp=N,0.5nm,0.2s,SNR=7.9						
ECHE				Lg	Lg	07 54 33.4	
	comp=N,0.8nm,0.3s,SNR=7.9						
MVO	Moncorvo	4.34	342	ePn	Pn	07 53 25.2	+0.8
MVO				eSn	Sn	07 54 14.3	-0.6
MVO				eSg	Sg	07 54 35.8	-2.4
MVO				A	A	07 54 41.7	
	comp=N,3.5nm,0.3s						
MVO	Moncorvo	4.34	342	Pn	Pn	07 53 25.0	+0.6
	comp=N,1.0nm,0.1s,SNR=7.9						
MVO				Sn	Sn	07 54 13.3	-1.6
	comp=N,1.1nm,0.2s,SNR=7.9						
MVO				Lg	Lg	07 54 35.8	
	comp=N,2.5nm,0.2s,SNR=7.9						
ETOR	Torete	4.54	33	Pn	Pn	07 53 28.1	+0.9
	comp=N,3.8nm,0.2s,SNR=9.2						
ETOR				Sn	Sn	07 54 16.8	-3.0
	comp=N,1.4nm,0.2s,SNR=7.9						
ETOR				Lg	Lg	07 54 43.1	
	comp=N,6.2nm,0.2s						
POLO	Lamas de Olo	4.75	337	ePn	Pn	07 53 31.2	+1.2
POLO				eSn	Sn	07 54 24.4	-0.6
POLO				A	A	07 54 52.4	
	comp=N,1.6nm,0.7s						
PBRG	Braganca	4.90	347	ePn	Pn	07 53 33.1	+1.1
PBRG				eSn	Sn	07 54 27.7	-0.8
PBRG				A	A	07 55 11.7	
	comp=N,2.3nm,0.7s						
EMOS	Mosqueruela	5.02	47	Sn	Sn	07 54 31.7	-0.1
	comp=N,0.3nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	07 55 00.4	
	comp=N,0.8nm,0.3s,SNR=7.9						
ECAL	Calabor	5.03	348	Sn	Sn	07 54 30.7	-1.1
	comp=N,0.5nm,0.2s,SNR=7.9						
ECAL				Lg	Lg	07 54 58.0	
	comp=N,3.3nm,0.3s,SNR=7.9						
PCAB	Cabril	5.13	336	eSn	Sn	07 54 31.9	-2.3
ELOB	Lobios	5.28	337	Sn	Sn	07 54 35.2	-2.9
	comp=N,0.2nm,0.1s,SNR=7.9						
ELOB				Lg	Lg	07 55 04.8	
	comp=N,0.6nm,0.2s,SNR=7.9						
PGAV	Gavieira, Arco	5.44	336	ePn	Pn	07 53 40.5	+1.0
SJPF	Ste Jean	6.83	26	ePn	Pn	07 53 59.5	+1.1
SJPF				eSn	Sn	07 55 12.9	-3.0
	comp=N,0.7nm,0.3s						
ETSF	Etsaut	6.89	30	ePn	Pn	07 54 00.5	+1.1
ETSF				eSn	Sn	07 55 15.2	-2.4
	comp=N,1.6nm,0.4s						
EPF	Esparros	7.38	34	ePn	Pn	07 54 07.9	+1.8
EPF				eSn	Sn	07 55 26.9	-2.8
	comp=N,0.5nm,0.2s						
MTLF	Montolieu	8.52	40	ePn	Pn	07 54 23.2	+1.5

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*KRNET **12** 07:58:36.6±0.1, 39°.68N×71°.96E, h26^{km}, mb2.9*

*SOME **12** 07:58:36.3, 39°.78N×72°.00E, h0^{km}*

*NNC **12** 07:58:38.4±1.7, 39°.79N×71°.98E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=12.9km s-min=6.7km az=178.0*

ISC 12 07:58:34.5±1.3, 39°.79N±0°.03×71°.96E±0°.03, h4^{km}±11^{km}, n28, σ1ˢ.70/47, 21C-9D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	0.33	202	⇑iP	Pb	07 58 42.3	-0.8
	baz=11						
DRK				⇑iS	Sb	07 58 46.4	-2.4
	baz=11						
BTK	Batken	0.92	288	⇑iP	Pn	07 58 54.3	+0.1
	baz=93						
BTK				⇑iS	Sn	07 59 07.6	-0.3
	baz=93						
OHH	Osh	0.97	40	⇓eP	Pn	07 58 56.1	+1.1
	baz=37						
OHH				⇓iS	Sn	07 59 10.2	+0.9
	baz=37						
SFK	Sufi-Kurgan	1.21	79	⇑eP	Pn	07 59 00.1	+1.7
	baz=74						
SFK				⇑eS	Sn	07 59 15.5	+0.1
	baz=74						
GAR	Garm	1.49	239	⇑iP	Pg	07 59 03.3	+0.2
	baz=42						
GAR				⇑iS	Sn	07 59 22.2	+0.1
	baz=42						
SALK	Salom-Alik	1.80	52	⇓eP	Pg	07 59 09.2	+0.3
	baz=49						
SALK				⇓eS	Sg	07 59 33.8	+1.6
	baz=49						
TRKS	Terek-Say	1.85	341	⇑iP	Pg	07 59 09.9	-0.1
	baz=42						
TRKS				⇑iS	Sg	07 59 34.0	+0.1
	baz=42						
CHGR	Chuyangaron	2.45	243	⇑iP	Pn	07 59 17.0	+1.7
	baz=46						
CHGR				⇑iS	Sn	07 59 46.6	+0.9
	baz=46						
AML	Almayashu	2.69	29	⇑iP	Pb	07 59 22.4	-1.0
	baz=28						
AML				⇑iS	Sb	07 59 55.8	-1.0
	baz=28						
MNAS	Manas	2.73	9	⇓iP	Pb	07 59 23.2	-0.8
	baz=8.0						
MNAS				⇓iS	Sb	07 59 57.7	-0.1
	baz=8.0						
IUG	Iuzhnay	2.77	329	eP	Pg	07 59 29.1	+1.5
	323nm,0.4s						
IUG				eS	Sg	08 00 07.3	+3.7
	41nm,0.2s						
IUG	Iuzhnay	2.77	329	Pg	Pg	07 59 29.1	+1.5
	323nm,0.4s						
IUG				Lg	Lg	08 00 07.3	
	41nm,0.2s						
MRKS	Merke	3.11	18	eP	Pg	07 59 35.1	+1.1
	6.7nm,0.3s						
MRKS				eS	Sg	08 00 17.6	+3.2
	28nm,0.3s						
MRKS	Merke	3.11	18	Pg	Pg	07 59 35.2	+1.1
	6.7nm,0.3s						
MRKS				Lg	Lg	08 00 17.6	
	28nm,0.3s						
UCH	Uchtor	3.11	38	⇓iP	Pb	07 59 28.4	-2.3
	baz=36						
UCH				⇓iS	Sb	08 00 06.2	-3.0
	baz=36						
AAK	Ala-Archa	3.43	33	⇑Pg	Pg	07 59 41.2	+0.9
	8.6nm,0.6s						
AAK				⇑Lg	Lg	08 00 26.4	
	5.6nm,0.5s						
AAK	Ala-Archa	3.43	33	⇑iP	Pb	07 59 32.5	-3.4
	baz=32						
AAK				⇑iS	Sn	08 00 13.4	+3.3
	baz=32						
KK02	Karatay Array	3.49	342	⇑Pn	Pb	07 59 34.8	-2.0
	0.3nm,0.3s						
KK02				⇓Pg	Pg	07 59 42.2	+0.9
	3.6nm,0.8s						
KK02				Lg	Lg	08 00 27.4	
	7.7nm,0.6s						
BRLS	Borolday	3.61	335	eP	Pg	07 59 41.5	-2.2
	3.0nm,0.2s						
BRLS				eS	Sg	08 00 28.5	-2.0
	7.4nm,0.2s						
BRLS	Borolday	3.61	335	Pg	Pg	07 59 41.5	-2.2
	3.0nm,0.2s						
BRLS				Lg	Lg	08 00 28.5	
	7.4nm,0.2s						
TKM2	Tokmak 2	4.16	40	⇑Pg	Pg	07 59 53.7	-0.6
	4.6nm,0.7s						
TKM2				⇑Lg	Lg	08 00 52.5	
	5.8nm,0.7s						
KST	Kastek	4.43	41	eP	Pg	07 59 59.1	-0.4
	2.6nm,0.2s						
KST				eS	Sg	08 00 58.8	+1.8
	4.7nm,0.3s						
KST	Kastek	4.43	41	Pg	Pg	07 59 59.1	-0.4
	2.6nm,0.2s						
KST				Lg	Lg	08 00 58.8	
	4.7nm,0.3s						
KUU	Kurty	5.25	37	eP	Pg	08 00 13.0	-2.0
	2.4nm,0.7s						
KUU				eS	Sg	08 01 22.7	-0.4
	3.9nm,0.4s						
KUU	Kurty	5.25	37	Pg	Pg	08 00 13.0	-2.0
	2.4nm,0.7s						
KUU				Lg	Lg	08 01 22.7	
	3.9nm,0.4s						
BTLS	Baital	5.47	16	eP	Pg	08 00 18.0	-1.3
	1.0nm,0.3s						
BTLS				eS	Sg	08 01 31.4	+1.1
	2.8nm,0.5s						
BTLS	Baital	5.47	16	Pg	Pg	08 00 18.0	-1.3
	1.0nm,0.3s						
BTLS				Lg	Lg	08 01 31.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	2.8nm,0.5s						
AB31	Akbulak array	12.76	322	Pn	Pn	08 01 37.1	+0.6
	0.2nm,0.4s,baz=128,slow=12,SNR=8.4						

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*BEO **12** 08:00:39.6±0.9, 41°.80N×15°.10E, h0^{km}, ML3.0/5*
*ROM **12** 08:00:41.1±0.4, 42°.42N±0°.02×15°.23E±0°.03, h9^{km}, ML2.9/25, Error ellipse: s-maj=3.2km s-min=1.2km az=35.0*
ISC 12 08:00:41.0±1.1**, 42°.28N**±0°.02×**15°.23E**±0°.02**, h17**^{km}±9^{km}**, n71,** $\sigma 1^{s}.$**73**/93**, 5C-2D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TREM	Isole Tremiti	0.26	126	P	Pb	08 00 48.5	+1.3
FRES	Fresagrandinar	0.52	234	P	Pn	08 00 51.7	-1.8
FRES				AML	AML		
	comp=E,388µm,1.5s						
FRES				AML	AML		
	comp=N,193µm,0.5s						
MELA	Melanico ??? S	0.58	187	P	Pn	08 00 53.5	-0.9
MELA				AML	AML		
	comp=N,1735µm,0.4s						
MELA				AML	AML		
	comp=N,1805µm,0.5s						
MELA				AML	AML		
	comp=E,2085µm,0.4s						
MELA				AML	AML		
	comp=E,2050µm,0.4s						
SGRT	San Giovanni R	0.65	144	P	Pn	08 00 55.9	+0.4
SGRT				S	Sn	08 01 08.3	+2.9
SGRT				AML	AML		
	comp=N,1840µm,0.3s						
SGRT				AML	AML		
	comp=E,2240µm,0.5s						
CIGN	Sant'Elia a Pi	0.67	201	P	Pn	08 00 56.6	+0.9
CIGN				AML	AML		
	comp=N,599µm,0.5s						
CIGN				AML	AML		
	comp=E,419µm,0.4s						
TRIV	Trivento	0.72	225	P	Pn	08 00 55.9	-0.4
TRIV				AML	AML		
	comp=E,398µm,1.1s						
TRIV				AML	AML		
	comp=N,410µm,0.7s						
MSAG	Monte S. Angel	0.76	138	P	Pn	08 00 57.9	+0.9
MSAG				AML	AML		
	comp=E,3440µm,0.5s						
MSAG				AML	AML		
	comp=N,5795µm,0.3s						
MSAG				AML	AML		
	comp=E,3665µm,0.5s						
MSAG				AML	AML		
	comp=N,5820µm,0.3s						
MSAG				AML	AML		
	comp=E,3445µm,0.5s						
GATE	Gambatesa	0.80	197	P	Pn	08 01 00.4	+2.9
GATE				AML	AML		
	comp=E,732µm,0.5s						
GATE				AML	AML		
	comp=E,545µm,0.4s						
GATE				AML	AML		
	comp=N,682µm,0.5s						
GATE				AML	AML		
	comp=E,732µm,0.5s						
GATE				AML	AML		
	comp=E,546µm,0.4s						
GATE				AML	AML		
	comp=N,682µm,0.5s						
GATE				AML	AML		
	comp=N,654µm,0.5s						
LPEL	Lama dei Pelig	0.81	254	P	Pn	08 00 56.8	-0.9
LPEL				AML	AML		
	comp=N,710µm,0.9s						
LPEL				AML	AML		
	comp=E,876µm,0.2s						
BSSO	Busso	0.87	213	P	Pn	08 00 59.9	+1.4
BSSO				AML	AML		
	comp=E,398µm,0.5s						
BSSO				AML	AML		
	comp=N,374µm,0.5s						
BSSO				AML	AML		
	comp=N,164µm,0.5s						
BSSO				AML	AML		
	comp=N,165µm,0.5s						
BSSO				AML	AML		
	comp=E,148µm,0.5s						
MOCO	Biccari - m.te	0.91	183	P	Pn	08 01 01.2	+2.1
MOCO				AML	AML		
	comp=N,236µm,1.1s						
MOCO				AML	AML		
	comp=E,369µm,0.6s						
MIDA	Miranda	0.97	229	P	Pn	08 01 00.1	+0.3
MIDA				AML	AML		
	comp=N,291µm,0.7s						
MIDA				AML	AML		
	comp=E,450µm,0.5s						
RNI2	Rionero Sannit	0.99	235	P	Pn	08 00 59.7	-0.4
VCEL	Villa Celiera	1.03	277	P	Pg	08 01 00.3	-0.7
VCEL				S	Sn	08 01 15.3	+0.4
VCEL				AML	AML		
	comp=E,1340µm,0.6s						
VCEL				AML	AML		
	comp=N,836µm,1.5s						
VCEL				AML	AML		
	comp=N,836µm,1.5s						
VCEL				AML	AML		
	comp=E,1345µm,0.6s						
T0110	Collepietro	1.08	268	P	Pg	08 01 02.1	+0.3
T0110				AML	AML		
	comp=N,666µm,1.2s						
T0110				AML	AML		
	comp=E,811µm,1.3s						
SGG	Gregorio Mates	1.09	216	P	Pn	08 01 04.1	+2.5
SGG				AML	AML		
	comp=E,340µm,0.5s						
SGG				AML	AML		
	comp=N,312µm,1.5s						
SGG				AML	AML		
	comp=N,312µm,1.5s						
SGG				AML	AML		
	comp=E,340µm,0.5s						
TRTR	Tortoreto Alta	1.10	299	P	Pn	08 01 01.1	-0.5
CERA	Filignano	1.13	233	P	Pg	08 01 04.6	+1.7
VITU	Vitulano (BN)	1.18	202	P	Pg	08 01 06.0	+2.1
VITU				AML	AML		
	comp=E,290µm,1.3s						
VITU				AML	AML		
	comp=N,3065µm,1.4s						
VITU				AML	AML		
	comp=E,314µm,1.4s						
VITU				AML	AML		
	comp=N,3060µm,1.4s						
VITU				AML	AML		
	comp=E,434µm,0.5s						
VITU				AML	AML		
	comp=N,490µm,0.5s						
FAGN	Fagnano	1.22	270	P	Pg	08 01 04.3	-0.3
TERO	Teramo	1.25	286	P	Pn	08 01 03.1	-0.6
TERO				AML	AML		
	comp=E,258µm,0.5s						
TERO				AML	AML		
	comp=N,166µm,0.7s						
HVAR	Hvar	1.27	45	*e*Pg	Pb	08 01 04.7	+0.2
HVAR				Sg	Sb	08 01 21.5	+1.0
LSTV	Lastovo	1.32	68	*e*Pg	Pg	08 01 06.0	-0.4
LSTV				Sg	Sg	08 01 23.6	-0.1
SNAL	S. Angelo Dei	1.35	181	P	Pg	08 01 07.8	+0.7
SNAL				AML	AML		
	comp=E,235µm,1.5s						
SNAL				AML	AML		
	comp=N,291µm,0.8s						
ZIRJ	Zirje	1.41	12	*e*Pn	Pn	08 01 05.0	-0.8
ZIRJ				Sg	Sn	08 01 23.1	-0.8
SMA1	SAN MARTINO	1.44	285	P	Pb	08 01 07.0	-0.5
SMA1				AML	AML		
	comp=E,416µm,0.8s						
SMA1				AML	AML		
	comp=N,404µm,1.0s						
RM33	Pellescritta (	1.51	279	P	Pb	08 01 08.4	-0.1
RM33				AML	AML		
	comp=N,466µm,0.9s						
RM33				AML	AML		
	comp=E,293µm,1.2s						
FIAM	Fiamignano	1.57	270	P	Pg	08 01 10.0	-1.1
FIAM				AML	AML		
	comp=N,234µm,0.7s						
FIAM				AML	AML		
	comp=E,260µm,0.7s						
FIAM				AML	AML		
	comp=N,234µm,0.7s						
ACER	Acerenza	1.59	160	AML	AML		
	comp=N,348µm,0.6s						
ACER				AML	AML		
	comp=E,448µm,0.9s						
ACER				AML	AML		
	comp=N,348µm,0.6s						
MORI	Morici	1.62	12	*e*Pn	Pn	08 01 08.8	0.0
MORI				Sn	Sn	08 01 29.7	+0.4
MAKA	Makarska	1.66	52	*e*Pn	Pn	08 01 09.7	+0.5
MAKA				Sn	Sb	08 01 31.9	+0.3
DUGI	Dugi Otok	1.71	356	*e*Pn	Pn	08 01 10.2	+0.2
DUGI				Sn	Sn	08 01 31.5	0.0
AMUR	Altamura	1.72	143	P	Pg	08 01 12.6	-1.3
AMUR				AML	AML		
	comp=E,278µm,1.4s						
AMUR				AML	AML		
	comp=N,340µm,0.4s						
RICI	Ricice	1.85	48	*e*Pn	Pn	08 01 13.0	+1.0
RICI				Sn	Sn	08 01 36.2	+1.2
STON	Ston	1.92	71	*e*Pn	Pb	08 01 14.8	-0.6
STON				Sn	Sb	08 01 40.0	+0.9
STON	Ston	1.92	71	*e*Pn	Pg	08 01 16.3	-1.5
STON				*e*Sn	Sg	08 01 45.4	+2.7
SSFR	Montelago di S	2.14	304	P	Pn	08 01 16.4	+0.5
SSFR				AML	AML		
	comp=N,130µm,0.7s						
SSFR				AML	AML		
	comp=E,136µm,0.8s						
UDBI	Udbina	2.28	10	*e*Pn	Pn	08 01 18.1	+0.2
UDBI				Sn	Sn	08 01 45.8	+0.3
NVLJ	Novalja	2.30	354	*e*Pn	Pn	08 01 18.4	+0.4
NVLJ				Sn	Sn	08 01 44.9	-0.9
TREB	Trebinje	2.35	78	*e*Pn	Pb	08 01 21.1	-1.7
TREB				*e*Sn	Sg	08 01 55.7	-0.8
PE3	Peglio	2.45	306	P	Pn	08 01 18.7	-1.5
PE3				AML	AML		
	comp=N,304µm,0.5s						
PE3				AML	AML		
	comp=E,11µm,0.0s						
RABC	Rab	2.49	353	*e*Pn	Pn	08 01 19.9	-0.8
RABC				Sn	Sn	08 01 50.4	-0.2
PARC	Parchiule	2.58	303	P	Pn	08 01 23.7	+1.6
PARC				AML	AML		
	comp=E,69µm,0.8s						
PARC				AML	AML		
	comp=N,70µm,0.7s						
PLIT	Plitvice	2.61	6	*e*Pn	Pn	08 01 22.6	+0.2
PLIT				Sn	Sn	08 01 53.9	+0.2
CET2	Cetraro	2.80	168	S	Sb	08 02 04.0	-0.6
BRJN	Brijuni	2.83	338	*e*Pn	Pn	08 01 24.9	-0.5
BRJN				Sn	Sn	08 01 57.8	-1.3
BLY	Banja Luka	2.85	29	*e*Pn	Pb	08 01 32.8	+1.5
SMRN	Sveta Marina	2.86	345	*e*Pn	Pn	08 01 25.6	-0.1
SMRN				Sn	Sn	08 01 58.9	-0.9
PDG	Podgorica	2.99	86	*e*Pn	Pb	08 01 30.7	-3.0
RUFI	Rufina	3.14	301	⇑P	Pn	08 01 32.9	+3.3
BOJS	Bojanci	3.22	0	⇑P	Pn	08 01 32.8	+2.0
BOJS				AML	AML		
	comp=N,119µm,0.5s						
BOJS				AML	AML		
	comp=E,173µm,0.6s						
BBLS	Lazići	3.45	61	*e*Pn	Pb	08 01 40.1	-1.5
BBLS				*e*Sn	Sb	08 02 22.7	-0.5
MTRZ	Monterenzio	3.45	309	S	Sn	08 02 17.0	+2.5
SJES	Sjenica	3.63	73	*e*Pn	Pb	08 01 41.1	-3.6
SJES				*e*Sn	Sb	08 02 25.1	-3.3
IFIL	Filicudi I Eol	3.75	188	⇓P	Pg	08 01 52.7	0.0
IFIL				S	Sb	08 02 28.0	-3.7
IFIL				S	Sg	08 02 42.0	+0.7
IVAS	Ivanjica	3.84	69	*e*Pn	Pn	08 01 43.2	+3.9
DIVS	Divibare	3.93	61	*e*Pn	Pb	08 01 46.3	-3.5
DIVS				*e*Sn	Sb	08 02 35.3	-1.8
OBKA	Obir	4.26	354	*i* Pn	Pn	08 01 45.7	+0.6
	comp=E,1.6nm,0.3s						
OBKA				Sg	Sb	08 02 51.3	+4.8
	comp=E,14nm,0.5s						
MNTV	Mantova	4.31	313	S	Sn	08 02 36.0	+0.5
SOKA	Soboth	4.40	358	*i* Pn	Pn	08 01 47.5	+0.5
	comp=E,1.0nm,0.3s						
SOKA				*e*Sg	Sb	08 02 55.9	+5.3
	comp=E,1.3nm,0.3s						
SELS	Selova	4.44	76	*e*Pn	Pn	08 01 51.0	+3.5
CTI	Castel Tesino	4.56	327	P	Pn	08 01 47.9	-1.4
MFNL	Monte Finestre	4.82	202	⇓P	Pg	08 02 07.8	-5.5
LEOD	Capriano del C	4.87	312	⇑P	Pg	08 02 14.0	-0.1
ABTA	Abfaltersbach	4.87	337	*i* Sn	Sn	08 02 46.6	-2.9
	comp=E,1.6nm,0.3s						
ABSI	Aberstueckl	5.25	329	⇑P	Pn	08 01 58.5	-0.3
HPAC	Pachino	5.58	181	⇑P	Pb	08 02 16.3	-1.5
WTTA	Wattenberg	5.60	334	*e*Sn	Sn	08 03 06.6	-1.0
	comp=E,7.6nm,0.4s						
FETA	Feichten	5.72	327	*e*Pn	Pn	08 02 07.1	+1.8
	comp=E,0.4nm,0.2s						
FETA				*e*Sn	Sn	08 03 09.0	-1.6
	comp=E,5.0nm,0.5s						
RETA	Reutte	6.09	330	*i* Sn	Sn	08 03 18.5	-1.1
	comp=E,3.4nm,0.4s						
DAVA	Damuels	6.29	325	*i* Sn	Sn	08 03 21.6	-2.8
	comp=E,4.1nm,0.4s						

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*IDC **12** 08:09:59.0±1.8, 71°.69N×1°.30W, h0^{km}, mb3.5/1, mb1 3.7/6, mb1mx3.4/44, mbtmp3.7/6, ML3.0/4, MS3.2/8, Ms1 3.2/8, ms1mx2.8/44, Error ellipse: s-maj=29.0km s-min=25.8km az=153.0*
*BER **12** 08:10:01.4±1.9, 71°.83N×1°.70W, h10^{km}, ML2.4, Confirmed Earthquake*
ISC 12 08:09:57.9±0.9**, 71°.83N**±0°.09×**1°.41W**±0°.07**, h10**^{km}**, n36,** σ**2^{s}.59**/34**, MS3.1**/4**, 1D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	2.43	253	Pn	Pn	08 10 38.9	+1.4
	baz=192,slow=4.9,SNR=2.2						
JMIC	Jan Mayen	2.43	253	*e*P	Pn	08 10 38.8	+1.3
DBG	Daneborg	6.02	303	*i* P	Pn	08 11 26.5	-0.3
DBG				IAML		08 11 26.9	
	comp=Z,4.8nm,0.3s						
DBG	Daneborg	6.02	303	⇓*i*P	Pn	08 11 26.6	-0.3
DBG				*e*S	Sn	08 12 29.3	-6.3
SCO	Scoresbysund	6.78	268	*i* P	Pn	08 11 39.1	+1.9
SCO				IAML		08 11 39.6	
	comp=Z,1.4nm,0.3s						
DAG	Danmarks Havn	6.79	325	*i* P	Pn	08 11 36.4	-1.0
DAG				IAML		08 11 38.4	
	comp=Z,5.3nm,0.4s						
DAG	Danmarks Havn	6.79	325	*e*P	Pn	08 11 36.7	-0.7
DAG				*e*S	Sn	08 12 43.6	-11
HSPB	Hornsund (broa	6.88	33	*e*P	Pn	08 11 40.0	+1.3
STEI	Steigen	6.93	116	*e*P	Pn	08 11 40.6	+1.3
STEI				*e*S	Sn	08 12 50.7	-7.4
STEI				IAML		08 12 55.0	
	comp=Z,5.6nm,0.7s						
TRO	Tromso	7.06	98	*e*P	Pn	08 11 41.7	+0.5
TRO				*e*S	Sn	08 12 51.3	-10
TRO				IAML		08 12 52.7	
	comp=Z,4.4nm,0.4s						
FAUS	Fauske	7.32	119	*e*P	Pn	08 11 46.2	+1.5
FAUS				IAML		08 13 08.8	
	comp=Z,3.6nm,0.6s						
KONS	Konsvik	7.42	129	*e*P	Pn	08 11 47.7	+1.6
KONS				*e*S	Sn	08 13 04.2	-6.0
KONS				IAML		08 13 16.6	
	comp=Z,6.4nm,0.9s						
STOK	Stokkvaagen	7.53	130	*e*P	Pn	08 11 48.8	+1.2
JETT	Jettan, Norway	7.56	97	*e*P	Pn	08 11 49.2	+1.2
SPA0	Spitsbergen Ar	7.82	28	*e*P	Pn	08 11 53.7	+2.1
SPITS	Spitsbergen Ar	7.82	28	Pn	Pn	08 11 54.1	+2.5
	baz=205,slow=15,SNR=71						
KBS	Kingsbay	7.86	19	*e*P	Pn	08 11 53.0	+0.9
KBS				IAML		08 13 14.7	
	comp=Z,6.9nm,0.7s						
KIF	Kilpisjarvi	7.95	100	*e*P	Pn	08 11 53.7	+0.3
MOR8	Moi Rana	8.01	127	*e*P	Pn	08 11 56.8	+2.6
MOR8				IAML		08 13 23.5	
	comp=Z,5.3nm,0.5s						
SALU	Saltoluokta	8.23	113	*e*P	Pn	08 11 58.8	+1.6
KTK1	Kautokeino	8.70	97	*e*P	Pn	08 12 04.2	+0.5
KTK1				IAML		08 12 47.8	
	comp=Z,2.8nm,0.3s						
NSS	Namsos	8.83	139	*e*P	Pn	08 12 05.9	+0.5
NSS				IAML		08 13 45.0	
	comp=Z,5.7nm,0.4s						
HEF	Hetta	9.15	100	*e*P	Pn	08 12 10.6	+0.8
ARA0	ARCESS Array S	9.16	91	*e*P	Pn	08 12 09.9	-0.1
ARA0				IAML		08 13 16.9	
	comp=Z,2.1nm,0.8s						
ARCES	ARCESS Array B	9.16	91	Pn	Pn	08 12 10.4	+0.5
	baz=298,slow=12,SNR=20						
ARCES				LR	LR	08 15 11.1	
	comp=Z,97nm,21.0s,baz=350,slow=34						
KEV	Kevo	9.54	89	*e*P	Pn	08 12 14.8	-0.3
NOR	Nord	10.37	348	*e*P	Pn	08 12 25.1	-1.3
NOR				*e*S	Sn	08 14 10.7	-12
SUMG	Summit	11.24	291	*i* P	Pn	08 12 42.3	+3.7
SUMG				IAML		08 12 44.1	
	comp=Z,0.8nm,0.3s						
NOA	NORSAR Array B	11.91	149	Pn	Pn	08 12 50.1	+2.6
	comp=Z,0.0nm,0.3s,baz=334,slow=12,SNR=2.7						
NOA				LR	LR	08 16 50.8	
	comp=Z,104nm,20.1s,baz=345,slow=35						
HFS	Hagfors	13.18	145	Pn	Pn	08 13 07.0	+2.1
	comp=Z,0.4nm,0.3s,baz=346,slow=10,SNR=12						
HFS				LR	LR	08 17 27.0	
	comp=Z,100nm,20.1s,baz=310,slow=34						
FINES	FINESS Array B	14.88	120	LR	LR	08 18 39.9	
	comp=Z,111nm,19.7s,baz=312,slow=35						
GERES	GERESS Array B	24.08	155	LR	LR	08 24 35.2	
	comp=Z,61nm,18.7s,baz=335,slow=37						
RES	Resolute Bay	24.46	320	LR	LR	08 25 22.3	
	comp=Z,17nm,19.4s,baz=50,slow=38						
FRB	Frobisher Bay	25.23	286	LR	LR	08 24 42.5	
	comp=Z,49nm,19.3s,baz=306,slow=35						
MKAR	Makanchi Array	44.48	77	P	P	08 18 11.7	+2.9
	comp=Z,0.5nm,0.7s,baz=353,slow=8.6,SNR=5.0						
PDAR	Pinedale Array	55.22	302	LR	LR	08 44 15.9	
	comp=Z,56nm,19.0s,baz=323,slow=37						

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*NEIC **12** 08:15:21.6±1.6, 4°.64S±0°.07×143°.26E±0°.09, h102^{km}±8^{km}, mb4.0/7, Error ellipse: s-maj=13.3km s-min=9.9km az=104.0*
*IDC **12** 08:15:21.2±2.1, 4°.68S×143°.30E, h103^{km}±22^{km}, mb3.5/4, mb1 3.7/7, mb1mx3.3/27, mbtmp3.9/7, MS2.4/2, Ms1 2.4/2, ms1mx2.2/24, Error ellipse: s-maj=24.0km s-min=16.7km az=55.0*
ISC 12 08:15:21.4±0.8**, 4°.65S**±0°.09×**143°.29E**±0°.09**, h103**^{km}**, n26,** σ**1^{s}.24**/27**, mb4.0**/5**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	3.34	309	P	Pn	08 16 11.4	-0.5
	8.1nm,0.3s,baz=169,slow=9.5,SNR=17						
PMG	Port Moresby	6.08	141	P	Pn	08 16 50.1	+1.2
	2.4nm,0.3s,baz=4.3,slow=4.7,SNR=5.7						
PMG				S	Sn	08 17 56.1	-1.1
	0.8nm,0.3s,baz=300,slow=23,SNR=16						
PMG				LR	LR	08 19 06.9	
	comp=Z,12nm,21.7s,baz=277,slow=37						
PMG	Port Moresby	6.08	141		Pn	08 16 49.2	+0.3
COEN	Coen	9.24	181		Pn	08 17 33.8	+1.9
COEN	Coen	9.24	181	P	Pn	08 17 34.6	+2.7
FAKI	Fak Fak	11.15	278	Pn	Pn	08 17 58.0	+0.2
KDU	Kakadu	13.34	233	P	Pn	08 18 25.1	-1.6
MTN	Manton Dam	14.51	235	Pn	Pn	08 18 40.3	-1.5
QIS	Mount Isa	16.21	192	P	Pn	08 19 02.7	-0.5
WB0	Warramunga Arr	17.34	209	P	P	08 19 16.1	-0.9
WB0				IAmb	IAmb	08 19 25.1	
	comp=Z,10nm,1.1s						
WRAB	Tennant Creek	17.51	209	P	P	08 19 16.5	-2.3
WRA	Warramunga Arr	17.52	209	P	P	08 19 18.0	-0.9
	comp=Z,0.6nm,0.3s,baz=30,slow=12,SNR=47						
KNRA	Kununurra	18.00	231		P	08 19 23.3	-0.8
KNRA				IAmb	IAmb	08 19 52.4	
	comp=Z,15nm,0.9s						
KNRA	Kununurra	18.00	231	P	P	08 19 23.9	-0.2
AS31	Alice Springs	20.96	205	P	P	08 19 55.8	-0.5
AS31				IAmb	IAmb	08 20 04.1	
	comp=Z,2.0nm,0.6s						
ASAR	Alice Springs	20.96	205	P	P	08 19 55.7	-0.6
	comp=Z,1.3nm,0.6s,baz=32,slow=11,SNR=23						
ASAR				LR	LR	08 27 28.4	
	comp=Z,38nm,20.4s,baz=64,slow=35						
ASAR	Alice Springs	20.96	205	P	P	08 19 56.0	-0.3
FITZ	Fitzroy Crossi	21.83	231	P	P	08 20 06.0	+0.4
	comp=Z,3.7nm,0.5s,baz=49,slow=7.7,SNR=19						
TOLI2	Tolitoli	23.21	284	P	P	08 20 19.6	0.0
TOLI2				IAmb	IAmb	08 20 48.1	
	comp=Z,6.6nm,0.9s						
OOD	Oodnadatta	24.13	197	P	P	08 20 28.7	+1.0
WRKA	Warakurna	24.86	214	P	P	08 20 36.1	+1.5
MK31	Makanchi Array	74.13	321	P	P	08 26 45.7	-0.9
MK31				IAmb	IAmb	08 26 53.7	
	comp=Z,3.4nm,1.3s						
MKAR	Makanchi Array	74.13	321	P	P	08 26 47.0	+0.3
	comp=Z,0.3nm,0.3s,baz=103,slow=7.9,SNR=14						
QSPA	South Pole Qui	85.31	180	P	P	08 27 47.2	+0.5
ILAR	Eielson Array	85.73	24	P	P	08 27 47.9	-0.8
	comp=Z,0.5nm,0.7s,baz=256,slow=4.7,SNR=6.7						
BCAR	Beaver Creek A	87.35	26	P	P	08 27 58.8	+2.1

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*IDC **12** 08:28:54.5±3.7, 38°.07N×72°.78E, h0^{km}, mb3.4/1, mb1 3.5/4, mb1mx3.2/57, mbtmp3.5/4, ML3.2/3, MS3.8/1, Ms1 3.8/1, ms1mx2.7/23, Error ellipse: s-maj=79.6km s-min=34.3km az=156.0*
*NNC **12** 08:29:01.2±1.5, 38°.56N×73°.01E, h0^{km}±6^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=10.1km s-min=7.1km az=3.0*
ISC 12 08:28:55.8±1.7**, 38°.1N**±0°.1×**72°.78E**±0°.07**, h10**^{km}**, n25,** σ**1^{s}.28**/26**, 5C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.60	334	Pg	Pb	08 30 19.1	+2.4
	889nm,0.5s						
IUG				Lg	Lg	08 31 15.4	
	191nm,0.7s						
MRKS	Merke	4.70	4	Pg	Pb	08 30 17.6	-0.8
	28nm,0.3s						
MRKS				Lg	Lg	08 31 12.8	
	23nm,0.3s						
AAK	Ala-Archa	4.76	15	⇓Pn	Pn	08 30 06.8	-1.0
	19nm,0.8s						
AAK				⇓Lg	Lg	08 31 17.1	
	50nm,1.0s						
TKM2	Tokmak 2	5.31	23	Pg	Pb	08 30 28.2	-0.7
TKM2				Lg	Lg	08 31 34.2	
KK02	Karatay Array	5.33	342	⇑Pn	Pn	08 30 15.1	-0.4
	5.6nm,0.4s						
KK02				⇑Pg	Pb	08 30 29.9	+0.8
	23nm,0.9s						
KK02				⇑Sn	Sn	08 31 16.5	-0.5
	16nm,0.7s						
KK02				⇑Lg	Lg	08 31 36.0	
	20nm,0.7s						
BRLS	Borolday	5.46	337	Pg	Pb	08 30 32.6	+1.4
	10nm,0.5s						
BRLS				Lg	Lg	08 31 38.6	
	22nm,0.5s						
KST	Kastek	5.54	25	Pg	Pb	08 30 33.0	+0.3
	16nm,0.6s						
KST				Lg	Lg	08 31 39.4	
	31nm,0.8s						
DGS	Degeres	5.66	23	Pg	Pb	08 30 35.5	+0.8
	18nm,0.7s						
DGS				Lg	Lg	08 31 43.6	
	17nm,0.5s						
MTBS	Maitube	5.78	28	Pg	Pb	08 30 35.7	-1.0
	10nm,0.6s						
MTBS				Lg	Lg	08 31 44.1	
	18nm,1.2s						
TNSS	Tian-Shan	5.90	31	Pg	Pb	08 30 40.1	+1.1
	9.4nm,0.4s						
TNSS				Lg	Lg	08 31 51.5	
	7.6nm,0.6s						
KRBS	Karabastau	6.05	20	Pg	Pb	08 30 41.0	-0.3
	5.9nm,0.5s						
KRBS				Lg	Lg	08 31 53.1	
	5.6nm,0.3s						
MDOK	Medeo	6.05	31	⇑Pg	Pb	08 30 43.8	+2.4
	6.7nm,0.8s						
MDOK				⇓Lg	Lg	08 31 58.0	
	37nm,1.1s						

MDOK	Medeo	6.05	31	Pg	Pb	08 30 42.9	+1.6
	6.0nm,0.4s						
MDOK				Lg	Lg	08 31 56.4	
	22nm,0.9s						
KOTS	Kotyrbulak	6.13	31	Pg	Pb	08 30 44.4	+1.6
	13nm,0.4s						
KOTS				Lg	Lg	08 31 59.2	
	41nm,0.6s						
KTBS	Karatobe	6.38	26	Pg	Pb	08 30 48.7	+1.8
	6.2nm,0.7s						
KTBS				Lg	Lg	08 32 06.3	
	30nm,0.9s						
KUU	Kurty	6.42	24	Pg	Pb	08 30 48.9	+1.2
	7.1nm,0.6s						
KUU				Lg	Lg	08 32 06.8	
	24nm,1.2s						
BTLS	Baital	7.05	7	Pg	Pb	08 31 00.6	+2.3
	2.5nm,0.7s						
BTLS				Lg	Lg	08 32 26.4	
	5.8nm,0.4s						
PDGK	Podgornoye	7.33	42	⇓Pn	Pn	08 30 42.8	-0.3
	5.3nm,0.8s						
PDGK				⇓Lg	Lg	08 32 38.9	
	27nm,1.2s						
MKAR	Makanchi Array	11.20	36	Pn	Pn	08 31 36.6	+0.6
	0.1nm,0.3s,baz=215,slow=12,SNR=6.4						
GEYT	Alibeck	11.58	274	Pn	Pn	08 31 40.7	-0.5
	0.4nm,0.3s,baz=85,slow=16,SNR=2.2						
AB31	Akbulak array	14.53	325	⇓Pn	Pn	08 32 20.0	-1.4
	1.2nm,0.6s,baz=140,slow=11,SNR=17						
AKTO	Aktyubinsk	16.25	324	⇓Pn	P	08 32 46.7	-0.4
	3.0nm,0.8s						
ZALV	Zalesovo Beam	17.92	24	P	P	08 33 05.8	+0.3
	0.3nm,0.3s,baz=212,slow=14,SNR=3.8						
KVAR	Kislovodsk Arr	23.38	294	LR	LR	08 46 43.4	
	comp=Z,226nm,18.0s,baz=90,slow=46						
SONM	Songino Array	26.29	57	P	P	08 34 31.9	+0.3
	0.6nm,0.9s,baz=247,slow=9.2,SNR=2.9						

MOS ***12*** *08:34:44.1±1.2, 37°.84N×21°.09E, h12^{km}, mb4.7/24, Error ellipse: s-maj=7.2km s-min=4.2km az=78.9*

BEO ***12*** *08:34:44.6±3.6, 37°.50N×19°.90E, h112^{km}±4^{km}, ML4.2/6*

IDC ***12*** *08:34:44.0±0.6, 37°.87N×21°.23E, h0^{km}, mb4.3/19, mb1 4.3/27, mb1mx4.2/46, mbtmp4.2/27, ML4.0/8, MS3.6/23, Ms1 3.6/23, ms1mx3.5/45, Error ellipse: s-maj=12.7km s-min=12.2km az=119.0*

NEIC ***12*** *08:34:45.8, 37°.80N×21°.06E, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.74; M$_{\theta\theta}$5.84; M$_{\phi\phi}$-5.10; M$_{r\theta}$1.05; M$_{\theta\phi}$0.69; M$_{\phi r}$-2.01; Fault plane solution: M$_0$6.00000×10^{15} NP1:ϕ_s309.56000°, δ80.64000°, λ-21.66000°. NP2:ϕ_s43.25000°, δ68.64000°, λ-169.95000°. Principal axes: T 6.0195, Plg8.0000°, Azm358.0000°; N -0.0427, Plg66.0000°, Azm107.0000°; P -5.9768, Plg22.0000°, Azm265.0000°;*

HLW ***12*** *08:34:45.7, 37°.79N×21°.75E, h5^{km}±17^{km}, Md4.6*

UPSL ***12*** *08:34:45.6, 37°.83N×21°.16E, h29^{km}, Mw4.5, Moment Tensor Solution. s5 Moment tensor: M$_{rr}$0.19; M$_{\theta\theta}$6.51; M$_{\phi\phi}$-6.71; M$_{r\theta}$-1.34; M$_{\theta\phi}$-1.01; M$_{\phi r}$0.38; Fault plane solution: NP1:ϕ_s229.00000°, δ80.00000°, λ173.00000°. NP2:ϕ_s320.00000°, δ84.00000°, λ10.00000°.*

ATH ***12*** *08:34:45.6, 37°.83N×21°.16E, h29^{km}±1^{km}, ML4.6/11 Error ellipse: s-maj=1.5km s-min=0.7km az=342.0*

NEIC ***12*** *08:34:46.7±1.6, 37°.81N±0°.06×21°.16E±0°.07, h14^{km}±4^{km}, Error ellipse: s-maj=8.9km s-min=6.8km az=215.0*

PDG ***12*** *08:34:47.3±0.5, 37°.84N×21°.10E, h16^{km}, ML4.4/12, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

THE ***12*** *08:34:47.4, 37°.80N×21°.13E, h0^{km}±1^{km}, ML4.4/7, Error ellipse: s-maj=1.4km s-min=0.4km az=220.0*

MED_RC ***12*** *08:34:47.0±0.9, 37°.82N×21°.21E, h25^{km}±2^{km}, MW4.5/21, Moment Tensor Solution.Mantle waves: s21,c27; Duration: 1^s.0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.22±.13; M$_{\theta\theta}$0.88±.08; M$_{\phi\phi}$-0.66±.08; M$_{r\theta}$0.06±.06; M$_{\theta\phi}$-0.30±.05; M$_{\phi r}$-0.08±.06; Best double couple: M$_0$0.83000×10^{16} NP1:ϕ_s56.00000°, δ82.00000°, λ-177.00000°. NP2:ϕ_s325.00000°, δ87.00000°, λ-8.00000°. Principal axes: T 0.9400, Plg3.0000°, Azm11.0000°; N -0.2100, Plg82.0000°, Azm126.0000°; P -0.7300, Plg7.0000°, Azm280.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

ISC 12 08:34:46.8±0.5, **37°.78N**±0°.02×**21°.14E**±0°.02, **h19**^{km}±1^{km}, **n540**, σ**2^s.20**/608, **mb4.5**/70, **MS3.7**/16, **28C-35D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTN	Vitineika	0.14	14	P	Pg	08 34 50.9	-0.1
VTN				S	Sb	08 34 53.1	+2.2
VTN	Vitineika	0.14	14	P	Pb	08 34 50.6	+1.2
LTHK	Lithakia	0.25	253	P	Pb	08 34 53.2	+0.5
LTHK	Lithakia	0.25	253	P	Pg	08 34 52.7	+0.1
LTHK				S	Sb	08 34 58.4	+1.9
RLS	Riolos of Patr	0.38	43	P	Pg	08 34 53.9	-0.8
RLS				S	Sg	08 34 59.6	-0.4
	147µm,0.3s						
RLS	Riolos of Patr	0.38	43	P	Pg	08 34 53.7	-1.0
RLS				S	Sg	08 34 58.8	-1.3
RLS				AML	AML	08 35 01.0	
RLS				AML	AML	08 35 01.4	
DRO	Drossia	0.48	69	P	Pg	08 34 56.0	-0.6
DRO				S	Sb	08 35 04.0	+0.5
DRO	Drossia	0.48	69	P	Pg	08 34 55.6	-1.0
DRO				S	Sg	08 35 03.3	+0.2
DRO				AML	AML	08 35 05.5	
DRO				AML	AML	08 35 05.7	
PSDA	Pessada-Kefalo	0.55	307	P	Pg	08 34 57.2	-0.7
PSDA				S	Sb	08 35 05.9	+0.5
PSDA	Pessada-Kefalo	0.55	307	P	Pg	08 34 56.7	-1.2
PSDA				S	Sg	08 35 05.2	-0.2
VLS	Valsamata	0.59	312	P	Pg	08 34 58.0	-0.6
VLS				S	Sb	08 35 07.3	+0.9
VLS	Valsamata	0.59	312	P	Pg	08 34 57.0	-1.5
VLS				S	Sb	08 35 06.7	+0.2
VLS				AML	AML	08 35 08.5	
	comp=E,47097µm,0.3s						
VLS				AML	AML	08 35 08.8	
	comp=N,61145µm,0.5s						
ARGA	Argostoli. Kep	0.66	307	P	Pb	08 34 59.9	+0.2
LXRA	Lixouri, Kepha	0.70	307	P	Pb	08 34 59.9	-0.4
UPR	University Cam	0.71	45	P	Pb	08 35 00.8	+0.1
UPR				S	Sg	08 35 10.9	+0.5
KEF4	Livadi, Kephal	0.74	310	P	Pb	08 35 00.2	-0.9
KEF4				S	Sg	08 35 11.7	+0.5
KEF4	Livadi, Kephal	0.74	310	P	Pb	08 35 00.2	-0.9
KEF4				S	Sb	08 35 10.5	-0.4
KEF3	Kipouria, Keph	0.76	304	P	Pb	08 35 00.4	-1.0
KEF3				S	Sg	08 35 12.3	+0.6
	comp=N,72µm,0.6s						
KEF3	Kipouria, Keph	0.76	304	P	Pb	08 34 59.9	-1.5
LAKA	Lakka	0.80	55	P	Pb	08 35 00.7	-1.6
LAKA				S	Sb	08 35 12.3	-0.4
LAKA				AML	AML	08 35 16.2	
LAKA				AML	AML	08 35 17.8	
FSK	Fiskardo	0.81	326	P	Pb	08 35 02.1	-0.3
FSK				S	Sn	08 35 14.9	-0.1
	comp=N,19µm,0.5s						
FSK	Fiskardo	0.81	326	P	Pb	08 35 01.4	-1.1
FSK				S	Sb	08 35 12.3	-0.8
FSK				AML	AML	08 35 24.6	
	comp=E,47788µm,1.0s						
FSK				AML	AML	08 35 25.4	
	comp=N,33419µm,0.5s						
KLV	Kalavryta, Ach	0.84	72	P	Pb	08 35 02.7	-0.2
KLV	Kalavryta, Ach	0.84	72	P	Pb	08 35 01.4	-1.4
KLV				S	Sb	08 35 12.1	-1.7
KLV				AML	AML	08 35 18.9	
	comp=N,41387µm,0.5s						
KLV				AML	AML	08 35 21.2	
	comp=E,46837µm,0.3s						
ITM	Ithomi	0.87	134	P	Pb	08 35 03.2	-0.1
ITM	Ithomi	0.87	134	P	Pb	08 35 03.7	+0.4
ITM				S	Sn	08 35 17.6	+1.3
ITM	Ithomi	0.87	134	P	Pb	08 35 03.2	-0.1
ITM				S	Sb	08 35 15.1	+0.5
ITM				AML	AML	08 35 22.8	
	comp=E,55402µm,0.4s						
ITM				AML	AML	08 35 23.1	
	comp=N,75502µm,0.8s						
ITM	Ithomi	0.87	134		Pb	08 35 03.1	-0.1
EFP	Efpalio	0.88	43	P	Pg	08 35 04.3	+0.3
EFP				S	Sn	08 35 16.9	+0.3
EFP	Efpalio	0.88	43	P	Pb	08 35 02.1	-1.5
EFP				S	Sb	08 35 14.0	-0.9
EFP				AML	AML	08 35 17.6	
	comp=N,55385µm,0.6s						
EFP				AML	AML	08 35 20.4	
	comp=E,70093µm,0.4s						
EVGI	Lefkada island	0.92	335	P	Pb	08 35 03.6	-0.6
EVGI				S	Sn	08 35 17.7	+0.1
EVGI	Lefkada island	0.92	335	P	Pb	08 35 02.9	-1.4
TRIZ	Trizonia	0.94	51	P	Pb	08 35 02.9	-1.6
NYDR	Nydri-Lefkada	0.99	339	P	Pb	08 35 04.7	-0.8
NYDR				S	Sn	08 35 19.7	+0.4
	comp=E,15µm,0.6s						
NYDR	Nydri-Lefkada	0.99	339	P	Pb	08 35 04.0	-1.4
DRAG	Dragano-Lefkad	1.00	334	P	Pb	08 35 05.0	-0.7
DRAG				S	Sn	08 35 20.4	+0.7
DRAG	Dragano-Lefkad	1.00	334	P	Pb	08 35 04.2	-1.5
PYL	PYLOS	1.01	152	P	Pb	08 35 05.7	0.0
PYL				S	Sn	08 35 22.3	+2.6
PYL	PYLOS	1.01	152	P	Pb	08 35 05.4	-0.3
LKD2	Lefkada island	1.07	339	P	Pb	08 35 06.2	-0.7
LKD2	Lefkada island	1.07	339	P	Pb	08 35 05.3	-1.6
LKD2				AML	AML	08 35 27.7	
	comp=E,65739µm,0.8s						
LKD2				AML	AML	08 35 32.5	
	comp=N,58029µm,0.6s						
TSLK	Tsoukalades, L	1.11	340	P	Pb	08 35 07.5	+0.1
TSLK	Tsoukalades, L	1.11	340	P	Pb	08 35 05.9	-1.6
TSLK				AML	AML	08 35 30.2	
	comp=N,59120µm,0.9s						
TSLK				AML	AML	08 35 30.4	
	comp=E,42496µm,0.8s						
THAL	Thalero	1.23	78	P	Pn	08 35 08.7	-0.3
THAL				AML	AML	08 35 37.5	
THAL				AML	AML	08 35 46.3	
	comp=N,84398µm,1.0s						
EVR	Evrytania	1.25	25	P	Pn	08 35 09.7	+0.3
DLFA	Delphi	1.27	57	P	Pn	08 35 08.7	-1.0
LTK	Loutraki	1.46	80	P	Pn	08 35 13.3	+1.0
LTK	Loutraki	1.46	80	P	Pn	08 35 13.1	+0.8
AGG	Agios Georgios	1.55	37	P	Pb	08 35 15.2	+0.3
AGG	Agios Georgios	1.55	37	P	Pb	08 35 15.3	+0.3
AGG				S	Sg	08 35 37.9	+1.0
AGG	Agios Georgios	1.55	37	P	Pn	08 35 13.6	+0.1
AGG	Agios Georgios	1.55	37		Pn	08 35 13.6	+0.1
KRND	KRANIDI	1.64	103	P	Pb	08 35 17.3	+0.7
KRND				S	Sg	08 35 41.1	+1.2
	comp=N,10µm,0.7s						
LKR	Lokris	1.70	59	P	Pb	08 35 17.1	-0.4
VLI	Veliai	1.78	126	P	Pb	08 35 19.6	+0.7
IGT	Igoumenitsa	1.86	340	P	Pn	08 35 19.1	+1.4
JAN	Janina	1.88	353	P	Pb	08 35 20.3	-0.4
THL	Klokotos Trika	1.91	21	P	Pb	08 35 20.3	-0.7
THL				S	Sb	08 35 45.3	+0.9
	comp=N,6µm,0.7s						
ATH	Athens Observa	2.04	84	P	Pb	08 35 22.9	-0.5
ATH				S	Sb	08 35 50.5	+2.0
	comp=N,9µm,0.7s						
VLY	Voula,Athens	2.10	87	P	Pb	08 35 23.5	-0.9
KTHR	Kythira	2.13	135	P	Pb	08 35 25.0	+0.2
KTHA	Kythira Island	2.16	134	P	Pb	08 35 25.3	-0.1
PTL	Penteli	2.17	82	P	Pb	08 35 24.5	-1.0
KPRO	Kipourio	2.17	4	P	Pb	08 35 24.7	-1.0
KEK	Kerkira	2.19	332	P	Pn	08 35 24.1	+1.7
DION	Dionisos Attik	2.23	82	P	Pb	08 35 25.5	-1.0
DION				S	Sb	08 35 54.0	+0.3
SRN	Sarande	2.28	337	P	Pb	08 35 25.7	-1.6
LSK	Leskovik	2.40	350	P	Pb	08 35 27.9	-1.6
PENT	Pentalofos	2.41	360	P	Pb	08 35 28.3	-1.4
KYMI	Kymi, Euboea I	2.48	69	P	Pn	08 35 28.7	+2.4
KZN	Kozani	2.57	11	P	Pn	08 35 30.1	+2.6
ANKY	Antikythira Is	2.58	137	P	Pb	08 35 30.9	-1.6
NEST	Nestorio	2.63	358	P	Pn	08 35 30.7	+2.3
KTI	Kastanea	2.71	16	P	Pn	08 35 32.0	+2.4
MHLO	Agia Marina, M	2.82	112	P	Pn	08 35 33.4	+2.5
KBN	Korca	2.85	355	P	Pn	08 35 32.7	+1.3
KBN	Korca	2.85	355	P	Pn	08 35 30.9	-0.5
KBN	Korca	2.85	355		Pn	08 35 30.9	-0.5
PAIG	Paliouri	2.92	42	P	Pn	08 35 33.8	+1.5
FNA	Florina	3.00	3	P	Pn	08 35 35.1	+1.6
FNA	Florina	3.00	3	P	Pn	08 35 34.8	+1.3
FNA	Florina	3.00	3	Pn	Pn	08 35 34.8	+1.3
RODP	Rodopos	3.06	136	P	Pn	08 35 37.2	+3.0
SCTE	Santa Cesarea	3.10	318		Pn	08 35 32.9	-1.8
PLG	Polygyros	3.15	34	P	Pn	08 35 37.9	+2.4
THE	Thessaloniki	3.18	26	P	Pn	08 35 37.4	+1.6
IMMV	Iera Moni Meta	3.25	135	eP	Pn	08 35 39.7	+2.8
IMMV	Iera Moni Meta	3.25	135	P	Pn	08 35 39.5	+2.6
KNDR	Palaiochora Ch	3.27	140	P	Pn	08 35 38.6	+1.5
GRG	Griva	3.31	17	P	Pn	08 35 40.3	+2.5
OHR	Ohrid	3.33	356	i Pn	Pn	08 35 39.7	+1.7
OHR	Ohrid	3.33	356	ePn	Pn	08 35 36.9	-1.2
OUR	Ouranopolis	3.37	40	eP	Pn	08 35 39.9	+1.4
OUR	Ouranopolis	3.37	40	P	Pn	08 35 40.1	+1.6
VAM	Vamos	3.42	133	P	Pn	08 35 41.8	+2.6
SOH	Sokhos	3.48	29	P	Pn	08 35 42.2	+2.1
APE	Apeiranthos	3.56	100	⇓P	Pb	08 35 45.9	-3.4
APE	Apeiranthos	3.56	100	eP	Pn	08 35 43.5	+2.3
APE	Apeiranthos	3.56	100	P	Pn	08 35 44.1	+2.9
THR5	Thira Island,	3.63	111	P	Pn	08 35 45.9	+3.9
KNT	Kendrikon	3.64	21	P	Pn	08 35 43.9	+1.7
THR3	Thira Island,	3.67	111	P	Pn	08 35 45.9	+3.3
THR6	Thira Island,	3.69	111	P	Pn	08 35 46.0	+3.1
TIR	Tirane	3.69	345	⇓P	Pn	08 35 44.1	+1.2
TIR	Tirane	3.69	345	P	Pn	08 35 43.9	+0.9
TIR	Tirane	3.69	345	Pn	Pn	08 35 43.9	+0.9
VAY	Valandovo	3.70	17	i Pn	Pn	08 35 44.5	+1.5
VAY	Valandovo	3.70	17	ePn	Pn	08 35 44.9	+1.9
VAY				eSn	Sn	08 36 25.4	-0.8
TIP	Timpagrande	3.71	293	⇓P	Pn	08 35 43.7	+0.4
TIP	Timpagrande	3.71	293	Pn	Pn	08 35 43.5	+0.2
SANT	Santorini	3.73	111	⇓P	Pn	08 35 47.2	+3.8
SANT	Santorini	3.73	111	Pn	Pn	08 35 45.0	+1.6
GVD	Gavdhos	3.78	140	P	Pn	08 35 45.3	+1.2
LIA	Limnos Island	3.80	55	P	Pn	08 35 46.4	+2.1
SRS	Serrai	3.83	29	P	Pn	08 35 46.9	+2.0
IDI	Anoyia	3.91	128	Pn	Pn	08 35 46.8	+0.7
	comp=N,5.2nm,0.3s,baz=270,slow=10,SNR=23						
IDI				Sn	Sn	08 36 32.8	+1.4
	comp=N,32nm,0.3s,baz=110,slow=22,SNR=5.0						
IDI				LR	LR	08 37 21.6	
	comp=N,856nm,20.6s,baz=294,slow=40						
IDI	Anoyia	3.91	128	P	Pn	08 35 48.6	+2.6
CHOS	Chios island	3.92	80	eP	Pn	08 35 48.7	+2.6
CHOS	Chios island	3.92	80	P	Pn	08 35 48.8	+2.6
SIGR	SIGRI	3.96	67	eP	Pn	08 35 48.5	+1.9
SIGR	SIGRI	3.96	67	P	Pn	08 35 49.5	+2.9
STIP	Stip	3.99	11	i Pn	Pn	08 35 50.4	+3.4
NVR	Nevrokopi	4.13	30	P	Pn	08 35 51.4	+2.3
CEL	Celeste	4.17	278	Pn	Pn	08 35 49.2	-0.4
SKO	Skopje	4.19	3	i Pn	Pn	08 35 50.9	+1.1
SKO	Skopje	4.19	3	ePn	Pn	08 35 50.7	+0.9
PRK	Paraskevi	4.28	68	P	Pn	08 35 55.0	+4.0
URLA	Izmir	4.34	81	eP	Pn	08 35 54.4	+2.5
BOZC	Bozcaada	4.35	60	eP	Pn	08 35 53.9	+1.9
GADA	Gvkgeada	4.42	56	eP	Pn	08 35 55.1	+2.2
ULC	Ulcinj	4.42	341	⇓iPn	Pn	08 35 52.6	-0.4
ULC				i Sn	Sn	08 36 45.2	+1.2
MATE	Matera	4.48	311	⇑P	Pn	08 35 53.9	+0.1
SMG	Samos	4.51	89	P	Pn	08 35 56.6	+2.4
EZN	Ezine	4.53	62	eP	Pn	08 35 57.2	+2.7
DRME	Dracevica, Mon	4.65	342	ePn	Pn	08 35 55.0	-1.1
DRME	Dracevica, Mon	4.65	342	⇓iPn	Pn	08 35 56.2	+0.1
DRME				i Sn	Sn	08 36 50.5	+1.0
BLCB	Balcova	4.69	81	eP	Pn	08 35 59.5	+2.8
DKL	Dikili	4.70	72	eP	Pn	08 35 59.7	+2.9
BOSS	Bosilegrad	4.82	12	ePn	Pn	08 35 59.4	+1.0
BOSS				eSn	Sn	08 36 49.5	-4.2
BUM	Brajici-Budva	4.83	340	⇑iPn	Pn	08 35 58.3	-0.3
BUM				i Sn	Sn	08 36 54.7	+0.6
PDG	Podgorica	4.86	343	⇑P	Pn	08 35 59.4	+0.4
PDG	Podgorica	4.86	343	ePn	Pn	08 35 57.5	-1.5
PDG	Podgorica	4.86	343	Pn	Pn	08 35 59.2	+0.3
TTG	Podgorica	4.86	343	⇑iPn	Pn	08 35 59.1	+0.1
TTG				i Sn	Sn	08 36 55.4	+0.7
ZKR	Zakros	4.88	122	eP	Pn	08 36 02.9	+3.6
PVY	Plav	4.89	350	⇓iPn	Pn	08 36 00.5	+1.0
PVY				i Sn	Sn	08 36 56.9	+1.2
ALN	Alexandroupoli	4.91	49	P	Pn	08 36 02.0	+2.3
ALN	Alexandroupoli	4.91	49	P	Pn	08 36 00.9	+1.2
ALN	Alexandroupoli	4.91	49		Pn	08 36 00.9	+1.2
BODT	Bodrum	4.96	96	eP	Pn	08 36 03.7	+3.3
BARS	Barje	5.05	6	ePn	Pn	08 36 01.9	+0.2
BARS	Barje	5.05	6	ePn	Pb	08 36 18.4	+3.7
CEME	Cevo	5.05	341	⇓iPn	Pn	08 36 01.2	-0.5
CEME				i Sn	Sn	08 36 59.2	-0.4
LPK	Lapseki	5.08	58	eP	Pn	08 36 04.2	+2.2
HCY	Herceg Novi	5.08	337	ePn	Pn	08 36 00.8	-1.2
HCY	Herceg Novi	5.08	337	⇓iPn	Pn	08 36 01.5	-0.5
HCY				i Sn	Sn	08 37 00.1	-0.1
VTS	Vitosha	5.09	18	⇓P	Pn	08 36 04.1	+1.8
VTS	Vitosha	5.09	18	P	Pn	08 36 02.9	+0.6
VTS	Vitosha	5.09	18	Pn	Pn	08 36 02.9	+0.6
VTS	Vitosha	5.09	18	ePn	Pn	08 36 02.7	+0.5
VTS				eSn	Sn	08 36 57.5	-3.1
PLD	Plovdiv	5.11	31	ePn	Pn	08 36 07.2	+4.8
IVA	Berane	5.17	350	⇑iPn	Pn	08 36 04.5	+1.2
IVA				i Sn	Sn	08 37 02.9	+0.4
KOME	Kolasin	5.21	347	⇑iPn	Pn	08 36 05.1	+1.2
KOME				i Sn	Sn	08 37 04.2	+0.7
DAT	Datca	5.24	100	eP	Pn	08 36 09.1	+4.8
NKME	Niksic	5.25	342	⇓iPn	Pn	08 36 04.7	+0.3
NKME				i Sn	Sn	08 37 04.8	+0.3
NKY	Niksic	5.29	343	⇑iPn	Pn	08 36 06.4	+1.5
NKY				i Sn	Sn	08 37 05.7	+0.3
AYDB	Zeytinkoy-Aydi	5.34	86	eP	Pn	08 36 09.5	+3.8
VAE	Valguarnera	5.35	269	Pn	Pn	08 36 06.7	+0.9
	comp=N,3.4nm,0.3s,baz=168,slow=14,SNR=6.3						
VAE				Sn	Sn	08 37 06.5	-0.4
	comp=N,14nm,0.3s,baz=161,slow=5.5,SNR=4.2						
TREB	Trebinje	5.37	337	ePn	Pn	08 36 05.0	-1.0
RAFF	Raffo Rosso	5.42	266		Pn	08 36 05.7	-1.0
SELS	Selova	5.43	360	ePn	Pn	08 36 06.1	-0.7
SJES	Sjenica	5.54	351	ePn	Pn	08 36 06.0	-2.5
BALB	Balikesir	5.58	69	eP	Pn	08 36 12.9	+4.0
BALB	Balikesir	5.58	69		Pn	08 36 08.6	-0.3
ZAPS	Zavoj	5.60	11	ePn	Pn	08 36 10.1	+0.9
UPM	Unac-Piva	5.68	343	ePn	Pn	08 36 11.1	+0.7
UPM	Unac-Piva	5.68	343	⇑iPn	Pn	08 36 11.1	+0.7
UPM				i Sn	Sn	08 37 15.2	+0.1
PLE	Pljevlja	5.70	347	⇓iPn	Pn	08 36 12.6	+2.0
PLE				i Sn	Sn	08 37 15.5	-0.1
STON	Ston	5.72	334	ePn	Pn	08 36 07.9	-2.9
STON	Ston	5.72	334	ePn	Pn	08 36 09.5	-1.3
STON				Sn	Sn	08 37 09.5	-6.4
SGRT	San Giovanni R	5.75	315	Pn	Pn	08 36 10.5	-0.7
TURN	Turunc	5.75	98	eP	Pn	08 36 15.4	+4.2
ARG	Arkhangelos	5.80	104	eP	Pn	08 36 15.9	+3.9
IVAS	Ivanjica	5.84	353	ePn	Pn	08 36 11.1	-1.3
IVAS				eSn	Sn	08 37 04.2	-15
BOVS	Bovan	5.86	4	ePn	Pn	08 36 12.1	-0.6
LSTV	Lastovo	5.95	328	ePn	Pn	08 36 12.5	-1.4
LSTV				Sn	Sn	08 37 15.5	-6.0
KULA	Kula-Manisa	5.97	81	eP	Pn	08 36 18.5	+4.2
RUDO	Rudo	5.98	348	ePn	Pn	08 36 14.0	-0.4
PAOL	Paolisi	6.04	305		Pn	08 36 15.5	+0.3
DALY	Dalyan (Mula)	6.06	97	eP	Pn	08 36 19.9	+4.4
ZAGS	Zajecar	6.08	7	ePn	Pn	08 36 15.6	-0.1
GRUS	Gruza	6.11	357	ePn	Pn	08 36 14.5	-1.6
CORL	Corleone	6.21	273		Pn	08 36 16.0	-1.5
BBLS	Lazići	6.22	348	ePn	Pn	08 36 17.8	+0.1
BBLS	Lazići	6.22	348	ePn	Pn	08 36 12.3	-5.4
BBLS				eSn	Sn	08 37 13.2	-15
CLTB	Caltabellotta	6.29	271	Pn	Pn	08 36 19.6	+0.9
MAKA	Makarska	6.33	332	ePn	Pn	08 36 18.1	-1.0
MAKA				Sn	Sn	08 37 25.3	-5.7
DIVS	Divibare	6.37	352	ePn	Pn	08 36 19.0	-0.8
DIVS	Divibare	6.37	352		Pn	08 36 19.4	-0.4
DIVS	Divibare	6.37	352	ePn	Pn	08 36 17.7	-2.1
DIVS				eSn	Sn	08 37 17.5	-15
FETY	Fethiye	6.44	98	eP	Pn	08 36 25.8	+5.1
HVAR	Hvar	6.47	328	ePn	Pn	08 36 20.1	-1.0
HVAR				Sn	Sn	08 37 28.2	-6.1
RICI	Ricice	6.47	333	ePn	Pn	08 36 19.8	-1.3
RICI				Sn	Sn	08 37 27.8	-6.6
KUBS	Kucevo	6.63	3	ePn	Pn	08 36 22.6	-0.8
TEKS	Tekeris	6.87	350	ePn	Pn	08 36 23.7	-2.9
TEKS	Tekeris	6.87	350	ePn	Pn	08 36 22.6	-4.0
MDVR	Moldovita	7.00	3	⇑P	Pn	08 36 30.3	+1.9
SLUM	Salum	7.12	151	P	Pn	08 36 30.3	+0.3
	baz=154						
SLUM				S	Sn	08 37 41.9	-8.4
	baz=154						
HERR	Herculane	7.16	7	⇑P	Pn	08 36 31.8	+1.3
ZIRJ	Zirje	7.20	326	ePn	Pn	08 36 29.6	-1.5
ZIRJ				Sn	Sn	08 37 46.6	-5.7
MGRS	Mrkonjic Grad	7.30	336	ePn	Pn	08 36 30.4	-2.1
MORI	Morici	7.34	328	ePn	Pn	08 36 32.2	-0.8
MORI				Sn	Sn	08 37 49.8	-6.0
ISP	Isparta	7.43	87	P	Pn	08 36 35.4	+1.0
ISP	Isparta	7.43	87	Pn	Pn	08 36 35.4	+1.0
FRGS	Fruska Gora	7.43	353	ePn	Pn	08 36 33.3	-1.1
FRGS	Fruska Gora	7.43	353	ePn	Pn	08 36 32.0	-2.4
AQU	L'Aquila	7.49	310	P	Pn	08 36 36.6	+1.5
AQU	L'Aquila	7.49	310	ePn	Pn	08 36 35.6	+0.5
AQU	L'Aquila	7.49	310		Pn	08 36 36.6	+1.5
BLY	Banja Luka	7.57	338	ePn	Pn	08 36 36.5	+0.3
DUGI	Dugi Otok	7.72	325	ePn	Pn	08 36 38.1	-0.2
DUGI				Sn	Sn	08 37 59.9	-5.3
BZS	Buzias	7.83	2	⇓P	Pn	08 36 41.0	+1.2
UDBI	Udbina	7.86	331	ePn	Pn	08 36 39.4	-0.9
UDBI				Sn	Sn	08 38 02.2	-6.5
LOT	Lotru	7.91	14	⇓P	Pn	08 36 42.6	+1.7
NRCA	Norcia	7.94	312		Pn	08 36 42.4	+1.0
ARR	Arges	8.02	18	⇑P	Pn	08 36 44.3	+1.9
VOIR		8.19	20	⇓P	Pn	08 36 47.5	+2.7
PLIT	Plitvice	8.21	331	ePn	Pn	08 36 44.5	-0.5
PLIT				Sn	Sn	08 38 11.3	-6.0
NVLJ	Novalja	8.26	327	ePn	Pn	08 36 44.7	-0.9
NVLJ				Sn	Sn	08 38 13.0	-5.3
ISR	Istrita	8.37	27	⇑P	Pn	08 36 50.4	+3.2
RABC	Rab	8.45	327	ePn	Pn	08 36 47.6	-0.6
RABC				Sn	Sn	08 38 16.4	-6.5
MOSL	Moslavina	8.48	339	ePn	Pn	08 36 47.1	-1.6
MOSL				Sn	Sn	08 38 17.5	-6.4
SIRR	Siria	8.49	2	⇓P	Pn	08 36 50.1	+1.3
MLR	Muntele Rosu	8.50	23	⇓P	Pn	08 36 52.1	+3.0
MLR	Muntele Rosu	8.50	23	Pn	Pn	08 36 52.2	+3.2
	comp=N,1.0nm,0.3s,baz=146,slow=13,SNR=7.0						
MLR				LR	LR	08 40 21.1	
	comp=N,216nm,21.8s,baz=213,slow=40						
TLBR	Topalu	8.53	35	⇑P	Pn	08 36 51.9	+2.6
HARR	Harsova	8.59	34	⇑P	Pn	08 36 53.0	+2.9
KOVH	Kovagotottos	8.60	346	eP	Pn	08 36 50.0	-0.4
MORH	Mrgy, Hungar	8.63	348	eP	Pn	08 36 50.6	-0.1
MORH	Mrgy, Hungar	8.63	348	ePn	Pn	08 36 49.7	-1.0
TIRR	Tirgusor	8.63	37	⇓P	Pn	08 36 54.0	+3.3
DOPR	Dopca	8.77	20	⇓P	Pn	08 36 56.0	+3.4
COVR	Voineasa-Covas	8.89	24	⇑P	Pn	08 36 57.7	+3.3
OZLJ	Ozalj	8.90	333	Sn	Sn	08 38 26.7	-7.4
OZLJ	Ozalj	8.90	333	ePn	Pn	08 36 53.9	-0.5
TPGR	Topolog	8.94	35	⇓P	Pn	08 36 58.5	+3.6
SMRN	Sveta Marina	8.94	326	ePn	Pn	08 36 54.2	-0.8
SMRN				Sn	Sn	08 38 28.7	-6.5
PTJ	Puntijarka	8.99	336	Sn	Sn	08 38 29.6	-6.8
PTJ	Puntijarka	8.99	336	ePn	Pn	08 36 54.8	-0.8
BRJN	Brijuni	9.03	324	ePn	Pn	08 36 55.3	-0.8
BRJN				Sn	Sn	08 38 30.8	-6.4
RIY	Rijeka	9.04	329	ePn	Pn	08 36 56.5	+0.2
RIY	Rijeka	9.04	329	Sn	Sn	08 38 31.6	-5.9
RIY	Rijeka	9.04	329	ePn	Pn	08 36 55.5	-0.8
KALN	Kalnik	9.04	339	ePn	Pn	08 36 54.6	-1.7
KALN				Sn	Sn	08 38 30.1	-7.6
PLOR	Plostina	9.05	25	⇑P	Pn	08 37 00.2	+3.8
CFR	Carcaliu	9.06	33	⇑P	Pn	08 37 00.5	+4.0
GBRS	Gornja Briga	9.07	331	i Pn	Pn	08 36 56.6	-0.2
DRGR		9.08	7	⇑P	Pn	08 36 59.5	+2.6
CRES	Cresnjev	9.09	334	ePn	Pn	08 36 55.8	-1.2
CRES	Cresnjev	9.09	334	ePn	Pn	08 36 55.7	-1.2
VRI	Vrincioaia	9.09	26	⇓P	Pn	08 37 00.7	+3.7
LOBO	Lobor	9.18	337	ePn	Pn	08 36 57.0	-1.2
LOBO				Sn	Sn	08 38 33.7	-7.3
SWA2		9.25	156	P	Pn	08 36 58.0	-1.2
	baz=159						
SWA2				S	Sn	08 38 35.6	-7.1
	baz=159						
CASP	Castiglione de	9.31	306	Pn	Pn	08 37 01.6	+1.6
VSL	Villasalto	9.36	284	Pn	Pn	08 36 59.2	-1.6

CEY	Cerknica	9.40	330	ePn	Pn	08 37 00.2	-1.0
OSSC	Osservatorio P	9.45	310		Pn	08 37 02.6	+0.6
LJU	Ljubljana	9.61	331	ePn	Pn	08 37 02.7	-1.5
TESR	Tescani	9.63	23	⇑P	Pn	08 37 07.8	+3.4
KEST	Kesra	9.69	261	Pn	Pn	08 37 05.9	+0.6
	comp=N,0.6nm,0.3s,baz=205,slow=2.2,SNR=9.0						
KEST				LR	LR	08 41 34.7	
	comp=N,212nm,21.8s,baz=317,slow=42						
KEST	Kesra	9.69	261		Pn	08 37 06.2	+0.9
MPLH	Magyarpolny	9.75	345	eP	Pn	08 37 06.2	+0.1
PERS	Pernice	9.91	335	ePn	Pn	08 37 07.0	-1.3
BR131	Keskin Array S	9.95	75	P	Pn	08 37 09.7	+0.7
BR131	Keskin Array S	9.95	75		Pn	08 37 09.7	+0.7
BRTR	Keskin Array B	9.95	75	Pn	Pn	08 37 13.6	+4.6
	comp=N,0.8nm,0.3s,baz=262,slow=12,SNR=14						
BRTR				LR	LR	08 41 48.1	
	comp=N,770nm,18.6s,baz=264,slow=43						
BRTR	Keskin Array B	9.95	75	P	Pn	08 37 07.6	-1.4
BRTR	Keskin Array B	9.95	75		Pn	08 37 07.6	-1.4
SOKA	Soboth	9.97	335	ePn	Pn	08 37 07.9	-1.3
	comp=N,8.7nm,0.5s,SNR=10						
SOKA				eSn	Sn	08 38 53.6	-7.0
	comp=N,8.5nm,0.6s						
OBKA	Obir	9.99	333	ePn	Pn	08 37 09.9	+0.4
	comp=N,12nm,0.5s,SNR=11						
OBKA				eSn	Sn	08 38 57.3	-3.9
	comp=N,37nm,0.7s						
ZCCA	Zocca	10.09	314		Pn	08 37 10.1	-0.7
PSZ	Piszkesteto	10.17	355	⇑P	Pn	08 37 13.8	+1.9
PSZ	Piszkesteto	10.17	355	eP	Pn	08 37 11.0	-0.9
PSZ	Piszkesteto	10.17	355	P	Pn	08 37 11.7	-0.2
PSZ	Piszkesteto	10.17	355	Pn	Pn	08 37 11.7	-0.2
CSS	Mathiatis	10.22	102	Pn	Pn	08 37 13.3	+0.7
BURAR	Bucovina Array	10.27	16	⇑P	Pn	08 37 16.5	+3.2
BURAR	Bucovina Array	10.27	16	Pn	Pn	08 37 13.8	+0.5
BUR08	Bucovina Ar. S	10.29	16		Pn	08 37 14.4	+0.7
PRED	Cave del Predi	10.32	329		Pn	08 37 14.2	+0.3
ARSA	Arzberg	10.33	338	ePn	Pn	08 37 14.0	0.0
	comp=N,3.6nm,0.3s						
TEOL	Teolo	10.37	320		Pn	08 37 14.8	+0.3
TRPA	Tarpa	10.39	5	eP	Pn	08 37 15.5	+0.7
MYKA	Terra Mystica	10.44	330	ePn	Pn	08 37 17.2	+1.6
	comp=N,4.4nm,0.4s						
MYKA				eSn	Sn	08 39 09.7	-2.3
	comp=N,13nm,0.7s						
STAL	STALIGIAL	10.53	326		Pn	08 37 16.2	-0.7
ZOU	Zoufplan	10.65	328		Pn	08 37 17.8	-0.8
CIMO	Cimolais	10.69	326		Pn	08 37 17.8	-1.2
VYHS	Vyhne	10.84	352	eP	Pn	08 37 19.0	-1.9
VYHS				e		08 39 15.6	
VYHS	Vyhne	10.84	352	ePN	Pn	08 37 19.0	-1.9
VYHS				eSN	Sn	08 39 15.6	-6.1
CONA	Conrad Observa	10.85	341	i Pn	Pn	08 37 22.2	+1.0
	comp=N,1.0nm,0.4s						
CTI	Castel Tesino	10.87	322	P	Pn	08 37 20.5	-1.0
CTI	Castel Tesino	10.87	322	Pn	Pn	08 37 20.5	-1.0
KBA	Koelnbreinsper	10.92	331	i Sn	Sn	08 39 20.0	-4.1
	comp=N,8.0nm,0.5s						
MODS	Modra-Piesok	10.95	346	eSN	Sn	08 39 17.2	-7.3
ABTA	Abfaltersbach	11.00	327	i Pn	Pn	08 37 24.6	+1.4
	comp=N,6.1nm,0.6s						
ABTA				eSn	Sn	08 39 20.7	-5.1
	comp=N,33nm,0.8s						
CRVS	Cervenica-Dubn	11.12	1	eP	Pn	08 37 24.1	-0.7
CRVS	Cervenica-Dubn	11.12	1	ePN	Pn	08 37 24.1	-0.7
SALO	Salr	11.14	318		Pn	08 37 25.1	-0.1
MOA	Molln	11.25	336	ePn	Pn	08 37 27.3	+0.7
	comp=N,4.0nm,0.4s,SNR=5.0						
MOA				eSn	Sn	08 39 27.2	-4.6
	comp=N,7.1nm,0.6s						
SORM	Soroca	11.61	25	⇑P	Pn	08 37 34.9	+3.5
WTTA	Wattenberg	11.78	327	ePn	Pn	08 37 36.8	+2.9
	comp=N,4.9nm,0.5s,SNR=5.7						
WTTA				eSn	Sn	08 39 41.0	-3.9
	comp=N,32nm,0.7s						
WATA	Walderalm	11.86	327	ePn	Pn	08 37 36.3	+1.2
	comp=N,7.0nm,0.4s						
WATA				eSn	Sn	08 39 44.5	-2.4
	comp=N,22nm,0.8s						
VRAC	Vranov	11.98	346	⇑P	Pn	08 37 36.9	+0.3
VRAC	Vranov	11.98	346	LR	LR	08 42 45.8	
	comp=N,148nm,21.1s,baz=176,slow=40						
FETA	Feichten	12.01	324	ePn	Pn	08 37 40.1	+3.0
	comp=N,1.5nm,0.4s						
FETA				eSn	Sn	08 39 46.9	-3.7
	comp=N,8.5nm,0.7s						
GLL	Jalalah	12.01	130	P	Pn	08 37 34.3	-2.8
	baz=131						
MOTA	Moosalm	12.07	325	i Pn	Pn	08 37 39.6	+1.6
	comp=N,5.8nm,0.5s						
MOTA				eSn	Sn	08 39 48.4	-3.8
	comp=N,16nm,0.7s						
HFRF	Wahat Farafira	12.20	148	P	Pn	08 37 38.0	-1.7
	baz=150						
DAVOX	Davos/Dischmat	12.25	321	Pn	Pn	08 37 42.4	+2.0
	comp=N,0.5nm,0.3s,baz=151,slow=15,SNR=6.8						
DAVOX				Sn	Sn	08 39 50.6	-6.0
	comp=N,0.5nm,0.3s,baz=289,slow=13,SNR=3.8						
DAVOX				LR	LR	08 44 32.2	
	comp=N,313nm,18.5s,baz=121,slow=48						
MORC	Moravsky Berou	12.27	349	⇓P	Pn	08 37 42.0	+1.5
GEC2	GERESS Array S	12.30	336		Pn	08 37 41.2	+0.1
GERES	GERESS Array B	12.30	336	Pn	Pn	08 37 39.7	-1.4
	comp=N,0.5nm,0.3s,baz=154,slow=14,SNR=10.0						
GERES				Sn	Sn	08 39 50.6	-7.2
	comp=N,0.3nm,0.3s,baz=164,slow=22,SNR=2.0						
GERES				LR	LR	08 43 26.4	
	comp=N,455nm,19.3s,baz=124,slow=43						
GERES	GERESS Array B	12.30	336	Pn	Pn	08 37 39.8	-1.3
RETA	Reutte	12.34	325	i Pn	Pn	08 37 43.9	+2.4
	comp=N,1.3nm,0.3s						
RETA				eSn	Sn	08 39 55.7	-2.8
	comp=N,7.9nm,0.7s						
SUZ	Suez	12.53	126	P	Pn	08 37 41.7	-2.5
	baz=127						
MMAI	Mount Meron Ar	12.57	108	Pn	Pn	08 37 42.1	-2.6
	comp=N,1.9nm,0.3s,baz=304,slow=14,SNR=5.3						
MMAI				Sn	Sn	08 39 59.1	-5.1
	comp=N,3.4nm,0.3s,baz=309,slow=24,SNR=4.8						
KHC	Kasperske Hory	12.59	337	P	Pn	08 37 43.2	-1.8
KHC	Kasperske Hory	12.59	337	ePN	Pn	08 37 44.3	-0.7
KHC				eSN	Sn	08 40 00.9	-3.8
KHC				AMS	AMS	08 43 50.0	
	comp=N,900nm,7.3s						
KHC	Kasperske Hory	12.59	337		Pn	08 37 43.2	-1.8
DAVA	Damuels	12.60	322	i Pn	P	08 37 51.4	-5.3
	comp=N,2.6nm,0.3s						
DAVA				eSn	Sn	08 40 02.1	-3.0
	comp=N,22nm,0.5s						
SENIN	Lac Senin/Sane	13.37	314	Pn	Pn	08 37 54.9	-0.9
GRA1	Grafenberg Arr	13.88	332		Pn	08 38 02.0	-0.5
GRF	Grafenberg Arr	13.88	332	P	Pn	08 38 02.0	-0.5
GRF	Grafenberg Arr	13.88	332	eP	P	08 38 12.7	+2.0
	baz=145,slow=11						
GRF				eL	L	08 44 27.4	
	comp=N,546nm,20.0s						
EIL	Elat	14.04	121	Pn	Pn	08 38 02.4	-2.4
	comp=N,0.8nm,0.3s,baz=334,slow=3.5,SNR=9.2						
EIL				Sn	Sn	08 40 29.8	-10
	comp=N,1.6nm,0.3s,baz=308,slow=12,SNR=3.3						
BRG	Berggiesshubel	14.05	341	eP	P	08 38 17.1	+4.5
BRG				Amp		08 38 22.4	
	comp=Z,3.7nm,0.7s						
BRG	Berggiesshubel	14.05	341	P	P	08 38 25.7	+13
BRG				Amp		08 38 26.6	
	comp=Z,2.3nm,0.7s						
BRG				Amp		08 44 21.0	
	comp=E,0.3nm,12.3s						
BRG				Amp		08 44 22.0	
	comp=Z,0.7nm,11.4s						
BRG				Amp		08 44 24.0	
	comp=N,0.5nm,8.9s						
HDK1	Dakhla	14.07	148	P	Pn	08 38 03.3	-2.1
	baz=150						
AKASG	Malin Array Be	14.14	21	Pn	Pn	08 38 04.5	-1.5
	comp=N,0.6nm,0.3s,baz=211,slow=12,SNR=6.6						
AKASG	Malin Array Be	14.14	21	P	Pn	08 38 03.9	-2.1
AKASG	Malin Array Be	14.14	21		Pn	08 38 03.9	-2.1
AKBB	Malin Array Si	14.14	21	ceP	Pn	08 38 02.9	-3.1
AKBB	Malin Array Si	14.14	21		Pn	08 38 05.2	-0.9
MOX	Moxa	14.54	335	eL	L	08 44 35.3	
	comp=N,598nm,20.8s						
ECH	Echery	14.58	320	P	Pn	08 38 13.0	+0.8
ECH	Echery	14.58	320	P	Pn	08 38 13.0	+0.8
GTR	Jabal at Tayr	14.62	144	P	Pn	08 38 10.8	-2.0
	baz=146						
CLL	Collm	14.70	339	eP	Pn	08 38 07.0	-6.7
CLL	Collm	14.70	339	eP	Pn	08 38 14.0	+0.3
CLL				i PP	PnPn	08 38 21.2	-0.4
CLL				e		08 38 38.0	
CLL	Collm	14.70	339		Pn	08 38 13.8	+0.2
SOC	Sochi	15.22	62	eP	Pn	08 38 21.2	+0.4
SOC				e		08 41 12.8	
SOC				MLR	MLR		
	comp=Z,84nm,15.0s						
WLF	Walferdange	16.04	323	dx	x	08 38 37.6	
WLF	Walferdange	16.04	323	P	Pn	08 38 29.1	-2.2
WLF				pmax	pmax		
	comp=Z,46nm,0.8s						
WLF	Walferdange	16.04	323		Pn	08 38 29.1	-2.2
WLF				IAmb	IAmb	08 38 53.2	
	comp=Z,46nm,0.8s						
SUW	Suwalki	16.29	4	eP	Pn	08 38 36.0	+1.5
SUW	Suwalki	16.29	4	eP	Pn	08 38 35.6	+1.2
SUW	Suwalki	16.29	4	P	Pn	08 38 34.5	0.0
SUW				pmax	pmax		
	comp=Z,123nm,0.8s						
SUW	Suwalki	16.29	4	P	Pn	08 38 34.5	0.0
GURO	Guroymak-BITLI	16.45	81	P	P	08 38 38.5	-0.9
BTNL	Ternell	16.68	325	dx	x	08 38 58.5	
MEM	Membach	16.75	325	dx	x	08 38 45.1	
RCHB	Rochefort	16.81	322	dx	x	08 38 45.8	
BCLA	Clavier	16.95	323	dPP	P	08 38 52.1	+7.4
BGES	Gesves	17.03	323	dP	Pn	08 38 43.8	-0.1
DOU	Dourbes	17.08	321	dP	Pn	08 38 45.1	+0.6
DOU				dx	x	08 38 48.1	
DOU				dPP	sP	08 38 55.5	+1.8
BMRD	Maredsous	17.13	322	dPP	P	08 38 56.1	+9.4
NEY	Neytrino	17.28	65	i P	P	08 38 50.4	+1.8
MNK	Minsk	17.35	13	i P	Pn	08 38 43.1	-4.7
MNK				i S	Sn	08 41 54.4	-5.8
MNK				pmax	pmax		
	comp=E,5.0nm,1.8s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,27nm,0.7s						
MNK				MLR	MLR		
	comp=Z,190nm,28.0s						
MNK				MLR	MLR		
	comp=N,190nm,26.0s						
MNK				MLR	MLR		
	comp=E,66nm,28.0s						
MNK	Minsk	17.35	13	i P	Pn	08 38 43.2	-4.6
	comp=E,5.0nm,1.8s						
MNK				i P	Pn	08 38 43.2	-4.6
	comp=N,27nm,0.7s						
MNK				i P	Pn	08 38 43.2	-4.6
	comp=Z,8.0nm,0.8s,baz=200						
MNK				i PP	pP	08 38 52.9	-1.3
MNK				i S	Sn	08 41 54.4	-5.8
MNK				i SS	S	08 42 09.1	+0.5
MNK				i LQ	LQ	08 43 47.5	
MNK				i LR	LR	08 45 05.6	
MNK				i LRM	MLR	08 46 07.0	
	comp=Z,190nm,27.6s						
MNK				i LRM	MLR	08 46 15.3	
	comp=N,190nm,26.2s						
MNK				i LRM	MLR	08 46 38.3	
	comp=E,66nm,28.1s						
KIV	Kislovodsk	17.40	62	eP	P	08 38 52.3	+2.5
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,63nm,14.0s						
KBZ	Khabaz	17.50	63	LR	LR	08 47 02.0	
	comp=Z,135nm,19.3s,baz=250,slow=42						
KBZ	Khabaz	17.50	63	ceP	P	08 38 52.0	+1.2
SNF	Seneffe	17.50	322	dx	x	08 38 54.1	
NACGM	Naroch	17.55	11	i P	Pn	08 38 49.5	-0.8
ONI	Oni	17.69	67	P	Pn	08 38 52.9	+0.7
ONI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ONI	Oni	17.69	67	P	Pn	08 38 52.9	+0.7
IIGN	Ignalina	17.91	9	eP	Pn	08 38 55.1	+0.5
NCK	Nalchik	17.95	64	i P	P	08 38 57.1	+1.3
ZEI	Tsey	18.05	67	eP	P	08 39 04.7	+7.6
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ISAL	Salakas	18.11	9	eP	P	08 38 59.5	+2.0
VORD	Divnogorie	18.43	39	eP	Pn	08 39 03.9	+2.8
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GNI	Garni	18.49	75	LR	LR	08 46 19.1	
	comp=Z,256nm,18.2s,baz=292,slow=38						
GNI	Garni	18.49	75	P	P	08 39 01.7	-0.3
GNI				pmax	pmax		
	comp=Z,31nm,1.3s						
GNI	Garni	18.49	75	P	P	08 39 01.7	-0.3
VSR	Storozhevoye	18.52	38	eP	Pn	08 39 04.1	+1.9
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LPSR	Galich'ya Gora	19.33	34	eP	P	08 39 09.1	-1.7
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
ESBB	Sonseca Array	19.66	283	P	P	08 39 14.9	+0.2
ESDC	Sonseca Array	19.66	283	P	P	08 39 14.9	+0.2
	comp=Z,0.3nm,0.3s,baz=78,slow=11,SNR=34						
ESDC				LR	LR	08 47 21.7	
	comp=Z,148nm,18.6s,baz=90,slow=38						
ESDC	Sonseca Array	19.66	283	P	P	08 39 14.6	-0.1
PAB	San Pablo	19.97	283	P	P	08 39 18.2	+0.2
PAB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PAB	San Pablo	19.97	283	P	P	08 39 18.2	+0.2
OBN	Obninsk	20.25	26	eP	P	08 39 20.0	-0.9
OBN				ePPP	PPP	08 39 43.6	
OBN				e		08 43 33.7	
OBN				pmax	pmax		
	comp=Z,12nm,0.8s						
OBN				MLR	MLR		
	comp=Z,172nm,16.0s						
VSU	Vasula	21.01	8	eP	P	08 39 29.2	+0.2
VSU	Vasula	21.01	8	c iP	P	08 39 28.2	-0.9
MTSE	Matsula	21.02	4	eP	P	08 39 28.5	-0.6
MOS	Moscow	21.12	26	eP	P	08 39 32.0	+1.8
MOS				e		08 39 39.5	
MOS				e		08 39 49.2	
MOS				pmax	pmax		
	comp=Z,37nm,0.7s						
MDT	Midelt	21.57	264	P	P	08 39 36.5	+1.1
	comp=Z,3.6nm,0.8s,baz=71,slow=7.6,SNR=6.1						
PBRG	Braganca	21.76	289	eP	P	08 39 40.8	+3.5
	comp=Z,28nm,1.6s						
MVO	Moncorvo	21.97	288	eP	P	08 39 39.7	+0.1
	comp=Z,36nm,2.2s						
UPP	Uppsala	22.21	355	eP	P	08 39 42.9	+1.0
PMRV	Marv??o	22.32	283	eP	P	08 39 42.9	-0.5
	comp=Z,27nm,1.1s						
PCBR	Castelo Branco	22.36	284	eP	P	08 39 47.0	+3.2
	comp=Z,20nm,1.3s						
MTE	Manteigas	22.38	286	eP	P	08 39 43.6	-0.5
	comp=Z,34nm,1.8s						
MTE	Manteigas	22.38	286	P	P	08 39 44.2	+0.2
MTE				IAmb	IAmb	08 39 49.6	
	comp=Z,16nm,0.8s						
AAL	Aland	22.43	358	eP	P	08 39 46.1	+1.9
PESTR	Estremoz	22.53	282	eP	P	08 39 48.5	+2.8
	comp=Z,24nm,1.1s						
PESTR	Estremoz	22.53	282	P	P	08 39 47.0	+1.3
POLO	Lamas de Olo	22.54	288	eP	P	08 39 46.4	+0.6
	comp=Z,13nm,1.2s						
PVIS	Viseu	22.63	287	eP	P	08 39 46.2	-0.5
	comp=Z,28nm,2.1s						
PVAQ	Vaqueiros	22.84	278	eP	P	08 39 49.5	+0.6
	comp=Z,42nm,2.2s						
PBEJ	Beja	22.86	280	eP	P	08 39 51.4	+2.4
HFS	Hagfors	22.87	350	P	P	08 39 48.0	-1.0
	comp=Z,11nm,0.6s,baz=163,slow=11,SNR=33						
HFS	Hagfors	22.87	350	P	P	08 39 48.0	-1.0
PMTG	Montargil	23.00	282	eP	P	08 39 48.6	-2.0
	comp=Z,26nm,1.9s						
RST	Umm Al-Ruwaisa	23.00	103	eP	P	08 39 49.6	-1.0
KONO	Kongsberg	23.10	345	P	P	08 39 51.1	-0.2
KONO				pmax	pmax		
	comp=Z,22nm,1.0s						
KONO	Kongsberg	23.10	345	eP	P	08 39 53.2	+1.9
KONO	Kongsberg	23.10	345	P	P	08 39 51.1	-0.2
KONO				IAmb	IAmb	08 40 04.4	
	comp=Z,22nm,1.0s						
MIB	Mutribah	23.13	102	eP	P	08 39 51.0	-0.9
OSL	Oslo	23.15	347	eP	P	08 39 52.2	+0.4
MESJ	Messejana	23.16	279	eP	P	08 39 54.7	+2.5
MESJ				IAmb	IAmb	08 39 55.9	
	comp=Z,18nm,1.1s						
MESJ	Messejana	23.16	279	eP	P	08 39 54.7	+2.5
MESJ	Messejana	23.16	279	eP	P	08 39 52.4	+0.2
	comp=Z,35nm,2.0s						
PNCL	Nicolau / Gran	23.36	280	eP	P	08 39 55.8	+1.6
	comp=Z,24nm,1.2s						
PSBE	So Bento	23.40	284	eP	P	08 39 55.7	+1.1
	comp=Z,63nm,1.6s						
NC602	NORSAR Array S	23.76	348	eP	P	08 39 57.4	-0.5
NC602	NORSAR Array S	23.76	348	P	P	08 39 57.9	+0.1
FINES	FINESS Array B	23.89	6	P	P	08 39 57.9	-1.1
	comp=Z,4.0nm,0.3s,baz=175,slow=11,SNR=66						
FINES				LR	LR	08 50 48.2	
	comp=Z,226nm,19.7s,baz=186,slow=40						
FINES	FINESS Array B	23.89	6	P	P	08 39 58.3	-0.7
FIA1	FINESS Array S	23.89	6	P	P	08 39 57.6	-1.4
FIA1				IAmb	IAmb	08 40 09.3	
	comp=Z,32nm,1.0s						
EKA	Eskdalemuir Ar	24.03	325	P	P	08 40 00.7	+0.2
	comp=Z,7.0nm,0.7s,baz=128,slow=9.5,SNR=19						
ESK	Eskdalemuir	24.05	325	P	P	08 39 59.7	-0.9
ESK				pmax	pmax		
	comp=Z,41nm,1.1s						
ESK	Eskdalemuir	24.05	325	P	P	08 39 59.7	-0.9
NC405	NORSAR Array S	24.09	349	P	P	08 39 58.9	-2.1
NC405				IAmb	IAmb	08 40 06.0	
	comp=Z,19nm,0.8s						
NB2	NORSAR Subarra	24.10	348	P	P	08 40 00.5	-0.6
	comp=Z,8.8nm,0.9s,baz=156,slow=10						
NB2	NORSAR Subarra	24.10	348	P	P	08 40 00.5	-0.6
	baz=156,slow=10						
NOA	NORSAR Array B	24.10	348	P	P	08 40 00.1	-1.1
	comp=Z,2.7nm,0.6s,baz=158,slow=8.7,SNR=14						
NOA				LR	LR	08 51 51.1	
	comp=Z,74nm,19.4s,baz=170,slow=43						
NBO00	NORSAR Array S	24.17	348	P	P	08 39 59.6	-2.1
NC303	NORSAR Array S	24.25	348	P	P	08 40 02.4	-0.1
NC303				IAmb	IAmb	08 40 29.6	
	comp=Z,21nm,0.8s						
SKAR	Skarslia	24.31	345	eP	P	08 40 04.6	+1.5
NC204	NORSAR Array S	24.40	348	P	P	08 40 03.1	-0.8
DOMB	Dombas	25.41	347	eP	P	08 40 15.8	+2.8
KLMR	Klimovskoe	25.83	21	eP	P	08 40 15.2	-1.5
KLMR				pmax	pmax		
	comp=Z,16nm,0.8s						
KLMR	Klimovskoe	25.83	21	eP	P	08 40 15.2	-1.5
KLMR				AMP		08 40 29.0	
	comp=Z,16nm,0.8s						
KLMR				LQ	LQ	08 48 09.2	
KLMR				LQ	LQ	08 48 09.2	
KLMR				LR	LR	08 49 29.8	
TBLU	Trondheim	26.34	349	eP	P	08 40 24.1	+2.8
NSS	Namsos	27.34	351	eP	P	08 40 29.2	-1.0
KIRV	Kirov	27.72	32	i P	P	08 40 31.4	-2.4
PRGR	Permogore	28.31	25	eP	P	08 40 37.3	-1.7
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AKTO	Aktyubinsk	29.03	52	P	P	08 40 45.1	-0.4
	comp=Z,2.0nm,0.5s,baz=251,slow=7.4,SNR=7.4						
AKTO				LR	LR	08 53 44.9	
	comp=Z,29nm,19.6s,baz=266,slow=39						
AKTO	Aktyubinsk	29.03	52	P	P	08 40 44.8	-0.8
KONS	Konsvik	29.13	353	eP	P	08 40 45.0	-1.2
FAUS	Fauske	29.83	355	eP	P	08 40 54.5	+2.1
TORD	Torodi Ar. Bea	30.04	220	P	P	08 40 55.2	+0.4
	comp=Z,8.7nm,0.6s,baz=29,slow=9.4,SNR=40						
AB31	Akbulak array	30.06	55	i P	P	08 40 54.9	+0.2
ABKAR	Akbulak array	30.06	55	P	P	08 40 54.5	-0.2
ABKAR	Akbulak array	30.06	55	P	P	08 40 55.0	+0.3
STEI	Steigen	30.38	356	eP	P	08 40 57.7	+0.4
ARU	Arti	31.03	41	d iP	P	08 41 07.9	+4.7
ARU						08 42 05.8	
ARU				pmax	pmax		
	comp=Z,17nm,1.6s						
ARU	Arti	31.03	41	P	P	08 41 02.1	-1.1
ARU				IAmb	IAmb	08 41 17.6	
	comp=Z,13nm,1.3s						
KTK1	Kautokeino	31.31	1	eP	P	08 41 05.5	0.0
JETT	Jettan, Norway	31.83	360	eP	P	08 41 11.3	+1.2
ARA0	ARCESS Array S	31.90	3	eP	P	08 41 10.8	+0.1
ARCES	ARCESS Array B	31.90	3	P	P	08 41 09.2	-1.5
	comp=Z,3.6nm,0.7s,baz=188,slow=9.1,SNR=23						
TRO	Tromso	31.93	359	eP	P	08 41 11.0	+0.1
KEV	Kevo	32.19	4	P	P	08 41 13.5	+0.3
KEV				pmax	pmax		
	comp=Z,60nm,1.5s						
KEV	Kevo	32.19	4	P	P	08 41 13.4	+0.3
SVE	Sverdlovsk	32.24	41	eP	P	08 41 14.1	+0.2
SVE				pmax	pmax		
	comp=Z,16nm,0.6s						
UOSS	Minazif	32.37	103	P	P	08 41 15.9	+0.6
UOSS				IAmb	IAmb	08 41 31.1	
	comp=Z,11nm,0.9s						
BRVK	Borovoye	36.94	49	i P	P	08 41 55.1	+0.6
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRVK	Borovoye	36.94	49	P	P	08 41 53.7	-0.8
BRVK				IAmb	IAmb	08 42 01.7	
	comp=Z,6.7nm,0.7s						
CHGR	Chuyangaron	37.39	73	P	P	08 41 58.4	-0.2
KKAR	Karatay Array	37.51	66	P	P	08 41 58.7	-0.8
KKAR	Karatay Array	37.51	66	P	P	08 41 58.6	-0.8
GAR	Garm	38.19	73	P	P	08 42 05.0	-0.4
GAR				IAmb	IAmb	08 42 28.0	
	comp=Z,12nm,0.9s						
DBIC	Dimbokro	38.94	224	P	P	08 42 12.9	+1.1
	comp=Z,3.5nm,0.7s,baz=29,slow=10.0,SNR=7.1						
DBIC	Dimbokro	38.94	224	IAmb	IAmb	08 42 22.8	
	comp=Z,5.7nm,0.7s						
TIC	Toumodi	39.05	224	eP	P	08 42 16.9	+4.2
KIC	Kosan Boka	39.14	223	eP	P	08 42 15.7	+2.3
	comp=Z,7.3nm,0.5s						
LIC	Lamto	39.41	224	eP	P	08 42 18.3	+2.7
	comp=Z,21nm,0.5s						
AAK	Ala-Archa	40.47	66	i P	P	08 42 25.6	+1.1
AAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMBO	Kilima Mbogo	41.48	155	LR	LR	09 00 15.2	
	comp=Z,54nm,21.0s,baz=90,slow=37						
KURBB	Kurchatov Arra	42.07	53	P	P	08 42 37.2	-0.1
KURK	Kurchatov	42.12	53	ceP	P	08 42 37.8	+0.1
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KURK	Kurchatov	42.12	53	P	P	08 42 37.7	0.0
KURK				IAmb	IAmb	08 42 46.1	
	comp=Z,11nm,1.1s						
KSH	Kashi	42.30	70	P	P	08 42 37.0	-2.4
MAKZ	Makanchi	44.88	58	P	P	08 43 00.5	+0.5
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	Makanchi	44.88	58	P	P	08 43 00.5	+0.5
MAKZ				IAmb	IAmb	08 43 14.9	
	comp=Z,4.0nm,0.8s						
MK31	Makanchi Array	45.09	58	P	P	08 43 00.5	-1.2
MK31	Makanchi Array	45.09	58	P	P	08 43 01.0	-0.7
MK31				IAmb	IAmb	08 43 15.6	
	comp=Z,4.5nm,0.6s						
MKAR	Makanchi Array	45.09	58	P	P	08 43 00.4	-1.3
	comp=Z,2.1nm,0.4s,baz=279,slow=7.6,SNR=39						
MKAR				LR	LR	09 05 07.8	
	comp=Z,34nm,18.0s,baz=281,slow=40						
MKAR	Makanchi Array	45.09	58	i P	P	08 43 00.8	-0.9
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR	Makanchi Array	45.09	58	P	P	08 43 01.3	-0.4
ZAA0	Zalesovo Array	45.59	48	P	P	08 43 05.5	0.0
ZAA0				IAmb	IAmb	08 43 18.2	
	comp=Z,12nm,0.9s						
ZALV	Zalesovo Beam	45.59	48	P	P	08 43 04.4	-1.1
	comp=Z,7.0nm,0.4s,baz=275,slow=8.9,SNR=26						
ZALV				LR	LR	09 03 11.2	
	comp=Z,44nm,18.2s,baz=326,slow=38						
ZALV	Zalesovo Beam	45.59	48	i P	P	08 43 04.8	-0.7
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.4s						
ZALV	Zalesovo Beam	45.59	48	P	P	08 43 05.2	-0.3
NRIK	Noril'sk	46.93	26	eP	P	08 43 16.7	+0.9
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NRIK	Noril'sk	46.93	26	P	P	08 43 17.1	+1.2

NRIK				IAmb	IAmb	08 43 19.4	
	comp=Z,3.2nm,0.8s						
DGZ	**Jazzator, Alta**	**47.87**	**53**	*i* P	**P**	**08 43 23.5**	**-0.1**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WMQ	**Urumqi**	**49.52**	**61**	*e*P	**P**	**08 43 39.5**	**+3.2**
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.7s						
WMQ				LR	LR		
	comp=N,230nm,28.9s						
WMQ				LR	LR		
	comp=E,810nm,29.1s						
WMQ				LR	LR		
	comp=Z,110nm,28.8s						
ZAK	**Zakamensk**	**57.45**	**49**	*e*P	**P**	**08 44 34.3**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SCHQ	**Schefferville**	**59.08**	**318**	P	**P**	**08 44 45.8**	**+0.2**
	comp=Z,4.7nm,0.5s,baz=70,slow=4.0,SNR=21						
SCHQ	**Schefferville**	**59.08**	**318**	P	**P**	**08 44 45.9**	**+0.2**
TIXI	**Tiksi**	**59.85**	**20**	*i* P	**P**	**08 44 51.1**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.8s						
SONM	**Songino Array**	**60.33**	**51**	P	**P**	**08 44 55.0**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=285,slow=11,SNR=3.7						
SONM				LR	LR	09 15 22.0	
	comp=Z,47nm,18.0s,baz=345,slow=40						
ULN	**Ulaanbaatar**	**60.72**	**50**	*ce*P	**P**	**08 44 56.1**	**-1.1**
ULN				pmax	pmax		
	comp=Z,8.0nm,2.5s						
HAL	**Halifax**	**61.37**	**306**	P	**P**	**08 45 02.2**	**+0.8**
HAL				pmax	pmax		
	comp=Z,28nm,1.1s						
HAL	**Halifax**	**61.37**	**306**	P	**P**	**08 45 02.2**	**+0.8**
LBTB	**Lobatse**	**62.60**	**175**	P	**P**	**08 45 10.3**	**+0.3**
LBTB				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LBTB	**Lobatse**	**62.60**	**175**	P	**P**	**08 45 10.2**	**+0.3**
LBTB				IAmb	IAmb	08 45 18.3	
	comp=Z,4.6nm,1.1s						
PQI	**Presque Isle**	**63.23**	**310**	P	**P**	**08 45 14.4**	**+0.6**
YAK	**Yakutsk**	**65.21**	**29**	*i* P	**P**	**08 45 28.4**	**+1.8**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BOSA	**Boshof**	**66.16**	**176**	P	**P**	**08 45 33.9**	**+0.7**
	comp=Z,1.4nm,0.4s,baz=352,slow=6.8,SNR=8.1						
BOSA				LR	LR	09 17 05.2	
	comp=Z,49nm,19.2s,baz=2.5,slow=38						
BOSA	**Boshof**	**66.16**	**176**	P	**P**	**08 45 33.8**	**+0.6**
BOSA				pmax	pmax		
	comp=Z,15nm,1.4s						
BOSA	**Boshof**	**66.16**	**176**	P	**P**	**08 45 33.8**	**+0.6**
HHC	**Hu-ho-hao-te**	**66.85**	**56**	*e*P	**P**	**08 45 36.1**	**-1.6**
A36M	**Sachs Harbour**	**68.00**	**349**	P	**P**	**08 45 45.1**	**+0.8**
A36M				IAmb	IAmb	08 45 47.8	
	comp=Z,6.0nm,0.7s						
KMI	**Kunming**	**68.74**	**74**	⇓P	**P**	**08 45 51.3**	**+1.3**
KMI				pP	pP	08 45 53.7	-2.3
KMI				sP	sP	08 45 55.1	-3.1
KMI				pmax	pmax		
	comp=Z,21nm,1.3s						
BILL	**Bilibino**	**71.29**	**13**	*e*P	**P**	**08 46 04.8**	**+0.2**
BILL				*e*		08 46 23.5	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,62nm,16.0s						
INK	**Inuvik**	**72.53**	**350**	P	**P**	**08 46 12.0**	**0.0**
INK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
INK	**Inuvik**	**72.53**	**350**	P	**P**	**08 46 12.0**	**0.0**
KLR	**Kul'dur**	**73.86**	**40**	*i* P	**P**	**08 46 20.3**	**0.0**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YKA	**Yellowknife Ar**	**73.93**	**340**	P	**P**	**08 46 20.4**	**0.0**
	comp=Z,1.3nm,0.6s,baz=32,slow=5.2,SNR=13						
EPYK	**Eagle Plains**	**74.78**	**351**	P	**P**	**08 46 25.6**	**+0.3**
EPYK				IAmb	IAmb	08 46 28.5	
	comp=Z,4.2nm,0.8s						
ULM	**Lac du Bonnet**	**76.31**	**324**	LR	LR	09 20 14.1	
	comp=Z,66nm,20.7s,baz=36,slow=36						
IMAR	**Indian Mountai**	**76.49**	**358**	P	**P**	**08 46 36.5**	**+1.4**
NJ2	**Nanjing**	**76.59**	**60**	*e*P	**P**	**08 46 35.9**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**77.23**	**44**	P	**P**	**08 46 40.3**	**+0.7**
	comp=Z,2.2nm,0.7s,baz=304,slow=4.8,SNR=4.6						
DAWY	**Dawson**	**77.32**	**351**	P	**P**	**08 46 40.6**	**+0.8**
DAWY				IAmb	IAmb	08 46 49.4	
	comp=Z,2.9nm,0.7s						
ILAR	**Eielson Array**	**77.35**	**355**	P	**P**	**08 46 40.5**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=348,slow=3.4,SNR=9.2						
ILAR	**Eielson Array**	**77.35**	**355**	P	**P**	**08 46 40.8**	**+0.9**
BCAR	**Beaver Creek A**	**78.56**	**352**	P	**P**	**08 46 47.0**	**+0.2**
KSRS	**Korea Array**	**79.20**	**51**	P	**P**	**08 46 50.1**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=321,slow=4.6,SNR=6.3						
KSRS				LR	LR	09 26 39.0	
	comp=Z,44nm,18.4s,baz=330,slow=39						
PPLA	**Purkeypile**	**79.52**	**357**	P	**P**	**08 46 52.4**	**+0.3**
PPLA				IAmb	IAmb	08 47 06.6	
	comp=Z,12nm,1.1s						
ECSD	**EROS Data Cent**	**81.21**	**320**	P	**P**	**08 47 01.9**	**+0.5**
PETK	**Petropavlovsk-**	**81.95**	**25**	LR	LR	09 27 59.8	
	comp=Z,64nm,19.2s,baz=312,slow=39						
PDAR	**Pinedale Array**	**88.15**	**326**	P	**P**	**08 47 38.7**	**+1.9**
	comp=Z,0.4nm,0.8s,baz=52,slow=2.6,SNR=3.5						
PDAR				LR	LR	09 28 25.5	
	comp=Z,67nm,18.8s,baz=32,slow=37						
NVAR	**Mina Array Bea**	**95.46**	**329**	LR	LR	09 33 34.2	
	comp=Z,99nm,18.6s,baz=302,slow=37						
WRA	**Warramunga Arr**	**120.03**	**93**	PKP	**PKPdf**	**08 53 35.8**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=330,slow=2.0,SNR=5.6						
ASAR	**Alice Springs**	**121.64**	**97**	PKP	**PKPdf**	**08 53 38.9**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=322,slow=1.2,SNR=8.9						

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*ISK **12** 09:10:00.9, 37°.87N×26°.83E, h9^{km}, ML3.1/17*
*DDA **12** 09:10:00.8, 37°.88N×26°.84E, h8^{km}±2^{km}, ML2.7*
ISC 12 09:10:01.0±1.0**, 37°.86N**±0°.02×**26°.82E**±0°.03**, h13**^{km}±9^{km}**,**
n34, σ0^{s}.49/48**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGB	**zmir**	**0.19**	**14**	*i* P	**Pg**	**09 10 04.9**	**-0.4**
GCAM	**G?zelcaml?**	**0.36**	**117**	*i* P	**Pg**	**09 10 07.7**	**-0.6**
GCAM				*i* S	**Sg**	**09 10 14.0**	**+0.8**
GCAM				IAML		09 10 14.0	
	comp=N,746nm,0.7s						
GCAM				IAML		09 10 14.0	
	comp=E,593nm,0.5s						
GCAM	**G?zelcaml?**	**0.36**	**117**	PG	**Pg**	**09 10 08.6**	**+0.3**
GCAM				SG	**Sb**	**09 10 14.5**	**-0.5**
ZEYE	**Izmir, Urla-Ze**	**0.45**	**326**	*i* P	**Pg**	**09 10 09.0**	**-0.9**
ZEYE				*i* S	**Sb**	**09 10 16.9**	**-0.7**
ZEYE				IAML		09 10 17.0	
	comp=N,1µm,0.6s						
ZEYE				IAML		09 10 18.0	
	comp=E,461nm,0.2s						
DDIM	**Aydin, Didim**	**0.52**	**141**	*i* P	**Pg**	**09 10 11.4**	**+0.1**
DDIM				*i* S	**Sb**	**09 10 19.7**	**+0.1**
DDIM				IAML		09 10 20.0	
	comp=N,635nm,0.5s						
DDIM				IAML		09 10 20.0	
	comp=E,684nm,0.6s						
URLA	**Izmir**	**0.53**	**340**	*i* P	**Pg**	**09 10 11.1**	**-0.3**
URLA				*i* S	**Sg**	**09 10 18.6**	**+0.2**
URLA				IAML		09 10 20.0	
	comp=E,668nm,0.3s						
URLA	**Izmir**	**0.53**	**340**	PG	**Pg**	**09 10 11.5**	**+0.1**
URLA				SG	**Sb**	**09 10 19.4**	**-0.4**
BLCB	**Balcova**	**0.55**	**18**	PG	**Pg**	**09 10 11.9**	**+0.1**
BLCB				SG	**Sb**	**09 10 19.7**	**-0.6**
CHOS	**Chios island**	**0.80**	**311**	PG	**Pb**	**09 10 17.2**	**+0.3**
CHOS				SG	**Sb**	**09 10 28.4**	**+0.7**
YKAV	**Yalikavak-Bodr**	**0.82**	**154**	PG	**Pb**	**09 10 17.3**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**0.85**	**84**	PG	**Pg**	**09 10 17.4**	**0.0**
FOCM	**Foa**	**0.85**	**355**	PG	**Pb**	**09 10 17.8**	**+0.1**
AYDN	**Tasoluk**	**0.86**	**103**	*i* P	**Pg**	**09 10 17.3**	**-0.3**
AYDN				*i* S	**Sg**	**09 10 29.0**	**+0.1**
AYDN				IAML		09 10 34.0	
	comp=E,262nm,0.3s						
BODT	**Bodrum**	**0.89**	**154**	PG	**Pg**	**09 10 18.2**	**0.0**
MLSB	**Milas**	**0.95**	**127**	PG	**Pg**	**09 10 19.6**	**+0.3**
ZEDA	**zmir-Bergama**	**1.12**	**10**	*i* P	**Pg**	**09 10 22.9**	**+0.3**
ZEDA				*i* S	**Sg**	**09 10 37.3**	**+0.2**
ZEDA				IAML		09 10 40.0	
	comp=N,118nm,0.3s						
ZEDA				IAML		09 10 41.0	
	comp=E,143nm,0.7s						
GOMA	**Golmarmara-Man**	**1.20**	**45**	PN	**Pg**	**09 10 24.3**	**+0.1**
DKL	**Dikili**	**1.21**	**3**	PN	**Pg**	**09 10 24.4**	**+0.2**
AKHS	**Akhisar**	**1.28**	**37**	*i* P	**Pn**	**09 10 24.7**	**0.0**
AKHS				*i* S	**Sg**	**09 10 42.7**	**+0.5**
AKHS				IAML		09 10 45.0	
	comp=E,142nm,0.3s						
AKS	**Akhisar**	**1.28**	**37**	PN	**Pg**	**09 10 25.6**	**0.0**
DAT	**Datca**	**1.28**	**152**	PN	**Pn**	**09 10 24.3**	**-0.5**
APE	**Apeiranthos**	**1.30**	**233**	PN	**Pb**	**09 10 25.4**	**0.0**
MULA	**Mugla, Merkez-**	**1.33**	**117**	*i* P	**Pn**	**09 10 24.6**	**-0.9**
MULA				*i* S	**Sg**	**09 10 43.7**	**-0.3**
TURN	**Turunc**	**1.57**	**133**	PN	**Pn**	**09 10 28.9**	**+0.3**
KULA	**Kula-Manisa**	**1.59**	**65**	PN	**Pb**	**09 10 30.7**	**+0.4**
BUHA	**Balikesir, Bur**	**1.65**	**7**	*i* P	**Pb**	**09 10 31.9**	**+0.6**
BUHA				*i* S	**Sg**	**09 10 54.3**	**+0.3**
BUHA				IAML		09 10 57.0	
	comp=N,56nm,0.3s						
BUHA				IAML		09 10 58.0	
	comp=E,84nm,0.4s						
STEP	**BALIKESIR_Sava**	**1.67**	**25**	*i* P	**Pb**	**09 10 31.8**	**+0.3**
STEP				*i* S	**Sg**	**09 10 54.5**	**-0.1**
STEP				IAML		09 10 57.0	
	comp=E,82nm,0.3s						
STEP				IAML		09 10 59.0	
	comp=N,99nm,0.7s						
TAVA	**DENIZLI_Tavas**	**1.71**	**103**	*i* P	**Pn**	**09 10 30.5**	**-0.1**
KOCA	**Canakkale, Ayv**	**1.72**	**342**	*i* P	**Pb**	**09 10 32.6**	**+0.1**
DALY	**Dalyan (Mula)**	**1.79**	**125**	PN	**Pb**	**09 10 33.1**	**-0.6**
BAYC	**CANAKKALE_Bayr**	**1.89**	**353**	*i* P	**Pn**	**09 10 32.1**	**-0.9**
USAK	**Uak-Merkez**	**1.92**	**63**	*i* P	**Pg**	**09 10 37.0**	**-0.9**
ARG	**Arkhangelos**	**1.95**	**147**	PN	**Pn**	**09 10 34.9**	**+1.1**
BALY	**Balya**	**1.97**	**18**	*i* P	**Pn**	**09 10 35.0**	**+0.8**

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*IDC **12** 09:30:06.1±1.0, 39°.00N×73°.50E, h0^{km}, mb3.6/13,*
mb1 3.8/20, mb1mx3.7/48, mbtmp3.7/20, ML3.3/7, MS2.9/2,
Ms1 2.9/2, ms1mx2.4/48, Error ellipse: s-maj=17.3km
s-min=15.8km az=176.0
*KRNET **12** 09:30:07.9±0.1, 39°.18N×73°.52E, h15^{km}, mb4.5*
*SOME **12** 09:30:09.3, 39°.42N×73°.05E, h10^{km}*
*NNC **12** 09:30:12.0±0.9, 39°.39N×73°.46E, h0^{km}, mb4.7, mpv4.5,*
Error ellipse: s-maj=7.0km s-min=3.9km az=177.0
ISC 12 09:30:05.7±1.4**, 38°.94N**±0°.04×**73°.45E**±0°.03**, h1**^{km}±8^{km}**,**
n105, σ2^{s}.54/136**, mb3.6**/12**, 32C-19D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**1.08**	**2**	⇑*e*P	**Pg**	**09 30 24.2**	**-2.1**
	baz=59						
SFK				⇑*e*S	**Sg**	**09 30 36.2**	**-4.1**
	baz=59						
DRK	**Karamyk**	**1.39**	**293**	⇑*e*P	**Pb**	**09 30 33.7**	**+1.0**
	baz=83						
DRK				⇑*i*S	**Sn**	**09 30 53.3**	**+1.5**
	baz=83						
OHH	**Osh**	**1.67**	**342**	⇓*e*P	**Pn**	**09 30 35.2**	**-1.0**
	baz=37						
OHH				⇓*e*S	**Sn**	**09 30 56.0**	**-2.3**
	baz=37						
SALK	**Salom-Alik**	**1.96**	**8**	⇓*e*P	**Pn**	**09 30 40.4**	**+0.1**
	baz=8.0						
SALK				⇓*e*S	**Sn**	**09 31 03.0**	**-2.7**
	baz=8.0						
KSH	**Kashi**	**2.04**	**73**	Pg	**Pn**	**09 30 37.9**	**-3.4**
KSH				Sg	**Sn**	**09 31 01.3**	**-6.2**
KSH				pmax	pmax		
	comp=Z,260nm,0.5s						
KSH				smax	smax		
	comp=N,3µm,0.7s						
KSH				smax	smax		
	comp=E,2µm,0.8s						
BTK	**Batken**	**2.33**	**300**	⇑*i*P	**Pg**	**09 30 48.7**	**-1.6**
	baz=94						
BTK				⇑*i*S	**Sg**	**09 31 18.4**	**-2.0**
	baz=94						
GAR	**Garm**	**2.44**	**272**	⇑*i*P	**Pg**	**09 30 51.7**	**-0.8**
	baz=67						
GAR				⇑*e*S	**Sg**	**09 31 24.1**	**-0.1**
	baz=67						
TRKS	**Terek-Say**	**3.14**	**326**	⇑*e*P	**Pn**	**09 30 57.6**	**+1.2**
	baz=23						
TRKS				⇑*e*S	**Sn**	**09 31 34.2**	**-0.5**
	baz=23						
AML	**Almayashu**	**3.20**	**3**	P	**Pn**	**09 30 59.9**	**+2.4**
	SNR=173						
AML	**Almayashu**	**3.20**	**3**	⇑*e*P	**Pn**	**09 30 58.3**	**+0.8**
	baz=3.0						
AML				⇑*e*S	**Sn**	**09 31 35.4**	**-1.0**
	baz=3.0						
UCH	**Uchtor**	**3.39**	**13**	P	**Pn**	**09 31 02.6**	**+2.5**
	SNR=43						
UCH	**Uchtor**	**3.39**	**13**	⇑*i*P	**Pn**	**09 31 00.8**	**+0.7**
	baz=14						
UCH				⇑*i*S	**Sn**	**09 31 39.6**	**-1.6**
	baz=14						
MNAS	**Manas**	**3.62**	**349**	⇑*i*P	**Pn**	**09 31 04.1**	**+1.1**
	baz=47						
MNAS				⇑*i*S	**Sn**	**09 31 45.3**	**-1.2**
	baz=47						
EKS2	**Erkin-Say**	**3.73**	**4**	P	**Pn**	**09 31 07.5**	**+2.9**
	SNR=71						
EKS2	**Erkin-Say**	**3.73**	**4**	⇓*e*P	**Pn**	**09 31 05.4**	**+0.9**
	baz=3.0						
EKS2				⇓*i*S	**Sn**	**09 31 47.6**	**-1.6**
	baz=3.0						
AAK	**Ala-Archa**	**3.78**	**12**	Pn	**Pn**	**09 31 08.0**	**+2.8**
	comp=E,14nm,0.3s,baz=190,slow=7.4,SNR=97						
AAK				Lg	Lg	09 31 55.2	
	comp=E,20nm,0.3s,baz=343,slow=22,SNR=8.2						
AAK	**Ala-Archa**	**3.78**	**12**	P	**Pn**	**09 31 07.9**	**+2.6**
	SNR=77						
AAK	**Ala-Archa**	**3.78**	**12**	⇑Pn	**Pn**	**09 31 06.6**	**+1.3**
	comp=E,53nm,0.6s						
AAK				⇓Lg	Lg	09 31 58.9	
	comp=E,303nm,0.8s						
AAK	**Ala-Archa**	**3.78**	**12**	⇓*i*P	**Pn**	**09 31 05.7**	**+0.4**
	baz=12						
AAK				⇓*i*S	**Sn**	**09 31 48.8**	**-1.7**
	baz=12						
MRKS	**Merke**	**3.81**	**357**	*e*P	**Pn**	**09 31 09.9**	**+4.3**
	comp=E,83nm,0.5s						
MRKS				*e*S	**Sn**	**09 31 53.2**	**+2.1**
	comp=E,143nm,0.3s						
MRKS	**Merke**	**3.81**	**357**	Pg	**Pb**	**09 31 12.1**	**-1.7**
	comp=E,98nm,0.4s						
MRKS				Lg	Lg	09 31 57.2	
	comp=E,143nm,0.3s						
KBK	**Karagaybulak**	**3.89**	**17**	P	**Pn**	**09 31 10.1**	**+3.3**
	SNR=10						
ULHL	**Ulahol**	**3.93**	**32**	P	**Pn**	**09 31 09.6**	**+2.3**
	SNR=6.5						
IUG	**Iuzhnay**	**4.13**	**322**	*e*P	**Pb**	**09 31 15.3**	**-4.0**
	comp=E,550nm,0.4s						
IUG				*e*S	**Sn**	**09 32 02.3**	**+3.2**
	comp=E,361nm,0.6s						
IUG	**Iuzhnay**	**4.13**	**322**	*e*Pn	**Pn**	**09 31 11.6**	**+1.5**
	baz=316						
IUG				*e*Pb	**Pb**	**09 31 21.0**	**+1.7**
	baz=316						
IUG				*e*Pg	**Pg**	**09 31 24.1**	**-0.8**
	baz=316						
IUG	**Iuzhnay**	**4.13**	**322**	Pg	**Pb**	**09 31 20.3**	**+1.0**
	comp=E,2µm,0.5s						
IUG				Lg	Lg	09 32 11.5	
	comp=E,308nm,0.7s						
CHMS	**Chumysh**	**4.18**	**13**	P	**Pn**	**09 31 13.2**	**+2.6**
	SNR=17						
DZA	**Taraz**	**4.27**	**339**	*e*P	**Pn**	**09 31 16.6**	**+4.7**
	comp=E,99nm,0.1s						
DZA				*e*S	**Sn**	**09 32 04.5**	**+2.3**
	comp=E,252nm,0.3s						
DZA	**Taraz**	**4.27**	**339**	*e*Pg	**Pb**	**09 31 24.2**	**+2.7**
	baz=334						
DZA	**Taraz**	**4.27**	**339**	Pg	**Pb**	**09 31 20.1**	**-1.4**
	comp=E,99nm,0.1s						
DZA				Lg	Lg	09 32 11.2	
	comp=E,252nm,0.3s						
KDJ	**Kajisay**	**4.27**	**40**	⇑*i*P	**Pn**	**09 31 14.3**	**+2.3**
	baz=42						
KDJ				⇑*i*S	**Sn**	**09 32 02.3**	**-0.3**
	baz=42						
TKM2	**Tokmak 2**	**4.30**	**22**	P	**Pn**	**09 31 15.1**	**+2.6**
	SNR=17						
TKM2	**Tokmak 2**	**4.30**	**22**	⇓Pn	**Pn**	**09 31 13.9**	**+1.5**
	comp=E,5.2nm,0.6s						
TKM2				⇓Pg	**Pb**	**09 31 23.0**	**+0.8**
	comp=E,44nm,0.6s						
TKM2				⇑Lg	Lg	09 32 16.2	
	comp=E,168nm,1.1s						
USP	**Ospenovka**	**4.40**	**10**	P	**Pn**	**09 31 16.6**	**+3.0**
	SNR=17						
KST	**Kastek**	**4.52**	**24**	*e*P	**Pb**	**09 31 26.8**	**+0.9**
	comp=E,55nm,0.5s						
KST				*e*S	**Sb**	**09 32 22.6**	**+1.7**
	comp=E,118nm,0.4s						
KST	**Kastek**	**4.52**	**24**	Pg	**Pb**	**09 31 26.4**	**+0.5**
	comp=E,55nm,0.5s						
KST				Lg	Lg	09 32 22.1	
	comp=E,118nm,0.4s						
SGDS	**Sogindy**	**4.60**	**11**	*e*Pb	**Pb**	**09 31 26.1**	**-1.1**
	baz=12						
DGS	**Degeres**	**4.65**	**21**	*e*P	**Pb**	**09 31 29.8**	**+1.7**
	comp=E,101nm,0.3s						
DGS				*e*S	**Sb**	**09 32 27.9**	**+3.4**
	comp=E,125nm,0.6s						
DGS	**Degeres**	**4.65**	**21**	Pg	**Pb**	**09 31 28.8**	**+0.8**
	comp=E,101nm,0.3s						
DGS				Lg	Lg	09 32 26.2	
	comp=E,125nm,0.6s						
KK02	**Karatay Array**	**4.72**	**333**	⇑Pn	**Pn**	**09 31 19.9**	**+1.9**
	comp=E,33nm,0.6s						
KK02				⇓Sn	**Sn**	**09 32 13.2**	**-0.2**
	comp=E,123nm,0.7s						
MTBS	**Maitube**	**4.76**	**27**	*e*P	**Pb**	**09 31 31.5**	**+1.6**
	comp=E,40nm,0.3s						
MTBS				*e*S	**Sb**	**09 32 30.8**	**+3.1**
	comp=E,128nm,0.3s						
MTBS	**Maitube**	**4.76**	**27**	Pg	**Pb**	**09 31 30.8**	**+0.9**
	comp=E,40nm,0.3s						
MTBS				Lg	Lg	09 32 29.4	
	comp=E,128nm,0.3s						
TNSS	**Tian-Shan**	**4.88**	**32**	*e*P	**Pb**	**09 31 34.6**	**+2.5**
	comp=E,42nm,0.3s						
TNSS				*e*S	**Sb**	**09 32 36.2**	**+4.8**
	comp=E,65nm,0.5s						
TNSS	**Tian-Shan**	**4.88**	**32**	*e*Pg	**Pb**	**09 31 35.6**	**+3.5**
	baz=35						
TNSS	**Tian-Shan**	**4.88**	**32**	Pg	**Pb**	**09 31 33.7**	**+1.6**
	comp=E,42nm,0.3s						
TNSS				Lg	Lg	09 32 34.6	
	comp=E,65nm,0.5s						
BRLS	**Borolday**	**4.92**	**327**	*e*P	Pn	09 31 26.2	+5.3
	comp=E,61nm,0.4s						
BRLS				*e*S	**Sn**	**09 32 21.6**	**+3.2**
	comp=E,64nm,0.3s						
BRLS	**Borolday**	**4.92**	**327**	*e*Pn	**Pn**	**09 31 20.5**	**-0.3**
	baz=319						
BRLS	**Borolday**	**4.92**	**327**	Pg	**Pb**	**09 31 32.7**	**+0.1**
	comp=E,61nm,0.4s						
BRLS				Lg	Lg	09 32 32.8	
	comp=E,64nm,0.3s						
ANVS	**Anan'yevo**	**5.00**	**38**	⇑*i*P	**Pn**	**09 31 23.8**	**+1.8**
	baz=40						
ANVS				⇑*i*S	**Sn**	**09 32 19.2**	**-1.3**
	baz=40						
AAA	**Alma-Ata**	**5.01**	**30**	Pg	**Pb**	**09 31 35.6**	**+1.4**
	comp=E,98nm,0.1s						
AAA				Lg	Lg	09 32 37.8	
	comp=E,19nm,0.4s						
MDOK	**Medeo**	**5.02**	**32**	*e*P	**Pb**	**09 31 36.8**	**+2.2**
	comp=E,34nm,0.6s						
MDOK				*e*S	**Sb**	**09 32 39.7**	**+4.3**
	comp=E,140nm,0.5s						
MDOK	**Medeo**	**5.02**	**32**	⇑Pn	**Pn**	**09 31 25.0**	**+2.6**
	comp=E,7.0nm,0.6s						
MDOK				⇑Pg	**Pb**	**09 31 36.7**	**+2.2**
	comp=E,43nm,0.8s						
MDOK				⇑Lg	Lg	09 32 40.2	
	comp=E,252nm,1.1s						
MDOK	**Medeo**	**5.02**	**32**	Pg	**Pb**	**09 31 36.7**	**+2.2**
	comp=E,34nm,0.6s						
MDOK				Lg	Lg	09 32 40.0	
	comp=E,140nm,0.5s						
KNDC	**Almaty**	**5.03**	**31**	⇑Pg	**Pb**	**09 31 38.2**	**+3.6**
	comp=E,190nm,0.7s						
KNDC				⇑Lg	Lg	09 32 40.6	
	comp=E,1µm,1.2s						
KRBS	**Karabastau**	**5.04**	**19**	*e*P	**Pb**	**09 31 36.6**	**+1.9**
	comp=E,31nm,0.7s						
KRBS				*e*S	**Sb**	**09 32 39.5**	**+3.6**
	comp=E,120nm,1.0s						
KRBS	**Karabastau**	**5.04**	**19**	Pg	**Pb**	**09 31 36.2**	**+1.4**
	comp=E,31nm,0.7s						
KRBS				Lg	Lg	09 32 39.1	
	comp=E,120nm,1.0s						
KOTS	**Kotyrbulak**	**5.11**	**32**	*e*P	**Pb**	**09 31 39.1**	**+3.1**
	comp=E,46nm,0.6s						
KOTS				*e*S	**Sb**	**09 32 43.5**	**+5.7**
	comp=E,245nm,0.5s						
KOTS	**Kotyrbulak**	**5.11**	**32**	Pg	**Pb**	**09 31 37.8**	**+1.9**
	comp=E,46nm,0.6s						
KOTS				Lg	Lg	09 32 41.7	
	comp=E,245nm,0.5s						
KTBS	**Karatobe**	**5.36**	**26**	*e*P	**Pb**	**09 31 41.7**	**+1.7**
	comp=E,37nm,0.5s						
KTBS				*e*S	**Sb**	**09 32 48.3**	**+3.5**
	comp=E,242nm,0.7s						
KTBS	**Karatobe**	**5.36**	**26**	Pg	**Pb**	**09 31 42.3**	**+2.2**
	comp=E,37nm,0.5s						
KTBS				Lg	Lg	09 32 49.6	
	comp=E,242nm,0.7s						
KUU	**Kurty**	**5.41**	**23**	*e*P	**Pb**	**09 31 43.1**	**+2.2**
	comp=E,20nm,0.4s						
KUU				*e*S	**Sb**	**09 32 50.5**	**+4.2**
	comp=E,166nm,0.5s						
KUU	**Kurty**	**5.41**	**23**	*e*Pg	**Pb**	**09 31 42.8**	**+1.9**
	baz=25						
KUU	**Kurty**	**5.41**	**23**	Pg	**Pb**	**09 31 43.2**	**+2.2**
	comp=E,20nm,0.4s						
KUU				Lg	Lg	09 32 50.9	
	comp=E,166nm,0.5s						
SATY	**Saty**	**5.57**	**41**	*e*Pn	**Pn**	**09 31 30.9**	**+1.1**
	baz=45						
SATY	**Saty**	**5.57**	**41**	Pg	**Pb**	**09 31 46.7**	**+3.0**
	comp=E,52nm,0.5s						
SATY				Lg	Lg	09 32 57.1	
	comp=E,110nm,0.9s						
KURS	**Kuram**	**5.77**	**37**	Pg	**Pb**	**09 31 50.3**	**+3.1**
	comp=E,24nm,0.9s						
KURS				Lg	Lg	09 33 03.1	
	comp=E,52nm,1.7s						
UZB	**Uzynbulak**	**5.95**	**43**	*e*Pn	**Pn**	**09 31 35.6**	**+0.5**
	baz=47						
UZB	**Uzynbulak**	**5.95**	**43**	Pg	**Pb**	**09 31 54.2**	**+3.9**
	comp=E,23nm,0.5s						
UZB				Lg	Lg	09 33 09.8	
	comp=E,40nm,0.5s						
BTLS	**Baital**	**6.12**	**4**	*e*P	**Pb**	**09 31 53.4**	**+0.4**
	comp=E,8.8nm,0.3s						
BTLS				*e*S	**Sb**	**09 33 08.6**	**+1.9**
	comp=E,28nm,0.7s						
BTLS	**Baital**	**6.12**	**4**	Pg	**Pb**	**09 31 56.2**	**+3.2**
	comp=E,8.8nm,0.3s						
BTLS				Lg	Lg	09 33 13.4	
	comp=E,28nm,0.7s						
ARXS	**Arharly**	**6.21**	**30**	Pg	**Pb**	**09 31 58.5**	**+3.9**
	comp=E,32nm,0.4s						
ARXS				Lg	Lg	09 33 17.0	
	comp=E,127nm,0.5s						
PDGK	**Podgornoye**	**6.33**	**44**	Pg	**Pb**	**09 32 00.6**	**+3.9**
	comp=E,12nm,0.3s						
PDGK	**Podgornoye**	**6.33**	**44**	⇑Pn	**Pn**	**09 31 41.3**	**+1.1**
	comp=E,5.1nm,0.8s						
PDGK				⇓Pg	Pb	09 32 02.2	+5.5
	comp=E,24nm,0.7s						
PDGK				⇓Lg	Lg	09 33 22.8	
	comp=E,81nm,0.9s						
BLB	**Baldybastay**	**6.39**	**35**	Pg	**Pb**	**09 32 01.9**	**+4.2**
	comp=E,32nm,0.4s						
TDK	**Taldyqorghan**	**7.10**	**30**	*e*Pg	Pb	09 32 15.6	+5.9
	baz=32						
TDK	**Taldyqorghan**	**7.10**	**30**	Pg	**Pb**	**09 32 14.4**	**+4.7**
	comp=E,69nm,0.4s						
KAPS	**Kapalarasan**	**7.71**	**33**	Pg	Pb	09 32 26.1	+5.9
	comp=E,13nm,0.9s						
MAKZ	**Makanchi**	**10.05**	**36**	⇓Lg	Lg	09 35 20.6	
	comp=E,13nm,1.0s						

MK31	**Makanchi Array**	**10.18**	**37**	⇑Pn	**Pn**	**09 32 35.3**	**+2.4**
	comp=E,2.3nm,0.9s,baz=197,slow=41,SNR=11						
MK31				⇓Lg	Lg	09 35 23.9	
	comp=E,5.5nm,0.9s,baz=222,slow=27,SNR=3.6						
MKAR	**Makanchi Array**	**10.18**	**37**	Pn	**Pn**	**09 32 34.7**	**+1.7**
	comp=E,0.1nm,0.3s,baz=224,slow=13,SNR=9.7						
MKAR				Lg	Lg	09 35 20.0	
	comp=E,0.1nm,0.3s,baz=224,slow=27,SNR=5.3						
WMQ	**Urumqi**	**11.76**	**61**	*e*P	**Pn**	**09 32 54.8**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,47nm,4.3s						
WMQ				smax	smax		
	comp=N,10.0nm,0.7s						
WMQ				smax	smax		
	comp=E,12nm,0.9s						
GEYT	**Alibeck**	**12.07**	**270**	Pn	**Pn**	**09 33 00.9**	**+2.1**
	comp=E,0.3nm,0.3s,baz=72,slow=17,SNR=2.5						
GEYT				Sn	**Sn**	**09 35 10.2**	**-3.9**
	comp=E,0.2nm,0.3s,baz=163,slow=36,SNR=2.4						
KURBB	**Kurchatov Arra**	**12.23**	**15**	Pn	**Pn**	**09 33 00.4**	**-0.5**
	comp=E,0.0nm,0.3s,baz=207,slow=12,SNR=1.4						
KURBB				Lg	Lg	09 36 24.1	
	comp=E,0.3nm,0.3s,baz=201,slow=29,SNR=6.2						
KURK	**Kurchatov**	**12.33**	**16**	⇑Lg	Lg	09 36 30.5	
	comp=E,85nm,1.4s						
AB31	**Akbulak array**	**14.14**	**321**	⇓Pn	**Pn**	**09 33 25.4**	**-1.7**
	comp=E,1.8nm,0.6s,baz=128,slow=13,SNR=34						
AB31				Sn	**Sn**	**09 36 00.7**	**-3.9**
	comp=E,9.7nm,1.1s,baz=134,slow=22,SNR=7.6						
BVAR	**Borovoye Array**	**14.25**	**352**	Pn	**Pn**	**09 33 26.8**	**-1.7**
	comp=E,0.3nm,0.3s,baz=180,slow=19,SNR=11						
BRVK	**Borovoye**	**14.29**	**352**	⇓Pn	**Pn**	**09 33 27.6**	**-1.5**
	comp=E,3.5nm,0.7s						
AKTO	**Aktyubinsk**	**15.86**	**321**	Pn	**Pn**	**09 33 48.7**	**-1.3**
	comp=E,0.3nm,0.3s,baz=124,slow=12,SNR=13						
AKTO				Sn	**Sn**	**09 36 38.9**	**-7.5**
	comp=E,0.3nm,0.3s,baz=354,slow=17,SNR=3.7						
AKTO				LR	LR	09 40 02.0	
	comp=E,31nm,21.7s,baz=115,slow=38						
AKTO	**Aktyubinsk**	**15.86**	**321**	⇑Pn	**Pn**	**09 33 49.2**	**-0.8**
	comp=E,8.1nm,0.9s						
AKTO				⇓Sn	**Sn**	**09 36 39.2**	**-7.2**
	comp=E,5.7nm,1.2s						
ZALV	**Zalesovo Beam**	**16.90**	**24**	Pn	**Pn**	**09 34 01.3**	**-2.1**
	comp=E,0.3nm,0.3s,baz=216,slow=9.1,SNR=10.0						
ZALV				Lg	Lg	09 38 55.5	
	baz=209,slow=23,SNR=1.1						
ARU	**Arti**	**20.09**	**335**	P	**P**	**09 34 40.6**	**+0.1**
	comp=E,0.9nm,0.4s,baz=158,slow=8.2,SNR=6.0						
GTA	**Gaotai**	**20.43**	**80**	*e*P	Pn	09 34 47.4	+0.9
GTA				pP		09 34 52.2	
GTA				sP		09 34 55.2	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	**25.38**	**59**	P	**P**	**09 35 34.6**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=254,slow=10,SNR=4.8						
BRTR	**Keskin Array B**	**30.63**	**284**	P	**P**	**09 36 23.4**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=98,slow=9.1,SNR=2.2						
AKASG	**Malin Array Be**	**33.03**	**306**	P	**P**	**09 36 42.5**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=75,slow=7.2,SNR=2.5						
FINES	**FINESS Array B**	**36.61**	**324**	P	**P**	**09 37 13.3**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=108,slow=6.2,SNR=6.4						
ARCES	**ARCESS Array B**	**39.68**	**336**	P	**P**	**09 37 38.6**	**-0.3**
	comp=Z,4.2nm,0.9s,baz=96,slow=7.4,SNR=5.9						
NOA	**NORSAR Array B**	**43.65**	**321**	P	**P**	**09 38 11.5**	**-0.1**
	comp=Z,1.7nm,1.0s,baz=93,slow=7.6,SNR=2.8						
DAV	**Davao City (W)**	**56.51**	**110**	LR	LR	10 04 13.9	
	comp=Z,16nm,18.1s,baz=330,slow=36						
TORD	**Torodi Ar. Bea**	**67.71**	**269**	P	**P**	**09 41 05.5**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=46,slow=5.1,SNR=2.9						
INK	**Inuvik**	**71.18**	**10**	P	**P**	**09 41 25.2**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=21,slow=9.8,SNR=3.8						
ILAR	**Eielson Array**	**71.90**	**17**	P	**P**	**09 41 28.7**	**-1.3**
	comp=Z,0.3nm,0.9s,baz=324,slow=5.6,SNR=2.1						
YKA	**Yellowknife Ar**	**78.71**	**4**	P	**P**	**09 42 10.2**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=349,slow=5.6,SNR=2.7						
WRA	**Warramunga Arr**	**81.68**	**124**	P	**P**	**09 42 26.0**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=308,slow=3.4,SNR=2.2						
ASAR	**Alice Springs**	**84.10**	**127**	P	**P**	**09 42 39.2**	**+0.8**
	comp=Z,0.3nm,0.9s,baz=339,slow=5.0,SNR=2.4						

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*IDC **12** 09:39:16.2±2.0, 38.°29N×73.°12E, h0^{km}, mb3.8/7,*
mb1 3.9/14, mb1mx3.6/48, mbtmp3.7/14, ML3.1/7, MS2.5/4,
Ms1 2.5/4, ms1mx2.3/49, Error ellipse: s-maj=35.2km
s-min=22.2km az=165.0
*SOME **12** 09:39:17.8, 38.°82N×72.°40E, h0^{km}*
*NNC **12** 09:39:23.0±2.7, 38.°78N×72.°75E, h0^{km}, mb4.2, mpv3.8,*
Error ellipse: s-maj=20.5km s-min=11.6km az=174.0
ISC 12 09:39:16.2±1.0**, 38.°06N**±0.°07×**72.°67E**±0.°06**, h10**^{km}**, n52,**
σ**1.^{s}99**/63**, mb3.7**/7**, 3C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.56**	**334**	*e*P	Pn	09 40 30.2	+4.8
	120nm,0.4s						
IUG				*e*S	**Sn**	**09 41 21.9**	**+3.5**
	152nm,0.7s						
IUG	**Iuzhnay**	**4.56**	**334**	Pg	Pn	09 40 30.2	+4.8
	120nm,0.4s						
IUG				Lg	Lg	09 41 21.9	
	152nm,0.7s						
MRKS	**Merke**	**4.70**	**5**	*e*P	Pn	09 40 32.8	+5.5
	8.1nm,0.4s						
MRKS				*e*S	**Sn**	**09 41 26.0**	**+4.1**
	60nm,0.8s						
MRKS	**Merke**	**4.70**	**5**	Pg	Pn	09 40 32.7	+5.5
	8.1nm,0.4s						
MRKS				Lg	Lg	09 41 26.0	
	60nm,0.8s						
AAK	**Ala-Archa**	**4.78**	**16**	Pn	**Pn**	**09 40 28.7**	**+0.3**
	2.8nm,0.3s,baz=172,slow=6.5,SNR=12						
AAK				Lg	Lg	09 41 26.6	
	1.7nm,0.3s,baz=357,slow=19,SNR=6.1						
AAK				LR	LR	09 41 56.2	
	comp=Z,21nm,18.6s,baz=202,slow=36						
AAK	**Ala-Archa**	**4.78**	**16**	⇓Pn	**Pn**	**09 40 27.2**	**-1.2**
	4.0nm,0.4s						
AAK				⇑Lg	Lg	09 41 33.7	
	41nm,0.8s						
KK02	**Karatay Array**	**5.30**	**343**	⇓Pn	**Pn**	**09 40 36.9**	**+1.4**
	7.4nm,0.4s						
KK02				⇓Sn	**Sn**	**09 41 33.4**	**-3.2**
	22nm,0.6s						
BRLS	**Borolday**	**5.42**	**337**	*e*P	**Pn**	**09 40 40.7**	**+3.6**
	6.8nm,0.6s						
BRLS				*e*S	**Sn**	**09 41 39.3**	**-0.2**
	16nm,0.8s						
BRLS	**Borolday**	**5.42**	**337**	Pg	**Pn**	**09 40 40.7**	**+3.6**
	6.8nm,0.6s						
BRLS				Lg	Lg	09 41 39.3	
	16nm,0.8s						
KST	**Kastek**	**5.58**	**26**	*e*P	**Pb**	**09 40 53.6**	**0.0**
	8.6nm,0.5s						
KST				*e*S	**Sb**	**09 42 01.9**	**+1.3**
	23nm,1.0s						
KST	**Kastek**	**5.58**	**26**	Pg	**Pb**	**09 40 53.6**	**0.0**
	8.6nm,0.5s						
KST				Lg	Lg	09 42 01.9	
	23nm,1.0s						
DGS	**Degeres**	**5.69**	**23**	*e*P	**Pb**	**09 40 54.0**	**-1.6**
	9.7nm,0.5s						
DGS				*e*S	**Sb**	**09 42 02.3**	**-1.6**
	15nm,0.8s						
DGS	**Degeres**	**5.69**	**23**	Pg	**Pb**	**09 40 54.0**	**-1.6**
	9.7nm,0.5s						
DGS				Lg	Lg	09 42 02.3	
	15nm,0.8s						
IZV	**Izvestkoviy**	**5.81**	**30**	*e*P	**Pb**	**09 40 56.1**	**-1.6**
	3.0nm,0.6s						
IZV				*e*S	**Sb**	**09 42 06.0**	**-1.3**
	22nm,0.8s						
IZV	**Izvestkoviy**	**5.81**	**30**	Pg	**Pb**	**09 40 56.1**	**-1.6**
	3.0nm,0.6s						
IZV				Lg	Lg	09 42 06.0	
	22nm,0.8s						
MTBS	**Maitube**	**5.82**	**28**	*e*P	**Pb**	**09 40 59.0**	**+1.2**
	6.5nm,0.6s						
MTBS				*e*S	**Sb**	**09 42 10.9**	**+3.4**
	14nm,0.8s						
MTBS	**Maitube**	**5.82**	**28**	Pg	**Pb**	**09 40 59.0**	**+1.2**
	6.5nm,0.6s						
MTBS				Lg	Lg	09 42 10.9	
	14nm,0.8s						
TNSS	**Tian-Shan**	**5.94**	**32**	*e*P	**Pb**	**09 41 01.4**	**+1.3**
	5.7nm,0.5s						
TNSS				*e*S	**Sb**	**09 42 14.7**	**+3.2**
	12nm,0.8s						
TNSS	**Tian-Shan**	**5.94**	**32**	Pg	**Pb**	**09 41 01.4**	**+1.3**
	5.7nm,0.5s						
TNSS				Lg	Lg	09 42 14.6	
	12nm,0.8s						
KRBS	**Karabastau**	**6.08**	**21**	*e*P	**Pb**	**09 41 00.7**	**-1.4**
	4.9nm,0.7s						
KRBS				*e*S	**Sb**	**09 42 14.1**	**-0.8**
	11nm,0.8s						
KRBS	**Karabastau**	**6.08**	**21**	Pg	**Pb**	**09 41 00.7**	**-1.4**
	4.9nm,0.7s						
KRBS				Lg	Lg	09 42 14.1	
	11nm,0.8s						
MDOK	**Medeo**	**6.09**	**32**	*e*P	**Pb**	**09 41 02.9**	**+0.4**
	4.3nm,0.9s						
MDOK				*e*S	**Sb**	**09 42 16.9**	**+1.5**
	15nm,1.1s						
MDOK	**Medeo**	**6.09**	**32**	⇑Pg	**Pb**	**09 41 02.1**	**-0.3**
	11nm,0.9s						
MDOK				Lg	Lg	09 42 14.9	
	34nm,1.0s						
MDOK	**Medeo**	**6.09**	**32**	Pg	**Pb**	**09 41 01.8**	**-0.6**
	4.3nm,0.9s						
MDOK				Lg	Lg	09 42 16.9	
	15nm,1.1s						
KOTS	**Kotyrbulak**	**6.17**	**32**	*e*P	**Pb**	**09 41 04.0**	**+0.2**
	7.0nm,0.6s						
KOTS				*e*S	**Sb**	**09 42 19.6**	**+1.8**
	31nm,0.8s						
KOTS	**Kotyrbulak**	**6.17**	**32**	Pg	**Pb**	**09 41 04.0**	**+0.2**
	7.0nm,0.6s						
KOTS				Lg	Lg	09 42 19.6	
	31nm,0.8s						
KTBS	**Karatobe**	**6.41**	**27**	*e*P	**Pb**	**09 41 08.4**	**+0.6**
	3.5nm,0.6s						
KTBS				*e*S	**Sb**	**09 42 27.1**	**+2.5**
KTBS	**Karatobe**	**6.41**	**27**	Pg	**Pb**	**09 41 08.4**	**+0.6**
	3.5nm,0.6s						
KTBS				Lg	Lg	09 42 27.1	
KUU	**Kurty**	**6.46**	**24**	*e*P	**Pb**	**09 41 07.9**	**-0.7**
	2.3nm,0.3s						
KUU				*e*S	**Sb**	**09 42 26.5**	**+0.7**
	16nm,0.5s						
KUU	**Kurty**	**6.46**	**24**	Pg	**Pb**	**09 41 07.9**	**-0.7**
	2.3nm,0.3s						
KUU				Lg	Lg	09 42 26.5	
	16nm,0.5s						
SATY	**Saty**	**6.63**	**39**	*e*P	**Pb**	**09 41 12.0**	**+0.4**
	7.6nm,0.8s						
SATY				*e*S	**Sb**	**09 42 33.7**	**+2.7**
	23nm,1.1s						
SATY	**Saty**	**6.63**	**39**	Pg	**Pb**	**09 41 12.0**	**+0.4**
	7.6nm,0.8s						
SATY				Lg	Lg	09 42 33.7	
	23nm,1.1s						
UZB	**Uzynbulak**	**7.01**	**42**	*e*P	**Pb**	**09 41 19.0**	**+0.9**
	4.2nm,0.2s						
UZB				*e*S	**Sb**	**09 42 45.6**	**+3.6**
	14nm,1.1s						
UZB	**Uzynbulak**	**7.01**	**42**	Pg	**Pb**	**09 41 19.0**	**+0.9**
	4.2nm,0.2s						
UZB				Lg	Lg	09 42 45.6	
	14nm,1.1s						
ARXS	**Arharly**	**7.28**	**31**	*e*P	**Pb**	**09 41 22.2**	**-0.3**
ARXS				*e*S	**Sb**	**09 42 50.2**	**+0.8**
	12nm,1.0s						
ARXS	**Arharly**	**7.28**	**31**	Pg	**Pb**	**09 41 22.3**	**-0.3**
ARXS				Lg	Lg	09 42 50.2	
	12nm,1.0s						
PDGK	**Podgornoye**	**7.38**	**42**	⇑Lg	Lg	09 42 57.2	
	21nm,0.9s						
MKAR	**Makanchi Array**	**11.25**	**36**	Pn	**Pn**	**09 41 55.4**	**-1.6**
	0.1nm,0.3s,baz=224,slow=12,SNR=3.1						
MKAR				LR	LR	09 46 42.5	
	comp=Z,24nm,21.9s,baz=351,slow=41						
GEYT	**Alibeck**	**11.49**	**274**	Pn	Pn	09 42 06.0	+5.7
	0.3nm,0.3s,baz=90,slow=14,SNR=2.7						
KURBB	**Kurchatov Arra**	**13.24**	**16**	Pn	Pn	09 42 19.5	-4.5
	0.1nm,0.3s,baz=208,slow=12,SNR=1.6						
AB31	**Akbulak array**	**14.48**	**325**	⇓Pn	**Pn**	**09 42 39.4**	**-1.6**
	0.6nm,0.5s,baz=137,slow=12,SNR=11						
AB31				⇓Sn	**Sn**	**09 45 15.2**	**-6.3**
	1.4nm,0.8s,baz=128,slow=24,SNR=5.0						
BVAR	**Borovoye Array**	**15.05**	**355**	Pn	**Pn**	**09 42 45.6**	**-3.2**
	0.2nm,0.3s,baz=168,slow=16,SNR=3.5						
AKTO	**Aktyubinsk**	**16.19**	**325**	Pn	**Pn**	**09 43 03.8**	**+0.1**
	0.1nm,0.3s,baz=120,slow=20,SNR=1.6						
AKTO				LR	LR	09 49 38.9	
	comp=Z,33nm,18.5s,baz=174,slow=38						
AKTO	**Aktyubinsk**	**16.19**	**325**	⇓Pn	**P**	**09 43 08.2**	**+1.3**
	9.2nm,1.1s						
ZALV	**Zalesovo Beam**	**17.95**	**24**	P	**Pn**	**09 43 21.4**	**-4.3**
	0.1nm,0.3s,baz=221,slow=14,SNR=2.3						
ZALV				LR	LR	09 49 28.7	
	comp=Z,25nm,19.4s,baz=22,slow=35						
SONM	**Songino Array**	**26.36**	**57**	P	**P**	**09 44 51.0**	**-1.5**
	0.5nm,0.7s,baz=118,slow=15,SNR=3.9						
FINES	**FINESS Array B**	**36.97**	**325**	P	**P**	**09 46 26.8**	**+1.6**
	1.4nm,0.7s,baz=117,slow=11,SNR=6.3						
ARCES	**ARCESS Array B**	**40.23**	**336**	P	**P**	**09 46 53.8**	**+1.2**
	5.6nm,1.0s,baz=98,slow=7.5,SNR=6.7						
NOA	**NORSAR Array B**	**43.96**	**322**	P	**P**	**09 47 23.9**	**+0.8**
	0.9nm,0.7s,baz=75,slow=8.4,SNR=3.3						
INK	**Inuvik**	**72.15**	**10**	P	**P**	**09 50 40.8**	**+0.4**
	0.6nm,0.5s,baz=337,slow=5.6,SNR=11						
ILAR	**Eielson Array**	**72.91**	**17**	P	**P**	**09 50 44.1**	**-1.0**
	0.5nm,0.8s,baz=324,slow=4.5,SNR=5.2						
YKA	**Yellowknife Ar**	**79.62**	**3**	P	**P**	**09 51 23.5**	**+0.3**
	0.4nm,0.7s,baz=347,slow=6.0,SNR=4.9						

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*TAP **12** 09:51:58.8, 24.°56N×122.°14E, h69^{km}±1^{km}, ML3.4, B*
*JMA **12** 09:51:58.1±0.1, 24.°53N×122.°11E, h78^{km}±2^{km}, M2.5*
ISC 12 09:51:59.4±1.3**, 24.°55N**±0.°03×**122.°16E**±0.°02**, h66**^{km}±7^{km}**,**
n74, σ**0.^{s}82**/139**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.29**	**281**	*i* P	**Pn**	**09 52 09.9**	**0.0**
	baz=280						
TWC				*e*S	**Sn**	**09 52 17.7**	**0.0**
	baz=280						
EWUT	**Wuta**	**0.36**	**253**	*i* P	**Pn**	**09 52 10.9**	**+0.3**
	baz=250						
EWUT				*e*S	**Sn**	**09 52 19.7**	**+1.0**
	baz=250						
ENA	**Nanau**	**0.40**	**252**	*i* P	**Pn**	**09 52 11.2**	**+0.3**
	baz=249						
ENA				S	**Sn**	**09 52 20.1**	**+0.9**
	baz=249						
NDS	**Dongshan**	**0.41**	**281**	*i* P	**Pn**	**09 52 11.2**	**+0.2**
	baz=280						
NDS				*e*S	**Sn**	**09 52 20.0**	**+0.5**
	baz=280						
NTC	**Toucheng**	**0.42**	**315**	*i* P	**Pn**	**09 52 10.9**	**-0.1**
	baz=315						
NTC				*i* S	**Sn**	**09 52 19.1**	**-0.6**
	baz=315						
ILA	**Ilan**	**0.43**	**300**	P	**Pn**	**09 52 11.5**	**+0.3**
	baz=300						
ILA				*e*S	**Sn**	**09 52 20.4**	**+0.7**
	baz=300						
TWE	**Neicheng**	**0.48**	**291**	*i* P	**Pn**	**09 52 11.8**	**+0.2**
	baz=290						
TWE				S	**Sn**	**09 52 20.8**	**+0.3**
	baz=290						
TWB1	**Santiao Chiao**	**0.48**	**341**	P	**Pn**	**09 52 11.1**	**-0.6**
	baz=343						
TWB1				*e*S	**Sn**	**09 52 18.9**	**-1.6**
	baz=343						
TIPB	**Shuangxi**	**0.52**	**324**	*i* P	**Pn**	**09 52 11.5**	**-0.5**
	baz=324						
TIPB				S	**Sn**	**09 52 20.7**	**-0.6**
	baz=324						
ENTT	**Nioudou**	**0.55**	**279**	*i* P	**Pn**	**09 52 12.8**	**+0.5**
	baz=278						
ENTT				S	**Sn**	**09 52 22.7**	**+0.9**
	baz=278						
NDT	**Datong Townshi**	**0.59**	**275**	*i* P	**Pn**	**09 52 13.1**	**+0.3**
	baz=274						
NDT				S	**Sn**	**09 52 23.2**	**+0.6**
	baz=274						
NWF	**Wu-fen Shan**	**0.62**	**326**	*e*P	**Pn**	**09 52 12.9**	**-0.3**
	baz=327						
NWF				*e*S	**Sn**	**09 52 22.6**	**-0.7**
	baz=327						
ETL	**Fush Village**	**0.63**	**231**	*i* P	**Pn**	**09 52 13.0**	**-0.2**
	baz=229						
ETL				S	**Sn**	**09 52 23.1**	**-0.2**
	baz=229						
NACB	**Ninganchiao**	**0.64**	**234**	*i* P	**Pn**	**09 52 12.9**	**-0.4**
	baz=232						
NACB				S	**Sn**	**09 52 23.4**	**-0.1**
	baz=232						
NWLT	**Wulai**	**0.64**	**291**	*i* P	**Pn**	**09 52 13.6**	**+0.3**
	baz=290						
NWLT				*i* S	**Sn**	**09 52 23.9**	**+0.3**
	baz=290						
TWA	**Mucha**	**0.68**	**309**	*i* P	**Pn**	**09 52 13.3**	**-0.4**
	baz=309						
TWA				*e*S	**Sn**	**09 52 23.2**	**-1.0**
	baz=309						
ETLH	**Xiulin Townshi**	**0.71**	**241**	*i* P	**Pn**	**09 52 13.9**	**-0.3**
	baz=239						
ETLH				*i* S	**Sn**	**09 52 24.6**	**-0.5**
	baz=239						
NHDH	**Xindian Distri**	**0.71**	**305**	*e*P	**Pn**	**09 52 13.8**	**-0.3**
	baz=305						
NHDH				*e*S	**Sn**	**09 52 23.9**	**-0.9**
	baz=305						
JYNG	**Yonagunijimaku**	**0.72**	**98**	P	**Pn**	**09 52 14.3**	**+0.1**
JYNG				S	**Sn**	**09 52 26.4**	**+1.2**
YHNB	**Yeheng**	**0.72**	**279**	P	**Pn**	**09 52 14.3**	**0.0**
	baz=278						
YHNB				S	**Sn**	**09 52 25.2**	**-0.2**
	baz=278						
YHNB	**Yeheng**	**0.72**	**279**	P	**Pn**	**09 52 14.4**	**0.0**
NNS	**Nan Shan**	**0.72**	**261**	*i* P	**Pn**	**09 52 14.3**	**-0.1**
	baz=260						
NNS				S	**Sn**	**09 52 25.2**	**-0.2**
	baz=260						
NSK	**Sanguang**	**0.74**	**280**	*i* P	**Pn**	**09 52 14.6**	**0.0**
	baz=279						
NSK				*i* S	**Sn**	**09 52 25.8**	**+0.2**
	baz=279						
HWA	**Hwalien**	**0.76**	**222**	P	**Pn**	**09 52 14.6**	**-0.1**
	baz=219						
HWA				S	**Sn**	**09 52 26.6**	**+0.6**
	baz=219						
YOJ	**Yonaguni jima**	**0.78**	**96**	P	**Pn**	**09 52 15.2**	**+0.3**
	baz=96						
YOJ				*e*S	**Sn**	**09 52 27.9**	**+1.5**
	baz=96						
YOJ	**Yonaguni jima**	**0.78**	**96**	P	**Pn**	**09 52 15.3**	**+0.3**
YOJ	**Yonaguni jima**	**0.78**	**96**	P	**Pn**	**09 52 14.3**	**-0.6**
YM01	**YM01**	**0.80**	**318**	P	**Pn**	**09 52 14.8**	**-0.4**
	baz=318						
YM01				*e*S	**Sn**	**09 52 25.2**	**-1.7**
	baz=318						
ETM	**Tongmen**	**0.84**	**226**	*i* P	**Pn**	**09 52 15.3**	**-0.4**
	baz=225						
TEYL	**Yanliau Villag**	**0.85**	**217**	*i* P	**Pn**	**09 52 15.5**	**-0.3**
	baz=217						
TWS1	**Kuangyinshan**	**0.87**	**309**	P	**Pn**	**09 52 15.5**	**-0.4**
	baz=309						
TWS1				S	**Sn**	**09 52 27.8**	**-0.5**
	baz=309						
FUSS	**Fushou**	**0.89**	**250**	*i* P	**Pn**	**09 52 16.8**	**+0.3**
	baz=249						
FUSS				S	**Sn**	**09 52 29.3**	**+0.1**
	baz=249						
NTST	**Danshui**	**0.89**	**314**	P	**Pn**	**09 52 15.9**	**-0.3**
	baz=313						
NTST				S	**Sn**	**09 52 28.1**	**-0.6**
	baz=313						
WHF	**Hehuan Shan**	**0.91**	**244**	*i* P	**Pn**	**09 52 16.8**	**-0.2**
	baz=242						
WHF				S	**Sn**	**09 52 29.5**	**-0.4**
	baz=242						
TWT	**Tachien**	**0.94**	**252**	*i* P	**Pn**	**09 52 17.7**	**+0.6**
	baz=250						
TWT				*i* S	**Sn**	**09 52 30.7**	**+0.4**
	baz=250						
TDCB	**Techi**	**0.96**	**252**	P	**Pn**	**09 52 17.6**	**+0.3**
	baz=251						
TDCB				S	**Sn**	**09 52 30.6**	**0.0**
	baz=251						
NCU	**National Centr**	**0.98**	**295**	*i* P	**Pn**	**09 52 17.2**	**-0.2**
	baz=295						
NCU				*i* S	**Sn**	**09 52 31.1**	**+0.3**
	baz=295						
NCUH	**Zhongli**	**0.98**	**295**	P	**Pn**	**09 52 17.7**	**+0.4**
	baz=295						
NCUH				S	**Sn**	**09 52 30.6**	**-0.2**
	baz=295						
ESL	**Shilin**	**0.99**	**222**	*i* P	**Pn**	**09 52 16.8**	**-0.8**
	baz=220						
ESL				*e*S	**Sn**	**09 52 29.4**	**-1.6**
	baz=220						
CHGB	**Renai**	**1.02**	**242**	P	**Pn**	**09 52 18.3**	**+0.1**
	baz=240						
CHGB				S	**Sn**	**09 52 31.8**	**-0.3**
	baz=240						
LIOB	**Emei**	**1.05**	**275**	*i* P	**Pn**	**09 52 18.8**	**+0.6**
	baz=274						
LIOB				S	**Sn**	**09 52 32.2**	**-0.1**
	baz=274						
NSTT	**Nanjuang**	**1.06**	**274**	P	**Pn**	**09 52 18.6**	**+0.2**
	baz=273						
NSTT				*i* S	**Sn**	**09 52 32.4**	**-0.1**
	baz=273						
OWD	**Renai**	**1.08**	**237**	*e*P	**Pn**	**09 52 18.6**	**-0.2**
	baz=235						
OWD				*e*S	**Sn**	**09 52 32.6**	**-0.6**
	baz=235						
EGFH	**Guangfu**	**1.10**	**217**	P	**Pn**	**09 52 19.0**	**0.0**
	baz=216						
EGFH				*e*S	**Sn**	**09 52 33.4**	**-0.3**
	baz=216						
WHP	**Taichung City**	**1.14**	**256**	P	**Pn**	**09 52 20.4**	**+0.9**
	baz=255						
WHP				S	**Sn**	**09 52 35.2**	**+0.6**
	baz=255						
VWDT	**VWDT**	**1.22**	**230**	P	**Pn**	**09 52 20.7**	**+0.1**
	baz=228						
VWDT				*e*S	**Sn**	**09 52 35.7**	**-0.6**
	baz=228						
WCS	**Beigang Elemen**	**1.24**	**247**	P	**Pn**	**09 52 21.4**	**+0.6**
	baz=245						
WCS				*e*S	**Sn**	**09 52 37.4**	**+0.6**
	baz=245						
NMLH	**Miaoli**	**1.25**	**270**	P	**Pn**	**09 52 20.9**	**+0.1**
	baz=268						
NMLH				S	**Sn**	**09 52 36.9**	**0.0**
	baz=268						
HGSD	**Ruisui**	**1.25**	**213**	P	**Pn**	**09 52 20.5**	**-0.4**
	baz=211						
HGSD				S	**Sn**	**09 52 36.5**	**-0.5**
	baz=211						
TWQ1	**Liyutan**	**1.28**	**261**	P	**Pn**	**09 52 21.5**	**+0.2**
	baz=260						
TWQ1				S	**Sn**	**09 52 37.4**	**-0.3**
	baz=260						
NSY	**Sanyi**	**1.28**	**264**	P	**Pn**	**09 52 21.6**	**+0.2**
	baz=263						
NSY				S	**Sn**	**09 52 38.6**	**+0.8**
	baz=263						
SMLT	**Sun Moon Lake**	**1.33**	**240**	*e*P	**Pn**	**09 52 23.5**	**+1.5**
	baz=239						
SMLT				*e*S	**Sn**	**09 52 40.6**	**+1.6**
	baz=239						
SSLB	**Suanglung**	**1.34**	**236**	P	**Pn**	**09 52 22.1**	**0.0**
	baz=234						
SSLB				*e*S	**Sn**	**09 52 40.6**	**+1.5**
	baz=234						
SSLB	**Suanglung**	**1.34**	**236**	P	**Pn**	**09 52 22.8**	**+0.7**
TYC	**Yuchr**	**1.35**	**242**	*e*P	**Pn**	**09 52 23.4**	**+1.1**
	baz=240						
TYC				*e*S	**Sn**	**09 52 41.2**	**+1.8**
	baz=240						
YULB	**Yu-li**	**1.40**	**215**	*e*P	**Pn**	**09 52 21.6**	**-1.2**
	baz=213						
YULB				*e*S	**Sn**	**09 52 38.3**	**-2.2**
	baz=213						
WDJ	**Dajia District**	**1.40**	**262**	P	**Pn**	**09 52 23.0**	**+0.1**
	baz=261						
WDJ				S	**Sn**	**09 52 40.6**	**+0.1**
	baz=261						
EYUL	**Yuli**	**1.43**	**213**	*e*P	**Pn**	**09 52 22.2**	**-1.0**
	baz=211						
EYUL				S	**Sn**	**09 52 39.7**	**-1.4**
	baz=211						
IRIF	**Iriomote-Funau**	**1.45**	**98**	P	**Pn**	**09 52 23.6**	**+0.1**
IRIF				*e*S	**Sn**	**09 52 42.0**	**+0.4**

WJS	Zhushan	1.50	241	*e*P	Pn	09 52 25.7	+1.5
	baz=240						
WJS				*e*S	Sn	09 52 44.8	+1.9
	baz=240						
WCHH	Zhanghua	1.54	252	P	Pn	09 52 24.9	+0.3
	baz=251						
WCHH				S	Sn	09 52 43.0	-0.8
	baz=251						
FULB	Fuli	1.56	211	P	Pn	09 52 24.6	-0.5
	baz=209						
FULB				S	Sn	09 52 44.4	-0.1
	baz=209						
ALS	Alishan	1.61	230	*e*P	Pn	09 52 27.6	+1.6
	baz=229						
ALS				*e*S	Sn	09 52 47.1	+1.0
	baz=229						
CHKT	Chengkung	1.62	207	*e*P	Pn	09 52 24.8	-1.0
	baz=205						
CHN5	Tsauling	1.66	235	*e*P	Pn	09 52 27.7	+1.4
	baz=234						
CHN5				*e*S	Sn	09 52 48.8	+2.0
	baz=234						
ELDTW	Lidau	1.71	218	P	Pn	09 52 27.0	-0.2
	baz=216						
ELDTW				S	Sn	09 52 47.3	-0.9
	baz=216						
WDLH	Douliu	1.71	240	*e*P	Pn	09 52 27.9	+0.8
	baz=239						
WDLH				*e*S	Sn	09 52 49.3	+1.3
	baz=239						
JKRS	Kuro-shima	1.71	100	P	Pn	09 52 27.6	+0.5
JKRS				S	Sn	09 52 48.8	+0.7
WRL	Guolierlin Hig	1.75	249	P	Pn	09 52 27.7	+0.2
	baz=247						
WRL				S	Sn	09 52 48.1	-0.9
	baz=247						
EDH	Donghe	1.76	207	*e*P	Pn	09 52 26.2	-1.5
	baz=205						
EDH				*e*S	Sn	09 52 46.8	-2.3
	baz=205						
JIJ	Ishigaki jima	1.82	96	P	Pn	09 52 28.4	0.0
JIJ				S	Sn	09 52 50.1	-0.4
TPUB	Ta-pu	1.87	229	P	Pn	09 52 31.1	+1.8
LONT	Longtian	1.89	210	*e*P	Pn	09 52 28.3	-1.2
	baz=209						
LONT				*e*S	Sn	09 52 50.2	-2.1
	baz=209						
JISG	Ishigakijimahi	1.96	89	P	Pn	09 52 30.7	+0.4

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*SKHL **12** 09:55:11.3±0.2, 52°.00N×151°.10E, h514^{km}±11^{km}, mb4.6/7, msha4.5/3*

*MOS **12** 09:55:12.1±0.9, 52°.01N×151°.75E, h517^{km}, mb4.4/6, Error ellipse: s-maj=11.9km s-min=8.8km az=52.7*

*IDC **12** 09:55:13.0±1.3, 52°.02N×151°.66E, h513^{km}±16^{km}, mb3.0/15, mb1 3.2/20, mb1mx3.0/50, mbtmp3.9/20, Error ellipse: s-maj=14.4km s-min=10.5km az=150.0*

*NEIC **12** 09:55:13.1±1.3, 51°.94N±0°.10×151°.7E±0°.2, h510^{km}±7^{km}, mb4.4/32, Error ellipse: s-maj=18.8km s-min=8.3km az=133.0*

*KRSC **12** 09:55:14.2±2.5, 51°.95N×152°.27E, h510^{km}±36^{km}, ML4.4*

ISC 12 09:55:11.9±0.4**, 52°.01N**±0°.07×**151°.70E**±0°.06**, h500**^{km}**, n146,** σ1^{s}.**88**/160**, mb3.9**/30**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	3.07	114	*e*P	P	09 56 25.2	+1.9
SKR				AMB	AMB	09 56 27.4	
	30nm,0.5s						
SKR				*e*S	S	09 57 22.8	+1.3
SKR				A	A	09 57 28.8	
	30nm,0.6s						
SKR				A	A	09 57 28.8	
	20nm,0.6s						
MIPR	Malaya Ipel'ka	3.13	83	P	P	09 56 25.6	+2.0
MIPR	Malaya Ipel'ka	3.13	83	*e*P	P	09 56 25.6	+2.0
PAU	Pauzhetka	3.22	98	P	P	09 56 25.6	+1.3
PAU	Pauzhetka	3.22	98	*e*P	P	09 56 25.6	+1.3
PAU	Pauzhetka	3.22	98	*e*P	P	09 56 26.2	+1.9
PAU				AMB	AMB	09 56 27.4	
	90nm,0.9s						
PAU				*e*S	S	09 57 24.4	+1.0
PAU				A	A	09 57 31.0	
	30nm,0.5s						
PAU				A	A	09 57 31.0	
	30nm,0.5s						
APC	Apacha	3.46	73	P	P	09 56 27.8	+1.8
APC	Apacha	3.46	73	*e*P	P	09 56 27.8	+1.8
PEA0B	Petropavlovsk-	3.82	71	P	P	09 56 30.9	+2.1
PEA0B	Petropavlovsk-	3.82	71	P	P	09 56 30.9	+2.1
PETK	Petropavlovsk-	3.82	71	P	P	09 56 30.1	+1.3
	2.7nm,0.3s,baz=236,slow=4.7,SNR=32						
PETK	Petropavlovsk-	3.82	71	P	P	09 56 30.5	+1.7
PETK	Petropavlovsk-	3.82	71	P	P	09 56 30.4	+1.7
ASAK	Asacha	3.83	82	P	P	09 56 31.2	+2.2
ASAK	Asacha	3.83	82	*e*P	P	09 56 31.2	+2.2
KDTR	Khodutka, Kamc	3.95	90	P	P	09 56 29.8	0.0
KDTR				S	S	09 57 30.6	-2.8
KDTR	Khodutka, Kamc	3.95	90	*e*P	P	09 56 29.8	0.0
KDTR				*e*S	S	09 57 30.6	-2.8
MTVR	Mutnovka	4.01	81	P	P	09 56 32.9	+2.5
MTVR	Mutnovka	4.01	81	*e*P	P	09 56 32.9	+2.5
KRMR	Karymshinskiy	4.02	76	P	P	09 56 32.0	+1.7
KRMR	Karymshinskiy	4.02	76	*e*P	P	09 56 32.0	+1.7
GNL	Ganaly	4.14	64	P	P	09 56 33.7	+2.3
GNL	Ganaly	4.14	64	*e*P	P	09 56 33.7	+2.3
RUS	Russkaya	4.21	82	P	P	09 56 33.0	+1.1
RUS				S	S	09 57 35.7	-1.6
RUS	Russkaya	4.21	82	*e*P	P	09 56 33.0	+1.1
RUS				*e*S	S	09 57 35.7	-1.6
RUS	Russkaya	4.21	82	*e*P	P	09 56 33.0	+1.1
PET	Petropavlovsk	4.37	74	*e*P	P	09 56 34.9	+1.8
PET				*e*S	S	09 57 41.4	+1.8
PET				pmax	pmax		
	comp=Z,57nm,0.5s						
PET				smax	smax		
	comp=N,37nm,0.7s						
PET				smax	smax		
	comp=E,41nm,0.6s						
PET	Petropavlovsk	4.37	74	*e*P	P	09 56 35.1	+2.0
PET				*e*S	S	09 57 39.4	-0.2
PET	Petropavlovsk	4.37	74	*e*P	P	09 56 35.2	+2.0
PET				AMB	AMB	09 56 35.8	
	comp=E,60nm,0.5s						
PET				*e*S	S	09 57 40.8	+1.2
PET				A	A	09 57 43.7	
	comp=E,40nm,0.7s						
PET				A	A	09 57 43.7	
	comp=E,40nm,0.7s						
PET	Petropavlovsk	4.37	74	P	P	09 56 35.2	+2.0
KOK	Koryaka	4.41	70	P	P	09 56 36.1	+2.4
KOK	Koryaka	4.41	70	*e*P	P	09 56 36.1	+2.4
KOK	Koryaka	4.41	70	*e*P	P	09 56 36.1	+2.4
DALK	Dalny	4.43	74	P	P	09 56 35.0	+1.3
DALK				S	S	09 57 40.1	-0.5
DALK	Dalny	4.43	74	*e*P	P	09 56 35.0	+1.3
DALK				*e*S	S	09 57 40.1	-0.5
AVH	Avacha	4.47	71	P	P	09 56 37.2	+3.1
AVH	Avacha	4.47	71	*e*P	P	09 56 37.2	+3.1
KRER	Koryakskii	4.48	70	P	P	09 56 37.1	+2.7
KRER	Koryakskii	4.48	70	*e*P	P	09 56 37.1	+2.7
SDLR	Sedlovina	4.55	71	P	P	09 56 37.2	+2.3
SDLR	Sedlovina	4.55	71	*e*P	P	09 56 37.2	+2.3
NLC	Nalytchevo	4.80	73	P	P	09 56 39.0	+2.1
NLC				S	S	09 57 45.4	-1.1
NLC	Nalytchevo	4.80	73	*e*P	P	09 56 39.0	+2.1
NLC				*e*S	S	09 57 45.4	-1.1
SPN	Mys Shipunski	5.19	75	P	P	09 56 40.5	0.0
SPN				S	S	09 57 48.5	-4.5
SPN	Mys Shipunski	5.19	75	*e*P	P	09 56 40.5	0.0
SPN				*e*S	S	09 57 48.5	-4.5
OKH	Okha	5.54	290	*e*P	P	09 56 39.0	-4.6
OKH				AMB	AMB	09 56 39.6	
	comp=E,60nm,0.7s						
ESO	Esso	5.69	44	P	P	09 56 49.7	+4.6
ESO	Esso	5.69	44	*e*P	P	09 56 49.7	+4.6
TYV	Tymovskoe	5.77	262	*e*P	P	09 56 41.2	-4.7
TYV				AMB	AMB	09 56 45.4	
	comp=E,5.0nm,0.4s						
MKZ	Mys Kozlova	6.53	63	P	P	09 56 53.2	0.0
MKZ				S	S	09 58 10.7	-5.5
MKZ	Mys Kozlova	6.53	63	*e*P	P	09 56 53.2	0.0
MKZ				*e*S	S	09 58 10.7	-5.5
KUR	Kuril'sk	7.25	202	*e*P	P	09 56 59.5	-1.1
KUR				AMB	AMB	09 57 00.7	
KBTR	Krutoberegovo	7.77	53	P	P	09 57 05.2	-0.4
KBTR				S	S	09 58 34.3	-4.8
KBTR	Krutoberegovo	7.77	53	*e*P	P	09 57 05.2	-0.4
KBTR				*e*S	S	09 58 34.3	-4.8
SHO	Shikotan	8.78	204	*e*P	P	09 57 14.8	-1.6
SHO				AMB	AMB	09 57 15.3	
	comp=E,30nm,0.4s						
YUK	Yuzh-Kuril'sk	8.89	208	*e*P	P	09 57 16.6	-0.9
YUK				AMB	AMB	09 57 19.1	
	comp=E,20nm,0.3s						
BKI	Bering	9.06	64	P	P	09 57 23.6	+4.5
BKI				S	S	09 59 02.6	-1.2
BKI	Bering	9.06	64	*e*P	P	09 57 23.6	+4.5
BKI				*e*S	S	09 59 02.6	-1.2
NMR	Nemuro--Hokkai	9.54	207	*e*P	P	09 57 21.9	-2.4
SEY	Seymchan	10.96	2	P	P	09 57 41.8	+2.8
	comp=E,0.2nm,0.3s,baz=185,slow=11,SNR=11						
ERM	Erimo	11.57	214	P	P	09 57 45.3	-0.5
ERM	Erimo	11.57	214	P	P	09 57 45.3	-0.5
KLR	Kul'dur	12.97	265	P	P	09 58 02.2	+1.7
	comp=E,0.2nm,0.3s,baz=55,slow=8.1,SNR=4.6						
KLR	Kul'dur	12.97	265	*e*P	P	09 57 57.4	-3.1
JTM	Tenmabayashi	13.39	217	P	P	09 58 04.1	-1.1
YAK	Yakutsk	15.54	319	P	P	09 58 27.6	+0.3
	comp=E,0.1nm,0.3s,baz=80,slow=3.0,SNR=4.2						
YAK	Yakutsk	15.54	319	*e*P	P	09 58 21.6	-5.7
JMM	Marumori	16.09	213	P	P	09 58 34.1	+0.6
MAJO	Matsushiro	18.19	217	P	P	09 58 55.0	+1.0
MAJO				pmax	pmax		
	comp=Z,55nm,2.0s						
MAJO	Matsushiro	18.19	217	P	P	09 58 55.0	+1.0
MAT	Matsushiro	18.19	217	P	P	09 58 54.0	0.0
MJAR	Matsushiro Arr	18.19	217	P	P	09 58 54.1	+0.1
	comp=Z,0.2nm,0.3s,baz=26,slow=10,SNR=13						
MJAR	Matsushiro Arr	18.19	217	P	P	09 58 54.1	+0.1
MJAR				IAmb	IAmb	09 59 14.1	
	comp=Z,19nm,1.9s						
JHS	Saijyo	21.60	225	P	P	09 59 25.4	+0.5
SONM	Songino Array	29.10	280	P	P	10 00 30.8	-0.5
	comp=Z,0.3nm,0.3s,baz=66,slow=7.4,SNR=5.1						
SONM	Songino Array	29.10	280	P	P	10 00 32.8	+1.5
SONM				pmax	pmax		
	comp=Z,10.0nm,2.0s						
SONM	Songino Array	29.10	280	P	P	10 00 32.8	+1.5
SONM				IAmb	IAmb	10 01 28.4	
	comp=Z,10.0nm,2.0s						
IMAR	Indian Mountai	30.23	41	P	P	10 00 41.4	+0.7
JOW	Kunigami	30.72	224	P	P	10 00 45.4	-0.1
JOW				IAmb	IAmb	10 01 05.1	
	comp=Z,26nm,1.0s						
Q19K	Cape Douglas,	30.95	55	P	P	10 00 47.7	+0.6
CAST	Castle Rocks	31.05	46	P	P	10 00 49.0	+1.1
CAST				IAmb	IAmb	10 01 11.2	
	comp=Z,22nm,1.9s						
COLD	Coldfoot	31.65	39	P	P	10 00 53.6	+0.7
KDAK	Kodiak Island	31.75	57	P	P	10 00 53.7	-0.2
KDAK				pmax	pmax		
	comp=Z,153nm,1.8s						
KDAK	Kodiak Island	31.75	57	P	P	10 00 53.7	-0.2
TRF	Thorofare Moun	31.85	46	P	P	10 00 55.5	+0.7
TRF				IAmb	IAmb	10 01 19.6	
	comp=Z,42nm,1.9s						
TOLK	Toolik Lake Re	31.89	36	P	P	10 00 55.6	+0.6
TOLK				IAmb	IAmb	10 00 56.4	
	comp=Z,8.3nm,1.4s						
CUT	Chulitna	32.00	48	P	P	10 00 56.8	+0.9
I23K	Minto, Yukon-K	32.09	43	P	P	10 00 57.7	+1.1
I23K				IAmb	IAmb	10 02 20.5	
	comp=Z,13nm,1.5s						
BWN	Browne	32.13	45	P	P	10 00 59.3	+2.2
MDM	Murphy Dome	32.58	43	P	P	10 01 01.6	+0.8
MDM				IAmb	IAmb	10 01 30.9	
	comp=Z,30nm,2.0s						
ILAR	Eielson Array	33.17	43	P	P	10 01 06.3	+0.4
	comp=Z,1.6nm,0.8s,baz=275,slow=9.5,SNR=16						
ILAR	Eielson Array	33.17	43	P	P	10 01 06.7	+0.8
ILAR	Eielson Array	33.17	43	P	P	10 01 06.7	+0.8
PRP	Porcupine Dome	33.65	42	P	P	10 01 11.2	+1.2
PRP				IAmb	IAmb	10 01 11.9	
	comp=Z,7.3nm,1.0s						
BMAR	Burnt Mountain	33.81	38	P	P	10 01 12.8	+1.5
SCRK	Sand Creek	34.54	45	P	P	10 01 17.5	-0.1
SCRK				IAmb	IAmb	10 02 57.1	
	comp=Z,19nm,1.8s						
ANA2	Anatahan	35.91	190		PP	10 03 05.1	-1.2
DAWY	Dawson	36.50	44	P	P	10 01 34.6	+0.8
DAWY				IAmb	IAmb	10 01 58.5	
	comp=Z,27nm,1.9s						
BCPM	Bancas Point	37.58	50		S	10 06 57.8	+2.4
INK	Inuvik	37.80	36	P	P	10 01 45.2	+0.9
INK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
INK	Inuvik	37.80	36	P	P	10 01 45.2	+0.9
ZALV	Zalesovo Beam	38.96	300	P	P	10 01 54.1	+0.1
	comp=Z,0.9nm,0.5s,baz=29,slow=3.3,SNR=2.7						
ZALV	Zalesovo Beam	38.96	300	P	P	10 01 54.5	+0.5
ZALV	Zalesovo Beam	38.96	300	P	P	10 01 54.5	+0.5
A36M	Sachs Harbour	39.61	29	P	P	10 01 59.9	+1.0
MK31	Makanchi Array	43.90	292	P	P	10 02 34.0	+0.7
MK31				pmax	pmax		
	comp=Z,10.0nm,2.0s						
MK31	Makanchi Array	43.90	292	P	P	10 02 34.0	+0.7
MKAR	Makanchi Array	43.90	292	P	P	10 02 33.9	+0.5
	comp=Z,0.9nm,0.3s,baz=51,slow=6.6,SNR=22						
MKAR	Makanchi Array	43.90	292	P	P	10 02 34.0	+0.7
MKAR	Makanchi Array	43.90	292	P	P	10 02 34.0	+0.7
MAKZ	Makanchi	44.07	292	P	P	10 02 35.2	+0.6
MAKZ				pmax	pmax		
	comp=Z,12nm,1.9s						
MAKZ	Makanchi	44.07	292	P	P	10 02 35.2	+0.6
MAKZ				IAmb	IAmb	10 04 06.5	
	comp=Z,12nm,1.9s						
YKA	Yellowknife Ar	47.33	39	P	P	10 02 59.4	+0.1
	comp=Z,2.0nm,0.5s,baz=304,slow=6.9,SNR=18						
YKA	Yellowknife Ar	47.33	39	P	P	10 02 59.7	+0.5
YKA	Yellowknife Ar	47.33	39	P	P	10 02 59.7	+0.5
TULEG	Thule	49.14	12		pP	10 04 50.4	+3.1
ARCES	ARCESS Array B	52.59	339	P	P	10 03 37.3	-0.5
	comp=Z,5.0nm,0.9s,baz=38,slow=9.3,SNR=2.4						
KKAR	Karatay Array	52.80	295	P	P	10 03 38.9	-0.9
KKAR	Karatay Array	52.80	295	P	P	10 03 38.9	-0.9
ABKAR	Akbulak array	54.45	306	P	P	10 03 52.0	+0.8
PLID	Pearl Lake	57.50	57	P	P	10 04 13.7	+0.9
FINES	FINESS Array B	58.90	333	P	P	10 04 21.6	-0.1
	comp=Z,4.7nm,1.2s,baz=23,slow=6.8,SNR=6.1						
BOZ	Bozeman (W)	59.38	54	P	P	10 04 26.4	+1.0
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.7s						
BOZ	Bozeman (W)	59.38	54	P	P	10 04 26.4	+1.0
NVAR	Mina Array Bea	60.88	64	P	P	10 04 36.1	+0.5
	comp=Z,0.7nm,0.7s,baz=294,slow=6.2,SNR=5.1						
BW06	Boulder Array	62.44	55	P	P	10 04 46.5	+0.7
PDAR	Pinedale Array	62.44	55	P	P	10 04 46.0	+0.3
	comp=Z,0.6nm,0.4s,baz=12,slow=2.2,SNR=12						
PDAR	Pinedale Array	62.44	55	P	P	10 04 46.2	+0.4
NOA	NORSAR Array B	62.95	340	P	P	10 04 48.4	-0.1
	comp=Z,0.4nm,0.8s,baz=32,slow=6.3,SNR=1.4						
B35A	Bob, Littlefor	65.52	42	P	P	10 05 04.1	-0.9
B35A				IAmb	IAmb	10 05 37.1	
	comp=Z,17nm,1.6s						
NRS	Narsarsuaq	66.35	9		pP	10 06 56.4	+3.7
KIV	Kislovodsk	66.53	312		pP	10 06 57.1	+2.9
AKASG	Malin Array Be	66.69	324	P	P	10 05 11.4	-0.8
	comp=Z,0.3nm,0.4s,baz=36,slow=6.8,SNR=2.2						
ECSD	EROS Data Cent	67.91	47	P	P	10 05 19.6	-0.3
ECSD				IAmb	IAmb	10 05 49.4	
	comp=Z,10nm,1.6s						
SCHQ	Schefferville	68.81	23	P	P	10 05 24.1	-1.0
	comp=Z,0.8nm,0.3s,baz=0.3,slow=6.5,SNR=6.1						
SCHQ	Schefferville	68.81	23	P	P	10 05 24.4	-0.7
SCHQ				IAmb	IAmb	10 07 04.8	
	comp=Z,19nm,1.6s						
WRA	Warramunga Arr	73.24	197	P	P	10 05 51.1	-0.5
	comp=Z,0.2nm,0.3s,baz=12,slow=5.0,SNR=6.0						
WRA	Warramunga Arr	73.24	197	P	P	10 05 51.4	-0.2
WRA	Warramunga Arr	73.24	197	P	P	10 05 51.4	-0.2
TXAR	Lajitas Array	75.71	61	P	P	10 06 06.3	+0.6
	comp=Z,0.4nm,0.5s,baz=297,slow=5.1,SNR=11						
TXAR	Lajitas Array	75.71	61	P	P	10 06 06.4	+0.7
TXAR	Lajitas Array	75.71	61	P	P	10 06 06.4	+0.7
ASAR	Alice Springs	76.95	197	P	P	10 06 12.7	+0.4
	comp=Z,0.7nm,0.5s,baz=7.5,slow=5.1,SNR=18						
Y59A	Loris	83.61	40		pP	10 08 35.0	-1.2
NWAO	Narrogin (SRO)	89.81	208	P	P	10 07 15.4	-0.9
NWAO	Narrogin (SRO)	89.81	208	P	P	10 07 15.4	-0.9

IDC 12 09:55:31.4±2.8**, 4°.00S×130°.13E, h0**^{km}**, mb3.7**/1**, mb1 3.6**/3**, mb1mx3.4**/23**, mbtmp3.4**/3**, ML3.0**/2**, Error ellipse: s-maj=207.0km s-min=29.1km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.37	166	Pn	Pn	09 59 21.5	-1.3
	0.0nm,0.3s,baz=349,slow=13,SNR=3.4						
ASAR	Alice Springs	19.89	170	P	P	10 00 05.1	+0.6
	0.1nm,0.3s,baz=347,slow=9.5,SNR=7.2						
MKAR	Makanchi Array	65.81	326	P	P	10 06 18.6	0.0
	0.4nm,0.5s,baz=116,slow=7.7,SNR=8.9						

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*IDC **12** 10:00:58.3±2.2, 5°.59N×126°.23E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.1/45, mbtmp3.4/3, MS3.0/1, Ms1 3.0/1, ms1mx2.2/25, Error ellipse: s-maj=173.9km s-min=27.6km az=65.0*

ISC 12 10:01:09.8±1.4**, 5°.5N**±0°.2×**126°.1E**±0°.4**, h100**^{km}**, n5,** σ**1**^{s}.**08**/7**, mb3.4**/3**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMPH	Davao City--Mi	1.71	341	⇑*e*P	Pn	10 01 37.8	-1.0
DMPH				*e*S	Sn	10 02 01.8	+1.1
KCP	Kidapawan	1.82	328	⇓*e*P	Pn	10 01 40.5	+0.2
KCP				*i* S	Sn	10 02 02.5	-0.9
WRA	Warramunga Arr	26.52	162	P	P	10 06 39.2	+1.0
	0.5nm,0.4s,baz=343,slow=10,SNR=11						
ASAR	Alice Springs	29.94	166	P	P	10 07 08.1	-0.6
	0.2nm,0.5s,baz=345,slow=6.9,SNR=1.9						
ASAR				LR	LR	10 19 50.6	
	comp=Z,27nm,18.3s,baz=6.5,slow=38						
MKAR	Makanchi Array	55.77	325	P	P	10 10 37.0	+0.5
	0.2nm,0.3s,baz=126,slow=6.5,SNR=4.8						

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*IDC **12** 10:09:00.4±2.3, 31°.66S×71°.79W, h0^{km}, mb4.2/4, mb1 3.9/8, mb1mx3.8/32, mbtmp3.9/8, ML3.5/4, MS3.1/2, Ms1 3.1/2, ms1mx2.7/22, Error ellipse: s-maj=75.7km s-min=23.3km az=100.0*

*NEIC **12** 10:09:01.6±1.1, 31°.68S±0°.04×72°.08W±0°.08, h10^{km}±1^{km}, mb4.1/8, ML3.9(GUC), Error ellipse: s-maj=11.7km s-min=5.7km az=283.0*

*GUC **12** 10:09:01.6±0.7, 31°.67S×72°.10W, h32^{km}±3^{km}, ML3.9*

ISC 12 10:09:00.3±1.7**, 31°.69S**±0°.03×**72°.11W**±0°.08**, h7**^{km}±10^{km}**, n54,** σ**0**^{s}.**67**/56**, mb4.2**/6**, 3C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	1.09	22		Pg	10 09 21.4	+0.1
CO06				Sg	Sg	10 09 35.8	+0.3
VA06	Catapilco	1.10	142	⇓*i*P	Pb	10 09 21.9	+0.2
VA01	Torpederas	1.38	164	*e*P	Pn	10 09 25.8	-0.2
VA01				*i* S	Sn	10 09 42.9	-1.6
VA01				IAML		10 09 44.3	
	comp=N,798nm,0.1s						
VA01	Torpederas	1.38	164		Pn	10 09 25.7	-0.3
CO03	El Pedregal	1.48	55		Pn	10 09 28.0	+0.5
CO03				Sn	Sb	10 09 47.4	+0.1
ROCH	El Roble	1.58	144	⇑*i*P	Pb	10 09 29.1	-0.8
ROCH				⇑*e*P	Pn	10 09 28.9	0.0
ROCH				*i* S	Sn	10 09 49.6	-0.1
ROCH				*i* S	Sb	10 09 50.4	+0.2
ROCH				IAML		10 09 53.7	
	comp=N,2µm,0.4s						
ROCH				IAML		10 09 55.7	
	comp=N,2µm,0.5s						
VA03	San Esteban	1.70	129		Pn	10 09 31.2	+0.7
MT02	Curacav	1.76	153		Pn	10 09 31.9	+0.6
PEL	Peldehue	1.88	141		Pn	10 09 33.9	+0.9
GO04	Tololo Observa	1.89	37	*e*P	Pn	10 09 33.6	+0.4
GO04				*i* S	Sn	10 09 57.7	+0.3
GO04				IAML		10 10 11.6	
	comp=N,7µm,0.5s						
GO04	Tololo Observa	1.89	37		Pn	10 09 33.6	+0.4
CO05	La Serena	1.92	23	*e*P	Pn	10 09 33.6	+0.2
CO05				*i* S	Sn	10 09 57.4	-0.4
CO05	La Serena	1.92	23		Pn	10 09 33.8	+0.4
VA05	Santo Domingo	2.00	168		Pn	10 09 34.7	+0.1
MT05	Renca	2.05	146	*e*P	Pn	10 09 35.9	+0.6
MT05				*i* S	Sn	10 10 02.4	+1.2
MT05				IAML		10 10 10.3	
	comp=E,1µm,0.3s						
MT05	Renca	2.05	146		Pn	10 09 35.4	+0.1
MT09	Talagante	2.28	156	⇑*e*P	Pn	10 09 39.5	+1.0
MT09				*i* S	Sn	10 10 06.7	-0.3
MT09				IAML		10 10 20.5	
	comp=N,800nm,0.4s						
MT09	Talagante	2.28	156		Pn	10 09 39.1	+0.5
MT01	Popeta	2.28	162		Pn	10 09 38.7	+0.3
BO01	Tunca	2.83	163		Pn	10 09 46.4	+0.5
BO02	Sierra Bellavi	3.28	161		Pn	10 09 52.2	0.0
GO05	Huala	3.31	177		Pn	10 09 52.9	+0.3
AC04	Llanos de Chal	3.59	15		Pn	10 09 57.2	+0.8
AC02	Maricunga	5.50	29	Pn	Pn	10 10 23.2	+0.2
H03N1	Juan Fernandez	6.00	251	T	T	10 17 10.5	
	baz=79,slow=72,SNR=996						
H03N3	Juan Fernandez	6.02	251	T	T	10 17 09.3	
	baz=79,slow=72,SNR=778						
H03N2	Juan Fernandez	6.02	251	T	T	10 17 07.5	
	baz=79,slow=72,SNR=656						
PLCA	Paso Flores	9.11	173	Pn	Pn	10 11 13.0	+0.7
	comp=N,0.3nm,0.3s,baz=322,slow=14,SNR=6.3						
PLCA	Paso Flores	9.11	173	Pn	Pn	10 11 13.2	+0.9
LVC	Limon Verde	9.48	18	Pn	Pn	10 11 16.4	-1.3
	comp=N,0.2nm,0.3s,baz=158,slow=15,SNR=1.7						
TRQA	Tornquist	10.46	130	Pn	Pn	10 11 31.7	+1.0
CPUP	Villa Florida	13.99	71	LR	LR	10 17 58.6	
	comp=N,74nm,18.8s,baz=220,slow=39						
PLTB	Pedras Altas	15.75	95		P	10 12 45.3	-1.3
LPAZ	La Paz	15.76	14	Pn	Pn	10 12 43.9	+0.5
	comp=N,0.1nm,0.3s,baz=152,slow=12,SNR=5.2						
LPAZ	La Paz	15.76	14		Pn	10 12 44.6	+1.2
SIV	San Ignacio	18.59	35	P	P	10 13 17.2	-0.9
	comp=N,0.1nm,0.3s,baz=199,slow=9.1,SNR=4.7						
SIV				LR	LR	10 21 48.8	
	comp=N,58nm,20.9s,baz=283,slow=42						
VILB	Vilhena	21.63	33	P	P	10 13 51.3	+0.1
VILB				IAmb	IAmb	10 14 04.7	
	comp=Z,5.5nm,0.8s						
ETMB	Extrema	22.45	15	P	P	10 14 00.3	+0.3
ETMB				IAmb	IAmb	10 14 12.4	
	comp=Z,6.0nm,1.3s						
BDFB	Brasilia	27.15	60	P	P	10 14 43.0	-1.5
	comp=Z,1.4nm,0.3s,baz=252,slow=7.6,SNR=3.5						
BDFB	Brasilia	27.15	60	P	P	10 14 44.2	-0.3
BDFB				IAmb	IAmb	10 14 51.7	
	comp=Z,12nm,1.4s						
MACA	Manacapuru-AM	30.35	23	P	P	10 15 12.6	-0.2
SNAA	Sanae	53.74	158	P	P	10 18 23.5	+0.7
	comp=Z,1.8nm,0.8s,baz=291,slow=12,SNR=5.9						
JCT	Junction City	67.19	334	P	P	10 19 55.5	+0.4
DBIC	Dimbokro	74.51	72	P	P	10 20 40.1	+0.1
	comp=Z,1.6nm,0.5s,baz=246,slow=9.2,SNR=3.1						
TORD	Torodi Ar. Bea	83.48	70	P	P	10 21 28.9	-0.2
	comp=Z,1.3nm,0.7s,baz=256,slow=4.8,SNR=8.7						
TORD	Torodi Ar. Bea	83.48	70	P	P	10 21 29.3	+0.1
TORD				IAmb	IAmb	10 21 39.9	
	comp=Z,1.4nm,0.8s						
H11S2	WAKE ISLAND Hy	125.71	271	T	T	12 46 50.4	
	baz=116,slow=75,SNR=7.7						
H11S1	WAKE ISLAND Hy	125.72	271	T	T	12 46 51.2	
	baz=116,slow=75,SNR=7.0						
H11S3	WAKE ISLAND Hy	125.73	271	T	T	12 46 53.8	
	baz=116,slow=75,SNR=9.5						
H11N3	WAKE ISLAND Hy	126.07	272	T	T	12 47 20.9	
	baz=117,slow=74						
H11N1	WAKE ISLAND Hy	126.08	272	T	T	12 47 27.3	
	baz=117						
H11N2	WAKE ISLAND Hy	126.08	272	T	T	12 47 24.7	
	baz=117,slow=74						
ZALV	Zalesovo Beam	152.29	30	PKPbc	PKPbc	10 28 57.0	+0.6
	comp=Z,0.9nm,0.5s,baz=330,slow=3.6,SNR=5.1						
ZALV	Zalesovo Beam	152.29	30	PKPdf	PKPdf	10 28 50.4	+0.8
ZALV					PKPbc	10 28 56.7	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ZALV				PKPab	PKPab	10 29 05.9	-0.4

MOS ***12*** *10:11:33.9±1.2, 52°.46N×152°.92E, h513^{km}, mb4.1/1, Error ellipse: s-maj=15.8km s-min=10.3km az=52.8*

SKHL ***12*** *10:11:34.3±0.2, 52°.30N×152°.80E, h526^{km}±9^{km}, mb4.5/10, msha4.6/6*

IDC ***12*** *10:11:34.9±0.9, 52°.51N×152°.78E, h500^{km}±12^{km}, mb2.9/9, mb1 3.2/14, mb1mx2.9/47, mbtmp4.0/14, Error ellipse: s-maj=23.5km s-min=12.7km az=155.0*

KRSC ***12*** *10:11:36.4±2.1, 52°.31N×153°.69E, h509^{km}±29^{km}, ML4.5*

ISC 12 10:11:33.8±0.6, **52°.34N**±0°.07×**153°.06E**±0°.07, **h500**^{km}, **n77**, σ**2^{s}.28**/102, **mb3.4**/9, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIPR	Malaya Ipel'ka	2.27	90	P	P	10 12 42.3	+2.1
MIPR	Malaya Ipel'ka	2.27	90	eP	P	10 12 42.3	+2.1
PAU	Pauzhetka	2.48	109	eP	P	10 12 43.8	+2.4
PAU				AMB	AMB	10 12 44.4	
	30nm,0.5s						
PAU				eS	S	10 13 38.1	+1.6
PAU				A	A	10 13 40.9	
	30nm,0.5s						
PAU				A	A	10 13 40.9	
	10.0nm,0.5s						
SKR	Severo-Kuril's	2.53	130	eP	P	10 12 43.4	+1.7
SKR				AMB	AMB	10 12 47.7	
	30nm,0.5s						
SKR				eS	S	10 13 38.5	+1.5
SKR				A	A	10 13 49.2	
	60nm,0.6s						
SKR				A	A	10 13 49.2	
	30nm,0.6s						
PETK	Petropavlovsk-	2.92	73	P	P	10 12 45.3	+1.2
	0.9nm,0.3s,baz=238,slow=3.8,SNR=14						
PETK				S	S	10 13 44.4	+2.8
	0.1nm,0.3s,baz=182,slow=14,SNR=1.7						
ASAK	Asacha	2.97	87	P	P	10 12 46.8	+2.3
ASAK	Asacha	2.97	87	eP	P	10 12 46.8	+2.3
KRMR	Karymshinskiy	3.13	79	P	P	10 12 46.9	+1.4
KRMR	Karymshinskiy	3.13	79	eP	P	10 12 46.9	+1.4
MTVR	Mutnovka	3.14	85	P	P	10 12 47.5	+1.7
MTVR				S	S	10 13 44.7	+0.2
MTVR	Mutnovka	3.14	85	eP	P	10 12 47.5	+1.7
MTVR				eS	S	10 13 44.7	+0.2
KDTR	Khodutka, Kamc	3.14	98	P	P	10 12 46.4	+0.8
KDTR				S	S	10 13 42.3	-1.9
KDTR	Khodutka, Kamc	3.14	98	eP	P	10 12 46.4	+0.8
KDTR				eS	S	10 13 42.3	-1.9
GNL	Ganaly	3.25	63	P	P	10 12 48.5	+2.1
GNL	Ganaly	3.25	63	eP	P	10 12 48.5	+2.1
RUS	Russkaya	3.34	86	P	P	10 12 48.5	+1.5
RUS				S	S	10 13 44.8	-2.0
RUS	Russkaya	3.34	86	eP	P	10 12 48.5	+1.5
RUS				eS	S	10 13 44.8	-2.0
RUS	Russkaya	3.34	86	eP	P	10 12 48.5	+1.5
PET	Petropavlovsk	3.47	76	P	P	10 12 50.8	+2.9
PET				S	S	10 13 47.9	-0.6
PET	Petropavlovsk	3.47	76	eP	P	10 12 50.8	+2.9
PET				eS	S	10 13 47.9	-0.6
PET	Petropavlovsk	3.47	76	eP	P	10 12 50.9	+3.0
PET				AMB	AMB	10 12 51.3	
	20nm,0.4s						
PET				eS	S	10 13 50.5	+2.0
PET				A	A	10 13 54.0	
	20nm,0.6s						
PET				A	A	10 13 54.0	
	30nm,0.6s						
KOK	Koryaka	3.52	72	P	P	10 12 51.5	+3.1
KOK	Koryaka	3.52	72	eP	P	10 12 51.5	+3.1
KOK	Koryaka	3.52	72	eP	P	10 12 51.5	+3.1
DALK	Dalny	3.53	76	P	P	10 12 49.8	+1.4
DALK				S	S	10 13 48.3	-1.0
DALK	Dalny	3.53	76	eP	P	10 12 49.8	+1.4
DALK				eS	S	10 13 48.3	-1.0
AVH	Avacha	3.57	73	P	P	10 12 52.0	+3.3
AVH	Avacha	3.57	73	eP	P	10 12 52.0	+3.3
KRER	Koryakskii	3.58	72	P	P	10 12 52.0	+3.0
KRER	Koryakskii	3.58	72	eP	P	10 12 52.0	+3.0
SMAR	Somma	3.60	73	P	P	10 12 52.1	+2.9
SMAR	Somma	3.60	73	eP	P	10 12 52.1	+2.9
UGLR	Uglovaya	3.61	74	P	P	10 12 51.7	+2.6
UGLR	Uglovaya	3.61	74	eP	P	10 12 51.7	+2.6
SDLR	Sedlovina	3.66	73	P	P	10 12 52.2	+2.7
SDLR	Sedlovina	3.66	73	eP	P	10 12 52.2	+2.7
NLC	Nalytchevo	3.91	75	eS	S	10 13 53.8	-0.8
SPN	Mys Shipunski	4.30	77	P	P	10 12 54.9	+0.4
SPN				S	S	10 13 56.0	-4.5
SPN	Mys Shipunski	4.30	77	eP	P	10 12 54.9	+0.4
SPN				eS	S	10 13 56.0	-4.5
ESO	Esso	4.89	40	P	P	10 13 02.9	+3.4
ESO	Esso	4.89	40	eP	P	10 13 02.9	+3.4
ESO	Esso	4.89	40	eP	P	10 13 02.9	+3.4
TUMR	Tumrok	5.13	52	P	P	10 13 05.4	+3.6
TUMD	Tumrok D	5.21	54	eP	P	10 13 05.4	+2.9
KMNR	Kamenistaya	5.44	48	P	P	10 13 07.6	+3.0
KMNR	Kamenistaya	5.44	48	eP	P	10 13 07.6	+3.0
MKZ	Mys Kozlova	5.63	63	P	P	10 13 06.3	-0.1
MKZ				S	S	10 14 16.8	-5.4
MKZ	Mys Kozlova	5.63	63	eP	P	10 13 06.3	-0.1
MKZ				eS	S	10 14 16.8	-5.4
OKH	Okha	6.24	285	eP	P	10 13 12.6	+0.4
OKH				AMB	AMB	10 13 14.0	
	40nm,0.6s						
TYV	Tymovskoe	6.65	261	eP	P	10 13 17.4	+1.1
TYV				AMB	AMB	10 13 19.2	
	5.0nm,0.5s						
KBG	Krutoberegovo	6.87	51	eP	P	10 13 20.0	+1.6
	20nm,0.4s						
KBG				AMB	AMB	10 13 20.5	
	20nm,0.4s						
KBTR	Krutoberegovo	6.90	52	P	P	10 13 18.5	-0.2
KBTR				S	S	10 14 40.9	-3.9
KBTR	Krutoberegovo	6.90	52	eP	P	10 13 18.5	-0.2
KBTR				eS	S	10 14 40.9	-3.9
NKL	Nikolayevsk	7.56	281	eP	P	10 13 25.0	-0.4
NKL				AMB	AMB	10 13 27.8	
	30nm,0.6s						
UGL	Uglegorsk	7.71	249	eP	P	10 13 26.1	-0.9
UGL				AMB	AMB	10 13 31.1	
	40nm,0.6s						
KUR	Kuril'sk	7.90	208	eP	P	10 13 29.2	+0.1
KUR				AMB	AMB	10 13 31.4	
	70nm,0.6s						
KUR				eS	S	10 15 01.9	-1.7
KUR				A	A	10 15 23.8	
	60nm,0.8s						
KUR				A	A	10 15 23.8	
	50nm,0.8s						
BKI	Bering	8.17	64	P	P	10 13 34.3	+2.7
BKI				S	S	10 15 06.9	-1.6
BKI	Bering	8.17	64	eP	P	10 13 34.3	+2.7
BKI				eS	S	10 15 06.9	-1.6
SHO	Shikotan	9.44	209	eP	P	10 13 44.5	-0.7
SHO				AMB	AMB	10 13 46.4	
	50nm,0.3s						
SHO				eS	S	10 15 30.4	-2.9
SHO				A	A	10 15 42.1	
	20nm,0.4s						
SHO				A	A	10 15 42.1	
	30nm,0.4s						
YUK	Yuzh-Kuril'sk	9.60	213	eP	P	10 13 47.0	+0.2
YUK				AMB	AMB	10 13 48.7	
	50nm,0.6s						
YUK				eS	S	10 15 33.5	-2.7
YUK				A	A	10 15 48.7	
	90nm,0.7s						
YUK				A	A	10 15 48.7	
	170nm,0.7s						
SEY	Seymchan	10.63	358	P	P	10 13 58.5	+1.1
	2.3nm,0.3s,baz=179,slow=10,SNR=53						
ASAJ	Asahikawa	10.78	224	P	P	10 14 01.7	+2.4
	0.6nm,0.3s,baz=99,slow=14,SNR=5.1						
YAK	Yakutsk	15.86	317	P	P	10 14 50.9	-1.6
	0.1nm,0.3s,baz=114,slow=5.0,SNR=4.8						
MAT	Matsushiro	18.96	219	P	P	10 15 25.1	+2.2
MJAR	Matsushiro Arr	18.96	219	P	P	10 15 24.0	+1.1
	0.2nm,0.3s,baz=23,slow=11,SNR=13						
MJAR	Matsushiro Arr	18.96	219	P	P	10 15 24.0	+1.1
ILAR	Eielson Array	32.36	44	P	P	10 17 21.9	+1.2
	0.9nm,0.7s,baz=284,slow=12,SNR=22						
ILAR	Eielson Array	32.36	44	P	P	10 17 22.0	+1.2
INK	Inuvik	37.04	36	P	P	10 18 01.0	+1.1
	0.9nm,0.3s,baz=298,slow=9.5,SNR=18						
INK	Inuvik	37.04	36	P	P	10 18 01.0	+1.1
ZALV	Zalesovo Beam	39.52	300	P	P	10 18 19.5	-0.9
	0.7nm,0.4s,baz=88,slow=7.6,SNR=3.7						
MKAR	Makanchi Array	44.55	292	P	P	10 18 59.9	-0.3
	0.7nm,0.4s,baz=62,slow=7.1,SNR=22						
YKA	Yellowknife Ar	46.54	40	P	P	10 19 16.1	+1.0
	0.5nm,0.4s,baz=305,slow=7.1,SNR=7.0						
ARCES	ARCESS Array B	52.58	339	P	P	10 19 58.5	-1.1
	1.3nm,0.7s,baz=19,slow=9.0,SNR=3.6						
FINES	FINESS Array B	58.99	333	P	P	10 20 43.0	-1.1
	1.9nm,0.9s,baz=53,slow=7.3,SNR=5.4						
PDAR	Pinedale Array	61.56	56	P	P	10 21 03.6	+1.7
	0.3nm,0.8s,baz=270,slow=0.7,SNR=2.7						
NOA	NORSAR Array B	62.93	340	P	P	10 21 09.3	-0.9
	0.2nm,0.4s,baz=31,slow=6.4,SNR=1.5						

NEIC ***12*** *10:14:00.5±1.5, 25°.1S±0°.2×179°.4W±0°.1, h451^{km}±13^{km}, mb4.2/14, Error ellipse: s-maj=26.5km s-min=14.8km az=160.0*

IDC ***12*** *10:14:03.8±2.0, 24°.70S×179°.80W, h472^{km}±17^{km}, mb3.4/8, mb1 3.5/10, mb1mx3.2/37, mbtmp4.2/10, Error ellipse: s-maj=28.9km s-min=17.4km az=129.0*

ISC 12 10:14:00.8±0.6, **24°.90S**±0°.09×**179°.55W**±0°.10, **h450**^{km}, **n34**, σ**1^{s}.60**/39, **mb4.1**/15, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	4.57	162	P	P	10 15 18.3	-2.7
MSVF	Nonsavu	7.48	342	P	P	10 15 52.7	+1.9
	3.2nm,0.3s,baz=284,slow=23,SNR=20						
MSVF	Nonsavu	7.48	342	P	P	10 15 53.0	+2.2
DZM	Mont Dzumac	13.16	280	P	P	10 16 55.2	+2.9
	0.3nm,0.3s,baz=156,slow=17,SNR=5.5						
AFI	Afiamalu	13.16	35	P	P	10 16 52.2	-0.2
	1.7nm,0.3s,baz=306,slow=22,SNR=3.1						
AFI				S	S	10 19 03.6	-11
	1.2nm,0.3s,baz=20,slow=18,SNR=2.2						
URZ	Urewera	13.62	191	P	P	10 17 01.3	+4.3
	1.1nm,0.3s,baz=120,slow=23,SNR=7.4						
URZ				S	S	10 19 26.8	+4.4
	0.1nm,0.3s,baz=303,slow=23,SNR=2.1						
KNTN	Kanton	23.26	20	P	P	10 18 32.4	+0.5
EIDS	Eidsvold	26.57	263	P	P	10 19 02.3	+1.1
EIDS				IAmb	IAmb	10 19 21.5	
	comp=Z,20nm,1.5s						
CTAO	Charters Tower	31.90	272	P	P	10 19 48.5	+0.6
STKA	Stephens Creek	34.74	249	P	P	10 20 13.0	+1.2
	comp=Z,1.9nm,0.6s,baz=84,slow=8.4,SNR=6.0						
STKA	Stephens Creek	34.74	249	P	P	10 20 13.0	+1.2
PMG	Port Moresby	35.22	290	P	P	10 20 14.5	-1.5
PMG				IAmb	IAmb	10 20 16.2	
	comp=Z,11nm,1.0s						
COEN	Coen	36.69	280	P	P	10 20 28.3	0.0
COEN				IAmb	IAmb	10 20 29.7	
	comp=Z,11nm,1.4s						
BBOO	Buckleboo	39.44	248	P	P	10 20 50.8	+0.1
BBOO				IAmb	IAmb	10 20 51.4	
	comp=Z,8.6nm,1.0s						
AS31	Alice Springs	42.29	262	P	P	10 21 13.6	0.0
ASAR	Alice Springs	42.29	262	P	P	10 21 13.4	-0.2
	comp=Z,2.4nm,0.7s,baz=86,slow=7.2,SNR=27						
ASAR				PcP	PcP	10 22 57.0	-0.5
	comp=Z,0.6nm,0.9s,baz=101,slow=4.4,SNR=4.2						
ASAR				ScP	ScP	10 26 03.2	-1.5
	comp=Z,0.3nm,0.8s,baz=103,slow=4.1,SNR=1.9						
ASAR				S	S	10 26 56.0	-5.0
	comp=Z,0.1nm,0.6s,baz=91,slow=18,SNR=2.3						
WR0	Warramunga Arr	42.57	267	P	P	10 21 15.3	-0.6
WR0				IAmb	IAmb	10 21 15.4	
	comp=Z,2.7nm,0.7s						
WB2	Warramunga Arr	42.75	267	P	P	10 21 16.7	-0.6
WB2				IAmb	IAmb	10 21 16.8	
	comp=Z,5.8nm,0.6s						
WB0	Warramunga Arr	42.76	267	P	P	10 21 16.8	-0.6
WB0				IAmb	IAmb	10 21 17.2	
	comp=Z,6.9nm,0.7s						
WRA	Warramunga Arr	42.76	267	P	P	10 21 16.4	-1.0
	comp=Z,4.4nm,0.6s,baz=104,slow=7.9,SNR=66						
WRA				PcP	PcP	10 22 58.0	-1.2
	comp=Z,1.0nm,0.9s,baz=97,slow=3.4,SNR=3.8						
WRA				ScP	ScP	10 26 05.9	-0.8
	comp=Z,1.7nm,0.8s,baz=100,slow=3.8,SNR=11						
WRA				S	S	10 26 58.0	-10
	comp=Z,0.6nm,0.9s,baz=97,slow=13,SNR=3.3						
WRA	Warramunga Arr	42.76	267	P	P	10 21 16.6	-0.7
FORT	Forrest	46.36	250	P	P	10 21 44.6	-0.6
KNRA	Kununurra	49.10	270	P	P	10 22 05.7	-0.3
KSRS	Korea Array	79.28	320	P	P	10 25 18.2	-0.2
	comp=Z,1.1nm,0.6s,baz=128,slow=5.8,SNR=6.4						
PETK	Petropavlovsk-	80.17	346	P	P	10 25 21.6	-1.1
	comp=Z,1.4nm,0.7s,baz=140,slow=7.0,SNR=1.8						
USRK	Ussuriysk Ar.	81.83	327	P	P	10 25 31.2	-0.3
	comp=Z,1.3nm,0.6s,baz=112,slow=6.1,SNR=6.0						
SEY	Seymchan	90.33	348	P	P	10 26 11.6	-0.6
	comp=Z,1.9nm,0.8s,baz=174,slow=6.3,SNR=4.5						
TXAR	Lajitas Array	90.61	58	P	P	10 26 16.2	+1.8
	comp=Z,0.5nm,0.8s,baz=219,slow=5.8,SNR=6.1						
HFS	Hagfors	143.61	349	PKhKP	PKPpre	10 32 39.8	
	comp=Z,2.1nm,0.4s,baz=83,slow=4.6,SNR=16						
AKASG	Malin Array Be	146.03	327	PKPbc	PKPdf	10 32 47.5	+0.2
	comp=Z,1.1nm,0.4s,baz=45,slow=4.4,SNR=14						
AKASG	Malin Array Be	146.03	327		PKPbc	10 32 48.0	-1.1
BRTR	Keskin Array B	148.50	306	PKPbc	PKPbc	10 32 55.5	-0.7
	comp=Z,1.0nm,0.6s,baz=149,slow=4.1,SNR=5.5						
BRTR				PKPab	PKPab	10 33 00.5	-0.9
	comp=Z,2.1nm,0.7s,baz=120,slow=4.3,SNR=9.9						
CLL	Collm	151.93	343	ePKPbc	PKiKP	10 33 04.0	+0.1
TORD	Torodi Ar. Bea	168.25	186	PKP	PKPdf	10 33 17.0	+1.4
	comp=Z,0.2nm,0.5s,baz=317,slow=2.8,SNR=1.7						

IDC ***12*** *10:24:34.8±4.7, 52°.11N×178°.35E, h130^{km}±44^{km}, mb3.2/12, mb1 3.4/14, mb1mx3.2/56, mbtmp3.6/14, Error ellipse: s-maj=30.5km s-min=14.1km az=174.0*

NEIC ***12*** *10:24:35.0±1.4, 51°.9N±0°.1×178°.3E±0°.1, h136^{km}±6^{km}, Error ellipse: s-maj=21.4km s-min=11.0km az=175.0*

AEIC ***12*** *10:24:35.2±1.7, 51°.9N±0°.1×178°.5E±0°.1, h138^{km}±5^{km}, ML3.1/22, Error ellipse: s-maj=17.7km s-min=10.8km az=168.0*

ISC 12 10:24:35.6±0.7, **51°.9N**±0°.1×**178°.40E**±0°.06, **h150**^{km}, **n45**, σ**1^{s}.23**/49, **mb3.5**/13, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	Amchitka	0.74	130		Pn	10 24 57.0	-1.3
AMKA					Sn	10 25 12.7	-2.9
CEAP	Semis' Anvil P	0.74	78		Pn	10 24 56.7	-1.6
CERB	Semis' Cerberu	0.77	84		Pn	10 24 57.2	-1.3
CERAA	Semis' Rag'd T	0.80	86		Pn	10 24 56.9	-1.8
CERAA					Sn	10 25 14.7	-1.7
GASW	Gareloi Southw	1.71	92		Pn	10 25 06.7	-0.6
GANO	Gareloi North	1.74	90		Pn	10 25 06.9	-0.8
TASE	Tanaga Southea	2.21	89		Pn	10 25 12.8	-0.4
TAFP	Tanaga Falls P	2.24	88		Pn	10 25 12.4	-1.1
TAFP					Sn	10 25 41.4	-1.3
TAPA	Tanaga Point A	2.35	90		Pn	10 25 14.2	-0.7
KIMD	Kanaga Island	2.71	90		Pn	10 25 18.3	-1.0
KICM	Kanaga Island	2.73	87		Pn	10 25 18.6	-0.9
KIKV	Kanaga Island	2.75	88		Pn	10 25 18.9	-0.8
KIWB	Kanaga Island	2.76	88		Pn	10 25 20.1	+0.2
ADK	Adak	3.05	88	Pn	Pn	10 25 22.5	-0.9
GSCK	Great Sitkin C	3.37	85		Pn	10 25 26.4	-1.2
GSTD	Great Sitkin T	3.38	85		Pn	10 25 26.8	-1.0
GSTD					Sn	10 26 07.4	-0.9
ATKA	Atka Island	4.59	83	Pn	Pn	10 25 43.1	-0.3
UNV	Unalaska Valle	9.35	72	Pn	Pn	10 26 47.1	+0.3
PEA0B	Petropavlovsk-	12.68	284	Pn	P	10 27 32.9	-2.9
PETK	Petropavlovsk-	12.68	284	P	Pn	10 27 31.1	+0.7
	0.2nm,0.3s,baz=93,slow=18,SNR=8.6						
PETK	Petropavlovsk-	12.68	284	Pn	Pn	10 27 31.8	+1.4
SDPT	Sand Point	13.01	66	Pn	Pn	10 27 33.0	-1.6
KDAK	Kodiak Island	17.65	59	P	P	10 28 29.4	-1.2
	1.0nm,0.3s,baz=296,slow=5.2,SNR=19						
K20K	Telida	18.53	41	P	Pn	10 28 42.3	0.0
CNPM	China Poot	18.62	54	P	P	10 28 41.9	+0.6
BRLK	Bradley Lake	18.84	53	P	P	10 28 43.4	-0.3
J20K	Nowinta River	18.87	39	P	P	10 28 45.0	+1.1
PPLA	Purkeypile	19.13	43	P	P	10 28 47.8	+0.9
CAST	Castle Rocks	19.37	42	P	P	10 28 50.3	+0.9
IMAR	Indian Mountai	19.92	34	P	P	10 28 54.0	-1.3
MDM	Murphy Dome	21.52	40	P	P	10 29 11.7	-0.7
ILAR	Eielson Array	21.99	41	P	P	10 29 15.0	-2.2
	0.2nm,0.5s,baz=252,slow=9.2,SNR=8.0						
KLR	Kul'dur	29.37	284	P	P	10 30 24.2	+0.1
	0.8nm,0.4s,baz=90,slow=9.1,SNR=2.6						
USRK	Ussuriysk Ar.	31.51	275	P	P	10 30 43.2	+0.1
	0.7nm,0.4s,baz=56,slow=9.4,SNR=4.5						
YKA	Yellowknife Ar	36.16	46	P	P	10 31 23.3	+0.3
	0.3nm,0.6s,baz=282,slow=9.0,SNR=1.9						
NVAR	Mina Array Bea	45.22	81	P	P	10 32 40.0	+2.2
	0.3nm,0.5s,baz=289,slow=8.5,SNR=2.0						
PDAR	Pinedale Array	47.81	71	P	P	10 32 58.3	+0.3
	0.2nm,0.5s,baz=282,slow=4.3,SNR=2.8						
SPITS	Spitsbergen Ar	49.76	355	P	P	10 33 11.3	-0.7
	12nm,1.0s,baz=26,slow=7.0,SNR=7.1						
KURK	Kurchatov	57.41	312	P	P	10 34 09.0	+1.1
KURBB	Kurchatov Arra	57.52	312	P	P	10 34 09.0	+0.3
	0.6nm,0.5s,baz=35,slow=9.8,SNR=1.5						
MKAR	Makanchi Array	58.35	307	P	P	10 34 14.2	-0.4
	0.6nm,0.5s,baz=52,slow=9.3,SNR=1.1						
BVAR	Borovoye Array	59.38	318	P	P	10 34 21.6	0.0
	0.9nm,0.4s,baz=73,slow=2.8,SNR=2.0						
TXAR	Lajitas Array	60.29	79	P	P	10 34 29.8	+1.5
	0.1nm,0.4s,baz=284,slow=4.4,SNR=3.9						
AKASG	Malin Array Be	74.53	340	P	P	10 35 57.9	+0.6
	0.3nm,0.3s,baz=22,slow=6.3,SNR=2.7						
WRA	Warramunga Arr	81.18	221	P	P	10 36 36.2	+1.8
	0.7nm,1.1s,baz=30,slow=5.7,SNR=2.7						

ATH ***12*** *11:15:00.8, 34°.36N×25°.28E, h26^{km}±2^{km}, ML3.9/10, Error ellipse: s-maj=3.8km s-min=1.4km az=355.0*

ISK ***12*** *11:15:01.0, 34°.48N×25°.40E, h20^{km}, ML4.0/24*

HLW ***12*** *11:15:01.8, 34°.45N×25°.63E, h25^{km}±16^{km}, Md4.3, Ml4.5*

IDC ***12*** *11:15:02.0±2.3, 34°.56N×25°.26E, h34^{km}±16^{km}, mb3.8/22, mb1 3.9/26, mb1mx3.7/60, mbtmp4.0/26, ML4.3/4, MS3.2/7, Ms1 3.2/7, ms1mx2.8/42, Error ellipse: s-maj=19.3km s-min=13.2km az=167.0*

NEIC ***12*** *11:15:02.4±2.2, 34°.48N±0°.09×25°.30E±0°.08, h36^{km}±9^{km}, Error ellipse: s-maj=13.8km s-min=8.4km az=198.0*

THE ***12*** *11:15:02.4, 34°.43N×25°.30E, h4^{km}±2^{km}, ML3.8/7, Error ellipse: s-maj=2.2km s-min=0.7km az=96.0*

NIC ***12*** *11:15:03.6±0.0, 34°.23N×25°.84E, h18^{km}±1^{km}, Ml4.0/3*

DDA ***12*** *11:15:08.0, 34°.82N×25°.54E, h70^{km}±85^{km}, MW4.1*

ISC 12 11:15:01.8±0.7, **34°.36N**±0°.04×**25°.40E**±0°.03, **h36**^{km}±1^{km}, **n234**, σ**1^{s}.76**/266, **mb4.0**/28, **MS3.3**/5, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRMA	Ierapetra Chan	0.71	23	P	Pn	11 15 16.9	+1.6
SIVA	Sivas	0.81	324	P	Pn	11 15 16.4	-0.3
SIVA				S	Sn	11 15 27.2	-0.3
SIVA	Sivas	0.81	324	P	Pn	11 15 16.1	-0.6
SIVA				S	Sn	11 15 26.7	-0.9
SIVA				AML	AML	11 15 31.2	
	comp=N,54098μm,0.4s						
SIVA				AML	AML	11 15 32.8	
	comp=E,86757μm,0.6s						
TMBK	Timbaki Herakl	0.88	324	P	Pn	11 15 17.8	+0.2
TMBK				S	Sn	11 15 28.3	-0.8
	comp=E,7μm,0.4s						
NPS	Neapolis	0.92	11	P	Pn	11 15 18.9	+0.8
NPS				S	Sn	11 15 32.9	+2.8
	comp=E,7μm,0.6s						
NPS	Neapolis	0.92	11	P	Pn	11 15 18.8	+0.6
NPS				S	Sn	11 15 32.6	+2.5
NPS				AML	AML	11 15 35.9	
	comp=E,18201μm,0.6s						
NPS				AML	AML	11 15 36.9	
	comp=N,12706μm,0.5s						
KSTL	Kastelli Herak	0.98	344	P	Pn	11 15 17.4	-1.5
KSTL				S	Sn	11 15 29.8	-1.7
	comp=N,7μm,0.5s						
HRKL	Herakleio	0.98	346	P	Pn	11 15 19.8	+0.9
HRKL				S	Sn	11 15 32.4	+0.8
IACM	Heraklion	0.98	344	P	Pn	11 15 20.1	+1.1
ZKR	Zakros	1.01	42	P	Pn	11 15 21.8	+2.4
ZKR				S	Sn	11 15 36.1	+3.7
	comp=N,7μm,0.5s						
ZKR	Zakros	1.01	42	P	Pn	11 15 21.8	+2.4
ZKR				S	Sn	11 15 36.9	+4.5
ZKR				AML	AML	11 15 41.6	
	comp=E,16438μm,0.8s						
ZKR				AML	AML	11 15 45.8	
	comp=N,10201μm,0.5s						
ZKR	Zakros	1.01	42	PG	Pn	11 15 21.5	+2.1
ZKR				SG	Sn	11 15 32.9	+0.5
ZKR	Zakros	1.01	42	P	Pn	11 15 21.4	+2.0
ZKR				S	Sn	11 15 35.5	+3.1
ZKR				AML	AML	11 15 38.4	
	comp=N,16nm,0.5s						
ZKR				AML	AML	11 15 38.4	
	comp=N,16nm,0.5s						
ZKR				AML	AML	11 15 45.4	
	comp=N,10nm,0.5s						
ZKR				AML	AML	11 15 45.4	
	comp=N,10nm,0.5s						
IDI	Anoyia	1.01	336	Pg	Pn	11 15 19.4	-0.1
	comp=N,352nm,0.3s,baz=156,slow=14,SNR=677						
IDI				Lg	Lg	11 15 33.1	
	comp=N,605nm,0.3s,baz=81,slow=20,SNR=14						
IDI				LR	LR	11 15 36.2	
	comp=N,109nm,19.0s,baz=104,slow=43						
IDI	Anoyia	1.01	336	P	Pn	11 15 19.6	+0.1
IDI				S	Sn	11 15 34.2	+1.7
	comp=N,6μm,0.6s						
IDI	Anoyia	1.01	336	P	Pn	11 15 19.2	-0.3
IDI				S	Sn	11 15 33.8	+1.3
IDI				AML	AML	11 15 35.6	
	comp=E,12559μm,0.8s						
IDI				AML	AML	11 15 36.2	
	comp=N,12296μm,0.6s						
STIA	Sitia Lasithi	1.01	34	P	Pn	11 15 21.4	+2.0
GVDS	Gavdos	1.18	294	P	Pn	11 15 22.8	+1.1
GVDS				S	Sn	11 15 39.4	+2.9
	comp=N,7μm,0.4s						
GVD	Gavdhos	1.18	294	P	Pn	11 15 22.6	+0.9
GVD	Gavdhos	1.18	294	P	Pn	11 15 22.1	+0.4
GVD				S	Sn	11 15 37.0	+0.4
GVD				AML	AML	11 15 51.3	
	comp=E,17858μm,0.5s						
GVD				AML	AML	11 15 55.7	
	comp=N,14024μm,0.6s						
GVD	Gavdhos	1.18	294	PN	Pn	11 15 22.4	+0.7
GVD				SN	Sn	11 15 37.9	+1.3
PRNS	Prines Rethymn	1.24	324	P	Pn	11 15 23.6	+1.0
PRNS				S	Sn	11 15 41.0	+2.9
	comp=N,2μm,0.6s						
VAM	Vamos	1.43	317	P	Pn	11 15 26.5	+1.3
VAM	Vamos	1.43	317	P	Pn	11 15 26.7	+1.4
VAM				AML	AML	11 15 55.1	
	comp=N,9634μm,0.5s						
VAM				AML	AML	11 15 55.2	
	comp=E,11072μm,0.5s						
IMMV	Iera Moni Meta	1.60	314	P	Pn	11 15 28.6	+1.1
IMMV	Iera Moni Meta	1.60	314	P	Pn	11 15 28.4	+0.9
IMMV				AML	AML	11 15 54.7	
	comp=N,9140μm,0.6s						
IMMV				AML	AML	11 16 08.2	
	comp=E,10932μm,0.6s						
IMMV	Iera Moni Meta	1.60	314	PN	Pn	11 15 28.0	+0.5
IMMV				SN	Sn	11 15 47.5	+0.6
KNDR	Palaiochora Ch	1.65	302	P	Pn	11 15 30.7	+2.5
RODP	Rodopos	1.80	312	P	Pn	11 15 31.5	+1.2
THR6	Thira Island,	1.99	0	P	Pn	11 15 35.3	+2.4
SANT	Santorini	2.00	1	i P	Pn	11 15 39.1	+6.0
SANT	Santorini	2.00	1	PN	Pn	11 15 33.4	+0.3
SANT	Santorini	2.00	1		Pn	11 15 32.1	-1.0
THR8	Santorini-Mono	2.04	2	P	Pn	11 15 34.0	+0.4
THR3	Thira Island,	2.04	0	P	Pn	11 15 35.0	+1.4
THR5	Thira Island,	2.05	359	P	Pn	11 15 35.1	+1.4
THR2	Thira island,	2.08	1	P	Pn	11 15 36.1	+2.0
ANKY	Antikythira Is	2.28	312	P	Pn	11 15 38.1	+1.2
ANKY	Antikythira Is	2.28	312	P	Pn	11 15 38.0	+1.1
MHLO	Agia Marina, M	2.46	341	P	Pn	11 15 40.4	+1.1
KTHA	Kythira Island	2.69	315	P	Pn	11 15 43.4	+0.9
KTHA	Kythira Island	2.69	315	P	Pn	11 15 43.2	+0.7
KTHA				AML	AML	11 16 15.0	
	comp=N,1468μm,0.4s						
KTHA				AML	AML	11 16 15.1	
	comp=E,2118μm,0.3s						
APE	Apeiranthos	2.70	2	P	Pn	11 15 42.9	+0.2

APE	Apeiranthos	2.70	2	*i* P	Pn	11 15 41.6	-1.1
APE	Apeiranthos	2.70	2	PN	Pn	11 15 42.3	-0.4
KTHR	Kythira	2.72	315	P	Pn	11 15 43.9	+0.9
SLUM	Salum	2.87	183	P	Pn	11 15 47.1	+2.2
	baz=187						
SLUM				AMP		11 16 00.0	
	baz=187						
SLUM				S	Sn	11 16 19.4	+1.2
	baz=187						
ARG	Arkhangelos	2.90	50	P	Pn	11 15 48.0	+2.6
ARG	Arkhangelos	2.90	50	P	Pn	11 15 48.0	+2.6
ARG				AML	AML	11 16 47.9	
	comp=N,830µm,0.9s						
ARG				AML	AML	11 16 55.8	
	comp=E,1011µm,0.7s						
ARG	Arkhangelos	2.90	50	PN	Pn	11 15 46.6	+1.2
ARG	Arkhangelos	2.90	50	P	Pn	11 15 47.0	+1.6
ARG				S	Sn	11 16 20.1	+1.1
DAT	Datca	2.96	36	P	Pn	11 15 48.0	+1.7
DAT	Datca	2.96	36	PN	Pn	11 15 47.0	+0.7
VLI	Veliai	3.09	320	P	Pn	11 15 48.1	+0.1
VLI	Veliai	3.09	320	P	Pn	11 15 47.7	-0.3
VLI				AML	AML	11 16 22.6	
	comp=N,1069µm,0.3s						
VLI				AML	AML	11 16 23.3	
	comp=E,683µm,0.4s						
BODT	Bodrum	3.11	29	PN	Pn	11 15 49.2	+0.9
BDRM	Kayabasi	3.17	31	*i* P	Pn	11 15 49.1	0.0
TURN	Turunc	3.34	43	*i* P	Pn	11 15 52.0	+0.6
TURN				*i* S	Sn	11 16 28.5	-1.5
TURN				IAML		11 16 35.0	
	comp=E,111nm,0.3s						
TURN				IAML		11 16 43.0	
	comp=N,113nm,0.4s						
TURN	Turunc	3.34	43	PN	Pn	11 15 52.4	+0.9
MLSB	Milas	3.51	33	PN	Pn	11 15 54.8	+1.0
KRND	KRANIDI	3.52	329	P	Pn	11 15 55.0	+1.1
DALY	Dalyan (Mula)	3.61	46	PN	Pn	11 15 56.7	+1.6
GCAM	G?zelcaml?	3.65	24	PN	Pn	11 15 57.0	+1.4
MULA	Mugla, Merkez-	3.74	39	*i* P	Pn	11 15 58.7	+1.7
MULA				*i* S	Sn	11 16 33.7	-6.2
MULA				IAML		11 16 42.0	
	comp=N,54nm,0.6s						
MULA				IAML		11 16 42.0	
	comp=E,107nm,0.8s						
FETY	Fethiye	3.77	52	PN	Pn	11 15 58.5	+1.2
AYDN	Tasoluk	3.86	31	*i* P	Pn	11 15 59.4	+0.8
DION	Dionisos Attik	3.89	343	P	Pn	11 15 59.4	+0.4
AKAS	Kas	3.92	60	*i* P	Pn	11 16 01.5	+2.1
AKAS				*i* S	Sn	11 16 42.8	-1.4
AKAS				IAML		11 16 47.0	
	comp=N,420nm,0.4s						
AKAS				IAML		11 16 51.0	
	comp=E,207nm,0.7s						
AKAS	Kas	3.92	60	PN	Pn	11 16 01.3	+1.8
ITM	Ithomi	3.98	316	PN	Pn	11 15 59.4	-0.9
ITM	Ithomi	3.98	316		Pn	11 15 59.7	-0.6
CHOS	Chios island	4.05	7	P	Pn	11 16 02.7	+1.4
CHOS	Chios island	4.05	7	PN	Pn	11 16 02.3	+1.0
CAME	Cameli-Denizli	4.09	50	PN	Pn	11 16 03.6	+1.7
URLA	Izmir	4.11	13	*i* P	Pn	11 16 00.5	-1.4
URLA	Izmir	4.11	13	PN	Pn	11 16 03.2	+1.2
AYDB	Zeytinkoy-Aydi	4.11	29	PN	Pn	11 16 03.5	+1.4
TAVA	DENIZLI_Tavas	4.21	42	*i* P	Pn	11 16 04.0	+0.5
TAVA				*i* S	Sn	11 16 46.9	-4.6
TAVA				IAML		11 16 58.0	
	comp=E,55nm,0.8s						
CAEL	Denizli, Camel	4.21	48	*i* P	Pn	11 16 15.6	+12
BLCB	Balcova	4.23	18	PN	Pn	11 16 04.4	+0.8
ELL	Elmali	4.38	56	Pn	Pn	11 16 08.6	+2.7
GOLH	Golhisar	4.44	49	*i* P	Pn	11 16 08.3	+1.7
GOLH				*i* S	Sn	11 16 54.5	-2.6
GOLH				IAML		11 16 59.0	
	comp=N,97nm,0.5s						
GOLH				IAML		11 17 03.0	
	comp=E,117nm,0.8s						
AKUM	Antalya-Kumluc	4.49	63	*i* P	Pn	11 16 08.0	+0.8
AKUM				*i* S	Sn	11 16 56.3	-1.9
AKUM				IAML		11 17 00.0	
	comp=N,87nm,0.4s						
AKUM				IAML		11 17 04.0	
	comp=E,129nm,0.6s						
KLV	Kalavryta, Ach	4.51	325	P	Pn	11 16 07.9	+0.3
DRO	Drossia	4.66	321	P	Pn	11 16 10.7	+1.1
LKR	Lokris	4.69	336	P	Pn	11 16 11.4	+1.4
KORT	Korkueli	4.81	55	*i* P	Pn	11 16 14.5	+2.6
KORT				*i* S	Sn	11 17 05.0	-1.4
KORT				IAML		11 17 10.0	
	comp=E,171nm,0.5s						
KORT				IAML		11 17 10.0	
	comp=N,95nm,0.8s						
SIGR	SIGRI	4.85	4	PN	Pn	11 16 13.3	+1.1
RLS	Riolos of Patr	4.87	320	P	Pn	11 16 14.5	+2.1
KULA	Kula-Manisa	4.91	31	PN	Pn	11 16 14.6	+1.5
OSC1	CSNet OBS 1	4.96	98	P	Pn	11 16 12.9	-0.8
OSC1				S	Sn	11 17 06.5	-3.4
SWA2		5.11	179	P	Pn	11 16 17.6	+1.9
	baz=182						
SWA2				AMP		11 17 00.0	
	baz=182						
SWA2				S	Sn	11 17 13.5	+0.1
	baz=182						
BUCA	Burdur, Bucak-	5.13	53	*i* P	Pn	11 16 19.4	+3.2
BUCA				*i* S	Sn	11 17 10.9	-3.2
PASA	Karahalli, USA	5.17	39	*i* P	Pn	11 16 17.5	+0.8
PASA				*i* S	Sn	11 17 10.6	-4.4
PASA				IAML		11 17 14.0	
	comp=E,40nm,0.6s						
PASA				IAML		11 17 18.0	
	comp=N,20nm,0.3s						
USAK	Uak-Merkez	5.23	33	*i* P	Pn	11 16 18.0	+0.5
AGG	Agios Georgios	5.26	333	P	Pn	11 16 19.2	+1.3
AGG	Agios Georgios	5.26	333	*i* P	Pn	11 16 18.1	+0.2
AGG				*i* S	Sn	11 17 15.9	-1.4
AGG				IAML		11 17 21.0	
	comp=N,30nm,0.5s						
AGG				IAML		11 17 24.0	
	comp=E,45nm,0.7s						
AGG	Agios Georgios	5.26	333	PN	Pn	11 16 19.7	+1.8
AGG	Agios Georgios	5.26	333	Pn	Pn	11 16 19.8	+2.0
BUHA	Balikesir, Bur	5.30	14	*i* P	Pn	11 16 17.7	-0.7
DEMI	Demirci	5.38	29	*i* P	Pn	11 16 20.4	+0.9
EVR	Evrytania	5.38	329	P	Pn	11 16 22.5	+2.9
ISP	Isparta	5.40	49	Pn	Pn	11 16 22.3	+2.5
VLS	Valsamata	5.44	316	P	Pn	11 16 21.2	+0.9
BAYC	CANAKKALE_Bayr	5.45	9	*i* P	Pn	11 16 19.6	-0.8
KZIL	AFYON_Kizioren	5.46	43	*i* P	Pn	11 16 21.8	+1.1
SIMA	Simav-Kutahya	5.52	30	PN	Pn	11 16 23.1	+1.6
KEF3	Kipouria, Keph	5.59	315	P	Pn	11 16 23.1	+0.7
FSK	Fiskardo	5.65	318	P	Pn	11 16 24.7	+1.6
KEPZ	Antalya-Kepez	5.65	62	*i* P	Pn	11 16 24.5	+1.2
KEPZ				*i* S	Sn	11 17 23.7	-3.3
KEPZ				IAML		11 17 28.0	
	comp=E,47nm,0.6s						
KEPZ				IAML		11 17 31.0	
	comp=N,51nm,0.7s						
BAGO	Egridir - ISPA	5.67	49	*i* P	Pn	11 16 24.5	+1.0
EVGI	Lefkada island	5.71	319	P	Pn	11 16 25.1	+1.1
GDZ	Gediz	5.74	34	*i* P	Pn	11 16 23.7	-0.9
AKMS	Akamas	5.75	82	P	Pn	11 16 24.5	-0.2
AKMS				AML	AML	11 17 27.0	
	comp=N,1.2nm,0.7s						
AKMS				AML	AML	11 17 27.9	
	comp=N,1.4nm,0.5s						
DURS	Dursunbey	5.78	24	*i* P	Pn	11 16 24.8	-0.3
OSC2	CSNet OBS 4	5.87	101	P	Pn	11 16 25.4	-0.7
OSC2				S	Sn	11 17 29.4	-2.7
NATA	Nata	5.93	84	P	Pn	11 16 27.6	+0.5
GAZI	Gazipasa	5.96	70	*i* P	Pn	11 16 27.2	-0.3
GAZI				*i* S	Sn	11 17 26.0	-8.4
ALFC	Alefka	5.98	80	P	Pn	11 16 27.5	-0.3
ALFC				AML	AML	11 17 32.0	
	comp=N,2.0nm,0.8s						
ALFC				AML	AML	11 17 32.3	
	comp=N,1.0nm,0.5s						
SEDI	Konya, Seydise	6.01	57	*i* P	Pn	11 16 31.2	+3.0
SEDI				*i* S	Sn	11 17 36.0	+0.1
SEDI				IAML		11 17 38.0	
	comp=N,71nm,1.2s						
SEDI				IAML		11 17 44.0	
	comp=E,57nm,0.6s						
TVSB	Tavsanli	6.03	31	PN	Pn	11 16 30.3	+1.8
YVAC	Isparta, Yalva	6.12	49	*i* P	Pn	11 16 29.9	+0.1
DOGA	KONYA_Doganhis	6.29	52	*i* P	Pn	11 16 33.7	+1.5
HNAT	Natroun	6.47	135	P	Pn	11 16 36.2	+1.7
	baz=137						
ASGA	Asgata	6.49	84	P	Pn	11 16 34.5	-0.2
CSS	Mathiatis	6.57	83	P	Pn	11 16 35.5	-0.3
CSS	Mathiatis	6.57	83	Pn	Pn	11 16 35.8	0.0
MVOU	Mavrovouni	6.82	82	P	Pn	11 16 39.2	0.0
PARAL	Paralimni	7.15	83	P	Pn	11 16 44.9	+1.1
FNA	Florina	7.16	335	Pn	Pn	11 16 44.0	0.0
GLL	Jalalah	7.18	130	P	Pn	11 16 44.6	+0.4
	baz=131						
KBN	Korca	7.24	331	Pn	Pn	11 16 44.2	-0.9
NBNS	Bani Suef	7.62	137	P	Pn	11 16 52.0	+1.6
	baz=138						
SUZ	Suez	7.75	124	P	Pn	11 16 52.1	0.0
	baz=125						
SCTE	Santa Cesarea	7.94	318		Pn	11 16 53.2	-1.4
TAMRE	El Minia	8.17	143	P	Pn	11 16 59.0	+1.1
	baz=144						
TIP	Timpagrande	8.43	307		Pn	11 16 60.0	-1.5
BOSS	Bosilegrad	8.44	345	*e*Pn	Pn	11 17 01.6	+0.2
MMAI	Mount Meron Ar	8.45	96	Pn	Pn	11 17 01.1	-0.6
	comp=E,3.1nm,0.3s,baz=269,slow=11,SNR=11						
MMAI				Sn	Sn	11 18 30.6	-5.2
	comp=E,17nm,0.3s,baz=290,slow=24,SNR=11						
BR131	Keskin Array S	8.49	49	Pn	Pn	11 17 03.1	+0.9
BRTR	Keskin Array B	8.49	49	Pn	Pn	11 17 03.2	+1.0
	comp=E,0.2nm,0.3s,baz=228,slow=13,SNR=6.2						
BRTR				Sn	Sn	11 18 31.8	-5.1
	baz=99,slow=32,SNR=1.3						
BRTR	Keskin Array B	8.49	49	Pn	Pn	11 17 01.4	-0.9
GRB	Gharib	8.76	132	P	Pn	11 17 06.7	+0.7
	baz=133						
GHAJ	Ghor Haditha	9.08	107		Pn	11 17 09.0	-1.3
ZAPS	Zavoj	9.15	347	*e*Pn	Pn	11 17 15.2	+3.9
EIL	Elat	9.36	117	Pn	Pn	11 17 14.4	+0.2
	comp=E,2.5nm,0.3s,baz=232,slow=1.9,SNR=55						
EIL				Sn	Sn	11 18 53.0	-5.2
	comp=E,7.7nm,0.3s,baz=86,slow=12,SNR=8.8						
HKAT	Jabal Katrina	9.37	126	P	Pn	11 17 14.1	-0.4
	baz=127						
PDG	Podgorica	9.38	331		Pn	11 17 13.5	-0.9
RAFF	Raffo Rosso	9.41	291	Pn	Pn	11 17 13.4	-1.4
SELS	Selova	9.45	341	*e*Pn	Pn	11 17 11.6	-3.7
HBST	Basata	9.46	120	P	Pn	11 17 15.6	+0.1
	baz=121						
NUB	Nuweibaa	9.51	122	P	Pn	11 17 16.2	+0.1
	baz=123						
HDHB	Dhahab	9.67	123	P	Pn	11 17 18.3	-0.1
	baz=124						
SJES	Sjenica	9.84	336	*e*Pn	Pn	11 17 20.5	-0.2
AKRG	Al Kharijah	9.87	152	P	Pn	11 17 22.5	+1.3
	baz=153						
ASF	Jabal al Asfar	9.87	100	Sn	Sn	11 19 06.6	-4.3
	comp=E,2.1nm,0.3s,baz=39,slow=21,SNR=3.1						
GTR	Jabal at Tayr	9.89	152	P	Pn	11 17 23.2	+1.8
	baz=153						
HHRG	Al Ghardaqah	10.00	133	P	Pn	11 17 24.9	+2.0
	baz=135						
IVAS	Ivanjica	10.06	338	*e*Pn	Pn	11 17 19.5	-4.2
CORL	Corleone	10.39	293	Pn	Pn	11 17 29.0	+0.7
BBLS	Lazići	10.56	336	*e*Pn	Pn	11 17 28.9	-1.7
SGRT	San Giovanni R	10.59	317	Pn	Pn	11 17 27.8	-3.2
MLR	Muntele Rosu	11.12	2	LR	LR	11 21 34.7	
	comp=E,97nm,21.0s,baz=7.5,slow=36						
NRCA	Norcia	12.79	315		Pn	11 18 00.7	-0.3
SOKA	Soboth	14.59	331	*e*Pn	Pn	11 18 21.4	-4.2
	comp=E,0.9nm,0.6s						
OBKA	Obir	14.66	329	*e*Pn	Pn	11 18 24.2	-2.3
	comp=E,0.3nm,0.2s						
OBKA				*e*Sn	Sn	11 20 56.6	-11
	comp=E,3.1nm,0.3s						
ZOU	Zoufplan	15.39	326		Pn	11 18 34.1	-2.3
ZOU				IAmb	IAmb	11 18 44.8	
	comp=Z,9.2nm,1.2s						
CIMO	Cimolais	15.47	324		Pn	11 18 34.2	-2.9
CTI	Castel Tesino	15.67	322	Pn	Pn	11 18 37.3	-2.6
ABTA	Abfaltersbach	15.75	326	*e*Pn	Pn	11 18 38.4	-2.5
	comp=Z,1.3nm,0.3s						
ABTA				*i* Sn	Sn	11 21 18.7	-15
	comp=Z,1.3nm,0.5s						
SALO	Salr	15.98	319		Pn	11 18 43.6	-0.2
SALO				IAmb	IAmb	11 18 50.5	
	comp=Z,20nm,0.8s						
VRAC	Vranov	16.29	339	Pn	Pn	11 18 47.0	-0.7
	comp=Z,0.5nm,0.3s,baz=222,slow=13,SNR=2.8						
ONI	Oni	16.33	54		Pn	11 18 48.9	+0.6
GNI	Garni	16.44	64	LR	LR	11 26 47.2	
	comp=Z,86nm,21.8s,baz=276,slow=43						
KIV	Kislovodsk	16.45	49	P	P	11 18 52.6	+0.4
KIV				IAmb	IAmb	11 18 55.3	
	comp=Z,20nm,0.9s						
KVAR	Kislovodsk Arr	16.46	49	Pn	P	11 18 52.8	+0.5
	baz=292,slow=16,SNR=2.7						
KBZ	Khabaz	16.47	50	Pn	P	11 18 53.2	+0.8
	comp=Z,0.4nm,0.3s,baz=253,slow=8.2,SNR=32						
AKASG	Malin Array Be	16.57	9	Pn	Pn	11 18 51.0	-0.1
	comp=Z,9.4nm,0.3s,baz=199,slow=10,SNR=74						
AKASG	Malin Array Be	16.57	9	P	Pn	11 18 48.7	-2.4
AKASG				IAmb	IAmb	11 18 52.0	
	comp=Z,15nm,0.5s						
AKBB	Malin Array Si	16.57	9		Pn	11 18 51.1	0.0
AKBB				IAmb	IAmb	11 18 52.0	
	comp=Z,20nm,0.5s						
FETA	Feichten	16.80	323	*e*Pn	Pn	11 18 54.8	+0.5
	comp=Z,0.7nm,0.4s						
MOTA	Moosalm	16.85	325	*e*Pn	Pn	11 18 55.2	+0.4
	comp=Z,1.0nm,0.4s						
MOTA				*i* Sn	Sn	11 21 48.5	-12
	comp=Z,0.7nm,0.3s						
GEC2	GERESS Array S	16.88	333	P	Pn	11 18 56.1	+1.0
GERES	GERESS Array B	16.88	333	Pn	Pn	11 18 52.9	-2.2
	comp=Z,0.6nm,0.3s,baz=146,slow=12,SNR=14						
GERES	GERESS Array B	16.88	333	P	Pn	11 18 56.1	+1.0
DAVOX	Davos/Dischmat	17.07	321	Pn	P	11 18 59.7	+0.5
	comp=Z,0.4nm,0.3s,baz=143,slow=19,SNR=7.4						
RETA	Reutte	17.11	324	*i* Pn	P	11 18 59.2	-0.4
	comp=Z,1.5nm,0.4s						
RETA				*e*Sn	Sn	11 21 54.1	-13
	comp=Z,1.4nm,0.4s						
SENIN	Lac Senin/Sane	18.22	317		P	11 19 10.2	-1.7
CLL	Collm	19.17	336	*e*P	P	11 19 21.0	-1.1
CLL				*e*PPP	PPP	11 19 44.0	
CLL				*e*		11 19 48.0	
RAYN	Ar Rayn	20.61	116		Pn	11 19 40.9	+0.5
OBN	Obninsk	22.16	17	LR	LR	11 29 09.8	
	comp=Z,14nm,18.5s,baz=143,slow=38						
ESDC	Sonseca Array	23.98	291	P	P	11 20 12.8	-0.1
	comp=Z,1.2nm,0.7s,baz=83,slow=8.6,SNR=9.8						
ESDC	Sonseca Array	23.98	291	P	P	11 20 11.9	-1.0
GEYT	Alibeck	26.59	73	P	P	11 20 39.4	+2.8
	comp=Z,1.3nm,0.5s,baz=295,slow=11,SNR=2.3						
GEYT	Alibeck	26.59	73	P	P	11 20 40.1	+3.5
GEYT				IAmb	IAmb	11 21 02.4	
	comp=Z,2.5nm,0.8s						
HFS	Hagfors	26.89	347	P	P	11 20 37.3	-1.8
	comp=Z,4.1nm,1.0s,baz=154,slow=14,SNR=1.8						
FINES	FINESS Array B	27.10	1	P	P	11 20 37.8	-3.1
	comp=Z,0.7nm,0.4s,baz=162,slow=12,SNR=12						
FINES				LR	LR	11 31 07.8	
	comp=Z,85nm,18.6s,baz=178,slow=36						
FINES	FINESS Array B	27.10	1	P	P	11 20 38.0	-2.9
FIA1	FINESS Array S	27.10	1	P	P	11 20 38.5	-2.4
NC602	NORSAR Array S	27.87	345	P	P	11 20 47.6	-0.3
NAO01	NORSAR Array S	28.11	345	P	P	11 20 48.8	-1.1
NOA	NORSAR Array B	28.22	345	P	P	11 20 48.0	-3.0
	comp=Z,0.8nm,0.8s,baz=42,slow=24,SNR=1.8						
AKTO	Aktyubinsk	28.66	46	P	P	11 20 54.6	-0.3
	comp=Z,1.1nm,0.4s,baz=252,slow=6.0,SNR=8.4						
AKTO				LR	LR	11 35 01.4	
	comp=Z,27nm,18.8s,baz=265,slow=42						
EKA	Eskdalemuir Ar	28.80	325	P	P	11 20 53.8	-2.4
	comp=Z,1.0nm,0.7s,baz=199,slow=25,SNR=1.7						
ABKAR	Akbulak array	29.44	49	P	P	11 21 02.4	+0.5
TORD	Torodi Ar. Bea	30.14	231	P	P	11 21 09.2	+0.8
	comp=Z,2.4nm,0.4s,baz=32,slow=8.5,SNR=21						
TORD	Torodi Ar. Bea	30.14	231	P	P	11 21 09.6	+1.3
TORD				IAmb	IAmb	11 21 18.2	
	comp=Z,4.2nm,1.4s						
ARU	Arti	31.58	35	P	P	11 21 19.9	-0.9
	comp=Z,1.2nm,0.3s,baz=244,slow=3.6,SNR=5.6						
ARCES	ARCESS Array B	35.22	0	P	P	11 21 49.7	-2.6
	comp=Z,1.3nm,0.6s,baz=170,slow=7.4,SNR=11						
ARCES				LR	LR	11 35 37.0	
	comp=Z,67nm,18.9s,baz=345,slow=35						
ARCES	ARCESS Array B	35.22	0	P	P	11 21 50.8	-1.5
BVAR	Borovoye Array	36.76	46	P	P	11 22 05.6	0.0
	comp=Z,0.5nm,0.4s,baz=262,slow=19,SNR=3.6						
AAK	Ala-Archa	38.84	63	P	P	11 22 24.7	+1.2
	comp=Z,0.7nm,0.3s,baz=276,slow=11,SNR=4.3						
NIL	Nilore	39.38	77	P	P	11 22 29.5	+1.4
NIL				IAmb	IAmb	11 22 57.0	
	comp=Z,10nm,0.8s						
KURBB	Kurchatov Arra	41.47	50	P	P	11 22 45.4	+0.3
	comp=Z,2.5nm,0.6s,baz=276,slow=8.7,SNR=15						
KURK	Kurchatov	41.53	50	P	P	11 22 44.9	-0.6
KURK				IAmb	IAmb	11 22 59.2	
	comp=Z,3.6nm,1.0s						
MK31	Makanchi Array	44.05	56	P	P	11 23 05.8	-0.3
MK31				IAmb	IAmb	11 23 26.7	
	comp=Z,1.9nm,0.7s						
MKAR	Makanchi Array	44.05	56	P	P	11 23 06.8	+0.7
	comp=Z,1.8nm,0.6s,baz=277,slow=7.0,SNR=8.5						
MKAR	Makanchi Array	44.05	56	P	P	11 23 06.3	+0.3
ZAA0	Zalesovo Array	45.42	46	P	P	11 23 16.0	-0.7
ZAA0				IAmb	IAmb	11 23 17.1	
	comp=Z,3.0nm,0.5s						
ZALV	Zalesovo Beam	45.42	46	P	P	11 23 16.6	-0.2
	comp=Z,3.5nm,0.4s,baz=267,slow=8.7,SNR=13						
ZALV	Zalesovo Beam	45.42	46	P	P	11 23 16.0	-0.7
NRIK	Noril'sk	48.52	25	P	P	11 23 41.1	+0.3
	comp=Z,1.4nm,0.3s,baz=254,slow=10,SNR=4.8						
NRIK	Noril'sk	48.52	25	P	P	11 23 40.2	-0.5
NRIK				IAmb	IAmb	11 23 44.4	
	comp=Z,6.6nm,1.2s						
SUMG	Summit	49.79	339	P	P	11 23 50.0	-0.9
SUMG				IAmb	IAmb	11 24 11.4	
	comp=Z,12nm,1.5s						
SONM	Songino Array	59.84	50	P	P	11 25 04.7	+1.0
	comp=Z,1.1nm,0.8s,baz=284,slow=7.5,SNR=5.0						
BOSA	Boshof	62.64	180	P	P	11 25 24.4	+1.8
	comp=Z,2.7nm,1.0s,baz=36,slow=9.3,SNR=1.7						
SCHQ	Schefferville	63.92	320	P	P	11 25 30.6	-0.3
	comp=Z,1.3nm,0.3s,baz=74,slow=4.2,SNR=13						
SCHQ	Schefferville	63.92	320	P	P	11 25 30.1	-0.7
SCHQ				IAmb	IAmb	11 25 54.9	
	comp=Z,7.5nm,1.3s						
BATG	Bathurst New B	66.60	312	P	P	11 25 47.8	-0.6
YKA	Yellowknife Ar	78.27	342	P	P	11 26 56.9	-0.6
	comp=Z,0.2nm,0.5s,baz=30,slow=5.0,SNR=4.1						
KSRS	Korea Array	78.61	52	P	P	11 27 00.1	+0.2
	comp=Z,0.9nm,0.5s,baz=310,slow=4.7,SNR=7.0						
KSRS				LR	LR	12 05 35.0	
	comp=Z,19nm,18.3s,baz=315,slow=39						
ILAR	Eielson Array	81.01	357	P	P	11 27 10.3	-2.1
	comp=Z,0.1nm,0.4s,baz=355,slow=3.3,SNR=2.0						
DAWY	Dawson	81.16	353	P	P	11 27 13.3	0.0
DAWY				IAmb	IAmb	11 27 26.8	
	comp=Z,3.4nm,1.4s						
WRH	Wood River Hil	81.36	357	P	P	11 27 14.2	-0.1

IDC 12 11:31:56.6±3.5**,43°.78N**×**87°.66E,h0^{km},mb3.9**/1**,**
mb1 3.5/4**,mb1mx2.9**/64**,mbtmp3.4**/4**,ML2.9**/3**,1C-2D,**
Error ellipse: s-maj=49.1km s-min=32.6km az=47.0,
Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	4.84	310	Pn	Pn	11 33 11.9	+1.1
	0.8nm,0.5s,baz=122,slow=14,SNR=37						
MK31				⇓Lg	Lg	11 34 31.1	
	4.2nm,0.6s,baz=126,slow=27,SNR=3.9						
MKAR	Makanchi Array	4.84	310	Pn	Pn	11 33 12.1	+1.4
	0.6nm,0.3s,baz=126,slow=14,SNR=32						
MKAR				Sn	Sn	11 34 08.7	+1.2
	0.4nm,0.3s,baz=124,slow=26,SNR=5.6						
MKAR				Lg	Lg	11 34 29.3	
	0.9nm,0.3s,baz=124,slow=28,SNR=2.4						
MAKZ	Makanchi	5.03	309	⇓Pn	Pn	11 33 14.3	+1.0
	5.3nm,1.1s						
MAKZ				⇑Lg	Lg	11 34 36.2	
	5.6nm,0.7s						
KURBB	Kurchatov Arra	9.24	321	Pn	Pn	11 34 09.8	-1.3
	0.2nm,0.3s,baz=134,slow=12,SNR=4.5						
KURBB				Lg	Lg	11 36 51.9	
	0.1nm,0.3s,baz=139,slow=29,SNR=4.3						
ZALV	Zalesovo Beam	10.35	351	Pn	Pn	11 34 26.0	-0.2
	0.2nm,0.3s,baz=179,slow=12,SNR=1.6						
ZALV				Lg	Lg	11 37 26.4	
	0.4nm,0.3s,baz=163,slow=30,SNR=1.5						
FINES	FINESS Array B	39.62	318	P	P	11 39 29.8	+0.2
	1.6nm,0.8s,baz=104,slow=12,SNR=1.6						

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*IDC **12** 11:34:26.5±1.1, 15°.55N×97°.15W, h0^{km}, mb4.1/14,*
mb1 4.3/17, mb1mx4.1/40, mbtmp4.1/17, ML3.5/3, MS3.6/11,
Ms1 3.6/11, ms1mx3.4/28, Error ellipse: s-maj=22.9km
s-min=14.5km az=1.0
*MEX **12** 11:34:30.8±2.2, 15°.74N×97°.25W, h10^{km}, MD4.5*
*NEIC **12** 11:34:36.1±1.9, 16°.12N±0°.09×97°.01W±0°.06, h36^{km}±11^{km},*
mb4.5/52, Md4.5/19(MEX), Error ellipse: s-maj=13.8km
s-min=5.6km az=204.0
ISC 12 11:34:30.3±1.1**, 15°.79N**±0°.05×**97°.17W**±0°.03**, h16^{km}**±6^{km}**,**
n237,σ1^{s}.**56**/247**, mb4.4**/23**, MS3.6**/10**, Near coast of**
Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEIG	Puerto Escondi	0.20	5	*i* P	Pg	11 34 35.4	+0.3
PEIG				*e*S	Sg	11 34 39.8	+1.5
HUIG	Huatulco	1.02	91		Pg	11 34 47.8	-2.2
HUIG					Sg	11 35 02.5	-0.9
HUIG	Huatulco	1.02	91	*e*P	Pg	11 34 47.8	-2.2
HUIG				*e*S	Sg	11 35 02.5	-0.9
PNIG	Pinotepa	1.10	303		Sb	11 34 59.6	-5.5
PNIG	Pinotepa	1.10	303	*e*P	Pb	11 34 47.0	-4.0
PNIG				*i* S	Sb	11 35 00.5	-4.6
YOIG	Yosondua	1.12	341	*e*P	Pb	11 34 49.6	-1.9
YOIG				*e*S	Sg	11 35 02.9	-3.8
OXBJ	Oaxaca	1.34	18		Pn	11 34 53.2	-1.3
OXBJ	Oaxaca	1.34	18	*e*P	Pn	11 34 53.2	-1.3
OXBJ				*e*S	Sb	11 35 10.3	-1.9
VHO	Vista Hermosa	1.34	18	*e*P	Pn	11 34 53.9	-0.7
VHO				*e*S	Sb	11 35 11.4	-0.8
OXLC	Oaxaca	1.34	19	*e*P	Pn	11 34 53.5	-1.1
OXLC				*i* S	Sb	11 35 10.5	-1.8
TXIG	Tlaxiaco	1.56	338	*e*P	Pn	11 34 56.2	-1.5
TXIG				*e*S	Sn	11 35 15.5	-2.4
MGIG	Malinaltepec	2.01	316	*e*P	Pn	11 35 01.6	-2.2
MGIG				*e*S	Sn	11 35 25.3	-3.4
CRIG	Cruz Grande	2.11	297	*e*P	Pn	11 35 03.9	-1.1
CRIG				*e*S	Sn	11 35 34.0	+3.1
HLIG	Huajuapan de L	2.12	343	*e*P	Pn	11 35 04.9	-0.4
HLIG				*i* S	Sb	11 35 36.4	+1.8
TLIG	Tlapa	2.21	323	Pn	Pn	11 35 09.2	+2.7
TLIG	Tlapa	2.21	323	*e*P	Pn	11 35 08.5	+2.0
TLIG				*e*S	Sn	11 35 37.1	+3.4
TOIG	Toxpalan	2.29	2	*e*P	Pn	11 35 07.6	-0.1
FTIG	Fresnillo de T	2.30	336	*e*P	Pn	11 35 07.1	-0.6
FTIG				*e*S	Sn	11 35 39.6	+3.8
CMIG	Matias Romero	2.54	59	Pn	Pn	11 35 10.0	-1.0
	15nm,0.3s,baz=253,slow=10.0,SNR=56						
CMIG				Pg	Pb	11 35 16.4	+0.8
	54nm,0.3s,baz=251,slow=15,SNR=40						
CMIG				Lg	Lg	11 35 52.6	
	116nm,0.3s,baz=356,slow=18,SNR=7.4						
TPIG	Tehuac#an	2.62	356	*e*P	Pn	11 35 12.3	+0.1
TPIG				*i* S	Sn	11 35 43.1	-0.7
DAIG	Los Arroyos	2.68	297	*e*P	Pn	11 35 10.9	-1.9
DAIG				*e*S	Sb	11 35 51.1	+0.4
MEIG	Mezcala	3.17	312	*e*P	Pn	11 35 18.4	-1.2
MEIG				*e*S	Sn	11 35 57.2	+0.1
CAIG	El Cayaco	3.23	293	*e*P	Pn	11 35 16.4	-4.0
CAIG				*i* S	Sn	11 35 56.9	-1.6
PLIG	Platanillo	3.42	320	*e*P	Pn	11 35 27.1	+4.0
PLIG				*e*S	Sn	11 36 07.2	+3.9
YAIG	Yautepec	3.55	330	*e*P	Pn	11 35 28.2	+3.2
YAIG				*e*S	Sn	11 36 05.7	-1.1
MAVM	Malinalco, Edo	3.85	325	*e*	Pn	11 35 32.0	+2.8
MAVM				*e*		11 36 23.7	
TLVM	San Miguel Top	3.89	331	*e*	Pb	11 35 36.3	-2.5
TLVM				*e*		11 36 31.1	
THVM	De Xico	3.90	334	*e*	Pn	11 35 33.3	+3.4
THVM				*e*		11 36 29.3	
XCVM	Xochimilco	3.91	332	*e*	Pb	11 35 40.3	+1.2
XCVM				*e*		11 36 31.1	
TXVM	Universitario	3.99	336	*e*	Pb	11 35 44.2	+3.8
TXVM				*e*		11 36 32.1	

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UNM   Universidad Na   4.01 332   Pn      Pn      11 35 34.5 +3.2
AOVM  Tlapan           4.02 330 e         Pn      11 35 37.0 +5.3
AOVM                            e                 11 36 33.0
BJVM  Benito Juarez    4.04 332 e         Pb      11 35 40.6 -0.8
BJVM                            e                 11 36 36.7
CJVM  Cuajimalpa       4.08 331 e         Pb      11 35 42.9 +0.8
CJVM                            e                 11 36 36.7
MHVM  Bosque de Chap   4.09 332 e         Pb      11 35 41.4 -0.8
MHVM                            e                 11 36 36.7
GMVM  Gustavo A Made   4.12 334 e         Pb      11 35 39.8 -2.9
GMVM                            e                 11 36 38.1
TOVM  TOLUCA           4.22 326 e         Pn      11 35 37.0 +2.7
TOVM                            e                 11 36 39.5
CCIG  Comitan          4.86  84           Pn      11 35 44.2 +1.2
MOIG  Morelia          5.44 316           Pn      11 35 58.4 +7.3
HUEH  Huehuetenango    5.48  94   Pn      Pn      11 35 52.7 +1.1
APG   El Apazote       6.51  96   Pn      Pn      11 36 04.9 -0.8
      1.0nm,0.3s,baz=320,slow=13,SNR=18
APG                               Sn      Sn      11 37 18.0 -2.0
      2.3nm,0.3s,baz=236,slow=15,SNR=4.1
PETF  Flores           7.10  80           Pn      11 36 13.4 -0.2
MTO3  Montecristo      7.67  99           Pn      11 36 23.4 +1.7
ZAIG  Zacatecas        8.61 325   Pn      Pn      11 36 38.6 +3.9
HZTE  Horizontes, Gu  12.34 113   Pn      Pn      11 37 29.5 +4.0
833A  Chaparral WMA,  12.64 351   P       Pn      11 37 29.9 +0.4
      baz=168
COVE  Coope Vega, Sa  13.41 111           Pn      11 37 42.6 +2.5
RIMA  Rio Macho       14.29 113           Pn      11 37 54.4 +2.1
TX31  Lajitas Ar. Si  14.75 337           Pn      11 37 59.7 +1.2
TXAR  Lajitas Array   14.75 337   Pn      Pn      11 38 00.2 +1.8
      0.0nm,0.3s,baz=167,slow=17,SNR=6.7
TXAR                              Lg      Lg      11 42 17.3
      0.0nm,0.3s,baz=140,slow=33,SNR=2.6
TXAR  Lajitas Array   14.75 337           Pn      11 37 58.6 +0.2
JCT   Junction City   14.82 351   P       Pn      11 38 00.0 +0.7
      baz=168,SNR=6.0
LPIG  La Paz          14.86 306   LR      LR      11 42 48.2
      comp=Z,262nm,21.3s,baz=43,slow=33
435B  Jarrell         14.93 359           Pn      11 37 58.8 -2.0
RIOS  Rincon, Osa     15.08 116           P       11 38 06.8 -1.3
RIOS                              IAmb    IAmb    11 38 14.8
      comp=Z,22nm,0.7s
NATX  Nacogdoches     16.06   8   P       Pn      11 38 14.7 -0.8
      baz=188
WHTX  Lake Whitney,   16.13 359   P       Pn      11 38 15.9 -0.5
      baz=178
ABTX  Abilene, Hawle  16.91 353           Pn      11 38 25.4 -1.0
ABTX                              IAmb    IAmb    11 38 30.7
      comp=Z,29nm,0.9s
ABTX  Abilene, Hawle  16.91 353   P       Pn      11 38 25.8 -0.6
      baz=170,SNR=5.6
VBMS  Vicksburg       17.43  19           Pn      11 38 29.4 -3.5
VBMS                              IAmb    IAmb    11 38 35.2
      comp=Z,45nm,0.9s
Z38A  Mt. Pleasant    17.50   6   P       Pn      11 38 32.7 -1.1
Z38A                              IAmb    IAmb    11 38 36.0
      comp=Z,23nm,0.9s
MNTX  Cornudas Mount  17.52 336           Pn      11 38 34.7 +0.7
MNTX  Cornudas Mount  17.52 336   P       Pn      11 38 35.0 +1.0
      baz=151,SNR=12
143A  Socs Landing,   17.63  16   P       Pn      11 38 33.5 -1.9
Z41A  Richland Creek  17.83  12   P       Pn      11 38 37.8 -0.1
      baz=193
WLAR  White Oak Lake  18.19  11   P       Pn      11 38 40.7 -1.5
146A  Union           18.31  22   P       Pn      11 38 42.6 -1.2
146A                              IAmb    IAmb    11 38 45.0
      comp=Z,33nm,0.9s
CCAR  Cane Creek      18.69  14   P       P       11 38 45.5 -2.5
CCAR                              IAmb    IAmb    11 38 50.9
      comp=Z,23nm,0.7s
MSTX  Muleshoe        18.79 345   P       P       11 38 49.0 -0.3
MSTX                              IAmb    IAmb    11 38 51.5
      comp=Z,24nm,1.0s
MSTX  Muleshoe        18.79 345   P       P       11 38 49.5 +0.3
      baz=162,SNR=14
MIAR  Mount Ida       18.95   9   P       P       11 38 50.5 -0.3
MIAR                              IAmb    IAmb    11 38 52.9
      comp=Z,33nm,0.9s
MIAR  Mount Ida       18.95   9   P       P       11 38 49.6 -1.2
      baz=190,SNR=30
Z47A  Carrollton      19.19  24   P       P       11 38 53.0 -0.4
Z47A                              IAmb    IAmb    11 38 55.1
      comp=Z,19nm,0.8s
121A  Cookes Peak, D  19.25 332   P       P       11 38 54.8 +0.4
121A  Cookes Peak, D  19.25 332   P       P       11 38 56.5 +2.1
      baz=146
W35A  Tecumseh        19.28   1   P       P       11 38 53.9 -0.5
AMTX  Amarillo        19.44 349   P       P       11 38 56.2 -0.1
AMTX  Amarillo        19.44 349   P       P       11 38 57.1 +0.8
      baz=166
W39A  Magazine        19.56   8   P       P       11 38 57.7 +0.2
      baz=189
W41B  Gary Mavity, V  19.80  12   P       P       11 38 60.0 -0.1
      baz=193
TIGA  Tifton          19.90  36   P       P       11 38 59.0 -2.2
      baz=221
WHAR  Wooly Hollow    19.90  12           P       11 39 00.5 -0.7
TUL1  Leonard         20.07   3   P       P       11 39 02.1 -1.0
      baz=183,SNR=5.3
BNM   Barren Site     20.17 337   P       P       11 39 06.1 +1.7
Y22D  IRIS PASSCAL I  20.21 336   P       P       11 39 04.4 -0.5
Y22D                              IAmb    IAmb    11 39 15.4
      comp=Z,29nm,0.9s
Y22D  IRIS PASSCAL I  20.21 336   P       P       11 39 06.9 +2.1
      baz=150
Y49A  Blount Mountai  20.44  26   P       P       11 39 06.2 -0.9
FCAR  Ozark Folk Cen  20.52  12   P       P       11 39 07.8 -0.1
W45A  Hickory Valley  20.57  19   P       P       11 39 07.9 -0.6
W45A                              IAmb    IAmb    11 39 23.3
      comp=Z,23nm,0.9s
U32A  Winter Ranch,   20.57 356   P       P       11 39 09.4 +0.9
U32A                              IAmb    IAmb    11 39 14.5
      comp=Z,20nm,0.9s
TUC   Tucson          20.58 325   P       P       11 39 10.3 +1.6
      baz=138
HHAR  Hobbs           20.61   7   P       P       11 39 08.5 -0.4
HHAR                              IAmb    IAmb    11 39 13.7
      comp=Z,15nm,0.9s
X48A  Hartselle       20.69  24   P       P       11 39 08.5 -1.3
PLAL  Pickwick Lake   20.78  21   P       P       11 39 10.6 -0.2
PLAL                              IAmb    IAmb    11 39 12.9
      comp=Z,14nm,0.8s
ANMO  Albuquerque     20.82 338   P       P       11 39 12.3 +0.9
      comp=Z,7.0nm,0.9s,baz=151,slow=13,SNR=22
ANMO  Albuquerque     20.82 338           P       11 39 12.8 +1.4
ANMO  Albuquerque     20.82 338   P       P       11 39 12.4 +0.9
      baz=153
U40A  Yellville       20.84  10   P       P       11 39 10.4 -1.0
      baz=191,SNR=17
LCAR  Lake Charles    20.89  14   P       P       11 39 11.9 -0.1
GOGA  Godfrey         21.47  33   P       P       11 39 15.9 -2.3
      baz=218,SNR=12
214A  Organ Pipe Nat  21.49 321   P       P       11 39 21.4 +2.9
      baz=133
MGMO  Mountain Grove  21.72  11   P       P       11 39 21.0 +0.1
MGMO                              IAmb    IAmb    11 39 25.2
      comp=Z,25nm,1.1s
SWET  Sewanee         21.81  25   P       P       11 39 21.0 -0.9
WVT   Waverly         21.90  21   P       P       11 39 21.3 -1.5
      baz=204
W50A  Signal Mountai  22.05  27   P       P       11 39 21.8 -2.7
W50A                              IAmb    IAmb    11 39 25.0
      comp=Z,18nm,0.9s
T25A  Trinidad        22.21 345   P       P       11 39 27.5 +1.1
      baz=160,SNR=25
CCM   Cathedral Cave  22.79  12   P       P       11 39 31.6 -0.7
CCM   Cathedral Cave  22.79  12   P       P       11 39 32.0 -0.2
      baz=194
R40A  Maddies Statio  22.82  10   P       P       11 39 31.6 -1.1
R40A                              IAmb    IAmb    11 39 34.4
      comp=Z,12nm,0.8s
S44A  Carbondale      22.91  16   P       P       11 39 33.8 +0.3
T47A  Sharon Grove    22.92  21   P       P       11 39 32.5 -1.3
U49A  Red Boiling Sp  22.99  24   P       P       11 39 32.3 -2.1
U49A                              IAmb    IAmb    11 39 36.4
      comp=Z,34nm,1.4s
CBKS  Cedar Bluff     23.05 355   P       P       11 39 34.6 -0.4
      baz=173
SDCO  Great Sand Dun  23.08 343   P       P       11 39 36.1 +0.5
SDCO  Great Sand Dun  23.08 343   P       P       11 39 36.1 +0.5
      baz=158,SNR=20
TKL   Tuckaleechee C  23.12  29   P       P       11 39 36.4 +0.6
      comp=Z,12nm,1.0s,baz=202,slow=9.3,SNR=10
TKL   Tuckaleechee C  23.12  29   P       P       11 39 35.3 -0.6
TKL                               IAmb    IAmb    11 39 37.3
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      comp=Z,15nm,1.1s
KSU1  Kansas State U  23.23   1   P       P       11 39 35.9 -0.9
      baz=180,SNR=8.0
ZARC  Zaragoza, Cauc  23.34 108   P       P       11 39 39.0 +0.9
WUAZ  Wupatki         23.40 330   P       P       11 39 40.4 +1.7
      baz=142,SNR=8.8
GLA   Glamis          23.47 320   P       P       11 39 41.1 +1.7
      baz=132
S22A  4UR Ranch, Cre  23.48 340   P       P       11 39 40.9 +1.2
      baz=155,SNR=16
MVCO  Mesa Verde      23.58 337   P       P       11 39 42.4 +1.7
      baz=151,SNR=6.6
KSCO  Kaye Shedlock'  23.62 349   P       P       11 39 40.8 -0.1
      baz=166
T50A  Nancy           23.81  25   P       P       11 39 40.8 -1.8
T50A                              IAmb    IAmb    11 39 44.1
      comp=Z,18nm,1.1s
KMSC  Kings Mountain  23.93  33   P       P       11 39 43.5 -0.2
      baz=220
TZTN  Tazewell        23.96  28   P       P       11 39 42.8 -1.2
      baz=214,SNR=7.4
Q24A  Divide          24.12 345   P       P       11 39 47.1 +1.2
      baz=160
BC3   Big Chuckawall  24.27 320   P       P       11 39 49.0 +2.0
      baz=131
WCI   Wyandotte Cave  24.32  21   P       P       11 39 46.7 -0.6
WCI   Wyandotte Cave  24.32  21   P       P       11 39 46.3 -1.0
      baz=206
V55A  Taylorsville    24.54  33   P       P       11 39 48.3 -1.0
V55A                              IAmb    IAmb    11 39 50.2
      comp=Z,13nm,0.9s
ISCO  Idaho Springs   25.03 344   P       P       11 39 54.0 -0.1
      baz=159,SNR=15
OGNE  Ogallala        25.42 351   P       P       11 39 57.4 +0.1
      baz=168,SNR=15
HDIL  Hopedale        25.61  14   P       P       11 39 57.9 -1.0
      baz=197,SNR=8.2
SFIN  Lafayette       26.02  18   P       P       11 40 01.1 -1.5
      baz=202
P49A  Miami Univ. Ec  26.04  22   P       P       11 40 01.3 -1.7
      baz=208,SNR=13
O20A  White River Ci  26.11 340   P       P       11 40 05.3 +1.6
      baz=154
N23A  Red Feather La  26.15 345   P       P       11 40 04.6 +0.4
      baz=160,SNR=6.1
SCIA  State Center    26.25   7   P       P       11 40 04.0 -0.8
      baz=188,SNR=5.2
P52A  Corning         27.15  26   P       P       11 40 11.8 -1.1
      baz=213
L44A  Lake County Fo  27.48  15   P       P       11 40 15.2 -0.6
      baz=199
JFWS  Jewell Farm     27.67  11   P       P       11 40 17.3 -0.3
      baz=194
R11A  Troy Canyon, C  27.71 328   P       P       11 40 19.6 +1.4
      baz=138,SNR=6.8
CWC   Cottonwood Cre  27.73 322   P       P       11 40 20.0 +1.6
      baz=131
ECSD  EROS Data Cent  27.85   1   P       P       11 40 18.5 -0.7
      baz=180
DUG   Dugway, Tooele  27.87 334   P       P       11 40 20.9 +1.3
      baz=145
K22A  Casper          27.95 345   P       P       11 40 20.9 +0.6
      baz=160
Q56A  Snyder Ridge,   28.02  31   P       P       11 40 19.7 -1.0
Q56A                              IAmb    IAmb    11 40 24.9
      comp=Z,9.2nm,1.0s
O53A  New Philadelph  28.05  27   P       P       11 40 19.2 -1.8
      baz=214
MCWV  Mont Chateau    28.19  29   P       P       11 40 20.9 -1.3
      baz=217
RSSD  Black Hills     28.83 350   P       P       11 40 29.2 +1.1
RSSD  Black Hills     28.83 350   P       P       11 40 29.3 +1.1
      baz=165
BW06  Boulder Array   28.91 341   P       P       11 40 29.4 +0.5
      baz=154
PDAR  Pinedale Array  28.91 341   P       P       11 40 30.1 +1.3
      comp=Z,0.7nm,0.8s,baz=169,slow=10,SNR=5.1
PDAR                              PcP     PcP     11 43 36.8 -1.1
      comp=Z,0.3nm,0.8s,baz=116,slow=2.1,SNR=2.3
PDAR                              LR      LR      11 52 40.3
      comp=Z,149nm,20.0s,baz=164,slow=38
PDAR  Pinedale Array  28.91 341   P       P       11 40 29.3 +0.4
N54A  Moraine State   29.17  27   P       P       11 40 30.6 -0.3
      baz=215
NVAR  Mina Array Bea  29.23 325   P       P       11 40 33.9 +2.1
      comp=Z,3.0nm,0.8s,baz=151,slow=9.2,SNR=20
NVAR                              PcP     PcP     11 43 39.3 +0.5
      comp=Z,0.3nm,0.6s,baz=132,slow=1.3,SNR=2.1
M53A  WI Miller and   29.26  26   P       P       11 40 31.8  0.0
      baz=214
O56A  Blue Knob Stat  29.27  30   P       P       11 40 31.1 -0.8
      baz=219
ELK   Elko            29.40 331   P       P       11 40 34.6 +1.3
      comp=Z,0.9nm,0.7s,baz=200,slow=7.0,SNR=4.7
SPMN  Marine on St.   29.57   6   P       P       11 40 33.8 -0.7
SPMN  Marine on St.   29.57   6   P       P       11 40 34.3 -0.1
      baz=188
M54A  Oil Creek Stat  29.75  27   P       P       11 40 34.4 -1.8
      baz=215
SSPA  Standing Stone  29.89  30   P       P       11 40 36.1 -1.2
      baz=219
RLMT  Red Lodge       30.97 343   P       P       11 40 48.3 +1.3
RLMT                              IAmb    IAmb    11 40 49.1
      comp=Z,8.9nm,0.9s
RLMT  Red Lodge       30.97 343   P       P       11 40 47.3 +0.3
      baz=156,SNR=9.9
HLID  Hailey          31.34 336   P       P       11 40 51.7 +1.4
      baz=146
LAO   LASA Array      31.72 348   P       P       11 40 54.3 +0.8
      baz=162
MCMT  McKenzie Canyo  31.83 339   P       P       11 40 55.4 +0.6
BINY  Binghamton      32.00  30   P       P       11 40 55.9 -0.1
      baz=221
MDND  Maddock         32.03 357   P       P       11 40 56.5 +0.3
      baz=175
BOZ   Bozeman (W)     32.10 341   P       P       11 40 57.6 +0.6
      baz=152
AGMN  Agassiz Nation  32.43   2   P       P       11 40 59.3 -0.4
      baz=182
DGMT  Dagmar          33.10 351   P       P       11 41 05.5  0.0
      baz=167
HRY   Holter Researc  33.16 341   P       P       11 41 06.9 +0.7
PLID  Pearl Lake      33.24 335   P       P       11 41 07.5 +0.5
PLID                              IAmb    IAmb    11 41 09.1
      comp=Z,9.5nm,1.0s
EGMT  Eagleton        33.78 345   P       P       11 41 12.7 +1.2
      baz=157
MSO   Missoula        33.95 339   P       P       11 41 13.7 +0.6
      baz=149
ULM   Lac du Bonnet   34.38   1   P       P       11 41 17.0 +0.4
      comp=Z,2.5nm,0.9s,baz=186,slow=9.7,SNR=3.0
ULM                               LR      LR      11 55 36.0
      comp=Z,60nm,19.7s,baz=170,slow=37
NEW   Newport         36.30 337   P       P       11 41 34.2 +0.9
      baz=146
D03D  Eldon           38.22 331   P       P       11 41 50.6 +1.1
      baz=136
FFC   Flin Flon       39.03 356   P       P       11 41 56.0 -0.2
ETMB  Extrema         39.84 128   P       P       11 42 07.3 +4.0
PTGA  Pitinga         40.24 111   P       P       11 42 03.4 -3.4
      comp=Z,1.9nm,0.8s,baz=297,slow=11,SNR=2.4
LPAZ  La Paz          42.86 137   LR      LR      11 58 17.5
      comp=Z,90nm,21.6s,baz=294,slow=34
SCHQ  Schefferville   45.47  24   P       P       11 42 47.1 -1.5
      comp=Z,2.5nm,0.8s,baz=245,slow=14,SNR=3.9
SCHQ                              LR      LR      12 05 54.8
      comp=Z,69nm,18.6s,baz=214,slow=41
SCHQ  Schefferville   45.47  24   P       P       11 42 47.7 -0.9
SCHQ                              IAmb    IAmb    11 43 13.7
      comp=Z,8.4nm,1.1s
YKA   Yellowknife Ar  48.24 349   P       P       11 43 08.8 -1.3
      comp=Z,2.0nm,0.8s,baz=158,slow=7.3,SNR=8.3
YKA                               LR      LR      12 04 05.7
      comp=Z,101nm,21.8s,baz=0.0,slow=37
H03N2 Juan Fernandez  51.96 161   T       T       12 39 34.3
      baz=337,slow=78,SNR=45
H03N1 Juan Fernandez  51.97 161   T       T       12 39 32.9
      baz=337,slow=78,SNR=85
H03N3 Juan Fernandez  51.98 161   T       T       12 39 35.2
      baz=337,slow=78,SNR=37
MMPY  Sheldon Lake,   52.52 341   P       P       11 43 44.0 +1.3
      baz=137
FARO  Faro, Yukon     52.92 340   P       P       11 43 47.0 +1.4
      baz=134
N31M  Braeburn, Yuko  53.25 338   P       P       11 43 49.9 +1.8
      baz=131
MESA  MESA            54.84 334   P       P       11 44 01.2 +1.3
      baz=123,SNR=22
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DAWY  Dawson          56.19 339   P       P       11 44 09.8 +0.5
      baz=128
BMRM  Bremner River   56.38 334   P       P       11 44 11.9 +1.1
      baz=121
L27K  Beaver Creek,   56.45 337   P       P       11 44 12.8 +1.6
      baz=125
EYAK  Cordova Ski Ar  56.64 334   P       P       11 44 14.3 +1.8
      baz=120
I29M  Ogilvie Camp,   56.67 341   P       P       11 44 12.8 +0.1
      baz=130
INK   Inuvik          57.36 345   P       P       11 44 17.2 -0.3
      comp=Z,4.6nm,0.8s,baz=122,slow=6.6,SNR=22
INK   Inuvik          57.36 345   P       P       11 44 17.9 +0.5
INK   Inuvik          57.36 345   P       P       11 44 17.4  0.0
      baz=137,SNR=6.7
PAX   Paxson          57.78 336   P       P       11 44 21.9 +1.2
      baz=121
J26L  Joseph Creek    57.91 338   P       P       11 44 23.3 +1.7
      baz=124
O22K  Cooper Landing  58.34 332   P       P       11 44 25.8 +1.3
      baz=116
A36M  Sachs Harbour   58.58 350   P       P       11 44 25.9  0.0
A36M  Sachs Harbour   58.58 350   P       P       11 44 25.4 -0.5
      baz=147,SNR=16
PRP   Porcupine Dome  59.17 339   P       P       11 44 30.5 +0.1
      baz=122
IL31                  59.26 338   P       P       11 44 31.7 +0.9
ILAR  Eielson Array   59.26 338   P       P       11 44 31.0 +0.1
      comp=Z,1.8nm,0.9s,baz=132,slow=5.3,SNR=17
ILAR  Eielson Array   59.26 338   P       P       11 44 31.8 +0.9
TRF   Thorofare Moun  59.92 335   P       P       11 44 36.5 +0.9
      baz=116
BMAR  Burnt Mountain  59.94 341   P       P       11 44 35.9 +0.4
H24K  Noodor Dome     60.17 338   P       P       11 44 37.5 +0.3
H24K                              IAmb    IAmb    11 44 38.6
      comp=Z,4.4nm,0.8s
H24K  Noodor Dome     60.17 338   P       P       11 44 37.4 +0.3
      baz=120
I23K  Minto, Yukon-K  60.36 337   P       P       11 44 38.6 +0.2
      baz=118
BPAW  Bear Paw Mtn.   60.49 336   P       P       11 44 41.4 +2.1
      baz=116
O18K  Koktuh Hills    60.61 331   P       P       11 44 41.0 +0.8
      baz=110
N19K  Bonanza Creek   60.62 332   P       P       11 44 41.1 +0.7
      baz=111
CAST  Castle Rocks    60.63 335   P       P       11 44 40.4 +0.1
      baz=115
MLY   Manley          60.82 337   P       P       11 44 42.1 +0.4
      baz=117
PPT   Papeete         61.37 239   LR      LR      12 04 44.4
      comp=Z,34nm,21.1s,baz=67,slow=30
K20K  Telida          61.42 335   P       P       11 44 45.2 -0.4
      baz=113
PLCA  Paso Flores     61.43 157   LR      LR      12 06 45.7
      comp=Z,56nm,19.1s,baz=338,slow=32
J20K  Nowinta River   61.78 335   P       P       11 44 47.8 -0.2
      baz=113
H21K  Melozitna Rive  61.88 337   P       P       11 44 48.8 +0.1
      baz=115
TTA   Tatalina        62.07 334   P       P       11 44 50.2 +0.1
      baz=111
TOLK  Toolik Lake Re  62.17 341   P       P       11 44 51.2 +0.5
      baz=120
BORG  Borgarnes       69.80  26   LR      LR      12 16 13.1
      comp=Z,39nm,20.5s,baz=251,slow=36
ESDC  Sonseca Array   82.50  51   P       P       11 46 51.9 -0.7
      comp=Z,1.5nm,0.8s,baz=310,slow=4.1,SNR=8.4
NOA   NORSAR Array B  84.92  28   P       P       11 47 04.7 +0.1
      comp=Z,1.8nm,1.0s,baz=338,slow=5.9,SNR=3.3
NOA                               LR      LR      12 25 53.0
      comp=Z,18nm,19.6s,baz=350,slow=36
ARCES ARCESS Array B  85.96  17   LR      LR      12 26 49.4
      comp=Z,22nm,21.6s,baz=5.0,slow=36
GERES GERESS Array B  91.35  38   P       P       11 47 34.9 -0.7
      comp=Z,0.5nm,0.8s,baz=305,slow=5.9,SNR=4.1
LZH   Lanzhou        124.71 339 ePKP      PKPdf   11 53 31.7 +1.7
WRA   Warramunga Arr 130.95 257   PKP     PKPdf   11 53 41.9 -0.1
      comp=Z,0.3nm,0.7s,baz=84,slow=2.8,SNR=2.7
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*NEIC **12** 11:39:19.8±1.4, 4.°15S±0.°09×129.°41E±0.°06, h10^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=16.0km s-min=7.8km az=332.0*

*DJA **12** 11:39:21.3±0.8, 4°S±2°×12°9E±°, h16^{km}±6^{km}, M4.4/11, mB5.5/3, mb4.5/11, MLv4.3/11, Mw(mB)5.0/3*

*IDC **12** 11:39:22.7±3.2, 4.°15S×129.°45E, h31^{km}±24^{km}, mb3.6/6, mb1 4.0/12, mb1mx3.7/41, mbtmp4.0/12, ML4.1/5, MS3.1/9, Ms1 3.0/9, ms1mx2.8/29, Error ellipse: s-maj=24.4km s-min=16.5km az=88.0*

ISC 12 11:39:22.3±0.5**, 4.°21S**±0.°05×**129.°37E**±0.°05**, h36^{km}, n39, σ1.s56**/46**, mb4.0**/8**, MS2.9**/3**, Banda Sea**

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Code  Station Name     Δ°   AZ°    Phase ID          Time      Res
                                  Op      ISC       h  m  s    ISC
MSAI  Masohi           0.96 333   P       Pn      11 39 37.4 -1.9
MSAI                              S       Sn      11 39 49.5 -2.3
AAI   Ambon            1.28 294   P       Pn      11 39 42.8 -0.9
AAI                               S       Sn      11 39 58.5 -1.1
FAKI  Fak Fak          3.15  66   P       Pn      11 40 09.6 +0.3
FAKI                              S       Sn      11 40 46.9 +1.2
FAKI  Fak Fak          3.15  66   Pn      Pn      11 40 09.6 +0.3
SIJI  Sorong           3.82  30   Pn      Pn      11 40 18.6 -0.1
      27nm,0.3s,baz=54,slow=9.6,SNR=64
SIJI                              Sn      Sn      11 41 00.7 -1.6
      12nm,0.3s,baz=70,slow=23,SNR=8.6
SIJI                              LR      LR      11 42 22.7
      comp=Z,222nm,18.9s,baz=222,slow=48
SWI   Sorong           3.82  30   P       Pn      11 40 18.7 +0.1
SWI                               S       Sn      11 41 01.5 -0.9
SANI  Sanana           4.00 302   P       Pn      11 40 21.6 +0.5
LBMI  Labuha           4.01 332   P       Pn      11 40 21.2  0.0
SAUI  Saumlaki         4.21 153   P       Pn      11 40 25.8 +1.8
SAUI  Saumlaki         4.21 153   Pn      Pn      11 40 24.1 +0.1
BATI  Baumata          8.22 223   Pn      Pn      11 41 20.9 +1.8
      4.5nm,0.3s,baz=41,slow=5.6,SNR=1.6
BATI                              LR      LR      11 44 49.4
      comp=Z,196nm,20.4s,baz=38,slow=39
MTN   Manton Dam       8.76 169   Pn      Pn      11 41 26.5 +0.1
EDFI  Ende, Flores     8.86 239   P       Pn      11 41 31.2 +3.2
      7.4nm,0.8s
KAPI  Kappang          9.62 265   Pn      Pn      11 41 39.9 +1.6
      2.1nm,0.3s,baz=210,slow=18,SNR=1.8
KAPI                              LR      LR      11 45 46.9
      comp=Z,52nm,18.5s,baz=139,slow=40
KNRA  Kununurra       11.41 183           Pn      11 42 05.0 +2.1
DAV   Davao City (W)  11.82 341   LR      LR      11 47 28.2
      comp=Z,106nm,18.6s,baz=100,slow=41
PLAI  Plampang        12.40 248   P       P       11 42 27.4 -0.4
FITZ  Fitzroy Crossi  14.28 195   Pn      Pn      11 42 41.8 -0.2
      0.2nm,0.3s,baz=181,slow=23,SNR=20
WRA   Warramunga Arr  16.37 163   Pn      Pn      11 43 07.7 -1.8
      0.3nm,0.3s,baz=347,slow=13,SNR=20
WRA                               Sn      Sn      11 46 03.8 -6.4
      0.1nm,0.3s,baz=342,slow=23,SNR=3.2
COEN  Coen            16.71 126           Pn      11 43 12.2 -1.6
COEN                              IAmb    IAmb    11 43 27.2
      comp=Z,9.1nm,0.7s
PMG   Port Moresby    18.40 107   P       Pn      11 43 36.0 +1.3
      comp=Z,0.5nm,0.3s,baz=326,slow=12,SNR=1.9
PMG                               LR      LR      11 50 51.7
      comp=Z,63nm,21.6s,baz=236,slow=38
PSA00 Pilbara Seismi  19.58 207   P       Pn      11 43 48.2 -0.7
PSA00                             IAmb    IAmb    11 43 51.2
      comp=Z,14nm,0.8s
PSA00 Pilbara Seismi  19.58 207   P       Pn      11 43 48.2 -0.7
PSA00                             IAmb    IAmb    11 43 50.8
      comp=Z,10nm,1.0s
AS31  Alice Springs   19.83 168   P       Pn      11 43 51.0 -0.9
ASAR  Alice Springs   19.83 168   P       Pn      11 43 52.6 +0.7
      comp=Z,0.9nm,0.3s,baz=347,slow=10,SNR=86
ASAR                              S       S       11 47 30.2 -1.5
      baz=358,slow=23,SNR=6.9
ASAR                              PcP     PcP     11 48 08.0 +0.8
      comp=Z,0.1nm,0.3s,baz=5.2,slow=1.1,SNR=1.6
ASAR                              ScP     ScP     11 51 42.3 +1.5
      comp=Z,0.1nm,0.3s,baz=336,slow=4.1,SNR=3.0
ASAR                              LR      LR      11 52 01.4
      comp=Z,52nm,19.6s,baz=334,slow=38
ASAR  Alice Springs   19.83 168   P       Pn      11 43 52.1 +0.2
LEM   Lembang         21.80 262   LR      LR      11 52 50.8
      comp=Z,42nm,19.4s,baz=91,slow=37
CTAO  Charters Tower  22.80 135   P       P       11 44 22.4 +0.3
CTAO                              IAmb    IAmb    11 44 47.5
      comp=Z,9.3nm,1.1s
```

FORT	Forrest	26.46	183	P	P	11 44 55.7	-0.3
STKA	Stephens Creek	29.82	159	P	P	11 45 26.4	+0.3
	comp=Z,0.6nm,0.5s,baz=347,slow=14,SNR=1.5						
STKA				LR	LR	11 57 29.6	
	comp=Z,36nm,18.1s,baz=22,slow=36						
CMAR	Chiang Mai Arr	37.50	308	P	P	11 46 35.2	+2.2
	comp=Z,1.0nm,0.4s,baz=138,slow=7.6,SNR=5.5						
CMAR	Chiang Mai Arr	37.50	308	P	P	11 46 34.0	+1.0
CHTO	Chiang Mai	37.70	308		P	11 46 34.4	-0.3
CHTO				IAmb	IAmb	11 46 46.8	
	comp=Z,5.2nm,0.8s						
MJAR	Matsushiro Arr	41.37	11	P	P	11 47 04.8	-0.2
	comp=Z,1.6nm,0.7s,baz=166,slow=11,SNR=2.4						
MJAR				LR	LR	12 02 02.5	
	comp=Z,14nm,21.3s,baz=95,slow=33						
KSRS	Korea Array	41.47	358	P	P	11 47 05.4	-0.4
	comp=Z,0.5nm,0.6s,baz=178,slow=9.7,SNR=2.0						
SONM	Songino Array	55.61	341	P	P	11 48 55.7	+1.1
	comp=Z,0.5nm,0.6s,baz=148,slow=8.5,SNR=3.1						
ZALV	Zalesovo Beam	68.82	334	P	P	11 50 23.2	+0.4
	comp=Z,0.6nm,0.4s,baz=92,slow=7.4,SNR=2.3						
ABKAR	Akbulak array	79.95	321	P	P	11 51 28.0	+0.4
TORD	Torodi Ar. Bea	127.61	283	PKP	PKiKP	11 58 25.1	-0.2
	comp=Z,0.2nm,0.6s,baz=81,slow=2.3,SNR=1.6						

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*MOS **12** 11:48:24.2±0.0, 42°.56N×36°.12E, h41^{km}±613^{km}, MPVA3.7*
*CFUSG **12** 11:48:25.2, 42°.60N×36°.10E, h21^{km}, MD3.0/4, Black Sea district 9 Magtype MSH 2.9 from 5 stations*
*DDA **12** 11:48:25.4, 42°.42N×36°.13E, h38^{km}, MW3.4*
*ISK **12** 11:48:25.2, 42°.52N×36°.07E, h20^{km}, ML3.6/14*
ISC 12 11:48:24.2±1.1, **42°.60N**±0°.02×**36°.15E**±0°.03, **h20**^{km}±6^{km}, **n64**, σ**1^s.21**/107, **5C-5D, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNOP	Sinop	0.91	231	Pg	Pb	11 48 41.5	+0.3
SNOP				Sg	Sb	11 48 53.3	+0.5
SNOP	Sinop	0.91	231	PG	Pb	11 48 41.5	+0.3
SNOP				SG	Sb	11 48 53.3	+0.5
SINO	SINOP_Merkez	0.91	231	*i* P	Pn	11 48 41.6	-0.1
SINO				*i* S	Sb	11 48 53.1	+0.1
SINO				IAML		11 48 56.0	
	comp=E,376nm,0.6s						
DIKM	Dikmen	1.16	215	⇓P	Pb	11 48 45.8	+0.3
DIKM	Dikmen	1.16	215	PG	Pb	11 48 45.5	+0.1
DIKM				SG	Sb	11 49 00.1	+0.1
SAMS	Samsun-Alacam	1.24	179	*i* P	Pn	11 48 45.5	-0.7
SAMS				*i* S	Sn	11 49 01.2	-1.1
SAMS				IAML		11 49 02.0	
	comp=N,394nm,0.3s						
SAMS				IAML		11 49 05.0	
	comp=E,324nm,0.1s						
KVT	Kavak	1.52	183	PN	Pn	11 48 50.7	+0.5
BOYA	Sinop/Boyabat-	1.53	226	*i* P	Pb	11 48 51.5	-0.2
BOYA				*i* S	Sn	11 49 07.3	-2.2
BOYA				IAML		11 49 11.0	
	comp=E,109nm,0.5s						
HAVZ	Havza	1.56	192	*e*P	Pn	11 48 50.8	+0.1
HAVZ				*i* S	Sn	11 49 10.2	-0.1
HAVZ	Havza	1.56	192	*i* P	Pn	11 48 50.8	+0.1
HAVZ				*i* S	Sn	11 49 10.2	-0.1
HAVZ				IAML		11 49 13.0	
	comp=N,231nm,0.7s						
HAVZ				IAML		11 49 13.0	
	comp=E,335nm,0.3s						
YARM	Yarimca-Ladik(	1.69	188	PN	Pn	11 48 53.3	+0.7
KIZO	Buyukkizoglu-L	1.71	186	PN	Pn	11 48 53.5	+0.7
HKOY	Hamitkoy-Ladik	1.71	184	PN	Pn	11 48 53.8	+0.9
BZK	Bozkurt	1.71	249	⇑P	Pb	11 48 54.1	-0.9
BZK	Bozkurt	1.71	249	P	Pb	11 48 54.0	-0.9
BZK	Bozkurt	1.71	249	PN	Pn	11 48 53.8	+1.0
KUPE	Kupecik-Ladik(	1.72	183	PN	Pn	11 48 53.8	+0.8
ERBA	Erbaa	1.97	166	*i* P	Pn	11 48 56.5	+0.2
ERBA				*i* S	Sn	11 49 19.6	-0.9
ERBA				IAML		11 49 21.0	
	comp=E,140nm,0.4s						
ERBA				IAML		11 49 22.0	
	comp=N,107nm,0.3s						
AMSY	Amasya-Merkez	1.97	187	*i* P	Pn	11 48 57.9	+1.4
ORDU	Ordu-Boztepe	2.05	141	*i* P	Pn	11 48 58.9	+1.4
ORDU				*i* S	Sn	11 49 22.9	+0.4
ORDU				IAML		11 49 32.0	
	comp=N,100nm,0.5s						
ORDU				IAML		11 49 32.0	
	comp=E,106nm,0.7s						
TOKT	Tokat	2.30	172	PN	Pn	11 49 02.2	+1.3
RSDY	Resadiye-TOKAT	2.37	158	PN	Pn	11 49 02.6	+0.7
ILGA	Ilgaz	2.39	230	*i* P	Pn	11 49 03.5	+1.2
ILGA				*i* S	Sn	11 49 30.7	-0.3
ILGA				IAML		11 49 37.0	
	comp=E,55nm,0.8s						
ILGA				IAML		11 49 38.0	
	comp=N,64nm,0.6s						
SUDU	Sudak	2.44	340	*e*P	Pn	11 49 02.6	-0.2
SUDU				P	Pb	11 49 09.2	+1.9
	comp=Z,8.0nm,0.2s						
SUDU				*e*S	Sn	11 49 30.3	-1.6
SUDU				S	Sn	11 49 35.1	+3.2
	comp=N,29nm,0.3s						
SUDU				S	Sn	11 49 35.2	+3.3
	comp=E,14nm,0.2s						
SUDU	Sudak	2.44	340	*e*Pn	Pn	11 49 02.6	-0.2
SUDU				*e*Sn	Sn	11 49 30.3	-1.6
ALU	Alushta	2.44	329	⇑*i*P	Pn	11 49 02.9	+0.1
ALU				P	Pn	11 49 03.1	+0.3
	comp=Z,10.0nm,0.2s						
ALU				*e*S	Sn	11 49 31.8	-0.1
ALU				S	Sn	11 49 32.8	+0.9
	comp=N,115nm,0.3s						
ALU				S	Sn	11 49 32.9	+1.0
	comp=E,46nm,0.2s						
ALU	Alushta	2.44	329	*i* Pn	Pn	11 49 02.9	+0.1
ALU				*e*Sn	Sn	11 49 31.8	-0.1
FEO	Feodosiya	2.48	347	*e*x	x	11 49 05.1	
FEO				*e*x	x	11 49 35.8	
FEO				S	Sb	11 49 36.8	-1.3
	comp=E,19nm,0.2s						
FEO				S	Sb	11 49 36.8	-1.3
	comp=N,12nm,0.2s						
PELI	Kastamonı-Ara	2.48	239	*i* P	Pn	11 49 04.9	+1.4
PELI				*i* S	Sn	11 49 32.9	-0.3
PELI				IAML		11 49 38.0	
	comp=E,28nm,0.5s						
PELI				IAML		11 49 40.0	
	comp=N,29nm,0.4s						
COAL	Corum-Alaca	2.50	201	*i* P	Pn	11 49 03.9	+0.2
COAL				*i* S	Sn	11 49 32.9	-0.8
COAL				IAML		11 49 36.0	
	comp=N,36nm,0.9s						
COAL				IAML		11 49 38.0	
	comp=E,30nm,0.5s						
SPGR	Shapsug	2.56	32	*e*Pn	Pn	11 49 05.4	+1.0
SPGR				*e*Sn	Sn	11 49 34.8	-0.1
KURC	Kurucasile-Bar	2.64	255	PN	Pn	11 49 06.7	+1.2
SEV	Sevastopol'	2.65	318	*e*P	Pn	11 49 05.6	-0.1
SEV				P	Pn	11 49 10.9	+5.2
	comp=Z,4.0nm,0.2s						
SEV				*e*S	Sn	11 49 35.7	-1.5
SEV				S	Sn	11 49 37.2	0.0
	comp=N,100nm,0.2s,comp=E,6.0nm,0.2s						
SEV	Sevastopol'	2.65	318	*e*Pn	Pn	11 49 05.6	-0.1
SEV				*e*Sn	Sn	11 49 35.7	-1.5
CORM	Corum	2.67	206	PN	Pn	11 49 07.1	+0.9
LZRR	Lazarevskoye	2.71	59	*i* Pn	Pn	11 49 07.4	+0.9
LZRR				*i* Sn	Sn	11 49 38.8	+0.1
SVSK	Karacayir	2.75	166	PN	Pn	11 49 08.4	+1.3
SIM	Simferopol'	2.77	329	*e*S	Sn	11 49 40.3	+0.1
SIM				S	Sn	11 49 40.6	+0.4
	comp=N,20nm,0.2s,comp=E,12nm,0.2s						
SIM	Simferopol'	2.77	329	*e*Pn	Pn	11 49 08.0	+0.6
SIM				*e*Sn	Sn	11 49 40.3	+0.1
SOC	Sochi	2.79	68	*e*Pn	Pn	11 49 08.2	+0.5
SOC				*e*Sn	Sn	11 49 39.7	-1.0
SUSE	Susehri	2.84	146	*i* P	Pn	11 49 11.1	+2.6
SUSE				*i* S	Sn	11 49 43.9	+1.6
SUSE				IAML		11 49 46.0	
	comp=N,35nm,0.5s						
SUSE				IAML		11 49 56.0	
	comp=E,41nm,0.6s						
GOYR	Goytkh	2.87	54	*e*Pn	Pn	11 49 09.5	+0.7
GOYR				*e*Sn	Sn	11 49 41.7	-0.9
HACI	Hacifakili, Ak	2.91	186	*i* P	Pn	11 49 07.9	-1.5
VSLR	Vesyoloye	2.98	72	*e*Pn	Pn	11 49 10.1	-0.1
VSLR				*e*Sn	Sn	11 49 43.3	-2.0
ALUC	Giresun/Alucra	2.99	138	*i* P	Pn	11 49 11.6	+1.0
ALUC				*i* S	Sn	11 49 46.0	+0.1
ALUC				IAML		11 49 52.0	
	comp=E,58nm,0.4s						
ALUC				IAML		11 50 08.0	
	comp=N,50nm,0.6s						
YOZ	Yozgat	3.02	192	PN	Pn	11 49 12.3	+1.3
DELI	KIRIKKALE	3.09	214	*i* P	Pn	11 49 13.3	+1.4
DELI				*i* S	Sn	11 49 47.4	-0.9
KTUT	Trabzon	3.15	120	⇑P	Pn	11 49 05.7	-6.8
MACK	Trabzon	3.17	120	*i* P	Pn	11 49 14.2	+1.3
MACK				*i* S	Sn	11 49 49.0	-1.1
RPOR	Krasnaya Polya	3.21	69	*i* Pn	Pn	11 49 13.4	0.0
RPOR				*e*Sn	Sn	11 49 48.9	-2.1
GUZR	Guzeripl'	3.22	63	*i* Pn	Pn	11 49 14.5	+1.0
GUZR				*e*Sn	Sn	11 49 50.1	-1.2
SIRC	Yozgat	3.35	193	*i* P	Pn	11 49 15.9	+0.5
SIRC				*i* S	Sn	11 49 52.8	-1.8
CUAYA	Sivas-Altinyay	3.36	172	*i* P	Pn	11 49 16.8	+1.2
KELT	Kelkit	3.38	135	*i* P	Pn	11 49 17.9	+1.9
KELT				*i* S	Sn	11 49 56.6	+0.9
KELT				IAML		11 49 59.0	
	comp=E,18nm,0.4s						
BRTR	Keskin Array B	3.44	214	PN	Pn	11 49 17.6	+0.9
BAYB	BAYBURT	3.87	126	*i* P	Pn	11 49 23.1	+0.3
BCA	Borcka	4.24	104	⇑P	Pn	11 49 26.9	-0.7
BATM	Batumi	4.24	102	⇑P	Pn	11 49 27.4	-0.2
CHVG	Ch'k'valeri	4.38	86	⇓P	Pn	11 49 31.4	+1.9
NEY	Neytrino	4.87	80	*i* Pn	Pn	11 49 38.3	+1.9
NEY				*e*Sn	Sn	11 50 29.5	-2.7
SHA1	Shidzhatmaz	4.89	74	*i* Pn	Pn	11 49 38.3	+1.6
SHA1				*e*Sn	Sn	11 50 30.5	-2.4
TIRR	Tirgusor	5.92	291	⇓P	Pn	11 49 48.4	-2.2
TPGR	Topolog	6.04	295	⇓P	Pn	11 49 50.0	-2.3
CFR	Carcaliu	6.34	297	⇓P	Pn	11 49 54.5	-1.8

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*IDC **12** 12:13:54.8±1.3, 48°.91S×124°.84E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.8/17, mbtmp3.7/5, MS3.6/5, Ms1 3.6/5, ms1mx3.3/12, Error ellipse: s-maj=57.5km s-min=27.1km az=113.0*
ISC 12 12:13:56.1±1.2, **48°.9S**±0°.2×**124°.9E**±0°.4, **h10**^{km}, **n11**, σ**0^s.98**/6, **mb3.7**/5, **MS3.5**/5, **Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	16.11	327	T	T	12 34 21.6	
	baz=159,slow=79,SNR=41						
H01W2	Cape Leeuwin H	16.12	327	T	T	12 34 23.6	
	baz=159,slow=79,SNR=39						
H01W3	Cape Leeuwin H	16.13	327	T	T	12 34 22.7	
	baz=159,slow=79,SNR=44						
STKA	Stephens Creek	21.20	43	P	P	12 18 42.6	+1.0
	2.4nm,0.7s,baz=198,slow=9.9,SNR=5.5						
STKA				LR	LR	12 25 28.6	
	comp=Z,182nm,20.6s,baz=206,slow=33						
ASAR	Alice Springs	26.21	19	P	P	12 19 30.9	-0.1
	1.4nm,0.8s,baz=191,slow=9.9,SNR=15						
ASAR				LR	LR	12 28 42.0	
	comp=Z,311nm,22.0s,baz=214,slow=34						
WRA	Warramunga Arr	29.91	18	P	P	12 20 02.9	-1.2
	0.4nm,1.0s,baz=193,slow=7.6,SNR=2.3						
WRA				LR	LR	12 31 07.7	
	comp=Z,292nm,20.7s,baz=180,slow=34						
MAW	Mawson	35.60	216	LR	LR	12 32 23.9	
	comp=Z,43nm,19.8s,baz=56,slow=31						
URZ	Urewera	38.61	94	LR	LR	12 35 01.1	
	comp=Z,47nm,21.0s,baz=210,slow=33						
SNAA	Sanae	54.16	198	P	P	12 23 20.9	0.0
	0.9nm,0.9s,baz=169,slow=3.4,SNR=1.8						
CMAR	Chiang Mai Arr	70.95	334	P	P	12 25 14.2	+0.6
	0.9nm,0.7s,baz=186,slow=5.2,SNR=6.8						
YKA	Yellowknife Ar	145.22	45	PKPbc	PKPab	12 33 32.0	-0.4
	1.9nm,0.7s,baz=266,slow=3.5,SNR=13						

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*IDC **12** 12:14:36.6±0.6, 12°.79S×14°.65W, h0^{km}, mb4.2/22, mb1 4.4/22, mb1mx4.3/37, mbtmp4.2/22, MS4.1/30, Ms1 4.0/30, ms1mx4.0/31, Error ellipse: s-maj=23.1km s-min=13.2km az=141.0*
*GCMT **12** 12:14:38.1±0.2, 12°.60S±0°.03×14°.58W±0°.01, h12^{km}, MW5.0/97, Moment Tensor Solution. s37,c41; s97,c133; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.64±.09; $M_{\theta\theta}$-0.18±.09; $M_{\phi\phi}$2.81±.07; $M_{r\theta}$2.24±.35; $M_{\theta\phi}$0.03±.07; $M_{\phi r}$1.50±.28; Best double couple: $M_0$3.76000×10^{16} NP1:ϕ_s340.00000°, δ34.00000°, λ-136.00000°. NP2: ϕ_s212.00000°, δ67.00000°, λ-64.00000°. Principal axes: T 3.3200, Plg18.0000°, Azm283.0000°; N 0.8750, Plg24.0000°, Azm21.0000°; P -4.2010, Plg59.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **12** 12:14:39.1±1.9, 12°.80S±0°.07×14°.68W±0°.09, h10^{km}±1^{km}, mb4.8/27 Error ellipse: s-maj=15.3km s-min=12.0km az=252.0*
ISC 12 12:14:39.0±0.4, **12°.85S**±0°.08×**14°.64W**±0°.06, **h16**^{km}, **n154**, σ**0^s.75**/138, **mb4.6**/45, **MS4.1**/30, **1D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	3.86	360	T	T	12 19 37.4	
	baz=191,slow=74,SNR=278						
H10S3	ASCENSION HYDR	3.87	360	T	T	12 19 48.3	
	baz=29,slow=74,SNR=477						
ASCN	Ascension	4.89	3	Pn	Pn	12 15 51.9	0.0
H10N1	ASCENSION HYDR	4.97	2	T	T	12 21 15.6	
	baz=184,slow=74,SNR=131						
H10N3	ASCENSION HYDR	4.98	2	T	T	12 21 05.7	
	baz=184,slow=74,SNR=445						
H10N2	ASCENSION HYDR	4.99	2	T	T	12 21 14.2	
	baz=184,slow=74,SNR=154						
SHEL	Horse Pasture	9.16	111	Pn	Pn	12 16 51.6	+1.0
NBRF	Rio Formoso -	20.54	280	*e*P	P	12 19 15.5	-1.5
LIC	Lamto	21.22	27	*e*P	P	12 19 27.4	+3.1
	111nm,1.4s						
NBPV	Pedro Velho	21.32	285	*e*P	P	12 19 26.4	+0.9
NBAN	Anadia - AL	21.45	276	*e*P	P	12 19 27.2	+0.4
KIC	Kosan Boka	21.47	28	*e*P	P	12 19 25.9	-1.1
	25nm,0.9s						
TIC	Toumodi	21.60	27	*e*P	P	12 19 28.3	-0.1
DBIC	Dimbokro	21.69	27	P	P	12 19 29.4	+0.1
	4.6nm,0.9s,baz=212,slow=12,SNR=4.1						
DBIC				LR	LR	12 25 46.3	
	comp=Z,618nm,21.6s,baz=216,slow=31						
DBIC	Dimbokro	21.69	27	P	P	12 19 29.6	+0.2
NBLV	Livramento - P	22.59	282	*e*P	P	12 19 39.4	+0.2
NBLA	Lagarto - SE	22.72	272	*e*P	P	12 19 40.1	-0.4
NBPA	Parau_RN	23.25	286	*e*P	P	12 19 46.1	+0.1
NBIT	Itapeh - BA	24.15	262	*e*P	P	12 19 54.9	+0.3
CMC01	Camacan, BA	24.25	261	*e*P	P	12 19 55.9	+0.4
GDU01	Guandu, BA	24.28	265	*e*P	P	12 19 55.9	+0.1
NBMA	Muriti-CE	24.35	281	*e*P	P	12 19 56.8	+0.2
GUA01	Guaratinga, BA	24.61	258	*e*P	P	12 20 00.5	+1.6
NBCL	Cascavel-CE	24.88	288	*e*P	P	12 20 01.8	+0.5
NBPN	Ponto Novo - B	25.09	272	*e*P	P	12 20 03.1	-0.1
RIB01	Linhares ES	25.55	252	*e*P	P	12 20 07.5	+0.2
NBPB	Pedra_Branca-C	25.65	284	*e*P	P	12 20 08.6	+0.3
BSFB	Barra de Sao F	25.88	253	*e*P	P	12 20 11.0	+0.6
ALF01	Guarapari-ES	26.12	249	*e*P	P	12 20 13.1	+0.7
SJMB	Sao Joao De Ma	26.18	254	*e*P	P	12 20 13.5	+0.4
NBMO	Morrinhos-CE	26.84	289	*e*P	P	12 20 20.5	+1.4
CAM01	Campos-RJ	27.25	247	*e*P	P	12 20 23.2	+0.5
NBPS	Pedro II - PI	27.77	285	*e*P	P	12 20 28.4	+0.8
DUB01	Friburgo-RJ	27.96	247	*e*P	P	12 20 29.9	+0.8
DIAM	Diamantina, MG	28.46	255	*e*P	P	12 20 33.4	-0.4
MC01	Montes Claros	28.57	259	*e*P	P	12 20 34.7	0.0
JANB	Januaria	28.87	262	*e*P	P	12 20 37.5	+0.3
VAS01	Vassouras-RJ	28.97	247	*e*P	P	12 20 38.2	+0.1
KOWA	Kowa	29.14	22	P	P	12 20 39.5	0.0
	1.0nm,0.3s,baz=184,slow=6.8,SNR=6.5						
KOWA				LR	LR	12 30 37.9	
	comp=Z,788nm,19.0s,baz=205,slow=33						
SDBA	SAO DESIDERIO	29.52	267	*e*P	P	12 20 42.7	-0.4
BSCB	Bom Sucesso	29.90	250	*e*P	P	12 20 46.9	+0.5
TORD	Torodi Ar. Bea	30.49	33	P	P	12 20 50.2	-1.2
	2.1nm,0.8s,baz=221,slow=9.0,SNR=13						
TORD				PcP	PcP	12 23 51.3	+0.6
	0.2nm,0.4s,baz=172,slow=3.5,SNR=1.7						
TORD				LR	LR	12 31 11.3	
	comp=Z,573nm,20.1s,baz=230,slow=33						
ROSB	Rosrio	30.79	286	*e*P	P	12 20 54.4	+0.2
VAO	Valinhos	32.30	247	*e*P	P	12 21 07.9	+0.4
BDFB	Brasilia	32.45	261	P	P	12 21 09.0	+0.1
	9.6nm,0.8s,baz=78,slow=7.6,SNR=12						
BDFB				LR	LR	12 31 32.7	
	comp=Z,430nm,21.6s,baz=128,slow=31						
BDFB	Brasilia	32.45	261	P	P	12 21 09.4	+0.5
BDFB				IAmb	IAmb	12 21 17.4	
	comp=Z,16nm,1.1s						
SMTB	Santa Maria do	32.58	274	*e*P	P	12 21 10.4	+0.4
RCLB	Rio Claro- Sao	32.69	248	*e*P	P	12 21 11.8	+0.8
IPMB	Ipameri, GO	32.73	257	*e*P	P	12 21 11.9	+0.6
PEXB	Peixe	32.86	268	*e*P	P	12 21 12.8	+0.3
PET01	Itanhaem-SP	32.88	245	*e*P	P	12 21 12.1	-0.4
BB19B	Bebedouro	33.37	251	*e*P	P	12 21 17.0	+0.1
TIJ01	Guaruva-PR	34.65	244	*e*P	P	12 21 28.7	+0.6
FRTB	Fartura	34.71	248	*e*P	P	12 21 29.2	+0.6
ITRB	Iturama	34.91	254	*e*P	P	12 21 31.1	+0.9
PRPB	Parauapebas	35.29	278	*e*P	P	12 21 32.9	-0.6
SNDB	Serra Nova Dou	35.79	267	*e*P	P	12 21 38.4	+0.6
PCMB	Pacaembu	35.97	251	*e*P	P	12 21 39.9	+0.5
ARAG	Araguaiana, MT	36.10	261	*e*P	P	12 21 41.1	+0.6
PP1B	Ponte de Pedra	39.06	258	*e*P	P	12 22 06.3	+0.8
MCPB	Macapa, AP	39.10	286	*e*P	P	12 22 06.5	+0.5
LBTB	Lobatse	39.79	114	LR	LR	12 35 40.0	
	comp=Z,499nm,21.8s,baz=232,slow=32						
SALV	Santo Antonio	39.84	261	*e*P	P	12 22 12.8	+0.7
AQDB	Aquidauana	39.97	253	*e*P	P	12 22 13.5	+0.4
BOSA	Boshof	40.26	119	LR	LR	12 36 05.6	
	comp=Z,566nm,19.5s,baz=278,slow=32						
CLDB	Colider	40.29	268	*e*P	P	12 22 16.4	+0.5
PLTB	Pedras Altas	40.38	236	*e*P	P	12 22 16.9	+0.5
PLTB	Pedras Altas	40.38	236	P	P	12 22 16.0	-0.4
PLTB				IAmb	IAmb	12 22 19.2	
	comp=Z,36nm,1.4s						
NPGB	Novo Progresso	40.48	274	*e*P	P	12 22 17.9	+0.5
MALB	Monte Alegre	40.72	282	*e*P	P	12 22 19.8	+0.4
PDRB	Porto dos Gac	41.12	267	*e*P	P	12 22 22.4	-0.3
ITTB	Itaituba	41.44	278	*e*P	P	12 22 25.6	+0.3
LSZ	Lusaka	41.57	99	P	P	12 22 26.0	-0.6
	comp=Z,4.1nm,0.8s,baz=279,slow=11,SNR=5.4						
LSZ				LR	LR	12 36 57.5	
	comp=Z,457nm,21.6s,baz=294,slow=32						
LSZ	Lusaka	41.57	99	P	P	12 22 27.4	+0.8
LSZ				IAmb	IAmb	12 22 29.0	
	comp=Z,20nm,1.4s						
MDP	Montagnes des	41.75	293	LR	LR	12 36 43.4	
	comp=Z,234nm,21.7s,baz=114,slow=32						
MATP	Matopo	41.92	106	LR	LR	12 37 32.0	
	comp=Z,204nm,21.8s,baz=300,slow=33						
CPUP	Villa Florida	42.20	245	P	P	12 22 31.6	+0.2
	comp=Z,4.0nm,0.8s,baz=119,slow=8.4,SNR=5.1						
CPUP				LR	LR	12 37 18.5	
	comp=Z,371nm,21.6s,baz=76,slow=32						
CPUP	Villa Florida	42.20	245	*e*P	P	12 22 32.0	+0.6
ITQB	Itaqui	42.29	240	*e*P	P	12 22 32.1	+0.1
PTLB	Pontes e Lacer	43.17	261	*e*P	P	12 22 40.0	+0.6
PTLB	Pontes e Lacer	43.17	261	P	P	12 22 39.9	+0.6
PTLB				IAmb	IAmb	12 22 44.0	
	comp=Z,16nm,1.4s						
VILB	Vilhena	44.36	265	*e*P	P	12 22 49.4	+0.3
SIV	San Ignacio	45.01	260	P	P	12 22 54.8	+0.6
	comp=Z,2.8nm,0.7s,baz=102,slow=8.6,SNR=13						
SIV				LR	LR	12 41 19.9	
	comp=Z,135nm,18.2s,baz=96,slow=36						
MDT	Midelt	46.41	12	P	P	12 23 04.9	-0.1
	comp=Z,2.3nm,0.8s,baz=231,slow=6.5,SNR=4.0						
MDT				LR	LR	12 41 22.6	
	comp=Z,162nm,19.0s,baz=202,slow=35						
MBAR	Mbarara	46.58	78	P	P	12 23 07.3	+0.4
MBAR				IAmb	IAmb	12 23 11.2	
	comp=Z,6.8nm,1.1s						
SAML	Samuel	47.77	270	P	P	12 23 16.4	+0.5
SAML				IAmb	IAmb	12 23 18.5	
	comp=Z,6.6nm,0.8s						
BOAV	Boa Vista	47.99	285	*e*P	P	12 23 18.4	+0.8
BOAV	Boa Vista	47.99	285	P	P	12 23 18.8	+1.1
TRQA	Tornquist	48.90	230	P	P	12 23 24.6	+0.2
TRQA				IAmb	IAmb	12 23 33.1	
	comp=Z,17nm,1.2s						
ETMB	Extrema	50.59	268	*e*P	P	12 23 38.3	+0.8
ETMB	Extrema	50.59	268	P	P	12 23 37.8	+0.3
ETMB				IAmb	IAmb	12 23 41.0	
	comp=Z,9.7nm,0.9s						
LPAZ	La Paz	51.77	259	P	P	12 23 47.0	-0.1
	comp=Z,3.0nm,1.0s,baz=94,slow=8.6,SNR=7.0						
LPAZ				LR	LR	12 43 58.2	
	comp=Z,160nm,21.6s,baz=94,slow=34						
LPAZ	La Paz	51.77	259	*e*P	P	12 23 47.0	-0.1
LPAZ	La Paz	51.77	259	P	P	12 23 47.0	-0.1
KMBO	Kilima Mbogo	52.70	82	P	P	12 23 54.9	+1.3
	comp=Z,0.9nm,0.5s,baz=228,slow=4.8,SNR=6.2						
KMBO				LR	LR	12 45 03.7	
	comp=Z,276nm,18.1s,baz=262,slow=35						
KMBO	Kilima Mbogo	52.70	82	P	P	12 23 54.7	+1.1
H05S1	Guadeloupe/Mar	53.17	299	T	T	13 21 20.6	
	SNR=16						
ESDC	Sonseca Array	53.19	10	P	P	12 23 56.4	-0.1
	comp=Z,0.8nm,0.8s,baz=190,slow=6.8,SNR=5.9						
ESDC				LR	LR	12 44 45.8	
	comp=Z,54nm,19.8s,baz=240,slow=34						
KEST	Kesra	53.38	24	P	P	12 23 58.8	+0.8
	comp=Z,17nm,1.0s,baz=216,slow=1.7,SNR=12						
KEST				LR	LR	12 46 07.3	
	comp=Z,195nm,19.8s,baz=166,slow=36						
KEST	Kesra	53.38	24	P	P	12 23 59.2	+1.2
H05N1	Guadeloupe/Mar	54.27	301	T	T	13 22 39.7	
PLCA	Paso Flores	56.01	229	LR	LR	12 44 47.2	
	comp=Z,146nm,21.3s,baz=90,slow=32						
LC01	Cunco	56.63	232	P	P	12 24 21.3	-0.2
LC01				IAmb	IAmb	12 24 23.8	
	comp=Z,14nm,1.1s						
CZSB	Cruzeiro do Su	57.26	269	*e*P	P	12 24 26.6	+0.2
CZSB	Cruzeiro do Su	57.26	269	P	P	12 24 26.5	+0.2
VNA2	Neumayer--Watz	58.22	177	P	P	12 24 31.3	-0.8
	baz=352,slow=8.5						
SNAA	Sanae	59.23	176	P	P	12 24 40.5	+1.3
SNAA	Sanae	59.23	176	P	P	12 24 39.7	+0.5
	comp=Z,3.1nm,1.0s,baz=350,slow=4.1,SNR=6.3						
SNAA	Sanae	59.23	176	P	P	12 24 39.6	+0.4
SNAA				IAmb	IAmb	12 24 48.1	
	comp=Z,6.9nm,1.2s						
SDV	Santo Domingo	59.66	288	*e*P	P	12 24 43.8	+0.5
ROSC	El Rosal	61.83	283	LR	LR	12 51 46.0	
	comp=Z,480nm,18.8s,baz=52,slow=36						
FLOC	Florencia	62.20	279	P	P	12 25 00.0	-0.4
ZARC	Zaragoza, Cauc	63.14	285	P	P	12 25 06.3	-0.3
ZARC				IAmb	IAmb	12 25 08.3	
	comp=Z,10nm,1.3s						
DAVA	Damuels	63.75	18	*e*P	P	12 25 09.5	-0.7
	comp=Z,9.6nm,1.1s						
FETA	Feichten	63.78	19	*e*P	P	12 25 09.8	-0.6
	comp=Z,7.2nm,0.9s						
SQTA	Sankt Quirin	64.11	19	*e*P	P	12 25 13.0	+0.5
	comp=Z,10nm,1.0s						
ABTA	Abfaltersbach	64.13	20	*e*P	P	12 25 11.5	-1.1
	comp=Z,6.1nm,1.0s						
MOTA	Moosalm	64.19	19	*e*P	P	12 25 12.5	-0.6
	comp=Z,3.8nm,1.0s						
RETA	Reutte	64.21	19	*e*P	P	12 25 12.4	-0.7
	comp=Z,4.0nm,0.9s						
BFO	Black Forest	64.24	17	P	P	12 25 12.4	-0.8
BFO				IAmb	IAmb	12 25 14.8	
	comp=Z,13nm,1.3s						
WTTA	Wattenberg	64.29	20	*e*P	P	12 25 13.7	-0.1
	comp=Z,6.1nm,0.8s						
SOKA	Soboth	64.96	22	*e*P	P	12 25 17.9	-0.1
	comp=Z,4.3nm,0.9s						
SYO	Syowa Base	65.70	161	⇓*e*P	P	12 25 20.6	-1.8
CONA	Conrad Observa	66.32	22	*e*P	P	12 25 27.3	+0.5
	comp=Z,4.5nm,1.0s						
GERES	GERESS Array B	66.35	20	P	P	12 25 26.0	-1.0
	comp=Z,0.8nm,0.8s,baz=298,slow=2.1,SNR=5.2						
GERES				LR	LR	12 53 30.2	
	comp=Z,142nm,21.1s,baz=252,slow=35						
GERES	GERESS Array B	66.35	20	P	P	12 25 26.9	-0.1
MODS	Modra-Piesok	67.21	22	*e*P	P	12 25 35.2	+2.8
MLR	Muntele Rosu	68.66	29	P	P	12 25 41.5	-0.2
	comp=Z,2.8nm,0.6s,baz=318,slow=4.8,SNR=3.2						
MLR	Muntele Rosu	68.66	29	P	P	12 25 41.9	+0.2
BRTR	Keskin Array B	68.91	38	P	P	12 25 44.0	+0.6
	comp=Z,2.1nm,0.9s,baz=197,slow=7.7,SNR=8.7						

BRTR				LR	LR	12 57 02.8	
	comp=Z,39nm,19.3s,baz=236,slow=37						
BRTR	**Keskin Array B**	**68.91**	**38**	P	**P**	**12 25 43.0**	**-0.4**
RAYN	**Ar Rayn**	**69.03**	**58**	P	**P**	**12 25 44.3**	**-0.1**
CRVS	**Cervenica-Dubn**	**69.27**	**25**	*e*P	**P**	**12 25 46.2**	**+0.9**
MAW	**Mawson**	**73.45**	**157**	LR	LR	12 52 07.7	
	comp=Z,145nm,19.4s,baz=242,slow=31						
AKASG	**Malin Array Be**	**73.94**	**27**	P	**P**	**12 26 12.1**	**-1.3**
	comp=Z,4.5nm,0.8s,baz=225,slow=6.1,SNR=18						
AKASG				LR	LR	13 00 02.0	
	comp=Z,60nm,19.4s,baz=275,slow=37						
AKASG	**Malin Array Be**	**73.94**	**27**	P	**P**	**12 26 12.6**	**-0.7**
AKBB	**Malin Array Si**	**73.94**	**27**	P	**P**	**12 26 12.3**	**-1.1**
AKBB				IAmb	IAmb	12 26 13.9	
	comp=Z,7.1nm,0.9s						
NOA	**NORSAR Array B**	**76.46**	**13**	P	**P**	**12 26 27.9**	**+0.2**
	comp=Z,2.3nm,0.9s,baz=205,slow=6.0,SNR=5.0						
NOA				LR	LR	13 02 08.1	
	comp=Z,41nm,18.1s,baz=190,slow=37						
KBZ	**Khabaz**	**76.86**	**39**	P	**P**	**12 26 30.5**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=188,slow=3.2,SNR=3.9						
KBZ				LR	LR	13 02 59.7	
	comp=Z,36nm,18.2s,baz=252,slow=38						
QSPA	**South Pole Qui**	**77.30**	**180**	P	**P**	**12 26 32.7**	**0.0**
QSPA				IAmb	IAmb	12 26 36.1	
	comp=Z,4.9nm,0.7s						
SCHQ	**Schefferville**	**80.46**	**332**	LR	LR	12 56 20.9	
	comp=Z,102nm,21.2s,baz=142,slow=31						
FINES	**FINESS Array B**	**80.71**	**19**	P	**P**	**12 26 51.4**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=190,slow=5.8,SNR=13						
FINES				LR	LR	13 02 43.2	
	comp=Z,93nm,18.5s,baz=220,slow=36						
FINES	**FINESS Array B**	**80.71**	**19**	P	**P**	**12 26 50.8**	**-0.3**
FIA1	**FINESS Array S**	**80.71**	**19**	P	**P**	**12 26 52.6**	**+1.5**
WVT	**Waverly**	**84.34**	**309**	P	**P**	**12 27 09.0**	**-1.6**
WVT				IAmb	IAmb	12 27 13.7	
	comp=Z,6.9nm,1.1s						
GEYT	**Alibeck**	**84.64**	**49**	P	**P**	**12 27 12.0**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=240,slow=14,SNR=3.4						
GEYT				LR	LR	13 06 08.5	
	comp=Z,61nm,18.1s,baz=30,slow=36						
Y45A	**Yeager Farm, C**	**84.90**	**306**	P	**P**	**12 27 13.1**	**-0.4**
KLMR	**Klimovskoe**	**85.02**	**23**	*e*P	**P**	**12 27 12.2**	**-1.2**
KLMR				AMP		12 27 13.3	
	comp=Z,8.0nm,0.9s						
ARCES	**ARCESS Array B**	**86.83**	**13**	LR	LR	13 07 19.4	
	comp=Z,41nm,19.2s,baz=260,slow=36						
ULM	**Lac du Bonnet**	**94.24**	**320**	LR	LR	13 02 22.4	
	comp=Z,104nm,21.7s,baz=122,slow=30						
TXAR	**Lajitas Array**	**95.35**	**299**	P	**P**	**12 28 02.7**	**-0.4**
	comp=Z,0.4nm,0.9s,baz=118,slow=6.6,SNR=4.4						
TXAR				LR	LR	13 08 01.9	
	comp=Z,21nm,22.0s,baz=0.0,slow=34						
SONM	**Songino Array**	**120.14**	**42**	PKP	**PKPdf**	**12 33 28.7**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=263,slow=3.8,SNR=2.6						
WRA	**Warramunga Arr**	**135.35**	**136**	PKP	**PKiKP**	**12 34 00.0**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=202,slow=0.9,SNR=2.2						
MJAR	**Matsushiro Arr**	**146.09**	**41**	PKPbc	**PKPbc**	**12 34 18.0**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=282,slow=3.5,SNR=4.0						

IDC 12 12:24:51.4±2.0**, 6°.86S**×**128°.36E, h0^{km}, mb3.5**/1, **mb1 4.0**/3**, mb1mx3.6**/27**, mbtmp3.8**/3**, ML3.9**/2**, Error ellipse: s-maj=123.6km s-min=31.2km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.24**	**157**	Pn	Pn	12 28 13.6	-1.0
	0.6nm,0.3s,baz=335,slow=12,SNR=21						
WRA				Sn	Sn	12 30 38.3	-15
	1.7nm,0.3s,baz=328,slow=24,SNR=9.6						
ASAR	**Alice Springs**	**17.54**	**163**	P	P	12 28 58.3	-0.5
	0.6nm,0.3s,baz=334,slow=9.8,SNR=44						
ASAR				S	Sn	12 31 59.2	-14
	0.2nm,0.3s,baz=331,slow=17,SNR=4.9						
MKAR	**Makanchi Array**	**67.22**	**328**	P	P	12 35 47.7	0.0
	0.2nm,0.4s,baz=120,slow=8.1,SNR=6.4						

IDC ***12*** *12:32:04.9±3.2, 13°.41S×14°.21W, h0^{km}, mb3.9/9, mb1 4.0/9, mb1mx3.8/32, mbtmp4.0/9, MS3.7/13, Ms1 3.7/13, ms1mx3.5/26, Error ellipse: s-maj=131.5km s-min=19.2km az=144.0*

ISC 12 12:32:06.2±3.1**, 13°.5S**±0°.7×**14°.2W**±0°.5**, h10^{km}, n22, σ0^s.89**/9**, mb3.9**/9**, MS3.7**/13**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**4.51**	**354**	T	T	12 37 14.5	
	baz=28,slow=74,SNR=94						
H10S3	**ASCENSION HYDR**	**4.52**	**354**	T	T	12 37 10.9	
	baz=192,slow=74,SNR=240						
H10N1	**ASCENSION HYDR**	**5.61**	**357**	T	T	12 38 34.8	
	baz=190,slow=78,SNR=88						
H10N3	**ASCENSION HYDR**	**5.61**	**357**	T	T	12 38 36.0	
	baz=190,slow=78,SNR=176						
H10N2	**ASCENSION HYDR**	**5.62**	**357**	T	T	12 38 36.0	
	baz=190,slow=78,SNR=86						
DBIC	**Dimbokro**	**22.05**	**25**	P	**P**	**12 37 01.2**	**-0.1**
	2.0nm,0.7s,baz=216,slow=5.0,SNR=4.4						
DBIC				LR	LR	12 43 26.5	
	comp=Z,180nm,19.2s,baz=210,slow=31						
KOWA	**Kowa**	**29.55**	**20**	P	**P**	**12 38 09.8**	**-1.5**
	0.7nm,0.4s,baz=129,slow=8.7,SNR=2.1						
KOWA				LR	LR	12 48 17.4	
	comp=Z,299nm,18.1s,baz=211,slow=33						
TORD	**Torodi Ar. Bea**	**30.77**	**31**	P	**P**	**12 38 22.0**	**-0.2**
	0.7nm,0.8s,baz=217,slow=8.3,SNR=5.4						
TORD				LR	LR	12 49 00.9	
	comp=Z,199nm,18.4s,baz=250,slow=33						
BDFB	**Brasilia**	**32.81**	**262**	P	**P**	**12 38 40.4**	**+0.1**
	1.3nm,0.3s,baz=79,slow=4.6,SNR=4.1						
BDFB				LR	LR	12 51 26.4	
	comp=Z,114nm,18.5s,baz=106,slow=35						
CPUP	**Villa Florida**	**42.36**	**246**	LR	LR	12 54 52.0	
	comp=Z,159nm,18.7s,baz=43,slow=32						
SIV	**San Ignacio**	**45.36**	**261**	P	**P**	**12 40 25.1**	**-0.2**
	0.7nm,0.2s,baz=95,slow=9.3,SNR=3.3						
LPAZ	**La Paz**	**52.11**	**260**	P	**P**	**12 41 17.6**	**-0.2**
	1.1nm,0.9s,baz=101,slow=7.4,SNR=3.6						
LPAZ				LR	LR	13 02 45.0	
	comp=Z,58nm,20.3s,baz=56,slow=35						
KMBO	**Kilima Mbogo**	**52.33**	**81**	LR	LR	13 00 40.7	
	comp=Z,81nm,21.3s,baz=88,slow=33						
ESDC	**Sonseca Array**	**53.72**	**10**	LR	LR	13 05 19.7	
	comp=Z,23nm,18.2s,baz=10.0,slow=37						
KEST	**Kesra**	**53.76**	**24**	P	**P**	**12 41 30.4**	**+1.4**
	5.2nm,1.0s,baz=225,slow=7.1,SNR=3.6						
KEST				LR	LR	13 03 37.4	
	comp=Z,88nm,19.5s,baz=316,slow=35						
H05S1	**Guadeloupe/Mar**	**53.89**	**299**	T	T	13 38 48.6	
	SNR=6.1						
H05N1	**Guadeloupe/Mar**	**54.99**	**301**	T	T	13 40 08.6	
ROSC	**El Rosal**	**62.42**	**283**	LR	LR	13 10 36.9	
	comp=Z,148nm,18.3s,baz=286,slow=37						
GERES	**GERESS Array B**	**66.78**	**20**	LR	LR	13 11 42.5	
	comp=Z,49nm,19.9s,baz=264,slow=36						
BRTR	**Keskin Array B**	**69.11**	**38**	P	**P**	**12 43 12.4**	**-0.5**
	0.2nm,0.4s,baz=215,slow=6.3,SNR=1.5						
BRTR				LR	LR	13 11 37.7	
	comp=Z,23nm,21.5s,baz=233,slow=34						
MAW	**Mawson**	**72.69**	**157**	LR	LR	13 08 15.9	
	comp=Z,39nm,20.7s,baz=245,slow=30						
AKASG	**Malin Array Be**	**74.28**	**27**	P	**P**	**12 43 44.0**	**+0.4**
	0.8nm,0.7s,baz=226,slow=6.5,SNR=8.5						

TUL ***12*** *12:39:57.9±1.1, 36°.28N±0°.01×97°.46W±0°.02, h8^{km}±3^{km}, ML3.1, mb_Lg2.8/42(NEIC), Error ellipse: s-maj=1.9km s-min=1.6km az=56.0*

ANF ***12*** *12:39:57.4±0.3, 36°.28N×97°.48W, h8^{km}, ML3.4/12, Error ellipse: s-maj=3.4km s-min=3.1km az=35.0*

NEIC ***12*** *12:39:57.3±0.7, 36°.28N±0°.01×97°.47W±0°.02, h4^{km}±7^{km}, Error ellipse: s-maj=2.4km s-min=1.6km az=68.0*

ISC 12 12:39:57.4±1.0**, 36°.28N**±0°.02×**97°.46W**±0°.02**, h9^{km}**±11^{km}**, n88, σ0^s.69**/119**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.48**	**298**	Pg	**Pg**	**12 40 06.8**	**+0.1**
CROK				Sg	**Sg**	**12 40 13.5**	**+0.6**
OK029	**Liberty Lake**	**0.48**	**179**	Pg	**Pg**	**12 40 06.8**	**0.0**
OK029				Sg	**Sg**	**12 40 13.6**	**+0.4**
BLOK	**Blackwell**	**0.52**	**23**	Pg	**Pg**	**12 40 07.5**	**+0.1**
BLOK				Sg	**Sg**	**12 40 14.7**	**+0.5**
OK031	**S. Brethren Rd**	**0.60**	**123**		**Pg**	**12 40 08.9**	**-0.1**
OK031				Sg	**Sg**	**12 40 16.9**	**0.0**
QUOK	**Quay**	**0.62**	**100**	Pg	**Pg**	**12 40 09.3**	**-0.1**
QUOK				Sg	**Sg**	**12 40 17.5**	**0.0**
BCOK	**Bluff Creek, N**	**0.64**	**191**	Pg	**Pg**	**12 40 09.5**	**-0.2**
BCOK				Sg	**Sg**	**12 40 17.9**	**-0.1**
GC02	**Grant County #**	**0.65**	**331**	Pg	**Pg**	**12 40 09.9**	**-0.1**
GC02				Sg	**Sg**	**12 40 18.2**	**-0.4**
OK030	**Cody Creek RV**	**0.65**	**123**		**Pg**	**12 40 09.9**	**-0.1**
OK030				Sg	**Sg**	**12 40 18.2**	**-0.3**
OK034	**N. Norfolk Rd.**	**0.66**	**114**	Pg	**Pg**	**12 40 10.1**	**-0.1**
OK034				Sg	**Sg**	**12 40 18.7**	**-0.2**
OK009	**Oakdale Elemen**	**0.70**	**177**	Pg	**Pb**	**12 40 11.8**	**0.0**
OK009				Sg	**Sg**	**12 40 20.8**	**+0.8**
OK025	**Westminster Rd**	**0.71**	**172**	Pg	**Pg**	**12 40 11.0**	**0.0**
OK025				Sg	**Sg**	**12 40 20.4**	**+0.2**
KAN13	**South Haven SW**	**0.73**	**359**	Pg	**Pg**	**12 40 11.4**	**-0.1**
KAN13				Sg	**Sg**	**12 40 21.1**	**+0.2**
KAN14	**Manchester OK**	**0.79**	**329**		**Pg**	**12 40 12.3**	**-0.2**
KAN14				Sg	**Sg**	**12 40 22.6**	**-0.1**
OK032	**Salt Plains WL**	**0.80**	**311**	Pg	**Pg**	**12 40 12.4**	**-0.3**
OK032				Sg	**Sg**	**12 40 22.7**	**-0.4**
KAN17	**Caldwell West**	**0.80**	**342**		**Pg**	**12 40 12.5**	**-0.2**
KAN17				Sg	**Sg**	**12 40 22.6**	**-0.6**
KAN09	**Caldwell North**	**0.86**	**352**	Pg	**Pg**	**12 40 13.7**	**-0.2**
KAN09				Sg	**Sg**	**12 40 24.7**	**-0.5**
OKCFA	**Oklahoma City**	**0.86**	**179**		**Pg**	**12 40 13.9**	**-0.1**
OKCFA				Sg	**Sg**	**12 40 25.1**	**-0.1**
OKCFA	**Oklahoma City**	**0.86**	**179**	P	**Pg**	**12 40 13.8**	**-0.1**
	baz=360,SNR=13						
OKCFA				S	**Sg**	**12 40 25.5**	**+0.2**
	baz=360						
OKCSW	**OKLAHOMA CITY**	**0.88**	**179**	Pg	**Pg**	**12 40 14.0**	**-0.2**
OKCSW				Sg	**Sg**	**12 40 25.5**	**0.0**
KAN05	**Bluff City Nor**	**0.89**	**338**		**Pg**	**12 40 14.2**	**-0.2**
KAN05				Sg	**Sg**	**12 40 25.7**	**-0.3**
KAN01	**Argonia South**	**0.90**	**345**		**Pg**	**12 40 14.4**	**-0.3**
KAN01				Sg	**Sg**	**12 40 26.3**	**-0.2**
KAN10	**Anthony SW Sta**	**0.98**	**329**	Pg	**Pg**	**12 40 15.8**	**-0.4**
KAN10				Sg	**Sg**	**12 40 28.7**	**-0.3**
T35A	**Sooner Cattle**	**0.99**	**50**	Pg	**Pg**	**12 40 16.0**	**-0.4**
T35A				Sg	**Sg**	**12 40 29.3**	**-0.1**
T35B	**Sooner Cattle**	**0.99**	**50**	P	**Pg**	**12 40 16.1**	**-0.4**
	baz=230,SNR=30						
T35B				S	**Sg**	**12 40 29.1**	**-0.3**
	baz=230						
KAN06	**Argonia West S**	**1.01**	**342**		**Pg**	**12 40 16.4**	**-0.5**
KAN06				Sg	**Sg**	**12 40 29.5**	**-0.6**
FNO	**Franklin**	**1.02**	**177**	Pg	**Pg**	**12 40 16.4**	**-0.6**
FNO				Sg	**Sg**	**12 40 30.3**	**0.0**
KAN08	**Anthony NE Sta**	**1.03**	**337**		**Pg**	**12 40 16.8**	**-0.4**
KAN08				Sg	**Sg**	**12 40 30.3**	**-0.2**
KAN16	**Harper SW Stat**	**1.06**	**333**	Pg	**Pg**	**12 40 17.3**	**-0.4**
KAN16				Sg	**Sg**	**12 40 31.1**	**-0.4**
KAN12	**Harper NE Stat**	**1.10**	**337**	Pg	**Pg**	**12 40 17.9**	**-0.6**
KAN12				Sg	**Sg**	**12 40 31.9**	**-0.9**
W35A	**Tecumseh**	**1.22**	**157**		**Pg**	**12 40 19.7**	**-1.2**
W35A				Sg	**Sg**	**12 40 36.0**	**-0.8**
U32A	**Winter Ranch,**	**1.25**	**275**		**Pg**	**12 40 20.4**	**-0.9**
U32A				Sg	**Sg**	**12 40 36.7**	**-0.8**
U32A	**Winter Ranch,**	**1.25**	**275**	P	**Pg**	**12 40 20.4**	**-0.9**
	baz=94						
U32A				S	**Sb**	**12 40 37.4**	**+0.1**
	baz=94						
TUL1	**Leonard**	**1.40**	**105**	Pn	**Pn**	**12 40 22.8**	**-0.3**
TUL1	**Leonard**	**1.40**	**105**	P	**Pn**	**12 40 22.5**	**-0.7**
	baz=286,SNR=165						
TUL1				S	**Sb**	**12 40 41.3**	**-0.5**
	baz=286						
X34A	**Smith Ranch, M**	**1.71**	**190**		**Pn**	**12 40 28.3**	**+0.9**
LOOK	**Love County**	**2.30**	**174**	Pn	**Pn**	**12 40 36.2**	**+0.7**
LOOK				IAmb_Lg		12 41 11.9	
	comp=Z,34nm,0.8s						
R32A	**Long Quarter,**	**2.36**	**335**	Pn	**Pn**	**12 40 37.9**	**+1.6**
R32A				IAmb_Lg		12 41 13.6	
	comp=Z,45nm,0.7s						
R32A	**Long Quarter,**	**2.36**	**335**	P	**Pn**	**12 40 37.0**	**+0.7**
	baz=155,SNR=13						
R32A				Sb	**Sb**	**12 41 11.3**	**+2.0**
	baz=155						
X37A	**Clayton**	**2.40**	**134**	Pn	**Pn**	**12 40 37.4**	**+0.5**
X37A				IAmb_Lg		12 41 16.7	
	comp=Z,45nm,0.7s						
X37A	**Clayton**	**2.40**	**134**	P	**Pn**	**12 40 38.0**	**+1.0**
	baz=316,SNR=38						
X37A				Sb	**Sg**	**12 41 13.0**	**-1.5**
	baz=316						
U38A	**Gravette**	**2.49**	**85**	Pn	**Pn**	**12 40 39.9**	**+1.8**
U38A	**Gravette**	**2.49**	**85**	P	**Pn**	**12 40 39.6**	**+1.5**
	baz=267						
HHAR	**Hobbs**	**2.85**	**89**	Pn	**Pn**	**12 40 44.2**	**+1.1**
KSU1	**Kansas State U**	**2.89**	**13**	Pn	**Pn**	**12 40 44.5**	**+0.8**
KSU1				IAmb_Lg		12 41 34.3	
	comp=Z,21nm,0.8s						
CBKS	**Cedar Bluff**	**3.11**	**325**	Pn	**Pn**	**12 40 46.1**	**-0.5**
W39A	**Magazine**	**3.18**	**109**	Pn	**Pn**	**12 40 47.9**	**+0.3**
S39A	**Bolivar**	**3.60**	**66**		**Pn**	**12 40 54.6**	**+1.2**
S39A	**Bolivar**	**3.60**	**66**	P	**Pn**	**12 40 54.4**	**+1.0**
	baz=248,SNR=12						
MIAR	**Mount Ida**	**3.62**	**118**		**Pn**	**12 40 54.7**	**+1.1**
MIAR	**Mount Ida**	**3.62**	**118**	P	**Pn**	**12 40 54.6**	**+1.0**
	baz=300,SNR=32						
Z38A	**Mt. Pleasant**	**3.64**	**145**		**Pn**	**12 40 54.6**	**+0.7**
AMTX	**Amarillo**	**3.71**	**249**		**Pn**	**12 40 55.2**	**+0.2**
U40A	**Yellville**	**3.72**	**88**		**Pn**	**12 40 55.8**	**+0.8**
U40A	**Yellville**	**3.72**	**88**	P	**Pn**	**12 40 56.0**	**+1.0**
	baz=270,SNR=15						
U40A				P	**Pn**	**12 40 56.0**	**+1.0**
	baz=270,SNR=15						
ABTX	**Abilene, Hawle**	**4.07**	**207**	Pn	**Pn**	**12 40 59.6**	**-0.3**
X40A	**Basin Creek Fa**	**4.18**	**114**		**Pn**	**12 41 02.0**	**+0.6**
X40A	**Basin Creek Fa**	**4.18**	**114**	P	**Pn**	**12 41 02.5**	**+1.1**
	baz=297,SNR=13						
X40A				P	**Pn**	**12 41 02.5**	**+1.1**
	baz=297,SNR=13						
MGMO	**Mountain Grove**	**4.26**	**77**	Pn	**Pn**	**12 41 01.9**	**-0.6**
WHAR	**Wooly Hollow**	**4.32**	**102**		**Pn**	**12 41 03.9**	**+0.6**
FCAR	**Ozark Folk Cen**	**4.34**	**94**		**Pn**	**12 41 03.5**	**-0.1**
FCAR				IAmb_Lg		12 42 15.8	
	comp=Z,17nm,0.8s						
W41B	**Gary Mavity, V**	**4.38**	**103**	P	**Pn**	**12 41 04.6**	**+0.4**
	baz=286,SNR=9.4						
WLAR	**White Oak Lake**	**4.41**	**125**	Pn	**Pn**	**12 41 04.8**	**+0.3**
WLAR				IAmb_Lg		12 42 23.1	
	comp=Z,20nm,0.8s						
N33A	**J Bar K, Exete**	**4.45**	**0**	Pn	**Pn**	**12 41 04.2**	**-0.9**
237A	**Washetta, Mont**	**4.49**	**162**	Pn	**Pn**	**12 41 05.9**	**+0.3**
P38A	**Dawn**	**4.56**	**42**		**Pn**	**12 41 07.3**	**+0.7**
P38A				IAmb_Lg		12 42 25.2	
	comp=Z,14nm,0.7s						
R40A	**Maddies Statio**	**4.60**	**63**		**Pn**	**12 41 07.7**	**+0.6**
R40A				IAmb_Lg		12 42 20.4	
	comp=Z,24nm,1.0s						
R40A	**Maddies Statio**	**4.60**	**63**	P	**Pn**	**12 41 07.7**	**+0.6**
	baz=246,SNR=8.3						
N35A	**Tabor**	**4.79**	**17**		**Pn**	**12 41 10.0**	**+0.2**
Z41A	**Richland Creek**	**4.88**	**127**	P	**Pn**	**12 41 11.3**	**+0.3**
	baz=310						
Z41A				P	**Pn**	**12 41 11.3**	**+0.3**
	baz=310						
KSCO	**Kaye Shedlock'**	**4.92**	**305**		**Pn**	**12 41 11.0**	**-0.7**
KSCO				IAmb_Lg		12 42 47.0	
	comp=Z,14nm,0.8s						
LCAR	**Lake Charles**	**5.11**	**91**	Pn	**Pn**	**12 41 15.7**	**+1.7**
LCAR				IAmb_Lg		12 42 38.7	
	comp=Z,12nm,1.0s						
BGNE	**Belgrade**	**5.15**	**354**	Pn	**Pn**	**12 41 14.2**	**-0.5**
BGNE				IAmb_Lg		12 42 53.0	
	comp=Z,25nm,0.8s						
CCAR	**Cane Creek**	**5.23**	**115**	IAmb_Lg		12 42 56.7	
	comp=Z,22nm,0.7s						
CCM	**Cathedral Cave**	**5.27**	**69**		**Pn**	**12 41 16.3**	**-0.1**
P40A	**Paris**	**5.37**	**51**	Pn	**Pn**	**12 41 17.8**	**+0.1**
P40A				IAmb_Lg		12 42 53.0	
	comp=Z,13nm,0.8s						
N38A	**Joes South For**	**5.59**	**35**		**Pn**	**12 41 19.5**	**-1.2**
N38A				IAmb_Lg		12 43 02.2	
	comp=Z,20nm,0.8s						
PBMO	**Poplar Bluff**	**5.68**	**83**	IAmb_Lg		12 42 57.8	
	comp=Z,14nm,0.7s						
L34A	**Svendsen Farm,**	**5.74**	**8**	Pn	**Pn**	**12 41 23.2**	**+0.4**
FVM	**French Village**	**5.87**	**71**	IAmb_Lg		12 43 01.7	
	comp=Z,13nm,0.9s						
OGNE	**Ogallala**	**5.87**	**324**	Pn	**Pn**	**12 41 25.6**	**+0.9**
OGNE				IAmb_Lg		12 43 08.7	
	comp=Z,13nm,0.9s						
K31A	**O'Neill**	**6.41**	**351**	IAmb_Lg		12 43 31.3	
	comp=Z,18nm,0.7s						
SCIA	**State Center**	**6.51**	**29**	IAmb_Lg		12 43 28.8	
	comp=Z,15nm,0.8s						
SDCO	**Great Sand Dun**	**6.60**	**285**		**Pn**	**12 41 33.4**	**-1.5**
S44A	**Carbondale**	**6.72**	**75**	Pn	**Pn**	**12 41 36.1**	**-0.1**
S44A				IAmb_Lg		12 43 50.0	
	comp=Z,11nm,0.8s						
SIUC	**Southern Illin**	**6.75**	**75**	IAmb_Lg		12 43 41.6	
	comp=Z,13nm,0.8s						
N41A	**Harden Midland**	**6.81**	**48**	IAmb_Lg		12 43 32.3	
	comp=Z,12nm,0.7s						
ISCO	**Idaho Springs**	**7.33**	**301**	Pn	**Pn**	**12 41 45.9**	**+1.0**
ECSD	**EROS Data Cent**	**7.47**	**5**	Pn	**Pn**	**12 41 46.1**	**-0.5**

NEIC ***12*** *12:59:13.4±0.5, 51°.8N±0°.2×178°.5E±0°.2, h119^{km}±11^{km}, ML3.5/21(AEIC), Error ellipse: s-maj=29.4km s-min=15.8km az=169.0*

AEIC ***12*** *12:59:13.2±0.5, 51°.7N±0°.2×178°.6E±0°.2, h124^{km}±6^{km}, Error ellipse: s-maj=26.0km s-min=15.7km az=168.0*

IDC ***12*** *12:59:15.0±4.6, 52°.07N×178°.35E, h136^{km}±42^{km}, mb3.3/14, mb1 3.5/15, mb1mx3.3/36, mbtmp3.8/15, MS3.3/1, Ms1 3.3/1, ms1mx2.4/32, Error ellipse: s-maj=25.3km s-min=14.0km az=165.0*

ISC 12 12:59:12.2±0.6**, 51°.96N**±0°.10×**178°.32E**±0°.05**, h113^{km}, n45, σ1^s.28**/42**, mb3.6**/14**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEAP	**Semis' Anvil P**	**0.78**	**87**		**Pn**	**12 59 32.5**	**+1.0**
CERB	**Semis' Cerberu**	**0.81**	**92**		**Pn**	**12 59 33.2**	**+1.4**
AMKA	**Amchitka**	**0.85**	**133**		**Pn**	**12 59 32.6**	**+0.5**
AMKA					**Sn**	**12 59 46.8**	**-0.3**
GASW	**Gareloi Southw**	**1.76**	**95**		**Pn**	**12 59 42.6**	**+0.2**
GASW					**Sn**	**13 00 04.9**	**-0.4**
TANO	**Tanaga North**	**2.21**	**90**		**Pn**	**12 59 48.3**	**+0.4**
TASE	**Tanaga Southea**	**2.26**	**92**		**Pn**	**12 59 48.9**	**+0.2**
TAFP	**Tanaga Falls P**	**2.29**	**90**		**Pn**	**12 59 49.1**	**+0.1**
TAFP					**Sn**	**13 00 17.1**	**-0.2**
TAFL	**Tanaga Flats**	**2.36**	**94**		**Pn**	**12 59 50.0**	**+0.2**
KIMD	**Kanaga Island**	**2.77**	**92**		**Pn**	**12 59 54.9**	**-0.2**
KIKV	**Kanaga Island**	**2.80**	**90**		**Pn**	**12 59 55.9**	**+0.4**
KIWB	**Kanaga Island**	**2.81**	**90**		**Pn**	**12 59 55.9**	**+0.2**
ADK	**Adak**	**3.10**	**90**		**Sn**	**13 00 34.4**	**-1.5**
ADK	**Adak**	**3.10**	**90**	Pn	**Pn**	**12 59 59.6**	**+0.1**
GSCK	**Great Sitkin C**	**3.42**	**87**		**Pn**	**13 00 03.6**	**-0.2**
GSTR	**Great Sitkin T**	**3.48**	**86**	Pn	**Pn**	**13 00 04.7**	**+0.2**
GSMY	**Great Sitkin M**	**3.48**	**86**		**Pn**	**13 00 04.5**	**0.0**
KOKL	**Mount Kliuchef**	**4.62**	**83**		**Pn**	**13 00 20.3**	**+0.3**
ATKA	**Atka Island**	**4.63**	**84**		**Pn**	**13 00 20.4**	**+0.5**
NIKH	**Nikolski High**	**7.90**	**78**		**Pn**	**13 01 05.7**	**+1.5**
SPIA	**Saint Paul Isl**	**8.45**	**47**	Pn	**Pn**	**13 01 13.3**	**+1.8**
PETK	**Petropavlovsk-**	**12.60**	**283**	P	**Pn**	**13 02 09.9**	**+2.7**
	0.2nm,0.3s,baz=268,slow=11,SNR=13						
PETK				S	**Sn**	**13 04 20.1**	**-5.7**
	0.1nm,0.3s,baz=275,slow=8.8,SNR=1.2						
KDAK	**Kodiak Island**	**17.64**	**59**	P	**P**	**13 03 07.3**	**-2.5**
	0.8nm,0.3s,baz=134,slow=0.8,SNR=22						
KDAK	**Kodiak Island**	**17.64**	**59**	P	**P**	**13 03 08.6**	**-1.2**
ILAR	**Eielson Array**	**21.95**	**41**	P	**P**	**13 03 55.8**	**-0.4**
	0.3nm,0.8s,baz=261,slow=11,SNR=5.0						
INK	**Inuvik**	**28.03**	**36**	P	**P**	**13 04 52.4**	**+0.3**
	0.4nm,0.6s,baz=277,slow=6.9,SNR=3.7						
KLR	**Kul'dur**	**29.29**	**283**	P	**P**	**13 05 04.5**	**+0.9**
	1.3nm,0.3s,baz=66,slow=7.9,SNR=7.2						
USRK	**Ussuriysk Ar.**	**31.45**	**274**	P	**P**	**13 05 23.0**	**+0.4**
	2.9nm,0.6s,baz=152,slow=43,SNR=1.5						
H11N2	**WAKE ISLAND Hy**	**33.39**	**200**	T	T	13 41 04.7	
	baz=11,slow=76,SNR=3.6						
H11N3	**WAKE ISLAND Hy**	**33.40**	**200**	T	T	13 41 07.5	
	baz=11,slow=76,SNR=2.9						
H11N1	**WAKE ISLAND Hy**	**33.41**	**200**	T	T	13 41 06.3	
	baz=11,slow=76,SNR=3.5						
H11S1	**WAKE ISLAND Hy**	**34.62**	**200**	T	T	13 42 54.8	
	baz=14						
H11S2	**WAKE ISLAND Hy**	**34.63**	**200**	T	T	13 42 43.9	
	baz=14						
H11S3	**WAKE ISLAND Hy**	**34.63**	**200**	T	T	13 42 44.5	
	baz=14						
YKA	**Yellowknife Ar**	**36.13**	**46**	P	**P**	**13 06 02.7**	**-0.1**
	0.5nm,0.7s,baz=130,slow=52,SNR=2.0						
SONM	**Songino Array**	**44.77**	**295**	P	**P**	**13 07 14.9**	**+0.6**
	0.9nm,0.4s,baz=36,slow=44,SNR=3.9						
NVAR	**Mina Array Bea**	**45.25**	**81**	P	**P**	**13 07 19.1**	**+0.7**
	0.3nm,0.5s,baz=287,slow=9.0,SNR=1.8						
PDAR	**Pinedale Array**	**47.83**	**71**	LR	LR	13 25 58.1	
	comp=Z,34nm,19.1s,baz=78,slow=34						
ARCES	**ARCESS Array B**	**57.19**	**349**	P	**P**	**13 08 46.4**	**-0.3**
	11nm,1.2s,baz=81,slow=30,SNR=2.1						
MKAR	**Makanchi Array**	**58.25**	**307**	P	**P**	**13 08 54.2**	**-0.3**
	0.7nm,0.5s,baz=45,slow=5.5,SNR=8.7						
TXAR	**Lajitas Array**	**60.33**	**79**	P	**P**	**13 09 08.8**	**-0.3**
	0.1nm,0.5s,baz=299,slow=4.8,SNR=3.9						
FINES	**FINESS Array B**	**64.79**	**346**	P	**P**	**13 09 37.5**	**-0.6**
	2.1nm,0.9s,baz=57,slow=7.0,SNR=4.4						
AKASG	**Malin Array Be**	**74.41**	**340**	P	**P**	**13 10 36.6**	**-0.8**
	0.3nm,0.3s,baz=24,slow=7.3,SNR=1.3						
WRA	**Warramunga Arr**	**81.23**	**221**	P	**P**	**13 11 15.8**	**+0.4**
	0.8nm,0.8s,baz=31,slow=6.1,SNR=7.1						
ASAR	**Alice Springs**	**84.74**	**220**	P	**P**	**13 11 34.1**	**+0.7**
	0.3nm,0.7s,baz=18,slow=5.0,SNR=6.1						
BOSA	**Boshof**	**149.23**	**309**	PKPbc	**PKPbc**	**13 18 47.8**	**+0.5**
	2.0nm,0.6s,baz=72,slow=1.8,SNR=8.3						

WEL 12 13:06:43.7, 39°.0S±0°.9×**17°6E**±°**, h10^{km}**±1^{km}**, M3.3**/43**, ML3.6**/43**, MLv3.3**/43**, Error ellipse: s-maj=0.0km s-min=0.0km az=74.5, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KATZ	**Kakaramea**	**0.05**	**351**	P	Pg	13 06 46.2	+0.3
NTVZ	**North Tongarir**	**0.08**	**197**	P	Pg	13 06 46.6	+0.4
KRVZ	**Karewarewa**	**0.09**	**216**	P	Pg	13 06 46.7	+0.4
TMVZ	**Te Maari**	**0.09**	**181**	P	Pg	13 06 46.8	+0.5
TMVZ				S	Sg	13 06 49.1	+0.8
ETVZ	**East Tongariro**	**0.11**	**178**	P	Pg	13 06 47.2	+0.6
ETVZ				S	Sg	13 06 49.9	+1.3
WTVZ	**West Tongariro**	**0.13**	**225**	P	Pg	13 06 47.5	+0.7
WTVZ				S	Sg	13 06 50.2	+1.1
NNVZ	**North Ngauruho**	**0.13**	**213**	P	Pg	13 06 47.4	+0.5
NNVZ				S	Sg	13 06 50.6	+1.5
RITZ	**Rihia Road**	**0.13**	**68**	P	Pg	13 06 47.3	+0.5
OTVZ	**Oturere**	**0.14**	**193**	P	Pg	13 06 47.8	+0.7
OTVZ				S	Sg	13 06 50.5	+1.0
RATZ	**Rangitukua**	**0.17**	**18**	P	Pg	13 06 48.3	+0.9
RATZ				S	Sg	13 06 50.7	+0.8
SNVZ	**South Ngauruho**	**0.17**	**197**	P	Pg	13 06 48.4	+0.9
SNVZ				S	Sg	13 06 51.6	+1.4
NGZ	**Ngauruhoe**	**0.17**	**208**	P	Pg	13 06 48.3	+0.7
TWVZ	**Taurewa**	**0.21**	**258**	P	Pg	13 06 48.7	+0.5
TWVZ				S	Sg	13 06 52.6	+1.3
TUVZ	**Tukino**	**0.25**	**189**	P	Pg	13 06 49.7	+0.8
FWVZ	**Far West T-bar**	**0.26**	**207**	P	Pg	13 06 49.9	+0.8
FWVZ				S	Sb	13 06 54.6	-0.7
DRZ	**Dome Shelter**	**0.27**	**204**	P	Pb	13 06 50.4	-0.6
WHVZ	**Whangaehu Hut**	**0.27**	**199**	P	Pg	13 06 50.1	+0.7
TRVZ	**Turoa**	**0.30**	**204**	P	Pg	13 06 50.6	+0.7
WNVZ	**Wahianoa**	**0.31**	**195**	P	Pb	13 06 50.9	-0.6
WATZ	**Wairara**	**0.32**	**4**	P	Pg	13 06 50.5	+0.4
HATZ	**Hinemaiaia**	**0.33**	**66**	P	Pg	13 06 50.2	-0.1
HATZ				S	Sg	13 06 55.0	+0.3
MOVZ	**Moawhango**	**0.38**	**175**	P	Pg	13 06 51.9	+0.6
MOVZ				S	Sg	13 06 56.8	+0.3
PKVZ	**Pokaka**	**0.38**	**227**	P	Pg	13 06 52.0	+0.7
MTVZ	**Mangateitei**	**0.40**	**207**	P	Pb	13 06 52.6	-0.4
WHTZ	**Whakaora**	**0.41**	**29**	P	Pb	13 06 54.2	+1.1
BHHZ	**Black Hill Sta**	**0.54**	**149**	P	Pg	13 06 54.6	+0.3
KUTZ	**Kaahu Road**	**0.54**	**10**	P	Pb	13 06 54.9	-0.5
MRHZ	**Matea Rd**	**0.59**	**71**	P	Pg	13 06 54.9	-0.2
WPRZ	**Whakapapatarin**	**0.62**	**35**	P	Pb	13 06 57.3	+0.7
BKZ	**Black Stump Fm**	**0.63**	**103**	P	Pg	13 06 55.0	-0.9
ALRZ	**Allen Road**	**0.68**	**47**	P	Pg	13 06 57.3	+0.4
KWHZ	**Kaweka Forest**	**0.69**	**126**	P	Pb	13 06 57.7	-0.1
TLZ	**Tolley Road**	**0.71**	**349**	P	Pg	13 06 57.2	-0.2
TLZ				P	Pg	13 06 57.2	-0.2
VRZ	**Vera Road**	**0.74**	**262**	P	Pb	13 06 58.6	-0.1
GRRZ	**Galatos Road**	**0.74**	**25**	P	Pb	13 06 59.5	+0.7
PRRZ	**Plateau Road**	**0.75**	**46**	P	Pg	13 06 58.3	0.0

HRRZ	Handcock Road	0.78	36	P	Pn	13 07 00.6	-0.2
KRHZ	Kereru	0.80	140	P	Pb	13 06 59.8	0.0
HSRZ	Hossack Road	0.83	31	P	Pn	13 07 01.6	+0.1
HIZ	Hauiti	0.84	307	P	Pb	13 07 00.3	-0.1
NMHZ	Naumai	0.86	95	P	Pn	13 07 01.5	-0.5
MCHZ	McNeill Hill	0.88	119	P	Pn	13 07 02.4	+0.2
MTHZ	Maungataniwha	0.90	79	P	Pb	13 07 01.3	-0.2
WAZ	Wanganui	0.92	217	P	Pb	13 07 01.9	+0.1
HLRZ	Highlands Stat	0.92	33	P	Pn	13 07 03.5	+0.7
UTU	Utuhina	0.93	24	P	Pn	13 07 03.1	+0.2
RRRZ	Republican Roa	0.93	43	P	Pn	13 07 03.2	+0.3
PNHZ	Pukenui	0.97	157	P	Pb	13 07 02.8	+0.2
MUGZ	Murupara	1.00	57	P	Pg	13 07 02.9	0.0
TARZ	Mount Tarawera	1.01	39	P	Pn	13 07 04.9	+0.8
ARHZ	Aropaoanui	1.03	104	P	Pn	13 07 05.3	+1.0
TSZ	Takapari Road	1.05	169	P	Pn	13 07 04.4	-0.2
OMRZ	Omania	1.06	30	P	Pn	13 07 04.8	+0.1
RTZ	Ruatahuna	1.08	68	P	Pn	13 07 04.8	-0.1
MHEZ	Mangahewa	1.08	267	P	Pn	13 07 05.8	+0.9
RAHZ	Arahi	1.08	85	P	Pn	13 07 05.3	+0.3
KARZ	Kaharoa	1.09	23	P	Pn	13 07 05.4	+0.3
LREZ	Lake Rotokare	1.10	246	P	Pn	13 07 05.7	+0.5
DREZ	Durham Road	1.18	262	P	Pg	13 07 07.0	+0.6
WPHZ	Waipukurau	1.18	152	P	Pg	13 07 07.6	+1.1
KAHZ	Kahuranaki	1.19	131	P	Pg	13 07 08.2	+1.6
KMRZ	Kaimai	1.19	9	P	Pb	13 07 06.3	-0.1
OHWZ	Ohakea	1.22	194	P	Pg	13 07 07.5	+0.4
EDRZ	Edgecumbe	1.22	42	P	Pg	13 07 08.3	+1.0
CKHZ	Cape Kidnapper	1.24	121	P	Pg	13 07 09.4	+1.9
PREZ	Palmer Road	1.24	255	P	Pg	13 07 08.4	+0.8
NEZ	North Egmont	1.27	258	P	Pg	13 07 09.0	+0.7
SNGZ	Shannon Statio	1.30	80	P	Pg	13 07 09.2	+0.6
TOZ	Tahuroa Road	1.30	353	P	Pn	13 07 07.3	-0.6
DVHZ	Dannevirke	1.32	165	P	Pg	13 07 09.9	+0.8
URZ	Urewera	1.34	56	P	Pn	13 07 08.4	-0.1
KHEZ	Kahui Hut	1.34	258	P	Pg	13 07 09.9	+0.4
PXZ	Pawanui	1.34	139	P	Pg	13 07 10.8	+1.2
PKE	Pukeiti	1.35	262	P	Pg	13 07 10.1	+0.5
OPRZ	Ohinepanea	1.35	30	P	Pg	13 07 09.6	-0.1
POWZ	Post Office Ro	1.37	178	P	Pg	13 07 10.2	+0.2
TGRZ	Tauranga	1.37	19	P	Pn	13 07 09.0	+0.2
PRHZ	Porangahau	1.43	150	P	Pg	13 07 12.4	+1.2
NBEZ	Newall Road No	1.45	260	P	Pg	13 07 11.7	+0.1
NMEZ	Namu Road	1.47	254	P	Pg	13 07 12.0	0.0
KNZ	Kokohu	1.53	90	P	Pg	13 07 13.2	+0.1
PRWZ	Pori Road	1.54	172	P	Pg	13 07 14.2	+0.9
ANWZ	Angora Road	1.55	158	P	Pg	13 07 14.1	+0.6
MRZ	Mangatainoka R	1.64	183	P	Pg	13 07 14.9	-0.2
RIGZ	Rimuhau	1.64	79	P	Pg	13 07 15.0	-0.2
PRGZ	Paritu Road	1.70	87	P	Pb	13 07 15.1	0.0
BFZ	Birch Farm	1.71	166	P	Pg	13 07 17.4	+1.0
MHGZ	Mahia Peninsul	1.72	95	P	Pg	13 07 16.7	0.0
TKGZ	Te Karaka	1.77	71	P	Pb	13 07 16.7	+0.4
MYRZ	Mayor Island	1.79	14	P	Pg	13 07 19.9	+1.8
OGWZ	Otaki Gorge	1.84	193	P	Pb	13 07 18.1	+0.7
RUGZ	Raukumara Rang	1.88	56	P	Pn	13 07 16.6	+0.6
HOWZ	Holdsworth Sta	1.88	184	P	Pg	13 07 19.0	-0.7
CPWZ	Castlepoint	1.92	169	P	Pg	13 07 21.4	+0.9
KIW	Kapiti Island	1.93	198	P	Pb	13 07 19.0	-0.1
TWGZ	Tauwhareparae	1.97	65	P	Pb	13 07 19.5	-0.3
HAZ	Te Kaha	2.07	53	P	Pn	13 07 18.6	+0.1
TMWZ	Te Maipa	2.08	176	P	Pb	13 07 21.7	+0.1
AWAZ	Awhitu Peninsu	2.13	336	P	Pn	13 07 20.5	+1.2
MTW	Mount Morrison	2.14	184	P	Pn	13 07 20.9	+1.5
CAW	Cannon Point	2.14	193	P	Pb	13 07 21.8	-0.8
ETAZ	East Tamaki Re	2.16	343	P	Pn	13 07 20.5	+0.8
PKGZ	Pakihiroa	2.18	59	P	Pb	13 07 22.0	-1.4
PUZ	Puketiti	2.22	65	P	Pb	13 07 23.3	-0.6
DUWZ	D'Urville Isla	2.24	217	P	Pb	13 07 24.8	+0.4
WTAZ	Waiatarua	2.27	336	P	Pn	13 07 22.6	+1.3
WIAZ	Waiheke Island	2.27	348	P	Pb	13 07 23.5	-1.4
KUZ	Kuaotunu	2.28	0	P	Pn	13 07 20.9	-0.5
EPAZ	Eden Park BICE	2.28	340	P	Pb	13 07 24.4	-0.5
MBAZ	Motutapu North	2.34	344	P	Pn	13 07 23.1	+0.9
PAWZ	Paruwai Farm	2.36	185	P	Pg	13 07 28.0	-1.1
TRWZ	Traveller	2.37	180	P	Pb	13 07 25.2	-1.3
MSWZ	Moikau Station	2.41	188	P	Pn	13 07 25.2	+1.9
RVAZ	Riverhead Bore	2.42	338	P	Pn	13 07 24.8	+1.4
TCW	Tory Channel	2.44	206	P	Pb	13 07 27.2	-0.6
WMGZ	Waiomatatini S	2.44	61	P	Pb	13 07 26.0	-1.7
BHW	Baring Head	2.46	195	P	Pn	13 07 25.7	+1.7
MXZ	Matakaoa Point	2.51	55	P	Pb	13 07 27.9	-1.1
ABAZ	Army Bay	2.52	344	P	Pn	13 07 26.3	+1.7
PLWZ	Palliser	2.56	188	P	Pb	13 07 29.1	-0.7
TUWZ	Tuamarina	2.75	209	P	Pb	13 07 31.7	-1.3
GRZ	Great Barrier	2.78	356	P	Pg	13 07 35.9	-1.0
NNZ	Nelson	2.82	218	P	Pb	13 07 33.2	-1.0
BSWZ	Blackbirch Sta	3.03	207	P	Pb	13 07 37.9	+0.2
QRZ	Quartz Range	3.03	233	P	Pn	13 07 33.8	+2.0
WCZ	Waipu Caves	3.27	340	P	Pn	13 07 36.4	+1.4
THZ	Tophouse	3.47	217	P	Pn	13 07 41.4	+3.5
KHZ	Kahutara	3.77	205	P	Pn	13 07 42.7	+0.8
OUZ	Omahuta	4.16	335	P	Pn	13 07 48.5	+1.3
LTZ	Lake Taylor	4.57	214	P	Pb	13 08 01.0	-3.0
OXZ	Oxford	5.11	212	P	Pn	13 08 04.1	+3.8

PGC 12 13:15:19.4±20.0**, 48°.89N**×**129°.07W, h10km, MLSn3.0**/14**, Mw3.6**/13**, Mw3.6**/14**, 231km west of Tofino, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMF	NEPTUNE Canada	0.94	181	P	Pg	13 15 30.9	-6.7
EDB	Eliza Dome	1.61	52	P	Pn	13 15 45.3	-2.5
PACB	Port Alice, BC	1.85	33	Pn	Pn	13 15 47.6	-3.6
PACB				Sn	Sn	13 16 10.2	-4.4
MAYB	Maynard	1.95	38	Pn	Pn	13 15 50.7	-2.0
WOSB	Woss	2.06	51	Pn	Pn	13 15 52.4	-1.8
PHC	Port Hardy	2.10	30	Pn	Pn	13 15 53.5	-1.2
PHC				Sn	Sn	13 16 17.1	-3.7
TLCB	Telegraph Cove	2.20	40	Pn	Pn	13 15 54.0	-1.9
BTB	Buttle Lake	2.40	75	Pn	Pn	13 15 56.7	-2.1
BTB				Sn	Sn	13 16 25.6	-2.7
SPLB	Strathcona Par	2.44	65	Pn	Pn	13 15 57.2	-2.2
SPLB				Sn	Sn	13 16 26.5	-2.8
NCRB	Newcastle Ridg	2.47	51	Pn	Pn	13 15 58.5	-1.4
NCRB				Sn	Sn	13 16 27.8	-2.4
BFSB	Bamfield	2.60	90	Pn	Pn	13 15 58.2	-3.2
B928	Bamfield	2.60	90	Pn	Pn	13 15 58.7	-2.7
MGB	Mount Grey	2.89	86	Pn	Pn	13 16 02.7	-2.9
TXB	Texada	3.14	73	Pn	Pn	13 16 07.5	-1.4
CLRS	Cowichan Lake	3.26	89	Pn	Pn	13 16 07.9	-2.7
BBB	Bella Bella	3.35	10	Pn	Pn	13 16 10.6	-1.2
BBB				Sn	Sn	13 16 47.5	-4.2
NLLB	Nanaimo Lost L	3.36	82	Pn	Pn	13 16 09.8	-2.1
SHB	Sechelt	3.47	76	Pn	Pn	13 16 12.0	-1.6
BIB	Bowen Island	3.82	80	Pn	Pn	13 16 15.6	-2.6
WPB	Watts Point	3.91	77	Pn	Pn	13 16 18.3	-1.2
BUTB	Butedale	4.19	5	Pn	Pn	13 16 22.1	-1.3
VDB	Vedder Mountai	4.59	86	Pn	Pn	13 16 27.9	-0.9
CMW	Cultus Mountai	4.63	93	Pn	Pn	13 16 28.7	-0.8
LLLB	Lillooet	4.96	67	Pn	Pn	13 16 33.7	-0.3

WEL 12 13:23:00.5, 44°S±2°×**17°1E**±°**, h15km**±3km**, M3.4**/13**, ML3.5**/14**, MLv3.4**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=119.6, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MHCZ	Mount Hutt	0.07	79	P	Pg	13 23 04.5	+0.9
RPZ	Rata Peaks	0.35	241	P	Pb	13 23 08.6	+0.1
RPZ				S	Sb	13 23 13.5	-0.4
ARCZ	Arundel	0.46	208	P	Pb	13 23 10.6	+0.3
OXZ	Oxford	0.46	62	P	Pb	13 23 11.0	+0.6
OXZ				S	Sb	13 23 17.8	+0.7
WACZ	Wakanui South	0.48	147	P	Pb	13 23 11.5	+0.9
RACZ	Rakaia	0.51	111	P	Pb	13 23 12.2	+0.9
WVZ	Waitaha Valley	0.72	311	P	Pb	13 23 15.0	+0.3
WVZ				S	Sb	13 23 25.3	+0.9
INZ	Inchbonnie	0.82	358	P	Pn	13 23 17.0	-0.5
MQZ	McQueen's Vall	0.87	101	P	Pg	13 23 17.7	+0.3
GCSZ	Gaunt Creek Bo	0.87	285	P	Pn	13 23 17.8	-0.4
TMZ	Timaru	0.91	202	P	Pg	13 23 18.3	+0.2
TMZ				S	Sg	13 23 30.4	+0.4
AMCZ	Amberley	0.93	67	P	Pn	13 23 19.0	0.0
LTZ	Lake Taylor	0.96	38	P	Pn	13 23 19.4	-0.1
AKCZ	Akaroa Harbour	1.09	108	P	Pb	13 23 20.7	-0.3
OKCZ	Okains Bay	1.16	99	P	Pb	13 23 22.3	0.0
FOZ	Fox Glacier	1.21	270	P	Pg	13 23 24.1	+0.3
LBZ	Lake Benmore	1.26	228	P	Pn	13 23 23.5	-0.1
GVZ	Greta Valley S	1.27	64	P	Pb	13 23 24.1	-0.2
ODZ	Otahua Downs	1.61	201	P	Pn	13 23 27.8	-0.7
DSZ	Denniston Nort	1.81	8	P	Pn	13 23 32.0	+0.7
KHZ	Kahutara	1.89	54	P	Pn	13 23 32.1	-0.1
JCZ	Jackson Bay	2.02	254	P	Pn	13 23 34.3	+0.1
THZ	Tophouse	2.07	31	P	Pn	13 23 35.5	+0.8
WKZ	Wanaka	2.19	233	P	Pn	13 23 35.8	-0.6
EAZ	Earnscleugh	2.29	222	P	Pn	13 23 37.9	0.0
HHSZ	Highcliff Hill	2.42	195	P	Pb	13 23 44.8	+1.0
HHSZ				S	Sg	13 24 18.3	-0.1
BSWZ	Blackbirch Sta	2.54	45	P	Pn	13 23 42.7	+1.5
TUZ	Tuapeka	2.75	208	P	Pn	13 23 43.7	-0.3
TUWZ	Tuamarina	2.79	42	P	Pn	13 23 45.7	+1.1
QRZ	Quartz Range	2.83	16	P	Pn	13 23 45.6	+0.5
MLZ	Mavora Lakes	3.02	232	P	Pn	13 23 46.9	-0.9
SYZ	Scrubby Hill	3.42	208	P	Pn	13 23 52.6	-0.7
WHZ	Wether Hill Ro	3.44	226	P	Pn	13 23 51.8	-1.7
CAW	Cannon Point	3.61	49	P	Pn	13 23 55.7	-0.2
PNHZ	Pukenui	5.06	46	P	Pn	13 24 20.4	+4.5

EAF ***12*** *13:35:36.3±1.4, 25°.27S×30°.89E, h10km, MD3.6*

BUL 12 13:35:28.5±10.0**, 24°.08S**×**33°.47E, h10km, MD3.8, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	1.98	286	*i* P	Pg	13 36 07.6	+1.1
MOPA	Mopani	1.98	286	*i* P	Pg	13 36 07.6	+1.1
CNG	Changalane	2.49	208	*i* P	Pn	13 36 02.9	-6.2
CNG	Changalane	2.49	208	*i* P	Pn	13 36 02.9	-6.2
MATP	Matopo	5.87	307	*i* P	Pn	13 36 55.7	+0.1
MATP				*i* S	Sn	13 37 52.2	-11
MATP	Matopo	5.87	307	*i* P	Pn	13 36 55.7	+0.1
MATP				*i* S	Sn	13 37 52.2	-11
BLWY	Bulawayo	5.97	310	*i* P	Pn	13 36 58.9	+1.8
BLWY				*i* S	Sn	13 37 56.0	-10
BLWY	Bulawayo	5.97	310	*i* P	Pn	13 36 58.9	+1.8
BLWY				*i* S	Sn	13 37 56.0	-10

DJA ***12*** *13:36:05.2±1.9, 9°S±12°×11°0E±°, h206km±26km, M3.5/6, MLv3.5/6*

IDC ***12*** *13:36:24.9±1.4, 7°.27S×109°.22E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.3/30, mbtmp3.3/3, Error ellipse: s-maj=58.3km s-min=13.4km az=20.0*

ISC 12 13:36:28.3±1.7**, 8°.3S**±0°.2×**108°.2E**±0°.2**, h50km, n6,** σ**0ˢ.51**/6**, mb2.9**/3**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	0.60	30	P	Pn	13 36 40.9	+0.2
LEM	Lembang	1.56	340	Pg	Pn	13 36 54.3	+0.4
	48nm,0.3s,baz=136,slow=23,SNR=21						
LEM				Lg	Lg	13 37 17.6	
	32nm,0.3s,baz=165,slow=21,SNR=7.6						
LEM	Lembang	1.56	340	P	Pn	13 36 54.0	+0.2
WRA	Warramunga Arr	27.86	117	P	P	13 42 13.1	-0.3
	0.2nm,0.8s,baz=306,slow=11,SNR=1.6						
ASAR	Alice Springs	29.01	125	P	P	13 42 24.1	+0.4
	0.2nm,0.7s,baz=295,slow=7.8,SNR=2.5						
MKAR	Makanchi Array	59.50	340	P	P	13 46 25.8	-0.5
	0.3nm,0.5s,baz=134,slow=5.9,SNR=3.5						

DJA ***12*** *14:10:02.2±0.3, 4°S±3°×12°9E±°, h10km, M4.3/9, mb4.5/6, mB5.1/1, MLv4.3/9, Mw(mB)4.5/1*

IDC ***12*** *14:10:05.2±1.8, 4°.12S×129°.73E, h48km±17km, mb3.9/7, mb1 4.0/10, mb1mx3.5/47, mbtmp4.2/10, ML4.5/3, MS3.0/4, Ms1 3.0/4, ms1mx2.6/35, Error ellipse: s-maj=22.7km s-min=11.5km az=84.0*

ISC 12 14:10:04.3±0.6**, 4°.16S**±0°.06×**129°.51E**±0°.06**, h36km, n34,** σ**1ˢ.91**/38**, mb4.2**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.53	133	P	Pn	14 10 15.1	-0.3
MSAI	Masohi	1.00	324	P	Pn	14 10 20.0	-1.8
MSAI				S	Sn	14 10 32.4	-2.2
AAI	Ambon	1.40	290	P	Pn	14 10 26.0	-1.3
FAKI	Fak Fak	3.00	66	P	Pn	14 10 50.7	+1.4
FAKI	Fak Fak	3.00	66	P	Pn	14 10 50.7	+1.4
SIJI	Sorong	3.71	28	P	Pn	14 10 59.6	+0.5
	37nm,0.3s,baz=195,slow=23,SNR=149						
SIJI				S	Sn	14 11 39.5	-2.2
	11nm,0.3s,baz=312,slow=6.1,SNR=4.0						
SWI	Sorong	3.71	28	P	Pn	14 10 59.7	+0.6
LBMI	Labuha	4.04	330	P	Pn	14 11 04.4	+0.8
SANI	Sanana	4.10	301	P	Pn	14 11 04.5	+0.1
SANI	Sanana	4.10	301	P	Pn	14 11 04.7	+0.3
SOEI	Soe	7.61	223	P	Pn	14 11 52.6	-0.3
	0.1nm13nm,0.6s						
DRS	Darwin Rock St	8.33	171	P	Pn	14 12 05.3	+2.8
BATI	Baumata	8.35	224	P	Pn	14 12 06.8	+3.9
	11nm,0.3s,baz=82,slow=2.6,SNR=8.8						
BATI				LR	LR	14 15 48.4	
	comp=Z,99nm,18.8s,baz=86,slow=40						
MTN	Manton Dam	8.77	170	P	Pn	14 12 10.1	+1.5
KDU	Kakadu	8.96	161	P	Pn	14 12 12.0	+0.8
TOLI2	Tolitoli	10.18	301	P	Pn	14 12 31.0	+3.1
KNRA	Kununurra	11.46	184	P	Pn	14 12 45.3	-0.2
PLAI	Plampang	12.55	248	P	Pn	14 13 02.5	+2.1
FITZ	Fitzroy Crossi	14.36	195	P	Pn	14 13 23.7	-1.4
	0.1nm,0.3s,baz=9.0,slow=13,SNR=2.4						
FITZ				LR	LR	14 20 09.8	
	comp=Z,35nm,19.1s,baz=34,slow=42						
WRA	Warramunga Arr	16.37	164	P	Pn	14 13 49.0	-2.5
	0.4nm,0.3s,baz=347,slow=13,SNR=27						
WRA				S	Sn	14 16 45.1	-7.1
	0.1nm,0.3s,baz=336,slow=26,SNR=4.7						
COEN	Coen	16.62	127	P	P	14 13 56.2	-0.6
QIS	Mount Isa	19.03	150	P	Pn	14 14 24.9	+0.6
ASAR	Alice Springs	19.85	168	P	Pn	14 14 33.0	-1.0
	0.7nm,0.3s,baz=345,slow=10,SNR=66						
ASAR				S	S	14 18 12.5	-1.5
	0.0nm,0.3s,baz=350,slow=20,SNR=3.4						
ASAR				PcP	PcP	14 18 49.5	+0.3
	0.2nm,0.3s,baz=7.2,slow=1.5,SNR=11						
ASAR				ScP	ScP	14 22 22.2	-0.6
	0.0nm,0.3s,baz=346,slow=1.7,SNR=2.0						
ASAR				LR	LR	14 23 15.8	
	comp=Z,41nm,18.5s,baz=4.5,slow=40						
MTSU	Mount Surprise	20.07	135	P	Pn	14 14 36.5	-0.2
CTA	Charters Tower	22.73	136	P	P	14 15 02.9	-0.5
	4.1nm,0.8s,baz=313,slow=7.9,SNR=1.6						
STKA	Stephens Creek	29.81	159	LR	LR	14 29 11.5	
	comp=Z,45nm,18.1s,baz=24,slow=38						
CMAR	Chiang Mai Arr	37.59	308	P	P	14 17 17.0	+1.3
	1.7nm,0.6s,baz=134,slow=7.0,SNR=16						
GTA	Gaotai	51.27	331	*e*P	P	14 19 05.3	+0.4
GTA				pP	pP	14 19 10.1	-4.3
GTA				sP	sP	14 19 13.3	-5.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	Songino Array	55.62	341	P	P	14 19 36.4	-0.2
	comp=Z,1.1nm,0.9s,baz=123,slow=5.3,SNR=4.8						
MKAR	Makanchi Array	65.61	326	P	P	14 20 44.8	+0.2
	comp=Z,3.2nm,0.4s,baz=113,slow=7.7,SNR=107						
ZALV	Zalesovo Beam	68.84	334	P	P	14 21 03.6	-1.3
	comp=Z,0.9nm,0.4s,baz=123,slow=5.3,SNR=7.6						
AKTO	Aktyubinsk	81.55	322	P	P	14 22 18.4	+0.2
	comp=Z,1.5nm,0.5s,baz=91,slow=5.7,SNR=5.3						
ARU	Arti	83.06	328	P	P	14 22 25.7	-0.2
	comp=Z,0.8nm,0.6s,baz=106,slow=15,SNR=5.2						
TORD	Torodi Ar. Bea	127.74	283	PKP	PKiKP	14 29 07.1	-0.4
	comp=Z,0.7nm,0.7s,baz=43,slow=1.7,SNR=4.6						

KRNET ***12*** *14:29:34.7±0.1, 42°.27N×72°.40E, h21km, mb3.0*

SOME ***12*** *14:29:35.2, 42°.28N×72°.43E, h10km*

NNC ***12*** *14:29:36.7±0.5, 42°.52N×72°.40E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=7.9km s-min=1.8km az=0.0*

KNET ***12*** *14:29:36.9±0.4, 42°.31N×72°.57E, h9km±2km, ml2.5, Error ellipse: s-maj=2.9km s-min=2.7km az=157.0*

ISC 12 14:29:35.4±1.1**, 42°.27N**±0°.03×**72°.42E**±0°.02**, h5km**±9km**, n71,** σ**1ˢ.40**/117**, 34C-31D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAS	Manas	0.23	17	⇓*i*P	Pg	14 29 40.3	+0.4
	baz=20						
MNAS				⇓*i*S	Sg	14 29 43.6	+0.6
	baz=20						
MRKS	Merke	0.77	51	⇑*e*P	Pg	14 29 50.1	0.0
	37nm,0.1s						
MRKS				*e*S	Sg	14 30 00.2	+0.2
	246nm,0.3s						
MRKS	Merke	0.77	51	P	Pg	14 29 50.1	0.0
	37nm,0.1s						
MRKS				S	Sg	14 29 59.7	-0.4
	246nm,0.3s						
AML	Almayashu	0.96	98	⇓P	Pg	14 29 53.5	-0.3
	48nm,0.1s,SNR=46						
AML				⇓S	Sg	14 30 06.5	+0.2
	113nm,0.2s						
AML	Almayashu	0.96	98	⇑*i*P	Pg	14 29 53.0	-0.8
	baz=98						
AML				⇑*i*S	Sg	14 30 06.2	-0.1
	baz=98						
DZA	Taraz	1.02	308	*e*P	Pg	14 29 54.3	-0.6
	166nm,0.2s						
DZA				*e*S	Sg	14 30 07.4	-0.6
	251nm,0.2s						
DZA	Taraz	1.02	308	P	Pg	14 29 54.4	-0.4
	166nm,0.2s						
DZA				S	Sg	14 30 07.0	-1.1
	251nm,0.2s						
EKS2	Erkin-Say	1.08	68	⇑P	Pg	14 29 55.6	-0.5
	7.3nm,0.1s,SNR=50						
EKS2				⇑S	Sg	14 30 10.0	-0.2
	26nm,0.1s						
EKS2	Erkin-Say	1.08	68	⇓*i*P	Pg	14 29 55.2	-0.9
	baz=68						
EKS2				⇓*i*S	Sg	14 30 09.7	-0.5
	baz=68						
TRKS	Terek-Say	1.20	233	⇑*e*P	Pn	14 29 57.5	-1.4
	baz=29						
TRKS				⇑*i*S	Sb	14 30 13.5	-1.1
	baz=29						
UCH	Uchtor	1.56	91	⇑P	Pn	14 30 04.5	+0.4
	6.4nm,0.1s,SNR=60						
UCH				⇑S	Sb	14 30 25.9	+0.8
	33nm,0.1s						
UCH	Uchtor	1.56	91	⇓*i*P	Pn	14 30 03.5	-0.6
	baz=91						
UCH				⇓*i*S	Sn	14 30 24.5	-0.4
	baz=91						
AAK	Ala-Archa	1.58	76	⇓P	Pn	14 30 04.7	+0.4
	15nm,0.1s,SNR=16						
AAK				⇓S	Sb	14 30 25.6	+0.1
	32nm,0.3s						
AAK	Ala-Archa	1.58	76	⇓P	Pn	14 30 04.6	+0.4
	5.1nm,0.3s						
AAK				⇓S	Sg	14 30 26.7	+0.5
	14nm,0.3s						
AAK	Ala-Archa	1.58	76	⇑*e*P	Pn	14 30 03.9	-0.3
	baz=76						
AAK				⇑*i*S	Sn	14 30 25.2	+0.1
	baz=76						
KK02	Karatay Array	1.63	301	⇓P	Pn	14 30 04.8	0.0
	43nm,0.3s						
KK02				⇑S	Sn	14 30 25.7	-0.5
	29nm,0.3s						
FRU1	Bishkek	1.73	71	⇓*i*P	Pn	14 30 06.2	+0.1
	baz=70						
FRU1				⇓*i*S	Sb	14 30 29.2	-0.3
	baz=70						
SALK	Salom-Alik	1.74	142	⇑*e*P	Pn	14 30 06.8	+0.4
	baz=42						
SALK				⇑*e*S	Sn	14 30 29.7	+0.7
	baz=42						
OHH	Osh	1.76	171	⇑*i*P	Pn	14 30 06.6	0.0
	baz=70						
OHH				⇑*i*S	Sn	14 30 29.9	+0.5
	baz=70						
IUG	Iuzhnay	1.77	267	*e*P	Pn	14 30 08.7	+1.9
	1µm,0.4s						
IUG				*e*S	Sb	14 30 32.5	+1.5
	335nm,0.5s						
IUG	Iuzhnay	1.77	267	P	Pb	14 30 09.1	+0.7
	1µm,0.4s						
IUG				S	Sb	14 30 32.3	+1.3
	335nm,0.5s						
USP	Ospenovka	1.83	56	⇑P	Pn	14 30 08.6	+1.1
	31nm,0.2s,SNR=139						
USP				⇓S	Sb	14 30 32.8	+0.2
	250nm,0.2s						
USP	Ospenovka	1.83	56	⇑*i*P	Pn	14 30 08.0	+0.5
	baz=56						
USP				⇑*i*S	Sb	14 30 32.2	-0.4
	baz=56						
CHMS	Chumysh	1.87	66	⇑P	Pn	14 30 09.2	+1.2
	11nm,0.2s,SNR=10						
CHMS				⇑S	Sb	14 30 34.0	+0.3
	33nm,0.1s						
CHMS	Chumysh	1.87	66	⇑*i*P	Pn	14 30 08.4	+0.3
	baz=66						
CHMS				⇑*i*S	Sb	14 30 33.1	-0.7
	baz=66						
KBK	Karagaybulak	1.92	77	⇑P	Pb	14 30 10.7	-0.1
	14nm,0.1s,SNR=57						
KBK				⇓S	Sg	14 30 36.8	-0.1
	82nm,0.3s						
KBK	Karagaybulak	1.92	77	⇓*e*P	Pn	14 30 09.2	+0.4
	baz=78						
KBK				⇓*i*S	Sb	14 30 34.3	-0.8
	baz=78						
BRLS	Borolday	2.05	293	*e*P	Pb	14 30 13.1	0.0
	48nm,0.4s						
BRLS				*e*S	Sb	14 30 40.5	+1.6
	5.8nm,0.3s						
BRLS	Borolday	2.05	293	Pg	Pb	14 30 13.2	+0.1
	48nm,0.4s						
BRLS				Lg	Lg	14 30 39.3	
	5.8nm,0.3s						
CHM	Chimkent	2.09	272	*e*P	Pb	14 30 15.2	+1.5
	7.0nm,0.3s						
CHM				*e*S	Sg	14 30 43.8	+1.5
	382nm,0.5s						
SFK	Sufi-Kurgan	2.40	160	⇓*e*P	Pn	14 30 15.4	0.0
	baz=59						
SFK				⇓*e*S	Sn	14 30 45.1	-0.2
	baz=59						
TKM2	Tokmak 2	2.44	73	P	Pn	14 30 18.2	+2.2
	7.0nm,0.1s,SNR=18						
TKM2	Tokmak 2	2.44	73	⇑Pn	Pn	14 30 18.3	+2.2
	5.2nm,0.5s						
TKM2				⇓Sn	Sb	14 30 49.8	-0.4
	30nm,0.3s						
TKM2	Tokmak 2	2.44	73	⇑*i*P	Pn	14 30 16.4	+0.4
	baz=73						
TKM2				⇑*i*S	Sn	14 30 46.9	+0.6
	baz=73						
BTK	Batken	2.51	209	⇓*i*P	Pn	14 30 16.7	-0.2
	baz=9.0						
BTK				⇓*i*S	Sn	14 30 47.9	0.0
	baz=9.0						
BOOM	Boomskoye usch	2.62	84	⇓*e*P	Pn	14 30 19.0	+0.5
	baz=84						
BOOM				⇓*i*S	Sn	14 30 51.3	+0.6
	baz=84						
DGS	Degeres	2.66	67	*e*P	Pb	14 30 23.0	-0.5
	7.2nm,0.2s						
DGS				*e*S	Sb	14 30 57.4	+0.9
	26nm,0.5s						
DGS	Degeres	2.66	67	Pg	Pb	14 30 23.0	-0.5
	7.2nm,0.2s						
DGS				Lg	Lg	14 30 56.8	
	26nm,0.5s						
KST	Kastek	2.73	72	*e*P	Pb	14 30 24.6	-0.1
	9.6nm,0.2s						
KST				*e*S	Sb	14 30 59.9	+1.4
	31nm,0.5s						
KST	Kastek	2.73	72	Pg	Pb	14 30 25.3	+0.6
	9.6nm,0.2s						
KST				Lg	Lg	14 30 59.9	
	31nm,0.5s						
KRBS	Karabastau	2.79	58	*e*P	Pb	14 30 25.3	-0.4
	4.2nm,0.3s						
KRBS				*e*S	Sb	14 31 01.3	+1.2
	59nm,0.3s						
KRBS	Karabastau	2.79	58	Pg	Pb	14 30 24.2	-1.4
	4.7nm,0.2s						
KRBS				Lg	Lg	14 30 58.0	
	59nm,0.3s						
BTLS	Baital	3.02	23	*e*P	Pb	14 30 29.2	-0.3
	3.9nm,0.3s						
BTLS				*e*S	Sb	14 31 08.2	+1.6
	20nm,0.2s						

BTLS	Baital	3.02	23	Pg	Pn	14 30 25.6	+1.8
	5.0nm,0.3s						
BTLS				Lg	Lg	14 31 01.1	
	4.2nm,0.5s						
MTBS	Maitube	3.08	72	*e*P	Pb	14 30 31.3	+0.7
	1.8nm,0.2s						
MTBS				*e*S	Sb	14 31 11.2	+2.6
	34nm,0.3s						
MTBS	Maitube	3.08	72	Pg	Pb	14 30 31.7	+1.0
	1.8nm,0.2s						
MTBS				Lg	Lg	14 31 10.5	
	34nm,0.3s						
KUU	Kurty	3.30	59	*e*P	Pb	14 30 34.4	0.0
	1.9nm,0.1s						
KUU				*e*S	Sb	14 31 16.8	+1.9
	22nm,0.3s						
KUU	Kurty	3.30	59	Pg	Pb	14 30 35.1	+0.7
	1.9nm,0.1s						
KUU				Lg	Lg	14 31 16.8	
	22nm,0.3s						
TNSS	Tian-Shan	3.43	75	*e*P	Pb	14 30 37.8	+1.0
	1.9nm,0.2s						
TNSS				*e*S	Sb	14 31 22.3	+3.4
	9.2nm,0.5s						
TNSS	Tian-Shan	3.43	75	Pg	Pb	14 30 38.5	+1.7
	1.9nm,0.2s						
TNSS				Lg	Lg	14 31 22.5	
	9.2nm,0.5s						
KTBS	Karatobe	3.45	64	*e*P	Pb	14 30 37.8	+0.9
	3.8nm,0.3s						
KTBS				*e*S	Sb	14 31 22.3	+3.2
	45nm,0.4s						
KTBS	Karatobe	3.45	64	Pg	Pb	14 30 37.9	+0.9
	3.8nm,0.3s						
KTBS				Lg	Lg	14 31 22.1	
	45nm,0.4s						
KNDC	Almaty	3.48	73	⇑Lg	Lg	14 31 25.7	
	15nm,0.3s						
MDOK	Medeo	3.53	74	*e*P	Pb	14 30 39.4	+1.1
	6.7nm,0.5s						
MDOK				*e*S	Sg	14 31 25.5	-3.3
	11nm,0.3s						
MDOK	Medeo	3.53	74	⇑Pg	Pb	14 30 41.0	+2.7
	4.9nm,0.6s						
MDOK				⇑Lg	Lg	14 31 29.4	
	10nm,0.4s						
MDOK	Medeo	3.53	74	Pg	Pb	14 30 40.5	+2.1
	6.7nm,0.5s						
MDOK				Lg	Lg	14 31 25.5	
	11nm,0.3s						
KDJ	Kajisay	3.54	91	⇑*i*P	Pn	14 30 31.8	+0.6
	baz=91						
KDJ				⇑*i*S	Sn	14 31 13.5	0.0
	baz=91						
KOTS	Kotyrbulak	3.59	73	*e*P	Pb	14 30 41.0	+1.6
	3.5nm,0.2s						
KOTS				*e*S	Sg	14 31 27.8	-2.9
	20nm,0.5s						
KOTS	Kotyrbulak	3.59	73	Pg	Pb	14 30 41.5	+2.1
	3.5nm,0.2s						
KOTS				Lg	Lg	14 31 27.6	
	20nm,0.5s						
ANVS	Anan'yevo	3.92	81	⇓*i*P	Pn	14 30 36.8	+0.5
	baz=81						
ANVS				⇓*i*S	Sn	14 31 22.7	0.0
	baz=81						
ARXS	Arharly	4.41	62	Pg	Pb	14 30 54.9	+1.6
	3.5nm,0.6s						
ARXS				Lg	Lg	14 31 51.2	
	18nm,0.4s						
SATY	Saty	4.49	78	Pg	Pg	14 30 59.1	-2.3
	2.5nm,0.2s						
SATY				Lg	Lg	14 31 58.0	
	6.9nm,0.4s						
BLB	Baldybastay	4.80	66	Pg	Pb	14 31 02.9	+3.0
	3.6nm,0.2s						
BLB				Lg	Lg	14 32 04.4	
	24nm,0.5s						
UZB	Uzynbulak	4.95	78	Pg	Pb	14 31 06.1	+3.6
	2.5nm,0.2s						
UZB				Lg	Lg	14 32 09.5	
	6.3nm,0.3s						
PDGK	Podgornoye	5.31	76	Pg	Pb	14 31 12.3	+3.5
	0.5nm,0.3s						
PDGK				Lg	Lg	14 32 20.3	
	2.7nm,1.2s						
PDGK	Podgornoye	5.31	76	⇑Pg	Pb	14 31 12.5	+3.8
	1.6nm,0.7s						
PDGK				⇓Lg	Lg	14 32 24.4	
	5.1nm,0.7s						
KAPS	Kapalarasan	5.86	57	Pg	Pb	14 31 21.1	+3.0
	0.7nm,0.2s						
KAPS				Lg	Lg	14 32 35.8	
	7.5nm,0.7s						
MK31	Makanchi Array	8.38	54	Pn	Pn	14 31 39.3	+1.9
	1.3nm,0.8s,baz=239,slow=14,SNR=11						
MK31				⇓Lg	Lg	14 34 01.9	
	1.0nm,0.6s						
KURBB	Kurchatov Arra	9.36	25	Pn	Pn	14 31 48.5	-2.3
KURBB				⇑Sn	Sn	14 33 34.1	-2.2
	2.2nm,0.8s						
KURBB				⇓Lg	Lg	14 34 30.6	
	4.9nm,0.6s						
BRVK	Borovoye	10.89	353	Pn	Pn	14 32 09.9	-1.8
AB31	Akbulak array	11.16	313	Pn	Pn	14 32 13.1	-2.3
	1.3nm,0.6s,baz=117,slow=15,SNR=21						

NEIC ***12*** *14:29:45.9±1.9, 6°.78N±0°.09×94°.5E±0°.1, h10*^{km}*±1*^{km}*, mb4.4/13, Error ellipse: s-maj=20.0km s-min=13.7km az=241.0*

IDC ***12*** *14:29:55.3±2.9, 7°.12N×95°.04E, h82*^{km}*±28*^{km}*, mb3.5/13, mb1 3.7/15, mb1mx3.5/46, mbtmp3.8/15, MS3.3/7, Ms1 3.3/7, ms1mx3.0/38, Error ellipse: s-maj=33.4km s-min=12.4km az=61.0*

DJA ***12*** *14:29:56.1±1.1, 7°N±6°×9°5E±1°4, h84*^{km}*±43*^{km}*, M4.2/7, mB4.6/2, mb4.3/7, MLv4.1/6, Mw(mB)3.8/2*

ISC 12 14:29:48.7±0.6**, 6°.85N**±0°.07×**94°.48E**±0°.08**, h26**^{km}**, n66, σ2^{s}.32**/59**, mb4.3**/28**, MS3.4**/4**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.93	123	P	Pn	14 30 34.8	+1.2
LHMI	Lhok Sumawe	2.93	123	Pn	Pn	14 30 33.0	-0.6
TPTI		4.46	143	P	Pn	14 30 58.4	+3.7
KCSI	Kotacane, Aceh	4.65	135	P	Pn	14 31 00.2	+2.9
SRIT	Nakonsritamara	5.36	71	Pn	Pn	14 31 06.9	-0.1
PSI	Prapat	5.98	132	P	Pn	14 31 17.9	+2.2
	3.1nm,0.3s,baz=317,slow=12,SNR=15						
PSI				S	Sn	14 32 27.3	+3.9
	0.8nm,0.3s,baz=278,slow=18,SNR=1.6						
PSI				LR	LR	14 34 01.9	
	comp=Z,347nm,18.7s,baz=302,slow=42						
GSI	Gunungsitoli	6.31	151	Pn	Pn	14 31 16.6	-3.6
KULM	Kulim	6.33	104		Pn	14 31 19.2	-1.1
IPM	Ipoh	6.92	110		Pn	14 31 26.0	-2.5
MYKOM	Kota Tinggi	10.60	118	Pn	Pn	14 32 15.6	-3.4
CMAR	Chiang Mai Arr	12.33	20	P	Pn	14 32 43.6	+0.9
	0.8nm,0.3s,baz=215,slow=14,SNR=14						
CMAR				LR	LR	14 37 26.4	
	comp=Z,59nm,21.0s,baz=246,slow=38						
CMAR	Chiang Mai Arr	12.33	20	Pn	Pn	14 32 41.5	-1.1
CHTO	Chiang Mai	12.66	20	Pn	Pn	14 32 47.5	+0.3
LEM	Lembang	18.87	136	LR	LR	14 42 50.3	
	comp=Z,153nm,19.2s,baz=302,slow=42						
QIZ	Qiongzhong	19.23	50	P	P	14 34 11.2	+0.1
QIZ				S	S	14 37 49.2	+1.7
QIZ				LR	LR		
	comp=N,300nm,11.6s						
QIZ				LR	LR		
	comp=E,190nm,5.1s						
QIZ				LR	LR		
	comp=Z,120nm,10.3s						
ODAN	Odare	21.02	342	*e*P	P	14 34 36.8	+6.1
RAMN	Ramite	21.35	340	*e*P	P	14 34 41.0	+6.7
	comp=Z,14nm,0.5s						
TAPN	Taplejung	21.38	343	*e*P	P	14 34 36.0	+1.3
	comp=Z,31nm,0.9s						
JIRN	Jiri	22.14	340	*e*P	P	14 34 45.8	+2.8
	comp=Z,18nm,0.7s						
PKI	Pulchoki	22.34	338	*e*P	P	14 34 48.9	+3.9
	comp=Z,16nm,0.7s						
PKIN	Phulchoki	22.35	338	*e*P	P	14 34 49.4	+4.4
	comp=Z,16nm,0.6s						
GUN	Gumba	22.48	340	*e*P	P	14 34 47.8	+1.3
	comp=Z,20nm,0.6s						
DMN	Daman	22.48	338	*e*P	P	14 34 51.6	+5.1
	comp=Z,24nm,1.0s						
KKN	Kakani	22.58	338	*e*P	P	14 34 50.6	+3.1
GKN	Gorkha	23.02	337	*e*P	P	14 34 54.2	+2.2
	comp=Z,16nm,0.7s						
H08S3	Diego Garcia H	26.23	237	T	T	15 01 58.3	
	baz=56,slow=76						
H08S2	Diego Garcia H	26.24	237	T	T	15 01 56.6	
	baz=56,slow=76						
H08S1	Diego Carcia H	26.25	237	T	T	15 02 04.7	
	baz=56,slow=76						
KAPI	Kappang	27.84	114	LR	LR	14 48 49.7	
	comp=Z,36nm,18.8s,baz=327,slow=41						
XAN	Xi'an	30.17	24	P	P	14 35 57.9	+1.0
XAN				pP	pP	14 36 02.3	-1.4
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NIL	Nilore	33.13	326	P	P	14 36 21.1	-1.8
HHC	Hu-ho-hao-te	37.13	22	*e*P	P	14 36 58.6	+1.2
WMQ	Urumqi	37.30	352	*e*P	P	14 37 00.7	+2.0
CHGR	Chuyangaron	39.07	328	P	P	14 37 13.8	+0.1
CHGR				IAmb	IAmb	14 37 20.7	
	comp=Z,10.0nm,0.8s						
AAK	Ala-Archa	39.78	337	P	P	14 37 20.1	+0.4
	comp=Z,0.3nm,0.3s,baz=200,slow=12,SNR=2.0						
MK31	Makanchi Array	41.16	347	P	P	14 37 29.7	-1.1
MKAR	Makanchi Array	41.16	347	P	P	14 37 30.2	-0.7
	comp=Z,0.9nm,0.7s,baz=170,slow=8.8,SNR=4.4						
MKAR	Makanchi Array	41.16	347	P	P	14 37 28.7	-2.2
SONM	Songino Array	42.09	12	P	P	14 37 37.3	-1.2
	comp=Z,0.3nm,0.4s,baz=195,slow=10,SNR=2.6						
KSAR	Wonju Array Be	42.99	40	P	P	14 37 45.6	-0.3
GEYT	Alibeck	45.19	319	P	P	14 38 04.1	+0.5
	comp=Z,1.2nm,0.5s,baz=152,slow=9.4,SNR=4.6						
GEYT	Alibeck	45.19	319	P	P	14 38 03.4	-0.2
GEYT				IAmb	IAmb	14 38 13.5	
	comp=Z,2.4nm,0.6s						
KURBB	Kurchatov Arra	45.62	346	P	P	14 38 06.0	-0.7
	comp=Z,0.5nm,0.4s,baz=173,slow=7.0,SNR=9.3						
KURK	Kurchatov	45.68	346	P	P	14 38 06.7	-0.5
WB0	Warramunga Arr	47.35	125	P	P	14 38 19.8	-1.0
WB0				IAmb	IAmb	14 38 37.7	
	comp=Z,2.8nm,0.8s						
WRA	Warramunga Arr	47.40	125	P	P	14 38 17.6	-3.5
	comp=Z,0.5nm,0.5s,baz=308,slow=8.2,SNR=18						
WRAB	Tennant Creek	47.40	125	P	P	14 38 19.8	-1.4
WRAB				IAmb	IAmb	14 38 40.2	
	comp=Z,4.9nm,1.2s						
WB2	Warramunga Arr	47.41	125	P	P	14 38 20.3	-0.9
WB2				IAmb	IAmb	14 38 34.5	
	comp=Z,3.1nm,0.8s						
ZALV	Zalesovo Beam	47.61	352	P	P	14 38 22.6	+0.3
	comp=Z,0.4nm,0.3s,baz=178,slow=9.9,SNR=2.1						
AS31	Alice Springs	49.00	130	P	P	14 38 31.8	-1.8
ASAR	Alice Springs	49.00	130	P	P	14 38 33.1	-0.5
	comp=Z,1.0nm,0.8s,baz=301,slow=7.4,SNR=14						
ASAR	Alice Springs	49.00	130	P	P	14 38 32.1	-1.5
MJAR	Matsushiro Arr	49.60	47	P	P	14 38 35.7	-2.2
RAYN	Ar Rayn	49.82	295	P	P	14 38 38.4	-1.5
RAYN				IAmb	IAmb	14 38 49.8	
	comp=Z,2.7nm,0.8s						
BRVK	Borovoye	50.12	341	P	P	14 38 40.5	-1.1
BRVK				IAmb	IAmb	14 38 41.8	
	comp=Z,3.7nm,1.1s						
ABKAR	Akbulak array	51.29	332	P	P	14 38 50.6	+0.1
ABKAR	Akbulak array	51.29	332	P	P	14 38 50.5	+0.1
STKA	Stephens Creek	59.16	133	P	P	14 39 46.9	-0.6
	comp=Z,1.9nm,0.9s,baz=285,slow=7.3,SNR=3.0						
AKASG	Malin Array Be	69.16	322	LR	LR	15 15 38.9	
	comp=Z,18nm,19.5s,baz=5.0,slow=40						
FINES	FINESS Array B	73.77	332	P	P	14 41 19.7	-0.8
	comp=Z,1.0nm,0.5s,baz=106,slow=4.2,SNR=6.9						
FINES	FINESS Array B	73.77	332	P	P	14 41 19.7	-0.8
BOSA	Boshof	75.33	238	P	P	14 41 35.7	+5.4
	comp=Z,3.8nm,1.0s,baz=56,slow=4.1,SNR=4.0						
ARCES	ARCESS Array B	76.34	340	LR	LR	15 17 54.4	
	comp=Z,29nm,20.2s,baz=230,slow=38						
GERES	GERESS Array B	78.81	318	P	P	14 41 50.0	+0.4
	comp=Z,0.2nm,0.3s,baz=79,slow=5.1,SNR=3.0						
NOA	NORSAR Array B	80.78	331	LR	LR	15 21 39.6	
	comp=Z,15nm,18.5s,baz=0.0,slow=38						
ESDC	Sonseca Array	92.13	310	P	P	14 42 57.0	+0.7
	comp=Z,0.4nm,0.6s,baz=56,slow=5.3,SNR=2.3						

IDC ***12*** *14:34:51.0±4.5, 4°.11S×129°.75E, h49*^{km}*±51*^{km}*, mb3.6/1, mb1 3.7/4, mb1mx3.4/30, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=71.2km s-min=19.2km az=88.0*

ISC 12 14:34:49.9±0.8**, 4°.14S**±0°.07×**129°.59E**±0°.08**, h36**^{km}**, n15, σ0^{s}.80**/17**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.49	141	P	Pn	14 34 58.2	-2.2
FAKI	Fak Fak	2.91	66	P	Pn	14 35 34.7	+1.0
SIJI	Sorong	3.65	27	P	Pn	14 35 44.2	+0.3
	4.9nm,0.3s,baz=164,slow=22,SNR=37						
SIJI				S	Sn	14 36 25.0	-0.7
	2.4nm,0.3s,baz=323,slow=5.1,SNR=3.7						
SANI	Sanana	4.15	300	P	Pn	14 35 51.2	+0.4
MTN	Manton Dam	8.78	170	P	Pn	14 36 54.7	+0.3
KDU	Kakadu	8.96	162	P	Pn	14 36 56.2	-0.6
KNRA	Kununurra	11.50	184	P	Pn	14 37 31.0	-0.6
WRAB	Tennant Creek	16.37	164	P	Pn	14 38 36.5	-0.6
WRA	Warramunga Arr	16.38	164	P	Pn	14 38 37.0	-0.1
	0.2nm,0.3s,baz=348,slow=13,SNR=4.4						
COEN	Coen	16.57	127	P	Pn	14 38 39.9	+0.2
QIS	Mount Isa	19.01	150	P	P	14 39 08.8	+0.1
ASAR	Alice Springs	19.86	168	P	P	14 39 18.1	+0.2
	0.3nm,0.3s,baz=347,slow=11,SNR=20						
ASAR				PcP	PcP	14 43 34.4	-0.4
	0.0nm,0.3s,baz=6.2,slow=1.8,SNR=4.1						
MTSU	Mount Surprise	20.03	135	P	P	14 39 20.6	+0.7
WRKA	Warakurna	20.82	183	P	P	14 39 29.1	+0.7
MKAR	Makanchi Array	65.63	326	P	P	14 45 30.4	0.0
	1.0nm,0.8s,baz=108,slow=8.0,SNR=9.9						

NEIC ***12*** *14:46:27±1.9, 10°.15S±0°.09×161°.14E±0°.10, h73*^{km}*±7*^{km}*, mb4.8/57, Error ellipse: s-maj=16.0km s-min=9.9km az=51.0*

IDC ***12*** *14:46:28.0±0.5, 10°.20S×161°.12E, h86*^{km}*±3*^{km}*, mb4.3/24, mb1 4.4/28, mb1mx4.2/46, mbtmp4.6/28, MS3.5/14, Ms1 3.5/14, ms1mx3.3/33, Error ellipse: s-maj=10.0km s-min=7.6km az=28.0*

GCMT ***12*** *14:46:28.0±0.4, 10°.07S±0°.03×161°.31E±0°.03, h87*^{km}*±5*^{km}*, MW4.9/68, Moment Tensor Solution. s17,c19; s68,c87; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*0.41±.15;* $M_{\theta\theta}$*-0.51±.14;* $M_{\phi\phi}$*0.09±.14;* $M_{r\theta}$*-1.51±.07;* $M_{\theta\phi}$*2.03±.12;* $M_{\phi r}$*0.09±.08; Best double couple:* M_0*2.55300×10*^{16} *NP1:*ϕ_s*176.00000°, δ53.00000°, λ174.00000°. NP2:* ϕ_s*269.00000°, δ85.00000°, λ38.00000°. Principal axes: T 2.3590, Plg29.0000°, Azm139.0000°; N 0.3870, Plg52.0000°, Azm275.0000°; P -2.7460, Plg22.0000°, Azm36.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 14:46:25.9±0.3**, 10°.19S**±0°.05×**161°.24E**±0°.05**, h67**^{km}**, n175, σ1^{s}.45**/185**, mb4.8**/65**, 1C-2D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HNR	Honiara	1.48	301	P	Pn	14 46 51.7	+1.2
	958nm,0.3s,baz=151,slow=3.5,SNR=204						
HNR				S	Sn	14 47 10.3	+1.2
	3µm,0.3s,baz=358,slow=23,SNR=48						
HNR				LR	LR	14 47 28.6	
	comp=Z,1µm,18.1s,baz=140,slow=44						
HNR	Honiara	1.48	301	Pn	Pn	14 46 50.1	-0.4
HNR	Honiara	1.48	301	P	Pn	14 46 51.6	+1.1
SANVU	Saraoutou	7.82	133	Pn	Pn	14 48 19.3	+2.3
DVP	Devils Point	10.08	139	P	Pn	14 48 50.0	+2.1
RTV	Rentapao	10.28	138	P	Pn	14 48 53.1	+2.4
KOUNC	Koumac, New Ca	10.71	164	P	Pn	14 48 59.1	+2.5
LIFNC	LIFOU	12.01	152	Pn	Pn	14 49 15.3	+1.0
LIFNC	LIFOU	12.01	152	P	Pn	14 49 15.4	+1.1
NOUC	Port Laguerre	12.80	158	P	Pn	14 49 28.6	+3.5
DZM	Mont Dzumac	12.82	158	*e*Pn	Pn	14 49 28.8	+3.3
	61nm,0.3s						
DZM				*e*Sn	Sn	14 51 35.7	-11
	14nm,0.3s						
DZM				*e*LR	LR	14 52 18.5	
	comp=Z,792nm,28.6s						
DZM	Mont Dzumac	12.82	158	P	Pn	14 49 28.8	+3.3
	17nm,0.3s,baz=21,slow=9.7,SNR=180						
DZM				S	Sn	14 51 41.3	-5.3
	2.1nm,0.3s,baz=330,slow=20,SNR=2.4						
DZM				LR	LR	14 53 50.7	
	comp=Z,144nm,19.9s,baz=344,slow=34						
DZM	Mont Dzumac	12.82	158	Pn	Pn	14 49 28.0	+2.5
MARNC	Mare, Loyalty	12.98	151	Pn	Pn	14 49 29.3	+1.8
MARNC	Mare, Loyalty	12.98	151	P	Pn	14 49 29.9	+2.3
YATNC	Mamie plateau,	12.99	156	P	Pn	14 49 29.2	+1.6
ONTNC	Ouen Toro	13.04	158	Pn	Pn	14 49 32.0	+3.6
ONTNC	Ouen Toro	13.04	158	P	Pn	14 49 32.2	+3.8
OUENC	Ouen Island, N	13.29	157	Pn	Pn	14 49 35.1	+3.4
PINNC	Pines Island,	13.71	155	P	P	14 49 40.6	-3.1
PMG	Port Moresby	13.90	272	P	Pn	14 49 40.3	+0.4
	0.3nm,0.3s,baz=111,slow=8.8,SNR=1.7						
PMG				LR	LR	14 54 34.6	
	comp=Z,197nm,18.6s,baz=82,slow=35						
TARA	Tarawa	16.33	46	P	P	14 50 14.6	+1.6
PATS	Pohnpei	17.16	350		P	14 50 21.6	-0.6
PATS	Pohnpei	17.16	350	P	P	14 50 21.5	-0.6
CTA	Charters Tower	17.48	234	P	P	14 50 26.0	+0.3
	1.4nm,0.3s,baz=53,slow=13,SNR=17						
CTAO	Charters Tower	17.48	234		Pn	14 50 24.9	-0.4
CTAO	Charters Tower	17.48	234	P	P	14 50 27.8	+2.1
EIDS	Eidsvold	17.91	211		Pn	14 50 31.3	+0.7
EIDS	Eidsvold	17.91	211	P	Pn	14 50 32.7	+2.1
MSVF	Nonsavu	17.95	117	P	Pn	14 50 34.7	+3.6
	0.3nm,0.3s,baz=334,slow=4.2,SNR=3.9						
MSVF				LR	LR	14 57 50.0	
	comp=Z,40nm,18.6s,baz=205,slow=38						
MSVF	Nonsavu	17.95	117	P	Pn	14 50 31.5	+0.4
MSVF				IAmb	IAmb	14 50 51.3	
	comp=Z,72nm,1.4s						
MSVF	Nonsavu	17.95	117	P	Pn	14 50 34.4	+3.3
COEN	Coen	18.05	256		Pn	14 50 33.2	+0.8
COEN	Coen	18.05	256	P	Pn	14 50 33.2	+0.8
RMQ	Roma	20.05	214	P	Pn	14 50 55.7	-0.3
ARMA	Armidale	22.03	203	P	P	14 51 13.8	-1.3
ARMA	Armidale	22.03	203	P	P	14 51 15.6	+0.5
QLP	Quilpie	22.89	222	P	P	14 51 25.6	+1.4
	comp=Z,47nm,0.8s						
QIS	Mount Isa	23.24	241	P	P	14 51 28.2	+0.5
SMPI	Sarmi	23.82	289	P	P	14 51 33.9	+0.9
	comp=Z,28nm,1.1s						
NTLS	Newcastle Soft	24.26	200	P	P	14 51 36.1	-0.7
	comp=Z,282nm,0.4s						
CMSA	Cobar Meteorol	25.67	212	P	P	14 51 50.9	+1.2
INKA	Innaminka	26.01	225	P	P	14 51 53.7	+0.9
CAN	Canberra	27.39	202	P	P	14 52 06.4	+1.2
WR0	Warramunga Arr	27.51	246	P	P	14 52 04.6	-1.7
WB0	Warramunga Arr	27.59	247	P	P	14 52 05.2	-1.9
WB0				IAmb	IAmb	14 52 28.6	
	comp=Z,21nm,0.7s						
WRAB	Tennant Creek	27.67	246	P	P	14 52 06.5	-1.3
WRAB				IAmb	IAmb	14 52 29.4	
	comp=Z,17nm,0.8s						
WRAB	Tennant Creek	27.67	246	P	P	14 52 07.4	-0.4
WB2	Warramunga Arr	27.68	246	P	P	14 52 07.2	-0.7
WB2				IAmb	IAmb	14 52 29.5	
	comp=Z,17nm,0.8s						
WRA	Warramunga Arr	27.69	246	P	P	14 52 07.5	-0.5
	comp=Z,7.4nm,0.7s,baz=75,slow=9.2,SNR=70						
WRA				pP	pwP	14 52 25.7	-1.3
	comp=Z,16nm,0.8s,baz=75,slow=9.4,SNR=13						
WRA				LR	LR	15 02 23.0	
	comp=Z,97nm,21.2s,baz=70,slow=35						
WRA	Warramunga Arr	27.69	246	P	P	14 52 05.5	-2.5
STKA	Stephens Creek	28.22	217	P	P	14 52 12.6	0.0
	comp=Z,6.8nm,0.8s,baz=46,slow=15,SNR=16						
STKA				LR	LR	15 02 48.8	
	comp=Z,177nm,20.3s,baz=34,slow=35						
STKA	Stephens Creek	28.22	217	P	P	14 52 12.9	+0.4
KDU	Kakadu	28.30	262	P	P	14 52 12.9	-0.5
AS31	Alice Springs	29.31	239	P	P	14 52 21.0	-1.4
ASAR	Alice Springs	29.31	239	P	P	14 52 21.1	-1.4
	comp=Z,5.6nm,0.8s,baz=61,slow=10,SNR=62						
ASAR				pP	pwP	14 52 41.1	+0.1
	comp=Z,6.5nm,0.8s,baz=65,slow=9.8,SNR=9.1						
ASAR				S	S	14 57 09.5	-1.6
	comp=Z,0.3nm,0.8s,baz=69,slow=14,SNR=1.9						
ASAR				ScP	ScP	14 59 01.5	-2.4
	comp=Z,0.4nm,0.8s,baz=50,slow=2.8,SNR=4.1						
ASAR				LR	LR	15 03 18.6	
	comp=Z,196nm,20.8s,baz=64,slow=35						
ASAR	Alice Springs	29.31	239	P	P	14 52 20.7	-1.7
LCRK	Leigh Creek	29.42	223	P	P	14 52 23.2	0.0
MTN	Manton Dam	29.61	262	P	P	14 52 24.2	-0.8
MTN				IAmb	IAmb	14 52 41.6	
	comp=Z,20nm,1.4s						
MTN	Manton Dam	29.61	262	P	P	14 52 24.9	-0.2
OOD	Oodnadatta	29.73	230	P	P	14 52 27.0	+1.0
TOO	Toolangi	30.73	205	P	P	14 52 35.4	+0.6
TOO	Toolangi	30.73	205	P	P	14 52 35.8	+1.0
HTT	Hallett	30.91	218	P	P	14 52 36.8	+0.3
NAPP	Napperby	31.22	219	P	P	14 52 40.1	+1.0
URZ	Urewera	31.37	156	P	P	14 52 40.6	+0.3
	comp=Z,5.5nm,0.9s,baz=308,slow=20,SNR=1.7						
URZ	Urewera	31.37	156	P	P	14 52 43.6	+3.3
BKZ	Black Stump Fm	31.91	157	P	P	14 52 46.2	+1.1
BKZ				IAmb	IAmb	14 52 50.1	
	comp=Z,13nm,0.9s						
BKZ	Black Stump Fm	31.91	157	P	P	14 52 46.4	+1.3
KNRA	Kununurra	32.09	257	P	P	14 52 46.5	-0.5
KNRA	Kununurra	32.09	257	P	P	14 52 46.6	-0.4
MULG	Mulgathing	32.25	228	P	P	14 52 47.3	-0.9
BBOO	Buckleboo	32.33	222	P	P	14 52 48.8	-0.1
BBOO	Buckleboo	32.33	222	P	P	14 52 48.9	+0.1
TUWZ	Tuamarina	33.07	162	P	P	14 52 55.5	+0.4
OXZ	Oxford	34.33	166	P	P	14 53 05.2	-0.9
RPZ	Rata Peaks	34.47	167	P	P	14 53 08.2	+0.8
WRKA	Warakurna	34.57	240	P	P	14 53 07.5	-1.1
BATI	Baumata	36.97	267	P	P	14 53 29.7	+0.5
	comp=Z,11nm,0.9s						
FORT	Forrest	37.00	232	P	P	14 53 29.8	+0.6
EDFI	Ende, Flores	39.02	269	P	P	14 53 45.5	-1.0
	comp=Z,8.2nm,1.3s						
GTOI	Gorontalo	39.53	284	P	P	14 53 52.5	+1.9
	comp=Z,8.7nm,0.7s						
MBWA	Marble Bar	41.31	250	P	P	14 54 04.6	-0.7
PLAI	Plampang	42.86	268	P	P	14 54 16.2	-1.8
MEEK	Meekatharra	43.39	242	P	P	14 54 22.2	0.0
TWSI	Taliwang, Sumb	43.75	268	P	P	14 54 24.8	-0.4
	comp=Z,7.9nm,0.7s						
BLDU	Ballidu	46.05	237	P	P	14 54 42.7	-0.5
MORW	Morawa	46.19	239	P	P	14 54 44.2	-0.2
NWAO	Narrogin (SRO)	46.32	234	P	P	14 54 45.8	+0.4
JAGI	Jajag, Banyuwa	46.47	268	P	P	14 54 47.7	+1.0
	comp=Z,836nmcomp=Z,45nm,1.0s						
MUN	Mundaring	46.85	235	P	P	14 54 49.8	+0.3
JOW	Kunigami	48.77	320	P	P	14 55 03.8	-0.6
	comp=Z,12nm,0.5s,baz=114,slow=9.7,SNR=5.9						
JOW	Kunigami	48.77	320	P	P	14 55 03.3	-1.0
JOW	Kunigami	48.77	320	P	P	14 55 05.3	+1.0
INU	Inuyama	50.75	334	P	P	14 55 19.7	+0.5
MJAR	Matsushiro Arr	51.29	336	P	P	14 55 22.2	-1.1
	comp=Z,1.7nm,0.4s,baz=168,slow=7.5,SNR=12						
MAJO	Matsushiro	51.29	336	P	P	14 55 22.6	-0.7
MAT	Matsushiro	51.29	336	P	P	14 55 22.1	-1.2
SSLB	Suanglung	51.87	311	P	P	14 55 28.4	+0.5
JNU	Nakatsue	51.88	327	P	P	14 55 27.2	-0.6
	comp=Z,6.5nm,0.4s,baz=42,slow=1.2,SNR=7.8						
KASI	Kota Agung	56.34	270	P	P	14 56 01.6	+1.0
	comp=Z,26nm,1.3s						
ASAJ	Asahikawa	56.64	344	P	P	14 56 02.1	+0.1
	comp=Z,6.7nm,0.5s,baz=228,slow=7.2,SNR=12						
KSRS	Korea Array	56.75	328	P	P	14 56 03.1	+0.1
	comp=Z,4.8nm,0.8s,baz=142,slow=7.1,SNR=22						
KSRS				pP	sP	14 56 25.4	-2.1
	comp=Z,2.8nm,1.0s,baz=143,slow=7.2,SNR=3.9						
KSRS				LR	LR	15 19 41.0	
	comp=Z,27nm,19.4s,baz=120,slow=35						
NJ2	Nanjing	58.36	318	*e*P	P	14 56 14.7	+0.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	Ussuriysk Ar.	60.29	336	P	P	14 56 27.8	+0.3
	comp=Z,9.3nm,0.8s,baz=149,slow=6.1,SNR=16						
USRK				pP	sP	14 56 49.6	-2.4
	comp=Z,3.2nm,0.7s,baz=142,slow=4.1,SNR=2.7						
USRK				LR	LR	15 20 23.0	
	comp=Z,28nm,21.8s,baz=156,slow=34						
WHN	Wuhan	60.56	314	⇓P	P	14 56 38.1	+8.5

CN2	**Changchun**	**62.81**	**332**	*e*P	**P**	**14 56 44.0**	**-0.5**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
PETK	**Petropavlovsk-**	**63.12**	**358**	P	**P**	**14 56 46.4**	**0.0**
	comp=Z,1.3nm,0.7s,baz=77,slow=27,SNR=9.6						
PETK				pP	**sP**	**14 57 08.5**	**-2.2**
	comp=Z,6.3nm,0.9s,baz=213,slow=7.8,SNR=3.4						
KLR	**Kul'dur**	**64.60**	**339**	P	**P**	**14 56 55.7**	**-0.5**
	comp=Z,3.9nm,0.8s,baz=148,slow=6.2,SNR=10						
KLR				pP	**sP**	**14 57 18.8**	**-2.0**
	comp=Z,3.1nm,0.7s,baz=143,slow=7.6,SNR=4.1						
XAN	**Xi'an**	**66.31**	**314**	P	**P**	**14 57 06.9**	**-0.7**
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
VNDA	**Vanda**	**67.31**	**180**	P	**P**	**14 57 13.9**	**+0.7**
VNDA				IAmb	IAmb	14 57 14.7	
	comp=Z,9.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**67.72**	**295**	LR	LR	15 26 56.7	
	comp=Z,8.1nm,20.3s,baz=4.5,slow=36						
HHC	**Hu-ho-hao-te**	**68.36**	**322**	*e*P	**P**	**14 57 20.3**	**-0.2**
CD2	**Chengdu**	**68.59**	**309**	P	**P**	**14 57 22.1**	**0.0**
LZH	**Lanzhou**	**70.94**	**314**	*e*P	**P**	**14 57 37.9**	**+1.3**
LZH				pP	pwP	14 57 58.0	+1.3
LZH				sP	sP	14 58 09.4	+8.3
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
SEY	**Seymchan**	**73.22**	**356**	P	**P**	**14 57 49.1**	**-0.3**
	comp=Z,3.5nm,0.7s,baz=149,slow=6.6,SNR=13						
SEY				pP	**sP**	**14 58 12.0**	**-2.1**
	comp=Z,4.1nm,1.0s,baz=154,slow=3.9,SNR=3.8						
SEY				LR	LR	15 25 27.1	
	comp=Z,48nm,20.9s,baz=136,slow=32						
GTA	**Gaotai**	**75.31**	**315**	⇑P	**P**	**14 58 03.0**	**+0.7**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM	**Songino Array**	**75.40**	**325**	P	**P**	**14 58 02.9**	**+0.3**
	comp=Z,10nm,0.7s,baz=142,slow=5.9,SNR=54						
SONM				pP	**pwP**	**14 58 24.0**	**+3.7**
	comp=Z,5.0nm,0.6s,baz=143,slow=6.0,SNR=4.7						
SONM				LR	LR	15 34 02.1	
	comp=Z,19nm,18.0s,baz=176,slow=38						
SONM	**Songino Array**	**75.40**	**325**	P	**P**	**14 58 02.7**	**+0.1**
SONM				IAmb	IAmb	14 58 03.9	
	comp=Z,10.0nm,0.8s						
YAK	**Yakutsk**	**76.09**	**345**	P	**P**	**14 58 05.9**	**-0.1**
	comp=Z,15nm,0.6s,baz=166,slow=0.6,SNR=18						
YAK				pP	**sP**	**14 58 28.3**	**-2.4**
	comp=Z,11nm,0.7s,baz=197,slow=0.6,SNR=4.3						
YAK				LR	LR	15 29 08.3	
	comp=Z,62nm,21.9s,baz=96,slow=34						
YAK	**Yakutsk**	**76.09**	**345**	P	**P**	**14 58 06.0**	**-0.1**
KDAK	**Kodiak Island**	**77.48**	**23**	P	**P**	**14 58 14.5**	**+0.6**
	comp=Z,13nm,0.7s,baz=190,slow=1.5,SNR=12						
KDAK	**Kodiak Island**	**77.48**	**23**	P	**P**	**14 58 13.6**	**-0.4**
M19K	**Big River Lodg**	**79.73**	**20**	P	**P**	**14 58 27.6**	**+1.4**
L19K	**White Mountain**	**79.78**	**19**	P	**P**	**14 58 27.8**	**+1.3**
QSPA	**South Pole Qui**	**79.81**	**180**	P	**P**	**14 58 25.6**	**-1.3**
RC01	**Rabbit Creek A**	**80.79**	**22**	P	**P**	**14 58 32.5**	**+0.6**
RC01				IAmb	IAmb	14 58 33.3	
	comp=Z,8.6nm,0.5s						
K20K	**Telida**	**80.87**	**19**	P	**P**	**14 58 32.9**	**+0.5**
PMR	**Palmer**	**81.34**	**22**	P	**P**	**14 58 35.6**	**+0.8**
J20K	**Nowinta River**	**81.44**	**18**	P	**P**	**14 58 35.3**	**0.0**
CAST	**Castle Rocks**	**81.55**	**19**	P	**P**	**14 58 35.9**	**-0.1**
KTH	**Kantishna Hill**	**82.03**	**20**	P	**P**	**14 58 38.1**	**-0.4**
KTH				IAmb	IAmb	14 58 39.0	
	comp=Z,10nm,0.8s						
TRF	**Thorofare Moun**	**82.17**	**20**	P	**P**	**14 58 39.1**	**-0.4**
TRF				IAmb	IAmb	14 58 39.8	
	comp=Z,8.3nm,0.8s						
RND	**Reindeer**	**82.62**	**20**	P	**P**	**14 58 42.1**	**+0.4**
RND				IAmb	IAmb	14 58 42.6	
	comp=Z,9.2nm,0.8s						
I21K	**Tanana**	**82.81**	**18**	P	**P**	**14 58 42.9**	**+0.5**
I21K				IAmb	IAmb	14 58 46.4	
	comp=Z,9.4nm,1.0s						
MCK	**McKinley**	**82.81**	**20**	P	**P**	**14 58 42.5**	**-0.1**
IMAR	**Indian Mountai**	**82.85**	**17**	P	**P**	**14 58 43.0**	**+0.3**
H21K	**Melozitna Rive**	**82.89**	**17**	P	**P**	**14 58 43.5**	**+0.6**
MLY	**Manley**	**83.09**	**19**	IAmb	IAmb	14 58 45.3	
	comp=Z,6.3nm,0.7s						
GLB	**Gilahina Butte**	**83.25**	**23**	P	**P**	**14 58 45.5**	**+0.5**
GLB				IAmb	IAmb	14 58 46.8	
	comp=Z,8.2nm,0.7s						
WRH	**Wood River Hil**	**83.57**	**20**	P	**P**	**14 58 46.1**	**-0.3**
WRH				IAmb	IAmb	14 58 47.0	
	comp=Z,5.9nm,0.6s						
I23K	**Minto, Yukon-K**	**83.60**	**19**	P	**P**	**14 58 46.3**	**-0.3**
I23K				IAmb	IAmb	14 59 12.0	
	comp=Z,7.1nm,1.1s						
CCB	**Clear Creek Bu**	**83.78**	**20**	P	**P**	**14 58 47.1**	**-0.4**
CCB				IAmb	IAmb	14 58 47.9	
	comp=Z,5.6nm,0.6s						
MAW	**Mawson**	**83.83**	**202**	P	**P**	**14 58 47.4**	**-0.4**
	comp=Z,3.3nm,0.8s,baz=121,slow=5.9,SNR=2.5						
MDM	**Murphy Dome**	**83.84**	**19**	P	**P**	**14 58 47.5**	**-0.3**
MDM				IAmb	IAmb	14 59 11.9	
	comp=Z,9.1nm,1.0s						
BARN	**Barnard Glacie**	**83.89**	**24**	P	**P**	**14 58 49.4**	**+1.1**
HDA	**Harding Lake**	**83.92**	**20**	P	**P**	**14 58 47.4**	**-0.8**
HDA				IAmb	IAmb	14 58 49.6	
	comp=Z,12nm,0.8s						
M26K	**Nabesna, AK**	**84.12**	**23**	P	**P**	**14 58 50.0**	**+0.6**
M26K				IAmb	IAmb	14 58 51.2	
	comp=Z,8.6nm,0.8s						
IL31		**84.17**	**20**	P	**P**	**14 58 48.7**	**-0.7**
ILAR	**Eielson Array**	**84.17**	**20**	P	**P**	**14 58 49.1**	**-0.4**
	comp=Z,2.0nm,0.4s,baz=241,slow=4.9,SNR=74						
ILAR				pP	**pwP**	**14 59 12.0**	**+2.1**
	comp=Z,3.1nm,0.9s,baz=239,slow=5.9,SNR=5.1						
ILAR	**Eielson Array**	**84.17**	**20**	P	**P**	**14 58 49.2**	**-0.3**
TIXI	**Tiksi**	**84.45**	**350**	P	**P**	**14 58 49.8**	**-0.9**
	comp=Z,2.2nm,0.5s,baz=142,slow=6.1,SNR=14						
TIXI				pP	**sP**	**14 59 13.7**	**-2.0**
	comp=Z,1.9nm,0.6s,baz=131,slow=1.0,SNR=2.9						
TIXI	**Tiksi**	**84.45**	**350**	P	**P**	**14 58 50.4**	**-0.4**
TIXI				IAmb	IAmb	14 59 17.5	
	comp=Z,10nm,1.5s						
DOT	**Dot Lake**	**84.46**	**21**	P	**P**	**14 58 51.9**	**+0.9**
DOT				IAmb	IAmb	14 58 52.6	
	comp=Z,9.4nm,0.7s						
M27K	**Edge Creek, AK**	**84.53**	**23**	P	**P**	**14 58 52.7**	**+1.1**
M27K				IAmb	IAmb	14 59 17.0	
	comp=Z,11nm,0.8s						
SCRK	**Sand Creek**	**84.68**	**21**	P	**P**	**14 58 53.3**	**+1.1**
SCRK				IAmb	IAmb	14 58 53.9	
	comp=Z,8.2nm,0.7s						
L27K	**Beaver Creek,**	**84.94**	**23**	P	**P**	**14 58 54.9**	**+1.4**
L27K				IAmb	IAmb	14 59 21.7	
	comp=Z,9.9nm,1.4s						
WMQ	**Urumqi**	**85.38**	**316**	*e*P	**P**	**14 58 57.3**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,14nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.3s						
TOLK	**Toolik Lake Re**	**85.86**	**16**	P	**P**	**14 58 59.0**	**+1.0**
EGAK	**Eagle**	**86.15**	**21**	P	**P**	**14 58 59.7**	**+0.4**
EGAK				IAmb	IAmb	14 59 01.4	
	comp=Z,7.1nm,0.8s						
NVAR	**Mina Array Bea**	**88.89**	**51**	P	**P**	**14 59 14.7**	**+1.3**
	comp=Z,2.2nm,0.7s,baz=235,slow=7.4,SNR=8.9						
MK31	**Makanchi Array**	**89.89**	**318**	P	**P**	**14 59 16.0**	**-1.7**
MK31				IAmb	IAmb	14 59 41.6	
	comp=Z,3.9nm,1.0s						
MKAR	**Makanchi Array**	**89.89**	**318**	P	**P**	**14 59 16.9**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=91,slow=6.9,SNR=23						
ZALV	**Zalesovo Beam**	**90.30**	**325**	LR	LR	15 42 10.6	
	comp=Z,13nm,18.0s,baz=52,slow=37						
SYO	**Syowa Base**	**91.27**	**198**	⇓*e*X	**P**	**14 59 20.4**	**-3.2**
NEW	**Newport**	**92.01**	**41**	P	**P**	**14 59 27.9**	**+0.4**
NEW				IAmb	IAmb	14 59 29.3	
	comp=Z,4.1nm,0.7s						
KURBB	**Kurchatov Arra**	**93.20**	**321**	P	**P**	**14 59 31.7**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=103,slow=3.1,SNR=5.2						
KURBB				pP	**pwP**	**14 59 53.8**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=105,slow=3.2,SNR=8.0						
NRIK	**Noril'sk**	**93.79**	**340**	LR	LR	15 40 36.8	
	comp=Z,54nm,22.0s,baz=92,slow=35						
PDAR	**Pinedale Array**	**96.25**	**48**	P	**P**	**14 59 47.4**	**0.0**
	comp=Z,0.5nm,0.8s,baz=174,slow=1.5,SNR=4.6						
YKA	**Yellowknife Ar**	**96.27**	**28**	P	**P**	**14 59 46.3**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=260,slow=4.9,SNR=15						
YKA				pP	**sP**	**15 00 10.2**	**-1.7**
	comp=Z,1.1nm,0.6s,baz=255,slow=4.7,SNR=4.0						
ARCES	**ARCESS Array B**	**114.36**	**344**	PKiKP	PKPdf	15 04 57.0	-0.6
	comp=Z,3.9nm,1.0s,baz=331,slow=1.5,SNR=8.4						
BOSA	**Boshof**	**122.59**	**226**	PKP	**PKPdf**	**15 05 13.6**	**-1.2**
	comp=Z,2.7nm,1.1s,baz=150,slow=3.0,SNR=3.7						
CRVS	**Cervenica-Dubn**	**128.91**	**327**	*e*PKP	**PKiKP**	**15 05 29.7**	**+3.0**
GERES	**GERESS Array B**	**132.90**	**331**	PKP	**PKPdf**	**15 05 34.0**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=5.7,slow=3.0,SNR=2.4						
ESDC	**Sonseca Array**	**147.82**	**338**	PKPbc	**PKPbc**	**15 06 03.2**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=7.7,slow=3.0,SNR=3.4						

SJA ***12*** *15:08:54.4±0.7, 35°.13S×72°.25W, h69^{km}±2^{km}, ML4.9, MW4.7*

NEIC ***12*** *15:08:58.2±2.1, 35°.01S±0°.05×71°.94W±0°.09, h41^{km}±4^{km}, mb5.0/34, Mwr4.6/29, ML4.9(GUC), Error ellipse: s-maj=10.6km s-min=6.7km az=111.0*

GUC ***12*** *15:08:58.4±0.6, 35°.08S×71°.92W, h51^{km}±3^{km}, ML4.9*

NEIC ***12*** *15:08:58, 35°.01S×71°.90W, h47^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$7.41; M$_{\theta\theta}$-0.84; M$_{\phi\phi}$-6.57; M$_{r\theta}$0.42; M$_{\theta\phi}$-0.79; M$_{\phi r}$-5.45; Fault plane solution: M$_0$8.94000×10^{15} NP1:φ$_s$180.69000°, δ63.91000°, λ84.45000°. NP2:φ$_s$13.15000°, δ26.64000°, λ101.18000°. Principal axes: T 9.3259, Plg71.0000°, Azm79.0000°; N -0.8357, Plg5.0000°, Azm183.0000°; P -8.4903, Plg19.0000°, Azm275.0000°;*

VAO ***12*** *15:08:59.1±0.6, 35°.00S×71°.62W, h43^{km}, mb4.8*

MOS ***12*** *15:09:00.0±1.1, 34°.98S×71°.64W, h67^{km}, mb5.2/6, Error ellipse: s-maj=15.8km s-min=8.0km az=83.8*

IDC ***12*** *15:09:01.4±2.6, 34°.97S×71°.64W, h61^{km}±22^{km}, mb4.4/12, mb1 4.5/16, mb1mx4.3/28, mbtmp4.6/16, ML4.6/4, MS3.6/11, Ms1 3.6/11, ms1mx3.5/22, Error ellipse: s-maj=22.2km s-min=12.9km az=84.0*

ISC 12 15:08:58.7±0.6**, 35°.03S**±0°.04×**71°.89W**±0°.05**, h46**^{km}±5^{km}**, n274,** σ1^s**66**/283**, mb4.9**/26**, MS3.7**/11**, 17C-19D, Fault plane solution: NP1:**φ$_s$9.57799°, δ49.37024°, λ86.45079°. **NP2:**φ$_s$195.01907°**,** δ40.75768°**,** λ94.12679°. **Principal axes:** T Plg84.9143°**,** Azm249.9870°**;** N Plg2.6929°**,** Azm11.8908°**;** P Plg4.3111°**,** Azm102.0940°**;**

Central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	**Huala**	**0.04**	**302**	*e*P	**Pn**	**15 09 06.2**	**+0.4**
GO05				*i* S	**Sn**	**15 09 11.8**	**+0.9**
GO05				IAML		15 09 13.0	
	comp=E,99μm,0.4s						
GO05	**Huala**	**0.04**	**302**	Pn	**Pn**	**15 09 06.4**	**+0.5**
GO05				Sn	**Sn**	**15 09 11.5**	**+0.6**
GO05	**Huala**	**0.04**	**302**	*e*P	**Pn**	**15 09 06.2**	**+0.4**
GO05				*e*S	**Sn**	**15 09 14.4**	**+3.5**
BO01	**Tunca**	**0.92**	**46**	*e*P	**Pn**	**15 09 15.2**	**0.0**
BO01				*i* S	**Sn**	**15 09 27.0**	**-0.3**
BO01	**Tunca**	**0.92**	**46**	Pn	**Pn**	**15 09 15.0**	**-0.2**
BO01				Sn	**Sn**	**15 09 25.1**	**-2.3**
BO01	**Tunca**	**0.92**	**46**	*e*P	**Pn**	**15 09 15.2**	**0.0**
BO01				*e*S	**Sn**	**15 09 26.8**	**-0.6**
BO01				IAML		15 09 27.8	
	comp=Z,10μm,0.3s						
BO02	**Sierra Bellavi**	**0.94**	**76**		**Pn**	**15 09 15.4**	**-0.2**
MT01	**Popeta**	**1.28**	**25**	*e*P	**Pn**	**15 09 20.6**	**+0.5**
MT01				*i* S	**Sn**	**15 09 37.5**	**+1.5**
MT01				IAML		15 09 41.2	
	comp=E,31μm,0.2s						
MT01	**Popeta**	**1.28**	**25**		**Pn**	**15 09 20.0**	**-0.1**
MT01	**Popeta**	**1.28**	**25**	*e*P	**Pn**	**15 09 20.6**	**+0.5**
MT01				*e*S	**Sn**	**15 09 39.6**	**+3.6**
MT01				IAML		15 09 41.0	
	comp=Z,16μm,0.8s						
VA05	**Santo Domingo**	**1.39**	**10**	*e*P	**Pn**	**15 09 21.7**	**+0.1**
VA05				*i* S	**Sn**	**15 09 39.5**	**+0.8**
VA05				IAML		15 09 49.1	
	comp=E,16μm,0.3s						
VA05	**Santo Domingo**	**1.39**	**10**		**Pn**	**15 09 21.7**	**+0.1**
MT09	**Talagante**	**1.46**	**31**	*e*P	**Pn**	**15 09 23.5**	**+0.8**
MT09				*i* S	**Sn**	**15 09 42.0**	**+1.3**
MT09				IAML		15 09 44.8	
	comp=N,46μm,0.3s						
MT09	**Talagante**	**1.46**	**31**		**Pn**	**15 09 22.9**	**+0.2**
BO04	**La Punta**	**1.48**	**46**	*e*P	**Pn**	**15 09 23.3**	**+0.4**
BO04				*i* S	**Sn**	**15 09 42.4**	**+1.2**
BO04				IAML		15 09 45.0	
	comp=E,28μm,0.1s						
LMEL	**Las Melosas**	**1.83**	**50**	*e*P	**Pn**	**15 09 28.5**	**+0.7**
LMEL				*i* S	**Sn**	**15 09 51.2**	**+1.4**
LMEL				IAML		15 09 59.0	
	comp=N,15μm,0.2s						
MT05	**Renca**	**1.89**	**31**	*e*P	**Pn**	**15 09 29.3**	**+0.8**
MT05				*i* S	**Sn**	**15 09 52.4**	**+1.2**
MT05				IAML		15 09 60.0	
	comp=E,23μm,0.3s						
MT05	**Renca**	**1.89**	**31**		**Pn**	**15 09 29.4**	**+0.8**
MT05	**Renca**	**1.89**	**31**	*e*P	**Pn**	**15 09 23.9**	**-4.7**
MT05				*e*P	**Pn**	**15 09 29.6**	**+1.0**
MT05				*e*S	**Sn**	**15 09 55.8**	**+4.5**
MT05				IAML		15 09 59.1	
	comp=Z,8μm,0.6s						
VA01	**Torpederas**	**2.01**	**6**	*e*P	**Pn**	**15 09 30.8**	**+0.7**
VA01	**Torpederas**	**2.01**	**6**	Pn	**Pn**	**15 09 30.4**	**+0.3**
VA01	**Torpederas**	**2.01**	**6**	*e*P	**Pn**	**15 09 30.0**	**-0.1**
VA01				*e*S	Sn	15 09 43.8	-10
PEL	**Peldehue**	**2.13**	**28**	P	**Pn**	**15 09 32.3**	**+0.5**
PEL	**Peldehue**	**2.13**	**28**	*e*P	**Pn**	**15 09 32.6**	**+0.8**
PEL				IAML		15 10 08.3	
	comp=N,10μm,0.4s						
PEL	**Peldehue**	**2.13**	**28**	Pn	**Pn**	**15 09 32.3**	**+0.5**
PEL	**Peldehue**	**2.13**	**28**	*e*P	**Pn**	**15 09 33.0**	**+1.1**
PEL				*e*P	**Pn**	**15 09 33.0**	**+1.1**
PEL				*e*S	**Sn**	**15 10 03.1**	**+6.0**
FCH	**Farellones**	**2.15**	**38**	*e*P	**Pn**	**15 09 33.2**	**+0.8**
FCH				*i* S	**Sn**	**15 09 59.6**	**+1.5**
FCH				IAML		15 10 05.0	
	comp=N,11μm,0.2s						
EDS3	**Malargue**	**2.17**	**111**	*e*P	**Pn**	**15 09 34.4**	**+2.0**
EDS3				*e*S	Sn	15 09 42.8	-15
ROC1	**El Roble**	**2.17**	**20**	*e*P	**Pn**	**15 09 33.0**	**+0.4**
ROC1				*e*S	**Sn**	**15 10 03.5**	**+5.1**
ROCH	**El Roble**	**2.18**	**20**	*e*P	**Pn**	**15 09 33.4**	**+0.7**
ROCH				*e*P	**Pn**	**15 09 33.1**	**+0.5**
ROCH				*i* S	**Sn**	**15 10 00.3**	**+1.8**
ROCH				*i* S	**Sn**	**15 10 00.4**	**+1.9**
ROCH				IAML		15 10 06.4	
	comp=N,13μm,0.7s						
ROCH				IAML		15 10 06.7	
	comp=N,16μm,0.6s						
VA03	**San Esteban**	**2.52**	**27**		**Pn**	**15 09 37.9**	**+0.7**
VA03	**San Esteban**	**2.52**	**27**	*e*P	**Pn**	**15 09 38.0**	**+0.7**
VA03				*e*S	**Sn**	**15 10 08.3**	**+1.6**
VA03				IAML		15 10 20.2	
	comp=Z,5μm,0.5s						
RFA	**San Rafael**	**2.83**	**86**	*e*P	**Pn**	**15 09 43.1**	**+1.7**
RFA				*e*S	Sn	15 10 29.3	+15
CANA	**Caviahue**	**2.93**	**167**	*e*P	Pn	15 09 48.0	+5.1
AAGR	**Agrelo**	**3.20**	**54**	*e*P	**Pn**	**15 09 49.0**	**+2.5**
ARCO	**CERRO ARCO**	**3.29**	**49**	*e*P	**Pn**	**15 09 50.0**	**+2.2**
AUSP	**Uspallata**	**3.49**	**37**	*e*P	**Pn**	**15 09 53.0**	**+2.3**
AUSP				*e*S	Sn	15 10 43.4	+12
ASAL	**Salagasta**	**3.52**	**47**	*e*P	**Pn**	**15 09 53.6**	**+2.7**
ASAL				*e*S	Sn	15 10 51.5	+20
LC01	**Cunco**	**3.86**	**180**	Pn	**Pn**	**15 09 57.1**	**+1.5**
RTLS	**Leoncito**	**3.88**	**35**	*e*P	**Pn**	**15 09 58.0**	**+1.9**
RTLS				*e*S	Sn	15 10 51.4	+11
RTLS				IAML		15 11 03.3	
	comp=Z,1μm,0.8s						
RTCV	**Cerro Valdivia**	**4.22**	**42**	*e*P	**Pn**	**15 10 02.0**	**+1.5**
ZON	**Zonda**	**4.39**	**39**	P	**Pn**	**15 10 04.3**	**+1.4**
ZON	**Zonda**	**4.39**	**39**	Pn	**Pn**	**15 10 04.3**	**+1.4**
ZON	**Zonda**	**4.39**	**39**	*e*P	**Pn**	**15 10 05.0**	**+2.1**
ZON				*e*S	**Sn**	**15 11 00.8**	**+8.0**
ZON				IAML		15 11 25.1	
	comp=Z,642nm,3.0s						
LR03	**Panguipulli**	**4.61**	**184**		**Pn**	**15 10 06.6**	**+0.8**
GO04	**Tololo Observa**	**4.93**	**11**	Pn	**Pn**	**15 10 10.2**	**-0.3**
GO04	**Tololo Observa**	**4.93**	**11**	*e*P	**Pn**	**15 10 10.6**	**+0.2**
GO04				*e*S	**Sn**	**15 11 05.3**	**-1.1**
ACCO	**Cerro Coronel**	**5.03**	**29**	*e*P	**Pn**	**15 10 13.0**	**+1.1**
ACCO				*e*S	**Sn**	**15 11 15.8**	**+7.0**
CO05	**La Serena**	**5.13**	**6**		**Pn**	**15 10 12.4**	**-0.5**
AROD	**Rodeo**	**5.26**	**23**	*e*P	**Pn**	**15 10 17.0**	**+1.9**
AROD				*e*S	Sn	15 11 24.9	+10
AVFE	**Valle Fertil**	**5.74**	**42**	*e*P	Pn	15 10 08.3	-13
AVFE				*e*P	Pn	15 10 15.8	-5.5
AVFE				*e*P	**Pn**	**15 10 21.1**	**-0.2**
AVFE				*e*S	**Sn**	**15 11 31.4**	**+5.4**
AVFE				IAML		15 11 37.5	
	comp=Z,374nm,0.7s						
MRA	**San Martin**	**5.76**	**65**	*e*P	**Pn**	**15 10 23.0**	**+1.2**
MRA				*e*S	Sn	15 11 45.1	+18
PLCA	**Paso Flores**	**5.79**	**170**	P	**Pn**	**15 10 25.1**	**+3.1**
	comp=Z,9.2nm,0.3s,baz=337,slow=11,SNR=118						
PLCA				S	Sn	15 11 37.4	+10
	baz=63,slow=22,SNR=0.9						
PLCA				LR	LR	15 12 48.5	
	comp=Z,547nm,20.5s,baz=354,slow=39						
PLCA	**Paso Flores**	**5.79**	**170**	*e*P	**Pn**	**15 10 25.9**	**+3.8**
ACHE	**Chepes**	**5.84**	**50**	*e*P	**Pn**	**15 10 23.3**	**+0.4**
ACHE				*e*S	**Sn**	**15 11 33.2**	**+4.6**
LL04	**Puerto Octay**	**5.88**	**184**	Pn	**Pn**	**15 10 22.3**	**-1.0**
H03S1	**Juan Fernandez**	**5.92**	**280**	T	T	15 16 23.1	
	SNR=1776						
H03S3	**Juan Fernandez**	**5.92**	**280**	T	T	15 16 24.5	
	SNR=2756						
H03S2	**Juan Fernandez**	**5.93**	**280**	T	T	15 16 23.5	
	SNR=2394						
H03N1	**Juan Fernandez**	**6.03**	**283**	T	T	15 16 28.1	
	baz=95,slow=75,SNR=36						
H03N3	**Juan Fernandez**	**6.03**	**283**	T	T	15 16 31.1	
	baz=95,slow=75,SNR=30						
H03N2	**Juan Fernandez**	**6.04**	**283**	T	T	15 16 37.7	
	baz=95,slow=75,SNR=25						
LCO	**Las Campanas**	**6.08**	**10**	*e*P	**Pn**	**15 10 25.9**	**-0.4**
LCO	**Las Campanas**	**6.08**	**10**	Pn	**Pn**	**15 10 25.9**	**-0.4**
APLL	**PUNTA DE LOS L**	**6.46**	**46**	*e*P	**Pn**	**15 10 30.6**	**-0.7**
APLL				*e*S	**Sn**	**15 11 45.9**	**+2.0**
LL05	**Los Muermos**	**6.49**	**191**	Pn	**Pn**	**15 10 29.4**	**-2.1**
VCA	**Vinchina**	**7.01**	**28**	*e*P	**Pn**	**15 10 38.0**	**-1.0**
VCA				*e*S	Sn	15 12 06.8	+9.4
GO03	**Copiap**	**7.55**	**11**	Pn	**Pn**	**15 10 44.5**	**-1.7**
GO03	**Copiap**	**7.55**	**11**	*e*P	**Pn**	**15 10 45.0**	**-1.2**
GO03				*e*S	Sn	15 12 23.9	+13
LL02	**Futaleuf**	**8.15**	**180**		**Pn**	**15 10 53.8**	**-0.5**
AC02	**Maricunga**	**8.51**	**17**	Pn	**Pn**	**15 10 57.5**	**-2.2**
TRQA	**Tornquist**	**8.53**	**114**	P	**Pn**	**15 11 01.5**	**+1.9**
TRQA	**Tornquist**	**8.53**	**114**		**Pn**	**15 11 01.5**	**+1.9**
LVC	**Limon Verde**	**12.65**	**13**	P	**Pn**	**15 11 56.6**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=218,slow=11,SNR=4.7						
LVC				S	**Sn**	**15 14 22.8**	**+7.0**
	comp=Z,0.8nm,0.3s,baz=139,slow=19,SNR=2.0						
LVC				LR	LR	15 16 46.9	
	comp=Z,338nm,21.8s,baz=214,slow=37						
LVC	**Limon Verde**	**12.65**	**13**	*e*P	**Pn**	**15 11 57.2**	**+0.9**
LVC	**Limon Verde**	**12.65**	**13**	*e*P	**Pn**	**15 11 56.6**	**+0.4**
PB07	**IPOC Station P**	**13.37**	**8**	Pn	**Pn**	**15 12 05.7**	**-0.3**
ITQB	**Itaqui**	**13.96**	**72**	*e*P	**Pn**	**15 12 11.8**	**-2.1**
ITQB	**Itaqui**	**13.96**	**72**	Pn	**Pn**	**15 12 12.7**	**-1.1**
PB01	**IPOC Station P**	**14.09**	**9**	Pn	**Pn**	**15 12 14.3**	**-1.5**
CPUP	**Villa Florida**	**15.22**	**59**	P	**Pn**	**15 12 30.8**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=233,slow=11,SNR=5.0						
CPUP				LR	LR	15 18 54.7	
	comp=Z,627nm,19.6s,baz=222,slow=40						
CPUP	**Villa Florida**	**15.22**	**59**	*e*P	**Pn**	**15 12 28.9**	**-1.6**
PB11	**IPOC Station P**	**15.34**	**8**	Pn	**Pn**	**15 12 30.4**	**-1.8**
PB11				IAmb	IAmb	15 12 39.1	
	comp=Z,62nm,0.9s						
PLTB	**Pedras Altas**	**15.62**	**83**	*e*P	**Pn**	**15 12 34.3**	**-1.4**
PLTB	**Pedras Altas**	**15.62**	**83**	Pn	**Pn**	**15 12 34.7**	**-1.0**
CPSB	**Cacapava Do Su**	**16.20**	**79**	*e*P	**Pn**	**15 12 42.1**	**-0.9**
PB12	**IPOC Station P**	**16.41**	**5**	Pn	**Pn**	**15 12 44.4**	**-1.5**
PB16	**IPOC Station P**	**16.76**	**8**	Pn	**Pn**	**15 12 50.1**	**-0.7**
ITAB	**Concordia**	**18.59**	**71**	*e*P	**P**	**15 13 12.2**	**+0.1**
ITAB	**Concordia**	**18.59**	**71**	P	**P**	**15 13 10.9**	**-1.1**
LPAZ	**La Paz**	**18.97**	**11**	P	**Pn**	**15 13 18.5**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=177,slow=5.5,SNR=52						
DSPA	**Despedida**	**19.09**	**173**	P	**P**	**15 13 15.9**	**-1.4**
EFI	**East Falkland**	**19.38**	**153**	*e*P	**P**	**15 13 20.2**	**-0.3**
EFI	**East Falkland**	**19.38**	**153**	P	**P**	**15 13 20.2**	**-0.3**
EFI				IAmb	IAmb	15 13 49.0	
	comp=Z,117nm,1.3s						
USHA	**Ushuaia**	**19.95**	**174**	LR	LR	15 21 42.9	
	comp=Z,298nm,19.6s,baz=66,slow=38						
PTGB	**Pitanga**	**20.00**	**64**	*e*P	**P**	**15 13 25.7**	**-1.8**
AQDB	**Aquidauana**	**20.34**	**49**	*e*P	**P**	**15 13 30.7**	**-0.4**
AQDB	**Aquidauana**	**20.34**	**49**	P	**P**	**15 13 29.9**	**-1.3**
AQDB				IAmb	IAmb	15 13 31.7	
	comp=Z,70nm,0.8s						
TER01	**Tubaro-SC**	**20.38**	**78**	*e*P	**P**	**15 13 29.8**	**-1.8**
TRCB	**Terra Rica**	**20.76**	**59**	P	**P**	**15 13 34.9**	**-0.9**
TRCB				IAmb	IAmb	15 13 38.7	
	comp=Z,78nm,0.5s						
SIV	**San Ignacio**	**21.30**	**30**	P	**P**	**15 13 40.7**	**-0.8**
	comp=Z,36nm,1.0s,baz=212,slow=9.6,SNR=87						
SIV				LR	LR	15 23 16.9	
	comp=Z,159nm,19.8s,baz=274,slow=40						
PCMB	**Pacaembu**	**22.50**	**59**	*e*P	**P**	**15 13 51.8**	**-2.6**
PTLB	**Pontes e Lacer**	**22.61**	**34**	*e*P	**P**	**15 13 54.8**	**-0.8**
FRTB	**Fartura**	**22.65**	**65**	*e*P	**P**	**15 13 54.2**	**-1.8**
PP1B	**Ponte de Pedra**	**23.04**	**45**	*e*P	**P**	**15 13 58.5**	**-1.6**
NNA	**Nana**	**23.38**	**348**	P	**P**	**15 14 05.3**	**+2.0**
	comp=Z,5.6nm,0.4s,baz=222,slow=14,SNR=3.9						
NNA				LR	LR	15 20 53.5	
	comp=Z,110nm,21.6s,baz=166,slow=30						
PET01	**Itanhaem-SP**	**23.86**	**70**	*e*P	**P**	**15 14 06.1**	**-1.7**
SALV	**Santo Antonio**	**23.95**	**41**	*e*P	**P**	**15 14 07.8**	**-0.9**
SPB	**Sao Paulo**	**24.12**	**68**	*e*P	**P**	**15 14 09.3**	**-0.9**
ITRB	**Iturama**	**24.39**	**57**	*e*P	**P**	**15 14 11.2**	**-1.6**
VILB	**Vilhena**	**24.39**	**29**	*e*P	**P**	**15 14 12.4**	**-0.4**
RCLB	**Rio Claro- Sao**	**24.71**	**66**	*e*P	**P**	**15 14 14.3**	**-1.4**
BB19B	**Bebedouro**	**24.79**	**62**	*e*P	**P**	**15 14 14.8**	**-1.6**
VAO	**Valinhos**	**24.80**	**68**	*e*P	**P**	**15 14 15.7**	**-0.9**
ETMB	**Extrema**	**25.63**	**13**	*e*P	**P**	**15 14 24.5**	**+0.6**
ETMB	**Extrema**	**25.63**	**13**	P	**P**	**15 14 23.6**	**-0.4**
ETMB				IAmb	IAmb	15 14 39.2	
	comp=Z,36nm,0.8s						
ARAG	**Araguaiana, MT**	**26.35**	**48**	*e*P	**P**	**15 14 29.4**	**-1.1**
IPMB	**Ipameri, GO**	**27.04**	**57**	*e*P	**P**	**15 14 35.2**	**-1.6**
PDRB	**Porto dos Gac**	**27.08**	**34**	*e*P	**P**	**15 14 36.1**	**-1.0**
SAML	**Samuel**	**27.16**	**19**	P	**P**	**15 14 37.0**	**-0.8**
SAML				pmax	pmax		
	comp=Z,148nm,0.8s						
SAML	**Samuel**	**27.16**	**19**	P	**P**	**15 14 37.0**	**-0.8**
CZSB	**Cruzeiro do Su**	**27.18**	**358**	*e*P	**P**	**15 14 38.9**	**+0.9**
MAN01	**Angra dos Reis**	**27.18**	**71**	*e*P	**P**	**15 14 36.3**	**-1.8**
BSCB	**Bom Sucesso**	**27.61**	**67**	*e*P	**P**	**15 14 40.3**	**-1.6**
VAS01	**Vassouras-RJ**	**27.90**	**71**	*e*P	**P**	**15 14 43.6**	**-0.9**
CLDB	**Colider**	**28.16**	**35**	*e*P	**P**	**15 14 46.2**	**-0.6**
ATAH	**Atahualpa**	**28.40**	**346**	LR	LR	15 24 27.7	
	comp=Z,58nm,18.2s,baz=175,slow=33						
BDFB	**Brasilia**	**28.83**	**54**	P	**P**	**15 14 51.5**	**-1.3**
	comp=Z,8.8nm,0.6s,baz=187,slow=10,SNR=8.8						
SNDB	**Serra Nova Dou**	**29.60**	**44**	*e*P	**P**	**15 14 58.0**	**-1.6**
DIAM	**Diamantina, MG**	**30.08**	**64**	*e*P	**P**	**15 15 02.8**	**-1.1**
TBTG	**Tabatinga, AM**	**30.75**	**4**	*e*P	**P**	**15 15 10.4**	**+0.8**
MC01	**Montes Claros**	**30.91**	**61**	*e*P	**P**	**15 15 09.8**	**-1.5**
PEXB	**Peixe**	**31.28**	**49**	*e*P	**P**	**15 15 13.0**	**-1.4**
SJMB	**Sao Joao De Ma**	**31.69**	**67**	*e*P	**P**	**15 15 16.4**	**-1.5**
NPGB	**Novo Progresso**	**31.73**	**32**	*e*P	**P**	**15 15 16.9**	**-1.5**
JANB	**Januaria**	**31.76**	**58**	*e*P	**P**	**15 15 17.2**	**-1.4**
BSFB	**Barra de Sao F**	**31.87**	**68**	*e*P	**P**	**15 15 18.0**	**-1.5**
RIB01	**Linhares ES**	**31.93**	**69**	*e*P	**P**	**15 15 19.1**	**-1.0**
SDBA	**SAO DESIDERIO**	**33.23**	**54**	*e*P	**P**	**15 15 30.2**	**-1.4**
MACA	**Manacapuru-AM**	**33.37**	**21**	*e*P	**P**	**15 15 32.2**	**-0.5**
ITTB	**Itaituba**	**33.98**	**30**	*e*P	**P**	**15 15 36.8**	**-1.2**
GUA01	**Guaratinga, BA**	**34.02**	**66**	*e*P	**P**	**15 15 37.0**	**-1.3**
SMTB	**Santa Maria do**	**34.25**	**46**	*e*P	**P**	**15 15 39.1**	**-1.3**
CMC01	**Camacan, BA**	**35.01**	**64**	*e*P	**P**	**15 15 45.5**	**-1.4**
PRPB	**Parauapebas**	**35.20**	**40**	*e*P	**P**	**15 15 47.4**	**-1.1**
NBIT	**Itapeh - BA**	**35.34**	**64**	*e*P	**P**	**15 15 49.0**	**-0.8**
GDU01	**Guandu, BA**	**36.03**	**62**	*e*P	**P**	**15 15 54.2**	**-1.5**
MALB	**Monte Alegre**	**36.86**	**30**	*e*P	**P**	**15 16 02.3**	**-0.4**
NBPN	**Ponto Novo - B**	**37.55**	**58**	*e*P	**P**	**15 16 07.3**	**-1.3**
BOAV	**Boa Vista**	**38.73**	**18**	*e*P	**P**	**15 16 17.7**	**-0.8**
BOAV	**Boa Vista**	**38.73**	**18**	P	**P**	**15 16 17.6**	**-0.8**
BOAV				IAmb	IAmb	15 16 37.4	
	comp=Z,11nm,0.8s						
MCPB	**Macapa, AP**	**39.15**	**33**	*e*P	**P**	**15 16 21.0**	**-1.0**
NBLA	**Lagarto - SE**	**39.15**	**61**	*e*P	**P**	**15 16 20.2**	**-1.9**
NBMA	**Muriti-CE**	**41.02**	**56**	*e*P	**P**	**15 16 37.1**	**-0.5**
NBAN	**Anadia - AL**	**41.14**	**61**	*e*P	**P**	**15 16 37.1**	**-1.5**
NBPS	**Pedro II - PI**	**41.50**	**50**	*e*P	**P**	**15 16 40.8**	**-0.8**
NBPB	**Pedra_Branca-C**	**41.82**	**53**	*e*P	**P**	**15 16 43.6**	**-0.5**
NBLV	**Livramento - P**	**42.29**	**58**	*e*P	**P**	**15 16 47.0**	**-1.1**
ZARC	**Zaragoza, Cauc**	**42.38**	**356**	P	**P**	**15 16 48.5**	**-0.2**
OCAC	**Ocana**	**43.05**	**358**	P	**P**	**15 16 52.5**	**-1.8**
NBPA	**Parau_RN**	**43.32**	**56**	*e*P	**P**	**15 16 55.8**	**-0.4**

NBCL	Cascavel-CE	43.65	53	*e*P	P	15 16 58.9	-0.1
SDV	Santo Domingo	43.69	2	*e*P	P	15 16 59.2	-0.2
BAUV	El Baul	43.88	5	P	P	15 16 59.2	-1.5
NBPV	Pedro Velho	44.09	58	*e*P	P	15 17 02.4	-0.1
BIRV	Birongo	45.57	8	P	P	15 17 12.8	-1.4
BIRV				IAmb	IAmb	15 17 14.9	
	comp=Z,29nm,0.7s						
VNA3	Neumayer Olymp	48.36	157	P	P	15 17 36.5	+1.1
VNA1	Neumayer--Stat	48.68	157	P	P	15 17 40.8	+3.0
VNA2	Neumayer--Watz	49.02	157	P	P	15 17 41.4	+0.9
	baz=287,slow=9.1						
SNAA	Sanae	50.59	158	P	P	15 17 53.5	+1.1
SNAA	Sanae	50.59	158	P	P	15 17 53.7	+1.3
	comp=Z,3.3nm,0.3s,baz=224,slow=7.3,SNR=22						
SNAA	Sanae	50.59	158	*i* P	P	15 17 52.1	-0.3
SNAA				pmax	pmax		
	comp=Z,12nm,1.0s						
SNAA	Sanae	50.59	158	P	P	15 17 52.4	0.0
SNAA				IAmb	IAmb	15 17 54.3	
	comp=Z,11nm,1.0s						
MLPR	Magueyes Islan	52.91	6	P	P	15 18 08.7	-1.4
CRPR	Cabo Rojo, PR	52.94	6	P	P	15 18 08.5	-1.9
CELP	Cerrillos	53.05	6	P	P	15 18 09.8	-1.5
QSPA	South Pole Qui	55.21	180	P	P	15 18 28.5	+1.8
	comp=Z,12nm,0.9s,baz=166,slow=0.9,SNR=34						
QSPA	South Pole Qui	55.21	180	P	P	15 18 28.0	+1.3
QSPA				IAmb	IAmb	15 18 29.5	
	comp=Z,15nm,1.0s						
TAOE	Nuku Hiva Isla	67.18	275	*e*LR	LR	15 40 12.4	
	comp=Z,62nm,25.3s						
TBI	Tubuai	67.20	257	*e*LR	LR	15 39 56.5	
	comp=Z,166nm,26.8s						
833A	Chaparral WMA,	68.16	334	P	P	15 19 55.4	+1.4
	baz=156						
GOGA	Godfrey	68.94	350	P	P	15 19 56.8	-2.0
GOGA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GOGA	Godfrey	68.94	350	P	P	15 19 56.8	-2.0
PPT2	Papeete2	70.21	262	*e*S	S	15 29 20.1	+4.3
	comp=Z,127nm,37.0s						
PPT2	Papeete2	70.21	262	*e*LR	LR	15 41 21.0	
	comp=Z,172nm,26.8s						
PPT	Papeete	70.22	262	LR	LR	15 41 08.9	
	comp=Z,15nm,21.0s,baz=174,slow=27						
KMSC	Kings Mountain	70.37	352	P	P	15 20 08.0	+0.5
	baz=172						
TXAR	Lajitas Array	70.69	331	P	P	15 20 11.0	+1.2
	comp=Z,1.2nm,0.6s,baz=158,slow=8.6,SNR=28						
TXAR	Lajitas Array	70.69	331	P	P	15 20 11.0	+1.2
CPCT	Cooper Cave	71.10	349	P	P	15 20 11.5	-0.5
CPCT				IAmb	IAmb	15 20 13.0	
	comp=Z,9.5nm,0.9s						
V48A	Smith Brothers	71.77	347	P	P	15 20 15.5	-0.6
U54A	Nelsons Funny	71.78	352	P	P	15 20 15.0	-1.2
U54A				IAmb	IAmb	15 20 16.9	
	comp=Z,14nm,0.8s						
X40A	Basin Creek Fa	71.88	342	P	P	15 20 17.3	+0.6
	baz=162						
MAW	Mawson	72.16	163	P	P	15 20 18.6	+0.5
	comp=Z,7.0nm,0.7s,baz=194,slow=8.0,SNR=8.5						
MAW				LR	LR	15 54 28.8	
	comp=Z,69nm,18.5s,baz=239,slow=38						
ABTX	Abilene, Hawle	72.17	336	P	P	15 20 19.8	+1.3
	baz=156						
WVT	Waverly	72.34	347	P	P	15 20 19.1	-0.3
WVT				pmax	pmax		
	comp=Z,30nm,0.8s						
WVT	Waverly	72.34	347	P	P	15 20 19.1	-0.3
W41B	Gary Mavity, V	72.39	343	P	P	15 20 20.8	+1.1
	baz=163						
W39A	Magazine	72.80	341	P	P	15 20 23.2	+1.0
	baz=162						
LCAR	Lake Charles	72.98	344	P	P	15 20 21.6	-1.6
LCAR				IAmb	IAmb	15 20 24.2	
	comp=Z,14nm,1.0s						
U40A	Yellville	73.66	342	P	P	15 20 28.5	+1.2
	baz=162						
TUL1	Leonard	74.01	340	P	P	15 20 30.1	+0.8
	baz=160						
MSTX	Muleshoe	74.48	334	P	P	15 20 34.5	+2.2
	baz=154						
P60A	Greenville	74.55	357	P	P	15 20 34.1	+1.8
	baz=177						
P52A	Corning	74.89	352	P	P	15 20 34.3	0.0
	baz=171						
LIC	Lamto	74.99	71	*e*P	P	15 20 35.3	-0.2
	comp=Z,23nm,0.6s						
P49A	Miami Univ. Ec	75.14	350	P	P	15 20 36.0	+0.3
	baz=169						
O56A	Blue Knob Stat	75.18	355	P	P	15 20 37.2	+1.1
	baz=174						
121A	Cookes Peak, D	75.18	329	P	P	15 20 37.3	+0.9
	baz=150						
TIC	Toumodi	75.25	71	*e*P	P	15 20 37.1	0.0
KIC	Kosan Boka	75.29	71	*e*P	P	15 20 37.2	-0.1
	comp=Z,39nm,0.8s						
DBIC	Dimbokro	75.40	71	P	P	15 20 37.9	+0.1
	comp=Z,13nm,0.7s,baz=224,slow=5.8,SNR=15						
DBIC				LR	LR	15 51 06.3	
	comp=Z,38nm,19.9s,baz=218,slow=34						
DBIC	Dimbokro	75.40	71	P	P	15 20 36.8	-1.1
DBIC				pmax	pmax		
	comp=Z,17nm,0.8s						
DBIC	Dimbokro	75.40	71	P	P	15 20 36.8	-1.1
DBIC				IAmb	IAmb	15 20 38.8	
	comp=Z,16nm,0.8s						
O53A	New Philadelph	75.40	353	P	P	15 20 37.4	+0.2
	baz=172						
N59A	State Game Lan	75.66	357	P	P	15 20 39.9	+1.2
	baz=177						
N54A	Moraine State	75.99	354	P	P	15 20 41.2	+0.6
	baz=173						
M54A	Oil Creek Stat	76.50	354	P	P	15 20 44.1	+0.6
	baz=174						
ANMO	Albuquerque	76.74	331	*i* P	P	15 20 47.0	+1.7
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
T25A	Trinidad	77.91	334	P	P	15 20 52.5	+0.7
	baz=153						
S22A	4UR Ranch, Cre	79.34	332	P	P	15 21 00.9	+1.1
	baz=152						
BOSA	Boshof	79.49	117	P	P	15 21 00.9	+0.1
	comp=Z,17nm,0.8s,baz=239,slow=3.6,SNR=34						
BOSA				LR	LR	15 51 43.6	
	comp=Z,39nm,19.6s,baz=186,slow=32						
BOSA	Boshof	79.49	117	P	P	15 21 01.0	+0.1
BOSA				IAmb	IAmb	15 21 01.8	
	comp=Z,20nm,0.9s						
KOWA	Kowa	80.95	65	P	P	15 21 08.7	+0.2
KOWA				IAmb	IAmb	15 21 09.3	
	comp=Z,16nm,0.6s						
ECSD	EROS Data Cent	81.56	342	P	P	15 21 11.3	+0.1
ECSD				IAmb	IAmb	15 21 12.5	
	comp=Z,9.0nm,0.9s						
LBTB	Lobatse	81.76	115	P	P	15 21 12.5	-0.5
LBTB				pmax	pmax		
	comp=Z,14nm,0.9s						
LBTB	Lobatse	81.76	115	P	P	15 21 12.5	-0.5
LBTB				IAmb	IAmb	15 21 14.8	
	comp=Z,14nm,0.8s						
TORD	Torodi Ar. Bea	84.45	70	P	P	15 21 26.7	-0.1
	comp=Z,14nm,0.8s,baz=253,slow=4.0,SNR=77						
TORD	Torodi Ar. Bea	84.45	70	P	P	15 21 26.7	-0.1
TORD				IAmb	IAmb	15 21 27.7	
	comp=Z,15nm,0.8s						
PDAR	Pinedale Array	84.73	333	P	P	15 21 28.2	+0.4
	comp=Z,0.7nm,0.6s,baz=150,slow=6.8,SNR=9.8						
NVAR	Mina Array Bea	84.80	325	P	P	15 21 30.4	+2.1
	comp=Z,1.6nm,0.9s,baz=158,slow=5.5,SNR=6.4						
DZM	Mont Dzumac	100.73	233	*e*LR	LR	15 55 24.8	
	comp=Z,94nm,25.7s						
WRA	Warramunga Arr	119.92	209	PKP	PKPdf	15 27 44.4	-0.2
	comp=Z,0.7nm,0.5s,baz=155,slow=1.9,SNR=9.1						
WRAB	Tennant Creek	119.92	209	*i* PKIKP	PKPdf	15 27 43.6	-1.0
BRTR	Keskin Array B	122.22	61	PKP	PKiKP	15 27 48.7	0.0
	comp=Z,1.3nm,0.8s,baz=191,slow=3.5,SNR=5.4						
VSU	Vasula	123.42	39	*i* PKIKP	PKPdf	15 27 46.3	-3.6
H11S2	WAKE ISLAND Hy	125.87	268	T	T	17 46 35.0	
	SNR=6.0						
H11S1	WAKE ISLAND Hy	125.88	268	T	T	17 46 38.2	
	baz=118,slow=74,SNR=6.3						
H11S3	WAKE ISLAND Hy	125.89	268	T	T	17 46 36.7	
	baz=327,slow=74,SNR=3.0						
H11N3	WAKE ISLAND Hy	126.31	270	T	T	17 47 07.5	
	baz=115,slow=78,SNR=4.9						
H11N1	WAKE ISLAND Hy	126.32	270	T	T	17 47 08.8	
	baz=115,slow=78,SNR=12						
H11N2	WAKE ISLAND Hy	126.33	270	T	T	17 47 06.6	
	baz=115,slow=78,SNR=4.7						
KIV	Kislovodsk	129.92	59	*e*PKIKP	PKPdf	15 28 02.7	-0.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KLMR	Klimovskoe	130.16	37	*e*PKIKP	PKPdf	15 28 01.6	-1.1
KLMR				pmax	pmax		
	comp=Z,18nm,1.4s						
KLMR	Klimovskoe	130.16	37	*e*PKPdf	PKPdf	15 28 01.6	-1.1
KLMR				AMP		15 28 18.7	
	comp=Z,18nm,1.4s						
GNI	Garni	130.46	64	*i* PKIKP	PKPdf	15 28 03.4	-0.8
BILL	Bilibino	133.81	334	*e*PKIKP	PKPdf	15 28 04.2	-5.3
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GEYT	Alibeck	140.08	71	PKP	PKiKP	15 28 24.2	-0.3
	comp=Z,1.8nm,0.6s,baz=221,slow=7.7,SNR=4.1						
TIXI	Tiksi	141.73	350	*i* PKIKP	PKiKP	15 28 26.7	-0.1
BVAR	Borovoye Array	147.94	44	PKPbc	PKiKP	15 28 39.4	-0.7
	comp=Z,4.1nm,0.7s,baz=247,slow=11,SNR=11						
HYB	Hyderabad	148.38	116	*i* PKP	PKPbc	15 28 41.0	+0.4
HYB				*e*		15 28 55.0	
YAK	Yakutsk	149.74	340	PKPbc	PKPbc	15 28 42.6	0.0
	comp=Z,3.6nm,0.4s,baz=183,slow=3.5,SNR=9.0						
YAK	Yakutsk	149.74	340	*e*PKP2	PKPbc	15 28 41.8	-0.8
YAK				pmax	pmax		
	comp=Z,19nm,0.9s						
KKAR	Karatay Array	149.91	63	PKP2	PKPbc	15 28 43.5	-0.2
KKAR	Karatay Array	149.91	63	PKPbc	PKPbc	15 28 43.5	-0.2
NIL	Nilore	151.27	83	PKIKP	PKPbc	15 28 47.4	+0.2
NIL	Nilore	151.27	83		PKPbc	15 28 47.4	+0.2
AML	Almayashu	152.31	65	P	PKiKP	15 28 50.7	+0.6
	SNR=13						
EKS2	Erkin-Say	152.34	64	P	PKiKP	15 28 50.5	+0.7
	SNR=13						
USP	Ospenovka	152.81	62	P	PKiKP	15 28 51.2	+0.6
	SNR=7.5						
AAK	Ala-Archa	152.87	64	PKPbc	PKiKP	15 28 51.8	+1.0
	comp=Z,14nm,0.7s,baz=200,slow=2.6,SNR=45						
AAK	Ala-Archa	152.87	64	P	PKiKP	15 28 51.9	+1.0
	SNR=19						
UCH	Uchtor	152.91	65	P	PKiKP	15 28 52.4	+1.0
	SNR=18						
KURBB	Kurchatov Arra	153.52	45	PKPbc	PKPbc	15 28 51.6	0.0
	comp=Z,1.7nm,0.5s,baz=296,slow=3.0,SNR=9.9						
KURK	Kurchatov	153.54	45	PKIKP	PKPbc	15 28 51.6	0.0
TKM2	Tokmak 2	153.65	63	P	PKiKP	15 28 53.0	+0.4
	SNR=6.1						
KSH	Kashi	154.12	70	PKPbc	PKPbc	15 28 52.3	-1.2
KSH				pPKP	sPKPdf	15 29 03.6	-0.9
KSH				sPKP		15 29 06.2	
ZALV	Zalesovo Beam	155.02	34	PKPbc	PKPdf	15 28 53.9	+8.0
	comp=Z,0.7nm,0.3s,baz=270,slow=2.5,SNR=4.6						
MKAR	Makanchi Array	157.33	51	PKPbc	PKPbc	15 29 05.2	
	comp=Z,1.2nm,0.8s,baz=276,slow=3.4,SNR=6.2						
MKAR				PKPab	PKPab	15 29 19.9	-0.8
	comp=Z,3.2nm,0.8s,baz=287,slow=3.0,SNR=11						
MDJ	Mudanjiang	160.97	307	P	PKPdf	15 28 52.7	-0.8
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,200nm,5.9s						
WMQ	Urumqi	161.99	55	*e*P	PKPdf	15 28 54.1	-0.6
WMQ				pmax	pmax		
	comp=Z,180nm,4.1s						
SONM	Songino Array	167.14	5	PKPab	PKPab	15 30 04.2	+0.6
	comp=Z,1.2nm,0.9s,baz=340,slow=4.1,SNR=4.6						
NJ2	Nanjing	170.55	255	*e*P	PKPdf	15 29 01.3	-0.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC	Hu-ho-hao-te	173.58	336	*e*P	PKPdf	15 29 02.9	0.0

PDG ***12*** *15:10:44.1±0.2, 43°.44N×18°.96E, h13^{km}, MD3.0/5, ML3.0/13 Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
RHSSO ***12*** *15:10:44.9±0.2, 43°.43N×19°.02E, h3^{km}±2^{km}, ML3.1/14*
KRSZO ***12*** *15:10:44.3±0.8, 43°.44N×19°.00E, h9^{km}±6^{km}, ML3.7/9, Error ellipse: s-maj=2.4km s-min=2.0km az=139.0*
BEO ***12*** *15:10:45.0±0.2, 43°.45N×19°.00E, h5^{km}±1^{km}, ML2.9/18*
PRU ***12*** *15:10:46.4±0.0, 43°.52N×19°.09E, h0^{km}*
ISC 12 15:10:44.6±1.1**, 43°.45N**±0°.01×**19°.02E**±0°.01**, h3**^{km}±9^{km}**, n121,** σ1^{s}.**14**/208**, 31C-20D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
UPM	Unac-Piva	0.26	198	⇓*i*Pg	Pg	15 10 49.4	-0.2
UPM				*e*Sg	Sg	15 10 53.1	+0.1
UPM	Unac-Piva	0.26	198	⇓*i*Pg	Pg	15 10 49.4	-0.2
UPM				*i* Sg	Sg	15 10 53.1	+0.1
PLE	Pljevlja	0.30	113	⇑*i*Pg	Pg	15 10 50.8	+0.5
PLE				*i* Sg	Sg	15 10 55.5	+1.3
RUDO	Rudo	0.31	56	⇑*i*Pg	Pg	15 10 50.1	-0.4
RUDO				*e*Sg	Sg	15 10 54.7	+0.1
BBLS	Lazići	0.50	34	⇓*i*Pg	Pg	15 10 54.6	+0.3
BBLS				*e*Sg	Sg	15 11 02.2	+1.4
BBLS	Lazići	0.50	34	*e*Pg	Pg	15 10 54.6	+0.3
BBLS				*e*Sg	Sg	15 11 01.8	+1.0
NKY	Niksic	0.64	182	⇑*i*Pg	Pg	15 10 56.4	-0.4
NKY				*i* Sg	Sg	15 11 06.0	+1.0
NKME	Niksic	0.68	184	⇑*i*Pg	Pg	15 10 56.5	-1.2
NKME				*i* Sg	Sg	15 11 07.2	+0.7
KOME	Kolasin	0.70	148	⇑*i*Pg	Pg	15 10 57.6	-0.4
KOME				*i* Sg	Sb	15 11 08.8	-0.8
SJES	Sjenica	0.72	105	*e*Pg	Pg	15 10 58.4	-0.1
SJES				*e*Sg	Sg	15 11 08.4	+0.6
IVAS	Ivanjica	0.84	81	*e*Pg	Pg	15 11 00.2	-0.4
IVAS				*e*Sg	Sg	15 11 10.6	-0.9
IVA	Berane	0.86	132	⇓*i*Pg	Pg	15 11 00.7	-0.4
IVA				*i* Sg	Sb	15 11 14.8	+0.5
TREB	Trebinje	0.88	214	*e*Pg	Pg	15 11 00.0	-1.4
TREB				*e*Sg	Sg	15 11 13.6	+0.8
TREB	Trebinje	0.88	214	*e*Pg	Pg	15 11 00.2	-1.2
TREB				*e*Sg	Sg	15 11 13.8	+1.0
CEME	Cevo	0.90	185	⇑*i*Pg	Pg	15 11 00.6	-1.3
CEME				*i* Sg	Sg	15 11 15.0	+1.4
DIVS	Divibare	0.96	47	⇓*i*Pg	Pg	15 11 02.9	-0.1
DIVS				*e*Sg	Sg	15 11 15.6	+0.1
DIVS	Divibare	0.96	47	*e*Pg	Pg	15 11 03.0	-0.1
DIVS				*e*Sg	Sg	15 11 15.2	-0.3
PDG	Podgorica	1.03	170	⇓P	Pg	15 11 03.5	-0.9
PDG				⇓S	Sg	15 11 18.4	+0.6
PDG	Podgorica	1.03	170	⇑*i*Pg	Pg	15 11 03.3	-1.1
PDG				*e*Sg	Sg	15 11 17.1	-0.7
PDG	Podgorica	1.03	170	*e*Pg	Pg	15 11 03.3	-1.1
PDG				*e*Sg	Sg	15 11 17.9	+0.1
TTG	Podgorica	1.03	170	⇑*i*Pg	Pg	15 11 03.1	-1.3
TTG				*i* Sg	Sb	15 11 19.5	+0.4
HCY	Herceg Novi	1.07	201	⇑*i*Pg	Pg	15 11 03.5	-1.6
HCY				*e*Sg	Sg	15 11 18.0	-1.0
HCY	Herceg Novi	1.07	201	⇑*i*Pg	Pg	15 11 03.6	-1.6
HCY				*i* Sg	Sb	15 11 20.3	+0.1
PVY	Plav	1.10	141	⇑*i*Pg	Pg	15 11 04.9	-0.7
PVY				*i* Sg	Sn	15 11 22.5	-0.3
STON	Ston	1.12	240	⇑*i*Pg	Pg	15 11 04.8	-1.3
STON				*e*Sg	Sg	15 11 20.4	-0.3
STON	Ston	1.12	240	*e*Pg	Pg	15 11 04.6	-1.5
STON				Sg	Sg	15 11 21.4	+0.7
STON	Ston	1.12	240	*e*Pg	Pg	15 11 04.5	-1.6
STON				*e*Sg	Sg	15 11 21.2	+0.5
BUM	Brajici-Budva	1.15	185	⇑*i*Pg	Pg	15 11 05.5	-1.1
BUM				*i* Sg	Sb	15 11 23.4	+0.8
TEKS	Tekeris	1.16	18	*e*Pg	Pg	15 11 06.4	-0.4
TEKS				*e*Sg	Sb	15 11 22.6	-0.3
TEKS	Tekeris	1.16	18	*e*Pg	Pg	15 11 06.5	-0.4
TEKS				*e*Sg	Sg	15 11 22.2	+0.3
DRME	Dracevica, Mon	1.27	174	*e*Pg	Pg	15 11 08.0	-0.9
DRME				*e*Sg	Sg	15 11 25.1	-0.2
DRME	Dracevica, Mon	1.27	174	⇑*i*Pg	Pg	15 11 07.8	-1.1
DRME				*i* Sg	Sn	15 11 27.7	+0.9
TRUS	Trudelj	1.27	52	*e*Pg	Pg	15 11 08.5	-0.4
TRUS				*e*Sg	Sb	15 11 25.9	-0.1
GRUS	Gruza	1.31	70	*e*Pg	Pg	15 11 09.2	-0.5
GRUS				*e*Sg	Sn	15 11 28.3	+0.4
BLJ	Bijeljina	1.35	8	*e*Pg	Pn	15 11 09.4	-0.9
BLJ				*e*Sg	Sg	15 11 27.0	-0.9
RICI	Ricice	1.37	273	*e*Pg	Pn	15 11 09.6	-1.1
RICI				Sg	Sb	15 11 29.7	+0.8
DOB	Doboj	1.44	333	*e*Pg	Pn	15 11 11.5	-0.2
DOB				*e*Sg	Sb	15 11 30.7	-0.3
MAKA	Makarska	1.47	264	*i* Pg	Pn	15 11 11.1	-0.9
MAKA				Sg	Sb	15 11 31.9	+0.3
ULC	Ulcinj	1.49	173	⇑*i*Pg	Pn	15 11 11.9	-0.5
ULC				*i* Sg	Sg	15 11 34.4	+1.8
SELS	Selova	1.55	98	*e*Pn	Pn	15 11 11.7	-1.5
SELS				*e*Sn	Sg	15 11 35.2	+0.8
LSTV	Lastovo	1.70	247	*e*Pn	Pn	15 11 14.6	-0.5
LSTV				Sg	Sb	15 11 38.8	+0.6
MGRS	Mrkonjic Grad	1.70	305	*e*Pn	Pn	15 11 15.0	-0.2
MGRS				*e*Sn	Sn	15 11 38.0	+0.5
FRGS	Fruska Gora	1.80	18	⇓P	Pn	15 11 15.7	-0.9
FRGS				⇑S	Sn	15 11 39.8	-0.2
FRGS	Fruska Gora	1.80	18	*e*Pn	Pn	15 11 16.9	+0.3
FRGS				*e*Sn	Sn	15 11 40.0	-0.1
FRGS	Fruska Gora	1.80	18	*e*Pg	Pn	15 11 15.8	-0.9
FRGS				*e*Sg	Sg	15 11 42.2	-0.3
BLY	Banja Luka	1.85	315	⇑*i*Pn	Pn	15 11 18.0	+0.7
BLY				*e*Sn	Sn	15 11 41.8	+0.5
BLY	Banja Luka	1.85	315	Pn	Pn	15 11 18.5	+1.2
	comp=Z,0.5nm,SNR=16						
BLY	Banja Luka	1.85	315	*e*Pn	Pn	15 11 18.2	+0.9
BLY				*e*Sn	Sn	15 11 41.1	-0.2
HVAR	Hvar	1.89	263	*e*Pn	Pn	15 11 18.1	+0.2
HVAR				Sn	Sb	15 11 44.3	+0.4
BOVS	Bovan	1.96	84	⇑P	Pn	15 11 20.0	+1.1
BOVS				⇑S	Sb	15 11 46.5	+0.5
BOVS	Bovan	1.96	84	*e*Pn	Pn	15 11 19.6	+0.8
BOVS				*e*Sn	Sn	15 11 44.6	+0.6
BARS	Barje	2.14	106	*e*Pn	Pn	15 11 21.5	+0.2
BARS	Barje	2.14	106	*e*Pn	Pn	15 11 22.5	+1.2
BARS				*e*Sn	Sn	15 11 47.8	-0.7
BARS				*e*Sn	Sb	15 11 50.6	-0.5
KUBS	Kucevo	2.15	62	*e*Pn	Pn	15 11 21.8	+0.4
TIR	Tirane	2.19	163	⇑P	Pn	15 11 22.2	+0.2
TIR				⇓S	Sb	15 11 51.6	-0.9
MDVR	Moldovita	2.35	55	⇑P	Pn	15 11 24.2	-0.1
MDVR				⇓S	Sn	15 11 54.8	+1.0
ZAGS	Zajecar	2.36	80	*e*Pn	Pn	15 11 24.4	+0.1
ZAGS				*e*Sn	Sn	15 11 54.3	+0.4
MORI	Morici	2.44	281	*e*Pn	Pn	15 11 26.2	+0.9
MORI				Sn	Sn	15 11 57.8	+2.1
ZIRJ	Zirje	2.46	276	*e*Pn	Pn	15 11 26.6	+1.0
ZIRJ				Sn	Sn	15 11 58.1	+1.9
UDBI	Udbina	2.58	296	*e*Pn	Pn	15 11 28.5	+1.1
UDBI				Sn	Sn	15 12 01.5	+2.2
ZAPS	Zavoj	2.64	93	*e*Pn	Pn	15 11 29.5	+1.3
ZAPS				*e*Sn	Sn	15 12 01.7	+0.9
BLKB	Belogradchik	2.67	85	⇑S	Sb	15 12 03.9	-2.3
OHR	Ohrid	2.68	150	*i* Pn	Pb	15 11 32.2	-1.2
MOSL	Moslavina	2.70	324	*e*Pn	Pn	15 11 28.9	-0.1
MOSL				Sn	Sn	15 12 03.1	+0.8
BOSS	Bosilegrad	2.71	109	*e*Pn	Pn	15 11 29.1	-0.1
BOSS				*e*Sn	Sn	15 12 02.8	+0.3
KOVH	Kovagotottos	2.72	346	*e*PN	Pn	15 11 28.8	-0.5
KOVH	Kovagotottos	2.72	346	*e*S	Sn	15 12 00.0	-2.6
KOVH	Kovagotottos	2.72	346	Pn	Pn	15 11 28.8	-0.5
	comp=Z,0.1nm,SNR=4.2						
KOVH				Sn	Sn	15 12 00.0	-2.6
MORH	Mrgy, Hungar	2.78	355	⇑P	Pn	15 11 28.8	-1.2
MORH				⇑S	Sn	15 12 02.6	-1.5
MORH	Mrgy, Hungar	2.78	355	*e*PN	Pn	15 11 29.4	-0.6
MORH	Mrgy, Hungar	2.78	355	*e*S	Sn	15 12 01.1	-3.0
MORH	Mrgy, Hungar	2.78	355	Pg	Pn	15 11 29.4	-0.6
	comp=Z,0.3nm,SNR=8.2						
MORH				Lg	Lg	15 12 01.1	
PLIT	Plitvice	2.83	302	*e*Pn	Pn	15 11 31.6	+0.8
PLIT				Sn	Sn	15 12 06.3	+0.9
HERR	Herculane	2.83	58	⇓P	Pn	15 11 30.9	+0.1
HERR				⇑S	Sn	15 12 07.6	+2.1
BZS	Buzias	2.86	40	⇓P	Pn	15 11 30.8	-0.3
BZS				⇑S	Sn	15 12 07.9	+1.9
BZS	Buzias	2.86	40	Pg	Pn	15 11 30.6	-0.5
	comp=Z,0.1nm,SNR=7.9						
DUGI	Dugi Otok	2.92	282	*e*Pn	Pn	15 11 33.0	+1.0
DUGI				Sn	Sn	15 12 09.3	+1.7
STIP	Stip	2.92	126	*i* Pn	Pn	15 11 33.6	+1.6
A266A	Gyulaj	3.12	350	Pn	Pn	15 11 34.6	-0.2
	comp=Z,0.3nm,SNR=3.2						
NVLJ	Novalja	3.19	292	*e*Pn	Pn	15 11 36.3	+0.6
NVLJ				Sn	Sn	15 12 15.3	+1.1
VTS	Vitosha	3.20	104	⇓P	Pn	15 11 36.4	+0.4
KALN	Kalnik	3.24	327	*e*Pn	Pn	15 11 36.8	+0.3
KALN				Sn	Sn	15 12 16.3	+0.7
PTJ	Puntijarka	3.28	320	*e*Pn	Pn	15 11 38.0	+0.9
PTJ				Sn	Sn	15 12 18.4	+1.7
PTJ	Puntijarka	3.28	320	Pg	Pg	15 11 53.1	+5.6
MATE	Matera	3.28	212	⇑P	Pn	15 11 35.7	-1.3
MATE				⇓S	Sn	15 12 16.0	-0.5
RABC	Rab	3.32	295	*e*Pn	Pn	15 11 37.5	+0.1
RABC				Sn	Sn	15 12 18.8	+1.5
SIRR	Siria	3.39	33	⇓P	Pn	15 11 38.6	+0.2
SIRR	Siria	3.39	33	Pg	Pg	15 11 48.7	-0.8
LOBO	Lobor	3.42	323	*e*Pn	Pn	15 11 39.0	0.0
LOBO				Sn	Sn	15 12 21.1	+1.1
CRES	Cresnjev	3.48	314	*e*Pn	Pn	15 11 40.1	+0.4
CRES				*e*Sn	Sn	15 12 20.5	-0.9
CRES	Cresnjev	3.48	314	Pn	Pn	15 11 40.4	+0.7
	comp=Z,0.3nm,SNR=2.2						
A267A	Kaloz	3.52	354	Pn	Pn	15 11 39.6	-0.5
	comp=Z,0.2nm,SNR=3.2						
KOGS	Kog	3.58	328	Pn	Pn	15 11 42.8	+1.7
RIY	Rijeka	3.75	302	*e*Pn	Pn	15 11 43.5	+0.1
RIY				*e*Sn	Sn	15 12 27.4	-0.7
SMRN	Sveta Marina	3.84	296	*e*Pn	Pn	15 11 45.1	+0.5
SMRN				Sn	Sn	15 12 31.4	+1.2
MPLH	Magyarpolny	3.87	345	*e*PN	Pn	15 11 45.0	0.0
MPLH	Magyarpolny	3.87	345	*e*S	Sn	15 12 31.8	+0.9
MPLH	Magyarpolny	3.87	345	Pn	Pn	15 11 45.0	0.0
	comp=Z,0.4nm,SNR=8.2						
MPLH				Sn	Sn	15 12 31.8	+0.9
LOT	Lotru	3.95	58	⇑P	Pn	15 11 46.0	-0.2
LOT				⇓S	Sn	15 12 34.5	+1.4
LOT	Lotru	3.95	58	Pg	Pb	15 11 55.8	+0.9
BSZH	Besenyszg	3.95	12	Pn	Pn	15 11 36.8	-9.3
CEY	Cerknica	4.00	307	*e*Pn	Pn	15 11 47.4	+0.6
CEY				*e*Sn	Sn	15 12 33.3	-0.9
BRJN	Brijuni	4.06	293	*e*Pn	Pn	15 11 48.2	+0.6
BRJN				Sn	Sn	15 12 36.4	+0.8
A269A	Baj	4.21	354	Pn	Pn	15 11 45.7	-4.1
	comp=Z,0.2nm,SNR=5.0						
A269A				Sn	Sn	15 12 36.3	-3.2
DRGR		4.24	37	⇑S	Sn	15 12 40.4	+0.1
SOKA	Soboth	4.29	320	*i* Pn	Pn	15 11 50.9	+0.1
	comp=Z,2.2nm,0.2s,SNR=8.2						
SOKA				*i* Sn	Sn	15 12 41.2	-0.3
	comp=Z,2.0nm,0.3s						
OBKA	Obir	4.41	316	*e*Pn	Pn	15 11 54.0	+1.5
	comp=Z,5.5nm,0.4s,SNR=14						
PSZ	Piszkesteto	4.51	8	⇑P	Pn	15 11 52.8	-1.2
TIP	Timpagrande	4.59	202	⇓P	Pn	15 11 54.3	-0.7
TIP				⇓S	Sn	15 12 49.2	+0.3
VOIR		4.75	63	⇓P	Pn	15 11 57.1	-0.2
VOIR				⇑S	Sn	15 12 55.1	+2.1
ZST	Bratislava	4.93	345	*e*SN	Sn	15 12 54.2	-3.0
CONA	Conrad Observa	5.00	335	*i* Pn	Pn	15 12 02.0	+1.4
	comp=Z,0.3nm,0.1s						
CONA				*e*Sn	Sn	15 12 58.2	-0.7
	comp=Z,4.8nm,0.3s						
VYHS	Vyhne	5.05	359	*e*SN	Sn	15 12 59.0	-1.1
MODS	Modra-Piesok	5.07	347	*e*PN	Pn	15 12 02.9	+1.3
MODS				*e*SN	Sn	15 12 56.5	-4.2
MOA	Molln	5.52	325	*i* Pn	Pn	15 12 09.1	+1.4
	comp=Z,1.8nm,0.4s						
MOA				*i* Sn	Sn	15 13 09.7	-1.9
	comp=Z,2.0nm,0.3s						
ABTA	Abfaltersbach	5.66	308	*i* Pn	Pn	15 12 11.3	+1.5
	comp=Z,0.8nm,0.3s						
ABTA				Sg	Sg	15 13 49.7	+3.2
	comp=Z,4.6nm,0.7s						
BURAR	Bucovina Array	6.03	44	⇓P	Pn	15 12 15.2	+0.5
WTTA	Wattenberg	6.45	309	*i* Pn	Pn	15 12 22.3	+1.7
	comp=Z,2.9nm,0.3s,SNR=4.1						
WATA	Walderalm	6.52	309	*i* Pn	Pn	15 12 22.9	+1.3
	comp=Z,2.5nm,0.4s						
MOTA	Moosalm	6.80	308	*e*Pn	Pn	15 12 26.6	+1.2
	comp=Z,1.6nm,0.4s						
KHC	Kasperske Hory	6.82	328	*e*PN	Pn	15 12 26.9	+1.4
KHC				*e*SN	Sn	15 13 40.9	-2.8

AEIC ***12*** *15:13:51.6±1.4, 51°.9N±0°.1×178°.4E±0°.1, h127^{km}±4^{km}, Error ellipse: s-maj=16.3km s-min=10.5km az=171.0*

BJI **12** *15:13:51.9±0.0, 52°.00N×178°.40E, h123^{km}, mB4.9/16, mb4.6/37*

MOS **12** *15:13:51.4±1.0, 52°.06N×178°.41E, h129^{km}, mb4.5/26, Error ellipse: s-maj=6.6km s-min=4.9km az=133.8*

GCMT **12** *15:13:52.5±0.4, 52°.10N±0°.03×178°.51E±0°.04, h116^{km}±4^{km}, MW4.9/79, Moment Tensor Solution. s19,c20; s79,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.62±.12; M$_{\theta\theta}$-0.82±.14; M$_{\phi\phi}$2.44±.11; M$_{r\theta}$1.22±.10; M$_{\theta\phi}$-0.52±.16; M$_{\phi r}$-0.61±.09; Best double couple: M$_0$2.59600×10^{16} NP1:ϕ$_s$202.00000°, δ44.00000°, λ-39.00000°. NP2:ϕ$_s$322.00000°, δ64.00000°, λ-127.00000°. Principal axes: T 2.6800, Plg11.0000°, Azm78.0000°; N -0.1690, Plg33.0000°, Azm340.0000°; P -2.5120, Plg55.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **12** *15:13:52.5±1.4, 52°.01N±0°.10×178°.40E±0°.09, h124^{km}±5^{km}, mb4.8/131, ML4.6/39(AEIC) Error ellipse: s-maj=14.4km s-min=7.4km az=190.0*

IDC **12** *15:13:53.1±0.5, 52°.10N×178°.35E, h128^{km}±3^{km}, mb4.1/49, mb1 4.2/52, mb1mx4.2/71, mbtmp4.5/52, MS3.6/10, Ms1 3.6/10, ms1mx3.1/55, Error ellipse: s-maj=9.7km s-min=6.5km az=158.0*

ISC 12 15:13:52.4±0.4**, 52°.08N**±0°.05×**178°.28E**±0°.03**, h124**^{km}±3^{km}**, h124**^{km}**:pP-P, n577,** σ1^s.**32**/565**, mb4.7**/153**, 22C-11D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEAP	Semis' Anvil P	0.81	95		Pn	15 14 12.8	-0.2
CERB	Semis' Cerberu	0.85	99		Pn	15 14 13.1	-0.2
CERB					Sn	15 14 29.1	0.0
CERAA	Semis' Rag'd T	0.88	101		Pn	15 14 12.9	-0.7
AMKA	Amchitka	0.94	137		Sn	15 14 28.3	-2.3
AMKA	Amchitka	0.94	137	Pn	Pn	15 14 12.5	-1.7
GASW	Gareloi Southw	1.80	98		Pn	15 14 22.6	-0.9
GANO	Gareloi North	1.82	97		Pn	15 14 23.1	-0.8
GALAA	Gareloi Lava P	1.85	99		Pn	15 14 23.3	-0.9
GAEA	Gareloi East	1.86	98		Pn	15 14 23.8	-0.5
TASE	Tanaga Southea	2.29	95		Pn	15 14 28.8	-0.8
TAFP	Tanaga Falls P	2.32	93		Pn	15 14 28.9	-1.1
TAFP					Sn	15 14 57.6	-1.2
TAFL	Tanaga Flats	2.39	96		Pn	15 14 30.0	-0.8
TAPA	Tanaga Point A	2.43	95		Pn	15 14 30.5	-0.9
KIMD	Kanaga Island	2.79	95		Pn	15 14 34.8	-1.3
KICM	Kanaga Island	2.80	91		Pn	15 14 35.5	-0.7
KIKV	Kanaga Island	2.82	92		Pn	15 14 35.7	-0.7
KIWB	Kanaga Island	2.83	93		Pn	15 14 35.2	-1.4
ADK	Adak	3.12	92	P	Pn	15 14 38.8	-1.5
ADK						15 15 16.1	
ADK	Adak	3.12	92	Pn	Pn	15 14 38.8	-1.5
ADK	Adak	3.12	92	P	Pn	15 14 39.2	-1.1
GSCK	Great Sitkin C	3.43	89		Pn	15 14 43.3	-1.1
GSTR	Great Sitkin T	3.49	87	Pn	Pn	15 14 43.9	-1.3
GSMY	Great Sitkin M	3.50	88		Pn	15 14 44.3	-1.0
GSMY					Sn	15 15 26.0	-0.2
KOKL	Mount Kliuchef	4.63	84		Pn	15 15 00.0	-0.4
ATKA	Atka Island	4.64	85	Pn	Pn	15 14 59.3	-1.1
ATKA	Atka Island	4.64	85	P	Pn	15 15 00.4	0.0
KOFP	Korovin Flat P	4.70	85		Pn	15 15 01.5	+0.2
KOSE	Korovin Southe	4.72	84		Pn	15 15 01.6	-0.1
NIKH	Nikolski High	7.90	78	Pn	Pn	15 15 44.7	+0.4
NIKH	Nikolski High	7.90	78	P	Pn	15 15 44.2	-0.1
	baz=267,SNR=5.8						
BKI	Bering	7.96	298	P	Pn	15 15 45.9	+0.8
BKI				S	Sn	15 17 08.5	-4.8
OKCE	Okmok Cone E	8.34	75		Pn	15 15 51.5	+1.2
SPIA	Saint Paul Isl	8.39	48		Pn	15 15 52.9	+2.1
SPIA	Saint Paul Isl	8.39	48	P	Pn	15 15 52.5	+1.7
	baz=236,SNR=7.7						
OKTU	Okmok Mt. Tuli	8.41	76		Pn	15 15 52.9	+1.6
MSW	Makushin Switc	9.20	73		Pn	15 16 02.9	+1.1
MNAT	Makushin Natee	9.25	73		Pn	15 16 03.7	+1.1
UNV	Unalaska Valle	9.35	73	Pn	Pn	15 16 04.3	+0.3
UNV	Unalaska Valle	9.35	73	P	Pn	15 16 04.2	+0.3
	baz=264,SNR=7.6						
UNV	Unalaska Valle	9.35	73	P	Pn	15 16 04.4	+0.5
AKLV	Akutan Long Va	9.71	71		Pn	15 16 10.5	+1.8
AKSA	Akutan Strait	9.86	72		Pn	15 16 12.9	+2.2
KBTR	Krutoberegovo	9.97	301	P	Pn	15 16 11.7	-0.4
MKZ	Mys Kozlova	10.21	291	P	Pn	15 16 14.9	-0.5
TILK	Tilichiki	10.75	326	P	Pn	15 16 24.2	+1.6
TILK				S	Sn	15 18 17.8	-3.0
SPN	Mys Shipunski	11.16	282	P	Pn	15 16 28.4	+0.3
SPN				S	Sn	15 18 24.6	-6.2
OSSR	Ossora	11.18	316	P	Pn	15 16 30.4	+2.0
TUMR	Tumrok	11.22	294	P	Pn	15 16 26.4	-2.7
TUMR				S	Sn	15 18 24.5	-8.0
KMNR	Kamenistaya	11.25	296	P	Pn	15 16 29.4	-0.1
FALS	False Pass	11.26	68		Pn	15 16 30.0	+0.6
FALS	False Pass	11.26	68	P	Pn	15 16 30.0	+0.6
	baz=262						
FALS	False Pass	11.26	68	P	Pn	15 16 27.9	-1.5
KII	Karymskiy	11.50	287	P	Pn	15 16 33.2	+0.5
NLC	Nalytchevo	11.56	283	P	Pn	15 16 34.7	+1.2
NLC				S	Sn	15 18 35.3	-5.3
SDLR	Sedlovina	11.84	283	P	Pn	15 16 37.7	+0.5
SMAR	Somma	11.88	283	P	Pn	15 16 38.4	+0.4
KRER	Koryakskii	11.91	284	P	Pn	15 16 39.3	+1.0
AVH	Avacha	11.92	283	P	Pn	15 16 39.3	+1.0
DALK	Dalny	11.92	282	P	Pn	15 16 38.4	+0.2
KOK	Koryaka	11.98	284	P	Pn	15 16 40.2	+1.1
PET	Petropavlovsk	11.98	282	⇓*i*P	Pn	15 16 39.5	+0.5
PET				*e*S	Sn	15 18 47.0	-3.8
PET				pmax	pmax		
	comp=Z,72nm,1.1s						
PET	Petropavlovsk	11.98	282	P	Pn	15 16 41.3	+2.3
RUS	Russkaya	12.12	279	P	Pn	15 16 42.3	+1.5
RUS				S	Sn	15 18 48.2	-5.9
ESO	Esso	12.14	296	P	Pn	15 16 41.6	+0.5
KRMR	Karymshinskiy	12.31	281	P	Pn	15 16 43.9	+0.6
MTVR	Mutnovka	12.31	280	P	Pn	15 16 44.8	+1.3
MTVR				S	Sn	15 18 53.5	-5.6
GNL	Ganaly	12.39	286	P	Pn	15 16 44.8	+0.4
KDTR	Khodutka, Kamc	12.47	277	P	Pn	15 16 46.3	+0.9
KDTR				S	Sn	15 18 55.5	-7.0
ASAK	Asacha	12.50	279	P	Pn	15 16 46.8	+1.0
PEA0B	Petropavlovsk-	12.55	283	*ce*P	Pn	15 16 46.6	+0.1
PEA0B	Petropavlovsk-	12.55	283	Pn	Pn	15 16 47.9	+1.4
PETK	Petropavlovsk-	12.55	283	P	Pn	15 16 46.8	+0.3
	comp=Z,2.8nm,0.3s,baz=285,slow=15,SNR=85						
PETK	Petropavlovsk-	12.55	283	Pn	Pn	15 16 47.4	+0.9
APC	Apacha	12.89	282	P	Pn	15 16 53.5	+2.6
SDPT	Sand Point	12.99	67	Pn	Pn	15 16 49.9	-2.1
SDPT	Sand Point	12.99	67	P	Pn	15 16 50.0	-2.1
	baz=263						
MIPR	Malaya Ipel'ka	13.21	279	P	Pn	15 16 56.4	+1.4
PAU	Pauzhetka	13.31	276	P	Pn	15 16 57.6	+1.4
CHNA	Chernabura Isl	13.46	69	P	Pn	15 16 55.5	-2.7
	baz=266						
CNBA	Chernabura Isl	13.46	70	Pn	Pn	15 16 55.2	-2.9
SKR	Severo-Kuril's	13.91	273	P	P	15 17 06.7	-1.3
SKR				S	Sn	15 19 31.4	-5.8
TNA	Tin City	15.23	22	P	Pn	15 17 20.1	-0.5
	baz=214						
CHIR	Chirikof Islan	15.77	66	Pn	Pn	15 17 25.8	-1.5
CHIR	Chirikof Islan	15.77	66	P	Pn	15 17 26.0	-1.4
	baz=266						
P18K	Big Mountain,	16.53	53	P	P	15 17 37.3	+0.2
P18K				IAmb	IAmb	15 17 42.0	
	comp=Z,85nm,1.1s						
P18K	Big Mountain,	16.53	53	P	P	15 17 37.5	+0.4
	baz=255,SNR=16						
SII	Sitkinak Islan	16.62	63	Pn	Pn	15 17 35.3	-2.5
SII				IAmb	IAmb	15 17 46.9	
	comp=Z,100nm,1.2s						
SII	Sitkinak Islan	16.62	63	P	Pn	15 17 36.5	-1.3
	baz=265						
O18K	Koktuh Hills	16.66	52	P	P	15 17 40.2	+1.7
O18K	Koktuh Hills	16.66	52	P	P	15 17 39.2	+0.7
	baz=253,SNR=28						
BILL	Bilibino	17.04	345	*e*P	Pn	15 17 45.2	+2.5
BILL				pmax	pmax		
	comp=Z,21nm,1.3s						
MA2	Magadan	17.08	307	*i* P	Pn	15 17 44.6	+1.2
O19K	Port Alsworth	17.19	51	P	Pn	15 17 45.3	+0.7
	baz=253,SNR=68						
Q19K	Cape Douglas,	17.22	56	P	P	15 17 44.3	-0.4
Q19K	Cape Douglas,	17.22	56	P	P	15 17 44.4	-0.3
	baz=258,SNR=6.2						
N19K	Bonanza Creek	17.29	49	P	Pn	15 17 47.3	+1.4
	baz=251						
TTA	Tatalina	17.43	41	P	Pn	15 17 48.7	+1.0
TTA				pmax	pmax		
	comp=Z,44nm,0.8s						
TTA	Tatalina	17.43	41		Pn	15 17 48.7	+1.0
TTA				IAmb	IAmb	15 17 50.5	
	comp=Z,44nm,0.8s						
TTA	Tatalina	17.43	41	P	Pn	15 17 48.5	+0.8
	baz=243,SNR=32						
SEY	Seymchan	17.51	318	P	Pn	15 17 49.2	+0.7
	comp=Z,0.1nm,0.3s,baz=119,slow=12,SNR=6.2						
SEY				ScP	ScP	15 25 43.3	-1.1
	comp=Z,0.1nm,0.3s,baz=183,slow=3.9,SNR=7.1						
P19K	Oil Pt	17.58	53	P	P	15 17 47.2	-1.5
	baz=256						
KDAK	Kodiak Island	17.60	60	P	P	15 17 47.1	-1.7
	comp=Z,17nm,0.3s,baz=290,slow=4.9,SNR=85						
KDAK	Kodiak Island	17.60	60	*i* P	P	15 17 46.9	-1.9
KDAK	Kodiak Island	17.60	60	P	P	15 17 47.0	-1.7
KDAK				IAmb	IAmb	15 17 49.1	
	comp=Z,86nm,1.0s						
KDAK	Kodiak Island	17.60	60	P	P	15 17 47.1	-1.7
	baz=263						
L19K	White Mountain	17.61	44		Pn	15 17 50.3	+0.6
L19K				IAmb	IAmb	15 17 54.2	
	comp=Z,75nm,0.9s						
L19K	White Mountain	17.61	44	P	Pn	15 17 50.1	+0.4
	baz=247,SNR=36						
M19K	Big River Lodg	17.70	46	P	P	15 17 49.7	-0.3
	baz=248						
O20K	Slope Mountain	17.98	52	P	P	15 17 52.9	-0.1
	baz=256,SNR=8.2						
GCSA	Galena City Sc	18.01	36	P	Pn	15 17 54.2	-0.2
	baz=236,SNR=42						
L20K	Farewell, AK	18.14	44	P	P	15 17 55.3	+0.5
	baz=247						
HOM	Homer	18.37	54	P	P	15 17 57.7	+0.4
	baz=258						
K20K	Telida	18.41	41	P	P	15 17 58.0	+0.3
	baz=244,SNR=17						
SPU	Mount Spurr	18.53	49	P	Pn	15 18 00.3	-0.4
CNPM	China Poot	18.55	54	P	P	15 17 59.2	-0.1
J20K	Nowinta River	18.75	39	P	Pn	15 18 02.7	-0.5
J20K				IAmb	IAmb	15 18 06.2	
	comp=Z,44nm,0.8s						
J20K	Nowinta River	18.75	39	P	Pn	15 18 02.6	-0.5
	baz=242						
BRLK	Bradley Lake	18.77	54	P	P	15 18 01.1	-0.5
BRSE	Bradley Lake S	18.84	54	P	P	15 18 01.7	-0.6
	baz=259,SNR=13						
CAPN	Captain Cook N	18.85	51	P	P	15 18 02.4	0.0
	baz=256						
PPLA	Purkeypile	19.02	44	P	Pn	15 18 06.4	-0.1
PPLA	Purkeypile	19.02	44	P	P	15 18 05.4	+1.0
	baz=248,SNR=25						
CAST	Castle Rocks	19.26	42	P	Pn	15 18 08.4	-0.8
	baz=247,SNR=27						
CHUM	Lake Minchumin	19.35	41	P	Pn	15 18 09.6	-0.6
	baz=246,SNR=88						
O22K	Cooper Landing	19.48	52	P	P	15 18 10.3	+1.0
O22K	Cooper Landing	19.48	52	P	P	15 18 08.9	-0.3
	baz=258						
SEW	Seward	19.54	53	P	P	15 18 08.5	-1.4
SEW	Seward	19.54	53	P	P	15 18 08.6	-1.4
	baz=260,SNR=13						
M22K	Willow	19.58	48	P	P	15 18 09.6	-0.7
	baz=254,SNR=21						
RC01	Rabbit Creek A	19.60	50	P	P	15 18 10.5	0.0
RC01				IAmb	IAmb	15 18 15.0	
	comp=Z,43nm,0.7s						
RC01	Rabbit Creek A	19.60	50	P	P	15 18 10.7	+0.2
	baz=256,SNR=16						
CUT	Chulitna	19.70	46	P	P	15 18 11.6	0.0
CUT	Chulitna	19.70	46	P	P	15 18 11.9	+0.3
	baz=252						
IMAR	Indian Mountai	19.78	35	P	P	15 18 12.9	+0.4
KTH	Kantishna Hill	19.79	43	P	P	15 18 13.6	+0.9
KTH				IAmb	IAmb	15 18 18.1	
	comp=Z,71nm,0.9s						
H21K	Melozitna Rive	19.95	36	P	P	15 18 15.7	+1.3
	baz=240						
BPAW	Bear Paw Mtn.	19.97	41	P	P	15 18 15.7	+1.1
BPAW				IAmb	IAmb	15 18 17.1	
	comp=Z,38nm,0.9s						
BPAW	Bear Paw Mtn.	19.97	41	P	P	15 18 15.5	+0.9
	baz=247,SNR=18						
PMR	Palmer	20.00	49	P	P	15 18 14.5	-0.4
PMR				pmax	pmax		
	comp=Z,13nm,0.6s						
PMR	Palmer	20.00	49	P	P	15 18 14.5	-0.4
PMR	Palmer	20.00	49	P	Pn	15 18 17.0	-0.7
	baz=256						
TRF	Thorofare Moun	20.02	43	P	P	15 18 16.4	+1.1
TRF				IAmb	IAmb	15 18 19.1	
	comp=Z,64nm,0.9s						
TRF	Thorofare Moun	20.02	43	P	P	15 18 16.0	+0.7
	baz=250,SNR=28						
I21K	Tanana	20.03	38	P	P	15 18 16.0	+0.9
	baz=243						
GHO	Glory Hole Cre	20.14	48	P	P	15 18 16.0	-0.4
GHO				IAmb	IAmb	15 18 19.5	
	comp=Z,42nm,0.7s						
PWL	Port Wells	20.22	51	P	P	15 18 17.0	-0.3
PWL	Port Wells	20.22	51	P	P	15 18 16.0	-1.2
	baz=259,SNR=12						
KNK	Knik Glacier	20.27	50	P	P	15 18 17.3	-0.5
	baz=257,SNR=19						
SML	Sawmill	20.42	49	P	P	15 18 19.3	-0.1
SML	Sawmill	20.42	49	P	P	15 18 18.8	-0.6
	baz=256,SNR=22						
WAT1	Susitna Watana	20.58	46	P	P	15 18 21.1	-0.1
	baz=253						
RND	Reindeer	20.62	44	P	P	15 18 21.7	+0.1
RND				pmax	pmax		
	comp=Z,16nm,0.7s						
RND	Reindeer	20.62	44	P	P	15 18 21.7	+0.1
MCK	McKinley	20.69	43	P	P	15 18 22.4	+0.1
MCK				pmax	pmax		
	comp=Z,37nm,1.0s						
MCK	McKinley	20.69	43	P	P	15 18 22.4	+0.1
MCK				IAmb	IAmb	15 18 25.3	
	comp=Z,37nm,1.0s						
MCK	McKinley	20.69	43	P	P	15 18 21.6	-0.7
	baz=250,SNR=17						
GLI	Glacier Island	20.82	51	P	P	15 18 23.5	-0.2
GLI	Glacier Island	20.82	51	P	P	15 18 22.2	-1.5
	baz=260,SNR=5.9						
WAT6	Susitna Watana	20.88	47	P	P	15 18 23.6	-0.8
	baz=255,SNR=23						
SCM	Sheep Creek Mo	20.89	49	IAmb	IAmb	15 18 26.2	
	comp=Z,77nm,1.0s						
SCM	Sheep Creek Mo	20.89	49	P	P	15 18 23.1	-1.4
	baz=257,SNR=12						
NEA2	Nenana	20.93	41	IAmb	IAmb	15 18 26.1	
	comp=Z,36nm,0.6s						
NEA2	Nenana	20.93	41	P	P	15 18 25.1	+0.2
	baz=248,SNR=26						
Q23K	Middleton Isla	21.01	56	P	P	15 18 25.3	-0.4
	baz=265						
I23K	Minto, Yukon-K	21.02	39	P	P	15 18 25.8	0.0
	baz=246,SNR=16						
DHY	Denali Highway	21.16	45	IAmb	IAmb	15 18 29.8	
	comp=Z,64nm,0.9s						
DHY	Denali Highway	21.16	45	P	P	15 18 26.5	-1.0
	baz=254,SNR=39						
MDM	Murphy Dome	21.40	40	IAmb	IAmb	15 18 32.8	
	comp=Z,31nm,0.8s						
EYAK	Cordova Ski Ar	21.43	53	P	P	15 18 30.2	0.0
	baz=262						
M24K	Tolsona, Glenn	21.48	48	P	P	15 18 30.3	-0.5
	baz=258,SNR=14						
KLU	Klutina	21.48	50	IAmb	IAmb	15 18 37.9	
	comp=Z,29nm,0.6s						
KLU	Klutina	21.48	50	P	P	15 18 30.2	-0.7
	baz=260,SNR=11						
DIV	Divide	21.50	51	P	P	15 18 30.9	-0.2
DIV				IAmb	IAmb	15 18 32.8	
	comp=Z,55nm,1.2s						
TCOL	CIGO, UAF Yank	21.51	40	P	P	15 18 31.0	0.0
	baz=249,SNR=14						
COLA	College	21.52	40	*i* P	P	15 18 31.0	-0.1
COLA				pmax	pmax		
	comp=Z,35nm,1.0s						
COLA	College	21.52	40	P	P	15 18 30.9	-0.2
COLA				IAmb	IAmb	15 18 34.6	
	comp=Z,44nm,1.1s						
COLA	College	21.52	40	P	P	15 18 31.0	-0.1
	baz=249						
COLD	Coldfoot	21.63	34	P	P	15 18 32.1	-0.2
	baz=241						
HDA	Harding Lake	21.73	42	IAmb	IAmb	15 18 35.1	
	comp=Z,21nm,0.6s						
HDA	Harding Lake	21.73	42	P	P	15 18 33.5	+0.1
	baz=251,SNR=19						
POKR	Poker Plat Res	21.77	40	IAmb	IAmb	15 18 35.4	
	comp=Z,31nm,0.8s						
POKR	Poker Plat Res	21.77	40	P	P	15 18 33.9	0.0
	baz=249,SNR=18						
H24K	Noodor Dome	21.86	38	IAmb	IAmb	15 18 37.8	
	comp=Z,21nm,0.8s						
H24K	Noodor Dome	21.86	38	P	P	15 18 34.2	-0.6
	baz=247,SNR=28						
ILAR	Eielson Array	21.87	41	P	P	15 18 33.0	-1.9
	comp=Z,3.8nm,0.5s,baz=244,slow=8.5,SNR=104						
ILAR				ScP	ScP	15 25 52.2	-2.2
	comp=Z,1.7nm,0.7s,baz=285,slow=3.2,SNR=14						
ILAR				LR	LR	15 27 59.1	
	comp=Z,108nm,19.0s,baz=260,slow=39						
ILAR				P3KPbc		15 52 18.9	
	comp=Z,0.2nm,0.9s,baz=126,slow=2.4,SNR=4.2						
ILAR	Eielson Array	21.87	41	P	P	15 18 33.0	-1.9
PAX	Paxson	21.98	46	IAmb	IAmb	15 18 38.1	
	comp=Z,41nm,0.8s						
PAX	Paxson	21.98	46	P	P	15 18 35.5	-0.6
	baz=257,SNR=23						
HARP	HAARP	22.00	48	P	P	15 18 35.4	-0.9
	baz=258,SNR=9.3						
KAIM	Kayak Island	22.03	54	P	P	15 18 36.2	-0.3
	baz=265						
BMRM	Bremner River	22.04	52	IAmb	IAmb	15 18 38.1	
	comp=Z,46nm,1.0s						
BMRM	Bremner River	22.04	52	P	P	15 18 35.7	-0.9
	baz=262,SNR=7.9						
N25K	Chitina, Valde	22.13	50	IAmb	IAmb	15 18 41.0	
	comp=Z,35nm,0.9s						
N25K	Chitina, Valde	22.13	50	P	P	15 18 37.0	-0.7
	baz=261,SNR=11						
A21K	Barrow	22.34	21	P	P	15 18 39.1	-0.4
	baz=223,SNR=11						
RIDG	Independent Ri	22.43	44	P	P	15 18 39.4	-1.2
	baz=256						
J25K	Salcha River,	22.45	42	P	P	15 18 38.8	-2.0
	baz=253,SNR=11						
GLB	Gilahina Butte	22.48	51	IAmb	IAmb	15 18 44.7	
	comp=Z,31nm,1.0s						
TOLK	Toolik Lake Re	22.55	31	P	P	15 18 42.2	+0.5
TOLK	Toolik Lake Re	22.55	31	P	P	15 18 41.6	-0.2
	baz=238,SNR=18						
VRDI	Verde Repeater	22.62	51	IAmb	IAmb	15 18 43.8	
	comp=Z,32nm,1.2s						
PRP	Porcupine Dome	22.66	40	P	P	15 18 41.6	-1.4
	baz=251,SNR=21						
CRQE	Cirque	22.75	52	P	P	15 18 43.1	-0.8
	baz=264,SNR=18						
DOT	Dot Lake	22.75	45	IAmb	IAmb	15 18 45.6	
	comp=Z,41nm,0.8s						
MCARA	McCarthy VSAT	22.85	51	IAmb	IAmb	15 18 47.7	
	comp=Z,47nm,0.8s						
MCARA	McCarthy VSAT	22.85	51	P	P	15 18 43.8	-0.9
	baz=263,SNR=11						
SCRK	Sand Creek	22.86	44	P	P	15 18 43.7	-1.2
	baz=256,SNR=18						
TGL	Tana Glacier	22.88	52	IAmb	IAmb	15 18 47.3	
	comp=Z,44nm,0.7s						
L26K	Log Cabin Wild	22.94	47	IAmb	IAmb	15 18 47.6	
	comp=Z,46nm,1.1s						
L26K	Log Cabin Wild	22.94	47	P	P	15 18 45.2	-0.4
	baz=259,SNR=32						
M26K	Nabesna, AK	23.00	48	P	P	15 18 45.2	-0.9
	baz=261						
ISLE	Juniper Island	23.11	53	IAmb	IAmb	15 18 49.3	
	comp=Z,58nm,1.2s						
FYU	Fort Yukon	23.13	37	IAmb	IAmb	15 18 50.3	
	comp=Z,55nm,1.1s						
J26L	Joseph Creek	23.17	43	P	P	15 18 47.0	-0.7
	baz=255						
MESA	MESA	23.28	54	IAmb	IAmb	15 18 51.2	
	comp=Z,35nm,0.7s						
MESA	MESA	23.28	54	P	P	15 18 47.8	-1.1
	baz=267						
M27K	Edge Creek, AK	23.50	49	P	P	15 18 50.2	-0.8
	baz=262,SNR=19						
CTG	Chitna Glacier	23.62	52	P	P	15 18 51.1	-0.9
	baz=266,SNR=14						
L27K	Beaver Creek,	23.63	47	P	P	15 18 51.1	-0.8
	baz=260						
BMAR	Burnt Mountain	23.69	35	P	P	15 18 52.6	+0.3
BVCY	Beaver Creek	23.98	49	P	P	15 18 54.2	-0.9
	baz=263,SNR=39						
YUK3	Moose Creek	24.11	50	P	P	15 18 55.9	-0.5
	baz=265,SNR=33						
PCA	Pinnacle	24.12	54	P	P	15 18 56.8	+0.4
PINM	Pinnacle	24.12	54	P	P	15 18 56.3	-0.1
	baz=269,SNR=7.2						
PNL	Peninsula	24.56	55	P	P	15 19 00.0	-0.2
	baz=270						
DAWY	Dawson	24.86	45	P	P	15 19 03.0	-0.1
	baz=261,SNR=59						
JKA	Kamikawa-asahi	24.92	266	P	P	15 19 03.6	-0.1
ASAJ	Asahikawa	24.92	266	P	P	15 19 04.2	+0.4
	comp=Z,5.2nm,0.7s,baz=52,slow=17,SNR=5.5						
ASAJ	Asahikawa	24.92	266	P	P	15 19 03.6	-0.1
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
J29M	Klondike Camp	25.43	44	P	P	15 19 08.3	+0.1
	baz=261						
I29M	Ogilvie Camp,	25.54	42	P	P	15 19 08.8	-0.3
	baz=259,SNR=29						
N31M	Braeburn, Yuko	26.33	51	P	P	15 19 15.9	-0.4
	baz=270,SNR=6.8						
SKAG	Skagway	26.64	56	P	P	15 19 19.0	0.0
	baz=274						
M31M	Drury Creek, Y	26.99	49	P	P	15 19 21.6	-0.6
	baz=270,SNR=11						
FARO	Faro, Yukon	27.48	49	P	P	15 19 26.0	-0.5
	baz=270						
YAK	Yakutsk	27.59	310	P	P	15 19 29.5	+2.1
	comp=Z,1.2nm,0.3s,baz=28,slow=2.5,SNR=1.3						
YAK				PcP	PcP	15 22 41.8	+0.2
	comp=Z,4.7nm,0.7s,baz=47,slow=21,SNR=4.3						
YAK				ScP	ScP	15 26 10.0	-0.5
	comp=Z,2.0nm,0.4s,baz=254,slow=3.5,SNR=4.3						
P33M	Teslin, Yukon	27.84	54	P	P	15 19 29.1	-0.7
	baz=275						
INK	Inuvik	27.95	36	P	P	15 19 31.4	+0.8
	comp=Z,4.1nm,0.5s,baz=252,slow=6.6,SNR=42						
INK				ScP	ScP	15 26 10.1	-1.4
	comp=Z,6.4nm,1.0s,baz=233,slow=3.6,SNR=13						
INK	Inuvik	27.95	36	P	P	15 19 30.0	-0.6
	baz=259,SNR=11						
WRAK	Wrangell Islan	28.66	62	P	P	15 19 37.2	+0.1
	baz=282						
TIXI	Tiksi	29.13	330	P	P	15 19 42.8	+1.7
	comp=Z,0.9nm,0.3s,baz=263,slow=10.0,SNR=2.3						
TIXI				PcP	PcP	15 22 45.3	0.0
	comp=Z,1.6nm,0.4s,baz=128,slow=4.2,SNR=5.5						
TIXI				ScP	ScP	15 26 13.7	-1.5
	comp=Z,5.1nm,0.8s,baz=105,slow=2.8,SNR=28						
KLR	Kul'dur	29.25	283	P	P	15 19 43.0	+0.7
	comp=Z,1.9nm,0.3s,baz=70,slow=8.1,SNR=13						
KLR	Kul'dur	29.25	283	*ce*P	P	15 19 42.1	-0.3
KLR				pmax	pmax		
	comp=Z,11nm,1.7s						
DLBC	Dease Lake	29.49	57	P	P	15 19 45.2	+0.7
	comp=Z,6.6nm,0.9s,baz=275,slow=8.6,SNR=9.7						
A36M	Sachs Harbour	31.37	30	P	P	15 20 01.7	+1.0
A36M				IAmb	IAmb	15 20 03.7	
	comp=Z,26nm,0.8s						
A36M				ScP	ScP	15 26 21.9	-0.6
A36M	Sachs Harbour	31.37	30	P	P	15 20 02.2	+1.4
	baz=261,SNR=30						
USRK	Ussuriysk Ar.	31.42	274	P	P	15 20 01.9	+0.3
	comp=Z,1.7nm,0.5s,baz=58,slow=11,SNR=4.2						
USRK				PcP	PcP	15 22 52.8	+1.0
	comp=Z,4.7nm,0.7s,baz=85,slow=1.8,SNR=4.8						
WRGLY	Wrigley	31.95	47	P	P	15 20 05.9	0.0
	baz=277						
MJAR	Matsushiro Arr	32.13	257	P	P	15 20 09.3	+1.4
	comp=Z,1.8nm,0.6s,baz=49,slow=7.3,SNR=4.4						
MJAR				LR	LR	15 31 39.2	
	comp=Z,19nm,22.0s,baz=120,slow=33						
MAJO	Matsushiro	32.14	257	P	P	15 20 09.2	+1.3
MAT	Matsushiro	32.14	257	P	P	15 20 09.0	+1.1

MDJ	Mudanjiang	32.68	276	P	P	15 20 12.6	+0.1
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,280nm,4.8s						
H11N2	WAKE ISLAND Hy	33.49	200	T	T	15 55 40.3	
	baz=11,slow=76,SNR=26						
H11N3	WAKE ISLAND Hy	33.50	200	T	T	15 56 01.2	
	baz=11,slow=76,SNR=26						
H11N1	WAKE ISLAND Hy	33.51	200	T	T	15 55 41.6	
	baz=11,slow=76,SNR=36						
H11S1	WAKE ISLAND Hy	34.72	200	T	T	15 57 35.5	
	baz=10,slow=76,SNR=16						
H11S2	WAKE ISLAND Hy	34.73	200	T	T	15 57 29.5	
	baz=10,slow=76,SNR=9.1						
H11S3	WAKE ISLAND Hy	34.73	200	T	T	15 57 33.5	
	baz=10,slow=76,SNR=18						
YKA	Yellowknife Ar	36.07	47	P	P	15 20 42.2	+0.7
	comp=Z,12nm,0.7s,baz=282,slow=8.3,SNR=48						
YKA				pP	pwP	15 21 10.8	+0.1
	comp=Z,5.4nm,0.8s,baz=284,slow=8.5,SNR=5.8						
YKA				ScP	ScP	15 26 37.8	-1.5
	comp=Z,2.1nm,0.8s,baz=292,slow=3.6,SNR=8.9						
YKA	Yellowknife Ar	36.07	47	P	P	15 20 40.5	-1.0
YKA				PcP	PcP	15 23 03.8	-0.9
D03D	Eldon	37.22	73	P	P	15 20 50.9	-0.5
	baz=299						
B05A	Bryant	37.45	71	P	P	15 20 52.8	-0.6
	baz=299						
KSRS	Korea Array	37.83	268	P	P	15 20 58.5	+1.8
	comp=Z,3.8nm,0.8s,baz=56,slow=9.1,SNR=14						
KSRS				PcP	PcP	15 23 11.7	+1.2
	comp=Z,2.8nm,0.8s,baz=52,slow=2.8,SNR=11						
E04D	Cinebar	38.02	74	P	P	15 20 56.3	-1.9
	baz=300						
B08A	Colville Reser	39.01	70	IAmb	IAmb	15 21 07.2	
	comp=Z,9.4nm,0.9s						
G05D	Wamic, OR	39.45	75	P	P	15 21 09.4	-0.7
	baz=302						
I04A	Tendick Farm,	39.58	78	P	P	15 21 10.7	-0.6
	baz=303						
RES	Resolute Bay	39.86	24	P	P	15 21 14.4	+1.3
	comp=Z,3.1nm,0.9s,baz=296,slow=12,SNR=8.0						
RES				pP	pwP	15 21 43.4	-0.2
	comp=Z,5.5nm,1.1s,baz=278,slow=9.6,SNR=3.8						
RES	Resolute Bay	39.86	24	P	P	15 21 15.1	+2.0
HAWA	Hanford	39.90	73	IAmb	IAmb	15 21 14.7	
	comp=Z,15nm,0.9s						
I05D	Terrebonne, OR	39.92	76	P	P	15 21 12.5	-1.7
	baz=303						
J04D	Umpqua Nationa	40.07	78	P	P	15 21 14.1	-1.4
	baz=304						
NEW	Newport	40.33	69	P	P	15 21 16.7	-0.7
	comp=Z,12nm,0.8s,baz=297,slow=7.0,SNR=32						
NEW				ScP	ScP	15 26 55.7	-0.1
	comp=Z,0.7nm,0.4s,baz=243,slow=6.6,SNR=3.7						
NEW	Newport	40.33	69	P	P	15 21 16.2	-1.3
NEW				pmax	pmax		
	comp=Z,13nm,0.9s						
NEW	Newport	40.33	69	P	P	15 21 16.2	-1.3
NEW				IAmb	IAmb	15 21 17.8	
	comp=Z,13nm,0.8s						
NEW	Newport	40.33	69	P	P	15 21 16.2	-1.3
	baz=300,SNR=11						
L04D	Klamath Falls	40.53	80	P	P	15 21 18.9	-0.4
	baz=305						
YBH	Yreka Blue Hor	40.57	81	P	P	15 21 20.3	+0.8
	comp=Z,10nm,0.9s,baz=263,slow=6.4,SNR=8.9						
J05D	Fort Rock, OR	40.57	78	P	P	15 21 19.3	-0.4
	baz=304						
K04D	Chiloquin, OR	40.63	79	P	P	15 21 19.9	-0.2
	baz=305						
M02C	Callahan	40.68	81	P	P	15 21 20.8	+0.4
	baz=306						
M04C	Macdoel	41.07	80	P	P	15 21 23.3	-0.4
	baz=306						
MOD	Modoc Plateau	41.93	79	IAmb	IAmb	15 21 31.7	
	comp=Z,7.2nm,0.6s						
O03E	Paynes Creek	41.97	82	P	P	15 21 30.7	-0.3
	baz=307,SNR=6.2						
ORV	Oroville	42.60	82	P	P	15 21 34.1	-1.9
ORV				pmax	pmax		
	comp=Z,14nm,1.1s						
ORV	Oroville	42.60	82	P	P	15 21 34.1	-1.9
ORV				IAmb	IAmb	15 21 36.5	
	comp=Z,14nm,1.1s						
NRIK	Noril'sk	42.88	329	P	P	15 21 39.0	+1.2
	comp=Z,1.8nm,0.5s,baz=67,slow=8.1,SNR=7.6						
NRIK	Noril'sk	42.88	329	*ce*P	P	15 21 38.3	+0.5
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MSO	Missoula	42.92	69	P	P	15 21 36.3	-2.3
MSO				IAmb	IAmb	15 21 38.3	
	comp=Z,11nm,0.9s						
MSO	Missoula	42.92	69	P	P	15 21 37.2	-1.5
	baz=303,SNR=9.7						
MPK	Martis Peak	43.66	82	P	P	15 21 44.8	-0.1
MPK				IAmb	IAmb	15 21 47.3	
	comp=Z,10.0nm,0.8s						
PAHR	Pah Rah Range	43.80	81	P	P	15 21 45.3	-0.6
PAHR				IAmb	IAmb	15 21 46.3	
	comp=Z,7.5nm,0.6s						
PNTR	Pine Nut	44.05	82		P	15 21 46.4	-1.5
PNTR				IAmb	IAmb	15 21 49.2	
	comp=Z,36nm,1.1s						
CMB	Columbia Colle	44.23	83	P	P	15 21 48.7	-0.5
CMB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMB	Columbia Colle	44.23	83		P	15 21 48.7	-0.5
ULN	Ulaanbaatar	44.32	294	*ce*P	P	15 21 49.7	-0.2
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HLID	Hailey	44.49	73	P	P	15 21 48.5	-2.8
	baz=306,SNR=9.2						
EGMT	Eagleton	44.65	65	P	P	15 21 50.6	-1.8
	baz=303						
SONM	Songino Array	44.71	294	P	P	15 21 53.7	+0.7
	comp=Z,1.4nm,0.6s,baz=59,slow=7.9,SNR=9.0						
SONM				pP	pwP	15 22 23.6	-1.1
	comp=Z,1.3nm,0.6s,baz=52,slow=12,SNR=3.5						
SONM				PcP	PcP	15 23 33.6	+0.5
	comp=Z,1.9nm,0.6s,baz=38,slow=2.2,SNR=6.6						
SONM				ScP	ScP	15 27 13.5	-0.1
	comp=Z,3.5nm,1.0s,baz=64,slow=2.7,SNR=12						
BOZ	Bozeman (W)	44.94	69	IAmb	IAmb	15 21 54.5	
	comp=Z,13nm,0.9s						
BOZ	Bozeman (W)	44.94	69	P	P	15 21 53.1	-1.7
	baz=305,SNR=17						
JOW	Kunigami	44.95	256	P	P	15 21 56.3	+1.4
	comp=Z,23nm,0.9s,baz=70,slow=13,SNR=4.2						
RYN	Ryan	45.00	81	IAmb	IAmb	15 21 56.9	
	comp=Z,8.3nm,0.5s						
NVAR	Mina Array Bea	45.25	81	P	P	15 21 57.8	+0.3
	comp=Z,4.8nm,0.5s,baz=297,slow=7.4,SNR=20						
NVAR				pP	pP	15 22 26.4	+0.8
	comp=Z,2.2nm,0.7s,baz=297,slow=7.4,SNR=2.8						
NVAR				ScP	ScP	15 27 15.8	-0.3
	comp=Z,1.1nm,0.8s,baz=299,slow=4.5,SNR=4.9						
TIA	Tai'an	45.28	275	⇓P	P	15 21 58.1	+0.6
TIA				pmax	pmax		
	comp=Z,18nm,1.4s						
ELK	Elko	45.68	77	P	P	15 21 59.4	-1.4
ELK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ELK	Elko	45.68	77	P	P	15 21 59.4	-1.4
HHC	Hu-ho-hao-te	45.76	283	*e*P	P	15 22 02.5	+1.3
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,6.7s						
HHC				LR	LR		
	comp=Z,290nm,13.6s						
HHC				LR	LR		
	comp=Z,280nm,12.8s						
HHC				LR	LR		
	comp=Z,200nm,13.6s						
H17A	Grant Village	46.24	70	P	P	15 22 04.8	-0.5
	baz=306,SNR=9.5						
NOR	Nord	46.32	3	*i* P	P	15 22 04.3	-0.8
NOR				IAmb	IAmb	15 22 05.6	
	comp=Z,1.3nm,0.5s						
VES	Vestal, Richgr	46.43	85	P	P	15 22 05.6	-0.9
	baz=311						
RLMT	Red Lodge	46.57	68	P	P	15 22 06.9	-0.8
	baz=306						
PKM	Mcpherson Peak	46.61	86	P	P	15 22 07.0	-1.1
	baz=311						
CWC	Cottonwood Cre	46.66	83	P	P	15 22 08.0	-0.4
	baz=310						
ISA	Isabella, Lake	46.93	85	P	P	15 22 09.3	-1.1
	baz=311						
R11A	Troy Canyon, C	46.96	80	P	P	15 22 09.7	-1.1
R11A	Troy Canyon, C	46.96	80	P	P	15 22 09.6	-1.2
	baz=309,SNR=6.4						
NJ2	Nanjing	46.99	269	*e*P	P	15 22 10.9	+0.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NEEM	North Greenlan	47.17	13	*i* P	P	15 22 11.6	-0.4
NEEM				IAmb	IAmb	15 22 12.8	
	comp=Z,11nm,0.6s						
MPMC	Manual Prospec	47.27	83	P	P	15 22 12.4	-0.8
	baz=311						
SPR3	Spring Creek 3	47.31	78	P	P	15 22 12.7	-1.0
LAO	LASA Array	47.38	65	P	P	15 22 13.3	-0.5
	baz=306						
FURC	Furnace Creek,	47.39	83	P	P	15 22 13.0	-0.8
	baz=310						
OSI	Osito Audit: C	47.46	86	P	P	15 22 13.9	-0.6
	baz=312						
DUG	Dugway, Tooele	47.47	76	P	P	15 22 14.0	-0.7
	baz=308,SNR=9.4						
EDW2	Edwards Air Fo	47.74	85	P	P	15 22 15.0	-1.7
	baz=312						
BW06	Boulder Array	47.81	71	P	P	15 22 15.9	-1.5
	baz=307,SNR=8.8						
PDAR	Pinedale Array	47.81	71	P	P	15 22 16.4	-0.9
	comp=Z,5.7nm,0.8s,baz=324,slow=3.3,SNR=28						
SHOC	Shoshone, Teco	48.12	83	P	P	15 22 19.2	-0.3
	baz=311						
GSC	Goldstone, Bar	48.19	84	P	P	15 22 20.0	-0.2
	baz=311,SNR=11						
BFSC	Mount Baldy Ra	48.37	85	P	P	15 22 20.6	-1.1
	baz=312						
HEC	Hector,Ludlow	48.79	84	P	P	15 22 23.5	-1.3
	baz=312						
BBRC	Big Bear Solar	48.81	85	P	P	15 22 24.3	-0.8
	baz=312						
MURC	Murrieta	49.08	86	P	P	15 22 25.8	-1.2
	baz=312						
GMRC	Granite Mounta	49.23	83	P	P	15 22 27.2	-1.0
	baz=312,SNR=6.1						
SRU	San Rafael Swe	49.52	76	P	P	15 22 29.5	-0.9
SRU				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SRU	San Rafael Swe	49.52	76	P	P	15 22 29.5	-0.9
SRU				IAmb	IAmb	15 22 32.4	
	comp=Z,9.7nm,0.5s						
SPITS	Spitsbergen Ar	49.54	355	P	P	15 22 29.6	-0.2
	comp=Z,3.0nm,0.5s,baz=34,slow=6.1,SNR=21						
BELC	Belle Mtn. Jos	49.55	84	P	P	15 22 29.9	-0.7
	baz=312						
UPNV	Upernavik	49.90	18	*i* P	P	15 22 32.7	+0.1
UPNV				IAmb	IAmb	15 22 33.2	
	comp=Z,8.8nm,1.0s						
BC3	Big Chuckawall	50.12	84	P	P	15 22 33.8	-1.1
	baz=312						
RSSD	Black Hills	50.16	66	P	P	15 22 33.9	-1.3
	baz=308						
U15A	North Rim	50.20	79	IAmb	IAmb	15 22 36.5	
	comp=Z,13nm,1.1s						
O20A	White River Ci	50.23	73	P	P	15 22 33.8	-2.0
	baz=310,SNR=5.9						
MDND	Maddock	50.31	60	P	P	15 22 35.3	-0.7
	baz=307						
PDMCI	Parker Dam,Lak	50.48	83	P	P	15 22 37.2	-0.3
	baz=312						
ULM	Lac du Bonnet	50.80	56	P	P	15 22 39.0	-0.7
	comp=Z,4.6nm,0.7s,baz=294,slow=11,SNR=4.2						
ULM				LR	LR	15 45 40.3	
	comp=Z,84nm,18.0s,baz=277,slow=38						
ULM	Lac du Bonnet	50.80	56	P	P	15 22 39.0	-0.7
WHN	Wuhan	50.81	271	⇓P	P	15 22 39.7	-0.3
GLA	Glamis	50.91	84	P	P	15 22 40.1	-0.7
	baz=313						
N23A	Red Feather La	51.09	71	P	P	15 22 40.7	-1.6
	baz=310						
WUAZ	Wupatki	51.36	80	P	P	15 22 43.3	-0.9
	baz=312						
XAN	Xi'an	51.75	278	P	P	15 22 47.7	+0.7
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MVCO	Mesa Verde	51.97	76	P	P	15 22 47.4	-1.5
	baz=311						
ISCO	Idaho Springs	51.99	72	P	P	15 22 48.0	-1.1
	baz=310						
AGMN	Agassiz Nation	52.01	58	P	P	15 22 47.4	-1.4
	baz=308,SNR=6.6						
ZALV	Zalesovo Beam	52.22	312	P	P	15 22 49.8	-0.4
	comp=Z,0.9nm,0.4s,baz=22,slow=5.0,SNR=2.3						
ZALV				PcP	PcP	15 24 00.8	+0.9
	comp=Z,4.7nm,0.7s,baz=31,slow=4.0,SNR=14						
S22A	4UR Ranch, Cre	52.61	74	P	P	15 22 52.7	-1.0
	baz=311,SNR=6.8						
W18A	Petrified Fore	52.62	79	P	P	15 22 52.8	-0.8
	baz=312						
SUSD	Miller	52.79	63	P	P	15 22 53.6	-0.9
	baz=310						
Q24A	Divide	52.81	72	P	P	15 22 53.5	-1.6
	baz=311						
214A	Organ Pipe Nat	52.90	84	P	P	15 22 54.8	-0.8
	baz=314						
SUMG	Summit	53.04	13	P	P	15 22 55.9	-0.5
SUMG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SUMG	Summit	53.04	13	*i* P	P	15 22 55.0	-1.4
SUMG				IAmb	IAmb	15 22 57.4	
	comp=Z,4.2nm,0.8s						
SUMG	Summit	53.04	13	P	P	15 22 55.9	-0.5
SUMG				IAmb	IAmb	15 22 57.8	
	comp=Z,8.3nm,1.0s						
DBG	Daneborg	53.29	6	*e*P	P	15 22 55.3	-2.4
DBG				IAmb	IAmb	15 22 57.5	
	comp=Z,3.0nm,0.7s						
FRB	Frobisher Bay	53.36	31	P	P	15 22 57.9	-0.5
	comp=Z,3.8nm,0.3s,baz=319,slow=8.2,SNR=15						
FRB				pP	pwP	15 23 28.6	-1.3
	comp=Z,3.5nm,0.5s,baz=317,slow=7.1,SNR=4.3						
SDCO	Great Sand Dun	53.40	74	P	P	15 22 58.6	-0.8
	baz=312,SNR=9.1						
LZH	Lanzhou	53.45	284	*e*P	P	15 23 00.0	+0.3
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				LR	LR		
	comp=Z,590nm,9.3s						
LZH				LR	LR		
	comp=Z,2µm,8.9s						
LZH				LR	LR		
	comp=Z,1µm,11.7s						
GTA	Gaotai	53.62	289	*e*P	P	15 23 01.5	+0.7
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,73nm,7.6s						
GTA				LR	LR		
	comp=Z,230nm,10.4s						
GTA				LR	LR		
	comp=Z,300nm,12.0s						
GTA				LR	LR		
	comp=Z,370nm,12.8s						
DGZ	Jazzator, Alta	53.67	306	*i* P	P	15 23 00.9	-0.2
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TUC	Tucson	53.90	82	P	P	15 23 02.4	-0.5
	baz=314						
T25A	Trinidad	54.45	73	P	P	15 23 06.1	-0.9
	baz=312,SNR=5.9						
EYMN	Ely	54.49	56	P	P	15 23 06.1	-0.8
	baz=310						
ECSD	EROS Data Cent	54.53	62	P	P	15 23 05.2	-2.0
	baz=311						
ANMO	Albuquerque	54.72	77	*ce*P	P	15 23 08.0	-0.9
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANMO	Albuquerque	54.72	77	P	P	15 23 07.8	-1.1
	baz=313						
121A	Cookes Peak, D	55.57	80	P	P	15 23 14.2	-0.8
	baz=314						
SPMN	Marine on St.	55.60	59	P	P	15 23 13.5	-1.4
	baz=311						
SFJD	Kangerlussuaq	55.66	21	P	P	15 23 14.7	-0.3
	comp=Z,3.9nm,0.4s,baz=15,slow=5.6,SNR=5.8						
SFJD	Kangerlussuaq	55.66	21	P	P	15 23 13.5	-1.4
SFJD				IAmb	IAmb	15 23 14.9	
	comp=Z,9.7nm,1.1s						
CBKS	Cedar Bluff	56.05	69	P	P	15 23 17.2	-1.1
	baz=312						
CD2	Chengdu	57.06	279	P	P	15 23 24.2	-1.3
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				LR	LR		
	comp=Z,530nm,12.8s						
CD2				LR	LR		
	comp=Z,520nm,10.8s						
CD2				LR	LR		
	comp=Z,760nm,13.1s						
ARCES	ARCESS Array B	57.08	349	P	P	15 23 24.1	-0.8
	comp=Z,8.5nm,1.1s,baz=30,slow=6.4,SNR=11						
ARCES				LR	LR	15 47 53.8	
	comp=Z,24nm,21.5s,baz=275,slow=36						
KURK	Kurchatov	57.21	312	*ce*P	P	15 23 26.0	-0.2
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KURK	Kurchatov	57.21	312	P	P	15 23 26.0	-0.2
KURK				IAmb	IAmb	15 23 29.1	
	comp=Z,7.4nm,0.5s						
KURBB	Kurchatov Arra	57.32	312	P	P	15 23 26.7	-0.2
	comp=Z,5.9nm,0.5s,baz=42,slow=6.7,SNR=39						
KURBB				pP	pP	15 23 55.5	-0.2
	comp=Z,2.9nm,0.7s,baz=44,slow=6.4,SNR=4.3						
KURBB				PcP	PcP	15 24 20.6	+0.9
	comp=Z,2.9nm,0.9s,baz=45,slow=7.3,SNR=8.6						
WMQ	Urumqi	57.43	301	*e*P	P	15 23 29.2	+1.3
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.7s						
WMQ				LR	LR		
	comp=Z,600nm,29.0s						
WMQ				LR	LR		
	comp=Z,830nm,28.9s						
WMQ				LR	LR		
	comp=Z,58nm,17.9s						
MNTX	Cornudas Mount	57.61	79	P	P	15 23 28.4	-0.9
	baz=315,SNR=8.7						
MK31	Makanchi Array	58.17	306	*i* P	P	15 23 32.6	-0.4
MKAR	Makanchi Array	58.17	306	P	P	15 23 32.5	-0.4
	comp=Z,2.4nm,0.4s,baz=49,slow=6.5,SNR=27						
MKAR				pP	pP	15 24 02.7	+1.2
	comp=Z,1.3nm,0.5s,baz=48,slow=8.9,SNR=3.7						
MAKZ	Makanchi	58.31	307	P	P	15 23 33.5	-0.5
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAKZ	Makanchi	58.31	307	P	P	15 23 33.5	-0.5
JFWS	Jewell Farm	58.52	59	P	P	15 23 33.6	-1.8
	baz=314						
BVAR	Borovoye Array	59.17	318	P	P	15 23 40.3	+0.5
	comp=Z,4.4nm,0.5s,baz=63,slow=0.3,SNR=30						
BVAR				pP	pP	15 24 09.2	+1.0
	comp=Z,2.7nm,0.7s,baz=144,slow=2.8,SNR=3.3						
BVAR				PcP	PcP	15 24 27.3	+0.4
	comp=Z,4.8nm,0.5s,baz=204,slow=4.0,SNR=8.9						
BVAR				ScP	ScP	15 28 16.1	+0.4
	comp=Z,1.0nm,0.7s,baz=184,slow=8.2,SNR=3.8						
E46A	Sault Ste Mari	59.17	53	P	P	15 23 38.8	-1.1
BRVK	Borovoye	59.19	318	*ce*P	P	15 23 39.8	-0.1
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BRVK	Borovoye	59.19	318	P	P	15 23 40.1	+0.2
BRVK				IAmb	IAmb	15 23 41.4	
	comp=Z,6.5nm,0.6s						
SVE	Sverdlovsk	60.01	326	*e*P	P	15 23 46.4	+1.0
SVE				pmax	pmax		
	comp=Z,17nm,1.3s						
TX31	Lajitas Ar. Si	60.33	79	IAmb	IAmb	15 23 48.2	
	comp=Z,9.6nm,0.6s						
TXAR	Lajitas Array	60.33	79	P	P	15 23 47.9	-0.3
	comp=Z,2.1nm,0.4s,baz=305,slow=5.2,SNR=52						
TXAR				ScP	ScP	15 28 19.9	-1.5
	comp=Z,0.5nm,0.7s,baz=301,slow=3.0,SNR=3.8						
TUL1	Leonard	60.33	69	P	P	15 23 46.8	-1.2
	baz=315						
ABTX	Abilene, Hawle	60.40	74	P	P	15 23 46.9	-1.6
	baz=315						
PRGR	Permogore	60.55	336	*e*P	P	15 23 47.8	-1.2
PRGR				*e**PP	pP	15 24 19.4	+1.9
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SCHQ	Schefferville	60.56	37	P	P	15 23 49.2	0.0
	comp=Z,2.2nm,0.5s,baz=273,slow=9.0,SNR=8.6						
SCHQ				LR	LR	15 51 33.9	
	comp=Z,51nm,18.4s,baz=320,slow=37						
HDIL	Hopedale	60.68	61	P	P	15 23 49.1	-1.1
HDIL				IAmb	IAmb	15 23 50.2	
	comp=Z,11nm,0.7s						
HDIL	Hopedale	60.68	61	P	P	15 23 48.4	-1.8
	baz=315						
ARU	Arti	61.04	327	*c i*P	P	15 23 52.5	0.0
ARU				*PP	pP	15 24 22.7	+1.6
ARU						15 24 33.7	
ARU						15 26 04.6	
ARU				S	S	15 32 03.4	+2.4
ARU				SS	SS	15 36 01.2	-0.4
ARU				pmax	pmax		
	comp=Z,22nm,0.9s						
ARU	Arti	61.04	327	P	P	15 23 52.4	0.0
CCM	Cathedral Cave	61.38	64	P	P	15 23 52.8	-2.3
	baz=315						
U40A	Yellville	61.69	66	P	P	15 23 55.3	-1.9
	baz=315,SNR=5.7						
JCT	Junction City	61.83	76	P	P	15 23 56.7	-1.5
	baz=316						
SFIN	Lafayette	61.98	60	IAmb	IAmb	15 23 59.6	
	comp=Z,10nm,0.6s						
SFIN	Lafayette	61.98	60	P	P	15 23 57.6	-1.5
	baz=316,SNR=6.4						
W39A	Magazine	61.99	68	P	P	15 23 58.0	-1.1
	baz=316						
KIRV	Kirov	62.13	333	*ce*P	P	15 23 59.1	-0.6
FCAR	Ozark Folk Cen	62.43	66	IAmb	IAmb	15 24 01.7	
	comp=Z,12nm,0.9s						
MIAR	Mount Ida	62.57	68	P	P	15 24 02.0	-1.0
	baz=316,SNR=6.0						
W41B	Gary Mavity, V	62.88	67	P	P	15 24 03.2	-1.8
	baz=316						
JAY	Jayapura	62.98	223	P	P	15 24 06.0	+0.1
	comp=Z,16nm,0.9s,baz=10,slow=2.4,SNR=3.7						
X40A	Basin Creek Fa	63.04	68	P	P	15 24 05.1	-1.0
	baz=316						
GENI	Genyem	63.27	224	P	P	15 24 09.2	+1.4
	comp=Z,55nm,0.7s						
GENI	Genyem	63.27	224	P	P	15 24 08.6	+0.8
SMPI	Sarmi	63.36	225	P	P	15 24 09.7	+1.3
	comp=Z,11nm,1.2s						
WCI	Wyandotte Cave	63.97	61	P	P	15 24 11.2	-1.0
	baz=317						
M53A	WI Miller and	64.54	55	P	P	15 24 15.1	-0.7
	baz=318						
WVT	Waverly	64.66	63	P	P	15 24 15.3	-1.4
	baz=317						
FINES	FINESS Array B	64.68	346	P	P	15 24 16.7	+0.3
	comp=Z,0.9nm,0.5s,baz=22,slow=6.1,SNR=15						
FINES				pP	pP	15 24 48.6	+3.3
	comp=Z,4.2nm,0.7s,baz=35,slow=8.5,SNR=4.8						
FINES				LR	LR	15 57 17.2	
	comp=Z,50nm,18.4s,baz=43,slow=40						
FINES	FINESS Array B	64.68	346	*i* P	P	15 24 17.1	+0.7
FINES	FINESS Array B	64.68	346	pmax	pmax		
	comp=Z,1.0nm,0.4s						
M54A	Oil Creek Stat	65.00	54	P	P	15 24 18.2	-0.7
	baz=318						
AAK	Ala-Archa	65.01	308	P	P	15 24 19.4	+0.3
	comp=Z,3.4nm,0.4s,baz=128,slow=4.5,SNR=17						
AAK	Ala-Archa	65.01	308	*ce*P	P	15 24 19.3	+0.2
AAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AAK	Ala-Archa	65.01	308	P	P	15 24 19.7	+0.6
LONY	Lake Ozonia	65.11	49	P	P	15 24 18.1	-1.4
	baz=319						
P52A	Corning	65.13	57	P	P	15 24 18.2	-1.5
	baz=318						
N54A	Moraine State	65.24	55	P	P	15 24 19.8	-0.6
	baz=318						
SWI	Sorong	65.86	233	P	P	15 24 25.4	+0.7
	comp=Z,912nmcomp=Z,93nm,1.0s						
SIJI	Sorong	65.86	233	P	P	15 24 25.3	+0.6
	comp=Z,53nm,0.6s,baz=11,slow=6.7,SNR=44						
ABKAR	Akbulak array	66.27	321	P	P	15 24 27.6	+0.7
ABKAR				IAmb	IAmb	15 24 28.9	
	comp=Z,8.8nm,1.1s						
ABKAR	Akbulak array	66.27	321	P	P	15 24 27.7	+0.8
BINY	Binghamton	66.28	51	P	P	15 24 26.3	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=319						
M57A	Sunshine Farm,	66.38	53	P	P	15 24 27.3	-0.5
M57A				IAmb	IAmb	15 24 28.6	
	comp=Z,13nm,0.7s						
SSPA	Standing Stone	66.54	54	P	P	15 24 28.1	-0.6
SSPA				IAmb	IAmb	15 24 29.4	
	comp=Z,8.7nm,0.7s						
SSPA	Standing Stone	66.54	54	P	P	15 24 28.1	-0.6
	baz=319						
KKAR	Karatay Array	66.56	311	P	P	15 24 29.0	+0.1
KKAR	Karatay Array	66.56	311	P	P	15 24 29.0	+0.1
KSH	Kashi	66.62	305	P	P	15 24 34.0	+4.6
KSH				pP	pwP	15 25 05.6	+4.0
KSH				pmax	pmax		
	comp=Z,13nm,0.9s						
TZTN	Tazewell	66.68	60	P	P	15 24 28.6	-1.1
	baz=318						
NB2	NORSAR Subarra	66.76	353	P	PcP	15 24 59.9	+2.1
	comp=Z,7.0nm,1.2s,baz=7.3,slow=6.5						
NOA	NORSAR Array B	66.76	353	P	P	15 24 29.4	-0.4
	comp=Z,0.5nm,0.6s,baz=2.6,slow=5.7,SNR=6.4						
NOA				pP	pP	15 24 59.5	+0.5
	comp=Z,4.0nm,1.0s,baz=8.0,slow=6.4,SNR=5.7						
PMG	Port Moresby	66.82	214	P	P	15 24 30.6	-0.1
	comp=Z,2.6nm,0.4s,baz=342,slow=6.5,SNR=5.2						
FAKI	Fak Fak	67.16	231	P	P	15 24 33.2	+0.3
	comp=Z,30nm,0.8s						
FAKI	Fak Fak	67.16	231	P	P	15 24 32.7	-0.2
FAKI	Fak Fak	67.16	231	P	P	15 24 33.4	+0.5
N59A	State Game Lan	67.37	52	P	P	15 24 33.4	-0.6
	baz=320,SNR=6.5						
HFS	Hagfors	67.46	352	P	P	15 24 33.4	-0.8
	comp=Z,3.7nm,0.9s,baz=25,slow=3.9,SNR=10						
HFS				pP	pP	15 25 03.8	+0.6
	comp=Z,1.7nm,0.4s,baz=48,slow=2.4,SNR=2.2						
BLA	Blacksburg	67.83	58	P	P	15 24 36.1	-0.9
	baz=319						
PAL	Palisades	68.20	51	P	P	15 24 37.3	-1.8
	baz=321						
KKM	Kota Kinabalu	68.30	251	P	P	15 24 41.3	+1.1
OBN	Obninsk	68.55	338	*e*P	P	15 24 41.7	+0.6
OBN				*e*		15 25 06.8	
OBN				*e**PP	pwP	15 25 14.1	-0.1
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KMSC	Kings Mountain	68.92	60	P	P	15 24 42.9	-0.8
	baz=319						
GOGA	Godfrey	69.08	62	P	P	15 24 43.0	-1.7
	baz=319						
HODGE	Hodges	69.11	61	P	P	15 24 44.1	-0.9
HODGE				IAmb	IAmb	15 24 45.1	
	comp=Z,5.2nm,0.5s						
CMAR	Chiang Mai Arr	69.15	273	P	P	15 24 45.1	-0.2
CMAR	Chiang Mai Arr	69.15	273	P	P	15 24 45.1	-0.2
TAPN	Taplejung	69.26	288	*e*P	P	15 24 46.9	+0.6
MSVF	Nonsavu	69.51	180	P	P	15 24 48.4	+1.0
	comp=Z,12nm,1.1s,baz=192,slow=5.9,SNR=4.0						
SANI	Sanana	69.56	238	P	P	15 24 47.4	-0.4
	comp=Z,17nm,1.0s						
MRSI	Marisa	69.60	243	P	P	15 24 48.4	+0.3
	comp=Z,753nmcomp=Z,40nm,0.9s						
TOLI2	Tolitoli	69.71	244	P	P	15 24 48.4	-0.5
TOLI2				IAmb	IAmb	15 24 49.3	
	comp=Z,18nm,0.9s						
TOLI2	Tolitoli	69.71	244	P	P	15 24 49.1	+0.3
ODAN	Odare	69.82	288	*e*P	P	15 24 50.5	+0.8
GUN	Gumba	69.91	290	*e*P	P	15 24 51.1	+0.7
	comp=Z,68nm,0.4s						
JIRN	Jiri	69.92	289	*e*P	P	15 24 51.4	+0.9
	comp=Z,66nm,0.8s						
RAMN	Ramite	70.21	289	*e*P	P	15 24 52.6	+0.5
	comp=Z,38nm,0.5s						
KKN	Kakani	70.35	290	*e*P	P	15 24 53.6	+0.7
	comp=Z,35nm,0.7s						
PKI	Pulchoki	70.44	290	*e*P	P	15 24 54.1	+0.5
	comp=Z,40nm,0.7s						
PKIN	Phulchoki	70.44	290	*e*P	P	15 24 53.9	+0.4
	comp=Z,36nm,0.5s						
GKN	Gorkha	70.56	291	*e*P	P	15 24 54.5	+0.4
	comp=Z,54nm,0.8s						
DMN	Daman	70.59	290	*e*P	P	15 24 54.8	+0.4
DANN	Dangsing	70.80	292	*e*P	P	15 24 56.5	+0.8
	comp=Z,66nm,0.9s						
KOLN	Koldanda	71.33	291	*e*P	P	15 24 59.3	+0.5
	comp=Z,31nm,0.9s						
PYUN	Piuthan	71.43	292	*e*P	P	15 24 59.9	+0.5
	comp=Z,52nm,0.9s						
KOUNC	Koumac, New Ca	73.34	194	P	P	15 25 12.3	+2.0
TTSI	Tana Toraja	73.69	242	P	P	15 25 12.9	+0.3
	comp=Z,23nm,1.2s						
AKASG	Malin Array Be	74.30	340	P	P	15 25 15.2	-0.4
	comp=Z,3.1nm,0.5s,baz=21,slow=6.1,SNR=26						
AKASG				pP	pP	15 25 44.7	-0.8
	comp=Z,1.0nm,0.4s,baz=22,slow=6.3,SNR=4.6						
AKASG				LR	LR	16 01 01.6	
	comp=Z,36nm,19.7s,baz=60,slow=38						
YATNC	Mamie plateau,	74.49	191	P	P	15 25 17.2	+0.2
DZM	Mont Dzumac	74.55	191	P	P	15 25 17.1	-0.3
DZM				IAmb	IAmb	15 25 20.4	
	comp=Z,12nm,0.9s						
NOUC	Port Laguerre	74.60	192	P	P	15 25 20.1	+2.5
KAPI	Kappang	75.36	241	P	P	15 25 23.3	+1.1
	comp=Z,2.9nm,0.3s,baz=113,slow=8.4,SNR=3.6						
KSM	Kuching	75.43	253	P	P	15 25 23.6	+0.9
	comp=Z,14nm,0.6s						
GEYT	Alibeck	76.33	315	P	P	15 25 28.3	+0.8
	comp=Z,3.1nm,0.8s,baz=43,slow=23,SNR=7.6						
SORM	Soroca	76.91	340	⇓P	P	15 25 30.3	-0.3
SORM	Soroca	76.91	340	⇓P	P	15 25 30.3	-0.3
KIV	Kislovodsk	76.95	329	*e*P	P	15 25 32.6	+1.6
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBZ	Khabaz	77.08	329	P	P	15 25 33.2	+1.6
	comp=Z,3.4nm,0.8s,baz=342,slow=1.3,SNR=7.2						
KBZ	Khabaz	77.08	329	*ce*P	P	15 25 32.1	+0.5
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CTAO	Charters Tower	77.11	211	P	P	15 25 31.9	0.0
CTAO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CTAO	Charters Tower	77.11	211	P	P	15 25 31.9	0.0
CTAO	Charters Tower	77.11	211	P	P	15 25 33.1	+1.2
	comp=Z,11nm,1.1s						
EDFI	Ende, Flores	77.47	238	P	P	15 25 33.3	-0.9
BATI	Baumata	77.69	235	P	P	15 25 35.3	0.0
	comp=Z,24nm,0.5s,baz=39,slow=0.9,SNR=9.2						
VRAC	Vranov	77.80	348	LR	LR	16 04 08.7	
	comp=Z,41nm,19.7s,baz=44,slow=39						
BUR08	Bucovina Ar. S	78.02	342	P	P	15 25 36.7	-0.3
TRPA	Tarpa	78.04	344	⇓P	P	15 25 37.4	+0.5
BURAR	Bucovina Array	78.05	342	⇑P	P	15 25 37.5	+0.4
BURAR	Bucovina Array	78.05	342	⇑P	P	15 25 37.5	+0.4
DRGR		79.30	343	⇑P	P	15 25 45.5	+1.5
DRGR		79.30	343	⇑P	P	15 25 45.5	+1.5
COVR	Voineasa-Covas	79.54	341	⇑P	P	15 25 47.2	+2.0
DOPR	Dopca	79.59	341	⇑P	P	15 25 41.1	-4.4
PLAI	Plampang	79.61	241	P	P	15 25 44.7	-1.1
	comp=Z,21nm,0.8s						
GNI	Garni	79.66	326	*ce*P	P	15 25 47.5	+1.4
GNI				pmax	pmax		
	comp=Z,13nm,1.7s						
CFR	Carcaliu	79.77	339	⇓P	P	15 25 48.3	+2.0
CFR	Carcaliu	79.77	339	⇓P	P	15 25 48.3	+2.0
KNRA	Kununurra	79.94	228	IAmb	IAmb	15 25 48.5	
	comp=Z,13nm,0.7s						
TPGR	Topolog	80.01	339	⇓P	P	15 25 43.0	-4.7
VOIR		80.17	341	⇑P	P	15 25 49.7	+1.1
VOIR		80.17	341	⇑P	P	15 25 49.7	+1.1
WATA	Walderalm	80.31	351	*e*P	pP	15 26 25.5	+5.9
	comp=Z,5.8nm,1.0s						
MOTA	Moosalm	80.35	351	*e*P	pP	15 26 25.7	+5.8
	comp=Z,7.5nm,1.2s						
WTTA	Wattenberg	80.38	351	*e*P	pP	15 26 26.2	+6.3
	comp=Z,11nm,1.3s						
KBA	Koelnbreinsper	80.38	350	*e*P	pP	15 26 26.4	+6.4
	comp=Z,7.2nm,0.7s						
SQTA	Sankt Quirin	80.46	351	*e*P	pP	15 26 26.5	+6.0
	comp=Z,3.2nm,0.8s						
SOKA	Soboth	80.58	348	*i* P	pP	15 26 27.2	+6.3
	comp=Z,9.5nm,1.2s						
BZS	Buzias	80.63	344	⇓P	P	15 25 49.6	-1.4
BZS	Buzias	80.63	344	⇓P	P	15 25 49.6	-1.4
FETA	Feichten	80.70	351	*e*P	pP	15 26 27.9	+6.1
	comp=Z,7.2nm,1.2s						
ABTA	Abfaltersbach	80.80	350	*e*P	pP	15 26 28.1	+5.9
	comp=Z,5.4nm,1.0s						
OBKA	Obir	80.80	349	*i* P	pP	15 26 28.1	+6.0
	comp=Z,3.5nm,0.8s						
WB0	Warramunga Arr	81.12	221	IAmb	IAmb	15 25 54.4	
	comp=Z,14nm,0.8s						
WR0	Warramunga Arr	81.23	221	IAmb	IAmb	15 25 54.9	
	comp=Z,14nm,0.7s						
PSI	Prapat	81.25	263	P	P	15 25 55.0	+0.1
	comp=Z,5.0nm,0.7s,baz=317,slow=4.8,SNR=5.6						
WRAB	Tennant Creek	81.28	221	*ce*P	P	15 25 53.6	-1.1
WRAB				pmax	pmax		
	comp=Z,23nm,1.3s						
WRAB	Tennant Creek	81.28	221	P	P	15 25 54.1	-0.6
	comp=Z,20nm,1.5s						
WB2	Warramunga Arr	81.29	221	IAmb	IAmb	15 25 55.4	
	comp=Z,17nm,0.8s						
WRA	Warramunga Arr	81.30	221	P	P	15 25 54.6	-0.1
	comp=Z,10nm,0.6s,baz=31,slow=6.1,SNR=120						
TEKS	Tekeris	82.02	345	*e*P	pP	15 26 34.3	+5.1
HYB	Hyderabad	82.27	288	*i* P	P	15 26 00.0	-0.1
DIVS	Divibare	82.38	344	*e*P	pP	15 26 37.3	+6.1
GRUS	Gruza	82.47	344	*e*P	pP	15 26 38.0	+6.5
BOVS	Bovan	82.54	343	⇑P	P	15 26 00.4	-0.6
BOVS	Bovan	82.54	343	*e*P	pP	15 26 37.3	+5.4
BBLS	Lazići	82.71	345	*e*P	pP	15 26 39.4	+6.6
ZAPS	Zavoj	82.72	342	*e*P	pP	15 26 38.8	+5.9
IVAS	Ivanjica	82.86	344	*e*P	pP	15 26 39.2	+5.6
SELS	Selova	83.05	343	*e*P	pP	15 26 40.1	+5.5
SJES	Sjenica	83.20	344	*e*P	pP	15 26 41.9	+6.4
BARS	Barje	83.31	343	*e*P	pP	15 26 40.6	+4.7
FITZ	Fitzroy Crossi	83.50	230	P	P	15 26 06.8	+0.7
	comp=Z,16nm,0.8s,baz=18,slow=4.8,SNR=37						
BOSS	Bosilegrad	83.50	342	*e*P	pP	15 26 42.8	+5.9
BRTR	Keskin Array B	83.53	333	P	P	15 26 06.8	+0.3
	comp=Z,0.9nm,0.7s,baz=42,slow=3.0,SNR=5.7						
BRTR	Keskin Array B	83.53	333	*i* P	P	15 26 07.3	+0.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AS31	Alice Springs	84.81	220	P	P	15 26 12.9	+0.1
ASAR	Alice Springs	84.81	220	P	P	15 26 12.8	+0.1
	comp=Z,5.9nm,0.7s,baz=23,slow=5.0,SNR=96						
ASAR	Alice Springs	84.81	220	P	P	15 26 12.6	-0.2
ESDC	Sonseca Array	88.60	2	P	P	15 26 31.1	-0.1
	comp=Z,0.3nm,0.4s,baz=339,slow=16,SNR=2.2						
ESDC				pP	pwP	15 27 05.8	+1.0
	comp=Z,1.7nm,1.0s,baz=346,slow=3.9,SNR=4.7						
STKA	Stephens Creek	89.57	211	P	P	15 26 36.6	+1.2
	comp=Z,12nm,0.6s,baz=351,slow=6.2,SNR=46						
STKA				LR	LR	16 01 44.2	
	comp=Z,40nm,20.2s,baz=27,slow=32						
STKA	Stephens Creek	89.57	211	P	P	15 26 36.0	+0.6
KEST	Kesra	92.03	351	LR	LR	16 11 15.1	
	comp=Z,124nm,19.7s,baz=279,slow=37						
TORD	Torodi Ar. Bea	114.98	356	PKP	PKiKP	15 32 17.8	-1.0
	comp=Z,1.1nm,0.4s,baz=347,slow=2.2,SNR=11						
TORD				PKKPbc	PKKPbc	15 42 55.2	+2.3
	comp=Z,0.7nm,0.6s,baz=174,slow=2.7,SNR=4.5						
DBIC	Dimbokro	121.42	4	PKP	PKPdf	15 32 30.4	-0.8
	comp=Z,1.6nm,0.4s,baz=17,slow=2.0,SNR=5.8						
H03N2	Juan Fernandez	123.08	103	T	T	17 47 34.5	
	baz=317,slow=78,SNR=5.9						
H03N1	Juan Fernandez	123.09	103	T	T	17 47 30.4	
	baz=317,slow=78,SNR=4.7						
H03N3	Juan Fernandez	123.09	103	T	T	17 47 28.4	
	baz=317,slow=78,SNR=4.9						
PLCA	Paso Flores	132.91	105	PKP	PKPdf	15 32 52.0	-0.4
	comp=Z,2.5nm,0.7s,baz=217,slow=2.6,SNR=5.2						
PLCA	Paso Flores	132.91	105	PKIKP	PKiKP	15 32 53.0	-0.5
PLCA	Paso Flores	132.91	105	PKPdf	PKiKP	15 32 53.0	-0.5
MAW	Mawson	145.92	218	PKPbc	PKPbc	15 33 15.4	-0.4
	comp=Z,22nm,0.8s,baz=95,slow=4.4,SNR=21						
LBTB	Lobatse	145.93	312	PKP2	PKPab	15 33 18.2	+0.2
LBTB	Lobatse	145.93	312		PKPab	15 33 18.2	+0.2
BOSA	Boshof	149.14	309	PKPbc	PKiKP	15 33 26.7	-0.5
	comp=Z,9.7nm,0.5s,baz=31,slow=2.5,SNR=40						
BOSA	Boshof	149.14	309	PKP2	PKiKP	15 33 26.6	-0.6
SNAA	Sanae	160.33	179	PKPab	PKPab	15 34 16.2	-0.9
VNA3	Neumayer Olymp	160.43	172	PKPab	PKPab	15 34 17.0	-0.6
VNA2	Neumayer--Watz	160.91	174	PKPab	PKPab	15 34 19.5	-0.1
	baz=184,slow=3.6						

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*IDC **12** 15:24:13.4±12.0, 2°.42S×101°.65E, h146^{km}±122^{km}, mb3.7/13, mb1 3.8/13, mb1mx3.3/49, mbtmp4.1/13, Error ellipse: s-maj=40.0km s-min=17.7km az=59.0*

*DJA **12** 15:24:16.6±0.3, 2°S±3°×10°2E±°, h144^{km}±4^{km}, M4.2/15, mb4.3/3, mB5.0/1, MLv4.1/15, Mw(mB)4.4/1*

ISC 12 15:24:15.3±0.7, **2°.20S**±0°.07×**101°.91E**±0°.06, **h150**^{km}, **n33**, σ_{1s}**29**/30, **mb4.2**/13, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRJI	Kerinci	0.46	284	P	Pn	15 24 38.9	+2.3
KRJI				S	Sn	15 24 54.4	+1.6
MASI	Maura Aman, Be	0.99	161	P	Pn	15 24 42.0	+1.9
KSI	Kapahiang	1.59	155	P	Pn	15 24 47.4	+1.4
JMBI	JAMBI	1.82	72	P	Pn	15 24 49.9	+1.5
PDSI	Padang	1.94	311	P	Pn	15 24 50.7	+0.9
PPSI	Pulau Pagai	1.98	254	P	Pn	15 24 52.0	+1.8
LHSI	Lahat	2.28	135	P	Pn	15 24 54.8	+1.0
BKNI	Bangkinang	2.66	341	P	Pn	15 24 59.7	+1.3
SISI	Saibi	2.95	287	P	Pn	15 25 03.8	+1.7
DSRI	Dabo	3.17	57	P	Pn	15 25 06.1	+1.3
MDSI	Maura Dua	3.21	135	P	Pn	15 25 06.4	+1.1
LWLI	Liwa	3.52	143	P	Pn	15 25 09.5	0.0
PPBI	Pangkal Pinang	4.22	90	P	Pn	15 25 20.1	+1.6
GSI	Gunungsitoli	5.56	309	P	Pn	15 25 36.8	+0.6
	0.6nm2µm126nm,0.6s						
KCSI	Kotacane, Aceh	7.03	324	P	Pn	15 25 57.4	+1.5
	0.2nm30nm,0.7s						
TPTI		7.20	319	P	Pn	15 25 58.6	+0.5
H08S2	Diego Garcia H	29.79	258	T	T	16 00 12.5	
	baz=82,slow=75,SNR=3.7						
H08S3	Diego Garcia H	29.80	259	T	T	16 00 12.8	
	baz=82,slow=75,SNR=3.2						
H08S1	Diego Carcia H	29.81	258	T	T	16 00 05.7	
	baz=82,slow=75,SNR=1.4						
WRA	Warramunga Arr	36.25	121	P	P	15 31 03.8	-0.5
	0.2nm,0.4s,baz=284,slow=7.9,SNR=5.2						
ASAR	Alice Springs	37.60	127	P	P	15 31 14.8	-1.0
	0.3nm,0.5s,baz=304,slow=7.7,SNR=12						
SONM	Songino Array	49.98	4	P	P	15 32 55.4	+1.1
	2.5nm,0.5s,baz=186,slow=9.5,SNR=17						
MKAR	Makanchi Array	51.76	343	P	P	15 33 06.9	-0.6
	2.5nm,0.6s,baz=157,slow=9.0,SNR=37						
USRK	Ussuriysk Ar.	53.45	27	P	P	15 33 20.5	+0.6
	4.3nm,0.6s,baz=206,slow=4.4,SNR=7.8						
KURBB	Kurchatov Arra	56.30	342	P	P	15 33 39.6	-0.7
	1.6nm,0.6s,baz=160,slow=6.8,SNR=14						
ZALV	Zalesovo Beam	57.74	348	P	P	15 33 49.3	-1.0
	3.3nm,0.3s,baz=160,slow=4.7,SNR=13						
ASAJ	Asahikawa	58.71	33	P	P	15 33 57.8	+0.5
	5.0nm,1.0s,baz=210,slow=20,SNR=1.1						
BVAR	Borovoye Array	61.05	339	P	P	15 34 11.6	-1.5
	1.5nm,0.6s,baz=181,slow=12,SNR=7.2						
KBZ	Khabaz	69.72	319	P	P	15 35 08.0	-1.0
	1.5nm,0.8s,baz=79,slow=4.9,SNR=4.2						
BRTR	Keskin Array B	74.87	312	P	P	15 35 38.4	-1.6
	0.5nm,0.5s,baz=151,slow=6.4,SNR=4.6						
FINES	FINESS Array B	85.18	332	P	P	15 36 33.8	-0.7
	1.2nm,0.7s,baz=123,slow=7.0,SNR=4.8						
ARCES	ARCESS Array B	87.31	340	P	P	15 36 44.3	-0.6
	2.7nm,0.9s,baz=57,slow=4.5,SNR=4.0						
TXAR	Lajitas Array	143.67	40	PKP	PKPab	15 43 30.9	+0.5
	0.2nm,0.6s,baz=346,slow=1.6,SNR=4.4						

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*IDC **12** 15:39:42.3±0.7, 23°.10N×121°.05E, h0^{km}, mb4.0/14, mb1 4.2/15, mb1mx3.9/67, mbtmp4.1/15, ML4.1/1, MS3.3/4, Ms1 3.3/4, ms1mx2.7/44, Error ellipse: s-maj=29.4km s-min=14.5km az=72.0*

*NEIC **12** 15:39:43.9±1.3, 23°.36N±0°.03×121°.42E±0°.03, h17^{km}±7^{km}, mb4.3/10, ML4.2(TAP), Error ellipse: s-maj=5.1km s-min=2.7km az=207.0*

*JMA **12** 15:39:43.2±0.1, 23°.34N×121°.48E, h0^{km}, M4.2*

*NIED **12** 15:39:43.2, 23°.34N×121°.48E, h0^{km}, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.07; $M_{\theta\theta}$1.17; $M_{\phi\phi}$-1.24; $M_{r\theta}$0.36; $M_{\theta\phi}$0.74; $M_{\phi r}$-0.17; Fault plane solution: $M_0$1.47000×10^{15} NP1: ϕ_s120.00000°, δ88.00000°, λ16.00000°. NP2: ϕ_s29.00000°, δ74.00000°, λ178.00000°.*

*BJI **12** 15:39:44.9±0.0, 23°.36N×121°.33E, h17^{km}, mB4.4/16, mb3.9/24, ML3.9/6, Ms4.3/21, Ms7 4.1/21*

*TAP **12** 15:39:45.5, 23°.38N×121°.34E, h13^{km}, ML4.4, B*

*ASIES **12** 15:39:45.9, 23°.38N×121°.29E, h17^{km}, MW4.1*

ISC 12 15:39:45.3±0.6, **23°.35N**±0°.01×**121°.37E**±0°.02, **h16**^{km}±3^{km}, **n221**, σ_{1s}**25**/269, **mb4.2**/20, **MS3.8**/4, **9C-48D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EYUL	Yuli	0.05	265	⇑P	Pg	15 39 48.1	-0.2
	baz=235						
EYUL				*i* S	Sg	15 39 50.4	+0.1
	baz=235						
TWF1	Yuli	0.07	271	⇑*i*P	Pg	15 39 48.1	-0.4
	baz=248						
TWF1				*i* S	Sg	15 39 49.9	-0.7
	baz=248						
YULB	Yu-li	0.08	301	⇓*i*P	Pg	15 39 48.1	-0.5
	baz=292						
YULB				S	Sg	15 39 50.0	-0.8
	baz=292						
YULB	Yu-li	0.08	301	Pg	Pg	15 39 47.2	-1.4
ECBN	Changbin	0.08	115	⇑*i*P	Pg	15 39 49.4	+0.8
	baz=121						
ECBN				*e*S	Sg	15 39 53.4	+2.7
	baz=121						
HGSD	Ruisui	0.15	19	⇑*i*P	Pg	15 39 49.7	+0.3
	baz=19						
HGSD				S	Sg	15 39 53.4	+1.4
	baz=19						
EHY	Hungye	0.16	344	⇓*i*P	Pb	15 39 49.2	-0.8
	baz=344						
EHY				*i* S	Sb	15 39 51.6	-1.4
	baz=344						
FULB	Fuli	0.17	205	⇓P	Pg	15 39 50.6	+0.9
	baz=207						
FULB				*e*S	Sg	15 39 55.0	+2.5
	baz=207						
CHKT	Chengkung	0.25	181	⇑*i*P	Pg	15 39 52.3	+1.4
	baz=166						
CHKT				S	Sg	15 39 57.5	+2.8
	baz=166						
ECS	Chishang	0.29	209	⇓P	Pb	15 39 52.1	-0.1
	baz=216						
EGFH	Guangfu	0.32	9	P	Pg	15 39 52.0	-0.1
	baz=360						
ELDTW	Lidau	0.36	244	⇓*i*P	Pg	15 39 52.6	-0.3
	baz=249						
ELDTW				*e*S	Sg	15 39 57.2	-0.9
	baz=249						
EDH	Donghe	0.38	189	P	Pb	15 39 54.0	+0.2
	baz=180						
TEGC	Jichi Village	0.39	24	*e*P	Pg	15 39 53.8	+0.5
	baz=8.0						
YUS	Yu-Shan	0.41	290	⇓*i*P	Pg	15 39 53.8	0.0
	baz=288						
VWDT	VWDT	0.45	332	⇓*i*P	Pg	15 39 54.5	+0.1
	baz=331						
ESL	Shilin	0.46	7	⇓*i*P	Pg	15 39 54.0	-0.7
	baz=357						
ESL				*e*S	Sg	15 40 00.5	-0.5
	baz=357						
LONT	Longtian	0.49	207	*e*P	Pg	15 39 55.1	-0.2
	baz=216						
ALS	Alishan	0.54	287	⇓*i*P	Pb	15 39 56.4	-0.3
	baz=286						
ALS				*e*S	Sb	15 40 04.8	+0.5
	baz=286						
TEYL	Yanliau Villag	0.56	22	*e*P	Pb	15 39 57.0	+0.3
	baz=7.0						
TEYL				*e*S	Sn	15 40 08.7	+1.2
	baz=7.0						
STYH	Taoyuan	0.58	252	⇓*i*P	Pb	15 39 56.7	-0.3
	baz=253						
STYH				*e*S	Sb	15 40 04.0	-0.9
	baz=253						
SSLB	Suanglung	0.58	319	⇓*i*P	Pb	15 39 56.5	-0.6
	baz=317						
SSLB	Suanglung	0.58	319	Pg	Pb	15 39 56.3	-0.9
STYT	Tauyuan	0.59	252	⇓*i*P	Pb	15 39 57.1	-0.3
	baz=251						
STYT				S	Sb	15 40 04.8	-0.8
	baz=251						
TWGBT	Beinan	0.59	207	*e*P	Pb	15 39 56.0	-1.4
	baz=193						
TWG	Pinlang	0.60	208	*e*P	Pb	15 39 56.1	-1.3
	baz=193						
TWG	Pinlang	0.60	208		Pb	15 39 56.0	-1.4
ETM	Tongmen	0.62	10	*e*P	Pb	15 39 56.5	-1.3
	baz=2.0						
OWD	Renai	0.63	343	⇓*i*P	Pb	15 39 57.2	-0.8
	baz=330						
TTN	Taitung	0.63	199	*e*P	Pg	15 39 58.3	+0.5
	baz=200						
HWA	Hwalien	0.66	19	*e*P	Pb	15 39 58.5	+0.1
	baz=3.0						
LDUT	Ludao	0.68	172	⇑P	Pb	15 39 58.6	-0.2
	baz=164						
LDUT				S	Sn	15 40 09.4	-1.1
	baz=164						
CHN5	Tsauling	0.68	291	⇓*i*P	Pg	15 39 59.3	+0.5
	baz=290						
SMLT	Sun Moon Lake	0.68	321	⇓*i*P	Pb	15 39 58.6	-0.4
	baz=320						
TPUB	Ta-pu	0.68	266	⇓*i*P	Pg	15 39 59.1	+0.3
	baz=266						
TPUB				S	Sg	15 40 08.7	+0.8
	baz=266						
TPUB	Ta-pu	0.68	266	Pg	Pb	15 39 59.0	+0.1
WTP	Ta-pu	0.70	262	⇓*i*P	Pg	15 39 59.5	+0.4
	baz=261						
WTP				S	Sg	15 40 09.4	+0.9
	baz=261						
CHN4	Tsaushan	0.71	270	⇓*e*P	Pb	15 39 58.2	-1.2
	baz=261						
TYC	Yuchr	0.72	320	⇓*i*P	Pb	15 39 59.3	-0.3
	baz=319						
TYC				*e*S	Sb	15 40 09.3	0.0
	baz=319						
CHGB	Renai	0.73	346	⇓*i*P	Pb	15 39 59.1	-0.7
	baz=343						
CHGB				S	Sb	15 40 09.6	-0.1
	baz=343						
WJS	Zhushan	0.75	309	⇓*i*P	Pg	15 40 01.1	+1.0
	baz=311						
WJS				S	Sn	15 40 11.7	-0.7
	baz=311						
TWD	Chiawan	0.75	16	*e*P	Pb	15 39 59.9	-0.2
	baz=15						
SLGT	Liugui	0.76	242	⇓*e*P	Pb	15 40 00.1	0.0
	baz=236						
WPL	Puli Township	0.76	330	⇓P	Pb	15 39 59.8	-0.4
	baz=336						
SGST	Jiashian	0.77	250	⇓P	Pb	15 39 59.9	-0.5
	baz=248						
DPDB	Guoxing	0.79	329	⇓*i*P	Pb	15 40 00.5	-0.3
	baz=334						
CHN1	Nanshi	0.79	258	⇓*i*P	Pg	15 40 01.4	+0.6
	baz=258						
WHF	Hehuan Shan	0.80	353	⇓P	Pb	15 39 59.9	-1.2
	baz=350						
WHF				*e*S	Sb	15 40 11.5	-0.2
	baz=350						
SNST	Tainan City	0.81	261	⇓P	Pg	15 40 01.7	+0.5
	baz=261						
WGK	Gukeng	0.81	294	⇓*i*P	Pn	15 40 02.1	0.0
	baz=294						
WGK				S	Sn	15 40 13.5	-0.3
	baz=294						
TWK	Hsinying	0.82	264	⇓*i*P	Pg	15 40 01.6	+0.3
	baz=264						
TWK				*e*S	Sn	15 40 13.6	-0.4
	baz=264						
WCS	Beigang Elemen	0.82	329	*e*P	Pb	15 39 59.9	-1.3
	baz=334						
WNT	Mingjian	0.82	310	⇓*i*P	Pn	15 40 02.3	+0.1
	baz=309						
WNT				S	Sn	15 40 14.5	+0.5
	baz=309						
WDLH	Douliu	0.83	294	⇓*i*P	Pn	15 40 02.6	+0.1
	baz=293						
ETL	Fush Village	0.84	16	*e*P	Pb	15 40 00.9	-0.6
	baz=12						
WNT1	Nantou City	0.84	311	*e*P	Pn	15 40 02.6	+0.1
	baz=310						
WNT1				*e*S	Sg	15 40 13.9	+1.1
	baz=310						
CHN2	Minshiung	0.84	282	⇓P	Pn	15 40 02.6	+0.1
	baz=296						
CHN2				*e*S	Sn	15 40 15.3	+0.8

baz=296
ECL Taimali 0.84 207 eP Pb 15 39 59.6 -2.0
baz=194
NACB Ninganchiao 0.84 14 eP Pb 15 39 59.6 -2.0
baz=10.0
NACB Ninganchiao 0.84 14 Pb 15 39 59.7 -2.0
ETLH Xiulin Townshi 0.86 7 eP Pb 15 40 00.1 -1.8
baz=18
CHY Chiayi 0.88 280⇓eP Pn 15 40 03.0 0.0
baz=279
FUSS Fushou 0.90 353⇓eP Pb 15 40 02.0 -0.7
SSD Sandimen 0.91 229 eP Pb 15 40 02.0 -0.8
baz=225
TWT Tachien 0.92 349 ⇓P Pb 15 40 02.5 -0.5
baz=345
TDCB Techi 0.92 348 ⇓P Pb 15 40 02.5 -0.5
baz=344
TDCB eS Sb 15 40 12.7 -2.4
baz=344
WWF Wufeng 0.92 318 ⇓P Pg 15 40 04.2 +0.9
baz=317
WWF eS Sg 15 40 16.5 +1.1
baz=317
TSMG Majia 0.93 226 eP Pb 15 40 03.0 -0.1
baz=221
SCST Cishan 0.93 240 eP Pg 15 40 04.5 +1.1
baz=242
WYL Yuanlin Townsh 0.95 310 eP Pb 15 40 03.5 +0.1
baz=309
WYL eS Sn 15 40 17.3 +0.2
baz=309
WTK Tuku 0.96 291⇓eP Pn 15 40 04.3 +0.1
baz=302
WTK eS Sn 15 40 18.2 +0.7
baz=302
CHN3 Shinhua 0.96 254⇓eP Pg 15 40 05.4 +1.3
baz=254
WHP Taichung City 1.00 337⇓eP Pb 15 40 04.1 -0.3
baz=341
MASBT Mashibuluo 1.00 223 eP Pb 15 40 03.4 -1.0
baz=225
ICHU Yijhu 1.00 271⇓eP Pg 15 40 05.2 +0.4
baz=272
ICHU eS Sg 15 40 19.8 +1.8
baz=272
TCU Taichung 1.02 321 eP Pg 15 40 05.5 +0.5
baz=319
SSHA Shanhua 1.02 258 eP Pg 15 40 05.9 +0.8
baz=259
TWM1 Shoushan 1.02 239 eP Pg 15 40 06.2 +1.1
baz=232
SGLT Jiouru 1.02 233 eP Pg 15 40 06.3 +1.2
baz=231
WCHH Zhanghua 1.04 314 eP Pn 15 40 05.6 +0.4
baz=302
WCHH eS Sg 15 40 20.4 +1.2
baz=302
TSPT Pingtung City 1.05 230 eP Pg 15 40 06.6 +0.9
baz=230
CHN8 Yiju 1.07 270 eP Pb 15 40 05.6 +0.2
baz=271
CHN8 S Sg 15 40 21.9 +2.0
baz=271
EAST Anshuo 1.08 207 eP Pb 15 40 03.5 -2.1
baz=196
TAW Tawu 1.08 204 eP Pb 15 40 04.1 -1.6
baz=194
NNS Nan Shan 1.08 0 eP Pb 15 40 04.5 -1.3
baz=10.0
WSF Szhu 1.09 285 ⇓P Pb 15 40 06.2 +0.3
baz=286
WSF eS Sg 15 40 21.5 +0.7
baz=286
TAI1 Yung-k'ang 1.10 254 eP Pg 15 40 06.5 0.0
baz=255
SCLT Jiali 1.10 261 eP Pg 15 40 06.7 +0.2
baz=263
SCLT eS Sg 15 40 22.6 +1.7
baz=263
WTCT Ta-ch'eng 1.12 297 eP Pn 15 40 06.4 0.0
baz=297
WTCT eS Sg 15 40 22.4 +0.6
baz=297
ENA Nanau 1.12 17 eP Pn 15 40 05.7 -0.8
baz=2.0
SNJT Kaohsiung City 1.12 238 eP Pg 15 40 07.9 +0.9
baz=240
TWQ1 Liyutan 1.13 331 ⇓P Pb 15 40 07.4 +0.9
baz=329
TWQ1 eS Sg 15 40 22.9 +0.8
baz=329
SSPT Xinbi 1.14 221 eP Pg 15 40 07.5 +0.1
baz=217
EWUT Wuta 1.15 19 eP Pn 15 40 06.0 -0.7
baz=3.0
SCZT Fangliau 1.20 216 eP Pn 15 40 06.8 -0.6
baz=224
WDJ Dajia District 1.20 326 eP Pb 15 40 08.1 +0.4
baz=323
NSY Sanyi 1.20 332⇓iP Pg 15 40 08.9 +0.4
baz=330
NSY eS Sg 15 40 24.6 +0.5
baz=330
SLIU Shizi 1.25 205 eP Pn 15 40 08.0 -0.1
baz=198
KAU Kaohsiung 1.25 232 eP Pb 15 40 08.8 +0.2
baz=235
NDT Datong Townshi 1.25 6 eP Pn 15 40 08.1 -0.1
baz=12
NMLH Miaoli 1.29 336 eP Pb 15 40 10.0 +0.7
baz=332
ENTT Nioudou 1.29 8 eP Pn 15 40 08.1 -0.7
baz=14
YHNB Yeheng 1.31 0 eP Pn 15 40 08.8 -0.3
baz=8.0
YHNB Yeheng 1.31 0 Pn Pn 15 40 08.6 -0.5
NDS Dongshan 1.31 14 eP Pn 15 40 09.2 +0.2
baz=7.0
LAY Lan-yu 1.32 173 eP Pn 15 40 07.2 -1.9
baz=164
NSTT Nanjuang 1.32 345 eP Pb 15 40 09.8 +0.1
baz=341
NSK Sanguang 1.32 359 eP Pn 15 40 08.9 -0.3
baz=10.0
TWC Suao 1.33 19 eP Pn 15 40 09.7 +0.5
baz=4.0
LIOB Emei 1.33 346 eP Pb 15 40 10.1 +0.2
baz=341
WLCH Liuqiu 1.35 223 eP Pg 15 40 12.4 +1.0
baz=227
TWP Hsiaoliuchiu 1.37 223 eP Pg 15 40 11.3 -0.4
baz=227
TWE Neicheng 1.39 11 eP Pn 15 40 10.3 +0.3
baz=5.0
NJN Zhunan 1.40 341 eP Pn 15 40 10.6 +0.3
baz=347
NWLT Wulai 1.42 5 eP Pn 15 40 10.7 +0.1
baz=10.0
ILA Ilan 1.45 14 eP Pn 15 40 11.3 +0.5
baz=7.0
HSN1 Hsinchu 1.46 347 eP Pn 15 40 11.3 +0.3
baz=342
HEN Hengchun 1.46 204 eP Pb 15 40 11.8 -0.3
baz=198
SBCB Hsinchu 1.48 346 eP Pb 15 40 12.3 -0.1
baz=341
HSN Hsinchu 1.49 346 eP Pg 15 40 14.2 +0.2
baz=342
TWK1 Hengchun 1.50 201 eP Pb 15 40 12.3 -0.5
baz=195
TWKBT Hengchun 1.50 200 eP Pn 15 40 11.9 +0.3
baz=195
TSEB Hengchuen, Pin 1.51 197 eP Pb 15 40 12.4 -0.5
baz=192
NTC Toucheng 1.55 16 eP Pn 15 40 12.6 +0.3
baz=8.0
WDGT Dungji 1.58 267 eP Pn 15 40 12.7 +0.1
baz=267
NHDH Xindian Distri 1.61 5 eP Pn 15 40 12.3 -0.8
baz=11
NCUH Zhongli 1.62 354 eP Pb 15 40 15.3 +0.5
baz=331
NCU National Centr 1.62 354 eP Pg 15 40 16.5 0.0
baz=331
TATO Taipei 1.62 4 eP Pn 15 40 13.6 +0.4
baz=11
TATO Taipei 1.62 4 Pn 15 40 11.8 -1.4
TWA Mucha 1.63 7 eP Pb 15 40 16.0 +0.9
baz=13
NTY Taoyuan 1.64 358 eP Pn 15 40 14.1 +0.6
baz=4.0
PHUB P'eng-hu 1.66 276 eP Pn 15 40 14.1 +0.3
baz=262
PHUB eS Sn 15 40 34.6 -0.2
baz=262
TIPB Shuangxi 1.67 14 eP Pn 15 40 14.8 +0.9
baz=6.0
PNG Penghu 1.68 278 eP Pn 15 40 14.2 +0.1
baz=278
TAP Taipei 1.69 4 eP Pn 15 40 15.3 +1.2
baz=15
TWS1 Kuangyinshan 1.74 1 eP Pn 15 40 16.2 +1.2
baz=12
TWB1 Santiao Chiao 1.74 19 eP Pn 15 40 14.2 -0.7
baz=11
NWF Wu-fen Shan 1.75 12 eP Pn 15 40 15.8 +0.6
baz=4.0
WFSB Wu-fen Shan 1.75 12 eP Pn 15 40 15.6 +0.5
baz=4.0
VCHM Qimei 1.79 266 eP Pb 15 40 16.8 -1.0
baz=266
YM01 YM01 1.80 6 eP Pn 15 40 16.6 +0.9
baz=15
NTST Danshui 1.81 2 eP Pn 15 40 16.6 +0.8
baz=13
JYNG Yonagunijimaku 1.81 52 P Pn 15 40 15.6 -0.2
JYNG S Sn 15 40 39.2 +0.7
TNOU National Taiwa 1.83 12 eP Pn 15 40 17.2 +1.1
baz=3.0
ANP Anpu 1.83 4 eP Pn 15 40 15.0 -1.2
baz=14
YM08 YM08 1.84 6 eP Pn 15 40 16.3 0.0
baz=15
YOJ Yonaguni jima 1.86 53 eP Pn 15 40 16.4 -0.2
baz=64
YOJ eS Sn 15 40 39.9 +0.1
baz=64
YOJ Yonaguni jima 1.86 53 P Pn 15 40 17.0 +0.4
YOJ eS Sn 15 40 40.7 +0.9
YOJ Yonaguni jima 1.86 53 Pn 15 40 16.1 -0.5
TWY Chenhua 1.93 6 eP Pb 15 40 20.0 -0.1
baz=15
HATJ Hateruma jima 2.34 72 P Pn 15 40 22.6 -0.5
HATJ S Sn 15 40 51.4 -0.1
PCYT Pengchaiyu 2.36 16 eP Pn 15 40 25.4 +2.1
baz=7.0
IRIF Iriomote-Funau 2.37 65 P Pn 15 40 23.8 +0.2
IRIF eS Sn 15 40 53.2 +0.9
JKRS Kuro-shima 2.57 69 P Pn 15 40 26.8 +0.5
JKRS eS Sn 15 40 57.4 +0.1
PTMZ Houxiangcun 2.66 310 eP Pn 15 40 27.1 -0.4
baz=294
JIJ Ishigaki jima 2.73 68 P Pn 15 40 28.2 -0.3
JIJ eS Sn 15 41 00.1 -1.1
KNM Kinmen 2.89 292 eP Pn 15 40 32.3 +1.6
baz=290
KNMB Chin-men Tao 2.95 293 eP Pn 15 40 31.3 -0.2
baz=292
KNMB Chin-men Tao 2.95 293 Pn Pn 15 40 31.2 -0.2
JISG Ishigakijimahi 2.96 65 P Pn 15 40 31.2 -0.4
JISG S Sn 15 41 05.2 -1.6
QZH Quanzhou 2.99 303 Pn Pn 15 40 32.9 +0.8
QZH Sn Sb 15 41 13.2 -1.4
QZH smax smax
comp=N,320nm,1.0s
QZH smax smax
comp=E,340nm,0.9s
MATB Ma-tsu 3.07 335 eP Pn 15 40 33.3 0.0
baz=344
JTJ Tarama 3.31 66 S Sn 15 41 14.5 -0.9
ZPLA Ao Xicun 3.37 281 eP Pn 15 40 37.6 +0.3
baz=280
MHZQ Yeshan 3.47 323 eP Pn 15 40 39.4 +0.8
baz=323
AXDP Jialang 3.47 297 eP Pn 15 40 38.7 0.0
baz=296
LYJJ Jianjiangzhen 3.50 336 eP Pn 15 40 38.5 -0.6
baz=343
XPSS Dashiqiu 3.72 344 eP Pn 15 40 41.8 -0.3
baz=342
JIRB Irabujima 3.77 66 P Pn 15 40 42.8 0.0
JIRB eS Sn 15 41 26.4 -0.5
JMJ Miyako jima 2 3.87 67 eP Pn 15 40 44.2 +0.1
baz=73
JIKM Ikemajima 3.87 65 P Pn 15 40 44.8 +0.6
JIKM eS Sn 15 41 28.9 -0.5
JMJ2 Miyako jima3 3.87 68 P Pn 15 40 44.5 +0.3
JMJ2 eS Sn 15 41 28.8 -0.6
JOGS Gusukube 3.95 68 P Pn 15 40 45.2 0.0
JOGS eS Sn 15 41 31.8 +0.6
JOW Kunigami 7.15 60 Pn Pn 15 41 28.3 -1.0
2.7nm,0.3s,baz=143,slow=16,SNR=11
JOW Kunigami 7.15 60 Pn Pn 15 41 27.2 -2.2
NJ2 Nanjing 8.95 346 eP Pn 15 42 03.4 +9.5
NJ2 S Sn 15 43 45.0 +11
NJ2 pmax pmax
comp=Z,13nm,0.6s
NJ2 smax smax
comp=N,52nm,0.9s
NJ2 smax smax
comp=E,74nm,1.1s
NJ2 LR LR
comp=N,710nm,5.5s
NJ2 LR LR
comp=E,470nm,4.9s
NJ2 LR LR
comp=Z,520nm,5.7s
WHN Wuhan 9.51 320 ⇑P Pn 15 42 01.0 -0.7
WHN S Sn 15 43 43.6 -4.7
WHN LR LR
comp=Z,2μm,12.1s
WHN LR LR
comp=Z,2μm,9.8s
WHN LR LR
comp=Z,3μm,11.8s
QIZ Qiongzhong 11.58 250 P Pn 15 42 30.3 +0.2
QIZ S Sn 15 44 39.5 +0.4
QIZ LR LR
comp=Z,320nm,14.5s
QIZ LR LR
comp=Z,300nm,16.9s
QIZ LR LR
comp=Z,350nm,15.3s
KSRS Korea Array 15.14 20 Pn Pn 15 43 21.2 +2.6
comp=Z,0.7nm,0.3s,baz=199,slow=12,SNR=30
KSRS LR LR 15 50 00.7
comp=Z,84nm,19.6s,baz=204,slow=40
KS19 Wonju Array Si 15.17 20 Pn 15 43 21.2 +2.3
KS19 IAmb IAmb 15 43 26.1
comp=Z,18nm,1.0s
XAN Xi'an 15.24 317 P Pn 15 43 22.5 +2.6
XAN S Sn 15 46 13.9 +5.4
XAN pmax pmax
comp=Z,7.0nm,1.1s
XAN LR LR
comp=Z,510nm,8.0s
XAN LR LR
comp=Z,690nm,12.9s
XAN LR LR
comp=Z,980nm,12.1s
HHC Hu-ho-hao-te 19.30 337 eP Pn 15 44 10.8 +0.1
HHC pmax pmax
comp=Z,18nm,0.7s
HHC pmax pmax
comp=Z,74nm,4.5s
HHC LR LR
comp=Z,300nm,9.4s
HHC LR LR
comp=Z,210nm,9.8s
HHC LR LR
comp=Z,170nm,10.6s
MJAR Matsushiro Arr 19.60 44 P Pn 15 44 14.9 +0.6
comp=Z,3.5nm,0.9s,baz=234,slow=9.2,SNR=5.5
MJAR LR LR 15 51 58.4
comp=Z,64nm,20.6s,baz=195,slow=37
LZH Lanzhou 19.78 314 eP Pn 15 44 20.6 +4.0
LZH pP sP 15 44 24.4 +2.4
LZH sP pP 15 44 27.2 +7.3
LZH pmax pmax
comp=Z,6.0nm,1.1s
LZH LR LR
comp=Z,370nm,10.3s
LZH LR LR
comp=Z,960nm,10.3s
LZH LR LR
comp=Z,810nm,10.6s
GTA Gaotai 24.30 316 ⇑P P 15 45 04.5 +2.3
GTA pP pP 15 45 09.1 +1.7
GTA sP sP 15 45 12.5 +3.0
GTA pmax pmax
comp=Z,2.0nm,1.3s
GTA pmax pmax
comp=Z,120nm,5.6s
GTA LR LR
comp=Z,190nm,10.8s
GTA LR LR
comp=Z,310nm,14.3s
GTA LR LR
comp=Z,380nm,13.1s
ERM Erimo 26.00 39 P P 15 45 13.7 -3.8
KLR Kul'dur 27.09 15 P P 15 45 28.9 +1.6
comp=Z,2.0nm,0.6s,baz=205,slow=7.1,SNR=7.9
SONM Songino Array 27.20 338 P P 15 45 28.2 -0.2
comp=Z,0.2nm,0.3s,baz=236,slow=48,SNR=2.2
SONM LR LR 15 57 46.9
comp=Z,127nm,18.6s,baz=180,slow=40
WMQ Urumqi 34.36 315 eP P 15 46 32.8 +1.3
WMQ pmax pmax
comp=Z,10.0nm,0.6s
WMQ pmax pmax
comp=Z,16nm,3.8s
WMQ LR LR
comp=Z,350nm,10.3s
WMQ LR LR
comp=Z,90nm,14.5s
WMQ LR LR
comp=Z,290nm,10.3s
MTN Manton Dam 37.22 164 P P 15 46 52.7 -3.5
MKAR Makanchi Array 39.05 317 P P 15 47 11.3 -0.2
comp=Z,1.2nm,0.7s,baz=106,slow=9.7,SNR=10
MKAR Makanchi Array 39.05 317 P P 15 47 09.1 -2.4
KNRA Kununurra 39.46 169 P P 15 47 10.8 -4.2
KNRA IAmb IAmb 15 47 35.6
comp=Z,6.8nm,1.1s
ZALV Zalesovo Beam 41.03 328 P P 15 47 27.3 -0.4
comp=Z,0.8nm,0.3s,baz=116,slow=6.9,SNR=5.5
H11N1 WAKE ISLAND Hy 42.37 86 T T 16 32 45.9
baz=283,slow=74,SNR=63
H11N2 WAKE ISLAND Hy 42.37 86 T T 16 32 49.6
baz=283,slow=74,SNR=76
H11N3 WAKE ISLAND Hy 42.38 86 T T 16 32 48.4
baz=283,slow=74,SNR=96
H11S3 WAKE ISLAND Hy 42.48 88 T T 16 32 58.4
baz=284,slow=75,SNR=153
H11S1 WAKE ISLAND Hy 42.48 88 T T 16 33 01.1
baz=284,slow=75,SNR=70
H11S2 WAKE ISLAND Hy 42.49 88 T T 16 32 57.6
baz=284,slow=75,SNR=69
KURK Kurchatov 42.84 321 P P 15 47 42.1 -0.4
KURBB Kurchatov Arra 42.85 320 P P 15 47 42.1 -0.6
comp=Z,2.3nm,0.2s,baz=112,slow=8.0,SNR=5.1
WB0 Warramunga Arr 44.70 162 P P 15 47 54.9 -2.9
WB0 IAmb IAmb 15 47 57.8
comp=Z,2.5nm,0.8s
WRAB Tennant Creek 44.85 163 P P 15 47 56.4 -2.6
WRAB IAmb IAmb 15 48 15.7
comp=Z,6.8nm,1.4s
WRA Warramunga Arr 44.85 163 P P 15 47 56.1 -2.9
comp=Z,2.2nm,0.7s,baz=346,slow=8.7,SNR=22
WRA Warramunga Arr 44.85 163 P P 15 47 56.1 -2.9
WB2 Warramunga Arr 44.86 163 P P 15 47 56.5 -2.5
WB2 IAmb IAmb 15 47 59.4
comp=Z,3.4nm,0.8s
WR0 Warramunga Arr 44.92 162 P P 15 47 57.3 -2.3
WR0 IAmb IAmb 15 47 59.9
comp=Z,4.9nm,0.8s
ASAR Alice Springs 48.30 165 P P 15 48 24.4 -1.7
comp=Z,0.9nm,0.8s,baz=341,slow=7.0,SNR=15
ASAR PcP PcP 15 49 51.4 -1.4
comp=Z,0.8nm,0.7s,baz=333,slow=3.0,SNR=6.5
TIXI Tiksi 48.51 3 LR LR 16 10 22.9
comp=Z,30nm,18.7s,baz=256,slow=38
ABKAR Akbulak array 54.15 315 P P 15 49 07.8 -1.8
STKA Stephens Creek 58.23 160 P P 15 49 38.1 -0.8
comp=Z,2.6nm,0.7s,baz=349,slow=17,SNR=5.0
ILAR Eielson Array 69.87 27 P P 15 50 58.6 +3.5
comp=Z,0.3nm,0.6s,baz=286,slow=5.8,SNR=2.8
FINES FINESS Array B 72.25 330 P P 15 51 09.1 -0.4
comp=Z,2.2nm,0.8s,baz=40,slow=4.9,SNR=8.4
NB2 NORSAR Subarra 79.04 332 P P 15 51 46.9 -1.6
comp=Z,3.4nm,1.0s,baz=61,slow=6.2
NOA NORSAR Array B 79.04 332 P P 15 51 47.5 -1.0
comp=Z,1.2nm,0.8s,baz=60,slow=5.8,SNR=4.6
GERES GERESS Array B 83.59 321 P P 15 52 13.1 0.0
comp=Z,1.0nm,0.8s,baz=72,slow=5.7,SNR=8.5
YKA Yellowknife Ar 83.67 23 P P 15 52 16.2 +3.2
comp=Z,1.2nm,0.8s,baz=309,slow=5.2,SNR=5.2
BMRD Maredsous 87.79 325 κP P 15 52 31.3 -2.4
DOU Dourbes 88.00 325 bP P 15 52 31.5 -3.2

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*DJA **12** 15:46:47.4±0.7, 3°N±5°×12°8E±°, h151km±5km, M4.1/13, mb4.3/6, mB4.5/2, MLv4.1/13, Mw(mB)3.6/2*
*IDC **12** 15:46:49.1±2.8, 2°.67N×128°.36E, h171km±30km, mb3.5/10, mb1 3.5/11, mb1mx3.3/52, mbtmp3.9/11, Error ellipse: s-maj=49.6km s-min=12.8km az=75.0*
ISC 12 15:46:47.2±0.7, **2°.68N**±0°.08×**128°.26E**±0°.07, **h150km, n23,** σ0ˢ99/26, **mb3.8**/10, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.09	205	P	Pn	15 47 24.2	+0.8
SGSI	Sangihe	2.91	290	P	Pn	15 47 34.1	+0.8
LBMI	Labuha	3.38	193	P	Pn	15 47 39.5	+0.1
SWI	Sorong	4.62	140	P	Pn	15 47 55.2	-0.4
SIJI	Sorong	4.63	140	P	Pn	15 47 58.0	+2.2
	0.9nm,0.3s,baz=267,slow=22,SNR=5.3						
SIJI				S	Sn	15 48 50.9	+1.7
	2.7nm,0.3s,baz=17,slow=22,SNR=10						
KMSI	Cibinong	4.76	244	P	Pn	15 47 58.2	+0.8
KMSI				S	Sn	15 48 52.4	+0.2
SANI	Sanana	5.22	206	P	Pn	15 48 02.5	-1.0
	0.1nm8.9nm,0.7s						
GTOI	Gorontalo	5.63	249	P	Pn	15 48 10.3	+1.4
	0.1nm336nm28nm,0.7s						
MRSI	Marisa	6.68	251	P	Pn	15 48 24.6	+1.6
	0.3nm846nm62nm,0.5s						
APSI	Ampana	7.51	242	P	Pn	15 48 33.2	-0.9
	0.1nm19nm,0.6s						
TTSI	Tana Toraja	10.17	236	P	Pn	15 49 09.0	-0.5
SPSI	Sidrap Palu	10.75	232	P	Pn	15 49 16.1	-1.0
	15nm,0.7s						
BNSI	Bone	10.76	229	P	Pn	15 49 18.9	+1.6
WRA	Warramunga Arr	23.26	165	P	P	15 51 41.1	-0.4
	1.2nm,0.6s,baz=343,slow=10,SNR=29						
ASAR	Alice Springs	26.76	168	P	P	15 52 12.2	-0.9
	0.2nm,0.4s,baz=349,slow=7.5,SNR=5.8						
ASAR				PcP	PcP	15 55 32.2	-0.3
	0.4nm,0.5s,baz=353,slow=2.2,SNR=14						
KSRS	Korea Array	34.61	360	P	P	15 53 22.2	+0.4
	0.8nm,0.5s,baz=176,slow=9.6,SNR=4.4						
MJAR	Matsushiro Arr	34.93	14	P	P	15 53 23.6	-1.0
	1.2nm,0.4s,baz=180,slow=9.8,SNR=4.3						
STKA	Stephens Creek	36.63	161	P	P	15 53 39.0	-0.1
	0.9nm,0.3s,baz=354,slow=8.7,SNR=4.7						
SONM	Songino Array	48.78	341	P	P	15 55 17.2	+0.2
	1.0nm,0.6s,baz=149,slow=8.5,SNR=3.9						
MKAR	Makanchi Array	59.29	325	P	P	15 56 33.5	+0.4
	1.7nm,0.4s,baz=115,slow=8.0,SNR=25						
KURBB	Kurchatov Arra	63.44	327	P	P	15 57 00.8	-0.1
	2.0nm,0.5s,baz=127,slow=6.1,SNR=14						
BVAR	Borovoye Array	69.03	327	P	P	15 57 36.3	-0.2
	1.0nm,0.6s,baz=179,slow=12,SNR=4.1						
ARU	Arti	76.64	328	P	P	15 58 20.5	-0.7
	0.4nm,0.2s,baz=78,slow=2.4,SNR=3.1						

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*IDC **12** 15:47:19.0±0.6, 23°.22N×121°.32E, h0km, mb3.9/17, mb1 4.0/19, mb1mx3.8/61, mbtmp4.0/19, ML4.0/2, Error ellipse: s-maj=27.7km s-min=13.3km az=66.0*
*JMA **12** 15:47:20.3, 23°.34N×121°.48E, h0km, M4.2*
*NEIC **12** 15:47:21.2±1.6, 23°.34N±0°.05×121°.34E±0°.05, h14km±2km, mb4.3/11, ML4.3(TAP), Error ellipse: s-maj=8.1km s-min=5.6km az=148.0*
*TAP **12** 15:47:22.7, 23°.37N×121°.34E, h12km, ML4.6, B*
*BJI **12** 15:47:22.7±0.0, 23°.23N×121°.45E, h29km, mB4.5/6, mb3.9/12, ML4.0/5, Ms4.3/8, Ms7 4.1/8*
*ASIES **12** 15:47:23.6, 23°.39N×121°.34E, h20km, MW4.0*

ISC 12 15:47:22.1±0.6, 23°.36N±0°.01×121°.39E±0°.02, h15km±3km, n206, σ1s.15/304, mb4.0/23, 9C-38D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBN	Changbin baz=119	0.07	126	P	Pg	15 47 26.6	+1.5
ECBN	baz=119			*e*S	Sg	15 47 29.7	+2.7
EYUL	Yuli baz=218	0.07	263	⇑*i*P	Pg	15 47 25.0	0.0
EYUL	baz=218			*i* S	Sg	15 47 27.0	0.0
TWF1	Yuli baz=237	0.09	268	⇑*i*P	Pg	15 47 25.1	-0.2
TWF1	baz=237			S	Sg	15 47 26.9	-0.4
YULB	Yu-li baz=297	0.10	293	⇓*i*P	Pg	15 47 25.2	-0.2
YULB	baz=297			*i* S	Sg	15 47 27.0	-0.4
YULB	Yu-li	0.10	293		Pg	15 47 24.0	-1.3
HGSD	Ruisui baz=33	0.14	12	⇑*i*P	Pb	15 47 26.7	+0.2
HGSD	baz=33			*e*S	Sg	15 47 29.5	+1.1
EHY	Hungye baz=355	0.16	337	⇓*i*P	Pg	15 47 26.3	0.0
EHY	baz=355			*i* S	Sg	15 47 28.8	-0.2
FULB	Fuli baz=194	0.18	210	⇓*i*P	Pb	15 47 27.8	+0.6
FULB	baz=194			*e*S	Sb	15 47 32.2	+1.7
CHKT	Chengkung baz=174	0.26	186	⇑*i*P	Pb	15 47 29.3	+0.8
CHKT	baz=174			*e*S	Sb	15 47 34.6	+1.9
ECS	Chishang baz=202	0.30	212	⇓P	Pb	15 47 29.1	-0.2
ECS	baz=202			*e*S	Sb	15 47 35.2	+1.1
EGFH	Guangfu baz=15	0.31	6	⇓*i*P	Pg	15 47 29.2	+0.5
EGFH	baz=15			*e*S	Sg	15 47 33.9	+0.8
TEGC	Jichi Village baz=30	0.38	21	*e*P	Pb	15 47 31.5	+0.9
ELDTW	Lidau baz=238	0.38	244	⇓*i*P	Pg	15 47 29.7	-0.2
ELDTW	baz=238			*e*S	Sg	15 47 34.9	-0.3
EDH	Donghe baz=185	0.39	192	*i* P	Pb	15 47 31.0	+0.3
EDH	baz=185			*e*S	Sb	15 47 37.7	+1.1
YUS	Yu-Shan baz=288	0.43	288	⇓*i*P	Pg	15 47 30.9	0.0
YUS	baz=288			S	Sg	15 47 36.5	-0.3
ESL	Shilin baz=12	0.46	5	⇓*i*P	Pg	15 47 31.2	-0.1
ESL	baz=12			*e*S	Sg	15 47 37.5	0.0
VWDT	VWDT baz=334	0.46	330	⇓*i*P	Pg	15 47 31.6	+0.3
VWDT	baz=334			*e*S	Sg	15 47 37.5	0.0
LONT	Longtian baz=203	0.51	208	*e*P	Pg	15 47 31.9	-0.3
LONT	baz=203			*e*S	Sn	15 47 41.6	-1.8
TEYL	Yanliau Villag baz=24	0.54	20	*e*P	Pb	15 47 33.9	+0.4
ALS	Alishan baz=286	0.56	286	⇓*i*P	Pg	15 47 33.5	+0.2
ALS	baz=286			*e*S	Sg	15 47 41.4	+0.6
SSLB	Suanglung baz=319	0.59	317	⇓*i*P	Pg	15 47 33.5	-0.2
SSLB	baz=319			*e*S	Sg	15 47 40.9	-0.7
SSLB	Suanglung	0.59	317		Pg	15 47 32.5	-1.2
SSLB	Suanglung	0.59	317	P	Pg	15 47 33.7	0.0
STYH	Taoyuan baz=249	0.60	252	⇓*i*P	Pg	15 47 33.8	0.0
STYH	baz=249			*e*S	Sg	15 47 41.3	-0.5
TWG	Pinlang baz=203	0.61	209	P	Pg	15 47 33.2	-0.9
TWG	baz=203			*e*S	Sb	15 47 43.5	+0.6
TWG	Pinlang	0.61	209		Pg	15 47 33.2	-0.9
TWGBT	Beinan baz=203	0.61	208	*e*P	Pg	15 47 33.1	-0.9
TWGBT	baz=203			*e*S	Sb	15 47 43.5	+0.6
ETM	Tongmen baz=13	0.61	9	*e*P	Pg	15 47 33.7	-0.5
ETM	baz=13			*e*S	Sg	15 47 43.0	+0.6
STYT	Tauyuan baz=248	0.61	252	⇓*i*P	Pg	15 47 34.2	0.0
STYT	baz=248			*e*S	Sg	15 47 42.2	-0.2
OWD	Renai baz=345	0.63	342	⇓*i*P	Pg	15 47 34.4	-0.2
OWD	baz=345			S	Sg	15 47 42.2	-0.7
TTN	Taitung baz=195	0.64	201	*e*P	Pb	15 47 35.5	+0.4
HWA	Hwalien baz=23	0.65	17	*e*P	Pb	15 47 36.0	+0.8
LDUT	Ludao baz=170	0.68	174	⇑*i*P	Pb	15 47 35.7	0.0
LDUT	baz=170			*e*S	Sn	15 47 46.8	-0.9
SMLT	Sun Moon Lake baz=322	0.69	319	⇓*i*P	Pg	15 47 35.6	-0.1
SMLT	baz=322			*e*S	Sg	15 47 44.6	-0.3
CHN5	Tsauling baz=290	0.70	290	⇓P	Pb	15 47 36.4	+0.3
CHN5	baz=290			*e*S	Sb	15 47 45.8	+0.2
TPUB	Ta-pu baz=264	0.70	266	⇓P	Pg	15 47 36.2	+0.3
TPUB	baz=264			*e*S	Sb	15 47 45.8	+0.1
TPUB	Ta-pu	0.70	266		Pb	15 47 35.4	-0.7
TPUB	Ta-pu	0.70	266	P	Pg	15 47 36.5	+0.6
WTP	Ta-pu baz=259	0.72	261	⇓P	Pg	15 47 36.6	+0.3
WTP	baz=259			*e*S	Sb	15 47 46.5	+0.2
CHGB	Renai baz=347	0.73	344	⇓*i*P	Pg	15 47 36.3	-0.1
CHN4	Tsaushan baz=268	0.73	270	⇓P	Pb	15 47 35.3	-1.4
CHN4	baz=268			*e*S	Sb	15 47 45.8	-0.8
TYC	Yuchr baz=321	0.73	318	⇓*i*P	Pb	15 47 36.3	-0.3
TYC	baz=321			*e*S	Sb	15 47 45.9	-0.6
TWD	Chiawan baz=19	0.74	14	*e*P	Pb	15 47 35.8	-1.0
TWD	baz=19			*e*S	Sb	15 47 46.8	-0.1
WJS	Zhushan baz=309	0.77	307	⇓P	Pn	15 47 38.0	-0.4
WJS	baz=309			*e*S	Sn	15 47 49.3	-0.5
WPL	Puli Township baz=331	0.77	329	⇓P	Pb	15 47 36.9	-0.3
WPL	baz=331			*e*S	Sb	15 47 46.2	-1.2
SLGT	Liugui baz=239	0.78	242	⇓*i*P	Pb	15 47 37.3	0.0
SLGT	baz=239			*e*S	Sg	15 47 47.7	+0.3
SGST	Jiashian baz=247	0.79	250	⇓P	Pb	15 47 37.0	-0.7
SGST	baz=247			*e*S	Sb	15 47 48.0	-0.2
WHF	Hehuan Shan baz=355	0.80	352	*e*P	Pb	15 47 37.2	-0.8
WHF	baz=355			*e*S	Sb	15 47 48.1	-0.6
DPDB	Guoxing baz=330	0.80	328	⇓P	Pb	15 47 37.7	-0.1
DPDB	baz=330			*e*S	Sb	15 47 47.9	-0.5
CHN1	Nanshi baz=256	0.81	258	⇓*e*P	Pg	15 47 38.5	+0.6
CHN1	baz=256			*e*S	Sn	15 47 50.0	-0.9
WCS	Beigang Elemen baz=330	0.83	328	⇓P	Pb	15 47 38.1	-0.1
WCS	baz=330			*e*S	Sb	15 47 48.6	-0.5
ETL	Fush Village baz=18	0.83	15	*e*P	Pb	15 47 37.6	-0.6
WGK	Gukeng baz=294	0.83	294	⇓*e*P	Pn	15 47 39.2	-0.1
WGK	baz=294			*e*S	Sn	15 47 51.5	+0.2
WNT	Mingjian baz=310	0.83	309	⇓P	Pn	15 47 39.4	+0.1
WNT	baz=310			*e*S	Sn	15 47 51.7	+0.3
SNST	Tainan City baz=259	0.83	261	⇓*e*P	Pg	15 47 38.8	+0.5
SNST	baz=259			*e*S	Sn	15 47 50.5	-0.9
NACB	Ninganchiao baz=16	0.83	13	*e*P	Pb	15 47 36.9	-1.5
NACB	baz=16			*e*S	Sb	15 47 49.9	+0.4
NACB	Ninganchiao	0.83	13		Pb	15 47 36.9	-1.5
TWK	Hsinying baz=262	0.84	264	⇓*e*P	Pg	15 47 38.7	+0.3
TWK	baz=262			*e*S	Sn	15 47 50.5	-1.0
ETLH	Xiulin Townshi baz=9.0	0.85	6	*e*P	Pb	15 47 37.2	-1.5
ETLH	baz=9.0			*e*S	Sg	15 47 50.9	+0.9
WDLH	Douliu baz=293	0.85	293	⇓*e*P	Pn	15 47 39.6	0.0
WDLH	baz=293			*e*S	Sn	15 47 52.2	+0.4
WNT1	Nantou City baz=311	0.85	310	*e*P	Pn	15 47 39.9	+0.3
WNT1	baz=311			*e*S	Sn	15 47 52.9	+1.0
ECL	Taimali baz=204	0.86	208	*e*P	Pb	15 47 37.2	-1.5
ECL	baz=204			*e*S	Sg	15 47 50.7	+0.7
CHN2	Minshiung baz=281	0.86	282	⇓*e*P	Pn	15 47 39.9	+0.2
CHN2	baz=281			*e*S	Sn	15 47 52.7	+0.7
FUSS	Fushou baz=354	0.90	351	*e*P	Pb	15 47 39.1	-0.5
FUSS	baz=354			*e*S	Sb	15 47 50.2	-1.3
CHY	Chiayi baz=278	0.90	279	⇓*e*P	Pn	15 47 40.2	-0.1
CHY	baz=278			*e*S	Sn	15 47 53.3	+0.3
TWT	Tachien baz=349	0.92	348	⇓P	Pb	15 47 39.7	-0.2
TWT	baz=349			*e*S	Sb	15 47 51.0	-0.9
TDCB	Techi baz=349	0.92	347	*e*P	Pb	15 47 39.6	-0.2
TDCB	baz=349			*e*S	Sb	15 47 50.6	-1.4
SSD	Sandimen baz=226	0.93	229	*e*P	Pb	15 47 38.9	-1.1
SSD	baz=226			*e*S	Sn	15 47 53.1	-0.6
WWF	Wufeng baz=319	0.93	317	*e*P	Pn	15 47 41.4	+0.6
WWF	baz=319			*e*S	Sn	15 47 54.6	+0.7
TSMG	Majia baz=224	0.94	227	*e*P	Pb	15 47 39.7	-0.5
TSMG	baz=224			*e*S	Sb	15 47 51.9	-0.7
WYL	Yuanlin Townsh baz=310	0.96	309	*e*P	Pn	15 47 41.4	+0.3
WYL	baz=310			*e*S	Sn	15 47 54.7	+0.2
WTK	Tuku baz=290	0.98	290	*e*P	Pn	15 47 41.2	-0.1
WTK	baz=290			*e*S	Sn	15 47 55.0	0.0
CHN3	Shinhua baz=252	0.98	254	⇓*e*P	Pg	15 47 42.6	+1.4
CHN3	baz=252			*e*S	Sn	15 47 57.9	+2.8
WHP	Taichung City baz=338	1.00	336	*e*P	Pb	15 47 41.3	0.0
WHP	baz=338			*e*S	Sb	15 47 54.3	-0.1
MASBT	Mashibuluo baz=221	1.02	224	*e*P	Pb	15 47 40.5	-1.0
ICHU	Yijhu baz=269	1.02	271	⇓*e*P	Pg	15 47 42.1	+0.2
ICHU	baz=269			*e*S	Sn	15 47 56.4	+0.3
TCU	Taichung baz=322	1.03	320	*e*P	Pg	15 47 42.8	+0.8
TCU	baz=322			*e*S	Sn	15 47 57.4	+1.3
TWM1	Shoushan baz=237	1.04	240	*e*P	Pg	15 47 43.3	+1.1
TWM1	baz=237			*e*S	Sn	15 47 58.9	+2.5
SSHA	Shanhua baz=256	1.04	258	*e*P	Pg	15 47 43.5	+1.3
SSHA	baz=256			*e*S	Sn	15 48 00.3	+3.9
SGLT	Jiouru baz=230	1.04	233	*e*P	Pg	15 47 43.7	+1.4
WCHH	Zhanghua baz=314	1.05	313	*e*P	Pg	15 47 42.8	+0.4
WCHH	baz=314			*e*S	Sg	15 47 57.6	+1.4
TSPT	Pingtung City baz=228	1.07	231	*e*P	Pg	15 47 43.9	+1.1
WRL	Guolierlin Hig baz=301	1.08	300	*e*P	Pn	15 47 42.8	+0.1
WRL	baz=301			*e*S	Sg	15 47 57.9	+0.9
NNS	Nan Shan baz=2.0	1.08	359	⇑*e*P	Pb	15 47 41.8	-0.9
NNS	baz=2.0			*e*S	Sn	15 47 57.5	-0.2
CHN8	Yiju baz=269	1.09	270	*e*P	Pg	15 47 43.0	-0.1
CHN8	baz=269			*e*S	Sg	15 47 59.3	+2.0
EAST	Anshuo baz=204	1.09	208	*e*P	Pb	15 47 40.6	-2.1
TAW	Tawu baz=202	1.09	205	*e*P	Pn	15 47 42.9	-0.1
WSF	Szhu baz=284	1.11	285	*e*P	Pg	15 47 43.5	-0.1
WSF	baz=284			*e*S	Sg	15 47 59.2	+1.1
ENA	Nanau baz=20	1.11	17	*e*P	Pn	15 47 41.7	-1.5
SCLT	Jiali baz=259	1.12	261	*e*P	Pg	15 47 44.1	+0.4
SCLT	baz=259			*e*S	Sg	15 48 01.2	+2.9
TAI1	Yung-k'ang baz=252	1.12	254	*e*P	Pg	15 47 44.5	+0.8
WTCT	Ta-ch'eng baz=297	1.14	297	*e*P	Pg	15 47 44.3	+0.2
TWQ1	Liyutan baz=332	1.14	330	*e*P	Pg	15 47 44.7	+0.6
TWQ1	baz=332			*e*S	Sg	15 48 01.5	+2.5
EWUT	Wuta baz=21	1.14	18	*e*P	Pn	15 47 42.0	-1.6
EWUT	baz=21			*e*S	Sg	15 47 59.9	+0.8
SSPT	Xinbi baz=219	1.15	221	*e*P	Pb	15 47 43.8	0.0
NSY	Sanyi baz=333	1.20	331	*e*P	Pg	15 47 46.1	+0.8
NSY	baz=333			*e*S	Sg	15 48 03.0	+1.9
WDJ	Dajia District baz=327	1.20	325	*e*P	Pg	15 47 45.9	+0.5
WDJ	baz=327			*e*S	Sg	15 48 02.2	+1.1
SCZT	Fangliau baz=213	1.21	216	*e*P	Pn	15 47 43.9	-0.7
SCZT	baz=213			*e*S	Sg	15 48 03.1	+1.9
NDT	Datong Townshi baz=7.0	1.25	5	*e*P	Pn	15 47 43.9	-1.2
NDT	baz=7.0			*e*S	Sn	15 48 02.3	+0.6
SLIU	Shizi baz=203	1.26	206	*e*P	Pn	15 47 43.6	-1.7
KAU	Kaohsiung baz=230	1.27	232	*e*P	Pg	15 47 48.8	+2.2
ENTT	Nioudou baz=10.0	1.29	7	*e*P	Pn	15 47 44.6	-1.1
NMLH	Miaoli baz=337	1.30	335	*e*P	Pg	15 47 47.3	+0.1
NMLH	baz=337			*e*S	Sg	15 48 05.7	+1.6
NDS	Dongshan baz=15	1.31	13	*e*P	Pn	15 47 45.5	-0.4
NDS	baz=15			*e*S	Sg	15 48 04.2	-0.2
YHNB	Yeheng	1.31	359		Pn	15 47 45.5	-0.4
YHNB	Yeheng	1.31	359	P	Pg	15 47 47.5	+0.1
NSK	Sanguang baz=1.0	1.31	359	*e*P	Pn	15 47 45.9	-0.2
NSK	baz=1.0			*e*S	Sb	15 48 03.9	+0.6
TWC	Suao baz=21	1.32	18	*e*P	Pn	15 47 45.5	-0.6
TWC	baz=21			*e*S	Sg	15 48 04.9	+0.2
LAY	Lan-yu baz=171	1.32	174	*e*P	Pn	15 47 44.6	-1.4
LAY	baz=171			*e*S	Sn	15 48 01.8	-1.6
NSTT	Nanjuang baz=346	1.32	344	⇑*e*P	Pb	15 47 47.2	+0.6
NSTT	baz=346			*e*S	Sn	15 48 03.3	-0.1
LIOB	Emei baz=347	1.33	345	*e*P	Pb	15 47 47.5	+0.7
LIOB	baz=347			*e*S	Sn	15 48 03.2	-0.5
WLCH	Liuqiu baz=221	1.37	223	*e*P	Pg	15 47 49.9	+1.4
TWE	Neicheng baz=13	1.38	10	*e*P	Pn	15 47 46.9	0.0
TWE	baz=13			*e*S	Sg	15 48 08.0	+1.2
TWP	Hsiaoliuchiu baz=221	1.38	224	*e*P	Pg	15 47 49.9	+1.1
NWLT	Wulai baz=6.0	1.42	4	*e*P	Pn	15 47 47.6	+0.1
NWLT	baz=6.0			*e*S	Sb	15 48 06.6	+0.3
ILA	Ilan baz=15	1.44	13	*e*P	Pg	15 47 50.4	+0.5
HEN	Hengchun baz=202	1.47	204	*e*P	Pg	15 47 49.9	-0.6
SBCB	Hsinchu baz=347	1.48	346	*e*P	Pg	15 47 51.2	+0.7
HSN	Hsinchu baz=348	1.49	345	*e*P	Pg	15 47 51.1	+0.3
TWK1	Hengchun baz=199	1.51	201	*e*P	Pn	15 47 48.6	0.0
TWKBT	Hengchun baz=199	1.51	201	*e*P	Pb	15 47 49.3	-0.5
TSEB	Hengchuen, Pin baz=197	1.52	198	*e*P	Pn	15 47 48.9	+0.1
NTC	Toucheng baz=17	1.54	15	*e*P	Pb	15 47 50.4	-0.1
WDGT	Dungji baz=266	1.59	267	*e*P	Pn	15 47 50.1	+0.3
NHDH	Xindian Distri baz=6.0	1.60	4	*e*P	Pn	15 47 50.9	+0.9
TATO	Taipei	1.61	3		Pn	15 47 50.6	+0.5
TATO	Taipei	1.61	3	Pn	Pn	15 47 50.3	+0.1
NCUH	Zhongli baz=355	1.62	353	*e*P	Pg	15 47 53.0	-0.2
TWA	Mucha baz=8.0	1.63	6	*e*P	Pn	15 47 47.3	-3.0
TIPB	Shuangxi baz=16	1.66	14	*e*P	Pn	15 47 50.5	-0.2
PHUB	P'eng-hu baz=275	1.68	276	*e*P	Pn	15 47 51.0	+0.1
PHUB	baz=275			*e*S	Sn	15 48 11.2	-1.0
PNG	Penghu baz=277	1.70	277	*e*P	Pn	15 47 51.6	+0.4
PNG	baz=277			*e*S	Sn	15 48 13.1	+0.4
TWB1	Santiao Chiao baz=20	1.73	18	*e*P	Pb	15 47 53.2	-0.4
TWS1	Kuangyinshan baz=3.0	1.74	1	*e*P	Pb	15 47 54.8	+1.0
NWF	Wu-fen Shan baz=13	1.74	12	*e*P	Pb	15 47 53.6	-0.3
WFSB	Wu-fen Shan baz=13	1.74	12	*e*P	Pb	15 47 53.2	-0.7
JYNG	Yonagunijimaku	1.79	52	P	Pn	15 47 53.0	+0.5
JYNG				*e*S	Sn	15 48 15.9	+0.9
VCHM	Qimei baz=265	1.81	266	*e*P	Pn	15 47 53.3	+0.5
YOJ	Yonaguni jima baz=54	1.85	53	⇑P	Pn	15 47 54.0	+0.7
YOJ	baz=54			*e*S	Sb	15 48 18.1	-0.5
YOJ	Yonaguni jima	1.85	53	P	Pn	15 47 54.0	+0.7
YOJ				S	Sb	15 48 17.7	-0.8
YOJ	Yonaguni jima	1.85	53		Pn	15 47 53.8	+0.5
YOJ	Yonaguni jima	1.85	53	P	Pn	15 47 54.3	+1.0
HATJ	Hateruma jima	2.32	72	P	Pn	15 48 00.0	+0.2
HATJ				S	Sn	15 48 28.4	+0.3
IRIF	Iriomote-Funau	2.35	65	P	Pn	15 48 00.5	+0.3
JKRS	Kuro-shima	2.55	69	P	Pn	15 48 03.7	+0.7
JKRS				*e*S	Sn	15 48 34.8	+1.0
PTMZ	Houxiangcun baz=309	2.67	309	*e*P	Pn	15 48 05.3	+0.7
JIJ	Ishigaki jima	2.71	68	P	Pn	15 48 05.0	-0.2
JIJ				*e*S	Sn	15 48 38.3	+0.6
KNM	Kinmen baz=290	2.91	292	*e*P	Pn	15 48 09.6	+1.7
JISG	Ishigakijimahi	2.94	65	P	Pn	15 48 08.2	-0.1
JISG				*e*S	Sn	15 48 43.6	+0.3
KNMB	Chin-men Tao baz=292	2.96	292	*e*P	Pn	15 48 08.5	-0.1
KNMB	Chin-men Tao	2.96	292		Pn	15 48 08.3	-0.3
QZH	Quanzhou	3.01	302	Pn	Pn	15 48 09.3	0.0
QZH				Sn	Sn	15 48 45.3	+0.3
QZH	comp=N,540nm,0.6s			smax	smax		
QZH	comp=E,470nm,0.8s			smax	smax		
QZH	comp=Z,1μm,10.4s			LR	LR		
JTJ	Tarama	3.29	66	P	Pn	15 48 13.7	+0.6
JTJ				*e*S	Sn	15 48 52.9	+1.0
MHZQ	Yeshan baz=322	3.48	322	*e*P	Pn	15 48 16.6	+0.9
AXDP	Jialang baz=296	3.48	297	*e*P	Pn	15 48 16.0	+0.2
LYJJ	Jianjiangzhen baz=336	3.51	335	*e*P	Pn	15 48 16.8	+0.7
JIRB	Irabujima	3.75	66	P	Pn	15 48 19.8	+0.3
JIRB				*e*S	Sn	15 49 04.3	+0.8
JMJ	Miyako jima 2 baz=68	3.85	67	*e*P	Pn	15 48 21.9	+1.1
JMJ	Miyako jima 2	3.85	67	P	Pn	15 48 22.3	+1.4
JIKM	Ikemajima	3.85	65	P	Pn	15 48 21.6	+0.7
JIKM				*e*S	Sn	15 49 06.6	+0.7
JMJ2	Miyako jima3	3.85	68	P	Pn	15 48 21.6	+0.7
JMJ2				*e*S	Sn	15 49 07.2	+1.3
JOGS	Gusukube	3.93	68	P	Pn	15 48 22.7	+0.8
JOGS				*e*S	Sn	15 49 09.0	+1.2
JOW	Kunigami 5.4nm,0.3s,baz=140,slow=18,SNR=16	7.13	60	Pn	Pn	15 49 04.7	-1.3
JOW	Kunigami	7.13	60	P	Pn	15 49 05.9	-0.1
WHN	Wuhan	9.52	320	⇑P	Pn	15 49 42.1	+3.4
WHN				S	Sn	15 51 21.4	-4.1
WHN				LR	LR		

	comp=N,1µm,5.8s						
WHN				LR	LR		
	comp=E,2µm,13.0s						
WHN				LR	LR		
	comp=Z,2µm,10.7s						
KSRS	**Korea Array**	**15.13**	**20**	Pn	**Pn**	**15 50 57.5**	**+2.2**
	0.6nm,0.3s,baz=198,slow=11,SNR=20						
KS19	**Wonju Array Si**	**15.16**	**20**	Pn	**Pn**	**15 50 53.5**	**-2.2**
KS19				IAmb	IAmb	15 51 03.3	
	comp=Z,13nm,1.0s						
XAN	**Xi'an**	**15.25**	**317**	P	**P**	**15 51 03.1**	**+1.2**
XAN				pP	sP	15 51 10.4	+1.9
XAN				S	**Sn**	**15 53 53.3**	**+7.5**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
XAN				LR	LR		
	comp=Z,360nm,9.9s						
XAN				LR	LR		
	comp=Z,490nm,10.4s						
XAN				LR	LR		
	comp=Z,930nm,12.2s						
GTA	**Gaotai**	**24.31**	**316**	*e*P	**P**	**15 52 43.6**	**+4.3**
GTA				pP	sP	15 52 48.2	+2.3
GTA				sP	pP	15 52 51.3	+7.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KLR	**Kul'dur**	**27.09**	**15**	P	**P**	**15 53 05.5**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=238,slow=9.0,SNR=5.9						
SONM	**Songino Array**	**27.20**	**338**	P	**P**	**15 53 05.4**	**0.0**
	comp=Z,0.4nm,0.4s,baz=325,slow=45,SNR=3.7						
SONM	**Songino Array**	**27.20**	**338**	P	**P**	**15 53 03.6**	**-1.8**
WMQ	**Urumqi**	**34.37**	**315**	*e*P	**P**	**15 54 10.3**	**+1.7**
MKAR	**Makanchi Array**	**39.06**	**317**	P	**P**	**15 54 48.6**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=107,slow=10,SNR=7.8						
KNRA	**Kununurra**	**39.46**	**169**	P	**P**	**15 54 49.4**	**-2.5**
ZALV	**Zalesovo Beam**	**41.04**	**328**	P	**P**	**15 55 04.5**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=111,slow=8.1,SNR=4.0						
H11N1	**WAKE ISLAND Hy**	**42.35**	**86**	T	T	16 40 20.6	
	baz=283,slow=74,SNR=31						
H11N2	**WAKE ISLAND Hy**	**42.35**	**86**	T	T	16 40 23.7	
	baz=283,slow=74,SNR=46						
H11N3	**WAKE ISLAND Hy**	**42.37**	**86**	T	T	16 40 23.0	
	baz=283,slow=74,SNR=46						
H11S3	**WAKE ISLAND Hy**	**42.45**	**88**	T	T	16 40 31.5	
	baz=284,slow=75,SNR=93						
H11S1	**WAKE ISLAND Hy**	**42.46**	**88**	T	T	16 40 32.1	
	baz=284,slow=75,SNR=41						
H11S2	**WAKE ISLAND Hy**	**42.47**	**88**	T	T	16 40 34.3	
	baz=284,slow=75,SNR=43						
COEN	**Coen**	**42.77**	**148**	P	**P**	**15 55 18.8**	**-0.6**
COEN				IAmb	IAmb	15 55 23.1	
	comp=Z,10nm,1.1s						
KURBB	**Kurchatov Arra**	**42.86**	**320**	P	**P**	**15 55 19.6**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=154,slow=8.0,SNR=4.6						
WB0	**Warramunga Arr**	**44.70**	**162**	P	**P**	**15 55 32.4**	**-2.4**
WB0				IAmb	IAmb	15 55 49.2	
	comp=Z,9.1nm,1.5s						
WRAB	**Tennant Creek**	**44.84**	**163**	P	**P**	**15 55 34.4**	**-1.5**
WRAB				IAmb	IAmb	15 55 37.6	
	comp=Z,2.5nm,0.9s						
WRA	**Warramunga Arr**	**44.85**	**163**	P	**P**	**15 55 34.0**	**-1.9**
	comp=Z,1.0nm,0.6s,baz=345,slow=8.7,SNR=12						
WRA	**Warramunga Arr**	**44.85**	**163**	P	**P**	**15 55 34.1**	**-1.9**
WB2	**Warramunga Arr**	**44.85**	**163**	P	**P**	**15 55 34.5**	**-1.6**
WB2				IAmb	IAmb	15 55 49.7	
	comp=Z,4.7nm,1.1s						
WR0	**Warramunga Arr**	**44.92**	**162**	P	**P**	**15 55 34.9**	**-1.7**
WR0				IAmb	IAmb	15 55 55.8	
	comp=Z,7.0nm,1.2s						
ASAR	**Alice Springs**	**48.30**	**165**	P	**P**	**15 56 01.1**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=340,slow=6.8,SNR=11						
ASAR				PcP	**PcP**	**15 57 28.6**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=342,slow=3.0,SNR=7.4						
ASAR	**Alice Springs**	**48.30**	**165**	P	**P**	**15 55 59.9**	**-3.1**
BVAR	**Borovoye Array**	**48.43**	**321**	P	**P**	**15 56 04.8**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=132,slow=2.2,SNR=3.7						
CTA	**Charters Tower**	**49.52**	**149**	P	**P**	**15 56 12.0**	**-0.5**
	comp=Z,1.8nm,0.2s,baz=39,slow=3.4,SNR=3.1						
ABKAR	**Akbulak array**	**54.16**	**315**	P	**P**	**15 56 45.4**	**-1.3**
ARU	**Arti**	**55.88**	**323**	P	**P**	**15 56 58.7**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=33,slow=1.9,SNR=3.8						
ATKA	**Atka Island**	**56.29**	**42**	P	**P**	**15 57 00.9**	**-1.1**
STKA	**Stephens Creek**	**58.22**	**160**	P	**P**	**15 57 14.3**	**-1.5**
	comp=Z,2.7nm,0.7s,baz=353,slow=6.3,SNR=5.1						
STKA	**Stephens Creek**	**58.22**	**160**	P	**P**	**15 57 14.2**	**-1.7**
STKA				IAmb	IAmb	15 57 20.4	
	comp=Z,0.7nm,0.8s						
ILAR	**Eielson Array**	**69.86**	**27**	P	**P**	**15 58 32.9**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=294,slow=7.5,SNR=5.2						
FINES	**FINESS Array B**	**72.25**	**330**	P	**P**	**15 58 45.3**	**-1.3**
	comp=Z,2.0nm,0.7s,baz=35,slow=7.0,SNR=8.7						
BRTR	**Keskin Array B**	**73.82**	**307**	P	**P**	**15 58 56.1**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=334,slow=11,SNR=2.0						
HFS	**Hagfors**	**78.38**	**331**	P	**P**	**15 59 21.6**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=115,slow=5.6,SNR=7.8						
NB2	**NORSAR Subarra**	**79.04**	**332**	P	**P**	**15 59 24.2**	**-1.4**
	comp=Z,1.9nm,0.9s,baz=62,slow=5.6						
NOA	**NORSAR Array B**	**79.04**	**332**	P	**P**	**15 59 24.6**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=60,slow=5.3,SNR=6.1						
GERES	**GERESS Array B**	**83.60**	**321**	P	**P**	**15 59 49.7**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=71,slow=5.8,SNR=9.7						

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*TEH **12** 15:48:24.9, 37°.93N×43°.55E, h6^{km}, ML4.0*
*ISK **12** 15:48:24.5, 37°.89N×43°.54E, h3^{km}, ML4.0/17*
*DDA **12** 15:48:25.4, 37°.88N×43°.52E, h10^{km}±4^{km}, MW4.1*
*ISN **12** 15:48:26.5±0.4, 37°.86N×43°.34E, h18^{km}±2^{km}, ML3.9*
*IDC **12** 15:48:27.4±1.3, 38°.07N×43°.38E, h0^{km}, mb3.7/6, mb1 3.6/16, mb1mx3.5/57, mbtmp3.6/16, ML3.2/8, MS3.0/4, Ms1 3.0/4, ms1mx2.6/42, Error ellipse: s-maj=22.7km s-min=12.2km az=140.0*
ISC 12 15:48:26.1±1.1, **37°.90N**±0°.02×**43°.53E**±0°.02, **h3**^{km}±8^{km}, **n96**, σ**1^{s}32**/121, **mb3.7**/6, **5C-9D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAKT	**HAKKARI**	**0.37**	**158**	⇓*i*P	**Pg**	**15 48 32.5**	**-0.7**
HAKT				*i* S	**Sg**	**15 48 39.3**	**+1.3**
HAKT				IAML		15 48 40.0	
	comp=N,13µm,0.3s						
HAKT				IAML		15 48 41.0	
	comp=E,20µm,0.5s						
HAKT	**HAKKARI**	**0.37**	**158**	*e*Pg	**Pg**	**15 48 32.5**	**-0.7**
TVAN	**Van**	**0.64**	**351**	⇓*i*P	**Pg**	**15 48 37.5**	**-0.8**
TVAN				*i* S	**Sb**	**15 48 48.5**	**-0.9**
TVAN				IAML		15 48 52.0	
	comp=N,7µm,0.6s						
TVAN				IAML		15 48 52.0	
	comp=E,6µm,0.5s						
TVAN	**Van**	**0.64**	**351**	*e*Pg	**Pg**	**15 48 37.5**	**-0.8**
CUKT	**Cukurca**	**0.65**	**175**	PG	**Pg**	**15 48 37.9**	**-0.7**
CUKT				SG	**Sg**	**15 48 47.2**	**+0.1**
CUKT	**Cukurca**	**0.65**	**175**	*e*Pg	**Pg**	**15 48 37.3**	**-1.3**
YOVA	**Hakkari_Yksek**	**0.68**	**117**	⇑*i*P	**Pg**	**15 48 38.1**	**-1.1**
YOVA				*i* S	**Sg**	**15 48 48.3**	**+0.4**
YOVA				IAML		15 48 52.0	
	comp=N,2µm,0.4s						
YOVA				IAML		15 48 55.0	
	comp=E,3µm,0.7s						
YOVA	**Hakkari_Yksek**	**0.68**	**117**	*e*Pg	**Pg**	**15 48 38.0**	**-1.1**
VANB	**Van**	**0.70**	**351**	PG	**Pg**	**15 48 37.4**	**-2.2**
VANB	**Van**	**0.70**	**351**	*e*Pg	**Pg**	**15 48 37.3**	**-2.3**
PERV	**Siirt/Pervari-**	**0.78**	**274**	⇓*i*P	**Pg**	**15 48 40.7**	**-0.5**
PERV				*i* S	**Sb**	**15 48 53.3**	**-0.3**
PERV				IAML		15 48 56.0	
	comp=N,8µm,0.4s						
PERV				IAML		15 48 58.0	
	comp=E,6µm,0.8s						
OZAP	**Van, Ozalp-Mer**	**0.84**	**25**	⇓*i*P	**Pg**	**15 48 40.8**	**-1.5**
OZAP				*i* S	**Sb**	**15 48 54.5**	**-0.9**
OZAP				IAML		15 49 05.0	
	comp=N,2µm,0.8s						
OZAP				IAML		15 49 08.0	
	comp=E,2µm,0.8s						
SIRT	**Sirnak**	**0.95**	**246**	PG	**Pg**	**15 48 43.4**	**-0.9**
SIRT				SG	**Sg**	**15 48 57.6**	**+0.9**
SIRT	**Sirnak**	**0.95**	**246**	*e*Pg	**Pg**	**15 48 43.1**	**-1.2**
SIRN	**Sırnak**	**0.97**	**246**	⇑*i*P	**Pg**	**15 48 43.3**	**-1.5**
SIRN				*i* S	**Sg**	**15 48 57.7**	**+0.4**
SIRN				IAML		15 49 02.0	
	comp=E,4µm,0.8s						
SIRN				IAML		15 49 05.0	
	comp=N,5µm,0.6s						
SIRN	**Sırnak**	**0.97**	**246**	*e*Pg	**Pg**	**15 48 43.9**	**-0.9**
VMUR	**Van-Muradiye**	**1.09**	**2**	⇓*i*P	**Pg**	**15 48 46.3**	**-0.7**
VMUR				*i* S	**Sn**	**15 49 05.0**	**+0.8**
ADCV	**BITLIS_Adilcev**	**1.11**	**325**	⇓*i*P	**Pg**	**15 48 46.0**	**-1.3**
ADCV				*i* S	**Sg**	**15 49 01.7**	**0.0**
ADCV				IAML		15 49 05.0	
	comp=N,2µm,0.8s						
ADCV				IAML		15 49 07.0	
	comp=E,945nm,0.5s						
ADCV	**BITLIS_Adilcev**	**1.11**	**325**	*e*Pg	**Pg**	**15 48 46.2**	**-1.1**
BLIS	**Bitlis-Merkez**	**1.23**	**295**	⇑*i*P	**Pg**	**15 48 47.9**	**-1.7**
BLIS				*i* S	**Sg**	**15 49 05.3**	**-0.3**
BLIS				IAML		15 49 13.0	
	comp=E,1µm,0.4s						
BLIS				IAML		15 49 14.0	
	comp=N,1µm,0.8s						
BLIS	**Bitlis-Merkez**	**1.23**	**295**	*e*Pg	**Pg**	**15 48 48.0**	**-1.7**
CLDR	**Caldiran**	**1.28**	**14**	PN	**Pg**	**15 48 49.5**	**-1.1**
CLDR				SN	**Sn**	**15 49 08.2**	**-0.7**
CLDR	**Caldiran**	**1.28**	**14**	*e*Pn	**Pg**	**15 48 49.1**	**-1.5**
GURO	**Guroymak-BITLI**	**1.35**	**299**	PN	**Pn**	**15 48 50.3**	**-1.7**
GURO	**Guroymak-BITLI**	**1.35**	**299**	*e*Pn	**Pn**	**15 48 49.9**	**-2.1**
MLAZ	**Malazgirt-MUS**	**1.46**	**328**	PN	**Pn**	**15 48 52.7**	**-0.8**
MLAZ	**Malazgirt-MUS**	**1.46**	**328**	*e*Pn	**Pn**	**15 48 52.6**	**-0.9**
DYDN	**Diyadin**	**1.65**	**4**	⇓*i*P	**Pn**	**15 48 55.5**	**-0.7**
DYDN				*i* S	**Sg**	**15 49 21.4**	**+2.4**
DYDN				IAML		15 49 22.0	
	comp=E,552nm,0.6s						
DYDN				IAML		15 49 33.0	
	comp=N,338nm,1.0s						
DYDN	**Diyadin**	**1.65**	**4**	*e*Pn	**Pb**	**15 48 56.8**	**-0.4**
ISHB	**Shabestar**	**1.69**	**76**	*e*Pn	**Pn**	**15 48 55.0**	**-1.8**
AGRB	**Hanur-Agry**	**1.73**	**346**	PN	**Pn**	**15 48 56.4**	**-0.8**
AGRB	**Hanur-Agry**	**1.73**	**346**	*e*Pn	**Pn**	**15 48 56.4**	**-0.8**
MIDY	**Mardin/Midyat-**	**1.76**	**254**	⇑*i*P	**Pn**	**15 48 57.4**	**-0.2**
MIDY				*i* S	**Sb**	**15 49 22.1**	**+0.4**
MIDY				IAML		15 49 24.0	
	comp=E,1µm,0.7s						
MIDY				IAML		15 49 29.0	
	comp=N,1µm,0.5s						
BTMN	**Batman**	**1.79**	**270**	⇑*i*P	**Pn**	**15 48 57.6**	**-0.4**
BTMN				*i* S	**Sg**	**15 49 24.7**	**+1.2**
SVAN	**Silvan-Diyarba**	**1.86**	**278**	PN	**Pn**	**15 48 58.4**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.86**	**278**	*e*Pn	**Pn**	**15 48 58.3**	**-0.6**
IMRD	**Marand**	**1.89**	**64**	*e*Pn	**Pn**	**15 48 59.2**	**-0.3**
IMRD				*e*		15 49 32.3	
	comp=Z,17µm,0.6s						
KOTA	**Agri, Merkez-K**	**1.92**	**352**	⇓*i*P	**Pn**	**15 49 00.5**	**+0.7**
KOTA				*i* S	**Sg**	**15 49 30.4**	**+2.7**
KOTA				IAML		15 49 36.0	
	comp=N,188nm,1.4s						
KOTA				IAML		15 49 42.0	
	comp=E,163nm,0.8s						
IAZR	**Azarshahr**	**1.95**	**96**	*e*Pn	**Pb**	**15 49 01.4**	**-1.1**
IAZR				*e*		15 49 39.2	
	comp=Z,13µm,0.7s						
VRTB	**Varto-Mus**	**2.06**	**308**	PN	**Pn**	**15 49 01.4**	**-0.4**
MAHB	**Mahabad**	**2.07**	**122**	*e*Pn	**Pb**	**15 49 03.0**	**-1.4**
MAHB				*e*		15 49 38.0	
	comp=Z,29µm,0.6s						
ITBZ	**Tabriz**	**2.09**	**80**	*e*Pn	**Pn**	**15 49 02.4**	**+0.2**
EATA	**Eleskirt**	**2.12**	**338**	⇓*i*P	**Pn**	**15 49 03.6**	**+0.8**
EATA				*i* S	**Sg**	**15 49 35.2**	**+0.9**
EATA				IAML		15 49 43.0	
	comp=N,196nm,0.7s						
EATA				IAML		15 49 46.0	
	comp=E,262nm,0.7s						
SLHN	**Bingol, Solhan**	**2.23**	**299**	*i* P	**Pb**	**15 49 06.3**	**-0.9**
SLHN				*i* S	**Sg**	**15 49 39.3**	**+1.4**
SLHN				IAML		15 49 48.0	
	comp=N,494nm,1.0s						
SLHN				IAML		15 49 53.0	
	comp=E,560nm,1.1s						
MARD	**Mardin**	**2.26**	**256**	*i* P	**Pn**	**15 49 04.2**	**-0.3**
MARD				IAML		15 49 34.0	
	comp=E,210nm,0.7s						
KARO	**Karliova-Bingo**	**2.40**	**307**	PN	**Pn**	**15 49 06.0**	**-0.5**
GNI	**Garni**	**2.44**	**22**	Pn	**Pb**	**15 49 08.8**	**-1.9**
	comp=E,4.9nm,0.3s,baz=197,slow=5.4,SNR=23						
GNI				Lg	Lg	15 49 46.6	
	comp=E,12nm,0.3s,baz=37,slow=21,SNR=5.6						
GNI	**Garni**	**2.44**	**22**	PN	**Pn**	**15 49 06.8**	**-0.2**
KOPR	**Koprukoy-ERZUR**	**2.46**	**328**	PN	**Pn**	**15 49 07.0**	**-0.4**
MAZI	**Mazidag**	**2.49**	**261**	PN	**Pn**	**15 49 06.8**	**-0.8**
HOMI	**Horasan**	**2.49**	**330**	*i* P	**Pb**	**15 49 10.6**	**-1.0**
HOMI				*i* S	**Sg**	**15 49 50.7**	**+4.6**
BNGB	**Bingl**	**2.49**	**297**	PN	**Pn**	**15 49 07.4**	**-0.3**
IKRK	**Kirkuk**	**2.58**	**165**	*e*Pg	**Pb**	**15 49 12.0**	**-1.0**
IKRK				*e*Sg	**Sb**	**15 49 45.0**	**-0.1**
IKRK				AML	AML	15 49 58.2	
	comp=E,871nm,0.3s						
IKRK				AML	AML	15 50 00.0	
	comp=N,595nm,0.4s						
EJDE	**Erzurum, Palan**	**2.60**	**319**	*i* P	**Pn**	**15 49 10.2**	**+0.8**
EJDE				*i* S	**Sb**	**15 49 45.1**	**-0.9**
EJDE				IAML		15 49 54.0	
	comp=E,317nm,0.9s						
EJDE				IAML		15 49 59.0	
	comp=N,174nm,0.6s						
IBST	**Bostanabad**	**2.67**	**93**	*e*Pn	**Pn**	**15 49 11.4**	**+1.2**
DYBB	**Diyarbakir**	**2.68**	**272**	PN	**Pn**	**15 49 10.2**	**-0.1**
YEDI	**Yedisu-Bingol**	**2.80**	**304**	PN	**Pn**	**15 49 11.6**	**-0.3**
SENK	**Senkaya-Erzuru**	**2.81**	**341**	PN	**Pn**	**15 49 11.8**	**-0.4**
KOVA	**Elazig, Kovanc**	**3.03**	**287**	*i* P	**Pn**	**15 49 16.1**	**+1.0**
KOVA				*i* S	**Sg**	**15 50 03.9**	**+0.3**
KOVA				IAML		15 50 21.0	
	comp=E,259nm,1.3s						
KOVA				IAML		15 50 28.0	
	comp=N,156nm,1.4s						
ISRB	**Sarab**	**3.27**	**90**	*e*Pn	**Pn**	**15 49 19.3**	**+0.8**
SVRC	**Sivrice-ELAZID**	**3.37**	**279**	PN	**Pn**	**15 49 19.5**	**-0.3**
IDHR	**Dehrash**	**3.94**	**143**	*e*Pn	**Pn**	**15 49 28.8**	**+1.1**
IDHR				*e*		15 50 43.2	
	comp=Z,3µm,0.8s						
ILIN	**Lien**	**4.06**	**136**	*e*Pn	**Pn**	**15 49 30.9**	**+1.5**
ILIN				*e*		15 50 50.9	
	comp=Z,2µm,0.7s						
IGHG	**Ghaleghazi**	**4.33**	**144**	*e*Pn	**Pn**	**15 49 34.2**	**+1.2**
KCHF	**Cheshme Sefid,**	**4.60**	**141**	*e*Pn	**Pn**	**15 49 38.2**	**+1.5**
BHD	**Baghdad**	**4.67**	**171**	*e*Pn	**Pn**	**15 49 38.0**	**+0.5**
BHD				*e*Sn	**Sn**	**15 50 30.0**	**-2.2**
BHD				AML	AML	15 51 07.5	
	comp=E,344nm,0.5s						
IBZA	**Bozab**	**4.90**	**133**	*e*Pn	**Pn**	**15 49 42.9**	**+2.0**
IBDR	**Badra**	**5.16**	**157**	*e*Pn	**Pn**	**15 49 45.0**	**+0.7**
IBDR				*e*Sn	**Sn**	**15 50 43.0**	**-1.4**
QABG	**Abgarm-Qazvin**	**5.33**	**112**	*e*Pn	**Pn**	**15 49 47.9**	**+1.2**
HAGD	**Aghdareh**	**5.47**	**122**	*e*Pn	**Pn**	**15 49 50.5**	**+1.8**
HSAM	**Samen**	**5.51**	**130**	*e*Pn	**Pn**	**15 49 51.4**	**+2.0**
IDOB	**Doab**	**5.57**	**136**	*e*Pn	**Pn**	**15 49 51.6**	**+1.4**
IKFM	**Kafar-mosalman**	**5.60**	**140**	*e*Pn	**Pn**	**15 49 51.9**	**+1.6**
IRAZ	**Razeghan**	**5.71**	**114**	*e*Pn	**Pn**	**15 49 53.8**	**+1.7**
KBZ	**Khabaz**	**5.84**	**355**	Pn	**Pn**	**15 49 55.6**	**+2.0**
	comp=E,0.1nm,0.3s,baz=152,slow=9.0,SNR=5.7						
KBZ				LR	LR	15 52 46.2	
	comp=E,172nm,20.4s,baz=186,slow=46						
QALM	**Alamut, Qazvin**	**5.87**	**102**	*e*Pn	**Pn**	**15 49 55.7**	**+1.5**
BMDN	**Meydan**	**6.03**	**133**	*e*Pn	**Pn**	**15 49 57.2**	**+0.9**
KVAR	**Kislovodsk Arr**	**6.08**	**354**	Pn	**Pn**	**15 49 57.5**	**+0.5**
	baz=119,slow=18,SNR=2.0						
RAFI	**Al-Rafai**	**6.52**	**160**	*e*Pn	**Pn**	**15 50 04.0**	**+1.1**
RAFI				*e*Sn	**Sn**	**15 51 15.0**	**-2.7**
AMIS	**Naft Sefid**	**7.81**	**141**	*e*Pn	**Pn**	**15 50 22.6**	**+1.9**
ASF	**Jabal al Asfar**	**7.89**	**226**	Pn	**Pn**	**15 50 21.9**	**+0.1**
	comp=E,0.6nm,0.3s,baz=125,slow=5.5,SNR=3.2						
ASF				Pg	**Pg**	**15 50 58.2**	**+1.0**
	comp=E,0.6nm,0.3s,baz=59,slow=7.6,SNR=9.3						
ASF				Lg	Lg	15 52 37.1	
	comp=E,0.5nm,0.3s,baz=201,slow=22,SNR=3.5						
BRTR	**Keskin Array B**	**7.94**	**286**	Pn	**Pn**	**15 50 24.9**	**+2.4**
	comp=E,0.1nm,0.3s,baz=114,slow=10,SNR=2.8						
BRTR				LR	LR	15 53 22.5	
	comp=E,62nm,18.7s,baz=97,slow=38						
MMAI	**Mount Meron Ar**	**8.23**	**236**	Pn	**Pn**	**15 50 28.1**	**+1.7**
	comp=E,1.2nm,0.3s,baz=61,slow=15,SNR=4.2						
MMAI				Lg	Lg	15 52 55.7	
	comp=E,0.9nm,0.3s,baz=47,slow=32,SNR=3.1						
MMAI				LR	LR	15 53 57.4	
	comp=E,76nm,18.7s,baz=95,slow=40						
EIL	**Elat**	**10.87**	**224**	Pn	**Pn**	**15 51 04.8**	**+2.1**
	comp=E,0.2nm,0.3s,baz=76,slow=12,SNR=1.5						
EIL				Pg		15 51 56.6	
	comp=E,0.2nm,0.3s,baz=56,slow=11,SNR=3.8						
EIL				Lg	Lg	15 54 25.9	
	comp=E,0.2nm,0.3s,baz=233,slow=22,SNR=4.0						
AKTO	**Aktyubinsk**	**16.24**	**35**	Pn	**Pn**	**15 52 15.8**	**+0.6**
	comp=E,0.2nm,0.3s,baz=220,slow=13,SNR=5.1						
AKASG	**Malin Array Be**	**16.35**	**326**	Pn	**Pn**	**15 52 14.9**	**-1.6**
	comp=E,0.4nm,0.3s,baz=2.7,slow=37,SNR=1.6						
OBN	**Obninsk**	**17.86**	**347**	P	**Pn**	**15 52 34.2**	**-1.1**
	baz=150,slow=16,SNR=3.3						
WSAR	**Wadi Sarin**	**19.52**	**134**	P	**P**	**15 52 53.3**	**-1.4**
	comp=E,0.3nm,0.3s,baz=282,slow=9.7,SNR=4.4						
KIRV	**Kirov**	**21.05**	**9**	LR	LR	16 01 56.0	
	comp=E,63nm,18.4s,baz=234,slow=39						
ARU	**Arti**	**21.08**	**24**	P	**P**	**15 53 11.8**	**+0.4**
	comp=E,1.4nm,0.6s,baz=211,slow=9.0,SNR=7.5						
KLMR	**Klimovskoe**	**23.12**	**355**	*e*	**P**	**15 53 30.5**	**-2.5**
KLMR				AMP		15 53 42.7	
	comp=Z,19nm,1.3s						
GERES	**GERESS Array B**	**24.14**	**307**	P	**P**	**15 53 43.3**	**0.0**
	comp=Z,0.4nm,0.5s,baz=129,slow=10,SNR=2.8						
FINES	**FINESS Array B**	**25.96**	**341**	P	**P**	**15 53 58.8**	**-0.8**
	comp=Z,3.0nm,0.9s,baz=164,slow=7.5,SNR=4.3						
DAVOX	**Davos/Dischmat**	**26.24**	**301**	P	**P**	**15 54 03.1**	**+0.5**
	comp=Z,1.7nm,0.5s,baz=170,slow=2.8,SNR=3.4						
MKAR	**Makanchi Array**	**29.74**	**60**	P	**P**	**15 54 35.7**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=256,slow=10,SNR=2.1						
ZALV	**Zalesovo Beam**	**32.35**	**47**	P	**P**	**15 54 58.5**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=238,slow=4.9,SNR=1.7						

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*IDC **12** 16:05:32.7±2.4, 48°.22N×153°.06E, h164^{km}±21^{km}, mb3.4/10, mb1 3.4/14, mb1mx3.2/52, mbtmp3.8/14, Error ellipse: s-maj=31.4km s-min=15.4km az=151.0*
ISC 12 16:05:31.9±1.4, **48°.3N**±0°.2×**153°.0E**±0°.1, **h150**^{km}, **n23**, σ**0^{s}57**/14, **mb3.6**/10, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**5.66**	**30**	P	**Pn**	**16 06 54.8**	**+0.7**
	0.3nm,0.3s,baz=203,slow=14,SNR=14						
ASAJ	**Asahikawa**	**8.34**	**244**	P	**Pn**	**16 07 30.8**	**+1.0**
	0.3nm,0.3s,baz=45,slow=16,SNR=1.8						
KLR	**Kul'dur**	**14.05**	**282**	P	**P**	**16 08 47.1**	**-0.2**
	0.2nm,0.3s,baz=66,slow=10,SNR=4.6						
SEY	**Seymchan**	**14.67**	**359**	P	**P**	**16 08 54.6**	**+0.4**
	0.1nm,0.3s,baz=155,slow=12,SNR=4.6						
KSRS	**Korea Array**	**21.24**	**249**	P	**P**	**16 10 05.6**	**-0.4**
	1.3nm,0.6s,baz=46,slow=9.6,SNR=11						
TIXI	**Tiksi**	**25.96**	**343**	P	**P**	**16 10 49.3**	**-0.7**
	0.9nm,0.3s,baz=126,slow=8.5,SNR=2.2						
H11N2	**WAKE ISLAND Hy**	**30.64**	**154**	T	T	16 43 38.0	
	baz=348						
H11N1	**WAKE ISLAND Hy**	**30.65**	**154**	T	T	16 43 39.2	
	baz=348						
H11N3	**WAKE ISLAND Hy**	**30.65**	**154**	T	T	16 43 36.8	
	baz=348						
H11S1	**WAKE ISLAND Hy**	**31.74**	**155**	T	T	16 45 11.5	
	baz=343,slow=76,SNR=7.8						
H11S3	**WAKE ISLAND Hy**	**31.75**	**155**	T	T	16 45 11.6	
	baz=343,slow=76,SNR=4.2						
H11S2	**WAKE ISLAND Hy**	**31.76**	**155**	T	T	16 45 10.5	
	baz=343,slow=76,SNR=4.5						
ILAR	**Eielson Array**	**35.39**	**40**	P	**P**	**16 12 13.2**	**+0.3**
	0.2nm,0.5s,baz=269,slow=5.9,SNR=4.7						
ZALV	**Zalesovo Beam**	**41.66**	**304**	P	**P**	**16 13 05.2**	**0.0**
	0.4nm,0.3s,baz=67,slow=5.0,SNR=3.7						
MKAR	**Makanchi Array**	**46.18**	**296**	P	**P**	**16 13 41.3**	**0.0**
	1.4nm,0.7s,baz=68,slow=7.4,SNR=13						
ARCES	**ARCESS Array B**	**56.36**	**340**	P	**P**	**16 14 57.0**	**+0.2**
	3.5nm,0.9s,baz=34,slow=7.3,SNR=3.7						
FINES	**FINESS Array B**	**62.61**	**334**	P	**P**	**16 15 39.2**	**-0.3**
	1.5nm,0.3s,baz=35,slow=7.1,SNR=29						
AKASG	**Malin Array Be**	**70.22**	**326**	P	**P**	**16 16 27.5**	**-0.6**
	0.4nm,0.3s,baz=33,slow=5.9,SNR=4.9						
TXAR	**Lajitas Array**	**76.80**	**61**	P	**P**	**16 17 06.4**	**-0.7**
	0.3nm,0.5s,baz=295,slow=4.4,SNR=5.5						
GERES	**GERESS Array B**	**77.03**	**334**	P	**P**	**16 17 08.0**	**-0.1**
	0.3nm,0.4s,baz=28,slow=6.2,SNR=4.5						
H03S2	**Juan Fernandez**	**139.05**	**89**	T	T	18 59 12.4	
	SNR=23						
H03S3	**Juan Fernandez**	**139.06**	**89**	T	T	18 59 24.5	
	SNR=30						
H03S1	**Juan Fernandez**	**139.07**	**89**	T	T	18 59 14.9	
	SNR=31						

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*IDC **12** 16:09:45.3±1.6, 4°.18S×129°.39E, h0^{km}, mb3.5/1, mb1 3.8/5, mb1mx3.4/32, mbtmp3.6/5, ML3.2/4, Error ellipse: s-maj=56.1km s-min=25.2km az=88.0*
*DJA **12** 16:09:47.5±0.8, 4°S±7°×12°9E±°, h10^{km}, M3.4/7, MLv3.4/7*
ISC 12 16:09:49.4±1.0, **4°.21S**±0°.08×**129°.36E**±0°.07, **h36**^{km}, **n11**, σ**1^{s}22**/13, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.96**	**333**	P	**Pn**	**16 10 04.9**	**-1.4**
AAI	**Ambon**	**1.27**	**294**	P	**Pn**	**16 10 10.5**	**-0.1**
FAKI	**Fak Fak**	**3.16**	**66**	P	**Pn**	**16 10 36.7**	**+0.1**
SIJI	**Sorong**	**3.83**	**30**	Pn	**Pn**	**16 10 45.4**	**-0.4**
	5.8nm,0.3s,baz=96,slow=1.7,SNR=96						
SIJI				Sn	**Sn**	**16 11 26.9**	**-2.7**
	3.0nm,0.3s,baz=146,slow=6.8,SNR=4.5						
SWI	**Sorong**	**3.83**	**30**	P	**Pn**	**16 10 46.3**	**+0.5**
SWI				S	**Sn**	**16 11 31.2**	**+1.6**
SANI	**Sanana**	**3.99**	**302**	P	**Pn**	**16 10 48.2**	**+0.2**
LBMI	**Labuha**	**4.00**	**332**	P	**Pn**	**16 10 49.0**	**+0.8**
FITZ	**Fitzroy Crossi**	**14.27**	**194**	Pn	**Pn**	**16 13 08.4**	**-0.7**
	0.0nm,0.3s,baz=332,slow=24,SNR=1.3						
WRA	**Warramunga Arr**	**16.37**	**163**	Pn	**Pn**	**16 13 36.0**	**-0.6**
	0.1nm,0.3s,baz=348,slow=12,SNR=7.2						
ASAR	**Alice Springs**	**19.83**	**168**	P	**Pn**	**16 14 19.1**	**+0.1**
	0.2nm,0.3s,baz=348,slow=11,SNR=37						
MKAR	**Makanchi Array**	**65.56**	**326**	P	**P**	**16 20 30.6**	**+1.1**
	0.3nm,0.6s,baz=110,slow=8.1,SNR=2.5						

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*IDC **12** 16:37:34.4±5.6, 27°.69S×177°.52W, h62^{km}±44^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.3/31, mbtmp3.6/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/13, Error ellipse: s-maj=48.9km s-min=34.2km az=55.0*
ISC 12 16:37:32.1±1.9, **27°.6S**±0°.1×**177°.4W**±0°.3, **h50**^{km}, **n7**, σ**0^{s}47**/6, **mb3.4**/3, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.70**	**195**	P	**Pn**	**16 37 59.5**	**+0.1**
	248nm,0.3s,baz=270,slow=23,SNR=14						
RAO				S	**Sn**	**16 38 20.2**	**+0.2**
	328nm,0.3s,baz=107,slow=23,SNR=18						
DZM	**Mont Dzumac**	**15.65**	**287**	LR	LR	16 45 37.8	
	comp=Z,75nm,18.4s,baz=70,slow=31						
ASAR	**Alice Springs**	**43.85**	**264**	P	**P**	**16 45 33.5**	**-0.3**
	0.3nm,0.5s,baz=103,slow=6.9,SNR=8.7						
WRA	**Warramunga Arr**	**44.58**	**269**	P	**P**	**16 45 39.6**	**0.0**
	0.3nm,0.5s,baz=107,slow=6.1,SNR=14						
QSPA	**South Pole Qui**	**62.50**	**180**	P	**P**	**16 47 49.9**	**-0.4**
	1.0nm,0.7s,baz=80,slow=4.1,SNR=2.9						
FINES	**FINESS Array B**	**142.68**	**342**	PKhKP	PKPpre	16 56 54.9	
	6.6nm,1.2s,baz=218,slow=21,SNR=1.7						
AKASG	**Malin Array Be**	**149.33**	**326**	PKPbc	**PKiKP**	**16 57 16.9**	**+0.6**
	0.6nm,0.4s,baz=42,slow=3.3,SNR=7.9						

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*INET **12** 16:51:09.6, 12°.00N×87°.73W, h7^{km}, MW4.1*
*UCR **12** 16:51:11.1±1.8, 12°.01N×87°.82W, h25^{km}±23^{km}, ML3.7, mb4.4(NEIC)*
*SNET **12** 16:51:11.1±1.1, 12°.03N×87°.84W, h20^{km}±13^{km}, ML3.8*
*NEIC **12** 16:51:12.3±2.5, 12°.1N±0°.1×87°.66W±0°.10, h35^{km}±2^{km}, mb4.4/28, Error ellipse: s-maj=25.4km s-min=3.1km az=219.0*
*IDC **12** 16:51:15.0±3.1, 12°.29N×87°.28W, h69^{km}±28^{km}, mb3.9/9, mb1 4.1/11, mb1mx3.7/39, mbtmp4.1/11, MS3.4/3, Ms1 3.4/3, ms1mx2.9/27, Error ellipse: s-maj=34.3km s-min=18.0km az=52.0*
ISC 12 16:51:13.8±1.1, **12°.14N**±0°.07×**87°.64W**±0°.07, **h61**^{km}±10^{km}, **n79**, σ**1^{s}57**/91, **mb4.3**/21, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCND	**La Caada**	**1.19**	**348**	*e*P	**Pn**	**16 51 33.2**	**-1.3**
LCND				*e*S	**Sn**	**16 51 51.6**	**+1.8**
LCND				IAML		16 51 57.4	
	comp=Z,3µm,0.3s						
LCND	**La Caada**	**1.19**	**348**	*e*P	**Pn**	**16 51 33.2**	**-1.3**
LCND				*e*S	**Sn**	**16 51 51.6**	**+1.8**
LCND				IAML		16 51 57.4	
	comp=Z,3µm,0.3s						
COEB	**Comit de Eme**	**1.61**	**327**	*e*P	**Pn**	**16 51 38.2**	**-1.9**
COEB				*e*S	**Sn**	**16 52 00.2**	**+0.2**

COEB				IAML		16 52 06.2	
	comp=Z,1µm,0.4s						
COEB	Comit de Eme	1.61	327	eP	Pn	16 51 38.2	-1.9
COEB				eS	Sn	16 52 00.2	+0.2
COEB				IAML		16 52 06.2	
	comp=Z,1µm,0.4s						
PQSS	Presa 15 de Se	1.73	329	eP	Pn	16 51 40.4	-1.3
PQSS				eS	Sn	16 52 02.1	-0.6
TECO	Alcaldia de Te	1.78	321	eP	Pn	16 51 40.0	-2.5
TECO				eS	Sn	16 52 03.3	-0.8
SCLA	Alcaldia de Sa	1.88	326	eP	Pn	16 51 42.6	-1.2
SCLA				eS	Sn	16 52 06.5	-0.1
SCLA				IAML		16 52 15.0	
	comp=Z,670nm,0.8s						
SCLA	Alcaldia de Sa	1.88	326	eP	Pn	16 51 42.6	-1.2
SCLA				eS	Sn	16 52 06.5	-0.1
SCLA				IAML		16 52 15.0	
	comp=Z,670nm,0.8s						
TGUH	Tegucigalpa,Un	1.94	10		Pn	16 51 44.6	-0.1
SJTE	Alcalda de S	1.98	318	eP	Pn	16 51 43.3	-1.9
SJTE				eS	Sn	16 52 08.3	-0.8
SJTE				IAML		16 52 18.4	
	comp=Z,471nm,0.4s						
SJTE	Alcalda de S	1.98	318	eP	Pn	16 51 43.3	-1.9
SJTE				eS	Sn	16 52 08.3	-0.8
SJTE				IAML		16 52 18.4	
	comp=Z,471nm,0.4s						
PAVA	Las Pavas	2.01	321	eP	Pn	16 51 43.5	-2.1
PAVA				IAML		16 52 18.1	
	comp=Z,904nm,0.6s						
PAVA	Las Pavas	2.01	321	eP	Pn	16 51 43.5	-2.1
PAVA				IAML		16 52 18.1	
	comp=Z,904nm,0.6s						
HZTE	Horizontes, Gu	2.45	125		Pn	16 51 49.5	-2.0
TACO	Tacachico	2.47	318	eP	Pn	16 51 49.9	-1.9
TACO	Tacachico	2.47	318	eP	Pn	16 51 49.9	-1.9
LAPC	Finca la Perla	2.55	122	eP	Pn	16 51 51.9	-1.1
CEVE	Cerro Verde	2.56	311	eP	Pn	16 51 52.2	-1.1
CEVE	Cerro Verde	2.56	311	eP	Pn	16 51 52.2	-1.1
BUAI	Buenos Aires	2.58	119	eP	Pn	16 51 52.6	-0.7
HORNC	Hornillas	2.80	120	eP	Pn	16 51 57.2	+0.9
COLC	Colonia	2.80	121	eP	Pn	16 51 56.5	+0.2
MTO3	Montecristo	2.81	323		Pn	16 51 55.7	-0.9
CUI	Cuipilapa	2.84	121	eP	Pn	16 51 55.0	-1.8
ESQI	Esquipulas	2.92	326		Pn	16 51 57.4	-0.6
DUNO	Dulce Nombre,	2.94	134		Pn	16 51 55.2	-2.9
ACAL	Aguas Claras	2.96	120	eP	Pn	16 51 59.2	+0.7
JTS	Las Juntas de	3.21	125	Pn	Pn	16 52 03.3	+1.4
APG	El Apazote	3.96	316	P	Pn	16 52 14.1	+1.7
	comp=Z,1.3nm,0.3s,baz=123,slow=8.3,SNR=5.4						
APG				S	Sn	16 53 04.7	+7.1
	comp=Z,2.9nm,0.3s,baz=155,slow=6.7,SNR=4.8						
RIMA	Rio Macho	4.39	122		Pn	16 52 19.0	+0.8
PEZE	Perez Zeledon,	4.76	125		Pn	16 52 24.5	+1.4
SRBA	San Rafael, Bu	5.10	124	Pn	Pn	16 52 27.7	-0.1
RIOS	Rincon, Osa	5.30	130		Pn	16 52 31.1	+0.6
CDITO	Canoas	5.88	127		Pn	16 52 38.5	+0.2
CMIG	Matias Romero	8.57	306	P	Pn	16 53 17.5	+2.2
	comp=Z,0.8nm,0.3s,baz=157,slow=7.9,SNR=5.2						
CMIG				S	Sn	16 54 56.4	+5.9
	comp=Z,0.3nm,0.3s,baz=33,slow=17,SNR=1.4						
CMIG				LR	LR	16 57 10.4	
	comp=Z,266nm,21.6s,baz=142,slow=40						
TLIG	Tlapa	11.86	298	Pn	Pn	16 54 00.7	+0.3
152A	Waverly Hall	20.61	7	P	P	16 55 47.5	-0.5
152A				IAmb	IAmb	16 55 53.4	
	comp=Z,14nm,0.8s						
JCT	Junction City	21.45	330	P	P	16 55 56.4	-0.7
JCT				IAmb	IAmb	16 56 00.7	
	comp=Z,12nm,0.8s						
GOGA	Godfrey	21.52	10	P	P	16 55 59.5	+1.7
Y49A	Blount Mountai	21.65	3	P	P	16 55 59.4	+0.2
Y49A				IAmb	IAmb	16 56 01.4	
	comp=Z,9.5nm,0.7s						
FPAL	Fort Paine	22.38	4	P	P	16 56 06.0	-1.1
HODGE	Hodges	22.53	12	P	P	16 56 09.7	+1.0
TXAR	Lajitas Array	22.70	321	P	P	16 56 11.6	+0.9
	comp=Z,14nm,0.7s,baz=136,slow=10.0,SNR=138						
TXAR	Lajitas Array	22.70	321	P	P	16 56 10.9	+0.3
TX31	Lajitas Ar. Si	22.70	321	P	P	16 56 10.9	+0.3
TX32	Lajitas Array	22.70	321	P	P	16 56 10.8	+0.1
JSC	Jenkinsville	22.80	14	P	P	16 56 12.2	+0.8
MIAR	Mount Ida	22.95	347	P	P	16 56 12.3	-0.8
MIAR				IAmb	IAmb	16 56 16.3	
	comp=Z,8.9nm,0.9s						
W50A	Signal Mountai	23.06	5	P	P	16 56 14.4	+0.3
W50A				IAmb	IAmb	16 56 16.1	
	comp=Z,9.3nm,0.6s						
BG3	Lake Jocassee	23.15	10	P	P	16 56 16.3	+1.2
BG3				IAmb	IAmb	16 56 39.6	
	comp=Z,21nm,1.3s						
PAULI	Pauline	23.19	12	P	P	16 56 16.0	+0.6
PAULI				IAmb	IAmb	16 56 17.4	
	comp=Z,7.8nm,0.6s						
X37A	Clayton	23.43	344	P	P	16 56 17.9	+0.3
X37A				IAmb	IAmb	16 56 20.9	
	comp=Z,10nm,0.8s						
TKL	Tuckaleechee C	23.68	8	P	P	16 56 20.0	+0.1
	comp=Z,12nm,0.8s,baz=183,slow=13,SNR=15						
TKL	Tuckaleechee C	23.68	8	P	P	16 56 20.5	+0.6
TKL				IAmb	IAmb	16 56 22.7	
	comp=Z,9.2nm,0.8s						
V51A	Loudon	23.75	7	P	P	16 56 21.6	+1.0
V51A				IAmb	IAmb	16 56 23.9	
	comp=Z,7.9nm,0.8s						
V53A	Saluda	23.83	10	P	P	16 56 22.2	+0.8
V53A				IAmb	IAmb	16 56 24.1	
	comp=Z,7.6nm,0.6s						
W57A	Gilead	23.94	16	P	P	16 56 21.1	-1.2
W57A				IAmb	IAmb	16 56 23.6	
	comp=Z,6.7nm,0.7s						
FCAR	Ozark Folk Cen	23.99	351	P	P	16 56 22.1	-0.7
TUL1	Leonard	24.79	344	P	P	16 56 29.5	-0.5
T42A	Van Buren	24.98	353	P	P	16 56 31.1	-0.6
MNTX	Cornudas Mount	25.42	323	P	P	16 56 37.0	+1.1
AMTX	Amarillo	25.99	333	P	P	16 56 41.5	+0.4
CCM	Cathedral Cave	26.01	353	P	P	16 56 40.7	-0.4
CCM				IAmb	IAmb	16 56 42.4	
	comp=Z,6.1nm,0.6s						
SDCO	Great Sand Dun	30.09	331	P	P	16 57 18.2	+0.3
ETMB	Extrema	30.48	135	P	P	16 57 20.9	-0.3
ECSD	EROS Data Cent	32.42	348	P	P	16 57 37.2	-0.8
LPAZ	La Paz	34.20	145	LR	LR	17 11 41.1	
	comp=Z,60nm,20.1s,baz=22,slow=36						
PDAR	Pinedale Array	35.96	332	P	P	16 58 09.4	+0.5
	comp=Z,1.6nm,0.8s,baz=127,slow=10,SNR=14						
PDAR				LR	LR	17 14 56.1	
	comp=Z,40nm,18.4s,baz=82,slow=40						
PDAR	Pinedale Array	35.96	332	P	P	16 58 08.1	-0.8
NVAR	Mina Array Bea	37.82	319	P	P	16 58 26.9	+2.2
	comp=Z,0.8nm,0.8s,baz=131,slow=7.7,SNR=4.4						
NVAR				PcP	PcP	17 00 42.9	+2.6
	comp=Z,0.1nm,0.3s,baz=149,slow=3.3,SNR=5.5						
YHL	Hebgen Lake	38.32	333	P	P	16 58 29.2	+0.2
YHL				IAmb	IAmb	16 58 34.1	
	comp=Z,9.9nm,1.5s						
SIV	San Ignacio	38.37	136	P	P	16 58 28.6	-0.7
	comp=Z,2.4nm,0.7s,baz=304,slow=7.6,SNR=11						
ULM	Lac du Bonnet	38.60	352	P	P	16 58 28.7	-2.1
	comp=Z,5.8nm,0.6s,baz=155,slow=7.4,SNR=7.5						
MCMT	McKenzie Canyo	39.07	331	P	P	16 58 35.4	+0.2
SCHQ	Schefferville	45.63	17	P	P	16 59 26.8	-1.3
	comp=Z,3.4nm,0.4s,baz=220,slow=6.5,SNR=21						
YKA	Yellowknife Ar	53.86	345	P	P	17 00 29.2	-1.2
	comp=Z,1.8nm,0.7s,baz=139,slow=7.0,SNR=6.7						
ILAR	Eielson Array	66.23	336	P	P	17 01 54.6	-0.5
	comp=Z,0.9nm,0.8s,baz=156,slow=4.1,SNR=11						
ASAR	Alice Springs	138.98	248	PKP	PKPdf	17 10 32.6	-1.7
	comp=Z,0.4nm,0.7s,baz=119,slow=1.9,SNR=4.7						
WRA	Warramunga Arr	139.01	254	PKP	PKPdf	17 10 34.4	0.0
	comp=Z,0.4nm,0.7s,baz=92,slow=1.9,SNR=7.7						

IDC 12 16:53:14.3±7.5, 1°.02S×101°.33E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.1/56, mbtmp3.2/3, Error ellipse: s-maj=407.7km s-min=30.9km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	37.37	122	P	P	17 00 29.2	+0.1
	0.2nm,0.9s,baz=310,slow=9.9,SNR=6.5						
ASAR	Alice Springs	38.78	128	P	P	17 00 40.6	-0.4
	0.1nm,0.4s,baz=301,slow=8.0,SNR=6.5						
MKAR	Makanchi Array	50.47	343	P	P	17 02 13.8	-0.1
	0.3nm,0.8s,baz=156,slow=9.3,SNR=1.7						

INET 12 16:53:49.5, 12°.27N×87°.55W, h14km, MW3.6, Near coast of Nicaragua

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IDC ***12*** *16:56:46.8±5.4, 4°.72N×126°.19E, h66km±54km, mb2.9/6, mb1 3.2/7, mb1mx3.0/55, mbtmp3.3/7, ML3.6/1, Error ellipse: s-maj=50.7km s-min=23.7km az=73.0*

ISC 12 16:56:50.1±1.1, 4°.6N±0°.2×126°.3E±0°.2, h100km, n7, σ1s.09/8, mb3.1/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	7.39	138	P	Pn	16 58 35.3	0.0
	0.9nm,0.3s,baz=221,slow=22,SNR=5.1						
SIJI				S	Sn	16 59 56.5	-1.1
	0.6nm,0.3s,baz=170,slow=23,SNR=2.2						
FITZ	Fitzroy Crossi	22.61	182	P	P	17 01 42.6	-0.1
	0.9nm,0.8s,baz=16,slow=12,SNR=1.8						
WRA	Warramunga Arr	25.68	162	P	P	17 02 12.1	+1.1
	0.2nm,0.3s,baz=342,slow=10,SNR=13						
ASAR	Alice Springs	29.10	166	P	P	17 02 42.4	+0.8
	0.1nm,0.7s,baz=348,slow=7.0,SNR=1.3						
MKAR	Makanchi Array	56.57	325	P	P	17 06 21.8	-0.7
	0.1nm,0.5s,baz=119,slow=7.2,SNR=4.1						
KURBB	Kurchatov Arra	60.75	327	P	P	17 06 50.1	-1.2
	0.1nm,0.4s,baz=124,slow=6.3,SNR=1.9						
ILAR	Eielson Array	84.47	25	P	P	17 09 12.4	+0.9
	0.2nm,0.5s,baz=272,slow=7.1,SNR=1.7						

IDC ***12*** *17:00:26.6±0.9, 6°.54S×154°.23E, h0km, mb3.9/14, mb1 4.1/16, mb1mx3.9/47, mbtmp3.9/16, ML2.7/2, MS3.4/5, Ms1 3.4/5, ms1mx2.9/37, Error ellipse: s-maj=26.4km s-min=17.0km az=120.0*

NEIC ***12*** *17:00:27.9±2.1, 6°.52S±0°.08×154°.33E±0°.09, h10km±1km, mb4.2/16, Error ellipse: s-maj=15.7km s-min=14.3km az=92.0*

ISC 12 17:00:33.0±0.6, 6°.59S±0°.08×154°.21E±0°.09, h48km, n40, σ1s.03/38, mb4.0/20, MS3.2/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.13	319		Pn	17 01 19.3	-0.7
PMG	Port Moresby	7.53	248	Pn	Pn	17 02 19.7	-0.5
	1.8nm,0.3s,baz=47,slow=7.9,SNR=24						
PMG				Sn	Sn	17 03 46.5	+2.2
	0.9nm,0.3s,baz=54,slow=23,SNR=5.6						
PMG				LR	LR	17 04 57.1	
	comp=Z,189nm,19.5s,baz=46,slow=36						
PMG	Port Moresby	7.53	248		Pn	17 02 20.3	+0.1
CTAO	Charters Tower	15.49	209	Pn	Pn	17 04 06.0	-2.4
DZM	Mont Dzumac	19.40	144	P	P	17 04 56.2	+0.9
	0.1nm,0.3s,baz=284,slow=17,SNR=1.4						
DZM	Mont Dzumac	19.40	144	IAmb	IAmb	17 05 05.3	
	comp=Z,6.3nm,0.9s						
WR0	Warramunga Arr	23.27	233	P	P	17 05 36.0	-0.6
WR0				IAmb	IAmb	17 05 38.0	
	comp=Z,9.2nm,1.1s						
WB0	Warramunga Arr	23.29	234	P	P	17 05 35.8	-1.0
WB0				IAmb	IAmb	17 05 37.7	
	comp=Z,7.6nm,1.1s						
WRAB	Tennant Creek	23.41	234	P	P	17 05 37.1	-0.8
WRAB				IAmb	IAmb	17 06 04.0	
	comp=Z,7.0nm,0.9s						
WB2	Warramunga Arr	23.41	234	P	P	17 05 36.6	-1.3
WB2				IAmb	IAmb	17 06 04.1	
	comp=Z,6.9nm,0.9s						
WRA	Warramunga Arr	23.42	234	P	P	17 05 37.4	-0.7
	comp=Z,5.7nm,1.0s,baz=57,slow=9.7,SNR=29						
WRA				LR	LR	17 14 23.3	
	comp=Z,41nm,18.5s,baz=50,slow=36						
WRA	Warramunga Arr	23.42	234	P	P	17 05 36.6	-1.5
AS31	Alice Springs	25.87	227	P	P	17 05 59.5	-1.0
ASAR	Alice Springs	25.87	227	P	P	17 06 00.3	-0.2
	comp=Z,1.1nm,0.6s,baz=58,slow=8.5,SNR=15						
ASAR				LR	LR	17 15 14.8	
	comp=Z,46nm,19.6s,baz=72,slow=34						
ASAR	Alice Springs	25.87	227	P	P	17 05 59.9	-0.6
KNRA	Kununurra	26.53	248	P	P	17 06 05.7	-0.7
KNRA				IAmb	IAmb	17 06 08.2	
	comp=Z,12nm,1.1s						
TNTI	Ternate	27.77	284	P	P	17 06 16.6	-1.1
STKA	Stephens Creek	27.79	203	P	P	17 06 18.3	+0.8
	comp=Z,1.6nm,0.6s,baz=19,slow=12,SNR=4.9						
STKA	Stephens Creek	27.79	203	P	P	17 06 17.3	-0.3
FITZ	Fitzroy Crossi	30.11	245	P	P	17 06 37.7	-0.7
	comp=Z,3.7nm,0.8s,baz=87,slow=5.8,SNR=8.5						
BATI	Baumata	30.43	261	LR	LR	17 21 23.2	
	comp=Z,76nm,18.7s,baz=123,slow=41						
BBOO	Buckleboo	31.08	211	P	P	17 06 46.1	-0.7
TOLI2	Tolitoli	34.23	282	P	P	17 07 13.7	-0.9
TOLI2				IAmb	IAmb	17 07 35.0	
	comp=Z,4.8nm,1.0s						
TAU	Tasmania Unive	36.69	188	P	P	17 07 37.4	+2.2
NNZ	Nelson	38.49	157	P	P	17 07 49.0	-1.5
KSRS	Korea Array	50.22	333	P	P	17 09 23.3	-0.9
	comp=Z,1.5nm,1.0s,baz=148,slow=7.2,SNR=4.6						
CMAR	Chiang Mai Arr	59.91	296	P	P	17 10 36.0	+1.4
	comp=Z,0.7nm,0.8s,baz=118,slow=5.0,SNR=7.0						
CMAR	Chiang Mai Arr	59.91	296	P	P	17 10 35.0	+0.5
SONM	Songino Array	68.58	328	P	P	17 11 31.7	+0.8
	comp=Z,0.4nm,0.7s,baz=145,slow=5.3,SNR=2.7						
SONM	Songino Array	68.58	328	P	P	17 11 30.9	0.0
SONM				IAmb	IAmb	17 11 41.5	
	comp=Z,2.4nm,1.2s						
MKAR	Makanchi Array	82.59	319	P	P	17 12 52.1	+1.0
	comp=Z,1.6nm,0.8s,baz=106,slow=4.3,SNR=12						
ILAR	Eielson Array	83.28	22	P	P	17 12 54.2	0.0
	comp=Z,0.4nm,0.9s,baz=253,slow=6.2,SNR=4.5						
ZALV	Zalesovo Beam	83.41	326	P	P	17 12 55.4	+0.3
	comp=Z,0.9nm,0.3s,baz=125,slow=9.5,SNR=2.5						
KURBB	Kurchatov Arra	86.06	322	P	P	17 13 09.4	+0.8
	comp=Z,0.5nm,0.9s,baz=106,slow=5.1,SNR=4.0						
INK	Inuvik	89.61	21	P	P	17 13 25.5	+0.4
	comp=Z,0.6nm,0.8s,baz=239,slow=3.6,SNR=3.7						
BVAR	Borovoye Array	91.50	323	P	P	17 13 34.8	+0.5
	comp=Z,0.5nm,0.6s,baz=76,slow=6.3,SNR=3.8						
NVAR	Mina Array Bea	92.08	52	P	P	17 13 38.1	+0.5
	comp=Z,0.3nm,0.5s,baz=262,slow=4.5,SNR=1.4						
NEW	Newport	93.97	42	LR	LR	17 50 31.2	
	comp=Z,57nm,19.0s,baz=240,slow=32						
TORD	Torodi Ar. Bea	152.17	286	PKPbc	PKiKP	17 20 24.3	-0.4
	comp=Z,0.8nm,0.7s,baz=65,slow=2.7,SNR=8.6						
TORD	Torodi Ar. Bea	152.17	286		PKiKP	17 20 24.6	0.0

MAN 12 17:03:52.4, 11°.14N×124°.77E, h1km, mb3.7, ML2.5, MS2.0, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	1.14	224	⇑iP	Pb	17 04 15.0	+0.2
LLP				i S	Sg	17 04 29.6	+0.6
TBP	Tagbilaran	1.70	212	eP	Pn	17 04 23.4	+0.3
TBP				i S	Sg	17 04 47.5	+0.5

MDD ***12*** *17:06:02.2±1.6, 37°.16N×13°.22W, h0km, mb4.3/8, Error ellipse: s-maj=14.8km s-min=11.6km az=46.0, PRXIMO*

IGIL ***12*** *17:06:02.9, 37°.25N×13°.26W, h6km, ML2.6*

INMG ***12*** *17:06:03.5±1.4, 36°.96N×13°.62W, h10km, ML2.6, Error ellipse: s-maj=6.3km s-min=3.2km az=126.0*

CNRM ***12*** *17:06:08.4, 36°.75N×12°.90W, h43km, ml3.1*

ISC 12 17:06:00.7±2.8, 37°.09N±0°.06×13°.2W±0°.1, h10km, n77, σ2s.29/136, 2C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	3.47	88	⇑ePn	Pn	17 06 56.7	+1.9
PFVI				eSn	Sn	17 07 35.6	-0.3
PFVI				A	A	17 07 37.3	
	11nm,0.2s						
PFVI	Vila Bisbo	3.47	88	⇑P	Pn	17 06 56.7	+1.9
	5.3nm,0.0s,SNR=18						
PFVI				S	Sn	17 07 36.0	0.0
	22nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	3.47	88	P	Pn	17 06 56.7	+1.9
PFVI				S	Sn	17 07 36.0	0.0
PTEO	Sao Teotonio	3.57	81	ePn	Pn	17 06 58.4	+2.2
PTEO				eSn	Sn	17 07 37.9	-0.5
PTEO				A	A	17 07 40.7	
	9.9nm,0.6s						
PTEO	Sao Teotonio	3.57	81	P	Pn	17 06 58.4	+2.2
PTEO				S	Sn	17 07 37.9	-0.5
	4.9nm,0.6s						
PMAFR	Mafra	3.59	58	ePn	Pn	17 06 58.5	+2.1
PMAFR				eSn	Sn	17 07 39.5	+0.7
PMAFR				A	A	17 08 00.3	
	17nm,0.5s						
PMAFR	Mafra	3.59	58	P	Pn	17 06 58.2	+1.8
	3.7nm,0.1s,SNR=7.9						
PMAFR				S	Sn	17 07 38.4	-0.4
	2.7nm,0.1s,SNR=7.9						
MORF	Marmelete	3.61	85	eP	Pn	17 06 58.6	+1.8
MORF				eS	Sn	17 07 39.1	-0.4
MORF				IAML		17 07 42.4	
	comp=N,15nm,0.3s						
MORF	Marmelete	3.61	85	ePn	Pn	17 06 58.6	+1.8
MORF				eSn	Sn	17 07 39.3	-0.2
MORF				A	A	17 07 45.3	
	comp=N,14nm,0.1s						
MORF	Marmelete	3.61	85	P	Pn	17 06 58.6	+1.8
MORF				S	Sn	17 07 39.3	-0.2
	comp=N,14nm,0.1s						
PNCL	Nicolau / Gran	3.82	73	ePn	Pn	17 07 01.3	+1.7
PNCL				eSn	Sn	17 07 44.7	+0.1
PNCL				A	A	17 07 49.8	
	comp=N,7.5nm,0.1s						
PNCL	Nicolau / Gran	3.82	73	P	Pn	17 07 01.3	+1.7
PNCL				S	Sn	17 07 44.7	+0.1
	comp=N,7.5nm,0.1s						
MESJ	Messejana	4.01	78	eP	Pn	17 07 03.7	+1.5
MESJ	Messejana	4.01	78	ePn	Pn	17 07 03.9	+1.7
MESJ				eSn	Sn	17 07 50.4	+1.2
MESJ				A	A	17 07 52.8	
	comp=N,5.3nm,0.2s						
MESJ	Messejana	4.01	78	P	Pn	17 07 03.9	+1.7
MESJ				S	Sn	17 07 50.4	+1.2
	comp=N,5.3nm,0.2s						
PCVE	Castro Verde	4.12	81	ePn	Pn	17 07 05.7	+2.0
PCVE				eSn	Sn	17 07 52.1	+0.1
PCVE				A	A	17 07 57.2	
	comp=N,4.1nm,0.5s						
PCVE	Castro Verde	4.12	81	P	Pn	17 07 05.7	+2.0
PCVE				S	Sn	17 07 52.1	+0.1
	comp=N,4.1nm,0.5s						
PBDV	Barranco-do-Ve	4.18	86	ePn	Pn	17 07 06.8	+2.1
PBDV				eSn	Sn	17 07 54.1	+0.5
PBDV				A	A	17 07 57.7	
	comp=N,4.9nm,0.2s						
PBDV	Barranco-do-Ve	4.18	86	P	Pn	17 07 06.8	+2.1
PBDV				S	Sn	17 07 54.1	+0.5
	comp=N,4.9nm,0.2s						
PSBE	So Bento	4.20	54	ePn	Pn	17 07 07.0	+2.1
PSBE				eSn	Sn	17 07 56.3	+2.2
PSBE				A	A	17 08 25.4	
	comp=N,6.1nm,0.8s						
PBEJ	Beja	4.31	76	ePn	Pn	17 07 08.4	+2.0
PBEJ				eSn	Sn	17 07 58.1	+1.3
PBEJ				A	A	17 08 01.1	
	comp=N,2.8nm,0.2s						
PBEJ	Beja	4.31	76	P	Pn	17 07 08.4	+2.0
PBEJ				S	Sn	17 07 58.1	+1.3
	comp=N,1.4nm,0.2s						
PVAQ	Vaqueiros	4.36	84	ePn	Pn	17 07 09.4	+2.4
PVAQ				eSn	Sn	17 07 57.2	-0.7
PVAQ				A	A	17 08 02.4	
	comp=N,11nm,0.1s						
PVAQ	Vaqueiros	4.36	84	P	Pn	17 07 09.4	+2.4
PVAQ				S	Sn	17 07 57.2	-0.7
	comp=N,11nm,0.1s						
PVAQ	Vaqueiros	4.36	84	P	Pn	17 07 08.9	+1.9
PVAQ				S	Sn	17 08 00.7	+2.8
PMTG	Montargil	4.37	62	ePn	Pn	17 07 08.9	+1.7
PMTG				eSn	Sn	17 07 59.5	+1.4
PMTG				A	A	17 08 13.4	
	comp=N,2.8nm,0.7s						
PMTG	Montargil	4.37	62	P	Pn	17 07 08.9	+1.7
PMTG				S	Sn	17 07 59.5	+1.4
	comp=N,2.8nm,0.7s						
EGRO	El Granado	4.55	83	P	Pn	17 07 11.9	+2.2
	comp=N,0.6nm,0.2s,SNR=7.9						
EGRO				S	Sn	17 08 01.9	-0.7
	comp=N,0.4nm,0.2s,SNR=7.9						
PCAS	Casmilo, Conde	4.70	50	ePn	Pn	17 07 13.2	+1.5
PCAS				eSn	Sn	17 08 06.2	-0.1
PCAS				A	A	17 08 13.3	
	comp=N,4.0nm,0.5s						
PCAS	Casmilo, Conde	4.70	50	P	Pn	17 07 13.2	+1.5
PCAS				S	Sn	17 08 06.2	-0.1
	comp=N,4.0nm,0.5s						
PESTR	Estremoz	4.75	66	ePn	Pn	17 07 15.0	+2.6
PESTR				eSn	Sn	17 08 07.2	-0.3
PESTR				A	A	17 08 13.9	
	comp=N,1.5nm,0.2s						
PESTR	Estremoz	4.75	66	P	Pn	17 07 15.7	+3.3
PESTR				S	Sn	17 08 10.5	+3.0
PMPST	Porto Santo, M	4.77	214	ePn	Pn	17 07 05.7	-7.0
PMPST				eSn	Sn	17 07 51.0	-17
PMPST				A	A	17 07 56.7	
	comp=N,27nm,0.7s						
PMPS	Porto Santo	4.79	214	eSn	Sn	17 07 51.0	-18
PBAR	Barrancos	4.98	76	eSn	Sn	17 08 15.1	+1.9
PBAR	Barrancos	4.98	76	S	Sn	17 08 15.1	+1.9
PMRV	Marv??o	5.11	61	ePn	Pn	17 07 19.0	+1.7
PMRV				eSn	Sn	17 08 15.5	-0.9
PMRV				A	A	17 08 23.4	
	comp=N,3.6nm,0.4s						
PMRV	Marv??o	5.11	61	P	Pn	17 07 19.0	+1.7
PMRV				S	Sn	17 08 15.5	-0.9
	comp=N,3.6nm,0.4s						
EBAD	Badajoz	5.14	69	P	Pn	17 07 18.7	+1.0
	comp=N,0.8nm,0.0s,SNR=7.9						
EBAD				S	Sn	17 08 15.3	-1.8
	comp=N,1.2nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.21	81	P	Pn	17 07 21.1	+2.3
	comp=N,0.5nm,0.1s,SNR=7.9						
EMIN				S	Sn	17 08 17.9	-1.1
	comp=N,3.0nm,0.2s,SNR=7.9						
PCBR	Castelo Branco	5.24	57	ePn	Pn	17 07 21.4	+2.3
PCBR	Castelo Branco	5.24	57	P	Pn	17 07 21.4	+2.3
PVIS	Viseu	5.48	47	ePn	Pn	17 07 24.2	+1.8
PVIS				eSn	Sn	17 08 24.2	-1.3
PVIS				A	A	17 08 28.6	
	comp=N,4.2nm,0.3s						
PVIS	Viseu	5.48	47	P	Pn	17 07 24.2	+1.8
PVIS				S	Sn	17 08 24.2	-1.3
	comp=N,2.1nm,0.3s						
MTE	Manteigas	5.50	51	eSn	Sn	17 08 25.6	-0.4
MTE	Manteigas	5.50	51	S	Sn	17 08 25.6	-0.4
SFS	San Fernando	5.62	94	P	Pn	17 07 24.1	-0.2
SFS				S	Sn	17 08 25.7	-3.3
ESPR	Espera	5.86	90	P	Pn	17 07 29.3	+1.7
	comp=N,1.4nm,0.2s,SNR=7.9						
ESPR				S	Sn	17 08 35.2	+0.4
	comp=N,4.0nm,0.2s,SNR=7.9						
POLO	Lamas de Olo	5.97	43	ePn	Pn	17 07 30.3	+1.0
POLO				eSn	Sn	17 08 35.1	-2.6
POLO				A	A	17 09 05.1	
	comp=N,0.9nm,0.6s						
POLO	Lamas de Olo	5.97	43	P	Pn	17 07 30.3	+1.0
POLO				S	Sn	17 08 35.1	-2.6
	comp=N,0.9nm,0.6s						
PCAB	Cabril	6.09	39	eSn	Sn	17 08 37.9	-2.7
PCAB	Cabril	6.09	39	S	Sn	17 08 37.9	-2.7
EZAM	Zamans	6.12	33	P	Pn	17 07 31.3	+0.2
	comp=N,1.1nm,0.2s,SNR=7.9						
EZAM				S	Sn	17 08 35.3	-5.8
	comp=N,2.1nm,0.1s,SNR=7.9						
PGAV	Gavieira, Arco	6.16	36	ePn	Pn	17 07 32.9	+1.0
PGAV				eSn	Sn	17 08 38.8	-3.7
PGAV				A	A	17 08 42.4	
	comp=N,2.3nm,0.2s						
PGAV	Gavieira, Arco	6.16	36	P	Pn	17 07 32.9	+1.0
PGAV				S	Sn	17 08 38.8	-3.7
	comp=N,2.3nm,0.2s						
ELOB	Lobios	6.19	38	P	Pn	17 07 33.8	+1.6
	comp=N,0.8nm,0.1s,SNR=7.9						
ELOB				S	Sn	17 08 38.7	-4.4
	comp=N,0.7nm,0.2s,SNR=7.9						
ECAB	El Cabril	6.23	79	P	Pn	17 07 34.1	+1.3
	comp=N,0.6nm,0.2s,SNR=7.9						
ECAB				S	Sn	17 08 41.5	-2.6
	comp=N,0.4nm,0.1s,SNR=7.9						

MVO	Moncorvo	6.27	48	ePn	Pn	17 07 34.8	+1.5
MVO				eSn	Sn	17 08 42.3	-2.7
MVO				A	A	17 08 43.7	
	comp=N,2.7nm,0.2s						
MVO	Moncorvo	6.27	48	P	Pn	17 07 34.1	+0.8
	comp=N,0.9nm,0.1s,SNR=7.9						
MVO				S	Sn	17 08 42.2	-2.7
	comp=N,1.5nm,0.1s,SNR=7.9						
EPLA	Plasencia	6.29	60	P	Pn	17 07 35.2	+1.6
	comp=N,0.6nm,0.1s,SNR=7.9						
EPLA				S	Sn	17 08 44.4	-1.2
	comp=N,1.1nm,0.2s,SNR=7.9						
SRHM	Skhour des Reh	6.33	135	P	Pn	17 07 35.6	+1.5
SRHM				S	Sn	17 08 42.3	-4.3
ZHG	ZHG	6.46	122	P	Pn	17 07 36.3	+0.4
ZHG				S	Sn	17 08 44.0	-5.8
EMAZ	Mazaricos	6.67	28	P	Pn	17 07 39.4	+0.6
	comp=N,2.6nm,0.1s,SNR=7.9						
EMAZ				S	Sn	17 08 46.8	-8.1
	comp=N,4.4nm,0.2s,SNR=7.9						
PBRG	Braganca	6.84	45	ePn	Pn	17 07 42.4	+1.2
PBRG	Braganca	6.84	45	P	Pn	17 07 42.4	+1.2
EADA	Adamuz	6.90	78	P	Pn	17 07 44.0	+2.1
	comp=N,0.4nm,0.1s,SNR=7.9						
EADA				S	Sn	17 08 59.6	-1.0
	comp=N,0.2nm,0.2s,SNR=7.9						
EAGO	Agolada(Pontev	6.91	33	P	Pn	17 07 42.3	+0.3
	comp=N,1.0nm,0.0s,SNR=7.9						
ECAL	Calabor	6.94	44	P	Pn	17 07 43.8	+1.3
	comp=N,1.1nm,0.2s,SNR=7.9						
ECAL				S	Sn	17 08 58.1	-3.4
	comp=N,0.5nm,0.3s,SNR=7.9						
OUK	Oukaimeden	7.33	142	P	Pn	17 07 48.5	+0.3
OUK				S	Sn	17 09 07.0	-4.7
PAB	San Pablo	7.35	68	P	Pn	17 07 51.0	+2.8
	comp=N,0.3nm,0.1s,SNR=7.9						
PAB				S	Sn	17 09 08.1	-3.6
	comp=N,0.1nm,0.2s,SNR=7.9						
TTIG	Tnine Tigouga,	7.62	148	P	Pn	17 07 49.9	-2.1
TTIG				S	Sn	17 09 11.4	-7.1
ESDC	Sonseca Array	7.67	68	P	Pn	17 07 54.7	+2.1
	comp=N,0.5nm,0.1s,baz=254,slow=13,SNR=5.7						
ESDC				S	Sn	17 09 18.2	-1.5
	baz=254,slow=23,SNR=7.9						
EPON	Pontenova	7.74	35	P	Pn	17 07 54.2	+0.8
	comp=N,0.5nm,0.2s,SNR=7.9						
EPON				S	Sn	17 09 14.4	-6.8
	comp=N,0.5nm,0.1s,SNR=7.9						
MD31	MD31	8.09	119	P	Pn	17 07 58.7	+0.4
MD31				S	Sn	17 09 24.9	-4.9
OUZM	OUZ	8.14	137	P	Pn	17 08 00.0	+0.9
OUZM				S	Sn	17 09 28.7	-2.7
MDT	Midelt	8.22	119	P	Pn	17 08 01.4	+1.2
MDT				S	Sn	17 09 28.3	-4.9
JBK	JBK	9.05	105	P	Pn	17 08 12.5	+0.9
JBK				S	Sn	17 09 48.0	-5.7

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*DJA **12** 17:13:04.2±0.4, 9°S±5°×10°9E±°, h10^{km}, M4.0/12, mb4.3/2, MLv3.9/12*
*IDC **12** 17:13:11.6±2.1, 8°.52S×109°.09E, h92^{km}±26^{km}, mb3.4/4, mb1 3.6/5, mb1mx3.2/32, mbtmp3.7/5, Error ellipse: s-maj=97.7km s-min=19.9km az=47.0*
ISC 12 17:13:04.9±1.1**, 9°.2S**±0°.1×**108°.58E**±0°.09**, h35^{km}, n23, σ1^{s}34**/22**, mb3.5**/4**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	1.38	355	P	Pn	17 13 27.0	-0.7
KPJI	Karang Pucung	1.86	11	P	Pn	17 13 34.1	-0.1
YOGI	Yogyakarta	2.17	52	P	Pn	17 13 37.2	-1.3
UGM	Wanagama	2.29	57	P	Pn	17 13 39.4	-0.9
CNJI	Cibinong	2.34	322	P	Pn	17 13 41.9	+1.1
LEM	Lembang	2.51	338	P	Pn	17 13 45.5	+2.0
	11nm,0.3s,baz=154,slow=9.1,SNR=15						
LEM				S	Sn	17 14 15.1	+2.1
	18nm,0.3s,baz=22,slow=16,SNR=6.9						
LEM	Lembang	2.51	338	P	Pn	17 13 45.3	+1.9
WOJI	Wonogiri, Jawa	2.67	61	P	Pn	17 13 44.0	-1.4
PCJI	Pacitan	2.75	70	P	Pn	17 13 46.0	-0.5
SMRI	Semarang	2.80	41	P	Pn	17 13 47.6	+0.4
SKJI	Sukabumi	2.94	317	P	Pn	17 13 49.5	+0.4
UWJI	Ujung Watu	3.60	41	P	Pn	17 13 57.5	-0.8
CGJI	Cibinong	3.82	311	P	Pn	17 14 01.6	+0.4
GMJI	Gumukmas	4.89	80	P	Pn	17 14 16.6	+0.6
JAGI	Jajag, Banyuwa	5.55	83	P	Pn	17 14 25.8	+0.7
	0.3nm19nm,0.7s						
TWSI	Taliwang, Sumb	8.22	88	P	Pn	17 15 02.8	+1.1
WRA	Warramunga Arr	27.10	116	P	P	17 18 44.9	+0.2
	0.7nm,0.5s,baz=290,slow=11,SNR=22						
ASAR	Alice Springs	28.18	124	P	P	17 18 54.7	+0.4
	0.2nm,0.6s,baz=302,slow=7.8,SNR=7.9						
ASAR				PcP	PcP	17 22 07.5	-0.3
	0.1nm,0.5s,baz=302,slow=2.0,SNR=5.5						
H08S2	Diego Garcia H	35.72	270	T	T	17 57 54.2	
	baz=94						
H08S3	Diego Garcia H	35.73	270	T	T	17 57 59.8	
	baz=94						
H08S1	Diego Carcia H	35.74	270	T	T	17 58 02.8	
	baz=94						
STKA	Stephens Creek	38.04	131	P	P	17 20 21.6	+1.5
	3.5nm,0.5s,baz=313,slow=7.9,SNR=12						
MKAR	Makanchi Array	60.45	340	P	P	17 23 07.9	-3.1
	0.2nm,0.5s,baz=156,slow=7.3,SNR=2.3						

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*NEIC **12** 17:24:34.9±0.9, 37°.15N±0°.02×98°.01W±0°.02, h7^{km}±4^{km}, mb_Lg2.3/5, ML2.2/23, Error ellipse: s-maj=2.7km s-min=2.0km az=152.0*
NEIC 12 17:24:35.1±1.1**, 37°.15N**±0°.01×**98°.00W**±0°.02**, h5^{km}**±1^{km}**, Error ellipse: s-maj=3.1km s-min=2.2km az=336.0, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN08	Anthony NE Sta	0.08	17	Pg	Pg	17 24 37.0	+0.1
KAN08				Sg	Sg	17 24 38.3	+0.2
KAN10	Anthony SW Sta	0.08	250	Pg	Pg	17 24 36.9	0.0
KAN10				Sg	Sg	17 24 38.2	0.0
KAN16	Harper SW Stat	0.09	325	Pg	Pg	17 24 37.1	0.0
KAN16				Sg	Sg	17 24 38.5	+0.1
KAN05	Bluff City Nor	0.11	113	Pg	Pg	17 24 37.7	+0.3
KAN05				Sg	Sg	17 24 39.5	+0.6
KAN12	Harper NE Stat	0.15	0	Pg	Pg	17 24 38.1	+0.1
KAN12				Sg	Sg	17 24 40.5	+0.4
KAN06	Argonia West S	0.15	49	Pg	Pg	17 24 38.1	+0.1
KAN06				Sg	Sg	17 24 40.4	+0.3
KAN01	Argonia South	0.19	89		Pg	17 24 39.1	+0.2
KAN01				Sg	Sg	17 24 42.1	+0.7
KAN14	Manchester OK	0.20	171	Pg	Pg	17 24 39.1	+0.2
KAN17	Caldwell West	0.22	120	Pg	Pg	17 24 39.6	+0.3
KAN17				Sg	Sg	17 24 42.7	+0.5
KAN09	Caldwell North	0.30	93	Pg	Pg	17 24 41.0	0.0
KAN09				Sg	Sg	17 24 44.5	-0.5
GC02	Grant County #	0.32	159	Pg	Pg	17 24 41.2	0.0
GC02				Sg	Sg	17 24 45.5	+0.1
OK032	Salt Plains WL	0.39	206	Pg	Pg	17 24 42.4	-0.1
OK032				Sg	Sg	17 24 47.9	+0.4
KAN13	South Haven SW	0.44	108	Pg	Pg	17 24 43.4	-0.2
KAN13				Sg	Sg	17 24 49.5	+0.2
CROK	Carrier	0.65	179	Pg	Pg	17 24 47.1	-0.4
CROK				Sg	Sg	17 24 56.0	+0.2
BLOK	Blackwell	0.74	122	Pg	Pg	17 24 47.9	-1.4
U32A	Winter Ranch,	1.11	227	Pg	Pg	17 24 55.5	-0.9
T35A	Sooner Cattle	1.21	101	Pg	Pg	17 24 57.5	-0.8
T35A				Sg	Sg	17 25 13.4	-0.7
R32A	Long Quarter,	1.39	336	Pn	Pn	17 25 00.4	-0.8
OK029	Liberty Lake	1.42	162	Pn	Pn	17 25 00.5	-1.1
QUOK	Quay	1.43	133	Pn	Pn	17 25 01.0	-0.6
OK031	S. Brethren Rd	1.52	142	Pn	Pn	17 25 02.4	-0.5
OK034	N. Norfolk Rd.	1.54	137	Pn	Pn	17 25 02.4	-0.8
OK030	Cody Creek RV	1.56	141	Pn	Pn	17 25 03.9	+0.3
OK025	Westminster Rd	1.66	161	Pn	Pn	17 25 04.4	-0.4
CBKS	Cedar Bluff	2.15	321	Pn	Pn	17 25 09.9	-1.8
TUL1	Leonard	2.17	124	Pn	Pn	17 25 10.7	-1.1
W35A	Tecumseh	2.19	155	Pn	Pn	17 25 09.6	-2.6
KSU1	Kansas State U	2.23	29	Pn	Pn	17 25 10.3	-2.4
X37A	Clayton	3.33	139	Pn	Pn	17 25 26.9	-1.0
HHAR	Hobbs	3.38	104	Pn	Pn	17 25 26.0	-2.4
S39A	Bolivar	3.76	80	Pn	Pn	17 25 34.0	+0.2
Z35A	Perchaven, San	3.86	171	Pn	Pn	17 25 34.0	-1.1
U40A	Yellville	4.21	99	Pn	Pn	17 25 40.2	+0.3
MIAR	Mount Ida	4.43	125	Pn	Pn	17 25 41.8	-1.2
MGMO	Mountain Grove	4.58	88	Pn	Pn	17 25 43.5	-1.5
X40A	Basin Creek Fa	4.97	121	Pn	Pn	17 25 47.6	-2.8
L34A	Svendsen Farm,	4.97	14	IAmb_Lg		17 27 22.9	
	comp=Z,8.4nm,0.9s						
CCM	Cathedral Cave	5.44	78	Pn	Pn	17 25 56.1	-0.6
FVM	French Village	6.07	80	IAmb_Lg		17 27 49.5	
	comp=Z,4.9nm,1.1s						
HKT	Hockley	7.41	165	IAmb_Lg		17 28 50.2	
	comp=Z,2.2nm,0.8s						

WEL 12 17:31:27.5±1.2**, 33°S**±18°×**17°9W**±4°8**, h94^{km}**±79^{km}**, M4.2**/6**, mB4.9**/6**, ML4.6**/8**, MLv4.3**/6**, Mw(mB)4.2**/6**, Error ellipse: s-maj=0.1km s-min=0.0km az=110.6, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.85	17	P	Pn	17 32 26.2	+1.7
GLKZ				S	Sn	17 33 07.3	-1.4
MXZ	Matakaoa Point	5.02	203	P	Pn	17 32 41.7	+1.3
MXZ				S	Sn	17 33 37.5	+0.4
WMGZ	Waiomatatini S	5.22	201	P	Pn	17 32 44.5	+1.4
WMGZ				S	Sn	17 33 39.0	-2.9
HAZ	Te Kaha	5.38	206	P	Pn	17 32 45.6	+0.4
HAZ				S	Sn	17 33 47.6	+1.9
PKGZ	Pakihiroa	5.39	203	P	Pn	17 32 46.1	+0.6
PUZ	Puketiti	5.50	201	P	Pn	17 32 48.2	+1.3
PUZ				S	Sn	17 33 49.1	+0.2
RUGZ	Raukumara Rang	5.60	206	P	Pn	17 32 50.3	+1.9
RUGZ				S	Sn	17 33 53.0	+1.6
URZ	Urewera	6.08	208	P	Pn	17 32 53.0	-1.6
PRGZ	Paritu Road	6.40	201	P	Pn	17 33 00.2	+1.1
SNGZ	Shannon Statio	6.45	205	P	Pn	17 32 57.3	-2.5
MTHZ	Maungataniwha	6.70	207	P	Pn	17 33 04.0	+0.8
KWHZ	Kaweka Forest	7.35	207	P	Pn	17 33 12.1	0.0
KWHZ				S	Sn	17 34 33.7	-0.3
KAHZ	Kahuranaki	7.51	204	P	Pn	17 33 11.5	-2.8

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*MOS **12** 17:34:00.1±1.5, 56°.08N×113°.89E, h7^{km}, mb3.5/1, Error ellipse: s-maj=14.8km s-min=10.2km az=56.6*
*BYKL **12** 17:34:00.6±0.1, 56°.06N×113°.94E, h7^{km}±3^{km}*
*IDC **12** 17:34:08.6±9.1, 56°.05N×112°.64E, h0^{km}, mb3.0/1, mb1 3.2/3, mb1mx3.0/45, mbtmp3.2/3, ML3.0/2, MS2.6/1, Ms1 2.7/1, ms1mx2.2/11, Error ellipse: s-maj=118.2km s-min=41.0km az=86.0*
ISC 12 17:34:00.6±0.6**, 56°.06N**±0°.03×**113°.91E**±0°.02**, h10^{km}, n45, σ2^{s}72**/92**, 3C-3D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.20	286	⇑iPg	Pg	17 34 04.6	-0.3
SVKR				eSg	Sg	17 34 08.2	+0.4
SVKR				Pmax			
	935nm,0.1s						
SVKR				Smax			
	15μm,0.7s						
SVKR	Severomuysk	0.20	286	⇑iPG	Pg	17 34 04.6	-0.3
SVKR				e		17 34 08.2	
SVKR				pmax	pmax		
	comp=Z,790nm,0.2s						
SVKR				smax	smax		
	comp=N,15μm,0.8s						
UKT	Uakit	0.60	196	⇑iPg	Pg	17 34 11.2	-0.9
UKT				eSg	Sg	17 34 18.9	-1.1
UKT				Pmax			
	comp=N,131nm,0.6s						
UKT				Smax			
	comp=N,662nm,0.9s						
NLYR	Nelyaty	1.09	66	⇓iPg	Pg	17 34 19.9	-1.6
NLYR				ePb	Pn	17 34 22.3	+0.4
NLYR				eSg	Sg	17 34 34.6	-1.1
NLYR				eSb	Sn	17 34 38.6	+1.5
NLYR				e		17 34 41.1	
NLYR				max			
	comp=N,325nm,0.4s						
NLYR				max			
	comp=N,1μm,0.9s						
NLYR	Nelyaty	1.09	66	⇓iPG	Pg	17 34 19.8	-1.7
NLYR				e		17 34 34.5	
NLYR				pmax	pmax		
	comp=Z,311nm,0.6s						
NLYR				smax	smax		
	comp=N,1μm,1.0s						
YOA	Uoyan	1.23	274	ePg	Pn	17 34 23.0	-0.8
YOA				ePb	Pg	17 34 24.9	+0.8
YOA				eSg	Sb	17 34 40.0	+0.3
YOA				e		17 34 46.9	
YOA				max			
	comp=N,453nm,0.3s						
YOA				max			
	comp=N,4μm,0.6s						
YOA	Uoyan	1.23	274	ePG	Pn	17 34 23.2	-0.6
YOA				e		17 34 40.1	
YOA				pmax	pmax		
	comp=Z,84nm,0.3s						
YOA				smax	smax		
	comp=N,4μm,0.5s						
KMO	Kumora	1.53	265	ePg	Pn	17 34 28.3	+0.3
KMO				ePb	Pb	17 34 29.5	+0.5
KMO				eSg	Sb	17 34 48.7	+0.2
KMO				e		17 34 51.9	
KMO				max			
	comp=N,603nm,0.4s						
KMO				max			
	comp=N,2μm,1.3s						
KMO	Kumora	1.53	265	ePG	Pn	17 34 28.4	+0.4
KMO				e		17 34 48.2	
KMO				pmax	pmax		
	comp=Z,603nm,0.4s						
KMO				smax	smax		
	comp=N,2μm,1.0s						
BOD	Bodaibo	1.76	2	ePn	Pn	17 34 31.5	+0.4
BOD				ePg	Pb	17 34 32.1	-0.9
BOD				eSg	Sn	17 34 54.5	+0.9
BOD				e		17 34 57.4	
BOD				Pmax			
	comp=N,120nm,0.6s						
BOD				max			
	comp=N,718nm,0.6s						
BOD	Bodaibo	1.76	2	ePN	Pn	17 34 31.9	+0.8
BOD				e		17 34 54.5	
BOD				pmax	pmax		
	comp=Z,121nm,0.5s						
BOD				smax	smax		
	comp=E,719nm,0.5s						
YLYR	Ulyunkhan	1.96	234	ePn	Pn	17 34 35.1	+1.2
YLYR				ePg	Pb	17 34 36.2	-0.2
YLYR				e		17 34 37.3	
YLYR				eSg	Sb	17 35 02.2	+1.3
YLYR				max			
	comp=E,90nm,0.5s						
YLYR				Smax			
	comp=E,515nm,0.4s						
YLYR	Ulyunkhan	1.96	234	ePN	Pn	17 34 35.6	+1.7
YLYR				e		17 34 37.1	
YLYR				eS	Sb	17 35 00.5	-0.4
YLYR				e		17 35 02.2	
YLYR				pmax	pmax		
	comp=Z,90nm,0.5s						
YLYR				smax	smax		
	comp=E,519nm,0.3s						
NIZ	Nizh Angarsk	2.48	265	ePn	Pn	17 34 42.0	+1.1
NIZ				ePg	Pb	17 34 45.5	+0.4
NIZ				eSn	Sn	17 35 11.4	+0.2
NIZ				eSg	Sb	17 35 17.2	+1.6
NIZ				e		17 35 18.5	
NIZ				Pmax			
	comp=E,39nm,1.0s						
NIZ				max			
	comp=E,577nm,0.5s						
NIZ	Nizh Angarsk	2.48	265	ePN	Pn	17 34 42.7	+1.8
NIZ				e		17 34 45.9	
NIZ				e		17 35 18.2	
NIZ				pmax	pmax		
	comp=Z,42nm,0.5s						
NIZ				smax	smax		
	comp=N,577nm,0.5s						
CRS	Chara	2.56	69	ePn	Pn	17 34 42.9	+0.8
CRS				ePg	Pb	17 34 46.9	+0.3
CRS				eSn	Sn	17 35 13.7	+0.3
CRS				eSg	Sb	17 35 20.3	+2.2
CRS				eSgSg	SnSn	17 35 27.4	+3.4
CRS				Pmax			
	comp=N,404nm,1.0s						
CRS				Smax			
	comp=N,326nm,1.2s						
CRS	Chara	2.56	69	ePN	Pb	17 34 46.5	-0.1
CRS				e		17 35 20.1	
CRS				pmax	pmax		
	comp=Z,156nm,0.9s						
CRS				smax	smax		
	comp=E,181nm,1.6s						
SYVR	Suvo	3.30	225	ePn	Pn	17 34 53.0	+0.6
SYVR				ePg	Pb	17 34 59.8	+0.6
SYVR				eSg	Sb	17 35 42.3	+2.9
SYVR				eSgSg	Sg	17 35 50.1	+3.6
SYVR				Pmax			
	comp=E,41nm,1.5s						
SYVR				Smax			
	comp=E,159nm,0.6s						
SYVR	Suvo	3.30	225	ePN	Pn	17 34 52.9	+0.6
SYVR				eS	Sb	17 35 43.2	+3.8
SYVR				smax	smax		
	comp=N,165nm,0.6s						
KHNR	Khani	3.47	73	ePn	Pn	17 34 55.6	+0.9
KHNR				ePg	Pb	17 35 02.5	+0.3
KHNR				eSn	Sn	17 35 35.6	-0.3
KHNR				eSg	Sb	17 35 47.1	+2.7
TUP	Tupik	3.83	113	ePn	Pn	17 34 59.7	+0.1
TUP				ePg	Pb	17 35 09.4	+1.2
TUP				eSn	Sn	17 35 43.8	-0.8
TUP				eSg	Sb	17 35 58.3	+3.7
TUP				e		17 36 03.2	
TUP				Pmax			
	comp=N,36nm,0.6s						
TUP				max			
	comp=N,325nm,0.7s						
TUP	Tupik	3.83	113	⇓iPN	Pn	17 34 59.7	+0.1
TUP				e		17 35 08.8	
TUP				eS	Sn	17 35 43.8	-0.8
TUP				e		17 35 58.2	
TUP				pmax	pmax		
	comp=Z,35nm,0.6s						
TUP				smax	smax		
	comp=E,326nm,0.7s						
CIT	Chita	4.05	183	ePN	Pn	17 35 04.0	+1.3
CIT				e		17 35 13.9	
CIT				eS	Sn	17 35 49.9	-0.3
CIT				e		17 36 05.0	
CIT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CIT				smax	smax		
	comp=E,125nm,1.5s						
MXMB	Maximikha	4.11	229	ePg	Pb	17 35 14.3	+1.4
MXMB				eSn	Sn	17 35 50.7	-0.7
MXMB				eSg	Sg	17 36 08.0	-4.3
OGRR	Ongureny	4.38	239	ePn	Pn	17 35 09.1	+2.0
OGRR				ePg	Pb	17 35 19.9	+2.3
OGRR				eSn	Sn	17 35 58.7	+0.6
OGRR				eSg	Sg	17 36 17.1	-4.0
OGRR				Pmax			
	comp=E,33nm,2.0s						
OGRR				Smax			
	comp=E,92nm,1.1s						
OGRR	Ongureny	4.38	239	ePN	Pn	17 35 10.0	+2.9
OGRR				e		17 35 21.4	
OGRR				e		17 36 17.3	
OGRR				pmax	pmax		
	comp=Z,13nm,0.8s						
OGRR				smax	smax		
	comp=E,92nm,1.3s						
KELR	Kotokel	4.75	228	eSg	Sg	17 36 27.6	-5.2
TRG	Tyrgan	5.52	236	ePn	Pn	17 35 24.8	+2.1
TRG				ePg	Pb	17 35 39.9	+3.0
TRG				eSn	Sn	17 36 24.1	-2.1
TRG				eSg	Sg	17 36 50.8	-6.7
TRG				Pmax			
	comp=E,10.0nm,0.9s						
TRG				Smax			
	comp=E,42nm,1.0s						
UUDB	Ulan-Yde	5.59	224	ePg	Pb	17 35 41.5	+3.3
UUDB				eSn	Sn	17 36 26.4	-1.6
UUDB				eSg	Sg	17 36 53.7	-6.2
UUDB				Pmax			
	comp=E,39nm,1.7s						
UUDB				Smax			
	comp=E,150nm,1.1s						
FFNB	Fofonovo	5.82	229	ePg	Pb	17 35 45.1	+3.0
FFNB				eSg	Sg	17 37 00.9	-6.3
HRMR	Khuramsha	6.05	226	ePg	Pb	17 35 50.3	+4.2
HRMR				eSn	Sn	17 36 39.4	0.0
HRMR				eSg	Sg	17 37 08.4	-6.3
HRMR				Pmax			
	comp=E,15nm,0.6s						
HRMR				Smax			
	comp=E,160nm,1.2s						
IENR	Iengra	6.12	84	ePn	Pn	17 35 31.2	+0.1
IENR				ePg	Pb	17 35 49.5	+2.2
IENR				eSn	Sn	17 36 39.1	-2.1
IENR				eSg	Sg	17 37 09.8	-7.2
BGT	Bolshoye Golou	6.42	235	eSg	Sg	17 37 20.4	-6.1
BGT				Smax			
	comp=E,47nm,1.4s						
KPC	Khapcheranga	6.44	189	ePn	Pn	17 35 35.2	-0.2
KPC				ePg	Pb	17 35 56.6	+4.0
KPC				eSn	Sn	17 36 46.8	-2.1
KPC				eSg	Sg	17 37 20.0	-7.0
KPC				Pmax			
	comp=E,3.0nm,0.3s						
KPC				Smax			
	comp=E,65nm,1.1s						
LSTR	Listvyanka	6.80	236	eSg	Sg	17 37 30.6	-8.2
LSTR				Smax			
	comp=E,78nm,1.4s						
ARS	Arshan	7.94	243	eSg	Sg	17 38 06.3	-8.7
ARS				Smax			
	comp=E,135nm,1.0s						
ZAK	Zakamensk	8.54	233	eSg	Sg	17 38 25.5	-8.9
ZAK				Smax			
	comp=E,35nm,1.3s						
MOY	Mondy	8.81	245	eSg	Sg	17 38 32.8	-10
MOY				Smax			
	comp=E,60nm,1.8s						
ORL	Orlik	8.96	253	ePn	Pn	17 36 10.9	+0.8
ORL				ePg	Pg	17 36 42.9	-9.2
ORL				eSn	Sn	17 37 48.3	-2.8
ORL				eSg	Sg	17 38 38.7	-9.3
ORL				Pmax			
	comp=E,10.0nm,1.1s						
ORL				Smax			
	comp=E,55nm,1.5s						
SONM	Songino Array	9.45	212	Pn	Pn	17 36 22.2	+5.5
	comp=E,0.1nm,0.3s,baz=26,slow=11,SNR=1.9						
SONM				Pg		17 36 52.6	
	comp=E,0.1nm,0.3s,baz=30,slow=15,SNR=3.8						
SONM				Lg	Lg	17 38 57.2	
	comp=E,0.6nm,0.3s,baz=24,slow=28,SNR=8.6						
KNGR	Kungurtug, Tuv	11.21	248	eSg		17 39 48.0	
ZALV	Zalesovo Beam	16.77	275	Pn	Pn	17 37 56.1	+0.9
	comp=E,0.4nm,0.3s,baz=87,slow=13,SNR=2.1						
MKAR	Makanchi Array	21.61	258	P	P	17 38 52.0	+1.5
	comp=E,0.4nm,0.5s,baz=56,slow=8.4,SNR=5.7						
MKAR	Makanchi Array	21.61	258	P	P	17 38 52.0	+1.5
NOA	NORSAR Array B	48.45	321	LR	LR	18 07 06.1	
	comp=E,6.6nm,21.1s,baz=345,slow=41						

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*TUL **12** 17:40:40.9±1.2, 36°.45N±0°.01×97°.12W±0°.01, h7^{km}±5^{km}, ML3.4, mb_Lg3.5/99(NEIC), Error ellipse: s-maj=2.1km s-min=1.4km az=218.0*
*NEIC **12** 17:40:40.8±1.4, 36°.44N±0°.01×97°.14W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.6km az=242.0*
*ANF **12** 17:40:41.3±0.2, 36°.43N×97°.13W, h7^{km}, ML4.0/16, Error ellipse: s-maj=2.8km s-min=2.5km az=112.0*
*IDC **12** 17:40:41.8±2.9, 36°.36N×96°.86W, h0^{km}, mb3.3/1, mb1 3.5/4, mb1mx3.2/43, mbtmp3.1/4, ML3.8/2, Error ellipse: s-maj=37.0km s-min=17.6km az=92.0*
ISC 12 17:40:40.7±1.0**, 36°.44N**±0°.02×**97°.13W**±0°.02**, h6^{km}**±9^{km}**, n141, σ1^{s}04**/165**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLOK	Blackwell	0.33	349	Pg	Pg	17 40 47.6	+0.4

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BLOK                              Sg     Sg     17 40 51.5  0.0
QUOK  Quay              0.43 128  Pg     Pg     17 40 49.4 +0.3
QUOK                              Sg     Sg     17 40 55.2 +0.4
OK031 S. Brethren Rd    0.54 154  Pg     Pg     17 40 51.6 +0.5
OK031                             Sg     Sg     17 40 58.4 +0.2
OK034 N. Norfolk Rd.    0.55 141  Pg     Pg     17 40 51.7 +0.4
OK034                             Sg     Sg     17 40 58.9 +0.5
OK030 Cody Creek RV     0.58 151  Pg     Pg     17 40 52.3 +0.4
OK030                             Sg     Sg     17 40 59.8 +0.2
KAN13 South Haven SW    0.64 334         Pg     17 40 53.3 +0.3
KAN13                             Sg     Sg     17 41 02.1 +0.8
CROK  Carrier           0.69 276  Pg     Pg     17 40 54.3 +0.4
CROK                              Sg     Sg     17 41 03.5 +0.6
OK029 Liberty Lake      0.69 202  Pg     Pg     17 40 54.4 +0.4
OK029                             Sg     Sb     17 41 04.2 -0.8
T35A  Sooner Cattle     0.69  46  Pg     Pg     17 40 54.1 +0.1
T35A                              Sg     Sg     17 41 02.9 -0.1
T35B  Sooner Cattle     0.69  46  P      Pg     17 40 54.0  0.0
      baz=226,SNR=304
T35B                              S      Sg     17 41 03.0 -0.1
      baz=226
GC02  Grant County #    0.71 306  Pg     Pg     17 40 54.7 +0.2
GC02                              Sg     Sg     17 41 04.4 +0.6
OK005 Luther M Schoo    0.78 183         Pg     17 40 56.1 +0.4
OK005                             Sg     Sg     17 41 06.8 +0.9
KAN17 Caldwell West     0.79 320         Pg     17 40 56.1 +0.2
KAN17                             Sg     Sg     17 41 06.7 +0.6
KAN09 Caldwell North    0.80 331         Pg     17 40 56.2 +0.1
KAN09                             Sg     Sg     17 41 06.7 +0.3
KAN14 Manchester OK     0.84 308         Pg     17 40 57.0 +0.1
KAN14                             Sg     Sg     17 41 07.9  0.0
BCOK  Bluff Creek, N    0.87 206         Pg     17 40 57.6 +0.2
BCOK                              Sg     Sg     17 41 09.4 +0.7
OK025 Westminster Rd    0.87 191  Pg     Pg     17 40 57.8 +0.3
OK025                             Sg     Sg     17 41 09.3 +0.6
KAN01 Argonia South     0.87 325         Pg     17 40 57.6 +0.1
KAN01                             Sg     Sg     17 41 08.9 +0.1
OK001 Jones High Sch    0.88 188  Pg     Pg     17 40 58.0 +0.3
OK001                             Sg     Sb     17 41 10.4 -0.1
OK009 Oakdale Elemen    0.89 195  Pg     Pg     17 40 58.0 +0.2
KAN05 Bluff City Nor    0.89 319         Pg     17 40 57.8 -0.1
KAN05                             Sg     Sg     17 41 10.0 +0.5
OK032 Salt Plains WL    0.94 293  Pg     Pg     17 40 58.9 +0.1
OK032                             Sg     Sg     17 41 10.5 -0.5
KAN06 Argonia West S    1.00 325         Pg     17 40 59.7 -0.2
KAN06                             Sg     Sg     17 41 13.1 +0.3
OK011 Prague            1.02 159  Pg     Pg     17 40 60.0 -0.3
KAN10 Anthony SW Sta    1.03 312  Pg     Pg     17 41 00.4 -0.1
KAN10                             Sg     Sg     17 41 13.6 -0.3
KAN08 Anthony NE Sta    1.03 320         Pg     17 41 00.5 -0.1
KAN08                             Sg     Sb     17 41 14.6 -0.2
OKCFA Oklahoma City     1.05 194         Pg     17 41 00.9  0.0
OKCFA                             Sg     Sg     17 41 14.9 +0.4
OKCFA Oklahoma City     1.05 194  P      Pg     17 41 00.9  0.0
      baz=14,SNR=38
OKCFA                             S      Sb     17 41 15.4 +0.1
      baz=14
OKCSW OKLAHOMA CITY     1.06 194         Pg     17 41 01.1  0.0
KAN16 Harper SW Stat    1.08 317         Pg     17 41 01.3 -0.3
KAN16                             Sg     Sg     17 41 15.5 -0.1
KAN12 Harper NE Stat    1.10 321         Pg     17 41 01.8 -0.1
KAN12                             Sg     Sg     17 41 15.8 -0.4
FNO   Franklin          1.20 190         Pg     17 41 03.3 -0.4
FNO                               Sg     Sg     17 41 19.4 +0.2
TUL1  Leonard           1.21 115  Pg     Pg     17 41 03.3 -0.6
TUL1                              Sg     Sg     17 41 19.3 -0.2
TUL1  Leonard           1.21 115  P      Pg     17 41 03.3 -0.6
      baz=297,SNR=98
TUL1                              S      Sg     17 41 19.6 +0.1
      baz=297
W35A  Tecumseh          1.30 171         Pn     17 41 04.5 -0.9
W35A                              Sg     Sg     17 41 21.8 -0.7
U32A  Winter Ranch,     1.51 268         Pn     17 41 08.6 +0.4
U32A                              Sn     Sn     17 41 28.4 +0.2
U32A                              IAmb_Lg       17 41 30.4
      comp=Z,195nm,1.1s
U32A  Winter Ranch,     1.51 268  P      Pn     17 41 08.7 +0.4
      baz=87,SNR=66
U32A                              S      Sg     17 41 29.3 +0.2
      baz=87
X34A  Smith Ranch, M    1.92 197         Pb     17 41 15.4 -0.7
X34A                              IAmb_Lg       17 41 43.8
      comp=Z,306nm,1.0s
U38A  Gravette          2.22  89  Pn     Pn     17 41 18.3 +0.3
U38A  Gravette          2.22  89  P      Pn     17 41 19.1 +1.1
      baz=271,SNR=162
X37A  Clayton           2.34 142  Pn     Pn     17 41 19.4 -0.3
X37A                              IAmb_Lg       17 41 59.7
      comp=Z,241nm,0.9s
X37A  Clayton           2.34 142  P      Pn     17 41 20.9 +1.2
      baz=323,SNR=55
X37A                              S      Sb     17 41 50.9 -1.5
      baz=323
R32A  Long Quarter,     2.34 328         Pn     17 41 19.0 -0.8
R32A                              IAmb_Lg       17 41 54.9
      comp=Z,180nm,1.0s
R32A  Long Quarter,     2.34 328  S      Sn     17 41 50.2 +1.3
      baz=147
LOOK  Love County       2.44 181         Pn     17 41 20.8 -0.3
HHAR  Hobbs             2.58  93         Pn     17 41 23.0  0.0
HHAR  Hobbs             2.58  93  P      Pn     17 41 24.5 +1.4
      baz=275
KSU1  Kansas State U    2.69   9  Pn     Pn     17 41 25.5 +1.0
KSU1  Kansas State U    2.69   9  P      Pn     17 41 25.8 +1.2
      baz=189,SNR=14
W39A  Magazine          2.99 113         Pn     17 41 29.4 +0.7
W39A                              IAmb_Lg       17 42 23.8
      comp=Z,218nm,0.8s
Z35A  Perchaven, San    3.10 182         Pn     17 41 29.1 -1.1
CBKS  Cedar Bluff       3.15 320         Pn     17 41 29.9 -0.9
S39A  Bolivar           3.29  67         Pn     17 41 31.8 -1.1
S39A  Bolivar           3.29  67  P      Pn     17 41 33.8 +0.9
      baz=249,SNR=34
U40A  Yellville         3.45  90         Pn     17 41 34.6 -0.5
U40A                              IAmb_Lg       17 42 29.2
      comp=Z,85nm,0.8s
U40A  Yellville         3.45  90  P      Pn     17 41 35.6 +0.6
      baz=273,SNR=24
U40A                              P      Pn     17 41 35.6 +0.6
      baz=273,SNR=24
MIAR  Mount Ida         3.46 122         Pn     17 41 35.3 +0.1
MIAR                              IAmb_Lg       17 42 37.7
      comp=Z,113nm,0.9s
MIAR  Mount Ida         3.46 122  P      Pn     17 41 36.0 +0.9
      baz=304,SNR=20
Z38A  Mt. Pleasant      3.63 150         Pn     17 41 35.7 -1.7
MGMO  Mountain Grove    3.97  78         Pn     17 41 43.4 +1.2
X40A  Basin Creek Fa    4.01 118         Pn     17 41 41.5 -1.2
X40A                              IAmb_Lg       17 42 52.4
      comp=Z,138nm,0.8s
X40A  Basin Creek Fa    4.01 118  P      Pn     17 41 43.6 +1.0
      baz=300,SNR=13
X40A                              P      Pn     17 41 43.6 +1.0
      baz=300,SNR=13
AMTX  Amarillo          4.01 249  Pn     Pn     17 41 41.9 -0.9
AMTX                              IAmb_Lg       17 42 47.7
      comp=Z,73nm,0.9s
FCAR  Ozark Folk Cen    4.09  96         Pn     17 41 42.0 -1.8
FCAR                              IAmb_Lg       17 42 52.9
      comp=Z,74nm,0.9s
WHAR  Wooly Hollow      4.10 105  Pn     Pn     17 41 43.3 -0.6
WHAR                              IAmb_Lg       17 42 50.8
      comp=Z,179nm,1.1s
W41B  Gary Mavity, V    4.17 106  P      Pn     17 41 45.3 +0.5
      baz=289,SNR=8.0
P38A  Dawn              4.27  41         Pn     17 41 44.6 -1.6
P38A                              IAmb_Lg       17 42 58.2
      comp=Z,153nm,0.7s
WLAR  White Oak Lake    4.29 129  Pn     Pn     17 41 45.4 -1.1
WLAR                              IAmb_Lg       17 43 03.2
      comp=Z,76nm,0.9s
R40A  Maddies Statio    4.29  63         Pn     17 41 46.8 +0.2
R40A                              IAmb_Lg       17 42 54.9
      comp=Z,96nm,0.9s
R40A  Maddies Statio    4.29  63  P      Pn     17 41 47.2 +0.6
      baz=246,SNR=45
N33A  J Bar K, Exete    4.30 357         Pn     17 41 47.3 +0.6
N33A                              IAmb_Lg       17 43 00.4
      comp=Z,83nm,1.0s
ABTX  Abilene, Hawle    4.33 209         Pn     17 41 46.8 -0.3
ABTX                              IAmb_Lg       17 43 01.4
      comp=Z,61nm,0.8s
WHTX  Lake Whitney,     4.44 184  Pn     Pn     17 41 45.7 -2.9
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237A  Washetta, Mont    4.56 166  Pn     Pn     17 41 51.0 +0.8
237A                              IAmb_Lg       17 43 14.9
      comp=Z,77nm,1.1s
237A  Washetta, Mont    4.56 166  P      Pn     17 41 51.0 +0.8
      baz=347
N35A  Tabor             4.57  14         Pn     17 41 51.1 +0.8
Z41A  Richland Creek    4.77 130  P      Pn     17 41 53.7 +0.6
      baz=313
Z41A                              P      Pn     17 41 53.7 +0.6
      baz=313
LCAR  Lake Charles      4.85  93         Pn     17 41 54.9 +0.8
LCAR                              IAmb_Lg       17 43 10.7
      comp=Z,81nm,0.9s
CCM   Cathedral Cave    4.97  69         Pn     17 41 56.4 +0.6
BGNE  Belgrade          5.03 351         Pn     17 41 55.2 -1.4
BGNE                              IAmb_Lg       17 43 23.3
      comp=Z,70nm,0.7s
BGNE  Belgrade          5.03 351  P      Pn     17 41 57.2 +0.6
      baz=170,SNR=7.2
KSCO  Kaye Shedlock'    5.06 302         Pn     17 41 58.3 +1.1
KSCO                              IAmb_Lg       17 43 34.2
      comp=Z,66nm,0.8s
CCAR  Cane Creek        5.06 118  Pn     Pn     17 41 55.2 -1.9
CCAR                              IAmb_Lg       17 43 28.1
      comp=Z,110nm,0.9s
P40A  Paris             5.07  51         Pn     17 41 55.2 -2.0
P40A                              IAmb_Lg       17 43 29.8
      comp=Z,111nm,0.8s
NATX  Nacogdoches       5.10 156         Pn     17 41 58.8 +1.2
N38A  Joes South For    5.31  34         Pn     17 42 01.6 +1.0
N38A                              IAmb_Lg       17 43 29.8
      comp=Z,143nm,0.8s
HBAR  Harrisburg        5.33  98  Pn     Pn     17 41 59.1 -1.6
PBMO  Poplar Bluff      5.40  84         Pn     17 42 00.0 -1.8
PBMO                              IAmb_Lg       17 43 34.0
      comp=Z,69nm,0.8s
L34A  Svendsen Farm,    5.55   6         Pn     17 42 01.4 -2.5
FVM   French Village    5.57  72         Pn     17 42 04.0 -0.2
FVM                               IAmb_Lg       17 43 38.2
      comp=Z,69nm,0.9s
LPAR  Lepanto           5.60  97  Pn     Pn     17 42 02.5 -2.0
LPAR                              IAmb_Lg       17 43 43.8
      comp=Z,103nm,0.8s
435B  Jarrell           5.65 184  IAmb_Lg       17 43 48.7
      comp=Z,62nm,0.8s
GNAR  Gosnell           5.77  93  IAmb_Lg       17 43 44.2
      comp=Z,117nm,0.8s
T25A  Trinidad          5.88 279  Pn     Pn     17 42 08.3 -0.2
T25A                              IAmb_Lg       17 43 52.7
      comp=Z,89nm,0.9s
SLM   Saint Louis       5.90  66  Pn     Pn     17 42 06.5 -2.2
OGNE  Ogallala          5.91 321         Pn     17 42 09.0 +0.2
OGNE                              IAmb_Lg       17 43 59.3
      comp=Z,47nm,0.8s
143A  Socs Landing,     6.02 127  IAmb_Lg       17 44 05.2
      comp=Z,45nm,0.8s
HENM  Henderson Moun    6.17  85  Pn     Pn     17 42 09.5 -2.9
LNXT  Lenox             6.18  91  Pn     Pn     17 42 09.6 -2.9
SCIA  State Center      6.25  28         Pn     17 42 13.6 +0.1
K31A  O'Neill           6.30 349         Pn     17 42 14.4 +0.2
K31A                              IAmb_Lg       17 44 05.3
      comp=Z,96nm,0.9s
JCT   Junction City     6.35 201         Pn     17 42 14.6 -0.2
JCT                               IAmb_Lg       17 44 06.2
      comp=Z,90nm,1.1s
HICK  Hickman           6.37  87  Pn     Pn     17 42 14.7 -0.4
S44A  Carbondale        6.42  76  Pn     Pn     17 42 15.9 +0.1
S44A                              IAmb_Lg       17 44 04.3
      comp=Z,113nm,0.9s
SIUC  Southern Illin    6.46  76  Pn     Pn     17 42 16.6 +0.3
N41A  Harden Midland    6.51  47         Pn     17 42 17.7 +0.7
W45A  Hickory Valley    6.58  99  IAmb_Lg       17 44 06.0
      comp=Z,78nm,0.7s
UTMT  University of     6.67  88  IAmb_Lg       17 44 18.8
      comp=Z,73nm,0.8s
Y45A  Yeager Farm, C    6.73 110  Pn     Pn     17 42 19.4 -0.5
Y45A                              IAmb_Lg       17 44 27.4
      comp=Z,50nm,0.9s
P43A  Skaggs, Pawnee    6.80  60  Pn     Pn     17 42 20.4 -0.7
SDCO  Great Sand Dun    6.81 284         Pn     17 42 21.9 +0.5
Q44A  Meyer Farm, Va    6.89  67  Pn     Pn     17 42 21.5 -0.7
K38A  Parkersburg       7.06  27         Pn     17 42 21.8 -2.8
L40A  Anamosa           7.25  37         Pn     17 42 25.5 -1.7
L40A                              IAmb_Lg       17 44 30.0
      comp=Z,79nm,0.8s
ECSD  EROS Data Cent    7.30   3         Pn     17 42 26.6 -1.2
ECSD  EROS Data Cent    7.30   3  P      Pn     17 42 28.4 +0.6
      baz=183,SNR=18
HDIL  Hopedale          7.39  54  Pn     Pn     17 42 27.7 -1.4
ISCO  Idaho Springs     7.48 299         Pn     17 42 31.6 +1.0
WVT   Waverly           7.52  90  Pn     Pn     17 42 28.7 -2.2
146A  Union             7.67 117  IAmb_Lg       17 45 01.3
      comp=Z,30nm,0.8s
ANMO  Albuquerque       7.73 262  Pn     Pn     17 42 37.9 +3.9
      comp=Z,0.0nm,0.3s,baz=84,slow=19,SNR=1.6
ANMO                              Pg     Pg     17 43 04.8 -3.9
      comp=Z,0.3nm,0.3s,baz=89,slow=19,SNR=5.8
ANMO                              Lg     Lg     17 44 43.7
      comp=Z,1.0nm,0.3s,baz=327,slow=6.9,SNR=4.1
ANMO  Albuquerque       7.73 262         Pn     17 42 33.6 -0.3
O44A  Mansfield         7.76  59  Pn     Pn     17 42 33.0 -1.2
O44A                              IAmb_Lg       17 44 51.9
      comp=Z,65nm,0.7s
L42A  Oliver, Polo      8.03  44  IAmb_Lg       17 45 05.7
      comp=Z,58nm,0.8s
T47A  Sharon Grove      8.07  83  Pn     Pn     17 42 37.7 -0.7
I37A  Lemond, Waseca    8.09  20  Pn     Pn     17 42 37.3 -1.4
I37A                              IAmb_Lg       17 45 08.3
      comp=Z,44nm,0.8s
BNM   Barren Site       8.09 256  Pn     Pn     17 42 39.0  0.0
SUSD  Miller            8.12 351  Pn     Pn     17 42 37.7 -1.3
SUSD                              IAmb_Lg       17 45 07.0
      comp=Z,28nm,0.8s
Z47A  Carrollton        8.12 111  IAmb_Lg       17 45 13.4
      comp=Z,26nm,0.8s
MNTX  Cornudas Mount    8.31 238  Pn     Pn     17 42 41.2 -0.6
JFWS  Jewell Farm       8.37  37  Pn     Pn     17 42 40.6 -1.8
JFWS                              IAmb_Lg       17 45 11.3
      comp=Z,51nm,0.8s
P46A  Rosedale          8.45  65  IAmb_Lg       17 45 17.6
      comp=Z,51nm,0.8s
M44A  Midewin, Midew    8.64  52  IAmb_Lg       17 45 10.7
      comp=Z,71nm,1.3s
BLO   Bloomington       8.83  69         Pn     17 42 48.6 -0.3
I40A  Norwalk           8.96  32  IAmb_Lg       17 45 27.4
      comp=Z,33nm,0.7s
TXAR  Lajitas Array     8.96 220  Pn     Pn     17 42 52.1 +1.3
      comp=Z,0.1nm,0.3s,baz=45,slow=11,SNR=7.5
TXAR                              Pg     Pg     17 43 22.4  -10
      comp=Z,0.6nm,0.3s,baz=40,slow=14,SNR=8.2
TXAR                              Lg     Lg     17 45 19.9
      comp=Z,0.6nm,0.3s,baz=53,slow=18,SNR=4.4
K43A  Burlington        9.23  45  IAmb_Lg       17 45 49.5
      comp=Z,41nm,0.8s
RSSD  Black Hills       9.31 328  IAmb_Lg       17 45 38.8
      comp=Z,22nm,0.9s
I42A  Draeger Farm,     9.74  38  IAmb_Lg       17 45 47.5
      comp=Z,34nm,1.1s
PDAR  Pinedale Array   11.47 307  Pn     Pn     17 43 33.5 +8.2
      comp=Z,0.1nm,0.3s,baz=107,slow=14,SNR=2.9
PDAR                              Lg     Lg     17 46 43.2
      comp=Z,0.3nm,0.3s,baz=106,slow=29,SNR=3.2
ILAR  Eielson Array    40.75 330  P      P      17 48 23.6 +1.5
      comp=Z,0.3nm,0.7s,baz=107,slow=8.6,SNR=2.8
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VAO ***12*** *17:44:15.0±1.8, 23°.97S×69°.21W, h180km, mb3.8*
GUC ***12*** *17:44:41.2±0.5, 23°.26S×67°.15W, h258km±8km, ML4.4*
IDC ***12*** *17:44:44.2±9.7, 23°.00S×66°.51W, h242km±67km, mb3.2/1, mb1 3.2/3, mb1mx3.0/31, mbtmp3.8/3, Error ellipse: s-maj=111.5km s-min=37.8km az=25.0*
ISC 12 17:44:40.0±0.8**, 23°.31S**±0°.07×**67°.06W**±0°.06**, h250**km**, n38,** σ1s.05/53**, Chile-Argentina border region**

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Code  Station Name       Δ°   AZ°   Phase ID         Time      Res
                                  Op     ISC      h  m  s     ISC
PB15  IPOC Station P    2.22 272  eP     Pn     17 45 25.6 +0.8
PB15                              i S    S      17 45 59.8 -0.2
PB15                              IAML          17 46 02.4
      comp=E,746nm,0.2s
PB06  IPOC Station P    2.39 284  eP     Pn     17 45 27.4 +1.1
PB06                              i S    S      17 46 02.3 -0.6
PB09  IPOC Station P    2.51 306  eP     Pn     17 45 28.8 +1.2
PB09                              i S    S      17 46 04.9 -0.3
PB03  IPOC Station P    2.78 296  eP     Pn     17 45 31.3 +0.9
PB03                              i S    S      17 46 09.1 -1.0
PB03                              IAML          17 46 09.7
      comp=N,240nm,0.5s
PB05  IPOC Station P    2.93 278  eP     Pn     17 45 32.9 +1.1
PB05                              i S    S      17 46 12.1 -0.7
PB04  IPOC Station P    3.01 288  eP     Pn     17 45 34.0 +1.2
PB04                              i S    S      17 46 13.9 -0.6
PB04                              IAML          17 46 16.5
      comp=N,176nm,0.2s
PB07  IPOC Station P    3.05 301  eP     Pn     17 45 34.3 +1.0
PB07                              i S    S      17 46 14.2 -1.1
PB07                              IAML          17 46 15.2
      comp=N,495nm,0.3s
PB01  IPOC Station P    3.18 315  eP     Pn     17 45 35.3 +0.7
PB01                              i S    S      17 46 17.4 -0.5
PB01                              IAML          17 46 19.7
      comp=E,291nm,0.3s
PB10  IPOC Station P    3.21 266  eP     Pn     17 45 36.3 +1.4
PB10                              i S    S      17 46 17.7 -0.5
PB02  IPOC Station P    3.29 306  eP     Pn     17 45 36.5 +0.8
PB02                              i S    S      17 46 18.4 -1.5
PB02                              IAML          17 46 20.3
      comp=E,188nm,0.2s
PB08  IPOC Station P    3.70 328  eP     Pn     17 45 42.3 +1.5
PB08                              i S    S      17 46 29.2 +0.2
PB08                              IAML          17 46 32.2
      comp=N,104nm,0.5s
PATCX Punta Patache     3.79 310  eP     Pn     17 45 41.9 +0.4
PATCX                             i S    S      17 46 28.5 -1.7
PATCX                             IAML          17 46 34.6
      comp=N,156nm,0.3s
TA01  Diego Aracena     3.98 313  eP     Pn     17 45 44.0 +0.4
TA01                              i S    S      17 46 32.7 -1.3
TA01                              IAML          17 46 35.0
      comp=E,164nm,0.4s
HMBC  Humberstone       4.00 318  eP     Pn     17 45 44.2 +0.3
HMBC                              i S    S      17 46 32.9 -1.8
HMBC                              IAML          17 46 37.3
      comp=E,258nm,0.5s
PB11  IPOC Station P    4.28 325  eP     Pn     17 45 47.5 +0.2
PB11                              i S    S      17 46 39.1 -1.7
PB11                              IAML          17 46 40.4
      comp=E,193nm,0.2s
LPAZ  La Paz            7.05 352  P      Pn     17 46 23.4 +1.4
      comp=E,0.7nm,0.3s,baz=167,slow=7.1,SNR=14
LPAZ                              S      S      17 47 43.4 -0.4
      comp=E,0.1nm,0.3s,baz=28,slow=22,SNR=4.7
PP1B  Ponte de Pedra   12.75  66  eP     P      17 47 35.8 +0.8
SALV  Santo Antonio    13.00  58  eP     P      17 47 39.4 +1.6
ETMB  Extrema          13.44   4  eP     Pn     17 47 30.2  -11
PTGB  Pitanga          13.78  99  eP     P      17 47 46.5 -0.1
ITAB  Concordia        14.06 109  eP     Pn     17 47 47.6 -1.3
ITRB  Iturama          15.95  80  eP     Pn     17 48 12.3 +0.6
FRTB  Fartura          16.08  94  eP     Pn     17 48 13.7 +0.6
ARAG  Araguaiana, MT   16.23  65  eP     Pn     17 48 14.5 -0.6
CLDB  Colider          16.38  43  eP     P      17 48 15.5 +0.3
TER01 Tubaro-SC        16.95 112  eP     P      17 48 18.3 -3.0
BB19B Bebedouro        17.31  86  eP     P      17 48 26.1 +0.8
VAO   Valinhos         18.48  93  eP     P      17 48 36.8 -1.2
BDFB  Brasilia         19.50  70  P      P      17 48 47.8 -1.2
      comp=E,0.3nm,0.3s,baz=241,slow=13,SNR=6.5
PARB  Paraibuna        19.69  94  eP     P      17 48 50.6 -0.3
PEXB  Peixe            21.03  61  eP     P      17 49 04.2 -0.9
DIAM  Diamantina, MG   22.42  82  eP     P      17 49 18.5 +0.3
MC01  Montes Claros    22.68  77  eP     P      17 49 20.8 +0.4
JANB  Januaria         22.98  73  eP     P      17 49 22.9 -0.3
SMTB  Santa Maria do   23.54  56  eP     P      17 49 27.4 -0.9
SDBA  SAO DESIDERIO    23.68  67  eP     P      17 49 29.3 -0.2
TORD  Torodi Ar. Bea   76.38  69  P      P      17 56 03.8 +1.5
      comp=E,0.4nm,0.4s,baz=255,slow=5.2,SNR=6.1
MKAR  Makanchi Array  146.03  39  PKPbc  PKiKP  18 03 53.5 +0.1
      comp=E,0.2nm,0.5s,baz=308,slow=1.3,SNR=1.7
```

WEL 12 18:00:06.9±0.4**, 39°S**±3°×**17°5E**±°**, h97**km±4km**, M3.5**/73**, ML3.6**/30**, MLv3.5**/73**, Error ellipse: s-maj=0.0km s-min=0.0km az=112.9, North Island**

```
Code  Station Name       Δ°   AZ°   Phase ID         Time      Res
                                  Op     ISC      h  m  s     ISC
PKVZ  Pokaka            0.28  65  P      Pn     18 00 22.2 +1.1
PKVZ                              S      Sn     18 00 34.4 +2.7
WAZ   Wanganui          0.34 184  P      Pn     18 00 22.9 +1.5
WAZ                               S      Sn     18 00 35.5 +3.3
VRZ   Vera Road         0.35 325  P      Pn     18 00 22.4 +1.0
MTVZ  Mangateitei       0.35  86  P      Pn     18 00 22.6 +1.1
MTVZ                              S      Sn     18 00 35.0 +2.6
TRVZ  Turoa             0.43  75  P      Pn     18 00 23.2 +1.0
FWVZ  Far West T-bar    0.45  70  P      Pn     18 00 23.2 +1.0
FWVZ                              S      Sn     18 00 35.8 +2.1
DRZ   Dome Shelter      0.45  72  P      Pn     18 00 23.3 +1.0
WNVZ  Wahianoa          0.46  80  P      Pn     18 00 23.4 +1.1
WNVZ                              S      Sn     18 00 36.1 +2.3
WHVZ  Whangaehu Hut     0.46  74  P      Pn     18 00 23.4 +1.0
TWVZ  Taurewa           0.47  44  P      Pn     18 00 23.1 +0.8
TWVZ                              S      Sn     18 00 35.5 +1.7
LREZ  Lake Rotokare     0.48 264  P      Pn     18 00 23.9 +1.7
NGZ   Ngauruhoe         0.51  63  P      Pn     18 00 23.6 +0.9
TUVZ  Tukino            0.52  74  P      Pn     18 00 23.8 +1.2
SNVZ  South Ngauruho    0.53  65  P      Pn     18 00 23.9 +1.0
SNVZ                              S      Sn     18 00 37.4 +2.6
WTVZ  West Tongariro    0.54  57  P      Pn     18 00 23.7 +0.9
WTVZ                              S      Sn     18 00 36.9 +2.2
NNVZ  North Ngauruho    0.54  59  P      Pn     18 00 23.8 +0.9
OTVZ  Oturere           0.56  64  P      Pn     18 00 23.9 +0.8
MOVZ  Moawhango         0.57  90  P      Pn     18 00 23.7 +0.7
MOVZ                              S      Sn     18 00 36.2 +1.2
KRVZ  Karewarewa        0.58  57  P      Pn     18 00 23.9 +0.8
NTVZ  North Tongarir    0.60  59  P      Pn     18 00 24.2 +0.9
ETVZ  East Tongariro    0.61  63  P      Pn     18 00 24.4 +1.0
TMVZ  Te Maari          0.61  61  P      Pn     18 00 24.3 +0.9
MHEZ  Mangahewa         0.63 302  P      Pn     18 00 24.7 +1.3
PREZ  Palmer Road       0.67 276  P      Pn     18 00 25.0 +1.2
DREZ  Durham Road       0.67 289  P      Pn     18 00 24.8 +1.1
KATZ  Kakaramea         0.69  51  P      Pn     18 00 24.9 +0.9
NEZ   North Egmont      0.73 281  P      Pn     18 00 25.5 +1.1
KHEZ  Kahui Hut         0.79 278  P      Pn     18 00 25.8 +0.8
RITZ  Rihia Road        0.79  57  P      Pn     18 00 25.9 +1.0
RATZ  Rangitukua        0.80  47  P      Pn     18 00 25.7 +0.6
BHHZ  Black Hill Sta    0.81  96  P      Pn     18 00 25.4 +0.2
OHWZ  Ohakea            0.82 164  P      Pn     18 00 26.9 +1.7
PKE   Pukeiti           0.83 285  P      Pn     18 00 26.2 +0.9
NMEZ  Namu Road         0.88 270  P      Pn     18 00 26.5 +0.7
WATZ  Wairara           0.90  39  P      Pn     18 00 26.9 +0.8
NBEZ  Newall Road No    0.90 279  P      Pn     18 00 26.8 +0.8
HIZ   Hauiti            0.91 352  P      Pn     18 00 26.5 +0.4
TSZ   Takapari Road     0.97 132  P      Pn     18 00 27.6 +0.8
HATZ  Hinemaiaia        0.98  58  P      Pn     18 00 27.1 +0.1
PNHZ  Pukenui           1.04 119  P      Pn     18 00 28.0 +0.4
KRHZ  Kereru            1.07 103  P      Pn     18 00 28.4 +0.5
KWHZ  Kaweka Forest     1.09  91  P      Pn     18 00 28.8 +0.6
KUTZ  Kaahu Road        1.12  35  P      Pn     18 00 29.1 +0.6
POWZ  Post Office Ro    1.14 150  P      Pn     18 00 29.1 +0.5
TLZ   Tolley Road       1.16  21  P      Pn     18 00 29.0 +0.1
BKZ   Black Stump Fm    1.17  78  P      Pn     18 00 29.1  0.0
MRHZ  Matea Rd          1.23  63  P      Pn     18 00 29.7 -0.1
DVHZ  Dannevirke        1.25 135  P      Pn     18 00 30.1 +0.1
WPRZ  Whakapapatarin    1.26  45  P      Pn     18 00 30.3 +0.2
WPHZ  Waipukurau        1.28 121  P      Pn     18 00 30.6 +0.3
MCHZ  McNeill Hill      1.30  92  P      Pn     18 00 31.3 +0.7
MRZ   Mangatainoka R    1.32 161  P      Pn     18 00 31.1 +0.3
ALRZ  Allen Road        1.34  51  P      Pn     18 00 30.9 -0.2
PRWZ  Pori Road         1.36 148  P      Pn     18 00 31.8 +0.6
GRRZ  Galatos Road      1.36  39  P      Pn     18 00 31.6 +0.3
OGWZ  Otaki Gorge       1.41 175  P      Pn     18 00 32.3 +0.4
PRRZ  Plateau Road      1.41  50  P      Pn     18 00 31.9 +0.1
HRRZ  Handcock Road     1.42  45  P      Pn     18 00 32.4 +0.3
NMHZ  Naumai            1.43  78  P      Pn     18 00 32.8 +0.6
KIW   Kapiti Island     1.45 183  P      Pn     18 00 32.4  0.0
HSRZ  Hossack Road      1.46  41  P      Pn     18 00 32.8 +0.3
KAHZ  Kahuranaki        1.49 105  P      Pn     18 00 33.1 +0.2
PRHZ  Porangahau        1.51 125  P      Pn     18 00 33.3 +0.2
TIWZ  Tintock           1.52 154  P      Pn     18 00 33.3 +0.1
MTHZ  Maungataniwha     1.52  69  P      Pn     18 00 33.0 -0.4
HOWZ  Holdsworth Sta    1.53 166  P      Pn     18 00 33.2 -0.2
ANWZ  Angora Road       1.53 133  P      Pn     18 00 33.9 +0.5
UTU   Utuhina           1.54  37  P      Pn     18 00 34.1 +0.6
ARHZ  Aropaoanui        1.54  85  P      Pn     18 00 34.0 +0.5
PXZ   Pawanui           1.55 114  P      Pn     18 00 33.9 +0.2
BFZ   Birch Farm        1.58 144  P      Pn     18 00 34.0 -0.1
RRRZ  Republican Roa    1.59  48  P      Pn     18 00 34.0 -0.2
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NGRZ	**Ngongotaha**	**1.60**	**35**	P	Pn	18 00 34.8	+0.5
CKHZ	**Cape Kidnapper**	**1.61**	**99**	P	Pn	18 00 34.8	+0.4
DUWZ	**D'Urville Isla**	**1.62**	**211**	P	Pn	18 00 34.4	-0.1
MUGZ	**Murupara**	**1.66**	**56**	P	Pn	18 00 34.5	-0.4
OMRZ	**Omania**	**1.68**	**40**	P	Pn	18 00 35.4	+0.1
RAHZ	**Arahi**	**1.68**	**74**	P	Pn	18 00 35.5	+0.1
KARZ	**Kaharoa**	**1.69**	**35**	P	Pn	18 00 35.6	+0.2
CAW	**Cannon Point**	**1.69**	**179**	P	Pn	18 00 35.3	-0.2
TOZ	**Tahuroa Road**	**1.72**	**13**	P	Pn	18 00 35.3	-0.5
RTZ	**Ruatahuna**	**1.73**	**63**	P	Pn	18 00 35.4	-0.5
CPWZ	**Castlepoint**	**1.75**	**149**	P	Pn	18 00 36.5	+0.4
MTW	**Mount Morrison**	**1.78**	**168**	P	Pn	18 00 36.1	-0.5
TMWZ	**Te Maipa**	**1.82**	**159**	P	Pn	18 00 36.8	-0.3
WEL	**Wellington**	**1.88**	**186**	P	Pn	18 00 37.3	-0.5
TCW	**Tory Channel**	**1.88**	**197**	P	Pn	18 00 37.4	-0.5
SNGZ	**Shannon Statio**	**1.92**	**72**	P	Pn	18 00 38.2	-0.1
TGRZ	**Tauranga**	**1.94**	**31**	P	Pn	18 00 38.6	0.0
OPRZ	**Ohinepanea**	**1.98**	**38**	P	Pn	18 00 38.9	-0.2
PAWZ	**Paruwai Farm**	**1.99**	**171**	P	Pn	18 00 38.0	-1.3
BHW	**Baring Head**	**2.00**	**183**	P	Pn	18 00 38.6	-0.7
URZ	**Urewera**	**2.00**	**56**	P	Pn	18 00 38.1	-1.3
MSWZ	**Moikau Station**	**2.01**	**175**	P	Pn	18 00 38.8	-0.7
TRWZ	**Traveller**	**2.05**	**166**	P	Pn	18 00 39.2	-0.8
KNZ	**Kokohu**	**2.10**	**80**	P	Pn	18 00 39.7	-0.9
PLWZ	**Palliser**	**2.16**	**175**	P	Pn	18 00 40.4	-1.1
TUWZ	**Tuamarina**	**2.17**	**202**	P	Pn	18 00 40.4	-1.2
NNZ	**Nelson**	**2.19**	**214**	P	Pn	18 00 40.9	-1.0
RIGZ	**Rimuhau**	**2.25**	**73**	P	Pn	18 00 41.9	-0.7
MHGZ	**Mahia Peninsul**	**2.26**	**84**	P	Pn	18 00 42.0	-0.7
PRGZ	**Paritu Road**	**2.28**	**79**	P	Pn	18 00 42.1	-1.0
MYRZ	**Mayor Island**	**2.34**	**25**	P	Pn	18 00 44.2	+0.4
AWAZ	**Awhitu Peninsu**	**2.36**	**353**	P	Pn	18 00 43.8	-0.3
QRZ	**Quartz Range**	**2.37**	**233**	P	Pn	18 00 43.0	-1.2
CMWZ	**Cape Campbell**	**2.41**	**194**	P	Pn	18 00 44.2	-0.6
TKGZ	**Te Karaka**	**2.41**	**67**	P	Pn	18 00 44.1	-0.7
ETAZ	**East Tamaki Re**	**2.46**	**358**	P	Pn	18 00 44.8	-0.6
BSWZ	**Blackbirch Sta**	**2.46**	**200**	P	Pn	18 00 44.2	-1.2
WTAZ	**Waiatarua**	**2.50**	**352**	P	Pn	18 00 46.3	+0.3
RUGZ	**Raukumara Rang**	**2.54**	**56**	P	Pn	18 00 44.5	-2.0
TWGZ	**Tauwhareparae**	**2.62**	**63**	P	Pn	18 00 46.6	-1.0
CNGZ	**Carnagh Statio**	**2.66**	**71**	P	Pn	18 00 47.2	-0.7
RVAZ	**Riverhead Bore**	**2.66**	**352**	P	Pn	18 00 47.8	-0.3
KUZ	**Kuaotunu**	**2.72**	**12**	P	Pn	18 00 47.9	-0.9
HAZ	**Te Kaha**	**2.73**	**54**	P	Pn	18 00 46.6	-2.3
PKGZ	**Pakihiroa**	**2.84**	**59**	P	Pn	18 00 49.0	-1.5
THZ	**Tophouse**	**2.84**	**214**	P	Pn	18 00 48.9	-1.7
PUZ	**Puketiti**	**2.87**	**63**	P	Pn	18 00 49.0	-1.8
WMGZ	**Waiomatatini S**	**3.10**	**60**	P	Pn	18 00 51.9	-2.0
MXZ	**Matakaoa Point**	**3.17**	**55**	P	Pn	18 00 53.3	-1.6
KHZ	**Kahutara**	**3.20**	**200**	P	Pn	18 00 53.5	-1.7
DSZ	**Denniston Nort**	**3.38**	**225**	P	Pn	18 00 55.4	-2.3
GVZ	**Greta Valley S**	**3.85**	**202**	P	Pn	18 01 01.5	-2.5
LTZ	**Lake Taylor**	**3.95**	**211**	P	Pn	18 01 02.2	-3.2
AMCZ	**Amberley**	**4.16**	**205**	P	Pn	18 01 05.2	-3.0
INZ	**Inchbonnie**	**4.27**	**218**	P	Pn	18 01 06.9	-2.8
OXZ	**Oxford**	**4.51**	**209**	P	Pn	18 01 09.5	-3.4
OKCZ	**Okains Bay**	**4.55**	**198**	P	Pn	18 01 09.9	-3.6
AKCZ	**Akaroa Harbour**	**4.73**	**199**	P	Pn	18 01 12.0	-3.9
WVZ	**Waitaha Valley**	**4.88**	**220**	P	Pn	18 01 14.5	-3.3
RPZ	**Rata Peaks**	**5.23**	**213**	P	Pn	18 01 19.6	-3.0
GCSZ	**Gaunt Creek Bo**	**5.26**	**221**	P	Pn	18 01 19.2	-3.8
ARCZ	**Arundel**	**5.37**	**211**	P	Pn	18 01 20.6	-3.9
LBZ	**Lake Benmore**	**6.14**	**214**	P	Pn	18 01 30.8	-4.2
ODZ	**Otahua Downs**	**6.50**	**209**	P	Pn	18 01 35.6	-4.3
CTZ	**Chatham Island**	**7.61**	**127**	P	Pn	18 01 53.0	-2.0
TUZ	**Tuapeka**	**7.64**	**209**	P	Pn	18 01 52.0	-3.4

DDA 12 18:11:00.0,39.°01N×29.°50E,h10^{km}±1^{km},ML1.6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.08**	**349**	*i* P	Pg	18 11 02.8	+0.3
GDZ				*i* S	Sg	18 11 04.3	0.0
USAK	**Uak-Merkez**	**0.48**	**232**	*i* P	Pb	18 11 10.6	+0.1
USAK				*i* S	Sb	18 11 17.1	-0.6
USAK				IAML		18 11 18.0	
	comp=N,31nm,0.8s						
USAK				IAML		18 11 18.0	
	comp=E,52nm,1.0s						
ANDZ	**Kutahya, Merke**	**0.58**	**32**	*i* P	Pg	18 11 11.3	-0.1
DEMI	**Demirci**	**0.61**	**273**	*i* P	Pg	18 11 12.2	+0.3
PASA	**Karahalli, USA**	**0.66**	**181**	*i* P	Pg	18 11 12.7	-0.2
PASA				*i* S	Sb	18 11 23.6	+0.6
BORA	**Eskisehir**	**1.14**	**40**	*i* P	Pb	18 11 21.2	-0.7
BORA				IAML		18 12 06.0	
	comp=E,36nm,1.6s						
ULDT	**Uludag**	**1.16**	**346**	*i* P	Pb	18 11 21.5	-0.9
ULDT				IAML		18 11 37.0	
	comp=N,13nm,0.8s						
ULDT				IAML		18 11 37.0	
	comp=E,18nm,1.6s						
BILE	**Bilecik/Merkez**	**1.18**	**14**	*i* P	Pb	18 11 22.6	0.0
BILE				IAML		18 12 06.0	
	comp=N,8.7nm,0.7s						

ISK 12 18:11:34.9,38.°38N×27.°94E,h1^{km},ML2.2/5,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AYDB	**Zeytinkoy-Aydi**	**0.43**	**185**	PG	Pb	18 11 44.6	-0.8
AKS	**Akhisar**	**0.51**	**349**	PG	Pb	18 11 46.0	-0.7
KULA	**Kula-Manisa**	**0.58**	**76**	PG	Pb	18 11 47.4	-0.6
BLCB	**Balcova**	**0.70**	**271**	PG	Pb	18 11 49.5	-0.4
BLCB				SG	Sb	18 12 00.3	+0.2
GCAM	**G?zelcaml?**	**0.88**	**220**	PG	Pb	18 11 52.4	-0.5

IDC ***12*** *18:15:11.9±1.4, 37.°64N×16.°36E, h0^{km}, mb4.0/4, mb1 4.0/8, mb1mx3.6/51, mbtmp3.9/8, ML3.7/4, MS2.7/1, Ms1 2.7/1, ms1mx2.1/47, Error ellipse: s-maj=34.6km s-min=18.4km az=171.0*

ROM ***12*** *18:15:13.5±0.2, 37.°432N±0.°008×16.°30E±0.°01, h25^{km}±1^{km}, ML3.5/63, Error ellipse: s-maj=1.2km s-min=0.5km az=302.0*

THE ***12*** *18:15:19.1, 37.°64N×16.°65E, h31^{km}±47^{km}, ML3.4/5, Error ellipse: s-maj=47.5km s-min=1.7km az=0.0*

ISC 12 18:15:14.1±1.0,37.°50N±0.°03×16.°28E±0.°03,h33^{km}±9^{km}, n171,σ1.°98/210,mb4.0/4,10C-24D,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOI	**Samo**	**0.60**	**343**	⇓P	**Pn**	**18 15 27.1**	**+0.7**
SOI				S	**Sb**	**18 15 35.7**	**+1.0**
SOI				AML	AML		
	comp=E,6540µm,0.7s						
SOI				AML	AML		
	comp=E,6545µm,0.7s						
SOI				AML	AML		
	comp=N,5475µm,0.5s						
SOI				AML	AML		
	comp=N,5480µm,0.5s						
GMB	**Gambarie**	**0.76**	**332**	⇓*i*P	**Pb**	**18 15 29.4**	**+0.4**
GMB				S	**Sn**	**18 15 41.0**	**+1.9**
GMB				AML	AML		
	comp=E,21400µm,0.2s						
GMB				AML	AML		
	comp=N,21700µm,0.4s						
CEL	**Celeste**	**0.82**	**338**	P	**Pn**	**18 15 30.4**	**+1.0**
CEL				S	**Sn**	**18 15 42.9**	**+2.4**
CEL				AML	AML		
	comp=N,3335µm,0.3s						
CEL				AML	AML		
	comp=E,4720µm,0.4s						
CEL				AML	AML		
	comp=N,4050µm,0.3s						
CEL				AML	AML		
	comp=E,5655µm,0.4s						
MSCL	**Scilla**	**0.83**	**332**	⇓*i*P	**Pn**	**18 15 30.6**	**+1.0**
MSCL				S	**Sn**	**18 15 43.3**	**+2.5**
MSCL				AML	AML		
	comp=E,8865µm,0.4s						
MSCL				AML	AML		
	comp=N,6905µm,0.3s						
AGST	**Augusta-Monte**	**0.87**	**254**	⇓*i*P	**Pb**	**18 15 30.1**	**-0.7**
AGST				S	**Sb**	**18 15 41.2**	**-0.9**
AGST				AML	AML		
	comp=E,3875µm,0.7s						
AGST				AML	AML		
	comp=N,4705µm,1.4s						
HAGA	**Augusta**	**0.92**	**257**	⇓*i*P	**Pb**	**18 15 30.8**	**-0.8**
HAGA				S	**Sb**	**18 15 42.8**	**-0.7**
HAGA				AML	AML		
	comp=N,2725µm,1.4s						
HAGA				AML	AML		
	comp=E,3110µm,1.1s						
AIO	**Antillo**	**0.95**	**300**	⇓*i*P	**Pb**	**18 15 32.3**	**+0.1**
AIO				AML	AML		
	comp=N,1230µm,0.3s						
AIO				AML	AML		
	comp=E,1260µm,0.3s						
PLAC	**Placanica**	**0.96**	**7**	⇑*i*P	**Pb**	**18 15 32.5**	**+0.2**
PLAC				AML	AML		
	comp=E,1170µm,0.3s						
PLAC				AML	AML		
	comp=E,1650µm,0.6s						
PLAC				AML	AML		
	comp=N,1200µm,0.3s						
PLAC				AML	AML		
	comp=N,1610µm,0.6s						
MSRU	**Castanea**	**0.98**	**322**	⇓*i*P	**Pb**	**18 15 32.8**	**+0.3**
MSRU				S	**Sn**	**18 15 46.6**	**+2.3**
MSRU				AML	AML		
	comp=N,2030µm,0.4s						
MSRU				AML	AML		
	comp=E,3565µm,0.4s						
MPNC	**Port Mandanici**	**0.98**	**312**	⇓*i*P	**Pb**	**18 15 32.9**	**+0.3**
MPNC				S	**Sn**	**18 15 47.4**	**+3.1**
MPNC				AML	AML		
	comp=N,6405µm,0.6s						
MPNC				AML	AML		
	comp=E,5150µm,1.4s						
MCSR	**Castroreale**	**0.99**	**305**	⇓*i*P	**Pb**	**18 15 33.1**	**+0.2**
MCSR				AML	AML		
	comp=N,8110µm,0.8s						
MCSR				AML	AML		
	comp=E,6205µm,0.3s						
SSY	**Sortino**	**1.02**	**251**	⇓P	**Pn**	**18 15 32.3**	**+0.1**
SSY				S	**Sb**	**18 15 45.2**	**-1.2**
SSY				AML	AML		
	comp=E,2820µm,0.6s						
SSY				AML	AML		
	comp=N,6315µm,0.3s						
NOV	**Novara**	**1.05**	**301**	⇓*i*P	**Pb**	**18 15 33.6**	**-0.2**
NOV				AML	AML		
	comp=N,2080µm,0.4s						
NOV				AML	AML		
	comp=E,1965µm,0.7s						
ESLN	**Serra La Nave**	**1.05**	**281**	P	**Pn**	**18 15 33.2**	**+0.4**
ESLN				AML	AML		
	comp=E,1595µm,0.5s						
ESLN				AML	AML		
	comp=N,1640µm,1.0s						
HAVL	**Avola**	**1.07**	**240**	P	**Pb**	**18 15 33.2**	**-0.8**
HAVL				S	**Sb**	**18 15 46.2**	**-1.5**
HAVL				AML	AML		
	comp=N,7095µm,0.2s						
HAVL				AML	AML		
	comp=E,7310µm,0.3s						
EMSG	**Monte Spagnolo**	**1.10**	**287**	*i* P	**Pb**	**18 15 34.6**	**-0.1**
EMSG				AML	AML		
	comp=N,2115µm,1.1s						
EMSG				AML	AML		
	comp=E,2275µm,0.6s						
ESML	**S. M. di Licod**	**1.12**	**277**	AML	AML		
	comp=N,2170µm,0.3s						
ESML				AML	AML		
	comp=E,2255µm,0.2s						
HLNI	**Lentini**	**1.13**	**263**	⇓*i*P	**Pn**	**18 15 34.0**	**+0.4**
HLNI				S	**Sn**	**18 15 47.9**	**-0.1**
HLNI				AML	AML		
	comp=N,7320µm,1.4s						
HLNI				AML	AML		
	comp=E,10415µm,0.6s						
MEU	**Monte Lauro**	**1.15**	**250**	P	**Pb**	**18 15 35.4**	**-0.1**
MEU				AML	AML		
	comp=E,5210µm,0.2s						
MEU				AML	AML		
	comp=N,10085µm,0.3s						
JOPP	**Joppolo**	**1.15**	**344**	⇑*i*P	**Pn**	**18 15 35.4**	**+1.4**
JOPP				AML	AML		
	comp=E,827µm,0.6s						
JOPP				AML	AML		
	comp=N,1380µm,0.4s						
EPZF	**Pizzo Felice**	**1.18**	**287**	*i* P	**Pb**	**18 15 35.8**	**-0.2**
EPZF				AML	AML		
	comp=E,1465µm,1.6s						
EPZF				AML	AML		
	comp=E,1470µm,1.6s						
EPZF				AML	AML		
	comp=N,1680µm,1.6s						
HPAC	**Pachino**	**1.23**	**230**	P	**Pb**	**18 15 36.4**	**-0.4**
HPAC				S	**Sb**	**18 15 52.1**	**-0.2**
HPAC				AML	AML		
	comp=N,2745µm,0.2s						
HPAC				AML	AML		
	comp=E,3670µm,0.3s						
MUCR	**Ucria**	**1.24**	**296**	⇓*i*P	**Pn**	**18 15 36.5**	**+1.3**
MUCR				AML	AML		
	comp=N,2415µm,0.4s						
MUCR				AML	AML		
	comp=E,1590µm,0.7s						
ECNV	**Catenanuova**	**1.25**	**275**	P	**Pb**	**18 15 36.8**	**-0.4**
ECNV				AML	AML		
	comp=E,2315µm,0.5s						
ECNV				AML	AML		
	comp=N,3320µm,0.4s						
HMDC	**Modica**	**1.31**	**246**	⇓*i*P	**Pb**	**18 15 36.8**	**-1.4**
HMDC				S	**Sn**	**18 15 52.6**	**+0.1**
HMDC				AML	AML		
	comp=E,3140µm,0.7s						
HMDC				AML	AML		
	comp=N,5240µm,0.3s						
GRI	**Girifalco**	**1.33**	**5**	P	**Pn**	**18 15 38.0**	**+1.6**
MNO	**Monte Soro**	**1.33**	**290**	P	**Pb**	**18 15 38.3**	**-0.3**
MNO				AML	AML		
	comp=E,1014µm,0.7s						
MNO				AML	AML		
	comp=N,890µm,0.4s						
MNO				AML	AML		
	comp=E,1014µm,0.7s						
MNO				AML	AML		
	comp=N,893µm,0.4s						
VPL	**Vulcano Piano**	**1.35**	**311**	⇓*i*P	**Pn**	**18 15 38.0**	**+1.3**
VPL				AML	AML		
	comp=E,5835µm,0.3s						
VPL				AML	AML		
	comp=N,6705µm,0.6s						
LLI	**Lipari**	**1.42**	**312**	⇓*i*P	**Pn**	**18 15 39.0**	**+1.5**
LLI				AML	AML		
	comp=E,9640µm,0.4s						
LLI				AML	AML		
	comp=N,10765µm,0.6s						
CAGR	**Agira**	**1.42**	**276**	⇓*i*P	**Pb**	**18 15 40.0**	**0.0**
CAGR				AML	AML		
	comp=N,1520µm,0.3s						
CAGR				AML	AML		
	comp=E,1425µm,1.1s						
MSFR	**San Fratello**	**1.44**	**292**	P	**Pb**	**18 15 39.7**	**-0.7**
MSFR				AML	AML		
	comp=N,290µm,0.4s						
MSFR				AML	AML		
	comp=E,508µm,0.4s						
VAE	**Valguarnera**	**1.49**	**270**	Pn	**Pb**	**18 15 41.5**	**+0.3**
	comp=E,17nm,0.3s,baz=28,slow=17,SNR=20						
VAE				Sn	**Sb**	**18 16 01.1**	**+1.5**
	comp=E,24nm,0.3s,baz=186,slow=14,SNR=8.5						
RAFF	**Raffo Rosso**	**1.55**	**260**	⇓*i*P	**Pb**	**18 15 40.9**	**-1.4**
RAFF				S	**Sb**	**18 16 00.4**	**-1.1**
RAFF				AML	AML		
	comp=E,1650µm,0.6s						
RAFF				AML	AML		
	comp=N,1175µm,1.6s						
SERS	**Sersale**	**1.57**	**12**	⇑*i*P	**Pn**	**18 15 41.1**	**+1.3**
SERS				AML	AML		
	comp=E,230µm,0.8s						
SERS				AML	AML		
	comp=N,248µm,0.4s						
TIP	**Timpagrande**	**1.72**	**12**	P	**Pn**	**18 15 43.2**	**+1.3**
TIP				AML	AML		
	comp=N,168µm,0.6s						
TIP				AML	AML		
	comp=E,159µm,1.4s						
TIP				AML	AML		
	comp=N,213µm,0.7s						
TIP				AML	AML		
	comp=E,137µm,0.6s						
IFIL	**Filicudi I Eol**	**1.72**	**309**	P	**Pn**	**18 15 42.8**	**+1.0**
IFIL				AML	AML		
	comp=E,3815µm,0.4s						
IFIL				AML	AML		
	comp=N,1485µm,0.2s						
RESU	**Resuttano**	**1.77**	**276**	P	**Pb**	**18 15 45.0**	**-0.9**
RESU				AML	AML		
	comp=N,339µm,0.5s						
RESU				AML	AML		
	comp=E,329µm,0.4s						
CSLB	**Castelbuono**	**1.82**	**285**	P	**Pn**	**18 15 45.0**	**+1.9**
CSLB				AML	AML		
	comp=N,136µm,0.3s						
CSLB				AML	AML		
	comp=E,138µm,0.5s						
IACL	**Alicudi**	**1.84**	**305**	⇓*i*P	**Pn**	**18 15 44.4**	**+1.0**
IACL				AML	AML		
	comp=N,1020µm,1.5s						
IACL				AML	AML		
	comp=E,831µm,0.3s						
GIB	**Gibilmanna**	**1.85**	**286**	⇓*i*P	**Pn**	**18 15 45.6**	**+1.9**
GIB				AML	AML		
	comp=E,372µm,0.6s						
GIB				AML	AML		
	comp=N,642µm,0.6s						
LADO	**San Nicola del**	**1.87**	**17**	P	**Pn**	**18 15 45.3**	**+1.5**
LADO				AML	AML		
	comp=N,17µm,0.3s						
LADO				AML	AML		
	comp=E,18µm,1.5s						
CLTA	**Licata**	**1.88**	**260**	⇓*i*P	**Pb**	**18 15 46.4**	**-1.3**
CLTA				AML	AML		
	comp=E,2455µm,0.5s						
CLTA				AML	AML		
	comp=N,3155µm,0.5s						
CELI	**Celico**	**1.91**	**5**	P	**Pn**	**18 15 46.4**	**+1.9**
CELI				AML	AML		
	comp=N,668µm,1.1s						
CELI				AML	AML		
	comp=E,442µm,0.5s						
FAVR	**Favara**	**2.09**	**265**	P	**Pb**	**18 15 49.5**	**-1.9**
FAVR				AML	AML		
	comp=E,488µm,0.6s						
FAVR				AML	AML		
	comp=N,428µm,1.1s						
TDS	**Terranova Siba**	**2.16**	**1**	P	**Pn**	**18 15 50.4**	**+2.6**
TDS				AML	AML		
	comp=E,99µm,1.1s						
TDS				AML	AML		
	comp=N,84µm,0.7s						
WDD	**Wied Dalam**	**2.18**	**221**	P	**Pb**	**18 15 50.1**	**-2.7**
WDD				AML	AML		
	comp=N,850µm,0.4s						
WDD				AML	AML		
	comp=N,888µm,0.4s						
WDD				AML	AML		
	comp=E,992µm,0.6s						
WDD				AML	AML		
	comp=E,1105µm,0.6s						
SOLUN	**Solunto**	**2.25**	**286**	P	**Pn**	**18 15 50.6**	**+1.5**
SOLUN				AML	AML		
	comp=E,62µm,1.6s						
SOLUN				AML	AML		
	comp=N,64µm,1.1s						
SALB	**San Lorenzo Be**	**2.38**	**1**	P	**Pn**	**18 15 53.0**	**+2.1**
SALB				AML	AML		
	comp=N,111µm,0.9s						
SALB				AML	AML		
	comp=E,163µm,0.7s						
CORL	**Corleone**	**2.39**	**280**	P	**Pn**	**18 15 53.7**	**+2.6**
MPG	**Monte Pellegri**	**2.41**	**287**	P	**Pn**	**18 15 52.8**	**+1.6**
CUC	**Castrocucco**	**2.52**	**352**	P	**Pn**	**18 15 53.9**	**+1.1**
CUC				AML	AML		
	comp=N,198µm,0.8s						
CUC				AML	AML		
	comp=E,232µm,0.3s						
MMGO	**Monte Magaggia**	**2.63**	**275**	P	**Pn**	**18 15 56.2**	**+1.9**
BULG	**Bulgheria - Ca**	**2.67**	**345**	P	**Pn**	**18 15 56.2**	**+1.3**
MGR	**Morigerati**	**2.70**	**348**	P	**Pn**	**18 15 56.9**	**+1.7**
MGR				AML	AML		
	comp=E,186µm,0.5s						
MGR				AML	AML		
	comp=N,197µm,0.3s						
SIRI	**Monte Sirino -**	**2.70**	**353**	P	**Pn**	**18 15 56.7**	**+1.4**
SIRI				AML	AML		
	comp=E,326µm,1.1s						
SIRI				AML	AML		
	comp=N,242µm,0.6s						
USI	**Ustica**	**2.73**	**297**	⇑*i*P	**Pn**	**18 15 56.3**	**+0.6**
CRAC	**Craco**	**2.87**	**2**	P	**Pn**	**18 15 59.9**	**+2.3**
CRAC				AML	AML		
	comp=E,347µm,0.9s						
CRAC				AML	AML		
	comp=N,305µm,0.3s						
CMPR	**Campora**	**2.92**	**345**	P	**Pn**	**18 15 59.6**	**+1.3**
CMPR				AML	AML		
	comp=N,107µm,1.1s						
CMPR				AML	AML		
	comp=E,140µm,1.0s						
MIGL	**Miglionico**	**3.11**	**2**	P	**Pn**	**18 16 01.9**	**+1.1**
MIGL				AML	AML		
	comp=E,398µm,1.2s						
MIGL				AML	AML		
	comp=N,359µm,1.0s						
LTRZ	**Laterza**	**3.13**	**8**	P	**Pn**	**18 16 01.2**	**+0.1**
MATE	**Matera**	**3.17**	**6**	⇑P	**Pn**	**18 16 01.6**	**0.0**
MATE				⇑S	**Sn**	**18 16 36.1**	**-2.1**
MATE	**Matera**	**3.17**	**6**	P	**Pn**	**18 16 01.8**	**+0.2**
MATE				AML	AML		
	comp=N,250µm,1.0s						
MATE				AML	AML		
	comp=E,314µm,1.4s						
ACER	**Acerenza**	**3.30**	**356**	P	**Pn**	**18 16 05.4**	**+1.9**
ACER				AML	AML		
	comp=N,124µm,0.6s						
ACER				AML	AML		
	comp=E,167µm,0.9s						
KEF3	**Kipouria, Keph**	**3.30**	**76**	P	**Pn**	**18 16 04.7**	**+1.3**
KEF3				S	**Sn**	**18 16 40.2**	**-1.3**
NOCI	**Noci**	**3.34**	**10**	P	**Pn**	**18 16 03.7**	**-0.4**
NOCI				AML	AML		
	comp=N,430µm,0.2s						
NOCI				AML	AML		
	comp=E,376µm,1.5s						
KEF4	**Livadi, Kephal**	**3.37**	**76**	P	**Pn**	**18 16 04.8**	**+0.4**
AMUR	**Altamura**	**3.42**	**4**	P	**Pn**	**18 16 05.2**	**+0.2**
AMUR				AML	AML		
	comp=N,266µm,1.2s						
AMUR				AML	AML		
	comp=E,402µm,0.2s						
PALZ	**Palazzo San Ge**	**3.45**	**356**	P	**Pn**	**18 16 06.9**	**+1.4**
PSDA	**Pessada-Kefalo**	**3.46**	**78**	P	**Pn**	**18 16 06.0**	**+0.3**
VLS	**Valsamata**	**3.48**	**77**	P	**Pn**	**18 16 06.1**	**+0.1**
VLS	**Valsamata**	**3.48**	**77**	P	**Pn**	**18 16 06.1**	**+0.1**
VLS				AML	AML		
	comp=N,110µm,0.7s						
VLS				AML	AML		
	comp=E,113µm,0.8s						
FSK	**Fiskardo**	**3.52**	**73**	P	**Pn**	**18 16 07.5**	**+1.1**
FSK				S	**Sn**	**18 16 44.6**	**-2.3**
	comp=E,305nm,0.2s						
KEK	**Kerkira**	**3.54**	**50**	P	**Pn**	**18 16 06.1**	**-0.6**
KEK				S	**Sn**	**18 16 44.9**	**-2.5**
	comp=E,180nm,0.2s						
KEK	**Kerkira**	**3.54**	**50**	P	**Pn**	**18 16 05.9**	**-0.8**
KEK				AML	AML		
	comp=E,58µm,1.4s						
KEK				AML	AML		
	comp=N,52µm,0.2s						
DRAG	**Dragano-Lefkad**	**3.59**	**69**	P	**Pn**	**18 16 08.0**	**+0.5**
DRAG				S	**Sn**	**18 16 46.1**	**-2.6**
LTHK	**Lithakia**	**3.62**	**85**	P	**Pn**	**18 16 08.8**	**+0.9**
LTHK				S	**Sn**	**18 16 47.2**	**-2.4**
EVGI	**Lefkada island**	**3.63**	**71**	P	**Pn**	**18 16 09.0**	**+1.0**
EVGI				S	**Sn**	**18 16 47.3**	**-2.5**
CAPA	**Cerignola FG**	**3.67**	**355**	P	**Pn**	**18 16 09.9**	**+1.3**
CAPA				AML	AML		
	comp=E,156µm,0.9s						
CAPA				AML	AML		
	comp=N,140µm,1.5s						
LKD2	**Lefkada island**	**3.69**	**68**	P	**Pn**	**18 16 09.3**	**+0.5**
NYDR	**Nydri-Lefkada**	**3.69**	**69**	P	**Pn**	**18 16 09.3**	**+0.5**
NYDR				S	**Sn**	**18 16 48.4**	**-2.8**
	comp=N,178nm,0.4s						
TSLK	**Tsoukalades, L**	**3.69**	**68**	P	**Pn**	**18 16 09.3**	**+0.4**

SRN	Sarande	3.76	50	P	Pn	18 16 09.2	-0.5
SRN				AML	AML		
	comp=E,74µm,1.2s						
SRN				AML	AML		
	comp=N,75µm,1.5s						
IGT	Igoumenitsa	3.77	56	P	Pn	18 16 09.9	-0.1
IGT				S	Sn	18 16 51.5	-1.7
RLS	Riolos of Patr	4.15	81	P	Pn	18 16 16.0	+0.9
JAN	Janina	4.18	58	P	Pn	18 16 16.1	+0.5
JAN				S	Sn	18 17 01.3	-2.0
	comp=N,160nm,0.2s						
MSAG	Monte S. Angel	4.22	356	P	Pn	18 16 16.6	+0.4
SGRT	San Giovanni R	4.27	355	P	Pn	18 16 17.1	+0.2
SGRT				AML	AML		
	comp=E,103µm,0.3s						
SGRT				AML	AML		
	comp=N,111µm,0.1s						
MELA	Melanico ??? S	4.30	348	P	Pn	18 16 19.4	+2.2
MELA				AML	AML		
	comp=N,94µm,1.5s						
MELA				AML	AML		
	comp=E,74µm,1.5s						
DRO	Drossia	4.33	82	P	Pn	18 16 19.2	+1.6
PYL	PYLOS	4.40	96	P	Pn	18 16 20.5	+1.9
ITM	Ithomi	4.51	92	P	Pn	18 16 21.8	+1.7
ITM	Ithomi	4.51	92	P	Pn	18 16 21.6	+1.4
ITM				AML	AML		
	comp=N,53µm,0.4s						
ITM				AML	AML		
	comp=E,60µm,0.5s						
EFP	Efpalio	4.54	76	P	Pn	18 16 21.7	+1.2
LAKA	Lakka	4.57	79	P	Pn	18 16 22.4	+1.4
EVR	Evrytania	4.58	70	P	Pn	18 16 23.0	+1.9
EVR				S	Sn	18 17 11.3	-2.0
	comp=E,68nm,0.4s						
PENT	Pentalofos	4.65	53	P	Pn	18 16 23.3	+1.1
KPRO	Kipourio	4.67	57	P	Pn	18 16 23.5	+1.1
KPRO				S	Sn	18 17 13.9	-1.6
ALIK	Aliki, Aigiali	4.68	79	P	Pn	18 16 24.4	+2.0
KLV	Kalavryta, Ach	4.68	82	P	Pn	18 16 23.7	+1.2
NEST	Nestorio	4.72	50	P	Pn	18 16 24.0	+0.9
TIR	Tirane	4.74	35	⇓P	Pn	18 16 22.2	-1.0
TIR				⇓S	Sn	18 17 12.2	-4.9
MAKR	Makrakomi, Fth	4.85	70	P	Pn	18 16 27.4	+2.6
MAKR				S	Sn	18 17 18.3	-1.5
THL	Klokotos Trika	4.95	64	P	Pn	18 16 27.4	+1.3
THL	Klokotos Trika	4.95	64	AML	AML		
	comp=N,15µm,0.8s						
THL				AML	AML		
	comp=E,19µm,0.4s						
AGG	Agios Georgios	5.00	70	P	Pn	18 16 29.0	+2.1
AGG				S	Sn	18 17 22.1	-1.4
THAL	Thalero	5.09	82	P	Pn	18 16 28.1	+0.1
KZN	Kozani	5.12	55	P	Pn	18 16 30.5	+2.0
DRME	Dracevica, Mon	5.19	25	ePn	Pn	18 16 28.4	-1.0
HCY	Herceg Novi	5.23	18	ePn	Pn	18 16 28.2	-1.8
LSTV	Lastovo	5.29	5	ePn	Pn	18 16 29.4	-1.3
LSTV				Sn	Sn	18 17 23.2	-7.3
LKR	Lokris	5.43	76	P	Pn	18 16 34.4	+1.7
PDG	Podgorica	5.43	24	⇓P	Pn	18 16 31.0	-1.7
PDG				⇑S	Sn	18 17 29.8	-4.3
PDG	Podgorica	5.43	24	ePn	Pn	18 16 32.0	-0.7
EPID	Epidavros	5.43	87	P	Pn	18 16 34.2	+1.4
ATAL	Atalanti	5.45	75	P	Pn	18 16 34.5	+1.5
TREB	Trebinje	5.45	16	ePn	Pn	18 16 31.0	-2.0
STON	Ston	5.48	11	ePn	Pn	18 16 31.8	-1.5
STON	Ston	5.48	11	ePn	Pn	18 16 32.2	-1.1
STON				Sn	Sn	18 17 28.5	-6.6
KTHR	Kythira	5.53	101	P	Pn	18 16 36.6	+2.5
KTHA	Kythira Island	5.58	101	P	Pn	18 16 37.5	+2.7
VILL	Villia	5.61	81	P	Pn	18 16 36.8	+1.6
HVAR	Hvar	5.68	1	ePn	Pn	18 16 35.2	-0.9
HVAR				Sn	Sn	18 17 33.0	-7.1
MAKA	Makarska	5.81	5	ePn	Pn	18 16 37.2	-0.7
MAKA				Sn	Sn	18 17 36.1	-7.3
KEST	Kesra	5.85	255	Pn	Pn	18 16 41.0	+2.4
	comp=E,1.5nm,0.3s,baz=30,slow=5.3,SNR=21						
KEST				Sn	Sn	18 17 44.7	+0.1
	comp=E,0.3nm,0.3s,baz=196,slow=22,SNR=1.7						
ANKY	Antikythira Is	5.87	104	P	Pn	18 16 41.1	+2.3
ATHU	Athens Univers	5.97	83	P	Pn	18 16 41.5	+1.4
ATHU				S	Sn	18 17 45.3	-2.0
RICI	Ricice	6.03	6	ePn	Pn	18 16 39.5	-1.4
RICI				Sn	Sn	18 17 41.5	-7.3
UPM	Unac-Piva	6.04	19	ePn	Pn	18 16 40.6	-0.7
DION	Dionisos Attik	6.09	82	P	Pn	18 16 43.3	+1.5
ZIRJ	Zirje	6.17	356	ePn	Pn	18 16 42.5	-0.3
ZIRJ				Sn	Sn	18 17 45.5	-6.8
KYMI	Kymi, Euboea I	6.27	77	P	Pn	18 16 45.6	+1.3
MORI	Morici	6.38	356	ePn	Pn	18 16 45.0	-0.7
MORI				Sn	Sn	18 17 52.0	-5.4
SJES	Sjenica	6.41	25	ePn	Pn	18 16 47.2	+0.9
RUDO	Rudo	6.55	20	ePn	Pn	18 16 47.4	-0.7
DUGI	Dugi Otok	6.55	352	ePn	Pn	18 16 48.1	-0.1
DUGI				Sn	Sn	18 17 56.1	-5.6
IVAS	Ivanjica	6.75	25	ePn	Pn	18 16 50.1	-0.8
BBLS	Lazići	6.79	19	ePn	Pn	18 16 51.4	-0.1
BBLS	Lazići	6.79	19	ePn	Pn	18 16 51.6	+0.1
BARS	Barje	6.80	37	ePn	Pn	18 16 50.9	-0.6
BARS	Barje	6.80	37	ePn	Pb	18 17 04.2	-7.2
SELS	Selova	6.80	31	ePn	Pn	18 16 51.2	-0.4
MGRS	Mrkonjic Grad	6.94	5	ePn	Pn	18 16 54.8	+1.3
UDBI	Udbina	7.04	357	ePn	Pn	18 16 55.1	+0.3
UDBI				Sn	Sn	18 18 07.6	-6.1
NVLJ	Novalja	7.14	352	ePn	Pn	18 16 55.7	-0.5
NVLJ				Sn	Sn	18 18 10.0	-6.1
DIVS	Divibare	7.17	22	ePn	Pn	18 16 55.6	-1.1
DIVS	Divibare	7.17	22	ePn	Pn	18 16 55.8	-0.9
GRUS	Gruza	7.22	26	ePn	Pn	18 16 57.4	+0.1
BLY	Banja Luka	7.28	5	ePn	Pn	18 16 57.7	-0.4
IDI	Anoyia	7.29	105	Pn	Pn	18 16 59.4	+1.1
	comp=E,2.3nm,0.3s,baz=278,slow=10,SNR=12						
IDI				Sn	Sn	18 18 16.7	-3.2
	comp=E,5.0nm,0.3s,baz=332,slow=22,SNR=9.4						
RABC	Rab	7.33	352	ePn	Pn	18 16 58.6	-0.3
RABC				Sn	Sn	18 18 14.5	-6.4
VTS	Vitosha	7.39	44	⇑P	Pn	18 16 57.8	-1.9
PLIT	Plitvice	7.39	356	ePn	Pn	18 16 59.6	-0.1
PLIT				Sn	Sn	18 18 16.1	-6.3
TRUS	Trudelj	7.41	24	ePn	Pn	18 16 59.3	-0.6
BRJN	Brijuni	7.64	346	ePn	Pn	18 17 04.5	+1.4
BRJN				Sn	Sn	18 18 23.7	-4.8
ZAGS	Zajecar	7.76	34	ePn	Pn	18 17 03.6	-1.1
FRGS	Fruska Gora	8.10	18	⇑P	Pn	18 17 07.9	-1.5
FRGS	Fruska Gora	8.10	18	ePn	Pn	18 17 07.1	-2.3
FRGS	Fruska Gora	8.10	18	ePn	Pn	18 17 03.6	-5.8
MOSL	Moslavina	8.12	2	ePn	Pn	18 17 08.7	-1.0
MOSL				Sn	Sn	18 18 33.3	-6.9
CRES	Cresnjev	8.35	356	ePn	Pn	18 17 15.4	+2.7
MORH	Mrgy, Hungar	8.89	11	⇑P	Pn	18 17 19.5	-0.7
MORH	Mrgy, Hungar	8.89	11	ePn	Pn	18 17 18.9	-1.2
ESDC	Sonseca Array	15.98	284	Pn	P	18 19 00.2	+0.6
	comp=E,0.0nm,0.3s,baz=90,slow=13,SNR=4.4						
AKASG	Malin Array Be	16.11	31	Pn	Pn	18 18 59.8	+1.8
	comp=E,0.5nm,0.3s,baz=223,slow=10,SNR=24						
MMAI	Mount Meron Ar	16.24	100	Pn	Pn	18 18 57.8	-2.1
	comp=E,1.2nm,0.3s,baz=300,slow=12,SNR=10						
EIL	Elat	17.39	111	P	P	18 19 14.9	-0.4
	comp=E,0.5nm,0.3s,baz=220,slow=7.9,SNR=9.7						
GNI	Garni	22.29	74	LR	LR	18 29 06.9	
	comp=E,20nm,18.7s,baz=314,slow=38						
FINES	FINESS Array B	24.75	11	P	P	18 20 32.8	+0.5
	comp=E,2.4nm,0.9s,baz=195,slow=9.4,SNR=5.1						
ARCES	ARCESS Array B	32.48	6	P	P	18 21 41.9	+0.7
	comp=E,4.3nm,1.0s,baz=183,slow=9.5,SNR=2.0						
MKAR	Makanchi Array	48.50	57	P	P	18 23 55.6	+1.9
	comp=E,0.3nm,0.4s,baz=285,slow=6.9,SNR=7.7						
ZALV	Zalesovo Beam	48.63	47	P	P	18 23 56.6	+2.1
	comp=E,0.9nm,0.3s,baz=284,slow=9.0,SNR=4.6						

IDC ***12*** *18:17:50.8±0.7, 10.°88N×73.°09W, h96^{km}±6^{km}, mb3.4/6, mb1 3.7/10, mb1mx3.4/38, mbtmp4.0/10, MS2.9/1, Ms1 2.9/1, ms1mx2.5/21, Error ellipse: s-maj=18.2km s-min=14.7km az=86.0*

RSNC ***12*** *18:17:53.0±0.9, 10.°65N×73.°24W, h88^{km}±4^{km}, ML3.9, Mw4.0, Fault plane solution: NP1:φ$_s$43.00000°, δ82.00000°, λ11.00000°.*

ISC 12 18:17:50.8±0.6**, 10.°76N**±0.°04×**73.°26W**±0.°03**, h93**^{km}±6^{km}**, n57, σ2.^{s}57**/101**, mb3.5**/6**, 7C-6D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CVALL	Valledupar, Ce	0.24	180	⇑iP	Pn	18 18 05.5	+1.0
CVALL				eS	Sn	18 18 14.9	+0.3
CVALL				i		18 18 17.8	
	comp=Z,1µm,0.2s						
CRJC	Cerrejon, Guaj	0.45	55	⇑iP	Pn	18 18 07.3	+1.6
CRJC				eS	Sn	18 18 18.2	+1.4
CRJC				i		18 18 19.3	
	comp=Z,8µm,0.1s						
SMRC	Santa Marta, M	1.03	293	⇑eP	Pn	18 18 12.3	+1.2
SMRC				eS	Sn	18 18 28.6	+2.2
SMRC				i		18 18 32.4	
	comp=Z,1µm,0.3s						
LL5C	La Loma 5 El P	1.10	205	eP	Pn	18 18 12.4	+0.5
LL5C				eS	Sn	18 18 28.2	+0.5
LL1C	La Loma 1 Cana	1.24	194	⇓iP	Pn	18 18 13.8	+0.3
LL1C				eS	Sn	18 18 29.3	-1.4
ARGC	Ariguani, Magd	1.32	228	⇑iP	Pn	18 18 15.7	+1.1
ARGC				eS	Sn	18 18 33.4	+1.0
ARGC				i		18 18 39.5	
	comp=Z,685nm,0.2s						
URIC	Uribia, Colomb	1.56	53	eP	Pn	18 18 19.5	+2.0
URIC				eS	Sn	18 18 40.6	+2.9
URIC				i		18 18 42.9	
	comp=Z,1µm,0.2s						
SJCC	San Jacinto, C	2.07	246	⇑eP	Pn	18 18 25.2	+1.0
SJCC				eS	Sn	18 18 50.6	+0.9
SJCC				i		18 18 52.4	
	comp=Z,290nm,0.3s						
SMLC	San Martn de	2.10	202	eP	Pn	18 18 24.2	-0.3
SMLC				eS	Sn	18 18 48.7	-1.5
SMLC				i		18 18 52.0	
	comp=Z,1µm,0.3s						
OCAC	Ocana	2.50	181	⇓iP	Pn	18 18 30.0	+0.1
OCAC				eS	Sn	18 18 58.6	-1.3
DABV	Dabajuro	2.58	86	⇑eP	Pn	18 18 32.8	+2.0
DABV				eS	Sn	18 19 03.4	+1.8
MOTC	Monteria, Cord	3.08	231	eP	Pn	18 18 39.3	+1.8
MOTC				eS	Sn	18 19 11.4	-2.1
SDV	Santo Domingo	3.19	125	⇑iP	Pn	18 18 40.3	+1.2
SDV				eS	Sn	18 19 15.3	-1.0
SDV				i		18 19 17.4	
	comp=Z,316nm,0.3s						
SOCV	Socops	3.41	136	eP	Pn	18 18 42.7	+0.7
SOCV				eS	Sn	18 19 20.4	-1.1
PAMC	Pamplona, Colo	3.44	171	⇓iP	Pn	18 18 43.5	+0.7
PAMC				eS	Sn	18 19 22.1	-0.7
PAMC				i		18 19 25.1	
	comp=Z,787nm,0.3s						
LCBC	Los crdobas,	3.60	239	eP	Pn	18 18 46.2	+1.8
LCBC				eS	Sn	18 19 26.4	+0.4
ZARC	Zaragoza, Cauc	3.61	206	eP	Pn	18 18 45.4	+0.7
ZARC				eS	Sn	18 19 25.2	-1.1
ZARC				i		18 19 34.0	
	comp=Z,495nm,0.4s						
BRRC	Barranca, Sant	3.65	187	⇓eP	Pn	18 18 45.7	+0.4
BRRC				eS	Sn	18 19 26.7	-0.6
UREC	San Jos de Ur	3.73	217	eP	Pn	18 18 46.8	+0.4
UREC				eS	Sn	18 19 27.1	-2.2
UREC				i		18 19 29.8	
	comp=Z,241nm,0.3s						
BARC	Barichara	4.14	179	⇓eP	Pn	18 18 52.7	+0.7
BARC				eS	Sn	18 19 38.9	-0.6
BARC				i		18 19 50.8	
	comp=Z,156nm,0.5s						
PTBC	PUERTO BERRIO,	4.35	196	eP	Pn	18 18 55.0	+0.2
PTBC				eS	Sn	18 19 43.8	-0.6
PTBC				i		18 19 49.7	
	comp=Z,144nm,0.4s						
TAMC	Tame, Arauca	4.53	161	eP	Pn	18 18 57.2	0.0
TAMC				eS	Sn	18 19 47.9	-0.8
TAMC				i		18 19 52.6	
	comp=Z,193nm,0.4s						
DBBC	Dabeiba	4.72	218	eP	Pn	18 18 59.8	0.0
DBBC				eS	Sn	18 19 46.6	-6.8
DBBC				i		18 19 56.9	
	comp=Z,304nm,0.3s						
RUSC	La Rusia	4.83	178	eP	Pn	18 19 01.4	-0.3
RUSC				eS	Sn	18 19 57.0	+0.3
RUSC				i		18 20 15.7	
	comp=Z,63nm,0.7s						
HELC	Santa Helena	5.06	207	eP	Pn	18 19 06.4	+1.8
HELC				eS	Sn	18 19 57.9	-4.2
HELC				i		18 20 14.9	
	comp=Z,108nm,0.4s						
SPBC	San Pablo de B	5.13	189	eP	Pn	18 19 06.0	+0.5
SPBC				eS	Sn	18 20 02.5	-1.0
SPBC				i		18 20 31.9	
	comp=Z,84nm,0.6s						
ELOV	Elorza	5.28	135	eP	Pn	18 19 07.9	+0.6
ELOV				eS	Sn	18 20 01.6	-5.3
NORC	Norcasia	5.40	197	eP	Pn	18 19 09.6	+0.6
NORC				eS	Sn	18 20 09.3	-0.6
NORC				i		18 20 20.4	
	comp=Z,94nm,0.5s						
CBOC	Ciudad Bolivar	5.57	209	eP	Pn	18 19 12.8	+1.3
CBOC				eS	Sn	18 20 14.1	-0.1
GUY2C	Guyana, Caldas	5.88	201	eP	Pn	18 19 16.8	+0.9
GUY2C				eS	Sn	18 20 17.7	-4.5
GUY2C				i		18 20 50.2	
	comp=Z,98nm,0.6s						
ROSC	El Rosal	5.97	190	P	Pn	18 19 19.0	+1.9
	comp=Z,18nm,0.3s,baz=51,slow=5.6,SNR=10						
ROSC				S	Sn	18 20 30.5	+6.2
	comp=Z,13nm,0.3s,baz=210,slow=22,SNR=1.6						
ROSC	El Rosal	5.97	190	eP	Pn	18 19 17.7	+0.6
ROSC				eS	Sn	18 20 23.7	-0.6
ROSC				i		18 20 49.7	
	comp=Z,57nm,0.5s						
PLMC	San Jos del P	6.54	207	eP	Pn	18 19 26.0	+1.4
PLMC				eS	Sn	18 20 34.6	-3.1
PLMC				i		18 20 44.0	
	comp=Z,32nm,0.3s						
ANIL	Santa Ana	6.58	199	eP	Pn	18 19 27.9	+2.6
ANIL				eS	Sn	18 20 46.7	+7.7
ANIL				i		18 20 57.0	
	comp=Z,100nm,0.4s						
VILC	Villavicencio,	6.61	184	eP	Pn	18 19 26.4	+0.8
VILC				eS	Sn	18 20 44.2	+4.5
ORTC	Ortega, Tolima	7.08	196	eP	Pn	18 19 33.4	+1.5
ORTC				eS	Sn	18 20 53.6	+2.7
PRAC	Prado	7.18	193	eP	Pn	18 19 34.1	+0.9
PRAC				eS	Sn	18 20 55.3	+2.0
PRAC				i		18 21 36.3	
	comp=Z,38nm,0.5s						
YOTC	Yotoco, Valle	7.39	205	eP	Pn	18 19 37.1	+0.9
YOTC				eS	Sn	18 20 53.3	-5.3
YOTC				i		18 20 59.7	
	comp=Z,9.8nm,0.7s						
CMJ	Castle Mountai	7.93	338	i P	Pn	18 19 45.6	+2.2
GWJ	Greenwich	8.01	336	i P	Pn	18 19 46.5	+1.8
STH	Stony Hill	8.05	335	⇓iP	Pn	18 19 47.4	+2.3
MCJ	Malvern	8.32	329	i S	Sn	18 21 13.6	-7.6
MCJ				i S	Sn	18 21 16.2	-4.9
PCRV	Puerto La Cruz	8.50	93	P	Pn	18 19 51.5	+0.3
	comp=Z,4.0nm,0.3s,baz=319,slow=2.4,SNR=21						
CVJ	Coleyville	8.50	331	i P	Pn	18 19 53.0	+1.7
POPC	Popayan, Colom	8.84	203	eP	Pn	18 19 55.3	-0.7
POPC				eS	Sn	18 21 25.6	-8.5
SJG	San Juan	10.04	42	P	Pn	18 20 09.4	-2.8
	comp=Z,3.6nm,0.3s,baz=216,slow=11,SNR=7.2						
SJG				S	Sn	18 21 55.8	-7.2
	comp=Z,4.3nm,0.3s,baz=64,slow=22,SNR=6.5						
APG	El Apazote	17.29	286	P	Pn	18 21 51.5	+4.7
	comp=Z,0.3nm,0.3s,baz=169,slow=22,SNR=13						
PTGA	Pitinga	17.46	130	P	Pn	18 21 50.2	+1.6
	comp=Z,0.4nm,0.3s,baz=313,slow=16,SNR=4.5						
ATAH	Atahualpa	18.49	196	P	Pn	18 22 03.2	+1.8
	comp=Z,0.4nm,0.3s,baz=55,slow=8.5,SNR=4.0						
CMIG	Matias Romero	21.90	289	P	P	18 22 36.9	+0.3
	comp=Z,0.9nm,0.4s,baz=72,slow=11,SNR=3.5						
CMIG				LR	LR	18 32 13.3	
	comp=Z,32nm,18.6s,baz=17,slow=39						
SIV	San Ignacio	29.18	155	P	P	18 23 44.2	+0.5
	comp=Z,2.1nm,0.7s,baz=331,slow=6.2,SNR=8.2						
TXAR	Lajitas Array	33.86	308	P	P	18 24 25.6	+0.8
	comp=Z,0.3nm,0.6s,baz=129,slow=8.4,SNR=4.4						
PDAR	Pinedale Array	44.88	322	P	P	18 25 57.4	+1.1
	comp=Z,0.3nm,0.6s,baz=120,slow=5.3,SNR=2.7						
PLCA	Paso Flores	51.29	177	P	P	18 26 44.0	-1.4
	comp=Z,1.2nm,0.6s,baz=360,slow=7.4,SNR=4.6						
TORD	Torodi Ar. Bea	73.12	79	P	P	18 29 10.0	-1.8
	comp=Z,0.8nm,1.1s,baz=308,slow=7.0,SNR=2.8						
TORD				pP	pP	18 29 35.1	-0.8
	comp=Z,0.3nm,0.6s,baz=283,slow=7.0,SNR=2.2						
ASAR	Alice Springs	151.12	240	PKPbc	PKPbc	18 37 34.1	+0.1
	comp=Z,0.8nm,0.5s,baz=107,slow=3.2,SNR=31						
ASAR				pPKPbc	pPKPbc	18 37 59.9	-0.4
	comp=Z,0.5nm,0.6s,baz=118,slow=3.1,SNR=3.1						
WRA	Warramunga Arr	151.90	248	PKPbc	PKPbc	18 37 35.4	-0.5
	comp=Z,0.5nm,0.6s,baz=104,slow=2.8,SNR=12						
WRA				pPKPbc	pPKPbc	18 38 02.0	-0.1
	comp=Z,0.4nm,0.5s,baz=105,slow=2.9,SNR=2.6						

JMA ***12*** *18:28:06.9±0.1, 23.°39N×121.°39E, h7^{km}±2^{km}, M3.3*

TAP ***12*** *18:28:08.1, 23.°39N×121.°34E, h11^{km}, ML3.7, B*

ISC 12 18:28:08.2±0.7**, 23.°40N**±0.°01×**121.°36E**±0.°02**, h16**^{km}±4^{km}**, n119, σ0.^{s}89**/190**, 6C-15D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YULB	Yu-li	0.06	267	⇑iP	Pg	18 28 10.3	-0.9
	baz=274						
YULB				i S	Sg	18 28 12.0	-1.2
	baz=274						
EYUL	Yuli	0.06	220	⇑iP	Pg	18 28 10.6	-0.7
	baz=213						
EYUL				i S	Sg	18 28 12.4	-0.8
	baz=213						
TWF1	Yuli	0.08	235	⇑iP	Pg	18 28 10.4	-1.0
	baz=227						
TWF1				i S	Sg	18 28 12.1	-1.3
	baz=227						
HGSD	Ruisui	0.11	30	⇑iP	Pg	18 28 12.0	+0.2
	baz=25						
HGSD				S	Sg	18 28 15.0	+1.0
	baz=25						
ECBN	Changbin	0.11	135	⇓iP	Pg	18 28 11.9	+0.1
	baz=126						
ECBN				S	Sg	18 28 15.0	+1.0
	baz=126						
EHY	Hungye	0.12	341	⇓iP	Pg	18 28 11.4	-0.5
	baz=353						
EHY				i S	Sg	18 28 13.6	-0.6
	baz=353						
FULB	Fuli	0.21	198	i P	Pg	18 28 13.3	+0.2
	baz=203						
FULB				S	Sg	18 28 17.7	+1.4
	baz=203						
EGFH	Guangfu	0.28	12	⇑iP	Pb	18 28 14.4	-0.5
	baz=4.0						
EGFH				S	Sb	18 28 19.0	-0.4
	baz=4.0						
CHKT	Chengkung	0.30	180	⇑iP	Pb	18 28 14.9	-0.3
	baz=165						
CHKT				S	Sb	18 28 21.3	+1.4
	baz=165						
ECS	Chishang	0.33	204	P	Pb	18 28 14.8	-1.0
	baz=221						
ECS				S	Sb	18 28 21.7	+0.8
	baz=221						
TEGC	Jichi Village	0.35	27	eP	Pb	18 28 17.0	+0.8
	baz=8.0						
ELDTW	Lidau	0.38	237	⇓iP	Pg	18 28 15.1	-0.9
	baz=246						
ELDTW				i S	Sg	18 28 19.8	-1.5
	baz=246						
YUS	Yu-Shan	0.39	284	⇓P	Pg	18 28 16.1	-0.3
	baz=276						
YUS				S	Sg	18 28 21.8	-0.2
	baz=276						
VWDT	VWDT	0.41	330	⇓iP	Pb	18 28 16.7	-0.5
	baz=331						
VWDT				S	Sb	18 28 22.4	-0.8
	baz=331						
ESL	Shilin	0.42	9	P	Pg	18 28 16.5	-0.3
	baz=1.0						
ESL				eS	Sg	18 28 22.5	0.0
	baz=1.0						
EDH	Donghe	0.42	187	i P	Pb	18 28 16.9	-0.6
	baz=210						
EDH				S	Sb	18 28 25.1	+1.5
	baz=210						
TEYL	Yanliau Villag	0.52	25	eP	Pn	18 28 20.4	-0.7
	baz=5.0						
ALS	Alishan	0.53	283	⇓iP	Pb	18 28 18.8	-0.6
	baz=284						
ALS				S	Sb	18 28 26.4	-0.5
	baz=284						
LONT	Longtian	0.53	204	P	Pb	18 28 18.6	-0.7
	baz=217						
LONT				S	Sb	18 28 27.1	+0.3
	baz=217						
SSLB	Suanglung	0.54	316	⇓iP	Pg	18 28 18.7	-0.3
	baz=317						
SSLB				i S	Sg	18 28 25.8	-0.5
	baz=317						
ETM	Tongmen	0.58	12	eP	Pg	18 28 19.4	-0.3
	baz=12						
OWD	Renai	0.58	343	⇓iP	Pg	18 28 19.5	-0.3
	baz=342						
OWD				S	Sg	18 28 27.3	-0.3
	baz=342						
STYH	Taoyuan	0.59	248	P	Pg	18 28 19.3	-0.5
	baz=250						
STYH				S	Sg	18 28 26.4	-1.2
	baz=250						
STYT	Tauyuan	0.60	248	⇓iP	Pg	18 28 19.6	-0.5
	baz=249						
STYT				S	Sg	18 28 27.2	-1.0
	baz=249						
HWA	Hwalien	0.62	21	eP	Pb	18 28 21.5	+0.7
	baz=6.0						
TWG	Pinlang	0.63	205	P	Pb	18 28 20.2	-0.8
	baz=218						
TWG				eS	Sg	18 28 28.5	-0.6
	baz=218						
TWGBT	Beinan	0.63	204	eP	Pg	18 28 19.2	-1.5
	baz=211						
SMLT	Sun Moon Lake	0.65	319	⇓iP	Pb	18 28 20.8	-0.5
	baz=319						
SMLT				i S	Sb	18 28 29.6	-0.5
	baz=319						
CHN5	Tsauling	0.66	288	⇓iP	Pb	18 28 21.6	+0.1
	baz=289						
CHN5				eS	Sb	18 28 31.3	+0.8
	baz=289						
TTN	Taitung	0.67	197	eP	Pb	18 28 22.0	+0.4
	baz=200						
TPUB	Ta-pu	0.68	262	⇓P	Pb	18 28 21.5	-0.3
	baz=264						
TPUB				S	Sb	18 28 30.9	-0.2
	baz=264						
CHGB	Renai	0.68	345	P	Pb	18 28 21.5	-0.5
	baz=343						
CHGB				S	Sg	18 28 30.4	-0.5
	baz=343						
TYC	Yuchr	0.69	317	⇓iP	Pb	18 28 21.5	-0.4
	baz=319						
TYC				i S	Sg	18 28 30.6	-0.2
	baz=319						
WTP	Ta-pu	0.71	258	⇓iP	Pb	18 28 21.9	-0.3
	baz=260						
WTP				S	Sb	18 28 31.7	-0.1
	baz=260						
CHN4	Tsaushan	0.71	267	P	Pg	18 28 20.6	-1.5
	baz=262						
CHN4				S	Sg	18 28 30.5	-1.0
	baz=262						
TWD	Chiawan	0.71	17	eP	Pb	18 28 22.5	+0.2
	baz=14						
WPL	Puli Township	0.72	329	i P	Pb	18 28 22.3	-0.2
	baz=328						
WPL				eS	Sg	18 28 31.5	-0.3
	baz=328						
WJS	Zhushan	0.72	306	P	Pn	18 28 23.3	-0.6
	baz=313						
WJS				S	Sn	18 28 34.0	-0.6
	baz=313						
LDUT	Ludao	0.73	172	eP	Pg	18 28 21.8	-0.7
	baz=163						
LDUT				eS	Sb	18 28 32.7	+0.4
	baz=163						
DPDB	Guoxing	0.75	328	i P	Pb	18 28 23.0	0.0
	baz=327						
DPDB				eS	Sb	18 28 32.9	-0.3
	baz=327						
WHF	Hehuan Shan	0.75	353	P	Pg	18 28 22.6	-0.4
	baz=351						
WHF				eS	Sg	18 28 32.7	-0.3

	baz=351						
WCS	Beigang Elemen	0.78	328	P	Pg	18 28 22.4	-1.1
	baz=333						
WCS				S	Sg	18 28 32.9	-0.8
	baz=333						
SGST	Jiashian	0.78	247	P	Pg	18 28 22.5	-1.0
	baz=247						
SGST				*e*S	Sb	18 28 33.6	-0.4
	baz=247						
WNT	Mingjian	0.79	308	⇓*i*P	Pn	18 28 24.7	-0.1
	baz=308						
WNT				*e*S	Sn	18 28 36.6	+0.3
	baz=308						
WGK	Gukeng	0.79	292	*i* P	Pn	18 28 24.7	-0.1
	baz=289						
WGK				*e*S	Sn	18 28 36.7	+0.4
	baz=289						
ETL	Fush Village	0.80	17	*e*P	Pb	18 28 24.2	+0.4
	baz=12						
CHN1	Nanshi	0.80	255	P	Pb	18 28 23.9	+0.1
	baz=257						
CHN1				S	Sb	18 28 35.4	+1.0
	baz=257						
NACB	Ninganchiao	0.80	15	*e*P	Pg	18 28 23.2	-0.7
	baz=10.0						
WNT1	Nantou City	0.81	309	P	Pn	18 28 25.4	+0.4
	baz=310						
WDLH	Douliu	0.81	291	*e*P	Pn	18 28 24.8	-0.3
	baz=293						
SNST	Tainan City	0.82	258	*e*P	Pb	18 28 24.1	0.0
	baz=260						
SNST				*e*S	Sb	18 28 36.1	+1.2
	baz=260						
TWK	Hsinying	0.82	261	P	Pb	18 28 24.0	-0.1
	baz=263						
TWK				*e*S	Sb	18 28 36.0	+1.0
	baz=263						
CHN2	Minshiung	0.83	280	*e*P	Pn	18 28 25.4	+0.1
	baz=295						
CHN2				*e*S	Sn	18 28 37.9	+0.6
	baz=295						
FUSS	Fushou	0.85	353	*e*P	Pb	18 28 24.7	-0.3
	baz=349						
FUSS				*e*S	Sg	18 28 35.4	-0.8
	baz=349						
CHY	Chiayi	0.87	277	*e*P	Pn	18 28 25.5	-0.3
	baz=279						
CHY				*e*S	Sn	18 28 38.2	-0.1
	baz=279						
TWT	Tachien	0.87	349	*e*P	Pb	18 28 24.9	-0.3
	baz=335						
TDCB	Techi	0.87	348	*e*P	Pb	18 28 24.8	-0.4
	baz=335						
TDCB				*e*S	Sg	18 28 35.4	-1.4
	baz=335						
ECL	Taimali	0.88	205	*e*P	Pg	18 28 24.1	-1.2
	baz=194						
WWF	Wufeng	0.89	317	P	Pn	18 28 26.9	+0.8
	baz=316						
WWF				*e*S	Sn	18 28 40.3	+1.5
	baz=316						
WYL	Yuanlin Townsh	0.91	308	*e*P	Pn	18 28 27.5	+1.0
	baz=308						
WYL				*e*S	Sn	18 28 40.6	+1.3
	baz=308						
SSD	Sandimen	0.94	226	*e*P	Pg	18 28 24.9	-1.4
	baz=223						
WTK	Tuku	0.94	288	*e*P	Pn	18 28 26.5	-0.3
	baz=289						
WTK				*e*S	Sn	18 28 41.1	+1.1
	baz=289						
TSMG	Majia	0.95	224	*e*P	Pg	18 28 25.5	-1.3
	baz=221						
WHP	Taichung City	0.96	337	*e*P	Pn	18 28 27.0	-0.2
	baz=341						
CHN3	Shinhua	0.97	251	*e*P	Pn	18 28 28.2	+0.9
	baz=253						
CHN3				*e*S	Sn	18 28 43.1	+2.3
	baz=253						
TCU	Taichung	0.98	320	*e*P	Pn	18 28 28.2	+0.8
	baz=319						
TCU				*e*S	Sn	18 28 42.7	+1.8
	baz=319						
ICHU	Yijhu	1.00	268	*e*P	Pn	18 28 27.9	+0.2
	baz=271						
ICHU				*e*S	Sn	18 28 42.0	+0.6
	baz=271						
WCHH	Zhanghua	1.00	313	*e*P	Pn	18 28 28.4	+0.7
	baz=312						
WCHH				*e*S	Sn	18 28 42.9	+1.3
	baz=312						
SSHA	Shanhua	1.02	256	*e*P	Pn	18 28 28.7	+0.7
	baz=258						
SSHA				*e*S	Sn	18 28 45.2	+3.1
	baz=258						
MASBT	Mashibuluo	1.03	221	*e*P	Pg	18 28 26.2	-2.0
	baz=225						
WRL	Guolierlin Hig	1.03	299	*e*P	Pn	18 28 28.7	+0.5
	baz=300						
WRL				*e*S	Sn	18 28 43.5	+1.1
	baz=300						
TWM1	Shoushan	1.04	237	*e*P	Pn	18 28 29.9	+1.7
	baz=231						
NNS	Nan Shan	1.04	0	*i* P	Pb	18 28 27.9	-0.1
	baz=7.0						
NNS				*e*S	Sg	18 28 40.9	-1.2
	baz=7.0						
SGLT	Jiouru	1.04	230	*e*P	Pn	18 28 29.3	+1.0
	baz=234						
CHN8	Yiju	1.06	268	*e*P	Pn	18 28 28.8	+0.3
	baz=270						
CHN8				*e*S	Sn	18 28 44.7	+1.7
	baz=270						
WSF	Szhu	1.08	283	*e*P	Pn	18 28 29.0	+0.3
	baz=297						
WSF				*e*S	Sn	18 28 44.3	+1.0
	baz=297						
ENA	Nanau	1.08	18	*e*P	Pg	18 28 27.7	-1.5
	baz=359						
TWQ1	Liyutan	1.09	330	*e*P	Pn	18 28 30.1	+1.1
	baz=328						
TWQ1				*e*S	Sn	18 28 46.3	+2.5
	baz=328						
WTCT	Ta-ch'eng	1.10	295	*e*P	Pn	18 28 29.9	+0.9
	baz=296						
WTCT				*e*S	Sn	18 28 45.3	+1.4
	baz=296						
SCLT	Jiali	1.10	259	*e*P	Pn	18 28 30.3	+1.3
	baz=261						
SCLT				*e*S	Sn	18 28 46.4	+2.5
	baz=261						
EWUT	Wuta	1.11	20	*e*P	Pb	18 28 29.1	0.0
EAST	Anshuo	1.11	205	P	Pb	18 28 29.1	-0.2
	baz=197						
NSY	Sanyi	1.16	332	*e*P	Pn	18 28 31.1	+1.3
	baz=329						
WDJ	Dajia District	1.16	325	*e*P	Pn	18 28 31.2	+1.4
	baz=323						
WDJ				*e*S	Sn	18 28 48.2	+2.8
	baz=323						
SSPT	Xinbi	1.17	219	*e*P	Pn	18 28 30.1	+0.1
	baz=216						
NDT	Datong Townshi	1.21	6	*e*P	Pg	18 28 31.6	0.0
	baz=11						
SCZT	Fangliau	1.23	214	*e*P	Pn	18 28 30.5	-0.4
	baz=225						
NMLH	Miaoli	1.25	335	*e*P	Pg	18 28 32.5	+0.1
	baz=331						
ENTT	Nioudou	1.25	8	*e*P	Pg	18 28 32.3	-0.1
	baz=13						
YHNB	Yeheng	1.27	0	*e*P	Pn	18 28 31.6	+0.1
	baz=7.0						
NDS	Dongshan	1.27	15	*e*P	Pg	18 28 32.5	-0.4
	baz=5.0						
NSTT	Nanjuang	1.27	345	*e*P	Pg	18 28 32.8	0.0
	baz=341						
NSTT				*e*S	Sn	18 28 49.2	+0.9
	baz=341						
NSK	Sanguang	1.27	360	*e*P	Pg	18 28 32.1	-0.7
	baz=352						
NSK				*e*S	Sb	18 28 48.5	+0.3
	baz=352						
LIOB	Emei	1.28	346	*e*P	Pg	18 28 33.1	+0.1
	baz=341						
SLIU	Shizi	1.28	204	*e*P	Pn	18 28 31.3	-0.3
	baz=198						
TWE	Neicheng	1.35	12	*e*P	Pb	18 28 32.8	-0.4
	baz=3.0						
NWLT	Wulai	1.38	5	*e*P	Pg	18 28 34.6	-0.3
	baz=9.0						
WLCH	Liuqiu	1.38	221	*e*P	Pg	18 28 35.5	+0.7
	baz=230						
NTC	Toucheng	1.51	16	*e*P	Pb	18 28 35.6	-0.4
	baz=6.0						
TWKBT	Hengchun	1.54	199	*e*P	Pn	18 28 34.2	-0.8
	baz=196						
NHDH	Xindian Distri	1.57	5	*e*P	Pg	18 28 37.3	-1.1
	baz=6.0						
WDGT	Dungji	1.57	265	*e*P	Pn	18 28 35.5	0.0
	baz=268						
TWA	Mucha	1.59	7	*e*P	Pg	18 28 38.1	-0.7
	baz=8.0						
TIPB	Shuangxi	1.62	15	*e*P	Pb	18 28 37.9	-0.1
	baz=4.0						
PHUB	P'eng-hu	1.65	274	*e*P	Pn	18 28 37.0	+0.4
	baz=275						
PNG	Penghu	1.67	276	*e*P	Pn	18 28 37.4	+0.5
	baz=277						
TWS1	Kuangyinshan	1.70	2	*e*P	Pg	18 28 40.1	-0.8
	baz=9.0						
NWF	Wu-fen Shan	1.71	13	*e*P	Pg	18 28 40.0	-1.2
	baz=1.0						
YM01	YM01	1.75	6	*e*P	Pg	18 28 40.9	-1.0
	baz=12						
JYNG	Yonagunijimaku	1.79	54	P	Pn	18 28 38.6	+0.1
JYNG				*e*S	Sb	18 29 02.4	-0.5
YOJ	Yonaguni jima	1.84	55	*e*P	Pn	18 28 39.3	0.0
	baz=44						
YOJ	Yonaguni jima	1.84	55	P	Pn	18 28 39.3	0.0
YOJ				S	Sn	18 29 03.6	+1.3
HATJ	Hateruma jima	2.33	73	*e*S	Sn	18 29 14.4	0.0
IRIF	Iriomote-Funau	2.36	66	P	Pn	18 28 46.3	-0.1
IRIF				*e*S	Sn	18 29 16.1	+1.1
JKRS	Kuro-shima	2.56	70	P	Pn	18 28 49.2	0.0
JKRS				*e*S	Sn	18 29 20.1	0.0
JIJ	Ishigaki jima	2.72	69	P	Pn	18 28 50.9	-0.4
JIJ				*e*S	Sn	18 29 24.4	+0.4
JISG	Ishigakijimahi	2.94	66	P	Pn	18 28 53.7	-0.7
JISG				*e*S	Sn	18 29 28.4	-1.1
JTJ	Tarama	3.29	67	P	Pn	18 28 58.9	-0.3
JTJ				*e*S	Sn	18 29 39.3	+1.2
JIRB	Irabujima	3.76	67	P	Pn	18 29 05.9	+0.2
JIRB				*e*S	Sn	18 29 50.0	+0.4

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*NIED **12** 18:37:15.7, 31°.19N×129°.13E, h8^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.39; $M_{\theta\theta}$0.73; $M_{\phi\phi}$0.66; $M_{r\theta}$-0.27; $M_{\theta\phi}$2.62; $M_{\phi r}$2.87; Fault plane solution: $M_0$4.08000×10^{15} NP1: ϕ_s188.00000°, δ77.00000°, λ-130.00000°. NP2: ϕ_s82.00000°, δ42.00000°, λ-20.00000°.*

*JMA **12** 18:37:15.7±0.2, 31°.18N×129°.13E, h8^{km}±2^{km}, M4.3*

JMA Felt I J1.

*IDC **12** 18:37:17.4±0.9, 31°.15N×129°.02E, h0^{km}, mb3.6/8, mb1 3.8/12, mb1mx3.6/48, mbtmp3.7/12, ML3.2/4, MS3.6/27, Ms1 3.6/27, ms1mx3.4/51, Error ellipse: s-maj=23.6km s-min=15.3km az=88.0*

ISC 12 18:37:18.1±0.7**, 31°.18N**±0°.04×**129°.26E**±0°.05**, h10**^{km}**, n45,** σ**1^s.55**/29**, mb3.7**/8**, MS3.6**/24**, 1C-4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.63	38	⇓P	Pg	18 37 28.7	-1.6
JSJ				*e*S	Sg	18 37 38.3	-0.3
JSU	Suzuyama	1.07	72	⇓P	Pg	18 37 37.7	-1.0
JKC	Kuchinoerabu	1.08	132	⇑P	Pg	18 37 37.4	-1.4
JKC				S	Sg	18 37 52.4	-0.4
JYAK	Yakushimahirau	1.43	131	P	Pn	18 37 42.2	-1.9
JYAK				*e*S	Sn	18 38 02.1	-0.8
JNN	Nakanoshima	1.44	158	P	Pn	18 37 42.4	-1.8
JFU	Fukue jima 2	1.53	344	P	Pn	18 37 42.9	-2.7
JTN	Tanegashima 3	1.57	109	P	Pn	18 37 45.0	-1.0
JTN				*e*S	Sn	18 38 05.5	-0.9
JMTN	Minamitane	1.61	119	P	Pn	18 37 45.7	-0.9
JTZ	Takazaki	1.71	65	⇓P	Pn	18 37 47.5	-0.6
JIU3	Izumi3	1.90	44	⇓P	Pn	18 37 49.9	-0.7
JNU	Nakatsue	2.37	35	Pn	Pb	18 38 00.3	-0.6
	8.9nm,0.3s,baz=221,slow=2.8,SNR=46						
JNU				Sn	Sg	18 38 33.2	-1.1
	28nm,0.3s,baz=212,slow=8.4,SNR=5.9						
JOW	Kunigami	4.42	192	Pn	Pn	18 38 28.1	+2.8
	2.6nm,0.3s,baz=30,slow=8.2,SNR=7.0						
KSRS	Korea Array	6.35	350	Pn	Pn	18 38 51.4	-0.4
	0.9nm,0.3s,baz=166,slow=14,SNR=14						
KSRS				Sn	Sn	18 40 04.3	-0.1
	0.5nm,0.3s,baz=165,slow=24,SNR=2.7						
KSRS				Lg	Lg	18 40 36.5	
	1.0nm,0.3s,baz=168,slow=29,SNR=5.3						
MJAR	Matsushiro Arr	9.16	52	Pn	Pn	18 39 34.2	+3.8
	0.1nm,0.3s,baz=245,slow=13,SNR=5.4						
MJAR				LR	LR	18 43 26.4	
	comp=Z,473nm,18.2s,baz=245,slow=39						
JCJ	Chichijima	12.01	107	LR	LR	18 43 22.6	
	comp=Z,46nm,21.9s,baz=323,slow=30						
ASAJ	Asahikawa	16.65	35	LR	LR	18 47 05.9	
	comp=Z,134nm,19.8s,baz=210,slow=35						
KLR	Kul'dur	18.13	5	P	P	18 41 33.2	+3.0
	0.2nm,0.3s,baz=193,slow=10.0,SNR=8.8						
GUMO	Guam	22.64	137	LR	LR	18 50 04.8	
	comp=Z,72nm,19.6s,baz=121,slow=34						
SONM	Songino Array	24.11	320	P	P	18 42 33.5	-0.5
	1.0nm,0.9s,baz=134,slow=6.4,SNR=4.9						
SONM				LR	LR	18 52 40.2	
	comp=Z,203nm,19.7s,baz=131,slow=38						
TLY	Talaya	27.83	325	LR	LR	18 54 23.6	
	comp=Z,96nm,20.1s,baz=146,slow=37						
PETK	Petropavlovsk-	30.07	35	LR	LR	18 55 17.0	
	comp=Z,53nm,18.2s,baz=235,slow=36						
CMAR	Chiang Mai Arr	30.19	252	LR	LR	18 56 54.9	
	comp=Z,53nm,18.5s,baz=33,slow=39						
ZALV	Zalesovo Beam	38.99	319	LR	LR	19 02 30.3	
	comp=Z,111nm,20.8s,baz=55,slow=39						
MKAR	Makanchi Array	39.09	307	P	P	18 44 44.4	-1.1
	0.4nm,0.7s,baz=86,slow=11,SNR=2.6						
MKAR				LR	LR	19 02 03.2	
	comp=Z,49nm,20.4s,baz=86,slow=38						
KURBB	Kurchatov Arra	42.04	313	P	P	18 45 09.2	-0.5
	0.5nm,0.7s,baz=97,slow=8.8,SNR=6.6						
WRA	Warramunga Arr	51.06	174	P	P	18 46 21.0	+0.3
	1.1nm,0.8s,baz=350,slow=8.2,SNR=6.0						
ARU	Arti	54.14	320	LR	LR	19 12 27.6	
	comp=Z,185nm,18.1s,baz=66,slow=39						
ASAR	Alice Springs	54.72	175	P	P	18 46 48.1	+0.4
	0.9nm,0.9s,baz=5.7,slow=13,SNR=10.0						
AKTO	Aktyubinsk	55.09	312	LR	LR	19 11 57.7	
	comp=Z,283nm,18.1s,baz=88,slow=38						
GEYT	Alibeck	57.70	298	LR	LR	19 13 27.5	
	comp=Z,39nm,22.0s,baz=110,slow=38						
KIRV	Kirov	58.80	323	LR	LR	19 16 27.3	
	comp=Z,48nm,18.6s,baz=72,slow=40						
ILAR	Eielson Array	59.68	30	P	P	18 47 22.9	+0.5
	0.5nm,0.6s,baz=280,slow=7.2,SNR=4.0						
ILAR				LR	LR	19 13 30.6	
	comp=Z,29nm,18.4s,baz=175,slow=36						
STKA	Stephens Creek	63.80	168	LR	LR	19 16 02.3	
	comp=Z,20nm,19.9s,baz=26,slow=36						
ARCES	ARCESS Array B	65.76	338	LR	LR	19 21 20.3	
	comp=Z,90nm,19.0s,baz=120,slow=40						
OBN	Obninsk	66.51	321	LR	LR	19 19 36.0	
	comp=Z,39nm,18.4s,baz=348,slow=38						
KBZ	Khabaz	66.78	308	LR	LR	19 22 35.4	
	comp=Z,28nm,18.1s,baz=54,slow=41						
FINES	FINESS Array B	69.03	330	P	P	18 48 24.9	+1.3
	2.0nm,0.8s,baz=56,slow=4.8,SNR=8.1						
FINES				LR	LR	19 20 49.9	
	comp=Z,49nm,19.1s,baz=38,slow=38						
RES	Resolute Bay	70.53	11	LR	LR	19 20 20.0	
	comp=Z,29nm,19.2s,baz=110,slow=37						
BRTR	Keskin Array B	74.74	307	P	P	18 48 59.9	+1.4
	0.5nm,0.8s,baz=106,slow=5.2,SNR=3.9						
NOA	NORSAR Array B	75.29	334	LR	LR	19 23 07.9	
	comp=Z,26nm,18.2s,baz=65,slow=37						
MLR	Muntele Rosu	76.86	315	LR	LR	19 26 18.8	
	comp=Z,65nm,19.2s,baz=37,slow=38						
VRAC	Vranov	80.02	322	LR	LR	19 28 12.5	
	comp=Z,84nm,20.7s,baz=56,slow=38						
GERES	GERESS Array B	81.81	323	LR	LR	19 29 18.9	
	comp=Z,90nm,19.3s,baz=49,slow=38						
PDAR	Pinedale Array	88.75	39	LR	LR	19 31 29.7	
	comp=Z,24nm,18.0s,baz=61,slow=37						
ESDC	Sonseca Array	97.20	325	LR	LR	19 39 54.6	
	comp=Z,56nm,19.2s,baz=320,slow=39						

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*IDC **12** 18:39:10.2±1.5, 4°.15S×129°.60E, h0^{km}, mb3.5/2, mb1 3.6/6, mb1mx3.3/40, mbtmp3.4/6, ML3.1/4, MS2.7/1, Ms1 2.7/1, ms1mx2.1/22, Error ellipse: s-maj=48.1km s-min=23.4km az=79.0*

*DJA **12** 18:39:12.1±1.4, 4°S±12°×13°0E±°, h18^{km}±17^{km}, M3.3/6, MLv3.3/6*

ISC 12 18:39:14.8±0.9**, 4°.13S**±0°.08×**129°.59E**±0°.06**, h36**^{km}**, n12,** σ**1^s.36**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.02	320	P	Pn	18 39 32.0	-0.7
AAI	Ambon	1.46	288	P	Pn	18 39 37.7	-1.0
AAI				S	Sn	18 39 57.3	+0.7
FAKI	Fak Fak	2.91	66	P	Pn	18 39 58.7	+0.1
SIJI	Sorong	3.65	27	Pn	Pn	18 40 09.6	+0.8
	1.8nm,0.3s,baz=198,slow=14,SNR=7.7						
SIJI				Sn	Sn	18 40 48.2	-2.4
	2.6nm,0.3s,baz=53,slow=20,SNR=6.6						
SWI	Sorong	3.65	27	P	Pn	18 40 09.5	+0.7
SANI	Sanana	4.15	300	P	Pn	18 40 15.1	-0.6
BATI	Baumata	8.43	224	LR	LR	18 44 23.2	
	comp=Z,52nm,18.6s,baz=95,slow=37						
FITZ	Fitzroy Crossi	14.41	195	Pn	Pn	18 42 36.6	+0.3
	0.0nm,0.3s,baz=69,slow=14,SNR=2.0						
WRA	Warramunga Arr	16.38	164	Pn	Pn	18 42 59.6	-2.6
	0.1nm,0.3s,baz=350,slow=13,SNR=7.2						
ASAR	Alice Springs	19.86	168	P	P	18 43 43.5	+0.6
	0.1nm,0.3s,baz=347,slow=11,SNR=20						
CMAR	Chiang Mai Arr	37.63	308	P	P	18 46 28.1	+1.6
	0.1nm,0.4s,baz=113,slow=6.9,SNR=1.6						
MKAR	Makanchi Array	65.62	326	P	P	18 49 55.2	-0.1
	0.4nm,0.5s,baz=111,slow=9.3,SNR=5.7						

IDC 12 18:39:26.6±3.5**, 37°.87S**×**51°.02E, h0**^{km}**, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.3**/36**, mbtmp3.6**/3**, MS3.2**/10**, Ms1 3.2**/10**, ms1mx3.0**/36**, Error ellipse: s-maj=122.6km s-min=55.1km az=50.0, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	Ambohidratompo	19.52	349	LR	LR	18 49 31.9	
	comp=Z,52nm,21.1s,baz=44,slow=31						
BOSA	Boshof	23.38	286	LR	LR	18 52 06.9	
	comp=Z,40nm,18.3s,baz=189,slow=32						
LBTB	Lobatse	25.10	293	LR	LR	18 51 50.2	
	comp=Z,17nm,21.9s,baz=202,slow=30						
SUR	Sutherland	25.24	273	LR	LR	18 52 49.7	
	comp=Z,35nm,19.9s,baz=152,slow=32						
MAW	Mawson	30.52	171	LR	LR	18 55 35.7	
	comp=Z,75nm,20.0s,baz=262,slow=32						
KMBO	Kilima Mbogo	38.70	338	LR	LR	19 00 49.0	
	comp=Z,59nm,20.1s,baz=96,slow=33						
H01W2	Cape Leeuwin H	50.04	107	T	T	19 41 45.2	
	baz=248,slow=75,SNR=98						
H01W3	Cape Leeuwin H	50.04	107	T	T	19 41 45.8	
	baz=248,slow=75,SNR=82						
H01W1	Cape Leeuwin H	50.05	107	T	T	19 41 46.5	
	baz=248,slow=75,SNR=94						
TORD	Torodi Ar. Bea	68.64	308	LR	LR	19 21 21.2	
	comp=Z,29nm,18.2s,baz=320,slow=37						
EIL	Elat	68.85	345	LR	LR	19 17 16.5	
	comp=Z,20nm,18.6s,baz=118,slow=33						
ASAR	Alice Springs	70.50	105	P	P	18 50 43.4	0.0
	0.3nm,0.6s,baz=230,slow=5.8,SNR=13						
CMAR	Chiang Mai Arr	71.88	48	P	P	18 50 51.5	-0.1
	0.3nm,0.6s,baz=221,slow=6.8,SNR=3.0						
CMAR				LR	LR	19 15 46.2	
	comp=Z,16nm,19.6s,baz=200,slow=30						
WRA	Warramunga Arr	72.91	102	P	P	18 50 58.1	+0.2
	0.5nm,0.6s,baz=229,slow=5.3,SNR=8.9						
IDI	Anoyia	76.72	338	LR	LR	19 27 11.6	
	comp=Z,15nm,18.0s,baz=264,slow=37						
ILAR	Eielson Array	151.05	16	PKPbc	PKPbc	18 59 20.2	-0.3
	0.3nm,0.6s,baz=309,slow=3.7,SNR=5.5						

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*IDC **12** 19:14:40.0±7.1, 8°.61S×124°.61E, h80^{km}±76^{km}, mb3.4/4, mb1 3.7/6, mb1mx3.3/25, mbtmp3.9/6, ML4.1/2, MS2.1/1, Ms1 2.1/1, ms1mx1.9/22, Error ellipse: s-maj=101.0km s-min=21.8km az=48.0*

*DJA **12** 19:14:42.7±0.4, 9°S±5°×12°4E±°, h108^{km}±5^{km}, M4.0/11, mb4.0/6, mB4.8/3, MLv3.9/11, Mw(mB)4.1/3*

ISC 12 19:14:41.0±0.8**, 8°.94S**±0°.06×**124°.43E**±0°.08**, h100**^{km}**, n28,** σ**2^s.33**/33**, mb4.5**/11**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.83	191	P	Pn	19 15 03.5	+3.6
SOEI				S	Sn	19 15 19.1	+5.1
BATI	Baumata	1.47	211	P	Pn	19 15 09.9	+2.9
	159nm,0.3s,baz=39,slow=3.9,SNR=365						
BATI				S	Sn	19 15 29.3	+2.6
	178nm,0.3s,baz=90,slow=6.2,SNR=30						
BATI				LR	LR	19 15 41.5	
	comp=Z,53nm,18.6s,baz=354,slow=34						
BATI	Baumata	1.47	211	P	Pn	19 15 09.8	+2.8
MMRI	Maumere	2.19	278	P	Pn	19 15 16.3	+0.2
MMRI				S	Sn	19 15 42.2	-0.7
EDFI	Ende, Flores	2.72	274	P	Pn	19 15 23.0	-0.1
BASI	Baing, Sumba	4.01	251	P	Pn	19 15 40.2	-0.2
BSSI	Bau Bau, Buton	4.79	305	P	Pn	19 15 51.5	+0.5
BKSI	Bulukumba	5.58	310	P	Pn	19 16 02.3	+0.6
	0.1nm12nm,0.5s						
KAPI	Kappang	6.06	310	LR	LR	19 18 36.6	
	comp=Z,16nm,20.6s,baz=200,slow=39						
BNSI	Bone	6.23	316	P	Pn	19 16 12.5	+2.1
	0.1nm14nm,1.2s						
PLAI	Plampang	6.58	270	P	Pn	19 16 15.0	-0.2
	0.2nm22nm,0.7s						
TWSI	Taliwang, Sumb	7.46	271	P	Pn	19 16 26.1	-1.2
	0.1nm324nm8.2nm,0.5s						
IGBI	Denpasar	9.18	270	P	Pn	19 16 50.0	-0.6
FITZ	Fitzroy Crossi	9.18	173	P	Pn	19 16 51.0	+0.3
	1.2nm,0.3s,baz=359,slow=9.1,SNR=77						
FITZ				S	Sn	19 18 27.9	-4.3
	8.4nm,0.3s,baz=134,slow=22,SNR=17						
WRA	Warramunga Arr	14.54	140	P	Pn	19 18 02.4	+0.3
	1.0nm,0.3s,baz=314,slow=14,SNR=51						
WRA				S	Sn	19 20 37.0	-5.4
	2.7nm,0.3s,baz=314,slow=24,SNR=12						
ASAR	Alice Springs	17.23	149	P	Pn	19 18 37.8	+2.3
	0.7nm,0.3s,baz=324,slow=12,SNR=32						
ASAR				S	Sn	19 21 41.8	-5.3
	1.0nm,0.3s,baz=314,slow=22,SNR=20						
STKA	Stephens Creek	27.84	147	P	P	19 20 24.0	+2.8
	2.3nm,0.9s,baz=308,slow=12,SNR=3.9						
CMAR	Chiang Mai Arr	37.06	317	P	P	19 21 41.5	-0.2
	0.4nm,0.4s,baz=148,slow=7.5,SNR=6.4						
TAPN	Taplejung	50.66	317	*e*P	P	19 23 30.9	+0.1
	4.8nm,0.3s						
RAMN	Ramite	51.17	315	*e*P	P	19 23 35.0	+0.5
	7.3nm,0.4s						
PKI	Pulchoki	52.39	315	*e*P	P	19 23 43.5	-0.2
	3.3nm,0.3s						
PKIN	Phulchoki	52.40	315	*e*P	P	19 23 43.3	-0.4
	6.3nm,0.5s						
GKN	Gorkha	53.19	315	*e*P	P	19 23 49.4	0.0
	2.9nm,0.3s						
KOLN	Koldanda	53.78	314	*e*P	P	19 23 53.2	-0.5
DANN	Dangsing	54.01	315	*e*P	P	19 23 54.5	-1.1
	6.8nm,0.5s						
PYUN	Piuthan	54.41	314	*e*P	P	19 23 57.7	-0.6
	5.5nm,0.4s						
SONM	Songino Array	58.74	346	P	P	19 24 28.6	0.0
	0.3nm,0.5s,baz=157,slow=7.8,SNR=2.1						
MKAR	Makanchi Array	66.97	330	P	P	19 25 22.4	-0.6
	0.6nm,0.6s,baz=132,slow=8.0,SNR=9.7						

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*TAP **12** 19:34:50.6, 24°.99N×122°.52E, h18^{km}±1^{km}, ML3.6, D*

*IDC **12** 19:34:51.6±1.4, 24°.52N×121°.58E, h0^{km}, mb3.4/4, mb1 3.5/5, mb1mx3.3/41, mbtmp3.4/5, ML3.1/1, MS3.2/7, Ms1 3.3/7, ms1mx2.9/41, Error ellipse: s-maj=68.3km s-min=22.8km az=68.0*

*JMA **12** 19:34:51.8±0.2, 24°.88N×122°.48E, h25^{km}±4^{km}, M2.4*

ISC 12 19:34:51.2±1.1**, 24°.94N**±0°.03×**122°.52E**±0°.02**, h8**^{km}±8^{km}**, n100,** σ**0^s.90**/121**, mb3.4**/4**, MS3.1**/5**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.49	278	P	Pg	19 35 00.3	-0.3
	baz=272						

TWB1				S	**Sg**	**19 35 07.8**	**+0.8**
	baz=272						
EGS		**0.54**	**260**	*e*P	**Pg**	**19 35 01.7**	**0.0**
	baz=243						
EGS				*e*S	**Sg**	**19 35 10.3**	**+1.5**
	baz=243						
JYNG	**Yonagunijimaku**	**0.62**	**141**	P	**Pg**	**19 35 03.4**	**+0.1**
JYNG				S	**Sg**	**19 35 11.3**	**-0.1**
TIPB	**Shuangxi**	**0.63**	**273**	P	**Pg**	**19 35 03.3**	**0.0**
	baz=268						
TIPB				S	**Sg**	**19 35 12.7**	**+1.1**
	baz=268						
NTC	**Toucheng**	**0.63**	**262**	P	**Pg**	**19 35 03.4**	**0.0**
	baz=257						
NTC				*e*S	**Sg**	**19 35 13.2**	**+1.5**
	baz=257						
YOJ	**Yonaguni jima**	**0.66**	**137**	*e*P	**Pg**	**19 35 04.1**	**+0.2**
	baz=139						
YOJ	**Yonaguni jima**	**0.66**	**137**	P	**Pg**	**19 35 04.2**	**+0.4**
YOJ				S	**Sg**	**19 35 12.1**	**-0.3**
NWF	**Wu-fen Shan**	**0.68**	**281**	P	**Pg**	**19 35 04.5**	**+0.1**
	baz=277						
TWC	**Suao**	**0.69**	**242**	*e*P	**Pg**	**19 35 03.9**	**-0.6**
	baz=237						
TWC				*e*S	**Sg**	**19 35 13.7**	**+0.1**
	baz=237						
ILA	**Ilan**	**0.72**	**256**	*e*P	**Pg**	**19 35 05.7**	**+0.6**
	baz=251						
NDS	**Dongshan**	**0.79**	**247**	*e*P	**Pg**	**19 35 05.9**	**-0.6**
	baz=243						
NDS				*e*S	**Sg**	**19 35 15.6**	**-1.1**
	baz=243						
PCYT	**Pengchaiyu**	**0.80**	**329**	P	**Pg**	**19 35 06.3**	**-0.3**
	baz=312						
TWE	**Neicheng**	**0.80**	**254**	*e*P	**Pg**	**19 35 06.1**	**-0.6**
	baz=250						
TWE				*e*S	**Sg**	**19 35 17.8**	**+0.6**
	baz=250						
EWUT	**Wuta**	**0.84**	**234**	P	**Pg**	**19 35 06.7**	**-0.6**
	baz=230						
EWUT				*e*S	**Sg**	**19 35 17.0**	**-1.1**
	baz=230						
TWA	**Mucha**	**0.85**	**273**	*e*P	**Pg**	**19 35 07.0**	**-0.5**
	baz=269						
ENA	**Nanau**	**0.87**	**234**	P	**Pg**	**19 35 07.6**	**-0.4**
	baz=230						
ENA				*e*S	**Sg**	**19 35 18.7**	**-0.7**
	baz=230						
YM01	**YM01**	**0.88**	**283**	P	**Pg**	**19 35 07.5**	**-0.7**
	baz=280						
TWY	**Chenhua**	**0.90**	**292**	P	**Pg**	**19 35 07.7**	**-0.8**
	baz=289						
TWY				*e*S	**Sg**	**19 35 20.1**	**0.0**
	baz=289						
NHDH	**Xindian Distri**	**0.90**	**272**	P	**Pg**	**19 35 08.2**	**-0.4**
	baz=268						
NHDH				*e*S	**Sg**	**19 35 21.1**	**+0.8**
	baz=268						
ENTT	**Nioudou**	**0.92**	**251**	*e*P	**Pg**	**19 35 08.4**	**-0.5**
	baz=229						
ENTT				*e*S	**Sg**	**19 35 21.7**	**+1.0**
	baz=229						
TAP	**Taipei**	**0.92**	**276**	*e*P	**Pg**	**19 35 09.2**	**+0.2**
	baz=273						
TAP				*e*S	**Sg**	**19 35 21.2**	**+0.2**
	baz=273						
NWLT	**Wulai**	**0.94**	**260**	P	**Pg**	**19 35 08.4**	**-0.9**
	baz=270						
NWLT				*e*S	**Sg**	**19 35 22.0**	**+0.6**
	baz=270						
ANP	**Anpu**	**0.94**	**285**	*e*P	**Pg**	**19 35 08.9**	**-0.3**
	baz=282						
NDT	**Datong Townshi**	**0.97**	**250**	*e*P	**Pg**	**19 35 09.6**	**-0.3**
	baz=231						
NDT				*e*S	**Sg**	**19 35 23.6**	**+1.0**
	baz=231						
NTST	**Danshui**	**0.99**	**283**	*e*P	**Pg**	**19 35 09.8**	**-0.5**
	baz=280						
TWS1	**Kuangyinshan**	**1.01**	**279**	*e*P	**Pg**	**19 35 10.0**	**-0.6**
	baz=276						
YHNB	**Yeheng**	**1.07**	**256**	*e*P	**Pg**	**19 35 11.1**	**-0.7**
	baz=264						
YHNB				*e*S	**Sg**	**19 35 24.7**	**-1.1**
	baz=264						
NSK	**Sanguang**	**1.09**	**256**	*e*P	**Pg**	**19 35 11.3**	**-0.8**
	baz=269						
ETL	**Fush Village**	**1.13**	**226**	*e*P	**Pb**	**19 35 12.2**	**-0.8**
	baz=235						
NACB	**Ninganchiao**	**1.14**	**228**	*e*P	**Pb**	**19 35 11.5**	**-1.6**
	baz=237						
NNS	**Nan Shan**	**1.16**	**245**	*e*P	**Pb**	**19 35 12.3**	**-1.2**
	baz=241						
ETLH	**Xiulin Townshi**	**1.20**	**232**	*e*P	**Pb**	**19 35 12.7**	**-1.4**
	baz=241						
ETLH				*e*S	**Sb**	**19 35 29.4**	**-0.4**
	baz=241						
TWD	**Chiawan**	**1.20**	**225**	*e*P	**Pn**	**19 35 13.6**	**-0.7**
	baz=230						
NCU	**National Centr**	**1.21**	**272**	*e*P	**Pn**	**19 35 12.5**	**-1.9**
	baz=285						
NCUH	**Zhongli**	**1.21**	**271**	*e*P	**Pn**	**19 35 13.5**	**-1.0**
	baz=268						
NCUH				*e*S	**Sn**	**19 35 31.9**	**+0.9**
	baz=268						
IRIF	**Iriomote-Funau**	**1.26**	**118**	P	**Pn**	**19 35 13.8**	**-1.3**
FUSS	**Fushou**	**1.35**	**239**	*e*P	**Pn**	**19 35 16.1**	**-0.5**
	baz=236						
FUSS				*e*S	**Sb**	**19 35 34.0**	**-0.4**
	baz=236						
WHF	**Hehuan Shan**	**1.39**	**235**	*e*P	**Pn**	**19 35 16.4**	**-0.9**
	baz=232						
WHF				*e*S	**Sb**	**19 35 33.5**	**-2.2**
	baz=232						
LIOB	**Emei**	**1.40**	**258**	*e*P	**Pn**	**19 35 16.0**	**-1.0**
	baz=271						
SBCB	**Hsinchu**	**1.40**	**264**	*e*P	**Pn**	**19 35 15.9**	**-1.1**
	baz=277						
TWT	**Tachien**	**1.40**	**241**	*e*P	**Pn**	**19 35 16.7**	**-0.5**
	baz=238						
TWT				*e*S	**Sn**	**19 35 36.8**	**+0.8**
	baz=238						
NSTT	**Nanjuang**	**1.41**	**258**	*e*P	**Pn**	**19 35 16.0**	**-1.2**
	baz=270						
TDCB	**Techi**	**1.42**	**241**	*e*P	**Pn**	**19 35 16.5**	**-0.9**
	baz=238						
TDCB				*e*S	**Sn**	**19 35 36.3**	**0.0**
	baz=238						
ESL	**Shilin**	**1.50**	**222**	*e*P	**Pn**	**19 35 18.4**	**+0.1**
	baz=203						
CHGB	**Renai**	**1.51**	**235**	*e*P	**Pn**	**19 35 18.2**	**-0.5**
	baz=217						
JKRS	**Kuro-shima**	**1.53**	**117**	P	**Pn**	**19 35 17.9**	**-0.9**
JKRS				*e*S	**Sn**	**19 35 37.0**	**-1.8**
OWD	**Renai**	**1.57**	**231**	*e*P	**Pn**	**19 35 19.4**	**-0.1**
	baz=213						
WHP	**Taichung City**	**1.58**	**246**	*e*P	**Pn**	**19 35 19.7**	**+0.1**
	baz=233						
WHP				*e*S	**Sn**	**19 35 40.6**	**+0.4**
	baz=233						
JIJ	**Ishigaki jima**	**1.59**	**111**	P	**Pn**	**19 35 18.6**	**-1.0**
NMLH	**Miaoli**	**1.62**	**256**	*e*P	**Pb**	**19 35 22.2**	**+0.8**
	baz=266						
JISG	**Ishigakijimahi**	**1.67**	**102**	P	**Pn**	**19 35 20.4**	**-0.3**
NSY	**Sanyi**	**1.68**	**252**	*e*P	**Pb**	**19 35 22.7**	**+0.3**
	baz=263						
TWQ1	**Liyutan**	**1.69**	**250**	*e*P	**Pb**	**19 35 23.3**	**+0.7**
	baz=248						
WCS	**Beigang Elemen**	**1.71**	**239**	*e*P	**Pn**	**19 35 22.1**	**+0.8**
	baz=237						
VWDT	**VWDT**	**1.73**	**227**	*e*P	**Pn**	**19 35 21.3**	**-0.2**
	baz=210						
HGSD	**Ruisui**	**1.76**	**215**	*e*P	**Pn**	**19 35 21.5**	**-0.4**
	baz=199						
EHY	**Hungye**	**1.80**	**218**	*e*P	**Pn**	**19 35 22.6**	**0.0**
	baz=216						
WDJ	**Dajia District**	**1.81**	**251**	*e*P	**Pn**	**19 35 24.1**	**+1.5**
	baz=249						
SMLT	**Sun Moon Lake**	**1.81**	**235**	*e*P	**Pn**	**19 35 23.3**	**+0.5**
	baz=218						
SSLB	**Suanglung**	**1.83**	**231**	*e*P	**Pn**	**19 35 22.9**	**-0.2**
	baz=214						
TYC	**Yuchr**	**1.83**	**236**	*e*P	**Pn**	**19 35 23.9**	**+0.9**
	baz=219						
EYUL	**Yuli**	**1.93**	**215**	*e*P	**Pn**	**19 35 24.6**	**+0.3**
	baz=214						
WJS	**Zhushan**	**1.98**	**236**	*e*P	**Pn**	**19 35 26.5**	**+1.5**
	baz=234						
WNT	**Mingjian**	**1.98**	**238**	*e*P	**Pb**	**19 35 27.5**	**0.0**
	baz=236						
JTJ	**Tarama**	**2.01**	**98**	P	**Pn**	**19 35 26.8**	**+1.4**
FULB	**Fuli**	**2.06**	**213**	*e*P	**Pn**	**19 35 26.4**	**+0.2**
	baz=198						
ALS	**Alishan**	**2.12**	**228**	*e*P	**Pn**	**19 35 27.0**	**-0.2**
	baz=211						
CHN5	**Tsauling**	**2.15**	**232**	*e*P	**Pn**	**19 35 27.9**	**+0.5**
	baz=230						
WDLH	**Douliu**	**2.20**	**236**	*e*P	**Pn**	**19 35 29.0**	**+1.1**
	baz=234						
WRL	**Guolierlin Hig**	**2.21**	**242**	*e*P	**Pn**	**19 35 28.0**	**-0.2**
	baz=241						
ELDTW	**Lidau**	**2.22**	**218**	*e*P	**Pn**	**19 35 27.9**	**-0.5**
	baz=204						
WTK	**Tuku**	**2.31**	**238**	*e*P	**Pn**	**19 35 30.1**	**+0.5**
	baz=236						
CHN4	**Tsaushan**	**2.37**	**228**	*e*P	**Pn**	**19 35 30.9**	**+0.5**
	baz=213						
STYH	**Taoyuan**	**2.38**	**222**	*e*P	**Pn**	**19 35 30.8**	**+0.3**
	baz=209						
TPUB	**Ta-pu**	**2.38**	**227**	*e*P	**Pn**	**19 35 31.1**	**+0.6**
	baz=212						
WTP	**Ta-pu**	**2.42**	**226**	*e*P	**Pn**	**19 35 32.0**	**+0.8**
	baz=211						
TWK	**Hsinying**	**2.50**	**228**	*e*P	**Pn**	**19 35 32.7**	**+0.5**
	baz=213						
SLGT	**Liugui**	**2.59**	**222**	*e*P	**Pn**	**19 35 34.2**	**+0.8**
	baz=221						
MATB	**Ma-tsu**	**2.62**	**298**	*e*P	**Pn**	**19 35 31.6**	**-2.2**
	baz=296						
SSD	**Sandimen**	**2.79**	**219**	*e*P	**Pn**	**19 35 36.9**	**+0.8**
	baz=205						
TSMG	**Majia**	**2.81**	**218**	*e*P	**Pn**	**19 35 37.6**	**+1.1**
	baz=205						
XPSS	**Dashiqiu**	**2.88**	**314**	*e*P	**Pn**	**19 35 36.2**	**-1.3**
	baz=311						
MASBT	**Mashibuluo**	**2.89**	**217**	*e*P	**Pn**	**19 35 38.3**	**+0.7**
	baz=205						
LYJJ	**Jianjiangzhen**	**2.96**	**303**	*e*P	**Pn**	**19 35 36.7**	**-1.8**
	baz=301						
EAST	**Anshuo**	**2.97**	**211**	*e*P	**Pn**	**19 35 38.5**	**-0.2**
	baz=210						
PTMZ	**Houxiangcun**	**3.08**	**273**	*e*P	**Pn**	**19 35 40.4**	**+0.2**
	baz=271						
SCZT	**Fangliau**	**3.09**	**215**	*e*P	**Pn**	**19 35 41.0**	**+0.6**
	baz=202						
SLIU	**Shizi**	**3.14**	**211**	*e*P	**Pn**	**19 35 42.5**	**+1.5**
	baz=200						
MHZQ	**Yeshan**	**3.36**	**291**	*e*P	**Pn**	**19 35 45.8**	**+1.8**
	baz=289						
AXDP	**Jialang**	**4.13**	**270**	*e*P	**Pn**	**19 35 53.0**	**-1.6**
	baz=269						
KSRS	**Korea Array**	**13.30**	**19**	Pn	**P**	**19 38 11.9**	**+1.8**
	0.1nm,0.3s,baz=194,slow=11,SNR=6.3						
KSRS				LR	LR	19 43 48.0	
	comp=Z,146nm,18.1s,baz=187,slow=38						
MJAR	**Matsushiro Arr**	**17.74**	**46**	LR	LR	19 46 36.2	
	comp=Z,44nm,19.5s,baz=110,slow=38						
CMAR	**Chiang Mai Arr**	**22.82**	**258**	LR	LR	19 49 26.9	
	comp=Z,44nm,20.4s,baz=90,slow=40						
ASAJ	**Asahikawa**	**25.17**	**36**	LR	LR	19 50 35.5	
	comp=Z,71nm,19.4s,baz=203,slow=36						
KLR	**Kul'dur**	**25.30**	**14**	LR	LR	19 51 15.0	
	comp=Z,89nm,19.1s,baz=206,slow=38						
SONM	**Songino Array**	**26.17**	**335**	P	**P**	**19 40 27.4**	**+1.2**
	0.4nm,0.6s,baz=138,slow=11,SNR=3.6						
SONM				LR	LR	19 52 16.4	
	comp=Z,53nm,18.6s,baz=88,slow=40						
TLY	**Talaya**	**30.34**	**337**	LR	LR	19 53 44.0	
	comp=Z,41nm,18.6s,baz=102,slow=37						
MKAR	**Makanchi Array**	**38.66**	**315**	P	**P**	**19 42 14.5**	**-0.8**
	1.6nm,0.9s,baz=97,slow=9.8,SNR=9.9						
WRA	**Warramunga Arr**	**46.07**	**164**	P	**P**	**19 43 15.0**	**-0.8**
	0.5nm,0.9s,baz=348,slow=8.1,SNR=3.6						
ASAR	**Alice Springs**	**49.56**	**166**	P	**P**	**19 43 44.0**	**+1.1**
	0.1nm,0.6s,baz=347,slow=12,SNR=2.4						

IDC 12 19:41:47.2±1.3**, 2°.55S**×**138°.82E, h0km, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/34**, mbtmp3.6**/4**, ML3.7**/1**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.2**/24**, Error ellipse: s-maj=26.7km s-min=15.8km az=177.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.89**	**89**	Pg	Pn	19 42 21.0	+0.2
	2.6nm,0.3s,baz=236,slow=9.6,SNR=3.9						
JAY				Lg	Lg	19 42 48.4	
	5.4nm,0.3s,baz=125,slow=22,SNR=3.8						
SIJI	**Sorong**	**7.73**	**282**	LR	LR	19 47 19.5	
	comp=Z,83nm,19.1s,baz=149,slow=43						
WRA	**Warramunga Arr**	**17.83**	**194**	P	Pn	19 45 56.4	-0.5
	0.3nm,0.3s,baz=18,slow=12,SNR=19						
ASAR	**Alice Springs**	**21.52**	**192**	P	P	19 46 37.9	-0.2
	0.6nm,0.5s,baz=11,slow=11,SNR=12						
MKAR	**Makanchi Array**	**69.73**	**322**	P	P	19 53 00.1	+0.9
	0.8nm,0.7s,baz=113,slow=6.9,SNR=7.8						
ILAR	**Eielson Array**	**85.65**	**24**	P	P	19 54 26.0	-1.5
	0.4nm,0.9s,baz=265,slow=5.1,SNR=2.6						

IDC ***12*** *20:02:57.2±2.4, 4°.06S×129°.59E, h52km±24km, mb3.8/5, mb1 3.9/8, mb1mx3.4/34, mbtmp4.0/8, ML4.0/3, MS2.8/1, Ms1 2.8/1, ms1mx2.1/40, Error ellipse: s-maj=31.1km s-min=15.3km az=108.0*

ISC 12 20:02:55.6±0.8**, 4°.14S**±0°.09×**129°.6E**±0°.1**, h36km, n10, σ1s.26**/12**, mb4.1**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.64**	**27**	P	**Pn**	**20 03 50.1**	**+0.6**
	15nm,0.3s,baz=246,slow=15,SNR=64						
SIJI				S	**Sn**	**20 04 32.2**	**+1.0**
	9.4nm,0.3s,baz=71,slow=21,SNR=8.5						
BATI	**Baumata**	**8.44**	**224**	P	**Pn**	**20 04 57.5**	**+1.9**
	3.4nm,0.3s,baz=57,slow=4.5,SNR=8.6						
BATI				LR	LR	20 08 39.3	
	comp=Z,54nm,18.1s,baz=64,slow=40						
FITZ	**Fitzroy Crossi**	**14.41**	**195**	P	**Pn**	**20 06 16.2**	**-1.0**
	0.1nm,0.3s,baz=35,slow=12,SNR=2.2						
WRA	**Warramunga Arr**	**16.36**	**164**	P	**Pn**	**20 06 40.8**	**-1.9**
	0.1nm,0.3s,baz=347,slow=13,SNR=8.1						
ASAR	**Alice Springs**	**19.85**	**168**	P	**P**	**20 07 25.1**	**+1.4**
	0.2nm,0.3s,baz=347,slow=10,SNR=18						
ASAR				PcP	**PcP**	**20 11 40.0**	**-0.5**
	0.1nm,0.3s,baz=357,slow=1.5,SNR=5.8						
CMAR	**Chiang Mai Arr**	**37.66**	**308**	P	**P**	**20 10 07.1**	**-0.6**
	0.9nm,0.6s,baz=135,slow=8.0,SNR=12						
MKAR	**Makanchi Array**	**65.65**	**326**	P	**P**	**20 13 35.6**	**-0.7**
	1.0nm,0.4s,baz=112,slow=8.1,SNR=22						
ZALV	**Zalesovo Beam**	**68.87**	**333**	P	**P**	**20 13 55.9**	**-0.6**
	0.7nm,0.3s,baz=91,slow=8.6,SNR=1.9						
KURBB	**Kurchatov Arra**	**69.90**	**328**	P	**P**	**20 14 02.1**	**-0.8**
	2.5nm,0.7s,baz=127,slow=5.8,SNR=30						
BVAR	**Borovoye Array**	**75.47**	**328**	P	**P**	**20 14 35.2**	**-0.8**
	0.7nm,0.5s,baz=140,slow=11,SNR=7.2						

IDC ***12*** *20:14:05.0±9.8, 36°.64N×70°.90E, h107km±110km, mb1 3.2/4, mb1mx2.9/32, mbtmp3.6/4, ML2.9/3, Error ellipse: s-maj=159.2km s-min=37.1km az=165.0*

NNC ***12*** *20:14:07.7±3.3, 36°.90N×70°.87E, h78km±94km, mb3.4, mpv3.6, Error ellipse: s-maj=37.9km s-min=21.8km az=133.0*

ISC 12 20:14:03.4±0.9**, 36°.57N**±0°.08×**71°.04E**±0°.07**, h100km, n15, σ1s.60**/18**, 6C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	**Karatay Array**	**6.54**	**357**	⇑P	**Pn**	**20 15 38.1**	**+1.1**
	2.3nm,0.5s						
KK02				⇑S	**Sn**	**20 16 46.7**	**-3.3**
	5.1nm,0.3s						
AAK	**Ala-Archa**	**6.62**	**23**	⇓P	**Pn**	**20 15 39.3**	**+1.1**
	2.0nm,0.3s						
AAK				⇑S	**Sn**	**20 16 50.5**	**-1.7**
	6.4nm,0.5s						
TKM2	**Tokmak 2**	**7.25**	**28**	⇑P	**Pn**	**20 15 47.8**	**+1.0**
	3.2nm,0.7s						
GEYT	**Alibeck**	**10.39**	**281**	P	**Pn**	**20 16 29.9**	**+0.4**
	2.4nm,0.3s,baz=118,slow=11,SNR=33						
GEYT				S	**Sn**	**20 18 21.8**	**-2.1**
	0.3nm,0.3s,baz=96,slow=26,SNR=2.0						
GYA0B	**ALIBECK ARRAY**	**10.39**	**281**	⇑P	**Pn**	**20 16 30.3**	**+0.8**
PYUN	**Piuthan**	**13.16**	**127**	*e*P	**Pn**	**20 17 04.8**	**-1.8**
	4.9nm,0.4s						
MKAR	**Makanchi Array**	**13.22**	**36**	P	**Pn**	**20 17 07.4**	**+0.4**
	0.1nm,0.3s,baz=225,slow=12,SNR=4.2						
DANN	**Dangsing**	**13.50**	**124**	*e*P	**Pn**	**20 17 10.0**	**-1.1**
KOLN	**Koldanda**	**13.78**	**126**	*e*P	**Pn**	**20 17 13.6**	**-1.0**
	3.7nm,0.5s						
AB31	**Akbulak array**	**15.04**	**331**	P	**Pn**	**20 17 29.9**	**-0.5**
	0.2nm,0.3s,baz=157,slow=10.0,SNR=16						
AB31				⇑S	Sn	20 20 05.1	-11
	2.4nm,0.8s,baz=147,slow=24,SNR=7.2						
KURBB	**Kurchatov Arra**	**15.05**	**19**	P	**Pn**	**20 17 32.5**	**+2.0**
	0.0nm,0.3s,baz=206,slow=11,SNR=5.5						
RAMN	**Ramite**	**16.32**	**122**	*e*P	**Pn**	**20 17 46.6**	**-0.3**
	4.5nm,0.4s						
AKTO	**Aktyubinsk**	**16.74**	**330**	⇓P	**P**	**20 17 54.4**	**+2.2**
	1.1nm,0.5s						
TAPN	**Taplejung**	**16.85**	**118**	*e*P	**P**	**20 17 54.5**	**+0.6**
	2.6nm,0.4s						
ZALV	**Zalesovo Beam**	**19.84**	**25**	P	**P**	**20 18 26.9**	**+0.8**
	0.4nm,0.3s,baz=230,slow=11,SNR=3.7						

ATH ***12*** *20:25:34.4, 40°.63N×20°.74E, h16km±2km, ML2.5/12, Error ellipse: s-maj=2.5km s-min=1.3km az=66.0*

THE ***12*** *20:25:34.7, 40°.66N×20°.74E, h4km±1km, ML2.8/3, Error ellipse: s-maj=1.7km s-min=0.7km az=156.0*

TIR ***12*** *20:25:34.0, 40°.64N×20°.72E, h6km, Md2.9, Ml2.8*

IASPEI ***12*** *20:25:34.3±0.8, 40°.64N±0°.02×20°.74E±0°.02, h8km±5km, Error ellipse: s-maj=3.5km s-min=2.8km az=82.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

SKO ***12*** *20:25:34.6, 40°.60N×20°.71E, h7km*

BEO ***12*** *20:25:35.6±0.7, 40°.65N×20°.80E, h9km±2km, ML2.5/7*

ISC 12 20:25:34.3±0.8**, 40°.63N**±0°.02×**20°.72E**±0°.02**, h7km**±5km**, n85, σ0s.87**/128**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	**Korca**	**0.05**	**101**	P	**Pg**	**20 25 36.0**	**0.0**
KBN				S	**Sg**	**20 25 37.5**	**+0.3**
KBN	**Korca**	**0.05**	**101**	P	**Pg**	**20 25 35.9**	**0.0**
	baz=105						
KBN				S	**Sg**	**20 25 37.0**	**-0.2**
	baz=105						
KBN				AMP			
	comp=N,109nm,0.5s,baz=105						
NEST	**Nestorio**	**0.33**	**131**	P	**Pg**	**20 25 40.9**	**+0.1**
NEST				S	**Sg**	**20 25 45.8**	**+0.6**
	comp=N,2μm,0.2s						
NEST	**Nestorio**	**0.33**	**131**	P	**Pg**	**20 25 40.7**	**-0.1**
NEST				S	**Sg**	**20 25 46.2**	**+1.0**
NEST				AML	AML	20 25 47.1	
	comp=N,4757μm,0.2s						
NEST				AML	AML	20 25 47.4	
	comp=E,5125μm,0.3s						
OHR	**Ohrid**	**0.48**	**7**	*i* Pg	**Pg**	**20 25 44.1**	**+0.5**
OHR				*i* Sg	**Sb**	**20 25 51.5**	**-0.9**
OHR				*e*Lg	Lg	20 25 51.7	
	comp=N,136nm,0.4s						
OHR	**Ohrid**	**0.48**	**7**	*e*Pg	**Pg**	**20 25 44.1**	**+0.5**
OHR				*e*Sg	**Sg**	**20 25 51.3**	**+1.4**
LSK	**Leskovik**	**0.49**	**191**	P	**Pg**	**20 25 44.2**	**+0.4**
LSK				S	**Sb**	**20 25 52.5**	**-0.2**
LSK	**Leskovik**	**0.49**	**191**	P	**Pg**	**20 25 44.2**	**+0.4**
	baz=191						
LSK				S	**Sg**	**20 25 51.6**	**+1.3**
	baz=191						
LSK				AMP			
	comp=N,3.9nm,0.5s,baz=191						
FNA	**Florina**	**0.52**	**73**	P	**Pg**	**20 25 44.4**	**+0.1**
FNA				S	**Sg**	**20 25 52.0**	**+0.9**
	comp=N,2μm,0.3s						
FNA	**Florina**	**0.52**	**73**	P	**Pg**	**20 25 44.2**	**-0.1**
FNA				S	**Sb**	**20 25 52.4**	**-1.0**
FNA				AML	AML	20 25 54.2	
	comp=N,4486μm,0.4s						
FNA				AML	AML	20 25 55.1	
	comp=E,4246μm,0.2s						
FNA	**Florina**	**0.52**	**73**	*i* Pg	**Pg**	**20 25 44.2**	**-0.1**
FNA				*i* Sg	**Sb**	**20 25 52.7**	**-0.7**
FNA	**Florina**	**0.52**	**73**	P	**Pg**	**20 25 44.3**	**-0.1**
	baz=73						
FNA				S	**Sb**	**20 25 52.5**	**-1.0**
	baz=73						
PENT	**Pentalofos**	**0.54**	**144**	P	**Pg**	**20 25 44.3**	**-0.4**
PENT				S	**Sb**	**20 25 53.6**	**-0.5**
PENT	**Pentalofos**	**0.54**	**144**	P	**Pg**	**20 25 44.1**	**-0.6**
PENT				AML	AML	20 25 53.8	
	comp=N,1514μm,0.2s						
PENT				AML	AML	20 25 55.1	
	comp=E,1118μm,0.2s						
KPRO	**Kipourio**	**0.84**	**144**	P	**Pg**	**20 25 49.9**	**-0.5**
KPRO				S	**Sb**	**20 26 03.9**	**+1.3**
KPRO	**Kipourio**	**0.84**	**144**	P	**Pg**	**20 25 49.7**	**-0.7**
KPRO				S	**Sg**	**20 26 01.6**	**+0.4**
KPRO				AML	AML	20 26 05.5	
	comp=N,873μm,0.4s						
KPRO				AML	AML	20 26 11.6	
	comp=E,646μm,0.5s						
KZN	**Kozani**	**0.86**	**112**	P	**Pg**	**20 25 50.6**	**-0.3**
KZN				S	**Sb**	**20 26 03.9**	**+0.5**
	comp=E,645nm,0.4s						
KZN	**Kozani**	**0.86**	**112**	P	**Pg**	**20 25 50.3**	**-0.6**
KZN				S	**Sg**	**20 26 02.4**	**+0.2**
KZN				AML	AML	20 26 07.4	
	comp=E,1458μm,0.5s						
KZN				AML	AML	20 26 08.3	
	comp=N,1248μm,0.4s						
SRN	**Sarande**	**0.93**	**217**	P	**Pg**	**20 25 52.9**	**+0.8**
SRN	**Sarande**	**0.93**	**217**	P	**Pg**	**20 25 53.0**	**+0.8**
	baz=217						
SRN				S	**Sb**	**20 26 06.2**	**+0.9**
	baz=217						
SRN				AMP			
	comp=N,0.4nm,0.7s,baz=217						
TIR	**Tirane**	**0.96**	**318**	P	**Pg**	**20 25 52.7**	**-0.1**
TIR	**Tirane**	**0.96**	**318**	P	**Pg**	**20 25 52.0**	**-0.8**
TIR				AML	AML	20 26 15.9	
	comp=N,542μm,0.6s						
TIR				AML	AML	20 26 18.5	
	comp=E,574μm,0.6s						
TIR	**Tirane**	**0.96**	**318**	*i* Pg	**Pg**	**20 25 52.2**	**-0.6**
TIR	**Tirane**	**0.96**	**318**	P	**Pg**	**20 25 52.9**	**+0.1**
	baz=318						
TIR				S	**Sb**	**20 26 07.0**	**+0.7**
	baz=318						
TIR	**Tirane**	**0.96**	**318**	*e*Pg	**Pg**	**20 25 53.3**	**+0.5**
TIR				*e*Sg	**Sn**	**20 26 08.9**	**+0.8**
JAN	**Janina**	**0.98**	**174**	P	**Pg**	**20 25 53.5**	**+0.4**
JAN	**Janina**	**0.98**	**174**	P	**Pg**	**20 25 52.7**	**-0.4**
JAN				AML	AML	20 26 11.1	
	comp=N,305μm,0.4s						
JAN				AML	AML	20 26 11.8	
	comp=E,346μm,0.4s						
PHP	**Peshkopia**	**1.07**	**349**	P	**Pg**	**20 25 54.3**	**-0.6**
	baz=349						
PHP				S	**Sn**	**20 26 10.5**	**-0.4**
	baz=349						
KTI	**Kastanea**	**1.09**	**102**	P	**Pg**	**20 25 54.8**	**-0.4**
IGT	**Igoumenitsa**	**1.14**	**195**	P	**Pg**	**20 25 56.1**	**0.0**
IGT				S	**Sn**	**20 26 13.7**	**+1.3**
IGT	**Igoumenitsa**	**1.14**	**195**	P	**Pg**	**20 25 55.8**	**-0.3**
IGT				AML	AML	20 26 18.3	
	comp=E,271μm,0.5s						
IGT				AML	AML	20 26 18.9	
	comp=N,374μm,0.5s						
KEK	**Kerkira**	**1.16**	**218**	P	**Pn**	**20 25 57.4**	**+0.5**
KEK	**Kerkira**	**1.16**	**218**	P	**Pg**	**20 25 56.3**	**-0.3**
KEK				AML	AML	20 26 24.5	
	comp=E,220μm,0.6s						
KEK				AML	AML	20 26 25.7	
	comp=N,221μm,0.8s						
GRG	**Griva**	**1.31**	**75**	P	**Pn**	**20 25 58.4**	**-0.6**
GRG	**Griva**	**1.31**	**75**	*i* Pg	**Pn**	**20 25 58.5**	**-0.6**
GRG				*i* Sg	**Sn**	**20 26 18.7**	**+1.8**
SKO	**Skopje**	**1.44**	**22**	*i* Pg	**Pb**	**20 26 01.9**	**+0.4**
SKO				*i* Sg	**Sg**	**20 26 21.5**	**+0.8**
THL	**Klokotos Trika**	**1.46**	**137**	P	**Pn**	**20 26 01.1**	**+0.2**
THL	**Klokotos Trika**	**1.46**	**137**	P	**Pn**	**20 25 59.8**	**-1.1**
THL				AML	AML	20 26 26.1	
	comp=N,216μm,0.5s						
THL				AML	AML	20 26 29.7	

	comp=E,146µm,0.5s						
STIP	Stip	1.53	46	*i* Pn	Pg	20 26 04.6	+0.9
VAY	Valandovo	1.56	63	*i* Pn	Pn	20 26 02.6	+0.2
VAY	Valandovo	1.56	63	*e*Pg	Pn	20 26 02.2	-0.2
VAY				*e*Sg	Sb	20 26 23.7	+0.4
THE	Thessaloniki	1.71	89	*i* Pn	Pn	20 26 04.3	0.0
KNT	Kendrikon	1.73	72	P	Pn	20 26 05.0	+0.2
KNT	Kendrikon	1.73	72	P	Pn	20 26 04.9	+0.1
KNT	Kendrikon	1.73	72	*i* Pn	Pn	20 26 04.8	+0.1
BCI	Bajram Curri	1.80	344	P	Pg	20 26 08.5	-0.3
	baz=345						
BCI				S	Sg	20 26 34.1	+1.9
	baz=345						
EVR	Evrytania	1.91	154	P	Pn	20 26 08.3	+1.0
EVR	Evrytania	1.91	154	P	Pn	20 26 07.7	+0.5
MAKR	Makrakomi, Fth	1.95	146	P	Pb	20 26 09.4	-0.7
MAKR				AML	AML	20 26 40.1	
	comp=N,375µm,1.0s						
MAKR				AML	AML	20 26 46.0	
	comp=E,338µm,0.5s						
EVGI	Lefkada island	2.01	181	P	Pn	20 26 10.2	+1.6
AGG	Agios Georgios	2.03	142	P	Pn	20 26 10.0	+1.1
AGG	Agios Georgios	2.03	142	P	Pn	20 26 09.4	+0.5
PLG	Polygyros	2.09	96	P	Pn	20 26 10.1	+0.4
PLG				AML	AML	20 26 46.2	
	comp=N,103µm,0.6s						
PLG				AML	AML	20 26 48.9	
	comp=E,53µm,0.5s						
PDG	Podgorica	2.11	329	*e*Pn	Pb	20 26 11.9	-0.8
PDG				*e*Sn	Sn	20 26 36.6	+0.3
SRS	Serrai	2.23	77	P	Pn	20 26 11.2	-0.4
BOSS	Bosilegrad	2.28	35	*e*Pn	Pn	20 26 12.1	-0.2
BOSS				*e*Sn	Sn	20 26 41.4	+0.7
XOR	Xorichti	2.28	123	P	Pn	20 26 13.2	+0.8
BARS	Barje	2.33	20	*i* Pn	Pn	20 26 13.9	+0.9
BARS	Barje	2.33	20	*e*Pn	Pn	20 26 13.8	+0.9
BARS				*e*Sn	Sn	20 26 42.4	+0.5
EFP	Efpalio	2.39	157	P	Pn	20 26 15.2	+1.5
EFP	Efpalio	2.39	157	P	Pb	20 26 17.0	-0.5
OUR	Ouranopolis	2.50	96	P	Pn	20 26 16.2	+0.9
LAKA	Lakka	2.58	157	P	Pb	20 26 20.0	-0.8
SELS	Selova	2.60	6	*e*Pn	Pn	20 26 16.5	-0.2
SJES	Sjenica	2.69	348	*e*Pn	Pn	20 26 19.8	+1.8
SJES				*e*Sn	Sn	20 26 51.6	+0.9
VTS	Vitosha	2.73	43	*e*Pn	Pn	20 26 19.2	+0.5
DRO	Drossia	2.79	164	P	Pb	20 26 22.4	-2.0
KLV	Kalavryta, Ach	2.81	156	P	Pb	20 26 23.5	-1.4
IVAS	Ivanjica	2.97	352	*e*Pn	Pn	20 26 23.3	+1.4
ZAPS	Zavoj	3.00	28	*e*Pn	Pn	20 26 23.0	+0.8
ZAPS				*e*Sn	Sn	20 26 58.2	-0.2
STON	Ston	3.18	316	*e*Pn	Pn	20 26 24.6	0.0
STON				Sn	Sn	20 27 02.4	-0.4
GRUS	Gruza	3.25	360	*e*Pn	Pn	20 26 26.2	+0.5
ZAGS	Zajecar	3.37	19	*e*Pn	Pn	20 26 27.5	+0.3
BBLS	Lazići	3.38	344	*e*Pn	Pn	20 26 29.5	+2.1
DIVS	Divibare	3.50	351	*e*Pn	Pn	20 26 29.6	+0.4
DIVS				*e*Sn	Sn	20 27 10.5	-0.4
LSTV	Lastovo	3.57	308	*e*Pn	Pn	20 26 29.8	-0.3
LSTV				Sn	Sn	20 27 10.3	-2.2
MAKA	Makarska	3.83	315	*e*Pn	Pn	20 26 33.7	+0.2
MAKA				Sn	Sn	20 27 17.6	-1.2
RICI	Ricice	3.91	318	*e*Pn	Pn	20 26 35.2	+0.4
RICI				Sn	Sn	20 27 20.5	-0.4
HVAR	Hvar	4.08	310	*e*Pn	Pn	20 26 37.0	0.0
HVAR				Sn	Sn	20 27 23.4	-1.5
ZIRJ	Zirje	4.83	310	*e*Pn	Pn	20 26 46.5	-0.8
ZIRJ				Sn	Sn	20 27 41.3	-2.2
MORI	Morici	4.93	313	*e*Pn	Pn	20 26 48.3	-0.4
MORI				Sn	Sn	20 27 43.5	-2.4
UDBI	Udbina	5.34	318	*e*Pn	Pn	20 26 55.2	+0.8
UDBI				Sn	Sn	20 27 55.6	-0.6
DUGI	Dugi Otok	5.38	310	*e*Pn	Pn	20 26 54.8	-0.1
DUGI				Sn	Sn	20 27 55.8	-1.1
NVLJ	Novalja	5.84	314	*e*Pn	Pn	20 27 01.3	+0.2
NVLJ				Sn	Sn	20 28 06.4	-1.8
BRJN	Brijuni	6.67	312	*e*Pn	Pn	20 27 12.8	+0.2
BRJN				Sn	Sn	20 28 27.0	-1.8

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*CNRM **12** 20:41:25.4, 35°.53N×3°.58W, h18^{km}, ml2.5*

*MDD **12** 20:41:26.3±0.8, 35°.26N×3°.63W, h30^{km}, mbLg2.2/14, Error ellipse: s-maj=9.4km s-min=4.8km az=10.0, PRXIMO*

*SFS **12** 20:41:26.0, 35°.32N×3°.59W, h30^{km}, ML3.4, ANOUAL (MARRUECOS)*

*INMG **12** 20:41:27.0±1.5, 35°.35N×3°.59W, h31^{km}, ML2.1, Error ellipse: s-maj=4.7km s-min=3.2km az=14.0*

ISC 12 20:41:26.9±1.4**, 35°.47N**±0°.02×**3°.61W**±0°.02**, h25**^{km}±13^{km}**, n59, σ1^{s}.86**/104**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.37	227	P	Pb	20 41 34.1	-0.9
PALE				S	Sn	20 41 40.0	-3.2
EMEL	Melilla	0.56	108	P	Pn	20 41 37.1	-2.1
	66nm,0.1s,SNR=8.4						
EMEL				S	Sn	20 41 44.6	-3.1
	348nm,0.2s,SNR=7.9						
GOG	Mont Gurugu	0.56	116	P	Pn	20 41 37.1	-2.3
GOG				S	Sn	20 41 44.8	-3.1
CHAS	Isla Isabel II	1.00	106	P	Pn	20 41 43.7	-1.7
CHAS				S	Sn	20 41 56.4	-2.3
TAF	Taforalt	1.18	124	P	Pn	20 41 46.9	-0.9
TAF				S	Sn	20 42 02.7	-0.5
ELGU	Los Guajares,	1.39	359	P	Pn	20 41 49.9	-0.9
	1.1nm,0.2s,SNR=7.9						
ELGU				S	Sn	20 42 07.3	-1.2
	27nm,0.2s,SNR=7.9						
JBK	JBK	1.42	143	P	Pn	20 41 50.4	-0.9
JBK				S	Sn	20 42 09.4	0.0
EMAL	Malaga-Limoner	1.45	333	P	Pn	20 41 50.8	-0.7
EMAL				S	Sn	20 42 07.2	-2.5
EMAL	Malaga-Limoner	1.45	333	P	Pn	20 41 50.8	-0.7
EMAL				S	Sn	20 42 07.2	-2.5
CHEFC	Chefchaouen	1.46	256	P	Pn	20 41 52.8	+1.0
CHEFC				S	Sn	20 42 10.4	+0.2
CEU	Ceuta	1.50	287	P	Pn	20 41 49.5	-2.7
CEU				S	Sn	20 42 06.0	-4.9
CEU	Ceuta	1.50	287	P	Pn	20 41 49.5	-2.7
CEU				S	Sn	20 42 06.0	-4.9
ECEU	Ceuta	1.50	287	P	Pn	20 41 50.9	-1.4
	2.2nm,0.2s,SNR=5.6						
ECEU				S	Sn	20 42 08.3	-2.8
	7.1nm,0.1s,SNR=7.9						
EBER	Berja	1.54	22	P	Pn	20 41 52.8	-0.1
	1.5nm,0.1s,SNR=20						
EBER				S	Sn	20 42 11.6	-0.6
	4.8nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	1.68	346	P	Pn	20 41 54.9	0.0
	0.2nm,0.2s,SNR=7.9						
EGOR				S	Sn	20 42 15.0	-0.7
	9.5nm,0.3s,SNR=7.9						
ENIJ	Nijar	1.88	37	S	Sn	20 42 19.8	-0.6
	3.0nm,0.1s,SNR=7.9						
LCRM	LCR	2.06	210	P	Pn	20 42 01.9	+1.8
LCRM				S	Sb	20 42 30.7	+1.8
IFR	Ifrane	2.32	213	P	Pn	20 41 57.8	-5.9
IFR				S	Sn	20 42 26.6	-4.8
EQES	Quesada	2.37	10	P	Pn	20 42 06.5	+2.2
	2.3nm,0.1s,SNR=19						
EQES				S	Sn	20 42 35.2	+2.7
	4.9nm,0.2s,SNR=4.5						
TDRA	Tendrara	2.76	151	P	Pn	20 42 09.9	+0.2
TDRA				S	Sn	20 42 44.3	+2.0
MD31	MD31	2.77	200	P	Pn	20 42 10.2	+0.4
MD31				S	Sn	20 42 45.4	+2.9
SESP	Santiago Espad	2.78	18	P	Pn	20 42 12.1	+2.2
	1.0nm,0.1s,SNR=7.9						
SESP				S	Sn	20 42 44.6	+1.9
	1.8nm,0.1s,SNR=7.9						
MDT	Midelt	2.78	198	P	Pn	20 42 11.0	+1.0
MDT				S	Sn	20 42 46.7	+4.0
EADA	Adamuz	2.80	344	P	Pn	20 42 11.5	+1.3
	0.1nm,0.2s,SNR=7.9						
EADA				S	Sn	20 42 43.6	+0.5
	2.4nm,0.2s,SNR=7.9						
ECAB	El Cabril	2.98	331	P	Pn	20 42 14.5	+1.9
	0.1nm,0.2s,SNR=7.9						
ECAB				S	Sn	20 42 47.3	-0.2
	1.2nm,0.3s,SNR=7.9						
EMUR	La Murta	3.04	38	S	Sn	20 42 49.2	+0.3
	2.4nm,0.4s,SNR=7.9						
ZHG	ZHG	3.22	232	P	Pn	20 42 18.4	+2.5
ZHG				S	Sn	20 42 57.9	+4.3
EMIN	Mina Concepcio	3.37	314	P	Pn	20 42 17.9	+0.1
	0.7nm,0.1s,SNR=7.0						
EMIN				S	Sn	20 42 54.6	-2.4
	0.5nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.57	27	P	Pn	20 42 23.0	+2.2
	1.2nm,0.4s,SNR=19						
ETOB				S	Sn	20 43 01.6	-0.6
	0.3nm,0.2s,SNR=7.9						
EGRO	El Granado	3.74	305	P	Pn	20 42 22.5	-0.5
	7.0nm,1.0s,SNR=16						
EGRO				S	Sn	20 43 03.6	-2.6
	2.2nm,0.3s,SNR=7.9						
PVAQ	Vaqueiros	3.83	301	*e*Pn	Pn	20 42 24.5	+0.2
PVAQ				*e*Sn	Sn	20 43 07.1	-1.5
PVAQ				A	A	20 43 12.5	
	2.8nm,0.9s						
PVAQ	Vaqueiros	3.83	301	P	Pn	20 42 24.5	+0.2
PVAQ				S	Sn	20 43 07.1	-1.5
	2.8nm,0.9s						
PVAQ	Vaqueiros	3.83	301	P	Pn	20 42 24.0	-0.3
PVAQ				S	Sn	20 43 08.6	0.0
PBDV	Barranco-do-Ve	3.91	298	*e*Pn	Pn	20 42 26.0	+0.6
PBDV				*e*Sn	Sn	20 43 10.5	0.0
PBDV				A	A	20 43 27.2	
	4.5nm,0.8s						
PBDV	Barranco-do-Ve	3.91	298	P	Pn	20 42 26.0	+0.6
PBDV				S	Sn	20 43 10.5	0.0
	4.5nm,0.8s						
PAB	San Pablo	4.11	352	P	Pn	20 42 30.1	+1.9
	SNR=7.9						
PAB				S	Sn	20 43 14.1	-1.4
	0.3nm,0.2s,SNR=7.9						
PCVE	Castro Verde	4.17	302	*e*Pn	Pn	20 42 28.5	-0.4
PCVE	Castro Verde	4.17	302	P	Pn	20 42 28.5	-0.4
ESDC	Sonseca Array	4.20	356	P	Pn	20 42 31.4	+1.9
	0.2nm,0.3s,baz=175,slow=12,SNR=9.7						
ESDC				S	Sn	20 43 16.7	-1.1
	1.1nm,0.7s,baz=180,slow=22,SNR=4.2						
EBAD	Badajoz	4.26	321	P	Pn	20 42 30.8	+0.6
	2.4nm,0.9s,SNR=7.6						
EBAD				S	Sn	20 43 17.3	-1.7
	2.1nm,0.2s,SNR=7.9						
MESJ	Messejana	4.40	304	*e*Pn	Pn	20 42 31.7	-0.3
MESJ				*e*Sn	Sn	20 43 24.9	+2.5
MESJ	Messejana	4.40	304	P	Pn	20 42 31.7	-0.3
MESJ				S	Sn	20 43 24.9	+2.5
PFVI	Vila Bisbo	4.53	293	*e*Pn	Pn	20 42 34.5	+0.6
PFVI				*e*Sn	Sn	20 43 23.7	-2.0
PFVI	Vila Bisbo	4.53	293	P	Pn	20 42 33.1	-0.8
PFVI				S	Sn	20 43 23.5	-2.2
PTEO	Sao Teotonio	4.61	298	*e*Sn	Sn	20 43 27.8	+0.1
PTEO	Sao Teotonio	4.61	298	S	Sn	20 43 27.8	+0.1
PESTR	Estremoz	4.65	318	*e*Pn	Pn	20 42 37.1	+1.6
PESTR				*e*Sn	Sn	20 43 27.2	-1.4
PESTR				A	A	20 43 49.8	
	2.1nm,0.6s						
PESTR	Estremoz	4.65	318	P	Pn	20 42 35.2	-0.3
PESTR				S	Sn	20 43 29.4	+0.7
PNCL	Nicolau / Gran	4.75	305	*e*Pn	Pn	20 42 36.8	0.0
PNCL				*e*Sn	Sn	20 43 29.8	-1.3
PNCL				A	A	20 43 40.1	
	1.5nm,1.1s						
PNCL	Nicolau / Gran	4.75	305	P	Pn	20 42 36.8	0.0
PNCL				S	Sn	20 43 29.8	-1.3
	1.5nm,1.1s						
PMRV	Marv??o	4.96	324	*e*Sn	Sn	20 43 35.4	-1.1
PMRV	Marv??o	4.96	324	S	Sn	20 43 35.4	-1.1
PMTG	Montargil	5.14	316	*e*Pn	Pn	20 42 44.4	+2.1
PMTG				*e*Sn	Sn	20 43 39.8	-1.0
PMTG				A	A	20 43 47.3	
	1.7nm,0.6s						
PMTG	Montargil	5.14	316	P	Pn	20 42 44.4	+2.1
PMTG				S	Sn	20 43 39.8	-1.0
	1.7nm,0.6s						
EIBI	Ibiza	5.31	47	P	Pn	20 42 45.3	+0.7
	SNR=7.9						
EIBI				S	Sn	20 43 42.3	-2.6
	0.4nm,0.1s,SNR=7.9						
PCBR	Castelo Branco	5.33	326	*e*Pn	Pn	20 42 46.2	+1.3
PCBR	Castelo Branco	5.33	326	P	Pn	20 42 46.2	+1.3
PSBE	So Bento	5.77	316	*e*Pn	Pn	20 42 52.9	+2.0
MVO	Moncorvo	6.29	336	*e*Pn	Pn	20 42 59.8	+1.7

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*SJA **12** 20:49:33.8±0.8, 30°.62S×71°.85W, h68^{km}±5^{km}, ML3.9, MW4.0*

*GUC **12** 20:49:34.9±0.7, 30°.73S×71°.62W, h40^{km}±1^{km}, ML4.0*

*NEIC **12** 20:49:36.3±1.9, 30°.69S±0°.04×71°.66W±0°.09, h34^{km}±1^{km}, mb4.2/4, ML4.0(GUC), Error ellipse: s-maj=10.9km s-min=5.7km az=98.0*

ISC 12 20:49:35.1±0.9**, 30°.66S**±0°.03×**71°.79W**±0°.05**, h31**^{km}±5^{km}**, n71, σ1^{s}.90**/111**, 3C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.13	96	⇑ *i*P	Pb	20 49 40.9	0.0
CO06				*e*S	Sb	20 49 44.6	-0.2
CO06				IAML		20 49 45.5	
	comp=E,48µm,0.2s						
CO06	Fray Jorge	0.13	96	Pg	Pb	20 49 40.8	0.0
CO06				Sg	Sb	20 49 44.8	0.0
CO05	La Serena	0.88	33	⇓ *i*P	Pn	20 49 50.6	-0.8
CO05				*i* S	Sn	20 50 03.2	+0.2
CO05				IAML		20 50 05.9	
	comp=N,4µm,0.4s						
CO05	La Serena	0.88	33		Pn	20 49 50.5	-0.8
CO03	El Pedregal	0.96	101	⇓ *i*P	Pn	20 49 50.3	-2.2
CO03				*e*S	Sn	20 50 01.2	-4.0
CO03				IAML		20 50 02.7	
	comp=E,5µm,0.1s						
CO03	El Pedregal	0.96	101	Pn	Pn	20 49 50.3	-2.2
CO03					Sn	20 50 01.5	-3.8
CO03	El Pedregal	0.96	101	*e*P	Pn	20 49 50.3	-2.2
CO03				*e*S	Sn	20 50 02.9	-2.4
CO03				IAML		20 50 03.4	
	comp=Z,2µm,0.3s						
GO04	Tololo Observa	0.98	61	⇓ *i*P	Pn	20 49 51.7	-1.3
GO04				*e*S	Sn	20 50 04.2	-1.7
GO04				IAML		20 50 07.9	
	comp=E,17µm,0.5s						
GO04	Tololo Observa	0.98	61		Pn	20 49 51.6	-1.3
GO04					Sn	20 50 04.2	-1.7
GO04	Tololo Observa	0.98	61	*e*P	Sn	20 50 04.9	-1.1
LCO	Las Campanas	1.90	30	⇓ *e*P	Pn	20 50 05.7	+0.2
LCO				*e*S	Sb	20 50 30.7	-1.9
LCO	Las Campanas	1.90	30		Pn	20 50 06.1	+0.5
LCO	Las Campanas	1.90	30	*e*P	Pn	20 50 06.0	+0.5
VA06	Catapilco	1.94	168	⇓ *e*P	Pn	20 50 05.9	0.0
VA06				*i* S	Sn	20 50 28.9	-0.4
VA06				IAML		20 50 36.4	
	comp=N,2µm,0.7s						
AROD	Rodeo	2.06	77	*e*P	Pn	20 50 09.0	+1.2
AROD				*e*S	Sn	20 50 29.0	-3.7
AROD				*e*S	Sn	20 50 35.7	+3.1
ACCO	Cerro Coronel	2.35	89	*e*P	Pn	20 50 13.9	+2.0
ACCO				*e*S	Sn	20 50 38.5	-1.3
VA03	San Esteban	2.35	154	⇓ *e*P	Pn	20 50 12.8	+1.2
VA03				*e*S	Sn	20 50 41.1	+1.7
VA03				IAML		20 50 49.9	
	comp=E,1µm,0.4s						
VA03	San Esteban	2.35	154		Pn	20 50 12.6	+1.0
VA03	San Esteban	2.35	154	*e*P	Pn	20 50 12.5	+0.9
VA03				*e*P	Pn	20 50 12.5	+0.9
VA03				IAML		20 50 48.4	
	comp=Z,579nm,0.5s						
VA01	Torpederas	2.36	177	*e*P	Pn	20 50 11.5	-0.2
VA01				*e*S	Sn	20 50 38.5	-1.1
VA01				IAML		20 50 51.6	
	comp=E,742nm,0.9s						
VA01	Torpederas	2.36	177		Pn	20 50 13.5	+1.8
ROCH	El Roble	2.40	164	*e*P	Pn	20 50 12.6	+0.2
ROCH				*e*P	Pn	20 50 12.5	0.0
ROCH				*e*S	Sn	20 50 40.5	-0.4
ROCH				*e*S	Sn	20 50 41.9	+1.0
ROCH				IAML		20 50 49.1	
	comp=N,1µm,0.3s						
ROCH				IAML		20 50 49.2	
	comp=N,953nm,0.4s						
ROC1	El Roble	2.40	164	*e*P	Pn	20 50 12.0	-0.5
RTLS	Leoncito	2.42	119	*e*P	Pn	20 50 15.0	+2.2
RTLS				*e*S	Sn	20 50 40.0	-1.5
RTLS				IAML		20 50 49.7	
	comp=Z,528nm,0.9s						
AC04	Llanos de Chal	2.52	14	*e*P	Pn	20 50 14.0	+0.1
AC04	Llanos de Chal	2.52	14		Pn	20 50 14.1	+0.1
AC04	Llanos de Chal	2.52	14	*e*P	Pn	20 50 14.0	+0.1
AC04				*e*S	Sb	20 50 54.2	+3.8
AC04				IAML		20 51 03.6	
	comp=Z,206nm,0.4s						
AUSP	Uspallata	2.58	128	*e*P	Pn	20 50 16.9	+2.0
PEL	Peldehue	2.65	160	⇑ *e*P	Pn	20 50 16.3	+0.6
PEL				*e*S	Sn	20 50 47.5	+0.8
PEL	Peldehue	2.65	160		Pn	20 50 16.3	+0.6
PEL	Peldehue	2.65	160	*e*P	Pn	20 50 16.6	+0.8
PEL				*e*S	Sn	20 50 48.0	+1.2
MT02	Curacav	2.65	168		Pn	20 50 15.2	-0.5
ZON	Zonda	2.81	109		Pn	20 50 19.3	+1.4
ZON	Zonda	2.81	109	*e*P	Pn	20 50 19.9	+1.9
ZON				*e*S	Sb	20 50 58.5	-0.2
ZON				IAML		20 51 01.6	
	comp=Z,138nm,0.3s						
MT05	Renca	2.87	162	*e*P	Pn	20 50 21.0	+2.3
MT05				*e*S	Sb	20 50 58.0	-2.3
MT05				IAML		20 51 07.8	
	comp=N,968nm,0.4s						
MT05	Renca	2.87	162		Pn	20 50 19.2	+0.5
MT05	Renca	2.87	162	*e*P	Pn	20 50 21.0	+2.3
MT05				IAML		20 51 10.7	
	comp=Z,344nm,0.6s						
FCH	Farellones	2.95	155	*e*P	Pn	20 50 21.8	+1.7
VA05	Santo Domingo	2.99	177	*e*P	Pn	20 50 24.1	+3.7
VA05				*e*S	Sn	20 50 54.0	-1.2
VA05				IAML		20 51 08.3	
	comp=E,648nm,0.6s						
VA05	Santo Domingo	2.99	177		Pn	20 50 21.6	+1.3
RTCV	Cerro Valdivia	3.03	114	*e*P	Pn	20 50 18.0	-3.0
RTCV				*e*P	Pn	20 50 23.0	+2.1
ASAL	Salagasta	3.17	128	*e*P	Pn	20 50 25.0	+2.1
ASAL				*e*S	Sn	20 51 02.0	+2.2
MT09	Talagante	3.18	168	⇑ *e*P	Pn	20 50 23.7	+0.7
MT09				*e*S	Sn	20 50 59.3	-0.8
MT09				IAML		20 51 16.3	
	comp=N,380nm,0.6s						
MT09	Talagante	3.18	168		Pn	20 50 23.8	+0.7
MT01	Popeta	3.23	172		Pn	20 50 23.7	0.0
MT01	Popeta	3.23	172	*e*P	Pn	20 50 24.0	+0.4
MT01				*e*S	Sn	20 51 05.5	+4.4
MT01				IAML		20 51 13.0	
	comp=Z,208nm,0.5s						
ARCO	CERRO ARCO	3.26	133	*e*P	Pn	20 50 27.0	+2.7
ARCO				*e*S	Sb	20 51 17.4	+5.5
ARCO				IAML		20 51 17.6	
	comp=Z,194nm,0.5s						
GO03	Copiap	3.34	24		Pn	20 50 26.1	+0.8
AAGR	Agrelo	3.49	135	*e*P	Pn	20 50 30.9	+3.5
AAGR				*e*S	Sb	20 51 23.2	+4.9
VCA	Vinchina	3.66	59	*e*P	Pn	20 50 29.0	-0.7
VCA				*e*S	Sn	20 51 12.5	+0.6
VCA				IAML		20 51 35.5	
	comp=Z,418nm,1.4s						
AVFE	Valle Fertil	3.73	91	*e*P	Pn	20 50 31.4	+0.8
AVFE				*e*S	Sn	20 51 18.0	+4.4
AVFE				IAML		20 51 25.1	
	comp=Z,104nm,0.7s						
BO01	Tunca	3.77	171	Pn	Pn	20 50 31.6	+0.6
BO01	Tunca	3.77	171	*e*P	Pn	20 50 32.0	+0.9
BO01				IAML		20 51 31.8	
	comp=Z,144nm,0.5s						
BO02	Sierra Bellavi	4.21	169		Pn	20 50 37.6	+0.5
BO02	Sierra Bellavi	4.21	169	*e*P	Pn	20 50 38.5	+1.3
BO02				*e*S	Sn	20 51 26.6	+1.3
BO02				IAML		20 51 41.6	
	comp=Z,144nm,0.2s						
GO05	Huala	4.34	182	Pn	Pn	20 50 37.7	-1.3
ACLC	CERRO LA CRUZ	4.37	75	*e*P	Pn	20 50 40.8	+1.3
ACLC				*e*S	Sn	20 51 29.5	0.0
ACLC				IAML		20 51 41.8	
	comp=Z,163nm,0.5s						
AC02	Maricunga	4.47	32		Pn	20 50 42.1	+1.0
AC02	Maricunga	4.47	32	*e*P	Pn	20 50 42.0	+0.8
AC02				IAML		20 52 00.7	
	comp=Z,91nm,0.8s						
APLL	PUNTA DE LOS L	4.55	88	*e*P	Pn	20 50 42.6	+0.8
APLL				*e*S	Sn	20 51 36.0	+2.3
APLL				IAML		20 51 43.5	
	comp=Z,145nm,0.6s						
RFA	San Rafael	4.96	147	*e*P	Pn	20 50 48.8	+1.2
RFA				*e*S	Sb	20 51 54.1	-6.5
RFA				IAML		20 52 24.5	
	comp=Z,34nm,0.8s						
MRA	San Martin	5.47	110	*e*P	Pn	20 50 54.7	+0.1
MRA				*e*S	Sn	20 51 48.0	-8.5
MRA				*e*S	Sn	20 51 56.0	-0.5
MRA				IAML		20 52 04.8	
	comp=Z,146nm,0.5s						
CYA	Choya	5.66	69	*e*P	Pn	20 50 57.7	+0.5
CYA				*e*S	Sn	20 51 59.5	-1.7
CYA				IAML		20 52 27.2	
	comp=Z,41nm,0.6s						
LC01	Cunco	8.22	180	Pn	Pn	20 51 31.8	-0.4
PLCA	Paso Flores	10.10	175	Pn	Pn	20 51 58.3	+0.3
TRQA	Tornquist	10.96	135		Pn	20 52 09.3	-0.4
ITQB	Itaqui	13.16	90	Pn	Pn	20 52 39.0	-0.8
SNAA	Sanae	54.60	159	P	P	20 58 59.5	-0.7
SNAA				IAmb	IAmb	20 59 20.2	
	comp=Z,4.2nm,1.3s						
QSPA	South Pole Qui	59.57	180	P	P	20 59 35.3	-0.3
KOWA	Kowa	79.08	66	P	P	21 01 36.8	+0.1
KOWA				IAmb	IAmb	21 01 51.7	
	comp=Z,2.1nm,1.1s						
TORD	Torodi Ar. Bea	82.88	70	P	P	21 01 56.2	-0.8

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*IDC **12** 20:56:14.6±0.7, 4°.15S×129°.46E, h0^{km}, mb4.0/13, mb1 4.0/17, mb1mx3.8/48, mbtmp4.0/17, ML3.6/4, MS3.0/8, Ms1 3.0/8, ms1mx2.7/35, Error ellipse: s-maj=27.8km s-min=14.7km az=68.0*

*NEIC **12** 20:56:16.7±1.9, 4°.04S±0°.06×129°.63E±0°.07, h10^{km}±1^{km}, mb4.3/28, Error ellipse: s-maj=11.3km s-min=10.1km az=81.0*

*DJA **12** 20:56:16.9±1.1, 4°S±2°×12°9E±°, h18^{km}±9^{km}, M4.3/13, mB5.0/5, mb4.5/13, MLv4.2/10, Mw(mB)4.3/5*

ISC 12 20:56:15.9±0.4**, 4°.17S**±0°.04×**129°.55E**±0°.06**, h10**^{km}**, n87, σ1^{s}.79**/90**, mb4.2**/22**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.50	135	P	Pn	20 56 29.6	+0.5
MSAI	Masohi	1.03	323	P	Pg	20 56 34.4	-1.3
MSAI				S	Sb	20 56 47.7	-1.6
AAI	Ambon	1.43	289	P	Pn	20 56 40.7	-1.3
FAKI	Fak Fak	2.97	65	P	Pn	20 57 04.1	+0.9
FAKI	Fak Fak	2.97	65	Pn	Pn	20 57 03.8	+0.7
FAKI	Fak Fak	2.97	65	P	Pn	20 57 04.0	+0.9
SIJI	Sorong	3.70	28	Pn	Pn	20 57 13.3	+0.1
	11nm,0.3s,baz=50,slow=11,SNR=62						
SIJI				Sn	Sn	20 57 55.2	-1.6
	18nm,0.3s,baz=188,slow=1.7,SNR=5.1						
SIJI				LR	LR	20 59 04.5	
	comp=Z,325nm,20.9s,baz=190,slow=46						
SWI	Sorong	3.70	28	P	Pn	20 57 12.5	-0.7
LBMI	Labuha	4.06	330	P	Pn	20 57 18.4	+0.2
SANI	Sanana	4.13	301	P	Pn	20 57 18.9	-0.2
SANI	Sanana	4.13	301	P	Pn	20 57 19.8	+0.7
SAUI	Saumlaki	4.17	155	Pn	Pn	20 57 22.6	+2.9
SAUI	Saumlaki	4.17	155	P	Pn	20 57 22.0	+2.3
TNTI	Ternate	5.37	336	Pn	Pn	20 57 35.4	-0.8
SOEI	Soe	7.63	223	P	Pn	20 58 06.0	-1.4
	0.1nm21nm,0.7s						
SOEI	Soe	7.63	223		Pn	20 58 10.1	+2.7
BATI	Baumata	8.37	224	Pn	Pn	20 58 21.4	+4.0
	3.5nm,0.3s,baz=94,slow=7.0,SNR=7.3						
BATI				LR	LR	21 02 01.4	
	comp=Z,133nm,19.1s,baz=35,slow=42						
BATI	Baumata	8.37	224	P	Pn	20 58 16.9	-0.5
	13nm,1.2s						
MTN	Manton Dam	8.76	170	Pn	Pn	20 58 25.1	+2.4
MTN	Manton Dam	8.76	170	P	Pn	20 58 26.3	+3.5
KDU	Kakadu	8.94	161	P	Pn	20 58 26.3	+1.0
KAPI	Kappang	9.80	265	LR	LR	21 02 01.7	
	comp=Z,49nm,21.4s,baz=126,slow=36						
KAPI	Kappang	9.80	265	Pn	Pn	20 58 41.4	+4.4
TOLI2	Tolitoli	10.21	301	Pn	Pn	20 58 44.8	+2.1
KNRA	Kununurra	11.46	184	Pn	Pn	20 59 01.2	+1.4

KNRA	Kununurra	11.46	184	P	Pn	20 59 01.5	+1.7
BKB	Balikpapan	12.96	283	Pn	Pn	20 59 25.0	+4.6
FITZ	Fitzroy Crossi	14.36	195	Pn	Pn	20 59 40.2	+0.7
	0.3nm,0.3s,baz=23,slow=12,SNR=2.5						
FITZ				LR	LR	21 05 30.3	
	comp=Z,38nm,19.1s,baz=73,slow=39						
JAGI	Jajag, Banyuwa	15.89	254		P	21 00 03.3	-0.2
JAGI				IAmb	IAmb	21 00 24.5	
	comp=Z,35nm,1.4s						
WB0	Warramunga Arr	16.21	163	Pn	Pn	21 00 01.4	-2.6
WRAB	Tennant Creek	16.35	164	P	P	21 00 09.2	+0.5
WRA	Warramunga Arr	16.36	164	Pn	Pn	21 00 02.9	-3.0
	comp=Z,0.4nm,0.3s,baz=347,slow=13,SNR=28						
WRA				Sn	Sn	21 02 59.0	-8.5
	comp=Z,0.0nm,0.3s,baz=335,slow=22,SNR=4.9						
WRA				LR	LR	21 07 01.0	
	comp=Z,68nm,18.2s,baz=320,slow=39						
WRA	Warramunga Arr	16.36	164	Pn	Pn	21 00 03.5	-2.3
COEN	Coen	16.59	127	P	P	21 00 11.1	-0.2
KKM	Kota Kinabalu	16.74	307		P	21 00 15.1	+2.0
KKM				IAmb	IAmb	21 00 28.6	
	comp=Z,21nm,1.1s						
PMG	Port Moresby	18.24	107	P	P	21 00 30.4	+0.9
	comp=Z,0.8nm,0.3s,baz=67,slow=7.6,SNR=3.4						
SBUM	Sibu	18.52	290	P	Pn	21 00 34.8	+1.9
QIS	Mount Isa	19.00	150	P	P	21 00 39.1	+1.1
PSA00	Pilbara Seismi	19.70	208	P	P	21 00 47.0	+1.5
PSA00	Pilbara Seismi	19.70	208	P	P	21 00 47.2	+1.6
PSA00				IAmb	IAmb	21 00 48.2	
	comp=Z,13nm,0.8s						
PSA00	Pilbara Seismi	19.70	208	P	Pn	21 00 47.6	+0.6
AS31	Alice Springs	19.83	168		P	21 00 48.0	+1.0
ASAR	Alice Springs	19.84	168	P	P	21 00 48.1	+1.1
	comp=Z,1.2nm,0.3s,baz=347,slow=9.6,SNR=130						
ASAR				S	S	21 04 26.0	-4.6
	comp=Z,0.1nm,0.3s,baz=354,slow=25,SNR=3.7						
ASAR				PcP	PcP	21 05 04.3	-0.6
	comp=Z,0.2nm,0.3s,baz=358,slow=1.6,SNR=5.6						
ASAR				LR	LR	21 08 22.9	
	comp=Z,43nm,21.7s,baz=12,slow=37						
ASAR	Alice Springs	19.84	168		P	21 00 48.0	+0.9
KSM	Kuching	20.03	286	P	Pn	21 00 50.6	-0.4
KSM				IAmb	IAmb	21 01 11.9	
	comp=Z,20nm,1.2s						
MTSU	Mount Surprise	20.04	135	P	P	21 00 50.8	+1.5
WRKA	Warakurna	20.78	183	P	P	21 00 58.9	+1.5
LEM	Lembang	21.99	262	LR	LR	21 09 54.7	
	comp=Z,52nm,20.2s,baz=86,slow=37						
CTA	Charters Tower	22.70	136	P	P	21 01 18.8	+0.8
	comp=Z,4.7nm,0.6s,baz=311,slow=11,SNR=14						
CTAO	Charters Tower	22.70	136	P	P	21 01 18.5	+0.5
CTAO				IAmb	IAmb	21 01 19.5	
	comp=Z,11nm,0.7s						
CTAO	Charters Tower	22.70	136	P	P	21 01 19.5	+1.5
OOD	Oodnadatta	24.21	167	P	P	21 01 33.7	+0.8
IPM	Ipoh	29.76	286	P	P	21 02 23.0	-0.1
IPM				IAmb	IAmb	21 02 24.1	
	comp=Z,7.4nm,0.8s						
STKA	Stephens Creek	29.79	159	P	P	21 02 23.9	+0.8
	comp=Z,0.8nm,0.4s,baz=349,slow=8.1,SNR=5.1						
STKA				LR	LR	21 16 07.9	
	comp=Z,33nm,18.6s,baz=24,slow=40						
STKA	Stephens Creek	29.79	159	P	P	21 02 22.4	-0.6
KULM	Kulim	30.36	288	P	P	21 02 28.5	+0.3
KULM				IAmb	IAmb	21 02 46.0	
	comp=Z,7.4nm,1.1s						
CAN	Canberra	35.84	152	P	P	21 03 16.6	+0.7
TOO	Toolangi	36.31	158	P	P	21 03 21.3	+1.4
CM31	Chiang Mai Arr	37.62	308	P	P	21 03 32.8	+1.5
CMAR	Chiang Mai Arr	37.62	308	P	P	21 03 31.6	+0.3
	comp=Z,1.2nm,0.8s,baz=137,slow=7.4,SNR=11						
CHTO	Chiang Mai	37.81	308	P	P	21 03 33.3	+0.3
JWT	Wachi	39.63	8	P	P	21 03 47.3	-0.5
MJAR	Matsushiro Arr	41.30	11	P	P	21 04 02.4	+0.6
	comp=Z,0.8nm,0.6s,baz=184,slow=8.9,SNR=1.4						
MAJO	Matsushiro	41.30	11	P	P	21 04 00.4	-1.3
MAJO				IAmb	IAmb	21 04 18.3	
	comp=Z,5.0nm,0.8s						
KSRS	Korea Array	41.44	358	P	P	21 04 03.3	+0.6
	comp=Z,0.6nm,0.6s,baz=174,slow=9.3,SNR=2.2						
USRK	Ussuriysk Ar.	48.20	2	P	P	21 04 56.9	+0.3
	comp=Z,1.2nm,0.5s,baz=197,slow=6.5,SNR=1.8						
LSA	Lhasa	49.87	315	P	P	21 05 10.1	-0.2
LSA				IAmb	IAmb	21 05 11.2	
	comp=Z,2.2nm,0.8s						
BKZ	Black Stump Fm	54.91	136	P	P	21 05 47.0	-0.1
SONM	Songino Array	55.63	341	P	P	21 05 52.7	+0.6
	comp=Z,0.3nm,0.5s,baz=158,slow=4.7,SNR=2.9						
MK31	Makanchi Array	65.63	326	P	P	21 06 59.7	-0.6
MK31				IAmb	IAmb	21 07 18.4	
	comp=Z,2.5nm,0.9s						
MKAR	Makanchi Array	65.63	326	P	P	21 06 60.0	-0.3
	comp=Z,1.8nm,0.5s,baz=117,slow=8.5,SNR=45						
MKAR	Makanchi Array	65.63	326	P	P	21 06 59.9	-0.5
YAK	Yakutsk	66.01	0	P	P	21 07 02.5	+0.1
	comp=Z,3.4nm,0.5s,baz=355,slow=1.0,SNR=4.9						
YAK	Yakutsk	66.01	0	P	P	21 07 02.7	+0.4
ZALV	Zalesovo Beam	68.86	334	P	P	21 07 19.8	-0.9
	comp=Z,0.9nm,0.6s,baz=116,slow=6.8,SNR=3.6						
ZALV	Zalesovo Beam	68.86	334	P	P	21 07 19.6	-1.0
KURK	Kurchatov	69.89	328	P	P	21 07 26.4	-0.6
BRVK	Borovoye	75.52	328	P	P	21 07 59.8	-0.7
BRVK				IAmb	IAmb	21 08 00.9	
	comp=Z,3.5nm,1.0s						
TIXI	Tiksi	75.68	360	P	P	21 08 00.3	-0.7
TIXI				IAmb	IAmb	21 08 01.0	
	comp=Z,2.0nm,0.7s						
ABKAR	Akbulak array	80.03	321	P	P	21 08 25.0	-0.8
ABKAR	Akbulak array	80.03	321	P	P	21 08 24.9	-0.8
ABKAR				IAmb	IAmb	21 08 25.6	
	comp=Z,2.2nm,0.8s						
AKTO	Aktyubinsk	81.58	322	P	P	21 08 33.3	-0.7
	comp=Z,0.9nm,0.5s,baz=102,slow=3.4,SNR=4.8						
ARU	Arti	83.08	328	P	P	21 08 41.3	-0.4
	comp=Z,0.4nm,0.4s,baz=174,slow=13,SNR=3.4						
QSPA	South Pole Qui	85.79	180	P	P	21 08 54.1	-1.3
RAYN	Ar Rayn	86.20	294	P	P	21 08 57.9	-0.4
RAYN				IAmb	IAmb	21 08 58.5	
	comp=Z,2.9nm,0.7s						
ILAR	Eielson Array	90.99	25	P	P	21 09 20.2	+0.1
	comp=Z,0.2nm,0.7s,baz=244,slow=3.9,SNR=1.6						
TORD	Torodi Ar. Bea	127.77	283	PKP	PKPdf	21 15 22.6	-0.3
	comp=Z,0.6nm,0.7s,baz=29,slow=1.0,SNR=3.8						

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*ISK **12** 20:59:31.5, 35.°70N×31.°40E, h10^{km}, ML3.5/52*
*NIC **12** 20:59:32.3±0.0, 36.°17N×31.°94E, h3^{km}±1^{km}, Ml3.5/5*
*DDA **12** 20:59:34.8, 35.°96N×31.°46E, h26^{km}±1^{km}, MW3.5*
ISC 12 20:59:35.0±1.3**, 35.°80N**±0.°03×**31.°46E**±0.°02**, h21**^{km}±4^{km}**,**
n103, σ1.^{s}30/119**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.82	58	*i* P	Pb	20 59 50.0	-0.6
GAZI				*i* S	Sb	20 59 59.3	-1.8
GAZI				IAML		21 00 02.0	
	comp=N,631nm,0.5s						
GAZI				IAML		21 00 03.0	
	comp=E,602nm,0.9s						
GAZI	Gazipasa	0.82	58	PG	Pb	20 59 49.5	-1.0
GAZI				SG	Sb	20 59 59.6	-1.5
AKUM	Antalya-Kumluc	1.05	300	*i* P	Pb	20 59 53.1	-1.4
AKUM				*i* S	Sn	21 00 08.5	+0.1
AKUM				IAML		21 00 12.0	
	comp=N,431nm,0.6s						
AKUM				IAML		21 00 12.0	
	comp=E,430nm,0.7s						
AKMS	Akamas	1.06	137	P	Pn	20 59 53.8	-0.8
AKMS				S	Sn	21 00 11.8	+3.1
AKMS				AML	AML	21 00 14.2	
	comp=E,3.0nm,0.5s						
AKMS				AML	AML	21 00 14.2	
	comp=E,3.0nm,0.5s						
AKMS				AML	AML	21 00 17.3	
	comp=E,2.9nm,0.7s						
AKMS				AML	AML	21 00 17.3	
	comp=E,2.9nm,0.7s						
KEMT	Kemer-ANTALYA	1.09	318	PN	Pn	20 59 53.8	-1.2
KEPZ	Antalya-Kepez	1.11	6	*i* P	Pn	20 59 53.9	-1.4
KEPZ				*i* S	Sb	21 00 06.1	-3.3
KEPZ				IAML		21 00 08.0	
	comp=N,563nm,0.6s						
KEPZ				IAML		21 00 09.0	
	comp=E,353nm,0.8s						
ALFC	Alefka	1.13	124	P	Pn	20 59 54.2	-1.4
ALFC				S	Sn	21 00 11.5	+1.0
ALFC				AML	AML	21 00 17.7	
	comp=E,3.7nm,0.6s						
ALFC				AML	AML	21 00 17.7	
	comp=E,3.7nm,0.6s						
ALFC				AML	AML	21 00 18.2	
	comp=E,2.4nm,0.4s						
ALFC				AML	AML	21 00 18.2	
	comp=E,2.4nm,0.4s						
BOZY	Bozyazi-Mersin	1.27	76	PN	Pn	20 59 56.9	-0.5
ANTB	Antalya	1.28	329	PN	Pn	20 59 56.7	-0.9
AKDN	Akdeniz- Kıbrı	1.32	112	PN	Pn	20 59 54.7	-3.6
LEF	Lefka	1.35	120	PN	Pn	20 59 56.6	-2.0
LEF				SN	Sn	21 00 14.7	-1.2
NATA	Nata	1.36	138	P	Pn	20 59 59.1	+0.2
NATA				S	Sb	21 00 21.1	+4.3
NATA				AML	AML	21 00 25.8	
	comp=E,3.4nm,1.0s						
NATA				AML	AML	21 00 25.8	
	comp=E,3.4nm,1.0s						
NATA				AML	AML	21 00 29.0	
	comp=E,4.6nm,0.5s						
NATA				AML	AML	21 00 29.0	
	comp=E,4.6nm,0.5s						
TEKE	Tekeli-Mersin	1.38	75	PN	Pn	20 59 58.4	-0.7
HDMB	Hadim	1.43	35	PN	Pn	20 59 59.4	-0.5
ERMK	Ermenek	1.44	54	*i* P	Pn	21 00 00.2	+0.1
ERMK				*i* S	Sn	21 00 18.7	+0.2
ERMK				IAML		21 00 30.0	
	comp=E,236nm,0.7s						
ERMK				IAML		21 00 32.0	
	comp=N,250nm,0.7s						
KORT	Korkueli	1.50	323	*i* P	Pb	21 00 02.8	+0.6
KORT				IAML		21 00 30.0	
	comp=E,274nm,0.6s						
KORT				IAML		21 00 36.0	
	comp=N,191nm,0.6s						
KORT	Korkueli	1.50	323	PN	Pn	20 59 59.9	-0.9
BERE	Bereket-Mersin	1.53	68	PN	Pn	21 00 00.7	-0.5
AKAS	Kas	1.57	287	*i* P	Pn	21 00 01.5	-0.2
AKAS				*i* S	Sb	21 00 23.9	+1.1
AKAS				IAML		21 00 34.0	
	comp=N,337nm,0.6s						
AKAS				IAML		21 00 34.0	
	comp=E,251nm,0.7s						
AKAS	Kas	1.57	287	PN	Pn	21 00 00.0	-1.8
ELL	Elmali	1.57	307	PN	Pn	21 00 00.5	-1.3
ELL	Elmali	1.57	307	P	Pb	21 00 03.3	-0.2
ELL				S	Sb	21 00 27.0	+4.0
YORU	Yoruktepe-Mers	1.61	77	PN	Pn	21 00 01.9	-0.4
SEYD	Seydisehir-KON	1.63	11	PN	Pn	21 00 02.8	+0.2
SEDI	Konya, Seydise	1.67	8	*i* P	Pn	21 00 03.5	+0.4
SEDI				IAML		21 00 28.0	
	comp=E,331nm,0.6s						
SEDI				IAML		21 00 29.0	
	comp=N,211nm,0.5s						
OREN	Orenkoy-Mersin	1.67	75	PN	Pn	21 00 02.5	-0.5
BUCA	Burdur, Bucak-	1.69	335	*i* P	Pn	21 00 03.8	+0.4
BUCA				*i* S	Sn	21 00 23.6	-0.8
ATHAL	Athalassa	1.71	112	S	Sn	21 00 22.8	-1.9
AKK1	Akkuyu-Mersin	1.72	78	PN	Pn	21 00 03.3	-0.4
AKK2	Akkuyu-Mersin	1.72	78	PN	Pn	21 00 03.3	-0.5
TEVE	Tevekalti-Mers	1.72	68	PN	Pn	21 00 03.9	0.0
AKKU	Akkuyu-Mersin	1.73	77	PN	Pn	21 00 03.9	0.0
GULN	MERSIN_Gulnar	1.73	77	*i* P	Pn	21 00 04.4	+0.5
GULN				IAML		21 00 31.0	
	comp=N,264nm,0.6s						
GULN				IAML		21 00 31.0	
	comp=E,222nm,0.5s						
CSS	Mathiatis	1.74	118	PN	Pn	21 00 02.3	-1.7
CSS	Mathiatis	1.74	118	P	Pn	21 00 01.8	-2.2
TEPK	Tepekoy-MERSIN	1.74	75	PN	Pn	21 00 03.8	-0.2
LFK	Lefkose	1.77	107	PN	Pn	21 00 03.7	-0.7
ASGA	Asgata	1.78	124	P	Pn	21 00 04.0	-0.4
ASGA				S	Sn	21 00 27.4	+1.0
ASGA				AML	AML	21 00 35.0	
	comp=E,1.1nm,1.5s						
ASGA				AML	AML	21 00 35.0	
	comp=E,1.1nm,1.5s						
ASGA				AML	AML	21 00 39.4	
	comp=E,1.5nm,0.5s						
ASGA				AML	AML	21 00 39.4	
	comp=E,1.5nm,0.5s						
BCK	Bucak	1.80	337	PN	Pn	21 00 04.1	-0.8
YESI	Yesilovacik-Me	1.81	77	PN	Pn	21 00 04.6	-0.3
TISA	Tisan-Mersin	1.83	78	PN	Pn	21 00 04.8	-0.5
KKBE	Karaman, Kazim	1.85	40	*i* P	Pn	21 00 06.8	+1.2
KKBE				IAML		21 00 38.0	
	comp=N,240nm,0.6s						
KKBE				IAML		21 00 40.0	
	comp=E,281nm,1.0s						
IKL	Isikli	1.85	76	PN	Pn	21 00 05.1	-0.4
KARG	Kargicak-Mersi	1.86	77	PN	Pn	21 00 04.8	-0.9
KEBE	Keben-Mersin	1.93	70	PN	Pn	21 00 06.7	0.0
MVOU	Mavrovouni	1.94	113	P	Pn	21 00 04.3	-2.4
MVOU				S	Sn	21 00 28.9	-1.5
MVOU				AML	AML	21 00 41.0	
	comp=E,1.6nm,0.6s						
MVOU				AML	AML	21 00 41.0	
	comp=E,1.6nm,0.6s						
MVOU				AML	AML	21 00 43.5	
	comp=E,1.5nm,0.7s						
MVOU				AML	AML	21 00 43.5	
	comp=E,1.5nm,0.7s						
KRMN	Karaman	2.00	46	PN	Pn	21 00 07.9	+0.3
SILI	Silifke-Mersin	2.07	73	PN	Pn	21 00 08.5	0.0
CAME	Cameli-Denizli	2.08	304	PN	Pn	21 00 07.9	-1.0
KMER	Konya-Meram	2.10	20	*i* P	Pn	21 00 10.8	+1.8
KMER				IAML		21 00 41.0	
	comp=N,191nm,0.5s						
KMER				IAML		21 00 44.0	
	comp=E,197nm,0.7s						
SLFK	Silifke-Mersin	2.10	73	PN	Pn	21 00 08.8	-0.1
FETY	Fethiye	2.10	294	PN	Pn	21 00 07.6	-1.3
GOLH	Golhisar	2.10	314	*i* P	Pn	21 00 10.2	+1.2
GOLH				IAML		21 00 56.0	
	comp=E,146nm,1.1s						
GOLH				IAML		21 00 57.0	
	comp=N,141nm,0.8s						
ISP	Isparta	2.16	340	PN	Pn	21 00 09.9	+0.1
CAEL	Denizli, Camel	2.17	308	*i* P	Pn	21 00 10.6	+0.5
CAEL				IAML		21 00 54.0	
	comp=E,232nm,1.0s						
CAEL				IAML		21 00 59.0	
	comp=N,250nm,0.8s						
BRDR	BURDUR-Merkez	2.20	330	*i* P	Pb	21 00 13.0	-1.2
EREN	Erenkoy	2.22	96	PN	Pn	21 00 09.9	-0.7
BAGO	Egridir - ISPA	2.25	346	*i* P	Pb	21 00 13.3	-1.8
BAGO				IAML		21 00 45.0	
	comp=E,112nm,0.7s						
KONT	Konya--Tatoy	2.26	18	PN	Pn	21 00 11.7	+0.5
OSC1	CSNet OBS 1	2.30	184	P	Pb	21 00 17.1	+1.3
DOGA	KONYA_Doganhis	2.31	4	*i* P	Pn	21 00 13.3	+1.4
DOGA				*i* S	Sn	21 00 40.1	+0.3
DOGA				IAML		21 00 44.0	
	comp=N,123nm,0.6s						
DOGA				IAML		21 00 56.0	
	comp=E,96nm,0.7s						
BASM	Basmaki-Afyon	2.40	332	PN	Pn	21 00 13.0	-0.2
YVAC	Isparta, Yalva	2.47	356	*i* P	Pn	21 00 14.1	-0.1
DALY	Dalyan (Mula)	2.49	295	PN	Pn	21 00 13.1	-1.1
LADK	Ladik-KONYA	2.50	16	PN	Pn	21 00 14.9	+0.3
TAVA	DENIZLI_Tavas	2.64	310	*i* P	Pn	21 00 15.7	-0.8
KZIL	AFYON_Kizioren	2.67	337	*i* P	Pn	21 00 17.5	+0.6
KZIL				*i* S	Sn	21 00 48.8	0.0
KERG	Konya-Eregli	2.68	52	*i* P	Pn	21 00 19.1	+2.1
KERG				*i* S	Sn	21 00 50.0	+1.0
KERG				IAML		21 01 01.0	
	comp=N,59nm,0.5s						
KERG				IAML		21 01 03.0	
	comp=E,64nm,0.5s						
MERS	Mersin	2.69	66	PN	Pn	21 00 17.3	+0.2
YESY	Yesilyurt	2.69	42	PN	Pn	21 00 17.5	+0.2
ARG	Arkhangelos	2.74	280	PN	Pn	21 00 15.9	-1.8
ARG	Arkhangelos	2.74	280	P	Pn	21 00 16.3	-1.4
ALIN	Konya, Altinte	2.74	24	*i* P	Pn	21 00 15.5	-2.3
KDHN	Kadinhani	2.77	11	*i* P	Pn	21 00 19.1	+0.9
TURN	Turunc	2.78	291	*i* P	Pn	21 00 17.4	-0.9
TURN	Turunc	2.78	291	PN	Pn	21 00 17.0	-1.2
OSC2	CSNet OBS 4	2.80	166	P	Pb	21 00 22.1	-2.2
SHUT	Suhut-Afyon	2.84	345	PN	Pn	21 00 19.5	+0.2
SULT	Sultanhani-AKS	2.90	34	PN	Pn	21 00 20.8	+0.7
PASA	Karahalli, USA	3.00	329	*i* P	Pn	21 00 23.2	+1.9
CHBY	Cihanbeyli	3.00	22	PN	Pn	21 00 22.4	+0.9
KIZT	Kizilcal	3.09	6	PN	Pn	21 00 23.5	+0.8
KARA	Karaisali	3.24	62	PN	Pn	21 00 24.9	+0.3
KRTS	Karatas	3.26	75	PN	Pn	21 00 25.2	+0.4
CMRD	Camardi-Nigde	3.39	56	PN	Pn	21 00 27.6	+0.8
AYDN	Tasoluk	3.43	304	*i* P	Pn	21 00 26.8	-0.4
NIDE	Nigde/Merkez-G	3.45	49	*i* P	Pn	21 00 28.8	+1.2
KULU	Kulu	3.46	20	PN	Pn	21 00 28.4	+0.6
YURE	YUREGIR	3.52	72	*i* P	Pn	21 00 29.0	+0.5
ASUZ	Hatay-Arsuz	3.54	81	*i* P	Pn	21 00 31.1	+2.4
KKUL	Konya-Kulu	3.56	19	*i* P	Pn	21 00 31.3	+2.2
CIFT	Cifteler, Eski	3.57	355	PN	Pn	21 00 30.0	+0.8
AUSIV	SIVRIHISAR	3.63	1	PN	Pn	21 00 31.0	+0.8
SVRH	Sivrihisar-ESK	3.64	1	PN	Pn	21 00 31.3	+1.1
CEYT	Ceyhan	3.66	69	PN	Pn	21 00 31.2	+0.8
SGAZ	Eskisehir, Sey	3.76	353	*i* P	Pn	21 00 32.3	+0.5
YAYL	Yayladag	3.78	85	PN	Pn	21 00 32.6	+0.5
KIRS	Kırehir-Merke	3.86	30	*i* P	Pn	21 00 35.2	+2.0
TAHT	Tahtakopru-Hat	3.87	80	PN	Pn	21 00 33.4	+0.2
YAHY	KAYSERI_Yahyal	3.87	53	*i* P	Pn	21 00 36.0	+2.6
KOZT	Kozan	3.89	63	PN	Pn	21 00 34.7	+1.1
DEMI	Demirci	3.91	327	*i* P	Pn	21 00 35.6	+1.7
BBAL	Bala	3.96	19	*i* P	Pn	21 00 35.8	+1.1

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*IDC **12** 21:03:32.6±6.2, 9.°32S×118.°48E, h72^{km}±50^{km}, mb3.3/2, mb1 3.6/6, mb1mx3.0/42, mbtmp3.8/6, ML3.7/4, Error ellipse: s-maj=98.4km s-min=20.7km az=67.0*
*DJA **12** 21:03:35.5±0.5, 9°S±4°×11°9E±°, h35^{km}±14^{km}, M4.3/19, mb4.3/7, mB4.7/1, MLv4.2/19, Mw(mB)4.0/1*
ISC 12 21:03:34.5±0.8**, 9.°19S**±0.°06×**118.°83E**±0.°05**, h35**^{km}**, n32,**
σ2.^{s}26/36**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.71	129	P	Pn	21 03 50.0	+1.9
WBSI				S	Sn	21 03 59.9	+2.0
PLAI	Plampang	1.10	289	P	Pn	21 03 55.4	+2.0
PLAI				S	Sn	21 04 08.1	+0.7
BASI	Baing, Sumba	2.01	121	P	Pn	21 04 07.9	+2.0
EDFI	Ende, Flores	2.86	81	P	Pn	21 04 19.4	+1.7
MMRI	Maumere	3.41	81	P	Pn	21 04 28.1	+2.9
MMRI	Maumere	3.41	81	P	Pn	21 04 27.9	+2.7
BSSI	Bau Bau, Buton	3.44	29	P	Pn	21 04 27.1	+1.4
DNP	Denpasar	3.61	278	P	Pn	21 04 29.2	+1.2
IGBI	Denpasar	3.66	275	P	Pn	21 04 29.7	+1.1
SRBI	Singaraja	3.74	287	P	Pn	21 04 31.0	+1.3
BKSI	Bulukumba	4.05	19	P	Pn	21 04 35.7	+1.7
KAPI	Kappang	4.25	13	P	Pn	21 04 38.5	+1.8
	5.1nm,0.3s,baz=191,slow=4.7,SNR=18						
KAPI				S	Sn	21 05 24.6	-0.5
	31nm,0.3s,baz=8.4,slow=20,SNR=18						
JAGI	Jajag, Banyuwa	4.68	278	P	Pn	21 04 42.1	-0.5
BATI	Baumata	4.87	102	P	Pn	21 04 47.3	+1.9
	16nm,0.3s,baz=280,slow=13,SNR=18						
BATI				S	Sn	21 05 42.7	+2.1
	14nm,0.3s,baz=14,slow=18,SNR=6.2						
BATI	Baumata	4.87	102	P	Pn	21 04 47.2	+1.9
BNSI	Bone	4.92	15	P	Pn	21 04 48.2	+2.2
SPSI	Sidrap Palu	5.27	10	P	Pn	21 04 52.4	+1.6
	0.1nm13nm,0.7s						
SOEI	Soe	5.39	96	P	Pn	21 04 54.7	+2.1
	0.2nm26nm,0.8s						
SOEI	Soe	5.39	96	P	Pn	21 04 54.7	+2.1
GMJI	Gumukmas	5.40	279	P	Pn	21 04 52.4	-0.2
	0.3nm37nm,0.6s						
PCJI	Pacitan	7.63	277	P	Pn	21 05 23.4	+0.2
	0.2nm36nm,2.0s						
UGM	Wanagama	8.31	278	P	Pn	21 05 33.5	+0.9
FITZ	Fitzroy Crossi	11.05	144	P	Pn	21 06 08.4	-1.7
	0.4nm,0.3s,baz=324,slow=13,SNR=12						
FITZ				S	Sn	21 08 04.2	-8.4
	0.5nm,0.3s,baz=175,slow=23,SNR=3.9						
KNRA	Kununurra	11.65	125	P	Pn	21 06 18.4	+0.1
MBWA	Marble Bar	11.94	176	P	Pn	21 06 24.2	+2.0
	15nm,1.3s						
MTN	Manton Dam	12.61	108	P	Pn	21 06 32.1	+0.6
GIRL	Giralia	14.09	198	P	Pn	21 06 54.4	+2.8
MEEK	Meekatharra	17.36	181	P	Pn	21 07 34.9	+0.8
WRKA	Warakurna	18.16	151	P	Pn	21 07 43.1	-0.9
	5.7nm,0.9s						
WRA	Warramunga Arr	18.41	127	P	P	21 07 43.9	-3.0
	0.1nm,0.3s,baz=302,slow=12,SNR=5.7						
WRA				S	Sn	21 11 00.7	-11
	0.1nm,0.3s,baz=303,slow=23,SNR=3.7						
ASAR	Alice Springs	20.38	137	P	P	21 08 06.2	-2.1
	0.7nm,0.5s,baz=312,slow=9.8,SNR=14						
ASAR				S	S	21 11 47.0	-7.9
	0.2nm,0.4s,baz=306,slow=22,SNR=3.4						
SONM	Songino Array	57.83	350	P	P	21 13 17.1	-5.5
	1.0nm,0.5s,baz=157,slow=7.8,SNR=8.7						

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*MOS **12** 21:05:49.7±1.0, 38.°91N×142.°00E, h46^{km}, mb4.4/10, Error ellipse: s-maj=9.1km s-min=5.9km az=87.5*
*BJI **12** 21:05:50.8±0.0, 38.°81N×141.°79E, h50^{km}, mB4.8/14, mb4.2/25, Ms4.6/7, Ms7 4.4/7*
*NIED **12** 21:05:52.1, 38.°89N×141.°97E, h49^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.64; $M_{\theta\theta}$-0.99; $M_{\phi\phi}$-4.65; $M_{r\theta}$2.63; $M_{\theta\phi}$-1.08; $M_{\phi r}$6.96; Fault plane solution: $M_0$9.13000×10^{14} NP1:ϕ_s20.00000°, δ72.00000°, λ92.00000°. NP2:ϕ_s192.00000°, δ18.00000°, λ83.00000°.*
*JMA **12** 21:05:52.0±0.1, 38.°89N×141.°97E, h49^{km}±1^{km}, M4.0 Broadband fault plane solution: P waves. NP1: ϕ_s189.00000°, δ15.00000°, λ72.00000°. NP2:ϕ_s27.00000°, δ76.00000°, λ95.00000°. Principal axes: T Plg59.0000°, Azm303.0000°; N Plg4.0000°, Azm206.0000°; P Plg31.0000°, Azm113.0000°;*
JMA Felt II J1.
*NEIC **12** 21:05:53.1±1.3, 38.°93N±0.°06×141.°9E±0.°1, h53^{km}±8^{km}, mb4.5/24 Error ellipse: s-maj=13.0km s-min=7.2km az=113.0*
*IDC **12** 21:05:54.0±1.9, 38.°87N×141.°96E, h68^{km}±16^{km}, mb3.7/16, mb1 3.8/20, mb1mx3.5/53, mbtmp4.0/20, MS2.8/5, Ms1 2.8/5, ms1mx2.5/46, Error ellipse: s-maj=19.6km s-min=10.2km az=111.0*
ISC 12 21:05:51.6±0.7**, 38.°90N**±0.°05×**142.°04E**±0.°06**, h48**^{km}±4^{km}**,**
n141, σ1.^{s}48/160**, mb4.3**/41**, MS4.3**/5**, 6C-11D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.34	303	⇓P	Pn	21 06 01.3	+0.3
OFUJ				S	Sn	21 06 07.6	0.0
JKMT	Kesennumamotoy	0.45	259	⇓P	Pn	21 06 02.0	-0.1
JKMT				S	Sn	21 06 08.9	-0.7
JMK	Ichinoseki	0.64	275	⇓P	Pn	21 06 04.4	-0.1
JMK				S	Sn	21 06 13.1	-0.6
JIO	Ouri	0.70	231	⇓P	Pn	21 06 04.9	-0.3
JIO				S	Sn	21 06 13.6	-1.4
JOM	Ohasama	0.81	315	⇓P	Pn	21 06 07.0	+0.2
JOM				S	Sn	21 06 17.8	-0.1
JTH	Tanohata	1.05	353	P	Pn	21 06 10.4	+0.5
JTH				S	Sn	21 06 23.7	+0.2
JOU	Okura	1.20	244	⇓P	Pn	21 06 11.6	-0.4
JOU				S	Sn	21 06 26.3	-0.8
JRG	Rokugo	1.20	295	⇓P	Pn	21 06 11.9	-0.1
JYK	Kaneyama	1.31	271	⇓P	Pn	21 06 13.3	-0.2
JYK				*e*S	Sn	21 06 29.2	-0.6
JMM	Marumori	1.42	224	⇓P	Pn	21 06 14.3	-0.7
JMM				S	Sn	21 06 31.3	-1.2
JMM	Marumori	1.42	224		Pn	21 06 14.3	-0.7
JMM				Sn	Sn	21 06 31.5	-1.0
JANG	Nango	1.53	345	⇓P	Pn	21 06 16.6	+0.1
JTM	Tenmabayashi	2.03	339	Pn	Pn	21 06 23.9	+0.6
JYT	Yasato	3.04	209	Pn	Pn	21 06 37.0	-0.2
JSD	Sado	3.08	255	Pn	Pn	21 06 37.3	-0.5
ERM	Erimo	3.23	15	P	Pn	21 06 41.6	+1.8
ERM	Erimo	3.23	15	Pn	Pn	21 06 41.6	+1.8
MJAR	Matsushiro Arr	3.84	233	P	Pn	21 06 50.3	+2.1
	1.4nm,0.3s,baz=35,slow=12,SNR=81						
MJAR				S	Sn	21 07 33.2	+1.2
	0.5nm,0.3s,baz=347,slow=12,SNR=4.0						
MJAR				LR	LR	21 08 38.9	
	comp=Z,81nm,19.7s,baz=100,slow=44						
MJAR	Matsushiro Arr	3.84	233	Pn	Pn	21 06 49.2	+1.0
MAJO	Matsushiro	3.84	233	P	Pn	21 06 47.9	-0.3
MAJO	Matsushiro	3.84	233	Pn	Pn	21 06 47.9	-0.3

MAT	**Matsushiro**	**3.84**	**233**	P	**Pn**	**21 06 49.7**	**+1.5**
MAT				eS	**Sn**	**21 07 32.9**	**+0.9**
MJB9	**Matsu-Tunnel**	**3.84**	**233**	Pn	**Pn**	**21 06 49.2**	**+1.0**
JEW	**Eniwo**	**3.96**	**354**	Pn	**Pn**	**21 06 49.5**	**-0.4**
JGF	**Kuroka**	**4.97**	**230**		**Pn**	**21 07 06.2**	**+2.4**
ASAJ	**Asahikawa**	**5.23**	**4**	P	**Pn**	**21 07 08.2**	**+1.0**
	1.6nm,0.3s,baz=207,slow=16,SNR=39						
ASAJ				S	**Sn**	**21 08 09.1**	**+2.9**
	1.9nm,0.3s,baz=105,slow=20,SNR=2.0						
ASAJ				LR	LR	21 09 36.5	
	comp=Z,52nm,21.9s,baz=188,slow=42						
JKA	**Kamikawa-asahi**	**5.23**	**4**	Pn	**Pn**	**21 07 07.8**	**+0.6**
NMR	**Nemuro--Hokkai**	**5.27**	**31**	eP	**Pn**	**21 07 06.7**	**-1.0**
NMR				eS	**Sn**	**21 08 02.4**	**-4.6**
INU	**Inuyama**	**5.35**	**230**	Pn	**Pn**	**21 07 09.3**	**+0.4**
GLVR	**Golovnino**	**5.50**	**27**	P	**Pn**	**21 07 10.2**	**-0.7**
GLVR				eS	**Sn**	**21 08 08.6**	**-4.2**
GLVR				pmax	pmax		
	comp=Z,13nm,0.1s						
GLVR				smax	smax		
	comp=N,413nm,0.3s						
GLVR				smax	smax		
	comp=E,320nm,0.3s						
RUSJ	**Misakicho**	**5.73**	**24**	eP	**Pn**	**21 07 15.2**	**+1.1**
RUSJ				eS	**Sn**	**21 08 18.3**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**5.88**	**28**	eP	**Pn**	**21 07 15.3**	**-0.8**
YUK				eS	**Sn**	**21 08 18.6**	**-3.6**
YUK				pmax	pmax		
	comp=N,66nm,0.2s						
YUK				pmax	pmax		
	comp=Z,94nm,0.2s						
YUK				smax	smax		
	comp=E,50nm,0.2s						
YUK				smax	smax		
	comp=N,231nm,0.3s						
SHO	**Shikotan**	**6.14**	**34**	eP	**Pn**	**21 07 18.2**	**-1.4**
SHO				eS	**Sn**	**21 08 22.8**	**-5.7**
SHO				pmax	pmax		
	comp=N,8.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,10.0nm,0.2s						
SHO				pmax	pmax		
	comp=Z,8.0nm,0.2s						
SHO				smax	smax		
	comp=N,83nm,0.3s						
SHO				smax	smax		
	comp=E,119nm,0.4s						
JWT	**Wachi**	**6.41**	**238**	Pn	**Pn**	**21 07 26.3**	**+2.8**
KUR	**Kuril'sk**	**7.67**	**33**	P	**Pn**	**21 07 41.0**	**+0.3**
KUR				S	**Sn**	**21 09 03.6**	**-2.6**
KUR				smax	smax		
	comp=N,71nm,0.5s						
KUR				smax	smax		
	comp=E,60nm,0.4s						
JHS	**Saijyo**	**8.13**	**244**	Pn	**Pn**	**21 07 48.6**	**+1.5**
USA0B	**Ussuriysk Arra**	**9.21**	**308**	P	**Pn**	**21 08 02.1**	**+0.5**
USA0B	**Ussuriysk Arra**	**9.21**	**308**	Pn	**Pn**	**21 08 02.1**	**+0.5**
USRK	**Ussuriysk Ar.**	**9.21**	**308**	P	**Pn**	**21 08 03.8**	**+2.1**
	baz=118,slow=14,SNR=16						
USRK				LR	LR	21 11 14.7	
	comp=E,84nm,20.9s,baz=33,slow=35						
USRK	**Ussuriysk Ar.**	**9.21**	**308**	Pn	**Pn**	**21 08 01.9**	**+0.3**
MDJ	**Mudanjiang**	**10.90**	**306**	P	**Pn**	**21 08 24.4**	**-0.5**
MDJ				pmax	pmax		
	comp=E,6.0nm,1.4s						
MDJ				pmax	pmax		
	comp=E,450nm,5.1s						
KSRS	**Korea Array**	**11.20**	**267**	P	**Pn**	**21 08 32.6**	**+3.6**
	comp=E,0.3nm,0.3s,baz=74,slow=13,SNR=6.6						
KSRS				LR	LR	21 12 02.0	
	comp=E,46nm,19.4s,baz=88,slow=33						
KSAR	**Wonju Array Be**	**11.24**	**267**	P	**Pn**	**21 08 28.4**	**-1.1**
KSAR	**Wonju Array Be**	**11.24**	**267**	Pn	**Pn**	**21 08 28.4**	**-1.1**
KS19	**Wonju Array Si**	**11.24**	**267**	Pn	**Pn**	**21 08 27.9**	**-1.6**
KLR	**Kul'dur**	**12.69**	**328**	P	**P**	**21 08 54.5**	**-4.7**
	comp=E,0.1nm,0.3s,baz=147,slow=16,SNR=2.1						
KLR	**Kul'dur**	**12.69**	**328**	iP	**Pn**	**21 08 47.7**	**-1.6**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
PEA0B	**Petropavlovsk-**	**17.84**	**32**	iP	**P**	**21 10 00.1**	**+3.8**
NJ2	**Nanjing**	**20.05**	**257**	eP	**P**	**21 10 20.4**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**23.41**	**285**	eP	**P**	**21 10 55.8**	**-0.6**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,88nm,4.8s						
YULB	**Yu-li**	**23.45**	**235**	P	**P**	**21 10 56.0**	**-0.8**
TPUB	**Ta-pu**	**23.95**	**236**	P	**P**	**21 11 01.2**	**-0.2**
YAK	**Yakutsk**	**24.37**	**346**	ceP	**P**	**21 11 04.1**	**-0.7**
YAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SEY	**Seymchan**	**24.87**	**11**	P	**P**	**21 11 11.0**	**+1.6**
	comp=Z,1.0nm,0.5s,baz=212,slow=11,SNR=5.1						
ULN	**Ulaanbaatar**	**26.77**	**301**	iP	**P**	**21 11 25.9**	**-1.0**
XAN	**Xi'an**	**26.98**	**270**	P	**P**	**21 11 27.8**	**-1.0**
XAN				pP	pP	21 11 40.7	-0.6
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SONM	**Songino Array**	**27.20**	**301**	P	**P**	**21 11 31.6**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=89,slow=9.8,SNR=5.4						
SONM	**Songino Array**	**27.20**	**301**	P	**P**	**21 11 30.4**	**-0.3**
ENH	**Enshi**	**28.03**	**262**	P	**P**	**21 11 37.2**	**-1.0**
ENH				IAmb	IAmb	21 11 42.6	
	comp=Z,7.7nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.74**	**125**	T	T	21 42 13.8	
	baz=317,slow=75,SNR=338						
H11N1	**WAKE ISLAND Hy**	**28.75**	**125**	T	T	21 42 20.3	
	baz=317,slow=75,SNR=478						
H11N3	**WAKE ISLAND Hy**	**28.76**	**125**	T	T	21 42 09.0	
	baz=317,slow=75,SNR=250						
H11S1	**WAKE ISLAND Hy**	**29.52**	**127**	T	T	21 43 01.4	
	baz=318,slow=76,SNR=135						
H11S3	**WAKE ISLAND Hy**	**29.52**	**127**	T	T	21 43 17.0	
	baz=318,slow=76,SNR=202						
H11S2	**WAKE ISLAND Hy**	**29.53**	**127**	T	T	21 43 07.5	
	baz=318,slow=76,SNR=109						
LZH	**Lanzhou**	**30.29**	**277**	eP	**P**	**21 12 02.5**	**+4.1**
LZH				pP	pP	21 12 06.6	-4.3
LZH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LZH				LR	LR		
	comp=Z,560nm,14.1s						
LZH				LR	LR		
	comp=Z,430nm,13.6s						
LZH				LR	LR		
	comp=Z,470nm,15.5s						
BILL	**Bilibino**	**32.10**	**17**	eP	**P**	**21 12 14.4**	**+0.6**
BILL				e*PP	**pP**	**21 12 28.6**	**+2.3**
BILL				e		21 13 23.9	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
CD2	**Chengdu**	**32.20**	**268**	P	**P**	**21 12 10.7**	**-4.4**
CD2				LR	LR		
	comp=Z,720nm,11.8s						
CD2				LR	LR		
	comp=Z,600nm,11.6s						
CD2				LR	LR		
	comp=Z,800nm,10.8s						
TIXI	**Tiksi**	**33.51**	**352**	iP	**P**	**21 12 29.3**	**+3.4**
TIXI				pmax	pmax		
	comp=Z,2.0nm,2.1s						
TIXI	**Tiksi**	**33.51**	**352**	P	**P**	**21 12 25.8**	**-0.1**
QIZ	**Qiongzhong**	**34.17**	**244**	P	**P**	**21 12 33.0**	**+0.7**
QIZ				S	**S**	**21 17 55.1**	**-0.3**
QIZ				LR	LR		
	comp=Z,420nm,11.6s						
QIZ				LR	LR		
	comp=Z,350nm,11.5s						
QIZ				LR	LR		
	comp=Z,520nm,11.8s						
DGZ	**Jazzator, Alta**	**39.73**	**304**	iP	**P**	**21 13 19.6**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WMQ	**Urumqi**	**40.47**	**295**	eP	**P**	**21 13 26.6**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,88nm,5.5s						
ZAA0	**Zalesovo Array**	**41.05**	**311**	P	**P**	**21 13 29.6**	**-0.4**
ZAA0				IAmb	IAmb	21 13 48.0	
	comp=Z,4.2nm,0.8s						
ZALV	**Zalesovo Beam**	**41.05**	**311**	P	**P**	**21 13 29.9**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=83,slow=8.7,SNR=11						
ZALV				PcP	**PcP**	**21 15 28.4**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=122,slow=1.4,SNR=2.0						
ZALV	**Zalesovo Beam**	**41.05**	**311**	P	**P**	**21 13 29.8**	**-0.3**
MK31	**Makanchi Array**	**43.57**	**301**	P	**P**	**21 13 50.2**	**-0.5**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	**Makanchi Array**	**43.57**	**301**	P	**P**	**21 13 50.1**	**-0.5**
MK31				IAmb	IAmb	21 13 51.5	
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**43.57**	**301**	P	**P**	**21 13 50.6**	**-0.1**
	comp=Z,3.4nm,0.6s,baz=85,slow=9.2,SNR=41						
MKAR	**Makanchi Array**	**43.57**	**301**	P	**P**	**21 13 50.4**	**-0.3**
MAKZ	**Makanchi**	**43.78**	**301**	P	**P**	**21 13 52.1**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	**Makanchi**	**43.78**	**301**	P	**P**	**21 13 52.1**	**-0.3**
IMAR	**Indian Mountai**	**44.80**	**32**	P	**P**	**21 14 02.1**	**+1.9**
KURK	**Kurchatov**	**45.19**	**307**	ceP	**P**	**21 14 02.7**	**-0.8**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KURK	**Kurchatov**	**45.19**	**307**	P	**P**	**21 14 03.1**	**-0.4**
KURK				IAmb	IAmb	21 14 04.0	
	comp=Z,8.8nm,0.9s						
JIRN	**Jiri**	**47.36**	**274**	eP	**P**	**21 14 21.9**	**+0.6**
RAMN	**Ramite**	**47.38**	**273**	eP	**P**	**21 14 21.4**	**0.0**
GUN	**Gumba**	**47.48**	**274**	eP	**P**	**21 14 23.0**	**+0.7**
	comp=Z,7.1nm,0.4s						
ILAR	**Eielson Array**	**47.66**	**33**	P	**P**	**21 14 24.3**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=261,slow=5.8,SNR=10						
ILAR	**Eielson Array**	**47.66**	**33**	P	**P**	**21 14 23.5**	**+0.7**
KKN	**Kakani**	**48.01**	**274**	eP	**P**	**21 14 26.3**	**+0.1**
GKN	**Gorkha**	**48.41**	**275**	eP	**P**	**21 14 29.1**	**-0.1**
BMAR	**Burnt Mountain**	**48.47**	**30**	P	**P**	**21 14 30.3**	**+1.4**
DANN	**Dangsing**	**48.92**	**276**	eP	**P**	**21 14 33.3**	**0.0**
	comp=Z,20nm,0.6s						
SCRK	**Sand Creek**	**48.99**	**34**	P	**P**	**21 14 34.4**	**+1.3**
SCRK				IAmb	IAmb	21 15 00.9	
	comp=Z,5.2nm,1.5s						
BOOM	**Boomskoye usch**	**49.10**	**297**	P	**P**	**21 14 33.5**	**-0.8**
BOOM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BOOM	**Boomskoye usch**	**49.10**	**297**	P	**P**	**21 14 33.5**	**-0.8**
BOOM				IAmb	IAmb	21 14 53.4	
	comp=Z,6.6nm,1.0s						
KOLN	**Koldanda**	**49.32**	**275**	eP	**P**	**21 14 35.7**	**-0.6**
PYUN	**Piuthan**	**49.64**	**276**	eP	**P**	**21 14 38.5**	**-0.2**
BRVK	**Borovoye**	**49.75**	**311**	ceP	**P**	**21 14 38.5**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
BRVK	**Borovoye**	**49.75**	**311**	P	**P**	**21 14 38.9**	**0.0**
BRVK				IAmb	IAmb	21 14 40.1	
	comp=Z,2.5nm,0.6s						
KSH	**Kashi**	**50.12**	**293**	P	**P**	**21 14 46.3**	**+4.3**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
INK	**Inuvik**	**52.51**	**28**	P	**P**	**21 15 00.8**	**+1.5**
	comp=Z,1.2nm,0.9s,baz=312,slow=6.9,SNR=3.8						
KKAR	**Karatay Array**	**52.63**	**299**	P	**P**	**21 15 00.3**	**-0.4**
KKAR	**Karatay Array**	**52.63**	**299**	P	**P**	**21 15 00.3**	**-0.4**
NIL	**Nilore**	**54.52**	**287**	P	**P**	**21 15 14.6**	**0.0**
NIL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NIL	**Nilore**	**54.52**	**287**	P	**P**	**21 15 14.6**	**0.0**
ARU	**Arti**	**55.30**	**318**	P	**P**	**21 15 20.0**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=62,slow=1.6,SNR=12						
ARU	**Arti**	**55.30**	**318**	d iP	**P**	**21 15 19.6**	**-0.3**
ARU				*PP	**pP**	**21 15 34.7**	**+1.5**
ARU				S	**S**	**21 22 59.4**	**-0.7**
ARU				SS	**SS**	**21 26 40.6**	**-3.8**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARU	**Arti**	**55.30**	**318**	P	**P**	**21 15 19.8**	**-0.1**
ARU				IAmb	IAmb	21 15 20.6	
	comp=Z,6.1nm,0.9s						
CHGR	**Chuyangaron**	**55.33**	**295**	P	**P**	**21 15 19.9**	**-0.5**
CHGR				IAmb	IAmb	21 15 40.1	
	comp=Z,8.0nm,1.1s						
LEM	**Lembang**	**55.57**	**223**	LR	LR	21 42 05.4	
	comp=Z,26nm,18.1s,baz=207,slow=39						
KNRA	**Kununurra**	**55.69**	**196**	P	**P**	**21 15 23.5**	**+0.5**
KNRA				IAmb	IAmb	21 15 51.0	
	comp=Z,8.0nm,1.1s						
ABKAR	**Akbulak array**	**57.13**	**309**	P	**P**	**21 15 32.8**	**-0.2**
ABKAR				IAmb	IAmb	21 15 33.4	
	comp=Z,3.8nm,0.7s						
ABKAR	**Akbulak array**	**57.13**	**309**	P	**P**	**21 15 32.9**	**-0.2**
AKTO	**Aktyubinsk**	**57.81**	**311**	P	**P**	**21 15 38.0**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=76,slow=13,SNR=6.0						
WB0	**Warramunga Arr**	**58.79**	**188**	P	**P**	**21 15 44.1**	**-0.8**
WB0				IAmb	IAmb	21 15 44.9	
	comp=Z,2.1nm,0.5s						
WRA	**Warramunga Arr**	**58.97**	**188**	P	**P**	**21 15 45.6**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=5.9,slow=7.1,SNR=20						
WRA	**Warramunga Arr**	**58.97**	**188**	P	**P**	**21 15 45.9**	**-0.3**
YKA	**Yellowknife Ar**	**61.95**	**31**	ceP	**P**	**21 16 08.8**	**+2.8**
ASAR	**Alice Springs**	**62.70**	**188**	P	**P**	**21 16 11.3**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=9.3,slow=5.3,SNR=10						
ASAR	**Alice Springs**	**62.70**	**188**	P	**P**	**21 16 11.6**	**+0.2**
ASAR	**Alice Springs**	**62.70**	**188**	P	**P**	**21 16 11.6**	**+0.2**
FIA1	**FINESS Array S**	**67.40**	**332**	P	**P**	**21 16 41.2**	**-0.3**
FINES	**FINESS Array B**	**67.40**	**332**	P	**P**	**21 16 41.4**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=22,slow=9.7,SNR=12						
FINES	**FINESS Array B**	**67.40**	**332**	P	**P**	**21 16 41.2**	**-0.3**
KIV	**Kislovodsk**	**70.06**	**311**	iP	**P**	**21 16 59.0**	**+0.4**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KBZ	**Khabaz**	**70.07**	**310**	P	**P**	**21 16 59.1**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=68,slow=8.2,SNR=3.0						
HFS	**Hagfors**	**72.59**	**336**	P	**P**	**21 17 13.5**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=55,slow=7.8,SNR=6.4						
AKASG	**Malin Array Be**	**73.13**	**322**	P	**P**	**21 17 16.4**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=45,slow=6.1,SNR=4.8						
AKASG	**Malin Array Be**	**73.13**	**322**	ceP	**P**	**21 17 16.3**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BUR08	**Bucovina Ar. S**	**77.14**	**322**	P	**P**	**21 17 40.0**	**-0.1**
BURAR	**Bucovina Array**	**77.16**	**322**	P	**P**	**21 17 40.3**	**+0.1**
K22A	**Casper**	**77.78**	**45**	P	**P**	**21 17 44.0**	**+0.2**
BRTR	**Keskin Array B**	**77.98**	**312**	P	**P**	**21 17 45.0**	**0.0**
	comp=Z,0.3nm,0.4s,baz=110,slow=3.4,SNR=7.7						
BRTR	**Keskin Array B**	**77.98**	**312**	ceP	**P**	**21 17 45.0**	**0.0**
BRTR	**Keskin Array B**	**77.98**	**312**	P	**P**	**21 17 44.7**	**-0.3**
CLL	**Collm**	**79.72**	**330**	eP	**P**	**21 17 54.0**	**-0.1**
CLL				e*PP	**sP**	**21 18 12.0**	**-1.4**
CLL	**Collm**	**79.72**	**330**	eP	**P**	**21 17 54.0**	**-0.1**
CLL				epP	**sP**	**21 18 12.0**	**-1.4**
RAR	**Rarotonga**	**80.86**	**127**	LR	LR	21 46 17.7	
	comp=Z,115nm,20.9s,baz=276,slow=30						
GERES	**GERESS Array B**	**81.39**	**328**	P	**P**	**21 18 03.3**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=18,slow=5.6,SNR=3.9						

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*MAN **12** 21:13:38.1, 9.°04N×126.°66E, h1km, mb4.3, ML3.1, MS2.8*
*IDC **12** 21:13:56.4±1.7, 7.°91N×124.°34E, h170km±18km, mb3.4/6, mb1 3.5/6, mb1mx3.1/42, mbtmp3.9/6, Error ellipse: s-maj=54.7km s-min=16.9km az=69.0*
ISC 12 21:13:35.7±1.2**, 9.°26N**±0.°06×**127.°0E**±0.°1**, h10km, n14, σ1ˢ22**/18**, mb3.7**/6**, 2C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.62**	**289**	⇓eP	**Pn**	**21 14 03.6**	**-0.8**
DAV	**Davao City (W)**	**2.61**	**214**	P	**Pg**	**21 14 26.0**	**+0.2**
	61nm,0.3s,baz=238,slow=15,SNR=4.4						
DAV				S	**Sn**	**21 14 51.6**	**+1.8**
	19nm,0.3s,baz=263,slow=15,SNR=4.3						
DMPH	**Davao City--Mi**	**2.64**	**215**	⇓eP	**Pn**	**21 14 19.2**	**+0.7**
DMPH				eS	**Sn**	**21 14 51.4**	**+0.8**
KCP	**Kidapawan**	**2.96**	**221**	⇓eP	**Pn**	**21 14 23.1**	**+0.3**
KCP				eS	**Sn**	**21 14 57.1**	**-1.3**
TBP	**Tagbilaran**	**3.17**	**278**	eP	**Pn**	**21 14 25.6**	**-0.1**
TBP				eS	**Sn**	**21 15 01.3**	**-2.3**
LLP	**Lapu-Lapu**	**3.21**	**289**	eP	**Pn**	**21 14 27.3**	**+1.0**
LLP				eS	**Sn**	**21 15 06.0**	**+1.4**
PAGZ	**Pagadian**	**3.88**	**249**	⇑eP	**Pn**	**21 14 35.9**	**+0.4**
RCP	**Roxas**	**4.81**	**299**	⇑eP	**Pn**	**21 14 50.3**	**+2.0**
WRA	**Warramunga Arr**	**29.89**	**166**	P	**P**	**21 19 42.8**	**-1.0**
	0.3nm,0.5s,baz=346,slow=9.5,SNR=5.5						
ASAR	**Alice Springs**	**33.40**	**169**	P	**P**	**21 20 13.8**	**-0.9**
	0.3nm,0.4s,baz=353,slow=6.9,SNR=16						
MKAR	**Makanchi Array**	**53.29**	**323**	P	**P**	**21 22 54.4**	**-0.5**
	0.9nm,0.6s,baz=122,slow=7.0,SNR=11						
KURBB	**Kurchatov Arra**	**57.33**	**325**	P	**P**	**21 23 23.3**	**-0.6**
	1.8nm,0.2s,baz=124,slow=6.8,SNR=4.4						
ILAR	**Eielson Array**	**80.02**	**26**	P	P	21 25 59.6	+14
	0.4nm,0.8s,baz=254,slow=6.4,SNR=4.6						
FINES	**FINESS Array B**	**87.14**	**332**	P	**P**	**21 26 22.7**	**+0.8**
	3.2nm,1.0s,baz=117,slow=5.0,SNR=1.5						

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*MAN **12** 21:18:34.8, 18.°60N×121.°15E, h24km, mb4.8, ML3.7, MS3.6*
*NEIC **12** 21:18:40.1±2.3, 18.°26N±0.°08×119.°87E±0.°09, h30km±5km, mb4.4/44, Error ellipse: s-maj=12.7km s-min=11.2km az=117.0*
*IDC **12** 21:18:52.0±2.4, 18.°05N×119.°85E, h149km±24km, mb3.8/20, mb1 3.8/23, mb1mx3.6/55, mbtmp4.2/23, MS3.4/12, Ms1 3.4/12, ms1mx3.2/38, Error ellipse: s-maj=19.7km s-min=9.2km az=71.0*
ISC 12 21:18:36.9±0.4**, 18.°19N**±0.°04×**119.°84E**±0.°06**, h10km, n105, σ1ˢ27**/99**, mb4.4**/45**, MS3.3**/12**, 2C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.65**	**114**	⇑eP	**Pn**	**21 18 51.5**	**-0.6**
SIPP				eS	**Sn**	**21 19 06.0**	**+3.6**
TGY	**Tagaytay City**	**4.20**	**165**	P	**Pg**	**21 19 55.0**	**-2.3**
	baz=270,slow=5.2						
LUBP	**Lubang**	**4.44**	**175**	⇑eP	**Pb**	**21 19 54.0**	**-1.1**
JCNP	**Jose Panganiba**	**4.75**	**144**	⇓iP	**Pn**	**21 19 51.8**	**+3.2**
TWG	**Pinlang**	**4.75**	**14**	Pn	**Pn**	**21 19 46.8**	**-1.9**
PGP	**Puerto Galera**	**4.78**	**167**	⇓eP	Pb	21 19 55.0	-5.8
TPUB	**Ta-pu**	**5.14**	**8**	Pn	**Pn**	**21 19 51.8**	**-2.2**
SSLB	**Suanglung**	**5.67**	**10**	Pn	**Pn**	**21 19 59.9**	**-1.4**
YHNB	**Yeheng**	**6.61**	**12**	Pn	**Pn**	**21 20 13.3**	**-0.9**
HKPS	**Hong Kong Po S**	**6.72**	**308**	Pn	**Pn**	**21 20 13.9**	**-1.8**
JOW	**Kunigami**	**11.61**	**41**	Pn	**Pn**	**21 21 21.4**	**-1.3**
DLV	**T Lat**	**12.59**	**242**	Pn	**Pn**	**21 21 37.6**	**+1.2**
UBPT	**Khong Chiam**	**14.06**	**260**		**P**	**21 22 02.9**	**-1.3**
TOLI2	**Tolitoli**	**16.99**	**177**	P	**P**	**21 22 37.5**	**+0.8**
SBUM	**Sibu**	**17.33**	**206**		**P**	**21 22 42.6**	**+2.1**
JNU	**Nakatsue**	**17.88**	**32**	P	**P**	**21 22 51.2**	**+4.8**
	0.3nm,0.3s,baz=213,slow=17,SNR=1.8						
CHTO	**Chiang Mai**	**19.82**	**275**	P	**P**	**21 23 08.7**	**+0.8**
CM31	**Chiang Mai Arr**	**19.84**	**274**	P	**P**	**21 23 09.2**	**+1.1**
CMAR	**Chiang Mai Arr**	**19.84**	**274**	P	**Pn**	**21 23 10.8**	**+1.2**
	0.6nm,0.3s,baz=75,slow=9.8,SNR=20						
CMAR	**Chiang Mai Arr**	**19.84**	**274**	P	**P**	**21 23 10.0**	**+1.9**
KSAR	**Wonju Array Be**	**20.45**	**19**	P	**P**	**21 23 13.6**	**-0.9**
KSRS	**Korea Array**	**20.47**	**19**	P	**P**	**21 23 15.1**	**+0.4**
	3.6nm,0.8s,baz=201,slow=11,SNR=11						
JHS	**Saijyo**	**20.49**	**33**	P	**P**	**21 23 15.1**	**0.0**
KS19	**Wonju Array Si**	**20.50**	**19**	P	**P**	**21 23 14.7**	**-0.4**
KS19				IAmb	IAmb	21 23 28.6	
	comp=Z,11nm,0.9s						
JWT	**Wachi**	**21.93**	**36**	P	**P**	**21 23 31.5**	**+1.0**
BJT	**Baijiatuau**	**21.99**	**352**	P	**P**	**21 23 31.5**	**+0.4**
BJT				IAmb	IAmb	21 23 48.6	
	comp=Z,11nm,1.2s						
SIJI	**Sorong**	**22.02**	**148**	P	**P**	**21 23 33.0**	**+1.3**
	comp=Z,5.2nm,0.5s,baz=315,slow=2.7,SNR=4.1						
SIJI				LR	LR	21 33 22.2	
	comp=Z,104nm,18.7s,baz=96,slow=40						
JCJ	**Chichijima**	**22.42**	**63**	LR	LR	21 31 49.1	
	comp=Z,70nm,21.0s,baz=98,slow=35						
KULM	**Kulim**	**22.71**	**238**	P	**P**	**21 23 39.9**	**+0.8**
KULM				IAmb	IAmb	21 23 51.6	
	comp=Z,15nm,1.3s						
INU	**Inuyama**	**22.91**	**38**	P	**P**	**21 23 39.7**	**-1.2**
INU				IAmb	IAmb	21 23 54.0	
	comp=Z,22nm,1.1s						
KAPI	**Kappang**	**23.05**	**180**	P	**P**	**21 23 43.5**	**+1.0**
	comp=Z,19nm,1.1s,baz=265,slow=5.0,SNR=3.6						
JGF	**Kuroka**	**23.28**	**38**	P	**P**	**21 23 44.0**	**-0.8**
JGF				IAmb	IAmb	21 23 52.2	
	comp=Z,6.9nm,0.9s						
MJAR	**Matsushiro Arr**	**24.43**	**38**	P	**P**	**21 23 58.5**	**+2.7**
	comp=Z,1.2nm,0.8s,baz=279,slow=10.0,SNR=1.5						
PSI	**Prapat**	**25.57**	**236**	LR	LR	21 33 43.5	
	comp=Z,66nm,18.1s,baz=48,slow=35						
BATI	**Baumata**	**28.46**	**172**	P	**P**	**21 24 32.2**	**-0.1**
	comp=Z,15nm,0.7s,baz=353,slow=2.8,SNR=5.3						
BATI				LR	LR	21 36 09.0	
	comp=Z,42nm,20.4s,baz=40,slow=37						
LSA	**Lhasa**	**28.54**	**299**	P	**P**	**21 24 34.5**	**+1.0**
JAY	**Jayapura**	**29.08**	**133**	LR	LR	21 35 05.3	
	comp=Z,155nm,20.6s,slow=34						
TAPN	**Taplejung**	**30.92**	**293**	eP	**P**	**21 24 55.7**	**+1.3**
	comp=Z,7.4nm,0.8s						
ODAN	**Odare**	**31.12**	**292**	eP	**P**	**21 24 57.1**	**+1.0**
	comp=Z,12nm,0.8s						
SONM	**Songino Array**	**31.55**	**343**	P	**P**	**21 25 00.1**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=166,slow=9.6,SNR=5.6						
SONM				LR	LR	21 38 00.1	
	comp=Z,51nm,18.2s,baz=150,slow=36						
RAMN	**Ramite**	**31.83**	**292**	eP	**P**	**21 25 03.8**	**+1.4**
	comp=Z,13nm,0.6s						
KLR	**Kul'dur**	**32.43**	**15**	P	**P**	**21 25 07.8**	**+0.8**
	comp=Z,1.9nm,0.6s,baz=222,slow=7.9,SNR=6.6						
GUN	**Gumba**	**32.62**	**294**	eP	**P**	**21 25 10.4**	**+1.0**
	comp=Z,18nm,0.8s						
PKI	**Pulchoki**	**32.97**	**293**	eP	**P**	**21 25 13.0**	**+0.5**
GKN	**Gorkha**	**33.72**	**293**	eP	**P**	**21 25 19.1**	**+0.3**
	comp=Z,12nm,0.8s						
DANN	**Dangsing**	**34.54**	**294**	eP	**P**	**21 25 26.4**	**+0.3**
KOLN	**Koldanda**	**34.59**	**293**	eP	**P**	**21 25 27.0**	**+0.6**
PYUN	**Piuthan**	**35.17**	**293**	eP	**P**	**21 25 32.2**	**+0.8**
FITZ	**Fitzroy Crossi**	**36.51**	**171**	P	**P**	**21 25 41.3**	**-1.3**
	comp=Z,3.4nm,0.8s,baz=347,slow=4.3,SNR=6.9						
COEN	**Coen**	**39.37**	**143**	P	**P**	**21 26 05.0**	**-1.9**
PSA00	**Pilbara Seismi**	**39.51**	**180**	P	**P**	**21 26 07.4**	**-0.5**
PSA00				IAmb	IAmb	21 26 21.6	
	comp=Z,16nm,1.1s						
PSA00	**Pilbara Seismi**	**39.51**	**180**	P	**P**	**21 26 07.4**	**-0.5**
PSA00				IAmb	IAmb	21 26 32.8	
	comp=Z,4.5nm,1.1s						
WB0	**Warramunga Arr**	**40.33**	**159**	P	**P**	**21 26 12.6**	**-2.2**
WB0				IAmb	IAmb	21 26 13.9	
	comp=Z,5.9nm,0.8s						
WRA	**Warramunga Arr**	**40.48**	**159**	P	**P**	**21 26 13.9**	**-2.1**
	comp=Z,5.9nm,0.7s,baz=342,slow=8.9,SNR=57						
WRA				LR	LR	21 45 04.4	
	comp=Z,23nm,18.6s,baz=35,slow=39						
WRA	**Warramunga Arr**	**40.48**	**159**	P	**P**	**21 26 13.3**	**-2.8**
MKAR	**Makanchi Array**	**41.99**	**321**	P	**P**	**21 26 29.3**	**+1.1**
	comp=Z,1.5nm,0.9s,baz=110,slow=9.2,SNR=9.0						
MKAR	**Makanchi Array**	**41.99**	**321**	P	**P**	**21 26 27.8**	**-0.5**
AS31	**Alice Springs**	**43.80**	**161**		**P**	**21 26 41.7**	**-1.5**
AS31				IAmb	IAmb	21 26 43.3	
	comp=Z,2.9nm,0.7s						
ASAR	**Alice Springs**	**43.80**	**161**	P	**P**	**21 26 42.2**	**-1.0**
	comp=Z,7.7nm,0.8s,baz=335,slow=7.1,SNR=74						
ASAR	**Alice Springs**	**43.80**	**161**		**P**	**21 26 42.0**	**-1.1**
NIL	**Nilore**	**44.27**	**300**	P	**P**	**21 26 47.0**	**+0.1**
ZALV	**Zalesovo Beam**	**44.73**	**331**	P	**P**	**21 26 51.0**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=79,slow=7.9,SNR=4.2						
ZALV	**Zalesovo Beam**	**44.73**	**331**	P	**P**	**21 26 48.8**	**-1.4**
PETK	**Petropavlovsk-**	**45.58**	**31**	LR	LR	21 47 27.6	
	comp=Z,33nm,18.9s,baz=173,slow=38						
CTAO	**Charters Tower**	**46.03**	**144**	P	**P**	**21 27 00.2**	**-0.7**
CTAO				IAmb	IAmb	21 27 01.9	
	comp=Z,5.5nm,0.8s						
KURK	**Kurchatov**	**46.05**	**324**	P	**P**	**21 27 01.1**	**+0.4**
KURK				IAmb	IAmb	21 27 10.6	
	comp=Z,7.7nm,1.3s						
KURBB	**Kurchatov Arra**	**46.05**	**324**	P	**P**	**21 27 01.6**	**+0.8**
	comp=Z,2.4nm,0.4s,baz=122,slow=8.3,SNR=16						
MORW	**Morawa**	**47.12**	**185**	P	**P**	**21 27 09.0**	**-0.3**
GAR	**Garm**	**47.52**	**307**	P	**P**	**21 27 13.4**	**+0.7**
KBL	**Kabul**	**47.84**	**300**	P	**P**	**21 27 16.0**	**+0.7**
KBL				IAmb	IAmb	21 27 23.9	
	comp=Z,4.0nm,0.8s						
HNR	**Honiara**	**48.17**	**121**	LR	LR	21 45 17.9	
	comp=Z,71nm,18.7s,baz=301,slow=33						
KKAR	**Karatay Array**	**48.32**	**312**	P	**P**	**21 27 19.3**	**+0.7**
FORT	**Forrest**	**49.32**	**171**	P	**P**	**21 27 26.3**	**+0.1**
BRVK	**Borovoye**	**51.72**	**324**	P	**P**	**21 27 45.0**	**+0.8**
BRVK				IAmb	IAmb	21 27 46.5	
	comp=Z,3.1nm,0.8s						
BBOO	**Buckleboo**	**53.03**	**163**	P	**P**	**21 27 53.6**	**-0.5**
TIXI	**Tiksi**	**53.73**	**4**	P	**P**	**21 27 58.8**	**+0.1**
TIXI				IAmb	IAmb	21 28 11.4	
	comp=Z,4.5nm,1.1s						
STKA	**Stephens Creek**	**53.97**	**157**	P	**P**	**21 28 00.1**	**-0.9**
	comp=Z,4.9nm,0.7s,baz=342,slow=7.4,SNR=10						
STKA				LR	LR	21 52 45.6	
	comp=Z,36nm,19.9s,baz=28,slow=38						

STKA	**Stephens Creek**	**53.97**	**157**	P	**P**	**21 28 00.5**	**-0.6**
NRIK	**Noril'sk**	**54.88**	**347**	P	**P**	**21 28 07.8**	**+0.6**
	comp=Z,2.3nm,0.6s,baz=141,slow=7.0,SNR=3.8						
NRIK	**Noril'sk**	**54.88**	**347**	P	**P**	**21 28 07.3**	**0.0**
NRIK				IAmb	IAmb	21 28 25.0	
	comp=Z,4.2nm,0.8s						
ABKAR	**Akbulak array**	**56.85**	**317**	P	**P**	**21 28 21.9**	**+0.2**
ABKAR	**Akbulak array**	**56.85**	**317**	P	**P**	**21 28 21.7**	**0.0**
ABKAR				IAmb	IAmb	21 28 29.1	
	comp=Z,4.3nm,1.4s						
GEYT	**Alibeck**	**56.90**	**304**	P	**P**	**21 28 22.5**	**+0.1**
GEYT				IAmb	IAmb	21 28 30.4	
	comp=Z,3.0nm,0.9s						
BILL	**Bilibino**	**57.73**	**19**	P	**P**	**21 28 26.8**	**-0.8**
BILL				IAmb	IAmb	21 28 51.4	
	comp=Z,5.0nm,1.2s						
TOO	**Toolangi**	**60.49**	**157**	P	**P**	**21 28 47.2**	**+0.1**
KBZ	**Khabaz**	**68.32**	**311**	LR	LR	22 01 40.9	
	comp=Z,62nm,18.4s,baz=42,slow=38						
J20K	**Nowinta River**	**72.07**	**27**	P	**P**	**21 30 01.3**	**+0.2**
J20K				IAmb	IAmb	21 30 14.8	
	comp=Z,4.6nm,1.0s						
H21K	**Melozitna Rive**	**72.52**	**26**	P	**P**	**21 30 03.2**	**-0.5**
H21K				IAmb	IAmb	21 30 17.6	
	comp=Z,4.9nm,1.0s						
CAST	**Castle Rocks**	**73.06**	**28**	P	**P**	**21 30 06.8**	**-0.2**
CAST				IAmb	IAmb	21 30 20.4	
	comp=Z,4.5nm,0.9s						
BPAW	**Bear Paw Mtn.**	**73.46**	**27**	P	**P**	**21 30 08.8**	**-0.5**
RND	**Reindeer**	**74.50**	**28**	P	**P**	**21 30 14.8**	**-0.7**
RND				IAmb	IAmb	21 30 19.8	
	comp=Z,6.1nm,0.8s						
ILAR	**Eielson Array**	**75.11**	**26**	P	**P**	**21 30 18.1**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=259,slow=6.0,SNR=7.0						
BMAR	**Burnt Mountain**	**75.50**	**23**	P	**P**	**21 30 21.7**	**+0.6**
M24K	**Tolsona, Glenn**	**75.96**	**29**	P	**P**	**21 30 23.6**	**-0.3**
FINES	**FINESS Array B**	**75.99**	**330**	P	**P**	**21 30 23.5**	**-0.5**
	comp=Z,3.1nm,0.9s,baz=104,slow=0.8,SNR=6.3						
FINES	**FINESS Array B**	**75.99**	**330**	P	**P**	**21 30 23.2**	**-0.7**
AKASG	**Malin Array Be**	**76.53**	**319**	P	**P**	**21 30 26.4**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=68,slow=5.3,SNR=5.1						
EGAK	**Eagle**	**77.50**	**26**	P	**P**	**21 30 31.2**	**-1.2**
EGAK				IAmb	IAmb	21 30 57.6	
	comp=Z,8.0nm,1.5s						
BCAR	**Beaver Creek A**	**77.70**	**27**	P	**P**	**21 30 34.1**	**+0.4**
BURAR	**Bucovina Array**	**79.83**	**317**	P	**P**	**21 30 46.0**	**+0.2**
BUR08	**Bucovina Ar. S**	**79.83**	**317**	P	**P**	**21 30 45.9**	**+0.1**
NC405	**NORSAR Array S**	**82.67**	**332**	P	**P**	**21 30 59.5**	**-1.0**
NOA	**NORSAR Array B**	**82.92**	**332**	P	**P**	**21 31 00.6**	**-1.3**
	comp=Z,1.4nm,1.0s,baz=64,slow=5.0,SNR=3.6						
NOA				LR	LR	22 13 35.1	
	comp=Z,50nm,18.6s,baz=65,slow=40						
YKA	**Yellowknife Ar**	**88.97**	**22**	P	**P**	**21 31 30.8**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=310,slow=4.9,SNR=4.7						
DAVOX	**Davos/Dischmat**	**89.87**	**320**	P	**P**	**21 31 36.5**	**+0.1**
	comp=Z,2.6nm,1.0s,baz=39,slow=3.4,SNR=5.0						

NNC 12 21:20:05.2±1.7**,38°.61N**×**73°.33E,h2**^{km}±8^{km}**,mb4.0, mpv3.6,6C-3D,Error ellipse: s-maj=12.1km s-min=9.8km az=173.0,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.12**	**12**	Pn	Pn	21 21 10.4	+1.0
	7.7nm,0.7s						
AAK				⇑Lg	Lg	21 22 13.3	
	15nm,0.8s						
MRKS	**Merke**	**4.14**	**359**	Pg	Pb	21 21 19.6	+0.9
	4.2nm,0.5s						
MRKS				Lg	Lg	21 22 17.6	
	9.2nm,0.6s						
IUG	**Iuzhnay**	**4.34**	**326**	Pg	Pb	21 21 24.9	+2.6
	511nm,0.5s						
IUG				Lg	Lg	21 22 27.2	
	56nm,1.2s						
TKM2	**Tokmak 2**	**4.64**	**21**	⇑Pg	Pb	21 21 30.2	+2.8
	6.7nm,1.0s						
TKM2				⇓Lg	Lg	21 22 30.4	
	9.1nm,0.9s						
KST	**Kastek**	**4.86**	**23**	Pg	Pb	21 21 33.7	+2.5
	6.7nm,0.4s						
KST				Lg	Lg	21 22 42.0	
	6.8nm,0.7s						
KK02	**Karatay Array**	**4.98**	**335**	⇓Pn	Pn	21 21 19.5	-1.5
	2.6nm,0.5s						
KK02				⇑Sn	Sn	21 22 19.4	+0.3
	7.1nm,0.7s						
DGS	**Degeres**	**4.99**	**21**	Pg	Pb	21 21 35.2	+1.9
	4.8nm,0.7s						
DGS				Lg	Lg	21 22 44.7	
	5.6nm,1.0s						
MTBS	**Maitube**	**5.09**	**26**	Pg	Pb	21 21 36.0	+1.0
	3.6nm,0.5s						
MTBS				Lg	Lg	21 22 46.1	
	7.1nm,0.8s						
TNSS	**Tian-Shan**	**5.21**	**31**	Pg	Pb	21 21 40.2	+2.9
	4.5nm,0.4s						
TNSS				Lg	Lg	21 22 53.1	
	5.5nm,0.8s						
MDOK	**Medeo**	**5.35**	**31**	⇓Pg	Pb	21 21 43.1	+3.6
	6.4nm,0.9s						
MDOK				⇑Lg	Lg	21 22 54.9	
	8.2nm,0.8s						
MDOK	**Medeo**	**5.35**	**31**	Pg	Pb	21 21 42.5	+2.9
	4.3nm,0.5s						
MDOK				Lg	Lg	21 22 57.4	
	6.0nm,1.1s						
KRBS	**Karabastau**	**5.38**	**18**	Pg	Pb	21 21 42.8	+2.8
	3.1nm,0.6s						
KRBS				Lg	Lg	21 22 55.6	
	5.3nm,0.9s						
KOTS	**Kotyrbulak**	**5.44**	**31**	Pg	Pb	21 21 44.6	+3.6
	4.9nm,0.6s						
KOTS				Lg	Lg	21 23 01.0	
	8.2nm,0.8s						
KTBS	**Karatobe**	**5.69**	**25**	Pg	Pb	21 21 49.4	+4.2
	3.6nm,0.4s						
KTBS				Lg	Lg	21 23 09.4	
	7.0nm,0.8s						
KUU	**Kurty**	**5.75**	**22**	Pg	Pb	21 21 49.4	+3.2
	2.7nm,1.1s						
KUU				Lg	Lg	21 23 09.3	
	7.9nm,1.1s						
PDGK	**Podgornoye**	**6.63**	**43**	⇑Pg	Pb	21 22 06.6	+5.3
	6.1nm,1.4s						
PDGK				⇑Lg	Lg	21 23 35.5	
	5.8nm,1.1s						
AB31	**Akbulak array**	**14.34**	**322**	Pn	Pn	21 23 29.6	+0.4
	0.3nm,0.4s,baz=134,slow=12,SNR=5.7						

IDC 12 21:23:43.6±1.6**,4°.14S**×**129°.49E,h0**^{km}**,mb3.5**/1**, mb1 3.6**/4**,mb1mx3.2**/39**,mbtmp3.4**/4**,ML3.4**/2**,MS2.5**/1**, Ms1 2.5**/1**,ms1mx2.0**/26**,Error ellipse: s-maj=57.0km s-min=27.5km az=82.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.70**	**29**	Pn	Pn	21 24 42.4	+0.3
	2.4nm,0.3s,baz=199,slow=22,SNR=10						
SIJI				Sn	Sn	21 25 23.4	-3.0
	3.9nm,0.3s,baz=216,slow=22,SNR=5.7						
FITZ	**Fitzroy Crossi**	**14.38**	**195**	LR	LR	21 33 12.5	
	comp=Z,18nm,18.4s,baz=176,slow=40						
WRA	**Warramunga Arr**	**16.41**	**164**	Pn	Pn	21 27 35.0	-0.5
	baz=348,slow=13,SNR=1.1						
ASAR	**Alice Springs**	**19.88**	**168**	P	P	21 28 16.9	+0.3
	0.1nm,0.3s,baz=348,slow=9.9,SNR=4.1						
MKAR	**Makanchi Array**	**65.57**	**326**	P	P	21 34 29.1	-0.1
	0.2nm,0.4s,baz=116,slow=7.4,SNR=7.6						

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*IDC **12** 21:26:06.6±2.3,9°.68N×8°.66W,h0^{km},mb3.7/2,mb1 3.7/5, mb1mx3.4/39,mbtmp3.5/5,ML3.2/3,Error ellipse: s-maj=30.1km s-min=20.2km az=62.0*

ISC 12 21:26:09.1±1.7**,9°.67N**±0°.07×**8°.5W**±0°.1**,h10**^{km}**,n8,** σ**1**^{s}**.77**/12**,Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIC	**Toumodi**	**4.54**	**131**	*e*P	**Pn**	**21 27 19.8**	**+1.9**
DBIC	**Dimbokro**	**4.64**	**130**	Pn	**Pn**	**21 27 21.2**	**+1.9**
	2.0nm,0.3s,baz=321,slow=14,SNR=38						
DBIC				Pg	**Pg**	**21 27 36.1**	**-2.0**
	1.2nm,0.3s,baz=320,slow=18,SNR=18						
DBIC				Sn	**Sn**	**21 28 14.3**	**+1.0**
	3.7nm,0.3s,baz=38,slow=23,SNR=21						
DBIC				Lg	Lg	21 28 37.2	
	3.4nm,0.3s,baz=47,slow=22,SNR=15						
LIC	**Lamto**	**4.82**	**135**	*e*P	**Pn**	**21 27 23.0**	**+1.2**
	20nm,0.7s						
KIC	**Kosan Boka**	**4.93**	**132**	*e*P	**Pn**	**21 27 25.1**	**+1.8**
	6.2nm,0.4s						
KOWA	**Kowa**	**6.46**	**42**	Pn	**Pn**	**21 27 45.9**	**+1.5**
	0.3nm,0.3s,baz=213,slow=17,SNR=8.0						
KOWA				Sn	**Sn**	**21 29 00.3**	**+2.0**
	0.5nm,0.3s,baz=238,slow=19,SNR=2.7						
KOWA				Lg	Lg	21 29 37.8	
	2.7nm,0.3s,baz=305,slow=22,SNR=6.8						
TORD	**Torodi Ar. Bea**	**10.53**	**70**	Pn	**Pn**	**21 28 40.9**	**+0.7**
	0.2nm,0.3s,baz=251,slow=13,SNR=7.9						
TORD				Sn	**Sn**	**21 30 36.3**	**-2.0**
	0.3nm,0.3s,baz=250,slow=22,SNR=5.4						
TORD				Lg	Lg	21 31 46.2	
	0.6nm,0.3s,baz=247,slow=28,SNR=9.0						
GERES	**GERESS Array B**	**43.23**	**21**	P	**P**	**21 34 10.1**	**-0.5**
	0.3nm,0.7s,baz=215,slow=12,SNR=2.4						
FINES	**FINESS Array B**	**57.54**	**19**	P	**P**	**21 35 57.6**	**-1.0**
	3.3nm,1.0s,baz=208,slow=7.6,SNR=5.3						

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*IDC **12** 21:28:33.1±4.4,19°.14S×177°.19W,h385^{km}±30^{km},mb3.8/6, mb1 3.9/7,mb1mx3.3/32,mbtmp4.5/7,Error ellipse: s-maj=67.0km s-min=27.5km az=133.0*

ISC 12 21:28:35.3±2.0**,18°.9S**±0°.3×**177°.4W**±0°.3**,h400**^{km}**,n7,** σ**0**^{s}**.58**/8**,mb4.0**/6**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.48**	**284**	P	**Pn**	**21 29 51.6**	**-0.6**
	1.6nm,0.3s,baz=129,slow=21,SNR=8.8						
CTA	**Charters Tower**	**34.24**	**262**	P	**P**	**21 34 46.1**	**+0.3**
	5.2nm,0.5s,baz=97,slow=8.4,SNR=3.2						
STKA	**Stephens Creek**	**39.01**	**242**	P	**P**	**21 35 25.4**	**+0.1**
	3.1nm,0.5s,baz=88,slow=9.6,SNR=9.1						
WRA	**Warramunga Arr**	**45.40**	**260**	P	**P**	**21 36 16.0**	**-0.5**
	1.3nm,0.3s,baz=97,slow=7.4,SNR=32						
ASAR	**Alice Springs**	**45.45**	**255**	P	**P**	**21 36 16.8**	**-0.1**
	21nm,0.6s,baz=91,slow=8.4,SNR=532						
ASAR				PcP	**PcP**	**21 37 47.7**	**-0.5**
	0.4nm,0.5s,baz=100,slow=4.0,SNR=2.3						
SIJI	**Sorong**	**53.40**	**283**	P	**P**	**21 37 17.1**	**+0.9**
	14nm,0.7s,baz=96,slow=4.4,SNR=9.8						
ILAR	**Eielson Array**	**86.64**	**13**	P	**P**	**21 40 34.4**	**0.0**
	0.3nm,0.4s,baz=217,slow=4.9,SNR=7.3						

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*IDC **12** 22:02:16.1±1.1,4°.15S×129°.54E,h0^{km},mb4.1/3, mb1 3.8/7,mb1mx3.6/40,mbtmp3.8/7,ML3.4/4,Error ellipse: s-maj=48.5km s-min=21.5km az=82.0*

*DJA **12** 22:02:19.0±2.2,4°S±6°×12°9E±°,h17^{km}±19^{km},M3.7/8, mb3.7/1,MLv3.7/8*

ISC 12 22:02:20.5±0.8**,4°.13S**±0°.07×**129°.51E**±0°.06**,h36**^{km}**,n13,** σ**1**^{s}**.62**/16**,mb4.2**/3**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.97**	**323**	P	**Pn**	**22 02 36.2**	**-1.4**
AAI	**Ambon**	**1.38**	**288**	P	**Pn**	**22 02 42.8**	**-0.4**
FAKI	**Fak Fak**	**2.99**	**66**	P	**Pn**	**22 03 06.0**	**+0.6**
SIJI	**Sorong**	**3.68**	**29**	Pn	**Pn**	**22 03 14.6**	**-0.3**
	4.2nm,0.3s,baz=208,slow=15,SNR=17						
SIJI				Sn	**Sn**	**22 03 55.7**	**-1.4**
	5.1nm,0.3s,baz=273,slow=14,SNR=2.5						
SWI	**Sorong**	**3.69**	**28**	P	**Pn**	**22 03 14.2**	**-0.8**
LBMI	**Labuha**	**4.00**	**330**	P	**Pn**	**22 03 17.2**	**-2.2**
SANI	**Sanana**	**4.08**	**300**	P	**Pn**	**22 03 20.6**	**+0.3**
FITZ	**Fitzroy Crossi**	**14.39**	**195**	Pn	**Pn**	**22 05 42.3**	**+0.5**
	0.1nm,0.3s,baz=13,slow=14,SNR=1.6						
WRA	**Warramunga Arr**	**16.41**	**164**	Pn	**Pn**	**22 06 05.6**	**-2.6**
	0.1nm,0.3s,baz=346,slow=13,SNR=3.7						
WRA				Sn	**Sn**	**22 09 06.0**	**-3.3**
	0.0nm,0.3s,baz=337,slow=26,SNR=2.1						
ASAR	**Alice Springs**	**19.88**	**168**	P	**P**	**22 06 49.2**	**+0.3**
	0.3nm,0.3s,baz=348,slow=10,SNR=21						
ASAR				PcP	**PcP**	**22 11 06.6**	**+1.1**
	0.1nm,0.3s,baz=0.0,slow=1.6,SNR=5.8						
MKAR	**Makanchi Array**	**65.57**	**326**	P	**P**	**22 13 02.1**	**+1.4**
	1.1nm,0.4s,baz=113,slow=7.9,SNR=31						
KURBB	**Kurchatov Arra**	**69.82**	**328**	P	**P**	**22 13 28.7**	**+1.4**
	1.7nm,0.6s,baz=129,slow=5.6,SNR=16						
TIXI	**Tiksi**	**75.64**	**360**	P	**P**	**22 14 02.4**	**+1.0**
	0.4nm,0.4s,baz=235,slow=2.9,SNR=1.8						

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*JMA **12** 22:03:57.6±0.2,31°.17N×129°.11E,h6^{km}±2^{km},M4.3*

JMA Felt II J1.

*NIED **12** 22:03:57.7,31°.17N×129°.11E,h6^{km},MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.34; $M_{\theta\theta}$0.58; $M_{\phi\phi}$0.76; $M_{r\theta}$-0.15; $M_{\theta\phi}$2.49; $M_{\phi r}$2.50; Fault plane solution: $M_0$3.72000×10^{15} NP1: ϕ_s187.00000°,δ76.00000°,λ-131.00000°. NP2: ϕ_s82.00000°,δ43.00000°,λ-21.00000°.*

*IDC **12** 22:03:58.5±0.7,31°.11N×129°.31E,h0^{km},mb3.9/18, mb1 4.1/23,mb1mx4.0/42,mbtmp3.9/23,ML3.3/4,MS3.5/24, Ms1 3.5/24,ms1mx3.3/56 Error ellipse: s-maj=19.2km s-min=14.7km az=81.0*

*NEIC **12** 22:04:01.4±1.7,31°.23N±0°.06×129°.35E±0°.06,h10^{km}±1^{km}, mb4.4/31,Error ellipse: s-maj=11.2km s-min=7.4km az=151.0*

*BJI **12** 22:04:03.6±0.0,31°.19N×129°.23E,h42^{km},mB4.7/24, mb4.2/42,Ms4.3/30,Ms7 4.0/30*

*KMA **12** 22:04:34.9±0.5,33°.49N×127°.40E,h0^{km},Error ellipse: s-maj=11.9km s-min=1.1km az=322.0*

ISC 12 22:04:02.3±1.3**,31°.21N**±0°.03×**129°.34E**±0°.04**,h19**^{km}±4^{km}**, n118,**σ**1**^{s}**.27**/116**,mb4.2**/36**,MS3.7**/26**,4C-4D,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.57**	**34**	⇓P	**Pb**	**22 04 11.1**	**-2.5**
JSJ				*e*S	**Sb**	**22 04 20.8**	**-0.5**
JSU	**Suzuyama**	**1.00**	**72**	⇓P	**Pb**	**22 04 20.1**	**-1.0**
JSU				*e*S	**Sn**	**22 04 35.5**	**+0.5**
JSU	**Suzuyama**	**1.00**	**72**		**Pb**	**22 04 20.3**	**-0.8**
JSU				Sn	**Sb**	**22 04 35.1**	**+1.3**
JKC	**Kuchinoerabu**	**1.04**	**135**	⇑P	**Pb**	**22 04 19.4**	**-2.4**
JKC				*e*S	**Sb**	**22 04 34.9**	**-0.2**
JYAK	**Yakushimahirau**	**1.40**	**133**	⇑P	**Pn**	**22 04 24.5**	**-2.3**
JYAK				*e*S	**Sn**	**22 04 44.6**	**0.0**
JNN	**Nakanoshima**	**1.44**	**161**	P	**Pn**	**22 04 24.3**	**-3.0**
JTN	**Tanegashima 3**	**1.51**	**111**	⇑P	**Pn**	**22 04 27.3**	**-1.1**
JTN				S	**Sn**	**22 04 48.0**	**+0.4**
JFU	**Fukue jima 2**	**1.53**	**341**	⇑P	**Pn**	**22 04 25.7**	**-2.9**
JFU				*e*S	**Sn**	**22 04 45.6**	**-2.4**
JMTN	**Minamitane**	**1.57**	**121**	P	**Pn**	**22 04 27.7**	**-1.4**
JMTN				*e*S	**Sn**	**22 04 49.3**	**+0.4**
JTZ	**Takazaki**	**1.65**	**65**	⇓P	**Pn**	**22 04 30.0**	**-0.2**
JIU3	**Izumi3**	**1.83**	**43**	⇓P	**Pn**	**22 04 32.3**	**-0.5**
JNU	**Nakatsue**	**2.31**	**34**	Pn	**Pn**	**22 04 39.0**	**-0.5**
	5.4nm,0.3s,baz=204,slow=12,SNR=43						
JNU				Sn	**Sg**	**22 05 15.2**	**-1.6**
	38nm,0.3s,baz=7.2,slow=8.9,SNR=5.3						
JNU	**Nakatsue**	**2.31**	**34**		**Pn**	**22 04 40.3**	**+0.8**
JTU	**Tsushima**	**3.31**	**1**		**Pn**	**22 04 53.6**	**+0.5**
HALB	**Hallimjungang-**	**3.40**	**311**	P	**Pn**	**22 04 53.0**	**-1.3**
	SNR=8.6						
YNDB	**Yeoundo**	**3.47**	**338**	P	**Pn**	**22 04 54.0**	**-1.3**
	SNR=12						
JOW	**Kunigami**	**4.46**	**192**	Pn	**Pn**	**22 05 10.4**	**+1.5**
	2.3nm,0.3s,baz=45,slow=11,SNR=5.8						
JOW	**Kunigami**	**4.46**	**192**	Pn	**Pn**	**22 05 10.2**	**+1.3**
KSKCH	**Geochang**	**4.55**	**345**	P	**Pn**	**22 05 12.4**	**+2.1**
	SNR=7.4						
JMN	**Monobe**	**4.59**	**56**	Pn	**Pn**	**22 05 12.0**	**+1.2**
JHS	**Saijyo**	**4.94**	**39**		**Pn**	**22 05 17.0**	**+1.6**
KSJEO	**Jeonju**	**5.02**	**341**	P	**Pn**	**22 05 16.0**	**-0.6**
	SNR=8.2						
KSAR	**Wonju Array Be**	**6.34**	**349**	Pn	**Pn**	**22 05 34.8**	**+0.1**
KSRS	**Korea Array**	**6.34**	**350**	Pn	**Pn**	**22 05 34.1**	**-0.7**
	0.7nm,0.3s,baz=174,slow=14,SNR=18						
KSRS				Sn	**Sn**	**22 06 44.4**	**-2.3**
	0.6nm,0.3s,baz=171,slow=25,SNR=4.7						
KSRS				Lg	Lg	22 07 13.5	
	2.5nm,0.3s,baz=172,slow=30,SNR=6.5						
KS19	**Wonju Array Si**	**6.40**	**349**		**Pn**	**22 05 34.3**	**-1.3**
JWT	**Wachi**	**6.50**	**50**	Pn	**Pn**	**22 05 38.2**	**+1.2**
INCN	**Inchon**	**6.65**	**341**	Pn	**Pn**	**22 05 38.2**	**-0.8**
KSGAH	**Ganghwa**	**6.91**	**341**	P	**Pn**	**22 05 41.7**	**-0.9**
	SNR=6.7						
INU	**Inuyama**	**7.64**	**55**	Pn	**Pn**	**22 05 53.5**	**+0.9**
NJ2	**Nanjing**	**8.98**	**278**	*e*P	**Pn**	**22 06 12.6**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,22nm,0.6s						
NJ2				LR	LR		
	comp=N,1μm,10.2s						
NJ2				LR	LR		
	comp=E,790nm,11.2s						
NJ2				LR	LR		
	comp=Z,750nm,15.2s						
MJAR	**Matsushiro Arr**	**9.09**	**52**	Pn	**Pn**	**22 06 14.2**	**+1.6**
	baz=247,slow=14,SNR=2.5						
MJAR				LR	LR	22 10 09.1	
	comp=Z,398nm,18.5s,baz=245,slow=40						
SSLB	**Suanglung**	**10.48**	**227**	Pn	**Pn**	**22 06 33.4**	**+1.7**
TIA	**Tai'an**	**11.33**	**299**	P	**Pn**	**22 06 47.4**	**+4.2**
TIA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TIA				LR	LR		
	comp=N,320nm,10.8s						
TIA				LR	LR		
	comp=E,500nm,11.2s						
TIA				LR	LR		
	comp=Z,580nm,10.9s						
JCJ	**Chichijima**	**11.95**	**107**	LR	LR	22 10 05.4	
	comp=Z,60nm,19.9s,baz=298,slow=31						
BJT	**Baijiatuau**	**13.85**	**313**	Pn	**Pn**	**22 07 17.4**	**-0.1**
BJI	**Beijing**	**13.86**	**313**	P	**Pn**	**22 07 18.7**	**+1.0**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BJI				LR	LR		
	comp=N,520nm,14.1s						
BJI				LR	LR		
	comp=E,590nm,12.6s						
BJI				LR	LR		
	comp=Z,740nm,11.2s						
ASAJ	**Asahikawa**	**16.59**	**35**	Pn	**Pn**	**22 07 52.1**	**-1.8**
	0.3nm,0.3s,baz=227,slow=14,SNR=5.2						
JKA	**Kamikawa-asahi**	**16.59**	**35**		**Pn**	**22 07 53.3**	**-0.6**
JKA				IAmb	IAmb	22 08 12.8	
	comp=Z,21nm,1.1s						
HHC	**Hu-ho-hao-te**	**17.27**	**309**	*e*P	**Pn**	**22 08 02.3**	**-0.2**
XAN	**Xi'an**	**17.43**	**285**	P	**P**	**22 08 05.6**	**0.0**
XAN				pP	pP	22 08 11.4	+0.6
XAN				S	**Sn**	**22 11 20.6**	**+2.5**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.5s						
XAN				LR	LR		
	comp=Z,910nm,15.5s						
XAN				LR	LR		
	comp=Z,400nm,13.7s						
XAN				LR	LR		
	comp=Z,520nm,12.2s						
KLR	**Kul'dur**	**18.10**	**5**	P	**P**	**22 08 13.9**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=183,slow=9.2,SNR=14						
HIA	**Hailar**	**19.44**	**341**	P	**P**	**22 08 28.2**	**+0.5**
QIZ	**Qiongzhong**	**21.38**	**240**	P	**P**	**22 08 50.4**	**+1.6**
QIZ				LR	LR		
	comp=Z,290nm,15.3s						
QIZ				LR	LR		
	comp=Z,230nm,13.3s						
QIZ				LR	LR		
	comp=Z,220nm,12.8s						
LZH	**Lanzhou**	**21.75**	**290**	*e*P	**P**	**22 08 54.0**	**+1.1**
LZH				pmax	pmax		
	comp=Z,6.0nm,1.3s						
LZH				LR	LR		
	comp=Z,710nm,12.5s						
LZH				LR	LR		
	comp=Z,190nm,12.7s						
LZH				LR	LR		
	comp=Z,480nm,13.8s						
CD2	**Chengdu**	**21.91**	**276**	P	**P**	**22 08 53.9**	**-0.6**
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
CD2				LR	LR		
	comp=Z,660nm,15.3s						
CD2				LR	LR		
	comp=Z,590nm,11.9s						
CD2				LR	LR		
	comp=Z,600nm,11.2s						
GUMO	**Guam**	**22.61**	**137**	LR	LR	22 16 46.4	
	comp=Z,58nm,18.4s,baz=77,slow=34						
ULN	**Ulaanbaatar**	**23.79**	**321**	P	**P**	**22 09 13.7**	**-0.3**
ULN				IAmb	IAmb	22 09 19.5	
	comp=Z,8.2nm,1.2s						
SONM	**Songino Array**	**24.13**	**320**	P	**P**	**22 09 16.3**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=136,slow=9.1,SNR=13						
SONM				LR	LR	22 19 43.3	
	comp=Z,256nm,18.2s,baz=128,slow=39						
SONM	**Songino Array**	**24.13**	**320**	P	**P**	**22 09 16.2**	**-0.9**
GTA	**Gaotai**	**25.36**	**297**	*e*P	**P**	**22 09 27.4**	**-1.0**
GTA				pP	pP	22 09 34.2	+0.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,110nm,6.4s						
GTA				LR	LR		
	comp=Z,290nm,15.1s						
GTA				LR	LR		
	comp=Z,270nm,11.2s						
GTA				LR	LR		
	comp=Z,290nm,13.9s						
TLY	**Talaya**	**27.85**	**325**	LR	LR	22 21 52.1	
	comp=Z,106nm,19.3s,baz=152,slow=38						
PETK	**Petropavlovsk-**	**30.01**	**35**	LR	LR	22 22 08.6	
	comp=Z,62nm,18.3s,baz=236,slow=36						
CMAR	**Chiang Mai Arr**	**30.26**	**252**	LR	LR	22 23 37.0	
	comp=Z,40nm,18.6s,baz=62,slow=39						
WMQ	**Urumqi**	**34.99**	**303**	*e*P	**P**	**22 10 56.5**	**+3.0**
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.7s						
ZALV	**Zalesovo Beam**	**39.02**	**319**	LR	LR	22 29 02.8	
	comp=Z,124nm,18.3s,baz=68,slow=38						
ZALV	**Zalesovo Beam**	**39.02**	**319**	P	**P**	**22 11 28.2**	**+0.7**
MK31	**Makanchi Array**	**39.13**	**307**	P	**P**	**22 11 27.1**	**-1.4**
MKAR	**Makanchi Array**	**39.13**	**307**	P	**P**	**22 11 27.6**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=96,slow=11,SNR=9.7						
MKAR				LR	LR	22 29 46.6	
	comp=Z,69nm,18.2s,baz=82,slow=40						
MKAR	**Makanchi Array**	**39.13**	**307**	P	**P**	**22 11 27.1**	**-1.4**
MAKZ	**Makanchi**	**39.34**	**307**	P	**P**	**22 11 29.2**	**-1.2**
PSI	**Prapat**	**40.26**	**231**	LR	LR	22 28 37.6	
	comp=Z,54nm,19.4s,baz=26,slow=37						
TIXI	**Tiksi**	**40.50**	**360**	P	**P**	**22 11 39.2**	**-0.4**
	comp=Z,2.4nm,1.0s,baz=166,slow=4.1,SNR=9.2						
TIXI	**Tiksi**	**40.50**	**360**	P	**P**	**22 11 39.4**	**-0.1**
TIXI				IAmb	IAmb	22 11 49.5	
	comp=Z,7.8nm,1.4s						
KURK	**Kurchatov**	**42.03**	**313**	P	**P**	**22 11 52.9**	**+0.5**
KURBB	**Kurchatov Arra**	**42.07**	**313**	P	**P**	**22 11 51.5**	**-1.3**
	comp=Z,1.4nm,0.9s,baz=97,slow=8.9,SNR=6.8						
BVAR	**Borovoye Array**	**47.33**	**315**	P	**P**	**22 12 34.1**	**-0.5**
	comp=Z,7.1nm,0.7s,baz=112,slow=7.6,SNR=40						
BRVK	**Borovoye**	**47.39**	**315**	P	**P**	**22 12 34.7**	**-0.5**
KKAR	**Karatay Array**	**47.48**	**302**	P	**P**	**22 12 36.3**	**+0.3**
CHGR	**Chuyangaron**	**49.13**	**296**	P	**P**	**22 12 48.5**	**-0.5**
HNR	**Honiara**	**49.93**	**139**	LR	LR	22 32 18.3	
	comp=Z,39nm,18.5s,baz=338,slow=34						
WB0	**Warramunga Arr**	**50.91**	**174**	P	**P**	**22 13 01.4**	**-0.9**
WB0				IAmb	IAmb	22 13 12.3	
	comp=Z,4.9nm,1.3s						
WRA	**Warramunga Arr**	**51.08**	**174**	P	**P**	**22 13 01.6**	**-2.0**
	comp=Z,0.6nm,0.6s,baz=352,slow=8.2,SNR=10						
WRA				LR	LR	22 35 40.2	
	comp=Z,10.0nm,20.6s,baz=65,slow=37						
WRA	**Warramunga Arr**	**51.08**	**174**	P	**P**	**22 13 02.0**	**-1.7**
ABKAR	**Akbulak array**	**54.05**	**311**	P	**P**	**22 13 24.8**	**-0.6**
ABKAR				IAmb	IAmb	22 13 28.4	
	comp=Z,2.7nm,1.1s						
ABKAR	**Akbulak array**	**54.05**	**311**	P	**P**	**22 13 24.6**	**-0.8**
ARU	**Arti**	**54.17**	**320**	P	**P**	**22 13 26.6**	**+0.5**
ASAR	**Alice Springs**	**54.73**	**175**	P	**P**	**22 13 29.7**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=4.7,slow=13,SNR=12						
ASAR	**Alice Springs**	**54.73**	**175**	P	**P**	**22 13 29.9**	**-0.7**
J20K	**Nowinta River**	**56.56**	**31**	P	**P**	**22 13 43.4**	**+0.1**
J20K				IAmb	IAmb	22 14 11.7	
	comp=Z,5.8nm,1.2s						
CAST	**Castle Rocks**	**57.53**	**32**	P	**P**	**22 13 50.8**	**+0.5**
CAST				IAmb	IAmb	22 14 10.3	
	comp=Z,6.4nm,1.4s						
GEYT	**Alibeck**	**57.74**	**298**	LR	LR	22 42 01.9	

	comp=Z,65nm,19.9s,baz=70,slow=40						
MLY	Manley	57.96	30	P	P	22 13 53.3	+0.1
MLY				IAmb	IAmb	22 13 54.2	
	comp=Z,1.9nm,0.9s						
NEA2	Nenana	58.72	30	P	P	22 13 58.8	+0.3
NEA2				IAmb	IAmb	22 14 07.6	
	comp=Z,7.2nm,1.2s						
MDM	Murphy Dome	59.03	29	P	P	22 14 00.8	+0.2
POKR	Poker Plat Res	59.34	29	P	P	22 14 03.6	+0.8
IL31		59.63	30	P	P	22 14 04.6	-0.1
IL31				IAmb	IAmb	22 14 31.0	
	comp=Z,5.9nm,1.4s						
ILAR	Eielson Array	59.63	30	P	P	22 14 03.9	-0.8
	comp=Z,0.7nm,0.7s,baz=284,slow=7.5,SNR=10.0						
ILAR	Eielson Array	59.63	30	P	P	22 14 05.0	+0.2
PRP	Porcupine Dome	60.07	29	P	P	22 14 07.9	0.0
PRP				IAmb	IAmb	22 14 32.0	
	comp=Z,4.3nm,1.2s						
SCRK	Sand Creek	61.01	30	P	P	22 14 13.8	-0.6
SCRK				IAmb	IAmb	22 14 29.3	
	comp=Z,6.9nm,1.4s						
BCAR	Beaver Creek A	62.18	31	P	P	22 14 22.8	+0.5
STKA	Stephens Creek	63.80	168	P	P	22 14 30.9	-2.3
	comp=Z,1.3nm,0.9s,baz=11,slow=16,SNR=2.3						
STKA				LR	LR	22 41 22.4	
	comp=Z,11nm,21.5s,baz=25,slow=35						
STKA	Stephens Creek	63.80	168	P	P	22 14 33.6	+0.5
INK	Inuvik	63.96	24	P	P	22 14 33.8	0.0
	comp=Z,1.0nm,0.8s,baz=280,slow=7.3,SNR=3.8						
A36M	Sachs Harbour	65.22	19	P	P	22 14 41.8	-0.2
A36M				IAmb	IAmb	22 14 47.2	
	comp=Z,4.3nm,1.0s						
ARCES	ARCESS Array B	65.76	338	LR	LR	22 48 23.0	
	comp=Z,55nm,20.0s,baz=195,slow=40						
KIV	Kislovodsk	66.88	308	P	P	22 14 53.9	+0.6
FIA1	FINESS Array S	69.04	330	P	P	22 15 07.0	+0.6
FINES	FINESS Array B	69.04	330	P	P	22 15 05.7	-0.7
	comp=Z,1.9nm,0.6s,baz=79,slow=7.2,SNR=15						
FINES				LR	LR	22 48 30.7	
	comp=Z,75nm,18.1s,baz=25,slow=39						
FINES	FINESS Array B	69.04	330	P	P	22 15 06.8	+0.4
AKASG	Malin Array Be	72.41	319	P	P	22 15 27.9	+0.8
	comp=Z,0.3nm,0.5s,baz=54,slow=7.4,SNR=4.5						
AKASG				LR	LR	22 49 35.6	
	comp=Z,70nm,18.5s,baz=50,slow=38						
AKASG	Malin Array Be	72.41	319	P	P	22 15 27.3	+0.2
AKASG				IAmb	IAmb	22 15 46.1	
	comp=Z,2.3nm,1.4s						
YKA	Yellowknife Ar	73.63	26	P	P	22 15 34.2	+0.1
	comp=Z,1.4nm,0.8s,baz=303,slow=5.2,SNR=1.8						
BRTR	Keskin Array B	74.78	307	P	P	22 15 42.3	+0.8
	comp=Z,1.7nm,1.0s,baz=68,slow=3.9,SNR=8.1						
BRTR				LR	LR	22 53 08.5	
	comp=Z,28nm,18.8s,baz=112,slow=39						
BRTR	Keskin Array B	74.78	307	P	P	22 15 42.0	+0.5
HFS	Hagfors	74.89	332	LR	LR	22 49 49.3	
	comp=Z,52nm,18.7s,baz=58,slow=37						
NC405	NORSAR Array S	75.06	334	P	P	22 15 42.9	+0.4
NC405				IAmb	IAmb	22 16 07.9	
	comp=Z,9.5nm,1.2s						
NB2	NORSAR Subarra	75.30	334	P	P	22 15 45.3	+1.4
	comp=Z,8.5nm,1.7s,baz=50,slow=5.9						
NOA	NORSAR Array B	75.30	334	P	P	22 15 42.9	-1.0
	comp=Z,1.4nm,0.8s,baz=50,slow=5.5,SNR=5.1						
SUMG	Summit	76.16	356	P	P	22 15 48.7	-0.4
SUMG				IAmb	IAmb	22 15 56.4	
	comp=Z,5.0nm,1.0s						
BURAR	Bucovina Array	76.22	318	P	P	22 15 50.4	+0.8
BURAR				IAmb	IAmb	22 16 07.8	
	comp=Z,1.4nm,0.9s						
EIL	Elat	78.65	298	LR	LR	22 55 05.3	
	comp=Z,25nm,20.4s,baz=219,slow=39						
CLL	Collm	80.64	325	*e*P	P	22 16 15.0	+1.3
CLL				*e*PP	PP	22 19 20.0	+3.2
GERES	GERESS Array B	81.83	323	LR	LR	22 56 00.8	
	comp=Z,79nm,18.7s,baz=60,slow=38						
SFJD	Kangerlussuaq	82.11	360	LR	LR	22 53 25.0	
	comp=Z,34nm,18.5s,baz=205,slow=36						
NVAR	Mina Array Bea	86.38	47	P	P	22 16 44.0	+0.2
	comp=Z,0.4nm,0.6s,baz=288,slow=7.5,SNR=3.6						
PDAR	Pinedale Array	88.69	39	P	P	22 16 54.6	-0.2
	comp=Z,0.4nm,0.7s,baz=33,slow=3.5,SNR=3.8						
PDAR				LR	LR	23 00 40.9	
	comp=Z,22nm,18.1s,baz=44,slow=38						
ULM	Lac du Bonnet	89.55	27	P	P	22 16 58.3	-0.1
	comp=Z,6.5nm,1.0s,baz=337,slow=6.8,SNR=3.2						
ULM				LR	LR	22 59 59.0	
	comp=Z,34nm,20.8s,baz=314,slow=38						

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*MOS **12** 22:36:38.3±0.8, 56°.82N×154°.60W, h10^{km}, mb4.8/15, Error ellipse: s-maj=13.7km s-min=4.9km az=87.7*

*IDC **12** 22:36:39.4±0.6, 56°.96N×154°.80W, h0^{km}, mb4.3/34, mb1 4.4/36, mb1mx4.2/76, mbtmp4.3/36, ML4.2/2, MS3.5/18, Ms1 3.5/18, ms1mx3.3/55, Error ellipse: s-maj=16.6km s-min=9.6km az=177.0*

*ANF **12** 22:36:44.2±0.3, 56°.78N×154°.38W, h43^{km}±7^{km}, ML4.9/19, Error ellipse: s-maj=3.7km s-min=2.9km az=161.0*

*NEIC **12** 22:36:44.3±1.6, 56°.80N±0°.04×154°.36W±0°.08, h38^{km}±5^{km}, Error ellipse: s-maj=6.5km s-min=5.1km az=123.0*

*AEIC **12** 22:36:44.7±1.9, 56°.72N±0°.04×154°.36W±0°.08, h50^{km}±5^{km}, ML4.4/181, mb4.6/66(NEIC), Mwr4.6/60(NEIC), Error ellipse: s-maj=6.9km s-min=5.2km az=130.0*

*NEIC **12** 22:36:45, 56°.85N×154°.44W, h46^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.66; $M_{\theta\theta}$-4.72; $M_{\phi\phi}$3.06; $M_{r\theta}$-2.05; $M_{\theta\phi}$6.04; $M_{\phi r}$-4.83; Fault plane solution: $M_0$9.01000×10^{15} NP1:ϕ_s258.87000°, δ64.52000°, λ22.02000°. NP2:ϕ_s159.00000°, δ70.22000°, λ152.80000°. Principal axes: T 9.7343, Plg33.0000°, Azm118.0000°; N -1.6901, Plg57.0000°, Azm306.0000°; P -8.0442, Plg4.0000°, Azm210.0000°;*

ISC 12 22:36:44.0±0.4, **56°.81N**±0°.05×**154°.39W**±0°.04, **h36**^{km}±1^{km}, **n509**, σ**1^{s}.08**/532, **mb4.5**/86, **MS3.5**/16, **20C-8D, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SII	Sitkinak Islan	0.27	155	Pn	Pn	22 36 52.5	+0.6
SII				Sn	Sn	22 36 58.9	+0.3
SII	Sitkinak Islan	0.27	155	P	Pn	22 36 52.5	+0.6
	baz=329,SNR=1000						
SII				S	Sn	22 36 58.9	+0.3
	baz=329						
CHIR	Chirikof Islan	1.20	215	Pn	Pn	22 37 03.4	-0.8
CHIR				Sn	Sn	22 37 22.2	+3.0
CHIR	Chirikof Islan	1.20	215	P	Pn	22 37 03.6	-0.6
	baz=37,SNR=87						
CAHL	Cahill	1.34	339		Pn	22 37 06.7	+0.5
PLK3	Peulik 3	1.35	312		Pn	22 37 06.9	+0.7
PLK4	Peulik 4	1.35	309		Pn	22 37 06.9	+0.6
KDAK	Kodiak Island	1.39	44	Pg	Pn	22 37 07.5	+0.9
	307nm,0.3s,baz=240,slow=6.8,SNR=2305						
KDAK				Lg	Lg	22 37 26.9	
	795nm,0.3s,baz=41,slow=15,SNR=17						
KDAK	Kodiak Island	1.39	44	P	Pn	22 37 07.7	+1.0
KDAK						22 37 25.1	
KDAK	Kodiak Island	1.39	44		Pn	22 37 07.7	+1.0
KDAK					Sn	22 37 25.1	+1.3
KDAK	Kodiak Island	1.39	44	P	Pn	22 37 07.6	+0.9
	baz=223						
KDAK				S	Sn	22 37 24.8	+1.1
	baz=223						
PLK2	Peulik 2	1.42	313		Pn	22 37 08.0	+0.8
ACHA	Angle Creek He	1.50	341		Sn	22 37 29.9	+3.3
ANCK	Angle Creek	1.52	337		Pn	22 37 09.4	+0.8
KBM	Katmai Bkd Mtn	1.54	344		Pn	22 37 09.7	+0.9
PLK1	Peulik 1	1.56	311		Pn	22 37 09.6	+0.5
PLBL	Peulik Blue Cr	1.59	305		Pn	22 37 10.7	+1.1
PLK5	Peulik 5	1.80	313		Pn	22 37 13.9	+1.5
KAHC	Katmai Hardscr	1.88	350		Pn	22 37 14.6	+1.1
ANPB	Aniakchak Plen	2.14	271		Pn	22 37 17.4	+0.3
Q19K	Cape Douglas,	2.16	10		Pn	22 37 18.9	+1.4
Q19K	Cape Douglas,	2.16	10	P	Pn	22 37 18.8	+1.4
	baz=190,SNR=127						
AUQ	Augustine Qik’	2.61	11		Pn	22 37 25.4	+1.8
AGU	Augustine-Summ	2.61	11		Pn	22 37 25.4	+1.7
AUW	Augustine West	2.62	10		Pn	22 37 25.6	+2.0
AU22	Augustine Moun	2.63	12		Pn	22 37 25.2	+1.5
P18K	Big Mountain,	2.63	351	Pn	Pn	22 37 24.1	+0.2
P18K	Big Mountain,	2.63	351	P	Pn	22 37 24.2	+0.3
	baz=170,SNR=48						
P18K				S	Sn	22 37 56.3	+1.8
	baz=170						
AUL	Augustine Lava	2.63	11		Pn	22 37 25.8	+1.9
AUL					Sn	22 37 58.2	+3.7
VNSG	Veniaminof 6	2.69	257		Pn	22 37 25.0	+0.3
VNHG	Veniaminof 1	2.71	259		Pn	22 37 25.2	+0.2
VNFG	Fog Glacier, M	2.91	262		Pn	22 37 28.0	+0.3
OPT	Oil Point	2.92	12		Pn	22 37 29.5	+1.7
P19K	Oil Pt	2.92	12		Pn	22 37 29.0	+1.2
O18K	Koktuh Hills	3.09	352		Pn	22 37 30.7	+0.6
O18K					Sn	22 38 09.7	+4.0
O18K	Koktuh Hills	3.09	352	P	Pn	22 37 30.7	+0.6
	baz=172						
CNPM	China Poot	3.20	30		Pn	22 37 32.8	+1.2
HOM	Homer	3.21	26		Pn	22 37 33.2	+1.5
HOM	Homer	3.21	26	P	Pn	22 37 33.0	+1.3
	baz=207,SNR=11						
ILS	Iliamna Low So	3.23	12		Pn	22 37 33.4	+1.1
ILSW	Iliamna Southw	3.25	11		Pn	22 37 33.5	+1.1
IVE	Iliamna Volcan	3.30	12		Pn	22 37 34.0	+1.0
IVE					Sn	22 38 13.8	+2.7
O19K	Port Alsworth	3.40	1		Pn	22 37 35.3	+1.0
O19K	Port Alsworth	3.40	1	P	Pn	22 37 35.5	+1.1
	baz=180,SNR=50						
O20K	Slope Mountain	3.41	15		Pn	22 37 36.2	+1.6
O20K	Slope Mountain	3.41	15	P	Pn	22 37 36.0	+1.4
	baz=196,SNR=15						
BRLK	Bradley Lake	3.50	31		Pn	22 37 36.1	+0.4
BRSE	Bradley Lake S	3.52	32		Pn	22 37 36.5	+0.5
BRSE	Bradley Lake S	3.52	32	P	Pn	22 37 36.7	+0.7
	baz=214,SNR=56						
CHNA	Chernabura Isl	3.54	238	P	Pn	22 37 35.3	-1.0
	baz=55,SNR=5.7						
CNBA	Chernabura Isl	3.54	238	Pn	Pn	22 37 35.3	-1.1
SDPT	Sand Point	3.71	249	Pn	Pn	22 37 38.1	-0.5
SDPT	Sand Point	3.71	249		Sn	22 38 21.6	+0.6
SDPT	Sand Point	3.71	249	P	Pn	22 37 38.3	-0.4
	baz=66,SNR=8.5						
RED	Redoubt Volcan	3.72	12		Pn	22 37 40.0	+1.1
RSO	Redoubt South	3.76	12		Pn	22 37 40.8	+1.3
RDWB	Redoubt West	3.78	12		Pn	22 37 40.8	+1.0
NCT	North Crescent	3.84	11		Pn	22 37 41.8	+1.3
RDJH	Redoubt Jeurge	3.88	12		Pn	22 37 42.6	+1.5
DFR	Drift River	3.90	12		Pn	22 37 42.4	+1.1
N19K	Bonanza Creek	4.02	359		Pn	22 37 44.3	+1.3
N19K					Sn	22 38 30.3	+1.6
N19K	Bonanza Creek	4.02	359	P	Pn	22 37 44.2	+1.3
	baz=179						
SEW	Seward	4.20	36	Pn	Pn	22 37 45.1	-0.2
SEW	Seward	4.20	36	P	Pn	22 37 45.2	-0.2
	baz=219,SNR=22						
SLKM	Skilak Lake	4.30	29		Pn	22 37 46.9	+0.1
CAPN	Captain Cook N	4.31	22	Pn	Pn	22 37 49.0	+2.1
CAPN	Captain Cook N	4.31	22	P	Pn	22 37 48.4	+1.5
	baz=204						
O22K	Cooper Landing	4.42	32		Pn	22 37 48.7	+0.4
O22K	Cooper Landing	4.42	32	P	Pn	22 37 48.5	+0.1
	baz=215,SNR=19						
BLHA	Black Hill	4.42	259		Pn	22 37 48.5	+0.1
PS4A	Pavlof South-4	4.43	254		Pn	22 37 49.1	+0.6
CKT	Bend	4.55	13		Pn	22 37 51.3	+1.1
SPU	Mount Spurr	4.55	14		Pn	22 37 51.1	+0.9
SPCN	Chakachatna No	4.58	14		Pn	22 37 51.9	+1.3
SPCG	Spurr Capps Gl	4.66	14		Pn	22 37 53.0	+1.2
DT1	Dutton Round H	4.75	252		Pn	22 37 53.1	+0.2
FIS	Fire Island	4.86	25		Pn	22 37 56.0	+1.7
STLK	Strandline Lak	4.89	15		Pn	22 37 55.7	+0.8
RC01	Rabbit Creek A	4.92	27		Pn	22 37 55.8	+0.5
RC01	Rabbit Creek A	4.92	27	P	Pn	22 37 55.6	+0.3
	baz=211,SNR=50						
RC01				S	Sn	22 38 50.3	-0.6
	baz=211						
Q23K	Middleton Isla	5.01	55	Pn	Pn	22 37 56.2	-0.3
Q23K	Middleton Isla	5.01	55		Sn	22 38 53.3	+0.4
Q23K	Middleton Isla	5.01	55	P	Pn	22 37 57.0	+0.6
	baz=241						
M19K	Big River Lodg	5.11	360		Pn	22 37 59.0	+1.1
M19K	Big River Lodg	5.11	360	P	Pn	22 37 59.0	+1.1
	baz=180						
PWL	Port Wells	5.14	35		Pn	22 37 58.2	0.0
PWL	Port Wells	5.14	35	P	Pn	22 37 58.3	0.0
	baz=220,SNR=95						
L19K	White Mountain	5.40	358	Pn	Pn	22 38 03.2	+1.4
L19K	White Mountain	5.40	358		Sn	22 39 05.1	+2.5
L19K	White Mountain	5.40	358	P	Pn	22 38 02.9	+1.1
	baz=177,SNR=134						
M22K	Willow	5.42	22		Pn	22 38 03.5	+1.4
M22K	Willow	5.42	22	P	Pn	22 38 02.8	+0.7
	baz=205,SNR=15						
FALS	False Pass	5.45	253	Pn	Pn	22 38 03.5	+1.0
FALS	False Pass	5.45	253	P	Pn	22 38 03.1	+0.6
	baz=66						
HIN	Hinchinbrook I	5.47	46		Sn	22 39 05.5	+1.0
PMR	Palmer	5.51	27	P	Pn	22 38 03.3	0.0
PMR	Palmer	5.51	27	Pn	Pn	22 38 03.3	0.0
PMR	Palmer	5.51	27	P	Pn	22 38 02.8	-0.4
	baz=211,SNR=16						
KNK	Knik Glacier	5.54	31		Pn	22 38 03.5	-0.2
KNK	Knik Glacier	5.54	31	P	Pn	22 38 03.5	-0.2
	baz=215,SNR=24						
GLI	Glacier Island	5.57	40		Pn	22 38 03.7	-0.4
GLI	Glacier Island	5.57	40	P	Pn	22 38 03.2	-0.9
	baz=225						
GLI				S	Sn	22 39 03.2	-3.6
	baz=225						
L20K	Farewell, AK	5.70	2		Pn	22 38 07.1	+1.2
L20K	Farewell, AK	5.70	2	P	Pn	22 38 06.8	+0.9
	baz=183						
FID	Port Fidalgo	5.71	43		Pn	22 38 05.3	-0.7
GHO	Glory Hole Cre	5.71	27		Pn	22 38 06.0	-0.1
EYAK	Cordova Ski Ar	5.86	47		Pn	22 38 07.8	-0.3
EYAK	Cordova Ski Ar	5.86	47	P	Pn	22 38 07.7	-0.4
	baz=233,SNR=9.9						
EYAK				S	Sn	22 39 11.5	-2.5
	baz=233						
JPK	Jack Peak	5.87	40		Pn	22 38 08.2	-0.1
SML	Sawmill	5.89	29		Pn	22 38 08.7	+0.1
SML	Sawmill	5.89	29	P	Pn	22 38 08.3	-0.3
	baz=214,SNR=14						
VMT	TAPS Tl Valdez	5.97	41		Pn	22 38 10.4	+0.8
CUT	Chulitna	5.99	19		Pn	22 38 10.1	+0.2
CUT	Chulitna	5.99	19	P	Pn	22 38 10.5	+0.6
	baz=202,SNR=16						
KAIM	Kayak Island	6.11	55		Pn	22 38 10.8	-0.7
KAIM	Kayak Island	6.11	55	P	Pn	22 38 11.4	-0.2
	baz=243						
KAIM				S	Sn	22 39 19.9	-0.1
	baz=243						
TT01	Tatalina	6.17	353		Pn	22 38 13.5	+1.1
TTA	Tatalina	6.20	353	P	Pn	22 38 13.4	+0.6
TTA	Tatalina	6.20	353	Pn	Pn	22 38 13.4	+0.6
TTA	Tatalina	6.20	353	P	Pn	22 38 13.6	+0.7
	baz=172,SNR=22						
SCM	Sheep Creek Mo	6.20	33	P	Pn	22 38 13.0	+0.1
SCM	Sheep Creek Mo	6.20	33		Pn	22 38 13.0	+0.1
SCM	Sheep Creek Mo	6.20	33	P	Pn	22 38 13.2	+0.4
	baz=218,SNR=49						
PPLA	Purkeypile	6.21	9		Pn	22 38 14.2	+1.1
PPLA	Purkeypile	6.21	9	P	Pn	22 38 14.3	+1.3
	baz=191,SNR=25						
DIV	Divide	6.21	42		Pn	22 38 13.2	+0.2
RAGM	Ragged Mountai	6.22	51		Pn	22 38 13.0	-0.1
GOAT	Goat Mountain	6.30	49		Pn	22 38 14.3	0.0
HMT	Hamilton	6.37	52		Pn	22 38 15.2	0.0
KLU	Klutina	6.40	39		Pn	22 38 16.1	+0.4
KLU	Klutina	6.40	39	P	Pn	22 38 15.7	0.0
	baz=226,SNR=40						
KLU				S	Sn	22 39 27.1	-0.4
	baz=226						
NICHA	Nichawak Mount	6.45	53		Pn	22 38 16.2	0.0
SUCK	Suckling Hills	6.46	55	Pn	Pn	22 38 16.3	-0.1
BMRM	Bremner River	6.56	46		Pn	22 38 17.3	-0.6
BMRM	Bremner River	6.56	46	P	Pn	22 38 17.6	-0.3
	baz=234,SNR=26						
BMRM				S	Sn	22 39 30.0	-1.4
	baz=234						
BERG	Berg Lake	6.64	53		Pn	22 38 18.8	-0.1
WAT7	Susitna Watana	6.66	22		Pn	22 38 19.3	+0.2
PS12	TAPS Pump St12	6.67	42		Pn	22 38 19.9	+0.6
WAT6	Susitna Watana	6.70	27		Pn	22 38 19.8	0.0
WAT6	Susitna Watana	6.70	27	P	Pn	22 38 19.6	-0.2
	baz=213,SNR=28						
WAT6				S	Sn	22 39 33.7	-1.0
	baz=213						
WAT1	Susitna Watana	6.72	24		Pn	22 38 20.0	0.0
WAT1	Susitna Watana	6.72	24	P	Pn	22 38 19.6	-0.3
	baz=208						
WAT1				S	Sn	22 39 33.5	-1.6
	baz=208						
CAST	Castle Rocks	6.73	9		Pn	22 38 20.5	+0.4
CAST	Castle Rocks	6.73	9	P	Pn	22 38 21.4	+1.3
	baz=191,SNR=91						
GRIN	Grindle Hills	6.76	54		Pn	22 38 20.4	-0.1
M24K	Tolsona, Glenn	6.76	35		Pn	22 38 21.3	+0.7
M24K	Tolsona, Glenn	6.76	35	P	Pn	22 38 21.3	+0.7
	baz=221,SNR=22						
KHIT	Khitrov Hills	6.86	53		Pn	22 38 21.7	-0.3
SNH	Sunshine Point	6.93	56		Pn	22 38 23.0	+0.1
N25K	Chitina, Valde	6.96	42		Pn	22 38 23.6	+0.3
N25K	Chitina, Valde	6.96	42	P	Pn	22 38 23.5	+0.3
	baz=230,SNR=21						
PS11	TAPS Pump St11	6.97	37		Pn	22 38 24.3	+1.0
TRF	Thorofare Moun	6.97	15		Pn	22 38 23.7	+0.2
TRF	Thorofare Moun	6.97	15	P	Pn	22 38 23.9	+0.4
	baz=199,SNR=21						
KTH	Kantishna Hill	6.98	13		Pn	22 38 23.4	-0.2
WAX	Waxell Ridge	7.04	54		Pn	22 38 24.3	-0.1
CRQM	Cirque	7.06	51		Pn	22 38 24.7	-0.1
CRQE	Cirque	7.08	51	P	Pn	22 38 24.9	0.0
	baz=240,SNR=8.1						
CRQE				S	Sn	22 39 42.6	-1.5
	baz=240						
GLB	Gilahina Butte	7.15	45		Pn	22 38 26.0	+0.1
RND	Reindeer	7.17	20	P	Pn	22 38 26.2	0.0
RND	Reindeer	7.17	20		Pn	22 38 26.2	0.0
CHUM	Lake Minchumin	7.17	7		Pn	22 38 26.6	+0.5
CHUM	Lake Minchumin	7.17	7	P	Pn	22 38 26.4	+0.2
	baz=189,SNR=22						
VRDI	Verde Repeater	7.17	47		Pn	22 38 26.3	-0.1
TGL	Tana Glacier	7.19	52		Pn	22 38 26.5	0.0
DHY	Denali Highway	7.20	26		Pn	22 38 26.7	0.0
DHY	Denali Highway	7.20	26	P	Pn	22 38 26.3	-0.4
	baz=212,SNR=30						
HARP	HAARP	7.30	36		Pn	22 38 28.9	+0.9
HARP	HAARP	7.30	36	P	Pn	22 38 29.0	+1.1
	baz=223,SNR=11						
ISLE	Juniper Island	7.34	54		Pn	22 38 28.2	-0.3
MESA	MESA	7.34	57		Pn	22 38 28.5	-0.2
MESA	MESA	7.34	57	P	Pn	22 38 28.6	-0.1
	baz=247						
J20K	Nowinta River	7.39	1		Pn	22 38 29.7	+0.5
J20K	Nowinta River	7.39	1	P	Pn	22 38 29.6	+0.5
	baz=181						
BAGL	Bagley Icefiel	7.40	55		Pn	22 38 29.5	+0.3
MCARA	McCarthy VSAT	7.43	47		Pn	22 38 29.9	+0.1
MCARA	McCarthy VSAT	7.43	47	P	Pn	22 38 30.1	+0.4
	baz=236						
MCK	McKinley	7.46	19	P	Pn	22 38 30.4	+0.4
MCK	McKinley	7.46	19		Pn	22 38 30.4	+0.4
MCK	McKinley	7.46	19	P	Pn	22 38 30.4	+0.4
	baz=203,SNR=22						
KIAG	Kiagna River	7.47	52		Pn	22 38 30.5	0.0
BPAW	Bear Paw Mtn.	7.51	12		Pn	22 38 31.2	+0.5
BPAW	Bear Paw Mtn.	7.51	12	P	Pn	22 38 31.1	+0.4
	baz=194,SNR=24						
YAH	Yahtse	7.51	56		Pn	22 38 30.9	0.0
UNV	Unalaska Valle	7.52	252		Pn	22 38 30.0	-0.9
UNV	Unalaska Valle	7.52	252	P	Pn	22 38 30.3	-0.6
	baz=62						
BALM	Baldy	7.54	51		Pn	22 38 31.1	-0.1
PTPK	Patty Peak	7.56	50		Pn	22 38 31.7	+0.1
MNAT	Makushin Natee	7.59	252		Pn	22 38 31.2	-0.8
PAX	Paxson	7.63	32	P	Pn	22 38 32.6	+0.1
PAX	Paxson	7.63	32		Pn	22 38 32.6	+0.1
PAX	Paxson	7.63	32	P	Pn	22 38 32.3	-0.2
	baz=220,SNR=42						
MSW	Makushin Switc	7.63	253		Pn	22 38 32.1	-0.4
RKAV	Rock Avalanche	7.67	57		Pn	22 38 33.1	0.0
CHX	Chaix Hills	7.69	59		Pn	22 38 33.3	0.0
MAPS	Pakushin South	7.76	253		Pn	22 38 33.9	-0.4
BWN	Browne	7.78	16		Pn	22 38 34.5	+0.1
TABL	Table Mountain	7.81	57		Pn	22 38 35.1	0.0
BARN	Barnard Glacie	7.84	52		Pn	22 38 35.5	+0.1
SAMH	Samovar Hills	7.87	59		Pn	22 38 35.9	+0.1
CTG	Chitna Glacier	7.94	53	P	Pn	22 38 36.6	-0.1
	baz=244,SNR=7.9						
CTGM	Chitina Glacie	7.94	53		Pn	22 38 36.8	-0.1
LOGN	Logan Glacier	8.03	54		Pn	22 38 37.5	-0.5
M26K	Nabesna, AK	8.04	41		Pn	22 38 38.6	+0.4
M26K	Nabesna, AK	8.04	41	P	Pn	22 38 38.4	+0.2
	baz=230						
GCSA	Galena City Sc	8.06	352		Pn	22 38 38.4	+0.2
GCSA	Galena City Sc	8.06	352	P	Pn	22 38 39.1	+0.8
	baz=170,SNR=11						
PCA	Pinnacle	8.11	60		Pn	22 38 39.0	-0.1
PINM	Pinnacle	8.11	60	P	Pn	22 38 39.3	+0.2
	baz=252						
NEA2	Nenana	8.23	16	P	Pn	22 38 39.4	-1.3
	baz=201,SNR=20						
WRH	Wood River Hil	8.28	19		Pn	22 38 40.5	-0.8
L26K	Log Cabin Wild	8.34	37		Pn	22 38 43.8	+1.7
L26K	Log Cabin Wild	8.34	37	P	Pn	22 38 44.0	+1.9
	baz=226,SNR=18						
BCPM	Bancas Point	8.37	62		Pn	22 38 41.7	-0.8
RIDG	Independent Ri	8.41	30		Pn	22 38 43.8	+0.7
RIDG	Independent Ri	8.41	30	P	Pn	22 38 43.6	+0.5
	baz=218						
PNL	Peninsula	8.41	64		Pn	22 38 42.6	-0.6
PNL	Peninsula	8.41	64	P	Pn	22 38 42.9	-0.3
	baz=256,SNR=5.7						
M27K	Edge Creek, AK	8.43	44		Pn	22 38 44.5	+1.0
M27K	Edge Creek, AK	8.43	44	P	Pn	22 38 44.0	+0.5
	baz=234						
MLY	Manley	8.44	11		Pn	22 38 43.0	-0.5
MLY	Manley	8.44	11	P	Pn	22 38 43.0	-0.5
	baz=194						
HDA	Harding Lake	8.45	23	Pn	Pn	22 38 43.5	-0.2
I21K	Tanana	8.48	7		Pn	22 38 44.1	0.0
I21K	Tanana	8.48	7	P	Pn	22 38 43.9	-0.1
	baz=189						
CCB	Clear Creek Bu	8.50	20		Pn	22 38 43.5	-0.7
YUK2	White River	8.53	49		Pn	22 38 45.5	+0.6
DOT	Dot Lake	8.56	33		Pn	22 38 45.4	+0.2
PS08	TAPS Pump Stn8	8.60	22		Pn	22 38 45.6	0.0
SPIA	Saint Paul Isl	8.67	279	Pn	Pn	22 38 48.0	+1.4
YUK3	Moose Creek	8.69	49		Pn	22 38 47.5	+0.4
YUK3	Moose Creek	8.69	49	P	Pn	22 38 47.6	+0.5
	baz=241,SNR=13						
TCOL	CIGO, UAF Yank	8.69	19		Pn	22 38 46.5	-0.4
TCOL	CIGO, UAF Yank	8.69	19	P	Pn	22 38 46.1	-0.8
	baz=204						
COLA	College	8.69	19	*i*P	Pn	22 38 45.1	-1.8
COLA	College	8.69	19		Pn	22 38 45.5	-1.5
COLA	College	8.69	19	P	Pn	22 38 45.6	-1.3
	baz=204						
MDM	Murphy Dome	8.71	18		Pn	22 38 46.0	-1.2
I23K	Minto, Yukon-K	8.71	14		Pn	22 38 46.3	-0.9
I23K	Minto, Yukon-K	8.71	14	P	Pn	22 38 46.2	-1.1
	baz=198,SNR=22						
IL31		8.79	22		Pn	22 38 47.4	-0.7
ILAR	Eielson Array	8.79	22	Pn	Pn	22 38 46.9	-1.4
	2.9nm,0.3s,baz=216,slow=13,SNR=121						
ILAR				Sn	Sn	22 40 20.9	-4.9
	1.1nm,0.3s,baz=223,slow=24,SNR=2.0						
ILAR				LR	LR	22 42 38.0	
	comp=Z,457nm,19.3s,baz=220,slow=41						
ILAR	Eielson Array	8.79	22	P	Pn	22 38 46.7	-1.5
ILAR	Eielson Array	8.79	22		Pn	22 38 46.6	-1.5
SCRK	Sand Creek	8.83	31		Pn	22 38 48.8	-0.2
SCRK	Sand Creek	8.83	31	P	Pn	22 38 48.7	-0.2
	baz=220,SNR=15						
BVCY	Beaver Creek	8.86	45	P	Pn	22 38 50.6	+1.3
	baz=236,SNR=6.2						
L27K	Beaver Creek,	8.88	40		Pn	22 38 50.4	+0.8
L27K	Beaver Creek,	8.88	40	P	Pn	22 38 50.0	+0.4
	baz=230						
BC03		8.90	40		Pn	22 38 50.5	+0.8
BCAR	Beaver Creek A	8.90	40		Pn	22 38 50.4	+0.5
H21K	Melozitna Rive	8.91	4		Pn	22 38 50.0	0.0
H21K	Melozitna Rive	8.91	4	P	Pn	22 38 50.1	0.0
	baz=186						
J25K	Salcha River,	8.98	26		Pn	22 38 50.4	-0.6
J25K	Salcha River,	8.98	26	P	Pn	22 38 50.3	-0.6
	baz=213,SNR=46						
POKR	Poker Plat Res	8.99	19		Pn	22 38 50.1	-1.0
POKR	Poker Plat Res	8.99	19	P	Pn	22 38 50.1	-1.0
	baz=205,SNR=8.2						
IM03		9.21	2		Pn	22 38 54.2	+0.2
IMAR	Indian Mountai	9.21	2		Pn	22 38 54.1	0.0

J26L	Joseph Creek	9.36	30		Pn	22 38 56.0	-0.2
J26L	Joseph Creek	9.36	30	P	Pn	22 38 56.1	0.0
	baz=219						
ANM	Nome	9.45	330	P	Pn	22 38 58.2	+0.9
ANM	Nome	9.45	330		Pn	22 38 58.2	+0.9
ANM	Nome	9.45	330	P	Pn	22 38 58.2	+0.9
	baz=140						
H24K	Noodor Dome	9.58	16		Pn	22 38 58.8	-0.3
H24K	Noodor Dome	9.58	16	P	Pn	22 38 57.9	-1.2
	baz=202,SNR=6.1						
PRP	Porcupine Dome	9.72	22		Pn	22 39 00.8	-0.3
PRP	Porcupine Dome	9.72	22	P	Pn	22 39 00.3	-0.9
	baz=210,SNR=30						
EGAK	Eagle	10.26	33		Pn	22 39 08.6	+0.2
EGAK	Eagle	10.26	33	P	Pn	22 39 08.5	+0.2
	baz=225						
DAWY	Dawson	10.36	39	P	Pn	22 39 10.3	+0.4
	baz=232						
SKAG	Skagway	10.42	67		Pn	22 39 10.8	+0.3
SIT	Sitka	10.42	81	P	Pn	22 39 11.1	+0.5
SIT	Sitka	10.42	81	Pn	Pn	22 39 11.1	+0.5
BESE	Bessie Mountai	10.60	72	Pn	Pn	22 39 14.1	+1.0
COLD	Coldfoot	10.64	9		Pn	22 39 12.0	-1.6
COLD	Coldfoot	10.64	9	P	Pn	22 39 12.2	-1.4
	baz=192,SNR=10						
FYU	Fort Yukon	10.70	20		Pn	22 39 13.2	-1.2
JIS	Juneau Island	10.85	74	Pn	Pn	22 39 16.8	+0.4
TNA	Tin City	10.91	329	Pn	Pn	22 39 19.7	+2.5
GAMB	Gambell	11.04	316	Pn	Pn	22 39 22.8	+3.8
BMAR	Burnt Mountain	11.58	19	Pn	Pn	22 39 25.0	-1.5
TOLK	Toolik Lake Re	12.07	8	Pn	Pn	22 39 31.7	-1.5
TOLK	Toolik Lake Re	12.07	8	P	Pn	22 39 32.0	-1.3
	baz=193						
WRAK	Wrangell Islan	12.14	83	P	Pn	22 39 34.2	+0.1
	baz=281						
MMPY	Sheldon Lake,	13.00	54	P	Pn	22 39 45.9	+0.1
	baz=254,SNR=9.3						
DLBC	Dease Lake	13.14	73	Pn	Pn	22 39 49.9	+2.1
	0.5nm,0.3s,baz=254,slow=10,SNR=8.6						
DLBC				Sn	Sn	22 42 09.7	-2.8
	0.3nm,0.3s,baz=110,slow=23,SNR=2.2						
DLBC				LR	LR	22 45 12.8	
	comp=Z,142nm,18.1s,baz=348,slow=39						
DLBC	Dease Lake	13.14	73		Pn	22 39 48.5	+0.7
A21K	Barrow	14.60	357		Pn	22 40 08.9	+1.4
INK	Inuvik	14.90	31	Pn	Pn	22 40 11.4	-0.2
	1.3nm,0.3s,baz=210,slow=11,SNR=37						
INK				LR	LR	22 46 31.8	
	comp=Z,298nm,18.4s,baz=201,slow=40						
INK	Inuvik	14.90	31		Pn	22 40 11.4	-0.2
INK	Inuvik	14.90	31	P	Pn	22 40 10.9	-0.7
	baz=229,SNR=28						
A36M	Sachs Harbour	19.41	27	P	P	22 41 07.1	+0.6
A36M	Sachs Harbour	19.41	27	P	Pn	22 41 07.8	-0.1
	baz=234,SNR=69						
YKA	Yellowknife Ar	20.62	58	P	P	22 41 20.6	+0.9
	20nm,0.9s,baz=271,slow=9.3,SNR=65						
YKA	Yellowknife Ar	20.62	58	P	P	22 41 19.4	-0.4
YKA	Yellowknife Ar	20.62	58	P	P	22 41 19.4	-0.4
BILL	Bilibino	20.96	318	*e*P	P	22 41 21.9	-1.5
BILL				*e*PPP	PPP	22 41 48.5	
BILL				pmax	pmax		
	comp=Z,12nm,1.3s						
BILL	Bilibino	20.96	318	P	P	22 41 21.7	-1.7
NEW	Newport	23.96	95	P	P	22 41 57.3	+2.6
	comp=Z,3.2nm,1.0s,baz=290,slow=6.9,SNR=3.4						
YBH	Yreka Blue Hor	25.29	113	P	P	22 42 11.0	+4.2
	comp=Z,1.9nm,0.7s,baz=297,slow=6.8,SNR=2.2						
YBH				LR	LR	22 49 56.3	
	comp=Z,114nm,18.8s,baz=340,slow=31						
SEY	Seymchan	26.71	305	P	P	22 42 17.1	-2.3
	comp=Z,1.6nm,0.6s,baz=81,slow=10,SNR=4.8						
SEY	Seymchan	26.71	305	P	P	22 42 17.1	-2.3
PEA0B	Petropavlovsk-	27.30	283	P	P	22 42 24.1	-0.7
PEA0B				pmax	pmax		
	comp=Z,73nm,1.5s						
PEA0B	Petropavlovsk-	27.30	283	P	P	22 42 24.1	-0.7
PETK	Petropavlovsk-	27.30	283	P	P	22 42 23.1	-1.7
	comp=Z,4.7nm,0.6s,baz=71,slow=12,SNR=15						
PETK	Petropavlovsk-	27.30	283	P	P	22 42 24.9	+0.1
PETK	Petropavlovsk-	27.30	283	P	P	22 42 24.9	+0.1
RES	Resolute Bay	28.44	29	P	P	22 42 35.4	+0.7
	comp=Z,0.9nm,0.4s,baz=249,slow=11,SNR=6.3						
RES	Resolute Bay	28.44	29	P	P	22 42 34.6	-0.1
RES				pmax	pmax		
	comp=Z,10.0nm,1.3s						
RES	Resolute Bay	28.44	29	P	P	22 42 34.6	-0.1
PAHR	Pah Rah Range	28.48	112	P	P	22 42 35.5	-0.1
NVAR	Mina Array Bea	30.00	112	P	P	22 42 52.4	+3.2
	comp=Z,2.3nm,0.7s,baz=310,slow=8.5,SNR=13						
NVAR	Mina Array Bea	30.00	112	P	P	22 42 50.3	+1.1
R11A	Troy Canyon, C	31.46	109	P	P	22 43 03.5	+1.5
PD31	Pinedale Array	31.54	97	P	P	22 43 04.8	+2.0
PDAR	Pinedale Array	31.54	97	P	P	22 43 05.6	+2.8
	comp=Z,1.3nm,0.5s,baz=319,slow=4.4,SNR=16						
RSSD	Black Hills	33.68	90	P	P	22 43 22.2	+0.8
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RSSD	Black Hills	33.68	90	P	P	22 43 22.2	+0.8
RSSD				IAmb	IAmb	22 43 36.9	
	comp=Z,6.8nm,0.8s						
TIXI	Tiksi	33.69	326	P	P	22 43 20.2	-0.7
	comp=Z,1.0nm,0.7s,baz=112,slow=12,SNR=5.5						
TIXI				PcP	PcP	22 45 59.3	-0.5
	comp=Z,0.8nm,0.5s,baz=57,slow=2.9,SNR=3.0						
TIXI	Tiksi	33.69	326	*i* P	P	22 43 19.7	-1.2
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TIXI	Tiksi	33.69	326	P	P	22 43 20.0	-0.9
ULM	Lac du Bonnet	34.44	75	P	P	22 43 29.3	+1.6
	comp=Z,2.5nm,0.5s,baz=278,slow=8.1,SNR=4.5						
AGMN	Agassiz Nation	35.57	78	P	P	22 43 37.4	0.0
AGMN				IAmb	IAmb	22 43 51.9	
	comp=Z,5.8nm,0.7s						
YAK	Yakutsk	36.91	310	*ce*P	P	22 43 46.3	-2.4
YAK				pmax	pmax		
	comp=Z,13nm,0.8s						
NEEM	North Greenlan	38.08	20	*i* P	P	22 43 52.2	-6.5
NEEM				IAmb	IAmb	22 44 00.4	
	comp=Z,5.9nm,0.7s						
KLR	Kul'dur	43.04	293	P	P	22 44 38.2	-1.5
	comp=Z,11nm,0.7s,baz=59,slow=8.1,SNR=31						
KLR	Kul'dur	43.04	293	*ce*P	P	22 44 37.6	-2.1
KLR				pmax	pmax		
	comp=Z,11nm,0.6s						
KLR	Kul'dur	43.04	293	P	P	22 44 38.2	-1.5
SUMG	Summit	43.62	23	P	P	22 44 45.0	+0.4
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SUMG	Summit	43.62	23	*i* P	P	22 44 44.8	+0.2
SUMG				IAmb	IAmb	22 44 45.2	
	comp=Z,4.0nm,0.7s						
SUMG	Summit	43.62	23	P	P	22 44 45.0	+0.4
SUMG				IAmb	IAmb	22 44 45.8	
	comp=Z,5.2nm,0.7s						
DAG	Danmarks Havn	43.78	13	*i* P	P	22 44 44.4	-0.9
DAG				IAmb	IAmb	22 44 45.2	
	comp=Z,11nm,0.6s						
R40A	Maddies Statio	44.13	87	P	P	22 44 48.8	+0.2
R40A				IAmb	IAmb	22 45 02.4	
	comp=Z,5.5nm,0.7s						
HDIL	Hopedale	44.16	83	P	P	22 44 49.0	+0.1
HDIL				IAmb	IAmb	22 44 51.1	
	comp=Z,14nm,0.9s						
SPITS	Spitsbergen Ar	45.15	3	P	P	22 44 56.3	0.0
	comp=Z,1.9nm,0.3s,baz=17,slow=6.1,SNR=25						
SPITS	Spitsbergen Ar	45.15	3	P	P	22 44 56.2	0.0
SPITS				pmax	pmax		
	comp=Z,67nm,1.4s						
SPB2	Spitsbergen Ar	45.15	3	P	P	22 44 56.2	-0.1
DBG	Daneborg	45.63	16	*i* P	P	22 44 59.1	-0.9
DBG				IAmb	IAmb	22 45 00.2	
	comp=Z,7.6nm,1.2s						
ICESG	Greenland Ices	45.83	27	*i* P	P	22 45 02.0	-0.1
ICESG				IAmb	IAmb	22 45 02.4	
	comp=Z,3.9nm,0.8s						
SCHQ	Schefferville	45.99	53	P	P	22 45 04.0	+0.8
	comp=Z,3.0nm,0.3s,baz=320,slow=7.3,SNR=16						
SCHQ				LR	LR	23 05 51.3	
	comp=Z,72nm,18.8s,baz=60,slow=38						
SCHQ	Schefferville	45.99	53	P	P	22 45 03.7	+0.4
NRIK	Noril'sk	46.45	334	P	P	22 45 06.0	-0.6
	comp=Z,2.2nm,0.4s,baz=71,slow=3.7,SNR=4.7						
NRIK				LR	LR	23 06 12.4	
	comp=Z,50nm,21.8s,baz=26,slow=38						
NRIK	Noril'sk	46.45	334	P	P	22 45 05.9	-0.6
NRIK				IAmb	IAmb	22 45 32.3	
	comp=Z,9.2nm,1.4s						
N49A	Columbus Grove	46.68	79	P	P	22 45 09.1	+0.3
N49A				IAmb	IAmb	22 45 10.5	
	comp=Z,12nm,0.9s						
P48A	Milroy	47.04	81	P	P	22 45 11.9	+0.3
P48A				IAmb	IAmb	22 45 12.3	
	comp=Z,6.8nm,0.5s						
WVT	Waverly	48.13	86	P	P	22 45 21.2	+1.1
WVT				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WVT	Waverly	48.13	86	P	P	22 45 21.2	+1.1
WVT				IAmb	IAmb	22 45 34.6	
	comp=Z,3.5nm,0.8s						
R50A	Paris	48.48	81	P	P	22 45 23.2	+0.4
R50A				IAmb	IAmb	22 45 37.1	
	comp=Z,9.9nm,0.8s						
S51A	Beattyville	49.35	81	P	P	22 45 30.2	+0.8
S51A				IAmb	IAmb	22 45 43.4	
	comp=Z,8.3nm,0.8s						
L56A	Greenwood	49.35	73	P	P	22 45 30.5	+1.0
FRNY	Flat Rock	49.50	67	P	P	22 45 30.5	0.0
FRNY				IAmb	IAmb	22 45 43.8	
	comp=Z,13nm,1.2s						
Z47A	Carrollton	50.18	89	P	P	22 45 36.6	+0.9
E62A	Clayton Lake	50.28	63	P	P	22 45 36.9	+0.5
E62A				IAmb	IAmb	22 46 00.2	
	comp=Z,15nm,1.3s						
Y49A	Blount Mountai	50.60	87	P	P	22 45 39.9	+0.9
JWT	Wachi	50.76	276	P	P	22 45 40.9	+0.7
V53A	Saluda	51.22	82	P	P	22 45 43.9	+0.3
V53A				IAmb	IAmb	22 45 45.8	
	comp=Z,6.1nm,0.9s						
F64A	Sherman	51.40	63	P	P	22 45 44.8	0.0
KSRS	Korea Array	53.20	284	P	P	22 45 58.2	0.0
	comp=Z,1.6nm,0.7s,baz=39,slow=7.2,SNR=7.4						
KSRS				LR	LR	23 08 00.0	
	comp=Z,25nm,22.0s,baz=36,slow=36						
ARCES	ARCESS Array B	53.96	0	P	P	22 46 02.1	-1.3
	comp=Z,2.0nm,0.8s,baz=13,slow=8.3,SNR=8.2						
ARCES				LR	LR	23 11 21.5	
	comp=Z,36nm,18.4s,baz=45,slow=39						
ARCES	ARCESS Array B	53.96	0	P	P	22 46 02.8	-0.6
ARCES				pmax	pmax		
	comp=Z,22nm,1.3s						
ARCES	ARCESS Array B	53.96	0	P	P	22 46 02.8	-0.6
SONM	Songino Array	56.10	307	P	P	22 46 18.9	-0.4
	comp=Z,1.5nm,0.7s,baz=44,slow=6.5,SNR=15						
SONM				LR	LR	23 12 03.0	
	comp=Z,126nm,20.3s,baz=34,slow=38						
SONM	Songino Array	56.10	307	P	P	22 46 18.6	-0.7
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	Songino Array	56.10	307	P	P	22 46 18.6	-0.7
SONM				IAmb	IAmb	22 46 31.8	
	comp=Z,3.4nm,0.9s						
ZAA0	Zalesovo Array	59.52	324	P	P	22 46 42.2	-0.9
ZAA0				IAmb	IAmb	22 46 54.2	
	comp=Z,2.8nm,0.8s						
ZALV	Zalesovo Beam	59.52	324	P	P	22 46 41.8	-1.3
	comp=Z,2.6nm,0.8s,baz=38,slow=7.3,SNR=6.8						
ZALV				LR	LR	23 14 16.0	
	comp=Z,43nm,18.9s,baz=67,slow=38						
ZALV	Zalesovo Beam	59.52	324	*i* P	P	22 46 42.9	-0.2
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZALV	Zalesovo Beam	59.52	324	P	P	22 46 42.5	-0.6
PRGR	Permogore	60.86	349	*e*P	P	22 46 51.8	-0.2
PRGR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NC405	NORSAR Array S	61.91	8	P	P	22 46 58.3	-0.9
NC405				IAmb	IAmb	22 47 04.2	
	comp=Z,4.0nm,0.8s						
NB2	NORSAR Subarra	61.95	8	P	P	22 46 59.3	-0.2
	comp=Z,31nm,1.4s,baz=351,slow=6.9						
NB2	NORSAR Subarra	61.95	8	P	P	22 46 59.3	-0.2
	baz=351,slow=6.9						
NOA	NORSAR Array B	61.95	8	P	P	22 46 59.3	-0.2
	comp=Z,3.3nm,0.8s,baz=353,slow=6.8,SNR=9.2						
FIA1	FINESS Array S	62.09	360	P	P	22 46 60.0	-0.4
FINES	FINESS Array B	62.09	360	P	P	22 47 00.0	-0.3
	comp=Z,1.7nm,0.4s,baz=17,slow=8.1,SNR=26						
FINES	FINESS Array B	62.09	360	P	P	22 47 00.0	-0.3
KLMR	Klimovskoe	62.17	352	*e*P	P	22 46 57.6	-3.3
KLMR				pmax	pmax		
	comp=Z,19nm,1.5s						
KLMR	Klimovskoe	62.17	352	*e*P	P	22 46 57.6	-3.3
KLMR				AMP		22 47 03.2	
	comp=Z,19nm,1.5s						
DGZ	Jazzator, Alta	62.19	320	*i* P	P	22 47 00.8	-0.7
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	Hagfors	63.02	7	P	P	22 47 06.7	0.0
	comp=Z,4.7nm,0.6s,baz=37,slow=5.9,SNR=38						
HFS	Hagfors	63.02	7	P	P	22 47 06.7	0.0
KIRV	Kirov	63.40	346	LR	LR	23 17 22.1	
	comp=Z,29nm,18.3s,baz=8.4,slow=39						
KIRV	Kirov	63.40	346	*ce*P	P	22 47 08.2	-0.9
ARU	Arti	64.02	340	P	P	22 47 12.5	-0.8
	comp=Z,0.9nm,0.6s,baz=16,slow=8.7,SNR=5.8						
ARU				LR	LR	23 18 07.2	
	comp=Z,36nm,18.3s,baz=78,slow=39						
ARU	Arti	64.02	340	*c i*P	P	22 47 12.4	-0.9
ARU						22 47 47.9	
ARU						22 49 33.2	
ARU				S	S	22 55 46.9	+0.3
ARU				SS	SS	22 59 51.6	-3.0
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ARU	Arti	64.02	340	P	P	22 47 13.6	+0.3
ARU				IAmb	IAmb	22 47 33.2	
	comp=Z,10.0nm,1.3s						
KURK	Kurchatov	64.26	326	*i* P	P	22 47 14.7	-0.2
KURK				pmax	pmax		
	comp=Z,5.0nm,1.6s						
KURK	Kurchatov	64.26	326	P	P	22 47 14.8	-0.2
BRVK	Borovoye	64.55	332	*ce*P	P	22 47 15.6	-1.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	Borovoye	64.55	332	P	P	22 47 16.3	-0.5
BRVK				IAmb	IAmb	22 47 27.9	
	comp=Z,5.2nm,0.8s						
EKA	Eskdalemuir Ar	65.80	18	P	P	22 47 25.5	+0.6
	comp=Z,2.5nm,0.5s,baz=337,slow=5.2,SNR=19						
EKA	Eskdalemuir Ar	65.80	18	P	P	22 47 25.5	+0.6
ESK	Eskdalemuir	65.81	18	P	P	22 47 25.5	+0.6
ESK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ESK	Eskdalemuir	65.81	18	P	P	22 47 25.5	+0.6
ESK				IAmb	IAmb	22 47 51.9	
	comp=Z,9.3nm,1.0s						
MK31	Makanchi Array	66.47	321	P	P	22 47 28.3	-1.0
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	Makanchi Array	66.47	321	P	P	22 47 28.3	-1.0
MKAR	Makanchi Array	66.47	321	P	P	22 47 28.6	-0.8
	comp=Z,0.8nm,0.7s,baz=38,slow=6.6,SNR=11						
MKAR				LR	LR	23 18 49.2	
	comp=Z,76nm,19.7s,baz=22,slow=38						
MKAR	Makanchi Array	66.47	321	P	P	22 47 28.7	-0.6
MKAR	Makanchi Array	66.47	321	P	P	22 47 28.7	-0.6
MAKZ	Makanchi	66.56	321	P	P	22 47 29.0	-1.0
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MAKZ	Makanchi	66.56	321	P	P	22 47 29.0	-1.0
MAKZ				IAmb	IAmb	22 47 50.1	
	comp=Z,3.8nm,1.1s						
OBN	Obninsk	68.08	353	*e*P	P	22 47 38.4	-0.9
OBN				*e*		22 50 09.3	
OBN				*e*PPP	PPP	22 51 47.7	
OBN				pmax	pmax		
	comp=Z,12nm,1.3s						
MNK	Minsk	69.03	359	*i* P	P	22 47 44.8	-0.5
MNK				*i*		22 50 17.1	
MNK				*i* PPP	PPP	22 51 57.0	
MNK				*i* S	S	22 56 49.0	+1.7
MNK				*i* SS	SS	23 01 17.3	+5.2
MNK				pmax	pmax		
	comp=E,3.0nm,1.2s						
MNK				pmax	pmax		
	comp=Z,15nm,1.0s						
MNK				pmax	pmax		
	comp=N,17nm,0.9s						
MNK				MLR	MLR		
	comp=E,41nm,28.0s						
MNK				MLR	MLR		
	comp=Z,101nm,28.0s						
MNK				MLR	MLR		
	comp=N,335nm,30.0s						
AKTO	Aktyubinsk	69.81	339	P	P	22 47 49.6	-0.6
	comp=N,2.3nm,0.7s,baz=46,slow=5.0,SNR=5.9						
ABKAR	Akbulak array	70.53	337	P	P	22 47 53.9	-0.7
ABKAR	Akbulak array	70.53	337	P	P	22 47 54.0	-0.5
ABKAR				IAmb	IAmb	22 48 06.3	
	comp=Z,2.8nm,0.8s						
CLL	Collm	71.75	8	*e*P	P	22 48 01.0	-0.9
CLL	Collm	71.75	8	*e*P	P	22 48 01.0	-0.9
BOOM	Boomskoye usch	72.40	323	P	P	22 48 05.9	-0.4
BOOM				pmax	pmax		
	comp=Z,20nm,1.5s						
BOOM	Boomskoye usch	72.40	323	P	P	22 48 05.9	-0.4
BOOM				IAmb	IAmb	22 48 24.5	
	comp=Z,20nm,1.5s						
CHVC	Chvalec	72.68	6	*e*P	P	22 48 08.2	+0.6
OSTC	Ostas	72.72	6	*e*P	P	22 48 08.4	+0.6
AAK	Ala-Archa	72.74	324	*i* P	P	22 48 07.7	-0.5
AAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AAK	Ala-Archa	72.74	324	P	P	22 48 08.0	-0.3
AKASG	Malin Array Be	72.81	358	P	P	22 48 07.4	-0.9
	comp=Z,3.3nm,0.5s,baz=6.2,slow=6.1,SNR=21						
AKASG	Malin Array Be	72.81	358	P	P	22 48 07.6	-0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	72.81	358	P	P	22 48 07.5	-0.7
AKBB	Malin Array Si	72.81	358	*ce*P	P	22 48 07.5	-0.8
AKBB	Malin Array Si	72.81	358	P	P	22 48 07.4	-0.8
AKBB				IAmb	IAmb	22 48 33.3	
	comp=Z,7.3nm,0.9s						
DPC	Dobruska-Polom	72.93	6	*e*P	P	22 48 09.9	+0.8
DPC				*e*	pP	22 48 23.3	+3.2
DPC	Dobruska-Polom	72.93	6	*e*pP	pP	22 48 23.3	+3.2
DPC	Dobruska-Polom	72.93	6	*e*P	P	22 48 09.9	+0.8
PRU	Pruhonice	73.17	7	*e*P	P	22 48 11.6	+1.1
PRU				*e*	pP	22 48 24.4	+2.9
PRU	Pruhonice	73.17	7	*e*pP	pP	22 48 24.4	+2.9
PRU	Pruhonice	73.17	7	*e*P	P	22 48 11.6	+1.1
KRLC	Kraliky	73.23	6	*e*P	P	22 48 11.2	+0.3
KRLC				*e*	pP	22 48 24.3	+2.4
KRLC	Kraliky	73.23	6	*e*pP	pP	22 48 24.3	+2.4
KRLC	Kraliky	73.23	6	*e*P	P	22 48 11.2	+0.3
KKAR	Karatay Array	73.54	327	P	P	22 48 12.5	-0.3
KKAR	Karatay Array	73.54	327	P	P	22 48 12.5	-0.3
MORC	Moravsky Berou	73.57	5	⇑P	P	22 48 13.5	+0.6
MORC	Moravsky Berou	73.57	5	⇑P	P	22 48 13.5	+0.6
KHC	Kasperske Hory	73.96	8	*e*P	P	22 48 15.8	+0.7
KHC				*e*	pP	22 48 29.5	+3.3
KHC	Kasperske Hory	73.96	8	*e*P	P	22 48 15.8	+0.7
KHC				*e*pP	pP	22 48 29.5	+3.3
KHC	Kasperske Hory	73.96	8	P	P	22 48 15.5	+0.4
KHC				IAmb	IAmb	22 48 16.7	
	comp=Z,3.3nm,0.7s						
GEC2	GERESS Array S	74.25	8	P	P	22 48 17.0	+0.1
GEC2				IAmb	IAmb	22 48 19.5	
	comp=Z,9.3nm,1.5s						
GERES	GERESS Array B	74.25	8	P	P	22 48 17.4	+0.5
	comp=Z,2.2nm,0.8s,baz=1.9,slow=4.0,SNR=19						
GERES				LR	LR	23 23 11.5	
	comp=Z,23nm,18.9s,baz=304,slow=38						
GERES	GERESS Array B	74.25	8	P	P	22 48 17.2	+0.3
GERES	GERESS Array B	74.25	8	P	P	22 48 17.2	+0.3
CKRC	Cesky Krumlov	74.32	8	*e*P	P	22 48 18.8	+1.6
TRPA	Tarpa	75.40	2	⇑P	P	22 48 24.3	+0.9
SORM	Soroca	75.40	358	⇑P	P	22 48 23.0	-0.4
SORM	Soroca	75.40	358	⇑P	P	22 48 23.0	-0.4
MOTA	Moosalm	75.51	10	*e*P	P	22 48 24.8	+0.5
	comp=Z,4.5nm,1.0s						
WATA	Walderalm	75.56	10	*i* P	P	22 48 25.4	+0.8
	comp=Z,10nm,1.2s						
WTTA	Wattenberg	75.64	10	*e*P	P	22 48 26.0	+1.0
	comp=Z,7.4nm,0.8s						
SQTA	Sankt Quirin	75.64	10	*i* P	P	22 48 25.4	+0.3
	comp=Z,9.5nm,1.0s						
FETA	Feichten	75.80	10	*e*P	P	22 48 26.3	+0.3
	comp=Z,4.6nm,1.0s,SNR=4.5						
BUR08	Bucovina Ar. S	75.92	0	P	P	22 48 26.7	+0.2
BURAR	Bucovina Array	75.94	0	⇓P	P	22 48 26.7	0.0
BURAR	Bucovina Array	75.94	0	⇓P	P	22 48 26.7	0.0
BURAR	Bucovina Array	75.94	0	P	P	22 48 26.9	+0.2
DAVOX	Davos/Dischmat	75.95	11	P	P	22 48 27.8	+1.0
	comp=Z,2.5nm,0.8s,baz=354,slow=6.2,SNR=6.3						
DAVOX	Davos/Dischmat	75.95	11	P	P	22 48 27.8	+1.0
KBA	Koelnbreinsper	75.98	9	*i* P	P	22 48 28.1	+1.1
	comp=Z,11nm,1.3s,SNR=6.4						
ABTA	Abfaltersbach	76.23	9	*i* P	P	22 48 29.6	+1.2
	comp=Z,4.8nm,1.3s						
BTK	Batken	76.23	326	P	P	22 48 28.2	-0.3
BTK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BTK	Batken	76.23	326	P	P	22 48 28.2	-0.3
BTK				IAmb	IAmb	22 48 46.1	
	comp=Z,6.1nm,0.9s						
ZOU	Zoufplan	76.46	9	P	P	22 48 29.7	-0.1
SOKA	Soboth	76.50	7	*i* P	P	22 48 30.4	+0.5
	comp=Z,1.9nm,0.6s						
PRED	Cave del Predi	76.63	9	P	P	22 48 30.6	0.0
PRED				IAmb	IAmb	22 48 36.5	
	comp=Z,7.4nm,1.4s						
OBKA	Obir	76.64	8	*i* P	P	22 48 31.2	+0.5
	comp=Z,6.6nm,0.6s						
CIMO	Cimolais	76.66	9	P	P	22 48 30.4	-0.3
DRGR		76.74	2	⇑P	P	22 48 31.6	+0.4
DRGR		76.74	2	⇑P	P	22 48 31.6	+0.4
CTI	Castel Tesino	76.85	10	P	P	22 48 31.5	-0.4
CTI				pmax	pmax		
	comp=Z,9.0nm,1.5s						
CTI	Castel Tesino	76.85	10	P	P	22 48 31.5	-0.4
CTI				IAmb	IAmb	22 48 42.6	
	comp=Z,9.3nm,1.5s						
GAR	Garm	77.36	326	P	P	22 48 34.2	-0.6
GOF	Gofitskoye	77.45	347	⇑*e*P	P	22 48 35.2	+0.1
GOF				pmax	pmax		
	comp=Z,29nm,0.9s						
LSA	Lhasa	77.67	306	P	P	22 48 36.6	-0.6
LSA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LSA	Lhasa	77.67	306	P	P	22 48 36.6	-0.6
LSA				IAmb	IAmb	22 48 49.9	
	comp=Z,5.2nm,0.9s						
PLOR	Plostina	77.71	359	⇑P	P	22 48 36.1	-0.5
PLOR	Plostina	77.71	359	⇑P	P	22 48 36.1	-0.5
COVR	Voineasa-Covas	77.71	360	⇓P	P	22 48 48.7	+12
BZS	Buzias	77.89	3	⇑P	P	22 48 38.0	+0.5
BZS	Buzias	77.89	3	⇑P	P	22 48 38.0	+0.5
CHGR	Chuyangaron	78.03	327	P	P	22 48 38.1	-0.5
CFR	Carcaliu	78.36	358	⇓P	P	22 48 40.8	+0.7
CFR	Carcaliu	78.36	358	⇓P	P	22 48 40.8	+0.7
KIV	Kislovodsk	78.58	348	*e*P	P	22 48 41.7	+0.2
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HERR	Herculane	78.64	2	⇓P	P	22 48 41.8	+0.1
KBZ	Khabaz	78.78	347	P	P	22 48 43.2	+0.7
	comp=Z,6.2nm,0.9s,baz=334,slow=3.8,SNR=12						
KBZ				LR	LR	23 26 42.9	
	comp=Z,21nm,19.6s,baz=24,slow=38						
KBZ	Khabaz	78.78	347	*ce*P	P	22 48 42.7	+0.2
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TIRR	Tirgusor	79.08	358	⇓P	P	22 48 35.9	-8.2
TIRR	Tirgusor	79.08	358	⇓P	P	22 48 35.9	-8.2
BOVS	Bovan	79.87	3	⇑P	P	22 48 48.3	-0.2
ESBB	Sonseca Array	80.69	23	P	P	22 48 53.5	+0.5
ESBB				IAmb	IAmb	22 48 55.0	
	comp=Z,4.3nm,0.9s						
ESDC	Sonseca Array	80.69	23	P	P	22 48 53.9	+0.9
	comp=Z,2.5nm,0.8s,baz=342,slow=5.2,SNR=19						
ESDC	Sonseca Array	80.69	23	P	P	22 48 53.5	+0.5
NIL	Nilore	81.29	321	P	P	22 48 55.7	-0.6
NIL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NIL	Nilore	81.29	321	P	P	22 48 55.6	-0.6
NIL				IAmb	IAmb	22 49 11.0	
	comp=Z,7.4nm,1.0s						
GEYT	Alibeck	81.70	335	P	P	22 48 58.9	+0.6
	comp=Z,1.9nm,0.8s,baz=30,slow=6.8,SNR=2.6						
GEYT				LR	LR	23 31 28.8	
	comp=Z,28nm,18.4s,baz=30,slow=40						
KBL	Kabul	81.86	325	P	P	22 48 58.1	-1.4

KBL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KBL	Kabul	81.86	325	P	P	22 48 58.1	-1.4
KBL				IAmb	IAmb	22 49 13.3	
	comp=Z,4.9nm,1.1s						
CMAR	Chiang Mai Arr	83.51	294	P	P	22 49 08.0	-0.1
	comp=Z,0.9nm,0.3s,baz=11,slow=5.5,SNR=5.1						
CMAR				LR	LR	23 30 35.9	
	comp=Z,30nm,18.3s,baz=23,slow=39						
CMAR	Chiang Mai Arr	83.51	294	P	P	22 49 07.4	-0.6
CMAR	Chiang Mai Arr	83.51	294	P	P	22 49 07.4	-0.6
BR131	Keskin Array S	83.59	354	P	P	22 49 08.0	-0.3
BR131				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BR131	Keskin Array S	83.59	354	P	P	22 49 08.0	-0.3
BR131				IAmb	IAmb	22 49 09.6	
	comp=Z,3.7nm,0.9s						
BRTR	Keskin Array B	83.59	354	P	P	22 49 08.5	+0.2
	comp=Z,2.1nm,0.9s,baz=23,slow=2.8,SNR=11						
BRTR				LR	LR	23 31 58.9	
	comp=Z,13nm,18.2s,baz=348,slow=40						
BRTR	Keskin Array B	83.59	354	P	P	22 49 08.2	-0.2
BNN	Bunyan	84.31	352	P	P	22 49 11.5	-0.5
MDT	Midelt	87.12	25	P	P	22 49 27.1	+1.2
	comp=Z,1.5nm,0.9s,baz=339,slow=2.8,SNR=4.6						
QSPA	South Pole Qui	146.60	180	PKPbc	PKPbc	22 56 20.3	+0.2
	comp=Z,4.5nm,1.0s,baz=48,slow=4.0,SNR=8.4						
QSPA	South Pole Qui	146.60	180		PKPbc	22 56 20.6	+0.5
BOSA	Boshof	151.82	1	PKPbc	PKPbc	22 56 33.9	-0.6
	comp=Z,3.1nm,1.0s,baz=9.5,slow=6.1,SNR=2.1						
BOSA	Boshof	151.82	1	PKIKP	PKPbc	22 56 33.3	-1.2
BOSA	Boshof	151.82	1		PKPbc	22 56 33.3	-1.2

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*IDC **12** 22:42:44.9±21.0, 10°.81N×126°.27E, h259km±209km, mb3.2/6, mb1 3.3/6, mb1mx2.7/51, mbtmp3.8/6, MS3.7/1, Ms1 3.7/1, ms1mx2.3/21, Error ellipse: s-maj=171.5km s-min=32.5km az=63.0*

ISC 12 22:42:50.0±1.6**, 10°.5N**±0°.2×**125°.5E**±0°.6**, h300**km**, n9, σ1ˢ.64**/7**, mb3.3**/6**, 2C, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMPH	Davao City--Mi	3.40	180	⇑eP	Pn	22 43 58.5	+8.6
KCP	Kidapawan	3.49	186	⇑eP	Pn	22 43 50.3	-0.7
FITZ	Fitzroy Crossi	28.42	180	P	P	22 48 19.2	+1.5
	1.9nm,1.0s,baz=349,slow=10,SNR=2.1						
WRA	Warramunga Arr	31.48	164	P	P	22 48 45.1	+0.5
	0.2nm,0.6s,baz=345,slow=10.0,SNR=2.4						
ASAR	Alice Springs	34.94	166	P	P	22 49 12.8	-1.6
	0.3nm,0.5s,baz=354,slow=7.5,SNR=9.4						
TLY	Talaya	44.76	341	LR	LR	23 11 50.0	
	comp=Z,86nm,18.1s,baz=32,slow=39						
MKAR	Makanchi Array	51.38	323	P	P	22 51 25.0	+0.3
	0.2nm,0.7s,baz=121,slow=8.3,SNR=1.5						
FINES	FINESS Array B	85.32	332	P	P	22 54 51.6	-1.8
	2.2nm,0.7s,baz=49,slow=6.5,SNR=7.1						
HFS	Hagfors	91.48	332	P	P	22 55 23.9	+1.4
	2.8nm,1.0s,baz=64,slow=6.6,SNR=7.1						

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*ISK **12** 22:43:48.9, 37°.58N×23°.06E, h24km, ML3.2/16*
*ATH **12** 22:43:48.0, 37°.61N×22°.91E, h78km±2km, ML3.0/23, Error ellipse: s-maj=2.9km s-min=1.4km az=76.0*
*IDC **12** 22:43:49.6±2.7, 37°.30N×22°.75E, h106km±45km, mb3.1/4, mb1 3.1/7, mb1mx2.9/53, mbtmp3.4/7, Error ellipse: s-maj=44.5km s-min=28.5km az=25.0*
*THE **12** 22:43:50.3, 37°.56N×22°.93E, h77km±1km, ML3.1/3, Error ellipse: s-maj=1.7km s-min=0.6km az=116.0*

ISC 12 22:43:49.2±0.8**, 37°.56N**±0°.03×**22°.89E**±0°.03**, h87**km±5km**, n111, σ1ˢ.22**/141**, mb3.2**/4**, 9C-5D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPID	Epidavros	0.20	73	P	Pn	22 44 01.6	-0.3
EPID				S	Sn	22 44 09.8	-1.4
KRND	KRANIDI	0.27	129	P	Pn	22 44 02.2	0.0
KRND				S	Sn	22 44 11.0	-0.7
KRND	KRANIDI	0.27	129	P	Pn	22 44 02.1	0.0
KRND				S	Sn	22 44 10.8	-0.9
KRND				AML	AML	22 44 11.6	
	comp=N,7239μm,0.2s						
KRND				AML	AML	22 44 11.7	
	comp=E,10686μm,0.4s						
LTK	Loutraki	0.47	8	P	Pn	22 44 03.2	-0.3
LTK	Loutraki	0.47	8	P	Pn	22 44 03.1	-0.3
LTK				AML	AML	22 44 15.1	
	comp=E,1867μm,0.2s						
LTK				AML	AML	22 44 16.6	
	comp=N,1796μm,0.2s						
THAL	Thalero	0.51	340	P	Pn	22 44 03.5	-0.3
THAL				S	Sn	22 44 13.1	-1.4
THAL				AML	AML	22 44 15.3	
	comp=N,6791μm,0.2s						
THAL				AML	AML	22 44 16.1	
	comp=E,5433μm,0.3s						
VIL2	Platees	0.72	25	P	Pn	22 44 05.3	-0.4
VIL2				S	Sn	22 44 16.0	-2.0
VIL2				AML	AML	22 44 17.4	
	comp=E,1378μm,0.2s						
VIL2				AML	AML	22 44 19.0	
	comp=N,1231μm,0.3s						
KLV	Kalavryta, Ach	0.76	310	P	Pn	22 44 06.2	+0.1
KLV	Kalavryta, Ach	0.76	310	P	Pn	22 44 06.1	0.0
KLV				S	Sn	22 44 17.8	-0.9
KLV				AML	AML	22 44 18.2	
	comp=N,1298μm,0.2s						
KLV				AML	AML	22 44 19.6	
	comp=E,1599μm,0.5s						
ATH	Athens Observa	0.78	58	P	Pn	22 44 06.5	+0.2
ATH				S	Sn	22 44 18.2	-0.8
	comp=E,835nm,0.4s						
ATH	Athens Observa	0.78	58	P	Pn	22 44 06.5	+0.2
ATH				S	Sn	22 44 18.1	-0.8
ATH				AML	AML	22 44 18.7	
	comp=N,1692μm,0.2s						
ATH				AML	AML	22 44 18.8	
	comp=E,1636μm,0.5s						
VLY	Voula,Athens	0.78	67	P	Pn	22 44 06.4	+0.1
VLY				S	Sn	22 44 18.5	-0.5
	comp=E,1μm,0.2s						
VLY	Voula,Athens	0.78	67	P	Pn	22 44 06.3	0.0
VLY				S	Sn	22 44 17.3	-1.7
VLY				AML	AML	22 44 18.6	
	comp=N,1812μm,0.3s						
VLY				AML	AML	22 44 19.6	
	comp=E,2220μm,0.2s						
ATHU	Athens Univers	0.82	60	P	Pn	22 44 06.7	0.0
ATHU				S	Sn	22 44 18.5	-1.3
VLI	Veliai	0.84	177	P	Pn	22 44 06.8	-0.1
VLI				S	Sn	22 44 19.2	-0.9
VLI	Veliai	0.84	177	P	Pn	22 44 06.7	-0.1
VLI				AML	AML	22 44 19.6	
	comp=N,871μm,0.2s						
VLI				AML	AML	22 44 20.3	
	comp=E,1214μm,0.3s						
ITM	Ithomi	0.85	244	P	Pn	22 44 08.4	+1.3
ITM				S	Sn	22 44 22.1	+1.7
ITM	Ithomi	0.85	244	P	Pn	22 44 08.3	+1.3
ITM				S	Sn	22 44 21.2	+0.9
ITM				AML	AML	22 44 24.2	
	comp=E,1163μm,0.3s						
ITM				AML	AML	22 44 24.6	
	comp=N,1703μm,0.8s						
ITM	Ithomi	0.85	244	PG	Pn	22 44 08.3	+1.3
ITM				SG	Sn	22 44 21.4	+1.0
MNVA	Monemvasia	0.88	172	P	Pn	22 44 06.6	-0.7
PTL	Penteli	0.92	57	P	Pn	22 44 08.1	+0.3
PTL	Penteli	0.92	57	P	Pn	22 44 08.0	+0.3
PTL				S	Sn	22 44 20.9	-0.8
PTL				AML	AML	22 44 21.6	
	comp=E,2259μm,0.3s						
PTL				AML	AML	22 44 21.6	
	comp=N,834μm,0.2s						
DLFA	Delphi	0.97	342	P	Pn	22 44 08.3	-0.1
DLFA				S	Sn	22 44 22.0	-0.8
DLFA				AML	AML	22 44 23.0	
	comp=E,1575μm,0.4s						
DLFA				AML	AML	22 44 23.0	
	comp=N,2018μm,0.4s						
DION	Dionisos Attik	0.98	58	P	Pn	22 44 09.0	+0.5
DION	Dionisos Attik	0.98	58	P	Pn	22 44 09.0	+0.5
DION				S	Sn	22 44 22.1	-0.9
DION				AML	AML	22 44 22.8	
	comp=N,3562μm,0.3s						
DION				AML	AML	22 44 23.0	
	comp=E,3159μm,0.2s						
LAKA	Lakka	0.99	314	P	Pn	22 44 08.9	+0.3
LAKA				AML	AML	22 44 23.5	
	comp=N,2276μm,0.8s						
LAKA				AML	AML	22 44 24.3	
	comp=E,1012μm,0.2s						
DRO	Drossia	1.01	293	P	Pn	22 44 09.8	+1.0
DRO				S	Sn	22 44 24.6	+1.1
	comp=E,1μm,0.4s						
DRO	Drossia	1.01	293	P	Pn	22 44 09.7	+0.8
DRO				AML	AML	22 44 31.0	
	comp=N,2109μm,0.5s						
DRO				AML	AML	22 44 31.4	
	comp=E,2250μm,0.3s						
TRIZ	Trizonia	1.03	322	P	Pn	22 44 09.2	+0.2
LKR	Lokris	1.10	5	P	Pn	22 44 10.2	+0.4
LKR				S	Sn	22 44 25.1	-0.2
LKR	Lokris	1.10	5	P	Pn	22 44 10.0	+0.2
LKR				S	Sn	22 44 25.0	-0.3
LKR				AML	AML	22 44 25.5	
	comp=E,4350μm,0.2s						
LKR				AML	AML	22 44 25.7	
	comp=N,2744μm,0.2s						
PYL	PYLOS	1.13	234	P	Pn	22 44 10.5	+0.3
UPR	University Cam	1.13	310	P	Pn	22 44 11.6	+1.4
ATAL	Atalanti	1.14	5	P	Pn	22 44 10.6	+0.2
EFP	Efpalio	1.16	319	P	Pn	22 44 11.2	+0.5
EFP				S	Sn	22 44 27.4	+0.7
EFP	Efpalio	1.16	319	P	Pn	22 44 11.1	+0.5
EFP				AML	AML	22 44 27.6	
	comp=E,1260μm,0.3s						
EFP				AML	AML	22 44 28.5	
	comp=N,1157μm,0.2s						
RLS	Riolos of Patr	1.23	294	P	Pn	22 44 12.9	+1.5
RLS	Riolos of Patr	1.23	294	P	Pn	22 44 12.5	+1.1
RLS				AML	AML	22 44 37.1	
	comp=E,520μm,0.5s						
RLS				AML	AML	22 44 38.2	
	comp=N,952μm,0.5s						
KTHR	Kythira	1.30	176	P	Pn	22 44 13.2	+0.9
KTHA	Kythira Island	1.31	174	P	Pn	22 44 12.9	+0.5
KTHA	Kythira Island	1.31	174	P	Pn	22 44 12.8	+0.4
KARY	Karystos	1.32	68	P	Pn	22 44 13.0	+0.5
VTN	Vitineika	1.39	285	P	Pn	22 44 15.2	+1.8
KYMI	Kymi, Euboea I	1.44	41	P	Pn	22 44 14.4	+0.3
KYMI	Kymi, Euboea I	1.44	41	P	Pn	22 44 14.2	+0.2
KYMI				AML	AML	22 44 32.9	
	comp=N,334μm,0.3s						
KYMI				AML	AML	22 44 33.4	
	comp=E,284μm,0.5s						
MHLO	Agia Marina, M	1.49	125	P	Pn	22 44 15.1	+0.4
AGG	Agios Georgios	1.53	344	P	Pn	22 44 15.8	+0.6
AGG				S	Sn	22 44 35.6	+0.8
AGG	Agios Georgios	1.53	344	P	Pn	22 44 15.7	+0.5
AGG				AML	AML	22 44 40.4	
	comp=E,482μm,0.3s						
AGG				AML	AML	22 44 42.3	
	comp=N,450μm,0.5s						
AGG	Agios Georgios	1.53	344	PN	Pn	22 44 15.7	+0.5
AGG				SN	Sn	22 44 35.0	+0.2
MAKR	Makrakomi, Fth	1.57	338	P	Pn	22 44 16.4	+0.7
MAKR				AML	AML	22 44 42.0	
	comp=N,1142μm,0.5s						
MAKR				AML	AML	22 44 42.9	
	comp=E,877μm,0.3s						
EVR	Evrytania	1.60	328	P	Pn	22 44 16.9	+0.7
EVR	Evrytania	1.60	328	P	Pn	22 44 16.3	+0.1
EVR				AML	AML	22 44 40.8	
	comp=N,287μm,0.5s						
EVR				AML	AML	22 44 43.2	
	comp=E,375μm,0.5s						
ANKY	Antikythira Is	1.72	169	P	Pn	22 44 18.2	+0.5
NEO	Neokhori	1.77	9	P	Pn	22 44 18.7	+0.4
NEO	Neokhori	1.77	9	P	Pn	22 44 18.7	+0.4
NEO				AML	AML	22 44 40.5	
	comp=E,306μm,0.5s						
NEO				AML	AML	22 44 40.6	
	comp=N,486μm,0.3s						
XOR	Xorichti	1.82	8	P	Pn	22 44 19.3	+0.3
XOR				AML	AML	22 44 41.5	
	comp=E,193μm,0.6s						
XOR				AML	AML	22 44 42.0	
	comp=N,266μm,1.1s						
FSK	Fiskardo	2.04	297	P	Pn	22 44 23.4	+1.5
RODP	Rodopos	2.11	160	PN	Pn	22 44 23.4	+0.6
THL	Klokotos Trika	2.12	341	P	Pn	22 44 23.5	+0.7
APE	Apeiranthos	2.17	102	⇑P	Pn	22 44 23.0	-0.5
APE				⇑S	Sn	22 44 50.1	+0.3
APE	Apeiranthos	2.17	102	PN	Pn	22 44 22.9	-0.6
IMMV	Iera Moni Meta	2.27	157	P	Pn	22 44 25.1	+0.2
IMMV	Iera Moni Meta	2.27	157	PN	Pn	22 44 25.5	+0.6
KNDR	Palaiochora Ch	2.41	164	PN	Pn	22 44 27.6	+0.9
PAIG	Paliouri	2.45	14	P	Pn	22 44 27.5	+0.3
CHOS	Chios island	2.64	71	PN	Pn	22 44 29.3	-0.6
KPRO	Kipourio	2.67	334	P	Pn	22 44 32.4	+2.1
IDI	Anoyia	2.78	144	P	Pn	22 44 31.9	+0.1
	comp=N,2.4nm,0.3s,baz=326,slow=15,SNR=16						
IDI				S	Sn	22 45 02.8	-1.8
	comp=N,3.8nm,0.3s,baz=75,slow=23,SNR=1.8						
IGT	Igoumenitsa	2.81	315	P	Pn	22 44 33.1	+1.0
PLG	Polygyros	2.85	9	P	Pn	22 44 33.0	+0.4
SIGR	SIGRI	2.86	54	PN	Pn	22 44 32.7	0.0
HRKL	Herakleio	2.87	141	PN	Pn	22 44 33.4	+0.5
GVDS	Gavdos	2.88	160	PN	Pn	22 44 34.2	+1.2
GVD	Gavdhos	2.88	160	PN	Pn	22 44 33.7	+0.6
OUR	Ouranopolis	2.90	17	PN	Pn	22 44 34.0	+0.7
URLA	Izmir	3.04	74	PN	Pn	22 44 34.9	-0.3
SRN	Sarande	3.24	317	P	Pn	22 44 38.9	+1.1
BLCB	Balcova	3.39	75	PN	Pn	22 44 39.9	0.0
GRG	Griva	3.42	354	P	Pn	22 44 41.5	+1.2
GRG	Griva	3.42	354	PN	Pn	22 44 41.1	+0.8
FNA	Florina	3.43	340	P	Pn	22 44 41.3	+0.8
FNA	Florina	3.43	340	PN	Pn	22 44 42.6	+2.1
SRS	Serrai	3.60	9	P	Pn	22 44 43.6	+0.9
KNT	Kendrikon	3.60	0	P	Pn	22 44 44.3	+1.5
KNT	Kendrikon	3.60	0	PN	Pn	22 44 44.0	+1.2
ZKR	Zakros	3.63	131	PN	Pn	22 44 44.4	+1.2
TIR	Tirane	4.45	329	⇓S	Sn	22 45 44.2	-0.6
BOSS	Bosilegrad	4.94	357	ePn	Pn	22 45 02.5	+1.5
VTS	Vitosha	5.06	3	⇑P	Pn	22 45 02.6	-0.1
VTS				⇑S	Sn	22 45 59.0	-1.0
TIP	Timpagrande	5.08	290	⇑P	Pn	22 44 59.7	-3.2
TIP				⇓S	Sn	22 45 57.8	-2.5
BARS	Barje	5.32	351	ePn	Pn	22 45 08.6	+2.5
PDG	Podgorica	5.61	331	⇑P	Pn	22 45 08.1	-1.9
PDG				⇑S	Sn	22 46 09.5	-3.5
MATE	Matera	5.71	305	⇓P	Pn	22 45 09.1	-2.3
MATE				⇓S	Sn	22 46 09.4	-6.2
ZAPS	Zavoj	5.71	358	ePn	Pn	22 45 17.2	+5.7
SELS	Selova	5.81	347	ePn	Pn	22 45 11.7	-1.2
SJES	Sjenica	6.12	340	ePn	Pn	22 45 16.7	-0.4
BOVS	Bovan	6.14	352	⇓P	Pn	22 45 16.6	-0.6
ZAGS	Zajecar	6.27	356	ePn	Pn	22 45 22.1	+3.1
IVAS	Ivanjica	6.36	342	ePn	Pn	22 45 18.5	-1.9
BBLS	Lazići	6.83	338	ePn	Pn	22 45 25.3	-1.5
DIVS	Divibare	6.89	342	ePn	Pn	22 45 26.2	-1.4
TRUS	Trudelj	6.92	345	ePn	Pn	22 45 18.8	-9.1
BZS	Buzias	8.11	354	⇑P	Pn	22 45 43.3	-0.8
BZS				⇑S	Sn	22 46 50.7	-23
BRTR	Keskin Array B	8.69	72	P	Pn	22 45 55.9	+3.7
	comp=N,0.1nm,0.3s,baz=253,slow=14,SNR=4.8						
MMAI	Mount Meron Ar	11.19	110	P	Pn	22 46 25.2	-1.0
	comp=N,0.3nm,0.3s,baz=308,slow=12,SNR=6.1						
GERES	GERESS Array B	13.11	332	P	P	22 47 00.4	+1.5
	comp=N,0.3nm,0.3s,baz=148,slow=12,SNR=10						
MNK	Minsk	17.29	10	i P	Pn	22 47 44.9	0.0
	comp=E,3.0nm,1.2s						
MNK				i P	Pn	22 47 44.9	0.0
	comp=N,17nm,0.9s						
MNK				i P	Pn	22 47 44.9	0.0
	comp=Z,15nm,1.0s,baz=182						
HFS	Hagfors	23.35	348	P	P	22 48 48.7	-1.0
	comp=Z,1.2nm,0.5s,baz=161,slow=9.2,SNR=1.2						
NOA	NORSAR Array B	24.63	346	P	P	22 49 02.1	+0.8
	comp=Z,0.4nm,0.6s,baz=153,slow=11,SNR=1.6						
EKA	Eskdalemuir Ar	25.03	324	P	P	22 49 05.3	+0.4
	comp=Z,0.5nm,0.3s,baz=119,slow=9.0,SNR=7.5						
MKAR	Makanchi Array	44.03	58	P	P	22 51 48.9	+0.7
	comp=Z,0.1nm,0.4s,baz=273,slow=7.4,SNR=4.7						

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*BEO **12** 22:45:57.4±0.3, 43°.38N×18°.98E, h0km, ML1.6/9*
*RHSSO **12** 22:45:57.6±0.2, 43°.44N×18°.99E, h5km±2km, ML1.8/8*

ISC 12 22:45:57.2±1.0**, 43°.41N**±0°.03×**19°.00E**±0°.03**, h10**km±9km**, n19, σ0ˢ.95**/35**, 2C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPM	Unac-Piva	0.22	198	⇓iPg	Pg	22 46 02.4	+0.6
UPM				eSg	Sg	22 46 06.1	+1.2
RUDO	Rudo	0.34	52	⇑iPg	Pg	22 46 03.2	-0.8
RUDO				eSg	Sg	22 46 08.9	+0.3
BBLS	Lazići	0.54	33	⇓iPg	Pg	22 46 07.3	-0.5
BBLS				eSg	Sg	22 46 14.6	-0.4
BBLS	Lazići	0.54	33	ePg	Pg	22 46 07.5	-0.3
BBLS				eSg	Sg	22 46 15.2	+0.2
SJES	Sjenica	0.73	101	ePg	Pg	22 46 11.2	-0.1
SJES				eSg	Sg	22 46 21.2	+0.4
TREB	Trebinje	0.84	215	ePg	Pg	22 46 12.8	-0.6
TREB				eSg	Sg	22 46 25.3	+1.0
TREB	Trebinje	0.84	215	ePg	Pg	22 46 12.7	-0.6
TREB				eSg	Sg	22 46 23.2	-1.1
IVAS	Ivanjica	0.86	78	ePg	Pg	22 46 13.0	-0.7
IVAS				eSg	Sg	22 46 23.7	-1.2
PDG	Podgorica	1.00	169	eSg	Sg	22 46 30.1	+0.8
PDG	Podgorica	1.00	169	ePg	Pg	22 46 13.7	-2.7
PDG				eSg	Sg	22 46 28.3	-1.0
DIVS	Divibare	1.00	46	⇑iPg	Pg	22 46 15.4	-1.0
DIVS				eSg	Sg	22 46 29.5	+0.1
DIVS	Divibare	1.00	46	ePg	Pg	22 46 15.4	-1.0
DIVS				eSg	Sb	22 46 29.9	+0.1
STON	Ston	1.09	241	ePg	Pg	22 46 17.9	-0.3
STON				eSg	Sg	22 46 32.9	+0.5
STON	Ston	1.09	241	ePg	Pg	22 46 16.9	-1.3
STON				eSg	Sg	22 46 30.8	-1.6
DRME	Dracevica, Mon	1.23	174	eSg	Sg	22 46 37.9	+1.1
TRUS	Trudelj	1.30	51	ePg	Pg	22 46 21.8	-0.5
TRUS				eSg	Sn	22 46 39.8	+0.8
GRUS	Gruza	1.33	68	ePg	Pn	22 46 22.0	+0.1
GRUS				eSg	Sn	22 46 41.1	+1.4
FRGS	Fruska Gora	1.84	18	ePn	Pn	22 46 29.2	+0.3
FRGS				eSn	Sn	22 46 52.6	+0.3
MORH	Mrgy, Hungar	2.82	355	ePn	Pn	22 46 42.6	+0.4

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*MAN **12** 22:55:13.7, 14°.37N×124°.11E, h21km, mb4.7, ML3.6, MS3.5*
*IDC **12** 22:55:15.3±1.3, 13°.55N×124°.57E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.1/59, mbtmp3.5/5, MS2.4/2, Ms1 2.6/2, ms1mx2.2/28, Error ellipse: s-maj=57.5km s-min=20.1km az=63.0*

ISC 12 22:55:16.4±1.1**, 13°.16N**±0°.08×**123°.66E**±0°.09**, h10**km**, n19, σ2ˢ.82**/13**, mb3.5**/5**, 3C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	Guinayangan	1.40	302	⇑eP	Pg	22 55 44.5	+1.2
GQP				eS	Sg	22 56 05.2	+3.8
JCNP	Jose Panganiba	1.46	320	⇓eP	Pn	22 55 39.6	-3.3
JCNP				i S	Sb	22 55 57.6	-4.8
RCP	Roxas	1.83	210	⇑eP	Pg	22 56 02.2	+11
PGP	Puerto Galera	2.66	278	⇑eP	Pb	22 56 03.9	-0.3
PGP				i S	Sg	22 56 41.6	-0.3
TGY	Tagaytay City	2.81	290	Pn	Pg	22 56 11.4	+1.1
	baz=93,slow=15						
TBP	Tagbilaran	3.45	177	eP	Pn	22 56 06.8	-3.4
KAPI	Kappang	18.47	192	LR	LR	23 06 53.4	
	comp=Z,13nm,21.3s,baz=120,slow=37						
CMAR	Chiang Mai Arr	24.35	286	LR	LR	23 10 20.2	
	comp=Z,11nm,21.2s,baz=280,slow=36						
WRA	Warramunga Arr	34.53	162	P	P	23 02 06.4	+1.2
	0.3nm,0.4s,baz=346,slow=9.1,SNR=2.3						
SONM	Songino Array	37.45	341	P	P	23 02 29.3	-0.7
	0.3nm,0.5s,baz=159,slow=8.5,SNR=4.4						
ASAR	Alice Springs	37.95	165	P	P	23 02 36.1	+1.7
	0.6nm,0.3s,baz=340,slow=7.0,SNR=20						
H11S3	WAKE ISLAND Hy	41.66	77	T	T	23 46 22.0	
	baz=270,slow=75,SNR=171						
H11S1	WAKE ISLAND Hy	41.67	77	T	T	23 46 22.8	
	baz=270,slow=75,SNR=81						
H11S2	WAKE ISLAND Hy	41.68	77	T	T	23 46 23.4	
	baz=270,slow=75,SNR=109						
H11N1	WAKE ISLAND Hy	41.88	75	T	T	23 46 38.2	
	baz=267,slow=74,SNR=60						
H11N2	WAKE ISLAND Hy	41.89	75	T	T	23 46 38.9	
	baz=267,slow=74,SNR=54						
H11N3	WAKE ISLAND Hy	41.90	75	T	T	23 46 39.8	
	baz=267,slow=74,SNR=67						
MKAR	Makanchi Array	48.19	322	P	P	23 03 59.6	+2.4
	0.2nm,0.5s,baz=104,slow=7.9,SNR=1.3						
KURBB	Kurchatov Arra	52.26	325	P	P	23 04 30.2	+2.4
	0.2nm,0.5s,baz=118,slow=8.1,SNR=1.7						

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*TAP **12** 22:55:27.8, 24°.04N×122°.90E, h27km, ML2.9, D*
*JMA **12** 22:55:28.4±0.1, 24°.08N×122°.88E, h39km±4km, M2.4*

ISC 12 22:55:26.5±1.3**, 23°.97N**±0°.03×**122°.90E**±0°.02**, h21**km±4km**, n59, σ0ˢ.88**/101**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.48	5	P	Pn	22 55 37.3	-0.9
JYNG				S	Sb	22 55 43.3	+0.4
YOJ	Yonaguni jima	0.50	11	i P	Pn	22 55 37.5	-1.0
	baz=12						
YOJ				i S	Sn	22 55 44.2	-2.4
	baz=12						
YOJ	Yonaguni jima	0.50	11	P	Pn	22 55 37.6	-0.9
YOJ				S	Sn	22 55 44.1	-2.4
HATJ	Hateruma jima	0.83	84	P	Pn	22 55 43.9	+0.9
HATJ				eS	Sn	22 55 55.6	+1.0
IRIF	Iriomote-Funau	0.84	64	P	Pn	22 55 43.3	+0.2
IRIF				S	Sn	22 55 55.2	+0.3
JKRS	Kuro-shima	1.05	75	P	Pn	22 55 47.4	+1.4
JKRS				S	Sn	22 56 00.5	+0.5
EWUT	Wuta	1.13	295	eP	Pb	22 55 48.3	+0.9
	baz=292						
EWUT				eS	Sn	22 56 04.2	+2.1
	baz=292						
TWC	Suao	1.15	304	eP	Pb	22 55 48.4	+0.6
	baz=301						
TWC				eS	Sn	22 56 03.1	+0.4
	baz=301						
ENA	Nanau	1.16	294	eP	Pb	22 55 48.2	+0.4
	baz=290						
ENA				eS	Sn	22 56 03.3	+0.6
	baz=290						
HWA	Hwalien	1.19	271	eP	Pn	22 55 48.1	+0.1
	baz=252						
HWA				eS	Sb	22 56 02.3	-0.9
	baz=252						
JIJ	Ishigaki jima	1.20	71	P	Pb	22 55 48.8	+0.3
JIJ				S	Sn	22 56 03.7	-0.1
NACB	Ninganchiao	1.21	280	eP	Pn	22 55 48.4	+0.1
	baz=261						
NACB				eS	Sn	22 56 04.2	0.0
	baz=261						
NDS	Dongshan	1.27	302	eP	Pb	22 55 50.2	+0.5
	baz=299						
NDS				eS	Sb	22 56 07.3	+1.7
	baz=299						
NTC	Toucheng	1.32	312	eP	Pb	22 55 49.9	-0.7
	baz=310						
ETLH	Xiulin Townshi	1.32	281	eP	Pn	22 55 50.0	+0.1
	baz=263						
ETLH				eS	Sn	22 56 06.4	-0.5
	baz=263						
TWB1	Santiao Chiao	1.33	321	eP	Pb	22 55 50.4	-0.4
	baz=332						
TWB1				eS	Sb	22 56 08.0	+0.7
	baz=332						
TWE	Neicheng	1.35	304	eP	Pb	22 55 50.9	-0.2
	baz=302						
TWE				eS	Sb	22 56 09.6	+1.6
	baz=302						
ENTT	Nioudou	1.39	299	eP	Pb	22 55 52.3	+0.5
	baz=297						
TIPB	Shuangxi	1.40	316	eP	Pb	22 55 51.6	-0.4
	baz=314						
TIPB				eS	Sn	22 56 08.1	-0.7
	baz=314						
JISG	Ishigakijimahi	1.43	64	P	Pb	22 55 51.9	-0.5
JISG				S	Sb	22 56 09.6	-0.5
HGSD	Ruisui	1.44	251	eP	Pb	22 55 53.2	+0.6
	baz=248						

HGSD	baz=248			*e*S	Sn	22 56 08.9	-0.7
NWF	**Wu-fen Shan** baz=315	1.50	317	*e*P	Pb	22 55 52.8	-0.9
NWF	baz=315			*e*S	Sn	22 56 10.6	-0.7
WFSB	**Wu-fen Shan** baz=315	1.50	317	*e*P	Pb	22 55 52.8	-0.9
WFSB	baz=315			*e*S	Sn	22 56 10.7	-0.5
WHF	**Hehuan Shan** baz=274	1.51	277	*e*P	Pb	22 55 53.8	-0.2
WHF	baz=274			*e*S	Sn	22 56 12.0	0.0
NWLT	**Wulai** baz=315	1.51	303	*e*P	Pb	22 55 54.2	+0.4
NWLT	baz=315			*e*S	Sb	22 56 13.7	+1.1
EHY	**Hungye** baz=249	1.52	253	*e*P	Pn	22 55 52.6	+0.1
EHY	baz=249			*e*S	Sn	22 56 11.9	+0.2
FUSS	**Fushou** baz=278	1.54	281	*e*P	Pb	22 55 54.2	-0.3
YHNB	**Yeheng** baz=294	1.56	297	P	Pb	22 55 54.5	-0.2
YHNB	baz=294			*e*S	Sn	22 56 12.9	+0.2
NSK	**Sanguang** baz=281	1.57	297	*e*P	Pb	22 55 54.4	-0.6
YULB	**Yu-li** baz=233	1.58	249	*e*P	Pn	22 55 53.7	+0.4
YULB	baz=233			*e*S	Sn	22 56 13.2	0.0
CHGB	**Renai** baz=270	1.58	274	*e*P	Pn	22 55 53.9	+0.3
CHGB	baz=270			*e*S	Sn	22 56 12.5	-1.1
VWDT	**VWDT** baz=260	1.63	263	*e*P	Pn	22 55 54.8	+0.8
VWDT	baz=260			*e*S	Sn	22 56 14.4	+0.1
CHKT	**Chengkung** baz=224	1.66	239	*e*P	Pb	22 55 55.9	-0.4
CHKT	baz=224			*e*S	Sn	22 56 13.6	-1.4
FULB	**Fuli** baz=228	1.66	243	*e*P	Pn	22 55 54.8	+0.3
FULB	baz=228			*e*S	Sn	22 56 14.2	-1.1
YM01	**YM01** baz=313	1.69	314	*e*P	Pn	22 55 55.4	+0.6
EDH	**Donghe** baz=223	1.77	236	*e*P	Pn	22 55 55.8	-0.2
SSLB	**Suanglung** baz=262	1.79	265	*e*P	Pb	22 55 57.6	-1.1
WHP	**Taichung City** baz=266	1.81	280	*e*P	Pb	22 55 59.4	+0.3
WHP	baz=266			*e*S	Sb	22 56 21.7	+0.3
WCS	**Beigang Elemen** baz=271	1.82	273	*e*P	Pn	22 55 57.5	+0.8
SMLT	**Sun Moon Lake** baz=266	1.83	268	*e*P	Pb	22 55 58.3	-1.1
LDUT	**Ludao** baz=223	1.84	226	*e*P	Pn	22 55 57.6	+0.6
LDUT	baz=223			*e*S	Sn	22 56 18.4	-1.3
LIOB	**Emei** baz=290	1.85	292	*e*P	Pb	22 55 59.2	-0.4
NSTT	**Nanjuang** baz=289	1.86	291	*e*P	Pb	22 55 59.3	-0.5
ELDTW	**Lidau** baz=244	1.90	246	*e*P	Pn	22 55 57.9	+0.1
LONT	**Longtian** baz=225	1.94	237	*e*P	Pb	22 56 00.3	-0.9
ALS	**Alishan** baz=244	1.98	257	*e*P	Pb	22 56 02.1	+0.1
WJS	**Zhushan** baz=263	2.00	266	*e*P	Pb	22 56 02.5	+0.3
WJS	baz=263			*e*S	Sb	22 56 26.8	+0.2
WNT	**Mingjian** baz=266	2.03	268	*e*P	Pb	22 56 02.6	-0.2
CHN5	**Tsauling** baz=247	2.07	260	*e*P	Pb	22 56 02.7	-0.8
CHN5	baz=247			*e*S	Sb	22 56 29.1	+0.3
STYH	**Taoyuan** baz=236	2.11	248	*e*P	Pb	22 56 02.5	-1.6
STYH	baz=236			*e*S	Sn	22 56 27.1	+0.9
TPUB	**Ta-pu** baz=239	2.19	253	*e*P	Pb	22 56 04.0	-1.4
TPUB	baz=239			*e*S	Sb	22 56 31.4	-0.8
CHN4	**Tsaushan** baz=241	2.21	254	*e*P	Pb	22 56 04.2	-1.5
CHN4	baz=241			*e*S	Sn	22 56 31.0	+2.3
WTP	**Ta-pu** baz=238	2.22	252	*e*P	Pb	22 56 05.4	-0.5
WTP	baz=238			*e*S	Sb	22 56 32.5	-0.5
ECL	**Taimali** baz=242	2.25	233	*e*P	Pn	22 56 03.0	+0.4
ECL	baz=242			*e*S	Sn	22 56 28.7	-1.1
SLGT	**Liugui** baz=234	2.29	245	*e*P	Pn	22 56 04.6	+1.5
CHN1	**Nanshi** baz=248	2.31	251	*e*P	Pb	22 56 06.7	-0.9
CHN1	baz=248			*e*S	Sb	22 56 34.9	-0.8
TWK	**Hsinying** baz=249	2.32	253	*e*P	Pb	22 56 06.6	-1.1
TWK	baz=249			*e*S	Sb	22 56 35.2	-0.8
MASBT	**Mashibuluo** baz=226	2.49	238	*e*P	Pn	22 56 06.3	+0.5
MASBT	baz=226			*e*S	Sn	22 56 34.7	-0.8
SLIU	**Shizi** baz=227	2.61	228	*e*P	Pn	22 56 08.4	+0.9

KRNET ***12*** *23:02:55.7±0.1, 41.°63N×73.°16E, h21^{km}, mb3.9*
NNC ***12*** *23:02:55.8±0.9, 41.°67N×73.°13E, h6^{km}±5^{km}, mb4.4, mpv4.1, Error ellipse: s-maj=7.9km s-min=3.5km az=173.0*
SOME ***12*** *23:02:55.9, 41.°68N×73.°18E, h10^{km}*
KNET ***12*** *23:02:57.5±0.5, 41.°69N×73.°26E, h16^{km}±2^{km}, ml3.3, Error ellipse: s-maj=5.7km s-min=2.8km az=109.0*
ISC 12 23:02:56.4±1.3**, 41.°61N**±0.°02×**73.°12E**±0.°02**, h3**^{km}±10^{km}**, n86,** σ**1.°68**/138**, 49C-26D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu** 250nm,0.1s,SNR=535	0.68	39	P	Pg	23 03 08.4	-1.0
AML	1µm,0.3s			⇓S	Sg	23 03 17.4	-0.9
AML	**Almayashu** baz=38	0.68	39	⇓*i*P	Pg	23 03 08.2	-1.2
AML	baz=38			⇓*i*S	Sg	23 03 17.1	-1.2
MNAS	**Manas** baz=31	0.99	333	⇑*i*P	Pb	23 03 14.2	-2.1
MNAS	baz=31			⇑*i*S	Sb	23 03 27.7	-2.1
OHH	**Osh** baz=95	1.11	193	⇑*i*P	Pb	23 03 16.5	-1.7
OHH	baz=95			⇑*i*S	Sb	23 03 31.6	-1.4
MRKS	**Merke** 75nm,0.2s	1.14	4	*e*P	Pn	23 03 17.2	-2.1
MRKS	633nm,0.3s			*e*S	Sb	23 03 32.2	-1.8
MRKS	**Merke** 75nm,0.2s	1.14	4	P	Pn	23 03 17.2	-2.1
MRKS	633nm,0.3s			S	Sb	23 03 32.3	-1.8
EKS2	**Erkin-Say** 50nm,0.1s,SNR=70	1.16	25	⇑P	Pn	23 03 17.0	-2.7
EKS2	148nm,0.3s			⇓S	Sb	23 03 32.1	-2.6
EKS2	**Erkin-Say** baz=24	1.16	25	⇑*i*P	Pn	23 03 16.7	-2.9
EKS2	baz=24			⇑*i*S	Sb	23 03 31.9	-2.8
UCH	**Uchtor** 175nm,0.2s,SNR=373	1.21	59	P	Pn	23 03 17.8	-2.8
UCH	181nm,0.2s			⇑S	Sb	23 03 33.7	-2.7
UCH	**Uchtor** baz=59	1.21	59	⇑*i*P	Pn	23 03 17.6	-3.0
UCH	baz=59			⇑*i*S	Sb	23 03 33.3	-3.1
AAK	**Ala-Archa** 91nm,0.1s,SNR=272	1.45	44	⇑P	Pn	23 03 22.1	-1.5
AAK	147nm,0.3s			⇓S	Sn	23 03 41.1	-2.2
AAK	**Ala-Archa** 68nm,0.3s	1.45	44	⇓P	Pn	23 03 22.0	-1.7
AAK	91nm,0.4s			⇓S	Sn	23 03 40.6	-2.6
AAK	**Ala-Archa** baz=44	1.45	44	⇑*i*P	Pn	23 03 21.7	-1.9
AAK	baz=44			⇑*i*S	Sn	23 03 40.6	-2.6
TRKS	**Terek-Say** baz=64	1.49	268	⇑*e*P	Pn	23 03 23.2	-0.9
TRKS	baz=64			⇑*i*S	Sn	23 03 43.2	-0.9
SFK	**Sufi-Kurgan** baz=71	1.62	169	⇑*e*P	Pn	23 03 25.6	-0.3
SFK	baz=71			⇑*e*S	Sb	23 03 47.4	-0.4
FRU1	**Bishkek** baz=41	1.65	42	⇑*i*P	Pn	23 03 25.4	-0.8
FRU1	baz=41			⇑*i*S	Sn	23 03 46.9	-1.0
KBK	**Karagaybulak** 386nm,0.2s,SNR=462	1.72	52	P	Pn	23 03 27.1	-0.2
KBK	**Karagaybulak** baz=52	1.72	52	⇑*i*P	Pn	23 03 26.5	-0.8
KBK	baz=52			⇑*i*S	Sn	23 03 48.5	-1.3
CHMS	**Chumysh** 149nm,0.2s,SNR=167	1.85	40	⇑P	Pn	23 03 29.2	+0.3
CHMS	89nm,0.2s			⇓S	Sn	23 03 53.2	+0.4
CHMS	**Chumysh** baz=40	1.85	40	⇓*i*P	Pn	23 03 28.4	-0.5
CHMS	baz=40			⇓*i*S	Sn	23 03 52.1	-0.7
DZA	**Taraz** 282nm,0.4s	1.85	315	*e*P	Pn	23 03 30.1	+1.2
DZA	528nm,0.2s			*e*S	Sb	23 03 54.9	+0.7
DZA	**Taraz** 282nm,0.4s	1.85	315	P	Pn	23 03 30.2	+1.2
DZA	528nm,0.2s			S	Sb	23 03 54.6	+0.3
USP	**Ospenovka** 167nm,0.2s,SNR=551	1.95	31	⇑P	Pn	23 03 30.8	+0.5
USP	494nm,0.3s			⇑S	Sb	23 03 56.8	-0.5
USP	**Ospenovka** baz=31	1.95	31	⇓*i*P	Pn	23 03 29.9	-0.5
USP	baz=31			⇓*i*S	Sn	23 03 54.7	-0.7
TKM2	**Tokmak 2** 102nm,0.2s,SNR=180	2.26	54	⇑P	Pn	23 03 35.5	+0.7
TKM2	**Tokmak 2** 200nm,0.9s	2.26	54	⇑Pn	Pn	23 03 35.4	+0.6
TKM2	159nm,0.7s			⇑Lg	Lg	23 04 05.0	
TKM2	**Tokmak 2** baz=54	2.26	54	⇓*e*P	Pn	23 03 34.3	-0.5
TKM2	baz=54			⇓*i*S	Sn	23 04 02.3	-1.0
BOOM	**Boomskoye usch** baz=66	2.28	66	⇓*i*P	Pn	23 03 34.5	-0.5
BOOM	baz=66			⇓*i*S	Sn	23 04 02.7	-1.0
BTK	**Batken** baz=29	2.33	229	⇑*i*P	Pn	23 03 36.0	+0.4
BTK	baz=29			⇑*i*S	Sn	23 04 05.6	+0.8
DRK	**Karamyk** baz=6.0	2.35	206	⇑*i*P	Pn	23 03 37.0	+0.9
DRK	baz=6.0			⇑*i*S	Sn	23 04 06.1	+0.6
IUG	**Iuzhnay** 1µm,0.1s	2.37	284	*e*P	Pb	23 03 38.9	-0.8
IUG	396nm,0.5s			*e*S	Sb	23 04 10.2	+0.8
ULHL	**Ulahol** 48nm,0.2s,SNR=14	2.42	74	⇑P	Pn	23 03 37.1	+0.2
ULHL	**Ulahol** baz=74	2.42	74	⇑*e*P	Pn	23 03 36.4	-0.5
ULHL	baz=74			⇑*i*S	Sn	23 04 06.0	-1.1
KK02	**Karatay Array** 42nm,0.7s	2.44	309	⇑Pg	Pb	23 03 40.7	-0.2
KK02	59nm,0.3s			⇑Lg	Lg	23 04 13.9	
KST	**Kastek** 423nm,0.3s	2.55	55	*e*P	Pb	23 03 41.6	-1.2
KST	122nm,0.4s			*e*S	Sb	23 04 14.7	0.0
KST	**Kastek** 423nm,0.3s	2.55	55	Pg	Pb	23 03 42.0	-0.8
KST	122nm,0.4s			Lg	Lg	23 04 14.8	
DGS	**Degeres** 108nm,0.6s	2.56	49	*e*P	Pb	23 03 41.9	-1.0
DGS	109nm,0.4s			*e*S	Sb	23 04 15.1	+0.3
DGS	**Degeres** 108nm,0.6s	2.56	49	Pg	Pb	23 03 42.0	-1.0
DGS	109nm,0.4s			Lg	Lg	23 04 14.7	
CHM	**Chimkent** 4.0nm,0.2s	2.72	286	*e*P	Pb	23 03 47.1	+1.5
CHM	500nm,0.5s			*e*S	Sg	23 04 23.8	+0.2
KRBS	**Karabastau** 62nm,0.4s	2.81	41	*e*P	Pb	23 03 45.8	-1.4
KRBS	77nm,0.3s			*e*S	Sb	23 04 22.0	-0.2
KRBS	**Karabastau** 62nm,0.4s	2.81	41	Pg	Pb	23 03 46.2	-1.1
KRBS	77nm,0.3s			Lg	Lg	23 04 21.9	
BRLS	**Borolday** 19nm,0.3s	2.82	301	*e*P	Pb	23 03 47.7	+0.4
BRLS	132nm,0.5s			*e*S	Sb	23 04 24.8	+2.5
BRLS	**Borolday** 19nm,0.3s	2.82	301	Pg	Pb	23 03 47.1	-0.3
BRLS	132nm,0.5s			Lg	Lg	23 04 23.1	
TAS	**Tashkent** baz=65	2.89	266	⇓*i*P	Pn	23 03 43.9	+0.7
TAS	baz=65			⇓*i*S	Sn	23 04 19.7	+1.3
MTBS	**Maitube** 53nm,0.3s	2.89	57	*e*P	Pb	23 03 47.8	-0.8
MTBS	102nm,0.4s			*e*S	Sb	23 04 24.8	+0.5
MTBS	**Maitube** 53nm,0.3s	2.89	57	Pg	Pb	23 03 47.6	-0.9
MTBS	102nm,0.4s			Lg	Lg	23 04 24.3	
KSH	**Kashi**	3.01	133	Pn	Pb	23 03 48.0	-2.7
KSH				Sn	Sb	23 04 24.8	-3.1
KSH	comp=N,440nm,1.0s			smax	smax		
KSH	comp=E,540nm,0.9s			smax	smax		
KSH	comp=N,310nm,3.9s			LR	LR		
KSH	comp=E,400nm,4.4s			LR	LR		
KSH	comp=Z,150nm,6.5s			LR	LR		
KDJ	**Kajisay** baz=79	3.08	79	⇑*i*P	Pn	23 03 45.6	-0.4
KDJ	baz=79			⇑*i*S	Sn	23 04 22.6	-0.8
TNSS	**Tian-Shan** comp=Z,56nm,0.4s	3.18	62	*e*P	Pb	23 03 52.7	-1.0
TNSS	comp=Z,36nm,0.6s			*e*S	Sb	23 04 33.8	+0.8
TNSS	**Tian-Shan** comp=Z,56nm,0.4s	3.18	62	Pg	Pb	23 03 52.0	-1.7
TNSS	comp=Z,36nm,0.6s			Lg	Lg	23 04 34.0	
KNDC	**Almaty** comp=Z,53nm,0.4s	3.27	59	⇑Pg	Pb	23 03 55.3	+0.2
KNDC	comp=Z,193nm,0.7s			⇓Lg	Lg	23 04 38.1	
KUU	**Kurty** comp=Z,29nm,0.3s	3.29	45	*e*P	Pb	23 03 53.8	-1.6
KUU	comp=Z,71nm,0.4s			*e*S	Sb	23 04 35.0	-0.8
KUU	**Kurty** comp=Z,29nm,0.3s	3.29	45	Pg	Pb	23 03 55.0	-0.4
KUU	comp=Z,71nm,0.4s			Lg	Lg	23 04 37.0	
MDOK	**Medeo** comp=Z,42nm,0.3s	3.30	61	*e*P	Pb	23 03 55.1	-0.5
MDOK	comp=Z,98nm,0.7s			*e*S	Sb	23 04 37.6	+1.4
MDOK	**Medeo** comp=Z,31nm,0.5s	3.30	61	⇓Pg	Pb	23 03 54.1	-1.5
MDOK	comp=Z,127nm,0.8s			⇓Lg	Lg	23 04 37.5	
MDOK	**Medeo** comp=Z,42nm,0.3s	3.30	61	Pg	Pb	23 03 55.1	-0.5
MDOK	comp=Z,98nm,0.7s			Lg	Lg	23 04 37.4	
KTBS	**Karatobe** comp=Z,26nm,0.4s	3.37	50	*e*P	Pb	23 03 55.8	-0.9
KTBS	comp=Z,101nm,0.5s			*e*S	Sb	23 04 38.8	+0.8
KTBS	**Karatobe** comp=Z,26nm,0.4s	3.37	50	Pg	Pb	23 03 56.0	-0.7
KTBS	comp=Z,101nm,0.5s			Lg	Lg	23 04 39.4	
KOTS	**Kotyrbulak** comp=Z,74nm,0.2s	3.38	60	*e*P	Pb	23 03 57.1	+0.3
KOTS	comp=Z,175nm,0.8s			*e*S	Sb	23 04 41.3	+3.0
KOTS	**Kotyrbulak** comp=Z,74nm,0.2s	3.38	60	Pg	Pb	23 03 57.2	+0.3
KOTS	comp=Z,175nm,0.8s			Lg	Lg	23 04 41.2	
BTLS	**Baital** comp=Z,14nm,0.2s	3.50	11	*e*P	Pb	23 03 58.4	-0.5
BTLS	comp=Z,50nm,0.4s			*e*S	Sb	23 04 42.9	+1.1
BTLS	**Baital** comp=Z,14nm,0.2s	3.50	11	Pg	Pb	23 03 58.4	-0.5
BTLS	comp=Z,50nm,0.4s			Lg	Lg	23 04 42.8	
ANVS	**Anan'yevo** baz=69	3.58	69	⇑*i*P	Pn	23 03 52.8	-0.1
ANVS	baz=69			⇑*i*S	Sn	23 04 34.1	-1.6
PRZ	**Przheval'sk** baz=76	4.03	76	⇑*i*P	Pn	23 03 59.3	+0.2
PRZ	baz=76			⇑*i*S	Sn	23 04 45.6	-1.3
KURS	**Kuram** comp=Z,16nm,0.5s	4.18	62	*e*P	Pb	23 04 11.1	+0.5
KURS	comp=Z,21nm,0.8s			*e*S	Sb	23 05 04.6	+3.2
KURS	**Kuram** comp=Z,16nm,0.5s	4.18	62	Pg	Pb	23 04 11.0	+0.5
KURS	comp=Z,21nm,0.8s			Lg	Lg	23 05 04.3	
SATY	**Saty** comp=Z,12nm,0.3s	4.18	68	*e*P	Pb	23 04 11.4	+0.9
SATY	comp=Z,39nm,0.7s			*e*S	Sb	23 05 05.5	+4.0
SATY	**Saty** comp=Z,12nm,0.3s	4.18	68	Pg	Pb	23 04 11.5	+0.9
SATY	comp=Z,39nm,0.7s			Lg	Lg	23 05 05.3	
ARXS	**Arharly** comp=Z,42nm,0.4s	4.33	51	*e*P	Pb	23 04 13.5	+0.4
ARXS	comp=Z,51nm,0.5s			*e*S	Sb	23 05 09.2	+3.4
ARXS	**Arharly** comp=Z,42nm,0.4s	4.33	51	Pg	Pb	23 04 14.1	+1.0
ARXS	comp=Z,51nm,0.5s			Lg	Lg	23 05 09.3	
UZB	**Uzynbulak** comp=Z,15nm,0.7s	4.64	69	*e*P	Pb	23 04 19.2	+0.8
UZB	comp=Z,24nm,0.7s			*e*S	Sb	23 05 18.6	+4.0
UZB	**Uzynbulak** comp=Z,15nm,0.7s	4.64	69	Pg	Pb	23 04 19.0	+0.6
UZB	comp=Z,24nm,0.7s			Lg	Lg	23 05 18.4	
BLB	**Baldybastay** comp=Z,52nm,0.6s	4.66	56	Pg	Pb	23 04 19.3	+0.5
BLB	comp=Z,47nm,0.5s			Lg	Lg	23 05 19.2	
SHLS	**Shalkode** comp=Z,11nm,0.4s	4.95	70	*e*P	Pg	23 04 31.5	+0.3
SHLS	comp=Z,35nm,0.6s			*e*S	Sg	23 05 39.6	+4.4
SHLS	**Shalkode** comp=Z,11nm,0.4s	4.95	70	Pg	Pg	23 04 31.0	-0.2
SHLS	comp=Z,35nm,0.6s			Lg	Lg	23 05 38.8	
PDGK	**Podgornoye** comp=Z,5.1nm,0.5s	5.02	68	Pg	Pb	23 04 25.7	+0.9
PDGK	comp=Z,9.1nm,0.9s			Lg	Lg	23 05 30.0	
PDGK	**Podgornoye** comp=Z,6.3nm,0.5s	5.02	68	⇓Pg	Pb	23 04 26.7	+1.9
PDGK	comp=Z,19nm,0.6s			⇑Lg	Lg	23 05 33.6	
TDK	**Taldyqorghan** comp=Z,25nm,0.4s	5.14	47	*e*P	Pb	23 04 29.2	+2.3
TDK	comp=Z,24nm,0.6s			*e*S	Sb	23 05 35.9	+6.9
TDK	**Taldyqorghan** comp=Z,25nm,0.4s	5.14	47	Pg	Pb	23 04 29.0	+2.2
TDK	comp=Z,24nm,0.6s			Lg	Lg	23 05 35.7	
KTMS	**Ketmen** comp=Z,2.7nm,0.3s	5.65	69	Pg	Pb	23 04 37.6	+1.9
KTMS	comp=Z,21nm,0.6s			Lg	Lg	23 05 50.5	
KAPS	**Kapalarasan** comp=Z,6.4nm,0.7s	5.84	49	Pg	Pb	23 04 42.7	+3.9
KAPS	comp=Z,15nm,0.6s			Lg	Lg	23 05 58.8	
OTUK	**Ortayu** comp=Z,2.5nm,0.8s	6.66	355	⇓Pn	Pn	23 04 36.4	+1.3
OTUK	comp=Z,85nm,0.7s			⇑Lg	Lg	23 06 24.8	
MAKZ	**Makanchi** comp=Z,3.6nm,1.1s	8.22	48	⇑Pn	Pn	23 04 58.4	+2.1
MAKZ	comp=Z,5.7nm,0.9s			⇓Lg	Lg	23 07 15.9	
MK31	**Makanchi Array** comp=Z,0.9nm,0.4s,baz=231,slow=13,SNR=17	8.38	49	⇑Pn	Pn	23 04 59.5	+0.9
MK31	comp=Z,4.2nm,0.6s			⇑Lg	Lg	23 07 21.0	
KURBB	**Kurchatov Arra** comp=Z,2.0nm,0.8s	9.77	21	⇑Pn	Pn	23 05 17.2	-0.3
KURBB	comp=Z,19nm,0.7s			⇓Lg	Lg	23 08 03.2	
AB31	**Akbulak array** comp=Z,1.1nm,0.6s,baz=119,slow=14,SNR=21	12.00	314	⇓Pn	Pn	23 05 48.2	+0.1

IDC ***12*** *23:30:31.7±0.6, 0.°58N×25.°01W, h0^{km}, mb4.4/20, mb1 4.6/20, mb1mx4.3/43, mbtmp4.5/20, MS4.1/8, Ms1 4.1/8, ms1mx3.7/29, Error ellipse: s-maj=19.6km s-min=14.8km az=117.0*
NEIC ***12*** *23:30:34.4±1.4, 0.°7N±0.°1×25.°06W±0.°10, h10^{km}±1^{km}, mb4.9/80, Error ellipse: s-maj=19.8km s-min=16.6km az=349.0*
GCMT ***12*** *23:30:38.4±0.5, 1.°16N±0.°05×25.°07W±0.°03, h20^{km}±1^{km}, MW5.0/63, Moment Tensor Solution. s21,c24; s63,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.00±.38; $M_{\theta\theta}$1.16±.20; $M_{\phi\phi}$2.84±.23; $M_{r\theta}$2.53±.45; $M_{\theta\phi}$0.24±.13; $M_{\phi r}$1.31±.33; Best double couple: $M_0$4.30100×10^{16} NP1:ϕ_s5.00000°, δ31.00000°, λ-120.00000°. NP2: ϕ_s218.00000°, δ64.00000°, λ-74.00000°. Principal axes: T 3.4100, Plg17.0000°, Azm296.0000°; N 1.7820, Plg15.0000°, Azm31.0000°; P -5.1920, Plg67.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular*

moment-rate function

ISC 12 23:30:33.5±0.3**, 0°.63N**±0°.08×**24°.99W**±0°.06**, h10km, n176, σ0.89**/177**, mb4.8**/65**, MS4.0**/8**, 5C-7D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	13.42	129	T	T	23 47 23.4	
	baz=307,slow=74,SNR=205						
H10N2	ASCENSION HYDR	13.42	129	T	T	23 47 23.4	
	baz=307,slow=74,SNR=333						
H10N1	ASCENSION HYDR	13.44	129	T	T	23 47 24.0	
	baz=307,slow=74,SNR=523						
NBLA	Lagarto - SE	17.18	227	*e*P	P	23 34 36.4	+0.9
NBPS	Pedro II - PI	17.18	253	*e*P	P	23 34 36.1	+0.5
NBPN	Ponto Novo - B	18.94	233	*e*P	Pn	23 34 56.1	+0.6
GDU01	Guandu, BA	20.30	225	*e*P	P	23 35 09.7	-0.1
LIC	Lamto	20.68	74	*e*P	P	23 35 13.9	0.0
	93nm,1.1s						
TIC	Toumodi	20.80	73	*e*P	P	23 35 13.9	-1.3
DBIC	Dimbokro	20.96	73	P	P	23 35 16.4	-0.5
	30nm,0.9s,baz=264,slow=10.0,SNR=26						
DBIC				LR	LR	23 41 34.6	
	comp=Z,580nm,21.3s,baz=272,slow=32						
DBIC	Dimbokro	20.96	73	P	P	23 35 16.2	-0.8
DBIC				IAmb	IAmb	23 35 19.5	
	comp=Z,56nm,1.1s						
KIC	Kosan Boka	20.99	74	*e*P	P	23 35 16.1	-1.2
	comp=Z,42nm,0.9s						
CMC01	Camacan, BA	21.41	222	*e*P	P	23 35 23.9	+2.1
GUA01	Guaratinga, BA	22.50	220	*e*P	P	23 35 34.8	+1.4
TMAB	Tom-Au,PA,Br	23.29	263	*e*P	P	23 35 42.8	+1.0
SDBA	SAO DESIDERIO	23.63	236	*e*P	P	23 35 46.3	+1.1
SMTB	Santa Maria do	24.41	247	*e*P	P	23 35 51.9	-0.6
JANB	Januaria	24.66	230	*e*P	P	23 35 55.8	+1.0
BSFB	Barra de Sao F	24.83	218	*e*P	P	23 35 57.2	+1.0
KOWA	Kowa	24.90	55	P	P	23 35 56.3	-0.6
	comp=Z,11nm,0.9s,baz=233,slow=8.5,SNR=31						
KOWA				LR	LR	23 44 36.7	
	comp=Z,383nm,19.1s,baz=230,slow=34						
KOWA	Kowa	24.90	55	P	P	23 35 56.0	-0.9
KOWA				IAmb	IAmb	23 36 03.5	
	comp=Z,31nm,1.4s						
SJMB	Sao Joao De Ma	24.95	219	*e*P	P	23 35 57.8	+0.6
MC01	Montes Claros	25.42	226	*e*P	P	23 36 02.8	+1.2
PRPB	Parauapebas	25.69	254	*e*P	P	23 36 05.8	+1.7
PEXB	Peixe	26.38	241	*e*P	P	23 36 10.5	+0.2
MDP	Montagnes des	27.97	280	LR	LR	23 45 13.0	
	comp=Z,198nm,21.0s,baz=88,slow=32						
TORD	Torodi Ar. Bea	29.21	64	P	P	23 36 34.6	-1.1
	comp=Z,5.3nm,0.9s,baz=252,slow=8.0,SNR=32						
TORD				LR	LR	23 46 59.1	
	comp=Z,717nm,19.6s,baz=255,slow=34						
TORD	Torodi Ar. Bea	29.21	64	P	P	23 36 35.3	-0.4
ITTB	Itaituba	31.12	261	*e*P	P	23 36 52.4	-0.2
CLDB	Colider	32.69	249	*e*P	P	23 37 07.2	+0.7
PDRB	Porto dos Gac	33.80	248	*e*P	P	23 37 16.6	+0.5
SALV	Santo Antonio	34.48	240	*e*P	P	23 37 22.5	+0.5
BOAV	Boa Vista	35.56	273	*e*P	P	23 37 32.0	+0.5
BOAV	Boa Vista	35.56	273	P	P	23 37 30.7	-0.7
MDT	Midelt	37.33	29	P	P	23 37 48.0	+1.6
	comp=Z,2.5nm,0.9s,baz=238,slow=8.4,SNR=6.2						
PTLB	Pontes e Lacer	37.33	243	*e*P	P	23 37 46.7	+0.3
PTLB	Pontes e Lacer	37.33	243	P	P	23 37 45.9	-0.5
VILB	Vilhena	37.44	248	P	P	23 37 48.5	+1.1
SAML	Samuel	39.22	255	P	P	23 38 02.5	0.0
ETMB	Extrema	42.32	255	*e*P	P	23 38 28.0	0.0
ETMB	Extrema	42.32	255	P	P	23 38 27.9	-0.2
ITQB	Itaqui	42.64	222	P	P	23 38 30.7	+0.3
ITQB				IAmb	IAmb	23 38 59.5	
	comp=Z,16nm,1.0s						
ESDC	Sonseca Array	43.34	24	P	P	23 38 36.8	+0.8
	comp=Z,4.7nm,1.0s,baz=222,slow=8.9,SNR=22						
ESDC				PcP	PcP	23 40 25.7	+0.9
	comp=Z,0.8nm,1.0s,baz=225,slow=3.4,SNR=3.5						
ESDC	Sonseca Array	43.34	24	P	P	23 38 37.0	+1.0
LPAZ	La Paz	45.76	246	P	P	23 38 56.0	-0.3
	comp=Z,5.0nm,1.0s,baz=64,slow=5.8,SNR=13						
LPAZ	La Paz	45.76	246	*e*P	P	23 38 56.4	0.0
LPAZ	La Paz	45.76	246	P	P	23 38 55.4	-0.9
WIN	Windhoek	47.02	122	P	P	23 39 05.1	-0.6
KEST	Kesra	47.30	39	P	P	23 39 09.5	+1.9
	comp=Z,4.3nm,1.0s,baz=246,slow=8.3,SNR=4.5						
KEST				LR	LR	23 59 32.8	
	comp=Z,448nm,20.6s,baz=190,slow=37						
TRQA	Tornquist	51.41	217	P	P	23 39 38.0	-0.8
TRQA				IAmb	IAmb	23 39 56.5	
	comp=Z,27nm,1.5s						
ZCCA	Zocca	53.97	31	P	P	23 39 58.0	+0.2
NRCA	Norcia	54.11	34	P	P	23 39 59.5	+0.6
SUR	Sutherland	54.26	132	P	P	23 39 59.6	-0.7
LSZ	Lusaka	54.86	109	P	P	23 40 05.0	+0.2
LBTB	Lobatse	55.15	121	P	P	23 40 05.9	-0.8
	comp=Z,4.0nm,0.9s,baz=272,slow=11,SNR=3.4						
DOU	Dourbes	55.37	23	*d*P	P	23 40 08.2	+0.5
CTI	Castel Tesino	55.48	30	P	P	23 40 08.6	-0.1
DAVA	Damuels	55.49	28	*e*P	P	23 40 10.4	+1.5
	comp=Z,12nm,1.1s						
FETA	Feichten	55.71	29	*e*P	P	23 40 10.8	+0.4
	comp=Z,12nm,1.1s						
BCLA	Clavier	55.90	23	κP	P	23 40 11.6	+0.1
RETA	Reutte	56.06	29	*e*P	P	23 40 14.1	+1.3
	comp=Z,9.7nm,1.2s						
CIMO	Cimolais	56.06	31	P	P	23 40 14.4	+1.5
SQTA	Sankt Quirin	56.08	29	*i* P	P	23 40 13.5	+0.4
	comp=Z,12nm,1.1s						
MOTA	Moosalm	56.12	29	*e*P	P	23 40 14.5	+1.1
	comp=Z,7.5nm,1.1s						
BOSA	Boshof	56.15	126	P	P	23 40 12.4	-1.5
	comp=Z,3.6nm,0.8s,baz=301,slow=5.9,SNR=6.7						
BOSA	Boshof	56.15	126	P	P	23 40 12.4	-1.5
BOSA				IAmb	IAmb	23 40 13.1	
	comp=Z,7.3nm,0.9s						
WTTA	Wattenberg	56.32	29	*e*P	P	23 40 15.3	+0.5
	comp=Z,6.9nm,1.1s						
MEM	Membach	56.32	23	*d*PcP	PcP	23 41 11.8	0.0
WATA	Walderalm	56.34	29	*i* P	P	23 40 16.2	+1.2
	comp=Z,8.4nm,1.3s						
ABTA	Abfaltersbach	56.40	30	*e*P	P	23 40 16.7	+1.4
	comp=Z,9.6nm,1.1s						
ZOU	Zoufplan	56.50	31	P	P	23 40 17.3	+1.1
ZOU				IAmb	IAmb	23 40 18.6	
	comp=Z,16nm,1.2s						
KBA	Koelnbreinsper	57.04	30	*i* P	P	23 40 21.5	+1.5
	comp=Z,3.9nm,1.2s						
OBKA	Obir	57.28	32	*e*P	P	23 40 23.6	+2.0
	comp=Z,3.9nm,1.3s						
SOKA	Soboth	57.65	32	*e*P	P	23 40 25.4	+1.2
	comp=Z,7.1nm,1.2s						
GERES	GERESS Array B	58.42	29	P	P	23 40 29.0	-0.5
	comp=Z,1.5nm,0.9s,baz=222,slow=5.4,SNR=11						
GERES	GERESS Array B	58.42	29	P	P	23 40 29.1	-0.4
KHC	Kasperske Hory	58.55	29	*e*P	P	23 40 29.9	-0.5
DIVS	Divibare	58.86	37	P	P	23 40 32.3	-0.3
MODS	Modra-Piesok	59.90	31	*e*P	P	23 40 40.5	+0.8
VTS	Vitosha	60.06	39	P	P	23 40 40.9	-0.2
LODK	Lodwar	60.37	86	P	P	23 40 43.9	+0.3
MOQ	Mont Orford	60.89	324	P	P	23 40 46.3	-0.3
N59A	State Game Lan	60.91	318	P	P	23 40 46.6	-0.2
N59A				IAmb	IAmb	23 40 55.1	
	comp=Z,16nm,1.5s						
MORC	Moravsky Berou	60.92	30	⇑P	P	23 40 47.0	+0.3
PSZ	Piszkesteto	61.01	33	P	P	23 40 48.1	+0.7
PSZ				IAmb	IAmb	23 41 01.4	
	comp=Z,7.4nm,1.1s						
R58B	Mineral	61.09	314	P	P	23 40 47.9	-0.1
R58B				IAmb	IAmb	23 40 50.0	
	comp=Z,13nm,1.2s						
Y57A	Sumter	61.47	309	P	P	23 40 50.5	-0.1
DRGR		61.95	35	⇑P	P	23 40 53.8	+0.1
KMBO	Kilima Mbogo	62.26	92	P	P	23 40 59.1	+2.4
	comp=Z,2.5nm,0.8s,baz=293,slow=7.7,SNR=4.6						
KMBO	Kilima Mbogo	62.26	92	P	P	23 40 57.3	+0.7
KMBO				IAmb	IAmb	23 41 01.4	
	comp=Z,6.1nm,1.2s						
TRPA	Tarpa	62.59	34	⇓P	P	23 40 56.7	-1.2
VOIR		62.62	37	⇑P	P	23 40 58.5	+0.3
MLR	Muntele Rosu	63.19	38	⇓P	P	23 41 02.5	+0.4
MLR	Muntele Rosu	63.19	38	P	P	23 41 02.5	+0.4
MLR				IAmb	IAmb	23 41 05.0	
	comp=Z,13nm,1.3s						
WVNY	West Valley, N	63.48	318	P	P	23 41 03.7	-0.2
Q54A	Coxs Mills	63.62	314	P	P	23 41 04.9	-0.1
BURAR	Bucovina Array	63.83	35	P	P	23 41 06.6	+0.3
VRI	Vrincioaia	63.85	38	⇑P	P	23 41 04.0	-2.4
O53A	New Philadelph	64.38	315	P	P	23 41 09.6	-0.3
O53A				IAmb	IAmb	23 41 10.6	
	comp=Z,9.9nm,1.0s						
BR231	Keskin MP Arra	65.32	46	P	P	23 41 17.2	+1.1
ACSO	Alum Creek Sta	65.63	315	P	P	23 41 17.8	-0.3
BR131	Keskin Array S	65.90	46	P	P	23 41 19.4	-0.6
BR131				IAmb	IAmb	23 41 22.1	
	comp=Z,10nm,0.9s						
BRTR	Keskin Array B	65.90	46	P	P	23 41 20.1	+0.2
	comp=Z,5.4nm,0.9s,baz=224,slow=5.2,SNR=24						
BRTR	Keskin Array B	65.90	46	P	P	23 41 19.7	-0.3
SWET	Sewanee	66.18	309	P	P	23 41 22.0	+0.3
SWET				IAmb	IAmb	23 41 24.6	
	comp=Z,14nm,1.2s						
NOA	NORSAR Array B	66.28	18	P	P	23 41 22.5	+0.6
	comp=Z,3.3nm,1.0s,baz=220,slow=6.4,SNR=5.4						
U49A	Red Boiling Sp	66.45	310	P	P	23 41 23.0	-0.4
V48A	Smith Brothers	67.03	309	P	P	23 41 26.3	-0.8
V48A				IAmb	IAmb	23 41 28.4	
	comp=Z,5.9nm,0.8s						
BNN	Bunyan	67.21	48	P	P	23 41 28.4	0.0
Z47A	Carrollton	67.33	306	P	P	23 41 28.8	-0.2
T47A	Sharon Grove	67.61	310	P	P	23 41 30.4	-0.4
T47A				IAmb	IAmb	23 41 32.5	
	comp=Z,12nm,1.1s						
AKASG	Malin Array Be	67.65	34	P	P	23 41 30.0	-0.7
	comp=Z,6.0nm,0.9s,baz=238,slow=6.6,SNR=19						
AKASG				LR	LR	00 13 11.1	
	comp=Z,44nm,18.1s,baz=240,slow=38						
AKASG	Malin Array Be	67.65	34	P	P	23 41 29.8	-0.9
AKASG				IAmb	IAmb	23 41 32.0	
	comp=Z,7.8nm,1.2s						
AKBB	Malin Array Si	67.65	34	P	P	23 41 30.3	-0.5
BLO	Bloomington	67.83	312	P	P	23 41 32.1	0.0
BLO				IAmb	IAmb	23 41 34.3	
	comp=Z,8.4nm,1.0s						
WVT	Waverly	67.92	309	P	P	23 41 32.4	-0.4
WVT				IAmb	IAmb	23 41 34.1	
	comp=Z,9.1nm,1.1s						
GLMI	Grayling	68.45	319	P	P	23 41 35.6	-0.3
P46A	Rosedale	68.48	313	P	P	23 41 35.5	-0.6
P46A				IAmb	IAmb	23 41 37.3	
	comp=Z,8.7nm,0.8s						
OLIL	Olney	68.87	312	P	P	23 41 38.1	-0.6
FVM	French Village	70.42	310	P	P	23 41 46.7	-1.6
FVM				IAmb	IAmb	23 41 47.8	
	comp=Z,5.0nm,0.7s						
LCAR	Lake Charles	70.51	308	P	P	23 41 48.0	-0.8
LCAR				IAmb	IAmb	23 41 50.4	
	comp=Z,12nm,1.3s						
CCM	Cathedral Cave	71.07	310	P	P	23 41 50.8	-1.3
CCM				IAmb	IAmb	23 41 53.8	
	comp=Z,11nm,1.1s						
MGMO	Mountain Grove	71.64	309	P	P	23 41 54.4	-1.2
MGMO				IAmb	IAmb	23 41 57.5	
	comp=Z,14nm,1.3s						
GURO	Guroymak-BITLI	71.77	49	P	P	23 41 56.6	0.0
GURO				IAmb	IAmb	23 41 59.2	
	comp=Z,9.6nm,1.0s						
FINES	FINESS Array B	71.85	23	P	P	23 41 55.6	-0.8
	comp=Z,4.7nm,0.8s,baz=207,slow=7.9,SNR=6.3						
FINES	FINESS Array B	71.85	23	P	P	23 41 56.4	0.0
RAYN	Ar Rayn	71.89	66	P	P	23 41 58.0	+0.5
RAYN				IAmb	IAmb	23 42 00.8	
	comp=Z,8.9nm,1.1s						
R40A	Maddies Statio	71.91	310	P	P	23 41 55.8	-1.5
U40A	Yellville	71.91	308	P	P	23 41 55.7	-1.6
U40A				IAmb	IAmb	23 41 58.8	
	comp=Z,17nm,1.6s						
SUMG	Summit	72.34	356	*i* P	P	23 41 59.0	-0.7
W39A	Magazine	72.40	307	P	P	23 41 59.4	-0.9
W39A				IAmb	IAmb	23 42 02.0	
	comp=Z,14nm,1.2s						
OPO	Ambohidratompo	73.33	109	P	P	23 42 08.1	+1.8
	comp=Z,5.0nm,0.9s,baz=236,slow=3.7,SNR=6.1						
KBZ	Khabaz	73.72	44	P	P	23 42 08.3	+0.5
	comp=Z,4.8nm,0.9s,baz=199,slow=3.0,SNR=8.5						
KBZ				LR	LR	00 16 25.4	
	comp=Z,88nm,21.6s,baz=226,slow=37						
DAG	Danmarks Havn	76.15	1	*i* P	P	23 42 20.4	-0.9
ECSD	EROS Data Cent	76.35	315	P	P	23 42 21.7	-1.4
AGMN	Agassiz Nation	76.89	320	P	P	23 42 25.4	-0.6
AGMN				IAmb	IAmb	23 42 27.1	
	comp=Z,19nm,1.6s						
KLMR	Klimovskoe	77.28	27	*e*P	P	23 42 27.9	-0.1
KLMR				AMP		23 42 30.2	
	comp=Z,26nm,1.4s						
ULM	Lac du Bonnet	77.38	322	P	P	23 42 28.1	-0.6
	comp=Z,1.9nm,0.6s,baz=131,slow=3.1,SNR=4.0						
NEEM	North Greenlan	78.05	354	*i* P	P	23 42 32.1	-0.2
MSTX	Muleshoe	79.52	304	P	P	23 42 40.5	-0.6
MSTX				IAmb	IAmb	23 42 47.5	
	comp=Z,17nm,1.4s						
SYO	Syowa Base	81.69	161	⇓*e*P	P	23 42 51.1	-0.7
SYO	Syowa Base	81.69	161	⇑*e*PcP	PcP	23 42 58.2	+0.6
UOSS	Minazif	81.75	65	P	P	23 42 52.2	-0.9
SDCO	Great Sand Dun	82.11	308	P	P	23 42 54.9	-0.2
SDCO				IAmb	IAmb	23 42 58.4	
	comp=Z,8.0nm,1.1s						
ISCO	Idaho Springs	82.39	310	P	P	23 42 56.3	-0.3
ANMO	Albuquerque	82.64	305	P	P	23 42 57.4	-0.4
LAO	LASA Array	83.53	317	P	P	23 43 01.3	-0.7
RES	Resolute Bay	84.16	345	P	P	23 43 04.7	+0.1
RES				IAmb	IAmb	23 43 07.0	
	comp=Z,12nm,1.2s						
X18A	Snowflake	85.49	304	P	P	23 43 11.7	-0.6
X18A				IAmb	IAmb	23 43 15.0	
	comp=Z,14nm,1.4s						
PD31	Pinedale Array	85.58	313	P	P	23 43 12.1	-0.6
PDAR	Pinedale Array	85.58	313	P	P	23 43 11.7	-1.0
	comp=Z,1.6nm,0.9s,baz=90,slow=7.4,SNR=8.1						
PDAR				LR	LR	00 17 39.0	
	comp=Z,207nm,18.0s,baz=160,slow=33						
PDAR	Pinedale Array	85.58	313	P	P	23 43 11.6	-1.1
GCMT	Greycliff	85.84	316	P	P	23 43 13.1	-0.7
ABKAR	Akbulak array	86.21	41	P	P	23 43 16.4	+1.1
ABKAR	Akbulak array	86.21	41	P	P	23 43 15.6	+0.3
ABKAR				IAmb	IAmb	23 43 18.2	
	comp=Z,9.5nm,1.6s						
LOHW	Long Hollow	86.39	313	P	P	23 43 15.8	-0.8
LOHW				IAmb	IAmb	23 43 18.9	
	comp=Z,12nm,1.3s						
FLWY	Flagg Ranch	86.48	314	P	P	23 43 16.7	-0.4
SNOW	Snow King Moun	86.49	313	P	P	23 43 16.5	-0.7
SNOW				IAmb	IAmb	23 43 19.5	
	comp=Z,11nm,1.1s						
REDW	Red Top Meadow	86.56	313	P	P	23 43 16.8	-0.8
YHH	Holmes Hill	86.62	315	P	P	23 43 17.2	-0.7
YHH				IAmb	IAmb	23 43 21.4	
	comp=Z,8.2nm,1.2s						
AHID	Auburn Hatcher	86.72	313	P	P	23 43 17.4	-0.9
AHID				IAmb	IAmb	23 43 20.8	
	comp=Z,12nm,1.3s						
JLU	Jordanelle	86.90	310	P	P	23 43 18.7	-0.6
JLU				IAmb	IAmb	23 43 21.7	
	comp=Z,9.8nm,1.2s						
HWUT	Hardware Ranch	87.02	311	P	P	23 43 18.8	-1.0
DUG	Dugway, Tooele	87.94	310	P	P	23 43 24.2	0.0
DUG				IAmb	IAmb	23 43 27.0	
	comp=Z,5.2nm,1.1s						
MAW	Mawson	89.75	157	P	P	23 43 32.7	+0.9
	comp=Z,10nm,0.9s,baz=277,slow=8.8,SNR=8.0						
QSPA	South Pole Qui	90.69	180	P	P	23 43 36.3	-0.2
	comp=Z,8.6nm,1.0s,baz=212,slow=3.7,SNR=3.3						
CAN	Canberra	145.03	171	PKPbc	PKPbc	23 50 10.1	-1.0
TOLI2	Tolitoli	145.73	87		PKPdf	23 50 12.3	-1.2
MMRI	Maumere	146.40	105		PKPdf	23 50 15.3	+0.6
STKA	Stephens Creek	146.43	159	PKPbc	PKPdf	23 50 14.6	+0.3
	comp=Z,16nm,1.0s,baz=157,slow=1.6,SNR=25						
ASAR	Alice Springs	149.28	140	PKP	PKPdf	23 50 18.1	-1.1
	comp=Z,6.2nm,0.8s,baz=214,slow=2.8,SNR=7.7						
ASAR				PKPbc	sPKPdf	23 50 22.5	+0.5
	comp=Z,7.3nm,0.9s,baz=209,slow=1.9,SNR=8.3						
ASAR				PKPab	sPKPbc	23 50 27.6	+1.3
	comp=Z,6.4nm,0.8s,baz=216,slow=3.6,SNR=19						
ASAR	Alice Springs	149.28	140		PKPbc	23 50 22.2	-1.3
ASAR					sPKPbc	23 50 27.3	+1.0
AS31	Alice Springs	149.28	140	PKPbc	PKPbc	23 50 22.4	-1.1
WRA	Warramunga Arr	152.10	135	PKP	PKPdf	23 50 22.4	-1.4
	comp=Z,4.4nm,0.9s,baz=244,slow=2.2,SNR=5.1						
WRA				PKPbc	PKPbc	23 50 28.9	-1.4
	comp=Z,4.3nm,0.9s,baz=246,slow=2.0,SNR=22						
WRA	Warramunga Arr	152.10	135		PKPbc	23 50 28.8	-1.5
WB0	Warramunga Arr	152.26	135	PKPbc	PKPbc	23 50 28.9	-1.7

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*IDC **12** 23:32:23.1±0.9, 52°.64S×18°.42E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.8/32, mbtmp4.0/7, MS3.4/3, Ms1 3.4/3, ms1mx3.1/23, Error ellipse: s-maj=48.7km s-min=21.0km az=79.0*

*NEIC **12** 23:32:25.4±1.5, 52°.67S±0°.07×18°.1E±0°.4, h10km±1km, mb4.5/7, Error ellipse: s-maj=42.5km s-min=11.1km az=83.0*

ISC 12 23:32:24.8±0.7**, 52°.7S**±0°.1×**18°.2E**±0°.2**, h10km, n28, σ0.50**/22**, mb4.2**/7**, MS3.0**/3**, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	20.36	6	P	Pn	23 37 07.4	+3.8
	16nm,1.1s,baz=189,slow=13,SNR=2.3						
SUR				LR	LR	23 43 28.0	
	comp=Z,69nm,18.2s,baz=169,slow=33						
SUR	Sutherland	20.36	6	P	P	23 37 02.0	+0.4
SUR				IAmb	IAmb	23 37 30.0	
	comp=Z,46nm,1.4s						
SNAA	Sanae	21.21	198	P	P	23 37 10.8	+0.5
SNAA	Sanae	21.21	198	P	P	23 37 10.9	+0.7
	comp=Z,8.1nm,0.8s,baz=44,slow=11,SNR=19						
SNAA	Sanae	21.21	198	P	P	23 37 10.7	+0.4
SNAA				IAmb	IAmb	23 37 15.9	
	comp=Z,11nm,1.0s						
VNA2	Neumayer--Watz	21.61	203	P	P	23 37 14.7	+0.1
	baz=34,slow=10.0						
VNA1	Neumayer--Stat	21.63	204	P	P	23 37 15.1	+0.4
VNA3	Neumayer Olymp	22.37	203	P	P	23 37 22.8	0.0
MAW	Mawson	26.04	142	P	P	23 37 58.8	+1.0
LBTB	Lobatse	28.18	14	LR	LR	23 47 28.7	
	comp=Z,39nm,21.8s,baz=212,slow=32						
QSPA	South Pole Qui	37.56	180	P	P	23 39 38.9	0.0
	comp=Z,8.2nm,0.7s,baz=241,slow=3.0,SNR=69						
QSPA	South Pole Qui	37.56	180	P	P	23 39 39.0	0.0
QSPA				IAmb	IAmb	23 39 40.0	
	comp=Z,9.1nm,0.8s						
VNDA	Vanda	48.13	170	P	P	23 41 03.9	-0.4
	comp=Z,1.5nm,0.7s,baz=207,slow=14,SNR=5.1						
VNDA	Vanda	48.13	170	P	P	23 41 03.9	-0.4
VNDA				IAmb	IAmb	23 41 04.4	
	comp=Z,5.1nm,1.5s						
DBIC	Dimbokro	62.27	334	P	P	23 42 47.2	+0.3
	comp=Z,4.4nm,0.9s,baz=161,slow=5.7,SNR=4.1						
DBIC	Dimbokro	62.27	334	P	P	23 42 47.4	+0.5
H01W2	Cape Leeuwin H	66.44	117	T	T	00 55 55.7	
	baz=224						
H01W3	Cape Leeuwin H	66.46	117	T	T	00 55 57.7	
	baz=224						
H01W1	Cape Leeuwin H	66.46	117	T	T	00 55 57.7	
	baz=224						
TORD	Torodi Ar. Bea	67.06	343	P	P	23 43 18.3	+0.1
	comp=Z,1.2nm,1.0s,baz=172,slow=7.0,SNR=4.7						
TORD	Torodi Ar. Bea	67.06	343	P	P	23 43 17.5	-0.6
TORD				IAmb	IAmb	23 43 22.7	
	comp=Z,4.0nm,1.5s						
ASAR	Alice Springs	85.75	124	P	P	23 45 03.6	-0.7
	comp=Z,0.3nm,0.8s,baz=206,slow=4.7,SNR=5.5						
ASAR	Alice Springs	85.75	124	P	P	23 45 04.3	0.0
FITZ	Fitzroy Crossi	85.93	115	LR	LR	00 18 00.1	
	comp=Z,64nm,19.5s,baz=62,slow=32						
WRA	Warramunga Arr	89.08	122	P	P	23 45 19.8	-0.5
	comp=Z,0.2nm,0.6s,baz=210,slow=4.4,SNR=1.6						
PDAR	Pinedale Array	144.19	275	PKP	PKPab	23 51 58.2	0.0
	comp=Z,0.4nm,0.6s,baz=133,slow=6.2,SNR=4.5						
PDAR	Pinedale Array	144.19	275		PKPdf	23 51 59.5	-0.9
NVAR	Mina Array Bea	146.90	262	PKPbc	PKPbc	23 52 07.1	0.0
	comp=Z,0.5nm,0.6s,baz=151,slow=3.3,SNR=3.6						

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*IDC **12** 23:32:51.2±0.6, 41°.23S×90°.31W, h0km, mb4.4/12, mb1 4.5/14, mb1mx4.3/32, mbtmp4.4/14, ML3.7/2, MS5.0/18, Ms1 4.9/18, ms1mx4.9/21, Error ellipse: s-maj=21.4km s-min=16.5km az=117.0*

*NEIC **12** 23:32:54.9±1.8, 41°.11S±0°.09×90°.1W±0°.1, h10km±1km, mb5.0/130, Ms_20 5.1/117, Mwb5.5/30, Error ellipse: s-maj=18.5km s-min=14.5km az=255.0*

*GCMT **12** 23:32:54.9±0.1, 41°.21S±0°.01×90°.58W±0°.01, h15km, MW5.6/150, Moment Tensor Solution. s134,c245; s150,c315; Duration: 1.6s Moment tensor: Scale 10^{17} Nm; M_{rr}-0.32±.03; $M_{\theta\theta}$0.42±.03; $M_{\phi\phi}$-0.10±.03; $M_{r\theta}$0.03±.10; $M_{\theta\phi}$-3.30±.03; $M_{\phi r}$-0.57±.10; Best double couple: $M_0$3.35900×10^{17} NP1:ϕ_s88.00000°, δ80.00000°, λ-179.00000°. NP2:ϕ_s358.00000°, δ89.00000°, λ-10.00000°. Principal axes: T 3.5120, Plg6.0000°, Azm43.0000°; N -0.3040, Plg80.0000°, Azm170.0000°; P -3.2070, Plg8.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **12** 23:32:54.6, 41°.08S×90°.20W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.44; $M_{\theta\theta}$-0.37; $M_{\phi\phi}$-0.06; $M_{r\theta}$0.18; $M_{\theta\phi}$-2.37; $M_{\phi r}$-0.28; Fault plane solution: $M_0$2.43000×10^{17} NP1:ϕ_s91.41000°, δ81.78000°, λ173.31000°. NP2:ϕ_s182.37000°, δ83.37000°, λ8.27000°. Principal axes: T 2.2179, Plg11.0000°, Azm47.0000°; N 0.3788, Plg79.0000°, Azm221.0000°; P -2.5967, Plg1.0000°, Azm317.0000°;*

*MOS **12** 23:32:58.3±1.1, 40°.81S×89°.85W, h35km, mb5.1/13, MS5.0/5 Error ellipse: s-maj=16.9km s-min=10.5km az=64.5*

ISC 12 23:32:53.3±0.3**, 41°.14S**±0°.06×**90°.41W**±0°.06**, h10km, n376, σ1.80**/313**, mb5.0**/75**, MS5.1**/83**, 3C-2D, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	11.67	55	T	T	23 48 01.1	
	baz=230						
H03S1	Juan Fernandez	11.68	55	T	T	23 48 03.8	
	baz=230						
H03S3	Juan Fernandez	11.69	55	T	T	23 48 03.0	
	baz=230						
H03N3	Juan Fernandez	11.93	54	T	T	23 48 23.6	
	baz=228,slow=71						
H03N2	Juan Fernandez	11.94	54	T	T	23 48 25.1	
	baz=228,slow=71,SNR=9724						
H03N1	Juan Fernandez	11.95	54	T	T	23 48 25.1	
	baz=228,slow=71						
LL07	Hotel Espejo d	12.71	103	Pn	Pn	23 35 54.5	+0.4
LL03	Petrohue	13.58	96	Pn	Pn	23 36 04.4	-1.4
LL04	Puerto Octay	13.60	95	Pn	Pn	23 36 05.0	-1.2
LL02	Futaleuf	13.92	105	Pn	Pn	23 36 10.7	+0.1
COYC	Coyhaique	14.05	114		Pn	23 36 11.4	-0.9
LC01	Cunco	14.38	87	Pn	Pn	23 36 16.1	-0.9
PLCA	Paso Flores	15.02	95	Pn	Pn	23 36 23.3	-2.3
	0.1nm,0.3s,baz=297,slow=11,SNR=3.1						
PLCA				LR	LR	23 40 59.4	
	comp=Z,5µm,18.1s,baz=262,slow=33						
PLCA	Paso Flores	15.02	95	P	Pn	23 36 23.1	-2.5
PLCA	Paso Flores	15.02	95		Pn	23 36 23.1	-2.5
GO05	Huala	15.78	73	Pn	Pn	23 36 33.2	-2.4
GO09	Cerro Castillo	16.05	135		Pn	23 36 38.8	-0.2
GO09				IAmb	IAmb	23 36 49.6	
	comp=Z,128nm,1.2s						
VA05	Santo Domingo	16.68	69	Pn	Pn	23 36 45.5	-1.6
BO01	Tunca	16.69	72	Pn	Pn	23 36 46.1	-1.0
BO01				IAmb	IAmb	23 36 49.2	
	comp=Z,198nm,1.9s						
BO02	Sierra Bellavi	16.71	74		Pn	23 36 46.5	-1.1
MT01	Popeta	16.83	71		Pn	23 36 47.8	-1.2
MT09	Talagante	17.07	71		Pn	23 36 50.5	-1.6
MT09				IAmb	IAmb	23 36 58.8	
	comp=Z,271nm,1.9s						
MT02	Curacav	17.23	69	P	Pn	23 36 52.6	-1.5
MT05	Renca	17.45	70		Pn	23 36 54.7	-2.1
MT05				IAmb	IAmb	23 37 06.3	
	comp=Z,168nm,1.5s						
PEL	Peldehue	17.61	69	P	Pn	23 36 57.3	-1.6
PEL				pmax	pmax		
	comp=Z,61nm,1.2s						
PEL	Peldehue	17.61	69	P	Pn	23 36 57.3	-1.6
VA03	San Esteban	17.92	69	P	Pn	23 37 01.1	-1.6
CO06	Fray Jorge	18.42	61		P	23 37 06.7	-2.0
CO03	El Pedregal	18.95	63	P	P	23 37 13.0	-1.6
CO05	La Serena	19.16	60	P	P	23 37 16.8	0.0
GO04	Tololo Observa	19.29	62	P	P	23 37 17.3	-1.2
ZON	Zonda	19.91	68	P	P	23 37 23.6	-1.5
ZON				pmax	pmax		
	comp=Z,55nm,1.3s						

ZON	Zonda	19.91	68	P	P	23 37 23.6	-1.5
USHA	Ushuaia	19.98	141	P	P	23 37 24.6	-1.0
	comp=Z,0.4nm,0.3s,baz=278,slow=8.9,SNR=2.2						
USHA				LR	LR	23 43 37.4	
	comp=Z,9µm,19.2s,baz=290,slow=32						
AC04	Llanos de Chal	20.43	57	P	P	23 37 29.2	-1.5
RPN	Rapa Nui	20.93	306	LR	LR	23 43 13.7	
	comp=Z,7µm,21.6s,baz=105,slow=30						
RPN	Rapa Nui	20.93	306	IAMs_20	IAMs_20	23 43 01.1	
	comp=Z,8µm,22.0s						
GO03	Copiap	21.38	57	P	P	23 37 39.7	-1.4
GO03				IAmb	IAmb	23 37 53.0	
	comp=Z,110nm,1.7s						
TRQA	Tornquist	22.08	91	P	P	23 37 47.5	-1.0
TRQA				pmax	pmax		
	comp=Z,82nm,1.5s						
TRQA				MLR	MLR		
	comp=Z,3µm,18.0s						
TRQA	Tornquist	22.08	91	P	P	23 37 47.5	-1.0
TRQA				IAmb	IAmb	23 37 59.7	
	comp=Z,82nm,1.4s						
AC02	Maricunga	22.61	58	P	P	23 37 53.5	-1.2
AC02				IAmb	IAmb	23 38 00.4	
	comp=Z,96nm,1.2s						
PB14	IPOC Station P	23.44	52	P	P	23 38 01.2	-1.9
PB14				IAmb	IAmb	23 38 12.8	
	comp=Z,82nm,1.4s						
PB14				IAMs_20	IAMs_20	23 44 20.6	
	comp=Z,6µm,21.0s						
PB10	IPOC Station P	24.21	50	IAMs_20	IAMs_20	23 44 44.0	
	comp=Z,7µm,22.0s						
EFI	East Falkland	24.47	126	*i* P	P	23 38 09.6	-2.7
EFI				pmax	pmax		
	comp=Z,49nm,1.1s						
EFI	East Falkland	24.47	126	P	P	23 38 11.2	-1.0
PB15	IPOC Station P	25.07	51	P	P	23 38 17.9	-0.3
PB15				IAmb	IAmb	23 38 20.6	
	comp=Z,32nm,0.9s						
PB04	IPOC Station P	25.36	48	P	P	23 38 19.3	-1.5
PB04				IAMs_20	IAMs_20	23 45 16.7	
	comp=Z,6µm,22.0s						
LVC	Limon Verde	25.86	51	P	P	23 38 24.5	-1.0
	comp=Z,19nm,1.0s,baz=220,slow=9.2,SNR=9.6						
LVC				LR	LR	23 46 08.1	
	comp=Z,4µm,19.7s,baz=224,slow=31						
LVC	Limon Verde	25.86	51	P	P	23 38 23.3	-2.2
LVC				pmax	pmax		
	comp=Z,22nm,1.0s						
LVC				MLR	MLR		
	comp=Z,5µm,20.0s						
LVC	Limon Verde	25.86	51	P	P	23 38 23.3	-2.2
PB07	IPOC Station P	25.99	48	IAMs_20	IAMs_20	23 45 54.5	
	comp=Z,5µm,20.0s						
PB09	IPOC Station P	26.30	49	P	P	23 38 29.1	-0.2
PB09				IAmb	IAmb	23 38 38.0	
	comp=Z,71nm,1.5s						
PATCX	Punta Patache	26.57	46	IAMs_20	IAMs_20	23 45 50.8	
	comp=Z,6µm,22.0s						
TA02	Huaiquique	27.02	46	P	P	23 38 35.6	0.0
TA02				IAmb	IAmb	23 39 29.6	
	comp=Z,27nm,0.9s						
PB08	IPOC Station P	27.66	47	P	P	23 38 41.3	-0.5
PB08				IAMs_20	IAMs_20	23 46 37.9	
	comp=Z,5µm,19.0s						
PB11	IPOC Station P	27.70	46	P	P	23 38 41.4	-0.5
PMSA	Palmer Station	28.09	156	LR	LR	23 46 48.1	
	comp=Z,4µm,20.1s,baz=310,slow=30						
PMSA	Palmer Station	28.09	156	IAMs_20	IAMs_20	23 46 28.3	
	comp=Z,6µm,21.0s						
PB12	IPOC Station P	28.28	43	IAMs_20	IAMs_20	23 46 50.4	
	comp=Z,5µm,20.0s						
PB16	IPOC Station P	28.94	44	P	P	23 38 51.4	-2.0
PB16				IAMs_20	IAMs_20	23 47 14.9	
	comp=Z,6µm,20.0s						
ITQB	Itaqui	29.65	78	P	P	23 38 56.8	-2.1
ITQB				IAmb	IAmb	23 39 09.7	
	comp=Z,36nm,1.0s						
CPUP	Villa Florida	31.01	72	LR	LR	23 50 30.8	
	comp=Z,3µm,19.3s,baz=242,slow=34						
LPAZ	La Paz	31.37	44	P	P	23 39 14.5	-0.4
	comp=Z,3.2nm,0.7s,baz=215,slow=6.6,SNR=6.8						
LPAZ				LR	LR	23 49 21.7	
	comp=Z,3µm,18.4s,baz=198,slow=32						
LPAZ	La Paz	31.37	44	P	P	23 39 13.8	-1.1
LPAZ				pmax	pmax		
	comp=Z,49nm,1.6s						
LPAZ	La Paz	31.37	44	P	P	23 39 13.8	-1.1
LPAZ				IAmb	IAmb	23 39 24.5	
	comp=Z,49nm,1.6s						
NNA	Nana	31.39	26	LR	LR	23 48 29.8	
	comp=Z,3µm,20.4s,baz=193,slow=30						
NNA	Nana	31.39	26	*i* P	P	23 39 13.4	-1.1
NNA				pmax	pmax		
	comp=Z,37nm,1.1s						
ITAB	Concordia	34.29	78	P	P	23 39 39.1	-0.7
ATAH	Atahualpa	35.52	21	P	P	23 39 51.4	+0.5
	comp=Z,5.0nm,0.6s,baz=201,slow=8.4,SNR=6.0						
SIV	San Ignacio	35.64	54	P	P	23 39 50.1	-1.5
	comp=Z,2.4nm,0.7s,baz=227,slow=8.1,SNR=7.3						
SIV				LR	LR	23 52 50.7	
	comp=Z,3µm,21.9s,baz=254,slow=34						
AQDB	Aquidauana	35.90	66	P	P	23 39 52.4	-1.3
CZSB	Cruzeiro do Su	36.81	30	P	P	23 40 00.1	-1.4
PTLB	Pontes e Lacer	37.25	56	P	P	23 40 03.8	-1.4
ETMB	Extrema	37.82	41	P	P	23 40 07.9	-2.2
VILB	Vilhena	38.53	52	P	P	23 40 14.0	-2.1
SAML	Samuel	40.11	45	P	P	23 40 27.0	-2.3
SAML				pmax	pmax		
	comp=Z,234nm,1.0s						
SAML				MLR	MLR		
	comp=Z,60µm,22.0s						
SAML	Samuel	40.11	45	P	P	23 40 26.9	-2.3
TBTG	Tabatinga, AM	41.14	32	P	P	23 40 36.2	-1.5
TBTG				IAmb	IAmb	23 40 39.4	
	comp=Z,52nm,1.2s						
OTAV	Otavalo	42.60	18	P	P	23 40 49.3	-0.9
OTAV				pmax	pmax		
	comp=Z,19nm,1.1s						
OTAV				MLR	MLR		
	comp=Z,2µm,20.0s						
OTAV	Otavalo	42.60	18	*e*P	P	23 40 51.9	+1.8
OTAV	Otavalo	42.60	18	P	P	23 40 49.2	-0.9
PTLC	Puerto Leguiza	43.50	23	*e*P	P	23 40 54.1	-2.8
BDFB	Brasilia	44.52	68	P	P	23 41 05.2	-0.2
	comp=Z,4.2nm,1.1s,baz=222,slow=12,SNR=1.9						
BDFB				LR	LR	23 58 55.8	
	comp=Z,3µm,19.5s,baz=227,slow=35						
FLOC	Florencia	44.60	21	*e*P	P	23 41 11.0	+5.2
FLOC	Florencia	44.60	21	P	P	23 41 05.6	-0.2
FLOC				IAmb	IAmb	23 41 14.0	
	comp=Z,43nm,1.4s						
PCON	Cinco Dias	45.11	20	*e*P	P	23 41 13.4	+2.9
MACA	Manacapuru-AM	46.31	43	P	P	23 41 17.9	-1.4
ORTC	Ortega, Tolima	46.93	21	*e*P	P	23 41 24.8	+0.5
ROSC	El Rosal	48.08	22	P	P	23 41 32.9	-0.7
	comp=Z,5.0nm,0.3s,baz=202,slow=21,SNR=2.2						
ROSC	El Rosal	48.08	22	P	P	23 41 32.4	-1.1
ROSC				pmax	pmax		
	comp=Z,60nm,1.4s						
ROSC	El Rosal	48.08	22	P	P	23 41 32.4	-1.1
GUY2C	Guyana, Caldas	48.16	20	*e*P	P	23 41 38.6	+4.3
VNA3	Neumayer Olymp	48.74	155	P	P	23 41 37.8	+0.1
PTGA	Pitinga	48.75	42	P	P	23 41 35.9	-2.4
	comp=Z,7.3nm,0.8s,baz=210,slow=9.6,SNR=11						
QSPA	South Pole Qui	49.09	180	P	P	23 41 40.6	0.0
	comp=Z,2.9nm,0.7s,baz=138,slow=5.3,SNR=8.6						
QSPA				PcP	PcP	23 43 09.4	+5.5
	comp=Z,8.3nm,1.0s,baz=150,slow=2.1,SNR=3.5						
QSPA	South Pole Qui	49.09	180	P	P	23 41 42.4	+1.9
VNA1	Neumayer--Stat	49.28	154	P	P	23 41 42.3	+0.6
RUSC	La Rusia	49.43	23	*e*P	P	23 41 43.0	-1.0
VNA2	Neumayer--Watz	49.52	155	P	P	23 41 43.3	-0.3
	baz=284,slow=8.0						
ZARC	Zaragoza, Cauc	50.47	20	*e*P	P	23 41 50.0	-1.4
ZARC	Zaragoza, Cauc	50.47	20	P	P	23 41 50.1	-1.2
ZARC				IAmb	IAmb	23 42 02.8	
	comp=Z,24nm,1.3s						
SRBA	San Rafael, Bu	50.55	9	P	P	23 41 51.7	-0.3
SRBA				IAmb	IAmb	23 41 58.8	
	comp=Z,25nm,1.5s						
SNAA	Sanae	50.81	156	P	P	23 41 52.5	-0.9
SNAA	Sanae	50.81	156	P	P	23 41 51.1	-2.3
	comp=Z,5.3nm,0.8s,baz=262,slow=5.0,SNR=14						
SNAA	Sanae	50.81	156	*i* P	P	23 41 49.5	-3.9
SNAA				pmax	pmax		
	comp=Z,11nm,1.2s						
SNAA	Sanae	50.81	156	P	P	23 41 52.1	-1.3
SNAA				IAmb	IAmb	23 42 17.7	
	comp=Z,22nm,1.3s						
BOAV	Boa Vista	51.17	40	P	P	23 41 55.6	-1.1
HDC	Heredia	51.22	8	IAMs_20	IAMs_20	23 58 14.6	
	comp=Z,2µm,20.0s						
JTS	Las Juntas de	51.42	7	*i* P	P	23 41 59.3	+0.7
JTS				pmax	pmax		
	comp=Z,21nm,1.4s						
JTS	Las Juntas de	51.42	7	IAMs_20	IAMs_20	23 58 00.1	
	comp=Z,3µm,20.0s						
MOTC	Monteria, Cord	51.50	19	P	P	23 41 59.6	+0.5
OCAC	Ocana	51.59	22	P	P	23 41 59.5	-0.6
TBI	Tubuai	52.03	271	*e*S	S	23 49 22.6	-4.1
	comp=Z,848nm,31.2s						
TBI				*e*LQ	LQ	23 54 39.8	
	comp=Z,2µm,31.2s						
TBI				*e*LR	LR	23 56 49.9	
	comp=Z,3µm,26.5s,baz=125						
SBA	Scott Base	52.77	195	IAMs_20	IAMs_20	23 58 55.3	
	comp=Z,2µm,22.0s						
SDV	Santo Domingo	53.01	25	P	P	23 42 10.5	-0.1
SDV				IAmb	IAmb	23 42 16.1	
	comp=Z,36nm,1.4s						
SDV	Santo Domingo	53.01	25	IAMs_20	IAMs_20	00 02 23.7	
	comp=Z,2µm,21.0s						
VNDA	Vanda	53.86	195	P	P	23 42 16.5	+0.6
VNDA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VNDA	Vanda	53.86	195	P	P	23 42 16.5	+0.6
BAUV	El Baul	53.93	28	P	P	23 42 16.1	-1.0
BAUV				IAmb	IAmb	23 42 23.2	
	comp=Z,23nm,1.1s						
TAOE	Nuku Hiva Isla	54.37	292	*e*S	S	23 49 55.3	-3.6
	comp=Z,1µm,26.1s						
TAOE				*e*LQ	LQ	23 55 38.0	
	comp=Z,3µm,26.7s						
TAOE				*e*LR	LR	23 57 53.9	
	comp=Z,2µm,26.2s,baz=149						
URIC	Uribia, Colomb	55.27	22	P	P	23 42 26.9	+0.1
MTO3	Montecristo	55.27	1	P	P	23 42 27.9	+0.8
MTO3				IAmb	IAmb	23 42 33.6	
	comp=Z,22nm,1.2s						
PPT2	Papeete2	55.52	277	*e*S	S	23 50 08.0	-6.3
	comp=Z,2µm,28.2s						
PPT2				*e*LQ	LQ	23 56 07.7	
	comp=Z,1µm,23.0s						
PPT2				*e*LR	LR	23 58 24.2	
	comp=Z,1µm,25.5s						
PPT	Papeete	55.53	277	LR	LR	23 59 50.8	
	comp=Z,500nm,19.2s,baz=137,slow=29						
NVL	N'lazarevskaya	55.58	157⇓	*i*P	P	23 42 16.1	-12
NVL				*i* PPP	PPP	23 45 52.6	
NVL				*i* S	S	23 50 18.5	+4.9
NVL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HATO	Hato, Curacao	56.64	25	IAMs_20	IAMs_20	00 04 38.9	
	comp=Z,2µm,20.0s						
CCIG	Comitan	57.16	358	P	P	23 42 41.5	+1.1
CCIG				IAmb	IAmb	23 42 53.5	
	comp=Z,20nm,1.2s						
TLIG	Tlapa	58.90	351	P	P	23 42 54.3	+1.7
GRGR	Grenville	59.30	33	IAMs_20	IAMs_20	00 05 41.5	
	comp=Z,2µm,21.0s						
FDF	Fort de France	61.85	32	IAMs_20	IAMs_20	00 07 39.3	
	comp=Z,1µm,22.0s						
SJG	San Juan	63.11	26	IAMs_20	IAMs_20	00 09 39.1	
	comp=Z,1µm,19.0s						
SEUS	St. Eustatius	63.65	29	IAMs_20	IAMs_20	00 10 47.2	
	comp=Z,1µm,20.0s						
SABA	Saba	63.67	29	IAMs_20	IAMs_20	00 11 28.8	
	comp=Z,1µm,20.0s						
SYO	Syowa Base	64.12	162⇓	*e*P	P	23 43 25.4	-1.7
SMRT	St. Maarten	64.12	29	IAMs_20	IAMs_20	00 09 03.9	
	comp=Z,1µm,22.0s						
ZAIG	Zacatecas	64.58	348	P	P	23 43 32.3	+1.3
ZAIG				IAmb	IAmb	23 43 46.9	
	comp=Z,19nm,1.4s						
HPIG		69.20	345	P	P	23 44 02.1	+1.9
833A	Chaparral WMA,	69.62	352	P	P	23 44 05.2	+2.7
	baz=173						
MAW	Mawson	69.70	169	LR	LR	00 12 20.0	
	comp=Z,1µm,20.6s,baz=204,slow=34						
HKT	Hockley	70.92	355	*i* P	P	23 44 12.2	+1.8
HKT				pmax	pmax		
	comp=Z,29nm,1.8s						
HKT	Hockley	70.92	355	P	P	23 44 12.4	+2.0
JCT	Junction City	71.79	351	P	P	23 44 16.2	+0.4
JCT				pmax	pmax		
	comp=Z,12nm,0.9s						
JCT	Junction City	71.79	351	P	P	23 44 16.2	+0.4
JCT				IAmb	IAmb	23 44 28.4	
	comp=Z,12nm,0.9s						
435B	Jarrell	71.87	354	P	P	23 44 16.7	+0.5
435B	Jarrell	71.87	354	P	P	23 44 18.9	+2.7
	baz=174						
342A	Flagon Creek P	72.18	358	P	P	23 44 19.8	+1.7
352A	Blakely	72.44	5	P	P	23 44 20.9	+1.3
WHTX	Lake Whitney,	73.06	354	P	P	23 44 24.5	+1.2
146A	Union	73.43	1	P	P	23 44 26.7	+1.2
143A	Socs Landing,	73.49	359	P	P	23 44 26.9	+1.1
154A	Montrose	73.70	6	P	P	23 44 28.1	+1.0
ABTX	Abilene, Hawle	73.90	352	P	P	23 44 29.4	+1.2
ABTX				IAmb	IAmb	23 44 40.6	
	comp=Z,16nm,1.1s						
ABTX	Abilene, Hawle	73.90	352	P	P	23 44 31.1	+2.9
	baz=173						
Z35A	Perchaven, San	74.38	354	P	P	23 44 32.2	+1.2
Z35A				IAmb	IAmb	23 44 42.6	
	comp=Z,18nm,0.9s						
GOGA	Godfrey	74.46	6	P	P	23 44 32.6	+1.1
GOGA				pmax	pmax		
	comp=Z,17nm,1.1s						
GOGA	Godfrey	74.46	6	P	P	23 44 32.6	+1.1
GOGA				IAmb	IAmb	23 44 41.7	
	comp=Z,17nm,1.1s						
GOGA	Godfrey	74.46	6	IAMs_20	IAMs_20	00 11 01.5	
	comp=Z,915nm,22.0s						
NHSC	New Hope	74.48	9	P	P	23 44 32.6	+1.0
X48A	Hartselle	75.29	3	P	P	23 44 37.4	+1.1
X48A				IAmb	IAmb	23 44 46.1	
	comp=Z,13nm,1.0s						
Y57A	Sumter	75.36	9	P	P	23 44 38.4	+1.8
HODGE	Hodges	75.38	7	P	P	23 44 38.0	+1.2
HODGE				IAmb	IAmb	23 44 47.4	
	comp=Z,17nm,1.0s						
TUC	Tucson	75.47	342	P	P	23 44 39.3	+1.8
TUC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
TUC	Tucson	75.47	342	P	P	23 44 39.3	+1.8
MSTX	Muleshoe	75.61	349	P	P	23 44 39.5	+1.3
MSTX	Muleshoe	75.61	349	P	P	23 44 41.1	+2.8
	baz=170						
214A	Organ Pipe Nat	75.62	340	P	P	23 44 40.9	+2.7
	baz=163						
W45A	Hickory Valley	75.94	1	P	P	23 44 41.5	+1.6
W41B	Gary Mavity, V	75.97	358	P	P	23 44 41.9	+1.8
	baz=178						
PAULI	Pauline	76.01	7	P	P	23 44 41.8	+1.5
PAULI				IAmb	IAmb	23 44 53.3	
	comp=Z,21nm,1.1s						
W39A	Magazine	76.03	357	P	P	23 44 42.5	+2.0
W39A				IAmb	IAmb	23 44 53.4	
	comp=Z,20nm,1.1s						
W39A	Magazine	76.03	357	P	P	23 44 42.1	+1.6
	baz=177						
WHAR	Wooly Hollow	76.08	358	P	P	23 44 42.0	+1.3
WHAR				IAmb	IAmb	23 44 50.7	
	comp=Z,20nm,1.1s						
SWET	Sewanee	76.10	4	P	P	23 44 41.8	+0.9
SWET				IAmb	IAmb	23 44 53.3	
	comp=Z,18nm,1.1s						
AMTX	Amarillo	76.36	350	P	P	23 44 43.9	+1.4
AMTX				IAmb	IAmb	23 44 52.9	
	comp=Z,17nm,0.9s						
KMSC	Kings Mountain	76.37	8	P	P	23 44 42.7	+0.3
KMSC	Kings Mountain	76.37	8	P	P	23 44 43.9	+1.5
	baz=187						
CPCT	Cooper Cave	76.41	5	P	P	23 44 43.6	+0.9
CPCT				IAmb	IAmb	23 44 52.8	
	comp=Z,18nm,1.1s						
V48A	Smith Brothers	76.58	3	P	P	23 44 44.8	+1.2
V48A				IAmb	IAmb	23 44 53.2	
	comp=Z,16nm,1.1s						
V53A	Saluda	76.76	6	P	P	23 44 45.8	+1.1
V53A				IAmb	IAmb	23 44 57.4	
	comp=Z,14nm,0.9s						
TUL1	Leonard	76.84	356	P	P	23 44 46.5	+1.4
TUL1	Leonard	76.84	356	P	P	23 44 47.5	+2.4
	baz=176						
LCAR	Lake Charles	76.84	359	P	P	23 44 46.3	+1.3
LCAR				IAmb	IAmb	23 44 56.9	
	comp=Z,16nm,1.3s						
CNNC	Cliffs of the	76.88	10	P	P	23 44 46.9	+1.6
CNNC				IAMs_20	IAMs_20	00 13 50.1	
	comp=Z,863nm,18.0s						
OK030	Cody Creek RV	76.92	355	P	P	23 44 46.1	+0.6
OK030				IAmb	IAmb	23 44 57.0	
	comp=Z,17nm,0.9s						
WVT	Waverly	76.94	2	P	P	23 44 46.1	+0.5
WVT				pmax	pmax		
	comp=Z,20nm,1.4s						
WVT	Waverly	76.94	2	P	P	23 44 46.0	+0.5
WVT				IAmb	IAmb	23 44 58.0	
	comp=Z,20nm,1.4s						
ANMO	Albuquerque	77.14	347	*i* P	P	23 44 49.5	+2.5
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ANMO	Albuquerque	77.14	347	P	P	23 44 48.7	+1.7
U40A	Yellville	77.16	358	P	P	23 44 48.5	+1.6
	baz=178						
U38A	Gravette	77.30	357	P	P	23 44 48.3	+0.6
U38A				IAmb	IAmb	23 44 59.2	
	comp=Z,17nm,0.9s						
U49A	Red Boiling Sp	77.40	4	P	P	23 44 49.1	+0.9
X18A	Snowflake	77.42	344	P	P	23 44 51.0	+2.5
X18A				IAmb	IAmb	23 45 04.6	
	comp=Z,26nm,1.6s						
PBMO	Poplar Bluff	77.55	360	P	P	23 44 49.3	+0.3
PBMO				IAmb	IAmb	23 44 58.8	
	comp=Z,12nm,0.8s						
X16A	Lo Mia Camp, P	77.64	342	P	P	23 44 51.8	+2.0
T42A	Van Buren	77.80	359	P	P	23 44 51.4	+1.0
T42A				IAmb	IAmb	23 45 00.6	
	comp=Z,12nm,0.9s						
T47A	Sharon Grove	77.82	3	P	P	23 44 52.0	+1.5
MGMO	Mountain Grove	77.94	358	P	P	23 44 52.4	+1.2
MGMO				IAmb	IAmb	23 45 04.2	
	comp=Z,15nm,1.1s						
S39A	Bolivar	78.50	358	P	P	23 44 55.2	+0.9
S39A				IAmb	IAmb	23 45 04.5	
	comp=Z,13nm,0.9s						
BLA	Blacksburg	78.52	8	IAMs_20	IAMs_20	00 14 54.6	
	comp=Z,1µm,20.0s						
S51A	Beattyville	78.66	6	P	P	23 44 55.4	+0.3
S51A				IAmb	IAmb	23 45 05.5	
	comp=Z,19nm,0.9s						
CCM	Cathedral Cave	78.83	359	P	P	23 44 56.8	+0.7
CCM				pmax	pmax		
	comp=Z,20nm,0.9s						
CCM	Cathedral Cave	78.83	359	P	P	23 44 56.8	+0.7
CCM				IAmb	IAmb	23 45 06.4	
	comp=Z,20nm,0.9s						
WCI	Wyandotte Cave	79.08	3	P	P	23 44 57.9	+0.4
WCI				pmax	pmax		
	comp=Z,11nm,1.0s						
WCI	Wyandotte Cave	79.08	3	P	P	23 44 57.9	+0.4
R49A	Shelbyville	79.20	4	P	P	23 44 59.8	+1.6
R49A				IAmb	IAmb	23 45 25.3	
	comp=Z,22nm,1.5s						
R58B	Mineral	79.56	10	P	P	23 45 01.1	+1.0
R55A	Marlinton	79.61	8	P	P	23 45 00.8	+0.4
R55A				IAmb	IAmb	23 45 17.9	
	comp=Z,20nm,1.1s						
S22A	4UR Ranch, Cre	79.94	347	P	P	23 45 04.0	+1.5
	baz=167						
BLO	Bloomington	80.02	3	P	P	23 45 03.8	+1.3
BLO				pmax	pmax		
	comp=Z,23nm,1.3s						
BLO	Bloomington	80.02	3	P	P	23 45 03.8	+1.3
BLO				IAmb	IAmb	23 45 14.9	
	comp=Z,23nm,1.2s						
CBKS	Cedar Bluff	80.03	353	P	P	23 45 04.1	+1.4
CBKS				pmax	pmax		
	comp=Z,14nm,0.8s						
CBKS	Cedar Bluff	80.03	353	P	P	23 45 04.1	+1.4
CBKS				IAmb	IAmb	23 45 14.3	
	comp=Z,14nm,0.8s						
KSU1	Kansas State U	80.07	355	P	P	23 45 04.5	+1.7
KSU1				IAmb	IAmb	23 45 14.8	
	comp=Z,19nm,0.9s						
P40A	Paris	80.31	359	P	P	23 45 05.3	+1.2
P38A	Dawn	80.44	358	P	P	23 45 05.7	+0.9
P38A				IAmb	IAmb	23 45 16.0	
	comp=Z,15nm,0.8s						
P49A	Miami Univ. Ec	80.47	4	P	P	23 45 06.1	+1.1
P49A	Miami Univ. Ec	80.47	4	P	P	23 45 06.0	+1.1
	baz=184						
P53A	Whipple	80.67	7	P	P	23 45 06.4	+0.4
P53A				IAmb	IAmb	23 45 23.6	
	comp=Z,21nm,1.1s						
MPMC	Manual Prospec	80.75	338	P	P	23 45 08.3	+1.5
	baz=160						
P52A	Corning	80.75	6	P	P	23 45 06.8	+0.3
P52A				IAmb	IAmb	23 45 15.7	
	comp=Z,20nm,0.8s						
P52A				IAMs_20	IAMs_20	00 15 58.9	
	comp=Z,1µm,21.0s						
P52A	Corning	80.75	6	P	P	23 45 07.0	+0.5
	baz=186						
Q24A	Divide	80.86	348	P	P	23 45 10.7	+3.2
	baz=169						
CWC	Cottonwood Cre	81.27	338	P	P	23 45 11.3	+1.8
	baz=159						
ACSO	Alum Creek Sta	81.28	6	IAMs_20	IAMs_20	00 15 36.9	
	comp=Z,1µm,22.0s						
O53A	New Philadelph	81.44	7	P	P	23 45 09.3	-0.8
	baz=187						
N53A	Lisbon	82.03	7	P	P	23 45 16.2	+2.9
N53A				IAmb	IAmb	23 45 26.1	
	comp=Z,29nm,1.4s						
N54A	Moraine State	82.27	8	P	P	23 45 15.6	+1.1
N54A				IAmb	IAmb	23 45 30.4	
	comp=Z,11nm,0.9s						
N54A				IAMs_20	IAMs_20	00 17 42.0	
	comp=Z,1µm,19.0s						
N54A	Moraine State	82.27	8	P	P	23 45 14.3	-0.2
	baz=188						
P17A	Butcher Ranch,	82.35	344	P	P	23 45 17.5	+2.4
R11A	Troy Canyon, C	82.39	340	P	P	23 45 18.7	+3.3
	baz=161						
P18A	Preston Nutter	82.40	345	P	P	23 45 17.1	+1.5
P18A				IAmb	IAmb	23 45 24.5	
	comp=Z,26nm,1.7s						
O20A	White River Ci	82.51	346	P	P	23 45 18.5	+2.4
	baz=166						
SPR3	Spring Creek 3	82.69	341	P	P	23 45 19.4	+2.2
SPR3				IAmb	IAmb	23 45 26.5	
	comp=Z,22nm,1.8s						
N59A	State Game Lan	82.75	11	P	P	23 45 16.3	-0.7
	baz=191						
M54A	Oil Creek Stat	82.85	8	IAMs_20	IAMs_20	00 17 21.8	
	comp=Z,1µm,20.0s						
M54A	Oil Creek Stat	82.85	8	P	P	23 45 17.5	0.0
	baz=188						
NLU	North Lily Min	83.09	343	P	P	23 45 21.8	+2.8
NLU				IAmb	IAmb	23 45 29.3	
	comp=Z,21nm,1.3s						
NVAR	Mina Array Bea	83.19	338	P	P	23 45 21.6	+2.0
	comp=Z,0.7nm,0.7s,baz=187,slow=6.4,SNR=4.7						
NVAR				LR	LR	00 14 02.2	
	comp=Z,243nm,21.6s,baz=160,slow=30						
NVAR	Mina Array Bea	83.19	338	P	P	23 45 21.5	+1.8
AAM	Ann Arbor	83.29	5	IAMs_20	IAMs_20	00 16 16.2	
	comp=Z,999nm,22.0s						
PNTR	Pine Nut	84.17	338	P	P	23 45 26.9	+2.2
K22A	Casper	84.67	348	P	P	23 45 29.9	+2.9
	baz=168						
ECSD	EROS Data Cent	84.68	355	P	P	23 45 28.7	+1.9
DZM	Mont Dzumac	85.09	245	*e*S	S	23 55 53.7	-5.9
	comp=Z,359nm,27.7s						
DZM	Mont Dzumac	85.09	245	*e*LR	LR	00 12 09.4	
	comp=Z,3µm,26.7s						
J57A	Williamstown	85.17	10	P	P	23 45 29.4	+0.1
PD31	Pinedale Array	85.30	346	P	P	23 45 32.0	+1.7
PD31				IAmb	IAmb	23 45 51.2	
	comp=Z,18nm,1.6s						
PDAR	Pinedale Array	85.30	346	P	P	23 45 31.9	+1.7
	comp=Z,1.0nm,0.7s,baz=152,slow=5.9,SNR=9.2						
PDAR	Pinedale Array	85.30	346	P	P	23 45 32.4	+2.2
DELO	Deloro Mine	86.05	9	P	P	23 45 33.8	+0.2

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DELO                                    IAmb      IAmb      23 45 43.7
           comp=Z,9.7nm,0.9s
CAN    Canberra           86.39 225     IAMs_20   IAMs_20   00 14 44.2
           comp=Z,1µm,21.0s
BOSA   Boshof             88.59 128     LR        LR        00 19 35.6
           comp=Z,602nm,20.8s,baz=220,slow=32
DBIC   Dimbokro           91.00  82     LR        LR        00 25 59.3
           comp=Z,364nm,18.1s,baz=238,slow=35
ULM    Lac du Bonnet      91.14 356     LR        LR        00 22 38.4
           comp=Z,316nm,20.9s,baz=172,slow=33
STKA   Stephens Creek     92.93 222     P         P         23 46 05.1  -1.7
           comp=Z,1.3nm,0.9s,baz=126,slow=14,SNR=2.2
STKA                                    LR        LR        00 21 03.6
           comp=Z,522nm,18.2s,baz=152,slow=31
SCHQ   Schefferville      97.71  14     LR        LR        00 28 59.6
           comp=Z,414nm,19.9s,baz=228,slow=34
CTAO   Charters Tower     99.57 233     IAMs_20   IAMs_20   00 24 40.3
           comp=Z,778nm,19.0s
TORD   Torodi Ar. Bea    100.09  81     P         Pdif      23 46 40.2  +0.9
           comp=Z,0.9nm,1.1s,baz=239,slow=4.0,SNR=2.7
TORD                                    PP        PP        23 50 49.1  +4.1
           comp=Z,0.7nm,1.0s,baz=254,slow=5.8,SNR=2.7
LSZ    Lusaka            100.21 121     IAMs_20   IAMs_20   00 29 04.8
           comp=Z,637nm,20.0s
WRAB   Tennant Creek     106.40 224     IAMs_20   IAMs_20   00 29 08.9
           comp=Z,754nm,19.0s
ABPO   Ambohimpanom      108.40 138     IAMs_20   IAMs_20   00 28 02.3
           comp=Z,647nm,21.0s
MBWA   Marble Bar        111.99 210     IAMs_20   IAMs_20   00 34 13.9
           comp=Z,562nm,18.0s
MBAR   Mbarara           112.57 112     IAMs_20   IAMs_20   00 33 22.0
           comp=Z,700nm,20.0s
EGAK   Eagle             112.80 339     IAMs_20   IAMs_20   00 29 12.0
           comp=Z,480nm,18.0s
ILAR   Eielson Array     114.42 337     PKP       PKPdf     23 51 30.6  -1.7
           comp=Z,0.3nm,0.8s,baz=169,slow=1.8,SNR=2.2
LODK   Lodwar            118.66 113     IAMs_20   IAMs_20   00 36 59.4
           comp=Z,681nm,21.0s
VSL    Villasalto        120.97  63     IAMs_20   IAMs_20   00 45 19.2
           comp=Z,408nm,20.0s
MMRI   Maumere           122.07 219     IAMs_20   IAMs_20   00 39 42.6
           comp=Z,576nm,21.0s
CEL    Celeste           124.83  67     IAMs_20   IAMs_20   00 45 48.4
           comp=Z,532nm,20.0s
FURI   Furi              124.84 111     IAMs_20   IAMs_20   00 42 31.2
           comp=Z,399nm,21.0s
AQU    L'Aquila          125.00  61     IAMs_20   IAMs_20   00 42 04.1
           comp=Z,439nm,22.0s
FETA   Feichten          125.30  55    eP         PKPdf     23 51 53.9  -0.1
           comp=Z,7.5nm,1.3s
RETA   Reutte            125.52  55    eP         PKiKP     23 51 56.3  +1.7
           comp=Z,8.4nm,2.0s
MOTA   Moosalm           125.67  55    eP         PKiKP     23 51 57.8  +2.8
           comp=Z,8.5nm,1.3s
SQTA   Sankt Quirin      125.68  55    eP         PKiKP     23 51 58.9  +4.0
           comp=Z,9.3nm,1.5s
WATA   Walderalm         125.96  55    eP         PKiKP     23 51 57.2  +1.6
           comp=Z,6.0nm,1.2s
WTTA   Wattenberg        125.97  55    eP         PKiKP     23 51 57.4  +1.8
           comp=Z,8.3nm,1.6s
ABTA   Abfaltersbach     126.30  56    eP         PKiKP     23 51 58.5  +2.3
           comp=Z,5.7nm,1.2s
KAPI   Kappang           126.41 218     IAMs_20   IAMs_20   00 42 10.5
           comp=Z,412nm,20.0s
OBKA   Obir              127.49  57     P         PKiKP     23 52 00.7  +2.1
           comp=Z,3.1nm,1.2s
GERES  GERESS Array B    127.86  54     PKP       PKPdf     23 51 57.5  -1.2
           comp=Z,0.7nm,0.7s,baz=247,slow=2.0,SNR=5.7
GERES  GERESS Array B    127.86  54     PKIKP     PKPdf     23 51 58.8  +0.1
GERES  GERESS Array B    127.86  54               PKPdf     23 51 58.8  +0.1
SOKA   Soboth            127.87  57    eP         PKiKP     23 52 02.7  +3.4
           comp=Z,4.2nm,1.6s
CLL    Collm             128.33  51    ePKPdf     PKiKP     23 52 03.0  +3.0
CLL                                    ePP        PP        23 54 00.0  -4.5
CLL                                    eSKPdf     SKPdf     23 55 35.0  +0.4
CLL                                    eSKKSac    SKKSac    00 01 06.0  +5.0
CLL                                    e                    00 02 42.0
CLL                                    ePPS       PPS       00 05 41.0
CLL                                    eSS        SS        00 11 18.0  -2.1
CLL                                    eSSS       SSS       00 15 48.0
CLL                                    e                    00 18 30.0
CLL                                    eSSSS                00 19 36.0
CLL                                     LmV                 00 45 00.0
           comp=Z,500nm,20.2s
TIR    Tirane            128.94  65     IAMs_20   IAMs_20   00 46 24.0
           comp=Z,414nm,21.0s
PDG    Podgorica         128.96  64     IAMs_20   IAMs_20   00 47 19.8
           comp=Z,348nm,21.0s
PSZ    Piszkesteto       131.40  57     IAMs_20   IAMs_20   00 47 57.9
           comp=Z,426nm,19.0s
BILL   Bilibino          132.28 330    ePKIKP     PKiKP     23 52 07.6  +0.2
BILL                                    pmax      pmax
           comp=Z,3.0nm,1.4s
PMBI   Palembang         134.00 201     IAMs_20   IAMs_20   00 49 55.0
           comp=Z,467nm,18.0s
MLR    Muntele Rosu      134.57  62     PKIKP     PKiKP     23 52 13.9  +1.0
MLR                                     MLR       MLR
           comp=Z,400nm,20.0s
MLR    Muntele Rosu      134.57  62     PKPdf     PKiKP     23 52 13.9  +1.0
MLR                                     IAMs_20   IAMs_20   00 52 14.1
           comp=Z,374nm,20.0s
BURAR  Bucovina Array    134.72  59     PKPdf     PKiKP     23 52 14.3  +1.1
GHAJ   Ghor Haditha      135.94  85     IAMs_20   IAMs_20   00 49 20.6
           comp=Z,337nm,22.0s
AKASG  Malin Array Be    138.02  56     PKP       PKPdf     23 52 17.8  +0.2
           comp=Z,0.1nm,0.2s,baz=255,slow=3.6,SNR=1.8
AKASG  Malin Array Be    138.02  56c  iPKIKP      PKiKP     23 52 23.1  +3.5
AKASG                                   pmax      pmax
           comp=Z,1.0nm,0.7s
BR131  Keskin Array S    138.02  73   i PKIKP     PKPdf     23 52 17.5  -0.6
BR131  Keskin Array S    138.02  73     PKPdf     PKiKP     23 52 20.2   0.0
BRTR   Keskin Array B    138.02  73     PKhKP     PKPpre    23 52 11.8
           comp=Z,0.6nm,0.8s,baz=248,slow=3.9,SNR=2.7
BRTR   Keskin Array B    138.02  73c  iPKIKP      PKiKP     23 52 22.5  +2.3
BRTR                                    pmax      pmax
           comp=Z,1.0nm,0.7s
BRTR   Keskin Array B    138.02  73     PKPdf     PKiKP     23 52 19.7  -0.5
MYKOM  Kota Tinggi       138.76 202     IAMs_20   IAMs_20   00 52 29.1
           comp=Z,392nm,19.0s
RAYN   Ar Rayn           139.29 102     IAMs_20   IAMs_20   00 45 55.7
           comp=Z,402nm,22.0s
IPM    Ipoh              142.08 199     IAMs_20   IAMs_20   00 51 16.5
           comp=Z,468nm,21.0s
OBN    Obninsk           142.89  50    ePKIKP     PKPdf     23 52 27.3  +1.1
OBN                                    e                    23 55 38.2
OBN                                    ePPP       PPP       23 58 44.4
OBN                                     pmax      pmax
           comp=Z,7.0nm,1.1s
MOS    Moscow            143.49  48    ePKIKP     PKPdf     23 52 26.6  -0.6
MOS                                     MLR       MLR
           comp=Z,500nm,20.0s
TIXI   Tiksi             143.79 340   i PKIKP     PKPdf     23 52 26.3  -1.0
TIXI   Tiksi             143.79 340     PKPdf     PKiKP     23 52 30.1  -0.7
TIXI                                    IAMs_20   IAMs_20   00 56 37.7
           comp=Z,295nm,20.0s
KLMR   Klimovskoe        143.98  40    ePKHKP     PKPpre    23 52 25.1
KLMR                                    pmax      pmax
           comp=Z,47nm,1.2s
KLMR   Klimovskoe        143.98  40    ePKPdf     PKPab     23 52 25.2  -0.1
KLMR                                    AMP                 23 52 36.0
           comp=Z,47nm,1.2s
KLMR                                    LQ        LQ        00 42 41.2
KLMR                                    LQ        LQ        00 42 41.2
KLMR                                    LR        LR        00 47 05.9
LPSR   Galich'ya Gora    144.24  54    ePKIKP     PKPdf     23 52 29.7  +1.0
LPSR                                    pmax      pmax
           comp=Z,20nm,1.0s
VSR    Storozhevoye      144.31  56    ePKIKP     PKPdf     23 52 29.3  +0.5
VSR                                     pmax      pmax
           comp=Z,20nm,1.1s
VORD   Divnogorie        144.38  57    ePKIKP     PKPdf     23 52 30.0  +1.1
VORD                                    pmax      pmax
           comp=Z,10.0nm,0.8s
KARS   Kars              145.16  75     PKIKP     PKPdf     23 52 30.9   0.0
KARS   Kars              145.16  75               PKPdf     23 52 30.9   0.0
PALK   Pallekele         145.35 164     PKIKP     PKPbc     23 52 31.5  -0.2
PALK   Pallekele         145.35 164     PKPbc     PKPbc     23 52 31.5  -0.2
KIV    Kislovodsk        145.69  69   i PKIKP     PKiKP     23 52 35.4  -0.3
KIV                                     pmax      pmax
           comp=Z,14nm,1.0s
KIV    Kislovodsk        145.69  69               PKPab     23 52 32.7  +0.4
KBZ    Khabaz            145.80  70     PKPbc     PKPab     23 52 33.2  +0.6
           comp=Z,5.4nm,1.1s,baz=270,slow=3.0,SNR=6.2
KBZ    Khabaz            145.80  70   i PKIKP     PKPab     23 52 32.4  -0.2
VRH    Novokhopyorsk     145.92  56    ePKIKP     PKPab     23 52 33.6  +0.8
VRH                                     pmax      pmax
           comp=Z,10.0nm,0.7s
ONI    Oni               145.94  72     PKIKP     PKPab     23 52 34.4  +1.1
ONI    Oni               145.94  72               PKPab     23 52 34.4  +1.1
GOF    Gofitskoye        146.16  67⇑  ePKP2      PKPbc     23 52 33.5  +0.2
GNI    Garni             146.24  77   i PKIKP     PKPdf     23 52 32.5  -0.3
SRIT   Nakonsritamara    146.39 198     PKPdf     PKPdf     23 52 34.0  +0.5
DLV    T  Lat            146.51 215     IAMs_20   IAMs_20   00 50 54.9
           comp=Z,340nm,22.0s
PRGR   Permogore         146.67  37    ePKP2      PKPbc     23 52 34.2   0.0
PRGR                                    pmax      pmax
           comp=Z,15nm,0.9s
UOSS   Minazif           147.93 110     PKPbc     PKiKP     23 52 40.1  -0.7
UOSS   Minazif           147.93 110     IAMs_20   IAMs_20   00 53 12.1
           comp=Z,291nm,20.0s
YAK    Yakutsk           148.26 325    ePKIKP     PKPbc     23 52 38.0  -0.6
YAK                                    e                    23 56 11.2
YAK                                     pmax      pmax
           comp=Z,40nm,1.0s
YAK                                     pmax      pmax
           comp=N,5.0nm,1.4s
YAK                                     pmax      pmax
           comp=E,4.0nm,0.8s
YAK                                     pmax      pmax
           comp=Z,251nm,3.7s
YAK                                     pmax      pmax
           comp=N,152nm,3.0s
YAK                                     pmax      pmax
           comp=E,136nm,3.3s
YAK    Yakutsk           148.26 325     PKPdf     PKPbc     23 52 37.8  -0.7
USRK   Ussuriysk Ar.     148.93 290     PKPbc     PKPbc     23 52 40.2  -0.6
           comp=E,6.1nm,0.7s,baz=72,slow=8.3,SNR=6.4
USRK   Ussuriysk Ar.     148.93 290     PKP2      PKPab     23 52 47.1  +2.1
USRK   Ussuriysk Ar.     148.93 290               PKPbc     23 52 40.4  -0.5
USRK                                    PKPab     PKPab     23 52 47.1  +2.1
MAK    Makhachkala       148.93  72    ePKHKP     PKPpre    23 52 31.9
MAK                                    e                    23 56 07.7
MAK                                    e                    23 59 37.9
MAK                                    eSS        SS        00 15 16.4  -7.3
MAK                                     pmax      pmax
           comp=Z,292nm,1.6s
MAK                                     MLR       MLR
           comp=Z,369nm,18.0s
KIRV   Kirov             149.39  42   i PKIKP     PKPbc     23 52 39.3  -2.2
KLR    Kul'dur           149.54 300   i PKIKP     PKPdf     23 52 37.9  +0.2
KSRS   Korea Array       150.27 276     PKPbc     PKPbc     23 52 43.6  -0.8
           comp=Z,1.6nm,0.8s,baz=118,slow=3.3,SNR=3.8
KSRS                                    PKPab     sPKPbc    23 52 48.7  +1.3
           comp=Z,6.5nm,1.0s,baz=122,slow=3.0,SNR=12
KSAR   Wonju Array Be    150.29 276     PKIKP     PKiKP     23 52 45.9  +0.6
KSAR   Wonju Array Be    150.29 276     PKPbc     PKiKP     23 52 45.9  +0.6
PBA    Port Blair        150.50 186     PKPbc     PKiKP     23 52 47.2  +0.9
MDJ    Mudanjiang        150.69 290     PKPbc     PKPdf     23 52 39.8  +0.2
MDJ                                     pPKP      PKPbc     23 52 44.6  -0.6
MDJ    Mudanjiang        150.69 290               PKPbc     23 52 44.8  -0.3
UBPT   Khong Chiam       150.78 213               PKPab     23 52 52.8  -0.3
NRIK   Noril'sk          151.72   2     PKPbc     PKPbc     23 52 46.7  -0.1
           comp=Z,4.7nm,0.8s,baz=17,slow=2.9,SNR=6.0
NRIK   Noril'sk          151.72   2     PKIKP     PKPbc     23 52 46.3  -0.5
NRIK   Noril'sk          151.72   2               PKPbc     23 52 46.3  -0.5
QIZ    Qiongzhong        151.97 224     PKPbc     PKPdf     23 52 41.6  -0.8
QIZ                                     PP        PP        23 56 29.4  +0.1
QIZ                                     LR        LR
           comp=Z,250nm,23.7s
QIZ                                     LR        LR
           comp=Z,190nm,20.4s
QIZ                                     LR        LR
           comp=Z,190nm,28.6s
ARU    Arti              154.76  42   i PKIKP     PKPbc     23 52 49.9  -3.9
NJ2    Nanjing           154.91 258    ePKPbc     PKPdf     23 52 46.0  -0.2
GEYT   Alibeck           155.59  87     PKPbc     PKPdf     23 52 53.6  +6.6
           comp=Z,1.7nm,0.8s,baz=225,slow=8.3,SNR=1.8
GEYT                                    PKPab     PKPab     23 53 11.9  -1.3
           comp=Z,2.4nm,0.7s,baz=219,slow=13,SNR=2.1
GYA0B  ALIBECK ARRAY     155.59  87     PKPbc     PKPdf     23 52 53.7  +6.6
CMAR   Chiang Mai Arr    156.01 202     PKIKP     PKPdf     23 52 47.9  -0.2
CMAR   Chiang Mai Arr    156.01 202     PKPdf     PKPdf     23 52 47.9  -0.2
CHTO   Chiang Mai        156.34 203     PKIKP     PKPdf     23 52 49.2  +0.6
CHTO   Chiang Mai        156.34 203     PKPdf     PKPdf     23 52 49.1  +0.6
CHTO   Chiang Mai        156.34 203     IAMs_20   IAMs_20   01 00 54.1
           comp=Z,307nm,19.0s
SLVN   Son La            156.82 216     IAMs_20   IAMs_20   01 06 44.7
           comp=Z,351nm,20.0s
BOD    Bodaibo           157.18 325    ePKP2      PKPab     23 53 21.8  +2.5
BOD                                     pmax      pmax
           comp=Z,16nm,1.7s
HIA    Hailar            157.37 301     IAMs_20   IAMs_20   01 05 18.5
           comp=Z,271nm,20.0s
HRA    Herat             157.41  99     PKPdf     PKPdf     23 52 51.0  +1.2
ABKAR  Akbulak array     157.70  59     PKPdf     PKPdf     23 52 48.7  -0.6
ABKAR  Akbulak array     157.70  59     PKPdf     PKPdf     23 52 48.7  -0.6
XAN    Xi'an             163.13 251     PKP       PKPdf     23 52 53.6  -2.3
XAN                                     LR        LR
           comp=Z,210nm,19.9s
XAN                                     LR        LR
           comp=Z,440nm,17.9s
SONM   Songino Array     166.28 305     PKPab     PKPab     23 53 58.5  -1.1
           comp=Z,1.2nm,1.1s,baz=104,slow=3.1,SNR=4.5
ZAA0   Zalesovo Array    166.79  12               PKPdf     23 52 56.3  -2.0
ZALV   Zalesovo Beam     166.79  12     PKP       PKPdf     23 52 55.8  -2.5
           comp=Z,2.0nm,0.9s,baz=45,slow=2.2,SNR=6.0
ZALV   Zalesovo Beam     166.79  12     PKIKP     PKPdf     23 52 55.5  -2.8
ZALV   Zalesovo Beam     166.79  12               PKPdf     23 52 55.5  -2.8
KSH    Kashi             169.48  94     PKP       PKPdf     23 53 03.3  +2.5
KSH                                     LR        LR
           comp=Z,270nm,15.5s
KSH                                     LR        LR
           comp=Z,330nm,16.5s
MKAR   Makanchi Array    172.28  41     PKP       PKPdf     23 53 02.7  +0.8
           comp=Z,0.7nm,0.8s,baz=298,slow=3.1,SNR=3.6
MKAR   Makanchi Array    172.28  41     PKIKP     PKPdf     23 53 00.5  -1.4
MKAR   Makanchi Array    172.28  41               PKPdf     23 53 00.5  -1.4
WMQ    Urumqi            176.98  27    ePKP       PKPdf     23 53 04.4  +0.9
WMQ                                     LR        LR
           comp=Z,390nm,29.2s
WMQ                                     LR        LR
           comp=Z,500nm,29.0s
```

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*INMG **12** 23:33:43.8±1.4, 37°.01N×13°.57W, h10km, ML2.2, Error ellipse: s-maj=16.0km s-min=13.7km az=163.0*

*CNRM **12** 23:34:04.9, 36°.39N×11°.84W, h5km, ml2.5*

ISC 12 23:33:54.2±3.4**, 37°.4N**±0°.1×**12°.1W**±0°.2**, h10km, n11, σ2ˢ17**/18**, Azores-Cape St. Vincent Ridge**

```
Code   Station Name        Δ°   AZ°    Phase ID            Time        Res
                                       Op        ISC       h  m  s     ISC
PFVI   Vila Bisbo         2.60  94    eSn        Sb        23 35 15.3  +2.5
PFVI                                   A         A         23 35 22.8
           7.4nm,0.5s
PTEO   Sao Teotonio       2.67  85    ePn        Pn        23 34 37.7  +0.5
PTEO                                  eSn        Sb        23 35 17.3  +2.4
PTEO                                   A         A         23 35 28.5
           5.3nm,0.7s
PNCL   Nicolau / Gran     2.91  74    ePn        Pn        23 34 41.2  +0.7
PNCL                                  eSn        Sb        23 35 23.5  +1.8
PNCL                                   A         A         23 35 29.7
           1.9nm,0.7s
MESJ   Messejana          3.10  80    ePn        Pn        23 34 43.4  +0.3
MESJ                                  eSn        Sb        23 35 29.6  +2.5
PCVE   Castro Verde       3.22  84    eSn        Sb        23 35 31.7  +1.0
PBDV   Barranco-do-Ve     3.30  91    eSn        Sb        23 35 33.3  +0.2
PBDV                                   A         A         23 35 49.2
           2.6nm,0.9s
PVAQ   Vaqueiros          3.47  88    ePn        Pn        23 34 48.6  +0.4
PVAQ                                  eSn        Sb        23 35 36.3  -1.5
PVAQ                                   A         A         23 35 45.1
           2.0nm,1.0s
PVAQ   Vaqueiros          3.47  88     P         Pg        23 35 00.2  -0.4
PVAQ                                   S         Sb        23 35 40.9  +3.0
PESTR  Estremoz           3.84  65    eSn        Sb        23 35 46.6  -2.1
MD31   MD31               7.47 125     P         Pn        23 35 45.1  +1.7
MD31                                   S         Sn        23 37 03.6  -4.6
MDT    Midelt             7.61 124     P         Pn        23 35 46.9  +1.7
MDT                                    S         Sn        23 37 09.4  -2.1
```

PRU 12 23:51:30.3±0.0**, 50°.26N×19°.01E, h0km, Poland**

```
Code   Station Name        Δ°   AZ°    Phase ID            Time        Res
                                       Op        ISC       h  m  s     ISC
LANS   Liptovska Anna     1.15 165    e          Sg        23 52 06.7  -0.5
LANS   Liptovska Anna     1.15 165    eLG        Lg        23 52 10.5
LANS   Liptovska Anna     1.15 165    ePG        Pg        23 51 52.2  -0.1
LANS   Liptovska Anna     1.15 165    eSG        Sg        23 52 06.6  -0.6
LANS   Liptovska Anna     1.15 165     pmax      pmax
           comp=N,4.0nm,0.8s
LANS   Liptovska Anna     1.15 165    ePKHKP     Pg        23 51 52.2  -0.1
KRLC   Kraliky            1.45 264    ePKIKP     Pg        23 51 56.2  -1.8
KRLC   Kraliky            1.45 264    ePG        Pg        23 51 56.2  -1.8
KRLC                                  eSG        Sg        23 52 15.8  -0.9
DPC    Dobruska-Polom     1.73 274    ePKIKP     Pg        23 52 02.2  -1.2
DPC    Dobruska-Polom     1.73 274    ePG        Pg        23 52 02.2  -1.2
DPC                                   eSG        Sb        23 52 25.3  +0.2
```

MAN 12 23:58:34.2, 16°.99N×120°.22E, h34km, mb3.9, ML2.7, MS2.3, Luzon

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*IDC **13** 00:06:26.2±1.4, 2°.62S×139°.12E, h0km, mb3.7/6, mb1 4.0/9, mb1mx3.8/24, mbtmp3.9/9, ML4.1/3, MS4.3/2, Ms1 4.3/2, ms1mx3.1/26, Error ellipse: s-maj=42.3km s-min=20.9km az=100.0*

*DJA **13** 00:06:29.8±0.7, 2°S±6°×13°9E±°, h10km±8km, M4.0/6, mb4.3/3, MLv3.9/6*

*NEIC **13** 00:06:33.2±0.9, 2°.72S±0°.08×138°.9E±0°.1, h41km±8km, mb4.1/11, Error ellipse: s-maj=19.6km s-min=10.6km az=99.0*

ISC 13 00:06:28.6±0.6**, 2°.62S**±0°.07×**138°.87E**±0°.05**, h10km, n32, σ0ˢ91**/31**, mb4.1**/9**, Irian Jaya**

```
Code   Station Name        Δ°   AZ°    Phase ID            Time        Res
                                       Op        ISC       h  m  s     ISC
SMPI   Sarmi              0.64 346     P         Pg        00 06 40.6  -0.5
GENI   Genyem             1.30  89     P         Pg        00 06 53.4  -0.2
GENI                                   S         Sg        00 07 12.1  +1.6
SRPI   Serui, Papua       2.73 286     P         Pn        00 07 13.1  +0.5
BAKI   Biak               3.10 297     P         Pn        00 07 17.8  +0.1
FAKI   Fak Fak            6.62 267     P         Pn        00 08 06.8  +0.7
           0.1nm12nm,0.7s
FAKI   Fak Fak            6.62 267     Pn        Pn        00 08 06.7  +0.7
SIJI   Sorong             7.79 283     Pn        Pn        00 08 24.2  +2.0
           1.0nm,0.3s,baz=125,slow=23,SNR=2.5
MTN    Manton Dam        12.72 217     Pn        Pn        00 09 29.7  -0.1
SOEI   Soe               16.15 243     P         Pn        00 10 17.8  +1.8
           36nm,1.0s
SOEI   Soe               16.15 243               Pn        00 10 16.3  +0.3
KNRA   Kununurra         16.36 217     Pn        Pn        00 10 17.5  -1.0
KNRA                                   IAmb      IAmb      00 10 42.1
           comp=Z,32nm,1.5s
BATI   Baumata           16.88 243     P         P         00 10 28.9  +1.6
           comp=Z,3.3nm,0.3s,baz=40,slow=2.0,SNR=3.7
WB0    Warramunga Arr    17.60 194               Pn        00 10 33.2  -1.0
WB0                                    IAmb      IAmb      00 11 00.8
           comp=Z,12nm,1.4s
WRA    Warramunga Arr    17.78 194     P         Pn        00 10 35.4  -1.1
           comp=Z,0.5nm,0.3s,baz=16,slow=13,SNR=19
WRA    Warramunga Arr    17.78 194     P         Pn        00 10 35.6  -0.8
FITZ   Fitzroy Crossi    20.12 219     P         P         00 11 02.9   0.0
           comp=Z,2.0nm,0.4s,baz=50,slow=9.9,SNR=18
AS31   Alice Springs     21.47 193     P         P         00 11 16.6  -0.9
ASAR   Alice Springs     21.47 193     P         P         00 11 17.6   0.0
           comp=Z,1.1nm,0.6s,baz=11,slow=11,SNR=15
ASAR   Alice Springs     21.47 193     P         P         00 11 16.6  -0.9
PSA00  Pilbara Seismi    26.41 223     P         P         00 12 04.7  -1.0
PSA00                                  IAmb      IAmb      00 12 27.3
           comp=Z,7.3nm,1.4s
SONM   Songino Array     57.70 335     P         P         00 16 19.2  -0.5
           comp=Z,0.2nm,0.6s,baz=62,slow=39,SNR=2.6
SONM   Songino Array     57.70 335     P         P         00 16 19.8  +0.2
SONM                                   IAmb      IAmb      00 16 46.1
           comp=Z,1.5nm,1.4s
PETK   Petropavlovsk-    57.73  13     LR        LR        00 40 55.0
           comp=Z,251nm,20.1s,baz=91,slow=36
MK31   Makanchi Array    69.81 322     P         P         00 17 40.2  +0.7
MK31                                   IAmb      IAmb      00 18 07.5
           comp=Z,1.8nm,1.1s
MKAR   Makanchi Array    69.81 322     P         P         00 17 39.8  +0.3
           comp=Z,1.1nm,0.7s,baz=114,slow=8.2,SNR=13
MAKZ   Makanchi          70.01 322     P         P         00 17 40.9  +0.2
MAKZ                                   IAmb      IAmb      00 17 41.5
           comp=Z,2.8nm,0.9s
ZALV   Zalesovo Beam     71.94 330     P         P         00 17 51.8  -0.3
           comp=Z,0.6nm,0.3s,baz=267,slow=27,SNR=2.4
BRVK   Borovoye          79.40 325     P         P         00 18 35.1  +0.1
BRVK                                   IAmb      IAmb      00 18 35.4
           comp=Z,2.2nm,0.8s
GEYT   Alibeck           84.31 308     LR        LR        00 56 44.6
           comp=Z,161nm,21.6s,baz=260,slow=36
ABKAR  Akbulak array     84.75 320     P         P         00 19 02.2  -0.9
ILAR   Eielson Array     85.68  24     P         P         00 19 06.5  -1.0
           comp=Z,0.3nm,0.8s,baz=254,slow=4.6,SNR=4.1
QSPA   South Pole Qui    87.33 180     P         P         00 19 15.8  +0.1
```

IDC 13 00:27:36.0±411.0**, 47°.35N×65°.95E, h0km, Error ellipse: s-maj=170.1km s-min=124.7km az=141.0, Central Kazakhstan**

```
Code   Station Name        Δ°   AZ°    Phase ID            Time        Res
                                       Op        ISC       h  m  s     ISC
I31KZ  AKTYUBINSK INF     6.05 303    i                    01 05 40.0
           baz=117,slow=334,SNR=0.8
I46RU  ZALESOVO INFRA13.65  54    i                    01 56 40.0
           baz=249,slow=310,SNR=0.8
I34MN  SONGINO INFRAS27.09  74    i                    03 12 10.0
           baz=285,slow=326,SNR=1.7
I18DK  QAANAAQ INFRAS52.40 349    i                    06 13 02.8
           baz=27,slow=346,SNR=2.6
```

IDC 13 00:28:41.4±2.3**, 4°.03S×130°.05E, h0km, mb3.1**/1**, mb1 3.2**/3**, mb1mx3.1**/35**, mbtmp3.0**/3**, ML3.0**/2**, Error ellipse: s-maj=174.2km s-min=16.2km az=70.0, Banda Sea**

```
Code   Station Name        Δ°   AZ°    Phase ID            Time        Res
                                       Op        ISC       h  m  s     ISC
WRA    Warramunga Arr    16.36 166     Pn        Pn        00 32 32.6  -0.1
           0.1nm,0.3s,baz=348,slow=14,SNR=2.0
ASAR   Alice Springs     19.88 170     P         P         00 33 14.4   0.0
           0.1nm,0.3s,baz=348,slow=9.7,SNR=7.1
MKAR   Makanchi Array    65.79 326     P         P         00 39 28.4   0.0
           0.1nm,0.6s,baz=110,slow=10,SNR=1.4
```

NNC 13 00:37:13.1±5.6**, 38°.68N×72°.71E, h0km, mb4.1, mpv3.5, 3C-3D, Error ellipse: s-maj=40.1km s-min=25.6km az=173.0, Tajikistan**

```
Code   Station Name        Δ°   AZ°    Phase ID            Time        Res
                                       Op        ISC       h  m  s     ISC
IUG    Iuzhnay            4.02 330     Pg        Pb        00 38 27.1  +2.2
           214nm,0.7s
IUG                                    Lg        Lg        00 39 22.4
           62nm,0.9s
MRKS   Merke              4.08   5     Pg        Pb        00 38 23.7  -2.2
           5.9nm,0.5s
MRKS                                   Lg        Lg        00 39 16.1
           5.8nm,0.5s
AAK    Ala-Archa          4.18  18    ⇓Pn        Pn        00 38 19.3  +1.1
           4.2nm,0.6s
AAK                                   ⇑Sn        Sn        00 39 10.5  +2.6
           0.6nm,0.6s
KK08   Karatay Array      4.73 340    ⇓Pn        Pn        00 38 23.7  -2.0
           1.4nm,0.4s,baz=150,slow=12
KK08                                  ⇑Sn        Sn        00 39 23.0  +1.7
           0.4nm,0.5s,baz=158,slow=22
TKM2   Tokmak 2           4.77  26    ⇓Pg        Pg        00 38 42.5  -2.0
           2.7nm,0.5s
TKM2                                  ⇑Lg        Lg        00 39 50.9
           3.7nm,0.8s
BRLS   Borolday           4.86 334     Pg        Pb        00 38 39.6  +0.5
           1.7nm,0.4s
BRLS                                   Lg        Lg        00 39 43.4
           5.4nm,0.6s
KRBS   Karabastau         5.49  23     Pg        Pb        00 38 50.7  +0.9
           1.7nm,0.8s
KRBS                                   Lg        Lg        00 40 02.4
           1.9nm,0.6s
```

IDC 13 01:11:51.8±8.4**, 1°.45N×124°.41E, h0km, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.4**/37**, mbtmp3.7**/3**, Error ellipse: s-maj=181.2km s-min=130.7km az=65.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.38**	**156**	P	P	01 17 02.7	+0.3
	0.8nm,0.4s,baz=333,slow=11,SNR=24						
ASAR	**Alice Springs**	**26.61**	**160**	P	P	01 17 33.0	+0.8
	0.3nm,0.4s,baz=339,slow=7.4,SNR=16						
STKA	**Stephens Creek**	**36.93**	**155**	P	P	01 19 01.6	-1.1
	0.5nm,0.3s,baz=354,slow=10,SNR=2.6						

IDC 13 01:17:03.4±5.0**, 2°.57S**×**139°.36E, h0**^{km}**, mb3.1**/2**, mb1 3.3**/3**, mb1mx3.2**/29**, mbtmp3.1**/3**, ML3.1**/1**, Error ellipse: s-maj=198.0km s-min=32.0km az=88.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.95**	**196**	P	Pn	01 21 13.7	-1.0
	0.1nm,0.3s,baz=16,slow=12,SNR=5.4						
ASAR	**Alice Springs**	**21.63**	**194**	P	P	01 21 55.8	+0.3
	0.3nm,0.7s,baz=17,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**70.08**	**322**	P	P	01 28 17.6	+0.2
	0.2nm,0.7s,baz=109,slow=7.8,SNR=1.9						

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*SJA **13** 01:17:36.7±0.8, 31°.68S×72°.45W, h20^{km}±9^{km}, ML4.0, MW4.1*

*IDC **13** 01:17:39.5±1.6, 31°.67S×71°.75W, h0^{km}, mb4.2/4, mb1 4.0/8, mb1mx3.9/24, mbtmp3.9/8, ML3.6/4, MS3.1/2, Ms1 3.1/2, ms1mx2.9/19, Error ellipse: s-maj=58.0km s-min=22.1km az=103.0*

*NEIC **13** 01:17:39.9±1.7, 31°.69S±0°.04×72°.1W±0°.1, h10^{km}±7^{km}, mb4.1/4, ML4.0(GUC), Error ellipse: s-maj=17.2km s-min=5.8km az=91.0*

*GUC **13** 01:17:41.0±0.6, 31°.70S×72°.12W, h48^{km}±4^{km}, ML4.0*

ISC 13 01:17:37.9±1.4**, 31°.74S**±0°.02×**72°.11W**±0°.05**, h3**^{km}±9^{km}**, n80, σ1**^{s}**.62**/110**, mb4.3**/5**, 8C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	**Catapilco**	**1.07**	**140**	⇓*i*P	**Pn**	**01 18 00.7**	**+0.9**
VA06				*i* S	**Sn**	**01 18 15.8**	**+0.6**
VA06				IAML		01 18 19.1	
	comp=E,8μm,0.2s						
CO06	**Fray Jorge**	**1.14**	**21**	⇑*i*P	**Pg**	**01 18 00.6**	**+0.8**
CO06				*i* S	**Sb**	**01 18 15.2**	**-0.4**
CO06	**Fray Jorge**	**1.14**	**21**		**Pb**	**01 18 00.2**	**-0.2**
VA01	**Torpederas**	**1.33**	**163**	*e*P	**Pb**	**01 18 04.3**	**+0.6**
VA01	**Torpederas**	**1.33**	**163**	Pn	**Pb**	**01 18 04.2**	**+0.5**
VA01	**Torpederas**	**1.33**	**163**	*e*P	**Pg**	**01 18 05.0**	**+1.4**
CO03	**El Pedregal**	**1.52**	**54**	⇑*i*P	**Pb**	**01 18 06.8**	**0.0**
CO03				*i* S	**Sb**	**01 18 25.8**	**-0.7**
CO03				IAML		01 18 33.2	
	comp=E,3μm,0.4s						
CO03	**El Pedregal**	**1.52**	**54**		**Pb**	**01 18 06.9**	**+0.2**
CO03	**El Pedregal**	**1.52**	**54**	*e*P	**Pb**	**01 18 07.0**	**+0.2**
CO03				*e*S	**Sg**	**01 18 26.6**	**-0.1**
CO03				IAML		01 18 27.7	
	comp=Z,1μm,0.5s						
ROCH	**El Roble**	**1.54**	**143**	⇑*i*P	**Pg**	**01 18 08.0**	**+0.5**
ROCH				⇑*i*P	**Pb**	**01 18 07.7**	**+0.5**
ROCH				*i* S	**Sg**	**01 18 28.1**	**+0.6**
ROCH				*i* S	**Sb**	**01 18 28.3**	**+1.0**
ROCH				IAML		01 18 32.2	
	comp=N,3μm,0.3s						
ROCH				IAML		01 18 32.4	
	comp=N,4μm,0.3s						
ROC1	**El Roble**	**1.54**	**143**	*e*P	**Pn**	**01 18 07.0**	**+0.4**
ROC1				*e*P	**Pb**	**01 18 07.8**	**+0.5**
ROC1				*e*S	**Sg**	**01 18 29.0**	**+1.5**
VA03	**San Esteban**	**1.67**	**128**	⇑*i*P	**Pb**	**01 18 09.9**	**+0.5**
VA03				*e*S	**Sb**	**01 18 30.8**	**-0.1**
VA03				IAML		01 18 37.2	
	comp=E,5μm,0.6s						
VA03	**San Esteban**	**1.67**	**128**		**Pb**	**01 18 09.3**	**-0.1**
VA03	**San Esteban**	**1.67**	**128**	*e*P	**Pb**	**01 18 10.1**	**+0.7**
VA03				*e*S	**Sg**	**01 18 32.2**	**+0.6**
VA03				IAML		01 18 37.6	
	comp=Z,2μm,0.5s						
MT02	**Curacav**	**1.72**	**152**	*e*P	**Pb**	**01 18 10.3**	**+0.1**
MT02				*i* S	**Sb**	**01 18 32.0**	**-0.3**
MT02	**Curacav**	**1.72**	**152**		**Pn**	**01 18 09.7**	**+0.8**
MT02	**Curacav**	**1.72**	**152**	*e*P	**Pn**	**01 18 05.2**	**-3.7**
MT02				*e*P	**Pb**	**01 18 10.6**	**+0.4**
MT02				*e*S	**Sn**	**01 18 30.2**	**-1.2**
MT02				IAML		01 18 40.2	
	comp=Z,670nm,0.4s						
PEL	**Peldehue**	**1.84**	**140**	⇓*i*P	**Pb**	**01 18 12.0**	**-0.4**
PEL				*i* S	**Sb**	**01 18 35.1**	**-0.8**
PEL				IAML		01 18 44.4	
	comp=N,1μm,0.3s						
PEL	**Peldehue**	**1.84**	**140**		**Pb**	**01 18 11.9**	**-0.4**
PEL	**Peldehue**	**1.84**	**140**	*e*P	**Pb**	**01 18 12.4**	**0.0**
PEL				*e*S	**Sg**	**01 18 40.4**	**+3.1**
GO04	**Tololo Observa**	**1.93**	**36**	⇑*i*P	**Pn**	**01 18 12.3**	**+0.4**
GO04	**Tololo Observa**	**1.93**	**36**		**Pn**	**01 18 12.7**	**+0.8**
GO04	**Tololo Observa**	**1.93**	**36**	*e*P	**Pb**	**01 18 13.0**	**-0.9**
GO04				*e*S	**Sg**	**01 18 40.7**	**+0.8**
VA05	**Santo Domingo**	**1.95**	**168**	*e*P	**Pn**	**01 18 13.3**	**+1.3**
VA05				IAML		01 18 51.0	
	comp=E,2μm,0.4s						
VA05	**Santo Domingo**	**1.95**	**168**		**Pn**	**01 18 12.6**	**+0.6**
CO05	**La Serena**	**1.97**	**23**	⇑*i*P	**Pn**	**01 18 12.8**	**+0.6**
CO05				IAML		01 18 50.4	
	comp=N,2μm,0.5s						
CO05	**La Serena**	**1.97**	**23**		**Pn**	**01 18 13.0**	**+0.8**
MT05	**Renca**	**2.01**	**145**	*e*P	**Pb**	**01 18 14.8**	**-0.5**
MT05				*i* S	**Sb**	**01 18 40.2**	**-0.5**
MT05				IAML		01 18 49.1	
	comp=E,2μm,0.2s						
MT05	**Renca**	**2.01**	**145**		**Pb**	**01 18 14.4**	**-0.8**
MT05	**Renca**	**2.01**	**145**	*e*P	**Pb**	**01 18 15.1**	**-0.2**
MT05				*e*S	**Sg**	**01 18 43.7**	**+1.0**
MT05				IAML		01 18 53.8	
	comp=Z,601nm,0.7s						
FCH	**Farellones**	**2.21**	**136**	*e*P	**Pb**	**01 18 17.5**	**-1.2**
FCH				*i* S	**Sb**	**01 18 45.5**	**-1.1**
FCH				IAML		01 18 54.3	
	comp=E,976nm,0.3s						
MT01	**Popeta**	**2.24**	**161**	⇑*i*P	**Pn**	**01 18 17.5**	**+1.6**
MT01				IAML		01 18 59.2	
	comp=E,669nm,0.9s						
MT01	**Popeta**	**2.24**	**161**		**Pn**	**01 18 17.0**	**+1.1**
MT01	**Popeta**	**2.24**	**161**	*e*P	**Pn**	**01 18 17.0**	**+1.1**
MT01				*e*S	**Sn**	**01 18 39.2**	**-4.9**
MT01				*e*S	**Sb**	**01 18 41.7**	**-5.4**
MT01				IAML		01 18 59.0	
	comp=Z,479nm,0.6s						
MT09	**Talagante**	**2.24**	**155**		**Pn**	**01 18 17.8**	**+1.7**
AUSP	**Uspallata**	**2.37**	**102**	*e*P	**Pb**	**01 18 22.0**	**+0.6**
AUSP				*e*S	**Sg**	**01 18 53.5**	**-0.5**
RTLS	**Leoncito**	**2.40**	**92**	*e*P	**Pb**	**01 18 22.0**	**0.0**
RTLS				*e*P	**Pg**	**01 18 22.4**	**-1.5**
RTLS				*e*S	**Sg**	**01 18 55.4**	**+0.4**
RTLS				IAML		01 19 00.3	
	comp=Z,737nm,0.7s						
AROD	**Rodeo**	**2.76**	**56**	*e*P	**Pb**	**01 18 27.0**	**-1.1**
AROD				*e*P	**Pn**	**01 18 27.2**	**+3.8**
AROD				*e*S	**Sb**	**01 19 01.7**	**-0.8**
BO01	**Tunca**	**2.78**	**162**		**Pn**	**01 18 24.7**	**+1.3**
BO01	**Tunca**	**2.78**	**162**	*e*P	**Pn**	**01 18 25.0**	**+1.6**
BO01				*e*S	**Sb**	**01 19 04.2**	**+1.4**
BO01				IAML		01 19 15.3	
	comp=Z,271nm,0.5s						
ACCO	**Cerro Coronel**	**2.85**	**67**	*e*P	**Pb**	**01 18 28.6**	**-1.1**
ACCO				*e*S	**Sb**	**01 19 05.2**	**-0.1**
ASAL	**Salagasta**	**2.91**	**108**	*e*P	**Pb**	**01 18 30.0**	**-0.5**
ASAL				*e*S	**Sg**	**01 19 10.7**	**-0.7**
ASAL				*e*S	Sb	01 19 20.8	+14
ARCO	**CERRO ARCO**	**2.91**	**113**	*e*P	**Pb**	**01 18 30.8**	**+0.2**
ARCO				*e*P	**Pg**	**01 18 31.0**	**-2.7**
ARCO				*e*S	**Sb**	**01 19 06.7**	**+0.1**
ARCO				IAML		01 19 21.2	
	comp=Z,441nm,0.5s						
ZON	**Zonda**	**2.94**	**87**	*e*P	**Pb**	**01 18 30.0**	**-1.0**
ZON				IAML		01 19 23.8	
	comp=Z,296nm,0.6s						
LCO	**Las Campanas**	**2.98**	**24**		**Pn**	**01 18 27.0**	**+0.5**
LCO	**Las Campanas**	**2.98**	**24**	*e*P	**Pn**	**01 18 28.0**	**+1.6**
AAGR	**Agrelo**	**3.08**	**117**	*e*P	**Pb**	**01 18 33.0**	**-0.5**
AAGR				*e*S	**Sg**	**01 19 17.7**	**+0.6**
AAGR				*e*S	Sb	01 19 22.0	+10
BO02	**Sierra Bellavi**	**3.24**	**160**		**Pn**	**01 18 31.5**	**+1.8**
BO02	**Sierra Bellavi**	**3.24**	**160**	*e*P	**Pn**	**01 18 27.2**	**-2.6**
BO02				*e*P	**Pb**	**01 18 32.0**	**-4.2**
BO02				*e*P	**Pb**	**01 18 32.2**	**-4.0**
BO02				*e*S	**Sb**	**01 19 12.7**	**-3.4**
BO02				IAML		01 19 30.7	
	comp=Z,429nm,0.7s						
GO05	**Huala**	**3.26**	**177**		**Pn**	**01 18 30.5**	**+0.5**
GO05	**Huala**	**3.26**	**177**	*e*P	**Pn**	**01 18 31.0**	**+1.0**
GO05				*e*S	**Sn**	**01 19 10.2**	**+0.8**
AC04	**Llanos de Chal**	**3.64**	**15**		**Pn**	**01 18 34.3**	**-0.9**
AC04	**Llanos de Chal**	**3.64**	**15**	*e*P	**Pn**	**01 18 35.3**	**0.0**
AC04				*e*S	**Sb**	**01 19 27.2**	**-0.4**
AC04				IAML		01 19 42.6	
	comp=Z,200nm,0.5s						
AVFE	**Valle Fertil**	**4.13**	**76**	*e*P	**Pn**	**01 18 46.0**	**+3.9**
AVFE				*e*S	**Sb**	**01 19 39.2**	**-2.7**
AVFE				IAML		01 19 45.4	
	comp=Z,329nm,0.5s						
RFA	**San Rafael**	**4.29**	**136**	*e*P	**Pn**	**01 18 48.0**	**+3.7**
RFA				*e*S	**Sg**	**01 19 54.2**	**-1.8**
RFA				IAML		01 19 59.7	
	comp=Z,67nm,1.2s						
GO03	**Copiap**	**4.45**	**22**	Pn	**Pn**	**01 18 46.0**	**-0.4**
VCA	**Vinchina**	**4.52**	**49**	*e*S	**Sb**	**01 19 53.2**	**+0.2**
AC02	**Maricunga**	**5.54**	**29**		**Pn**	**01 19 01.8**	**0.0**
H03N1	**Juan Fernandez**	**5.98**	**252**	T	T	01 25 58.1	
	baz=81,slow=72,SNR=1116						
H03N3	**Juan Fernandez**	**6.00**	**252**	T	T	01 25 47.5	
	baz=81,slow=72,SNR=928						
H03N2	**Juan Fernandez**	**6.00**	**252**	T	T	01 25 48.8	
	baz=81,slow=72,SNR=926						
H03S3	**Juan Fernandez**	**6.09**	**248**	T	T	01 26 07.1	
	baz=84,SNR=9.3						
H03S1	**Juan Fernandez**	**6.09**	**248**	T	T	01 26 03.9	
	baz=84,SNR=12						
H03S2	**Juan Fernandez**	**6.11**	**248**	T	T	01 26 04.7	
	baz=84,SNR=10						
LC01	**Cunco**	**7.14**	**179**	Pn	**Pn**	**01 19 23.7**	**+0.4**
PLCA	**Paso Flores**	**9.06**	**172**	Pn	**Pn**	**01 19 52.4**	**+2.7**
	comp=Z,0.4nm,0.3s,baz=317,slow=9.8,SNR=7.7						
PLCA				LR	LR	01 23 41.7	
	comp=Z,94nm,19.6s,baz=339,slow=40						
LVC	**Limon Verde**	**9.53**	**18**	Pn	**Pn**	**01 19 56.6**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=170,slow=6.1,SNR=1.9						
LVC				Sn	Sn	01 21 53.3	+9.0
	comp=Z,0.5nm,0.3s,baz=208,slow=18,SNR=3.1						
CPUP	**Villa Florida**	**14.01**	**71**	LR	LR	01 26 46.5	
	comp=Z,115nm,20.1s,baz=290,slow=40						
LPAZ	**La Paz**	**15.81**	**14**	Pn	**Pn**	**01 21 23.0**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=169,slow=7.3,SNR=6.1						
LPAZ	**La Paz**	**15.81**	**14**	IAmb	IAmb	01 21 29.3	
	comp=Z,2.0nm,0.9s						
SIV	**San Ignacio**	**18.63**	**35**	P	**P**	**01 21 56.0**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=226,slow=12,SNR=5.3						
ETMB	**Extrema**	**22.50**	**15**	P	**P**	**01 22 34.6**	**-4.1**
ETMB				IAmb	IAmb	01 22 42.4	
	comp=Z,3.0nm,0.8s						
BDFB	**Brasilia**	**27.18**	**59**	P	**P**	**01 23 22.4**	**-0.6**
	comp=Z,2.0nm,0.5s,baz=225,slow=8.6,SNR=3.2						
SNAA	**Sanae**	**53.70**	**158**	P	**P**	**01 27 02.4**	**+1.6**
	comp=Z,2.4nm,0.8s,baz=250,slow=9.6,SNR=11						
SNAA	**Sanae**	**53.70**	**158**	IAmb	IAmb	01 27 03.4	
	comp=Z,2.9nm,0.8s						
DBIC	**Dimbokro**	**74.53**	**72**	P	**P**	**01 29 18.1**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=206,slow=7.9,SNR=3.3						
DBIC	**Dimbokro**	**74.53**	**72**	IAmb	IAmb	01 29 19.4	
	comp=Z,10nm,1.3s						
TORD	**Torodi Ar. Bea**	**83.50**	**70**	P	**P**	**01 30 08.1**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=257,slow=5.5,SNR=9.5						
WRA	**Warramunga Arr**	**122.69**	**210**	PKP	**PKiKP**	**01 36 38.1**	**+2.1**
	comp=Z,0.4nm,0.7s,baz=154,slow=1.8,SNR=3.4						
ZALV	**Zalesovo Beam**	**152.33**	**30**	PKPbc	**PKiKP**	**01 37 35.9**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=314,slow=3.1,SNR=7.8						

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*IDC **13** 01:19:46.9±1.4, 4°.14S×129°.36E, h0^{km}, mb3.5/2, mb1 3.6/6, mb1mx3.5/35, mbtmp3.5/6, ML3.3/4, Error ellipse: s-maj=52.8km s-min=22.8km az=84.0*

ISC 13 01:19:51.4±1.0**, 4°.19S**±0°.09×**129°.7E**±0°.2**, h36**^{km}**, n6, σ0**^{s}**.72**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.67**	**26**	Pn	**Pn**	**01 20 46.4**	**+0.8**
	3.5nm,0.3s,baz=151,slow=23,SNR=48						
SIJI				Sn	**Sn**	**01 21 26.9**	**-0.8**
	2.7nm,0.3s,baz=300,slow=2.0,SNR=4.1						
FITZ	**Fitzroy Crossi**	**14.37**	**196**	Pn	**Pn**	**01 23 12.4**	**+0.1**
	0.1nm,0.3s,baz=14,slow=8.3,SNR=1.9						
WRA	**Warramunga Arr**	**16.31**	**164**	Pn	**Pn**	**01 23 37.1**	**-0.7**
	0.1nm,0.3s,baz=346,slow=12,SNR=4.2						
ASAR	**Alice Springs**	**19.80**	**168**	P	**Pn**	**01 24 20.9**	**+0.4**
	0.4nm,0.3s,baz=346,slow=10,SNR=37						
SONM	**Songino Array**	**55.68**	**341**	P	**P**	**01 29 24.2**	**+0.1**
	0.4nm,0.8s,baz=141,slow=7.3,SNR=3.6						
MKAR	**Makanchi Array**	**65.70**	**326**	P	**P**	**01 30 31.9**	**-0.4**
	0.3nm,0.4s,baz=118,slow=7.3,SNR=8.7						

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*IDC **13** 01:30:46.5±2.0, 8°.08S×125°.17E, h0^{km}, mb3.2/1, mb1 3.5/5, mb1mx3.0/35, mbtmp3.3/5, ML3.2/4, Error ellipse: s-maj=43.2km s-min=26.3km az=85.0*

ISC 13 01:30:48.3±1.5**, 8°.2S**±0°.1×**125°.1E**±0°.1**, h10**^{km}**, n5, σ0**^{s}**.76**/6**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.48**	**215**	Pn	**Pn**	**01 31 29.6**	**+0.9**
	3.9nm,0.3s,baz=251,slow=2.2,SNR=2.7						
BATI				Sn	**Sb**	**01 32 02.8**	**-0.7**
	4.4nm,0.3s,baz=269,slow=19,SNR=7.9						
FITZ	**Fitzroy Crossi**	**9.88**	**177**	Pn	**Pn**	**01 33 10.2**	**-0.3**
	0.1nm,0.3s,baz=349,slow=9.9,SNR=11						
WRA	**Warramunga Arr**	**14.72**	**144**	Pn	**Pn**	**01 34 16.6**	**-0.2**
	0.2nm,0.3s,baz=320,slow=13,SNR=12						
ASAR	**Alice Springs**	**17.56**	**152**	P	**P**	**01 34 54.7**	**+0.3**
	0.1nm,0.3s,baz=334,slow=12,SNR=13						
MKAR	**Makanchi Array**	**66.66**	**329**	P	**P**	**01 41 38.8**	**-0.5**
	0.2nm,0.7s,baz=125,slow=7.6,SNR=1.6						

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*IDC **13** 01:47:02.7±0.4, 3°.49N×127°.52E, h0^{km}, mb5.1/43, mb1 5.1/45, mb1mx4.9/67, mbtmp5.1/45, ML4.8/2, MS4.4/14, Ms1 4.5/14, ms1mx4.3/32, Error ellipse: s-maj=15.3km s-min=9.2km az=77.0*

*MOS **13** 01:47:05.0±0.8, 3°.50N×127°.49E, h27^{km}, mb5.6/56, MS5.1/4, Error ellipse: s-maj=9.3km s-min=4.3km az=118.5*

*NEIC **13** 01:47:05.4±2.5, 3°.48N±0°.04×127°.42E±0°.07, h10^{km}±1^{km}, mb5.4/137, Mwb5.3/9, Error ellipse: s-maj=12.2km s-min=5.9km az=63.0*

*BJI **13** 01:47:07.1±0.0, 3°.27N×127°.39E, h58^{km}, mB5.4/57, mb5.4/79, Ms5.2/80, Ms7 5.0/76*

*GCMT **13** 01:47:08.4±0.2, 3°.56N±0°.01×127°.53E±0°.01, h20^{km}±1^{km}, MW5.4/120, Moment Tensor Solution. s74,c106; s120,c222; Duration: 1^{s}.2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.24±.03; $M_{\theta\theta}$0.54±.02; $M_{\phi\phi}$-0.29±.02; $M_{r\theta}$-1.15±.09; $M_{\theta\phi}$-0.55±.01; $M_{\phi r}$-0.53±.06; Best double couple: $M_0$1.45100×10^{17} NP1:ϕ_s333.00000°, δ29.00000°, λ-10.00000°. NP2:ϕ_s72.00000°, δ85.00000°, λ-119.00000°. Principal axes: T 1.3740, Plg34.0000°, Azm186.0000°; N 0.1550, Plg29.0000°, Azm75.0000°; P -1.5280, Plg43.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **13** 01:47:09.8, 3°.45N×127°.45E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.34; $M_{\theta\theta}$-0.46; $M_{\phi\phi}$0.80; $M_{r\theta}$-0.86; $M_{\theta\phi}$-0.52; $M_{\phi r}$0.32; Fault plane solution: $M_0$1.27000×10^{17} NP1:ϕ_s18.83000°, δ41.50000°, λ-15.79000°. NP2:ϕ_s120.79000°, δ79.61000°, λ-130.41000°. Principal axes: T 1.2552, Plg24.0000°, Azm241.0000°; N 0.0226, Plg40.0000°, Azm130.0000°; P -1.2779, Plg41.0000°, Azm353.0000°;*

*DJA **13** 01:47:10.2±0.2, 3°N±2°×12°7E±°, h44^{km}±2^{km}, M5.1/87, mb5.3/87, mB5.6/63, MLv5.4/18, Mw(mB)5.1/63, MwMwp5.0/19, Mwp5.2/19*

*KLM **13** 01:47:12, 3°.40N×127°.31E, h41^{km}, mb5.2*

ISC 13 01:47:09.7±0.4**, 3°.48N**±0°.03×**127°.35E**±0°.04**, h47**^{km}±3^{km}**, h47**^{km}**:pP-P, n596, σ1**^{s}**.74**/617**, mb5.4**/167**, MS4.8**/39**, 42C-32D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.83**	**277**	P	**Pn**	**01 47 39.1**	**+0.4**
TNTI	**Ternate**	**2.69**	**180**	P	**Pn**	**01 47 51.0**	**+0.5**
TNTI	**Ternate**	**2.69**	**180**		**Pn**	**01 47 50.5**	**0.0**
DAV	**Davao City (W)**	**3.98**	**334**	Pn	**Pn**	**01 48 09.1**	**+0.9**
	233nm,0.3s,baz=58,slow=1.6,SNR=50						
DAV				Sn	Sn	01 49 04.1	+10
	301nm,0.3s,baz=256,slow=22,SNR=10						
DAV	**Davao City (W)**	**3.98**	**334**		Sn	01 49 04.1	+10
DAV	**Davao City (W)**	**3.98**	**334**		**Pn**	**01 48 10.1**	**+1.8**
LBMI	**Labuha**	**4.09**	**178**	P	**Pn**	**01 48 11.4**	**+1.6**
KCP	**Kidapawan**	**4.17**	**327**	⇑*i*P	**Pn**	**01 48 11.5**	**+0.6**
KCP				*i* S	Sn	01 49 09.9	+11
KMSI	**Cibinong**	**4.43**	**230**	P	**Pn**	**01 48 17.0**	**+2.5**
BUKP	**Musuan**	**4.93**	**333**	⇑*i*P	Pn	01 48 32.4	+11
BUKP				*i* S	Sn	01 49 29.7	+13
GTOI	**Gorontalo**	**5.18**	**237**	P	**Pn**	**01 48 26.1**	**+1.5**
	1.2nm2μm3μm268nm,0.6s						
SANI	**Sanana**	**5.66**	**194**	P	**Pn**	**01 48 29.7**	**-1.6**
	1.5nm5μm8μm269nm,0.6s						
SANI	**Sanana**	**5.66**	**194**	P	**Pn**	**01 48 32.1**	**+0.8**
SWI	**Sorong**	**5.82**	**138**	P	**Pn**	**01 48 33.2**	**-0.3**
	2.0nm8μm7μm593nm,1.2s						
SIJI	**Sorong**	**5.83**	**138**	Pn	**Pn**	**01 48 33.7**	**+0.1**
	41nm,0.3s,baz=334,slow=9.4,SNR=138						
SIJI				Sn	**Sn**	**01 49 42.1**	**+2.9**
	24nm,0.3s,baz=146,slow=19,SNR=6.4						
SIJI	**Sorong**	**5.83**	**138**		**Pn**	**01 48 33.7**	**+0.1**
PAGZ	**Pagadian**	**5.87**	**318**	⇑*e*P	**Pn**	**01 48 34.6**	**+0.5**
MRSI	**Marisa**	**6.17**	**241**	P	**Pn**	**01 48 40.9**	**+2.6**
	7.5nm4μm23μm2μm,0.6s						
ZCP	**Zamboanga City**	**6.28**	**303**	⇓*e*P	**Pn**	**01 48 40.7**	**+0.9**
ZCP				*e*S	**Sn**	**01 49 47.7**	**-2.5**
MSAI	**Masohi**	**6.96**	**167**	P	**Pn**	**01 48 48.4**	**-0.7**
	0.2nm716nm64nm,0.8s						
TOLI2	**Tolitoli**	**6.97**	**250**	Pn	**Pn**	**01 48 49.1**	**-0.2**
TOLI2	**Tolitoli**	**6.97**	**250**	P	**Pn**	**01 48 49.8**	**+0.5**
AAI	**Ambon**	**7.17**	**173**	P	**Pn**	**01 48 53.2**	**+1.2**
	1.7nm6μm6μm378nm,1.0s						
APSI	**Ampana**	**7.18**	**233**	P	**Pn**	**01 48 54.8**	**+2.7**
	3.1nm4μm8μm766nm,0.9s						
LLP	**Lapu-Lapu**	**7.58**	**334**	*e*P	**Pn**	**01 48 58.1**	**+0.5**
LLP				*e*S	**Sn**	**01 50 27.6**	**+5.3**
CNOP	**Candoni, Negro**	**7.85**	**324**	⇑*e*P	**Pn**	**01 49 04.0**	**+2.7**
FAKI	**Fak Fak**	**8.02**	**142**	P	**Pn**	**01 49 04.7**	**+1.0**
	1.5nm6μm4μm431nm,1.2s						
FAKI	**Fak Fak**	**8.02**	**142**	Pn	**Pn**	**01 49 03.6**	**-0.1**
FAKI	**Fak Fak**	**8.02**	**142**	P	**Pn**	**01 49 05.1**	**+1.4**
MPSI	**Mapaga**	**8.08**	**247**	P	**Pn**	**01 49 06.7**	**+2.3**
	2μm246nm,0.9s						
MYLDM	**Lahad Datu**	**8.99**	**281**	Pn	**Pn**	**01 49 18.8**	**+1.8**
JAP	**San Jose, Anti**	**8.99**	**324**	⇑*e*P	Pn	01 49 30.8	+14
RCP	**Roxas**	**9.24**	**331**	⇑*e*P	**Pn**	**01 49 20.9**	**+0.5**
BAKI	**Biak**	**9.90**	**118**	P	**Pn**	**01 49 33.7**	**+4.2**
	8μm574nm,1.7s						
TTSI	**Tana Toraja**	**9.93**	**229**	P	**Pn**	**01 49 31.6**	**+1.7**
	2μm240nm,0.8s						
SRPI	**Serui, Papua**	**10.35**	**121**	P	**Pn**	**01 49 34.6**	**-1.0**
	2μm155nm,0.6s						
SPSI	**Sidrap Palu**	**10.59**	**226**	P	**Pn**	**01 49 40.1**	**+1.3**
	4μm2μm90nm,0.6s						
BNSI	**Bone**	**10.66**	**223**	P	**Pn**	**01 49 40.3**	**+0.4**
	1μm124nm,0.9s						
SMKI	**Samarinda**	**10.86**	**249**	P	**Pn**	**01 49 44.5**	**+1.9**
	258nm,0.9s						
BKSI	**Bulukumba**	**11.34**	**220**	P	**Pn**	**01 49 49.5**	**+0.4**
	1μm76nm,0.6s						
KAPI	**Kappang**	**11.35**	**222**	Pn	**Pn**	**01 49 49.9**	**+0.6**
	4.3nm,0.3s,baz=77,slow=4.1,SNR=16						
KAPI	**Kappang**	**11.35**	**222**	Pn	**Pn**	**01 49 47.1**	**-2.2**
KAPI	**Kappang**	**11.35**	**222**	P	**Pn**	**01 49 49.4**	**+0.1**
KKM	**Kota Kinabalu**	**11.39**	**283**	Pn	**Pn**	**01 49 51.6**	**+1.7**
KKM	**Kota Kinabalu**	**11.39**	**283**	P	**Pn**	**01 49 52.3**	**+2.4**
JCNP	**Jose Panganiba**	**11.68**	**337**	⇑*e*P	**Pn**	**01 49 56.6**	**+2.8**
BSSI	**Bau Bau, Buton**	**11.76**	**216**	P	**Pn**	**01 49 56.2**	**+1.3**
	1μm134nm,0.9s						
LQP	**Lukban**	**12.02**	**332**	⇑*e*P	**Pn**	**01 50 01.8**	**+3.1**
SAUI	**Saumlaki**	**12.05**	**161**	P	**Pn**	**01 50 00.0**	**+1.2**
	6μm9μm310nm,1.1s						
SAUI	**Saumlaki**	**12.05**	**161**	Pn	**Pn**	**01 49 58.4**	**-0.4**
SAUI	**Saumlaki**	**12.05**	**161**	P	**Pn**	**01 50 00.2**	**+1.4**
LUBP	**Lubang**	**12.37**	**326**	⇓*e*P	**Pn**	**01 50 04.7**	**+1.5**
SMPI	**Sarmi**	**12.59**	**115**	P	**Pn**	**01 50 04.9**	**-1.3**
	2μm196nm,1.4s						
KBKI	**Kotabaru**	**13.05**	**239**	P	**Pn**	**01 50 14.2**	**+1.7**
	1μm107nm,1.2s						
MMRI	**Maumere**	**13.07**	**203**	P	**Pn**	**01 50 11.9**	**-0.9**
	3μm3μm207nm,1.4s						
MMRI	**Maumere**	**13.07**	**203**		**Pn**	**01 50 12.2**	**-0.6**
MTKI	**Muara Teweh, K**	**13.20**	**251**	P	**Pn**	**01 50 16.5**	**+1.9**
	144nm,0.9s						
EDFI	**Ende, Flores**	**13.39**	**205**	P	**Pn**	**01 50 17.7**	**+0.4**
	1μm126nm,1.0s						
SOEI	**Soe**	**13.50**	**193**	P	**Pn**	**01 50 20.1**	**+1.3**
	5μm4μm229nm,0.9s						
SOEI	**Soe**	**13.50**	**193**		**Pn**	**01 50 19.6**	**+0.8**
SOEI	**Soe**	**13.50**	**193**	P	**Pn**	**01 50 20.6**	**+1.8**
BATI	**Baumata**	**14.08**	**195**	Pn	**Pn**	**01 50 26.1**	**-0.6**
	7.1nm,0.3s,baz=68,slow=3.1,SNR=12						
BATI				LR	LR	01 57 21.7	
	comp=Z,1μm,19.5s,baz=3.5,slow=44						
BATI	**Baumata**	**14.08**	**195**	P	**Pn**	**01 50 26.1**	**-0.6**
	2μm2μm135nm,0.7s						
BATI	**Baumata**	**14.08**	**195**		**Pn**	**01 50 26.1**	**-0.6**
GENI	**Genyem**	**14.16**	**115**	P	**Pn**	**01 50 30.1**	**+2.5**
	2μm15μm2μm,1.1s						
GENI	**Genyem**	**14.16**	**115**	P	**Pn**	**01 50 29.4**	**+1.8**
BBKI	**Banjar Baru**	**14.28**	**241**	P	**Pn**	**01 50 31.7**	**+2.5**
	2μm66nm,1.4s						
SBUM	**Sibu**	**15.15**	**267**	P	**P**	**01 50 43.0**	**-2.0**
SBUM	**Sibu**	**15.15**	**267**	Pn	**Pn**	**01 50 40.5**	**-0.2**
BASI	**Baing, Sumba**	**15.19**	**206**	P	**Pn**	**01 50 41.1**	**-0.1**
	3μm202nm,1.3s						
WBSI	**Waikabubak, Su**	**15.26**	**211**	P	**Pn**	**01 50 42.3**	**+0.1**
	4μm264nm,1.0s						
APYP	**Conner**	**15.50**	**338**	⇓*e*P	**Pn**	**01 50 46.4**	**+1.2**
PLAI	**Plampang**	**15.51**	**218**	P	**Pn**	**01 50 47.1**	**+1.7**
	3μm7μm528nm,1.4s						
PLAI	**Plampang**	**15.51**	**218**	P	**Pn**	**01 50 46.8**	**+1.4**
DRS	**Darwin Rock St**	**16.19**	**167**	P	**Pn**	**01 50 54.8**	**+0.7**
STKI	**Sintang**	**16.22**	**258**	P	**P**	**01 50 55.8**	**-1.2**
	51nm,0.9s						
MTN	**Manton Dam**	**16.64**	**167**	P	**Pn**	**01 50 58.3**	**-1.5**
	baz=17,SNR=28						
MTN	**Manton Dam**	**16.64**	**167**	Pn	**Pn**	**01 50 57.8**	**-2.1**
MTN	**Manton Dam**	**16.64**	**167**	P	**Pn**	**01 50 58.6**	**-1.2**
SRBI	**Singaraja**	**16.69**	**226**	P	**P**	**01 51 01.5**	**-0.6**
	3μm236nm,0.9s						
PBKI	**Pangkalan Bun**	**16.83**	**249**	P	**Pn**	**01 51 02.0**	**-0.2**
	185nm,1.2s						
KDU	**Kakadu**	**16.85**	**163**	P	**Pn**	**01 50 59.8**	**-2.5**
	baz=17,SNR=30						
KDU	**Kakadu**	**16.85**	**163**	P	**Pn**	**01 51 02.0**	**-0.3**
DNP	**Denpasar**	**17.10**	**225**	P	**P**	**01 51 08.1**	**+1.4**
	818nm,0.7s						
KSM	**Kuching**	**17.14**	**264**	P	**P**	**01 51 09.0**	**+1.8**
KSM	**Kuching**	**17.14**	**264**		**P**	**01 51 06.8**	**-0.4**
KSM	**Kuching**	**17.14**	**264**	P	**P**	**01 51 08.2**	**+1.0**
ABJI	**Asem Bagus**	**17.23**	**229**	P	**P**	**01 51 09.3**	**+1.2**
	2μm118nm,1.2s						
IGBI	**Denpasar**	**17.24**	**225**	P	**P**	**01 51 09.1**	**+0.8**
	3μm188nm,1.1s						
MMPI	**Merauke**	**17.60**	**132**	P	**Pn**	**01 51 11.7**	**0.0**
	431nm,0.6s						
JAGI	**Jajag, Banyuwa**	**17.72**	**228**	P	**P**	**01 51 14.4**	**+0.8**
	2μm141nm,0.7s						
JAGI	**Jajag, Banyuwa**	**17.72**	**228**		**Pn**	**01 51 12.7**	**-0.5**
GMJI	**Gumukmas**	**18.13**	**230**	P	**Pn**	**01 51 21.7**	**+3.5**
	2μm204nm,1.2s						
KNRA	**Kununurra**	**19.08**	**176**	P	**P**	**01 51 27.7**	**-0.8**
	baz=19,SNR=20						
KNRA	**Kununurra**	**19.08**	**176**	P	**P**	**01 51 26.5**	**-2.0**
KNRA	**Kununurra**	**19.08**	**176**	P	**P**	**01 51 28.0**	**-0.5**
SMRI	**Semarang**	**19.86**	**238**	P	**Pn**	**01 51 38.7**	**-0.2**
SMRI	**Semarang**	**19.86**	**238**	P	**P**	**01 51 34.0**	**-3.0**
GUMO	**Guam**	**20.01**	**59**	LR	LR	01 57 57.6	
	comp=Z,2μm,21.1s,baz=240,slow=33						
DLV	**T Lat**	**20.48**	**295**	P	**P**	**01 51 43.4**	**-0.6**
DLV				IAmb	IAmb	01 51 54.3	
	comp=Z,117nm,0.8s						
DLV	**T Lat**	**20.48**	**295**	P	**P**	**01 51 44.9**	**+0.9**
	comp=Z,157nm,0.9s						

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TPI   Tanjungpandan    20.64 253   P     Pn     01 51 50.1 +1.9
MANU  Manus Island     20.74 105   P     P      01 51 46.2 -0.4
TPUB  Ta-pu            20.75 342   P     P      01 51 45.3 -1.3
SSLB  Suanglung        21.12 344   P     P      01 51 48.5 -2.1
SSLB  Suanglung        21.12 344   P     P      01 51 49.5 -1.1
YOJ   Yonaguni jima    21.28 349   P     P      01 51 50.8 -1.5
YOJ                                pmax  pmax
      comp=Z,159nm,0.6s
YOJ   Yonaguni jima    21.28 349   P     P      01 51 50.8 -1.5
YOJ                                IAmb  IAmb   01 51 56.7
      comp=Z,159nm,0.6s
KPJI  Karang Pucung    21.29 240   P     P      01 51 52.2 -0.3
      comp=Z,1µmcomp=Z,54nm,0.7s
NACB  Ninganchiao      21.31 345   IAmb  IAmb   01 52 04.8
      comp=Z,88nm,0.6s
FITZ  Fitzroy Crossi   21.51 184   P     P      01 51 52.6 -2.1
      comp=Z,14nm,0.5s,baz=13,slow=11,SNR=24
YHNB  Yeheng           21.84 345   P     P      01 51 58.5 +0.1
TATO  Taipei           22.11 346   P     P      01 51 58.3 -2.9
TATO                               IAmb  IAmb   01 52 03.7
      comp=Z,153nm,0.8s
ANA2  Anatahan         22.11  53   P     P      01 51 58.8 -2.6
LEM   Lembang          22.20 243   P     P      01 52 01.7 -0.7
      comp=Z,10nm,0.4s,baz=58,slow=19,SNR=1.5
LEM                                LR    LR     02 03 21.1
      comp=Z,618nm,19.4s,baz=128,slow=44
LEM   Lembang          22.20 243   P     P      01 52 01.7 -0.7
JMZ   Minamidaito 2    22.52   9   P     P      01 52 03.2 -2.4
JMZ                                IAmb  IAmb   01 52 19.9
      comp=Z,174nm,1.0s
KNMB  Chin-men Tao     22.58 338   P     P      01 52 05.3 -0.9
HKPS  Hong Kong Po S   22.66 327   IAmb  IAmb   01 52 14.5
      comp=Z,185nm,1.1s
DBJI  Dramaga          22.86 244   P     P      01 52 09.5 +0.2
QZH   Quanzhou         22.95 339⇑iP     P      01 52 08.4 -1.7
QZH                                S     S      01 56 14.6 -2.3
QZH                                pmax  pmax
      comp=Z,150nm,1.0s
QZH                                LR    LR
      comp=Z,2µm,18.0s
QZH                                LR    LR
      comp=Z,1µm,19.0s
QZH                                LR    LR
      comp=Z,3µm,18.5s
QIZ   Qiongzhong       23.06 313   P     P      01 52 10.0 -1.3
QIZ                                S     S      01 56 16.2 -2.8
QIZ                                pmax  pmax
      comp=Z,230nm,4.4s
QIZ                                LR    LR
      comp=Z,650nm,20.2s
QIZ                                LR    LR
      comp=Z,890nm,19.4s
QIZ                                LR    LR
      comp=Z,1µm,20.7s
QIZ   Qiongzhong       23.06 313   P     P      01 52 11.2 -0.1
JOW   Kunigami         23.24   2   P     P      01 52 12.0 -0.9
      comp=Z,67nm,0.7s,baz=181,slow=9.4,SNR=13
JOW                                LR    LR     02 02 19.5
      comp=Z,1µm,20.6s,baz=152,slow=40
JOW   Kunigami         23.24   2   P     P      01 52 12.4 -0.5
JOW                                IAmb  IAmb   01 52 17.2
      comp=Z,100nm,0.9s
JOW   Kunigami         23.24   2   P     P      01 52 13.9 +0.9
COEN  Coen             23.38 138   P     P      01 52 11.2 -3.2
COEN  Coen             23.38 138   P     P      01 52 14.0 -0.4
PMG   Port Moresby     23.53 123   P     P      01 52 12.6 -3.2
      comp=Z,3.3nm,0.3s,baz=291,slow=7.5,SNR=3.7
PMG                                LR    LR     02 02 22.4
      comp=Z,823nm,20.1s,baz=302,slow=39
PMG   Port Moresby     23.53 123   P     P      01 52 12.9 -2.9
PMG                                pmax  pmax
      comp=Z,24nm,0.9s
PMG   Port Moresby     23.53 123   P     P      01 52 12.9 -2.9
MYKOM Kota Tinggi      23.54 267   P     P      01 52 16.2 +0.3
BLSI  Bandar Lampung   23.77 248   P     P      01 52 20.7 +2.6
      comp=Z,192nm,0.4s
CGJI  Cibinong         23.83 245   P     P      01 52 17.5 -1.2
      comp=Z,82nm,1.0s
KLI   Kotabumi         23.95 250   P     P      01 52 20.3 +0.5
      comp=Z,154nm,0.9s
KLSI                   24.01 250   P     P      01 52 23.1 +2.7
      comp=Z,423nmcomp=Z,38nm,1.1s
WRAB  Tennant Creek    24.26 164c iP    P      01 52 20.6 -2.0
WRAB                               pmax  pmax
      comp=Z,195nm,1.4s
WRAB  Tennant Creek    24.26 164   P     P      01 52 20.1 -2.4
WRAB                               IAmb  IAmb   01 52 39.2
      comp=Z,188nm,1.0s
WRAB  Tennant Creek    24.26 164   P     P      01 52 20.8 -1.8
WRA   Warramunga Arr   24.27 164   P     P      01 52 20.2 -2.4
      comp=Z,41nm,0.9s,baz=346,slow=11,SNR=78
WRA   Warramunga Arr   24.27 164 i P     P      01 52 20.2 -2.4
WRA                                pmax  pmax
      comp=Z,45nm,0.8s
WB2   Warramunga Arr   24.27 164   P     P      01 52 20.2 -2.5
WR0   Warramunga Arr   24.34 163   IAmb  IAmb   01 52 38.4
      comp=Z,107nm,0.8s
MDSI  Maura Dua        24.47 251   P     P      01 52 26.8 +2.2
      comp=Z,1µmcomp=Z,28nm,1.1s
UBPT  Khong Chiam      24.53 300   P     P      01 52 23.1 -2.1
UBPT                               IAmb  IAmb   01 52 25.6
      comp=Z,143nm,1.2s
MBWA  Marble Bar       25.60 197   P     P      01 52 34.7  0.0
RABL  Rabaul           25.94 107   P     P      01 52 35.9 -2.1
RABL                               IAmb  IAmb   01 52 44.6
      comp=Z,59nm,0.8s
PSA00 Pilbara Seismi   25.96 196   P     P      01 52 36.5 -1.5
PSA00                              IAmb  IAmb   01 52 39.2
      comp=Z,84nm,0.9s
PSA00 Pilbara Seismi   25.96 196   P     P      01 52 38.1 +0.1
IPM   Ipoh             26.28 273   P     P      01 52 40.9 -0.1
IPM   Ipoh             26.28 273   P     P      01 52 39.9 -1.2
BKNI  Bangkinang       26.48 264   P     P      01 52 42.1 -0.7
BKNI                               IAmb  IAmb   01 52 43.9
      comp=Z,71nm,0.5s
KULM  Kulim            26.68 275   P     P      01 52 44.6 -0.1
QIS   Mount Isa        26.74 154   P     P      01 52 43.6 -1.5
      baz=27,SNR=28
QIS   Mount Isa        26.74 154   P     P      01 52 43.8 -1.3
MTSU  Mount Surprise   27.22 143   P     P      01 52 48.5 -1.0
      baz=27,SNR=13
MTSU  Mount Surprise   27.22 143   P     P      01 52 49.7 +0.3
JCJ   Chichijima       27.44  30   P     P      01 52 49.1 -2.1
      comp=Z,214nm,0.9s,baz=134,slow=5.1,SNR=5.4
JCJ                                LR    LR     02 01 51.2
      comp=Z,1µm,21.1s,baz=259,slow=32
JCJ   Chichijima       27.44  30   P     P      01 52 50.1 -1.2
ASAR  Alice Springs    27.73 167   P     P      01 52 51.5 -2.5
      comp=Z,3.1nm,0.5s,baz=344,slow=7.1,SNR=32
ASAR                               ScP   ScP    01 59 50.2 +3.2
      comp=Z,2.8nm,1.0s,baz=1.0,slow=2.6,SNR=4.5
ASAR                               LR    LR     02 05 08.2
      comp=Z,2µm,20.6s,baz=5.0,slow=39
ASAR  Alice Springs    27.73 167   P     P      01 52 51.6 -2.3
ASAR  Alice Springs    27.73 167   P     P      01 52 51.6 -2.3
JSU   Suzuyama         28.03   6   P     P      01 52 56.4 -0.2
JSU                                IAmb  IAmb   01 53 04.9
      comp=Z,52nm,0.7s
SRIT  Nakonsritamara   28.05 282   P     P      01 52 56.5 -0.4
SRIT                               IAmb  IAmb   01 53 12.7
      comp=Z,57nm,1.4s
WRKA  Warakurna        28.36 178   P     P      01 52 58.0 -1.5
      baz=28,SNR=73
WRKA  Warakurna        28.36 178   P     P      01 52 58.3 -1.3
PSI   Prapat           28.39 269   P     P      01 52 59.8 -0.3
      comp=Z,12nm,0.9s,baz=77,slow=2.5,SNR=9.6
PSI                                LR    LR     02 06 45.4
      comp=Z,579nm,19.2s,baz=100,slow=41
SLVN  Son La           28.89 310   P     P      01 53 02.3 -2.0
GIRL  Giralia          28.95 206   P     P      01 53 06.5 +1.7
      baz=29,SNR=4.1
NJ2   Nanjing          29.52 345 ⇑P     P      01 53 09.7 -0.1
NJ2                                pP    pP     01 53 20.7 -0.6
NJ2                                sP    sP     01 53 27.3 +0.7
NJ2                                PP    PnPn   01 54 09.6 +3.7
NJ2                                S     S      01 58 01.2 -0.1
NJ2                                pmax  pmax
      comp=Z,43nm,0.8s
NJ2                                pmax  pmax
      comp=Z,600nm,3.5s
NJ2                                LR    LR
      comp=Z,640nm,18.0s
NJ2                                LR    LR
      comp=Z,680nm,16.9s
NJ2                                LR    LR
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      comp=Z,910nm,18.2s
WHN   Wuhan            29.59 337 ⇑P     P      01 53 11.5 +1.1
WHN                                S     S      01 58 08.7 +6.3
WHN                                pmax  pmax
      comp=Z,240nm,1.0s
WHN                                LR    LR
      comp=Z,7µm,23.5s
WHN                                LR    LR
      comp=Z,4µm,20.1s
WHN                                LR    LR
      comp=Z,6µm,20.5s
JNU   Nakatsue         29.68   6   P     P      01 53 09.7 -1.5
      comp=Z,44nm,0.7s,baz=192,slow=6.0,SNR=13
JNU   Nakatsue         29.68   6   P     P      01 53 12.1 +1.0
GSI   Gunungsitoli     29.83 267   P     P      01 53 13.6 +0.9
GSI                                IAmb  IAmb   01 53 17.3
      comp=Z,91nm,1.1s
CTA   Charters Tower   29.89 142   P     P      01 53 11.4 -1.7
      comp=Z,8.5nm,0.8s,baz=325,slow=8.3,SNR=2.1
CTAO  Charters Tower   29.89 142   P     P      01 53 11.4 -1.7
CTAO                               pmax  pmax
      comp=Z,19nm,1.0s
CTAO  Charters Tower   29.89 142   P     P      01 53 11.4 -1.7
CTAO  Charters Tower   29.89 142   P     P      01 53 13.3 +0.2
GYA   Guiyang          30.25 321⇑iP     P      01 53 16.3 -0.1
GYA                                pP    sP     01 53 35.4 +2.1
GYA                                S     S      01 58 13.2  0.0
GYA                                pmax  pmax
      comp=Z,19nm,1.8s
GYA                                LR    LR
      comp=Z,870nm,14.7s
GYA                                LR    LR
      comp=Z,1µm,19.8s
GYA                                LR    LR
      comp=Z,2µm,18.5s
JMN   Monobe           30.71  11   IAmb  IAmb   01 53 33.5
      comp=Z,114nm,1.4s
JTU   Tsushima         30.95   3   P     P      01 53 20.5 -1.8
JTU                                IAmb  IAmb   01 53 23.7
      comp=Z,45nm,1.1s
MEEK  Meekatharra      31.11 195   P     P      01 53 23.0 -0.9
      baz=31,SNR=22
MEEK  Meekatharra      31.11 195   P     P      01 53 23.4 -0.5
CM31  Chiang Mai Arr   31.53 300   P     P      01 53 27.7  0.0
CM31                               IAmb  IAmb   01 53 34.7
      comp=Z,32nm,0.8s
CMAR  Chiang Mai Arr   31.53 300   LR    LR     02 07 50.0
      comp=Z,634nm,18.5s,baz=140,slow=39
ENH   Enshi            31.56 330   P     P      01 53 28.0 +0.2
CHTO  Chiang Mai       31.68 301   P     P      01 53 28.4 -0.7
CHTO                               pmax  pmax
      comp=Z,35nm,0.9s
CHTO  Chiang Mai       31.68 301   P     P      01 53 28.4 -0.7
CHTO                               IAmb  IAmb   01 53 35.7
      comp=Z,34nm,0.8s
CHTO  Chiang Mai       31.68 301   P     P      01 53 29.8 +0.8
KMI   Kunming          32.00 315 ⇓P     P      01 53 32.1 +0.1
KMI                                pP    pwP    01 53 45.4 -1.3
KMI                                sP    sP     01 53 52.3 +3.4
KMI                                PP    PP     01 54 43.0 -1.9
KMI                                S     S      01 58 42.7 +2.0
KMI                                sS    sS     01 59 04.5 +4.3
KMI                                pmax  pmax
      comp=Z,56nm,1.1s
KMI                                pmax  pmax
      comp=Z,230nm,5.0s
KMI                                LR    LR
      comp=Z,840nm,17.3s
KMI                                LR    LR
      comp=Z,380nm,23.0s
KMI                                LR    LR
      comp=Z,1µm,16.4s
OOD   Oodnadatta       32.11 166   P     P      01 53 31.7 -0.9
JWT   Wachi            32.51  12   P     P      01 53 34.8 -1.3
JWT                                IAmb  IAmb   01 53 44.6
      comp=Z,44nm,0.7s
TJN   Taejon           32.74   0 i P     P      01 53 37.5 -0.5
TJN   Taejon           32.74   0   P     P      01 53 38.6 +0.6
      comp=Z,256nm,1.0s
INU   Inuyama          32.95  15   P     P      01 53 37.9 -2.0
INU                                IAmb  IAmb   01 53 40.8
      comp=Z,69nm,1.1s
INU   Inuyama          32.95  15   P     P      01 53 40.3 +0.4
JGF   Kuroka           33.28  15   P     P      01 53 41.2 -1.6
INKA  Innaminka        33.62 158   P     P      01 53 43.8 -2.0
KSAR  Wonju Array Be   33.80   1   P     P      01 53 47.1 -0.2
KSAR  Wonju Array Be   33.80   1   P     P      01 53 47.1 -0.2
KSRS  Korea Array      33.82   1   P     P      01 53 47.2 -0.2
      comp=Z,34nm,0.7s,baz=179,slow=10,SNR=62
KSRS                               PcP   PcP    01 56 26.7 +1.0
      comp=Z,2.4nm,0.7s,baz=198,slow=3.1,SNR=4.7
KSRS                               LR    LR     02 12 13.5
      comp=Z,479nm,18.9s,baz=45,slow=45
INCN  Inchon           33.85 359   P     P      01 53 47.1 -0.6
INCN                               pmax  pmax
      comp=Z,24nm,0.9s
INCN  Inchon           33.85 359   P     P      01 53 47.1 -0.6
KS19  Wonju Array Si   33.86   1   IAmb  IAmb   01 53 56.9
      comp=Z,53nm,0.8s
TIA   Tai'an           33.91 345   P     P      01 53 48.2 -0.1
TIA                                S     S      01 59 14.0 +4.2
TIA                                pmax  pmax
      comp=Z,78nm,0.9s
TIA                                pmax  pmax
      comp=Z,650nm,5.4s
TIA                                LR    LR
      comp=Z,730nm,21.6s
TIA                                LR    LR
      comp=Z,1µm,17.2s
TIA                                LR    LR
      comp=Z,1µm,18.6s
QLP   Quilpie          34.05 152   P     P      01 53 48.6 -1.0
      baz=34,SNR=4.7
QLP   Quilpie          34.05 152   P     P      01 53 49.6  0.0
FORT  Forrest          34.07 179   P     P      01 53 48.9 -0.8
      baz=34,SNR=8.9
FORT  Forrest          34.07 179   IAmb  IAmb   01 54 00.7
      comp=Z,50nm,0.8s
FORT  Forrest          34.07 179   P     P      01 53 48.5 -1.2
MORW  Morawa           34.13 198   P     P      01 53 49.7 -0.5
      baz=34,SNR=15
MORW  Morawa           34.13 198   P     P      01 53 49.3 -1.0
MORW                               IAmb  IAmb   01 53 51.2
      comp=Z,90nm,1.4s
MORW  Morawa           34.13 198   P     P      01 53 49.8 -0.5
MULG  Mulgathing       34.18 170   P     P      01 53 50.0 -0.6
MAJO  Matsushiro       34.39  16   P     P      01 53 50.8 -1.7
MAJO                               pmax  pmax
      comp=Z,32nm,0.8s
MAJO  Matsushiro       34.39  16   P     P      01 53 50.8 -1.7
MAJO                               IAmb  IAmb   01 53 60.0
      comp=Z,32nm,0.8s
MAJO  Matsushiro       34.39  16   P     P      01 53 51.4 -1.1
MAT   Matsushiro       34.39  16   P     P      01 53 50.0 -2.5
MJAR  Matsushiro Arr   34.39  16   P     P      01 53 50.0 -2.5
      comp=Z,23nm,0.9s,baz=185,slow=9.4,SNR=17
MJAR  Matsushiro Arr   34.39  16   P     P      01 53 50.0 -2.5
JYT   Yasato           34.68  18   IAmb  IAmb   01 54 06.1
      comp=Z,48nm,1.0s
XAN   Xi'an            34.92 333   P     P      01 53 57.0 -0.1
XAN                                pP    pP     01 54 09.6 +0.8
XAN                                S     S      01 59 25.8 +0.3
XAN                                pmax  pmax
      comp=Z,170nm,1.1s
XAN                                pmax  pmax
      comp=Z,540nm,6.5s
XAN                                LR    LR
      comp=Z,1µm,13.7s
XAN                                LR    LR
      comp=Z,1µm,13.9s
XAN                                LR    LR
      comp=Z,2µm,24.1s
RK1H  Rockhampton Ha   34.96 141   P     P      01 53 57.0 -0.5
CD2   Chengdu          35.21 323   P     P      01 53 58.8 -0.9
CD2                                pP    pwP    01 54 14.2 -0.3
CD2                                PP    PP     01 55 20.4 +0.1
CD2                                S     S      01 59 25.1 -5.0
CD2                                sS    sS     01 59 56.0 +6.3
CD2                                pmax  pmax
      comp=Z,100nm,1.2s
CD2                                pmax  pmax
      comp=Z,420nm,3.5s
CD2                                LR    LR
      comp=Z,1µm,15.8s
CD2                                LR    LR
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      comp=Z,2µm,23.0s
CD2                                LR    LR
      comp=Z,2µm,20.1s
PBA   Port Blair       35.22 285   P     P      01 53 58.2 -1.7
PBA                                IAmb  IAmb   01 54 00.2
      comp=Z,43nm,0.9s
LCRK  Leigh Creek      35.30 164   P     P      01 54 00.1 -0.2
BLDU  Ballidu          35.39 196   P     P      01 54 00.1 -1.0
      baz=36,SNR=30
BLDU  Ballidu          35.39 196   P     P      01 54 00.4 -0.7
DL2   Dalian           35.65 352   P     P      01 54 04.2 +1.0
DL2                                pP    sP     01 54 19.8 -0.4
DL2                                S     S      01 59 40.3 +4.0
DL2                                pmax  pmax
      comp=Z,83nm,0.9s
DL2                                pmax  pmax
      comp=Z,440nm,6.3s
DL2                                LR    LR
      comp=Z,600nm,22.1s
DL2                                LR    LR
      comp=Z,720nm,23.1s
DL2                                LR    LR
      comp=Z,2µm,23.1s
JSD   Sado             35.81  15   IAmb  IAmb   01 54 04.3
      comp=Z,53nm,0.8s
KLBR  Kellerberrin     36.05 194   P     P      01 54 06.0 -0.8
      baz=36,SNR=48
KLBR  Kellerberrin     36.05 194   P     P      01 54 06.1 -0.7
RMQ   Roma             36.28 146   P     P      01 54 08.1 -0.7
      baz=36,SNR=9.3
RMQ   Roma             36.28 146   P     P      01 54 08.5 -0.3
      comp=Z,17nm,0.9s
TIY   Taiyuan          36.71 340 ⇑P     P      01 54 13.6 +1.2
TIY                                pP    pP     01 54 24.2 +0.1
TIY                                S     S      01 59 55.5 +2.6
TIY                                pmax  pmax
      comp=Z,91nm,1.0s
TIY                                LR    LR
      comp=Z,810nm,13.0s
TIY                                LR    LR
      comp=Z,780nm,13.8s
TIY                                LR    LR
      comp=Z,2µm,19.3s
EIDS  Eidsvold         36.77 143   P     P      01 54 11.8 -1.3
      baz=37,SNR=6.0
EIDS  Eidsvold         36.77 143   P     P      01 54 13.2 +0.2
MUN   Mundaring        36.82 196   P     P      01 54 12.7 -0.6
      baz=37,SNR=23
MUN   Mundaring        36.82 196   P     P      01 54 13.0 -0.3
BBOO  Buckleboo        37.02 168   P     P      01 54 13.5 -1.5
      baz=37,SNR=36
BBOO  Buckleboo        37.02 168   P     P      01 54 13.8 -1.2
NWAO  Narrogin (SRO)   37.45 194   P     P      01 54 18.3 -0.4
WHYH  Whyalla          37.58 166   P     P      01 54 20.7 +1.0
      comp=Z,58nm,0.6s
STKA  Stephens Creek   37.68 160   P     P      01 54 19.2 -1.4
      comp=Z,31nm,0.4s,baz=335,slow=8.5,SNR=72
STKA                               LR    LR     02 11 41.2
      comp=Z,1µm,21.3s,baz=326,slow=39
STKA  Stephens Creek   37.68 160   P     P      01 54 19.3 -1.3
      baz=38,SNR=27
STKA  Stephens Creek   37.68 160   P     P      01 54 19.6 -1.0
BJI   Beijing          37.78 346   P     P      01 54 21.4 +0.1
BJI                                pP    pwP    01 54 34.3 -2.0
BJI                                sP    sP     01 54 40.2 +1.9
BJI                                S     S      02 00 11.1 +2.3
BJI                                LR    LR
      comp=Z,2µm,14.4s
BJI                                LR    LR
      comp=Z,3µm,14.9s
BJI                                LR    LR
      comp=Z,4µm,17.0s
NAPP  Napperby         37.87 165   P     P      01 54 23.4 +1.2
      comp=Z,36nm,0.5s
HTT   Hallett          38.30 164   P     P      01 54 25.6 -0.3
      baz=38,SNR=7.2
HTT   Hallett          38.30 164   P     P      01 54 26.2 +0.3
SNY   Shenyang         38.33 355 ⇑P     P      01 54 26.2 +0.3
SNY                                S     S      02 00 25.4 +8.3
SNY                                pmax  pmax
      comp=Z,43nm,0.7s
SNY                                pmax  pmax
      comp=Z,590nm,8.3s
SNY                                LR    LR
      comp=Z,2µm,16.7s
SNY                                LR    LR
      comp=Z,3µm,20.6s
SNY                                LR    LR
      comp=Z,5µm,20.6s
CMSA  Cobar Meteorol   38.95 155   P     P      01 54 30.8 -0.6
      baz=39,SNR=11
CMSA  Cobar Meteorol   38.95 155   P     P      01 54 30.9 -0.4
LZH   Lanzhou          39.03 329⇑iP     P      01 54 33.2 +1.0
LZH                                pP    pP     01 54 44.0  0.0
LZH                                sP    sP     01 54 49.2 -0.1
LZH                                PP    PnPn   01 56 09.2 +4.1
LZH                                S     S      02 00 35.0 +6.7
LZH                                sS    sS     02 00 55.6 +7.5
LZH                                pmax  pmax
      comp=Z,88nm,1.1s
LZH                                pmax  pmax
      comp=Z,370nm,4.3s
LZH                                LR    LR
      comp=Z,1µm,14.9s
LZH                                LR    LR
      comp=Z,3µm,14.1s
LZH                                LR    LR
      comp=Z,2µm,17.6s
JTM   Tenmabayashi     39.15  17   P     P      01 54 32.9 +0.1
TWOA  Tennyson Woods   39.73 166   P     P      01 54 38.3 +0.5
      comp=Z,71nm,1.0s
HHC   Hu-ho-hao-te     39.83 341 eP     P      01 54 39.8 +1.1
HHC                                S     S      02 00 42.3 +2.3
HHC                                SS    SS     02 03 29.0 -8.7
HHC                                ScS   ScS    02 04 38.8 -3.5
HHC                                pmax  pmax
      comp=Z,160nm,1.2s
HHC                                pmax  pmax
      comp=Z,900nm,5.0s
HHC                                LR    LR
      comp=Z,2µm,14.5s
HHC                                LR    LR
      comp=Z,2µm,16.2s
HHC                                LR    LR
      comp=Z,3µm,14.5s
BTO   Baotou           40.13 339 eP     P      01 54 42.0 +0.8
BTO                                LR    LR
      comp=Z,10µm,17.1s
BTO                                LR    LR
      comp=Z,7µm,16.1s
CN2   Changchun        40.19 358 eP     P      01 54 40.5 -0.9
CN2                                pmax  pmax
      comp=Z,10.0nm,0.9s
CN2                                pmax  pmax
      comp=Z,200nm,6.0s
CN2                                LR    LR
      comp=Z,2µm,17.0s
CN2                                LR    LR
      comp=Z,3µm,17.0s
CN2                                LR    LR
      comp=Z,3µm,16.0s
SHL   Shillong         40.52 306   P     P      01 54 43.8 -0.9
SHL                                pmax  pmax
      comp=Z,106nm,0.8s
SHL   Shillong         40.52 306   P     P      01 54 43.8 -0.9
SHL                                IAmb  IAmb   01 54 57.4
      comp=Z,106nm,0.8s
USA0B Ussuriysk Arra   40.76   5   P     P      01 54 46.1 -0.1
USA0B                              pmax  pmax
      comp=Z,58nm,1.2s
USA0B Ussuriysk Arra   40.76   5   P     P      01 54 46.1 -0.1
USA0B                              IAmb  IAmb   01 54 47.5
      comp=Z,58nm,1.1s
USRK  Ussuriysk Ar.    40.76   5   P     P      01 54 45.4 -0.7
      comp=Z,28nm,0.9s,baz=194,slow=8.6,SNR=33
USRK  Ussuriysk Ar.    40.76   5   P     P      01 54 45.4 -0.7
ARMA  Armidale         40.92 147   P     P      01 54 47.9 +0.1
      baz=41,SNR=12
ARMA  Armidale         40.92 147   P     P      01 54 47.3 -0.5
ARMA                               IAmb  IAmb   01 54 51.5
      comp=Z,60nm,1.1s
ARMA  Armidale         40.92 147   P     P      01 54 48.3 +0.5
MDJ   Mudanjiang       41.02   2   P     P      01 54 48.9 +0.6
MDJ                                pP    pP     01 54 59.9 -0.1
MDJ                                PcS   PcS    02 00 38.3 -0.2
MDJ                                S     S      02 01 01.9 +4.6
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MDJ                                 sS    sS     02 01 19.3 +2.1
MDJ                                 pmax  pmax
      comp=Z,76nm,1.4s
MDJ                                 pmax  pmax
      comp=Z,300nm,3.7s
MDJ                                 LR    LR
      comp=Z,780nm,15.1s
MDJ                                 LR    LR
      comp=Z,590nm,16.4s
MDJ                                 LR    LR
      comp=Z,1µm,19.9s
MDJ   Mudanjiang         41.02   2  IAmb  IAmb   01 55 01.8
      comp=Z,83nm,1.0s
MDJ   Mudanjiang         41.02   2  P     P      01 54 49.1 +0.8
      comp=Z,84nm,1.2s
ARPS  Mount Arapiles     42.26 163  P     P      01 54 57.7 -0.8
      baz=42,SNR=18
ARPS  Mount Arapiles     42.26 163  P     P      01 54 58.8 +0.3
LSA   Lhasa              43.07 311  P     P      01 55 06.9 +1.1
LSA                                 LR    LR
      comp=Z,1µm,20.0s
LSA                                 LR    LR
      comp=Z,2µm,22.4s
CAN   Canberra           43.61 154  P     P      01 55 09.1 -0.5
CAN                                 pmax  pmax
      comp=Z,38nm,1.1s
CAN   Canberra           43.61 154  P     P      01 55 09.1 -0.5
CAN   Canberra           43.61 154  P     P      01 55 09.8 +0.2
GTA   Gaotai             43.63 329 ⇓P     P      01 55 09.6 -0.2
GTA                                 pP    pP     01 55 21.6 -0.2
GTA                                 sP    sP     01 55 26.0 -1.0
GTA                                 PcP   PcP    01 56 55.7 -0.9
GTA                                 S     S      02 01 39.6 +3.3
GTA                                 sS    sS     02 02 00.3 +4.0
GTA                                 pmax  pmax
      comp=Z,19nm,1.1s
GTA                                 pmax  pmax
      comp=Z,260nm,10.4s
GTA                                 LR    LR
      comp=Z,1µm,24.3s
GTA                                 LR    LR
      comp=Z,930nm,23.9s
GTA                                 LR    LR
      comp=Z,2µm,23.1s
BRAT  Ballarat           43.63 161  P     P      01 55 09.8 +0.2
SANVU Saraoutou          43.70 117  P     P      01 55 07.8 -2.7
TOO   Toolangi           44.18 159  P     P      01 55 14.4 +0.4
      baz=44,SNR=6.9
TOO   Toolangi           44.18 159  P     P      01 55 13.5 -0.6
TOO                                 pmax  pmax
      comp=Z,50nm,1.4s
TOO   Toolangi           44.18 159  P     P      01 55 13.5 -0.6
TOO                                 IAmb  IAmb   01 55 21.6
      comp=Z,50nm,1.4s
TOO   Toolangi           44.18 159  P     P      01 55 14.5 +0.4
TAPN  Taplejung          44.66 306 eP     P      01 55 17.6 -0.9
ODAN  Odare              44.72 305 eP     P      01 55 17.6 -1.3
      comp=Z,101nm,0.7s
RAMN  Ramite             45.40 305 eP     P      01 55 23.6 -0.7
      comp=Z,42nm,0.5s
KLR   Kul'dur            45.74   4  P     P      01 55 25.8 -0.5
      comp=Z,21nm,0.7s,baz=192,slow=6.0,SNR=56
DZM   Mont Dzumac        45.88 125  P     P      01 55 27.6 -0.4
      comp=Z,8.9nm,1.1s,baz=20,slow=7.2,SNR=6.4
DZM   Mont Dzumac        45.88 125  P     P      01 55 29.1 +1.1
JIRN  Jiri               46.02 306 eP     P      01 55 29.0 -0.3
HIA   Hailar             46.08 353  IAmb  IAmb   01 55 44.4
      comp=Z,58nm,1.2s
YATNC Mamie plateau,     46.24 125  P     P      01 55 31.6 +0.9
      comp=Z,25nm,0.7s
GUN   Gumba              46.37 306 eP     P      01 55 31.7 -0.4
      comp=Z,148nm,0.7s
PALK  Pallekele          46.58 277  P     P      01 55 33.6 +0.1
PALK                                pmax  pmax
      comp=Z,42nm,1.3s
PALK  Pallekele          46.58 277  P     P      01 55 33.6 +0.1
PALK                                IAmb  IAmb   01 55 50.6
      comp=Z,42nm,1.3s
PKI   Pulchoki           46.62 305 eP     P      01 55 32.7 -1.3
KKN   Kakani             46.81 305 eP     P      01 55 34.8 -0.5
DMN   Daman              46.88 305 eP     P      01 55 35.0 -0.9
ULN   Ulaanbaatar        47.55 342d iP    P      01 55 40.9 +0.2
ULN                                 pmax  pmax
      comp=Z,76nm,1.3s
ULN   Ulaanbaatar        47.55 342  P     P      01 55 40.6  0.0
SONM  Songino Array      47.73 341  P     P      01 55 41.9 -0.2
      comp=Z,15nm,0.5s,baz=156,slow=8.3,SNR=65
SONM  Songino Array      47.73 341  P     P      01 55 42.2 +0.1
SONM                                pmax  pmax
      comp=Z,99nm,1.4s
SONM  Songino Array      47.73 341  P     P      01 55 42.2 +0.1
KOLN  Koldanda           48.18 305 eP     P      01 55 44.9 -1.0
      comp=Z,250nm,0.8s
DANN  Dangsing           48.27 305 eP     P      01 55 46.1 -0.6
      comp=Z,295nm,0.8s
PYUN  Piuthan            48.80 305 eP     P      01 55 50.5 -0.2
      comp=Z,229nm,1.0s
HYB   Hyderabad          49.78 290 i P    P      01 55 57.5 -0.7
      comp=Z,70nm,1.0s
HYB                                e             01 56 09.5
ZEA   Zeya               50.10 360 eP     P      01 55 59.2 -0.7
ZEA                                 pmax  pmax
      comp=N,10.0nm,0.8s
ZEA                                 pmax  pmax
      comp=Z,20nm,0.9s
NFK   Norfolk Island     50.61 133  P     P      01 56 02.6 -1.6
      baz=51,SNR=3.5
ZAK   Zakamensk          50.97 340 eP     P      01 56 06.1 -0.6
ZAK                                 pmax  pmax
      comp=Z,31nm,1.3s
TLY   Talaya             51.96 341 eP     P      01 56 14.8 +0.8
TLY                                 pmax  pmax
      comp=Z,260nm,1.5s
TLY   Talaya             51.96 341  P     P      01 56 14.8 +0.8
TLY                                 IAmb  IAmb   01 56 30.1
      comp=Z,74nm,1.1s
IRK   Irkutsk            52.25 342 eP     P      01 56 15.7 -0.4
IRK                                 pmax  pmax
      comp=Z,172nm,2.3s
MOY   Mondy              52.83 340 eP     P      01 56 21.8 +1.3
MOY                                 pmax  pmax
      comp=Z,198nm,3.4s
SKR   Severo-Kuril's     52.91  23 eP     P      01 56 12.2 -8.7
SKR                                 MLR   MLR
      comp=Z,1µm,19.0s
WMQ   Urumqi             53.28 325 eP     P      01 56 24.9 +0.9
WMQ                                 pP    pwP    01 56 39.2 -0.1
WMQ                                 S     S      02 03 52.4 +0.1
WMQ                                 pmax  pmax
      comp=Z,85nm,1.1s
WMQ                                 pmax  pmax
      comp=Z,410nm,4.5s
WMQ                                 LR    LR
      comp=Z,2µm,17.1s
WMQ                                 LR    LR
      comp=Z,2µm,13.5s
WMQ                                 LR    LR
      comp=Z,2µm,17.7s
MSVF  Nonsavu            54.24 115  P     P      01 56 31.4  0.0
MSVF                                pmax  pmax
      comp=Z,30nm,1.0s
MSVF  Nonsavu            54.24 115  P     P      01 56 31.4  0.0
MSVF                                IAmb  IAmb   01 56 45.4
      comp=Z,30nm,0.9s
POO   Poona              54.38 290 eP     P      01 56 28.0 -4.4
BOD   Bodaibo            55.20 351 eP     P      01 56 37.6  0.0
BOD                                e             01 57 42.8
BOD                                 pmax  pmax
      comp=Z,71nm,1.7s
PETK  Petropavlovsk-     55.43  22  LR    LR     02 20 27.8
      comp=Z,277nm,19.5s,baz=220,slow=36
ZSN   Zaisan             57.05 327 eP     P      01 56 51.1 +0.1
      baz=327
ZSN   Zaisan             57.05 327 eP     P      01 56 51.1 +0.1
DGZ   Jazzator, Alta     57.12 330d iP    P      01 56 52.2 +0.6
DGZ                                 pmax  pmax
      comp=Z,89nm,1.0s
SHLS  Shalkode           57.94 320 eP     P      01 56 55.8 -1.7
      baz=320
SHLS  Shalkode           57.94 320 eP     P      01 56 55.7 -1.7
MIDW  Midway             57.99  59  P     P      01 56 55.6 -2.3
MK31  Makanchi Array     58.12 325 i P    P      01 56 58.9 +0.4
MK31  Makanchi Array     58.12 325  P     P      01 56 59.1 +0.6
MKAR  Makanchi Array     58.12 325  P     P      01 56 58.3 -0.3
      comp=Z,14nm,0.5s,baz=119,slow=7.4,SNR=106
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UZB   Uzynbulak          58.21 320 eP     P      01 57 00.0 +0.6
      baz=320
UZB   Uzynbulak          58.21 320 eP     P      01 57 00.0 +0.6
MAKZ  Makanchi           58.30 325  P     P      01 57 00.1 +0.3
MAKZ                                pmax  pmax
      comp=Z,129nm,1.4s
MAKZ  Makanchi           58.30 325  P     P      01 57 00.1 +0.3
TARG  Taragay, Kyrgy     58.35 318  IAmb  IAmb   01 57 11.5
      comp=Z,21nm,0.8s
SATY  Saty               58.57 320 eP     P      01 57 02.1 +0.2
      baz=320
SATY  Saty               58.57 320 eP     P      01 57 02.1 +0.2
NIL   Nilore             58.57 308  P     P      01 57 01.4 -0.5
NIL                                 pmax  pmax
      comp=Z,67nm,1.1s
NIL   Nilore             58.57 308  P     P      01 57 01.4 -0.5
KSH   Kashi              58.66 315  P     P      01 57 04.4 +1.8
KSH                                 sP    sP     01 57 22.4 +2.3
KSH                                 S     S      02 05 04.2 +0.2
KSH                                 pmax  pmax
      comp=Z,14nm,0.9s
KSH                                 pmax  pmax
      comp=Z,250nm,4.3s
KSH                                 LR    LR
      comp=Z,3µm,17.9s
KSH                                 LR    LR
      comp=Z,3µm,17.5s
KSH                                 LR    LR
      comp=Z,3µm,16.8s
MA2   Magadan            58.80  14  P     P      01 57 03.2 +0.2
MA2                                 pmax  pmax
      comp=Z,46nm,1.0s
MA2   Magadan            58.80  14  P     P      01 57 03.1 +0.2
MA2                                 IAmb  IAmb   01 57 14.0
      comp=Z,46nm,1.0s
KDJ   Kajisay            58.95 318  P     P      01 57 06.0 +1.4
KDJ                                 pmax  pmax
      comp=Z,62nm,1.2s
KDJ   Kajisay            58.95 318  P     P      01 57 06.0 +1.4
KDJ                                 IAmb  IAmb   01 57 20.8
      comp=Z,62nm,1.2s
MDOK  Medeo              59.50 319 eP     P      01 57 08.1 -0.3
      baz=319
MDOK  Medeo              59.50 319 eP     P      01 57 08.9 +0.5
TDK   Taldyqorghan       59.50 322 eP     P      01 57 08.2  0.0
      baz=322
TDK   Taldyqorghan       59.50 322 eP     P      01 57 08.1  0.0
TNSS  Tian-Shan          59.51 319 eP     P      01 57 09.2 +0.5
      baz=319
BOOM  Boomskoye usch     59.93 318  P     P      01 57 13.1 +1.7
BOOM                                pmax  pmax
      comp=Z,15nm,0.8s
BOOM  Boomskoye usch     59.93 318  P     P      01 57 13.1 +1.7
BOOM                                IAmb  IAmb   01 57 24.3
      comp=Z,15nm,0.8s
DCZ   Deep Cove          60.21 149  P     P      01 57 12.3 -0.6
KUU   Kurty              60.29 320 eP     P      01 57 13.6  0.0
      comp=Z,45nm,0.9s,baz=320
KUU   Kurty              60.29 320 eP     P      01 57 13.6  0.0
KUU                                 pmax  pmax
      comp=Z,45nm,0.9s
TKM2  Tokmak 2           60.34 318  P     P      01 57 14.1 -0.2
KBK   Karagaybulak       60.66 318  P     P      01 57 16.9 +0.5
      SNR=9.9
UCH   Uchtor             60.78 317  P     P      01 57 18.9 +1.3
      SNR=27
CHMS  Chumysh            60.94 318  P     P      01 57 18.5 +0.4
      SNR=11
FRU1  Bishkek            60.94 318  P     P      01 57 18.5 +0.4
FRU1                                pmax  pmax
      comp=Z,45nm,1.5s
FRU1  Bishkek            60.94 318  P     P      01 57 18.5 +0.4
FRU1                                IAmb  IAmb   01 57 27.5
      comp=Z,45nm,1.5s
AAK   Ala-Archa          60.96 318  P     P      01 57 19.0 +0.6
      comp=Z,4.5nm,0.6s,baz=126,slow=7.8,SNR=10
AAK   Ala-Archa          60.96 318 i P    P      01 57 18.7 +0.3
AAK                                 pmax  pmax
      comp=Z,40nm,1.0s
AAK   Ala-Archa          60.96 318  P     P      01 57 19.3 +0.9
AAK                                 IAmb  IAmb   01 57 33.2
      comp=Z,16nm,0.8s
ZAA0  Zalesovo Array     61.09 333  P     P      01 57 18.2 -0.6
ZALV  Zalesovo Beam      61.09 333  P     P      01 57 19.0 +0.2
      comp=Z,25nm,0.8s,baz=116,slow=6.8,SNR=102
ZALV  Zalesovo Beam      61.09 333  P     P      01 57 17.9 -1.0
SGDS  Sogindy            61.21 319 eP     P      01 57 19.9  0.0
      baz=318
USP   Ospenovka          61.22 318  P     P      01 57 20.2 +0.2
      SNR=30
SEM   Semipalatinsk      61.24 328 eP     P      01 57 19.1 -1.1
      comp=Z,16nm,0.9s,baz=328
SEM   Semipalatinsk      61.24 328 eP     P      01 57 19.1 -1.1
SEM                                 pmax  pmax
      comp=Z,16nm,0.9s
AML   Almayashu          61.30 317  P     P      01 57 21.7 +0.7
      SNR=21
EKS2  Erkin-Say          61.45 317  P     P      01 57 22.8 +1.1
      SNR=18
KBL   Kabul              62.17 307  P     P      01 57 26.4 -0.4
KBL                                 pmax  pmax
      comp=Z,23nm,0.8s
KBL   Kabul              62.17 307  P     P      01 57 26.4 -0.4
KBL                                 IAmb  IAmb   01 57 34.5
      comp=Z,23nm,0.8s
BTLS  Baital             62.27 320 eP     P      01 57 26.9  0.0
      baz=320
BTLS  Baital             62.27 320 eP     P      01 57 26.9  0.0
KURBB Kurchatov Arra     62.28 327  P     P      01 57 27.2 +0.3
      comp=Z,185nm,0.9s,baz=124,slow=6.0,SNR=798
KURBB Kurchatov Arra     62.28 327  P     P      01 57 27.1 +0.2
KURK  Kurchatov          62.28 327d iP    P      01 57 27.1 +0.2
KURK                                pmax  pmax
      comp=Z,231nm,0.9s
KURK  Kurchatov          62.28 327  P     P      01 57 26.9  0.0
BTK   Batken             62.54 314  IAmb  IAmb   01 57 42.0
      comp=Z,28nm,0.8s
DZA   Taraz              63.20 317 eP     P      01 57 33.6 +0.3
      comp=Z,10.0nm,0.7s,baz=317
DZA   Taraz              63.20 317 eP     P      01 57 33.5 +0.3
DZA                                 pmax  pmax
      comp=Z,10.0nm,0.7s
CHGR  Chuyangaron        63.30 312  P     P      01 57 34.9 +0.9
IUG   Iuzhnay            63.83 316 eP     P      01 57 37.6  0.0
      baz=316
IUG   Iuzhnay            63.83 316 eP     P      01 57 37.5  0.0
KKAR  Karatay Array      63.84 317  P     P      01 57 36.9 -0.6
KKAR  Karatay Array      63.84 317  P     P      01 57 36.9 -0.6
TAS   Tashkent           64.06 315  P     P      01 57 39.3 +0.3
TAS                                 pmax  pmax
      comp=Z,107nm,1.0s
TAS   Tashkent           64.06 315  P     P      01 57 39.3 +0.3
BRLS  Borolday           64.27 317 eP     P      01 57 40.6 +0.2
      baz=316
BRLS  Borolday           64.27 317 eP     P      01 57 40.5 +0.2
OTUK  Ortayu             64.70 323  P     P      01 57 42.7 -0.3
BVAR  Borovoye Array     67.87 327  P     P      01 58 03.5 +0.3
      comp=Z,119nm,0.8s,baz=171,slow=10,SNR=252
BRVK  Borovoye           67.94 327 i P    P      01 58 03.8 +0.2
BRVK                                pmax  pmax
      comp=Z,154nm,0.8s
TIXI  Tiksi              68.08   1  P     P      01 58 02.9 -1.2
TIXI                                pmax  pmax
      comp=Z,45nm,1.0s
TIXI  Tiksi              68.08   1  P     P      01 58 02.9 -1.2
TIXI                                IAmb  IAmb   01 58 04.9
      comp=Z,45nm,1.0s
NRIK  Noril'sk           70.82 346  P     P      01 58 20.9 -0.2
      comp=Z,33nm,0.8s,baz=131,slow=6.1,SNR=63
NRIK  Noril'sk           70.82 346 i P    P      01 58 20.5 -0.6
NRIK                                pmax  pmax
      comp=Z,45nm,0.9s
NRIK  Noril'sk           70.82 346  P     P      01 58 20.9 -0.2
NRIK                                IAmb  IAmb   01 58 22.2
      comp=Z,37nm,0.8s
GEYT  Alibeck            71.53 309  P     P      01 58 26.3 +0.2
      comp=Z,6.2nm,0.8s,baz=106,slow=8.1,SNR=11
GEYT  Alibeck            71.53 309  IAmb  IAmb   01 58 43.5
      comp=Z,31nm,0.9s
GYA0B ALIBECK ARRAY      71.53 309  P     P      01 58 27.1 +1.1
GYA0B                               IAmb  IAmb   01 58 43.5
      comp=Z,34nm,0.8s
AB31  Akbulak array      72.74 321 i P    P      01 58 32.2 -0.8
ABKAR Akbulak array      72.74 321  P     P      01 58 32.9 -0.1
AKTO  Aktyubinsk         74.24 322  P     P      01 58 42.0 +0.2
      comp=Z,54nm,0.8s,baz=100,slow=7.6,SNR=114
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SVE   Sverdlovsk         74.50 328ceP     P      01 58 43.3 +0.1
SVE                                eS     S      02 08 12.0 -2.7
SVE                                 pmax  pmax
      comp=Z,92nm,1.3s
ARU   Arti               75.48 328  P     P      01 58 48.5 -0.4
      comp=Z,11nm,0.6s,baz=108,slow=2.0,SNR=56
ARU   Arti               75.48 328d iP    P      01 58 48.0 -0.8
ARU                                              01 58 59.6
ARU                                 S     S      02 08 26.9 +1.3
ARU                                 pmax  pmax
      comp=Z,126nm,2.3s
ARU   Arti               75.48 328  P     P      01 58 49.7 +0.8
ARU                                 IAmb  IAmb   01 59 01.2
      comp=Z,37nm,0.8s
SBV   Sambava            78.61 256  P     P      01 59 22.2  +15
QRN   Al-Qurain          79.07 298 eP     P      01 59 08.7 -0.9
UMR   Umm Al-Rimmam      79.28 299 eP     P      01 59 10.5 -0.1
MIB   Mutribah           79.61 300 eP     P      01 59 12.2 -0.3
RST   Umm Al-Ruwaisa     79.90 299⇓eP     P      01 59 13.3 -0.7
MAK   Makhachkala        80.21 313 eP     P      01 59 12.0 -3.4
MAK                                e*PP   pP     01 59 28.4  0.0
MAK                                e             02 02 14.9
MAK                                ePPP   PPP    02 04 06.4
MAK                                eS     S      02 09 09.8 -7.3
MAK                                eSS    SS     02 14 31.7 +3.0
MAK                                eSSS   SSS    02 17 59.3
MAK                                 pmax  pmax
      comp=Z,257nm,1.6s
MAK                                 MLR   MLR
      comp=Z,2µm,17.0s
KIRV  Kirov              80.76 329  P     P      01 59 18.6 +0.6
      comp=Z,54nm,0.6s,baz=116,slow=1.9,SNR=14
KIRV  Kirov              80.76 329 i P    P      01 59 17.8 -0.2
RAYN  Ar Rayn            81.15 293  P     P      01 59 21.1 +0.2
RAYN                                pmax  pmax
      comp=Z,27nm,0.9s
RAYN  Ar Rayn            81.15 293  P     P      01 59 21.1 +0.2
RAYN                                IAmb  IAmb   01 59 40.1
      comp=Z,27nm,0.8s
GROC  Groznyy            81.47 313 eP     P      01 59 22.0 -0.2
GROC                               e             01 59 27.6
GROC                               e*PP   pwP    01 59 37.7 -0.3
GROC                                pmax  pmax
      comp=Z,13nm,0.5s
OPO   Ambohidratompo     81.80 251  P     P      01 59 25.1 +0.5
      comp=Z,8.4nm,0.9s,baz=65,slow=4.6,SNR=9.7
ABPO  Ambohimpanom       81.81 250  P     P      01 59 25.8 +1.2
ABPO                                pmax  pmax
      comp=Z,12nm,0.8s
ABPO  Ambohimpanom       81.81 250  P     P      01 59 25.8 +1.2
GNI   Garni              82.12 310  P     P      01 59 25.8  0.0
      comp=Z,9.0nm,0.9s,baz=217,slow=7.4,SNR=5.6
GNI   Garni              82.12 310 i P    P      01 59 27.0 +1.1
GNI                                 pmax  pmax
      comp=Z,33nm,1.0s
GNI   Garni              82.12 310  P     P      01 59 27.3 +1.4
VOI   Vohitsoka          82.55 248  P     P      01 59 33.4 +5.0
PRGR  Permogore          83.02 332 eP     P      01 59 30.1 +0.3
PRGR                                pmax  pmax
      comp=Z,46nm,1.1s
VNDA  Vanda              83.10 173  P     P      01 59 29.7 -0.2
VNDA                                pmax  pmax
      comp=Z,13nm,0.9s
VNDA  Vanda              83.10 173  P     P      01 59 29.7 -0.2
ONI   Oni                83.17 312  IAmb  IAmb   01 59 49.6
      comp=Z,43nm,1.2s
KARS  Kars               83.40 310  P     P      01 59 33.6 +1.1
KARS                                pmax  pmax
      comp=Z,283nm,0.9s
KARS  Kars               83.40 310  P     P      01 59 33.6 +1.1
GOF   Gofitskoye         83.53 315⇑eP     P      01 59 33.2 +0.3
GOF                                 pmax  pmax
      comp=Z,30nm,1.3s
KBZ   Khabaz             83.60 313  P     P      01 59 33.6 +0.4
      comp=Z,6.7nm,1.0s,baz=13,slow=2.9,SNR=12
KBZ   Khabaz             83.60 313 i P    P      01 59 33.4 +0.2
KBZ                                 pmax  pmax
      comp=Z,27nm,1.4s
MAW   Mawson             83.73 200  P     P      01 59 34.1 +0.8
      comp=Z,8.7nm,0.9s,baz=47,slow=3.8,SNR=5.5
KIV   Kislovodsk         83.76 314 eP     P      01 59 34.2  0.0
KIV                                eS     S      02 09 52.0 -1.9
KIV                                 pmax  pmax
      comp=Z,20nm,1.0s
KIV   Kislovodsk         83.76 314  P     P      01 59 33.9 -0.3
KIV                                 IAmb  IAmb   01 59 51.9
      comp=Z,24nm,0.9s
ATD   Arta Tunnel        83.94 281  P     P      01 59 37.9 +2.3
      comp=Z,17nm,0.8s,baz=344,slow=4.4,SNR=5.0
ATD   Arta Tunnel        83.94 281  IAmb  IAmb   01 59 38.6
      comp=Z,29nm,1.1s
CHVG  Ch'k'valeri        84.18 312 ⇑P     P      01 59 38.9 +2.6
CHVG  Ch'k'valeri        84.18 312 ⇑P     P      01 59 38.9 +2.6
GURO  Guroymak-BITLI     84.19 308  P     P      01 59 37.0 +0.4
VRH   Novokhopyorsk      84.57 321 eP     P      01 59 37.6 -0.4
VRH                                e*PP   pP     01 59 48.8 -2.1
VRH                                eS     SKSac  02 09 56.8 -1.4
VRH                                 pmax  pmax
      comp=Z,30nm,0.9s
VRH                                 smax  smax
      comp=E,250nm,4.9s
MARD  Mardin             85.18 307  P     P      01 59 42.5 +0.9
MARD                                IAmb  IAmb   01 59 56.4
      comp=Z,44nm,1.1s
KOPT  Kop Dagi           85.37 310  P     P      01 59 43.8 +1.1
SOC   Sochi              85.91 313 eP     P      01 59 43.4 -1.5
SOC                                e*PP   pP     01 59 56.3 -1.6
SOC                                e             02 03 00.3
SOC                                ePPP   PPP    02 04 57.6
SOC                                eS     SKSac  02 10 04.6 -2.4
SOC                                eSSS   SSS    02 19 28.7
SOC                                 pmax  pmax
      comp=Z,19nm,0.7s
SOC                                 MLR   MLR
      comp=Z,1µm,20.0s
KLMR  Klimovskoe         85.93 331 eP     P      01 59 42.7 -1.8
KLMR                               eS     SKSac  02 10 03.7 -2.6
KLMR                                pmax  pmax
      comp=Z,60nm,1.0s
KLMR  Klimovskoe         85.93 331 eP     P      01 59 42.8 -1.8
KLMR                                AMP          02 00 01.1
      comp=Z,60nm,1.0s
KLMR                               eS     SKSac  02 10 03.8 -2.6
KLMR                               eS     SKSac  02 10 03.8 -2.6
VORD  Divnogorie         86.10 321 eP     P      01 59 45.4 -0.2
VORD                               e*PP   pP     01 59 56.7 -2.0
VORD                                pmax  pmax
      comp=Z,20nm,0.4s
VORR  Voronezh           86.14 321 eP     P      01 59 44.0 -1.8
VORR                                pmax  pmax
      comp=Z,250nm,2.0s
VSR   Storozhevoye       86.17 321 eP     P      01 59 45.5 -0.5
VSR                                e*PP   pP     01 59 57.6 -1.5
VSR                                eS     S      02 10 15.4 -1.9
VSR                                 pmax  pmax
      comp=Z,20nm,0.8s
VSR                                 smax  smax
      comp=N,30nm,1.2s
LPSR  Galich'ya Gora     86.30 322 eP     P      01 59 47.1 +0.5
LPSR                               e*PP   pP     01 59 57.6 -2.1
LPSR                               eS     S      02 10 15.4 -3.1
LPSR                                pmax  pmax
      comp=Z,30nm,0.8s
LPSR                                smax  smax
      comp=N,40nm,1.5s
MOS   Moscow             87.00 326 eP     P      01 59 48.8 -1.1
MOS                                e*PP   pP     02 00 02.3 -0.6
MOS                                e             02 03 17.9
MOS                                eS     S      02 10 19.4 -5.7
MOS                                eSS    SS     02 16 05.8 -2.6
MOS                                 pmax  pmax
      comp=Z,55nm,0.9s
OBN   Obninsk            87.62 325c iP    P      01 59 52.8 -0.1
OBN                                e             02 03 20.9
OBN                                i S    SKSac  02 10 22.4 +5.4
OBN                                 pmax  pmax
      comp=Z,47nm,0.8s
OBN                                 MLR   MLR
      comp=Z,421nm,18.0s
OBN   Obninsk            87.62 325  P     P      01 59 53.1 +0.1
GAZ   Gaziantep          88.03 307  IAmb  IAmb   02 00 08.9
      comp=Z,45nm,1.2s
TOKA  Tokat              88.44 310  IAmb  IAmb   02 00 14.6
      comp=Z,12nm,0.7s
```

ASF	Jabal al Asfar	88.56	302	P	P	01 59 59.6	+1.6
	comp=Z,12nm,0.7s,baz=110,slow=5.6,SNR=12						
BNN	Bunyan	89.02	309	IAmb	IAmb	02 00 06.6	
	comp=Z,37nm,1.2s						
KIBK	Kibwezi	89.45	268	P	P	02 00 03.1	+0.5
KIBK				IAmb	IAmb	02 00 20.5	
	comp=Z,20nm,1.3s						
GHAJ	Ghor Haditha	89.74	301	IAmb	IAmb	02 00 19.3	
	comp=Z,49nm,1.2s						
MMAI	Mount Meron Ar	89.76	303	P	P	02 00 04.8	+1.2
	comp=Z,3.9nm,0.8s,baz=103,slow=7.2,SNR=4.7						
KMBO	Kilima Mbogo	90.17	269	P	P	02 00 08.5	+2.4
	comp=Z,6.6nm,0.9s,baz=58,slow=6.4,SNR=9.2						
KMBO	Kilima Mbogo	90.17	269	P	P	02 00 07.0	+0.9
KMBO				pmax	pmax		
	comp=Z,22nm,1.4s						
KMBO	Kilima Mbogo	90.17	269	P	P	02 00 07.0	+0.9
KMBO				IAmb	IAmb	02 00 23.9	
	comp=Z,22nm,1.4s						
EIL	Elat	90.38	300	P	P	02 00 08.4	+1.9
	comp=Z,6.0nm,0.8s,baz=54,slow=4.5,SNR=7.1						
BR131	Keskin Array S	90.66	310	IAmb	IAmb	02 00 22.8	
	comp=Z,19nm,1.0s						
BRTR	Keskin Array B	90.66	310	P	P	02 00 07.2	-0.5
	comp=Z,3.1nm,0.8s,baz=118,slow=4.1,SNR=17						
ARCES	ARCESS Array B	90.90	340	P	P	02 00 07.0	-1.1
	comp=Z,7.4nm,0.6s,baz=80,slow=5.0,SNR=12						
ARCES	ARCESS Array B	90.90	340	P	P	02 00 07.0	-1.1
FINES	FINESS Array B	92.34	332	P	P	02 00 14.1	-0.8
	comp=Z,1.3nm,0.4s,baz=49,slow=5.8,SNR=9.2						
FINES	FINESS Array B	92.34	332	i P	P	02 00 15.1	+0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SYO	Syowa Base	92.42	201	⇓epP	P	02 00 19.0	+4.0
SYO	Syowa Base	92.42	201	⇓esP	P	02 00 21.7	+6.7
AKASG	Malin Array Be	92.48	321	P	P	02 00 14.7	-1.0
	comp=Z,3.3nm,0.6s,baz=64,slow=4.1,SNR=4.0						
PURM	Purcari	92.64	317	⇓P	P	02 00 16.8	+0.2
QSPA	South Pole Qui	93.39	180	P	P	02 00 21.3	+1.5
QSPA				IAmb	IAmb	02 00 31.0	
	comp=Z,16nm,1.1s						
SORM	Soroca	93.43	318	⇓P	P	02 00 19.6	-0.6
SORM	Soroca	93.43	318	⇓P	P	02 00 19.6	-0.6
TLCR		93.56	316	⇓P	P	02 00 21.7	+0.8
TLCR		93.56	316	⇓P	P	02 00 21.7	+0.8
JURR	Jurilovca	93.58	315	⇑P	P	02 00 21.4	+0.4
TPGR	Topolog	93.89	315	⇓P	P	02 00 22.8	+0.3
TIRR	Tirgusor	93.96	315	⇑P	P	02 00 22.3	-0.4
TIRR	Tirgusor	93.96	315	⇑P	P	02 00 22.3	-0.4
VLDR	Vladesti	93.97	316	⇓P	P	02 00 22.8	0.0
CFR	Carcaliu	94.04	316	⇑P	P	02 00 23.0	0.0
CFR	Carcaliu	94.04	316	⇑P	P	02 00 23.0	0.0
SCTR	Scanteiesti	94.06	316	⇓P	P	02 00 23.1	-0.1
TLBR	Topalu	94.20	315	⇓P	P	02 00 23.9	0.0
HARR	Harsova	94.26	315	⇑P	P	02 00 24.5	+0.4
HARR	Harsova	94.26	315	⇑P	P	02 00 24.5	+0.4
TESR	Tescani	94.84	317	⇓P	P	02 00 26.5	-0.2
VRI	Vrincioaia	94.90	316	⇑P	P	02 00 27.0	-0.1
VRI	Vrincioaia	94.90	316	⇑P	P	02 00 27.0	-0.1
PLOR	Plostina	94.96	316	⇑P	P	02 00 27.2	-0.2
PLOR	Plostina	94.96	316	⇑P	P	02 00 27.2	-0.2
BISRR	Bisoca	94.97	316	⇑P	P	02 00 27.6	+0.2
COVR	Voineasa-Covas	95.27	316	⇓P	P	02 00 28.6	-0.2
NEHR	Nehoiu	95.28	316	⇑P	P	02 00 29.3	+0.5
OZUR		95.51	317	⇑P	P	02 00 29.3	-0.5
MLR	Muntele Rosu	95.51	316	⇓P	P	02 00 30.6	+0.6
MLR	Muntele Rosu	95.51	316	P	P	02 00 29.9	-0.1
	comp=Z,5.3nm,0.7s,baz=45,slow=3.1,SNR=13						
MLR	Muntele Rosu	95.51	316	IAmb	IAmb	02 00 46.6	
	comp=Z,18nm,1.0s						
BURAR	Bucovina Array	95.60	318	⇑P	P	02 00 29.4	-0.9
BURAR	Bucovina Array	95.60	318	⇑P	P	02 00 29.4	-0.9
BURAR	Bucovina Array	95.60	318	IAmb	IAmb	02 00 46.3	
	comp=Z,8.4nm,0.7s						
DOPR	Dopca	95.80	317	⇓P	P	02 00 30.6	-0.6
VOIR		96.14	316	⇓P	P	02 00 33.2	+0.4
VOIR		96.14	316	⇓P	P	02 00 33.2	+0.4
HUMR	Humele	96.36	315	⇑P	P	02 00 33.6	-0.1
ARR	Arges	96.44	316	⇑P	P	02 00 33.9	-0.3
CBBR	Cluj-Babes-Bol	96.89	318	⇑P	P	02 00 35.3	-0.8
UZH	Uzhgorod	97.29	320	d iP	P	02 00 37.5	-0.3
UZH				e		02 00 44.6	
UZH				i		02 00 51.5	
DRGR		97.44	318	⇑P	P	02 00 38.4	-0.3
DRGR		97.44	318	⇑P	P	02 00 38.4	-0.3
CRVS	Cervenica-Dubn	97.76	320	ePDIFF	P	02 00 39.3	-0.7
RES	Resolute Bay	97.95	10	P	P	02 00 39.9	-0.3
RES				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RES	Resolute Bay	97.95	10	P	P	02 00 39.9	-0.3
RES				IAmb	IAmb	02 00 41.4	
	comp=Z,8.8nm,1.1s						
BZS	Buzias	98.46	317	⇓P	P	02 00 42.3	-0.8
BZS	Buzias	98.46	317	⇓P	P	02 00 42.3	-0.8
HFS	Hagfors	98.53	332	P	P	02 00 42.9	-0.3
	comp=Z,7.8nm,0.9s,baz=81,slow=9.2,SNR=7.2						
LANS	Liptovska Anna	98.96	321	ePDIFF	P	02 00 44.6	-0.8
NB2	NORSAR Subarra	99.29	334	P	Pdif	02 00 44.8	-1.8
	comp=Z,28nm,2.0s,baz=66,slow=4.6						
NB2	NORSAR Subarra	99.29	334	P	Pdif	02 00 44.8	-1.8
	baz=66,slow=4.6						
NOA	NORSAR Array B	99.29	334	P	Pdif	02 00 45.6	-0.9
	comp=Z,2.2nm,0.8s,baz=66,slow=4.5,SNR=5.7						
NOA				LR	LR	02 52 03.8	
	comp=Z,463nm,19.3s,baz=45,slow=39						
YKA	Yellowknife Ar	99.47	25	LR	LR	02 46 31.3	
	comp=Z,49nm,20.7s,baz=0.0,slow=36						
DPC	Dobruska-Polom	100.56	323	ePDIFF	Pdif	02 01 02.9	+10
VRAC	Vranov	100.72	321	P	Pdif	02 00 55.0	+1.8
	comp=Z,2.3nm,1.0s,baz=135,slow=4.7,SNR=3.6						
VRAC	Vranov	100.72	321	P	Pdif	02 00 55.0	+1.8
MPLH	Magyarpolny	100.76	319	eP	Pdif	02 00 54.2	+0.8
BRG	Berggiesshubel	101.81	324	eP	Pdif	02 00 59.6	+1.7
BRG				Amp		02 01 01.8	
	comp=Z,2.3nm,0.8s						
BRG	Berggiesshubel	101.81	324	P	Pdif	02 01 14.8	+17
BRG				Amp		02 01 16.8	
	comp=Z,7.1nm,1.0s						
CKRC	Cesky Krumlov	102.30	322	ePDIFF	Pdif	02 00 55.3	-4.9
KHC	Kasperske Hory	102.64	322	eP	Pdif	02 00 59.8	-2.0
KHC	Kasperske Hory	102.64	322	ePDIFF	Pdif	02 00 59.8	-2.0
GERES	GERESS Array B	102.67	322	P	Pdif	02 01 02.6	+0.6
	comp=Z,0.3nm,0.4s,baz=46,slow=7.0,SNR=2.3						
NVAR	Mina Array Bea	106.61	48	PKKPbc	PKKPbc	02 16 52.2	+1.4
	comp=Z,0.3nm,0.6s,baz=122,slow=5.4,SNR=3.7						
RCHB	Rochefort	107.17	325	dPdif	Pdif	02 01 24.4	+2.6
DOU	Dourbes	107.56	325	dPdif	Pdif	02 01 24.1	+0.5
PDAR	Pinedale Array	111.13	41	PKKPbc	PKKPbc	02 16 35.0	-1.6
	comp=Z,0.7nm,0.9s,baz=98,slow=3.3,SNR=4.6						
TORD	Torodi Ar. Bea	123.59	288	PKP	PKiKP	02 06 03.4	+0.1
	comp=Z,6.5nm,0.8s,baz=46,slow=2.0,SNR=43						
TORD	Torodi Ar. Bea	123.59	288	PKPdf	PKPdf	02 06 02.9	-0.2
KOWA	Kowa	128.61	292	PKPdf	PKPdf	02 06 11.4	-1.4
KIC	Kosan Boka	131.18	281	ePKIKP	PKiKP	02 06 18.8	+0.2
	comp=Z,7.1nm,0.5s						
DBIC	Dimbokro	131.24	282	PKP	PKiKP	02 06 18.8	+0.1
	comp=Z,5.5nm,0.7s,baz=74,slow=1.6,SNR=7.9						
DBIC	Dimbokro	131.24	282	PKPdf	PKiKP	02 06 19.0	+0.3
TIC	Toumodi	131.40	282	ePKIKP	PKiKP	02 06 19.2	+0.1
LIC	Lamto	131.48	281	ePKIKP	PKiKP	02 06 19.4	+0.2
	comp=Z,44nm,1.1s						
PLCA	Paso Flores	139.55	159	PKP	PKPdf	02 06 33.0	+0.4
	comp=Z,3.6nm,0.8s,baz=208,slow=3.9,SNR=4.7						
TRQA	Tornquist	144.54	167	PKIKP	PKPbc	02 06 40.7	+0.5
TRQA	Tornquist	144.54	167	PKPdf	PKPbc	02 06 40.7	+0.5
BO02	Sierra Bellavi	144.58	154	PKPdf	PKPdf	02 06 41.8	0.0
DUNO	Dulce Nombre,	144.62	67	PKPdf	PKPdf	02 06 41.8	-0.5
BO01	Tunca	144.78	153	PKPdf	PKPbc	02 06 41.1	0.0
CAO2	Cobano, Puntar	145.12	68	PKPbc	PKPdf	02 06 43.8	+0.7
MT09	Talagante	145.34	153	PKPbc	PKPdf	02 06 43.9	+0.7
MT05	Renca	145.78	152		PKPab	02 06 45.7	+1.0
PEL	Peldehue	146.01	152	PKP2	PKPab	02 06 45.6	0.0
PEL	Peldehue	146.01	152	PKPbc	PKPab	02 06 45.6	0.0
VA03	San Esteban	146.38	152	PKPbc	PKPab	02 06 46.7	-0.4
ZON	Zonda	148.26	153	PKP2	PKPbc	02 06 50.9	-0.5
ZON	Zonda	148.26	153	PKPbc	PKPbc	02 06 50.9	-0.5
LCO	Las Campanas	149.36	148	PKP2	PKiKP	02 06 55.8	+0.1
LCO	Las Campanas	149.36	148	PKPab	PKiKP	02 06 55.8	+0.1
AC04	Llanos de Chal	149.79	146	PKPbc	PKPbc	02 06 53.6	-1.7
PLTB	Pedras Altas	151.85	178	eP	PKPbc	02 06 58.6	-1.4
ITQB	Itaqui	153.68	172	eP	PKPdf	02 06 59.3	+2.9
CNLB	Canela	154.25	184	eP	PKPdf	02 06 59.9	+2.6
PLMC	San Jos del P	154.96	71	eP	PKPbc	02 07 06.5	-1.0
CPUP	Villa Florida	156.84	169	PKPab	PKPab	02 07 30.7	+0.4
	comp=Z,7.1nm,0.9s,baz=180,slow=2.5,SNR=3.6						
PAMC	Pamplona, Colo	157.29	62	eP	PKPdf	02 07 17.7	+15
PTLC	Puerto Leguiza	157.57	81	eP	PKPab	02 07 30.8	-3.3
RUSC	La Rusia	157.57	66	eP	PKPdf	02 07 16.3	+14
SPB	Sao Paulo	159.38	194	eP	PKPdf	02 07 07.0	+3.1
LPAZ	La Paz	160.16	131	PKP	PKPdf	02 07 06.9	+1.2
	comp=Z,2.5nm,0.9s,baz=27,slow=8.0,SNR=7.9						
LPAZ				PKPab	PKPab	02 07 46.8	+0.9
	comp=Z,7.1nm,0.8s,baz=210,slow=2.7,SNR=4.6						
LPAZ	La Paz	160.16	131	PKIKP	PKPdf	02 07 04.5	-1.2
LPAZ						02 07 45.6	
LPAZ	La Paz	160.16	131	eP	PKPdf	02 07 08.0	+2.2
LPAZ	La Paz	160.16	131	PKPdf	PKPdf	02 07 04.5	-1.2
LPAZ				PKPab	PKPab	02 07 45.6	-0.2
RIB01	Linhares ES	160.22	216	eP	PKPdf	02 07 09.2	+4.2
PP1B	Ponte de Pedra	165.80	171	eP	PKPdf	02 07 15.1	+4.7
JANB	Januaria	165.86	215	eP	PKPdf	02 07 13.6	+3.0
PTLB	Pontes e Lacer	166.50	152	eP	PKPdf	02 07 14.9	+3.9
NBPB	Pedra_Branca-C	166.82	261	eP	PKPdf	02 07 15.8	+4.5
VILB	Vilhena	167.99	142	eP	PKPdf	02 07 17.4	+5.2
SDBA	SAO DESIDERIO	168.28	220	eP	PKPdf	02 07 17.5	+5.1
BOAV	Boa Vista	170.20	54	eP	PKPdf	02 07 18.8	+5.2
MACA	Manacapuru-AM	171.97	88	eP	PKPdf	02 07 20.0	+5.5
SMTB	Santa Maria do	172.66	223	eP	PKPdf	02 07 19.7	+4.9
NPGB	Novo Progresso	175.55	143	eP	PKPdf	02 07 20.6	+4.9
ITTB	Itaituba	176.80	106	eP	PKPdf	02 07 19.2	+3.2
MALB	Monte Alegre	177.72	45	eP	PKPdf	02 07 20.1	+4.0

IDC 13 01:50:11.6±1.0, 37°.94N×21°.20E, h0km, mb4.0/6, mb1 3.9/15, mb1mx3.6/66, mbtmp3.8/15, ML3.5/10, MS2.9/4, Ms1 3.0/4, ms1mx2.7/44, Error ellipse: s-maj=15.7km s-min=14.9km az=78.0

ATH 13 01:50:13.9, 37°.81N×21°.17E, h28km±1km, ML3.9/15, Error ellipse: s-maj=1.5km s-min=0.9km az=198.0

NEIC 13 01:50:14.1±2.3, 37°.79N±0°.04×21°.12E±0°.05, h7km±7km, mb4.2/5, ML4.1(THE), Error ellipse: s-maj=6.2km s-min=4.5km az=141.0

THE 13 01:50:15.4, 37°.81N×21°.15E, h0km±1km, ML4.1/9, Error ellipse: s-maj=1.7km s-min=0.5km az=195.0

PDG 13 01:50:17.7±0.3, 38°.13N×20°.85E, h12km±3km, ML4.0/13, Error ellipse: s-maj=3.4km s-min=1.5km az=90.0

ISC 13 01:50:14.9±0.7, 37°.85N±0°.03×21°.10E±0°.02, h25km±5km, n248, σ1ˢ.92/308, mb4.0/7, 14C-17D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTN	Vitineika	0.10	43	P	Pb	01 50 19.2	-0.3
VTN	Vitineika	0.10	43	P	Pb	01 50 19.2	-0.3
LTHK	Lithakia	0.25	237	P	Pb	01 50 21.5	+0.3
LTHK				S	Sb	01 50 25.0	-0.5
	86µm,0.4s						
LTHK	Lithakia	0.25	237	P	Pb	01 50 21.4	+0.2
LTHK				S	Sb	01 50 26.3	+0.9
RLS	Riolos of Patr	0.36	54	P	Pb	01 50 22.2	-0.6
RLS				S	Sb	01 50 27.9	-0.3
	31µm,0.4s						
RLS	Riolos of Patr	0.36	54	P	Pb	01 50 22.1	-0.7
RLS				S	Sb	01 50 27.9	-0.3
RLS				AML	AML	01 50 28.8	
	comp=N,49663µm,0.4s						
RLS				AML	AML	01 50 29.1	
	comp=E,81191µm,0.3s						
DRO	Drossia	0.49	77	P	Pb	01 50 24.2	-0.8
DRO				S	Sb	01 50 31.2	-0.7
	comp=E,42µm,0.3s						
DRO	Drossia	0.49	77	P	Pb	01 50 23.9	-1.1
DRO				S	Sb	01 50 30.8	-1.1
DRO				AML	AML	01 50 32.2	
	comp=E,80162µm,0.4s						
DRO				AML	AML	01 50 34.0	
	comp=N,84085µm,0.4s						
VLS	Valsamata	0.52	309	P	Pn	01 50 26.8	0.0
VLS				S	Sn	01 50 34.9	0.0
	comp=N,20µm,0.4s						
VLS	Valsamata	0.52	309	P	Pb	01 50 25.4	-0.2
VLS				S	Sn	01 50 34.7	-0.2
VLS				AML	AML	01 50 36.5	
	comp=E,38072µm,0.4s						
VLS				AML	AML	01 50 36.6	
	comp=N,43697µm,0.4s						
ARGA	Argostoli. Kep	0.59	304	P	Pn	01 50 27.9	+0.2
LXRA	Lixouri, Kepha	0.63	304	P	Pn	01 50 27.9	-0.4
KEF4	Livadi, Kephal	0.68	308	P	Pn	01 50 28.7	-0.1
KEF4				S	Sn	01 50 40.5	+1.9
KEF4	Livadi, Kephal	0.68	308	P	Pn	01 50 28.3	-0.5
KEF4				S	Sn	01 50 39.3	+0.7
KEF3	Kipouria, Keph	0.69	301	P	Pn	01 50 28.8	-0.3
KEF3				S	Sn	01 50 40.3	+1.3
	comp=N,27µm,0.3s						
KEF3	Kipouria, Keph	0.69	301	P	Pb	01 50 28.3	0.0
UPR	University Cam	0.69	51	P	Pn	01 50 28.9	-0.2
UPR				S	Sn	01 50 38.8	-0.3
FSK	Fiskardo	0.75	325	P	Pn	01 50 30.1	+0.3
FSK	Fiskardo	0.75	325	P	Pn	01 50 29.4	-0.4
FSK				AML	AML	01 50 48.5	
	comp=E,15446µm,0.5s						
FSK				AML	AML	01 50 50.0	
	comp=N,13756µm,0.7s						
LAKA	Lakka	0.80	60	P	Pb	01 50 29.7	-0.4
LAKA				S	Sn	01 50 42.7	+1.1
	comp=N,19µm,0.4s						
LAKA	Lakka	0.80	60	P	Pb	01 50 29.0	-1.1
LAKA				AML	AML	01 50 42.8	
	comp=E,33061µm,0.4s						
LAKA				AML	AML	01 50 46.1	
	comp=N,46908µm,0.4s						
KLV	Kalavryta, Ach	0.85	76	P	Pb	01 50 30.3	-0.8
KLV	Kalavryta, Ach	0.85	76	P	Pb	01 50 29.4	-1.7
KLV				AML	AML	01 50 47.6	
	comp=N,7475µm,0.8s						
KLV				AML	AML	01 50 51.7	
	comp=E,7443µm,0.5s						
EFP	Efpalio	0.86	47	P	Pb	01 50 31.0	-0.1
EFP				S	Sn	01 50 43.9	+0.8
	comp=E,9µm,0.6s						
EFP	Efpalio	0.86	47	P	Pb	01 50 30.5	-0.7
EFP				AML	AML	01 50 46.9	
	comp=N,19284µm,0.5s						
EFP				AML	AML	01 50 49.2	
	comp=E,15546µm,0.6s						
ALIK	Aliki, Aigiali	0.90	62	P	Pb	01 50 31.3	-0.5
TRIZ	Trizonia	0.93	56	P	Pb	01 50 31.8	-0.5
TRIZ	Trizonia	0.93	56	P	Pb	01 50 31.3	-1.0
ITM	Ithomi	0.93	135	P	Pb	01 50 31.4	-1.0
ITM	Ithomi	0.93	135	P	Pb	01 50 31.1	-1.4
ITM				AML	AML	01 50 50.0	
	comp=E,8784µm,0.5s						
ITM				AML	AML	01 50 50.1	
	comp=N,15719µm,0.7s						
ITM	Ithomi	0.93	135	Pg	Pb	01 50 31.3	-1.1
LKD2	Lefkada island	1.00	340	P	Pn	01 50 34.3	+0.9
PYL	PYLOS	1.08	152	P	Pn	01 50 33.7	-0.7
PYL				S	Sn	01 50 50.1	+1.6
PYL	PYLOS	1.08	152	P	Pn	01 50 33.3	-1.0
EVR	Evrytania	1.21	27	P	Pb	01 50 37.2	+0.1
EVR				S	Sn	01 50 56.1	+4.3
	comp=N,7µm,0.6s						
EVR	Evrytania	1.21	27	P	Pn	01 50 36.6	+0.4
EVR				AML	AML	01 51 01.3	
	comp=E,10876µm,0.7s						
EVR				AML	AML	01 51 02.0	
	comp=N,16703µm,0.6s						
THAL	Thalero	1.25	81	P	Pb	01 50 37.5	-0.3
THAL	Thalero	1.25	81	P	Pn	01 50 36.6	-0.1
THAL				AML	AML	01 50 59.0	
	comp=N,20321µm,0.7s						
THAL				AML	AML	01 51 08.5	
	comp=E,20524µm,0.4s						
DLFA	Delphi	1.27	60	P	Pn	01 50 36.8	-0.3
MAKR	Makrakomi, Fth	1.42	34	P	Pb	01 50 41.1	+0.4
MAKR	Makrakomi, Fth	1.42	34	P	Pb	01 50 40.7	0.0
MAKR				AML	AML	01 51 07.0	
	comp=N,6755µm,0.9s						
MAKR				AML	AML	01 51 10.6	
	comp=E,5334µm,0.5s						
LTK	Loutraki	1.48	83	P	Pb	01 50 41.5	-0.3
LTK	Loutraki	1.48	83	P	Pn	01 50 40.8	+0.8
LTK				AML	AML	01 51 12.7	
	comp=E,4050µm,0.6s						
LTK				AML	AML	01 51 16.0	
	comp=N,3978µm,0.7s						
AGG	Agios Georgios	1.52	39	P	Pb	01 50 43.6	+1.2
AGG				S	Sb	01 51 05.0	+3.7
AGG	Agios Georgios	1.52	39	P	Pn	01 50 41.3	+0.8
AGG				AML	AML	01 51 09.6	
	comp=E,5597µm,0.6s						
AGG				AML	AML	01 51 16.2	
	comp=N,4984µm,0.9s						
AGG	Agios Georgios	1.52	39	Pn	Pb	01 50 43.1	+0.6
EPID	Epidavros	1.62	98	P	Pb	01 50 44.7	+0.7
KRND	KRANIDI	1.69	105	P	Pb	01 50 45.7	+0.4
LKR	Lokris	1.70	61	P	Pb	01 50 45.4	0.0
ATAL	Atalanti	1.73	60	P	Pb	01 50 45.8	-0.2
ATAL	Atalanti	1.73	60	P	Pn	01 50 44.3	+0.9
ATAL				AML	AML	01 51 18.2	
	comp=E,2309µm,1.1s						
ATAL				AML	AML	01 51 18.6	
	comp=N,3678µm,0.8s						
VILL	Villia	1.77	79	P	Pb	01 50 47.1	+0.3
IGT	Igoumenitsa	1.79	341	P	Pb	01 50 47.0	0.0
JAN	Janina	1.82	354	P	Pb	01 50 48.4	+0.9
JAN	Janina	1.82	354	P	Pb	01 50 46.6	-0.9
JAN				AML	AML	01 51 28.1	
	comp=N,2516µm,0.6s						
JAN				AML	AML	01 51 31.0	
	comp=E,3573µm,0.6s						
VLI	Veliai	1.85	127	P	Pb	01 50 47.7	-0.2
THL	Klokotos Trika	1.86	22	P	Pb	01 50 48.9	+0.7
THL				S	Sb	01 51 14.3	+3.3
	comp=E,2µm,0.6s						
ATH	Athens Observa	2.07	86	P	Pb	01 50 51.0	-0.8
ATH				S	Sb	01 51 18.4	+1.3
KPRO	Kipourio	2.12	5	P	Pb	01 50 52.8	+0.2
ATHU	Athens Univers	2.12	86	P	Pb	01 50 51.3	-1.4
KEK	Kerkira	2.12	332	P	Pb	01 50 51.5	-1.2
VLY	Voula,Athens	2.13	89	P	Pb	01 50 51.4	-1.4
PTL	Penteli	2.19	84	P	Pb	01 50 52.4	-1.5
KTHR	Kythira	2.19	136	P	Pn	01 50 52.0	+2.2
SRN	Sarande	2.21	337	P	Pb	01 50 52.8	-1.3
NEO	Neokhori	2.21	48	P	Pb	01 50 52.9	-1.3
KTHA	Kythira Island	2.23	135	P	Pn	01 50 52.4	+2.2
DION	Dionisos Attik	2.25	83	P	Pb	01 50 53.6	-1.2
LSK	Leskovik	2.33	351	P	Pb	01 50 55.4	-0.9
PENT	Pentalofos	2.35	1	P	Pb	01 50 56.1	-0.4
KYMI	Kymi, Euboea I	2.49	71	P	Pb	01 50 56.5	-2.4
KZN	Kozani	2.51	12	P	Pb	01 50 57.5	-1.8
NEST	Nestorio	2.57	359	P	Pb	01 50 59.6	-0.7
ANKY	Antikythira Is	2.65	138	P	Pn	01 50 55.8	-0.2
KTI	Kastanea	2.66	17	P	Pb	01 51 00.0	-1.9
KBN	Korca	2.79	355	P	Pb	01 51 02.1	-1.9
KBN	Korca	2.79	355		Pb	01 51 01.4	-2.6
PAIG	Paliouri	2.89	43	P	Pn	01 51 01.6	+2.3
SKY	Skiros Island	2.90	68	P	Pb	01 51 02.9	-3.0
VLO	Vlora	2.90	335	Pn	Pn	01 51 01.6	+2.1
FNA	Florina	2.94	4	P	Pn	01 51 03.2	+3.1
FNA	Florina	2.94	4	Pn	Pn	01 51 02.3	+2.2
PLG	Polygyros	3.11	35	P	Pn	01 51 04.7	+2.3
THE	Thessaloniki	3.14	27	P	Pn	01 51 05.7	+3.0
GRG	Griva	3.27	18	P	Pn	01 51 07.0	+2.5
OHR	Ohrid	3.27	356	i Pn	Pn	01 51 08.0	+3.4
OUR	Ouranopolis	3.35	41	P	Pn	01 51 08.1	+2.6
SOH	Sokhos	3.45	30	P	Pn	01 51 10.1	+3.1
KNT	Kendrikon	3.59	22	P	Pn	01 51 12.1	+3.2
APE	Apeiranthos	3.61	101	⇑P	Pb	01 51 14.0	-3.9
TIR	Tirane	3.63	345	⇑P	Pn	01 51 09.9	+0.5
TIR	Tirane	3.63	345		Pn	01 51 11.4	+2.0
VAY	Valandovo	3.65	18	i Pn	Pn	01 51 12.2	+2.5
TIP	Timpagrande	3.66	293	⇓P	Pn	01 51 11.4	+1.5
TIP				⇓S	Sn	01 51 53.6	+1.3
TIP	Timpagrande	3.66	293		Pn	01 51 11.4	+1.5
SRS	Serrai	3.79	30	P	Pn	01 51 14.3	+2.6
STIP	Stip	3.93	12	i Pn	Pn	01 51 17.7	+4.1
THAS	Thassos island	3.94	44	P	Pn	01 51 16.0	+2.4
IDI	Anoyia	3.98	129	Pn	Pn	01 51 15.3	+1.0
	comp=E,1.1nm,0.3s,baz=311,slow=20,SNR=1.5						
IDI				Sn	Sn	01 52 02.8	+2.6
	comp=E,11nm,0.3s,baz=288,slow=19,SNR=7.0						
IDI				LR	LR	01 52 48.6	
	comp=E,148nm,20.1s,baz=244,slow=40						
NVR	Nevrokopi	4.10	30	P	Pn	01 51 19.0	+3.1
SKO	Skopje	4.13	3	i Pn	Pn	01 51 19.6	+3.2
CEL	Celeste	4.13	277	Pn	Pn	01 51 16.9	+0.5
SMTH	Samothraki Isl	4.33	51	P	Pn	01 51 20.9	+1.9
ULC	Ulcinj	4.35	341	ePn	Pn	01 51 20.5	+1.1
ULC				eSn	Sn	01 52 08.0	-1.4
MATE	Matera	4.42	311	⇓P	Pn	01 51 21.1	+0.9
MATE				⇓S	Sn	01 52 10.5	-0.3
DRME	Dracevica, Mon	4.58	342	ePn	Pn	01 51 23.7	+1.2
DRME	Dracevica, Mon	4.58	342	ePn	Pn	01 51 23.9	+1.4
DRME				eSn	Sn	01 52 13.6	-1.3
RDO	Rodhopi	4.76	45	P	Pn	01 51 27.5	+2.6
BUM	Brajici-Budva	4.76	340	ePn	Pn	01 51 25.9	+0.8
BUM				eSn	Sn	01 52 17.8	-1.7
BOSS	Bosilegrad	4.76	12	ePn	Pn	01 51 28.0	+2.9
PDG	Podgorica	4.79	343	⇓P	Pn	01 51 26.3	+0.9
PDG				⇑S	Sn	01 52 18.9	-1.1
PDG	Podgorica	4.79	343	ePn	Pn	01 51 26.5	+1.1
PDG	Podgorica	4.79	343	Pn	Pn	01 51 26.6	+1.1
TTG	Podgorica	4.79	343	ePn	Pn	01 51 26.3	+0.9
TTG				eSn	Sn	01 52 19.0	-1.1
PVY	Plav	4.82	350	ePn	Pn	01 51 28.6	+2.6
PVY				eSn	Sn	01 52 21.0	-0.1
ALN	Alexandroupoli	4.89	50	Pn	Pn	01 51 27.9	+1.0
CEME	Cevo	4.98	341	ePn	Pn	01 51 28.9	+0.8
CEME				i Sn	Sn	01 52 23.5	-1.5
BARS	Barje	5.00	6	ePn	Pn	01 51 29.9	+1.7
HCY	Herceg Novi	5.01	337	ePn	Pn	01 51 28.7	+0.2
HCY	Herceg Novi	5.01	337	ePn	Pn	01 51 28.6	+0.1
HCY				eSn	Sn	01 52 23.9	-1.6
VTS	Vitosha	5.04	18	⇓P	Pn	01 51 30.4	+1.5
VTS				⇑S	Sn	01 52 26.8	+0.4
VTS	Vitosha	5.04	18	Pn	Pn	01 51 30.9	+2.0
IVA	Berane	5.11	350	ePn	Pn	01 51 32.1	+2.3
IVA				eSn	Sn	01 52 26.5	-1.5
KOME	Kolasin	5.14	347	ePn	Pn	01 51 32.1	+1.7
KOME				eSn	Sn	01 52 27.8	-1.1
NKME	Niksic	5.18	342	ePn	Pn	01 51 32.5	+1.7
NKME				eSn	Sn	01 52 28.5	-1.3
NKY	Niksic	5.22	343	ePn	Pn	01 51 33.0	+1.6
NKY				eSn	Sn	01 52 28.7	-2.0
TREB	Trebinje	5.30	337	ePn	Pn	01 51 32.5	+0.1
VAE	Valguarnera	5.32	268	Pn	Pn	01 51 34.8	+2.0
	comp=E,1.1nm,0.3s,baz=135,slow=13,SNR=2.8						
VAE				Sn	Sn	01 52 38.7	+5.4
	comp=E,4.9nm,0.3s,baz=170,slow=6.5,SNR=6.5						
SELS	Selova	5.37	0	ePn	Pn	01 51 34.3	+0.9
RAFF	Raffo Rosso	5.39	265	Pn	Pn	01 51 34.3	+0.6
SJES	Sjenica	5.48	351	ePn	Pn	01 51 37.1	+2.1
ZAPS	Zavoj	5.55	12	ePn	Pn	01 51 38.4	+2.6
BALB	Balikesir	5.59	69	Pn	Pn	01 51 38.3	+1.8
UPM	Unac-Piva	5.61	343	ePn	Pn	01 51 37.2	+0.4
UPM	Unac-Piva	5.61	343	ePn	Pn	01 51 37.9	+1.1
UPM				eSn	Sn	01 52 38.4	-2.1
PLE	Pljevlja	5.63	347	ePn	Pn	01 51 39.1	+2.0
PLE				eSn	Sn	01 52 39.6	-1.4
STON	Ston	5.65	334	ePn	Pn	01 51 37.1	-0.1
STON	Ston	5.65	334	i Pn	Pn	01 51 37.6	+0.4
STON				Sn	Sn	01 52 37.9	-3.4
SGRT	San Giovanni R	5.68	315	Pn	Pn	01 51 38.0	+0.2
IVAS	Ivanjica	5.77	353	ePn	Pn	01 51 39.9	+1.0
BOVS	Bovan	5.80	4	⇑P	Pn	01 51 40.9	+1.6
BOVS				⇓S	Sn	01 52 44.6	-0.4
LSTV	Lastovo	5.88	328	ePn	Pn	01 51 40.5	+0.2
LSTV				Sn	Sn	01 52 42.4	-4.4
BLKB	Belogradchik	5.89	11	⇑S	Sn	01 52 47.0	-0.3
RUDO	Rudo	5.91	348	ePn	Pn	01 51 41.8	+0.9
PAOL	Paolisi	5.97	304		Pn	01 51 42.4	+0.6
ZAGS	Zajecar	6.02	8	ePn	Pn	01 51 43.9	+1.6
GRUS	Gruza	6.04	357	ePn	Pn	01 51 43.6	+1.0
BBLS	Lazići	6.15	348	ePn	Pn	01 51 46.1	+2.0
BBLS	Lazići	6.15	348	ePn	Pn	01 51 46.2	+2.1
CORL	Corleone	6.17	273	Pn	Pn	01 51 45.6	+1.2
CLTB	Caltabellotta	6.26	270		Pn	01 51 47.9	+2.2
MAKA	Makarska	6.26	332	ePn	Pn	01 51 46.1	+0.5
MAKA				Sn	Sn	01 52 52.2	-4.1
DIVS	Divibare	6.30	353	ePn	Pn	01 51 47.0	+0.7
DIVS	Divibare	6.30	353		Pn	01 51 47.1	+0.9
DIVS	Divibare	6.30	353	ePn	Pn	01 51 46.9	+0.7
TRUS	Trudelj	6.39	356	ePn	Pn	01 51 48.3	+0.9
HVAR	Hvar	6.40	328	ePn	Pn	01 51 47.6	+0.2
HVAR				Sn	Sn	01 52 54.9	-4.7

RICI	Ricice	6.40	333	ePn	Pn	01 51 47.5	0.0
RICI				Sn	Sn	01 52 56.3	-3.4
MDVR	Moldovita	6.95	4	⇓P	Pn	01 51 56.5	+1.4
RAZG	Razgrad	7.04	34	⇑P	Pn	01 51 58.8	+2.5
RAZG				⇓S	Sn	01 53 17.1	+1.7
HERR	Herculane	7.10	8	⇓P	Pn	01 51 59.0	+1.9
ZIRJ	Zirje	7.13	326	ePn	Pn	01 51 57.5	0.0
ZIRJ				Sn	Sn	01 53 13.2	-4.5
MGRS	Mrkonjic Grad	7.23	336	ePn	Pn	01 52 00.1	+1.2
MORI	Morici	7.27	327	ePn	Pn	01 52 00.4	+1.0
MORI				Sn	Sn	01 53 16.6	-4.5
FRGS	Fruska Gora	7.37	353	⇑P	Pn	01 52 01.6	+0.7
FRGS	Fruska Gora	7.37	353	ePn	Pn	01 52 01.3	+0.5
FRGS	Fruska Gora	7.37	353	ePn	Pn	01 52 01.3	+0.5
AQU	L'Aquila	7.42	310	ePn	Pn	01 52 08.7	+7.1
BLY	Banja Luka	7.50	338	ePn	Pn	01 52 03.3	+0.7
BANR	Banloc	7.53	0	P	Pn	01 52 04.6	+1.6
BORA	Eskisehir	7.57	72		Pn	01 52 05.4	+1.7
DUGI	Dugi Otok	7.66	325	ePn	Pn	01 52 05.4	+0.7
DUGI				Sn	Sn	01 53 25.3	-5.3
BZS	Buzias	7.77	3	⇑P	Pn	01 52 07.1	+0.8
UDBI	Udbina	7.79	331	ePn	Pn	01 52 08.2	+1.5
UDBI				Sn	Sn	01 53 29.7	-4.4
LOT	Lotru	7.85	14	⇑P	Pn	01 52 09.1	+1.6
ARR	Arges	7.97	18	⇓P	Pn	01 52 10.6	+1.5
VOIR		8.14	20	⇓P	Pn	01 52 13.4	+1.9
PLIT	Plitvice	8.14	331	ePn	Pn	01 52 12.7	+1.3
PLIT				Sn	Sn	01 53 38.8	-3.9
NVLJ	Novalja	8.19	327	ePn	Pn	01 52 12.8	+0.8
NVLJ				Sn	Sn	01 53 39.0	-4.7
MDUB	Mudurnu	8.27	68	Pn	Pn	01 52 15.6	+2.3
RABC	Rab	8.38	327	ePn	Pn	01 52 14.9	+0.3
RABC				Sn	Sn	01 53 44.1	-4.2
MLR	Muntele Rosu	8.45	24	⇓P	Pn	01 52 17.7	+1.9
MLR	Muntele Rosu	8.45	24	Pn	Pn	01 52 15.2	-0.6
	comp=E,0.1nm,0.3s,baz=231,slow=14,SNR=1.6						
MLR	Muntele Rosu	8.45	24		Pn	01 52 17.9	+2.1
HARR	Harsova	8.55	35	P	Pn	01 52 19.4	+2.4
MORH	Mrgy, Hungar	8.56	348	ePn	Pn	01 52 17.1	0.0
DOPR	Dopca	8.72	20	⇓P	Pn	01 52 20.7	+1.3
OZLJ	Ozalj	8.83	333	ePn	Pn	01 52 21.2	+0.4
OZLJ				Sn	Sn	01 53 55.0	-4.5
COVR	Voineasa-Covas	8.85	24	⇓P	Pn	01 52 23.3	+2.2
SMRN	Sveta Marina	8.88	326	ePn	Pn	01 52 22.0	+0.6
SMRN				Sn	Sn	01 53 55.4	-5.1
BRJN	Brijuni	8.96	324	ePn	Pn	01 52 23.6	+1.0
BRJN				Sn	Sn	01 53 57.2	-5.3
RIY	Rijeka	8.96	329	ePn	Pn	01 52 23.6	+0.9
RIY	Rijeka	8.96	329	ePn	Pn	01 52 23.2	+0.6
RIY				Sn	Sn	01 53 57.4	-5.4
KALN	Kalnik	8.97	339	ePn	Pn	01 52 23.2	+0.4
KALN				Sn	Sn	01 53 59.2	-3.8
PLOR	Plostina	9.00	26	⇓P	Pn	01 52 25.8	+2.5
CRES	Cresnjev	9.02	334	ePn	Pn	01 52 23.4	0.0
DRGR		9.02	7	⇑P	Pn	01 52 24.8	+1.3
CFR	Carcaliu	9.02	34	⇑P	Pn	01 52 25.8	+2.3
VRI	Vrincioaia	9.04	26	⇑P	Pn	01 52 26.1	+2.3
LOBO	Lobor	9.11	337	ePn	Pn	01 52 25.2	+0.6
LOBO				Sn	Sn	01 54 02.1	-4.2
CEY	Cerknica	9.33	330	ePn	Pn	01 52 28.3	+0.6
KEST	Kesra	9.66	261	Pn	Pn	01 52 33.6	+1.2
	comp=E,0.3nm,0.3s,baz=266,slow=5.7,SNR=9.6						
MPLH	Magyarpolny	9.68	345	eP	Pn	01 52 33.9	+1.4
SOKA	Soboth	9.90	335	ePn	Pn	01 52 35.5	-0.1
	comp=E,1.2nm,0.3s						
SOKA				eSn	Sn	01 54 20.9	-5.0
	comp=E,3.1nm,0.5s						
OBKA	Obir	9.93	333	ePn	Pn	01 52 36.1	+0.2
	comp=E,1.4nm,0.3s						
BRTR	Keskin Array B	9.97	75	Pn	Pn	01 52 36.5	-0.1
	comp=E,0.1nm,0.3s,baz=258,slow=12,SNR=1.9						
BRTR				LR	LR	01 57 24.7	
	comp=E,84nm,19.2s,baz=266,slow=44						
PSZ	Piszkesteto	10.11	355	⇑P	Pn	01 52 39.7	+1.4
PSZ	Piszkesteto	10.11	355	eP	Pn	01 52 39.7	+1.4
PSZ	Piszkesteto	10.11	355	Pn	Pn	01 52 39.8	+1.4
BURAR	Bucovina Array	10.22	16	⇓P	Pn	01 52 41.6	+1.7
ARSA	Arzberg	10.26	338	ePn	Pn	01 52 40.6	+0.2
	comp=E,0.8nm,0.3s						
STAL	STALIGIAL	10.46	326		Pn	01 52 45.3	+2.0
CIMO	Cimolais	10.62	326	Pn	Pn	01 52 45.8	+0.4
CONA	Conrad Observa	10.78	341	ePn	Pn	01 52 50.1	+2.5
	comp=E,0.2nm,0.2s						
CTI	Castel Tesino	10.80	322	Pn	Pn	01 52 49.5	+1.6
KBA	Koelnbreinsper	10.85	331	ePn	Pn	01 52 50.5	+1.8
	comp=E,0.6nm,0.3s						
KBA				eSn	Sn	01 54 42.5	-6.9
	comp=E,1.2nm,0.3s						
ABTA	Abfaltersbach	10.93	327	ePn	Pn	01 52 49.4	-0.2
	comp=E,1.3nm,0.4s						
MOA	Molln	11.18	336	ePn	Pn	01 52 53.3	+0.2
	comp=E,1.2nm,0.5s						
MOA				eSn	Sn	01 54 54.3	-2.9
	comp=E,0.8nm,0.4s						
WTTA	Wattenberg	11.71	326	ePn	Pn	01 53 02.5	+2.1
	comp=E,2.1nm,0.4s						
WTTA				Sn	Sn	01 55 07.0	-3.3
	comp=E,3.5nm,0.4s						
WATA	Walderalm	11.79	327	ePn	Pn	01 53 03.3	+1.8
	comp=E,1.6nm,0.5s						
WATA				eSn	Sn	01 55 12.5	+0.3
	comp=E,4.1nm,0.6s						
SQTA	Sankt Quirin	11.87	325	ePn	Pn	01 53 02.9	+0.4
	comp=E,1.0nm,0.3s						
VRAC	Vranov	11.91	346	LR	LR	01 59 16.6	
	comp=E,59nm,21.2s,baz=170,slow=46						
FETA	Feichten	11.94	323	ePn	Pn	01 53 06.8	+3.2
	comp=E,0.2nm,0.3s						
MOTA	Moosalm	12.01	325	ePn	Pn	01 53 05.1	+0.7
	comp=E,1.6nm,0.6s						
DAVOX	Davos/Dischmat	12.18	321	Sn	Sn	01 55 20.8	-1.2
	comp=E,0.4nm,0.3s,baz=342,slow=20,SNR=3.7						
GERES	GERESS Array B	12.23	336	Pn	Pn	01 53 07.6	+0.1
	comp=E,0.3nm,0.3s,baz=154,slow=14,SNR=11						
GERES				Sn	Sn	01 55 20.0	-3.0
	comp=E,0.3nm,0.3s,baz=147,slow=26,SNR=3.1						
RETA	Reutte	12.27	325	ePn	Pn	01 53 10.0	+2.1
	comp=E,0.6nm,0.4s						
KHC	Kasperske Hory	12.53	337	ePN	Pn	01 53 12.0	+0.6
KHC				eSN	Sn	01 55 25.4	-4.7
MMAI	Mount Meron Ar	12.62	108	Pn	Pn	01 53 10.9	-1.9
	comp=E,0.5nm,0.3s,baz=306,slow=13,SNR=1.5						
AKASG	Malin Array Be	14.10	22	Pn	Pn	01 53 31.8	-1.0
	comp=E,0.4nm,0.3s,baz=215,slow=12,SNR=2.4						
EIL	Elat	14.10	121	Sn	Sn	01 55 60.0	-8.7
	comp=E,0.6nm,0.3s,baz=44,slow=4.5,SNR=5.2						
ASF	Jabal al Asfar	14.12	109	Pn	Pn	01 53 30.8	-2.6
	comp=E,0.3nm,0.3s,baz=12,slow=11,SNR=3.9						
ESBB	Sonseca Array	19.62	283	P	P	01 54 41.9	+0.5
ESBB				IAmb	IAmb	01 54 43.3	
	comp=Z,22nm,1.8s						
ESDC	Sonseca Array	19.62	283	P	P	01 54 41.8	+0.3
	comp=Z,0.1nm,0.3s,baz=74,slow=14,SNR=5.0						
ESDC	Sonseca Array	19.62	283	IAmb	IAmb	01 54 44.6	
	comp=Z,9.9nm,2.0s						
VSU	Vasula	20.95	8	eP	P	01 54 56.7	+1.0
MTSE	Matsula	20.96	4	eP	P	01 54 56.5	+0.8
UPP	Uppsala	22.14	355	eP	P	01 55 08.9	+0.5
AAL	Aland	22.36	359	eP	P	01 55 11.6	+0.8
HFS	Hagfors	22.80	350	P	P	01 55 15.3	-0.1
	comp=Z,4.6nm,0.6s,baz=153,slow=10.0,SNR=20						
FINES	FINESS Array B	23.83	6	P	P	01 55 25.4	-0.2
	comp=Z,2.2nm,0.4s,baz=186,slow=9.0,SNR=32						
EKA	Eskdalemuir Ar	23.96	325	P	P	01 55 27.7	+0.7
	comp=Z,2.1nm,0.6s,baz=124,slow=9.6,SNR=14						
NB2	NORSAR Subarra	24.04	348	P	P	01 55 27.8	+0.1
	comp=Z,0.9nm,0.6s,baz=156,slow=9.3						
NOA	NORSAR Array B	24.04	348	P	P	01 55 27.5	-0.1
	comp=Z,0.4nm,0.5s,baz=254,slow=4.7,SNR=11						
NOA				LR	LR	02 06 58.9	
	comp=Z,32nm,18.8s,baz=55,slow=42						
ABKAR	Akbulak array	30.05	55	P	P	01 56 23.1	+1.4
ABKAR				IAmb	IAmb	01 57 12.7	
	comp=Z,12nm,1.9s						
TORD	Torodi Ar. Bea	30.07	220	P	P	01 56 23.4	+1.2
	comp=Z,1.8nm,0.6s,baz=31,slow=9.4,SNR=22						
TORD	Torodi Ar. Bea	30.07	220	IAmb	IAmb	01 56 25.8	
	comp=Z,3.8nm,1.6s						
ARCES	ARCESS Array B	31.84	3	P	P	01 56 37.0	-0.3
	comp=Z,1.5nm,0.6s,baz=186,slow=7.3,SNR=11						

JMA 13 01:51:33.8±0.2**, 43°.04N×143°.92E, h121**^{km}±1^{km}**, M0.9,**
Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOB	Onbets	0.15	205	P	Pn	01 51 50.8	+0.4
JOB				eS	Sn	01 52 03.6	+0.7
JAR	Ashorobuto	0.28	337	P	Pn	01 51 50.9	+0.1
JAR				eS	Sn	01 52 04.0	+0.4
JAK	Akkeshi	0.57	94	P	Pn	01 51 52.3	+0.1
JAK				eS	Sn	01 52 06.0	-0.2
JCH	Churui	0.59	224	P	Pn	01 51 52.4	0.0
JCH				eS	Sn	01 52 06.0	-0.4
JTKR	Abashiri--Toko	0.93	359	P	Pn	01 51 55.3	+0.1
JMP	Maruseppu	1.05	337	P	Pn	01 51 56.5	+0.1

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*JMA **13** 01:52:12.4±0.7, 46°.63N×153°.02E, h30^{km}, M5.8*
JMA Felt I J1.
*NIED **13** 01:52:12.4, 46°.63N×153°.02E, h30^{km}, MW5.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.84; M$_{\theta\theta}$2.65; M$_{\phi\phi}$-5.49; M$_{r\theta}$-2.17; M$_{\theta\phi}$-3.11; M$_{\phi r}$3.04; Fault plane solution: M$_0$6.78000×10^{16} NP1: φ$_s$342.00000°, δ72.00000°, λ42.00000°. NP2: φ$_s$237.00000°, δ50.00000°, λ156.00000°.*
*SKHL **13** 01:52:14.3±0.3, 46°.30N×153°.10E, h76^{km}±2^{km}, mb6.0/19, ms5.0/9*
*BJI **13** 01:52:14.6±0.0, 46°.76N×152°.70E, h60^{km}, mB5.4/48, mb5.5/72, Ms5.0/59, Ms7 4.9/58*
*MOS **13** 01:52:15.5±1.0, 46°.60N×152°.67E, h67^{km}, mb5.7/71, MS4.7/33, Error ellipse: s-maj=5.8km s-min=4.9km az=92.1*
*IDC **13** 01:52:15.3±1.8, 46°.70N×152°.53E, h37^{km}±14^{km}, mb5.0/54, mb1 5.0/58, mb1mx5.0/67, mbtmp5.2/58, ML4.0/4, MS4.7/27, Ms1 4.7/27, ms1mx4.7/35, Error ellipse: s-maj=11.0km s-min=8.3km az=114.0*
*NEIC **13** 01:52:17.7±1.5, 46°.72N±0°.08×152°.59E±0°.09, h57^{km}±3^{km}, mb5.3/567, Error ellipse: s-maj=12.5km s-min=6.7km az=149.0*
*GCMT **13** 01:52:17.7±0.1, 46°.70N±0°.01×152°.79E±0°.01, h46^{km}, MW5.4/145, Moment Tensor Solution. s130,c234; s145,c264; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.29±.02; M$_{\theta\theta}$-0.46±.02; M$_{\phi\phi}$-0.83±.02; M$_{r\theta}$0.26±.01; M$_{\theta\phi}$-0.67±.01; M$_{\phi r}$0.66±.01; Best double couple: M$_0$1.49200×10^{17} NP1:φ$_s$225.00000°, δ32.00000°, λ103.00000°. NP2:φ$_s$30.00000°, δ59.00000°, λ82.00000°. Principal axes: T 1.4780, Plg75.0000°, Azm278.0000°; N 0.0230, Plg7.0000°, Azm34.0000°; P -1.5050, Plg14.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **13** 01:52:24.4±0.0, 48°.04N×151°.78E, h33^{km}, mb5.9, mB_BB6.0*
ISC 13 01:52:16.9±0.4**, 46°.62N**±0°.03×**152°.61E**±0°.03**, h56**^{km}±2^{km}**, h56**^{km}**:pP-P, n1666,** σ**1^{s}32**/1499**, mb5.3**/518**, MS5.0**/66**, 548C-164D, Fault plane solution: NP1:**φ$_s$12.29491°, δ50.40634°**,** λ62.17461°. **NP2:**φ$_s$231.92447°**,** δ47.04025°**,** λ119.43888°. **Principal axes:** T Plg68.8357°**,** Azm216.2041°**;** N Plg21.0813°**,** Azm30.8874°**;** P Plg1.7888°**,** Azm121.5772°**; Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.59	249	d iPN	Pn	01 53 11.3	+1.3
KUR				eS	Sn	01 53 53.1	+2.1
KUR				pmax	pmax		
	comp=Z,5µm,2.7s						
KUR				pmax	pmax		
	comp=Z,2µm,0.4s						
KUR				pmax	pmax		
	comp=N,732nm,0.2s						
KUR				pmax	pmax		
	comp=E,839nm,0.2s						
KUR				smax	smax		
	comp=E,56µm,1.5s						
KUR				smax	smax		
	comp=N,36µm,1.6s						
KUR				smax	smax		
	comp=N,24µm,0.4s						
KUR				smax	smax		
	comp=E,10µm,0.4s						
KUR	Kuril'sk	3.59	249	i P	Pn	01 53 10.7	+0.7
KUR				AMB	AMB	01 53 14.0	
	comp=E,5µm,3.0s						
KUR				AMB	AMB	01 53 20.0	
	comp=E,2µm,0.4s						
KUR				eS	Sn	01 53 53.2	+2.2
KUR				A	A	01 54 08.4	
	comp=E,36µm,2.0s						
KUR				A	A	01 54 08.4	
	comp=E,56µm,2.0s						
KUR				A	A	01 54 09.0	
	comp=E,24µm,0.4s						
KUR				A	A	01 54 09.0	
	comp=E,10µm,0.4s						
SKR	Severo-Kuril's	4.68	28	ePN	Pn	01 53 24.6	-0.4
SKR				eS	Sn	01 54 16.8	-1.2
SKR				pmax	pmax		
	comp=Z,1µm,0.7s						
SKR				smax	smax		
	comp=E,6µm,0.5s						
SKR				smax	smax		
	comp=N,10µm,0.8s						
SKR				MLR	MLR		
	comp=Z,6µm,17.0s						
SKR				MLR	MLR		
	comp=Z,8µm,13.0s						
SKR	Severo-Kuril's	4.68	28	eP	Pn	01 53 24.4	-0.6
SKR				AMB	AMB	01 53 29.0	
	comp=Z,1µm,0.7s						
SKR				eS	Sn	01 54 16.8	-1.2
SKR				A	A	01 54 36.0	
	comp=Z,10µm,0.8s						
SKR				A	A	01 54 36.0	
	comp=Z,6µm,0.8s						
SKR				AMS	AMS	01 55 18.0	
	comp=Z,5µm,12.0s						
SKR				AMS	AMS	01 55 18.0	
	comp=Z,4µm,12.0s						
SKR				AMS	AMS	01 55 18.0	
	comp=Z,6µm,12.0s						
SHO	Shikotan	4.92	238	⇑iPN	Pn	01 53 27.4	-0.8
SHO				eS	Sn	01 54 24.0	+0.2
SHO				pmax	pmax		
	comp=E,544nm,0.4s						
SHO				pmax	pmax		
	comp=Z,869nm,0.4s						
SHO				pmax	pmax		
	comp=N,257nm,0.5s						
SHO				smax	smax		
	comp=N,3µm,0.4s						
SHO				smax	smax		
	comp=E,5µm,0.4s						
SHO	Shikotan	4.92	238	i P	Pn	01 53 27.4	-0.8
SHO				AMB	AMB	01 53 30.0	
	comp=E,870nm,0.5s						
SHO				eS	Sn	01 54 22.8	-1.0
SHO				A	A	01 54 30.0	
	comp=E,3µm,0.4s						
SHO				A	A	01 54 30.0	
	comp=E,5µm,0.4s						
SHO				AMS	AMS	01 55 25.6	
	comp=E,10µm,14.0s						
SHO				AMS	AMS	01 55 25.6	
	comp=E,8µm,14.0s						
SHO				AMS	AMS	01 55 25.6	
	comp=E,7µm,14.0s						
YUK	Yuzh-Kuril'sk	5.41	244	ePN	Pn	01 53 36.0	+1.0
YUK				eS	Sn	01 54 38.2	+2.3
YUK				pmax	pmax		
	comp=Z,2µm,0.3s						
YUK				pmax	pmax		
	comp=N,883nm,0.2s						
YUK				pmax	pmax		
	comp=E,806nm,0.2s						
YUK				smax	smax		
	comp=N,12µm,0.5s						
YUK				smax	smax		
	comp=E,12µm,0.5s						
YUK	Yuzh-Kuril'sk	5.41	244	eP	Pn	01 53 35.7	+0.7
YUK				AMB	AMB	01 53 39.0	
	comp=E,2µm,0.4s						
YUK				eS	Sn	01 54 36.6	+0.7
YUK				A	A	01 54 52.0	
	comp=E,12µm,0.5s						
YUK				A	A	01 54 52.0	
	comp=E,12µm,0.5s						
YUK				AMS	AMS	01 55 47.0	
	comp=E,26µm,13.0s						
YUK				AMS	AMS	01 55 47.0	
	comp=E,17µm,13.0s						
PAU	Pauzhetka	5.58	28	eP	Pn	01 53 37.6	+0.3
PAU				AMB	AMB	01 53 41.6	
	comp=E,470nm,0.4s						
PAU				eS	Sn	01 54 40.0	0.0
PAU				A	A	01 54 59.7	
	comp=E,2µm,0.5s						
PAU				A	A	01 54 59.7	
	comp=E,2µm,0.5s						
GLVR	Golovnino	5.78	243	ePN	Pn	01 53 39.7	-0.3
GLVR				eS	Sn	01 54 46.4	+1.5
GLVR				pmax	pmax		
	comp=Z,1µm,0.2s						
GLVR				pmax	pmax		
	comp=E,1µm,0.4s						
GLVR				pmax	pmax		
	comp=N,1µm,0.3s						
GLVR				smax	smax		
	comp=N,11µm,0.5s						
GLVR				smax	smax		
	comp=E,7µm,0.4s						
GLVR	Golovnino	5.78	243	eP	Pn	01 53 39.7	-0.3
GLVR				AMB	AMB	01 53 47.0	
	comp=E,1µm,0.4s						
GLVR				eS	Sn	01 54 46.4	+1.5
GLVR				A	A	01 55 05.0	
	comp=E,12µm,0.5s						
GLVR				A	A	01 55 05.0	
	comp=E,7µm,0.5s						
NEM2	Nemuro 2	5.85	239	⇑P	Pn	01 53 39.9	-1.1
NEM2				eS	Sn	01 54 44.1	-2.6
NMR	Nemuro--Hokkai	5.86	239	⇑iPN	Pn	01 53 40.0	-1.1
NMR				eS	Sn	01 54 46.3	-0.6
NMR	Nemuro--Hokkai	5.86	239	i P	Pn	01 53 40.5	-0.6
NMR				eS	Sn	01 54 46.3	-0.6
JRA	Rausu	5.92	246	P	Pn	01 53 43.5	+1.5
JNSB	Nemuroshibetsu	6.08	245	⇑P	Pn	01 53 45.7	+1.6
JNK	Nakash	6.35	244	P	Pn	01 53 48.6	+0.7
JNK				eS	Sn	01 55 00.1	+1.1
JKHN	Kushirohamanak	6.36	239	P	Pn	01 53 47.1	-0.9
AKK	Akkeshi	6.59	240	eP	Pn	01 53 50.5	-0.6
JTKR	Abashiri--Toko	6.68	250	P	Pn	01 53 54.2	+1.8
JAK	Akkeshi	6.69	240	⇑P	Pn	01 53 51.3	-1.2
JAK				eS	Sn	01 55 04.7	-2.6
YSS	Yuzh-Sakhalins	6.77	276	κ iPN	Pn	01 53 56.4	+2.8
YSS				eS	Sn	01 55 12.0	+2.7
YSS				pmax	pmax		
	comp=Z,2µm,3.2s						
YSS				pmax	pmax		
	comp=Z,1µm,0.6s						
YSS				smax	smax		
	comp=N,2µm,0.5s						
YSS				smax	smax		
	comp=E,1µm,0.5s						
YSS				MLR	MLR		
	comp=Z,6µm,12.0s						
YSS				MLR	MLR		
	comp=E,3µm,11.0s						
YSS	Yuzh-Sakhalins	6.77	276	i P	Pn	01 53 56.4	+2.8
YSS				AMB	AMB	01 53 57.0	
	comp=E,2µm,3.0s						
YSS				AMB	AMB	01 54 01.8	
	comp=E,980nm,0.5s						
YSS				eS	Sn	01 55 12.4	+3.1
YSS				A	A	01 55 14.7	
	comp=E,290nm,0.4s						
YSS				A	A	01 55 14.7	
	comp=E,1µm,0.4s						
YSS				AMS	AMS	01 56 49.0	
	comp=E,3µm,12.0s						
YSS				AMS	AMS	01 56 49.0	
	comp=E,6µm,12.0s						
YSS	Yuzh-Sakhalins	6.77	276		Pn	01 53 56.1	+2.5
YSS				Sn	Sn	01 55 11.3	+2.1
YSS	Yuzh-Sakhalins	6.77	276	P	Pn	01 53 56.7	+3.1
JMP	Maruseppu	7.02	251	⇑P	Pn	01 53 59.3	+2.2
JAR	Ashorobuto	7.09	245	⇑P	Pn	01 53 59.1	+1.1
JSE	Soyaes	7.20	260	P	Pn	01 54 02.5	+3.0
JOB	Onbets	7.26	242	P	Pn	01 54 00.1	-0.2
JOB				eS	Sn	01 55 19.9	-1.5
PEA0B	Petropavlovsk-	7.28	25	c ePN	Pn	01 54 00.0	-0.5
PEA0B	Petropavlovsk-	7.28	25	Pn	Pn	01 54 00.5	0.0
PETK	Petropavlovsk-	7.28	25	Pn	Pn	01 54 00.1	-0.5
	comp=E,3.9nm,0.3s,baz=180,slow=8.6,SNR=66						
PETK				LR	LR	01 56 52.3	
	comp=E,3µm,20.3s,baz=204,slow=38						
JKA	Kamikawa-asahi	7.48	254	eP	Pn	01 54 05.6	+2.3
JKA	Kamikawa-asahi	7.48	254		Pn	01 54 05.6	+2.3
ASAJ	Asahikawa	7.48	254	Pn	Pn	01 54 04.9	+1.6
	comp=E,20nm,0.3s,baz=81,slow=17,SNR=219						
ASAJ				LR	LR	01 56 51.7	
	comp=E,7µm,20.2s,baz=62,slow=37						
ASAJ	Asahikawa	7.48	254	P	Pn	01 54 06.5	+3.2
ASAJ	Asahikawa	7.48	254	PN	Pn	01 54 05.6	+2.3
JKK2	Kamakawa 2	7.48	252	P	Pn	01 54 05.8	+2.5
UGL	Uglegorsk	7.51	293	⇓iPN	Pn	01 54 07.3	+3.7
UGL				eS	Sn	01 55 30.0	+2.8
UGL				pmax	pmax		
	comp=Z,5µm,1.5s						
UGL				pmax	pmax		
	comp=Z,2µm,1.2s						
UGL				smax	smax		
	comp=N,1µm,0.6s						
UGL				smax	smax		
	comp=E,993nm,0.9s						
UGL				smax	smax		
	comp=N,2µm,5.6s						
UGL				smax	smax		
	comp=E,4µm,5.6s						
UGL				MLR	MLR		
	comp=Z,6µm,13.0s						
UGL				MLR	MLR		
	comp=N,2µm,11.0s						
UGL				MLR	MLR		
	comp=E,4µm,13.0s						
UGL	Uglegorsk	7.51	293	eP	Pn	01 54 07.4	+3.8
UGL				AMB	AMB	01 54 08.9	
	comp=E,820nm,0.7s						
UGL				AMB	AMB	01 54 10.0	
	comp=E,5µm,2.0s						
UGL				eS	Sn	01 55 32.6	+5.4
UGL				A	A	01 55 39.5	
	comp=E,1µm,0.8s						
UGL				A	A	01 55 39.5	
	comp=E,990nm,0.8s						
UGL				A	A	01 55 43.0	
	comp=E,2µm,6.0s						
UGL				A	A	01 55 43.0	
	comp=E,4µm,6.0s						
UGL				AMS	AMS	01 57 31.5	
	comp=E,2µm,12.0s						
UGL				AMS	AMS	01 57 31.5	
	comp=E,4µm,12.0s						
UGL				AMS	AMS	01 57 31.5	
	comp=E,6µm,12.0s						
PET	Petropavlovsk	7.51	29	ePN	Pn	01 54 04.3	+0.7
PET				pmax	pmax		
	comp=Z,224nm,0.6s						
PET	Petropavlovsk	7.51	29	eP	Pn	01 54 04.1	+0.5
PET				AMB	AMB	01 54 15.1	
	comp=Z,550nm,0.5s						
PET				eS	Sn	01 55 26.5	-0.7
PET				A	A	01 55 40.3	
	comp=Z,5µm,4.0s						
PET				AMS	AMS	01 57 03.5	
	comp=Z,4µm,16.0s						
PET	Petropavlovsk	7.51	29	Pn	Pn	01 54 03.3	-0.3
PET	Petropavlovsk	7.51	29	P	Pn	01 54 04.7	+1.1
JWK2	Keihoku	7.58	264	P	Pn	01 54 09.1	+4.5
JCH	Churui	7.71	242	P	Pn	01 54 05.4	-1.1
JCH				eS	Sn	01 55 29.8	-2.6
TYV	Tymovskoe	7.83	306	ePN	Pn	01 54 10.8	+2.8
TYV				eS	Sn	01 55 37.0	+1.9
TYV				pmax	pmax		
	comp=Z,336nm,0.8s						
TYV				pmax	pmax		
	comp=Z,1µm,2.3s						

TYV				smax	smax		
	comp=N,168nm,1.0s						
TYV				smax	smax		
	comp=E,84nm,1.0s						
TYV				smax	smax		
	comp=N,800nm,3.7s						
TYV				MLR	MLR		
	comp=N,7µm,18.0s						
TYV				MLR	MLR		
	comp=Z,12µm,18.0s						
TYV	**Tymovskoe**	**7.83**	**306**	eP	**Pn**	**01 54 10.8**	**+2.8**
TYV				AMB	AMB	01 54 12.2	
	comp=Z,160nm,0.5s						
TYV				AMB	AMB	01 54 14.0	
	comp=Z,1µm,2.0s						
TYV				A	A	01 55 38.9	
	comp=Z,800nm,4.0s						
TYV				eS	**Sn**	**01 55 40.2**	**+5.1**
TYV				A	A	01 55 42.8	
	comp=Z,110nm,0.8s						
TYV				A	A	01 55 42.8	
	comp=Z,110nm,0.8s						
TYV				AMS	AMS	01 57 03.0	
	comp=Z,8µm,17.0s						
TYV				AMS	AMS	01 57 03.0	
	comp=Z,7µm,17.0s						
TYV				AMS	AMS	01 57 03.0	
	comp=Z,12µm,17.0s						
JSS	**Shosan**	**7.87**	**258**	P	**Pn**	**01 54 13.0**	**+4.3**
JAB	**Ashibetsu**	**7.98**	**251**	⇑P	**Pn**	**01 54 12.9**	**+2.7**
JRBN	**Rebuntou**	**8.12**	**266**	P	**Pn**	**01 54 15.7**	**+3.6**
ERM	**Erimo**	**8.19**	**239**	cePN	**Pn**	**01 54 13.1**	**+0.1**
ERM				pmax	pmax		
	comp=Z,302nm,0.6s						
ERM	**Erimo**	**8.19**	**239**		**Pn**	**01 54 13.4**	**+0.4**
ERM	**Erimo**	**8.19**	**239**	P	**Pn**	**01 54 14.1**	**+1.1**
JHR	**Hokuryu**	**8.21**	**253**	P	**Pn**	**01 54 16.5**	**+3.2**
JBT2	**Biratori 2**	**8.24**	**246**	P	**Pn**	**01 54 13.6**	**-0.2**
JNBK	**Urakawa-nobuka**	**8.28**	**242**	P	**Pn**	**01 54 12.7**	**-1.5**
JNBK				eS	**Sn**	**01 55 42.6**	**-3.6**
JEW	**Eniwo**	**8.79**	**249**	P	**Pn**	**01 54 22.3**	**+1.0**
JEW	**Eniwo**	**8.79**	**249**	Pn	**Pn**	**01 54 22.6**	**+1.3**
JNB	**Noboribetsu**	**9.24**	**247**	P	**Pn**	**01 54 27.3**	**-0.1**
JNB				eS	**Sn**	**01 56 07.4**	**-2.5**
OKH	**Okha**	**9.31**	**322**	dePN	**Pn**	**01 54 31.9**	**+3.6**
OKH				eS	**Sn**	**01 56 15.1**	**+3.7**
OKH				pmax	pmax		
	comp=Z,700nm,3.3s						
OKH				smax	smax		
	comp=N,800nm,9.0s						
OKH				MLR	MLR		
	comp=Z,6µm,16.0s						
OKH				MLR	MLR		
	comp=N,3µm,12.0s						
OKH				MLR	MLR		
	comp=E,8µm,15.0s						
OKH	**Okha**	**9.31**	**322**	i P	**Pn**	**01 54 31.9**	**+3.6**
OKH				AMB	AMB	01 54 33.2	
	comp=E,700nm,3.0s						
OKH				AMB	AMB	01 54 33.8	
	comp=E,620nm,0.7s						
OKH				eS	**Sn**	**01 56 16.8**	**+5.4**
OKH				A	A	01 56 23.1	
	comp=E,800nm,9.0s						
OKH				A	A	01 56 25.8	
	comp=E,290nm,0.7s						
OKH				A	A	01 56 25.8	
	comp=E,280nm,0.7s						
OKH				AMS	AMS	01 58 16.8	
	comp=E,3µm,16.0s						
OKH				AMS	AMS	01 58 16.8	
	comp=E,8µm,16.0s						
OKH				AMS	AMS	01 58 16.8	
	comp=E,6µm,16.0s						
JKB	**Kayabe**	**9.55**	**244**	P	**Pn**	**01 54 30.2**	**-1.5**
JKB				eS	**Sn**	**01 56 12.0**	**-5.5**
JSH	**Shimam**	**9.80**	**251**	P	**Pn**	**01 54 35.8**	**+0.8**
JYM2	**Yakumo 2**	**9.85**	**247**	P	**Pn**	**01 54 34.7**	**-1.0**
NKL	**Nikolayevsk**	**10.09**	**315**	ePN	**Pn**	**01 54 36.3**	**-2.6**
NKL				eS	Sn	01 56 40.1	+10
NKL				pmax	pmax		
	comp=N,2.0nm,0.4s						
NKL				pmax	pmax		
	comp=E,3.0nm,0.4s						
NKL				pmax	pmax		
	comp=Z,925nm,1.2s						
NKL				smax	smax		
	comp=E,8.0nm,0.8s						
NKL				smax	smax		
	comp=N,8.0nm,0.7s						
NKL				MLR	MLR		
	comp=Z,5µm,13.0s						
NKL	**Nikolayevsk**	**10.09**	**315**	eP	**Pn**	**01 54 41.1**	**+2.2**
NKL				AMB	AMB	01 54 43.0	
	comp=Z,720nm,0.9s						
NKL				eS	**Sn**	**01 56 33.7**	**+3.3**
NKL				AMS	AMS	01 56 46.0	
	comp=Z,4µm,15.0s						
NKL				AMS	AMS	01 56 46.0	
	comp=Z,5µm,15.0s						
JSR	**Shiriuchi**	**10.14**	**244**	eS	**Sn**	**01 56 25.8**	**-5.9**
JTM	**Tenmabayashi**	**10.18**	**239**	eS	**Sn**	**01 56 24.5**	**-8.4**
JANG	**Nango**	**10.19**	**236**	eS	Sn	01 56 22.1	-11
JTH	**Tanohata**	**10.29**	**233**	eS	Sn	01 56 24.9	-11
OFUJ	**Ofunato**	**11.00**	**231**	eS	Sn	01 56 42.6	-10
TEY	**Ternei**	**11.28**	**268**	⇑ePN	**Pn**	**01 54 58.2**	**+3.0**
TEY				e		01 57 04.3	
TEY				pmax	pmax		
	comp=N,30nm,1.1s						
TEY				pmax	pmax		
	comp=E,30nm,1.1s						
TEY				pmax	pmax		
	comp=Z,50nm,2.3s						
TEY				pmax	pmax		
	comp=N,100nm,1.2s						
TEY				pmax	pmax		
	comp=E,500nm,1.2s						
TEY				pmax	pmax		
	comp=Z,400nm,1.1s						
TEY				pmax	pmax		
	comp=E,300nm,5.1s						
TEY				pmax	pmax		
	comp=N,1µm,6.8s						
TEY				MLR	MLR		
	comp=E,1µm,13.0s						
TEY				MLR	MLR		
	comp=N,900nm,17.0s						
TEY				MLR	MLR		
	comp=Z,2µm,14.0s						
TEY	**Ternei**	**11.28**	**268**	i P	**Pn**	**01 54 57.0**	**+1.8**
TEY				AMB	AMB	01 54 59.3	
	comp=Z,50nm,2.0s						
TEY				erx	rx	01 57 04.3	
TEY				A	A	01 57 10.4	
	comp=Z,1µm,5.0s						
TEY				A	A	01 57 10.4	
	comp=Z,300nm,5.0s						
TEY				AMS	AMS	01 59 08.4	
	comp=Z,2µm,14.0s						
TEY				AMS	AMS	01 59 08.4	
	comp=Z,1µm,14.0s						
TEY				AMS	AMS	01 59 08.4	
	comp=Z,2µm,14.0s						
JRG	**Rokugo**	**11.35**	**235**	eS	**Sn**	**01 56 53.7**	**-7.7**
GRNR	**Gornyy**	**11.47**	**297**	⇑iPN	Pn	01 55 03.1	+5.3
GRNR				eS	Sn	01 57 16.6	+12
GRNR				pmax	pmax		
	comp=E,250nm,0.9s						
GRNR				pmax	pmax		
	comp=N,70nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,270nm,0.9s						
GRNR				smax	smax		
	comp=N,10.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,5µm,17.0s						
GRNR				MLR	MLR		
	comp=N,2µm,14.0s						
GRNR				MLR	MLR		
	comp=Z,6µm,16.0s						
GRNR	**Gornyy**	**11.47**	**297**	eP	**Pn**	**01 55 01.1**	**+3.3**
GRNR				AMB	AMB	01 55 04.0	
	comp=Z,270nm,0.9s						
JIO	**Ouri**	**11.63**	**229**	eS	Sn	01 56 57.9	-10
JMM	**Marumori**	**12.36**	**229**	Pn	**Pn**	**01 55 09.4**	**-0.6**
JFK	**Kawauchi**	**12.70**	**227**	eS	Sn	01 57 24.3	-10
MA2	**Magadan**	**13.03**	**356**	cePN	**Pn**	**01 55 18.4**	**-0.6**
MA2				pmax	pmax		
	comp=Z,153nm,1.0s						
MA2	**Magadan**	**13.03**	**356**	eP	**Pn**	**01 55 18.4**	**-0.6**
MA2	**Magadan**	**13.03**	**356**	Pn	**Pn**	**01 55 18.3**	**-0.6**
MA2	**Magadan**	**13.03**	**356**	P	**Pn**	**01 55 20.3**	**+1.3**
JFY	**Yanaizu**	**13.28**	**231**	P	**Pn**	**01 55 19.2**	**-3.4**
JYT	**Yasato**	**13.93**	**226**		**Pn**	**01 55 28.9**	**-2.4**
KLR	**Kul'dur**	**14.22**	**288**	LR	LR	02 01 17.3	
	comp=Z,5µm,18.9s,baz=94,slow=38						
KLR	**Kul'dur**	**14.22**	**288**	i P	**Pn**	**01 55 37.4**	**+2.2**
KLR				pmax	pmax		
	comp=Z,127nm,0.7s						
KLR	**Kul'dur**	**14.22**	**288**	eP	**Pn**	**01 55 35.0**	**-0.2**
USA0B	**Ussuriysk Arra**	**14.68**	**268**	P	**Pn**	**01 55 42.7**	**+1.5**
USA0B	**Ussuriysk Arra**	**14.68**	**268**	Pn	**Pn**	**01 55 42.7**	**+1.5**
USRK	**Ussuriysk Ar.**	**14.68**	**268**	Pn	**Pn**	**01 55 41.1**	**-0.1**
	baz=80,slow=8.5,SNR=43						
USRK				LR	LR	02 01 05.8	
	comp=Z,4µm,20.5s,baz=72,slow=36						
USRK	**Ussuriysk Ar.**	**14.68**	**268**	P	**Pn**	**01 55 42.6**	**+1.4**
USRK	**Ussuriysk Ar.**	**14.68**	**268**	Pn	**Pn**	**01 55 42.6**	**+1.4**
MJB9	**Matsu-Tunnel**	**14.72**	**232**		**Pn**	**01 55 41.2**	**-0.7**
MAJO	**Matsushiro**	**14.72**	**232**	P	**Pn**	**01 55 39.2**	**-2.7**
MAJO	**Matsushiro**	**14.72**	**232**	Pn	**Pn**	**01 55 39.2**	**-2.7**
MAJO	**Matsushiro**	**14.72**	**232**	P	**Pn**	**01 55 41.0**	**-0.9**
MAT	**Matsushiro**	**14.72**	**232**	P	**Pn**	**01 55 38.5**	**-3.4**
MJAR	**Matsushiro Arr**	**14.72**	**232**	Pn	**Pn**	**01 55 39.0**	**-2.9**
	comp=Z,0.4nm,0.3s,baz=25,slow=12,SNR=13						
MJAR				Sn	**S**	**01 58 33.6**	**-6.1**
	comp=Z,0.3nm,0.3s,baz=28,slow=25,SNR=4.0						
MJAR				LR	LR	02 01 36.2	
	comp=Z,2µm,21.1s,baz=65,slow=38						
MJAR	**Matsushiro Arr**	**14.72**	**232**	P	**Pn**	**01 55 42.1**	**+0.2**
MJAR	**Matsushiro Arr**	**14.72**	**232**	Pn	**Pn**	**01 55 42.0**	**+0.2**
JNG	**Nsakai**	**14.88**	**232**	P	**Pn**	**01 55 41.4**	**-2.6**
JGF	**Kuroka**	**15.88**	**232**		**Pn**	**01 55 56.4**	**-0.4**
MDJ	**Mudanjiang**	**16.22**	**271**	P	**Pn**	**01 56 02.0**	**+1.1**
MDJ				pP	pP	01 56 10.6	-4.5
MDJ				sP	sP	01 56 20.4	-1.7
MDJ				S	**Sn**	**01 58 58.2**	**-1.6**
MDJ				sS	S	01 59 13.4	+3.3
MDJ				PcS	**PcS**	**02 04 31.4**	**+3.4**
MDJ				pmax	pmax		
	comp=Z,140nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,470nm,3.5s						
MDJ				LR	LR		
	comp=Z,2µm,19.5s						
MDJ				LR	LR		
	comp=Z,3µm,19.1s						
MDJ				LR	LR		
	comp=Z,5µm,19.7s						
MDJ	**Mudanjiang**	**16.22**	**271**	Pn	**Pn**	**01 56 00.8**	**-0.2**
MDJ				IAmb	IAmb	01 56 07.2	
	comp=Z,254nm,0.9s						
MDJ	**Mudanjiang**	**16.22**	**271**	P	**P**	**01 56 03.5**	**+0.3**
INU	**Inuyama**	**16.26**	**232**		**Pn**	**01 56 01.2**	**-0.2**
INU	**Inuyama**	**16.26**	**232**	P	**Pn**	**01 56 01.2**	**-0.2**
SEY	**Seymchan**	**16.35**	**360**	Pn	**Pn**	**01 56 02.2**	**-0.2**
	comp=Z,1.8nm,0.3s,baz=171,slow=9.9,SNR=37						
SEY				LR	LR	02 02 43.4	
	comp=Z,2µm,18.3s,baz=178,slow=39						
BMKR	**Bomnak**	**17.04**	**307**	eP	**Pn**	**01 56 11.0**	**-0.1**
BMKR				AMB	AMB	01 56 17.4	
	comp=Z,230nm,0.7s						
BMKR				AMB	AMB	01 56 17.4	
	comp=Z,300nm,0.7s						
BMKR				AMB	AMB	01 56 17.4	
	comp=Z,450nm,0.7s						
JWT	**Wachi**	**17.20**	**235**		**Pn**	**01 56 12.7**	**-0.5**
JWT				IAmb	IAmb	01 56 16.2	
	comp=Z,114nm,0.9s						
ZEA	**Zeya**	**17.67**	**303**	ceP	**P**	**01 56 20.1**	**+1.0**
ZEA				eS	**Sn**	**01 59 26.5**	**-8.2**
ZEA				pmax	pmax		
	comp=N,300nm,4.4s						
ZEA				pmax	pmax		
	comp=Z,400nm,4.9s						
ZEA				pmax	pmax		
	comp=E,90nm,0.9s						
ZEA				pmax	pmax		
	comp=N,110nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,150nm,0.7s						
ZEA				smax	smax		
	comp=E,300nm,5.9s						
ZEA				smax	smax		
	comp=N,400nm,8.0s						
ZEA				MLR	MLR		
	comp=E,2µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,17.0s						
ZEA	**Zeya**	**17.67**	**303**	eP	**P**	**01 56 20.1**	**+1.0**
ZEA				AMB	AMB	01 56 23.1	
	comp=Z,400nm,5.0s						
ZEA				AMB	AMB	01 56 23.7	
	comp=Z,110nm,0.7s						
ZEA				AMB	AMB	01 56 23.7	
	comp=Z,150nm,0.7s						
ZEA				AMS	AMS	02 03 23.0	
	comp=Z,2µm,16.0s						
ZEA				AMS	AMS	02 03 23.0	
	comp=Z,2µm,16.0s						
JHS	**Saijyo**	**18.72**	**239**	P	**Pn**	**01 56 32.0**	**+0.2**
JMN	**Monobe**	**19.19**	**234**	P	**Pn**	**01 56 37.0**	**-0.4**
CN2	**Changchun**	**19.31**	**272**	eP	**P**	**01 56 34.8**	**-2.4**
CN2				eS	S	02 00 01.1	-12
CN2				LR	LR		
	comp=Z,1µm,16.0s						
CN2				LR	LR		
	comp=Z,3µm,16.0s						
CN2				LR	LR		
	comp=Z,3µm,17.2s						
KSIJA	**INJE**	**20.00**	**253**	P	Pn	01 56 46.1	-0.9
	SNR=22						
HWCB	**Hwacheon**	**20.17**	**254**	P	Pn	01 56 48.0	-0.9
	SNR=39						
KSYOW	**Yeongwol**	**20.24**	**251**	P	**P**	**01 56 48.5**	**+1.2**
	SNR=26						
YAK	**Yakutsk**	**20.24**	**328**	P	**P**	**01 56 47.6**	**+0.5**
	comp=Z,214nm,0.6s,baz=327,slow=0.8,SNR=39						
YAK				LR	LR	02 04 23.9	
	comp=Z,3µm,20.9s,baz=115,slow=36						
YAK	**Yakutsk**	**20.24**	**328**	eSSS	SSS	02 11 17.6	
YAK	**Yakutsk**	**20.24**	**328**	eP	**P**	**01 56 47.7**	**+0.5**
YAK				e		01 57 06.8	
YAK				eS	**S**	**02 00 32.0**	**+1.1**
YAK				e		02 00 55.2	
YAK				eSS	SnSn	02 01 10.3	+19
YAK				e		02 08 08.4	
YAK				pmax	pmax		
	comp=Z,695nm,0.8s						
YAK				pmax	pmax		
	comp=N,158nm,1.0s						
YAK				pmax	pmax		
	comp=E,43nm,0.7s						
YAK				pmax	pmax		
	comp=Z,550nm,1.5s						
YAK				pmax	pmax		
	comp=N,220nm,1.3s						
YAK				pmax	pmax		
	comp=E,240nm,1.3s						
YAK				smax	smax		
	comp=E,437nm,2.8s						
YAK				smax	smax		
	comp=N,191nm,1.8s						
YAK	**Yakutsk**	**20.24**	**328**		**P**	**01 56 47.4**	**+0.2**
YAK	**Yakutsk**	**20.24**	**328**	pmax	pmax		
	comp=E,246nm,3.3s						
YAK	**Yakutsk**	**20.24**	**328**	pmax	pmax		
	comp=N,240nm,3.0s						
YAK	**Yakutsk**	**20.24**	**328**	pmax	pmax		
	comp=Z,849nm,0.9s						
YAK	**Yakutsk**	**20.24**	**328**	pmax	pmax		
	comp=N,150nm,1.0s						
YAK	**Yakutsk**	**20.24**	**328**	pmax	pmax		
	comp=E,157nm,0.9s						
YAK	**Yakutsk**	**20.24**	**328**	pmax	pmax		
	comp=Z,240nm,3.0s						
YAK	**Yakutsk**	**20.24**	**328**	eP	**P**	**01 56 48.2**	**+1.0**
YAK	**Yakutsk**	**20.24**	**328**	e*PP	pP	01 57 02.1	+2.5
YAK	**Yakutsk**	**20.24**	**328**	e*SS		02 05 11.7	
KSCHC	**Chuncheon**	**20.32**	**253**	P	Pn	01 56 50.0	-0.7
	SNR=28						
KSCWO	**Cheorwon**	**20.34**	**254**	P	Pn	01 56 50.8	-0.2
	SNR=15						
KSWJU	**Wonju**	**20.37**	**252**	P	Pn	01 56 51.0	-0.3
	SNR=48						
KSRS	**Korea Array**	**20.43**	**252**	P	**P**	**01 56 50.6**	**+1.2**
	comp=Z,83nm,0.9s,baz=56,slow=11,SNR=45						
KSRS				S	Sn	02 00 47.5	+6.2
	comp=Z,27nm,1.3s,baz=58,slow=19,SNR=7.4						
KSRS				PcP	**PcP**	**02 01 01.2**	**+1.6**
	comp=Z,6.9nm,0.9s,baz=343,slow=1.3,SNR=7.1						
KSRS				LR	LR	02 03 40.2	
	comp=Z,2µm,20.5s,baz=124,slow=34						
KSRS				ScP	**ScP**	**02 04 34.0**	**+2.9**
	comp=Z,3.5nm,0.9s,baz=265,slow=1.5,SNR=8.1						
KS19	**Wonju Array Si**	**20.43**	**252**	IAmb	IAmb	01 56 57.6	
	comp=Z,156nm,0.7s						
KSAR	**Wonju Array Be**	**20.46**	**252**	P	**P**	**01 56 50.1**	**+0.4**
KSAR	**Wonju Array Be**	**20.46**	**252**	P	**P**	**01 56 50.1**	**+0.4**
GAPB	**Gapyeong**	**20.49**	**254**	P	Pn	01 56 52.1	-0.6
	SNR=20						
EUSB	**Uiseong**	**20.57**	**249**	P	Pn	01 56 52.5	-1.1
	SNR=37						
KSEUS	**ULSEONG**	**20.57**	**249**	P	Pn	01 56 52.5	-1.2
	SNR=22						
YOCB	**Yeongcheon**	**20.63**	**247**	P	Pn	01 56 53.1	-1.3
	SNR=9.7						
KSYOC	**YEONGCHEON**	**20.64**	**247**	P	**P**	**01 56 52.9**	**+1.2**
	SNR=9.0						
KSUSN	**Ulsan**	**20.70**	**247**	P	**P**	**01 56 52.9**	**+0.5**
	SNR=11						
KSCHJ	**Chungju**	**20.72**	**251**	P	Pn	01 56 55.0	-0.5
	SNR=38						
KSDDC	**Dongducheon**	**20.75**	**254**	P	Pn	01 56 58.2	+2.5
	SNR=9.1						
YNCB	**YEONCHEON**	**20.76**	**255**	P	Pn	01 56 58.7	+2.8
	SNR=6.3						
YNCB	**YEONCHEON**	**20.76**	**255**	P	**P**	**01 56 53.8**	**+0.8**
	SNR=76						
KSMGY	**Mungyeong**	**20.80**	**250**	P	**P**	**01 56 54.7**	**+1.3**
	SNR=29						
KSICN	**Icheon**	**20.85**	**252**	P	Pn	01 56 57.9	+0.9
	SNR=7.8						
KSSAJ	**Sangju**	**20.88**	**250**	P	**P**	**01 56 55.7**	**+1.4**
	SNR=38						
KSMUS	**Musan**	**20.95**	**255**	P	Pn	01 56 59.3	+1.1
	SNR=52						
KSMUS	**Musan**	**20.95**	**255**	P	**P**	**01 56 56.2**	**+1.1**
	SNR=88						
KSBUS	**Busan**	**20.99**	**246**	P	**P**	**01 56 57.0**	**+1.5**
	SNR=8.4						
KSSOD	**Songwoldong**	**20.99**	**254**	P	Pn	01 57 00.1	+1.5
	SNR=6.6						
KSBON	**Boeun**	**21.06**	**250**	P	**P**	**01 56 57.9**	**+1.7**
	SNR=10						
KSCPR	**CHUPUNGNYEONG**	**21.11**	**249**	P	**P**	**01 56 59.5**	**+2.7**
	SNR=30						
KSBSA	**Busan_acc**	**21.13**	**245**	P	**P**	**01 56 58.5**	**+1.5**
	SNR=5.6						
OKCB	**Cheongsan-myeo**	**21.15**	**250**	P	**P**	**01 56 60.0**	**+2.8**
	SNR=5.5						
JCJ	**Chichijima**	**21.16**	**207**	P	**P**	**01 56 58.0**	**+0.7**
	comp=Z,117nm,0.7s,baz=350,slow=1.4,SNR=5.1						
JCJ	**Chichijima**	**21.16**	**207**	P	**P**	**01 56 57.8**	**+0.4**
JCJ				IAmb	IAmb	01 56 58.8	
	comp=Z,158nm,0.8s						
PYTK	**Pyeongtaek**	**21.23**	**252**	P	**P**	**01 57 02.4**	**+4.4**
	SNR=17						
INCN	**Inchon**	**21.26**	**254**	P	**P**	**01 56 58.5**	**+0.1**
INCN				pmax	pmax		
	comp=Z,217nm,0.8s						
INCN	**Inchon**	**21.26**	**254**	P	**P**	**01 57 02.0**	**+3.7**
INCN	**Inchon**	**21.26**	**254**	P	**P**	**01 56 58.5**	**+0.1**
INCN	**Inchon**	**21.26**	**254**	P	**P**	**01 57 00.0**	**+1.6**
KSGAH	**Ganghwa**	**21.26**	**255**	P	**P**	**01 57 04.7**	**+6.3**
	SNR=8.6						
KSGAH	**Ganghwa**	**21.26**	**255**	P	**P**	**01 56 59.3**	**+1.0**
	SNR=44						
JTU	**Tsushima**	**21.28**	**244**	P	**P**	**01 57 00.2**	**+1.6**
SNY	**Shenyang**	**21.28**	**268**	⇑P	**P**	**01 56 58.0**	**-0.6**
SNY				S	**S**	**02 00 43.8**	**-8.0**
SNY				pmax	pmax		
	comp=Z,45nm,1.0s						
SNY				pmax	pmax		
	comp=Z,380nm,3.5s						
SNY				LR	LR		
	comp=Z,2µm,17.7s						
SNY				LR	LR		
	comp=Z,3µm,19.6s						
SNY				LR	LR		
	comp=Z,5µm,20.1s						
SHHB	**Siheung-si**	**21.29**	**254**	P	**P**	**01 57 03.0**	**+4.4**
	SNR=8.7						
JNU	**Nakatsue**	**21.35**	**239**	P	**P**	**01 56 59.7**	**+0.2**
	comp=Z,65nm,0.9s,baz=57,slow=8.8,SNR=8.5						
JNU	**Nakatsue**	**21.35**	**239**	IAmb	IAmb	01 57 01.8	
	comp=Z,113nm,1.1s						
JNU	**Nakatsue**	**21.35**	**239**	P	**P**	**01 56 59.1**	**-0.4**
KSMAS	**Masan**	**21.38**	**246**	P	**P**	**01 57 01.4**	**+1.8**
	SNR=6.6						
TJN	**Taejon**	**21.41**	**251**	ceP	**P**	**01 57 00.1**	**+0.1**
TJN	**Taejon**	**21.41**	**251**	P	**P**	**01 57 02.0**	**+2.0**
KOJ2	**Gongju-si**	**21.50**	**251**	P	**P**	**01 57 04.0**	**+3.0**
	SNR=12						
KSDEI	**Deokjeokdo**	**21.73**	**254**	P	**P**	**01 57 05.8**	**+2.4**
	SNR=31						
BUYB	**Buyeo**	**21.76**	**251**	P	**P**	**01 57 05.0**	**+1.2**
	SNR=27						
KSSES	**Seosan**	**21.77**	**253**	P	**P**	**01 57 05.0**	**+1.2**
	SNR=43						
YPDB	**Yeonpyeongdo**	**21.80**	**255**	P	**P**	**01 57 08.0**	**+3.8**
	SNR=7.6						
KSGUS	**GUNSAN**	**21.99**	**251**	P	**P**	**01 57 07.1**	**+0.9**
	SNR=13						
HIA	**Hailar**	**22.08**	**289**	P	**P**	**01 57 05.7**	**-1.4**
HIA				pmax	pmax		
	comp=Z,78nm,0.8s						
HIA	**Hailar**	**22.08**	**289**	P	**P**	**01 57 05.7**	**-1.4**
HIA				IAmb	IAmb	01 57 08.2	
	comp=Z,78nm,0.8s						
SUCA	**Sunchang**	**22.16**	**249**	P	**P**	**01 57 14.0**	**+5.9**
	SNR=6.0						
SUCA	**Sunchang**	**22.16**	**249**	P	**P**	**01 57 09.1**	**+1.0**
	SNR=26						
KSJEU	**Jeongeup**	**22.23**	**249**	P	**P**	**01 57 09.5**	**+0.8**
	SNR=10						
KSSCH	**SUNCHEON**	**22.29**	**248**	P	**P**	**01 57 10.1**	**+0.7**
	SNR=11						
OYDB	**Oeyeondo**	**22.34**	**252**	P	**P**	**01 57 12.0**	**+2.0**
	SNR=7.1						
YNDB	**Yeoundo**	**22.34**	**246**	P	**P**	**01 57 11.1**	**+1.2**
	SNR=7.2						
SMKB	**Mukjeong-gil**	**22.35**	**250**	P	**P**	**01 57 11.0**	**+0.9**
	SNR=34						
MNYD	**Munyeodo**	**22.36**	**250**	P	**P**	**01 57 11.0**	**+0.8**
	SNR=18						
KSKWJ	**Gwangju**	**22.39**	**248**	P	**P**	**01 57 11.0**	**+0.5**
	SNR=16						
KSKWJ	**Gwangju**	**22.39**	**248**	P	**P**	**01 57 11.1**	**+0.5**
	SNR=16						
KSKWJ	**Gwangju**	**22.39**	**248**	P	**P**	**01 57 11.1**	**+0.5**
	SNR=16						
KSGBI	**Gyogryolbido**	**22.45**	**253**	P	**P**	**01 57 13.8**	**+2.7**
	SNR=20						
ECDB	**Euchungdo**	**22.47**	**252**	P	**P**	**01 57 14.0**	**+2.6**
	SNR=6.1						
BOSB	**Boseong-gun**	**22.50**	**247**	P	**P**	**01 57 12.3**	**+0.6**
	SNR=15						
GOCB	**Gochang-gun**	**22.53**	**249**	P	**P**	**01 57 13.0**	**+1.0**
	SNR=11						
KOHB	**KOHEUNG**	**22.55**	**247**	P	**P**	**01 57 13.0**	**+0.8**
	SNR=17						
BILL	**Bilibino**	**22.60**	**13**	deP	**P**	**01 57 11.5**	**-0.9**
BILL				e		01 57 36.7	
BILL				i S	**S**	**02 01 12.1**	**-3.7**
BILL				pmax	pmax		
	comp=Z,29nm,1.0s						
BILL				MLR	MLR		
	comp=Z,1µm,16.0s						
BILL	**Bilibino**	**22.60**	**13**	eP	**P**	**01 57 11.5**	**-0.9**
BILL	**Bilibino**	**22.60**	**13**	P	**P**	**01 57 11.8**	**-0.7**
JSU	**Suzuyama**	**22.77**	**236**	P	**P**	**01 57 14.6**	**0.0**
JSU				IAmb	IAmb	01 57 16.5	
	comp=Z,106nm,1.0s						
ANMD	**Anmado**	**22.90**	**250**	P	**P**	**01 57 20.0**	**+4.1**
	SNR=7.1						
GMDB	**Geomundo**	**22.92**	**246**	P	**P**	**01 57 17.1**	**+1.0**
	SNR=11						

HANB	**Haenam**	**23.04**	**248**	P	**P**	**01 57 19.0**	**+1.7**
	SNR=13						
DL2	**Dalian**	**23.90**	**262**	⇑P	**P**	**01 57 25.8**	**+0.5**
DL2				sP	**sP**	**01 57 46.4**	**+1.9**
DL2				S	**S**	**02 01 37.1**	**-0.5**
DL2				sS	**sS**	**02 01 55.5**	**-4.1**
DL2				pmax	pmax		
	comp=Z,200nm,1.0s						
DL2				pmax	pmax		
	comp=Z,1µm,3.9s						
DL2				LR	LR		
	comp=Z,1µm,17.4s						
DL2				LR	LR		
	comp=Z,1µm,18.9s						
DL2				LR	LR		
	comp=Z,1µm,17.3s						
SPIA	**Saint Paul Isl**	**24.93**	**51**	P	**P**	**01 57 35.0**	**+0.5**
	baz=261						
GAMB	**Gambell**	**26.13**	**36**	P	**P**	**01 57 47.0**	**+1.7**
GAMB	**Gambell**	**26.13**	**36**	P	**P**	**01 57 46.3**	**+1.0**
	baz=246						
UNV	**Unalaska Valle**	**26.83**	**59**	P	**P**	**01 57 52.5**	**+0.8**
	baz=271						
BJI	**Beijing**	**27.13**	**269**	P	**P**	**01 57 56.8**	**+2.3**
BJI				pP	**pwP**	**01 58 11.3**	**+0.6**
BJI				sP	**sP**	**01 58 15.9**	**+1.9**
BJI				PcP	**PcP**	**02 01 13.8**	**-0.1**
BJI				S	**S**	**02 02 33.6**	**+4.8**
BJI				pmax	pmax		
	comp=Z,200nm,0.8s						
BJI				LR	LR		
	comp=Z,2µm,14.1s						
BJI				LR	LR		
	comp=Z,3µm,17.9s						
BJI				LR	LR		
	comp=Z,4µm,17.9s						
BJT	**Baijiatuau**	**27.14**	**269**	P	**P**	**01 57 55.5**	**+0.8**
BJT				pmax	pmax		
	comp=Z,116nm,0.7s						
BJT	**Baijiatuau**	**27.14**	**269**	P	**P**	**01 57 55.5**	**+0.8**
TIXI	**Tiksi**	**27.50**	**344**	P	**P**	**01 57 56.5**	**-1.0**
	comp=Z,6.9nm,0.5s,baz=131,slow=6.3,SNR=20						
TIXI				LR	LR	02 09 30.7	
	comp=Z,2µm,19.2s,baz=131,slow=38						
TIXI	**Tiksi**	**27.50**	**344**	*ce*P	**P**	**01 57 54.7**	**-2.8**
TIXI				pmax	pmax		
	comp=Z,50nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,2µm,18.0s						
JOW	**Kunigami**	**27.57**	**233**	P	**P**	**01 57 58.1**	**-0.5**
	comp=Z,29nm,0.9s,baz=63,slow=5.9,SNR=6.0						
JOW	**Kunigami**	**27.57**	**233**	P	**P**	**01 57 59.2**	**+0.6**
JOW				IAmb	IAmb	01 57 59.8	
	comp=Z,75nm,1.1s						
JOW	**Kunigami**	**27.57**	**233**	P	**P**	**01 58 00.1**	**+1.5**
TNA	**Tin City**	**28.33**	**34**	P	**P**	**01 58 05.3**	**+0.3**
TNA	**Tin City**	**28.33**	**34**	P	**P**	**01 58 05.9**	**+0.8**
	baz=248						
TIA	**Tai'an**	**28.35**	**261**	⇑P	**P**	**01 58 06.0**	**+0.5**
TIA				pmax	pmax		
	comp=Z,68nm,1.0s						
ANM	**Nome**	**29.00**	**37**	P	**P**	**01 58 11.3**	**+0.3**
	baz=252						
H11N2	**WAKE ISLAND Hy**	**29.27**	**152**	T	T	02 29 39.7	
	baz=340,slow=76						
H11N1	**WAKE ISLAND Hy**	**29.28**	**152**	T	T	02 29 44.1	
	baz=340,slow=76						
H11N3	**WAKE ISLAND Hy**	**29.28**	**152**	T	T	02 29 40.2	
	baz=340,slow=76						
NJ2	**Nanjing**	**29.62**	**253**	⇑P	**P**	**01 58 16.3**	**-0.5**
NJ2				pP	**pP**	**01 58 29.9**	**-0.2**
NJ2				sP	**sP**	**01 58 37.8**	**+1.5**
NJ2				PP	**PnPn**	**01 59 14.2**	**+0.4**
NJ2				S	**S**	**02 03 07.9**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,45nm,0.9s						
NJ2				LR	LR		
	comp=Z,1µm,14.1s						
NJ2				LR	LR		
	comp=Z,2µm,13.5s						
NJ2				LR	LR		
	comp=Z,2µm,16.3s						
HHC	**Hu-ho-hao-te**	**29.95**	**274**	*e*P	**P**	**01 58 20.2**	**+0.4**
HHC				S	**S**	**02 03 10.8**	**-2.7**
HHC				sS	sS	02 03 37.2	+1.3
HHC				SS	**SnSn**	**02 04 46.9**	**-2.3**
HHC				pmax	pmax		
	comp=Z,220nm,1.0s						
HHC				pmax	pmax		
	comp=Z,390nm,7.4s						
HHC				LR	LR		
	comp=Z,2µm,16.2s						
HHC				LR	LR		
	comp=Z,2µm,17.9s						
HHC				LR	LR		
	comp=Z,3µm,16.2s						
SDPT	**Sand Point**	**30.28**	**56**	P	**P**	**01 58 22.3**	**-0.1**
	baz=273						
H11S1	**WAKE ISLAND Hy**	**30.35**	**153**	T	T	02 30 19.7	
	baz=339,slow=76,SNR=81						
H11S3	**WAKE ISLAND Hy**	**30.36**	**153**	T	T	02 30 19.2	
	baz=339,slow=76,SNR=132						
H11S2	**WAKE ISLAND Hy**	**30.37**	**153**	T	T	02 30 19.9	
	baz=339,slow=76,SNR=61						
ULN	**Ulaanbaatar**	**30.61**	**289**	*ce*P	**P**	**01 58 24.7**	**-0.9**
ULN				pmax	pmax		
	comp=Z,141nm,0.8s						
ULN				MLR	MLR		
	comp=Z,3µm,18.0s						
ULN	**Ulaanbaatar**	**30.61**	**289**	P	**P**	**01 58 27.0**	**+1.4**
ULN	**Ulaanbaatar**	**30.61**	**289**	*e*P	**P**	**01 58 24.7**	**-0.9**
ULN	**Ulaanbaatar**	**30.61**	**289**	P	**P**	**01 58 25.5**	**-0.2**
TIY	**Taiyuan**	**30.79**	**268**	*e*P	**P**	**01 58 29.0**	**+1.8**
TIY				S	**S**	**02 03 24.9**	**-1.8**
TIY				pmax	pmax		
	comp=Z,89nm,0.6s						
TIY				LR	LR		
	comp=Z,820nm,13.0s						
TIY				LR	LR		
	comp=Z,710nm,13.7s						
TIY				LR	LR		
	comp=Z,2µm,19.3s						
SONM	**Songino Array**	**31.05**	**289**	P	**P**	**01 58 28.6**	**-0.8**
	comp=Z,22nm,0.8s,baz=79,slow=7.7,SNR=12						
SONM				PcP	**PcP**	**02 01 24.4**	**+0.6**
	comp=Z,8.2nm,0.8s,baz=88,slow=3.1,SNR=4.2						
SONM				ScP	**ScP**	**02 05 03.5**	**+1.7**
	comp=Z,2.6nm,0.7s,baz=97,slow=2.2,SNR=5.5						
SONM				LR	LR	02 12 02.4	
	comp=Z,3µm,18.9s,baz=124,slow=38						
SONM	**Songino Array**	**31.05**	**289**	P	**P**	**01 58 28.5**	**-1.0**
SONM				IAmb	IAmb	01 58 37.8	
	comp=Z,85nm,1.0s						
TLY	**Talaya**	**31.93**	**297**	*e*P	**P**	**01 58 36.7**	**-0.3**
TLY				*e*		01 59 59.9	
TLY				*e*S	**S**	**02 03 49.7**	**+5.7**
TLY				pmax	pmax		
	comp=Z,77nm,0.8s						
TLY				MLR	MLR		
	comp=Z,9µm,15.0s						
TLY	**Talaya**	**31.93**	**297**	P	**P**	**01 58 36.6**	**-0.4**
TLY	**Talaya**	**31.93**	**297**	*e*P	**P**	**01 58 37.2**	**+0.2**
TLY	**Talaya**	**31.93**	**297**	P	**P**	**01 58 36.4**	**-0.6**
TLY				IAmb	IAmb	01 58 39.2	
	comp=Z,54nm,0.8s						
ZAK	**Zakamensk**	**32.42**	**295**	*e*P	**P**	**01 58 39.8**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,72nm,1.1s						
TTA	**Tatalina**	**32.75**	**41**	P	**P**	**01 58 44.3**	**+0.2**
TTA				pmax	pmax		
	comp=Z,15nm,0.9s						
TTA	**Tatalina**	**32.75**	**41**	P	**P**	**01 58 44.3**	**+0.2**
TTA	**Tatalina**	**32.75**	**41**	P	**P**	**01 58 44.6**	**+0.5**
	baz=265,SNR=8.5						
P18K	**Big Mountain,**	**32.98**	**48**	P	**P**	**01 58 46.0**	**-0.2**
	baz=271						
YHNB	**Yeheng**	**33.18**	**240**	P	**P**	**01 58 49.0**	**+0.7**
YHNB				IAmb	IAmb	01 58 58.7	
	comp=Z,80nm,1.5s						
L19K	**White Mountain**	**33.23**	**43**	P	**P**	**01 58 48.6**	**+0.3**
	baz=267						
N19K	**Bonanza Creek**	**33.36**	**45**	P	**P**	**01 58 50.1**	**+0.6**
	baz=269						
M19K	**Big River Lodg**	**33.43**	**43**	P	**P**	**01 58 50.6**	**+0.6**
	baz=268						
O19K	**Port Alsworth**	**33.44**	**46**	P	**P**	**01 58 50.1**	**+0.1**
	baz=270						
WHN	**Wuhan**	**33.56**	**255**	⇑P	**P**	**01 58 51.9**	**+0.5**
WHN				pmax	pmax		
	comp=Z,160nm,1.1s						
L20K	**Farewell, AK**	**33.70**	**42**	P	**P**	**01 58 52.8**	**+0.4**
	baz=267						
J20K	**Nowinta River**	**33.70**	**39**	IAmb	IAmb	01 59 02.2	
	comp=Z,26nm,1.0s						
J20K	**Nowinta River**	**33.70**	**39**	P	**P**	**01 58 52.4**	**+0.1**
	baz=265						
P19K	**Oil Pt**	**34.00**	**47**	P	**P**	**01 58 55.2**	**+0.2**
	baz=272						
IMAR	**Indian Mountai**	**34.08**	**36**	P	**P**	**01 58 55.6**	**0.0**
SSLB	**Suanglung**	**34.10**	**239**	IAmb	IAmb	01 59 01.1	
	comp=Z,30nm,1.1s						
YULB	**Yu-li**	**34.20**	**238**	IAmb	IAmb	01 59 06.5	
	comp=Z,47nm,1.1s						
A21K	**Barrow**	**34.28**	**26**	P	**P**	**01 58 57.6**	**+0.5**
A21K	**Barrow**	**34.28**	**26**	P	**P**	**01 58 57.4**	**+0.2**
	baz=252,SNR=33						
O20K	**Slope Mountain**	**34.29**	**47**	P	**P**	**01 58 57.7**	**+0.1**
	baz=272						
H21K	**Melozitna Rive**	**34.42**	**37**	IAmb	IAmb	01 59 04.4	
	comp=Z,52nm,1.1s						
H21K	**Melozitna Rive**	**34.42**	**37**	P	**P**	**01 58 58.9**	**+0.3**
	baz=264						
KDAK	**Kodiak Island**	**34.45**	**51**	P	**P**	**01 58 58.2**	**-0.7**
KDAK				pmax	pmax		
	comp=Z,46nm,1.1s						
KDAK	**Kodiak Island**	**34.45**	**51**	P	**P**	**01 58 58.2**	**-0.7**
KDAK				IAmb	IAmb	01 59 03.6	
	comp=Z,46nm,1.1s						
KDAK	**Kodiak Island**	**34.45**	**51**	P	**P**	**01 58 58.3**	**-0.5**
	baz=276						
CHUM	**Lake Minchumin**	**34.48**	**40**	P	**P**	**01 58 59.6**	**+0.6**
	baz=267						
PPLA	**Purkeypile**	**34.49**	**42**	IAmb	IAmb	01 59 02.1	
	comp=Z,71nm,1.4s						
PPLA	**Purkeypile**	**34.49**	**42**	P	**P**	**01 59 00.1**	**+0.7**
	baz=268						
CAST	**Castle Rocks**	**34.56**	**41**	P	**P**	**01 59 01.0**	**+1.2**
	baz=268						
TPUB	**Ta-pu**	**34.66**	**239**	P	**P**	**01 59 01.6**	**+0.6**
TPUB	**Ta-pu**	**34.66**	**239**	P	**P**	**01 59 02.3**	**+1.2**
I21K	**Tanana**	**34.72**	**38**	IAmb	IAmb	01 59 07.8	
	comp=Z,29nm,0.9s						
I21K	**Tanana**	**34.72**	**38**	P	**P**	**01 59 01.4**	**+0.3**
	baz=265						
TWG	**Pinlang**	**34.77**	**238**	P	**P**	**01 59 01.9**	**0.0**
BPAW	**Bear Paw Mtn.**	**35.08**	**40**	IAmb	IAmb	01 59 14.3	
	comp=Z,21nm,0.8s						
BPAW	**Bear Paw Mtn.**	**35.08**	**40**	P	**P**	**01 59 04.8**	**+0.6**
	baz=268,SNR=12						
KTH	**Kantishna Hill**	**35.09**	**40**	IAmb	IAmb	01 59 14.8	
	comp=Z,66nm,1.0s						
XAN	**Xi'an**	**35.16**	**265**	P	**P**	**01 59 05.9**	**+0.6**
XAN				pP	pwP	01 59 20.6	-0.9
XAN				PP	**PP**	**02 00 25.9**	**+0.2**
XAN				S	**S**	**02 04 31.8**	**-2.5**
XAN				pmax	pmax		
	comp=Z,200nm,0.7s						
XAN				pmax	pmax		
	comp=Z,550nm,3.7s						
XAN				LR	LR		
	comp=Z,1µm,15.7s						
XAN				LR	LR		
	comp=Z,1µm,13.7s						
XAN				LR	LR		
	comp=Z,2µm,19.4s						
MLY	**Manley**	**35.23**	**38**	P	**P**	**01 59 06.3**	**+0.8**
	baz=267						
BRSE	**Bradley Lake S**	**35.25**	**47**	P	**P**	**01 59 05.1**	**-0.6**
	baz=274						
TRF	**Thorofare Moun**	**35.37**	**41**	IAmb	IAmb	01 59 17.4	
	comp=Z,23nm,1.0s						
TRF	**Thorofare Moun**	**35.37**	**41**	P	**P**	**01 59 07.3**	**+0.4**
	baz=269,SNR=5.8						
CUT	**Chulitna**	**35.38**	**42**	P	**P**	**01 59 06.4**	**-0.3**
	baz=271						
COLD	**Coldfoot**	**35.64**	**34**	IAmb	IAmb	01 59 14.5	
	comp=Z,30nm,1.0s						
COLD	**Coldfoot**	**35.64**	**34**	P	**P**	**01 59 09.6**	**+0.6**
	baz=264,SNR=31						
RC01	**Rabbit Creek A**	**35.67**	**45**	P	**P**	**01 59 09.0**	**-0.3**
	baz=273						
O22K	**Cooper Landing**	**35.71**	**46**	P	**P**	**01 59 09.3**	**-0.4**
	baz=274						
I23K	**Minto, Yukon-K**	**35.82**	**38**	IAmb	IAmb	01 59 12.8	
	comp=Z,51nm,1.5s						
I23K	**Minto, Yukon-K**	**35.82**	**38**	P	**P**	**01 59 11.2**	**+0.7**
	baz=268,SNR=8.0						
NEA2	**Nenana**	**35.93**	**39**	P	**P**	**01 59 11.8**	**+0.3**
NEA2				IAmb	IAmb	01 59 16.8	
	comp=Z,31nm,0.8s						
NEA2	**Nenana**	**35.93**	**39**	P	**P**	**01 59 11.9**	**+0.3**
	baz=269,SNR=27						
PMR	**Palmer**	**35.94**	**44**	P	**P**	**01 59 11.2**	**-0.4**
	baz=273						
MCK	**McKinley**	**35.98**	**40**	IAmb	IAmb	01 59 29.0	
	comp=Z,40nm,1.2s						
MCK	**McKinley**	**35.98**	**40**	P	**P**	**01 59 12.0**	**+0.1**
	baz=270,SNR=13						
RND	**Reindeer**	**36.01**	**41**	IAmb	IAmb	01 59 13.4	
	comp=Z,38nm,1.1s						
TOLK	**Toolik Lake Re**	**36.04**	**32**	P	**P**	**01 59 12.8**	**+0.4**
TOLK				IAmb	IAmb	01 59 25.1	
	comp=Z,17nm,0.6s						
TOLK	**Toolik Lake Re**	**36.04**	**32**	P	**P**	**01 59 13.0**	**+0.6**
	baz=263,SNR=21						
WAT1	**Susitna Watana**	**36.16**	**42**	P	**P**	**01 59 13.1**	**-0.5**
	baz=272						
KNK	**Knik Glacier**	**36.27**	**44**	IAmb	IAmb	01 59 15.7	
	comp=Z,54nm,1.1s						
KNK	**Knik Glacier**	**36.27**	**44**	P	**P**	**01 59 14.3**	**-0.1**
	baz=274,SNR=7.9						
MDM	**Murphy Dome**	**36.30**	**38**	IAmb	IAmb	01 59 24.6	
	comp=Z,27nm,0.8s						
SML	**Sawmill**	**36.30**	**43**	P	**P**	**01 59 15.0**	**+0.2**
	baz=273,SNR=17						
WRH	**Wood River Hil**	**36.35**	**39**	IAmb	IAmb	01 59 29.7	
	comp=Z,49nm,1.2s						
PWL	**Port Wells**	**36.37**	**45**	IAmb	IAmb	01 59 19.8	
	comp=Z,20nm,0.8s						
PWL	**Port Wells**	**36.37**	**45**	P	**P**	**01 59 15.0**	**-0.3**
	baz=274						
TCOL	**CIGO, UAF Yank**	**36.45**	**38**	IAmb	IAmb	01 59 22.6	
	comp=Z,48nm,0.8s						
TCOL	**CIGO, UAF Yank**	**36.45**	**38**	P	**P**	**01 59 16.7**	**+0.7**
	baz=269,SNR=10						
COLA	**College**	**36.45**	**38**	*i* P	**P**	**01 59 14.9**	**-1.0**
COLA				pmax	pmax		
	comp=Z,53nm,1.2s						
COLA	**College**	**36.45**	**38**	P	**P**	**01 59 15.9**	**0.0**
COLA				IAmb	IAmb	01 59 22.6	
	comp=Z,47nm,0.8s						
COLA	**College**	**36.45**	**38**	P	**P**	**01 59 16.5**	**+0.6**
	baz=269						
H24K	**Noodor Dome**	**36.47**	**37**	IAmb	IAmb	01 59 22.5	
	comp=Z,24nm,1.0s						
H24K	**Noodor Dome**	**36.47**	**37**	P	**P**	**01 59 17.2**	**+1.1**
	baz=268						
CCB	**Clear Creek Bu**	**36.47**	**39**	IAmb	IAmb	01 59 24.6	
	comp=Z,28nm,1.2s						
WAT6	**Susitna Watana**	**36.54**	**42**	P	**P**	**01 59 16.6**	**-0.3**
	baz=273,SNR=5.5						
POKR	**Poker Plat Res**	**36.63**	**38**	IAmb	IAmb	01 59 27.9	
	comp=Z,43nm,0.8s						
POKR	**Poker Plat Res**	**36.63**	**38**	P	**P**	**01 59 18.4**	**+0.9**
	baz=270,SNR=29						
DHY	**Denali Highway**	**36.69**	**41**	IAmb	IAmb	01 59 19.4	
	comp=Z,37nm,1.2s						
DHY	**Denali Highway**	**36.69**	**41**	P	**P**	**01 59 18.0**	**-0.2**
	baz=272,SNR=11						
SCM	**Sheep Creek Mo**	**36.78**	**43**	IAmb	IAmb	01 59 35.3	
	comp=Z,76nm,1.5s						
SCM	**Sheep Creek Mo**	**36.78**	**43**	P	**P**	**01 59 19.0**	**+0.1**
	baz=274						
HDA	**Harding Lake**	**36.84**	**39**	IAmb	IAmb	01 59 28.5	
	comp=Z,23nm,0.7s						
HDA	**Harding Lake**	**36.84**	**39**	P	**P**	**01 59 18.9**	**-0.4**
	baz=271,SNR=18						
IL31		**36.87**	**38**	P	**P**	**01 59 19.8**	**+0.3**
IL31				IAmb	IAmb	01 59 25.6	
	comp=Z,31nm,1.1s						
ILAR	**Eielson Array**	**36.87**	**38**	P	**P**	**01 59 19.2**	**-0.2**
	comp=Z,8.7nm,0.9s,baz=259,slow=7.1,SNR=42						
ILAR				LR	LR	02 16 59.2	
	comp=Z,518nm,18.7s,baz=293,slow=40						
GLI	**Glacier Island**	**36.97**	**45**	P	**P**	**01 59 20.0**	**-0.4**
	baz=276						
M24K	**Tolsona, Glenn**	**37.30**	**43**	IAmb	IAmb	01 59 43.5	
	comp=Z,77nm,1.2s						
M24K	**Tolsona, Glenn**	**37.30**	**43**	P	**P**	**01 59 22.6**	**-0.7**
	baz=275						
PRP	**Porcupine Dome**	**37.44**	**37**	IAmb	IAmb	01 59 37.4	
	comp=Z,22nm,0.9s						
PRP	**Porcupine Dome**	**37.44**	**37**	P	**P**	**01 59 25.0**	**+0.5**
	baz=271,SNR=21						
KLU	**Klutina**	**37.48**	**44**	IAmb	IAmb	01 59 26.4	
	comp=Z,38nm,1.1s						
KLU	**Klutina**	**37.48**	**44**	P	**P**	**01 59 25.1**	**+0.3**
	baz=276,SNR=8.9						
J25K	**Salcha River,**	**37.52**	**39**	P	**P**	**01 59 24.1**	**-1.0**
	baz=272,SNR=11						
LZH	**Lanzhou**	**37.54**	**272**	⇑*i*P	**P**	**01 59 26.7**	**+1.0**
LZH				pP	pP	01 59 38.7	-0.6
LZH				sP	pwP	01 59 43.7	+1.5
LZH				PP	**PP**	**02 00 49.4**	**-2.7**
LZH				pmax	pmax		
	comp=Z,160nm,1.1s						
LZH				pmax	pmax		
	comp=Z,460nm,4.3s						
LZH				LR	LR		
	comp=Z,1µm,14.9s						
LZH				LR	LR		
	comp=Z,3µm,14.1s						
LZH				LR	LR		
	comp=Z,2µm,17.6s						
FYU	**Fort Yukon**	**37.55**	**35**	IAmb	IAmb	01 59 31.4	
	comp=Z,59nm,0.8s						
PAX	**Paxson**	**37.56**	**41**	P	**P**	**01 59 25.6**	**+0.1**
	baz=274,SNR=6.1						
DIV	**Divide**	**37.59**	**44**	IAmb	IAmb	01 59 34.3	
	comp=Z,24nm,0.6s						
EYAK	**Cordova Ski Ar**	**37.66**	**45**	P	**P**	**01 59 26.5**	**+0.2**
	baz=277						
HARP	**HAARP**	**37.75**	**42**	P	**P**	**01 59 27.4**	**+0.4**
	baz=275,SNR=5.1						
RIDG	**Independent Ri**	**37.79**	**40**	IAmb	IAmb	01 59 42.4	
	comp=Z,40nm,1.1s						
RIDG	**Independent Ri**	**37.79**	**40**	P	**P**	**01 59 26.9**	**-0.5**
	baz=274,SNR=5.9						
N25K	**Chitina, Valde**	**38.09**	**44**	P	**P**	**01 59 30.4**	**+0.4**
	baz=277,SNR=5.8						
SCRK	**Sand Creek**	**38.16**	**40**	P	**P**	**01 59 30.4**	**-0.2**
SCRK	**Sand Creek**	**38.16**	**40**	P	**P**	**01 59 30.2**	**-0.4**
	baz=274,SNR=10						
BMRM	**Bremner River**	**38.17**	**45**	IAmb	IAmb	01 59 32.3	
	comp=Z,43nm,1.1s						
BMRM	**Bremner River**	**38.17**	**45**	P	**P**	**01 59 30.7**	**+0.1**
	baz=277,SNR=7.2						
J26L	**Joseph Creek**	**38.31**	**39**	P	**P**	**01 59 30.8**	**-1.0**
	baz=274						
KAIM	**Kayak Island**	**38.40**	**46**	P	**P**	**01 59 33.6**	**+1.1**
	baz=279						
GLB	**Gilahina Butte**	**38.49**	**44**	P	**P**	**01 59 33.8**	**+0.5**
GLB				IAmb	IAmb	01 59 50.6	
	comp=Z,22nm,1.0s						
L26K	**Log Cabin Wild**	**38.52**	**41**	P	**P**	**01 59 34.3**	**+0.8**
	baz=276,SNR=10						
GTA	**Gaotai**	**38.65**	**279**	⇑P	**P**	**01 59 35.0**	**0.0**
GTA				pP	pP	01 59 49.7	+1.0
GTA				sP	sP	01 59 56.0	+1.0
GTA				PcP	**PcP**	**02 01 47.3**	**+1.2**
GTA				PcS	**PcS**	**02 05 36.5**	**+0.9**
GTA				pmax	pmax		
	comp=Z,25nm,1.5s						
GTA				pmax	pmax		
	comp=Z,240nm,8.4s						
GTA				LR	LR		
	comp=Z,1µm,18.3s						
GTA				LR	LR		
	comp=Z,860nm,18.7s						
GTA				LR	LR		
	comp=Z,2µm,19.1s						
NRIK	**Noril'sk**	**38.69**	**329**	LR	LR	02 17 21.1	
	comp=Z,2µm,18.3s,baz=118,slow=39						
M26K	**Nabesna, AK**	**38.75**	**42**	IAmb	IAmb	01 59 38.1	
	comp=Z,40nm,1.0s						
M26K	**Nabesna, AK**	**38.75**	**42**	P	**P**	**01 59 36.7**	**+1.2**
	baz=277						
MCARA	**McCarthy VSAT**	**38.87**	**44**	P	**P**	**01 59 38.3**	**+1.9**
	baz=278						
CRQE	**Cirque**	**38.93**	**45**	P	**P**	**01 59 38.0**	**+1.0**
	baz=279,SNR=12						
TGL	**Tana Glacier**	**39.06**	**45**	IAmb	IAmb	01 59 54.0	
	comp=Z,33nm,0.8s						
WAX	**Waxell Ridge**	**39.09**	**45**	IAmb	IAmb	01 59 49.6	
	comp=Z,46nm,0.6s						
L27K	**Beaver Creek,**	**39.21**	**41**	IAmb	IAmb	01 59 41.2	
	comp=Z,29nm,0.9s						
L27K	**Beaver Creek,**	**39.21**	**41**	P	**P**	**01 59 40.6**	**+1.3**
	baz=277,SNR=30						
M27K	**Edge Creek, AK**	**39.27**	**42**	IAmb	IAmb	01 59 42.5	
	comp=Z,32nm,1.1s						
M27K	**Edge Creek, AK**	**39.27**	**42**	P	**P**	**01 59 40.7**	**+0.8**
	baz=278						
EGAK	**Eagle**	**39.32**	**38**	P	**P**	**01 59 39.9**	**-0.2**
EGAK				IAmb	IAmb	01 59 41.2	
	comp=Z,42nm,1.1s						
EGAK	**Eagle**	**39.32**	**38**	P	**P**	**01 59 40.0**	**-0.2**
	baz=276,SNR=25						
ISLE	**Juniper Island**	**39.32**	**45**	IAmb	IAmb	01 59 45.7	
	comp=Z,35nm,0.9s						
BARN	**Barnard Glacie**	**39.57**	**44**	IAmb	IAmb	01 59 44.8	
	comp=Z,56nm,1.2s						
MESA	**MESA**	**39.58**	**46**	P	**P**	**01 59 42.9**	**+0.2**
	baz=280						
YAH	**Yahtse**	**39.65**	**45**	IAmb	IAmb	01 59 54.9	
	comp=Z,38nm,0.7s						
BVCY	**Beaver Creek**	**39.74**	**42**	P	**P**	**01 59 44.8**	**+1.2**
	baz=279,SNR=11						
CTG	**Chitna Glacier**	**39.74**	**44**	P	**P**	**01 59 44.8**	**+0.9**
	baz=280,SNR=8.3						
LOGN	**Logan Glacier**	**39.93**	**44**	IAmb	IAmb	01 59 52.2	
	comp=Z,35nm,0.9s						
TABL	**Table Mountain**	**39.93**	**45**	IAmb	IAmb	01 59 47.5	
	comp=Z,49nm,1.2s						
YUK3	**Moose Creek**	**40.02**	**43**	P	**P**	**01 59 46.9**	**+0.6**
	baz=280,SNR=13						
DAWY	**Dawson**	**40.16**	**39**	P	**P**	**01 59 47.9**	**+0.7**
	baz=278						
PCA	**Pinnacle**	**40.43**	**45**	P	**P**	**01 59 49.2**	**-0.3**
PCA				IAmb	IAmb	02 00 00.2	
	comp=Z,27nm,0.6s						
PINM	**Pinnacle**	**40.43**	**45**	P	**P**	**01 59 50.0**	**+0.5**
	baz=282						
I29M	**Ogilvie Camp,**	**40.46**	**37**	P	**P**	**01 59 49.6**	**+0.1**
	baz=277						
CD2	**Chengdu**	**40.52**	**265**	P	**P**	**01 59 51.0**	**+0.5**
CD2				sP	sP	02 00 12.5	+2.0
CD2				PP	**PnPn**	**02 01 30.2**	**+1.4**
CD2				S	**S**	**02 05 58.7**	**+3.1**
CD2				pmax	pmax		
	comp=Z,640nm,6.5s						
CD2				LR	LR		
	comp=Z,1µm,15.8s						
CD2				LR	LR		
	comp=Z,2µm,23.0s						
CD2				LR	LR		
	comp=Z,2µm,18.7s						
GYA	**Guiyang**	**41.34**	**257**	⇑*i*P	**P**	**01 59 57.8**	**+0.4**
GYA				sP	sP	02 00 22.8	+5.6
GYA				pmax	pmax		
	comp=Z,95nm,1.1s						
GYA				pmax	pmax		
	comp=Z,380nm,3.5s						
MAYO	**Mayo, Yukon**	**41.77**	**40**	P	**P**	**02 00 00.4**	**0.0**
	baz=281						
INK	**Inuvik**	**41.95**	**32**	P	**P**	**02 00 02.4**	**+0.7**
	comp=Z,26nm,0.8s,baz=293,slow=7.2,SNR=65						
INK	**Inuvik**	**41.95**	**32**	P	**P**	**02 00 02.4**	**+0.7**
INK	**Inuvik**	**41.95**	**32**	P	**P**	**02 00 02.5**	**+0.8**
	baz=278,SNR=34						
N31M	**Braeburn, Yuko**	**42.27**	**43**	P	**P**	**02 00 06.2**	**+1.7**
	baz=284,SNR=9.5						
DGZ	**Jazzator, Alta**	**42.36**	**299**	*i* P	**P**	**02 00 05.3**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,18nm,0.7s						
ZAA0	**Zalesovo Array**	**42.40**	**306**	P	**P**	**02 00 05.1**	**-0.5**
ZAA0				IAmb	IAmb	02 00 06.7	
	comp=Z,23nm,0.6s						
ZAA0				PcP	**PcP**	**02 01 57.4**	**-0.4**
ZALV	**Zalesovo Beam**	**42.40**	**306**	P	**P**	**02 00 04.2**	**-1.3**
	comp=Z,21nm,0.6s,baz=60,slow=5.5,SNR=18						

ZALV				PcP	PcP	02 01 58.2	+0.4
	comp=Z,32nm,0.8s,baz=77,slow=3.2,SNR=16						
ZALV				LR	LR	02 18 52.6	
	comp=Z,5µm,19.0s,baz=100,slow=38						
ZALV	Zalesovo Beam	42.40	306	iP	P	02 00 04.3	-1.3
ZALV				pmax	pmax		
	comp=Z,27nm,0.7s						
M31M	Drury Creek, Y	42.74	41	P	P	02 00 09.6	+1.3
	baz=284,SNR=14						
SKAG	Skagway	43.00	45	P	P	02 00 10.5	+0.2
SKAG	Skagway	43.00	45	P	P	02 00 11.4	+1.0
	baz=286						
FARO	Faro, Yukon	43.21	41	P	P	02 00 13.1	+1.0
	baz=285,SNR=14						
JIS	Juneau Island	43.82	47	IAmb	IAmb	02 00 20.1	
	comp=Z,49nm,1.3s						
P33M	Teslin, Yukon	44.01	44	P	P	02 00 19.8	+1.3
	baz=287,SNR=20						
MMPY	Sheldon Lake,	44.04	40	P	P	02 00 20.0	+1.2
	baz=286						
A36M	Sachs Harbour	44.12	26	P	P	02 00 19.6	+0.4
A36M	Sachs Harbour	44.12	26	P	P	02 00 20.1	+1.0
	baz=281,SNR=57						
QIZ	Qiongzhong	44.48	246	IAmb	IAmb	02 00 26.1	
	comp=Z,71nm,1.2s						
QIZ	Qiongzhong	44.48	246	P	P	02 00 24.7	+2.0
WMQ	Urumqi	44.65	291	eP	P	02 00 26.0	+2.1
WMQ				pP	pP	02 00 37.1	-0.7
WMQ				pmax	pmax		
	comp=Z,74nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,230nm,5.3s						
WMQ				LR	LR		
	comp=Z,2µm,16.7s						
WMQ				LR	LR		
	comp=Z,2µm,18.9s						
WMQ				LR	LR		
	comp=Z,2µm,17.3s						
ZSN	Zaisan	44.82	297	eP	P	02 00 25.1	-0.1
	baz=297						
ZSN	Zaisan	44.82	297	eP	P	02 00 25.1	-0.1
KMI	Kunming	44.88	259	⇑P	P	02 00 26.9	+0.8
KMI				pP	pP	02 00 41.4	+1.6
KMI				sP	sP	02 00 47.8	+1.9
KMI				PP	PP	02 02 15.3	+3.7
KMI				pmax	pmax		
	comp=Z,70nm,1.1s						
KMI				pmax	pmax		
	comp=Z,550nm,4.9s						
KMI				LR	LR		
	comp=Z,870nm,18.1s						
KMI				LR	LR		
	comp=Z,310nm,19.1s						
KMI				LR	LR		
	comp=Z,630nm,18.1s						
WTLY	Watson Lake, Y	45.95	43	P	P	02 00 33.5	-0.4
	baz=290						
SEM	Semipalatinsk	46.33	303	eP	P	02 00 34.3	-3.0
	comp=Z,22nm,0.9s,baz=303						
SEM	Semipalatinsk	46.33	303	eP	P	02 00 34.3	-3.0
SEM				pmax	pmax		
	comp=Z,22nm,0.9s						
SLVN	Son La	46.67	254	P	P	02 00 41.0	+0.9
SLVN				IAmb	IAmb	02 00 42.5	
	comp=Z,43nm,0.8s						
MK31	Makanchi Array	46.69	297	iP	P	02 00 38.3	-1.6
MK31	Makanchi Array	46.69	297	P	P	02 00 39.4	-0.5
MKAR	Makanchi Array	46.69	297	P	P	02 00 38.9	-1.0
	comp=Z,70nm,0.6s,baz=64,slow=6.2,SNR=59						
MKAR				PcP	PcP	02 02 13.0	+0.3
	comp=Z,24nm,0.8s,baz=64,slow=5.5,SNR=7.9						
MKAR				ScP	ScP	02 06 03.0	+1.7
	comp=Z,2.7nm,0.7s,baz=57,slow=4.5,SNR=4.3						
MKAR	Makanchi Array	46.69	297	iP	P	02 00 38.9	-1.0
MKAR				pmax	pmax		
	comp=Z,69nm,0.6s						
MKAR	Makanchi Array	46.69	297	P	P	02 00 39.1	-0.8
MAKZ	Makanchi	46.88	297	P	P	02 00 40.4	-0.9
MAKZ				pmax	pmax		
	comp=Z,35nm,0.7s						
MAKZ	Makanchi	46.88	297	P	P	02 00 40.4	-0.9
MAKZ				IAmb	IAmb	02 00 43.0	
	comp=Z,35nm,0.7s						
KURK	Kurchatov	47.15	304	ceP	P	02 00 42.0	-1.3
KURK				pmax	pmax		
	comp=Z,108nm,0.9s						
KURK	Kurchatov	47.15	304	P	P	02 00 42.5	-0.8
KURK	Kurchatov	47.15	304	eP	P	02 00 42.0	-1.3
KURK	Kurchatov	47.15	304	P	P	02 00 42.4	-0.9
KURBB	Kurchatov Arra	47.24	303	P	P	02 00 42.0	-2.0
	comp=Z,80nm,0.8s,baz=71,slow=8.8,SNR=39						
KURBB				PcP	PcP	02 02 14.4	-0.1
	comp=Z,14nm,0.8s,baz=72,slow=2.4,SNR=7.1						
WRGLY	Wrigley	47.24	38	P	P	02 00 43.9	0.0
	baz=291						
TDK	Taldyqorghan	49.93	297	eP	P	02 01 03.8	-1.1
	comp=Z,115nm,0.6s,baz=297						
TDK	Taldyqorghan	49.93	297	eP	P	02 01 03.8	-1.1
TDK				pmax	pmax		
	comp=Z,115nm,0.6s						
LSA	Lhasa	49.93	273	P	P	02 01 07.4	+1.8
LSA	Lhasa	49.93	273	P	P	02 01 07.0	+1.4
LSA				pmax	pmax		
	comp=Z,135nm,0.8s						
LSA	Lhasa	49.93	273	P	P	02 01 07.0	+1.4
UBPT	Khong Chiam	50.04	247	P	P	02 01 06.8	+0.9
SHLS	Shalkode	50.20	294	eP	P	02 01 04.2	-3.0
	comp=Z,15nm,0.6s,baz=294						
SHLS	Shalkode	50.20	294	eP	P	02 01 04.1	-3.0
SHLS				pmax	pmax		
	comp=Z,15nm,0.6s						
UZB	Uzynbulak	50.49	294	eP	P	02 01 08.2	-1.1
	comp=Z,16nm,0.6s,baz=294						
UZB	Uzynbulak	50.49	294	eP	P	02 01 08.1	-1.1
UZB				pmax	pmax		
	comp=Z,16nm,0.6s						
BVAR	Borovoye Array	50.67	309	P	P	02 01 09.0	-1.3
	comp=Z,31nm,0.5s,baz=345,slow=0.7,SNR=30						
BVAR				PcP	PcP	02 02 27.5	+0.6
	comp=Z,14nm,0.5s,baz=197,slow=4.6,SNR=6.4						
MYLDM	Lahad Datu	50.70	226	P	P	02 01 12.1	+1.2
MYLDM				IAmb	IAmb	02 01 14.5	
	comp=Z,59nm,1.2s						
BRVK	Borovoye	50.71	309	ceP	P	02 01 09.3	-1.3
BRVK				pmax	pmax		
	comp=Z,41nm,0.5s						
BRVK	Borovoye	50.71	309	P	P	02 01 09.7	-0.8
BRVK	Borovoye	50.71	309	eP	P	02 01 09.3	-1.3
BRVK	Borovoye	50.71	309	P	P	02 01 09.8	-0.8
BRVK				PcP	PcP	02 02 27.1	0.0
DLV	T Lat	50.71	242	P	P	02 01 12.2	+1.0
DLV				IAmb	IAmb	02 01 13.6	
	comp=Z,47nm,1.1s						
DLV	T Lat	50.71	242	P	P	02 01 12.6	+1.3
SWI	Sorong	50.87	208	P	P	02 01 13.1	+0.9
	comp=Z,2µmcomp=Z,77nm,1.6s						
SIJI	Sorong	50.88	208	P	P	02 01 12.9	+0.7
	comp=Z,16nm,0.7s,baz=6.4,slow=11,SNR=34						
SATY	Saty	50.92	295	eP	P	02 01 11.3	-1.2
	baz=295						
SATY	Saty	50.92	295	eP	P	02 01 11.3	-1.2
RES	Resolute Bay	51.07	18	P	P	02 01 13.4	+0.4
RES				pmax	pmax		
	comp=Z,46nm,1.4s						
RES	Resolute Bay	51.07	18	P	P	02 01 13.4	+0.4
RES				IAmb	IAmb	02 01 17.2	
	comp=Z,46nm,1.4s						
YKA	Yellowknife Ar	51.24	36	P	P	02 01 14.7	+0.3
	comp=Z,8.4nm,0.9s,baz=301,slow=7.1,SNR=12						
YKA				PcP	PcP	02 02 29.3	+0.5
	comp=Z,3.4nm,0.6s,baz=303,slow=3.7,SNR=7.7						
YKA				LR	LR	02 26 35.1	
	comp=Z,233nm,18.6s,baz=0.0,slow=40						
MDOK	Medeo	51.71	295	eP	P	02 01 17.6	-0.9
	baz=296						
MDOK	Medeo	51.71	295	eP	P	02 01 17.5	-0.9
CHTO	Chiang Mai	51.75	256	P	P	02 01 19.9	+1.1
CHTO				pmax	pmax		
	comp=Z,111nm,0.9s						
CHTO	Chiang Mai	51.75	256	P	P	02 01 20.4	+1.6
CHTO	Chiang Mai	51.75	256	P	P	02 01 19.9	+1.1
CHTO	Chiang Mai	51.75	256	P	P	02 01 20.5	+1.7
KUU	Kurty	51.77	297	eP	P	02 01 16.6	-2.2
	comp=Z,42nm,0.7s,baz=297						
KUU	Kurty	51.77	297	eP	P	02 01 16.5	-2.2
KUU				pmax	pmax		
	comp=Z,42nm,0.7s						
TNSS	Tian-Shan	51.84	295	eP	P	02 01 18.8	-0.9
	baz=295						
CMAR	Chiang Mai Arr	52.00	256	LR	LR	02 26 24.6	
	comp=Z,767nm,18.1s,baz=99,slow=39						
CMAR	Chiang Mai Arr	52.00	256	P	P	02 01 21.7	+1.0
CMAR	Chiang Mai Arr	52.00	256	P	P	02 01 21.7	+1.0
SHL	Shillong	52.02	268	P	P	02 01 21.6	+0.7
	SNR=13						
FAKI	Fak Fak	52.50	206	P	P	02 01 25.0	+0.6
	comp=Z,31nm,2.0s						
FAKI	Fak Fak	52.50	206	P	P	02 01 24.9	+0.6
FAKI				IAmb	IAmb	02 01 25.2	
	comp=Z,28nm,1.1s						
BTLS	Baital	52.56	299	eP	P	02 01 22.5	-2.1
	baz=299						
BTLS	Baital	52.56	299	eP	P	02 01 22.4	-2.1
KBS	Kingsbay	52.57	351	ceP	P	02 01 24.0	-0.1
KBS				pmax	pmax		
	comp=Z,83nm,2.5s						
KBS	Kingsbay	52.57	351	eP	P	02 01 23.9	-0.1
KBS	Kingsbay	52.57	351	P	P	02 01 23.8	-0.3
KBS				IAmb	IAmb	02 01 25.1	
	comp=Z,44nm,0.8s						
SPA0	Spitsbergen Ar	52.68	350	eP	P	02 01 24.1	-0.9
SPITS	Spitsbergen Ar	52.68	350	P	P	02 01 24.1	-0.9
	comp=Z,40nm,1.0s,baz=57,slow=9.1,SNR=55						
SPITS	Spitsbergen Ar	52.68	350	P	P	02 01 24.3	-0.7
SPITS				pmax	pmax		
	comp=Z,63nm,1.1s						
ULHL	Ulahol	52.70	295	P	P	02 01 26.0	+0.1
	SNR=25						
TKM2	Tokmak 2	52.74	296	P	P	02 01 26.1	-0.1
	SNR=20						
BOOM	Boomskoye usch	52.76	295	P	P	02 01 26.7	+0.4
BOOM				pmax	pmax		
	comp=Z,63nm,0.7s						
BOOM	Boomskoye usch	52.76	295	P	P	02 01 26.7	+0.4
SGDS	Sogindy	53.05	297	eP	P	02 01 27.0	-1.3
	comp=Z,27nm,0.9s,baz=297						
TOLI2	Tolitoli	53.17	221	P	P	02 01 30.5	+1.2
TOLI2				IAmb	IAmb	02 01 30.8	
	comp=Z,72nm,1.5s						
TOLI2	Tolitoli	53.17	221	P	P	02 01 30.8	+1.5
MRSI	Marisa	53.21	220	P	P	02 01 30.8	+1.2
	comp=Z,2µmcomp=Z,94nm,1.6s						
CHMS	Chumysh	53.22	296	P	P	02 01 28.6	-0.9
	SNR=19						
USP	Ospenovka	53.23	297	P	P	02 01 29.6	0.0
	SNR=60						
KBK	Karagaybulak	53.29	296	P	P	02 01 29.8	-0.4
	SNR=29						
AAK	Ala-Archa	53.58	296	P	P	02 01 32.2	0.0
	comp=Z,63nm,0.8s,baz=108,slow=4.9,SNR=39						
AAK	Ala-Archa	53.58	296	P	P	02 01 31.9	-0.4
	SNR=44						
AAK	Ala-Archa	53.58	296	iP	P	02 01 31.5	-0.7
	SNR=5.2						
AAK	Ala-Archa	53.58	296	ceP	P	02 01 31.6	-0.7
AAK				pmax	pmax		
	comp=Z,184nm,0.8s						
AAK	Ala-Archa	53.58	296	P	P	02 01 32.5	+0.2
AAK	Ala-Archa	53.58	296	eP	P	02 01 31.6	-0.7
AAK	Ala-Archa	53.58	296	P	P	02 01 32.1	-0.2
AAK				PcP	PcP	02 02 38.7	+0.4
SVE	Sverdlovsk	53.69	317	c iP	P	02 01 32.2	-0.4
SVE				pmax	pmax		
	comp=Z,55nm,0.9s						
SVE				MLR	MLR		
	comp=Z,1µm,19.0s						
SVE	Sverdlovsk	53.69	317	eP	P	02 01 32.2	-0.4
TAPN	Taplejung	53.76	273	eP	P	02 01 34.6	+0.7
	comp=Z,399nm,0.9s						
SANI	Sanana	53.84	214	P	P	02 01 33.7	-0.5
	comp=Z,38nm,1.2s						
SANI	Sanana	53.84	214	P	P	02 01 33.9	-0.2
EKS2	Erkin-Say	54.01	297	P	P	02 01 35.4	+0.1
	SNR=39						
ODAN	Odare	54.29	273	eP	P	02 01 38.2	+0.5
TULEG	Thule	54.32	11	iP	P	02 01 35.3	-1.6
TULEG				IAmb	IAmb	02 01 39.0	
	comp=Z,27nm,0.8s						
TULEG	Thule	54.32	11	P	P	02 01 35.9	-1.0
TULEG				IAmb	IAmb	02 01 37.2	
	comp=Z,57nm,1.1s						
AML	Almayashu	54.35	296	P	P	02 01 38.5	+0.3
	SNR=20						
AML	Almayashu	54.35	296	iP	P	02 01 37.8	-0.4
	SNR=20						
AML	Almayashu	54.35	296	P	P	02 01 38.7	+0.5
KSH	Kashi	54.38	292	P	P	02 01 41.9	+3.8
KSH				pP	sP	02 01 57.5	-0.9
KSH				sP	pwP	02 02 00.5	+5.4
KSH				S	S	02 09 14.1	+1.9
KSH				sS	sS	02 09 43.1	+7.4
KSH				SS	SS	02 12 55.4	+0.9
KSH				pmax	pmax		
	comp=Z,53nm,0.8s						
KSH				pmax	pmax		
	comp=Z,540nm,5.8s						
APSI	Ampana	54.58	219	P	P	02 01 39.9	+0.3
	comp=Z,76nm,1.1s						
JIRN	Jiri	54.61	274	eP	P	02 01 41.4	+1.2
GUN	Gumba	54.66	275	eP	P	02 01 41.3	+0.7
RAMN	Ramite	54.77	273	eP	P	02 01 42.0	+0.7
	comp=Z,307nm,0.6s						
ARU	Arti	54.87	317	P	P	02 01 40.3	-1.0
	comp=Z,16nm,0.5s,baz=78,slow=5.3,SNR=15						
ARU	Arti	54.87	317	c iP	P	02 01 40.1	-1.1
ARU				*PP	pP	02 01 56.8	+1.3
ARU						02 02 41.2	
ARU						02 03 41.2	
ARU				S	S	02 09 19.2	+1.1
ARU				SS	SS	02 12 56.7	-4.6
ARU				pmax	pmax		
	comp=Z,43nm,0.6s						
ARU				MLR	MLR		
	comp=Z,1µm,18.0s						
ARU	Arti	54.87	317	eP	P	02 01 40.1	-1.1
ARU	Arti	54.87	317	P	P	02 01 40.0	-1.3
ARU				PcP	PcP	02 02 42.3	-0.4
KKN	Kakani	55.15	275	eP	P	02 01 44.8	+0.9
	comp=Z,928nm,1.1s						
PKI	Pulchoki	55.20	275	eP	P	02 01 45.2	+0.8
PKIN	Phulchoki	55.20	275	eP	P	02 01 45.0	+0.6
NEEM	North Greenlan	55.33	6	iP	P	02 01 42.4	-2.2
NEEM				IAmb	IAmb	02 01 44.2	
	comp=Z,69nm,0.7s						
DZA	Taraz	55.38	298	eP	P	02 01 44.2	-1.0
	comp=Z,25nm,0.9s,baz=298						
DMN	Daman	55.38	275	eP	P	02 01 46.8	+1.1
	comp=Z,1µm,0.9s						
GKN	Gorkha	55.46	276	eP	P	02 01 47.1	+1.0
	comp=Z,1µm,0.9s						
KKAR	Karatay Array	55.76	299	P	P	02 01 47.0	-0.8
KKAR	Karatay Array	55.76	299	P	P	02 01 47.0	-0.8
KKAR				PcP	PcP	02 02 47.0	+0.6
DANN	Dangsing	55.84	277	eP	P	02 01 50.3	+1.3
	comp=Z,1µm,0.9s						
PMG	Port Moresby	55.98	186	P	P	02 01 50.4	+0.8
	comp=Z,3.1nm,0.4s,baz=325,slow=4.7,SNR=3.4						
BRLS	Borolday	56.20	299	eP	P	02 01 51.8	+0.7
	baz=299						
BRLS	Borolday	56.20	299	eP	P	02 01 51.7	+0.7
B08A	Colville Reser	56.26	53	P	P	02 01 51.7	+0.3
KOLN	Koldanda	56.32	276	eP	P	02 01 53.4	+1.1
	comp=Z,957nm,0.9s						
PYUN	Piuthan	56.53	277	eP	P	02 01 54.9	+1.1
	comp=Z,1µm,1.0s						
IUG	Iuzhnay	56.59	298	eP	P	02 01 52.9	-1.1
	baz=298						
IUG	Iuzhnay	56.59	298	eP	P	02 01 52.8	-1.1
LVZ	Lovozero	56.75	336	ceP	P	02 01 55.3	+0.8
LVZ				pmax	pmax		
	comp=Z,152nm,2.5s						
DAG	Danmarks Havn	56.76	358	iP	P	02 01 52.7	-1.7
DAG				IAmb	IAmb	02 01 53.8	
	comp=Z,13nm,0.8s						
E07A	Sunnyside	56.99	55	IAmb	IAmb	02 02 02.6	
	comp=Z,17nm,1.0s						
PRGR	Permogore	57.29	327	eP	P	02 01 58.4	+0.1
PRGR				pmax	pmax		
	comp=Z,33nm,1.2s						
APA	Apatity	57.32	337	⇓iP	P	02 01 57.5	-1.0
APA				pmax	pmax		
	comp=Z,15nm,0.7s						
F07A	Phinny Hill Vi	57.33	56	IAmb	IAmb	02 02 05.2	
	comp=Z,21nm,0.9s						
HAMF	Hammerfest	57.41	342	eP	P	02 01 58.0	-1.1
TAS	Tashkent	57.52	298	P	P	02 02 01.1	+0.7
TAS						02 02 53.1	
TAS				pmax	pmax		
	comp=Z,92nm,0.9s						
TAS	Tashkent	57.52	298	P	P	02 02 01.1	+0.7
TAS				PcP	PcP	02 02 53.1	-0.2
NEW	Newport	57.53	52	P	P	02 01 60.0	-0.4
	baz=305						
KIRV	Kirov	57.67	323	P	P	02 02 01.4	+0.3
	comp=Z,21nm,0.7s,baz=65,slow=5.1,SNR=5.3						
KIRV				PcP	PcP	02 02 53.8	+0.3
	comp=Z,41nm,0.7s,baz=312,slow=1.0,SNR=8.3						
MTKI	Muara Teweh, K	57.77	226	P	P	02 02 02.6	+0.3
ARA0	ARCESS Array S	57.86	341	eP	P	02 02 03.1	+0.8
ARCES	ARCESS Array B	57.86	341	P	P	02 02 02.2	-0.1
	comp=Z,7.6nm,0.5s,baz=35,slow=7.2,SNR=22						
ARCES				PcP	PcP	02 02 54.4	+0.2
	comp=Z,14nm,0.8s,baz=40,slow=4.0,SNR=6.3						
ARCES				LR	LR	02 32 37.7	
	comp=Z,748nm,18.1s,baz=60,slow=42						
ARCES	ARCESS Array B	57.86	341	P	P	02 02 02.5	+0.1
ARCES				IAmb	IAmb	02 02 05.6	
	comp=Z,16nm,0.8s						
KSM	Kuching	58.12	232	P	P	02 02 06.1	+1.3
KSM				IAmb	IAmb	02 02 07.1	
	comp=Z,23nm,0.9s						
KSM	Kuching	58.12	232	P	P	02 02 06.5	+1.7
SPSI	Sidrap Palu	58.13	220	P	P	02 02 04.6	-0.2
	comp=Z,27nm,1.6s						
ABKAR	Akbulak array	58.24	310	P	P	02 02 04.3	-1.0
BNSI	Bone	58.37	219	P	P	02 02 08.2	+1.7
	comp=Z,22nm,2.5s						
AKTO	Aktyubinsk	58.55	312	P	P	02 02 06.4	-1.0
	comp=Z,14nm,0.5s,baz=58,slow=7.3,SNR=17						
AKTO				PcP	PcP	02 02 57.4	+0.1
	comp=Z,19nm,0.8s,baz=37,slow=2.8,SNR=5.7						
STKI	Sintang	58.67	230	P	P	02 02 10.7	+2.1
KTK1	Kautokeino	58.78	341	eP	P	02 02 08.7	0.0
JETT	Jettan, Norway	58.96	342	eP	P	02 02 11.1	+1.1
KBKI	Kotabaru	59.19	224	P	P	02 02 13.7	+1.5
	comp=Z,2µmcomp=Z,22nm,1.4s						
TRO	Tromso	59.20	343	eP	P	02 02 11.4	-0.1
UPNV	Upernavik	59.23	10	iP	P	02 02 09.8	-1.9
UPNV				IAmb	IAmb	02 02 13.8	
	comp=Z,58nm,0.7s						
DBG	Daneborg	59.27	358	iP	P	02 02 09.5	-2.5
DBG				IAmb	IAmb	02 02 14.4	
	comp=Z,11nm,0.7s						
JTMT	Jette	59.38	52	IAmb	IAmb	02 02 20.2	
	comp=Z,15nm,0.9s						
NIL	Nilore	59.62	288	P	P	02 02 16.2	+1.1
NIL	Nilore	59.62	288	P	P	02 02 15.5	+0.4
NIL				PcP	PcP	02 03 02.7	+0.9
BBKI	Banjar Baru	59.97	225	P	P	02 02 18.6	+1.0
	comp=Z,25nm,1.3s						
PLID	Pearl Lake	60.03	55	IAmb	IAmb	02 02 24.3	
	comp=Z,26nm,0.8s						
KLMR	Klimovskoe	60.04	329	eP	P	02 02 14.0	-3.5
KLMR				e		02 04 25.6	
KLMR				eSS	SS	02 14 16.8	-5.4
KLMR				pmax	pmax		
	comp=Z,49nm,1.0s						
KLMR	Klimovskoe	60.04	329	eP	P	02 02 14.0	-3.5
KLMR				AMP		02 02 19.3	
	comp=Z,49nm,1.0s						
KLMR				ePP	PP	02 04 25.7	-4.1
KLMR				eSS	SS	02 14 16.8	-5.4
KLMR				eSS	SS	02 14 16.8	-5.4
KLMR				LQ	LQ	02 23 30.1	
KLMR				LQ	LQ	02 23 30.1	
KLMR				LR	LR	02 27 14.5	
MSO	Missoula	60.12	52	P	P	02 02 19.2	+0.8
MSO				IAmb	IAmb	02 02 35.0	
	comp=Z,31nm,1.2s						
MSO	Missoula	60.12	52	P	P	02 02 19.2	+0.8
	baz=308,SNR=12						
WVOR	Wild Horse Val	60.12	59	IAmb	IAmb	02 02 34.9	
	comp=Z,15nm,0.9s						
NUUG	Nuugaatsiaq	60.72	9	iP	P	02 02 21.0	-1.0
NUUG				IAmb	IAmb	02 02 25.9	
	comp=Z,12nm,0.7s						
SUMG	Summit	60.85	4	P	P	02 02 23.3	-0.1
SUMG				pmax	pmax		
	comp=Z,140nm,1.0s						
SUMG	Summit	60.85	4	iP	P	02 02 22.5	-0.9
SUMG				IAmb	IAmb	02 02 26.2	
	comp=Z,69nm,1.0s						
SUMG	Summit	60.85	4	P	P	02 02 23.3	-0.1
COEN	Coen	60.89	190	P	P	02 02 24.3	+0.6
COEN				IAmb	IAmb	02 02 25.3	
	comp=Z,16nm,0.9s						
COEN	Coen	60.89	190	P	P	02 02 24.9	+1.1
PBA	Port Blair	61.02	256	P	P	02 02 25.9	+1.1
FFC	Flin Flon	61.06	40	P	P	02 02 24.4	-0.2
FFC				pmax	pmax		
	comp=Z,42nm,1.1s						
FFC	Flin Flon	61.06	40	P	P	02 02 24.4	-0.2
FFC				IAmb	IAmb	02 02 26.3	
	comp=Z,42nm,1.1s						
IPM	Ipoh	61.10	243	P	P	02 02 25.5	+0.1
IPM				IAmb	IAmb	02 02 26.8	
	comp=Z,39nm,1.0s						
IPM	Ipoh	61.10	243	P	P	02 02 26.3	+0.9
N2IH	Innhavet	61.20	343	eP	P	02 02 24.6	-0.6
N2VI	Vinje	61.24	344	eP	P	02 02 25.2	-0.4
MMRI	Maumere	61.32	215	P	P	02 02 26.6	-0.1
MMRI				IAmb	IAmb	02 02 27.1	
	comp=Z,50nm,1.4s						
PAHR	Pah Rah Range	61.35	61	IAmb	IAmb	02 02 37.6	
	comp=Z,18nm,1.3s						
STEI	Steigen	61.37	343	eP	P	02 02 24.8	-1.6
MYKOM	Kota Tinggi	61.53	239	P	P	02 02 28.9	+0.7
SOEI	Soe	61.57	212	P	P	02 02 28.7	+0.1
	comp=Z,2µmcomp=Z,38nm,0.9s						
SOEI	Soe	61.57	212	P	P	02 02 29.4	+0.8
SOEI				IAmb	IAmb	02 02 45.8	
	comp=Z,26nm,0.8s						
SOEI	Soe	61.57	212	P	P	02 02 28.9	+0.3
EGMT	Eagleton	61.61	49	IAmb	IAmb	02 02 30.4	
	comp=Z,43nm,1.1s						
EGMT	Eagleton	61.61	49	P	P	02 02 29.1	+0.6
	baz=309,SNR=15						
EDFI	Ende, Flores	61.64	215	P	P	02 02 28.5	-0.5
	comp=Z,5.3nm,1.4s						
N2TV	T¥rnvik	61.70	343	eP	P	02 02 28.2	-0.4
CMB	Columbia Colle	61.77	64	P	P	02 02 29.7	0.0
CMB				pmax	pmax		
	comp=Z,22nm,1.5s						
CMB	Columbia Colle	61.77	64	P	P	02 02 29.7	0.0
CMB				IAmb	IAmb	02 02 45.9	
	comp=Z,22nm,1.5s						
KBL	Kabul	61.79	291	P	P	02 02 29.3	-0.8
KBL				pmax	pmax		
	comp=Z,92nm,0.6s						
KBL	Kabul	61.79	291	P	P	02 02 29.7	-0.4
	SNR=26						
KBL	Kabul	61.79	291	P	P	02 02 29.3	-0.8
N2ST	Straumen	61.79	343	eP	P	02 02 28.9	-0.3
FAUS	Fauske	61.83	343	⇑iP	P	02 02 29.1	-0.3
N2SV	S¸rv¥gen	61.84	344	eP	P	02 02 28.9	-0.7
HLID	Hailey	61.87	55	IAmb	IAmb	02 02 32.0	
	comp=Z,21nm,1.5s						
HLID	Hailey	61.87	55	P	P	02 02 31.0	+0.6
	baz=309,SNR=7.4						
NBB08	Skaug oppvekst	61.96	343	eP	P	02 02 30.2	-0.1
N2VA	Vr¸y	62.10	344	⇑iP	P	02 02 30.5	-0.8
BOZ	Bozeman (W)	62.14	52	IAmb	IAmb	02 02 37.8	
	comp=Z,14nm,0.8s						
BOZ	Bozeman (W)	62.14	52	P	P	02 02 32.7	+0.5
	baz=309,SNR=15						
N2RO	R¸st	62.34	344	eP	P	02 02 32.2	-0.7
NBB05	Inndyr	62.38	343	eP	P	02 02 32.8	-0.4
NBB30	Finnes	62.49	343	eP	P	02 02 33.3	-0.7
RYN	Ryan	62.54	62	P	P	02 02 35.5	+0.5
NBB17	Glomfjord B¥r	62.58	343	eP	P	02 02 34.2	-0.4
LHV	Little Huntoon	62.79	62	IAmb	IAmb	02 02 48.5	
	comp=Z,21nm,1.0s						
NVAR	Mina Array Bea	62.80	62	P	P	02 02 37.6	+0.8
	comp=Z,4.4nm,0.8s,baz=288,slow=6.9,SNR=11						
NBB13	Alf Garage	62.87	343	eP	P	02 02 35.8	-0.7
MLAC	Mammoth, Mammo	62.98	63	P	P	02 02 39.2	+1.2

	baz=310						
KONS	Konsvik	63.03	343	eP	P	02 02 36.8	-0.7
NBB40	Tonnes	63.04	343	eP	P	02 02 36.8	-0.8
MOR8	Moi Rana	63.04	342	⇑iP	P	02 02 36.0	-1.6
YHH	Holmes Hill	63.08	53	IAmb	IAmb	02 02 44.7	
	comp=Z,12nm,0.9s						
SCO	Scoresbysund	63.14	358	P	P	02 02 38.1	-0.1
SCO				pmax	pmax		
	comp=Z,131nm,1.4s						
SCO	Scoresbysund	63.14	358	i P	P	02 02 37.8	-0.4
SCO				IAmb	IAmb	02 02 38.7	
	comp=Z,17nm,0.8s						
SCO	Scoresbysund	63.14	358	P	P	02 02 38.1	-0.1
ILULI	Ilulissat	63.16	9	i P	P	02 02 37.3	-1.1
ILULI				IAmb	IAmb	02 02 41.9	
	comp=Z,48nm,0.7s						
ELK	Elko	63.17	58	P	P	02 02 39.7	+0.5
ELK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ELK	Elko	63.17	58	P	P	02 02 39.7	+0.5
STOK	Stokkvaagen	63.19	343	eP	P	02 02 38.3	-0.3
WBSI	Waikabubak, Su	63.38	217	P	P	02 02 38.8	-1.7
	comp=Z,43nm,1.1s						
TSI	Tuntungan	63.39	245	P	P	02 02 42.1	+1.5
	comp=Z,85nm,1.1s						
BASI	Baing, Sumba	63.42	216	P	P	02 02 40.9	+0.2
	comp=Z,42nm,1.5s						
PPBI	Pangkal Pinang	63.43	234	P	P	02 02 43.8	+2.9
H17A	Grant Village	63.48	53	IAmb	IAmb	02 02 45.1	
	comp=Z,20nm,1.2s						
H17A	Grant Village	63.48	53	P	P	02 02 42.7	+1.4
	baz=310						
PSI	Prapat	63.71	244	P	P	02 02 43.8	+0.9
	comp=Z,30nm,0.9s,baz=12,slow=5.4,SNR=24						
RLMT	Red Lodge	63.72	51	IAmb	IAmb	02 02 49.8	
	comp=Z,17nm,1.1s						
RLMT	Red Lodge	63.72	51	P	P	02 02 43.9	+1.1
	baz=311,SNR=10						
SRBI	Singaraja	63.83	222	P	P	02 02 44.6	+1.1
	comp=Z,74nm,1.2s						
LOHW	Long Hollow	63.97	53	IAmb	IAmb	02 02 47.3	
	comp=Z,28nm,1.4s						
PUL	Pulkovo	63.98	332	ceP	P	02 02 43.4	-0.5
PUL				pmax	pmax		
	comp=Z,117nm,0.7s						
PUL	Pulkovo	63.98	332	eP	P	02 02 43.4	-0.5
REDW	Red Top Meadow	64.00	54	IAmb	IAmb	02 03 01.4	
	comp=Z,30nm,1.1s						
FIA1	FINESS Array S	64.01	335	P	P	02 02 43.6	-0.5
FINES	FINESS Array B	64.01	335	P	P	02 02 43.2	-0.8
	comp=Z,70nm,0.6s,baz=45,slow=8.4,SNR=81						
FINES				PcP	PcP	02 03 18.5	-0.5
	comp=Z,16nm,0.8s,baz=17,slow=5.8,SNR=4.2						
FINES				LR	LR	02 33 16.7	
	comp=Z,918nm,19.0s,baz=48,slow=38						
FINES	FINESS Array B	64.01	335	P	P	02 02 43.1	-0.9
PKM	Mcpherson Peak	64.12	66	P	P	02 02 46.4	+0.9
	baz=310						
DGMT	Dagmar	64.15	46	IAmb	IAmb	02 02 47.0	
	comp=Z,74nm,1.2s						
DGMT	Dagmar	64.15	46	P	P	02 02 45.8	+0.5
	baz=312,SNR=12						
ICESG	Greenland Ices	64.25	5	i P	P	02 02 45.6	-0.4
ICESG				IAmb	IAmb	02 02 50.2	
	comp=Z,98nm,0.9s						
LAO	LASA Array	64.31	49	IAmb	IAmb	02 02 52.6	
	comp=Z,32nm,0.9s						
LAO	LASA Array	64.31	49	P	P	02 02 47.3	+0.9
	baz=312,SNR=14						
BKNI	Bangkinang	64.37	240	P	P	02 02 48.8	+1.7
	comp=Z,4µmcomp=Z,335nm,0.9s						
BKNI	Bangkinang	64.37	240	P	P	02 02 48.3	+1.2
BKNI	Bangkinang	64.37	240	P	P	02 02 49.2	+2.1
	comp=Z,340nm,1.0s						
R11A	Troy Canyon, C	64.50	61	P	P	02 02 48.7	+0.8
	baz=310						
MPMC	Manual Prospec	64.82	64	P	P	02 02 49.8	-0.2
	baz=311						
DUG	Dugway, Tooele	64.94	57	IAmb	IAmb	02 03 07.2	
	comp=Z,22nm,1.1s						
DUG	Dugway, Tooele	64.94	57	P	P	02 02 51.6	+0.9
	baz=311,SNR=16						
FURC	Furnace Creek,	64.94	63	P	P	02 02 51.3	+0.8
	baz=311						
NSS	Namsos	64.99	342	eP	P	02 02 49.8	-0.6
LRMC	Laurel Mtn Rad	65.07	64	P	P	02 02 51.6	0.0
	baz=311						
BW06	Boulder Array	65.10	54	P	P	02 02 52.4	+0.6
	baz=311,SNR=17						
PDAR	Pinedale Array	65.10	54	P	P	02 02 52.2	+0.3
	comp=Z,9.4nm,0.8s,baz=318,slow=2.0,SNR=35						
OBN	Obninsk	65.22	325	P	P	02 02 51.1	-0.9
	comp=Z,6.8nm,0.7s,baz=358,slow=5.0,SNR=5.9						
OBN	Obninsk	65.22	325	ceP	P	02 02 50.1	-1.9
OBN				e		02 03 22.3	
OBN				e		02 05 13.7	
OBN				pmax	pmax		
	comp=Z,30nm,0.8s						
OBN				MLR	MLR		
	comp=Z,1µm,21.0s						
OBN	Obninsk	65.22	325	eP	P	02 02 50.7	-1.3
OBN	Obninsk	65.22	325	P	P	02 02 51.9	-0.1
OBN				IAmb	IAmb	02 02 52.4	
	comp=Z,26nm,0.7s						
SMRI	Semarang	65.24	227	P	P	02 02 52.7	0.0
SMRI				IAmb	IAmb	02 03 10.8	
	comp=Z,55nm,1.0s						
QSM	Queen of Sheba	65.26	63	IAmb	IAmb	02 03 08.7	
	comp=Z,28nm,1.3s						
EDW2	Edwards Air Fo	65.27	65	P	P	02 02 52.8	0.0
	baz=311						
SFJD	Kangerlussuaq	65.34	10	P	P	02 02 52.6	0.0
SFJD				pmax	pmax		
	comp=Z,48nm,0.9s						
SFJD	Kangerlussuaq	65.34	10	i P	P	02 02 52.0	-0.7
SFJD				IAmb	IAmb	02 02 56.3	
	comp=Z,17nm,0.8s						
SFJD	Kangerlussuaq	65.34	10	P	P	02 02 52.6	0.0
SFJD				IAmb	IAmb	02 02 56.8	
	comp=Z,48nm,0.9s						
PDSI	Padang	65.70	240	P	P	02 02 57.6	+1.8
	comp=Z,29nm,1.4s						
VRH	Novokhopyorsk	65.88	320	eP	P	02 02 54.7	-1.7
VRH				pmax	pmax		
	comp=Z,60nm,0.8s						
VRH				MLR	MLR		
	comp=Z,1µm,22.0s						
KRJI	Kerinci	66.05	238	P	P	02 03 00.0	+1.9
	comp=Z,16µmcomp=Z,506nm,1.0s						
LPSR	Galich'ya Gora	66.09	322	eP	P	02 02 56.1	-1.6
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,830nm,20.0s						
VSU	Vasula	66.17	332	eP	P	02 02 58.0	-0.1
VSU	Vasula	66.17	332	i P	P	02 02 57.3	-0.8
VSU				pmax	pmax		
	comp=Z,179nm,0.7s						
HRA	Herat	66.19	295	P	P	02 02 59.0	0.0
KLSI		66.30	234	P	P	02 03 00.4	+0.9
	comp=Z,610nmcomp=Z,35nm,1.8s						
DY2G	Dye2	66.31	8	i P	P	02 02 58.0	-1.2
DY2G				IAmb	IAmb	02 03 02.6	
	comp=Z,37nm,0.9s						
GEYT	Alibeck	66.37	301	P	P	02 03 00.8	+1.0
	comp=Z,32nm,0.7s,baz=52,slow=3.4,SNR=34						
GEYT	Alibeck	66.37	301	P	P	02 03 00.3	+0.5
GEYT				IAmb	IAmb	02 03 01.7	
	comp=Z,37nm,0.8s						
MDSI	Maura Dua	66.44	234	P	P	02 03 00.8	+0.4
	comp=Z,10nm,1.0s						
MASI	Maura Aman, Be	66.45	237	P	P	02 03 02.0	+1.5
	comp=Z,245nm,1.1s						
TBLU	Trondheim	66.47	342	eP	P	02 02 58.7	-1.3
LEM	Lembang	66.51	230	P	P	02 03 01.9	+0.8
	comp=Z,12nm,0.5s,baz=103,slow=7.4,SNR=8.5						
RDMU	Red Mountain	66.55	55	IAmb	IAmb	02 03 07.3	
	comp=Z,40nm,0.8s						
VORR	Voronezh	66.64	321	eP	P	02 02 59.0	-2.3
VORR				pmax	pmax		
	comp=Z,250nm,1.2s						
HYB	Hyderabad	66.65	271	i P	P	02 03 02.0	+0.1
	comp=Z,115nm,0.8s						
LCMT	Little Creek M	66.78	60	P	P	02 03 03.6	+1.1
GMRC	Granite Mounta	66.78	64	P	P	02 03 02.3	-0.3
	baz=312						
AAL	Aland	66.78	336	eP	P	02 03 01.1	-0.9
MDND	Maddock	66.82	44	P	P	02 03 02.9	+0.4
	baz=315,SNR=6.2						
K22A	Casper	66.85	52	P	P	02 03 03.0	+0.1
	baz=313,SNR=9.1						
ULM	Lac du Bonnet	66.85	41	P	P	02 03 02.2	-0.4
	comp=Z,8.8nm,0.8s,baz=305,slow=8.6,SNR=10						
MTSE	Matsula	66.88	334	eP	P	02 03 02.5	-0.1
SRU	San Rafael Swe	66.98	57	IAmb	IAmb	02 03 10.2	
	comp=Z,24nm,0.9s						
VSR	Storozhevoye	66.99	321	eP	P	02 03 01.8	-1.7
VSR				pmax	pmax		
	comp=Z,30nm,0.7s						
VSR				MLR	MLR		
	comp=Z,2µm,21.0s						
VORD	Divnogorie	67.12	321	eP	P	02 03 03.5	-0.8
VORD				pmax	pmax		
	comp=Z,40nm,0.7s						
RSSD	Black Hills	67.17	49	P	P	02 03 04.8	-0.3
RSSD				pmax	pmax		
	comp=Z,34nm,1.2s						
RSSD	Black Hills	67.17	49	P	P	02 03 04.8	-0.3
RSSD				IAmb	IAmb	02 03 06.5	
	comp=Z,34nm,1.2s						
RSSD	Black Hills	67.17	49	P	P	02 03 05.3	+0.2
	baz=314						
E28A	Huff	67.18	46	IAmb	IAmb	02 03 06.3	
	comp=Z,44nm,1.4s						
CGJI	Cibinong	67.36	232	P	P	02 03 04.8	-1.5
	comp=Z,28nm,0.5s						
IRM	Iron Mountain	67.51	64	P	P	02 03 07.1	-0.1
	baz=312						
O20A	White River Ci	67.60	55	P	P	02 03 08.3	+0.5
	baz=313						
MOL	Molde	67.64	343	eP	P	02 03 07.1	-0.2
UPP	Uppsala	67.69	337	eP	P	02 03 07.2	-0.5
DOMB	Dombas	67.81	342	⇑iP	P	02 03 08.0	-0.5
ISOG	Isortoq, Green	67.81	5	i P	P	02 03 06.5	-1.9
ISOG				IAmb	IAmb	02 03 11.8	
	comp=Z,31nm,0.6s						
ANGG	Ammassalik, Gr	67.82	5	i P	P	02 03 06.0	-2.4
ANGG				IAmb	IAmb	02 03 11.3	
	comp=Z,13nm,0.8s						
ANGG	Ammassalik, Gr	67.82	5	IAmb	IAmb	02 03 11.8	
	comp=Z,31nm,1.0s						
NUUK	Nuuk	67.89	11	i P	P	02 03 08.2	-0.7
NUUK				IAmb	IAmb	02 03 13.9	
	comp=Z,13nm,0.9s						
WB0	Warramunga Arr	68.10	198	P	P	02 03 10.6	-0.2
AKN	Aaknes	68.10	343	eP	P	02 03 10.2	-0.2
SLIT	Slitere, Latvi	68.23	334	eP	P	02 03 11.2	0.0
NB2	NORSAR Subarra	68.24	341	P	P	02 03 10.6	-0.7
	comp=Z,116nm,0.9s,baz=28,slow=6.5						
NB2	NORSAR Subarra	68.24	341	P	P	02 03 10.6	-0.7
	baz=28,slow=6.5						
NOA	NORSAR Array B	68.24	341	P	P	02 03 10.0	-1.3
	comp=Z,59nm,0.8s,baz=27,slow=6.3,SNR=193						
NOA	NORSAR Array B	68.24	341	P	P	02 03 10.0	-1.3
AGMN	Agassiz Nation	68.26	42	IAmb	IAmb	02 03 12.4	
	comp=Z,23nm,1.1s						
AGMN	Agassiz Nation	68.26	42	P	P	02 03 11.2	-0.3
	baz=316,SNR=13						
WRAB	Tennant Creek	68.27	198	P	P	02 03 11.5	-0.3
WRAB				pmax	pmax		
	comp=Z,12nm,1.0s						
WRAB	Tennant Creek	68.27	198	P	P	02 03 11.5	-0.3
WRAB	Tennant Creek	68.27	198	P	P	02 03 11.7	-0.1
WB2	Warramunga Arr	68.28	198	P	P	02 03 11.7	-0.2
WRA	Warramunga Arr	68.28	199	P	P	02 03 11.7	-0.2
	comp=Z,6.6nm,0.9s,baz=19,slow=6.7,SNR=18						
WRA				PKPPKP	P'P'df	02 31 29.3	+4.8
	comp=Z,1.3nm,0.9s,baz=199,slow=2.6,SNR=5.6						
WRA				LR	LR	02 33 57.0	
	comp=Z,124nm,19.7s,baz=15,slow=37						
WRA	Warramunga Arr	68.28	199	i P	P	02 03 11.6	-0.3
WRA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
N23A	Red Feather La	68.36	53	P	P	02 03 13.5	+0.8
	baz=314,SNR=5.1						
NC602	NORSAR Array S	68.43	341	⇑iP	P	02 03 11.7	-0.7
GLA	Glamis	68.45	64	P	P	02 03 13.4	+0.4
	baz=312						
HFS	Hagfors	68.45	339	P	P	02 03 12.0	-0.5
	comp=Z,100nm,0.7s,baz=50,slow=5.4,SNR=106						
D32A	Dogwood Acres,	68.56	43	IAmb	IAmb	02 03 14.3	
	comp=Z,60nm,1.1s						
ISAL	Salakas	68.68	331	eP	P	02 03 14.2	+0.1
IIGN	Ignalina	68.83	330	eP	P	02 03 15.2	+0.2
FITZ	Fitzroy Crossi	68.86	208	P	P	02 03 16.3	+0.8
	comp=Z,10nm,0.8s,baz=29,slow=0.8,SNR=16						
BORG	Borgarnes	68.87	357	P	P	02 03 16.4	+1.3
BORG				pmax	pmax		
	comp=Z,88nm,1.1s						
BORG	Borgarnes	68.87	357	P	P	02 03 16.4	+1.3
MAK	Makhachkala	68.89	311	eP	P	02 03 12.0	-3.5
MAK				e*PP	pP	02 03 28.1	-2.3
MAK				ePPP	PPP	02 03 36.0	
MAK				e		02 05 45.2	
MAK				eS	S	02 12 09.0	-6.3
MAK				e*SS	sS	02 12 39.0	-1.6
MAK				eSS	SS	02 16 41.3	+0.7
MAK				pmax	pmax		
	comp=Z,203nm,1.8s						
WUAZ	Wupatki	68.90	60	P	P	02 03 16.7	+0.7
	baz=313						
MNK	Minsk	68.93	329	i P	P	02 03 14.0	-1.6
MNK				i		02 03 39.9	
MNK				i		02 05 46.8	
MNK				i PPP	PPP	02 07 26.1	
MNK				i S	S	02 12 14.4	-1.1
MNK				i SS	SS	02 16 39.5	-1.1
MNK				pmax	pmax		
	comp=Z,222nm,0.9s						
MNK				pmax	pmax		
	comp=E,9.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,79nm,0.9s						
MNK				MLR	MLR		
	comp=Z,1µm,22.0s						
MNK				MLR	MLR		
	comp=E,108nm,19.0s						
MNK				MLR	MLR		
	comp=N,1µm,23.0s						
MNK	Minsk	68.93	329	i P	P	02 03 14.1	-1.5
	comp=E,9.0nm,0.9s						
MNK				i P	P	02 03 14.1	-1.5
	comp=N,79nm,0.9s						
MNK				i P	P	02 03 14.1	-1.5
	comp=Z,222nm,0.9s,baz=37						
MNK				i PcP	PcP	02 03 39.9	+0.3
MNK				i PP	PP	02 05 46.9	-0.8
MNK				i PPP	PPP	02 07 26.1	
MNK				i S	S	02 12 14.5	-1.0
MNK				i SS	SS	02 16 39.6	-1.0
MNK				i SSS	SSS	02 19 58.1	
MNK				i LR	LR	02 33 48.9	
MNK				i LRM	MLR	02 36 29.1	
	comp=E,108nm,18.7s						
MNK				i LRM	MLR	02 36 29.1	
	comp=Z,1µm,21.9s						
MNK				i LRM	MLR	02 36 42.6	
	comp=N,1µm,22.6s						
NACGM	Naroch	68.99	330	i P	P	02 03 14.9	-1.1
FOO	Floro	69.01	344	eP	P	02 03 15.9	-0.1
POO	Poona	69.12	275	⇑iP	P	02 03 15.0	-2.4
HYA	Hoyanger	69.19	343	eP	P	02 03 17.0	0.0
SKAR	Skarslia	69.19	342	⇑iP	P	02 03 17.3	0.0
ISCO	Idaho Springs	69.30	54	P	P	02 03 19.3	+0.7
	baz=314,SNR=14						
OSL	Oslo	69.33	341	eP	P	02 03 18.1	+0.1
MVCO	Mesa Verde	69.44	57	P	P	02 03 20.7	+1.3
MVCO	Mesa Verde	69.44	57	P	P	02 03 19.2	-0.2
	baz=314						
DZM	Mont Dzumac	69.50	166	eP	P	02 03 18.7	-0.8
	comp=N,19nm,1.0s						
DZM	Mont Dzumac	69.50	166	eLR	LR	02 24 31.2	
	comp=N,815nm,24.9s						
SUSD	Miller	69.55	46	IAmb	IAmb	02 03 19.9	
	comp=Z,21nm,0.8s						
SUSD	Miller	69.55	46	P	P	02 03 19.2	-0.5
	baz=316						
SUE	Sulen	69.56	344	eP	P	02 03 20.4	+1.0
GNBR	Gunib	69.58	310	i P	P	02 03 18.9	-1.0
GNBR				pmax	pmax		
	comp=Z,42nm,0.6s						
GROC	Groznyy	69.61	312	eP	P	02 03 20.3	+0.3
GROC				e*PP	pwP	02 03 36.2	-1.0
GROC				e		02 03 43.1	
GROC				e*SS	sS	02 12 53.2	+4.2
GROC				pmax	pmax		
	comp=Z,18nm,0.6s						
GOF	Gofitskoye	69.66	315	⇑iP	P	02 03 20.7	+0.4
GOF				pmax	pmax		
	comp=Z,163nm,0.7s						
F33A	5 Mile Ranch,	69.84	44	IAmb	IAmb	02 03 22.5	
	comp=Z,36nm,1.1s						
KONO	Kongsberg	69.84	341	P	P	02 03 20.6	-0.6
KONO				pmax	pmax		
	comp=Z,98nm,0.9s						
KONO	Kongsberg	69.84	341	⇑iP	P	02 03 21.0	-0.1
KONO	Kongsberg	69.84	341	P	P	02 03 20.6	-0.6
S22A	4UR Ranch, Cre	70.03	56	P	P	02 03 24.0	+0.9
	baz=314,SNR=18						
BER	Bergen	70.07	343	eP	P	02 03 22.6	+0.1
Q24A	Divide	70.14	54	P	P	02 03 24.2	+0.5
	baz=314,SNR=7.6						
W18A	Petrified Fore	70.15	60	P	P	02 03 24.3	+0.6
	baz=314						
ODD1	Odda	70.25	343	eP	P	02 03 23.9	+0.2
214A	Organ Pipe Nat	70.44	64	P	P	02 03 25.7	+0.3
	baz=313						
OGNE	Ogallala	70.45	51	P	P	02 03 25.6	+0.3
	baz=315,SNR=6.3						
EYMN	Ely	70.49	40	IAmb	IAmb	02 03 26.1	
	comp=Z,25nm,0.9s						
EYMN	Ely	70.49	40	P	P	02 03 25.1	-0.2
	baz=319						
KVAR	Kislovodsk Arr	70.63	314	P	P	02 03 27.0	+0.6
	comp=Z,19nm,0.7s,baz=266,slow=23,SNR=8.4						
KIV	Kislovodsk	70.64	314	⇓P	P	02 03 26.9	+0.5
KIV	Kislovodsk	70.64	314	i P	P	02 03 26.6	+0.1
	SNR=9.2						
KIV	Kislovodsk	70.64	314	eP	P	02 03 26.4	-0.1
KIV				e		02 06 02.2	
KIV				eS	S	02 12 37.4	+1.3
KIV				pmax	pmax		
	comp=Z,83nm,3.6s						
KIV				pmax	pmax		
	comp=Z,56nm,1.0s						
KIV				MLR	MLR		
	comp=Z,1µm,18.0s						
KIV	Kislovodsk	70.64	314	P	P	02 03 26.4	-0.1
KIV				IAmb	IAmb	02 03 30.5	
	comp=Z,41nm,0.7s						
KBZ	Khabaz	70.70	314	P	P	02 03 27.3	+0.7
	comp=Z,44nm,0.8s,baz=94,slow=3.4,SNR=34						
KBZ				LR	LR	02 39 11.1	
	comp=Z,2µm,18.5s,baz=40,slow=40						
KBZ	Khabaz	70.70	314	i P	P	02 03 26.2	-0.4
KBZ				pmax	pmax		
	comp=Z,43nm,0.8s						
KBZ	Khabaz	70.70	314	eP	P	02 03 26.2	-0.4
BLS5	Blasjo	70.73	342	⇑iP	P	02 03 26.8	+0.2
SDCO	Great Sand Dun	70.79	55	P	P	02 03 28.2	+0.5
	baz=315						
SUW	Suwalki	70.94	331	eP	P	02 03 27.0	-1.0
SUW	Suwalki	70.94	331	eP	P	02 03 27.2	-0.7
K31A	O'Neill	70.96	48	IAmb	IAmb	02 03 29.4	
	comp=Z,62nm,1.1s						
KMY	Karmoy	71.17	343	eP	P	02 03 29.9	+0.6
IVI	Ivigtut	71.22	10	i P	P	02 03 28.8	-0.6
IVI				IAmb	IAmb	02 03 34.0	
	comp=Z,18nm,0.7s						
IVI	Ivigtut	71.22	10	IAmb	IAmb	02 03 34.5	
	comp=Z,23nm,0.8s						
ECSD	EROS Data Cent	71.23	46	IAmb	IAmb	02 03 30.9	
	comp=Z,34nm,1.1s						
ECSD	EROS Data Cent	71.23	46	P	P	02 03 29.5	-0.4
	baz=317,SNR=21						
ONI	Oni	71.25	313	IAmb	IAmb	02 03 34.4	
	comp=Z,33nm,0.8s						
HOMB	Homborsund	71.34	341	⇑iP	P	02 03 29.7	-0.5
TUC	Tucson	71.44	63	P	P	02 03 32.1	+0.6
TUC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TUC	Tucson	71.44	63	P	P	02 03 32.1	+0.6
TUC	Tucson	71.44	63	P	P	02 03 31.8	+0.3
	baz=314						
AKASG	Malin Array Be	71.46	326	P	P	02 03 30.3	-0.9
	comp=Z,77nm,0.6s,baz=34,slow=6.3,SNR=211						
AKASG				LR	LR	02 37 04.8	
	comp=Z,1µm,19.3s,baz=35,slow=38						
AKASG	Malin Array Be	71.46	326	i P	P	02 03 30.2	-0.9
AKASG				pmax	pmax		
	comp=Z,80nm,0.6s						
E38A	The Farm, Brul	71.48	41	IAmb	IAmb	02 03 31.8	
	comp=Z,55nm,1.1s						
KSCO	Kaye Shedlock'	71.50	53	P	P	02 03 31.9	+0.1
	baz=316						
SNART	Snartemo	71.56	342	eP	P	02 03 31.9	+0.3
OVD	Ostervraa, Den	71.80	340	i P	P	02 03 32.3	-0.8
OVD				IAmb	IAmb	02 03 33.1	
	comp=Z,76nm,0.6s						
T25A	Trinidad	71.83	55	P	P	02 03 34.2	+0.2
	baz=315,SNR=7.7						
CHVG	Ch'k'valeri	71.84	313	⇑P	P	02 03 35.1	+1.5
CHVG	Ch'k'valeri	71.84	313	⇑P	P	02 03 35.1	+1.5
SPMN	Marine on St.	71.95	43	IAmb	IAmb	02 03 35.0	
	comp=Z,26nm,0.9s						
SPMN	Marine on St.	71.95	43	P	P	02 03 33.7	-0.5
	baz=319,SNR=8.5						
ASAR	Alice Springs	71.98	198	P	P	02 03 35.4	+0.9
	comp=Z,7.2nm,0.7s,baz=11,slow=5.3,SNR=80						
ASAR				LR	LR	02 33 13.3	
	comp=Z,182nm,21.7s,baz=17,slow=34						
AKH	Akhalkalaki	72.08	312	⇓P	P	02 03 37.4	+2.1
BGNE	Belgrade	72.15	48	P	P	02 03 34.7	-0.8
	baz=317						
ANMO	Albuquerque	72.20	58	P	P	02 03 36.6	+0.5
ANMO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ANMO	Albuquerque	72.20	58	P	P	02 03 36.6	+0.5
ANMO	Albuquerque	72.20	58	P	P	02 03 36.7	+0.5
	baz=315						
GOET	G??ttrup	72.29	340	i P	P	02 03 35.7	-0.3
GOET				IAmb	IAmb	02 03 36.9	
	comp=Z,161nm,0.8s						
PALK	Pallekele	72.33	262	P	P	02 03 36.8	-0.2
PALK				pmax	pmax		
	comp=Z,61nm,0.9s						
PALK	Pallekele	72.33	262	P	P	02 03 36.8	-0.2
GNI	Garni	72.35	310	P	P	02 03 37.6	+0.6
	comp=Z,22nm,0.7s,baz=317,slow=2.4,SNR=15						
GNI	Garni	72.35	310	P	P	02 03 38.4	+1.5
GNI	Garni	72.35	310	P	P	02 03 37.5	+0.6
GNI				IAmb	IAmb	02 03 52.4	
	comp=Z,46nm,0.8s						
SOC	Sochi	72.37	315	c iP	P	02 03 35.9	-0.8
SOC				e*PP	pP	02 03 49.9	-1.7
SOC				e*SP	sP	02 03 56.8	-0.9
SOC				e		02 06 18.0	
SOC				ePPP	PPP	02 07 57.5	
SOC				eS	S	02 12 57.0	+1.2
SOC				eSS	SS	02 17 34.9	+1.0
SOC				pmax	pmax		
	comp=Z,29nm,0.6s						
SOC				MLR	MLR		
	comp=Z,1µm,18.0s						
SOC	Sochi	72.37	315	eP	P	02 03 35.9	-0.8
D41A	Chassel	72.45	39	IAmb	IAmb	02 03 38.3	
	comp=Z,32nm,0.9s						
BSD	Bornholm Skovb	72.53	336	eP	P	02 03 37.5	+0.1
BSD	Bornholm Skovb	72.53	336	i P	P	02 03 36.3	-1.1
BSD				IAmb	IAmb	02 03 37.4	
	comp=Z,52nm,0.7s						
Y22D	IRIS PASSCAL I	72.54	59	P	P	02 03 38.8	+0.7
	baz=315						
L34A	Svendsen Farm,	72.64	47	IAmb	IAmb	02 03 42.7	
	comp=Z,32nm,0.9s						
COP	Copenhagen	72.70	338	i P	P	02 03 37.9	-0.6
COP				IAmb	IAmb	02 03 38.8	
	comp=Z,657nm,0.7s						
MUD	Monsted U'grnd	72.83	340	i P	P	02 03 38.5	-0.7
MUD				IAmb	IAmb	02 03 39.8	
	comp=Z,35nm,0.7s						
RMQ	Roma	72.84	184	P	P	02 03 40.2	+0.7
BCA	Borcka	73.01	313	⇑P	P	02 03 41.6	+1.0
121A	Cookes Peak, D	73.11	61	P	P	02 03 42.5	+1.0
	baz=315						
CBKS	Cedar Bluff	73.21	51	P	P	02 03 41.3	-0.5

	baz=317						
QLP	Quilpie	73.25	188	P	P	02 03 43.3	+1.4
GKP	Gorka Klasztor	73.46	334	eP	P	02 03 42.7	-0.3
GKP	Gorka Klasztor	73.46	334	eP	P	02 03 43.4	+0.4
RGN	Rugen	73.47	337	eP	P	02 03 44.1	+1.1
RGN	Rugen	73.47	337	eP	P	02 03 43.5	+0.5
	comp=Z,231nm,0.9s,baz=26,slow=5.7						
BEL	Belsk	73.56	331	eP	P	02 03 44.0	+0.4
SCHQ	Schefferville	73.56	23	P	P	02 03 43.6	0.0
	comp=Z,8.6nm,0.8s,baz=332,slow=6.3,SNR=8.2						
SCHQ				LR	LR	02 37 44.0	
	comp=Z,267nm,21.0s,baz=312,slow=37						
SCHQ	Schefferville	73.56	23	P	P	02 03 43.4	-0.2
N35A	Tabor	73.83	47	IAmb	IAmb	02 03 50.1	
	comp=Z,28nm,0.7s						
SORM	Soroca	73.86	325	⇑P	P	02 03 44.7	-0.7
SORM	Soroca	73.86	325	⇑P	P	02 03 44.7	-0.7
K38A	Parkersburg	73.91	44	IAmb	IAmb	02 03 46.5	
	comp=Z,21nm,0.9s						
SIM	Simferopol'	73.94	319	d iP	P	02 03 45.2	-0.8
SIM				pmax	pmax		
	comp=Z,45nm,0.8s						
I40A	Norwalk	73.98	42	IAmb	IAmb	02 03 46.9	
	comp=Z,32nm,1.1s						
LVV	L'vov	74.12	328	eP	P	02 03 46.4	-0.5
LVV				e		02 03 55.5	
LVV				e		02 14 02.7	
LVV				pmax	pmax		
	comp=Z,200nm,1.2s						
LVV				MLR	MLR		
	comp=E,600nm,20.0s						
LVV				MLR	MLR		
	comp=N,800nm,18.0s						
LVV				MLR	MLR		
	comp=Z,700nm,21.0s						
SCIA	State Center	74.25	45	P	P	02 03 47.8	-0.1
	baz=319,SNR=9.9						
PURM	Purcari	74.53	323	⇑P	P	02 03 49.2	-0.1
KIS	Kishinev	74.58	324	⇑iP	P	02 03 49.0	-0.7
	comp=Z,110nm,0.6s						
KIS	Kishinev	74.58	324	ePcP	PcP	02 04 02.0	-1.8
KIS	Kishinev	74.58	324	⇑P	P	02 03 49.4	-0.3
KIS	Kishinev	74.58	324	c iP	P	02 03 49.0	-0.7
KIS				pmax	pmax		
	comp=Z,280nm,4.0s						
KIS				MLR	MLR		
	comp=Z,400nm,17.5s						
KIS				MLR	MLR		
	comp=N,400nm,16.5s						
WRKA	Warakurna	74.64	203	P	P	02 03 51.0	+0.9
KOPT	Kop Dagi	74.64	312	IAmb	IAmb	02 03 53.4	
	comp=Z,56nm,1.2s						
KSU1	Kansas State U	74.65	49	P	P	02 03 49.0	-1.2
	baz=318						
MILM	Milestii Mici	74.65	324	⇑P	P	02 03 49.8	-0.3
MILM	Milestii Mici	74.65	324	c iP	P	02 03 49.0	-1.0
MILM				eS	S	02 13 18.0	-3.4
MILM				pmax	pmax		
	comp=Z,400nm,4.0s						
MILM				MLR	MLR		
	comp=N,800nm,19.0s						
MILM				MLR	MLR		
	comp=Z,1µm,19.0s						
KWP	Kalwaria Pacla	74.75	329	eP	P	02 03 51.1	+0.4
KWP	Kalwaria Pacla	74.75	329	P	P	02 03 50.7	+0.1
KWP	Kalwaria Pacla	74.75	329	P	P	02 03 50.7	+0.1
DRUM	Mains of Drumt	74.76	346	eP	P	02 03 50.2	-0.3
DRUM				IAmb	IAmb	02 03 54.2	
	comp=Z,381nm,2.0s						
I42A	Draeger Farm,	74.76	41	IAmb	IAmb	02 03 50.8	
	comp=Z,19nm,0.8s						
BSEG	Bad Segeberg	74.82	338	eP	P	02 03 51.2	+0.3
	comp=Z,77nm,1.0s,baz=26,slow=5.7						
H43A	Windswept, Lux	74.82	40	IAmb	IAmb	02 03 51.9	
	comp=Z,42nm,1.1s						
KPL	Plockton	74.83	348	eP	P	02 03 49.8	-1.1
KPL				IAmb	IAmb	02 03 49.9	
	comp=Z,130nm,0.9s						
JFWS	Jewell Farm	74.90	43	P	P	02 03 50.6	-0.9
	baz=321						
IAS	Iasi	74.93	325	⇑P	P	02 03 51.5	-0.2
IAS	Iasi	74.93	325	⇑P	P	02 03 51.5	-0.2
GURO	Guroymak-BITLI	74.94	311	IAmb	IAmb	02 03 54.7	
	comp=Z,52nm,0.9s						
AMTX	Amarillo	74.99	55	P	P	02 03 52.8	+0.4
	baz=317						
MSTX	Muleshoe	75.03	56	P	P	02 03 53.1	+0.4
MSTX	Muleshoe	75.03	56	P	P	02 03 52.5	-0.1
	baz=317,SNR=6.8						
N38A	Joes South For	75.09	46	IAmb	IAmb	02 03 53.4	
	comp=Z,56nm,1.1s						
L40A	Anamosa	75.10	44	IAmb	IAmb	02 03 53.1	
	comp=Z,39nm,1.1s						
MNTX	Cornudas Mount	75.13	60	P	P	02 03 53.4	+0.3
	baz=316						
RUE	Ruedersdorf	75.17	335	eP	P	02 03 53.1	+0.2
RUE	Ruedersdorf	75.17	335	eP	P	02 03 53.0	+0.1
	comp=Z,159nm,1.0s,baz=26,slow=5.7						
LEOM	Leova	75.24	324	⇑P	P	02 03 53.6	+0.1
LEOM	Leova	75.24	324	⇑P	P	02 03 53.6	+0.1
OJC	Ojcow	75.26	331	eP	P	02 03 53.6	0.0
VASR	Vaslui	75.29	324	⇑P	P	02 03 53.9	+0.2
PRAR	RASCA	75.32	326	⇑P	P	02 03 53.8	-0.2
U32A	Winter Ranch,	75.38	52	IAmb	IAmb	02 04 00.0	
	comp=Z,19nm,0.8s						
STHS	Stebnicka Huta	75.45	330	eP	P	02 03 54.8	+0.1
INVG	Invergeldie, C	75.47	347	eP	P	02 03 54.2	-0.4
INVG				IAmb	IAmb	02 03 55.1	
	comp=Z,104nm,1.6s						
KOLS	Kolonicke sedl	75.50	329	eP	P	02 03 55.1	+0.2
BURAR	Bucovina Array	75.50	326	⇑P	P	02 03 55.1	0.0
BURAR	Bucovina Array	75.50	326	⇑P	P	02 03 55.1	0.0
BURAR	Bucovina Array	75.50	326	P	P	02 03 54.8	-0.4
BIR	Birlad	75.66	324	⇑P	P	02 03 56.8	+0.9
BIR	Birlad	75.66	324	⇑P	P	02 03 56.8	+0.9
BANOM	Banah	75.71	293	i P	P	02 03 56.9	+0.4
	SNR=71						
BANOM	Banah	75.71	293	P	P	02 03 57.3	+0.8
	SNR=21						
SHME	Shamm	75.72	293	i P	P	02 03 56.7	+0.2
	SNR=27						
SHME	Shamm	75.72	293	P	P	02 03 57.1	+0.5
	SNR=8.8						
ESY	Stoneypath	75.73	346	eP	P	02 03 56.2	+0.1
UZH	Uzhgorod	75.74	329	d iP	P	02 03 55.3	-1.0
UZH				e		02 04 04.0	
NIE	Niedzica	75.78	330	eP	P	02 03 57.7	+1.2
CRVS	Cervenica-Dubn	75.81	329	eP	P	02 03 57.0	+0.3
VLDR	Vladesti	75.82	324	⇑P	P	02 03 57.3	+0.5
TESR	Tescani	75.85	325	⇑P	P	02 03 56.6	-0.3
KSP	Ksiaz	75.86	333	eP	P	02 03 56.9	-0.1
VARL	Varlezi	75.87	324	⇓P	P	02 03 57.9	+0.8
L42A	Oliver, Polo	75.88	43	IAmb	IAmb	02 03 57.3	
	comp=Z,23nm,1.0s						
GLMI	Grayling	75.91	38	P	P	02 03 56.9	-0.4
	baz=324,SNR=6.3						
GHRR		75.92	324	⇑P	P	02 03 58.0	+0.7
EBL	Broad Law	75.94	346	eP	P	02 03 56.5	-0.8
K43A	Burlington	75.95	42	IAmb	IAmb	02 03 57.9	
	comp=Z,35nm,0.9s						
DIKM	Dikmen	75.97	317	⇓P	P	02 03 58.9	+1.1
SCTR	Scanteiesti	75.99	324	⇑P	P	02 03 58.5	+0.7
FLTG	Flechtingen	76.02	337	eP	P	02 03 57.5	-0.3
	comp=Z,142nm,0.9s,baz=26,slow=5.7						
TATR	Tatarca	76.03	323	⇓P	P	02 03 58.4	+0.4
VLDQ	Val d'Or	76.04	32	IAmb	IAmb	02 03 57.4	
	comp=Z,47nm,1.1s						
TLCR		76.05	323	⇓P	P	02 03 58.6	+0.5
TLCR		76.05	323	⇓P	P	02 03 58.6	+0.5
GIUM	Giurgiulesti	76.06	323	⇑P	P	02 03 59.2	+1.0
TRPA	Tarpa	76.07	328	⇓P	P	02 03 58.5	+0.3
TRPA	Tarpa	76.07	328	eP	P	02 03 58.0	-0.2
WSAR	Wadi Sarin	76.10	289	P	P	02 03 60.0	+1.2
	comp=Z,33nm,1.0s,baz=50,slow=6.6,SNR=11						
WSAR	Wadi Sarin	76.10	289	P	P	02 03 59.9	+1.2
	SNR=6.7						
BMR	Baia Mare	76.10	327	⇑P	P	02 03 58.8	+0.4
BMR	Baia Mare	76.10	327	⇑P	P	02 03 58.8	+0.4
OSTC	Ostas	76.13	333	eP	P	02 03 58.5	0.0
OSTC				AMS	AMS	02 40 40.0	
	comp=Z,2µm,19.8s						
PGBU	Glenifferbraes	76.14	347	eP	P	02 03 58.6	+0.2
OKC	Ostrava-Krasne	76.14	332	eP	P	02 03 58.6	+0.1
OKC				MLR	MLR		
	comp=Z,900nm,17.2s						
OKC	Ostrava-Krasne	76.14	332	eP	P	02 03 58.6	+0.1
OKC				AMS	AMS	02 41 40.0	
	comp=Z,900nm,17.2s						
RETH	Rethem/Aller,	76.15	338	eP	P	02 03 58.7	+0.2
	comp=Z,155nm,1.1s,baz=26,slow=5.7						
SLCR	Slobozia Conac	76.15	324	⇑P	P	02 03 59.2	+0.6
CHVC	Chvalec	76.16	333	eP	P	02 03 58.6	-0.1
CHVC				AMS	AMS	02 40 30.0	
	comp=Z,2µm,25.1s						
NRDL	Niedersach Rie	76.17	337	eP	P	02 03 58.7	+0.1
	comp=Z,89nm,1.0s,baz=26,slow=5.7						
TUDR		76.19	324	⇑P	P	02 03 59.7	+0.9
IZVR	Izvoarele	76.19	324	⇑P	P	02 03 59.4	+0.5
MASF	Masafi	76.19	292	P	P	02 03 59.9	+0.6
	SNR=10.0						
MSFE	Esma-Masafi	76.20	292	i P	P	02 03 59.6	+0.2
	SNR=35						
SCHL	Schela	76.20	323	⇓P	P	02 03 59.4	+0.5
BIDO	Bidbid	76.22	290	P	P	02 04 02.0	+2.5
	SNR=9.8						
UPC	Upice	76.24	333	eP	P	02 03 59.1	0.0
UPC				MLR	MLR		
	comp=Z,2µm,19.2s						
UPC	Upice	76.24	333	eP	P	02 03 59.1	0.0
UPC				AMS	AMS	02 40 40.0	
	comp=Z,2µm,19.2s						
ARCR	ARCALIA	76.27	326	⇑P	P	02 04 00.6	+1.2
DPC	Dobruska-Polom	76.28	333	eP	P	02 03 59.7	+0.3
DPC				MLR	MLR		
	comp=Z,1µm,19.6s						
DPC	Dobruska-Polom	76.28	333	eP	P	02 03 59.7	+0.3
DPC				AMS	AMS	02 41 30.0	
	comp=Z,1µm,19.6s						
LANS	Liptovska Anna	76.29	330	eP	P	02 04 00.5	+1.0
ODBI	Odobesti	76.30	324	⇑P	P	02 04 01.2	+1.7
N41A	Harden Midland	76.31	44	IAmb	IAmb	02 04 00.5	
	comp=Z,65nm,1.1s						
WBK	Wadi Bani Khal	76.32	288	P	P	02 04 01.8	+1.8
	SNR=10.0						
T35A	Sooner Cattle	76.33	50	IAmb	IAmb	02 04 00.8	
	comp=Z,39nm,1.4s						
CFR	Carcaliu	76.33	323	⇑P	P	02 03 59.7	0.0
CFR	Carcaliu	76.33	323	⇑P	P	02 03 59.7	0.0
VRI	Vrincioaia	76.35	324	⇑P	P	02 03 60.0	+0.2
VRI	Vrincioaia	76.35	324	⇑P	P	02 04 00.0	+0.2
JLN	Jalan Bani Buh	76.35	288	P	P	02 04 01.6	+1.4
	SNR=14						
ASSE	Asse, Remlinge	76.35	337	eP	P	02 03 59.5	-0.1
	comp=Z,57nm,1.1s,baz=26,slow=5.7						
JURR	Jurilovca	76.36	322	⇓P	P	02 04 00.2	+0.4
KRLC	Kraliky	76.38	332	eP	P	02 04 00.0	0.0
KRLC				MLR	MLR		
	comp=Z,1µm,18.6s						
KRLC	Kraliky	76.38	332	eP	P	02 04 00.0	0.0
KRLC				AMS	AMS	02 41 20.0	
	comp=Z,1µm,18.6s						
EKA	Eskdalemuir Ar	76.38	346	P	P	02 03 59.9	+0.1
	comp=Z,2.3nm,0.3s,baz=23,slow=5.2,SNR=33						
MORC	Moravsky Berou	76.39	332	⇑P	P	02 04 00.2	+0.1
MORC	Moravsky Berou	76.39	332	eP	P	02 04 00.1	+0.1
MORC	Moravsky Berou	76.39	332	⇑P	P	02 04 00.2	+0.1
PLOR	Plostina	76.39	324	⇑P	P	02 04 00.6	+0.5
PLOR	Plostina	76.39	324	⇑P	P	02 04 00.6	+0.5
UMQ	Umm Al-Quwin	76.40	293	P	P	02 04 01.3	+0.9
ESK	Eskdalemuir	76.41	346	eP	P	02 03 59.5	-0.4
ESK	Eskdalemuir	76.41	346	P	P	02 04 00.4	+0.4
ESK				pmax	pmax		
	comp=Z,75nm,1.3s						
ESK	Eskdalemuir	76.41	346	P	P	02 04 00.4	+0.4
ESK				IAmb	IAmb	02 04 01.2	
	comp=Z,74nm,1.2s						
TOKA	Tokat	76.41	315	IAmb	IAmb	02 04 02.6	
	comp=Z,59nm,1.0s						
CLL	Collm	76.44	335	⇑iP	P	02 04 00.0	-0.2
CLL				pmax	pmax		
	comp=Z,166nm,0.9s						
CLL				MLR	MLR		
	comp=Z,800nm,20.6s						
CLL	Collm	76.44	335	⇑iP	P	02 04 00.0	-0.2
	comp=Z,166nm,0.9s						
CLL				eS	S	02 13 42.0	+1.0
CLL				e(SS)		02 19 12.0	
CLL				eSSS	SSS	02 22 00.0	
CLL				e		02 23 24.0	
CLL				LmV		02 40 00.0	
	comp=Z,800nm,20.6s						
CLL	Collm	76.44	335	eP	P	02 04 00.0	-0.2
	comp=Z,166nm,0.9s,baz=26,slow=5.7						
UOSS	Minazif	76.46	292	i P	P	02 04 00.8	0.0
	SNR=16						
UOSS	Minazif	76.46	292	P	P	02 04 01.3	+0.5
UOSS	Minazif	76.46	292	P	P	02 04 00.8	0.0
TPGR	Topolog	76.48	323	⇓P	P	02 04 00.9	+0.3
KECS	Kecovo	76.51	330	eP	P	02 04 01.0	+0.3
OZUR		76.53	325	⇓P	P	02 04 02.1	+1.2
BRG	Berggiesshubel	76.55	335	eP	P	02 04 00.5	-0.3
	comp=Z,51nm,1.0s,baz=26,slow=5.7						
BRG	Berggiesshubel	76.55	335	eP	P	02 04 00.6	-0.3
BRG				Amp		02 04 01.8	
	comp=Z,46nm,1.0s						
BRG				Amp		02 43 50.0	
	comp=Z,0.8nm,15.6s						
BRG				Amp		02 43 53.0	
	comp=E,0.4nm,16.9s						
BRG				Amp		02 43 54.0	
	comp=N,0.7nm,17.0s						
L44A	Lake County Fo	76.55	42	P	P	02 03 60.0	-1.0
	baz=322						
COVR	Voineasa-Covas	76.57	325	⇑P	P	02 04 02.1	+0.9
HATD	Hatta, Dubai	76.59	292	i P	P	02 04 01.9	+0.4
	SNR=102						
HATD	Hatta, Dubai	76.59	292	P	P	02 04 02.4	+0.9
	SNR=49						
SMDO	Samad	76.60	289	P	P	02 04 02.8	+1.0
	SNR=9.1						
P40A	Paris	76.64	46	IAmb	IAmb	02 04 02.5	
	comp=Z,31nm,1.0s						
GRER		76.64	324	⇓P	P	02 04 03.6	+2.1
PVCC	Panska Ves	76.67	334	eP	P	02 04 01.5	0.0
PVCC				MLR	MLR		
	comp=Z,1µm,19.3s						
PVCC	Panska Ves	76.67	334	eP	P	02 04 01.5	0.0
PVCC				AMS	AMS	02 40 10.0	
	comp=Z,1µm,19.3s						
TGMR	Targu Mures	76.67	326	⇑P	P	02 04 03.5	+1.8
FBE	Freiberg	76.68	335	eP	P	02 04 01.7	+0.1
	comp=Z,110nm,1.0s,baz=26,slow=5.7						
CLZ	Clausthal	76.69	337	eP	P	02 04 02.2	+0.5
	comp=Z,169nm,1.1s,baz=26,slow=5.7						
HOQ	Hoqain	76.71	290	P	P	02 04 03.0	+0.8
	SNR=20						
ASHO	Ashiyiah	76.74	292	i P	P	02 04 02.7	+0.3
	SNR=57						
ASHO	Ashiyiah	76.74	292	P	P	02 04 03.2	+0.8
	SNR=32						
MESR	Meseseni	76.75	327	⇓P	P	02 04 03.0	+1.0
NEWG	New Galloway	76.76	347	eP	P	02 04 01.8	-0.2
NAZ	Nazwa, Dubai	76.78	292	i P	P	02 04 02.7	+0.2
	SNR=21						
NAZ	Nazwa, Dubai	76.78	292	P	P	02 04 03.2	+0.6
	SNR=8.1						
QUOK	Quay	76.78	51	IAmb	IAmb	02 04 03.6	
	comp=Z,55nm,1.3s						
DOPR	Dopca	76.80	325	⇓P	P	02 04 03.4	+1.1
TIRR	Tirgusor	76.80	323	⇑P	P	02 04 02.1	-0.3
TIRR	Tirgusor	76.80	323	⇑P	P	02 04 02.1	-0.3
HARR	Harsova	76.81	323	⇑P	P	02 04 02.8	+0.4
HARR	Harsova	76.81	323	⇑P	P	02 04 02.8	+0.4
SOHO	SOHO	76.82	291	i P	P	02 04 02.8	0.0
	SNR=31						
CBBR	Cluj-Babes-Bol	76.84	327	⇓P	P	02 04 03.4	+0.8
CJR	Cluj-Napoca	76.87	327	⇓P	P	02 04 03.4	+0.6
NEUB	Neuenburg	76.88	336	eP	P	02 04 02.7	0.0
	comp=Z,165nm,1.2s,baz=26,slow=5.7						
OK025	Westminster Rd	76.88	52	IAmb	IAmb	02 04 08.1	
	comp=Z,20nm,0.8s						
TLBR	Topalu	76.89	323	⇓P	P	02 04 03.5	+0.7
LTVH	Ltavrtes, Hu	76.93	328	⇑P	P	02 04 03.8	+0.8
LTVH	Ltavrtes, Hu	76.93	328	eP	P	02 04 02.7	-0.3
MLR	Muntele Rosu	76.97	325	⇑P	P	02 04 04.0	+0.5
MLR	Muntele Rosu	76.97	325	P	P	02 04 03.2	-0.3
	comp=Z,74nm,0.7s,baz=173,slow=3.6,SNR=82						
MLR	Muntele Rosu	76.97	325	⇑P	P	02 04 04.0	+0.5
FAQ	Al Faqa, Dubai	76.99	292	i P	P	02 04 03.9	+0.1
	SNR=41						
FAQ	Al Faqa, Dubai	76.99	292	P	P	02 04 04.3	+0.5
	SNR=10						
MFTR	Murfatlar	77.03	322	⇑P	P	02 04 04.0	+0.4
PGOR	Pogoanele	77.03	324	⇑P	P	02 04 05.2	+1.5
ISR	Istrita	77.03	324	⇑P	P	02 04 04.4	+0.7
ISR	Istrita	77.03	324	⇑P	P	02 04 04.4	+0.7
MDB	Medias	77.05	326	⇓P	P	02 04 05.3	+1.6
MDB	Medias	77.05	326	⇓P	P	02 04 05.3	+1.6
JMDO	Jabal Madar	77.05	289	P	P	02 04 05.1	+1.0
	SNR=20						
VYHS	Vyhne	77.07	330	eP	P	02 04 04.2	+0.4
GTTG	Gottingen	77.07	337	eP	P	02 04 04.1	+0.3
	comp=Z,113nm,1.2s,baz=26,slow=5.7						
KESW	Keswick, Cumbr	77.09	346	eP	P	02 04 03.7	-0.1
KESW				IAmb	IAmb	02 04 06.6	
	comp=Z,122nm,1.0s						
FNO	Franklin	77.09	52	IAmb	IAmb	02 04 09.5	
	comp=Z,30nm,0.9s						
VRAC	Vranov	77.10	332	⇑P	P	02 04 04.4	+0.4
VRAC	Vranov	77.10	332	P	P	02 04 04.5	+0.4
	comp=Z,93nm,0.9s,baz=33,slow=5.8,SNR=145						
VRAC	Vranov	77.10	332	eP	P	02 04 04.3	+0.3
PRA	Prague	77.11	334	eP	P	02 04 04.0	0.0
PRA				MLR	MLR		
	comp=Z,1µm,14.8s						
PRA	Prague	77.11	334	eP	P	02 04 04.0	0.0
PRA				AMS	AMS	02 41 40.0	
	comp=Z,1µm,14.8s						
M44A	Midewin, Midew	77.11	42	IAmb	IAmb	02 04 04.8	
	comp=Z,31nm,1.0s						
AMRR	Amara	77.13	323	⇑P	P	02 04 04.7	+0.5
AMRR	Amara	77.13	323	⇑P	P	02 04 04.7	+0.5
DRGR		77.14	327	⇓P	P	02 04 04.3	0.0
DRGR		77.14	327	⇓P	P	02 04 04.3	0.0
KOLL	Kolacno	77.14	331	eP	P	02 04 04.7	+0.5
JAVC	Velka Javorina	77.14	331	eP	P	02 04 05.3	+1.0
PRU	Pruhonice	77.15	334	eP	P	02 04 04.1	-0.1
PRU				MLR	MLR		
	comp=Z,1µm,19.1s						
PRU	Pruhonice	77.15	334	eP	P	02 04 04.1	-0.1
PRU				AMS	AMS	02 41 40.0	
	comp=Z,1µm,19.1s						
ILGA	Ilgaz	77.16	317	P	P	02 04 05.8	+1.0
HDIL	Hopedale	77.18	44	P	P	02 04 04.1	-0.5
	baz=322,SNR=7.4						
PSZ	Piszkesteto	77.20	330	⇑P	P	02 04 05.1	+0.4
PSZ	Piszkesteto	77.20	330	eP	P	02 04 04.3	-0.3
PSZ	Piszkesteto	77.20	330	⇑P	P	02 04 05.1	+0.4
BORR	Bors	77.22	328	⇓P	P	02 04 05.5	+0.8
MANR	Mangalia	77.25	322	⇑P	P	02 04 05.6	+0.7
SECR		77.30	324	⇓P	P	02 04 05.5	+0.4
ICOR	Ion Corvin	77.34	323	⇓P	P	02 04 06.1	+0.8
VOIR		77.37	325	⇑P	P	02 04 06.3	+0.6
VOIR		77.37	325	⇑P	P	02 04 06.3	+0.6
BSY	Bisya	77.38	290	P	P	02 04 07.2	+1.2
	SNR=20						
ALNE	Al Ain	77.38	292	i P	P	02 04 06.4	+0.4
	SNR=16						
ALNE	Al Ain	77.38	292	P	P	02 04 06.8	+0.8
	SNR=20						
KRUC	Moravsky	77.38	332	eP	P	02 04 05.8	+0.2
TANN	Tannenbergstha	77.39	335	eP	P	02 04 05.8	+0.1
	comp=Z,41nm,1.0s,baz=26,slow=5.7						
ARQ	Araqi	77.39	291	P	P	02 04 07.1	+1.0
	SNR=14						
WERD	Werda	77.41	335	eP	P	02 04 05.9	+0.2
	comp=Z,77nm,1.2s,baz=26,slow=5.7						
PLAR	PLOIESTI	77.41	324	⇑P	P	02 04 06.3	+0.5
PLN	Plauen	77.41	335	eP	P	02 04 05.7	0.0
	comp=Z,75nm,1.1s,baz=26,slow=5.7						
L46A	Eue Claire	77.42	41	IAmb	IAmb	02 04 06.5	
	comp=Z,34nm,1.1s						
MOX	Moxa	77.43	336	eP	P	02 04 05.9	+0.1
	comp=Z,103nm,1.1s,baz=26,slow=5.7						
W35A	Tecumseh	77.45	52	IAmb	IAmb	02 04 07.6	
	comp=Z,33nm,1.4s						
LEHL	Lehliu	77.45	323	⇑P	P	02 04 07.1	+1.1
TUL1	Leonard	77.46	51	P	P	02 04 05.9	-0.4
TUL1	Leonard	77.46	51	P	P	02 04 06.1	-0.2
	baz=319						
TREC	Trest	77.47	333	eP	P	02 04 06.1	0.0
TREC				MLR	MLR		
	comp=Z,1µm,19.0s						
TREC	Trest	77.47	333	eP	P	02 04 06.1	0.0
TREC				AMS	AMS	02 41 30.0	
	comp=Z,1µm,19.0s						
GUNZ	Gunzen	77.47	335	eP	P	02 04 06.3	+0.2
	comp=Z,72nm,0.9s,baz=26,slow=5.7						
R40A	Maddies Statio	77.48	47	IAmb	IAmb	02 04 06.9	
	comp=Z,29nm,1.2s						
AJN	Ajban	77.51	292	i P	P	02 04 06.8	+0.1
	SNR=13						
AJN	Ajban	77.51	292	P	P	02 04 07.1	+0.5
	SNR=9.6						
SULR		77.51	324	⇑P	P	02 04 06.3	0.0
SMOL	Smolenice	77.52	331	eP	P	02 04 07.0	+0.6
RASA	Rasa	77.53	323	⇑P	P	02 04 06.8	+0.4
WERN	Wernitzgruen	77.53	335	eP	P	02 04 06.7	+0.3
	comp=Z,89nm,0.9s,baz=26,slow=5.7						
NKC	Novy Kostel	77.56	335	eP	P	02 04 06.7	+0.1
NKC				MLR	MLR		
	comp=Z,700nm,19.5s						
NKC	Novy Kostel	77.56	335	eP	P	02 04 06.7	+0.1
NKC				AMS	AMS	02 41 00.0	
	comp=Z,700nm,19.5s						
ARR	Arges	77.59	325	⇑P	P	02 04 08.1	+1.2
BSZH	Besenyszg	77.59	329	⇑P	P	02 04 07.6	+0.9
BSZH	Besenyszg	77.59	329	eP	P	02 04 07.8	+1.0
MODS	Modra-Piesok	77.69	331	eP	P	02 04 07.1	-0.3
UBBA	Unterbreizbach	77.72	337	eP	P	02 04 07.4	+0.2
	comp=Z,199nm,1.8s,baz=26,slow=5.7						
P43A	Skaggs, Pawnee	77.79	44	IAmb	IAmb	02 04 08.2	
	comp=Z,20nm,0.9s						
ABTX	Abilene, Hawle	77.80	55	P	P	02 04 08.3	+0.1
	baz=318						
SRO	Srobarova	77.83	330	eP	P	02 04 09.1	+1.0
LOT	Lotru	77.86	326	⇑P	P	02 04 08.3	-0.2
BUG	Bochum--Univer	77.86	339	eP	P	02 04 08.3	+0.1
	comp=Z,156nm,1.1s,baz=26,slow=5.7						
BUD	Budapest	77.87	330	eP	P	02 04 08.4	0.0
MANZ	Manzenberg	77.88	335	eP	P	02 04 08.5	+0.2
	comp=Z,19nm,1.0s,baz=26,slow=5.7						
STFAR	Stefanesti-Arg	77.88	325	⇑P	P	02 04 09.1	+0.7
O44A	Mansfield	77.89	43	IAmb	IAmb	02 04 08.5	
	comp=Z,18nm,0.8s						
ZST	Bratislava	77.91	331	eP	P	02 04 09.3	+0.8
SIRR	Siria	77.97	328	⇓P	P	02 04 09.2	+0.3
LBWR	Ladybower, Pea	77.98	345	eP	P	02 04 08.3	-0.5
LBWR				IAmb	IAmb	02 04 10.5	
	comp=Z,167nm,1.0s						
SGRR	Singureni	78.00	324	⇓P	P	02 04 08.8	-0.3
KDZE	Karadeniz Ereo	78.01	319	⇓P	P	02 04 09.1	-0.1
ROTZ	Rotzenmuhle	78.04	335	eP	P	02 04 09.6	+0.3
	comp=Z,23nm,1.0s,baz=26,slow=5.7						
HUMR	Humele	78.15	325	⇓P	P	02 04 09.2	-0.7
CCM	Cathedral Cave	78.17	46	P	P	02 04 09.6	-0.6
CCM				pmax	pmax		
	comp=Z,26nm,1.1s						
CCM	Cathedral Cave	78.17	46	P	P	02 04 09.6	-0.6
CCM				IAmb	IAmb	02 04 10.9	
	comp=Z,26nm,1.1s						
CCM	Cathedral Cave	78.17	46	P	P	02 04 09.8	-0.4
	baz=321						
KHC	Kasperske Hory	78.20	334	eP	P	02 04 10.4	+0.2
KHC				MLR	MLR		
	comp=Z,1µm,18.6s						
KHC	Kasperske Hory	78.20	334	eP	P	02 04 10.4	+0.2
KHC				ex	x	02 05 10.5	
KHC				AMS	AMS	02 42 10.0	
	comp=Z,1µm,18.6s						
AMBH	Ambrzfalva	78.24	328	⇓P	P	02 04 10.8	+0.5
AMBH	Ambrzfalva	78.24	328	eP	P	02 04 10.8	+0.5
CSKK	Cskako	78.24	330	eP	P	02 04 10.8	+0.5
BR131	Keskin Array S	78.24	316	P	P	02 04 11.4	+0.7
	SNR=29						
BRTR	Keskin Array B	78.24	316	P	P	02 04 11.3	+0.6
	comp=Z,53nm,0.9s,baz=70,slow=3.9,SNR=106						
BRTR				LR	LR	02 44 39.6	
	comp=Z,1µm,18.6s,baz=48,slow=40						
CKRC	Cesky Krumlov	78.25	333	eP	P	02 04 11.3	+0.8
L48A	N Adams	78.31	40	IAmb	IAmb	02 04 11.7	
	comp=Z,44nm,1.1s						
RAZG	Razgrad	78.32	323	⇓P	P	02 04 11.4	+0.5
SFIN	Lafayette	78.35	42	P	P	02 04 10.5	-0.6
	baz=323,SNR=6.2						

AAM	Ann Arbor	78.36	39	IAmb	IAmb	02 04 12.1	
	comp=Z,32nm,0.9s						
AAM	Ann Arbor	78.36	39	P	P	02 04 11.1	0.0
	baz=324						
MULG	Mulgathing	78.36	196	P	P	02 04 12.1	+1.1
COPA	Copaceanca	78.38	324	⇓P	P	02 04 10.9	-0.3
UMR	Umm Al-Rimmam	78.39	301	eP	P	02 04 11.7	+0.2
GRF	Grafenberg Arr	78.39	336	eP	P	02 04 11.7	+0.5
	comp=Z,214nm,0.9s,baz=26,slow=5.7						
GRFO	Grafenberg	78.39	336	P	P	02 04 11.7	+0.5
GRFO				pmax	pmax		
	comp=Z,170nm,0.8s						
GRFO	Grafenberg	78.39	336	P	P	02 04 11.7	+0.5
WET	Wettzell	78.40	334	eP	P	02 04 11.8	+0.5
	comp=Z,124nm,1.0s,baz=26,slow=5.7						
K50A	Casco	78.42	38	IAmb	IAmb	02 04 12.2	
	comp=Z,38nm,1.1s						
GEC2	GERESS Array S	78.42	334	eP	P	02 04 11.5	0.0
	comp=Z,47nm,0.9s,baz=26,slow=5.7						
GEC2	GERESS Array S	78.42	334	IAmb	IAmb	02 04 12.4	
	comp=Z,43nm,0.8s						
GERES	GERESS Array B	78.42	334	P	P	02 04 11.3	-0.2
	comp=Z,36nm,0.8s,baz=36,slow=5.3,SNR=158						
GERES				LR	LR	02 42 44.5	
	comp=Z,1µm,18.3s,baz=58,slow=39						
GERES	GERESS Array B	78.42	334	P	P	02 04 11.2	-0.3
MIB	Mutribah	78.43	301	eP	P	02 04 12.0	+0.3
ANTO	Ankara	78.53	317	P	P	02 04 12.9	+0.7
ANTO				pmax	pmax		
	comp=Z,112nm,0.8s						
ANTO	Ankara	78.53	317	P	P	02 04 12.9	+0.7
SOP	Sopron	78.53	331	eP	P	02 04 11.9	-0.1
CWF	Charnwood Fore	78.53	344	eP	P	02 04 10.6	-1.2
CWF				IAmb	IAmb	02 04 12.8	
	comp=Z,142nm,1.5s						
BZS	Buzias	78.53	327	⇑P	P	02 04 11.8	-0.2
BZS	Buzias	78.53	327	⇑P	P	02 04 11.8	-0.2
CONA	Conrad Observa	78.55	332	eP	P	02 04 12.7	+0.6
	comp=Z,95nm,0.8s,SNR=47						
N47A	Urbana	78.60	41	IAmb	IAmb	02 04 12.7	
	comp=Z,37nm,1.1s						
Q44A	Meyer Farm, Va	78.61	44	IAmb	IAmb	02 04 13.4	
	comp=Z,48nm,1.1s						
MPLH	Magyarpolny	78.65	331	eP	P	02 04 12.8	+0.2
U40A	Yellville	78.67	48	IAmb	IAmb	02 04 13.5	
	comp=Z,40nm,1.1s						
U40A	Yellville	78.67	48	P	P	02 04 12.3	-0.6
	baz=320,SNR=24						
TNS	Taunus Mts	78.67	337	eP	P	02 04 13.0	+0.2
	comp=Z,107nm,0.9s,baz=26,slow=5.7						
UMZA	Um Al Zommool	78.72	291	P	P	02 04 14.0	+0.7
ZIMR		78.72	324	⇑P	P	02 04 13.4	+0.4
ZIMR		78.72	324	⇑P	P	02 04 13.4	+0.4
SRE	Strehaia	78.74	326	⇓P	P	02 04 13.1	0.0
SRE	Strehaia	78.74	326	⇓P	P	02 04 13.1	0.0
AHRW	Bad Neuenahr-A	78.74	338	eP	P	02 04 13.4	+0.4
	comp=Z,181nm,1.1s,baz=26,slow=5.7						
STKA	Stephens Creek	78.76	190	P	P	02 04 13.8	+0.6
	comp=Z,4.2nm,0.9s,baz=355,slow=9.9,SNR=4.6						
STKA				LR	LR	02 36 50.0	
	comp=Z,173nm,21.9s,baz=15,slow=34						
TIH	Tihany	78.77	330	eP	P	02 04 13.8	+0.5
MZWR	Madinat Zayed	78.79	293	P	P	02 04 14.0	+0.3
MDUB	Mudurnu	78.79	318	P	P	02 04 14.0	+0.3
VLAD	Vladila	78.82	325	⇓P	P	02 04 13.2	-0.4
BEBN	Eben Emael	78.85	339	dP	P	02 04 13.5	-0.2
	comp=Z,146nm,1.0s						
HERR	Herculane	78.86	326	⇑P	P	02 04 13.3	-0.5
RST	Umm Al-Ruwaisa	78.86	301	eP	P	02 04 14.1	0.0
QRN	Al-Qurain	78.86	300	eP	P	02 04 14.2	+0.1
P46A	Rosedale	78.91	43	IAmb	IAmb	02 04 14.9	
	comp=Z,58nm,1.0s						
BANR	Banloc	78.91	327	⇑P	P	02 04 14.3	+0.3
BTNL	Ternell	78.94	339	dP	P	02 04 14.5	+0.4
	comp=Z,82nm,1.0s						
KHOR	Al-Khor Airpor	78.94	295	P	P	02 04 15.1	+0.6
MEM	Membach	78.94	339	dP	P	02 04 14.1	0.0
	comp=Z,127nm,0.9s						
W39A	Magazine	79.07	50	P	P	02 04 14.7	-0.4
	baz=320,SNR=9.6						
MORH	Mrgy, Hungar	79.10	329	⇑iP	P	02 04 14.3	-0.8
SHMA	Al-Shehemyia	79.11	296	P	P	02 04 16.0	+0.5
MOA	Molln	79.12	333	eP	P	02 04 15.4	+0.2
	comp=Z,50nm,0.8s,SNR=27						
UCC	Uccle	79.16	340	dP	P	02 04 15.4	+0.1
	comp=Z,11nm,0.9s						
PUNG	Punghina	79.17	326	⇑P	P	02 04 15.1	-0.4
BHOU	Houvegnez	79.18	339	bP	P	02 04 15.7	+0.2
	comp=Z,56nm,1.1s						
OLIL	Olney	79.18	44	IAmb	IAmb	02 04 16.8	
	comp=Z,57nm,1.4s						
MDVR	Moldovita	79.21	327	⇓P	P	02 04 15.6	-0.2
BAIL	Bailesti	79.22	325	⇑P	P	02 04 16.6	+0.8
N49A	Columbus Grove	79.24	40	IAmb	IAmb	02 04 16.7	
	comp=Z,40nm,1.2s						
ARSA	Arzberg	79.25	332	i P	P	02 04 16.0	+0.1
	comp=Z,47nm,0.8s,SNR=24						
GHWR	Ruwais	79.28	293	P	P	02 04 16.5	+0.1
SAKB	Bahrain	79.29	296	P	P	02 04 16.7	+0.3
BCLA	Clavier	79.29	339	κP	P	02 04 16.4	+0.4
	comp=Z,72nm,1.0s						
JCT	Junction City	79.29	57	IAmb	IAmb	02 04 32.8	
	comp=Z,16nm,0.8s						
JCT	Junction City	79.29	57	P	P	02 04 16.5	0.0
	baz=318						
M50A	Fremont	79.35	39	IAmb	IAmb	02 04 17.1	
	comp=Z,19nm,0.8s						
BGES	Gesves	79.38	340	bP	P	02 04 16.3	-0.2
	comp=Z,70nm,1.0s						
KOVH	Kovagotottos	79.40	330	eP	P	02 04 15.9	-0.9
S44A	Carbondale	79.44	45	IAmb	IAmb	02 04 18.1	
	comp=Z,50nm,1.2s						
SIUC	Southern Illin	79.44	45	IAmb	IAmb	02 04 18.1	
	comp=Z,50nm,1.2s						
SNF	Seneffe	79.45	340	dP	P	02 04 17.1	+0.2
	comp=Z,64nm,1.0s						
WHTX	Lake Whitney,	79.50	54	P	P	02 04 17.5	0.0
	baz=319						
BMRD	Maredsous	79.53	340	dP	P	02 04 17.1	-0.3
	comp=Z,96nm,1.0s						
KUBS	Kucevo	79.53	327	⇑iP	P	02 04 16.3	-1.2
RCHB	Rochefort	79.55	339	dP	P	02 04 17.2	-0.3
	comp=Z,62nm,1.1s						
PBMO	Poplar Bluff	79.57	47	IAmb	IAmb	02 04 19.0	
	comp=Z,50nm,1.4s						
FRGS	Fruska Gora	79.59	328	⇓P	P	02 04 17.5	-0.3
FRGS	Fruska Gora	79.59	328	⇑iP	P	02 04 17.3	-0.5
FRGS	Fruska Gora	79.59	328	⇑iP	P	02 04 17.4	-0.4
BORA	Eskisehir	79.60	319	P	P	02 04 18.0	-0.1
BORA				IAmb	IAmb	02 04 19.5	
	comp=Z,33nm,1.0s						
EDRB	Edirne	79.64	322	P	P	02 04 18.9	+0.8
J54A	Appleton	79.65	35	IAmb	IAmb	02 04 18.8	
	comp=Z,35nm,1.0s						
MIAR	Mount Ida	79.68	50	P	P	02 04 18.4	-0.1
	baz=320,SNR=6.2						
RJOB	Jochberg	79.68	334	eP	P	02 04 18.9	+0.6
	comp=Z,72nm,0.9s,baz=26,slow=5.7						
KOGS	Kog	79.72	331	⇑iP	P	02 04 18.0	-0.4
FUR	Furstenfeldbru	79.75	335	eP	P	02 04 19.1	+0.5
	comp=Z,174nm,1.0s,baz=26,slow=5.7						
DOU	Dourbes	79.76	340	bP	P	02 04 18.4	-0.3
	comp=Z,34nm,1.1s						
TRNA	Turayna	79.77	295	P	P	02 04 19.2	+0.1
WHAR	Wooly Hollow	79.78	49	IAmb	IAmb	02 04 19.8	
	comp=Z,50nm,1.3s						
WLF	Walferdange	79.78	339	dP	P	02 04 19.4	+0.7
	comp=Z,26nm,1.0s						
WLF	Walferdange	79.78	339	P	P	02 04 19.1	+0.3
WLF				pmax	pmax		
	comp=Z,49nm,1.0s						
WLF	Walferdange	79.78	339	P	P	02 04 19.1	+0.3
WLF				IAmb	IAmb	02 04 21.6	
	comp=Z,49nm,1.0s						
STU	Stuttgart	79.80	336	eP	P	02 04 19.0	+0.2
	comp=Z,290nm,1.0s,baz=26,slow=5.7						
MEDO	Medina	79.81	35	IAmb	IAmb	02 04 18.6	
	comp=Z,40nm,1.2s						
ZAGS	Zajecar	79.83	326	⇑iP	P	02 04 17.5	-1.6
SVIS	Svilajnac	79.83	327	⇑iP	P	02 04 18.7	-0.4
P48A	Milroy	79.86	42	IAmb	IAmb	02 04 19.9	
	comp=Z,33nm,1.0s						
W41B	Gary Mavity, V	79.89	49	P	P	02 04 19.1	-0.5
	baz=321,SNR=12						
SOKA	Soboth	79.92	332	eP	P	02 04 19.7	0.0
	comp=Z,104nm,0.9s,SNR=72						
PERS	Pernice	79.92	332	⇑iP	P	02 04 19.8	+0.1
SLWR	Sila	79.95	294	P	P	02 04 20.4	+0.4
M52A	Chesterland	79.97	38	IAmb	IAmb	02 04 20.9	
	comp=Z,59nm,1.1s						
J55A	Hilton	79.98	35	IAmb	IAmb	02 04 20.2	
	comp=Z,30nm,1.1s						
PARMO	Parma	80.00	46	P	P	02 04 20.1	0.0
N51A	Ashland	80.04	39	IAmb	IAmb	02 04 20.9	
	comp=Z,69nm,1.1s						
LONY	Lake Ozonia	80.06	32	P	P	02 04 20.0	-0.4
	baz=329						
ERPA	Erie	80.06	37	IAmb	IAmb	02 04 20.8	
	comp=Z,35nm,0.8s						
ERPA	Erie	80.06	37	P	P	02 04 20.1	-0.3
	baz=326,SNR=11						
KBA	Koelnbreinsper	80.10	333	eP	P	02 04 20.9	+0.2
	comp=Z,211nm,0.9s,SNR=97						
X40A	Basin Creek Fa	80.11	50	IAmb	IAmb	02 04 22.0	
	comp=Z,35nm,1.4s						
X40A	Basin Creek Fa	80.11	50	P	P	02 04 20.5	-0.3
	baz=321,SNR=8.1						
P49A	Miami Univ. Ec	80.12	41	IAmb	IAmb	02 04 21.4	
	comp=Z,41nm,1.1s						
P49A	Miami Univ. Ec	80.12	41	P	P	02 04 20.2	-0.6
	baz=324,SNR=13						
ZAPS	Zavoj	80.13	325	⇑iP	P	02 04 20.1	-0.7
FORT	Forrest	80.17	201	P	P	02 04 21.6	+0.7
FORT				IAmb	IAmb	02 04 23.1	
	comp=Z,49nm,0.8s						
FORT	Forrest	80.17	201	P	P	02 04 22.3	+1.4
TRUS	Trudelj	80.17	327	⇑iP	P	02 04 20.7	-0.3
BOVS	Bovan	80.18	326	⇓P	P	02 04 20.4	-0.6
BOVS	Bovan	80.18	326	⇑iP	P	02 04 19.8	-1.2
TEKS	Tekeris	80.22	328	⇑iP	P	02 04 19.4	-1.8
TEKS	Tekeris	80.22	328	⇑iP	P	02 04 20.3	-0.9
OBKA	Obir	80.22	332	i P	P	02 04 20.9	-0.4
	comp=Z,41nm,0.8s,SNR=23						
435B	Jarrell	80.33	55	P	P	02 04 22.2	+0.1
	baz=319						
ACSO	Alum Creek Sta	80.33	40	IAmb	IAmb	02 04 22.6	
	comp=Z,58nm,1.2s						
ACSO	Alum Creek Sta	80.33	40	P	P	02 04 21.6	-0.3
	baz=325,SNR=8.8						
M53A	WI Miller and	80.34	38	IAmb	IAmb	02 04 22.9	
	comp=Z,68nm,1.0s						
M53A	WI Miller and	80.34	38	P	P	02 04 21.8	-0.2
	baz=326,SNR=14						
GRUS	Gruza	80.34	327	⇑iP	P	02 04 21.7	-0.2
ZAG	Zagreb	80.35	331	⇑iP	P	02 04 21.6	-0.3
WVNY	West Valley, N	80.39	36	IAmb	IAmb	02 04 22.8	
	comp=Z,34nm,1.1s						
MMNY	Mt. Morris Dam	80.39	35	IAmb	IAmb	02 04 21.9	
	comp=Z,27nm,0.7s						
MYKA	Terra Mystica	80.40	333	i P	P	02 04 21.8	-0.5
	comp=Z,42nm,0.8s,SNR=18						
WATA	Walderalm	80.41	334	eP	P	02 04 22.6	+0.2
	comp=Z,128nm,0.7s,SNR=87						
DIVS	Divibare	80.43	327	⇑iP	P	02 04 21.9	-0.6
DIVS	Divibare	80.43	327	⇑iP	P	02 04 22.1	-0.4
BFO	Black Forest	80.44	337	P	P	02 04 22.3	0.0
BFO				pmax	pmax		
	comp=Z,122nm,1.0s						
BFO	Black Forest	80.44	337	eP	P	02 04 22.4	+0.1
	comp=Z,133nm,1.0s,baz=26,slow=5.7						
BFO	Black Forest	80.44	337	P	P	02 04 22.3	0.0
WCI	Wyandotte Cave	80.44	43	P	P	02 04 22.0	-0.5
WCI				pmax	pmax		
	comp=Z,56nm,1.2s						
WCI	Wyandotte Cave	80.44	43	P	P	02 04 21.9	-0.5
WCI				IAmb	IAmb	02 04 23.6	
	comp=Z,56nm,1.1s						
WCI	Wyandotte Cave	80.44	43	P	P	02 04 22.4	-0.1
	baz=323						
VTS	Vitosha	80.44	325	⇑P	P	02 04 22.9	+0.3
VTS	Vitosha	80.44	325	⇑P	P	02 04 22.9	+0.3
WTTA	Wattenberg	80.45	334	eP	P	02 04 23.1	+0.4
	comp=Z,161nm,0.7s,SNR=65						
RETA	Reutte	80.51	335	i P	P	02 04 23.0	+0.1
	comp=Z,70nm,0.9s,SNR=28						
CRES	Cresnjev	80.53	331	⇑iP	P	02 04 22.4	-0.5
UBR	Ueberruh	80.53	335	eP	P	02 04 23.0	+0.1
	comp=Z,56nm,1.1s,baz=26,slow=5.7						
MOTA	Moosalm	80.54	335	i P	P	02 04 23.1	0.0
	comp=Z,141nm,0.8s,SNR=73						
BATG	Bathurst New B	80.55	26	IAmb	IAmb	02 04 23.9	
	comp=Z,28nm,0.9s						
J57A	Williamstown	80.56	34	IAmb	IAmb	02 04 24.2	
	comp=Z,29nm,1.3s						
WLAR	White Oak Lake	80.58	50	IAmb	IAmb	02 04 24.1	
	comp=Z,18nm,0.7s						
SQTA	Sankt Quirin	80.62	334	eP	P	02 04 23.7	+0.2
	comp=Z,119nm,0.9s,SNR=60						
LJU	Ljubljana	80.64	332	⇑iP	P	02 04 22.9	-0.6
LJU	Ljubljana	80.64	332	⇑iP	P	02 04 22.9	-0.6
ABTA	Abfaltersbach	80.65	333	i P	P	02 04 23.1	-0.5
	comp=Z,59nm,1.0s,SNR=23						
ZOU	Zoufplan	80.68	333	IAmb	IAmb	02 04 29.0	
	comp=Z,33nm,1.2s						
M54A	Oil Creek Stat	80.70	37	IAmb	IAmb	02 04 24.7	
	comp=Z,48nm,1.1s						
M54A	Oil Creek Stat	80.70	37	P	P	02 04 23.5	-0.4
	baz=327,SNR=14						
ALN	Alexandroupoli	80.72	322	P	P	02 04 24.6	+0.7
ALN	Alexandroupoli	80.72	322	P	P	02 04 24.1	+0.2
ALN				pmax	pmax		
	comp=Z,155nm,1.0s						
ALN	Alexandroupoli	80.72	322	P	P	02 04 24.1	+0.2
RDO	Rodhopi	80.73	322	P	P	02 04 24.8	+0.8
SELS	Selova	80.76	326	⇑iP	P	02 04 22.8	-1.4
N53A	Lisbon	80.79	38	IAmb	IAmb	02 04 25.2	
	comp=Z,62nm,1.1s						
ENEZ	Enez	80.81	322	P	P	02 04 25.1	+0.7
IVAS	Ivanjica	80.82	327	⇑iP	P	02 04 23.8	-0.7
BARS	Barje	80.83	326	⇑iP	P	02 04 16.3	-8.3
BARS	Barje	80.83	326	⇑iP	P	02 04 23.7	-0.9
BOSS	Bosilegrad	80.84	325	⇑iP	P	02 04 24.4	-0.2
BBLS	Lazići	80.85	328	⇑iP	P	02 04 24.6	-0.1
BBLS	Lazići	80.85	328	⇑iP	P	02 04 24.8	+0.1
ECH	Echery	80.85	337	P	P	02 04 24.2	-0.4
ECH				pmax	pmax		
	comp=Z,103nm,0.9s						
ECH	Echery	80.85	337	P	P	02 04 24.2	-0.4
J58A	Remsen	80.88	33	IAmb	IAmb	02 04 24.9	
	comp=Z,24nm,1.1s						
BOJS	Bojanci	80.88	331	⇑iP	P	02 04 24.3	-0.4
	comp=Z,107nm,1.2s						
BLY	Banja Luka	80.88	330	⇑iP	P	02 04 23.9	-0.8
P51A	Williamsport	80.91	40	IAmb	IAmb	02 04 25.4	
	comp=Z,37nm,0.9s						
R49A	Shelbyville	80.92	42	IAmb	IAmb	02 04 25.6	
	comp=Z,30nm,1.4s						
O52A	Adamsville	80.93	39	IAmb	IAmb	02 04 25.8	
	comp=Z,65nm,1.1s						
K57A	Scipio Center	80.94	34	IAmb	IAmb	02 04 25.3	
	comp=Z,35nm,1.3s						
CEY	Cerknica	80.94	332	⇑iP	P	02 04 24.4	-0.7
FETA	Feichten	80.94	335	eP	P	02 04 25.5	+0.2
	comp=Z,58nm,0.9s,SNR=29						
DAVA	Damuels	80.95	335	i P	P	02 04 25.4	+0.1
	comp=Z,79nm,0.9s,SNR=23						
BALB	Balikesir	80.96	320	P	P	02 04 25.7	+0.5
G62A	West of Eustis	80.96	29	IAmb	IAmb	02 04 26.4	
	comp=Z,24nm,0.9s						
N54A	Moraine State	81.02	38	IAmb	IAmb	02 04 26.5	
	comp=Z,59nm,1.1s						
N54A	Moraine State	81.02	38	P	P	02 04 25.2	-0.4
	baz=326						
T47A	Sharon Grove	81.04	44	IAmb	IAmb	02 04 27.1	
	comp=Z,41nm,1.1s						
CIMO	Cimolais	81.06	333	IAmb	IAmb	02 04 25.7	
	comp=Z,23nm,0.8s						
RUDO	Rudo	81.08	328	⇑iP	P	02 04 25.2	-0.6
Z41A	Richland Creek	81.08	50	P	P	02 04 26.1	+0.1
	baz=321						
O53A	New Philadelph	81.09	39	IAmb	IAmb	02 04 26.6	
	comp=Z,59nm,1.1s						
O53A	New Philadelph	81.09	39	P	P	02 04 25.6	-0.4
	baz=326,SNR=20						
M55A	Ridgway	81.11	36	IAmb	IAmb	02 04 26.9	
	comp=Z,62nm,1.1s						
CCAR	Cane Creek	81.11	49	P	P	02 04 26.4	+0.2
CCAR				IAmb	IAmb	02 04 27.9	
	comp=Z,56nm,1.3s						
833A	Chaparral WMA,	81.13	58	P	P	02 04 26.4	0.0
	baz=319						
Q51A	Peebles	81.16	41	IAmb	IAmb	02 04 27.3	
	comp=Z,48nm,0.9s						
SJES	Sjenica	81.16	327	⇑iP	P	02 04 26.5	+0.1
P52A	Corning	81.20	40	P	P	02 04 25.8	-0.8
	baz=325,SNR=9.4						
MGRS	Mrkonjic Grad	81.20	329	⇑iP	P	02 04 26.8	+0.3
TAOE	Nuku Hiva Isla	81.22	113	eS	S	02 14 28.8	-4.3
	comp=Z,162nm,23.8s						
TAOE	Nuku Hiva Isla	81.22	113	eLR	LR	02 29 49.4	
	comp=Z,1µm,28.8s,baz=324						
NATX	Nacogdoches	81.22	53	P	P	02 04 27.2	+0.5
	baz=320						
NVR	Nevrokopi	81.25	324	P	P	02 04 27.4	+0.6
PMOR	Pomariorio Ree	81.28	123	eT	T	03 33 53.9	
	comp=Z,97nm,0.2s						
KAVA	Kavala	81.28	323	P	P	02 04 27.4	+0.5
RIY	Rijeka	81.29	332	⇑iP	P	02 04 25.9	-1.0
SMTH	Samothraki Isl	81.29	322	P	P	02 04 27.1	+0.1
H62A	Milan	81.32	30	IAmb	IAmb	02 04 28.2	
	comp=Z,34nm,0.9s						
PKME	Peaks-Kenny Pk	81.34	28	P	P	02 04 26.8	-0.3
	baz=332						
LBNH	Lisbon	81.34	31	P	P	02 04 26.4	-0.8
	baz=331						
GADA	Gvkgeada	81.37	322	P	P	02 04 31.6	+4.2
WVT	Waverly	81.37	45	P	P	02 04 27.4	-0.1
WVT				pmax	pmax		
	comp=Z,17nm,1.0s						
WVT	Waverly	81.37	45	P	P	02 04 27.4	-0.1
WVT	Waverly	81.37	45	P	P	02 04 27.4	-0.1
	baz=323						
DAVOX	Davos/Dischmat	81.41	335	P	P	02 04 28.2	+0.4
	comp=Z,56nm,0.8s,baz=360,slow=4.2,SNR=118						
ACCN	Adirondack Com	81.46	32	IAmb	IAmb	02 04 28.3	
	comp=Z,25nm,1.1s						
W45A	Hickory Valley	81.47	47	IAmb	IAmb	02 04 29.2	
	comp=Z,41nm,1.0s						
EZN	Ezine	81.48	321	P	P	02 04 28.6	+0.6
THAS	Thassos island	81.52	323	P	P	02 04 28.6	+0.4
KULA	Kula-Manisa	81.53	319	P	P	02 04 28.9	+0.5
CTI	Castel Tesino	81.54	334	P	P	02 04 27.5	-0.9
CTI				pmax	pmax		
	comp=Z,59nm,0.9s						
CTI	Castel Tesino	81.54	334	P	P	02 04 27.5	-0.9
CTI				IAmb	IAmb	02 04 28.6	
	comp=Z,59nm,0.9s						
SRS	Serrai	81.56	324	P	P	02 04 28.7	+0.3
BINY	Binghamton	81.60	34	P	P	02 04 27.7	-0.9
	baz=329						
UPM	Unac-Piva	81.61	328	⇑iP	P	02 04 27.9	-1.0
STIP	Stip	81.64	325	i P	P	02 04 27.9	-0.9
P53A	Whipple	81.64	39	IAmb	IAmb	02 04 29.8	
	comp=Z,31nm,1.1s						
Q52A	Bidwell	81.69	40	IAmb	IAmb	02 04 29.2	
	comp=Z,24nm,1.1s						
SKO	Skopje	81.70	325	i P	P	02 04 29.5	+0.3
SHAO	Shalim	81.77	287	i P	P	02 04 30.4	+0.5
	SNR=8.8						
SHAO	Shalim	81.77	287	P	P	02 04 30.5	+0.7
SHAO				P	P	02 04 30.6	+0.7
VAY	Valandovo	81.80	324	i P	P	02 04 30.0	+0.4
KNT	Kendrikon	81.80	324	P	P	02 04 30.2	+0.5
BHL	Bhannes	81.81	311	eP	P	02 04 30.1	+0.1
M57A	Sunshine Farm,	81.88	35	IAmb	IAmb	02 04 30.8	
	comp=Z,34nm,0.9s						
J61A	Chester	81.90	32	IAmb	IAmb	02 04 30.5	
	comp=Z,22nm,1.1s						
LIA	Limnos Island	81.92	322	P	P	02 04 30.4	+0.1
G65A	Princeton	81.95	27	IAmb	IAmb	02 04 32.8	
	comp=Z,38nm,1.3s						
L59A	Walton	81.97	34	IAmb	IAmb	02 04 31.1	
	comp=Z,50nm,1.1s						
I63A	Otisfield	81.97	30	P	P	02 04 30.7	+0.2
I63A				IAmb	IAmb	02 04 31.4	
	comp=Z,37nm,1.1s						
PRK	Paraskevi	81.99	321	P	P	02 04 32.0	+1.3
DQRL	Deir Qamar	82.01	311	eP	P	02 04 31.7	+0.6
RCY	Rachaya	82.04	311	eP	P	02 04 31.8	+0.5
OUR	Ouranopolis	82.06	323	P	P	02 04 31.1	+0.1
U49A	Red Boiling Sp	82.06	44	IAmb	IAmb	02 04 32.1	
	comp=Z,32nm,1.1s						
T50A	Nancy	82.10	43	IAmb	IAmb	02 04 31.8	
	comp=Z,23nm,0.8s						
CLTN	Cedars of Leba	82.13	44	IAmb	IAmb	02 04 32.7	
	comp=Z,29nm,1.0s						
PDG	Podgorica	82.14	327	⇑P	P	02 04 30.9	-0.6
PDG	Podgorica	82.14	327	⇑iP	P	02 04 30.8	-0.6
PDG	Podgorica	82.14	327	P	P	02 04 30.7	-0.7
SSPA	Standing Stone	82.17	36	P	P	02 04 30.5	-1.1
SSPA				IAmb	IAmb	02 04 31.9	
	comp=Z,22nm,0.9s						
SSPA	Standing Stone	82.17	36	P	P	02 04 31.2	-0.4
	baz=328						
MCWV	Mont Chateau	82.17	38	IAmb	IAmb	02 04 32.9	
	comp=Z,36nm,1.1s						
MCWV	Mont Chateau	82.17	38	P	P	02 04 31.6	-0.1
	baz=327,SNR=8.2						
S51A	Beattyville	82.17	42	IAmb	IAmb	02 04 32.0	
	comp=Z,16nm,0.8s						
V48A	Smith Brothers	82.18	45	IAmb	IAmb	02 04 32.7	
	comp=Z,26nm,1.1s						
GRG	Griva	82.18	324	P	P	02 04 32.0	+0.3
O56A	Blue Knob Stat	82.19	37	IAmb	IAmb	02 04 32.6	
	comp=Z,37nm,1.1s						
O56A	Blue Knob Stat	82.19	37	P	P	02 04 31.5	-0.3
	baz=327,SNR=11						
SIGR	SIGRI	82.20	321	P	P	02 04 31.9	+0.1
THE	Thessaloniki	82.22	324	P	P	02 04 31.4	-0.5
TREB	Trebinje	82.23	328	⇑iP	P	02 04 30.3	-1.6
PLG	Polygyros	82.24	323	P	P	02 04 32.0	-0.1
CLF	Chambon-Foret	82.25	340	P	P	02 04 32.4	+0.6
LEF	Lefka	82.25	314	⇑P	P	02 04 32.0	-0.1
MORW	Morawa	82.27	212	P	P	02 04 32.4	+0.4
MORW				IAmb	IAmb	02 04 33.4	
	comp=Z,38nm,1.4s						
MORW	Morawa	82.27	212	P	P	02 04 34.0	+1.9
Q54A	Coxs Mills	82.30	39	IAmb	IAmb	02 04 32.9	
	comp=Z,23nm,0.9s						
DOK	Doka	82.33	289	P	P	02 04 33.2	+0.4
	SNR=14						
PHP	Peshkopia	82.33	326	P	P	02 04 32.4	-0.1
STON	Ston	82.33	328	⇑iP	P	02 04 31.0	-1.4
BLCB	Balcova	82.36	320	P	P	02 04 32.7	+0.1
DRME	Dracevica, Mon	82.38	327	⇑iP	P	02 04 32.3	-0.4
PPT2	Papeete2	82.38	125	eS	S	02 14 40.2	-4.6
	comp=Z,672nm,32.2s						
PPT2	Papeete2	82.38	125	eLR	LR	02 30 21.3	
	comp=Z,2µm,24.5s,baz=320						
PPT2	Papeete2	82.38	125	eT	T	03 35 16.8	
	comp=Z,8.0nm,0.3s						
HCY	Herceg Novi	82.41	328	⇑iP	P	02 04 31.5	-1.4
N58A	Sunbury	82.47	35	IAmb	IAmb	02 04 33.8	
	comp=Z,33nm,0.9s						
TIAR	Tiarei	82.49	125	eT	T	03 35 22.7	
	comp=Z,1.4nm,0.2s						
ASF	Jabal al Asfar	82.51	310	P	P	02 04 34.6	+0.9
	comp=Z,77nm,0.9s,baz=46,slow=2.6,SNR=58						
SENIN	Lac Senin/Sane	82.52	337	IAmb	IAmb	02 04 38.7	
	comp=Z,41nm,0.9s						
PAIG	Paliouri	82.52	323	P	P	02 04 33.3	-0.2
L61B	Northampton	82.63	32	P	P	02 04 33.4	-0.6
	baz=330						
MMAI	Mount Meron Ar	82.64	311	P	P	02 04 35.4	+1.1
	comp=Z,122nm,0.7s,baz=37,slow=7.3,SNR=174						
OHR	Ohrid	82.68	325	i P	P	02 04 33.8	-0.6
FNA	Florina	82.73	325	P	P	02 04 34.5	-0.2
N59A	State Game Lan	82.78	35	IAmb	IAmb	02 04 35.6	
	comp=Z,28nm,1.0s						
N59A	State Game Lan	82.78	35	P	P	02 04 34.4	-0.4
	baz=329,SNR=14						
TIR	Tirane	82.84	326	⇓P	P	02 04 34.8	-0.3
TIR	Tirane	82.84	326	P	P	02 04 35.1	0.0
TIR	Tirane	82.84	326	⇓P	P	02 04 34.8	-0.3
FETY	Fethiye	82.86	317	P	P	02 04 35.8	+0.5
KZN	Kozani	82.98	324	P	P	02 04 35.4	-0.6
HRV	Adam Dziewonsk	82.98	31	P	P	02 04 36.0	+0.2
HRV				pmax	pmax		
	comp=Z,18nm,1.0s						
HRV	Adam Dziewonsk	82.98	31	P	P	02 04 36.0	+0.2
HRV				IAmb	IAmb	02 04 36.3	
	comp=Z,18nm,1.0s						
HRV	Adam Dziewonsk	82.98	31	P	P	02 04 35.6	-0.2
	baz=331						
SMG	Samos	83.01	320	P	P	02 04 30.2	-5.9
SWET	Sewanee	83.03	45	IAmb	IAmb	02 04 36.9	
	comp=Z,52nm,1.2s						

SKY	Skiros Island	83.04	322	P	P	02 04 36.3	+0.1
WHFO	Wadi Hawf	83.06	289	P	P	02 04 36.9	+0.2
	SNR=9.3						
S54A	Dingess, Beckl	83.07	40	IAmb	IAmb	02 04 36.8	
	comp=Z,16nm,0.8s						
RBK	Rabkut	83.08	288	P	P	02 04 37.0	+0.2
	SNR=5.6						
TZTN	Tazewell	83.09	42	IAmb	IAmb	02 04 37.0	
	comp=Z,15nm,0.8s						
TZTN	Tazewell	83.09	42	P	P	02 04 36.4	-0.1
	baz=325,SNR=6.7						
VBMS	Vicksburg	83.09	50	P	P	02 04 36.6	+0.1
	baz=322						
KBN	Korca	83.10	325	P	P	02 04 36.6	0.0
KBN	Korca	83.10	325	P	P	02 04 36.5	0.0
KBN				pmax	pmax		
	comp=Z,84nm,1.0s						
KBN	Korca	83.10	325	P	P	02 04 36.5	0.0
WES	Weston	83.18	31	IAmb	IAmb	02 04 36.8	
	comp=Z,39nm,1.2s						
NEST	Nestorio	83.18	325	P	P	02 04 37.0	0.0
TRNY	Table Rock, Ra	83.18	34	IAmb	IAmb	02 04 37.4	
	comp=Z,32nm,1.1s						
R55A	Marlinton	83.20	39	IAmb	IAmb	02 04 38.2	
	comp=Z,25nm,0.9s						
NEO	Neokhori	83.23	323	P	P	02 04 36.9	-0.3
BCX	Boston College	83.27	31	P	P	02 04 36.8	-0.5
BCX				IAmb	IAmb	02 04 38.2	
	comp=Z,27nm,1.1s						
V51A	Loudon	83.31	43	IAmb	IAmb	02 04 38.6	
	comp=Z,20nm,0.9s						
BODT	Bodrum	83.33	319	P	P	02 04 37.8	+0.1
PENT	Pentalofos	83.33	325	P	P	02 04 37.5	-0.3
UCCT	U. Connecticut	83.37	32	IAmb	IAmb	02 04 39.0	
	comp=Z,41nm,1.1s						
PAL	Palisades	83.42	34	IAmb	IAmb	02 04 38.7	
	comp=Z,30nm,1.1s						
PAL	Palisades	83.42	34	P	P	02 04 37.6	-0.4
	baz=330,SNR=5.5						
BLDU	Ballidu	83.44	211	P	P	02 04 38.9	+0.8
KPRO	Kipourio	83.45	324	P	P	02 04 38.0	-0.4
BRNJ	Basking Ridge	83.45	34	P	P	02 04 37.5	-0.7
BRNJ				IAmb	IAmb	02 04 39.0	
	comp=Z,23nm,0.8s						
DAT	Datca	83.48	319	P	P	02 04 38.3	-0.3
WSPT	Westport, CT	83.50	33	IAmb	IAmb	02 04 38.2	
	comp=Z,18nm,0.9s						
BRYW	Bryant College	83.51	32	IAmb	IAmb	02 04 39.2	
	comp=Z,20nm,1.0s						
THL	Klokotos Trika	83.51	324	P	P	02 04 37.7	-0.9
CPCT	Cooper Cave	83.52	44	IAmb	IAmb	02 04 39.6	
	comp=Z,22nm,1.1s						
Z47A	Carrollton	83.58	47	IAmb	IAmb	02 04 40.1	
	comp=Z,41nm,1.1s						
LSK	Leskovik	83.58	325	P	P	02 04 39.5	+0.4
VLC	Villacollemand	83.63	334	P	P	02 04 39.4	+0.2
V52A	Sevierville	83.64	43	IAmb	IAmb	02 04 39.9	
	comp=Z,26nm,1.1s						
ARG	Arkhangelos	83.65	318	P	P	02 04 39.9	+0.5
N62A	Caumsett State	83.65	33	IAmb	IAmb	02 04 39.7	
	comp=Z,25nm,0.9s						
TKL	Tuckaleechee C	83.70	43	P	P	02 04 39.5	-0.2
TKL				pmax	pmax		
	comp=Z,22nm,1.1s						
TKL	Tuckaleechee C	83.70	43	P	P	02 04 39.5	-0.2
TKL				IAmb	IAmb	02 04 40.6	
	comp=Z,22nm,1.1s						
FPAL	Fort Paine	83.73	45	P	P	02 04 39.6	-0.3
FPAL				IAmb	IAmb	02 04 40.7	
	comp=Z,26nm,1.1s						
L64A	Middleborough	83.74	31	IAmb	IAmb	02 04 40.6	
	comp=Z,31nm,0.9s						
M63A	Gales Ferry	83.77	32	IAmb	IAmb	02 04 40.4	
	comp=Z,36nm,1.1s						
P60A	Greenville	83.77	35	P	P	02 04 39.4	-0.5
	baz=329						
ABTO	Aybut	83.78	289	P	P	02 04 40.8	+0.4
	SNR=9.2						
ATAL	Atalanti	83.84	323	P	P	02 04 39.4	-0.9
AGG	Agios Georgios	83.84	323	P	P	02 04 39.1	-1.3
AGG	Agios Georgios	83.84	323	IAmb	IAmb	02 04 39.9	
	comp=Z,47nm,0.9s						
LKR	Lokris	83.88	323	P	P	02 04 39.6	-0.9
Y49A	Blount Mountai	83.89	46	IAmb	IAmb	02 04 40.8	
	comp=Z,14nm,0.8s						
BNI	Bardonecchia	83.89	336	IAmb	IAmb	02 04 42.1	
	comp=Z,28nm,0.9s						
U54A	Nelsons Funny	83.90	41	P	P	02 04 40.6	-0.1
U54A				IAmb	IAmb	02 04 41.6	
	comp=Z,31nm,1.1s						
JAN	Janina	83.91	325	P	P	02 04 41.0	+0.3
MAKR	Makrakomi, Fth	83.93	323	P	P	02 04 41.2	+0.4
BLA	Blacksburg	83.95	40	IAmb	IAmb	02 04 41.9	
	comp=Z,36nm,1.1s						
BLA	Blacksburg	83.95	40	P	P	02 04 40.7	-0.3
	baz=326,SNR=12						
DION	Dionisos Attik	83.97	322	P	P	02 04 40.2	-0.8
KLBR	Kellerberrin	83.97	209	P	P	02 04 42.7	+1.9
SRN	Sarande	84.05	325	P	P	02 04 41.1	-0.2
EVR	Evrytania	84.15	324	P	P	02 04 41.3	-0.7
ATH	Athens Observa	84.15	322	P	P	02 04 41.0	-0.9
VILL	Villia	84.16	322	P	P	02 04 41.0	-1.0
RAYN	Ar Rayn	84.18	298	*i* P	P	02 04 42.9	+0.5
	SNR=52						
RAYN	Ar Rayn	84.18	298	P	P	02 04 42.4	+0.1
RAYN				pmax	pmax		
	comp=Z,64nm,1.0s						
RAYN	Ar Rayn	84.18	298	P	P	02 04 42.4	+0.1
IGT	Igoumenitsa	84.22	325	P	P	02 04 42.0	-0.2
VLY	Voula,Athens	84.22	322	P	P	02 04 41.1	-1.1
AQU	L'Aquila	84.29	331	⇑*i*P	P	02 04 42.5	-0.1
LTK	Loutraki	84.42	322	P	P	02 04 41.7	-1.6
CBN	Corbin Frederi	84.43	37	P	P	02 04 43.0	-0.2
CBN				IAmb	IAmb	02 04 44.3	
	comp=Z,32nm,0.9s						
CBN	Corbin Frederi	84.43	37	P	P	02 04 43.1	-0.2
	baz=328						
EFP	Efpalio	84.53	323	P	P	02 04 43.7	-0.1
THAL	Thalero	84.54	323	P	P	02 04 42.4	-1.5
MATE	Matera	84.63	328	⇑P	P	02 04 43.9	-0.3
BG3	Lake Jocassee	84.64	43	IAmb	IAmb	02 04 45.8	
	comp=Z,47nm,1.2s						
T57A	Hurt	84.64	39	IAmb	IAmb	02 04 45.2	
	comp=Z,15nm,0.9s						
LAKA	Lakka	84.65	323	P	P	02 04 44.2	-0.3
U56A	King	84.69	40	IAmb	IAmb	02 04 45.1	
	comp=Z,15nm,0.9s						
LKD2	Lefkada island	84.72	324	P	P	02 04 44.5	-0.3
KLV	Kalavryta, Ach	84.75	323	P	P	02 04 44.1	-0.9
Z51A	Franklin	84.93	45	IAmb	IAmb	02 04 46.7	
	comp=Z,32nm,1.1s						
DRO	Drossia	85.01	323	P	P	02 04 46.5	+0.2
RLS	Riolos of Patr	85.02	323	P	P	02 04 46.4	+0.1
Y52A	Lilburn	85.03	44	IAmb	IAmb	02 04 47.7	
	comp=Z,17nm,0.9s						
PAOL	Paolisi	85.06	329	P	P	02 04 45.8	-0.7
KMSC	Kings Mountain	85.26	42	IAmb	IAmb	02 04 48.4	
	comp=Z,34nm,1.2s						
KMSC	Kings Mountain	85.26	42	P	P	02 04 47.1	-0.4
	baz=326,SNR=10						
KEF4	Livadi, Kephal	85.27	324	P	P	02 04 47.2	-0.3
VLS	Valsamata	85.28	324	P	P	02 04 47.2	-0.4
PAULI	Pauline	85.30	42	IAmb	IAmb	02 04 48.6	
	comp=Z,24nm,1.3s						
NWAO	Narrogin (SRO)	85.37	209	P	P	02 04 48.9	+1.1
T59A	Double "B" Far	85.40	38	IAmb	IAmb	02 04 49.4	
	comp=Z,27nm,1.2s						
ZKR	Zakros	85.43	319	P	P	02 04 48.7	+0.3
EIL	Elat	85.50	309	P	P	02 04 49.4	+0.6
	comp=Z,62nm,0.7s,baz=43,slow=2.2,SNR=52						
VLI	Veliai	85.54	322	P	P	02 04 47.1	-1.8
ITM	Ithomi	85.58	323	P	P	02 04 48.4	-0.7
HODGE	Hodges	85.58	43	IAmb	IAmb	02 04 49.8	
	comp=Z,26nm,1.1s						
NPS	Neapolis	85.58	319	P	P	02 04 48.1	-1.1
T60A	Surry	85.60	37	IAmb	IAmb	02 04 50.2	
	comp=Z,30nm,0.9s						
152A	Waverly Hall	85.68	45	IAmb	IAmb	02 04 49.9	
	comp=Z,18nm,1.1s						
GOGA	Godfrey	85.68	44	P	P	02 04 49.2	-0.5
GOGA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GOGA	Godfrey	85.68	44	P	P	02 04 49.2	-0.5
GOGA	Godfrey	85.68	44	P	P	02 04 49.4	-0.2
	baz=325						
V58A	Windy Hill, Pi	85.71	40	IAmb	IAmb	02 04 50.2	
	comp=Z,15nm,0.8s						
BRAL	Brewton	85.72	48	P	P	02 04 50.3	+0.4
	baz=324						
KSTL	Kastelli Herak	85.79	319	P	P	02 04 50.3	+0.1
U59A	Littleton	85.82	39	IAmb	IAmb	02 04 50.8	
	comp=Z,17nm,1.1s						
W57A	Gilead	85.86	41	IAmb	IAmb	02 04 50.9	
	comp=Z,15nm,0.9s						
IDI	Anoyia	85.89	320	P	P	02 04 49.4	-1.3
	comp=Z,47nm,0.6s,baz=40,slow=10,SNR=24						
PYL	PYLOS	85.90	323	P	P	02 04 49.6	-1.1
KTHR	Kythira	85.90	321	P	P	02 04 50.3	-0.4
TIP	Timpagrande	85.90	327	⇑P	P	02 04 50.5	-0.2
JSC	Jenkinsville	86.00	42	IAmb	IAmb	02 04 52.3	
	comp=Z,16nm,1.0s						
BIRD	Birdtown, Kers	86.07	41	IAmb	IAmb	02 04 52.5	
	comp=Z,20nm,1.0s						
ANKY	Antikythira Is	86.10	321	P	P	02 04 51.5	-0.2
X58A	Rowland	86.65	41	IAmb	IAmb	02 04 55.5	
	comp=Z,20nm,0.9s						
CNNC	Cliffs of the	86.72	39	P	P	02 04 54.7	0.0
	baz=328						
CEL	Celeste	87.03	327	P	P	02 04 55.7	-0.5
CEL				IAmb	IAmb	02 04 57.2	
	comp=Z,30nm,0.8s						
TBI	Tubuai	87.09	129	*e*LR	LR	02 32 34.2	
	comp=Z,948nm,26.5s,baz=314						
TBI	Tubuai	87.09	129	*e*T	T	03 41 08.3	
	comp=Z,50nm,0.3s						
TIGA	Tifton	87.23	45	P	P	02 04 57.6	+0.3
TIGA	Tifton	87.23	45	P	P	02 04 57.6	+0.3
	baz=325,SNR=6.0						
Y59A	Loris	87.33	41	IAmb	IAmb	02 04 58.6	
	comp=Z,31nm,0.9s						
255A	Hazlehurst	87.38	44	IAmb	IAmb	02 04 59.2	
	comp=Z,39nm,1.1s						
NHSC	New Hope	87.48	42	P	P	02 04 58.8	+0.3
	baz=327						
VSL	Villasalto	88.18	332	IAmb	IAmb	02 05 03.0	
	comp=Z,41nm,1.2s						
PBRG	Braganca	90.06	345	*e*P	P	02 05 09.3	-1.2
	comp=Z,38nm,1.8s						
PGAV	Gavieira, Arco	90.17	346	*e*P	P	02 05 10.1	-1.0
	comp=Z,50nm,1.4s						
PGAV	Gavieira, Arco	90.17	346	A	A	02 51 45.6	
	comp=Z,368nm,20.0s						
POLO	Lamas de Olo	90.67	345	*e*P	P	02 05 12.3	-1.1
	comp=Z,34nm,1.4s						
MVO	Moncorvo	90.73	345	*e*P	P	02 05 12.5	-1.2
	comp=Z,53nm,1.4s						
MVO	Moncorvo	90.73	345	*e*LR	LR	02 37 40.0	
	comp=Z,428nm,20.0s						
PVRL	Vila Real	90.75	345	*e*P	P	02 05 12.8	-0.9
	comp=Z,68nm,1.3s						
PVIS	Viseu	91.32	345	*e*P	P	02 05 15.4	-1.0
	comp=Z,45nm,1.3s						
ESBB	Sonseca Array	91.57	342	IAmb	IAmb	02 05 17.6	
	comp=Z,21nm,1.1s						
MTE	Manteigas	91.57	345	*e*P	P	02 05 16.4	-1.2
	comp=Z,52nm,1.0s						
MTE	Manteigas	91.57	345	*e*LR	LR	02 38 15.3	
	comp=Z,369nm,18.0s						
MTE	Manteigas	91.57	345	P	P	02 05 16.8	-0.8
ESDC	Sonseca Array	91.57	342	P	P	02 05 16.4	-1.2
	comp=Z,12nm,1.0s,baz=5.4,slow=3.9,SNR=56						
ESDC				LR	LR	02 50 15.3	
	comp=Z,454nm,21.4s,baz=345,slow=38						
ESDC	Sonseca Array	91.57	342	IAmb	IAmb	02 05 17.7	
	comp=Z,21nm,1.1s						
KEST	Kesra	91.61	331	P	P	02 05 17.7	-0.2
	comp=Z,16nm,0.8s,baz=206,slow=1.8,SNR=21						
KEST				LR	LR	02 50 54.9	
	comp=Z,322nm,19.0s,baz=350,slow=38						
KEST	Kesra	91.61	331	P	P	02 05 18.0	+0.1
	SNR=8.3						
PAB	San Pablo	91.78	342	P	P	02 05 17.0	-1.6
PAB				pmax	pmax		
	comp=Z,17nm,1.0s						
PAB	San Pablo	91.78	342	P	P	02 05 17.0	-1.6
PAB				IAmb	IAmb	02 05 18.5	
	comp=Z,18nm,0.9s						
COI	Coimbra	91.91	346	*e*P	P	02 05 18.1	-0.9
	comp=Z,81nm,1.1s						
PCAS	Casmilo, Conde	92.07	346	*e*P	P	02 05 18.6	-1.2
	comp=Z,55nm,1.3s						
PCBR	Castelo Branco	92.10	345	*e*P	P	02 05 18.6	-1.3
	comp=Z,25nm,1.5s						
PMRV	Marv??o	92.48	345	*e*P	P	02 05 20.9	-0.9
	comp=Z,35nm,1.6s						
PMRV	Marv??o	92.48	345	*e*LR	LR	02 38 52.2	
	comp=Z,585nm,18.0s						
PSBE	So Bento	92.65	346	*e*P	P	02 05 21.2	-1.3
	comp=Z,50nm,0.9s						
PMTG	Montargil	92.98	345	*e*P	P	02 05 23.2	-0.8
	comp=Z,24nm,1.5s						
PESTR	Estremoz	93.06	345	*e*P	P	02 05 23.1	-1.4
	comp=Z,24nm,2.1s						
PESTR	Estremoz	93.06	345	IAmb	IAmb	02 05 23.5	
	comp=Z,8.3nm,0.9s						
PBEJ	Beja	93.93	345	*e*P	P	02 05 27.3	-1.1
	comp=Z,30nm,1.4s						
MESJ	Messejana	94.18	345	*e*P	P	02 05 27.9	-1.6
	comp=Z,34nm,1.1s						
PCVE	Castro Verde	94.35	345	*e*P	P	02 05 29.6	-0.7
PCVE				-Mb		02 05 30.2	
PVAQ	Vaqueiros	94.51	344	*e*LR	LR	02 39 26.4	
	comp=Z,399nm,18.0s						
MORF	Marmelete	94.77	345	*e*P	P	02 05 31.3	-1.1
	comp=Z,65nm,1.4s						
ATD	Arta Tunnel	94.85	292	P	P	02 05 34.0	+1.0
MDT	Midelt	98.30	341	P	P	02 05 46.5	-1.9
	comp=Z,2.2nm,0.7s,baz=103,slow=3.2,SNR=9.7						
POPC	Popayan, Colom	114.67	56	*e*P	Pdif	02 07 04.6	+2.9
PRAC	Prado	114.72	54	*e*P	Pdif	02 07 04.6	+2.9
TORD	Torodi Ar. Bea	115.02	328	PKP	PKiKP	02 10 51.2	-0.7
	comp=Z,2.0nm,0.8s,baz=12,slow=2.1,SNR=14						
TORD				PP	PP	02 11 48.6	-2.2
	comp=Z,3.0nm,1.1s,baz=19,slow=6.0,SNR=4.6						
TORD	Torodi Ar. Bea	115.02	328	PKiKP	PKiKP	02 10 51.1	-0.8
SOTA	Rioblanco	115.03	57	*e*P	Pdif	02 07 10.7	+7.0
DBIC	Dimbokro	123.28	333	PKP	PKPdf	02 11 07.2	-0.6
	comp=Z,14nm,0.9s,baz=48,slow=2.5,SNR=8.9						
DBIC				PKKPbc	PKKPab	02 21 02.9	+2.9
	comp=Z,2.3nm,0.7s,baz=190,slow=6.1,SNR=3.1						
TIC	Toumodi	123.36	333	*e*PKP1	PKPdf	02 11 07.2	-0.8
KIC	Kosan Boka	123.54	333	*e*PKP1	PKPdf	02 11 07.8	-0.5
	comp=Z,21nm,0.9s						
LIC	Lamto	123.76	333	*e*PKP1	PKPdf	02 11 08.1	-0.6
	comp=Z,52nm,1.1s						
TBTG	Tabatinga, AM	124.00	54	*e*P	PKiKP	02 11 11.1	+1.6
CZSB	Cruzeiro do Su	125.25	60	*e*P	PKPdf	02 11 11.7	+0.1
CZSB	Cruzeiro do Su	125.25	60		PKPdf	02 11 11.7	+0.1
MACA	Manacapuru-AM	127.95	44	*e*P	PKPdf	02 11 16.8	0.0
ETMB	Extrema	130.69	55	*e*P	PKiKP	02 11 23.4	+0.6
ITTB	Itaituba	131.28	39	*e*P	PKiKP	02 11 24.2	+0.2
SAML	Samuel	131.63	51	PKIKP	PKPdf	02 11 23.5	-0.2
SAML	Samuel	131.63	51	PKPdf	PKPdf	02 11 23.5	-0.2
LBTB	Lobatse	132.93	278	PKIKP	PKPdf	02 11 25.7	-0.2
LBTB	Lobatse	132.93	278	PKPdf	PKPdf	02 11 25.7	-0.2
NPGB	Novo Progresso	133.83	40	*e*P	PKiKP	02 11 29.6	+0.5
ROSB	Rosrio	134.08	24	*e*P	PKiKP	02 11 29.3	-0.4
LPAZ	La Paz	134.71	62	PKP	PKPdf	02 11 30.6	+0.5
	comp=Z,5.6nm,1.1s,baz=36,slow=2.7,SNR=6.9						
LPAZ	La Paz	134.71	62	*e*P	PKiKP	02 11 32.0	+0.4
PRPB	Parauapebas	135.31	33	*e*P	PKiKP	02 11 32.8	+0.6
BOSA	Boshof	135.47	275	PKhKP	PKPpre	02 11 22.6	
	comp=Z,2.6nm,0.8s,baz=79,slow=2.2,SNR=4.7						
NBMO	Morrinhos-CE	135.48	18	*e*P	PKiKP	02 11 33.2	+0.7
PB11	IPOC Station P	136.38	67		PKPdf	02 11 33.0	+0.3
VILB	Vilhena	136.56	50	*e*P	PKiKP	02 11 33.8	-0.9
NBCL	Cascavel-CE	136.72	16	*e*P	PKiKP	02 11 35.0	0.0
CLDB	Colider	137.00	43	*e*P	PKiKP	02 11 36.1	+0.5
PDRB	Porto dos Gac	137.19	45	*e*P	PKiKP	02 11 36.7	+0.7
NBPB	Pedra_Branca-C	137.74	18	*e*P	PKPdf	02 11 35.0	-0.2
NBPA	Parau_RN	138.43	15	*e*P	PKPdf	02 11 37.3	+0.8
SMTB	Santa Maria do	138.60	31	*e*P	PKiKP	02 11 38.2	-0.7
LVC	Limon Verde	138.93	69	*e*P	PKiKP	02 11 38.9	-0.8
H03N2	Juan Fernandez	139.10	90	T	T	04 46 54.3	
	baz=308,slow=77,SNR=261						
H03N1	Juan Fernandez	139.12	90	T	T	04 46 55.6	
	baz=308,slow=77,SNR=285						
H03N3	Juan Fernandez	139.12	90	T	T	04 46 58.0	
	baz=308,slow=77,SNR=254						
PTLB	Pontes e Lacer	139.20	51	*e*P	PKPdf	02 11 38.0	+0.3
H03S2	Juan Fernandez	139.33	91	T	T	04 47 37.8	
	SNR=10						
H03S3	Juan Fernandez	139.33	91	T	T	04 47 20.1	
	SNR=7.6						
H03S1	Juan Fernandez	139.35	91	T	T	04 47 37.8	
	SNR=3.7						
NBPV	Pedro Velho	139.37	12	*e*P	PKiKP	02 11 39.7	-0.8
SNDB	Serra Nova Dou	139.99	38	*e*P	PKPdf	02 11 39.5	+0.3
SYO	Syowa Base	140.62	212	⇑*e*Pdiff	Pdif	02 08 56.8	+1.4
SYO	Syowa Base	140.62	212	⇑*e*pPdiff	pPdif	02 09 14.8	+4.2
SALV	Santo Antonio	141.37	47	*e*P	PKPdf	02 11 42.6	+1.0
NBRF	Rio Formoso -	141.62	12	*e*P	PKPdf	02 11 43.1	+0.9
NBPN	Ponto Novo - B	142.72	21	*e*P	PKPdf	02 11 44.8	+0.6
SDBA	SAO DESIDERIO	142.83	29	*e*P	PKiKP	02 11 46.1	-1.4
ARAG	Araguaiana, MT	143.07	42	*e*P	PKPdf	02 11 45.9	+1.3
NBLA	Lagarto - SE	143.41	17	*e*P	PKiKP	02 11 48.0	-0.7
SHEL	Horse Pasture	144.51	322	PKIKP	PKPbc	02 11 46.2	+0.3
SHEL	Horse Pasture	144.51	322	PKPdf	PKPbc	02 11 46.2	+0.3
PEL	Peldehue	144.60	83	PKIKP	PKPab	02 11 45.7	+0.1
PEL	Peldehue	144.60	83		PKPbc	02 11 45.7	-0.1
BDFB	Brasilia	144.65	36	PKP	PKPab	02 11 46.3	0.0
	comp=Z,20nm,1.0s,baz=0.7,slow=2.9,SNR=20						
BDFB	Brasilia	144.65	36	PKIKP	PKPab	02 11 45.7	-0.6
BDFB	Brasilia	144.65	36	PKPdf	PKPab	02 11 45.7	-0.6
AQDB	Aquidauana	145.18	51	*e*P	PKPbc	02 11 47.7	-0.1
AQDB	Aquidauana	145.18	51		PKPbc	02 11 46.8	-1.1
JANB	Januaria	145.50	30	*e*P	PKPdf	02 11 48.8	-0.1
GDU01	Guandu, BA	145.64	21	*e*P	PKPab	02 11 50.2	+0.4
NBIT	Itapeh - BA	146.84	22	*e*P	PKPbc	02 11 52.6	-0.5
ITRB	Iturama	147.22	43	*e*P	PKPbc	02 11 54.4	+0.3
CMC01	Camacan, BA	147.23	22	*e*P	PKPbc	02 11 53.2	-0.9
GUA01	Guaratinga, BA	148.32	23	*e*P	PKPbc	02 11 56.5	-0.6
PCMB	Pacaembu	148.41	46	*e*P	PKPbc	02 11 56.5	-0.7
PLCA	Paso Flores	148.54	95	PKPbc	PKPbc	02 11 57.7	+0.6
	comp=Z,17nm,0.9s,baz=276,slow=3.7,SNR=12						
PLCA	Paso Flores	148.54	95	PKP2	PKPbc	02 11 57.4	+0.3
PLCA	Paso Flores	148.54	95	*e*P	PKPbc	02 11 57.1	0.0
PLCA	Paso Flores	148.54	95		PKPbc	02 11 57.4	+0.3
DIAM	Diamantina, MG	148.72	31	*e*P	PKPbc	02 11 56.5	-1.8
CPUP	Villa Florida	148.83	60	PKPbc	PKPbc	02 11 58.1	0.0
	comp=Z,14nm,0.9s,baz=329,slow=3.1,SNR=14						
CPUP	Villa Florida	148.83	60	*e*P	PKPbc	02 11 57.1	-1.1
BB19B	Bebedouro	149.24	41	*e*P	PKPbc	02 11 57.4	-2.0
COYC	Coyhaique	149.31	105	PKPbc	PKPbc	02 11 58.7	0.0
NVL	N'lazarevskaya	149.37	204	*e*PKP2	PKPab	02 12 03.7	+0.6
NVL				pmax	pmax		
	comp=Z,59nm,1.6s						
NAN01	Guarapari, ES	149.43	24	*e*P	PKPdf	02 11 56.8	+1.4
SJMB	Sao Joao De Ma	149.93	27	*e*P	PKPbc	02 11 59.5	-1.6
BSFB	Barra de Sao F	150.15	26	*e*P	PKPbc	02 11 59.5	-2.1
SMAI	San Martin Ant	150.50	151		PKPbc	02 12 00.7	-0.1
PTGB	Pitanga	150.56	51	*e*P	PKPbc	02 12 00.1	-2.5
RIB01	Linhares ES	150.75	26	*e*P	PKPdf	02 11 59.5	+2.1
BSCB	Bom Sucesso	150.78	35	*e*P	PKPbc	02 12 00.4	-2.8
RCLB	Rio Claro- Sao	150.87	41	*e*P	PKPdf	02 11 59.5	+1.9
VAO	Valinhos	151.63	41	*e*P	PKPdf	02 12 00.4	+1.6
SNAA	Sanae	152.33	196	PKPbc	PKPbc	02 12 05.1	0.0
SNAA	Sanae	152.33	196	PKIKP	PKPbc	02 12 04.9	-0.2
SNAA	Sanae	152.33	196		PKPbc	02 12 04.9	-0.2
PMSA	Palmer Station	153.07	146	*e*P	PKPbc	02 12 03.4	-3.5
VNA2	Neumayer--Watz	153.79	195	PKPbc	PKiKP	02 12 08.6	+0.2
	baz=112,slow=1.2						
VNA3	Neumayer Olymp	153.89	193	PKPbc	PKPbc	02 12 08.5	0.0
VNA1	Neumayer--Stat	154.18	195	PKPbc	PKiKP	02 12 09.3	+0.2

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*TUL **13** 02:25:54.2±0.8, 36°.39N±0°.01×96°.74W±0°.02, h4^{km}±7^{km}, ML2.6, mb_Lg2.4/22(NEIC) Error ellipse: s-maj=2.8km s-min=1.8km az=87.0*

NEIC 13 02:25:54.2±0.7**, 36°.394N**±0°.005×**96°.76W**±0°.02**, h5**^{km}±7^{km}**, Error ellipse: s-maj=2.8km s-min=0.5km az=77.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	Quay	0.23	169	Pg	Pg	02 25 59.0	+0.3
QUOK				Sg	Sg	02 26 01.7	+0.1
OK034	N. Norfolk Rd.	0.39	174	Pg	Pg	02 26 01.6	-0.1
OK034				Sg	Sg	02 26 06.9	+0.2
OK031	S. Brethren Rd	0.44	188	Pg	Pg	02 26 02.8	0.0
OK030	Cody Creek RV	0.47	182	Pg	Pg	02 26 02.9	-0.3
OK030				Sg	Sg	02 26 09.3	0.0
BLOK	Blackwell	0.52	315	Pg	Pg	02 26 04.3	+0.1
T35A	Sooner Cattle	0.56	21	Pg	Pg	02 26 05.0	0.0
T35A				Sg	Sg	02 26 12.7	+0.4
OK029	Liberty Lake	0.82	223	Pg	Pg	02 26 09.9	0.0
TUL1	Leonard	0.92	121	Pg	Pg	02 26 11.3	-0.6
OK025	Westminster Rd	0.94	210		Pg	02 26 11.6	-0.6
OK025				Sg	Sg	02 26 24.6	+0.2
CROK	Carrier	0.99	277	Pg	Pg	02 26 13.4	+0.1
CROK				Sg	Sg	02 26 26.7	+0.6
BCOK	Bluff Creek, N	1.01	223		Pg	02 26 13.0	-0.6
KAN09	Caldwell North	1.01	317	Pg	Pg	02 26 13.4	-0.2
KAN09				IAmb_Lg		02 26 26.6	
	comp=Z,56nm,1.0s						
KAN01	Argonia South	1.10	314	Pg	Pg	02 26 15.2	-0.2
KAN14	Manchester OK	1.12	301		Pg	02 26 15.3	-0.4
OKCFA	Oklahoma City	1.12	210	Pg	Pg	02 26 15.4	-0.4
OKCSW	OKLAHOMA CITY	1.13	209		Pg	02 26 15.2	-0.6
KAN06	Argonia West S	1.23	314		Pg	02 26 16.9	-0.9
W35A	Tecumseh	1.24	184	Pg	Pg	02 26 17.4	-0.7
FNO	Franklin	1.25	205		Pb	02 26 18.3	0.0
KAN08	Anthony NE Sta	1.28	311		Pg	02 26 17.6	-1.2
KAN10	Anthony SW Sta	1.29	305	Pn	Pg	02 26 19.1	0.0
KAN16	Harper SW Stat	1.33	309	Pn	Pb	02 26 19.8	0.0
KAN12	Harper NE Stat	1.34	313	Pn	Pn	02 26 19.5	-0.2
U32A	Winter Ranch,	1.81	270		Pn	02 26 26.5	+0.4
U38A	Gravette	1.92	88	Pn	Pn	02 26 27.5	-0.1
X34A	Smith Ranch, M	1.99	206		Pn	02 26 28.8	+0.2
X37A	Clayton	2.13	147	Pn	Pn	02 26 30.7	+0.2
HHAR	Hobbs	2.28	92		Pn	02 26 32.8	+0.1
LOOK	Love County	2.42	188	Pn	Pn	02 26 35.7	+1.2
R32A	Long Quarter,	2.55	323	Pn	Pn	02 26 36.4	+0.1
W39A	Magazine	2.70	115		Pn	02 26 38.2	-0.1
S39A	Bolivar	3.04	64	Pn	Pn	02 26 43.0	-0.1
S39A				IAmb_Lg		02 27 36.1	
	comp=Z,8.1nm,0.8s						
U40A	Yellville	3.15	90	Pn	Pn	02 26 44.2	-0.4
U40A				IAmb_Lg		02 27 38.6	
	comp=Z,9.1nm,0.7s						
MIAR	Mount Ida	3.19	124	Pn	Pn	02 26 46.0	+1.0
MGMO	Mountain Grove	3.69	77	Pn	Pn	02 26 51.3	-0.6
X40A	Basin Creek Fa	3.73	120	Pn	Pn	02 26 52.1	-0.4
FCAR	Ozark Folk Cen	3.79	96	Pn	Pn	02 26 53.5	+0.2
FCAR				IAmb_Lg		02 28 01.4	
	comp=Z,7.4nm,0.8s						
WHAR	Wooly Hollow	3.80	106	Pn	Pn	02 26 54.1	+0.7
WHAR				IAmb_Lg		02 28 04.5	
	comp=Z,9.4nm,1.0s						
R40A	Maddies Statio	4.05	61	Pn	Pn	02 26 56.6	-0.3
P38A	Dawn	4.11	37	Pn	Pn	02 26 57.8	0.0
N35A	Tabor	4.55	11	IAmb_Lg		02 28 28.9	
	comp=Z,12nm,0.7s						
T42A	Van Buren	4.60	80	Pn	Pn	02 27 04.4	-0.1
T42A				IAmb_Lg		02 28 19.6	
	comp=Z,6.9nm,0.7s						
CCM	Cathedral Cave	4.71	68	Pn	Pn	02 27 06.7	+0.7
CCM				IAmb_Lg		02 28 33.9	
	comp=Z,6.8nm,0.9s						
PBMO	Poplar Bluff	5.11	84	IAmb_Lg		02 28 41.2	
	comp=Z,8.4nm,0.7s						
N38A	Joes South For	5.19	31	IAmb_Lg		02 28 49.8	
	comp=Z,6.8nm,0.8s						
FVM	French Village	5.30	71	Pn	Pn	02 27 13.8	-0.4
S44A	Carbondale	6.14	76	IAmb_Lg		02 29 11.3	
	comp=Z,12nm,0.9s						
JCT	Junction City	6.42	204	IAmb_Lg		02 29 36.3	
	comp=Z,7.9nm,1.2s						

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*IDC **13** 02:40:45.3±1.5, 4°.21S×129°.45E, h0^{km}, mb3.6/1, mb1 3.8/5, mb1mx3.6/27, mbtmp3.7/5, ML3.6/4, Error ellipse: s-maj=54.9km s-min=24.4km az=86.0*

ISC 13 02:40:50.1±1.4**, 4°.2S**±0°.2×**129°.7E**±0°.2**, h35**^{km}**, n16,** σ**2**^{s}**.17**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.42	146	P	Pn	02 40 59.8	+0.2
FAKI	Fak Fak	2.86	64	P	Pn	02 41 35.7	+2.4
SIJI	Sorong	3.65	26	Pn	Pn	02 41 45.7	+1.5
	3.6nm,0.3s,baz=182,slow=23,SNR=46						
SIJI				Sn	Sn	02 42 26.4	+0.4

	2.9nm,0.3s,baz=245,slow=19,SNR=4.0						
SANI	**Sanana**	**4.24**	**300**	P	**Pn**	**02 41 52.0**	**-0.2**
KNRA	**Kununurra**	**11.46**	**184**	P	**Pn**	**02 43 33.3**	**+1.9**
FITZ	**Fitzroy Crossi**	**14.39**	**196**	Pn	**Pn**	**02 44 10.2**	**-1.1**
	0.1nm,0.3s,baz=26,slow=13,SNR=1.5						
WRAB	**Tennant Creek**	**16.31**	**164**	P	**P**	**02 44 36.7**	**-2.5**
WRA	**Warramunga Arr**	**16.32**	**164**	Pn	**P**	**02 44 35.0**	**-4.4**
	0.3nm,0.3s,baz=348,slow=13,SNR=14						
QIS	**Mount Isa**	**18.94**	**150**	P	**Pn**	**02 45 10.0**	**+0.9**
ASAR	**Alice Springs**	**19.80**	**168**	P	**Pn**	**02 45 18.1**	**-1.3**
	0.4nm,0.3s,baz=346,slow=9.9,SNR=43						
WRKA	**Warakurna**	**20.78**	**184**	P	Pn	02 45 30.0	-0.9
OOD	**Oodnadatta**	**24.18**	**167**	P	**P**	**02 46 04.5**	**+1.2**
XMI	**Christmas Isla**	**24.57**	**254**	P	**P**	**02 46 08.9**	**+1.8**
INKA	**Innaminka**	**25.70**	**157**	P	**P**	**02 46 17.9**	**+0.8**
MULG	**Mulgathing**	**26.29**	**171**	P	**P**	**02 46 25.4**	**+2.9**
MKAR	**Makanchi Array**	**65.70**	**326**	P	**P**	**02 51 30.9**	**-0.3**
	0.2nm,0.4s,baz=112,slow=8.4,SNR=5.8						

IDC 13 03:00:24.4±1.1**,27°.81N**×**84°.64E,h0^{km},mb3.9**/3**, mb1 4.0**/4**,mb1mx3.1**/50**,mbtmp3.8**/4**,ML3.9**/1**,Error ellipse: s-maj=32.4km s-min=14.3km az=82.0, Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.04**	**355**	P	P	03 04 48.0	0.0
	0.3nm,0.3s,baz=177,slow=12,SNR=20						
FINES	**FINESS Array B**	**51.02**	**328**	P	P	03 09 27.8	-0.1
	1.3nm,0.7s,baz=120,slow=8.2,SNR=6.9						
ARCES	**ARCESS Array B**	**53.54**	**338**	P	P	03 09 46.2	-0.3
	5.5nm,0.9s,baz=97,slow=7.4,SNR=5.2						
WRA	**Warramunga Arr**	**67.57**	**129**	P	P	03 11 23.0	0.0
	0.2nm,0.7s,baz=325,slow=6.1,SNR=1.2						

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*NEIC **13** 03:11:40.3±2.0,24°.6S±0°.2×179°.9W±0°.2,h482^{km}±14^{km}, mb4.3/15,Error ellipse: s-maj=29.8km s-min=25.9km az=85.0*

*IDC **13** 03:11:42.8±3.8,24°.45S×179°.94E,h502^{km}±31^{km},mb3.6/8, mb1 3.8/9,mb1mx3.3/25,mbtmp4.5/9,Error ellipse: s-maj=51.6km s-min=26.0km az=143.0*

ISC 13 03:11:43.8±1.1**,24°.7S**±0°.2×**179°.9E**±0°.2**,h517^{km},n28, σ0^{s}.96**/29**,mb4.3**/14**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.64**	**279**	P	**P**	**03 14 29.9**	**+0.7**
	0.3nm,0.3s,baz=86,slow=14,SNR=8.4						
DZM	**Mont Dzumac**	**12.64**	**279**	P	**P**	**03 14 28.7**	**-0.5**
BFZ	**Birch Farm**	**16.26**	**190**		**P**	**03 15 05.2**	**-1.4**
ARMA	**Armidale**	**25.69**	**251**	P	**P**	**03 16 33.6**	**+1.1**
ARMA				IAmb	IAmb	03 16 44.4	
	comp=Z,15nm,1.4s						
EIDS	**Eidsvold**	**26.12**	**262**	P	**P**	**03 16 36.7**	**+0.4**
EIDS				IAmb	IAmb	03 16 39.0	
	comp=Z,22nm,1.5s						
CTA	**Charters Tower**	**31.41**	**272**	P	**P**	**03 17 23.1**	**+0.6**
	comp=Z,14nm,0.5s,baz=93,slow=12,SNR=15						
CTAO	**Charters Tower**	**31.41**	**272**	P	**P**	**03 17 21.4**	**-1.0**
TOO	**Toolangi**	**31.97**	**238**	P	**P**	**03 17 28.2**	**+1.1**
TOO				IAmb	IAmb	03 17 28.7	
	comp=Z,8.5nm,1.2s						
STKA	**Stephens Creek**	**34.37**	**249**	P	**P**	**03 17 48.4**	**+1.0**
	comp=Z,4.4nm,0.5s,baz=93,slow=9.7,SNR=14						
STKA	**Stephens Creek**	**34.37**	**249**	P	**P**	**03 17 47.4**	**0.0**
PMG	**Port Moresby**	**34.68**	**290**	P	**P**	**03 17 49.8**	**-0.3**
	comp=Z,7.7nm,0.4s,baz=37,slow=3.5,SNR=5.6						
PMG	**Port Moresby**	**34.68**	**290**	P	**P**	**03 17 49.2**	**-0.9**
COEN	**Coen**	**36.16**	**280**	P	**P**	**03 18 02.3**	**-0.3**
COEN				IAmb	IAmb	03 18 04.7	
	comp=Z,6.0nm,0.8s						
BBOO	**Buckleboo**	**39.08**	**248**	P	**P**	**03 18 25.1**	**-1.1**
AS31	**Alice Springs**	**41.84**	**261**	P	**P**	**03 18 48.2**	**-0.1**
ASAR	**Alice Springs**	**41.84**	**261**	P	**P**	**03 18 48.2**	**-0.2**
	comp=Z,5.9nm,0.9s,baz=94,slow=8.2,SNR=41						
ASAR	**Alice Springs**	**41.84**	**261**	P	**P**	**03 18 47.7**	**-0.7**
WR0	**Warramunga Arr**	**42.09**	**267**	P	**P**	**03 18 49.4**	**-1.0**
WR0				IAmb	IAmb	03 18 50.0	
	comp=Z,8.2nm,0.6s						
WB2	**Warramunga Arr**	**42.27**	**267**	P	**P**	**03 18 50.9**	**-1.0**
WB2				IAmb	IAmb	03 18 51.9	
	comp=Z,8.6nm,0.7s						
WB0	**Warramunga Arr**	**42.28**	**267**	P	**P**	**03 18 51.1**	**-0.8**
WRA	**Warramunga Arr**	**42.28**	**267**	P	**P**	**03 18 51.1**	**-0.8**
	comp=Z,6.8nm,0.5s,baz=104,slow=7.9,SNR=119						
WRA				ScP	**ScP**	**03 23 38.0**	**+2.8**
	comp=Z,2.9nm,0.9s,baz=101,slow=4.3,SNR=14						
FORT	**Forrest**	**45.98**	**250**	P	**P**	**03 19 21.1**	**+0.8**
KNRA	**Kununurra**	**48.61**	**270**	P	**P**	**03 19 40.2**	**-0.1**
KSRS	**Korea Array**	**78.78**	**320**	P	**P**	**03 22 51.9**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=139,slow=5.7,SNR=5.1						
CMAR	**Chiang Mai Arr**	**89.72**	**290**	P	**P**	**03 23 47.9**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=140,slow=3.9,SNR=8.4						
PDAR	**Pinedale Array**	**93.29**	**44**	P	**P**	**03 24 03.8**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=249,slow=2.5,SNR=3.5						
AKASG	**Malin Array Be**	**145.57**	**327**	PKPbc	**PKPdf**	**03 30 22.4**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=45,slow=4.0,SNR=7.1						
BRTR	**Keskin Array B**	**147.97**	**306**	PKPbc	**PKPbc**	**03 30 30.4**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=111,slow=2.4,SNR=6.9						

NNC 13 03:24:52.4±6.1**,38°.64N**×**73°.16E,h0^{km},mb4.0,mpv3.6, 5D,Error ellipse: s-maj=45.1km s-min=28.8km az=172.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.12**	**14**	⇓P	Pn	03 25 58.5	+1.8
	4.1nm,0.6s						
AAK				⇓S	Sn	03 26 49.2	+3.4
	6.5nm,0.8s						
IUG	**Iuzhnay**	**4.24**	**327**	Pg	Pb	03 26 10.7	+2.8
	163nm,0.5s						
IUG				Lg	Lg	03 27 11.5	
	24nm,0.9s						
KK08	**Karatay Array**	**4.90**	**336**	⇓P	Pn	03 26 08.7	+1.4
	2.7nm,0.7s						
KK08				⇓S	Sn	03 27 05.4	+0.6
	4.3nm,0.7s						
DGS	**Degeres**	**5.01**	**22**	Pg	Pb	03 26 20.5	-0.4
	2.7nm,0.5s						
DGS				Lg	Lg	03 27 27.4	
	2.7nm,0.9s						
BRLS	**Borolday**	**5.06**	**331**	Pg	Pb	03 26 18.6	-3.2
	1.2nm,0.1s						
BRLS				Lg	Lg	03 27 24.1	
	0.8nm,0.4s						
KUU	**Kurty**	**5.77**	**24**	Pg	Pb	03 26 34.0	0.0
	2.8nm,1.0s						
KUU				Lg	Lg	03 27 50.4	
AB31	**Akbulak array**	**14.23**	**322**	⇓P	Pn	03 28 12.2	-2.9
	0.5nm,0.6s,baz=133,slow=12,SNR=11						

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*IDC **13** 03:31:14.5±3.6,37°.52N×72°.74E,h0^{km},mb4.0/1, mb1 3.6/6,mb1mx3.0/59,mbtmp3.5/6,ML3.1/5,MS3.0/1, Ms1 3.0/1,ms1mx2.3/44,Error ellipse: s-maj=46.7km s-min=18.0km az=167.0*

*NNC **13** 03:31:20.7±3.8,38°.11N×72°.56E,h0^{km},mb4.3,mpv3.9, Error ellipse: s-maj=27.6km s-min=20.1km az=170.0*

ISC 13 03:31:19.0±2.4**,37°.9N**±0°.2×**72°.39E**±0°.09**,h10^{km},n17, σ1^{s}.71**/19**,5C-2D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.66**	**338**	Pg	**Pb**	**03 32 42.1**	**+1.2**
	546nm,0.6s						
IUG				Lg	Lg	03 33 43.5	
	77nm,1.5s						
MRKS	**Merke**	**4.93**	**7**	Pg	**Pb**	**03 32 42.1**	**-3.4**
	13nm,0.4s						
MRKS				Lg	Lg	03 33 43.0	
	9.9nm,0.5s						
AAK	**Ala-Archa**	**5.05**	**18**	Pn	**Pn**	**03 32 35.8**	**+1.0**
	0.5nm,0.3s,baz=153,slow=4.3,SNR=6.3						
AAK				Sn	**Sn**	**03 33 34.9**	**+1.6**
	0.9nm,0.3s,baz=252,slow=23,SNR=4.5						
AAK	**Ala-Archa**	**5.05**	**18**	⇑Pn	**Pn**	**03 32 35.7**	**+0.9**
	5.4nm,0.5s						
AAK				⇑Sn	**Sn**	**03 33 33.4**	**+0.1**
	15nm,0.8s						
KK08	**Karatay Array**	**5.45**	**345**	⇓Pn	**Pn**	**03 32 40.9**	**+0.7**
	3.6nm,0.5s						
KK08				⇑Sn	**Sn**	**03 33 43.6**	**+0.7**
	6.3nm,0.5s						
BRLS	**Borolday**	**5.53**	**340**	Pg	**Pb**	**03 32 54.9**	**-0.7**
	3.2nm,0.4s						
BRLS				Lg	Lg	03 34 05.9	
	9.6nm,0.5s						
TKM2	**Tokmak 2**	**5.63**	**25**	⇓Pg	**Pb**	**03 32 58.2**	**+0.8**
	5.0nm,0.8s						
TKM2				⇑Lg	Lg	03 34 09.1	
	5.7nm,0.7s						
DGS	**Degeres**	**5.97**	**24**	Pg	**Pb**	**03 33 03.9**	**+0.7**
	9.1nm,0.6s						
DGS				Lg	Lg	03 34 20.4	
	5.7nm,0.8s						
KRBS	**Karabastau**	**6.35**	**22**	Pg	**Pb**	**03 33 10.2**	**+0.6**
	3.8nm,0.6s						
KRBS				Lg	Lg	03 34 31.9	
	4.6nm,0.7s						
KUU	**Kurty**	**6.74**	**25**	Pg	**Pb**	**03 33 16.5**	**+0.3**
	2.1nm,0.6s						
KUU				Lg	Lg	03 34 41.8	
	6.2nm,0.8s						
MKAR	**Makanchi Array**	**11.55**	**36**	Pn	**Pn**	**03 34 01.7**	**-2.2**
	0.0nm,0.3s,baz=227,slow=15,SNR=2.1						
AB31	**Akbulak array**	**14.52**	**326**	⇑P	**Pn**	**03 34 41.4**	**-3.0**
	0.4nm,0.5s,baz=140,slow=12,SNR=16						
BVAR	**Borovoye Array**	**15.24**	**355**	Pn	**Pn**	**03 34 55.4**	**+1.2**
	0.3nm,0.3s,baz=183,slow=13,SNR=5.5						
AKTO	**Aktyubinsk**	**16.23**	**325**	Pn	**Pn**	**03 35 07.9**	**+0.9**
	0.2nm,0.3s,baz=126,slow=16,SNR=2.2						
ZALV	**Zalesovo Beam**	**18.23**	**24**	P	**P**	**03 35 29.7**	**-2.5**
	0.2nm,0.3s,baz=212,slow=10,SNR=3.9						
TLY	**Talaya**	**25.91**	**48**	LR	LR	03 46 41.3	
	comp=Z,31nm,18.5s,baz=326,slow=36						
FINES	**FINESS Array B**	**37.01**	**325**	P	**P**	**03 38 30.3**	**+1.9**
	1.4nm,0.8s,baz=123,slow=12,SNR=3.3						

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*DJA **13** 03:37:57.9±0.4,9°S±6°×11°9E±°,h119^{km}±6^{km},M4.0/11, mb4.2/4,MLv3.9/11*

*IDC **13** 03:37:58.6±3.4,8°.45S×119°.42E,h155^{km}±31^{km},mb3.2/4, mb1 3.2/8,mb1mx2.8/43,mbtmp3.7/8,Error ellipse: s-maj=58.0km s-min=14.9km az=59.0*

ISC 13 03:37:57.0±0.8**,8°.67S**±0°.08×**119°.23E**±0°.07**,h150^{km},n20, σ1^{s}.51**/24**,mb3.8**/3**,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.98**	**171**	P	**Pn**	**03 38 21.4**	**-0.3**
WBSI				S	**Sn**	**03 38 39.4**	**-1.2**
PLAI	**Plampang**	**1.44**	**264**	P	**Pn**	**03 38 25.8**	**-0.2**
BASI	**Baing, Sumba**	**2.04**	**139**	P	**Pn**	**03 38 33.6**	**+1.0**
TWSI	**Taliwang, Sumb**	**2.32**	**268**	P	**Pn**	**03 38 36.0**	**+0.1**
EDFI	**Ende, Flores**	**2.44**	**92**	P	**Pn**	**03 38 37.8**	**+0.3**
KAPI	**Kappang**	**3.67**	**8**	P	**Pn**	**03 38 52.4**	**-0.6**
	1.0nm,0.3s,baz=191,slow=1.8,SNR=5.6						
IGBI	**Denpasar**	**4.04**	**268**	P	**Pn**	**03 38 57.6**	**-0.2**
BATI	**Baumata**	**4.64**	**110**	P	**Pn**	**03 39 06.8**	**+1.2**
	6.5nm,0.3s,baz=284,slow=9.8,SNR=2.3						
BATI				S	**Sn**	**03 39 58.0**	**-1.1**
	23nm,0.3s,baz=217,slow=17,SNR=9.7						
BATI	**Baumata**	**4.64**	**110**	P	**Pn**	**03 39 07.1**	**+1.4**
JAGI	**Jajag, Banyuwa**	**5.02**	**272**	P	**Pn**	**03 39 09.2**	**-1.6**
SOEI	**Soe**	**5.09**	**103**	P	**Pn**	**03 39 12.8**	**+1.0**
	0.2nm27nm,0.5s						
GMJI	**Gumukmas**	**5.73**	**274**	P	**Pn**	**03 39 20.2**	**0.0**
	0.2nm19nm,1.6s						
PCJI	**Pacitan**	**7.98**	**273**	P	**Pn**	**03 39 50.4**	**+0.2**
	0.2nm35nm,1.6s						
UGM	**Wanagama**	**8.65**	**274**	P	**Pn**	**03 40 00.4**	**+1.3**
FITZ	**Fitzroy Crossi**	**11.26**	**147**	P	**Pn**	**03 40 35.0**	**+1.4**
	0.3nm,0.3s,baz=328,slow=9.3,SNR=20						
FITZ				S	**Sn**	**03 42 33.9**	**-4.3**
	0.6nm,0.3s,baz=198,slow=20,SNR=10						
WRA	**Warramunga Arr**	**18.42**	**129**	P	**P**	**03 42 02.7**	**+1.7**
	0.2nm,0.3s,baz=302,slow=12,SNR=12						
WRA				S	**S**	**03 45 22.0**	**-1.7**
	0.2nm,0.3s,baz=310,slow=26,SNR=6.1						
ASAR	**Alice Springs**	**20.49**	**138**	P	**P**	**03 42 26.1**	**+2.7**
	0.7nm,0.5s,baz=314,slow=9.1,SNR=17						
SONM	**Songino Array**	**57.39**	**350**	P	**P**	**03 47 30.2**	**+0.3**
	0.4nm,0.4s,baz=164,slow=10,SNR=5.4						
MKAR	**Makanchi Array**	**64.27**	**333**	P	**P**	**03 48 16.5**	**+0.3**
	0.6nm,0.5s,baz=139,slow=8.1,SNR=9.1						
ZALV	**Zalesovo Beam**	**68.81**	**339**	P	**P**	**03 48 43.8**	**-1.1**
	0.5nm,0.3s,baz=157,slow=4.3,SNR=5.3						

MDD 13 03:46:31.6±0.5**,27°.75N**×**18°.19W,h32^{km}**±3^{km}**, mbLg3.2**/17**,7C,Error ellipse: s-maj=5.6km s-min=3.9km az=167.0,PRXIMO TT-model: canary, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORC	**Orchilla, El H**	**0.06**	**137**	⇑P	Pb	03 46 36.5	-0.5
	SNR=18						
CORC				S	Sb	03 46 40.2	-0.6
	2μm,0.2s,SNR=7.9						
CTAD	**Las Tabladas,**	**0.10**	**92**	⇑P	Pb	03 46 36.6	-0.6
	SNR=18						
CTAD				S	Sb	03 46 40.6	-0.5
	3μm,0.1s,SNR=7.9						
CJUL	**El Julan, El H**	**0.10**	**103**	⇑P	Pn	03 46 36.8	-0.3
	266nm,0.1s,SNR=18						
CJUL				S	Sb	03 46 41.0	-0.4
	3μm,0.1s,SNR=7.9						
CTAN	**El Hierro**	**0.12**	**89**	⇑P	Pn	03 46 36.8	-0.5
	206nm,0.1s,SNR=18						
CTAN				S	Sn	03 46 40.9	+0.2
	2μm,0.1s,SNR=7.9						
CHIE	**El Hierro**	**0.21**	**97**	⇑P	Pb	03 46 37.4	-0.7
	SNR=18						
CHIE				S	Sb	03 46 40.8	-1.8
	3.7nm,0.3s,SNR=7.9						
CRST	**La Restinga, E**	**0.22**	**120**	⇑P	Pb	03 46 37.5	-0.7
	SNR=18						
CRST				S	Sb	03 46 42.3	-0.4
	3μm,0.2s,SNR=7.9						
CTIG	**El Hierro**	**0.24**	**81**	⇑P	Pb	03 46 37.9	-0.7
	SNR=18						
CTIG				S	Sb	03 46 42.9	-0.4
	329nm,0.1s,SNR=7.9						
EHIG	**Higuera**	**0.87**	**23**	P	Pn	03 46 46.0	-1.6
	22nm,0.3s,SNR=9.3						
EHIG				S	Sn	03 46 57.7	-1.6
	372nm,0.1s,SNR=27						
TBT	**Taburiente**	**0.96**	**15**	P	Pn	03 46 46.6	-2.2
	SNR=7.9						
TBT				S	Sn	03 46 58.4	-2.9
	36nm,0.2s,SNR=7.9						
EGOM	**La Gomera**	**0.96**	**65**	P	Pn	03 46 46.9	-1.9
	5.8nm,0.3s,SNR=35						
EGOM				S	Sn	03 46 58.6	-2.7
	94nm,0.1s,SNR=19						
CRAJ	**Montana Rajada**	**1.50**	**70**	P	Pn	03 46 54.7	-1.8
	4.4nm,0.3s,SNR=6.3						
CRAJ				S	Sn	03 47 11.8	-3.3
	115nm,0.2s,SNR=20						
MACI	**Morro de la Ar**	**1.57**	**71**	P	Pn	03 46 55.7	-1.7
	SNR=7.9						
MACI				S	Sn	03 47 13.6	-3.1
	39nm,0.2s,SNR=7.9						
CGUI	**Guimar, Teneri**	**1.65**	**69**	P	Pn	03 46 56.7	-1.6
	SNR=7.9						
CGUI				S	Sn	03 47 15.2	-3.2
	141nm,0.2s,SNR=7.9						
EBAJ	**Bajamar**	**1.81**	**64**	P	Pn	03 46 58.8	-1.7
	SNR=7.9						
EBAJ				S	Sn	03 47 19.5	-2.9
	17nm,0.3s,SNR=7.9						
GGC	**Guia, Gran Can**	**2.29**	**80**	P	Pn	03 47 05.5	-1.6
	SNR=7.9						
GGC				S	Sn	03 47 28.8	-5.5
	4.7nm,0.2s,SNR=7.9						
EOSO	**Osorio**	**2.36**	**82**	P	Pn	03 47 07.5	-0.6
	SNR=7.9						
EOSO				S	Sn	03 47 30.5	-5.5
	3.1nm,0.1s,SNR=7.9						
CGIN	**Giniginamar, F**	**3.66**	**82**	P	Pn	03 47 25.0	-1.0
	SNR=7.9						
CGIN				S	Sn	03 48 02.9	-5.2
	3.5nm,0.1s,SNR=7.9						
CFTV	**Fuerteventura**	**3.69**	**79**	P	Pn	03 47 24.8	-1.6
	SNR=7.9						
CFTV				S	Sn	03 48 03.4	-5.4
	6.1nm,0.1s,SNR=7.9						
CFUE	**Fuerteventura**	**3.86**	**76**	P	Pn	03 47 26.7	-2.0
	SNR=7.9						
CFUE				S	Sn	03 48 06.8	-6.1
	10nm,0.1s,SNR=7.9						

MDD 13 03:47:12.0±1.1**,27°.74N**×**18°.21W,h33^{km}**±7^{km}**,mbLg2.8**/6**, Error ellipse: s-maj=15.7km s-min=8.9km az=174.0, PRXIMO TT-model: canary,Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORC	**Orchilla, El H**	**0.07**	**121**	P	Pb	03 47 17.2	-0.5
	68nm,0.2s,SNR=7.9						
CORC				S	Sb	03 47 20.6	-0.9
	259nm,0.2s,SNR=7.9						
CTAD	**Las Tabladas,**	**0.11**	**84**	P	Pb	03 47 17.3	-0.6
	85nm,0.1s,SNR=7.9						
CTAD				S	Sb	03 47 21.5	-0.5
	444nm,0.1s,SNR=7.9						
CJUL	**El Julan, El H**	**0.11**	**94**	P	Pb	03 47 17.5	-0.6
	14nm,0.2s,SNR=7.9						
CJUL				S	Sb	03 47 21.8	-0.5
	260nm,0.1s,SNR=7.9						
CTAN	**El Hierro**	**0.14**	**83**	P	Pb	03 47 17.4	-0.7
	54nm,0.1s,SNR=7.9						
CTAN				S	Sb	03 47 21.7	-0.6
	278nm,0.1s,SNR=7.9						
CHIE	**El Hierro**	**0.22**	**93**	P	Pn	03 47 18.2	-0.1
	0.7nm,0.2s,SNR=4.0						
CHIE				S	Sn	03 47 21.7	+0.8
	0.7nm,0.1s,SNR=7.9						
CRST	**La Restinga, E**	**0.22**	**115**	S	Sb	03 47 23.1	-0.4
	254nm,0.1s,SNR=7.9						
CTIG	**El Hierro**	**0.26**	**79**	P	Pn	03 47 18.6	-0.6
	9.0nm,0.1s,SNR=4.0						
CTIG				S	Sb	03 47 23.8	-0.4
	42nm,0.1s,SNR=7.9						
EHIG	**Higuera**	**0.89**	**23**	S	Sn	03 47 38.3	-1.7
	50nm,0.1s,SNR=7.9						

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*CNRM **13** 03:57:00.4,36°.13N×0°.56W,h0^{km},ml2.5*

*MDD **13** 03:57:01.7±2.1,36°.12N×0°.35W,h0^{km},mbLg1.7/5,Error ellipse: s-maj=19.9km s-min=11.0km az=152.0,PRXIMO*

ISC 13 03:57:00.1±1.4**,36°.16N**±0°.05×**0°.34W**±0°.07**,h10^{km},n13, σ1^{s}.02**/25**,Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CART	**Cartagena**	**1.52**	**340**	P	**Pg**	**03 57 29.0**	**-0.1**
CART				S	**Sg**	**03 57 48.6**	**-0.3**
ENIJ	**Nijar**	**1.71**	**299**	P	**Pb**	**03 57 31.5**	**-0.1**
	0.5nm,0.1s,SNR=7.9						
ENIJ				S	**Sn**	**03 57 52.8**	**+1.0**
	1.6nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**1.82**	**337**	P	**Pb**	**03 57 33.5**	**-0.1**
	0.1nm,0.2s,SNR=7.9						
EMUR				S	**Sb**	**03 57 56.4**	**-0.1**
	1.2nm,0.2s,SNR=5.9						
EBER	**Berja**	**2.18**	**290**	P	**Pn**	**03 57 38.0**	**+1.4**
	0.3nm,0.1s,SNR=6.7						
EBER				S	**Sn**	**03 58 04.4**	**+0.7**
	0.7nm,0.1s,SNR=7.9						
GOG	**Mont Gurugu**	**2.36**	**247**	P	**Pn**	**03 57 38.6**	**-0.3**
GOG				S	**Sn**	**03 58 07.3**	**-0.7**
AFON	**Font Roja**	**2.50**	**356**	S	**Sn**	**03 58 12.7**	**+1.2**
	1.0nm,0.1s,SNR=4.0						
JBK	**JBK**	**2.58**	**226**	P	**Pn**	**03 57 42.5**	**+0.4**
JBK				S	**Sn**	**03 58 13.6**	**0.0**
SESP	**Santiago Espad**	**2.63**	**319**	P	**Pb**	**03 57 46.9**	**-0.5**
	5.4nm,0.4s,SNR=7.9						
SESP				S	**Sb**	**03 58 18.4**	**-1.4**
	2.3nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**2.66**	**339**	P	**Pb**	**03 57 46.7**	**-1.1**
	0.1nm,0.2s,SNR=10						
ETOB				S	**Sb**	**03 58 17.9**	**-2.6**
	1.1nm,0.2s,SNR=7.9						
EQES	**Quesada**	**2.73**	**308**	P	**Pb**	**03 57 48.7**	**-0.4**
	0.5nm,0.1s,SNR=8.4						
EQES				S	**Sb**	**03 58 22.4**	**-0.3**
	0.5nm,0.1s,SNR=7.9						
ELGU	**Los Guajares,**	**2.74**	**286**	P	**Pn**	**03 57 45.6**	**+1.4**
	0.6nm,0.3s,SNR=7.9						
ELGU				S	**Sn**	**03 58 18.0**	**+0.6**
	1.2nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.16**	**25**	P	**Pn**	**03 57 51.2**	**+1.4**
	0.2nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**03 58 27.2**	**-0.3**
	0.5nm,0.1s,SNR=4.0						
AKLM	**AKL**	**3.32**	**241**	P	**Pn**	**03 57 53.8**	**+1.7**
AKLM				S	**Sn**	**03 58 32.1**	**+0.4**

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*IDC **13** 04:24:27.1±1.8,43°.15N×82°.21E,h0^{km},mb4.0/4, mb1 3.8/9,mb1mx3.5/55,mbtmp3.7/9,ML3.1/5,Error ellipse: s-maj=27.1km s-min=15.9km az=126.0*

*NEIC **13** 04:24:31.8±1.3,43°.33N±0°.09×82°.4E±0°.1,h10^{km}±2^{km}, mb4.3/6,Error ellipse: s-maj=20.1km s-min=9.5km az=127.0*

*SOME **13** 04:24:33.1,43°.42N×81°.97E,h10^{km}*

*NNC **13** 04:24:34.6±1.0,43°.58N×81°.94E,h0^{km},mb4.3,mpv4.0, Error ellipse: s-maj=9.7km s-min=3.9km az=137.0*

ISC 13 04:24:30.7±1.5**,43°.41N**±0°.05×**82°.28E**±0°.05**,h6^{km}**±9^{km}**, n77,**σ**2^{s}.22**/105**,mb4.2**/6**,11C-6D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.40**	**272**	*e*P	**Pn**	**04 24 57.0**	**+0.1**
	184nm,0.2s						
KTMS				*e*S	**Sg**	**04 25 14.6**	**-1.1**
	963nm,0.3s						
KTMS	**Ketmen**	**1.40**	**272**	P	**Pn**	**04 24 57.0**	**+0.1**
	184nm,0.2s						
KTMS				S	**Sg**	**04 25 14.6**	**-1.1**
	963nm,0.3s						
PDGK	**Podgornoye**	**2.03**	**269**	P	**Pn**	**04 25 07.1**	**+1.6**
	191nm,0.2s						
PDGK				S	**Sn**	**04 25 32.8**	**+1.5**
	389nm,0.3s						
PDGK	**Podgornoye**	**2.03**	**269**	⇑Pn	**Pn**	**04 25 06.5**	**+0.9**
	114nm,0.3s						
PDGK				⇑Sn	**Sn**	**04 25 32.8**	**+1.5**
	465nm,0.5s						
SHLS	**Shalkode**	**2.07**	**264**	*e*P	**Pn**	**04 25 02.9**	**-3.2**
	195nm,0.4s						
SHLS				*e*S	**Sn**	**04 25 24.9**	**-7.3**
	723nm,0.4s						
SHLS	**Shalkode**	**2.07**	**264**	P	**Pn**	**04 25 02.9**	**-3.2**
	195nm,0.4s						
SHLS				S	**Sn**	**04 25 25.3**	**-7.0**
	723nm,0.4s						
UZB	**Uzynbulak**	**2.39**	**265**	*e*P	**Pn**	**04 25 12.6**	**+2.1**
	54nm,0.3s						
UZB				*e*S	**Sn**	**04 25 41.3**	**+1.1**
	207nm,0.7s						
UZB	**Uzynbulak**	**2.39**	**265**	Pg	**Pn**	**04 25 12.6**	**+2.1**
	54nm,0.3s						
UZB				Lg	Lg	04 25 41.3	
	207nm,0.7s						
KAPS	**Kapalarasan**	**2.81**	**313**	*e*P	**Pb**	**04 25 21.6**	**+0.3**
	23nm,0.2s						
KAPS				*e*S	**Sb**	**04 25 55.9**	**0.0**
	130nm,0.2s						
KAPS	**Kapalarasan**	**2.81**	**313**	Pg	**Pb**	**04 25 21.6**	**+0.3**
	23nm,0.2s						
KAPS				Lg	Lg	04 25 55.9	
	130nm,0.2s						
ZHN	**Zhinishke**	**2.81**	**266**	*e*P	**Pb**	**04 25 20.9**	**-0.5**
	56nm,0.2s						
ZHN				*e*S	**Sb**	**04 25 55.0**	**-1.2**
	71nm,0.4s						
ZHN	**Zhinishke**	**2.81**	**266**	Pg	**Pb**	**04 25 20.9**	**-0.5**
	56nm,0.2s						
ZHN				Lg	Lg	04 25 55.0	
	71nm,0.4s						
BLB	**Baldybastay**	**2.83**	**285**	Pg	**Pb**	**04 25 20.7**	**-1.1**
	22nm,0.2s						
BLB				Lg	Lg	04 25 53.5	
	155nm,0.3s						
SATY	**Saty**	**2.85**	**264**	*e*P	**Pb**	**04 25 22.4**	**+0.4**
	53nm,0.3s						
SATY				*e*S	**Sb**	**04 25 57.6**	**+0.5**
	139nm,0.2s						
SATY	**Saty**	**2.85**	**264**	Pg	**Pb**	**04 25 22.4**	**+0.4**
	53nm,0.3s						

SATY				Lg	Lg	04 25 57.7	
	139nm,0.2s						
KURS	**Kuram**	**2.99**	**273**	*e*P	**Pb**	**04 25 25.4**	**+1.1**
	9.0nm,0.3s						
KURS				*e*S	**Sb**	**04 26 02.5**	**+1.3**
	46nm,0.5s						
KURS	**Kuram**	**2.99**	**273**	Pg	**Pb**	**04 25 25.4**	**+1.1**
	9.0nm,0.3s						
KURS				Lg	Lg	04 26 02.5	
	46nm,0.5s						
TDK	**Taldyqorghan**	**3.20**	**301**	*e*P	**Pb**	**04 25 27.6**	**-0.4**
	48nm,0.2s						
TDK				*e*S	**Sb**	**04 26 07.1**	**-0.1**
	188nm,0.5s						
TDK	**Taldyqorghan**	**3.20**	**301**	Pg	**Pb**	**04 25 27.6**	**-0.4**
	48nm,0.2s						
TDK				Lg	Lg	04 26 07.1	
	188nm,0.5s						
ARXS	**Arharly**	**3.32**	**285**	*e*P	**Pb**	**04 25 31.1**	**+1.1**
	25nm,0.5s						
ARXS				*e*S	**Sb**	**04 26 12.4**	**+1.8**
	89nm,0.5s						
ARXS	**Arharly**	**3.32**	**285**	Pg	**Pb**	**04 25 31.6**	**+1.6**
	25nm,0.5s						
ARXS				Lg	Lg	04 26 12.4	
	89nm,0.5s						
MK31	**Makanchi Array**	**3.38**	**0**	⇓Pn	**Pn**	**04 25 26.6**	**+2.6**
	3.3nm,0.2s,baz=186,slow=13,SNR=463						
MK31				⇓Sn	**Sn**	**04 26 05.7**	**+1.3**
	12nm,0.3s,baz=184,slow=28,SNR=5.7						
MK31				⇓Lg	Lg	04 26 21.2	
	37nm,0.4s,baz=181,slow=29,SNR=7.2						
MK31	**Makanchi Array**	**3.38**	**0**		**Pn**	**04 25 26.0**	**+2.0**
MKAR	**Makanchi Array**	**3.38**	**0**	Pn	**Pn**	**04 25 26.7**	**+2.7**
	1.9nm,0.3s,baz=185,slow=15,SNR=82						
MKAR				Sn	**Sn**	**04 26 07.0**	**+2.6**
	23nm,0.3s,baz=184,slow=28,SNR=16						
MKAR				Lg	Lg	04 26 24.3	
	32nm,0.3s,baz=180,slow=26,SNR=13						
MKAR	**Makanchi Array**	**3.38**	**0**		**Pn**	**04 25 26.0**	**+2.0**
MAKZ	**Makanchi**	**3.40**	**357**	⇓Pn	**Pn**	**04 25 26.9**	**+2.6**
	4.2nm,0.4s						
MAKZ				⇓Sn	**Sn**	**04 26 07.3**	**+2.3**
	22nm,0.3s						
MAKZ	**Makanchi**	**3.40**	**357**		**Pn**	**04 25 26.7**	**+2.4**
TARG	**Taragay, Kyrgy**	**3.71**	**245**		**Pn**	**04 25 30.1**	**+1.3**
KOTS	**Kotyrbulak**	**3.77**	**269**	*e*P	**Pb**	**04 25 38.6**	**+0.9**
	39nm,0.5s						
KOTS				*e*S	**Sb**	**04 26 25.1**	**+1.4**
	265nm,0.4s						
KOTS	**Kotyrbulak**	**3.77**	**269**	Pg	**Pb**	**04 25 38.6**	**+0.9**
	39nm,0.5s						
KOTS				Lg	Lg	04 26 25.2	
	265nm,0.4s						
MDOK	**Medeo**	**3.82**	**268**	*e*P	**Pb**	**04 25 41.0**	**+2.4**
	19nm,0.4s						
MDOK				*e*S	**Sb**	**04 26 29.3**	**+4.0**
	26nm,0.3s						
MDOK	**Medeo**	**3.82**	**268**	Pg	**Pb**	**04 25 41.0**	**+2.4**
	19nm,0.4s						
MDOK				Lg	Lg	04 26 29.3	
	26nm,0.3s						
TNSS	**Tian-Shan**	**3.91**	**266**	*e*P	**Pb**	**04 25 39.8**	**-0.5**
	6.7nm,0.3s						
TNSS				*e*S	**Sb**	**04 26 27.9**	**-0.1**
	19nm,0.6s						
TNSS	**Tian-Shan**	**3.91**	**266**	Pg	**Pb**	**04 25 39.8**	**-0.5**
	6.7nm,0.3s						
TNSS				Lg	Lg	04 26 28.7	
	19nm,0.6s						
AAA	**Alma-Ata**	**3.92**	**269**	*e*P	**Pb**	**04 25 40.6**	**+0.4**
	25nm,0.1s						
AAA				*e*S	**Sb**	**04 26 28.9**	**+1.1**
	41nm,0.2s						
AAA	**Alma-Ata**	**3.92**	**269**	Pg	**Pb**	**04 25 40.6**	**+0.4**
	25nm,0.1s						
AAA				Lg	Lg	04 26 28.9	
	41nm,0.2s						
KDJ	**Kajisay**	**3.96**	**253**	Pn	**Pn**	**04 25 33.7**	**+1.5**
KTBS	**Karatobe**	**4.08**	**276**	*e*P	**Pb**	**04 25 44.4**	**+1.5**
	12nm,0.4s						
KTBS				*e*S	**Sb**	**04 26 35.8**	**+3.4**
	88nm,0.5s						
KTBS	**Karatobe**	**4.08**	**276**	Pg	**Pb**	**04 25 44.4**	**+1.5**
	12nm,0.4s						
KTBS				Lg	Lg	04 26 35.8	
	88nm,0.5s						
IZV	**Izvestkoviy**	**4.16**	**267**	*e*P	**Pb**	**04 25 45.0**	**+0.7**
	15nm,0.5s						
IZV				*e*S	**Sb**	**04 26 37.4**	**+2.6**
	84nm,0.7s						
IZV	**Izvestkoviy**	**4.16**	**267**	Pg	**Pb**	**04 25 45.0**	**+0.7**
	15nm,0.5s						
IZV				Lg	Lg	04 26 37.4	
	84nm,0.7s						
MTBS	**Maitube**	**4.28**	**268**	*e*P	**Pb**	**04 25 49.0**	**+2.6**
	12nm,0.4s						
MTBS				*e*S	**Sb**	**04 26 44.3**	**+6.0**
	39nm,0.5s						
MTBS	**Maitube**	**4.28**	**268**	Pg	**Pb**	**04 25 48.9**	**+2.6**
	12nm,0.4s						
KUU	**Kurty**	**4.33**	**278**	*e*P	**Pb**	**04 25 49.5**	**+2.3**
	7.0nm,0.3s						
KUU				*e*S	**Sb**	**04 26 44.6**	**+4.8**
	74nm,0.5s						
KUU	**Kurty**	**4.33**	**278**	Pg	**Pb**	**04 25 49.5**	**+2.3**
	7.0nm,0.3s						
KUU				Lg	Lg	04 26 44.6	
	74nm,0.5s						
ZSN	**Zaisan**	**4.43**	**23**	*e*P	**Pg**	**04 25 53.8**	**-1.7**
	6.5nm,0.3s						
ZSN				*e*S	**Sg**	**04 26 52.3**	**-0.6**
	99nm,0.8s						
ZSN	**Zaisan**	**4.43**	**23**	Pg	**Pg**	**04 25 55.2**	**-0.3**
	14nm,0.2s						
KST	**Kastek**	**4.63**	**268**	*e*P	**Pb**	**04 25 55.5**	**+3.2**
	29nm,0.8s						
KST				*e*S	**Sb**	**04 26 54.1**	**+5.8**
	32nm,0.6s						
KST	**Kastek**	**4.63**	**268**	Pg	**Pb**	**04 25 55.5**	**+3.2**
	29nm,0.8s						
KST				Lg	Lg	04 26 54.1	
	32nm,0.6s						
BOOM	**Boomskoye usch**	**4.74**	**261**		**Pn**	**04 25 44.9**	**+2.0**
TKM2	**Tokmak 2**	**4.91**	**267**	⇑Pn	**Pn**	**04 25 47.1**	**+1.9**
	3.7nm,0.5s						
TKM2				⇑Pg	**Pg**	**04 26 04.7**	**0.0**
	9.5nm,0.7s						
TKM2				⇑Lg	Lg	04 27 03.3	
	30nm,0.7s						
SGDS	**Sogindy**	**5.57**	**273**	Pg	**Pb**	**04 26 11.3**	**+3.0**
	2.0nm,0.4s						
SGDS				Lg	Lg	04 27 21.2	
	7.6nm,0.5s						
FRU1	**Bishkek**	**5.63**	**266**		**Pn**	**04 25 58.4**	**+3.4**
AAK	**Ala-Archa**	**5.76**	**265**	Pn	**Pn**	**04 25 56.2**	**-0.6**
	0.7nm,0.3s,baz=117,slow=6.5,SNR=6.3						
AAK				Lg	Lg	04 27 29.9	
	1.2nm,0.3s,baz=50,slow=20,SNR=5.6						
AAK	**Ala-Archa**	**5.76**	**265**	⇑Pg	**Pg**	**04 26 17.7**	**-3.2**
	7.9nm,1.0s						
AAK				⇓Lg	Lg	04 27 28.0	
	21nm,0.8s						
AAK	**Ala-Archa**	**5.76**	**265**	Pn	**Pn**	**04 25 58.7**	**+1.9**
KURBB	**Kurchatov Arra**	**7.65**	**342**	Pn	**Pn**	**04 26 23.0**	**+0.4**
	0.2nm,0.3s,baz=165,slow=12,SNR=1.9						
KURBB				Sn	**Sn**	**04 27 48.0**	**-1.5**
	0.4nm,0.3s,baz=158,slow=23,SNR=11						
KURBB				Lg	Lg	04 28 39.8	
	0.4nm,0.3s,baz=353,slow=9.8,SNR=5.7						
KURBB	**Kurchatov Arra**	**7.65**	**342**	⇑Pn	**Pn**	**04 26 23.5**	**+0.9**
	2.5nm,0.5s						
KURBB				⇑Sn	**Sn**	**04 27 47.4**	**-2.2**
	26nm,0.8s						
KURK	**Kurchatov**	**7.72**	**342**	⇑Pn	**Pn**	**04 26 23.5**	**0.0**
	1.6nm,0.5s						
KURK				⇑Sn	**Sn**	**04 27 48.0**	**-3.1**
	9.7nm,0.7s						
KURK	**Kurchatov**	**7.72**	**342**	Pn	**Pn**	**04 26 24.8**	**+1.3**
OTUK	**Ortayu**	**8.45**	**308**	⇑Pn	**Pn**	**04 26 32.6**	**-1.1**
	1.5nm,0.8s						
KK05	**Karatay Array**	**8.58**	**272**	Pg	Pg	04 27 04.8	-10
KK05				Lg	Lg	04 29 02.5	
KKAR	**Karatay Array**	**8.59**	**272**	Pn	**Pn**	**04 26 38.0**	**+2.4**
ZAA0	**Zalesovo Array**	**10.68**	**8**	Pn	**Pn**	**04 27 05.8**	**+1.8**
ZALV	**Zalesovo Beam**	**10.68**	**8**	Pn	**Pn**	**04 27 04.9**	**+0.9**
	0.2nm,0.3s,baz=186,slow=11,SNR=2.2						
ZALV	**Zalesovo Beam**	**10.68**	**8**	Pn	**Pn**	**04 27 04.7**	**+0.7**
NIL	**Nilore**	**12.03**	**219**	Pn	**Pn**	**04 27 22.8**	**+0.2**
ABKAR	**Akbulak array**	**16.46**	**299**	Pn	**Pn**	**04 28 23.5**	**+1.4**
ABKAR				IAmb	IAmb	04 28 24.3	
	comp=Z,6.9nm,1.6s						
SONM	**Songino Array**	**17.42**	**67**	P	**P**	**04 28 35.2**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=265,slow=11,SNR=9.2						
USA0B	**Ussuriysk Arra**	**35.44**	**71**	P	**P**	**04 31 26.5**	**-1.1**
USA0B				IAmb	IAmb	04 31 32.2	
	comp=Z,5.4nm,0.7s						
RAYN	**Ar Rayn**	**36.14**	**249**	P	**P**	**04 31 34.6**	**+0.8**
RAYN				IAmb	IAmb	04 31 44.3	
	comp=Z,13nm,1.9s						
FINES	**FINESS Array B**	**37.31**	**319**	P	**P**	**04 31 41.7**	**-1.5**
	comp=Z,2.4nm,1.0s,baz=117,slow=8.3,SNR=1.8						
ARCES	**ARCESS Array B**	**38.60**	**332**	P	**P**	**04 31 53.1**	**-1.0**
	comp=Z,6.7nm,1.1s,baz=101,slow=9.3,SNR=4.1						
NB2	**NORSAR Subarra**	**44.49**	**319**	P	**P**	**04 32 41.6**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=79,slow=8.6						
NOA	**NORSAR Array B**	**44.49**	**319**	P	**P**	**04 32 41.5**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=76,slow=7.6,SNR=4.4						
TORD	**Torodi Ar. Bea**	**74.28**	**273**	P	**P**	**04 36 06.3**	**-2.7**
	comp=Z,0.7nm,0.5s,baz=43,slow=5.1,SNR=8.1						
TORD	**Torodi Ar. Bea**	**74.28**	**273**	IAmb	IAmb	04 37 18.7	
	comp=Z,6.4nm,1.8s						

IDC 13 04:26:06.8±3.9**, 5°.24S**×**151°.32E, h0^{km}, mb3.4**/2**, mb1 3.8**/2**, mb1mx3.4**/37**, mbtmp3.5**/2**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.5**/22**, Error ellipse: s-maj=142.3km s-min=53.6km az=117.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**9.51**	**116**	LR	LR	04 31 46.5	
	comp=Z,58nm,19.1s,baz=350,slow=36						
WRA	**Warramunga Arr**	**22.06**	**227**	P	P	04 31 02.8	-0.7
	1.0nm,0.7s,baz=53,slow=11,SNR=12						
ASAR	**Alice Springs**	**24.84**	**221**	P	P	04 31 31.7	+0.5
	0.9nm,0.7s,baz=59,slow=9.3,SNR=16						
TORD	**Torodi Ar. Bea**	**149.03**	**287**	PKPbc	PKPbc	04 45 57.4	-0.7
	0.3nm,0.6s,baz=60,slow=4.8,SNR=1.4						

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*IDC **13** 04:26:57.4±0.7, 3°.46N×127°.28E, h0^{km}, mb4.0/10, mb1 4.0/11, mb1mx3.8/45, mbtmp4.0/11, ML3.8/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/38, Error ellipse: s-maj=46.4km s-min=14.2km az=68.0*

*NEIC **13** 04:26:59.3±2.0, 3°.46N±0°.02×127°.37E±0°.10, h10^{km}±1^{km}, mb4.3/12, Error ellipse: s-maj=16.1km s-min=4.1km az=93.0*

*DJA **13** 04:26:59.5±1.4, 4°N±17°×12°8E±1°2, h12^{km}±16^{km}, M4.4/10, mb4.5/5, mB5.1/4, MLv4.3/10, Mw(mB)4.4/4*

ISC 13 04:26:59.2±0.5**, 3°.55N**±0°.06×**127°.51E**±0°.09**, h10^{km}, n43,** σ**1^{s}70**/46**, mb4.2**/15**, 2C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.98**	**274**	P	**Pn**	**04 27 33.5**	**+0.6**
TNTI	**Ternate**	**2.77**	**183**		**Pn**	**04 27 41.1**	**-2.6**
TNTI	**Ternate**	**2.77**	**183**	P	**Pn**	**04 27 43.9**	**+0.2**
DAV	**Davao City (W)**	**3.99**	**331**	Pn	**Pn**	**04 28 02.0**	**+1.5**
KCP	**Kidapawan**	**4.20**	**325**	⇑*e*P	**Pn**	**04 28 06.0**	**+2.6**
KCP				*e*S	**Sb**	**04 29 06.3**	**+2.3**
BUKP	**Musuan**	**4.94**	**331**	⇑*e*P	**Pb**	**04 28 28.4**	**+2.4**
BUKP				*e*S	**Sb**	**04 29 20.1**	**-5.4**
GTOI	**Gorontalo**	**5.35**	**237**	P	**Pn**	**04 28 21.0**	**+1.8**
	0.1nm224nm16nm,0.5s						
SANI	**Sanana**	**5.77**	**195**	P	**Pn**	**04 28 24.9**	**-0.1**
	0.2nm1µm25nm,0.6s						
SANI	**Sanana**	**5.77**	**195**	P	**Pn**	**04 28 26.1**	**+1.1**
SIJI	**Sorong**	**5.78**	**139**	Pn	**Pn**	**04 28 26.9**	**+1.8**
	2.3nm,0.3s,baz=344,slow=16,SNR=4.4						
SIJI				Sn	**Sn**	**04 29 36.5**	**+5.0**
	0.8nm,0.3s,baz=37,slow=20,SNR=1.2						
SIJI				LR	LR	04 30 56.5	
	comp=Z,97nm,21.2s,baz=128,slow=41						
MRSI	**Marisa**	**6.35**	**241**	P	**Pn**	**04 28 35.2**	**+2.2**
	0.6nm2µm163nm,0.6s						
TOLI2	**Tolitoli**	**7.15**	**250**		**Pn**	**04 28 42.7**	**-1.3**
TOLI2	**Tolitoli**	**7.15**	**250**	P	**Pn**	**04 28 44.5**	**+0.6**
AAI	**Ambon**	**7.22**	**175**	P	**Pn**	**04 28 45.7**	**+0.7**
FAKI	**Fak Fak**	**7.98**	**144**	P	Pn	04 28 59.8	+4.4
DRS	**Darwin Rock St**	**16.23**	**168**	P	**P**	**04 30 49.2**	**-1.4**
KNRA	**Kununurra**	**19.15**	**176**	P	**Pn**	**04 31 24.1**	**+0.4**
TPUB	**Ta-pu**	**20.73**	**342**	P	**P**	**04 31 39.5**	**-0.6**
SSLB	**Suanglung**	**21.09**	**343**	P	**P**	**04 31 44.6**	**+0.6**
YHNB	**Yeheng**	**21.81**	**345**	P	**P**	**04 31 53.1**	**+1.3**
WB0	**Warramunga Arr**	**24.14**	**164**	P	**P**	**04 32 13.6**	**-2.0**
WRAB	**Tennant Creek**	**24.29**	**164**	P	**P**	**04 32 16.9**	**-0.1**
WRA	**Warramunga Arr**	**24.29**	**164**	P	**P**	**04 32 14.9**	**-2.1**
	1.1nm,0.5s,baz=345,slow=11,SNR=13						
WB2	**Warramunga Arr**	**24.30**	**164**	P	**P**	**04 32 15.8**	**-1.3**
WB2				IAmb	IAmb	04 32 29.4	
	comp=Z,4.0nm,0.7s						
MBWA	**Marble Bar**	**25.72**	**197**	P	**P**	**04 32 29.5**	**-0.4**
PSA00	**Pilbara Seismi**	**26.07**	**196**	P	**P**	**04 32 32.3**	**-0.9**
PSA00				IAmb	IAmb	04 32 33.9	
	comp=Z,4.7nm,0.9s						
ASAR	**Alice Springs**	**27.76**	**167**	P	**P**	**04 32 49.4**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=347,slow=8.4,SNR=6.0						
ASAR				PcP	**PcP**	**04 36 04.4**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=346,slow=2.7,SNR=1.9						
KSRS	**Korea Array**	**33.74**	**1**	P	**P**	**04 33 42.0**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=177,slow=9.6,SNR=4.8						
KSRS				LR	LR	04 48 06.4	
	comp=Z,15nm,21.8s,baz=75,slow=38						
STKA	**Stephens Creek**	**37.69**	**160**	P	**P**	**04 34 13.9**	**-1.1**
	comp=Z,1.1nm,0.5s,baz=335,slow=12,SNR=4.6						
BJT	**Baijiatuau**	**37.73**	**346**	P	**P**	**04 34 14.8**	**-0.3**
SHL	**Shillong**	**40.61**	**306**	P	**P**	**04 34 38.3**	**-1.5**
SHL				IAmb	IAmb	04 34 38.6	
	comp=Z,8.7nm,1.2s						
ULN	**Ulaanbaatar**	**47.53**	**341**	P	**P**	**04 35 33.7**	**-1.2**
ULN				IAmb	IAmb	04 35 38.9	
	comp=Z,2.6nm,0.7s						
SONM	**Songino Array**	**47.72**	**341**	P	**P**	**04 35 36.1**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=152,slow=8.8,SNR=11						
SONM	**Songino Array**	**47.72**	**341**	P	**P**	**04 35 36.5**	**+0.1**
SONM				IAmb	IAmb	04 35 43.8	
	comp=Z,7.7nm,1.8s						
PETK	**Petropavlovsk-**	**55.30**	**22**	P	**P**	**04 36 33.0**	**+0.1**
	comp=Z,3.4nm,0.8s,baz=79,slow=7.9,SNR=4.0						
MKAR	**Makanchi Array**	**58.15**	**325**	P	**P**	**04 36 52.9**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=120,slow=8.0,SNR=13						
ZALV	**Zalesovo Beam**	**61.10**	**333**	P	**P**	**04 37 12.8**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=134,slow=8.5,SNR=4.6						
ZALV	**Zalesovo Beam**	**61.10**	**333**	P	**P**	**04 37 11.9**	**-1.5**
KURK	**Kurchatov**	**62.31**	**327**	P	**P**	**04 37 21.0**	**-0.7**
BRVK	**Borovoye**	**67.97**	**327**	P	**P**	**04 37 58.0**	**-0.4**
ABKAR	**Akbulak array**	**72.78**	**321**	P	**P**	**04 38 27.8**	**-0.1**
ABKAR				IAmb	IAmb	04 38 28.4	
	comp=Z,2.6nm,0.8s						
AKTO	**Aktyubinsk**	**74.28**	**322**	P	**P**	**04 38 36.4**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=79,slow=7.4,SNR=9.6						
ARU	**Arti**	**75.50**	**328**	P	**P**	**04 38 42.9**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=90,slow=20,SNR=3.8						

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*ANF **13** 04:36:14.0±1.6, 32°.39N×115°.25W, h5^{km}, ML2.9/10, Error ellipse: s-maj=11.7km s-min=6.4km az=163.0*

*NEIC **13** 04:36:15.8±1.9, 32°.38N±0°.04×115°.28W±0°.04, h9^{km}±8^{km}, Error ellipse: s-maj=6.8km s-min=3.9km az=214.0*

*PAS **13** 04:36:16.1±1.8, 32°.40N±0°.04×115°.26W±0°.05, h5^{km}±7^{km}, ML3.0/44, ML3.1/52(NEIC), Error ellipse: s-maj=6.9km s-min=5.0km az=212.0*

*MEX **13** 04:36:16.9±1.1, 32°.46N×115°.18W, h5^{km}±15^{km}, MD4.0*

ISC 13 04:36:15.9±0.9**, 32°.43N**±0°.03×**115°.26W**±0°.02**, h9^{km}**±5^{km}**, n54,** σ**1^{s}43**/68**, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	**Cerro Prieto**	**0.04**	**258**		**Pg**	**04 36 17.6**	**-0.1**
MBIG	**Mexicali**	**0.06**	**111**		**Pg**	**04 36 17.2**	**-0.7**
MBIG					**Sg**	**04 36 19.3**	**0.0**
MBIG	**Mexicali**	**0.06**	**111**	*i* P	**Pg**	**04 36 17.2**	**-0.7**
MBIG				*i* S	**Sg**	**04 36 19.3**	**0.0**
GUVIX	**Guadalupe Vict**	**0.20**	**128**	Pg	**Pg**	**04 36 19.8**	**-0.2**
UABX	**UABC, Campus M**	**0.25**	**323**	Pg	**Pg**	**04 36 21.7**	**+0.6**
SWSC	**Sam W. Stewart**	**0.69**	**319**	P	**Pg**	**04 36 29.1**	**-0.1**
	baz=140,SNR=26						
SWSC				S	**Sg**	**04 36 39.4**	**+1.2**
	baz=140						
SUP	**Superstition M**	**0.71**	**318**		**Pg**	**04 36 29.5**	**-0.1**
RMX	**La Rumorosa**	**0.71**	**284**		**Pg**	**04 36 29.1**	**-0.6**
GLA	**Glamis**	**0.72**	**30**		**Pg**	**04 36 29.6**	**-0.2**
GLA				IAML		04 36 42.3	
	comp=N,1µm,0.5s						
GLA				IAML		04 36 42.3	
	comp=E,992nm,0.5s						
GLA	**Glamis**	**0.72**	**30**	P	**Pg**	**04 36 29.6**	**-0.2**
	baz=209,SNR=136						
GLA				S	**Sg**	**04 36 40.2**	**+0.9**
	baz=209						
IKP	**In-Ko-Pah, Jac**	**0.75**	**287**	P	**Pg**	**04 36 30.4**	**0.0**
	baz=109,SNR=32						
IKP				S	**Sg**	**04 36 41.1**	**+0.9**
	baz=109						
MONP2	**Monument Peak**	**1.08**	**296**	P	**Pg**	**04 36 35.3**	**-1.5**
	baz=116,SNR=48						
MONP2				Sb	**Sg**	**04 36 50.6**	**-0.2**
	baz=116						
CBX	**Cerro Bola**	**1.19**	**265**		**Pg**	**04 36 38.0**	**-0.8**
CBX					**Sg**	**04 36 53.4**	**-1.0**
CBX	**Cerro Bola**	**1.19**	**265**	IAML		04 37 01.9	
	comp=N,200nm,0.8s						
CBX	**Cerro Bola**	**1.19**	**265**	*i* P	**Pg**	**04 36 38.0**	**-0.8**
CBX				*i* S	**Sg**	**04 36 53.4**	**-1.0**
TJIG	**Tijuana**	**1.20**	**271**		**Pg**	**04 36 37.9**	**-1.0**
TJIG					**Sg**	**04 36 53.2**	**-1.2**
TJIG	**Tijuana**	**1.20**	**271**	*i* P	**Pg**	**04 36 37.9**	**-1.0**
TJIG				*i* S	**Sg**	**04 36 53.2**	**-1.2**
BAR	**Barrett**	**1.22**	**282**	Pg	**Pg**	**04 36 38.1**	**-1.2**
BC3	**Big Chuckawall**	**1.23**	**353**	P	**Pg**	**04 36 37.5**	**-2.1**
	baz=173,SNR=41						
CCX	**Cicese**	**1.31**	**245**		**Pn**	**04 36 40.6**	**+0.2**
CCX				IAML		04 36 59.4	
	comp=E,294nm,0.8s						
SPIG	**San Pedro Mart**	**1.39**	**187**		**Pn**	**04 36 39.8**	**-1.9**
SPIG					**Sn**	**04 37 04.5**	**+4.2**
SPIG	**San Pedro Mart**	**1.39**	**187**	*i* P	**Pn**	**04 36 39.8**	**-1.9**
SPIG				*i* S	**Sn**	**04 37 04.5**	**+4.2**
SFX	**San Felipe**	**1.43**	**166**	Pn	**Pn**	**04 36 42.3**	**+0.4**
TJX	**Tijuana**	**1.52**	**274**		**Pn**	**04 36 43.0**	**-0.2**
PFO	**Pinyon Flats O**	**1.55**	**320**		**Pn**	**04 36 41.5**	**-2.3**
PFO	**Pinyon Flats O**	**1.55**	**320**	P	**Pn**	**04 36 41.4**	**-2.3**
	baz=140,SNR=11						
PFO				S	**Sn**	**04 37 01.3**	**-2.8**
	baz=140						
109C	**Camp Elliot, M**	**1.62**	**287**	Pn	**Pn**	**04 36 45.4**	**+0.8**
109C				IAML		04 37 08.0	
	comp=E,97nm,0.3s						
109C				IAML		04 37 09.2	
	comp=N,128nm,0.6s						
109C	**Camp Elliot, M**	**1.62**	**287**	Pb	**Pn**	**04 36 45.2**	**+0.6**
	baz=107						
109C				Sb	**Sn**	**04 37 07.0**	**+1.4**
	baz=107						
BELC	**Belle Mtn. Jos**	**1.69**	**339**	S	**Sn**	**04 37 04.7**	**-2.7**
	baz=159						
PDMCI	**Parker Dam,Lak**	**2.09**	**26**	Sb	**Sb**	**04 37 20.9**	**+0.9**
	baz=206						
214A	**Organ Pipe Nat**	**2.13**	**102**		**Pn**	**04 36 49.1**	**-2.5**
214A					**Sn**	**04 37 17.7**	**-0.5**
214A	**Organ Pipe Nat**	**2.13**	**102**	IAML		04 37 45.0	
	comp=E,110nm,0.7s						
214A				IAML		04 37 59.6	
	comp=N,96nm,1.5s						
214A	**Organ Pipe Nat**	**2.13**	**102**	P	**Pn**	**04 36 48.8**	**-2.8**
	baz=283,SNR=13						
214A	**Organ Pipe Nat**	**2.13**	**102**	*i* P	**Pn**	**04 36 49.1**	**-2.5**
214A				*i* S	**Sn**	**04 37 17.7**	**-0.5**
CIS	**Catalina Islan**	**2.83**	**291**	Sb	**Sb**	**04 37 41.8**	**+0.6**
	baz=110						
GSC	**Goldstone, Bar**	**3.14**	**336**	Pn	**Pn**	**04 37 06.4**	**+0.8**
GSC				IAML		04 38 23.0	
	comp=E,43nm,1.6s						
GSC				IAML		04 38 29.3	
	comp=N,27nm,1.1s						
X16A	**Lo Mia Camp, P**	**3.76**	**57**		**Pn**	**04 37 14.6**	**+0.4**
QSM	**Queen of Sheba**	**3.77**	**340**	Pn	**Pn**	**04 37 16.2**	**+2.0**
QSM				IAML		04 38 33.6	
	comp=E,16nm,4.8s						
QSM				IAML		04 39 14.0	
	comp=N,17nm,2.6s						
TUC	**Tucson**	**3.79**	**91**	Pn	**Pn**	**04 37 15.2**	**+0.7**
TUC				IAML		04 38 39.7	
	comp=N,23nm,2.8s						
GWY	**Greenwater Val**	**3.93**	**343**	Pn	**Pn**	**04 37 17.5**	**+1.0**
GWY				IAML		04 38 10.1	
	comp=N,21nm,2.7s						
GWY				IAML		04 39 17.3	
	comp=E,28nm,2.9s						
SHPR	**Sheep Range**	**4.07**	**1**	Pn	**Pn**	**04 37 19.7**	**+1.3**
SHPR				IAML		04 38 40.5	
	comp=E,21nm,3.2s						
WUAZ	**Wupatki**	**4.46**	**45**	Pn	**Pn**	**04 37 24.8**	**+0.9**
WUAZ				IAML		04 38 50.8	
	comp=E,29nm,1.8s						
U15A	**North Rim**	**4.68**	**31**	Pn	**Pn**	**04 37 27.4**	**+0.4**
U15A				IAML		04 39 08.0	
	comp=E,25nm,1.8s						
U15A				IAML		04 39 20.4	
	comp=N,20nm,0.9s						
LCMT	**Little Creek M**	**4.87**	**19**	Pn	**Pn**	**04 37 29.9**	**+0.5**
LCMT				IAML		04 39 12.3	
	comp=E,13nm,1.5s						
LCMT				IAML		04 39 35.8	
	comp=N,11nm,3.5s						
X18A	**Snowflake**	**4.91**	**63**		**Pn**	**04 37 31.1**	**+1.1**
PRN	**Pahroc Range**	**4.97**	**2**	Pn	**Pn**	**04 37 30.3**	**-0.5**
KNB	**Kanab**	**5.00**	**23**	Pn	**Pn**	**04 37 32.0**	**+0.7**
KNB				IAML		04 39 35.4	
	comp=E,20nm,3.9s						
KNB				IAML		04 39 58.3	
	comp=N,18nm,4.9s						
W18A	**Petrified Fore**	**5.33**	**58**		**Pn**	**04 37 35.5**	**-0.2**
R11A	**Troy Canyon, C**	**5.91**	**358**	Pn	**Pn**	**04 37 45.1**	**+1.3**
PSUT	**Pine Spring**	**6.20**	**10**	Pn	**Pn**	**04 37 49.0**	**+1.3**
121A	**Cookes Peak, D**	**6.32**	**87**		**Pn**	**04 37 48.7**	**-0.7**
MVU	**Marysvale**	**6.55**	**21**	Pn	**Pn**	**04 37 52.5**	**-0.1**
MSU	**Marysvale**	**6.57**	**22**	Pn	**Pn**	**04 37 53.3**	**+0.4**
SPR3	**Spring Creek 3**	**6.60**	**6**	Pn	**Pn**	**04 37 54.8**	**+1.4**

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*MAN **13** 04:38:18.1, 6°.53N×126°.90E, h56^{km}, mb4.9, ML3.8, MS3.8*

*IDC **13** 04:38:18.4±2.2, 6°.65N×126°.93E, h108^{km}±20^{km}, mb3.4/8, mb1 3.5/9, mb1mx3.4/42, mbtmp3.8/9, MS3.0/1, Ms1 3.0/1, ms1mx2.6/16, Error ellipse: s-maj=41.7km s-min=14.1km az=61.0*

*DJA **13** 04:38:23.1±1.2, 6°N±8°×12°7E±1°1, h55^{km}±16^{km}, M4.5/6, mb4.5/6, mB4.8/3, MLv4.5/6, Mw(mB)4.1/3*

ISC 13 04:38:17.5±0.7**, 6°.69N**±0°.08×**126°.94E**±0°.10**, h100^{km}, n29,** σ**1^{s}17**/32**, mb4.1**/12**, 1C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.40**	**286**	P	**Pn**	**04 38 43.8**	**+1.2**
	817nm,0.3s,baz=106,slow=1.7,SNR=160						
DAV				S	**Sn**	**04 39 03.3**	**+1.7**
	437nm,0.3s,baz=114,slow=23,SNR=7.2						
KCP	**Kidapawan**	**1.86**	**280**	⇓*i*P	**Pn**	**04 38 48.3**	**-0.1**
KCP				*i* S	**Sn**	**04 39 11.4**	**-0.5**
GSPH	**General Santos**	**2.07**	**253**	⇓*e*P	**Pn**	**04 38 47.9**	**-3.1**
BUKP	**Musuan**	**2.21**	**303**	⇓*i*P	Pn	04 39 04.3	+12
BUKP				*i* S	**Sn**	**04 39 21.2**	**+1.4**
SGSI	**Sangihe**	**3.30**	**205**	P	**Pn**	**04 39 05.6**	**-1.7**
PAGZ	**Pagadian**	**3.71**	**288**	⇑*e*P	**Pn**	**04 39 14.0**	**+1.2**
GTOI	**Gorontalo**	**7.18**	**213**	P	**Pn**	**04 39 58.2**	**-1.6**
	0.1nm226nm20nm,0.6s						
MRSI	**Marisa**	**7.93**	**219**	P	**Pn**	**04 40 09.6**	**-0.5**
	0.4nm42nm,0.5s						
SIJI	**Sorong**	**8.66**	**150**	P	**Pn**	**04 40 20.4**	**+0.4**
	1.7nm,0.3s,baz=228,slow=23,SNR=2.9						
SANI	**Sanana**	**8.73**	**186**	P	**Pn**	**04 40 21.7**	**+0.7**
	723nm14nm,0.8s						
BATI	**Baumata**	**17.10**	**191**	P	**P**	**04 42 12.0**	**+1.4**
	4.3nm,0.3s,baz=39,slow=5.6,SNR=8.4						
BATI	**Baumata**	**17.10**	**191**	P	**P**	**04 42 12.9**	**+2.3**
WRA	**Warramunga Arr**	**27.45**	**165**	P	**P**	**04 43 54.1**	**-0.1**
	0.4nm,0.8s,baz=344,slow=10,SNR=3.2						
WRA				LR	LR	04 55 31.7	
	comp=Z,33nm,20.9s,baz=160,slow=38						
ASAR	**Alice Springs**	**30.93**	**168**	P	**P**	**04 44 23.9**	**-1.1**
	0.2nm,0.5s,baz=347,slow=7.8,SNR=4.4						
TAPN	**Taplejung**	**42.50**	**304**	*e*P	**P**	**04 46 03.5**	**-0.1**
ODAN	**Odare**	**42.59**	**303**	*e*P	**P**	**04 46 04.4**	**+0.2**
RAMN	**Ramite**	**43.28**	**303**	*e*P	**P**	**04 46 10.3**	**+0.5**

	12nm,0.7s						
JIRN	**Jiri**	**43.87**	**303**	*e*P	**P**	**04 46 14.5**	**-0.2**
	20nm,0.7s						
GUN	**Gumba**	**44.22**	**304**	*e*P	**P**	**04 46 17.4**	**0.0**
	34nm,0.8s						
PKI	**Pulchoki**	**44.49**	**303**	*e*P	**P**	**04 46 19.2**	**-0.4**
SONM	**Songino Array**	**44.59**	**340**	P	**P**	**04 46 18.6**	**-1.2**
	0.6nm,0.9s,baz=141,slow=5.7,SNR=3.7						
SONM				PcP	**PcP**	**04 48 02.4**	**+1.3**
	0.6nm,0.8s,baz=173,slow=3.3,SNR=3.5						
KOLN	**Koldanda**	**46.07**	**302**	*e*P	**P**	**04 46 31.9**	**0.0**
DANN	**Dangsing**	**46.13**	**303**	*e*P	**P**	**04 46 32.3**	**-0.1**
PYUN	**Piuthan**	**46.69**	**303**	*e*P	**P**	**04 46 37.0**	**+0.3**
	27nm,0.9s						
MKAR	**Makanchi Array**	**55.28**	**324**	P	**P**	**04 47 41.6**	**+1.0**
	1.6nm,0.6s,baz=125,slow=8.3,SNR=13						
ZALV	**Zalesovo Beam**	**58.07**	**332**	P	**P**	**04 48 00.1**	**0.0**
	1.3nm,0.6s,baz=104,slow=9.3,SNR=6.8						
ILAR	**Eielson Array**	**82.36**	**26**	P	**P**	**04 50 28.8**	**+0.7**
	0.3nm,0.6s,baz=252,slow=5.0,SNR=7.9						
BRTR	**Keskin Array B**	**88.31**	**310**	P	**P**	**04 50 57.6**	**-0.7**
	0.7nm,0.8s,baz=132,slow=5.2,SNR=5.1						
FINES	**FINESS Array B**	**89.34**	**332**	P	**P**	**04 51 01.4**	**-1.1**
	1.1nm,0.8s,baz=225,slow=1.8,SNR=1.1						

DJA 13 04:55:23.2±0.5,**8°S**±10°×**11°9E**±°,**h267**^{km}±6^{km},**M3.5**/8,**mb3.9**/3,**MLv3.3**/8,**Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.89**	**235**	P	Pn	04 56 06.5	+0.3
PLAI				S	S	04 56 41.3	+1.1
WBSI	**Waikabubak, Su**	**1.89**	**178**	P	Pn	04 56 06.3	+0.1
WBSI				S	S	04 56 39.7	-0.7
EDFI	**Ende, Flores**	**2.53**	**113**	P	Pn	04 56 12.0	-0.1
TWSI	**Taliwang, Sumb**	**2.63**	**248**	P	Pn	04 56 13.2	+0.3
BASI	**Baing, Sumba**	**2.75**	**154**	P	Pn	04 56 14.5	+0.3
BATI	**Baumata**	**4.92**	**120**	P	Pn	04 56 39.1	+0.4
SOEI	**Soe**	**5.27**	**113**	P	Pn	04 56 42.6	-0.3
	0.1nm15nm,0.6s						
GMJI	**Gumukmas**	**5.86**	**264**	P	Pn	04 56 50.3	+0.2
	0.2nm19nm,1.6s						
PCJI	**Pacitan**	**8.10**	**266**	P	Pn	04 57 17.1	-0.7

BGS ***13*** *05:28:18.8±0.4,51°.65N×3°.21W,h5^{km}±5^{km},ML2.4*
LDG ***13*** *05:28:18.6±0.2,51°.66N×3°.26W,h6^{km},Ml2.6/22,Error ellipse: s-maj=3.1km s-min=2.0km az=126.0*
ISC 13 05:28:18.3±1.0,**51°.60N**±0°.02×**3°.10W**±0°.04,**h17**^{km}±9^{km},**n44**,σ**1^{s}29**/70,**1C**,**United Kingdom**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCH1	**Michaelchurch**	**0.40**	**9**	⇑*i*P	**Pg**	**05 28 25.9**	**-0.6**
MCH1				*e*S	**Sg**	**05 28 31.1**	**-1.0**
MCH1				IAML		05 28 31.4	
	comp=N,625nm,0.4s						
MCH1				IAML		05 28 31.4	
	comp=E,406nm,0.1s						
HLM1	**Long Mynd**	**0.93**	**8**	*e*P	**Pb**	**05 28 35.3**	**-0.6**
HLM1				IAML		05 28 51.4	
	comp=E,103nm,0.2s						
HLM1				IAML		05 28 51.5	
	comp=N,65nm,0.2s						
HTL	**Hartland**	**1.06**	**236**	*e*P	**Pb**	**05 28 38.6**	**+0.4**
HTL				*e*S	**Sb**	**05 28 51.7**	**0.0**
HTL				IAML		05 28 54.6	
	comp=N,51nm,0.4s						
HTL				IAML		05 28 56.0	
	comp=E,49nm,0.2s						
WOL	**Wolverton**	**1.21**	**103**	*e*P	**Pg**	**05 28 42.5**	**+0.9**
DYA	**Yadsworthy**	**1.28**	**205**	*e*P	**Pn**	**05 28 42.2**	**+0.9**
DYA				*e*S	**Sn**	**05 28 59.2**	**+1.1**
DYA				IAML		05 29 01.1	
	comp=N,61nm,0.3s						
DYA				IAML		05 29 01.8	
	comp=E,65nm,0.2s						
FOEL	**Foel Wylfa**	**1.29**	**357**	*e*P	**Pn**	**05 28 41.7**	**+0.1**
FOEL				*e*S	**Sb**	**05 28 57.8**	**-0.6**
FOEL				IAML		05 28 59.0	
	comp=E,80nm,0.5s						
FOEL				IAML		05 29 02.2	
	comp=N,80nm,0.5s						
SBD1	**Bryn Du**	**1.31**	**356**	*e*P	**Pg**	**05 28 44.0**	**+0.5**
CWF	**Charnwood Fore**	**1.59**	**43**	*e*P	**Pn**	**05 28 46.9**	**+1.3**
CWF				*e*S	**Sn**	**05 29 07.0**	**+1.3**
CWF				IAML		05 29 09.4	
	comp=N,55nm,0.3s						
CWF				IAML		05 29 09.6	
	comp=E,79nm,0.2s						
WLF1	**Llynfaes**	**1.87**	**335**	*e*P	**Pn**	**05 28 49.6**	**+0.2**
WLF1				IAML		05 29 14.6	
	comp=E,134nm,0.3s						
WLF1				IAML		05 29 14.6	
	comp=N,64nm,0.3s						
CCA1	**Carnmenellis**	**1.95**	**224**	IAML		05 29 20.8	
	comp=N,13nm,0.3s						
CCA1				IAML		05 29 21.3	
	comp=E,16nm,0.4s						
LBWR	**Ladybower, Pea**	**1.99**	**24**	*e*P	**Pn**	**05 28 52.6**	**+1.5**
LBWR				IAML		05 29 20.3	
	comp=N,68nm,0.5s						
LBWR				IAML		05 29 22.4	
	comp=E,74nm,0.2s						
WPS	**Cemaes, Angles**	**2.00**	**335**	*e*P	**Pn**	**05 28 51.7**	**+0.5**
WPS				*e*S	**Sn**	**05 29 15.1**	**-0.6**
WPS				IAML		05 29 18.2	
	comp=E,25nm,0.4s						
WPS				IAML		05 29 18.3	
	comp=N,21nm,0.4s						
ROSF	**Rostrenen**	**3.27**	**182**	*e*Pn	**Pn**	**05 29 09.0**	**+0.3**
ROSF	**Rostrenen**	**3.27**	**182**	*e*Pg	**Pg**	**05 29 20.3**	**-0.6**
ROSF				*e*Sn	**Sn**	**05 29 47.6**	**+0.4**
	comp=N,8.7nm,0.4s						
ROSF				*e*Sg	**Sg**	**05 30 03.5**	**+0.3**
FLN	**La Foliniere**	**3.30**	**148**	*e*Pn	**Pn**	**05 29 10.9**	**+1.7**
	baz=327						
FLN	**La Foliniere**	**3.30**	**148**	*e*Pg	**Pg**	**05 29 21.7**	**+0.2**
	baz=333						
FLN				*e*Sn	**Sn**	**05 29 47.7**	**-0.3**
	comp=N,3.2nm,0.3s						
FLN				*e*Sg	**Sg**	**05 30 05.0**	**+0.7**
	comp=N,5.6nm,0.2s,baz=319						
SGMF	**Saint Gilles**	**3.37**	**174**	*e*Pn	**Pn**	**05 29 10.6**	**+0.5**
SGMF	**Saint Gilles**	**3.37**	**174**	*e*Pg	**Pg**	**05 29 22.2**	**-0.6**
SGMF				*e*Sn	**Sn**	**05 29 49.3**	**-0.3**
	comp=N,2.7nm,0.2s						
SGMF				*e*Sg	**Sg**	**05 30 06.7**	**+0.3**
	comp=N,2.0nm,0.3s						
GRR	**Gorron**	**3.53**	**155**	*e*Pn	**Pn**	**05 29 13.4**	**+1.2**
GRR	**Gorron**	**3.53**	**155**	*e*P	**Pn**	**05 29 16.5**	**+4.3**
GRR	**Gorron**	**3.53**	**155**	*e*Pg	**Pg**	**05 29 25.7**	**-0.1**
GRR				*e*Sn	**Sn**	**05 29 53.1**	**-0.4**
	comp=N,2.8nm,0.2s						
GRR				*e*Sg	**Sg**	**05 30 11.7**	**+0.3**
	comp=N,1.9nm,0.2s						
LDF	**La Druitiere**	**3.57**	**146**	*e*Pn	**Pn**	**05 29 14.2**	**+1.4**
LDF	**La Druitiere**	**3.57**	**146**	*e*Pg	**Pg**	**05 29 26.8**	**+0.2**
LDF				*e*Sn	**Sn**	**05 29 54.0**	**-0.6**
	comp=N,2.4nm,0.3s						
LDF				*e*Sg	**Sg**	**05 30 13.4**	**+0.6**
	comp=N,1.8nm,0.2s						
QUIF	**Quistinic**	**3.69**	**181**	*e*Pn	**Pn**	**05 29 14.5**	**0.0**
QUIF	**Quistinic**	**3.69**	**181**	*e*Pg	**Pg**	**05 29 28.3**	**-0.6**
QUIF				*e*Sn	**Sn**	**05 29 57.5**	**0.0**
	comp=N,2.7nm,0.2s						
QUIF				*e*Sg	**Sg**	**05 30 16.7**	**+0.1**
	comp=N,3.2nm,0.3s						
BAIF	**Baives**	**4.88**	**106**	*e*Pn	**Pn**	**05 29 31.9**	**+1.0**
BAIF	**Baives**	**4.88**	**106**	*e*P	Pn	05 29 36.4	+5.5
BAIF				*e*Sn	**Sn**	**05 30 26.7**	**-0.2**
	comp=N,0.7nm,0.2s						
GIVF	**Givet**	**5.24**	**104**	*e*Pn	**Pn**	**05 29 36.7**	**+0.9**
GIVF				*e*Sn	**Sn**	**05 30 35.1**	**-0.6**
	comp=N,2.6nm,0.3s						
MFF	**Saint Martin d**	**5.37**	**158**	*e*Pn	**Pn**	**05 29 38.3**	**+0.8**
MFF				*e*Sn	**Sn**	**05 30 39.1**	**+0.2**
HYF	**Humbligny**	**5.73**	**137**	*e*Pn	**Pn**	**05 29 43.6**	**+1.1**
HYF				*e*Sg	**Sg**	**05 31 21.8**	**-0.2**
SAVF	**Savonnieres en**	**6.08**	**116**	*e*Pn	**Pn**	**05 29 48.2**	**+0.9**
	baz=300						
MEZF	**Maizieres J'vi**	**6.10**	**117**	*e*Pn	**Pn**	**05 29 48.4**	**+0.8**
	baz=303						
SSF	**Saint Saulge**	**6.27**	**134**	*e*Pn	**Pn**	**05 29 51.2**	**+1.3**
SSF				*e*Sn	**Sn**	**05 30 59.1**	**-2.0**
	comp=N,0.8nm,0.3s						
LOR	**Lormes**	**6.28**	**131**	*e*Pn	**Pn**	**05 29 51.1**	**+1.1**
	baz=311						
LOR				*e*Sn	**Sn**	**05 31 01.6**	**+0.3**
	comp=N,1.8nm,0.3s,baz=323						
TCF	**Toulx Ste Croi**	**6.36**	**145**	*e*Pn	**Pn**	**05 29 51.9**	**+0.7**
TCF				*e*Sn	**Sn**	**05 31 02.1**	**-1.4**
	comp=N,2.6nm,0.3s						
BGF	**Bois d'Agland**	**6.38**	**140**	*e*Pn	**Pn**	**05 29 52.4**	**+0.9**
BGF				*e*Sn	**Sn**	**05 31 01.8**	**-2.1**
	comp=N,1.2nm,0.2s						
AVF	**Avril sur Loir**	**6.41**	**136**	*e*Pn	**Pn**	**05 29 52.7**	**+0.9**
AVF				*e*Sn	**Sn**	**05 31 02.2**	**-2.3**
SMF	**Signal de Mont**	**6.73**	**135**	*e*Pn	**Pn**	**05 29 57.4**	**+1.1**
RJF	**Les Rejaudoux**	**7.01**	**152**	*e*Pn	**Pn**	**05 30 00.7**	**+0.6**
RJF				*e*Sn	**Sn**	**05 31 14.4**	**-4.9**
	comp=N,0.5nm,0.2s						
HAU	**Haudompre**	**7.09**	**117**	*e*P	Pn	05 30 07.1	+5.8
LFF	**La Frestale**	**7.14**	**157**	*e*Pn	**Pn**	**05 30 02.4**	**+0.5**
LFF				*e*Sn	**Sn**	**05 31 19.0**	**-3.6**
	comp=N,0.1nm,0.1s						
HINF	**Hinteralfeld**	**7.48**	**117**	*e*P	Pn	05 30 12.6	+6.0
CAF	**Calviac**	**7.51**	**151**	*e*Pn	**Pn**	**05 30 07.7**	**+0.6**
CAF				*e*Sn	**Sn**	**05 31 29.6**	**-2.2**
	comp=N,0.6nm,0.2s						
CABF	**La Chapelle**	**7.83**	**126**	*e*Pn	**Pn**	**05 30 11.4**	**0.0**

IDC ***13*** *05:29:40.1±1.1,6°.58S×130°.12E,h0^{km},mb3.6/2,mb1 3.7/4,mb1mx3.5/22,mbtmp3.5/4,ML3.7/2,Error ellipse: s-maj=40.8km s-min=9.7km az=66.0*
ISC 13 05:29:55.1±1.0,**7°.1S**±0°.1×**129°.8E**±0°.1,**h150**^{km},**n11**,σ**2^{s}09**/11,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.73**	**122**	P	**Pn**	**05 30 25.8**	**-1.4**
FAKI	**Fak Fak**	**4.76**	**31**	P	**Pn**	**05 31 04.5**	**-1.0**
DRS	**Darwin Rock St**	**5.45**	**169**	P	**Pn**	**05 31 13.2**	**-1.3**
MTN	**Manton Dam**	**5.89**	**168**	P	**Pn**	**05 31 19.7**	**-0.8**
SOEI	**Soe**	**6.12**	**244**	P	**Pn**	**05 31 22.3**	**-1.3**
	27nm,0.5s						
KDU	**Kakadu**	**6.17**	**155**	P	**Pn**	**05 31 23.2**	**-1.0**
PLAI	**Plampang**	**12.07**	**261**	P	**Pn**	**05 32 41.6**	**-0.8**
WRA	**Warramunga Arr**	**13.54**	**162**	Pn	**Pn**	**05 32 58.5**	**-2.8**
	0.5nm,0.3s,baz=348,slow=11,SNR=27						
ASAR	**Alice Springs**	**16.98**	**167**	P	**P**	**05 33 44.1**	**+0.9**
	0.2nm,0.3s,baz=339,slow=8.8,SNR=17						
STKA	**Stephens Creek**	**27.03**	**158**	P	**P**	**05 35 27.3**	**+3.9**
	0.4nm,0.3s,baz=338,slow=5.4,SNR=1.5						
MKAR	**Makanchi Array**	**68.18**	**327**	P	**P**	**05 40 40.9**	**+1.6**
	0.2nm,0.4s,baz=119,slow=7.7,SNR=4.8						

BJI ***13*** *05:53:16.6±0.0,55°.03N×111°.87E,h10^{km},mB4.9/34,mb4.5/52,Ms4.7/50,Ms7 4.4/47*
MOS ***13*** *05:53:17.5±0.9,54°.92N×111°.63E,h8^{km},mb5.0/58,MS3.9/11,Error ellipse: s-maj=5.6km s-min=4.1km az=84.2*
MOS Felt (III-IV) at Ulyunkhan, (III) at Chita, Atamanovka.
BYKL ***13*** *05:53:18.4±0.1,54°.88N×111°.73E,h9^{km}±2^{km},FELT I=III-IV MSK at Ylynkhan, Varvarinskiy, III at Chita, Atamanovka*
GCMT ***13*** *05:53:19.0±0.3,55°.10N±0°.04×111°.86E±0°.06,h13^{km}±1^{km},MW4.8/68,Moment Tensor Solution. s16,c19; s68,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.32±.13; $M_{\theta\theta}$0.20±.08; $M_{\phi\phi}$1.12±.10; $M_{r\theta}$0.75±.25; $M_{\theta\phi}$0.72±.05; $M_{\phi r}$-0.46±.23; Best double couple: $M_0$1.65800×10^{16} NP1:ϕ_s234.00000°,δ51.00000°,λ-52.00000°. NP2: ϕ_s3.00000°,δ53.00000°,λ-127.00000°. Principal axes: T 1.5150, Plg1.0000°, Azm118.0000°; N 0.2910, Plg29.0000°, Azm28.0000°; P -1.8010, Plg61.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***13*** *05:53:20.7±3.9,54°.84N×111°.70E,h22^{km}±26^{km},mb4.3/30,mb1 4.4/37,mb1mx4.3/48,mbtmp4.5/37,ML4.2/5,MS3.8/30,Ms1 3.8/30,ms1mx3.7/48 Error ellipse: s-maj=11.2km s-min=8.8km az=156.0*
NEIC ***13*** *05:53:20.0±1.3,54°.98N±0°.07×111°.7E±0°.1,h12^{km}±3^{km},mb5.1/342,Error ellipse: s-maj=10.0km s-min=9.6km az=131.0*
BGR ***13*** *05:53:24.6±0.0,54°.82N×110°.68E,h10^{km},mb4.9,Ms4.1*
ISC 13 05:53:19.2±0.5,**54°.98N**±0°.02×**111°.76E**±0°.02,**h10**^{km}±3^{km},**n867**,σ**1^{s}52**/957,**mb5.0**/261,**MS3.9**/34,**46C-25D**,**Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YLYR	**Ulyunkhan**	**0.36**	**254**	Pmax		05 53 09.2	
	34μm,0.6s						
YLYR				⇑*i*Pg	**Pg**	**05 53 24.5**	**-1.8**
YLYR				*e*Sg	**Sg**	**05 53 29.2**	**-1.9**
YLYR				Smax		05 53 29.5	
	142μm,0.7s						
YLYR	**Ulyunkhan**	**0.36**	**254**	⇑*i*PG	**Pg**	**05 53 24.5**	**-1.8**
YLYR				*e*S	**Sg**	**05 53 29.1**	**-2.0**
KMO	**Kumora**	**0.97**	**341**	⇑*i*Pg	**Pg**	**05 53 37.1**	**-0.7**
	2μm,1.0s						
KMO				⇓*i*Pg	**Pg**	**05 53 37.1**	**-0.7**
	775nm,1.0s						
KMO				⇑*i*Pg	**Pg**	**05 53 37.1**	**-0.7**
	5μm,1.0s						
KMO				Pmax		05 53 37.5	
	5μm,0.8s						
KMO				*e*Sg	**Sb**	**05 53 51.2**	**+0.4**
KMO				*e*Sb	**Sn**	**05 53 55.8**	**+3.3**
KMO				max		05 54 00.2	
	37μm,1.2s						
KMO	**Kumora**	**0.97**	**341**	⇑*i*PG	**Pg**	**05 53 37.1**	**-0.7**
KMO				*e*		05 53 50.1	
KMO				pmax	pmax		
	comp=Z,5μm,0.6s						
KMO				smax	smax		
	comp=N,37μm,1.1s						
YOA	**Uoyan**	**1.16**	**359**	*e*Pg	**Pb**	**05 53 41.1**	**-0.1**
YOA				Pmax		05 53 52.5	
	comp=N,10μm,0.4s						
YOA				*e*Sg	**Sn**	**05 53 58.4**	**+1.1**
YOA				Smax		05 54 15.2	
	comp=N,72μm,1.2s						
YOA	**Uoyan**	**1.16**	**359**	*e*PG	**Pb**	**05 53 41.5**	**+0.3**
YOA				*e*		05 53 59.3	
YOA				pmax	pmax		
	comp=Z,3μm,0.2s						
YOA				smax	smax		
	comp=N,72μm,1.1s						
UKT	**Uakit**	**1.19**	**64**	⇑*i*Pg	**Pb**	**05 53 40.4**	**-1.3**
UKT				Pmax		05 53 46.6	
	comp=N,5μm,0.9s						
UKT				*e*Sg	**Sb**	**05 53 57.2**	**+0.1**
UKT				*e*		05 54 02.3	
UKT				max		05 54 13.5	
	comp=N,24μm,0.7s						
NIZ	**Nizh Angarsk**	**1.50**	**303**	⇑*i*Pg	**Pn**	**05 53 45.8**	**-0.3**
NIZ				Pmax		05 53 46.5	
	comp=N,4μm,1.0s						
NIZ				*e*		05 53 48.9	
NIZ				*e*Sg	**Sg**	**05 54 06.6**	**-0.8**
NIZ				*e*		05 54 09.3	
NIZ				max		05 54 11.0	
	comp=N,46μm,1.5s						
NIZ	**Nizh Angarsk**	**1.50**	**303**	⇑*i*PG	**Pn**	**05 53 45.9**	**-0.2**
NIZ				*e*		05 54 07.4	
NIZ				pmax	pmax		
	comp=Z,5μm,1.4s						
NIZ				smax	smax		
	comp=N,19μm,1.2s						
SVKR	**Severomuysk**	**1.53**	**41**	*e*Pg	**Pb**	**05 53 48.4**	**+0.8**
SVKR				*e*		05 53 51.4	
SVKR				max		05 53 52.5	
	comp=N,10μm,0.7s						
SVKR				*e*Sg	**Sg**	**05 54 10.1**	**+1.7**
SVKR				Smax		05 54 19.4	
	comp=N,41μm,1.0s						
SVKR	**Severomuysk**	**1.53**	**41**	⇓*i*PN	**Pb**	**05 53 48.5**	**+0.8**
SVKR				*e*		05 53 49.6	
SVKR				*e*S	**Sb**	**05 54 07.7**	**+0.6**
SVKR				*e*		05 54 10.4	
SVKR				pmax	pmax		
	comp=Z,10μm,0.8s						
SVKR				smax	smax		
	comp=N,41μm,1.1s						
SYVR	**Suvo**	**1.68**	**219**	*e*Pg	**Pn**	**05 53 47.2**	**-1.3**
SYVR				*e*Pb	**Pb**	**05 53 48.3**	**-1.8**
SYVR				max		05 53 50.7	
	comp=N,7μm,0.7s						
SYVR				*e*Sg	**Sn**	**05 54 08.3**	**-1.7**
SYVR				*e*		05 54 11.0	
SYVR				max		05 54 15.3	
	comp=N,20μm,1.1s						
SYVR	**Suvo**	**1.68**	**219**	*e*PG	**Pn**	**05 53 47.2**	**-1.3**
SYVR				*e*		05 54 09.1	
SYVR				pmax	pmax		
	comp=Z,7μm,0.7s						
SYVR				smax	smax		
	comp=N,20μm,0.9s						
MXMB	**Maximikha**	**2.47**	**227**	⇓*i*Pn	**Pn**	**05 53 58.5**	**-0.9**
MXMB				*e*Pg	**Pb**	**05 54 01.6**	**-2.0**
MXMB				*e*		05 54 30.3	
MXMB				*e*Sg	**Sb**	**05 54 33.4**	**-0.6**
NLYR	**Nelyaty**	**2.70**	**54**	⇓*i*Pn	**Pn**	**05 54 03.6**	**+1.1**
NLYR				*e*Pg	**Pb**	**05 54 07.7**	**+0.3**
NLYR				Pmax		05 54 13.3	
	comp=N,2μm,0.9s						
NLYR				*e*Sg	**Sg**	**05 54 44.7**	**-1.0**
NLYR				Smax		05 54 56.3	
	comp=N,28μm,1.4s						
NLYR	**Nelyaty**	**2.70**	**54**	⇓*i*PN	**Pn**	**05 54 03.7**	**+1.2**
NLYR				*e*		05 54 09.6	
NLYR				*e*S	**Sn**	**05 54 36.5**	**+1.3**
NLYR				*e*		05 54 44.1	
NLYR				pmax	pmax		
	comp=Z,2μm,1.2s						
NLYR				smax	smax		
	comp=N,28μm,1.4s						
OGRR	**Ongureny**	**2.78**	**243**	⇓*i*	**Pn**	**05 54 05.1**	**+1.4**
OGRR				*e*Pg	**Pb**	**05 54 07.3**	**-1.6**
OGRR				*e*		05 54 09.4	
OGRR				max		05 54 11.6	
	comp=N,2μm,1.1s						
OGRR				*e*		05 54 39.6	
OGRR				*e*Sg	**Sb**	**05 54 43.9**	**+0.9**
OGRR				Smax		05 55 04.2	
	comp=N,11μm,1.1s						
OGRR	**Ongureny**	**2.78**	**243**	⇓*i*PN	**Pn**	**05 54 05.1**	**+1.4**
OGRR				*e*		05 54 08.6	
OGRR				*e*		05 54 39.6	
OGRR				pmax	pmax		
	comp=Z,2μm,1.4s						
OGRR				smax	smax		
	comp=N,11μm,1.1s						
BOD	**Bodaibo**	**3.11**	**23**	⇓*i*Pn	**Pn**	**05 54 09.2**	**+1.0**
	comp=N,183nm,1.4s						
BOD				⇓*i*Pn	**Pn**	**05 54 09.2**	**+1.0**
	comp=N,76nm,1.4s						
BOD				⇓*i*Pn	**Pn**	**05 54 09.2**	**+1.0**
	comp=N,205nm,1.4s						
BOD				*e*Pg	**Pb**	**05 54 15.9**	**+1.5**
BOD				Pmax		05 54 19.0	
	comp=N,1μm,1.4s						
BOD				*e*Sn	**Sn**	**05 54 47.1**	**+1.8**
BOD				*e*Sg	**Sg**	**05 54 57.3**	**-1.6**
BOD				Smax		05 55 04.9	
	comp=N,6μm,1.2s						
BOD	**Bodaibo**	**3.11**	**23**	⇓*i*PN	**Pn**	**05 54 09.1**	**+0.9**
BOD				*e*		05 54 17.1	
BOD				*e*		05 54 55.6	
BOD				pmax	pmax		
	comp=Z,1μm,1.4s						
BOD				smax	smax		
	comp=E,6μm,1.7s						
KELR	**Kotokel**	**3.11**	**226**	*e*Pn	**Pn**	**05 54 07.1**	**-1.1**
KELR				*e*		05 54 09.2	
KELR				*e*Pg	**Pb**	**05 54 12.6**	**-1.9**
KELR				*e*PgPg	**PnPn**	**05 54 15.6**	**+0.3**
KELR				*e*Sn	**Sn**	**05 54 43.0**	**-2.4**
KELR				*e*Sg	**Sb**	**05 54 53.1**	**+0.6**
CIT	**Chita**	**3.15**	**159**	*e*Pn	**Pn**	**05 54 07.9**	**-0.8**
CIT				*e*Pg	**Pb**	**05 54 12.8**	**-2.3**
CIT				Pmax		05 54 20.1	
	comp=E,2μm,0.6s						
CIT				*e*Sn	**Sn**	**05 54 43.3**	**-3.0**
CIT				*e*Sg	**Sb**	**05 54 53.1**	**-0.4**
CIT				Smax		05 54 53.9	
	comp=E,19μm,0.8s						
CIT	**Chita**	**3.15**	**159**	*e*PN	**Pb**	**05 54 12.8**	**-2.3**
CIT				*e*		05 54 53.1	
CIT				pmax	pmax		
	comp=Z,2μm,1.2s						
CIT				smax	smax		
	comp=N,19μm,0.6s						
TRG	**Tyrgan**	**3.90**	**237**	*e*Pn	**Pn**	**05 54 18.0**	**-1.1**
TRG				*e*Pg	**Pb**	**05 54 26.7**	**-1.2**
TRG				Pmax		05 54 31.5	
	comp=N,750nm,1.3s						
TRG				*e*		05 54 54.7	
TRG				*e*Sg	**Sb**	**05 55 16.6**	**+1.5**
TRG				Smax		05 55 29.1	
	comp=N,4μm,1.2s						
TRG	**Tyrgan**	**3.90**	**237**	⇓*i*PN	**Pn**	**05 54 18.2**	**-0.9**
TRG				*e*		05 54 27.3	
TRG				*e*S	**Sn**	**05 55 02.4**	**-2.4**
TRG				*e*		05 55 16.0	
TRG				pmax	pmax		
	comp=Z,747nm,1.3s						
TRG				smax	smax		
	comp=E,4μm,0.9s						
UUDB	**Ulan-Yde**	**3.96**	**220**	⇓*i*Pn	**Pn**	**05 54 19.0**	**-0.9**
UUDB				*e*Pg	**Pb**	**05 54 27.5**	**-1.5**
UUDB				Pmax		05 54 32.5	
	comp=E,3μm,1.4s						
UUDB				*e*		05 55 00.0	
UUDB				*e*Sg	**Sb**	**05 55 18.5**	**+1.5**
UUDB				Smax		05 55 23.4	
	comp=E,14μm,1.1s						
CRS	**Chara**	**4.13**	**60**	⇓*i*Pn	**Pn**	**05 54 23.5**	**+1.2**
CRS				*e*Pg	**Pb**	**05 54 34.0**	**+2.1**
CRS				Pmax		05 54 39.1	
	comp=E,2μm,1.1s						
CRS				*e*Sg	**Sg**	**05 55 28.2**	**-3.6**
CRS				Smax		05 55 32.7	
	comp=E,7μm,2.0s						
CRS	**Chara**	**4.13**	**60**	⇓*i*PN	**Pn**	**05 54 23.5**	**+1.2**
CRS				*e*		05 54 34.2	
CRS				*e*		05 55 28.6	
CRS				pmax	pmax		
	comp=Z,2μm,1.1s						
CRS				smax	smax		
	comp=E,6μm,1.8s						
FFNB	**Fofonovo**	**4.18**	**228**	*e*Pn	**Pn**	**05 54 21.7**	**-1.3**
FFNB				*e*Pg	**Pb**	**05 54 31.8**	**-1.0**
FFNB				*e*		05 55 03.6	
FFNB				*e*Sg	**Sb**	**05 55 25.2**	**+1.9**
KAB	**Kabansk**	**4.23**	**228**	*e*Pn	**Pn**	**05 54 22.7**	**-0.9**
KAB				*e*Pg	**Pb**	**05 54 32.5**	**-1.1**
KAB				Pmax		05 54 41.4	
	comp=E,2μm,1.4s						
KAB				*e*Sg	**Sb**	**05 55 26.7**	**+2.1**
KAB				Smax		05 55 48.4	
	comp=E,15μm,1.5s						
STDB	**Stepnoy Dvoret**	**4.27**	**231**	*e*Pn	**Pn**	**05 54 23.4**	**-0.8**
STDB				*e*Pg	**Pb**	**05 54 34.2**	**-0.1**
STDB				*e*		05 54 37.3	
STDB				*e*Sg	**Sb**	**05 55 28.8**	**+3.0**
HRMR	**Khuramsha**	**4.42**	**223**	⇓*i*Pn	**Pn**	**05 54 25.3**	**-0.9**
HRMR				*e*Pg	**Pb**	**05 54 36.7**	**-0.2**
HRMR				Pmax		05 54 39.8	
	comp=E,3μm,0.7s						
HRMR				*e*		05 55 04.8	
HRMR				*e*Sg	**Sb**	**05 55 33.2**	**+3.0**
HRMR				Smax		05 56 05.0	
	comp=E,15μm,0.9s						
TUP	**Tupik**	**4.78**	**93**	⇑*i*Pn	**Pn**	**05 54 31.2**	**0.0**
TUP				*e*		05 54 40.2	
TUP				*e*Pg	**Pb**	**05 54 44.5**	**+1.5**
TUP				Pmax		05 54 48.1	
	comp=E,882nm,0.8s						
TUP				*e*Sn	**Sn**	**05 55 24.8**	**-1.8**
TUP				*e*Sg	**Sb**	**05 55 46.5**	**+5.9**
TUP				Smax		05 56 03.2	
	comp=E,9μm,1.4s						
TUP	**Tupik**	**4.78**	**93**	*e*PN	**Pn**	**05 54 31.4**	**+0.2**

TUP				*e*		05 54 45.1	
TUP				*e*S	**Sn**	**05 55 27.1**	**+0.5**
TUP				*e*		05 55 48.3	
TUP				pmax	pmax		
	comp=Z,886nm,0.6s						
TUP				smax	smax		
	comp=N,8µm,0.9s						
BGT	**Bolshoye Golou**	**4.80**	**235**	*e*Pn	**Pn**	**05 54 30.2**	**-1.2**
BGT				*e*Pg	**Pb**	**05 54 42.7**	**-0.5**
BGT				*e*		05 54 45.4	
BGT				max		05 54 49.9	
	comp=N,306nm,1.0s						
BGT				*e*Sn	**Sn**	**05 55 23.7**	**-3.2**
BGT				*e*Sg	**Sb**	**05 55 43.9**	**+3.0**
BGT				Smax		05 56 05.4	
	comp=N,2µm,1.1s						
KHNR	**Khani**	**5.01**	**64**	*e*Pn	**Pn**	**05 54 35.8**	**+1.5**
KHNR				*e*Pg	**Pb**	**05 54 49.0**	**+2.1**
KHNR				*e*Sn	**Sn**	**05 55 30.9**	**-1.3**
KHNR				*e*Sg	**Sg**	**05 55 55.3**	**-4.6**
LSTR	**Listvyanka**	**5.18**	**236**	*e*Pn	**Pn**	**05 54 35.6**	**-1.1**
LSTR				*e*		05 54 44.4	
LSTR				*e*Pg	**Pb**	**05 54 49.8**	**0.0**
LSTR				Pmax		05 54 56.9	
	comp=N,204nm,1.4s						
LSTR				*e*		05 55 16.8	
LSTR				*e*Sg	**Sb**	**05 55 55.8**	**+3.8**
LSTR				Smax		05 56 02.5	
	comp=N,2µm,1.4s						
IRK	**Irkutsk**	**5.23**	**242**	*e*Pg	**Pb**	**05 54 51.2**	**+0.6**
IRK				Pmax		05 54 58.5	
	comp=N,701nm,0.7s						
IRK				*e*Sn	**Sn**	**05 55 33.6**	**-4.1**
IRK				*e*		05 55 48.7	
IRK				*e*Sg	**Sb**	**05 55 57.7**	**+4.2**
IRK				Smax		05 56 15.3	
	comp=N,5µm,1.0s						
KPC	**Khapcheranga**	**5.29**	**176**	*e*Pn	**Pn**	**05 54 36.3**	**-2.0**
KPC				*e*Pg	**Pb**	**05 54 52.2**	**+0.5**
KPC				Pmax		05 55 03.3	
	comp=N,394nm,1.1s						
KPC				*e*Sn	**Sn**	**05 55 33.8**	**-5.5**
KPC				*e*Sg	**Sb**	**05 55 59.6**	**+4.3**
KPC				Smax		05 56 02.1	
	comp=N,10µm,1.5s						
KPC	**Khapcheranga**	**5.29**	**176**	⇑*i*PN	**Pn**	**05 54 36.3**	**-2.0**
KPC				*e*		05 54 51.8	
KPC				*e*		05 55 58.3	
KPC				pmax	pmax		
	comp=Z,394nm,1.1s						
KPC				smax	smax		
	comp=N,10µm,1.5s						
IVK	**Ivanovka**	**5.43**	**237**	*e*Pn	**Pn**	**05 54 38.8**	**-1.2**
IVK				*e*		05 54 42.5	
IVK				*e*		05 54 47.2	
IVK				*e*Pg	**Pb**	**05 54 54.3**	**+0.4**
IVK				Pmax		05 55 25.4	
	comp=N,186nm,1.1s						
IVK				*e*Sn	**Sn**	**05 55 39.1**	**-3.3**
IVK				*e*		05 56 00.5	
IVK				*e*Sg	**Sb**	**05 56 04.6**	**+5.6**
IVK				Smax		05 56 10.6	
	comp=N,2µm,1.5s						
TLY	**Talaya**	**5.88**	**239**	Pn	**Pn**	**05 54 44.8**	**-1.5**
	comp=N,0.1nm,0.3s,baz=26,slow=7.2,SNR=12						
TLY				Lg	Lg	05 56 15.7	
	comp=N,0.6nm,0.3s,baz=149,slow=10,SNR=8.3						
TLY				LR	LR	05 57 05.5	
	comp=N,1µm,20.5s,baz=42,slow=39						
TLY	**Talaya**	**5.88**	**239**	*e*Pn	**Pn**	**05 54 44.7**	**-1.5**
TLY				*e*Pg	**Pb**	**05 55 02.5**	**+0.9**
TLY				Pmax		05 55 07.8	
	comp=N,155nm,0.9s						
TLY				*e*Sn	**Sn**	**05 55 49.5**	**-4.1**
TLY				*e*		05 56 13.1	
TLY				*e*Sg	**Sb**	**05 56 18.7**	**+6.7**
TLY				Smax		05 56 22.7	
	comp=N,2µm,1.2s						
TLY	**Talaya**	**5.88**	**239**	*e*PN	**Pn**	**05 54 44.7**	**-1.5**
TLY				*e*		05 55 03.8	
TLY				*e*		05 56 16.5	
TLY				pmax	pmax		
	comp=Z,247nm,0.6s						
TLY				smax	smax		
	comp=E,1.0nm,0.4s						
TLY	**Talaya**	**5.88**	**239**	Pn	**Pn**	**05 54 44.6**	**-1.6**
ARS	**Arshan**	**6.36**	**245**	*e*Pn	**Pn**	**05 54 51.5**	**-1.4**
ARS				*e*Pg	**Pb**	**05 55 11.7**	**+1.8**
ARS				Pmax		05 55 16.3	
	comp=E,658nm,0.8s						
ARS				*e*Sn	**Sn**	**05 56 01.0**	**-4.6**
ARS				*e*Sg	**Sb**	**05 56 32.6**	**+6.6**
ARS				Smax		05 56 37.2	
	comp=E,11µm,0.9s						
ZAK	**Zakamensk**	**6.91**	**232**	*e*Pn	**Pn**	**05 54 59.9**	**-0.5**
ZAK				*e*Pg	**Pb**	**05 55 21.1**	**+1.9**
ZAK				Pmax		05 55 58.6	
	comp=E,170nm,1.1s						
ZAK				*e*Sn	**Sn**	**05 56 14.4**	**-4.7**
ZAK				*e*Sg	**Sb**	**05 56 49.4**	**+7.7**
ZAK				Smax		05 57 12.9	
	comp=E,2µm,1.2s						
ZAK	**Zakamensk**	**6.91**	**232**	*e*PN	**Pn**	**05 55 00.1**	**-0.3**
ZAK				*e*		05 55 22.4	
ZAK				*e*		05 56 48.8	
ZAK				pmax	pmax		
	comp=Z,169nm,0.3s						
ZAK				smax	smax		
	comp=N,2µm,1.0s						
MOY	**Mondy**	**7.25**	**247**	*e*Pn	**Pn**	**05 55 04.7**	**-0.4**
MOY				*e*Pg	**Pb**	**05 55 28.0**	**+2.9**
MOY				Pmax		05 55 36.6	
	comp=N,366nm,1.1s						
MOY				*e*Sn	**Sn**	**05 56 22.8**	**-4.7**
MOY				*e*Sg	**Sb**	**05 56 59.7**	**+8.1**
MOY				Smax		05 57 14.6	
	comp=N,3µm,1.2s						
MOY	**Mondy**	**7.25**	**247**	*e*PN	**Pn**	**05 55 06.0**	**+0.9**
MOY				*e*		05 55 28.3	
MOY				*e*		05 56 59.3	
MOY				pmax	pmax		
	comp=Z,371nm,1.1s						
MOY				smax	smax		
	comp=E,3µm,1.4s						
ORL	**Orlik**	**7.50**	**256**	*e*Pn	**Pn**	**05 55 08.4**	**-0.1**
ORL				max		05 55 22.1	
	comp=E,585nm,1.2s						
ORL				*e*Sn	**Sn**	**05 56 28.5**	**-5.0**
ORL				*e*Sg	Sg	05 57 08.7	-11
ORL				Smax		05 57 15.2	
	comp=E,3µm,1.3s						
ORL	**Orlik**	**7.50**	**256**	⇑*i*PN	**Pn**	**05 55 08.4**	**-0.1**
ORL				*e*		05 55 32.3	
ORL				*e*		05 57 07.2	
ORL				pmax	pmax		
	comp=Z,585nm,1.0s						
ORL				smax	smax		
	comp=N,3µm,1.3s						
HIA	**Hailar**	**7.54**	**136**	*e*Pn	**Pn**	**05 55 08.8**	**-0.2**
HIA				*e*Pg	**Pb**	**05 55 33.2**	**+3.4**
HIA				*e*Sn	**Sn**	**05 56 29.5**	**-4.8**
HIA				*e*		05 56 44.2	
HIA				*e*Sg	Sb	05 57 09.4	+10
HIA	**Hailar**	**7.54**	**136**	PN	**Pn**	**05 55 09.4**	**+0.4**
HIA	**Hailar**	**7.54**	**136**	Pn	**Pn**	**05 55 09.3**	**+0.4**
ULN	**Ulaanbaatar**	**7.70**	**204**	*e*Pn	**Pn**	**05 55 10.3**	**-1.1**
ULN				*e*Pg	**Pb**	**05 55 36.0**	**+3.2**
ULN				*e*Sn	**Sn**	**05 56 33.4**	**-5.3**
ULN				*e*Sg	Sb	05 57 14.5	+10
ULN	**Ulaanbaatar**	**7.70**	**204**	*e*PN	**Pn**	**05 55 10.2**	**-1.1**
ULN	**Ulaanbaatar**	**7.70**	**204**	Pn	**Pn**	**05 55 10.3**	**-1.1**
SONM	**Songino Array**	**7.90**	**207**	Pn	**Pn**	**05 55 12.9**	**-1.2**
	comp=N,18nm,0.3s,baz=25,slow=11,SNR=217						
SONM				Sn	**Sn**	**05 56 45.5**	**+2.1**
	comp=N,12nm,0.3s,baz=14,slow=28,SNR=5.5						
SONM				Lg	Lg	05 57 23.7	
	comp=N,30nm,0.3s,baz=9.8,slow=27,SNR=10						
SONM	**Songino Array**	**7.90**	**207**	Pn	**Pn**	**05 55 12.6**	**-1.4**
ZEA	**Zeya**	**9.13**	**91**	*e*P	**Pn**	**05 55 33.5**	**+2.7**
ZEA				*e*S	**Sn**	**05 57 14.3**	**+0.9**
ZEA				pmax	pmax		
	comp=Z,100nm,1.0s						
ZEA				pmax	pmax		
	comp=N,30nm,0.9s						
ZEA				pmax	pmax		
	comp=E,50nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,80nm,0.8s						
ZEA				smax	smax		
	comp=E,100nm,1.2s						
ZEA				MLR	MLR		
	comp=E,2µm,5.0s						
ZEA				MLR	MLR		
	comp=N,1µm,3.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,6.0s						
KNGR	**Kungurtug, Tuv**	**9.67**	**249**	*e*Pn	**Pn**	**05 55 38.4**	**+0.1**
KNGR				*e*		05 55 52.4	
KNGR				*e*Sn	**Sn**	**05 57 19.9**	**-7.1**
KNGR				*e*Sg		05 58 15.8	
KZLR	**Kyzyl**	**10.85**	**260**	*e*Sg	Sg	05 58 52.2	
YAK	**Yakutsk**	**11.71**	**46**	Pn	**Pn**	**05 56 03.7**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=57,slow=3.7,SNR=5.5						
YAK				Lg	Lg	05 59 21.5	
	comp=Z,0.1nm,0.3s,baz=270,slow=16,SNR=6.7						
YAK				LR	LR	05 59 50.5	
	comp=Z,70nm,20.6s,baz=258,slow=33						
YAK	**Yakutsk**	**11.71**	**46**	*e*P	**Pn**	**05 56 04.0**	**-1.9**
YAK				*e*S	**Sn**	**05 58 15.7**	**-0.7**
YAK				pmax	pmax		
	comp=Z,38nm,1.2s						
YAK				pmax	pmax		
	comp=N,15nm,1.0s						
YAK				pmax	pmax		
	comp=E,24nm,1.5s						
YAK				pmax	pmax		
	comp=Z,142nm,3.4s						
YAK				pmax	pmax		
	comp=N,169nm,3.3s						
YAK				pmax	pmax		
	comp=E,95nm,2.8s						
YAK				smax	smax		
	comp=E,189nm,2.7s						
YAK				smax	smax		
	comp=N,179nm,2.4s						
YAK				MLR	MLR		
	comp=Z,211nm,14.0s						
YAK	**Yakutsk**	**11.71**	**46**	Pn	**Pn**	**05 56 03.0**	**-2.9**
KLR	**Kul'dur**	**13.54**	**107**	Pn	**Pn**	**05 56 30.4**	**-0.7**
	comp=Z,2.0nm,0.3s,baz=307,slow=14,SNR=26						
KLR				Sn	**Sn**	**05 59 02.3**	**+0.9**
	comp=Z,1.2nm,0.3s,baz=259,slow=4.5,SNR=5.1						
KLR				Lg	Lg	06 00 22.4	
	comp=Z,3.6nm,0.3s,baz=42,slow=20,SNR=8.5						
KLR				LR	LR	06 02 20.4	
	comp=Z,262nm,19.6s,baz=336,slow=40						
KLR	**Kul'dur**	**13.54**	**107**	*i* P	**Pn**	**05 56 30.7**	**-0.4**
HHC	**Hu-ho-hao-te**	**14.14**	**181**	*e*P	**Pn**	**05 56 42.1**	**+2.7**
HHC				S	**Sn**	**05 59 21.1**	**+4.9**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,4.4s						
HHC				LR	LR		
	comp=Z,3µm,7.2s						
HHC				LR	LR		
	comp=Z,750nm,6.8s						
HHC				LR	LR		
	comp=Z,3µm,7.2s						
CN2	**Changchun**	**14.27**	**136**	*e*P	**Pn**	**05 56 40.5**	**-0.5**
CN2				*e*S	**Sn**	**05 59 20.0**	**+0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,100nm,8.2s						
CN2				LR	LR		
	comp=Z,2µm,10.0s						
CN2				LR	LR		
	comp=Z,2µm,10.0s						
CN2				LR	LR		
	comp=Z,1µm,10.0s						
BJI	**Beijing**	**15.23**	**167**	P	**Pn**	**05 56 54.8**	**+0.7**
BJI				S	**Sn**	**05 59 48.1**	**+5.4**
BJI				pmax	pmax		
	comp=Z,12nm,0.9s						
BJI				LR	LR		
	comp=Z,1µm,7.3s						
BJI				LR	LR		
	comp=Z,2µm,8.0s						
BJT	**Baijiatuau**	**15.25**	**167**	P	**Pn**	**05 56 56.2**	**+1.8**
BJT				pmax	pmax		
	comp=Z,36nm,0.9s						
BJT	**Baijiatuau**	**15.25**	**167**	Pn	**Pn**	**05 56 56.2**	**+1.8**
SNY	**Shenyang**	**15.29**	**145**	⇓P	**P**	**05 57 03.8**	**+4.2**
SNY				S	**S**	**06 00 05.3**	**+4.7**
SNY				pmax	pmax		
	comp=Z,22nm,0.8s						
MDJ	**Mudanjiang**	**15.45**	**125**	P	**Pn**	**05 56 58.4**	**+1.5**
MDJ				S	**Sn**	**05 59 48.1**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,150nm,5.4s						
MDJ				LR	LR		
	comp=Z,3µm,6.1s						
MDJ				LR	LR		
	comp=Z,1µm,7.1s						
MDJ				LR	LR		
	comp=Z,3µm,7.4s						
MDJ	**Mudanjiang**	**15.45**	**125**	Pn	**Pn**	**05 56 58.0**	**+1.1**
ZAA0	**Zalesovo Array**	**15.67**	**277**	Pn	**Pn**	**05 56 58.3**	**-1.3**
ZAA0				IAmb	IAmb	05 57 03.1	
	comp=Z,108nm,1.0s						
ZALV	**Zalesovo Beam**	**15.67**	**277**	Pn	**Pn**	**05 56 58.7**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=76,slow=9.3,SNR=66						
ZALV				Lg	Lg	06 01 29.1	
	comp=Z,0.3nm,0.3s,baz=76,slow=25,SNR=4.1						
ZALV				LR	LR	06 03 39.9	
	comp=Z,127nm,22.0s,baz=75,slow=40						
ZALV	**Zalesovo Beam**	**15.67**	**277**	*i* P	**Pn**	**05 56 58.7**	**-1.0**
ZALV				pmax	pmax		
	comp=Z,70nm,0.8s						
ZALV	**Zalesovo Beam**	**15.67**	**277**	Pn	**Pn**	**05 56 58.6**	**-1.1**
DGZ	**Jazzator, Alta**	**15.74**	**260**	*i* P	**Pn**	**05 57 00.2**	**-0.6**
DGZ				MLR	MLR		
	comp=Z,194nm,12.0s						
USA0B	**Ussuriysk Arra**	**16.91**	**121**	P	**P**	**05 57 17.4**	**-0.2**
USA0B				pmax	pmax		
	comp=Z,43nm,1.6s						
USA0B	**Ussuriysk Arra**	**16.91**	**121**	P	**P**	**05 57 17.4**	**-0.2**
USRK	**Ussuriysk Ar.**	**16.91**	**121**	Pn	**Pn**	**05 57 16.1**	**+0.5**
	baz=321,slow=11,SNR=7.5						
USRK				Lg	Lg	06 02 10.6	
	baz=316,slow=30,SNR=9.7						
USRK				LR	LR	06 04 26.9	
	comp=Z,238nm,20.9s,baz=339,slow=40						
USRK	**Ussuriysk Ar.**	**16.91**	**121**	P	**P**	**05 57 17.0**	**-0.7**
USRK	**Ussuriysk Ar.**	**16.91**	**121**		**P**	**05 57 17.0**	**-0.7**
TIY	**Taiyuan**	**17.27**	**178**	*e*P	**P**	**05 57 24.8**	**+3.0**
TIY				LR	LR		
	comp=Z,1µm,6.8s						
TIY				LR	LR		
	comp=Z,860nm,5.6s						
TIY				LR	LR		
	comp=Z,2µm,8.3s						
GTA	**Gaotai**	**17.52**	**212**	*e*P	**Pn**	**05 57 23.3**	**-0.1**
GTA				pP	pP	05 57 26.6	-1.4
GTA				sP	sP	05 57 29.4	-0.2
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,8.8s						
GTA				LR	LR		
	comp=Z,640nm,8.8s						
GTA				LR	LR		
	comp=Z,1µm,8.0s						
GTA				LR	LR		
	comp=Z,1µm,10.0s						
NRIK	**Noril'sk**	**18.10**	**332**	Pn	**Pn**	**05 57 28.1**	**-2.1**
	comp=Z,1.8nm,0.3s,baz=132,slow=12,SNR=16						
NRIK				Sn	Sn	06 00 40.1	-12
	comp=Z,1.3nm,0.3s,baz=41,slow=16,SNR=4.2						
NRIK				Lg	Lg	06 02 53.4	
	comp=Z,0.4nm,0.3s,baz=241,slow=23,SNR=4.4						
NRIK				LR	LR	06 05 09.7	
	comp=Z,408nm,21.0s,baz=135,slow=39						
NRIK	**Noril'sk**	**18.10**	**332**	*ce*P	**Pn**	**05 57 27.9**	**-2.3**
NRIK				pmax	pmax		
	comp=Z,55nm,0.9s						
NRIK				MLR	MLR		
	comp=Z,471nm,19.0s						
NRIK	**Noril'sk**	**18.10**	**332**	Pn	**Pn**	**05 57 27.6**	**-2.6**
OKH	**Okha**	**18.19**	**82**	*de*P	**Pn**	**05 57 25.3**	**-6.1**
OKH				MLR	MLR		
	comp=E,900nm,9.0s						
OKH				MLR	MLR		
	comp=Z,700nm,8.0s						
OKH				MLR	MLR		
	comp=N,1µm,9.0s						
TIXI	**Tiksi**	**18.28**	**17**	Pn	**Pn**	**05 57 27.0**	**-5.3**
	comp=N,1.4nm,0.3s,baz=196,slow=7.6,SNR=19						
TIXI				Sn	Sn	06 00 44.4	-12
	comp=N,0.9nm,0.3s,baz=314,slow=10,SNR=3.1						
TIXI				LR	LR	06 04 55.9	
	comp=N,134nm,21.7s,baz=220,slow=38						
TIXI	**Tiksi**	**18.28**	**17**	*ce*P	**Pn**	**05 57 29.4**	**-3.0**
TIXI				pmax	pmax		
	comp=Z,21nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,168nm,14.0s						
TIXI	**Tiksi**	**18.28**	**17**	Pn	**Pn**	**05 57 28.6**	**-3.8**
ZSN	**Zaisan**	**18.37**	**257**	*e*P	**P**	**05 57 33.9**	**0.0**
	baz=257						
ZSN	**Zaisan**	**18.37**	**257**	*e*P	**P**	**05 57 33.8**	**0.0**
TYV	**Tymovskoe**	**18.99**	**90**	*e*P	**Pn**	**05 57 44.9**	**+3.7**
TYV				pmax	pmax		
	comp=Z,15nm,1.3s						
TYV				pmax	pmax		
	comp=Z,500nm,3.8s						
WMQ	**Urumqi**	**19.13**	**244**	*e*P	**Pn**	**05 57 43.6**	**+0.6**
WMQ				pP	sP	05 57 47.8	+0.6
WMQ				sP	pP	05 57 52.1	+6.5
WMQ				pmax	pmax		
	comp=Z,54nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,240nm,6.1s						
WMQ				LR	LR		
	comp=Z,2µm,11.5s						
WMQ				LR	LR		
	comp=Z,810nm,8.7s						
SEM	**Semipalatinsk**	**19.54**	**270**	*e*P	**P**	**05 57 46.2**	**-0.6**
	baz=269						
SEM	**Semipalatinsk**	**19.54**	**270**	*e*P	**P**	**05 57 46.1**	**-0.7**
LZH	**Lanzhou**	**19.66**	**199**	*e*P	**Pn**	**05 57 49.6**	**0.0**
LZH				pP	sP	05 57 55.3	+2.1
LZH				sP	pP	05 57 58.3	+6.7
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				LR	LR		
	comp=Z,940nm,8.1s						
LZH				LR	LR		
	comp=Z,2µm,9.0s						
LZH				LR	LR		
	comp=Z,960nm,10.3s						
MK31	**Makanchi Array**	**20.19**	**258**	P	**P**	**05 57 54.0**	**+0.3**
MK31				pmax	pmax		
	comp=Z,20nm,1.2s						
MK31	**Makanchi Array**	**20.19**	**258**	P	**P**	**05 57 54.0**	**+0.3**
MKAR	**Makanchi Array**	**20.19**	**258**	P	**P**	**05 57 52.7**	**-1.0**
	comp=Z,5.6nm,0.6s,baz=52,slow=7.5,SNR=27						
MKAR				Lg	Lg	06 03 56.4	
	comp=Z,9.7nm,1.0s,baz=80,slow=30,SNR=8.2						
MKAR				LR	LR	06 05 11.8	
	comp=Z,182nm,20.9s,baz=46,slow=35						
MKAR	**Makanchi Array**	**20.19**	**258**	*i* P	**P**	**05 57 54.0**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MKAR	**Makanchi Array**	**20.19**	**258**	P	**P**	**05 57 54.1**	**+0.4**
INCN	**Inchon**	**20.22**	**144**	P	Pn	05 57 55.2	-0.8
INCN				pmax	pmax		
	comp=Z,39nm,1.0s						
INCN	**Inchon**	**20.22**	**144**	P	Pn	05 57 55.2	-0.8
KURK	**Kurchatov**	**20.35**	**272**	P	**P**	**05 57 55.8**	**+0.5**
KURK	**Kurchatov**	**20.35**	**272**	P	**P**	**05 57 54.8**	**-0.5**
MAKZ	**Makanchi**	**20.36**	**259**	P	**P**	**05 57 54.7**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,13nm,0.8s						
MAKZ	**Makanchi**	**20.36**	**259**	P	**P**	**05 57 54.7**	**-0.8**
KURBB	**Kurchatov Arra**	**20.44**	**271**	P	**P**	**05 57 55.8**	**-0.5**
	comp=Z,6.5nm,0.5s,baz=68,slow=12,SNR=26						
KS19	**Wonju Array Si**	**20.64**	**141**	P	**P**	**05 57 59.3**	**+0.7**
KSAR	**Wonju Array Be**	**20.70**	**141**	P	Pn	05 58 00.9	-0.6
KSAR	**Wonju Array Be**	**20.70**	**141**	P	Pn	05 58 00.9	-0.6
KSRS	**Korea Array**	**20.70**	**141**	P	**P**	**05 57 58.9**	**-0.3**
	comp=Z,1.5nm,0.9s,baz=341,slow=9.1,SNR=2.6						
KSRS				LR	LR	06 05 11.3	
	comp=Z,162nm,20.3s,baz=335,slow=34						
YSS	**Yuzh-Sakhalins**	**20.96**	**100**	*ce*P	Pn	05 58 04.6	0.0
YSS				pmax	pmax		
	comp=Z,41nm,1.2s						
YSS	**Yuzh-Sakhalins**	**20.96**	**100**	P	**P**	**05 58 02.3**	**+0.3**
XAN	**Xi'an**	**21.03**	**187**	P	**P**	**05 58 03.0**	**+0.1**
XAN				pP	sP	05 58 07.9	-0.1
XAN				S	Sn	06 01 59.6	-3.4
XAN				pmax	pmax		
	comp=Z,75nm,1.3s						
XAN				LR	LR		
	comp=Z,850nm,11.3s						
XAN				LR	LR		
	comp=Z,2µm,13.9s						
XAN				LR	LR		
	comp=Z,1µm,9.9s						
MA2	**Magadan**	**21.35**	**62**	*ce*P	**P**	**05 58 08.2**	**+2.1**
MA2				pmax	pmax		
	comp=Z,63nm,1.3s						
MA2	**Magadan**	**21.35**	**62**	P	**P**	**05 58 07.2**	**+1.1**
SEY	**Seymchan**	**22.06**	**52**	P	**P**	**05 58 15.0**	**+1.3**
	comp=Z,9.6nm,0.7s,baz=262,slow=11,SNR=21						
SEY				LR	LR	06 06 08.0	
	comp=Z,137nm,18.1s,baz=277,slow=35						
SEY	**Seymchan**	**22.06**	**52**	P	**P**	**05 58 15.0**	**+1.3**
ASAJ	**Asahikawa**	**22.58**	**106**	LR	LR	06 07 38.3	
	comp=Z,294nm,19.0s,baz=266,slow=38						
TDK	**Taldyqorghan**	**23.44**	**259**	*e*P	**P**	**05 58 28.3**	**0.0**
	comp=Z,38nm,0.9s,baz=258						
TDK	**Taldyqorghan**	**23.44**	**259**	*e*P	**P**	**05 58 28.3**	**0.0**
TDK				pmax	pmax		
	comp=Z,37nm,0.9s						
NJ2	**Nanjing**	**23.46**	**165**	⇑P	**P**	**05 58 28.5**	**0.0**
NJ2				pP	**sP**	**05 58 33.0**	**-0.7**
NJ2				sP	**pP**	**05 58 35.4**	**+3.2**
NJ2				S	**S**	**06 02 38.6**	**-3.2**
NJ2				sS	**sS**	**06 02 49.8**	**+1.8**
NJ2				SS	**SnSn**	**06 03 30.8**	**+14**
NJ2				pmax	pmax		
	comp=Z,15nm,0.7s						
NJ2				LR	LR		
	comp=Z,590nm,8.9s						
NJ2				LR	LR		
	comp=Z,520nm,10.1s						
NJ2				LR	LR		
	comp=Z,630nm,12.9s						
JTU	**Tsushima**	**23.85**	**142**	P	**P**	**05 58 32.7**	**+0.4**
JTU				IAmb	IAmb	05 59 24.6	
	comp=Z,39nm,1.2s						
SHLS	**Shalkode**	**24.01**	**254**	*e*P	**P**	**05 58 32.4**	**-1.5**
	comp=Z,21nm,1.4s,baz=253						
SHLS	**Shalkode**	**24.01**	**254**	*e*P	**P**	**05 58 32.4**	**-1.5**
SHLS				pmax	pmax		
	comp=Z,21nm,1.4s						
JTM	**Tenmabayashi**	**24.02**	**114**	P	**P**	**05 58 32.6**	**-1.2**
JTM				IAmb	IAmb	05 58 37.3	
	comp=Z,62nm,1.0s						
BVAR	**Borovoye Array**	**24.15**	**283**	P	**P**	**05 58 34.9**	**-0.1**
	comp=Z,12nm,0.7s,baz=129,slow=4.7,SNR=29						
BRVK	**Borovoye**	**24.19**	**283**	P	**P**	**05 58 35.8**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,27nm,0.7s						
BRVK	**Borovoye**	**24.19**	**283**	P	**P**	**05 58 35.8**	**+0.4**
BRVK				IAmb	IAmb	05 58 45.8	
	comp=Z,27nm,0.7s						
UZB	**Uzynbulak**	**24.26**	**254**	*e*P	**P**	**05 58 36.3**	**-0.1**
	comp=Z,18nm,1.3s,baz=254						
UZB	**Uzynbulak**	**24.26**	**254**	*e*P	**P**	**05 58 36.2**	**-0.1**
UZB				pmax	pmax		
	comp=Z,18nm,1.3s						
ERM	**Erimo**	**24.27**	**109**	P	**P**	**05 58 37.5**	**+1.3**
ERM				pmax	pmax		
	comp=Z,59nm,1.1s						
ERM	**Erimo**	**24.27**	**109**	P	**P**	**05 58 37.5**	**+1.3**
ERM				IAmb	IAmb	05 58 40.9	
	comp=Z,58nm,1.1s						
JEM	**Erimo**	**24.27**	**109**	P	P	05 58 20.0	-16
JEM				IAmb	IAmb	05 58 41.0	
	comp=Z,72nm,1.2s						
WHN	**Wuhan**	**24.49**	**175**	⇑P	**P**	**05 58 39.3**	**+1.1**

SATY	Saty	24.66	255	*e*P	P	05 58 40.0	0.0
	baz=255						
SATY	Saty	24.66	255	*e*P	P	05 58 39.9	0.0
CD2	Chengdu	24.73	197	P	P	05 58 39.8	-0.7
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
ENH	Enshi	24.75	185	P	P	05 58 40.4	-0.2
OTUK	Ortayu	25.12	271	P	P	05 58 43.4	-0.5
KUU	Kurty	25.29	259	*e*P	P	05 58 45.3	-0.1
	baz=259						
KUU	Kurty	25.29	259	*e*P	P	05 58 45.3	-0.1
MDOK	Medeo	25.35	257	*e*P	P	05 58 46.1	-0.1
	baz=256						
MDOK	Medeo	25.35	257	*e*P	P	05 58 46.0	-0.1
MJAR	Matsushiro Arr	25.83	125	LR	LR	06 09 15.0	
	comp=Z,209nm,18.6s,baz=315,slow=37						
MJAR	Matsushiro Arr	25.83	125	P	P	05 58 51.6	+1.2
MJAR				pmax	pmax		
	comp=Z,13nm,1.6s						
MJAR	Matsushiro Arr	25.83	125	P	P	05 58 51.6	+1.2
TARG	Taragay, Kyrgy	25.87	253	P	P	05 58 50.6	-0.6
BTLS	Baital	25.90	263	*e*P	P	05 58 50.5	-0.5
	baz=263						
BTLS	Baital	25.90	263	*e*P	P	05 58 50.4	-0.5
SGDS	Sogindy	26.53	260	*e*P	P	05 58 55.9	-0.9
	baz=260						
PETK	Petropavlovsk-	26.67	75	P	P	05 58 59.5	+1.7
	comp=Z,6.2nm,0.9s,baz=336,slow=3.3,SNR=3.6						
PETK				LR	LR	06 10 42.0	
	comp=Z,261nm,19.7s,baz=310,slow=39						
PETK	Petropavlovsk-	26.67	75	P	P	05 58 56.7	-1.1
SKR	Severo-Kuril's	26.79	81	pmax	pmax		
	comp=Z,700nm,4.6s						
SKR				pmax	pmax		
	comp=Z,97nm,1.2s						
AAK	Ala-Archa	27.13	259	P	P	05 59 03.0	+0.8
	comp=Z,5.6nm,0.9s,baz=87,slow=8.8,SNR=7.8						
AAK				LR	LR	06 09 23.6	
	comp=Z,237nm,18.4s,baz=34,slow=36						
AAK	Ala-Archa	27.13	259	P	P	05 59 02.1	-0.1
PET	Petropavlovsk	27.23	75	P	P	05 59 03.3	+0.5
PET				IAmb	IAmb	05 59 20.8	
	comp=Z,37nm,1.3s						
BILL	Bilibino	28.00	41	*de*P	P	05 59 11.4	+1.8
BILL				*e*		05 59 58.2	
BILL				*e*S	S	06 03 48.3	-5.0
BILL				pmax	pmax		
	comp=Z,16nm,1.3s						
BILL				MLR	MLR		
	comp=Z,95nm,12.0s						
BILL	Bilibino	28.00	41	P	P	05 59 11.4	+1.8
SVE	Sverdlovsk	28.18	295	*e*P	P	05 59 12.5	+1.2
SVE				*e*S	S	06 04 02.8	+6.4
SVE				pmax	pmax		
	comp=Z,36nm,1.4s						
SVE				MLR	MLR		
	comp=Z,472nm,14.0s						
KSH	Kashi	28.41	252	P	P	05 59 19.8	+6.1
KSH				pP	sP	05 59 23.5	+4.5
KSH				sP	pP	05 59 26.3	+8.9
KSH				S	S	06 04 06.6	+6.0
KSH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KSH				LR	LR		
	comp=Z,750nm,13.6s						
KSH				LR	LR		
	comp=Z,430nm,13.2s						
KSH				LR	LR		
	comp=Z,440nm,13.5s						
KKAR	Karatay Array	29.10	263	P	P	05 59 19.9	+0.2
KKAR	Karatay Array	29.10	263	P	P	05 59 19.9	+0.2
JHJ	Hachijo jima 2	29.37	127	LR	LR	06 10 44.4	
	comp=Z,198nm,18.6s,baz=64,slow=36						
ARU	Arti	29.40	295	P	P	05 59 22.8	+0.7
	comp=Z,1.2nm,0.6s,baz=65,slow=4.9,SNR=5.6						
ARU				LR	LR	06 12 28.0	
	comp=Z,227nm,18.6s,baz=98,slow=39						
ARU	Arti	29.40	295	*c i*P	P	05 59 21.5	-0.6
ARU						06 00 13.8	
ARU				S	S	06 04 16.9	+1.4
ARU				SS	SnSn	06 05 44.4	+2.8
ARU				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ARU				MLR	MLR		
	comp=Z,482nm,16.0s						
ARU	Arti	29.40	295	P	P	05 59 21.8	-0.3
IUG	Iuzhnay	29.98	262	*e*P	P	05 59 27.7	+0.1
	baz=262						
IUG	Iuzhnay	29.98	262	*e*P	P	05 59 27.6	+0.1
KMI	Kunming	30.56	196	⇑P	P	05 59 35.3	+2.4
KMI				pmax	pmax		
	comp=Z,23nm,0.5s						
KMI				LR	LR		
	comp=Z,260nm,19.9s						
KMI				LR	LR		
	comp=Z,490nm,14.5s						
KMI				LR	LR		
	comp=Z,330nm,13.0s						
BTK	Batken	30.91	258	P	P	05 59 36.3	+0.5
BTK				pmax	pmax		
	comp=Z,19nm,1.1s						
BTK	Batken	30.91	258	P	P	05 59 36.3	+0.5
BTK				IAmb	IAmb	05 59 41.0	
	comp=Z,19nm,1.1s						
AB31	Akbulak array	31.70	281	*i* P	P	05 59 42.5	-0.1
ABKAR	Akbulak array	31.70	281	P	P	05 59 42.5	-0.1
ABKAR	Akbulak array	31.70	281	P	P	05 59 42.5	-0.1
GAR	Garm	31.91	257	P	P	05 59 45.2	+0.5
GAR				IAmb	IAmb	05 59 51.1	
	comp=Z,33nm,0.9s						
AKTO	Aktyubinsk	32.20	285	LR	LR	06 14 00.1	
	comp=Z,225nm,20.1s,baz=55,slow=38						
TAPN	Taplejung	32.68	222	*e*P	P	05 59 50.7	-1.0
CHGR	Chuyangaron	32.80	258	P	P	05 59 52.4	0.0
SHL	Shillong	32.82	215	P	P	05 59 51.3	-1.5
SHL				pmax	pmax		
	comp=Z,22nm,1.4s						
SHL	Shillong	32.82	215	P	P	05 59 51.3	-1.5
SHL				IAmb	IAmb	05 59 56.5	
	comp=Z,22nm,1.4s						
GUN	Gumba	32.91	225	*e*P	P	05 59 53.3	-0.5
	comp=Z,36nm,0.8s						
JIRN	Jiri	33.01	225	*e*P	P	05 59 54.1	-0.5
	comp=Z,49nm,0.7s						
ODAN	Odare	33.25	222	*e*P	P	05 59 55.7	-0.9
	comp=Z,86nm,0.7s						
KIRV	Kirov	33.26	302	LR	LR	06 15 09.0	
	comp=Z,277nm,19.3s,baz=63,slow=39						
KIRV	Kirov	33.26	302	*ce*P	P	05 59 55.5	-0.6
GKN	Gorkha	33.35	227	*e*P	P	05 59 57.1	-0.3
PKI	Pulchoki	33.41	226	*e*P	P	05 59 57.2	-0.9
	comp=Z,21nm,0.8s						
DANN	Dangsing	33.42	229	*e*P	P	05 59 57.8	-0.4
RAMN	Ramite	33.48	223	*e*P	P	05 59 57.5	-1.1
	comp=Z,20nm,0.6s						
PRGR	Permogore	33.97	309	*e*P	P	05 59 58.0	-4.2
PRGR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PYUN	Piuthan	33.98	230	*e*P	P	06 00 02.1	-0.8
KOLN	Koldanda	34.00	228	*e*P	P	06 00 02.4	-0.7
SLVN	Son La	34.11	193	P	P	06 00 03.2	-0.7
SLVN				IAmb	IAmb	06 00 57.9	
	comp=Z,29nm,2.0s						
NIL	Nilore	34.21	247	P	P	06 00 04.5	-0.2
NIL				pmax	pmax		
	comp=Z,15nm,1.1s						
NIL	Nilore	34.21	247	P	P	06 00 04.5	-0.2
NIL				IAmb	IAmb	06 00 06.0	
	comp=Z,15nm,1.1s						
KBL	Kabul	35.83	253	P	P	06 00 18.3	-0.5
KBL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KBL	Kabul	35.83	253	P	P	06 00 18.3	-0.5
QIZ	Qiongzhong	35.91	183	P	P	06 00 20.9	+1.5
QIZ				S	S	06 06 00.1	+2.7
QIZ				LR	LR		
	comp=Z,160nm,6.9s						
QIZ				LR	LR		
	comp=Z,560nm,21.1s						
QIZ				LR	LR		
	comp=Z,190nm,10.4s						
APA	Apatity	36.95	321	⇓*i*P	P	06 00 30.2	+2.5
APA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,700nm,12.0s						
KLMR	Klimovskoe	37.01	309	*e*P	P	06 00 26.6	-1.7
KLMR				*e*		06 01 51.5	
KLMR				pmax	pmax		
	comp=Z,23nm,0.9s						
KLMR	Klimovskoe	37.01	309	*e*P	P	06 00 26.7	-1.6
KLMR				AMP		06 00 31.4	
	comp=Z,23nm,0.9s						
KLMR				*e*PP	PP	06 01 51.6	-0.8
GAMB	Gambell	37.66	45	P	P	06 00 33.2	-0.5
	baz=294						
CMAR	Chiang Mai Arr	37.75	200	P	P	06 00 34.1	-0.9
	comp=Z,1.4nm,0.3s,baz=6.4,slow=8.8,SNR=6.8						
CMAR				LR	LR	06 15 58.9	
	comp=Z,38nm,18.1s,baz=75,slow=36						
TNA	Tin City	38.43	41	P	P	06 00 39.7	-0.6
	baz=294						
ARCES	ARCESS Array B	38.91	326	P	P	06 00 44.1	-0.2
	comp=Z,3.9nm,0.9s,baz=45,slow=9.0,SNR=5.8						
ARCES				LR	LR	06 18 39.8	
	comp=Z,110nm,21.8s,baz=55,slow=39						
GEYT	Alibeck	39.61	267	P	P	06 00 50.4	-0.2
	comp=Z,7.6nm,0.9s,baz=222,slow=2.0,SNR=9.1						
GEYT				LR	LR	06 16 33.0	
	comp=Z,81nm,18.9s,baz=55,slow=35						
GEYT	Alibeck	39.61	267	P	P	06 00 50.9	+0.3
GYA0B	ALIBECK ARRAY	39.61	267	P	P	06 00 50.7	+0.2
HRA	Herat	39.75	260	P	P	06 00 52.5	+0.5
A21K	Barrow	39.80	30	P	P	06 00 50.8	-0.9
	baz=296						
ANM	Nome	39.83	42	P	P	06 00 51.2	-0.9
	baz=297						
MOS	Moscow	40.27	303	*e*P	P	06 00 55.1	-0.7
VRH	Novokhopyorsk	40.63	295	*e*P	P	06 00 59.1	+0.3
VRH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NOR	Nord	40.93	350	*i* P	P	06 01 00.6	-0.3
NOR				IAmb	IAmb	06 01 03.5	
	comp=Z,2.4nm,0.7s						
OBN	Obninsk	41.11	302	⇓*e*P	P	06 01 01.9	-0.8
OBN				*e*		06 02 37.0	
OBN				pmax	pmax		
	comp=Z,31nm,2.3s						
OBN				MLR	MLR		
	comp=Z,238nm,18.0s						
LPSR	Galich'ya Gora	41.30	298	*e*P	P	06 01 03.4	-0.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	Storozhevoye	41.95	296	*e*P	P	06 01 07.9	-1.7
VSR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAK	Makhachkala	42.38	281	*e*P	P	06 01 08.1	-5.1
MAK				*e*S	S	06 07 27.4	-6.9
MAK				pmax	pmax		
	comp=Z,119nm,1.5s						
MAK				MLR	MLR		
	comp=Z,121nm,13.0s						
FINES	FINESS Array B	42.49	315	P	P	06 01 14.0	+0.1
	comp=Z,4.1nm,0.6s,baz=66,slow=8.0,SNR=20						
FINES				LR	LR	06 20 11.2	
	comp=Z,142nm,19.6s,baz=44,slow=38						
FINES	FINESS Array B	42.49	315	P	P	06 01 13.5	-0.4
GCSA	Galena City Sc	42.93	39	P	P	06 01 16.4	-0.9
	baz=302,SNR=5.9						
TOLK	Toolik Lake Re	43.24	32	P	P	06 01 21.1	+1.1
TOLK	Toolik Lake Re	43.24	32	P	P	06 01 18.5	-1.5
	baz=304						
IMAR	Indian Mountai	43.36	36	P	P	06 01 21.7	+0.8
COLD	Coldfoot	43.84	34	P	P	06 01 25.8	+1.0
COLD	Coldfoot	43.84	34	P	P	06 01 24.2	-0.6
	baz=305,SNR=7.1						
H21K	Melozitna Rive	43.86	37	P	P	06 01 25.5	+0.5
H21K				IAmb	IAmb	06 01 27.5	
	comp=Z,19nm,1.0s						
H21K	Melozitna Rive	43.86	37	P	P	06 01 24.5	-0.5
	baz=304						
J20K	Nowinta River	44.23	39	P	P	06 01 28.7	+0.8
J20K	Nowinta River	44.23	39	P	P	06 01 28.3	+0.3
	baz=304						
TTA	Tatalina	44.25	41	P	P	06 01 27.6	-0.5
	baz=304						
I21K	Tanana	44.42	37	P	P	06 01 30.9	+1.5
I21K	Tanana	44.42	37	P	P	06 01 29.0	-0.5
	baz=305						
KIV	Kislovodsk	44.45	286	⇑P	P	06 01 31.8	+1.7
KIV	Kislovodsk	44.45	286	*e*P	P	06 01 30.6	+0.5
KIV				*e*S	S	06 08 05.9	+1.1
KIV				*e*SS	ScS	06 11 26.0	-1.9
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV				MLR	MLR		
	comp=Z,70nm,16.0s						
KBZ	Khabaz	44.48	285	LR	LR	06 22 09.9	
	comp=Z,120nm,18.7s,baz=28,slow=39						
EUNU	Eureka	44.81	4	P	P	06 01 33.0	+0.5
DAG	Danmarks Havn	44.84	346	*i* P	P	06 01 31.3	-1.3
DAG				IAmb	IAmb	06 01 32.6	
	comp=Z,4.2nm,0.9s						
MLY	Manley	44.94	37	P	P	06 01 34.7	+1.1
MLY	Manley	44.94	37	P	P	06 01 33.4	-0.2
	baz=306						
CHUM	Lake Minchumin	45.06	38	P	P	06 01 33.6	-0.9
	baz=306						
L19K	White Mountain	45.12	41	P	P	06 01 36.7	+1.6
L19K				IAmb	IAmb	06 01 37.0	
	comp=Z,37nm,1.9s						
L19K	White Mountain	45.12	41	P	P	06 01 34.2	-0.9
	baz=306						
L20K	Farewell, AK	45.31	41	P	P	06 01 35.6	-1.0
	baz=306						
I23K	Minto, Yukon-K	45.34	36	P	P	06 01 38.2	+1.6
I23K				IAmb	IAmb	06 01 39.6	
	comp=Z,15nm,1.1s						
I23K	Minto, Yukon-K	45.34	36	P	P	06 01 36.3	-0.3
	baz=307,SNR=6.5						
BPAW	Bear Paw Mtn.	45.40	38	P	P	06 01 38.6	+1.3
BPAW				IAmb	IAmb	06 03 02.5	
	comp=Z,35nm,1.9s						
BPAW	Bear Paw Mtn.	45.40	38	P	P	06 01 36.8	-0.5
	baz=307						
H24K	Noodor Dome	45.41	35	P	P	06 01 39.5	+2.1
H24K	Noodor Dome	45.41	35	P	P	06 01 37.3	-0.1
	baz=307,SNR=9.0						
CAST	Castle Rocks	45.42	39	P	P	06 01 39.2	+1.8
CAST				IAmb	IAmb	06 01 40.6	
	comp=Z,21nm,1.4s						
CAST	Castle Rocks	45.42	39	P	P	06 01 37.8	+0.4
	baz=306,SNR=5.0						
M19K	Big River Lodg	45.46	42	P	P	06 01 39.5	+1.8
M19K				IAmb	IAmb	06 01 40.1	
	comp=Z,47nm,1.8s						
M19K	Big River Lodg	45.46	42	P	P	06 01 36.4	-1.4
	baz=306						
BMAR	Burnt Mountain	45.48	32	P	P	06 01 39.9	+2.0
PPLA	Purkeypile	45.69	40	P	P	06 01 41.5	+1.7
PPLA				IAmb	IAmb	06 02 58.9	
	comp=Z,45nm,1.6s						
KTH	Kantishna Hill	45.75	38	P	P	06 01 42.0	+1.8
KTH				IAmb	IAmb	06 01 42.5	
	comp=Z,15nm,1.0s						
NEA2	Nenana	45.77	36	P	P	06 01 41.8	+1.6
NEA2				IAmb	IAmb	06 01 45.6	
	comp=Z,38nm,2.0s						
NEA2	Nenana	45.77	36	P	P	06 01 38.7	-1.5
	baz=308						
MDM	Murphy Dome	45.83	36	P	P	06 01 42.3	+1.6
MDM				IAmb	IAmb	06 01 45.6	
	comp=Z,15nm,1.0s						
NACGM	Naroch	45.88	307	*i* P	P	06 01 41.7	+0.5
BWN	Browne	45.89	37	P	P	06 01 42.1	+1.0
POKR	Poker Plat Res	46.00	35	P	P	06 01 39.7	-2.4
	baz=308						
TCOL	CIGO, UAF Yank	46.01	36	P	P	06 01 43.8	+1.8
TCOL				IAmb	IAmb	06 01 45.4	
	comp=Z,16nm,1.0s						
TCOL	CIGO, UAF Yank	46.01	36	P	P	06 01 41.3	-0.7
	baz=308						
COLA	College	46.01	36	P	P	06 01 43.4	+1.4
COLA				pmax	pmax		
	comp=Z,18nm,1.1s						
COLA	College	46.01	36	P	P	06 01 43.4	+1.4
COLA				IAmb	IAmb	06 01 45.4	
	comp=Z,18nm,1.1s						
COLA	College	46.01	36	P	P	06 01 41.4	-0.6
	baz=308						
TRF	Thorofare Moun	46.04	38	P	P	06 01 43.8	+1.3
TRF				IAmb	IAmb	06 01 47.5	
	comp=Z,32nm,1.2s						
TRF	Thorofare Moun	46.04	38	P	P	06 01 42.7	+0.2
	baz=308,SNR=6.3						
N19K	Bonanza Creek	46.08	43	P	P	06 01 42.4	-0.4
	baz=307						
CCB	Clear Creek Bu	46.17	36	P	P	06 01 44.8	+1.5
CCB				IAmb	IAmb	06 01 45.7	
	comp=Z,14nm,1.1s						
WRH	Wood River Hil	46.18	36	P	P	06 01 44.6	+1.2
WRH				IAmb	IAmb	06 01 45.8	
	comp=Z,14nm,1.0s						
MCK	McKinley	46.35	37	P	P	06 01 46.6	+1.9
MCK				pmax	pmax		
	comp=Z,20nm,1.4s						
MCK	McKinley	46.35	37	P	P	06 01 46.6	+1.9
MCK				IAmb	IAmb	06 01 47.9	
	comp=Z,20nm,1.4s						
MCK	McKinley	46.35	37	P	P	06 01 44.2	-0.6
	baz=308						
PRP	Porcupine Dome	46.38	34	P	P	06 01 46.0	+0.9
PRP				IAmb	IAmb	06 01 47.9	
	comp=Z,12nm,0.9s						
PRP	Porcupine Dome	46.38	34	P	P	06 01 45.1	0.0
	baz=309,SNR=12						
IL31		46.40	35	P	P	06 01 46.4	+1.3
IL31				IAmb	IAmb	06 01 47.5	
	comp=Z,17nm,0.9s						
ILAR	Eielson Array	46.40	35	P	P	06 01 46.5	+1.4
	comp=Z,11nm,0.8s,baz=299,slow=6.5,SNR=107						
ILAR	Eielson Array	46.40	35	P	P	06 01 46.2	+1.1
HDA	Harding Lake	46.61	36	P	P	06 01 47.5	+0.7
HDA	Harding Lake	46.61	36	P	P	06 01 44.8	-2.0
	baz=309						
P18K	Big Mountain,	46.64	45	P	P	06 01 46.6	-0.5
	baz=308						
RSO	Redoubt South	46.97	42	P	P	06 01 51.0	+1.1
J25K	Salcha River,	47.01	35	P	P	06 01 48.7	-1.3
	baz=310						
WAT1	Susitna Watana	47.05	38	P	P	06 01 49.8	-0.5
	baz=309						
DBG	Daneborg	47.05	344	*i* P	P	06 01 49.3	-0.9
DBG				IAmb	IAmb	06 01 52.0	
	comp=Z,2.1nm,0.6s						
A36M	Sachs Harbour	47.24	21	P	P	06 01 51.9	+0.3
A36M				IAmb	IAmb	06 01 56.0	
	comp=Z,18nm,1.2s						
A36M	Sachs Harbour	47.24	21	P	P	06 01 51.5	-0.1
	baz=319,SNR=10						
AKASG	Malin Array Be	47.30	301	P	P	06 01 51.9	-0.4
	comp=Z,6.9nm,0.9s,baz=46,slow=8.9,SNR=12						
AKASG				LR	LR	06 23 39.5	
	comp=Z,230nm,18.2s,baz=10.0,slow=38						
AKASG	Malin Array Be	47.30	301	*i* P	P	06 01 55.2	+2.9
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	47.30	301	P	P	06 01 52.4	+0.1
AKBB	Malin Array Si	47.30	301	P	P	06 01 52.2	-0.1
AKBB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
AKBB	Malin Array Si	47.30	301	P	P	06 01 52.2	-0.1
DHY	Denali Highway	47.31	37	P	P	06 01 53.3	+0.9
DHY				IAmb	IAmb	06 01 56.2	
	comp=Z,8.2nm,0.7s						
DHY	Denali Highway	47.31	37	P	P	06 01 51.5	-1.0
	baz=310,SNR=5.2						
WAT6	Susitna Watana	47.50	38	P	P	06 01 53.0	-1.0
	baz=310,SNR=8.8						
GHO	Glory Hole Cre	47.59	39	P	P	06 01 56.1	+1.5
PMR	Palmer	47.62	40	P	P	06 01 55.8	+1.1
PMR				pmax	pmax		
	comp=Z,19nm,1.2s						
PMR	Palmer	47.62	40	P	P	06 01 55.8	+1.1
PMR				IAmb	IAmb	06 01 59.5	
	comp=Z,19nm,1.2s						
PMR	Palmer	47.62	40	P	P	06 01 53.6	-1.1
	baz=310						
J26L	Joseph Creek	47.67	34	P	P	06 01 54.7	-0.4
	baz=311						
RC01	Rabbit Creek A	47.72	41	P	P	06 01 55.0	-0.5
	baz=310						
RIDG	Independent Ri	47.75	36	P	P	06 01 54.6	-1.1
	baz=311,SNR=5.4						
SML	Sawmill	47.78	39	P	P	06 01 57.3	+1.3
SML				IAmb	IAmb	06 01 58.0	
	comp=Z,19nm,1.1s						
SML	Sawmill	47.78	39	P	P	06 01 55.2	-0.8
	baz=310						
SCRK	Sand Creek	47.88	35	P	P	06 01 55.9	-0.9
	baz=311						
KNK	Knik Glacier	47.99	40	P	P	06 01 55.5	-2.0
	baz=310						
INK	Inuvik	48.02	27	P	P	06 01 58.7	+1.0
INK				pmax	pmax		
	comp=Z,13nm,1.2s						
INK	Inuvik	48.02	27	P	P	06 01 58.6	+1.0
INK				IAmb	IAmb	06 02 02.5	
	comp=Z,13nm,1.2s						
INK	Inuvik	48.02	27	P	P	06 01 57.7	0.0
	baz=315,SNR=7.5						
PAX	Paxson	48.04	37	P	P	06 01 59.3	+1.3
PAX				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PAX	Paxson	48.04	37	P	P	06 01 59.3	+1.3
PAX	Paxson	48.04	37	P	P	06 01 57.8	-0.2
	baz=311						
DOT	Dot Lake	48.07	36	P	P	06 01 58.8	+0.6
EGAK	Eagle	48.26	33	P	P	06 02 01.2	+1.7
EGAK				IAmb	IAmb	06 02 04.2	
	comp=Z,17nm,0.9s						
EGAK	Eagle	48.26	33	P	P	06 01 58.7	-0.9
	baz=312						
NC303	NORSAR Array S	48.34	320	P	P	06 02 00.7	+0.5
M24K	Tolsona, Glenn	48.36	38	P	P	06 02 02.2	+1.7
M24K	Tolsona, Glenn	48.36	38	P	P	06 02 00.3	-0.2
	baz=311						
GURO	Guroymak-BITLI	48.41	280	P	P	06 02 03.5	+2.2
SEW	Seward	48.47	41	P	P	06 02 00.1	-1.1
	baz=310						
NB2	NORSAR Subarra	48.51	320	P	P	06 02 01.5	-0.2
	comp=Z,4.4nm,0.8s,baz=51,slow=7.9						
NOA	NORSAR Array B	48.51	320	P	P	06 02 01.9	+0.3
	comp=Z,3.1nm,0.8s,baz=51,slow=7.7,SNR=12						
NOA				LR	LR	06 23 45.7	
	comp=Z,85nm,19.9s,baz=45,slow=38						
HARP	HAARP	48.52	37	P	P	06 02 00.6	-1.2
	baz=312						
L26K	Log Cabin Wild	48.73	36	P	P	06 02 02.1	-1.2
	baz=312						
KDAK	Kodiak Island	48.73	45	P	P	06 02 03.9	+0.5
	comp=Z,13nm,0.9s,baz=252,slow=2.9,SNR=6.8						
KDAK	Kodiak Island	48.73	45	P	P	06 02 04.7	+1.4
KDAK				pmax	pmax		
	comp=Z,87nm,1.6s						
KDAK	Kodiak Island	48.73	45	P	P	06 02 04.7	+1.4
KDAK	Kodiak Island	48.73	45	P	P	06 02 03.9	+0.5
	baz=310						
I29M	Ogilvie Camp,	48.74	32	P	P	06 02 02.3	-1.1
	baz=314						
TULEG	Thule	48.75	0	*i* P	P	06 02 03.0	-0.2
TULEG				IAmb	IAmb	06 02 03.4	
	comp=Z,5.1nm,0.9s						
KLU	Klutina	48.86	38	P	P	06 02 05.9	+1.5
KLU				IAmb	IAmb	06 02 06.7	
	comp=Z,32nm,1.2s						
KLU	Klutina	48.86	38	P	P	06 02 04.6	+0.3
	baz=312,SNR=7.7						
L27K	Beaver Creek,	49.21	35	P	P	06 02 08.7	+1.7
L27K				IAmb	IAmb	06 02 09.3	
	comp=Z,14nm,0.7s						
L27K	Beaver Creek,	49.21	35	P	P	06 02 06.3	-0.7
	baz=313,SNR=14						
BCAR	Beaver Creek A	49.22	35	P	P	06 02 08.8	+1.7
N25K	Chitina, Valde	49.25	38	P	P	06 02 09.3	+1.9
N25K	Chitina, Valde	49.25	38	P	P	06 02 07.4	0.0
	baz=312,SNR=9.3						
M26K	Nabesna, AK	49.27	36	P	P	06 02 07.3	-0.2
	baz=313						
DAWY	Dawson	49.31	33	P	P	06 02 06.9	-0.9
	baz=314						
SORM	Soroca	49.38	299	⇑P	P	06 02 08.4	0.0
SORM	Soroca	49.38	299	⇑P	P	06 02 08.4	0.0
RES	Resolute Bay	49.40	9	P	P	06 02 08.9	+0.7
RES				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RES	Resolute Bay	49.40	9	P	P	06 02 08.9	+0.7

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J29M  Klondike Camp     49.41  32 P     P     06 02 09.2 +0.7
      baz=315
EYAK  Cordova Ski Ar    49.55  39 P     P     06 02 09.1 -0.4
      baz=312
M27K  Edge Creek, AK    49.68  36 P     P     06 02 12.8 +2.1
M27K                              IAmb  IAmb  06 02 16.6
      comp=Z,20nm,1.1s
M27K  Edge Creek, AK    49.68  36 P     P     06 02 09.7 -1.0
      baz=314
BMRM  Bremner River     49.68  38 P     P     06 02 12.3 +1.7
BMRM                              IAmb  IAmb  06 02 16.2
      comp=Z,35nm,1.3s
BMRM  Bremner River     49.68  38 P     P     06 02 09.5 -1.1
      baz=313
MCARA McCarthy VSAT     49.96  37 P     P     06 02 12.9 +0.2
      baz=314
BVCY  Beaver Creek      49.98  35 P     P     06 02 13.1 +0.3
      baz=314
TGL   Tana Glacier      50.46  38 P     P     06 02 18.2 +1.6
CTG   Chitna Glacier    50.84  37 P     P     06 02 18.9 -0.5
      baz=315,SNR=5.9
CTGM  Chitina Glacie    50.84  37 P     P     06 02 21.6 +2.1
BUR08 Bucovina Ar. S    51.29 300 P     P     06 02 23.6 +0.6
BURAR Bucovina Array    51.30 300 ⇑P    P     06 02 22.3 -0.8
BURAR Bucovina Array    51.30 300 ⇑P    P     06 02 22.3 -0.8
BURAR Bucovina Array    51.30 300 P     P     06 02 23.6 +0.4
TESR  Tescani           51.33 298 ⇑P    P     06 02 22.7 -0.5
VRI   Vrincioaia        51.73 298 ⇑P    P     06 02 28.4 +2.2
VRI   Vrincioaia        51.73 298 ⇑P    P     06 02 28.4 +2.2
PLOR  Plostina          51.78 298 ⇑P    P     06 02 26.6  0.0
PLOR  Plostina          51.78 298 ⇑P    P     06 02 26.6  0.0
KOLS  Kolonicke sedl    51.86 303 eP    P     06 02 28.6 +1.5
ARCR  ARCALIA           52.09 300 ⇓P    P     06 02 30.8 +1.9
BMR   Baia Mare         52.12 301 ⇑P    P     06 02 30.4 +1.3
BMR   Baia Mare         52.12 301 ⇑P    P     06 02 30.4 +1.3
M31M  Drury Creek, Y    52.23  33 P     P     06 02 29.6 -0.1
      baz=318,SNR=8.1
CRVS  Cervenica-Dubn    52.27 303 eP    P     06 02 30.7 +0.5
TRPA  Tarpa             52.27 302 ⇓P    P     06 02 31.5 +1.3
TRPA  Tarpa             52.27 302 eP    P     06 02 30.6 +0.5
BR131 Keskin Array S    52.29 287 P     P     06 02 29.2 -1.4
BR131                             pmax  pmax
      comp=Z,9.0nm,1.1s
BR131 Keskin Array S    52.29 287 P     P     06 02 29.2 -1.4
BRTR  Keskin Array B    52.29 287 P     P     06 02 31.6 +1.0
      comp=Z,6.3nm,1.1s,baz=67,slow=5.5,SNR=16
BRTR                              PcP   PcP   06 03 41.5 -0.3
      comp=Z,1.8nm,0.8s,baz=27,slow=1.4,SNR=4.0
BRTR                              LR    LR    06 27 09.9
      comp=Z,93nm,18.8s,baz=38,slow=39
N31M  Braeburn, Yuko    52.32  34 P     P     06 02 30.7 +0.2
      baz=318,SNR=8.6
DOPR  Dopca             52.34 298 ⇑P    P     06 02 32.4 +1.7
SBUM  Sibu              52.36 179 P     P     06 02 31.7 +0.5
MLR   Muntele Rosu      52.38 298 ⇑P    P     06 02 32.5 +1.3
MLR   Muntele Rosu      52.38 298 ⇑P    P     06 02 32.5 +1.3
MLR   Muntele Rosu      52.38 298 P     P     06 02 32.3 +1.0
FARO  Faro, Yukon       52.53  32 P     P     06 02 32.0  0.0
      baz=319
MMPY  Sheldon Lake,     52.87  31 P     P     06 02 34.1 -0.4
      baz=320,SNR=5.7
VOIR                    52.88 298 ⇑P    P     06 02 33.7 -1.1
VOIR                    52.88 298 ⇑P    P     06 02 33.7 -1.1
LANS  Liptovska Anna    53.05 305 eP    P     06 02 38.5 +2.5
DRGR                    53.11 301 ⇑P    P     06 02 35.4 -1.1
DRGR                    53.11 301 ⇑P    P     06 02 35.4 -1.1
ARR   Arges             53.14 298 ⇑P    P     06 02 38.7 +1.9
MORC  Moravsky Berou    53.51 306 ⇓P    P     06 02 40.8 +1.4
MORC  Moravsky Berou    53.51 306 eP    P     06 02 42.8 +3.4
MORC  Moravsky Berou    53.51 306 ⇓P    P     06 02 40.8 +1.4
CHVC  Chvalec           53.63 308 eP    P     06 02 46.2 +6.0
DPC   Dobruska-Polom    53.67 308 eP    P     06 02 40.9 +0.3
DPC   Dobruska-Polom    53.67 308 eP    P     06 02 40.9 +0.3
PSZ   Piszkesteto       53.70 303 eP    P     06 02 40.4 -0.5
VYHS  Vyhne             53.81 305 eP    P     06 02 42.1 +0.6
SKAG  Skagway           53.99  36 P     P     06 02 42.3 -0.4
      baz=319
JAVC  Velka Javorina    54.10 306 eP    P     06 02 45.7 +2.0
P33M  Teslin, Yukon     54.24  34 P     P     06 02 44.2 -0.4
      baz=320,SNR=9.5
VRAC  Vranov            54.28 307 eP    P     06 02 46.0 +1.0
BZS   Buzias            54.48 300 ⇑P    P     06 02 47.5 +1.1
BZS   Buzias            54.48 300 ⇑P    P     06 02 47.5 +1.1
ICESG Greenland Ices    54.49 348 i P   P     06 02 46.9 +0.3
ICESG                             IAmb  IAmb  06 02 49.0
      comp=Z,4.0nm,1.0s
KRUC  Moravsky          54.55 306 eP    P     06 02 48.1 +1.2
WRGLY Wrigley           54.58  27 P     P     06 02 46.0 -0.9
      baz=324
HERR  Herculane         54.60 299 ⇑P    P     06 02 48.7 +1.4
PRU   Pruhonice         54.74 308 eP    P     06 02 48.6 +0.3
PRU   Pruhonice         54.74 308 eP    P     06 02 48.6 +0.3
MPSI  Mapaga            54.87 170 P     P     06 02 49.2 -0.3
      comp=Z,7.6nm,1.1s
CSKK  Cskako            54.88 304 eP    P     06 02 49.9 +0.5
MPLH  Magyarpolny       55.36 304 eP    P     06 02 53.8 +1.0
SOP   Sopron            55.46 305 eP    P     06 02 54.3 +0.8
MORH  Mrgy, Hungar      55.51 303 eP    P     06 02 54.5 +0.6
MOX   Moxa              55.57 311 eL    L     06 28 37.0
      comp=Z,147nm,18.7s
CONA  Conrad Observa    55.61 306 eP    P     06 02 56.3 +1.6
      comp=Z,8.3nm,1.4s
CKRC  Cesky Krumlov     55.68 307 eP    P     06 02 57.0 +1.9
FRGS  Fruska Gora       55.70 301 ⇑P    P     06 02 56.3 +1.0
KHC   Kasperske Hory    55.79 308 P     P     06 02 56.1 +0.2
KHC                               pmax  pmax
      comp=Z,9.0nm,1.2s
KHC   Kasperske Hory    55.79 308 eP    P     06 02 55.6 -0.3
KHC   Kasperske Hory    55.79 308 P     P     06 02 56.1 +0.2
KOVH  Kovagotottos      55.87 303 eP    P     06 02 56.5  0.0
GERES GERESS Array B    55.94 308 P     P     06 02 57.5 +0.4
      comp=Z,2.1nm,0.9s,baz=44,slow=6.3,SNR=9.3
GERES                             LR    LR    06 29 09.5
      comp=Z,147nm,19.9s,baz=58,slow=38
GERES GERESS Array B    55.94 308 P     P     06 02 57.6 +0.5
ARSA  Arzberg           56.26 305 eP    P     06 03 00.4 +1.1
      comp=Z,3.1nm,1.0s
GRF   Grafenberg Arr    56.44 310 eP    P     06 03 02.0 +1.5
      comp=Z,22nm,1.6s,baz=40,slow=6.2
GRF                               eL    L     06 29 37.7
      comp=Z,124nm,18.7s
SOKA  Soboth            56.90 305 eP    P     06 03 05.2 +1.3
      comp=Z,3.2nm,0.9s
OBKA  Obir              57.26 305 eP    P     06 03 07.6 +1.1
      comp=Z,9.6nm,0.8s,SNR=15
YKA   Yellowknife Ar    57.38  24 P     P     06 03 06.7 -0.3
      comp=Z,1.8nm,0.6s,baz=332,slow=7.0,SNR=6.9
KBA   Koelnbreinsper    57.40 307 eP    P     06 03 09.7 +2.1
      comp=Z,16nm,0.9s
RAYN  Ar Rayn           57.50 265 P     P     06 03 07.9 -0.5
RAYN                              pmax  pmax
      comp=Z,9.0nm,0.8s
RAYN  Ar Rayn           57.50 265 P     P     06 03 07.9 -0.5
MYKA  Terra Mystica     57.59 306 eP    P     06 03 10.1 +1.3
      comp=Z,3.2nm,0.5s
PRED  Cave del Predi    57.76 306 P     P     06 03 10.5 +0.5
SIJI  Sorong            57.92 157 P     P     06 03 09.7 -1.6
      comp=Z,7.3nm,0.6s,baz=353,slow=8.7,SNR=4.8
WATA  Walderalm         58.02 308 eP    P     06 03 13.0 +1.1
      comp=Z,12nm,1.0s
ABTA  Abfaltersbach     58.03 307 eP    P     06 03 12.7 +0.8
      comp=Z,3.3nm,1.1s
WTTA  Wattenberg        58.05 308 eP    P     06 03 13.0 +0.9
      comp=Z,4.1nm,0.7s
MOTA  Moosalm           58.23 308 eP    P     06 03 14.1 +0.8
      comp=Z,10.0nm,1.1s,SNR=8.1
SQTA  Sankt Quirin      58.27 308 eP    P     06 03 15.1 +1.4
      comp=Z,7.8nm,1.0s,SNR=10
RETA  Reutte            58.27 308 eP    P     06 03 15.8 +2.2
      comp=Z,3.9nm,1.0s
STAL  STALIGIAL         58.30 306 P     P     06 03 13.2 -0.5
STAL                              IAmb  IAmb  06 03 16.9
      comp=Z,16nm,0.9s
CIMO  Cimolais          58.38 307 P     P     06 03 14.2 -0.1
FETA  Feichten          58.64 308 eP    P     06 03 17.5 +1.3
      comp=Z,7.1nm,1.1s
BFO   Black Forest      58.72 311 P     P     06 03 17.3 +0.7
BFO                               pmax  pmax
      comp=Z,56nm,2.0s
BFO   Black Forest      58.72 311 P     P     06 03 17.3 +0.7
DAVA  Damuels           58.82 309 eP    P     06 03 18.7 +1.2
      comp=Z,1.1nm,0.5s
CTI   Castel Tesino     58.95 307 P     P     06 03 18.4 +0.1
CTI                               pmax  pmax
      comp=Z,11nm,1.0s
CTI   Castel Tesino     58.95 307 P     P     06 03 18.4 +0.1
CTI                               IAmb  IAmb  06 03 21.5
      comp=Z,11nm,1.0s
ECH   Echery            59.32 311 P     P     06 03 21.2 +0.4
ECH                               pmax  pmax
      comp=Z,19nm,1.3s
ECH   Echery            59.32 311 P     P     06 03 21.1 +0.4
ECH                               IAmb  IAmb  06 03 22.8
      comp=Z,19nm,1.3s
MURB  Monte Urbino      60.63 304 P     P     06 03 31.2 +1.3
NRCA  Norcia            60.68 303 P     P     06 03 30.6 +0.3
NRCA                              IAmb  IAmb  06 03 39.5
      comp=Z,12nm,0.9s
AQU   L'Aquila          60.90 303 P     P     06 03 32.5 +0.8
AQU                               pmax  pmax
      comp=Z,28nm,1.1s
AQU   L'Aquila          60.90 303 P     P     06 03 32.5 +0.8
BNI   Bardonecchia      61.97 309 P     P     06 03 39.3 +0.3
BNI                               pmax  pmax
      comp=Z,19nm,1.2s
BNI   Bardonecchia      61.97 309 P     P     06 03 39.3 +0.3
BNI                               IAmb  IAmb  06 03 44.8
      comp=Z,19nm,1.2s
EDM   Edmonton          65.91  28 P     P     06 04 05.0 +0.3
EDM                               pmax  pmax
      comp=Z,24nm,0.9s
EDM   Edmonton          65.91  28 P     P     06 04 05.0 +0.3
FFC   Flin Flon         67.20  20 P     P     06 04 13.2 +0.4
FFC                               pmax  pmax
      comp=Z,10.0nm,1.3s
FFC   Flin Flon         67.20  20 P     P     06 04 13.2 +0.4
B05A  Bryant            67.62  36 P     P     06 04 15.1 -0.5
      baz=330
KEST  Kesra             68.02 301 P     P     06 04 18.9 +0.4
      comp=Z,4.2nm,0.9s,baz=216,slow=1.3,SNR=6.0
KEST                              LR    LR    06 37 25.6
      comp=Z,137nm,19.2s,baz=274,slow=39
KEST  Kesra             68.02 301 P     P     06 04 18.7 +0.2
KEST                              IAmb  IAmb  06 04 24.0
      comp=Z,9.3nm,1.1s
B08A  Colville Reser    68.45  34 P     P     06 04 22.1 +1.2
B08A                              IAmb  IAmb  06 04 22.7
      comp=Z,11nm,1.0s
NEW   Newport           69.23  33 P     P     06 04 25.4 -0.4
      baz=332
C09A  Chrisman Ranch    69.28  34 P     P     06 04 26.7 +0.7
SCHQ  Schefferville     70.55 359 P     P     06 04 33.7  0.0
      comp=Z,10.0nm,0.9s,baz=32,slow=5.6,SNR=8.8
SCHQ  Schefferville     70.55 359 P     P     06 04 34.1 +0.4
JTMT  Jette             70.55  31 P     P     06 04 35.3 +1.3
JTMT                              IAmb  IAmb  06 04 36.3
      comp=Z,33nm,1.5s
ESBB  Sonseca Array     70.94 313 P     P     06 04 36.4  0.0
ESDC  Sonseca Array     70.95 313 P     P     06 04 36.0 -0.4
      comp=Z,5.9nm,0.9s,baz=29,slow=6.4,SNR=32
ESDC                              LR    LR    06 40 51.5
      comp=Z,48nm,19.3s,baz=350,slow=40
ESDC  Sonseca Array     70.95 313 P     P     06 04 36.7 +0.3
F10A  Beach Ranch, E    71.23  34 P     P     06 04 39.0 +0.9
F10A                              IAmb  IAmb  06 04 42.7
      comp=Z,17nm,0.9s
MSO   Missoula          71.48  31 P     P     06 04 40.5 +0.9
MSO                               IAmb  IAmb  06 04 45.4
      comp=Z,12nm,0.9s
MSO   Missoula          71.48  31 P     P     06 04 39.0 -0.7
      baz=334,SNR=9.9
EGMT  Eagleton          71.59  28 P     P     06 04 40.8 +0.6
EGMT  Eagleton          71.59  28 P     P     06 04 39.4 -0.8
      baz=336
J04D  Umpqua Nationa    71.98  38 P     P     06 04 41.4 -1.4
      baz=331
I07A  Izee              72.15  36 P     P     06 04 45.4 +1.7
I07A                              IAmb  IAmb  06 07 09.5
      comp=Z,33nm,1.7s
BMO   Blue Mountains    72.20  34 P     P     06 04 45.2 +1.2
BMO                               pmax  pmax
      comp=Z,17nm,1.1s
BMO   Blue Mountains    72.20  34 P     P     06 04 45.1 +1.2
BMO                               IAmb  IAmb  06 04 49.0
      comp=Z,17nm,1.1s
HRY   Holter Researc    72.21  30 P     P     06 04 45.0 +1.0
J05D  Fort Rock, OR     72.25  38 P     P     06 04 44.2 -0.2
      baz=331
L02E  Cave Junction     72.38  40 P     P     06 04 43.8 -1.1
      baz=330
PLID  Pearl Lake        72.41  33 P     P     06 04 46.4 +1.0
PLID                              IAmb  IAmb  06 04 49.7
      comp=Z,15nm,0.8s
DGMT  Dagmar            72.58  24 P     P     06 04 46.7 +0.6
DGMT  Dagmar            72.58  24 P     P     06 04 45.6 -0.5
      baz=339,SNR=6.0
ULM   Lac du Bonnet     72.62  18 P     P     06 04 45.7 -0.5
      comp=Z,4.2nm,0.7s,baz=341,slow=9.8,SNR=4.7
ULM   Lac du Bonnet     72.62  18 P     P     06 04 45.8 -0.5
ULM                               IAmb  IAmb  06 04 49.5
      comp=Z,14nm,1.2s
L04D  Klamath Falls     72.80  39 P     P     06 04 46.9 -0.7
      baz=331
DLMT  Dillon            73.21  31 P     P     06 04 50.8 +0.8
DLMT                              IAmb  IAmb  06 04 52.0
      comp=Z,14nm,1.0s
BOZ   Bozeman (W)       73.28  30 P     P     06 04 50.4  0.0
      baz=336
M04C  Macdoel           73.35  39 P     P     06 04 50.4 -0.5
      baz=331
MCMT  McKenzie Canyo    73.62  31 P     P     06 04 53.8 +1.2
COEN  Coen              73.63 148 P     P     06 04 52.2 -0.3
GCMT  Greycliff         73.66  29 P     P     06 04 53.6 +1.0
N02D  Trinity Center    73.74  40 P     P     06 04 51.7 -1.4
      baz=331
LAO   LASA Array        73.75  26 P     P     06 04 52.2 -0.9
      baz=338
MOD   Modoc Plateau     73.79  38 P     P     06 04 54.3 +0.8
MOD                               IAmb  IAmb  06 04 58.8
      comp=Z,21nm,1.2s
WVOR  Wild Horse Val    73.90  36 P     P     06 04 55.0 +0.9
WVOR                              pmax  pmax
      comp=Z,12nm,1.1s
WVOR  Wild Horse Val    73.90  36 P     P     06 04 55.0 +0.9
BCYI  Bear Canyon       73.92  32 P     P     06 04 54.7 +0.4
MFID  Camas Ranch       73.96  34 P     P     06 04 55.4 +1.0
MFID                              IAmb  IAmb  06 04 58.4
      comp=Z,12nm,1.0s
HLID  Hailey            74.28  33 P     P     06 04 57.0 +0.6
HLID  Hailey            74.28  33 P     P     06 04 55.5 -0.8
      baz=334
RLMT  Red Lodge         74.39  29 P     P     06 04 57.5 +0.5
RLMT                              IAmb  IAmb  06 05 01.9
      comp=Z,34nm,1.4s
RLMT  Red Lodge         74.39  29 P     P     06 04 56.3 -0.7
      baz=337,SNR=9.6
O02D  Mt. Diablo Mer    74.40  40 P     P     06 04 57.4 +0.4
      baz=331
AGMN  Agassiz Nation    74.50  19 P     P     06 04 56.6 -0.8
AGMN                              IAmb  IAmb  06 05 00.0
      comp=Z,13nm,0.9s
AGMN  Agassiz Nation    74.50  19 P     P     06 04 55.6 -1.7
      baz=344,SNR=5.5
B35A  Bob, Littlefor    74.83  17 P     P     06 04 58.3 -0.9
B35A                              IAmb  IAmb  06 04 59.7
      comp=Z,18nm,0.9s
FLWY  Flagg Ranch       74.93  30 P     P     06 05 01.2 +1.0
E28A  Huff              75.17  23 P     P     06 05 01.7 +0.4
E28A                              IAmb  IAmb  06 05 05.4
      comp=Z,23nm,1.1s
MOOW  Moose Ponds       75.22  30 P     P     06 05 02.5 +0.6
MOOW                              IAmb  IAmb  06 05 06.7
      comp=Z,20nm,1.4s
FXWY  Fox Creek         75.24  31 P     P     06 05 03.2 +1.2
FXWY                              IAmb  IAmb  06 05 04.5
      comp=Z,13nm,0.9s
LOHW  Long Hollow       75.39  30 P     P     06 05 03.4 +0.6
LOHW                              IAmb  IAmb  06 05 05.2
      comp=Z,30nm,1.9s
ORV   Oroville          75.42  40 P     P     06 05 03.3 +0.5
ORV                               pmax  pmax
      comp=Z,7.0nm,1.1s
ORV   Oroville          75.42  40 P     P     06 05 03.2 +0.5
SNOW  Snow King Moun    75.48  31 P     P     06 05 05.2 +1.8
SNOW                              IAmb  IAmb  06 05 05.9
      comp=Z,12nm,1.1s
REDW  Red Top Meadow    75.55  31 P     P     06 05 04.7 +1.0
EYMN  Ely               75.59  16 P     P     06 05 01.9 -1.7
      baz=346
PAHR  Pah Rah Range     76.06  38 P     P     06 05 07.5 +0.9
BMN   Battle Mountai    76.17  36 P     P     06 05 08.4 +1.2
BMN                               pmax  pmax
      comp=Z,5.0nm,0.8s
BMN   Battle Mountai    76.17  36 P     P     06 05 08.4 +1.2
HVU   Hansel Valley     76.41  33 P     P     06 05 09.6 +1.0
HVU                               pmax  pmax
      comp=Z,14nm,1.5s
HVU   Hansel Valley     76.41  33 P     P     06 05 09.6 +1.0
BW06  Boulder Array     76.47  30 P     P     06 05 08.9 -0.2
BW06  Boulder Array     76.47  30 P     P     06 05 07.3 -1.7
      baz=337
PD31  Pinedale Array    76.47  30 P     P     06 05 08.7 -0.3
PDAR  Pinedale Array    76.47  30 P     P     06 05 08.9 -0.1
      comp=Z,2.3nm,0.7s,baz=25,slow=2.8,SNR=25
PDAR  Pinedale Array    76.47  30 P     P     06 05 09.3 +0.3
PNTR  Pine Nut          76.53  39 P     P     06 05 10.5 +1.1
PNTR                              IAmb  IAmb  06 05 15.1
      comp=Z,9.8nm,0.8s
ELK   Elko              76.55  35 P     P     06 05 10.5 +1.0
ELK                               pmax  pmax
      comp=Z,16nm,1.3s
ELK   Elko              76.55  35 P     P     06 05 10.5 +1.0
ELK                               IAmb  IAmb  06 05 14.2
      comp=Z,16nm,1.3s
RSSD  Black Hills       76.70  26 P     P     06 05 10.3  0.0
RSSD                              pmax  pmax
      comp=Z,9.0nm,0.9s
RSSD  Black Hills       76.70  26 P     P     06 05 10.3  0.0
RSSD                              IAmb  IAmb  06 05 11.5
      comp=Z,9.0nm,0.9s
RSSD  Black Hills       76.70  26 P     P     06 05 09.7 -0.6
      baz=340
F33A  5 Mile Ranch,     76.78  20 P     P     06 05 10.6 +0.1
F33A                              IAmb  IAmb  06 05 13.8
      comp=Z,14nm,1.1s
E38A  The Farm, Brul    76.89  16 P     P     06 05 11.0  0.0
WB0   Warramunga Arr    76.91 158 P     P     06 05 10.4 -0.9
WB0                               IAmb  IAmb  06 05 13.5
      comp=Z,13nm,1.3s
HWUT  Hardware Ranch    76.94  32 P     P     06 05 12.6 +1.0
HWUT                              IAmb  IAmb  06 05 16.1
      comp=Z,20nm,0.9s
VLDQ  Val d'Or          76.99   6 P     P     06 05 11.5  0.0
VLDQ                              IAmb  IAmb  06 05 14.7
      comp=Z,16nm,1.0s
WRA   Warramunga Arr    77.07 158 P     P     06 05 11.0 -1.2
      comp=Z,2.9nm,0.6s,baz=349,slow=6.1,SNR=55
WRA   Warramunga Arr    77.07 158 i P   P     06 05 11.0 -1.2
WRA                               pmax  pmax
      comp=Z,3.0nm,0.6s
WRA   Warramunga Arr    77.07 158 P     P     06 05 11.0 -1.2
WB2   Warramunga Arr    77.07 158 P     P     06 05 10.9 -1.3
KVN   Kaiserville       77.09  38 P     P     06 05 13.7 +1.1
KVN                               pmax  pmax
      comp=Z,10.0nm,0.9s
KVN   Kaiserville       77.09  38 P     P     06 05 13.7 +1.1
KVN                               IAmb  IAmb  06 05 14.6
      comp=Z,10nm,0.9s
BGU   Big Grassy Mou    77.10  33 P     P     06 05 13.6 +1.1
WR0   Warramunga Arr    77.13 158 P     P     06 05 11.2 -1.3
WR0                               IAmb  IAmb  06 05 15.4
      comp=Z,30nm,1.8s
F36A  Milaca            77.28  18 P     P     06 05 13.1 -0.1
F36A                              IAmb  IAmb  06 05 13.8
      comp=Z,16nm,0.8s
RYN   Ryan              77.32  38 P     P     06 05 14.4 +0.6
RYN                               IAmb  IAmb  06 05 17.7
      comp=Z,27nm,1.8s
K22A  Casper            77.42  28 P     P     06 05 13.4 -0.9
K22A  Casper            77.42  28 P     P     06 05 12.9 -1.4
      baz=339
SUSD  Miller            77.58  22 P     P     06 05 15.3 +0.4
SUSD  Miller            77.58  22 P     P     06 05 15.1 +0.1
      baz=342,SNR=22
NVAR  Mina Array Bea    77.58  38 P     P     06 05 16.1 +0.8
      comp=Z,2.8nm,0.7s,baz=318,slow=4.3,SNR=29
NVAR  Mina Array Bea    77.58  38 P     P     06 05 15.8 +0.5
LHV   Little Huntoon    77.66  38 P     P     06 05 16.7 +1.3
LHV                               IAmb  IAmb  06 05 18.8
      comp=Z,18nm,1.4s
DUG   Dugway, Tooele    77.83  33 P     P     06 05 17.8 +1.2
DUG                               pmax  pmax
      comp=Z,10.0nm,1.1s
DUG   Dugway, Tooele    77.83  33 P     P     06 05 17.8 +1.2
DUG   Dugway, Tooele    77.83  33 P     P     06 05 15.4 -1.2
      baz=336,SNR=8.5
SPMN  Marine on St.     78.02  17 P     P     06 05 17.5 +0.1
SPMN                              IAmb  IAmb  06 05 18.2
      comp=Z,15nm,0.9s
SPMN  Marine on St.     78.02  17 P     P     06 05 16.7 -0.7
      baz=346,SNR=5.7
MLAC  Mammoth, Mammo78.10  39 P     P     06 05 17.5 -0.8
      baz=333
RWWY  Rawlins           78.13  29 P     P     06 05 18.7 +0.3
TPH   Tonopah           78.28  37 P     P     06 05 19.7 +0.5
TPH                               pmax  pmax
      comp=Z,31nm,1.0s
TPH   Tonopah           78.28  37 P     P     06 05 19.7 +0.5
NLU   North Lily Min    78.29  33 P     P     06 05 20.0 +0.8
NLU                               IAmb  IAmb  06 05 21.6
      comp=Z,9.9nm,0.9s
D62A  Allapoint, All    78.31   1 P     P     06 05 19.9 +1.0
D62A                              IAmb  IAmb  06 05 22.9
      comp=Z,33nm,1.5s
MPU   Maple Canyon      78.37  33 P     P     06 05 20.3 +0.7
G40A  Rib Lake          78.41  16 P     P     06 05 19.8 +0.2
G40A                              IAmb  IAmb  06 05 20.5
      comp=Z,18nm,0.9s
SPR3  Spring Creek 3    78.43  35 P     P     06 05 21.6 +1.5
RDMU  Red Mountain      78.48  31 P     P     06 05 21.5 +1.2
RDMU                              IAmb  IAmb  06 05 24.7
      comp=Z,21nm,1.0s
R11A  Troy Canyon, C    78.59  36 P     P     06 05 21.7 +0.8
R11A  Troy Canyon, C    78.59  36 P     P     06 05 19.6 -1.3
      baz=334
PQI   Presque Isle      78.72 360 P     P     06 05 22.2 +1.0
PQI                               IAmb  IAmb  06 05 22.9
      comp=Z,29nm,1.1s
ECSD  EROS Data Cent    78.74  21 P     P     06 05 21.6 +0.2
ECSD                              IAmb  IAmb  06 05 25.7
      comp=Z,20nm,1.1s
ECSD  EROS Data Cent    78.74  21 P     P     06 05 20.6 -0.8
      baz=344,SNR=16
LCH   Last Change Ra    78.88  38 P     P     06 05 24.0 +1.6
PSUT  Pine Spring       79.01  35 P     P     06 05 24.0 +0.8
I37A  Lemond, Waseca    79.09  18 P     P     06 05 23.5 +0.2
I37A                              IAmb  IAmb  06 05 27.9
      comp=Z,14nm,1.1s
P17A  Butcher Ranch,    79.14  32 P     P     06 05 24.3 +0.4
P17A                              IAmb  IAmb  06 05 25.7
      comp=Z,14nm,1.0s
P18A  Preston Nutter    79.15  32 P     P     06 05 24.6 +0.5
P18A                              IAmb  IAmb  06 05 33.3
      comp=Z,20nm,1.7s
TMUT  Trail Mountain    79.16  33 P     P     06 05 24.8 +0.7
N23A  Red Feather La    79.22  28 P     P     06 05 23.7 -0.7
      baz=339,SNR=8.9
O20A  White River Ci    79.28  30 P     P     06 05 25.4 +0.8
O20A                              IAmb  IAmb  06 05 28.8
      comp=Z,13nm,0.8s
O20A  White River Ci    79.28  30 P     P     06 05 23.8 -0.8
      baz=338,SNR=9.8
K31A  O'Neill           79.35  22 P     P     06 05 25.0 +0.2
K31A                              IAmb  IAmb  06 05 25.9
      comp=Z,18nm,0.9s
TCRU  Three Creeks R    79.39  34 P     P     06 05 26.5 +1.1
SRU   San Rafael Swe    79.54  32 P     P     06 05 26.2 +0.1
SRU                               pmax  pmax
      comp=Z,5.0nm,0.9s
SRU   San Rafael Swe    79.54  32 P     P     06 05 26.2 +0.1
H43A  Windswept, Lux    79.55  14 P     P     06 05 25.7  0.0
MVU   Marysvale         79.57  34 P     P     06 05 26.9 +0.6
MVU                               IAmb  IAmb  06 05 28.0
      comp=Z,28nm,1.0s
MSU   Marysvale         79.57  34 P     P     06 05 27.5 +1.2
MSU   Marysvale         79.57  34 P     P     06 05 27.5 +1.2
VES   Vestal, Richgr    79.60  40 P     P     06 05 25.3 -0.9
      baz=333
GLMI  Grayling          79.60  12 P     P     06 05 25.2 -0.9
      baz=350
PRN   Pahroc Range      79.62  36 P     P     06 05 27.2 +0.7
I40A  Norwalk           79.68  16 P     P     06 05 26.7 +0.2
I40A                              IAmb  IAmb  06 05 27.6
      comp=Z,24nm,0.9s
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I42A   Draeger Farm,      79.95  15  P      P      06 05 28.0 +0.1
I42A                                 IAmb   IAmb   06 05 31.4
       comp=Z,21nm,0.8s
MPMC   Manual Prospec     79.98  39  P      P      06 05 26.8 -1.7
       baz=334
MTPU   Mount Pierson      80.00  34  P      P      06 05 29.7 +0.9
CCUT   Cedar City         80.06  35  P      P      06 05 29.5 +0.5
SZCU   Shurtz Canyon      80.11  35  P      P      06 05 29.7 +0.5
PKME   Peaks-Kenny Pk     80.13   1  P      P      06 05 27.7 -1.1
       baz=359
OGNE   Ogallala           80.18  25  P      P      06 05 28.8 -0.6
       baz=341
SADO   Sadowa             80.20   8  P      P      06 05 29.3 +0.1
ISCO   Idaho Springs      80.33  28  P      P      06 05 31.0 +0.5
ISCO                                 pmax   pmax
       comp=Z,5.0nm,1.1s
ISCO   Idaho Springs      80.33  28  P      P      06 05 31.0 +0.5
ISCO   Idaho Springs      80.33  28  P      P      06 05 29.4 -1.1
       baz=339,SNR=6.7
SHPR   Sheep Range        80.40  37  P      P      06 05 31.7 +1.0
LRMC   Laurel Mtn Rad     80.43  39  P      P      06 05 30.2 -0.7
       baz=334,SNR=5.1
K38A   Parkersburg        80.53  18  P      P      06 05 31.0 -0.1
K38A                                 IAmb   IAmb   06 05 32.0
       comp=Z,19nm,0.8s
SMCO   Snowmass           80.53  30  P      P      06 05 32.8 +1.1
SMCO                                 IAmb   IAmb   06 05 36.2
       comp=Z,15nm,0.9s
SHOC   Shoshone, Teco     80.56  38  P      P      06 05 30.1 -1.3
       baz=334
DELO   Deloro Mine        80.56   7  P      P      06 05 31.8 +0.6
DELO                                 IAmb   IAmb   06 05 32.6
       comp=Z,18nm,1.0s
AS31   Alice Springs      80.59 159  P      P      06 05 30.6 -0.9
ASAR   Alice Springs      80.59 159  P      P      06 05 30.6 -1.0
       comp=Z,1.7nm,0.8s,baz=354,slow=5.5,SNR=25
LONY   Lake Ozonia        80.63   5  P      P      06 05 32.3 +0.7
LONY                                 IAmb   IAmb   06 05 33.4
       comp=Z,14nm,1.1s
LONY   Lake Ozonia        80.63   5  P      P      06 05 30.1 -1.5
       baz=356
BGNE   Belgrade           80.65  22  P      P      06 05 32.1 +0.3
BGNE                                 IAmb   IAmb   06 05 32.9
       comp=Z,18nm,0.8s
BGNE   Belgrade           80.65  22  P      P      06 05 30.2 -1.6
       baz=343
JFWS   Jewell Farm        80.69  16  P      P      06 05 31.8 -0.2
JFWS                                 pmax   pmax
       comp=Z,26nm,0.8s
JFWS   Jewell Farm        80.69  16  P      P      06 05 31.8 -0.2
JFWS   Jewell Farm        80.69  16  P      P      06 05 30.3 -1.7
       baz=347,SNR=9.5
KNB    Kanab              80.72  35  P      P      06 05 33.3 +0.8
KNB                                  pmax   pmax
       comp=Z,21nm,0.9s
KNB    Kanab              80.72  35  P      P      06 05 33.3 +0.8
KNB                                  IAmb   IAmb   06 05 37.2
       comp=Z,21nm,0.9s
EDW2   Edwards Air Fo     80.85  39  P      P      06 05 33.0 -0.1
       baz=334
GSC    Goldstone, Bar     80.91  38  P      P      06 05 32.9 -0.5
       baz=334
VT1    Waterbury          80.99   3  P      P      06 05 34.6 +1.0
VT1                                  IAmb   IAmb   06 05 35.4
       comp=Z,13nm,1.0s
LBNH   Lisbon             81.11   3  P      P      06 05 32.4 -1.7
       baz=358
SCIA   State Center       81.16  19  P      P      06 05 35.1 +0.6
SCIA   State Center       81.16  19  P      P      06 05 33.9 -0.6
       baz=346
K43A   Burlington         81.19  15  P      P      06 05 34.3 -0.3
Q24A   Divide             81.23  28  P      P      06 05 33.6 -1.8
       baz=340
I63A   Otisfield          81.33   2  P      P      06 05 36.6 +1.2
I63A                                 IAmb   IAmb   06 05 37.5
       comp=Z,22nm,1.0s
L40A   Anamosa            81.36  17  P      P      06 05 35.4 -0.2
U15A   North Rim          81.43  35  P      P      06 05 37.6 +1.2
BFSC   Mount Baldy Ra     81.55  40  P      P      06 05 35.9 -0.9
       baz=334
L42A   Oliver, Polo       81.67  16  P      P      06 05 36.7 -0.5
N35A   Tabor              81.70  21  P      P      06 05 38.0 +0.6
L44A   Lake County Fo     81.77  15  P      P      06 05 36.8 -0.9
       baz=349
GMRC   Granite Mounta     81.78  38  P      P      06 05 38.4 +0.3
       baz=335
J59A   Piesco             81.79   5  P      P      06 05 38.8 +0.9
J59A                                 IAmb   IAmb   06 05 39.5
       comp=Z,16nm,1.1s
BBRC   Big Bear Solar     81.80  39  P      P      06 05 37.7 -0.6
       baz=334
KSCO   Kaye Shedlock'     81.86  26  P      P      06 05 39.0 +0.6
KSCO                                 IAmb   IAmb   06 05 39.9
       comp=Z,23nm,1.1s
KSCO   Kaye Shedlock'     81.86  26  P      P      06 05 37.3 -1.1
       baz=341
S22A   4UR Ranch, Cre     81.90  30  P      P      06 05 38.6 -0.2
       baz=339,SNR=5.8
MVCO   Mesa Verde         81.91  31  P      P      06 05 39.1 +0.3
MVCO                                 IAmb   IAmb   06 06 36.5
       comp=Z,36nm,1.7s
MVCO   Mesa Verde         81.91  31  P      P      06 05 38.2 -0.6
       baz=338
KMBO   Kilima Mbogo       82.07 257  P      P      06 05 39.6 -0.3
       comp=Z,5.3nm,0.8s,baz=67,slow=4.4,SNR=4.3
KMBO   Kilima Mbogo       82.07 257 i P     P      06 05 42.9 +3.0
KMBO                                 pmax   pmax
       comp=Z,5.0nm,0.8s
KMBO   Kilima Mbogo       82.07 257  P      P      06 05 40.0  0.0
HQIL   Hanson Quary C     82.15  15  P      P      06 05 39.4 -0.4
N38A   Joes South For     82.24  19  P      P      06 05 40.4 +0.2
N38A                                 IAmb   IAmb   06 05 41.1
       comp=Z,14nm,0.9s
SDCO   Great Sand Dun     82.28  29  P      P      06 05 41.2 +0.4
SDCO                                 IAmb   IAmb   06 05 42.5
       comp=Z,12nm,1.0s
SDCO   Great Sand Dun     82.28  29  P      P      06 05 39.9 -0.9
       baz=340
L48A   N Adams            82.47  12  P      P      06 05 41.7 +0.3
IRM    Iron Mountain      82.53  38  P      P      06 05 42.0 +0.1
       baz=335
M44A   Midewin, Midew     82.53  15  P      P      06 05 41.7  0.0
PFO    Pinyon Flats O     82.55  39  P      P      06 05 41.6 -0.5
       baz=334
WUAZ   Wupatki            82.57  34  P      P      06 05 42.8 +0.5
WUAZ                                 IAmb   IAmb   06 05 46.8
       comp=Z,9.0nm,1.0s
WUAZ   Wupatki            82.57  34  P      P      06 05 41.9 -0.4
       baz=337
WVNY   West Valley, N     82.59   8  P      P      06 05 41.7 -0.3
WVNY                                 IAmb   IAmb   06 05 43.0
       comp=Z,16nm,0.9s
KIBK   Kibwezi            82.62 255  P      P      06 05 42.7  0.0
N41A   Harden Midland     82.74  17  P      P      06 05 42.9  0.0
PDMCI  Parker Dam,Lak     82.74  37  P      P      06 05 42.6 -0.3
       baz=335
ERPA   Erie               82.76   9  P      P      06 05 42.5 -0.5
       baz=353
HRV    Adam Dziewonsk     82.85   2  P      P      06 05 43.1 -0.2
       baz=358
BC3    Big Chuckawall     82.87  38  P      P      06 05 42.9 -0.9
       baz=335
L61B   Northampton        82.87   3  P      P      06 05 42.7 -0.8
       baz=357
BINY   Binghamton         82.97   6  P      P      06 05 44.7 +0.6
BINY                                 IAmb   IAmb   06 05 47.9
       comp=Z,17nm,0.9s
BINY   Binghamton         82.97   6  P      P      06 05 42.5 -1.5
       baz=356,SNR=6.2
QUA2   Belchertown        83.05   3  P      P      06 05 45.4 +0.9
T25A   Trinidad           83.15  28  P      P      06 05 45.7 +0.4
T25A                                 IAmb   IAmb   06 05 48.9
       comp=Z,14nm,1.3s
T25A   Trinidad           83.15  28  P      P      06 05 43.2 -2.1
       baz=340
HDIL   Hopedale           83.15  16  P      P      06 05 44.3 -0.7
HDIL                                 IAmb   IAmb   06 05 48.1
       comp=Z,12nm,0.8s
HDIL   Hopedale           83.15  16  P      P      06 05 44.0 -1.0
       baz=348
M50A   Fremont            83.16  11  P      P      06 05 44.9 -0.1
M50A                                 IAmb   IAmb   06 05 48.2
       comp=Z,17nm,0.9s
KSU1   Kansas State U     83.19  22  P      P      06 05 43.2 -2.0
       baz=344
P38A   Dawn               83.31  19  P      P      06 05 46.0 +0.2
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P38A                                 IAmb   IAmb   06 05 49.4
       comp=Z,21nm,1.1s
N47A   Urbana             83.36  13  P      P      06 05 45.3 -0.7
N47A                                 IAmb   IAmb   06 05 49.0
       comp=Z,18nm,1.1s
M53A   WI Miller and      83.37   9  P      P      06 05 45.8 -0.3
M53A   WI Miller and      83.37   9  P      P      06 05 44.5 -1.6
       baz=353
R32A   Long Quarter,      83.37  24  P      P      06 05 46.5 +0.3
M54A   Oil Creek Stat     83.39   9  P      P      06 05 44.1 -2.1
       baz=353
W18A   Petrified Fore     83.46  33  P      P      06 05 47.8 +0.9
W18A                                 IAmb   IAmb   06 05 52.1
       comp=Z,18nm,1.6s
W18A   Petrified Fore     83.46  33  P      P      06 05 46.3 -0.6
       baz=338
N49A   Columbus Grove     83.50  12  P      P      06 05 46.9 +0.2
M55A   Ridgway            83.51   8  P      P      06 05 46.6 -0.2
UCCT   U. Connecticut     83.54   3  P      P      06 05 47.9 +0.9
UCCT                                 IAmb   IAmb   06 05 51.6
       comp=Z,18nm,1.0s
X16A   Lo Mia Camp, P     83.55  35  P      P      06 05 48.2 +0.9
GLA    Glamis             83.64  38  P      P      06 05 47.3 -0.4
       baz=335
SFIN   Lafayette          83.65  14  P      P      06 05 47.8 +0.3
SFIN   Lafayette          83.65  14  P      P      06 05 47.1 -0.4
       baz=349,SNR=8.8
O44A   Mansfield          83.67  15  P      P      06 05 47.4 -0.3
O44A                                 IAmb   IAmb   06 05 48.4
       comp=Z,14nm,0.9s
P40A   Paris              83.68  18  P      P      06 05 47.7  0.0
N51A   Ashland            83.71  11  P      P      06 05 47.4 -0.4
M57A   Sunshine Farm,     83.76   7  P      P      06 05 48.5 +0.4
M57A                                 IAmb   IAmb   06 05 49.3
       comp=Z,13nm,0.9s
N54A   Moraine State      83.91   9  P      P      06 05 48.8  0.0
N54A   Moraine State      83.91   9  P      P      06 05 48.5 -0.4
       baz=353
X18A   Snowflake          83.93  34  P      P      06 05 49.8 +0.5
N53A   Lisbon             83.98  10  P      P      06 05 49.3 +0.1
N53A                                 IAmb   IAmb   06 05 52.6
       comp=Z,16nm,0.9s
P43A   Skaggs, Pawnee     84.01  16  P      P      06 05 49.4  0.0
TRNY   Table Rock, Ra     84.11   5  P      P      06 05 50.4 +0.5
TRNY                                 IAmb   IAmb   06 05 53.7
       comp=Z,11nm,0.8s
ODNJ   Ogdensburg         84.16   5  P      P      06 05 50.6 +0.5
ODNJ                                 IAmb   IAmb   06 05 51.4
       comp=Z,11nm,0.9s
O49A   Covington          84.21  12  P      P      06 05 50.4  0.0
N59A   State Game Lan     84.26   6  P      P      06 05 51.1 +0.5
N59A   State Game Lan     84.26   6  P      P      06 05 50.1 -0.6
       baz=356,SNR=9.0
PAL    Palisades          84.27   4  P      P      06 05 51.0 +0.4
PAL                                  pmax   pmax
       comp=Z,13nm,0.9s
PAL    Palisades          84.27   4  P      P      06 05 51.0 +0.4
PAL                                  IAmb   IAmb   06 05 54.3
       comp=Z,13nm,0.9s
PAL    Palisades          84.27   4  P      P      06 05 50.1 -0.5
       baz=357
N58A   Sunbury            84.28   6  P      P      06 05 50.7  0.0
N58A                                 IAmb   IAmb   06 05 54.3
       comp=Z,9.3nm,0.9s
ACSO   Alum Creek Sta     84.33  11  P      P      06 05 51.0  0.0
ACSO   Alum Creek Sta     84.33  11  P      P      06 05 50.8 -0.2
       baz=352,SNR=9.4
SSPA   Standing Stone     84.40   7  P      P      06 05 50.9 -0.4
SSPA                                 IAmb   IAmb   06 05 54.7
       comp=Z,10nm,1.0s
SSPA   Standing Stone     84.40   7  P      P      06 05 50.7 -0.7
       baz=354
O53A   New Philadelph     84.50  10  P      P      06 05 52.4 +0.5
O53A                                 IAmb   IAmb   06 05 55.3
       comp=Z,14nm,1.1s
O53A   New Philadelph     84.50  10  P      P      06 05 51.4 -0.4
       baz=353
BRNJ   Basking Ridge      84.56   5  P      P      06 05 52.9 +0.8
O52A   Adamsville         84.56  10  P      P      06 05 52.5 +0.2
LUPA   Lehigh Univers     84.60   5  P      P      06 05 52.3  0.0
ANMO   Albuquerque        84.61  31  P      P      06 05 53.4 +0.6
ANMO                                 pmax   pmax
       comp=Z,8.0nm,1.1s
ANMO   Albuquerque        84.61  31  P      P      06 05 53.4 +0.6
ANMO                                 IAmb   IAmb   06 05 55.0
       comp=Z,8.0nm,1.1s
ANMO   Albuquerque        84.61  31  P      P      06 05 52.1 -0.7
       baz=339
O56A   Blue Knob Stat     84.72   8  P      P      06 05 53.6 +0.6
O56A                                 IAmb   IAmb   06 05 54.0
       comp=Z,12nm,0.9s
O56A   Blue Knob Stat     84.72   8  P      P      06 05 52.5 -0.5
       baz=354
P48A   Milroy             84.79  13  P      P      06 05 53.3  0.0
P48A                                 IAmb   IAmb   06 05 56.3
       comp=Z,21nm,1.2s
P49A   Miami Univ. Ec     84.81  13  P      P      06 05 52.3 -1.1
       baz=351
Q44A   Meyer Farm, Va     84.81  16  P      P      06 05 53.7 +0.3
R40A   Maddies Statio     84.84  19  P      P      06 05 53.3 -0.3
R40A                                 IAmb   IAmb   06 05 56.7
       comp=Z,10nm,0.8s
BLO    Bloomington        84.92  14  P      P      06 05 53.9 -0.1
BLO                                  pmax   pmax
       comp=Z,13nm,0.7s
BLO    Bloomington        84.92  14  P      P      06 05 53.9 -0.1
P52A   Corning            85.01  11  P      P      06 05 54.0 -0.4
P52A   Corning            85.01  11  P      P      06 05 53.7 -0.8
       baz=352,SNR=8.9
P51A   Williamsport       85.06  11  P      P      06 05 54.4 -0.3
P51A                                 IAmb   IAmb   06 05 57.7
       comp=Z,11nm,0.8s
OLIL   Olney              85.12  15  P      P      06 05 55.5 +0.6
MCWV   Mont Chateau       85.21   9  P      P      06 05 55.1 -0.3
       baz=353
S39A   Bolivar            85.22  20  P      P      06 05 55.4 -0.2
P53A   Whipple            85.23  10  P      P      06 05 55.7 +0.1
CCM    Cathedral Cave     85.26  18  P      P      06 05 55.6 -0.1
CCM                                  pmax   pmax
       comp=Z,12nm,0.8s
CCM    Cathedral Cave     85.26  18  P      P      06 05 55.6 -0.1
CCM                                  IAmb   IAmb   06 05 56.5
       comp=Z,12nm,0.8s
CCM    Cathedral Cave     85.26  18  P      P      06 05 55.0 -0.7
       baz=347
BNM    Barren Site        85.31  31  P      P      06 05 57.5 +1.2
P60A   Greenville         85.37   6  P      P      06 05 55.5 -0.8
       baz=356
FVM    French Village     85.47  17  P      P      06 05 56.9 +0.1
FVM                                  pmax   pmax
       comp=Z,16nm,1.2s
FVM    French Village     85.47  17  P      P      06 05 56.9 +0.1
FVM                                  IAmb   IAmb   06 06 00.2
       comp=Z,16nm,1.1s
Q51A   Peebles            85.47  12  P      P      06 05 57.0 +0.2
Q52A   Bidwell            85.66  11  P      P      06 05 57.7  0.0
Q52A                                 IAmb   IAmb   06 06 00.9
       comp=Z,12nm,0.9s
Q54A   Coxs Mills         85.79  10  P      P      06 05 58.6 +0.2
Q54A                                 IAmb   IAmb   06 06 02.1
       comp=Z,17nm,0.8s
WCI    Wyandotte Cave     85.88  14  P      P      06 05 59.1 +0.3
WCI                                  pmax   pmax
       comp=Z,26nm,0.8s
WCI    Wyandotte Cave     85.88  14  P      P      06 05 59.0 +0.3
WCI    Wyandotte Cave     85.88  14  P      P      06 05 58.4 -0.4
       baz=350
Q56A   Snyder Ridge,      85.88   9  P      P      06 05 59.0 +0.2
SIUC   Southern Illin     85.94  17  P      P      06 05 59.5 +0.4
MGMO   Mountain Grove     85.94  19  P      P      06 05 58.9 -0.3
MGMO                                 IAmb   IAmb   06 08 14.8
       comp=Z,18nm,1.0s
S44A   Carbondale         85.95  17  P      P      06 06 00.1 +0.9
R49A   Shelbyville        85.97  13  P      P      06 05 59.1 -0.2
R49A                                 IAmb   IAmb   06 06 00.5
       comp=Z,23nm,1.2s
AMTX   Amarillo           86.00  27  P      P      06 05 58.3 -1.3
       baz=342
R50A   Paris              86.09  13  P      P      06 05 59.9 +0.1
R50A                                 IAmb   IAmb   06 06 00.8
       comp=Z,19nm,1.4s
U38A   Gravette           86.22  21         P      06 06 00.2 -0.3
U38A                                 IAmb   IAmb   06 06 01.2
       comp=Z,14nm,0.9s
T42A   Van Buren          86.28  18  P      P      06 06 00.4 -0.4
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T42A                                 IAmb   IAmb   06 06 04.8
       comp=Z,18nm,0.9s
Q61A   Milford            86.31   6  P      P      06 05 59.7 -1.2
       baz=356
R53A   Hurricane          86.32  11  P      P      06 06 01.1 +0.1
TUL1   Leonard            86.43  22  P      P      06 06 01.4 -0.2
       baz=345
121A   Cookes Peak, D     86.46  33  P      P      06 06 01.4 -0.6
       baz=338
MSTX   Muleshoe           86.57  28  P      P      06 06 03.0 +0.5
MSTX                                 IAmb   IAmb   06 06 04.2
       comp=Z,8.1nm,1.1s
MSTX   Muleshoe           86.57  28  P      P      06 06 01.7 -0.8
       baz=341
U40A   Yellville          86.61  20  P      P      06 06 01.8 -0.6
U40A                                 IAmb   IAmb   06 06 03.1
       comp=Z,13nm,0.9s
U40A   Yellville          86.61  20  P      P      06 06 01.5 -1.0
       baz=346,SNR=6.1
PBMO   Poplar Bluff       86.64  18  P      P      06 06 02.6  0.0
PBMO                                 IAmb   IAmb   06 06 05.9
       comp=Z,11nm,1.2s
T45A   Paducah            86.71  16  P      P      06 06 03.7 +0.8
CBN    Corbin Frederi     86.86   7  P      P      06 06 02.6 -1.0
       baz=355
T47A   Sharon Grove       86.98  15  P      P      06 06 04.5 +0.2
T47A                                 IAmb   IAmb   06 06 08.0
       comp=Z,14nm,0.8s
R58B   Mineral            87.06   8  P      P      06 06 04.7 +0.1
R58B                                 IAmb   IAmb   06 06 05.6
       comp=Z,7.4nm,0.9s
S57A   Dark Hollow, R     87.17   8  P      P      06 06 05.6 +0.5
S57A                                 IAmb   IAmb   06 06 08.6
       comp=Z,8.6nm,0.8s
FCAR   Ozark Folk Cen     87.20  19  P      P      06 06 05.0 -0.3
FCAR                                 IAmb   IAmb   06 06 06.0
       comp=Z,11nm,1.0s
LCAR   Lake Charles       87.20  18  P      P      06 06 05.3  0.0
LCAR                                 IAmb   IAmb   06 06 09.0
       comp=Z,14nm,0.9s
W39A   Magazine           87.54  21  P      P      06 06 07.4 +0.4
W39A                                 IAmb   IAmb   06 06 08.2
       comp=Z,17nm,1.2s
W39A   Magazine           87.54  21  P      P      06 06 06.1 -0.9
       baz=346
U49A   Red Boiling Sp     87.64  14  P      P      06 06 07.5 +0.1
U49A                                 IAmb   IAmb   06 06 11.2
       comp=Z,15nm,1.1s
WVT    Waverly            87.71  16  P      P      06 06 08.3 +0.5
WVT                                  pmax   pmax
       comp=Z,21nm,0.9s
WVT    Waverly            87.71  16  P      P      06 06 08.3 +0.5
WVT    Waverly            87.71  16  P      P      06 06 07.0 -0.8
       baz=349
WHAR   Wooly Hollow       87.75  19  P      P      06 06 08.2 +0.2
W41B   Gary Mavity, V     87.87  19  P      P      06 06 07.1 -1.5
       baz=346
TZTN   Tazewell           87.90  12  P      P      06 06 08.1 -0.6
       baz=351
T60A   Surry              87.96   7  P      P      06 06 09.4 +0.5
LOOK   Love County        87.96  24  P      P      06 06 10.2 +1.2
MNTX   Cornudas Mount     87.96  31  P      P      06 06 09.1  0.0
       baz=340
CLTN   Cedars of Leba     87.97  15  P      P      06 06 09.9 +0.9
V48A   Smith Brothers     88.25  15  P      P      06 06 10.5 +0.2
V48A                                 IAmb   IAmb   06 06 14.1
       comp=Z,12nm,0.9s
X40A   Basin Creek Fa     88.42  20  P      P      06 06 10.2 -1.0
       baz=346
W45A   Hickory Valley     88.44  17  P      P      06 06 12.0 +0.8
U56A   King               88.44  10  P      P      06 06 11.6 +0.3
U56A                                 IAmb   IAmb   06 06 15.6
       comp=Z,16nm,1.4s
V51A   Loudon             88.53  13  P      P      06 06 12.1 +0.5
V51A                                 IAmb   IAmb   06 06 12.9
       comp=Z,9.1nm,0.8s
Z35A   Perchaven, San     88.58  24  P      P      06 06 12.7 +0.7
V52A   Sevierville        88.59  12  P      P      06 06 12.1 +0.2
V52A                                 IAmb   IAmb   06 06 15.8
       comp=Z,13nm,1.1s
U59A   Littleton          88.67   8  P      P      06 06 12.2 -0.1
U59A                                 IAmb   IAmb   06 06 16.3
       comp=Z,12nm,1.1s
ABTX   Abilene, Hawle     88.67  26  P      P      06 06 13.2 +0.7
ABTX   Abilene, Hawle     88.67  26  P      P      06 06 11.8 -0.7
       baz=343
TKL    Tuckaleechee C     88.75  13  P      P      06 06 13.2 +0.5
TKL                                  pmax   pmax
       comp=Z,54nm,2.0s
TKL    Tuckaleechee C     88.75  13  P      P      06 06 13.2 +0.5
V55A   Taylorsville       88.85  11  P      P      06 06 13.8 +0.6
V55A                                 IAmb   IAmb   06 06 17.1
       comp=Z,19nm,1.2s
V53A   Saluda             88.85  12  P      P      06 06 13.6 +0.4
V53A                                 IAmb   IAmb   06 06 17.2
       comp=Z,13nm,1.0s
CPCT   Cooper Cave        88.85  13  P      P      06 06 13.7 +0.4
CPCT                                 IAmb   IAmb   06 06 16.9
       comp=Z,12nm,0.9s
W52A   Murphy             89.28  13  P      P      06 06 15.3  0.0
W52A                                 IAmb   IAmb   06 06 16.5
       comp=Z,9.5nm,0.9s
X48A   Hartselle          89.47  15  P      P      06 06 16.0 -0.1
X48A                                 IAmb   IAmb   06 06 19.5
       comp=Z,12nm,0.9s
BG3    Lake Jocassee      89.50  12  P      P      06 06 16.9 +0.6
BG3                                  IAmb   IAmb   06 06 20.2
       comp=Z,11nm,1.0s
KMSC   Kings Mountain     89.54  11  P      P      06 06 16.9 +0.4
KMSC   Kings Mountain     89.54  11  P      P      06 06 15.8 -0.6
       baz=353,SNR=7.0
FPAL   Fort Paine         89.60  14  P      P      06 06 17.2 +0.4
Z41A   Richland Creek     89.62  20  P      P      06 06 16.0 -0.8
       baz=346
Y45A   Yeager Farm, C     89.64  18  P      P      06 06 17.4 +0.5
W57A   Gilead             89.67  10  P      P      06 06 17.7 +0.7
W57A                                 IAmb   IAmb   06 06 20.7
       comp=Z,10nm,0.9s
X51A   Calhoun            89.68  14  P      P      06 06 17.7 +0.6
X51A                                 IAmb   IAmb   06 06 20.9
       comp=Z,13nm,0.9s
CNNC   Cliffs of the      89.76   8  P      P      06 06 18.3 +0.9
CNNC   Cliffs of the      89.76   8  P      P      06 06 16.2 -1.3
       baz=354
BIRD   Birdtown, Kers     90.12  10  P      P      06 06 19.6 +0.4
BIRD                                 IAmb   IAmb   06 06 23.1
       comp=Z,19nm,1.1s
STKA   Stephens Creek     90.23 155  P      P      06 06 17.9 -1.4
       comp=Z,1.0nm,0.7s,baz=5.8,slow=8.9,SNR=4.0
HODGE  Hodges             90.34  12  P      P      06 06 20.6 +0.4
HODGE                                IAmb   IAmb   06 06 23.8
       comp=Z,11nm,0.9s
JSC    Jenkinsville       90.40  11  P      P      06 06 19.6 -0.8
JSC                                  pmax   pmax
       comp=Z,12nm,1.1s
JSC    Jenkinsville       90.40  11  P      P      06 06 19.6 -0.8
JSC                                  IAmb   IAmb   06 06 21.7
       comp=Z,12nm,1.1s
TORD   Torodi Ar. Bea     90.46 294  P      P      06 06 20.5 -0.5
       comp=Z,4.0nm,0.8s,baz=27,slow=4.6,SNR=24
TORD   Torodi Ar. Bea     90.46 294  P      P      06 06 20.4 -0.6
Y52A   Lilburn            90.48  13  P      P      06 06 21.8 +1.0
Z47A   Carrollton         90.54  17  P      P      06 06 21.4 +0.3
146A   Union              90.92  17  P      P      06 06 23.9 +1.0
Y59A   Loris              90.92   9  P      P      06 06 23.7 +0.9
435B   Jarrell            90.94  25  P      P      06 06 22.2 -0.9
       baz=344
Y60A   Bolivia            90.96   8  P      P      06 06 23.9 +0.9
GOGA   Godfrey            91.00  13  P      P      06 06 24.2 +1.0
GOGA                                 pmax   pmax
       comp=Z,13nm,0.9s
GOGA   Godfrey            91.00  13  P      P      06 06 24.2 +1.0
GOGA                                 IAmb   IAmb   06 06 27.2
       comp=Z,13nm,0.9s
GOGA   Godfrey            91.00  13  P      P      06 06 22.8 -0.5
       baz=351,SNR=6.9
154A   Montrose           91.83  13  P      P      06 06 28.1 +1.0
KOWA   Kowa               92.27 299  P      P      06 06 29.3 -0.1
KOWA                                 IAmb   IAmb   06 06 30.0
       comp=Z,6.5nm,1.1s
BRAL   Brewton            92.69  16  P      P      06 06 29.7 -1.4
       baz=349
352A   Blakely            92.70  14  P      P      06 06 31.9 +0.7
DBIC   Dimbokro           99.34 296  LR     LR     06 57 27.0
       comp=Z,46nm,18.3s,baz=3.0,slow=39
```

SYO	Syowa Base	134.32	209	⇑*e*Pdiff	Pdif	06 09 35.8	+0.2
SYO	Syowa Base	134.32	209	⇑*e*pPdiff	pPdif	06 09 40.6	+0.9
SIV	San Ignacio	140.70	349	PKP	PKPdf	06 12 48.0	-0.9
	comp=Z,0.7nm,0.4s,baz=352,slow=2.8,SNR=6.3						
NVL	N'lazarevskaya	143.50	213	*e*PKIKP	PKiKP	06 12 54.3	-1.2
NVL				pmax	pmax		
	comp=Z,16nm,1.1s						
AQDB	Aquidauana	144.27	340	PKPdf	PKPbc	06 12 53.3	0.0
PB11	IPOC Station P	144.83	2	PKPdf	PKPbc	06 12 55.4	+0.1
LVC	Limon Verde	147.67	1	PKPbc	PKPbc	06 13 04.2	+0.2
	comp=Z,9.6nm,0.8s,baz=0.7,slow=5.0,SNR=8.0						
LVC	Limon Verde	147.67	1	PKIKP	PKPdf	06 13 00.4	-0.9
LVC	Limon Verde	147.67	1		PKPdf	06 13 00.4	-0.9
SNAA	Sanae	148.33	213	PKPbc	PKPbc	06 13 02.9	-1.0
VNA2	Neumayer--Watz	149.77	215	PKPbc	PKPbc	06 13 07.0	-0.5
	baz=76,slow=3.0						
VNA1	Neumayer--Stat	150.06	215	PKPbc	PKPbc	06 13 07.7	-0.4
CPUP	Villa Florida	150.28	340	PKPbc	PKPbc	06 13 08.7	-1.4
	comp=Z,9.5nm,0.9s,baz=288,slow=1.1,SNR=8.8						
CPUP	Villa Florida	150.28	340		PKPbc	06 13 09.6	-0.4
VNA3	Neumayer Olymp	150.51	214	PKPbc	PKPbc	06 13 08.4	-0.9
AC02	Maricunga	151.88	2	PKPdf	PKPdf	06 13 09.2	+1.2
AC02					PKiKP	06 13 15.4	+0.6
AC02				PKPab	PKPab	06 13 24.5	+1.0

IDC 13 06:10:50.8±4.1**, 18°.10S×176°.15W, h0^{km}, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.8**/26**, mbtmp4.1**/3**, Error ellipse: s-maj=182.9km s-min=49.4km az=142.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	40.43	242	P	P	06 18 31.2	+0.2
	1.6nm,0.6s,baz=75,slow=11,SNR=5.1						
WRA	Warramunga Arr	46.71	259	P	P	06 19 21.8	-0.1
	1.1nm,0.4s,baz=98,slow=7.7,SNR=40						
ASAR	Alice Springs	46.81	254	P	P	06 19 22.3	-0.4
	1.6nm,0.4s,baz=87,slow=8.2,SNR=51						
GERES	GERESS Array B	148.30	348	PKPbc	PKPbc	06 30 38.4	-0.7
	0.2nm,0.4s,baz=352,slow=2.7,SNR=3.8						

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*IDC **13** 06:31:13.6±1.2, 10°.39N×93°.70E, h0^{km}, mb3.5/8, mb1 3.6/8, mb1mx3.4/42, mbtmp3.5/8, MS2.6/2, Ms1 2.7/2, ms1mx2.6/33, Error ellipse: s-maj=51.6km s-min=20.5km az=51.0*

ISC 13 06:31:17.4±1.2**, 10°.4N**±0°.2×**93°.7E**±0°.3**, h25^{km}, n11, σ1^{s}16**/8**, mb3.4**/8**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	9.15	145	LR	LR	06 37 27.1	
	comp=Z,43nm,18.0s,baz=353,slow=40						
CMAR	Chiang Mai Arr	9.50	32	LR	LR	06 37 54.0	
	comp=Z,24nm,18.2s,baz=197,slow=42						
KAPI	Kappang	30.12	119	LR	LR	06 50 05.4	
	comp=Z,538nm,20.1s,baz=126,slow=38						
MKAR	Makanchi Array	37.56	347	P	P	06 38 28.7	-1.0
	0.5nm,0.7s,baz=173,slow=10,SNR=4.3						
SONM	Songino Array	38.84	14	P	P	06 38 40.8	+0.3
	0.3nm,0.7s,baz=206,slow=6.3,SNR=2.8						
GEYT	Alibeck	42.07	317	P	P	06 39 09.1	+1.8
	4.3nm,0.6s,baz=169,slow=8.4,SNR=6.4						
ZALV	Zalesovo Beam	44.03	352	P	P	06 39 22.5	-0.4
	0.4nm,0.4s,baz=168,slow=7.6,SNR=4.0						
WRA	Warramunga Arr	50.09	127	P	P	06 40 11.7	+1.0
	0.2nm,0.7s,baz=304,slow=8.8,SNR=5.4						
ASAR	Alice Springs	51.87	131	P	P	06 40 23.2	-0.8
	0.2nm,0.6s,baz=300,slow=7.2,SNR=5.2						
BRTR	Keskin Array B	60.48	310	P	P	06 41 24.7	-0.9
	0.6nm,0.7s,baz=116,slow=8.3,SNR=4.0						
GERES	GERESS Array B	75.68	318	P	P	06 43 00.4	-0.4
	0.2nm,0.5s,baz=86,slow=8.2,SNR=2.0						

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*BJI **13** 06:42:04.4±0.0, 7°.30S×130°.20E, h97^{km}, mB5.3/49, mb5.4/73*

*MOS **13** 06:42:06.6±1.0, 6°.80S×129°.89E, h78^{km}, mb5.6/50, MS4.4/7, Error ellipse: s-maj=9.2km s-min=4.7km az=117.4*

*NEIC **13** 06:42:09.1±2.2, 6°.87S±0°.06×129°.86E±0°.06, h77^{km}±4^{km}, mb5.4/162, Error ellipse: s-maj=9.2km s-min=7.8km az=50.0*

*IDC **13** 06:42:10.3±1.1, 6°.80S×129°.93E, h96^{km}±8^{km}, mb5.0/26, mb1 5.0/30, mb1mx4.9/36, mbtmp5.3/30, MS4.2/26, Ms1 4.2/26, ms1mx4.1/32, Error ellipse: s-maj=11.2km s-min=8.3km az=66.0*

*DJA **13** 06:42:10.7±0.2, 7°S±2°×13°0E±°, h103^{km}±2^{km}, M5.2/85, mb5.5/85, mB5.7/67, MLv6.0/14, Mw(mB)5.2/67, MwMwp5.1/29, Mwp5.3/29*

*GCMT **13** 06:42:11.1±0.1, 6°.88S±0°.01×130°.02E±0°.01, h109^{km}, MW5.4/137, Moment Tensor Solution. s137,c213; s129,c248; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.53±.02; $M_{\theta\theta}$-1.57±.02; $M_{\phi\phi}$0.04±.02; $M_{r\theta}$-0.36±.02; $M_{\theta\phi}$0.82±.02; $M_{\phi r}$-0.17±.02; Best double couple: $M_0$1.77800×10^{17} NP1:ϕ_s126.00000°, δ42.00000°, λ110.00000°. NP2:ϕ_s280.00000°, δ51.00000°, λ72.00000°. Principal axes: T 1.6220, Plg76.0000°, Azm130.0000°; N 0.3120, Plg13.0000°, Azm291.0000°; P -1.9340, Plg4.0000°, Azm22.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*KLM **13** 06:42:12, 6°.91S×129°.97E, h106^{km}, mb5.5*

ISC 13 06:42:10.1±0.3**, 6°.89S**±0°.03×**129°.89E**±0°.04**, h101**^{km}±2^{km}**, h101^{km}:pP-P, n915, σ1^{s}41**/968**, mb5.4**/174**, 125C-32D, Fault plane solution: NP1:**ϕ_s140.82515°**,** δ46.04144°**,** λ100.87575°. **NP2:**ϕ_s305.35358°**,** δ45.01572°**,** λ78.92900°. **Principal axes:** T Plg82.1766°**,** Azm129.3880°**;** N Plg7.8060°**,** Azm313.2287°**;** P Plg0.5176°**,** Azm223.1578°**; Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.77	128	P	Pn	06 42 40.0	+0.2
SAUI	Saumlaki	1.77	128		Pn	06 42 39.5	-0.3
SAUI				Sn	Sn	06 42 59.1	-3.4
SAUI	Saumlaki	1.77	128	P	Pn	06 42 40.4	+0.6
BNDI	Bandanaira	2.35	0	P	Pn	06 42 50.0	+2.7
AAI	Ambon	3.60	332	P	Pn	06 43 06.8	+2.8
MSAI	Masohi	3.65	345	P	Pn	06 43 08.0	+3.4
FAKI	Fak Fak	4.59	31	P	Pn	06 43 16.3	-1.0
FAKI	Fak Fak	4.59	31	Pn	Pn	06 43 16.6	-0.8
FAKI	Fak Fak	4.59	31	P	Pn	06 43 16.9	-0.4
DRS	Darwin Rock St	5.60	170	P	Pn	06 43 29.6	-1.4
MTN	Manton Dam	6.04	168	Pn	Pn	06 43 36.4	-0.6
MTN	Manton Dam	6.04	168	P	Pn	06 43 35.6	-1.5
SIJI	Sorong	6.13	13	P	Pn	06 43 37.9	-0.4
	62nm,0.3s,baz=184,slow=6.0,SNR=222						
SIJI				S	Sn	06 44 43.8	-3.4
	112nm,0.3s,baz=34,slow=23,SNR=10						
SIJI				LR	LR	06 46 07.2	
	comp=Z,5µm,21.8s,baz=266,slow=39						
SWI	Sorong	6.14	13	P	Pn	06 43 37.7	-0.7
	8.3nm13µm20µm1µm,0.7s						
SANI	Sanana	6.18	321	P	Pn	06 43 43.5	+4.5
	2.2nm6µm312nm,0.6s						
SOEI	Soe	6.25	243	P	Pn	06 43 41.0	+1.0
	21nm16µm22µm2µm,0.6s						
SOEI	Soe	6.25	243	Pn	Pn	06 43 40.7	+0.7
SOEI	Soe	6.25	243	P	Pn	06 43 42.0	+2.0
KDU	Kakadu	6.30	156	P	Pn	06 43 38.6	-1.9
LBMI	Labuha	6.65	339	P	Pn	06 43 49.4	+4.1
	8.1nm9µm29µm2µm,1.0s						
BATI	Baumata	6.99	241	P	Pn	06 43 50.7	+0.8
	410nm,0.3s,baz=124,slow=3.2,SNR=131						
BATI				S	Sn	06 45 07.2	-0.7
	392nm,0.3s,baz=95,slow=21,SNR=10						
BATI	Baumata	6.99	241	P	Pn	06 43 51.0	+1.1
	5.3nm6µm13µm987nm,0.6s						
MMRI	Maumere	7.78	257	P	Pn	06 44 03.0	+2.3
	1.7nm5µm7µm357nm,1.1s						
MMRI	Maumere	7.78	257	Pn	Pn	06 44 02.0	+1.3
MMRI	Maumere	7.78	257	P	Pn	06 44 03.8	+3.1
TNTI	Ternate	8.02	342	P	Pn	06 44 07.1	+3.2
	2µm7µm969nm,0.8s						
TNTI	Ternate	8.02	342	Pn	Pn	06 44 06.8	+2.9
TNTI	Ternate	8.02	342	P	Pn	06 44 07.7	+3.8
SRPI	Serui, Papua	8.05	52	P	Pn	06 44 02.9	-1.5
	3.8nm6µm9µm627nm,0.5s						
BAKI	Biak	8.39	48	P	Pn	06 44 08.6	-0.4
	35µm4µm,0.7s						
KNRA	Kununurra	8.80	187	Pn	Pn	06 44 11.2	-3.4
KNRA	Kununurra	8.80	187	P	Pn	06 44 11.8	-2.8
WAMI	Wamena	9.27	72	P	Pn	06 44 22.1	+1.1
	3µm,0.7s						
BSSI	Bau Bau, Buton	9.37	274	P	Pn	06 44 26.3	+4.0
	2µm139nm,0.8s						
KMSI	Cibinong	9.47	321	P	Pn	06 44 28.1	+4.4
	498nm,0.7s						
BASI	Baing, Sumba	9.79	250	P	Pn	06 44 27.6	-0.4
	4µm7µm650nm,0.7s						
BKSI	Bulukumba	9.84	279	P	Pn	06 44 31.8	+3.1
	2µm178nm,1.1s						
SMPI	Sarmi	10.04	61	P	Pn	06 44 30.4	-1.1
	4µm6µm798nm,1.0s						
BNSI	Bone	10.05	284	P	Pn	06 44 36.1	+4.6
	3µm185nm,0.7s						
APSI	Ampana	10.14	305	P	Pn	06 44 38.0	+5.2
	2µm152nm,0.9s						
GTOI	Gorontalo	10.15	317	P	Pn	06 44 41.2	+8.3
	1µm81nm,0.8s						
KAPI	Kappang	10.26	280	P	Pn	06 44 35.5	+1.1
	1.9nm,0.3s,baz=121,slow=7.5,SNR=24						
KAPI	Kappang	10.26	280		Pn	06 44 35.2	+0.8
SPSI	Sidrap Palu	10.49	286	P	Pn	06 44 40.8	+3.3
	2µm182nm,0.6s						
MMPI	Merauke	10.52	99	P	Pn	06 44 36.1	-1.8
	2µm,0.5s						
TTSI	Tana Toraja	10.74	290	P	Pn	06 44 43.1	+2.2
	3µm152nm,0.8s						
WBSI	Waikabubak, Su	10.75	255	P	Pn	06 44 42.4	+1.3
	6µm586nm,0.6s						
MRSI	Marisa	10.79	312	P	Pn	06 44 46.3	+4.6
	3µm391nm,0.9s						
GENI	Genyem	11.09	68	P	Pn	06 44 43.0	-2.7
	7µm9µm882nm,0.8s						
GENI	Genyem	11.09	68	P	Pn	06 44 46.0	+0.3
SGSI	Sangihe	11.37	337	P	Pn	06 44 51.9	+2.4
	497nm,0.6s						
FITZ	Fitzroy Crossi	11.89	200	P	Pn	06 44 52.0	-4.3
	20nm,0.3s,baz=22,slow=10,SNR=295						
FITZ				S	Sn	06 46 55.4	-12
	68nm,0.3s,baz=77,slow=15,SNR=6.9						
FITZ				LR	LR	06 50 02.0	
	comp=Z,3µm,20.3s,baz=0.5,slow=39						
TOLI2	Tolitoli	12.07	311	Pn	Pn	06 44 60.0	+1.1
PLAI	Plampang	12.16	260	P	Pn	06 44 59.6	-0.4
	3µm3µm216nm,0.7s						
PLAI	Plampang	12.16	260	P	Pn	06 44 59.9	-0.1
MPSI	Mapaga	12.29	305	P	P	06 45 07.0	-2.7
	2µm60nm,0.9s						
TWSI	Taliwang, Sumb	13.02	261	P	Pn	06 45 11.0	-0.4
	2µm1µm49nm,0.6s						
WB0	Warramunga Arr	13.53	162	Pn	Pn	06 45 11.8	-6.2
WRAB	Tennant Creek	13.67	162	*d i*P	Pn	06 45 13.8	-6.0
WRAB				pmax	pmax		
	comp=Z,474nm,0.7s						
WRAB	Tennant Creek	13.67	162		Pn	06 45 13.8	-6.0
WRA	Warramunga Arr	13.68	162	P	Pn	06 45 13.7	-6.2
	comp=Z,81nm,0.3s,baz=345,slow=13,SNR=521						
WRA				S	Sn	06 47 37.3	-13
	comp=Z,114nm,0.3s,baz=344,slow=20,SNR=12						
WRA				LR	LR	06 51 24.5	
	comp=Z,7µm,18.2s,baz=340,slow=40						
WRA	Warramunga Arr	13.68	162	*i* P	Pn	06 45 13.6	-6.3
WRA				pmax	pmax		
	comp=Z,464nm,0.5s						
WRA	Warramunga Arr	13.68	162		Pn	06 45 13.5	-6.4
WB2	Warramunga Arr	13.68	162		Pn	06 45 14.1	-5.8
WR0	Warramunga Arr	13.76	161		Pn	06 45 15.8	-5.2
BKB	Balikpapan	14.11	293	P	P	06 45 30.6	+0.6
	comp=Z,7µmcomp=Z,289nm,1.8s						
BKB	Balikpapan	14.11	293		Pn	06 45 26.4	+0.8
KBKI	Kotabaru	14.13	284	P	P	06 45 31.9	+1.7
	comp=Z,176nm,0.7s						
SMKI	Samarinda	14.18	296	P	P	06 45 30.5	-0.3
	comp=Z,315nm,0.9s						
DAV	Davao City (W)	14.52	343	LR	LR	06 51 49.7	
	comp=Z,1µm,21.3s,baz=118,slow=40						
DAV	Davao City (W)	14.52	343	Pn	Pn	06 45 30.0	-0.8
KCP	Kidapawan	14.61	341	⇑*e*P	P	06 45 34.2	-1.5
COEN	Coen	14.83	119	Pn	Pn	06 45 30.2	-4.5
COEN	Coen	14.83	119	P	Pn	06 45 32.0	-2.7
BBKI	Banjar Baru	15.37	282	P	P	06 45 46.4	+2.4
	comp=Z,6µmcomp=Z,599nm,1.5s						
BUKP	Musuan	15.44	342	⇑*e*P	P	06 45 55.9	+11
JAGI	Jajag, Banyuwa	15.68	263	P	Pn	06 45 45.0	-0.5
	comp=Z,1µmcomp=Z,65nm,0.5s						
JAGI	Jajag, Banyuwa	15.68	263	Pn	Pn	06 45 44.6	-0.9
JAGI	Jajag, Banyuwa	15.68	263	P	P	06 45 46.9	-0.6
PAGZ	Pagadian	16.01	336	⇑*e*P	P	06 45 53.8	+2.6
MTKI	Muara Teweh, K	16.08	291	P	P	06 45 55.1	+3.2
	comp=Z,197nm,0.8s						
BLJI	Banyuglugur	16.19	266	P	P	06 45 54.1	+1.0
	comp=Z,1µmcomp=Z,66nm,0.6s						
MYLDM	Lahad Datu	16.52	316	P	P	06 45 57.3	+0.5
QIS	Mount Isa	16.53	146	P	Pn	06 45 52.9	-3.1
AS31	Alice Springs	17.12	167		Pn	06 46 00.5	-2.8
AS31				IAmb	IAmb	06 46 04.3	
	comp=Z,136nm,0.5s						
ASAR	Alice Springs	17.12	167	P	Pn	06 46 00.0	-3.3
	comp=Z,13nm,0.3s,baz=345,slow=15,SNR=454						
ASAR				S	Sn	06 48 55.6	-18
	comp=Z,18nm,0.3s,baz=334,slow=18,SNR=5.0						
ASAR				LR	LR	06 53 19.5	
	comp=Z,5µm,19.0s,baz=346,slow=39						
ASAR				P3KPbc		07 21 00.3	
	comp=Z,0.0nm,0.3s,baz=166,slow=3.4,SNR=6.5						
ASAR	Alice Springs	17.12	167	P	Pn	06 46 01.4	-1.9
ASAR	Alice Springs	17.12	167		Pn	06 46 01.4	-1.9
MBWA	Marble Bar	17.26	214	P	P	06 46 01.9	-3.0
MBWA	Marble Bar	17.26	214	P	P	06 46 03.4	-1.5
PMG	Port Moresby	17.27	99	P	P	06 46 04.5	-0.6
	comp=Z,12nm,0.3s,baz=306,slow=3.8,SNR=56						
PMG				S	Sn	06 49 02.1	-15
	comp=Z,9.0nm,0.3s,baz=4.7,slow=23,SNR=7.9						
PMG				LR	LR	06 53 57.6	
	comp=Z,2µm,20.1s,baz=281,slow=41						
PMG	Port Moresby	17.27	99		P	06 46 04.0	-1.1
PMG				IAmb	IAmb	06 46 33.7	
	comp=Z,234nm,0.8s						
PMG	Port Moresby	17.27	99	P	Pn	06 46 05.2	+0.1
PMG	Port Moresby	17.27	99	P	Pn	06 46 05.2	+0.1
TBP	Tagbilaran	17.53	340	⇑*i*P	Pn	06 46 10.7	+2.5
PSA00	Pilbara Seismi	17.53	213	P	P	06 46 05.6	-2.3
PSA00	Pilbara Seismi	17.53	213	P	P	06 46 07.4	-0.5
SPMM	Sapulut	17.67	310	P	Pn	06 46 14.0	+4.0
MTSU	Mount Surprise	17.96	130	P	P	06 46 12.4	-0.3
MANU	Manus Island	18.07	75	P	P	06 46 13.9	0.0
LLP	Lapu-Lapu	18.08	341	*e*P	Pn	06 46 15.6	+0.7
WRKA	Warakurna	18.11	185	P	P	06 46 12.4	-1.9
PCJI	Pacitan	18.60	265	P	P	06 46 18.6	-1.0
	comp=Z,3µmcomp=Z,112nm,1.1s						
PBKI	Pangkalan Bun	18.62	282	P	Pn	06 46 22.5	+1.1
	comp=Z,9µmcomp=Z,642nm,1.1s						
KKM	Kota Kinabalu	18.74	313		P	06 46 19.2	-2.1
KKM				IAmb	IAmb	06 46 32.3	
	comp=Z,229nm,1.0s						
KKM	Kota Kinabalu	18.74	313	P	Pn	06 46 24.0	+1.1
WOJI	Wonogiri, Jawa	18.84	266	P	P	06 46 22.0	-0.2
	comp=Z,2µmcomp=Z,37nm,0.8s						
UGM	Wanagama	19.23	266	P	Pn	06 46 29.0	+0.3
	comp=Z,77nm,1.0s						
STKI	Sintang	19.63	290	P	Pn	06 46 32.9	-0.3
	comp=Z,60nm,0.7s						
RCP	Roxas	19.66	339	⇑*e*P	Pn	06 46 33.5	0.0
SBUM	Sibu	19.93	297	P	Pn	06 46 38.0	+1.3
SBUM	Sibu	19.93	297	P	P	06 46 34.3	+0.1
CTA	Charters Tower	20.59	131	P	P	06 46 42.0	+0.7
	comp=Z,80nm,0.7s,baz=315,slow=14,SNR=76						
CTA	Charters Tower	20.59	131	P	Pn	06 46 42.9	-1.5
CTAO	Charters Tower	20.59	131	P	P	06 46 41.9	+0.6
CTAO				pmax	pmax		
	comp=Z,129nm,0.8s						
CTAO	Charters Tower	20.59	131	P	P	06 46 41.9	+0.6
CTAO				IAmb	IAmb	06 46 43.6	
	comp=Z,130nm,0.8s						
CTAO	Charters Tower	20.59	131	P	P	06 46 42.6	+1.3
KSM	Kuching	21.24	292	P	P	06 46 51.0	+2.8
KSM	Kuching	21.24	292	P	P	06 46 48.3	+0.1
KSM	Kuching	21.24	292	P	P	06 46 51.4	+3.2
CMJI	Cimerak	21.29	266	P	P	06 46 47.3	-1.4
	comp=Z,54nm,0.8s						
OOD	Oodnadatta	21.51	166	P	P	06 46 51.4	+0.5
GIRL	Giralia	21.75	222	P	P	06 46 54.6	+1.0
GIRL	Giralia	21.75	222	P	P	06 46 55.3	+1.7
LEM	Lembang	22.12	269	P	P	06 46 58.3	+0.5
	comp=Z,74nm,0.6s,baz=4.5,slow=5.4,SNR=16						
LEM	Lembang	22.12	269	P	P	06 46 57.7	0.0
	comp=Z,856nmcomp=Z,57nm,0.6s						
PGP	Puerto Galera	22.12	336	⇑*e*P	P	06 46 59.2	+1.6
JCNP	Jose Panganiba	22.22	341	⇓*i*P	P	06 46 59.2	+0.7
RABL	Rabaul	22.33	84	P	P	06 47 00.0	+0.2
RABL				IAmb	IAmb	06 47 43.2	
	comp=Z,123nm,0.7s						
MEEK	Meekatharra	22.38	207	P	P	06 47 01.2	+0.9
LQP	Lukban	22.45	338	⇑*e*P	P	06 47 01.8	+0.6
TPI	Tanjungpandan	22.53	279	P	P	06 47 04.3	+2.4
	comp=Z,2µmcomp=Z,134nm,1.5s						
CNJI	Cibinong	22.59	268	P	P	06 47 00.8	-1.7
	comp=Z,3µmcomp=Z,343nm,0.7s						
LUBP	Lubang	22.61	335	⇓*e*P	P	06 47 04.4	+1.7
CBJI	Citeko	22.89	270	P	P	06 47 03.7	-1.8
	comp=Z,213nm,0.5s						
INKA	Innaminka	23.15	155	P	P	06 47 08.9	+1.1
MULG	Mulgathing	23.60	171	P	P	06 47 12.3	+0.4
FORT	Forrest	23.83	184	P	P	06 47 13.9	0.0
FORT	Forrest	23.83	184	P	P	06 47 14.6	+0.6
QLP	Quilpie	23.88	147	P	P	06 47 15.3	+0.9
CGJI	Cibinong	24.03	269	P	P	06 47 14.7	-1.3
	comp=Z,72nm,0.5s						
PPBI	Pangkal Pinang	24.14	280	P	P	06 47 18.5	+1.6
	comp=Z,11µmcomp=Z,75nm,0.6s						
XMIS	Christmas Isla	24.22	260	P	P	06 47 15.8	-1.9
LCRK	Leigh Creek	24.71	163	P	P	06 47 22.5	+0.6
KLSI		25.13	274	P	P	06 47 28.2	+2.2
	comp=Z,22nm,1.6s						
MORW	Morawa	25.64	209	P	P	06 47 31.1	+0.6
MORW				IAmb	IAmb	06 47 58.4	
	comp=Z,120nm,0.8s						
MORW	Morawa	25.64	209	P	P	06 47 30.9	+0.4
MDSI	Maura Dua	25.70	274	P	P	06 47 31.4	+0.3
	comp=Z,7.9nm,0.7s						
RK1H	Rockhampton Ha	25.72	132	P	P	06 47 31.5	+0.3
BBOO	Buckleboo	26.42	168	P	P	06 47 37.2	-0.2
BBOO				IAmb	IAmb	06 48 19.2	
	comp=Z,131nm,0.7s						
BBOO	Buckleboo	26.42	168	P	P	06 47 37.8	+0.3
RMQ	Roma	26.50	140	P	P	06 47 39.0	+0.7
BLDU	Ballidu	26.65	206	P	P	06 47 40.5	+1.0
WHYH	Whyalla	26.98	166	P	P	06 47 42.8	+0.4
KLBR	Kellerberrin	27.07	203	P	P	06 47 44.3	+1.0
STKA	Stephens Creek	27.16	158	P	P	06 47 44.2	+0.2
	comp=Z,83nm,0.5s,baz=330,slow=9.1,SNR=319						
STKA				LR	LR	07 00 00.7	
	comp=Z,2µm,18.7s,baz=329,slow=39						
STKA	Stephens Creek	27.16	158	P	P	06 47 44.3	+0.2
STKA				pmax	pmax		
	comp=Z,25nm,0.7s						
STKA	Stephens Creek	27.16	158	P	P	06 47 44.2	+0.2
STKA	Stephens Creek	27.16	158	P	P	06 47 44.5	+0.5
NAPP	Napperby	27.26	165	P	P	06 47 45.4	+0.4
EIDS	Eidsvold	27.34	135	P	P	06 47 45.1	-0.7
EIDS	Eidsvold	27.34	135	P	P	06 47 45.8	0.0
MYKOM	Kota Tinggi	27.38	287	P	P	06 47 46.5	+0.3
MYKOM				IAmb	IAmb	06 47 51.0	
	comp=Z,122nm,1.6s						
HTT	Hallett	27.71	164	P	P	06 47 49.7	+0.7
MUN	Mundaring	28.04	205	P	P	06 47 52.9	+1.0
RGRI	Rengat	28.25	282	P	P	06 47 55.1	+1.1
	comp=Z,15µmcomp=Z,121nm,0.5s						
NWAO	Narrogin (SRO)	28.46	203	P	P	06 47 56.8	+1.2
CMSA	Cobar Meteorol	28.63	151	P	P	06 47 58.0	+0.9
TWOA	Tennyson Woods	29.13	165	P	P	06 48 02.1	+0.6
JRMM	Jerantut	29.39	291	P	P	06 48 07.0	+2.9
HNR	Honiara	29.85	97	P	P	06 48 07.9	-0.3
	comp=Z,208nm,0.7s,baz=346,slow=3.6,SNR=4.9						
HNR	Honiara	29.85	97	P	P	06 48 08.1	-0.1
HNR				pmax	pmax		
	comp=Z,224nm,0.7s						
HNR	Honiara	29.85	97	P	P	06 48 08.1	-0.1
PDSI	Padang	29.94	280	P	P	06 48 10.6	+1.5
PPI	Padang Panjang	30.10	281	P	P	06 48 11.1	+0.7
	comp=Z,38nm,0.9s						
IPM	Ipoh	30.95	291	P	P	06 48 20.0	+2.1
IPM	Ipoh	30.95	291	P	P	06 48 18.9	+1.0
IPM	Ipoh	30.95	291	P	P	06 48 21.7	+3.8
ARMA	Armidale	31.05	142	IAmb	IAmb	06 48 22.9	
	comp=Z,62nm,0.7s						
ARMA	Armidale	31.05	142	P	P	06 48 19.6	+0.9
MNSI	Mandailing Nat	31.20	283	P	P	06 48 19.7	-0.4
	comp=Z,2µmcomp=Z,69nm,0.8s						
KULM	Kulim	31.59	292	P	P	06 48 26.0	+2.5
KULM	Kulim	31.59	292	P	P	06 48 23.5	-0.1
KULM				IAmb	IAmb	06 48 28.3	
	comp=Z,205nm,2.0s						
ARPS	Mount Arapiles	31.68	162	P	P	06 48 25.3	+1.3
PSI	Prapat	32.38	286	P	P	06 48 30.4	-0.2
	comp=Z,58nm,0.7s,baz=123,slow=5.5,SNR=62						
QIZ	Qiongzhong	32.46	323	P	P	06 48 30.0	-1.1
QIZ				S	S	06 53 32.4	-6.3
QIZ				LR	LR		
	comp=Z,340nm,15.3s						
QIZ				LR	LR		
	comp=Z,510nm,15.7s						
QIZ				LR	LR		
	comp=Z,500nm,18.8s						
QIZ	Qiongzhong	32.46	323	P	P	06 48 30.8	-0.3
QIZ				IAmb	IAmb	06 48 32.1	
	comp=Z,77nm,1.4s						
QIZ	Qiongzhong	32.46	323	P	P	06 48 33.3	+2.2
	comp=Z,32nm,1.1s						
UBPT	Khong Chiam	32.72	312	P	P	06 48 33.8	+0.4
UBPT				IAmb	IAmb	06 48 35.0	
	comp=Z,49nm,0.9s						
MGCD	Mangrove Creek	32.76	146	P	P	06 48 35.8	+2.2
NTLH	Newcastle Hard	32.87	145	P	P	06 48 36.3	+1.8
SYDH	Sydney Hard Ro	32.98	147	P	P	06 48 37.3	+1.9
	comp=Z,69nm,0.9s						
BRAT	Ballarat	33.09	159	P	P	06 48 38.3	+2.0
GSI	Gunungsitoli	33.26	283	P	P	06 48 39.0	+0.8
	comp=Z,2µmcomp=Z,84nm,0.6s						
GSI	Gunungsitoli	33.26	283	IAmb	IAmb	06 48 41.8	
	comp=Z,60nm,0.6s						
GSI	Gunungsitoli	33.26	283	P	P	06 48 39.7	+1.5
	comp=Z,85nm,0.7s						
CAN	Canberra	33.30	151	P	P	06 48 40.0	+1.7
CNB	Canberra Magne	33.48	150	P	P	06 48 41.7	+1.9
JOW	Kunigami	33.56	357	P	P	06 48 41.0	+0.5
JOW				IAmb	IAmb	06 49 13.9	
	comp=Z,71nm,0.9s						
JOW	Kunigami	33.56	357	P	P	06 48 41.9	+1.4
TOO	Toolangi	33.68	157	P	P	06 48 42.3	+0.8
TOO				pmax	pmax		
	comp=Z,38nm,0.7s						
TOO	Toolangi	33.68	157	P	P	06 48 42.3	+0.8
TOO				IAmb	IAmb	06 48 44.4	
	comp=Z,38nm,0.7s						
TOO	Toolangi	33.68	157	P	P	06 48 43.8	+2.3
GEXS	Deakin Univers	33.79	159	P	P	06 48 44.0	+1.6
SRIT	Nakonsritamara	33.89	297	P	P	06 48 44.2	+0.6
SRIT				IAmb	IAmb	06 49 16.0	
	comp=Z,61nm,1.2s						
TPTI		34.17	286	P	P	06 48 47.4	+1.3
	comp=Z,274nmcomp=Z,20nm,0.7s						
LHMI	Lhok Sumawe	35.01	289	P	P	06 48 53.2	-0.1
LHMI	Lhok Sumawe	35.01	289	P	P	06 48 56.6	+3.3
	comp=Z,186nm,0.7s						
JCJ	Chichijima	35.82	19	P	P	06 49 00.5	+0.5
KOUNC	Koumac, New Ca	35.97	116	P	P	06 49 01.7	+0.3
LHI	Lord Howe Isla	36.64	136	P	P	06 49 08.0	+1.0
SANVU	Saraoutou	37.53	106	P	P	06 49 15.8	+1.1
JSU	Suzuyama	38.18	1	P	P	06 49 20.1	+0.2
JSU				IAmb	IAmb	06 50 00.3	
	comp=Z,33nm,0.8s						
NOUC	Port Laguerre	38.22	117	P	P	06 49 21.0	+0.5
DZM	Mont Dzumac	38.34	117	*e*P	P	06 49 21.0	-0.6
	comp=Z,78nm,1.0s						
DZM				*e*S	S	06 55 08.0	-0.9
	comp=Z,427nm,31.4s						
DZM				*e*LR	LR	06 59 48.0	
	comp=Z,1µm,30.6s						
DZM	Mont Dzumac	38.34	117	P	P	06 49 22.1	+0.6
	comp=Z,26nm,0.7s,baz=270,slow=7.6,SNR=52						
DZM	Mont Dzumac	38.34	117	IAmb	IAmb	06 49 22.8	
	comp=Z,39nm,0.9s						
DZM	Mont Dzumac	38.34	117	P	P	06 49 22.6	+1.0
ONTNC	Ouen Toro	38.42	117	P	P	06 49 22.9	+0.7

ONTNC				IAmb	IAmb	06 49 24.1	
	comp=Z,53nm,0.6s						
ONTNC	Ouen Toro	38.42	117	P	P	06 49 22.5	+0.4
LIFNC	LIFOU	38.68	115	P	P	06 49 24.5	+0.2
LIFNC	LIFOU	38.68	115	P	P	06 49 25.1	+0.8
YATNC	Mamie plateau,	38.73	117	P	P	06 49 26.3	+1.5
OUENC	Ouen Island, N	38.80	117	P	P	06 49 25.4	+0.2
OUENC	Ouen Island, N	38.80	117	P	P	06 49 26.2	+0.9
TAU	Tasmania Unive	39.03	160	P	P	06 49 27.5	+0.6
TAU				pmax	pmax		
	comp=Z,168nm,1.8s						
TAU	Tasmania Unive	39.03	160	P	P	06 49 27.5	+0.6
PINNC	Pines Island,	39.39	117	P	P	06 49 31.1	+0.9
PINNC	Pines Island,	39.39	117	P	P	06 49 31.9	+1.7
CM31	Chiang Mai Arr	39.58	310	P	P	06 49 32.8	+0.9
CM31				IAmb	IAmb	06 49 33.8	
	comp=Z,61nm,1.1s						
CMAR	Chiang Mai Arr	39.58	310	P	P	06 49 32.8	+0.9
	comp=Z,19nm,0.6s,baz=140,slow=7.4,SNR=120						
CMAR				PcP	PcP	06 51 39.2	+1.9
	comp=Z,7.7nm,0.7s,baz=154,slow=2.1,SNR=4.9						
CMAR				ScP	ScP	06 55 17.8	+0.7
	comp=Z,2.0nm,0.3s,baz=143,slow=3.0,SNR=5.6						
CMAR				LR	LR	07 06 53.0	
	comp=Z,287nm,20.4s,baz=172,slow=38						
CMAR	Chiang Mai Arr	39.58	310	P	P	06 49 32.5	+0.6
MARNC	Mare, Loyalty	39.58	115	P	P	06 49 31.9	0.0
MARNC	Mare, Loyalty	39.58	115	P	P	06 49 33.0	+1.2
CHTO	Chiang Mai	39.79	310	P	P	06 49 34.2	+0.7
CHTO				pmax	pmax		
	comp=Z,46nm,0.8s						
CHTO	Chiang Mai	39.79	310	P	P	06 49 34.3	+0.7
CHTO				P	P	06 49 34.3	+0.7
CHTO	Chiang Mai	39.79	310	P	P	06 49 34.1	+0.7
CHTO				IAmb	IAmb	06 49 35.4	
	comp=Z,46nm,0.8s						
CHTO	Chiang Mai	39.79	310	P	P	06 49 35.2	+1.6
JNU	Nakatsue	39.80	1	P	P	06 49 33.6	+0.2
	comp=Z,24nm,0.8s,baz=146,slow=1.4,SNR=8.2						
JNU	Nakatsue	39.80	1	P	P	06 49 33.5	0.0
JNU				IAmb	IAmb	06 50 04.0	
	comp=Z,29nm,0.7s						
GYA	Guiyang	40.08	327	⇑P	P	06 49 36.0	0.0
GYA				sP	sP	06 50 12.3	+2.3
GYA				S	S	06 55 34.5	-0.4
GYA				SS	SS	06 58 35.9	-0.6
GYA				pmax	pmax		
	comp=Z,23nm,1.1s						
GYA				pmax	pmax		
	comp=Z,270nm,3.9s						
WHN	Wuhan	40.09	339	⇑P	P	06 49 37.1	+1.3
WHN				pP	pP	06 49 58.3	0.0
WHN				S	S	06 55 30.3	-4.3
WHN				pmax	pmax		
	comp=Z,70nm,0.8s						
NJ2	Nanjing	40.13	345	eP	P	06 49 39.0	+2.9
NJ2				pP	pP	06 49 56.1	-2.6
NJ2				sP	sP	06 50 08.3	-1.6
NJ2				pmax	pmax		
	comp=Z,23nm,0.9s						
KMI	Kunming	41.36	321	⇑P	P	06 49 48.1	+1.4
KMI				pP	pwP	06 50 13.6	+1.0
KMI				S	S	06 55 52.6	-1.6
KMI				pmax	pmax		
	comp=Z,36nm,0.5s						
KMI				pmax	pmax		
	comp=Z,280nm,5.8s						
KMI				LR	LR		
	comp=Z,410nm,15.2s						
KMI				LR	LR		
	comp=Z,220nm,16.2s						
KMI				LR	LR		
	comp=Z,560nm,21.3s						
JHS	Saijyo	41.77	4	P	P	06 49 50.4	+0.7
JHS				IAmb	IAmb	06 50 28.9	
	comp=Z,105nm,1.4s						
ENH	Enshi	41.81	333	P	P	06 49 49.8	-0.3
ENH				IAmb	IAmb	06 49 53.4	
	comp=Z,48nm,0.7s						
JWT	Wachi	42.26	7	P	P	06 49 53.8	+0.2
INU	Inuyama	42.54	9	P	P	06 49 56.4	+0.5
INU	Inuyama	42.54	9	P	P	06 49 59.0	+3.2
JGF	Kuroka	42.84	9	P	P	06 49 57.4	-1.0
TJN	Taejon	43.10	357	ceP	P	06 50 01.1	+0.8
TJN	Taejon	43.10	357	P	P	06 50 03.9	+3.6
	comp=Z,121nm,0.9s						
MJAR	Matsushiro Arr	43.90	10	P	P	06 50 05.4	-1.4
	comp=Z,25nm,0.7s,baz=186,slow=9.4,SNR=38						
MJAR				ScP	ScP	06 55 33.7	-0.2
	comp=Z,3.6nm,0.8s,baz=164,slow=3.8,SNR=4.6						
MJAR				LR	LR	07 05 33.8	
	comp=Z,345nm,21.7s,baz=215,slow=32						
MAJO	Matsushiro	43.90	10	c iP	P	06 50 05.8	-1.0
MAJO				pmax	pmax		
	comp=Z,48nm,0.8s						
MAJO	Matsushiro	43.90	10	P	P	06 50 06.3	-0.5
MAJO				IAmb	IAmb	06 50 33.5	
	comp=Z,49nm,0.8s						
MAJO	Matsushiro	43.90	10	P	P	06 50 09.5	+2.7
MAT	Matsushiro	43.90	10	P	P	06 50 05.9	-0.9
MAT				S	S	06 56 26.4	-4.3
MJB9	Matsu-Tunnel	43.90	10	P	P	06 50 06.1	-0.7
MJB9				IAmb	IAmb	06 50 09.0	
	comp=Z,57nm,0.8s						
JYT	Yasato	43.97	12	P	P	06 50 06.2	-1.1
JYT				IAmb	IAmb	06 50 08.4	
	comp=Z,46nm,0.8s						
KSAR	Wonju Array Be	44.14	358	P	P	06 50 09.3	+0.7
KSAR	Wonju Array Be	44.14	358	P	P	06 50 09.3	+0.7
KSRS	Korea Array	44.15	358	P	P	06 50 09.7	+1.0
	comp=Z,5.5nm,0.7s,baz=173,slow=8.7,SNR=22						
KSRS				PcP	PP	06 51 53.1	-0.5
	comp=Z,4.8nm,0.6s,baz=177,slow=3.2,SNR=8.8						
KSRS				ScP	ScP	06 55 34.8	0.0
	comp=Z,2.8nm,0.8s,baz=182,slow=4.2,SNR=5.8						
KSRS				LR	LR	07 06 28.7	
	comp=Z,236nm,20.1s,baz=133,slow=33						
KS19	Wonju Array Si	44.20	358	P	P	06 50 09.4	+0.3
CD2	Chengdu	45.15	328	P	P	06 50 16.5	-0.4
CD2				S	S	06 56 43.4	-5.7
CD2				pmax	pmax		
	comp=Z,60nm,0.7s						
CD2				LR	LR		
	comp=Z,890nm,12.9s						
CD2				LR	LR		
	comp=Z,720nm,7.9s						
CD2				LR	LR		
	comp=Z,860nm,20.1s						
XAN	Xi'an	45.29	335	P	P	06 50 17.6	-0.3
XAN				pP	pP	06 50 40.3	-0.8
XAN				PcP	PcP	06 51 57.1	+1.0
XAN				S	S	06 56 45.0	-6.0
XAN				ScS	ScS	07 00 05.1	+0.4
XAN				pmax	pmax		
	comp=Z,65nm,0.8s						
XAN				pmax	pmax		
	comp=Z,370nm,5.9s						
JMM	Marumori	45.67	12	P	P	06 50 21.2	+0.4
JMM				IAmb	IAmb	06 50 25.6	
	comp=Z,66nm,0.7s						
DL2	Dalian	46.20	351	eP	P	06 50 24.4	-0.5
DL2				S	S	06 57 03.3	-0.4
DL2				sS	sS	06 57 43.9	+1.4
DL2				pmax	pmax		
	comp=Z,24nm,0.9s						
DL2				LR	LR		
	comp=Z,700nm,10.4s						
DL2				LR	LR		
	comp=Z,390nm,13.1s						
DL2				LR	LR		
	comp=Z,560nm,16.7s						
MSVF	Nonsavu	48.14	108	P	P	06 50 40.8	+0.3
MSVF				pmax	pmax		
	comp=Z,52nm,1.1s						
MSVF	Nonsavu	48.14	108	P	P	06 50 40.8	+0.3
MSVF				IAmb	IAmb	06 50 42.3	
	comp=Z,52nm,1.1s						
MSVF	Nonsavu	48.14	108	P	P	06 50 42.0	+1.5
BJT	Baijiatuau	48.36	346	P	P	06 50 42.2	+0.5
BJT				pmax	pmax		
	comp=Z,34nm,0.7s						
BJT	Baijiatuau	48.36	346	P	P	06 50 42.2	+0.5
BJT				IAmb	IAmb	06 51 05.1	
	comp=Z,34nm,0.7s						
BJI	Beijing	48.38	346	P	P	06 50 42.3	+0.5
BJI				pP	pP	06 51 03.6	-1.4
BJI				sP	sP	06 51 15.0	-1.0
BJI				S	S	06 57 39.3	+4.7
BJI				pmax	pmax		
	comp=Z,40nm,0.7s						
OUZ	Omahuta	49.00	131	P	P	06 50 48.6	+1.9
OUZ				IAmb	IAmb	06 50 49.3	
	comp=Z,59nm,0.8s						
SHL	Shillong	49.05	313	P	P	06 50 46.9	-0.5
SHL				pmax	pmax		
	comp=Z,35nm,0.7s						
SHL	Shillong	49.05	313	P	P	06 50 46.9	-0.5
SHL				IAmb	IAmb	06 52 11.4	
	comp=Z,35nm,0.7s						
LZH	Lanzhou	49.26	332	⇑iP	P	06 50 49.9	+1.1
LZH				pP	pP	06 51 11.8	-0.4
LZH				sP	pwP	06 51 19.1	+3.9
LZH				eS	S	06 57 44.0	-3.4
LZH				sS	sS	06 58 28.9	+2.3
LZH				pmax	pmax		
	comp=Z,78nm,1.0s						
LZH				pmax	pmax		
	comp=Z,340nm,4.3s						
LZH				LR	LR		
	comp=Z,340nm,13.6s						
LZH				LR	LR		
	comp=Z,540nm,14.6s						
LZH				LR	LR		
	comp=Z,2µm,14.9s						
DGTI	Dogotuki	49.60	105	P	P	06 50 53.3	+1.7
	comp=Z,55nm,0.8s						
VLA	Vladivostok	49.80	2	c iP	P	06 50 52.9	+0.3
VLA				pmax	pmax		
	comp=Z,47nm,0.8s						
DCZ	Deep Cove	50.15	146	P	P	06 50 56.3	+1.0
DCZ				IAmb	IAmb	06 50 56.9	
	comp=Z,62nm,1.0s						
HHC	Hu-ho-hao-te	50.40	342	eP	P	06 50 58.3	+0.9
HHC				S	S	06 57 58.8	-4.4
HHC				sS	sS	06 58 43.9	+1.4
HHC				ScS	ScS	07 00 38.8	+0.2
HHC				pmax	pmax		
	comp=Z,26nm,1.3s						
HHC				pmax	pmax		
	comp=Z,320nm,5.8s						
HHC				LR	LR		
	comp=Z,350nm,14.5s						
HHC				LR	LR		
	comp=Z,300nm,15.3s						
HHC				LR	LR		
	comp=Z,510nm,15.3s						
CN2	Changchun	50.61	356	eP	P	06 50 58.8	+0.1
CN2				eS	S	06 58 01.0	-4.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,400nm,5.5s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
MLZ	Mavora Lakes	50.63	146	IAmb	IAmb	06 51 10.1	
	comp=Z,46nm,1.0s						
WHZ	Wether Hill Ro	50.85	146	P	P	06 51 00.9	+0.3
USA0B	Ussuriysk Arra	50.88	2	P	P	06 51 00.9	+0.2
USA0B				pmax	pmax		
	comp=Z,17nm,0.7s						
USA0B	Ussuriysk Arra	50.88	2	P	P	06 51 00.9	+0.2
USA0B				IAmb	IAmb	06 51 01.9	
	comp=Z,17nm,0.7s						
USRK	Ussuriysk Ar.	50.88	2	P	P	06 51 01.4	+0.6
	comp=Z,15nm,0.5s,baz=182,slow=7.2,SNR=30						
USRK				LR	LR	07 12 47.3	
	comp=Z,173nm,20.5s,baz=177,slow=36						
PALK	Pallekele	51.04	285	P	P	06 51 01.5	-1.1
PALK				pmax	pmax		
	comp=Z,18nm,0.7s						
PALK	Pallekele	51.04	285	P	P	06 51 02.0	-0.5
PALK	Pallekele	51.04	285	P	P	06 51 01.5	-1.1
PALK				IAmb	IAmb	06 51 05.7	
	comp=Z,18nm,0.7s						
LBZ	Lake Benmore	51.24	144	P	P	06 51 04.2	+0.7
MDJ	Mudanjiang	51.27	360	P	P	06 51 04.4	+0.8
MDJ				pP	pP	06 51 28.3	+1.2
MDJ				S	S	06 58 13.8	-0.9
MDJ				sS	sS	06 58 54.8	+0.5
MDJ				pmax	pmax		
	comp=Z,34nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.7s						
MDJ	Mudanjiang	51.27	360	P	P	06 51 04.5	+0.8
MDJ				IAmb	IAmb	06 51 46.1	
	comp=Z,39nm,1.1s						
MDJ	Mudanjiang	51.27	360	P	P	06 51 07.6	+4.0
RPZ	Rata Peaks	51.39	142	P	P	06 51 05.9	+1.2
LTZ	Lake Taylor	51.64	141	IAmb	IAmb	06 51 13.6	
	comp=Z,33nm,0.7s						
TUWZ	Tuamarina	52.04	138	P	P	06 51 09.7	+0.3
LSA	Lhasa	52.04	316	P	P	06 51 11.4	+1.1
LSA	Lhasa	52.04	316	P	P	06 51 11.0	+0.8
LSA	Lhasa	52.04	316	P	P	06 51 11.1	+0.8
LSA				pmax	pmax		
	comp=Z,31nm,0.8s						
LSA	Lhasa	52.04	316	P	P	06 51 11.3	+1.0
LSA	Lhasa	52.04	316	P	P	06 51 11.1	+0.8
LSA				IAmb	IAmb	06 51 14.7	
	comp=Z,31nm,0.8s						
JKA	Kamikawa-asahi	52.05	12	IAmb	IAmb	06 51 39.3	
	comp=Z,24nm,0.7s						
KHZ	Kahutara	52.26	140	P	P	06 51 11.7	+0.6
SNZO	South Karori	52.48	138	P	P	06 51 13.1	+0.3
BKZ	Black Stump Fm	52.75	135	P	P	06 51 15.7	+0.8
URZ	Urewera	52.82	134	P	P	06 51 15.2	-0.1
	comp=Z,25nm,0.5s,baz=121,slow=23,SNR=22						
URZ	Urewera	52.82	134	IAmb	IAmb	06 51 19.6	
	comp=Z,33nm,0.6s						
MCQ	Macquarie Isla	52.92	159	P	P	06 51 18.2	+2.5
	comp=Z,251nm,1.0s						
ODAN	Odare	53.10	311	eP	P	06 51 17.9	+0.1
	comp=Z,88nm,0.6s						
ODAN	Odare	53.10	311	eP	P	06 51 18.0	+0.1
	comp=Z,88nm,0.6s						
TAPN	Taplejung	53.13	312	eP	P	06 51 18.1	0.0
	comp=Z,105nm,0.7s						
TAPN	Taplejung	53.13	312	eP	P	06 51 18.2	+0.1
	comp=Z,105nm,0.7s						
RAMN	Ramite	53.74	311	eP	P	06 51 23.1	+0.5
	comp=Z,198nm,0.6s						
GTA	Gaotai	53.82	331	⇑P	P	06 51 23.4	+0.6
GTA				pP	pP	06 51 46.1	-0.5
GTA				sP	sP	06 51 56.4	-1.2
GTA				S	S	06 58 46.5	-3.5
GTA				ScS	ScS	07 01 01.6	-1.0
GTA				pmax	pmax		
	comp=Z,51nm,0.8s						
GTA				pmax	pmax		
	comp=Z,180nm,6.4s						
GTA				LR	LR		
	comp=Z,290nm,15.1s						
GTA				LR	LR		
	comp=Z,330nm,17.9s						
GTA				LR	LR		
	comp=Z,550nm,17.5s						
JIRN	Jiri	54.43	311	eP	P	06 51 27.7	+0.1
JIRN	Jiri	54.43	311	eP	P	06 51 27.8	+0.1
GUN	Gumba	54.80	311	eP	P	06 51 30.4	+0.1
	comp=Z,156nm,0.6s						
GUN	Gumba	54.80	311	eP	P	06 51 30.4	+0.1
	comp=Z,237nm,0.7s						
YSS	Yuzh-Sakhalins	54.81	11	eP	P	06 51 30.0	+0.5
YSS				e		06 51 51.2	
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,17.0s						
YSS	Yuzh-Sakhalins	54.81	11	P	P	06 51 29.4	-0.1
YSS	Yuzh-Sakhalins	54.81	11	P	P	06 51 34.0	+4.5
	comp=Z,32nm,0.7s						
PKI	Pulchoki	54.97	311	eP	P	06 51 31.1	-0.4
	comp=Z,58nm,0.6s						
PKI	Pulchoki	54.97	311	eP	P	06 51 31.3	-0.2
	comp=Z,58nm,0.6s						
PKIN	Phulchoki	54.98	311	eP	P	06 51 31.3	-0.3
	comp=Z,64nm,0.6s						
PKIN	Phulchoki	54.98	311	eP	P	06 51 31.4	-0.2
KKN	Kakani	55.18	311	eP	P	06 51 32.7	-0.2
	comp=Z,72nm,0.6s						
DMN	Daman	55.22	310	eP	P	06 51 33.1	-0.1
DMN	Daman	55.22	310	eP	P	06 51 33.4	+0.2
	comp=Z,127nm,0.9s						
GKN	Gorkha	55.78	311	eP	P	06 51 37.1	0.0
GKN	Gorkha	55.78	311	eP	P	06 51 37.2	+0.1
KLR	Kul'dur	55.91	1	LR	LR	07 16 05.6	
	comp=Z,181nm,19.6s,baz=175,slow=36						
KLR	Kul'dur	55.91	1	c iP	P	06 51 37.9	+0.5
KLR				pmax	pmax		
	comp=Z,26nm,1.0s						
HYB	Hyderabad	56.17	296	i P	P	06 51 39.0	-0.9
	comp=Z,100nm,1.4s						
HYB				e		06 52 02.0	
KOLN	Koldanda	56.45	310	eP	P	06 51 42.1	+0.2
	comp=Z,190nm,0.9s						
HIA	Hailar	56.62	352	P	P	06 51 43.7	+1.2
HIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HIA	Hailar	56.62	352	P	P	06 51 43.7	+1.2
DANN	Dangsing	56.62	310	eP	P	06 51 42.8	-0.5
	comp=Z,143nm,0.9s						
DANN	Dangsing	56.62	310	eP	P	06 51 43.2	-0.1
	comp=Z,143nm,0.9s						
PYUN	Piuthan	57.08	310	eP	P	06 51 46.5	+0.1
PYUN	Piuthan	57.08	310	eP	P	06 51 46.6	+0.1
	comp=Z,220nm,0.9s						
GRNR	Gornyy	57.70	5	⇓iP	P	06 51 51.1	+1.0
GRNR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,220nm,12.0s						
GRNR				MLR	MLR		
	comp=N,200nm,20.0s						
GRNR				MLR	MLR		
	comp=Z,330nm,17.0s						
ULN	Ulaanbaatar	58.12	342	c iP	P	06 51 54.5	+1.2
ULN				pmax	pmax		
	comp=Z,41nm,0.8s						
ULN	Ulaanbaatar	58.12	342	P	P	06 51 54.5	+1.2
ULN				P	P	06 51 54.5	+1.2
ULN	Ulaanbaatar	58.12	342	P	P	06 51 54.6	+1.2
ULN				IAmb	IAmb	06 51 55.6	
	comp=Z,36nm,0.7s						
KNTN	Kanton	58.30	89	P	P	06 51 55.8	+0.8
SONM	Songino Array	58.30	342	P	P	06 51 55.5	+1.0
	comp=Z,13nm,0.6s,baz=155,slow=6.3,SNR=61						
SONM				PKPPKP	P'P'df	07 21 35.4	+2.9
	comp=Z,0.9nm,0.8s,baz=320,slow=2.1,SNR=4.5						
TYV	Tymovskoe	58.57	9	eP	P	06 51 57.2	+1.1
TYV				eS	S	06 59 56.5	+4.4
TYV				pmax	pmax		
	comp=Z,15nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,4.2s						
TYV				smax	smax		
	comp=N,600nm,5.6s						
TYV				smax	smax		
	comp=E,800nm,5.6s						
ZEA	Zeya	60.44	358	eP	P	06 52 09.6	+0.7
ZEA				e		06 52 31.8	
ZEA				eS	S	07 00 19.4	+3.3
ZEA				pmax	pmax		
	comp=N,30nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,50nm,0.8s						
ZEA				smax	smax		
	comp=N,200nm,4.4s						
POO	Poona	60.75	296	eP	P	06 52 10.0	-1.8
ZAK	Zakamensk	61.52	341	eP	P	06 52 16.8	+0.3
ZAK				pmax	pmax		
	comp=Z,18nm,1.5s						
SKR	Severo-Kuril's	61.66	19	eP	P	06 52 17.7	+0.5
SKR				eS	S	07 00 34.0	+2.4
SKR				pmax	pmax		
	comp=Z,1µm,5.3s						
SKR				MLR	MLR		
	comp=Z,700nm,19.0s						
TLY	Talaya	62.53	342	eP	P	06 52 24.6	+1.5
TLY				eS	S	07 00 40.0	-2.8
TLY				pmax	pmax		
	comp=Z,16nm,0.6s						
TLY				MLR	MLR		
	comp=Z,546nm,17.0s						
TLY	Talaya	62.53	342	P	P	06 52 24.4	+1.3
TLY	Talaya	62.53	342	P	P	06 52 24.2	+1.1
WMQ	Urumqi	63.24	327	eP	P	06 52 29.0	+1.0
WMQ				pP	pP	06 52 51.6	-1.0
WMQ				sP	PcP	06 53 06.8	+2.3
WMQ				S	S	07 00 51.6	-0.4
WMQ				ScS	SKSac	07 02 08.8	-2.9
WMQ				pmax	pmax		
	comp=Z,81nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,400nm,4.3s						
WMQ				LR	LR		
	comp=Z,280nm,21.3s						
WMQ				LR	LR		
	comp=Z,280nm,18.9s						
MOY	Mondy	63.38	340	eP	P	06 52 30.3	+1.5
MOY				pmax	pmax		
	comp=E,82nm,2.1s						
PEA0B	Petropavlovsk-	64.25	18	deP	P	06 52 36.1	+1.8
PETK	Petropavlovsk-	64.25	18	P	P	06 52 34.3	-0.1
	comp=E,14nm,0.6s,baz=187,slow=5.9,SNR=38						
PETK	Petropavlovsk-	64.25	18	P	P	06 52 34.6	+0.2
PETK	Petropavlovsk-	64.25	18	P	P	06 52 34.6	+0.2
PET	Petropavlovsk	64.48	19	eP	P	06 52 34.9	-0.9
PET				eS	S	07 01 05.7	-1.0
PET				e*SS	sS	07 01 54.0	+5.3
PET				pmax	pmax		
	comp=Z,41nm,0.7s						
PET	Petropavlovsk	64.48	19	P	P	06 52 36.5	+0.7
BOD	Bodaibo	65.77	351	eP	P	06 52 44.8	+0.7
BOD				pmax	pmax		
	comp=Z,31nm,1.9s						
NIL	Nilore	67.06	311	P	P	06 52 53.1	+0.2
NIL				pmax	pmax		
	comp=Z,24nm,0.6s						
NIL	Nilore	67.06	311	P	P	06 52 53.2	+0.2
NIL	Nilore	67.06	311	P	P	06 52 53.0	+0.2
NIL				IAmb	IAmb	06 53 22.6	
	comp=Z,24nm,0.6s						
ZSN	Zaisan	67.12	329	eP	P	06 52 52.7	-0.3
	baz=329						
ZSN				eS	S	07 01 41.9	+2.7
	baz=329						
ZSN	Zaisan	67.12	329	eP	P	06 52 52.6	-0.3
ZSN				eS	S	07 01 41.9	+2.7
DGZ	Jazzator, Alta	67.36	332	c iP	P	06 52 55.6	+1.0
DGZ				pmax	pmax		
	comp=Z,81nm,0.6s						
SHLS	Shalkode	67.56	322	eP	P	06 52 54.3	-1.7
	comp=Z,18nm,0.8s,baz=323						
SHLS	Shalkode	67.56	322	eP	P	06 52 54.3	-1.7
SHLS				pmax	pmax		
	comp=Z,18nm,0.8s						
UZB	Uzynbulak	67.83	322	eP	P	06 52 57.8	+0.1
	comp=Z,20nm,0.9s,baz=322						
UZB	Uzynbulak	67.83	322	eP	P	06 52 57.7	+0.1
UZB				pmax	pmax		
	comp=Z,20nm,0.9s						
KSH	Kashi	67.86	318	P	P	06 52 59.1	+1.2
KSH				pP	pwP	06 53 24.9	-0.1
KSH				sP	sP	06 53 36.4	+2.7
KSH				S	S	07 01 48.3	-0.3
KSH				sS	sS	07 02 32.4	+2.6
KSH				ScS	SKiKP	07 02 44.4	-0.4
KSH				pmax	pmax		
	comp=Z,23nm,1.2s						
MK31	Makanchi Array	68.07	327	eP	P	06 52 59.9	+0.9
MK31	Makanchi Array	68.07	327	P	P	06 52 59.9	+0.9
MKAR	Makanchi Array	68.07	327	P	P	06 52 59.9	+0.9
	comp=Z,166nm,0.6s,baz=123,slow=7.9,SNR=1151						
MKAR				PKPPKP	P'P'df	07 21 16.7	-0.5
	comp=Z,0.9nm,0.8s,baz=325,slow=1.9,SNR=6.2						
MKAR	Makanchi Array	68.07	327	P	P	06 53 00.7	+1.7
SATY	Saty	68.16	322	eP	P	06 52 59.5	-0.2
	comp=Z,25nm,0.9s,baz=322						
SATY	Saty	68.16	322	eP	P	06 52 59.5	-0.2
SATY				pmax	pmax		
	comp=Z,25nm,0.9s						

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MAKZ  Makanchi          68.25 327    P       P        06 53 01.0 +0.9
MAKZ                                 pmax    pmax
      comp=Z,113nm,0.6s
MAKZ  Makanchi          68.25 327    P       P        06 53 01.0 +0.9
MA2   Magadan           68.31  11ceP         P        06 53 00.8 +0.7
MA2                                  pmax    pmax
      comp=Z,34nm,1.7s
MA2   Magadan           68.31  11    P       P        06 53 01.3 +1.2
MA2                                  IAmb    IAmb     06 53 02.3
      comp=Z,46nm,1.3s
KDJ   Kajisay           68.42 320    P       P        06 53 02.4 +1.0
KDJ                                  pmax    pmax
      comp=Z,24nm,0.8s
KDJ   Kajisay           68.42 320    P       P        06 53 02.4 +1.0
YAK   Yakutsk           68.71 360c iP        P        06 53 03.1 +0.5
YAK                                 e*PP     pP       06 53 28.2 +0.9
YAK                                 e                 06 55 36.1
YAK                                 ePPP     PPP      06 57 14.8
YAK                                 eS       S        07 01 59.1 +1.6
YAK                                 e*SS     sS       07 02 38.4 -0.7
YAK                                 e                 07 02 55.8
YAK                                 eSS      SS       07 06 20.6 -3.7
YAK                                  pmax    pmax
      comp=Z,170nm,0.9s
YAK                                  pmax    pmax
      comp=N,17nm,0.9s
YAK                                  pmax    pmax
      comp=E,11nm,0.9s
YAK                                  pmax    pmax
      comp=Z,397nm,5.8s
YAK                                  pmax    pmax
      comp=N,292nm,4.2s
YAK                                  pmax    pmax
      comp=E,178nm,5.3s
YAK                                  smax    smax
      comp=E,367nm,5.4s
YAK                                  smax    smax
      comp=N,101nm,3.0s
YAK   Yakutsk           68.71 360    P       P        06 53 03.0 +0.5
TNSS  Tian-Shan         69.04 321   eP       P        06 53 05.6 +0.1
      baz=321
MDOK  Medeo             69.05 321   eP       P        06 53 05.1 -0.2
      baz=321
MDOK                                eS       S        07 02 05.0 +2.3
      baz=321
MDOK  Medeo             69.05 321   eP       P        06 53 05.0 -0.2
MDOK                                eS       S        07 02 04.9 +2.3
ARXS  Arharly           69.14 323   eP       P        06 53 05.6 -0.1
TDK   Taldyqorghan      69.23 324   eP       P        06 53 06.1 -0.1
      comp=N,24nm,0.8s,baz=324
TDK   Taldyqorghan      69.23 324   eP       P        06 53 06.1 -0.1
TDK                                  pmax    pmax
      comp=Z,23nm,0.8s
BOOM  Boomskoye usch    69.39 320    P       P        06 53 08.5 +1.0
BOOM                                 pmax    pmax
      comp=Z,35nm,0.8s
BOOM  Boomskoye usch    69.39 320    P       P        06 53 08.5 +1.0
BOOM                                 IAmb    IAmb     06 53 09.9
      comp=Z,35nm,0.8s
TKM2  Tokmak 2          69.83 321    P       P        06 53 11.4 +1.2
      SNR=29
TKM2  Tokmak 2          69.83 321    P       P        06 53 10.7 +0.5
KUU   Kurty             69.87 322   eP       P        06 53 09.3 -0.9
      comp=Z,64nm,0.7s,baz=322
KUU   Kurty             69.87 322   eP       P        06 53 09.3 -0.9
KUU                                  pmax    pmax
      comp=Z,64nm,0.7s
KBK   Karagaybulak      70.11 320    P       P        06 53 13.9 +2.1
      SNR=19
UCH   Uchtor            70.17 319    P       P        06 53 14.0 +1.5
      SNR=31
FRU1  Bishkek           70.39 320    P       P        06 53 14.7 +1.3
FRU1                                 pmax    pmax
      comp=Z,21nm,0.9s
FRU1  Bishkek           70.39 320    P       P        06 53 14.7 +1.3
AAK   Ala-Archa         70.39 320    LR      LR       07 29 25.3
      comp=Z,55nm,18.3s,baz=118,slow=40
AAK   Ala-Archa         70.39 320    P       P        06 53 15.5 +1.9
      SNR=25
AAK   Ala-Archa         70.39 320  i P       P        06 53 14.5 +1.0
      SNR=12
AAK   Ala-Archa         70.39 320c iP        P        06 53 14.5 +1.0
AAK                                  pmax    pmax
      comp=Z,221nm,1.7s
AAK   Ala-Archa         70.39 320    P       P        06 53 13.3 -0.2
AAK                                  P       P        06 53 13.3 -0.2
AAK   Ala-Archa         70.39 320    P       P        06 53 15.3 +1.8
AAK                                  IAmb    IAmb     06 53 16.3
      comp=Z,30nm,0.8s
CHMS  Chumysh           70.40 320    P       P        06 53 14.7 +1.3
      SNR=15
KBL   Kabul             70.61 310    P       P        06 53 15.5 +0.4
KBL                                  pmax    pmax
      comp=Z,15nm,1.0s
KBL   Kabul             70.61 310    P       P        06 53 15.3 +0.2
      SNR=9.8
KBL   Kabul             70.61 310    P       P        06 53 15.5 +0.4
AML   Almayashu         70.66 319    P       P        06 53 17.7 +2.2
      SNR=5.8
AML   Almayashu         70.66 319  i P       P        06 53 16.6 +1.1
      SNR=29
AML   Almayashu         70.66 319    P       P        06 53 16.8 +1.3
USP   Ospenovka         70.70 320    P       P        06 53 16.9 +1.7
      SNR=5.8
SGDS  Sogindy           70.71 321   eP       P        06 53 15.4 +0.1
      baz=321
EKS2  Erkin-Say         70.86 320    P       P        06 53 18.5 +2.2
      SNR=6.0
SEM   Semipalatinsk     71.35 329   eP       P        06 53 18.2 -1.0
      comp=Z,18nm,0.8s,baz=329
SEM   Semipalatinsk     71.35 329   eP       P        06 53 18.2 -1.0
SEM                                  pmax    pmax
      comp=Z,18nm,0.8s
ZAA0  Zalesovo Array    71.44 334    IAmb    IAmb     06 53 20.3
      comp=Z,49nm,0.7s
ZALV  Zalesovo Beam     71.44 334    P       P        06 53 19.3 -0.1
      comp=Z,48nm,0.6s,baz=126,slow=5.4,SNR=206
ZALV                                 PKPPKP  P'P'df   07 21 10.0 -0.9
      comp=Z,0.8nm,0.6s,baz=302,slow=3.3,SNR=4.4
ZALV                                 LR      LR       07 25 50.8
      comp=Z,79nm,21.8s,baz=1.5,slow=37
GAR   Garm              71.51 315    IAmb    IAmb     06 53 23.5
      comp=Z,50nm,0.6s
BTK   Batken            71.62 316    IAmb    IAmb     06 53 23.6
      comp=Z,183nm,2.0s
BTLS  Baital            71.87 322   eP       P        06 53 21.9 -0.4
      baz=322
BTLS  Baital            71.87 322   eP       P        06 53 21.8 -0.4
CHGR  Chuyangaron       72.19 314    IAmb    IAmb     06 53 27.4
      comp=Z,64nm,0.8s
KURBB Kurchatov Arra    72.36 329    P       P        06 53 25.5 +0.5
KURK  Kurchatov         72.37 329c iP        P        06 53 25.6 +0.6
KURK                                 pmax    pmax
      comp=Z,66nm,0.6s
KURK  Kurchatov         72.37 329    P       P        06 53 25.7 +0.6
KURK  Kurchatov         72.37 329    P       P        06 53 25.5 +0.5
DZA   Taraz             72.55 319   eP       P        06 53 26.5 +0.1
      baz=319
DZA   Taraz             72.55 319   eP       P        06 53 26.5 +0.1
VNDA  Vanda             72.57 173    P       P        06 53 26.0 +0.2
VNDA                                 pmax    pmax
      comp=Z,13nm,0.8s
VNDA  Vanda             72.57 173    P       P        06 53 26.0 +0.2
RER   Riviere de l'E    72.79 250    P       P        06 53 28.9 +0.6
IUG   Iuzhnay           73.08 318   eP       P        06 53 29.2 -0.4
      baz=318
IUG   Iuzhnay           73.08 318   eP       P        06 53 29.2 -0.4
KK31  Karatay Array     73.19 319    P       P        06 53 30.5 +0.4
KKAR  Karatay Array     73.19 319    P       P        06 53 31.0 +0.9
KKAR  Karatay Array     73.19 319    P       P        06 53 31.0 +0.9
TAS   Tashkent          73.22 317    P       P        06 53 31.6 +1.3
TAS                                  pmax    pmax
      comp=Z,76nm,0.6s
TAS   Tashkent          73.22 317    P       P        06 53 31.6 +1.3
SBA   Scott Base        73.46 172    P       P        06 53 32.5 +1.4
SBA                                  pmax    pmax
      comp=Z,19nm,1.0s
SBA   Scott Base        73.46 172    P       P        06 53 32.5 +1.4
BRLS  Borolday          73.60 319   eP       P        06 53 32.0 -0.5
      baz=318
BRLS  Borolday          73.60 319   eP       P        06 53 32.0 -0.5
OTUK  Ortayu            74.49 324    P       P        06 53 38.6 +1.0
JLN   Jalan Bani Buh    74.76 295    P       P        06 53 40.5 +0.8
JLN                                  P       P        06 53 40.5 +0.8
MAW   Mawson            75.02 201    P       P        06 53 41.6 +1.4
      comp=Z,22nm,0.7s,baz=66,slow=6.0,SNR=28
MAW                                  LR      LR       07 23 31.3
      comp=Z,284nm,21.6s,baz=58,slow=33
MAW   Mawson            75.02 201    P       P        06 53 41.1 +0.9
WBK   Wadi Bani Khal    75.27 295    P       P        06 53 43.2 +0.6
      SNR=5.0
WSAR  Wadi Sarin        75.72 296    P       P        06 53 46.0 +0.9
      SNR=5.6
HRA   Herat             75.80 308    P       P        06 53 46.2 +0.6
DQM   DQM               75.95 292    P       P        06 53 46.8 +0.3
DQM                                  P       P        06 53 46.8 +0.3
JMDO  Jabal Madar       75.99 295    P       P        06 53 46.9 +0.2
SMDO  Samad             76.20 296    P       P        06 53 48.5 +0.5
      SNR=7.2
SMDO                                 P       P        06 53 48.5 +0.5
      SNR=7.2
BIDO  Bidbid            76.24 296    P       P        06 53 48.8 +0.7
      SNR=12
BSY   Bisya             76.89 295    P       P        06 53 52.0 +0.2
BSY                                  P       P        06 53 52.0 +0.2
BSY                                  P       PcP      06 53 52.3  -10
BSY                                  P       PcP      06 53 52.3  -10
HOQ   Hoqain            76.98 296    P       P        06 53 52.9 +0.6
      SNR=9.9
SHAO  Shalim            77.32 290    P       P        06 53 54.5 +0.3
SHAO  Shalim            77.32 290    P       P        06 53 54.6 +0.3
ARQ   Araqi             77.63 296    P       P        06 53 57.6 +1.7
SOCY  Socotra           77.79 284    P       P        06 53 58.3 +1.3
SOCY                                 IAmb    IAmb     06 54 03.6
      comp=Z,29nm,0.6s
SOHO  SOHO              77.80 296  i P       P        06 53 57.0 +0.2
      SNR=15
SOHO  SOHO              77.80 296    P       P        06 53 57.6 +0.8
SOHO                                 P       P        06 53 57.6 +0.8
DMTO  DMTO              77.89 290    P       P        06 53 57.7 +0.3
DMTO                                 P       P        06 53 58.0 +0.5
BRVK  Borovoye          77.98 328    P       P        06 53 57.9 +0.7
BRVK                                 pmax    pmax
      comp=Z,58nm,0.8s
BRVK  Borovoye          77.98 328    P       P        06 53 57.9 +0.7
BRVK                                 P       P        06 53 57.9 +0.7
BRVK  Borovoye          77.98 328    P       P        06 53 57.9 +0.7
BRVK                                 IAmb    IAmb     06 53 58.8
      comp=Z,58nm,0.8s
MDH   Madha             78.28 298    P       P        06 53 58.9 -0.5
MDH   Madha             78.28 298    P       P        06 54 01.0 +1.6
UOSS  Minazif           78.28 297  i P       P        06 53 59.5  0.0
      SNR=6.0
UOSS  Minazif           78.28 297    P       P        06 54 00.9 +1.4
UOSS  Minazif           78.28 297    P       P        06 54 01.0 +1.4
UOSS                                 IAmb    IAmb     06 54 02.7
      comp=Z,67nm,1.6s
HATD  Hatta, Dubai      78.31 297  i P       P        06 54 00.1 +0.4
      SNR=7.1
HATD  Hatta, Dubai      78.31 297    P       P        06 54 02.0 +2.3
      SNR=7.1
HATD                                 P       P        06 54 02.0 +2.3
      SNR=7.1
ASHO  Ashiyiah          78.35 297  i P       P        06 54 00.5 +0.6
      SNR=12
ASHO  Ashiyiah          78.35 297    P       P        06 54 02.2 +2.3
      SNR=5.8
TIXI  Tiksi             78.38 360ceP         P        06 53 58.4 -0.6
TIXI                                 pmax    pmax
      comp=Z,44nm,0.7s
TIXI  Tiksi             78.38 360    P       P        06 53 59.2 +0.2
TIXI                                 IAmb    IAmb     06 54 00.1
      comp=Z,45nm,0.7s
MSFE  Esma-Masafi       78.41 298  i P       P        06 54 00.9 +0.7
      SNR=9.0
MASF  Masafi            78.41 298    P       P        06 54 01.9 +1.6
      SNR=5.4
MASF                                 P       P        06 54 01.9 +1.6
      SNR=5.4
BANOM Banah             78.42 298    P       P        06 54 01.6 +1.3
ALNE  Al Ain            78.48 296    P       P        06 54 01.2 +0.6
ALNE  Al Ain            78.48 296    P       P        06 54 03.4 +2.8
      SNR=6.3
SHME  Shamm             78.59 298    P       P        06 54 01.8 +0.7
SHME  Shamm             78.59 298    P       P        06 54 02.3 +1.1
SBV   Sambava           78.71 258    P       P        06 54 02.6 +0.5
TBI   Tubuai            78.74 112   eLR      LR       07 18 35.0
      comp=Z,398nm,30.5s
NAZ   Nazwa, Dubai      78.77 297    P       P        06 54 02.3 +0.2
FAQ   Al Faqa, Dubai    78.77 297  i P       P        06 54 02.2  0.0
      SNR=5.6
FAQ   Al Faqa, Dubai    78.77 297    P       P        06 54 04.1 +1.9
DOK   Doka              78.83 290    P       P        06 54 02.8 +0.2
PPT2  Papeete2          78.95 107   eS       S        07 03 49.1 -5.4
      comp=Z,110nm,27.2s
PPT2  Papeete2          78.95 107   eLR      LR       07 18 41.7
      comp=Z,307nm,27.2s
PPT   Papeete           78.96 107    LR      LR       07 26 52.2
      comp=Z,59nm,19.2s,baz=260,slow=34
ASUD  Al Ashush, Dub    78.98 297    P       P        06 54 04.2 +0.9
ASUD  Al Ashush, Dub    78.98 297    P       P        06 54 04.5 +1.2
ASUD                                 P       P        06 54 04.5 +1.2
WHFO  Wadi Hawf         79.03 290    P       P        06 54 04.0 +0.2
WHFO                                 P       P        06 54 04.0 +0.2
BILL  Bilibino          79.03  13⇑eP         P        06 54 02.9 +0.2
BILL                                e                 06 54 10.7
BILL                                e                 06 57 03.2
BILL                                eS       ScS      07 04 17.6 +2.0
BILL                                 pmax    pmax
      comp=Z,30nm,3.3s
BILL                                 MLR     MLR
      comp=Z,131nm,14.0s
ABTO  Aybut             79.37 289    P       P        06 54 06.1 +0.5
ABTO                                 P       P        06 54 06.1 +0.5
GEYT  Alibeck           80.06 310    P       P        06 54 09.9 +0.9
      comp=Z,9.4nm,0.8s,baz=190,slow=7.5,SNR=22
GEYT                                 LR      LR       07 35 59.9
      comp=Z,68nm,18.3s,baz=230,slow=40
GEYT  Alibeck           80.06 310    P       P        06 54 10.1 +1.1
GYA0B ALIBECK ARRAY     80.06 310    P       P        06 54 10.3 +1.3
GYA0B                                IAmb    IAmb     06 54 11.2
      comp=Z,64nm,1.6s
UNV   Unalaska Valle    80.47  33    P       P        06 54 11.7 +1.0
UNV   Unalaska Valle    80.47  33    P       P        06 54 12.2 +1.5
      baz=244
ABPO  Ambohimpanom      80.88 252    P       P        06 54 14.7 +0.8
ABPO                                 pmax    pmax
      comp=Z,34nm,1.6s
ABPO  Ambohimpanom      80.88 252    P       P        06 54 14.7 +0.8
VOI   Vohitsoka         81.08 249    P       P        06 54 16.1 +1.2
      SNR=5.6
VOI   Vohitsoka         81.08 249    P       P        06 54 16.0 +1.1
VOI   Vohitsoka         81.08 249    P       P        06 54 15.8 +0.8
NRIK  Noril'sk          81.42 346    P       P        06 54 15.4 -0.1
      comp=Z,22nm,0.9s,baz=141,slow=5.5,SNR=19
NRIK                                 LR      LR       07 33 26.5
      comp=Z,96nm,18.8s,baz=127,slow=38
NRIK  Noril'sk          81.42 346c iP        P        06 54 16.1 +0.6
NRIK                                 pmax    pmax
      comp=Z,31nm,1.0s
AB31  Akbulak array     82.36 322  i P       P        06 54 20.8  0.0
ABKAR Akbulak array     82.36 322    P       P        06 54 20.9 +0.1
FALS  False Pass        82.53  32    P       P        06 54 23.0 +1.5
      baz=247
TRNA  Turayna           82.67 296    P       P        06 54 23.9 +1.0
GAMB  Gambell           82.86  22    P       P        06 54 24.9 +1.9
      baz=238
QSPA  South Pole Qui    83.09 180    P       P        06 54 24.8 +0.3
SHMA  Al-Shehemyia      83.10 297    P       P        06 54 25.8 +0.7
SYO   Syowa Base        83.73 201⇑iP         P        06 54 28.4 +0.9
SYO   Syowa Base        83.73 201⇑eX         P        06 54 30.2 +2.7
AKTO  Aktyubinsk        83.92 322    LR      LR       07 34 51.6
      comp=Z,61nm,21.1s,baz=100,slow=38
AKTO  Aktyubinsk        83.92 322    P       P        06 54 28.9 +0.1
SDPT  Sand Point        84.28  33    P       P        06 54 30.8 +0.3
      baz=249
CHNA  Chernabura Isl    84.58  33    P       P        06 54 32.5 +0.5
      baz=250
SVE   Sverdlovsk        84.62 329deP         P        06 54 32.7 +0.5
SVE                                 eS       S        07 04 46.7 -4.3
SVE                                  pmax    pmax
      comp=Z,77nm,0.8s
TNA   Tin City          85.16  22    P       P        06 54 36.5 +1.9
      baz=242
ARU   Arti              85.56 328c iP        P        06 54 36.9  0.0
ARU                                  *PP     pP       06 54 59.6 -3.1
ARU                                                   06 57 50.3
ARU                                  S       S        07 04 53.7 -6.5
ARU                                  SS      SS       07 10 35.1 -3.2
ARU                                  pmax    pmax
      comp=Z,60nm,0.8s
ARU   Arti              85.56 328    P       P        06 54 36.8 -0.1
ARU                                  IAmb    IAmb     06 54 38.0
      comp=Z,56nm,0.8s
ANM   Nome              85.67  23    P       P        06 54 38.0 +0.7
ANM                                  pmax    pmax
      comp=Z,52nm,1.7s
ANM   Nome              85.67  23    P       P        06 54 38.0 +0.7
ANM                                  IAmb    IAmb     06 54 39.9
      comp=Z,52nm,1.7s
ANM   Nome              85.67  23    P       P        06 54 37.9 +0.7
      baz=244
QRN   Al-Qurain         86.29 299   eP       P        06 54 40.6 -0.6
KBD   Kabd              86.56 300   eP       P        06 54 41.9 -0.6
UMR   Umm Al-Rimmam     86.60 300   eP       P        06 54 41.7 -1.0
MIB   Mutribah          86.97 300   eP       P        06 54 43.9 -0.5
RST   Umm Al-Ruwaisa    87.21 300   eP       P        06 54 45.2 -0.4
RAYN  Ar Rayn           87.60 294  i P       P        06 54 48.3 +0.6
      SNR=32
RAYN  Ar Rayn           87.60 294    P       P        06 54 48.3 +0.6
RAYN                                 pmax    pmax
      comp=Z,33nm,0.8s
RAYN  Ar Rayn           87.60 294    P       P        06 54 48.5 +0.8
RAYN  Ar Rayn           87.60 294    P       P        06 54 48.3 +0.6
RAYN                                 IAmb    IAmb     06 54 49.3
      comp=Z,34nm,0.8s
SII   Sitkinak Islan    88.02  33    P       P        06 54 49.9 +1.0
      baz=254
RDOG  Red Dog Mine      88.04  20    P       P        06 54 56.4 +7.7
      baz=246
TAOE  Nuku Hiva Isla    88.92  99   eS       S        07 05 30.8 -3.6
      comp=Z,226nm,31.0s
TAOE  Nuku Hiva Isla    88.92  99   eLR      LR       07 23 14.6
      comp=Z,262nm,30.5s
Q19K  Cape Douglas,     88.93  30    P       P        06 54 54.1 +1.0
      baz=255
O19K  Port Alsworth     88.94  29    P       P        06 54 54.3 +1.2
      baz=254
TTA   Tatalina          88.94  26    P       P        06 54 54.1 +0.9
      baz=253
N19K  Bonanza Creek     89.03  28    IAmb    IAmb     06 55 40.6
      comp=Z,19nm,0.9s
N19K  Bonanza Creek     89.03  28    P       P        06 54 54.6 +1.0
      baz=254
MAK   Makhachkala       89.10 313   eP       P        06 54 53.3 -0.9
MAK                                 e*PP     pP       06 55 14.2 -5.5
MAK                                 e*SP     pwP      06 55 23.2 -1.1
MAK                                 e                 07 05 14.7
MAK                                 eSS      SS       07 11 27.1 -3.6
MAK                                  pmax    pmax
      comp=Z,49nm,0.4s
MAK                                  MLR     MLR
      comp=Z,128nm,20.0s
GCSA  Galena City Sc    89.12  24    P       P        06 54 54.1 +0.3
      baz=252,SNR=5.8
KDAK  Kodiak Island     89.18  32    P       P        06 54 55.1 +0.8
      baz=256
L19K  White Mountain    89.23  27    IAmb    IAmb     06 55 41.3
      comp=Z,22nm,0.8s
L19K  White Mountain    89.23  27    P       P        06 54 55.7 +1.2
      baz=254
M19K  Big River Lodg    89.37  27    IAmb    IAmb     06 54 58.8
      comp=Z,14nm,0.8s
M19K  Big River Lodg    89.37  27    P       P        06 54 57.3 +2.2
      baz=254
L20K  Farewell, AK      89.75  27    P       P        06 54 58.2 +1.3
      baz=255
J20K  Nowinta River     90.09  25    P       P        06 54 59.1 +0.7
      baz=254
PPLA  Purkeypile        90.61  27    P       P        06 55 00.9 -0.2
      baz=256
GNI   Garni             90.70 310    LR      LR       07 42 27.7
      comp=Z,18nm,19.7s,baz=100,slow=40
GNI   Garni             90.70 310⇓eP         P        06 55 04.0 +2.0
GNI                                  pmax    pmax
      comp=Z,23nm,1.1s
CAST  Castle Rocks      90.78  26    IAmb    IAmb     06 55 43.7
      comp=Z,42nm,2.0s
CAST  Castle Rocks      90.78  26    P       P        06 55 01.7  0.0
      baz=256
CHUM  Lake Minchumin    90.80  26    P       P        06 55 02.0 +0.3
      baz=256,SNR=12
KIRV  Kirov             90.89 329    LR      LR       07 37 46.6
      comp=Z,119nm,21.7s,baz=109,slow=37
KIRV  Kirov             90.89 329deP         P        06 55 01.2 -1.0
H21K  Melozitna Rive    91.03  24    P       P        06 55 02.7  0.0
      baz=256
O22K  Cooper Landing    91.22  29    P       P        06 55 03.6 -0.1
      baz=258
I21K  Tanana            91.25  24    IAmb    IAmb     06 55 27.0
      comp=Z,39nm,1.8s
I21K  Tanana            91.25  24    P       P        06 55 04.0 +0.3
      baz=256
A21K  Barrow            91.25  18    P       P        06 55 03.7  0.0
      baz=252
RC01  Rabbit Creek A    91.34  29    P       P        06 55 04.5 +0.2
      baz=258
CUT   Chulitna          91.37  27    P       P        06 55 04.2 -0.1
      baz=258
BPAW  Bear Paw Mtn.     91.42  26    IAmb    IAmb     06 55 10.4
      comp=Z,31nm,1.6s
BPAW  Bear Paw Mtn.     91.42  26    P       P        06 55 04.6  0.0
      baz=257
KIBK  Kibwezi           91.56 267    P       P        06 55 06.8 +0.3
TRF   Thorofare Moun    91.58  26    P       P        06 55 06.1 +0.5
      baz=258
MLY   Manley            91.73  25    IAmb    IAmb     06 55 10.1
      comp=Z,10nm,0.7s
MLY   Manley            91.73  25    P       P        06 55 05.7 -0.4
      baz=257,SNR=12
PMR   Palmer            91.73  28    P       P        06 55 05.7 -0.4
      baz=259
PWL   Port Wells        91.97  29    P       P        06 55 06.8 -0.4
      baz=259
KNK   Knik Glacier      92.01  28    P       P        06 55 07.5 +0.1
      baz=259
SML   Sawmill           92.14  28    P       P        06 55 07.5 -0.6
      baz=260
RND   Reindeer          92.20  26    IAmb    IAmb     06 55 54.1
      comp=Z,21nm,0.8s
MCK   McKinley          92.23  26    IAmb    IAmb     06 55 57.9
      comp=Z,24nm,1.5s
MCK   McKinley          92.23  26    P       P        06 55 07.8 -0.6
      baz=259
WAT1  Susitna Watana    92.23  27    P       P        06 55 08.0 -0.5
      baz=259
I23K  Minto, Yukon-K    92.32  25    P       P        06 55 08.7  0.0
      baz=259,SNR=14
NEA2  Nenana            92.33  25    P       P        06 55 08.8  0.0
      baz=259
COLD  Coldfoot          92.41  23    IAmb    IAmb     06 55 10.4
      comp=Z,9.4nm,0.7s
COLD  Coldfoot          92.41  23    P       P        06 55 09.5 +0.4
      baz=258
NVL   N'lazarevskaya    92.43 197   eP       P        06 55 16.9 +7.7
NVL                                  pmax    pmax
      comp=Z,17nm,0.6s
KMBO  Kilima Mbogo      92.49 269    P       P        06 55 11.0  0.0
      comp=Z,2.0nm,0.3s,baz=69,slow=7.6,SNR=6.5
KMBO                                 LR      LR       07 31 53.5
      comp=Z,99nm,21.8s,baz=90,slow=32
KMBO  Kilima Mbogo      92.49 269  i P       P        06 55 12.0 +1.0
KMBO                                 pmax    pmax
      comp=Z,3.0nm,0.4s
KBZ   Khabaz            92.54 314    P       P        06 55 10.2  0.0
      comp=Z,3.0nm,0.7s,baz=134,slow=5.1,SNR=6.6
KBZ                                  LR      LR       07 43 07.2
      comp=Z,46nm,19.7s,baz=78,slow=40
KBZ   Khabaz            92.54 314⇑eP         P        06 55 09.9 -0.3
KBZ                                  pmax    pmax
      comp=Z,5.0nm,0.9s
WAT6  Susitna Watana    92.55  27    P       P        06 55 09.9 -0.1
      baz=260
GURO  Guroymak-BITLI    92.57 308    IAmb    IAmb     06 55 12.9
      comp=Z,18nm,0.9s
KIV   Kislovodsk        92.72 314   eP       P        06 55 10.1 -1.1
KIV                                  pmax    pmax
      comp=Z,7.0nm,1.1s
KIV                                  MLR     MLR
      comp=Z,71nm,20.0s
MDM   Murphy Dome       92.76  25    IAmb    IAmb     06 55 12.5
      comp=Z,34nm,2.0s
DHY   Denali Highway    92.80  27    IAmb    IAmb     06 56 04.5
      comp=Z,11nm,0.8s
DHY   Denali Highway    92.80  27    P       P        06 55 10.6 -0.6
      baz=260
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CCB	Clear Creek Bu	92.88	25	IAmb	IAmb	06 55 11.1	
	comp=Z,14nm,0.7s						
TCOL	CIGO, UAF Yank	92.90	25	IAmb	IAmb	06 55 11.5	
	comp=Z,9.5nm,0.7s						
TCOL	CIGO, UAF Yank	92.90	25	P	P	06 55 10.8	-0.5
	baz=260						
COLA	College	92.90	25	⇑*e*P	P	06 55 11.2	-0.2
COLA				pmax	pmax		
	comp=Z,24nm,2.8s						
COLA	College	92.90	25	P	P	06 55 11.0	-0.3
	baz=260						
TOLK	Toolik Lake Re	92.92	21	IAmb	IAmb	06 55 12.4	
	comp=Z,14nm,1.2s						
TOLK	Toolik Lake Re	92.92	21	P	P	06 55 11.5	0.0
	baz=259						
H24K	Noodor Dome	93.06	24	IAmb	IAmb	06 55 13.3	
	comp=Z,11nm,0.7s						
H24K	Noodor Dome	93.06	24	P	P	06 55 12.1	-0.1
	baz=260						
POKR	Poker Plat Res	93.12	25	P	P	06 55 12.2	-0.2
	baz=260						
HDA	Harding Lake	93.21	26	IAmb	IAmb	06 55 13.3	
	comp=Z,9.6nm,0.7s						
HDA	Harding Lake	93.21	26	P	P	06 55 11.5	-1.4
	baz=261,SNR=9.9						
PRGR	Permogore	93.28	332	*e*P	P	06 55 10.6	-2.6
PRGR				pmax	pmax		
	comp=Z,17nm,0.8s						
ILAR	Eielson Array	93.29	25	P	P	06 55 11.7	-1.5
	comp=Z,4.8nm,0.7s,baz=262,slow=4.4,SNR=91						
ILAR				PKiKP	PKiKP	07 00 01.6	+2.5
	comp=Z,0.9nm,0.8s,baz=247,slow=3.9,SNR=4.1						
ILAR				PKKP	PKKPdf	07 12 20.0	-1.5
	comp=Z,1.5nm,0.7s,baz=16,slow=0.9,SNR=19						
ILAR				LR	LR	07 37 04.1	
	comp=Z,139nm,19.6s,baz=252,slow=35						
PAX	Paxson	93.64	27	IAmb	IAmb	06 55 16.2	
	comp=Z,33nm,1.6s						
PAX	Paxson	93.64	27	P	P	06 55 15.0	0.0
	baz=262						
BMRM	Bremner River	93.78	29	P	P	06 55 15.6	-0.1
	baz=263						
J25K	Salcha River,	93.91	25	P	P	06 55 15.2	-1.0
	baz=262						
PRP	Porcupine Dome	93.97	25	P	P	06 55 15.0	-1.5
	baz=262						
RIDG	Independent Ri	94.03	26	IAmb	IAmb	06 55 16.9	
	comp=Z,9.4nm,0.8s						
RIDG	Independent Ri	94.03	26	P	P	06 55 16.3	-0.4
	baz=263,SNR=5.3						
FYU	Fort Yukon	94.23	24	IAmb	IAmb	06 55 39.9	
	comp=Z,14nm,1.0s						
SCRK	Sand Creek	94.43	26	P	P	06 55 18.0	-0.6
	baz=264						
MCARA	McCarthy VSAT	94.59	29	P	P	06 55 19.5	+0.2
	baz=264						
L26K	Log Cabin Wild	94.61	27	P	P	06 55 19.5	+0.2
	baz=264						
J26L	Joseph Creek	94.67	26	P	P	06 55 20.0	+0.3
	baz=264						
M27K	Edge Creek, AK	95.22	28	P	P	06 55 23.0	+0.7
	baz=265						
L27K	Beaver Creek,	95.31	27	P	P	06 55 22.4	-0.1
	baz=265,SNR=6.9						
EGAK	Eagle	95.73	26	IAmb	IAmb	06 55 25.4	
	comp=Z,8.8nm,0.9s						
EGAK	Eagle	95.73	26	P	P	06 55 24.2	-0.1
	baz=266						
SNAA	Sanae	95.75	194	P	P	06 55 25.5	+1.0
SNAA	Sanae	95.75	194	P	P	06 55 25.4	+0.8
	comp=Z,16nm,0.7s,baz=142,slow=3.7,SNR=122						
SNAA	Sanae	95.75	194	*c* *i*P	P	06 55 25.1	+0.6
SNAA				pmax	pmax		
	comp=Z,20nm,0.8s						
SNAA	Sanae	95.75	194	P	P	06 55 24.7	+0.2
VORR	Voronezh	95.77	321	P	P	06 55 25.0	+0.1
VORR				pmax	pmax		
	comp=Z,250nm,0.8s						
KLMR	Klimovskoe	96.14	331	*e*P	P	06 55 23.3	-3.0
KLMR				pmax	pmax		
	comp=Z,15nm,0.9s						
KLMR	Klimovskoe	96.14	331	*e*P	P	06 55 23.4	-2.9
KLMR				AMP		06 55 25.0	
	comp=Z,15nm,0.9s						
DAWY	Dawson	96.46	26	P	P	06 55 27.5	-0.3
	baz=268,SNR=8.1						
I29M	Ogilvie Camp,	96.96	25	P	P	06 55 29.9	-0.1
	baz=269,SNR=6.7						
VNA2	Neumayer--Watz	97.31	193	P	Pdif	06 55 32.4	+0.8
	baz=134,slow=3.9						
OBN	Obninsk	97.50	325	⇑*e*P	P	06 55 31.2	-1.4
OBN				*e*		06 59 37.4	
OBN				pmax	pmax		
	comp=Z,46nm,2.3s						
VNA3	Neumayer Olymp	97.57	192	P	Pdif	06 55 33.2	+0.5
EPYK	Eagle Plains	97.62	24	P	P	06 55 32.1	-0.9
	baz=270						
VNA1	Neumayer--Stat	97.71	193	P	Pdif	06 55 34.3	+0.9
INK	Inuvik	98.80	22	P	P	06 55 37.5	-0.6
	baz=274						
BR131	Keskin Array S	99.16	309	P	Pdif	06 55 40.2	-0.4
BRTR	Keskin Array B	99.16	309	P	Pdif	06 55 40.0	-0.7
	comp=Z,1.8nm,0.7s,baz=131,slow=6.5,SNR=12						
BRTR				LR	LR	07 48 48.9	
	comp=Z,56nm,19.4s,baz=102,slow=40						
FARO	Faro, Yukon	99.21	28	P	Pdif	06 55 39.8	-0.4
	baz=273						
BOSA	Boshof	99.43	240	P	Pdif	06 55 41.5	-0.6
	comp=Z,6.5nm,0.9s,baz=127,slow=5.6,SNR=4.9						
BOSA				LR	LR	07 35 01.4	
	comp=Z,60nm,21.0s,baz=118,slow=32						
LBTB	Lobatse	99.92	243	P	Pdif	06 55 44.4	0.0
	comp=Z,3.6nm,0.6s,baz=133,slow=5.2,SNR=7.3						
A36M	Sachs Harbour	101.09	18	P	Pdif	06 55 47.7	-0.6
	baz=282						
ARCES	ARCESS Array B	101.44	340	P	Pdif	06 55 48.7	-1.2
	comp=Z,14nm,1.1s,baz=56,slow=2.2,SNR=7.5						
ARCES				PKiKP	PKiKP	07 00 14.5	+1.0
	comp=Z,7.6nm,1.1s,baz=97,slow=3.6,SNR=6.1						
AKASG	Malin Array Be	102.05	320	P	Pdif	06 55 51.9	-1.1
	comp=Z,0.9nm,0.5s,baz=70,slow=4.1,SNR=3.1						
MNK	Minsk	102.55	324	*i* P	Pdif	06 55 53.7	-1.4
MNK				*i*		07 00 07.9	
MNK				*i* PPP	PPP	07 02 18.4	
MNK				*i* S	SKSac	07 06 25.8	+0.4
MNK				*i* SS	SS	07 14 40.7	+0.4
MNK				*i* SSS	SSS	07 18 38.2	
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,13nm,0.9s						
MNK				pmax	pmax		
	comp=N,12nm,1.0s						
MNK				MLR	MLR		
	comp=N,103nm,17.0s						
MNK				MLR	MLR		
	comp=Z,75nm,14.0s						
MNK				MLR	MLR		
	comp=E,16nm,22.0s						
MNK	Minsk	102.55	324	*i* P	Pdif	06 55 53.7	-1.4
	comp=E,2.0nm,1.0s						
MNK				*i* P	Pdif	06 55 53.7	-1.4
	comp=N,12nm,1.0s						
MNK				*i* P	Pdif	06 55 53.7	-1.4
	comp=Z,13nm,0.9s,baz=84						
MNK				*i* pP	pPdif	06 56 15.5	-5.8
MNK				*i* PP	PP	07 00 08.0	-1.3
MNK				*i* PPP	PPP	07 02 18.5	
MNK				*i* S	SKSac	07 06 25.9	+0.5
MNK				*i* sS	SKKSac	07 07 05.3	+0.2
MNK				*i* SS	SS	07 14 40.7	+0.4
MNK				*i* SSS	SSS	07 18 38.3	
MNK				*i* LR	LR	07 40 05.3	
MNK				*i* LRM	MLR	07 42 17.0	
	comp=N,103nm,17.1s						
MNK				*i* LRM	MLR	07 42 22.0	
	comp=Z,75nm,14.0s						
MNK				*i* LRM	MLR	07 42 39.2	
	comp=E,16nm,21.6s						
FINES	FINESS Array B	102.61	331	P	Pdif	06 55 54.2	-1.1
	comp=E,2.1nm,0.7s,baz=130,slow=3.0,SNR=5.2						
FINES				PKiKP	PKiKP	07 00 16.3	+0.5
	comp=E,3.8nm,0.6s,baz=76,slow=2.6,SNR=15						
SORM	Soroca	102.80	318	⇑P	Pdif	06 55 53.7	-2.7
SORM	Soroca	102.80	318	⇑P	Pdif	06 55 53.7	-2.7
CFR	Carcaliu	103.14	315	⇑P	Pdif	06 55 58.3	+0.4
CFR	Carcaliu	103.14	315	⇑P	Pdif	06 55 58.3	+0.4
NOR	Nord	103.87	355	*i* P	PKiKP	07 00 16.0	-1.6
TESR	Tescani	104.08	316	⇓P	Pdif	06 56 02.0	-0.1
MLR	Muntele Rosu	104.66	315	⇑P	Pdif	06 56 04.4	-0.5
MLR	Muntele Rosu	104.66	315	⇑P	Pdif	06 56 04.4	-0.5
BURAR	Bucovina Array	104.95	317	⇑P	Pdif	06 56 05.4	-0.7
BURAR	Bucovina Array	104.95	317	⇑P	Pdif	06 56 05.4	-0.7
DRGR		106.74	317	⇑P	Pdif	06 56 14.2	+0.1
DRGR		106.74	317	⇑P	Pdif	06 56 14.2	+0.1
B05A	Bryant	107.08	42	P	PKiKP	07 00 24.9	+0.5
	baz=279						
YKA	Yellowknife Ar	107.70	26	PKiKP	PKiKP	07 00 25.2	+0.1
	comp=E,6.3nm,0.6s,baz=290,slow=2.0,SNR=55						
YKA				PKKPbc	PKKPbc	07 11 39.2	-2.7
	comp=E,5.0nm,0.7s,baz=104,slow=2.8,SNR=22						
J04D	Umpqua Nationa	107.79	47	P	PKiKP	07 00 26.4	+0.3
	baz=277						
DAG	Danmarks Havn	108.12	353	*i* P	PKiKP	07 00 24.1	-1.5
M04C	Macdoel	108.17	48	P	PKiKP	07 00 26.5	-0.4
	baz=277						
J05D	Fort Rock, OR	108.42	47	P	PKiKP	07 00 26.8	-0.5
	baz=278						
NEEM	North Greenlan	109.48	0	*i* P	PKiKP	07 00 28.5	0.0
MORC	Moravsky Berou	109.60	320	*e*PKP	PKiKP	07 00 29.9	+0.8
NB2	NORSAR Subarra	109.63	333	PKPdf	PKiKP	07 00 29.1	+0.2
	comp=Z,2.6nm,1.1s,baz=68,slow=1.9						
NOA	NORSAR Array B	109.63	333	Pdiff	Pdif	06 56 24.9	-1.6
	comp=Z,1.1nm,0.9s,baz=69,slow=4.7,SNR=4.1						
NOA				PKiKP	PKiKP	07 00 28.6	-0.2
	comp=Z,2.3nm,0.8s,baz=261,slow=2.9,SNR=9.2						
NOA				PKKPbc	PKKPbc	07 11 35.0	-0.8
	comp=Z,1.4nm,0.8s,baz=63,slow=2.8,SNR=7.2						
JAVC	Velka Javorina	109.72	319	*e*PKP	PKiKP	07 00 30.9	+1.5
KRLC	Kraliky	110.01	321	*e*PKP	PKiKP	07 00 30.4	+0.5
DPC	Dobruska-Polom	110.23	321	*e*PKP	PKiKP	07 00 31.0	+0.7
OSTC	Ostas	110.25	321	*e*PKP	PKiKP	07 00 31.0	+0.7
VRAC	Vranov	110.31	320	*e*PKP	PKiKP	07 00 31.0	+0.6
NEW	Newport	110.35	41	P	PKiKP	07 00 31.1	+0.5
	baz=283						
UPC	Upice	110.39	321	*e*PKP	PKiKP	07 00 30.5	0.0
KRUC	Moravsky	110.49	320	*e*PKP	PKiKP	07 00 31.3	+0.5
CONA	Conrad Observa	111.11	319	*i* P	PKiKP	07 00 32.0	-0.1
	comp=Z,2.3nm,0.7s						
NVAR	Mina Array Bea	111.31	52	Pdiff	Pdif	06 56 39.9	+5.1
	comp=Z,0.9nm,0.7s,baz=264,slow=6.5,SNR=6.9						
NVAR				PKiKP	PKiKP	07 00 34.1	+1.2
	comp=Z,1.0nm,0.6s,baz=251,slow=2.0,SNR=8.5						
NVAR				PKKPbc	PKKPbc	07 11 29.5	-0.3
	comp=Z,1.4nm,0.7s,baz=115,slow=3.6,SNR=11						
PRU	Pruhonice	111.43	321	*e*PKP	PKiKP	07 00 33.1	+0.6
ARSA	Arzberg	111.49	318	*i* P	PKiKP	07 00 32.5	-0.2
	comp=Z,1.6nm,0.5s						
GROS	Grobnik	111.69	317	*i* PKiKP	PKiKP	07 00 33.0	-0.2
CWC	Cottonwood Cre	111.76	54	P	PKiKP	07 00 33.7	-0.1
	baz=278						
CKRC	Cesky Krumlov	111.89	320	*e*PKP	PKiKP	07 00 34.9	+1.4
SOKA	Soboth	111.95	318	*i* P	PKiKP	07 00 33.6	-0.2
	comp=Z,3.1nm,0.7s,SNR=5.2						
CLL	Collm	112.00	323	*e*PKIKP	PKiKP	07 00 34.0	+0.5
CLL	Collm	112.00	323	*e*PKiKP	PKiKP	07 00 34.0	+0.5
EDW2	Edwards Air Fo	112.03	55	P	PKiKP	07 00 34.6	+0.4
	baz=277						
BOJS	Bojanci	112.07	316	*i* PKiKP	PKiKP	07 00 34.3	+0.4
MOA	Molln	112.17	319	*i* P	PKiKP	07 00 33.7	-0.3
	comp=Z,2.3nm,0.7s						
LRMC	Laurel Mtn Rad	112.21	55	P	PKiKP	07 00 34.5	-0.1
	baz=278						
GEC2	GERESS Array S	112.27	320	*e*PKiKP	PKiKP	07 00 34.8	+0.5
	baz=72,slow=1.9						
GERES	GERESS Array B	112.27	320	PKiKP	PKiKP	07 00 34.6	+0.3
	comp=Z,5.9nm,0.6s,baz=68,slow=2.2,SNR=58						
KHC	Kasperske Hory	112.27	320	*e*PKP	PKiKP	07 00 34.4	+0.2
MPMC	Manual Prospec	112.29	54	P	PKiKP	07 00 35.8	+1.0
	baz=278						
FURC	Furnace Creek,	112.73	53	P	PKiKP	07 00 36.1	+0.7
	baz=278						
MSO	Missoula	112.78	42	P	PKiKP	07 00 35.7	+0.3
	baz=285						
JAVS	Javornik	112.79	317	*i* PKiKP	PKiKP	07 00 35.1	-0.3
GSC	Goldstone, Bar	112.94	55	P	PKiKP	07 00 36.7	+0.7
	baz=278						
RJOB	Jochberg	113.15	319	*e*PKiKP	PKiKP	07 00 36.0	0.0
	baz=72,slow=1.9						
HLID	Hailey	113.25	45	P	PKiKP	07 00 37.0	+0.5
	baz=283,SNR=11						
R11A	Troy Canyon, C	113.43	51	P	PKiKP	07 00 37.5	+0.6
	baz=280						
PFO	Pinyon Flats O	113.45	56	P	PKiKP	07 00 37.2	+0.2
	baz=278						
TPFO	Pinon Flats	113.46	56	P	PKiKP	07 00 37.7	+0.7
	baz=278						
GRF	Grafenberg Arr	113.58	322	*e*PKiKP	PKiKP	07 00 37.2	+0.5
	baz=72,slow=1.9						
ABTA	Abfaltersbach	113.61	318	*i* P	PKiKP	07 00 36.4	-0.5
	comp=Z,6.7nm,0.7s,SNR=15						
BELC	Belle Mtn. Jos	113.78	56	P	PKiKP	07 00 38.4	+0.7
	baz=278						
GMRC	Granite Mounta	113.95	55	P	PKiKP	07 00 39.0	+1.0
	baz=278						
SUMG	Summit	113.99	356	*i* P	PKiKP	07 00 36.0	-1.3
FUR	Furstenfeldbru	114.01	320	*e*PKiKP	PKiKP	07 00 38.1	+0.5
	baz=72,slow=1.9						
WTTA	Wattenberg	114.04	319	*e*P	PKiKP	07 00 37.9	+0.1
	comp=Z,20nm,0.6s,SNR=50						
WATA	Walderalm	114.06	319	*e*P	PKPdf	07 00 37.6	-0.2
	comp=Z,7.2nm,0.6s,SNR=10						
BC3	Big Chuckawall	114.28	56	P	PKiKP	07 00 40.2	+1.6
	baz=278						
SQTA	Sankt Quirin	114.33	319	*i* P	PKPdf	07 00 38.0	-0.3
	comp=Z,4.8nm,0.6s,SNR=5.4						
MOTA	Moosalm	114.36	319	*i* P	PKPdf	07 00 38.2	-0.3
	comp=Z,9.0nm,0.6s,SNR=15						
IRM	Iron Mountain	114.46	56	P	PKiKP	07 00 39.6	+0.8
	baz=279						
RETA	Reutte	114.54	319	*e*P	PKPdf	07 00 38.5	-0.1
	comp=Z,4.0nm,0.6s,SNR=6.9						
FETA	Feichten	114.70	319	*i* P	PKiKP	07 00 39.1	0.0
	comp=Z,0.5nm,0.4s						
UBR	Ueberruh	114.90	320	*e*PKiKP	PKPdf	07 00 39.5	+0.2
	baz=72,slow=1.9						
EGMT	Eagleton	115.16	40	P	PKPdf	07 00 40.6	+0.7
	baz=289						
DUG	Dugway, Tooele	115.17	49	P	PKPdf	07 00 40.7	+0.6
	baz=283,SNR=8.1						
DAVA	Damuels	115.17	319	*i* P	PKiKP	07 00 40.0	0.0
	comp=Z,12nm,0.6s,SNR=16						
RLMT	Red Lodge	116.39	43	P	PKiKP	07 00 43.4	+0.9
	baz=288						
MEM	Membach	116.39	324	*d*PKPdf	PKiKP	07 00 42.7	+0.7
BHOU	Houvegnez	116.49	324	*d*PKPdf	PKiKP	07 00 43.1	+0.9
214A	Organ Pipe Nat	116.73	58	P	PKiKP	07 00 43.8	+0.5
	baz=279						
BCLA	Clavier	116.88	324	*d*PKPdf	PKiKP	07 00 43.0	+0.1
BW06	Boulder Array	116.89	45	P	PKiKP	07 00 44.1	+0.5
	baz=287						
PDAR	Pinedale Array	116.89	45	PKP	PKiKP	07 00 44.0	+0.5
	comp=Z,4.2nm,0.7s,baz=238,slow=0.9,SNR=42						
PDAR				PKKPbc	PKKPbc	07 11 05.2	-5.7
	comp=Z,1.3nm,1.0s,baz=120,slow=6.8,SNR=6.5						
FFC	Flin Flon	116.91	31	PKIKP	PKiKP	07 00 43.1	+0.2
FFC	Flin Flon	116.91	31	PKPdf	PKiKP	07 00 43.1	+0.2
WUAZ	Wupatki	117.28	54	P	PKiKP	07 00 45.0	+0.6
	baz=282,SNR=6.7						
DOU	Dourbes	117.43	324	*d*PKPdf	PKiKP	07 00 44.2	+0.2
SNF	Seneffe	117.44	324	*d*PKPdf	PKiKP	07 00 44.5	+0.5
SOEG	Soedalen	117.50	352	*i* P	PKPdf	07 00 42.8	-0.8
ICESG	Greenland Ices	117.50	356	*i* P	PKPdf	07 00 43.5	-0.5
LAO	LASA Array	117.87	40	P	PKiKP	07 00 46.9	+1.8
	baz=291						
BNI	Bardonecchia	118.00	318	PKIKP	PKiKP	07 00 45.7	+0.2
BNI	Bardonecchia	118.00	318	PKPdf	PKiKP	07 00 45.7	+0.2
TUC	Tucson	118.37	57	P	PKiKP	07 00 46.7	+0.2
	baz=280						
DGMT	Dagmar	118.46	38	P	PKiKP	07 00 46.9	+0.7
	baz=294						
O20A	White River Ci	118.58	48	P	PKiKP	07 00 47.6	+0.7
	baz=286,SNR=17						
W18A	Petrified Fore	118.67	54	P	PKiKP	07 00 48.2	+1.1
	baz=282						
KEST	Kesra	118.67	307	PKP	PKiKP	07 00 47.8	+0.7
	comp=Z,9.6nm,0.9s,baz=305,slow=5.3,SNR=12						
K22A	Casper	119.05	45	P	PKPdf	07 00 47.6	0.0
	baz=289,SNR=5.6						
MVCO	Mesa Verde	119.16	51	P	PKiKP	07 00 49.2	+1.0
	baz=284						
CLF	Chambon-Foret	119.69	322		PKiKP	07 00 49.5	+1.0
N23A	Red Feather La	120.02	46	P	PKiKP	07 00 50.6	+0.9
	baz=288						
RSSD	Black Hills	120.24	42	PKIKP	PKiKP	07 00 50.2	+0.1
RSSD	Black Hills	120.24	42	PKPdf	PKiKP	07 00 50.1	+0.1
RSSD	Black Hills	120.24	42	P	PKPdf	07 00 49.7	-0.2
	baz=292						
S22A	4UR Ranch, Cre	120.30	50	P	PKiKP	07 00 50.8	+0.3
	baz=286,SNR=11						
ISCO	Idaho Springs	120.61	48	P	PKiKP	07 00 51.0	0.0
	baz=288,SNR=6.7						
ANGG	Ammassalik, Gr	120.72	354		PKPdf	07 00 49.6	-0.3
121A	Cookes Peak, D	120.81	56	P	PKiKP	07 00 52.5	+1.1
	baz=282						
Q24A	Divide	121.21	48	P	PKiKP	07 00 52.5	+0.3
	baz=288						
SDCO	Great Sand Dun	121.31	50	P	PKPdf	07 00 51.5	-0.7
	baz=287,SNR=6.9						
ANMO	Albuquerque	121.33	53	PKIKP	PKiKP	07 00 53.7	+1.3
ANMO	Albuquerque	121.33	53	PKPdf	PKiKP	07 00 53.7	+1.3
ANMO	Albuquerque	121.33	53	P	PKiKP	07 00 53.7	+1.3
	baz=285						
MDND	Maddock	121.50	37	P	PKiKP	07 00 52.1	0.0
	baz=298						
T25A	Trinidad	122.31	50	P	PKPdf	07 00 54.1	0.0
	baz=288,SNR=6.7						
ULM	Lac du Bonnet	122.41	33	PKP	PKPdf	07 00 53.3	-0.3
	comp=Z,17nm,0.5s,baz=311,slow=2.9,SNR=28						
ULM				PKKPbc	PKKPab	07 10 48.6	-0.5
	comp=Z,6.7nm,0.7s,baz=118,slow=4.5,SNR=8.8						
ULM	Lac du Bonnet	122.41	33	PKIKP	PKPdf	07 00 53.5	-0.1
ULM	Lac du Bonnet	122.41	33	PKPdf	PKPdf	07 00 53.5	-0.1
OGNE	Ogallala	122.79	45	P	PKiKP	07 00 55.0	+0.1
	baz=292						
MNTX	Cornudas Mount	122.98	57	P	PKiKP	07 00 56.5	+0.9
	baz=283						
KSCO	Kaye Shedlock’	123.05	48	P	PKiKP	07 00 56.4	+0.8
	baz=290						
SUSD	Miller	123.44	40	P	PKPdf	07 00 55.7	-0.1
	baz=296						
AGMN	Agassiz Nation	123.45	35	P	PKPdf	07 00 55.7	0.0
	baz=302						
COYC	Coyhaique	124.19	161	PKPdf	PKiKP	07 00 57.5	0.0
K31A	O'Neill	124.37	42	PKPdf	PKPdf	07 00 57.8	+0.1
F33A	5 Mile Ranch,	124.45	38		PKPdf	07 00 57.7	0.0
MSTX	Muleshoe	124.52	53	P	PKiKP	07 00 58.6	0.0
	baz=287						
AMTX	Amarillo	125.11	52	P	PKiKP	07 01 00.0	+0.3
	baz=288						
CBKS	Cedar Bluff	125.22	47	P	PKiKP	07 00 59.7	-0.1
	baz=292						
ECSD	EROS Data Cent	125.27	40	P	PKPdf	07 00 58.7	-0.6
	baz=298,SNR=20						
BGNE	Belgrade	125.30	43	P	PKPdf	07 00 58.7	-0.8
	baz=295,SNR=6.5						
IVI	Ivigtut	125.78	359	PKPdf	PKPdf	07 00 59.4	-0.3
EYMN	Ely	126.09	33	P	PKiKP	07 01 01.0	-0.2
	baz=306						
SPMN	Marine on St.	126.87	37	P	PKPdf	07 01 01.4	-0.9
	baz=303,SNR=7.2						
KSU1	Kansas State U	127.34	45	P	PKPdf	07 01 02.8	-0.6
	baz=295,SNR=11						
ESDC	Sonseca Array	127.35	316	PKP	PKPdf	07 01 02.5	-1.0
	comp=Z,2.3nm,0.9s,baz=360,slow=3.1,SNR=12						
ESDC	Sonseca Array	127.35	316	PKPdf	PKiKP	07 01 03.9	-0.1
ABTX	Abilene, Hawle	127.42	54	P	PKPdf	07 01 03.9	+0.1
	baz=288						
JCT	Junction City	127.92	57	P	PKiKP	07 01 05.2	-0.3
	baz=286						
SCIA	State Center	128.34	41	P	PKiKP	07 01 05.7	-0.2
	baz=300						
TORD	Torodi Ar. Bea	128.68	281	PKhKP	PKPpre	07 00 58.1	
	comp=Z,0.6nm,0.5s,baz=72,slow=4.0,SNR=3.7						
TORD				PKP	PKPdf	07 01 06.7	+0.1
	comp=Z,13nm,0.7s,baz=59,slow=1.7,SNR=53						
TORD				SKKPbc	SKKPbc	07 14 09.5	+1.2
	comp=Z,0.8nm,0.8s,baz=272,slow=5.0,SNR=3.5						
MVO	Moncorvo	128.73	319	*e*PKPdf	PKiKP	07 01 07.8	+1.0
833A	Chaparral WMA,	128.84	59	P	PKiKP	07 01 07.0	-0.2
	baz=285						
PLCA	Paso Flores	129.02	160	PKP	PKPdf	07 01 06.4	-0.3
	comp=Z,11nm,0.9s,baz=231,slow=4.0,SNR=15						
PLCA	Paso Flores	129.02	160	PKPdf	PKPdf	07 01 06.3	-0.4
PVRL	Vila Real	129.12	319	*e*PKPdf	PKiKP	07 01 08.7	+1.2
POLO	Lamas de Olo	129.12	319	*e*PKPdf	PKiKP	07 01 08.8	+1.2
PGAV	Gavieira, Arco	129.13	320	*e*PKPdf	PKiKP	07 01 08.5	+0.9
P38A	Dawn	129.24	43	PKPdf	PKiKP	07 01 07.9	+0.2
TUL1	Leonard	129.25	49	P	PKiKP	07 01 07.5	-0.3
	baz=294						
MTE	Manteigas	129.45	318	*e*PKPdf	PKiKP	07 01 09.2	+1.0
435B	Jarrell	129.66	55	P	PKPdf	07 01 07.8	-0.2
	baz=288						
JFWS	Jewell Farm	129.68	38	P	PKPdf	07 01 07.5	-0.3
	baz=304,SNR=8.9						
PCBR	Castelo Branco	129.68	317	*e*PKPdf	PKiKP	07 01 09.8	+1.2
PMRV	Marv??o	129.82	317	*e*PKPdf	PKiKP	07 01 09.8	+0.9
COI	Coimbra	130.12	318	*e*PKPdf	PKPdf	07 01 05.8	-2.8
PESTR	Estremoz	130.22	316	*e*PKPdf	PKPdf	07 01 05.5	-3.4
PCAS	Casmilo, Conde	130.25	318	*e*PKPdf	PKiKP	07 01 10.6	+0.8
SCHQ	Schefferville	130.34	13	PKP	PKPdf	07 01 08.6	-0.1
	comp=Z,7.8nm,0.7s,baz=329,slow=3.7,SNR=12						
SCHQ				SKPbc	SKPab	07 04 22.3	-0.5
	comp=Z,29nm,0.8s,baz=6.5,slow=4.2,SNR=20						
PSBE	So Bento	130.72	318	*e*PKPdf	PKiKP	07 01 12.1	+1.3
PBEJ	Beja	130.81	315	*e*PKPdf	PKiKP	07 01 11.4	+0.5
PVAQ	Vaqueiros	131.00	315	*e*PKPdf	PKiKP	07 01 15.6	+4.3
W39A	Magazine	131.03	49	P	PKPdf	07 01 11.0	+0.5
	baz=295						
MESJ	Messejana	131.15	315	*e*PKPdf	PKPdf	07 01 09.4	-1.3
U40A	Yellville	131.22	47	P	PKPdf	07 01 10.5	-0.4
	baz=296						
PNCL	Nicolau / Gran	131.23	316	*e*PKPdf	PKPdf	07 01 09.6	-1.2
PMST	Lisbon--Monsan	131.37	317	*e*PKPdf	PKPdf	07 01 08.0	-3.1
MIAR	Mount Ida	131.46	49	P	PKPdf	07 01 11.2	-0.1
	baz=294						
L44A	Lake County Fo	131.51	37	P	PKPdf	07 01 10.6	-0.6
	baz=306						
CCM	Cathedral Cave	131.56	44	P	PKPdf	07 01 11.5	0.0
	baz=299						
HDIL	Hopedale	131.57	40	P	PKPdf	07 01 10.7	-0.7
	baz=303,SNR=5.7						
GLMI	Grayling	131.75	33	P	PKPdf	07 01 11.7	+0.1
	baz=311,SNR=7.1						
PFVI	Vila Bisbo	131.91	315	*e*PKPdf	PKPdf	07 01 12.2	+0.1
X40A	Basin Creek Fa	132.04	49	P	PKPdf	07 01 12.4	0.0
	baz=295						
Z41A	Richland Creek	132.57	50	P	PKPdf	07 01 13.0	-0.5
	baz=294						
SFIN	Lafayette	133.06	39	P	PKPdf	07 01 14.5	+0.3
	baz=305						
X43A	Marvell	133.48	48	P	PKPdf	07 01 15.0	-0.2
	baz=297						
AAM	Ann Arbor	133.93	35	P	PKPdf	07 01 15.8	0.0
	baz=310						
TRQA	Tornquist	133.94	167	PKIKP	PKiKP	07 01 17.9	+0.6
TRQA	Tornquist	133.94	167	PKPdf	PKiKP	07 01 17.9	+0.6
VBMS	Vicksburg	134.75	51	P	PKPdf	07 01 17.1	-0.5
	baz=295						
WCI	Wyandotte Cave	134.79	41	P	PKPdf	07 01 17.2	-0.4
	baz=304						
WVT	Waverly	134.89	44	P	PKPdf	07 01 17.9	+0.2
	baz=301						
KIC	Kosan Boka	134.95	272	*e*PKIKP	PKiKP	07 01 20.5	+0.5
	comp=Z,31nm,0.8s						
P49A	Miami Univ. Ec	135.03	38	P	PKPdf	07 01 17.7	-0.2
	baz=307						
DBIC	Dimbokro	135.08	273	PKhKP	PKPpre	07 01 10.4	
	comp=Z,3.8nm,0.8s,baz=177,slow=1.6,SNR=6.6						
DBIC				PKP	PKiKP	07 01 19.6	-0.6
	comp=Z,16nm,0.8s,baz=74,slow=1.1,SNR=19						
DBIC				SKPbc	SKPbc	07 04 39.6	-0.9
	comp=Z,5.5nm,0.6s,baz=142,slow=3.2,SNR=9.4						
CMIG	Matias Romero	135.14	73	PKhKP	PKPpre	07 01 08.8	
	comp=Z,3.6nm,0.8s,baz=290,slow=2.8,SNR=6.0						
CMIG				PKP	PKPdf	07 01 19.1	+0.3
	comp=Z,4.2nm,0.7s,baz=329,slow=1.6,SNR=7.0						
LIC	Lamto	135.22	272	*e*PKIKP	PKiKP	07 01 20.9	+0.4
	comp=Z,70nm,0.9s						
TIC	Toumodi	135.24	272	*e*PKIKP	PKiKP	07 01 21.0	+0.4
ACSO	Alum Creek Sta	135.65	36	P	PKPdf	07 01 19.5	+0.4
	baz=310						
ERPA	Erie	136.06	32	P	PKPdf	07 01 19.9	+0.1
	baz=315						
M53A	WI Miller and	136.16	34	P	PKPdf	07 01 19.5	-0.5
	baz=313,SNR=6.9						
P52A	Corning	136.53	37	P	PKPdf	07 01 20.9	+0.2
	baz=310						
M54A	Oil Creek Stat	136.66	33	P	PKPdf	07 01 20.9	0.0
	baz=314,SNR=9.9						

O53A	New Philadelph	136.66	35	P	PKPdf	07 01 21.3	+0.4
	baz=312						
LONY	Lake Ozonia	136.78	26	P	PKPdf	07 01 21.5	+0.5
	baz=323						
N54A	Moraine State	136.87	33	P	PKPdf	07 01 21.3	0.0
	baz=314						
J58A	Remsen	137.46	27	PKPdf	PKiKP	07 01 23.4	-0.9
TZTN	Tazewell	137.55	41	P	PKPdf	07 01 22.7	0.0
	baz=306						
MCWV	Mont Chateau	137.84	35	P	PKPdf	07 01 22.8	-0.3
	baz=313						
TKL	Tuckaleechee C	137.91	42	PKhKP	PKPpre	07 01 16.0	
	comp=Z,2.4nm,0.6s,baz=155,slow=6.6,SNR=6.4						
TKL				PKP	PKPdf	07 01 23.9	+0.5
	comp=Z,21nm,0.7s,baz=153,slow=3.1,SNR=21						
TKL				SKPbc	SKPbc	07 04 48.3	-0.1
	comp=Z,6.2nm,0.7s,baz=299,slow=3.9,SNR=8.8						
BINY	Binghamton	138.03	29	P	PKPdf	07 01 23.1	-0.4
	baz=320,SNR=7.7						
O56A	Blue Knob Stat	138.13	33	P	PKPdf	07 01 23.8	+0.1
	baz=315						
LBNH	Lisbon	138.19	24	P	PKPdf	07 01 23.6	-0.1
	baz=326,SNR=5.0						
SSPA	Standing Stone	138.23	32	P	PKPdf	07 01 23.4	-0.4
	baz=316						
PKME	Peaks-Kenny Pk	138.30	20	P	PKPdf	07 01 23.7	0.0
	baz=331						
N59A	State Game Lan	139.11	30	P	PKPdf	07 01 24.9	-0.6
	baz=319						
BLA	Blacksburg	139.12	38	P	PKPdf	07 01 24.4	-1.3
	baz=310						
L61B	Northampton	139.35	26	P	PKPdf	07 01 25.3	-0.5
	baz=324						
GOGA	Godfrey	139.37	45	P	PKPdf	07 01 26.1	0.0
	baz=303						
HRV	Adam Dziewonsk	139.78	25	P	PKPdf	07 01 27.1	+0.5
	baz=326						
KMSC	Kings Mountain	139.83	41	P	PKPdf	07 01 26.2	-0.7
	baz=307						
PAL	Palisades	139.94	28	P	PKPdf	07 01 26.4	-0.5
	baz=322						
P60A	Greenville	140.00	31	P	PKPdf	07 01 26.7	-0.3
	baz=318						
UCCT	U. Connecticut	140.08	26		PKPdf	07 01 25.5	-1.6
CBN	Corbin Frederi	140.24	34	P	PKPdf	07 01 26.1	-1.4
	baz=315						
TIGA	Tifton	140.32	48	P	PKPdf	07 01 28.0	0.0
	baz=301						
NHSC	New Hope	141.81	43	P	PKPdf	07 01 29.8	-0.7
	baz=306						
CNNC	Cliffs of the	141.95	38	P	PKPdf	07 01 30.2	-0.5
	baz=311						
PB14	IPOC Station P	142.95	148	PKPdf	PKPdf	07 01 31.4	-1.9
DWPF	Disney Wildern	143.62	51	P	PKPbc	07 01 31.7	+0.2
	baz=300						
LVC	Limon Verde	145.38	148	PKPbc	PKPab	07 01 39.2	+1.3
	comp=Z,62nm,0.6s,baz=234,slow=2.3,SNR=8.9						
CPUP	Villa Florida	146.24	168	PKPbc	PKPab	07 01 40.5	0.0
	comp=Z,98nm,0.8s,baz=196,slow=2.1,SNR=108						
NNA	Nana	147.47	125	PKPbc	PKPbc	07 01 43.2	-0.3
	comp=Z,94nm,0.7s,baz=251,slow=7.2,SNR=35						
NNA	Nana	147.47	125	PKIKP	PKPdf	07 01 41.9	+1.0
NNA						07 01 45.0	
NNA	Nana	147.47	125	PKPdf	PKPdf	07 01 41.9	+1.0
NNA				PKPab	PKiKP	07 01 45.0	-0.6
BRU2	Volcan	147.67	84	PKPdf	PKPdf	07 01 42.2	+0.8
BRU2					PKPab	07 01 46.6	-0.2
PB16	IPOC Station P	148.46	143		PKPdf	07 01 43.8	+0.7
PB16				PKPbc	PKiKP	07 01 48.6	+0.3
ATAH	Atahualpa	148.53	116	PKP	PKPbc	07 01 45.1	-1.8
	comp=Z,72nm,0.9s,baz=160,slow=2.2,SNR=15						
ATAH				PKPbc	PKiKP	07 01 49.0	+0.7
	comp=Z,72nm,0.9s,baz=202,slow=0.5,SNR=27						
LPAZ	La Paz	150.87	142	PKP	PKPdf	07 01 48.5	+1.5
	comp=Z,8.3nm,0.9s,baz=89,slow=0.8,SNR=26						
LPAZ				PKPbc	PKiKP	07 01 53.8	+0.4
	comp=Z,47nm,0.8s,baz=122,slow=1.7,SNR=64						
LPAZ	La Paz	150.87	142	PKPbc	PKiKP	07 01 53.9	+0.6
BBSR	BB Station	151.23	26		PKiKP	07 01 53.5	+0.6
AQDB	Aquidauana	152.26	169	PKPdf	PKPdf	07 01 48.8	+0.5
AQDB				PKPbc	PKiKP	07 01 55.6	+0.3
SIV	San Ignacio	154.81	155	PKP	PKPdf	07 01 53.4	+1.3
	comp=Z,6.4nm,0.8s,baz=207,slow=2.0,SNR=37						
SIV				PKPbc	PKiKP	07 02 01.2	+0.4
	comp=Z,6.7nm,0.8s,baz=208,slow=0.8,SNR=12						
SIV				PKPab	pPKPdf	07 02 17.3	-1.1
	comp=Z,24nm,0.6s,baz=209,slow=4.6,SNR=36						
ZARC	Zaragoza, Cauc	155.44	87	PKPdf	PKPdf	07 01 52.6	-0.4
ZARC				PKPab	pPKPdf	07 02 20.7	+1.5
ROSC	El Rosal	155.83	94	PKP	PKPdf	07 01 55.0	+1.1
	comp=Z,5.6nm,0.6s,baz=209,slow=7.1,SNR=5.0						
ROSC				PKPab	PKPab	07 02 22.0	+0.9
	comp=Z,13nm,0.6s,baz=159,slow=6.5,SNR=5.4						
PTLB	Pontes e Lacer	156.07	158	PKPdf	PKPdf	07 01 53.6	-0.1
PTLB				PKPab	PKPab	07 02 22.4	+1.2
SDDR	Presa de Saban	156.15	58	PKPab	PKPab	07 02 22.8	+1.0
ETMB	Extrema	156.92	136	PKPdf	PKPdf	07 01 54.4	-0.5
ETMB				PKPab	PKPab	07 02 25.6	+0.5
BDFB	Brasilia	157.52	185	PKP	PKPdf	07 01 56.8	+1.1
	comp=Z,8.1nm,1.0s,baz=75,slow=6.5,SNR=8.1						
BDFB				PKPab	PKPab	07 02 28.4	+0.8
	comp=Z,6.0nm,0.8s,baz=332,slow=2.5,SNR=5.2						
BDFB	Brasilia	157.52	185	PKIKP	PKPdf	07 01 56.1	+0.4
BDFB						07 02 27.2	
BDFB	Brasilia	157.52	185	PKPdf	PKPdf	07 01 56.1	+0.4
BDFB				PKPab	PKPab	07 02 27.2	-0.4
CRPR	Cabo Rojo, PR	160.08	55	PKPab	PKPab	07 02 39.5	+0.7
OBIP	Obispado Ponce	160.47	54	PKPdf	PKPdf	07 01 59.0	+0.1
OBIP					PKPab	07 02 38.7	-1.8
GCPR	Guaynabo City	160.74	52		PKPab	07 02 41.8	+0.2
SJG	San Juan	160.79	53	PKPab	PKPab	07 02 42.5	+0.7
	comp=Z,32nm,0.9s,baz=309,slow=3.3,SNR=7.4						
PDPR	Patillas Dam,	160.94	53	PKPdf	PKPdf	07 01 59.4	-0.1
PDPR					PKPab	07 02 42.5	-0.1
HUMP	Col San Antoni	161.01	52	PKPdf	PKPdf	07 01 59.2	-0.3
BAUV	El Baul	162.12	82	PKPdf	PKPdf	07 02 00.1	-0.7
BAUV				PKPab	PKPab	07 02 48.9	+1.0
MACA	Manacapuru-AM	165.47	133	PKPdf	PKPdf	07 02 04.1	+0.2
MACA				PKPab	PKPab	07 03 02.9	+0.4
PTGA	Pitinga	167.59	127	PKP	PKPdf	07 02 06.6	+1.0
	comp=Z,1.1nm,0.4s,baz=77,slow=3.0,SNR=6.2						
PTGA				PKPab	PKPab	07 03 12.4	+0.5
	comp=Z,3.8nm,0.8s,baz=246,slow=2.3,SNR=4.6						

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*TAP **13** 06:50:09.3, 24°.96N×122°.50E, h17^{km}, ML4.0, C*
*JMA **13** 06:50:09.9±0.1, 24°.92N×122°.50E, h33^{km}±3^{km}, M2.9*
ISC 13 06:50:09.7±1.4**, 24°.94N**±0°.04×**122°.52E**±0°.03**, h21**^{km}±4^{km}**,**
n88, σ0^s.92/103**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.49	278	*e*P	Pb	06 50 18.7	-0.9
	baz=276						
TWB1				*i* S	Sb	06 50 26.0	-0.3
	baz=276						
EGS		0.54	260	P	Pb	06 50 20.2	-0.3
	baz=252						
JYNG	Yonagunijimaku	0.62	141	P	Pb	06 50 21.8	-0.2
JYNG				S	Sb	06 50 30.9	+0.6
TIPB	Shuangxi	0.63	273	*i* P	Pb	06 50 21.4	-0.8
	baz=271						
TIPB				*e*S	Sb	06 50 30.9	+0.2
	baz=271						
NTC	Toucheng	0.63	262	*e*P	Pb	06 50 21.5	-0.6
	baz=260						
YOJ	Yonaguni jima	0.65	137	*e*P	Pb	06 50 22.3	-0.1
	baz=136						
YOJ	Yonaguni jima	0.65	137	P	Pb	06 50 22.4	-0.1
YOJ				*e*S	Sb	06 50 31.8	+0.6
NWF	Wu-fen Shan	0.68	281	*e*P	Pb	06 50 22.8	-0.3
	baz=280						
NWF				*e*S	Sn	06 50 33.5	-0.7
	baz=280						
WFSB	Wu-fen Shan	0.68	281	*e*P	Pb	06 50 22.6	-0.3
	baz=280						
WFSB				*e*S	Sn	06 50 33.5	-0.6
	baz=280						
TWC	Suao	0.69	242	*i* P	Pb	06 50 22.3	-0.8
	baz=239						
TNOU	National Taiwa	0.71	287	*i* P	Pb	06 50 23.2	-0.2
	baz=286						
ILA	Ilan	0.72	256	*i* P	Pb	06 50 23.5	-0.1
	baz=254						
NDS	Dongshan	0.79	247	*e*P	Pb	06 50 24.2	-0.6
	baz=245						
NDS				*e*S	Sb	06 50 35.0	0.0
	baz=245						
PCYT	Pengchaiyu	0.80	330	*i* P	Pb	06 50 24.7	-0.2
	baz=313						
NWRT	Kuosheng	0.82	289	*e*P	Pn	06 50 25.7	-0.4
	baz=288						
EWUT	Wuta	0.83	234	*e*P	Pb	06 50 24.6	-0.9
	baz=232						
TWA	Mucha	0.85	273	P	Pn	06 50 25.6	-0.9
	baz=272						
ENA	Nanau	0.87	234	*i* P	Pb	06 50 25.7	-0.5
	baz=231						
ENA				S	Sb	06 50 36.5	-0.9
	baz=231						
YM08	YM08	0.88	287	*e*P	Pb	06 50 25.8	-0.5
	baz=286						
YM01	YM01	0.89	284	*i* P	Pn	06 50 26.2	-0.8
	baz=283						
TWY	Chenhua	0.90	292	*i* P	Pn	06 50 26.5	-0.6
	baz=291						
TWY				*e*S	Sn	06 50 40.8	+1.3
	baz=291						
NHDH	Xindian Distri	0.90	272	*i* P	Pn	06 50 26.6	-0.6
	baz=270						
NHDH				*e*S	Sn	06 50 39.0	-0.6
	baz=270						
NSM	Shimen	0.91	293	*e*P	Pn	06 50 27.5	+0.2
	baz=292						
ENTT	Nioudou	0.92	251	P	Pn	06 50 26.6	-0.8
	baz=249						
TAP	Taipei	0.93	276	*e*P	Pn	06 50 27.5	0.0
	baz=275						
TATO	Taipei	0.94	272	*e*P	Pb	06 50 26.6	-0.6
	baz=271						
NWLT	Wulai	0.94	260	*e*P	Pb	06 50 26.9	-0.4
	baz=259						
ANP	Anpu	0.94	285	*e*P	Pn	06 50 27.3	-0.5
	baz=285						
NDT	Datong Townshi	0.97	250	*i* P	Pb	06 50 27.8	-0.1
	baz=248						
NTST	Danshui	1.00	283	*e*P	Pb	06 50 28.9	+0.6
	baz=282						
TWS1	Kuangyinshan	1.01	279	*i* P	Pb	06 50 28.5	-0.1
	baz=278						
YHNB	Yeheng	1.07	256	*e*P	Pb	06 50 29.1	-0.5
	baz=267						
NSK	Sanguang	1.09	256	*i* P	Pb	06 50 29.4	-0.4
	baz=267						
ETL	Fush Village	1.13	227	*e*P	Pb	06 50 30.8	+0.2
	baz=224						
NACB	Ninganchiao	1.14	228	*i* P	Pn	06 50 29.8	-0.6
	baz=226						
NNS	Nan Shan	1.16	245	*e*P	Pn	06 50 30.3	-0.5
	baz=242						
NNS				*e*S	Sb	06 50 46.2	+0.6
	baz=242						
ETLH	Xiulin Townshi	1.19	233	*e*P	Pb	06 50 31.2	-0.5
	baz=244						
ETLH				*e*S	Sb	06 50 47.5	+0.8
	baz=244						
TWD	Chiawan	1.20	225	*e*P	Pb	06 50 31.7	0.0
	baz=233						
NCU	National Centr	1.21	272	*e*P	Pb	06 50 31.5	-0.5
	baz=270						
NCUH	Zhongli	1.21	272	*e*P	Pb	06 50 33.2	+1.3
	baz=288						
IRIF	Iriomote-Funau	1.26	118	P	Pn	06 50 32.1	+0.1
IRIF				*e*S	Sn	06 50 47.8	-0.5
HWA	Hwalien	1.27	221	*e*P	Pb	06 50 33.8	+0.9
	baz=218						
ETM	Tongmen	1.35	224	*e*P	Pb	06 50 33.9	-0.4
	baz=204						
FUSS	Fushou	1.35	240	*e*P	Pb	06 50 34.2	-0.3
	baz=237						
FUSS				*e*S	Sb	06 50 53.1	+1.7
	baz=237						
WHF	Hehuan Shan	1.39	236	*e*P	Pb	06 50 34.5	-0.7
	baz=233						
LIOB	Emei	1.40	258	*e*P	Pb	06 50 34.3	-0.8
	baz=256						
TWT	Tachien	1.40	241	*e*P	Pb	06 50 35.2	-0.1
	baz=239						
TWT				*e*S	Sb	06 50 54.8	+2.0
	baz=239						
NSTT	Nanjuang	1.41	258	*e*P	Pb	06 50 34.6	-0.8
	baz=256						
TDCB	Techi	1.42	241	*e*P	Pb	06 50 35.1	-0.4
	baz=239						
HATJ	Hateruma jima	1.47	127	*e*S	Sn	06 50 52.9	-0.5
ESL	Shilin	1.50	222	*e*P	Pb	06 50 36.6	-0.2
	baz=219						
CHGB	Renai	1.51	235	*e*P	Pb	06 50 36.8	-0.4
	baz=216						
JKRS	Kuro-shima	1.53	117	P	Pn	06 50 35.7	0.0
WHP	Taichung City	1.58	246	*e*P	Pb	06 50 37.9	-0.4
	baz=258						
JIJ	Ishigaki jima	1.58	111	P	Pn	06 50 36.5	-0.1
NSY	Sanyi	1.68	252	*e*P	Pb	06 50 41.7	+1.7
	baz=264						
TWQ1	Liyutan	1.69	250	*e*P	Pb	06 50 41.1	+0.9
	baz=248						
WPL	Puli Township	1.70	237	*e*P	Pb	06 50 40.2	0.0
	baz=235						
WCS	Beigang Elemen	1.71	239	*e*P	Pb	06 50 40.7	+0.3
	baz=237						
DPDB	Guoxing	1.71	238	*e*P	Pb	06 50 40.5	+0.1
	baz=236						
VWDT	VWDT	1.73	227	*e*P	Pb	06 50 39.5	-1.2
	baz=208						
HGSD	Ruisui	1.75	215	*e*P	Pb	06 50 39.9	-1.3
	baz=198						
EHY	Hungye	1.80	218	*e*P	Pb	06 50 40.4	-1.6
	baz=215						
SMLT	Sun Moon Lake	1.81	235	*e*P	Pb	06 50 41.6	-0.7
	baz=215						
SSLB	Suanglung	1.83	232	*e*P	Pb	06 50 41.3	-1.3
	baz=213						
TYC	Yuchr	1.83	236	*e*P	Pb	06 50 41.8	-0.8
	baz=216						
TCU	Taichung	1.85	245	*e*P	Pb	06 50 44.4	+1.5
	baz=243						
YULB	Yu-li	1.90	216	*e*P	Pn	06 50 40.9	-0.1
	baz=214						
EYUL	Yuli	1.93	215	*e*P	Pb	06 50 43.5	-0.7
	baz=200						
TWF1	Yuli	1.94	215	*e*P	Pb	06 50 42.8	-1.6
	baz=213						
WNT	Mingjian	1.98	238	*e*P	Pb	06 50 46.5	+1.4
	baz=236						
YUS	Yu-Shan	2.03	225	*e*P	Pb	06 50 44.4	-1.9
	baz=222						
ALS	Alishan	2.12	228	*e*P	Pb	06 50 46.9	-0.6
	baz=209						
CHN5	Tsauling	2.15	232	*e*P	Pb	06 50 46.8	-1.2
	baz=213						
WDLH	Douliu	2.19	236	*e*P	Pb	06 50 48.6	-0.1
	baz=250						
ELDTW	Lidau	2.22	219	*e*P	Pn	06 50 46.5	+1.1
	baz=203						
EDH	Donghe	2.25	210	*e*P	Pn	06 50 47.1	+1.4
	baz=195						
WTK	Tuku	2.31	238	*e*P	Pn	06 50 47.6	+1.1
	baz=236						
CHN4	Tsaushan	2.37	228	*e*P	Pn	06 50 48.5	+1.2
	baz=211						
STYH	Taoyuan	2.38	222	*e*P	Pn	06 50 48.7	+1.3
	baz=208						
TPUB	Ta-pu	2.38	227	*e*P	Pb	06 50 50.0	-1.8
	baz=209						
LONT	Longtian	2.39	212	*e*P	Pn	06 50 49.4	+1.7
	baz=210						
STYT	Tauyuan	2.39	223	*e*P	Pn	06 50 49.4	+1.6
	baz=205						
WTP	Ta-pu	2.42	226	*e*P	Pb	06 50 50.5	-2.1
	baz=209						
TWK	Hsinying	2.49	229	*e*P	Pb	06 50 52.1	-1.8
	baz=211						
CHN1	Nanshi	2.52	227	*e*P	Pb	06 50 52.5	-1.8
	baz=224						
SLGT	Liugui	2.59	222	*e*P	Pn	06 50 52.3	+2.0
	baz=220						
MATB	Ma-tsu	2.62	298	*e*P	Pn	06 50 51.4	+0.6
	baz=297						

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*IDC **13** 07:05:21.1±1.4, 12°.17N×120°.76E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.3/40, mbtmp3.6/3, Error ellipse: s-maj=80.1km s-min=21.6km az=75.0*
*MAN **13** 07:05:21.6, 12°.27N×120°.90E, h2^{km}, mb4.2, ML3.1, MS2.8*
ISC 13 07:05:22.6±1.0**, 12°.41N**±0°.06×**121°.2E**±0°.1**, h10**^{km}**, n11,**
σ0^s.63/13**, mb3.5**/3**, 3C-4D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	1.11	350	⇓*e*P	Pn	07 05 44.7	+0.5
PGP				*i* S	Sn	07 06 00.3	+0.7
LUBP	Lubang	1.59	326	⇑*i*P	Pn	07 05 50.4	-0.4
TGY	Tagaytay City	1.70	353	Pn	Pb	07 05 54.6	+0.7
	baz=270,slow=3.7						
TGY	Tagaytay City	1.70	353	⇑*e*P	Pn	07 05 51.9	-0.5
TGY				*i* S	Sg	07 06 17.2	-0.1
LQP	Lukban	1.74	12	⇓*e*P	Pg	07 05 56.0	0.0
RCP	Roxas	1.77	118	⇓*i*P	Pb	07 05 55.8	+0.6
JAP	San Jose, Anti	1.82	155	⇓*e*P	Pn	07 05 54.4	+0.3
JCNP	Jose Panganiba	2.40	39	⇑*e*P	Pb	07 06 05.7	-0.2
WRA	Warramunga Arr	34.67	158	P	P	07 12 11.3	-1.3
	0.2nm,0.4s,baz=330,slow=11,SNR=5.2						
ASAR	Alice Springs	37.96	161	P	P	07 12 40.3	-0.4
	0.4nm,0.4s,baz=341,slow=7.5,SNR=14						
MKAR	Makanchi Array	47.33	324	P	P	07 13 56.8	+0.2
	1.1nm,0.9s,baz=126,slow=7.3,SNR=3.5						

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*IDC **13** 07:42:27.8±1.6, 5°.65N×123°.77E, h590^{km}±21^{km}, mb3.3/10, mb1 3.4/10, mb1mx2.9/46, mbtmp4.3/10, Error ellipse: s-maj=40.1km s-min=8.2km az=65.0*
*NEIC **13** 07:42:27.2±0.9, 5°.7N±0°.1×123°.6E±0°.2, h573^{km}±10^{km}, mb4.1/23, Error ellipse: s-maj=27.0km s-min=14.5km az=56.0*
ISC 13 07:42:28.4±0.5**, 5°.56N**±0°.09×**123°.5E**±0°.1**, h600**^{km}**, n39,**
σ1^s.08/42**, mb3.9**/21**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MYLDM	Lahad Datu	5.02	266	P	P	07 44 01.1	-0.4
TOLI2	Tolitoli	5.20	212	P	P	07 44 00.7	-2.3
KKM	Kota Kinabalu	7.29	274	P	P	07 44 19.1	-2.1
FAKI	Fak Fak	12.11	134	P	P	07 45 06.6	-1.8
TPUB	Ta-pu	17.86	351	P	P	07 46 01.9	-0.9
QIZ	Qiongzhong	18.90	316	P	P	07 46 11.3	-0.9
MTN	Manton Dam	19.78	158	P	P	07 46 20.0	-0.3
MTN				IAmb	IAmb	07 46 42.9	
	comp=Z,14nm,1.4s						
CMAR	Chiang Mai Arr	27.20	300	P	P	07 47 27.4	+1.2
	comp=Z,1.7nm,0.4s,baz=114,slow=6.6,SNR=9.0						
WB0	Warramunga Arr	27.34	157	P	P	07 47 26.6	-0.7
WB0				IAmb	IAmb	07 47 27.2	
	comp=Z,4.7nm,0.6s						
CHTO	Chiang Mai	27.35	301	P	P	07 47 28.4	+1.0
CHTO				IAmb	IAmb	07 47 28.7	
	comp=Z,3.7nm,0.6s						
WRAB	Tennant Creek	27.48	157	P	P	07 47 28.2	-0.3
WRAB				IAmb	IAmb	07 47 28.6	
	comp=Z,5.4nm,0.7s						
WRA	Warramunga Arr	27.48	158	P	P	07 47 28.0	-0.5
	comp=Z,4.3nm,0.4s,baz=340,slow=9.3,SNR=101						
WRA				S	S	07 51 26.6	-2.0
	comp=Z,0.5nm,0.9s,baz=338,slow=16,SNR=3.2						
WRA				ScP	ScP	07 53 13.3	+2.1
	comp=Z,0.3nm,0.6s,baz=344,slow=3.5,SNR=4.9						
WRA	Warramunga Arr	27.48	158	IAmb	IAmb	07 47 28.8	
	comp=Z,0.2nm,0.7s						
WB2	Warramunga Arr	27.48	157	P	P	07 47 28.2	-0.3
AS31	Alice Springs	30.76	161	P	P	07 47 57.2	+0.5
AS31				IAmb	IAmb	07 47 57.7	
	comp=Z,2.1nm,0.3s						
ASAR	Alice Springs	30.76	161	P	P	07 47 57.2	+0.4
	comp=Z,3.3nm,0.5s,baz=338,slow=7.5,SNR=116						
ASAR				S	S	07 52 19.3	+0.1
	comp=Z,0.3nm,0.7s,baz=334,slow=13,SNR=5.0						
ASAR				ScP	ScP	07 53 23.8	+2.0
	comp=Z,0.3nm,0.5s,baz=349,slow=2.9,SNR=6.0						
ASAR	Alice Springs	30.76	161	P	P	07 47 56.9	+0.2
MORW	Morawa	35.17	191	P	P	07 48 34.6	+0.8
MORW				IAmb	IAmb	07 48 49.2	
	comp=Z,10nm,1.2s						
FORT	Forrest	36.39	173	P	P	07 48 44.3	+0.6
BBOO	Buckleboo	39.97	163	P	P	07 49 13.6	+0.9
BBOO				IAmb	IAmb	07 49 14.6	
	comp=Z,16nm,1.4s						
STKA	Stephens Creek	41.02	156	P	P	07 49 21.9	+0.9
	comp=Z,2.0nm,0.3s,baz=342,slow=8.3,SNR=15						
STKA	Stephens Creek	41.02	156	P	P	07 49 21.9	+0.9
SONM	Songino Array	44.61	344	P	P	07 49 48.7	-0.1
	comp=Z,1.1nm,0.8s,baz=159,slow=9.5,SNR=6.0						
MK31	Makanchi Array	54.26	326	P	P	07 50 59.9	+0.6
MKAR	Makanchi Array	54.26	326	P	P	07 50 59.8	+0.5
	comp=Z,1.8nm,0.4s,baz=122,slow=8.0,SNR=34						
NIL	Nilore	54.29	308	P	P	07 50 60.0	+0.1
NIL				IAmb	IAmb	07 51 03.0	
	comp=Z,3.4nm,0.8s						
MAKZ	Makanchi	54.44	326	P	P	07 51 00.9	+0.3
KBL	Kabul	57.89	308	P	P	07 51 22.5	-2.2
KBL				IAmb	IAmb	07 51 23.1	
	comp=Z,3.8nm,0.5s						
GAR	Garm	58.35	313	P	P	07 51 28.1	+0.4
GAR				IAmb	IAmb	07 51 28.3	
	comp=Z,11nm,1.4s						
KURBB	Kurchatov Arra	58.50	328	P	P	07 51 28.8	+0.5
	comp=Z,3.1nm,0.6s,baz=126,slow=6.1,SNR=15						
KURK	Kurchatov	58.51	328	P	P	07 51 28.5	+0.2
KURK				IAmb	IAmb	07 51 29.2	
	comp=Z,6.2nm,0.8s						
KKAR	Karatay Array	59.73	317	P	P	07 51 37.1	+0.4
BKZ	Black Stump Fm	66.07	137	P	P	07 52 18.7	+1.3
TIXI	Tiksi	66.10	2	P	P	07 52 15.8	-1.0
	comp=Z,0.6nm,0.3s,baz=155,slow=4.4,SNR=4.3						
NRIK	Noril'sk	67.92	347	P	P	07 52 27.7	-0.3
	comp=Z,0.7nm,0.3s,baz=150,slow=10.0,SNR=3.6						
NRIK	Noril'sk	67.92	347	P	P	07 52 28.8	+0.7
NRIK				IAmb	IAmb	07 52 29.6	
	comp=Z,3.0nm,1.2s						
ABKAR	Akbulak array	68.73	321	P	P	07 52 33.7	+0.4
AKTO	Aktyubinsk	70.26	322	P	P	07 52 42.5	+0.1
	comp=Z,2.2nm,0.7s,baz=100,slow=5.7,SNR=6.5						
RAYN	Ar Rayn	76.84	293	P	P	07 53 20.9	+0.6
RAYN				IAmb	IAmb	07 53 47.7	
	comp=Z,6.9nm,1.5s						

IDC 13 08:06:00.3±1.3**, 4°.11S**×**129°.43E, h0**^{km}**, mb4.1**/2**,**
mb1 3.8/5**, mb1mx3.3**/49**, mbtmp3.8**/5**, ML3.3**/3**, Error ellipse: s-maj=42.9km s-min=23.6km az=85.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.71	30	Pn	Pn	08 06 59.9	+0.9
	4.6nm,0.3s,baz=264,slow=23,SNR=9.6						
SIJI				Sn	Sn	08 07 42.5	-0.9
	6.1nm,0.3s,baz=252,slow=19,SNR=3.8						
WRA	Warramunga Arr	16.45	163	Pn	Pn	08 09 50.5	-2.2
	0.1nm,0.3s,baz=346,slow=13,SNR=8.0						
ASAR	Alice Springs	19.91	168	P	Pn	08 10 34.6	-0.7
	0.2nm,0.3s,baz=348,slow=10,SNR=15						
MKAR	Makanchi Array	65.52	326	P	P	08 16 45.8	+0.1
	0.8nm,0.4s,baz=121,slow=8.3,SNR=24						
KURBB	Kurchatov Arra	69.77	328	P	P	08 17 12.1	-0.2
	1.7nm,0.7s,baz=128,slow=5.7,SNR=12						

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*MOS **13** 08:09:32.4±0.0, 41°.08N×48°.50E, h4^{km}, MPVA4.2*
*DRS **13** 08:09:34.8±0.0, 40°.99N×48°.53E, h17^{km}*
ISC 13 08:09:32.4±2.9**, 41°.10N**±0°.09×**48°.8E**±0°.1**, h2**^{km}±12^{km}**, n18,**
σ0^s.89/35**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSMR	Kasumkent	0.70	316	*e*Pg	Pb	08 09 46.9	-0.4
KSMR				*e*Sg	Sb	08 09 56.7	-0.7
AKT	Akhty	0.87	296	*i* Pg	Pg	08 09 48.6	-0.5
AKT				*e*Sg	Sg	08 09 59.8	-0.6
DRN	Derbent	0.98	340	*e*Pg	Pn	08 09 53.0	-0.1
DRN				*e*Sg	Sn	08 10 07.4	-0.2
URKR	Urkarakh	1.36	321	*e*Pg	Pg	08 09 58.8	+0.3
URKR				*e*Sg	Sn	08 10 17.4	+0.2
SGKR	Sergokala	1.59	329	*e*Pg	Pg	08 10 02.8	-0.1
SGKR				*e*Sg	Sg	08 10 24.7	+1.1
KMKR	Kumukh	1.62	310	*e*Pg	Pb	08 10 02.6	-0.5
KMKR				*e*Sg	Sg	08 10 25.0	+0.4
GNBR	Gunib	1.87	314	*e*Pg	Pb	08 10 06.6	-0.7

GNBR				*e*Sg	Sg	08 10 32.3	-0.1
ARKR	Arakani	2.00	319	*e*Pg	Pg	08 10 10.1	-0.7
ARKR				*e*Sg	Sg	08 10 37.8	+1.1
DDFL	Dedoflistskaro	2.03	281	P	Pg	08 10 11.3	0.0
LGD	Lagodekhi	2.04	292	P	Pb	08 10 09.3	-0.8
LGD				S	Sg	08 10 39.5	+1.6
MAK	Makhachkala	2.08	333	*e*Pg	Pb	08 10 10.7	-0.1
MAK				*e*Sg	Sg	08 10 39.6	+0.2
XNZR	Khunzakh	2.11	314	*e*Pg	Pb	08 10 10.6	-0.8
XNZR				*e*Sg	Sb	08 10 39.2	+1.0
BUJR	Buynaksk	2.12	325	*i* Pg	Pb	08 10 10.8	-0.7
BUJR				*e*Sg	Sb	08 10 39.6	+1.3
UNCR	Uncukul	2.19	318	*e*Pg	Pb	08 10 12.8	+0.2
UNCR				*e*Sg	Sg	08 10 43.0	+0.4
KRNR	Karanay	2.22	322	*e*Pg	Pb	08 10 13.2	0.0
KRNR				*e*Sg	Sg	08 10 43.7	+0.1
DBC	Dubki	2.40	324	*e*Pn	Pn	08 10 14.0	+1.3
DBC				*e*Sn	Sb	08 10 45.7	-0.7
BTLR	Botlikh	2.46	310	*i* Pn	Pn	08 10 14.8	+1.3
BTLR				*e*Sn	Sb	08 10 46.8	-1.4
DLMR	Dylym	2.53	322	*e*Pn	Pb	08 10 16.9	-1.6
DLMR				*e*Sn	Sb	08 10 48.2	-1.9

*ATH **13** 08:16:56.0, 39°.18N×28°.05E, h21^{km}±3^{km}, ML3.4/8, Error ellipse: s-maj=5.2km s-min=2.3km az=88.0*
*ISK **13** 08:16:58.6, 39°.18N×27°.80E, h10^{km}, ML3.5/26*
*THE **13** 08:16:59.3, 39°.18N×27°.89E, h1^{km}±1^{km}, ML3.5/4, Error ellipse: s-maj=1.5km s-min=0.6km az=59.0*
*DDA **13** 08:16:59.0, 39°.18N×27°.81E, h7^{km}±1^{km}, MW3.5*
*CFUSG **13** 08:17:00.6, 39°.33N×28°.02E, h1^{km}, Western Turkey Magtype MSH 3.2 from 1 stations*
*BEO **13** 08:17:02.8±0.9, 39°.42N×27°.71E, h0^{km}, ML3.5/6*
ISC 13 08:16:59.4±0.9**, 39°.19N**±0°.02×**27°.84E**±0°.02**, h14**^{km}±6^{km}**, n100,** σ1§**13**/130**, 9C-11D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.21	333	*i* P	Pg	08 17 03.6	-0.6
STEP				IAML		08 17 07.0	
	comp=E,31µm,0.6s						
STEP				*i* S	Sg	08 17 07.5	0.0
STEP				IAML		08 17 08.0	
	comp=N,31µm,0.6s						
AKS	Akhisar	0.31	184	PG	Pg	08 17 05.1	-0.7
AKS				SG	Sg	08 17 10.4	+0.2
AKHS	Akhisar	0.31	184	*i* P	Pg	08 17 05.2	-0.6
AKHS				IAML		08 17 10.0	
	comp=E,14µm,0.4s						
AKHS				*i* S	Sg	08 17 10.4	+0.2
BALB	Balikesir	0.45	4	PG	Pg	08 17 08.4	0.0
BALB				SG	Sg	08 17 15.4	+0.8
GOMA	Golmarmara-Man	0.48	173	PG	Pg	08 17 08.6	-0.4
GOMA				SG	Sg	08 17 15.8	+0.3
BALY	Balya	0.58	343	*i* P	Pg	08 17 10.5	-0.3
BALY				*i* S	Sg	08 17 18.8	+0.3
BALY				IAML		08 17 23.0	
	comp=N,2µm,0.5s						
BALY				IAML		08 17 23.0	
	comp=E,2µm,0.4s						
ZEDA	zmir-Bergama	0.63	250	*i* P	Pg	08 17 11.5	-0.3
ZEDA				*i* S	Sg	08 17 20.0	-0.2
ZEDA				IAML		08 17 22.0	
	comp=N,2µm,0.3s						
ZEDA				IAML		08 17 22.0	
	comp=E,806nm,0.5s						
DURS	Dursunbey	0.64	50	*i* S	Sb	08 17 20.8	-0.4
BUHA	Balikesir, Bur	0.67	298	*i* P	Pg	08 17 11.9	-0.6
BUHA				IAML		08 17 26.0	
	comp=N,813nm,0.3s						
BUHA				IAML		08 17 26.0	
	comp=E,1µm,0.5s						
DEMI	Demirci	0.70	102	*i* P	Pb	08 17 13.0	-0.4
DEMI				IAML		08 17 27.0	
	comp=N,2µm,0.5s						
DEMI				IAML		08 17 27.0	
	comp=E,2µm,0.4s						
DST	Dursunbey	0.73	55	PG	Pb	08 17 13.9	0.0
DST				SG	Sb	08 17 24.3	+0.5
DKL	Dikili	0.74	261	PG	Pg	08 17 12.5	-1.2
DKL				SG	Sg	08 17 22.9	-0.6
CAND	Candarli	0.84	254	PG	Pg	08 17 14.6	-1.1
GONE	Gonen-Balikesi	0.87	352	PG	Pg	08 17 15.8	-0.4
SIMA	Simav-Kutahya	0.89	96	PG	Pb	08 17 17.0	+0.3
AYVA	Ayvalik	0.90	278	*i* P	Pg	08 17 16.3	-0.5
AYVA				IAML		08 17 31.0	
	comp=N,2µm,0.4s						
AYVA				IAML		08 17 33.0	
	comp=E,891nm,0.6s						
KULA	Kula-Manisa	0.93	136	P	Pb	08 17 17.1	-0.3
KULA				S	Sb	08 17 29.4	-0.1
KULA	Kula-Manisa	0.93	136	PG	Pb	08 17 17.0	-0.3
FOCM	Foa	0.99	242	PG	Pg	08 17 17.5	-1.0
BLCB	Balcova	1.02	218	P	Pg	08 17 18.4	-0.6
BLCB				S	Sb	08 17 33.5	+1.6
BLCB	Balcova	1.02	218	PG	Pg	08 17 18.1	-0.9
USAK	Uak-Merkez	1.03	117	*i* P	Pb	08 17 19.0	0.0
SHAP	Saphane-Kutahy	1.09	98	PN	Pn	08 17 20.4	+0.1
KNL	Balıkesir	1.11	347	*i* P	Pg	08 17 19.6	-1.2
KNL				IAML		08 17 41.0	
	comp=N,2µm,0.6s						
KNL				IAML		08 17 41.0	
	comp=E,3µm,0.6s						
BAYC	CANAKKALE_Bayr	1.14	299	*i* P	Pg	08 17 20.4	-1.0
BAYC				IAML		08 17 37.0	
	comp=N,2µm,0.4s						
BAYC				IAML		08 17 37.0	
	comp=E,1µm,0.4s						
KCTX	Karacabey (Bur	1.15	20	PN	Pg	08 17 21.1	-0.4
EDC	Edincik	1.16	1	PN	Pg	08 17 21.1	-0.6
ORLT	Orhaneli	1.18	43	PN	Pn	08 17 22.2	+0.7
PRK	Paraskevi	1.22	273	P	Pn	08 17 23.1	+1.1
PRK				S	Sn	08 17 40.2	+2.0
	comp=E,2µm,0.4s						
PRK	Paraskevi	1.22	273	P	Pn	08 17 22.6	+0.6
PRK				AML	AML	08 17 42.0	
	comp=E,4163µm,0.4s						
PRK				AML	AML	08 17 46.8	
	comp=N,4417µm,0.9s						
GEDZ	Gediz	1.23	96	PN	Pn	08 17 22.9	+0.7
AYDB	Zeytinkoy-Aydi	1.24	178	PN	Pg	08 17 22.1	-1.2
URLA	Izmir	1.28	230	PN	Pn	08 17 22.7	-0.1
TVSB	Tavsanli	1.28	78	PN	Pn	08 17 23.7	+0.7
EZN	Ezine	1.33	299	P	Pn	08 17 23.8	+0.3
EZN				S	Sg	08 17 43.3	+0.8
EZN	Ezine	1.33	299	PN	Pn	08 17 23.6	+0.1
MRMT	Marmara Adasi	1.43	352	PN	Pn	08 17 25.4	+0.5
MDNY	Mudanya-Bursa	1.43	34	PN	Pn	08 17 25.2	+0.4
LPK	Lapseki	1.45	325	PN	Pn	08 17 25.2	+0.1
BOZC	Bozcaada	1.53	296	PN	Pn	08 17 26.3	+0.1
SIGR	SIGRI	1.54	271	P	Pn	08 17 26.5	+0.1
SIGR				S	Sb	08 17 49.1	+2.0
	comp=N,2µm,0.4s						
SIGR	SIGRI	1.54	271	P	Pn	08 17 26.0	-0.4
SIGR				S	Sb	08 17 48.8	+1.7
SIGR				AML	AML	08 17 50.8	
	comp=E,3919µm,0.5s						
SIGR				AML	AML	08 17 50.8	
	comp=N,3590µm,0.4s						
SIGR	SIGRI	1.54	271	PN	Pn	08 17 26.6	+0.1
GCAM	G?zelcaml?	1.56	198	PN	Pn	08 17 26.8	+0.2
CHOS	Chios island	1.61	241	P	Pn	08 17 28.0	+0.6
CHOS				S	Sb	08 17 50.7	+1.7
	comp=N,2µm,0.4s						
CHOS	Chios island	1.61	241	P	Pn	08 17 26.9	-0.5
CHOS				S	Sb	08 17 50.7	+1.7
CHOS				AML	AML	08 17 53.1	
	comp=N,3231µm,0.4s						
CHOS				AML	AML	08 17 54.0	
	comp=E,2813µm,0.4s						
CHOS	Chios island	1.61	241	PN	Pn	08 17 26.8	-0.6
SMG	Samos	1.67	208	P	Pn	08 17 29.5	+1.3
SMG				S	Sb	08 17 52.0	+1.1
SMG	Samos	1.67	208	P	Pn	08 17 26.9	-1.4
SMG				S	Sn	08 17 51.0	+1.5
SMG				AML	AML	08 17 55.4	
	comp=N,1831µm,0.6s						
SMG				AML	AML	08 17 58.0	
	comp=E,1430µm,0.4s						
GADA	Gvkgeada	1.80	304	P	Pn	08 17 30.4	+0.4
MLSB	Milas	1.89	182	PN	Pn	08 17 31.4	+0.2
ENEZ	Enez	2.02	321	P	Pn	08 17 34.0	+1.1
ENEZ				S	Sn	08 18 01.1	+3.2
ISK	Istanbul-Kandi	2.10	26	P	Pn	08 17 33.8	-0.2
LIA	Limnos Island	2.17	290	P	Pn	08 17 35.6	+0.5
LIA	Limnos Island	2.17	290	P	Pn	08 17 35.3	+0.2
LIA				AML	AML	08 18 17.6	
	comp=E,499µm,0.7s						
LIA				AML	AML	08 18 23.9	
	comp=N,430µm,0.5s						
SMTH	Samothraki Isl	2.19	306	P	Pn	08 17 35.8	+0.4
SMTH	Samothraki Isl	2.19	306	P	Pn	08 17 35.4	0.0
SMTH				AML	AML	08 18 14.1	
	comp=E,691µm,0.5s						
SMTH				AML	AML	08 18 19.6	
	comp=N,677µm,0.6s						
ALN	Alexandroupoli	2.19	322	P	Pn	08 17 36.1	+0.7
ALN				S	Sn	08 18 04.4	+2.1
	comp=N,350nm,0.6s						
ALN	Alexandroupoli	2.19	322	P	Pn	08 17 35.7	+0.4
ALN				AML	AML	08 18 10.6	
	comp=N,706µm,0.8s						
ALN				AML	AML	08 18 13.1	
	comp=E,729µm,0.4s						
DAT	Datca	2.46	185	P	Pn	08 17 39.4	+0.2
RDO	Rodhopi	2.63	319	P	Pn	08 17 42.2	+0.8
RDO	Rodhopi	2.63	319	P	Pn	08 17 42.0	+0.6
RDO				AML	AML	08 18 23.4	
	comp=E,622µm,0.5s						
RDO				AML	AML	08 18 23.5	
	comp=N,330µm,0.8s						
FETY	Fethiye	2.73	159	P	Pn	08 17 42.2	-0.6
THAS	Thassos island	2.79	302	P	Pn	08 17 43.8	+0.3
APE	Apeiranthos	2.79	221	⇓P	Pg	08 17 52.0	-0.9
APE				⇓S	Sg	08 18 27.4	-1.7
KYMI	Kymi, Euboea I	2.97	260	P	Pn	08 17 46.7	+0.6
KAVA	Kavala	3.13	306	P	Pn	08 17 48.6	+0.4
PAIG	Paliouri	3.30	284	P	Pn	08 17 50.9	+0.3
NVR	Nevrokopi	3.73	307	P	Pn	08 17 57.2	+0.6
PLD	Plovdiv	3.77	322	*e*Pn	Pn	08 17 58.0	+1.0
PLD				*e*Sn	Sn	08 18 41.2	+0.1
SRS	Serrai	3.78	302	P	Pn	08 17 57.5	+0.3
KNT	Kendrikon	4.27	299	P	Pn	08 18 04.7	+0.8
VTS	Vitosha	4.89	316	⇑P	Pn	08 18 13.0	+0.4
VTS				⇑S	Sn	08 19 04.4	-4.7
VTS	Vitosha	4.89	316	*e*Pn	Pn	08 18 13.7	+1.1
VTS				*e*Sn	Sn	08 19 07.4	-1.6
ICOR	Ion Corvin	4.92	360	⇑P	Pn	08 18 13.4	+0.5
BOSS	Bosilegrad	5.24	311	*e*Pn	Pn	08 18 17.9	+0.7
BOSS				*e*Sn	Sn	08 19 16.0	-1.4
TIRR	Tirgusor	5.28	4	⇓P	Pn	08 18 18.2	+0.4
HARR	Harsova	5.50	1	⇑P	Pn	08 18 21.5	+0.7
ZAPS	Zavoj	5.66	318	*e*Pn	Pn	08 18 24.6	+1.5
ZAPS				*e*Sn	Sn	08 19 24.9	-3.0
BARS	Barje	5.82	310	*e*Pn	Pn	08 18 26.5	+1.2
BARS				*e*Sn	Sn	08 19 29.6	-2.2
CFR	Carcaliu	5.99	2	⇓P	Pn	08 18 27.7	+0.2
ZAGS	Zajecar	6.25	319	*e*Pn	Pn	08 18 32.1	+1.0
BOVS	Bovan	6.40	316	*e*Pn	Pn	08 18 33.9	+0.7
MLR	Muntele Rosu	6.45	348	⇓P	Pn	08 18 34.9	+0.9
SELS	Selova	6.47	311	*e*Pn	Pn	08 18 36.1	+1.9
VOIR		6.58	343	⇓P	Pn	08 18 35.1	-0.6
VLDR	Vladesti	6.65	1	⇓P	Pn	08 18 37.9	+1.3
PLOR	Plostina	6.72	353	⇓P	Pn	08 18 37.6	+0.1
COVR	Voineasa-Covas	6.76	350	⇑P	Pn	08 18 38.7	+0.5
HERR	Herculane	6.97	326	⇑P	Pn	08 18 41.2	+0.2
DOPR	Dopca	7.01	346	⇓P	Pn	08 18 42.4	+0.8
GRUS	Gruza	7.11	314	*e*Pn	Pn	08 18 43.9	+0.9
GRUS				*e*Sn	Sn	08 20 00.2	-3.3
MDVR	Moldovita	7.21	323	⇑P	Pn	08 18 44.6	+0.2
IVAS	Ivanjica	7.25	310	*e*Pn	Pn	08 18 46.6	+1.6
TESR	Tescani	7.37	354	⇑P	Pn	08 18 47.2	+0.7
DIVS	Divibare	7.65	312	*e*Pn	Pn	08 18 52.3	+1.8
DIVS				*e*Sn	Sn	08 20 13.2	-3.8
SUDU	Sudak	7.80	41	*e*S	Sn	08 20 20.5	+0.2
SUDU				Sm		08 20 22.5	
	comp=N,15nm,0.6s						
SUDU				Sm		08 20 22.5	
	comp=E,7.0nm,0.5s						
BZS	Buzias	7.90	326	⇓P	Pn	08 18 53.4	-0.3
DRGR		8.48	335	⇓P	Pn	08 19 00.5	-1.2
BURAR	Bucovina Array	8.64	348	⇑P	Pn	08 19 03.9	0.0

*EAF **13** 08:20:05.6±2.4, 22°.44S×29°.25E, h12^{km}±30^{km}, MD3.9*
BUL 13 08:20:03.2±1.4**, 22°.58S**×**29°.52E, h12**^{km}±8^{km}**, MD4.2, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	1.97	119	*i* P	Pg	08 20 42.2	+1.2
MOPA				*i* Sg	Sg	08 21 16.1	+10
MOPA	Mopani	1.97	119	*i* P	Pg	08 20 42.2	+1.2
MOPA				*i* Sg	Sg	08 21 16.1	+10
MATP	Matopo	2.34	336	*i* P	Pn	08 20 42.3	+0.5
MATP				*i* Sg	Sb	08 21 16.1	+1.7
MATP	Matopo	2.34	336	*i* P	Pn	08 20 42.3	+0.5
MATP				*i* Sg	Sb	08 21 16.1	+1.7
LBTB	Lobatse	4.33	235	*i* P	Pn	08 21 07.6	-1.5
LBTB				*i* S	Sn	08 21 56.7	-3.0
LBTB	Lobatse	4.33	235	*i* P	Pn	08 21 07.6	-1.5
LBTB				*i* S	Sn	08 21 56.7	-3.0
KRI	Karoi	5.72	1	*i* P	Pn	08 21 19.8	-8.4
KRI				*i* S	Sn	08 22 16.0	-18
KRI	Karoi	5.72	1	*i* P	Pn	08 21 19.8	-8.4
KRI				*i* S	Sn	08 22 16.0	-18

*VAO **13** 08:31:14.7±0.4, 24°.16S×66°.96W, h182^{km}, mb4.3*
*NEIC **13** 08:31:15.1±1.7, 24°.19S±0°.06×66°.90W±0°.09, h173^{km}±5^{km}, mb4.6/67, Md4.6(SJA), Error ellipse: s-maj=11.5km s-min=8.2km az=76.0*
*SJA **13** 08:31:15.8±0.9, 24°.20S×66°.96W, h199^{km}±11^{km}, ML3.9, MW4.3*
*IDC **13** 08:31:16.2±1.1, 24°.10S×66°.83W, h184^{km}±9^{km}, mb3.9/11, mb1 4.0/18, mb1mx3.9/25, mbtmp4.4/18, MS3.1/1, Ms1 3.1/1, ms1mx2.6/28, Error ellipse: s-maj=14.3km s-min=11.8km az=8.0*
*GUC **13** 08:31:17.8±0.6, 24°.14S×67°.33W, h225^{km}±8^{km}, ML4.8*
ISC 13 08:31:15.9±0.6**, 24°.16S**±0°.03×**66°.97W**±0°.03**, h189**^{km}±5^{km}**, n215,** σ1§**16**/240**, mb4.5**/42**, 13C, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.45	113	*e*P	Pn	08 31 49.9	+1.5
SLA				*e*S	Sn	08 32 14.7	+1.2
SLA				IAML		08 32 15.9	
	comp=Z,440nm,0.7s						
HJA	Humahuaca	1.72	57	*e*P	Pn	08 31 52.9	+1.8
AZAP	Zapla	1.74	93	*e*P	Pn	08 31 52.3	+1.1
AZAP				*e*S	Sn	08 32 18.9	+0.3
AZAP				IAML		08 32 22.8	
	comp=Z,857nm,0.8s						
FSA	Cafayete	2.14	155	*e*P	Pn	08 31 56.1	+0.7
FSA				*e*S	Sn	08 32 26.7	+0.6
ASTB	Santa Barbara	2.31	85	*e*P	Pn	08 31 58.2	+1.0
LVC	Limon Verde	2.35	310	P	Pn	08 31 59.4	+1.5
	comp=Z,227nm,0.3s,baz=127,slow=8.3,SNR=2687						
LVC				S	Sn	08 32 31.4	+0.9
	comp=Z,136nm,0.3s,baz=147,slow=6.1,SNR=5.4						
LVC	Limon Verde	2.35	310	⇑*i*P	Pn	08 31 59.0	+1.2
LVC				*i* S	Sn	08 32 30.8	+0.4
LVC	Limon Verde	2.35	310	*i* P	Pn	08 31 59.4	+1.5
LVC				*e*S	Sn	08 32 32.3	+1.9
LVC				IAML		08 32 33.2	
	comp=Z,457nm,0.6s						
YJA	Yavi	2.39	35	*e*P	Pn	08 32 00.0	+1.7
YJA				*e*S	Sn	08 32 33.8	+2.6
PB15	IPOC Station P	2.48	292	⇑*i*P	Pn	08 32 00.5	+1.4
PB15				*i* S	Sn	08 32 32.3	-0.4
PB15	IPOC Station P	2.48	292		Pn	08 31 59.8	+0.7
PB15				Sn	Sn	08 32 33.1	+0.4
PB15	IPOC Station P	2.48	292	*e*P	Pn	08 32 00.5	+1.4
PB15				*e*S	Sn	08 32 34.7	+2.1
PB06	IPOC Station P	2.79	301	⇑*i*P	Pn	08 32 03.9	+1.2
PB06				*i* S	Sn	08 32 38.7	-0.4
PB06				IAML		08 32 41.6	
	comp=N,3µm,0.2s						
PB06	IPOC Station P	2.79	301		Pn	08 32 03.5	+0.8
PB06	IPOC Station P	2.79	301	*e*P	Pn	08 32 03.9	+1.2
PB06				*e*S	Sn	08 32 39.8	+0.7
AHML	Horco Molle	3.01	151	*e*P	Pn	08 32 05.4	+0.3
AHML				*e*S	Sn	08 32 42.7	-0.9
PB09	IPOC Station P	3.15	318	⇑*i*P	Pn	08 32 08.3	+1.4
PB09				*i* S	Sn	08 32 47.2	+0.4
PB09				IAML		08 32 49.0	
	comp=N,1µm,0.5s						
PB09	IPOC Station P	3.15	318		Pn	08 32 08.4	+1.4
PB09	IPOC Station P	3.15	318	*e*P	Pn	08 32 08.5	+1.6
PB09				*e*S	Sn	08 32 47.6	+0.9
PB14	IPOC Station P	3.16	261	⇑*i*P	Pn	08 32 07.4	+0.2
PB14				*i* S	Sn	08 32 45.6	-1.7
PB14				IAML		08 32 47.8	
	comp=E,828nm,0.4s						
PB14	IPOC Station P	3.16	261	Pn	Pn	08 32 06.9	-0.3
PB05	IPOC Station P	3.24	293	⇑*i*P	Pn	08 32 08.4	+0.4
PB05				*i* S	Sn	08 32 46.9	-1.8
PB05				IAML		08 32 51.2	
	comp=E,1µm,0.2s						
PB05	IPOC Station P	3.24	293	*e*P	Pn	08 32 08.8	+0.8
PB05				*e*S	Sn	08 32 48.5	-0.1
AC02	Maricunga	3.30	216	⇑*e*P	Pn	08 32 09.8	+0.7
AC02				*i* S	Sn	08 32 51.5	+0.7
AC02	Maricunga	3.30	216	Pn	Pn	08 32 10.0	+0.9
PB03	IPOC Station P	3.31	309	⇑*i*P	Pn	08 32 09.7	+0.7
PB03				*i* S	Sn	08 32 48.9	-1.4
PB03				IAML		08 32 50.8	
	comp=N,2µm,0.2s						
PB10	IPOC Station P	3.34	280	⇑*i*P	Pn	08 32 09.4	+0.2
PB10				*i* S	Sn	08 32 47.6	-3.1
PB10				IAML		08 32 54.6	
	comp=N,891nm,0.3s						
PB10	IPOC Station P	3.34	280	Pn	Pn	08 32 09.8	+0.7
PB10	IPOC Station P	3.34	280	*e*P	Pn	08 32 09.8	+0.7
PB10				*e*S	Sn	08 32 49.6	-1.1
PB04	IPOC Station P	3.44	301	⇑*i*P	Pn	08 32 11.1	+0.5
PB04				*i* S	Sn	08 32 51.5	-1.7
PB04	IPOC Station P	3.44	301	Pn	Pn	08 32 11.0	+0.5
PB07	IPOC Station P	3.62	311	⇑*i*P	Pn	08 32 13.2	+0.5
PB07				*i* S	Sn	08 32 55.3	-1.8
PB07	IPOC Station P	3.62	311		Pn	08 32 13.1	+0.4
PB01	IPOC Station P	3.87	323	⇑*i*P	Pn	08 32 16.1	+0.2
PB01				*i* S	Sn	08 33 01.5	-1.3
PB01	IPOC Station P	3.87	323		Pn	08 32 16.1	+0.2
PATCX	Punta Patache	4.44	318	Pn	Pn	08 32 22.3	-0.7
PB08	IPOC Station P	4.48	333	⇑*i*P	Pn	08 32 24.7	+0.9
PB08				*i* S	Sn	08 33 16.7	-0.3
PB08	IPOC Station P	4.48	333		Pn	08 32 24.7	+0.9
GO03	Copiap	4.51	220	*e*P	Pn	08 32 22.6	-1.2
GO03				*i* S	Sn	08 33 14.1	-3.1
GO03	Copiap	4.51	220	Pn	Pn	08 32 22.9	-0.9
TA01	Diego Aracena	4.65	320	*e*P	Pn	08 32 24.4	-1.2
TA01				*i* S	Sn	08 33 17.3	-3.0
TA01	Diego Aracena	4.65	320	Pn	Pn	08 32 24.8	-0.8
TA02	Huaiquique	4.85	322		Pn	08 32 28.0	-0.2
PB11	IPOC Station P	5.04	330	Pn	Pn	08 32 29.8	-0.9
AC04	Llanos de Chal	5.46	222	Pn	Pn	08 32 34.6	-1.4
PB16	IPOC Station P	6.26	337		Pn	08 32 46.8	-0.2
PB12	IPOC Station P	6.34	330	Pn	Pn	08 32 45.5	-2.1
LPAZ	La Paz	7.91	352	P	Pn	08 33 09.2	+0.6
	comp=N,6.0nm,0.3s,baz=145,slow=8.0,SNR=125						
LPAZ				S	Sn	08 34 36.2	-1.6
	comp=N,1.5nm,0.3s,baz=59,slow=21,SNR=3.3						
LPAZ	La Paz	7.91	352	*e*P	Pn	08 33 08.6	0.0
LPAZ	La Paz	7.91	352		Pn	08 33 08.7	+0.1
CPUP	Villa Florida	8.99	106	P	Pn	08 33 20.8	-1.4
	comp=N,0.6nm,0.3s,baz=290,slow=12,SNR=6.3						
CPUP	Villa Florida	8.99	106	*e*P	Pn	08 33 21.2	-1.0
CPUP	Villa Florida	8.99	106	Pn	Pn	08 33 21.0	-1.2
SIV	San Ignacio	9.83	35	P	Pn	08 33 31.9	-1.3
	comp=N,3.8nm,0.3s,baz=212,slow=12,SNR=60						
SIV				S	Sn	08 35 21.3	-1.7
	comp=N,0.0nm,0.3s,baz=318,slow=20,SNR=3.2						
MT09	Talagante	10.21	199		Pn	08 33 35.3	-2.8
MT01	Popeta	10.37	200		Pn	08 33 38.6	-1.5
ITQB	Itaqui	10.74	123	*e*P	Pn	08 33 43.9	-1.0
ITQB	Itaqui	10.74	123		Pn	08 33 44.1	-0.8
BO01	Tunca	10.81	198		Pn	08 33 44.7	-1.1
AQDB	Aquidauana	11.06	73	*e*P	Pn	08 33 47.6	-1.5
AQDB	Aquidauana	11.06	73		Pn	08 33 49.9	+0.8
BO02	Sierra Bellavi	11.10	196		Pn	08 33 46.7	-2.9
PTLB	Pontes e Lacer	11.37	42	*e*P	Pn	08 33 52.3	-0.9
PTLB	Pontes e Lacer	11.37	42		Pn	08 33 52.2	-0.9
VILB	Vilhena	12.86	31	*e*P	Pn	08 34 12.3	+0.2
VILB	Vilhena	12.86	31	P	Pn	08 34 13.3	+1.2
PP1B	Ponte de Pedra	13.05	62	*e*P	Pn	08 34 13.7	-0.8
SALV	Santo Antonio	13.40	54	*e*P	Pn	08 34 18.4	-0.6
CPSB	Cacapava Do Su	13.54	120	*e*P	Pn	08 34 19.6	-1.0
PTGB	Pitanga	13.59	95	*e*P	Pn	08 34 21.9	+0.5
ITAB	Concordia	13.73	106	*e*P	Pn	08 34 22.6	-0.3
ITAB	Concordia	13.73	106	P	Pn	08 34 23.4	+0.5
PLTB	Pedras Altas	14.03	126	*e*P	Pn	08 34 25.8	-0.8
PLTB	Pedras Altas	14.03	126	Pn	Pn	08 34 24.5	-2.1
ETMB	Extrema	14.28	3	*e*P	Pn	08 34 28.1	-1.7
ETMB	Extrema	14.28	3		Pn	08 34 28.0	-1.9
TRQA	Tornquist	14.50	164	*e*P	Pn	08 34 31.7	-0.6
TRQA	Tornquist	14.50	164		Pn	08 34 30.2	-2.2
PCMB	Pacaembu	14.70	83	*e*P	Pn	08 34 34.3	-0.7
CNLB	Canela	15.29	113	*e*P	Pn	08 34 40.8	-1.4
NNA	Nana	15.30	321	P	P	08 34 43.8	+0.7
	comp=N,1.4nm,0.3s,baz=236,slow=9.5,SNR=4.1						
NNA				LR	LR	08 40 53.7	
	comp=N,70nm,19.5s,baz=44,slow=38						
SAML	Samuel	15.55	14	P	Pn	08 34 45.0	-0.4
PDRB	Porto dos Gac	15.82	40	*e*P	Pn	08 34 48.2	-0.5
ITRB	Iturama	16.04	77	*e*P	Pn	08 34 50.8	-0.5
TIJ01	Guaruva-PR	16.37	98	*e*P	P	08 34 53.8	-1.0
ARAG	Araguaiana, MT	16.54	62	*e*P	Pn	08 34 57.0	-0.4
TER01	Tubaro-SC	16.57	109	*e*P	P	08 34 55.9	-1.0
PLCA	Paso Flores	16.80	189	P	Pn	08 34 59.9	-0.4
	comp=N,0.3nm,0.3s,baz=347,slow=11,SNR=8.4						
PLCA	Paso Flores	16.80	189	*e*P	P	08 34 58.5	-0.9
PLCA	Paso Flores	16.80	189	P	P	08 34 57.0	-2.3
PLCA				IAmb	IAmb	08 35 07.6	
	comp=Z,11nm,0.7s						
CLDB	Colider	16.96	41	*e*P	P	08 34 59.9	-1.3
CZSB	Cruzeiro do Su	17.23	340	*e*P	P	08 35 04.5	+0.2
CZSB	Cruzeiro do Su	17.23	340	P	P	08 35 04.3	+0.1
BB19B	Bebedouro	17.31	83	*e*P	P	08 35 04.8	-0.2
LL04	Puerto Octay	17.32	194	P	P	08 35 04.7	-0.2
LL04				IAmb	IAmb	08 35 08.5	
	comp=Z,18nm,1.1s						
SPB	Sao Paulo	17.88	92	*e*P	P	08 35 11.2	0.0
RCLB	Rio Claro- Sao	17.95	88	*e*P	P	08 35 11.6	-0.4
PET01	Itanhaem-SP	17.97	94	*e*P	P	08 35 11.0	-1.2
LL05	Los Muermos	18.04	196	P	P	08 35 11.3	-1.5
VAO	Valinhos	18.38	90	*e*P	P	08 35 16.1	-0.7
IPMB	Ipameri, GO	18.55	74	*e*P	P	08 35 18.6	0.0
SNDB	Serra Nova Dou	19.18	54	*e*P	P	08 35 24.8	-0.6
PARB	Paraibuna	19.56	92	*e*P	P	08 35 28.7	-0.9
GO07	Milladeo Hill,	19.70	195	P	P	08 35 29.2	-1.5
BDFB	Brasilia	19.72	68	P	P	08 35 30.9	-0.5
	comp=Z,3.1nm,0.3s,baz=244,slow=10,SNR=38						
BDFB	Brasilia	19.72	68	P	P	08 35 30.3	-1.1
BDFB				IAmb	IAmb	08 35 32.4	
	comp=Z,28nm,0.9s						
TBTG	Tabatinga, AM	20.06	351	P	P	08 35 33.5	-1.3
NPGB	Novo Progresso	20.34	35	*e*P	P	08 35 35.6	-2.2
BSCB	Bom Sucesso	20.73	86	*e*P	P	08 35 40.8	-1.3
MAN01	Angra dos Reis	21.14	91	*e*P	P	08 35 44.7	-1.6
PEXB	Peixe	21.38	59	*e*P	P	08 35 47.8	-1.1
VAS01	Vassouras-RJ	21.70	90	*e*P	P	08 35 51.4	-0.8
MACA	Manacapuru-AM	21.74	17	*e*P	P	08 35 51.6	-0.9
MACA	Manacapuru-AM	21.74	17	P	P	08 35 51.8	-0.8
COYC	Coyhaique	21.76	190	P	P	08 35 51.1	-1.4
COYC				IAmb	IAmb	08 35 53.3	
	comp=Z,16nm,0.8s						
ITTB	Itaituba	22.46	31	*e*P	P	08 35 58.0	-1.5
DIAM	Diamantina, MG	22.48	79	*e*P	P	08 35 59.0	-0.8
DUB01	Friburgo-RJ	22.71	90	*e*P	P	08 36 00.7	-1.1
MC01	Montes Claros	22.80	75	*e*P	P	08 36 01.1	-1.6
JANB	Januaria	23.16	71	*e*P	P	08 36 04.9	-1.0
CAM01	Campos-RJ	23.41	89	*e*P	P	08 36 07.5	-0.5
SDBA	SAO DESIDERIO	23.95	65	*e*P	P	08 36 12.2	-0.9
SMTB	Santa Maria do	23.96	54	*e*P	P	08 36 13.2	0.0
PTGA	Pitinga	24.26	17	P	P	08 36 15.4	-0.4
	comp=Z,1.0nm,0.4s,baz=214,slow=13,SNR=5.8						
PRPB	Parauapebas	24.32	45	*e*P	P	08 36 15.5	-0.8
ALF01	Guarapari-ES	24.51	87	*e*P	P	08 36 16.6	-1.5
SJMB	Sao Joao De Ma	24.59	82	*e*P	P	08 36 17.6	-1.3
RIB01	Linhares ES	25.14	84	*e*P	P	08 36 23.0	-0.7
NAN01	Guarapari, ES	25.81	81	*e*P	P	08 36 28.5	-1.3
GUA01	Guaratinga, BA	26.53	79	*e*P	P	08 36 35.3	-1.0
BOAV	Boa Vista	27.13	14	P	P	08 36 41.0	-0.6

BOAV				IAmb	IAmb	08 37 04.1	
	comp=Z,20nm,1.7s						
CMC01	Camacan, BA	27.24	76	*e*P	P	08 36 41.3	-1.3
NBIT	Itapeh - BA	27.48	76	*e*P	P	08 36 43.7	-1.1
GDU01	Guandu, BA	27.86	73	*e*P	P	08 36 46.7	-1.5
DSPA	Despedida	29.77	182	P	P	08 37 04.7	+0.1
NBLA	Lagarto - SE	30.67	70	*e*P	P	08 37 11.2	-1.7
NBPS	Pedro II - PI	31.48	55	*e*P	P	08 37 18.9	-1.2
NBMA	Muriti-CE	31.76	63	*e*P	P	08 37 22.1	-0.6
NBPB	Pedra_Branca-C	32.18	59	*e*P	P	08 37 25.6	-0.6
ZARC	Zaragoza, Cauc	32.38	345	P	P	08 37 26.5	-1.4
NBAN	Anadia - AL	32.61	69	*e*P	P	08 37 28.7	-1.3
NBRF	Rio Formoso -	34.09	69	*e*P	P	08 37 40.8	-1.9
NBPV	Pedro Velho	35.15	65	*e*P	P	08 37 51.6	-0.2
CVTR	Volcan Turrial	37.72	332	P	P	08 38 14.4	+0.4
RPN	Rapa Nui	38.18	256	P	P	08 38 19.6	+2.3
	comp=Z,42nm,0.7s,baz=78,slow=9.3,SNR=1.5						
JTS	Las Juntas de	38.48	331	P	P	08 38 18.9	-1.1
JTS				IAmb	IAmb	08 39 20.4	
	comp=Z,39nm,1.9s						
PDPR	Patillas Dam,	41.93	1	P	P	08 38 48.5	+0.4
PDPR				IAmb	IAmb	08 39 00.6	
	comp=Z,19nm,1.1s						
VNA3	Neumayer Olymp	56.99	161	P	P	08 40 42.2	+0.8
VNA1	Neumayer--Stat	57.19	160	P	P	08 40 44.1	+1.4
VNA2	Neumayer--Watz	57.56	160	P	P	08 40 46.1	+0.7
	baz=282,slow=7.2						
SNAA	Sanae	59.19	161	P	P	08 40 57.3	+0.6
SNAA	Sanae	59.19	161	P	P	08 40 57.4	+0.7
GOGA	Godfrey	59.37	344	P	P	08 40 58.8	+0.5
GOGA				IAmb	IAmb	08 41 27.5	
	comp=Z,9.4nm,1.3s						
JSC	Jenkinsville	59.68	346	P	P	08 41 01.0	+0.7
JSC				IAmb	IAmb	08 41 01.6	
	comp=Z,4.3nm,0.6s						
X51A	Calhoun	60.82	343	P	P	08 41 08.9	+0.8
X51A				IAmb	IAmb	08 41 09.7	
	comp=Z,12nm,0.9s						
FPAL	Fort Paine	61.00	342	P	P	08 41 10.4	+1.0
FPAL				IAmb	IAmb	08 41 11.5	
	comp=Z,26nm,1.9s						
V55A	Taylorsville	61.19	347	P	P	08 41 11.8	+1.2
V55A				IAmb	IAmb	08 43 16.6	
	comp=Z,29nm,2.0s						
X48A	Hartselle	61.33	341	P	P	08 41 12.0	+0.5
X48A				IAmb	IAmb	08 41 12.3	
	comp=Z,4.2nm,0.7s						
W50A	Signal Mountai	61.54	343	P	P	08 41 13.7	+0.7
TKL	Tuckaleechee C	61.58	344	P	P	08 41 13.3	+0.1
V52A	Sevierville	61.71	345	P	P	08 41 14.3	+0.2
V52A				IAmb	IAmb	08 43 19.5	
	comp=Z,23nm,1.6s						
SWET	Sewanee	61.72	342	P	P	08 41 14.5	+0.3
SWET				IAmb	IAmb	08 41 15.1	
	comp=Z,5.4nm,0.8s						
U49A	Red Boiling Sp	62.90	343	P	P	08 41 22.2	+0.3
U49A				IAmb	IAmb	08 42 53.5	
	comp=Z,6.0nm,1.2s						
WVT	Waverly	63.12	341	P	P	08 41 23.6	+0.3
WVT				IAmb	IAmb	08 41 23.9	
	comp=Z,7.9nm,0.7s						
T47A	Sharon Grove	63.71	342	IAmb	IAmb	08 41 28.3	
	comp=Z,5.7nm,0.8s						
FCAR	Ozark Folk Cen	64.29	337	P	P	08 41 31.3	+0.2
FCAR				IAmb	IAmb	08 42 19.9	
	comp=Z,8.2nm,1.1s						
PBMO	Poplar Bluff	64.52	339	P	P	08 41 32.7	+0.1
PBMO				IAmb	IAmb	08 41 34.1	
	comp=Z,7.7nm,0.9s						
WCI	Wyandotte Cave	64.65	343	P	P	08 41 33.0	-0.4
WCI				IAmb	IAmb	08 41 33.6	
	comp=Z,5.9nm,0.5s						
CCM	Cathedral Cave	65.95	339	P	P	08 41 42.3	+0.6
CCM				IAmb	IAmb	08 41 42.7	
	comp=Z,6.3nm,0.7s						
QSPA	South Pole Qui	66.05	180	P	P	08 41 43.6	+1.4
QSPA				IAmb	IAmb	08 41 44.2	
	comp=Z,8.1nm,0.6s						
S39A	Bolivar	66.32	337	P	P	08 41 44.6	+0.5
S39A				IAmb	IAmb	08 41 45.6	
	comp=Z,8.3nm,0.9s						
MSTX	Muleshoe	67.08	328	P	P	08 41 49.4	+0.3
MSTX				IAmb	IAmb	08 41 51.4	
	comp=Z,6.5nm,0.8s						
P40A	Paris	67.55	339	P	P	08 41 51.0	-0.8
P40A				IAmb	IAmb	08 41 52.9	
	comp=Z,5.5nm,0.8s						
DBIC	Dimbokro	67.83	71	P	P	08 41 54.2	+0.1
	comp=Z,1.7nm,0.7s,baz=244,slow=7.0,SNR=1.8						
P38A	Dawn	68.13	338	IAmb	IAmb	08 41 56.5	
	comp=Z,8.0nm,0.8s						
319A	Douglas	68.47	322	IAmb	IAmb	08 42 00.9	
	comp=Z,5.4nm,0.5s						
ANMO	Albuquerque	69.69	326	P	P	08 42 06.7	+1.3
JFWS	Jewell Farm	70.10	342	IAmb	IAmb	08 42 08.5	
	comp=Z,9.7nm,0.6s						
I42A	Draeger Farm,	70.64	343	P	P	08 42 11.2	+0.4
ECSD	EROS Data Cent	72.83	338	P	P	08 42 24.6	+0.8
ISCO	Idaho Springs	73.13	330	P	P	08 42 28.0	+1.9
F36A	Milaca	73.75	341	P	P	08 42 29.6	+0.6
U15A	North Rim	73.89	323	IAmb	IAmb	08 44 16.8	
	comp=Z,22nm,2.0s						
EYMN	Ely	75.08	343	P	P	08 42 37.1	+0.3
EYMN				IAmb	IAmb	08 43 47.1	
	comp=Z,23nm,1.3s						
B35A	Bob, Littlefor	76.07	342	P	P	08 42 43.1	+0.8
B35A				IAmb	IAmb	08 42 43.6	
	comp=Z,7.1nm,0.8s						
TORD	Torodi Ar. Bea	76.60	69	P	P	08 42 45.8	-0.3
	comp=Z,1.3nm,0.5s,baz=262,slow=5.7,SNR=13						
TORD	Torodi Ar. Bea	76.60	69	P	P	08 42 46.0	-0.1
PDAR	Pinedale Array	77.30	329	P	P	08 42 51.0	+1.4
	comp=Z,0.6nm,0.5s,baz=130,slow=8.4,SNR=8.7						
PDAR	Pinedale Array	77.30	329	P	P	08 42 51.2	+1.5
ULM	Lac du Bonnet	78.39	342	P	P	08 42 55.4	+0.3
	comp=Z,2.8nm,0.5s,baz=153,slow=4.8,SNR=3.6						
SCHQ	Schefferville	78.67	0	P	P	08 42 56.7	+0.1
	comp=Z,3.6nm,1.0s,baz=133,slow=7.8,SNR=1.5						
NVAR	Mina Array Bea	78.68	321	P	P	08 42 58.9	+1.5
	comp=Z,0.8nm,0.7s,baz=139,slow=5.8,SNR=6.8						
HLID	Hailey	80.23	327	P	P	08 43 08.3	+2.7
MCMT	McKenzie Canyo	80.41	329	P	P	08 43 09.3	+2.8
BOSA	Boshof	80.64	117	P	P	08 43 08.5	+0.3
	comp=Z,2.6nm,0.9s,baz=287,slow=3.0,SNR=5.6						
BOSA	Boshof	80.64	117	P	P	08 43 08.3	+0.1
MAW	Mawson	81.28	163	P	P	08 43 11.6	+1.1
	comp=Z,6.9nm,0.8s,baz=203,slow=6.8,SNR=8.5						
MAW	Mawson	81.28	163	P	P	08 43 12.2	+1.6
PLID	Pearl Lake	82.12	327	P	P	08 43 17.2	+1.7
PLID				IAmb	IAmb	08 43 18.0	
	comp=Z,5.5nm,0.8s						
LBTB	Lobatse	82.30	114	P	P	08 43 17.4	+0.5
WDC	Whiskeytown Da	82.55	321	P	P	08 43 18.2	+0.6
PINE	Pine Mountain	83.77	324	P	P	08 43 26.4	+2.4
C09A	Chrisman Ranch	85.16	328	P	P	08 43 32.5	+1.9
C09A				IAmb	IAmb	08 43 32.8	
	comp=Z,7.1nm,0.6s						
LTY	Liberty	85.96	327	P	P	08 43 36.2	+1.5
YKA	Yellowknife Ar	94.28	340	P	P	08 44 14.0	+0.9
	comp=Z,1.4nm,0.5s,baz=133,slow=4.5,SNR=17						
ASAR	Alice Springs	128.32	205	PKP	PKPdf	08 50 01.0	+0.3
	comp=Z,1.6nm,0.7s,baz=139,slow=1.9,SNR=30						
ASAR	Alice Springs	128.32	205		PKPdf	08 50 01.2	+0.5
WRA	Warramunga Arr	131.50	207	PKP	PKPdf	08 50 07.3	+0.6
	comp=Z,1.1nm,0.5s,baz=156,slow=1.8,SNR=43						
WRA				SKPbc	SKPbc	08 53 14.4	0.0
	comp=Z,0.6nm,0.6s,baz=151,slow=3.6,SNR=10						
BVAR	Borovoye Array	136.91	37	PKP	PKiKP	08 50 17.4	-0.2
	comp=Z,0.7nm,0.6s,baz=249,slow=6.0,SNR=3.9						
KURBB	Kurchatov Arra	142.49	36	PKhKP	PKPpre	08 50 23.0	
	comp=Z,0.7nm,0.8s,baz=311,slow=2.9,SNR=2.5						
ZALV	Zalesovo Beam	143.52	28	PKP	PKPbc	08 50 26.5	+1.0
	comp=Z,3.0nm,0.5s,baz=299,slow=3.6,SNR=16						
MKAR	Makanchi Array	146.63	40	PKPbc	PKPdf	08 50 34.5	+1.3
	comp=Z,4.1nm,0.5s,baz=312,slow=2.2,SNR=27						
MKAR	Makanchi Array	146.63	40		PKPdf	08 50 34.6	+1.3
MKAR				PKPbc	PKPab	08 50 36.4	-0.3
KLR	Kul'dur	150.98	334	PKPbc	PKPbc	08 50 46.5	+0.4
	comp=Z,4.1nm,0.6s,baz=70,slow=3.3,SNR=15						
SONM	Songino Array	155.79	11	PKPab	PKPab	08 51 15.4	+0.7
	comp=Z,0.6nm,0.7s,baz=339,slow=6.9,SNR=4.0						

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*IDC **13** 08:49:45.0±1.7,23°.40S×179°.83W,h517km±18km,mb3.6/8, mb1 3.8/10,mb1mx3.4/30,mbtmp4.5/10,Error ellipse: s-maj=22.9km s-min=18.7km az=173.0*

*NEIC **13** 08:49:45.6±1.6,23°.5S±0°.1×179°.7W±0°.1,h529km±10km, mb4.3/26,Error ellipse: s-maj=19.7km s-min=17.0km az=139.0*

*NOU **13** 08:49:45.0,23°.55S×179°.77W,h532km,mb4.4/10,South of Fiji Islands*

ISC 13 08:49:45.7±0.7**,23°.47S**±0°.10×**179°.83W**±0°.10**,h532**km**, n53,**σ1°**08**/56**,mb4.3**/20**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.04	340	P	P	08 51 22.9	-1.1
	3.4nm,0.3s,baz=286,slow=21,SNR=16						
MSVF	Nonsavu	6.04	340	P	P	08 51 23.7	-0.4
MSVF	Nonsavu	6.04	340	P	P	08 51 23.7	-0.4
TAVE	Taveuni	6.72	359	P	P	08 51 30.9	+0.4
DGTI	Dogotuki	7.14	357	P	P	08 51 34.5	-0.1
MARNC	Mare, Loyalty	11.40	278	P	P	08 52 18.4	+0.4
MARNC	Mare, Loyalty	11.40	278	P	P	08 52 18.4	+0.4
PINNC	Pines Island,	11.75	272	P	P	08 52 23.4	+1.8
LIFNC	LIFOU	12.28	280	P	P	08 52 27.1	-0.1
LIFNC	LIFOU	12.28	280	P	P	08 52 27.1	-0.1
DZM	Mont Dzumac	12.74	274	P	P	08 52 33.2	+1.1
	0.3nm,0.3s,baz=133,slow=12,SNR=6.1						
DZM				S	S	08 54 36.9	-12
	0.2nm,0.3s,baz=137,slow=22,SNR=6.8						
DZM	Mont Dzumac	12.74	274	P	P	08 52 33.9	+1.7
URZ	Urewera	14.98	189	P	P	08 52 55.1	0.0
URZ	Urewera	14.98	189	P	P	08 52 53.7	-1.4
BKZ	Black Stump Fm	15.96	190	P	P	08 53 02.8	-2.5
BKZ				IAmb	IAmb	08 53 04.1	
	comp=Z,17nm,1.1s						
BKZ	Black Stump Fm	15.96	190	P	P	08 53 02.8	-2.5
BFZ	Birch Farm	17.48	190	P	P	08 53 18.3	-1.3
ARMA	Armidale	26.33	249	P	P	08 54 41.2	+1.9
EIDS	Eidsvold	26.54	260	P	P	08 54 41.5	+0.4
EIDS				IAmb	IAmb	08 54 42.4	
	comp=Z,8.9nm,0.5s						
CAN	Canberra	29.50	239	P	P	08 55 08.0	+1.1
CAN				IAmb	IAmb	08 55 25.6	
	comp=Z,12nm,1.2s						
CTA	Charters Tower	31.64	269	P	P	08 55 26.1	+0.7
	comp=Z,24nm,0.5s,baz=93,slow=11,SNR=35						
CTAO	Charters Tower	31.64	269	P	P	08 55 26.1	+0.7
TOO	Toolangi	32.82	237	P	P	08 55 36.2	+0.9
TOO				IAmb	IAmb	08 55 48.2	
	comp=Z,13nm,1.5s						
PMG	Port Moresby	34.51	288	P	P	08 55 49.7	-0.1
	comp=Z,14nm,0.7s,baz=111,slow=5.1,SNR=5.9						
STKA	Stephens Creek	35.03	248	P	P	08 55 54.5	+0.6
	comp=Z,3.8nm,0.4s,baz=100,slow=11,SNR=21						
STKA	Stephens Creek	35.03	248	P	P	08 55 54.6	+0.6
COEN	Coen	36.20	278	P	P	08 56 04.4	+0.5
BBOO	Buckleboo	39.76	246	P	P	08 56 32.3	-0.3
BBOO				IAmb	IAmb	08 56 32.5	
	comp=Z,4.3nm,0.6s						
AS31	Alice Springs	42.26	260	P	P	08 56 52.6	0.0
ASAR	Alice Springs	42.26	260	P	P	08 56 52.6	-0.1
	comp=Z,6.8nm,0.6s,baz=93,slow=7.5,SNR=136						
ASAR				ScP	ScP	09 01 37.0	+2.6
	comp=Z,0.7nm,0.9s,baz=103,slow=5.4,SNR=4.9						
ASAR				S	S	09 02 33.3	-1.7
	comp=Z,0.4nm,0.8s,baz=99,slow=14,SNR=5.8						
WR0	Warramunga Arr	42.41	266	P	P	08 56 53.1	-0.7
WR0				IAmb	IAmb	08 56 54.2	
	comp=Z,4.9nm,0.7s						
WB2	Warramunga Arr	42.59	266	P	P	08 56 54.6	-0.6
WB2				IAmb	IAmb	08 56 55.3	
	comp=Z,11nm,0.8s						
WB0	Warramunga Arr	42.59	266	P	P	08 56 54.5	-0.7
WRAB	Tennant Creek	42.59	266	P	P	08 56 54.5	-0.8
WRAB				IAmb	IAmb	08 56 55.2	
	comp=Z,9.4nm,0.8s						
WRA	Warramunga Arr	42.60	266	P	P	08 56 54.5	-0.8
	comp=Z,8.0nm,0.4s,baz=102,slow=8.3,SNR=396						
WRA				ScP	ScP	09 01 38.9	+3.2
	comp=Z,0.7nm,1.0s,baz=93,slow=3.8,SNR=5.4						
WRA	Warramunga Arr	42.60	266	P	P	08 56 54.9	-0.4
FORT	Forrest	46.61	249	P	P	08 57 25.5	-0.6
MTN	Manton Dam	47.58	274	P	P	08 57 32.7	-0.9
MTN				IAmb	IAmb	08 57 33.2	
	comp=Z,23nm,1.5s						
KHLU	Kahalu`u	48.75	31	P	P	08 57 42.0	-0.2
KNRA	Kununurra	48.85	269	P	P	08 57 43.2	+0.2
KNRA				IAmb	IAmb	08 57 43.6	
	comp=Z,6.9nm,0.7s						
FAKI	Fak Fak	50.61	286	P	P	08 57 55.5	-0.5
FAKI				IAmb	IAmb	08 57 59.4	
	comp=Z,10nm,0.9s						
PSA00	Pilbara Seismi	55.40	259	P	P	08 58 29.6	-0.5
PSA00				IAmb	IAmb	08 58 30.6	
	comp=Z,19nm,1.3s						
MORW	Morawa	57.17	250	P	P	08 58 42.0	-0.1
MORW				IAmb	IAmb	08 58 58.8	
	comp=Z,23nm,1.4s						
GIRL	Giralia	60.17	257	P	P	08 59 01.9	-0.5
QSPA	South Pole Qui	66.62	180	P	P	08 59 44.3	+1.1
	comp=Z,3.7nm,0.8s,baz=359,slow=0.5,SNR=25						
QSPA	South Pole Qui	66.62	180	P	P	08 59 44.5	+1.3
QSPA				IAmb	IAmb	08 59 45.5	
	comp=Z,11nm,1.5s						
NVAR	Mina Array Bea	84.33	44	P	P	09 01 22.4	+0.4
	comp=Z,0.2nm,0.4s,baz=235,slow=8.7,SNR=3.0						
NVAR	Mina Array Bea	84.33	44	P	P	09 01 22.2	+0.2
SNAA	Sanae	85.10	179	P	P	09 01 24.6	-0.5
L19K	White Mountain	87.66	11	P	P	09 01 37.2	+0.1
PDAR	Pinedale Array	92.27	44	P	P	09 01 59.0	-0.2
	comp=Z,0.4nm,0.6s,baz=201,slow=4.8,SNR=3.5						
PDAR	Pinedale Array	92.27	44	P	P	09 01 58.8	-0.5
ARCES	ARCESS Array B	131.49	348	PKP	PKPdf	09 07 56.3	-0.7
	comp=Z,4.6nm,0.9s,baz=70,slow=1.1,SNR=1.8						

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*NEIC **13** 08:59:36.9±1.6,20°.9S±0°.1×178°.9W±0°.2,h578km±9km, mb4.2/29,Error ellipse: s-maj=23.0km s-min=18.7km az=138.0*

*IDC **13** 08:59:38.7±1.4,21°.08S×178°.88W,h610km±14km,mb3.3/8, mb1 3.6/11,mb1mx3.3/23,mbtmp4.4/11,Error ellipse: s-maj=25.9km s-min=14.6km az=142.0*

ISC 13 08:59:39.9±0.7**,20°.9S**±0°.1×**179°.0W**±0°.1**,h619**km**,n66, **σ1°**27**/66**,mb4.1**/23**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.23	318	P	P	09 01 08.7	+0.1
	16nm,0.3s,baz=148,slow=2.4,SNR=38						
MSVF				S	S	09 02 21.3	+0.7
	baz=297,slow=24,SNR=0.9						
MARNC	Mare, Loyalty	12.13	265	P	P	09 02 19.2	-0.7
DZM	Mont Dzumac	13.61	263	P	P	09 02 34.1	-0.5
	0.2nm,0.3s,baz=127,slow=9.6,SNR=8.5						
OUZ	Omahuta	15.67	203	P	P	09 02 55.5	+2.4
GRZ	Great Barrier	16.03	196	P	P	09 02 58.2	+1.8
KUZ	Kuaotunu	16.43	195	P	P	09 03 01.4	+1.4
WIAZ	Waiheke Island	16.62	197	P	P	09 02 57.5	-4.4
MBAZ	Motutapu North	16.67	197	P	P	09 03 04.7	+2.4
ETAZ	East Tamaki Re	16.83	197	P	P	09 03 05.7	+2.0
WTAZ	Waiatarua	16.91	198	P	P	09 03 06.6	+2.0
WMGZ	Waiomatatini S	16.99	187	P	P	09 03 05.1	-0.1
AWAZ	Awhitu Peninsu	17.01	198	P	P	09 03 07.2	+1.7
RUGZ	Raukumara Rang	17.23	189	P	P	09 03 06.1	-1.5
TWGZ	Tauwhareparae	17.39	188	P	P	09 03 09.1	+0.2
URZ	Urewera	17.60	190	P	P	09 03 08.2	-2.6
	2.7nm,0.3s,baz=122,slow=23,SNR=23						
URZ	Urewera	17.60	190	P	P	09 03 08.1	-2.6
URZ	Urewera	17.60	190	P	P	09 03 09.0	-1.8
MUGZ	Murupara	17.87	191	P	P	09 03 11.9	-1.4
BKZ	Black Stump Fm	18.59	191	P	P	09 03 17.9	-2.0
BFZ	Birch Farm	20.11	191	P	P	09 03 32.9	-0.6
SNZO	South Karori	21.02	193	P	P	09 03 40.2	-1.4
EIDS	Eidsvold	27.85	255	P	P	09 04 42.7	+0.6
EIDS				IAmb	IAmb	09 04 46.8	
	comp=Z,13nm,1.2s						
ARMA	Armidale	28.05	244	P	P	09 04 45.3	+1.4
CTA	Charters Tower	32.53	265	P	P	09 05 22.6	+0.4
	comp=Z,4.8nm,0.4s,baz=90,slow=11,SNR=9.3						
CTAO	Charters Tower	32.53	265	P	P	09 05 22.8	+0.5
PMG	Port Moresby	34.55	284	P	P	09 05 38.9	-0.2
	comp=Z,6.9nm,0.6s,baz=41,slow=5.1,SNR=4.6						
TOO	Toolangi	34.91	234	P	P	09 05 42.6	+0.7
TOO				IAmb	IAmb	09 05 42.7	
	comp=Z,6.0nm,1.0s						
COEN	Coen	36.70	275	P	P	09 05 57.3	+0.5
COEN				IAmb	IAmb	09 05 57.9	
	comp=Z,4.2nm,0.9s						
STKA	Stephens Creek	36.78	244	P	P	09 05 57.5	+0.3
	comp=Z,2.1nm,0.5s,baz=78,slow=10,SNR=9.7						
STKA	Stephens Creek	36.78	244	P	P	09 05 57.7	+0.5
BBOO	Buckleboo	41.53	244	P	P	09 06 35.2	-0.1
BBOO				IAmb	IAmb	09 06 35.8	
	comp=Z,6.3nm,0.7s						
WR0	Warramunga Arr	43.44	263	P	P	09 06 49.9	-0.4
WR0				IAmb	IAmb	09 06 51.1	
	comp=Z,3.2nm,0.8s						
AS31	Alice Springs	43.53	257	P	P	09 06 50.8	-0.1
ASAR	Alice Springs	43.53	257	P	P	09 06 50.8	-0.2
	comp=Z,6.2nm,0.6s,baz=96,slow=7.6,SNR=90						
ASAR				ScP	ScP	09 11 20.6	+2.6
	comp=Z,0.8nm,0.6s,baz=100,slow=4.4,SNR=14						
ASAR				S	S	09 12 35.4	-1.3
	comp=Z,0.3nm,0.8s,baz=90,slow=15,SNR=4.8						
ASAR	Alice Springs	43.53	257	P	P	09 06 50.1	-0.8
WB0	Warramunga Arr	43.61	263	P	P	09 06 51.2	-0.4
WB0				IAmb	IAmb	09 06 51.6	
	comp=Z,8.2nm,0.5s						
WB2	Warramunga Arr	43.62	263	P	P	09 06 51.3	-0.4
WB2				IAmb	IAmb	09 06 51.8	
	comp=Z,6.1nm,1.0s						
WRA	Warramunga Arr	43.63	263	P	P	09 06 51.2	-0.6
	comp=Z,3.5nm,0.5s,baz=97,slow=7.8,SNR=53						
WRA	Warramunga Arr	43.63	263	P	P	09 06 51.1	-0.6
MTN	Manton Dam	48.25	271	P	P	09 07 26.3	-0.3
MTN				IAmb	IAmb	09 07 27.1	
	comp=Z,8.5nm,0.7s						
FORT	Forrest	48.28	247	P	P	09 07 26.4	-0.3
FORT				IAmb	IAmb	09 07 52.6	
	comp=Z,16nm,1.1s						
KNRA	Kununurra	49.72	267	P	P	09 07 37.2	-0.2
KNRA				IAmb	IAmb	09 07 38.7	
	comp=Z,18nm,1.3s						
PSA00	Pilbara Seismi	56.68	257	P	P	09 08 25.9	-0.6
PSA00				IAmb	IAmb	09 08 53.1	
	comp=Z,16nm,1.2s						
QSPA	South Pole Qui	69.14	180	P	P	09 09 46.6	+1.1
LCH	Last Change Ra	81.72	45	P	P	09 10 55.9	+0.5
NVAR	Mina Array Bea	81.97	44	P	P	09 10 57.4	+0.7
	comp=Z,1.1nm,0.6s,baz=225,slow=8.2,SNR=10						
NVAR	Mina Array Bea	81.97	44	P	P	09 10 57.5	+0.8
NV11	Mina Array Sit	82.06	44	P	P	09 10 57.4	+0.2
NV11				IAmb	IAmb	09 10 59.0	
	comp=Z,7.6nm,1.5s						
PINE	Pine Mountain	83.48	38	P	P	09 11 05.6	+1.4
U15A	North Rim	84.93	48	P	P	09 11 12.7	+1.2
U15A				IAmb	IAmb	09 11 13.1	
	comp=Z,2.8nm,0.6s						
G08A	Pilot Rock	85.51	38	P	P	09 11 14.8	+0.9
G08A				IAmb	IAmb	09 11 15.2	
	comp=Z,8.1nm,1.4s						
PPLA	Purkeypile	86.18	12		pP	09 13 20.4	-8.1
SCM	Sheep Creek Mo	86.27	14	P	P	09 11 16.8	-0.2
B08A	Colville Reser	87.11	35	P	P	09 11 21.2	0.0
BPAW	Bear Paw Mtn.	87.50	12		pP	09 13 27.8	-7.1
SNAA	Sanae	87.61	179	P	P	09 11 23.2	-0.1
SNAA				IAmb	IAmb	09 11 29.5	
	comp=Z,5.6nm,1.5s						
I21K	Tanana	88.30	11	P	P	09 11 25.9	-0.4
CCB	Clear Creek Bu	88.63	13	P	P	09 11 26.7	-1.1
IMAR	Indian Mountai	88.73	10	P	P	09 11 28.1	-0.1
ILAR	Eielson Array	88.93	13	P	P	09 11 28.2	-1.0
	comp=Z,0.3nm,0.5s,baz=211,slow=5.6,SNR=6.4						
PDAR	Pinedale Array	89.90	44	P	P	09 11 34.5	-0.1
	comp=Z,0.7nm,0.7s,baz=199,slow=4.4,SNR=7.5						
PDAR	Pinedale Array	89.90	44	P	P	09 11 34.8	+0.2
OK030	Cody Creek RV	95.99	54		pP	09 14 06.5	-8.6
ARCES	ARCESS Array B	129.17	349	PKP	PKPdf	09 17 37.3	-0.9
	comp=Z,1.2nm,0.7s,baz=80,slow=0.8,SNR=5.3						
GERES	GERESS Array B	150.35	343	PKPbc	PKPbc	09 18 21.9	-0.6
	comp=Z,0.4nm,0.6s,baz=97,slow=2.5,SNR=2.7						
GERES	GERESS Array B	150.35	343		PKPbc	09 18 22.1	-0.5

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*JMA **13** 09:06:36.5±0.3,24°.84N×122°.51E,h28km,M2.0*

*TAP **13** 09:06:38.0,24°.88N×122°.25E,h26km,ML2.9,B*

ISC 13 09:06:36.1±1.0**,24°.91N**±0°.03×**122°.37E**±0°.02**,h27**km±10km**, n53,**σ1°**31**/95**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.36	286	P	Pb	09 06 44.3	+0.1
	baz=298						
TWB1				*e*S	Sn	09 06 50.8	-1.1
	baz=298						
EGS		0.40	261	*e*P	Pb	09 06 45.4	+0.6
	baz=261						
EGS				*e*S	Sb	09 06 50.8	0.0
	baz=261						
NTC	Toucheng	0.49	264	*e*P	Pb	09 06 46.9	+0.6
	baz=265						
NTC				*e*S	Sn	09 06 53.8	-1.3
	baz=265						
TIPB	Shuangxi	0.50	278	P	Pb	09 06 47.1	+0.7
	baz=282						
TIPB				S	Sn	09 06 54.1	-1.2
	baz=282						
NWF	Wu-fen Shan	0.56	287	P	Pb	09 06 48.3	+0.8
	baz=293						
NWF				S	Sn	09 06 55.7	-1.2
	baz=293						
TWC	Suao	0.56	238	P	Pb	09 06 47.9	+0.5
	baz=232						
TWC				*e*S	Sn	09 06 55.3	-1.4
	baz=232						
ILA	Ilan	0.58	256	*e*P	Pb	09 06 48.4	+0.6
	baz=254						
ILA				*e*S	Sn	09 06 56.0	-1.4
	baz=254						
NDS	Dongshan	0.66	246	*e*P	Pb	09 06 49.6	+0.6
	baz=242						
NDS				*e*S	Sn	09 06 58.2	-0.9
	baz=242						
TWE	Neicheng	0.67	254	P	Pn	09 06 50.1	+0.3
	baz=252						
TWE				S	Sb	09 06 57.5	-0.6
	baz=252						
JYNG	Yonagunijimaku	0.69	131	P	Pb	09 06 47.7	-1.9
JYNG				*e*S	Sb	09 06 54.1	-4.7
EWUT	Wuta	0.71	230	*e*P	Pb	09 06 50.5	+0.6
	baz=224						
EWUT				*e*S	Sn	09 06 59.8	-0.6
	baz=224						
TWA	Mucha	0.72	276	*e*P	Pb	09 06 50.5	+0.4
	baz=278						
TWA				*e*S	Sn	09 06 59.3	-1.4
	baz=278						
YOJ	Yonaguni jima	0.73	127	*e*P	Pb	09 06 53.5	+3.3
	baz=121						
YOJ				*e*S	Sb	09 07 03.8	+3.9
	baz=121						
YOJ	Yonaguni jima	0.73	127	P	Pb	09 06 48.0	-2.3
YOJ				*e*S	Sb	09 06 55.4	-4.5
ENA	Nanau	0.75	230	*e*P	Pb	09 06 51.0	+0.5
	baz=224						
ENA				*e*S	Sn	09 07 00.6	-0.7
	baz=224						
YM01	YM01	0.77	288	P	Pn	09 06 51.6	+0.4
	baz=292						
YM01				*e*S	Sn	09 07 01.5	-0.4
	baz=292						
PCYT	Pengchaiyu	0.77	339	*e*P	Pb	09 06 52.8	+1.9
	baz=348						
PCYT				*e*S	Sn	09 07 03.5	+1.6
	baz=348						
NHDH	Xindian Distri	0.77	274	*e*P	Pn	09 06 51.5	+0.3
	baz=276						
NHDH				*e*S	Sn	09 07 01.3	-0.6
	baz=276						
ENTT	Nioudou	0.78	250	*e*P	Pn	09 06 52.0	+0.6
	baz=248						
TWY	Chenhua	0.79	298	*e*P	Pb	09 06 51.8	+0.6
	baz=303						
TWY				*e*S	Sn	09 07 02.2	-0.2
	baz=303						
NWLT	Wulai	0.80	261	*e*P	Pn	09 06 52.0	+0.3
	baz=261						
NWLT				*e*S	Sn	09 07 01.7	-1.0
	baz=261						
TWS1	Kuangyinshan	0.89	283	*e*P	Pb	09 06 53.2	+0.3
	baz=286						

TWS1	baz=286			eS	Sn	09 07 04.0	-0.8
YHNB	Yeheng baz=254	0.94	256	P	Pn	09 06 54.0	+0.4
YHNB	baz=254			eS	Sn	09 07 05.1	-1.0
NSK	Sanguang baz=255	0.95	256	eP	Pn	09 06 54.9	+1.2
ETL	Fush Village baz=218	1.01	223	eP	Pb	09 06 55.4	+0.4
ETL	baz=218			eS	Sn	09 07 07.9	0.0
NACB	Ninganchiao baz=220	1.02	224	P	Pb	09 06 55.6	+0.6
NACB	baz=220			eS	Sn	09 07 08.5	+0.5
NNS	Nan Shan baz=240	1.02	243	eP	Pn	09 06 55.2	+0.4
NNS	baz=240			eS	Sn	09 07 07.7	-0.6
ETLH	Xiulin Townshi baz=225	1.07	229	eP	Pb	09 06 56.5	+0.5
ETLH	baz=225			eS	Sn	09 07 09.3	-0.1
TWD	Chiawan baz=216	1.08	221	eP	Pn	09 06 56.4	+0.8
TWD	baz=216			eS	Sn	09 07 09.9	+0.2
FUSS	Fushou baz=235	1.22	238	eP	Pn	09 06 58.3	+0.6
FUSS	baz=235			eS	Sb	09 07 13.1	-1.0
LIOB	Emei baz=258	1.26	258	eP	Pb	09 06 58.9	-0.4
WHF	Hehuan Shan baz=230	1.26	233	eP	Pb	09 07 00.5	+0.9
WHF	baz=230			eS	Sb	09 07 14.4	-1.1
TWT	Tachien baz=237	1.27	239	eP	Pb	09 06 59.2	-0.3
TWT	baz=237			eS	Sb	09 07 14.3	-1.1
NSTT	Nanjuang baz=257	1.28	258	eP	Pn	09 06 58.7	+0.5
NSTT	baz=257			eS	Sb	09 07 13.9	-1.6
TDCB	Techi baz=237	1.28	240	eP	Pn	09 06 59.1	+0.7
TDCB	baz=237			eS	Sb	09 07 14.5	-1.3
IRIF	Iriomote-Funau	1.36	114	P	Pn	09 06 56.9	-2.4
CHGB	Renai baz=229	1.38	233	eP	Pn	09 07 00.6	+0.8
CHGB	baz=229			eS	Sn	09 07 17.1	-0.2
ESL	Shilin baz=214	1.39	218	eP	Pn	09 07 01.0	+1.3
ESL	baz=214			eS	Sn	09 07 17.3	+0.2
WHP	Taichung City baz=242	1.44	245	eP	Pn	09 07 01.3	+0.7
WHP	baz=242			eS	Sb	09 07 18.6	-1.7
HATJ	Hateruma jima	1.56	123	P	Pn	09 07 01.3	-0.7
VWDT	VWDT baz=221	1.61	225	eP	Pn	09 07 03.8	+1.1
VWDT	baz=221			eS	Sb	09 07 23.2	-1.7
HGSD	Ruisui baz=208	1.65	212	eP	Pn	09 07 05.3	+1.9
HGSD	baz=208			eS	Sn	09 07 24.3	+0.6
SMLT	Sun Moon Lake baz=230	1.69	233	eP	Pn	09 07 04.7	+0.8
SMLT	baz=230			eS	Sn	09 07 24.6	-0.1
JIJ	Ishigaki jima	1.70	108	P	Pn	09 07 03.0	-1.0
JIJ				eS	Sn	09 07 21.4	-3.5
TYC	Yuchr baz=232	1.70	234	eP	Pn	09 07 05.2	+1.1
TYC	baz=232			eS	Sn	09 07 25.3	+0.3
SSLB	Suanglung baz=227	1.71	230	eP	Pn	09 07 05.6	+1.4
SSLB	baz=227			eS	Sn	09 07 25.3	+0.1
YULB	Yu-li baz=210	1.80	213	eP	Pn	09 07 06.8	+1.4
YULB	baz=210			eS	Sn	09 07 28.4	+1.0
CHN5	Tsauling baz=228	2.02	230	eP	Pn	09 07 09.5	+0.9
ELDTW	Lidau baz=213	2.11	216	eP	Pn	09 07 11.2	+1.4
JTJ	Tarama	2.13	97	P	Pn	09 07 10.7	+0.7
JTJ				eS	Sn	09 07 34.6	-1.0
CHN4	Tsaushan baz=224	2.25	227	eP	Pn	09 07 13.3	+1.8
STYH	Taoyuan baz=218	2.26	220	eP	Pn	09 07 13.3	+1.6
STYH	baz=218			eS	Sn	09 07 39.7	+0.9
MATB	Ma-tsu baz=300	2.52	300	eP	Pn	09 07 16.4	+1.2
MATB	baz=300			eS	Sn	09 07 45.6	+0.5

**TAP 13 09:09:40.4, 24°.92N×122°.60E, h38^{km}±2^{km}, ML3.0, D,
Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao baz=279	0.56	279	eP	Pn	09 09 51.1	-0.9
TWB1	baz=279			i S	Sn	09 09 59.0	-1.1
EGS	baz=258	0.61	263	P	Pn	09 09 52.1	-0.6
TIPB	Shuangxi baz=274	0.71	275	i P	Pn	09 09 54.2	+0.3
TIPB	baz=274			i S	Sn	09 10 03.2	-0.4
TWC	Suao baz=246	0.75	246	P	Pn	09 09 54.6	+0.2
TWC	baz=246			S	Sn	09 10 04.2	-0.3
NWF	Wu-fen Shan baz=282	0.76	282	i P	Pn	09 09 55.5	+0.8
NWF	baz=282			eS	Sn	09 10 05.7	+0.7
WFSB	Wu-fen Shan baz=282	0.76	282	P	Pn	09 09 55.1	+0.5
WFSB	baz=282			S	Sn	09 10 05.3	+0.5
TNOU	National Taiwa baz=287	0.79	287	eP	Pn	09 09 55.6	+0.7
ILA	Ilan baz=259	0.79	259	eP	Pn	09 09 55.7	+0.8
ILA	baz=259			S	Sn	09 10 06.3	+0.7
NDS	Dongshan baz=251	0.85	251	eP	Pn	09 09 57.1	+1.2
PCYT	Pengchaiyu baz=315	0.86	326	eP	Pn	09 09 57.1	+1.2
PCYT	baz=315			eS	Sn	09 10 08.9	+1.7
TWE	Neicheng baz=257	0.87	257	eP	Pn	09 09 56.3	+0.2
TWE	baz=257			S	Sn	09 10 08.2	+0.6
TWA	Mucha baz=264	0.93	274	P	Pn	09 09 57.6	+0.7
TWA	baz=264			eS	Sn	09 10 09.7	+0.7
YM01	YM01 baz=294	0.96	284	eP	Pn	09 09 58.8	+1.5
YM01	baz=294			eS	Sn	09 10 11.4	+1.5
TWY	Chenhua baz=291	0.98	292	eP	Pn	09 09 59.0	+1.5
TWY	baz=291			eS	Sn	09 10 11.2	+1.1
ENTT	Nioudou baz=254	0.98	254	eP	Pn	09 09 58.1	+0.5
ENTT	baz=254			eS	Sn	09 10 10.6	+0.3
NWLT	Wulai baz=262	1.01	262	eP	Pn	09 09 59.6	+1.6

*TAP **13** 09:09:43.3, 24°.68N×122°.63E, h26^{km}±1^{km}, ML2.8, C*
*JMA **13** 09:09:43.3, 24°.65N×122°.58E, h17^{km}±1^{km}, M1.9*
ISC 13 09:09:43.3±1.1**, 24°.68N**±0°.03×**122°.61E**±0°.02**, h19**^{km}±3^{km}**,
n50, σ0s.36**/89**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.38	127	P	Pg	09 09 51.2	-0.1
JYNG				eS	Sg	09 09 56.6	-0.1
YOJ	Yonaguni jima baz=135	0.42	121	P	Pg	09 09 52.1	0.0
YOJ	Yonaguni jima baz=115	0.42	121	S	Sb	09 09 58.5	+0.1
YOJ	Yonaguni jima	0.42	121	eS	Sg	09 09 57.9	0.0
YOJ	Yonaguni jima	0.42	121	P	Pg	09 09 52.0	0.0
YOJ	Yonaguni jima baz=115	0.42	121	P	Pg	09 09 51.9	-0.1
YOJ	Yonaguni jima baz=135	0.42	121	S	Sn	09 10 00.7	-1.0
EGS	baz=285	0.64	285	eP	Pb	09 09 55.5	-0.3
EGS	baz=285			eS	Sb	09 10 04.2	-0.1
TWB1	Santiao Chiao baz=300	0.65	300	P	Pb	09 09 55.5	-0.6
TWB1	baz=300			i S	Sb	09 10 04.5	-0.3
TWC	Suao baz=264	0.70	264	i P	Pb	09 09 56.1	-0.7
TWC	baz=264			S	Sg	09 10 06.5	+0.1
NTC	Toucheng baz=283	0.73	284	eP	Pg	09 09 58.1	+0.4
NTC	baz=283			eS	Sb	09 10 07.3	+0.3
TIPB	Shuangxi baz=302	0.77	292	i P	Pg	09 09 58.5	+0.1
TIPB	baz=302			i S	Sg	09 10 08.9	+0.2
ILA	Ilan baz=276	0.79	276	P	Pb	09 09 58.2	-0.2
ILA	baz=276			S	Sb	09 10 09.0	+0.2
ENA	Nanau baz=253	0.83	252	i P	Pb	09 09 58.5	-0.7
ENA	baz=253			i S	Sb	09 10 10.2	+0.1
NWF	Wu-fen Shan baz=308	0.85	297	i P	Pb	09 09 59.6	+0.1
NWF	baz=308			i S	Sg	09 10 11.2	+0.1
WFSB	Wu-fen Shan baz=308	0.85	297	P	Pg	09 09 59.8	-0.1
WFSB	baz=308			S	Sg	09 10 11.1	0.0
TWE	Neicheng baz=272	0.86	273	i P	Pb	09 09 59.6	0.0
TWE	baz=272			i S	Sb	09 10 10.6	-0.1
EHP	Heping Village baz=245	0.88	245	eS	Sb	09 10 10.9	-0.3
ENTT	Nioudou baz=267	0.95	268	i P	Pb	09 10 01.1	-0.2
ENTT	baz=267			i S	Sb	09 10 13.9	+0.4
TWA	Mucha baz=287	0.98	288	i P	Pn	09 10 01.9	-0.1
TWA	baz=287			i S	Sb	09 10 14.6	+0.3
NDT	Datong Townshi baz=265	1.00	266	P	Pb	09 10 01.7	-0.4
NDT	baz=265			S	Sn	09 10 15.6	-0.5
NWLT	Wulai baz=275	1.01	275	P	Pn	09 10 02.5	0.0
NWLT	baz=275			S	Sn	09 10 16.0	-0.4
NHDH	Xindian Distri baz=286	1.03	286	eP	Pn	09 10 02.8	+0.1
NHDH	baz=286			S	Sn	09 10 16.2	-0.3
ETL	Fush Village baz=240	1.04	240	eP	Pb	09 10 02.6	-0.2
YM01	YM01 baz=282	1.05	296	P	Pb	09 10 02.7	-0.2
YM01	baz=282			S	Sb	09 10 16.6	+0.3
NACB	Ninganchiao baz=241	1.06	241	P	Pb	09 10 02.0	-1.0
NACB	baz=241			S	Sn	09 10 17.2	-0.1
PCYT	Pengchaiyu baz=318	1.06	333	P	Pb	09 10 02.8	-0.3
PCYT	baz=318			S	Sn	09 10 17.5	0.0
IRIF	Iriomote-Funau	1.08	109	P	Pb	09 10 03.2	-0.1
IRIF				S	Sg	09 10 18.5	+0.2
TWY	Chenhua baz=287	1.09	303	eP	Pn	09 10 03.6	0.0
TWY	baz=287			eS	Sg	09 10 18.8	0.0
TWD	Chiawan baz=237	1.10	237	eP	Pb	09 10 04.2	+0.4
TWD	baz=237			eS	Sn	09 10 18.6	+0.1
YHNB	Yeheng baz=269	1.12	270	P	Pn	09 10 04.0	-0.2
YHNB	baz=269			S	Sn	09 10 19.1	-0.1
ETLH	Xiulin Townshi baz=245	1.14	245	P	Pn	09 10 03.7	-0.6
ETLH	baz=245			eS	Sn	09 10 19.4	-0.1
NSK	Sanguang baz=270	1.14	270	i P	Pn	09 10 04.2	-0.1
NSK	baz=270			i S	Sb	09 10 18.6	-0.4
NNS	Nan Shan baz=270	1.16	258	i P	Pn	09 10 04.5	0.0
NNS	baz=270			S	Sn	09 10 20.0	+0.1
HWA	Hwalien baz=232	1.16	233	eS	Sn	09 10 20.1	+0.3
HATJ	Hateruma jima	1.25	120	eS	Sn	09 10 22.2	0.0
WHF	Hehuan Shan baz=246	1.34	247	P	Pn	09 10 07.5	+0.1
WHF	baz=246			S	Sb	09 10 25.0	-0.1
JKRS	Kuro-shima	1.35	109	P	Pb	09 10 07.6	-0.3
JKRS				eS	Sb	09 10 25.7	+0.9
TWT	Tachien baz=237	1.38	252	eP	Pb	09 10 08.6	0.0
TWT	baz=237			eS	Sb	09 10 26.7	+0.8
ESL	Shilin baz=230	1.38	231	eP	Pn	09 10 07.3	-0.2
ESL	baz=230			eS	Sb	09 10 26.3	+0.5
JIJ	Ishigaki jima	1.43	103	P	Pb	09 10 09.3	0.0
JIJ				eS	Sb	09 10 27.4	+0.2
CHGB	Renai baz=228	1.45	245	eP	Pb	09 10 09.6	-0.3
CHGB	baz=228			eS	Sb	09 10 27.9	-0.2
WHP	Taichung City baz=241	1.57	255	eP	Pn	09 10 10.2	0.0
WHP	baz=241			eS	Sn	09 10 30.6	+0.4
HGSD	Ruisui baz=210	1.61	223	eP	Pn	09 10 11.2	+0.5
HGSD	baz=210			eS	Sb	09 10 31.7	-0.6
VWDT	VWDT baz=235	1.63	236	eP	Pn	09 10 11.4	+0.4
VWDT	baz=235			eS	Sb	09 10 32.3	-0.7
EHY	Hungye baz=224	1.66	225	eP	Pn	09 10 11.5	0.0
EHY	baz=224			eS	Sn	09 10 32.5	+0.2
SMLT	Sun Moon Lake baz=230	1.75	243	eP	Pn	09 10 12.9	0.0
SSLB	Suanglung baz=227	1.76	240	eP	Pn	09 10 13.5	+0.7
SSLB	baz=227			eS	Sn	09 10 35.2	+0.5
YULB	Yu-li baz=238	1.76	223	eP	Pn	09 10 13.1	+0.2
YULB	baz=238			eS	Sn	09 10 34.7	0.0
TYC	Yuchr baz=231	1.78	244	eP	Pn	09 10 13.5	+0.5
TYC	baz=231			eS	Sn	09 10 35.6	+0.4

*IDC **13** 09:27:21.5±2.3, 15°.09S×178°.44W, h413^{km}±27^{km}, mb3.0/6,
mb1 3.3/7, mb1mx2.8/42, mbtmp3.8/7, Error ellipse:
s-maj=92.3km s-min=18.5km az=149.0*
*NOU **13** 09:27:59.4, 16°.34S×179°.98W, h126^{km}, MLv2.9/4, Fiji
Islands Region*
ISC 13 09:27:20.7±1.2**, 14°.9S**±0°.4×**178°.5W**±0°.3**, h400**^{km}**, n11,
σ0s.76**/12**, mb3.4**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGTI	Dogotuki	2.20	229	P	Pn	09 28 18.1	+0.1
TAVE	Taveuni	2.27	215	P	Pn	09 28 18.6	+0.2
MSVF	Nonsavu 36nm,0.3s,baz=51,slow=13,SNR=65	4.35	228	P	Pn	09 28 37.2	+1.0
MSVF	Nonsavu	4.35	228	P	Pn	09 28 37.6	+1.3
STKA	Stephens Creek 1.5nm,0.8s,baz=97,slow=8.1,SNR=3.8	40.06	238	P	P	09 34 17.9	-1.4
WRA	Warramunga Arr 0.5nm,0.3s,baz=92,slow=7.8,SNR=36	45.14	257	P	P	09 34 59.4	-0.5
ASAR	Alice Springs 20nm,0.4s,baz=84,slow=8.6,SNR=732	45.57	251	P	P	09 35 03.0	-0.1
ASAR	0.2nm,0.6s,baz=98,slow=4.0,SNR=2.3			PcP	PcP	09 36 33.8	-0.1
FITZ	Fitzroy Crossi 0.5nm,0.4s,baz=102,slow=14	53.46	258	P	P	09 36 02.3	+0.3
NVAR	Mina Array Bea 0.3nm,0.6s,baz=228,slow=9.4,SNR=3.1	77.33	44	P	P	09 38 33.1	+0.1
ILAR	Eielson Array 0.4nm,0.5s,baz=225,slow=5.3,SNR=11	82.95	13	P	P	09 39 02.0	+0.3
PDAR	Pinedale Array 0.3nm,0.5s,baz=216,slow=4.3,SNR=3.9	85.23	44	P	P	09 39 13.9	0.0

*MDD **13** 09:31:15.3±1.7, 37°.13N×13°.20W, h0^{km}, mb4.0/12, Error
ellipse: s-maj=14.8km s-min=12.8km az=55.0, PRXIMO*
*INMG **13** 09:31:16.6±1.3, 36°.94N×13°.63W, h10^{km}, ML2.4, Error
ellipse: s-maj=6.6km s-min=5.3km az=84.0*
*IGIL **13** 09:31:17.2, 37°.20N×13°.12W, h2^{km}, ML1.9*
*CNRM **13** 09:31:52.0, 36°.61N×10°.84W, h147^{km}, ml2.2*
ISC 13 09:31:09.9±1.7**, 37°.05N**±0°.05×**13°.42W**±0°.09**, h10**^{km}**, n73,
σ2s.95**/128**, 1C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	3.67	87⇑	ePn	Pn	09 32 09.8	+3.0
PFVI				eSn	Sn	09 32 48.9	-1.3
PFVI	7.8nm,0.2s			A	A	09 32 50.6	
PFVI	Vila Bisbo 4.7nm,0.1s,SNR=7.9	3.67	87	P	Pn	09 32 09.8	+3.0
PFVI	13nm,0.1s,SNR=7.9			S	Sn	09 32 48.6	-1.6
PFVI	Vila Bisbo	3.67	87	P	Pg	09 32 24.0	+3.6
PFVI				S	Sn	09 32 49.1	-1.1
PMST	Lisbon--Monsan	3.75	62	eSn	Sn	09 32 52.9	+0.9
PTEO	Sao Teotonio	3.78	81	ePn	Pn	09 32 11.5	+3.3
PTEO				eSn	Sn	09 32 51.3	-1.4
PTEO	7.9nm,0.6s			A	A	09 33 10.5	
PTEO	Sao Teotonio	3.78	81	P	Pn	09 32 11.5	+3.3
PTEO	4.0nm,0.6s			S	Sn	09 32 51.3	-1.4
PMAFR	Mafra	3.78	59	ePn	Pn	09 32 11.8	+3.5
PMAFR				eSn	Sn	09 32 53.6	+0.8
PMAFR	14nm,0.7s			A	A	09 33 06.2	
PMAFR	Mafra 1.9nm,0.1s,SNR=7.9	3.78	59	P	Pn	09 32 11.7	+3.4
PMAFR	3.4nm,0.1s,SNR=7.9			S	Sn	09 32 52.3	-0.5
MORF	Marmelete	3.82	85	eP	Pn	09 32 11.8	+3.0
MORF				eS	Sn	09 32 51.6	-2.3
MORF	comp=N,8.2nm,0.2s			IAML		09 32 54.2	
MORF	Marmelete	3.82	85	ePn	Pn	09 32 11.8	+3.0
MORF				eSn	Sn	09 32 52.6	-1.2
MORF	comp=N,8.3nm,0.1s			A	A	09 32 58.4	
MORF	Marmelete	3.82	85	P	Pn	09 32 11.8	+3.0
MORF				S	Sn	09 32 51.6	-2.3
PNCL	Nicolau / Gran	4.03	73	ePn	Pn	09 32 14.4	+2.7
PNCL				eSn	Sn	09 32 57.9	-1.0
PNCL	comp=N,2.9nm,0.1s			A	A	09 33 02.9	
PNCL	Nicolau / Gran	4.03	73	P	Pn	09 32 14.4	+2.7
PNCL	comp=N,2.9nm,0.1s			S	Sn	09 32 57.9	-1.0
MESJ	Messejana	4.21	78	eP	Pn	09 32 17.0	+2.8
MESJ				eS	Sn	09 33 00.6	-2.9
MESJ	comp=N,1.3nm,0.1s			IAML		09 33 03.7	
MESJ	Messejana	4.21	78	ePn	Pn	09 32 17.1	+2.8
MESJ				eSn	Sn	09 33 03.4	-0.1
MESJ	comp=N,3.3nm,0.5s			A	A	09 33 05.1	
MESJ	Messejana	4.21	78	P	Pn	09 32 17.0	+2.8
MESJ				S	Sn	09 33 00.6	-2.9
PCVE	Castro Verde	4.33	81	ePn	Pn	09 32 18.9	+3.1
PCVE				eSn	Sn	09 33 05.8	-0.5
PCVE	comp=N,2.4nm,0.2s			A	A	09 33 10.3	
PCVE	Castro Verde	4.33	81	P	Pn	09 32 18.9	+3.1
PCVE	comp=N,2.4nm,0.2s			S	Sn	09 33 05.8	-0.5
PBDV	Barranco-do-Ve	4.39	86	ePn	Pn	09 32 20.1	+3.4
PBDV				eSn	Sn	09 33 07.3	-0.6
PBDV	comp=N,5.2nm,0.7s			A	A	09 33 11.9	
PBDV	Barranco-do-Ve	4.39	86	P	Pn	09 32 20.1	+3.4
PBDV	comp=N,5.2nm,0.7s			S	Sn	09 33 07.3	-0.6
PSBE	So Bento	4.39	55	ePn	Pn	09 32 20.0	+3.3
PSBE				eSn	Sn	09 33 07.9	0.0
PSBE	comp=N,5.0nm,0.7s			A	A	09 33 13.7	
PBEJ	Beja	4.52	76	eSn	Sn	09 33 11.2	+0.1
PBEJ	comp=N,2.8nm,0.4s			A	A	09 33 16.5	
PBEJ	Beja comp=N,1.4nm,0.4s	4.52	76	S	Sn	09 33 11.2	+0.1
EVO	Evora	4.53	69	P	Pn	09 32 21.3	+2.8
EVO				S	Sn	09 33 09.7	-1.6
EVO	Evora	4.53	69	ePn	Pn	09 32 22.7	+4.1
EVO				eSn	Sn	09 33 11.3	0.0
EVO	Evora	4.53	69	P	Pn	09 32 21.3	+2.8
EVO				S	Sn	09 33 09.7	-1.6
PVAQ	Vaqueiros	4.56	84	ePn	Pn	09 32 22.5	+3.4
PVAQ				eSn	Sn	09 33 10.4	-1.8
PVAQ	comp=N,5.8nm,0.6s			A	A	09 33 15.3	
PVAQ	Vaqueiros	4.56	84	P	Pn	09 32 22.5	+3.4
PVAQ	comp=N,5.8nm,0.6s			S	Sn	09 33 10.4	-1.8
PVAQ	Vaqueiros	4.56	84	P	Pg	09 32 33.9	-3.5
PVAQ				S	Sn	09 33 06.8	-5.4
PMTG	Montargil	4.57	62	ePn	Pn	09 32 22.1	+3.0
PMTG				eSn	Sn	09 33 12.4	+0.2
PMTG	comp=N,3.2nm,0.8s			A	A	09 33 20.3	
PMTG	Montargil	4.57	62	P	Pn	09 32 22.1	+3.0
PMTG	comp=N,3.2nm,0.8s			S	Sn	09 33 12.4	+0.2
PMPST	Porto Santo, M	4.63	212	eSn	Sn	09 33 05.8	-8.0
EGRO	El Granado comp=N,0.9nm,0.1s,SNR=7.9	4.76	82	P	Pn	09 32 25.0	+3.3
EGRO	comp=N,3.1nm,0.2s,SNR=7.9			S	Sn	09 33 14.4	-2.5
PCAS	Casmilo, Conde	4.88	51	ePn	Pn	09 32 26.7	+3.2
PCAS				eSn	Sn	09 33 20.1	+0.1
PCAS	comp=N,3.6nm,0.6s			A	A	09 33 25.9	
PCAS	Casmilo, Conde	4.88	51	P	Pn	09 32 26.7	+3.2
PCAS				S	Sn	09 33 20.1	+0.1

	comp=N,3.6nm,0.6s						
PESTR	Estremoz	4.95	67	*e*Pn	Pn	09 32 28.1	+3.7
PESTR				*e*Sn	Sn	09 33 20.8	-0.9
PESTR				A	A	09 33 23.3	
	comp=N,1.3nm,0.1s						
PESTR	Estremoz	4.95	67	P	Pg	09 32 44.8	0.0
PESTR				S	Sn	09 33 24.3	+2.6
PMOZ	Porto Moniz, M	5.24	217	*e*Sn	Sn	09 33 27.1	-1.8
PMRV	Marv??o	5.30	62	*e*Pn	Pn	09 32 32.1	+2.8
PMRV				*e*Sn	Sn	09 33 29.5	-0.9
PMRV				A	A	09 33 36.3	
	comp=N,2.0nm,0.6s						
PMRV	Marv??o	5.30	62	P	Pn	09 32 32.1	+2.8
PMRV				S	Sn	09 33 29.5	-0.9
	comp=N,2.0nm,0.6s						
EBAD	Badajoz	5.34	70	P	Pn	09 32 32.6	+2.8
	comp=N,1.2nm,0.1s,SNR=7.4						
EBAD				S	Sn	09 33 28.1	-3.3
	comp=N,1.9nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	5.42	80	P	Pn	09 32 32.9	+2.1
	comp=N,0.5nm,0.1s,SNR=7.9						
EMIN				S	Sn	09 33 29.7	-3.5
	comp=N,1.2nm,0.1s,SNR=5.7						
PCBR	Castelo Branco	5.43	57	*e*Pn	Pn	09 32 34.3	+3.3
PCBR				*e*Sn	Sn	09 33 33.4	-0.1
PCBR	Castelo Branco	5.43	57	P	Pn	09 32 34.3	+3.3
PCBR				S	Sn	09 33 33.4	-0.1
PVIS	Viseu	5.65	48	*e*Pn	Pn	09 32 36.8	+2.7
PVIS				*e*Sn	Sn	09 33 37.8	-1.3
PVIS				A	A	09 33 49.1	
	comp=N,3.1nm,0.1s						
PVIS	Viseu	5.65	48	P	Pn	09 32 36.8	+2.7
PVIS				S	Sn	09 33 37.8	-1.3
	comp=N,1.6nm,0.1s						
MTE	Manteigas	5.68	52	*e*Sn	Sn	09 33 38.8	-1.0
MTE	Manteigas	5.68	52	S	Sn	09 33 38.8	-1.0
ESPR	Espera	6.06	89	S	Sn	09 33 46.9	-2.1
	comp=N,8.5nm,0.3s,SNR=7.9						
PVRL	Vila Real	6.12	45	*e*Sn	Sn	09 33 48.7	-1.8
PVRL	Vila Real	6.12	45	S	Sn	09 33 48.7	-1.8
POLO	Lamas de Olo	6.14	44	*e*Pn	Pn	09 32 43.7	+2.9
POLO				*e*Sn	Sn	09 33 48.4	-2.7
POLO				A	A	09 33 51.7	
	comp=N,1.6nm,0.8s						
POLO	Lamas de Olo	6.14	44	P	Pn	09 32 43.7	+2.9
POLO				S	Sn	09 33 48.4	-2.7
	comp=N,1.6nm,0.8s						
PCAB	Cabril	6.25	40	*e*Sn	Sn	09 33 51.3	-2.5
PCAB	Cabril	6.25	40	S	Sn	09 33 51.3	-2.5
EZAM	Zamans	6.26	34	S	Sn	09 33 47.6	-6.3
	comp=N,1.5nm,0.1s,SNR=7.9						
PGAV	Gavieira, Arco	6.32	37	*e*Pn	Pn	09 32 46.3	+3.1
PGAV				*e*Sn	Sn	09 33 52.2	-3.3
PGAV				A	A	09 33 57.9	
	comp=N,4.7nm,0.6s						
PGAV	Gavieira, Arco	6.32	37	P	Pn	09 32 46.3	+3.1
PGAV				S	Sn	09 33 52.2	-3.3
	comp=N,4.7nm,0.6s						
ELOB	Lobios	6.35	39	P	Pn	09 32 45.1	+1.5
	comp=N,0.3nm,0.1s,SNR=7.9						
ELOB				S	Sn	09 33 52.0	-4.2
	comp=N,2.7nm,0.1s,SNR=8.1						
ECAB	El Cabril	6.44	78	P	Pn	09 32 48.0	+3.2
	comp=N,0.2nm,0.1s,SNR=7.4						
ECAB				S	Sn	09 33 56.8	-1.6
	comp=N,0.5nm,0.1s,SNR=7.9						
MVO	Moncorvo	6.45	48	*e*Pn	Pn	09 32 48.0	+3.0
MVO				*e*Sn	Sn	09 33 55.6	-3.0
MVO				A	A	09 33 58.0	
	comp=N,2.4nm,0.3s						
MVO	Moncorvo	6.45	48	P	Pn	09 32 47.4	+2.5
	comp=N,1.0nm,0.2s,SNR=7.9						
MVO				S	Sn	09 33 55.5	-3.1
	comp=N,2.4nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	6.80	29	S	Sn	09 34 00.3	-7.1
	comp=N,3.9nm,0.1s,SNR=7.9						
PBRG	Braganca	7.02	45	*e*Pn	Pn	09 32 55.2	+2.4
PBRG				*e*Sn	Sn	09 34 09.7	-2.9
PBRG				A	A	09 34 15.0	
	comp=N,1.9nm,0.4s						
PBRG	Braganca	7.02	45	P	Pn	09 32 55.2	+2.4
PBRG				S	Sn	09 34 09.7	-2.9
	comp=N,0.9nm,0.4s						
EAGO	Agolada(Pontev	7.05	34	S	Sn	09 34 06.7	-6.8
	comp=N,2.2nm,0.1s,SNR=7.9						
EADA	Adamuz	7.11	78	P	Pn	09 32 57.0	+3.0
	comp=N,0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	09 34 13.7	-1.1
	comp=N,1.4nm,0.1s,SNR=7.9						
ECAL	Calabor	7.11	45	P	Pn	09 32 55.6	+1.6
	comp=N,0.4nm,0.1s,SNR=6.3						
ECAL				S	Sn	09 34 10.5	-4.4
	comp=N,1.3nm,0.2s,SNR=4.8						
OUK	Oukaimeden	7.43	140	P	Pb	09 33 17.1	-2.1
OUK				S	Sn	09 34 24.4	+1.1
ESDC	Sonseca Array	7.88	68	P	Pn	09 33 07.2	+2.6
	comp=N,0.4nm,0.1s,baz=256,slow=13,SNR=5.4						
ESDC				S	Sn	09 34 30.9	-2.9
	comp=N,0.1nm,0.1s,baz=252,slow=23,SNR=7.9						
EPON	Pontenova	7.89	35	P	Pn	09 33 07.3	+2.5
	comp=N,0.2nm,0.1s,SNR=7.9						
EPON				S	Sn	09 34 27.6	-6.5
	comp=N,1.1nm,0.2s,SNR=7.9						
MD31	MD31	8.24	118	P	Pb	09 33 24.7	-8.1
MD31				S	Sn	09 34 34.3	-8.7
MDT	Midelt	8.38	118	P	Pb	09 33 24.0	-11
MDT				S	Sn	09 34 34.8	-12

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*IDC **13** 09:31:29.0±5.7, 1°.92S×101°.04E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx2.9/48, mbtmp3.4/3, MS2.5/1, Ms1 2.7/1, ms1mx2.2/26, Error ellipse: s-maj=296.9km s-min=29.0km az=53.0*

*DJA **13** 09:31:36.0±0.8, 2°S±4°×10°1E±°, h17^{km}±9^{km}, M3.6/6, MLv3.6/6*

ISC 13 09:31:35.7±1.1**, 2°.14S**±0°.07×**100°.65E**±0°.06**, h50**^{km}**, n14, σ2^{s}.12**/10**, mb3.5**/3**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRJI	Kerinci	0.81	87	P	Pn	09 31 52.2	+1.3
PPSI	Pulau Pagai	0.89	226	P	Pn	09 31 53.3	+1.4
PDSI	Padang	1.24	351	P	Pn	09 31 57.9	+1.3
PPI	Padang Panjang	1.69	351	P	Pn	09 32 04.8	+2.0
SISI	Saibi	1.76	297	P	Pn	09 32 05.7	+2.0
MASI	Maura Aman, Be	1.87	122	P	Pn	09 32 07.0	+1.7
KLSI		4.79	122	P	Pn	09 32 48.2	+2.8
CMAR	Chiang Mai Arr	20.54	355	LR	LR	09 44 45.7	
	comp=Z,14nm,20.8s,baz=70,slow=39						
H08S2	Diego Garcia H	28.57	258	T	T	10 06 47.3	
	baz=82,slow=74						
H08S3	Diego Garcia H	28.58	258	T	T	10 06 47.5	
	baz=82						
H08S1	Diego Carcia H	28.59	258	T	T	10 06 48.6	
	baz=82,slow=74						
WRA	Warramunga Arr	37.36	121	P	P	09 38 41.8	-2.0
	0.1nm,0.4s,baz=297,slow=8.1,SNR=1.4						
ASAR	Alice Springs	38.64	126	P	P	09 38 52.9	-1.8
	0.4nm,0.6s,baz=299,slow=7.7,SNR=13						
MKAR	Makanchi Array	51.34	344	P	P	09 40 34.4	-0.7
	0.4nm,0.4s,baz=155,slow=8.0,SNR=5.0						

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*IDC **13** 09:32:46.9±0.8, 34°.15N×134°.97E, h0^{km}, mb3.8/9, mb1 3.9/13, mb1mx3.6/54, mbtmp3.7/13, ML3.2/4, MS2.9/3, Ms1 3.0/3, ms1mx2.7/44, Error ellipse: s-maj=18.7km s-min=16.2km az=118.0*

*JMA **13** 09:32:47.4, 34°.15N×135°.08E, h9^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s219.00000°, δ53.00000°, λ136.00000°. NP2: ϕ_s339.00000°, δ56.00000°, λ47.00000°. Principal axes: T Plg55.0000°, Azm191.0000°; N Plg35.0000°, Azm7.0000°; P Plg2.0000°, Azm98.0000°;*

JMA Felt III J1.

*NIED **13** 09:32:47.4, 34°.15N×135°.08E, h9^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.06; $M_{\theta\theta}$0.03; $M_{\phi\phi}$-4.10; $M_{r\theta}$0.67; $M_{\theta\phi}$-0.31; $M_{\phi r}$0.43; Fault plane solution: $M_0$4.17000×10^{14} NP1:ϕ_s13.00000°, δ49.00000°, λ102.00000°. NP2:ϕ_s176.00000°, δ42.00000°, λ77.00000°.*

ISC 13 09:32:47.2±1.2**, 34°.14N**±0°.03×**135°.05E**±0°.03**, h3**^{km}±8^{km}**, n24, σ0^{s}.93**/29**, mb3.7**/9**, 7D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAWN	Awajishima-nag	0.36	341	⇓P	Pb	09 32 55.0	-1.3
JWM	Minabe	0.39	139	⇓P	Pg	09 32 55.0	+0.3
JWM				S	Sg	09 33 00.0	+0.3
JWY	Kouya	0.46	80	⇓P	Pg	09 32 55.5	-0.5
JTNC	Tanabenakahech	0.57	124	⇓P	Pg	09 32 58.3	+0.2
JTNC				S	Sg	09 33 05.8	+0.3
JAI	Aioi	0.61	235	⇓P	Pb	09 32 59.4	-1.0
JAI				S	Sb	09 33 07.9	-1.4
JHE	Heguri	0.73	46	⇓P	Pg	09 33 01.1	-0.2
JHE				S	Sg	09 33 10.5	-0.3
JKS	Kasai	0.85	349	P	Pg	09 33 03.8	+0.2
JKS				*e*S	Sg	09 33 15.2	+0.5
JJS	Sakaide	0.95	284	⇓P	Pg	09 33 05.4	-0.1
MAT	Matsushiro	3.52	46	P	Pn	09 33 43.2	+0.4
MAT				*e*S	Sn	09 34 25.6	+0.6
MJAR	Matsushiro Arr	3.52	46	Pn	Pn	09 33 43.8	+1.0
	0.4nm,0.3s,baz=234,slow=13,SNR=6.1						
MJAR				Lg	Lg	09 34 42.1	
	0.3nm,0.3s,baz=226,slow=28,SNR=6.6						
JNU	Nakatsue	3.62	255	Pn	Pn	09 33 45.5	+1.2
	2.7nm,0.3s,baz=23,slow=0.3,SNR=22						
JNU				Lg	Lg	09 34 44.4	
	3.8nm,0.3s,baz=149,slow=20,SNR=1.8						
JHJ	Hachijo jima 2	4.08	103	LR	LR	09 35 24.1	
	comp=Z,161nm,18.0s,baz=342,slow=38						
KSRS	Korea Array	6.67	302	Pn	Pn	09 34 27.7	+1.8
	1.1nm,0.3s,baz=118,slow=14,SNR=18						
KSRS				Sn	Sn	09 35 42.9	+0.5
	1.2nm,0.3s,baz=120,slow=24,SNR=16						
KSRS				LR	LR	09 37 08.5	
	comp=Z,39nm,21.6s,baz=100,slow=40						
KLR	Kul'dur	15.27	352	Pn	Pn	09 36 25.5	+1.9
	0.1nm,0.3s,baz=134,slow=8.4,SNR=4.5						
SONM	Songino Array	25.42	311	P	P	09 38 15.5	-0.5
	1.1nm,0.7s,baz=121,slow=9.2,SNR=5.1						
CMAR	Chiang Mai Arr	35.72	253	LR	LR	09 56 01.3	
	comp=Z,36nm,18.4s,baz=50,slow=39						
ZALV	Zalesovo Beam	40.16	315	P	P	09 40 23.9	-0.3
	0.3nm,0.4s,baz=125,slow=7.2,SNR=2.0						
WRA	Warramunga Arr	53.79	181	P	P	09 42 10.4	-0.6
	3.1nm,0.8s,baz=355,slow=7.9,SNR=32						
ILAR	Eielson Array	54.67	31	P	P	09 42 17.0	0.0
	0.4nm,0.8s,baz=254,slow=6.5,SNR=2.1						
ASAR	Alice Springs	57.50	181	P	P	09 42 38.6	+0.9
	0.5nm,0.6s,baz=10,slow=12,SNR=16						
FINES	FINESS Array B	68.88	331	P	P	09 43 51.5	-1.2
	3.5nm,0.9s,baz=151,slow=4.4,SNR=3.8						
AKASG	Malin Array Be	73.30	320	P	P	09 44 18.7	-1.1
	0.2nm,0.3s,baz=51,slow=6.2,SNR=2.5						
BRTR	Keskin Array B	76.75	309	P	P	09 44 40.3	+0.1
	1.8nm,1.0s,baz=101,slow=7.5,SNR=5.7						
NVAR	Mina Array Bea	80.84	50	P	P	09 45 03.9	+1.1
	0.3nm,0.6s,baz=251,slow=2.8,SNR=2.8						

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*IDC **13** 09:43:53.4±6.0, 6°.97S×154°.22E, h94^{km}±50^{km}, mb3.3/6, mb1 3.6/7, mb1mx3.4/25, mbtmp3.7/7, MS2.9/1, Ms1 2.9/1, ms1mx2.5/15, Error ellipse: s-maj=48.1km s-min=28.0km az=118.0*

ISC 13 09:43:48.3±1.1**, 7°.0S**±0°.2×**154°.5E**±0°.2**, h50**^{km}**, n8, σ1^{s}.37**/9**, mb3.5**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	7.64	251	P	Pn	09 45 37.5	+0.4
	0.8nm,0.3s,baz=163,slow=3.0,SNR=4.2						
PMG				S	Sn	09 47 03.5	+1.0
	0.4nm,0.3s,baz=300,slow=20,SNR=7.0						
PMG				LR	LR	09 48 17.6	
	comp=Z,86nm,19.9s,baz=59,slow=36						
WRA	Warramunga Arr	23.41	235	P	P	09 48 52.0	-1.1
	1.5nm,0.9s,baz=55,slow=9.4,SNR=20						
ASAR	Alice Springs	25.80	228	P	P	09 49 14.9	-0.1
	0.5nm,0.8s,baz=64,slow=8.6,SNR=7.0						
STKA	Stephens Creek	27.52	204	P	P	09 49 30.3	-0.1
	0.9nm,0.6s,baz=43,slow=11,SNR=3.8						
MKAR	Makanchi Array	83.08	319	P	P	09 56 06.8	-1.9
	0.3nm,0.4s,baz=94,slow=5.8,SNR=5.4						
ILAR	Eielson Array	83.56	22	P	P	09 56 12.7	+1.9
	0.3nm,0.8s,baz=256,slow=5.5,SNR=1.7						
NVAR	Mina Array Bea	92.11	52	P	P	09 56 53.2	+0.3
	0.5nm,0.8s,baz=272,slow=6.2,SNR=4.0						
TORD	Torodi Ar. Bea	152.54	285	PKPbc	PKPbc	10 03 39.1	-1.2
	0.6nm,1.1s,baz=41,slow=2.0,SNR=1.9						

MAN 13 09:44:37.9, 13°.82N×120°.63E, h178^{km}**, mb4.1, ML2.9, MS2.5, 1C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.38	258	⇑*i*P	Pn	09 45 03.3	+1.3
LUBP				*i* S	Sn	09 45 22.5	+2.0
PGP	Puerto Galera	0.44	135	⇓*e*P	Pn	09 45 03.2	+0.9
PGP				*i* S	Sn	09 45 23.1	+2.1

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*BJI **13** 10:03:21.8±0.0, 11°.00S×166°.92E, h96^{km}, mB5.0/22, mb4.8/46*

*NEIC **13** 10:03:24.1±1.9, 11°.17S±0°.08×166°.4E±0°.1, h86^{km}±6^{km}, mb4.8/61, Error ellipse: s-maj=14.4km s-min=11.1km az=75.0*

*IDC **13** 10:03:24.2±0.7, 11°.23S×166°.37E, h92^{km}±5^{km}, mb4.2/20, mb1 4.3/23, mb1mx4.3/31, mbtmp4.5/23, MS3.5/9, Ms1 3.5/9, ms1mx3.3/26, Error ellipse: s-maj=14.2km s-min=11.7km az=128.0*

ISC 13 10:03:24.8±0.3**, 11°.24S**±0°.05×**166°.43E**±0°.05**, h100**^{km}**, n248, σ1^{s}.06**/254**, mb4.8**/88**, 2C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	4.25	170	Pn	Pn	10 04 27.3	-0.1
SANVU	Saraoutou	4.25	170	P	Pn	10 04 27.8	+0.4
HNR	Honiara	6.63	285	P	Pn	10 04 58.1	-1.7
	5.7nm,0.3s,baz=205,slow=4.7,SNR=1.3						
HNR				S	Sn	10 06 12.5	-1.4
	18nm,0.3s,baz=157,slow=18,SNR=1.9						
HNR	Honiara	6.63	285	Pn	Pn	10 05 01.4	+1.7
DVP	Devils Point	6.66	165	P	Pn	10 05 01.9	+1.7
KOUNC	Koumac, New Ca	9.48	192	P	Pn	10 05 39.3	+0.8
LIFNC	LIFOU	9.51	175	Pn	Pn	10 05 37.0	-1.9
LIFNC	LIFOU	9.51	175	P	Pn	10 05 37.6	-1.3
MARNC	Mare, Loyalty	10.29	172	Pn	Pn	10 05 47.8	-1.8
MARNC	Mare, Loyalty	10.29	172	P	Pn	10 05 48.6	-1.0
YATNC	Mamie plateau,	10.76	178	P	Pn	10 05 55.2	-0.8
DZM	Mont Dzumac	10.77	180	*e*Pn	Pn	10 05 55.4	-0.7
	116nm,0.8s						
DZM				*e*Sn	Sn	10 07 50.7	-4.0
	55nm,0.9s						
DZM				*e*LR	LR	10 08 26.3	
	comp=Z,686nm,28.6s						
DZM	Mont Dzumac	10.77	180	P	Pn	10 05 55.9	-0.2
	7.8nm,0.3s,baz=31,slow=1.6,SNR=409						
DZM				S	Sn	10 07 52.0	-2.7
	2.1nm,0.3s,baz=116,slow=23,SNR=5.8						
DZM				LR	LR	10 09 40.6	
	comp=Z,288nm,21.9s,baz=25,slow=35						
DZM	Mont Dzumac	10.77	180	Pn	Pn	10 05 55.2	-0.9
NOUC	Port Laguerre	10.80	181	P	Pn	10 05 57.6	+1.2
ONTNC	Ouen Toro	11.00	180	Pn	Pn	10 05 59.0	-0.1
ONTNC	Ouen Toro	11.00	180	P	Pn	10 05 59.8	+0.6
OUENC	Ouen Island, N	11.12	178	Pn	Pn	10 06 00.4	-0.4
OUENC	Ouen Island, N	11.12	178	P	Pn	10 06 01.4	+0.6
PINNC	Pines Island,	11.35	175		Pn	10 06 03.8	0.0
PINNC	Pines Island,	11.35	175	P	Pn	10 06 04.8	+1.0
MSVF	Nonsavu	12.96	121	LR	LR	10 10 26.1	
	comp=Z,191nm,21.1s,baz=309,slow=32						
MSVF	Nonsavu	12.96	121	Pn	P	10 06 29.7	-2.4
DGTI	Dogotuki	13.86	113	P	P	10 06 42.2	+0.1
TARA	Tarawa	14.08	28	Pn	Pn	10 06 37.0	-3.0
TARA	Tarawa	14.08	28	P	P	10 06 45.5	+1.0
PMG	Port Moresby	19.05	274	P	Pn	10 07 40.0	-1.2
	0.4nm,0.3s,baz=71,slow=0.9,SNR=10						
PMG	Port Moresby	19.05	274	P	Pn	10 07 40.0	-1.2
PMG	Port Moresby	19.05	274	P	P	10 07 39.7	+0.3
PMG	Port Moresby	19.05	274	P	P	10 07 39.7	+0.3
RK1H	Rockhampton Ha	19.40	229	P	P	10 07 43.9	+0.8
EIDS	Eidsvold	20.21	224	P	P	10 07 52.6	+0.8
EIDS	Eidsvold	20.21	224	P	Pn	10 07 53.4	-1.3
LHI	Lord Howe Isla	21.30	198	P	P	10 08 05.3	+1.8
CTA	Charters Tower	21.31	243	P	P	10 08 03.0	-0.7
	6.8nm,0.8s,baz=68,slow=14,SNR=7.0						
CTAO	Charters Tower	21.31	243	P	P	10 08 03.5	-0.2
CTAO	Charters Tower	21.31	243	P	P	10 08 03.8	+0.1
MTSU	Mount Surprise	22.45	250	P	P	10 08 15.6	-0.2
RMQ	Roma	22.53	225	P	P	10 08 17.0	+0.4
	18nm,0.8s						
COEN	Coen	22.85	261	P	P	10 08 18.9	-1.1
COEN	Coen	22.85	261	P	P	10 08 19.7	-0.2
ARMA	Armidale	23.52	214	P	P	10 08 26.8	+0.7
ARMA				IAmb	IAmb	10 08 49.8	
	comp=Z,39nm,1.2s						
ARMA	Armidale	23.52	214	P	P	10 08 26.4	+0.3
OUZ	Omahuta	24.74	166	P	P	10 08 39.5	+2.5
QIS	Mount Isa	27.37	247	P	P	10 08 59.8	-1.2
TOZ	Tahuroa Road	27.60	164	P	P	10 09 04.3	+1.6
HIZ	Hauiti	28.18	166	P	P	10 09 09.6	+1.7
MXZ	Matakaoa Point	28.29	160	P	P	10 09 10.3	+1.4
HAZ	Te Kaha	28.30	161	P	P	10 09 10.7	+1.8
RUGZ	Raukumara Rang	28.45	161	P	P	10 09 11.3	+0.9
PKGZ	Pakihiroa	28.51	160	P	P	10 09 10.9	0.0
URZ	Urewera	28.55	162	P	P	10 09 11.6	+0.4
	comp=Z,14nm,0.8s,baz=123,slow=24,SNR=9.1						
URZ	Urewera	28.55	162	P	P	10 09 12.1	+0.9
URZ	Urewera	28.55	162	P	P	10 09 12.0	+0.9
WMGZ	Waiomatatini S	28.56	160	P	P	10 09 11.8	+0.5
MUGZ	Murupara	28.65	163	P	P	10 09 13.0	+0.9
CAN	Canberra	28.73	211	P	P	10 09 12.8	-0.1
CAN				IAmb	IAmb	10 09 18.8	
	comp=Z,24nm,1.3s						
PUZ	Puketiti	28.74	160	P	P	10 09 12.9	0.0
VRZ	Vera Road	28.74	166	P	P	10 09 17.9	+5.1
MRHZ	Matea Rd	28.88	164	P	P	10 09 15.3	+1.1
NNVZ	North Ngauruho	28.95	165	P	P	10 09 17.4	+2.5
TMVZ	Te Maari	28.96	165	P	P	10 09 18.3	+3.3
SMPI	Sarmi	29.00	286	P	P	10 09 16.4	+0.9
	comp=Z,18nm,1.4s						
TRVZ	Turoa	29.09	165	P	P	10 09 18.1	+1.8
RAHZ	Arahi	29.15	163	P	P	10 09 17.3	+0.8
INKA	Innaminka	29.15	232	P	P	10 09 17.1	+0.4
RIGZ	Rimuhau	29.16	162	P	P	10 09 12.4	-4.2
BKZ	Black Stump Fm	29.21	164	P	P	10 09 17.3	+0.1
BKZ	Black Stump Fm	29.21	164	P	P	10 09 18.1	+1.0
BKZ	Black Stump Fm	29.21	164	P	P	10 09 17.9	+0.8
NMHZ	Naumai	29.24	163	P	P	10 09 18.6	+1.2
MOVZ	Moawhango	29.25	165	P	P	10 09 18.3	+0.9
BHHZ	Black Hill Sta	29.40	165	P	P	10 09 19.3	+0.5
ARHZ	Aropaoanui	29.45	163	P	P	10 09 19.7	+0.6
MCHZ	McNeill Hill	29.53	164	P	P	10 09 20.7	+0.8
H11S2	WAKE ISLAND Hy	29.55	1	T	T	10 40 03.8	
	baz=181,slow=76,SNR=3.6						
H11S3	WAKE ISLAND Hy	29.55	0	T	T	10 39 55.3	
	baz=181,slow=76,SNR=3.3						
H11S1	WAKE ISLAND Hy	29.56	1	T	T	10 40 02.8	
	baz=181,slow=76,SNR=3.1						
KRHZ	Kereru	29.63	164	P	P	10 09 21.0	+0.2
CKHZ	Cape Kidnapper	29.84	163	P	P	10 09 22.7	+0.2
PNHZ	Pukenui	29.84	165	P	P	10 09 23.3	+0.7
TSZ	Takapari Road	29.91	165	P	P	10 09 23.5	+0.2
STKA	Stephens Creek	30.77	224	P	P	10 09 31.0	+0.1
	comp=Z,2.5nm,0.7s,baz=6.1,slow=9.8,SNR=7.9						
STKA				pP	pP	10 09 52.1	+0.3
	comp=Z,4.1nm,0.7s,baz=56,slow=9.4,SNR=6.6						
STKA				PcP	PcP	10 12 26.7	+0.5
	comp=Z,3.2nm,0.6s,baz=24,slow=2.4,SNR=6.2						
STKA				LR	LR	10 20 44.2	
	comp=Z,93nm,20.5s,baz=30,slow=34						
STKA	Stephens Creek	30.77	224	P	P	10 09 31.3	+0.4
STKA	Stephens Creek	30.77	224	P	P	10 09 31.4	+0.5
TUWZ	Tuamarina	30.78	169	P	P	10 09 32.1	+1.2
KHZ	Kahutara	31.67	170	P	P	10 09 38.5	-0.1
BAKI	Biak	31.72	286	P	P	10 09 37.7	-1.8
	comp=Z,32nm,0.8s						
LTZ	Lake Taylor	31.83	172	P	P	10 09 41.7	+1.6
WR0	Warramunga Arr	31.87	250	P	P	10 09 40.2	-0.5
WB0	Warramunga Arr	31.97	251	P	P	10 09 40.3	-1.3
WRAB	Tennant Creek	32.04	250	P	P	10 09 41.9	-0.4
WRAB				IAmb	IAmb	10 09 42.4	
	comp=Z,22nm,1.4s						
WRAB	Tennant Creek	32.04	250	P	P	10 09 41.1	-1.1
WB2	Warramunga Arr	32.04	250	P	P	10 09 41.1	-1.1
WB2				IAmb	IAmb	10 09 41.9	
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	32.05	250	P	P	10 09 41.0	-1.4
	comp=Z,11nm,0.8s,baz=83,slow=8.7,SNR=97						
WRA				PcP	PcP	10 12 30.5	+0.6
	comp=Z,4.6nm,0.9s,baz=80,slow=3.2,SNR=14						
WRA				ScP	ScP	10 16 06.2	+1.6
	comp=Z,0.6nm,0.9s,baz=78,slow=3.7,SNR=2.9						
WRA				LR	LR	10 22 27.5	
	comp=Z,106nm,19.1s,baz=70,slow=36						
WRA	Warramunga Arr	32.05	250	P	P	10 09 40.9	-1.5
TOO	Toolangi	32.26	212	P	P	10 09 45.5	+1.5
FOZ	Fox Glacier	32.30	175	P	P	10 09 44.8	+0.6
LCRK	Leigh Creek	32.41	230	P	P	10 09 44.7	-0.7
RPZ	Rata Peaks	32.60	174	P	P	10 09 47.2	+0.4
BRAT	Ballarat	33.08	214	P	P	10 09 53.0	+2.0
KDU	Kakadu	33.24	264	P	P	10 09 51.9	-0.8
AS31	Alice Springs	33.30	244	P	P	10 09 52.3	-1.0
ASAR	Alice Springs	33.31	244	P	P	10 09 51.5	-1.8
	comp=Z,7.3nm,0.7s,baz=69,slow=9.8,SNR=126						
ASAR				PcP	PcP	10 12 33.5	+0.1
	comp=Z,6.3nm,0.8s,baz=79,slow=2.4,SNR=22						
ASAR				ScP	ScP	10 16 11.2	+2.4
	comp=Z,0.7nm,0.8s,baz=85,slow=2.8,SNR=4.8						
ASAR				LR	LR	10 23 03.3	
	comp=Z,71nm,18.8s,baz=70,slow=36						
HTT	Hallett	33.50	224	P	P	10 09 54.4	-0.5
NAPP	Napperby	33.90	225	P	P	10 09 59.2	+0.9
MTN	Manton Dam	34.54	264	P	P	10 10 04.2	+0.1
TWOA	Tennyson Woods	34.66	222	P	P	10 10 05.6	+0.8
	comp=Z,16nm,0.9s						
BBOO	Buckleboo	35.19	228	P	P	10 10 09.3	-0.1
BBOO				IAmb	IAmb	10 10 10.0	
	comp=Z,17nm,1.1s						
BBOO	Buckleboo	35.19	228	P	P	10 10 09.3	-0.1
MULG	Mulgathing	35.52	233	P	P	10 10 11.2	-1.1
BNDI	Bandanaira	36.76	278	P	P	10 10 22.7	-0.4
	comp=Z,210nm,0.9s						
KNRA	Kununurra	36.86	259	P	P	10 10 23.5	-0.4
FORT	Forrest	40.48	235	P	P	10 10 55.6	+1.6
FORT				IAmb	IAmb	10 11 10.6	
	comp=Z,18nm,0.9s						
SANI	Sanana	41.15	280	P	P	10 10 59.1	-0.5
	comp=Z,36nm,1.0s						
SANI	Sanana	41.15	280	P	P	10 10 59.2	-0.4
	comp=Z,36nm,0.9s						
PPT	Papeete	42.99	104	LR	LR	10 25 20.0	
	comp=Z,35nm,21.0s,baz=244,slow=31						
PPT2	Papeete2	43.00	104	*e*LR	LR	10 23 14.2	
	comp=Z,169nm,31.0s						
PSA00	Pilbara Seismi	45.70	251	P	P	10 11 36.1	-0.1
PSA00	Pilbara Seismi	45.70	251	P	P	10 11 35.7	-0.5
PSA00				IAmb	IAmb	10 11 37.2	
	comp=Z,14nm,1.0s						
PSA00	Pilbara Seismi	45.70	251	P	P	10 11 36.4	+0.2
MBWA	Marble Bar	45.77	251	P	P	10 11 37.1	+0.4
BNSI	Bone	46.35	275	P	P	10 11 41.7	+0.4
	comp=Z,1μmcomp=Z,69nm,1.0s						
KAPI	Kappang	46.58	274	LR	LR	10 32 16.8	
	comp=Z,19nm,20.1s,baz=128,slow=37						
KAPI	Kappang	46.58	274	P	P	10 11 44.7	+1.5
	comp=Z,39nm,1.0s						
TOLI2	Tolitoli	47.00	282	P	P	10 11 47.4	+0.9
MEEK	Meekatharra	47.47	244	P	P	10 11 50.2	+0.2
MPSI	Mapaga	47.64	281	P	P	10 11 50.2	-1.2
	comp=Z,28nm,0.9s						
PLAI	Plampang	47.93	268	P	P	10 11 52.5	-1.2
	comp=Z,43nm,1.4s						
TWSI	Taliwang, Sumb	48.82	268	P	P	10 11 59.5	-1.0
	comp=Z,11nm,0.6s						
KLBR	Kellerberrin	49.17	238	P	P	10 12 02.4	-0.6
NWAO	Narrogin (SRO)	49.91	236	P	P	10 12 09.1	+0.5
IGBI	Denpasar	50.51	268	P	P	10 12 12.7	-0.6
	comp=Z,69nm,0.9s						
MUN	Mundaring	50.54	238	P	P	10 12 14.0	+0.7
	comp=Z,35nm,1.1s						
SRBI	Singaraja	50.54	269	P	P	10 12 13.1	-0.4
	comp=Z,27nm,1.1s						
JAGI	Jajag, Banyuwa	51.53	268	P	P	10 12 19.3	-1.7
	comp=Z,54nm,0.9s						
GMJI	Gumukmas	52.25	268	P	P	10 12 24.6	-1.7
	comp=Z,32nm,1.2s						

TAOE	Nuku Hiva Isla	52.60	93	eLR	LR	10 27 45.0	
	comp=Z,91nm,27.5s						
JMN	Monobe	54.40	327	P	P	10 12 41.3	-0.4
MJAR	Matsushiro Arr	54.46	332	P	P	10 12 40.8	-1.2
	comp=Z,3.6nm,0.8s,baz=167,slow=8.1,SNR=5.0						
MAT	Matsushiro	54.46	332	P	P	10 12 40.8	-1.3
PCJI	Pacitan	54.48	268	P	P	10 12 42.6	-0.1
	comp=Z,106nm,0.9s						
WOJI	Wonogiri, Jawa	54.78	268	P	P	10 12 44.6	-0.2
	comp=Z,34nm,2.1s						
UGM	Wanagama	55.16	268	P	P	10 12 47.3	-0.3
	comp=Z,76nm,1.9s						
CMJI	Cimerak	57.22	268	P	P	10 13 00.7	-1.5
	comp=Z,36nm,0.7s						
LEM	Lembang	58.17	269	P	P	10 13 09.3	+0.2
	comp=Z,51nm,0.8s						
KSRS	Korea Array	60.42	325	P	P	10 13 23.9	+0.1
	comp=Z,2.3nm,0.7s,baz=136,slow=7.3,SNR=10						
MDSI	Maura Dua	61.94	271	P	P	10 13 32.9	-1.8
	comp=Z,8.0nm,2.8s						
NJ2	Nanjing	62.63	315	eP	P	10 13 39.9	+1.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USRK	Ussuriysk Ar.	63.43	333	P	P	10 13 44.6	+0.8
	comp=Z,4.6nm,0.9s,baz=126,slow=4.9,SNR=7.1						
PETK	Petropavlovsk-	64.53	354	P	P	10 13 51.4	+0.4
	comp=Z,3.3nm,0.8s,baz=168,slow=5.6,SNR=4.1						
PETK				LR	LR	10 34 45.0	
	comp=Z,77nm,21.8s,baz=98,slow=29						
CN2	Changchun	66.26	329	eP	P	10 14 02.3	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VNDA	Vanda	66.31	181	P	P	10 14 02.6	+0.5
VNDA				IAmb	IAmb	10 14 04.1	
	comp=Z,13nm,0.9s						
SBA	Scott Base	66.60	180	P	P	10 14 05.0	+1.1
IPM	Ipoh	66.92	280	P	P	10 14 06.6	-0.5
IPM				IAmb	IAmb	10 14 08.1	
	comp=Z,19nm,1.0s						
IPM	Ipoh	66.92	280	P	P	10 14 08.0	+0.8
	comp=Z,21nm,1.2s						
ENH	Enshi	68.55	309	P	P	10 14 15.8	-1.2
ENH				IAmb	IAmb	10 14 17.4	
	comp=Z,17nm,1.0s						
BJI	Beijing	69.06	321	P	P	10 14 20.3	+0.3
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN	Xi'an	70.75	312	P	P	10 14 30.9	+0.3
XAN				pP	pP	10 14 53.6	-2.0
XAN				pmax	pmax		
	comp=Z,21nm,0.7s						
KMI	Kunming	71.80	301	⇑P	P	10 14 38.3	+1.0
KMI				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC	Hu-ho-hao-te	72.42	319	eP	P	10 14 41.0	+0.5
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,6.3s						
CMAR	Chiang Mai Arr	72.81	293	P	P	10 14 43.9	+0.7
	comp=Z,5.1nm,0.8s,baz=118,slow=4.3,SNR=30						
CMAR	Chiang Mai Arr	72.81	293	P	P	10 14 43.1	-0.1
CHTO	Chiang Mai	72.92	294	P	P	10 14 43.8	0.0
CHTO	Chiang Mai	72.92	294	P	P	10 14 44.5	+0.7
	comp=Z,4.8nm,1.2s						
LZH	Lanzhou	75.39	312	eP	P	10 14 59.0	+1.0
LZH				pP	pP	10 15 22.3	-1.0
LZH				sP	sP	10 15 30.3	-3.7
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
KDAK	Kodiak Island	76.52	21	P	P	10 15 03.1	-0.6
	comp=Z,6.0nm,1.0s,baz=170,slow=6.1,SNR=11						
KDAK	Kodiak Island	76.52	21	P	P	10 15 04.3	+0.7
QSPA	South Pole Qui	78.76	180	P	P	10 15 16.1	-0.2
QSPA				IAmb	IAmb	10 15 17.3	
	comp=Z,20nm,1.1s						
ULN	Ulaanbaatar	78.86	324	P	P	10 15 16.9	-0.3
ULN				IAmb	IAmb	10 15 18.8	
	comp=Z,15nm,1.1s						
BILL	Bilibino	79.08	360	P	P	10 15 18.5	+0.8
BILL				IAmb	IAmb	10 15 19.1	
	comp=Z,13nm,1.2s						
L19K	White Mountain	79.16	17	P	P	10 15 19.2	+0.9
L19K				IAmb	IAmb	10 15 20.6	
	comp=Z,7.7nm,0.8s						
SONM	Songino Array	79.22	324	P	P	10 15 19.6	+0.5
	comp=Z,3.2nm,0.6s,baz=134,slow=5.8,SNR=19						
SONM				LR	LR	10 48 23.7	
	comp=Z,66nm,21.0s,baz=34,slow=34						
SONM	Songino Array	79.22	324	P	P	10 15 19.1	0.0
GTA	Gaotai	79.68	314	⇑P	P	10 15 22.8	+1.0
GTA				pP	pP	10 15 46.6	-0.7
GTA				sP	sP	10 15 59.6	+1.7
GTA				pmax	pmax		
	comp=Z,13nm,1.1s						
CAST	Castle Rocks	80.93	18	P	P	10 15 27.7	-0.1
CAST				IAmb	IAmb	10 15 30.6	
	comp=Z,7.3nm,0.8s						
SHL	Shillong	81.20	298	P	P	10 15 30.6	+0.2
SHL				IAmb	IAmb	10 15 30.9	
	comp=Z,17nm,1.1s						
KTH	Kantishna Hill	81.38	18	P	P	10 15 31.6	+1.3
RND	Reindeer	81.91	19	P	P	10 15 34.5	+1.4
RND				IAmb	IAmb	10 15 36.4	
	comp=Z,9.0nm,1.0s						
N25K	Chitina, Valde	82.09	21	P	P	10 15 33.8	-0.2
N25K				IAmb	IAmb	10 15 35.7	
	comp=Z,10nm,0.7s						
GLB	Gilahina Butte	82.26	22	P	P	10 15 33.3	-1.6
GLB				IAmb	IAmb	10 15 36.5	
	comp=Z,12nm,0.9s						
I21K	Tanana	82.29	16	P	P	10 15 35.9	+1.0
I21K				IAmb	IAmb	10 16 04.5	
	comp=Z,17nm,1.5s						
M26K	Nabesna, AK	83.18	21	P	P	10 15 40.9	+1.2
M26K				IAmb	IAmb	10 15 41.9	
	comp=Z,18nm,1.1s						
TCOL	CIGO, UAF Yank	83.26	18	P	P	10 15 39.7	-0.2
TCOL				IAmb	IAmb	10 15 41.5	
	comp=Z,13nm,0.7s						
COLA	College	83.27	18	P	P	10 15 40.1	+0.2
COLA				IAmb	IAmb	10 15 41.5	
	comp=Z,13nm,0.7s						
RIDG	Independent Ri	83.43	20	P	P	10 15 41.9	+1.0
RIDG				IAmb	IAmb	10 15 43.2	
	comp=Z,19nm,1.1s						
L26K	Log Cabin Wild	83.46	21	P	P	10 15 41.7	+0.7
L26K				IAmb	IAmb	10 15 43.6	
	comp=Z,12nm,1.1s						
IL31		83.49	18	P	P	10 15 41.0	-0.1
ILAR	Eielson Array	83.49	18	P	P	10 15 41.0	-0.1
	comp=Z,2.5nm,0.5s,baz=258,slow=5.0,SNR=74						
ILAR				pP	pP	10 16 05.5	-1.1
	comp=Z,1.8nm,0.9s,baz=228,slow=6.0,SNR=2.9						
ILAR	Eielson Array	83.49	18	P	P	10 15 41.0	-0.1
DOT	Dot Lake	83.63	20	P	P	10 15 43.0	+1.1
DOT				IAmb	IAmb	10 15 43.6	
	comp=Z,13nm,0.8s						
SCRK	Sand Creek	83.87	20	P	P	10 15 44.3	+1.0
SCRK				IAmb	IAmb	10 15 45.1	
	comp=Z,14nm,0.9s						
L27K	Beaver Creek,	84.02	21	P	P	10 15 45.4	+1.5
BCAR	Beaver Creek A	84.04	21	P	P	10 15 44.9	+0.9
MAW	Mawson	84.79	202	P	P	10 15 47.7	0.0
	comp=Z,4.2nm,0.9s,baz=99,slow=6.8,SNR=4.0						
EGAK	Eagle	85.33	20	P	P	10 15 50.5	+0.1
EGAK				IAmb	IAmb	10 15 52.5	
	comp=Z,10nm,0.7s						
ODAN	Odare	85.44	298	eP	P	10 15 51.8	-0.3
	comp=Z,26nm,0.6s						
NVAR	Mina Array Bea	85.64	50	P	P	10 15 54.3	+1.5
	comp=Z,1.7nm,0.7s,baz=239,slow=8.1,SNR=11						
NV11	Mina Array Sit	85.75	50	P	P	10 15 54.6	+1.3
NV11				IAmb	IAmb	10 16 20.0	
	comp=Z,16nm,1.5s						
KVN	Kaiserville	85.98	49	P	P	10 15 53.2	-1.3
KVN				IAmb	IAmb	10 15 56.7	
	comp=Z,12nm,1.5s						
RAMN	Ramite	86.14	298	eP	P	10 15 55.7	+0.1
	comp=Z,8.7nm,0.5s						
JIRN	Jiri	86.67	299	eP	P	10 15 58.4	+0.1
GUN	Gumba	87.00	299	eP	P	10 15 59.8	-0.1
PKI	Pulchoki	87.32	299	eP	P	10 16 01.0	-0.4
PKIN	Phulchoki	87.33	299	eP	P	10 16 00.8	-0.6
GKN	Gorkha	88.09	299	eP	P	10 16 04.2	-0.7
DANN	Dangsing	88.92	299	eP	P	10 16 08.1	-0.9
	comp=Z,50nm,0.8s						
KOLN	Koldanda	88.93	298	eP	P	10 16 08.0	-0.9
	comp=Z,31nm,0.9s						
PYUN	Piuthan	89.53	299	eP	P	10 16 10.2	-1.5
	comp=Z,28nm,0.9s						
WMQ	Urumqi	89.71	315	eP	P	10 16 12.1	+0.1
WMQ				sP	sP	10 16 45.5	-2.9
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.7s						
SYO	Syowa Base	91.79	197	⇓eP	P	10 16 22.2	+1.1
PDAR	Pinedale Array	93.19	47	P	P	10 16 29.6	+1.2
	comp=Z,0.7nm,0.9s,baz=212,slow=3.2,SNR=4.5						
PDAR				PKKPbc	PKKPdf	10 33 36.3	0.0
	comp=Z,0.6nm,0.7s,baz=109,slow=4.9,SNR=6.3						
A36M	Sachs Harbour	94.09	17	P	P	10 16 32.0	+0.4
ZAA0	Zalesovo Array	94.11	324	P	P	10 16 29.9	-2.1
ZAA0				IAmb	IAmb	10 16 32.0	
	comp=Z,5.6nm,0.9s						
ZALV	Zalesovo Beam	94.11	324	P	P	10 16 31.6	-0.4
	comp=Z,3.6nm,0.7s,baz=116,slow=4.2,SNR=20						
ZALV	Zalesovo Beam	94.11	324	P	P	10 16 30.7	-1.3
MK31	Makanchi Array	94.13	317	P	P	10 16 31.1	-1.2
MKAR	Makanchi Array	94.13	317	P	P	10 16 32.3	-0.1
	comp=Z,9.7nm,0.7s,baz=87,slow=6.0,SNR=78						
MKAR				pP	pP	10 16 56.8	-1.5
	comp=Z,1.9nm,0.7s,baz=96,slow=7.0,SNR=3.7						
MKAR	Makanchi Array	94.13	317	P	P	10 16 32.0	-0.4
MAKZ	Makanchi	94.34	317	P	P	10 16 33.0	-0.3
YKA	Yellowknife Ar	94.84	27	P	P	10 16 34.3	-0.8
	comp=Z,0.9nm,0.5s,baz=257,slow=4.6,SNR=8.2						
TXAR	Lajitas Array	95.33	61	P	P	10 16 39.5	+1.2
	comp=Z,0.3nm,0.5s,baz=224,slow=5.0,SNR=3.1						
ARCES	ARCESS Array B	116.69	346	PKP	PKPdf	10 21 56.7	-0.2
	comp=Z,2.6nm,0.5s,baz=83,slow=2.4,SNR=24						
ARCES	ARCESS Array B	116.69	346		PKPdf	10 21 56.2	-0.6
FINES	FINESS Array B	122.20	339	PKP	PKPdf	10 22 07.5	-0.1
	comp=Z,2.4nm,0.7s,baz=14,slow=2.0,SNR=16						
FINES	FINESS Array B	122.20	339		PKPdf	10 22 07.0	-0.6
BOSA	Boshof	125.43	223	PKP	PKiKP	10 22 15.5	0.0
	comp=Z,6.6nm,0.7s,baz=173,slow=1.4,SNR=14						
BOSA	Boshof	125.43	223		PKPdf	10 22 15.2	+0.1
NB2	NORSAR Subarra	127.07	345	PKPdf	PKPdf	10 22 16.0	-1.1
	comp=Z,3.2nm,1.2s,baz=39,slow=1.9						
NOA	NORSAR Array B	127.07	345	PKP	PKPdf	10 22 17.0	-0.1
	comp=Z,1.0nm,0.7s,baz=337,slow=1.9,SNR=5.7						
AKASG	Malin Array Be	127.39	327	PKP	PKPdf	10 22 17.5	-0.4
	comp=Z,0.2nm,0.3s,baz=50,slow=2.3,SNR=10						
BRTR	Keskin Array B	129.59	313	PKP	PKPdf	10 22 22.8	+0.1
	comp=Z,0.6nm,0.8s,baz=350,slow=5.3,SNR=4.1						
CONA	Conrad Observa	135.89	332	eP	PKiKP	10 22 35.8	0.0
	comp=Z,1.1nm,0.6s						
GERES	GERESS Array B	136.18	334	PKP	PKPdf	10 22 33.6	-1.1
	comp=Z,0.8nm,0.7s,baz=9.5,slow=1.2,SNR=4.9						
SOKA	Soboth	137.19	331	eP	PKiKP	10 22 37.7	-0.8
	comp=Z,2.1nm,0.8s						
WATA	Walderalm	138.25	334	eP	PKPdf	10 22 37.5	-1.2
	comp=Z,2.1nm,0.7s						
WTTA	Wattenberg	138.28	334	eP	PKPdf	10 22 39.1	+0.3
	comp=Z,3.7nm,1.0s						
ABTA	Abfaltersbach	138.30	333	eP	PKPdf	10 22 38.2	-0.5
	comp=Z,2.2nm,0.8s						
MOTA	Moosalm	138.44	335	eP	PKPdf	10 22 39.9	+0.9
	comp=Z,2.4nm,0.7s						
FETA	Feichten	138.85	335	eP	PKPdf	10 22 40.0	+0.1
	comp=Z,4.8nm,1.1s						
KEST	Kesra	147.98	323	PKPbc	PKPbc	10 22 59.7	+0.5
	comp=Z,12nm,0.9s,baz=315,slow=6.4,SNR=12						
KEST				pPKPbc	pPKPdf	10 23 24.4	+1.3
	comp=Z,7.9nm,0.9s,baz=317,slow=7.8,SNR=3.8						
ESDC	Sonseca Array	150.43	345	PKPbc	PKPbc	10 23 04.9	-0.3
	comp=Z,2.1nm,0.8s,baz=9.4,slow=2.7,SNR=12						
TORD	Torodi Ar. Bea	164.96	279	PKP	PKPdf	10 23 18.1	-0.2
	comp=Z,1.9nm,0.9s,baz=1.7,slow=1.4,SNR=8.8						
TORD				PKPab	PKPab	10 24 14.6	-0.6
	comp=Z,2.6nm,1.1s,baz=78,slow=2.9,SNR=6.4						
TORD	Torodi Ar. Bea	164.96	279		PKPdf	10 23 18.3	0.0
TORD				PKPab	PKPab	10 24 17.0	+1.8
KIC	Kosan Boka	170.02	242	ePKP2	PKPab	10 24 37.5	0.0
	comp=Z,13nm,0.9s						
LIC	Lamto	170.20	240	ePKP2	PKPab	10 24 38.4	+0.1
	comp=Z,29nm,0.9s						
DBIC	Dimbokro	170.27	243	PKP	PKPdf	10 23 21.4	-0.7
	comp=Z,2.9nm,0.8s,baz=182,slow=4.9,SNR=3.5						
DBIC				PKPab	PKPab	10 24 38.6	-0.1
	comp=Z,5.6nm,0.9s,baz=140,slow=11,SNR=5.1						
TIC	Toumodi	170.40	242	ePKP2	PKPab	10 24 39.1	-0.1

IDC 13 10:27:57.3±4.1,**3°.85S**×**141°.75E,h0**^{km}**,mb3.5**/3,
mb1 3.9/4,**mb1mx3.6**/26,**mbtmp3.7**/4,**ML4.2**/1,**MS3.7**/1,
Ms1 3.7/1,**ms1mx2.6**/26,**Error ellipse: s-maj=120.5km
s-min=32.6km az=95.0,New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.56	204	P	Pn	10 32 03.4	-0.3
	0.9nm,0.3s,baz=24,slow=12,SNR=64						
ASAR	Alice Springs	21.11	200	P	P	10 32 43.4	-0.4
	1.6nm,0.5s,baz=27,slow=11,SNR=38						
FITZ	Fitzroy Crossi	21.20	227	P	P	10 32 45.4	+0.7
	2.0nm,0.7s,baz=35,slow=9.3,SNR=3.4						
RAR	Rarotonga	59.29	112	LR	LR	11 02 17.1	
	comp=Z,52nm,18.5s,baz=278,slow=35						
MKAR	Makanchi Array	72.55	322	P	P	10 39 26.4	0.0
	0.2nm,0.4s,baz=99,slow=7.8,SNR=2.6						

NNC 13 10:41:06.5±15.0,**37°.62N**×**73°.59E,h0**^{km}**,mb3.7,mpv3.3,
2C-4D,Error ellipse: s-maj=114.0km s-min=79.7km
az=157.0,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.06	8	⇓Pg	Pb	10 42 38.5	+2.5
	3.3nm,0.6s						
AAK				⇑Lg	Lg	10 43 48.7	
	5.1nm,0.9s						
TKM2	Tokmak 2	5.52	16	⇑Pg	Pg	10 42 49.6	-2.6
	1.6nm,0.6s						
TKM2				⇓Lg	Lg	10 44 08.8	
	1.6nm,0.6s						
KK08	Karatay Array	5.97	338	⇓Pn	Pn	10 42 35.1	-1.1
	1.1nm,0.4s,baz=155,slow=12						
KK08				⇓Sn	Sn	10 43 45.1	-0.2
	3.5nm,0.7s,baz=148,slow=22						

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*IDC **13** 11:10:06.7±1.3, 30°.98N×131°.37E, h0^{km}, mb3.6/9,
mb1 3.7/11, mb1mx3.5/45, mbtmp3.6/11, ML3.4/2, MS2.9/2,
Ms1 2.9/2, ms1mx2.6/39, Error ellipse: s-maj=37.7km
s-min=25.9km az=78.0*

*JMA **13** 11:10:15.7±0.1, 31°.40N×131°.43E, h37^{km}±1^{km}, M3.4
Broadband fault plane solution: P waves. NP1:
ϕ_s181.00000°, δ23.00000°, λ73.00000°. NP2:ϕ_s19.00000°,
δ68.00000°, λ97.00000°. Principal axes: T Plg66.0000°,
Azm301.0000°; N Plg6.0000°, Azm197.0000°; P
Plg23.0000°, Azm104.0000°;*

JMA Felt I J1.

ISC 13 11:10:14.5±1.0,**31°.37N**±0°.04×**131°.54E**±0°.07,**h36**^{km}±1^{km}**,
n22,**σ**1**^{s}**.55**/31,**mb3.5**/9,**2C-8D,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNAR	Kushima--Naru	0.28	306	⇓P	Pn	11 10 22.4	-0.1
JNAR				S	Sn	11 10 27.3	-1.7
JNKG	Nichinankitago	0.33	335	⇓P	Pn	11 10 23.3	+0.6
JNKG				S	Sn	11 10 29.1	0.0
JTSR	Tashiro 2	0.56	250	⇓P	Pn	11 10 26.1	0.0
JTSR				S	Sn	11 10 34.0	-0.2
JTZ	Takazaki	0.66	325	⇓P	Pn	11 10 27.3	-0.1
JTZ				S	Sn	11 10 36.1	-0.4
JTN	Tanegashima 3	0.85	214	⇓P	Pn	11 10 31.6	+1.6
JTN				S	Sn	11 10 43.9	+2.6
JTSN	Tsuno	0.88	358	⇑P	Pn	11 10 31.1	+0.7
JTSN				S	Sn	11 10 43.3	+1.4
JSU	Suzuyama	0.93	279	⇓P	Pn	11 10 31.2	+0.1
JSU				S	Sn	11 10 43.3	0.0
JMTN	Minamitane	1.11	210	⇓P	Pn	11 10 35.2	+1.7
JMTN				eS	Sn	11 10 50.1	+2.6
JZO	Okuchi	1.11	314	⇓P	Pn	11 10 33.8	+0.2
JIU3	Izumi3	1.33	333	⇑P	Pn	11 10 37.5	+0.9
JIU3				S	Sn	11 10 53.8	+0.8
JNU	Nakatsue	1.84	343	Pn	Pn	11 10 44.7	+1.1
	14nm,0.3s,baz=106,slow=0.8,SNR=90						
JNU				Sn	Sn	11 11 09.2	+3.6
	27nm,0.3s,baz=54,slow=22,SNR=6.1						
KSRS	Korea Array	6.77	335	Pn	Pn	11 11 54.4	+3.1
	0.1nm,0.3s,baz=153,slow=14,SNR=3.0						
KSRS				LR	LR	11 14 34.8	
	comp=Z,49nm,21.4s,baz=75,slow=38						
KLR	Kul'dur	17.85	0	P	P	11 14 21.7	+1.4
	0.3nm,0.3s,baz=171,slow=7.8,SNR=8.3						
SONM	Songino Array	25.25	318	P	P	11 15 36.8	-0.5
	0.6nm,0.5s,baz=129,slow=9.3,SNR=6.1						
SONM				LR	LR	11 25 14.4	
	comp=Z,50nm,19.4s,baz=12,slow=36						
MKAR	Makanchi Array	40.53	307	P	P	11 17 49.1	-1.1
	0.3nm,0.7s,baz=90,slow=12,SNR=4.2						
KURBB	Kurchatov Arra	43.35	312	P	P	11 18 11.7	-1.3
	0.3nm,0.6s,baz=100,slow=8.5,SNR=2.7						
WRA	Warramunga Arr	51.09	177	P	P	11 19 08.5	-5.1
	0.2nm,0.9s,baz=329,slow=7.7,SNR=1.2						
ILAR	Eielson Array	58.56	30	P	P	11 20 07.9	+0.8
	0.2nm,0.7s,baz=288,slow=6.9,SNR=6.3						
FINES	FINESS Array B	69.84	330	P	P	11 21 18.9	-2.2
	1.3nm,0.7s,baz=66,slow=6.7,SNR=4.6						
AKASG	Malin Array Be	73.52	320	P	P	11 21 42.3	-1.2
	0.8nm,0.5s,baz=56,slow=6.3,SNR=3.0						
NOA	NORSAR Array B	75.98	334	P	P	11 21 56.2	-1.3
	0.3nm,0.5s,baz=49,slow=5.7,SNR=2.1						
BRTR	Keskin Array B	76.17	308	P	P	11 21 58.2	-1.0
	0.7nm,0.7s,baz=75,slow=6.1,SNR=3.8						

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*NDI **13** 11:17:26.2±2.2, 24°.60N×95°.39E, h110^{km}±32^{km}, ML4.2,
mb4.0(NEIC)*

*NEIC **13** 11:17:29.2±1.8, 24°.6N±0°.2×95°.0E±0°.2, h147^{km}±10^{km},
mb4.0/5, Error ellipse: s-maj=35.2km s-min=12.1km
az=49.0*

*IDC **13** 11:17:30.3±3.1, 24°.73N×95°.33E, h152^{km}±30^{km}, mb3.5/13,
mb1 3.6/14, mb1mx3.3/54, mbtmp3.9/14, Error ellipse:
s-maj=31.3km s-min=11.7km az=57.0*

ISC 13 11:17:29.8±0.6,**24°.66N**±0°.08×**95°.03E**±0°.07,**h150**^{km}**,n49,**
σ**1**^{s}**.92**/63,**mb3.9**/16,**Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOHI	KOHIMA	1.34	322	eP	Pn	11 17 54.6	-3.4
KOHI				eS	Sn	11 18 15.3	-4.2
KOHI				IAML		11 18 23.9	
	comp=N,993nm,0.7s						
KOHI				IAML		11 18 24.0	
	comp=E,957nm,0.4s						
MOKO	MOKOCHONG	1.72	345	eP	Pn	11 17 58.6	-3.3
MOKO				eS	Sn	11 18 21.2	-5.4
MOKO				IAML		11 18 23.2	
	comp=N,2μm,0.5s						
MOKO				IAML		11 18 23.3	
	comp=E,4μm,0.5s						
JORH	JORHAT	2.19	342	eS	Sn	11 18 31.7	-4.3
ITAN	ITANAGAR	2.74	335	eP	Pn	11 18 10.0	-3.9
ITAN				eS	Sn	11 18 43.5	-4.5
ITAN				IAML		11 18 49.7	
	comp=E,1μm,0.2s						
DIBR	DIBRUGARH	2.80	358	eS	Sn	11 18 42.7	-6.6
SHL	Shillong	2.99	288	eP	Pn	11 18 16.2	-0.9
SHL				eS	Sn	11 18 52.4	-1.4
SHL				IAML		11 18 54.2	
	comp=E,3μm,0.2s						
SHL				IAML		11 18 54.4	
	comp=N,3μm,0.2s						
SHL	Shillong	2.99	288	Pn	Pn	11 18 16.3	-0.9
LSA	Lhasa	6.09	326	Pn	Pn	11 18 59.4	+1.3
GTK	Tadong	6.36	296	eP	Pn	11 19 02.6	+1.2
GTK				eS	Sn	11 20 12.0	-1.1
CHTO	Chiang Mai	6.86	147	Pn	Pn	11 19 05.6	-2.5
TAPN	Taplejung	7.11	294	ePn	Pn	11 19 12.2	+0.7
TAPN				eSn	Sn	11 20 30.4	-0.9
	comp=N,77nm,0.5s						
CMAR	Chiang Mai Arr	7.17	149	P	Pn	11 19 11.2	-1.0
	comp=N,1.0nm,0.3s,baz=326,slow=13,SNR=19						
ODAN	Odare	7.22	289	ePn	Pn	11 19 12.8	-0.3
ODAN				eSn	Sn	11 20 31.9	-2.1
	comp=N,99nm,0.4s						
RAMN	Ramite	7.93	289	ePn	Pn	11 19 22.7	+0.2
JIRN	Jiri	8.48	293	ePn	Pn	11 19 29.9	-0.1
JIRN				eSn	Sn	11 21 03.1	-1.4
GUN	Gumba	8.82	294	ePn	Pn	11 19 34.3	-0.2
GUN				eSn	Sn	11 21 11.1	-1.6
PKI	Pulchoki	9.12	291	ePn	Pn	11 19 38.2	-0.2
PKI				eSn	Sn	11 21 17.8	-1.9
	comp=N,27nm,0.5s						
PKIN	Phulchoki	9.13	291	ePn	Pn	11 19 38.3	-0.2
PKIN				eSn	Sn	11 21 18.0	-1.9
	comp=N,41nm,0.4s						
KKN	Kakani	9.29	292	ePn	Pn	11 19 40.4	-0.2
KKN				eSn	Sn	11 21 21.5	-2.2
	comp=N,30nm,0.6s						
DMN	Daman	9.38	290	ePn	Pn	11 19 42.6	+0.7
GKN	Gorkha	9.89	292	ePn	Pn	11 19 48.6	0.0
GKN				eSn	Sn	11 21 35.7	-2.6
KOLN	Koldanda	10.72	289	ePn	Pn	11 19 59.1	-0.4
KOLN				eSn	Sn	11 21 54.6	-3.5
DANN	Dangsing	10.74	292	ePn	Pn	11 20 00.6	+0.8
DANN				eSn	Sn	11 21 55.9	-2.9
PYUN	Piuthan	11.32	290	ePn	Pn	11 20 06.3	-1.1
PYUN				eSn	Sn	11 22 10.2	-2.5
	comp=N,36nm,0.7s						
UBPT	Khong Chiam	13.54	132	Pn	Pn	11 20 34.7	-1.2
MK31	Makanchi Array	24.33	338	P	P	11 22 34.9	+1.4
MK31				IAmb	IAmb	11 22 35.5	
	comp=Z,1.3nm,0.7s						
MKAR	Makanchi Array	24.33	338	P	P	11 22 35.0	+1.5
	comp=Z,1.8nm,0.6s,baz=146,slow=9.8,SNR=27						
MKAR	Makanchi Array	24.33	338	P	P	11 22 34.3	+0.8
AAK	Ala-Archa	24.66	322	P	P	11 22 39.7	+2.9
	comp=Z,1.0nm,0.5s,baz=231,slow=15,SNR=3.9						
SONM	Songino Array	24.83	18	P	P	11 22 37.0	-1.2
	comp=Z,0.2nm,0.3s,baz=206,slow=10,SNR=4.3						
KURBB	Kurchatov Arra	28.89	338	P	P	11 23 15.0	+0.7
	comp=Z,0.6nm,0.2s,baz=145,slow=9.9,SNR=4.4						
ABKAR	Akbulak array	36.75	321	P	P	11 24 24.4	+1.9
BRTR	Keskin Array B	53.12	302	P	P	11 26 33.1	+0.9
	comp=Z,0.5nm,0.6s,baz=121,slow=9.0,SNR=3.7						
AKASG	Malin Array Be	56.13	316	P	P	11 26 53.8	+0.3
	comp=Z,0.6nm,0.3s,baz=76,slow=6.7,SNR=4.8						
WB0	Warramunga Arr	58.47	136	P	P	11 27 09.5	-0.8
WRA	Warramunga Arr	58.56	136	P	P	11 27 10.0	-0.9
	comp=Z,1.3nm,0.7s,baz=323,slow=7.5,SNR=24						
WRA	Warramunga Arr	58.56	136	P	P	11 27 09.3	-1.7
WB2	Warramunga Arr	58.57	136	P	P	11 27 09.8	-1.2
WB2				IAmb	IAmb	11 27 11.6	
	comp=Z,2.6nm,0.8s						
FINES	FINESS Array B	58.61	328	P	P	11 27 11.6	+0.9
	comp=Z,3.0nm,0.9s,baz=103,slow=8.0,SNR=8.2						
FINES	FINESS Array B	58.61	328	P	P	11 27 10.4	-0.3
WR0	Warramunga Arr	58.70	136	P	P	11 27 10.1	-1.9
WR0				IAmb	IAmb	11 27 11.7	
	comp=Z,2.1nm,0.8s						
ARCES	ARCESS Array B	59.98	338	P	P	11 27 20.4	+0.4
	comp=Z,5.3nm,1.0s,baz=92,slow=6.6,SNR=2.2						
ASAR	Alice Springs	61.06	139	P	P	11 27 27.7	-0.3
	comp=Z,0.8nm,0.7s,baz=322,slow=6.7,SNR=19						
NB2	NORSAR Subarra	65.78	328	P	P	11 27 58.5	0.0
	comp=Z,0.7nm,0.7s,baz=83,slow=6.5						
NOA	NORSAR Array B	65.78	328	P	P	11 27 58.6	0.0
	comp=Z,0.9nm,0.8s,baz=82,slow=6.6,SNR=4.1						
BMAR	Burnt Mountain	78.17	20	P	P	11 29 12.2	0.0
BCAR	Beaver Creek A	81.81	23	P	P	11 29 31.7	-0.1
BOSA	Boshof	85.47	236	P	P	11 29 53.2	+2.1
	comp=Z,3.9nm,1.0s,baz=73,slow=4.0,SNR=3.6						
TORD	Torodi Ar. Bea	87.58	283	P	P	11 30 03.5	+2.0
	comp=Z,0.7nm,0.6s,baz=57,slow=3.9,SNR=5.5						

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*JMA **13** 11:22:06.8±0.2, 37°.06N×135°.08E, h381^{km}, M2.8*

*IDC **13** 11:22:07.8±1.3, 36°.94N×135°.21E, h366^{km}±19^{km}, mb2.4/2,
mb1 2.6/5, mb1mx2.2/44, mbtmp3.2/5, Error ellipse:
s-maj=31.9km s-min=24.3km az=41.0*

ISC 13 11:22:08.0±1.1,**37°.0N**±0°.1×**135°.1E**±0°.1,**h350**^{km}**,n12,**
σ**1**^{s}**.94**/12,**Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	Wachi	1.76	171	P	Pn	11 23 00.0	+2.2
JYTA	Yamagatataniai	1.96	137	P	Pn	11 23 01.0	+1.9

JNG	**Nsakai**	**2.50**	**103**	P	**Pn**	**11 23 05.2**	**+2.0**
MAT	**Matsushiro**	**2.56**	**100**	P	**Pn**	**11 23 05.2**	**+1.6**
MJAR	**Matsushiro Arr**	**2.56**	**100**	P	**Pn**	**11 23 04.5**	**+0.9**
	0.2nm,0.3s,baz=273,slow=7.7,SNR=9.5						
JSD	**Sado**	**2.72**	**67**	P	**Pn**	**11 23 06.8**	**+2.0**
JIE	**Ise**	**2.95**	**153**	P	**Pn**	**11 23 08.9**	**+1.9**
JMM	**Marumori**	**4.62**	**78**	P	**Pn**	**11 23 24.3**	**+0.9**
KSRS	**Korea Array**	**5.73**	**276**	P	**Pn**	**11 23 37.4**	**+1.8**
	0.1nm,0.3s,baz=93,slow=12,SNR=4.5						
ASAJ	**Asahikawa**	**9.10**	**37**	P	**Pn**	**11 24 14.5**	**-0.5**
	0.8nm,0.3s,baz=232,slow=9.5,SNR=9.6						
MKAR	**Makanchi Array**	**39.81**	**301**	P	**P**	**11 29 08.0**	**-0.4**
	0.1nm,0.4s,baz=102,slow=8.6,SNR=1.2						
WRA	**Warramunga Arr**	**56.67**	**181**	P	**P**	**11 31 13.6**	**-2.4**
	0.1nm,0.4s,baz=358,slow=7.6,SNR=6.1						

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*NEIC **13** 11:37:55.2±0.6, 20°.5S±0°.2×177°.3W±0°.1, h468^{km}±15^{km}, mb4.0/12, Error ellipse: s-maj=31.9km s-min=7.8km az=145.0*

*IDC **13** 11:37:56.2±18.0, 20°.38S×177°.33W, h471^{km}±172^{km}, mb3.1/4, mb1 3.3/4, mb1mx3.0/23, mbtmp3.9/4, Error ellipse: s-maj=169.2km s-min=55.0km az=131.0*

ISC 13 11:37:53.5±1.1**, 20°.5S**±0°.2×**177°.2W**±0°.2**, h450**^{km}**, n18, σ0**^{s}**71**/19**, mb3.9**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.26**	**301**	P	**P**	**11 39 21.1**	**+0.5**
URZ	**Urewera**	**18.34**	**194**	P	**P**	**11 41 39.7**	**+0.3**
XMAS	**Kiritimati**	**29.64**	**43**	P	**P**	**11 43 20.8**	**-0.2**
ARMA	**Armidale**	**29.71**	**244**	P	**P**	**11 43 21.4**	**-0.2**
CTAO	**Charters Tower**	**34.21**	**264**	P	**P**	**11 43 59.5**	**-0.7**
CTAO				IAmb	IAmb	11 44 25.0	
	comp=Z,11nm,1.3s						
COEN	**Coen**	**38.31**	**273**	P	**P**	**11 44 33.9**	**-0.5**
COEN				IAmb	IAmb	11 44 50.7	
	comp=Z,8.3nm,1.3s						
WR0	**Warramunga Arr**	**45.13**	**262**	P	**P**	**11 45 27.8**	**-0.8**
WR0				IAmb	IAmb	11 45 40.1	
	comp=Z,7.2nm,1.5s						
AS31	**Alice Springs**	**45.22**	**257**	P	**P**	**11 45 30.8**	**+1.5**
ASAR	**Alice Springs**	**45.22**	**257**	P	**P**	**11 45 30.4**	**+1.0**
	comp=Z,3.1nm,0.5s,baz=90,slow=8.5,SNR=117						
ASAR				PcP	**pwP**	**11 46 59.8**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=103,slow=3.9,SNR=1.9						
ASAR	**Alice Springs**	**45.22**	**257**	P	**P**	**11 45 29.8**	**+0.4**
WB0	**Warramunga Arr**	**45.30**	**262**	P	**P**	**11 45 30.0**	**0.0**
WB0				IAmb	IAmb	11 45 53.5	
	comp=Z,7.7nm,1.5s						
WB2	**Warramunga Arr**	**45.31**	**262**	P	**P**	**11 45 29.4**	**-0.6**
WRAB	**Tennant Creek**	**45.31**	**262**	P	**P**	**11 45 29.6**	**-0.5**
WRAB				IAmb	IAmb	11 45 36.8	
	comp=Z,4.0nm,1.3s						
WRA	**Warramunga Arr**	**45.32**	**262**	P	**P**	**11 45 29.9**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=96,slow=7.7,SNR=29						
WRA	**Warramunga Arr**	**45.32**	**262**	P	**P**	**11 45 29.3**	**-0.8**
KNRA	**Kununurra**	**51.38**	**266**	P	**P**	**11 46 14.7**	**-0.9**
KNRA				IAmb	IAmb	11 46 28.8	
	comp=Z,18nm,1.3s						
ILAR	**Eielson Array**	**88.17**	**13**	P	**P**	**11 49 54.8**	**-0.1**
	comp=Z,0.1nm,0.5s,baz=226,slow=5.0,SNR=4.3						
SONM	**Songino Array**	**96.25**	**319**	P	**P**	**11 50 33.2**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=116,slow=5.3,SNR=2.1						

IDC 13 11:45:50.3±5.2**, 4°.24S**×**131°.40E, h0**^{km}**, mb3.4**/1**, mb1 3.5**/3**, mb1mx3.3**/23**, mbtmp3.3**/3**, ML2.8**/2**, Error ellipse: s-maj=377.6km s-min=31.5km az=73.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.87**	**170**	Pn	Pn	11 49 33.5	-1.8
	0.0nm,0.3s,baz=350,slow=13,SNR=3.1						
ASAR	**Alice Springs**	**19.47**	**173**	P	Pn	11 50 19.6	-0.4
	0.1nm,0.3s,baz=348,slow=11,SNR=13						
MKAR	**Makanchi Array**	**66.72**	**326**	P	P	11 56 43.3	0.0
	0.3nm,0.8s,baz=126,slow=6.4,SNR=3.7						

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*IDC **13** 12:01:39.9±1.1, 10°.49S×66°.43E, h0^{km}, mb3.7/8, mb1 3.9/8, mb1mx3.6/36, mbtmp3.7/8, MS3.4/8, Ms1 3.4/8, ms1mx3.2/33, Error ellipse: s-maj=39.7km s-min=23.3km az=27.0*

ISC 13 12:01:42.1±1.2**, 10°.5S**±0°.3×**66°.4E**±0°.2**, h14**^{km}**, n22, σ0**^{s}**55**/14**, mb3.9**/13**, MS3.5**/8**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**6.60**	**65**	T	T	12 10 14.1	
	baz=245,slow=76,SNR=42						
H08S3	**Diego Garcia H**	**6.62**	**65**	T	T	12 10 14.7	
	baz=245,slow=76,SNR=44						
H08S2	**Diego Garcia H**	**6.62**	**65**	T	T	12 09 51.0	
	baz=245,slow=76,SNR=50						
OPO	**Ambohidratompo**	**20.27**	**244**	LR	LR	12 12 14.5	
	comp=Z,22nm,19.0s,baz=182,slow=31						
BOSA	**Boshof**	**42.52**	**239**	LR	LR	12 24 07.5	
	comp=Z,36nm,19.2s,baz=358,slow=32						
CMAR	**Chiang Mai Arr**	**43.08**	**48**	P	**P**	**12 09 43.1**	**+1.0**
	0.3nm,0.4s,baz=239,slow=10,SNR=4.9						
CMAR				LR	LR	12 26 04.7	
	comp=Z,28nm,19.1s,baz=151,slow=34						
MAW	**Mawson**	**57.11**	**182**	LR	LR	12 32 09.2	
	comp=Z,31nm,18.6s,baz=100,slow=32						
BRTR	**Keskin Array B**	**58.48**	**331**	P	**P**	**12 11 38.4**	**+0.3**
	0.5nm,0.6s,baz=121,slow=5.6,SNR=2.5						
ASAR	**Alice Springs**	**65.32**	**111**	P	**P**	**12 12 23.9**	**-0.5**
	0.9nm,1.0s,baz=276,slow=5.8,SNR=7.1						
ASAR				LR	LR	12 37 49.8	
	comp=Z,41nm,19.3s,baz=8.5,slow=33						
WRA	**Warramunga Arr**	**65.85**	**107**	P	**P**	**12 12 27.9**	**+0.1**
	1.5nm,1.0s,baz=277,slow=5.4,SNR=8.4						
WRA				LR	LR	12 39 08.0	
	comp=Z,45nm,20.7s,baz=300,slow=34						
ZALV	**Zalesovo Beam**	**66.05**	**12**	P	**P**	**12 12 27.2**	**-1.0**
	0.3nm,0.4s,baz=246,slow=14,SNR=4.2						
SONM	**Songino Array**	**68.01**	**28**	P	**P**	**12 12 40.8**	**-0.3**
	0.3nm,0.4s,baz=256,slow=6.0,SNR=6.4						
TORD	**Torodi Ar. Bea**	**68.40**	**289**	P	**P**	**12 12 44.0**	**0.0**
	0.9nm,1.0s,baz=108,slow=4.1,SNR=4.6						
KEST	**Kesra**	**70.74**	**314**	LR	LR	12 42 22.5	
	comp=Z,38nm,20.8s,baz=240,slow=34						
DBIC	**Dimbokro**	**72.98**	**280**	LR	LR	12 43 46.4	
	comp=Z,59nm,18.8s,baz=352,slow=35						
CONA	**Conrad Observa**	**73.35**	**327**	*e*P	**P**	**12 13 13.0**	**-0.6**
	4.0nm,1.1s						
ABTA	**Abfaltersbach**	**74.50**	**325**	*e*P	**P**	**12 13 20.8**	**+0.5**
	1.8nm,0.8s						
WTTA	**Wattenberg**	**75.28**	**325**	*e*P	**P**	**12 13 24.9**	**-0.1**
	3.7nm,1.1s						
SQTA	**Sankt Quirin**	**75.50**	**325**	*e*P	**P**	**12 13 25.9**	**-0.3**
	5.3nm,1.3s						
FETA	**Feichten**	**75.67**	**324**	*e*P	**P**	**12 13 27.2**	**0.0**
	4.0nm,1.0s						
ESDC	**Sonseca Array**	**81.95**	**313**	P	**P**	**12 14 02.1**	**+0.3**
	0.6nm,0.8s,baz=137,slow=5.2,SNR=4.3						
NVAR	**Mina Array Bea**	**151.84**	**8**	PKPbc	**PKiKP**	**12 21 38.0**	**+0.3**
	0.8nm,0.8s,baz=214,slow=0.1,SNR=3.6						

NNC 13 12:05:10.8±6.4**, 38°.67N**×**73°.03E, h0**^{km}**, mb4.0, mpv3.5, 5C-1D, Error ellipse: s-maj=46.3km s-min=25.3km az=171.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.12**	**15**	⇑Pg	Pn	12 06 18.7	+3.6
	5.1nm,0.7s						
AAK				⇓Lg	Lg	12 07 17.3	
	9.0nm,0.8s						
IUG	**Iuzhnay**	**4.16**	**328**	Pg	Pb	12 06 26.8	+1.8
	256nm,0.8s						
IUG				Lg	Lg	12 07 19.9	
	43nm,0.8s						
TKM2	**Tokmak 2**	**4.67**	**24**	⇑Pg	Pg	12 06 38.8	-1.6
	4.7nm,0.8s						
TKM2				⇑Lg	Lg	12 07 41.5	
	6.9nm,1.0s						
KK08	**Karatay Array**	**4.83**	**337**	⇑Pn	Pn	12 06 22.7	-2.1
	1.9nm,0.5s,baz=153,slow=13						
KK08				⇑Sn	Sn	12 07 24.3	+2.8
	6.3nm,0.8s,baz=156,slow=23						
BRLS	**Borolday**	**4.98**	**332**	Pg	Pb	12 06 41.5	+2.5
	1.2nm,0.4s						
BRLS				Lg	Lg	12 07 44.9	
	2.4nm,0.6s						
DGS	**Degeres**	**5.01**	**24**	Pg	Pg	12 06 44.6	-2.3
	3.8nm,0.4s						
DGS				Lg	Lg	12 07 50.4	
	4.9nm,1.0s						
KRBS	**Karabastau**	**5.40**	**21**	Pg	Pg	12 06 51.9	-2.4
	1.5nm,0.4s						
KRBS				Lg	Lg	12 08 02.5	
	3.0nm,0.5s						
KTBS	**Karatobe**	**5.74**	**27**	Pg	Pg	12 06 58.1	-2.7
	2.0nm,0.4s						
KTBS				Lg	Lg	12 08 13.6	
	6.6nm,0.8s						

KRSC 13 12:07:20.3±2.1**, 50°.08N**×**156°.01E, h238**^{km}±19^{km}**, ML4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.61**	**7**	*e*P	Pn	12 07 52.6	+0.5
SKR				*e*S	S	12 08 17.5	+0.3
KDTR	**Khodutka, Kamc**	**2.17**	**36**	*e*S	S	12 08 36.7	-0.5
MIPR	**Malaya Ipel'ka**	**2.25**	**12**	*e*P	Pn	12 08 03.4	-0.7
MTVR	**Mutnovka**	**2.77**	**29**	*e*S	S	12 08 49.7	+1.2
RUS	**Russkaya**	**2.84**	**33**	*e*P	Pn	12 08 12.4	+2.2
RUS				*e*S	S	12 08 49.4	-0.1
DALK	**Dalny**	**3.42**	**29**	*e*P	Pn	12 08 19.2	+2.5
DALK				*e*S	S	12 09 02.3	+1.1
UGLR	**Uglovaya**	**3.59**	**28**	*e*P	Pn	12 08 21.8	+3.0
UGLR				S	S	12 09 06.5	+1.4
KOK	**Koryaka**	**3.61**	**26**	*e*P	Pn	12 08 21.3	+2.3
AVH	**Avacha**	**3.62**	**27**	P	Pn	12 08 21.1	+2.1
AVH				*e*S	S	12 09 05.5	0.0
SMAR	**Somma**	**3.63**	**28**	*e*P	Pn	12 08 21.9	+2.5
KRER	**Koryakskii**	**3.66**	**27**	*e*P	Pn	12 08 22.6	+3.0
KRER				*e*S	S	12 09 07.2	+0.7
SDLR	**Sedlovina**	**3.67**	**28**	*e*P	Pn	12 08 21.5	+1.8
SDLR				*e*S	S	12 09 05.9	-0.8
SPN	**Mys Shipunski**	**3.93**	**38**	*e*P	Pn	12 08 25.1	+2.5
SPN				*e*S	S	12 09 10.4	-1.5
MKZ	**Mys Kozlova**	**5.70**	**36**	*e*P	Pn	12 08 45.7	+1.5
MKZ				*e*S	S	12 09 46.7	-4.4
KBTR	**Krutoberegovo**	**7.38**	**31**	*e*P	Pn	12 09 05.5	0.0

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*IDC **13** 12:08:29.0±4.9, 30°.63S×71°.70W, h32^{km}±38^{km}, mb3.8/4, mb1 3.9/7, mb1mx3.7/27, mbtmp3.9/7, ML4.1/3, Error ellipse: s-maj=39.7km s-min=20.3km az=127.0*

*GUC **13** 12:08:29.2±0.7, 30°.63S×71°.61W, h32^{km}±2^{km}, ML4.1*

*NEIC **13** 12:08:30.2±1.7, 30°.61S±0°.02×71°.6W±0°.1, h33^{km}±6^{km}, Error ellipse: s-maj=16.4km s-min=1.6km az=99.0*

ISC 13 12:08:28.8±0.7**, 30°.62S**±0°.03×**71°.70W**±0°.06**, h32**^{km}±4^{km}**, n61, σ1**^{s}**18**/69**, mb4.0**/4**, 1C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.08**	**132**	⇑*i*P	**Pb**	**12 08 34.9**	**+0.6**
CO06				*e*S	**Sb**	**12 08 38.3**	**+0.3**
CO06	**Fray Jorge**	**0.08**	**132**		**Pb**	**12 08 34.5**	**+0.3**
CO06				Sg	**Sb**	**12 08 38.6**	**+0.7**
CO05	**La Serena**	**0.81**	**30**	⇓*i*P	**Pb**	**12 08 43.7**	**-0.7**
CO05				*e*S	**Sb**	**12 08 54.4**	**-0.6**
CO05	**La Serena**	**0.81**	**30**		**Pb**	**12 08 43.8**	**-0.5**
CO05				Sn	**Sb**	**12 08 55.1**	**+0.1**
CO03	**El Pedregal**	**0.90**	**104**	⇓*i*P	**Pb**	**12 08 44.9**	**-1.1**
CO03				*e*S	**Sb**	**12 08 55.8**	**-1.9**
CO03	**El Pedregal**	**0.90**	**104**	Pn	**Pb**	**12 08 44.7**	**-1.2**
GO04	**Tololo Observa**	**0.90**	**60**	⇓*i*P	**Pb**	**12 08 45.3**	**-0.7**
GO04				*e*S	**Sb**	**12 08 57.4**	**-0.5**
GO04	**Tololo Observa**	**0.90**	**60**		**Pb**	**12 08 45.4**	**-0.7**
LCO	**Las Campanas**	**1.83**	**29**	*e*P	**Pn**	**12 08 59.1**	**+0.9**
LCO				*e*S	**Sn**	**12 09 21.0**	**+0.5**
LCO	**Las Campanas**	**1.83**	**29**	Pn	**Pn**	**12 08 59.3**	**+1.1**
VA06	**Catapilco**	**1.96**	**170**	*e*P	**Pn**	**12 09 00.6**	**+0.7**
VA06				*e*S	**Sn**	**12 09 22.8**	**-0.6**
VA06				IAML		12 09 34.1	
	comp=N,2μm,0.5s						
VA03	**San Esteban**	**2.35**	**156**	*e*P	**Pn**	**12 09 06.8**	**+1.5**
VA03				*e*S	**Sn**	**12 09 35.5**	**+2.3**
VA03				IAML		12 09 44.7	
	comp=E,1μm,0.5s						
VA03	**San Esteban**	**2.35**	**156**		**Pn**	**12 09 07.5**	**+2.2**
ROCH	**El Roble**	**2.42**	**166**	*e*P	Pb	12 09 07.2	-4.6
ROCH				*e*P	**Pn**	**12 09 06.8**	**+0.5**
ROCH				*e*S	**Sn**	**12 09 36.0**	**+1.1**
ROCH				IAML		12 09 49.8	
	comp=E,1μm,0.2s						
ROCH				IAML		12 09 50.3	
	comp=N,1μm,0.3s						
AC04	**Llanos de Chal**	**2.47**	**13**	*e*P	**Pn**	**12 09 07.2**	**+0.4**
AC04	**Llanos de Chal**	**2.47**	**13**	Pn	**Pn**	**12 09 07.3**	**+0.4**
PEL	**Peldehue**	**2.66**	**161**	*e*P	**Pn**	**12 09 10.8**	**+1.3**
PEL				IAML		12 09 53.5	
	comp=E,698nm,0.4s						
PEL	**Peldehue**	**2.66**	**161**		**Pn**	**12 09 11.0**	**+1.4**
MT02	**Curacav**	**2.67**	**170**	*e*P	**Pn**	**12 09 10.1**	**+0.4**
MT02	**Curacav**	**2.67**	**170**		**Pn**	**12 09 11.5**	**+1.9**
MT05	**Renca**	**2.88**	**164**	*e*P	**Pn**	**12 09 13.4**	**+0.9**
MT05				IAML		12 10 01.1	
	comp=E,943nm,0.2s						
FCH	**Farellones**	**2.95**	**156**	*e*P	**Pn**	**12 09 15.8**	**+2.0**
FCH				IAML		12 10 06.7	
	comp=E,356nm,0.5s						
MT09	**Talagante**	**3.20**	**169**	*e*P	**Pn**	**12 09 18.2**	**+1.2**
MT09				IAML		12 10 12.3	
	comp=N,625nm,0.4s						
MT09	**Talagante**	**3.20**	**169**		**Pn**	**12 09 18.2**	**+1.2**
MT01	**Popeta**	**3.25**	**173**	*e*P	**Pn**	**12 09 18.1**	**+0.4**
MT01				IAML		12 10 10.2	
	comp=E,364nm,0.3s						
GO03	**Copiap**	**3.28**	**23**	*e*P	**Pn**	**12 09 18.7**	**+0.7**
GO03				IAML		12 10 14.1	
	comp=N,429nm,0.5s						
LMEL	**Las Melosas**	**3.46**	**159**	*e*P	**Pn**	**12 09 23.0**	**+2.4**
LMEL				IAML		12 10 20.2	
	comp=N,357nm,0.5s						
BO04	**La Punta**	**3.48**	**165**	*e*P	**Pn**	**12 09 22.1**	**+1.3**
BO01	**Tunca**	**3.79**	**172**	*e*P	**Pn**	**12 09 25.8**	**+0.7**
BO01	**Tunca**	**3.79**	**172**	Pn	**Pn**	**12 09 26.2**	**+1.1**
BO02	**Sierra Bellavi**	**4.23**	**170**	*e*P	**Pn**	**12 09 32.2**	**+1.0**
AC02	**Maricunga**	**4.40**	**32**	Pn	**Pn**	**12 09 34.7**	**+0.9**
H03N1	**Juan Fernandez**	**6.74**	**243**	Pn	**Pn**	**12 10 04.8**	**-0.4**
	baz=114,slow=19,SNR=48						
H03N1				T	T	12 16 58.4	
	baz=71,slow=72,SNR=2963						
H03N3	**Juan Fernandez**	**6.75**	**243**	Pn	**Pn**	**12 10 04.9**	**-0.6**
	baz=114,slow=19,SNR=43						
H03N3				T	T	12 16 59.7	
	baz=71,slow=72,SNR=3258						
H03N2	**Juan Fernandez**	**6.75**	**244**	Pn	**Pn**	**12 10 04.9**	**-0.6**
	baz=114,slow=19,SNR=40						
H03N2				T	T	12 17 01.0	
	baz=71,slow=72,SNR=3127						
H03S3	**Juan Fernandez**	**6.89**	**241**	Pn	**Pn**	**12 10 06.1**	**-1.3**
	SNR=13						
H03S1	**Juan Fernandez**	**6.90**	**240**	Pn	**Pn**	**12 10 05.9**	**-1.6**
	SNR=14						
H03S2	**Juan Fernandez**	**6.91**	**240**	Pn	**Pn**	**12 10 06.2**	**-1.4**
	SNR=12						
LC01	**Cunco**	**8.26**	**181**	Pn	**Pn**	**12 10 24.2**	**-2.1**
PLCA	**Paso Flores**	**10.13**	**175**	Pn	**Pn**	**12 10 52.7**	**+0.6**
	comp=N,1.0nm,0.3s,baz=358,slow=12,SNR=20						
TRQA	**Tornquist**	**10.93**	**135**	Pn	**Pn**	**12 11 03.7**	**+0.7**
CPUP	**Villa Florida**	**13.34**	**75**	Pn	**Pn**	**12 11 35.9**	**-0.2**
LPAZ	**La Paz**	**14.64**	**14**	Pn	**Pn**	**12 11 56.5**	**+2.2**
	comp=N,0.1nm,0.3s,baz=198,slow=6.4,SNR=2.4						
LPAZ	**La Paz**	**14.64**	**14**		**Pn**	**12 11 55.3**	**+1.0**
SIV	**San Ignacio**	**17.51**	**36**	P	**Pn**	**12 12 31.8**	**+1.1**
	comp=N,0.4nm,0.3s,baz=203,slow=15,SNR=5.4						
BDFB	**Brasilia**	**26.32**	**61**	P	**P**	**12 14 01.3**	**-0.7**
	comp=N,1.4nm,0.4s,baz=239,slow=12,SNR=3.2						
QSPA	**South Pole Qui**	**59.60**	**180**	P	**P**	**12 18 30.2**	**+0.8**
	comp=N,1.0nm,0.7s,baz=164,slow=2.3,SNR=6.8						
QSPA	**South Pole Qui**	**59.60**	**180**	P	**P**	**12 18 29.4**	**0.0**
QSPA				IAmb	IAmb	12 18 40.6	
	comp=Z,1.8nm,1.1s						
DBIC	**Dimbokro**	**73.85**	**72**	P	**P**	**12 20 00.7**	**0.0**
	comp=Z,3.1nm,0.9s,baz=252,slow=4.0,SNR=3.9						
DBIC	**Dimbokro**	**73.85**	**72**	P	**P**	**12 20 00.0**	**-0.7**
MAW	**Mawson**	**76.33**	**164**	P	**P**	**12 20 14.8**	**+0.6**
TORD	**Torodi Ar. Bea**	**82.80**	**70**	P	**P**	**12 20 49.8**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=256,slow=5.6,SNR=5.0						
TORD	**Torodi Ar. Bea**	**82.80**	**70**	P	**P**	**12 20 48.7**	**-1.6**
TORD				IAmb	IAmb	12 21 04.9	
	comp=Z,1.2nm,0.9s						
WRA	**Warramunga Arr**	**123.83**	**210**	PKP	**PKPdf**	**12 27 23.4**	**-0.9**
	comp=Z,0.1nm,0.5s,baz=157,slow=2.0,SNR=1.7						
H11S2	**WAKE ISLAND Hy**	**126.04**	**271**	T	T	14 46 13.9	
	baz=114,slow=75,SNR=59						
H11S1	**WAKE ISLAND Hy**	**126.05**	**271**	T	T	14 46 13.6	
	baz=114,slow=75,SNR=59						
H11S3	**WAKE ISLAND Hy**	**126.06**	**271**	T	T	14 46 17.4	
	baz=114,slow=75,SNR=48						
KURBB	**Kurchatov Arra**	**150.15**	**39**	PKPbc	**PKPbc**	**12 28 16.4**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=309,slow=3.2,SNR=4.4						
KURK	**Kurchatov**	**150.15**	**39**		**PKPdf**	**12 28 10.5**	**-0.4**
ZALV	**Zalesovo Beam**	**151.19**	**29**	PKPbc	**PKPbc**	**12 28 18.8**	**+0.4**
	comp=Z,1.1nm,0.4s,baz=305,slow=3.5,SNR=9.0						
ZALV				pPKPbc	**sPKPbc**	**12 28 28.9**	**-3.3**
	comp=Z,0.9nm,0.4s,baz=316,slow=4.1,SNR=4.4						
ZALV	**Zalesovo Beam**	**151.19**	**29**		**PKPbc**	**12 28 18.3**	**0.0**

WEL 13 12:15:49.2±0.6**, 33°S**±8°×**17°9W**±1°8**, h268**^{km}±8^{km}**, M4.1**/24**, mB4.8**/24**, ML4.9**/31**, MLv4.7**/23**, Mw(mB)4.0**/24**, Error ellipse: s-maj=0.0km s-min=0.0km az=110.8, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.27**	**17**	S	S	12 17 43.1	-7.9
MXZ	**Matakaoa Point**	**4.61**	**204**	P	Pn	12 17 03.4	+2.7
MXZ				S	S	12 17 58.7	+0.7
WMGZ	**Waiomatatini S**	**4.81**	**202**	P	Pn	12 17 05.3	+2.1
WMGZ				S	S	12 18 03.6	+1.3
HAZ	**Te Kaha**	**4.97**	**207**	P	Pn	12 17 06.9	+1.8
HAZ				S	S	12 18 05.7	-0.2
PKGZ	**Pakihiroa**	**4.98**	**204**	P	Pn	12 17 08.1	+2.8
PKGZ				S	S	12 18 05.7	-0.5
PUZ	**Puketiti**	**5.09**	**202**	P	Pn	12 17 09.3	+2.8
PUZ				S	S	12 18 09.1	+0.7
RUGZ	**Raukumara Rang**	**5.19**	**207**	P	Pn	12 17 09.3	+1.4
RUGZ				S	S	12 18 09.0	-2.0
TWGZ	**Tauwhareparae**	**5.27**	**204**	P	Pn	12 17 12.8	+4.0
TWGZ				S	S	12 18 15.6	+3.1
KUZ	**Kuaotunu**	**5.28**	**229**	P	Pn	12 17 09.9	+1.2
TGRZ	**Tauranga**	**5.64**	**218**	P	Pn	12 17 16.0	+2.8
RRRZ	**Republican Roa**	**6.00**	**213**	P	Pn	12 17 20.8	+3.2
TOZ	**Tahuroa Road**	**6.06**	**223**	P	Pn	12 17 20.8	+2.5
HSRZ	**Hossack Road**	**6.10**	**215**	P	Pn	12 17 22.3	+3.5
PRRZ	**Plateau Road**	**6.18**	**213**	P	Pn	12 17 22.3	+2.4
ALRZ	**Allen Road**	**6.26**	**213**	P	Pn	12 17 23.0	+2.2
MTHZ	**Maungataniwha**	**6.29**	**208**	P	Pn	12 17 21.8	+0.7
MTHZ				S	S	12 18 33.4	-1.7
KUTZ	**Kaahu Road**	**6.45**	**216**	P	Pn	12 17 26.0	+2.9
MRHZ	**Matea Rd**	**6.45**	**211**	P	Pn	12 17 25.0	+1.8
NMHZ	**Naumai**	**6.51**	**208**	P	Pn	12 17 24.5	+0.5
NMHZ				S	S	12 18 39.2	-1.0
ARHZ	**Aropaoanui**	**6.59**	**206**	P	Pn	12 17 26.4	+1.5
CKHZ	**Cape Kidnapper**	**6.91**	**204**	P	Pn	12 17 31.2	+2.4
CKHZ				S	S	12 18 47.1	-2.0
KWHZ	**Kaweka Forest**	**6.95**	**208**	P	Pn	12 17 31.1	+1.7
KWHZ				S	S	12 18 48.1	-1.9
HIZ	**Hauiti**	**6.97**	**221**	P	Pn	12 17 31.7	+2.1
NNVZ	**North Ngauruho**	**7.05**	**214**	P	Pn	12 17 34.1	+3.3
KAHZ	**Kahuranaki**	**7.10**	**204**	P	Pn	12 17 31.5	+0.2
MOVZ	**Moawhango**	**7.21**	**212**	P	Pn	12 17 32.8	+0.2
TRVZ	**Turoa**	**7.22**	**213**	P	Pn	12 17 33.7	+0.8
PKVZ	**Pokaka**	**7.30**	**215**	P	Pn	12 17 34.6	+0.8
PXZ	**Pawanui**	**7.32**	**204**	P	Pn	12 17 35.1	+1.2
PXZ				S	S	12 18 55.4	-2.9
PNHZ	**Pukenui**	**7.46**	**208**	P	Pn	12 17 35.2	-0.4
PNHZ				S	S	12 18 57.5	-4.0
VRZ	**Vera Road**	**7.47**	**218**	P	Pn	12 17 37.4	+1.6
PRHZ	**Porangahau**	**7.61**	**204**	P	Pn	12 17 38.7	+1.2
TSZ	**Takapari Road**	**7.67**	**208**	P	Pn	12 17 37.3	-1.0
TSZ				S	S	12 19 00.7	-5.8
DVHZ	**Dannevirke**	**7.80**	**206**	P	Pn	12 17 40.1	+0.1
ANWZ	**Angora Road**	**7.83**	**204**	P	Pn	12 17 41.2	+0.9
ANWZ				S	S	12 19 05.7	-4.3
WAZ	**Wanganui**	**7.84**	**214**	P	Pn	12 17 39.9	-0.6
POWZ	**Post Office Ro**	**8.03**	**208**	P	Pn	12 17 42.8	-0.1
PRWZ	**Pori Road**	**8.10**	**206**	P	Pn	12 17 44.1	+0.4
BFZ	**Birch Farm**	**8.11**	**205**	P	Pn	12 17 43.2	-0.6
TIWZ	**Tintock**	**8.32**	**206**	P	Pn	12 17 45.8	-0.7
CPWZ	**Castlepoint**	**8.33**	**204**	P	Pn	12 17 47.9	+1.4
MRZ	**Mangatainoka R**	**8.34**	**208**	P	Pn	12 17 44.4	-2.3
HOWZ	**Holdsworth Sta**	**8.57**	**207**	P	Pn	12 17 48.2	-1.4
TMWZ	**Te Maipa**	**8.61**	**205**	P	Pn	12 17 49.5	-0.6
OGWZ	**Otaki Gorge**	**8.63**	**209**	P	Pn	12 17 48.0	-2.3
KIW	**Kapiti Island**	**8.78**	**210**	P	Pn	12 17 50.6	-1.5
MTW	**Mount Morrison**	**8.80**	**206**	P	Pn	12 17 50.6	-1.8
CAW	**Cannon Point**	**8.92**	**208**	P	Pn	12 17 51.4	-2.6
TRWZ	**Traveller**	**8.94**	**205**	P	Pn	12 17 53.5	-0.7
PAWZ	**Paruwai Farm**	**9.02**	**206**	P	Pn	12 17 54.4	-0.8
MSWZ	**Moikau Station**	**9.12**	**207**	P	Pn	12 17 55.4	-1.0
PLWZ	**Palliser**	**9.25**	**206**	P	Pn	12 17 56.4	-1.7
BHW	**Baring Head**	**9.26**	**208**	P	Pn	12 17 55.7	-2.4
TUWZ	**Tuamarina**	**9.66**	**212**	P	Pn	12 18 00.2	-3.0
QRZ	**Quartz Range**	**9.88**	**219**	P	Pn	12 18 02.6	-3.3
BSWZ	**Blackbirch Sta**	**9.92**	**211**	P	Pn	12 18 04.0	-2.4

IDC 13 12:18:28.0±9.5**, 4°.36S**×**153°.50E, h116**^{km}±64^{km}**, mb3.3**/2**, mb1 3.6**/3**, mb1mx2.9**/43**, mbtmp3.9**/3**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.5**/13**, Error ellipse: s-maj=130.2km s-min=59.0km az=122.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.04**	**231**	P	Pn	12 20 22.3	+0.2
	4.0nm,0.3s,baz=44,slow=7.1,SNR=14						
PMG				S	Sn	12 21 51.9	+0.5
	1.8nm,0.3s,baz=345,slow=21,SNR=7.0						
PMG				LR	LR	12 23 13.9	
	comp=Z,60nm,21.3s,baz=74,slow=36						
WRA	**Warramunga Arr**	**24.25**	**229**	P	P	12 23 34.7	+0.3
	1.5nm,0.3s,baz=54,slow=9.9,SNR=25						
ASAR	**Alice Springs**	**26.94**	**223**	P	P	12 23 58.5	-0.2
	0.2nm,0.4s,baz=55,slow=9.2,SNR=11						
TORD	**Torodi Ar. Bea**	**150.82**	**289**	PKPbc	PKPbc	12 38 07.6	-0.3
	0.5nm,0.7s,baz=77,slow=4.5,SNR=2.5						

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*IDC **13** 12:25:02.6±0.9, 55°.84N×113°.51E, h0^{km}, mb3.7/8, mb1 3.8/12, mb1mx3.4/45, mbtmp3.7/12, ML3.0/4, MS3.2/4, Ms1 3.3/4, ms1mx2.9/41, Error ellipse: s-maj=23.5km s-min=16.1km az=161.0*

*MOS **13** 12:25:02.4±1.2, 55°.88N×113°.49E, h10^{km}, mb4.1/3, Error ellipse: s-maj=11.5km s-min=8.1km az=57.8*

*BYKL **13** 12:25:03.0±0.1, 55°.92N×113°.44E, h5^{km}±2^{km}*

ISC 13 12:25:01.8±1.0**, 55°.90N**±0°.02×**113°.41E**±0°.02**, h4**^{km}±7^{km}**, n76, σ2**^{s}**56**/136**, mb3.8**/9**, 6C-4D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.23**	**21**	⇑*i*Pg	**Pg**	**12 25 07.3**	**+0.9**
SVKR				Pmax		12 25 10.1	
	5μm,0.3s						
SVKR				*e*Sg	**Sg**	**12 25 11.3**	**+1.8**
SVKR				Smax		12 25 12.4	
	37μm,0.9s						
SVKR	**Severomuysk**	**0.23**	**21**	⇑*i*PG	**Pg**	**12 25 07.3**	**+0.9**
SVKR				*e*		12 25 11.7	
SVKR				pmax	pmax		
	comp=Z,7μm,0.9s						
SVKR				smax	smax		
	comp=N,37μm,0.9s						
UKT	**Uakit**	**0.43**	**163**	⇑*i*Pg	**Pg**	**12 25 10.6**	**+0.6**
UKT				Pmax		12 25 11.6	
	comp=N,213nm,0.3s						
UKT				*e*Sg	**Sg**	**12 25 16.5**	**+0.9**
UKT				Smax		12 25 18.6	
	comp=N,3μm,0.4s						
YOA	**Uoyan**	**0.98**	**285**	*e*Pg	**Pg**	**12 25 20.9**	**+0.4**
YOA				Pmax		12 25 30.7	
	comp=N,2μm,0.3s						
YOA				*e*Sg	**Sg**	**12 25 34.5**	**+1.4**
YOA				Smax		12 25 44.4	
	comp=N,6μm,0.5s						
YOA				*e*		12 25 55.2	
YOA	**Uoyan**	**0.98**	**285**	*e*PG	**Pg**	**12 25 21.5**	**+1.0**

YOA				*e*		12 25 31.6	
YOA				pmax	pmax		
	comp=Z,260nm,0.2s						
YOA				smax	smax		
	comp=E,6µm,0.4s						
KMO	**Kumora**	**1.25**	**270**	⇑*i*Pg	**Pn**	**12 25 25.1**	**-0.9**
KMO				*e*Pb	**Pb**	**12 25 26.0**	**+0.1**
KMO				*e*		12 25 33.6	
KMO				max		12 25 34.8	
	comp=E,823nm,0.4s						
KMO				*e*Sg	**Sb**	**12 25 42.0**	**-0.3**
KMO				*e*		12 25 45.8	
KMO				max		12 25 47.4	
	comp=E,3µm,0.7s						
KMO	**Kumora**	**1.25**	**270**	*e*PG	**Pn**	**12 25 25.2**	**-0.8**
KMO				*e*		12 25 42.1	
KMO				pmax	pmax		
	comp=Z,257nm,0.3s						
KMO				smax	smax		
	comp=N,3µm,0.5s						
NLYR	**Nelyaty**	**1.41**	**64**	*e*Pg	**Pn**	**12 25 27.7**	**-0.6**
NLYR				*e*		12 25 29.9	
NLYR				max		12 25 32.7	
	comp=N,508nm,0.6s						
NLYR				*e*Sg	**Sg**	**12 25 46.8**	**-0.3**
NLYR				*e*		12 25 50.4	
NLYR				max		12 25 51.1	
	comp=N,6µm,1.5s						
NLYR	**Nelyaty**	**1.41**	**64**	*e*PG	**Pn**	**12 25 28.0**	**-0.3**
NLYR				*e*		12 25 28.4	
NLYR				*e*		12 25 47.2	
NLYR				pmax	pmax		
	comp=Z,505nm,0.6s						
NLYR				smax	smax		
	comp=N,6µm,1.5s						
YLYR	**Ulyunkhan**	**1.64**	**232**	⇑*i*Pn	**Pn**	**12 25 32.2**	**+0.7**
YLYR				*e*Pg	**Pb**	**12 25 32.9**	**+0.3**
YLYR				Pmax		12 25 35.7	
	comp=N,370nm,0.4s						
YLYR				*e*Sg	**Sb**	**12 25 55.4**	**+1.7**
YLYR				Smax		12 25 59.1	
	comp=N,3µm,0.3s						
YLYR	**Ulyunkhan**	**1.64**	**232**	*e*PN	**Pn**	**12 25 32.4**	**+0.9**
YLYR				*e*		12 25 33.0	
YLYR				*e*S	**Sb**	**12 25 55.0**	**+1.3**
YLYR				*e*		12 25 55.3	
YLYR				pmax	pmax		
	comp=Z,361nm,0.1s						
YLYR				smax	smax		
	comp=N,3µm,0.2s						
BOD	**Bodaibo**	**1.95**	**9**	*e*Pn	**Pb**	**12 25 36.9**	**-1.0**
BOD				*e*Pg	**Pg**	**12 25 37.7**	**-1.5**
BOD				Pmax		12 25 38.4	
	comp=N,887nm,0.7s						
BOD				*e*Sg	**Sb**	**12 26 02.9**	**+0.3**
BOD				Smax		12 26 04.3	
	comp=N,3µm,0.7s						
BOD	**Bodaibo**	**1.95**	**9**	*e*PN	**Pb**	**12 25 36.9**	**-1.0**
BOD				*e*		12 25 37.7	
BOD				*e*		12 26 02.9	
BOD				pmax	pmax		
	comp=Z,895nm,0.7s						
BOD				smax	smax		
	comp=E,2µm,0.5s						
NIZ	**Nizh Angarsk**	**2.19**	**268**	⇓*i*Pn	**Pn**	**12 25 40.8**	**+1.8**
NIZ				*e*Pg	**Pb**	**12 25 42.8**	**+0.9**
NIZ				Pmax		12 25 46.7	
	comp=E,155nm,0.5s						
NIZ				*e*Sn	**Sn**	**12 26 07.5**	**+1.0**
NIZ				*e*		12 26 10.4	
NIZ				*e*Sg	**Sg**	**12 26 12.6**	**+0.6**
NIZ				Smax		12 26 15.4	
	comp=E,922nm,0.9s						
NIZ	**Nizh Angarsk**	**2.19**	**268**	*e*PN	**Pn**	**12 25 40.8**	**+1.8**
NIZ				*e*		12 25 42.8	
NIZ				*e*		12 26 10.7	
NIZ				pmax	pmax		
	comp=Z,173nm,1.4s						
NIZ				smax	smax		
	comp=N,1µm,0.9s						
CRS	**Chara**	**2.88**	**68**	*e*Pn	**Pn**	**12 25 49.5**	**+1.0**
CRS				*e*Pg	**Pb**	**12 25 55.0**	**+1.2**
CRS				Pmax		12 26 11.6	
	comp=N,238nm,0.9s						
CRS				*e*Sg	**Sg**	**12 26 32.0**	**-2.3**
CRS				Smax		12 26 34.7	
	comp=N,1µm,1.6s						
CRS	**Chara**	**2.88**	**68**	*e*PN	**Pn**	**12 25 50.6**	**+2.1**
CRS				*e*		12 25 55.6	
CRS				*e*		12 26 31.7	
CRS				pmax	pmax		
	comp=Z,191nm,0.6s						
CRS				smax	smax		
	comp=E,875nm,1.1s						
SYVR	**Suvo**	**2.99**	**223**	*e*Pn	**Pn**	**12 25 51.7**	**+1.7**
SYVR				*e*Pg	**Pb**	**12 25 56.8**	**+1.2**
SYVR				*e*PgPg	**PbPb**	**12 26 00.1**	**+1.3**
SYVR				max		12 26 02.7	
	comp=E,146nm,0.6s						
SYVR				*e*Sn	**Sn**	**12 26 27.9**	**+1.6**
SYVR				*e*Sg	**Sg**	**12 26 37.0**	**-0.8**
SYVR				*e*		12 26 43.9	
SYVR				max		12 26 47.6	
	comp=E,1µm,1.2s						
SYVR	**Suvo**	**2.99**	**223**	*e*PN	**Pn**	**12 25 51.7**	**+1.7**
SYVR				*e*		12 25 56.8	
SYVR				*e*		12 26 37.5	
SYVR				pmax	pmax		
	comp=Z,152nm,0.6s						
SYVR				smax	smax		
	comp=N,2µm,1.1s						
MXMB	**Maximikha**	**3.79**	**228**	*e*Pn	**Pn**	**12 26 03.3**	**+2.4**
MXMB				*e*Pg	**Pb**	**12 26 11.3**	**+2.1**
MXMB				*e*Sn	**Sn**	**12 26 46.3**	**+0.4**
MXMB				*e*Sg	**Sg**	**12 27 01.2**	**-2.1**
KHNR	**Khani**	**3.79**	**72**	*e*Pn	**Pn**	**12 26 02.3**	**+1.3**
KHNR				*e*Pg	**Pb**	**12 26 10.6**	**+1.3**
KHNR				*e*PgPg	**PbPb**	**12 26 12.1**	**-0.3**
KHNR				*e*		12 26 14.3	
KHNR				*e*Sn	**Sn**	**12 26 45.0**	**-1.0**
KHNR				*e*Sg	**Sg**	**12 26 59.8**	**-3.7**
CIT	**Chita**	**3.89**	**179**	*e*Pn	**Pn**	**12 26 03.9**	**+1.6**
CIT				*e*Sg	**Sg**	**12 27 05.1**	**-1.4**
CIT				Smax		12 27 18.9	
	comp=N,646nm,0.4s						
TUP	**Tupik**	**4.03**	**109**	*e*Pn	**Pn**	**12 26 05.4**	**+1.1**
TUP				*e*Pg	**Pb**	**12 26 15.5**	**+2.1**
TUP				Pmax		12 26 17.5	
	comp=N,104nm,0.4s						
TUP				*e*Sn	**Sn**	**12 26 52.0**	**0.0**
TUP				*e*Sg	**Sg**	**12 27 08.1**	**-3.1**
TUP				Smax		12 27 15.9	
	comp=N,581nm,1.4s						
TUP	**Tupik**	**4.03**	**109**	*e*PN	**Pn**	**12 26 05.3**	**+1.0**
TUP				*e*		12 26 16.3	
TUP				*e*S	**Sn**	**12 26 53.4**	**+1.4**
TUP				*e*		12 27 09.3	
TUP				pmax	pmax		
	comp=Z,106nm,0.4s						
TUP				smax	smax		
	comp=N,540nm,0.9s						
OGRR	**Ongureny**	**4.05**	**239**	*e*Pn	**Pn**	**12 26 07.1**	**+2.5**
OGRR				*e*Pg	**Pb**	**12 26 16.3**	**+2.5**
OGRR				*e*		12 26 19.8	
OGRR				max		12 26 21.0	
	comp=N,114nm,0.7s						
OGRR				*e*		12 26 40.1	
OGRR				*e*Sn	**Sn**	**12 26 53.0**	**+0.5**
OGRR				*e*Sg	**Sg**	**12 27 09.8**	**-2.2**
OGRR				Smax		12 27 17.3	
	comp=N,657nm,1.2s						
OGRR	**Ongureny**	**4.05**	**239**	*e*PN	**Pn**	**12 26 08.2**	**+3.6**
OGRR				*e*		12 26 18.4	
OGRR				*e*		12 27 10.3	
OGRR				pmax	pmax		
	comp=Z,125nm,1.3s						
OGRR				smax	smax		
	comp=N,825nm,2.2s						
KELR	**Kotokel**	**4.43**	**227**	*e*Pn	**Pn**	**12 26 12.2**	**+2.4**
KELR				*e*Pg	**Pb**	**12 26 22.8**	**+2.7**
KELR				*e*Sn	**Sn**	**12 27 01.8**	**0.0**
KELR				*e*Sg	**Sg**	**12 27 20.9**	**-3.0**
TRG	**Tyrgan**	**5.19**	**236**	*e*Pn	**Pn**	**12 26 21.9**	**+1.6**
TRG				*e*		12 26 32.6	
TRG				max		12 26 49.3	
	comp=N,26nm,1.0s						
TRG				*e*Sg	**Sg**	**12 27 44.0**	**-4.4**
TRG				Smax		12 28 03.0	
	comp=N,380nm,1.9s						
TRG	**Tyrgan**	**5.19**	**236**	*e*PN	**Pn**	**12 26 18.9**	**-1.4**
TRG				*e*		12 26 34.6	
TRG				*e*S	**Sn**	**12 27 19.7**	**-0.9**
TRG				*e*		12 27 43.8	
TRG				pmax	pmax		
	comp=Z,27nm,0.8s						
TRG				smax	smax		
	comp=N,379nm,1.6s						
UUDB	**Ulan-Yde**	**5.28**	**222**	*e*Pn	**Pn**	**12 26 23.7**	**+2.3**
UUDB				*e*		12 26 33.5	
UUDB				*e*Pg	**Pb**	**12 26 38.2**	**+3.6**
UUDB				Pmax		12 26 43.0	
	comp=N,96nm,1.4s						
UUDB				*e*		12 27 01.9	
UUDB				*e*Sn	**Sn**	**12 27 22.0**	**-0.7**
UUDB				*e*Sg	**Sg**	**12 27 47.4**	**-3.8**
UUDB				Smax		12 27 54.4	
	comp=N,749nm,1.5s						
FFNB	**Fofonovo**	**5.50**	**228**	*e*Pn	**Pn**	**12 26 26.4**	**+1.9**
FFNB				*e*Pg	**Pb**	**12 26 41.7**	**+3.3**
FFNB				*e*		12 27 06.9	
FFNB				*e*Sg	**Sg**	**12 27 53.7**	**-4.6**
KAB	**Kabansk**	**5.54**	**229**	*e*Pn	**Pn**	**12 26 27.7**	**+2.6**
KAB				*e*Sg	**Sg**	**12 27 55.5**	**-4.2**
KAB				Smax		12 28 20.7	
	comp=N,1µm,1.4s						
HRMR	**Khuramsha**	**5.74**	**224**	*e*Pn	**Pn**	**12 26 30.7**	**+2.9**
HRMR				*e*		12 26 40.2	
HRMR				*e*Pg	**Pb**	**12 26 46.2**	**+3.7**
HRMR				*e*		12 26 48.7	
HRMR				max		12 26 53.8	
	comp=N,109nm,0.6s						
HRMR				*e*Sn	**Sn**	**12 27 34.0**	**-0.1**
HRMR				*e*Sg	**Sg**	**12 28 01.9**	**-4.1**
HRMR				Smax		12 28 13.3	
	comp=N,898nm,1.0s						
BGT	**Bolshoye Golou**	**6.10**	**234**	*e*Pn	**Pn**	**12 26 35.0**	**+2.3**
BGT				*e*Pg	**Pb**	**12 26 52.3**	**+3.8**
BGT				Pmax		12 26 56.5	
	comp=N,32nm,0.8s						
BGT				*e*Sn	**Sn**	**12 27 43.0**	**+0.1**
BGT				*e*Sg	**Sg**	**12 28 11.9**	**-5.6**
BGT				Smax		12 28 21.1	
	comp=N,237nm,1.3s						
KPC	**Khapcheranga**	**6.24**	**186**	*e*Pn	**Pn**	**12 26 36.9**	**+2.3**
KPC				*e*		12 26 46.5	
KPC				*e*Pg	Pb	12 26 56.1	+5.2
KPC				Pmax		12 27 16.9	
	comp=N,24nm,1.2s						
KPC				*e*Sn	**Sn**	**12 27 46.3**	**-0.1**
KPC				*e*Sg	**Sg**	**12 28 18.0**	**-3.9**
KPC				Smax		12 28 25.1	
	comp=N,544nm,1.4s						
IENR	**Iengra**	**6.42**	**82**	*e*Pn	**Pn**	**12 26 37.8**	**+0.7**
IENR				*e*Pg	**Pb**	**12 26 57.9**	**+3.8**
IENR				*e*Sn	**Sn**	**12 27 49.1**	**-1.8**
IENR				*e*Sg	**Sg**	**12 28 21.1**	**-6.7**
LSTR	**Listvyanka**	**6.48**	**235**	*e*Pg	**Pb**	**12 26 59.6**	**+4.5**
LSTR				Pmax		12 27 01.3	
	comp=N,20nm,1.3s						
LSTR				*e*		12 28 13.4	
LSTR				*e*Sg	**Sg**	**12 28 23.7**	**-6.0**
LSTR				Smax		12 28 31.2	
	comp=N,355nm,1.8s						
IRK	**Irkutsk**	**6.51**	**240**	*e*Sg	**Sg**	**12 28 25.8**	**-4.7**
IRK				Smax		12 28 31.2	
	comp=N,581nm,1.2s						
IVK	**Ivanovka**	**6.72**	**236**	*e*Pg	Pb	12 27 04.4	+5.3
IVK				Pmax		12 27 27.2	
	comp=N,20nm,1.6s						
IVK				*e*Sn	**Sn**	**12 27 56.8**	**-1.4**
IVK				*e*		12 28 16.1	
IVK				*e*Sg	**Sg**	**12 28 31.4**	**-6.0**
IVK				Smax		12 28 45.7	
	comp=N,226nm,2.5s						
TLY	**Talaya**	**7.16**	**238**	Pn	**Pn**	**12 26 50.3**	**+3.0**
	comp=N,0.0nm,0.3s,baz=259,slow=14,SNR=2.5						
TLY				Lg	Lg	12 28 43.0	
	comp=N,0.1nm,0.3s,baz=118,slow=21,SNR=10						
TLY				LR	LR	12 29 40.8	
	comp=N,125nm,18.1s,baz=17,slow=39						
TLY	**Talaya**	**7.16**	**238**	*e*Pn	**Pn**	**12 26 50.0**	**+2.7**
TLY				*e*Pg	Pb	12 27 11.9	+5.2
TLY				Pmax		12 27 13.4	
	comp=N,17nm,1.2s						
TLY				*e*Sn	**Sn**	**12 28 07.3**	**-1.7**
TLY				*e*		12 28 29.7	
TLY				*e*Sg	**Sg**	**12 28 45.0**	**-6.6**
TLY				Smax		12 29 06.3	
	comp=N,144nm,2.2s						
TLY	**Talaya**	**7.16**	**238**	*e*PG	**Pb**	**12 27 11.1**	**+4.4**
TLY				*e*		12 28 41.8	
TLY				pmax	pmax		
	comp=Z,17nm,1.0s						
TLY				smax	smax		
	comp=E,143nm,1.8s						
ARS	**Arshan**	**7.61**	**243**	*e*Pn	**Pn**	**12 26 56.0**	**+2.5**
ARS				*e*		12 27 07.1	
ARS				*e*Pg	Pb	12 27 20.3	+6.0
ARS				Pmax		12 27 22.3	
	comp=E,32nm,0.6s						
ARS				*e*Sn	**Sn**	**12 28 17.9**	**-2.3**
ARS				*e*Sg	Sg	12 28 58.2	-7.8
ARS				Smax		12 29 08.3	
	comp=E,708nm,0.9s						
HIA	**Hailar**	**7.68**	**147**	*e*Pn	**Pn**	**12 26 56.2**	**+1.8**
HIA				*e*Sn	**Sn**	**12 28 20.5**	**-1.3**
HIA				*e*Sg	**Sg**	**12 29 01.5**	**-6.6**
ZAK	**Zakamensk**	**8.22**	**232**	*e*Pn	**Pn**	**12 27 03.4**	**+1.5**
ZAK				*e*Pg	Pb	12 27 31.6	+6.9
ZAK				Pmax		12 28 06.5	
	comp=E,11nm,1.6s						
ZAK				*e*Sn	**Sn**	**12 28 32.2**	**-2.9**
ZAK				*e*Sg	Sg	12 29 18.2	-7.2
ZAK				Smax		12 29 30.6	
	comp=E,180nm,1.3s						
ZAK	**Zakamensk**	**8.22**	**232**	*e*PN	Pn	12 27 08.2	+6.3
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ZEA	**Zeya**	**8.28**	**99**	*e*PN	Pn	12 27 11.6	+9.0
ZEA				pmax	pmax		
	comp=E,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,60nm,0.8s						
ZEA				MLR	MLR		
	comp=E,300nm,5.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,8.0s						
MOY	**Mondy**	**8.48**	**245**	*e*Pn	**Pn**	**12 27 08.2**	**+2.7**
MOY				max		12 27 37.9	
	comp=Z,29nm,1.5s						
MOY				*e*Sn	**Sn**	**12 28 38.9**	**-2.8**
MOY				*e*Sg	Sg	12 29 25.2	-8.7
MOY				Smax		12 29 39.1	
	comp=Z,282nm,1.4s						
MOY	**Mondy**	**8.48**	**245**	*e*PN	**Pn**	**12 27 08.5**	**+3.0**
MOY				*e*		12 27 37.5	
MOY				*e*		12 29 25.7	
MOY				pmax	pmax		
	comp=Z,8.0nm,0.3s						
MOY				smax	smax		
	comp=E,283nm,1.2s						
ORL	**Orlik**	**8.65**	**253**	*e*Pn	**Pn**	**12 27 09.9**	**+2.1**
ORL				*e*Pg	Pg	12 27 39.3	-8.0
ORL				Pmax		12 28 06.0	
	comp=E,23nm,1.1s						
ORL				*e*Sn	**Sn**	**12 28 43.3**	**-2.4**
ORL				*e*Sg	Sg	12 29 31.3	-7.9
ORL				Smax		12 29 44.3	
	comp=E,129nm,2.0s						
ORL	**Orlik**	**8.65**	**253**	*e*PN	**Pn**	**12 27 09.8**	**+2.0**
ORL				*e*		12 27 39.5	
ORL				*e*		12 29 30.8	
ORL				pmax	pmax		
	comp=Z,23nm,1.0s						
ORL				smax	smax		
	comp=N,127nm,1.7s						
ULN	**Ulaanbaatar**	**8.95**	**209**	*e*Sg	Sg	12 29 41.5	-7.4
SONM	**Songino Array**	**9.16**	**211**	Pn	**Pn**	**12 27 16.6**	**+1.8**
	comp=N,0.3nm,0.3s,baz=24,slow=13,SNR=8.1						
SONM				Lg	Lg	12 29 47.2	
	comp=N,0.6nm,0.3s,baz=19,slow=24,SNR=4.0						
SONM				LR	LR	12 31 03.7	
	comp=N,212nm,20.6s,baz=46,slow=40						
YAK	**Yakutsk**	**10.39**	**47**	Lg	Lg	12 30 20.4	
	comp=N,0.1nm,0.3s,baz=158,slow=22,SNR=14						
KNGR	**Kungurtug, Tuv**	**10.89**	**247**	*e*Sn	**Sn**	**12 29 36.7**	**-4.0**
KNGR				*e*Sg		12 30 40.5	
KLR	**Kul'dur**	**12.98**	**113**	Pn	**Pn**	**12 28 08.1**	**+1.3**
	comp=N,0.3nm,0.3s,baz=312,slow=14,SNR=5.3						
KLR	**Kul'dur**	**12.98**	**113**	⇓*e*P	**Pn**	**12 28 08.3**	**+1.5**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**16.50**	**275**	Pn	**P**	**12 28 58.0**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=72,slow=14,SNR=3.8						
ZALV				Lg	Lg	12 33 41.9	
	comp=Z,0.1nm,0.3s,baz=71,slow=23,SNR=5.2						
ZALV	**Zalesovo Beam**	**16.50**	**275**	P	**P**	**12 28 58.0**	**+1.4**
USRK	**Ussuriysk Ar.**	**16.65**	**127**	Lg	Lg	12 33 45.9	
	baz=151,slow=33,SNR=2.0						
DGZ	**Jazzator, Alta**	**16.83**	**259**	⇓*e*P	**P**	**12 29 02.1**	**+1.6**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	**Tiksi**	**17.12**	**17**	Pn	**Pn**	**12 28 57.5**	**-4.1**
	comp=Z,0.7nm,0.3s,baz=211,slow=8.4,SNR=7.6						
TIXI				Sn	Sn	12 31 57.5	-15
	comp=Z,0.4nm,0.3s,baz=354,slow=2.0,SNR=5.5						
TIXI				Lg	Lg	12 33 59.2	
	comp=Z,0.1nm,0.3s,baz=317,slow=19,SNR=3.3						
TIXI				LR	LR	12 35 52.2	
	comp=Z,123nm,19.1s,baz=224,slow=38						
NRIK	**Noril'sk**	**17.75**	**329**	Pn	**Pn**	**12 29 06.1**	**-3.4**
	comp=Z,0.3nm,0.3s,baz=130,slow=7.8,SNR=4.1						
NRIK				Sn	Sn	12 32 16.2	-11
	comp=Z,0.5nm,0.3s,baz=150,slow=22,SNR=4.8						
SEY	**Seymchan**	**20.76**	**54**	P	Pn	12 29 46.0	+0.4
	comp=Z,0.8nm,0.3s,baz=323,slow=3.3,SNR=5.0						
KURK	**Kurchatov**	**21.27**	**271**	⇓*e*P	**P**	**12 29 52.8**	**+3.9**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.6s						
MKAR	**Makanchi Array**	**21.30**	**258**	P	**P**	**12 29 51.1**	**+1.8**
	comp=Z,2.2nm,0.7s,baz=57,slow=10,SNR=12						
KURBB	**Kurchatov Arra**	**21.36**	**270**	P	**P**	**12 29 51.4**	**+1.5**
	comp=Z,2.9nm,0.6s,baz=65,slow=11,SNR=17						
BVAR	**Borovoye Array**	**24.87**	**282**	P	**P**	**12 30 26.4**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=64,slow=3.4,SNR=4.0						
BRVK	**Borovoye**	**24.92**	**282**	⇑*e*P	**P**	**12 30 29.2**	**+3.6**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
WHN	**Wuhan**	**25.35**	**178**	P	**P**	**12 30 29.8**	**+0.1**
CMAR	**Chiang Mai Arr**	**38.95**	**202**	LR	LR	12 50 20.7	
	comp=Z,34nm,21.7s,baz=35,slow=39						
FINES	**FINESS Array B**	**42.50**	**315**	P	**P**	**12 32 58.2**	**+0.5**
	comp=Z,2.0nm,0.9s,baz=261,slow=7.5,SNR=3.9						
ILAR	**Eielson Array**	**45.10**	**37**	P	**P**	**12 33 20.8**	**+2.2**
	comp=Z,0.7nm,0.8s,baz=305,slow=10,SNR=7.6						
WRA	**Warramunga Arr**	**77.60**	**160**	P	**P**	**12 36 58.5**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=350,slow=6.4,SNR=7.5						
WRA	**Warramunga Arr**	**77.60**	**160**	*i* P	**P**	**12 36 59.9**	**+1.0**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**81.14**	**161**	P	**P**	**12 37 18.9**	**+0.7**
	comp=Z,0.2nm,0.8s,baz=1.3,slow=7.7,SNR=4.2						

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*IDC **13** 12:39:13.1±8.5, 12°.24S×166°.99E, h233^{km}±87^{km}, mb3.2/5, mb1 3.4/6, mb1mx3.2/29, mbtmp3.7/6, Error ellipse: s-maj=68.9km s-min=28.7km az=163.0*

ISC 13 12:39:11.9±0.9**, 12°.18S**±0°.10×**167°.0E**±0°.2**, h220^{km}, n8, σ0^{s}.88**/9**, mb3.6**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.85**	**183**	P	**Pn**	**12 41 30.4**	**+1.4**
	0.3nm,0.3s,baz=356,slow=14,SNR=1.5						
DZM				S	**S**	**12 43 18.3**	**-1.4**
	0.2nm,0.3s,baz=259,slow=23,SNR=1.7						
WRA	**Warramunga Arr**	**32.25**	**252**	P	**P**	**12 45 20.2**	**+0.2**
	0.1nm,0.5s,baz=80,slow=8.6,SNR=1.4						
ASAR	**Alice Springs**	**33.38**	**245**	P	**P**	**12 45 29.3**	**-0.6**
	0.2nm,0.6s,baz=69,slow=10.0,SNR=2.3						
ILAR	**Eielson Array**	**84.20**	**18**	P	**P**	**12 51 17.6**	**-0.5**
	2.4nm,0.6s,baz=244,slow=5.1,SNR=57						
NVAR	**Mina Array Bea**	**85.84**	**49**	P	**P**	**12 51 27.2**	**0.0**
	0.8nm,0.8s,baz=246,slow=6.8,SNR=3.7						
MKAR	**Makanchi Array**	**95.16**	**317**	P	**P**	**12 52 10.5**	**+0.3**
	0.5nm,0.6s,baz=107,slow=5.6,SNR=5.7						
ARCES	**ARCESS Array B**	**117.72**	**346**	PKP	**PKPdf**	**12 57 31.2**	**-0.1**
	7.2nm,1.1s,baz=85,slow=2.2,SNR=8.0						
FINES	**FINESS Array B**	**123.25**	**339**	PKP	**PKPdf**	**12 57 42.1**	**0.0**
	1.1nm,0.8s,baz=57,slow=5.1,SNR=4.2						

IDC 13 12:47:17.3±3.2**, 2°.46N**×**95°.35E, h0^{km}, mb3.5**/3**, mb1 3.6**/4**, mb1mx3.3**/28**, mbtmp3.5**/4**, Error ellipse: s-maj=132.3km s-min=31.3km az=61.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.29**	**12**	Pn	Pn	12 51 07.7	+0.1
	baz=202,slow=11,SNR=4.9						
H08S2	**Diego Garcia H**	**24.91**	**246**	T	T	13 18 57.5	
	baz=66,slow=76,SNR=39						
H08S3	**Diego Garcia H**	**24.92**	**246**	T	T	13 19 01.5	
	baz=66,slow=76,SNR=30						
H08S1	**Diego Carcia H**	**24.93**	**246**	T	T	13 18 58.8	
	baz=66,slow=76,SNR=20						
H01W3	**Cape Leeuwin H**	**41.12**	**156**	T	T	13 38 45.5	
	baz=333,slow=76,SNR=12						
H01W2	**Cape Leeuwin H**	**41.13**	**156**	T	T	13 38 46.4	
	baz=333,slow=76,SNR=9.9						
H01W1	**Cape Leeuwin H**	**41.13**	**156**	T	T	13 38 45.4	
	baz=333,slow=76,SNR=12						
MKAR	**Makanchi Array**	**45.60**	**347**	P	P	12 55 39.4	+0.1
	0.4nm,0.4s,baz=161,slow=8.7,SNR=10						
ASAR	**Alice Springs**	**45.62**	**127**	P	P	12 55 39.7	-0.1
	0.1nm,0.8s,baz=298,slow=7.8,SNR=1.6						
ZALV	**Zalesovo Beam**	**52.05**	**352**	P	P	12 56 28.2	-0.5
	0.6nm,0.5s,baz=166,slow=6.7,SNR=4.2						

NOU 13 12:56:19.4, 16°.09S×**167°.92E, h141^{km}, MLv4.3**/13**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.94**	**313**	P	Pn	12 56 43.1	+0.3
DVP	**Devils Point**	**1.65**	**171**	P	Pn	12 56 49.7	-0.2
RTV	**Rentapao**	**1.76**	**164**	P	Pn	12 56 51.4	+0.2
KOUNC	**Koumac, New Ca**	**5.62**	**217**	P	Pn	12 57 40.4	-0.5
YATNC	**Mamie plateau,**	**6.02**	**189**	P	Pn	12 57 46.0	-0.3
DZM	**Mont Dzumac**	**6.11**	**193**	P	Pn	12 57 47.5	-0.1
NOUC	**Port Laguerre**	**6.17**	**194**	P	Pn	12 57 48.6	+0.3
PINNC	**Pines Island,**	**6.50**	**184**	P	Pn	12 57 53.5	+0.7

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*EAF **13** 13:03:10.7±2.4, 24°.94S×24°.89E, h5^{km}±17^{km}, MD3.9*

BUL 13 13:03:12.4±0.9**, 25°.01S**×**25°.02E, h16^{km}**±7^{km}**, MD4.1, Botswana**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**0.53**	**91**	*i* P	Pg	13 03 22.2	-0.7
LBTB	**Lobatse**	**0.53**	**91**	*i* P	Pg	13 03 22.2	-0.7
BOSA	**Boshof**	**3.60**	**177**	*i* P	Pn	13 04 07.5	-0.2
BOSA	**Boshof**	**3.60**	**177**	*i* P	Pn	13 04 07.5	-0.2
MSNA	**Messina**	**5.30**	**61**	*i* P	Pn	13 04 30.0	-1.0
MSNA				*i* S	Sn	13 05 27.2	-4.7
MSNA	**Messina**	**5.30**	**61**	*i* P	Pn	13 04 30.0	-1.0
MSNA				*i* S	Sn	13 05 27.2	-4.7
MATP	**Matopo**	**5.58**	**36**	*i* P	Pn	13 04 34.9	0.0
MATP	**Matopo**	**5.58**	**36**	*i* P	Pn	13 04 34.9	0.0
MOPA	**Mopani**	**6.01**	**77**	*i* P	Pn	13 04 41.5	+0.7
MOPA				*i* S	Sn	13 05 48.2	-1.1
MOPA	**Mopani**	**6.01**	**77**	*i* P	Pn	13 04 41.5	+0.7
MOPA				*i* S	Sn	13 05 48.2	-1.1

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*ISK **13** 13:07:12.9, 34°.31N×26°.05E, h82^{km}, ML3.3/15*

*NIC **13** 13:07:12.2±0.0, 34°.19N×26°.27E, h15^{km}±18^{km}, Ml3.8/4*

ISC 13 13:07:13.4±1.4, 34°.18N±0°.09×26°.09E±0°.04, h54^{km}±37^{km}, n24, σ0ˢ.54/31, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.94	7	PG	Pn	13 07 30.1	-0.4
ZKR				SG	Sn	13 07 43.8	+0.8
ZKR	Zakros	0.94	7	P	Pn	13 07 29.7	-0.8
ZKR				S	Sn	13 07 43.5	+0.4
ZKR				AML	AML	13 07 44.1	
	2.3nm,0.5s						
ZKR				AML	AML	13 07 44.1	
	2.3nm,0.5s						
ZKR				AML	AML	13 07 47.5	
	0.8nm,0.7s						
ZKR				AML	AML	13 07 47.5	
	0.8nm,0.7s						
GVD	Gavdhos	1.78	292	PN	Pn	13 07 42.3	+0.6
GVD				SN	Sn	13 08 03.4	+0.2
IMMV	Iera Moni Meta	2.15	307	PN	Pn	13 07 46.9	0.0
IMMV				SN	Sn	13 08 11.8	-0.6
ARG	Arkhangelos	2.63	39	PN	Pn	13 07 53.5	+0.1
ARG				SN	Sn	13 08 23.8	-0.4
DAT	Datca	2.82	25	PN	Pn	13 07 56.4	+0.3
APE	Apeiranthos	2.92	351	PN	Pn	13 07 57.2	-0.2
TURN	Turunc	3.14	34	PN	Pn	13 08 00.9	+0.6
DALY	Dalyan (Mula)	3.37	38	PN	Pn	13 08 03.4	0.0
FETY	Fethiye	3.47	44	PN	Pn	13 08 05.4	+0.6
AKAS	Kas	3.54	54	PN	Pn	13 08 06.5	+0.6
CAME	Cameli-Denizli	3.81	43	PN	Pn	13 08 09.9	+0.3
AYDB	Zeytinkoy-Aydi	4.04	21	PN	Pn	13 08 12.5	-0.3
OSC1	CSNet OBS 1	4.37	97	P	Pn	13 08 16.7	-0.5
OSC1				S	Sn	13 09 06.7	-0.2
KORT	Korkueli	4.47	50	PN	Pn	13 08 18.9	+0.1
ITM	Ithomi	4.52	313	PN	Pn	13 08 18.7	-0.6
ANTB	Antalya	4.61	53	PN	Pn	13 08 21.1	+0.6
AKMS	Akamas	5.22	79	P	Pn	13 08 28.2	-0.7
AKMS				AML	AML	13 09 25.0	
	0.2nm,0.3s						
AKMS				AML	AML	13 09 28.5	
	0.3nm,0.3s						
OSC2	CSNet OBS 4	5.27	100	P	Pn	13 08 30.1	+0.6
OSC2				S	Sn	13 09 29.6	+0.6
NATA	Nata	5.39	82	P	Pn	13 08 31.3	+0.1
ALFC	Alefka	5.46	78	P	Pn	13 08 31.4	-0.7
ALFC				AML	AML	13 09 34.7	
	0.2nm,0.3s						
ALFC				AML	AML	13 09 35.9	
	0.2nm,0.3s						
ASGA	Asgata	5.95	82	P	Pn	13 08 38.9	0.0
ASGA				AML	AML	13 09 47.2	
	0.2nm,0.6s						
ASGA				AML	AML	13 09 48.2	
	0.2nm,0.5s						
CSS	Mathiatis	6.03	80	P	Pn	13 08 38.9	-1.1
MVOU	Mavrovouni	6.28	80	P	Pn	13 08 43.3	-0.1

*NEIC **13** 13:35:05.3±1.2, 31°.0S±0°.1×179°.9W±0°.2, h366^{km}±9^{km}, mb4.0/11, Error ellipse: s-maj=26.1km s-min=14.3km az=109.0*

*IDC **13** 13:35:05.7±1.2, 30°.97S×179°.91W, h382^{km}±16^{km}, mb2.6/2, mb1 3.5/5, mb1mx3.2/21, mbtmp4.2/5, Error ellipse: s-maj=35.0km s-min=16.0km az=131.0*

ISC 13 13:35:06.7±0.7, 31°.07S±0°.07×179°.6W±0°.1, h400^{km}, n91, σ2ˢ.03/103, mb3.8/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.34	40	P	Pn	13 36 02.8	-2.2
GLKZ				S	S	13 36 38.1	-14
RIZ	Raoul Island	2.35	40	P	Pn	13 36 03.7	-1.3
RIZ				S	S	13 36 38.1	-14
RAO	Raoul Island	2.35	40	P	Pn	13 36 03.6	-1.4
	56nm,0.3s,baz=73,slow=11,SNR=5.2						
RAO				S	S	13 36 43.4	-8.7
	100nm,0.3s,baz=101,slow=22,SNR=2.7						
RAO	Raoul Island	2.35	40		Pn	13 36 01.2	-3.8
GRZ	Great Barrier	6.58	217	P	P	13 36 48.2	+1.9
MXZ	Matakaoa Point	6.69	194	P	Pn	13 36 47.1	+0.3
MXZ				S	S	13 38 06.5	-2.1
MXZ	Matakaoa Point	6.69	194		Pn	13 36 45.0	-1.9
WMGZ	Waiomatatini S	6.92	193	P	Pn	13 36 48.7	-0.7
WMGZ				S	S	13 38 09.9	-3.3
WCZ	Waipu Caves	6.98	224	P	P	13 36 52.8	+2.1
HAZ	Te Kaha	7.00	197	P	Pn	13 36 49.9	-0.3
HAZ				S	S	13 38 12.4	-2.4
OUZ	Omahuta	7.02	232	P	P	13 36 52.5	+1.4
PKGZ	Pakihiroa	7.06	195	P	Pn	13 36 51.3	+0.4
PUZ	Puketiti	7.20	193	P	Pn	13 36 50.6	-1.9
PUZ				S	S	13 38 15.5	-3.4
RUGZ	Raukumara Rang	7.22	197	P	Pn	13 36 52.1	-0.8
RUGZ				S	S	13 38 15.0	-4.7
WHRZ	Whale Island	7.32	202	P	P	13 36 58.6	+4.2
TWGZ	Tauwhareparae	7.35	195	P	Pn	13 36 54.5	+0.2
TWGZ				S	S	13 38 21.3	-1.0
OPRZ	Ohinepanea	7.45	204	P	P	13 36 56.3	+0.5
TGRZ	Tauranga	7.45	206	P	P	13 36 58.7	+2.8
MARZ	Manawahe	7.54	203	P	P	13 36 59.3	+2.5
MWZ	Matawai	7.61	197	P	Pn	13 36 55.2	-2.0
MWZ				S	S	13 38 25.6	-2.0
EDRZ	Edgecumbe	7.62	202	P	P	13 36 59.5	+1.7
TKGZ	Te Karaka	7.63	195	P	Pn	13 36 56.3	-1.1
TKGZ				S	S	13 38 25.6	-2.4
URZ	Urewera	7.65	200	P	Pn	13 36 55.2	-2.4
	29nm,0.3s,baz=132,slow=23,SNR=53						
URZ				S	S	13 38 28.3	-0.1
	9.7nm,0.3s,baz=57,slow=19,SNR=7.6						
URZ	Urewera	7.65	200	P	Pn	13 36 55.2	-2.4
URZ				S	S	13 38 25.4	-3.0
URZ	Urewera	7.65	200		Pn	13 36 56.4	-1.2
KARZ	Kaharoa	7.72	205	P	P	13 37 01.6	+2.8
OMRZ	Omania	7.75	204	P	P	13 37 01.6	+2.4
RAGZ	Rawiri	7.79	197	P	P	13 37 00.8	+1.0
RAGZ				S	S	13 38 31.9	+0.5
UTU	Utuhina	7.87	205	P	P	13 37 03.8	+3.2
HLRZ	Highlands Stat	7.89	204	P	P	13 37 03.3	+2.6
RIGZ	Rimuhau	7.91	195	P	Pn	13 36 59.3	-1.3
RIGZ				S	S	13 38 28.7	-5.1
RRRZ	Republican Roa	7.91	203	P	P	13 37 03.2	+2.2
MUGZ	Murupara	7.96	201	P	Pn	13 36 58.8	-2.2
HSRZ	Hossack Road	7.98	204	P	P	13 37 04.9	+3.2
RTZ	Ruatahuna	8.02	199	P	Pn	13 37 00.3	-1.6
HRRZ	Handcock Road	8.03	204	P	P	13 37 04.4	+2.0
SNGZ	Shannon Statio	8.08	197	P	P	13 37 04.1	+1.2
TLZ	Tolley Road	8.26	207	P	P	13 37 07.1	+2.3
RAHZ	Arahi	8.27	198	P	Pn	13 37 03.9	-0.8
BKZ	Black Stump Fm	8.67	200	P	Pn	13 37 07.5	-1.9
BKZ	Black Stump Fm	8.67	200	Pn	Pn	13 37 06.7	-2.6
HIZ	Hauiti	8.69	210	P	P	13 37 12.4	+2.7
HIZ	Hauiti	8.69	210	P	P	13 37 10.7	+1.0
ETVZ	East Tongariro	8.90	204	P	P	13 37 12.9	+0.8
WTVZ	West Tongariro	8.92	205	P	P	13 37 13.3	+0.9
NNVZ	North Ngauruho	8.93	204	P	P	13 37 13.4	+0.9
KWHZ	Kaweka Forest	8.93	200	P	Pn	13 37 12.3	0.0
OTVZ	Oturere	8.94	204	P	Pn	13 37 13.2	+0.7
TWVZ	Taurewa	8.94	205	P	P	13 37 13.6	+1.1
NGZ	Ngauruhoe	8.97	204	P	P	13 37 13.7	+0.7
CKHZ	Cape Kidnapper	8.98	196	P	Pn	13 37 12.8	0.0
TUVZ	Tukino	9.04	204	P	P	13 37 13.8	+0.1
DRZ	Dome Shelter	9.07	204	P	Pn	13 37 16.6	+2.4
BHHZ	Black Hill Sta	9.10	201	P	P	13 37 12.4	-1.9
TRVZ	Turoa	9.10	204	P	P	13 37 14.1	-0.4
WNVZ	Wahianoa	9.11	204	P	P	13 37 14.9	+0.4
MOVZ	Moawhango	9.13	203	P	P	13 37 13.6	-0.9
KRHZ	Kereru	9.15	200	P	P	13 37 12.9	-1.9
KAHZ	Kahuranaki	9.15	197	P	P	13 37 13.8	-1.1
PKVZ	Pokaka	9.17	205	P	P	13 37 14.2	-0.8
VRZ	Vera Road	9.25	208	P	Pn	13 37 17.3	+1.4
PNHZ	Pukenui	9.45	200	P	P	13 37 15.5	-2.6
WPHZ	Waipukurau	9.52	198	P	P	13 37 18.1	-0.8
TSZ	Takapari Road	9.65	201	P	P	13 37 18.1	-2.3
WAZ	Wanganui	9.71	205	P	P	13 37 21.3	+0.4
BFZ	Birch Farm	10.15	198		P	13 37 23.7	-2.1
PLWZ	Palliser	11.25	200	P	P	13 37 36.8	-1.3
THZ	Tophouse	12.23	207	P	P	13 37 47.3	-1.6
OXZ	Oxford	13.90	206	P	P	13 38 05.7	-1.4
AFI	Afiamalu	18.55	25	P	P	13 38 57.2	-0.1
	3.6nm,0.3s,baz=278,slow=6.1,SNR=5.6						
BBOO	Buckleboo	37.43	255	P	P	13 41 42.3	-1.4
BBOO				IAmb	IAmb	13 42 03.8	
	comp=Z,6.9nm,1.1s						
ASAR	Alice Springs	41.67	268	P	P	13 42 17.0	-1.4
	comp=Z,0.2nm,0.5s,baz=105,slow=7.1,SNR=8.1						
WR0	Warramunga Arr	42.54	274	P	P	13 42 23.9	-1.4
WB2	Warramunga Arr	42.71	274	P	P	13 42 24.8	-1.9
WB2				IAmb	IAmb	13 42 45.4	
	comp=Z,5.3nm,1.4s						
WRAB	Tennant Creek	42.71	274	P	P	13 42 24.9	-1.8
WRAB				IAmb	IAmb	13 42 45.5	
	comp=Z,7.2nm,1.5s						
WRA	Warramunga Arr	42.72	274	P	P	13 42 25.2	-1.6
	comp=Z,0.5nm,0.5s,baz=111,slow=7.9,SNR=20						
WRA	Warramunga Arr	42.72	274	IAmb	IAmb	13 42 27.6	
	comp=Z,0.2nm,1.2s						
WB0	Warramunga Arr	42.75	274	P	P	13 42 25.5	-1.5
FORT	Forrest	44.51	256	P	P	13 42 39.0	-1.7
SBA	Scott Base	47.27	184	P	P	13 43 04.7	+3.5
SBA				IAmb	IAmb	13 43 12.3	
	comp=Z,30nm,1.5s						
QSPA	South Pole Qui	59.04	180	P	P	13 44 29.9	+3.7
QSPA				IAmb	IAmb	13 44 30.4	
	comp=Z,5.1nm,0.6s						
JAGI	Jajag, Banyuwa	65.32	275	P	P	13 45 08.0	+0.1
SNAA	Sanae	77.52	179	P	P	13 46 21.4	+2.3
SNAA	Sanae	77.52	179	P	P	13 46 21.5	+2.4
SNAA				IAmb	IAmb	13 46 36.2	
	comp=Z,6.8nm,1.5s						
VNA3	Neumayer Olymp	77.72	177	P	P	13 46 22.5	+2.3
VNA2	Neumayer--Watz	78.14	177	P	P	13 46 25.1	+2.7
	baz=182,slow=5.1						
VNA1	Neumayer--Stat	78.38	177	P	P	13 46 27.3	+3.6
FINES	FINESS Array B	145.27	339	PKPbc	PKPbc	13 53 57.2	-0.2
	comp=Z,2.6nm,0.5s,baz=62,slow=4.0,SNR=49						
NB2	NORSAR Subarra	149.18	350	PKP	PKiKP	13 54 08.3	-0.7
	comp=Z,0.4nm,0.5s,baz=14,slow=2.6						
NOA	NORSAR Array B	149.18	350	PKPbc	PKiKP	13 54 08.3	-0.7
	comp=Z,0.5nm,0.5s,baz=15,slow=4.1,SNR=3.8						
HFS	Hagfors	149.60	347	PKPbc	PKPbc	13 54 09.1	+0.1
	comp=Z,0.9nm,0.6s,baz=349,slow=4.4,SNR=5.5						
HFS				PKPab	PKPab	13 54 14.9	-0.7
	comp=Z,1.2nm,0.5s,baz=66,slow=3.5,SNR=9.9						

*FUNV **13** 13:44:47.2, 10°.68N×70°.44W, h2^{km}, MW3.4*

ISC 13 13:44:46.7±1.8, 10°.68N±0°.04×70°.44W±0°.03, h7^{km}±12^{km}, n22, σ1ˢ.33/40, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CURV	Curarigua	0.81	145	*e*S	Sb	13 45 14.5	+0.1
TORV	Torococo	1.13	169	*e*P	Pg	13 45 08.3	-0.1
TORV				*e*S	Sg	13 45 22.6	-0.5
MONV	Montecano	1.35	20	*e*P	Pn	13 45 11.4	-0.6
JACV	Jacura	1.63	75	*e*P	Pn	13 45 16.4	+0.5
JACV				*e*S	Sb	13 45 38.8	+0.8
SDV	Santo Domingo	1.79	186	*e*P	Pn	13 45 19.8	+1.6
SDV				*e*S	Sb	13 45 43.4	+0.6
SDV				*i*		13 45 44.0	
	comp=Z,101nm,0.5s						
URIC	Uribia, Colomb	1.83	304	*e*P	Pn	13 45 20.0	+1.4
URIC				*e*S	Sn	13 45 43.4	+1.3
URIC				*i*		13 45 44.3	
	comp=Z,67nm,0.1s						
VIGV	El Vigia	2.04	207	*e*P	Pn	13 45 22.1	+0.5
VIGV				*e*S	Sn	13 45 47.6	+0.3
MAPV	Macapo	2.12	113	*e*P	Pn	13 45 23.6	+0.9
MAPV				*e*S	Sn	13 45 49.6	+0.2
MCQV	Machiques	2.15	253	*e*P	Pn	13 45 23.5	+0.4
MCQV				*e*S	Sn	13 45 50.5	+0.4
SOCV	Socops	2.41	190	*e*P	Pn	13 45 27.9	+1.2
SOCV				*e*S	Sn	13 45 58.8	+2.3
SOCV	Socops	2.41	190	*e*P	Pn	13 45 26.7	0.0
SOCV				*e*S	Sn	13 45 56.8	+0.3
CRJC	Cerrejon, Guaj	2.42	278	*e*P	Pn	13 45 26.7	-0.2
CRJC				*e*S	Sn	13 45 55.9	-1.0
CRJC				*i*		13 46 04.9	
	comp=Z,97nm,0.4s						
BENV	Beln	2.88	104	*e*P	Pn	13 45 33.1	-0.1
BENV				*e*S	Sn	13 46 06.2	-2.0
BAUV	El Baul	2.92	126	*e*P	Pn	13 45 34.2	+0.5
BAUV				*e*S	Sn	13 46 08.0	-1.1
CAPV	Capacho	3.35	214	*e*P	Pn	13 45 40.0	+0.2
CAPV				*e*S	Sn	13 46 18.6	-1.3
ELOV	Elorza	3.77	165	*e*S	Sn	13 46 32.6	+2.6
ELOV	Elorza	3.77	165	*e*P	Pn	13 45 45.8	+0.4
ELOV				*e*S	Sn	13 46 28.2	-1.8
PAMC	Pamplona, Colo	4.00	214	*e*P	Pn	13 45 49.2	+0.3
PAMC				*e*S	Sn	13 46 35.4	-0.9
PAMC				*i*		13 46 38.4	
	comp=Z,23nm,0.3s						
SJCC	San Jacinto, C	4.73	261	*e*P	Pn	13 45 59.4	+0.8
SJCC				*e*S	Sn	13 46 54.7	+0.9
SJCC				*i*		13 47 05.2	
	comp=Z,9.9nm,0.5s						
ZARC	Zaragoza, Cauc	5.39	234	*e*P	Pn	13 46 07.5	-0.1
ZARC				*e*S	Sn	13 47 08.8	-1.2
ZARC				*i*		13 47 45.8	
	comp=Z,7.8nm,0.5s						
RUSC	La Rusia	5.43	209	*e*P	Pn	13 46 09.3	+0.7
PTBC	PUERTO BERRIO,	5.72	224	*e*P	Pn	13 46 10.6	-1.5
PTBC				*e*S	Sn	13 47 13.3	-4.7

*JMA **13** 13:59:48.5, 36°.78N×141°.36E, h44^{km}±1^{km}, M3.3*

*IDC **13** 13:59:58.1±4.0, 36°.47N×140°.67E, h74^{km}±36^{km}, mb3.1/5, mb1 3.4/5, mb1mx2.8/40, mbtmp3.5/5, Error ellipse: s-maj=39.1km s-min=22.7km az=90.0*

ISC 13 13:59:48.1±2.1, 36°.80N±0°.05×141°.41E±0°.09, h16^{km}±10^{km}, n21, σ0ˢ.85/22, mb3.6/5, 4C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.57	302	⇑P	Pg	13 59 59.9	+0.5
ONAJ				S	Sg	14 00 08.0	+0.9
JHO	Hitachi	0.70	255	P	Pb	14 00 01.3	-0.6
JHO				S	Sg	14 00 10.7	-0.3
JFK	Kawauchi	0.71	323	⇑P	Pb	14 00 02.0	-0.1
JFK				S	Sg	14 00 11.6	+0.2
JFFD	Fukushimafurud	0.74	294	P	Pb	14 00 01.9	-0.7
JFFD				*e*S	Sb	14 00 12.1	-0.4
JHYU	Hitachinakayam	0.80	236	P	Pb	14 00 02.8	-0.9
JHYU				S	Sb	14 00 13.5	-0.8
JFT	Otama	1.12	310	⇑P	Pn	14 00 07.9	-1.2
JFT				S	Sb	14 00 22.0	-1.4
JMM	Marumori	1.17	336	⇑P	Pn	14 00 08.9	-1.0
JMM				S	Sb	14 00 24.1	-0.9
JAG	Ashikaga	1.62	257	P	Pn	14 00 15.0	-0.9
MJAR	Matsushiro Arr	2.58	265	P	Pn	14 00 29.1	-0.1
	0.5nm,0.3s,baz=88,slow=14,SNR=18						
MAT	Matsushiro	2.59	265	P	Pn	14 00 30.0	+0.7
MAT				S	Sn	14 01 01.6	+1.2
H11N2	WAKE ISLAND Hy	28.03	120	T	T	14 35 06.3	
	baz=313,slow=75,SNR=31						
H11N1	WAKE ISLAND Hy	28.04	120	T	T	14 35 04.4	
	baz=313,slow=75,SNR=39						
H11N3	WAKE ISLAND Hy	28.05	120	T	T	14 35 02.4	
	baz=313,slow=75,SNR=32						
H11S1	WAKE ISLAND Hy	28.74	123	T	T	14 35 57.8	
	baz=315,slow=75,SNR=15						
H11S3	WAKE ISLAND Hy	28.74	123	T	T	14 35 58.2	
	baz=315,slow=75,SNR=21						
H11S2	WAKE ISLAND Hy	28.75	123	T	T	14 35 58.5	
	baz=315,slow=75,SNR=19						
MKAR	Makanchi Array	44.24	302	P	P	14 07 57.5	+0.8
	0.2nm,0.6s,baz=93,slow=10,SNR=2.9						
KURBB	Kurchatov Arra	46.14	308	P	P	14 08 12.5	+0.9
	0.4nm,0.7s,baz=84,slow=8.6,SNR=2.4						
ILAR	Eielson Array	49.70	32	P	P	14 08 46.7	+7.8
	0.6nm,0.7s,baz=268,slow=6.3,SNR=6.3						
WRA	Warramunga Arr	56.83	188	P	P	14 09 31.9	0.0
	0.4nm,0.6s,baz=6.3,slow=7.4,SNR=7.7						
ASAR	Alice Springs	60.55	188	P	P	14 09 58.0	+0.2
	0.5nm,0.9s,baz=8.1,slow=4.7,SNR=5.0						

*SOF **13** 14:04:34.8, 41°.70N×24°.17E, h13^{km}, MD2.6*

*ISK **13** 14:04:35.8, 41°.66N×24°.15E, h6^{km}, ML2.7/6*

*ATH **13** 14:04:35.1, 41°.68N×24°.17E, h21^{km}±2^{km}, ML2.3/9, Error ellipse: s-maj=3.6km s-min=1.3km az=190.0*

*THE **13** 14:04:36.6, 41°.63N×24°.16E, h2^{km}, ML2.4/6, Error ellipse: s-maj=1.3km s-min=0.6km az=181.0*

*SKO **13** 14:04:36.5, 41°.68N×24°.18E, h6^{km}*

*BEO **13** 14:04:36.0±0.6, 41°.63N×24°.19E, h4^{km}±2^{km}, ML2.3/8*

ISC 13 14:04:34.6±1.1, 41°.71N±0°.02×24°.21E±0°.02, h5^{km}±9^{km}, n78, σ0ˢ.82/114, 7C-9D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RZN	Rozhen	0.38	93	*i* P	Pb	14 04 43.6	-0.3
MMB	Musomiste	0.38	252	*i* P	Pg	14 04 42.2	+0.1
NVR	Nevrokopi	0.45	216	P	Pg	14 04 43.5	+0.2
NVR				S	Sg	14 04 49.3	+0.2
NVR	Nevrokopi	0.45	216	P	Pg	14 04 43.4	+0.2
NVR				S	Sg	14 04 49.4	+0.3
NVR				AML	AML	14 04 49.8	
	comp=E,956µm,0.2s						
NVR				AML	AML	14 04 51.9	
	comp=N,776µm,0.2s						
PLD	Plovdiv	0.54	43	PG	Pb	14 04 47.2	+0.6
PLD	Plovdiv	0.54	43	*i* P	Pb	14 04 47.1	+0.6
PLD	Plovdiv	0.54	43	*i* Pg	Pb	14 04 47.2	+0.6
PLD				*i* Sg	Sb	14 04 55.5	+0.9
PLD	Plovdiv	0.54	43	*e*Pg	Pb	14 04 47.1	+0.6
PLD				*e*Sg	Sb	14 04 55.3	+0.8
KAVA	Kavala	0.75	162	P	Pg	14 04 49.3	+0.3
KAVA				S	Sg	14 04 58.9	+0.2
	comp=N,290nm,0.2s						
KAVA	Kavala	0.75	162	P	Pg	14 04 49.2	+0.3
KAVA				S	Sb	14 04 59.7	-0.9
SRS	Serrai	0.76	218	P	Pg	14 04 49.5	+0.4
SRS				S	Sb	14 04 59.8	-1.0
SRS	Serrai	0.76	218	P	Pg	14 04 49.3	+0.1
SRS				S	Sg	14 04 59.5	+0.6
SRS				AML	AML	14 05 06.2	
	comp=E,556µm,0.1s						
SRS				AML	AML	14 05 07.2	
	comp=N,442µm,0.2s						
SRS	Serrai	0.76	218	⇑*i*Pg	Pg	14 04 49.2	+0.1
SRS				*i* Sg	Sg	14 04 59.6	+0.6
KVLA	Kavala	0.78	170	P	Pb	14 04 50.6	-0.1
KVLA				AML	AML	14 05 01.3	
	comp=N,527µm,0.2s						
KVLA				AML	AML	14 05 06.3	
	comp=E,817µm,0.2s						
PGB	Panagyurishte	0.84	358	*i* P	Pg	14 04 50.9	+0.1
KKB	Krupnik	0.86	281	*i* P	Pg	14 04 50.6	-0.5
KDZ	Kurdzhali	0.90	93	*i* P	Pg	14 04 52.1	+0.1
KOKK	Kokkinochori,	0.91	190	P	Pg	14 04 51.8	-0.2
DIM	Dimitrovgrad	1.04	71	*i* P	Pn	14 04 56.6	+0.7
SOH	Sokhos	1.10	216	P	Pg	14 04 55.6	-0.1
SOH				S	Sg	14 05 09.8	-0.2
	comp=E,162nm,0.4s						
SOH	Sokhos	1.10	216	P	Pg	14 04 55.6	-0.1
SOH				AML	AML	14 05 15.3	
	comp=N,731µm,0.4s						
SOH				AML	AML	14 05 17.1	
	comp=E,332µm,0.2s						
SOH	Sokhos	1.10	216	*i* Pg	Pg	14 04 55.5	-0.1
KNT	Kendrikon	1.13	241	P	Pg	14 04 56.1	-0.2
KNT				S	Sb	14 05 11.5	-0.1
	comp=E,192nm,0.3s						
KNT	Kendrikon	1.13	241	P	Pg	14 04 56.0	-0.2
KNT	Kendrikon	1.13	241	PG	Pb	14 04 56.5	-0.1
KNT				SG	Sb	14 05 11.6	-0.1
KNT	Kendrikon	1.13	241	*i* Pg	Pg	14 04 56.0	-0.4
KNT				*i* Sg	Sg	14 05 10.6	-0.4
RDO	Rodhopi	1.14	119	P	Pn	14 04 57.6	+0.4
RDO				S	Sn	14 05 15.5	+2.2
	comp=E,208nm,0.2s						
RDO	Rodhopi	1.14	119	P	Pn	14 04 57.1	-0.1
RDO				AML	AML	14 05 17.2	
	comp=E,454µm,0.3s						
RDO				AML	AML	14 05 17.4	
	comp=N,388µm,0.1s						
RDO	Rodhopi	1.14	119	PN	Pn	14 04 58.3	+1.1
RDO				SN	Sn	14 05 14.9	+1.6
VTS	Vitosha	1.16	322	⇓P	Pg	14 04 56.8	-0.2
VTS				⇑S	Sn	14 05 14.6	+0.6
VTS	Vitosha	1.16	322	*i* P	Pg	14 04 56.9	0.0
VTS	Vitosha	1.16	322	*i* Pg	Pg	14 04 57.0	0.0
VTS	Vitosha	1.16	322	*e*Pg	Pg	14 04 57.1	+0.1
VTS				*e*Sg	Sn	14 05 15.6	+1.6
THAS	Thassos island	1.17	161	P	Pg	14 04 56.9	-0.2
THAS				S	Sn	14 05 13.8	0.0
	comp=N,195nm,0.3s						
THAS	Thassos island	1.17	161	P	Pg	14 04 56.8	-0.2
THAS				S	Sn	14 05 13.8	0.0
THAS				AML	AML	14 05 16.1	
	comp=E,366µm,0.2s						
THAS				AML	AML	14 05 17.2	
	comp=N,435µm,0.4s						
VAY	Valandovo	1.29	253	*i* Pg	Pn	14 04 59.2	-0.1
VAY				*i* Sg	Sn	14 05 17.1	+0.2
VAY	Valandovo	1.29	253	*e*Pg	Pg	14 04 59.4	0.0
VAY				*e*Sg	Sg	14 05 15.4	-0.8
OUR	Ouranopolis	1.39	187	P	Pb	14 05 00.7	-0.3
OUR				S	Sn	14 05 20.2	+1.0
	comp=N,250nm,0.3s						
OUR	Ouranopolis	1.39	187	P	Pb	14 05 00.7	-0.3
OUR	Ouranopolis	1.39	187	PN	Pg	14 05 01.5	+0.3
OUR				SN	Sn	14 05 20.1	+0.9
THE	Thessaloniki	1.43	222	P	Pb	14 05 01.5	-0.2
THE	Thessaloniki	1.43	222	*i* Pg	Pn	14 05 01.1	0.0
THE				*i* Sg	Sn	14 05 20.1	-0.2
PLG	Polygyros	1.46	204	P	Pg	14 05 02.3	-0.3
PLG				AML	AML	14 05 23.4	
	comp=N,352µm,0.3s						
PLG				AML	AML	14 05 23.4	
	comp=E,262µm,0.3s						
BOSS	Bosilegrad	1.51	302	*e*Pg	Pb	14 05 03.1	0.0
BOSS				*e*Sg	Sg	14 05 24.7	+1.5
GRG	Griva	1.56	242	P	Pb	14 05 04.0	0.0
GRG				S	Sg	14 05 24.4	-0.3
GRG	Griva	1.56	242	PN	Pb	14 05 04.0	0.0
GRG				SN	Sb	14 05 24.1	+0.1
GRG	Griva	1.56	242	*i* Pg	Pb	14 05 03.8	-0.2
GRG				*i* Sg	Sg	14 05 24.6	-0.1
SMTH	Samothraki Isl	1.59	141	P	Pb	14 05 04.0	-0.5
SMTH				S	Sg	14 05 26.3	+0.6
SMTH	Samothraki Isl	1.59	141	P	Pb	14 05 03.9	-0.5
SMTH				AML	AML	14 05 28.1	
	comp=N,71µm,0.4s						
SMTH				AML	AML	14 05 29.4	
	comp=E,67µm,0.4s						
ALN	Alexandroupoli	1.60	120	P	Pg	14 05 05.0	-0.3
ALN				S	Sg	14 05 27.0	+0.9
ALN	Alexandroupoli	1.60	120	P	Pg	14 05 04.9	-0.5
ALN				AML	AML	14 05 31.5	
	comp=N,59µm,0.6s						
ALN				AML	AML	14 05 34.4	
	comp=E,69µm,0.3s						
ALN	Alexandroupoli	1.60	120	PN	Pg	14 05 05.6	+0.3
ALN				SN	Sg	14 05 27.4	+1.3
PAIG	Paliouri	1.83	193	P	Pn	14 05 06.7	+0.1
PAIG				S	Sn	14 05 30.2	+0.1
PAIG	Paliouri	1.83	193	P	Pn	14 05 06.7	+0.1
EDRB	Edirne	1.90	85	P	Pb	14 05 10.2	+0.5
EDRB	Edirne	1.90	85	PN	Pg	14 05 10.4	-0.6
UKOP	Uzunkopru-Edir	1.91	107	PN	Pb	14 05 10.3	+0.4
ZAPS	Zavoj	1.95	324	*e*Pn	Pb	14 05 11.1	+0.4
ZAPS				*e*Sn	Sb	14 05 35.3	0.0
ERIK	Erikli-Kesan	2.02	120	PN	Pb	14 05 11.5	-0.3
BARS	Barje	2.10	303	*e*Pn	Pn	14 05 11.6	+1.2
BARS	Barje	2.10	303	*e*Pn	Pg	14 05 24.5	+10
BARS				*e*Sn	Sn	14 05 38.3	+1.5
BARS				*e*Sn	Sg	14 05 58.6	+17
BLKB	Belogradchik	2.22	330	⇓S	Sb	14 05 42.0	-1.1
VLAD	Vladila	2.29	3	⇓S	Sn	14 05 42.5	+1.0
XOR	Xorichti	2.47	199	P	Pn	14 05 16.4	+0.9
MAR4	Marsite Statio	2.50	111	PN	Pb	14 05 18.7	-1.4
RAZG	Razgrad	2.51	42	⇓S	Sn	14 05 45.6	-1.4
ZAGS	Zajecar	2.56	326	*e*Pn	Pb	14 05 20.0	-1.0
ZAGS				*e*Sn	Sb	14 05 51.3	-1.4
BOVS	Bovan	2.67	317	⇓S	Sn	14 05 52.3	+1.4
PUNG	Punghina	2.73	340	⇓S	Sn	14 05 53.3	+0.8
SELS	Selova	2.74	304	*e*Pn	Pn	14 05 20.5	+1.2
SELS				*e*Sn	Sb	14 05 55.8	-2.2
SGRR	Singureni	2.82	27	⇓P	Pn	14 05 18.3	-2.0
SGRR				⇑S	Sn	14 05 54.1	-0.6
IVAS	Ivanjica	3.53	303	*e*Pn	Pn	14 05 31.4	+1.3
MDVR	Moldovita	3.57	330	⇓S	Sn	14 06 14.5	+1.3
VOIR		3.77	9	⇑P	Pn	14 05 32.7	-0.8
MLR	Muntele Rosu	3.98	18	⇑P	Pn	14 05 34.7	-1.7
TIRR	Tirgusor	4.12	47	⇑P	Pn	14 05 36.0	-2.1

CFR	**Carcaliu**	**4.49**	**38**	⇓P	**Pn**	**14 05 41.2**	**-2.0**
PLOR	**Plostina**	**4.50**	**22**	⇑P	**Pn**	**14 05 42.3**	**-1.1**

IDC 13 14:10:53.1±4.5**, 15°.29S**×**176°.70W, h0**^{km}**, mb3.7**/4**, mb1 4.1**/4**, mb1mx3.8**/30**, mbtmp3.7**/4**, MS3.3**/5**, Ms1 3.3**/5**, ms1mx3.0**/34**, Error ellipse: s-maj=376.5km s-min=26.8km az=151.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.96**	**75**	Pn	Pn	14 11 57.7	-11
	6.3nm,0.3s,baz=303,slow=2.3,SNR=9.1						
AFI				LR	LR	14 13 32.8	
	comp=Z,234nm,18.7s,baz=236,slow=32						
MSVF	**Nonsavu**	**5.59**	**244**	LR	LR	14 14 07.0	
	comp=Z,96nm,19.5s,baz=143,slow=35						
RAO	**Raoul Island**	**13.94**	**184**	LR	LR	14 18 39.1	
	comp=Z,161nm,20.6s,baz=12,slow=33						
STKA	**Stephens Creek**	**41.35**	**239**	LR	LR	14 35 40.1	
	comp=Z,66nm,19.4s,baz=24,slow=36						
WRA	**Warramunga Arr**	**46.77**	**257**	P	P	14 19 24.2	-0.4
	0.8nm,1.0s,baz=92,slow=6.7,SNR=3.9						
ASAR	**Alice Springs**	**47.12**	**252**	P	P	14 19 27.4	0.0
	0.9nm,0.7s,baz=85,slow=8.3,SNR=17						
ASAR				LR	LR	14 38 59.0	
	comp=Z,64nm,19.0s,baz=64,slow=36						
NVAR	**Mina Array Bea**	**76.41**	**43**	P	P	14 22 45.0	+0.1
	1.2nm,0.9s,baz=236,slow=8.0,SNR=4.6						
PDAR	**Pinedale Array**	**84.33**	**43**	P	P	14 23 27.4	0.0
	0.6nm,0.8s,baz=259,slow=3.0,SNR=4.3						

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*NEIC **13** 14:25:41.5±1.8, 30°.27S±0°.03×72°.29W±0°.05, h3^{km}±3^{km}, Error ellipse: s-maj=6.7km s-min=4.7km az=99.0*

*GUC **13** 14:25:44.8±0.6, 30°.32S×71°.96W, h17^{km}±3^{km}, ML3.9*

ISC 13 14:25:42.4±1.7**, 30°.31S**±0°.04×**72°.09W**±0°.07**, h6**^{km}±11^{km}**, n42, σ1**^{s}**22**/54**, 1C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.53**	**133**	⇓iP	**Pb**	**14 25 54.5**	**+0.3**
CO06				iS	**Sb**	**14 26 00.7**	**-1.4**
CO06				IAML		14 26 03.8	
	comp=N,10µm,0.7s						
CO06	**Fray Jorge**	**0.53**	**133**		**Pb**	**14 25 54.4**	**+0.3**
CO06				Sg	**Sg**	**14 26 00.2**	**+0.5**
CO05	**La Serena**	**0.83**	**62**	⇓iP	**Pn**	**14 26 01.2**	**+0.5**
CO05				IAML		14 26 14.4	
	comp=E,5µm,0.4s						
CO05	**La Serena**	**0.83**	**62**	Pg	**Pn**	**14 26 01.2**	**+0.5**
CO05				Sg	**Sg**	**14 26 09.3**	**+0.1**
GO04	**Tololo Observa**	**1.13**	**83**	eP	**Pn**	**14 26 05.2**	**+0.3**
GO04				eS	**Sn**	**14 26 20.6**	**-0.3**
GO04				IAML		14 26 23.4	
	comp=N,15µm,0.3s						
GO04	**Tololo Observa**	**1.13**	**83**		**Pn**	**14 26 05.2**	**+0.3**
CO03	**El Pedregal**	**1.32**	**114**	⇓iP	**Pg**	**14 26 07.3**	**-0.3**
CO03				iS	**Sn**	**14 26 25.3**	**-0.1**
CO03				IAML		14 26 27.2	
	comp=N,3µm,0.3s						
CO03	**El Pedregal**	**1.32**	**114**		**Pg**	**14 26 07.3**	**-0.3**
LCO	**Las Campanas**	**1.77**	**43**	⇑eP	**Pg**	**14 26 16.1**	**-0.2**
LCO				eS	**Sg**	**14 26 40.0**	**+0.6**
AC04	**Llanos de Chal**	**2.28**	**23**	eP	**Pn**	**14 26 22.4**	**+1.8**
AC04	**Llanos de Chal**	**2.28**	**23**	Pn	**Pn**	**14 26 22.2**	**+1.7**
VA06	**Catapilco**	**2.34**	**163**	eP	**Pn**	**14 26 21.8**	**+0.4**
VA06				eS	**Sb**	**14 26 55.0**	**+0.7**
VA06				IAML		14 27 04.4	
	comp=E,848nm,0.5s						
VA01	**Torpederas**	**2.73**	**172**	Pn	**Pn**	**14 26 27.2**	**+0.4**
VA03	**San Esteban**	**2.78**	**152**		**Pn**	**14 26 29.2**	**+1.7**
ROCH	**El Roble**	**2.81**	**161**	eP	**Pn**	**14 26 28.7**	**+0.7**
ROCH				eP	**Pn**	**14 26 28.7**	**+0.7**
ROCH				eS	**Sb**	**14 27 07.2**	**-0.7**
ROCH				IAML		14 27 16.9	
	comp=E,417nm,0.5s						
ROCH				IAML		14 27 17.2	
	comp=E,488nm,0.5s						
MT02	**Curacav**	**3.05**	**165**	eP	**Pn**	**14 26 34.6**	**+3.5**
MT02				eS	**Sb**	**14 27 13.2**	**-1.4**
MT02	**Curacav**	**3.05**	**165**		**Pn**	**14 26 32.1**	**+0.9**
PEL	**Peldehue**	**3.07**	**157**		**Pn**	**14 26 33.0**	**+1.5**
GO03	**Copiap**	**3.16**	**31**	Pn	**Pn**	**14 26 32.8**	**+0.1**
ZON	**Zonda**	**3.18**	**114**	Pn	**Pn**	**14 26 33.6**	**+0.6**
MT05	**Renca**	**3.28**	**160**	eP	**Pn**	**14 26 38.0**	**+3.6**
MT05				eS	**Sb**	**14 27 20.5**	**-0.8**
MT05				IAML		14 27 30.9	
	comp=E,597nm,0.4s						
MT05	**Renca**	**3.28**	**160**	Pn	**Pn**	**14 26 35.3**	**+0.9**
VA05	**Santo Domingo**	**3.36**	**173**	eP	**Pb**	**14 26 42.4**	**0.0**
VA05				eS	**Sb**	**14 27 26.3**	**+2.8**
VA05				IAML		14 27 50.3	
	comp=E,311nm,0.4s						
VA05	**Santo Domingo**	**3.36**	**173**		**Pn**	**14 26 35.7**	**+0.3**
MT09	**Talagante**	**3.58**	**165**	eP	**Pn**	**14 26 39.6**	**+1.0**
MT09	**Talagante**	**3.58**	**165**		**Pn**	**14 26 39.5**	**+0.9**
MT01	**Popeta**	**3.61**	**169**	eP	**Pn**	**14 26 39.2**	**+0.3**
MT01	**Popeta**	**3.61**	**169**		**Pn**	**14 26 39.0**	**0.0**
BO01	**Tunca**	**4.16**	**168**	Pn	**Pn**	**14 26 46.4**	**-0.1**
AC02	**Maricunga**	**4.33**	**38**	Pn	**Pn**	**14 26 52.2**	**+2.9**
BO02	**Sierra Bellavi**	**4.60**	**166**		**Pn**	**14 26 53.1**	**+0.5**
GO05	**Huala**	**4.69**	**178**	Pn	**Pn**	**14 26 52.7**	**-1.1**
PB14	**IPOC Station P**	**5.86**	**15**	Pn	**Pn**	**14 27 09.5**	**-0.6**
PB15	**IPOC Station P**	**7.45**	**19**	Pn	**Pn**	**14 27 32.3**	**+0.4**
LVC	**Limon Verde**	**8.18**	**21**	Pn	**Pn**	**14 27 40.3**	**-1.7**
LC01	**Cunco**	**8.57**	**179**	Pn	**Pn**	**14 27 45.3**	**-1.7**
PB01	**IPOC Station P**	**9.52**	**15**	Pn	**Pn**	**14 27 59.5**	**-0.7**
TA01	**Diego Aracena**	**9.86**	**11**	Pn	**Pn**	**14 28 05.1**	**+0.4**
LL05	**Los Muermos**	**11.13**	**185**	Pn	**Pn**	**14 28 21.5**	**-0.6**
TRQA	**Tornquist**	**11.39**	**135**	Pn	**Pn**	**14 28 26.3**	**+0.7**
PLTB	**Pedras Altas**	**15.91**	**100**	Pn	**Pn**	**14 29 27.0**	**0.0**
PLTB				IAmb	IAmb	14 29 49.0	
	comp=Z,16nm,1.3s						
SNAA	**Sanae**	**55.02**	**159**	P	**P**	**14 35 15.2**	**+0.8**
SNAA				IAmb	IAmb	14 35 43.2	
	comp=Z,3.9nm,1.4s						

WEL 13 14:34:58.9±0.9**, 32°S**±19°×**18°0E**±4°2**, h383**^{km}±31^{km}**, M3.8**/7**, mB4.2**/6**, MLv4.3**/7**, Mw(mB)3.2**/6**, Error ellipse: s-maj=0.1km s-min=0.0km az=112.7, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.78**	**190**	P	Pn	14 36 29.6	+1.2
MXZ				S	S	14 37 40.5	-0.7
WMGZ	**Waiomatatini S**	**6.02**	**189**	P	Pn	14 36 32.6	+1.6
WMGZ				S	S	14 37 47.0	+1.1
HAZ	**Te Kaha**	**6.06**	**194**	P	Pn	14 36 31.9	+0.4
HAZ				S	S	14 37 46.2	-0.7
PKGZ	**Pakihiroa**	**6.13**	**191**	P	Pn	14 36 33.6	+1.3
PKGZ				S	S	14 37 47.7	-0.8
RUGZ	**Raukumara Rang**	**6.28**	**194**	P	Pn	14 36 34.5	+0.5
PUZ	**Puketiti**	**6.29**	**190**	P	Pn	14 36 33.3	-0.7
PUZ				S	S	14 37 50.1	-1.4
TWGZ	**Tauwhareparae**	**6.43**	**191**	P	Pn	14 36 37.3	+1.6
TWGZ				S	S	14 37 55.2	+0.7
OPRZ	**Ohinepanea**	**6.46**	**202**	P	Pn	14 36 38.3	+2.3
MWZ	**Matawai**	**6.67**	**194**	P	Pn	14 36 37.6	-0.7
MWZ				S	S	14 37 59.1	-0.3
URZ	**Urewera**	**6.69**	**197**	P	Pn	14 36 37.4	-1.1
TKGZ	**Te Karaka**	**6.71**	**192**	P	Pn	14 36 38.5	-0.2
TKGZ				S	S	14 38 00.3	+0.1
RIGZ	**Rimuhau**	**6.99**	**192**	P	Pn	14 36 41.6	-0.3
MUGZ	**Murupara**	**6.99**	**199**	P	Pn	14 36 41.2	-0.6
MUGZ				S	S	14 38 05.2	-0.7
RTZ	**Ruatahuna**	**7.06**	**197**	P	Pn	14 36 41.8	-1.0
MTHZ	**Maungataniwha**	**7.32**	**197**	P	Pn	14 36 46.0	+0.2
RAHZ	**Arahi**	**7.33**	**196**	P	Pn	14 36 45.6	-0.2
NMHZ	**Naumai**	**7.56**	**197**	P	P	14 36 49.4	+0.1
NMHZ				S	S	14 38 21.1	+2.9
BKZ	**Black Stump Fm**	**7.71**	**198**	P	Pn	14 36 49.1	-1.0
BKZ				S	S	14 38 21.1	-0.1
MCHZ	**McNeill Hill**	**7.92**	**197**	P	P	14 36 53.4	+0.2
MCHZ				S	S	14 38 29.2	+3.7
BHHZ	**Black Hill Sta**	**8.13**	**200**	P	Pn	14 36 54.3	-0.7
KRHZ	**Kereru**	**8.19**	**198**	P	Pn	14 36 55.7	0.0
KRHZ				S	S	14 38 30.8	-0.6
KAHZ	**Kahuranaki**	**8.21**	**195**	P	Pn	14 36 55.2	-0.8
KAHZ				S	S	14 38 33.9	+2.1
PXZ	**Pawanui**	**8.44**	**194**	P	Pn	14 36 57.3	-1.3
PNHZ	**Pukenui**	**8.49**	**198**	P	Pn	14 36 58.3	-0.8
TSZ	**Takapari Road**	**8.69**	**199**	P	Pn	14 37 00.3	-1.2
TSZ				S	S	14 38 41.3	-0.7
PRHZ	**Porangahau**	**8.72**	**195**	P	Pn	14 37 01.4	-0.4

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*NEIC **13** 14:35:42.4±2.0, 29°.66S±0°.04×71°.97W±0°.06, h10^{km}±1^{km}, mb4.3/11, ML4.2(GUC), Error ellipse: s-maj=9.4km s-min=6.2km az=259.0*

*IDC **13** 14:35:44.7±0.8, 29°.77S×72°.01W, h25^{km}±4^{km}, mb4.1/5, mb1 4.1/8, mb1mx3.9/25, mbtmp4.2/8, ML3.9/3, MS3.6/3, Ms1 3.6/3, ms1mx3.2/17, Error ellipse: s-maj=34.9km s-min=19.2km az=130.0*

*GUC **13** 14:35:44.5±0.6, 29°.78S×71°.88W, h32^{km}±6^{km}, ML4.2*

ISC 13 14:35:42.8±0.8**, 29°.68S**±0°.04×**72°.02W**±0°.05**, h15**^{km}±4^{km}**, n87, σ1**^{s}**24**/91**, mb4.3**/8**, 2C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.72**	**109**	⇓iP	**Pg**	**14 35 56.6**	**-0.2**
CO05				eS	**Sg**	**14 36 05.1**	**-1.2**
CO05				IAML		14 36 08.6	
	comp=E,14µm,0.4s						
CO05	**La Serena**	**0.72**	**109**		**Pg**	**14 35 56.5**	**-0.3**
CO05				Sg	**Sg**	**14 36 04.8**	**-1.5**
CO06	**Fray Jorge**	**1.04**	**162**	eP	**Pb**	**14 36 01.9**	**-0.7**
CO06				eS	**Sb**	**14 36 15.4**	**-0.7**
CO06	**Fray Jorge**	**1.04**	**162**		**Pb**	**14 36 02.3**	**-0.3**
CO06				Sg	**Sb**	**14 36 15.3**	**-0.7**
GO04	**Tololo Observa**	**1.16**	**115**	⇓iP	**Pn**	**14 36 04.2**	**-0.6**
GO04				eS	**Sb**	**14 36 19.2**	**-0.6**
GO04	**Tololo Observa**	**1.16**	**115**		**Pn**	**14 36 04.1**	**-0.6**
LCO	**Las Campanas**	**1.33**	**60**	⇓iP	**Pn**	**14 36 06.0**	**-1.1**
LCO				eS	**Sn**	**14 36 22.8**	**-1.9**
LCO	**Las Campanas**	**1.33**	**60**	Pn	**Pn**	**14 36 06.1**	**-1.1**
CO03	**El Pedregal**	**1.63**	**135**	⇑iP	**Pn**	**14 36 11.3**	**+0.3**
CO03				eS	**Sn**	**14 36 31.6**	**-0.1**
CO03				IAML		14 36 41.6	
	comp=E,4µm,0.5s						
CO03	**El Pedregal**	**1.63**	**135**		**Pn**	**14 36 11.2**	**+0.3**
AC04	**Llanos de Chal**	**1.69**	**30**	⇑iP	**Pn**	**14 36 10.1**	**-1.8**
AC04	**Llanos de Chal**	**1.69**	**30**	Pn	**Pn**	**14 36 10.0**	**-1.8**
GO03	**Copiap**	**2.61**	**37**	eP	**Pn**	**14 36 22.8**	**-1.7**
GO03				eS	**Sn**	**14 36 58.3**	**+2.4**
GO03				IAML		14 37 15.8	
	comp=N,1µm,0.5s						
GO03	**Copiap**	**2.61**	**37**	Pn	**Pn**	**14 36 23.3**	**-1.2**
VA06	**Catapilco**	**2.93**	**168**	eP	**Pn**	**14 36 29.0**	**+0.1**
VA06				IAML		14 37 28.5	
	comp=E,2µm,0.5s						
VA03	**San Esteban**	**3.32**	**158**		**Pn**	**14 36 35.5**	**+1.2**
VA01	**Torpederas**	**3.34**	**175**	Pn	**Pn**	**14 36 34.0**	**-0.5**
ROCH	**El Roble**	**3.39**	**166**	eP	Pb	14 36 35.9	-6.8
ROCH				eP	**Pn**	**14 36 35.6**	**+0.2**
ROCH				IAML		14 37 42.2	
	comp=N,719nm,0.3s						
ZON	**Zonda**	**3.42**	**124**		**Pn**	**14 36 36.5**	**+0.8**
PEL	**Peldehue**	**3.63**	**162**	eP	**Pn**	**14 36 39.4**	**+0.8**
PEL				IAML		14 37 44.3	
	comp=N,648nm,0.6s						
PEL	**Peldehue**	**3.63**	**162**		**Pn**	**14 36 39.2**	**+0.7**
MT02	**Curacav**	**3.64**	**168**	eP	**Pn**	**14 36 38.5**	**-0.2**
MT02	**Curacav**	**3.64**	**168**		**Pn**	**14 36 38.5**	**-0.2**
AC02	**Maricunga**	**3.81**	**43**	eP	**Pn**	**14 36 41.7**	**+0.3**
AC02	**Maricunga**	**3.81**	**43**	Pn	**Pn**	**14 36 41.2**	**-0.3**
MT05	**Renca**	**3.85**	**164**	eP	**Pn**	**14 36 42.2**	**+0.6**
MT05	**Renca**	**3.85**	**164**	Pn	**Pn**	**14 36 42.4**	**+0.8**
FCH	**Farellones**	**3.92**	**158**	eP	**Pn**	**14 36 44.6**	**+1.9**
VA05	**Santo Domingo**	**3.98**	**175**	eP	**Pn**	**14 36 42.6**	**-0.6**
VA05	**Santo Domingo**	**3.98**	**175**		**Pn**	**14 36 42.5**	**-0.7**
MT09	**Talagante**	**4.17**	**168**	eP	**Pn**	**14 36 47.0**	**+0.9**
MT09	**Talagante**	**4.17**	**168**		**Pn**	**14 36 46.8**	**+0.7**
MT01	**Popeta**	**4.22**	**171**	iP	**Pn**	**14 36 46.5**	**-0.1**
MT01	**Popeta**	**4.22**	**171**		**Pn**	**14 36 46.3**	**-0.3**
BO04	**La Punta**	**4.46**	**165**	eP	**Pn**	**14 36 50.8**	**+0.9**
BO01	**Tunca**	**4.76**	**171**		**Pn**	**14 36 53.9**	**-0.2**
BO02	**Sierra Bellavi**	**5.20**	**169**		**Pn**	**14 37 00.4**	**+0.2**
PB14	**IPOC Station P**	**5.24**	**16**	Pn	**Pn**	**14 36 58.4**	**-2.5**
GO05	**Huala**	**5.31**	**179**	Pn	**Pn**	**14 37 00.2**	**-1.4**
PB10	**IPOC Station P**	**6.28**	**12**	Pn	**Pn**	**14 37 13.5**	**-1.5**
PB15	**IPOC Station P**	**6.84**	**20**	Pn	**Pn**	**14 37 19.4**	**-3.4**
H03N1	**Juan Fernandez**	**6.97**	**236**	Pn	**Pn**	**14 37 22.6**	**-1.6**
	baz=60,slow=74,SNR=62						
H03N1				T	T	14 44 57.9	
	baz=65,slow=71,SNR=780						
H03N2	**Juan Fernandez**	**6.99**	**236**	Pn	**Pn**	**14 37 22.8**	**-1.5**
H03N2				T	T	14 45 11.7	
	baz=65,slow=71,SNR=655						
H03N3	**Juan Fernandez**	**6.99**	**236**	Pn	**Pn**	**14 37 22.7**	**-1.7**
	baz=329,slow=74,SNR=37						
H03N3				T	T	14 44 43.6	
	baz=65,slow=71,SNR=691						
H03S3	**Juan Fernandez**	**7.17**	**233**	Pn	**Pn**	**14 37 24.1**	**-2.8**
	SNR=30						
H03S1	**Juan Fernandez**	**7.18**	**233**	Pn	**Pn**	**14 37 24.0**	**-3.0**
	SNR=32						
H03S2	**Juan Fernandez**	**7.19**	**233**	Pn	**Pn**	**14 37 24.1**	**-3.1**
	SNR=32						
LVC	**Limon Verde**	**7.58**	**22**	Pn	**Pn**	**14 37 31.4**	**-1.7**
PB07	**IPOC Station P**	**8.15**	**14**	Pn	**Pn**	**14 37 38.8**	**-2.1**
PB09	**IPOC Station P**	**8.24**	**18**	Pn	**Pn**	**14 37 41.4**	**-0.7**
PATCX	**Punta Patache**	**8.98**	**11**	Pn	**Pn**	**14 37 51.9**	**-0.2**
LC01	**Cunco**	**9.19**	**179**	Pn	**Pn**	**14 37 53.6**	**-1.2**
PLCA	**Paso Flores**	**11.09**	**174**	Pn	**Pn**	**14 38 21.0**	**+0.1**
	comp=N,0.3nm,0.3s,baz=340,slow=15,SNR=6.3						
PLCA				LR	LR	14 42 54.4	
	comp=N,121nm,18.4s,baz=352,slow=39						
PLCA	**Paso Flores**	**11.09**	**174**	Pn	**Pn**	**14 38 21.1**	**+0.2**
TRQA	**Tornquist**	**11.80**	**138**	Pn	**Pn**	**14 38 31.7**	**+1.2**
CPUP	**Villa Florida**	**13.40**	**79**	LR	LR	14 44 22.8	
	comp=N,252nm,18.8s,baz=248,slow=39						
LPAZ	**La Paz**	**13.80**	**16**	Pn	**Pn**	**14 39 01.5**	**+2.9**
	comp=N,0.1nm,0.3s,baz=182,slow=4.6,SNR=12						
LPAZ	**La Paz**	**13.80**	**16**		**Pn**	**14 38 59.2**	**+0.6**
SIV	**San Ignacio**	**16.94**	**39**	P	**P**	**14 39 41.2**	**-0.1**
	comp=N,0.3nm,0.3s,baz=224,slow=11,SNR=19						
PTLB	**Pontes e Lacer**	**18.47**	**43**		**P**	**14 39 57.2**	**-1.0**
VILB	**Vilhena**	**19.93**	**36**	P	**P**	**14 40 13.1**	**-1.2**
VILB				IAmb	IAmb	14 40 22.6	
	comp=Z,12nm,0.7s						
SAML	**Samuel**	**22.23**	**24**	P	**P**	**14 40 38.3**	**-0.7**
BDFB	**Brasilia**	**26.12**	**63**	P	**P**	**14 41 15.7**	**-0.8**
	comp=Z,2.6nm,0.7s,baz=229,slow=7.2,SNR=5.6						
BDFB	**Brasilia**	**26.12**	**63**	IAmb	IAmb	14 41 17.4	
	comp=Z,5.6nm,0.9s						
ZARC	**Zaragoza, Cauc**	**37.06**	**355**	P	**P**	**14 42 52.1**	**-0.4**
ZARC				IAmb	IAmb	14 42 56.1	
	comp=Z,3.1nm,1.0s						
PRVC	**Isla de Provid**	**43.75**	**347**	P	**P**	**14 43 47.9**	**+0.1**
VNA3	**Neumayer Olymp**	**53.35**	**159**	P	**P**	**14 45 01.9**	**+0.7**
VNA2	**Neumayer--Watz**	**53.99**	**158**	P	**P**	**14 45 06.9**	**+1.1**
	baz=293,slow=8.8						
SNAA	**Sanae**	**55.58**	**159**	P	**P**	**14 45 18.0**	**+0.6**
SNAA	**Sanae**	**55.58**	**159**	P	**P**	**14 45 17.7**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=248,slow=6.6,SNR=4.5						
SNAA	**Sanae**	**55.58**	**159**	P	**P**	**14 45 17.5**	**+0.1**
SNAA				IAmb	IAmb	14 45 19.0	
	comp=Z,3.5nm,1.0s						
QSPA	**South Pole Qui**	**60.54**	**180**	P	**P**	**14 45 53.4**	**+1.1**
QSPA				IAmb	IAmb	14 46 17.2	
	comp=Z,4.3nm,1.1s						
DBIC	**Dimbokro**	**73.82**	**72**	P	**P**	**14 47 17.4**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=249,slow=5.8,SNR=4.2						
DBIC	**Dimbokro**	**73.82**	**72**	IAmb	IAmb	14 47 17.8	
	comp=Z,3.9nm,0.8s						
KOWA	**Kowa**	**78.86**	**66**	P	**P**	**14 47 45.8**	**0.0**
KOWA				IAmb	IAmb	14 47 46.7	
	comp=Z,4.1nm,0.8s						
BOSA	**Boshof**	**82.08**	**118**	P	**P**	**14 48 03.3**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=259,slow=5.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**82.74**	**70**	P	**P**	**14 48 06.6**	**+0.1**
	comp=Z,3.3nm,0.8s,baz=258,slow=4.7,SNR=20						
TORD				pP	**pwP**	**14 48 15.4**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=258,slow=5.9,SNR=5.0						
TORD	**Torodi Ar. Bea**	**82.74**	**70**	P	**P**	**14 48 06.5**	**-0.1**
TORD				IAmb	IAmb	14 48 07.8	
	comp=Z,2.5nm,0.8s						
ESDC	**Sonseca Array**	**93.57**	**46**	LR	LR	15 30 41.0	
	comp=Z,44nm,18.7s,baz=285,slow=35						
WRA	**Warramunga Arr**	**124.51**	**210**	PKP	**PKiKP**	**14 54 43.8**	**+1.4**
	comp=Z,0.2nm,0.7s,baz=156,slow=1.5,SNR=1.5						
H11S2	**WAKE ISLAND Hy**	**125.74**	**272**	T	T	17 13 40.1	
	baz=116						
H11S1	**WAKE ISLAND Hy**	**125.75**	**272**	T	T	17 13 41.0	
	baz=116,slow=74,SNR=4.1						
H11S3	**WAKE ISLAND Hy**	**125.75**	**272**	T	T	17 13 42.7	
	baz=116,slow=74,SNR=5.0						
ZALV	**Zalesovo Beam**	**150.50**	**28**	PKPbc	**PKiKP**	**14 55 34.3**	**+0.2**
	comp=Z,8.9nm,0.7s,baz=302,slow=3.2,SNR=30						
ZALV				pPKPbc	**pPKPab**	**14 55 42.6**	**-1.2**
	comp=Z,8.5nm,0.7s,baz=290,slow=3.3,SNR=12						
ZALV	**Zalesovo Beam**	**150.50**	**28**	PKPbc	**PKPbc**	**14 55 34.1**	**+0.7**
KSH	**Kashi**	**152.01**	**61**	PKPbc	**PKiKP**	**14 55 39.3**	**+1.4**
MKAR	**Makanchi Array**	**153.74**	**42**	PKPbc	**PKPbc**	**14 55 41.4**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=48,slow=1.8,SNR=3.6						
MKAR				pPKPbc	**sPKPbc**	**14 55 48.6**	**+2.2**
	comp=Z,0.5nm,0.7s,baz=349,slow=1.2,SNR=4.0						

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*JMA **13** 14:43:53.0±0.6, 47°.06N×153°.07E, h30^{km}, M4.5*

*SKHL **13** 14:43:55.8±0.3, 46°.90N×153°.00E, h81^{km}±4^{km}, mb5.1/7, mbv5.4/2, msha5.6/8*

*MOS **13** 14:43:56.0±1.2, 47°.04N×152°.81E, h78^{km}, mb4.6/10, Error ellipse: s-maj=10.8km s-min=6.3km az=56.2*

*NEIC **13** 14:43:58.7±1.1, 47°.30N±0°.10×152°.6E±0°.1, h76^{km}±6^{km}, mb4.5/90, Error ellipse: s-maj=16.4km s-min=11.1km az=135.0*

*IDC **13** 14:43:60.0±2.5, 47°.25N×152°.62E, h93^{km}±23^{km}, mb3.5/13, mb1 3.7/16, mb1mx3.5/48, mbtmp3.9/16, MS3.1/2, Ms1 3.1/2, ms1mx2.7/37, Error ellipse: s-maj=23.6km s-min=12.6km az=148.0*

ISC 13 14:43:55.4±0.4**, 46°.98N**±0°.05×**152°.87E**±0°.05**, h56**^{km}**, n197, σ1**^{s}**56**/212**, mb4.5**/64**, 1C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.90**	**245**	d iPN	**Pn**	**14 44 56.2**	**+3.5**
KUR				iS	**Sn**	**14 45 41.6**	**+4.5**
KUR				pmax	pmax		
	comp=Z,108nm,0.1s						
KUR				pmax	pmax		
	comp=N,53nm,0.3s						
KUR				pmax	pmax		
	comp=E,51nm,0.3s						
KUR				smax	smax		
	comp=E,211nm,0.6s						
KUR				smax	smax		
	comp=N,71nm,0.3s						
KUR	**Kuril'sk**	**3.90**	**245**	iP	**Pn**	**14 44 54.0**	**+1.3**
KUR				AMB	AMB	14 44 56.9	
	comp=N,110nm,0.3s						
KUR				iS	**Sn**	**14 45 37.5**	**+0.4**
KUR				A	A	14 45 54.8	
	comp=N,240nm,0.4s						
KUR				A	A	14 45 54.8	
	comp=N,280nm,0.4s						
SKR	**Severo-Kuril's**	**4.28**	**29**	ePN	**Pn**	**14 44 59.0**	**+1.0**
SKR				eS	**Sn**	**14 45 44.6**	**-2.0**
SKR				pmax	pmax		
	comp=Z,69nm,0.7s						
SKR				pmax	pmax		
	comp=Z,1µm,2.4s						
SKR				smax	smax		
	comp=E,322nm,0.7s						
SKR				smax	smax		
	comp=N,575nm,0.9s						
SKR				MLR	MLR		
	comp=Z,1µm,14.0s						
SKR	**Severo-Kuril's**	**4.28**	**29**	eP	**Pn**	**14 44 59.3**	**+1.3**
SKR				AMB	AMB	14 45 01.0	
	comp=Z,1µm,2.0s						
SKR				AMB	AMB	14 45 01.6	
	comp=Z,120nm,0.6s						
SKR				eS	**Sn**	**14 45 46.7**	**+0.1**
SKR				A	A	14 45 58.0	
	comp=Z,580nm,0.9s						
SKR				A	A	14 45 58.0	
	comp=Z,320nm,0.9s						
PAU	**Pauzhetka**	**5.18**	**28**	eP	**Pn**	**14 45 12.2**	**+1.9**
PAU				AMB	AMB	14 45 18.9	
	comp=Z,90nm,0.5s						
PAU				eS	**Sn**	**14 46 09.8**	**+1.2**
PAU				A	A	14 46 13.8	
	comp=Z,90nm,0.2s						
PAU				A	A	14 46 13.8	
	comp=Z,170nm,0.2s						
SHO	**Shikotan**	**5.27**	**236**	PN	**Pn**	**14 45 12.2**	**+0.7**
SHO				eS	**Sn**	**14 46 09.8**	**-1.1**
SHO				pmax	pmax		
	comp=Z,18nm,0.1s						
SHO				smax	smax		
	comp=N,54nm,0.4s						
SHO				smax	smax		
	comp=E,76nm,0.4s						
SHO	**Shikotan**	**5.27**	**236**	eP	**Pn**	**14 45 12.4**	**+0.9**
SHO				AMB	AMB	14 45 16.3	
	comp=E,60nm,0.2s						
SHO				eS	**Sn**	**14 46 09.8**	**-1.1**
SHO				A	A	14 46 16.0	
	comp=E,50nm,0.4s						
SHO				A	A	14 46 16.0	
	comp=E,80nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**5.74**	**242**	ePN	**Pn**	**14 45 20.3**	**+2.3**
YUK				eS	**Sn**	**14 46 25.5**	**+3.1**
YUK				pmax	pmax		
	comp=Z,116nm,0.2s						
YUK				pmax	pmax		
	comp=E,64nm,0.4s						
YUK				pmax	pmax		
	comp=N,56nm,0.2s						
YUK				smax	smax		
	comp=N,111nm,0.5s						
YUK				smax	smax		
	comp=E,143nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.74**	**242**	eP	**Pn**	**14 45 19.7**	**+1.7**
YUK				AMB	AMB	14 45 22.0	
	comp=E,120nm,0.3s						
YUK				eS	**Sn**	**14 46 22.5**	**+0.1**
YUK				A	A	14 46 33.0	
	comp=E,110nm,0.5s						
YUK				A	A	14 46 33.0	
	comp=E,140nm,0.5s						
RUSJ	**Misakicho**	**6.08**	**245**	⇓iPN	**Pn**	**14 45 26.2**	**+3.6**
RUSJ				eS	**Sn**	**14 46 34.3**	**+3.6**
GLVR	**Golovnino**	**6.11**	**241**	ePN	**Pn**	**14 45 24.4**	**+1.4**
GLVR				eS	**Sn**	**14 46 32.2**	**+0.7**
GLVR				smax	smax		
	comp=N,221nm,0.7s						
GLVR				smax	smax		
	comp=E,257nm,0.6s						
GLVR	**Golovnino**	**6.11**	**241**	eP	**Pn**	**14 45 24.4**	**+1.4**
GLVR				eS	**Sn**	**14 46 31.2**	**-0.3**
GLVR				A	A	14 46 47.0	
	comp=E,220nm,0.7s						
GLVR				A	A	14 46 47.0	
	comp=E,260nm,0.7s						
NEM2	**Nemuro 2**	**6.20**	**237**	P	**Pn**	**14 45 23.9**	**-0.4**
NEM2				eS	**Sn**	**14 46 31.1**	**-2.7**
NMR	**Nemuro--Hokkai**	**6.21**	**237**	ePN	**Pn**	**14 45 23.8**	**-0.6**
NMR	**Nemuro--Hokkai**	**6.21**	**237**	eP	**Pn**	**14 45 24.0**	**-0.4**
NMR				eS	**Sn**	**14 46 31.5**	**-2.4**
JRA	**Rausu**	**6.24**	**244**	P	**Pn**	**14 45 27.2**	**+2.4**
JNK	**Nakash**	**6.68**	**242**	P	**Pn**	**14 45 32.5**	**+1.7**
PEA0B	**Petropavlovsk-**	**6.88**	**25**	⇓ePN	**Pn**	**14 45 35.6**	**+2.1**
PEA0B	**Petropavlovsk-**	**6.88**	**25**	Pn	**Pn**	**14 45 34.2**	**+0.7**
PETK	**Petropavlovsk-**	**6.88**	**25**	P	**Pn**	**14 45 34.8**	**+1.3**
	comp=E,0.8nm,0.3s,baz=189,slow=11,SNR=13						
PETK	**Petropavlovsk-**	**6.88**	**25**		**Pn**	**14 45 31.2**	**-2.4**
YSS	**Yuzh-Sakhalins**	**6.92**	**273**	ePN	**Pn**	**14 45 36.6**	**+2.4**
YSS				eS	**Sn**	**14 46 53.3**	**+1.8**
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				smax	smax		
	comp=E,20nm,1.2s						
YSS	**Yuzh-Sakhalins**	**6.92**	**273**	eP	**Pn**	**14 45 37.1**	**+2.9**
YSS				AMB	AMB	14 45 38.3	
	comp=E,10.0nm,0.6s						
YSS				eS	**Sn**	**14 46 52.6**	**+1.1**
YSS				A	A	14 47 04.5	
	comp=E,40nm,0.7s						
YSS				A	A	14 47 04.5	
	comp=E,10.0nm,0.7s						
YSS	**Yuzh-Sakhalins**	**6.92**	**273**	Pn	**Pn**	**14 45 32.9**	**-1.3**
JAK	**Akkeshi**	**7.03**	**238**	P	**Pn**	**14 45 35.2**	**-0.5**
JAK				eS	**Sn**	**14 46 50.1**	**-4.1**
PET	**Petropavlovsk**	**7.10**	**29**	⇓ePN	**Pn**	**14 45 39.0**	**+2.4**

PET	Petropavlovsk	7.10	29	eP	Pn	14 45 39.0	+2.4
PET				AMB	AMB	14 45 49.2	
	comp=E,30nm,0.7s						
PET				eS	Sn	14 46 54.2	-1.6
PET				A	A	14 47 20.8	
	comp=E,60nm,0.5s						
PET	Petropavlovsk	7.10	29	Pn	Pn	14 45 36.9	+0.3
JAR	Ashorobuto	7.41	244	P	Pn	14 45 42.6	+1.7
JAR				eS	Sn	14 47 02.9	-0.7
UGL	Uglegorsk	7.54	290	eP	Pn	14 45 44.6	+2.0
UGL				AMB	AMB	14 45 47.6	
	comp=E,40nm,0.8s						
ASAJ	Asahikawa	7.76	252	P	Pn	14 45 50.2	+4.6
	comp=E,1.6nm,0.3s,baz=72,slow=11,SNR=16						
ASAJ				LR	LR	14 48 48.6	
	comp=E,93nm,18.0s,baz=178,slow=38						
JKK2	Kamakawa 2	7.77	250	P	Pn	14 45 48.9	+3.1
TYV	Tymovskoe	7.77	304	ePN	Pn	14 45 48.6	+2.9
TYV				pmax	pmax		
	comp=Z,13nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,3.5s						
TYV	Tymovskoe	7.77	304	eP	Pn	14 45 48.6	+2.9
TYV				AMB	AMB	14 45 50.2	
	comp=Z,10.0nm,0.5s						
TYV				AMB	AMB	14 45 52.0	
	comp=Z,200nm,4.0s						
TYV				eS	Sn	14 47 11.6	-0.6
TYV				A	A	14 47 13.0	
	comp=Z,400nm,6.0s						
TYV				A	A	14 47 15.1	
	comp=Z,10.0nm,6.0s						
TYV				A	A	14 47 15.1	
	comp=Z,10.0nm,6.0s						
JFR	Furan	8.21	246	P	Pn	14 45 54.6	+2.7
ERM	Erimo	8.53	238	PN	Pn	14 45 57.1	+0.9
ERM	Erimo	8.53	238	Pn	Pn	14 45 57.1	+0.9
JNBK	Urakawa-nobuka	8.61	241	P	Pn	14 45 56.3	-1.0
JNBK				eS	Sn	14 47 28.3	-4.5
JNB	Noboribetsu	9.55	246	P	Pn	14 46 10.7	+0.5
JKB	Kayabe	9.88	243	P	Pn	14 46 13.4	-1.2
JKB				eS	Sn	14 47 57.0	-6.9
JYM2	Yakumo 2	10.16	246	P	Pn	14 46 18.3	-0.1
JANG	Nango	10.54	235	P	Pn	14 46 20.5	-3.2
JANG				eS	Sn	14 48 10.0	-10
JRG	Rokugo	11.71	234	P	Pn	14 46 37.2	-2.4
MA2	Magadan	12.68	355	PN	Pn	14 46 53.4	+0.6
MA2	Magadan	12.68	355	eP	Pn	14 46 53.4	+0.6
MA2	Magadan	12.68	355	Pn	Pn	14 46 53.4	+0.6
USA0B	Ussuriysk Arra	14.88	267	P	P	14 47 26.1	-0.7
USA0B	Ussuriysk Arra	14.88	267	P	P	14 47 26.1	-0.7
USRK	Ussuriysk Ar.	14.88	267	P	Pn	14 47 24.4	+2.1
	baz=78,slow=10,SNR=4.9						
USRK				LR	LR	14 53 19.4	
	comp=Z,75nm,18.3s,baz=31,slow=38						
USRK	Ussuriysk Ar.	14.88	267	P	P	14 47 26.2	-0.6
MAJO	Matsushiro	15.09	232	P	P	14 47 30.6	+1.4
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MAJO	Matsushiro	15.09	232		P	14 47 30.6	+1.4
JHJ2	Mitsune	17.05	220		P	14 47 54.2	+3.3
JWT	Wachi	17.55	235	P	P	14 47 58.1	+1.6
ZEA	Zeya	17.63	302	eP	P	14 47 58.2	+1.0
ZEA	Zeya	17.63	302	eP	Pn	14 47 55.5	-1.4
YAK	Yakutsk	20.04	327	⇓eP	Pn	14 48 24.9	-0.7
YAK				pmax	pmax		
	comp=Z,31nm,1.8s						
YAK	Yakutsk	20.04	327	eP	Pn	14 48 24.9	-0.7
KSRS	Korea Array	20.71	252	P	P	14 48 31.3	+0.4
	comp=Z,1.4nm,0.5s,baz=56,slow=10,SNR=9.2						
KSRS	Korea Array	20.71	252	eP	P	14 48 32.4	+1.5
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KSRS	Korea Array	20.71	252	eP	P	14 48 32.4	+1.5
KSAR	Wonju Array Be	20.74	252	P	P	14 48 32.8	+1.5
KSAR	Wonju Array Be	20.74	252	P	P	14 48 32.8	+1.5
H11N2	WAKE ISLAND Hy	29.50	152	T	T	15 21 33.1	
	baz=341,slow=76,SNR=721						
H11N1	WAKE ISLAND Hy	29.51	152	T	T	15 21 35.0	
	baz=341,slow=76,SNR=488						
H11N3	WAKE ISLAND Hy	29.52	152	T	T	15 21 35.1	
	baz=341,slow=76,SNR=495						
H11S1	WAKE ISLAND Hy	30.59	154	T	T	15 22 55.5	
	baz=341,slow=76,SNR=679						
H11S3	WAKE ISLAND Hy	30.59	154	T	T	15 22 59.5	
	baz=341,slow=76,SNR=652						
H11S2	WAKE ISLAND Hy	30.61	154	T	T	15 22 55.3	
	baz=341,slow=76,SNR=566						
J20K	Nowinta River	33.31	40	P	P	14 50 27.3	0.0
J20K				IAmb	IAmb	14 50 40.4	
	comp=Z,9.4nm,1.4s						
Q19K	Cape Douglas,	33.44	49	P	P	14 50 28.9	+0.3
IMAR	Indian Mountai	33.68	36	P	P	14 50 30.8	+0.2
A21K	Barrow	33.88	26	P	P	14 50 32.3	+0.1
A21K				IAmb	IAmb	14 50 58.0	
	comp=Z,8.5nm,1.1s						
H21K	Melozitna Rive	34.03	37	P	P	14 50 34.2	+0.6
H21K				IAmb	IAmb	14 50 35.6	
	comp=Z,4.8nm,1.1s						
KDAK	Kodiak Island	34.09	51	P	P	14 50 34.0	-0.2
	comp=Z,6.2nm,0.9s,baz=306,slow=5.4,SNR=6.6						
KDAK	Kodiak Island	34.09	51	P	P	14 50 34.0	-0.2
KDAK	Kodiak Island	34.09	51	IAmb	IAmb	14 50 37.5	
	comp=Z,19nm,1.2s						
PPLA	Purkeypile	34.10	42	P	P	14 50 35.1	+0.6
PPLA				IAmb	IAmb	14 50 40.4	
	comp=Z,10nm,1.3s						
I21K	Tanana	34.32	38	P	P	14 50 37.0	+0.9
I21K				IAmb	IAmb	14 50 39.9	
	comp=Z,8.7nm,1.5s						
CNPM	China Poot	34.64	48	P	P	14 50 38.8	-0.2
KTH	Kantishna Hill	34.69	41	P	P	14 50 39.9	+0.4
BRLK	Bradley Lake	34.80	47	P	P	14 50 39.8	-0.6
MLY	Manley	34.84	38	P	P	14 50 41.4	+0.7
MLY				IAmb	IAmb	14 50 52.0	
	comp=Z,6.7nm,1.5s						
TRF	Thorofare Moun	34.98	41	P	P	14 50 42.2	+0.2
TRF				IAmb	IAmb	14 50 52.0	
	comp=Z,8.6nm,1.5s						
COLD	Coldfoot	35.24	34	P	P	14 50 44.4	+0.4
RC01	Rabbit Creek A	35.28	45	P	P	14 50 44.8	+0.3
RC01				IAmb	IAmb	14 50 48.2	
	comp=Z,12nm,1.4s						
I23K	Minto, Yukon-K	35.43	38	P	P	14 50 46.2	+0.6
I23K				IAmb	IAmb	14 51 01.8	
	comp=Z,9.9nm,1.5s						
NEA2	Nenana	35.53	39	P	P	14 50 47.1	+0.5
RND	Reindeer	35.62	41	P	P	14 50 47.1	-0.3
RND				pmax	pmax		
	comp=Z,7.0nm,1.4s						
RND	Reindeer	35.62	41	P	P	14 50 47.1	-0.3
RND				IAmb	IAmb	14 50 49.2	
	comp=Z,7.4nm,1.4s						
TOLK	Toolik Lake Re	35.64	32	P	P	14 50 47.8	+0.3
TOLK				IAmb	IAmb	14 50 48.7	
	comp=Z,6.5nm,1.2s						
GHO	Glory Hole Cre	35.64	44	P	P	14 50 47.2	-0.5
GHO				IAmb	IAmb	14 50 53.8	
	comp=Z,15nm,1.4s						
KNK	Knik Glacier	35.88	45	P	P	14 50 49.4	-0.2
KNK				IAmb	IAmb	14 51 11.4	
	comp=Z,14nm,1.4s						
MDM	Murphy Dome	35.90	38	P	P	14 50 49.4	-0.4
MDM				IAmb	IAmb	14 50 51.8	
	comp=Z,5.0nm,1.2s						
SML	Sawmill	35.92	44	P	P	14 50 50.4	+0.5
WRH	Wood River Hil	35.95	39	P	P	14 50 50.4	+0.2
WRH				IAmb	IAmb	14 51 18.7	
	comp=Z,9.8nm,1.4s						
PWL	Port Wells	35.98	45	P	P	14 50 51.0	+0.5
PWL				IAmb	IAmb	14 51 10.5	
	comp=Z,14nm,1.2s						
COLA	College	36.06	39	⇓eP	P	14 50 51.1	+0.1
COLA				pmax	pmax		
	comp=Z,11nm,1.6s						
H24K	Noodor Dome	36.07	37	P	P	14 50 51.7	+0.5
H24K				IAmb	IAmb	14 50 53.8	
	comp=Z,9.2nm,1.4s						
CCB	Clear Creek Bu	36.08	39	P	P	14 50 51.4	+0.2
CCB				IAmb	IAmb	14 51 01.8	
	comp=Z,6.3nm,1.5s						
DHY	Denali Highway	36.30	42	P	P	14 50 52.9	-0.4
DHY				IAmb	IAmb	14 51 17.0	
	comp=Z,6.9nm,1.4s						
HDA	Harding Lake	36.45	39	P	P	14 50 54.2	-0.2
HDA				IAmb	IAmb	14 50 57.9	
	comp=Z,9.8nm,1.4s						
IL31		36.47	39	P	P	14 50 54.9	+0.3
ILAR	Eielson Array	36.47	39	P	P	14 50 54.7	+0.1
	comp=Z,0.9nm,0.9s,baz=264,slow=6.1,SNR=11						
ILAR	Eielson Array	36.47	39	eP	P	14 50 53.9	-0.7
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
M24K	Tolsona, Glenn	36.91	43	P	P	14 50 58.8	+0.3
M24K				IAmb	IAmb	14 50 59.5	
	comp=Z,10nm,1.0s						
PRP	Porcupine Dome	37.04	37	P	P	14 50 59.4	-0.2
KLU	Klutina	37.09	44	P	P	14 51 00.6	+0.6
KLU				IAmb	IAmb	14 51 20.4	
	comp=Z,5.3nm,1.1s						
FYU	Fort Yukon	37.16	36	P	P	14 51 00.4	0.0
FYU				IAmb	IAmb	14 51 05.6	
	comp=Z,9.8nm,1.3s						
BMAR	Burnt Mountain	37.42	34	P	P	14 51 03.0	+0.3
N25K	Chitina, Valde	37.71	44	P	P	14 51 06.3	+1.0
N25K				IAmb	IAmb	14 51 30.5	
	comp=Z,17nm,1.5s						
SCRK	Sand Creek	37.77	40	P	P	14 51 05.7	0.0
SCRK				IAmb	IAmb	14 51 29.0	
	comp=Z,5.3nm,1.4s						
BMRM	Bremner River	37.78	45	P	P	14 51 06.1	+0.3
BMRM				IAmb	IAmb	14 51 15.5	
	comp=Z,16nm,1.4s						
RAGM	Ragged Mountai	37.83	46	P	P	14 51 07.0	+0.8
GLB	Gilahina Butte	38.10	44	P	P	14 51 09.2	+0.7
GLB				IAmb	IAmb	14 51 38.3	
	comp=Z,8.9nm,1.4s						
VRDI	Verde Repeater	38.30	44	P	P	14 51 10.7	+0.4
VRDI				IAmb	IAmb	14 51 24.2	
	comp=Z,11nm,1.2s						
BERG	Berg Lake	38.31	46	P	P	14 51 10.9	+0.7
M26K	Nabesna, AK	38.36	42	P	P	14 51 11.8	+1.1
M26K				IAmb	IAmb	14 51 13.3	
	comp=Z,8.9nm,1.3s						
CRQM	Cirque	38.52	45	P	P	14 51 12.8	+0.6
TGL	Tana Glacier	38.67	45	P	P	14 51 14.2	+0.8
TGL				IAmb	IAmb	14 51 27.4	
	comp=Z,17nm,1.3s						
WAX	Waxell Ridge	38.71	46	P	P	14 51 14.7	+1.1
L27K	Beaver Creek,	38.82	41	P	P	14 51 15.7	+1.2
BCAR	Beaver Creek A	38.84	41	P	P	14 51 15.8	+1.2
M27K	Edge Creek, AK	38.89	42	P	P	14 51 16.5	+1.3
M27K				IAmb	IAmb	14 51 42.1	
	comp=Z,8.5nm,1.4s						
EGAK	Eagle	38.92	39	P	P	14 51 15.2	-0.1
EGAK				IAmb	IAmb	14 51 26.5	
	comp=Z,8.0nm,1.5s						
ISLE	Juniper Island	38.94	45	P	P	14 51 16.1	+0.5
ISLE				IAmb	IAmb	14 51 27.1	
	comp=Z,9.1nm,1.0s						
CTGM	Chitina Glacie	39.36	45	P	P	14 51 20.2	+1.1
LOGN	Logan Glacier	39.55	45	P	P	14 51 21.6	+0.9
LOGN				IAmb	IAmb	14 51 50.6	
	comp=Z,17nm,1.4s						
PCA	Pinnacle	40.05	46	P	P	14 51 25.6	+0.8
EPYK	Eagle Plains	40.58	36	P	P	14 51 29.6	+0.6
EPYK				IAmb	IAmb	14 51 31.9	
	comp=Z,5.0nm,1.2s						
INK	Inuvik	41.55	33	P	P	14 51 37.6	+0.8
	comp=Z,1.0nm,0.4s,baz=299,slow=6.7,SNR=11						
INK	Inuvik	41.55	33	P	P	14 51 37.2	+0.3
INK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
INK	Inuvik	41.55	33	P	P	14 51 37.2	+0.3
ZALV	Zalesovo Beam	42.34	306	PcP	PcP	14 53 35.4	-0.6
	comp=Z,0.8nm,0.4s,baz=64,slow=3.4,SNR=6.1						
A36M	Sachs Harbour	43.72	26	P	P	14 51 55.1	+0.7
A36M				IAmb	IAmb	14 51 56.4	
	comp=Z,8.7nm,0.8s						
MKAR	Makanchi Array	46.69	297	P	P	14 52 16.8	-1.6
	comp=Z,0.3nm,0.7s,baz=72,slow=6.1,SNR=5.2						
MKAR				PcP	PcP	14 53 50.3	-0.8
	comp=Z,0.4nm,0.3s,baz=64,slow=5.2,SNR=9.8						
KURK	Kurchatov	47.10	303	⇑eP	P	14 52 19.9	-1.5
KURK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
KURK	Kurchatov	47.10	303	eP	P	14 52 19.9	-1.5
KURK	Kurchatov	47.10	303	P	P	14 52 19.4	-2.0
EUNU	Eureka	48.94	11	P	P	14 52 34.5	-0.9
EUNU				IAmb	IAmb	14 53 01.8	
	comp=Z,5.0nm,1.1s						
YKA	Yellowknife Ar	50.84	37	P	P	14 52 50.2	+0.3
	comp=Z,0.7nm,0.6s,baz=298,slow=6.9,SNR=2.1						
RABL	Rabaul	50.95	181	P	P	14 52 53.9	+2.6
CMAR	Chiang Mai Arr	52.27	256	P	P	14 53 01.4	+0.3
	comp=Z,0.4nm,0.4s,baz=30,slow=7.4,SNR=4.2						
CLRS	Cowichan Lake	52.98	55	P	P	14 53 04.5	-1.4
NEEM	North Greenlan	54.95	6	iP	P	14 53 18.2	-2.1
NEEM				IAmb	IAmb	14 53 18.9	
	comp=Z,4.1nm,0.8s						
LTY	Liberty	55.78	55	P	P	14 53 26.7	+0.3
B08A	Colville Reser	55.90	54	P	P	14 53 27.2	0.0
G08A	Pilot Rock	57.88	56	P	P	14 53 41.6	+0.2
G08A				IAmb	IAmb	14 53 58.4	
	comp=Z,4.2nm,1.5s						
KNTN	Kanton	58.51	137	P	P	14 53 49.0	+3.1
PLID	Pearl Lake	59.68	55	P	P	14 53 54.8	+0.7
PLID				IAmb	IAmb	14 53 55.4	
	comp=Z,4.1nm,1.0s						
SUMG	Summit	60.48	4	P	P	14 53 58.5	-0.8
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SUMG	Summit	60.48	4	iP	P	14 53 58.2	-1.2
SUMG				IAmb	IAmb	14 53 58.9	
	comp=Z,4.6nm,1.0s						
SUMG	Summit	60.48	4	P	P	14 53 58.5	-0.8
LRM	Limekiln Ridge	61.19	53	P	P	14 54 05.3	+1.0
PNTR	Pine Nut	61.27	62	P	P	14 54 06.1	+1.1
YERR	Yerington	61.55	62	P	P	14 54 09.2	+2.3
BOZ	Bozeman (W)	61.78	52	P	P	14 54 09.1	+0.9
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BOZ	Bozeman (W)	61.78	52	P	P	14 54 09.1	+0.9
BOZ				IAmb	IAmb	14 54 33.4	
	comp=Z,3.0nm,0.8s						
BMN	Battle Mountai	61.86	60	P	P	14 54 10.1	+1.2
BMN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BMN	Battle Mountai	61.86	60	P	P	14 54 10.1	+1.2
BMN				IAmb	IAmb	14 54 10.7	
	comp=Z,1.8nm,0.7s						
KVN	Kaiserville	62.20	62	P	P	14 54 12.3	+1.1
KVN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KVN	Kaiserville	62.20	62	P	P	14 54 12.3	+1.1
NVAR	Mina Array Bea	62.47	62	P	P	14 54 13.7	+0.6
	comp=Z,0.7nm,0.6s,baz=291,slow=6.2,SNR=4.2						
GCMT	Greycliff	62.71	51	P	P	14 54 15.3	+0.9
FIA1	FINESS Array S	63.76	335	P	P	14 54 18.6	-2.3
FINES	FINESS Array B	63.76	335	P	P	14 54 18.8	-2.1
	comp=Z,1.5nm,0.3s,baz=38,slow=7.4,SNR=26						
FINES	FINESS Array B	63.76	335	eP	P	14 54 18.8	-2.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ICESG	Greenland Ices	63.88	5	⇓iP	P	14 54 21.2	-0.9
ICESG				IAmb	IAmb	14 54 23.0	
	comp=Z,3.7nm,0.8s						
R11A	Troy Canyon, C	64.16	61	P	P	14 54 24.8	+0.6
BW06	Boulder Array	64.74	54	P	P	14 54 28.4	+0.4
PD31	Pinedale Array	64.74	54	P	P	14 54 28.5	+0.5
PDAR	Pinedale Array	64.74	54	P	P	14 54 28.2	+0.2
	comp=Z,0.6nm,0.6s,baz=318,slow=1.7,SNR=6.3						
PDAR	Pinedale Array	64.74	54	P	P	14 54 28.6	+0.5
GWY	Greenwater Val	64.91	63	P	P	14 54 29.2	+0.1
NLU	North Lily Min	65.18	58	P	P	14 54 31.5	+0.7
CCUT	Cedar City	66.01	60	P	P	14 54 36.9	+0.7
MTPU	Mount Pierson	66.38	59	P	P	14 54 38.8	+0.1
PFO	Pinyon Flats O	66.74	65	P	P	14 54 41.3	+0.4
PFO				pmax	pmax		
	comp=Z,14nm,1.5s						
PFO	Pinyon Flats O	66.74	65	P	P	14 54 41.3	+0.4
PFO				IAmb	IAmb	14 54 47.8	
	comp=Z,14nm,1.5s						
NC405	NORSAR Array S	67.78	341	P	P	14 54 44.3	-2.5
NB201	NORSAR Array S	67.93	341	P	P	14 54 46.3	-1.5
NB201				IAmb	IAmb	14 55 11.6	
	comp=Z,7.3nm,1.1s						
NB2	NORSAR Subarra	67.96	341	P	P	14 54 46.5	-1.5
	comp=Z,0.3nm,0.3s,baz=26,slow=6.5						
NOA	NORSAR Array B	67.96	341	P	P	14 54 46.7	-1.3
	comp=Z,0.3nm,0.4s,baz=30,slow=6.7,SNR=10						
NOA	NORSAR Array B	67.96	341	eP	P	14 54 46.7	-1.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NC602	NORSAR Array S	68.16	341	P	P	14 54 47.5	-1.6
ECSD	EROS Data Cent	70.84	46	P	P	14 55 04.3	-1.8
AKASG	Malin Array Be	71.26	326	P	P	14 55 06.5	-2.0
	comp=Z,0.7nm,0.3s,baz=37,slow=6.2,SNR=7.3						
AKASG	Malin Array Be	71.26	326	IAmb	IAmb	14 55 11.7	
	comp=Z,2.1nm,1.3s						
ASAR	Alice Springs	72.37	198	P	P	14 55 16.4	+1.1
	comp=Z,0.8nm,0.8s,baz=12,slow=5.4,SNR=8.3						
BUR08	Bucovina Ar. S	75.29	326	P	P	14 55 31.2	-1.1
BURAR	Bucovina Array	75.31	326	P	P	14 55 31.0	-1.4
Z35A	Perchaven, San	78.25	54	P	P	14 55 48.3	-0.8
Z35A				IAmb	IAmb	14 55 58.0	
	comp=Z,8.4nm,0.8s						
U40A	Yellville	78.29	49	P	P	14 55 48.5	-0.8
U40A				IAmb	IAmb	14 55 52.4	
	comp=Z,5.6nm,1.2s						
MIAR	Mount Ida	79.31	50	P	P	14 55 57.0	+2.1
MIAR				pmax	pmax		
	comp=Z,11nm,1.4s						
MIAR	Mount Ida	79.31	50	P	P	14 55 57.0	+2.1
MIAR				IAmb	IAmb	14 56 16.6	
	comp=Z,11nm,1.4s						
PRED	Cave del Predi	80.36	333	P	P	14 55 58.3	-2.2
PLCA	Paso Flores	148.39	95	PKPbc	PKPbc	15 03 35.9	+0.8
	comp=Z,2.7nm,0.9s,baz=263,slow=5.8,SNR=2.9						

DJA 13 15:02:08.0±0.3,**12˚S**±3˚×**11˚8E**±˚,**h10km**,**M4.1**/14,
mb4.2/9,**MLv4.0**/14,**South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	2.53	40	P	Pn	15 02 48.3	-1.0
PLAI	Plampang	2.75	1	P	Pn	15 02 51.3	-0.8
PLAI				S	Sn	15 03 19.0	-6.4
TWSI	Taliwang, Sumb	2.95	344	P	Pn	15 02 54.3	-0.7
BASI	Baing, Sumba	3.11	64	P	Pn	15 02 55.4	-1.8
IGBI	Denpasar	3.75	317	P	Pn	15 03 05.3	-0.6
SRBI	Singaraja	4.28	324	P	Pn	15 03 14.2	+1.0
JAGI	Jajag, Banyuwa	4.69	311	P	Pn	15 03 17.9	-1.1
JAGI				S	Sn	15 04 06.7	-6.8
ABJI	Asem Bagus	5.11	317	P	Pn	15 03 25.2	+0.6
	0.2nm20nm,0.5s						
MMRI	Maumere	5.32	57	P	Pn	15 03 27.3	-0.3
	0.1nm9.0nm,0.5s						
GMJI	Gumukmas	5.36	308	P	Pn	15 03 27.2	-0.9
	0.2nm29nm,1.5s						
BATI	Baumata	5.99	77	P	Pn	15 03 36.6	-0.2
	0.1nm8.6nm,0.6s						
BSSI	Bau Bau, Buton	6.06	27	P	Pn	15 03 38.2	+0.4
	0.1nm29nm,1.3s						
BKSI	Bulukumba	6.66	21	P	Pn	15 03 47.2	+1.2
	0.1nm11nm,0.9s						
SOEI	Soe	6.68	75	P	Pn	15 03 46.8	+0.4
	0.1nm8.5nm,0.5s						
PCJI	Pacitan	7.28	297	P	Pn	15 03 55.0	+0.4
	0.2nm29nm,2.1s						
UGM	Wanagama	7.99	297	P	Pn	15 04 03.5	-0.8
	0.5nm104nm,2.5s						

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*NNC **13** 15:17:24.0±3.1, 38˚.74N×73˚.05E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=23.8km s-min=13.0km az=1.0*

*IDC **13** 15:17:34.9±37.0, 38˚.16N×75˚.04E, h180km±142km, mb3.5/1, mb1 3.0/3, mb1mx2.7/32, mbtmp3.5/3, ML2.7/2, MS3.1/2, Ms1 3.1/2, ms1mx2.6/25, Error ellipse: s-maj=588.7km s-min=113.4km az=160.0*

ISC 13 15:17:20.1±2.9,**38˚.5N**±0˚.2×**72˚.74E**±0˚.07,**h10km**,**n18**,
$\sigma 2\overset{s}{.}24$/16,**7C**,**Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.21	331	Pg	Pg	15 18 40.4	-0.5
	216nm,0.3s						
IUG				Lg	Lg	15 19 36.3	
	99nm,0.6s						
MRKS	Merke	4.28	5	Pg	Pb	15 18 36.2	+0.6
	13nm,0.5s						
MRKS				Lg	Lg	15 19 29.8	
	12nm,0.6s						
AAK	Ala-Archa	4.37	17	⇑Pn	Pn	15 18 27.3	+0.7
	9.2nm,0.7s						
AAK				⇑Lg	Lg	15 19 27.4	
	35nm,0.9s						
KK08	Karatay Array	4.93	340	⇑Pn	Pn	15 18 36.1	+1.8
	4.8nm,0.7s,baz=149,slow=14						
KK08				⇑Sn	Sn	15 19 34.0	+2.5
	7.8nm,0.6s,baz=160,slow=24						
TKM2	Tokmak 2	4.94	25	⇑Pg	Pg	15 18 52.3	-2.4
	3.8nm,0.4s						
TKM2				⇑Lg	Lg	15 19 52.4	
	12nm,0.8s						
BRLS	Borolday	5.06	335	Pg	Pg	15 18 53.1	-3.8
	5.3nm,0.6s						
BRLS				Lg	Lg	15 19 59.4	
	17nm,1.1s						
TNSS	Tian-Shan	5.56	34	Pg	Pb	15 18 59.1	+1.6
	3.8nm,0.3s						
TNSS				Lg	Lg	15 20 09.9	
	6.8nm,0.9s						
SATY	Saty	6.28	41	Pg	Pb	15 19 12.5	+2.9
	5.3nm,0.9s						
SATY				Lg	Lg	15 20 31.3	
	14nm,1.4s						
UZB	Uzynbulak	6.67	44	Pg	Pb	15 19 19.0	+2.8
	5.9nm,0.4s						
UZB				Lg	Lg	15 20 43.0	
	9.0nm,1.2s						
SHLS	Shalkode	6.92	45	Pg	Pg	15 19 29.5	-3.0
	2.8nm,0.4s						
SHLS				Lg	Lg	15 21 00.9	
	7.3nm,0.7s						
PDGK	Podgornoye	7.04	44	Pg	Pb	15 19 23.6	+1.0
	1.4nm,0.7s						
PDGK				Lg	Lg	15 20 50.9	
	3.4nm,0.9s						
MKAR	Makanchi Array	10.88	37	P	Pn	15 19 56.3	+0.4
	0.1nm,0.3s,baz=213,slow=15,SNR=5.0						
AB31	Akbulak array	14.17	324	P	Pn	15 20 40.2	-0.5
	0.5nm,0.5s,baz=131,slow=13,SNR=5.8						
AKTO	Aktyubinsk	15.89	324	⇑P	P	15 21 07.3	-0.1
	3.4nm,0.9s						
ZALV	Zalesovo Beam	17.55	24	P	Pn	15 21 22.6	-2.0
	0.1nm,0.3s,baz=211,slow=13,SNR=2.8						
SONM	Songino Array	26.09	58	LR	LR	15 34 19.8	
	comp=Z,65nm,19.1s,baz=50,slow=41						
FINES	FINESS Array B	36.66	324	P	P	15 24 34.8	+8.2
	2.9nm,1.0s,baz=114,slow=14,SNR=4.4						
KSRS	Korea Array	42.96	73	LR	LR	15 42 56.9	
	comp=Z,18nm,20.9s,baz=55,slow=37						

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*NEIC **13** 15:17:49.1±1.7, 4˚.25S±0˚.07×129˚.44E±0˚.10, h10km±1km, mb4.1/22, Error ellipse: s-maj=16.5km s-min=11.4km az=275.0*

*DJA **13** 15:17:51.0±0.8, 4˚S±4˚×12˚9E±˚, h12km±7km, M4.2/9, mb4.5/3, MLv4.0/9*

*IDC **13** 15:17:51.3±1.0, 4˚.18S×129˚.38E, h26km±5km, mb3.7/5, mb1 4.0/7, mb1mx3.8/26, mbtmp4.0/7, ML4.4/2, MS2.6/2, Ms1 2.6/2, ms1mx2.5/29, Error ellipse: s-maj=36.0km s-min=18.2km az=74.0*

ISC 13 15:17:51.7±0.5,**4˚.18S**±0˚.05×**129˚.37E**±0˚.05,**h35km**,**n62**,
$\sigma 1\overset{s}{.}83$/64,**mb4.2**/13,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.63	123	P	Pn	15 18 02.9	-1.3
MSAI	Masohi	0.94	332	P	Pn	15 18 07.0	-1.4
MSAI				S	Sn	15 18 18.3	-2.3
AAI	Ambon	1.27	292	P	Pn	15 18 12.2	-0.8
AAI				S	Sn	15 18 27.8	-1.1
FAKI	Fak Fak	3.13	67	P	Pn	15 18 39.0	+0.3
FAKI	Fak Fak	3.13	67		Pn	15 18 38.9	+0.3
FAKI	Fak Fak	3.13	67	P	Pn	15 18 39.3	+0.7
SIJI	Sorong	3.79	30	Pn	Pn	15 18 48.9	+1.2
	25nm,0.3s,baz=193,slow=12,SNR=61						
SIJI				Sn	Sn	15 19 32.4	+1.3
	21nm,0.3s,baz=233,slow=23,SNR=8.4						
SWI	Sorong	3.79	30	P	Pn	15 18 48.0	+0.3

LBMI	Labuha	3.98	332	P	Pn	15 18 50.3	0.0
SANI	Sanana	3.98	302	P	Pn	15 18 50.9	+0.5
SANI	Sanana	3.98	302	P	Pn	15 18 53.5	+3.1
SAUI	Saumlaki	4.24	153	P	Pn	15 18 58.9	+5.0
BATI	Baumata	8.24	223	LR	LR	15 22 53.7	
	comp=Z,121nm,21.8s,baz=63,slow=37						
MTN	Manton Dam	8.79	169		Pn	15 19 54.9	-1.5
MTN	Manton Dam	8.79	169	P	Pn	15 19 59.9	+3.5
KDU	Kakadu	8.99	160	P	Pn	15 19 59.7	+0.5
SPSI	Sidrap Palu	9.58	271	P	Pn	15 20 08.6	+1.3
KAPI	Kappang	9.63	265	LR	LR	15 24 20.0	
	comp=Z,14nm,19.4s,baz=110,slow=40						
KNRA	Kununurra	11.45	183	Pn	Pn	15 20 30.7	-2.1
WB0	Warramunga Arr	16.25	163		Pn	15 21 33.8	-3.7
WB0				IAmb	IAmb	15 21 42.1	
	comp=Z,16nm,1.4s						
WRAB	Tennant Creek	16.40	163		Pn	15 21 35.9	-3.5
WRAB	Tennant Creek	16.40	163	P	Pn	15 21 38.4	-0.9
WRA	Warramunga Arr	16.40	163	Pn	Pn	15 21 36.7	-2.7
	comp=Z,0.4nm,0.3s,baz=351,slow=12,SNR=30						
WRA	Warramunga Arr	16.40	163		Pn	15 21 35.3	-4.1
WB2	Warramunga Arr	16.41	163		Pn	15 21 35.9	-3.6
WB2				IAmb	IAmb	15 21 43.8	
	comp=Z,16nm,1.4s						
WR0	Warramunga Arr	16.48	163		Pn	15 21 37.2	-3.2
COEN	Coen	16.73	126	Pn	Pn	15 21 40.1	-3.5
COEN				IAmb	IAmb	15 21 47.4	
	comp=Z,12nm,1.1s						
COEN	Coen	16.73	126	P	Pn	15 21 41.6	-1.9
QIS	Mount Isa	19.09	149	P	Pn	15 22 12.1	-0.4
PSA00	Pilbara Seismi	19.61	207	P	P	15 22 17.4	+0.2
KSM	Kuching	19.86	286	P	Pn	15 22 22.1	+0.2
KSM				IAmb	IAmb	15 22 23.6	
	comp=Z,4.8nm,0.7s						
AS31	Alice Springs	19.86	168		P	15 22 20.6	+0.5
AS31				IAmb	IAmb	15 22 24.9	
	comp=Z,5.1nm,0.6s						
ASAR	Alice Springs	19.86	168	P	Pn	15 22 20.9	-0.9
	comp=Z,1.4nm,0.3s,baz=348,slow=11,SNR=115						
ASAR				PcP	PcP	15 26 37.0	+0.2
	comp=Z,0.1nm,0.3s,baz=360,slow=1.3,SNR=4.4						
ASAR	Alice Springs	19.86	168	Pn	P	15 22 20.5	+0.4
MTSU	Mount Surprise	20.16	135	P	Pn	15 22 24.3	-1.0
CTAO	Charters Tower	22.82	135	P	P	15 22 50.0	-1.8
CTAO				IAmb	IAmb	15 23 03.4	
	comp=Z,6.6nm,0.9s						
OOD	Oodnadatta	24.25	166	P	P	15 23 06.0	+0.4
INKA	Innaminka	25.82	156	P	P	15 23 21.6	+1.8
MULG	Mulgathing	26.34	171	P	P	15 23 26.1	+1.6
FORT	Forrest	26.49	183	P	P	15 23 29.7	+3.8
	comp=Z,20nm,0.9s						
LCRK	Leigh Creek	27.43	163	P	P	15 23 37.1	+2.7
BBOO	Buckleboo	29.17	168	P	P	15 23 48.7	-1.1
BBOO	Buckleboo	29.17	168	P	P	15 23 52.1	+2.3
	comp=Z,10nm,2.0s						
IPM	Ipoh	29.60	287	P	P	15 23 53.1	-0.7
IPM				IAmb	IAmb	15 24 05.1	
	comp=Z,6.5nm,0.8s						
STKA	Stephens Creek	29.85	159	P	P	15 23 56.8	+0.9
	comp=Z,2.5nm,0.9s,baz=10,slow=6.5,SNR=4.8						
STKA	Stephens Creek	29.85	159	P	P	15 23 55.2	-0.7
KULM	Kulim	30.19	288	P	P	15 24 01.1	+1.9
HTT	Hallett	30.44	164	P	P	15 24 04.4	+3.3
CMAR	Chiang Mai Arr	37.48	308	P	P	15 25 04.3	+1.9
	comp=Z,0.7nm,0.6s,baz=136,slow=7.5,SNR=9.8						
CMAR	Chiang Mai Arr	37.48	308	P	P	15 25 03.4	+1.0
CHTO	Chiang Mai	37.68	308	P	P	15 25 05.5	+1.4
CHTO				IAmb	IAmb	15 25 16.0	
	comp=Z,3.1nm,0.7s						
SONM	Songino Array	55.58	341	P	P	15 27 25.2	+1.2
	comp=Z,0.8nm,0.9s,baz=145,slow=5.3,SNR=4.2						
SONM	Songino Array	55.58	341	IAmb	IAmb	15 27 30.3	
	comp=Z,1.8nm,1.2s						
KNTN	Kanton	58.81	91	P	P	15 27 45.8	-1.4
MK31	Makanchi Array	65.54	326	P	P	15 28 32.6	+0.8
MK31				IAmb	IAmb	15 28 43.2	
	comp=Z,1.3nm,0.7s						
MKAR	Makanchi Array	65.54	326	P	P	15 28 32.4	+0.6
	comp=Z,0.7nm,0.5s,baz=112,slow=7.8,SNR=15						
MKAR				pP	pP	15 28 40.0	-1.3
	comp=Z,1.6nm,0.6s,baz=123,slow=7.3,SNR=9.0						
MAKZ	Makanchi	65.72	326	P	P	15 28 33.4	+0.5
MAKZ				IAmb	IAmb	15 28 45.1	
	comp=Z,7.6nm,1.5s						
ZALV	Zalesovo Beam	68.79	334	P	P	15 28 52.0	-0.2
	comp=Z,0.4nm,0.4s,baz=123,slow=7.3,SNR=4.4						
ZALV				pP	pP	15 29 01.9	0.0
	comp=Z,1.6nm,0.8s,baz=104,slow=6.3,SNR=4.4						
KURK	Kurchatov	69.80	328	P	P	15 28 59.3	+0.8
VNDA	Vanda	75.31	173	P	P	15 29 31.1	+0.2
VNDA				IAmb	IAmb	15 29 45.0	
	comp=Z,5.8nm,1.4s						
SBA	Scott Base	76.20	172	P	P	15 29 36.3	+0.4
TORD	Torodi Ar. Bea	127.60	283	PKP	PKPdf	15 36 54.2	-0.2
	comp=Z,0.6nm,0.6s,baz=60,slow=1.5,SNR=4.5						
TORD				pPKP	pPKPdf	15 37 04.7	+0.4
	comp=Z,0.6nm,0.6s,baz=75,slow=1.6,SNR=3.8						

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*TUL **13** 15:24:14.5±1.4, 36°.87N±0°.01×98°.00W±0°.02, h6^{km}±4^{km}, ML3.0, mb_Lg2.4/12(NEIC), Error ellipse: s-maj=2.4km s-min=1.8km az=75.0*

NEIC 13 15:24:14.4±0.6, **36°.84N**±0°.01×**98°.01W**±0°.04, **h8**^{km}±5^{km}, **Error ellipse: s-maj=4.5km s-min=1.6km az=109.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN14	Manchester OK	0.12	19	Pg	Pg	15 24 16.9	-0.2
KAN14				Sg	Sg	15 24 18.7	-0.4
GC02	Grant County #	0.12	84		Pg	15 24 17.3	+0.1
GC02				Sg	Sg	15 24 19.3	+0.2
KAN17	Caldwell West	0.29	44	Pg	Pg	15 24 19.8	-0.3
KAN17				Sg	Sg	15 24 23.6	-0.3
KAN10	Anthony SW Sta	0.29	347	Pg	Pg	15 24 20.2	0.0
KAN10				Sg	Sg	15 24 24.0	0.0
KAN05	Bluff City Nor	0.29	23	Pg	Pg	15 24 20.1	-0.1
KAN05				Sg	Sg	15 24 23.7	-0.4
CROK	Carrier	0.34	176		Pg	15 24 21.6	+0.6
KAN01	Argonia South	0.37	33	Pg	Pg	15 24 21.4	-0.3
KAN01				Sg	Sg	15 24 26.5	-0.2
KAN08	Anthony NE Sta	0.39	5	Pg	Pg	15 24 21.9	-0.2
KAN08				Sg	Sg	15 24 27.1	0.0
KAN16	Harper SW Stat	0.39	354	Pg	Pg	15 24 21.9	-0.1
KAN16				Sg	Sg	15 24 27.2	+0.1
KAN09	Caldwell North	0.43	47	Pg	Pg	15 24 22.6	-0.3
KAN12	Harper NE Stat	0.46	2	Pg	Pg	15 24 23.2	-0.1
KAN12				Sg	Sg	15 24 29.2	-0.1
KAN13	South Haven SW	0.46	68	Pg	Pg	15 24 23.4	0.0
BLOK	Blackwell	0.65	97	Pg	Pg	15 24 26.5	-0.4
U32A	Winter Ranch,	0.92	240	Pg	Pg	15 24 32.1	0.0
T35A	Sooner Cattle	1.21	86	Pg	Pb	15 24 36.8	-0.7
BCOK	Bluff Creek, N	1.23	164	Pg	Pb	15 24 37.3	-0.5
QUOK	Quay	1.25	122	Pg	Pn	15 24 38.0	-0.2
OK031	S. Brethren Rd	1.30	133	Pn	Pn	15 24 38.5	-0.4
OK034	N. Norfolk Rd.	1.34	128		Pn	15 24 39.2	-0.2
OK030	Cody Creek RV	1.35	132		Pn	15 24 39.5	0.0
OK025	Westminster Rd	1.37	156		Pb	15 24 40.1	-0.2
OKCFA	Oklahoma City	1.49	162	Pn	Pn	15 24 42.0	+0.4
OKCSW	OKLAHOMA CITY	1.50	162		Pn	15 24 41.7	0.0
FNO	Franklin	1.66	162		Pn	15 24 44.0	+0.2
R32A	Long Quarter,	1.67	341		Pn	15 24 44.3	+0.2
TUL1	Leonard	2.02	117	Pn	Pn	15 24 49.2	+0.4
TUL1				IAmb_Lg		15 25 22.2	
	comp=Z,23nm,0.9s						
CBKS	Cedar Bluff	2.40	326	Pn	Pn	15 24 53.8	-0.3
KSU1	Kansas State U	2.52	26	IAmb_Lg		15 25 35.6	
	comp=Z,20nm,0.8s						
U38A	Gravette	2.94	97	Pn	Pn	15 25 01.7	+0.1
X37A	Clayton	3.11	135	Pn	Pn	15 25 04.2	+0.4
U40A	Yellville	4.18	95	IAmb_Lg		15 26 36.1	
	comp=Z,6.3nm,0.7s						
MIAR	Mount Ida	4.28	121	Pn	Pn	15 25 19.6	-0.2
P38A	Dawn	4.49	50	IAmb_Lg		15 26 49.5	
	comp=Z,6.6nm,0.7s						
MGMO	Mountain Grove	4.61	84	Pn	Pn	15 25 25.0	+0.6
MGMO				IAmb_Lg		15 26 50.7	
	comp=Z,6.0nm,0.7s						
R40A	Maddies Statio	4.79	71	IAmb_Lg		15 26 51.6	
	comp=Z,6.5nm,0.8s						

NNC 13 15:24:45.7±5.4, **38°.89N**×**72°.92E**, **h0**^{km}, **mb3.9**, **mpv3.5**, **5C-1D**, **Error ellipse: s-maj=39.0km s-min=21.8km az=173.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	Merke	3.85	3	Pg	Pb	15 25 55.3	+0.7
MRKS				Lg	Lg	15 26 51.4	
AAK	Ala-Archa	3.93	17	⇑Pg	Pg	15 25 59.8	-1.2
	3.3nm,0.6s						
AAK				⇑Lg	Lg	15 26 45.7	
	11nm,1.0s						
IUG	Iuzhnay	3.93	327	Pg	Pb	15 25 53.2	-2.7
	78nm,0.4s						
IUG				Lg	Lg	15 26 45.3	
	18nm,0.5s						
TKM2	Tokmak 2	4.50	26	⇑Pg	Pg	15 26 12.3	+0.3
	1.7nm,0.5s						
TKM2				⇓Lg	Lg	15 27 08.0	
	4.6nm,0.8s						
KK08	Karatay Array	4.59	337	⇑Pn	Pn	15 25 55.7	-0.7
	1.8nm,0.5s,baz=150,slow=12						
KK08				⇑Sn	Sn	15 26 54.5	+4.0
	2.7nm,0.5s,baz=151,slow=23						
TNSS	Tian-Shan	5.14	35	Pg	Pb	15 26 19.2	+2.5
	1.5nm,0.4s						
TNSS				Lg	Lg	15 27 28.9	
	3.6nm,0.7s						
KRBS	Karabastau	5.23	22	Pg	Pb	15 26 20.0	+2.0
	2.1nm,0.4s						
KRBS				Lg	Lg	15 27 32.0	
	5.0nm,0.8s						
KOTS	Kotyrbulak	5.37	35	Pg	Pb	15 26 21.9	+1.4
	1.8nm,0.3s						
KOTS				Lg	Lg	15 27 35.3	
	14nm,0.8s						
KTBS	Karatobe	5.58	29	Pg	Pb	15 26 27.2	+3.1
	1.2nm,0.2s						
KTBS				Lg	Lg	15 27 44.2	
	6.3nm,0.6s						

IDC 13 15:36:23.2±3.5, **5°.75S**×**131°.28E**, **h0**^{km}, **mb3.7**/1, **mb1 3.4**/3, **mb1mx3.0**/33, **mbtmp3.3**/3, **ML3.3**/2, **Error ellipse: s-maj=246.6km s-min=30.8km az=72.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.42	168	Pn	Pn	15 39 49.7	+1.0
	0.2nm,0.3s,baz=349,slow=11,SNR=13						
ASAR	Alice Springs	17.99	172	P	Pn	15 40 34.1	-0.8
	0.1nm,0.3s,baz=346,slow=10,SNR=9.2						
MKAR	Makanchi Array	67.89	326	P	P	15 47 23.8	+0.1
	0.4nm,0.5s,baz=112,slow=8.7,SNR=8.8						

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*WEL **13** 15:42:00, 41°.51S×172°.34E, h7^{km}, ML4.5, Mw4.3, Moment Tensor Solution. s11 Moment tensor: Scale 10^{15}Nm; M_{rr}0.66; $M_{\theta\theta}$1.51; $M_{\phi\phi}$-2.17; $M_{r\theta}$-0.45; $M_{\theta\phi}$-2.03; $M_{\phi r}$0.85; Fault plane solution: $M_0$2.93000×10^{15} NP1: ϕ_s248.00000°, δ69.00000°, λ171.00000°. NP2: ϕ_s341.00000°, δ82.00000°, λ21.00000°. Principal axes: T -316.1600, Plg21.0000°, Azm207.0000°; N 269.7800, Plg67.0000°, Azm0.0000°; P 46.3800, Plg9.0000°, Azm113.0000°;*

*IDC **13** 15:42:39.7±1.2, 41°.68S×172°.56E, h0^{km}, mb3.5/2, mb1 3.8/3, mb1mx3.6/16, mbtmp3.6/3, ML3.6/1, MS3.3/4, Ms1 3.4/4, ms1mx3.2/9 Error ellipse: s-maj=47.7km s-min=30.7km az=178.0*

*NEIC **13** 15:42:41.1±1.6, 41°.60S±0°.04×172°.42E±0°.05, h5^{km}±5^{km}, Error ellipse: s-maj=5.4km s-min=4.7km az=223.0*

*WEL **13** 15:42:41.3, 42°S±3°×17°2E±°, h13^{km}±6^{km}, M4.5/13, MLv4.5/13, Error ellipse: s-maj=0.0km s-min=0.0km az=105.4*

*NOU **13** 15:42:42.7, 41°.52S×172°.38E, h10^{km}, MLv4.8/10, South Island, New Zealand*

ISC 13 15:42:41.1±1.1, **41°.57S**±0°.02×**172°.42E**±0°.02, **h5**^{km}±8^{km}, **n208**, σ**1^{s}55**/223, **mb4.2**/10, **MS3.4**/3, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THZ	Tophouse	0.42	119	P	Pb	15 42 50.1	-0.9
THZ				S	Sb	15 42 56.6	-1.0
THZ	Tophouse	0.42	119	Pg	Pg	15 42 49.9	+0.8
THZ				Sg	Sb	15 42 56.1	-1.5
DSZ	Denniston Nort	0.49	248	P	Pb	15 42 51.8	-0.5
DSZ				S	Sb	15 42 58.8	-0.9
QRZ	Quartz Range	0.74	7	P	Pg	15 42 55.6	+0.3
QRZ				S	Sg	15 43 05.8	+0.8
QRZ	Quartz Range	0.74	7		Pg	15 42 55.5	+0.2
QRZ				Sg	Sg	15 43 05.5	+0.6
QRZ	Quartz Range	0.74	7	P	Pb	15 42 56.4	-0.1
NNZ	Nelson	0.80	65	P	Pg	15 42 56.9	+0.5
NNZ	Nelson	0.80	65		Pg	15 42 56.7	+0.3
BSWZ	Blackbirch Sta	1.10	98	P	Pn	15 43 03.1	-0.1
BSWZ				S	Sn	15 43 19.1	+0.3
BSWZ	Blackbirch Sta	1.10	98		Pn	15 43 03.0	-0.2
TUWZ	Tuamarina	1.15	84	P	Pg	15 43 03.0	-0.2
TUWZ				S	Sb	15 43 19.0	+0.2
TUWZ	Tuamarina	1.15	84		Pg	15 43 02.7	-0.5
TUWZ				Sg	Sg	15 43 17.1	-1.0
KHZ	Kahutara	1.19	136	P	Pn	15 43 05.4	+1.1
KHZ				S	Sn	15 43 23.5	+2.6
KHZ	Kahutara	1.19	136		Pn	15 43 05.5	+1.1
KHZ	Kahutara	1.19	136	P	Pn	15 43 05.9	+1.5
LTZ	Lake Taylor	1.22	185	P	Pn	15 43 05.9	+1.1
LTZ				S	Sn	15 43 23.6	+1.8
LTZ	Lake Taylor	1.22	185		Pn	15 43 05.6	+0.8
CMWZ	Cape Campbell	1.36	98	P	Pg	15 43 08.9	+1.8
CMWZ	Cape Campbell	1.36	98		Pg	15 43 07.8	+0.7
INZ	Inchbonnie	1.37	212	P	Pb	15 43 06.9	-0.2
INZ				S	Sn	15 43 26.5	+1.3
DUWZ	D'Urville Isla	1.37	57	P	Pn	15 43 06.7	-0.1
TCW	Tory Channel	1.44	76	P	Pn	15 43 08.1	+0.3
TCW				S	Sg	15 43 28.5	+1.1
GVZ	Greta Valley S	1.48	162	P	Pg	15 43 10.1	+0.8
GVZ				S	Sg	15 43 31.4	+3.0
AMCZ	Amberley	1.62	174	P	Pg	15 43 11.7	-0.4
SNZO	South Karori	1.74	82		Pn	15 43 12.5	+0.7
SNZO	South Karori	1.74	82	P	Pb	15 43 13.5	+0.1
OXZ	Oxford	1.78	189	P	Pb	15 43 13.4	-0.8
OXZ	Oxford	1.78	189		Pn	15 43 12.9	+0.4
WEL	Wellington	1.79	82	P	Pb	15 43 14.1	-0.2
WEL				S	Sg	15 43 38.9	+0.3
BHW	Baring Head	1.85	86	P	Pb	15 43 15.1	-0.2
BHW				S	Sg	15 43 39.8	-0.7
BHW	Baring Head	1.85	86	Pn	Pb	15 43 14.8	-0.6
WVZ	Waitaha Valley	1.96	219	P	Pn	15 43 15.2	+0.3
KIW	Kapiti Island	2.01	70	P	Pb	15 43 17.7	-0.3
KIW				S	Sb	15 43 44.1	+0.8
CAW	Cannon Point	2.05	78	P	Pb	15 43 18.1	-0.6
MHCZ	Mount Hutt	2.06	197	P	Pn	15 43 17.0	+0.6
PLWZ	Palliser	2.13	91	P	Pn	15 43 18.2	+0.9
PLWZ	Palliser	2.13	91	Pn	Pn	15 43 17.5	+0.2
MSWZ	Moikau Station	2.13	87	P	Pn	15 43 18.3	+1.0
MSWZ				S	Sb	15 43 46.3	-0.6
MSWZ	Moikau Station	2.13	87		Pn	15 43 17.8	+0.5
MQZ	McQueen's Vall	2.15	175	P	Pn	15 43 17.6	+0.1
MQZ	McQueen's Vall	2.15	175	Pn	Pn	15 43 17.5	0.0
RACZ	Rakaia	2.17	185	P	Pn	15 43 18.4	+0.6
OGWZ	Otaki Gorge	2.21	71	P	Pb	15 43 20.7	-0.7
OKCZ	Okains Bay	2.21	168	P	Pn	15 43 19.3	+0.9
PAWZ	Paruwai Farm	2.27	86	P	Pn	15 43 19.9	+0.7
AKCZ	Akaroa Harbour	2.33	171	P	Pn	15 43 20.9	+0.8
GCSZ	Gaunt Creek Bo	2.34	221	P	Pn	15 43 20.4	+0.3
MTW	Mount Morrison	2.36	81	P	Pn	15 43 21.2	+0.8
RPZ	Rata Peaks	2.37	205	P	Pn	15 43 21.3	+0.7
RPZ	Rata Peaks	2.37	205	Pn	Pn	15 43 20.7	+0.1
RPZ	Rata Peaks	2.37	205	P	Pb	15 43 22.4	-1.9
WACZ	Wakanui South	2.41	190	P	Pn	15 43 21.4	+0.3
NMEZ	Namu Road	2.42	28	P	Pb	15 43 23.3	-1.7
HOWZ	Holdsworth Sta	2.43	75	P	Pn	15 43 22.8	+1.4
TRWZ	Traveller	2.46	87	P	Pn	15 43 22.5	+0.6
NBEZ	Newall Road No	2.55	26	P	Pn	15 43 24.9	+1.9
ARCZ	Arundel	2.55	201	P	Pn	15 43 23.2	+0.1
MRZ	Mangatainoka R	2.55	70	P	Pn	15 43 24.7	+1.6
KHEZ	Kahui Hut	2.58	29	P	Pn	15 43 25.4	+1.9
OHWZ	Ohakea	2.58	59	P	Pb	15 43 27.7	-0.1
PREZ	Palmer Road	2.59	31	P	Pn	15 43 25.9	+2.3
LREZ	Lake Rotokare	2.59	36	P	Pb	15 43 26.1	-1.8
NEZ	North Egmont	2.63	30	P	Pn	15 43 26.3	+2.1
PKE	Pukeiti	2.65	27	P	Pn	15 43 26.9	+2.4
TMWZ	Te Maipa	2.66	81	P	Pn	15 43 25.0	+0.4
WAZ	Wanganui	2.66	48	P	Pb	15 43 27.6	-1.6
TIWZ	Tintock	2.73	74	P	Pn	15 43 26.6	+1.0
DREZ	Durham Road	2.74	30	P	Pb	15 43 28.7	-1.8
FOZ	Fox Glacier	2.75	223	P	Pn	15 43 25.8	+0.1
FOZ	Fox Glacier	2.75	223		Pn	15 43 25.7	-0.1
POWZ	Post Office Ro	2.79	66	P	Pb	15 43 30.2	-1.2
PRWZ	Pori Road	2.87	71	P	Pn	15 43 28.8	+1.3
MHEZ	Mangahewa	2.88	31	P	Pb	15 43 31.9	-1.0
CPWZ	Castlepoint	2.93	78	P	Pn	15 43 29.4	+1.2
TMZ	Timaru	3.00	200	P	Pn	15 43 29.4	+0.1
BFZ	Birch Farm	3.02	74	P	Pn	15 43 30.0	+0.4
BFZ	Birch Farm	3.02	74		Pn	15 43 29.7	+0.1
BFZ	Birch Farm	3.02	74	P	Pn	15 43 30.0	+0.4
VRZ	Vera Road	3.02	37	P	Pn	15 43 31.6	+2.0
TSZ	Takapari Road	3.08	62	P	Pn	15 43 31.7	+1.3
DVHZ	Dannevirke	3.11	67	P	Pn	15 43 31.6	+0.9
MTVZ	Mangateitei	3.19	48	P	Pb	15 43 35.6	-2.6
PKVZ	Pokaka	3.19	45	P	Pn	15 43 34.3	+2.4
LBZ	Lake Benmore	3.26	209	P	Pn	15 43 33.1	+0.3
LBZ	Lake Benmore	3.26	209		Pn	15 43 32.9	+0.1
ANWZ	Angora Road	3.26	72	P	Pn	15 43 33.2	+0.4
TRVZ	Turoa	3.29	48	P	Pn	15 43 36.5	+3.1
WNVZ	Wahianoa	3.30	48	P	Pn	15 43 36.2	+2.7
PNHZ	Pukenui	3.31	61	P	Pn	15 43 34.9	+1.3
DRZ	Dome Shelter	3.32	47	P	Pb	15 43 37.4	-3.1
FWVZ	Far West T-bar	3.33	47	P	Pn	15 43 36.4	+2.5
WHVZ	Whangaehu Hut	3.33	48	P	Pn	15 43 37.3	+3.3
MOVZ	Moawhango	3.33	51	P	Pn	15 43 36.1	+2.2
TUVZ	Tukino	3.37	48	P	Pn	15 43 37.5	+3.0
WPHZ	Waipukurau	3.40	65	P	Pn	15 43 35.4	+0.6
NGZ	Ngauruhoe	3.41	47	P	Pn	15 43 37.3	+2.3
SNVZ	South Ngauruho	3.42	47	P	Pb	15 43 38.9	-3.3
WTVZ	West Tongariro	3.44	46	P	Pn	15 43 39.0	+3.5
NNVZ	North Ngauruho	3.45	46	P	Pn	15 43 38.6	+3.1
PRHZ	Porangahau	3.45	69	P	Pn	15 43 35.8	+0.4
OTVZ	Oturere	3.45	47	P	Pn	15 43 38.9	+3.3
BHHZ	Black Hill Sta	3.47	54	P	Pn	15 43 37.4	+1.7
KRVZ	Karewarewa	3.49	46	P	Pb	15 43 41.7	-1.7
ETVZ	East Tongariro	3.50	47	P	Pn	15 43 38.9	+2.7
NTVZ	North Tongarir	3.50	46	P	Pb	15 43 40.1	-3.5
TMVZ	Te Maari	3.51	47	P	Pn	15 43 39.0	+2.7
KRHZ	Kereru	3.57	59	P	Pn	15 43 38.1	+1.0
HIZ	Hauiti	3.58	32	P	Pn	15 43 38.1	+0.9
HIZ	Hauiti	3.58	32		Pn	15 43 37.1	-0.1
HIZ	Hauiti	3.58	32	P	Pn	15 43 38.6	+1.4
KATZ	Kakaramea	3.60	45	P	Pb	15 43 43.4	-1.9
JCZ	Jackson Bay	3.66	226	P	Pn	15 43 38.3	-0.1
RITZ	Rihia Road	3.69	47	P	Pn	15 43 42.6	+3.8
PXZ	Pawanui	3.71	67	P	Pn	15 43 39.6	+0.6
ODZ	Otahua Downs	3.71	200	P	Pn	15 43 38.8	-0.1
ODZ	Otahua Downs	3.71	200		Pn	15 43 38.9	-0.1
ODZ	Otahua Downs	3.71	200	P	Pn	15 43 39.5	+0.5
RATZ	Rangitukua	3.72	45	P	Pn	15 43 42.6	+3.4
KWHZ	Kaweka Forest	3.73	56	P	Pn	15 43 43.4	+4.1
WATZ	Wairara	3.82	43	P	Pn	15 43 44.7	+4.1
KAHZ	Kahuranaki	3.83	64	P	Pn	15 43 41.4	+0.8
MCHZ	McNeill Hill	3.89	58	P	Pn	15 43 42.5	+1.0
BKZ	Black Stump Fm	3.93	54	P	Pn	15 43 43.2	+1.1
BKZ	Black Stump Fm	3.93	54	Pn	Pn	15 43 41.9	-0.2
BKZ	Black Stump Fm	3.93	54	P	Pn	15 43 42.7	+0.6
TLZ	Tolley Road	4.02	38	P	Pn	15 43 45.0	+1.6
KUTZ	Kaahu Road	4.03	42	P	Pn	15 43 47.5	+4.0
WKZ	Wanaka	4.10	216	P	Pn	15 43 43.7	-0.6
WKZ	Wanaka	4.10	216		Pn	15 43 43.8	-0.6
MRHZ	Matea Rd	4.10	50	P	Pn	15 43 45.2	+0.8
NMHZ	Naumai	4.16	55	P	Pn	15 43 46.2	+0.9
ALRZ	Allen Road	4.25	46	P	Pn	15 43 48.1	+1.6
GRRZ	Galatos Road	4.29	43	P	Pn	15 43 49.7	+2.8
EAZ	Earnscleugh	4.31	211	P	Pn	15 43 46.7	-0.5
MTHZ	Maungataniwha	4.34	53	P	Pn	15 43 47.9	+0.3
RAHZ	Arahi	4.45	55	P	Pn	15 43 49.5	+0.3
UTU	Utuhina	4.46	42	P	Pb	15 43 57.0	-2.9
TOZ	Tahuroa Road	4.51	33	P	Pn	15 43 51.2	+1.3
HHSZ	Highcliff Hill	4.51	196	P	Pn	15 43 49.7	-0.4
MSZ	Milford Sound	4.52	225	P	Pn	15 43 50.8	+0.7
MUGZ	Murupara	4.55	49	P	Pn	15 43 50.6	+0.1
RTZ	Ruatahuna	4.57	51	P	Pn	15 43 50.9	-0.1
OMRZ	Omania	4.60	43	P	Pn	15 43 53.4	+2.1
KARZ	Kaharoa	4.61	41	P	Pb	15 43 57.0	-5.4
KNZ	Kokohu	4.75	59	P	Pn	15 43 52.7	-0.6
AWAZ	Awhitu Peninsu	4.81	22	P	Pn	15 43 55.9	+1.7
TUZ	Tuapeka	4.83	204	P	Pn	15 43 54.1	-0.3
MHGZ	Mahia Peninsul	4.84	62	P	Pn	15 43 54.8	+0.3
TGRZ	Tauranga	4.84	39	P	Pn	15 43 56.3	+1.7
URZ	Urewera	4.89	49	Pn	Pn	15 43 54.3	-0.9
	2.5nm,0.3s,baz=121,slow=23,SNR=17						
URZ	Urewera	4.89	49	P	Pn	15 43 54.5	-0.8
URZ	Urewera	4.89	49	Pn	Pn	15 43 54.4	-0.8
URZ	Urewera	4.89	49	P	Pn	15 43 55.2	0.0
RAGZ	Rawiri	4.91	53	P	Pb	15 44 03.0	-4.6
WTAZ	Waiatarua	4.92	21	P	Pn	15 43 58.1	+2.4
MLZ	Mavora Lakes	4.92	218	P	Pn	15 43 55.2	-0.5
MLZ	Mavora Lakes	4.92	218	Pn	Pn	15 43 54.8	-0.9
PRGZ	Paritu Road	4.95	60	P	Pn	15 43 56.5	+0.5
RIGZ	Rimuhau	4.99	57	P	Pn	15 43 56.5	-0.1
ETAZ	East Tamaki Re	5.00	24	P	Pn	15 43 58.5	+1.8
HBAZ	Herne Bay Bore	5.04	22	P	Pn	15 44 01.5	+4.3
RVAZ	Riverhead Bore	5.07	20	P	Pn	15 43 59.8	+2.1
MWZ	Matawai	5.08	52	P	Pn	15 43 57.1	-0.8
MBAZ	Motutapu North	5.16	23	P	Pn	15 44 01.0	+2.1
TKGZ	Te Karaka	5.21	55	P	Pn	15 43 58.7	-0.9
WIAZ	Waiheke Island	5.21	25	P	Pn	15 44 01.6	+2.0
ABAZ	Army Bay	5.30	22	P	Pn	15 44 03.0	+2.2
WHZ	Wether Hill Ro	5.40	215	P	Pn	15 44 02.9	+0.7
WHZ	Wether Hill Ro	5.40	215		Pn	15 44 01.1	-1.2
RUGZ	Raukumara Rang	5.42	50	P	Pn	15 44 02.4	-0.2
KUZ	Kuaotunu	5.45	29	P	Pn	15 44 03.8	+0.9
TWGZ	Tauwhareparae	5.46	53	P	Pn	15 44 02.5	-0.6
DCZ	Deep Cove	5.46	223	P	Pn	15 44 04.2	+1.1
DCZ	Deep Cove	5.46	223		Pn	15 44 02.2	-0.9
SYZ	Scrubby Hill	5.50	204	P	Pn	15 44 02.8	-0.8
HAZ	Te Kaha	5.62	49	P	Pn	15 44 05.2	0.0
GRZ	Great Barrier	5.81	25	P	Pn	15 44 10.7	+2.8
WCZ	Waipu Caves	5.82	16	P	Pn	15 44 09.3	+1.4
MXZ	Matakaoa Point	6.06	51	Pn	Pn	15 44 10.3	-0.9
APZ	The Paps	6.15	210	P	Pn	15 44 12.2	-0.4
PYZ	Puysegur Point	6.19	220	Pn	Pn	15 44 12.1	-0.9
OUZ	Omahuta	6.40	9	P	Pn	15 44 17.2	+1.3
OUZ	Omahuta	6.40	9	P	Pn	15 44 16.9	+0.9
CTZ	Chatham Island	8.37	109	P	Pn	15 44 42.1	-0.9
RAO	Raoul Island	14.58	36	LR	LR	15 51 11.8	
	comp=Z,166nm,18.6s,baz=271,slow=35						
ARMA	Armidale	20.11	297	P	P	15 47 13.4	-2.4
ARMA				IAmb	IAmb	15 47 30.8	
	comp=Z,12nm,1.4s						
ASAR	Alice Springs	36.66	287	P	P	15 49 49.2	+0.5
	comp=Z,0.3nm,0.5s,baz=125,slow=7.1,SNR=26						
ASAR				PcP	PcP	15 52 11.5	-0.1
	comp=Z,0.2nm,0.6s,baz=123,slow=4.3,SNR=4.3						
ASAR				LR	LR	16 04 33.3	
	comp=Z,54nm,18.8s,baz=78,slow=36						
WB2	Warramunga Arr	38.75	292	P	P	15 50 05.7	-0.7
WB2				IAmb	IAmb	15 50 23.3	
	comp=Z,5.9nm,1.4s						
WRAB	Tennant Creek	38.75	292	P	P	15 50 05.3	-1.2
WRA	Warramunga Arr	38.76	292	P	P	15 50 07.0	+0.6
	comp=Z,0.9nm,0.9s,baz=136,slow=6.9,SNR=13						
WRA				LR	LR	16 04 36.4	
	comp=Z,63nm,21.6s,baz=105,slow=34						
WRA	Warramunga Arr	38.76	292	P	P	15 50 05.6	-0.9
KNRA	Kununurra	45.53	291	P	P	15 51 01.5	-0.2
MTN	Manton Dam	45.90	296	P	P	15 51 02.1	-2.5
MTN				IAmb	IAmb	15 51 05.8	
	comp=Z,11nm,1.2s						
QSPA	South Pole Qui	48.56	180	P	P	15 51 26.3	+1.2
QSPA				IAmb	IAmb	15 51 35.6	
	comp=Z,6.7nm,0.8s						
SOEI	Soe	52.79	293	P	P	15 51 56.2	-1.3
SOEI				IAmb	IAmb	15 52 12.8	
	comp=Z,7.5nm,0.9s						
MAW	Mawson	59.05	205	P	P	15 52 41.9	+0.4
MAW				IAmb	IAmb	15 52 55.4	
	comp=Z,1.8nm,1.2s						
SNAA	Sanae	67.02	182	P	P	15 53 34.7	+0.1
SNAA	Sanae	67.02	182	P	P	15 53 34.5	-0.1
SNAA				IAmb	IAmb	15 53 37.4	
	comp=Z,1.7nm,1.0s						
VNA3	Neumayer Olymp	67.49	179	P	P	15 53 37.8	+0.4
MYLDM	Lahad Datu	67.61	299	P	P	15 53 37.6	-1.3

VNA2	Neumayer--Watz	67.82	180	P	P	15 53 39.7	+0.2
	baz=171,slow=4.0						
CMAR	Chiang Mai Arr	90.31	294	P	P	15 55 47.6	+4.4
	comp=Z,0.5nm,0.8s,baz=144,slow=3.2,SNR=4.7						
CMAR				LR	LR	16 40 51.8	
	comp=Z,7.7nm,18.7s,baz=65,slow=39						
HHC	Hu-ho-hao-te	98.82	318	*e*P	Pdif	15 56 22.6	+0.8
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,6.8s						
DBIC	Dimbokro	145.17	185	PKPbc	PKPbc	16 02 19.2	-0.4
	comp=Z,5.1nm,1.1s,baz=182,slow=3.4,SNR=2.7						
ARCES	ARCESS Array B	147.12	339	PKPbc	PKPbc	16 02 24.0	0.0
	comp=Z,2.5nm,0.8s,baz=28,slow=4.1,SNR=4.6						
BRTR	Keskin Array B	148.88	281	PKPbc	PKPbc	16 02 28.8	-0.9
	comp=Z,0.7nm,0.8s,baz=129,slow=4.0,SNR=4.6						
TORD	Torodi Ar. Bea	150.56	199	PKPbc	PKPbc	16 02 32.1	-2.2
	comp=Z,0.3nm,0.3s,baz=154,slow=2.9,SNR=3.0						
FINES	FINESS Array B	151.62	326	PKPbc	PKPbc	16 02 34.4	-1.0
	comp=Z,2.6nm,0.9s,baz=104,slow=0.7,SNR=7.1						

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*SOME **13** 16:27:23.7, 39.°27N×75.°72E, h5^{km}*

*NNC **13** 16:27:26.4±3.2, 39.°46N×75.°23E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=22.9km s-min=16.9km az=152.0*

ISC 13 16:27:28.4±2.3, **39.°5N**±0.°1×**75.°69E**±0.°06, **h10**^{km}, **n23, σ2.^{s}82**/32, **5C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	3.27	344	⇑Pg	Pg	16 28 27.7	-3.4
	4.1nm,0.5s						
AAK				Lg	Lg	16 29 05.1	
	15nm,0.7s						
TKM2	Tokmak 2	3.43	359	⇑Pg	Pg	16 28 31.5	-2.5
	3.2nm,0.5s						
TKM2				⇑Lg	Lg	16 29 18.9	
	9.2nm,0.5s						
KST	Kastek	3.56	3	*e*P	Pg	16 28 33.1	-3.4
	6.3nm,0.4s						
KST				*e*S	Sg	16 29 24.1	+1.6
	32nm,0.5s						
KST	Kastek	3.56	3	Pg	Pb	16 28 32.2	+0.8
	6.3nm,0.4s						
KST				Lg	Lg	16 29 24.1	
	32nm,0.5s						
TNSS	Tian-Shan	3.67	15	*e*P	Pg	16 28 35.9	-2.7
	2.4nm,0.2s						
TNSS				*e*S	Sg	16 29 29.3	+3.1
	12nm,0.8s						
TNSS	Tian-Shan	3.67	15	Pg	Pg	16 28 35.9	-2.7
	2.4nm,0.2s						
TNSS				Lg	Lg	16 29 28.0	
	12nm,0.8s						
MTBS	Maitube	3.68	8	*e*P	Pg	16 28 35.2	-3.7
	8.6nm,0.6s						
MTBS				*e*S	Sg	16 29 27.6	+1.1
	8.3nm,0.7s						
MTBS	Maitube	3.68	8	Pg	Pb	16 28 34.4	+0.9
MTBS				Lg	Lg	16 29 28.8	
MRKS	Merke	3.75	331	*e*P	Pg	16 28 37.2	-3.0
	2.6nm,0.3s						
MRKS				*e*S	Sg	16 29 31.3	+2.6
	8.1nm,0.9s						
MRKS	Merke	3.75	331	Pg	Pn	16 28 29.0	+2.7
	1.8nm,0.5s						
MRKS				Lg	Lg	16 29 16.0	
	6.8nm,0.7s						
MDOK	Medeo	3.81	15	*e*P	Pb	16 28 37.4	+1.6
	5.3nm,0.4s						
MDOK				*e*S	Sg	16 29 31.5	+0.8
	26nm,0.8s						
MDOK	Medeo	3.81	15	Pg	Pg	16 28 38.5	-2.9
	4.7nm,0.6s						
MDOK				Lg	Lg	16 29 35.3	
	38nm,0.9s						
MDOK	Medeo	3.81	15	Pg	Pb	16 28 36.4	+0.7
	5.3nm,0.4s						
MDOK				Lg	Lg	16 29 31.5	
	26nm,0.8s						
KOTS	Kotyrbulak	3.89	15	*e*P	Pg	16 28 40.2	-2.7
	7.6nm,0.5s						
KOTS				*e*S	Sg	16 29 35.8	+2.6
	25nm,0.5s						
KOTS	Kotyrbulak	3.89	15	Pg	Pb	16 28 38.6	+1.5
	7.6nm,0.5s						
KOTS				Lg	Lg	16 29 35.8	
	25nm,0.5s						
KRBS	Karabastau	4.20	360	*e*P	Pg	16 28 44.5	-4.3
	3.8nm,0.7s						
KRBS				*e*S	Sg	16 29 43.5	+0.3
	10nm,0.8s						
KRBS	Karabastau	4.20	360	Pg	Pg	16 28 44.5	-4.3
	3.8nm,0.7s						
KRBS				Lg	Lg	16 29 43.5	
	10nm,0.8s						
KUU	Kurty	4.43	6	*e*P	Pg	16 28 48.8	-4.3
	3.1nm,0.5s						
KUU				*e*S	Sg	16 29 50.6	+0.2
	22nm,0.5s						
KUU	Kurty	4.43	6	Pg	Pg	16 28 48.8	-4.3
	3.1nm,0.5s						
KUU				Lg	Lg	16 29 50.6	
	22nm,0.5s						
PDGK	Podgornoye	4.78	35	⇓Pg	Pg	16 28 58.9	-1.1
	2.9nm,0.6s						
PDGK				⇑Lg	Lg	16 30 01.0	
	8.3nm,0.7s						
IUG	Iuzhnay	5.05	304	*e*P	Pg	16 29 01.9	-3.2
	102nm,0.4s						
IUG				*e*S	Sg	16 30 14.7	+4.3
	20nm,0.9s						
IUG	Iuzhnay	5.05	304	Pg	Pn	16 28 42.7	-1.6
	67nm,0.4s						
IUG				Lg	Lg	16 29 41.0	
	18nm,0.4s						
KK08	Karatay Array	5.33	314	⇑Pg	Pb	16 29 03.0	+1.5
	1.7nm,0.6s,baz=138,slow=17						
KK08				⇓Lg	Lg	16 30 11.0	
	1.8nm,0.5s,baz=132,slow=32						

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*NEIC **13** 16:44:30.2±2.4, 17.°00N±0.°05×95.°28W±0.°04, h102^{km}±5^{km}, mb4.2/80, Md4.5/80(MEX), Error ellipse: s-maj=7.6km s-min=5.9km az=160.0*

*IDC **13** 16:44:31.9±0.9, 17.°13N×94.°97W, h108^{km}±8^{km}, mb3.9/5, mb1 4.2/5, mb1mx3.5/50, mbtmp4.2/5, Error ellipse: s-maj=40.7km s-min=23.7km az=79.0*

*MEX **13** 16:44:32.3±1.2, 17.°03N×95.°31W, h109^{km}±9^{km}, MD4.5*

ISC 13 16:44:30.6±0.6, **16.°99N**±0.°03×**95.°28W**±0.°02, **h110**^{km}±5^{km}, **n157, σ1.^{s}64**/214, **mb4.2**/31, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.39	74	P	Pn	16 44 47.3	+0.5
	2µm,0.3s,baz=242,slow=5.9						
CMIG				S	Sn	16 44 58.9	-0.1
	719nm,0.3s,baz=360,slow=21,SNR=138						
CMIG	Matias Romero	0.39	74		Pn	16 44 47.2	+0.4
CMIG					Sn	16 44 58.8	-0.1
CMIG	Matias Romero	0.39	74	*e*P	Pn	16 44 47.2	+0.4
CMIG				*i* S	Sn	16 44 58.8	-0.1
UXUV	UXUV	1.13	73	*e*P	Pn	16 44 53.8	+0.6
UXUV				*i* S	Sn	16 45 10.0	-0.2
MIHL	Minatitlan	1.22	35	*i* P	Pn	16 44 54.5	+0.3
MIHL				*i* S	Sn	16 45 11.9	-0.1
TUIG	Tuzandepetl	1.32	38		Pn	16 44 55.3	-0.1
TUIG					Sn	16 45 10.7	-3.4
TUIG	Tuzandepetl	1.32	38	*e*P	Pn	16 44 55.3	-0.1
TUIG				*i* S	Sn	16 45 13.8	-0.3
OXLC	Oaxaca	1.37	274	*e*P	Pn	16 44 56.5	+0.4
OXLC				*e*S	Sn	16 45 14.6	-0.7
OXBJ	Oaxaca	1.39	274		Pn	16 44 56.7	+0.4
OXBJ					Sn	16 45 15.9	+0.1
OXBJ	Oaxaca	1.39	274	*e*P	Pn	16 44 56.7	+0.4
OXBJ				*e*S	Sn	16 45 14.9	-0.9
VHO	Vista Hermosa	1.40	274	*e*P	Pn	16 44 56.8	+0.4
VHO				*e*S	Sn	16 45 15.8	-0.1
HUIG	Huatulco	1.45	214		Pn	16 44 56.4	-0.5
HUIG					Sn	16 45 15.3	-1.4
HUIG	Huatulco	1.45	214	*e*P	Pn	16 44 56.4	-0.5
HUIG				*i* S	Sn	16 45 16.9	+0.2
PANG	Puerto Angel	1.74	221		Pn	16 44 58.8	-1.6
PANG					Sn	16 45 21.7	-1.4
PANG	Puerto Angel	1.74	221	*i* P	Pn	16 44 59.2	-1.2
PANG				*i* S	Sn	16 45 22.9	-0.2
TOIG	Toxpalan	2.03	303	*e*P	Pn	16 45 04.3	+0.2
TOIG				*e*S	Sn	16 45 28.3	-1.4
PEIG	Puerto Escondi	2.04	242	*i* P	Pn	16 45 02.7	-1.5
PEIG				*e*S	Sn	16 45 27.9	-2.0
TGIG		2.07	95		Pn	16 45 05.7	+1.0
TGIG					Sn	16 45 29.5	-1.1
TGIG		2.07	95	*e*P	Pn	16 45 05.7	+1.0
TGIG				*e*S	Sn	16 45 29.5	-1.1
YOIG	Yosondua	2.17	267	*e*P	Pn	16 45 05.8	-0.4
YOIG				*e*S	Sn	16 45 30.6	-2.6
PCIG		2.35	122		Pn	16 45 09.9	+1.7
PCIG					Sn	16 45 38.9	+2.1
PCIG		2.35	122	*e*P	Pn	16 45 09.9	+1.7
PCIG				*e*S	Sn	16 45 38.9	+2.1
TXIG	Tlaxiaco	2.40	277	*e*P	Pn	16 45 09.2	+0.2
TXIG				*e*S	Sn	16 45 37.8	-0.6
TPIG	Tehuac#an	2.45	306		Pn	16 45 10.0	+0.5
TPIG					Sn	16 45 40.8	+1.5
TPIG	Tehuac#an	2.45	306	*e*P	Pn	16 45 10.0	+0.5
TPIG				*e*S	Sn	16 45 38.8	-0.5
THEZ	Tehuacan	2.50	307	*e*P	Pn	16 45 10.2	0.0
THEZ				*e*S	Sn	16 45 41.7	+1.1
OZST	Orizaba	2.54	317	*e*P	Pn	16 45 08.7	-2.0
OZST				*e*S	Sn	16 45 38.2	-3.4
HLIG	Huajuapan de L	2.55	290	*i* P	Pn	16 45 11.3	+0.4
HLIG				*e*S	Sn	16 45 41.0	-1.0
PNIG	Pinotepa	2.79	258		Pn	16 45 12.4	-1.5
PNIG					Sn	16 45 45.4	-1.9
PNIG	Pinotepa	2.79	258	*e*P	Pn	16 45 12.4	-1.5
PNIG				*e*S	Sn	16 45 45.4	-1.9
FTIG	Fresnillo de T	2.88	289	*e*P	Pn	16 45 15.6	+0.5
FTIG				*e*S	Sn	16 45 46.2	-3.1
CCIG	Comitan	3.09	103		Pn	16 45 19.9	+1.8
CCIG					Sn	16 45 47.5	-7.0
CCIG	Comitan	3.09	103	*e*P	Pn	16 45 19.9	+1.8
CCIG				*e*S	Sn	16 45 47.5	-7.0
TLIG	Tlapa	3.19	281		Pn	16 45 19.5	+0.2
TLIG					Sn	16 45 49.0	-7.9
TLIG	Tlapa	3.19	281	*e*P	Pn	16 45 19.5	+0.2
TLIG				*i* S	Sn	16 45 55.4	-1.6
MGIG	Malinaltepec	3.22	275	*e*P	Pn	16 45 19.7	-0.1
MGIG				*e*S	Sn	16 45 56.5	-1.1
CRIG	Cruz Grande	3.70	267		Pn	16 45 24.4	-1.5
CRIG					Sn	16 46 09.3	+0.6
CRIG	Cruz Grande	3.70	267	*i* P	Pn	16 45 24.4	-1.5
CRIG				*e*S	Sn	16 46 09.3	+0.6
HUEH	Huehuetenango	3.99	114	Pn	Pn	16 45 30.7	+0.6
YAIG	Yautepec	4.06	298		Pn	16 45 32.2	+1.2
YAIG					Sn	16 46 18.6	+0.9
YAIG	Yautepec	4.06	298	*e*P	Pn	16 45 32.2	+1.2
YAIG				*e*S	Sn	16 46 18.6	+0.9
DAIG	Los Arroyos	4.18	271		Pn	16 45 31.5	-1.0
DAIG					Sn	16 46 19.9	-0.5
DAIG	Los Arroyos	4.18	271	*e*P	Pn	16 45 31.5	-1.0
DAIG				*e*S	Sn	16 46 19.9	-0.5
MEIG	Mezcala	4.25	283		Pn	16 45 33.8	+0.4
MEIG					Sn	16 46 22.1	-0.1
MEIG	Mezcala	4.25	283	*e*P	Pn	16 45 33.8	+0.4
MEIG				*e*S	Sn	16 46 22.1	-0.1
PLIG	Platanillo	4.26	290		Pn	16 45 34.5	+0.9
PLIG					Sn	16 46 22.8	+0.3
PLIG	Platanillo	4.26	290	*e*P	Pn	16 45 34.5	+0.9
PLIG				*e*S	Sn	16 46 22.8	+0.3
SCIG	Sabancuy	4.37	63		Pn	16 45 33.3	-1.6
SCIG					Sn	16 46 18.1	-6.7
SCIG	Sabancuy	4.37	63	*e*P	Pn	16 45 33.3	-1.6
SCIG				*e*S	Sn	16 46 18.1	-6.7
AOVM	Tlapan	4.47	301	*i* P	Pn	16 45 38.6	+1.9
AOVM				*i* S	Sn	16 46 31.3	+3.4
MAVM	Malinalco, Edo	4.47	297		Pn	16 45 38.0	+1.5
MAVM					Sn	16 46 24.0	-3.6
MAVM	Malinalco, Edo	4.47	297	*i* P	Pn	16 45 38.0	+1.5
MAVM				*i* S	Sn	16 46 24.0	-3.6
CAIG	El Cayaco	4.77	271		Pn	16 45 39.1	-1.3
CAIG					Sn	16 46 36.9	+2.2
CAIG	El Cayaco	4.77	271	*e*P	Pn	16 45 39.1	-1.3
CAIG				*e*S	Sn	16 46 36.9	+2.2
ARIG	Puente Sto Nin	5.00	286		Pn	16 45 44.7	+1.2
ARIG					Sn	16 46 40.7	+0.4
ARIG	Puente Sto Nin	5.00	286	*e*P	Pn	16 45 44.7	+1.2
ARIG				*e*S	Sn	16 46 40.7	+0.4
PETF	Flores	5.18	90	Pn	Pn	16 45 46.2	+0.3
ZIIG	Zihuatanejo	5.94	277		Pn	16 45 56.1	-0.1
ZIIG					Sn	16 47 02.9	-0.1
ZIIG	Zihuatanejo	5.94	277	*i* P	Pn	16 45 56.1	-0.1
ZIIG				*e*S	Sn	16 47 02.9	-0.1
MOIG	Morelia	6.22	296		Pn	16 46 01.7	+1.5
MTO3	Montecristo	6.25	113	Pn	Pn	16 46 00.8	+0.1
HZTE	Horizontes, Gu	11.28	122	Pn	Pn	16 47 09.4	+0.8
JTS	Las Juntas de	12.04	122	Pn	Pn	16 47 19.9	+1.2
RIMA	Rio Macho	13.22	121	Pn	Pn	16 47 34.8	+0.5
SRBA	San Rafael, Bu	13.93	122	Pn	Pn	16 47 44.1	+0.6
JCT	Junction City	14.05	344	Pn	Pn	16 47 44.9	-0.1
NATX	Nacogdoches	14.72	2	P	P	16 47 56.5	0.0
352A	Blakely	17.23	31	P	Pn	16 48 24.8	+0.4
X37A	Clayton	17.53	360	P	Pn	16 48 28.1	0.0
MIAR	Mount Ida	17.55	5	P	Pn	16 48 27.9	-0.5
X40A	Basin Creek Fa	17.57	7	P	Pn	16 48 28.2	-0.3
X34A	Smith Ranch, M	17.69	353	P	Pn	16 48 29.4	-0.7
X34A				IAmb	IAmb	16 48 54.4	
	comp=Z,12nm,0.6s						
W39A	Magazine	18.19	4	P	Pn	16 48 34.6	-1.3
W39A				IAmb	IAmb	16 48 48.1	
	comp=Z,6.6nm,0.6s						
WHAR	Wooly Hollow	18.43	8	P	P	16 48 37.1	-0.3
TUL1	Leonard	18.86	359	P	P	16 48 41.5	-0.6
TUL1				IAmb	IAmb	16 48 42.5	
	comp=Z,5.5nm,0.7s						
X48A	Hartselle	18.89	21	P	P	16 48 41.4	-1.2
X48A				IAmb	IAmb	16 49 04.9	
	comp=Z,14nm,1.4s						
OK030	Cody Creek RV	18.91	356	P	Pn	16 48 43.1	-1.5
OK031	S. Brethren Rd	18.94	356	P	Pn	16 48 43.2	-1.8
OK031				IAmb	IAmb	16 48 44.2	
	comp=Z,5.9nm,0.8s						
OK034	N. Norfolk Rd.	18.99	356	P	P	16 48 42.6	-1.0
OK034				IAmb	IAmb	16 48 44.6	
	comp=Z,12nm,0.6s						
FCAR	Ozark Folk Cen	19.04	8	P	P	16 48 43.8	-0.3
FCAR				IAmb	IAmb	16 48 44.9	
	comp=Z,6.0nm,0.7s						
QUOK	Quay	19.15	356	P	P	16 48 45.2	-0.2
QUOK				IAmb	IAmb	16 48 45.9	
	comp=Z,9.4nm,0.8s						
GTBY	Guantanamo Bay	19.35	78	P	Pn	16 48 48.6	-1.3
LCAR	Lake Charles	19.36	10	P	P	16 48 47.0	-0.6
U38A	Gravette	19.39	2	P	P	16 48 47.8	-0.3
U40A	Yellville	19.41	6	P	P	16 48 48.0	-0.2
U40A				IAmb	IAmb	16 48 49.1	
	comp=Z,10nm,0.6s						
FPAL	Fort Paine	19.51	25	P	P	16 48 48.5	-0.8
FPAL				IAmb	IAmb	16 48 52.6	
	comp=Z,7.2nm,0.9s						
T35A	Sooner Cattle	19.88	357	P	P	16 48 53.2	-0.1
T35A				IAmb	IAmb	16 48 54.1	
	comp=Z,7.1nm,0.6s						
PBMO	Poplar Bluff	20.18	11	P	P	16 48 55.8	-0.7
WVT	Waverly	20.18	18	P	P	16 48 55.6	-1.0
W50A	Signal Mountai	20.20	24	P	P	16 48 55.4	-1.4
T42A	Van Buren	20.31	10	P	P	16 48 57.7	-0.1
T42A				IAmb	IAmb	16 48 58.5	
	comp=Z,6.2nm,0.6s						
CLTN	Cedars of Leba	20.62	21	P	P	16 49 00.7	-0.5
S39A	Bolivar	20.70	4	P	P	16 49 01.6	-0.4
CPCT	Cooper Cave	20.74	25	P	P	16 49 00.3	-2.2
HODGE	Hodges	20.77	32	P	P	16 49 01.4	-1.4
HODGE				IAmb	IAmb	16 49 02.0	
	comp=Z,8.4nm,0.7s						
BG3	Lake Jocassee	21.05	29	P	P	16 49 04.5	-1.4
V51A	Loudon	21.11	25	P	P	16 49 04.4	-2.2
V51A				IAmb	IAmb	16 49 07.6	
	comp=Z,5.2nm,0.7s						
U49A	Red Boiling Sp	21.20	22	P	P	16 49 05.3	-2.1
U49A				IAmb	IAmb	16 49 08.8	
	comp=Z,6.0nm,0.5s						
TKL	Tuckaleechee C	21.23	27	P	P	16 49 06.8	-1.0
	comp=Z,2.4nm,0.5s,baz=186,slow=12,SNR=9.2						
TKL	Tuckaleechee C	21.23	27	P	P	16 49 06.5	-1.3
TKL				IAmb	IAmb	16 49 34.4	
	comp=Z,12nm,1.4s						
CCM	Cathedral Cave	21.29	9	P	P	16 49 06.9	-1.5
JSC	Jenkinsville	21.32	33	P	P	16 49 07.0	-1.8
JSC				IAmb	IAmb	16 49 31.8	
	comp=Z,13nm,1.3s						
R40A	Maddies Statio	21.39	7	P	P	16 49 08.9	-0.5
V52A	Sevierville	21.46	27	P	P	16 49 09.8	-0.5
V53A	Saluda	21.67	28	P	P	16 49 11.8	-0.7
KMSC	Kings Mountain	21.95	32	P	P	16 49 13.9	-1.5
KMSC				IAmb	IAmb	16 49 32.8	
	comp=Z,10nm,0.9s						
TZTN	Tazewell	22.08	26	P	P	16 49 16.2	-0.6
TZTN				IAmb	IAmb	16 49 17.7	
	comp=Z,8.2nm,0.9s						
Q44A	Meyer Farm, Va	22.51	13	P	P	16 49 19.9	-1.3
V55A	Taylorsville	22.57	31	P	P	16 49 20.3	-1.6
V55A				IAmb	IAmb	16 49 21.0	
	comp=Z,11nm,0.7s						
WCI	Wyandotte Cave	22.59	19	P	P	16 49 20.3	-1.6
WCI				IAmb	IAmb	16 49 22.4	
	comp=Z,10nm,1.1s						
P40A	Paris	22.64	6	P	P	16 49 21.0	-1.5
W57A	Gilead	22.66	34	P	P	16 49 20.9	-1.8
W57A				IAmb	IAmb	16 49 21.7	
	comp=Z,7.3nm,0.6s						
U54A	Nelsons Funny	22.82	29	P	P	16 49 22.4	-2.0
U54A				IAmb	IAmb	16 49 23.5	
	comp=Z,11nm,0.8s						
S51A	Beattyville	23.00	24	P	P	16 49 23.3	-2.7
P43A	Skaggs, Pawnee	23.12	11	P	P	16 49 25.9	-1.3
P43A				IAmb	IAmb	16 49 28.4	
	comp=Z,9.3nm,0.6s						
R50A	Paris	23.29	22	P	P	16 49 27.2	-1.6
BLO	Bloomington	23.39	17	P	P	16 49 29.1	-0.5
BLO				IAmb	IAmb	16 49 29.3	
	comp=Z,22nm,1.4s						
P46A	Rosedale	23.62	16	P	P	16 49 30.0	-1.7
P46A				IAmb	IAmb	16 49 47.9	
	comp=Z,12nm,0.9s						
O44A	Mansfield	23.83	13	P	P	16 49 33.2	-0.4
P48A	Milroy	23.98	19	P	P	16 49 34.0	-0.9
P48A				IAmb	IAmb	16 49 34.4	
	comp=Z,5.0nm,0.6s						
BLA	Blacksburg	24.04	30	P	P	16 49 34.4	-1.2
BLA				IAmb	IAmb	16 49 35.6	
	comp=Z,8.6nm,1.0s						
HDIL	Hopedale	24.05	11	P	P	16 49 34.9	-0.7
HDIL				IAmb	IAmb	16 49 35.7	
	comp=Z,10nm,0.8s						
R53A	Hurricane	24.27	26	P	P	16 49 35.7	-1.8
R53A				IAmb	IAmb	16 49 37.9	
	comp=Z,8.5nm,0.6s						
P49A	Miami Univ. Ec	24.28	20	P	P	16 49 36.0	-1.6
P49A				IAmb	IAmb	16 49 37.3	
	comp=Z,8.8nm,0.9s						
T57A	Hurt	24.45	32	P	P	16 49 39.1	-0.2
T57A				IAmb	IAmb	16 50 07.1	
	comp=Z,9.6nm,1.4s						
Q52A	Bidwell	24.67	25	P	P	16 49 40.3	-0.9
Q52A				IAmb	IAmb	16 49 41.2	
	comp=Z,19nm,1.2s						
O49A	Covington	24.99	20	P	P	16 49 43.8	-0.3
R55A	Marlinton	25.04	29	P	P	16 49 43.8	-0.9
R55A				IAmb	IAmb	16 49 46.5	
	comp=Z,7.2nm,0.9s						
M44A	Midewin, Midew	25.11	13	P	P	16 49 45.4	+0.2
M44A				IAmb	IAmb	16 50 03.1	
	comp=Z,17nm,1.1s						
N47A	Urbana	25.21	17	P	P	16 49 45.8	-0.3
O52A	Adamsville	25.83	24	P	P	16 49 50.6	-1.2
O53A	New Philadelph	26.19	25	P	P	16 49 53.7	-1.4
N53A	Lisbon	26.82	25	P	P	16 49 58.3	-2.3
N53A				IAmb	IAmb	16 50 13.0	
	comp=Z,16nm,1.4s						
NVAR	Mina Array Bea	29.38	321	P	P	16 50 26.2	+2.5
	comp=Z,3.1nm,0.8s,baz=134,slow=9.2,SNR=7.7						
DELO	Deloro Mine	31.22	25	P	P	16 50 38.2	-1.3
YKA	Yellowknife Ar	47.44	348	P	P	16 52 53.8	-0.1
	comp=Z,1.1nm,0.6s,baz=153,slow=7.3,SNR=5.2						
MT09	Talagante	55.54	155	P	P	16 53 55.8	+1.0
INK	Inuvik	56.71	344	P	P	16 54 02.0	-0.4
INK				IAmb	IAmb	16 54 31.2	
	comp=Z,2.7nm,1.1s						
EGAK	Eagle	56.79	338	P	P	16 54 03.0	-0.1
EGAK				IAmb	IAmb	16 54 06.9	
	comp=Z,3.2nm,1.1s						
A36M	Sachs Harbour	57.74	349	P	P	16 54 07.9	-1.7
A36M				IAmb	IAmb	16 54 09.5	
	comp=Z,5.4nm,1.3s						
BMAR	Burnt Mountain	59.42	340	P	P	16 54 21.9	+0.5
TRF	Thorofare Moun	59.61	335	P	P	16 54 22.8	-0.1
KTH	Kantishna Hill	59.91	335	P	P	16 54 24.6	-0.2
I23K	Minto, Yukon-K	59.98	337	P	P	16 54 25.7	+0.5
I23K				IAmb	IAmb	16 54 42.1	
	comp=Z,2.7nm,1.4s						
PPLA	Purkeypile	60.17	334	P	P	16 54 26.5	-0.3
CAST	Castle Rocks	60.33	334	P	P	16 54 27.3	-0.5
MLY	Manley	60.45	336	P	P	16 54 28.7	+0.2
M19K	Big River Lodg	60.77	332	P	P	16 54 31.2	+0.5
J20K	Nowinta River	61.47	335	P	P	16 54 35.1	-0.2
TOLK	Toolik Lake Re	61.66	340	P	P	16 54 37.1	+0.4
PLCA	Paso Flores	61.85	159	P	P	16 54 40.2	+2.0
	comp=Z,1.3nm,0.6s,baz=304,slow=6.5,SNR=3.3						
PLCA	Paso Flores	61.85	159	P	P	16 54 39.6	+1.3
KBS	Kingsbay	76.70	11	P	P	16 56 10.0	+0.8
ARCES	ARCESS Array B	84.29	18	P	P	16 56 50.2	+0.3
	comp=Z,14nm,1.3s,baz=297,slow=4.0,SNR=4.0						
WRA	Warramunga Arr	132.98	258	PKP	PKiKP	17 03 34.6	-0.6
	comp=Z,0.3nm,0.6s,baz=90,slow=2.3,SNR=8.8						
WRA	Warramunga Arr	132.98	258		PKiKP	17 03 34.0	-1.1
ASAR	Alice Springs	133.58	253	PKP	PKiKP	17 03 36.1	-0.2
	comp=Z,0.2nm,0.7s,baz=66,slow=2.2,SNR=1.7						

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*MAN **13** 16:48:05.4, 5.°76N×127.°07E, h95^{km}, mb5.1, ML4.0, MS4.1*

*NEIC **13** 16:48:06.9±1.8, 5.°81N±0.°08×126.°96E±0.°03, h127^{km}±8^{km}, mb4.3/42, Error ellipse: s-maj=11.9km s-min=1.3km az=203.0*

*DJA **13** 16:48:07.3±0.5, 6°N±3°×12°7E±°, h121^{km}±7^{km}, M4.2/12, mb4.0/12, mB4.7/5, MLv4.5/12, Mw(mB)4.0/5*

*IDC **13** 16:48:07.9±1.0, 5.°74N×126.°80E, h140^{km}±8^{km}, mb3.7/19, mb1 3.7/20, mb1mx3.6/55, mbtmp4.1/20, Error ellipse: s-maj=25.1km s-min=9.7km az=67.0*

ISC 13 16:48:06.9±0.9, **5.°81N**±0.°04×**126.°93E**±0.°08, **h130**^{km}±8^{km}, **n109, σ1.^{s}05**/114, **mb4.2**/42, **1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.84	313	P	Pn	16 48 39.1	+0.2
	85nm,0.3s,baz=96,slow=1.3,SNR=7.2						
DAV				S	Sn	16 49 05.2	+1.7
	105nm,0.3s,baz=246,slow=22,SNR=18						
DAV	Davao City (W)	1.84	313		Pn	16 48 38.8	-0.2
DAV				Sn	Sn	16 49 03.8	+0.3
GSPH	General Santos	1.99	278	*e*P	Pn	16 48 38.7	-2.2
SGSI	Sangihe	2.53	214	P	Pn	16 48 46.2	-1.4
SGSI				S	Sn	16 49 18.2	-0.6
SGSI	Sangihe	2.53	214	P	Pn	16 48 47.1	-0.5
SGSI				S	Sn	16 49 19.1	+0.3
BUKP	Musuan	2.77	318	⇑*i*P	Pn	16 48 50.2	-0.4
BUKP				*i* S	Sn	16 49 24.0	-0.4
PAGZ	Pagadian	4.07	300	⇓*e*P	Pn	16 49 08.2	+0.6
TNTI	Ternate	5.02	175	P	Pn	16 49 20.1	-0.3
	0.2nm887nm48nm,0.8s						
TNTI	Ternate	5.02	175	P	Pn	16 49 19.4	-1.0
	0.2nm887nm31nm,0.6s						
TNTI	Ternate	5.02	175	Pn	Pn	16 49 19.6	-0.8
KMSI	Cibinong	5.98	210	P	Pn	16 49 34.0	+0.8
	0.4nm871nm61nm,0.8s						
LBMI	Labuha	6.43	175	P	Pn	16 49 39.3	0.0
	0.1nm529nm13nm,0.8s						
GTOI	Gorontalo	6.46	217	P	Pn	16 49 39.7	+0.1
	0.1nm9.7nm,0.5s						
GTOI	Gorontalo	6.46	217	P	Pn	16 49 39.8	+0.1
	0.1nm9.7nm,0.5s						
MRSI	Marisa	7.27	223	P	Pn	16 49 51.7	+1.1
	0.2nm755nm41nm,0.5s						
MRSI	Marisa	7.27	223	P	Pn	16 49 52.4	+1.8
	0.2nm751nm41nm,0.5s						
TOLI2	Tolitoli	7.71	233	Pn	Pn	16 49 56.0	-0.5
SANI	Sanana	7.86	187	P	Pn	16 49 55.2	-3.4
	0.2nm11nm,0.9s						
SANI	Sanana	7.86	187	P	Pn	16 49 54.7	-3.9

	0.2nm12nm,0.9s						
SWI	**Sorong**	**7.91**	**147**	P	**Pn**	**16 49 59.5**	**+0.3**
	0.2nm12nm,1.1s						
SWI	**Sorong**	**7.91**	**147**	P	**Pn**	**16 49 59.0**	**-0.2**
	0.2nm12nm,1.1s						
SIJI	**Sorong**	**7.92**	**147**	P	**Pn**	**16 49 59.4**	**0.0**
	1.6nm,0.3s,baz=320,slow=12,SNR=7.8						
SIJI	**Sorong**	**7.92**	**147**		**Pn**	**16 49 59.4**	**0.0**
MYLDM	**Lahad Datu**	**8.42**	**266**	Pn	**Pn**	**16 50 07.1**	**+1.0**
APSI	**Ampana**	**8.51**	**218**	P	**Pn**	**16 50 07.6**	**+0.3**
	18nm,0.7s						
APSI	**Ampana**	**8.51**	**218**	P	**Pn**	**16 50 09.1**	**+1.8**
	18nm,0.7s						
MPSI	**Mapaga**	**8.88**	**233**	P	**Pn**	**16 50 13.0**	**+0.7**
MPSI	**Mapaga**	**8.88**	**233**	P	**Pn**	**16 50 12.2**	**-0.1**
FAKI	**Fak Fak**	**10.17**	**148**	Pn	**Pn**	**16 50 29.9**	**+0.3**
SBUM	**Sibu**	**15.05**	**258**	P	**P**	**16 51 36.1**	**+0.9**
KSM	**Kuching**	**17.14**	**256**	Pn	**Pn**	**16 51 60.0**	**+1.3**
KSM				IAmb	IAmb	16 52 21.8	
	comp=Z,19nm,1.4s						
TPUB	**Ta-pu**	**18.42**	**341**	P	**P**	**16 52 11.8**	**-0.6**
TPUB				IAmb	IAmb	16 52 26.5	
	comp=Z,40nm,1.3s						
MTN	**Manton Dam**	**19.00**	**167**	P	**P**	**16 52 18.5**	**-0.1**
MTN				IAmb	IAmb	16 52 30.1	
	comp=Z,16nm,1.4s						
YHNB	**Yeheng**	**19.50**	**345**	P	**P**	**16 52 24.1**	**0.0**
KNRA	**Kununurra**	**21.42**	**175**	P	**P**	**16 52 45.0**	**+0.3**
KNRA				IAmb	IAmb	16 52 59.4	
	comp=Z,8.9nm,0.9s						
WB0	**Warramunga Arr**	**26.45**	**164**	P	**P**	**16 53 31.4**	**-0.5**
WRAB	**Tennant Creek**	**26.60**	**164**	P	**P**	**16 53 33.1**	**-0.2**
WRA	**Warramunga Arr**	**26.61**	**164**	P	**P**	**16 53 33.1**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=346,slow=11,SNR=24						
WRA	**Warramunga Arr**	**26.61**	**164**	P	**P**	**16 53 32.2**	**-1.1**
WB2	**Warramunga Arr**	**26.61**	**164**	P	**P**	**16 53 32.1**	**-1.3**
WR0	**Warramunga Arr**	**26.68**	**164**	P	**P**	**16 53 33.5**	**-0.5**
WR0				IAmb	IAmb	16 53 39.8	
	comp=Z,8.2nm,1.5s						
AS31	**Alice Springs**	**30.07**	**167**	P	**P**	**16 54 03.0**	**-1.1**
ASAR	**Alice Springs**	**30.08**	**167**	P	**P**	**16 54 03.8**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=342,slow=7.0,SNR=17						
ASAR				ScP	**ScP**	**17 00 33.0**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=348,slow=2.9,SNR=6.5						
ASAR	**Alice Springs**	**30.08**	**167**	P	**P**	**16 54 02.8**	**-1.3**
KMI	**Kunming**	**30.10**	**312**	⇓P	**P**	**16 54 05.8**	**+1.2**
KMI				pmax	pmax		
	comp=Z,13nm,0.9s						
JWT	**Wachi**	**30.35**	**14**	P	**P**	**16 54 06.8**	**+0.4**
KSRS	**Korea Array**	**31.51**	**2**	P	**P**	**16 54 17.0**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=173,slow=10.0,SNR=5.6						
KSRS	**Korea Array**	**31.51**	**2**	P	**P**	**16 54 17.0**	**+0.5**
MJAR	**Matsushiro Arr**	**32.29**	**17**	P	**P**	**16 54 22.3**	**-1.1**
MJAR				IAmb	IAmb	16 54 50.6	
	comp=Z,5.7nm,1.3s						
MAT	**Matsushiro**	**32.29**	**17**	P	**P**	**16 54 21.7**	**-1.7**
XAN	**Xi'an**	**32.68**	**332**	P	**P**	**16 54 26.5**	**-0.4**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
JMM	**Marumori**	**34.31**	**20**	P	**P**	**16 54 40.7**	**-0.3**
FORT	**Forrest**	**36.40**	**178**	P	**P**	**16 54 59.0**	**+0.2**
HHC	**Hu-ho-hao-te**	**37.51**	**341**	*e*P	**P**	**16 55 12.1**	**+3.8**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,74nm,6.7s						
USA0B	**Ussuriysk Arra**	**38.49**	**6**	P	**P**	**16 55 16.9**	**+0.5**
USA0B				IAmb	IAmb	16 55 34.6	
	comp=Z,3.3nm,0.9s						
USRK	**Ussuriysk Ar.**	**38.49**	**6**	P	**P**	**16 55 17.1**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=184,slow=8.1,SNR=6.4						
USRK	**Ussuriysk Ar.**	**38.49**	**6**	P	**P**	**16 55 16.9**	**+0.5**
SHL	**Shillong**	**38.85**	**304**	P	**P**	**16 55 20.2**	**+0.4**
SHL				IAmb	IAmb	16 55 20.7	
	comp=Z,4.2nm,0.9s						
BBOO	**Buckleboo**	**39.37**	**168**	P	**P**	**16 55 24.0**	**+0.2**
BBOO				IAmb	IAmb	16 55 29.9	
	comp=Z,12nm,1.2s						
STKA	**Stephens Creek**	**40.00**	**160**	P	**P**	**16 55 29.6**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=356,slow=7.7,SNR=4.3						
STKA	**Stephens Creek**	**40.00**	**160**	P	**P**	**16 55 29.0**	**0.0**
GTA	**Gaotai**	**41.44**	**328**	*e*P	**P**	**16 55 41.3**	**+0.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KLR	**Kul'dur**	**43.46**	**5**	P	**P**	**16 55 57.2**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=174,slow=10,SNR=4.6						
KLR	**Kul'dur**	**43.46**	**5**	P	**P**	**16 55 57.2**	**+0.2**
ULN	**Ulaanbaatar**	**45.22**	**341**	P	**P**	**16 56 10.3**	**-0.9**
ULN				IAmb	IAmb	16 56 12.9	
	comp=Z,3.6nm,0.9s						
SONM	**Songino Array**	**45.41**	**341**	P	**P**	**16 56 12.5**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=153,slow=8.0,SNR=8.9						
SONM	**Songino Array**	**45.41**	**341**	P	**P**	**16 56 11.5**	**-1.2**
TOO	**Toolangi**	**46.50**	**160**	P	**P**	**16 56 21.2**	**0.0**
TOO				IAmb	IAmb	16 56 50.3	
	comp=Z,4.8nm,1.1s						
ONTNC	**Ouen Toro**	**47.72**	**127**	P	**P**	**16 56 30.8**	**-0.1**
ONTNC				IAmb	IAmb	16 56 31.4	
	comp=Z,9.9nm,0.9s						
WMQ	**Urumqi**	**51.16**	**324**	*e*P	**P**	**16 56 58.3**	**+1.5**
PEA0B	**Petropavlovsk-**	**53.44**	**23**	P	**P**	**16 57 14.9**	**+1.5**
PETK	**Petropavlovsk-**	**53.44**	**23**	P	**P**	**16 57 14.7**	**+1.3**
	comp=Z,4.1nm,0.8s,baz=187,slow=3.4,SNR=6.5						
PETK	**Petropavlovsk-**	**53.44**	**23**	P	**P**	**16 57 14.6**	**+1.3**
MK31	**Makanchi Array**	**55.98**	**324**	P	**P**	**16 57 31.5**	**-0.4**
MK31				IAmb	IAmb	16 57 32.8	
	comp=Z,2.9nm,0.9s						
MKAR	**Makanchi Array**	**55.98**	**324**	P	**P**	**16 57 32.0**	**+0.1**
	comp=Z,2.5nm,0.4s,baz=116,slow=7.4,SNR=34						
MKAR	**Makanchi Array**	**55.98**	**324**	P	**P**	**16 57 31.6**	**-0.3**
MAKZ	**Makanchi**	**56.17**	**324**	P	**P**	**16 57 32.9**	**-0.3**
MAKZ				IAmb	IAmb	16 57 34.1	
	comp=Z,5.5nm,1.0s						
PRZ	**Przheval'sk**	**56.29**	**318**	P	**P**	**16 57 34.7**	**+0.4**
KSH	**Kashi**	**56.74**	**314**	P	**P**	**16 57 39.1**	**+1.6**
KSH				sP	sP	16 58 22.1	+0.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NIL	**Nilore**	**56.84**	**307**	P	**P**	**16 57 38.4**	**+0.2**
NIL				IAmb	IAmb	16 57 39.5	
	comp=Z,9.2nm,1.2s						
KDJ	**Kajisay**	**56.95**	**317**	P	**P**	**16 57 39.2**	**+0.2**
KDJ				IAmb	IAmb	16 57 40.1	
	comp=Z,4.3nm,0.7s						
BOOM	**Boomskoye usch**	**57.94**	**317**	P	**P**	**16 57 44.3**	**-1.6**
BOOM				IAmb	IAmb	16 57 46.8	
	comp=Z,4.3nm,0.9s						
ZAA0	**Zalesovo Array**	**58.84**	**332**	P	**P**	**16 57 50.5**	**-1.2**
ZAA0				IAmb	IAmb	16 57 51.5	
	comp=Z,1.4nm,0.8s						
ZALV	**Zalesovo Beam**	**58.84**	**332**	P	**P**	**16 57 50.9**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=123,slow=6.5,SNR=11						
ZALV	**Zalesovo Beam**	**58.84**	**332**	P	**P**	**16 57 50.5**	**-1.3**
AAK	**Ala-Archa**	**58.98**	**317**	P	**P**	**16 57 52.5**	**-0.6**
SEY	**Seymchan**	**59.97**	**13**	P	**P**	**16 58 00.7**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=228,slow=16,SNR=2.0						
SEY	**Seymchan**	**59.97**	**13**	P	**P**	**16 58 00.7**	**+1.3**
KURK	**Kurchatov**	**60.12**	**327**	P	**P**	**16 58 00.1**	**-0.4**
KURBB	**Kurchatov Arra**	**60.12**	**327**	P	**P**	**16 58 00.4**	**-0.2**
	comp=Z,8.6nm,0.8s,baz=125,slow=6.2,SNR=53						
BTK	**Batken**	**60.65**	**313**	P	**P**	**16 58 04.0**	**-0.5**
BTK				IAmb	IAmb	16 58 06.1	
	comp=Z,7.2nm,1.4s						
GAR	**Garm**	**60.69**	**312**	P	**P**	**16 58 02.5**	**-2.4**
CHGR	**Chuyangaron**	**61.45**	**311**	P	**P**	**16 58 08.8**	**-1.2**
CHGR				IAmb	IAmb	16 58 10.2	
	comp=Z,5.5nm,0.8s						
KKAR	**Karatay Array**	**61.87**	**316**	P	**P**	**16 58 12.3**	**-0.3**
BVAR	**Borovoye Array**	**65.70**	**326**	P	**P**	**16 58 37.2**	**-0.3**
	comp=Z,7.4nm,0.7s,baz=171,slow=10,SNR=26						
BVAR	**Borovoye Array**	**65.70**	**326**	P	**P**	**16 58 37.2**	**-0.3**
TIXI	**Tiksi**	**65.78**	**1**	P	**P**	**16 58 36.7**	**-0.9**
TIXI				IAmb	IAmb	16 58 39.7	
	comp=Z,6.2nm,1.4s						
BRVK	**Borovoye**	**65.78**	**326**	P	**P**	**16 58 37.5**	**-0.5**
ABKAR	**Akbulak array**	**70.69**	**320**	P	**P**	**16 59 08.0**	**-0.6**
AKTO	**Aktyubinsk**	**72.17**	**321**	P	**P**	**16 59 17.6**	**+0.1**
	comp=Z,2.2nm,0.4s,baz=88,slow=7.5,SNR=7.3						
ARU	**Arti**	**73.30**	**327**	P	**P**	**16 59 23.3**	**-0.8**
	comp=Z,2.3nm,0.6s,baz=86,slow=3.8,SNR=14						
ARU	**Arti**	**73.30**	**327**	P	**P**	**16 59 23.0**	**-1.1**
ARU				IAmb	IAmb	16 59 24.1	
	comp=Z,6.2nm,0.6s						
ARCES	**ARCESS Array B**	**88.58**	**340**	P	**P**	**17 00 43.6**	**-1.1**
	comp=Z,3.2nm,0.7s,baz=75,slow=6.4,SNR=7.1						
ARCES	**ARCESS Array B**	**88.58**	**340**	P	**P**	**17 00 43.6**	**-1.1**
ARCES	**ARCESS Array B**	**88.58**	**340**	IAmb	IAmb	17 00 47.7	
	comp=Z,22nm,1.4s						
BRTR	**Keskin Array B**	**88.86**	**310**	P	**P**	**17 00 47.1**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=102,slow=6.3,SNR=4.5						
FINES	**FINESS Array B**	**90.11**	**332**	P	**P**	**17 00 50.8**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=60,slow=4.6,SNR=4.1						
AKASG	**Malin Array Be**	**90.42**	**321**	P	**P**	**17 00 52.6**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=73,slow=3.2,SNR=4.5						
AKASG	**Malin Array Be**	**90.42**	**321**	P	**P**	**17 00 52.6**	**-1.1**

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*SNET **13** 16:49:27.9±0.8, 13°.90N×90°.93W, h97^{km}±14^{km}, ML3.4*
*MEX **13** 16:49:29.6±0.4, 14°.53N×92°.36W, h222^{km}±14^{km}, MD3.5*
*GCG **13** 16:49:29.1±0.3, 13°.93N×90°.90W, h95^{km}±8^{km}, MD3.3*
ISC 13 16:49:27.9±2.2**, 13°.8N**±0°.2×**90°.9W**±0°.1**, h106**^{km}±28^{km}**, n11, σ0^{s}.47**/18**, 2C-1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.61**	**7**	*e*P	**Pn**	**16 49 45.2**	**-0.1**
FUG				*e*S	**Sn**	**16 49 57.6**	**-0.7**
PCG	**Pacaya**	**0.62**	**29**	*e*P	**Pn**	**16 49 45.6**	**+0.1**
NBG	**Las Nubes**	**0.92**	**37**	*e*P	**Pn**	**16 49 48.5**	**+0.3**
NBG				*e*S	**Sn**	**16 50 04.3**	**+0.7**
STG3	**Santiaguito 3,**	**1.07**	**324**	*e*P	**Pn**	**16 49 50.1**	**+0.3**
SLOZ	**Alcaldia de Sa**	**1.11**	**80**	⇑*i*P	**Pn**	**16 49 49.7**	**-0.3**
SLOZ				*e*S	**Sn**	**16 50 07.0**	**+0.3**
SLOZ				IAML		16 50 12.1	
	comp=Z,237nm,0.4s						
CEVE	**Cerro Verde**	**1.25**	**91**	*e*P	**Pn**	**16 49 51.9**	**+0.1**
JAYA	**Jayaque - finc**	**1.44**	**97**	⇑*i*P	**Pn**	**16 49 53.9**	**+0.1**
JAYA				*e*S	**Sn**	**16 50 13.6**	**+0.1**
JAYA				IAML		16 50 15.7	
	comp=Z,870nm,0.2s						
TACO	**Tacachico**	**1.52**	**85**	⇓*i*P	**Pn**	**16 49 54.2**	**-0.5**
THIG		**1.68**	**309**	*e*P	**Pn**	**16 49 57.2**	**+0.5**
THIG				*e*S	**Sn**	**16 50 18.9**	**+0.3**
PATR	**El Naranjo**	**1.80**	**315**	*e*P	**Pn**	**16 49 58.2**	**-0.1**
PATR				*e*S	**Sn**	**16 50 20.8**	**-0.7**
PAVE	**Pavencul**	**1.82**	**318**	*e*P	**Pn**	**16 49 58.9**	**+0.3**
PAVE				*e*S	**Sn**	**16 50 21.3**	**-0.6**

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*JMA **13** 16:51:17.8±0.1, 30°.87N×131°.42E, h33^{km}±1^{km}, M3.4*
*NEIC **13** 16:51:17.8±1.3, 30°.86N±0°.06×131°.38E±0°.09, h35^{km}±2^{km}, mb4.1/13, Error ellipse: s-maj=12.6km s-min=10.0km az=81.0*
*IDC **13** 16:51:20.8±2.5, 30°.96N×131°.41E, h62^{km}±29^{km}, mb3.6/12, mb1 3.6/14, mb1mx3.4/56, mbtmp3.8/14, ML2.5/2, MS3.5/6, Ms1 3.5/6, ms1mx3.1/42, Error ellipse: s-maj=77.0km s-min=14.7km az=69.0*
ISC 13 16:51:17.8±0.7**, 30°.85N**±0°.04×**131°.43E**±0°.06**, h39**^{km}±3^{km}**, n57, σ0^{s}.89**/59**, mb4.0**/18**, MS3.6**/5**, 7C-1D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.43**	**243**	⇓P	**Pn**	**16 51 27.1**	**-0.5**
JTN				S	**Sn**	**16 51 34.0**	**-0.5**
JTSR	**Tashiro 2**	**0.54**	**306**	⇑P	**Pn**	**16 51 28.1**	**-1.0**
JTSR				S	**Sn**	**16 51 36.3**	**-0.7**
JMTN	**Minamitane**	**0.64**	**225**	⇑P	**Pn**	**16 51 30.6**	**+0.1**
JNAR	**Kushima--Naru**	**0.69**	**349**	⇑P	**Pn**	**16 51 30.9**	**-0.2**
JNAR				*e*S	**Sn**	**16 51 40.5**	**-0.1**
JNKG	**Nichinankitago**	**0.81**	**357**	⇑P	**Pn**	**16 51 32.8**	**0.0**
JNKG				*e*S	**Sn**	**16 51 43.9**	**+0.3**
JYAK	**Yakushimahirau**	**1.00**	**233**	P	**Pn**	**16 51 35.8**	**+0.5**
JYAK				S	**Sn**	**16 51 50.0**	**+1.8**
JSU	**Suzuyama**	**1.06**	**308**	⇑P	**Pn**	**16 51 36.1**	**-0.1**
JSU	**Suzuyama**	**1.06**	**308**		**Pn**	**16 51 36.1**	**-0.1**
JTZ	**Takazaki**	**1.09**	**345**	⇑P	**Pn**	**16 51 36.8**	**+0.2**
JTZ				S	**Sn**	**16 51 51.4**	**+1.0**
JKC	**Kuchinoerabu**	**1.13**	**250**	P	**Pn**	**16 51 37.7**	**+0.6**
JKC				S	**Sn**	**16 51 52.9**	**+1.5**
JTSN	**Tsuno**	**1.39**	**3**	P	**Pn**	**16 51 40.6**	**-0.1**
JTSN				*e*S	**Sn**	**16 51 58.4**	**+0.5**
JZO	**Okuchi**	**1.47**	**331**	⇑P	**Pn**	**16 51 41.9**	**+0.1**
JZO				*e*S	**Sn**	**16 51 59.5**	**-0.3**
JNU	**Nakatsue**	**2.31**	**349**	P	**Pn**	**16 51 54.4**	**+1.0**
	1.7nm,0.3s,baz=199,slow=2.6,SNR=12						
JNU				S	**Sn**	**16 52 22.0**	**+1.3**
	4.9nm,0.3s,baz=251,slow=5.7,SNR=4.6						
JNU	**Nakatsue**	**2.31**	**349**		**Pn**	**16 51 54.1**	**+0.7**
JMN	**Monobe**	**3.54**	**35**	Pn	**Pn**	**16 52 10.4**	**+0.1**
JHS	**Saijyo**	**4.37**	**18**	Pn	**Pn**	**16 52 21.5**	**-0.3**
JOW	**Kunigami**	**4.87**	**215**	Pn	**Pn**	**16 52 28.9**	**+0.4**
JMZ	**Minamidaito 2**	**5.02**	**182**	Pn	**Pn**	**16 52 30.6**	**+0.1**
JWT	**Wachi**	**5.54**	**36**	Pn	**Pn**	**16 52 37.8**	**+0.1**
INU	**Inuyama**	**6.49**	**45**	Pn	**Pn**	**16 52 51.9**	**+1.1**
KSRS	**Korea Array**	**7.20**	**337**	P	**Pn**	**16 53 02.8**	**+2.4**
	0.1nm,0.3s,baz=152,slow=14,SNR=4.7						
KSRS				LR	LR	16 56 03.0	
	comp=Z,177nm,18.5s,baz=139,slow=40						
MAJO	**Matsushiro**	**8.01**	**43**	Pn	**Pn**	**16 53 12.2**	**+0.6**
SONM	**Songino Array**	**25.57**	**319**	P	**P**	**16 56 43.7**	**+0.6**
	1.3nm,0.7s,baz=138,slow=10.0,SNR=6.5						
SONM				LR	LR	17 08 02.5	
	comp=Z,132nm,18.9s,baz=33,slow=39						
SONM	**Songino Array**	**25.57**	**319**	P	**P**	**16 56 42.8**	**-0.3**
CMAR	**Chiang Mai Arr**	**31.88**	**255**	LR	LR	17 12 06.0	
	comp=Z,37nm,18.0s,baz=28,slow=39						
H11N2	**WAKE ISLAND Hy**	**33.79**	**101**	T	T	17 33 42.6	
	baz=296,slow=75,SNR=10.0						
H11N1	**WAKE ISLAND Hy**	**33.80**	**101**	T	T	17 33 42.4	
	baz=296,slow=75,SNR=6.9						
H11N3	**WAKE ISLAND Hy**	**33.81**	**101**	T	T	17 33 46.0	
	baz=296,slow=75,SNR=7.4						
ZALV	**Zalesovo Beam**	**40.47**	**319**	LR	LR	17 17 03.5	
	comp=Z,83nm,18.2s,baz=72,slow=38						
KURK	**Kurchatov**	**43.58**	**313**	P	**P**	**16 59 17.6**	**-0.3**
KURK	**Kurchatov**	**43.58**	**313**	IAmb	IAmb	16 59 22.4	
	comp=Z,5.5nm,1.5s						
KURBB	**Kurchatov Arra**	**43.63**	**313**	P	**P**	**16 59 17.6**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=97,slow=9.0,SNR=5.3						
BVAR	**Borovoye Array**	**48.84**	**315**	P	**P**	**16 59 58.4**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=158,slow=9.1,SNR=6.4						
BRVK	**Borovoye**	**48.90**	**315**	P	**P**	**16 59 59.7**	**+0.1**
BRVK				IAmb	IAmb	17 00 00.0	
	comp=Z,2.6nm,1.0s						
KKAR	**Karatay Array**	**49.19**	**302**	P	**P**	**17 00 02.0**	**0.0**
WB0	**Warramunga Arr**	**50.41**	**176**	P	**P**	**17 00 11.8**	**+0.4**
WB0				IAmb	IAmb	17 00 23.0	
	comp=Z,4.3nm,1.4s						
WRA	**Warramunga Arr**	**50.58**	**176**	P	**P**	**17 00 13.4**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=352,slow=8.4,SNR=5.8						
WRA	**Warramunga Arr**	**50.58**	**176**	P	**P**	**17 00 10.9**	**-1.8**
WB2	**Warramunga Arr**	**50.58**	**176**	P	**P**	**17 00 10.9**	**-1.8**
WB2				IAmb	IAmb	17 00 33.3	
	comp=Z,2.0nm,0.9s						
WR0	**Warramunga Arr**	**50.61**	**176**	P	**P**	**17 00 10.8**	**-2.1**
WR0				IAmb	IAmb	17 00 16.4	
	comp=Z,3.6nm,1.1s						
ASAR	**Alice Springs**	**54.26**	**177**	P	**P**	**17 00 41.5**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=10,slow=13,SNR=13						
ARU	**Arti**	**55.60**	**320**	P	**P**	**17 00 48.8**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=81,slow=18,SNR=3.3						
ABKAR	**Akbulak array**	**55.64**	**311**	P	**P**	**17 00 49.0**	**-0.7**
AKTO	**Aktyubinsk**	**56.68**	**313**	LR	LR	17 27 03.5	
	comp=Z,71nm,18.3s,baz=42,slow=38						
STKA	**Stephens Creek**	**63.13**	**170**	P	**P**	**17 01 43.2**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=263,slow=3.1,SNR=3.4						
STKA	**Stephens Creek**	**63.13**	**170**	P	**P**	**17 01 40.5**	**-1.0**
STKA				IAmb	IAmb	17 01 50.1	
	comp=Z,0.9nm,1.5s						
WSAR	**Wadi Sarin**	**64.27**	**283**	LR	LR	17 32 36.7	
	comp=Z,35nm,18.1s,baz=80,slow=38						
A36M	**Sachs Harbour**	**64.96**	**20**	P	**P**	**17 01 54.1**	**+1.1**
KBZ	**Khabaz**	**68.44**	**309**	P	**P**	**17 02 16.6**	**+0.9**
	comp=Z,3.2nm,0.8s,baz=64,slow=3.3,SNR=8.2						
FINES	**FINESS Array B**	**70.24**	**331**	P	**P**	**17 02 26.6**	**0.0**
	comp=Z,1.1nm,0.7s,baz=72,slow=6.2,SNR=6.7						
AKASG	**Malin Array Be**	**73.85**	**320**	P	**P**	**17 02 47.8**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=58,slow=6.2,SNR=5.5						
NB201	**NORSAR Array S**	**76.37**	**334**	P	**P**	**17 03 02.8**	**0.0**
NOA	**NORSAR Array B**	**76.40**	**334**	P	**P**	**17 03 02.7**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=50,slow=5.7,SNR=3.2						
BR131	**Keskin Array S**	**76.41**	**308**	P	**P**	**17 03 03.0**	**-0.5**
BRTR	**Keskin Array B**	**76.41**	**308**	P	**P**	**17 03 03.5**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=77,slow=5.2,SNR=11						
BRTR	**Keskin Array B**	**76.41**	**308**	P	**P**	**17 03 03.2**	**-0.3**
BURAR	**Bucovina Array**	**77.68**	**318**	P	**P**	**17 03 10.2**	**-0.2**
BURAR				IAmb	IAmb	17 03 16.7	
	comp=Z,1.1nm,0.9s						

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*ISK **13** 16:51:27.4, 40°.78N×30°.99E, h2^{km}, ML3.5/42*
*DDA **13** 16:51:27.9, 40°.77N×30°.99E, h9^{km}±1^{km}, ML3.4*
*CFUSG **13** 16:51:28.9, 40°.78N×31°.01E, h13^{km}, mb2.8/3, MD3.2/3, Northwestern Turkey Magtype MSH 3.0 from 3 stations*
*IDC **13** 16:51:28.0±1.2, 40°.73N×31°.13E, h0^{km}, mb3.5/1, mb1 3.4/4, mb1mx3.1/43, mbtmp3.2/4, ML3.1/3, MS2.7/1, Ms1 2.7/1, ms1mx2.1/38, Error ellipse: s-maj=28.4km s-min=11.4km az=46.0*
ISC 13 16:51:28.4±1.0**, 40°.78N**±0°.02×**31°.00E**±0°.02**, h4**^{km}±8^{km}**, n103, σ0^{s}.91**/126**, 10C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAHE	**Sakarya_HENDEK**	**0.14**	**303**	*i* P	**Pg**	**16 51 31.3**	**+0.1**
SAHE				*i* S	**Sg**	**16 51 33.6**	**+0.6**
BTAS	**Taskesti**	**0.21**	**181**	*i* P	**Pg**	**16 51 32.3**	**-0.2**
BTAS				*i* S	**Sg**	**16 51 35.4**	**+0.1**
BTAS				IAML		16 51 36.0	
	comp=E,12µm,0.6s						
BTAS				IAML		16 51 37.0	
	comp=N,7µm,0.5s						
MDUB	**Mudurnu**	**0.34**	**154**	PG	**Pg**	**16 51 35.2**	**+0.1**
MDUB				SG	**Sg**	**16 51 40.3**	**+0.8**
YIGI	**Dzce**	**0.39**	**61**	*i* P	**Pg**	**16 51 35.8**	**-0.1**
YIGI				*i* S	**Sg**	**16 51 41.6**	**+0.7**
GULT	**Gulveren**	**0.51**	**227**	PG	**Pg**	**16 51 38.1**	**-0.1**
GULT				SG	**Sg**	**16 51 45.7**	**+0.9**
SAUV	**Serdivan-Sakar**	**0.52**	**266**	PG	**Pg**	**16 51 38.1**	**-0.2**
SAUV				SG	**Sg**	**16 51 45.9**	**+0.9**
KAYN	**Sakarya, Kayna**	**0.54**	**291**	*i* P	**Pg**	**16 51 38.7**	**0.0**
KAYN				*i* S	**Sg**	**16 51 45.8**	**+0.1**
GEYV	**SAKARYA_Geyve**	**0.61**	**242**	*i* P	**Pg**	**16 51 40.1**	**-0.1**
GEYV				IAML		16 51 49.0	
	comp=N,2µm,0.5s						
GEYV				*i* S	**Sb**	**16 51 49.2**	**-1.4**
KDZE	**Karadeniz Ereo**	**0.63**	**32**	⇑P	**Pb**	**16 51 42.2**	**+0.3**
KDZE				⇓S	**Sb**	**16 51 49.9**	**-1.2**
KDZE	**Karadeniz Ereo**	**0.63**	**32**	PG	**Pg**	**16 51 40.4**	**-0.1**
KDZE				SG	**Sb**	**16 51 49.9**	**-1.2**
KAND	**Kocaeli-Kandir**	**0.69**	**297**	*i* P	**Pg**	**16 51 41.4**	**-0.3**
KAND				*i* S	**Sb**	**16 51 51.1**	**-1.8**
GPA	**Golpazari**	**0.72**	**227**	PG	**Pg**	**16 51 41.8**	**-0.5**
KIBS	**BOLU**	**0.74**	**119**	*i* P	**Pg**	**16 51 42.8**	**+0.2**
BCAM	**Yenicaga**	**0.81**	**87**	*i* P	**Pg**	**16 51 43.5**	**-0.4**
BCAM				*i* S	**Sg**	**16 51 54.9**	**+0.4**
DEVR	**Zonguldak/Devr**	**0.82**	**63**	*i* P	**Pg**	**16 51 43.2**	**-1.0**
BORA	**Eskisehir**	**0.99**	**205**	*i* P	**Pg**	**16 51 46.9**	**-0.6**
BORA				IAML		16 52 06.0	
	comp=E,937nm,0.3s						
BORA	**Eskisehir**	**0.99**	**205**	PG	**Pg**	**16 51 47.5**	**+0.1**
HRT	**Hereke**	**1.01**	**273**	PG	**Pg**	**16 51 47.0**	**-0.9**
ADVT	**Abdulvahap**	**1.02**	**251**	PG	**Pg**	**16 51 47.5**	**-0.5**
CAVI	**Cavuskoy**	**1.06**	**237**	PG	**Pg**	**16 51 48.5**	**-0.2**
BILE	**Bilecik/Merkez**	**1.06**	**235**	*i* P	**Pg**	**16 51 47.9**	**-0.8**
BILE				*i* S	**Sb**	**16 52 04.0**	**+0.4**
SILT	**Sile**	**1.10**	**290**	PN	**Pg**	**16 51 48.8**	**-0.6**
AUBOZ	**BOZOYUK**	**1.14**	**221**	*i* P	**Pg**	**16 51 49.3**	**-1.0**
AUBOZ				*i* S	**Sg**	**16 52 05.2**	**+0.1**
AUBOZ				IAML		16 52 09.0	
	comp=N,881nm,0.5s						
AUBOZ				IAML		16 52 11.0	
	comp=E,757nm,0.4s						
AUBOZ	**BOZOYUK**	**1.14**	**221**	PN	**Pg**	**16 51 49.9**	**-0.4**
CMDR	**Camlidere-ANKA**	**1.16**	**104**	*i* P	**Pg**	**16 51 50.1**	**-0.5**
CMDR				*i* S	**Sb**	**16 52 06.5**	**+0.1**
IZI	**Iznik**	**1.25**	**250**	PN	**Pg**	**16 51 51.7**	**-0.6**
SGAZ	**Eskisehir, Sey**	**1.25**	**186**	*i* P	**Pn**	**16 51 53.9**	**+1.1**
SGAZ				IAML		16 52 12.0	
	comp=E,558nm,0.4s						
YLV	**Yalova**	**1.26**	**261**	PN	**Pg**	**16 51 52.1**	**-0.4**
ESKT	**Eskisehir**	**1.26**	**185**	PN	**Pg**	**16 51 52.6**	**0.0**
KBUK	**KARABUK-Merkez**	**1.31**	**69**	*i* P	**Pn**	**16 51 51.8**	**-1.7**
KBUK				*i* S	**Sn**	**16 52 12.1**	**+0.6**
KURT	**Yalova, Merkez**	**1.38**	**263**	*i* P	**Pn**	**16 51 53.4**	**-1.0**
KURT				*i* S	**Sn**	**16 52 12.8**	**-0.2**
KURT				IAML		16 52 15.0	
	comp=E,555nm,0.7s						
KURT				IAML		16 52 17.0	
	comp=N,470nm,0.4s						
SVRH	**Sivrihisar-ESK**	**1.39**	**163**	PN	**Pn**	**16 51 54.5**	**-0.1**
AUSIV	**SIVRIHISAR**	**1.40**	**163**	*i* P	**Pn**	**16 51 54.5**	**-0.3**
AUSIV	**SIVRIHISAR**	**1.40**	**163**	PN	**Pn**	**16 51 54.3**	**-0.5**
TRML	**Termal-Yalova**	**1.40**	**264**	PN	**Pg**	**16 51 55.1**	**-0.2**
CIFT	**Cifteler, Eski**	**1.42**	**178**	PN	**Pg**	**16 51 55.9**	**+0.3**
GEMT	**Gemlik**	**1.42**	**257**	PN	**Pn**	**16 51 54.6**	**-0.4**
IGD	**Bursa**	**1.47**	**250**	*i* P	**Pn**	**16 51 55.1**	**-0.4**
IGD				*i* S	**Sg**	**16 52 15.4**	**-0.2**
KAVV	**Kandilli-Istan**	**1.50**	**282**	PN	**Pn**	**16 51 55.9**	**-0.1**
ISK	**Istanbul-Kandi**	**1.50**	**282**	PN	**Pn**	**16 51 55.7**	**-0.4**
ANDZ	**Kutahya, Merke**	**1.52**	**214**	*i* P	**Pn**	**16 51 56.1**	**-0.4**
ANDZ				*i* S	**Sn**	**16 52 16.7**	**-0.1**
ANDZ				IAML		16 52 19.0	
	comp=N,570nm,0.5s						
AUKIR	**Kırka- Seyitga**	**1.54**	**194**	*i* P	**Pn**	**16 51 57.1**	**+0.3**
AUKIR				IAML		16 52 21.0	
	comp=N,804nm,0.6s						
AUKIR				IAML		16 52 23.0	
	comp=E,722nm,0.4s						
KLYT	**Kilyos**	**1.56**	**288**	PN	**Pb**	**16 51 57.1**	**-0.7**
ULDT	**Uludag**	**1.56**	**247**	*i* P	**Pn**	**16 51 56.5**	**-0.6**
ULDT				*i* S	**Sg**	**16 52 18.3**	**-0.3**
LOD	**Lodumlu**	**1.61**	**123**	PN	**Pb**	**16 51 58.7**	**-0.1**
ANTO	**Ankara**	**1.64**	**123**	PN	**Pb**	**16 51 58.9**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.67**	**256**	PN	**Pb**	**16 51 58.9**	**-0.7**
KURC	**Kurucasile-Bar**	**1.69**	**50**	PN	**Pn**	**16 51 58.1**	**-0.6**
BGKT	**Bogazkoy**	**1.73**	**284**	PN	**Pn**	**16 51 59.5**	**+0.2**
ORLT	**Orhaneli**	**1.77**	**246**	PN	**Pn**	**16 51 59.9**	**+0.1**
TVSB	**Tavsanli**	**1.78**	**222**	PN	**Pn**	**16 52 00.2**	**+0.2**
PELI	**Kastamonı-Ara**	**1.82**	**73**	*i* P	**Pn**	**16 52 00.8**	**+0.3**
CIDE	**Kastamonu/Cide**	**1.83**	**52**	*i* P	**Pn**	**16 52 01.0**	**+0.4**
ELDT	**Eldivan**	**1.87**	**98**	*i* P	**Pn**	**16 52 01.6**	**+0.4**
CTKS	**Kestanelik-??a**	**1.94**	**284**	PN	**Pn**	**16 52 02.3**	**+0.2**
ELBA	**Catalca**	**1.98**	**282**	*i* P	**Pn**	**16 52 02.0**	**-0.7**
CANT	**Cankiri**	**2.00**	**94**	PN	**Pb**	**16 52 04.1**	**-1.2**
BBAL	**Bala**	**2.04**	**127**	*i* P	**Pn**	**16 52 04.3**	**+0.7**
AFYO	**Afyonkarahisar**	**2.06**	**195**	*i* P	**Pg**	**16 52 07.9**	**0.0**
AFYO				IAML		16 52 51.0	
	comp=E,300nm,0.8s						
AFSR	**Afar-Bala (An**	**2.07**	**129**	PN	**Pn**	**16 52 05.1**	**+1.1**
ILGA	**Ilgaz**	**2.07**	**82**	*i* P	**Pn**	**16 52 04.2**	**0.0**
KCTX	**Karacabey (Bur**	**2.08**	**257**	PN	**Pn**	**16 52 04.8**	**+0.7**
GEDZ	**Gediz**	**2.12**	**216**	PN	**Pn**	**16 52 05.4**	**+0.7**
SLVT	**Silivri**	**2.16**	**283**	PN	**Pn**	**16 52 05.9**	**+0.8**
CTYL	**Yalikoy Yolu**	**2.17**	**290**	PN	**Pn**	**16 52 05.9**	**+0.7**
KKUL	**Konya-Kulu**	**2.18**	**137**	*i* P	**Pn**	**16 52 06.0**	**+0.5**
SHAP	**Saphane-Kutahy**	**2.23**	**219**	PN	**Pn**	**16 52 06.9**	**+0.8**
SHUT	**Suhut-Afyon**	**2.25**	**189**	PN	**Pn**	**16 52 06.1**	**-0.4**
DURS	**Dursunbey**	**2.27**	**240**	*i* P	**Pn**	**16 52 05.8**	**-0.8**
BRTR	**Keskin Array B**	**2.27**	**117**	Pn	**Pn**	**16 52 06.9**	**0.0**
	comp=E,0.7nm,0.3s,baz=298,slow=10,SNR=41						
BRTR	**Keskin Array B**	**2.27**	**117**	PN	**Pn**	**16 52 06.6**	**-0.3**
SIMA	**Simav-Kutahya**	**2.30**	**223**	PN	**Pn**	**16 52 07.4**	**+0.3**
EDC	**Edincik**	**2.43**	**261**	PN	**Pn**	**16 52 08.9**	**0.0**
KAMT	**Kaman**	**2.51**	**123**	PN	**Pn**	**16 52 10.2**	**+0.1**
VIZE	**Kirklareli, Vi**	**2.52**	**290**	*i* P	**Pn**	**16 52 10.2**	**+0.2**
BZK	**Bozkurt**	**2.55**	**61**	⇓P	**Pb**	**16 52 13.0**	**-1.6**
BZK	**Bozkurt**	**2.55**	**61**	PN	**Pn**	**16 52 11.3**	**+0.9**
CHBY	**Cihanbeyli**	**2.63**	**146**	PN	**Pn**	**16 52 12.4**	**+0.7**
BALB	**Balikesir**	**2.65**	**246**	PN	**Pn**	**16 52 12.8**	**+1.0**
LADK	**Ladik-KONYA**	**2.78**	**157**	PN	**Pn**	**16 52 14.5**	**+0.7**
CORM	**Corum**	**2.83**	**101**	PN	**Pn**	**16 52 15.5**	**+1.0**
KONT	**Konya--Tatoy**	**3.02**	**159**	PN	**Pn**	**16 52 17.7**	**+0.7**
DIKM	**Dikmen**	**3.33**	**73**	⇓P	**Pn**	**16 52 23.5**	**+2.3**
TIRR	**Tirgusor**	**4.14**	**333**	⇑P	**Pn**	**16 52 33.5**	**+1.1**
SEV	**Sevastopol'**	**4.25**	**27**	*e*P	**Pn**	**16 52 34.3**	**+0.5**
SEV				Pm		16 52 37.7	
	comp=Z,3.0nm,0.3s						
SEV				Sm		16 53 22.3	
	comp=N,4.0nm,0.5s,comp=E,14nm,0.5s						
SEV				*e*S	**Sn**	**16 53 22.0**	**-1.7**
SEV				Sm		16 53 25.3	
	comp=N,11nm,0.4s						
TLBR	**Topalu**	**4.35**	**331**	⇑P	**Pn**	**16 52 36.2**	**+1.0**
HARR	**Harsova**	**4.52**	**331**	⇓P	**Pn**	**16 52 38.9**	**+1.4**
TLCR		**4.69**	**341**	⇓P	**Pn**	**16 52 40.9**	**+1.0**
CFR	**Carcaliu**	**4.87**	**335**	⇓P	**Pn**	**16 52 43.3**	**+0.9**
SUDU	**Sudak**	**5.05**	**34**	*e*P	**Pn**	**16 52 44.3**	**-0.5**
SUDU				*e*P	**Pn**	**16 52 46.0**	**+1.2**
SUDU				Pm		16 52 50.0	
	comp=Z,8.0nm,0.4s						

SUDU				*e*S	Sn	16 53 43.6	0.0
SUDU				Sm		16 53 45.9	
	comp=N,40nm,0.6s						
SUDU				Sm		16 53 45.9	
	comp=E,12nm,0.4s						
NEHR	Nehoiu	5.78	325	⇑P	Pn	16 52 56.1	+1.2
VRI	Vrincioaia	5.96	330	⇑P	Pn	16 52 59.1	+1.6
PLOR	Plostina	5.98	329	⇑P	Pn	16 52 59.2	+1.6
MLR	Muntele Rosu	5.99	324	⇑P	Pn	16 52 59.7	+1.8
MLR	Muntele Rosu	5.99	324	Pn	Pn	16 52 59.3	+1.4
	comp=E,0.3nm,0.3s,baz=141,slow=6.5,SNR=2.7						
MLR				Sn	Sn	16 54 11.2	+4.3
	comp=E,0.6nm,0.3s,baz=98,slow=18,SNR=3.7						
VTS	Vitosha	6.10	290	⇑P	Pn	16 53 00.7	+1.3
COVR	Voineasa-Covas	6.16	327	⇓P	Pn	16 53 01.9	+1.9
VOIR		6.38	319	⇓P	Pn	16 53 04.4	+1.3
ARR	Arges	6.54	317	⇑P	Pn	16 53 06.4	+1.0
DOPR	Dopca	6.60	324	⇑P	Pn	16 53 08.3	+2.1
AKASG	Malin Array Be	10.00	353	Pn	Pn	16 53 51.5	-1.2
	comp=E,0.4nm,0.3s,baz=168,slow=13,SNR=3.2						
VRAC	Vranov	13.27	315	LR	LR	17 00 43.8	
	comp=E,34nm,19.4s,baz=358,slow=42						
TORD	Torodi Ar. Bea	37.62	231	P	P	16 58 44.7	+0.4
	comp=E,0.5nm,0.7s,baz=31,slow=9.7,SNR=4.2						

*IDC **13** 17:03:30.7±0.7, 31°.04S×179°.82W, h358^{km}±7^{km}, mb2.9/2, mb1 3.3/3, mb1mx2.7/30, mbtmp3.9/3, Error ellipse: s-maj=26.4km s-min=13.7km az=127.0*

*WEL **13** 17:06:41.2, 38°S±52°×17°8E±3°2, h14^{km}±37^{km}, M2.5/6, ML2.8/7, MLv2.5/6, Error ellipse: s-maj=0.1km s-min=0.0km az=174.5*

ISC 13 17:03:32.8±0.6**, 31°.30S**±0°.07×**179°.2W**±0°.2**, h400^{km}, n80, σ2^{s}.53**/98**, mb3.5**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.32	29	P	Pn	17 04 27.8	-3.2
	125nm,0.3s,baz=80,slow=8.3,SNR=6.6						
RAO				S	S	17 05 10.2	-7.7
	119nm,0.3s,baz=279,slow=23,SNR=8.7						
MXZ	Matakaoa Point	6.58	198	P	P	17 05 14.0	+1.8
MXZ				S	S	17 06 27.3	-5.0
WMGZ	Waiomatatini S	6.79	196	P	Pn	17 05 13.5	-0.6
WMGZ				S	S	17 06 32.3	-4.5
HAZ	Te Kaha	6.90	200	P	Pn	17 05 14.5	-0.7
HAZ				S	S	17 06 36.7	-2.3
PKGZ	Pakihiroa	6.94	198	P	Pn	17 05 08.4	-7.4
PUZ	Puketiti	7.07	197	P	Pn	17 05 15.9	-1.2
PUZ				S	S	17 06 39.6	-2.9
RUGZ	Raukumara Rang	7.13	200	P	Pn	17 05 17.5	-0.4
RUGZ				S	S	17 06 39.3	-4.5
TWGZ	Tauwhareparae	7.24	198	P	P	17 05 22.0	+2.3
TWGZ				S	S	17 06 45.4	-0.7
TWGZ	Tauwhareparae	7.24	198	P	S	17 06 44.5	-1.5
OPRZ	Ohinepanea	7.41	207	P	P	17 05 23.9	+2.5
CNGZ	Carnagh Statio	7.47	196	P	P	17 05 23.3	+1.1
MWZ	Matawai	7.51	200	P	Pn	17 05 22.3	+0.1
MWZ				S	S	17 06 49.0	-2.7
MWZ	Matawai	7.51	200	P	S	17 06 50.1	-1.6
TKGZ	Te Karaka	7.52	198	P	Pn	17 05 22.9	+0.7
TKGZ				S	S	17 06 48.6	-3.3
TKGZ	Te Karaka	7.52	198	P	S	17 06 48.5	-3.3
URZ	Urewera	7.58	203	P	Pn	17 05 20.1	-2.7
	5.0nm,0.3s,baz=264,slow=3.9,SNR=24						
URZ				S	S	17 06 49.4	-3.5
	17nm,0.3s,baz=122,slow=22,SNR=14						
URZ	Urewera	7.58	203	P	Pn	17 05 22.4	-0.4
URZ				S	S	17 06 49.9	-3.0
RAGZ	Rawiri	7.70	200	P	P	17 05 25.7	+0.9
RAGZ				S	S	17 06 53.7	-1.9
RIGZ	Rimuhau	7.80	198	P	Pn	17 05 23.1	-2.3
RIGZ				S	S	17 06 54.1	-3.4
RIGZ	Rimuhau	7.80	198	P	S	17 06 49.6	-8.0
RTZ	Ruatahuna	7.94	202	P	Pn	17 05 26.6	-0.5
RTZ				S	S	17 06 55.9	-4.8
PRGZ	Paritu Road	7.97	197	P	S	17 06 55.4	-5.8
SNGZ	Shannon Statio	7.98	200	P	P	17 05 29.4	+1.5
SNGZ				S	S	17 06 58.5	-3.0
SNGZ	Shannon Statio	7.98	200	P	S	17 06 58.4	-3.1
KNZ	Kokohu	8.12	198	P	P	17 05 30.5	+1.2
KNZ				S	S	17 06 59.8	-4.3
KNZ	Kokohu	8.12	198	P	S	17 06 57.6	-6.6
MHGZ	Mahia Peninsul	8.18	196	P	S	17 06 59.1	-6.5
RAHZ	Arahi	8.18	201	P	S	17 07 02.6	-3.1
MTHZ	Maungataniwha	8.20	202	P	Pn	17 05 29.4	-0.6
MTHZ				S	S	17 07 02.9	-3.2
MTHZ	Maungataniwha	8.20	202	P	S	17 07 03.0	-3.1
TLZ	Tolley Road	8.24	210	P	P	17 05 33.6	+2.9
NMHZ	Naumai	8.44	202	P	Pn	17 05 33.1	+0.3
ARHZ	Aropaoanui	8.53	200	P	Pn	17 05 34.8	+1.0
BKZ	Black Stump Fm	8.60	203	P	Pn	17 05 34.2	-0.4
BKZ				S	S	17 07 11.2	-3.4
MCHZ	McNeill Hill	8.79	201	P	P	17 05 38.8	+2.0
TMVZ	Te Maari	8.84	207	P	P	17 05 38.4	+0.9
ETVZ	East Tongariro	8.86	207	P	P	17 05 38.7	+1.0
NNVZ	North Ngauruho	8.89	207	P	P	17 05 39.9	+1.8
NGZ	Ngauruhoe	8.93	207	P	P	17 05 39.9	+1.3
TUVZ	Tukino	8.99	206	P	Pn	17 05 39.7	+0.5
BHHZ	Black Hill Sta	9.04	204	P	Pn	17 05 39.6	0.0
KAHZ	Kahuranaki	9.06	200	P	P	17 05 40.2	+0.3
WNVZ	Wahianoa	9.06	207	P	Pn	17 05 40.4	+0.4
KRHZ	Kereru	9.07	202	P	P	17 05 40.4	+0.4
MOVZ	Moawhango	9.07	206	P	P	17 05 40.1	0.0
PKVZ	Pokaka	9.13	208	P	Pn	17 05 41.6	+0.9
VRZ	Vera Road	9.24	211	P	Pn	17 05 44.5	+2.6
PXZ	Pawanui	9.28	199	P	P	17 05 42.3	+0.1
PNHZ	Pukenui	9.37	202	P	P	17 05 42.8	-0.6
WPHZ	Waipukurau	9.43	201	P	Pn	17 05 45.2	+1.0
PRHZ	Porangahau	9.56	200	P	Pn	17 05 46.7	+1.1
TSZ	Takapari Road	9.58	203	P	P	17 05 45.8	+0.1
DVHZ	Dannevirke	9.73	201	P	P	17 05 47.0	-0.3
PRWZ	Pori Road	10.03	202	P	P	17 05 51.5	+0.9
MRZ	Mangatainoka R	10.25	203	P	P	17 05 53.0	0.0
TIWZ	Tintock	10.26	201	P	P	17 05 53.9	+0.8
CPWZ	Castlepoint	10.28	200	P	Pn	17 05 56.0	+2.0
HOWZ	Holdsworth Sta	10.48	203	P	P	17 05 55.7	+0.1
TMWZ	Te Maipa	10.56	201	P	P	17 05 57.3	+0.8
MTW	Mount Morrison	10.72	202	P	P	17 05 59.0	+0.7
TRWZ	Traveller	10.88	201	P	P	17 06 01.2	+1.1
STKA	Stephens Creek	33.28	259	P	P	17 09 35.5	+0.6
	0.9nm,0.4s,baz=95,slow=8.7,SNR=4.8						
ASAR	Alice Springs	42.04	268	P	P	17 10 44.4	-3.0
	0.4nm,0.7s,baz=106,slow=7.5,SNR=13						
ASAR				PcP	PcP	17 12 33.8	0.0
	1.3nm,1.1s,baz=119,slow=3.6,SNR=5.5						
ASAR				ScP	ScP	17 15 48.3	+3.0
	0.4nm,0.8s,baz=116,slow=3.4,SNR=4.3						
WRA	Warramunga Arr	43.11	274	P	P	17 10 52.9	-3.1
	0.9nm,0.4s,baz=111,slow=8.1,SNR=45						
SNAA	Sanae	77.28	179	P	P	17 14 48.7	+4.7
VNA3	Neumayer Olymp	77.47	177	P	P	17 14 49.6	+4.7
VNA2	Neumayer--Watz	77.90	177	P	P	17 14 52.3	+5.1
	baz=181,slow=4.3						
VNA1	Neumayer--Stat	78.13	177	P	P	17 14 53.5	+5.1
KURBB	Kurchatov Arra	120.96	313	PKP	PKiKP	17 21 38.6	+0.4
	0.8nm,0.7s,baz=115,slow=1.7,SNR=8.4						
BVAR	Borovoye Array	126.32	315	PKP	PKiKP	17 21 49.0	+0.2
	0.7nm,0.6s,baz=194,slow=5.5,SNR=4.9						
ARCES	ARCESS Array B	139.24	347	PKhKP	PKPpre	17 22 07.5	
	4.7nm,0.9s,baz=12,slow=3.1,SNR=5.4						
KBZ	Khabaz	144.74	303	PKP	PKPdf	17 22 23.1	+0.7
	2.3nm,0.9s,baz=9.9,slow=6.4,SNR=4.5						
FINES	FINESS Array B	145.62	339	PKPbc	PKPbc	17 22 25.2	+0.6
	8.1nm,0.5s,baz=59,slow=4.2,SNR=114						
NB2	NORSAR Subarra	149.47	350	PKP	PKiKP	17 22 36.1	+0.4
	comp=Z,1.1nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.47	350	PKPbc	PKiKP	17 22 36.0	+0.2
	comp=Z,2.1nm,0.7s,baz=15,slow=4.1,SNR=11						
HFS	Hagfors	149.91	347	PKPbc	PKiKP	17 22 36.7	+0.1
	comp=Z,1.8nm,0.4s,baz=116,slow=3.4,SNR=18						
HFS				PKPab	PKPab	17 22 43.0	0.0
	comp=Z,2.4nm,0.4s,baz=72,slow=4.8,SNR=15						
MMAI	Mount Meron Ar	150.73	283	PKPbc	PKiKP	17 22 41.0	+1.8
	comp=Z,1.0nm,0.4s,baz=82,slow=7.7,SNR=6.5						
AKASG	Malin Array Be	151.37	321	PKPbc	PKiKP	17 22 40.5	+0.7
	comp=Z,0.9nm,0.4s,baz=62,slow=3.0,SNR=12						
AKASG				PKPab	PKPab	17 22 48.5	-0.9
	comp=Z,0.3nm,0.4s,baz=50,slow=5.2,SNR=4.9						
BRTR	Keskin Array B	152.10	297	PKPbc	PKiKP	17 22 42.4	+0.5
	comp=Z,0.7nm,0.5s,baz=134,slow=4.4,SNR=8.3						
BRTR				PKPab	PKPab	17 22 52.3	-0.9
	comp=Z,0.4nm,0.5s,baz=120,slow=7.2,SNR=3.9						
TORD	Torodi Ar. Bea	161.91	183	PKPab	PKPab	17 23 39.5	+3.7
	comp=Z,0.8nm,0.5s,baz=168,slow=3.7,SNR=5.4						

*PGC **13** 17:12:42.5±53.0, 48°.28N×129°.08W, h10^{km}, MLSn3.3/19, Mw3.9/19, Mw3.9/19, 251km Wsw of Tofino, Bc Vancouver Island, Canada Region*

*IDC **13** 17:12:43.2±1.4, 48°.34N×128°.97W, h0^{km}, mb3.7/7, mb1 3.9/11, mb1mx3.5/65, mbtmp3.7/11, ML3.4/3, MS3.9/30, Ms1 3.9/30, ms1mx3.8/47, Error ellipse: s-maj=26.7km s-min=17.3km az=44.0*

*GCMT **13** 17:12:46.0±0.4, 48°.54N±0°.04×128°.95W±0°.04, h21^{km}±1^{km}, MW4.9/88, Moment Tensor Solution. s15,c17; s88,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.20±.19; $M_{\theta\theta}$0.07±.11; $M_{\phi\phi}$2.13±.13; $M_{r\theta}$0.91±.26; $M_{\theta\phi}$0.20±.08; $M_{\phi r}$-0.83±.19; Best double couple: $M_0$2.47500×10^{16} NP1:ϕ_s203.00000°, δ38.00000°, λ-59.00000°. NP2: ϕ_s345.00000°, δ58.00000°, λ-112.00000°. Principal axes: T 2.2830, Plg10.0000°, Azm91.0000°; N 0.3800, Plg19.0000°, Azm357.0000°; P -2.6680, Plg69.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 13 17:12:45.7±1.1**, 48°.53N**±0°.07×**128°.74W**±0°.07**, h10^{km}, n71, σ1^{s}.02**/52**, mb3.6**/6**, MS4.0**/20**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMF	NEPTUNE Canada	0.62	203	P	Pg	17 12 49.4	-8.3
NC27	ODP1027	1.01	139	P	Pb	17 13 00.7	-4.4
EDB	Eliza Dome	1.72	38	P	Pn	17 13 15.1	-0.6
BPBC	Brooks Peninsu	1.75	21	Pn	Pn	17 13 14.7	-1.5
TOFB	Tofino	1.98	70	Sn	Sn	17 13 43.7	-0.3
PACB	Port Alice, BC	2.08	23	Pn	Pn	17 13 18.8	-1.8
PACB				Sn	Sn	17 13 46.6	+0.1
MAYB	Maynard	2.14	28	Pn	Pn	17 13 21.3	-0.3
HOLB	Holberg	2.15	10	Pn	Pn	17 13 21.6	-0.1
WOSB	Woss	2.17	40	Pn	Pn	17 13 22.0	+0.1
GDR	Gold River	2.18	54	Pn	Pn	17 13 20.5	-1.5
OZB	Mount Ozzard	2.19	77	Sn	Sn	17 13 49.3	-0.2
BTB	Buttle Lake	2.32	65	Pn	Pn	17 13 23.8	-0.4
BTB				Sn	Sn	17 13 53.6	+0.8
PHC	Port Hardy	2.34	21	Pn	Pn	17 13 23.6	-0.6
TLCB	Telegraph Cove	2.37	31	Pn	Pn	17 13 23.6	-1.1
TLCB				Sn	Sb	17 13 55.7	-2.1
NCRB	Newcastle Ridg	2.57	42	Pn	Pn	17 13 28.2	+0.7
CBB	Campbell River	2.68	54	Pn	Pn	17 13 27.6	-1.2
B927	Port Alberni	2.69	74	Pn	Pn	17 13 28.3	-0.6
B927				Sn	Sn	17 14 01.9	+0.5
MGB	Mount Grey	2.72	78	Pn	Pn	17 13 28.4	-1.2
MGB				Sn	Sn	17 14 01.7	-0.9
B926	Mesachie Lake	3.07	83	Pn	Pn	17 13 33.2	-1.1
B926				Sn	Sn	17 14 10.8	-0.2
CLRS	Cowichan Lake	3.07	83	Pn	Pn	17 13 32.0	-2.2
CLRS				Sn	Sn	17 14 10.8	-0.2
NLLB	Nanaimo Lost L	3.21	76	Pn	Pn	17 13 37.2	+0.9
NLLB				Sn	Sn	17 14 16.3	+1.7
SHB	Sechelt	3.38	70	Pn	Pn	17 13 38.8	+0.2
GOBB	Galiano Island	3.49	81	Pn	Pn	17 13 38.6	-1.4
BBB	Bella Bella	3.69	6	Pn	Pn	17 13 43.6	+0.9
	6.6nm,0.3s,baz=202,slow=13,SNR=14						
BBB				Sn	Sn	17 14 27.3	+1.1
	3.1nm,0.3s,baz=49,slow=4.3,SNR=6.3						
BBB				LR	LR	17 15 04.7	
	comp=Z,565nm,20.2s,baz=150,slow=36						
BBB	Bella Bella	3.69	6	Pn	Pn	17 13 42.7	0.0
BBB				Sn	Sn	17 14 26.5	+0.3
WPB	Watts Point	3.81	71	Pn	Pn	17 13 44.8	+0.4
WSLR	Whistler	4.13	65	Pn	Pn	17 13 49.9	+1.0
BUTB	Butedale	4.55	2	Pn	Pn	17 13 54.5	-0.1
BUTB				Sn	Sn	17 14 47.7	+0.2
LLLB	Lillooet	4.93	62	Pn	Pn	17 14 00.4	+0.6
SLEB	Sale Mountain	7.35	65	Pn	Pn	17 14 34.9	+1.7
MNB	Mounoet Dainar	7.58	57	Pn	Pn	17 14 38.1	+1.8
NEW	Newport	7.74	88	Pn	Pn	17 14 38.5	+0.1
	0.4nm,0.3s,baz=260,slow=11,SNR=5.0						
NEW				LR	LR	17 17 44.9	
	comp=Z,2µm,18.5s,baz=268,slow=38						
YBH	Yreka Blue Hor	8.02	146	LR	LR	17 17 31.8	
	comp=Z,1µm,20.3s,baz=331,slow=36						
WALA	Waterton Lakes	9.80	81	Pn	Pn	17 15 07.0	+0.2
DLBC	Dease Lake	9.96	356	LR	LR	17 18 51.1	
	comp=Z,554nm,19.2s,baz=175,slow=36						
ELK	Elko	12.36	124	LR	LR	17 20 31.7	
	comp=Z,836nm,19.6s,baz=317,slow=38						
NVAR	Mina Array Bea	12.61	139	LR	LR	17 20 28.5	
	comp=Z,956nm,18.8s,baz=276,slow=37						
PDAR	Pinedale Array	14.59	106	LR	LR	17 22 09.6	
	comp=Z,988nm,21.4s,baz=332,slow=39						
YKA	Yellowknife Ar	16.07	24	Pn	Pn	17 16 31.4	-0.1
	0.0nm,0.3s,baz=218,slow=12,SNR=6.1						
YKA				LR	LR	17 23 10.3	
	comp=Z,457nm,18.6s,baz=0.0,slow=38						
PFO	Pinyon Flats O	17.51	144	LR	LR	17 23 36.9	
	comp=Z,303nm,21.2s,baz=330,slow=37						
ILAR	Eielson Array	18.97	336	P	Pn	17 17 08.4	+0.8
	baz=157,slow=8.8,SNR=12						
ILAR				LR	LR	17 23 35.6	
	comp=Z,433nm,19.7s,baz=165,slow=34						
INK	Inuvik	19.98	355	P	Pn	17 17 19.8	+0.2
	3.8nm,1.1s,baz=167,slow=7.2,SNR=5.9						
ANMO	Albuquerque	21.36	121	P	P	17 17 34.1	+0.8
	2.5nm,1.0s,baz=300,slow=10,SNR=5.3						
ANMO				LR	LR	17 26 22.3	
	comp=Z,161nm,19.4s,baz=306,slow=38						
ULM	Lac du Bonnet	21.37	73	P	P	17 17 35.0	+1.9
	9.8nm,1.1s,baz=292,slow=9.3,SNR=4.8						
ULM				LR	LR	17 26 11.6	
	comp=Z,522nm,18.2s,baz=287,slow=38						
SCHQ	Schefferville	37.77	56	LR	LR	17 36 00.3	
	comp=Z,747nm,18.4s,baz=280,slow=37						
PETK	Petropavlovsk-	44.81	305	LR	LR	17 36 32.0	
	comp=Z,140nm,21.9s,baz=77,slow=32						
H11N2	WAKE ISLAND Hy	58.56	265	T	T	18 25 53.3	
	baz=44,slow=76,SNR=19						
H11N3	WAKE ISLAND Hy	58.56	265	T	T	18 25 53.3	
	baz=44,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	58.57	265	T	T	18 25 53.8	
	baz=44,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	59.55	264	T	T	18 27 09.7	
	baz=44,slow=76,SNR=10						
H11S2	WAKE ISLAND Hy	59.56	264	T	T	18 27 07.8	
	baz=44,slow=76,SNR=33						
H11S3	WAKE ISLAND Hy	59.57	264	T	T	18 27 06.3	
	baz=44,slow=76,SNR=13						
ARCES	ARCESS Array B	60.74	10	LR	LR	17 50 25.0	
	comp=Z,51nm,20.2s,baz=90,slow=37						
ROSC	El Rosal	63.38	115	LR	LR	17 53 23.2	
	comp=Z,161nm,20.1s,baz=242,slow=38						
USRK	Ussuriysk Ar.	63.77	308	LR	LR	17 52 05.9	
	comp=Z,91nm,18.0s,baz=50,slow=37						
MJAR	Matsushiro Arr	65.52	298	LR	LR	17 50 35.7	
	comp=Z,49nm,20.2s,baz=35,slow=35						
NOA	NORSAR Array B	66.11	20	LR	LR	17 52 06.9	
	comp=Z,37nm,19.0s,baz=295,slow=36						
TLY	Talaya	70.61	328	LR	LR	17 57 20.0	
	comp=Z,104nm,18.3s,baz=12,slow=38						
KSRS	Korea Array	70.71	305	LR	LR	17 52 03.3	
	comp=Z,39nm,21.3s,baz=40,slow=33						
SONM	Songino Array	72.78	325	P	P	17 24 13.8	-0.4
	0.7nm,0.9s,baz=46,slow=4.2,SNR=5.1						
SONM				LR	LR	17 57 36.8	
	comp=Z,122nm,18.1s,baz=34,slow=37						
KIRV	Kirov	73.24	1	LR	LR	18 03 56.3	
	comp=Z,42nm,18.3s,baz=36,slow=42						
ZALV	Zalesovo Beam	74.03	340	LR	LR	18 00 37.8	
	comp=Z,74nm,19.4s,baz=48,slow=39						
ARU	Arti	75.24	356	LR	LR	17 59 26.7	
	comp=Z,69nm,19.7s,baz=148,slow=37						
BRG	Berggiesshubel	75.94	23	*e*P	P	17 24 33.3	+1.0
BRG				Amp		17 24 35.5	
	comp=Z,3.0nm,1.0s						
GUMO	Guam	77.58	276	LR	LR	17 49 43.4	
	comp=Z,114nm,21.5s,baz=340,slow=29						
GERES	GERESS Array B	77.72	24	P	P	17 24 43.0	+0.5
	comp=Z,1.5nm,1.0s,baz=0.0,slow=4.0,SNR=8.4						
GERES				LR	LR	18 01 10.8	
	comp=Z,58nm,18.3s,baz=14,slow=37						
KURBB	Kurchatov Arra	78.49	343	P	P	17 24 45.4	-1.2
	comp=Z,0.4nm,0.8s,baz=16,slow=7.4,SNR=4.3						
AKASG	Malin Array Be	79.36	14	P	P	17 24 50.2	-1.1
	comp=Z,0.1nm,0.2s,baz=4.8,slow=5.6,SNR=4.8						
MKAR	Makanchi Array	81.29	339	LR	LR	18 05 04.5	
	comp=Z,80nm,18.9s,baz=16,slow=39						
LPAZ	La Paz	83.97	123	LR	LR	18 04 04.7	
	comp=Z,58nm,20.8s,baz=42,slow=37						
CPUP	Villa Florida	98.01	121	LR	LR	18 16 55.3	
	comp=Z,38nm,18.6s,baz=34,slow=39						

*IDC **13** 17:18:23.0±8.6, 20°.56S×178°.69W, h524^{km}±26^{km}, mb3.5/5, mb1 3.5/7, mb1mx3.1/35, mbtmp4.4/7, Error ellipse: s-maj=151.3km s-min=50.5km az=103.0*

ISC 13 17:18:15.8±6.5**, 21°.0S**±0°.3×**177°.8W**±0°.7**, h500^{km}, n7, σ0^{s}.89**/7**, mb4.0**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.06	309	P	P	17 19 44.2	+0.7
	14nm,0.3s,baz=143,slow=7.0,SNR=63						
DZM	Mont Dzumac	14.67	263	P	P	17 21 22.7	0.0
	0.3nm,0.3s,baz=92,slow=18,SNR=2.9						
CTA	Charters Tower	33.60	265	P	P	17 24 14.2	0.0
	7.3nm,0.4s,baz=89,slow=10,SNR=11						
STKA	Stephens Creek	37.71	245	P	P	17 24 49.1	+0.9
	1.1nm,0.7s,baz=89,slow=9.4,SNR=4.1						
ASAR	Alice Springs	44.56	257	P	P	17 25 42.5	-0.3
	3.4nm,0.7s,baz=83,slow=8.9,SNR=37						
WRA	Warramunga Arr	44.69	262	P	P	17 25 42.8	-1.1
	3.4nm,0.8s,baz=95,slow=7.6,SNR=14						
SIJI	Sorong	53.52	285	P	P	17 26 48.7	-0.7
	16nm,0.7s,baz=123,slow=4.0,SNR=8.1						

*IDC **13** 17:21:38.4±1.4, 8°.00S×126°.01E, h0^{km}, mb3.8/3, mb1 4.1/5, mb1mx3.5/34, mbtmp3.9/5, ML4.0/2, MS2.2/1, Ms1 2.2/1, ms1mx2.0/29, Error ellipse: s-maj=47.6km s-min=23.3km az=64.0*

*DJA **13** 17:21:42.9±0.2, 8°S±2°×12°6E±°, h10^{km}, M4.1/14, mb4.2/12, mB4.7/4, MLv4.1/14, Mw(mB)4.0/4*

ISC 13 17:21:44.7±0.8**, 8°.22S**±0°.07×**125°.83E**±0°.07**, h35^{km}, n35, σ1^{s}.37**/36**, mb3.7**/3**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	2.17	225	P	Pn	17 22 18.3	-0.2
BATI	Baumata	2.91	227	Pn	Pn	17 22 29.6	+1.0
	22nm,0.3s,baz=85,slow=3.1,SNR=31						
BATI				Sn	Sn	17 23 05.4	+3.0
	22nm,0.3s,baz=274,slow=23,SNR=9.0						
BATI				LR	LR	17 23 48.0	
	comp=Z,39nm,21.9s,baz=142,slow=41						
BATI	Baumata	2.91	227	P	Pn	17 22 29.4	+0.8
BATI				S	Sn	17 23 04.1	+1.7
MMRI	Maumere	3.58	263	P	Pn	17 22 39.3	+1.6
MMRI	Maumere	3.58	263	P	Pn	17 22 40.4	+2.7
EDFI	Ende, Flores	4.13	262	P	Pn	17 22 46.0	+0.6
AAI	Ambon	5.08	28	P	Pn	17 22 59.3	+0.9
	0.2nm15nm,0.4s						
SAUI	Saumlaki	5.42	88	P	Pn	17 23 03.1	0.0
	0.4nm65nm,0.8s						
BASI	Baing, Sumba	5.55	249	P	Pn	17 23 05.0	+0.1
	0.1nm35nm,0.9s						
BSSI	Bau Bau, Buton	5.68	291	P	Pn	17 23 05.3	-1.4
	0.1nm36nm,1.3s						
MSAI	Masohi	5.74	33	P	Pn	17 23 10.2	+2.7
SANI	Sanana	6.13	2	P	Pn	17 23 12.7	-0.1
	0.1nm6.2nm,1.2s						
DRS	Darwin Rock St	6.51	130	P	Pn	17 23 18.0	-0.1
BNSI	Bone	6.83	303	P	Pn	17 23 22.2	-0.3
	0.1nm29nm,0.8s						
MTN	Manton Dam	6.95	132	P	Pn	17 23 25.6	+1.5
SPSI	Sidrap Palu	7.36	305	P	Pn	17 23 30.1	+0.4
	0.1nm11nm,0.9s						
LBMI	Labuha	7.71	13	P	Pn	17 23 37.4	+2.8
	0.1nm11nm,1.4s						
KNRA	Kununurra	7.95	159	P	Pn	17 23 37.2	-0.6
PLAI	Plampang	7.99	265	P	Pn	17 23 39.6	+1.3
	0.1nm8.4nm,0.7s						
PLAI	Plampang	7.99	265	P	Pn	17 23 39.9	+1.6
TWSI	Taliwang, Sumb	8.86	266	P	Pn	17 23 50.8	+0.4
	4.0nm,0.9s						
WRA	Warramunga Arr	14.28	146	Pn	Pn	17 24 59.2	-5.3
	0.4nm,0.3s,baz=330,slow=15,SNR=22						
WRKA	Warakurna	16.89	172	P	Pn	17 25 36.2	-2.3
ASAR	Alice Springs	17.20	154	P	Pn	17 25 41.4	-1.0
	0.5nm,0.3s,baz=337,slow=13,SNR=33						
QIS	Mount Isa	18.11	134	P	P	17 25 54.4	+0.7
OOD	Oodnadatta	21.59	156	P	P	17 26 31.7	+0.2
FORT	Forrest	22.54	175	P	P	17 26 41.1	-0.6
MULG	Mulgathing	23.27	162	P	P	17 26 49.3	+0.1
INKA	Innaminka	24.00	146	P	P	17 26 56.9	+0.7
LCRK	Leigh Creek	24.97	154	P	P	17 27 05.6	+0.5
QLP	Quilpie	25.27	139	P	P	17 27 08.5	+0.6
STKA	Stephens Creek	27.74	150	P	P	17 27 30.1	0.0
	0.9nm,0.5s,baz=331,slow=9.5,SNR=3.7						
HTT	Hallett	27.86	156	P	P	17 27 31.6	+0.4
CMAR	Chiang Mai Arr	37.50	315	P	P	17 28 54.5	-1.0
	0.9nm,0.7s,baz=145,slow=7.4,SNR=9.4						
MKAR	Makanchi Array	67.06	329	P	P	17 32 32.5	-1.9
	0.5nm,0.6s,baz=125,slow=7.0,SNR=7.2						

*SJA **13** 17:31:03.8±0.7, 30°.52S×72°.39W, h11^{km}, ML5.0, MW4.6*

*IDC **13** 17:31:06.7±0.6, 30°.68S×71°.97W, h0^{km}, mb4.5/6, mb1 4.6/9, mb1mx4.4/26, mbtmp4.5/9, ML4.1/3, MS3.9/15, Ms1 3.9/15, ms1mx3.8/25, Error ellipse: s-maj=24.4km s-min=18.5km az=127.0*

*GUC **13** 17:31:06.4±0.7, 30°.59S×72°.13W, h10^{km}±4^{km}, ML5.2, MW4.8*

*NEIC **13** 17:31:07.7±2.2, 30°.56S±0°.05×72°.08W±0°.04, h10^{km}±1^{km}, mb4.8/15, Mwr4.6/43, Mwr4.8(GUC), Error ellipse: s-maj=7.9km s-min=6.5km az=170.0*

*NEIC **13** 17:31:07.7, 30°.56S×72°.09W, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}8.24; $M_{\theta\theta}$0.75; $M_{\phi\phi}$-8.98; $M_{r\theta}$2.31; $M_{\theta\phi}$-0.89; $M_{\phi r}$-4.02; Fault plane solution: $M_0$9.84000×10^{15} NP1:ϕ_s169.29000°, δ58.97000°, λ72.16000°. NP2:ϕ_s21.26000°, δ35.35000°, λ116.98000°. Principal axes: T 9.7928, Plg70.0000°, Azm39.0000°; N 0.0984, Plg15.0000°, Azm179.0000°; P -9.8913, Plg12.0000°, Azm272.0000°;*

*VAO **13** 17:31:08.8±0.4, 30°.60S×71°.86W, h10^{km}, mb4.7*

ISC 13 17:31:06.1±1.0**, 30°.62S**±0°.02×**72°.10W**±0°.04**, h3^{km}**±5^{km}**, n219, σ1^{s}.43**/231**, mb4.8**/12**, MS4.2**/13**, 8C-5D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.41	98	⇓*i*P	Pb	17 31 16.6	+0.6
CO06				*i* S	Sb	17 31 21.8	-0.8
CO06	Fray Jorge	0.41	98		Pb	17 31 16.3	+0.3
CO06				Sg	Sb	17 31 21.6	-1.0
CO05	La Serena	1.02	47	⇓*i*P	Pb	17 31 26.8	+0.4
CO05				*i* S	Sb	17 31 40.0	-0.4
CO05	La Serena	1.02	47		Pb	17 31 26.6	+0.2
GO04	Tololo Observa	1.21	69	⇓*i*P	Pg	17 31 29.6	+0.3
GO04				*i* S	Sn	17 31 46.3	-0.9
GO04				IAML		17 31 53.2	
	comp=N,90µm,0.4s						
GO04	Tololo Observa	1.21	69		Pg	17 31 29.7	+0.3
GO04	Tololo Observa	1.21	69	*e*P	Pg	17 31 29.9	+0.6
CO03	El Pedregal	1.24	101	⇓*i*P	Pn	17 31 29.8	-0.7
CO03				*e*S	Sg	17 31 46.8	+0.9
CO03	El Pedregal	1.24	101		Pn	17 31 29.6	-0.8
CO03	El Pedregal	1.24	101	*e*P	Pn	17 31 29.8	-0.7
CO03				*e*S	Sn	17 31 47.9	+0.2
CO03				IAML		17 31 51.3	
	comp=Z,13µm,0.8s						
LCO	Las Campanas	2.01	38	⇑*i*P	Pn	17 31 41.4	+0.1
LCO				*e*S	Sn	17 32 06.3	-0.8
LCO	Las Campanas	2.01	38		Pn	17 31 41.4	+0.1
LCO	Las Campanas	2.01	38	*e*P	Pn	17 31 41.0	-0.3
VA06	Catapilco	2.05	161	⇑*i*P	Pn	17 31 42.5	+0.9
VA06				*i* S	Sb	17 32 10.3	+0.2
VA06				IAML		17 32 18.1	
	comp=E,24µm,0.5s						
AROD	Rodeo	2.31	79	*e*P	Pb	17 31 48.0	-0.7
AROD				*e*S	Sg	17 32 20.8	+0.2
VA01	Torpederas	2.43	171	*e*P	Pn	17 31 48.3	+1.6
VA01	Torpederas	2.43	171	Pn	Pn	17 31 47.1	+0.3
VA03	San Esteban	2.51	149	⇑*i*P	Pn	17 31 49.9	+1.9
VA03				*i* S	Sb	17 32 22.8	-0.6
VA03				IAML		17 32 30.0	

	comp=E,16µm,0.4s						
VA03	San Esteban	2.51	149		Pn	17 31 49.9	+1.9
VA03	San Esteban	2.51	149	eP	Pn	17 31 50.0	+1.9
VA03				IAML		17 32 32.1	
	comp=Z,9µm,0.8s						
ROCH	El Roble	2.52	159⇑	eP	Pb	17 31 49.4	-2.8
ROCH				eP	Pn	17 31 48.9	+0.6
ROCH				eS	Sb	17 32 22.9	-0.9
ROCH				eS	Sn	17 32 23.6	+4.0
ROCH				IAML		17 32 37.4	
	comp=N,12µm,0.8s						
ROCH				IAML		17 32 37.8	
	comp=N,11µm,0.7s						
ROC1	El Roble	2.52	159	eP	Pn	17 31 49.0	+0.7
ROC1				eS	Sb	17 32 25.8	+1.9
AC04	Llanos de Chal	2.57	21	eP	Pn	17 31 48.1	-0.5
AC04				eS	Sn	17 32 17.4	-3.0
AC04	Llanos de Chal	2.57	21		Pn	17 31 48.0	-0.7
AC04	Llanos de Chal	2.57	21	eP	Pn	17 31 48.0	-0.7
AC04				eS	Sn	17 32 21.0	+0.6
ACDV	Cuesta del Vie	2.62	81	eP	Pb	17 31 54.0	+0.2
ACDV				IAML		17 32 40.5	
	comp=Z,3µm,0.7s						
ACCO	Cerro Coronel	2.62	90	eP	Pb	17 31 54.0	+0.1
RTLS	Leoncito	2.67	117	eP	Pb	17 31 55.0	+0.1
RTLS				eS	Sg	17 32 32.6	+0.5
RTLS				IAML		17 32 37.7	
	comp=Z,4µm,0.9s						
PEL	Peldehue	2.79	155⇑	eP	Pn	17 31 53.4	+1.6
PEL				eS	Sb	17 32 31.4	+0.1
PEL				IAML		17 32 45.4	
	comp=E,6µm,0.7s						
PEL	Peldehue	2.79	155		Pn	17 31 53.4	+1.6
PEL	Peldehue	2.79	155	eP	Pn	17 31 48.0	-3.8
PEL				eP	Pb	17 31 54.0	-2.7
PEL				eS	Sg	17 32 35.8	0.0
AUSP	Uspallata	2.82	125	eP	Pn	17 31 51.0	-1.4
AUSP				eP	Pb	17 31 56.0	-1.3
AUSP				eS	Sg	17 32 35.7	-1.0
MT05	Renca	3.00	158	eP	Pn	17 31 56.5	+1.8
MT05				IAML		17 32 46.9	
	comp=E,11µm,0.4s						
MT05	Renca	3.00	158		Pn	17 31 55.9	+1.3
MT05	Renca	3.00	158	eP	Pn	17 31 57.0	+2.4
MT05				IAML		17 32 48.8	
	comp=Z,4µm,0.6s						
VA05	Santo Domingo	3.06	172	Pn	Pn	17 31 56.9	+1.5
ZON	Zonda	3.08	108	eP	Pb	17 32 00.0	-1.6
ZON				IAML		17 32 53.4	
	comp=Z,3µm,1.6s						
MT09	Talagante	3.29	164⇑	eP	Pn	17 32 00.2	+1.5
MT09				eS	Sn	17 32 41.7	+3.4
MT09				IAML		17 32 59.5	
	comp=N,4µm,0.6s						
MT09	Talagante	3.29	164		Pn	17 32 00.1	+1.4
RTCV	Cerro Valdivia	3.29	113	eP	Pb	17 32 03.0	-2.2
RTCV				eS	Sg	17 32 54.4	+2.5
MT01	Popeta	3.31	168⇑	eP	Pn	17 31 59.6	+0.7
MT01				IAML		17 33 00.0	
	comp=E,3µm,0.5s						
MT01	Popeta	3.31	168		Pn	17 31 59.9	+1.0
MT01	Popeta	3.31	168	eS	Sb	17 32 44.0	-2.4
MT01				IAML		17 32 55.8	
	comp=Z,2µm,0.7s						
ASAL	Salagasta	3.41	126	eP	Pb	17 32 05.0	-2.3
GO03	Copiap	3.43	29		Pn	17 32 00.4	-0.2
GO03	Copiap	3.43	29	eP	Pn	17 32 01.0	+0.4
GO03				eS	Sb	17 32 51.0	+1.3
ARCO	CERRO ARCO	3.49	130	eP	Pb	17 32 07.0	-1.7
ARCO				IAML		17 33 07.7	
	comp=Z,2µm,0.8s						
LMEL	Las Melosas	3.60	154	IAML		17 33 04.7	
	comp=N,3µm,0.2s						
AAGR	Agrelo	3.71	132	eP	Pb	17 32 09.0	-3.5
AAGR				eS	Sg	17 33 07.6	+2.1
BO01	Tunca	3.86	167	Pn	Pn	17 32 07.3	+0.9
VCA	Vinchina	3.88	62	eP	Pn	17 32 11.0	+4.2
VCA				IAML		17 33 16.9	
	comp=Z,2µm,1.6s						
BO02	Sierra Bellavi	4.31	165		Pn	17 32 14.1	+1.4
BO02	Sierra Bellavi	4.31	165	eP	Pn	17 32 15.0	+2.3
BO02				eS	Sb	17 33 14.0	-1.0
BO02				IAML		17 33 29.6	
	comp=Z,2µm,0.8s						
GO05	Huala	4.38	178		Pn	17 32 13.3	-0.3
GO05	Huala	4.38	178	eP	Pn	17 32 14.0	+0.4
AC02	Maricunga	4.58	35		Pn	17 32 17.4	+0.6
AC02	Maricunga	4.58	35	eP	Pn	17 32 17.0	+0.1
AC02				eS	Sn	17 33 13.5	+2.6
AC02				IAML		17 33 38.1	
	comp=Z,914nm,1.2s						
ACLC	CERRO LA CRUZ	4.62	76	eP	Pn	17 32 19.0	+1.9
ACLC				IAML		17 33 39.4	
	comp=Z,1µm,1.2s						
APLL	PUNTA DE LOS L	4.81	89	eP	Pn	17 32 22.0	+2.4
APLL				eS	Sg	17 33 36.8	-4.0
RFA	San Rafael	5.15	144	eP	Pn	17 32 22.0	-2.2
RFA				eP	Pb	17 32 27.5	-9.4
RFA				eS	Sg	17 33 46.5	-5.1
RFA				IAML		17 33 55.3	
	comp=Z,373nm,1.9s						
MRA	San Martin	5.74	110	eP	Pn	17 32 34.4	+2.1
MRA				IAML		17 34 18.6	
	comp=Z,2µm,0.9s						
PB14	IPOC Station P	6.16	15	Pn	Pn	17 32 34.5	-3.8
H03N1	Juan Fernandez	6.43	242	Pn	Pn	17 32 42.1	+0.6
	baz=113,slow=19,SNR=56						
H03N1				T	T	17 39 42.6	
	baz=72,slow=72,SNR=2421						
H03N2	Juan Fernandez	6.45	242	Pn	Pn	17 32 42.3	+0.6
	baz=113,slow=19,SNR=62						
H03N2				T	T	17 39 42.1	
	baz=72,slow=72,SNR=4725						
H03N3	Juan Fernandez	6.45	242	Pn	Pn	17 32 42.0	+0.2
	baz=113,slow=19,SNR=49						
H03N3				T	T	17 39 45.0	
	baz=72,slow=72,SNR=2345						
H03S3	Juan Fernandez	6.59	239	Pn	Pn	17 32 43.6	-0.2
	SNR=19						
H03S1	Juan Fernandez	6.60	239	Pn	Pn	17 32 43.0	-0.8
H03S2	Juan Fernandez	6.61	239	Pn	Pn	17 32 43.4	-0.6
	SNR=22						
PB15	IPOC Station P	7.75	18		Pn	17 32 58.1	-1.9
LC01	Cunco	8.26	179	Pn	Pn	17 33 07.5	+0.7
LVC	Limon Verde	8.47	20	LR	LR	17 35 43.0	
	comp=Z,175nm,21.4s,baz=210,slow=33						
LR03	Panguipulli	8.99	181	Pn	Pn	17 33 19.1	+2.2
PB07	IPOC Station P	9.08	13	Pn	Pn	17 33 17.5	-0.8
PLCA	Paso Flores	10.17	173	Pn	Pn	17 33 34.3	+1.2
	comp=Z,0.8nm,0.3s,baz=341,slow=10,SNR=18						
PLCA				LR	LR	17 38 12.4	
	comp=Z,592nm,18.7s,baz=352,slow=42						
PLCA	Paso Flores	10.17	173	eP	Pn	17 33 35.2	+2.1
LL04	Puerto Octay	10.27	181	Pn	Pn	17 33 33.5	-1.0
TRQA	Tornquist	11.18	134	eP	Pn	17 33 46.9	0.0
TRQA	Tornquist	11.18	134	Pn	Pn	17 33 47.5	+0.7
ITQB	Itaqui	13.43	90	eP	Pn	17 34 15.9	-1.7
ITQB	Itaqui	13.43	90	Pn	Pn	17 34 15.6	-2.0
CPUP	Villa Florida	13.68	75	LR	LR	17 39 55.3	
	comp=Z,1µm,20.2s,baz=246,slow=39						
CPUP	Villa Florida	13.68	75	eP	Pn	17 34 19.7	-1.3
CPUP	Villa Florida	13.68	75	Pn	Pn	17 34 24.1	+3.1
LPAZ	La Paz	14.72	15	Pn	Pn	17 34 37.5	+1.6
	comp=Z,0.1nm,0.3s,baz=178,slow=9.4,SNR=17						
LPAZ	La Paz	14.72	15	eP	Pn	17 34 37.1	+1.1
LPAZ	La Paz	14.72	15	Pn	Pn	17 34 34.9	-1.1
COYC	Coyhaique	14.93	180		Pn	17 34 38.4	+0.4
PLTB	Pedras Altas	15.87	99	eP	Pn	17 34 49.0	-1.6
PLTB	Pedras Altas	15.87	99		Pn	17 34 48.5	-2.1
CPSB	Cacapava Do Su	16.09	94	eP	Pn	17 34 51.9	-1.5
SIV	San Ignacio	17.72	37	P	P	17 35 15.1	+0.1
	comp=Z,0.7nm,0.3s,baz=230,slow=12,SNR=87						
ITAB	Concordia	17.80	84	eP	Pn	17 35 14.7	-0.3
ITAB	Concordia	17.80	84	Pn	Pn	17 35 12.5	-2.5
ITAB				IAmb	IAmb	17 35 27.7	
	comp=Z,72nm,1.1s						
AQDB	Aquidauana	17.90	59	eP	Pn	17 35 15.6	-0.6
AQDB	Aquidauana	17.90	59		Pn	17 35 15.4	-0.9
CNLB	Canela	18.46	91	eP	P	17 35 22.4	-0.7
PTGB	Pitanga	18.69	77	eP	P	17 35 25.4	-0.3
NNA	Nana	19.05	346	LR	LR	17 39 39.5	
	comp=Z,68nm,21.9s,baz=123,slow=27						
PTLB	Pontes e Lacer	19.22	41	eP	P	17 35 31.4	0.0
PTLB	Pontes e Lacer	19.22	41	P	P	17 35 26.5	-4.9
TER01	Tubaro-SC	20.09	90	eP	P	17 35 40.8	-0.1
PP1B	Ponte de Pedra	20.34	54	eP	P	17 35 43.1	-0.6
PCMB	Pacaembu	20.73	69	eP	P	17 35 47.7	-0.2
VILB	Vilhena	20.74	35	eP	P	17 35 48.1	+0.1
VILB	Vilhena	20.74	35	P	P	17 35 44.7	-3.4
VILB				IAmb	IAmb	17 35 52.8	
	comp=Z,46nm,0.9s						
SALV	Santo Antonio	20.98	49	eP	P	17 35 50.4	-0.3
TIJ01	Guaruva-PR	21.06	81	eP	P	17 35 51.8	+0.3
FRTB	Fartura	21.33	76	eP	P	17 35 53.9	-0.6
ETMB	Extrema	21.41	16	eP	P	17 35 55.9	+0.6
ETMB	Extrema	21.41	16	P	P	17 35 54.6	-0.7
ETMB				IAmb	IAmb	17 36 00.5	
	comp=Z,54nm,1.2s						
ITRB	Iturama	22.44	66	eP	P	17 36 05.2	-1.2
PET01	Itanhaem-SP	22.89	80	eP	P	17 36 10.2	-0.9
SPB	Sao Paulo	23.02	78	eP	P	17 36 11.6	-0.9
BB19B	Bebedouro	23.21	71	eP	P	17 36 14.2	-0.3
RCLB	Rio Claro- Sao	23.42	75	eP	P	17 36 15.8	-0.8
VAO	Valinhos	23.65	77	eP	P	17 36 17.9	-1.0
PDRB	Porto dos Gac	23.68	40	eP	P	17 36 19.9	+0.7
ARAG	Araguaiana, MT	23.78	56	eP	P	17 36 20.3	+0.2
PARB	Paraibuna	24.65	79	eP	P	17 36 28.5	+0.2
CLDB	Colider	24.81	41	eP	P	17 36 29.7	0.0
IPMB	Ipameri, GO	25.08	65	eP	P	17 36 31.1	-1.1
TBTG	Tabatinga, AM	26.37	5	eP	P	17 36 45.4	+1.6
TBTG	Tabatinga, AM	26.37	5	P	P	17 36 40.3	-3.5
BDFB	Brasilia	26.62	61	P	P	17 36 45.4	-0.8
	comp=Z,24nm,0.8s,baz=239,slow=8.5,SNR=36						
BDFB				LR	LR	17 48 43.3	
	comp=Z,449nm,18.9s,baz=221,slow=40						
BDFB	Brasilia	26.62	61	P	P	17 36 45.5	-0.8
BDFB				IAmb	IAmb	17 36 46.5	
	comp=Z,26nm,0.9s						
SNDB	Serra Nova Dou	26.75	51	eP	P	17 36 48.2	+1.0
VAS01	Vassouras-RJ	26.91	79	eP	P	17 36 48.2	-0.5
NPGB	Novo Progresso	28.22	37	eP	P	17 36 59.8	-0.7
DIAM	Diamantina, MG	28.55	71	eP	P	17 37 03.3	-0.3
CAM01	Campos-RJ	28.61	79	eP	P	17 37 04.1	+0.3
PEXB	Peixe	28.71	55	eP	P	17 37 04.7	-0.1
MC01	Montes Claros	29.17	68	eP	P	17 37 08.7	-0.3
MACA	Manacapuru-AM	29.37	24	eP	P	17 37 11.1	+0.5
MACA	Manacapuru-AM	29.37	24	P	P	17 37 08.3	-2.3
MACA				IAmb	IAmb	17 37 51.3	
	comp=Z,15nm,1.0s						
JANB	Januaria	29.82	65	eP	P	17 37 14.1	-0.6
ALF01	Guarapari-ES	29.91	78	eP	P	17 37 14.2	-1.1
ITTB	Itaituba	30.33	34	eP	P	17 37 18.5	-0.7
SJMB	Sao Joao De Ma	30.40	74	eP	P	17 37 19.2	-0.5
BSFB	Barra de Sao F	30.62	75	eP	P	17 37 20.9	-0.8
SDBA	SAO DESIDERIO	30.99	60	eP	P	17 37 24.4	-0.6
SMTB	Santa Maria do	31.50	52	eP	P	17 37 29.6	+0.1
PRPB	Parauapebas	32.09	45	eP	P	17 37 33.8	-0.9
CMC01	Camacan, BA	33.47	70	eP	P	17 37 46.7	-0.1
NBIT	Itapeh - BA	33.77	70	eP	P	17 37 49.9	+0.5
GDU01	Guandu, BA	34.33	68	eP	P	17 37 53.2	-1.0
BOAV	Boa Vista	34.64	21	eP	P	17 37 57.0	+0.2
BOAV	Boa Vista	34.64	21	P	P	17 37 56.5	-0.4
BOAV				IAmb	IAmb	17 37 58.1	
	comp=Z,9.8nm,0.8s						
NBPN	Ponto Novo - B	35.54	63	eP	P	17 38 04.0	-0.8
MCPB	Macapa, AP	35.61	36	eP	P	17 38 05.8	+0.5
TMAB	Tom-Au,PA,Br	36.13	44	eP	P	17 38 10.8	+1.0
NBLA	Lagarto - SE	37.33	66	eP	P	17 38 19.1	-0.9
ZARC	Zaragoza, Cauc	37.99	356	P	P	17 38 25.0	-0.5
ZARC				IAmb	IAmb	17 38 28.8	
	comp=Z,13nm,0.9s						
NBMA	Muriti-CE	38.84	60	eP	P	17 38 32.6	-0.2
NBPS	Pedro II - PI	38.92	54	eP	P	17 38 32.8	-0.7
SDV	Santo Domingo	39.30	2	eP	P	17 38 37.5	+0.7
NBAN	Anadia - AL	39.31	66	eP	P	17 38 36.2	-0.5
NBPB	Pedra_Branca-C	39.45	57	eP	P	17 38 38.0	+0.1
BAUV	El Baul	39.53	6	P	P	17 38 39.0	+0.6
NBLV	Livramento - P	40.24	62	eP	P	17 38 43.3	-1.2
NBPA	Parau_RN	41.13	60	eP	P	17 38 52.1	+0.3
PCRV	Puerto La Cruz	41.19	11	LR	LR	17 57 33.0	
	comp=Z,388nm,21.7s,slow=38						
DSLB	Salisbury	46.93	14	eP	P	17 39 37.2	-1.1
SJG	San Juan	48.79	8	LR	LR	18 02 19.2	
	comp=Z,98nm,18.5s,baz=82,slow=38						
CMIG	Matias Romero	52.26	332	LR	LR	17 56 34.7	
	comp=Z,83nm,20.4s,baz=205,slow=29						
VNA3	Neumayer Olymp	52.51	159	P	P	17 40 21.2	+1.0
VNA1	Neumayer--Stat	52.81	158	P	P	17 40 23.1	+0.7
VNA2	Neumayer--Watz	53.15	158	P	P	17 40 25.8	+0.9
	baz=284,slow=8.3						
SNAA	Sanae	54.74	159	P	P	17 40 37.6	+1.0
SNAA	Sanae	54.74	159	P	P	17 40 37.0	+0.5
TAOE	Nuku Hiva Isla	66.67	273	eLR	LR	18 02 07.7	
	comp=Z,107nm,27.3s						
TXAR	Lajitas Array	66.78	330	P	P	17 42 01.4	+2.3
	comp=Z,0.8nm,0.6s,baz=137,slow=13,SNR=5.1						
TBI	Tubuai	68.09	255	eT	T	18 56 38.5	
	comp=Z,7.8nm,0.2s						
SYO	Syowa Base	69.03	159⇓	epP	pP	17 42 13.8	+1.3
SYO	Syowa Base	69.03	159⇑	ePcP	PcP	17 42 33.3	-3.5
TIAR	Tiarei	70.52	261	eT	T	18 59 39.2	
	comp=Z,1.0nm,0.2s						
PPT2	Papeete2	70.70	261	eLR	LR	18 04 04.3	
	comp=Z,144nm,24.0s						
LIC	Lamto	73.78	72	eP	P	17 42 41.7	-0.6
	comp=Z,34nm,1.3s						
TIC	Toumodi	74.03	72	eP	P	17 42 43.3	-0.4
KIC	Kosan Boka	74.09	73	eP	P	17 42 44.9	+0.8
	comp=Z,13nm,0.9s						
DBIC	Dimbokro	74.17	72	P	P	17 42 44.9	+0.4
	comp=Z,7.7nm,0.9s,baz=232,slow=5.5,SNR=8.0						
DBIC				LR	LR	18 12 55.3	
	comp=Z,238nm,19.3s,baz=260,slow=34						
MAW	Mawson	76.43	164	P	P	17 42 58.0	+1.3
	comp=Z,8.0nm,0.8s,baz=222,slow=7.6,SNR=11						
MAW				LR	LR	18 15 46.7	
	comp=Z,157nm,21.0s,baz=238,slow=35						
PDAR	Pinedale Array	80.73	333	P	P	17 43 22.6	+1.7
	comp=Z,0.7nm,0.9s,baz=131,slow=6.8,SNR=4.1						
PDAR				LR	LR	18 16 13.3	
	comp=Z,64nm,18.4s,baz=21,slow=34						
BOSA	Boshof	81.70	118	LR	LR	18 16 36.0	
	comp=Z,100nm,18.8s,baz=254,slow=34						
TORD	Torodi Ar. Bea	83.12	70	P	P	17 43 33.8	0.0
	comp=Z,9.8nm,0.8s,baz=258,slow=4.8,SNR=60						
TORD	Torodi Ar. Bea	83.12	70	P	P	17 43 33.2	-0.6
TORD				IAmb	IAmb	17 43 35.0	
	comp=Z,8.3nm,0.9s						
RAO	Raoul Island	87.65	237	LR	LR	18 15 32.7	
	comp=Z,39nm,20.5s,baz=54,slow=30						
AFI	Afiamalu	91.12	253	LR	LR	18 18 19.1	
	comp=Z,108nm,19.3s,baz=119,slow=31						
ESDC	Sonseca Array	94.27	46	LR	LR	18 26 48.0	
	comp=Z,89nm,18.1s,baz=215,slow=36						
AKASG	Malin Array Be	119.92	46	PKP	PKPdf	17 49 57.2	-0.4
	comp=Z,1.2nm,0.8s,baz=259,slow=2.3,SNR=7.4						
BRTR	Keskin Array B	120.20	59	PKP	PKiKP	17 49 58.7	-0.1
	comp=Z,0.6nm,0.7s,baz=203,slow=3.0,SNR=4.5						
ASAR	Alice Springs	120.54	208	PKKPbc	PKKPbc	18 00 06.4	+1.4
	comp=Z,0.8nm,1.1s,baz=340,slow=2.5,SNR=4.7						
WRA	Warramunga Arr	123.67	210	PKP	PKiKP	17 50 06.1	-0.1
	comp=Z,0.7nm,0.8s,baz=171,slow=1.6,SNR=6.2						
H11S2	WAKE ISLAND Hy	125.70	272	T	T	20 08 57.6	
	baz=115,slow=74,SNR=49						
H11S1	WAKE ISLAND Hy	125.71	272	T	T	20 08 55.3	
	baz=115,slow=74,SNR=34						
H11S3	WAKE ISLAND Hy	125.71	272	T	T	20 08 58.9	
	baz=115,slow=74,SNR=33						
H11N3	WAKE ISLAND Hy	126.02	273	T	T	20 09 22.1	
	baz=155,slow=74,SNR=5.3						
H11N2	WAKE ISLAND Hy	126.04	273	T	T	20 09 23.4	
	baz=119,slow=74,SNR=10						
KLMR	Klimovskoe	126.69	35	ePKPdf	PKPdf	17 50 09.1	-1.2
KLMR				AMP		17 50 12.9	
	comp=Z,15nm,1.3s						
ARU	Arti	137.18	38	PKP	PKiKP	17 50 31.8	-0.4
	comp=Z,0.3nm,0.3s,baz=295,slow=7.2,SNR=4.1						
BVAR	Borovoye Array	144.78	40	PKP	PKPdf	17 50 44.4	+0.3
	comp=Z,11nm,0.8s,baz=238,slow=8.5,SNR=30						
KKAR	Karatay Array	147.86	57	PKPbc	PKiKP	17 50 53.3	-1.2
EKS2	Erkin-Say	150.30	57	P	PKiKP	17 51 00.0	+0.3
	SNR=17						
AML	Almayashu	150.35	58	P	PKiKP	17 51 00.8	+0.7
	SNR=8.6						
KURBB	Kurchatov Arra	150.37	39	PKP	PKPdf	17 50 54.7	+1.4
	comp=Z,3.0nm,0.9s,baz=298,slow=3.1,SNR=4.8						
KURBB				PKPbc	PKiKP	17 50 59.4	0.0
	comp=Z,9.4nm,0.9s,baz=297,slow=3.1,SNR=65						
USP	Ospenovka	150.67	55	P	PKiKP	17 51 01.2	+0.8
	SNR=15						
AAK	Ala-Archa	150.82	56	PKPbc	PKiKP	17 51 01.5	+0.7
	comp=Z,12nm,0.9s,baz=207,slow=3.1,SNR=37						
AAK	Ala-Archa	150.82	56	P	PKiKP	17 51 01.6	+0.8
	SNR=15						
CHMS	Chumysh	150.92	56	P	PKiKP	17 51 01.4	+0.6
	SNR=6.8						
UCH	Uchtor	150.92	57	P	PKiKP	17 51 02.3	+0.8
	SNR=16						
KBK	Karagaybulak	151.14	56	P	PKiKP	17 51 02.5	+1.0
	SNR=6.4						
ZAA0	Zalesovo Array	151.35	29	PKPbc	PKiKP	17 51 01.7	+0.4
ZALV	Zalesovo Beam	151.35	29	PKP	PKPdf	17 50 55.5	+0.7
	comp=Z,2.1nm,0.9s,baz=228,slow=1.8,SNR=7.3						
ZALV				PKPbc	pPKPbc	17 51 01.7	+1.0
	comp=Z,44nm,0.8s,baz=305,slow=3.0,SNR=106						
TKM2	Tokmak 2	151.54	55	P	PKiKP	17 51 03.1	+0.8
	SNR=8.2						
KSH	Kashi	152.52	62	PKPbc	PKPdf	17 50 58.1	+0.9
MKAR	Makanchi Array	154.47	44	PKP	PKPdf	17 51 00.0	+0.4
	comp=Z,1.0nm,0.9s,baz=268,slow=3.4,SNR=5.3						
MKAR				PKPbc	PKiKP	17 51 08.0	-0.1
	comp=Z,2.6nm,0.9s,baz=270,slow=2.4,SNR=11						
MKAR				PKPab	pPKPab	17 51 23.4	+1.2
	comp=Z,3.5nm,0.9s,baz=270,slow=3.6,SNR=9.0						
WMQ	Urumqi	159.27	45	eP	PKPdf	17 51 06.3	+0.4
WMQ				pmax	pmax		
	comp=Z,210nm,4.5s						
SONM	Songino Array	162.77	3	PKPab	PKPab	17 52 00.1	+1.8
	comp=Z,1.7nm,0.9s,baz=339,slow=5.2,SNR=8.5						
CMAR	Chiang Mai Arr	165.41	144	PKPab	PKPab	17 52 10.9	+0.4
	comp=Z,0.4nm,0.4s,baz=218,slow=5.8,SNR=5.7						
GTA	Gaotai	169.01	35	PKPbc	PKPdf	17 51 15.9	+0.9

TRN 13 17:38:37.8, 18°.73N×63°.03W, h8^{km}, MD4.2, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMRT	St. Maarten	0.68	184	eP	Pn	17 38 54.2	+0.5
SMRT				eS	Sn	17 39 05.3	+0.7
SABA	Saba	1.12	190	eP	Pn	17 39 02.1	+2.2
SABA				eS	Sn	17 39 19.7	+4.2
SEUS	St. Eustatius	1.23	178	eP	Pg	17 39 02.7	+1.3
SEUS				eS	Sn	17 39 21.1	+2.9
SKI	Saint Kitts	1.42	169	eP	Pg	17 39 06.8	+1.8
SKI				eS	Sg	17 39 26.1	+2.7
ANWB	Willy Bob	1.58	132	eP	Pb	17 39 07.2	-0.2
ANWB				eS	Sg	17 39 31.0	+2.1
CDVI	St. Croix	1.92	240	eP	Pb	17 39 12.9	-0.1
ANBD	Bethesda, Anti	2.06	144	eP	Pn	17 39 13.8	+1.0
ANBD				eS	Sg	17 39 42.8	-1.3
CBE	Ff, Capester	2.97	153	eP	Pn	17 39 28.0	+2.6
TBG	Guadaloupe-3	3.15	155	eP	Pn	17 39 30.5	+2.7
TDBA	Terre de Bas,	3.16	155	eP	Pn	17 39 30.5	+2.6
TDBA				eS	Sn	17 40 09.1	+3.3
MAGL	Barre de l'ile	3.23	149	eP	Pn	17 39 30.9	+2.0
MAGL				eS	Sn	17 40 10.1	+2.6
MDCT	Cottage Hill,	3.44	154	eP	Pn	17 39 34.7	+2.9
AOPR	Arecibo Observ	3.55	264	eP	Pn	17 39 36.2	+2.9
AOPR				eS	Sn	17 40 17.8	+2.2
BIM	Bigot	4.59	156	eP	Pn	17 39 49.8	+2.1
MPOM	Morne Pois Mar	4.74	154	eP	Pn	17 39 51.6	+1.9
SLBI	Saint Lucia, B	5.08	157	eP	Pn	17 39 57.3	+3.0

IDC 13 17:39:25.8±1.4, 23°.80S×69°.89E, h0^{km}, mb3.7/3, mb1 3.8/3, mb1mx3.2/47, mbtmp3.7/3, Error ellipse: s-maj=52.3km s-min=34.1km az=178.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	16.25	9	T	T	18 00 20.1	
	baz=191,slow=76,SNR=6.4						
H08S2	Diego Garcia H	16.25	9	T	T	18 00 18.2	
	baz=191,slow=76,SNR=8.2						
H08S3	Diego Garcia H	16.27	9	T	T	18 00 11.6	
	baz=191,slow=76,SNR=6.2						
BOSA	Boshof	40.16	253	P	P	17 47 03.9	-0.1
	5.0nm,1.1s,baz=82,slow=14,SNR=2.5						
ASAR	Alice Springs	58.12	104	P	P	17 49 21.5	-0.1
	0.3nm,0.7s,baz=256,slow=6.0,SNR=9.1						
MKAR	Makanchi Array	71.14	9	P	P	17 50 46.1	+0.1
	0.5nm,0.8s,baz=181,slow=7.2,SNR=4.1						

DDA ***13*** *17:58:45.7, 42°.64N×41°.91E, h7^{km}±2^{km}, ML2.6*
TIF ***13*** *17:58:45.0, 42°.65N×42°.03E, h23^{km}±1^{km}*
ISK ***13*** *17:58:46.5, 42°.61N×41°.80E, h9^{km}, ML2.6/5*
MOS ***13*** *17:58:46.8±0.0, 42°.63N×42°.06E, h10^{km}, MPVA3.2*
NORS ***13*** *17:58:48.5±0.0, 42°.66N×42°.25E, h2^{km}, MPVA3.1*

ISC 13 17:58:46.4±0.9, 42°.61N±0°.02×42°.03E±0°.02, h12^{km}±6^{km}, n33, σ0^{s}.77/63, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHVG	Ch'k'valeri	0.11	20	P	Pg	17 58 49.5	+0.1
CHVG				S	Sg	17 58 52.1	+0.5
TKB	Tkibuli	0.76	110	P	Pg	17 59 00.4	-0.7
TKB				S	Sg	17 59 11.0	-0.1
NEY	Neytrino	0.81	38	i Pg	Pb	17 59 02.1	-0.5
NEY				eSg	Sg	17 59 12.2	-0.7
ABS	Abastumani	1.03	146	P	Pg	17 59 05.4	-0.9
ABS				S	Sg	17 59 19.8	0.0
ONI	Oni	1.05	91	P	Pg	17 59 05.6	-0.9
ONI				S	Sg	17 59 19.2	-1.0
ONI	Oni	1.05	91	i Pg	Pg	17 59 05.7	-0.9
ONI				eSg	Sg	17 59 19.3	-1.0
ARXR	Arkhyz	1.10	330	ePg	Pn	17 59 08.2	+0.4
ARXR				eSg	Sn	17 59 23.0	0.0
DIGR	Digorskoe uzhe	1.18	75	ePg	Pg	17 59 08.9	-0.1
DIGR				eSg	Sg	17 59 23.1	-1.3
BCA	Borcka	1.21	195	PN	Pn	17 59 09.1	0.0
BCA				SN	Sg	17 59 26.2	+1.0
SHA1	Shidzhatmaz	1.22	22	i Pg	Pn	17 59 09.8	+0.4
SHA1				eSg	Sn	17 59 25.6	-0.4
EPOS	Posof	1.22	155	i P	Pn	17 59 08.7	-0.8
EPOS				i S	Sb	17 59 26.0	+0.7
KBZ	Khabaz	1.28	29	ePg	Pg	17 59 11.2	+0.1
KBZ				i Sg	Sn	17 59 27.9	+0.7
DBOC	Borcka	1.29	192	i P	Pn	17 59 09.6	-0.8
DBOC				i S	Sb	17 59 27.5	+0.2
DBOC				IAML		17 59 28.0	
	comp=E,226nm,0.3s						
HOPA	Hopa-Artvin	1.30	200	PN	Pn	17 59 10.8	+0.4
HOPA				SN	Sb	17 59 28.1	+0.7
ZEI	Tsey	1.39	82	ePg	Pg	17 59 13.3	+0.2
ZEI				eSg	Sb	17 59 30.1	-0.1
KIV	Kislovodsk	1.43	19	PN	Pg	17 59 14.1	+0.3
KIV				SN	Sg	17 59 34.3	+2.0
KIV	Kislovodsk	1.43	19	ePg	Pg	17 59 13.5	-0.3
KIV				i Sg	Sg	17 59 32.9	+0.5
KIV0	Kislovodsk Arr	1.43	20	ePg	Pg	17 59 13.4	-0.4
KIV0				i Sg	Sg	17 59 32.6	+0.2
BEYR	Belyy Ugol+	1.51	22	i Pg	Pg	17 59 15.3	-0.1
BEYR				i Sg	Sg	17 59 35.2	+0.2
DAGI	Agillar	1.54	183	i P	Pn	17 59 13.6	-0.2
DAGI				i S	Sn	17 59 34.0	+0.3
DBAD	Bademkaya	1.61	189	i P	Pn	17 59 14.2	-0.6
DBAD				i S	Sn	17 59 35.4	-0.2
DBAD				IAML		17 59 39.0	
	comp=E,72nm,0.9s						
DBAD				IAML		17 59 39.0	
	comp=N,67nm,0.6s						
LACR	Lac	1.68	82	ePg	Pg	17 59 18.8	+0.1
LACR				eSg	Sg	17 59 40.5	0.0
RPOR	Krasnaya Polya	1.69	311	i Pg	Pb	17 59 17.1	-0.3
RPOR				eSg	Sg	17 59 40.5	-0.2
VSLR	Vesyoloye	1.69	301	i Pg	Pb	17 59 17.7	+0.2
VSLR				i Sg	Sg	17 59 40.6	-0.2
DDEM	Demirkent	1.73	187	i P	Pn	17 59 16.0	-0.4
DDEM				i S	Sn	17 59 39.2	+0.7
DDEM				IAML		17 59 41.0	
	comp=E,70nm,0.5s						
DDEM				IAML		17 59 47.0	
	comp=N,118nm,0.3s						
CHOM	Cayeli-Rize	1.79	212	PN	Pn	17 59 17.2	+0.1
CHOM				SN	Sn	17 59 39.4	-0.4
TRLG	Trialeti	1.88	124	P	Pn	17 59 20.0	+1.5

TRLG				S	Sb	17 59 45.2	+1.0
PNSH	Pansheti	1.91	88	P	Pn	17 59 13.4	-5.6
SOC	Sochi	1.95	301	ePg	Pb	17 59 21.7	-0.2
SOC				eSg	Sb	17 59 45.5	-0.7
GUZR	Guzeripl'	1.96	315	i Pg	Pb	17 59 21.3	-0.9
GUZR				eSg	Sb	17 59 46.9	+0.2
SENK	Senkaya-Erzuru	2.06	173	PN	Pn	17 59 22.9	+1.8
SENK				SN	Sn	17 59 48.9	+2.0
LZRR	Lazarevskoye	2.34	305	ePn	Pb	17 59 27.5	-1.0
LZRR				eSn	Sb	17 59 56.1	-1.3
BAYT	Aydıntepe-Bayb	2.63	213	PN	Pn	17 59 30.1	+1.2

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*IDC **13** 18:24:23.9±11.0, 6°.23S×129°.87E, h127km±113km, mb2.9/1, mb1 3.2/5, mb1mx2.8/37, mbtmp3.5/5, ML3.5/4, Error ellipse: s-maj=115.3km s-min=33.4km az=49.0*

ISC 13 18:24:31.2±1.6**, 6°.8S**±0°.1×**129°.4E**±0°.1**, h200km, n5, σ1s.72**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.60	239	P	Pn	18 26 08.4	+2.1
	1.7nm,0.3s,baz=63,slow=4.5,SNR=4.2						
BATI				S	Sn	18 27 21.0	-0.7
	4.0nm,0.3s,baz=334,slow=22,SNR=9.6						
FITZ	Fitzroy Crossi	11.81	198	P	P	18 27 16.8	-1.9
	0.3nm,0.3s,baz=27,slow=14,SNR=16						
FITZ				S	S	18 29 24.5	-1.1
	0.1nm,0.3s,baz=281,slow=22,SNR=1.1						
WRA	Warramunga Arr	13.92	160	P	Pn	18 27 40.9	+0.7
	0.1nm,0.3s,baz=345,slow=13,SNR=15						
WRA				S	S	18 30 14.3	-0.9
	0.1nm,0.3s,baz=344,slow=20,SNR=2.8						
ASAR	Alice Springs	17.32	166	P	Pn	18 28 22.5	+1.1
	0.1nm,0.3s,baz=346,slow=9.5,SNR=17						
ASAR				S	S	18 31 31.8	+2.1
	0.0nm,0.3s,baz=346,slow=26,SNR=2.7						
MKAR	Makanchi Array	67.73	327	P	P	18 35 06.4	-0.7
	0.2nm,0.6s,baz=116,slow=6.6,SNR=2.1						

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*FUNV **13** 18:43:57.7, 8°.53N×71°.52W, h5km, MW3.4*

ISC 13 18:43:55.7±1.1**, 8°.64N**±0°.04×**71°.51W**±0°.03**, h9km**±10km**, n13, σ1s.69**/25**, 1C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIGV	El Vigia	0.25	35	⇑iP	Pn	18 44 04.3	+3.5
VIGV				eS	Sn	18 44 09.3	+5.2
SOCV	Socops	0.73	119	eP	Pg	18 44 09.0	-0.9
SDV	Santo Domingo	0.90	74	eP	Pn	18 44 15.1	+0.4
SDV				eS	Sn	18 44 27.3	-0.6
SDV				i		18 44 29.1	
	comp=Z,33nm,0.3s						
CAPV	Capacho	1.11	226	eP	Pb	18 44 16.7	-0.5
CAPV				eS	Sb	18 44 31.1	-0.8
TORV	Torococo	1.56	54	eP	Pg	18 44 25.6	0.0
TORV				eS	Sg	18 44 46.3	+0.3
PAMC	Pamplona, Colo	1.75	223	eP	Pg	18 44 29.1	-0.2
PAMC				eS	Sg	18 44 52.9	+0.8
PAMC				i		18 44 56.9	
	comp=Z,42nm,0.3s						
OCAC	Ocana	1.84	258	eP	Pg	18 44 30.8	-0.2
OCAC				eS	Sg	18 44 55.1	+0.2
OCAC				i		18 44 58.3	
	comp=Z,173nm,0.2s						
CURV	Curarigua	2.05	48	eP	Pg	18 44 34.5	-0.5
CURV				eS	Sb	18 44 59.9	+1.1
SMLC	San Martn de	2.54	274	eP	Pb	18 44 43.1	+1.6
SMLC				eS	Sg	18 45 16.7	-0.8
SMLC				i		18 45 19.2	
	comp=Z,28nm,0.3s						
ELOV	Elorza	2.58	129	eP	Pg	18 44 45.0	-0.2
ELOV				eS	Sb	18 45 12.2	-1.8
ELOV	Elorza	2.58	129	eP	Pn	18 44 38.4	+0.8
ELOV				eS	Sn	18 45 08.8	-0.4
BARC	Barichara	2.62	219	eP	Pg	18 44 44.5	-1.6
BARC				eS	Sb	18 45 17.1	+1.6
BARC				i		18 45 21.2	
	comp=Z,24nm,0.5s						
BAUV	El Baul	3.44	85	eP	Pn	18 44 51.3	+1.8
BAUV				eS	Sn	18 45 30.9	+0.5

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*IDC **13** 19:11:08.9±0.7, 9°.79S×76°.40W, h0km, mb4.0/8, mb1 4.3/13, mb1mx4.1/30, mbtmp4.1/13, ML3.9/5, MS3.1/4, Ms1 3.1/4, ms1mx2.8/31, Error ellipse: s-maj=24.1km s-min=12.6km az=84.0*

*ARE **13** 19:11:09±2.8, 9°.90S±0°.06×76°.38W±0°.10, h13km±5km, ML4.4, mb4.5/4(NEIC), Error ellipse: s-maj=14.3km s-min=7.5km az=110.0*

*NEIC **13** 19:11:12.3±2.5, 9°.94S±0°.08×76°.4W±0°.1, h39km±7km, Error ellipse: s-maj=14.2km s-min=10.9km az=94.0*

*VAO **13** 19:11:19.9±1.3, 9°.53S×75°.71W, h10km, mb4.2*

ISC 13 19:11:13.8±0.6**, 9°.81S**±0°.06×**76°.48W**±0°.08**, h35km, n66, σ2s.29**/60**, mb4.0**/10**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.19	189	Pn	Pn	19 11 47.6	-0.3
	65nm,0.3s,baz=360,slow=14,SNR=69						
NNA				Lg	Lg	19 12 19.9	
	53nm,0.3s,baz=330,slow=23,SNR=20						
NNA				LR	LR	19 12 44.2	
	comp=Z,148nm,18.3s,baz=12,slow=43						
NNA	Nana	2.19	189		Pn	19 11 45.1	-2.7
ATAH	Atahualpa	3.26	324	Pn	Pn	19 12 08.6	+5.7
	12nm,0.3s,baz=152,slow=3.0,SNR=74						
ATAH				Lg	Lg	19 12 54.5	
	18nm,0.3s,baz=126,slow=22,SNR=5.3						
ATAH				LR	LR	19 13 19.3	
	comp=Z,131nm,18.2s,baz=149,slow=40						
CZSB	Cruzeiro do Su	4.26	61	eP	Pn	19 12 14.7	-1.6
CZSB	Cruzeiro do Su	4.26	61		Pn	19 12 14.3	-2.0
TBTG	Tabatinga, AM	8.58	50	eP	Pn	19 13 13.2	-2.4
PTLC	Puerto Leguiza	10.05	10	eP	Pn	19 13 29.6	-6.3
ETMB	Extrema	10.12	91	eP	Pn	19 13 34.1	-2.5
ETMB	Extrema	10.12	91	Pn	Pn	19 13 33.1	-3.5
OTAV	Otavalo	10.17	349	eP	Pn	19 13 41.1	+3.2
OTAV	Otavalo	10.17	349		Pn	19 13 36.2	-1.7
CUSE	Cuicocha Este	10.23	349	eP	Pn	19 13 44.9	+6.3
LPAZ	La Paz	10.37	129	Pn	Pn	19 13 40.7	0.0
	0.2nm,0.3s,baz=233,slow=19,SNR=1.9						
LPAZ				Sn	Sn	19 15 44.0	+7.9
	0.1nm,0.3s,baz=270,slow=9.1,SNR=1.8						
LPAZ	La Paz	10.37	129	eP	Pn	19 13 45.4	+4.7
TULM	Tulcn-Chalpat	10.54	353	eP	Pn	19 13 43.9	+1.1
CMBC	Cumbal	10.76	353	eP	Pn	19 13 47.8	+1.8
PB16	IPOC Station P	10.84	142		Pn	19 13 43.0	-4.1
GCUF	Volcan Galeras	11.00	355	eP	Pn	19 13 52.5	+3.4
FLOC	Florencia	11.35	4	eP	Pn	19 13 55.4	+1.9
FLOC	Florencia	11.35	4		Pn	19 13 53.6	+0.1
SOTA	Rioblanco	11.87	359	eP	Pn	19 14 03.1	+2.0
PCON	Cinco Dias	12.06	0	eP	Pn	19 14 06.9	+3.1
MACC	Macarena, Meta	12.16	13	eP	Pn	19 14 02.1	-2.6
POPC	Popayan, Colom	12.27	359	eP	Pn	19 14 07.8	+1.5
MARP	Paez Belalcaza	12.58	2	eP	Pn	19 14 10.7	+0.1
SAML	Samuel	13.15	87	Pn	Pn	19 14 13.7	-4.5
ORTC	Ortega, Tolima	13.68	5	eP	Pn	19 14 26.0	+0.5
VILC	Villavicencio,	14.11	11	eP	Pn	19 14 32.7	+1.4
LVC	Limon Verde	14.65	151	Pn	Pn	19 14 37.4	-1.5
	0.1nm,0.3s,baz=234,slow=8.7,SNR=2.0						
LVC	Limon Verde	14.65	151	eP	P	19 14 45.6	+0.8
NORC	Norcasia	15.36	6	eP	Pn	19 14 44.2	-3.9
SOLC	Bahia Solano	15.96	357	eP	Pn	19 14 53.6	-2.2
SIV	San Ignacio	16.22	114	Pn	Pn	19 14 56.6	-2.6
	1.0nm,0.3s,baz=293,slow=13,SNR=15						
SIV				Lg	Lg	19 19 36.7	
	0.3nm,0.3s,baz=200,slow=23,SNR=4.5						
SIV				LR	LR	19 21 21.9	
	comp=Z,114nm,18.7s,baz=87,slow=38						
VILB	Vilhena	16.26	103	eP	Pn	19 14 58.6	-1.1
MACA	Manacapuru-AM	17.02	68	eP	Pn	19 15 08.6	-0.6
SMLC	San Martn de	18.64	7	eP	Pn	19 15 37.8	+8.6
PTGA	Pitinga	18.74	62	P	P	19 15 28.6	-1.1
	1.1nm,0.3s,baz=250,slow=17,SNR=5.6						
PTGA				Lg	Lg	19 20 56.1	
	0.1nm,0.3s,baz=311,slow=24,SNR=1.3						
PDRB	Porto dos Gac	19.49	97	eP	Pn	19 15 39.8	+0.4
BOAV	Boa Vista	19.99	53	eP	Pn	19 15 45.7	+0.3
CLDB	Colider	20.37	95	eP	Pn	19 15 50.2	+0.3
BAUV	El Baul	20.43	25	P	P	19 15 47.7	-0.6
NPGB	Novo Progresso	21.07	84	eP	P	19 15 55.3	+0.1
SALV	Santo Antonio	21.14	109	eP	P	19 16 00.2	+4.3
ITTB	Itaituba	21.28	77	eP	P	19 15 56.7	-0.7
URIC	Uribia, Colomb	21.83	12	P	P	19 15 58.0	-5.3
URIC				IAmb	IAmb	19 16 18.1	
	comp=Z,30nm,1.2s						
CPUP	Villa Florida	24.46	135	P	P	19 16 30.9	+1.3
	comp=Z,3.6nm,0.8s,baz=326,slow=15,SNR=4.1						
MCPB	Macapa, AP	26.05	70	eP	P	19 16 45.9	+1.8
PCMB	Pacaembu	26.91	119	eP	P	19 16 55.8	+4.0
ITRB	Iturama	27.07	114	eP	P	19 16 56.4	+3.1
TMAB	Tom-Au,PA,Br	29.15	77	eP	P	19 17 14.7	+2.8
PLCA	Paso Flores	31.24	171	P	P	19 17 29.9	-0.4
	comp=Z,3.5nm,0.9s,baz=334,slow=10,SNR=5.4						
ROSB	Rosrio	32.86	80	eP	P	19 17 47.9	+3.3
NBAN	Anadia - AL	39.61	93	eP	P	19 18 45.9	+3.5
TXAR	Lajitas Array	46.92	327	P	P	19 19 43.1	+1.8
	comp=Z,0.9nm,0.7s,baz=159,slow=8.7,SNR=3.8						
SDCO	Great Sand Dun	54.55	332	P	P	19 20 36.6	-2.3
SDCO				IAmb	IAmb	19 20 41.5	
	comp=Z,3.4nm,0.9s						
PDAR	Pinedale Array	60.42	332	P	P	19 21 21.2	+1.1
	comp=Z,0.6nm,0.5s,baz=122,slow=9.9,SNR=9.2						
PDAR				LR	LR	19 47 32.2	
	comp=Z,33nm,18.3s,baz=322,slow=36						
ULM	Lac du Bonnet	62.16	346	P	P	19 21 31.4	0.0
	comp=Z,4.3nm,0.6s,baz=146,slow=7.2,SNR=5.9						
YKA	Yellowknife Ar	77.88	343	P	P	19 23 08.2	+0.6
	comp=Z,0.8nm,0.5s,baz=141,slow=5.9,SNR=14						
TORD	Torodi Ar. Bea	80.88	75	P	P	19 23 24.8	-0.2
	comp=Z,0.8nm,0.7s,baz=267,slow=3.0,SNR=4.9						
TORD	Torodi Ar. Bea	80.88	75	P	P	19 23 21.1	-3.9
ILAR	Eielson Array	90.65	336	P	P	19 24 12.8	+0.4
	comp=Z,0.7nm,1.0s,baz=126,slow=4.6,SNR=4.1						
ZALV	Zalesovo Beam	133.50	15	PKP	PKPdf	19 30 26.4	+0.1
	comp=Z,0.6nm,0.4s,baz=337,slow=3.9,SNR=4.6						
ASAR	Alice Springs	135.40	221	PKP	PKPdf	19 30 30.1	-0.8
	comp=Z,0.4nm,0.7s,baz=122,slow=1.9,SNR=6.3						
WRA	Warramunga Arr	137.64	226	PKP	PKPdf	19 30 35.1	-0.1
	comp=Z,0.6nm,0.8s,baz=124,slow=2.0,SNR=11						
MKAR	Makanchi Array	138.95	22	PKP	PKPdf	19 30 37.1	+0.3
	comp=Z,0.2nm,0.4s,baz=324,slow=2.6,SNR=4.7						
KSRS	Korea Array	144.76	325	PKP	PKPdf	19 30 47.2	-0.1
	comp=Z,2.9nm,0.6s,baz=51,slow=3.6,SNR=17						

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*IDC **13** 19:13:26.4±1.1, 0°.57S×124°.30E, h0km, mb3.3/5, mb1 3.4/5, mb1mx3.3/29, mbtmp3.4/5, Error ellipse: s-maj=181.1km s-min=20.7km az=65.0*

*DJA **13** 19:13:33.9±1.0, 0°S±3°×12°5E±°, h34km±18km, M4.0/19, mb4.1/4, mB4.6/3, MLv4.0/19, Mw(mB)3.9/3*

ISC 13 19:13:33.5±0.8**, 0°.39S**±0°.07×**124°.96E**±0°.05**, h52km, n19, σ1s.24**/23**, mb3.7**/5**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.37	314	P	Pn	19 13 56.0	-0.3
KMSI				S	Sn	19 14 14.6	+1.3
SANI	Sanana	1.94	148	P	Pn	19 14 02.7	-1.4
LBMI	Labuha	2.55	96	P	Pn	19 14 12.9	+0.5
LBMI				S	Sn	19 14 42.1	-0.3
TNTI	Ternate	2.67	64	P	Pn	19 14 15.6	+1.6
TNTI				S	Sn	19 14 45.7	+0.5
MRSI	Marisa	3.14	286	P	Pn	19 14 19.6	-0.9
APSI	Ampana	3.35	261	P	Pn	19 14 24.3	+0.9
SGSI	Sangihe	4.09	8	P	Pn	19 14 30.7	-2.8
AAI	Ambon	4.60	135	P	Pn	19 14 40.9	+0.4
MSAI	Masohi	4.94	127	P	Pn	19 14 47.5	+2.4
MPSI	Mapaga	5.11	278	P	Pn	19 14 48.3	+0.7
TTSI	Tana Toraja	5.77	243	P	Pn	19 14 58.0	+1.4
	0.1nm541nm23nm,0.5s						
SPSI	Sidrap Palu	6.28	236	P	Pn	19 15 04.7	+1.1
	0.1nm483nm15nm,0.5s						
FAKI	Fak Fak	7.71	109	P	Pn	19 15 23.0	-0.2
WRA	Warramunga Arr	21.49	155	P	P	19 18 17.2	-0.8
	0.2nm,0.5s,baz=333,slow=12,SNR=6.9						
ASAR	Alice Springs	24.71	160	P	P	19 18 50.8	+0.8
	0.2nm,0.7s,baz=342,slow=11,SNR=5.2						
ASAR				PcP	PcP	19 22 26.9	+0.7
	0.3nm,1.0s,baz=356,slow=2.5,SNR=4.3						
SONM	Songino Array	50.68	344	P	P	19 22 27.9	0.0
	0.3nm,0.4s,baz=159,slow=8.1,SNR=3.2						
MKAR	Makanchi Array	59.98	327	P	P	19 23 32.9	-1.8
	0.7nm,0.5s,baz=125,slow=8.0,SNR=16						
ZALV	Zalesovo Beam	63.49	335	P	P	19 23 57.8	-0.2
	0.4nm,0.5s,baz=121,slow=5.4,SNR=1.9						
TORD	Torodi Ar. Bea	122.40	285	PKP	PKPdf	19 32 23.8	-0.2
	0.3nm,0.8s,baz=89,slow=2.1,SNR=1.9						

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*IDC **13** 19:50:52.7±1.1, 4°.11S×129°.71E, h0km, mb3.8/4, mb1 3.9/9, mb1mx3.7/39, mbtmp3.7/9, ML3.3/5, MS2.8/4, Ms1 2.8/4, ms1mx2.6/34, Error ellipse: s-maj=35.4km s-min=18.9km az=90.0*

*DJA **13** 19:50:55.7±1.1, 4°S±7°×13°0E±°, h27km±11km, M4.0/9, mb4.4/2, MLv3.8/9*

ISC 13 19:50:57.4±0.8**, 4°.18S**±0°.06×**129°.61E**±0°.05**, h36km, n18, σ1s.37**/23**, mb3.8**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.07	321	P	Pn	19 51 13.8	-2.1
MSAI				S	Sn	19 51 28.0	-1.5
AAI	Ambon	1.49	289	P	Pn	19 51 20.1	-1.6
AAI				S	Sn	19 51 39.0	-0.9
FAKI	Fak Fak	2.92	65	P	Pn	19 51 41.3	0.0
FAKI				S	Sn	19 52 15.0	-0.1
SIJI	Sorong	3.68	27	Pn	Pn	19 51 51.2	-0.7
	4.2nm,0.3s,baz=257,slow=23,SNR=36						
SIJI				Sn	Sn	19 52 34.1	+0.1
	6.6nm,0.3s,baz=250,slow=20,SNR=9.2						
SWI	Sorong	3.69	27	P	Pn	19 51 51.4	-0.4
LBMI	Labuha	4.10	329	P	Pn	19 51 58.2	+0.6
SANI	Sanana	4.19	300	P	Pn	19 51 58.9	+0.1
SANI				S	Sn	19 52 46.4	-0.1
TNTI	Ternate	5.41	335	P	Pn	19 52 13.7	-1.8
	0.1nm11nm,0.5s						
BATI	Baumata	8.40	224	Pn	Pn	19 52 59.3	+2.6
	0.7nm,0.3s,baz=100,slow=18,SNR=1.9						
BATI				LR	LR	19 56 18.1	
	comp=Z,118nm,20.6s,baz=56,slow=38						
KAPI	Kappang	9.86	265	LR	LR	19 56 53.9	
	comp=Z,33nm,20.1s,baz=115,slow=36						
FITZ	Fitzroy Crossi	14.37	195	Pn	Pn	19 54 18.9	+0.6
	0.1nm,0.3s,baz=21,slow=12,SNR=5.1						
FITZ				LR	LR	19 59 32.4	
	comp=Z,38nm,21.0s,baz=20,slow=36						
WRA	Warramunga Arr	16.33	164	Pn	Pn	19 54 43.5	-0.6
	0.1nm,0.3s,baz=350,slow=12,SNR=6.0						
WRA				Sn	Sn	19 57 40.8	-3.6
	0.0nm,0.3s,baz=336,slow=23,SNR=2.4						
ASAR	Alice Springs	19.81	168	P	Pn	19 55 26.0	-0.8
	0.2nm,0.3s,baz=348,slow=10.0,SNR=24						
ASAR				PcP	PcP	19 59 42.4	+0.1
	0.0nm,0.3s,baz=360,slow=1.4,SNR=1.7						
LEM	Lembang	22.05	262	LR	LR	20 06 37.2	
	comp=Z,27nm,18.1s,baz=150,slow=43						
CMAR	Chiang Mai Arr	37.67	308	P	P	19 58 10.8	+1.3
	0.7nm,0.6s,baz=135,slow=7.8,SNR=8.7						
SONM	Songino Array	55.66	341	P	P	20 00 30.7	+0.7
	0.8nm,0.9s,baz=162,slow=6.6,SNR=4.5						
MKAR	Makanchi Array	65.67	326	P	P	20 01 38.5	+0.3
	1.1nm,0.7s,baz=129,slow=7.0,SNR=8.4						
ZALV	Zalesovo Beam	68.90	333	P	P	20 01 58.8	+0.4
	0.3nm,0.4s,baz=124,slow=7.8,SNR=3.9						

IDC 13 19:55:31.2±15.0**, 20°.85S×177°.81W, h493km**±109km**, mb2.9**/3**, mb1 3.1**/4**, mb1mx2.8**/29**, mbtmp3.8**/4**, Error ellipse: s-maj=323.9km s-min=50.9km az=145.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.98	308	P	P	19 56 57.9	0.0
	3.4nm,0.3s,baz=125,slow=12,SNR=8.7						
ASAR	Alice Springs	44.61	257	P	P	20 02 59.1	-0.1
	1.1nm,0.5s,baz=94,slow=7.9,SNR=17						
WRA	Warramunga Arr	44.73	262	P	P	20 02 59.3	-0.8
	0.2nm,0.3s,baz=99,slow=7.3,SNR=7.4						
FITZ	Fitzroy Crossi	53.16	263	P	P	20 04 03.8	+1.1
	1.7nm,1.1s,baz=96,slow=8.0,SNR=1.9						
AKASG	Malin Array Be	143.40	331	PKP	PKPdf	20 14 08.1	-0.8
	0.4nm,0.4s,baz=40,slow=3.4,SNR=5.9						

NNC 13 19:56:32.7±5.8**, 38°.84N×73°.17E, h0km, mb3.9, mpv3.5, 5C-2D, Error ellipse: s-maj=43.7km s-min=26.0km az=165.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	Merke	3.90	1	Pg	Pn	19 57 37.1	+3.2
	3.5nm,0.3s						
MRKS				Lg	Lg	19 58 29.2	
	5.2nm,0.4s						
AAK	Ala-Archa	3.92	14	⇑Pg	Pb	19 57 45.2	+2.4
	4.6nm,0.7s						
AAK				⇓Lg	Lg	19 58 32.9	
	12nm,0.8s						
IUG	Iuzhnay	4.08	325	Pg	Pn	19 57 38.2	+1.9
	83nm,0.3s						
IUG				Lg	Lg	19 58 30.8	
	31nm,0.4s						
TKM2	Tokmak 2	4.47	24	⇓Pg	Pg	19 57 57.7	-0.7
	3.3nm,0.6s						
TKM2				⇑Lg	Lg	19 58 56.1	
	3.8nm,0.6s						
KK08	Karatay Array	4.72	335	⇑Pn	Pn	19 57 45.7	+0.6
	1.8nm,0.5s,baz=155,slow=14						
KK08				⇑Sn	Sn	19 58 45.4	+4.8
	9.6nm,0.8s,baz=158,slow=26						
TNSS	Tian-Shan	5.07	33	Pg	Pb	19 58 06.2	+3.6
	2.3nm,0.3s						
TNSS				Lg	Lg	19 59 18.2	
	3.0nm,0.6s						
KRBS	Karabastau	5.20	20	Pg	Pb	19 58 07.3	+2.7
	2.9nm,0.6s						
KRBS				Lg	Lg	19 59 18.7	
	2.1nm,1.0s						
MDOK	Medeo	5.22	33	Pg	Pb	19 58 06.9	+2.0
	2.9nm,0.6s						
MDOK				Lg	Lg	19 59 19.0	
	5.6nm,0.5s						
KOTS	Kotyrbulak	5.30	33	Pg	Pb	19 58 08.9	+2.6
	2.2nm,0.5s						
KOTS				Lg	Lg	19 59 21.9	
	12nm,0.7s						
KTBS	Karatobe	5.54	27	Pg	Pb	19 58 13.1	+2.8
	1.4nm,0.6s						
KTBS				Lg	Lg	19 59 29.5	
	5.6nm,0.5s						
AB31	Akbulak array	14.08	322	⇑P	Pn	19 59 52.5	-0.8
	0.7nm,0.6s,baz=131,slow=13,SNR=18						

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*NORS **13** 19:57:31.5±0.0, 42°.23N×45°.09E, h1km, MPVA3.2*

*TIF **13** 19:57:32.9, 42°.41N×45°.11E, h15km±1km*

*MOS **13** 19:57:32.0±0.0, 42°.34N×45°.11E, h20km, MPVA3.3*

*DDA **13** 19:57:32.5, 42°.42N×45°.06E, h5km±5km, ML2.1*

*DRS **13** 19:57:35.9±0.0, 42°.42N×45°.27E, h14km*

ISC 13 19:57:33.8±1.0**, 42°.40N**±0°.02×**45°.10E**±0°.01**, h18km**±7km**, n48, σ1s.62**/91**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNSH	Pansheti	0.43	303	P	Pg	19 57 33.6	-9.1
PNSH				S	Sg	19 57 38.8	-10
GUDG	Gudauri	0.47	278	P	Pb	19 57 43.7	+0.1
GUDG				S	Sb	19 57 49.8	-0.5
MTEO	Meteo	0.50	304	P	Pg	19 57 43.1	-1.0
MTEO				S	Sb	19 57 51.3	-0.3
KMGR	Komgaron	0.68	345	ePg	Pn	19 57 47.5	-1.1
KMGR				eSg	Sn	19 57 59.0	+0.2
BTNK	Botanikuri	0.75	197	P	Pb	19 57 48.3	-0.2
BTNK				S	Sn	19 57 59.6	-0.9
BTNK	Botanikuri	0.75	197	i P	Pb	19 57 48.2	-0.2
BTNK				i S	Sn	19 57 59.6	-0.9
BTNK				IAML		19 58 00.0	
	comp=E,102nm,0.1s						
BTLR	Botlikh	0.87	72	ePg	Pg	19 57 49.9	-0.9
BTLR				eSg	Sn	19 58 03.6	0.0
DVE	Vedeno	0.94	53	ePg	Pn	19 57 51.6	-0.6
DVE				eSg	Sn	19 58 04.1	-1.2
GROC	Groznyy	0.95	32	ePg	Pn	19 57 54.0	+1.7
GROC				eSg	Sn	19 58 07.3	+1.9
ZEI	Tsey	0.96	294	ePg	Pb	19 57 51.5	-0.7
ZEI				eSg	Sg	19 58 04.9	-0.5
ARNR	Ardon	0.98	323	ePg	Pn	19 57 53.3	+0.6
ARNR				eSg	Sn	19 58 08.7	+2.4
LGD	Lagodekhi	1.02	123	P	Pn	19 57 52.7	-0.6
LGD				S	Sn	19 58 07.2	0.0
KORR	Kora	1.02	312	ePg	Pn	19 57 54.1	+0.7
KORR				eSg	Sn	19 58 09.0	+1.8
BTKR	Batakoyurt	1.05	337	ePg	Pg	19 57 55.4	+1.1
BTKR				eSg	Sn	19 58 12.2	+4.2
TRLG	Trialeti	1.14	221	P	Pb	19 57 54.5	-0.6
TRLG				S	Sn	19 58 11.0	+0.7
KZRT	Kazreti	1.14	208	i P	Pb	19 57 54.5	-0.6
KZRT				i S	Sn	19 58 09.7	-0.4
XNZR	Khunzakh	1.20	83	ePg	Pg	19 57 55.7	-1.3
XNZR				eSg	Sg	19 58 11.5	-1.1
DDFL	Dedoflistskaro	1.22	141	P	Pg	19 57 59.5	+2.1
DDFL				S	Sg	19 58 20.7	+7.3
DDFL	Dedoflistskaro	1.22	141	i P	Pg	19 57 59.3	+1.9
DDFL				i S	Sg	19 58 20.1	+6.8
DDFL				IAML		19 58 21.0	
	comp=E,56nm,0.3s						
DDFL				IAML		19 58 21.0	
	comp=N,39nm,0.3s						
BRNG	Burnasheti	1.23	231	P	Pg	19 57 56.6	-1.0
DIGR	Digorskoe uzhe	1.23	294	ePg	Pn	19 57 55.9	-0.4
DIGR				eSg	Sg	19 58 14.1	+0.5
STDR	Stavd-Durt	1.23	322	ePg	Pg	19 57 57.9	+0.3
STDR				eSg	Sg	19 58 16.8	+3.1
ONI	Oni	1.23	279	P	Pb	19 57 56.3	-0.4
ONI				S	Sg	19 58 16.7	+2.9
ONI	Oni	1.23	279	ePg	Pb	19 57 56.4	-0.2
ONI				eSg	Sg	19 58 14.2	+0.5
DMNI	Dmanisi	1.27	213	P	Pn	19 57 56.4	-0.4
DMNI				S	Sn	19 58 13.4	-0.1
LSNR	Lesken	1.28	314	ePg	Pg	19 57 58.2	-0.4
LSNR				eSg	Sg	19 58 16.9	+1.5
UNCR	Uncukul	1.29	75	ePg	Pg	19 57 58.0	-0.8
UNCR				eSg	Sg	19 58 15.2	-0.4
DLMR	Dylym	1.31	59	ePg	Pg	19 57 58.5	-0.6
DLMR				eSg	Sg	19 58 15.7	-0.6
GNBR	Gunib	1.38	90	ePg	Pg	19 57 59.9	-0.5
GNBR				eSg	Sg	19 58 18.1	-0.4
KRNR	Karanay	1.40	72	ePg	Pg	19 57 59.8	-1.0
KRNR				eSg	Sg	19 58 17.8	-1.4
ARKR	Arakani	1.42	81	ePg	Pg	19 58 00.4	-0.7
ARKR				eSg	Sg	19 58 19.4	-0.2
DBC	Dubki	1.42	64	ePg	Pg	19 58 00.3	-0.9
DBC				eSg	Sg	19 58 19.5	-0.1
PRTR	Priterechnaya	1.48	336	ePg	Pb	19 58 00.0	-0.7
PRTR				eSg	Sg	19 58 21.4	-0.1
KMKR	Kumukh	1.51	100	ePg	Pb	19 58 01.0	-0.4
KMKR				eSg	Sb	19 58 20.2	-0.1
BUJR	Buynaksk	1.54	73	ePg	Pg	19 58 02.4	-1.1
BUJR				eSg	Sg	19 58 23.0	-0.6
AKH	Akhalkalaki	1.56	231	P	Pg	19 58 02.6	-1.2
AKH				S	Sg	19 58 22.7	-1.4
TKB	Tkibuli	1.56	269	P	Pg	19 58 02.9	-1.0
TKB				S	Sg	19 58 23.5	-0.7
BGD	Bogdanovka	1.60	225	P	Pg	19 58 03.2	-1.4
BGD				S	Sg	19 58 24.2	-1.2
ABS	Abastumani	1.82	250	P	Pb	19 58 06.3	-0.4
ABS				S	Sg	19 58 30.8	-1.6
SGKR	Sergokala	1.90	87	ePg	Pg	19 58 08.5	-1.7
SGKR				eSg	Sg	19 58 33.4	-1.5
NEY	Neytrino	1.94	297	ePg	Pb	19 58 08.9	+0.1
NEY				eSg	Sg	19 58 34.4	-2.1
EPOS	Posof	1.98	244	i P	Pb	19 58 08.7	-0.7
EPOS				IAML		19 58 38.0	
	comp=N,16nm,0.5s						
KBZ	Khabaz	2.09	310	ePg	Pb	19 58 10.6	-0.5
KBZ				eSg	Sb	19 58 37.6	+0.8
SHA1	Shidzhatmaz	2.23	308	ePn	Pb	19 58 13.1	-0.7
SHA1				eSn	Sb	19 58 41.1	-0.1
GNI	Garni	2.27	187	ePn	Pb	19 58 12.5	-1.8
GNI				eSn	Sb	19 58 43.2	+1.2
KIV	Kislovodsk	2.35	312	ePn	Pn	19 58 12.7	+1.1
KIV				eSn	Sb	19 58 45.3	+0.9
DIGO	Kars	2.37	214	i P	Pb	19 58 15.1	-1.1
ALER	Alexandrovskoy	2.84	327	ePn	Pn	19 58 20.2	+1.9
ALER				eSn	Sb	19 58 55.8	-2.8

BGR ***13*** *20:09:07.9±0.0,37.°34N×75.°16E,h16^{km},mb5.0,Ms3.6*
SOME ***13*** *20:09:10.8,38.°30N×72.°23E,h15^{km},MS4.2*
IDC ***13*** *20:09:17.5±0.5,38.°17N×73.°06E,h0^{km},mb4.3/33, mb1 4.4/41,mb1mx4.3/62,mbtmp4.3/41,ML3.7/8,MS3.5/25, Ms1 3.5/25,ms1mx3.4/49,Error ellipse: s-maj=10.6km s-min=9.3km az=16.0*
MOS ***13*** *20:09:17.6±1.4,38.°25N×72.°98E,h10^{km},mb4.8/30,Error ellipse: s-maj=5.9km s-min=4.0km az=88.0*
BJI ***13*** *20:09:18.4±0.0,38.°24N×72.°89E,h8^{km},mB4.9/30, mb4.5/49,ML4.5/5,Ms4.3/33,Ms7 4.0/31*
NEIC ***13*** *20:09:19.6±3.0,38.°32N±0.°05×73.°02E±0.°07,h10^{km}±1^{km}, mb4.8/34,Error ellipse: s-maj=10.4km s-min=8.3km az=120.0*
NNC ***13*** *20:09:20.2±2.2,38.°49N×72.°69E,h0^{km},mb5.0,mpv4.6, Error ellipse: s-maj=19.1km s-min=12.3km az=158.0*
ISC 13 20:09:19.2±0.3**,38.°21N**±0.°03×**72.°95E**±0.°03**,h10^{km},n382,** σ**2^{s}27**/399**,mb4.6**/93**,MS3.7**/27**,45C-24D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.55	325	Pn	Pn	20 09 45.2	-1.9
GAR	Garm	2.21	292		Pn	20 09 57.6	+1.6
BTK	Batken	2.48	319	PN	Pn	20 10 01.5	+1.8
BTK	Batken	2.48	319		Pn	20 10 01.5	+1.8
KSH	Kashi	2.70	60	Pg	Pn	20 09 59.3	-3.5
KSH				Sg	Sn	20 10 25.8	-10
KSH				smax	smax		
	comp=N,5μm,1.0s						
KSH				smax	smax		
	comp=E,6μm,1.3s						
CHGR	Chuyangaron	3.01	280		Pn	20 10 08.8	+1.8
AML	Almayashu	3.96	8	P	Pn	20 10 22.4	+2.0
	SNR=132						
AML	Almayashu	3.96	8	*i* Pn	Pn	20 10 22.4	+2.0
	SNR=133						
UCH	Uchtor	4.19	16	P	Pn	20 10 26.0	+2.4
	SNR=104						
CEP	Cherat	4.46	191	P	Pb	20 10 33.7	-3.9
EKS2	Erkin-Say	4.49	8	P	Pn	20 10 31.0	+3.6
	SNR=13						
IUG	Iuzhnay	4.52	331	*e*P	Pn	20 10 30.0	+2.2
	458nm,0.7s						
IUG				*e*S	Sn	20 11 26.2	+5.6
	1μm,1.2s						
IUG	Iuzhnay	4.52	331	*e*Pg	Pb	20 10 40.8	+2.1
	baz=329						
IUG	Iuzhnay	4.52	331	Pg	Pn	20 10 30.2	+2.4
	810nm,0.6s						
IUG				Lg	Lg	20 11 37.9	
MRKS	Merke	4.54	3	*e*P	Pb	20 10 34.9	-4.0
	57nm,0.6s						
MRKS				*e*S	Sb	20 11 34.6	+0.9
	122nm,1.1s						
MRKS	Merke	4.54	3	Pg	Pn	20 10 34.1	+6.2
	77nm,0.6s						
MRKS				Lg	Lg	20 11 34.6	
	122nm,1.1s						
NIL	Nilore	4.55	177	PN	Pb	20 10 34.6	-4.6
NIL	Nilore	4.55	177		Pb	20 10 34.6	-4.6
AAK	Ala-Archa	4.58	14	Pn	Pn	20 10 31.4	+2.8
	6.3nm,0.3s,baz=192,slow=7.9,SNR=166						
AAK				Sn	Sn	20 11 29.4	+7.4
	10nm,0.3s,baz=355,slow=20,SNR=1.5						
AAK				LR	LR	20 12 27.5	
	comp=Z,1μm,21.1s,baz=199,slow=41						
AAK	Ala-Archa	4.58	14	P	Pn	20 10 31.4	+2.8
	SNR=80						
AAK	Ala-Archa	4.58	14	Pn	Pn	20 10 31.8	+3.2
AAK	Ala-Archa	4.58	14*d*	*i*PN	Pn	20 10 31.3	+2.6
AAK				pmax	pmax		
	comp=Z,233nm,1.0s						
AAK	Ala-Archa	4.58	14	⇑Pn	Pn	20 10 31.2	+2.6
	comp=Z,93nm,1.2s						
AAK				⇑Pg	Pb	20 10 42.6	+2.9
	comp=Z,172nm,0.9s						
AAK				⇓Lg	Lg	20 11 40.5	
	comp=Z,452nm,1.1s						
AAK	Ala-Archa	4.58	14	Pn	Pn	20 10 31.1	+2.5
KBK	Karagaybulak	4.70	18	P	Pn	20 10 33.2	+2.9
	SNR=21						
ULHL	Ulahol	4.76	31	P	Pn	20 10 35.1	+4.0
	SNR=8.8						
FRU1	Bishkek	4.77	15	PN	Pn	20 10 32.5	+1.3
FRU1	Bishkek	4.77	15		Pn	20 10 32.5	+1.3
DZA	Taraz	4.84	346	*e*P	Pn	20 10 36.9	+4.9
	comp=Z,140nm,0.5s						
DZA				*e*S	Sb	20 11 38.9	-3.4
	comp=Z,324nm,0.5s						
DZA	Taraz	4.84	346	Pg	Pn	20 10 36.9	+4.9
	comp=Z,140nm,0.5s						
DZA				Lg	Lg	20 11 38.9	
	comp=Z,324nm,0.5s						
BOOM	Boomskoye usch	4.85	27	PN	Pn	20 10 33.9	+1.5
BOOM	Boomskoye usch	4.85	27	Pn	Pn	20 10 33.9	+1.5
CHMS	Chumysh	4.98	15	P	Pn	20 10 36.5	+2.6
	SNR=24						
KDJ	Kajisay	5.08	38	PN	Pn	20 10 37.4	+1.8
KDJ	Kajisay	5.08	38	Pn	Pn	20 10 37.4	+1.8
TKM2	Tokmak 2	5.12	22	P	Pn	20 10 38.7	+2.6
	SNR=12						
TKM2	Tokmak 2	5.12	22	⇑Pn	Pn	20 10 38.2	+2.0
	comp=Z,29nm,0.9s						
TKM2				⇓Pg	Pb	20 10 51.0	+2.0
	comp=Z,120nm,0.9s						
TKM2				⇓Lg	Lg	20 11 58.9	
	comp=Z,438nm,1.6s						
TARG	Taragay, Kyrgy	5.13	45		Pn	20 10 37.6	+1.2
USP	Ospenovka	5.19	13	P	Pn	20 10 38.7	+1.8
	SNR=21						
KKAR	Karatay Array	5.23	340	PN	Pn	20 10 38.9	+1.5
KKAR	Karatay Array	5.23	340	Pn	Pn	20 10 38.9	+1.5
KK08	Karatay Array	5.24	340	⇓Pn	Pn	20 10 39.6	+2.0
	comp=Z,35nm,0.5s						
KK08				⇑Lg	Lg	20 11 58.2	
	comp=Z,95nm,0.8s						
KST	Kastek	5.35	24	*e*P	Pb	20 10 52.9	+0.1
	comp=Z,39nm,0.5s						
KST				*e*S	Sb	20 12 04.9	+7.9
	comp=Z,260nm,1.3s						
KST	Kastek	5.35	24	Pg	Pb	20 10 52.9	+0.1
	comp=Z,39nm,0.5s						
KST				Lg	Lg	20 12 04.9	
	comp=Z,260nm,1.3s						
BRLS	Borolday	5.37	335	*e*P	Pn	20 10 40.6	+1.3
	comp=Z,9.7nm,0.3s						
BRLS				*e*S	Sn	20 11 44.3	+3.1
	comp=Z,58nm,0.4s						
BRLS	Borolday	5.37	335	*e*Pn	Pn	20 10 35.8	-3.5
	baz=331						
BRLS				*e*Pg	Pb	20 10 53.9	+0.9
	baz=331						
BRLS	Borolday	5.37	335	*e*PN	Pn	20 10 35.8	-3.5
BRLS				*e*		20 10 53.9	
BRLS	Borolday	5.37	335	Pg	Pn	20 10 40.6	+1.3
	comp=Z,9.7nm,0.3s						
BRLS				Lg	Lg	20 11 59.4	
	comp=Z,144nm,1.1s						
SGDS	Sogindy	5.39	13	*e*Pg	Pb	20 10 56.4	+2.9
	baz=14						
SGDS	Sogindy	5.39	13	Pg	Pb	20 10 51.2	-2.3
	comp=Z,70nm,0.5s						
SGDS				Lg	Lg	20 12 03.0	
	comp=Z,148nm,1.8s						
DGS	Degeres	5.47	22	*e*P	Pb	20 10 53.2	-1.6
	comp=Z,68nm,0.9s						
DGS				*e*S	Sb	20 12 05.6	+5.1
	comp=Z,167nm,1.1s						
DGS	Degeres	5.47	22	Pg	Pb	20 10 53.2	-1.6
	comp=Z,68nm,0.9s						
DGS				Lg	Lg	20 12 05.6	
	comp=Z,167nm,1.1s						
THW	Thamme Wali	5.49	191	P	Pn	20 10 46.2	+5.2
MTBS	Maitube	5.58	27	*e*P	Pb	20 10 57.9	+1.1
	comp=Z,72nm,1.2s						
MTBS				*e*S	Sg	20 12 14.2	-4.1
	comp=Z,178nm,1.6s						
MTBS	Maitube	5.58	27	Pg	Pb	20 10 57.9	+1.1
	comp=Z,72nm,1.2s						
MTBS				Lg	Lg	20 12 14.2	
	comp=Z,178nm,1.6s						
TNSS	Tian-Shan	5.70	31	*e*P	Pb	20 11 00.1	+1.1
	comp=Z,46nm,0.6s						
TNSS				*e*S	Sg	20 12 17.4	-4.9
	comp=Z,113nm,0.8s						
TNSS	Tian-Shan	5.70	31	*e*Pn	Pn	20 10 42.2	-2.1
	baz=32						
TNSS				*e*Pg	Pb	20 11 02.7	+3.7
	baz=32						
TNSS	Tian-Shan	5.70	31	Pg	Pb	20 11 00.1	+1.1
	comp=Z,46nm,0.6s						
TNSS				Lg	Lg	20 12 17.4	
	comp=Z,113nm,0.8s						
TNSS	Tian-Shan	5.70	31	Pg	Pb	20 11 01.7	+2.8
	comp=Z,78nm,1.1s						
TNSS				Lg	Lg	20 12 15.2	
	comp=Z,403nm,1.5s						
JMU	Jammu	5.71	163	*e*P	Pn	20 10 45.0	+1.1
JMU				*e*S	Sn	20 11 48.0	-1.5
MDOK	Medeo	5.85	31	*e*P	Pb	20 11 02.4	+1.1
	comp=Z,66nm,0.9s						
MDOK				*e*S	Sg	20 12 22.1	-4.8
	comp=Z,198nm,0.8s						
MDOK	Medeo	5.85	31	*e*Pg	Pb	20 11 05.5	+4.2
	baz=32						
MDOK	Medeo	5.85	31	⇑Pn	Pn	20 10 48.5	+2.5
	comp=Z,24nm,1.2s						
MDOK				⇑Pg	Pb	20 11 05.3	+4.0
	comp=Z,108nm,1.0s						
MDOK				⇑Lg	Lg	20 12 21.3	
	comp=Z,415nm,1.2s						
MDOK	Medeo	5.85	31	Pg	Pb	20 11 02.4	+1.1
	comp=Z,66nm,0.9s						
MDOK				Lg	Lg	20 12 22.1	
	comp=Z,198nm,0.8s						
KRBS	Karabastau	5.86	20	*e*P	Pb	20 11 01.0	-0.4
	comp=Z,42nm,0.8s						
KRBS				*e*S	Sb	20 12 18.7	+7.0
	comp=Z,77nm,1.1s						
KRBS	Karabastau	5.86	20	Pg	Pb	20 11 00.3	-1.2
	comp=Z,42nm,0.8s						
KRBS				Lg	Lg	20 12 19.1	
	comp=Z,111nm,1.1s						
KOTS	Kotyrbulak	5.93	31	Pg	Pb	20 11 06.8	+4.1
	comp=Z,68nm,0.8s						
KOTS				Lg	Lg	20 12 24.6	
	comp=Z,278nm,1.2s						
PRZ	Przheval'sk	5.96	43	PN	Pn	20 10 48.8	+1.1
PRZ	Przheval'sk	5.96	43	Pn	Pn	20 10 48.8	+1.1
KTBS	Karatobe	6.18	26	*e*P	Pb	20 11 09.1	+2.2
	comp=Z,30nm,1.0s						
KTBS				*e*S	Sg	20 12 34.0	-3.5
	comp=Z,168nm,0.9s						
KTBS	Karatobe	6.18	26	Pg	Pb	20 11 09.1	+2.2
	comp=Z,30nm,1.0s						
KTBS				Lg	Lg	20 12 30.7	
	comp=Z,223nm,1.0s						
KUU	Kurty	6.23	23	*e*Pn	Pn	20 10 49.7	-1.5
	comp=Z,6.8nm,1.0s,baz=24						
KUU				*e*Pg	Pb	20 11 11.8	+4.1
	baz=24						
KUU	Kurty	6.23	23	*e*PN	Pn	20 10 49.6	-1.5
KUU				*e*		20 11 11.8	
KUU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SATY	Saty	6.38	39	*e*Pg	Pb	20 11 16.1	+5.8
	baz=41						
SATY	Saty	6.38	39	*e*P*	Pb	20 11 16.1	+5.8
SATY	Saty	6.38	39	Pg	Pb	20 11 12.3	+2.0
	comp=Z,67nm,1.1s						
SATY				Lg	Lg	20 12 38.4	
	comp=Z,355nm,1.7s						
UZB	Uzynbulak	6.75	41	*e*Pn	Pn	20 10 57.5	-1.1
	baz=43						
UZB	Uzynbulak	6.75	41	*e*PN	Pn	20 10 57.4	-1.1
BTLS	Baital	6.88	7	*e*Pn	Pn	20 10 58.6	-1.5
	baz=6.7						
BTLS	Baital	6.88	7	*e*PN	Pn	20 10 58.5	-1.5
SHLS	Shalkode	7.00	43	*e*Pn	Pn	20 11 04.3	+2.5
	comp=Z,12nm,0.9s,baz=46						
SHLS				*e*Pg	Pg	20 11 31.7	-1.4
	baz=46						
SHLS	Shalkode	7.00	43	*e*PN	Pn	20 11 04.2	+2.5
SHLS				*e*		20 11 31.6	
SHLS				pmax	pmax		
	comp=Z,12nm,0.9s						
ARXS	Arharly	7.04	30	*e*PN	Pn	20 11 04.1	+1.8
PDGK	Podgornoye	7.13	42	⇑Pn	Pn	20 11 05.1	+1.5
	comp=Z,47nm,0.8s						
PDGK				⇑Lg	Lg	20 13 03.2	
	comp=Z,223nm,1.2s						
SMLA	Simla	7.87	153	*e*P	Pn	20 11 17.1	+3.5
SMLA				*e*S	Sn	20 12 43.4	+0.6
SMLA				IAML		20 12 54.1	
	comp=N,202nm,0.4s						
SMLA				IAML		20 12 55.2	
	comp=E,337nm,0.6s						
HRA	Herat	9.44	249	Pn	Pn	20 11 37.3	+1.9
OTUK	Ortayu	10.04	358	⇓Pn	Pn	20 11 42.9	-0.6
	comp=E,11nm,0.7s						
OTUK				⇓Lg	Lg	20 14 37.4	
	comp=E,133nm,1.2s						
NDI	New Delhi	10.14	158	*e*S	Sn	20 13 37.1	-1.6
KUDL	Kundal	10.46	163	*e*P	Pn	20 11 50.7	+1.4
KUDL				*e*S	Sn	20 13 46.0	-0.5
SONA	Sohna	10.52	160	*e*P	Pn	20 11 54.5	+4.5
MAKZ	Makanchi	10.87	35	P	Pn	20 11 56.1	+1.3
MAKZ	Makanchi	10.87	35	Pn	Pn	20 11 56.1	+1.3
MK31	Makanchi Array	11.00	36*d*	*i*P	Pn	20 11 58.4	+1.8
MK31	Makanchi Array	11.00	36	Pn	Pn	20 11 58.4	+1.8
	comp=E,29nm,0.9s,baz=212,slow=12,SNR=67						
MK31				⇑Lg	Lg	20 15 11.9	
	comp=E,14nm,1.1s,baz=213,slow=28,SNR=3.6						
MK31	Makanchi Array	11.00	36	Pn	Pn	20 11 57.2	+0.6
MKAR	Makanchi Array	11.00	36	Pn	Pn	20 11 58.6	+2.1
	comp=E,0.3nm,0.3s,baz=206,slow=12,SNR=30						
MKAR				Lg	Lg	20 14 54.7	
	comp=E,0.1nm,0.3s,baz=229,slow=26,SNR=1.6						
MKAR				LR	LR	20 15 54.8	
	comp=E,198nm,18.0s,baz=227,slow=36						
MKAR	Makanchi Array	11.00	36	P	Pn	20 11 57.5	+0.9
MKAR	Makanchi Array	11.00	36	Pn	Pn	20 11 57.5	+0.9
GEYT	Alibeck	11.70	273	Pn	Pn	20 12 06.1	-0.1
	comp=E,2.1nm,0.3s,baz=118,slow=12,SNR=33						
GEYT				Sn	Sn	20 14 11.0	-5.7
	comp=E,0.4nm,0.3s,baz=74,slow=28,SNR=2.4						
GEYT				LR	LR	20 17 21.1	
	comp=E,127nm,20.5s,baz=240,slow=41						
GEYT	Alibeck	11.70	273		Pn	20 12 05.1	-1.1
GYA0B	ALIBECK ARRAY	11.70	273	⇑Pn	Pn	20 12 05.3	-0.8
GYA0B				⇓Sn	Sn	20 14 09.6	-7.1
GYA0B	ALIBECK ARRAY	11.70	273	Pn	Pn	20 12 05.0	-1.1
BRZS	Berezniki	11.77	359	*e*Pn	Pn	20 12 05.5	-1.7
	baz=359						
BRZS	Berezniki	11.77	359	*e*P	Pn	20 12 05.4	-1.7
AJM	Ajmer	11.78	173	*e*P	Pn	20 12 13.1	+5.7
WMQ	Urumqi	12.46	59	*e*P	Pn	20 12 17.5	+0.9
WMQ				pP		20 12 28.3	
WMQ				S	Sn	20 14 36.3	+0.7
WMQ				sS		20 14 50.6	
WMQ				pmax	pmax		
	comp=E,24nm,0.9s						
WMQ				pmax	pmax		
	comp=E,240nm,4.1s						
WMQ				LR	LR		
	comp=E,540nm,10.1s						
WMQ				LR	LR		
	comp=E,500nm,7.7s						
WMQ				LR	LR		
	comp=E,380nm,16.3s						
ZSN	Zaisan	12.71	40	*e*Pn	Pn	20 12 19.5	-0.4
	baz=40						
ZSN	Zaisan	12.71	40	*e*P	Pn	20 12 19.5	-0.4
KURBB	Kurchatov Arra	13.03	16	Pn	Pn	20 12 22.9	-1.3
	comp=E,0.0nm,0.3s,baz=206,slow=12,SNR=28						
KURBB				Lg	Lg	20 16 11.2	
	comp=E,0.0nm,0.3s,baz=199,slow=30,SNR=5.3						
PYUN	Piuthan	13.12	137	*e*P	Pn	20 12 23.0	-2.8
	comp=E,31nm,0.4s						
KURK	Kurchatov	13.14	16*c*	*e*P	Pn	20 12 24.3	-1.4
KURK				pmax	pmax		
	comp=Z,14nm,1.7s						
KURK	Kurchatov	13.14	16	⇓Pn	Pn	20 12 22.7	-3.0
	comp=Z,10nm,0.9s						
KURK				⇓Lg	Lg	20 16 15.2	
	comp=Z,152nm,1.4s						
KURK	Kurchatov	13.14	16	Pn	Pn	20 12 24.1	-1.6
SEM	Semipalatinsk	13.26	21	*e*Pn	Pn	20 12 25.3	-2.4
	comp=Z,4.7nm,1.0s,baz=21						
SEM	Semipalatinsk	13.26	21	*e*P	Pn	20 12 25.2	-2.4
SEM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DANN	Dangsing	13.35	134	*e*P	Pn	20 12 25.8	-3.2
	comp=Z,21nm,0.5s						
KOLN	Koldanda	13.71	136	*e*P	Pn	20 12 31.5	-2.3
	comp=Z,32nm,0.5s						
GKN	Gorkha	14.11	133	*e*P	Pn	20 12 35.8	-3.5
	comp=Z,30nm,0.6s						
GKN				*e*S	Sn	20 15 09.9	-6.2
VLK	Valmikinagar	14.21	137	*e*P	Pn	20 12 37.0	-3.5
AB31	Akbulak array	14.48	324	Pn	Pn	20 12 41.1	-2.9
	comp=Z,7.8nm,0.6s,baz=132,slow=13,SNR=115						
ABKAR	Akbulak array	14.48	324	Pn	Pn	20 12 40.4	-3.6
ABKAR	Akbulak array	14.48	324	Pn	Pn	20 12 40.9	-3.2
KKN	Kakani	14.65	132	*e*P	Pn	20 12 43.1	-3.6
	comp=Z,18nm,0.5s						
KKN				*e*S	Sn	20 15 22.6	-6.6
DMN	Daman	14.68	132	*e*P	Pn	20 12 44.0	-3.2
	comp=Z,26nm,0.4s						
PKIN	Phulchoki	14.88	132	*e*P	Pn	20 12 45.5	-4.3
	comp=Z,54nm,0.5s						
PKIN	Phulchoki	14.88	132	*e*P	Pn	20 12 45.5	-4.3
	comp=Z,14nm,0.6s						
PKI	Pulchoki	14.89	132	*e*P	Pn	20 12 46.2	-3.8
	comp=Z,17nm,0.5s						
GUN	Gumba	14.92	130	*e*P	Pn	20 12 46.8	-3.7
BVAR	Borovoye Array	14.92	354	Pn	Pn	20 12 47.7	-2.4
	comp=Z,0.1nm,0.3s,baz=183,slow=21,SNR=12						
BVAR				Lg	Lg	20 17 03.2	
	comp=Z,0.1nm,0.3s,baz=185,slow=31,SNR=1.9						
BRVK	Borovoye	14.97	354	⇑*e*P	Pn	20 12 48.0	-2.6
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRVK	Borovoye	14.97	354	Pn	Pn	20 12 48.1	-2.5
JIRN	Jiri	15.29	130	*e*P	Pn	20 12 51.3	-4.1
BHPL	Bhopal	15.40	164	*e*P	P	20 13 03.7	+2.4
DGZ	Jazzator, Alta	15.48	37*d*	*i*P	Pn	20 12 57.5	-0.2
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
RAMN	Ramite	16.05	130	*e*P	Pn	20 13 01.3	-4.0
	comp=Z,33nm,0.5s						
AKTO	Aktyubinsk	16.20	324	Pn	Pn	20 13 06.5	-0.2
	comp=Z,1.2nm,0.3s,baz=127,slow=10,SNR=35						
AKTO				Sn	Sn	20 15 59.6	-6.7
	comp=Z,0.3nm,0.3s,baz=227,slow=15,SNR=1.7						
AKTO				LR	LR	20 20 08.5	
	comp=Z,52nm,18.8s,baz=145,slow=40						
AKTO	Aktyubinsk	16.20	324	⇓Pn	Pn	20 13 06.5	-0.2
	comp=Z,55nm,1.0s						
TAPN	Taplejung	16.45	127	*e*P	Pn	20 13 05.8	-4.6
ODAN	Odare	16.60	129	*e*P	Pn	20 13 08.0	-4.2
LSA	Lhasa	17.30	114	P	Pn	20 13 20.3	-1.0
LSA				LR	LR		
	comp=Z,270nm,6.8s						
LSA				LR	LR		
	comp=Z,700nm,9.0s						
LSA	Lhasa	17.30	114	Pn	Pn	20 13 20.9	-0.4
LSA	Lhasa	17.30	114	P	Pn	20 13 19.6	-1.7
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LSA	Lhasa	17.30	114		Pn	20 13 19.6	-1.7
ZAA0	Zalesovo Array	17.73	24	Pn	Pn	20 13 24.2	-1.7
ZALV	Zalesovo Beam	17.73	24	P	Pn	20 13 24.7	-1.2
	comp=Z,0.7nm,0.3s,baz=220,slow=10.0,SNR=27						
ZALV				Lg	Lg	20 18 38.5	
	comp=Z,0.1nm,0.3s,baz=198,slow=27,SNR=1.4						
ZALV				LR	LR	20 20 31.5	
	comp=Z,323nm,19.6s,baz=226,slow=38						
ZALV	Zalesovo Beam	17.73	24		Pn	20 13 24.6	-1.4
BOK	Bokaro	18.12	139	*e*P	P	20 13 31.5	+0.2
BANOM	Banah	18.65	234	Pn	Pn	20 13 38.3	+0.9
SHME	Shamm	18.66	234	Pn	Pn	20 13 39.4	+1.8
LKRN	Lenkeran, Azer	18.93	279	P	Pn	20 13 41.2	+0.5
MDH	Madha	19.09	232	Pn	Pn	20 13 44.5	+1.6
MSFE	Esma-Masafi	19.14	233	*i* Pn	Pn	20 13 45.3	+1.9
	SNR=8.9						
WSAR	Wadi Sarin	19.30	223	P	Pn	20 13 45.4	0.0
	comp=Z,0.3nm,0.3s,baz=59,slow=7.2,SNR=6.2						
WSAR				LR	LR	20 22 23.1	
	comp=Z,136nm,19.7s,baz=78,slow=41						
UOSS	Minazif	19.41	232	Pn	Pn	20 13 47.1	+0.5
UOSS	Minazif	19.41	232	P	Pn	20 13 45.8	-0.8
UOSS				IAmb	IAmb	20 13 53.6	
	comp=Z,33nm,1.1s						
HATD	Hatta, Dubai	19.54	232	Pn	Pn	20 13 49.9	+1.7
POO	Poona	19.62	177	*e*P	Pn	20 13 54.0	+4.8
ASHO	Ashiyiah	19.69	232	*i* Pn	Pn	20 13 50.3	+0.3
	SNR=20						
SOHO	SOHO	19.81	230	Pn	Pn	20 13 51.6	+0.2
MAK	Makhachkala	19.87	292	*e*P	P	20 13 50.0	-0.3
MAK				*e*S	S	20 17 32.0	-1.9
MAK				pmax	pmax		
	comp=Z,128nm,1.0s						
MAK				MLR	MLR		
	comp=Z,325nm,13.0s						
SEKA	Sheki	20.01	287	P	Pn	20 13 53.0	-0.8
MNGR	Mingechevir, A	20.10	285	P	Pn	20 13 53.9	-0.8
ASUD	Al Ashush, Dub	20.19	233	Pn	Pn	20 13 56.3	+0.5
ALNE	Al Ain	20.34	231	*i* Pn	Pn	20 13 57.5	-0.2
	SNR=10.0						
SVE	Sverdlovsk	20.34	340	⇓*i*P	P	20 13 55.2	-0.2
SVE				*e*S	S	20 17 41.0	-2.1
SVE				pmax	pmax		
	comp=Z,14nm,0.9s						
SVE				MLR	MLR		
	comp=Z,548nm,11.0s						
SHL	Shillong	20.38	123	P	P	20 13 56.3	0.0
SHL				pmax	pmax		
	comp=Z,27nm,0.7s						
SHL	Shillong	20.38	123	*e*P	P	20 13 56.1	-0.2
SHL	Shillong	20.38	123	P	P	20 13 56.3	0.0
SHL				IAmb	IAmb	20 14 10.2	
	comp=Z,27nm,0.7s						
ARU	Arti	20.60	337	P	P	20 13 57.6	-0.6
	comp=Z,4.7nm,0.7s,baz=157,slow=11,SNR=11						
ARU				LR	LR	20 21 27.4	
	comp=Z,64nm,21.0s,baz=130,slow=35						
ARU	Arti	20.60	337*c*	*i*P	P	20 13 57.5	-0.6
ARU						20 14 13.1	
ARU				S	S	20 17 43.7	-4.5
ARU				pmax	pmax		
	comp=Z,20nm,0.9s						
ARU				MLR	MLR		
	comp=Z,178nm,11.0s						
ARU	Arti	20.60	337	P	P	20 13 57.1	-1.0
GANJ	Ganja	20.69	285	P	P	20 13 59.3	0.0
GTA	Gaotai	20.95	78	⇓P	P	20 14 03.4	+1.1
GTA				pP	sP	20 14 13.8	+5.4
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,170nm,7.6s						
GTA				LR	LR		
	comp=Z,270nm,10.8s						
GTA				LR	LR		
	comp=Z,410nm,12.7s						
GTA				LR	LR		
	comp=Z,520nm,12.4s						
GROC	Groznyy	21.14	292	*e*P	P	20 14 06.7	+2.6
GROC				*e*		20 14 26.8	
GROC				*e*S	S	20 18 01.6	+2.5
GROC				pmax	pmax		
	comp=Z,108nm,0.8s						
HYB	Hyderabad	21.29	165	*i* P	P	20 14 10.5	+4.5
NAX	Nakhchivan	21.42	281	P	P	20 14 07.6	+0.2
GNI	Garni	21.92	284	P	P	20 14 12.8	0.0
	comp=Z,4.6nm,0.8s,baz=198,slow=23,SNR=3.1						
GNI				LR	LR	20 24 33.5	
	comp=Z,49nm,18.2s,baz=63,slow=42						
GNI	Garni	21.92	284	⇑*e*P	P	20 14 15.8	+3.1
GNI				pmax	pmax		
	comp=Z,85nm,1.3s						
GNI	Garni	21.92	284	P	P	20 14 13.4	+0.6
GNI				IAmb	IAmb	20 14 25.5	
	comp=Z,54nm,0.8s						
ZEI	Tsey	22.50	291	*e*P	P	20 14 22.9	+3.9
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NCK	Nalchik	22.76	293	⇓*e*P	P	20 14 26.6	+5.1
NCK				pmax	pmax		
	comp=Z,31nm,0.6s						
ONI	Oni	22.83	290	P	P	20 14 25.9	+3.6
ONI				pmax	pmax		
	comp=Z,48nm,0.8s						
ONI	Oni	22.83	290	P	P	20 14 25.9	+3.6
KBZ	Khabaz	23.28	293	P	P	20 14 27.6	+0.7

	comp=Z,1.1nm,0.9s,baz=321,slow=21,SNR=1.9						
KBZ				LR	LR	20 25 11.7	
	comp=Z,71nm,18.7s,baz=94,slow=41						
KBZ	**Khabaz**	**23.28**	**293**	*ce*P	**P**	**20 14 32.8**	**+6.0**
KBZ				pmax	pmax		
	comp=Z,12nm,0.9s						
GOF	**Gofitskoye**	**23.29**	**297**	⇑*e*P	P	20 14 34.0	+7.0
NEY	**Neytrino**	**23.38**	**292**	⇑*e*P	**P**	**20 14 34.8**	**+6.7**
NEY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KVAR	**Kislovodsk Arr**	**23.44**	**294**	P	**P**	**20 14 28.3**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=114,slow=20,SNR=2.2						
KIV	**Kislovodsk**	**23.44**	**294**	⇑P	**P**	**20 14 30.9**	**+2.2**
KIV	**Kislovodsk**	**23.44**	**294**	P	**P**	**20 14 32.4**	**+3.8**
KIV	**Kislovodsk**	**23.44**	**294**	*e*P	**P**	**20 14 30.9**	**+2.2**
KIV				*e*S	**S**	**20 18 42.0**	**0.0**
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KIV				MLR	MLR		
	comp=Z,43nm,14.0s						
MOY	**Mondy**	**23.80**	**47**	*e*P	**P**	**20 14 33.7**	**+1.6**
MOY				pmax	pmax		
	comp=Z,67nm,2.3s						
CHVG	**Ch'k'valeri**	**23.84**	**291**	⇑P	**P**	**20 14 35.7**	**+3.3**
BCA	**Borcka**	**24.21**	**288**	⇑P	**P**	**20 14 39.4**	**+3.5**
LZH	**Lanzhou**	**24.66**	**85**	*e*P	**P**	**20 14 41.5**	**+1.2**
LZH				pP	sP	20 14 51.0	+4.4
LZH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LZH				LR	LR		
	comp=Z,400nm,10.0s						
LZH				LR	LR		
	comp=Z,480nm,13.0s						
LZH				LR	LR		
	comp=Z,300nm,15.5s						
ZAK	**Zakamensk**	**24.70**	**51**	*e*P	**P**	**20 14 40.6**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,23nm,1.0s						
TLY	**Talaya**	**25.34**	**48**	P	**P**	**20 14 46.1**	**0.0**
	comp=Z,2.4nm,0.5s,baz=257,slow=12,SNR=3.3						
TLY				LR	LR	20 24 36.3	
	comp=Z,102nm,19.2s,baz=29,slow=36						
TLY	**Talaya**	**25.34**	**48**	*e*P	**P**	**20 14 47.8**	**+1.7**
TLY				pmax	pmax		
	comp=Z,22nm,1.3s						
TLY				MLR	MLR		
	comp=Z,357nm,8.0s						
KIRV	**Kirov**	**25.44**	**331**	P	**P**	**20 14 47.7**	**+0.9**
	comp=Z,21nm,0.9s,baz=135,slow=19,SNR=6.4						
KIRV	**Kirov**	**25.44**	**331**	*de*P	**P**	**20 14 46.9**	**+0.1**
VRH	**Novokhopyorsk**	**25.50**	**311**	*e*P	**P**	**20 14 50.9**	**+3.5**
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
SONM	**Songino Array**	**26.10**	**58**	P	**P**	**20 14 53.9**	**+0.8**
	comp=Z,7.9nm,0.9s,baz=256,slow=10,SNR=35						
SONM				LR	LR	20 26 36.4	
	comp=Z,297nm,19.9s,baz=241,slow=40						
SONM	**Songino Array**	**26.10**	**58**	*e*P	**P**	**20 14 54.4**	**+1.3**
SONM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SONM	**Songino Array**	**26.10**	**58**	P	**P**	**20 14 53.3**	**+0.1**
SONM				IAmb	IAmb	20 15 02.2	
	comp=Z,18nm,1.2s						
ULN	**Ulaanbaatar**	**26.54**	**58**	⇓*i*P	**P**	**20 14 57.8**	**+0.6**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VORD	**Divnogorie**	**26.90**	**309**	*e*P	**P**	**20 14 59.8**	**-0.3**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VSR	**Storozhevoye**	**27.04**	**310**	*e*P	**P**	**20 15 01.1**	**-0.3**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LPSR	**Galich'ya Gora**	**27.58**	**313**	*e*P	**P**	**20 15 05.6**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,20nm,0.7s						
RAYN	**Ar Rayn**	**27.61**	**246**	P	**P**	**20 15 09.0**	**+2.2**
PRGR	**Permogore**	**28.91**	**333**	*e*P	**P**	**20 15 14.0**	**-3.9**
PRGR				pmax	pmax		
	comp=Z,115nm,1.5s						
XAN	**Xi'an**	**29.24**	**87**	P	**P**	**20 15 21.5**	**+0.2**
XAN				pP	sP	20 15 32.9	+5.4
XAN				S	**S**	**20 20 10.6**	**-3.4**
XAN				SS	**SnSn**	**20 21 44.8**	**+5.9**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.6s						
XAN				LR	LR		
	comp=Z,300nm,16.1s						
XAN				LR	LR		
	comp=Z,350nm,11.8s						
XAN				LR	LR		
	comp=Z,460nm,14.7s						
MOS	**Moscow**	**29.37**	**318**	*e*P	**P**	**20 15 20.8**	**-1.3**
MOS				*e*		20 16 19.5	
OBN	**Obninsk**	**29.71**	**317**	P	**P**	**20 15 25.4**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=46,slow=16,SNR=3.8						
OBN				LR	LR	20 28 56.2	
	comp=Z,20nm,19.9s,baz=236,slow=40						
OBN	**Obninsk**	**29.71**	**317**	⇑*e*P	**P**	**20 15 25.8**	**+0.7**
OBN				*e*		20 16 25.4	
OBN				pmax	pmax		
	comp=Z,15nm,0.8s						
OBN				MLR	MLR		
	comp=Z,87nm,16.0s						
HHC	**Hu-ho-hao-te**	**29.74**	**73**	*e*P	**P**	**20 15 26.9**	**+1.1**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,7.2s						
CMAR	**Chiang Mai Arr**	**30.01**	**124**	P	**P**	**20 15 28.1**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=310,slow=8.8,SNR=14						
BRTR	**Keskin Array B**	**30.44**	**285**	P	**P**	**20 15 34.1**	**+2.1**
	comp=Z,4.2nm,1.1s,baz=89,slow=7.7,SNR=13						
BRTR				LR	LR	20 28 43.1	
	comp=Z,58nm,18.3s,baz=64,slow=38						
BRTR	**Keskin Array B**	**30.44**	**285**	P	**P**	**20 15 31.9**	**-0.1**
KLMR	**Klimovskoe**	**30.80**	**328**	*e*P	**P**	**20 15 33.5**	**-1.2**
KLMR				*e*		20 16 32.5	
KLMR				*e*		20 18 30.7	
KLMR				pmax	pmax		
	comp=Z,20nm,1.3s						
KLMR	**Klimovskoe**	**30.80**	**328**	*e*P	**P**	**20 15 33.6**	**-1.2**
KLMR				AMP		20 15 50.5	
	comp=Z,20nm,1.3s						
KLMR				*e*PP	**PnPn**	**20 16 32.5**	**-2.2**
KLMR				*e*PcP	**PcP**	**20 18 30.8**	**-0.8**
NRIK	**Noril'sk**	**32.18**	**10**	P	**P**	**20 15 47.1**	**+0.4**
	comp=Z,14nm,1.0s,baz=192,slow=6.3,SNR=12						
NRIK				LR	LR	20 30 27.7	
	comp=Z,200nm,20.1s,baz=197,slow=39						
BOD	**Bodaibo**	**33.05**	**40**	*e*P	**P**	**20 15 54.3**	**-0.2**
BOD				pmax	pmax		
	comp=Z,11nm,1.3s						
AKASG	**Malin Array Be**	**33.13**	**306**	P	**P**	**20 15 55.4**	**0.0**
	comp=Z,1.8nm,0.8s,baz=83,slow=7.0,SNR=13						
AKASG	**Malin Array Be**	**33.13**	**306**	*e*P	**P**	**20 15 55.3**	**0.0**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKBB	**Malin Array Si**	**33.13**	**306**	⇑*e*P	**P**	**20 15 56.0**	**+0.7**
AKBB				pmax	pmax		
	comp=Z,12nm,0.9s						
AKBB	**Malin Array Si**	**33.13**	**306**	P	**P**	**20 15 55.0**	**-0.3**
AKBB				IAmb	IAmb	20 16 01.3	
	comp=Z,10nm,0.8s						
BJI	**Beijing**	**33.34**	**73**	P	**P**	**20 15 58.0**	**+0.7**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CFR	**Carcaliu**	**33.83**	**296**	⇑P	**P**	**20 16 04.0**	**+2.5**
MNK	**Minsk**	**34.42**	**313**	*i* P	**P**	**20 16 07.2**	**+0.7**
MNK				*i*		20 17 22.0	
MNK				*i* PPP	PPP	20 17 38.5	
MNK				*i*		20 18 43.4	
MNK				*i* S	**S**	**20 21 34.7**	**+0.3**
MNK				*i* SS	**SnSn**	**20 23 47.1**	**+2.7**
MNK				*i* SSS	SSS	20 24 05.8	
MNK				pmax	pmax		
	comp=N,9.0nm,1.3s						
MNK				pmax	pmax		
	comp=Z,13nm,0.8s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.3s						
MNK				MLR	MLR		
	comp=Z,66nm,23.0s						
MNK				MLR	MLR		
	comp=N,100nm,17.0s						
MNK				MLR	MLR		
	comp=E,15nm,17.0s						
MNK	**Minsk**	**34.42**	**313**	*i* P	**P**	**20 16 07.3**	**+0.8**
	comp=E,3.0nm,1.3s						
MNK				*i* P	**P**	**20 16 07.3**	**+0.8**
	comp=N,9.0nm,1.3s						
MNK				*i* P	**P**	**20 16 07.3**	**+0.8**
	comp=Z,13nm,0.8s,baz=99						
MNK				*i* PP	**PnPn**	**20 17 22.0**	**+0.9**
MNK				*i* PPP	PPP	20 17 38.6	
MNK				*i* S	**S**	**20 21 34.8**	**+0.4**
MNK				*i* SS	**SnSn**	**20 23 47.2**	**+2.8**
MNK				*i* SSS	SSS	20 24 05.8	
MNK				*i* LQ	LQ	20 27 39.6	
MNK				*i* LR	LR	20 30 10.4	
MNK				*i* LRM	MLR	20 31 31.8	
	comp=Z,66nm,22.9s						
MNK				*i* LRM	MLR	20 31 36.9	
	comp=N,100nm,16.5s						
MNK				*i* LRM	MLR	20 31 44.5	
	comp=E,15nm,16.6s						
VRI	**Vrincioaia**	**34.77**	**298**	⇑P	**P**	**20 16 12.4**	**+2.7**
TESR	**Tescani**	**34.78**	**299**	⇑P	**P**	**20 16 11.6**	**+1.9**
WHN	**Wuhan**	**34.79**	**90**	⇑P	**P**	**20 16 10.9**	**+1.0**
PLOR	**Plostina**	**34.82**	**298**	⇑P	**P**	**20 16 11.7**	**+1.6**
NACGM	**Naroch**	**35.12**	**314**	*i* P	**P**	**20 16 11.3**	**-1.2**
COVR	**Voineasa-Covas**	**35.13**	**298**	⇑P	**P**	**20 16 15.2**	**+2.4**
MLR	**Muntele Rosu**	**35.34**	**297**	⇑P	**P**	**20 16 17.4**	**+2.7**
IIGN	**Ignalina**	**35.51**	**314**	*e*P	**P**	**20 16 18.1**	**+2.3**
ISAL	**Salakas**	**35.60**	**315**	*e*P	**P**	**20 16 19.1**	**+2.4**
DOPR	**Dopca**	**35.69**	**298**	⇑P	**P**	**20 16 20.0**	**+2.4**
BURAR	**Bucovina Array**	**35.70**	**301**	⇑P	**P**	**20 16 19.0**	**+1.3**
VSU	**Vasula**	**35.85**	**320**	*e*P	**P**	**20 16 19.3**	**+0.5**
VSU	**Vasula**	**35.85**	**320**	⇑*e*P	**P**	**20 16 19.1**	**+0.4**
VSU				pmax	pmax		
	comp=Z,86nm,1.4s						
VOIR		**35.97**	**297**	⇑P	**P**	**20 16 22.9**	**+2.8**
ARR	**Arges**	**36.27**	**297**	⇑P	**P**	**20 16 25.2**	**+2.6**
LVV	**L'vov**	**36.43**	**305**	*e*P	P	20 16 28.6	+4.8
LVZ	**Lovozero**	**36.48**	**337**	⇓*e*P	**P**	**20 16 21.9**	**-2.1**
LVZ				pmax	pmax		
	comp=Z,133nm,1.9s						
FINES	**FINESS Array B**	**36.97**	**324**	P	**P**	**20 16 28.6**	**+0.4**
	comp=Z,5.2nm,0.6s,baz=110,slow=9.5,SNR=18						
FINES				LR	LR	20 31 08.1	
	comp=Z,36nm,20.0s,baz=175,slow=35						
MTSE	**Matsula**	**37.40**	**319**	*e*P	**P**	**20 16 32.9**	**+0.9**
DRGR		**37.46**	**300**	⇑P	**P**	**20 16 34.7**	**+2.0**
TRPA	**Tarpa**	**37.47**	**302**	⇑P	**P**	**20 16 35.0**	**+2.3**
TRPA	**Tarpa**	**37.47**	**302**	*e*P	**P**	**20 16 34.0**	**+1.3**
KOLS	**Kolonicke sedl**	**37.60**	**303**	*e*P	P	20 16 40.3	+6.5
VTS	**Vitosha**	**37.67**	**293**	⇑P	**P**	**20 16 36.8**	**+2.2**
NJ2	**Nanjing**	**37.74**	**85**	*e*P	**P**	**20 16 36.4**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZAPS	**Zavoj**	**37.99**	**294**	*e*P	P	20 16 43.6	+6.4
BZS	**Buzias**	**38.35**	**298**	⇑P	**P**	**20 16 42.6**	**+2.5**
BOVS	**Bovan**	**38.59**	**295**	⇑P	**P**	**20 16 44.1**	**+2.0**
BOVS	**Bovan**	**38.59**	**295**	*e*P	**P**	**20 16 44.2**	**+2.0**
BARS	**Barje**	**38.66**	**293**	*e*P	**P**	**20 16 45.0**	**+2.2**
AMBH	**Ambrzfalva**	**38.87**	**299**	*e*P	P	20 16 38.9	-5.7
OJC	**Ojcow**	**39.14**	**305**	*e*P	P	20 16 52.1	+5.3
GRUS	**Gruza**	**39.25**	**295**	*e*P	**P**	**20 16 48.6**	**+0.8**
CN2	**Changchun**	**39.46**	**65**	*e*P	**P**	**20 16 50.0**	**+0.5**
CN2				S	**S**	**20 22 50.8**	**-0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=Z,300nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
FRGS	**Fruska Gora**	**39.68**	**298**	⇑P	**P**	**20 16 52.8**	**+1.5**
IVAS	**Ivanjica**	**39.71**	**295**	*e*P	**P**	**20 16 54.5**	**+2.8**
DIVS	**Divibare**	**39.73**	**296**	P	**P**	**20 16 51.5**	**-0.3**
DIVS	**Divibare**	**39.73**	**296**	*e*P	**P**	**20 16 53.9**	**+2.1**
ZEA	**Zeya**	**39.77**	**49**	*e*P	**P**	**20 16 53.6**	**+1.6**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SJES	**Sjenica**	**39.90**	**295**	*e*P	P	20 16 57.9	+4.6
ARCES	**ARCESS Array B**	**40.18**	**336**	P	**P**	**20 16 55.5**	**+0.3**
	comp=Z,10nm,0.8s,baz=114,slow=6.0,SNR=9.8						
ARCES	**ARCESS Array B**	**40.18**	**336**	P	**P**	**20 16 55.4**	**+0.2**
BBLS	**Lazići**	**40.19**	**296**	*e*P	**P**	**20 16 57.6**	**+2.0**
MORH	**Mrgy, Hungar**	**40.32**	**299**	⇑P	**P**	**20 16 58.2**	**+1.6**
MORH	**Mrgy, Hungar**	**40.32**	**299**	*e*P	**P**	**20 16 54.8**	**-1.8**
MORC	**Moravsky Berou**	**40.63**	**305**	⇑P	**P**	**20 17 00.5**	**+1.3**
MORC	**Moravsky Berou**	**40.63**	**305**	*e*P	**P**	**20 17 00.5**	**+1.3**
JAVC	**Velka Javorina**	**40.63**	**304**	*e*P	**P**	**20 17 02.1**	**+2.8**
KRLC	**Kraliky**	**41.09**	**305**	*e*P	**P**	**20 17 04.0**	**+1.0**
KRLC	**Kraliky**	**41.09**	**305**	*e*P	**P**	**20 17 04.0**	**+1.0**
VRAC	**Vranov**	**41.29**	**304**	⇑P	**P**	**20 17 06.6**	**+2.0**
VRAC	**Vranov**	**41.29**	**304**	*e*P	**P**	**20 17 06.1**	**+1.5**
DPC	**Dobruska-Polom**	**41.36**	**306**	*e*P	**P**	**20 17 05.5**	**+0.3**
DPC				*e*		20 17 09.7	
DPC	**Dobruska-Polom**	**41.36**	**306**	*e*P	**P**	**20 17 05.5**	**+0.3**
DPC				*e*x	x	20 17 09.7	
OSTC	**Ostas**	**41.41**	**306**	*e*P	P	20 17 11.3	+5.7
KRUC	**Moravsky**	**41.45**	**304**	*e*P	**P**	**20 17 06.8**	**+0.9**
CHVC	**Chvalec**	**41.51**	**306**	*e*P	P	20 17 11.3	+4.9
UPC	**Upice**	**41.54**	**306**	*e*P	P	20 17 11.8	+5.2
UPC	**Upice**	**41.54**	**306**	*e*P	P	20 17 11.8	+5.2
YAK	**Yakutsk**	**41.67**	**36**	P	**P**	**20 17 06.8**	**-0.7**
	comp=Z,3.5nm,0.7s,baz=225,slow=14,SNR=4.6						
YAK	**Yakutsk**	**41.67**	**36**	*e*P	**P**	**20 17 07.4**	**-0.1**
YAK				pmax	pmax		
	comp=Z,13nm,1.5s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.8s						
YAK				pmax	pmax		
	comp=E,11nm,1.8s						
YAK	**Yakutsk**	**41.67**	**36**	P	**P**	**20 17 06.1**	**-1.4**
YAK				IAmb	IAmb	20 17 16.1	
	comp=Z,22nm,1.4s						
CONA	**Conrad Observa**	**41.95**	**302**	*e*P	**P**	**20 17 11.8**	**+1.7**
	comp=Z,5.1nm,1.0s						
MDJ	**Mudanjiang**	**42.23**	**63**	P	**P**	**20 17 11.6**	**-0.7**
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,200nm,5.7s						
ARSA	**Arzberg**	**42.28**	**301**	*e*P	**P**	**20 17 14.1**	**+1.3**
	comp=Z,2.8nm,0.8s						
PSI	**Prapat**	**42.50**	**140**	P	**P**	**20 17 14.1**	**-0.9**
	comp=Z,3.9nm,0.8s,baz=326,slow=6.8,SNR=7.3						
PRU	**Pruhonice**	**42.54**	**306**	*e*P	**P**	**20 17 16.1**	**+1.4**
PRU	**Pruhonice**	**42.54**	**306**	*e*P	**P**	**20 17 16.1**	**+1.4**
SOKA	**Soboth**	**42.71**	**301**	*e*P	**P**	**20 17 18.0**	**+1.7**
	comp=Z,5.9nm,0.9s,SNR=6.6						
BRG	**Berggiesshubel**	**42.81**	**307**	*e*P	**P**	**20 17 18.5**	**+1.5**
BRG				Amp		20 17 19.3	
	comp=Z,4.3nm,0.9s						
BRG	**Berggiesshubel**	**42.81**	**307**	P	P	20 17 22.5	+5.5
BRG				Amp		20 17 24.1	
	comp=Z,11nm,1.0s						
CKRC	**Cesky Krumlov**	**42.84**	**304**	*e*P	**P**	**20 17 21.3**	**+4.0**
KSRS	**Korea Array**	**42.88**	**73**	P	**P**	**20 17 16.8**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=269,slow=7.9,SNR=7.1						
KSRS				LR	LR	20 37 43.0	
	comp=Z,139nm,18.4s,baz=310,slow=40						
KLR	**Kul'dur**	**42.89**	**55**	P	**P**	**20 17 18.1**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=294,slow=8.9,SNR=4.0						
KLR	**Kul'dur**	**42.89**	**55**	⇓*e*P	**P**	**20 17 17.7**	**+0.1**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MOA	**Molln**	**43.02**	**303**	*e*P	**P**	**20 17 20.0**	**+1.2**
	comp=Z,3.8nm,1.2s						
OBKA	**Obir**	**43.07**	**301**	*e*P	**P**	**20 17 21.4**	**+2.2**
	comp=Z,7.0nm,1.1s,SNR=4.6						
GERES	**GERESS Array B**	**43.24**	**304**	P	**P**	**20 17 22.1**	**+1.5**
	comp=Z,2.4nm,0.9s,baz=70,slow=8.7,SNR=11						
GERES				LR	LR	20 40 04.6	
	comp=Z,50nm,18.1s,baz=92,slow=43						
KHC	**Kasperske Hory**	**43.27**	**304**	⇓*e*P	**P**	**20 17 22.0**	**+1.3**
KHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KHC	**Kasperske Hory**	**43.27**	**304**	*e*P	**P**	**20 17 22.1**	**+1.3**
KHC				*e*x	x	20 17 25.0	
CLL	**Collm**	**43.35**	**308**	*e*P	**P**	**20 17 22.0**	**+0.7**
CLL				*i*		20 17 25.9	
CLL	**Collm**	**43.35**	**308**	*e*P	**P**	**20 17 22.0**	**+0.7**
CLL				*i* pP	**pP**	**20 17 24.8**	**-0.9**
	comp=Z,8.0nm,0.9s						
CLL				*i* sP	**sP**	**20 17 25.9**	**-1.6**
CLL				LmV		20 37 00.0	
	comp=Z,100nm,19.7s						
TIXI	**Tiksi**	**43.61**	**22**	⇓*e*P	**P**	**20 17 22.1**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TIXI	**Tiksi**	**43.61**	**22**	P	**P**	**20 17 21.8**	**-1.3**
TIXI				IAmb	IAmb	20 17 23.5	
	comp=Z,8.2nm,0.9s						
NC405	**NORSAR Array S**	**43.73**	**322**	P	**P**	**20 17 23.7**	**-0.6**
NC405				IAmb	IAmb	20 17 31.9	
	comp=Z,25nm,0.9s						
PRED	**Cave del Predi**	**43.75**	**301**	P	**P**	**20 17 24.7**	**+0.1**
NC303	**NORSAR Array S**	**43.91**	**322**	P	**P**	**20 17 26.1**	**+0.5**
NB2	**NORSAR Subarra**	**43.97**	**322**	P	**P**	**20 17 26.0**	**-0.3**
	comp=Z,6.9nm,0.6s,baz=92,slow=8.6						
NOA	**NORSAR Array B**	**43.97**	**322**	P	**P**	**20 17 26.4**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=102,slow=7.1,SNR=23						
NOA				LR	LR	20 35 46.7	
	comp=Z,62nm,19.1s,baz=95,slow=36						
USRK	**Ussuriysk Ar.**	**43.99**	**63**	P	**P**	**20 17 26.0**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=294,slow=11,SNR=3.0						
NC204	**NORSAR Array S**	**44.20**	**322**	P	**P**	**20 17 28.2**	**+0.1**
MOX	**Moxa**	**44.31**	**307**	*e*L	L	20 35 46.7	
	comp=Z,60nm,20.0s						
ABTA	**Abfaltersbach**	**44.40**	**301**	*e*P	**P**	**20 17 29.8**	**-0.1**
	comp=Z,1.8nm,1.0s						
GRF	**Grafenberg Arr**	**44.70**	**306**	*e*P	**P**	**20 17 34.5**	**+2.3**
	comp=Z,12nm,1.0s,baz=87,slow=7.0						
GRF				*e*pP	**sP**	**20 17 38.9**	**+0.4**
GRF				*e*L	L	20 37 06.3	
	comp=Z,64nm,18.8s						
WTTA	**Wattenberg**	**44.88**	**302**	*e*P	**P**	**20 17 34.5**	**+0.7**
	comp=Z,5.7nm,0.9s						
WATA	**Walderalm**	**44.91**	**302**	*e*P	**P**	**20 17 33.5**	**-0.5**
	comp=Z,1.6nm,0.5s						
MOTA	**Moosalm**	**45.22**	**302**	*e*P	**P**	**20 17 36.4**	**-0.1**
	comp=Z,4.1nm,1.0s						
FETA	**Feichten**	**45.54**	**302**	*e*P	**P**	**20 17 38.9**	**-0.2**
	comp=Z,1.8nm,0.8s						
DAVA	**Damuels**	**46.05**	**303**	*e*P	**P**	**20 17 43.4**	**+0.3**
	comp=Z,8.1nm,0.9s						
PDSI	**Padang**	**46.46**	**140**	P	**P**	**20 17 46.6**	**+0.1**
	comp=Z,18nm,0.6s						
SENIN	**Lac Senin/Sane**	**47.99**	**302**	P	**P**	**20 17 56.8**	**-1.5**
SENIN				IAmb	IAmb	20 18 06.9	
	comp=Z,7.8nm,0.7s						
BNI	**Bardonecchia**	**48.76**	**300**	P	**P**	**20 18 04.6**	**+0.4**
BNI				pmax	pmax		
	comp=Z,11nm,1.0s						
BNI	**Bardonecchia**	**48.76**	**300**	P	**P**	**20 18 04.6**	**+0.4**
BNI				IAmb	IAmb	20 18 10.7	
	comp=Z,11nm,1.0s						
KEST	**Kesra**	**49.98**	**288**	P	**P**	**20 18 15.6**	**+2.0**
	comp=Z,7.4nm,1.0s,baz=152,slow=7.3,SNR=5.0						
KEST	**Kesra**	**49.98**	**288**	P	**P**	**20 18 13.5**	**-0.1**
KEST				IAmb	IAmb	20 18 20.3	
	comp=Z,19nm,1.2s						
YSS	**Yuzh-Sakhalins**	**50.58**	**56**	⇓*e*P	**P**	**20 18 18.0**	**+0.2**
YSS				pmax	pmax		
	comp=Z,21nm,1.1s						
MAJO	**Matsushiro**	**50.90**	**70**	⇓*e*P	**P**	**20 18 22.8**	**+2.3**
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MAT	**Matsushiro**	**50.90**	**70**	P	**P**	**20 18 19.9**	**-0.6**
MJAR	**Matsushiro Arr**	**50.90**	**70**	P	**P**	**20 18 20.3**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=300,slow=9.7,SNR=9.6						
ASAJ	**Asahikawa**	**51.35**	**60**	LR	LR	20 42 11.7	
	comp=Z,149nm,19.5s,baz=311,slow=38						
JHJ	**Hachijo jima 2**	**53.49**	**74**	LR	LR	20 43 02.1	
	comp=Z,94nm,19.0s,baz=252,slow=38						
DAG	**Danmarks Havn**	**53.53**	**343**	*i* P	**P**	**20 18 39.2**	**-0.3**
DAG				IAmb	IAmb	20 18 40.0	
	comp=Z,4.6nm,0.9s						
ESDC	**Sonseca Array**	**58.04**	**298**	P	**P**	**20 19 12.9**	**+0.5**
	comp=Z,1.7nm,0.9s,baz=66,slow=6.0,SNR=7.8						
JCJ	**Chichijima**	**58.13**	**79**	LR	LR	20 45 13.0	
	comp=Z,65nm,21.3s,baz=344,slow=37						
NEEM	**North Greenlan**	**59.69**	**348**	*i* P	**P**	**20 19 23.1**	**-0.5**
NEEM				IAmb	IAmb	20 19 30.5	
	comp=Z,7.4nm,0.8s						
SUMG	**Summit**	**59.95**	**341**	P	**P**	**20 19 25.4**	**-0.1**
SUMG				pmax	pmax		
	comp=Z,13nm,1.0s						
SUMG	**Summit**	**59.95**	**341**	*i* P	**P**	**20 19 25.7**	**+0.2**
SUMG				IAmb	IAmb	20 19 26.8	
	comp=Z,5.7nm,0.9s						
SUMG	**Summit**	**59.95**	**341**	P	**P**	**20 19 25.4**	**-0.1**
SUMG				IAmb	IAmb	20 19 27.7	
	comp=Z,13nm,1.0s						
ICESG	**Greenland Ices**	**62.21**	**338**	*e*P	**P**	**20 19 41.0**	**+0.1**
ICESG				IAmb	IAmb	20 19 50.2	
	comp=Z,5.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**67.30**	**269**	P	**P**	**20 20 14.5**	**+0.1**
	comp=Z,5.1nm,0.8s,baz=47,slow=5.4,SNR=17						
TORD				LR	LR	20 53 48.0	
	comp=Z,59nm,18.8s,baz=295,slow=40						
TORD	**Torodi Ar. Bea**	**67.30**	**269**	P	**P**	**20 20 14.4**	**-0.1**
TORD				IAmb	IAmb	20 20 20.4	
	comp=Z,3.6nm,0.9s						
TOLK	**Toolik Lake Re**	**68.87**	**15**	P	**P**	**20 20 23.7**	**+0.2**
A36M	**Sachs Harbour**	**69.36**	**6**	P	**P**	**20 20 26.5**	**+0.1**
H21K	**Melozitna Rive**	**70.57**	**18**	P	**P**	**20 20 32.9**	**-1.1**
H21K				IAmb	IAmb	20 20 34.5	
	comp=Z,14nm,1.2s						
BMAR	**Burnt Mountain**	**70.91**	**14**	P	**P**	**20 20 36.6**	**+0.5**
J20K	**Nowinta River**	**71.41**	**20**	P	**P**	**20 20 38.0**	**-1.0**
H24K	**Noodor Dome**	**71.58**	**16**	P	**P**	**20 20 37.8**	**-2.4**
H24K				IAmb	IAmb	20 20 41.6	
	comp=Z,8.4nm,0.9s						
INK	**Inuvik**	**71.96**	**10**	P	**P**	**20 20 42.0**	**-0.3**
	comp=Z,13nm,0.9s,baz=358,slow=7.2,SNR=35						
INK	**Inuvik**	**71.96**	**10**	P	**P**	**20 20 41.6**	**-0.7**
COLA	**College**	**72.40**	**17**	*c i*P	**P**	**20 20 45.3**	**+0.3**
COLA				pmax	pmax		
	comp=Z,25nm,1.0s						
ILAR	**Eielson Array**	**72.71**	**17**	P	**P**	**20 20 46.0**	**-0.9**
	comp=Z,6.5nm,0.9s,baz=318,slow=5.1,SNR=64						
ILAR	**Eielson Array**	**72.71**	**17**	P	**P**	**20 20 45.4**	**-1.5**
SCRK	**Sand Creek**	**74.04**	**16**	P	**P**	**20 20 54.7**	**-0.2**
SCRK				IAmb	IAmb	20 20 55.7	
	comp=Z,14nm,1.0s						
FITZ	**Fitzroy Crossi**	**74.69**	**128**	P	**P**	**20 20 58.5**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=0.0,slow=8.1,SNR=2.2						
SCM	**Sheep Creek Mo**	**75.11**	**19**	P	**P**	**20 20 59.8**	**-1.3**
SCM				pmax	pmax		
	comp=Z,20nm,1.0s						
SCM	**Sheep Creek Mo**	**75.11**	**19**	P	**P**	**20 20 59.8**	**-1.3**
L27K	**Beaver Creek,**	**75.31**	**16**	P	**P**	**20 20 60.0**	**-2.2**
L27K				IAmb	IAmb	20 21 03.5	
	comp=Z,6.0nm,0.8s						
BCAR	**Beaver Creek A**	**75.31**	**16**	P	**P**	**20 21 02.5**	**+0.2**
DBIC	**Dimbokro**	**76.33**	**268**	P	**P**	**20 21 09.3**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=64,slow=3.1,SNR=4.1						
DBIC				LR	LR	20 59 35.7	
	comp=Z,74nm,18.6s,baz=8.0,slow=40						
YKA	**Yellowknife Ar**	**79.46**	**4**	P	**P**	**20 21 25.2**	**-0.1**
	comp=Z,5.7nm,0.8s,baz=348,slow=5.5,SNR=22						
BOSA	**Boshof**	**80.05**	**221**	LR	LR	20 58 00.0	
	comp=Z,20nm,20.7s,baz=5.0,slow=36						
SCHQ	**Schefferville**	**81.12**	**338**	P	**P**	**20 21 33.8**	**-0.7**
	comp=Z,7.2nm,0.8s,baz=105,slow=5.4,SNR=4.0						
WRA	**Warramunga Arr**	**81.60**	**123**	P	**P**	**20 21 36.3**	**-1.1**
	comp=Z,2.4nm,0.9s,baz=327,slow=4.9,SNR=19						
WRA	**Warramunga Arr**	**81.60**	**123**	P	**P**	**20 21 36.6**	**-0.9**
WRA	**Warramunga Arr**	**81.60**	**123**	P	**P**	**20 21 36.5**	**-0.9**
WRAB	**Tennant Creek**	**81.61**	**123**	P	**P**	**20 21 36.1**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WRAB	**Tennant Creek**	**81.61**	**123**	P	**P**	**20 21 36.1**	**-1.4**
WB2	**Warramunga Arr**	**81.61**	**123**	P	**P**	**20 21 36.2**	**-1.3**
ASAR	**Alice Springs**	**83.98**	**126**	P	**P**	**20 21 48.7**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=318,slow=4.5,SNR=9.1						
PDAR	**Pinedale Array**	**99.37**	**2**	LR	LR	21 13 07.4	
	comp=Z,39nm,18.1s,baz=360,slow=38						
LPAZ	**La Paz**	**139.49**	**292**	PKP	**PKPdf**	**20 28 48.5**	**+0.5**
	comp=Z,1.1nm,1.0s,baz=45,slow=4.3,SNR=2.9						
PLCA	**Paso Flores**	**151.84**	**253**	PKPbc	**PKiKP**	**20 29 14.2**	**-0.2**
	comp=Z,9.4nm,1.1s,baz=102,slow=2.6,SNR=3.6						

IDC ***13*** *20:23:37.6±2.1, 2°.56S×139°.00E, h0^{km}, mb3.3/4,* *mb1 3.7/7, mb1mx3.6/27, mbtmp3.7/7, ML3.8/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/24, Error ellipse: s-maj=54.4km s-min=23.1km az=91.0*

ISC 13 20:23:42.8±1.8**, 2°.8S**±0°.1×**138°.8E**±0°.2**, h35^{km}, n7, σ1^{s}98**/8**, mb3.5**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	7.81	284	Pn	Pn	20 25 34.1	+0.1
	0.4nm,0.3s,baz=162,slow=15,SNR=1.8						
SIJI				LR	LR	20 29 01.1	
	comp=Z,83nm,20.2s,baz=9.5,slow=41						
BATI	Baumata	16.78	243	Pn	P	20 27 38.0	+0.8
	1.7nm,0.3s,baz=77,slow=18,SNR=1.8						
WRA	Warramunga Arr	17.61	194	P	Pn	20 27 46.3	+0.7
	0.3nm,0.3s,baz=12,slow=11,SNR=17						
WRA				S	Sn	20 30 57.5	-3.3
	0.0nm,0.3s,baz=12,slow=22,SNR=2.0						
FITZ	Fitzroy Crossi	19.98	219	P	Pn	20 28 14.4	+0.2
	0.4nm,0.4s,baz=37,slow=10,SNR=1.1						
ASAR	Alice Springs	21.30	193	P	P	20 28 28.8	+2.1
	0.8nm,0.7s,baz=12,slow=11,SNR=17						
SONM	Songino Array	57.84	335	P	P	20 33 29.5	-1.6
	0.3nm,0.7s,baz=149,slow=5.3,SNR=2.2						
MKAR	Makanchi Array	69.93	322	P	P	20 34 50.9	+0.4
	0.6nm,0.6s,baz=101,slow=7.7,SNR=6.5						

IDC 13 20:27:17.9±1.7**, 4°.27S**×**130°.30E, h0^{km}, mb3.4**/1**, mb1 3.4**/4**, mb1mx3.2**/29**, mbtmp3.3**/4**, ML3.0**/3**, Error ellipse: s-maj=62.8km s-min=24.3km az=88.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.51	16	Pn	Pn	20 28 14.0	+0.1
	2.9nm,0.3s,baz=238,slow=22,SNR=49						
SIJI				Sn	Sn	20 28 55.5	-0.7
	1.3nm,0.3s,baz=318,slow=23,SNR=1.4						
WRA	Warramunga Arr	16.07	166	Pn	Pn	20 31 04.2	-1.2
	0.0nm,0.3s,baz=348,slow=12,SNR=1.9						
ASAR	Alice Springs	19.59	170	P	P	20 31 48.2	+0.3
	0.1nm,0.3s,baz=345,slow=11,SNR=5.0						
MKAR	Makanchi Array	66.13	326	P	P	20 38 07.4	+0.2
	0.2nm,0.5s,baz=145,slow=5.2,SNR=5.6						

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*IDC **13** 20:39:04.4±9.9, 18°.71N×145°.33E, h420^{km}±114^{km}, mb3.1/7, mb1 3.3/7, mb1mx2.6/38, mbtmp3.9/7, Error ellipse: s-maj=44.3km s-min=25.0km az=76.0*

ISC 13 20:39:02.7±1.3**, 18°.7N**±0°.2×**145°.3E**±0°.3**, h400^{km}, n8, σ0^{s}52**/8**, mb3.3**/8**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	22.44	241	P	P	20 43 29.1	-0.4
	111nm,0.4s,baz=58,slow=13,SNR=2.3						
WRA	Warramunga Arr	39.92	196	P	P	20 46 00.4	+0.3
	0.1nm,0.3s,baz=19,slow=8.1,SNR=4.8						
SONM	Songino Array	42.90	322	P	P	20 46 24.1	+0.2
	0.5nm,0.6s,baz=134,slow=8.4,SNR=4.8						
ZALV	Zalesovo Beam	57.78	323	P	P	20 48 13.5	-0.1
	0.6nm,0.5s,baz=97,slow=7.5,SNR=3.6						
MKAR	Makanchi Array	58.19	314	P	P	20 48 17.1	+0.5
	0.6nm,0.5s,baz=86,slow=8.4,SNR=12						
ILAR	Eielson Array	63.77	26	P	P	20 48 53.2	0.0
	1.0nm,1.1s,baz=256,slow=6.0,SNR=3.1						
ARCES	ARCESS Array B	82.36	342	P	P	20 50 40.9	+0.2
	6.6nm,1.0s,baz=57,slow=5.7,SNR=2.1						
FINES	FINESS Array B	86.71	335	P	P	20 51 01.4	-0.9
	0.8nm,0.3s,baz=66,slow=5.2,SNR=9.1						

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*THR **13** 20:44:11.9±0.7, 32°.05N×48°.21E, h15^{km}, ML3.6*
*ISN **13** 20:44:13.9±1.1, 32°.05N×48°.28E, h6^{km}±35^{km}, ML3.5*
*TEH **13** 20:44:14.3, 32°.17N×48°.35E, h13^{km}, ML3.9*

ISC 13 20:44:14.1±0.8**, 32°.13N**±0°.04×**48°.35E**±0°.03**, h10^{km}, n96, σ1^{s}10**/100**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHWZ	Ahwaz	0.83	162	ePg	Pg	20 44 30.7	+0.5
AHWZ				eSg	Sn	20 44 44.4	+0.1
AHWZ				e		20 44 47.2	
	comp=Z,10µm,0.3s						
AMIS	Naft Sefid	0.92	120	ePg	Pg	20 44 32.1	+0.2
AMIS				e		20 44 50.1	
	comp=Z,72µm,0.2s						
DHL1	Dehloran	1.06	302	ePg	Pg	20 44 33.9	-0.6
DHL1				eSg	Sn	20 44 49.6	-0.2
IKFM	Kafar-mosalman	1.46	343	ePg	Pb	20 44 40.5	-0.8
IKFM				e		20 45 03.7	
	comp=Z,30µm,0.9s						
IDOB	Doab	1.66	355	ePg	Pb	20 44 44.2	-0.8
RAFI	Al-Rafai	1.94	259	ePn	Pb	20 44 49.0	-0.6
RAFI				eSn	Sb	20 45 13.2	-0.6
RAFI				AML	AML	20 45 26.9	
	comp=E,614nm,0.5s						
HSAM	Samen	2.09	6	ePn	Pn	20 44 50.2	+0.7
KHMZ	Khomeyn	2.10	40	ePn	Pb	20 44 51.3	-1.2
KHMZ				IAML		20 45 24.7	
	comp=N,353nm,0.4s						
KHMZ	Khomeyn	2.10	40	ePn	Pb	20 44 51.3	-1.2
SHK1	Shahrekord	2.16	84	ePn	Pn	20 44 51.8	+1.4
SHK1				e		20 44 54.2	
	comp=Z,8µm,0.3s						
IPIR	Pirpir	2.23	75	ePn	Pb	20 44 53.5	-1.1
IPIR				e		20 45 31.5	
	comp=Z,7µm,0.5s						
IBDR	Badra	2.26	296	ePn	Pn	20 44 53.0	+1.4
IBDR				eSn	Sb	20 45 22.0	-1.1
IBDR				AML	AML	20 45 38.8	
	comp=E,323nm,0.7s						
IBDR				AML	AML	20 45 39.7	
	comp=N,334nm,0.7s						
IBZA	Bozab	2.37	350	ePn	Pn	20 44 54.2	+0.8
KCHF	Cheshme Sefid,	2.41	333	ePn	Pn	20 44 54.3	+0.6
KCHF				e		20 45 41.5	
	comp=Z,5µm,0.5s						
KER	Kermanshah	2.47	336	ePn	Pn	20 44 55.1	+0.5
MIB	Mutribah	2.47	201	eP	Pn	20 44 55.3	+0.8
IBRJ	Brojen	2.49	94	ePn	Pn	20 44 56.1	+1.2
IBRJ				e		20 45 03.0	
	comp=Z,5µm,0.6s						
UMR	Umm Al-Rimmam	2.62	192	eP	Pn	20 44 57.9	+1.4
IGHG	Ghaleghazi	2.65	326	e		20 45 55.4	
	comp=Z,6µm,0.8s						
HAGD	Aghdareh	2.77	14	ePn	Pn	20 44 59.8	+1.0
HAGD				e		20 45 05.0	
	comp=Z,2µm,0.5s						
ASAO	Ashtian	2.79	30	ePn	Pn	20 45 00.3	+1.2
ASAO				IAML		20 45 48.9	
	comp=N,161nm,0.7s						
ASAO				IAML		20 45 51.7	
	comp=E,167nm,0.7s						
RST	Umm Al-Ruwaisa	2.86	204	eP	Pn	20 45 01.0	+1.1
IKLH	Kolahrood	2.97	66	ePn	Pn	20 45 03.2	+1.6
IKLH				e		20 45 47.8	
	comp=Z,4µm,0.3s						
KLNJ	Kolanjah	2.99	111	ePn	Pn	20 45 03.0	+1.1
KLNJ				e		20 46 06.1	
	comp=Z,3µm,0.6s						
ILIN	Lien	3.01	338	e		20 45 10.8	
	comp=Z,2µm,0.4s						
ILIN				ePn	Pn	20 45 02.7	+0.5
QAMS	Qamsar	3.03	57	ePn	Pn	20 45 04.4	+2.0
IDHR	Dehrash	3.04	328	ePn	Pn	20 45 03.1	+0.6
IDHR				e		20 46 03.4	
	comp=Z,3µm,0.5s						
SNGE	Sanandaj	3.07	345	ePn	Pn	20 45 02.6	-0.3
SNGE				IAML		20 45 52.0	
	comp=N,90nm,0.6s						
IGAR	Gharneh	3.14	84	e		20 45 08.9	
	comp=Z,3µm,0.2s						
IGAR				ePn	Pn	20 45 05.4	+1.5
QRN	Al-Qurain	3.39	186	eP	Pn	20 45 08.4	+1.3
GHVR	GHOM	3.41	46	ePn	Pn	20 45 09.7	+2.2
GHVR				IAML		20 46 02.5	
	comp=E,122nm,0.3s						
GHVR				IAML		20 46 07.5	
	comp=N,57nm,0.3s						
IRAM	Ramesheh	3.44	94	ePn	Pn	20 45 09.0	+0.9
IZEF	Zefreh	3.45	76	e		20 45 20.4	
	comp=Z,1µm,0.4s						
IZEF				ePn	Pn	20 45 09.5	+1.3
IRAZ	Razeghan	3.52	22	ePn	Pn	20 45 10.2	+1.0
BHD	Baghdad	3.53	290	ePn	Pn	20 45 11.0	+2.0
BHD				eSn	Sn	20 45 53.0	+2.1
IQOM	Qom	3.54	39	ePn	Pn	20 45 10.7	+1.3
KRSH	Karshahi	3.67	59	ePn	Pn	20 45 12.7	+1.5
QABG	Abgarm-Qazvin	3.72	16	ePn	Pn	20 45 12.4	+0.6
KAZ1	Kazerun	3.77	131	ePn	Pn	20 45 13.3	+0.8
NASN	Na'in	3.83	79	ePn	Pn	20 45 14.7	+1.2
NASN				IAML		20 46 20.9	
	comp=E,45nm,0.5s						
NASN				IAML		20 46 22.6	
	comp=N,30nm,0.5s						
NASN	Na'in	3.83	79	ePn	Pn	20 45 14.7	+1.2
ISFB	Sefidab	3.95	55	ePn	Pn	20 45 15.5	+0.6
IVRN	Varamin	4.02	44	ePn	Pn	20 45 17.2	+1.4
IMHD	Mahdasht	4.04	28	ePn	Pn	20 45 16.7	+0.5
IHSB	Hasanabad	4.11	36	ePn	Pn	20 45 18.0	+0.9
AHBU	AHRAM	4.13	141	ePn	Pn	20 45 16.8	-0.5
THKV	Tehran--Karaj	4.33	28	ePn	Pn	20 45 20.7	+0.6
THKV	Tehran--Karaj	4.33	28	ePn	Pn	20 45 20.7	+0.6
CHTH	Charan	4.42	31	ePn	Pn	20 45 22.0	+0.4
CHTH	Charan	4.42	31	ePn	Pn	20 45 22.0	+0.4
IGZV	Ghazvin	4.52	20	ePn	Pn	20 45 23.5	+0.6
ZNJK	Zanjan	4.54	3	ePn	Pn	20 45 23.6	+0.5
ZNJK	Zanjan	4.54	3	ePn	Pn	20 45 23.6	+0.5
ISAD	Sadrabad	4.54	91	ePn	Pn	20 45 24.1	+0.9
IDMV	Damavand	4.61	41	ePn	Pn	20 45 24.8	+0.6
DAMV	Damavand	4.62	40	ePn	Pn	20 45 25.1	+0.9
DAMV	Damavand	4.62	40	ePn	Pn	20 45 25.1	+0.9
ANAR	Anarak	4.66	75	ePn	Pn	20 45 25.5	+0.8
IKRK	Kirkuk	4.67	315	ePn	Pn	20 45 27.0	+2.3
IKRK				eSn	Sn	20 46 21.0	+2.1
IKRK				AML	AML	20 47 00.7	
	comp=E,96nm,0.8s						
IKRK				AML	AML	20 47 04.0	
	comp=N,64nm,0.9s						
QALM	Alamut, Qazvin	4.70	23	ePn	Pn	20 45 25.7	+0.4
JIR1	Jirandeh	4.72	14	ePn	Pn	20 45 26.5	+0.9
IFIR	Firoozkooh	5.07	45	ePn	Pn	20 45 31.3	+0.8
ICHK	Chekchek	5.14	87	ePn	Pn	20 45 32.0	+0.6
ICHK				e		20 45 32.8	
	comp=Z,1µm,0.6s						
IPRN	Peran	5.27	38	ePn	Pn	20 45 33.1	0.0
YZKH	Yazd	5.30	86	ePn	Pn	20 45 34.3	+0.9
YZKH	Yazd	5.30	86	ePn	Pn	20 45 34.3	+0.9
IMEH	Mehriz	5.39	96	ePn	Pn	20 45 34.9	+0.1
ISHM	Shahmirzad	5.51	47	e		20 46 02.1	
	comp=Z,581nm,0.5s						
GHIR	Ghir-Karzin	5.55	132	ePn	Pn	20 45 36.6	-0.3
GHIR				IAML		20 46 49.5	
	comp=N,38nm,0.3s						
GHIR				IAML		20 46 58.8	
	comp=E,26nm,0.7s						
GHIR	Ghir-Karzin	5.55	132	ePn	Pn	20 45 36.6	-0.3
ISRB	Sarab	5.71	355	ePn	Pn	20 45 39.9	+0.7
IAZR	Azarshahr	5.87	341	ePn	Pn	20 45 42.6	+1.2
IHRS	Heris	6.27	351	ePn	Pn	20 45 47.6	+0.7
IGLO	Ghaloghah	6.29	45	ePn	Pn	20 45 48.6	+1.4
GRMI	Germi	6.68	357	ePn	Pn	20 45 53.1	+0.8
GRMI	Germi	6.68	357	ePn	Pn	20 45 53.2	+0.8
TPRV	Parvadeh(Tabas	7.10	81	ePn	Pn	20 45 58.7	+0.5
TNSJ	Nastanj	7.18	73	ePn	Pn	20 46 00.0	+0.8
SHRO	Shahrood	7.43	57	ePn	Pn	20 46 04.3	+1.5
SHRO	Shahrood	7.43	57	ePn	Pn	20 46 04.3	+1.5
KRBR	Kerman	7.53	104	ePn	Pn	20 46 03.8	-0.5
KRBR	Kerman	7.53	104	ePn	Pn	20 46 03.8	-0.5
TKDS	Koohdasht(Taba	7.53	76	ePn	Pn	20 46 04.3	+0.2
TABS	Tabas	7.53	76	ePn	Pn	20 46 04.8	+0.6
TABS	Tabas	7.53	76	ePn	Pn	20 46 04.8	+0.6
IKOO	Kooshah	9.03	85	ePn	Pn	20 46 25.4	+0.6
AFRZ	Afriz	9.08	79	ePn	Pn	20 46 26.3	+0.9
BANOM	Banah	9.31	130	Pn	Pn	20 46 26.2	-2.3
BANOM				Sn	Sn	20 48 03.5	-10
ISFR	Sfrayin	9.35	56	ePn	Pn	20 46 30.9	+1.7
MSFE	Esma-Masafi	9.62	133	Pn	Pn	20 46 31.2	-1.5
MDH	Madha	9.75	132	Pn	Pn	20 46 32.4	-2.0
UOSS	Minazif	9.94	134	Pn	Pn	20 46 35.8	-1.3
HATD	Hatta, Dubai	9.99	135	Pn	Pn	20 46 37.1	-0.7
ASHO	Ashiyiah	10.05	136	Pn	Pn	20 46 36.6	-2.0
SHRT	Shahrakht	10.16	78	ePn	Pn	20 46 41.5	+1.4
SHRT	Shahrakht	10.16	78	ePn	Pn	20 46 41.5	+1.4

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*IDC **13** 20:47:21.0±0.8, 4°.32S×101°.69E, h0^{km}, mb4.3/19, mb1 4.3/22, mb1mx4.1/41, mbtmp4.3/22, ML3.9/2, MS3.5/13, Ms1 3.5/13, ms1mx3.3/35, Error ellipse: s-maj=26.0km s-min=11.8km az=48.0*
*DJA **13** 20:47:26.9±0.3, 4°S±2°×10°2E±°, h40^{km}±3^{km}, M4.6/33, mb4.5/33, mB5.2/9, MLv4.7/27, Mw(mB)4.6/9, MwMwp5.2/2, Mwp5.4/2*
*NEIC **13** 20:47:26.4±1.9, 4°.52S±0°.08×101°.49E±0°.08, h50^{km}±6^{km}, mb4.4/19, Error ellipse: s-maj=12.5km s-min=10.8km az=55.0*

ISC 13 20:47:24.9±0.5**, 4°.47S**±0°.05×**101°.55E**±0°.05**, h30^{km}, n126, σ1^{s}37**/122**, mb4.5**/41**, MS3.5**/11**, 3C, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSI	Kapahiang	1.32	52	P	Pn	20 47 47.5	+0.2
KSI				S	Sb	20 48 06.1	+0.5
MASI	Maura Aman, Be	1.48	28	P	Pn	20 47 50.3	+0.7
MASI				S	Sb	20 48 10.9	+0.5
LHSI	Lahat	2.07	72	P	Pn	20 47 58.6	+1.1
PPSI	Pulau Pagai	2.29	318	P	Pn	20 48 01.7	+1.1
KRJI	Kerinci	2.36	358	P	Pn	20 48 03.3	+1.6
LWLI	Liwa	2.56	102	P	Pn	20 48 06.2	+1.8
MDSI	Maura Dua	2.62	91	P	Pn	20 48 06.3	+1.1
MDSI				S	Sn	20 48 36.8	+0.8
KASI	Kota Agung	3.12	110	P	Pn	20 48 14.4	+2.4
KASI				S	Sn	20 48 48.0	-0.2
KLSI		3.18	94	P	Pn	20 48 15.3	+2.5
KLI	Kotabumi	3.32	97	P	Pn	20 48 18.1	+3.3
JMBI	JAMBI	3.50	37	P	Pn	20 48 19.2	+1.9
PMBI	Palembang	3.56	65	P	Pn	20 48 19.1	+1.0
PDSI	Padang	3.69	343	P	Pn	20 48 21.6	+1.6
BLSI	Bandar Lampung	3.79	104	P	Pn	20 48 24.6	+3.3
SISI	Saibi	3.97	322	S	Sn	20 49 11.0	+1.6
PPI	Padang Panjang	4.15	344	P	Pn	20 48 27.7	+1.5
RGRI	Rengat	4.16	11	P	Pn	20 48 29.4	+3.0
CGJI	Cibinong	4.64	118	P	Pn	20 48 34.1	+1.1
CGJI				S	Sn	20 49 25.7	-0.2
BKNI	Bangkinang	4.79	354	P	Pn	20 48 36.7	+1.7
BKNI	Bangkinang	4.79	354		Pn	20 48 36.2	+1.2
DSRI	Dabo	4.98	37	P	Pn	20 48 39.5	+1.8
PPBI	Pangkal Pinang	5.12	64	P	Pn	20 48 41.1	+1.6
	0.4nm55nm,1.2s						
DBJI	Dramaga	5.57	112	P	Pn	20 48 47.7	+1.9
	0.9nm4µm73nm,0.7s						
MNSI	Mandailing Nat	5.59	339	P	Pn	20 48 46.0	0.0
	0.4nm706nm29nm,0.5s						
CBJI	Citeko	5.62	110	P	Pn	20 48 52.7	+6.3
	0.7nm2µm157nm,0.8s						
CNJI	Cibinong	6.22	117	P	Pn	20 48 54.8	0.0
LEM	Lembang	6.47	112	Pn	Pn	20 48 58.2	-0.1
	3.9nm,0.3s,baz=219,slow=23,SNR=2.8						
LEM				LR	LR	20 51 58.6	
	comp=Z,383nm,19.4s,baz=241,slow=43						
LEM	Lembang	6.47	112	P	Pn	20 49 00.5	+2.1
	0.2nm48nm,0.9s						
MYKOM	Kota Tinggi	6.62	20		Pn	20 49 01.3	+1.0
GSI	Gunungsitoli	6.97	325	P	Pn	20 49 05.5	+0.4
	0.4nm41nm,1.0s						
GSI	Gunungsitoli	6.97	325	Pn	Pn	20 49 05.7	+0.6
GSI	Gunungsitoli	6.97	325	P	Pn	20 49 06.9	+1.8
CMJI	Cimerak	7.61	116	P	Pn	20 49 13.7	-0.1
	0.1nm28nm,0.9s						
PSI	Prapat	7.68	340	Pn	Pn	20 49 12.0	-2.9
	baz=162,slow=16						
PSI				Sn	Sn	20 50 39.9	-1.2
	baz=252,slow=6.4,SNR=1.9						
PSI				LR	LR	20 52 29.4	
	comp=Z,322nm,21.5s,baz=144,slow=41						
KCSI	Kotacane, Aceh	8.79	334	P	Pn	20 49 33.0	+3.0
	17nm,1.3s						
IPM	Ipoh	8.90	357	Pn	Pn	20 49 33.0	+1.4
IPM	Ipoh	8.90	357	P	Pn	20 49 37.1	+5.5
COCO	West Island	8.98	211	Pn	Pn	20 49 31.5	-1.1
UGM	Wanagama	9.55	111	Pn	Pn	20 49 41.0	+0.4
UGM	Wanagama	9.55	111	P	Pn	20 49 41.1	+0.6
KULM	Kulim	9.73	355		Pn	20 49 42.5	-0.4
WOJI	Wonogiri, Jawa	9.90	110	P	Pn	20 49 46.8	+1.6
	18nm,1.0s						
JAGI	Jajag, Banyuwa	13.13	108	P	Pn	20 50 31.7	+2.2
	25nm,0.7s						
JAGI	Jajag, Banyuwa	13.13	108	P	Pn	20 50 30.6	+1.1
PLAI	Plampang	16.68	106	P	Pn	20 51 16.8	+0.1
KAPI	Kappang	18.15	92	P	Pn	20 51 33.7	-1.1
	0.2nm,0.3s,baz=280,slow=6.1,SNR=1.9						
KAPI				LR	LR	20 59 24.2	
	comp=Z,119nm,18.3s,baz=291,slow=40						
TTSI	Tana Toraja	18.28	86	P	Pn	20 51 37.6	+1.1
	5µm3µm17nm,1.1s						
MPSI	Mapaga	18.94	76	P	Pn	20 51 46.1	+1.6
	1µm12nm,1.3s						
MYLDM	Lahad Datu	19.45	61	P	P	20 51 48.5	-0.8
MYLDM				IAmb	IAmb	20 51 59.9	
	comp=Z,25nm,1.0s						
TOLI2	Tolitoli	20.00	74	P	P	20 51 55.0	-0.2
TOLI2				IAmb	IAmb	20 51 56.4	
	comp=Z,16nm,0.8s						
TOLI2	Tolitoli	20.00	74	P	P	20 51 55.8	+0.6
UBPT	Khong Chiam	20.00	11	P	P	20 51 54.8	-0.4
UBPT				IAmb	IAmb	20 51 55.8	
	comp=Z,27nm,0.9s						
EDFI	Ende, Flores	20.45	103	P	Pn	20 52 02.8	+0.3
	comp=Z,4.6nm,0.4s						
MRSI	Marisa	20.95	77	P	P	20 52 06.7	+1.1
	comp=Z,340nmcomp=Z,29nm,0.9s						
BATI	Baumata	22.65	106	P	P	20 52 22.9	-1.0
	comp=Z,10nm,0.4s,baz=278,slow=5.6,SNR=2.5						
BATI				S	S	20 56 17.2	-13
	comp=Z,3.5nm,0.3s,baz=90,slow=20,SNR=1.9						
BATI	Baumata	22.65	106	P	P	20 52 26.1	+2.2
	comp=Z,9.1nm,0.5s						
CMAR	Chiang Mai Arr	22.92	354	P	P	20 52 25.1	-1.5
	comp=Z,2.3nm,0.8s,baz=188,slow=8.2,SNR=20						
CMAR				PcP	PcP	20 56 18.1	+1.4
	comp=Z,0.6nm,0.7s,baz=202,slow=3.9,SNR=5.8						
CMAR				LR	LR	21 01 55.2	
	comp=Z,102nm,18.3s,baz=197,slow=38						
SOEI	Soe	23.14	104	P	P	20 52 30.0	+1.0
	comp=Z,18nm,0.7s						
SOEI	Soe	23.14	104	P	P	20 52 30.2	+1.2
SGSI	Sangihe	25.29	72	P	P	20 52 49.4	+0.4
	comp=Z,380nm,0.5s						
LBMI	Labuha	26.20	82	P	P	20 52 58.9	+1.7
	comp=Z,21nm,0.8s						
FITZ	Fitzroy Crossi	27.18	122	P	P	20 53 05.2	-0.8
	comp=Z,1.6nm,0.8s,baz=307,slow=10,SNR=2.4						
FITZ				LR	LR	21 04 58.2	
	comp=Z,74nm,20.1s,baz=328,slow=39						
KNRA	Kununurra	28.97	115	P	P	20 53 19.8	-2.3
KNRA				IAmb	IAmb	20 53 34.9	
	comp=Z,12nm,1.4s						
H08S2	Diego Garcia H	29.06	262	T	T	21 23 32.7	
	baz=85,slow=75						
H08S3	Diego Garcia H	29.07	262	T	T	21 23 32.4	
	baz=85,slow=75						
H08S1	Diego Carcia H	29.08	262	T	T	21 23 33.9	
	baz=85,slow=75						
SIJI	Sorong	29.89	84	P	P	20 53 28.0	-2.3
	comp=Z,3.9nm,0.6s,baz=191,slow=1.8,SNR=3.6						
MTN	Manton Dam	30.38	108	P	P	20 53 32.7	-1.9
MTN				IAmb	IAmb	20 53 59.9	
	comp=Z,7.4nm,0.8s						
H01W3	Cape Leeuwin H	32.44	160	T	T	21 28 11.5	
	baz=341,slow=76						
H01W2	Cape Leeuwin H	32.45	161	T	T	21 28 10.7	
	baz=341,slow=76						
H01W1	Cape Leeuwin H	32.45	160	T	T	21 28 02.7	
	baz=341,slow=76						
YULB	Yu-li	33.73	34	P	P	20 54 01.8	-2.1
ODAN	Odare	34.02	337	eP	P	20 54 07.3	+0.7
TAPN	Taplejung	34.34	338	eP	P	20 54 10.9	+1.4
	comp=Z,20nm,0.8s						
JIRN	Jiri	35.21	336	eP	P	20 54 18.2	+1.1
WB0	Warramunga Arr	35.42	118	P	P	20 54 18.6	0.0
WB0				IAmb	IAmb	20 54 31.5	
	comp=Z,8.4nm,1.4s						
WRA	Warramunga Arr	35.44	119	P	P	20 54 18.7	-0.1
	comp=Z,1.1nm,0.4s,baz=304,slow=8.5,SNR=34						
WRA				PcP	PcP	20 56 48.8	+0.5
	comp=Z,1.1nm,0.8s,baz=302,slow=2.4,SNR=4.8						
WRA				LR	LR	21 10 32.6	
	comp=Z,47nm,20.0s,baz=40,slow=39						
WRA	Warramunga Arr	35.44	119	P	P	20 54 18.5	-0.3
WRAB	Tennant Creek	35.44	119	P	P	20 54 18.9	+0.1
WRAB				IAmb	IAmb	20 54 46.1	
	comp=Z,8.2nm,1.3s						
WB2	Warramunga Arr	35.45	119	P	P	20 54 19.6	+0.7
WB2				IAmb	IAmb	20 54 31.2	
	comp=Z,4.2nm,0.9s						
GUN	Gumba	35.56	336	eP	P	20 54 21.1	+1.1
	comp=Z,32nm,0.7s						
WR0	Warramunga Arr	35.62	118	P	P	20 54 19.5	-0.8
GKN	Gorkha	36.17	334	eP	P	20 54 25.8	+0.8
KOLN	Koldanda	36.43	333	eP	P	20 54 28.3	+1.0
	comp=Z,30nm,0.7s						
ASAR	Alice Springs	36.57	125	P	P	20 54 28.9	+0.5
	comp=Z,1.9nm,0.7s,baz=294,slow=8.4,SNR=36						
ASAR				PcP	PcP	20 56 52.9	+1.3
	comp=Z,0.6nm,0.7s,baz=307,slow=2.5,SNR=5.3						
ASAR				LR	LR	21 10 09.2	
	comp=Z,45nm,20.8s,baz=348,slow=37						
ASAR	Alice Springs	36.57	125	P	P	20 54 28.6	+0.1
AS31	Alice Springs	36.57	125	P	P	20 54 28.0	-0.5
DANN	Dangsing	36.85	333	eP	P	20 54 31.9	+0.9
	comp=Z,22nm,0.6s						
PYUN	Piuthan	36.99	332	eP	P	20 54 32.7	+0.6
	comp=Z,13nm,0.6s						
XAN	Xi'an	38.93	10	P	P	20 54 47.0	-1.2
XAN				pP	pP	20 54 57.8	+1.1
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN				LR	LR		
	comp=N,260nm,15.8s						
XAN				LR	LR		
	comp=E,260nm,15.8s						
XAN				LR	LR		
	comp=Z,290nm,15.1s						
NJ2	Nanjing	39.87	23	eP	P	20 54 56.9	+0.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PMG	Port Moresby	45.51	99	LR	LR	21 17 25.1	
	comp=Z,61nm,19.2s,baz=329,slow=40						
HHC	Hu-ho-hao-te	46.02	11	eP	P	20 55 47.8	+2.0
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,7.1s						
BJI	Beijing	46.29	16	P	P	20 55 46.4	-1.4
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
STKA	Stephens Creek	46.37	131	P	P	20 55 49.9	+1.2
	comp=Z,3.1nm,0.7s,baz=311,slow=7.6,SNR=12						
STKA				LR	LR	21 16 07.7	
	comp=Z,55nm,20.1s,baz=20,slow=37						
STKA	Stephens Creek	46.37	131	P	P	20 55 48.4	-0.2
KSRS	Korea Array	48.39	28	P	P	20 56 03.6	-0.6
	comp=Z,4.6nm,0.8s,baz=216,slow=7.4,SNR=18						
KSRS				LR	LR	21 16 07.3	
	comp=Z,19nm,19.9s,baz=50,slow=36						
WMQ	Urumqi	49.66	347	eP	P	20 56 15.4	+1.4
WMQ				pP	sP	20 56 27.5	+1.3
WMQ				sP	pP	20 56 32.3	+10
WMQ				pmax	pmax		
	comp=Z,27nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,74nm,4.1s						
SONM	Songino Array	52.25	4	P	P	20 56 33.9	+0.4
	comp=Z,7.5nm,0.8s,baz=184,slow=9.7,SNR=56						
SONM	Songino Array	52.25	4	P	P	20 56 32.8	-0.7
CN2	Changchun	52.65	22	eP	P	20 56 35.1	-1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MAT	Matsushiro	53.25	37	P	P	20 56 38.6	-2.3
MJAR	Matsushiro Arr	53.26	37	P	P	20 56 38.8	-2.1
	comp=Z,3.2nm,0.6s,baz=209,slow=7.4,SNR=4.2						
MK31	Makanchi Array	53.81	344	P	P	20 56 43.9	-0.9
MK31				IAmb	IAmb	20 56 46.1	
	comp=Z,4.5nm,0.8s						
MKAR	Makanchi Array	53.81	344	P	P	20 56 45.0	+0.2
	comp=Z,5.2nm,0.7s,baz=147,slow=8.2,SNR=37						
MKAR	Makanchi Array	53.81	344	P	P	20 56 44.1	-0.7
USRK	Ussuriysk Ar.	55.63	26	P	P	20 56 57.6	-0.4
	comp=Z,15nm,0.8s,baz=224,slow=5.3,SNR=24						
USRK	Ussuriysk Ar.	55.63	26	P	P	20 56 56.7	-1.3

ZAA0	Zalesovo Array	59.87	349	P	P	20 57 25.6	-2.0
ZALV	Zalesovo Beam	59.87	349	P	P	20 57 27.3	-0.3
	comp=Z,7.2nm,0.5s,baz=178,slow=4.6,SNR=48						
ZALV				LR	LR	21 26 53.8	
	comp=Z,53nm,18.9s,baz=78,slow=40						
ZALV	Zalesovo Beam	59.87	349	P	P	20 57 27.0	-0.6
ASAJ	Asahikawa	60.80	33	P	P	20 57 33.8	-0.4
	comp=Z,3.6nm,0.5s,baz=228,slow=7.7,SNR=11						
ABKAR	Akbulak array	64.53	331	P	P	20 57 57.9	-1.1
ABKAR	Akbulak array	64.53	331	P	P	20 57 58.0	-0.9
MAW	Mawson	68.30	195	LR	LR	21 22 15.2	
	comp=Z,96nm,21.6s,baz=58,slow=31						
KBZ	Khabaz	71.17	319	P	P	20 58 42.1	+1.3
	comp=Z,1.9nm,0.8s,baz=82,slow=6.2,SNR=5.2						
BOSA	Boshof	75.85	242	LR	LR	21 25 08.3	
	comp=Z,48nm,19.1s,baz=64,slow=30						
BRTR	Keskin Array B	76.12	313	P	P	20 59 10.4	+0.2
	comp=Z,0.6nm,0.7s,baz=149,slow=9.2,SNR=5.5						
ANTO	Ankara	76.78	313	⇑P	P	20 59 05.9	-8.1
TIXI	Tiksi	78.04	9	P	P	20 59 18.3	-1.9
TIXI				IAmb	IAmb	20 59 19.0	
	comp=Z,3.0nm,0.8s						
AKASG	Malin Array Be	82.37	322	P	P	20 59 43.4	-0.6
	comp=Z,1.1nm,0.9s,baz=89,slow=4.7,SNR=4.6						
MLR	Muntele Rosu	83.15	317	⇑P	P	20 59 49.5	+1.2
BURAR	Bucovina Array	84.12	319	⇑P	P	20 59 54.3	+1.1
BUR08	Bucovina Ar. S	84.14	319	P	P	20 59 50.8	-2.5
BUR08				IAmb	IAmb	20 59 58.1	
	comp=Z,3.5nm,0.9s						
FINES	FINESS Array B	87.00	332	P	P	21 00 07.5	+0.4
	comp=Z,2.0nm,0.8s,baz=115,slow=6.3,SNR=8.6						
GERES	GERESS Array B	91.91	319	P	P	21 00 32.0	+1.4
	comp=Z,0.5nm,0.8s,baz=87,slow=6.8,SNR=5.7						

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*TUL **13** 21:00:07.5±0.8, 36°.280N±0°.006×97°.52W±0°.02, h8^{km}±7^{km}, ML3.0, mb_Lg2.7/31(NEIC), Error ellipse: s-maj=2.0km s-min=0.8km az=76.0*

NEIC 13 21:00:07.4±0.5**, 36°.281N**±0°.009×**97°.52W**±0°.02**, h1**^{km}±7^{km}**, Error ellipse: s-maj=2.1km s-min=1.2km az=80.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.43	301	Pg	Pg	21 00 16.0	+0.2
CROK				Sg	Sg	21 00 22.4	+1.0
OK029	Liberty Lake	0.49	174	Pg	Pg	21 00 16.9	+0.2
OK029				Sg	Sg	21 00 23.7	+0.7
BLOK	Blackwell	0.54	27		Pg	21 00 18.0	+0.2
BLOK				Sg	Sg	21 00 25.5	+0.7
BCOK	Bluff Creek, N	0.63	187	Pg	Pg	21 00 19.6	+0.1
BCOK				Sg	Sg	21 00 28.1	+0.6
GC02	Grant County #	0.63	335		Pg	21 00 19.6	0.0
GC02				Sg	Sg	21 00 28.3	+0.6
OK031	S. Brethren Rd	0.64	120		Pg	21 00 19.8	+0.1
QUOK	Quay	0.67	99		Pg	21 00 20.2	0.0
OK030	Cody Creek RV	0.69	120		Pg	21 00 20.8	+0.1
OK034	N. Norfolk Rd.	0.71	112		Pg	21 00 21.0	0.0
OK025	Westminster Rd	0.71	168	Pg	Pg	21 00 21.2	+0.1
KAN13	South Haven SW	0.73	3		Pg	21 00 21.5	+0.1
OK032	Salt Plains WL	0.76	313	Pg	Pg	21 00 22.0	0.0
KAN14	Manchester OK	0.76	332		Pg	21 00 22.0	0.0
KAN17	Caldwell West	0.79	346		Pg	21 00 22.5	0.0
KAN09	Caldwell North	0.86	355		Pg	21 00 23.8	-0.1
OKCFA	Oklahoma City	0.86	176		Pg	21 00 23.8	-0.2
KAN05	Bluff City Nor	0.87	341		Pg	21 00 24.1	-0.1
OKCSW	OKLAHOMA CITY	0.88	176	Pg	Pg	21 00 24.0	-0.2
KAN01	Argonia South	0.89	348		Pg	21 00 24.4	-0.2
KAN10	Anthony SW Sta	0.96	331		Pg	21 00 25.6	-0.3
KAN08	Anthony NE Sta	1.01	339		Pg	21 00 26.6	-0.2
FNO	Franklin	1.03	174	Pg	Pg	21 00 26.7	-0.4
T35A	Sooner Cattle	1.03	52	Pg	Pg	21 00 26.9	-0.3
KAN12	Harper NE Stat	1.08	339		Pg	21 00 27.9	-0.3
U32A	Winter Ranch,	1.20	275	Pn	Pg	21 00 29.7	-0.7
TUL1	Leonard	1.45	104		Pn	21 00 33.5	-1.3
X34A	Smith Ranch, M	1.69	189		Pn	21 00 38.6	+0.5
LOOK	Love County	2.30	173		Pn	21 00 46.5	0.0
X37A	Clayton	2.44	133	Pn	Pn	21 00 48.8	+0.5
U38A	Gravette	2.54	85		Pn	21 00 50.0	+0.3
HHAR	Hobbs	2.89	89		Pn	21 00 54.5	-0.1
KSU1	Kansas State U	2.91	14	Pn	Pn	21 00 54.7	-0.1
W39A	Magazine	3.23	108	Pn	Pn	21 00 59.0	-0.2
W39A				IAmb_Lg		21 01 54.9	
	comp=Z,19nm,0.9s						
S39A	Bolivar	3.64	66	IAmb_Lg		21 02 08.7	
	comp=Z,14nm,0.8s						
U40A	Yellville	3.77	87	IAmb_Lg		21 02 08.1	
	comp=Z,15nm,0.9s						
FCAR	Ozark Folk Cen	4.39	94	IAmb_Lg		21 02 26.6	
	comp=Z,8.8nm,0.9s						
P38A	Dawn	4.59	42	IAmb_Lg		21 02 34.8	
	comp=Z,15nm,0.8s						
T42A	Van Buren	5.22	80	IAmb_Lg		21 03 01.6	
	comp=Z,14nm,1.3s						
CCM	Cathedral Cave	5.32	69	IAmb_Lg		21 02 54.1	
	comp=Z,11nm,0.8s						
P40A	Paris	5.41	52	IAmb_Lg		21 03 02.8	
	comp=Z,15nm,0.8s						
T25A	Trinidad	5.60	281	IAmb_Lg		21 03 11.7	
	comp=Z,8.4nm,1.0s						
PBMO	Poplar Bluff	5.73	83	IAmb_Lg		21 03 16.3	
	comp=Z,16nm,0.8s						
L34A	Svendsen Farm,	5.75	9	IAmb_Lg		21 03 22.2	
	comp=Z,20nm,0.8s						
JCT	Junction City	6.09	199	IAmb_Lg		21 03 21.0	
	comp=Z,15nm,1.1s						
S44A	Carbondale	6.76	76	IAmb_Lg		21 03 42.9	
	comp=Z,14nm,0.7s						
ISCO	Idaho Springs	7.29	301	IAmb_Lg		21 03 55.5	
	comp=Z,11nm,1.1s						
MNTX	Cornudas Mount	7.97	237	IAmb_Lg		21 04 23.1	
	comp=Z,5.8nm,1.3s						
SMCO	Snowmass	8.03	294	IAmb_Lg		21 04 15.8	
	comp=Z,12nm,1.2s						
JFWS	Jewell Farm	8.68	38	IAmb_Lg		21 04 53.3	
	comp=Z,9.4nm,0.8s						

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*IDC **13** 21:11:49.5±2.8, 32°.10S×71°.42W, h0^{km}, mb3.8/1, mb1 3.5/4, mb1mx3.5/23, mbtmp3.4/4, ML3.4/3, MS4.4/1, Ms1 4.4/1, ms1mx2.9/21, Error ellipse: s-maj=115.9km s-min=33.7km az=99.0*

*GUC **13** 21:11:53.4±0.7, 32°.26S×71°.71W, h37^{km}±2^{km}, ML3.7*

ISC 13 21:11:51.3±1.3**, 32°.22S**±0°.03×**71°.72W**±0°.06**, h14**^{km}±9^{km}**, n38,** σ**1^{s}.14**/43**, 1C-7D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.50	134	⇓iP	Pn	21 12 03.4	-0.7
VA06				i S	Sb	21 12 10.4	+1.4
VA06				IAML		21 12 11.1	
	comp=E,20µm,0.5s						
VA01	Torpederas	0.81	176	eP	Pg	21 12 07.6	+0.6
VA01				i S	Sg	21 12 18.1	+0.5
ROCH	El Roble	0.96	142	⇓iP	Pg	21 12 10.5	+0.5
ROCH				⇓iP	Pb	21 12 10.1	+0.1
ROCH				i S	Sb	21 12 22.8	+0.2
ROCH				i S	Sg	21 12 23.0	+0.4
ROCH				IAML		21 12 25.4	
	comp=N,2µm,0.2s						
ROCH				IAML		21 12 25.6	
	comp=N,3µm,0.3s						
VA03	San Esteban	1.13	119	⇓iP	Pn	21 12 13.1	+0.3
VA03				i S	Sn	21 12 28.9	+0.7
VA03				IAML		21 12 30.8	
	comp=N,6µm,0.5s						
MT02	Curacav	1.15	155	⇓eP	Pg	21 12 13.1	-0.4
MT02				eS	Sg	21 12 27.4	-1.2
PEL	Peldehue	1.27	137	i P	Pb	21 12 15.0	-0.1
PEL				i S	Sg	21 12 31.2	-1.3
PEL				IAML		21 12 34.5	
	comp=N,2µm,0.4s						
MT05	Renca	1.44	145	eP	Pn	21 12 17.6	+0.5
MT05				eS	Sn	21 12 36.2	+0.5
MT05				IAML		21 12 39.5	
	comp=E,2µm,0.3s						
VA05	Santo Domingo	1.44	176	eP	Pn	21 12 17.3	+0.3
VA05				eS	Sn	21 12 36.3	+0.6
VA05				IAML		21 12 41.7	
	comp=N,3µm,0.4s						
CO06	Fray Jorge	1.54	3	⇑iP	Pn	21 12 19.0	+0.6
CO06				eS	Sb	21 12 41.1	+2.0
CO06				IAML		21 12 45.4	
	comp=E,2µm,0.8s						
CO03	El Pedregal	1.63	33	⇓eP	Pb	21 12 21.8	+0.5
CO03				eS	Sg	21 12 43.7	-0.3
CO03				IAML		21 12 47.0	
	comp=E,1µm,0.5s						
FCH	Farellones	1.64	133	⇓iP	Pn	21 12 20.9	+0.8
FCH				eS	Sn	21 12 41.3	+0.2
FCH				IAML		21 12 43.6	
	comp=E,1µm,0.3s						
MT09	Talagante	1.67	159	eP	Pn	21 12 21.4	+1.1
MT09				eS	Sn	21 12 42.7	+1.0
MT09				IAML		21 12 49.2	
	comp=N,1µm,0.3s						
MT01	Popeta	1.69	167	eP	Pn	21 12 21.4	+0.9
MT01				eS	Sn	21 12 43.1	+1.2
MT01				IAML		21 12 50.1	
	comp=E,954nm,0.3s						
BO04	La Punta	2.00	152	eP	Pn	21 12 26.1	+1.3
BO04				eS	Sn	21 12 51.1	+1.5
BO04				IAML		21 12 58.8	
	comp=E,820nm,0.4s						
LMEL	Las Melosas	2.07	142	eP	Pn	21 12 27.2	+1.4
LMEL				eS	Sn	21 12 52.5	+1.1
LMEL				IAML		21 13 02.5	
	comp=N,753nm,0.1s						
GO04	Tololo Observa	2.19	21	eP	Pn	21 12 29.1	+1.6
GO04				eS	Sn	21 12 55.2	+0.7
BO01	Tunca	2.23	166	eP	Pn	21 12 29.0	+1.1
CO05	La Serena	2.33	10	eS	Sn	21 12 59.6	+1.9
CO05				IAML		21 13 10.6	
	comp=E,866nm,0.3s						
BO02	Sierra Bellavi	2.69	163	eP	Pn	21 12 35.4	+1.2
BO02				IAML		21 13 21.3	
	comp=E,622nm,0.4s						
GO05	Huala	2.79	184	eP	Pn	21 12 34.9	-0.7
H03N1	Juan Fernandez	6.17	257	T	T	21 19 57.1	
	baz=85,slow=73						
H03N3	Juan Fernandez	6.19	257	T	T	21 19 50.7	
	baz=85,slow=73						
H03N2	Juan Fernandez	6.19	257	T	T	21 19 57.9	
	baz=85,slow=73						
H03S3	Juan Fernandez	6.25	253	T	T	21 19 55.4	
	baz=70						
H03S1	Juan Fernandez	6.25	253	T	T	21 19 52.9	
	baz=70						
H03S2	Juan Fernandez	6.26	253	T	T	21 19 58.3	
	baz=70						
PLCA	Paso Flores	8.55	174	Pn	Pn	21 13 55.9	+1.1
	comp=E,0.2nm,0.3s,baz=0.0,slow=11,SNR=4.9						
LPAZ	La Paz	16.19	12	Pn	Pn	21 15 38.1	-0.9
	comp=E,0.1nm,0.3s,baz=195,slow=7.4,SNR=2.7						
SIV	San Ignacio	18.83	33	P	P	21 16 07.3	-3.6
	comp=E,0.0nm,0.3s,baz=195,slow=20,SNR=1.2						
USHA	Ushuaia	22.73	175	LR	LR	21 25 52.3	
	comp=E,1µm,21.8s,baz=218,slow=37						
TORD	Torodi Ar. Bea	83.35	70	P	P	21 24 17.8	-0.5
	comp=E,0.6nm,0.7s,baz=243,slow=3.5,SNR=5.2						
H11S2	WAKE ISLAND Hy	126.05	270	T	T	23 49 52.5	
	baz=118,slow=75						
H11S1	WAKE ISLAND Hy	126.06	270	T	T	23 49 52.1	
	baz=118,slow=75						
H11S3	WAKE ISLAND Hy	126.06	270	T	T	23 49 52.5	
	baz=118,slow=75						
H11N3	WAKE ISLAND Hy	126.41	272	T	T	23 50 20.0	
	baz=116,slow=76						
H11N1	WAKE ISLAND Hy	126.43	272	T	T	23 50 21.3	
	baz=116,slow=76						
H11N2	WAKE ISLAND Hy	126.43	272	T	T	23 50 22.2	
	baz=116,slow=76						
ZALV	Zalesovo Beam	152.57	31	PKPbc	PKPbc	21 31 46.4	-0.4
	comp=E,1.1nm,0.6s,baz=300,slow=2.8,SNR=5.3						

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*IDC **13** 21:45:34.9±4.7, 0°.97S×79°.21W, h0^{km}, mb4.0/2, mb1 3.9/3, mb1mx3.7/26, mbtmp3.9/3, ML3.9/1, Error ellipse: s-maj=127.6km s-min=57.7km az=83.0*

*NEIC **13** 21:45:50.9±2.3, 1°.8S±0°.1×79°.9W±0°.1, h165^{km}±10^{km}, mb4.1/8, Error ellipse: s-maj=22.6km s-min=17.4km az=122.0*

ISC 13 21:45:56.3±1.1**, 1°.5S**±0°.1×**79°.3W**±0°.1**, h200**^{km}**, n23,** σ**2^{s}.23**/23**, mb4.0**/4**, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTAV	Otavalo	1.93	26	eP	Pn	21 46 37.0	+2.3
OTAV	Otavalo	1.93	26	Pn	Pn	21 46 36.5	+1.8
OTAV				Sn	Sn	21 47 05.4	+0.9
CUSE	Cuicocha Este	2.02	27	eP	Pn	21 46 38.3	+2.8
SOTA	Rioblanco	4.51	37	eP	Pn	21 47 04.0	-1.0
FLOC	Florencia	4.77	50	eP	Pn	21 47 02.5	-5.4
PCON	Cinco Dias	4.79	37	eP	Pn	21 47 08.0	-0.7
POPC	Popayan, Colom	4.80	33	eP	Pn	21 47 08.2	-0.3
GARC	Garzon, Huila	5.29	46	eP	Pn	21 47 11.2	-3.6
YOTC	Yotoco, Valle	6.21	28	eP	Pn	21 47 24.9	-1.6
PRAC	Prado	6.81	40	eP	Pn	21 47 30.9	-3.3
BIRV	Birongo	17.61	47	P	Pn	21 49 52.9	+2.9
LPAZ	La Paz	18.36	144	P	P	21 49 56.0	-0.8
	0.2nm,0.3s,baz=344,slow=13,SNR=5.5						
LPAZ	La Paz	18.36	144	P	P	21 49 55.4	-1.4
BOAV	Boa Vista	19.18	78	P	P	21 50 04.8	-0.2
BOAV				IAmb	IAmb	21 50 12.5	
	comp=Z,5.5nm,1.3s						
STVI	Saint Thomas	24.27	35	P	P	21 50 57.0	+1.6
MSU	Marysvale	50.02	326		P	21 54 27.7	-3.1
JLU	Jordanelle	51.13	329	P	P	21 54 35.4	-3.8
JLU				IAmb	IAmb	21 54 38.4	
	comp=Z,5.1nm,1.1s						
R11A	Troy Canyon, C	51.87	324	P	P	21 54 41.9	-2.7
R11A				IAmb	IAmb	21 54 53.0	
	comp=Z,2.6nm,0.7s						
DBIC	Dimbokro	74.74	83	P	P	21 57 15.8	+0.9
	comp=Z,1.7nm,0.7s,baz=239,slow=4.0,SNR=1.7						
DBIC	Dimbokro	74.74	83	P	P	21 57 15.0	0.0
DBIC				IAmb	IAmb	21 57 26.9	
	comp=Z,9.9nm,1.4s						
TORD	Torodi Ar. Bea	81.58	77	P	P	21 57 54.8	+2.2
	comp=Z,0.3nm,0.4s,baz=279,slow=5.8,SNR=12						
TORD	Torodi Ar. Bea	81.58	77	P	P	21 57 53.8	+1.3
WRA	Warramunga Arr	140.72	235	PKP	PKiKP	22 05 06.9	+1.0
	comp=Z,0.3nm,0.7s,baz=138,slow=2.2,SNR=2.2						

NNC 13 21:51:47.9±13.0**, 37°.18N**×**70°.78E, h0**^{km}**, mb3.5, mpv3.2, 2C-4D, Error ellipse: s-maj=106.0km s-min=83.0km az=172.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK08	Karatay Array	5.92	358	⇑P	Pn	21 53 18.9	+2.2
	0.4nm,0.3s,baz=183,slow=14						
KK08				⇓S	Sn	21 54 28.8	+3.5
	0.6nm,0.3s,baz=184,slow=25						
AAK	Ala-Archa	6.15	26	⇑P	Pn	21 53 20.5	+0.5
	1.3nm,0.6s						
AAK				⇓S	Sn	21 54 31.3	+0.1
	4.2nm,0.6s						
TKM2	Tokmak 2	6.82	31	⇓P	Pn	21 53 28.2	-1.1
	1.2nm,0.4s						
TKM2				⇓S	Sn	21 54 45.5	-2.2
	0.1nm,0.1s						

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*INMG **13** 21:55:52.4±1.2, 36°.73N×9°.71W, h18^{km}±4^{km}, ML1.8, Error ellipse: s-maj=6.0km s-min=3.9km az=55.0*

*IGIL **13** 21:55:52.8, 36°.76N×9°.69W, h14^{km}, ML1.5*

*MDD **13** 21:55:52.8±1.4, 36°.70N×9°.72W, h30^{km}, mbLg2.2/4, Error ellipse: s-maj=11.9km s-min=10.5km az=38.0, PRXIMO*

*CNRM **13** 21:55:58.0, 36°.50N×8°.74W, h119^{km}, ml2.7*

ISC 13 21:55:46.7±1.9**, 36°.53N**±0°.04×**9°.86W**±0°.07**, h32**^{km}±12^{km}**, n53,** σ**2^{s}.09**/89**, 1C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.02	54	eP	Pn	21 56 07.3	+2.5
PFVI				eS	Sb	21 56 18.2	-0.7
PFVI				A	A	21 56 19.2	
	6.3nm,0.1s						
PFVI	Vila Bisbo	1.02	54	P	Pn	21 56 07.3	+2.5
	1.7nm,0.1s,SNR=7.9						
PFVI				S	Sb	21 56 17.8	-1.2
	9.2nm,0.1s,SNR=7.9						
MORF	Marmelete	1.24	51	eP	Pb	21 56 10.2	+0.7
MORF				eS	Sb	21 56 23.1	-2.1
MORF				IAML		21 56 25.9	
	comp=E,11nm,0.1s						
MORF	Marmelete	1.24	51	eP	Pb	21 56 10.3	+0.7
MORF				eS	Sb	21 56 23.5	-1.7
MORF				A	A	21 56 24.7	
	comp=E,7.9nm,0.8s						
MORF	Marmelete	1.24	51	P	Pb	21 56 10.2	+0.7
MORF				S	Sb	21 56 23.1	-2.1
PTEO	Sao Teotonio	1.36	41	eP	Pb	21 56 13.4	+1.9
PTEO				eS	Sn	21 56 26.4	0.0
PTEO				A	A	21 56 27.3	
	comp=E,7.7nm,0.4s						
PTEO	Sao Teotonio	1.36	41	P	Pb	21 56 13.4	+1.9
PTEO				S	Sn	21 56 26.4	0.0
	comp=E,3.8nm,0.4s						
PBDV	Barranco-do-Ve	1.70	65	⇑eP	Pb	21 56 17.0	-0.3
PBDV				eS	Sn	21 56 35.3	+0.5
PBDV				A	A	21 56 37.4	
	comp=E,5.8nm,0.8s						
PBDV	Barranco-do-Ve	1.70	65	P	Pb	21 56 17.0	-0.3
PBDV				S	Sn	21 56 35.3	+0.5
	comp=E,5.8nm,0.8s						
PCVE	Castro Verde	1.82	52	ePn	Pb	21 56 18.6	-0.8
PCVE				eSn	Sn	21 56 38.4	+0.6
PCVE				A	A	21 56 53.4	
	comp=E,3.5nm,0.8s						
PCVE	Castro Verde	1.82	52	P	Pb	21 56 18.6	-0.8
PCVE				S	Sn	21 56 38.4	+0.6
	comp=E,3.5nm,0.8s						
MESJ	Messejana	1.85	44	eP	Pn	21 56 18.6	+2.5
MESJ				eS	Sn	21 56 37.8	-0.7
MESJ				IAML		21 56 39.3	
	comp=N,4.7nm,0.3s						
MESJ	Messejana	1.85	44	ePn	Pn	21 56 18.5	+2.3
MESJ				eSn	Sn	21 56 38.1	-0.3
MESJ				A	A	21 56 42.9	
	comp=N,3.1nm,0.4s						
MESJ	Messejana	1.85	44	P	Pn	21 56 18.6	+2.5
MESJ				S	Sn	21 56 37.8	-0.7
PNCL	Nicolau / Gran	1.90	33	ePn	Pn	21 56 19.1	+2.2
PNCL				eSn	Sn	21 56 39.0	-0.7
PNCL				A	A	21 56 39.5	
	comp=N,5.8nm,0.9s						
PNCL	Nicolau / Gran	1.90	33	P	Pn	21 56 19.1	+2.2
PNCL				S	Sn	21 56 39.0	-0.7
	comp=N,5.8nm,0.9s						
PVAQ	Vaqueiros	1.92	62	ePn	Pb	21 56 19.9	-1.2
PVAQ				eSn	Sn	21 56 41.3	+1.0
PVAQ				A	A	21 56 42.8	
	comp=N,3.8nm,0.1s						
PVAQ	Vaqueiros	1.92	62	P	Pb	21 56 19.9	-1.2
PVAQ				S	Sn	21 56 41.3	+1.0
	comp=N,3.8nm,0.1s						
PVAQ	Vaqueiros	1.92	62	P	Pb	21 56 21.1	0.0
PVAQ				S	Sb	21 56 43.2	-1.4
EGRO	El Granado	2.15	61	P	Pb	21 56 23.6	-1.2
	comp=N,0.1nm,0.2s,SNR=7.9						
EGRO				S	Sn	21 56 45.8	0.0
	comp=N,2.1nm,0.1s,SNR=7.9						
PBEJ	Beja	2.18	46	eSn	Sn	21 56 46.2	-0.4
PBEJ	Beja	2.18	46	S	Sn	21 56 46.2	-0.4
PMAFR	Mafra	2.46	10	ePn	Pn	21 56 26.9	+2.3
PMAFR				eSn	Sn	21 56 52.9	-0.8
PMAFR				A	A	21 56 53.9	
	comp=N,18nm,0.8s						
PMAFR	Mafra	2.46	10	P	Pn	21 56 26.7	+2.0
	comp=N,6.0nm,0.3s,SNR=4.0						
PMAFR				S	Sn	21 56 52.5	-1.1
	comp=N,8.6nm,0.1s,SNR=7.9						
EVO	Evora	2.48	36	eSn	Sn	21 56 52.8	-1.2
EVO	Evora	2.48	36	S	Sn	21 56 52.8	-1.2
EMIN	Mina Concepcio	2.83	63	P	Pn	21 56 32.3	+2.7
	comp=N,0.1nm,0.2s,SNR=4.0						
EMIN				S	Sn	21 57 01.9	-0.7
	comp=N,0.5nm,0.1s,SNR=7.9						
PMTG	Montargil	2.84	27	ePn	Pn	21 56 32.4	+2.5
PMTG				eSn	Sn	21 57 01.4	-1.6
PMTG				A	A	21 57 03.0	
	comp=N,4.7nm,0.3s						
PMTG	Montargil	2.84	27	P	Pn	21 56 32.4	+2.5
PMTG				S	Sn	21 57 01.4	-1.6
	comp=N,4.7nm,0.3s						
PESTR	Estremoz	2.94	37	ePn	Pb	21 56 36.6	-1.9
PESTR				eSn	Sn	21 57 04.1	-1.4
PESTR				A	A	21 57 06.7	
	comp=N,2.8nm,1.1s						
PESTR	Estremoz	2.94	37	P	Pb	21 56 40.4	+2.0
PESTR				S	Sn	21 57 06.0	+0.5
PSBE	So Bento	3.10	15	ePn	Pn	21 56 35.6	+2.3
PSBE				eSn	Sn	21 57 07.5	-1.8
PSBE				A	A	21 57 12.6	
	comp=N,6.0nm,0.8s						
EBAD	Badajoz	3.17	45	S	Sn	21 57 09.1	-1.9
	comp=N,1.4nm,0.0s,SNR=6.4						
ESPR	Espera	3.23	83	S	Sn	21 57 12.7	+0.1
	comp=N,4.0nm,0.2s,SNR=7.9						
PMRV	Marv??o	3.49	33	ePn	Pn	21 56 41.6	+2.9
PMRV				eSn	Sn	21 57 17.6	-1.3
PMRV				A	A	21 57 35.0	
	comp=N,2.9nm,0.8s						
PMRV	Marv??o	3.49	33	P	Pn	21 56 41.6	+2.9
PMRV				S	Sn	21 57 17.6	-1.3
	comp=N,2.9nm,0.8s						
PCAS	Casmilo, Conde	3.68	16	eSn	Sn	21 57 23.6	0.0
PCAS	Casmilo, Conde	3.68	16	S	Sn	21 57 23.6	0.0
PCBR	Castelo Branco	3.80	29	eSn	Sn	21 57 24.6	-2.0
PCBR	Castelo Branco	3.80	29	S	Sn	21 57 24.6	-2.0
ECAB	El Cabril	3.86	65	P	Pn	21 56 46.6	+2.7
	comp=N,0.2nm,0.1s,SNR=7.1						
ECAB				S	Sn	21 57 26.7	-1.4
	comp=N,0.5nm,0.2s,SNR=7.9						
ZHG	ZHG	4.05	138	S	Sn	21 57 31.5	-1.4
MTE	Manteigas	4.27	24	eSn	Sn	21 57 37.2	-1.0
MTE	Manteigas	4.27	24	S	Sn	21 57 37.2	-1.0
EADA	Adamuz	4.51	67	P	Pn	21 56 54.8	+2.0
	comp=N,0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	21 57 43.2	-1.0
	comp=N,0.3nm,0.1s,SNR=7.9						
PVRL	Vila Real	5.02	19	eSn	Sn	21 57 51.1	-5.7
PVRL	Vila Real	5.02	19	S	Sn	21 57 51.1	-5.7
MVO	Moncorvo	5.13	25	eSn	Sn	21 57 56.3	-3.1
MVO	Moncorvo	5.13	25	P	Pn	21 57 03.4	+2.1
	comp=N,1.0nm,0.3s,SNR=7.9						
MVO				S	Sn	21 57 55.7	-3.7
	comp=N,1.0nm,0.2s,SNR=7.9						
PAB	San Pablo	5.29	54	P	Pn	21 57 05.9	+2.4
	comp=N,3.0nm,0.6s,SNR=7.9						
PAB				S	Sn	21 57 59.2	-4.2
	comp=N,0.2nm,0.2s,SNR=7.9						
EQES	Quesada	5.56	75	S	Sn	21 58 08.2	-2.0
	comp=N,0.2nm,0.1s,SNR=7.9						
MD31	MD31	5.56	130	P	Pn	21 57 10.9	+3.5
MD31				S	Sn	21 58 05.7	-4.6
MDT	Midelt	5.70	129	P	Pn	21 57 12.6	+3.4
MDT				S	Sn	21 58 08.8	-4.7

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*NAO **13** 21:59:32.4±0.7, 67°.13N×21°.03E, ML3.1*

*HEL **13** 21:59:32.9±0.0, 67°.19N×20°.66E, h1^{km}, ML2.5, ML3.2(UPP), Confirmed Induced event*

*UPP **13** 21:59:32.2±0.1, 67°.18N×20°.64E, h0^{km}, ML3.2, Explosion*

*IDC **13** 21:59:33.2±0.7, 67°.14N×20°.95E, h0^{km}, mb1 3.4/6, mb1mx3.2/41, mbtmp3.4/6, ML3.1/6, Error ellipse: s-maj=13.0km s-min=6.8km az=108.0*

*BER **13** 21:59:34.5±3.6, 67°.05N×20°.90E, h1^{km}, ML2.5, ML3.1(NAO), Confirmed Induced event*

ISC 13 21:59:30.8±0.6**, 67°.11N**±0°.02×**20°.58E**±0°.02**, h0**^{km}**, n58,** σ**1^{s}.72**/99**, 3D, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.65	57	P	Pg	21 59 43.6	+0.4
MASU				S	Sg	21 59 51.9	+0.3
MASU	Masugnsbyn	0.65	57	i P	Pg	21 59 43.6	+0.4
MASU				i S	Sg	21 59 51.9	+0.3
RATU	Laukkuluspa	0.81	332	P	Pg	21 59 46.5	+0.2
RATU				S	Sg	21 59 57.4	+0.7
RATU	Laukkuluspa	0.81	332	i P	Pg	21 59 46.5	+0.2
RATU				i S	Sg	21 59 57.4	+0.7
ERTU	Ertsjaerv	0.85	131	P	Pb	21 59 48.5	+0.2
ERTU	Ertsjaerv	0.85	131	eP	Pg	21 59 48.4	+1.4
ERTU				eS	Sb	22 00 00.1	-0.1
KUA	Kurravaara	0.85	354	P	Pg	21 59 46.7	-0.4
KUA				S	Sg	21 59 57.7	-0.4

KUA	Kurravaara	0.85	354	i P	Pg	21 59 46.7	-0.4
KUA				i S	Sg	21 59 57.7	-0.4
SALU	Saltoluokta	0.85	289	P	Pg	21 59 48.5	+1.4
SALU	Saltoluokta	0.85	289	i P	Pg	21 59 48.5	+1.4
PAJU	Pajala	0.99	94	P	Pg	21 59 50.3	+0.5
PAJU	Pajala	0.99	94	eP	Pg	21 59 50.2	+0.4
LANU	Lannavaara	1.08	29	P	Pg	21 59 50.8	-0.7
LANU	Lannavaara	1.08	29	eP	Pg	21 59 50.8	-0.7
SJUU	Sjulsmark	1.66	165	P	Pg	22 00 03.5	+1.0
SJUU	Sjulsmark	1.66	165	eP	Pg	22 00 03.5	+1.0
KALU	Kalix	1.68	137	P	Pb	22 00 03.2	+0.8
KALU	Kalix	1.68	137	eP	Pb	22 00 03.3	+0.8
HEF	Hetta	1.75	41	Pn	Pn	22 00 02.6	+0.2
HEF				Sn	Sn	22 00 24.6	-0.7
HEF	Hetta	1.75	41	⇓iP	Pn	22 00 02.4	+0.1
HEF	Hetta	1.75	41	eP	Pn	22 00 02.4	+0.1
HEF				eS	Sn	22 00 24.2	-1.1
HEF				MSG		22 00 28.0	
	comp=Z,33nm,0.2s						
TOF	Tornio	1.82	123	ePN	Pb	22 00 05.6	+0.7
TOF				eSG	Sg	22 00 29.6	+0.5
KIF	Kilpisjarvi	1.90	2	Pn	Pb	22 00 05.8	-0.5
KIF				Sn	Sg	22 00 31.5	-0.3
KIF	Kilpisjarvi	1.90	2	Pn	Pb	22 00 05.8	-0.5
KIF				Sn	Sg	22 00 31.5	-0.3
KIF	Kilpisjarvi	1.90	2	eP	Pn	22 00 05.5	+1.2
KIF				eS	Sn	22 00 29.2	+0.2
KIF				MSG		22 00 33.5	
	comp=Z,63nm,0.2s						
FAUS	Fauske	2.08	280	⇓iP	Pb	22 00 09.8	+0.6
FAUS				eS	Sg	22 00 38.5	+1.1
FAUS				IAML		22 00 40.2	
	comp=Z,83nm,0.5s						
KTK1	Kautokeino	2.15	26	eP	Pb	22 00 09.6	-1.0
KTK1				eS	Sb	22 00 36.4	-1.4
KTK1				IAML		22 00 38.8	
	comp=Z,121nm,0.5s						
RNF	Rovaniemi	2.20	101	ePB	Pb	22 00 11.2	-0.3
STEI	Steigen	2.21	294	eP	Pn	22 00 10.2	+1.6
STEI				eSG	Sb	22 00 40.8	+1.4
SGF	Sodankyl	2.33	79	eP	Pn	22 00 11.2	+0.9
SGF				ePB	Pb	22 00 12.8	-0.8
SGF				eSG	Sb	22 00 43.6	+0.7
SGF				MSG		22 00 44.8	
	comp=Z,24nm,0.2s						
JETT	Jettan, Norway	2.46	359	Pn	Pb	22 00 14.4	-1.3
JETT				Sn	Sb	22 00 47.1	+0.5
BURU	Burvik	2.56	172	eP	Pb	22 00 16.7	-0.8
BURU				eSG	Sg	22 00 54.0	+1.1
TRO	Tromso	2.61	347	ePB	Pb	22 00 17.6	-0.6
TRO				eSG	Sb	22 00 51.4	+0.7
OUL	Oulu	2.97	131	eP	Pn	22 00 21.5	+2.4
KONS	Konsvik	3.02	262	⇓iP	Pn	22 00 22.2	+2.5
KONS				IAML		22 01 21.7	
	comp=Z,38nm,0.4s						
ARA0	ARCESS Array S	3.04	35	Pn	Pn	22 00 20.8	+0.7
	baz=210,slow=16						
ARA0				Sn	Sn	22 00 57.7	+0.5
	baz=214,slow=28						
ARA0				Lg	Lg	22 01 01.8	
	baz=210,slow=28						
ARA0	ARCESS Array S	3.04	35	Pn	Pn	22 00 20.8	+0.7
	baz=210,slow=16						
ARA0				Sn	Sn	22 00 57.7	+0.5
	baz=214,slow=28						
ARA0				IAML		22 01 14.4	
	comp=Z,15nm,0.7s						
ARCES	ARCESS Array B	3.04	35	Pn	Pn	22 00 21.0	+0.9
	baz=217,slow=13,SNR=320						
ARCES				Sn	Sn	22 00 58.0	+0.9
	baz=214,slow=25,SNR=15						
KEV	Kevo	3.56	39	eP	Pn	22 00 27.9	+0.7
HAMF	Hammerfest	3.72	16	eP	Pn	22 00 30.1	+0.7
HAMF				IAML		22 01 30.0	
	comp=Z,20nm,0.3s						
APA0	Apatity Array	4.82	78	Pn	Pn	22 00 44.6	+0.1
	baz=270,slow=12						
APA0				Sn	Sn	22 01 39.2	-1.7
	baz=266,slow=28						
APA0				Lg	Lg	22 01 59.8	
	baz=281,slow=28						
APA0	Apatity Array	4.82	78	Pn	Pn	22 00 44.6	+0.1
	baz=270,slow=12						
APA0				Sn	Sn	22 01 39.2	-1.7
	baz=266,slow=28						
APA0				Sg	Sb	22 01 59.8	+5.3
	baz=281,slow=28						
FIA0	FINESS Array S	6.17	155	Pn	Pn	22 01 05.7	+2.7
	baz=348,slow=16						
FIA0				Sn	Sn	22 02 14.3	+0.2
	baz=347,slow=28						
FIA0				Lg	Lg	22 02 43.4	
	baz=349,slow=28						
FIA0	FINESS Array S	6.17	155	Pn	Pn	22 01 05.7	+2.7
	baz=348,slow=16						
FIA0				Sg	Sg	22 02 43.4	-5.3
	baz=349,slow=28						
FINES	FINESS Array B	6.17	155	Pn	Pn	22 01 06.0	+3.0
	comp=Z,1.4nm,0.3s,baz=347,slow=13,SNR=67						
FINES				Sn	Sn	22 02 15.5	+1.3
	comp=Z,1.1nm,0.3s,baz=346,slow=22,SNR=6.7						
FINES				Lg	Lg	22 02 43.6	
	comp=Z,1.0nm,0.3s,baz=347,slow=23,SNR=4.1						
NB2	NORSAR Subarra	7.34	218	Pn	Pn	22 01 21.9	+2.8
	baz=27,slow=14						
NB2				Sn	Sn	22 02 42.4	-0.7
	baz=31,slow=22						
NB2				Lg	Lg	22 03 22.6	
	baz=32,slow=37						
NB2	NORSAR Subarra	7.34	218	Pn	Pn	22 01 21.9	+2.8
	baz=27,slow=14						
NB2				Sn	Sn	22 02 42.4	-0.7
	baz=31,slow=22						
NB2				Sg	Sg	22 03 22.6	-3.7
	baz=32,slow=37						
NOA	NORSAR Array B	7.34	218	Pn	Pn	22 01 22.1	+3.0
	comp=Z,0.1nm,0.3s,baz=28,slow=11,SNR=14						
NOA				Sn	Sn	22 02 42.6	-0.5
	comp=Z,0.1nm,0.3s,baz=32,slow=21,SNR=5.1						
NOA				Lg	Lg	22 03 21.3	
	comp=Z,0.1nm,0.3s,baz=224,slow=26,SNR=5.7						
NRA0	NORESS Array S	7.53	216	Pn	Pn	22 01 24.2	+2.6
	baz=24,slow=14						
NRA0				Sn	Sn	22 02 47.9	+0.2
	baz=32,slow=28						
NRA0				Lg	Lg	22 03 27.1	
	baz=36,slow=28						
NRA0	NORESS Array S	7.53	216	Pn	Pn	22 01 24.2	+2.6
	baz=24,slow=14						
NRA0				Sn	Sn	22 02 47.9	+0.2
	baz=32,slow=28						
NRA0				Sg	Sg	22 03 27.1	-5.2
	baz=36,slow=28						
AKN	Aaknes	7.64	236	eP	Pn	22 01 25.3	+2.1
HFS	Hagfors	7.64	207	Pn	Pn	22 01 24.9	+1.7
	comp=Z,1.0nm,0.3s,baz=26,slow=13,SNR=32						
HFS				Sn	Sn	22 02 50.4	0.0
	comp=Z,1.0nm,0.3s,baz=27,slow=26,SNR=6.9						
HFS				Lg	Lg	22 03 29.6	
	comp=Z,0.7nm,0.3s,baz=33,slow=25,SNR=3.6						
HFS	Hagfors	7.64	207	Pn	Pn	22 01 24.7	+1.5
	baz=18,slow=14						
HFS				Sn	Sn	22 02 50.4	0.0
	baz=22,slow=22						
HFS				Lg	Lg	22 03 29.6	
	baz=32,slow=28						
HFS	Hagfors	7.64	207	Pn	Pn	22 01 24.7	+1.5
	baz=18,slow=14						
HFS				Sn	Sn	22 02 50.4	0.0
	baz=22,slow=22						
HFS				Sg	Sg	22 03 29.6	-6.3
	baz=32,slow=28						
SPA0	Spitsbergen Ar	11.19	356	Pn	Pn	22 02 11.8	+0.1
	baz=167,slow=14						
SPA0	Spitsbergen Ar	11.19	356	Pn	Pn	22 02 11.8	+0.1
	baz=167,slow=14						
SPITS	Spitsbergen Ar	11.19	356	Pn	Pn	22 02 11.5	-0.2
	baz=160,slow=16,SNR=8.8						
AKASG	Malin Array Be	17.02	161	Pn	Pn	22 03 26.0	-3.9
	comp=Z,0.7nm,0.3s,baz=344,slow=13,SNR=4.8						

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*IDC **13** 22:02:28.6±9.7, 32°.37N×132°.03E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.2/39, mbtmp3.3/3, Error ellipse: s-maj=434.6km s-min=27.9km az=62.0*

*JMA **13** 22:02:58.6±0.1, 34°.33N×135°.37E, h387^{km}, M2.7*

ISC 13 22:02:56.6±1.1, **34°.3N**±0°.2×**135°.49E**±0°.09, **h400**^{km}, **n11**, σ**1^{s}38**/12, **mb2.9**/3, **Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKN2	Miekihoku	0.65	92	P	Pn	22 03 47.6	+0.9
JWT	Wachi	1.02	356	P	Pn	22 03 48.6	+0.9
JAO	Obara	1.77	55	P	Pn	22 03 52.5	+1.3
JHS	Saijyo	2.09	291	P	Pn	22 03 53.5	+0.3
JNY	Yasuok	2.23	60	P	Pn	22 03 55.3	+1.2
JHT	Toyohira	2.57	280	P	Pn	22 03 56.5	0.0
JHU	Hanno	3.49	62	P	Pn	22 04 06.0	+2.1
JHO	Hitachi	4.76	59	P	Pn	22 04 15.9	-0.2
JHO				S	S	22 05 18.3	-2.4
SONM	Songino Array	25.62	311	P	P	22 07 53.0	+1.3
	0.2nm,0.5s,baz=119,slow=10,SNR=2.7						
MKAR	Makanchi Array	41.58	304	P	P	22 10 06.8	-0.4
	0.4nm,0.6s,baz=92,slow=11,SNR=6.0						
WRA	Warramunga Arr	53.91	181	P	P	22 11 40.2	-0.6
	0.1nm,0.3s,baz=358,slow=5.9,SNR=13						

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*DJA **13** 22:21:17.7±0.6, 7°S±2°×10°5E±°, h15^{km}±5^{km}, M4.5/19, mb4.6/17, mB5.1/7, MLv4.4/19, Mw(mB)4.5/7*

*NEIC **13** 22:21:19.4±2.0, 7°.02S±0°.07×105°.14E±0°.07, h41^{km}±9^{km}, mb4.6/18, Error ellipse: s-maj=10.7km s-min=10.1km az=153.0*

*IDC **13** 22:21:24.8±2.5, 6°.83S×105°.41E, h89^{km}±21^{km}, mb4.0/17, mb1 4.1/19, mb1mx3.9/34, mbtmp4.3/19, MS3.1/7, Ms1 3.1/7, ms1mx2.9/36, Error ellipse: s-maj=23.0km s-min=9.5km az=44.0*

ISC 13 22:21:19.1±1.0, **7°.13S**±0°.05×**105°.15E**±0°.05, **h47**^{km}±9^{km}, **n89**, σ**1^{s}54**/99, **mb4.4**/29, **MS3.0**/5, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.75	46	P	Pn	22 21 32.3	-1.1
CGJI				S	Sn	22 21 40.0	-3.7
SBJI	Serang	1.40	44	P	Pn	22 21 42.3	+0.1
SBJI				S	Sn	22 21 59.1	-0.5
SKJI	Sukabumi	1.40	85	P	Pn	22 21 42.4	+0.1
SKJI				S	Sn	22 22 00.0	+0.4
DBJI	Dramaga	1.69	70	P	Pn	22 21 46.5	+0.3
DBJI				S	Sn	22 22 07.1	+0.4
KASI	Kota Agung	1.73	338	P	Pn	22 21 48.2	+1.5
BLSI	Bandar Lampung	1.76	3	P	Pn	22 21 48.2	+1.1
TNG	Tangerang	1.77	57	P	Pn	22 21 46.5	-0.8
TNG				P	Pn	22 21 49.6	+2.3
TNG				S	Sn	22 22 09.9	+1.3
TNG				S	Sn	22 22 10.2	+1.6
CBJI	Citeko	1.83	67	P	Pn	22 21 48.8	+0.7
CBJI				S	Sn	22 22 11.4	+1.2
CNJI	Cibinong	1.97	95	P	Pn	22 21 49.5	-0.6
CNJI				S	Sn	22 22 11.8	-1.8
KLI	Kotabumi	2.27	353	P	Pn	22 21 56.7	+2.5
LWLI	Liwa	2.37	333	P	Pn	22 21 57.7	+2.1
KLSI		2.46	350	P	Pn	22 21 59.1	+2.3
LEM	Lembang	2.47	83	P	Pn	22 22 00.5	+3.4
	149nm,0.3s,baz=304,slow=6.2,SNR=50						
LEM				S	Sn	22 22 30.3	+4.2
	87nm,0.3s,baz=150,slow=22,SNR=9.0						
LEM				LR	LR	22 22 59.8	
	comp=Z,484nm,19.9s,baz=228,slow=43						
LEM	Lembang	2.47	83	P	Pn	22 22 00.0	+3.0
MDSI	Maura Dua	2.80	340	P	Pn	22 22 03.5	+2.0
CMJI	Cimerak	3.34	101	P	Pn	22 22 09.6	+0.8
XMIS	Christmas Isla	3.36	172	Pn	Pn	22 22 07.1	-2.1
XMIS				Sn	Sn	22 22 45.2	-2.7
LHSI	Lahat	3.66	334	P	Pn	22 22 16.2	+2.9
MASI	Maura Aman, Be	4.91	324	P	Pn	22 22 33.1	+2.6
	0.6nm86nm,0.6s						
UGM	Wanagama	5.38	99	Pn	Pn	22 22 38.4	+1.4
UGM				Sn	Sn	22 23 38.5	+0.7
JAGI	Jajag, Banyuwa	9.02	99	P	Pn	22 23 27.5	+0.7
	2µm35nm,0.4s						
JAGI	Jajag, Banyuwa	9.02	99	Pn	Pn	22 23 27.7	+0.9
JAGI					Sn	22 25 08.5	+1.3
ABJI	Asem Bagus	9.03	95	P	Pn	22 23 26.7	-0.3
	3µm295nm,0.6s						
COCO	West Island	9.61	238	Pn	Pn	22 23 38.0	+3.1
SRBI	Singaraja	10.02	96	P	Pn	22 23 41.2	+0.7
	854nm46nm,0.6s						
GSI	Gunungsitoli	11.28	318	Pn	Pn	22 23 55.3	-2.6
PLAI	Plampang	12.62	99	P	Pn	22 24 13.2	-2.9
	16nm,0.7s						
KAPI	Kappang	14.67	83	LR	LR	22 30 39.0	
	comp=Z,74nm,20.0s,baz=278,slow=38						
BKSI	Bulukumba	14.99	84	P	Pn	22 24 50.2	+2.1
	443nm34nm,0.8s						
BNSI	Bone	15.13	80	P	P	22 24 53.6	-0.6
	19nm,0.7s						
EDFI	Ende, Flores	16.46	97	P	Pn	22 25 04.8	-2.3
	247nm8.6nm,0.6s						
MPSI	Mapaga	16.48	64	P	P	22 25 11.2	+1.9
	2µm24nm,1.0s						
TOLI2	Tolitoli	17.62	63		P	22 25 21.3	-0.5
MRSI	Marisa	18.38	66	P	Pn	22 25 31.3	+0.6
	35nm,0.7s						
BATI	Baumata	18.56	101	P	P	22 25 30.7	-1.6
	5.1nm,0.3s,baz=266,slow=0.7,SNR=2.2						
BATI				S	Sn	22 28 58.5	-1.1
	2.5nm,0.3s,baz=57,slow=14,SNR=2.1						
BATI	Baumata	18.56	101	P	P	22 25 29.9	-2.3
	510nm17nm,0.7s						
SOEI	Soe	19.09	99	P	Pn	22 25 47.0	+7.6
SOEI	Soe	19.09	99		P	22 25 38.8	+0.6
SOEI				IAmb	IAmb	22 25 47.7	
	comp=Z,27nm,0.6s						
FITZ	Fitzroy Crossi	22.75	121	P	P	22 26 18.1	+0.6
	comp=Z,2.9nm,0.6s,baz=289,slow=7.4,SNR=8.3						
FITZ				S	S	22 30 20.9	-2.2
	comp=Z,0.5nm,0.3s,baz=102,slow=9.5,SNR=1.7						
FITZ				LR	LR	22 34 21.0	
	comp=Z,45nm,21.7s,baz=336,slow=34						
LBMI	Labuha	23.20	75	P	P	22 26 21.4	-0.8
	comp=Z,20nm,0.8s						
KNRA	Kununurra	24.63	112	P	P	22 26 35.6	+0.2
KNRA				IAmb	IAmb	22 26 36.7	
	comp=Z,19nm,0.8s						
DAV	Davao City (W)	24.79	56	LR	LR	22 36 57.0	
	comp=Z,54nm,19.6s,baz=98,slow=38						
CMAR	Chiang Mai Arr	26.16	347	P	P	22 26 48.4	-0.9
	comp=Z,1.0nm,0.3s,baz=182,slow=8.1,SNR=8.1						
MTN	Manton Dam	26.20	105	P	P	22 26 48.8	-0.9
H01W3	Cape Leeuwin H	28.83	165	T	T	22 57 34.6	
	baz=344,slow=76,SNR=50						
H01W1	Cape Leeuwin H	28.84	165	T	T	22 57 34.9	
	baz=344,slow=76,SNR=74						
H01W2	Cape Leeuwin H	28.84	165	T	T	22 57 35.5	
	baz=344,slow=76,SNR=55						
WB0	Warramunga Arr	31.02	117	P	P	22 27 33.3	+0.6
WB0				IAmb	IAmb	22 27 34.7	
	comp=Z,7.3nm,1.0s						
WRA	Warramunga Arr	31.04	117	P	P	22 27 33.4	+0.6
	comp=Z,2.4nm,0.4s,baz=288,slow=7.8,SNR=78						
WRA				PcP	PcP	22 30 29.0	+1.0
	comp=Z,0.8nm,0.4s,baz=304,slow=2.0,SNR=9.4						
WRA				LR	LR	22 41 10.0	
	comp=Z,35nm,20.6s,baz=75,slow=38						
WRA	Warramunga Arr	31.04	117	P	P	22 27 33.6	+0.8
WRAB	Tennant Creek	31.04	117	P	P	22 27 33.6	+0.7
WRAB				IAmb	IAmb	22 27 34.8	
	comp=Z,5.3nm,0.6s						
WB2	Warramunga Arr	31.05	117	P	P	22 27 33.7	+0.8
WB2				IAmb	IAmb	22 27 34.0	
	comp=Z,4.1nm,0.6s						
WR0	Warramunga Arr	31.22	117	P	P	22 27 35.3	+0.9
WR0				IAmb	IAmb	22 27 35.9	
	comp=Z,5.7nm,0.8s						
ASAR	Alice Springs	32.12	124	P	P	22 27 43.3	+1.0
	comp=Z,0.7nm,0.4s,baz=310,slow=8.1,SNR=16						
ASAR				PcP	PcP	22 30 32.2	+1.4
	comp=Z,0.7nm,0.3s,baz=297,slow=2.2,SNR=7.1						
ASAR				LR	LR	22 41 28.8	
	comp=Z,38nm,20.3s,baz=8.0,slow=38						
ASAR	Alice Springs	32.12	124	P	P	22 27 42.5	+0.2
H08S2	Diego Garcia H	32.38	267	T	T	23 02 02.0	
	baz=91,slow=75,SNR=112						
H08S3	Diego Garcia H	32.39	267	T	T	23 02 02.7	
	baz=91,slow=75,SNR=111						
H08S1	Diego Carcia H	32.40	267	T	T	23 02 04.1	
	baz=91,slow=75,SNR=106						
TAPN	Taplejung	38.21	334	eP	P	22 28 34.9	0.0
	comp=Z,4.0nm,0.4s						
RAMN	Ramite	38.35	333	eP	P	22 28 36.1	0.0
	comp=Z,5.5nm,0.4s						
GUN	Gumba	39.50	333	eP	P	22 28 45.7	-0.1
	comp=Z,8.8nm,0.4s						
GKN	Gorkha	40.16	331	eP	P	22 28 50.8	-0.3
	comp=Z,9.2nm,0.3s						
KOLN	Koldanda	40.47	330	eP	P	22 28 53.8	+0.1
DANN	Dangsing	40.87	331	eP	P	22 28 57.1	0.0
	comp=Z,5.9nm,0.3s						
PYUN	Piuthan	41.05	330	eP	P	22 28 58.3	-0.2
STKA	Stephens Creek	41.93	131	P	P	22 29 07.4	+2.0
	comp=Z,6.1nm,0.4s,baz=298,slow=8.5,SNR=23						
STKA				LR	LR	22 49 17.6	
	comp=Z,32nm,18.7s,baz=26,slow=40						
STKA	Stephens Creek	41.93	131	P	P	22 29 07.5	+2.0
KSRS	Korea Array	49.20	24	P	P	22 30 01.9	-0.8
	comp=Z,1.0nm,0.4s,baz=213,slow=7.7,SNR=4.3						
SONM	Songino Array	54.74	1	P	P	22 30 43.2	-0.8
	comp=Z,1.0nm,0.4s,baz=180,slow=9.3,SNR=20						
SONM				PcP	PcP	22 31 46.3	+0.2
	comp=Z,1.2nm,0.5s,baz=175,slow=4.3,SNR=13						
SONM	Songino Array	54.74	1	P	P	22 30 42.5	-1.5
SONM					PcP	22 31 46.0	-0.1
GAR	Garm	56.12	328	P	P	22 30 53.0	-1.1
CHGR	Chuyangaron	56.50	327	P	P	22 30 55.3	-1.5
USRK	Ussuriysk Ar.	56.55	23	P	P	22 30 55.5	-1.3
	comp=Z,3.8nm,0.5s,baz=201,slow=5.4,SNR=18						
BTK	Batken	56.64	329	P	P	22 30 56.8	-0.9
BTK				IAmb	IAmb	22 30 58.7	
	comp=Z,4.3nm,1.0s						
MKAR	Makanchi Array	57.41	342	P	P	22 31 01.9	-1.0
	comp=Z,0.8nm,0.4s,baz=155,slow=8.2,SNR=36						
GEYT	Alibeck	62.65	319	P	P	22 31 40.4	+1.3
	comp=Z,1.0nm,0.5s,baz=141,slow=4.8,SNR=2.0						
ZALV	Zalesovo Beam	63.22	347	P	P	22 31 41.3	-1.1
	comp=Z,2.1nm,0.3s,baz=153,slow=5.8,SNR=15						
ZALV	Zalesovo Beam	63.22	347	P	P	22 31 41.5	-0.9
ABKAR	Akbulak array	68.60	330	P	P	22 32 17.3	+0.2
ABKAR	Akbulak array	68.60	330	P	P	22 32 17.6	+0.4
ABKAR				IAmb	IAmb	22 32 18.6	
	comp=Z,13nm,1.1s						
PETK	Petropavlovsk-	74.61	30	P	P	22 32 51.8	-1.4
	comp=Z,1.9nm,0.6s,baz=241,slow=3.0,SNR=1.9						
NRIK	Noril'sk	77.27	354	P	P	22 33 07.3	-0.8
	comp=Z,5.6nm,0.4s,baz=128,slow=5.8,SNR=9.6						
NRIK	Noril'sk	77.27	354	P	P	22 33 07.5	-0.5
NRIK				IAmb	IAmb	22 33 08.8	
	comp=Z,12nm,1.2s						
BOSA	Boshof	77.77	242	P	P	22 33 14.8	+2.9
	comp=Z,6.7nm,1.1s,baz=45,slow=4.3,SNR=3.1						
BRTR	Keskin Array B	80.55	312	P	P	22 33 27.2	+0.3
	comp=Z,0.7nm,0.8s,baz=134,slow=8.0,SNR=6.6						
BRTR	Keskin Array B	80.55	312	P	P	22 33 27.7	+0.8
FINES	FINESS Array B	91.02	332	P	P	22 34 18.6	+0.5
	comp=Z,1.5nm,0.7s,baz=145,slow=4.7,SNR=9.8						
FINES	FINESS Array B	91.02	332	P	P	22 34 18.3	+0.2
ARCES	ARCESS Array B	93.02	340	P	P	22 34 26.5	-0.8
	comp=Z,5.2nm,0.9s,baz=88,slow=7.5,SNR=5.2						

IDC 13 22:49:17.7±1.3, **1°.16N**×**124°.03E**, **h0**^{km}, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.1**/39, **mbtmp3.6**/4, **Error ellipse: s-maj=150.3km s-min=22.0km az=66.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.28	155	P	P	22 54 27.3	+0.1
	4.1nm,0.5s,baz=334,slow=11,SNR=80						
ASAR	Alice Springs	26.48	159	P	P	22 54 56.8	-0.1
	0.3nm,0.3s,baz=338,slow=8.1,SNR=5.8						
SONM	Songino Array	48.95	344	P	P	22 58 06.1	+0.2
	0.2nm,0.4s,baz=155,slow=6.9,SNR=2.6						
MKAR	Makanchi Array	58.19	327	P	P	22 59 13.3	-0.3
	0.1nm,0.3s,baz=137,slow=8.2,SNR=4.7						

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*IDC **13** 23:03:23.9±0.8, 0°.89N×127°.35E, h0^{km}, mb4.1/7, mb1 4.2/9, mb1mx3.6/45, mbtmp4.0/9, ML3.6/2, MS3.0/4, Ms1 3.0/4, ms1mx2.7/38, Error ellipse: s-maj=42.7km s-min=14.8km az=63.0*

*DJA **13** 23:03:26.8±0.3, 1°N±3°×12°7E±°, h10^{km}, M4.0/9, mb4.3/5, MLv3.9/9*

*NEIC **13** 23:03:26.9±0.6, 0°.94N±0°.06×127°.43E±0°.07, h14^{km}±3^{km}, mb4.4/19, Error ellipse: s-maj=10.6km s-min=8.5km az=122.0*

ISC 13 23:03:27.1±0.9, **0°.91N**±0°.05×**127°.46E**±0°.05, **h18**^{km}±3^{km}, **n48**, σ**1^{s}22**/44, **mb4.4**/17, **MS2.9**/3, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.16	214	P	Pg	23 03 31.1	-0.4
TNTI				S	Sg	23 03 34.7	+0.2
TNTI	Ternate	0.16	214	Pg	Pb	23 03 30.8	+0.2
TNTI				Sg	Sg	23 03 34.0	-0.5
LBMI	Labuha	1.53	178	P	Pb	23 03 55.3	+0.3
LBMI				S	Sg	23 04 17.8	+1.1
SANI	Sanana	3.28	207	P	Pn	23 04 18.2	+0.6
KMSI	Cibinong	3.49	265	P	Pn	23 04 22.9	+2.4
SWI	Sorong	4.19	115	P	Pn	23 04 33.9	+3.8
SIJI	Sorong	4.20	115	Pn	Pn	23 04 30.6	+0.4
	3.6nm,0.3s,baz=239,slow=22,SNR=10						
SIJI				Sn	Sn	23 05 20.3	+1.5
	2.8nm,0.3s,baz=33,slow=20,SNR=3.7						
GTOI	Gorontalo	4.45	267	P	Pn	23 04 37.4	+3.7
MRSI	Marisa	5.53	266	P	Pb	23 05 05.5	+2.3
FAKI	Fak Fak	6.11	128	Pn	Pn	23 04 57.3	+0.8
TOLI2	Tolitoli	6.68	272	Pn	Pn	23 05 03.7	-0.6
TTSI	Tana Toraja	8.58	243	P	Pn	23 05 35.5	+5.0
BNSI	Bone	9.04	234	P	Pn	23 05 41.8	+5.1
SPSI	Sidrap Palu	9.08	238	P	Pn	23 05 38.2	+0.9
	74nm,0.7s						
BKSI	Bulukumba	9.59	230	P	Pn	23 05 51.7	+7.4
KAPI	Kappang	9.69	233	Pn	Pn	23 05 45.5	-0.1
SMKI	Samarinda	10.34	263	P	Pn	23 05 49.3	-5.2
EDFI	Ende, Flores	11.18	211	P	Pn	23 06 17.1	+11
BATI	Baumata	11.67	199	LR	LR	23 10 47.0	
	comp=Z,43nm,21.4s,baz=312,slow=38						
KNRA	Kununurra	16.53	176	Pn	Pn	23 07 17.9	-0.2
KNRA				IAmb	IAmb	23 07 24.7	
	comp=Z,28nm,1.2s						
FITZ	Fitzroy Crossi	18.97	185	P	P	23 07 46.5	-1.1
	comp=Z,0.1nm,0.3s,baz=4.8,slow=12,SNR=2.2						
WB0	Warramunga Arr	21.64	162	P	P	23 08 16.9	+0.3
WB0				IAmb	IAmb	23 08 20.9	
	comp=Z,9.6nm,0.8s						
WRAB	Tennant Creek	21.79	162	P	P	23 08 18.4	+0.3
WRAB				IAmb	IAmb	23 08 19.7	
	comp=Z,13nm,0.8s						
WRA	Warramunga Arr	21.79	162	P	P	23 08 18.6	+0.4
	comp=Z,9.9nm,0.7s,baz=340,slow=11,SNR=64						
WRA	Warramunga Arr	21.79	162	P	P	23 08 18.0	-0.2
WB2	Warramunga Arr	21.79	162	P	P	23 08 18.2	0.0
WB2				IAmb	IAmb	23 08 19.8	
	comp=Z,14nm,0.8s						
WR0	Warramunga Arr	21.87	162	P	P	23 08 19.1	+0.1
WR0				IAmb	IAmb	23 08 20.6	
	comp=Z,9.5nm,0.8s						
PMG	Port Moresby	22.14	118	LR	LR	23 20 14.9	
	comp=Z,69nm,18.0s,baz=266,slow=46						
PSA00	Pilbara Seismi	23.55	198	P	P	23 08 36.5	0.0
AS31	Alice Springs	25.22	166	P	P	23 08 52.2	+0.2
AS31				IAmb	IAmb	23 08 55.5	
	comp=Z,4.5nm,0.8s						
ASAR	Alice Springs	25.22	166	P	P	23 08 52.0	0.0
	comp=Z,14nm,0.9s,baz=343,slow=9.2,SNR=57						
ASAR				LR	LR	23 18 26.9	
	comp=Z,36nm,18.1s,baz=31,slow=36						
GIRL	Giralia	26.72	208	P	P	23 09 05.7	+0.2
PSI	Prapat	28.58	274	LR	LR	23 22 38.1	
	comp=Z,23nm,20.0s,baz=72,slow=40						
FORT	Forrest	31.52	179	P	P	23 09 47.3	-0.8
BBOO	Buckleboo	34.51	167	P	P	23 10 14.2	-0.1
BBOO				IAmb	IAmb	23 10 14.8	
	comp=Z,18nm,1.1s						
STKA	Stephens Creek	35.25	159	P	P	23 10 20.1	-0.6
	comp=Z,5.0nm,0.8s,baz=330,slow=9.3,SNR=11						
STKA	Stephens Creek	35.25	159	P	P	23 10 20.7	0.0
JSD	Sado	38.27	14	P	P	23 10 46.2	-0.1
JSD				IAmb	IAmb	23 11 00.7	
	comp=Z,12nm,1.1s						
BJT	Baijiatuau	40.27	347	P	P	23 11 00.4	-2.6
ERM	Erimo	43.30	17	P	P	23 11 27.9	+0.2

SONM	**Songino Array**	**50.19**	**342**	P	**P**	**23 12 22.2**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=165,slow=7.4,SNR=4.1						
SONM	**Songino Array**	**50.19**	**342**	P	**P**	**23 12 20.8**	**-1.1**
MK31	**Makanchi Array**	**60.28**	**326**	P	**P**	**23 13 35.0**	**+0.5**
MK31				IAmb	IAmb	23 13 39.1	
	comp=Z,3.7nm,1.2s						
MKAR	**Makanchi Array**	**60.28**	**326**	P	**P**	**23 13 34.4**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=119,slow=7.4,SNR=13						
MAKZ	**Makanchi**	**60.46**	**326**	P	**P**	**23 13 35.6**	**-0.2**
MAKZ				IAmb	IAmb	23 13 36.9	
	comp=Z,4.4nm,1.1s						
BOOM	**Boomskoye usch**	**61.91**	**319**	P	**P**	**23 13 45.8**	**-0.2**
BOOM				IAmb	IAmb	23 13 59.4	
	comp=Z,5.9nm,1.2s						
KURBB	**Kurchatov Arra**	**64.50**	**328**	P	**P**	**23 14 01.8**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=125,slow=6.1,SNR=10.0						
BVAR	**Borovoye Array**	**70.07**	**327**	P	**P**	**23 14 36.7**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=108,slow=4.2,SNR=2.5						

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*JMA **13** 23:20:02.7±0.1, 26°.67N×127°.77E, h47km±2km, M3.4*
JMA Felt I J1.
*NEIC **13** 23:20:03.0±1.7, 26°.68N±0°.08×128°.04E±0°.08, h64km±5km, mb4.2/20, Error ellipse: s-maj=11.5km s-min=10.6km az=153.0*
*IDC **13** 23:20:12.9±8.8, 26°.58N×127°.46E, h140km±82km, mb3.4/14, mb1 3.6/14, mb1mx3.3/36, mbtmp3.8/14, MS2.4/1, Ms1 2.4/1, ms1mx2.2/28, Error ellipse: s-maj=36.0km s-min=15.5km az=65.0*
ISC 13 23:20:01.9±0.7**, 26°.65N**±0°.05×**127°.85E**±0°.04**, h54**km±6km**,**
n53, σ1.s43/62**, mb4.1**/24**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNTH	**Nagotoyohara**	**0.20**	**130**	P	**Pn**	**23 20 11.1**	**+0.4**
JNTH				S	**Sn**	**23 20 17.1**	**+0.2**
JIH	**Iheya**	**0.40**	**15**	P	**Pn**	**23 20 12.7**	**+0.4**
JIH				S	**Sn**	**23 20 20.1**	**+0.3**
JOW	**Kunigami**	**0.42**	**64**	P	**Pn**	**23 20 13.4**	**+0.9**
JOW				S	**Sn**	**23 20 21.4**	**+1.2**
JOW	**Kunigami**	**0.42**	**64**	Pn	**Pn**	**23 20 13.5**	**+0.9**
JOW				Sn	**Sn**	**23 20 20.1**	**-0.2**
JJT3	**Tamagusuku3**	**0.51**	**187**	P	**Pn**	**23 20 14.5**	**+1.0**
JJT3				*e*S	**Sn**	**23 20 23.5**	**+1.7**
JAGN	**Aguni-jima**	**0.55**	**264**	P	**Pn**	**23 20 13.4**	**-0.6**
JAGN				S	**Sn**	**23 20 21.2**	**-1.5**
JYRO	**Yoronjima**	**0.65**	**55**	P	**Pn**	**23 20 16.3**	**+1.1**
JYRO				S	**Sn**	**23 20 26.1**	**+1.2**
JOKE	**Okinoerabujima**	**0.96**	**42**	P	**Pn**	**23 20 20.2**	**+1.0**
JOKE				S	**Sn**	**23 20 32.8**	**+0.9**
JKE	**Kume jima 2**	**1.01**	**252**	P	**Pn**	**23 20 19.2**	**-0.6**
JKE				*e*S	**Sn**	**23 20 31.5**	**-1.6**
JMZ	**Minamidaito 2**	**3.13**	**105**	Pn	**Pn**	**23 20 48.2**	**-0.7**
JMZ				Sn	**Sn**	**23 21 21.8**	**-3.2**
YHNB	**Yeheng**	**6.17**	**253**	Pn	**Pn**	**23 21 32.8**	**+2.3**
SSLB	**Suanglung**	**6.87**	**247**	Pn	**Pn**	**23 21 41.1**	**+1.1**
TPUB	**Ta-pu**	**7.35**	**245**	Pn	**Pn**	**23 21 47.8**	**+1.0**
KSRS	**Korea Array**	**10.78**	**0**	LR	LR	23 26 55.9	
	comp=Z,19nm,19.8s,baz=160,slow=37						
JSD	**Sado**	**14.35**	**35**	Pn	**Pn**	**23 23 19.5**	**-2.6**
ERM	**Erimo**	**19.82**	**35**	P	**P**	**23 24 23.8**	**-4.2**
SLVN	**Son La**	**22.50**	**262**	P	**P**	**23 24 58.9**	**+1.7**
SLVN				IAmb	IAmb	23 25 09.3	
	comp=Z,10nm,1.4s						
ULN	**Ulaanbaatar**	**26.73**	**328**	P	**P**	**23 25 34.3**	**-2.1**
SONM	**Songino Array**	**27.02**	**327**	P	**P**	**23 25 41.0**	**+2.0**
	comp=Z,1.1nm,0.8s,baz=142,slow=10,SNR=10.0						
SONM	**Songino Array**	**27.02**	**327**	P	**P**	**23 25 39.9**	**+0.8**
MK31	**Makanchi Array**	**41.01**	**312**	P	**P**	**23 27 40.1**	**+0.3**
MKAR	**Makanchi Array**	**41.01**	**312**	P	**P**	**23 27 40.2**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=92,slow=10,SNR=14						
MAKZ	**Makanchi**	**41.22**	**312**	P	**P**	**23 27 42.1**	**+0.6**
MAKZ				IAmb	IAmb	23 27 50.4	
	comp=Z,4.7nm,1.2s						
ZALV	**Zalesovo Beam**	**41.71**	**323**	P	**P**	**23 27 45.9**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=116,slow=6.7,SNR=4.7						
ZALV	**Zalesovo Beam**	**41.71**	**323**	P	**P**	**23 27 45.4**	**+0.1**
KURK	**Kurchatov**	**44.28**	**316**	P	**P**	**23 28 06.6**	**+0.4**
KURBB	**Kurchatov Arra**	**44.32**	**316**	P	**P**	**23 28 07.0**	**+0.5**
	comp=Z,2.1nm,0.3s,baz=104,slow=9.1,SNR=28						
WB0	**Warramunga Arr**	**46.57**	**172**	P	**P**	**23 28 25.2**	**+0.6**
WB0				IAmb	IAmb	23 28 34.8	
	comp=Z,3.9nm,1.3s						
WRA	**Warramunga Arr**	**46.74**	**172**	P	**P**	**23 28 27.5**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=353,slow=8.7,SNR=6.4						
WRA	**Warramunga Arr**	**46.74**	**172**	P	**P**	**23 28 26.8**	**+0.9**
WB2	**Warramunga Arr**	**46.74**	**172**	P	**P**	**23 28 26.1**	**+0.2**
WB2				IAmb	IAmb	23 28 34.0	
	comp=Z,4.5nm,1.2s						
WR0	**Warramunga Arr**	**46.78**	**171**	P	**P**	**23 28 24.9**	**-1.3**
BRVK	**Borovoye**	**49.81**	**318**	P	**P**	**23 28 49.9**	**+0.6**
BRVK				IAmb	IAmb	23 28 50.6	
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**50.36**	**173**	P	**P**	**23 28 55.8**	**+2.1**
	comp=Z,0.2nm,0.6s,baz=2.6,slow=9.6,SNR=5.6						
KBL	**Kabul**	**50.62**	**294**	P	**P**	**23 28 56.0**	**0.0**
KBL				IAmb	IAmb	23 28 57.9	
	comp=Z,2.7nm,0.8s						
ABKAR	**Akbulak array**	**56.12**	**313**	P	**P**	**23 29 35.5**	**-0.3**
ABKAR				IAmb	IAmb	23 29 37.2	
	comp=Z,1.5nm,0.8s						
ABKAR	**Akbulak array**	**56.12**	**313**	P	**P**	**23 29 35.9**	**+0.1**
BBOO	**Buckleboo**	**59.64**	**172**	P	**P**	**23 29 58.1**	**-2.4**
A21K	**Barrow**	**60.37**	**21**	P	**P**	**23 30 04.8**	**-0.2**
H21K	**Melozitna Rive**	**61.67**	**28**	P	**P**	**23 30 14.6**	**+0.6**
H21K				IAmb	IAmb	23 30 26.5	
	comp=Z,2.9nm,1.4s						
MCK	**McKinley**	**63.48**	**30**	P	**P**	**23 30 24.1**	**-2.0**
MCK				IAmb	IAmb	23 30 37.8	
	comp=Z,2.8nm,1.0s						
MDM	**Murphy Dome**	**63.64**	**28**	P	**P**	**23 30 24.8**	**-2.3**
MDM				IAmb	IAmb	23 30 25.2	
	comp=Z,4.5nm,1.2s						
ILAR	**Eielson Array**	**64.23**	**28**	P	**P**	**23 30 34.3**	**+3.3**
	comp=Z,0.5nm,1.0s,baz=254,slow=6.5,SNR=2.2						
GLI	**Glacier Island**	**64.73**	**33**	P	**P**	**23 30 33.7**	**-0.6**
BMAR	**Burnt Mountain**	**64.78**	**25**	P	**P**	**23 30 35.9**	**+1.3**
KBZ	**Khabaz**	**68.63**	**309**	P	**P**	**23 30 59.3**	**-0.1**
	comp=Z,3.8nm,1.1s,baz=111,slow=8.6,SNR=5.6						
FINES	**FINESS Array B**	**72.33**	**330**	P	**P**	**23 31 22.3**	**+0.6**
	comp=Z,3.8nm,1.0s,baz=69,slow=5.0,SNR=7.6						
FINES	**FINESS Array B**	**72.33**	**330**	P	**P**	**23 31 22.1**	**+0.4**
AKASG	**Malin Array Be**	**75.00**	**319**	P	**P**	**23 31 37.7**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=58,slow=6.2,SNR=4.0						
BRTR	**Keskin Array B**	**76.51**	**308**	P	**P**	**23 31 47.1**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=104,slow=5.2,SNR=6.5						
YKA	**Yellowknife Ar**	**78.29**	**25**	P	**P**	**23 31 58.1**	**+2.2**
	comp=Z,0.7nm,0.8s,baz=299,slow=5.6,SNR=3.2						
NOA	**NORSAR Array B**	**78.79**	**334**	P	**P**	**23 31 58.8**	**0.0**
	comp=Z,0.2nm,0.6s,baz=78,slow=4.4,SNR=1.5						
GERES	**GERESS Array B**	**84.66**	**323**	P	**P**	**23 32 30.3**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=46,slow=4.2,SNR=2.1						

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*IDC **13** 23:34:01.3±1.7, 4°.12S×129°.45E, h0km, mb3.4/1, mb1 3.3/4, mb1mx2.9/37, mbtmp3.2/4, ML3.0/3, Error ellipse: s-maj=57.8km s-min=27.6km az=83.0*
*DJA **13** 23:34:04.3±1.4, 4°S±9°×12°9E±°, h14km±10km, M2.9/5, MLv2.9/5*
ISC 13 23:34:05.4±1.1**, 4°.08S**±0°.08×**129°.46E**±0°.07**, h36**km**, n7,**
σ1.s62/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.90**	**324**	P	**Pn**	**23 34 22.0**	**+0.4**
MSAI				S	**Sn**	**23 34 32.7**	**-0.7**
AAI	**Ambon**	**1.32**	**287**	P	**Pn**	**23 34 27.0**	**-0.3**
FAKI	**Fak Fak**	**3.02**	**68**	P	**Pn**	**23 34 51.4**	**+0.7**
SIJI	**Sorong**	**3.67**	**30**	Pn	**Pn**	**23 34 60.0**	**+0.3**
	1.8nm,0.3s,baz=157,slow=21,SNR=18						
SIJI				Sn	**Sn**	**23 35 39.5**	**-2.2**
	1.5nm,0.3s,baz=203,slow=22,SNR=1.9						
WRA	**Warramunga Arr**	**16.47**	**164**	Pn	**Pn**	**23 37 51.4**	**-2.4**
	0.0nm,0.3s,baz=347,slow=13,SNR=2.5						
ASAR	**Alice Springs**	**19.94**	**168**	P	**P**	**23 38 35.7**	**+1.3**
	0.1nm,0.3s,baz=348,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	**65.51**	**326**	P	**P**	**23 44 46.6**	**+1.5**
	0.2nm,0.4s,baz=122,slow=7.6,SNR=5.4						

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*IDC **14** 00:13:57.6±0.8, 19°.76N×121°.22E, h0km, mb3.7/12, mb1 4.0/14, mb1mx3.8/44, mbtmp3.9/14, ML4.3/2, MS3.1/4, Ms1 3.2/4, ms1mx2.7/47, Error ellipse: s-maj=26.1km s-min=16.7km az=72.0*
*NEIC **14** 00:14:03.5±1.3, 19°.84N±0°.03×121°.4E±0°.2, h38km±12km, mb4.0/7, Error ellipse: s-maj=20.6km s-min=3.7km az=88.0*
ISC 14 00:14:03.0±0.8**, 19°.86N**±0°.08×**121°.2E**±0°.1**, h35**km**, n29,**
σ1.s07/31**, mb3.9**/15**, MS3.4**/3**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**2.96**	**357**		**Pn**	**00 14 47.5**	**0.0**
TWG				Sn	**Sn**	**00 15 20.8**	**-0.9**
TPUB	**Ta-pu**	**3.48**	**351**		**Pn**	**00 14 55.8**	**+1.2**
TPUB				Sn	**Sn**	**00 15 31.3**	**-3.3**
YULB	**Yu-li**	**3.52**	**1**		**Pn**	**00 14 55.3**	**+0.1**
YULB				Sn	**Sn**	**00 15 36.6**	**+0.9**
SSLB	**Suanglung**	**3.92**	**356**		**Pn**	**00 15 01.7**	**+0.9**
SSLB				Sn	**Sn**	**00 15 43.7**	**-2.0**
NACB	**Ninganchiao**	**4.31**	**4**	Pn	**Pn**	**00 15 05.9**	**-0.2**
YHNB	**Yeheng**	**4.79**	**1**		**Pn**	**00 15 14.2**	**+1.4**
JOW	**Kunigami**	**9.48**	**42**	Pn	**Pn**	**00 16 16.1**	**-1.0**
JNU	**Nakatsue**	**15.77**	**31**	Pn	**Pn**	**00 17 42.7**	**+0.2**
	0.8nm,0.3s,baz=210,slow=6.7,SNR=4.6						
JHS	**Saijyo**	**18.38**	**32**	P	**P**	**00 18 13.8**	**-1.1**
KSRS	**Korea Array**	**18.48**	**17**	P	**Pn**	**00 18 16.4**	**+0.2**
	1.1nm,0.3s,baz=198,slow=12,SNR=16						
KSRS				LR	LR	00 26 48.1	
	comp=Z,31nm,18.4s,baz=185,slow=42						
JWT	**Wachi**	**19.81**	**36**		**P**	**00 18 30.8**	**+0.3**
JWT				IAmb	IAmb	00 18 53.2	
	comp=Z,12nm,1.0s						
CMAR	**Chiang Mai Arr**	**21.11**	**270**	P	**P**	**00 18 43.4**	**-1.3**
	comp=Z,2.1nm,0.6s,baz=73,slow=9.4,SNR=16						
CMAR				LR	LR	00 26 42.1	
	comp=Z,23nm,19.6s,baz=40,slow=36						
MJAR	**Matsushiro Arr**	**22.30**	**38**	P	**P**	**00 18 57.1**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=240,slow=9.7,SNR=1.4						
SONM	**Songino Array**	**30.40**	**340**	P	**P**	**00 20 11.4**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=161,slow=14,SNR=1.9						
SONM	**Songino Array**	**30.40**	**340**	P	**P**	**00 20 13.1**	**+1.2**
SONM				IAmb	IAmb	00 20 38.2	
	comp=Z,1.4nm,1.2s						
WB0	**Warramunga Arr**	**41.43**	**161**	P	**P**	**00 21 45.7**	**-0.7**
WB0				IAmb	IAmb	00 21 58.2	
	comp=Z,2.1nm,0.8s						
MK31	**Makanchi Array**	**41.56**	**319**	P	**P**	**00 21 47.2**	**0.0**
MK31				IAmb	IAmb	00 21 48.4	
	comp=Z,4.2nm,1.3s						
MKAR	**Makanchi Array**	**41.56**	**319**	P	**P**	**00 21 47.6**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=122,slow=8.1,SNR=8.5						
WRA	**Warramunga Arr**	**41.58**	**161**	P	**P**	**00 21 46.5**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=325,slow=12,SNR=33						
WB2	**Warramunga Arr**	**41.59**	**161**	P	**P**	**00 21 46.9**	**-0.8**
WB2				IAmb	IAmb	00 21 57.6	
	comp=Z,4.7nm,1.4s						
ZALV	**Zalesovo Beam**	**43.94**	**330**	P	**P**	**00 22 07.1**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=122,slow=11,SNR=1.8						
ASAR	**Alice Springs**	**44.98**	**163**	P	**P**	**00 22 14.2**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=349,slow=7.0,SNR=12						
KURBB	**Kurchatov Arra**	**45.51**	**323**	P	**P**	**00 22 19.4**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=141,slow=6.2,SNR=6.8						
NRIK	**Noril'sk**	**53.59**	**346**	P	**P**	**00 23 20.8**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=160,slow=9.3,SNR=2.1						
AKTO	**Aktyubinsk**	**57.95**	**318**	LR	LR	00 51 03.6	
	comp=Z,45nm,18.2s,baz=25,slow=38						
KBZ	**Khabaz**	**68.26**	**310**	P	**P**	**00 25 01.0**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=63,slow=4.5,SNR=4.1						
FINES	**FINESS Array B**	**75.20**	**330**	P	**P**	**00 25 42.1**	**+0.3**
	comp=Z,3.3nm,1.1s,baz=93,slow=3.8,SNR=3.9						
NOA	**NORSAR Array B**	**82.06**	**333**	LR	LR	01 04 22.9	
	comp=Z,19nm,21.5s,baz=305,slow=37						
YKA	**Yellowknife Ar**	**86.92**	**23**	P	**P**	**00 26 45.0**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=309,slow=4.4,SNR=2.6						

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*IDC **14** 00:30:07.8±1.0, 0°.42S×126°.86E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.3/47, mbtmp3.6/7, ML3.3/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/30, Error ellipse: s-maj=41.3km s-min=19.1km az=56.0*
*DJA **14** 00:30:12.6±0.6, 0°S±4°×12°7E±°, h26km±9km, M3.7/7, mb4.2/1, MLv3.5/7*
ISC 14 00:30:12.9±0.9**, 0°.41S**±0°.06×**126°.97E**±0°.07**, h35**km**, n12,**
σ0.s93/14**, mb3.9**/5**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**0.58**	**113**	P	**Pn**	**00 30 23.3**	**-1.4**
LBMI				S	**Sn**	**00 30 31.8**	**-1.2**
TNTI	**Ternate**	**1.24**	**19**	P	**Pn**	**00 30 33.2**	**-0.5**
TNTI				S	**Sn**	**00 30 48.9**	**-0.3**
SANI	**Sanana**	**1.90**	**211**	P	**Pn**	**00 30 43.0**	**+0.1**
SIJI	**Sorong**	**4.32**	**96**	Pn	**Pn**	**00 31 17.5**	**+1.3**
	1.7nm,0.3s,baz=238,slow=22,SNR=2.0						
SIJI				Sn	**Sn**	**00 32 06.9**	**+1.5**
	1.2nm,0.3s,baz=202,slow=23,SNR=1.3						
FITZ	**Fitzroy Crossi**	**17.63**	**184**	LR	LR	00 41 53.2	
	comp=Z,30nm,19.6s,baz=69,slow=40						
WRA	**Warramunga Arr**	**20.71**	**160**	P	**P**	**00 34 49.8**	**-0.6**
	0.4nm,0.5s,baz=340,slow=11,SNR=8.0						
ASAR	**Alice Springs**	**24.08**	**164**	P	**P**	**00 35 26.1**	**+0.8**
	0.6nm,0.5s,baz=346,slow=11,SNR=4.6						
SONM	**Songino Array**	**51.28**	**342**	P	**P**	**00 39 14.1**	**+0.6**
	0.4nm,0.7s,baz=158,slow=9.2,SNR=3.2						
MKAR	**Makanchi Array**	**61.09**	**327**	P	**P**	**00 40 23.8**	**+0.3**
	0.8nm,0.4s,baz=117,slow=8.0,SNR=13						
ZALV	**Zalesovo Beam**	**64.37**	**334**	P	**P**	**00 40 44.8**	**-0.4**
	0.4nm,0.4s,baz=122,slow=11,SNR=1.9						
KURBB	**Kurchatov Arra**	**65.35**	**328**	P	**P**	**00 40 51.3**	**-0.3**
	1.4nm,0.6s,baz=125,slow=6.3,SNR=13						
TORD	**Torodi Ar. Bea**	**124.34**	**286**	PKP	**PKPdf**	**00 49 08.6**	**-0.7**
	0.4nm,0.7s,baz=42,slow=1.6,SNR=2.9						

KRSC 14 00:31:34.6±0.9**, 55°.47N×162°.78E, h61**km±19km**, ML4.0,**
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.74**	**2**	*i* P	Pn	00 31 50.3	+0.9
KBTR				*e*S	Sn	00 32 01.0	+0.8
KBG	**Krutoberegovo**	**0.79**	**357**	*e*P	Pn	00 31 50.9	+0.9
KBG				*e*S	Sn	00 32 01.9	+0.6
MKZ	**Mys Kozlova**	**1.09**	**214**	*e*S	Sn	00 32 10.2	+2.1
ZLN	**Zelenaya**	**1.24**	**297**	*e*P	Pn	00 31 58.4	+2.5
ZLN				*e*S	Sn	00 32 14.4	+2.5
BZGR	**Bezymyannyi-Gr**	**1.27**	**293**	*e*P	Pn	00 31 58.3	+2.0
BZGR				*e*S	Sn	00 32 15.0	+2.5
LGNR	**Loginova**	**1.33**	**299**	*e*P	Pn	00 31 59.4	+2.1
LGNR				*e*S	Sn	00 32 16.0	+1.8
SMKR	**Semkarok**	**1.34**	**327**	*e*P	Pn	00 31 58.7	+1.5
SMKR				*e*S	Sn	00 32 15.5	+1.4
BZWR	**Bezymyannyi-We**	**1.38**	**292**	*e*P	Pn	00 32 00.0	+2.1
BZWR				*e*S	Sn	00 32 17.7	+2.4
TUMD	**Tumrok D**	**1.38**	**260**	*e*P	Pn	00 32 00.2	+2.5
TUMD				*e*S	Sn	00 32 17.6	+2.5
BDR	**Baidarnaya**	**1.41**	**322**	*e*P	Pn	00 32 00.1	+1.9
BDR				*e*S	Sn	00 32 17.6	+1.7
KRSR	**Krestovskiy**	**1.46**	**302**	*e*S	Sn	00 32 17.9	+1.0
KIRR	**Kirishev**	**1.46**	**291**	*e*P	Pn	00 32 01.2	+2.3
KIRR				*e*S	Sn	00 32 19.9	+2.8
KLY	**Klyuchi**	**1.47**	**306**	*e*P	Pn	00 31 59.1	+0.3
KLY				*e*S	Sn	00 32 16.4	-0.6
KMNR	**Kamenistaya**	**1.47**	**282**	*i* P	Pn	00 32 01.6	+2.7
KMNR				*e*S	Sn	00 32 20.9	+3.7
SRKR	**Sorokina**	**1.49**	**324**	*e*P	Pn	00 32 01.1	+1.9
SRKR				*e*S	Sn	00 32 19.0	+1.2
KPT	**Kopyto**	**1.53**	**290**	*e*P	Pn	00 32 02.3	+2.6
KOZ	**Kozyrevsk**	**1.75**	**291**	*e*S	Sn	00 32 26.4	+2.6
BKI	**Bering**	**1.84**	**97**	*e*P	Pn	00 32 06.4	+2.5
BKI				*e*S	Sn	00 32 28.4	+2.3
ESO	**Esso**	**2.35**	**283**	*e*P	Pn	00 32 14.3	+3.5
KII	**Karymskiy**	**2.40**	**235**	*e*P	Pn	00 32 14.6	+3.0
SPN	**Mys Shipunski**	**2.87**	**215**	*e*P	Pn	00 32 19.7	+1.8
SPN				*e*S	Sn	00 32 51.6	+0.4
NLC	**Nalytchevo**	**3.05**	**223**	*e*P	Pn	00 32 23.3	+3.0
NLC				*e*S	Sn	00 32 57.5	+1.9
SDLR	**Sedlovina**	**3.16**	**228**	*i* P	Pn	00 32 25.4	+3.5
SDLR				*e*S	Sn	00 33 00.7	+2.2
KRER	**Koryakskii**	**3.20**	**229**	*i* P	Pn	00 32 26.2	+3.6
SMAR	**Somma**	**3.21**	**228**	*i* P	Pn	00 32 26.0	+3.3
AVH	**Avacha**	**3.23**	**229**	*i* P	Pn	00 32 26.7	+3.8
UGLR	**Uglovaya**	**3.23**	**227**	*e*P	Pn	00 32 26.3	+3.3
KOK	**Koryaka**	**3.26**	**230**	*i* P	Pn	00 32 27.0	+3.8
GNL	**Ganaly**	**3.33**	**240**	*e*P	Pn	00 32 27.9	+3.7
DALK	**Dalny**	**3.39**	**226**	*e*P	Pn	00 32 28.3	+3.3
DALK				*e*S	Sn	00 33 05.4	+1.4
PET	**Petropavlovsk**	**3.44**	**226**	*e*P	Pn	00 32 29.1	+3.5
PET				*e*S	Sn	00 33 07.2	+2.1
KRMR	**Karymshinskiy**	**3.80**	**228**	*e*P	Pn	00 32 34.3	+3.7
RUS	**Russkaya**	**3.95**	**221**	*i* P	Pn	00 32 35.2	+2.6
RUS				*e*S	Sn	00 33 18.6	+1.1
MTVR	**Mutnovka**	**4.04**	**224**	*e*P	Pn	00 32 37.5	+3.6
MTVR				*e*S	Sn	00 33 23.1	+3.2
APC	**Apacha**	**4.17**	**235**	*e*P	Pn	00 32 40.3	+4.7
ASAK	**Asacha**	**4.22**	**225**	*e*P	Pn	00 32 40.8	+4.3
KDTR	**Khodutka, Kamc**	**4.61**	**219**	*e*P	Pn	00 32 44.0	+2.4
KDTR				*e*S	Sn	00 33 33.6	-0.2
MIPR	**Malaya Ipel'ka**	**4.78**	**231**	*e*P	Pn	00 32 49.1	+5.0
TILK	**Tilichiki**	**5.31**	**18**	*e*P	Pn	00 32 54.2	+3.1

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*IDC **14** 00:39:13.2±1.4, 4°.13S×129°.84E, h0km, mb3.7/2, mb1 3.5/6, mb1mx3.3/39, mbtmp3.4/6, ML2.9/4, MS3.4/1, Ms1 3.4/1, ms1mx2.5/34, Error ellipse: s-maj=49.3km s-min=20.6km az=87.0*
*DJA **14** 00:39:17.3±0.9, 4°S±6°×12°9E±°, h14km±6km, M3.5/7, MLv3.5/7*
ISC 14 00:39:18.4±0.9**, 4°.10S**±0°.07×**129°.52E**±0°.06**, h36**km**, n11,**
σ1.s78/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.96**	**322**	P	**Pn**	**00 39 35.5**	**+0.2**
MSAI				S	**Sn**	**00 39 47.7**	**0.0**
AAI	**Ambon**	**1.39**	**287**	P	**Pn**	**00 39 40.3**	**-0.9**
AAI				S	**Sn**	**00 39 58.1**	**-0.2**
FAKI	**Fak Fak**	**2.96**	**67**	P	**Pn**	**00 40 05.2**	**+2.3**
SIJI	**Sorong**	**3.65**	**29**	Pn	**Pn**	**00 40 09.4**	**-3.0**
	0.5nm,0.3s,baz=138,slow=23,SNR=1.4						
SIJI				Sn	**Sn**	**00 40 54.4**	**+0.1**
	2.6nm,0.3s,baz=125,slow=20,SNR=3.9						
SANI	**Sanana**	**4.08**	**300**	P	**Pn**	**00 40 18.7**	**+0.5**
FITZ	**Fitzroy Crossi**	**14.42**	**195**	Pn	**Pn**	**00 42 41.1**	**+1.1**
	0.0nm,0.3s,baz=351,slow=21,SNR=0.9						
WRA	**Warramunga Arr**	**16.43**	**164**	Pn	**Pn**	**00 43 03.0**	**-3.3**
	0.0nm,0.3s,baz=347,slow=13,SNR=1.7						
WRA				Sn	**Sn**	**00 46 07.6**	**-0.1**
	0.0nm,0.3s,baz=345,slow=18,SNR=2.1						
ASAR	**Alice Springs**	**19.91**	**168**	P	**P**	**00 43 45.4**	**-1.6**
	0.2nm,0.3s,baz=344,slow=9.1,SNR=15						
PSI	**Prapat**	**31.34**	**282**	LR	LR	00 58 47.0	
	comp=Z,76nm,22.0s,baz=178,slow=37						
MKAR	**Makanchi Array**	**65.56**	**326**	P	**P**	**00 49 59.9**	**+1.5**
	0.4nm,0.5s,baz=112,slow=8.0,SNR=5.6						
ZALV	**Zalesovo Beam**	**68.79**	**334**	P	**P**	**00 50 20.3**	**+1.6**
	0.3nm,0.4s,baz=115,slow=5.1,SNR=1.6						

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*IDC **14** 00:43:22.7±1.1, 35°.24N×24°.25E, h0km, mb3.8/9, mb1 3.9/16, mb1mx3.7/48, mbtmp3.7/16, ML3.6/7, MS3.3/1, Ms1 3.3/1, ms1mx2.3/45, Error ellipse: s-maj=22.5km s-min=7.8km az=5.0*
*THE **14** 00:43:23.1, 35°.28N×24°.26E, h0km±1km, ML3.0/15, Error ellipse: s-maj=1.0km s-min=0.4km az=189.0*
*ATH **14** 00:43:23.1, 35°.31N×24°.27E, h16km±2km, ML3.3/4, Error ellipse: s-maj=2.7km s-min=1.0km az=320.0*
ISC 14 00:43:23.6±0.9**, 35°.29N**±0°.02×**24°.29E**±0°.02**, h8**km±6km**,**
n58, σ1.s07/80**, mb3.7**/9**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAM	**Vamos**	**0.14**	**329**	P	**Pg**	**00 43 26.6**	**+0.1**
VAM				S	**Sg**	**00 43 28.1**	**-0.5**
VAM	**Vamos**	**0.14**	**329**	P	**Pg**	**00 43 26.7**	**+0.2**
VAM				S	**Sg**	**00 43 29.2**	**+0.6**
VAM				AML	AML	00 43 32.8	
	comp=N,55448μm,0.5s						
VAM				AML	AML	00 43 33.0	
	comp=E,34657μm,0.6s						
PRNS	**Prines Rethymn**	**0.19**	**67**	P	**Pg**	**00 43 26.9**	**-0.6**
PRNS				S	**Sg**	**00 43 29.8**	**-0.4**
	comp=E,7μm,0.8s						
IMMV	**Iera Moni Meta**	**0.30**	**304**	P	**Pg**	**00 43 29.1**	**-0.5**
IMMV				S	**Sg**	**00 43 33.7**	**+0.1**
	comp=E,10μm,0.8s						
IMMV	**Iera Moni Meta**	**0.30**	**304**	P	**Pg**	**00 43 29.1**	**-0.5**
IMMV				S	**Sb**	**00 43 35.3**	**-1.0**
IMMV				AML	AML	00 43 38.8	
	comp=N,15984μm,0.6s						
IMMV				AML	AML	00 43 41.2	
	comp=E,19078μm,0.9s						
TMBK	**Timbaki Herakl**	**0.45**	**119**	P	**Pg**	**00 43 32.3**	**0.0**
TMBK				S	**Sb**	**00 43 40.3**	**-0.3**
	comp=E,1μm,0.5s						
GVDS	**Gavdos**	**0.47**	**200**	P	**Pg**	**00 43 32.6**	**-0.2**
GVDS				S	**Sb**	**00 43 40.2**	**-1.1**
	comp=E,3μm,0.5s						
GVD	**Gavdhos**	**0.48**	**200**	P	**Pg**	**00 43 32.2**	**-0.7**
GVD				S	**Sb**	**00 43 40.5**	**-0.9**
	comp=E,6μm,0.3s						
GVD	**Gavdhos**	**0.48**	**200**	P	**Pg**	**00 43 32.6**	**-0.2**
GVD				S	**Sg**	**00 43 40.0**	**+0.9**
GVD				AML	AML	00 43 41.1	
	comp=N,9246μm,0.3s						
GVD				AML	AML	00 43 43.8	
	comp=E,13106μm,0.3s						
KNDR	**Palaiochora Ch**	**0.49**	**264**	P	**Pg**	**00 43 33.0**	**-0.1**
KNDR				S	**Sb**	**00 43 41.1**	**-0.7**
	comp=E,1μm,0.6s						
IDI	**Anoyia**	**0.49**	**90**	Pg	**Pg**	**00 43 32.7**	**-0.5**
	comp=E,57nm,0.3s,baz=251,slow=13,SNR=252						
IDI				Lg	Lg	00 43 40.5	
	comp=E,200nm,0.3s,baz=285,slow=9.9,SNR=25						
IDI				LR	LR	00 44 02.1	
	comp=E,42nm,20.2s,baz=90,slow=75						
IDI	**Anoyia**	**0.49**	**90**	P	**Pg**	**00 43 32.7**	**-0.5**
IDI				S	**Sb**	**00 43 40.9**	**-1.1**
	comp=E,2μm,0.7s						
IDI	**Anoyia**	**0.49**	**90**	P	**Pg**	**00 43 32.6**	**-0.5**
IDI				S	**Sb**	**00 43 40.6**	**-1.3**
IDI				AML	AML	00 43 43.0	
	comp=N,3064μm,0.4s						
IDI				AML	AML	00 43 43.4	
	comp=E,2565μm,0.3s						
RODP	**Rodopos**	**0.51**	**302**	P	**Pg**	**00 43 32.7**	**-0.7**
RODP				S	**Sb**	**00 43 41.3**	**-1.0**
	comp=E,635nm,0.4s						
SIVA	**Sivas**	**0.51**	**122**	P	**Pg**	**00 43 33.1**	**-0.3**
SIVA				S	**Sb**	**00 43 41.8**	**-0.5**
	comp=E,4μm,0.5s						
SIVA	**Sivas**	**0.51**	**122**	P	**Pg**	**00 43 33.2**	**-0.3**
KSTL	**Kastelli Herak**	**0.64**	**89**	P	**Pn**	**00 43 39.9**	**+1.0**
KSTL				S	**Sn**	**00 43 53.0**	**+3.7**
	comp=E,545nm,0.5s						
HRKL	**Herakleio**	**0.67**	**88**	P	**Pb**	**00 43 36.8**	**-0.7**
HRKL				S	**Sb**	**00 43 46.9**	**0.0**
	comp=E,4μm,1.1s						
ANKY	**Antikythira Is**	**0.99**	**306**	P	**Pg**	**00 43 41.8**	**-0.7**
ANKY				S	**Sb**	**00 43 56.6**	**+0.6**
	comp=E,885nm,0.5s						
ANKY	**Antikythira Is**	**0.99**	**306**	P	**Pg**	**00 43 41.8**	**-0.7**
NPS	**Neapolis**	**1.09**	**91**	P	**Pg**	**00 43 43.9**	**-0.5**
NPS				S	**Sn**	**00 43 59.5**	**-0.8**
	comp=E,800nm,0.6s						
NPS	**Neapolis**	**1.09**	**91**	P	**Pg**	**00 43 43.9**	**-0.5**
FRMA	**Ierapetra Chan**	**1.22**	**103**	P	**Pg**	**00 43 48.7**	**+1.7**
KTHA	**Kythira Island**	**1.39**	**314**	P	**Pn**	**00 43 49.1**	**0.0**
KTHA				S	**Sg**	**00 44 08.1**	**0.0**
KTHA	**Kythira Island**	**1.39**	**314**	P	**Pn**	**00 43 49.2**	**0.0**
THR6	**Thira Island,**	**1.40**	**40**	P	**Pb**	**00 43 49.6**	**-0.3**
MHLO	**Agia Marina, M**	**1.40**	**4**	P	**Pn**	**00 43 49.2**	**-0.2**
MHLO				S	**Sg**	**00 44 08.3**	**-0.3**
	comp=E,2μm,0.5s						
MHLO	**Agia Marina, M**	**1.40**	**4**	P	**Pn**	**00 43 48.9**	**-0.5**
THR5	**Thira Island,**	**1.42**	**37**	P	**Pb**	**00 43 49.7**	**-0.5**
KTHR	**Kythira**	**1.42**	**313**	P	**Pb**	**00 43 49.9**	**-0.4**
KTHR				S	**Sb**	**00 44 08.7**	**+0.1**
	comp=E,518nm,0.4s						
STAX	**Taxiarchis Har**	**1.43**	**39**	P	**Pb**	**00 43 50.3**	**-0.2**
THR3	**Thira Island,**	**1.44**	**39**	P	**Pg**	**00 43 50.6**	**-0.6**
SANT	**Santorini**	**1.44**	**41**	P	**Pn**	**00 43 49.1**	**-0.9**
THR8	**Santorini-Mono**	**1.48**	**41**	P	**Pn**	**00 43 50.3**	**-0.1**
THR2	**Thira island,**	**1.48**	**39**	P	**Pn**	**00 43 50.5**	**0.0**
VLI	**Veliai**	**1.79**	**323**	P	**Pn**	**00 43 54.4**	**-0.4**
APE	**Apeiranthos**	**2.04**	**29**	P	**Pn**	**00 43 57.5**	**-0.7**
KRND	**KRANIDI**	**2.28**	**337**	P	**Pn**	**00 44 01.6**	**+0.1**

DION	Dionisos Attik	2.80	354	P	Pn	00 44 08.8	+0.2
KLV	Kalavryta, Ach	3.24	329	P	Pn	00 44 15.4	+0.7
VAE	Valguarnera	8.26	288	Sn	Sn	00 46 57.6	+0.5
	comp=E,0.1nm,0.3s,baz=119,slow=21,SNR=2.0						
BRTR	Keskin Array B	8.65	56	Pn	Pn	00 45 31.8	+2.7
	comp=E,0.2nm,0.3s,baz=228,slow=15,SNR=6.7						
MMAI	Mount Meron Ar	9.49	101	Pn	Pn	00 45 40.7	+0.2
	comp=E,0.6nm,0.3s,baz=295,slow=12,SNR=5.3						
MMAI				Sn	Sn	00 47 26.1	-1.3
	comp=E,0.5nm,0.3s,baz=255,slow=27,SNR=1.5						
EIL	Elat	10.61	119	Pn	Pn	00 45 55.2	-0.6
	comp=E,0.2nm,0.3s,baz=322,slow=6.1,SNR=2.6						
EIL				Sn	Sn	00 47 49.8	-4.9
	comp=E,0.2nm,0.3s,baz=252,slow=20,SNR=1.7						
GERES	GERESS Array B	15.64	333	Pn	P	00 47 06.9	-1.6
	comp=E,0.2nm,0.3s,baz=142,slow=11,SNR=11						
AKASG	Malin Array Be	15.81	12	Pn	Pn	00 47 07.6	+1.2
	comp=E,0.9nm,0.3s,baz=206,slow=10,SNR=4.4						
KVAR	Kislovodsk Arr	16.59	53	Pn	P	00 47 20.5	+1.4
	baz=270,slow=22,SNR=7.6						
KBZ	Khabaz	16.63	54	Pn	P	00 47 21.2	+1.9
	comp=E,0.2nm,0.3s,baz=258,slow=7.5,SNR=6.2						
ESDC	Sonseca Array	22.80	289	P	P	00 48 28.6	+2.0
	comp=E,1.1nm,0.9s,baz=82,slow=9.6,SNR=8.3						
FINES	FINESS Array B	26.20	2	P	P	00 48 57.3	-1.1
	comp=E,1.1nm,0.7s,baz=177,slow=11,SNR=4.6						
NOA	NORSAR Array B	27.09	346	P	P	00 49 06.9	+0.4
	comp=E,0.1nm,0.6s,baz=149,slow=9.5,SNR=1.9						
GEYT	Alibeck	27.20	74	LR	LR	01 01 21.7	
	comp=E,56nm,18.4s,baz=5.0,slow=40						
EKA	Eskdalemuir Ar	27.52	325	P	P	00 49 11.7	+1.3
	comp=E,1.5nm,0.9s,baz=130,slow=8.5,SNR=3.8						
TORD	Torodi Ar. Bea	30.03	228	P	P	00 49 33.2	+0.2
	comp=E,0.5nm,0.6s,baz=35,slow=8.6,SNR=5.7						
ARCES	ARCESS Array B	34.31	1	P	P	00 50 10.8	+0.8
	comp=E,9.0nm,1.1s,baz=179,slow=9.0,SNR=3.8						
MKAR	Makanchi Array	44.30	57	P	P	00 51 34.1	+0.3
	comp=E,0.3nm,0.3s,baz=269,slow=7.9,SNR=7.3						
ZALV	Zalesovo Beam	45.43	46	P	P	00 51 42.3	-0.3
	comp=E,0.4nm,0.4s,baz=274,slow=8.6,SNR=3.9						
SCHQ	Schefferville	62.62	319	P	P	00 53 47.8	-0.4
	comp=E,4.2nm,0.9s,baz=45,slow=14,SNR=1.9						

IDC 14 00:43:53.5±2.2**, 8°.17S**×**128°.81E, h0**^{km}**, mb3.4**/1**, mb1 3.6**/4**, mb1mx3.2**/34**, mbtmp3.4**/4**, ML3.4**/3**, Error ellipse: s-maj=67.9km s-min=26.0km az=77.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	10.34	197	Pn	Pn	00 46 24.2	+1.0
	0.4nm,0.3s,baz=19,slow=9.5,SNR=14						
FITZ				Sn	Sn	00 48 19.3	-0.6
	0.1nm,0.3s,baz=85,slow=23,SNR=1.0						
WRA	Warramunga Arr	12.87	156	Pn	Pn	00 46 58.5	+0.6
	0.2nm,0.3s,baz=329,slow=13,SNR=12						
WRA				Sn	Sn	00 49 21.8	-0.1
	0.1nm,0.3s,baz=336,slow=23,SNR=1.4						
ASAR	Alice Springs	16.16	163	Pn	Pn	00 47 41.7	-0.5
	0.1nm,0.3s,baz=346,slow=11,SNR=5.1						
MKAR	Makanchi Array	68.57	328	P	P	00 54 58.1	-0.1
	0.2nm,0.6s,baz=132,slow=8.0,SNR=1.5						

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*NEIC **14** 00:50:53.6±2.5, 7°.41S±0°.06×103°.41E±0°.05, h10^{km}±1^{km}, mb4.5/16, Error ellipse: s-maj=12.5km s-min=5.8km az=214.0*

*IDC **14** 00:50:53.8±1.1, 7°.09S×103°.59E, h0^{km}, mb4.0/13, mb1 4.1/14, mb1mx3.9/38, mbtmp4.1/14, ML3.9/1, MS3.0/5, Ms1 3.0/5, ms1mx2.7/43, Error ellipse: s-maj=38.3km s-min=13.6km az=43.0*

*DJA **14** 00:50:56.9±0.3, 7°S±3°×10°4E±°, h45^{km}, M4.7/18, mb5.2/3, mB5.5/1, MLv4.5/18, Mw(mB)5.0/1*

ISC 14 00:50:54.1±0.5**, 7°.29S**±0°.06×**103°.54E**±0°.06**, h10**^{km}**, n70,** σ**2**^{s}**.39**/63**, mb4.3**/18**, MS2.9**/3**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	Kota Agung	1.99	28	P	Pn	00 51 24.9	-2.9
KASI				S	Sn	00 51 44.6	-8.3
CGJI	Cibinong	2.24	73	P	Pn	00 51 28.1	-3.1
LWLI	Liwa	2.31	13	P	Pn	00 51 30.7	-1.7
LWLI				S	Sn	00 51 55.4	-5.6
BLSI	Bandar Lampung	2.55	42	P	Pn	00 51 33.0	-2.5
KLI	Kotabumi	2.74	29	P	Pn	00 51 36.2	-1.9
SBJI	Serang	2.82	66	P	Pn	00 51 35.8	-3.4
KLSI		2.84	25	P	Pn	00 51 37.6	-1.9
MDSI	Maura Dua	2.85	13	P	Pn	00 51 38.0	-1.7
SKJI	Sukabumi	3.00	85	P	Pn	00 51 38.7	-3.1
DBJI	Dramaga	3.27	77	P	Pn	00 51 42.7	-2.7
CBJI	Citeko	3.40	75	P	Pn	00 51 46.1	-1.0
LHSI	Lahat	3.44	360	P	Pn	00 51 47.3	-0.4
CNJI	Cibinong	3.56	91	P	Pn	00 51 46.3	-3.1
KSI	Kapahiang	3.73	345	P	Pn	00 51 49.6	-2.3
XMIS	Christmas Isla	3.80	147	Pn	Pn	00 51 50.8	-1.9
XMIS				Sn	Sn	00 52 30.6	-6.8
LEM	Lembang	4.07	84	Pn	Pn	00 51 58.1	+1.5
	8.1nm,0.3s,baz=297,slow=22,SNR=2.6						
LEM				Sn	Sn	00 52 39.3	-5.1
	15nm,0.3s,baz=294,slow=20,SNR=4.6						
LEM				LR	LR	00 53 25.0	
	comp=Z,81nm,20.2s,baz=322,slow=38						
LEM	Lembang	4.07	84	P	Pn	00 51 52.5	-4.1
MASI	Maura Aman, Be	4.32	342	P	Pn	00 51 59.7	-0.2
CMJI	Cimerak	4.89	96	P	Pn	00 52 05.7	-2.0
PPSI	Pulau Pagai	5.71	322	P	Pn	00 52 20.3	+1.3
	1.2nm4µm284nm,0.5s						
UGM	Wanagama	6.95	96	Pn	Pn	00 52 35.6	-0.4
SISI	Saibi	7.40	323	P	Pn	00 52 42.4	+0.2
	0.2nm37nm,0.5s						
BKNI	Bangkinang	7.96	342	Pn	Pn	00 52 50.1	+0.1
COCO	West Island	8.21	233	Pn	Pn	00 52 49.1	-4.2
JAGI	Jajag, Banyuwa	10.58	97	P	Pn	00 53 38.5	+13
JAGI	Jajag, Banyuwa	10.58	97	Pn	Pn	00 53 25.9	+0.1
KAPI	Kappang	16.27	83	LR	LR	01 01 13.0	
	comp=Z,54nm,21.2s,baz=288,slow=38						
MPSI	Mapaga	17.99	66	P	Pn	00 55 05.2	+0.8
EDFI	Ende, Flores	18.03	96	P	P	00 55 12.1	+6.6
KKM	Kota Kinabalu	18.31	44	P	P	00 55 09.3	+0.7
KKM				IAmb	IAmb	00 55 13.7	
	comp=Z,19nm,1.1s						
GIRL	Giralia	18.41	147	P	Pn	00 55 08.4	-1.2
TOLI2	Tolitoli	19.12	65	P	P	00 55 16.5	-0.9
MYLDM	Lahad Datu	19.39	51	P	P	00 55 20.9	+0.4
MYLDM				IAmb	IAmb	00 55 23.5	
	comp=Z,28nm,1.3s						
BATI	Baumata	20.10	100	P	P	00 55 29.8	+1.7
	comp=Z,16nm,0.3s,baz=183,slow=3.9,SNR=3.0						
BATI				S	S	00 59 08.9	-5.2
	comp=Z,22nm,0.4s,baz=299,slow=19,SNR=4.4						
BATI				LR	LR	01 04 33.2	
	comp=Z,80nm,19.1s,baz=329,slow=41						
BATI	Baumata	20.10	100	P	Pn	00 55 41.3	+11
PSA00	Pilbara Seismi	21.20	134	P	P	00 55 44.3	+4.2
FITZ	Fitzroy Crossi	24.05	119	P	P	00 56 12.0	+2.3
	comp=Z,1.4nm,1.0s,baz=299,slow=10,SNR=2.6						
FITZ				S	S	01 00 31.1	+3.9
	comp=Z,1.2nm,1.0s,baz=295,slow=18,SNR=1.2						
FITZ				LR	LR	01 06 17.4	
	comp=Z,33nm,18.9s,baz=334,slow=38						
CMAR	Chiang Mai Arr	25.98	350	P	P	00 56 26.9	-0.3
	comp=Z,0.8nm,0.3s,baz=188,slow=8.7,SNR=4.7						
CMAR				LR	LR	01 08 40.7	
	comp=Z,30nm,19.0s,baz=155,slow=41						
KNRA	Kununurra	26.06	111	P	P	00 56 30.7	+2.8
H01W3	Cape Leeuwin H	29.14	162	T	T	01 27 37.4	
	baz=341,slow=76,SNR=7.2						
H01W2	Cape Leeuwin H	29.16	162	T	T	01 27 38.6	
	baz=341,slow=76,SNR=7.8						
H01W1	Cape Leeuwin H	29.16	162	T	T	01 27 35.0	
	baz=341,slow=76,SNR=7.1						
H08S2	Diego Garcia H	30.79	267	T	T	01 29 47.7	
	baz=90,slow=74,SNR=8.8						
H08S3	Diego Garcia H	30.80	267	T	T	01 30 13.3	
	baz=90,slow=74,SNR=16						
H08S1	Diego Carcia H	30.80	267	T	T	01 29 58.9	
	baz=90,slow=74,SNR=12						
ASAR	Alice Springs	33.37	123	P	P	00 57 35.1	+2.2
	comp=Z,0.5nm,1.0s,baz=304,slow=8.5,SNR=3.3						
STKA	Stephens Creek	43.05	130	P	P	00 58 55.8	+1.5
	comp=Z,0.8nm,0.5s,baz=326,slow=8.4,SNR=2.8						
KSRS	Korea Array	50.00	25	P	P	00 59 47.6	-1.0
	comp=Z,0.6nm,0.4s,baz=235,slow=6.2,SNR=2.0						
SONM	Songino Array	54.94	2	P	P	01 00 25.7	+0.4
	comp=Z,1.4nm,0.7s,baz=176,slow=9.2,SNR=9.6						
SONM	Songino Array	54.94	2	P	P	01 00 26.3	+1.0
GAR	Garm	55.41	329	P	P	01 00 28.9	0.0
GAR				IAmb	IAmb	01 00 32.9	
	comp=Z,2.8nm,0.7s						
BOOM	Boomskoye usch	55.57	335	P	P	01 00 28.5	-1.5
MK31	Makanchi Array	57.07	343	P	P	01 00 40.1	-0.3
MKAR	Makanchi Array	57.07	343	P	P	01 00 40.6	+0.2
	comp=Z,0.9nm,0.5s,baz=147,slow=8.7,SNR=14						
MKAR	Makanchi Array	57.07	343	P	P	01 00 40.0	-0.4
USA0B	Ussuriysk Arra	57.33	24	P	P	01 00 41.7	-0.5
USA0B				IAmb	IAmb	01 00 42.6	
	comp=Z,6.6nm,0.7s						
USRK	Ussuriysk Ar.	57.33	24	P	P	01 00 41.7	-0.5
	comp=Z,3.5nm,0.7s,baz=216,slow=4.4,SNR=3.5						
USRK	Ussuriysk Ar.	57.33	24	P	P	01 00 41.9	-0.4
KKAR	Karatay Array	58.44	332	P	P	01 00 49.7	-0.5
KURK	Kurchatov	61.66	342	P	P	01 01 12.2	+0.1
KURK				IAmb	IAmb	01 01 13.8	
	comp=Z,7.4nm,1.4s						
ZAA0	Zalesovo Array	63.02	348	P	P	01 01 20.9	-0.1
ZAA0				IAmb	IAmb	01 01 22.3	
	comp=Z,2.5nm,0.8s						
ZALV	Zalesovo Beam	63.02	348	P	P	01 01 21.0	-0.1
	comp=Z,1.1nm,0.4s,baz=161,slow=4.5,SNR=13						
ZALV	Zalesovo Beam	63.02	348	P	P	01 01 20.9	-0.2
RAYN	Ar Rayn	64.41	300	P	P	01 01 27.0	-4.0
RAYN				IAmb	IAmb	01 01 31.7	
	comp=Z,6.9nm,1.5s						
RAYN				pwP	sP	01 01 34.0	+0.2
ABKAR	Akbulak array	67.94	331	P	P	01 01 53.6	+0.5
ABKAR				IAmb	IAmb	01 01 54.8	
	comp=Z,3.6nm,0.6s						
ABKAR	Akbulak array	67.94	331	P	P	01 01 53.7	+0.6
KBZ	Khabaz	74.59	319	P	P	01 02 35.1	+1.7
	comp=Z,2.2nm,0.9s,baz=204,slow=2.5,SNR=4.8						
BRTR	Keskin Array B	79.47	313	P	P	01 03 02.3	+1.1
	comp=Z,1.0nm,0.7s,baz=141,slow=6.9,SNR=7.8						
FINES	FINESS Array B	90.41	332	P	P	01 03 55.3	-0.2
	comp=Z,2.2nm,0.9s,baz=110,slow=8.1,SNR=1.7						
TXAR	Lajitas Array	146.28	46	PKPbc	PKPdf	01 10 35.2	+0.4
	comp=Z,0.2nm,0.6s,baz=274,slow=3.4,SNR=3.4						

IDC 14 01:10:05.6±2.3**, 3°.99N**×**127°.25E, h0**^{km}**, mb3.5**/2**, mb1 3.7**/2**, mb1mx2.9**/37**, mbtmp3.5**/2**, Error ellipse: s-maj=171.1km s-min=28.2km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.79	164	P	P	01 15 28.5	-0.9
	2.6nm,0.8s,baz=344,slow=11,SNR=14						
ASAR	Alice Springs	28.25	167	P	P	01 16 01.9	+1.3
	0.1nm,0.3s,baz=341,slow=8.1,SNR=1.3						
MKAR	Makanchi Array	57.64	325	P	P	01 19 57.6	-0.1
	0.7nm,0.9s,baz=131,slow=5.9,SNR=4.1						

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*IDC **14** 01:11:32.6±0.9, 47°.12N×153°.87E, h0^{km}, mb3.8/16, mb1 3.9/17, mb1mx3.8/39, mbtmp3.8/17, ML2.6/1, MS3.3/5, Ms1 3.3/5, ms1mx3.0/51, Error ellipse: s-maj=24.2km s-min=17.8km az=128.0*

*NEIC **14** 01:11:41.8±1.5, 47°.4N±0°.2×153°.8E±0°.2, h56^{km}±11^{km}, mb4.3/11, Error ellipse: s-maj=26.8km s-min=12.4km az=141.0*

ISC 14 01:11:37.3±0.9**, 47°.1N**±0°.1×**153°.9E**±0°.1**, h27**^{km}**, n52,** σ**1**^{s}**.20**/41**, mb4.1**/23**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PEA0B	Petropavlovsk-	6.44	21	Pn	Pn	01 13 11.5	+1.2
PETK	Petropavlovsk-	6.44	21	Pn	Pn	01 13 10.4	+0.1
	0.6nm,0.3s,baz=184,slow=15,SNR=7.7						
PETK				Sn	Sn	01 14 23.1	+0.3
	0.1nm,0.3s,baz=197,slow=4.5,SNR=1.4						
PETK				LR	LR	01 15 53.1	
	comp=Z,181nm,20.1s,baz=119,slow=40						
PETK	Petropavlovsk-	6.44	21		Pn	01 13 09.4	-0.9
JKA	Kamikawa-asahi	8.50	253	Pn	Pn	01 13 44.9	+6.4
ASAJ	Asahikawa	8.50	253	Pn	Pn	01 13 42.2	+3.7
	0.6nm,0.3s,baz=70,slow=15,SNR=2.4						
ASAJ				LR	LR	01 16 28.6	
	comp=Z,88nm,19.0s,baz=73,slow=35						
ERM	Erimo	9.24	240	Pn	Pn	01 13 50.5	+1.9
KLR	Kul'dur	14.93	286	LR	LR	01 20 10.7	
	comp=Z,93nm,19.5s,baz=76,slow=35						
KSRS	Korea Array	21.45	253	P	P	01 16 20.2	-3.0
	0.5nm,0.3s,baz=57,slow=7.5,SNR=2.3						
TIXI	Tiksi	27.25	343	LR	LR	01 27 42.5	
	comp=Z,118nm,21.2s,baz=31,slow=36						
H11N2	WAKE ISLAND Hy	29.32	154	T	T	01 48 59.7	
	baz=341						
H11N1	WAKE ISLAND Hy	29.34	154	T	T	01 48 50.2	
	baz=341,slow=74						
H11N3	WAKE ISLAND Hy	29.34	154	T	T	01 48 58.6	
	baz=341,slow=74						
H11S1	WAKE ISLAND Hy	30.43	156	T	T	01 50 02.0	
	baz=343,slow=76,SNR=60						
H11S3	WAKE ISLAND Hy	30.43	156	T	T	01 50 01.6	
	baz=343,slow=76,SNR=98						
H11S2	WAKE ISLAND Hy	30.44	156	T	T	01 50 09.6	
	baz=343,slow=76,SNR=61						
SML	Sawmill	35.30	44	P	P	01 18 29.9	+0.3
ILAR	Eielson Array	35.89	39	P	P	01 18 33.2	-1.4
	0.5nm,0.9s,baz=262,slow=6.2,SNR=2.3						
BMAR	Burnt Mountain	36.88	34	P	P	01 18 44.5	+1.4
BCAR	Beaver Creek A	38.23	42	P	P	01 18 54.8	+0.2
M27K	Edge Creek, AK	38.28	43	P	P	01 18 56.3	+1.2
M27K				IAmb	IAmb	01 19 02.4	
	comp=Z,6.5nm,1.4s						
BARN	Barnard Glacie	38.56	45	P	P	01 18 58.2	+0.7
BARN				IAmb	IAmb	01 19 00.9	
	comp=Z,9.5nm,1.3s						
CTGM	Chitina Glacie	38.74	45	P	P	01 18 59.8	+0.8
CTGM				IAmb	IAmb	01 19 18.7	
	comp=Z,6.4nm,1.2s						
INK	Inuvik	41.02	33	P	P	01 19 16.8	-0.8
	comp=Z,0.4nm,0.7s,baz=270,slow=5.1,SNR=1.4						
INK	Inuvik	41.02	33	P	P	01 19 19.4	+1.9
ZALV	Zalesovo Beam	42.83	306	P	P	01 19 31.5	-1.1
	comp=Z,0.2nm,0.3s,baz=63,slow=10,SNR=4.6						
ZALV				LR	LR	01 38 22.1	
	comp=Z,93nm,19.5s,baz=46,slow=38						
ZALV	Zalesovo Beam	42.83	306	P	P	01 19 31.3	-1.3
MKAR	Makanchi Array	47.26	297	P	P	01 20 06.0	-1.9
	comp=Z,0.5nm,0.7s,baz=70,slow=8.7,SNR=3.9						
MKAR	Makanchi Array	47.26	297	P	P	01 20 07.0	-0.9
KURK	Kurchatov	47.61	304	P	P	01 20 09.4	-1.1
KURK				IAmb	IAmb	01 20 11.1	
	comp=Z,2.6nm,1.0s						
KURBB	Kurchatov Arra	47.70	304	P	P	01 20 10.4	-0.8
	comp=Z,1.7nm,0.7s,baz=67,slow=8.2,SNR=12						
RES	Resolute Bay	50.28	19	P	P	01 20 31.1	+0.4
RES				IAmb	IAmb	01 20 40.2	
	comp=Z,2.5nm,1.2s						
BVAR	Borovoye Array	51.04	309	P	P	01 20 36.7	0.0
	comp=Z,0.3nm,0.4s,baz=159,slow=4.6,SNR=4.4						
CMAR	Chiang Mai Arr	53.01	257	P	P	01 20 52.2	+0.4
	comp=Z,0.8nm,0.3s,baz=30,slow=7.3,SNR=1.5						
ARCES	ARCESS Array B	57.66	341	P	P	01 21 24.0	-0.6
	comp=Z,5.2nm,0.9s,baz=34,slow=8.7,SNR=2.0						
ABKAR	Akbulak array	58.60	310	P	P	01 21 30.8	-0.7
FIA1	FINESS Array S	63.92	335	P	P	01 22 06.6	-0.6
FINES	FINESS Array B	63.92	335	P	P	01 22 06.7	-0.5
	comp=Z,0.7nm,0.5s,baz=23,slow=6.9,SNR=11						
FINES	FINESS Array B	63.92	335	P	P	01 22 06.9	-0.4
NC204	NORSAR Array S	67.92	342	P	P	01 22 33.4	+0.3
NC204				IAmb	IAmb	01 22 44.9	
	comp=Z,3.3nm,0.8s						
NB2	NORSAR Subarra	68.03	341	P	P	01 22 34.0	+0.2
	comp=Z,0.7nm,0.6s,baz=25,slow=6.5						
NOA	NORSAR Array B	68.03	341	P	P	01 22 34.0	+0.2
	comp=Z,1.4nm,0.8s,baz=26,slow=6.4,SNR=4.6						
WRA	Warramunga Arr	69.07	200	P	P	01 22 38.9	-1.7
	comp=Z,0.8nm,1.0s,baz=15,slow=6.6,SNR=3.1						
AKASG	Malin Array Be	71.53	327	P	P	01 22 54.8	-0.6
	comp=Z,0.7nm,0.5s,baz=34,slow=6.3,SNR=5.0						
ASAR	Alice Springs	72.76	199	P	P	01 23 03.2	+0.3
	comp=Z,1.1nm,1.0s,baz=12,slow=6.3,SNR=4.6						
BUR08	Bucovina Ar. S	75.55	327	P	P	01 23 19.3	+0.1
BUR08				IAmb	IAmb	01 23 20.2	
	comp=Z,6.5nm,1.2s						
BURAR	Bucovina Array	75.56	327	P	P	01 23 19.8	+0.5
CLL	Collm	76.33	336	*e*P	P	01 23 24.0	+0.5
TXAR	Lajitas Array	76.81	61	P	P	01 23 27.0	+0.3
	comp=Z,0.3nm,0.6s,baz=294,slow=3.1,SNR=4.2						
BRTR	Keskin Array B	78.48	317	P	P	01 23 35.8	-0.2
	comp=Z,0.8nm,0.9s,baz=59,slow=3.3,SNR=5.1						
H03N2	Juan Fernandez	138.20	90	T	T	04 04 33.7	
	baz=309,slow=77,SNR=13						
H03N1	Juan Fernandez	138.21	90	T	T	04 04 39.8	
	baz=309,slow=77,SNR=12						
H03N3	Juan Fernandez	138.21	90	T	T	04 04 30.3	
	baz=309,slow=77,SNR=13						

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*IDC **14** 01:26:16.6±1.6, 36°.63N×140°.81E, h0^{km}, mb3.7/4, mb1 3.8/5, mb1mx3.1/45, mbtmp3.7/5, ML2.6/1, Error ellipse: s-maj=35.7km s-min=22.7km az=64.0*

*NIED **14** 01:26:20.6, 36°.68N×140°.65E, h11^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.89; $M_{\theta\theta}$0.44; $M_{\phi\phi}$1.45; $M_{r\theta}$0.74; $M_{\theta\phi}$-0.70; $M_{\phi r}$-0.24; Fault plane solution: $M_0$2.00000×10^{14} NP1: ϕ_s319.00000°, δ55.00000°, λ-106.00000°. NP2: ϕ_s166.00000°, δ38.00000°, λ-68.00000°.*

*JMA **14** 01:26:20.6, 36°.68N×140°.65E, h11^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s166.00000°, δ31.00000°, λ-67.00000°. NP2: ϕ_s319.00000°, δ62.00000°, λ-103.00000°. Principal axes: T Plg16.0000°, Azm59.0000°; N Plg12.0000°, Azm326.0000°; P Plg70.0000°, Azm201.0000°;*

JMA Felt II J1.

ISC 14 01:26:19.6±1.0**, 36°.68N**±0°.04×**140°.66E**±0°.06**, h17**^{km}±5^{km}**, n24,** σ**0**^{s}**.59**/21**, mb3.7**/4**, 8C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	0.10	226	⇑P	Pb	01 26 23.1	+0.1
JHO				S	Sg	01 26 24.9	-0.4
JHYU	Hitachinakayam	0.34	189	⇑P	Pb	01 26 27.3	+0.1
JHYU				S	Sb	01 26 32.3	0.0
JFFD	Fukushimafurud	0.42	350	⇑P	Pb	01 26 28.7	+0.1
JFFD				S	Sb	01 26 34.5	-0.2
ONAJ	Iwakimizuishiy	0.44	15	⇑P	Pb	01 26 29.0	0.0
ONAJ				S	Sb	01 26 35.5	+0.2
JYT	Yasato	0.58	220	⇑P	Pb	01 26 31.6	+0.3
JSB	Shiboa	0.66	296	⇑P	Pn	01 26 33.6	-0.6
JFK	Kawauchi	0.71	14	⇑P	Pb	01 26 33.6	0.0
JAG	Ashikaga	1.00	256	⇑P	Pb	01 26 38.4	-0.1
JFY	Yanaizu	1.05	314	P	Pg	01 26 40.3	+0.3
MJAR	Matsushiro Arr	1.97	267	Pn	Pn	01 26 53.2	+1.0
	2.2nm,0.3s,baz=85,slow=9.4,SNR=41						
MJAR				Sn	Sb	01 27 19.2	-0.2
	7.1nm,0.3s,baz=85,slow=29,SNR=16						
MAT	Matsushiro	1.97	267	P	Pb	01 26 54.6	-0.5
MAT				S	Sb	01 27 20.0	+0.6
H11N2	WAKE ISLAND Hy	28.50	119	T	T	02 01 59.2	
	baz=312,slow=75,SNR=93						
H11N1	WAKE ISLAND Hy	28.50	119	T	T	02 01 59.8	
	baz=312,slow=75,SNR=96						
H11N3	WAKE ISLAND Hy	28.52	119	T	T	02 02 00.5	
	baz=312,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	29.19	121	T	T	02 02 49.1	
	baz=314,slow=76,SNR=163						
H11S3	WAKE ISLAND Hy	29.19	121	T	T	02 02 49.7	
	baz=314,slow=76,SNR=119						
H11S2	WAKE ISLAND Hy	29.20	121	T	T	02 02 51.3	
	baz=314,slow=76,SNR=156						
ZALV	Zalesovo Beam	41.71	313	P	P	01 34 07.1	-0.2
	1.3nm,0.5s,baz=99,slow=6.5,SNR=1.6						
WRA	Warramunga Arr	56.63	187	P	P	01 36 01.6	-0.2
	0.6nm,0.6s,baz=3.6,slow=7.5,SNR=12						
ASAR	Alice Springs	60.35	187	P	P	01 36 26.2	-1.6
	0.4nm,0.8s,baz=7.8,slow=7.5,SNR=3.2						
AKASG	Malin Array Be	74.20	322	P	P	01 37 56.3	+1.0
	0.3nm,0.5s,baz=44,slow=5.8,SNR=4.0						
H03N2	Juan Fernandez	147.59	96	T	T	04 30 58.8	
	baz=291,slow=76,SNR=7.3						
H03N3	Juan Fernandez	147.60	96	T	T	04 30 59.7	
	baz=291,slow=76,SNR=7.0						
H03N1	Juan Fernandez	147.61	96	T	T	04 30 57.1	
	baz=291,slow=76,SNR=7.2						

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*NEIC **14** 01:34:00.6±2.6, 4°.06S±0°.05×129°.54E±0°.06, h10^{km}±1^{km}, mb5.2/98, Error ellipse: s-maj=10.6km s-min=9.2km az=95.0*

*GCMT **14** 01:34:00.6±0.2, 4°.08S±0°.01×129°.52E±0°.02, h12^{km}, MW5.0/123, Moment Tensor Solution. s58,c79; s123,c189; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.25±.10; $M_{\theta\theta}$-4.28±.08; $M_{\phi\phi}$0.02±.10; $M_{r\theta}$-0.89±.26; $M_{\theta\phi}$0.71±.09; $M_{\phi r}$-0.35±.34; Best double couple: $M_0$4.42800×10^{16} NP1: ϕ_s106.00000°, δ40.00000°, λ100.00000°. NP2: ϕ_s273.00000°, δ51.00000°, λ82.00000°. Principal axes: T 4.3830, Plg82.0000°, Azm138.0000°; N 0.0880, Plg6.0000°, Azm278.0000°; P -4.4740, Plg5.0000°, Azm9.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **14** 01:34:01.4±0.9, 4°.13S×129°.40E, h33^{km}, mb5.3/48, MS4.3/4 Error ellipse: s-maj=12.6km s-min=5.6km az=117.0*

*IDC **14** 01:34:03.0±2.5, 4°.15S×129°.49E, h33^{km}±18^{km}, mb4.6/27, mb1 4.7/32, mb1mx4.5/39, mbtmp4.8/32, ML4.1/5, MS4.3/8, Ms1 4.3/8, ms1mx3.8/40, Error ellipse: s-maj=16.2km s-min=10.0km az=77.0*

*DJA **14** 01:34:05.0±0.2, 4°S±2°×13°0E±°, h43^{km}±2^{km}, M5.0/67, mB5.5/53, mb5.1/67, MLv5.2/14, Mw(mB)5.0/53, MwMwp5.0/13, Mwp5.3/13*

*KLM **14** 01:34:07, 4°.05S×129°.52E, h49^{km}, mb5.2*

ISC 14 01:34:03.6±0.2**, 4°.14S**±0°.03×**129°.54E**±0°.04**, h36**^{km}**, n477,** σ**1**^{s}**.73**/481**, mb5.1**/121**, MS4.5**/13**, 90C-24D, Fault plane solution: NP1:**ϕ_s81.83987°**,**δ36.12787°**,**λ75.05167°. **NP2:**ϕ_s280.13095°**,**δ55.27509°**,**λ100.66343°. **Principal axes:** T Plg76.8875°**,** Azm225.3529°**;** N Plg8.7477°**,** Azm94.0090°**;** P Plg9.6912°**,** Azm2.5032°**; Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.53	136	P	Pn	01 34 13.1	-1.6
MSAI	Masohi	1.00	323	P	Pn	01 34 18.6	-2.5
AAI	Ambon	1.41	289	P	Pn	01 34 24.5	-2.3
FAKI	Fak Fak	2.97	66	P	Pn	01 34 48.8	+0.6
FAKI	Fak Fak	2.97	66		Pn	01 34 48.4	+0.1
FAKI	Fak Fak	2.97	66	P	Pn	01 34 49.3	+1.1
SIJI	Sorong	3.68	28	Pn	Pn	01 34 58.0	-0.1
	28nm,0.3s,baz=286,slow=6.4,SNR=27						
SIJI				Sn	Sn	01 35 40.5	+0.2
	35nm,0.3s,baz=286,slow=6.3,SNR=7.4						
SIJI				LR	LR	01 36 48.5	
	comp=Z,11µm,19.9s,baz=220,slow=45						
SWI	Sorong	3.69	28	P	Pn	01 34 57.6	-0.5
LBMI	Labuha	4.03	330	P	Pn	01 35 03.1	+0.3
SANI	Sanana	4.11	300	P	Pn	01 35 02.5	-1.4
SANI	Sanana	4.11	300	P	Pn	01 35 03.3	-0.6
SAUI	Saumlaki	4.20	155	P	Pn	01 35 07.9	+2.8
SAUI	Saumlaki	4.20	155	Pn	Pn	01 35 07.3	+2.1
SAUI	Saumlaki	4.20	155	P	Pn	01 35 09.7	+4.6
TNTI	Ternate	5.34	336	P	Pn	01 35 21.7	+0.8
	1.0nm4µm2µm78nm,0.7s						
TNTI	Ternate	5.34	336	Pn	Pn	01 35 19.9	-0.9
TNTI	Ternate	5.34	336	P	Pn	01 35 22.3	+1.4
BAKI	Biak	7.19	66	P	Pn	01 35 46.4	+0.1
	5µm272nm,1.0s						
KMSI	Cibinong	7.26	310	P	Pn	01 35 46.2	-1.1
	2.7nm5µm250nm,0.7s						
SOEI	Soe	7.64	223	P	Pn	01 35 56.2	+3.6
	1.5nm3µm141nm,0.9s						
SOEI	Soe	7.64	223	Pn	Pn	01 35 54.8	+2.2
SOEI	Soe	7.64	223	P	Pn	01 35 55.4	+2.8
DRS	Darwin Rock St	8.35	171	P	Pn	01 36 06.6	+4.5
BATI	Baumata	8.38	224	Pn	Pn	01 36 03.9	+1.2
	11nm,0.3s,baz=58,slow=2.9,SNR=11						
BATI	Baumata	8.38	224	P	Pn	01 36 06.0	+3.4
	2µm2µm88nm,1.0s						
APSI	Ampana	8.51	292	P	Pn	01 36 07.1	+2.8
	3µm214nm,1.0s						
MMRI	Maumere	8.51	238	P	Pn	01 36 14.4	+10
MMRI	Maumere	8.51	238	Pn	Pn	01 36 07.4	+3.0
MMRI	Maumere	8.51	238	P	Pn	01 36 06.0	+1.5
MTN	Manton Dam	8.79	170	P	Pn	01 36 09.2	+1.0
	baz=8.8,SNR=9.6						

MTN	Manton Dam	8.79	170	Pn	Pn	01 36 09.6	+1.4
MTN	Manton Dam	8.79	170	P	Pn	01 36 10.5	+2.3
MRSI	Marisa	8.87	301	P	Pn	01 36 12.1	+2.8
	92nm,1.1s						
KDU	Kakadu	8.97	161	P	Pn	01 36 10.1	-0.6
	baz=9.0,SNR=86						
KDU	Kakadu	8.97	161	P	Pn	01 36 10.5	-0.2
EDFI	Ende, Flores	9.04	239	P	Pn	01 36 14.8	+3.1
	2µm1µm47nm,1.0s						
BSSI	Bau Bau, Buton	9.22	257	P	Pn	01 36 21.0	+6.8
	1µm90nm,1.3s						
BNSI	Bone	9.41	268	P	Pn	01 36 21.3	+4.6
	2µm80nm,1.0s						
BKSI	Bulukumba	9.45	263	P	Pn	01 36 21.9	+4.6
	2µm94nm,1.2s						
SPSI	Sidrap Palu	9.74	271	P	Pn	01 36 24.6	+3.3
	3µm63nm,0.9s						
TTSI	Tana Toraja	9.76	276	P	Pn	01 36 25.4	+3.9
	3µm52nm,0.9s						
KAPI	Kappang	9.79	265	Pn	Pn	01 36 25.0	+3.1
	3.3nm,0.3s,baz=120,slow=7.4,SNR=22						
KAPI				LR	LR	01 39 56.0	
	comp=Z,640nm,20.4s,baz=106,slow=36						
KAPI	Kappang	9.79	265	*ce*P	Pn	01 36 25.2	+3.2
KAPI	Kappang	9.79	265	P	Pn	01 36 26.3	+4.3
KAPI	Kappang	9.79	265	Pn	Pn	01 36 23.6	+1.6
KAPI	Kappang	9.79	265	P	Pn	01 36 25.0	+3.1
TOLI2	Tolitoli	10.19	301	Pn	Pn	01 36 27.4	0.0
TOLI2	Tolitoli	10.19	301	P	Pn	01 36 28.8	+1.4
MPSI	Mapaga	10.61	295	P	Pn	01 36 35.0	+1.8
	894nm35nm,0.8s						
GENI	Genyem	10.72	82	P	Pn	01 36 51.5	+17
GENI	Genyem	10.72	82	P	Pn	01 36 34.3	-0.5
BASI	Baing, Sumba	10.74	235	P	Pn	01 36 37.8	+2.8
	2µm3µm179nm,1.4s						
WBSI	Waikabubak, Su	11.45	241	P	Pn	01 36 51.9	+7.1
	2µm120nm,1.1s						
KNRA	Kununurra	11.49	184	P	Pn	01 36 44.9	-0.3
	baz=12,SNR=22						
KNRA	Kununurra	11.49	184	Pn	Pn	01 36 44.7	-0.5
KNRA	Kununurra	11.49	184	P	Pn	01 36 46.0	+0.8
DAV	Davao City (W)	11.82	340	LR	LR	01 42 20.4	
	comp=Z,985nm,21.2s,baz=144,slow=42						
PLAI	Plampang	12.57	248	P	Pn	01 37 04.6	+4.5
	3µm3µm156nm,1.5s						
PLAI	Plampang	12.57	248	P	Pn	01 37 01.0	+0.9
BKB	Balikpapan	12.94	282	Pn	Pn	01 37 08.1	+3.0
KBKI	Kotabaru	13.37	273	P	P	01 37 22.3	+2.4
FITZ	Fitzroy Crossi	14.38	195	Pn	Pn	01 37 22.9	-1.9
	0.5nm,0.3s,baz=36,slow=13,SNR=14						
FITZ				LR	LR	01 44 27.5	
	comp=Z,2µm,18.4s,baz=82,slow=44						
FITZ	Fitzroy Crossi	14.38	195	P	Pn	01 37 23.3	-1.5
	baz=14						
MYLDM	Lahad Datu	14.40	310		P	01 37 28.9	-2.5
BBKI	Banjar Baru	14.68	272	P	P	01 37 32.3	-2.2
	3µm61nm,1.1s						
SRBI	Singaraja	14.77	254	P	P	01 37 33.4	-2.1
	4µm5µm234nm,1.7s						
DNP	Denpasar	14.93	252	P	P	01 37 40.1	+2.8
MTKI	Muara Teweh, K	14.96	282	P	P	01 37 39.3	+1.6
IGBI	Denpasar	15.03	251	P	P	01 37 38.3	-0.1
	129nm,1.0s						
ABJI	Asem Bagus	15.64	256	P	P	01 37 44.5	-0.7
	5µm6µm253nm,2.0s						
SPMM	Sapulut	15.74	304	P	P	01 37 45.0	-1.4
JAGI	Jajag, Banyuwa	15.88	254	P	P	01 37 46.8	-1.1
	4µm4µm188nm,1.4s						
JAGI	Jajag, Banyuwa	15.88	254		Pn	01 37 46.1	+1.5
JAGI				IAmb	IAmb	01 37 49.0	
	comp=Z,259nm,1.3s						
JAGI	Jajag, Banyuwa	15.88	254	P	P	01 37 47.4	-0.5
WB0	Warramunga Arr	16.24	163	Pn	Pn	01 37 44.2	-4.9
BLJI	Banyuglugur	16.25	257	P	P	01 37 53.2	+1.2
	comp=Z,3µmcomp=Z,127nm,1.8s						
WRAB	Tennant Creek	16.38	164	*d i*P	Pn	01 37 47.1	-3.8
WRAB	Tennant Creek	16.38	164	Pn	Pn	01 37 47.2	-3.7
WRA	Warramunga Arr	16.39	164	Pn	Pn	01 37 47.1	-3.9
	comp=Z,1.1nm,0.3s,baz=345,slow=13,SNR=69						
WRA				Sn	Sn	01 40 44.0	-7.8
	comp=Z,0.1nm,0.3s,baz=347,slow=22,SNR=3.4						
WRA				LR	LR	01 44 47.1	
	comp=Z,2µm,20.3s,baz=340,slow=39						
WRA	Warramunga Arr	16.39	164	*i* P	Pn	01 37 46.7	-4.3
WRA				pmax	pmax		
	comp=Z,16µm,0.8s						
WRA	Warramunga Arr	16.39	164	Pn	Pn	01 37 46.0	-5.0
WB2	Warramunga Arr	16.39	164	P	Pn	01 37 45.5	-5.6
	baz=16						
WB2	Warramunga Arr	16.39	164	Pn	Pn	01 37 45.7	-5.4
WR0	Warramunga Arr	16.46	163	Pn	Pn	01 37 48.9	-3.0
GMJI	Gumukmas	16.51	255	P	P	01 37 55.9	+1.0
	comp=Z,4µmcomp=Z,2µmcomp=Z,129nm,1.4s						
COEN	Coen	16.62	127		Pn	01 37 52.9	-1.0
COEN	Coen	16.62	127	P	P	01 37 55.4	-0.7
KKM	Kota Kinabalu	16.71	307		Pn	01 37 55.2	-0.1
KKM	Kota Kinabalu	16.71	307	P	P	01 37 57.0	-0.2
MANU	Manus Island	17.93	84	P	P	01 38 10.8	+0.2
PMG	Port Moresby	18.26	108	P	Pn	01 38 14.3	0.0
	comp=Z,3.1nm,0.3s,baz=306,slow=9.2,SNR=17						
PMG				LR	LR	01 47 08.6	
	comp=Z,638nm,20.9s,baz=291,slow=43						
PMG	Port Moresby	18.26	108	P	Pn	01 38 14.6	+0.3
PMG				pmax	pmax		
	comp=Z,161nm,1.4s						
PMG	Port Moresby	18.26	108	P	Pn	01 38 14.6	+0.3
PMG	Port Moresby	18.26	108	P	Pn	01 38 15.4	+1.1
PMG	Port Moresby	18.26	108	P	Pn	01 38 15.9	+1.6
SBUM	Sibu	18.50	290	P	Pn	01 38 19.0	+1.7
SBUM	Sibu	18.50	290	P	Pn	01 38 18.1	+0.8
STKI	Sintang	18.52	283	P	Pn	01 38 19.3	+1.8
PCJI	Pacitan	18.69	257	P	Pn	01 38 19.3	-0.2
	comp=Z,12µmcomp=Z,2µmcomp=Z,144nm,1.6s						
WOJI	Wonogiri, Jawa	18.87	258	P	Pn	01 38 23.3	+1.6
	comp=Z,2µmcomp=Z,156nm,1.1s						
QIS	Mount Isa	19.03	150	P	P	01 38 22.9	+0.2
	baz=19,SNR=23						
QIS	Mount Isa	19.03	150	P	Pn	01 38 23.4	-0.3
UGM	Wanagama	19.27	258	P	Pn	01 38 29.7	+3.1
	comp=Z,156nm,1.9s						
UGM	Wanagama	19.27	258	P	Pn	01 38 27.1	+0.5
UGM				IAmb	IAmb	01 38 44.0	
	comp=Z,212nm,1.2s						
MBWA	Marble Bar	19.41	209	P	Pn	01 38 28.0	-0.2
MBWA	Marble Bar	19.41	209	P	Pn	01 38 27.9	-0.3
PSA00	Pilbara Seismi	19.71	208	P	P	01 38 30.8	+0.7
PSA00	Pilbara Seismi	19.71	208	P	Pn	01 38 31.1	-0.7
PSA00				IAmb	IAmb	01 38 32.5	
	comp=Z,219nm,1.1s						
PSA00	Pilbara Seismi	19.71	208	P	Pn	01 38 31.7	-0.1
AS31	Alice Springs	19.86	168	P	P	01 38 32.0	+0.3
ASAR	Alice Springs	19.86	168	P	P	01 38 31.9	+0.1
	comp=Z,2.6nm,0.3s,baz=348,slow=10,SNR=140						
ASAR				S	S	01 42 08.0	-5.7
	baz=354,slow=22,SNR=1.6						
ASAR				PcP	PcP	01 42 48.0	-0.5
	comp=Z,0.2nm,0.3s,baz=4.6,slow=1.4,SNR=2.5						
ASAR				ScP	ScP	01 46 21.0	-1.2
	comp=Z,0.1nm,0.3s,baz=351,slow=2.0,SNR=2.8						
ASAR				LR	LR	01 46 51.3	
	comp=Z,2µm,19.0s,baz=350,slow=39						
ASAR	Alice Springs	19.86	168	P	P	01 38 32.4	+0.6
ASAR	Alice Springs	19.86	168	P	P	01 38 32.4	+0.6
KSM	Kuching	20.01	286	IAmb	IAmb	01 38 35.5	
	comp=Z,180nm,0.9s						
KSM	Kuching	20.01	286	P	P	01 38 34.3	+0.9
LUBP	Lubang	20.01	333	⇑*e*P	P	01 38 33.1	-0.3
MTSU	Mount Surprise	20.07	135	P	P	01 38 34.8	+0.8
	baz=20,SNR=21						
MTSU	Mount Surprise	20.07	135	P	Pn	01 38 35.3	-0.7
WRKA	Warakurna	20.81	183	P	P	01 38 42.9	+0.9
	baz=21,SNR=88						
WRKA	Warakurna	20.81	183	P	Pn	01 38 43.8	-0.8
LEM	Lembang	21.98	262	P	P	01 38 51.1	-3.7
	comp=Z,32nm,0.4s,baz=174,slow=22,SNR=5.6						
LEM				LR	LR	01 48 13.5	
	comp=Z,351nm,20.9s,baz=68,slow=39						
CTA	Charters Tower	22.73	136	P	P	01 39 03.2	+0.5
	comp=Z,16nm,0.7s,baz=308,slow=13,SNR=12						
CTA	Charters Tower	22.73	136	P	P	01 39 03.5	+0.9
CTAO	Charters Tower	22.73	136	P	P	01 39 02.8	+0.1
CTAO				pmax	pmax		
	comp=Z,89nm,1.1s						
CTAO	Charters Tower	22.73	136	P	P	01 39 02.8	+0.1
CTAO				IAmb	IAmb	01 39 25.6	
	comp=Z,89nm,1.1s						
CTAO	Charters Tower	22.73	136	P	P	01 39 03.5	+0.9
GIRL	Giralia	23.61	217	P	P	01 39 12.6	+1.1
	baz=24,SNR=6.5						
GIRL	Giralia	23.61	217	P	P	01 39 12.3	+0.8
GIRL	Giralia	23.61	217	P	P	01 39 13.8	+2.3
OOD	Oodnadatta	24.24	167	P	P	01 39 18.3	+1.1
MEEK	Meekatharra	24.69	204	P	P	01 39 21.3	-0.1
	baz=25,SNR=8.3						
MEEK	Meekatharra	24.69	204	P	P	01 39 23.6	+2.2
PMBI	Palembang	24.75	272	P	P	01 39 28.2	+6.2
LWLI	Liwa	25.41	267	P	P	01 39 35.9	+7.7
INKA	Innaminka	25.79	157	P	P	01 39 35.7	+4.4
MYKOM	Kota Tinggi	26.34	282	P	P	01 39 36.9	+0.5
MULG	Mulgathing	26.35	171	P	P	01 39 40.4	+4.0
QLP	Quilpie	26.38	149	P	P	01 39 37.0	+0.3
	baz=26,SNR=3.6						
QLP	Quilpie	26.38	149	P	P	01 39 41.4	+4.7
FORT	Forrest	26.53	183	P	P	01 39 38.0	0.0
FORT				IAmb	IAmb	01 39 58.1	
	comp=Z,70nm,0.9s						
FORT	Forrest	26.53	183	P	P	01 39 41.7	+3.7
LCRK	Leigh Creek	27.42	164	P	P	01 39 49.9	+3.9
RK1H	Rockhampton Ha	27.86	135	P	P	01 39 55.8	+5.8
	comp=Z,30nm,1.0s						
MORW	Morawa	27.90	206	P	P	01 39 54.7	+4.3
JRMM	Jerantut	28.19	286	P	P	01 39 54.0	+0.9
RMQ	Roma	28.85	142	P	P	01 40 00.8	+2.0
BLDU	Ballidu	28.98	203	P	P	01 40 01.6	+1.7
SSLB	Suanglung	28.99	344	P	P	01 39 60.0	-0.1
SSLB				IAmb	IAmb	01 40 02.6	
	comp=Z,62nm,1.2s						
SSLB	Suanglung	28.99	344	P	P	01 40 01.8	+1.7
BBOO	Buckleboo	29.17	169	P	P	01 40 00.6	-1.0
BBOO	Buckleboo	29.17	169	P	P	01 40 01.2	-0.4
PPI	Padang Panjang	29.34	276	P	P	01 40 03.9	+0.6
	comp=Z,784nmcomp=Z,31nm,1.0s						
KLBR	Kellerberrin	29.46	201	P	P	01 40 04.3	+0.1
	baz=30,SNR=6.2						
KLBR	Kellerberrin	29.46	201	P	P	01 40 06.8	+2.6
	comp=Z,31nm,1.2s						
WHYH	Whyalla	29.71	166	P	P	01 40 08.6	+2.3
	comp=Z,13nm,0.9s						
IPM	Ipoh	29.74	286	P	P	01 40 06.7	-0.2
IPM	Ipoh	29.74	286	P	P	01 40 07.1	+0.2
STKA	Stephens Creek	29.82	159	P	P	01 40 07.3	0.0
	comp=Z,4.1nm,0.7s,baz=340,slow=8.0,SNR=9.0						
STKA	Stephens Creek	29.82	159	P	P	01 40 07.9	+0.5
	baz=30,SNR=5.2						
STKA	Stephens Creek	29.82	159	P	P	01 40 07.4	0.0
STKA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
STKA	Stephens Creek	29.82	159	P	P	01 40 07.4	0.0
STKA	Stephens Creek	29.82	159	P	P	01 40 09.5	+2.1
QIZ	Qiongzhong	30.10	321	P	P	01 40 12.6	+2.6
QIZ				S	S	01 45 06.3	-0.2
KULM	Kulim	30.34	288	P	P	01 40 11.0	-1.2
HTT	Hallett	30.43	164	P	P	01 40 14.6	+1.8
JOW	Kunigami	30.82	358	P	P	01 40 16.6	+0.4
JOW				IAmb	IAmb	01 40 24.6	
	comp=Z,36nm,0.9s						
NWAO	Narrogin (SRO)	30.86	200	P	P	01 40 22.3	+5.8
CMSA	Cobar Meteorol	31.20	153	P	P	01 40 20.2	+0.6
	baz=31,SNR=7.8						
CMSA	Cobar Meteorol	31.20	153	P	P	01 40 21.1	+1.6
PSI	Prapat	31.36	282	P	P	01 40 19.6	-1.8
	comp=Z,13nm,0.9s,baz=145,slow=3.2,SNR=15						
ARMA	Armidale	33.44	144	P	P	01 40 44.6	+5.3
LHMI	Lhok Sumawe	33.86	286	P	P	01 40 41.3	-1.8
ARPS	Mount Arapiles	34.38	162	P	P	01 40 48.3	+1.0
	baz=34,SNR=8.0						
ARPS	Mount Arapiles	34.38	162	P	P	01 40 49.1	+1.8
	comp=Z,31nm,1.0s						
JSU	Suzuyama	35.46	1	P	P	01 40 55.4	-1.3
JSU				IAmb	IAmb	01 41 04.8	
	comp=Z,41nm,0.9s						
SLVN	Son La	35.66	316	IAmb	IAmb	01 41 01.1	
	comp=Z,105nm,2.0s						
CAN	Canberra	35.87	152	P	P	01 41 00.5	+0.3
CAN				pmax	pmax		
	comp=Z,33nm,1.1s						
CAN	Canberra	35.87	152	P	P	01 41 00.5	+0.3
CAN				IAmb	IAmb	01 41 16.3	
	comp=Z,33nm,1.1s						
CAN	Canberra	35.87	152	P	P	01 41 01.8	+1.6
SSE	Sheshan	35.94	348	P	P	01 41 03.4	+2.7
SSE				S	S	01 46 39.1	+2.4
SSE				pmax	pmax		
	comp=Z,18nm,0.7s						
SSE				pmax	pmax		
	comp=Z,140nm,5.1s						
SSE				LR	LR		
	comp=Z,240nm,17.5s						
SSE				LR	LR		
	comp=Z,250nm,17.5s						
CNB	Canberra Magne	36.04	152	P	P	01 41 08.0	+6.3
JNU	Nakatsue	37.08	2	P	P	01 41 08.9	-1.6
	comp=Z,23nm,0.9s,baz=9.6,slow=3.2,SNR=3.7						
JNU	Nakatsue	37.08	2	P	P	01 41 10.1	-0.5
JNU				IAmb	IAmb	01 41 29.5	
	comp=Z,33nm,0.8s						
JNU	Nakatsue	37.08	2	P	P	01 41 11.3	+0.8
NJ2	Nanjing	37.40	345	*e*P	P	01 41 17.3	+4.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WHN	Wuhan	37.42	338	⇑P	P	01 41 15.3	+1.9
WHN				S	S	01 47 01.8	+2.4
WHN				LR	LR		
	comp=Z,2µm,10.3s						
CM31	Chiang Mai Arr	37.59	308	P	P	01 41 15.1	+0.1
CMAR	Chiang Mai Arr	37.59	308	P	P	01 41 15.3	+0.2
	comp=Z,14nm,0.8s,baz=139,slow=8.0,SNR=76						
CMAR				ScP	ScP	01 47 18.3	+1.0
	comp=Z,1.1nm,0.3s,baz=164,slow=3.6,SNR=2.1						
CHTO	Chiang Mai	37.79	308	P	P	01 41 16.9	+0.2
CHTO				pmax	pmax		
	comp=Z,42nm,0.9s						
CHTO	Chiang Mai	37.79	308	P	P	01 41 17.9	+1.2
CHTO	Chiang Mai	37.79	308	P	P	01 41 16.9	+0.2
CHTO				IAmb	IAmb	01 41 18.6	
	comp=Z,42nm,0.9s						
CHTO	Chiang Mai	37.79	308	P	P	01 41 19.1	+2.4
JMN	Monobe	37.89	6	IAmb	IAmb	01 41 26.0	
	comp=Z,83nm,1.3s						
SANVU	Saraoutou	38.71	110	P	P	01 41 29.6	+5.1
KMI	Kunming	39.03	320	⇑P	P	01 41 26.3	-1.1
KMI				pP	pwP	01 41 44.4	+2.7
KMI				sP	sP	01 41 56.8	+15
KMI				PP	PnPn	01 43 06.4	+6.5
KMI				S	S	01 47 26.3	+1.8
KMI				SS	SS	01 50 15.5	-2.2
KMI				pmax	pmax		
	comp=Z,36nm,1.1s						
KMI				pmax	pmax		
	comp=Z,260nm,3.7s						
JHS	Saijyo	39.08	5	IAmb	IAmb	01 41 29.2	
	comp=Z,55nm,1.1s						
JWT	Wachi	39.60	8	P	P	01 41 31.6	0.0
JWT				IAmb	IAmb	01 41 40.1	
	comp=Z,60nm,1.0s						
DZM	Mont Dzumac	39.95	120	P	P	01 41 34.6	-0.3
	comp=Z,9.6nm,0.9s,baz=17,slow=9.3,SNR=4.4						
DZM	Mont Dzumac	39.95	120	P	P	01 41 33.5	-1.4
JGF	Kuroka	40.21	10	P	P	01 41 36.2	-0.5
TJN	Taejon	40.36	357	⇓*e*P	P	01 41 38.6	+0.7
TJN	Taejon	40.36	357	P	P	01 41 39.5	+1.6
MAJO	Matsushiro	41.28	11	*ce*P	P	01 41 44.3	-1.2
MAJO				pmax	pmax		
	comp=Z,29nm,0.8s						
MAJO	Matsushiro	41.28	11	P	P	01 41 43.9	-1.6
MAJO				IAmb	IAmb	01 41 53.6	
	comp=Z,46nm,0.9s						
MJAR	Matsushiro Arr	41.28	11	P	P	01 41 44.2	-1.2
	comp=Z,14nm,0.8s,baz=182,slow=8.4,SNR=15						
MJAR	Matsushiro Arr	41.28	11	P	P	01 41 44.3	-1.2
MJB9	Matsu-Tunnel	41.28	11	IAmb	IAmb	01 41 53.6	
	comp=Z,50nm,0.8s						
KSAR	Wonju Array Be	41.40	358	P	P	01 41 46.1	-0.4
KSAR	Wonju Array Be	41.40	358	P	P	01 41 46.1	-0.4
KSRS	Korea Array	41.41	358	P	P	01 41 47.1	+0.5
	comp=Z,7.9nm,0.7s,baz=174,slow=10.0,SNR=25						
KS19	Wonju Array Si	41.46	358	IAmb	IAmb	01 42 12.9	
	comp=Z,55nm,1.6s						
INCN	Inchon	41.50	357	P	P	01 41 48.7	+1.3
CD2	Chengdu	42.67	327	P	P	01 41 56.9	-0.1
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
XAN	Xi'an	42.67	334	P	P	01 41 56.8	-0.2
XAN				pP	pwP	01 42 15.1	+3.1
XAN				sP	sP	01 42 24.3	+14
XAN				S	S	01 48 14.5	-3.6
XAN				SS	SS	01 51 21.3	-8.2
XAN				ScS	ScS	01 51 53.6	-2.2
XAN				pmax	pmax		
	comp=Z,16nm,1.8s						
XAN				pmax	pmax		
	comp=Z,350nm,5.7s						
XAN				LR	LR		
	comp=Z,480nm,20.6s						
XAN				LR	LR		
	comp=Z,370nm,19.2s						
XAN				LR	LR		
	comp=Z,620nm,21.3s						
JSD	Sado	42.74	10	IAmb	IAmb	01 42 08.2	
	comp=Z,33nm,1.0s						
BJT	Baijiatuau	45.63	346	IAmb	IAmb	01 42 40.1	
	comp=Z,29nm,1.2s						
BJI	Beijing	45.65	346	P	P	01 42 20.3	-0.4
BJI				pP	pwP	01 42 39.4	+3.9
BJI				S	S	01 49 05.3	+4.2
BJI				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH	Lanzhou	46.69	331	*e*P	P	01 42 29.8	+0.6
LZH				pP	pwP	01 42 48.3	+4.1
LZH				sP	sP	01 42 57.6	+15
LZH				pmax	pmax		
	comp=Z,31nm,1.2s						
SHL	Shillong	46.96	311	P	P	01 42 30.3	-1.2
SHL				pmax	pmax		
	comp=Z,21nm,0.8s						
SHL	Shillong	46.96	311	P	P	01 42 31.4	-0.1
	SNR=9.0						
SHL	Shillong	46.96	311	P	P	01 42 30.3	-1.2
SHL				IAmb	IAmb	01 42 51.5	
	comp=Z,21nm,0.8s						
HHC	Hu-ho-hao-te	47.70	342	*e*P	P	01 42 36.6	-0.3
HHC				S	S	01 49 29.9	-0.8
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,290nm,6.5s						
HHC				LR	LR		
	comp=Z,350nm,8.7s						
HHC				LR	LR		
	comp=Z,490nm,7.6s						
HHC				LR	LR		
	comp=Z,310nm,7.9s						
CN2	Changchun	47.87	356	*e*P	P	01 42 38.8	+0.8
CN2				S	S	01 49 31.8	-0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,400nm,14.0s						
CN2				LR	LR		
	comp=Z,400nm,14.0s						
CN2				LR	LR		
	comp=Z,500nm,19.0s						
BTO	Baotou	47.99	340	*e*P	P	01 42 41.4	+2.3
USA0B	Ussuriysk Arra	48.17	2	P	P	01 42 40.7	+0.3
USA0B				pmax	pmax		
	comp=Z,129nm,2.0s						
USA0B	Ussuriysk Arra	48.17	2	P	P	01 42 40.7	+0.3
USRK	Ussuriysk Ar.	48.17	2	P	P	01 42 39.8	-0.6
	comp=Z,10nm,0.7s,baz=182,slow=7.1,SNR=21						
MDJ	Mudanjiang	48.54	0	P	P	01 42 44.5	+1.3
MDJ				S	S	01 49 46.5	+4.3
MDJ				pmax	pmax		
	comp=Z,22nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,350nm,4.3s						
MDJ				LR	LR		
	comp=Z,730nm,11.3s						
MDJ				LR	LR		
	comp=Z,510nm,9.8s						
MDJ				LR	LR		
	comp=Z,630nm,20.6s						
MDJ	Mudanjiang	48.54	0	P	P	01 42 43.6	+0.5
ASAJ	Asahikawa	49.46	12	P	P	01 42 50.4	+0.2
	comp=Z,9.9nm,0.9s,baz=211,slow=12,SNR=2.4						
LSA	Lhasa	49.84	315	P	P	01 42 54.6	+0.6
LSA	Lhasa	49.84	315	P	P	01 42 53.7	-0.3
LSA				pmax	pmax		
	comp=Z,19nm,0.9s						
LSA	Lhasa	49.84	315	P	P	01 42 53.7	-0.3
LSA				IAmb	IAmb	01 43 02.9	
	comp=Z,19nm,0.9s						
ODAN	Odare	51.07	310	*e*P	P	01 43 02.5	-0.5
	comp=Z,21nm,0.7s						
TAPN	Taplejung	51.07	310	*e*P	P	01 43 02.3	-0.8
	comp=Z,60nm,0.9s						
GTA	Gaotai	51.27	331	⇑P	P	01 43 04.3	+0.1
GTA				pP	pwP	01 43 22.6	+3.4
GTA				sP	sP	01 43 31.6	+14
GTA				S	S	01 50 18.4	-2.3
GTA				pmax	pmax		
	comp=Z,17nm,1.4s						
GTA				pmax	pmax		
	comp=Z,130nm,6.0s						
GTA				LR	LR		
	comp=Z,500nm,18.3s						
GTA				LR	LR		
	comp=Z,470nm,16.7s						
GTA				LR	LR		
	comp=Z,240nm,15.9s						
RAMN	Ramite	51.72	309	*e*P	P	01 43 07.7	-0.2
	comp=Z,21nm,0.5s						
YSS	Yuzh-Sakhalins	52.20	11	*e*P	P	01 43 10.8	0.0
YSS				*e*		01 45 09.4	
YSS				*e*		01 50 34.3	
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
JIRN	Jiri	52.39	310	*e*P	P	01 43 12.3	-0.8
GUN	Gumba	52.76	310	*e*P	P	01 43 15.0	-0.7
	comp=Z,74nm,1.0s						
PKIN	Phulchoki	52.96	309	*e*P	P	01 43 16.0	-1.2
KKN	Kakani	53.16	309	*e*P	P	01 43 17.3	-1.2
KLR	Kul'dur	53.19	2	P	P	01 43 18.4	+0.2
	comp=Z,14nm,1.0s,baz=197,slow=3.6,SNR=20						
KLR	Kul'dur	53.19	2	*c i*P	P	01 43 18.3	+0.2
KLR				pmax	pmax		
	comp=Z,50nm,1.4s						
DMN	Daman	53.20	309	*e*P	P	01 43 18.1	-0.8
GKN	Gorkha	53.76	309	*e*P	P	01 43 21.6	-1.3
	comp=Z,101nm,1.1s						
TUWZ	Tuamarina	54.33	140	P	P	01 43 25.9	-0.8
KOLN	Koldanda	54.45	309	*e*P	P	01 43 27.5	-0.5
	comp=Z,147nm,1.0s						
DANN	Dangsing	54.60	309	*e*P	P	01 43 28.3	-0.9
	comp=Z,128nm,1.0s						
HYB	Hyderabad	54.68	295	*i* P	P	01 43 28.0	-1.6
	comp=Z,60nm,1.0s						
GRNR	Gornyy	55.02	5	⇓*i*P	P	01 43 32.6	+1.2
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,170nm,19.0s						
GRNR				MLR	MLR		
	comp=N,250nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,400nm,17.0s						
PYUN	Piuthan	55.08	309	*e*P	P	01 43 31.9	-0.7
	comp=Z,172nm,1.1s						
ULN	Ulaanbaatar	55.42	342	*c i*P	P	01 43 35.1	+0.5
ULN				pmax	pmax		
	comp=Z,31nm,1.4s						
ULN	Ulaanbaatar	55.42	342	P	P	01 43 35.6	+1.1
ULN	Ulaanbaatar	55.42	342	P	P	01 43 34.0	-0.6
ULN				IAmb	IAmb	01 44 01.6	
	comp=Z,19nm,0.9s						
SONM	Songino Array	55.60	341	P	P	01 43 35.8	-0.1
	comp=Z,15nm,1.2s,baz=165,slow=7.1,SNR=33						
SONM	Songino Array	55.60	341	P	P	01 43 35.3	-0.6
SONM				pmax	pmax		
	comp=Z,16nm,1.1s						
SONM	Songino Array	55.60	341	P	P	01 43 35.2	-0.6
ZEA	Zeya	57.70	358	*e*P	P	01 43 51.3	+0.8
ZEA				*e*		01 44 08.0	
ZEA				*e*		01 51 54.2	

ZEA				pmax	pmax		
	comp=N,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZAK	**Zakamensk**	**58.83**	**341**	*e*P	**P**	**01 43 57.7**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,15nm,1.3s						
TLY	**Talaya**	**59.83**	**342**	P	**P**	**01 44 05.1**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=170,slow=5.9,SNR=4.0						
TLY	**Talaya**	**59.83**	**342**	*e*P	**P**	**01 44 06.2**	**+0.8**
TLY				pmax	pmax		
	comp=Z,51nm,1.6s						
TLY	**Talaya**	**59.83**	**342**	P	**P**	**01 44 06.1**	**+0.7**
TLY				IAmb	IAmb	01 44 27.5	
	comp=Z,14nm,0.9s						
MOY	**Mondy**	**60.69**	**340**	*e*P	**P**	**01 44 12.7**	**+1.4**
MOY				pmax	pmax		
	comp=Z,63nm,2.6s						
WMQ	**Urumqi**	**60.77**	**326**	⇑P	**P**	**01 44 12.3**	**+0.3**
WMQ				pP	pwP	01 44 37.0	+10
WMQ				PcP	**PcP**	**01 44 56.3**	**+0.6**
WMQ				S	**S**	**01 52 25.3**	**-1.5**
WMQ				pmax	pmax		
	comp=Z,38nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,340nm,4.3s						
WMQ				LR	LR		
	comp=Z,460nm,15.7s						
WMQ				LR	LR		
	comp=Z,460nm,19.5s						
WMQ				LR	LR		
	comp=Z,540nm,21.3s						
PETK	**Petropavlovsk-**	**61.78**	**19**	P	**P**	**01 44 18.8**	**+0.2**
	comp=Z,7.4nm,0.9s,baz=203,slow=9.4,SNR=4.1						
BOD	**Bodaibo**	**63.02**	**351**	*e*P	**P**	**01 44 27.4**	**+0.7**
BOD				pmax	pmax		
	comp=Z,41nm,1.7s						
ZSN	**Zaisan**	**64.61**	**328**	*e*P	**P**	**01 44 36.2**	**-1.4**
	baz=328						
ZSN				*e*S	**S**	**01 53 14.8**	**0.0**
	baz=328						
ZSN	**Zaisan**	**64.61**	**328**	*e*P	**P**	**01 44 36.1**	**-1.4**
ZSN				*e*S	**S**	**01 53 14.8**	**0.0**
DGZ	**Jazzator, Alta**	**64.79**	**331**	*c i*P	**P**	**01 44 39.1**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,27nm,1.0s						
NIL	**Nilore**	**65.02**	**310**	P	**P**	**01 44 38.7**	**-1.8**
NIL				pmax	pmax		
	comp=Z,17nm,1.1s						
NIL	**Nilore**	**65.02**	**310**	P	**P**	**01 44 38.7**	**-1.8**
NIL				IAmb	IAmb	01 44 54.6	
	comp=Z,17nm,1.1s						
SHLS	**Shalkode**	**65.19**	**322**	*e*P	**P**	**01 44 39.1**	**-2.5**
	comp=Z,8.8nm,0.7s,baz=322						
SHLS				*e*S	**S**	**01 53 19.4**	**-2.9**
	baz=322						
SHLS	**Shalkode**	**65.19**	**322**	*e*P	**P**	**01 44 39.0**	**-2.5**
SHLS				*e*S	**S**	**01 53 19.4**	**-2.9**
SHLS				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TARG	**Taragay, Kyrgy**	**65.49**	**320**	P	**P**	**01 44 43.3**	**-0.5**
TARG				IAmb	IAmb	01 44 55.0	
	comp=Z,12nm,1.0s						
MK31	**Makanchi Array**	**65.60**	**326**	*c i*P	**P**	**01 44 43.9**	**0.0**
MK31	**Makanchi Array**	**65.60**	**326**	P	**P**	**01 44 43.1**	**-0.8**
MK31				IAmb	IAmb	01 44 45.1	
	comp=Z,19nm,0.9s						
MKAR	**Makanchi Array**	**65.60**	**326**	P	**P**	**01 44 43.7**	**-0.2**
	comp=Z,21nm,0.8s,baz=126,slow=7.8,SNR=131						
MKAR	**Makanchi Array**	**65.60**	**326**	*i* P	**P**	**01 44 44.0**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,21nm,0.8s						
MKAR	**Makanchi Array**	**65.60**	**326**	P	**P**	**01 44 43.0**	**-0.9**
KSH	**Kashi**	**65.62**	**317**	P	**P**	**01 44 44.6**	**+0.3**
KSH				pP	pwP	01 45 04.3	+4.6
KSH				sP	PcP	01 45 10.9	-4.8
KSH				pmax	pmax		
	comp=Z,12nm,0.9s						
MA2	**Magadan**	**65.71**	**12**	⇑*e*P	**P**	**01 44 44.1**	**-0.2**
MA2				pmax	pmax		
	comp=Z,30nm,1.2s						
MAKZ	**Makanchi**	**65.78**	**326**	P	**P**	**01 44 44.2**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,24nm,1.0s						
MAKZ	**Makanchi**	**65.78**	**326**	P	**P**	**01 44 44.2**	**-0.9**
MAKZ				IAmb	IAmb	01 44 46.2	
	comp=Z,24nm,0.9s						
SATY	**Saty**	**65.80**	**321**	*e*P	**P**	**01 44 44.4**	**-1.1**
	comp=Z,15nm,0.9s,baz=321						
SATY	**Saty**	**65.80**	**321**	*e*P	**P**	**01 44 44.3**	**-1.1**
SATY				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK	**Yakutsk**	**65.99**	**0**	P	**P**	**01 44 45.8**	**-0.2**
	comp=Z,31nm,0.7s,baz=93,slow=0.1,SNR=12						
YAK	**Yakutsk**	**65.99**	**0**	*c i*P	**P**	**01 44 46.3**	**+0.3**
YAK				pmax	pmax		
	comp=Z,57nm,0.8s						
YAK	**Yakutsk**	**65.99**	**0**	P	**P**	**01 44 45.3**	**-0.7**
MDOK	**Medeo**	**66.70**	**321**	*e*P	**P**	**01 44 50.4**	**-0.9**
	baz=321						
MDOK	**Medeo**	**66.70**	**321**	*e*P	**P**	**01 44 50.3**	**-1.0**
ARXS	**Arharly**	**66.76**	**322**	*e*P	**P**	**01 44 50.6**	**-0.9**
TDK	**Taldyqorghan**	**66.83**	**323**	*e*P	**P**	**01 44 51.2**	**-0.7**
	comp=Z,18nm,1.2s,baz=323						
TDK				*e*S	**S**	**01 53 42.6**	**+0.7**
	baz=323						
TDK	**Taldyqorghan**	**66.83**	**323**	*e*P	**P**	**01 44 51.1**	**-0.7**
TDK				*e*S	**S**	**01 53 42.6**	**+0.7**
TDK				pmax	pmax		
	comp=Z,18nm,1.2s						
TKM2	**Tokmak 2**	**67.51**	**320**	P	**P**	**01 44 56.0**	**-0.4**
	SNR=5.8						
TKM2	**Tokmak 2**	**67.51**	**320**	P	**P**	**01 44 56.2**	**-0.2**
KUU	**Kurty**	**67.52**	**321**	*e*P	**P**	**01 44 54.8**	**-1.5**
	comp=Z,22nm,0.8s,baz=321						
KUU	**Kurty**	**67.52**	**321**	*e*P	**P**	**01 44 54.7**	**-1.5**
KUU				pmax	pmax		
	comp=Z,22nm,0.8s						
UCH	**Uchtor**	**67.88**	**319**	P	**P**	**01 44 59.5**	**+0.5**
	SNR=12						
AAK	**Ala-Archa**	**68.08**	**319**	P	**P**	**01 45 00.2**	**+0.2**
	SNR=8.1						
AAK	**Ala-Archa**	**68.08**	**319**	*i* P	**P**	**01 45 00.2**	**+0.2**
AAK	**Ala-Archa**	**68.08**	**319**	P	**P**	**01 45 00.8**	**+0.8**
AAK	**Ala-Archa**	**68.08**	**319**	P	**P**	**01 44 58.7**	**-1.3**
AAK				IAmb	IAmb	01 45 27.0	
	comp=Z,21nm,1.1s						
AML	**Almayashu**	**68.37**	**319**	P	**P**	**01 45 02.5**	**+0.4**
	SNR=12						
AML	**Almayashu**	**68.37**	**319**	P	**P**	**01 45 02.3**	**+0.2**
USP	**Ospenovka**	**68.38**	**320**	P	**P**	**01 45 01.6**	**-0.1**
	SNR=16						
SGDS	**Sogindy**	**68.38**	**320**	*e*P	**P**	**01 45 00.2**	**-1.5**
	baz=320						
DRK	**Karamyk**	**68.49**	**315**	IAmb	IAmb	01 45 25.5	
	comp=Z,26nm,1.2s						
EKS2	**Erkin-Say**	**68.56**	**319**	P	**P**	**01 45 03.6**	**+0.6**
	SNR=8.5						
KBL	**Kabul**	**68.59**	**309**	P	**P**	**01 45 02.6**	**-0.8**
KBL				pmax	pmax		
	comp=Z,12nm,0.9s						
KBL	**Kabul**	**68.59**	**309**	P	**P**	**01 45 03.3**	**-0.1**
	SNR=7.6						
KBL	**Kabul**	**68.59**	**309**	P	**P**	**01 45 02.6**	**-0.8**
KBL				IAmb	IAmb	01 45 04.0	
	comp=Z,12nm,0.9s						
SEM	**Semipalatinsk**	**68.83**	**329**	*e*P	**P**	**01 45 03.0**	**-1.6**
	baz=329						
SEM	**Semipalatinsk**	**68.83**	**329**	*e*P	**P**	**01 45 03.0**	**-1.6**
ZALV	**Zalesovo Beam**	**68.83**	**334**	P	**P**	**01 45 03.5**	**-0.7**
	comp=Z,19nm,0.9s,baz=108,slow=4.8,SNR=72						
ZALV	**Zalesovo Beam**	**68.83**	**334**	*i* P	**P**	**01 45 03.7**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,19nm,0.9s						
SEY	**Seymchan**	**69.10**	**11**	P	**P**	**01 45 06.1**	**+0.4**
	comp=Z,23nm,0.9s,baz=196,slow=4.9,SNR=36						
GAR	**Garm**	**69.34**	**314**	P	**P**	**01 45 06.3**	**-1.6**
GAR				IAmb	IAmb	01 45 22.0	
	comp=Z,28nm,1.0s						
BTLS	**Baital**	**69.51**	**321**	*e*P	**P**	**01 45 07.3**	**-1.3**
	baz=321						
BTLS	**Baital**	**69.51**	**321**	*e*P	**P**	**01 45 07.3**	**-1.3**
KURBB	**Kurchatov Arra**	**69.85**	**328**	P	**P**	**01 45 10.4**	**-0.2**
KURK	**Kurchatov**	**69.86**	**328**	*c i*P	**P**	**01 45 10.6**	**0.0**
KURK				pmax	pmax		
	comp=Z,83nm,0.9s						
KURK	**Kurchatov**	**69.86**	**328**	P	**P**	**01 45 11.1**	**+0.5**
KURK	**Kurchatov**	**69.86**	**328**	P	**P**	**01 45 09.9**	**-0.7**
DZA	**Taraz**	**70.27**	**318**	*e*P	**P**	**01 45 12.3**	**-1.1**
	baz=318						
DZA	**Taraz**	**70.27**	**318**	*e*P	**P**	**01 45 12.3**	**-1.1**
IUG	**Iuzhnay**	**70.83**	**317**	*e*P	**P**	**01 45 15.2**	**-1.7**
	baz=317						
IUG	**Iuzhnay**	**70.83**	**317**	*e*P	**P**	**01 45 15.2**	**-1.7**
KK31	**Karatay Array**	**70.91**	**318**	P	**P**	**01 45 16.4**	**-0.9**
BRLS	**Borolday**	**71.32**	**318**	*e*P	**P**	**01 45 18.9**	**-0.9**
	baz=318						
BRLS	**Borolday**	**71.32**	**318**	*e*P	**P**	**01 45 18.9**	**-0.9**
BRZS	**Berezniki**	**72.71**	**326**	*e*P	**P**	**01 45 26.9**	**-1.0**
	comp=Z,14nm,1.1s,baz=326						
BRZS	**Berezniki**	**72.71**	**326**	*e*P	**P**	**01 45 26.9**	**-1.0**
BRZS				pmax	pmax		
	comp=Z,14nm,1.1s						
JLN	**Jalan Bani Buh**	**73.29**	**294**	P	**P**	**01 45 31.5**	**-0.4**
WBK	**Wadi Bani Khal**	**73.78**	**295**	P	**P**	**01 45 35.0**	**+0.2**
WSAR	**Wadi Sarin**	**74.22**	**295**	P	**P**	**01 45 37.7**	**+0.3**
	SNR=5.6						
JMDO	**Jabal Madar**	**74.52**	**294**	P	**P**	**01 45 39.8**	**+0.6**
SMDO	**Samad**	**74.71**	**295**	P	**P**	**01 45 40.1**	**-0.2**
BIDO	**Bidbid**	**74.73**	**296**	P	**P**	**01 45 40.7**	**+0.4**
	SNR=8.0						
VNDA	**Vanda**	**75.32**	**173**	P	**P**	**01 45 42.3**	**-0.4**
	comp=Z,2.9nm,0.9s,baz=301,slow=7.3,SNR=9.3						
VNDA	**Vanda**	**75.32**	**173**	P	**P**	**01 45 42.1**	**-0.6**
VNDA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VNDA	**Vanda**	**75.32**	**173**	P	**P**	**01 45 42.1**	**-0.6**
BSY	**Bisya**	**75.42**	**295**	P	**P**	**01 45 44.3**	**0.0**
HOQ	**Hoqain**	**75.47**	**296**	P	**P**	**01 45 44.8**	**+0.2**
	SNR=8.2						
BRVK	**Borovoye**	**75.49**	**328**	*c i*P	**P**	**01 45 43.5**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,45nm,1.0s						
BRVK	**Borovoye**	**75.49**	**328**	P	**P**	**01 45 44.6**	**+0.6**
BRVK	**Borovoye**	**75.49**	**328**	P	**P**	**01 45 42.7**	**-1.4**
TIXI	**Tiksi**	**75.65**	**360**	⇓*e*P	**P**	**01 45 44.2**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,16nm,1.0s						
TIXI	**Tiksi**	**75.65**	**360**	P	**P**	**01 45 43.2**	**-1.3**
TIXI				IAmb	IAmb	01 46 03.1	
	comp=Z,29nm,1.3s						
SOHO	**SOHO**	**76.28**	**296**	P	**P**	**01 45 49.3**	**+0.2**
BILL	**Bilibino**	**76.46**	**13**	⇓*e*P	**P**	**01 45 50.0**	**+0.7**
BILL				pmax	pmax		
	comp=Z,18nm,2.1s						
BILL				MLR	MLR		
	comp=Z,229nm,20.0s						
UOSS	**Minazif**	**76.72**	**297**	P	**P**	**01 45 51.3**	**-0.4**
UOSS	**Minazif**	**76.72**	**297**	P	**P**	**01 45 50.0**	**-1.8**
UOSS				IAmb	IAmb	01 45 52.4	
	comp=Z,30nm,1.4s						
HATD	**Hatta, Dubai**	**76.77**	**297**	P	**P**	**01 45 52.3**	**+0.3**
	SNR=6.6						
SOCY	**Socotra**	**76.80**	**283**	P	**P**	**01 45 51.6**	**-0.8**
ASHO	**Ashiyiah**	**76.81**	**296**	P	**P**	**01 45 53.0**	**+0.8**
BANOM	**Banah**	**76.83**	**298**	P	**P**	**01 45 53.4**	**+1.1**
MASF	**Masafi**	**76.85**	**297**	P	**P**	**01 45 53.4**	**+1.0**
ALNE	**Al Ain**	**76.97**	**296**	P	**P**	**01 45 53.4**	**+0.3**
	SNR=6.6						
FAQ	**Al Faqa, Dubai**	**77.23**	**296**	P	**P**	**01 45 55.0**	**+0.5**
MAW	**Mawson**	**77.43**	**201**	P	**P**	**01 45 53.3**	**-1.4**
	comp=Z,8.6nm,1.1s,baz=75,slow=7.0,SNR=5.5						
MAW	**Mawson**	**77.43**	**201**	P	**P**	**01 45 54.4**	**-0.3**
MAW				pmax	pmax		
	comp=Z,5.0nm,1.5s						
MAW	**Mawson**	**77.43**	**201**	P	**P**	**01 45 54.4**	**-0.3**
ASUD	**Al Ashush, Dub**	**77.45**	**296**	P	**P**	**01 45 56.7**	**+0.9**
DOK	**Doka**	**77.55**	**290**	P	**P**	**01 45 55.7**	**-0.7**
WHFO	**Wadi Hawf**	**77.78**	**289**	P	**P**	**01 45 57.0**	**-0.9**
GEYT	**Alibeck**	**78.03**	**310**	P	**P**	**01 45 58.9**	**+0.1**
	comp=Z,6.2nm,0.9s,baz=169,slow=7.8,SNR=11						
GEYT	**Alibeck**	**78.03**	**310**	IAmb	IAmb	01 46 00.6	
	comp=Z,32nm,1.6s						
GYA0B	**ALIBECK ARRAY**	**78.03**	**310**	P	**P**	**01 45 58.5**	**-0.4**
GYA0B				IAmb	IAmb	01 46 00.5	
	comp=Z,34nm,1.4s						
ABTO	**Aybut**	**78.15**	**289**	P	**P**	**01 45 59.4**	**-0.4**
NRIK	**Noril'sk**	**78.69**	**346**	P	**P**	**01 46 01.7**	**0.0**
	comp=Z,8.9nm,0.9s,baz=138,slow=5.1,SNR=16						
NRIK	**Noril'sk**	**78.69**	**346**	*c i*P	**P**	**01 46 02.2**	**+0.5**
NRIK				pmax	pmax		
	comp=Z,45nm,1.8s						
NRIK	**Noril'sk**	**78.69**	**346**	IAmb	IAmb	01 46 27.8	
	comp=Z,44nm,1.4s						
AB31	**Akbulak array**	**80.00**	**321**	*i* P	**P**	**01 46 09.0**	**-0.3**
SLWR	**Sila**	**80.63**	**295**	P	**P**	**01 46 13.7**	**+0.5**
TRNA	**Turayna**	**81.16**	**296**	P	**P**	**01 46 16.7**	**+0.7**
SVE	**Sverdlovsk**	**82.10**	**329**	*de*P	**P**	**01 46 20.5**	**+0.2**
SVE				pmax	pmax		
	comp=Z,39nm,1.0s						
TNA	**Tin City**	**82.76**	**22**	P	**P**	**01 46 23.3**	**-0.2**
	baz=243						
ARU	**Arti**	**83.05**	**328**	*c i*P	**P**	**01 46 24.7**	**-0.6**
ARU						01 49 30.5	
ARU				S	**S**	**01 56 43.1**	**+1.0**
ARU				pmax	pmax		
	comp=Z,27nm,1.2s						
ARU	**Arti**	**83.05**	**328**	P	**P**	**01 46 23.5**	**-1.8**
ARU				IAmb	IAmb	01 46 26.2	
	comp=Z,16nm,0.9s						
CHIR	**Chirikof Islan**	**84.95**	**33**	P	**P**	**01 46 35.8**	**+0.8**
	baz=255						
QSPA	**South Pole Qui**	**85.81**	**180**	P	**P**	**01 46 38.1**	**-1.2**
QSPA				IAmb	IAmb	01 46 39.2	
	comp=Z,15nm,1.1s						
SYO	**Syowa Base**	**86.14**	**201**	⇓*e*P	**P**	**01 46 40.6**	**0.0**
SYO	**Syowa Base**	**86.14**	**201**	⇓*e*pP	pP	01 46 46.6	-4.8
RAYN	**Ar Rayn**	**86.17**	**294**	P	**P**	**01 46 41.6**	**-0.3**
RAYN				pmax	pmax		
	comp=Z,41nm,1.0s						
RAYN	**Ar Rayn**	**86.17**	**294**	P	**P**	**01 46 42.1**	**+0.3**
RAYN	**Ar Rayn**	**86.17**	**294**	P	**P**	**01 46 41.6**	**-0.3**
TTA	**Tatalina**	**86.65**	**26**	P	**P**	**01 46 44.4**	**+1.1**
TTA				pmax	pmax		
	comp=Z,33nm,1.3s						
TTA	**Tatalina**	**86.65**	**26**	P	**P**	**01 46 44.4**	**+1.1**
TTA				IAmb	IAmb	01 46 45.5	
	comp=Z,33nm,1.3s						
TTA	**Tatalina**	**86.65**	**26**	P	**P**	**01 46 44.1**	**+0.8**
	baz=254						
Q19K	**Cape Douglas,**	**86.76**	**30**	P	**P**	**01 46 44.3**	**+0.4**
	baz=257						
GCSA	**Galena City Sc**	**86.78**	**24**	P	**P**	**01 46 44.2**	**+0.4**
	baz=253						
N19K	**Bonanza Creek**	**86.80**	**28**	P	**P**	**01 46 45.2**	**+1.1**
	baz=256						
L19K	**White Mountain**	**86.97**	**27**	P	**P**	**01 46 45.3**	**+0.4**
L19K				IAmb	IAmb	01 46 53.9	
	comp=Z,32nm,1.2s						
L19K	**White Mountain**	**86.97**	**27**	P	**P**	**01 46 46.0**	**+1.2**
	baz=255						
MAK	**Makhachkala**	**86.97**	**313**	*e*P	P	01 46 37.6	-7.6
MAK				*e**PP	pP	01 46 55.9	+0.6
MAK				*e*		01 50 02.6	
MAK				*e*SS	SS	02 02 56.9	-7.9
MAK				*e*SSS	SSS	02 06 31.3	
MAK				pmax	pmax		
	comp=Z,124nm,1.0s						
M19K	**Big River Lodg**	**87.11**	**27**	P	**P**	**01 46 47.3**	**+1.8**
	baz=256						
J20K	**Nowinta River**	**87.78**	**25**	P	**P**	**01 46 49.5**	**+0.9**
	baz=256						
GROC	**Groznyy**	**88.25**	**313**	*e*P	**P**	**01 46 50.2**	**-1.2**
GROC				*e*		01 50 13.9	
GROC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KIRV	**Kirov**	**88.37**	**329**	*de*P	**P**	**01 46 50.8**	**-0.7**
CHUM	**Lake Minchumin**	**88.49**	**26**	P	**P**	**01 46 51.8**	**-0.3**
	baz=258						
CAST	**Castle Rocks**	**88.49**	**26**	P	**P**	**01 46 53.6**	**+1.5**
	baz=258						
GNI	**Garni**	**88.67**	**310**	*c i*P	**P**	**01 46 54.6**	**+1.0**
GNI				pmax	pmax		
	comp=Z,18nm,1.4s						
GNI	**Garni**	**88.67**	**310**	P	**P**	**01 46 53.8**	**+0.1**
GNI				IAmb	IAmb	01 47 19.1	
	comp=Z,20nm,1.1s						
MLY	**Manley**	**89.40**	**25**	P	**P**	**01 46 56.7**	**+0.4**
	baz=259						
PMR	**Palmer**	**89.49**	**28**	P	**P**	**01 46 57.0**	**+0.2**
	baz=260						
ZEI	**Tsey**	**89.58**	**313**	*e*P	**P**	**01 46 57.7**	**-0.2**
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KNK	**Knik Glacier**	**89.78**	**28**	P	**P**	**01 46 57.6**	**-0.6**
	baz=261						
NCK	**Nalchik**	**89.88**	**313**	*d i*P	**P**	**01 46 59.4**	**+0.3**
NCK				pmax	pmax		
	comp=Z,17nm,1.2s						
SML	**Sawmill**	**89.90**	**28**	P	**P**	**01 46 57.8**	**-1.0**
	baz=261						
RND	**Reindeer**	**89.92**	**26**	IAmb	IAmb	01 47 00.3	
	comp=Z,14nm,1.0s						
MCK	**McKinley**	**89.94**	**26**	P	**P**	**01 46 57.9**	**-1.0**
	baz=261						
I23K	**Minto, Yukon-K**	**89.99**	**25**	P	**P**	**01 46 58.8**	**-0.3**
	baz=260						
SIRT	**Sirnak**	**90.19**	**307**	P	**P**	**01 46 59.0**	**-1.8**
WAT6	**Susitna Watana**	**90.30**	**27**	P	**P**	**01 46 58.7**	**-2.0**
	baz=262						
KBZ	**Khabaz**	**90.40**	**314**	P	**P**	**01 47 00.9**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=15,slow=5.1,SNR=7.1						
KBZ	**Khabaz**	**90.40**	**314**	*ce*P	**P**	**01 47 01.2**	**-0.2**
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TOLK	**Toolik Lake Re**	**90.51**	**21**	P	**P**	**01 47 01.9**	**+0.4**
	baz=260						
DHY	**Denali Highway**	**90.53**	**27**	P	**P**	**01 47 02.8**	**+0.9**
	baz=262						
CCB	**Clear Creek Bu**	**90.57**	**25**	IAmb	IAmb	01 47 01.8	
	comp=Z,11nm,1.2s						
KIV	**Kislovodsk**	**90.58**	**314**	*e*P	**P**	**01 47 04.5**	**+2.1**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,54nm,20.0s						
COLA	**College**	**90.58**	**25**	⇓*e*P	**P**	**01 47 01.5**	**-0.3**
COLA				pmax	pmax		
	comp=Z,19nm,2.7s						
GURO	**Guroymak-BITLI**	**90.60**	**308**	P	**P**	**01 47 02.5**	**-0.2**
H24K	**Noodor Dome**	**90.71**	**24**	IAmb	IAmb	01 47 27.6	
	comp=Z,16nm,1.2s						
H24K	**Noodor Dome**	**90.71**	**24**	P	**P**	**01 47 02.8**	**+0.3**
	baz=262						
HDA	**Harding Lake**	**90.90**	**26**	P	**P**	**01 47 02.6**	**-0.8**
	baz=262						
M24K	**Tolsona, Glenn**	**90.95**	**28**	P	**P**	**01 47 03.6**	**-0.1**
	baz=263						
ILAR	**Eielson Array**	**90.98**	**25**	P	**P**	**01 47 02.2**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=280,slow=4.2,SNR=11						
PAX	**Paxson**	**91.38**	**27**	P	**P**	**01 47 05.5**	**-0.2**
	baz=264						
MARD	**Mardin**	**91.49**	**307**	IAmb	IAmb	01 47 08.2	
	comp=Z,13nm,1.0s						
KOPT	**Kop Dagi**	**91.90**	**310**	IAmb	IAmb	01 47 13.7	
	comp=Z,16nm,1.2s						
KMBO	**Kilima Mbogo**	**92.20**	**269**	P	**P**	**01 47 10.5**	**-0.3**
	comp=Z,4.6nm,0.9s,baz=50,slow=8.0,SNR=6.8						
KMBO	**Kilima Mbogo**	**92.20**	**269**	*i* P	**P**	**01 47 11.3**	**+0.5**
KMBO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CRQE	**Cirque**	**92.30**	**29**	P	**P**	**01 47 10.1**	**+0.1**
	baz=266						
J26L	**Joseph Creek**	**92.37**	**26**	P	**P**	**01 47 10.1**	**-0.2**
	baz=265						
MCARA	**McCarthy VSAT**	**92.38**	**29**	P	**P**	**01 47 11.2**	**+1.0**
	baz=266						
M27K	**Edge Creek, AK**	**92.98**	**28**	P	**P**	**01 47 13.1**	**-0.1**
	baz=267						
L27K	**Beaver Creek,**	**93.04**	**27**	IAmb	IAmb	01 47 15.0	
	comp=Z,11nm,1.1s						
L27K	**Beaver Creek,**	**93.04**	**27**	P	**P**	**01 47 14.5**	**+1.1**
	baz=267						
BCAR	**Beaver Creek A**	**93.06**	**27**	P	**P**	**01 47 13.8**	**+0.4**
CTG	**Chitna Glacier**	**93.17**	**29**	P	**P**	**01 47 14.5**	**+0.4**
	baz=267						
KLMR	**Klimovskoe**	**93.60**	**331**	*e*P	**P**	**01 47 12.6**	**-3.2**
KLMR				pmax	pmax		
	comp=Z,18nm,1.4s						
KLMR	**Klimovskoe**	**93.60**	**331**	*e*P	**P**	**01 47 12.7**	**-3.1**
KLMR				AMP		01 47 17.6	
	comp=Z,18nm,1.4s						
DAWY	**Dawson**	**94.17**	**26**	P	**P**	**01 47 18.7**	**+0.2**
	baz=269						
I29M	**Ogilvie Camp,**	**94.64**	**25**	P	**P**	**01 47 20.6**	**0.0**
	baz=270						
OBN	**Obninsk**	**95.07**	**325**	⇑*i*P	**P**	**01 47 21.9**	**-0.8**
OBN				*e*SS	SS	02 04 55.2	-5.7
OBN				pmax	pmax		
	comp=Z,35nm,2.5s						
EPYK	**Eagle Plains**	**95.28**	**24**	P	**P**	**01 47 23.1**	**-0.4**
	baz=272						
INK	**Inuvik**	**96.40**	**22**	P	**P**	**01 47 28.3**	**-0.1**
	baz=275						
BRTR	**Keskin Array B**	**97.16**	**309**	P	**P**	**01 47 31.2**	**-1.6**
	comp=Z,1.2nm,0.8s,baz=130,slow=6.7,SNR=7.5						
BRTR	**Keskin Array B**	**97.16**	**309**	*i* P	**P**	**01 47 31.8**	**-1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SNAA	**Sanae**	**98.31**	**194**	⇓*e*P	Pdif	01 47 37.3	0.0
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ARCES	**ARCESS Array B**	**98.76**	**340**	P	Pdif	01 47 39.3	+0.2
	comp=Z,9.0nm,1.0s,baz=58,slow=3.4,SNR=2.3						
FINES	**FINESS Array B**	**100.05**	**332**	P	**Pdif**	**01 47 43.8**	**-1.2**
	comp=Z,4.5nm,1.0s,baz=98,slow=10,SNR=3.1						
MNK	**Minsk**	**100.12**	**325**	*i* P	**Pdif**	**01 47 45.0**	**-0.5**
MNK				*i*		01 51 51.1	
MNK				*i* S	**SKSac**	**01 58 21.1**	**-0.4**
MNK				*i* SS	**SS**	**02 06 13.9**	**+1.9**
MNK				*i* SSS	SSS	02 10 08.0	
MNK				pmax	pmax		
	comp=N,15nm,1.2s						
MNK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,25nm,24.0s						
MNK				MLR	MLR		
	comp=N,379nm,24.0s						
MNK				MLR	MLR		
	comp=Z,95nm,20.0s						
MNK	**Minsk**	**100.12**	**325**	*i* P	**Pdif**	**01 47 45.0**	**-0.5**
MNK				*i* P	**Pdif**	**01 47 45.0**	**-0.5**
	comp=N,15nm,1.2s						
MNK				*i* P	**Pdif**	**01 47 45.0**	**-0.5**
	comp=Z,10.0nm,0.9s,baz=263						
MNK				*i* PP	**PP**	**01 51 51.2**	**-0.1**
MNK				*i* PPP	PPP	01 53 46.8	
MNK				*i* S	**SKSac**	**01 58 21.1**	**-0.4**
MNK				*i* PS	PS	02 00 36.0	-15
MNK				*i* SS	**SS**	**02 06 13.9**	**+1.9**
MNK				*i* SSS	SSS	02 10 08.1	
MNK				*i* LR	LR	02 33 04.1	
MNK				*i* LRM	MLR	02 33 20.0	
	comp=E,25nm,23.9s						
MNK				*i* LRM	MLR	02 33 32.7	
	comp=N,379nm,23.9s						
MNK				*i* LRM	MLR	02 34 02.7	
	comp=Z,95nm,19.5s						
GERES	**GERESS Array B**	**109.94**	**321**	PKiKP	**PKiKP**	**01 52 30.0**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=94,slow=1.5,SNR=5.2						
PDAR	**Pinedale Array**	**115.20**	**44**	PKP	**PKPdf**	**01 52 42.8**	**+0.9**
	comp=Z,1.9nm,1.1s,baz=259,slow=0.8,SNR=5.5						
PDAR	**Pinedale Array**	**115.20**	**44**		**PKPdf**	**01 52 42.0**	**+0.2**
ANMO	**Albuquerque**	**119.95**	**52**	*c i*PKIKP	**PKiKP**	**01 52 53.1**	**+1.9**
ANMO				pmax	pmax		
	comp=Z,10.0nm,2.5s						
TXAR	**Lajitas Array**	**123.83**	**57**	PKP	**PKiKP**	**01 52 59.1**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=259,slow=1.3,SNR=13						
P38A	**Dawn**	**127.47**	**42**	PKPdf	**PKPdf**	**01 53 04.0**	**-1.2**
TORD	**Torodi Ar. Bea**	**127.75**	**283**	PKP	**PKPdf**	**01 53 06.2**	**-0.2**
	comp=Z,3.4nm,0.9s,baz=84,slow=1.5,SNR=17						
PLCA	**Paso Flores**	**131.70**	**160**	PKP	**PKPdf**	**01 53 13.1**	**-0.2**
	comp=Z,1.4nm,1.0s,baz=138,slow=6.9,SNR=1.3						
DBIC	**Dimbokro**	**134.54**	**275**	PKP	**PKPdf**	**01 53 19.2**	**0.0**
	comp=Z,2.3nm,0.8s,baz=89,slow=8.3,SNR=3.1						
JTS	**Las Juntas de**	**145.27**	**78**	*c i*PKIKP	**PKPdf**	**01 53 39.8**	**+1.1**
LVC	**Limon Verde**	**147.88**	**147**	*c i*PKP2	**PKPab**	**01 53 48.4**	**-0.3**
LVC				pmax	pmax		
	comp=Z,54nm,2.5s						
LVC	**Limon Verde**	**147.88**	**147**		**PKPbc**	**01 53 47.0**	**+0.8**
CPUP	**Villa Florida**	**148.99**	**168**	PKPbc	**PKPbc**	**01 53 48.3**	**-0.3**
	comp=Z,6.4nm,0.9s,baz=195,slow=3.5,SNR=7.0						
CPUP	**Villa Florida**	**148.99**	**168**	PKP2	**PKPbc**	**01 53 47.9**	**-0.7**
CPUP	**Villa Florida**	**148.99**	**168**	PKPbc	**PKPbc**	**01 53 47.9**	**-0.7**
PB08	**IPOC Station P**	**149.68**	**143**	PKPbc	**PKPbc**	**01 53 51.4**	**+0.4**
OTAV	**Otavalo**	**151.77**	**97**	*c i*PKIKP	**PKPdf**	**01 53 52.1**	**+2.2**

OTAV				pmax	pmax		
	comp=Z,8.0nm,1.3s						
OTAV	Otavalo	151.77	97		PKPdf	01 53 50.6	+0.8
LPAZ	La Paz	153.22	140	PKPbc	PKPbc	01 53 59.4	-0.2
	comp=Z,3.4nm,0.9s,baz=129,slow=2.0,SNR=7.5						
LPAZ	La Paz	153.22	140	PKIKP	PKPdf	01 53 52.1	0.0
LPAZ	La Paz	153.22	140		PKPdf	01 53 52.1	0.0
CZSB	Cruzeiro do Su	154.87	118	PKPdf	PKPdf	01 53 53.6	-0.1

BJI **14** *01:45:57.9±0.0, 4°.37S×129°.66E, h30^{km}, mB5.6/63, mb5.2/75, Ms5.0/64, Ms7 4.7/62*
MOS **14** *01:45:58.2±0.9, 4°.16S×129°.42E, h27^{km}, mb5.6/63, MS4.5/8, Error ellipse: s-maj=11.4km s-min=4.9km az=114.5*
GCMT **14** *01:45:58.8±0.1, 4°.16S±0°.01×129°.48E±0°.01, h12^{km}, MW5.3/140, Moment Tensor Solution. s120,c175; s140,c267; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}1.00±.01; $M_{\theta\theta}$-1.01±.01; $M_{\phi\phi}$0.01±.01; $M_{r\theta}$0.31±.03; $M_{\theta\phi}$0.36±.01; $M_{\phi r}$-0.37±.04; Best double couple: $M_0$1.17000×10^{17} NP1:ϕ_s273.00000°, δ36.00000°, λ67.00000°. NP2:ϕ_s121.00000°, δ57.00000°, λ106.00000°. Principal axes: T 1.1390, Plg73.0000°, Azm72.0000°; N 0.0630, Plg13.0000°, Azm292.0000°; P -1.2010, Plg11.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC **14** *01:45:58.8±2.5, 4°.06S±0°.05×129°.53E±0°.05, h10^{km}±1^{km}, mb5.6/154, Mww5.3 Error ellipse: s-maj=9.3km s-min=8.6km az=216.0*
IDC **14** *01:45:59.2±2.1, 4°.17S×129°.53E, h20^{km}±13^{km}, mb5.0/30, mb1 5.0/35, mb1mx4.9/40, mbtmp5.1/35, ML4.3/5, MS4.6/27, Ms1 4.6/27, ms1mx4.4/42, Error ellipse: s-maj=13.8km s-min=9.0km az=72.0*
DJA **14** *01:46:01.6±0.5, 4°S±2°×13°0E±°, h28^{km}±5^{km}, M5.4/81, mB5.8/66, mb5.3/81, MLv5.4/14, Mw(mB)5.4/66, MwMwp5.3/3, Mwp5.5/3*
KLM **14** *01:46:02, 4°.12S×129°.90E, h49^{km}, mb5.6*
NEIC **14** *01:46:02, 4°.16S×129°.74E, h16^{km}, Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.95; $M_{\theta\theta}$-1.03; $M_{\phi\phi}$0.08; $M_{r\theta}$-0.11; $M_{\theta\phi}$0.51; $M_{\phi r}$0.68; Fault plane solution: $M_0$1.31000×10^{17} NP1:ϕ_s85.00000°, δ43.00000°, λ46.00000°. NP2:ϕ_s318.00000°, δ60.00000°, λ123.00000°. Principal axes: T 1.3306, Plg60.0000°, Azm278.0000°; N -0.0426, Plg28.0000°, Azm120.0000°; P -1.2880, Plg10.0000°, Azm25.0000°;*
ISC 14 01:46:00.9±0.6**, 4°.18S**±0°.03×**129°.56E**±0°.04**, h32**^{km}±3^{km}**, n785, **σ1^s**38**/811**, mb5.5**/178**, MS4.6**/46**, 38C-16D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.48	135	P	Pb	01 46 11.1	0.0
MSAI	Masohi	1.05	323	P	Pn	01 46 16.9	-2.5
AAI	Ambon	1.45	290	P	Pn	01 46 22.7	-2.3
FAKI	Fak Fak	2.96	65	P	Pn	01 46 46.4	+0.6
FAKI	Fak Fak	2.96	65		Pn	01 46 46.2	+0.5
FAKI	Fak Fak	2.96	65	P	Pn	01 46 47.2	+1.4
SIJI	Sorong	3.71	27	Pn	Pn	01 46 55.3	-0.8
	66nm,0.3s,baz=44,slow=19,SNR=85						
SIJI				Sn	Sn	01 47 37.0	-1.6
	210nm,0.3s,baz=33,slow=17,SNR=9.1						
SIJI				LR	LR	01 48 58.1	
	comp=Z,23µm,18.9s,baz=199,slow=48						
SWI	Sorong	3.71	27	P	Pn	01 46 56.1	+0.1
LBMI	Labuha	4.08	330	P	Pn	01 47 01.7	+0.5
SAUI	Saumlaki	4.15	156	P	Pn	01 47 06.2	+4.1
SAUI	Saumlaki	4.15	156	Pn	Pn	01 47 05.6	+3.4
SAUI	Saumlaki	4.15	156	P	Pn	01 47 05.8	+3.7
SANI	Sanana	4.15	301	P	Pn	01 47 01.7	-0.5
SANI	Sanana	4.15	301	P	Pn	01 47 02.3	+0.1
TNTI	Ternate	5.39	336	P	Pn	01 47 19.5	+0.3
	1.3nm5µm376nm,1.3s						
TNTI	Ternate	5.39	336	Pn	Pn	01 47 18.8	-0.4
TNTI	Ternate	5.39	336	P	Pn	01 47 19.8	+0.6
SRPI	Serui, Papua	7.05	71	P	Pb	01 47 55.9	-6.8
BAKI	Biak	7.18	66	P	Pn	01 47 44.9	+1.1
	289nm,1.5s						
KMSI	Cibinong	7.31	310	P	Pn	01 47 45.3	-0.3
	4.6nm5µm621nm,0.7s						
SOEI	Soe	7.63	223	P	Pn	01 47 54.3	+4.2
	2.1nm5µm270nm,1.3s						
SOEI	Soe	7.63	223	Pn	Pn	01 47 53.0	+2.9
SOEI	Soe	7.63	223	P	Pn	01 47 53.7	+3.6
DRS	Darwin Rock St	8.30	171	P	Pn	01 48 02.1	+2.9
BATI	Baumata	8.37	224	Pn	Pn	01 47 59.7	-0.4
	21nm,0.3s,baz=41,slow=7.2,SNR=10						
BATI				Sn	Sn	01 49 34.1	+0.4
	baz=319,slow=23,SNR=1.2						
BATI				LR	LR	01 51 31.7	
	comp=Z,12µm,22.0s,baz=32,slow=40						
BATI	Baumata	8.37	224	P	Pn	01 48 01.8	+1.6
	2µm106nm,1.5s						
MMRI	Maumere	8.52	238	P	Pn	01 48 07.9	+5.7
MMRI	Maumere	8.52	238	Pn	Pn	01 48 05.0	+2.9
MMRI	Maumere	8.52	238	P	Pn	01 48 06.7	+4.5
APSI	Ampana	8.55	292	P	Pn	01 48 03.0	+0.4
	6µm588nm,1.1s						
MTN	Manton Dam	8.74	170	P	Pn	01 48 08.1	+2.9
	baz=8.8,SNR=12						
MTN	Manton Dam	8.74	170	Pn	Pn	01 48 08.0	+2.7
MTN	Manton Dam	8.74	170	P	Pn	01 48 08.6	+3.3
MRSI	Marisa	8.91	301	P	Pn	01 48 08.2	+0.6
	3µm217nm,1.0s						
KDU	Kakadu	8.93	161	P	Pn	01 48 07.6	-0.1
	baz=9.0,SNR=64						
KDU	Kakadu	8.93	161	P	Pn	01 48 07.7	-0.1
EDFI	Ende, Flores	9.04	239	P	Pn	01 48 11.5	+2.0
	116nm,1.2s						
BSSI	Bau Bau, Buton	9.24	257	P	Pn	01 48 12.4	+0.3
	3µm238nm,1.2s						
BNSI	Bone	9.43	268	P	Pn	01 48 18.7	+4.0
	5µm270nm,1.4s						
BKSI	Bulukumba	9.48	263	P	Pn	01 48 15.9	+0.6
	4µm248nm,2.0s						
SPSI	Sidrap Palu	9.77	271	P	Pn	01 48 23.5	+4.1
	4µm228nm,1.6s						
TTSI	Tana Toraja	9.79	276	P	Pn	01 48 23.8	+4.2
	3µm153nm,1.2s						
KAPI	Kappang	9.81	265	Pn	Pn	01 48 22.4	+2.5
	7.2nm,0.3s,baz=135,slow=7.1,SNR=28						
KAPI				Sn	Sn	01 50 09.8	+0.7
	baz=164,slow=14,SNR=1.0						
KAPI				LR	LR	01 52 21.1	
	comp=Z,2µm,19.4s,baz=106,slow=39						
KAPI	Kappang	9.81	265	P	Pn	01 48 22.7	+2.7
KAPI	Kappang	9.81	265	P	Pn	01 48 25.0	+5.0
KAPI	Kappang	9.81	265	Pn	Pn	01 48 22.6	+2.7
TOLI2	Tolitoli	10.23	301	Pn	Pn	01 48 26.0	+0.3
TOLI2	Tolitoli	10.23	301	P	Pn	01 48 26.3	+0.6
MPSI	Mapaga	10.65	295	P	Pn	01 48 30.9	-0.5
	2µm96nm,1.6s						
GENI	Genyem	10.70	82	P	Pn	01 48 30.6	-1.5
	5µm124nm,0.7s						
GENI	Genyem	10.70	82	P	Pn	01 48 32.2	+0.1
BASI	Baing, Sumba	10.74	236	P	Pn	01 48 36.0	+3.3
	6µm162nm,1.0s						
KNRA	Kununurra	11.45	184	P	Pn	01 48 42.8	+0.5
	baz=12,SNR=15						
KNRA	Kununurra	11.45	184	Pn	Pn	01 48 40.4	-1.9
WBSI	Waikabubak, Su	11.46	241	P	Pn	01 48 51.0	+8.5
DAV	Davao City (W)	11.87	340	Pn	Pn	01 48 51.4	+3.4
	76nm,0.3s,baz=319,slow=4.6,SNR=2.2						
DAV				LR	LR	01 53 38.7	
	comp=Z,3µm,19.8s,baz=178,slow=39						
DAV	Davao City (W)	11.87	340	Pn	Pn	01 48 47.4	-0.7
PLAI	Plampang	12.59	248	P	Pn	01 49 02.4	+4.5
	8µm271nm,1.4s						
PLAI	Plampang	12.59	248	P	Pn	01 49 00.7	+2.8
SMKI	Samarinda	12.89	286	P	P	01 49 20.3	+7.9
BKB	Balikpapan	12.98	283	Pn	Pn	01 49 07.5	+4.2
KBKI	Kotabaru	13.40	273	P	P	01 49 17.2	-0.8
FITZ	Fitzroy Crossi	14.35	195	Pn	Pn	01 49 20.4	-1.6
	0.7nm,0.3s,baz=24,slow=13,SNR=24						
FITZ				Sn	Sn	01 51 48.2	-12
	1.0nm,0.3s,baz=123,slow=15,SNR=0.8						
FITZ				LR	LR	01 55 00.9	
	comp=Z,2µm,21.5s,baz=42,slow=38						
FITZ	Fitzroy Crossi	14.35	195	P	Pn	01 49 24.7	+2.7
	baz=14,SNR=20						
MYLDM	Lahad Datu	14.44	310		Pn	01 49 24.2	+0.9
BBKI	Banjar Baru	14.71	272	P	Pn	01 49 28.4	+1.5
	16µm10µm291nm,1.6s						
SRBI	Singaraja	14.78	254	P	Pn	01 49 31.1	+3.2
	10µm436nm,1.4s						
DNP	Denpasar	14.94	252	P	P	01 49 38.9	+3.7
MTKI	Muara Teweh, K	15.00	282	P	Pn	01 49 33.3	+2.5
	81nm,0.7s						
IGBI	Denpasar	15.04	251	P	Pn	01 49 34.1	+2.7
	4µm124nm,0.9s						
ABJI	Asem Bagus	15.66	256	P	P	01 49 43.2	0.0
	10µm362nm,1.7s						
SPMM	Sapulut	15.79	304	P	Pn	01 49 42.0	+0.9
JAGI	Jajag, Banyuwa	15.90	254	P	P	01 49 45.5	-0.4
	6µm214nm,1.4s						
JAGI	Jajag, Banyuwa	15.90	254	Pn	Pn	01 49 42.7	+0.2
JAGI	Jajag, Banyuwa	15.90	254	P	P	01 49 45.3	-0.6
WB0	Warramunga Arr	16.19	163	Pn	Pn	01 49 43.8	-2.4
BLJI	Banyuglugur	16.27	257	P	P	01 49 50.2	+0.2
	6µm191nm,1.3s						
WRAB	Tennant Creek	16.34	164*d*	*i*P	Pn	01 49 44.1	-4.0
WRAB				pmax	pmax		
	comp=Z,109nm,1.7s						
WRAB	Tennant Creek	16.34	164	Pn	Pn	01 49 45.0	-3.1
WRAB				IAmb	IAmb	01 49 59.5	
	comp=Z,636nm,1.9s						
WRA	Warramunga Arr	16.34	164	Pn	Pn	01 49 45.0	-3.1
	comp=Z,2.2nm,0.3s,baz=350,slow=13,SNR=86						
WRA				Sn	Sn	01 52 43.2	-5.4
	comp=Z,0.8nm,0.3s,baz=348,slow=22,SNR=5.1						
WRA				LR	LR	01 56 43.8	
	comp=Z,5µm,19.8s,baz=345,slow=39						
WRA				ScS	ScS	02 01 50.9	-1.5
	comp=Z,0.0nm,0.3s,baz=334,slow=3.7,SNR=2.0						
WRA	Warramunga Arr	16.34	164	*i* P	Pn	01 49 44.7	-3.5
WRA				pmax	pmax		
	comp=Z,12nm,0.6s						
WRA	Warramunga Arr	16.34	164	Pn	Pn	01 49 45.2	-3.0
WB2	Warramunga Arr	16.34	164	P	Pn	01 49 45.9	-2.3
	baz=16						
WB2	Warramunga Arr	16.34	164	Pn	Pn	01 49 45.0	-3.2
WR0	Warramunga Arr	16.41	163	Pn	Pn	01 49 45.8	-3.3
GMJI	Gumukmas	16.53	255	P	P	01 49 54.2	+1.3
	comp=Z,6µmcomp=Z,274nm,1.2s						
COEN	Coen	16.57	127	Pn	Pn	01 49 49.2	-1.9
COEN	Coen	16.57	127	P	Pn	01 49 50.3	-0.8
KKM	Kota Kinabalu	16.76	307		Pn	01 49 53.5	0.0
KKM				IAmb	IAmb	01 50 02.9	
	comp=Z,476nm,1.4s						
KKM	Kota Kinabalu	16.76	307	P	Pn	01 49 54.6	+1.0
MANU	Manus Island	17.90	84		P	01 50 07.9	-0.2
PBKI	Pangkalan Bun	17.92	274	P	P	01 50 13.9	+5.6
PMG	Port Moresby	18.22	107	P	Pn	01 50 11.5	-0.1
	comp=Z,3.9nm,0.3s,baz=302,slow=11,SNR=42						
PMG	Port Moresby	18.22	107	P	P	01 50 11.8	+0.2
PMG				pmax	pmax		
	comp=Z,253nm,1.4s						
PMG	Port Moresby	18.22	107		P	01 50 11.8	+0.2
PMG	Port Moresby	18.22	107	P	P	01 50 12.8	+1.2
PMG	Port Moresby	18.22	107	P	P	01 50 12.8	+1.2
SBUM	Sibu	18.54	291	P	Pn	01 50 16.5	+1.0
STKI	Sintang	18.56	283	P	Pn	01 50 18.0	+2.3
	comp=Z,9µmcomp=Z,66nm,1.0s						
PCJI	Pacitan	18.70	257	P	P	01 50 18.1	+1.2
	comp=Z,5µmcomp=Z,301nm,1.2s						
WOJI	Wonogiri, Jawa	18.89	258	P	P	01 50 20.2	+1.3
	comp=Z,3µmcomp=Z,194nm,1.4s						
QIS	Mount Isa	18.98	150	P	P	01 50 20.5	+0.5
	baz=19,SNR=59						
QIS	Mount Isa	18.98	150	P	P	01 50 20.4	+0.4
SMRI	Semarang	19.24	261	P	Pn	01 50 24.7	+0.7
	comp=Z,10µmcomp=Z,441nm,1.4s						
SMRI	Semarang	19.24	261	P	Pn	01 50 25.1	+1.1
SMRI	Semarang	19.24	261	P	Pn	01 50 26.2	+2.2
UGM	Wanagama	19.29	258	P	Pn	01 50 25.7	+1.1
	comp=Z,6µmcomp=Z,262nm,2.0s						
UGM	Wanagama	19.29	258	P	Pn	01 50 25.7	+1.1
UGM				IAmb	IAmb	01 50 53.9	
	comp=Z,570nm,1.5s						
UGM	Wanagama	19.29	258	P	Pn	01 50 26.8	+2.2
MBWA	Marble Bar	19.39	209	P	Pn	01 50 26.5	+0.8
MBWA	Marble Bar	19.39	209	P	Pn	01 50 26.5	+0.8
YOGI	Yogyakarta	19.50	258	P	Pn	01 50 30.9	+3.9
PSA00	Pilbara Seismi	19.69	208	P	P	01 50 29.1	+1.4
PSA00				IAmb	IAmb	01 50 32.5	
	comp=Z,553nm,1.3s						
PSA00	Pilbara Seismi	19.69	208	P	P	01 50 28.5	+0.8
PSA00				IAmb	IAmb	01 50 37.4	
	comp=Z,582nm,1.7s						
PSA00	Pilbara Seismi	19.69	208	P	Pn	01 50 29.9	+0.6
AS31	Alice Springs	19.82	168	P	P	01 50 29.6	+0.6
ASAR	Alice Springs	19.82	168	P	P	01 50 29.9	+0.8
	comp=Z,3.2nm,0.3s,baz=350,slow=11,SNR=149						
ASAR				S	S	01 54 06.3	-4.5
	comp=Z,0.1nm,0.3s,baz=353,slow=22,SNR=1.7						
ASAR				PcP	PcP	01 54 46.2	-0.2
	comp=Z,0.5nm,0.3s,baz=0.7,slow=1.8,SNR=2.4						
ASAR				ScP	ScP	01 58 20.7	+0.2
	comp=Z,0.2nm,0.3s,baz=337,slow=2.8,SNR=4.9						
ASAR				LR	LR	01 58 48.2	
	comp=Z,4µm,18.9s,baz=348,slow=39						
ASAR				ScS	ScS	02 01 59.9	-3.1
	comp=Z,0.1nm,0.3s,baz=227,slow=39,SNR=2.8						
MTSU	Mount Surprise	20.02	135	P	P	01 50 32.2	+1.0
	baz=20,SNR=72						
MTSU	Mount Surprise	20.02	135	P	Pn	01 50 32.7	-0.5
KSM	Kuching	20.05	286	P	P	01 50 33.0	+1.4
KSM	Kuching	20.05	286	P	P	01 50 32.2	+0.6
KSM				IAmb	IAmb	01 50 33.9	
	comp=Z,415nm,1.2s						
KSM	Kuching	20.05	286	P	P	01 50 32.8	+1.2
TGY	Tagaytay City	20.08	335	P	P	01 50 33.0	+1.0
	comp=Z,163nm,0.3s,baz=57,slow=2.7,SNR=7.5						
WRKA	Warakurna	20.77	183	P	P	01 50 40.2	+0.7
	baz=21,SNR=248						
WRKA	Warakurna	20.77	183	P	Pn	01 50 41.8	-0.2
CMJI	Cimerak	21.30	259	P	P	01 50 45.5	+0.3
	comp=Z,2µmcomp=Z,72nm,1.1s						
LEM	Lembang	22.00	262	P	P	01 50 49.6	-3.3
	comp=Z,12nm,0.4s,baz=346,slow=21,SNR=1.8						
LEM				LR	LR	01 59 59.1	
	comp=Z,2µm,21.5s,baz=83,slow=38						
LEM	Lembang	22.00	262	P	P	01 50 55.0	+2.1
	comp=Z,2µmcomp=Z,66nm,1.4s						
CNJI	Cibinong	22.53	261	P	P	01 50 56.1	-2.3
	comp=Z,3µmcomp=Z,148nm,1.2s						
RABL	Rabaul	22.54	91	P	P	01 50 59.4	+0.8
CTA	Charters Tower	22.68	136	P	P	01 51 00.3	+0.4
	comp=Z,44nm,0.6s,baz=316,slow=14,SNR=51						
CTAO	Charters Tower	22.68	136	P	P	01 51 00.1	+0.1
CTAO				pmax	pmax		
	comp=Z,78nm,0.8s						
CTAO	Charters Tower	22.68	136	P	P	01 51 00.1	+0.1
CTAO	Charters Tower	22.68	136	P	P	01 51 01.2	+1.3
GIRL	Giralia	23.60	218	P	P	01 51 11.2	+2.1
	baz=24,SNR=5.1						
GIRL	Giralia	23.60	218	P	P	01 51 10.7	+1.5
GIRL	Giralia	23.60	218	P	P	01 51 11.7	+2.5
OOD	Oodnadatta	24.20	167	P	P	01 51 15.6	+0.9
	comp=Z,124nm,1.5s						
MEEK	Meekatharra	24.66	204	P	P	01 51 19.8	+0.8
	baz=25,SNR=9.5						
MEEK	Meekatharra	24.66	204	P	P	01 51 20.3	+1.3
DSRI	Dabo	25.23	278	P	P	01 51 27.2	+2.9
	comp=Z,2µmcomp=Z,44nm,1.2s						
MDSI	Maura Dua	25.31	268	P	P	01 51 40.2	+15
INKA	Innaminka	25.74	157	P	P	01 51 29.6	+0.9
MULG	Mulgathing	26.30	171	P	P	01 51 34.3	+0.5
QLP	Quilpie	26.33	149	P	P	01 51 34.9	+0.8
MYKOM	Kota Tinggi	26.37	283	IAmb	IAmb	01 52 01.5	
	comp=Z,104nm,1.1s						
DLV	T Lat	26.38	308	P	P	01 51 36.4	+1.5
FORT	Forrest	26.49	183	P	P	01 51 36.5	+1.0
	baz=27,SNR=8.3						
FORT	Forrest	26.49	183	P	P	01 51 35.9	+0.4
FORT				IAmb	IAmb	01 51 41.1	
	comp=Z,334nm,1.6s						
FORT	Forrest	26.49	183	P	P	01 51 36.4	+0.9
LCRK	Leigh Creek	27.37	164	P	P	01 51 44.5	+1.1
RK1H	Rockhampton Ha	27.81	135	P	P	01 51 49.1	+1.7
MORW	Morawa	27.88	206	P	P	01 51 49.1	+1.1
	baz=28,SNR=3.3						
MORW	Morawa	27.88	206	P	P	01 51 51.0	+3.0
TPUB	Ta-pu	28.68	343	P	P	01 51 53.8	-1.4
TPUB	Ta-pu	28.68	343	P	P	01 51 54.6	-0.5
BLDU	Ballidu	28.95	203	P	P	01 51 59.1	+1.6
	baz=29,SNR=4.3						
BLDU	Ballidu	28.95	203	P	P	01 52 00.4	+2.8
SSLB	Suanglung	29.04	344	IAmb	IAmb	01 52 00.1	
	comp=Z,119nm,1.2s						
SSLB	Suanglung	29.04	344	P	P	01 51 57.7	-0.7
BBOO	Buckleboo	29.12	169	P	P	01 51 59.4	+0.4
	baz=29,SNR=14						
BBOO	Buckleboo	29.12	169	P	P	01 51 58.7	-0.3
BBOO				IAmb	IAmb	01 52 00.7	
	comp=Z,131nm,1.8s						
BBOO	Buckleboo	29.12	169	P	P	01 51 59.4	+0.4
PPI	Padang Panjang	29.37	276	P	P	01 52 02.3	+0.8
	comp=Z,37nm,0.9s						
KLBR	Kellerberrin	29.44	201	P	P	01 52 03.4	+1.5
	baz=30,SNR=7.7						
KLBR	Kellerberrin	29.44	201	P	P	01 52 02.3	+0.5
EIDS	Eidsvold	29.51	138	P	P	01 52 03.9	+1.4
WHYH	Whyalla	29.66	166	P	P	01 52 04.4	+0.6
YHNB	Yeheng	29.77	345	P	P	01 52 06.0	+1.1
STKA	Stephens Creek	29.78	159	P	P	01 52 05.2	+0.4
	comp=Z,11nm,1.0s,baz=326,slow=10,SNR=9.7						
STKA				ScP	ScP	01 58 49.2	+1.1
	comp=Z,2.1nm,0.6s,baz=322,slow=5.4,SNR=3.6						
STKA				LR	LR	02 04 45.7	
	comp=Z,4µm,19.7s,baz=326,slow=38						
STKA	Stephens Creek	29.78	159	P	P	01 52 05.7	+0.9
	baz=30,SNR=7.7						
STKA	Stephens Creek	29.78	159	P	P	01 52 04.4	-0.5
STKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	Stephens Creek	29.78	159	P	P	01 52 04.3	-0.5
STKA	Stephens Creek	29.78	159	P	P	01 52 05.8	+0.9
IPM	Ipoh	29.78	286	P	P	01 52 04.8	-0.3
IPM	Ipoh	29.78	286	P	P	01 52 05.3	+0.2
	comp=Z,150nm,1.1s						
QIZ	Qiongzhong	30.15	321	P	P	01 52 09.4	+1.1
QIZ				S	S	01 57 08.3	+2.8
QIZ				pmax	pmax		
	comp=Z,29nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,390nm,4.8s						
QIZ				LR	LR		
	comp=Z,450nm,23.1s						
QIZ				LR	LR		
	comp=Z,530nm,11.4s						
QIZ				LR	LR		
	comp=Z,650nm,11.9s						
QIZ	Qiongzhong	30.15	321	P	P	01 52 09.8	+1.5
MNSI	Mandailing Nat	30.37	279	P	P	01 52 13.2	+2.9
KULM	Kulim	30.37	288	P	P	01 52 11.0	+0.7
KULM	Kulim	30.37	288	IAmb	IAmb	01 52 30.7	
	comp=Z,100nm,1.0s						
HTT	Hallett	30.38	164	P	P	01 52 11.2	+1.0
	baz=30,SNR=5.1						
HTT	Hallett	30.38	164	P	P	01 52 11.3	+1.0
HNR	Honiara	30.60	101	P	P	01 52 12.3	-0.1
	comp=Z,38nm,0.4s,baz=158,slow=8.9,SNR=6.7						
NWAO	Narrogin (SRO)	30.83	201	P	P	01 52 14.6	+0.4
NWAO	Narrogin (SRO)	30.83	201	P	P	01 52 15.9	+1.7
QZH	Quanzhou	30.85	340	*e*P	P	01 52 14.9	+0.5
QZH				S	S	01 57 16.9	+0.6
QZH				LR	LR		
	comp=Z,660nm,9.9s						
JOW	Kunigami	30.86	358	P	P	01 52 15.1	+0.7
JOW				IAmb	IAmb	01 52 16.4	
	comp=Z,164nm,1.3s						
JOW	Kunigami	30.86	358	P	P	01 52 15.7	+1.3
CMSA	Cobar Meteorol	31.15	153	P	P	01 52 17.6	+0.7
	baz=31						
CMSA	Cobar Meteorol	31.15	153	P	P	01 52 17.9	+0.9
PSI	Prapat	31.39	282	P	P	01 52 17.9	-1.6
	comp=Z,19nm,1.0s,baz=101,slow=9.7,SNR=19						
TWOA	Tennyson Woods	31.81	166	P	P	01 52 24.7	+1.9
GSI	Gunungsitoli	32.43	279	P	P	01 52 28.2	-0.3
	comp=Z,54nm,1.0s						
GSI	Gunungsitoli	32.43	279	P	P	01 52 26.7	-1.8
GSI				IAmb	IAmb	01 52 47.1	
	comp=Z,117nm,1.4s						
KCSI	Kotacane, Aceh	32.68	283	P	P	01 52 35.0	+4.3
ARMA	Armidale	33.39	144	P	P	01 52 37.0	+0.2
ARMA	Armidale	33.39	144	P	P	01 52 38.7	+1.9
LHMI	Lhok Sumawe	33.89	286	P	P	01 52 42.5	+1.3
	comp=Z,3µmcomp=Z,144nm,1.0s						
LHMI	Lhok Sumawe	33.89	286	P	P	01 52 40.2	-1.0
LHMI	Lhok Sumawe	33.89	286	P	P	01 52 41.8	+0.6
ARPS	Mount Arapiles	34.34	162	P	P	01 52 46.4	+1.6
	baz=34,SNR=8.8						
ARPS	Mount Arapiles	34.34	162	P	P	01 52 46.1	+1.3
JSU	Suzuyama	35.50	1	P	P	01 52 54.4	-0.5
SLVN	Son La	35.71	316	IAmb	IAmb	01 53 12.2	
	comp=Z,114nm,1.5s						
BRAT	Ballarat	35.72	160	P	P	01 52 58.9	+2.2
CAN	Canberra	35.82	152	P	P	01 52 59.5	+1.8
SSE	Sheshan	35.98	348	P	P	01 53 00.4	+1.4
SSE				S	S	01 58 36.3	+0.7
SSE				pmax	pmax		
	comp=Z,27nm,1.3s						
SSE				pmax	pmax		
	comp=Z,320nm,5.1s						
SSE				LR	LR		
	comp=Z,210nm,18.4s						
SSE				LR	LR		
	comp=Z,330nm,18.0s						
CNB	Canberra Magne	35.99	152	P	P	01 53 01.3	+2.2
	baz=36						
TOO	Toolangi	36.29	158	P	P	01 53 03.6	+2.0
	baz=36,SNR=5.3						
TOO	Toolangi	36.29	158	P	P	01 53 03.4	+1.8
TOO				pmax	pmax		
	comp=Z,138nm,1.9s						
TOO	Toolangi	36.29	158	P	P	01 53 03.4	+1.8
TOO				IAmb	IAmb	01 53 24.6	
	comp=Z,138nm,1.9s						
TOO	Toolangi	36.29	158	P	P	01 53 03.8	+2.2
JNU	Nakatsue	37.12	2	P	P	01 53 07.4	-1.3
	comp=Z,24nm,0.6s,baz=162,slow=5.3,SNR=14						
JNU	Nakatsue	37.12	2	P	P	01 53 07.4	-1.3
JNU				IAmb	IAmb	01 53 10.9	
	comp=Z,178nm,1.3s						
NJ2	Nanjing	37.45	345	⇓P	P	01 53 11.3	-0.2
NJ2				pmax	pmax		
	comp=Z,47nm,0.9s						
WHN	Wuhan	37.47	338	⇓P	P	01 53 13.1	+1.4
WHN				PP	PnPn	01 54 41.8	+3.3
WHN				S	S	01 59 01.3	+2.9
WHN				pmax	pmax		
	comp=Z,460nm,1.7s						
WHN				LR	LR		
	comp=Z,960nm,4.3s						
WHN				LR	LR		
	comp=Z,2µm,11.4s						
WHN				LR	LR		
	comp=Z,2µm,27.8s						
CM31	Chiang Mai Arr	37.64	308	IAmb	IAmb	01 53 15.7	
	comp=Z,116nm,1.2s						
CMAR	Chiang Mai Arr	37.64	308	P	P	01 53 14.0	+0.7
	comp=Z,44nm,1.1s,baz=137,slow=7.1,SNR=124						
CMAR				PcP	PcP	01 55 30.7	0.0
	comp=Z,3.9nm,0.7s,baz=171,slow=2.6,SNR=3.0						
CMAR				ScP	ScP	01 59 17.9	+2.0
	comp=Z,1.1nm,0.3s,baz=151,slow=3.9,SNR=1.6						
CHTO	Chiang Mai	37.84	308	P	P	01 53 15.1	+0.1
CHTO				pmax	pmax		
	comp=Z,131nm,1.2s						
CHTO	Chiang Mai	37.84	308	P	P	01 53 16.4	+1.4
CHTO	Chiang Mai	37.84	308	P	P	01 53 15.1	+0.1
CHTO				IAmb	IAmb	01 53 17.1	
	comp=Z,132nm,1.1s						
CHTO	Chiang Mai	37.84	308	P	P	01 53 16.1	+1.1
JMN	Monobe	37.93	6	P	P	01 53 16.2	+0.7
JMN				IAmb	IAmb	01 53 18.6	
	comp=Z,178nm,1.2s						
SANVU	Saraoutou	38.67	110	P	P	01 53 23.4	+1.3
SANVU	Saraoutou	38.67	110	P	P	01 53 23.3	+1.3
KMI	Kunming	39.08	320	⇑P	P	01 53 26.8	+1.2
KMI				pP	sP	01 53 34.4	-2.6
KMI				sP	pwP	01 53 37.8	-1.6
KMI				S	S	01 59 25.0	+1.5
KMI				sS	sS	01 59 41.6	+4.6
KMI				pmax	pmax		
	comp=Z,62nm,1.3s						
KMI				pmax	pmax		
	comp=Z,490nm,3.7s						
KMI				LR	LR		

	comp=Z,490nm,13.0s						
KMI				LR	LR		
	comp=Z,290nm,11.7s						
KMI				LR	LR		
	comp=Z,540nm,20.9s						
JHS	Saijyo	39.12	5	IAmb	IAmb	01 53 28.4	
	comp=Z,172nm,1.3s						
ENH	Enshi	39.28	332	P	P	01 53 26.6	-0.4
JWT	Wachi	39.64	7	IAmb	IAmb	01 53 32.7	
	comp=Z,255nm,1.4s						
DZM	Mont Dzumac	39.91	120	eP	P	01 53 32.6	+0.2
	comp=Z,74nm,1.4s						
DZM	Mont Dzumac	39.91	120	eLR	LR	02 04 34.8	
	comp=Z,569nm,25.4s						
DZM	Mont Dzumac	39.91	120	P	P	01 53 32.6	+0.2
	comp=Z,8.5nm,0.6s,baz=320,slow=7.7,SNR=9.9						
DZM	Mont Dzumac	39.91	120	P	P	01 53 32.3	-0.2
DZM	Mont Dzumac	39.91	120	P	P	01 53 33.9	+1.5
INU	Inuyama	39.94	10	IAmb	IAmb	01 53 34.1	
	comp=Z,190nm,1.5s						
INU	Inuyama	39.94	10	P	P	01 53 33.1	+0.8
DGPR	DIGLIPUR	40.26	296	eP	P	01 53 33.9	-1.3
DGPR				IAmb	IAmb	01 53 46.3	
	comp=Z,29nm,0.9s						
YATNC	Mamie plateau,	40.29	120	P	P	01 53 36.7	+1.2
TJN	Taejon	40.40	357	c iP	P	01 53 36.5	+0.4
TJN	Taejon	40.40	357	P	P	01 53 37.1	+1.0
MAJO	Matsushiro	41.31	11	c iP	P	01 53 42.3	-1.4
MAJO				pmax	pmax		
	comp=Z,163nm,2.2s						
MAJO	Matsushiro	41.31	11	P	P	01 53 42.0	-1.7
MAJO	Matsushiro	41.31	11	P	P	01 53 42.8	-0.9
MAT	Matsushiro	41.31	11	P	P	01 53 42.5	-1.2
MAT				eS	S	01 59 54.4	-1.6
MJAR	Matsushiro Arr	41.31	11	P	P	01 53 42.5	-1.2
	comp=Z,14nm,0.5s,baz=161,slow=9.8,SNR=15						
MJAR				PcP	PcP	01 55 42.0	+0.1
	comp=Z,1.7nm,0.5s,baz=182,slow=5.4,SNR=2.0						
MJAR				LR	LR	02 08 13.8	
	comp=Z,756nm,20.7s,baz=195,slow=32						
MJAR	Matsushiro Arr	41.31	11	P	P	01 53 41.6	-2.1
MJAR				pmax	pmax		
	comp=Z,35nm,1.4s						
MJAR	Matsushiro Arr	41.31	11	P	P	01 53 41.6	-2.1
JYT	Yasato	41.41	13	IAmb	IAmb	01 53 46.9	
	comp=Z,70nm,0.7s						
KSRS	Korea Array	41.45	358	P	P	01 53 44.5	-0.3
	comp=Z,10nm,0.6s,baz=177,slow=11,SNR=34						
KSRS				PcP	PcP	01 55 42.6	+0.4
	comp=Z,1.9nm,0.7s,baz=159,slow=2.0,SNR=2.8						
KSRS				LR	LR	02 09 41.0	
	comp=Z,957nm,21.0s,baz=164,slow=34						
KS19	Wonju Array Si	41.50	358	P	P	01 53 44.0	-1.2
KS19				IAmb	IAmb	01 53 47.1	
	comp=Z,186nm,1.8s						
INCN	Inchon	41.54	356	P	P	01 53 45.7	+0.1
INCN				pmax	pmax		
	comp=Z,205nm,1.5s						
INCN	Inchon	41.54	356	P	P	01 53 45.7	+0.1
INCN				IAmb	IAmb	01 53 47.7	
	comp=Z,205nm,1.4s						
INCN	Inchon	41.54	356	P	P	01 53 46.8	+1.2
CD2	Chengdu	42.72	327	P	P	01 53 54.8	-0.5
CD2				S	S	02 00 13.8	-3.3
CD2				pmax	pmax		
	comp=Z,60nm,1.4s						
CD2				LR	LR		
	comp=Z,1μm,12.2s						
CD2				LR	LR		
	comp=Z,1μm,9.3s						
CD2				LR	LR		
	comp=Z,850nm,12.2s						
XAN	Xi'an	42.72	334	P	P	01 53 54.4	-0.9
XAN				pP	pP	01 54 02.5	-1.0
XAN				PP	PP	01 55 36.9	+2.1
XAN				S	S	02 00 11.8	-5.2
XAN				ScS	SnSn	02 03 46.8	+2.6
XAN				pmax	pmax		
	comp=Z,50nm,1.5s						
XAN				pmax	pmax		
	comp=Z,520nm,3.7s						
XAN				LR	LR		
	comp=Z,500nm,22.7s						
XAN				LR	LR		
	comp=Z,650nm,19.9s						
XAN				LR	LR		
	comp=Z,1μm,22.7s						
JSD	Sado	42.78	10	P	P	01 53 53.9	-1.6
JSD				IAmb	IAmb	01 53 59.3	
	comp=Z,171nm,1.6s						
DL2	Dalian	43.50	351	P	P	01 54 02.3	+0.9
DL2				S	S	02 00 30.3	+2.2
DL2				pmax	pmax		
	comp=Z,53nm,1.4s						
DL2				pmax	pmax		
	comp=Z,500nm,5.0s						
DL2				LR	LR		
	comp=Z,630nm,16.5s						
DL2				LR	LR		
	comp=Z,590nm,17.1s						
DL2				LR	LR		
	comp=Z,810nm,21.4s						
TIY	Taiyuan	44.62	341	⇓P	P	01 54 10.9	+0.3
TIY				pP	pP	01 54 18.0	-0.8
TIY				sP	pwP	01 54 25.1	+1.2
TIY				S	S	02 00 45.3	+0.6
TIY				sS	sS	02 01 05.8	+7.5
TIY				pmax	pmax		
	comp=Z,22nm,0.7s						
TIY				pmax	pmax		
	comp=Z,590nm,4.7s						
TIY				LR	LR		
	comp=Z,260nm,7.1s						
TIY				LR	LR		
	comp=Z,250nm,10.0s						
TIY				LR	LR		
	comp=Z,540nm,25.1s						
BJT	Baijiatuau	45.68	346	IAmb	IAmb	01 54 20.1	
	comp=Z,91nm,1.4s						
BJI	Beijing	45.70	346	P	P	01 54 18.8	-0.1
BJI				pP	pwP	01 54 34.8	+2.4
BJI				S	S	02 01 00.6	+0.6
BJI				pmax	pmax		
	comp=Z,54nm,1.5s						
LZH	Lanzhou	46.74	331	eP	P	01 54 28.1	+0.7
LZH				pP	pP	01 54 35.3	-0.3
LZH				sP	pwP	01 54 39.0	-2.3
LZH				S	S	02 01 15.8	+0.3
LZH				sS	sS	02 01 34.1	+5.1
LZH				SS	SS	02 04 41.3	-1.0
LZH				pmax	pmax		
	comp=Z,85nm,1.1s						
LZH				pmax	pmax		
	comp=Z,570nm,4.6s						
LZH				LR	LR		
	comp=Z,570nm,13.3s						
LZH				LR	LR		
	comp=Z,510nm,12.5s						
LZH				LR	LR		
	comp=Z,2μm,19.0s						
SHL	Shillong	47.01	311	P	P	01 54 28.6	-1.2
SHL				pmax	pmax		
	comp=Z,66nm,1.1s						
SHL	Shillong	47.01	311	eP	P	01 54 28.8	-1.0
SHL				IAmb	IAmb	01 54 33.6	
	comp=Z,40nm,1.2s						
SHL	Shillong	47.01	311	P	P	01 54 30.4	+0.7
	SNR=22						
SHL	Shillong	47.01	311	P	P	01 54 28.6	-1.2
SHL				IAmb	IAmb	01 54 31.0	
	comp=Z,66nm,1.1s						
VLA	Vladivostok	47.13	2	c iP	P	01 54 31.3	+1.2
VLA				pmax	pmax		
	comp=Z,186nm,1.7s						
ERM	Erimo	47.62	14	d iP	P	01 54 35.9	+2.0
ERM				pmax	pmax		
	comp=Z,112nm,1.6s						
HHC	Hu-ho-hao-te	47.75	342	eP	P	01 54 35.0	-0.2
HHC				S	S	02 01 32.4	+2.8
HHC				ScS	ScS	02 04 25.1	-1.5
HHC				pmax	pmax		
	comp=Z,34nm,1.2s						
HHC				pmax	pmax		
	comp=Z,630nm,5.0s						
HHC				LR	LR		
	comp=Z,290nm,15.3s						
HHC				LR	LR		
	comp=Z,470nm,15.3s						
HHC				LR	LR		
	comp=Z,680nm,16.1s						
CN2	Changchun	47.91	356	eP	P	01 54 36.1	-0.1
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
CN2				pmax	pmax		
	comp=Z,400nm,5.0s						
CN2				LR	LR		
	comp=Z,700nm,13.0s						
CN2				LR	LR		
	comp=Z,400nm,13.0s						
CN2				LR	LR		
	comp=Z,800nm,19.0s						
BTO	Baotou	48.04	340	eP	P	01 54 37.3	-0.1
USRK	Ussuriysk Ar.	48.21	2	P	P	01 54 38.7	+0.2
	comp=Z,16nm,0.6s,baz=182,slow=7.2,SNR=47						
USRK				LR	LR	02 15 44.9	
	comp=Z,858nm,19.1s,baz=143,slow=37						
MDJ	Mudanjiang	48.58	0	P	P	01 54 42.8	+1.4
MDJ				sP	pwP	01 54 56.0	+0.9
MDJ				PP	PP	01 56 33.3	-1.2
MDJ				S	S	02 01 44.5	+3.5
MDJ				SS	SS	02 05 11.8	+0.2
MDJ				pmax	pmax		
	comp=Z,58nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,630nm,3.6s						
MDJ				LR	LR		
	comp=Z,620nm,12.4s						
MDJ				LR	LR		
	comp=Z,450nm,11.0s						
MDJ				LR	LR		
	comp=Z,1μm,21.1s						
MDJ	Mudanjiang	48.58	0	IAmb	IAmb	01 54 43.6	
	comp=Z,128nm,1.5s						
TEY	Ternei	49.40	7	⇓eP	P	01 54 47.6	0.0
TEY				pmax	pmax		
	comp=N,100nm,4.2s						
TEY				pmax	pmax		
	comp=Z,100nm,4.2s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,30nm,1.0s						
ASAJ	Asahikawa	49.49	12	P	P	01 54 47.6	-0.7
	comp=Z,5.0nm,0.5s,baz=226,slow=12,SNR=8.1						
ASAJ				LR	LR	02 13 19.8	
	comp=Z,646nm,21.0s,baz=200,slow=33						
LSA	Lhasa	49.89	315	P	P	01 54 53.5	+1.2
LSA				LR	LR		
	comp=Z,780nm,6.0s						
LSA				LR	LR		
	comp=Z,1μm,6.8s						
LSA	Lhasa	49.89	315	P	P	01 54 52.6	+0.3
LSA	Lhasa	49.89	315	P	P	01 54 52.4	+0.1
LSA				pmax	pmax		
	comp=Z,243nm,2.0s						
LSA	Lhasa	49.89	315	P	P	01 54 52.4	+0.1
YUK	Yuzh-Kuril'sk	50.19	15	c iP	P	01 54 54.5	+0.9
YUK				e		01 56 15.9	
YUK				i		01 56 45.7	
YUK				i S	S	02 02 05.2	+1.7
YUK				i SS	SS	02 05 37.0	-0.4
YUK				i SSS	SSS	02 07 04.0	
YUK				pmax	pmax		
	comp=Z,87nm,0.4s						
BOK	Bokaro	50.83	305	eP	P	01 54 58.8	-0.1
ODAN	Odare	51.12	310	eP	P	01 55 00.6	-0.7
	comp=Z,192nm,1.2s						
TAPN	Taplejung	51.12	310	eP	P	01 55 00.8	-0.6
	comp=Z,163nm,1.0s						
GTA	Gaotai	51.32	330	⇑P	P	01 55 02.4	0.0
GTA				pP	sP	01 55 12.8	-2.1
GTA				sP	pwP	01 55 16.0	-0.1
GTA				S	S	02 02 16.6	-3.1
GTA				ScS	ScS	02 04 51.5	+0.7
GTA				pmax	pmax		
	comp=Z,51nm,1.4s						
GTA				pmax	pmax		
	comp=Z,360nm,6.4s						
GTA				LR	LR		
	comp=Z,340nm,22.3s						
GTA				LR	LR		
	comp=Z,370nm,21.5s						
GTA				LR	LR		
	comp=Z,560nm,23.3s						
RAMN	Ramite	51.77	309	eP	P	01 55 05.9	-0.3
	comp=Z,26nm,0.4s						
YSS	Yuzh-Sakhalins	52.24	11	eP	P	01 55 08.5	-0.4
YSS				e		01 57 07.6	
YSS				MLR	MLR		
	comp=Z,700nm,17.0s						
JIRN	Jiri	52.44	310	eP	P	01 55 10.6	-0.7
GUN	Gumba	52.80	310	eP	P	01 55 13.0	-1.0
	comp=Z,378nm,1.4s						
PKI	Pulchoki	53.00	309	eP	P	01 55 14.3	-1.1
	comp=Z,153nm,1.3s						
PKIN	Phulchoki	53.01	309	eP	P	01 55 14.3	-1.1
	comp=Z,122nm,1.3s						
KKN	Kakani	53.20	309	eP	P	01 55 16.0	-0.8
KLR	Kul'dur	53.23	2	c iP	P	01 55 15.9	-0.4
KLR				pmax	pmax		
	comp=Z,132nm,1.5s						
BLSP	Bilaspur	53.24	302	eP	P	01 55 16.4	-0.6
DMN	Daman	53.25	309	eP	P	01 55 16.5	-0.7
	comp=Z,222nm,1.2s						
GKN	Gorkha	53.80	309	eP	P	01 55 20.4	-0.7
	comp=Z,226nm,1.1s						
HIA	Hailar	53.91	352	c iP	P	01 55 21.5	+0.2
HIA				pmax	pmax		
	comp=Z,37nm,1.9s						
HIA	Hailar	53.91	352	P	P	01 55 21.2	-0.1
TUWZ	Tuamarina	54.28	140	P	P	01 55 23.2	-0.9
KOLN	Koldanda	54.50	309	eP	P	01 55 25.7	-0.5
	comp=Z,534nm,1.3s						
DANN	Dangsing	54.65	309	eP	P	01 55 26.4	-1.0
	comp=Z,411nm,1.3s						
HYB	Hyderabad	54.72	295	i P	P	01 55 26.0	-1.8
	comp=Z,179nm,1.2s						
HYB	Hyderabad	54.72	295	eP	P	01 55 26.5	-1.3
HYB				IAmb	IAmb	01 55 35.2	
	comp=Z,157nm,1.4s						
BKZ	Black Stump Fm	54.90	136	P	P	01 55 28.8	0.0
URZ	Urewera	54.92	135	LR	LR	02 20 19.2	
	comp=Z,548nm,18.8s,baz=31,slow=38						
GRNR	Gornyy	55.05	5	⇑iP	P	01 55 29.6	0.0
GRNR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,270nm,14.0s						
GRNR				MLR	MLR		
	comp=N,280nm,19.0s						
GRNR				MLR	MLR		
	comp=Z,440nm,14.0s						
PYUN	Piuthan	55.13	309	eP	P	01 55 30.4	-0.4
	comp=Z,511nm,1.2s						
ULN	Ulaanbaatar	55.47	342	c iP	P	01 55 32.6	-0.2
ULN				pmax	pmax		
	comp=Z,93nm,1.3s						
ULN	Ulaanbaatar	55.47	342	P	P	01 55 34.2	+1.4
ULN	Ulaanbaatar	55.47	342	P	P	01 55 32.6	-0.2
SONM	Songino Array	55.65	341	P	P	01 55 34.5	+0.4
	comp=Z,38nm,1.3s,baz=166,slow=7.7,SNR=77						
SONM				LR	LR	02 24 06.6	
	comp=Z,270nm,18.9s,baz=131,slow=41						
SONM	Songino Array	55.65	341	IAmb	IAmb	01 55 36.2	
	comp=Z,73nm,1.3s						
TYV	Tymovskoe	55.97	10	eP	P	01 55 37.6	+1.5
TYV				eS	S	02 03 26.7	+4.6
TYV				pmax	pmax		
	comp=Z,27nm,1.6s						
TYV				pmax	pmax		
	comp=Z,700nm,3.6s						
TYV				smax	smax		
	comp=E,12nm,1.6s						
TYV				smax	smax		
	comp=N,800nm,6.9s						
AKL	Akola	57.16	298	eP	P	01 55 44.2	-1.0
BHPL	Bhopal	57.68	301	eP	P	01 55 46.9	-2.0
BHPL				IAmb	IAmb	01 55 56.4	
	comp=Z,239nm,2.0s						
ZEA	Zeya	57.74	358	eP	P	01 55 49.3	+0.7
ZEA				pmax	pmax		
	comp=N,20nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.4s						
KAD	Karad	58.68	293	eP	P	01 55 53.9	-2.0
ZAK	Zakamensk	58.88	341	eP	P	01 55 56.3	-0.5
ZAK				pmax	pmax		
	comp=Z,33nm,1.5s						
SKR	Severo-Kuril's	59.23	19	eP	P	01 56 05.4	+6.4
SKR				pmax	pmax		
	comp=Z,200nm,5.4s						
TLY	Talaya	59.88	342	LR	LR	02 25 15.6	
	comp=Z,149nm,19.0s,baz=144,slow=39						
TLY	Talaya	59.88	342	eP	P	01 56 04.1	+0.5
TLY				e		01 58 23.5	
TLY				eS	S	02 04 17.4	+4.1
TLY				pmax	pmax		
	comp=Z,144nm,1.8s						
TLY				MLR	MLR		
	comp=Z,539nm,16.0s						
TLY	Talaya	59.88	342	P	P	01 56 05.0	+1.4
TLY	Talaya	59.88	342	P	P	01 56 03.7	+0.1
TLY				IAmb	IAmb	01 56 06.2	
	comp=Z,48nm,1.3s						
IRK	Irkutsk	60.18	342	eP	P	01 56 06.3	+0.7
IRK				pmax	pmax		
	comp=Z,165nm,3.1s						
KUDL	Kundal	60.32	306	eP	P	01 56 05.4	-1.6
MOY	Mondy	60.74	340	eP	P	01 56 10.4	+0.8
MOY				pmax	pmax		
	comp=Z,199nm,2.1s						
WMQ	Urumqi	60.82	326	⇓P	P	01 56 11.0	+0.8
WMQ				pP	sP	01 56 21.4	-1.3
WMQ				sP	pwP	01 56 26.6	+2.2
WMQ				S	S	02 04 26.9	+1.2
WMQ				pmax	pmax		
	comp=Z,78nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,640nm,3.9s						
SMLA	Simla	61.01	309	eP	P	01 56 11.4	-0.2
SMLA				IAmb	IAmb	01 56 13.7	
	comp=Z,173nm,1.3s						
PEA0B	Petropavlovsk-	61.81	19	⇓eP	P	01 56 18.2	+1.6
PETK	Petropavlovsk-	61.81	19	P	P	01 56 16.8	+0.1
	comp=Z,15nm,0.9s,baz=171,slow=3.5,SNR=10.0						
PETK				LR	LR	02 19 19.6	
	comp=Z,449nm,21.4s,baz=210,slow=32						
PET	Petropavlovsk	62.05	19	ceP	P	01 56 18.8	+0.6
PET				pmax	pmax		
	comp=Z,51nm,1.3s						
PET	Petropavlovsk	62.05	19	P	P	01 56 18.1	-0.1
BOD	Bodaibo	63.06	351	eP	P	01 56 25.7	+0.8
BOD				pmax	pmax		
	comp=Z,114nm,1.6s						
ZSN	Zaisan	64.66	328	eP	P	01 56 34.3	-1.5
	comp=Z,21nm,1.2s,baz=328						
ZSN				i S	S	02 05 12.8	-1.0
	baz=328						
ZSN	Zaisan	64.66	328	eP	P	01 56 34.2	-1.5
ZSN				i S	S	02 05 12.7	-1.0
ZSN				pmax	pmax		
	comp=Z,21nm,1.2s						
DGZ	Jazzator, Alta	64.84	331	c iP	P	01 56 37.1	+0.1
DGZ				pmax	pmax		
	comp=Z,81nm,1.2s						
NIL	Nilore	65.07	310	P	P	01 56 37.4	-1.3
NIL				pmax	pmax		
	comp=Z,86nm,1.5s						
NIL	Nilore	65.07	310	P	P	01 56 38.5	-0.1
NIL	Nilore	65.07	310	P	P	01 56 37.4	-1.3
NIL				IAmb	IAmb	01 56 39.5	
	comp=Z,86nm,1.5s						
SHLS	Shalkode	65.24	322	eP	P	01 56 37.2	-2.5
	comp=Z,35nm,1.4s,baz=322						
SHLS				eS	S	02 05 17.3	-4.0
	baz=322						
SHLS	Shalkode	65.24	322	eP	P	01 56 37.2	-2.5
SHLS				eS	S	02 05 17.2	-4.0
SHLS				pmax	pmax		
	comp=Z,35nm,1.4s						
UZB	Uzynbulak	65.51	322	eP	P	01 56 40.3	-1.3
	comp=Z,45nm,1.5s,baz=322						
UZB	Uzynbulak	65.51	322	eP	P	01 56 40.2	-1.3
UZB				pmax	pmax		
	comp=Z,45nm,1.5s						
PRZ	Przheval'sk	65.55	321	IAmb	IAmb	01 56 44.3	
	comp=Z,73nm,1.1s						
MK31	Makanchi Array	65.65	326	deP	P	01 56 41.7	-0.5
MK31	Makanchi Array	65.65	326	P	P	01 56 42.1	-0.1
MK31				IAmb	IAmb	01 56 43.6	
	comp=Z,51nm,1.1s						
MKAR	Makanchi Array	65.65	326	P	P	01 56 41.9	-0.3
	comp=Z,13nm,0.4s,baz=114,slow=7.5,SNR=365						
KSH	Kashi	65.67	317	P	P	01 56 43.3	+0.7
KSH				PcP	PcP	01 57 13.3	-0.5
KSH				S	S	02 05 28.1	+1.5
KSH				ScS	SKSac	02 06 31.3	-4.9
KSH				pmax	pmax		
	comp=Z,30nm,1.2s						
KSH				pmax	pmax		
	comp=Z,410nm,4.6s						
MA2	Magadan	65.74	12	P	P	01 56 42.6	+0.1
	comp=Z,0.0nm,0.4s,baz=107,slow=20						
MA2	Magadan	65.74	12	c iP	P	01 56 42.8	+0.4
MA2				pmax	pmax		
	comp=Z,60nm,1.3s						
MA2	Magadan	65.74	12	P	P	01 56 43.1	+0.6
MAKZ	Makanchi	65.83	326	P	P	01 56 42.7	-0.7
MAKZ				pmax	pmax		
	comp=Z,77nm,1.1s						
MAKZ	Makanchi	65.83	326	P	P	01 56 42.7	-0.7
SATY	Saty	65.85	321	eP	P	01 56 42.5	-1.2
	comp=Z,42nm,1.2s,baz=321						
SATY	Saty	65.85	321	eP	P	01 56 42.4	-1.2
SATY				pmax	pmax		
	comp=Z,42nm,1.2s						
YAK	Yakutsk	66.03	0	P	P	01 56 44.2	+0.1
	comp=Z,51nm,0.7s,baz=179,slow=2.7,SNR=18						
YAK	Yakutsk	66.03	0	c iP	P	01 56 44.3	+0.1
YAK				e*PP	sP	01 56 54.6	-1.9
YAK				e		01 57 11.5	
YAK				e		01 59 07.3	
YAK				eS	S	02 05 29.3	-0.5
YAK				e*SS	sS	02 05 45.6	+1.6
YAK				e		02 06 35.2	
YAK				eSS	SS	02 09 48.4	+2.7
YAK				pmax	pmax		
	comp=N,54nm,1.1s						
YAK				pmax	pmax		
	comp=Z,153nm,1.1s						
YAK				pmax	pmax		
	comp=E,19nm,1.5s						
YAK				pmax	pmax		
	comp=Z,241nm,3.8s						
YAK				pmax	pmax		
	comp=N,181nm,3.7s						
YAK				pmax	pmax		
	comp=E,159nm,4.1s						
YAK				smax	smax		
	comp=E,249nm,2.8s						
YAK				smax	smax		
	comp=N,180nm,3.7s						
YAK				MLR	MLR		
	comp=Z,646nm,19.0s						
YAK				MLR	MLR		
	comp=N,565nm,19.0s						
YAK				MLR	MLR		
	comp=E,203nm,19.0s						
YAK	Yakutsk	66.03	0	P	P	01 56 44.4	+0.1
KDJ	Kajisay	66.15	320	IAmb	IAmb	01 57 13.1	
	comp=Z,63nm,1.4s						
MDOK	Medeo	66.75	321	eP	P	01 56 47.1	-2.4
	baz=321						
MDOK				eS	S	02 05 38.9	-0.8
	baz=321						
MDOK	Medeo	66.75	321	eP	P	01 56 47.9	-1.6
MDOK				eS	S	02 05 38.8	-0.9
ARXS	Arharly	66.81	322	eP	P	01 56 49.0	-0.7
TDK	Taldyqorghan	66.88	323	eP	P	01 56 49.3	-0.8
	comp=Z,46nm,1.3s,baz=323						
TDK				eS	S	02 05 40.3	-0.5
	baz=323						
TDK	Taldyqorghan	66.88	323	eP	P	01 56 49.2	-0.8
TDK				eS	S	02 05 40.3	-0.5
TDK				pmax	pmax		

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      comp=Z,46nm,1.3s
BOOM  Boomskoye usch  67.12 320    IAmb   IAmb   01 56 53.5
      comp=Z,44nm,1.2s
TKM2  Tokmak 2        67.55 320    P      P      01 56 54.9 +0.3
      SNR=10
TKM2  Tokmak 2        67.55 320    P      P      01 56 54.1  -0.5
KUU   Kurty           67.57 321   eP      P      01 56 52.9  -1.5
      comp=Z,68nm,1.2s,baz=321
KUU                               eS      S      02 05 47.9  -1.3
      baz=321
KUU   Kurty           67.57 321   eP      P      01 56 52.9  -1.5
KUU                               eS      S      02 05 47.9  -1.3
KUU                                pmax   pmax
      comp=Z,68nm,1.2s
KBK   Karagaybulak    67.84 320    P      P      01 56 57.3 +0.8
      SNR=15
UCH   Uchtor          67.92 319    P      P      01 56 57.7 +0.4
      SNR=29
AAK   Ala-Archa       68.13 319    P      P      01 56 58.6 +0.4
      SNR=24
AAK   Ala-Archa       68.13 319  i P      P      01 56 58.0  -0.2
      SNR=7.0
AAK   Ala-Archa       68.13 319c iP      P      01 56 58.3 +0.1
AAK                                pmax   pmax
      comp=Z,165nm,1.7s
AAK   Ala-Archa       68.13 319    P      P      01 56 59.0 +0.8
AAK   Ala-Archa       68.13 319    P      P      01 56 58.4 +0.1
AAK                                IAmb   IAmb   01 57 00.0
      comp=Z,47nm,1.3s
CHMS  Chumysh         68.14 320    P      P      01 56 58.3 +0.2
      SNR=8.0
AML   Almayashu       68.42 319    P      P      01 57 00.5 +0.2
      SNR=39
AML   Almayashu       68.42 319  i P      P      01 57 00.2  -0.1
      SNR=10
AML   Almayashu       68.42 319    P      P      01 57 01.4 +1.1
USP   Ospenovka       68.42 320    P      P      01 57 00.5 +0.6
      SNR=42
SGDS  Sogindy         68.43 320   eP      P      01 56 58.3  -1.6
      baz=320
SGDS  Sogindy         68.43 320   eP      P      01 56 59.1  -0.9
DRK   Karamyk         68.54 315    IAmb   IAmb   01 57 02.5
      comp=Z,45nm,1.2s
EKS2  Erkin-Say       68.61 319    P      P      01 57 01.5 +0.3
      SNR=20
KBL   Kabul           68.64 309    P      P      01 57 00.3  -1.3
KBL                                pmax   pmax
      comp=Z,49nm,1.3s
KBL   Kabul           68.64 309    P      P      01 57 01.8 +0.2
      SNR=18
KBL   Kabul           68.64 309    P      P      01 57 00.3  -1.3
KBL                                IAmb   IAmb   01 57 02.4
      comp=Z,49nm,1.3s
SEM   Semipalatinsk   68.88 329   eP      P      01 57 00.5  -2.4
      baz=329
SEM   Semipalatinsk   68.88 329   eP      P      01 57 00.4  -2.4
ZALV  Zalesovo Beam   68.88 334    P      P      01 57 01.8  -0.6
      comp=Z,69nm,1.1s,baz=108,slow=4.8,SNR=121
ZALV                               LR     LR     02 29 06.9
      comp=Z,170nm,20.7s,baz=129,slow=38
ZALV  Zalesovo Beam   68.88 334  i P      P      01 57 01.7  -0.7
ZALV                               pmax   pmax
      comp=Z,68nm,1.1s
SEY   Seymchan        69.14  11    P      P      01 57 04.7 +0.8
      comp=Z,29nm,0.7s,baz=205,slow=5.7,SNR=44
BTK   Batken          69.47 316    IAmb   IAmb   01 57 14.5
      comp=Z,67nm,1.4s
BTLS  Baital          69.56 321   eP      P      01 57 04.9  -1.9
      baz=322
BTLS  Baital          69.56 321   eP      P      01 57 04.8  -2.0
KURBB Kurchatov Arra  69.90 328    P      P      01 57 08.4  -0.4
KURK  Kurchatov       69.91 328ceP        P      01 57 07.9  -0.9
KURK                               pmax   pmax
      comp=Z,224nm,1.3s
KURK  Kurchatov       69.91 328    P      P      01 57 09.0 +0.1
KURK  Kurchatov       69.91 328    P      P      01 57 08.4  -0.4
DZA   Taraz           70.32 318   eP      P      01 57 10.5  -1.2
      baz=318
DZA   Taraz           70.32 318   eP      P      01 57 10.4  -1.2
IUG   Iuzhnay         70.88 317   eP      P      01 57 13.6  -1.6
      baz=317
IUG                               eS      S      02 06 27.4  -1.1
      baz=317
IUG   Iuzhnay         70.88 317   eP      P      01 57 13.5  -1.6
IUG                               eS      S      02 06 27.4  -1.1
KK31  Karatay Array   70.95 318    P      P      01 57 14.7  -0.8
TAS   Tashkent        71.04 316    P      P      01 57 15.9  -0.1
TAS                                pmax   pmax
      comp=Z,116nm,1.2s
TAS   Tashkent        71.04 316    P      P      01 57 15.9  -0.1
BRLS  Borolday        71.37 318   eP      P      01 57 15.9  -2.1
      baz=318
BRLS                              eS      S      02 06 32.2  -2.0
      baz=318
BRLS  Borolday        71.37 318   eP      P      01 57 15.9  -2.1
BRLS                              eS      S      02 06 32.1  -2.0
OTUK  Ortayu          72.12 324    P      P      01 57 22.0  -0.4
JLN   Jalan Bani Buh  73.34 294    P      P      01 57 30.0  -0.1
WBK   Wadi Bani Khal  73.83 295    P      P      01 57 33.4 +0.4
      SNR=7.5
HRA   Herat           73.90 307    P      P      01 57 32.8  -0.7
HRA                                IAmb   IAmb   01 57 34.6
      comp=Z,71nm,1.4s
WSAR  Wadi Sarin      74.26 295    P      P      01 57 36.1 +0.6
      SNR=20
JMDO  Jabal Madar     74.57 294    P      P      01 57 37.7 +0.4
      SNR=6.6
SMDO  Samad           74.75 295    P      P      01 57 38.4  -0.1
      SNR=6.9
BIDO  Bidbid          74.77 296    P      P      01 57 39.0 +0.5
      SNR=20
VNDA  Vanda           75.28 173    P      P      01 57 40.4   0.0
      comp=Z,2.6nm,0.8s,baz=306,slow=4.0,SNR=8.4
VNDA                               LR     LR     02 31 08.5
      comp=Z,518nm,18.1s,baz=344,slow=36
VNDA  Vanda           75.28 173    P      P      01 57 40.3   0.0
VNDA                               pmax   pmax
      comp=Z,49nm,1.6s
VNDA  Vanda           75.28 173    P      P      01 57 40.3   0.0
BSY   Bisya           75.46 295    P      P      01 57 42.7 +0.2
      SNR=8.7
HOQ   Hoqain          75.52 296    P      P      01 57 43.5 +0.7
      SNR=18
BRVK  Borovoye        75.54 328c iP      P      01 57 42.2  -0.1
BRVK                               pmax   pmax
      comp=Z,123nm,1.3s
BRVK  Borovoye        75.54 328    P      P      01 57 43.0 +0.8
BRVK  Borovoye        75.54 328    P      P      01 57 41.8  -0.4
TIXI  Tiksi           75.69 360    P      P      01 57 42.0  -0.7
      comp=Z,13nm,0.4s,baz=165,slow=5.8,SNR=38
TIXI  Tiksi           75.69 360c iP      P      01 57 42.0  -0.7
TIXI                               pmax   pmax
      comp=Z,66nm,1.4s
TIXI  Tiksi           75.69 360    P      P      01 57 41.6  -1.2
TIXI                               IAmb   IAmb   01 57 44.0
      comp=Z,87nm,1.4s
SHAO  Shalim          76.10 290    P      P      01 57 45.8  -0.4
SHAO  Shalim          76.10 290    P      P      01 57 46.6 +0.5
ARQ   Araqi           76.18 295    P      P      01 57 48.0 +1.4
      SNR=8.0
SOHO  SOHO            76.32 296  i P      P      01 57 47.0  -0.4
      SNR=13
SOHO  SOHO            76.32 296    P      P      01 57 47.8 +0.5
BILL  Bilibino        76.49  13⇑eP        P      01 57 47.9 +0.5
BILL                              eSS     SS     02 12 35.7  +10
BILL                               pmax   pmax
      comp=Z,36nm,2.0s
BILL                               MLR    MLR
      comp=Z,345nm,17.0s
BILL  Bilibino        76.49  13    P      P      01 57 47.2  -0.1
DMTO  DMTO            76.69 289    P      P      01 57 49.4  -0.1
NIKH  Nikolski High   76.74  33    P      P      01 57 50.5 +1.4
      baz=244
UOSS  Minazif         76.77 297  i P      P      01 57 49.3  -0.6
      SNR=6.0
UOSS  Minazif         76.77 297    P      P      01 57 49.9   0.0
UOSS  Minazif         76.77 297    P      P      01 57 47.9  -1.9
UOSS                               IAmb   IAmb   01 57 50.7
      comp=Z,91nm,1.6s
HATD  Hatta, Dubai    76.81 297  i P      P      01 57 49.7  -0.4
      SNR=9.6
HATD  Hatta, Dubai    76.81 297    P      P      01 57 51.0 +0.8
      SNR=12
SOCY  Socotra         76.84 283    P      P      01 57 50.2  -0.4
SOCY  Socotra         76.84 283    IAmb   IAmb   01 57 51.4
      comp=Z,107nm,1.3s
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ASHO  Ashiyiah        76.85 296  i P      P      01 57 49.9  -0.5
      SNR=12
ASHO  Ashiyiah        76.85 296    P      P      01 57 51.1 +0.7
      SNR=12
BANOM Banah           76.87 298  i P      P      01 57 50.7 +0.3
      SNR=6.2
BANOM Banah           76.87 298    P      P      01 57 51.7 +1.2
MSFE  Esma-Masafi     76.89 297  i P      P      01 57 50.7 +0.1
      SNR=8.8
MASF  Masafi          76.89 297    P      P      01 57 52.1 +1.5
      SNR=8.5
ALNE  Al Ain          77.01 296  i P      P      01 57 50.8  -0.4
      SNR=6.5
ALNE  Al Ain          77.01 296    P      P      01 57 51.9 +0.6
      SNR=13
SHME  Shamm           77.04 298    P      P      01 57 51.3   0.0
SHME  Shamm           77.04 298    P      P      01 57 52.2 +0.9
NAZ   Nazwa, Dubai    77.26 297    P      P      01 57 53.1 +0.5
FAQ   Al Faqa, Dubai  77.28 296  i P      P      01 57 52.3  -0.4
      SNR=7.1
FAQ   Al Faqa, Dubai  77.28 296    P      P      01 57 52.7   0.0
UMZA  Um Al Zommool   77.30 294    P      P      01 57 53.0 +0.1
RBK   Rabkut          77.36 289    P      P      01 57 53.3   0.0
MAW   Mawson          77.40 201    P      P      01 57 52.6 +0.1
      comp=Z,13nm,1.1s,baz=67,slow=7.0,SNR=7.6
MAW                                LR     LR     02 28 03.0
      comp=Z,541nm,21.5s,baz=56,slow=33
MAW   Mawson          77.40 201    P      P      01 57 53.3 +0.8
      baz=78
MAW   Mawson          77.40 201    P      P      01 57 51.9  -0.6
MAW                                pmax   pmax
      comp=Z,10.0nm,1.5s
MAW   Mawson          77.40 201    P      P      01 57 51.9  -0.6
ASUD  Al Ashush, Dub  77.49 296    P      P      01 57 53.7  -0.2
ASUD  Al Ashush, Dub  77.49 296    P      P      01 57 55.2 +1.3
DOK   Doka            77.59 290    P      P      01 57 54.0  -0.6
WHFO  Wadi Hawf       77.83 289    P      P      01 57 55.3  -0.7
SPIA  Saint Paul Isl  77.92  29    P      P      01 57 56.8 +1.2
      baz=242
GEYT  Alibeck         78.08 310    P      P      01 57 57.4 +0.4
      comp=Z,70nm,1.3s,baz=239,slow=17,SNR=31
GEYT  Alibeck         78.08 310    IAmb   IAmb   01 58 01.0
      comp=Z,67nm,1.4s
GYA0  ALIBECK ARRAY   78.08 310    P      P      01 57 56.7  -0.3
GYA0B ALIBECK ARRAY   78.08 310    IAmb   IAmb   01 58 01.5
      comp=Z,58nm,1.1s
ABTO  Aybut           78.19 289    P      P      01 57 58.2 +0.1
      SNR=7.1
MZWR  Madinat Zayed   78.64 295    P      P      01 58 00.8 +0.5
NRIK  Noril'sk        78.74 346    P      P      01 58 00.5 +0.6
      comp=Z,36nm,1.1s,baz=133,slow=5.7,SNR=54
NRIK                               LR     LR     02 34 31.1
      comp=Z,584nm,20.9s,baz=130,slow=37
NRIK  Noril'sk        78.74 346ceP        P      01 58 00.3 +0.4
NRIK                               pmax   pmax
      comp=Z,134nm,1.5s
PPT   Papeete         80.05 107    LR     LR     02 31 40.7
      comp=Z,93nm,21.4s,baz=270,slow=34
PPT2  Papeete2        80.05 107   eLR     LR     02 23 11.3
      comp=Z,242nm,23.5s
AB31  Akbulak array   80.05 321  i P      P      01 58 06.7  -0.8
ABKAR Akbulak array   80.05 321    P      P      01 58 07.1  -0.4
GAMB  Gambell         80.50  23    P      P      01 58 10.1 +0.6
      baz=240
SLWR  Sila            80.67 295    P      P      01 58 12.1 +0.8
TRNA  Turayna         81.20 296    P      P      01 58 15.0 +0.8
SHMA  Al-Shehemyia    81.59 297    P      P      01 58 16.6 +0.4
SAKB  Bahrain         81.99 297    P      P      01 58 18.8 +0.5
SVE   Sverdlovsk      82.15 329deP        P      01 58 18.8 +0.3
SVE                                pmax   pmax
      comp=Z,99nm,1.1s
ARU   Arti            83.10 328c iP      P      01 58 22.9  -0.5
ARU                                              02 01 28.1
ARU                                PPP    PPP    02 03 22.4
ARU                                S      S      02 08 42.3 +1.4
ARU                                SS     SS     02 14 02.3  -3.1
ARU                                pmax   pmax
      comp=Z,83nm,1.5s
ARU   Arti            83.10 328    P      P      01 58 22.1  -1.4
ANM   Nome            83.33  23    P      P      01 58 25.8 +1.3
      baz=246
QRN   Al-Qurain       84.69 299   eP      P      01 58 31.0  -1.1
UMR   Umm Al-Rimmam   84.97 300   eP      P      01 58 33.0  -0.5
CHIR  Chirikof Islan  84.97  33    P      P      01 58 33.9 +0.9
      baz=255
MIB   Mutribah        85.33 300   eP      P      01 58 34.4  -1.0
RST   Umm Al-Ruwaisa  85.58 300   eP      P      01 58 35.0  -1.6
QSPA  South Pole Qui  85.77 180    P      P      01 58 35.7  -1.3
QSPA                               IAmb   IAmb   01 58 38.2
      comp=Z,92nm,1.8s
SII   Sitkinak Islan  85.94  33    P      P      01 58 38.7 +0.9
      baz=256
P18K  Big Mountain,   86.10  30    P      P      01 58 39.6 +1.0
      baz=255
SYO   Syowa Base      86.11 201⇓eP        P      01 58 39.0 +0.6
SYO   Syowa Base      86.11 201⇑isP       sP     01 58 45.8  -5.4
RAYN  Ar Rayn         86.22 294  i P      P      01 58 40.1 +0.1
      SNR=74
RAYN  Ar Rayn         86.22 294    P      P      01 58 39.2  -0.8
RAYN                               pmax   pmax
      comp=Z,116nm,1.3s
RAYN  Ar Rayn         86.22 294    P      P      01 58 40.6 +0.6
RAYN  Ar Rayn         86.22 294    P      P      01 58 39.2  -0.8
O18K  Koktuh Hills    86.23  29    P      P      01 58 39.9 +0.7
      baz=255
TTA   Tatalina        86.67  26    IAmb   IAmb   01 58 43.8
      comp=Z,70nm,1.4s
TTA   Tatalina        86.67  26    P      P      01 58 42.3 +0.9
      baz=254,SNR=8.6
GCSA  Galena City Sc  86.81  24    P      P      01 58 42.2 +0.3
      baz=253
N19K  Bonanza Creek   86.82  28    P      P      01 58 43.3 +1.2
      baz=256
L19K  White Mountain  86.99  27    IAmb   IAmb   01 58 46.2
      comp=Z,84nm,1.4s
L19K  White Mountain  86.99  27    P      P      01 58 44.1 +1.3
      baz=255,SNR=8.1
MAK   Makhachkala     87.02 313   eP      P      01 58 40.4  -3.0
MAK                               e              02 02 03.1
MAK                               ePPP    PPP    02 03 58.3
MAK                               e              02 09 03.2
MAK                               eSS     SS     02 15 02.5  -1.3
MAK                                pmax   pmax
      comp=Z,269nm,1.7s
MAK                                MLR    MLR
      comp=Z,116nm,18.0s
M19K  Big River Lodg  87.13  27    P      P      01 58 45.1 +1.5
      baz=256
O20K  Slope Mountain  87.54  29    P      P      01 58 45.6  -0.1
      baz=257
ATD   Arta Tunnel     87.62 282    LR     LR     02 36 16.4
      comp=Z,108nm,19.4s,baz=88,slow=34
ATD   Arta Tunnel     87.62 282    P      P      01 58 48.3 +1.3
ATD   Arta Tunnel     87.62 282    P      P      01 58 47.3 +0.4
J20K  Nowinta River   87.80  25    P      P      01 58 47.5 +0.8
      baz=256
GROC  Groznyy         88.30 313   eP      P      01 58 49.4  -0.1
GROC                              e              02 02 17.1
GROC                               pmax   pmax
      comp=Z,41nm,1.6s
KIRV  Kirov           88.42 329d iP      P      01 58 49.0  -0.7
CHUM  Lake Minchumin  88.52  26    P      P      01 58 50.7 +0.7
      baz=258
H21K  Melozitna Rive  88.70  24    P      P      01 58 51.4 +0.4
      baz=257
GNI   Garni           88.71 310    P      P      01 58 52.4 +0.6
GNI   Garni           88.71 310c iP      P      01 58 52.2 +0.4
GNI                                pmax   pmax
      comp=Z,46nm,1.3s
GNI   Garni           88.71 310    P      P      01 58 53.6 +1.8
GNI   Garni           88.71 310    P      P      01 58 51.8   0.0
GNI                                IAmb   IAmb   01 59 16.3
      comp=Z,39nm,1.1s
A21K  Barrow          88.80  18    P      P      01 58 51.8 +0.5
      baz=253
I21K  Tanana          88.94  24    P      P      01 58 52.7 +0.7
      baz=258
SEW   Seward          89.11  30    P      P      01 58 53.1 +0.2
      baz=260
RC01  Rabbit Creek A  89.14  29    P      P      01 58 53.6 +0.5
      baz=260
TRF   Thorofare Moun  89.31  26    P      P      01 58 55.0 +0.9
      baz=259
MLY   Manley          89.42  25    P      P      01 58 56.4 +2.0
      baz=259
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PMR   Palmer          89.52  28    IAmb   IAmb   01 59 06.7
      comp=Z,45nm,1.4s
PMR   Palmer          89.52  28    P      P      01 58 55.3 +0.5
      baz=260
ZEI   Tsey            89.63 313   eP      P      01 58 55.5  -0.6
ZEI                                pmax   pmax
      comp=Z,13nm,1.3s
TAOE  Nuku Hiva Isla  89.65  99   eLR     LR     02 27 36.0
      comp=Z,268nm,25.0s
PWL   Port Wells      89.78  29    P      P      01 58 56.3 +0.1
      baz=261
AKH   Akhalkalaki     89.79 311 ⇑P        P      01 58 57.2 +0.3
KNK   Knik Glacier    89.80  28    IAmb   IAmb   01 59 19.2
      comp=Z,36nm,1.2s
KNK   Knik Glacier    89.80  28    P      P      01 58 56.5 +0.3
      baz=261
SML   Sawmill         89.93  28    P      P      01 58 56.8   0.0
      baz=261
RND   Reindeer        89.94  26    IAmb   IAmb   01 58 59.3
      comp=Z,30nm,1.1s
MCK   McKinley        89.96  26    P      P      01 58 55.1  -1.8
MCK                                pmax   pmax
      comp=Z,68nm,1.6s
MCK   McKinley        89.96  26    P      P      01 58 55.1  -1.8
MCK                                IAmb   IAmb   01 59 06.5
      comp=Z,68nm,1.6s
MCK   McKinley        89.96  26    P      P      01 58 56.2  -0.7
      baz=260,SNR=8.5
WAT1  Susitna Watana  89.99  27    P      P      01 58 56.8  -0.3
      baz=261
I23K  Minto, Yukon-K  90.02  25    IAmb   IAmb   01 58 59.5
      comp=Z,44nm,1.3s
I23K  Minto, Yukon-K  90.02  25    P      P      01 58 57.3 +0.2
      baz=260
COLD  Coldfoot        90.05  23    P      P      01 58 57.7 +0.4
      baz=259
SIRT  Sirnak          90.24 307    P      P      01 58 58.7  -0.2
WAT6  Susitna Watana  90.32  27    P      P      01 58 58.5  -0.2
      baz=262
SCM   Sheep Creek Mo  90.40  28    P      P      01 58 59.0   0.0
      baz=262
WRH   Wood River Hil  90.44  25    IAmb   IAmb   01 59 00.5
      comp=Z,36nm,1.3s
KBZ   Khabaz          90.45 314    P      P      01 58 59.1  -0.4
      comp=Z,8.5nm,1.1s,baz=154,slow=5.5,SNR=9.1
KBZ   Khabaz          90.45 314c iP      P      01 58 59.2  -0.4
KBZ                                pmax   pmax
      comp=Z,16nm,1.4s
GOF   Gofitskoye      90.47 315   eP      P      01 58 57.4  -2.3
NEY   Neytrino        90.53 313⇑eP        P      01 59 01.8 +1.5
NEY                                pmax   pmax
      comp=Z,8.0nm,1.2s
TOLK  Toolik Lake Re  90.54  21    P      P      01 58 58.6  -1.0
TOLK                               IAmb   IAmb   01 59 01.4
      comp=Z,93nm,1.9s
TOLK  Toolik Lake Re  90.54  21    P      P      01 58 59.7 +0.2
      baz=260
DHY   Denali Highway  90.55  27    P      P      01 58 59.8  -0.1
      baz=262
CCB   Clear Creek Bu  90.59  25    IAmb   IAmb   01 59 00.9
      comp=Z,32nm,1.3s
COLA  College         90.61  25deP        P      01 58 59.4  -0.4
COLA                               pmax   pmax
      comp=Z,19nm,2.0s
KIV   Kislovodsk      90.62 314 ⇑P        P      01 58 60.0  -0.6
KIV   Kislovodsk      90.62 314    P      P      01 58 59.2  -1.3
KIV   Kislovodsk      90.62 314   eP      P      01 58 59.5  -1.1
KIV                               e              02 09 28.3
KIV                                pmax   pmax
      comp=Z,8.0nm,1.1s
KIV                                MLR    MLR
      comp=Z,95nm,20.0s
KIV   Kislovodsk      90.62 314    P      P      01 59 01.1 +0.6
KIV   Kislovodsk      90.62 314    P      P      01 58 59.6  -0.9
H24K  Noodor Dome     90.74  24    IAmb   IAmb   01 59 02.3
      comp=Z,93nm,1.8s
H24K  Noodor Dome     90.74  24    P      P      01 59 00.8 +0.3
      baz=262
PRGR  Permogore       90.77 332   eP      P      01 58 58.7  -1.9
PRGR                               pmax   pmax
      comp=Z,34nm,1.4s
POKR  Poker Plat Res  90.82  25    P      P      01 59 01.4 +0.6
      baz=262
ILAR  Eielson Array   91.00  25    P      P      01 58 59.8  -1.9
      comp=Z,1.2nm,0.5s,baz=279,slow=4.1,SNR=12
ILAR                               LR     LR     02 34 32.6
      comp=Z,390nm,21.4s,baz=252,slow=32
KLU   Klutina         91.02  29    P      P      01 59 02.4 +0.4
      baz=263
KIBK  Kibwezi         91.34 268    P      P      01 59 03.6  -1.0
PAX   Paxson          91.40  27    IAmb   IAmb   01 59 05.3
      comp=Z,57nm,1.6s
PAX   Paxson          91.40  27    P      P      01 59 04.2 +0.5
      baz=264
HARP  HAARP           91.48  28    P      P      01 59 04.5 +0.5
      baz=264
MARD  Mardin          91.54 307    IAmb   IAmb   01 59 06.7
      comp=Z,61nm,1.5s
KAIM  Kayak Island    91.59  30    P      P      01 59 05.5 +1.0
      baz=264
BMRM  Bremner River   91.60  29    P      P      01 59 04.6  -0.1
      baz=264
J25K  Salcha River,   91.63  25    P      P      01 59 05.1 +0.3
      baz=264
N25K  Chitina, Valde  91.67  28    IAmb   IAmb   01 59 07.0
      comp=Z,50nm,1.6s
N25K  Chitina, Valde  91.67  28    P      P      01 59 05.2 +0.2
      baz=264
RIDG  Independent Ri  91.76  26    P      P      01 59 05.8 +0.4
      baz=264
VRH   Novokhopyorsk   91.87 321   eP      P      01 59 04.6  -1.4
VRH                                pmax   pmax
      comp=Z,10.0nm,0.9s
KOPT  Kop Dagi        91.94 310    P      P      01 59 07.9 +0.8
GLB   Gilahina Butte  92.03  29    IAmb   IAmb   01 59 25.0
      comp=Z,40nm,1.5s
DOT   Dot Lake        92.10  26    IAmb   IAmb   01 59 08.3
      comp=Z,30nm,1.4s
BGLC  Bering Glacier  92.17  30    P      P      01 59 07.4 +0.2
      baz=266
KMBO  Kilima Mbogo    92.22 269    P      P      01 59 08.0  -0.9
      comp=Z,6.1nm,0.9s,baz=39,slow=6.9,SNR=8.4
KMBO                               LR     LR     02 37 26.7
      comp=Z,288nm,20.0s,baz=90,slow=34
KMBO  Kilima Mbogo    92.22 269    P      P      01 59 08.5  -0.4
KMBO  Kilima Mbogo    92.22 269    P      P      01 59 08.3  -0.5
KMBO                               pmax   pmax
      comp=Z,17nm,1.3s
KMBO  Kilima Mbogo    92.22 269    P      P      01 59 08.3  -0.5
CRQE  Cirque          92.32  29    P      P      01 59 08.6 +0.6
      baz=266
L26K  Log Cabin Wild  92.37  27    IAmb   IAmb   01 59 10.0
      comp=Z,33nm,1.7s
L26K  Log Cabin Wild  92.37  27    P      P      01 59 08.6 +0.4
      baz=266
J26L  Joseph Creek    92.39  26    P      P      01 59 08.7 +0.4
      baz=265
MCARA McCarthy VSAT   92.40  29    P      P      01 59 08.6 +0.3
      baz=266
TGL   Tana Glacier    92.45  29    IAmb   IAmb   01 59 10.6
      comp=Z,38nm,1.3s
M26K  Nabesna, AK     92.49  28    IAmb   IAmb   01 59 10.7
      comp=Z,45nm,1.8s
M26K  Nabesna, AK     92.49  28    P      P      01 59 09.2 +0.5
      baz=266
SOC   Sochi           92.74 313   eP      P      01 59 07.5  -2.7
SOC                               e              02 02 50.4
SOC                               ePPP    PPP    02 04 47.7
SOC                               eS      SKSac  02 09 38.4  -3.5
SOC                               eSS     SS     02 16 22.9  -3.7
SOC                               eSSS    SSS    02 20 00.3
SOC                                pmax   pmax
      comp=Z,32nm,1.1s
M27K  Edge Creek, AK  93.00  28    IAmb   IAmb   01 59 13.2
      comp=Z,29nm,1.6s
M27K  Edge Creek, AK  93.00  28    P      P      01 59 11.8 +0.6
      baz=267
BARN  Barnard Glacie  93.04  29    P      P      01 59 12.0 +0.5
BARN                               IAmb   IAmb   01 59 14.4
      comp=Z,18nm,1.0s
L27K  Beaver Creek,   93.07  27    IAmb   IAmb   01 59 13.5
      comp=Z,73nm,2.0s
L27K  Beaver Creek,   93.07  27    P      P      01 59 12.0 +0.6
      baz=267
CTG   Chitna Glacier  93.19  29    P      P      01 59 12.7 +0.7
      baz=267
CTGM  Chitina Glacie  93.19  29    P      P      01 59 11.9  -0.2
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CTGM                                  IAmb     IAmb     01 59 14.3
         comp=Z,42nm,1.4s
VORD   Divnogorie          93.39 321 eP        P        01 59 11.2  -1.8
VORD                                  pmax     pmax
         comp=Z,10.0nm,0.6s
EGAK   Eagle               93.44  25  IAmb     IAmb     01 59 14.7
         comp=Z,34nm,1.5s
EGAK   Eagle               93.44  25  P        P        01 59 13.0   0.0
         baz=268,SNR=5.9
VSR    Storozhevoye        93.48 321 eP        P        01 59 11.0  -2.4
VSR                                   pmax     pmax
         comp=Z,10.0nm,1.6s
BVCY   Beaver Creek        93.48  28  P        P        01 59 14.0  +0.7
         baz=268
YUK3   Moose Creek         93.64  28  P        P        01 59 14.7  +0.4
         baz=268
KLMR   Klimovskoe          93.64 331 eP        P        01 59 10.4  -3.5
KLMR                                  pmax     pmax
         comp=Z,54nm,1.4s
KLMR   Klimovskoe          93.64 331 eP        P        01 59 10.5  -3.5
KLMR                                  AMP               01 59 13.5
         comp=Z,54nm,1.4s
LPSR   Galich'ya Gora      93.68 322 eP        P        01 59 11.8  -2.5
DAWY   Dawson              94.19  26  P        P        01 59 17.2  +0.7
         baz=269
GAZ    Gaziantep           94.38 307  IAmb     IAmb     01 59 26.1
         comp=Z,40nm,1.4s
LODK   Lodwar              94.43 273  P        P        01 59 17.9  -0.9
LODK   Lodwar              94.43 273  P        P        01 59 17.1  -1.7
MOS    Moscow              94.52 325 eP        P        01 59 15.4  -2.7
I29M   Ogilvie Camp,       94.67  25  P        P        01 59 18.9  +0.3
         baz=270
OBN    Obninsk             95.12 325⇓eP        P        01 59 19.5  -1.4
OBN                                   pmax     pmax
         comp=Z,30nm,1.3s
EPYK   Eagle Plains        95.30  24  P        P        01 59 21.5  -0.1
         baz=272,SNR=11
GHAJ   Ghor Haditha        95.56 301  IAmb     IAmb     01 59 31.7
         comp=Z,28nm,1.1s
N31M   Braeburn, Yuko      95.88  29  P        P        01 59 24.8  +0.6
         baz=272
APA    Apatity             96.20 337⇓iP        P        01 59 22.8  -2.7
APA                                   pmax     pmax
         comp=Z,12nm,1.1s
APA                                   MLR      MLR
         comp=Z,900nm,19.0s
INK    Inuvik              96.42  22  P        P        01 59 25.4  -1.1
         comp=Z,8.3nm,0.8s,baz=299,slow=3.7,SNR=35
INK    Inuvik              96.42  22  P        P        01 59 26.1  -0.4
         baz=275,SNR=15
FARO   Faro, Yukon         96.99  28  P        P        01 59 29.5  +0.2
         baz=274
BRTR   Keskin Array B      97.21 309  P        P        01 59 29.4  -1.6
         comp=Z,3.3nm,1.1s,baz=122,slow=3.9,SNR=12
BRTR                                  PP       PP       02 03 28.1  +0.6
         comp=Z,1.1nm,1.0s,baz=93,slow=7.4,SNR=4.0
BRTR                                  LR       LR       02 52 17.0
         comp=Z,56nm,18.6s,baz=88,slow=41
BRTR   Keskin Array B      97.21 309ceP        P        01 59 30.0  -1.0
BRTR                                  pmax     pmax
         comp=Z,3.0nm,1.1s
MMPY   Sheldon Lake,       97.92  27  P        P        01 59 33.7  +0.2
         baz=276
SNAA   Sanae               98.28 194  P        Pdif     01 59 35.9  +0.8
SNAA   Sanae               98.28 194⇓iP        P        01 59 35.6  +0.6
SNAA                                  pmax     pmax
         comp=Z,16nm,1.6s
SNAA   Sanae               98.28 194  P        P        01 59 34.0  -1.1
SNAA                                  IAmb     IAmb     01 59 36.8
         comp=Z,22nm,1.6s
A36M   Sachs Harbour       98.64  18  IAmb     IAmb     01 59 37.5
         comp=Z,29nm,1.6s
A36M   Sachs Harbour       98.64  18  P        P        01 59 36.0  -0.4
         baz=283,SNR=6.0
ARCES  ARCESS Array B      98.80 340  P        P        01 59 36.2  -1.1
         comp=Z,12nm,1.1s,baz=57,slow=4.5,SNR=8.7
ARCES                                 LR       LR       02 52 01.8
         comp=Z,308nm,18.5s,baz=65,slow=40
AKASG  Malin Array Be      99.77 321  P        Pdif     01 59 40.6  -1.3
         comp=Z,0.6nm,0.7s,baz=82,slow=3.1,SNR=1.9
AKASG                                 PP       PP       02 03 48.8  +2.2
         comp=Z,0.1nm,0.3s,baz=80,slow=4.9,SNR=4.7
FINES  FINESS Array B     100.10 332  P        Pdif     01 59 41.4  -1.7
         comp=Z,4.7nm,1.0s,baz=132,slow=2.8,SNR=6.0
FINES  FINESS Array B     100.10 332 i P       Pdif     01 59 41.7  -1.5
FINES                                 pmax     pmax
         comp=Z,4.0nm,1.0s
VNA3   Neumayer Olymp     100.12 192  Pdiff    Pdif     01 59 43.9  +0.7
MNK    Minsk              100.17 325 i P       Pdif     01 59 43.7   0.0
MNK                                  i                  02 03 49.3
MNK                                  i PPP     PPP      02 05 56.5
MNK                                  i S       SKSac    02 10 19.7  -0.5
MNK                                  i PS      PS       02 12 49.6  +0.1
MNK                                  i SS      SS       02 18 11.3  +0.3
MNK                                  i SSS     SSS      02 22 01.5
MNK                                   pmax     pmax
         comp=N,17nm,0.9s
MNK                                   pmax     pmax
         comp=Z,13nm,1.0s
MNK                                   pmax     pmax
         comp=E,5.0nm,1.2s
MNK                                   MLR      MLR
         comp=N,253nm,21.0s
MNK                                   MLR      MLR
         comp=Z,118nm,20.0s
MNK                                   MLR      MLR
         comp=E,20nm,20.0s
MNK    Minsk              100.17 325 i P       Pdif     01 59 43.7   0.0
         comp=E,5.0nm,1.2s
MNK                                  i P       Pdif     01 59 43.7   0.0
         comp=N,17nm,0.9s
MNK                                  i P       Pdif     01 59 43.7   0.0
         comp=Z,13nm,1.1s,baz=83
MNK                                  i PP      PP       02 03 49.4  -0.1
MNK                                  i PPP     PPP      02 05 56.5
MNK                                  i S       SKSac    02 10 19.8  -0.4
MNK                                  i PS      PS       02 12 49.6  +0.1
MNK                                  i SS      SS       02 18 11.3  +0.4
MNK                                  i SSS     SSS      02 22 01.6
MNK                                  i LQ      LQ       02 39 00.6
MNK                                  i LR      LR       02 42 14.5
MNK                                  i LRM     MLR      02 45 45.1
         comp=N,253nm,21.0s
MNK                                  i LRM     MLR      02 45 48.0
         comp=Z,118nm,19.5s
MNK                                  i LRM     MLR      02 46 25.6
         comp=E,20nm,20.3s
VNA1   Neumayer--Stat     100.26 193  Pdiff    Pdif     01 59 45.2  +1.5
BOSA   Boshof             100.50 240  P        Pdif     01 59 45.2  -0.7
         comp=E,4.6nm,1.1s,baz=108,slow=3.2,SNR=3.4
BOSA   Boshof             100.50 240 i P       Pdif     01 59 47.9  +2.0
BOSA   Boshof             100.50 240           Pdif     01 59 47.9  +2.0
SORM   Soroca             100.59 318 ⇑P        Pdif     01 59 44.8  -0.8
SORM   Soroca             100.59 318 ⇑P        Pdif     01 59 44.8  -0.8
NACGM  Naroch             100.75 325 i P       Pdif     01 59 44.8  -1.5
TESR   Tescani            101.91 317 ⇑P        Pdif     01 59 51.3  -0.3
BURAR  Bucovina Array     102.74 318 ⇑P        Pdif     01 59 55.7  +0.3
BURAR  Bucovina Array     102.74 318 ⇑P        Pdif     01 59 55.7  +0.3
ARR    Arges              103.45 316 ⇑P        Pdif     01 59 57.4  -1.2
UZH    Uzhgorod           104.52 319 eP        Pdif     02 00 01.2  -1.9
DRGR                      104.56 317 ⇑P        Pdif     02 00 03.4  -0.1
DRGR                      104.56 317 ⇑P        Pdif     02 00 03.4  -0.1
CRVS   Cervenica-Dubn     105.01 320 ePDIFF    Pdif     02 00 06.1  +0.8
YKA    Yellowknife Ar     105.42  26  Pdiff    Pdif     02 00 06.6  -0.2
         comp=E,0.9nm,1.0s,baz=293,slow=3.3,SNR=4.0
YKA                                   PKiKP    PKiKP    02 04 20.6  +0.2
         comp=E,0.8nm,0.8s,baz=289,slow=1.9,SNR=4.0
YKA                                   PKKPbc   PKKPbc   02 15 45.1  -3.0
         comp=E,1.5nm,1.0s,baz=94,slow=3.6,SNR=5.0
M02C   Callahan           105.93  48  P        PKiKP    02 04 21.5  -0.6
         baz=279
N02D   Trinity Center     106.10  49  P        PKiKP    02 04 22.8  +0.4
         baz=279
NOA    NORSAR Array B     107.09 333  Pdiff    Pdif     02 00 13.4  -1.0
         comp=E,0.8nm,0.9s,baz=69,slow=4.5,SNR=1.3
PKM    Mcpherson Peak     109.27  55  P        PKiKP    02 04 28.6   0.0
         baz=279
CLL    Collm              109.66 323 eP        Pdif     02 00 28.0  +2.1
CLL                                   MLR      MLR
         comp=Z,400nm,19.3s
CLL    Collm              109.66 323 ePS       PS       02 14 27.0  -1.4
CLL                                  ePPS      PPS      02 15 30.0
CLL                                  e                  02 29 30.0
CLL                                   Lm       MLR      03 04 00.0
         comp=N,200nm,19.1s
CLL                                   Lm       MLR      03 04 00.0
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         comp=E,100nm,18.9s
CLL                                   Lm       MLR      03 04 00.0
         comp=Z,400nm,19.3s
SOKA   Soboth             109.73 318 eP        PKiKP    02 04 28.4  -0.6
         comp=Z,5.1nm,1.4s
SNCC   San Nicolas Is     109.75  56  P        PKiKP    02 04 29.7  +0.4
         baz=278
MOA    Molln              109.92 320  P        PKiKP    02 04 29.7  +0.5
         comp=Z,6.2nm,1.5s
GERES  GERESS Array B     109.99 321  PKiKP    PKiKP    02 04 29.4  -0.1
         comp=Z,0.5nm,0.6s,baz=90,slow=1.3,SNR=4.8
GERES                                 PP       PP       02 05 01.3  -1.1
         comp=Z,0.8nm,0.8s,baz=64,slow=6.7,SNR=4.2
OBKA   Obir               110.10 318 eP        PKiKP    02 04 29.1  -0.6
         comp=Z,3.7nm,1.3s
KBA    Koelnbreinsper     110.74 319 eP        PKiKP    02 04 29.8  -1.2
         comp=Z,5.4nm,1.4s
MSO    Missoula           110.99  41  P        PKiKP    02 04 31.7  +0.3
         baz=287
ABTA   Abfaltersbach      111.38 319 eP        PKiKP    02 04 31.9  -0.2
         comp=Z,4.2nm,1.4s
WTTA   Wattenberg         111.79 320 eP        PKiKP    02 04 32.3  -0.8
         comp=Z,7.2nm,1.4s
GMRC   Granite Mounta     112.66  54  P        PKiKP    02 04 35.7  +0.7
         baz=281
BOZ    Bozeman (W)        112.89  42  P        PKiKP    02 04 35.7  +0.5
         baz=288
DAVOX  Davos/Dischmat     113.08 320  PKiKP    PKiKP    02 04 35.7  +0.2
         comp=Z,1.4nm,0.6s,baz=356,slow=3.0,SNR=3.4
EGMT   Eagleton           113.29  39  P        PKiKP    02 04 36.0  +0.2
         baz=291
DUG    Dugway, Tooele     113.63  48  P        PKiKP    02 04 37.9  +1.2
         baz=285
H17A   Grant Village      113.99  43  P        PKiKP    02 04 38.1  +0.7
         baz=289
RLMT   Red Lodge          114.62  42  P        PKiKP    02 04 39.0  +0.4
         baz=290
BW06   Boulder Array      115.21  44  P        PKiKP    02 04 40.1  +0.3
         baz=289
PDAR   Pinedale Array     115.21  44  PKP      PKPdf    02 04 40.7  +0.9
         comp=Z,2.6nm,1.1s,baz=238,slow=1.4,SNR=8.9
PDAR                                  PKKPbc   PKKPbc   02 15 14.7  -1.4
         comp=Z,1.5nm,1.1s,baz=101,slow=7.7,SNR=4.8
PDAR   Pinedale Array     115.21  44  PKiKP    PKiKP    02 04 40.2  +0.4
214A   Organ Pipe Nat     115.55  57  P        PKiKP    02 04 40.8  +0.3
         baz=282
WUAZ   Wupatki            115.92  52  P        PKPdf    02 04 41.2   0.0
         baz=284
LAO    LASA Array         116.02  39           PKPdf    02 04 41.9  +0.9
LAO    LASA Array         116.02  39  P        PKPdf    02 04 42.2  +1.2
         baz=294
DGMT   Dagmar             116.52  37  P        PKiKP    02 04 42.3  +0.5
         baz=296
O20A   White River Ci     117.00  47  P        PKPdf    02 04 43.5  +0.2
         baz=289
TUC    Tucson             117.15  56  P        PKPdf    02 04 43.6   0.0
         baz=283
W18A   Petrified Fore     117.32  53  P        PKPdf    02 04 44.3  +0.2
         baz=285
K22A   Casper             117.35  44  P        PKPdf    02 04 43.5  -0.3
         baz=291
MVCO   Mesa Verde         117.70  50  P        PKPdf    02 04 44.5  -0.2
         baz=287,SNR=5.7
N23A   Red Feather La     118.39  45  P        PKPdf    02 04 46.3  +0.3
         baz=291
RSSD   Black Hills        118.46  41  PKIKP    PKPdf    02 04 45.1  -0.9
RSSD   Black Hills        118.46  41  PKPdf    PKPdf    02 04 45.1  -0.9
RSSD   Black Hills        118.46  41  P        PKPdf    02 04 45.7  -0.3
         baz=294
S22A   4UR Ranch, Cre     118.80  49  P        PKPdf    02 04 46.9  -0.1
         baz=289,SNR=7.1
ISCO   Idaho Springs      119.01  46  P        PKPdf    02 04 47.7  +0.4
         baz=291
MDND   Maddock            119.53  36  P        PKPdf    02 04 47.4  -0.2
         baz=300
121A   Cookes Peak, D     119.56  55  P        PKiKP    02 04 49.1  +0.7
         baz=285
Q24A   Divide             119.64  47  P        PKiKP    02 04 49.1  +0.5
         baz=291
SDCO   Great Sand Dun     119.80  48  P        PKPdf    02 04 49.3  +0.5
         baz=290,SNR=5.6
ANMO   Albuquerque        119.95  52⇑iPKIKP    PKiKP    02 04 50.2  +1.0
ANMO                                  pmax     pmax
         comp=Z,11nm,1.3s
ANMO   Albuquerque        119.95  52  P        PKiKP    02 04 49.7  +0.6
         baz=288
ULM    Lac du Bonnet      120.32  32  PKP      PKPdf    02 04 48.7  -0.3
         comp=Z,1.7nm,0.5s,baz=0.0,slow=5.1,SNR=2.2
ULM                                   PKKPbc   PKKPab   02 14 56.4  -1.2
         comp=Z,1.6nm,0.4s,baz=82,slow=7.1,SNR=3.0
T25A   Trinidad           120.82  49  P        PKiKP    02 04 51.4  +0.5
         baz=290,SNR=5.5
OGNE   Ogallala           121.11  44  P        PKPdf    02 04 51.0   0.0
         baz=294
AGMN   Agassiz Nation     121.42  34  P        PKiKP    02 04 52.0  +0.6
         baz=304
MNTX   Cornudas Mount     121.75  55  P        PKiKP    02 04 53.1  +0.5
         baz=286
MSTX   Muleshoe           123.15  52  P        PKPdf    02 04 55.6  +0.4
         baz=290
ECSD   EROS Data Cent     123.40  39  PKPdf    PKPdf    02 04 54.5  -0.7
ECSD   EROS Data Cent     123.40  39  P        PKiKP    02 04 56.5  +1.0
         baz=301
BGNE   Belgrade           123.54  42  P        PKPdf    02 04 55.7  +0.2
         baz=298
CBKS   Cedar Bluff        123.60  45  P        PKPdf    02 04 56.0  +0.2
         baz=295
TXAR   Lajitas Array      123.82  57  PKP      PKiKP    02 04 57.5  +0.7
         comp=Z,2.6nm,1.1s,baz=222,slow=1.7,SNR=10
F36A   Milaca             124.11  35  PKPdf    PKPdf    02 04 56.0  -0.5
SPMN   Marine on St.      124.89  35  P        PKPdf    02 04 58.0  -0.1
         baz=305
ESDC   Sonseca Array      125.18 317  PKP      PKPdf    02 04 58.7  -0.1
         comp=Z,3.4nm,1.2s,baz=316,slow=4.1,SNR=5.5
ESDC                                  PP       PP       02 06 48.0  -0.2
         comp=Z,2.7nm,1.2s,baz=67,slow=7.3,SNR=4.9
KSU1   Kansas State U     125.66  44  P        PKPdf    02 04 59.5  -0.1
         baz=298,SNR=5.4
JCT    Junction City      126.68  55  P        PKPdf    02 05 02.2  +0.3
         baz=290
TUL1   Leonard            127.68  47  P        PKPdf    02 05 03.8  +0.2
         baz=296
833A   Chaparral WMA,     127.70  57  P        PKPdf    02 05 04.2  +0.3
         baz=288
JFWS   Jewell Farm        127.73  36  PKIKP    PKPdf    02 05 02.9  -0.6
JFWS   Jewell Farm        127.73  36  PKPdf    PKPdf    02 05 02.9  -0.6
JFWS   Jewell Farm        127.73  36  P        PKiKP    02 05 04.4  +0.3
         baz=306
SCHQ   Schefferville      127.78  12  PKP      PKiKP    02 05 04.0  +0.2
         comp=Z,6.0nm,1.1s,baz=51,slow=8.3,SNR=1.5
TORD   Torodi Ar. Bea     127.79 283  PKP      PKPdf    02 05 03.6  -0.7
         comp=Z,4.8nm,0.9s,baz=31,slow=1.6,SNR=26
TORD                                  PP       PP       02 07 07.9  +1.3
         comp=Z,8.6nm,1.3s,baz=72,slow=6.8,SNR=6.4
TORD                                  SKPbc    SKiKP    02 08 20.4  -18
         comp=Z,5.3nm,1.3s,baz=82,slow=1.3,SNR=5.4
TORD   Torodi Ar. Bea     127.79 283  PKPdf    PKPdf    02 05 03.4  -1.0
U38A   Gravette           128.45  46  PKPdf    PKPdf    02 05 03.9  -1.3
S39A   Bolivar            128.60  44  PKPdf    PKPdf    02 05 05.4   0.0
MDT    Midelt             128.63 309  PKP      PKPdf    02 05 06.5  +0.8
         comp=Z,2.9nm,1.1s,baz=333,slow=2.3,SNR=2.6
W39A   Magazine           129.46  47  P        PKPdf    02 05 07.3  +0.3
         baz=298
U40A   Yellville          129.58  45  P        PKPdf    02 05 07.2  -0.1
         baz=299
CCM    Cathedral Cave     129.82  42  PKIKP    PKPdf    02 05 07.8  +0.2
CCM    Cathedral Cave     129.82  42  PKPdf    PKPdf    02 05 07.8  +0.2
CCM    Cathedral Cave     129.82  42  P        PKPdf    02 05 07.8  +0.2
         baz=302
MIAR   Mount Ida          129.91  47  P        PKPdf    02 05 08.2  +0.3
         baz=297
X40A   Basin Creek Fa     130.48  47  P        PKPdf    02 05 09.7  +0.7
         baz=298
W41B   Gary Mavity, V     130.58  46  P        PKPdf    02 05 10.0  +0.9
         baz=299
SFIN   Lafayette          131.14  37  P        PKPdf    02 05 10.6  +0.5
         baz=308
PLCA   Paso Flores        131.65 160  PKP      PKPdf    02 05 10.6  -0.6
         comp=Z,8.1nm,1.3s,baz=243,slow=4.4,SNR=3.2
WCI    Wyandotte Cave     132.94  39  P        PKPdf    02 05 14.1  +0.5
         baz=307
P49A   Miami Univ. Ec     133.10  37  P        PKPdf    02 05 14.3  +0.5
         baz=310
KOWA   Kowa               133.16 286  PKP      PKPdf    02 05 13.7  -0.8
         comp=Z,2.9nm,0.9s,baz=76,slow=3.1,SNR=6.7
KOWA                                  PP       PP       02 07 41.3   0.0
         comp=Z,7.6nm,1.2s,baz=78,slow=5.1,SNR=5.1
ACSO   Alum Creek Sta     133.65  35  P        PKiKP    02 05 16.2  +0.1
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         baz=312
P52A   Corning            134.54  35  P        PKPdf    02 05 17.6  +1.1
         baz=313
DBIC   Dimbokro           134.57 275  PKP      PKPdf    02 05 16.4  -0.8
         comp=Z,2.8nm,0.8s,baz=53,slow=4.7,SNR=4.2
DBIC                                  SKPbc    SKPbc    02 08 45.1   0.0
         comp=Z,11nm,1.2s,baz=121,slow=15,SNR=6.8
O53A   New Philadelph     134.63  33  P        PKPdf    02 05 16.9  +0.3
         baz=314
N54A   Moraine State      134.78  32  P        PKiKP    02 05 18.4   0.0
         baz=316
TZTN   Tazewell           135.70  39  P        PKPdf    02 05 19.7  +0.9
         baz=309
PKME   Peaks-Kenny Pk     135.88  19  P        PKiKP    02 05 20.4  -0.1
         baz=332
O56A   Blue Knob Stat     136.03  31  P        PKiKP    02 05 20.9  -0.1
         baz=318
L61B   Northampton        137.05  24  P        PKiKP    02 05 22.5  -0.4
         baz=326
BLA    Blacksburg         137.17  36  P        PKPdf    02 05 22.5  +1.0
         baz=313
GOGA   Godfrey            137.66  43  P        PKPdf    02 05 23.3  +0.9
         baz=306
P60A   Greenville         137.85  29  P        PKiKP    02 05 24.2  -0.4
         baz=321
KMSC   Kings Mountain     137.98  39  P        PKPdf    02 05 24.5  +1.5
         baz=310
PLTB   Pedras Altas       144.13 175  PKPdf    PKPbc    02 05 33.0  +0.7
LVC    Limon Verde        147.83 147  PKPbc    PKPbc    02 05 43.6  -0.4
         comp=Z,12nm,0.8s,baz=206,slow=1.7,SNR=10
LVC    Limon Verde        147.83 147  PKP2     PKPbc    02 05 43.9  -0.2
LVC    Limon Verde        147.83 147           PKPbc    02 05 43.9  -0.2
PB07   IPOC Station P     147.97 144  PKPbc    PKPbc    02 05 44.8  +0.5
PB09   IPOC Station P     148.29 145  PKPbc    PKPbc    02 05 46.3  +1.2
ITAB   Concordia          148.72 177  PKPdf    PKPdf    02 05 43.1  +1.0
PB01   IPOC Station P     148.73 144  PKPbc    PKPbc    02 05 46.6  +0.4
CPUP   Villa Florida      148.94 168  PKPbc    PKPbc    02 05 46.6  +0.2
         comp=Z,11nm,0.9s,baz=186,slow=1.3,SNR=9.9
NNA    Nana               149.22 122  PKPbc    PKPdf    02 05 45.1  +1.9
         comp=Z,12nm,0.7s,baz=225,slow=2.9,SNR=6.5
NNA    Nana               149.22 122c iPKP2    PKiKP    02 05 50.3  +1.6
NNA                                   pmax     pmax
         comp=Z,133nm,2.5s
NNA    Nana               149.22 122  PKPbc    PKPbc    02 05 48.6  +1.1
ATAH   Atahualpa          149.92 112  PKP      PKPdf    02 05 44.6  -0.2
         comp=Z,4.4nm,0.7s,baz=215,slow=3.9,SNR=8.3
ATAH                                  PKPbc    PKiKP    02 05 51.2  +0.6
         comp=Z,46nm,1.2s,baz=225,slow=2.1,SNR=23
OTAV   Otavalo            151.74  97  PKIKP    PKPdf    02 05 48.7  +1.0
OTAV   Otavalo            151.74  97  PKPdf    PKPdf    02 05 48.7  +1.0
LPAZ   La Paz             153.17 140  PKP      PKPdf    02 05 48.3  -1.7
         comp=Z,8.9nm,1.2s,baz=277,slow=1.6,SNR=11
LPAZ                                  PKPbc    PKPbc    02 05 57.2  -0.2
         comp=Z,11nm,1.1s,baz=341,slow=2.4,SNR=11
AQDB   Aquidauana         154.96 168  PKPdf    PKPdf    02 05 51.1  -0.5
AQDB                                  PKPbc    pPKPdf   02 05 58.6  -2.4
ROSC   El Rosal           156.18  88  PKP      PKPdf    02 05 52.2  -1.7
         comp=Z,4.4nm,0.4s,baz=231,slow=6.5,SNR=5.6
ROSC                                  PKPab    PKPab    02 06 21.3  -0.5
         comp=Z,3.7nm,0.3s,baz=312,slow=6.0,SNR=1.6
ROSC   El Rosal           156.18  88  PKIKP    PKPdf    02 05 50.7  -3.3
ROSC   El Rosal           156.18  88           PKPdf    02 05 50.6  -3.3
SIV    San Ignacio        157.36 153  PKP      PKPdf    02 05 54.1  -0.8
         comp=Z,3.3nm,1.1s,baz=253,slow=1.2,SNR=11
SIV                                   PKPab    PKPab    02 06 25.8  -0.2
         comp=Z,5.0nm,0.8s,baz=194,slow=4.9,SNR=12
BAUV   El Baul            161.89  74  PKPdf    PKPdf    02 05 57.8  -2.3
PTGA   Pitinga            169.30 117  PKP      PKPdf    02 06 05.8  -0.4
         comp=Z,8.3nm,1.2s,baz=296,slow=1.7,SNR=7.5
PTGA                                  PKPab    PKPab    02 07 18.8  +0.2
         comp=Z,2.8nm,0.8s,baz=333,slow=5.2,SNR=4.2
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*IDC **14** 02:05:25.4±1.4, 4°.19S×129°.46E, h0km, mb3.9/5, mb1 4.1/8, mb1mx3.7/37, mbtmp4.0/8, ML3.6/3, MS3.6/1, Ms1 3.6/1, ms1mx2.9/37, Error ellipse: s-maj=46.0km s-min=24.0km az=86.0*

*DJA **14** 02:05:28.4±1.1, 4°S±6°×12°9E±°, h20km±9km, M4.0/7, MLv4.0/7*

*NEIC **14** 02:05:29.7±1.1, 4°.11S±0°.08×129°.47E±0°.06, h28km±7km, mb4.1/13, Error ellipse: s-maj=11.2km s-min=8.0km az=191.0*

ISC 14 02:05:29.9±0.6, **4°.14S**±0°.05×**129°.47E**±0°.05, **h36km, n35,** σ1^s**75**/38, **mb4.2**/8, **Banda Sea**

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Code   Station Name        Δ°   AZ°   Phase ID          Time        Res
                                      Op       ISC      h  m  s     ISC
MSAI   Masohi              0.96 326   P        Pn       02 05 45.5  -1.3
MSAI                                  S        Sn       02 05 59.1  -0.2
AAI    Ambon               1.35 290   P        Pn       02 05 51.6  -0.6
AAI                                   S        Sn       02 06 08.7  -0.2
FAKI   Fak Fak             3.03  66   P        Pn       02 06 15.7  +0.4
FAKI                                  S        Sn       02 06 51.8  +1.4
FAKI   Fak Fak             3.03  66            Pn       02 06 15.3   0.0
SIJI   Sorong              3.72  29   Pn       Pn       02 06 24.4  -0.4
         13nm,0.3s,baz=213,slow=23,SNR=14
SIJI                                  Sn       Sn       02 07 03.4  -4.0
         7.2nm,0.3s,baz=248,slow=5.2,SNR=4.4
SWI    Sorong              3.72  29   P        Pn       02 06 24.8   0.0
LBMI   Labuha              4.00 331   P        Pn       02 06 28.7   0.0
SANI   Sanana              4.05 301   P        Pn       02 06 29.4   0.0
SAUI   Saumlaki            4.23 155   Pn       Pn       02 06 32.8  +1.0
FITZ   Fitzroy Crossi     14.37 195   Pn       Pn       02 08 48.3  -2.5
         0.1nm,0.3s,baz=21,slow=14,SNR=1.9
WB0    Warramunga Arr     16.25 163   Pn       Pn       02 09 11.6  -4.0
WRAB   Tennant Creek      16.40 164   Pn       Pn       02 09 13.8  -3.6
WRAB                                  IAmb     IAmb     02 09 41.6
         comp=Z,16nm,1.4s
WRA    Warramunga Arr     16.41 164   Pn       Pn       02 09 13.4  -4.1
         comp=Z,0.2nm,0.3s,baz=342,slow=13,SNR=19
WRA    Warramunga Arr     16.41 164   Pn       Pn       02 09 14.2  -3.4
WB2    Warramunga Arr     16.41 164   Pn       Pn       02 09 14.2  -3.4
WB2                                   IAmb     IAmb     02 09 31.6
         comp=Z,7.0nm,1.1s
COEN   Coen               16.67 127   P        P        02 09 22.5  -0.4
COEN                                  IAmb     IAmb     02 09 44.6
         comp=Z,9.6nm,1.1s
PSA00  Pilbara Seismi     19.68 208   P        P        02 09 56.9  +0.9
PSA00  Pilbara Seismi     19.68 208   P        P        02 09 56.2  +0.2
PSA00                                 IAmb     IAmb     02 09 58.5
         comp=Z,11nm,1.0s
AS31   Alice Springs      19.87 168   P        P        02 09 58.0  -0.1
ASAR   Alice Springs      19.88 168   P        P        02 09 58.4  +0.2
         comp=Z,0.4nm,0.3s,baz=346,slow=9.7,SNR=49
ASAR   Alice Springs      19.88 168   P        P        02 09 58.7  +0.5
CTAO   Charters Tower     22.77 135   P        P        02 10 29.7  +0.3
CTAO                                  IAmb     IAmb     02 10 43.7
         comp=Z,11nm,1.2s
FORT   Forrest            26.53 183   P        P        02 11 04.3   0.0
CMAR   Chiang Mai Arr     37.54 308   P        P        02 12 41.9  +1.0
         comp=Z,1.4nm,0.3s,baz=143,slow=7.9,SNR=2.4
KSRS   Korea Array        41.41 358   P        P        02 13 13.5  +0.7
         comp=Z,0.6nm,0.3s,baz=167,slow=6.1,SNR=4.1
ASAJ   Asahikawa          49.47  12   LR       LR       02 33 51.5
         comp=Z,69nm,19.9s,baz=169,slow=34
SONM   Songino Array      55.58 341   P        P        02 15 04.2  +2.2
         comp=Z,0.4nm,0.7s,baz=161,slow=9.2,SNR=2.0
MK31   Makanchi Array     65.57 326   P        P        02 16 10.9  +1.0
MK31                                  IAmb     IAmb     02 16 12.5
         comp=Z,2.0nm,1.0s
MKAR   Makanchi Array     65.57 326   P        P        02 16 10.9  +0.9
         comp=Z,0.9nm,0.5s,baz=114,slow=7.3,SNR=17
MKAR   Makanchi Array     65.57 326   P        P        02 16 10.7  +0.7
MAKZ   Makanchi           65.75 326   P        P        02 16 11.7  +0.5
MAKZ                                  IAmb     IAmb     02 16 27.0
         comp=Z,3.3nm,1.1s
ZALV   Zalesovo Beam      68.81 334   P        P        02 16 31.4  +1.1
         comp=Z,1.4nm,0.9s,baz=141,slow=7.4,SNR=5.1
ZALV   Zalesovo Beam      68.81 334   P        P        02 16 29.9  -0.4
KURK   Kurchatov          69.82 328   P        P        02 16 36.7   0.0
ABKAR  Akbulak array      79.96 321   P        P        02 17 35.8  +0.5
```

IDC 14 02:08:14.3±1.6, **4°.11S**×**129°.60E, h0km, mb3.7**/1, **mb1 3.8**/5, **mb1mx3.4**/43, **mbtmp3.7**/5, **ML3.3**/4, **Error ellipse: s-maj=55.8km s-min=25.3km az=87.0, Banda Sea**

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Code   Station Name        Δ°   AZ°   Phase ID          Time        Res
                                      Op       ISC      h  m  s     ISC
SIJI   Sorong              3.62  27   Pn       Pn       02 09 12.2  +0.5
         4.8nm,0.3s,baz=235,slow=21,SNR=5.4
SIJI                                  Sn       Sn       02 09 59.1  +3.9
         4.1nm,0.3s,baz=265,slow=23,SNR=2.0
```

FITZ	Fitzroy Crossi	14.43	195	Pn	Pn	02 11 39.4	-0.6
	0.1nm,0.3s,baz=6.3,slow=9.2,SNR=2.1						
WRA	Warramunga Arr	16.40	164	Pn	Pn	02 12 04.5	-1.6
	0.1nm,0.3s,baz=345,slow=10,SNR=2.2						
ASAR	Alice Springs	19.88	168	P	Pn	02 12 48.4	-0.5
	0.1nm,0.3s,baz=351,slow=11,SNR=4.6						
MKAR	Makanchi Array	65.61	326	P	P	02 19 00.0	-0.2
	0.4nm,0.4s,baz=109,slow=8.0,SNR=5.6						

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*IDC **14** 02:12:14.2±1.0, 2°.17S×100°.12E, h0^{km}, mb4.1/14, mb1 4.2/15, mb1mx3.9/50, mbtmp4.1/15, ML3.0/1, Error ellipse: s-maj=35.8km s-min=15.6km az=53.0*

*DJA **14** 02:12:19.2±0.6, 2°S±4°×10°0E±°, h12^{km}±6^{km}, M4.1/7, mb4.0/3, MLv4.1/7*

*NEIC **14** 02:12:22.9±2.1, 2°.10S±0°.09×100°.12E±0°.08, h56^{km}±7^{km}, mb4.3/17, Error ellipse: s-maj=12.9km s-min=11.3km az=201.0*

ISC 14 02:12:20.0±0.5**, 2°.12S**±0°.05×**100°.16E**±0°.05**, h34**^{km}**, n64, σ1^{s}.47**/60**, mb4.3**/19**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.65	194	P	Pb	02 12 33.1	-0.1
PDSI	Padang	1.24	14	P	Pn	02 12 41.3	+0.3
KRJI	Kerinci	1.30	89	P	Pb	02 12 43.8	-0.2
SISI	Saibi	1.33	306	P	Pn	02 12 41.9	-0.4
PPI	Padang Panjang	1.67	8	P	Pn	02 12 48.0	+1.1
MASI	Maura Aman, Be	2.31	116	P	Pb	02 12 58.4	-2.7
BKNI	Bangkinang	2.59	20	P	Pb	02 13 03.4	-2.4
BKNI	Bangkinang	2.59	20	Pn	Pn	02 13 02.4	+2.8
GSI	Gunungsitoli	4.28	323	P	Pn	02 13 23.7	+0.9
GSI	Gunungsitoli	4.28	323	Pn	Pn	02 13 25.4	+2.6
MDSI	Maura Dua	4.64	120	P	Pn	02 13 30.1	+2.3
RPSI	Rantau Prapat	4.94	345		Pn	02 13 31.0	-0.9
RPSI					Sn	02 14 33.5	+5.5
PSI	Prapat	5.05	346	Pn	Pn	02 13 31.0	-2.5
	0.6nm,0.3s,baz=163,slow=17,SNR=1.9						
PSI				Sn	Sn	02 14 33.5	+2.8
	baz=169,slow=21,SNR=1.0						
KLSI		5.22	119	P	Pn	02 13 38.2	+2.4
	10nm,1.0s						
MYKOM	Kota Tinggi	5.36	44	Pn	Pn	02 13 40.2	+2.6
KASI	Kota Agung	5.49	128	P	Pn	02 13 41.6	+2.2
	44nm,1.0s						
TPTI		6.12	331	P	Pn	02 13 49.5	+1.3
MYLDM	Lahad Datu	19.70	68	P	Pn	02 16 47.6	-0.7
MYLDM				IAmb	IAmb	02 17 02.7	
	comp=Z,26nm,1.4s						
CM31	Chiang Mai Arr	20.49	357	P	P	02 16 54.6	-0.6
CM31				IAmb	IAmb	02 16 59.7	
	comp=Z,8.2nm,0.4s						
CMAR	Chiang Mai Arr	20.49	357	P	P	02 16 53.5	-1.7
	comp=Z,2.6nm,0.5s,baz=185,slow=9.7,SNR=10						
CMAR	Chiang Mai Arr	20.49	357	P	P	02 16 54.3	-0.9
TOLI2	Tolitoli	20.86	81	P	P	02 16 59.8	+0.5
TOLI2				IAmb	IAmb	02 17 01.0	
	comp=Z,10nm,0.9s						
H08S2	Diego Garcia H	28.10	258	T	T	02 47 04.0	
	baz=80,slow=75,SNR=81						
H08S3	Diego Garcia H	28.11	258	T	T	02 47 04.8	
	baz=80,slow=75,SNR=103						
H08S1	Diego Carcia H	28.12	258	T	T	02 47 08.2	
	baz=80,slow=75,SNR=87						
FITZ	Fitzroy Crossi	29.61	124	P	P	02 18 21.9	-0.5
	comp=Z,2.6nm,0.9s,baz=317,slow=8.0,SNR=2.7						
H01W3	Cape Leeuwin H	35.09	160	T	T	02 56 16.0	
	baz=336						
H01W2	Cape Leeuwin H	35.11	160	T	T	02 56 27.9	
	baz=336						
H01W1	Cape Leeuwin H	35.11	160	T	T	02 56 20.4	
	baz=336						
WB0	Warramunga Arr	37.77	120	P	P	02 19 31.9	-1.4
WRA	Warramunga Arr	37.79	120	P	P	02 19 32.5	-0.9
	comp=Z,2.5nm,0.8s,baz=300,slow=11,SNR=21						
WRA	Warramunga Arr	37.79	120	P	P	02 19 32.4	-1.0
WB2	Warramunga Arr	37.80	120	P	P	02 19 32.5	-1.1
WB2				IAmb	IAmb	02 19 46.5	
	comp=Z,4.3nm,1.0s						
WR0	Warramunga Arr	37.97	120	P	P	02 19 34.2	-0.7
ASAR	Alice Springs	39.05	126	P	P	02 19 43.1	-0.9
	comp=Z,0.8nm,0.5s,baz=301,slow=7.6,SNR=12						
ASAR	Alice Springs	39.05	126	P	P	02 19 44.1	+0.1
KSRS	Korea Array	47.04	30	P	P	02 20 47.8	-0.5
	comp=Z,0.8nm,0.5s,baz=233,slow=7.5,SNR=4.3						
STKA	Stephens Creek	48.95	132	P	P	02 21 04.2	+1.0
BOOM	Boomskoye usch	49.51	336	P	P	02 21 07.9	+0.3
SONM	Songino Array	50.05	5	P	P	02 21 11.6	0.0
	comp=Z,1.2nm,0.4s,baz=190,slow=9.7,SNR=9.9						
SONM	Songino Array	50.05	5	P	P	02 21 12.9	+1.3
MK31	Makanchi Array	51.19	344	P	P	02 21 20.2	+0.2
MK31				IAmb	IAmb	02 21 20.5	
	comp=Z,4.5nm,1.3s						
MKAR	Makanchi Array	51.19	344	P	P	02 21 20.2	+0.1
	comp=Z,1.5nm,0.3s,baz=158,slow=9.0,SNR=56						
MKAR	Makanchi Array	51.19	344	P	P	02 21 19.8	-0.3
MAKZ	Makanchi	51.29	344	P	P	02 21 21.1	+0.4
MAKZ				IAmb	IAmb	02 21 21.9	
	comp=Z,3.1nm,1.0s						
KKAR	Karatay Array	52.34	333	P	P	02 21 30.0	+1.3
USRK	Ussuriysk Ar.	54.19	28	P	P	02 21 41.9	-0.3
	comp=Z,3.1nm,0.6s,baz=207,slow=3.4,SNR=6.4						
USRK	Ussuriysk Ar.	54.19	28	P	P	02 21 42.7	+0.5
ZAA0	Zalesovo Array	57.32	349	P	P	02 22 03.8	-0.7
ZALV	Zalesovo Beam	57.32	349	P	P	02 22 03.6	-0.8
	comp=Z,1.9nm,0.5s,baz=176,slow=5.3,SNR=13						
ZALV	Zalesovo Beam	57.32	349	P	P	02 22 04.0	-0.5
KLR	Kul'dur	57.98	24	P	P	02 22 08.6	-0.6
	comp=Z,2.2nm,0.7s,baz=249,slow=6.6,SNR=9.2						
BRVK	Borovoye	60.42	340	P	P	02 22 25.1	-0.9
BRVK				IAmb	IAmb	02 22 38.0	
	comp=Z,3.8nm,1.4s						
ABKAR	Akbulak array	61.83	331	P	P	02 22 34.5	-1.1
KBZ	Khabaz	68.51	319	P	P	02 23 19.2	+0.1
	comp=Z,1.5nm,0.8s,baz=160,slow=7.7,SNR=3.7						
BRTR	Keskin Array B	73.53	312	P	P	02 23 48.7	-1.2
	comp=Z,0.6nm,0.7s,baz=134,slow=8.8,SNR=5.2						
BRTR	Keskin Array B	73.53	312	P	P	02 23 49.1	-0.8
TIXI	Tiksi	75.95	9	P	P	02 24 02.1	-0.9
TIXI				IAmb	IAmb	02 24 06.3	
	comp=Z,1.9nm,0.7s						
BURAR	Bucovina Array	81.46	319	P	P	02 24 33.8	-0.2
BUR08	Bucovina Ar. S	81.48	319	P	P	02 24 35.0	+0.9
BUR08				IAmb	IAmb	02 24 35.5	
	comp=Z,4.4nm,1.1s						
FINES	FINESS Array B	84.30	332	P	P	02 24 48.1	-0.2
	comp=Z,1.0nm,0.7s,baz=186,slow=10,SNR=6.1						
FINES	FINESS Array B	84.30	332	P	P	02 24 48.3	+0.1
ARCES	ARCESS Array B	86.64	340	P	P	02 24 59.8	0.0
	comp=Z,6.8nm,1.1s,baz=97,slow=4.9,SNR=8.5						
TXAR	Lajitas Array	144.70	38	PKP	PKPdf	02 31 53.3	-0.9
	comp=Z,0.7nm,0.4s,baz=232,slow=0.6,SNR=25						

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*IDC **14** 02:13:32.8±1.1, 31°.74S×71°.93W, h0^{km}, mb3.6/2, mb1 3.7/4, mb1mx3.5/32, mbtmp3.5/4, ML3.7/2, Error ellipse: s-maj=39.1km s-min=30.4km az=116.0*

*SJA **14** 02:13:33.1±0.7, 31°.72S×72°.40W, h38^{km}±6^{km}, ML3.8, MW4.2*

*GUC **14** 02:13:36.7±0.7, 31°.71S×71°.83W, h36^{km}±5^{km}, ML3.6*

ISC 14 02:13:33.7±1.9**, 31°.74S**±0°.03×**72°.42W**±0°.06**, h14**^{km}±12^{km}**, n47, σ1^{s}.96**/76**, 4C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA01	Torpederas	1.44	153	*e*P	Pn	02 13 59.1	-0.2
VA01				*e*S	Sn	02 14 15.2	-2.7
ROC1	El Roble	1.71	136	*e*P	Pn	02 14 02.0	-1.4
ROC1				*e*S	Sn	02 14 22.1	-3.0
ROCH	El Roble	1.71	136	⇑*i*P	Pn	02 14 02.0	-1.3
ROCH				*e*S	Sn	02 14 20.8	-4.3
ROCH				IAML		02 14 26.8	
	comp=N,2µm,0.4s						
PEL	Peldehue	2.03	134	⇑*e*P	Pn	02 14 06.5	-1.0
PEL				*e*S	Sn	02 14 28.9	-3.8
PEL				IAML		02 14 42.4	
	comp=E,571nm,0.5s						
PEL	Peldehue	2.03	134	*e*P	Pn	02 14 06.6	-0.9
PEL				*e*S	Sn	02 14 32.2	-0.4
VA05	Santo Domingo	2.03	161	*e*P	Pn	02 14 07.7	+0.2
VA05				*e*S	Sn	02 14 30.7	-1.9
VA05				IAML		02 14 43.7	
	comp=N,1µm,0.5s						
CO05	La Serena	2.08	30	*e*P	Pn	02 14 07.8	-0.3
GO04	Tololo Observa	2.09	42	*e*P	Pn	02 14 07.3	-1.2
GO04				*i* S	Sn	02 14 29.7	-4.8
GO04	Tololo Observa	2.09	42	*e*P	Pn	02 14 07.3	-1.2
GO04				*e*S	Sn	02 14 33.3	-1.1
MT05	Renca	2.18	140	*e*P	Pn	02 14 08.6	-0.9
MT05				*i* S	Sn	02 14 34.1	-2.3
MT05				IAML		02 14 43.1	
	comp=E,1µm,0.4s						
MT05	Renca	2.18	140	*e*P	Pn	02 14 09.0	-0.6
MT05				*e*S	Pg	02 14 16.7	+1.3
MT05				*e*S	Sn	02 14 32.2	-4.1
MT05				IAML		02 14 50.6	
	comp=Z,320nm,0.6s						
MT09	Talagante	2.36	150	⇑*i*P	Pn	02 14 12.6	+0.4
MT09				*e*S	Sn	02 14 36.9	-4.2
MT09				IAML		02 14 46.5	
	comp=N,450nm,0.3s						
FCH	Farellones	2.40	132	⇑*i*P	Pn	02 14 11.7	-1.1
FCH				*i* S	Sn	02 14 38.1	-4.1
FCH				IAML		02 14 54.3	
	comp=N,282nm,0.7s						
AUSP	Uspallata	2.62	101	*e*P	Pn	02 14 15.8	-0.1
AUSP				*e*S	Sn	02 14 47.3	-0.3
RTLS	Leoncito	2.66	92	*e*P	Pn	02 14 16.0	-0.4
RTLS				*e*S	Sn	02 14 48.3	-0.3
RTLS				IAML		02 14 50.4	
	comp=Z,335nm,0.7s						
AROD	Rodeo	2.98	59	*e*P	Pn	02 14 21.8	+1.0
AROD				*e*P	Pb	02 14 24.0	-2.7
AROD				*e*S	Sn	02 14 58.6	+2.2
ACCO	Cerro Coronel	3.10	69	*e*P	Pn	02 14 22.9	+0.4
ACCO				*e*S	Sn	02 14 58.2	-1.2
LCO	Las Campanas	3.10	29	*e*P	Pn	02 14 22.0	-0.4
ARCO	CERRO ARCO	3.15	111	*e*P	Pn	02 14 20.7	-2.3
ARCO				*e*P	Pb	02 14 24.7	-4.9
ARCO				*e*P	Pb	02 14 25.0	-4.6
ARCO				*e*S	Sn	02 14 58.7	-1.8
ARCO				IAML		02 15 04.1	
	comp=Z,202nm,1.3s						
ASAL	Salagasta	3.16	107	*e*P	Pn	02 14 24.0	+0.9
ASAL				*e*S	Sn	02 15 04.7	+4.2
ZON	Zonda	3.20	88	*e*P	Pn	02 14 25.0	+1.4
ZON				IAML		02 15 15.9	
	comp=Z,135nm,1.8s						
GO05	Huala	3.29	173	*e*P	Pn	02 14 25.0	+0.2
GO05				*e*S	Sn	02 15 03.3	-0.4
RTCV	Cerro Valdivia	3.31	93	*e*P	Pn	02 14 25.0	-0.1
RTCV				*e*S	Sb	02 15 13.6	+1.4
AAGR	Agrelo	3.32	115	*e*P	Pn	02 14 26.8	+1.5
AAGR				*e*S	Sn	02 15 07.2	+2.6
AAGR				IAML		02 15 18.1	
	comp=Z,317nm,2.2s						
BO02	Sierra Bellavi	3.34	156	*e*P	Pn	02 14 20.7	-4.8
BO02				*e*P	Pn	02 14 26.0	+0.4
BO02				*e*P	Pn	02 14 26.2	+0.7
BO02				*e*S	Sn	02 15 06.0	+0.9
BO02				IAML		02 15 16.4	
	comp=Z,219nm,0.7s						
AVFE	Valle Fertil	4.39	77	*e*P	Pn	02 14 40.2	+0.2
AVFE				*e*S	Sn	02 15 29.7	-1.2
AVFE				IAML		02 15 39.7	
	comp=Z,123nm,0.4s						
RFA	San Rafael	4.49	133	*e*P	Pn	02 14 42.0	+0.7
RFA				*e*S	Sb	02 15 44.7	-1.5
RFA				IAML		02 15 51.7	
	comp=Z,45nm,1.2s						
VCA	Vinchina	4.72	52	*e*P	Pn	02 14 46.0	+1.4
VCA				*e*S	Sb	02 15 50.2	-2.7
VCA				IAML		02 16 05.0	
	comp=Z,185nm,0.6s						
ACHE	Chepes	4.95	85	*e*P	Pn	02 14 51.0	+3.2
ACHE				*e*S	Sn	02 15 48.8	+3.9
APLL	PUNTA DE LOS L	5.23	77	*e*P	Pn	02 14 52.3	+0.8
APLL				*e*S	Sn	02 15 51.7	+0.1
ACLC	CERRO LA CRUZ	5.25	65	*e*P	Pn	02 14 51.0	-0.9
ACLC				*e*P	Pn	02 14 51.2	-0.7
ACLC				*e*S	Sn	02 15 53.2	+1.0
ACLC				IAML		02 15 58.8	
	comp=Z,195nm,0.9s						
AC02	Maricunga	5.67	31	*e*P	Pn	02 14 53.2	-4.7
AC02				*e*P	Pn	02 14 57.2	-0.7
AC02				*e*S	Sb	02 16 20.7	+0.1
H03N1	Juan Fernandez	5.74	251	Pn	Pn	02 15 04.5	+6.3
	baz=64						
H03N1				T	T	02 21 45.0	
	baz=84,slow=71,SNR=625						
H03N3	Juan Fernandez	5.75	251	Pn	Pn	02 15 04.4	+6.0
	baz=64						
H03N3				T	T	02 21 45.4	
	baz=84,slow=71,SNR=550						
H03N2	Juan Fernandez	5.75	251	Pn	Pn	02 15 04.6	+6.2
H03N2				T	T	02 21 51.0	
	baz=84,slow=71,SNR=622						
H03S3	Juan Fernandez	5.85	247	T	T	02 21 58.6	
	baz=83						
H03S1	Juan Fernandez	5.85	247	T	T	02 21 48.3	
	baz=83						
H03S2	Juan Fernandez	5.87	247	T	T	02 21 53.1	
	baz=83						
CYA	Choya	6.61	62	*e*P	Pn	02 15 04.7	-5.7
CYA				*e*P	Pn	02 15 10.2	-0.2
CYA				*e*S	Sn	02 16 24.2	-1.4
CYA				*e*S	Sn	02 16 24.7	-0.9
LC01	Cunco	7.16	177	*e*P	Pn	02 15 21.0	+3.1
AHML	Horco Molle	7.91	53	*e*P	Pn	02 15 26.2	-2.2
PLCA	Paso Flores	9.10	171	Pn	Pn	02 15 45.3	+0.6
	comp=Z,0.2nm,0.3s,baz=329,slow=12,SNR=3.0						
LVC	Limon Verde	9.61	20	Pn	Pn	02 15 50.5	-1.5
	comp=Z,0.4nm,0.3s,baz=187,slow=5.5,SNR=1.9						
TXAR	Lajitas Array	67.61	331	P	P	02 24 33.0	+2.9
	comp=Z,0.3nm,0.8s,baz=134,slow=7.7,SNR=2.1						
TORD	Torodi Ar. Bea	83.75	70	P	P	02 26 01.9	-0.8
	comp=Z,0.7nm,0.8s,baz=254,slow=4.9,SNR=5.0						
WRA	Warramunga Arr	122.56	210	PKP	PKPdf	02 32 30.6	+1.1
	comp=Z,0.4nm,1.0s,baz=153,slow=1.7,SNR=5.1						
ZALV	Zalesovo Beam	152.46	30	PKPbc	PKiKP	02 33 30.3	+1.1
	comp=Z,1.4nm,0.4s,baz=332,slow=2.6,SNR=6.6						

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*IDC **14** 02:15:09.3±0.8, 5°.31S×152°.05E, h0^{km}, mb4.2/13, mb1 4.5/14, mb1mx4.1/45, mbtmp4.3/14, MS3.5/2, Ms1 3.5/2, ms1mx3.0/33, Error ellipse: s-maj=27.0km s-min=16.9km az=113.0*

*NEIC **14** 02:15:18.1±1.5, 5°.36S±0°.08×151°.8E±0°.1, h44^{km}±6^{km}, mb4.5/12, Error ellipse: s-maj=19.8km s-min=8.2km az=118.0*

ISC 14 02:15:16.9±0.6**, 5°.42S**±0°.07×**151°.9E**±0°.1**, h45**^{km}**, n37, σ1^{s}.21**/38**, mb4.3**/18**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.26	14	Pn	Pn	02 15 39.0	+0.9
RABL				Sn	Sn	02 15 56.7	+2.7
MANU	Manus Island	5.60	307	Pn	Pn	02 16 43.1	+5.5
PMG	Port Moresby	6.11	229	Pn	Pn	02 16 44.8	+0.1
	baz=41,slow=11,SNR=6.3						
PMG				Sn	Sn	02 17 53.0	-0.4
	4.5nm,0.3s,baz=204,slow=21,SNR=3.2						
PMG	Port Moresby	6.11	229		Pn	02 16 47.9	+3.2
SIJI	Sorong	21.04	282	P	P	02 19 56.7	-0.6
	6.5nm,0.4s,baz=117,slow=19,SNR=2.3						
MTN	Manton Dam	21.73	249		P	02 20 06.2	+1.5
DZM	Mont Dzumac	21.75	141		P	02 20 06.2	+1.3
WB0	Warramunga Arr	22.18	228	P	P	02 20 09.8	+0.3
WB0				IAmb	IAmb	02 20 12.5	
	comp=Z,15nm,0.8s						
WR0	Warramunga Arr	22.19	228	P	P	02 20 09.9	+0.3
WR0				IAmb	IAmb	02 20 12.6	
	comp=Z,17nm,0.9s						
WRAB	Tennant Creek	22.32	228	P	P	02 20 11.1	+0.2
WRAB				IAmb	IAmb	02 20 13.7	
	comp=Z,19nm,0.7s						
WB2	Warramunga Arr	22.32	228	P	P	02 20 11.0	+0.1
WB2				IAmb	IAmb	02 20 13.8	
	comp=Z,15nm,0.7s						
WRA	Warramunga Arr	22.33	228	P	P	02 20 11.2	+0.1
	comp=Z,16nm,0.8s,baz=52,slow=10,SNR=42						
WRA				LR	LR	02 28 40.2	
	comp=Z,83nm,21.3s,baz=140,slow=36						
WRA	Warramunga Arr	22.33	228	P	P	02 20 10.1	-0.9
KNRA	Kununurra	24.85	244	P	P	02 20 35.3	-0.2
AS31	Alice Springs	25.06	222	P	P	02 20 37.1	-0.1
AS31				IAmb	IAmb	02 20 40.8	
	comp=Z,8.5nm,0.8s						
ASAR	Alice Springs	25.06	222	P	P	02 20 37.8	+0.5
	comp=Z,26nm,0.7s,baz=55,slow=9.0,SNR=134						
ASAR				LR	LR	02 30 19.9	
	comp=Z,141nm,18.3s,baz=38,slow=36						
ASAR	Alice Springs	25.06	222	P	P	02 20 38.0	+0.7
STKA	Stephens Creek	28.02	199	P	P	02 21 03.2	-0.5
	comp=Z,0.7nm,0.3s,baz=30,slow=8.1,SNR=4.4						
FITZ	Fitzroy Crossi	28.54	242	P	P	02 21 07.9	-0.7
	comp=Z,8.4nm,0.6s,baz=65,slow=9.8,SNR=10						
FORT	Forrest	33.72	219	P	P	02 21 54.1	+0.1
KLR	Kul'dur	57.18	344	P	P	02 24 57.9	-1.3
	comp=Z,0.8nm,0.7s,baz=14,slow=5.7,SNR=3.5						
CMAR	Chiang Mai Arr	57.29	296	P	P	02 25 01.6	+1.0
	comp=Z,2.6nm,0.3s,baz=126,slow=6.8,SNR=2.7						
SONM	Songino Array	66.35	328	P	P	02 26 00.8	-0.3
	comp=Z,1.2nm,0.7s,baz=140,slow=7.0,SNR=5.0						
SONM	Songino Array	66.35	328	P	P	02 26 02.2	+1.0
VNDA	Vanda	72.25	178	P	P	02 26 37.3	+0.3
	comp=Z,1.5nm,0.8s,baz=20,slow=5.1,SNR=5.2						
VNDA	Vanda	72.25	178	P	P	02 26 39.0	+2.1
VNDA				IAmb	IAmb	02 26 40.5	
	comp=Z,6.1nm,1.3s						
MKAR	Makanchi Array	80.17	319	P	P	02 27 22.1	-0.5
	comp=Z,0.5nm,0.8s,baz=98,slow=2.0,SNR=2.6						
ZALV	Zalesovo Beam	81.15	327	P	P	02 27 25.7	-1.9
	comp=Z,0.9nm,0.7s,baz=106,slow=4.7,SNR=3.6						
ZALV	Zalesovo Beam	81.15	327	P	P	02 27 27.8	+0.2
ILAR	Eielson Array	83.09	22	P	P	02 27 35.0	-2.5
	comp=Z,0.7nm,0.7s,baz=249,slow=5.8,SNR=12						
ILAR	Eielson Array	83.09	22	P	P	02 27 38.8	+1.2
NVAR	Mina Array Bea	93.21	52	P	P	02 28 25.8	-1.3
	comp=Z,0.3nm,0.3s,baz=228,slow=4.7,SNR=2.7						
GERES	GERESS Array B	124.08	328	PKP	PKPdf	02 34 10.1	-0.6
	comp=Z,0.2nm,0.4s,baz=85,slow=2.1,SNR=2.7						
TORD	Torodi Ar. Bea	149.59	287	PKPbc	PKPbc	02 35 01.4	-1.2
	comp=Z,1.9nm,0.7s,baz=75,slow=2.1,SNR=25						
TORD	Torodi Ar. Bea	149.59	287		PKPbc	02 35 01.6	-1.0
BDFB	Brasilia	151.28	137	PKPbc	PKPbc	02 35 05.6	-1.1
	comp=Z,2.0nm,0.7s,baz=170,slow=5.1,SNR=4.3						
BDFB	Brasilia	151.28	137	PKPbc	PKiKP	02 35 07.5	+0.3

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*IDC **14** 02:17:20.4±1.1, 5°.22S×118°.98E, h0^{km}, mb4.0/6, mb1 4.1/7, mb1mx3.5/43, mbtmp4.0/7, ML2.9/1, Error ellipse: s-maj=26.0km s-min=15.7km az=22.0*

*NEIC **14** 02:17:23.3±1.6, 5°.2S±0°.1×118°.91E±0°.03, h15^{km}±6^{km}, mb4.1/6, Error ellipse: s-maj=19.4km s-min=3.7km az=170.0*

*DJA **14** 02:17:24.1±0.3, 5°S±3°×11°9E±°, h10^{km}, M4.5/13, mb4.8/2, mB4.8/1, MLv4.3/13, Mw(mB)4.1/1*

ISC 14 02:17:22.4±0.7**, 5°.23S**±0°.06×**118°.96E**±0°.04**, h10**^{km}**, n32, σ1^{s}.08**/34**, mb4.3**/7**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	0.82	75	Pn	Pg	02 17 39.7	+1.4
	845nm,0.3s,baz=284,slow=10,SNR=1298						
KAPI				LR	LR	02 17 49.9	
	comp=Z,82nm,21.0s,baz=64,slow=37						
KAPI				Sn	Sg	02 17 51.0	+2.1
	2µm,0.3s,baz=63,slow=22,SNR=30						
KAPI	Kappang	0.82	75	Pg	Pg	02 17 39.6	+1.4
KAPI				Sg	Sg	02 17 50.6	+1.7
BKSI	Bulukumba	1.16	95	P	Pn	02 17 44.7	-0.1
BNSI	Bone	1.41	54	P	Pg	02 17 50.3	+0.8
SPSI	Sidrap Palu	1.50	33	P	Pg	02 17 51.7	+0.5
BSSI	Bau Bau, Buton	1.77	121	P	Pn	02 17 53.1	-0.1
TTSI	Tana Toraja	2.33	22	P	Pb	02 18 04.2	-0.4
KBKI	Kotabaru	3.38	304	P	Pg	02 18 29.9	+2.6
PLAI	Plampang	3.76	198	P	Pn	02 18 20.4	-0.1
WBSI	Waikabubak, Su	4.40	174	P	Pn	02 18 29.7	+0.3
EDFI	Ende, Flores	4.42	142	P	Pn	02 18 29.5	-0.3
SRBI	Singaraja	4.68	232	P	Pn	02 18 33.0	-0.1
BASI	Baing, Sumba	5.21	162	P	Pn	02 18 40.2	-0.3
	1µm63nm,0.5s						
JAGI	Jajag, Banyuwa	5.76	236	P	Pn	02 18 47.8	-0.2
JAGI	Jajag, Banyuwa	5.76	236	Pn	Pn	02 18 48.3	+0.3
FITZ	Fitzroy Crossi	14.36	153	Pn	Pn	02 20 45.4	-0.5
	0.0nm,0.3s,baz=340,slow=15,SNR=2.1						
PSA00	Pilbara Seismi	16.27	177	Pn	Pn	02 21 11.2	0.0
WRA	Warramunga Arr	20.93	136	P	P	02 22 04.9	-0.6
	2.1nm,0.8s,baz=312,slow=12,SNR=5.8						
WB2	Warramunga Arr	20.93	136	P	P	02 22 07.4	+1.9
WB2				IAmb	IAmb	02 22 23.5	
	comp=Z,5.0nm,0.9s						
WR0	Warramunga Arr	21.08	135	P	P	02 22 08.5	+1.4
WR0				IAmb	IAmb	02 22 13.1	
	comp=Z,5.1nm,0.9s						
ASAR	Alice Springs	23.31	143	P	P	02 22 30.0	-0.8
	comp=Z,0.8nm,0.7s,baz=323,slow=11,SNR=2.5						
CMAR	Chiang Mai Arr	30.72	321	P	P	02 23 37.4	-0.5
	comp=Z,1.5nm,0.3s,baz=150,slow=6.3,SNR=1.9						
CMAR	Chiang Mai Arr	30.72	321	P	P	02 23 37.5	-0.4
MK31	Makanchi Array	61.12	332	P	P	02 27 35.9	-1.1
MK31				IAmb	IAmb	02 27 37.8	
	comp=Z,1.8nm,0.9s						
MKAR	Makanchi Array	61.12	332	P	P	02 27 36.7	-0.2
	comp=Z,1.5nm,0.6s,baz=138,slow=7.1,SNR=9.8						
MKAR	Makanchi Array	61.12	332	P	P	02 27 36.1	-0.8
ZAA0	Zalesovo Array	65.53	339	P	P	02 28 04.0	-2.0
ZALV	Zalesovo Beam	65.53	339	P	P	02 28 04.9	-1.0
	comp=Z,2.6nm,0.7s,baz=123,slow=5.3,SNR=7.9						
ZALV	Zalesovo Beam	65.53	339	P	P	02 28 04.6	-1.4
ABKAR	Akbulak array	74.48	324	P	P	02 29 00.9	-0.2
TIXI	Tiksi	77.01	3	P	P	02 29 14.5	-0.6
	comp=Z,2.2nm,0.5s,baz=172,slow=3.8,SNR=12						
TIXI	Tiksi	77.01	3	P	P	02 29 14.2	-0.8
TIXI				IAmb	IAmb	02 29 23.0	
	comp=Z,4.4nm,1.1s						

IDC 14 02:20:09.2±1.6**, 4°.18S**×**129°.92E, h0**^{km}**, mb3.6**/2**, mb1 3.5**/5**, mb1mx3.2**/41**, mbtmp3.4**/5**, ML3.0**/3**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.8**/25**, Error ellipse: s-maj=50.1km s-min=24.1km az=91.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.56	22	Pn	Pn	02 21 05.9	+0.3
	2.5nm,0.3s,baz=209,slow=23,SNR=11						
SIJI				Sn	Sn	02 21 47.5	-0.9
	3.7nm,0.3s,baz=348,slow=23,SNR=3.6						
FITZ	Fitzroy Crossi	14.45	197	LR	LR	02 29 05.2	
	comp=Z,453nm,21.4s,slow=37						
WRA	Warramunga Arr	16.24	165	Pn	Pn	02 23 58.8	-0.1
	0.0nm,0.3s,baz=345,slow=10,SNR=2.2						
ASAR	Alice Springs	19.75	169	P	P	02 24 40.2	-0.6
	0.1nm,0.3s,baz=346,slow=11,SNR=1.6						
KSRS	Korea Array	41.47	358	P	P	02 27 57.0	-0.8
	0.6nm,0.4s,baz=180,slow=6.9,SNR=2.0						
MKAR	Makanchi Array	65.85	326	P	P	02 30 57.5	+0.9
	0.2nm,0.5s,baz=136,slow=6.8,SNR=2.5						

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*IDC **14** 02:32:24.7±1.1, 4°.18S×129°.45E, h0^{km}, mb4.0/3, mb1 4.0/7, mb1mx3.8/36, mbtmp3.9/7, ML3.4/4, Error ellipse: s-maj=43.6km s-min=21.5km az=76.0*

*DJA **14** 02:32:27.9±0.9, 4°S±6°×12°9E±°, h11^{km}±5^{km}, M3.6/6, MLv3.6/6*

ISC 14 02:32:28.9±0.8**, 4°.17S**±0°.06×**129°.45E**±0°.06**, h36**^{km}**, n12, σ2^{s}.15**/17**, mb4.2**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.97	327	P	Pn	02 32 44.5	-1.6
MSAI				S	Sn	02 32 56.3	-2.4
AAI	Ambon	1.35	291	P	Pn	02 32 50.7	-0.5
FAKI	Fak Fak	3.05	66	P	Pn	02 33 15.4	+0.7
SIJI	Sorong	3.75	29	Pn	Pn	02 33 24.5	+0.3
	4.5nm,0.3s,baz=233,slow=22,SNR=23						
SIJI				Sn	Sn	02 34 04.2	-3.0
	7.3nm,0.3s,baz=310,slow=4.3,SNR=4.6						
SWI	Sorong	3.75	29	P	Pn	02 33 24.8	+0.5
SANI	Sanana	4.05	301	P	Pn	02 33 29.0	+0.6
FITZ	Fitzroy Crossi	14.34	195	Pn	Pn	02 35 49.5	+0.1
	0.1nm,0.3s,baz=14,slow=8.3,SNR=1.5						
WRA	Warramunga Arr	16.38	164	Pn	Pn	02 36 14.1	-2.2
	0.1nm,0.3s,baz=344,slow=13,SNR=12						
WRA				Sn	Sn	02 39 11.5	-5.6
	0.1nm,0.3s,baz=345,slow=22,SNR=3.2						
ASAR	Alice Springs	19.85	168	P	P	02 36 58.5	+1.5
	0.5nm,0.3s,baz=348,slow=9.8,SNR=34						

ASAR				S	**S**	**02 40 40.2**	**+1.4**
	0.0nm,0.3s,baz=351,slow=23,SNR=1.5						
ASAR				PcP	**PcP**	**02 41 14.7**	**+0.9**
	0.2nm,0.3s,baz=7.4,slow=1.7,SNR=6.5						
CMAR	**Chiang Mai Arr**	**37.55**	**308**	P	**P**	**02 39 41.7**	**+1.7**
	0.9nm,0.3s,baz=137,slow=9.3,SNR=4.6						
MKAR	**Makanchi Array**	**65.58**	**326**	P	**P**	**02 43 10.2**	**+1.1**
	1.6nm,0.6s,baz=120,slow=7.9,SNR=15						
ZALV	**Zalesovo Beam**	**68.82**	**334**	P	**P**	**02 43 30.5**	**+1.0**
	0.4nm,0.4s,baz=116,slow=6.6,SNR=1.8						

IDC 14 02:42:41.1±43.0**, 58°.06S×148°.16E, h0^{km}, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/19**, mbtmp3.7**/3**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.8**/21**, Error ellipse: s-maj=756.4km s-min=245.2km az=149.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**26.56**	**347**	P	P	02 48 20.9	+0.3
	1.2nm,0.6s,baz=169,slow=10,SNR=2.4						
URZ	**Urewera**	**27.32**	**56**	LR	LR	02 57 39.4	
	comp=Z,80nm,20.1s,baz=211,slow=33						
H01W1	**Cape Leeuwin H**	**32.37**	**301**	T	T	03 22 13.1	
	baz=143,slow=75,SNR=13						
H01W2	**Cape Leeuwin H**	**32.37**	**301**	T	T	03 22 14.8	
	baz=143,slow=75,SNR=13						
H01W3	**Cape Leeuwin H**	**32.39**	**301**	T	T	03 22 14.3	
	baz=143,slow=75,SNR=14						
ASAR	**Alice Springs**	**35.85**	**337**	P	P	02 49 42.3	-0.2
	0.6nm,0.8s,baz=167,slow=9.6,SNR=7.1						
WRA	**Warramunga Arr**	**39.39**	**339**	P	P	02 50 12.2	-0.2
	0.8nm,0.6s,baz=166,slow=7.6,SNR=9.4						

RSNC 14 02:55:35.4±0.6**, 12°.01N×72°.82W, h31^{km}**±8^{km}**, ML3.5, 1C, Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URIC	**Uribia, Colomb**	**0.86**	**111**	*i* P	Pn	02 55 50.7	-0.7
URIC				*e*S	Sn	02 56 02.1	-0.9
URIC				*i*		02 56 04.3	
	comp=Z,786nm,0.3s						
CRJC	**Cerrejon, Guaj**	**0.98**	**184**⇑	*i*P	Pn	02 55 52.3	-0.9
CRJC				*e*S	Sn	02 56 04.8	-1.3
CRJC				*i*		02 56 06.6	
	comp=Z,2µm,0.3s						
CVALL	**Valledupar, Ce**	**1.55**	**196**	*e*P	Pn	02 56 00.0	-0.9
CVALL				*e*S	Sn	02 56 19.6	-0.5
CVALL				*i*		02 56 20.6	
	comp=Z,750nm,0.2s						
SMRC	**Santa Marta, M**	**1.62**	**239**	*e*P	Pn	02 56 00.7	-1.1
SMRC				*e*S	Sn	02 56 20.7	-0.8
SMRC				*i*		02 56 26.7	
	comp=Z,186nm,0.5s						
LL6C	**La Loma 6 Bece**	**2.30**	**191**	*e*P	Pn	02 56 10.8	-0.5
LL6C				*e*S	Sn	02 56 37.9	-0.7
ARGC	**Ariguani, Magd**	**2.56**	**213**	*e*P	Pn	02 56 14.1	-0.7
ARGC				*e*S	Sn	02 56 44.5	-0.4
ARGC				*i*		02 56 54.7	
	comp=Z,84nm,0.2s						
SJCC	**San Jacinto, C**	**3.13**	**228**	*e*P	Pn	02 56 21.5	-1.2
SJCC				*e*S	Sn	02 57 03.4	+4.3
SJCC				*i*		02 57 09.1	
	comp=Z,81nm,0.5s						
SMLC	**San Martn de**	**3.42**	**201**	*e*P	Pn	02 56 25.4	-1.2
SMLC				*e*S	Sn	02 57 04.1	-2.0
SMLC				*i*		02 57 21.8	
	comp=Z,120nm,0.5s						
SDV	**Santo Domingo**	**3.77**	**145**	*e*P	Pn	02 56 31.1	-0.6
SDV				*e*S	Sn	02 57 14.0	-1.2
OCAC	**Ocana**	**3.78**	**188**	*e*P	Pn	02 56 30.8	-0.9
OCAC				*e*S	Sn	02 57 14.1	-1.2
OCAC				*i*		02 57 36.5	
	comp=Z,218nm,0.3s						
SOCV	**Socops**	**4.17**	**152**	*e*P	Pn	02 56 36.2	-0.9
SOCV				*e*S	Sn	02 57 23.6	-1.2
PAMC	**Pamplona, Colo**	**4.64**	**179**	*e*P	Pn	02 56 42.9	-0.9
PAMC				*e*S	Sn	02 57 35.8	-1.1
PAMC				*i*		02 57 42.9	
	comp=Z,33nm,0.3s						
ZARC	**Zaragoza, Cauc**	**4.92**	**204**	*e*P	Pn	02 56 46.9	-0.4
ZARC				*e*Pg	Pb	02 56 49.3	-12
ZARC				*e*S	Sn	02 57 42.0	-1.2
ZARC				*i*		02 57 57.0	
	comp=Z,97nm,0.4s						
BRRC	**Barranca, Sant**	**4.95**	**190**	*e*P	Pn	02 56 47.0	-0.7
BRRC				*e*S	Sn	02 57 43.2	-0.7
BRRC				*i*		02 57 49.1	
	comp=Z,32nm,0.5s						
BARC	**Barichara**	**5.39**	**184**	*e*P	Pn	02 56 54.1	+0.1
BARC				*e*S	Sn	02 57 54.5	-0.8
BARC				*i*		02 58 01.5	
	comp=Z,44nm,0.3s						
PTBC	**PUERTO BERRIO,**	**5.67**	**197**	*e*P	Pn	02 56 57.1	-0.5
PTBC				*e*S	Sn	02 58 02.4	+0.7
PTBC				*i*		02 58 08.8	
	comp=Z,29nm,0.5s						
ELOV	**Elorza**	**5.96**	**146**	*e*P	Pn	02 56 60.0	-1.7
ELOV				*e*S	Sn	02 58 06.9	-2.0
RUSC	**La Rusia**	**6.08**	**183**	*e*P	Pn	02 57 03.8	+0.1
RUSC				*e*S	Sn	02 58 13.7	+1.1
RUSC				*i*		02 58 25.0	
	comp=Z,10nm,0.4s						
HELC	**Santa Helena**	**6.37**	**205**	*e*P	Pn	02 57 09.7	+2.2
HELC				*e*S	Sn	02 58 21.4	+2.0
HELC				*i*		02 58 40.6	
	comp=Z,26nm,0.5s						
SPBC	**San Pablo de B**	**6.44**	**191**	*e*P	Pn	02 57 07.3	-0.9
SPBC				*e*S	Sn	02 58 21.4	+0.7
SPBC				*i*		02 58 32.7	
	comp=Z,15nm,0.5s						
NORC	**Norcasia**	**6.72**	**198**	*e*P	Pn	02 57 13.0	+1.0
NORC				*e*S	Sn	02 58 30.0	+2.4
NORC				*i*		02 58 37.5	
	comp=Z,15nm,0.4s						
CBOC	**Ciudad Bolivar**	**6.87**	**208**	*e*P	Pn	02 57 16.4	+2.1
CBOC				*e*S	Sn	02 58 29.1	-2.5
CBOC				*i*		02 58 52.3	
	comp=Z,8.1nm,0.5s						
GUY2C	**Guyana, Caldas**	**7.20**	**201**	*e*P	Pn	02 57 21.2	+2.2
GUY2C				*e*S	Sn	02 58 45.6	+5.7
GUY2C				*i*		02 59 02.0	
	comp=Z,13nm,0.5s						
PLMC	**San Jos del P**	**7.85**	**206**	*e*P	Pn	02 57 29.2	+1.7
ANIL	**Santa Ana**	**7.90**	**199**	*e*P	Pn	02 57 29.4	+1.0
ANIL				*e*S	Sn	02 59 03.9	+6.9
ANIL				*i*		02 59 15.0	
	comp=Z,19nm,0.4s						
ORTC	**Ortega, Tolima**	**8.40**	**197**	*e*P	Pn	02 57 36.6	+1.5
PRAC	**Prado**	**8.49**	**194**	*e*P	Pn	02 57 38.0	+1.6
PRAC				*e*S	Sn	02 59 12.2	+0.9
PRAC				*i*		02 59 45.1	
	comp=Z,9.4nm,0.5s						

KMA 14 03:07:50.2±0.8**, 36°.57N×128°.55E, h0^{km}**±2^{km}**, Error ellipse: s-maj=14.9km s-min=1.1km az=17.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSYOJ	**YEONGJU**	**0.29**	**356**	P	Pg	03 07 46.0	-10
	SNR=230						
KSSAJ	**Sangju**	**0.35**	**242**	P	Pg	03 07 57.0	0.0
	SNR=8.3						
KSSAJ	**Sangju**	**0.35**	**242**	P	Pg	03 07 57.0	0.0
	SNR=8.3						
YOCB	**Yeongcheon**	**0.68**	**151**	P	Pg	03 08 03.3	0.0
	SNR=80						
YOCB	**Yeongcheon**	**0.68**	**151**	P	Pg	03 08 03.3	0.0
	SNR=80						
KSYOC	**YEONGCHEON**	**0.69**	**151**	P	Pg	03 08 03.3	-0.1
	SNR=25						
KSYOC	**YEONGCHEON**	**0.69**	**151**	P	Pg	03 08 03.3	-0.1
	SNR=25						
KSDAG	**Daegu**	**0.85**	**160**	P	Pg	03 08 06.6	0.0
	SNR=9.8						
KSDAG	**Daegu**	**0.85**	**160**	P	Pg	03 08 06.6	0.0
	SNR=9.8						
SMKB	**Mukjeong-gil**	**1.84**	**242**	P	Pn	03 08 23.5	+0.5
	SNR=25						

KMA 14 03:08:59.9±0.5**, 35°.15N×126°.59E, h0^{km}, Error ellipse: s-maj=7.0km s-min=2.5km az=145.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOCB	**Gochang-gun**	**0.20**	**2**	P	Pg	03 09 03.8	0.0
	SNR=11						
GOCB	**Gochang-gun**	**0.20**	**2**	P	Pg	03 09 03.8	0.0
	SNR=11						
KSJEU	**Jeongeup**	**0.45**	**39**	P	Pg	03 09 08.7	+0.2
	SNR=11						
KSJEU	**Jeongeup**	**0.45**	**39**	P	Pg	03 09 08.7	+0.2
	SNR=11						
ANMD	**Anmado**	**0.50**	**294**	P	Pg	03 09 09.5	0.0
	SNR=15						
ANMD	**Anmado**	**0.50**	**294**	P	Pg	03 09 09.5	0.0
	SNR=15						
SMKB	**Mukjeong-gil**	**0.54**	**357**	P	Pg	03 09 09.3	-1.1
	SNR=214						
KSJEO	**Jeonju**	**0.98**	**36**	P	Pg	03 09 18.5	-0.2
	SNR=8.7						
KSJEO	**Jeonju**	**0.98**	**36**	P	Pg	03 09 18.5	-0.2
	SNR=8.7						
HUK2	**Heuksan-myeon**	**1.04**	**244**	P	Pg	03 09 19.8	0.0
	SNR=6.1						

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*HLW **14** 03:15:01.0, 36°.27N×28°.37E, h25^{km}±12^{km}, Ml3.4*

*ISK **14** 03:15:01.6, 36°.46N×28°.40E, h57^{km}±1^{km}, ML2.7/13*

*DDA **14** 03:15:01.3, 36°.44N×28°.37E, h55^{km}±1^{km}, ML2.4*

*NIC **14** 03:15:02.5±0.0, 36°.14N×28°.57E, h23^{km}±1^{km}, Ml3.3/3*

ISC 14 03:15:01.5±1.2**, 36°.38N**±0°.04×**28°.44E**±0°.04**, h48^{km}**±11^{km}**, n53, σ1^s.72**/69**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.30**	**237**	PG	**Pn**	**03 15 12.1**	**+1.6**
ARG				SG	**Sn**	**03 15 19.6**	**+2.7**
TURN	**Turunc**	**0.42**	**339**	*i* P	**Pn**	**03 15 12.3**	**+0.5**
TURN				*i* S	**Sn**	**03 15 20.0**	**+0.8**
TURN	**Turunc**	**0.42**	**339**	PG	**Pn**	**03 15 12.3**	**+0.5**
TURN				SG	**Sn**	**03 15 20.2**	**+1.1**
DALY	**Dalyan (Mula)**	**0.47**	**22**	PG	**Pn**	**03 15 13.0**	**+0.7**
DALY				SG	**Sn**	**03 15 20.9**	**+0.9**
FETY	**Fethiye**	**0.58**	**64**	PG	**Pn**	**03 15 14.4**	**+0.7**
DAT	**Datca**	**0.78**	**297**	PG	**Pn**	**03 15 16.6**	**+0.3**
MULA	**Mugla, Merkez-**	**0.88**	**354**	*i* P	**Pn**	**03 15 18.5**	**+0.7**
MULA				*i* S	**Sn**	**03 15 30.3**	**+0.8**
MULA				IAML		03 15 31.0	
	comp=E,174nm,0.2s						
MULA				IAML		03 15 32.0	
	comp=N,81nm,0.2s						
CAME	**Cameli-Denizli**	**0.90**	**51**	PG	**Pn**	**03 15 18.8**	**+0.8**
KSL	**Kastellorizon**	**0.95**	**104**	P	**Pn**	**03 15 19.1**	**+0.5**
KSL				S	**Sn**	**03 15 30.8**	**-0.3**
KSL				AML	AML	03 15 33.4	
	comp=N,0.2nm,0.8s						
KSL				AML	AML	03 15 33.4	
	comp=N,0.2nm,0.8s						
KSL				AML	AML	03 15 33.5	
	comp=N,0.3nm,0.6s						
KSL				AML	AML	03 15 33.5	
	comp=N,0.3nm,0.6s						
AKAS	**Kas**	**0.95**	**98**	*i* P	Pn	03 15 24.4	+5.6
AKAS				IAML		03 15 37.0	
	comp=N,102nm,0.4s						
AKAS				IAML		03 15 38.0	
	comp=E,69nm,0.3s						
CAEL	**Denizli, Camel**	**1.03**	**43**	*i* P	**Pn**	**03 15 20.5**	**+0.8**
CAEL				*i* S	**Sn**	**03 15 35.0**	**+1.9**
CAEL				IAML		03 15 38.0	
	comp=E,162nm,1.1s						
CAEL				IAML		03 15 40.0	
	comp=N,91nm,0.5s						
BDRM	**Kayabasi**	**1.05**	**311**	*i* P	**Pn**	**03 15 19.5**	**-0.5**
MLSB	**Milas**	**1.06**	**330**	PG	**Pn**	**03 15 20.1**	**+0.1**
BODT	**Bodrum**	**1.13**	**307**	PG	**Pn**	**03 15 20.7**	**-0.4**
TAVA	**DENIZLI_Tavas**	**1.15**	**19**	*i* P	**Pn**	**03 15 21.6**	**+0.2**
ELL	**Elmali**	**1.24**	**72**	PN	**Pn**	**03 15 23.9**	**+1.3**
ELL	**Elmali**	**1.24**	**72**	P	**Pn**	**03 15 24.2**	**+1.6**
ELL				S	**Sn**	**03 15 41.4**	**+3.1**
GOLH	**Golhisar**	**1.24**	**46**	*i* P	**Pn**	**03 15 23.9**	**+1.2**
GOLH				*i* S	**Sn**	**03 15 38.9**	**+0.5**
GOLH				IAML		03 15 41.0	
	comp=N,48nm,0.4s						
AYDN	**Tasoluk**	**1.35**	**341**	*i* P	**Pn**	**03 15 24.1**	**0.0**
AYDN				*i* S	**Sn**	**03 15 40.0**	**-1.0**
AYDN				IAML		03 15 41.0	
	comp=E,128nm,0.6s						
AYDN				IAML		03 15 42.0	
	comp=N,128nm,0.5s						
DDIM	**Aydin, Didim**	**1.44**	**319**	*i* P	**Pn**	**03 15 27.4**	**+2.2**
AKUM	**Antalya-Kumluc**	**1.54**	**92**	*i* P	**Pn**	**03 15 27.8**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**1.62**	**345**	PN	**Pn**	**03 15 27.2**	**-0.7**
GCAM	**G?zelcaml?**	**1.63**	**324**	*i* P	**Pn**	**03 15 27.5**	**-0.4**
GCAM	**G?zelcaml?**	**1.63**	**324**	PN	**Pn**	**03 15 27.8**	**0.0**
KORT	**Korkueli**	**1.66**	**67**	PN	**Pn**	**03 15 29.7**	**+1.4**
BRDR	**BURDUR-Merkez**	**1.85**	**44**	*i* P	**Pn**	**03 15 31.1**	**+0.2**
BUCA	**Burdur, Bucak-**	**1.95**	**60**	*i* P	**Pn**	**03 15 33.3**	**+1.0**
DGB	**zmir**	**2.08**	**324**	*i* P	**Pn**	**03 15 33.5**	**-0.5**
DGB				*i* S	**Sn**	**03 15 56.3**	**-2.3**
DGB				IAML		03 15 58.0	
	comp=E,38nm,0.3s						
PASA	**Karahalli, USA**	**2.14**	**23**	*i* P	**Pn**	**03 15 33.9**	**-0.9**
PASA				*i* S	**Sn**	**03 15 58.3**	**-1.9**
KULA	**Kula-Manisa**	**2.14**	**5**	PN	**Pn**	**03 15 33.9**	**-1.0**
ZKR	**Zakros**	**2.20**	**236**	P	**Pn**	**03 15 37.5**	**+1.8**
KZIL	**AFYON_Kizioren**	**2.31**	**35**	*i* P	**Pn**	**03 15 36.6**	**-0.7**
USAK	**Uak-Merkez**	**2.38**	**11**	*i* P	**Pn**	**03 15 37.4**	**-0.7**
USAK				IAML		03 16 05.0	
	comp=E,21nm,0.9s						
ZEYE	**Izmir, Urla-Ze**	**2.41**	**321**	*i* P	**Pn**	**03 15 38.8**	**+0.3**
ZEYE				*i* S	**Sn**	**03 16 03.9**	**-2.9**
ZEYE				IAML		03 16 06.0	
	comp=E,20nm,0.3s						
ZEYE				IAML		03 16 08.0	
	comp=N,17nm,0.3s						
URLA	**Izmir**	**2.46**	**324**	*i* P	**Pn**	**03 15 38.6**	**-0.7**
AKHS	**Akhisar**	**2.54**	**349**	*i* P	**Pn**	**03 15 36.7**	**-3.7**
KEPZ	**Antalya-Kepez**	**2.60**	**77**	*i* P	**Pn**	**03 15 43.0**	**+1.9**
KEPZ				*i* S	**Sn**	**03 16 15.1**	**+3.6**
KEPZ				IAML		03 16 19.0	
	comp=N,19nm,1.0s						
KEPZ				IAML		03 16 20.0	
	comp=E,12nm,1.0s						
DEMI	**Demirci**	**2.67**	**5**	*i* P	**Pn**	**03 15 41.2**	**-0.9**
DEMI				*i* S	**Sn**	**03 16 10.4**	**-2.9**
ZEDA	**zmir-Bergama**	**2.80**	**338**	*i* P	**Pn**	**03 15 43.2**	**-0.6**
SEDI	**Konya, Seydise**	**2.87**	**67**	*i* P	**Pn**	**03 15 45.6**	**+0.7**
SEDI				IAML		03 16 24.0	
	comp=E,12nm,0.5s						
YVAC	**Isparta, Yalva**	**2.92**	**49**	*i* P	**Pn**	**03 15 46.3**	**+0.6**
AKMS	**Akamas**	**3.45**	**112**	P	**Pn**	**03 15 52.7**	**-0.1**
AKMS				AML	AML	03 16 31.9	
	comp=E,0.2nm,0.5s						
AKMS				AML	AML	03 16 32.9	
	comp=E,0.2nm,0.4s						
ALFC	**Alefka**	**3.60**	**109**	P	**Pn**	**03 15 54.9**	**+0.1**
ALFC				AML	AML	03 16 39.2	
	comp=E,0.1nm,0.6s						
ALFC				AML	AML	03 16 44.6	
	comp=E,0.2nm,1.2s						
OSC1	**CSNet OBS 1**	**3.70**	**140**	P	**Pn**	**03 15 55.8**	**-0.4**
NATA	**Nata**	**3.73**	**114**	P	**Pn**	**03 15 56.5**	**0.0**
CSS	**Mathiatis**	**4.23**	**108**	P	**Pn**	**03 16 03.9**	**+0.5**
ASGA	**Asgata**	**4.23**	**111**	P	**Pn**	**03 16 03.4**	**0.0**
HSAF	**As Saff**	**7.23**	**158**	P	**Pn**	**03 16 44.9**	**+0.2**
	baz=157						
GLL	**Jalalah**	**7.32**	**157**	P	**Pn**	**03 16 45.7**	**-0.2**
	baz=156						
RYAN	**Fayoum**	**7.44**	**167**	P	**Pn**	**03 16 47.7**	**+0.2**
	baz=166						
RYAN				S	**Sn**	**03 18 04.4**	**-6.1**
	baz=166						
SUZ	**Suez**	**7.49**	**149**	P	**Pn**	**03 16 48.1**	**-0.1**
	baz=148						
SWA2		**7.54**	**200**	P	**Pn**	**03 16 48.1**	**-0.8**
	baz=201						
NBNS	**Bani Suef**	**8.10**	**162**	P	**Pn**	**03 16 56.1**	**-0.5**
	baz=161						
NBNS				AMP		03 18 00.0	
	baz=161						
NBNS				S	**Sn**	**03 18 20.5**	**-6.3**
	baz=161						

IDC 14 03:22:00.1±1.6**, 4°.11S×129°.44E, h0^{km}, mb3.5**/1**, mb1 3.3**/4**, mb1mx3.2**/32**, mbtmp3.2**/4**, ML2.9**/3**, Error ellipse: s-maj=57.8km s-min=28.1km az=82.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.70**	**30**	Pn	Pn	03 22 58.8	+0.2
	1.7nm,0.3s,baz=244,slow=23,SNR=9.5						
SIJI				Sn	Sn	03 23 38.5	-4.5
	0.9nm,0.3s,baz=234,slow=23,SNR=1.6						
WRA	**Warramunga Arr**	**16.44**	**164**	Pn	Pn	03 25 52.7	+0.3
	0.0nm,0.3s,baz=347,slow=12,SNR=2.3						
ASAR	**Alice Springs**	**19.91**	**168**	P	P	03 26 33.4	-0.1
	0.0nm,0.3s,baz=352,slow=11,SNR=2.0						
MKAR	**Makanchi Array**	**65.52**	**326**	P	P	03 32 45.4	0.0
	0.2nm,0.4s,baz=112,slow=7.6,SNR=6.5						

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*IDC **14** 03:44:52.2±1.1, 1°.94N×127°.17E, h0^{km}, mb4.0/6, mb1 4.1/7, mb1mx3.7/37, mbtmp4.0/7, ML3.9/1, Error ellipse: s-maj=92.0km s-min=16.0km az=69.0*

*DJA **14** 03:45:04.7±1.1, 2°N±4°×12°7E±°, h28^{km}±15^{km}, M4.0/11, mb4.0/2, MLv4.0/11*

*NEIC **14** 03:45:05.7±1.7, 1°.8N±0°.1×126°.93E±0°.10, h106^{km}±8^{km}, mb4.2/17, Error ellipse: s-maj=18.3km s-min=10.8km az=221.0*

ISC 14 03:45:04.1±0.7**, 1°.92N**±0°.07×**127°.02E**±0°.07**, h100^{km}, n35, σ1^s.36**/39**, mb4.2**/15**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.19**	**163**	P	**Pn**	**03 45 27.6**	**+0.9**
TNTI				S	**Sn**	**03 45 43.5**	**-0.2**
TNTI	**Ternate**	**1.19**	**163**		**Pn**	**03 45 26.1**	**-0.6**
TNTI				Sn	**Sn**	**03 45 43.7**	**0.0**
SGSI	**Sangihe**	**2.31**	**320**	P	**Pn**	**03 45 39.9**	**-0.8**
LBMI	**Labuha**	**2.58**	**169**	P	**Pn**	**03 45 46.8**	**+2.4**
KMSI	**Cibinong**	**3.32**	**246**	P	**Pn**	**03 45 56.1**	**+1.9**
SANI	**Sanana**	**4.07**	**195**	P	**Pn**	**03 46 03.2**	**-1.1**
GTOI	**Gorontalo**	**4.21**	**252**	P	**Pn**	**03 46 08.2**	**+2.1**
TOLI2	**Tolitoli**	**6.29**	**263**		**Pn**	**03 46 34.8**	**+0.4**
TOLI2					**Sn**	**03 47 42.2**	**-2.7**
FAKI	**Fak Fak**	**7.10**	**133**	Pn	**Pn**	**03 46 46.8**	**+1.4**
MPSI	**Mapaga**	**7.29**	**258**	P	**Pn**	**03 46 49.6**	**+1.5**
KNRA	**Kununurra**	**17.56**	**174**	P	**P**	**03 49 01.7**	**-0.6**
FITZ	**Fitzroy Crossi**	**19.93**	**184**	P	**P**	**03 49 27.9**	**-0.3**
	0.2nm,0.3s,baz=8.4,slow=9.5,SNR=8.0						
COEN	**Coen**	**22.47**	**135**	P	**P**	**03 49 55.8**	**+0.4**
COEN				IAmb	IAmb	03 50 03.1	
	comp=Z,16nm,1.5s						
WB0	**Warramunga Arr**	**22.73**	**162**		**P**	**03 49 56.2**	**-1.8**
WB0				IAmb	IAmb	03 50 03.1	
	comp=Z,8.7nm,0.8s						
WRAB	**Tennant Creek**	**22.87**	**162**	P	**P**	**03 49 57.4**	**-1.9**
WRAB				IAmb	IAmb	03 50 04.9	
	comp=Z,9.9nm,0.6s						
WRA	**Warramunga Arr**	**22.88**	**162**	P	**P**	**03 49 57.5**	**-1.9**
	comp=Z,2.8nm,0.4s,baz=340,slow=11,SNR=58						
WRA	**Warramunga Arr**	**22.88**	**162**	P	**P**	**03 49 56.4**	**-3.0**
WB2	**Warramunga Arr**	**22.88**	**162**		**P**	**03 49 57.8**	**-1.7**
WB2				IAmb	IAmb	03 50 05.3	
	comp=Z,10nm,0.9s						
WR0	**Warramunga Arr**	**22.96**	**162**	P	**P**	**03 49 58.5**	**-1.7**
WR0				IAmb	IAmb	03 50 06.1	
	comp=Z,12nm,1.4s						
PSA00	**Pilbara Seismi**	**24.38**	**196**	P	**P**	**03 50 12.7**	**-0.4**
PSA00				IAmb	IAmb	03 50 14.0	
	comp=Z,6.3nm,0.8s						
ASAR	**Alice Springs**	**26.30**	**166**	P	**P**	**03 50 29.0**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=351,slow=7.5,SNR=8.9						
ASAR				PcP	**PcP**	**03 53 54.2**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=342,slow=2.1,SNR=1.6						
MORW	**Morawa**	**32.56**	**198**	P	**P**	**03 51 25.6**	**-0.3**
BBOO	**Buckleboo**	**35.58**	**167**	P	**P**	**03 51 50.9**	**-1.1**
STKA	**Stephens Creek**	**36.34**	**159**	P	**P**	**03 51 58.1**	**-0.4**
	comp=Z,1.6nm,0.4s,baz=346,slow=8.3,SNR=7.3						
STKA	**Stephens Creek**	**36.34**	**159**	P	**P**	**03 51 58.1**	**-0.4**
ARMA	**Armidale**	**39.80**	**146**	P	**P**	**03 52 27.7**	**-0.1**
ARMA				IAmb	IAmb	03 52 46.2	
	comp=Z,5.9nm,1.1s						
SONM	**Songino Array**	**49.10**	**342**	P	**P**	**03 53 42.5**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=152,slow=6.4,SNR=2.3						
SONM	**Songino Array**	**49.10**	**342**	P	**P**	**03 53 42.7**	**+1.2**
MK31	**Makanchi Array**	**59.21**	**326**	P	**P**	**03 54 56.1**	**+1.2**
MK31				IAmb	IAmb	03 54 56.6	
	comp=Z,1.4nm,0.8s						
MKAR	**Makanchi Array**	**59.21**	**326**	P	**P**	**03 54 55.9**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=118,slow=8.7,SNR=21						
MKAR	**Makanchi Array**	**59.21**	**326**	P	**P**	**03 54 55.5**	**+0.6**
KURBB	**Kurchatov Arra**	**63.42**	**328**	P	**P**	**03 55 23.8**	**+0.7**
	comp=Z,1.9nm,0.5s,baz=128,slow=6.0,SNR=17						
KURK	**Kurchatov**	**63.42**	**328**	P	**P**	**03 55 24.4**	**+1.2**
ABKAR	**Akbulak array**	**73.73**	**321**	P	**P**	**03 56 27.7**	**+0.4**
VNDA	**Vanda**	**81.60**	**173**	P	**P**	**03 57 10.0**	**-0.4**
VNDA				IAmb	IAmb	03 57 10.8	
	comp=Z,2.1nm,0.9s						

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*GCG **14** 04:04:25.7±0.5, 13°.21N×90°.79W, h16^{km}±8^{km}, MD3.5*

*SNET **14** 04:04:25.0±1.2, 13°.21N×90°.68W, h12^{km}±14^{km}, ML3.2*

ISC 14 04:04:25.4±2.9**, 13°.2N**±0°.1×**90°.70W**±0°.10**, h24^{km}, n22, σ0^s.56**/25**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**1.24**	**4**	*e*P	**Pn**	**04 04 47.3**	**-0.2**
CEVE	**Cerro Verde**	**1.24**	**57**	*i* P	**Pn**	**04 04 46.8**	**-0.7**
CEVE				IAML		04 05 06.5	
	comp=Z,931nm,0.3s						
SLOZ	**Alcaldia de Sa**	**1.25**	**46**	*i* P	**Pn**	**04 04 46.7**	**-0.7**
SBLS	**San Blas**	**1.25**	**57**	*i* P	**Pn**	**04 04 47.0**	**-0.6**
RTR	**El Retiro**	**1.27**	**54**	*e*P	**Pn**	**04 04 47.2**	**-0.5**
SNJE	**San Jose**	**1.28**	**56**	*e*P	**Pn**	**04 04 47.4**	**-0.6**
FUG	**Fuego 3**	**1.30**	**354**	*e*P	**Pn**	**04 04 48.2**	**0.0**
FUG				*e*S	**Sb**	**04 05 05.4**	**-0.1**
JAYA	**Jayaque - finc**	**1.31**	**67**	*e*P	**Pn**	**04 04 47.8**	**-0.6**
JAYA				*e*S	**Sn**	**04 05 05.4**	**+0.1**
JAYA				IAML		04 05 11.8	
	comp=Z,371nm,0.2s						
LALI	**Alcalda de L**	**1.38**	**76**	*e*P	**Pn**	**04 04 48.1**	**-1.0**
CEDA	**San Andres**	**1.43**	**63**	*e*P	**Pn**	**04 04 49.4**	**-0.4**
CEDA				*e*S	**Sn**	**04 05 09.0**	**+1.2**
CEDA				IAML		04 05 14.4	
	comp=Z,352nm,0.3s						
NBG	**Las Nubes**	**1.47**	**13**	*e*P	**Pb**	**04 04 51.8**	**-0.4**
BOQS	**Boqueron**	**1.50**	**67**	*e*P	**Pn**	**04 04 50.5**	**-0.5**
UEES	**Universidad Ev**	**1.53**	**68**	IAML		04 05 20.8	
	comp=Z,182nm,0.2s						
TACO	**Tacachico**	**1.54**	**58**	*e*P	**Pn**	**04 04 51.4**	**0.0**
TACO				*e*S	**Sn**	**04 05 11.2**	**+0.5**
LFRS	**El Faro**	**1.66**	**73**	*e*P	**Pn**	**04 04 53.0**	**-0.1**
SJTE	**Alcalda de S**	**1.71**	**74**	*e*P	**Pn**	**04 04 53.7**	**-0.1**
STG3	**Santiaguito 3,**	**1.77**	**331**	*e*P	**Pn**	**04 04 54.7**	**+0.1**
MTO3	**Montecristo**	**1.80**	**46**	*i* P	**Pn**	**04 04 55.2**	**+0.1**
PAVA	**Las Pavas**	**1.80**	**72**	*e*P	**Pn**	**04 04 55.7**	**+0.6**
COEG	**Centro de Oper**	**1.83**	**75**	*e*P	**Pn**	**04 04 56.3**	**+0.9**
ESQI	**Esquipulas**	**1.92**	**43**	*e*P	**Pn**	**04 04 57.3**	**+0.6**
SCLA	**Alcaldia de Sa**	**1.99**	**74**	*e*P	**Pn**	**04 04 57.9**	**+0.3**

IDC 14 05:20:36.0±4.7**, 4°.20S×129°.32E, h0^{km}, mb3.5**/1**, mb1 3.3**/3**, mb1mx3.3**/22**, mbtmp3.2**/3**, ML2.9**/2**, Error ellipse: s-maj=435.3km s-min=32.2km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.39**	**163**	Pn	Pn	05 24 26.8	-0.9
	0.0nm,0.3s,baz=346,slow=13,SNR=2.8						
ASAR	**Alice Springs**	**19.85**	**168**	P	P	05 25 09.2	+0.4
	0.1nm,0.3s,baz=344,slow=10,SNR=4.3						
MKAR	**Makanchi Array**	**65.53**	**326**	P	P	05 31 21.4	0.0
	0.3nm,0.7s,baz=132,slow=8.5,SNR=2.1						

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*IDC **14** 06:01:36.2±1.0, 35°.41N×133°.86E, h0^{km}, mb3.6/5, mb1 3.7/9, mb1mx3.4/45, mbtmp3.6/9, ML3.0/4, MS3.1/9, Ms1 3.1/9, ms1mx3.0/44, Error ellipse: s-maj=20.5km s-min=15.2km az=136.0*

*JMA **14** 06:01:37.2, 35°.45N×133°.91E, h8^{km}±1^{km}, M4.2*

Broadband fault plane solution: P waves. NP1: ϕ_s318.00000°, δ61.00000°, λ-6.00000°. NP2: ϕ_s51.00000°, δ85.00000°, λ-151.00000°. Principal axes: T Plg16.0000°, Azm181.0000°; N Plg61.0000°, Azm60.0000°; P Plg24.0000°, Azm278.0000°;

JMA Felt IV J1.

*NEIC **14** 06:01:37.3±1.5, 35°.42N±0°.05×133°.95E±0°.02, h3^{km}±7^{km}, mb4.0/3 Error ellipse: s-maj=8.1km s-min=0.9km az=166.0*

*NIED **14** 06:01:37.2, 35°.45N×133°.91E, h8^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.03; $M_{\theta\theta}$0.93; $M_{\phi\phi}$-0.89; $M_{r\theta}$-0.15; $M_{\theta\phi}$-0.53; $M_{\phi r}$-0.01; Fault plane solution: $M_0$1.06000×10^{15} NP1: ϕ_s240.00000°, δ87.00000°, λ173.00000°. NP2: ϕ_s330.00000°, δ83.00000°, λ3.00000°.*

ISC 14 06:01:37.4±1.0**, 35°.45N**±0°.04×**133°.91E**±0°.02**, h7**^{km}±7^{km}**, n45, σ1^s.07**/51**, mb3.8**/7**, MS2.9**/3**, 2C-7D, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.10	225	⇑P	Pg	06 01 39.5	-0.2
JKR				S	Sg	06 01 41.3	0.0
JAD	Aida	0.55	157	⇑P	Pg	06 01 47.7	-0.3
JAD				S	Sg	06 01 55.1	-0.1
JKSM	Kasumi	0.63	77	⇓P	Pg	06 01 49.2	-0.3
JKSM				S	Sg	06 01 57.6	-0.2
JNM	Ikuma	0.72	274	⇓P	Pg	06 01 51.2	0.0
JHS	Saijyo	0.79	235	⇓P	Pg	06 01 51.9	-0.7
JHS				S	Sg	06 02 02.7	-0.2
JHS	Saijyo	0.79	235	Pg	Pg	06 01 51.9	-0.7
JHS				Sg	Sg	06 02 02.5	-0.4
JISK	Izumosakaura	0.87	274	⇓P	Pg	06 01 53.5	-0.5
JKS	Kasai	0.90	121	⇓P	Pg	06 01 54.0	-0.6
JKS				S	Sg	06 02 05.8	-0.5
JKY	Yasaka	0.99	79	⇓P	Pg	06 01 55.6	-0.8
JOI	OKI	0.99	328	⇓P	Pg	06 01 55.6	-0.9
JWT	Wachi	1.23	97	Pn	Pg	06 01 59.9	-1.1
JWT				Sg	Sg	06 02 15.5	-1.5
JMN	Monobe	1.72	181	Pn	Pn	06 02 07.7	-0.1
INU	Inuyama	2.54	91	Pn	Pn	06 02 19.5	+0.5
JGF	Kuroka	2.82	86		Pn	06 02 23.2	+0.4
JNU	Nakatsue	3.42	228	Pn	Pn	06 02 31.9	+0.8
	4.9nm,0.3s,baz=36,slow=2.9,SNR=14						
JNU				Sn	Sn	06 03 12.4	+0.4
	11nm,0.3s,baz=199,slow=19,SNR=3.2						
JNU				Lg	Lg	06 03 21.7	
	12nm,0.3s,baz=99,slow=22,SNR=5.6						
JNU	Nakatsue	3.42	228		Pn	06 02 31.8	+0.7
JSG	Sagara	3.59	101	Pn	Pn	06 02 33.6	+0.1
MAJO	Matsushiro	3.65	71	Pn	Pn	06 02 34.2	-0.1
MAT	Matsushiro	3.65	71	P	Pn	06 02 35.2	+0.9
MAT				eS	Sn	06 03 19.4	+1.8
MJAR	Matsushiro Arr	3.65	71	Pn	Pn	06 02 33.4	-0.9
	0.2nm,0.3s,baz=20,slow=39,SNR=2.4						
MJAR				Pg	Pg	06 02 45.9	-1.5
	0.8nm,0.3s,baz=257,slow=11,SNR=14						
MJAR				LR	LR	06 04 12.0	
	comp=Z,143nm,18.1s,baz=240,slow=42						
MJAR	Matsushiro Arr	3.65	71	Pn	Pn	06 02 33.1	-1.2
JTU	Tsushima	3.82	257	Pn	Pn	06 02 38.1	+1.6
JSD	Sado	4.34	52	Pn	Pn	06 02 44.8	+1.0
JSU	Suzuyama	4.88	217	Pn	Pn	06 02 50.9	-0.2
KSRS	Korea Array	5.22	294	Pn	Pn	06 02 55.5	-0.3
	3.0nm,0.3s,baz=107,slow=14,SNR=20						
KSRS				Sn	Sn	06 03 54.3	-2.0
	2.0nm,0.3s,baz=123,slow=17,SNR=5.7						
KSRS				LR	LR	06 05 10.8	
	comp=Z,130nm,18.7s,baz=122,slow=41						
KSAR	Wonju Array Be	5.25	294	Pn	Pn	06 02 54.9	-1.3
KS19	Wonju Array Si	5.28	295		Pn	06 02 55.5	-1.1
JHJ	Hachijo jima 2	5.39	114	LR	LR	06 04 55.1	
	comp=Z,119nm,18.3s,baz=298,slow=37						
USRK	Ussuriysk Ar.	8.86	351	Pn	Pn	06 03 47.4	+1.6
	baz=171,slow=14,SNR=7.3						
USRK				LR	LR	06 06 45.4	
	comp=Z,151nm,18.9s,baz=175,slow=35						
USRK	Ussuriysk Ar.	8.86	351	Pn	Pn	06 03 47.1	+1.3
JMZ	Minamidaito 2	9.88	194	Pn	Pn	06 04 00.0	+0.3
ASAJ	Asahikawa	10.93	35	LR	LR	06 08 15.0	
	comp=Z,116nm,18.3s,baz=194,slow=36						
KLR	Kul'dur	13.86	354	Pn	Pn	06 04 57.9	+3.7
	0.1nm,0.3s,baz=160,slow=14,SNR=11						
KLR				LR	LR	06 09 54.0	
	comp=Z,113nm,18.7s,baz=112,slow=36						
ULN	Ulaanbaatar	23.46	310	P	P	06 06 48.4	+0.9
ULN				IAmb	IAmb	06 06 50.7	
	comp=Z,7.9nm,1.3s						
SONM	Songino Array	23.86	310	P	P	06 06 52.2	+0.9
	comp=Z,4.4nm,1.0s,baz=120,slow=9.9,SNR=10						
SONM	Songino Array	23.86	310	P	P	06 06 52.0	+0.6
SONM				IAmb	IAmb	06 06 54.2	
	comp=Z,5.2nm,1.3s						
GUMO	Guam	23.91	153	LR	LR	06 13 11.7	
	comp=Z,33nm,21.9s,baz=96,slow=29						
DAV	Davao City (W)	29.26	197	LR	LR	06 17 39.8	
	comp=Z,32nm,19.9s,baz=14,slow=33						
CHTO	Chiang Mai	35.03	251	P	P	06 08 30.7	-0.1
CHTO				IAmb	IAmb	06 08 37.0	
	comp=Z,2.1nm,0.9s						
TIXI	Tiksi	36.36	357	LR	LR	06 23 52.8	
	comp=Z,94nm,18.8s,baz=189,slow=37						
MKAR	Makanchi Array	39.84	303	P	P	06 09 09.2	-2.2
	comp=Z,0.3nm,0.5s,baz=81,slow=9.4,SNR=2.2						
KKAR	Karatay Array	48.63	299	P	P	06 10 21.0	-0.8
ILAR	Eielson Array	54.04	31	P	P	06 11 01.7	-0.3
	comp=Z,0.3nm,0.9s,baz=264,slow=8.1,SNR=2.0						
WRA	Warramunga Arr	55.09	180	P	P	06 11 09.2	-0.9
	comp=Z,0.5nm,0.5s,baz=354,slow=7.9,SNR=8.4						
ASAR	Alice Springs	58.80	180	P	P	06 11 36.6	+0.3
	comp=Z,0.2nm,0.3s,baz=6.5,slow=9.9,SNR=4.4						

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*IDC **14** 06:05:35.7±2.5, 31°.51S×177°.75W, h0^{km}, mb4.1/3, mb1 4.3/4, mb1mx3.7/25, mbtmp4.1/4, ML4.1/1, MS2.9/2, Ms1 2.9/2, ms1mx2.6/26, Error ellipse: s-maj=68.5km s-min=32.9km az=134.0*

ISC 14 06:05:40.3±1.2**, 31°.74S**±0°.09×**177°.9W**±0°.2**, h35**^{km}**, n12, σ2^s.15**/12**, mb4.0**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.48	359	Pn	Pn	06 06 14.6	-3.6
	51nm,0.3s,baz=36,slow=22,SNR=2.4						
RAO				Sn	Sn	06 06 47.8	+0.6
	151nm,0.3s,baz=44,slow=23,SNR=4.3						
RAO				LR	LR	06 07 18.4	
	comp=Z,120nm,18.4s,baz=146,slow=46						
URZ	Urewera	7.71	211	Pn	Pn	06 07 25.6	-4.4
	0.4nm,0.3s,baz=124,slow=23,SNR=2.0						
URZ				Sn	Sn	06 08 51.7	-4.3
	1.2nm,0.3s,baz=300,slow=23,SNR=2.2						
DZM	Mont Dzumac	16.98	301	LR	LR	06 15 29.3	
	comp=Z,90nm,18.3s,baz=192,slow=35						
STKA	Stephens Creek	34.32	259	P	P	06 12 25.9	+2.3
	1.2nm,0.6s,baz=105,slow=3.9,SNR=4.5						
ASAR	Alice Springs	43.18	268	P	P	06 13 39.0	+1.0
	2.5nm,0.8s,baz=112,slow=8.0,SNR=25						
WRA	Warramunga Arr	44.29	273	P	P	06 13 47.4	+0.5
	2.8nm,0.8s,baz=111,slow=8.0,SNR=23						
SNAA	Sanae	76.82	178	P	P	06 17 29.0	+0.8
VNA3	Neumayer Olymp	76.97	176	P	P	06 17 29.0	+0.1
VNA2	Neumayer--Watz	77.40	177	P	P	06 17 32.0	+0.7
	baz=182,slow=5.2						
KBZ	Khabaz	145.95	302	PKPbc	PKPbc	06 25 16.7	+0.7
	2.9nm,0.9s,baz=128,slow=9.7,SNR=3.8						
FINES	FINESS Array B	146.44	339	PKPbc	PKPdf	06 25 16.2	+0.7
	5.1nm,0.7s,baz=51,slow=3.6,SNR=11						
BRTR	Keskin Array B	153.32	296	PKPbc	PKiKP	06 25 35.9	+0.9
	0.4nm,0.6s,baz=100,slow=5.3,SNR=3.8						

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*OSPL **14** 06:29:27.4±0.4, 19°.60N×67°.65W, h0^{km}±6^{km}, ML3.1*

*NEIC **14** 06:29:28.3±1.3, 19°.68N±0°.07×67°.63W±0°.06, h31^{km}±14^{km}, Error ellipse: s-maj=10.9km s-min=7.7km az=209.0*

*RSPR **14** 06:29:28.7, 19°.75N×67°.61W, h39^{km}±30^{km}, MD3.7/15*

ISC 14 06:29:27.5±1.6**, 19°.57N**±0°.08×**67°.64W**±0°.05**, h21**^{km}**, n57, σ0^s.81**/63**, 12C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	1.19	172	⇓eP	Pn	06 29 47.9	-1.0
AGPR	Aguadilla, PR	1.21	155	⇑eP	Pb	06 29 49.8	+0.1
AGPR	Aguadilla, PR	1.21	155	eS	Sb	06 30 05.3	+0.5
AGPR	Aguadilla, PR	1.21	155		Pb	06 29 49.8	+0.1
AGPR					Sb	06 30 05.3	+0.5
AGPR	Aguadilla, PR	1.21	155	IAML		06 30 08.7	
	comp=N,353nm,0.6s						
AGPR	Aguadilla, PR	1.21	155	i P	Pb	06 29 49.6	-0.1
AGPR				eS	Sb	06 30 05.8	+0.9
AGPR				IAML		06 30 11.9	
	comp=Z,170nm,0.3s						
PCDR	Punta Cana, DR	1.27	214		Pn	06 29 48.4	-1.6
PCDR				IAML		06 30 13.7	
	comp=E,304nm,0.8s						
PRSN	Puerto Rico Se	1.43	161	⇑iP	Pb	06 29 52.9	-0.5
PRSN	Puerto Rico Se	1.43	161	eS	Sb	06 30 12.9	+1.7
PRSN	Puerto Rico Se	1.43	161		Pb	06 29 52.9	-0.5
PRSN					Sb	06 30 12.9	+1.7
AOPR	Arecibo Observ	1.48	145	⇑eP	Pn	06 29 53.2	+0.3
AOPR	Arecibo Observ	1.48	145	eS	Sb	06 30 13.7	+0.9
AOPR	Arecibo Observ	1.48	145		Pn	06 29 53.2	+0.3
AOPR					Sb	06 30 13.7	+0.9
AOPR	Arecibo Observ	1.48	145	IAML		06 30 22.3	
	comp=N,264nm,0.4s						
LSP	Las Mesas	1.49	159	⇑eP	Pb	06 29 54.1	-0.3
LSP	Las Mesas	1.49	159	eS	Sb	06 30 13.7	+0.9
CRPR	Cabo Rojo, PR	1.64	162	⇑eP	Pb	06 29 56.2	-0.8
CRPR	Cabo Rojo, PR	1.64	162	eS	Sb	06 30 18.0	+0.8
CRPR	Cabo Rojo, PR	1.64	162		Pb	06 29 56.2	-0.8
CRPR					Sb	06 30 18.0	+0.8
CRPR	Cabo Rojo, PR	1.64	162	IAML		06 30 22.1	
	comp=E,232nm,0.6s						
CRPR	Cabo Rojo, PR	1.64	162	i P	Pn	06 29 55.8	+0.7
CRPR				eS	Sb	06 30 17.1	-0.1
CRPR				IAML		06 30 21.9	
	comp=Z,446nm,0.5s						
MLPR	Magueyes Islan	1.69	160	⇑eP	Pb	06 29 57.2	-0.7
MLPR	Magueyes Islan	1.69	160	eS	Sb	06 30 18.5	-0.3
MLPR	Magueyes Islan	1.69	160		Pb	06 29 57.2	-0.7
MLPR					Sb	06 30 18.5	-0.3
MLPR	Magueyes Islan	1.69	160	IAML		06 30 23.3	
	comp=E,263nm,0.6s						
GBPR	Guanica, Bosqu	1.75	155	⇑eP	Pb	06 29 58.5	-0.3
CELP	Cerrillos	1.80	146	⇑eP	Pb	06 29 58.2	-1.5
CELP	Cerrillos	1.80	146	eS	Sn	06 30 20.1	+0.7
CELP	Cerrillos	1.80	146		Pb	06 29 58.2	-1.5
CELP					Sn	06 30 20.1	+0.7
CELP	Cerrillos	1.80	146	IAML		06 30 35.3	
	comp=E,157nm,0.5s						
OBIP	Obispado Ponce	1.81	147	⇑eP	Pb	06 29 58.7	-1.3
OBIP	Obispado Ponce	1.81	147	eS	Sb	06 30 21.6	-0.6
OBIP	Obispado Ponce	1.81	147		Pb	06 29 58.7	-1.3
OBIP					Sb	06 30 21.6	-0.6
OBIP	Obispado Ponce	1.81	147	IAML		06 30 29.4	
	comp=N,127nm,0.7s						
GCPR	Guaynabo City	1.94	130	⇓eP	Pn	06 29 59.1	-0.1
GCPR	Guaynabo City	1.94	130		Pn	06 29 59.1	-0.1
SJG	San Juan	2.03	136		Pb	06 30 01.7	-2.0
SJG				IAML		06 30 38.3	
	comp=N,116nm,0.3s						
SJG				IAML		06 30 38.8	
	comp=N,95nm,0.5s						
CBYP	Canovanas	2.13	127	⇑eP	Pn	06 30 02.1	+0.2
CBYP	Canovanas	2.13	127		Pn	06 30 02.1	+0.2
PDPR	Patillas Dam,	2.18	135		Pn	06 30 01.3	-1.2
PDPR				IAML		06 30 48.8	
	comp=E,88nm,1.2s						
HUMP	Col San Antoni	2.21	130	⇑eP	Pn	06 30 03.6	+0.6
HUMP	Col San Antoni	2.21	130	eS	Sn	06 30 30.7	+1.0
HUMP	Col San Antoni	2.21	130		Pn	06 30 03.6	+0.6
HUMP					Sn	06 30 30.7	+1.0
HUMP	Col San Antoni	2.21	130	IAML		06 30 37.0	
	comp=N,68nm,0.3s						
MTP	Monte Pirata	2.46	126	⇑eP	Pn	06 30 06.6	+0.1
MTP	Monte Pirata	2.46	126	eS	Sn	06 30 36.2	+0.3
MTP	Monte Pirata	2.46	126		Pn	06 30 06.6	+0.1
MTP					Sn	06 30 36.2	+0.3
CUPR	Culebra, Puert	2.56	119	⇓eP	Pn	06 30 08.2	+0.4
CUPR	Culebra, Puert	2.56	119	eS	Sn	06 30 37.5	-0.8
CUPR	Culebra, Puert	2.56	119		Pn	06 30 08.2	+0.4
CUPR					Sn	06 30 37.5	-0.8
STVI	Saint Thomas	2.82	115	⇑eP	Pn	06 30 11.9	+0.6
STVI	Saint Thomas	2.82	115	eS	Sn	06 30 45.2	+0.6
STVI	Saint Thomas	2.82	115		Pn	06 30 11.9	+0.6
STVI					Sn	06 30 45.2	+0.6
TBVI	Tortola	3.08	111	eS	Sn	06 30 50.8	-0.4
SDDR	Presa de Saban	3.50	261		Pn	06 30 21.1	+0.4
SDDR				IAML		06 31 29.1	
	comp=N,65nm,1.4s						
SDDR	Presa de Saban	3.50	261	i P	Pn	06 30 21.0	+0.3
SDDR				IAML		06 31 23.1	
	comp=Z,29nm,0.6s						
LONE2	Loma La Sidra	3.77	255	i P	Pn	06 30 25.1	+0.7
LONE2				IAML		06 31 26.6	
	comp=Z,32nm,1.6s						

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*IDC **14** 06:54:35.4±2.9, 30°.91S×71°.66W, h0^{km}, mb3.6/1, mb1 3.6/4, mb1mx3.5/33, mbtmp3.5/4, ML3.3/3, Error ellipse: s-maj=115.3km s-min=39.5km az=102.0*

*GUC **14** 06:54:41.3±0.8, 30°.44S×71°.54W, h51^{km}±8^{km}, ML3.7*

ISC 14 06:54:37.5±1.5**, 30°.65S**±0°.03×**71°.69W**±0°.06**, h2**^{km}±11^{km}**, n19, σ2^s.00**/31**, 1C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.83	28	⇓iP	Pb	06 54 54.5	0.0
CO05				i S	Sg	06 55 03.6	-0.5
CO05				IAML		06 55 04.5	
	comp=N,3µm,0.4s						
CO03	El Pedregal	0.88	103	⇓iP	Pn	06 54 59.1	+2.1
CO03				i S	Sn	06 55 11.1	+0.7
CO03				IAML		06 55 12.6	
	comp=E,2µm,0.2s						
GO04	Tololo Observa	0.90	58	⇓iP	Pn	06 54 57.4	-0.1
GO04				eS	Sb	06 55 08.2	-0.4
GO04				IAML		06 55 09.6	
	comp=N,8µm,0.3s						
LCO	Las Campanas	1.84	28	⇑iP	Pn	06 55 10.1	-0.3
LCO				i S	Sn	06 55 31.0	-3.5
VA06	Catapilco	1.93	170	eP	Pg	06 55 16.1	+1.5
VA06				eS	Sg	06 55 43.5	+3.8
ROCH	El Roble	2.39	166	eP	Pg	06 55 22.9	-0.4
ROCH				eS	Sg	06 55 54.4	+0.2
PEL	Peldehue	2.63	161	eP	Pb	06 55 26.3	+0.9
PEL				eS	Sg	06 55 60.0	-2.1
PEL				IAML		06 56 15.4	
	comp=N,214nm,0.6s						
MT05	Renca	2.85	164	eP	Pb	06 55 30.3	+1.1
MT05				eS	Sb	06 56 05.1	+0.5
MT05				IAML		06 56 20.6	
	comp=E,422nm,0.5s						
FCH	Farellones	2.92	156	eP	Pg	06 55 32.7	-0.8
FCH				i S	Sg	06 56 09.1	-2.4
MT09	Talagante	3.17	169	eP	Pb	06 55 33.5	-1.2
MT09				eS	Sb	06 56 13.4	-0.4
MT09				IAML		06 56 34.8	
	comp=N,217nm,0.5s						
MT01	Popeta	3.23	174	eP	Pb	06 55 33.7	-1.8
MT01				eS	Sb	06 56 14.3	-1.0
MT01				IAML		06 56 32.0	
	comp=N,109nm,0.6s						
H03N1	Juan Fernandez	6.73	244	Pn	Pn	06 56 18.0	+0.9
	baz=117,slow=19,SNR=14						
H03N1				T	T	07 03 13.1	
	baz=71,slow=72,SNR=387						
H03N3	Juan Fernandez	6.75	244	Pn	Pn	06 56 17.9	+0.5
	baz=117,slow=19,SNR=27						
H03N3				T	T	07 03 11.4	
	baz=71,slow=72,SNR=248						
H03N2	Juan Fernandez	6.75	244	Pn	Pn	06 56 17.8	+0.5
	baz=117,slow=19,SNR=27						
H03N2				T	T	07 03 12.7	
	baz=71,slow=72,SNR=460						
LVC	Limon Verde	8.38	18	Pn	Pn	06 56 42.4	+2.0
	comp=N,0.3nm,0.3s,baz=153,slow=9.0,SNR=2.2						
LVC				Sn	Sn	06 58 22.6	+6.7
	comp=N,0.5nm,0.3s,baz=182,slow=20,SNR=1.4						
LPAZ	La Paz	14.66	14	Pn	Pn	06 58 06.6	0.0
	comp=N,0.1nm,0.3s,baz=189,slow=12,SNR=2.3						
SIV	San Ignacio	17.53	36	P	Pn	06 58 43.1	-0.1
	comp=N,0.1nm,0.3s,baz=241,slow=10,SNR=5.8						
TORD	Torodi Ar. Bea	82.80	70	P	P	07 07 02.3	-1.4
	comp=N,0.4nm,0.9s,baz=225,slow=5.2,SNR=1.4						
ZALV	Zalesovo Beam	151.20	29	PKPbc	PKPbc	07 14 30.6	-1.4
	comp=N,1.4nm,0.6s,baz=285,slow=3.0,SNR=5.8						

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*NEIC **14** 06:54:41.6±1.1, 36°.27N±0°.01×97°.51W±0°.02, h1^{km}±7^{km}, Error ellipse: s-maj=2.2km s-min=1.7km az=212.0*

*TUL **14** 06:54:41.5±0.8, 36°.284N±0°.004×97°.51W±0°.02, h7^{km}±7^{km}, ML3.2, mb_Lg3.1/64(NEIC), Error ellipse: s-maj=2.0km s-min=0.4km az=73.0*

*ANF **14** 06:54:41.3±0.4, 36°.29N×97°.50W, h2^{km}, ML3.6/10, Error ellipse: s-maj=3.9km s-min=2.9km az=110.0*

ISC 14 06:54:41.5±1.2**, 36°.27N**±0°.02×**97°.51W**±0°.03**, h4**^{km}±14^{km}**, n77, σ0^s.62**/62**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.45	302	Pg	Pg	06 54 50.3	+0.2
CROK				Sg	Sg	06 54 56.6	+0.6
BLOK	Blackwell	0.54	26	Pg	Pg	06 54 52.1	+0.1
BLOK				Sg	Sg	06 54 59.4	+0.4
BCOK	Bluff Creek, N	0.62	188		Pg	06 54 53.7	+0.4
OK031	S. Brethren Rd	0.63	120		Pg	06 54 53.9	+0.3
OK031				Sg	Sg	06 55 02.5	+0.7
GC02	Grant County #	0.64	334	Pg	Pg	06 54 53.7	-0.2
QUOK	Quay	0.66	99	Pg	Pg	06 54 54.3	+0.2
QUOK				Sg	Sg	06 55 02.9	+0.3
OK030	Cody Creek RV	0.68	120	Pg	Pg	06 54 54.8	+0.2
OK030				Sg	Sg	06 55 03.9	+0.5
OK034	N. Norfolk Rd.	0.70	112	Pg	Pg	06 54 55.0	+0.2
OK034				Sg	Sg	06 55 04.0	+0.1
OK025	Westminster Rd	0.70	168		Pg	06 54 55.3	+0.3
KAN13	South Haven SW	0.74	2	Pg	Pg	06 54 55.6	-0.1
KAN14	Manchester OK	0.78	332	Pg	Pg	06 54 56.1	-0.3
KAN17	Caldwell West	0.80	345	Pg	Pg	06 54 56.5	-0.3
OKCFA	Oklahoma City	0.86	177		Pg	06 54 58.0	+0.1
OKCFA	Oklahoma City	0.86	177	P	Pg	06 54 57.9	+0.1
	baz=357,SNR=23						
OKCFA				S	Sb	06 55 10.4	-0.4
	baz=357						
OKCSW	OKLAHOMA CITY	0.87	176		Pg	06 54 58.2	+0.1
KAN09	Caldwell North	0.87	354	Pg	Pg	06 54 57.9	-0.3
KAN05	Bluff City Nor	0.89	341	Pg	Pg	06 54 58.2	-0.2
KAN01	Argonia South	0.90	347		Pg	06 54 58.4	-0.4
KAN10	Anthony SW Sta	0.97	331	Pg	Pg	06 54 59.9	-0.3
KAN06	Argonia West S	1.01	344		Pg	06 55 00.6	-0.4
FNO	Franklin	1.02	175		Pg	06 55 00.9	-0.1
KAN08	Anthony NE Sta	1.02	339		Pg	06 55 00.7	-0.4
T35A	Sooner Cattle	1.03	51		Pg	06 55 00.9	-0.4
T35B	Sooner Cattle	1.03	51	P	Pg	06 55 00.8	-0.4
	baz=232,SNR=204						
T35B				S	Sg	06 55 14.3	-0.3
	baz=232						
KAN16	Harper SW Stat	1.05	335	Pg	Pg	06 55 01.3	-0.3
U32A	Winter Ranch,	1.21	276		Pg	06 55 03.9	-0.8
U32A	Winter Ranch,	1.21	276	P	Pg	06 55 03.7	-1.0
	baz=94						
W35A	Tecumseh	1.23	155	Pn	Pg	06 55 04.3	-0.8
TUL1	Leonard	1.44	104		Pn	06 55 07.7	-0.7
TUL1				IAmb_Lg		06 55 29.6	
	comp=Z,88nm,1.1s						
TUL1	Leonard	1.44	104	P	Pn	06 55 07.5	-0.8
	baz=285,SNR=160						
TUL1				S	Sg	06 55 26.9	-0.7
	baz=285						
X34A	Smith Ranch, M	1.69	189		Pb	06 55 12.8	-0.3
LOOK	Love County	2.29	173		Pn	06 55 21.2	+1.1
R32A	Long Quarter,	2.35	336		Pn	06 55 22.6	+1.6
X37A	Clayton	2.42	133		Pn	06 55 22.9	+0.9
X37A	Clayton	2.42	133	P	Pn	06 55 22.6	+0.7
	baz=315,SNR=30						
X37A				Sb	Sg	06 55 58.3	-1.0
	baz=315						
KSU1	Kansas State U	2.91	14	Pn	Pn	06 55 29.5	+0.8
KSU1	Kansas State U	2.91	14	P	Pn	06 55 29.0	+0.3
	baz=194						
Z35A	Perchaven, San	2.94	176	Pn	Pn	06 55 29.9	+0.8
Z35A	Perchaven, San	2.94	176	P	Pn	06 55 29.6	+0.5
	baz=356						
W39A	Magazine	3.21	108		Pn	06 55 33.9	+1.0
W39A				IAmb_Lg		06 56 27.8	
	comp=Z,72nm,0.8s						
W39A	Magazine	3.21	108	P	Pn	06 55 33.9	+1.0
	baz=291,SNR=27						
S39A	Bolivar	3.64	66	IAmb_Lg		06 56 39.4	
	comp=Z,39nm,0.7s						
S39A	Bolivar	3.64	66	P	Pn	06 55 38.9	+0.2
	baz=248,SNR=22						
MIAR	Mount Ida	3.65	117	P	Pn	06 55 39.6	+0.9
	baz=300,SNR=20						
AMTX	Amarillo	3.67	249	IAmb_Lg		06 56 44.4	
	comp=Z,36nm,0.7s						
U40A	Yellville	3.76	87	IAmb_Lg		06 56 41.4	
	comp=Z,47nm,0.7s						
X40A	Basin Creek Fa	4.21	114	IAmb_Lg		06 56 58.0	
	comp=Z,27nm,0.7s						
WHTX	Lake Whitney,	4.27	179	Pn	Pn	06 55 46.6	-0.8
MGMO	Mountain Grove	4.30	77	IAmb_Lg		06 57 01.0	
	comp=Z,35nm,0.7s						
WHAR	Wooly Hollow	4.36	101	IAmb_Lg		06 57 03.3	
	comp=Z,39nm,0.7s						
WLAR	White Oak Lake	4.44	124	IAmb_Lg		06 57 10.8	
	comp=Z,27nm,0.7s						
P38A	Dawn	4.59	42	Pn	Pn	06 55 51.9	+0.2
P38A				IAmb_Lg		06 57 09.2	
	comp=Z,39nm,0.8s						
R40A	Maddies Statio	4.64	63	P	Pn	06 55 52.4	0.0
	baz=246,SNR=13						
N35A	Tabor	4.81	17	Pn	Pn	06 55 54.9	+0.1
KSCO	Kaye Shedlock'	4.90	305	Pn	Pn	06 55 57.6	+1.5
KSCO				IAmb_Lg		06 57 29.6	
	comp=Z,26nm,0.7s						
LCAR	Lake Charles	5.15	90	IAmb_Lg		06 57 36.1	
	comp=Z,24nm,1.1s						
BGNE	Belgrade	5.15	355	IAmb_Lg		06 57 37.1	
	comp=Z,39nm,0.8s						
T42A	Van Buren	5.21	80	Pn	Pn	06 56 01.2	+0.8
T42A				IAmb_Lg		06 57 31.8	
	comp=Z,32nm,1.1s						
CCM	Cathedral Cave	5.31	69	Pn	Pn	06 56 01.6	0.0
CCM				IAmb_Lg		06 57 37.9	
	comp=Z,28nm,0.8s						
P40A	Paris	5.41	51	IAmb_Lg		06 57 36.6	
	comp=Z,43nm,0.8s						
435B	Jarrell	5.47	181	IAmb_Lg		06 57 47.2	
	comp=Z,22nm,0.9s						
T25A	Trinidad	5.61	281	Pn	Pn	06 56 05.8	-0.1
N38A	Joes South For	5.62	35	IAmb_Lg		06 57 43.2	
	comp=Z,48nm,0.7s						
L34A	Svendsen Farm,	5.75	8	IAmb_Lg		06 57 56.4	
	comp=Z,44nm,0.7s						
OGNE	Ogallala	5.86	324	IAmb_Lg		06 57 51.7	
	comp=Z,21nm,0.7s						
FVM	French Village	5.91	71	IAmb_Lg		06 57 50.7	
	comp=Z,25nm,0.8s						
JCT	Junction City	6.09	199	Pn	Pn	06 56 12.2	-0.2
JCT				IAmb_Lg		06 57 59.5	
	comp=Z,44nm,1.1s						
HENM	Henderson Moun	6.49	84	IAmb_Lg		06 58 17.0	
	comp=Z,40nm,0.8s						
SCIA	State Center	6.54	29	IAmb_Lg		06 58 14.3	
	comp=Z,32nm,0.8s						
S44A	Carbondale	6.76	75	IAmb_Lg		06 58 15.3	
	comp=Z,31nm,0.7s						
W45A	Hickory Valley	6.86	97	IAmb_Lg		06 58 24.7	
	comp=Z,27nm,0.8s						
K38A	Parkersburg	7.35	28	IAmb_Lg		06 58 47.7	
	comp=Z,34nm,0.8s						
L40A	Anamosa	7.57	38	IAmb_Lg		06 58 50.3	
	comp=Z,31nm,1.1s						
Y22D	IRIS PASSCAL I	8.01	257	IAmb_Lg		06 59 04.3	
	comp=Z,24nm,0.9s						
O44A	Mansfield	8.10	59	IAmb_Lg		06 59 09.7	
	comp=Z,26nm,0.8s						
SUSD	Miller	8.24	353	IAmb_Lg		06 59 10.3	
	comp=Z,16nm,0.9s						
JFWS	Jewell Farm	8.68	38	IAmb_Lg		06 59 17.4	
	comp=Z,21nm,0.8s						

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*TAP **14** 06:58:04.8, 25°.47N×122°.41E, h263^{km}, ML3.8, C*

*JMA **14** 06:58:06.1±0.2, 25°.31N×122°.44E, h242^{km}±3^{km}, M4.0*

ISC 14 06:58:07.0±2.0**, 25°.34N**±0°.09×**122°.47E**±0°.04**, h237**^{km}±11^{km}**, n57, σ0^s.65**/106**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCYT	Pengchaiyu	0.47	309	eP	Pn	06 58 38.2	-0.1
	baz=297						

TWB1	Santiao Chiao	0.55	233	P	Pn	06 58 39.7	+1.1
	baz=216						
TIPB	Shuangxi	0.69	238	*i* P	Pn	06 58 38.9	-0.3
	baz=227						
TWE	Neicheng	0.96	230	*i* P	Pn	06 58 41.1	+0.7
	baz=224						
TWE				S	S	06 59 07.2	+0.7
	baz=224						
TATO	Taipei	0.96	248	P	Pn	06 58 40.3	-0.2
	baz=244						
TATO				S	S	06 59 06.9	+0.3
	baz=244						
JYNG	Yonagunijimaku	0.98	154	P	Pn	06 58 40.3	-0.3
JYNG				*e*S	S	06 59 06.7	-0.2
NDS	Dongshan	0.98	225	P	Pn	06 58 41.1	+0.5
	baz=221						
NDS				S	S	06 59 08.3	+1.4
	baz=221						
YOJ	Yonaguni jima	1.00	151	*e*P	Pn	06 58 39.8	-0.9
	baz=158						
YOJ				S	S	06 59 08.5	+1.5
	baz=158						
NWLT	Wulai	1.04	238	P	Pn	06 58 40.5	-0.5
	baz=230						
NWLT				S	S	06 59 07.9	+0.3
	baz=230						
ENTT	Nioudou	1.08	230	P	Pn	06 58 41.0	-0.2
	baz=225						
ENTT				S	S	06 59 08.2	+0.3
	baz=225						
EWUT	Wuta	1.09	216	P	Pn	06 58 42.0	+0.8
	baz=206						
EWUT				S	S	06 59 08.8	+0.7
	baz=206						
ENA	Nanau	1.12	216	P	Pn	06 58 41.0	-0.5
	baz=205						
ENA				S	S	06 59 09.1	+0.6
	baz=205						
NDT	Datong Townshi	1.14	230	*i* P	Pn	06 58 41.6	0.0
	baz=231						
NDT				*i* S	S	06 59 08.5	-0.1
	baz=231						
YHNB	Yeheng	1.20	236	P	Pn	06 58 41.7	-0.3
	baz=230						
YHNB				S	S	06 59 08.6	-0.8
	baz=230						
NSK	Sanguang	1.21	237	P	Pn	06 58 41.7	-0.4
	baz=230						
NSK				S	S	06 59 09.0	-0.6
	baz=230						
NNS	Nan Shan	1.34	228	P	Pn	06 58 43.2	0.0
	baz=226						
NNS				S	S	06 59 11.2	-0.2
	baz=226						
NNSB	Datong	1.34	228	P	Pn	06 58 42.9	-0.3
	baz=222						
NNSB				S	S	06 59 11.1	-0.3
	baz=222						
ETL	Fush Village	1.41	214	P	Pn	06 58 43.2	-0.3
	baz=218						
ETL				S	S	06 59 12.1	+0.1
	baz=218						
NACB	Ninganchiao	1.41	215	P	Pn	06 58 43.1	-0.4
	baz=219						
NACB				*e*S	S	06 59 11.4	-0.5
	baz=219						
ETLH	Xiulin Townshi	1.44	219	P	Pn	06 58 43.4	-0.5
	baz=222						
ETLH				S	S	06 59 12.1	-0.5
	baz=222						
TWD	Chiawan	1.49	213	*e*P	Pn	06 58 43.2	-0.8
	baz=216						
TWD				S	S	06 59 12.9	-0.1
	baz=216						
LIOB	Emei	1.49	243	*i* P	Pn	06 58 43.4	-0.7
	baz=233						
LIOB				*i* S	S	06 59 13.2	+0.1
	baz=233						
NSTT	Nanjuang	1.51	243	*i* P	Pn	06 58 43.5	-0.7
	baz=232						
NSTT				*i* S	S	06 59 12.6	-0.7
	baz=232						
IRIF	Iriomote-Funau	1.52	131	P	Pn	06 58 43.9	-0.4
IRIF				*e*S	S	06 59 13.0	-0.4
FUSS	Fushou	1.56	226	*i* P	Pn	06 58 45.2	+0.3
	baz=226						
FUSS				S	S	06 59 14.9	+0.4
	baz=226						
TWT	Tachien	1.60	228	P	Pn	06 58 45.5	+0.3
	baz=227						
TWT				S	S	06 59 15.6	+0.6
	baz=227						
TDCB	Techi	1.61	228	P	Pn	06 58 45.5	+0.2
	baz=227						
TDCB				S	S	06 59 15.4	+0.3
	baz=227						
WHF	Hehuan Shan	1.62	223	*i* P	Pn	06 58 45.8	+0.2
	baz=222						
WHF				S	S	06 59 15.7	-0.1
	baz=222						
ETM	Tongmen	1.63	213	*e*P	Pn	06 58 44.4	-0.9
	baz=215						
ETM				S	S	06 59 15.0	-0.2
	baz=215						
TEYL	Yanliau Villag	1.67	209	P	Pn	06 58 45.6	+0.1
	baz=202						
TEYL				S	S	06 59 16.1	+0.5
	baz=202						
CHGB	Renai	1.74	223	P	Pn	06 58 47.0	+0.6
	baz=219						
CHGB				*e*S	S	06 59 18.5	+1.4
	baz=219						
WHP	Taichung City	1.75	233	P	Pn	06 58 46.1	-0.2
	baz=229						
WHP				S	S	06 59 16.3	-0.7
	baz=229						
HATJ	Hateruma jima	1.76	136	P	Pn	06 58 46.5	+0.2
HATJ				*e*S	S	06 59 17.1	+0.1
JKRS	Kuro-shima	1.77	128	P	Pn	06 58 46.6	+0.2
JKRS				S	S	06 59 17.4	+0.2
JIJ	Ishigaki jima	1.80	122	P	Pn	06 58 46.3	-0.3
JIJ				S	S	06 59 16.4	-1.2
JISG	Ishigakijimahi	1.83	114	P	Pn	06 58 46.7	-0.2
JISG				S	S	06 59 17.8	-0.2
WCS	Beigang Elemen	1.91	228	P	Pn	06 58 47.3	-0.4
	baz=230						
WCS				S	S	06 59 19.1	-0.3
	baz=230						
VWDT	VWDT	1.99	218	P	Pn	06 58 49.2	+0.9
	baz=218						
VWDT				*e*S	S	06 59 22.5	+1.8
	baz=218						
TYC	Yuchr	2.05	226	P	Pn	06 58 48.5	-0.4
	baz=228						
TYC				S	S	06 59 21.8	0.0
	baz=228						
HGSD	Ruisui	2.07	208	P	Pn	06 58 49.2	0.0
	baz=209						
HGSD				*e*S	S	06 59 21.2	-1.0
	baz=209						
SSLB	Suanglung	2.07	222	P	Pn	06 58 48.7	-0.5
	baz=226						
SSLB				S	S	06 59 22.1	-0.2
	baz=226						
JTJ	Tarama	2.14	109	P	Pn	06 58 49.8	+0.1
JTJ				*e*S	S	06 59 22.9	-0.3
YULB	Yu-li	2.21	209	*e*P	Pn	06 58 49.5	-1.1
	baz=209						
TWF1	Yuli	2.25	209	*e*P	Pn	06 58 52.3	+1.3
	baz=210						
ALS	Alishan	2.37	220	P	Pn	06 58 52.3	-0.2
	baz=223						
ALS				*e*S	S	06 59 28.5	+0.5
	baz=223						
CHN5	Tsauling	2.38	224	P	Pn	06 58 52.5	+0.1
	baz=226						
CHN5				*e*S	S	06 59 28.5	+0.7
	baz=226						
JIRB	Irabujima	2.50	101	*e*S	S	06 59 28.9	-0.8
JIKM	Ikemajima	2.55	99	P	Pn	06 58 53.5	-0.3
JIKM				S	S	06 59 30.5	-0.1
EDH	Donghe	2.59	205	P	Pn	06 58 54.2	-0.1
	baz=204						
JMJ	Miyako jima 2	2.61	101	P	Pn	06 58 55.2	+0.7
	baz=104						
JMJ				S	S	06 59 31.4	-0.3
	baz=104						
CHN4	Tsaushan	2.62	221	*e*P	Pn	06 58 52.4	-2.3
	baz=224						
CHN4				S	S	06 59 30.6	-1.4
	baz=224						
TPUB	Ta-pu	2.64	220	P	Pn	06 58 54.2	-0.7
	baz=224						
TPUB				S	S	06 59 32.1	-0.4
	baz=224						
JMJ2	Miyako jima3	2.66	102	P	Pn	06 58 55.2	+0.2
JMJ2				*e*S	S	06 59 32.9	+0.2
WTP	Ta-pu	2.69	220	P	Pn	06 58 55.2	-0.3
	baz=223						
WTP				S	S	06 59 33.2	-0.3
	baz=223						
SLGT	Liugui	2.87	216	P	Pn	06 58 57.4	0.0
	baz=211						
SLGT				*e*S	S	06 59 38.5	+1.6
	baz=211						
MASBT	Mashibuluo	3.19	212	P	Pn	06 59 01.3	+0.3
	baz=209						
MASBT				*e*S	S	06 59 44.4	+0.9
	baz=209						
JOW	Kunigami	5.42	73	*e*P	Pn	06 59 28.1	+0.5
	baz=75						

NOU ***14*** *06:58:23.1, 30°.31S×175°.29W, h32^{km}, mb4.8/6, Kermadec Islands Region*

IDC ***14*** *06:58:54.2±0.6, 31°.73S×177°.81W, h0^{km}, mb4.6/15, mb1 4.8/17, mb1mx4.6/34, mbtmp4.6/17, ML4.9/1, MS3.9/13, Ms1 3.9/13, ms1mx3.8/39, Error ellipse: s-maj=18.6km s-min=18.1km az=139.0*

NEIC ***14*** *06:58:58.0±1.5, 31°.80S±0°.06×177°.8W±0°.1, h22^{km}±5^{km}, mb4.9/26, Error ellipse: s-maj=18.6km s-min=9.1km az=98.0*

GCMT ***14*** *06:59:00.0±0.4, 31°.93S±0°.04×177°.41W±0°.04, h30^{km}, MW5.0/69, Moment Tensor Solution. s25,c26; s69,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.69±.24; $M_{\theta\theta}$-1.11±.16; $M_{\phi\phi}$-2.58±.17; $M_{r\theta}$0.59±.20; $M_{\theta\phi}$-0.43±.12; $M_{\phi r}$1.54±.18; Best double couple: $M_0$3.59400×10^{16} NP1:ϕ_s194.00000°,δ31.00000°,λ87.00000°. NP2: ϕ_s18.00000°,δ59.00000°,λ92.00000°. Principal axes: T 4.0910, Plg76.0000°, Azm293.0000°; N -0.9960, Plg1.0000°, Azm197.0000°; P -3.0960, Plg14.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 06:58:57.5±0.4**, 31°.80S**±0°.05×**177°.90W**±0°.09**, h24^{km}, n129, σ2^{s}.18**/141**, mb4.8**/36**, MS3.9**/13**, 2D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.53	360	P	Pn	06 59 34.7	-2.3
GLKZ				S	Sn	07 00 05.0	-2.0
RAO	Raoul Island	2.54	360	Pn	Pn	06 59 35.4	-1.8
	239nm,0.3s,baz=104,slow=13,SNR=13						
RAO				Sn	Sn	07 00 05.0	-2.3
	844nm,0.3s,baz=224,slow=23,SNR=12						
RAO				LR	LR	07 00 14.7	
	comp=Z,614nm,21.2s,baz=126,slow=33						
RAO	Raoul Island	2.54	360	Pn	Pn	06 59 35.3	-1.8
RAO				Sn	Sn	07 00 05.8	-1.5
RIZ	Raoul Island	2.54	359	P	Pn	06 59 35.6	-1.6
RIZ				S	Sn	07 00 05.9	-1.5
MXZ	Matakaoa Point	6.54	207	P	Pn	07 00 29.4	-2.8
MXZ				S	Sn	07 01 44.6	-1.4
MXZ	Matakaoa Point	6.54	207	Pn	Pn	07 00 29.4	-2.8
WMGZ	Waiomatatini S	6.73	206	P	Pn	07 00 32.2	-2.5
WMGZ				S	Sn	07 01 49.7	-0.9
PKGZ	Pakihiroa	6.92	207	P	Pn	07 00 34.5	-2.9
PKGZ				S	Sn	07 01 54.2	-1.1
HAZ	Te Kaha	6.92	210	P	Pn	07 00 36.6	-0.8
PUZ	Puketiti	7.01	206	P	Pn	07 00 36.4	-2.3
PUZ				S	Sn	07 01 56.0	-1.6
RUGZ	Raukumara Rang	7.15	209	P	Pn	07 00 38.2	-2.4
RUGZ				S	Sn	07 02 00.8	-0.2
TWGZ	Tauwhareparae	7.21	207	P	Pn	07 00 39.7	-1.6
TWGZ				S	Sn	07 02 00.4	-2.0
TKGZ	Te Karaka	7.49	207	P	Pn	07 00 43.2	-1.9
MWZ	Matawai	7.52	209	P	Pn	07 00 43.4	-2.3
MWZ				S	Sn	07 02 08.4	-1.8
URZ	Urewera	7.63	211	Pn	Pn	07 00 43.1	-4.0
	2.5nm,0.3s,baz=296,slow=22,SNR=15						
URZ				Sn	Sn	07 02 10.5	-2.4
	4.3nm,0.3s,baz=172,slow=18,SNR=6.9						
URZ	Urewera	7.63	211	P	Pn	07 00 44.1	-3.0
URZ				S	Sn	07 02 10.2	-2.7
URZ	Urewera	7.63	211	Pn	Pn	07 00 46.3	-0.9
URZ	Urewera	7.63	211	P	Pn	07 00 46.9	-0.3
RAGZ	Rawiri	7.71	209	P	Pn	07 00 46.1	-2.1
RAGZ				S	Sn	07 02 13.3	-1.5
RIGZ	Rimuhau	7.75	206	P	Pn	07 00 45.7	-3.1
RIGZ				S	Sn	07 02 12.7	-3.1
PRGZ	Paritu Road	7.90	205	P	Pn	07 00 46.7	-4.1
PRGZ				S	Sn	07 02 15.8	-3.7
MUGZ	Murupara	7.96	212	P	Pn	07 00 49.0	-2.8
MHGZ	Mahia Peninsul	8.10	204	P	Pn	07 00 49.2	-4.3
RAHZ	Arahi	8.20	209	P	Pn	07 00 54.8	-0.1
RAHZ				S	Sn	07 02 24.1	-2.7
BFZ	Birch Farm	10.04	206	Pn	Pn	07 01 14.0	-6.2
BFZ	Birch Farm	10.04	206	P	Pn	07 01 17.1	-3.1
QRZ	Quartz Range	11.86	218	P	Pn	07 01 44.4	-0.6
KHZ	Kahutara	12.60	210	P	Pn	07 01 53.9	-1.3
MSVF	Nonsavu	14.47	344	Pn	Pn	07 02 19.6	-1.4
	baz=124,slow=11,SNR=3.5						
MSVF				LR	LR	07 07 49.2	
	comp=Z,880nm,18.3s,baz=176,slow=37						
RPZ	Rata Peaks	14.74	213	P	Pn	07 02 20.9	-3.5
ODZ	Otahua Downs	15.96	211	P	Pn	07 02 35.5	-4.9
DZM	Mont Dzumac	16.97	301	*e*P	P	07 02 57.9	+2.7
	101nm,1.3s						
DZM				*e*LR	LR	07 07 06.3	
	comp=Z,1μm,24.8s						
DZM	Mont Dzumac	16.97	301	P	P	07 02 58.8	+3.5
	0.4nm,0.3s,baz=94,slow=14,SNR=8.0						
DZM				LR	LR	07 08 46.1	
	comp=Z,2μm,18.0s,baz=168,slow=35						
RAR	Rarotonga	19.32	61	LR	LR	07 11 20.3	
	comp=Z,105nm,18.9s,baz=248,slow=39						
ARMA	Armidale	26.09	265	P	P	07 04 29.8	+0.3
TBI	Tubuai	26.52	79	*e*LQ	LQ	07 09 14.2	
	651nm,25.2s						
TBI				*e*LR	LR	07 10 15.5	
	comp=Z,406nm,31.5s						
EIDS	Eidsvold	27.92	275	P	P	07 04 43.7	-2.2
EIDS				IAmb	IAmb	07 04 50.1	
	comp=Z,32nm,1.3s						
PPT2	Papeete2	29.26	68	*e*LQ	LQ	07 10 25.6	
	comp=Z,394nm,24.0s						
PPT2				*e*LR	LR	07 11 39.3	
	comp=Z,352nm,30.5s						
PPT	Papeete	29.27	68	LR	LR	07 15 25.0	
	comp=Z,105nm,18.5s,baz=252,slow=34						
HNR	Honiara	30.29	312	LR	LR	07 16 29.0	
	comp=Z,384nm,18.4s,baz=149,slow=35						
TOO	Toolangi	30.52	249	P	P	07 05 10.9	+2.1
TOO				IAmb	IAmb	07 05 14.4	
	comp=Z,13nm,1.2s						
CTA	Charters Tower	34.13	281	P	P	07 05 43.4	+2.8
	comp=Z,26nm,0.9s,baz=102,slow=12,SNR=10						
CTAO	Charters Tower	34.13	281	P	P	07 05 42.9	+2.3
STKA	Stephens Creek	34.27	259	P	P	07 05 43.5	+1.7
	comp=Z,11nm,0.9s,baz=95,slow=9.0,SNR=19						
STKA	Stephens Creek	34.27	259	P	P	07 05 43.3	+1.5
BBOO	Buckleboo	38.69	256	P	P	07 06 20.0	+0.5
BBOO				IAmb	IAmb	07 06 21.2	
	comp=Z,23nm,0.9s						
PMG	Port Moresby	39.30	297	PcP	PcP	07 08 32.9	-0.4
	comp=Z,4.2nm,0.3s,baz=117,slow=4.5,SNR=3.5						
COEN	Coen	39.75	287	P	P	07 06 30.9	+2.4
TAOE	Nuku Hiva Isla	41.80	65	*e*LR	LR	07 17 20.3	
	comp=Z,136nm,29.3s						
AS31	Alice Springs	43.14	268	P	P	07 06 57.1	+0.9
ASAR	Alice Springs	43.14	268	P	P	07 06 56.8	+0.5
	comp=Z,17nm,0.9s,baz=113,slow=7.9,SNR=79						
ASAR				ScP	ScP	07 12 38.2	+2.7
	comp=Z,0.6nm,0.8s,baz=120,slow=5.1,SNR=4.6						
ASAR	Alice Springs	43.14	268	P	P	07 06 56.6	+0.4
WR0	Warramunga Arr	44.07	274	P	P	07 07 04.4	+0.6
WR0				IAmb	IAmb	07 07 21.8	
	comp=Z,14nm,1.1s						
WB2	Warramunga Arr	44.24	274	P	P	07 07 05.8	+0.7
WB2				IAmb	IAmb	07 07 06.7	
	comp=Z,16nm,0.8s						
WRAB	Tennant Creek	44.25	274	P	P	07 07 05.4	+0.2
WRAB				IAmb	IAmb	07 07 06.6	
	comp=Z,16nm,0.9s						
WRA	Warramunga Arr	44.25	274	P	P	07 07 05.6	+0.4
	comp=Z,11nm,0.8s,baz=113,slow=7.8,SNR=57						
WRA				PcP	PcP	07 08 50.2	+0.6
	comp=Z,0.6nm,0.6s,baz=124,slow=3.3,SNR=2.8						
WRA				ScP	ScP	07 12 43.5	+3.5
	comp=Z,2.0nm,1.1s,baz=125,slow=3.1,SNR=7.1						
WRA	Warramunga Arr	44.25	274	P	P	07 07 05.7	+0.4
WB0	Warramunga Arr	44.28	274	P	P	07 07 06.2	+0.7
WB0				IAmb	IAmb	07 07 07.0	
	comp=Z,18nm,0.8s						
FORT	Forrest	45.79	256	P	P	07 07 17.3	-0.1
MTN	Manton Dam	50.30	280	P	P	07 07 53.3	+0.9
MTN				IAmb	IAmb	07 07 53.5	
	comp=Z,16nm,0.9s						
KNRA	Kununurra	50.91	275	P	P	07 07 59.3	+2.4
KNRA				IAmb	IAmb	07 08 13.2	
	comp=Z,11nm,0.8s						
FITZ	Fitzroy Crossi	52.45	271	P	P	07 08 08.9	+0.4
	comp=Z,12nm,1.0s,baz=142,slow=7.0,SNR=10.0						
FAKI	Fak Fak	54.91	291	P	P	07 08 27.0	+0.5
	comp=Z,14nm,1.2s						
SIJI	Sorong	56.93	292	P	P	07 08 41.9	+0.8
	comp=Z,5.6nm,0.5s,baz=315,slow=5.7,SNR=4.9						
SOEI	Soe	57.65	279	P	P	07 08 44.7	-1.5
	comp=Z,28nm,1.0s						
SOEI	Soe	57.65	279	P	P	07 08 46.3	+0.1
QSPA	South Pole Qui	58.32	180	P	P	07 08 51.9	+1.7
	comp=Z,6.8nm,1.0s,baz=34,slow=2.8,SNR=14						
QSPA	South Pole Qui	58.32	180	P	P	07 08 51.5	+1.3
TWSI	Taliwang, Sumb	64.41	276	P	P	07 09 31.5	-0.5
	comp=Z,14nm,1.0s						
MAW	Mawson	71.03	201	P	P	07 10 13.5	+0.6
	comp=Z,6.7nm,1.0s,baz=128,slow=6.2,SNR=7.8						
MAW				LR	LR	07 41 57.2	
	comp=Z,271nm,18.4s,baz=80,slow=36						
MAW	Mawson	71.03	201	P	P	07 10 14.4	+1.5
SBUM	Sibu	74.31	283	P	P	07 10 31.9	-1.4
SBUM				IAmb	IAmb	07 10 35.3	
	comp=Z,8.7nm,1.2s						
SYO	Syowa Base	75.78	193	⇓*e*P	P	07 10 40.6	-0.2
SYO	Syowa Base	75.78	193	⇓*e*pP	pP	07 10 47.0	0.0
SNAA	Sanae	76.76	178	P	P	07 10 46.8	+0.2
SNAA	Sanae	76.76	178	P	P	07 10 47.0	+0.4
SNAA				IAmb	IAmb	07 11 03.9	
	comp=Z,16nm,1.1s						
VNA3	Neumayer Olymp	76.91	176	P	P	07 10 47.2	-0.1
VNA2	Neumayer--Watz	77.34	177	P	P	07 10 50.2	+0.4
	baz=178,slow=5.6						
VNA1	Neumayer--Stat	77.58	176	P	P	07 10 51.7	+0.7
COYC	Coyhaique	77.87	136	P	P	07 10 53.3	+0.2
COYC				IAmb	IAmb	07 10 55.6	
	comp=Z,14nm,1.1s						
MJAR	Matsushiro Arr	79.44	325	LR	LR	07 39 25.2	
	comp=Z,40nm,21.6s,baz=205,slow=31						
PLCA	Paso Flores	81.50	133	P	P	07 11 13.8	+0.8
	comp=Z,3.5nm,1.0s,baz=238,slow=7.6,SNR=3.3						
PLCA				LR	LR	07 40 51.3	
	comp=Z,123nm,18.3s,baz=244,slow=31						
BO02	Sierra Bellavi	84.75	128	P	P	07 11 29.9	0.0
MT01	Popeta	84.96	127	P	P	07 11 30.9	-0.1
KSRS	Korea Array	85.46	320	P	P	07 11 34.2	+1.2
	comp=Z,0.9nm,0.6s,baz=198,slow=24,SNR=2.9						
KSRS				LR	LR	07 46 05.3	
	comp=Z,44nm,19.4s,baz=92,slow=33						
PETK	Petropavlovsk-	87.18	346	P	P	07 11 42.4	+1.2
	comp=Z,4.9nm,0.8s,baz=186,slow=12,SNR=3.8						
PETK	Petropavlovsk-	87.18	346	P	P	07 11 42.0	+0.9
ISA	Isabella, Lake	87.23	45	P	P	07 11 43.3	+1.4
ISA				IAmb	IAmb	07 11 44.8	
	comp=Z,13nm,1.2s						
USRK	Ussuriysk Ar.	88.37	326	P	P	07 11 48.0	+1.0
	comp=Z,1.6nm,0.7s,baz=48,slow=2.8,SNR=4.6						
USRK				LR	LR	07 47 15.7	
	comp=Z,77nm,19.4s,baz=39,slow=33						
USRK	Ussuriysk Ar.	88.37	326	P	P	07 11 47.0	0.0
NVAR	Mina Array Bea	89.20	43	P	P	07 11 52.1	+0.7
	comp=Z,1.7nm,0.8s,baz=212,slow=8.1,SNR=6.6						
NVAR	Mina Array Bea	89.20	43	P	P	07 11 50.6	-0.8
MDJ	Mudanjiang	89.82	325	P	P	07 11 54.6	+0.8
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,280nm,6.9s						
TUC	Tucson	89.92	51	P	P	07 11 54.5	-0.2
TUC				IAmb	IAmb	07 11 57.7	
	comp=Z,5.2nm,1.1s						
CN2	Changchun	91.30	323	*e*P	P	07 12 01.6	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TXAR	Lajitas Array	93.07	57	P	P	07 12 10.7	+1.3
	comp=Z,1.2nm,1.1s,baz=197,slow=3.9,SNR=6.2						
CMAR	Chiang Mai Arr	93.94	289	PP	PP	07 16 02.4	+2.5
	comp=Z,1.1nm,0.3s,baz=142,slow=6.0,SNR=4.9						
XAN	Xi'an	95.02	307	P	P	07 12 12.8	-5.4
XAN				pP	PcP	07 12 16.8	-1.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PDAR	Pinedale Array	97.08	44	P	P	07 12 26.8	-0.9
	comp=Z,0.9nm,1.1s,baz=258,slow=4.5,SNR=2.7						
PDAR				LR	LR	07 54 37.8	
	comp=Z,63nm,18.1s,baz=266,slow=34						
HHC	Hu-ho-hao-te	97.26	314	*e*P	P	07 12 23.8	-4.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,6.0s						
LPAZ	La Paz	97.50	114	LR	LR	07 49 24.4	
	comp=Z,38nm,18.3s,baz=141,slow=31						
MKAR	Makanchi Array	118.73	309	PKP	PKPdf	07 17 42.9	-0.4
	comp=Z,1.2nm,0.8s,baz=44,slow=5.4,SNR=3.9						
BVAR	Borovoye Array	127.46	315	PKP	PKiKP	07 18 00.2	-0.2
	comp=Z,1.2nm,0.5s,baz=194,slow=5.6,SNR=6.3						
ARU	Arti	134.21	320	PKP	PKiKP	07 18 13.2	-0.6
	comp=Z,1.2nm,0.2s,baz=338,slow=17,SNR=3.1						
AKTO	Aktyubinsk	135.09	311	PKP	PKiKP	07 18 15.5	-0.3
	comp=Z,1.2nm,0.6s,baz=117,slow=4.5,SNR=3.0						
KLMR	Klimovskoe	142.03	331	*e*PKPdf	PKPdf	07 18 20.5	-6.2
KLMR				AMP		07 18 28.3	
	comp=Z,6.0nm,0.8s						
GNI	Garni	144.77	296	PKP	PKPbc	07 18 31.7	+0.3
	comp=Z,8.3nm,0.3s,baz=97,slow=4.3,SNR=4.9						
KBZ	Khabaz	145.94	302	PKPbc	PKPab	07 18 35.9	+0.6
	comp=Z,21nm,1.0s,baz=122,slow=1.2,SNR=23						
KVAR	Kislovodsk Arr	146.06	303	PKPbc	PKPab	07 18 37.2	+1.2
	comp=Z,2.2nm,0.3s,baz=89,slow=23,SNR=2.0						
OBN	Obninsk	146.36	324	PKPbc	PKPbc	07 18 35.8	+0.2
	comp=Z,4.7nm,0.4s,baz=70,slow=1.3,SNR=11						
FINES	FINESS Array B	146.48	339	PKPbc	PKPbc	07 18 35.9	0.0
	comp=Z,19nm,0.9s,baz=53,slow=3.4,SNR=38						
NB2	NORSAR Subarra	150.14	351	PKP	PKPbc	07 18 45.3	-0.3
	comp=Z,16nm,1.4s,baz=15,slow=4.1						
NOA	NORSAR Array B	150.14	351	PKPbc	PKPbc	07 18 45.6	+0.1
	comp=Z,2.6nm,0.9s,baz=16,slow=4.2,SNR=5.2						
MNK	Minsk	150.82	329	*i* PKP	PKPbc	07 18 45.1	-2.1
	comp=E,4.0nm,0.9s						
MNK				*i* PKP	PKPbc	07 18 45.1	-2.1
	comp=N,15nm,0.8s						
MNK				*i* PKP	PKPbc	07 18 45.1	-2.1
	comp=Z,12nm,0.8s,baz=230						
MNK				*i* PP	PP	07 22 28.6	+4.1
MNK				*i* PPP	PPP	07 25 51.0	
MNK				*i* SKS	SKSdf	07 25 59.1	+12
MNK				*i* SKKS	SKKSdf	07 34 46.0	+6.8
MNK				*i* SS	SS	07 41 33.4	-10
MNK				*i* SSS	SSS	07 47 38.1	
MNK				*i* LR	LR	08 27 14.7	
MNK				*i* LRM	MLR	08 30 30.1	
	comp=E,39nm,23.1s						
MNK				*i* LRM	MLR	08 30 31.5	
	comp=N,365nm,26.1s						
MNK				*i* LRM	MLR	08 30 34.4	
	comp=Z,84nm,18.8s						
NACGM	Naroch	151.03	330	*i* PKP	PKiKP	07 18 48.1	-0.3
AKASG	Malin Array Be	152.45	321	PKPbc	PKPbc	07 18 51.0	-0.1
	comp=Z,5.2nm,0.9s,baz=50,slow=2.9,SNR=11						
BRTR	Keskin Array B	153.31	296	PKPbc	PKiKP	07 18 54.1	+0.3
	comp=Z,2.9nm,0.8s,baz=129,slow=3.3,SNR=10						
CRVS	Cervenica-Dubn	157.53	325	*e*PKP	PKPab	07 19 24.2	+1.0
MORC	Moravsky Berou	158.64	332	*e*PKP	PKPab	07 19 28.7	+0.7
CLL	Collm	158.91	341	*e*PKPab	PKPab	07 19 29.0	0.0

CLL				*e*pPKPab	**sPKPab**	**07 19 41.0**	**+3.6**
BRG	**Berggiesshubel**	**159.02**	**339**	Amp		07 19 44.8	
	comp=Z,7.8nm,0.9s						
BRG	**Berggiesshubel**	**159.02**	**339**	P	PKPab	07 19 43.8	+14
VYHS	**Vyhne**	**159.06**	**328**	*e*PKP	**PKPab**	**07 19 30.7**	**+0.9**
JAVC	**Velka Javorina**	**159.30**	**330**	*e*PKP	**PKPab**	**07 19 32.3**	**+1.4**
VRAC	**Vranov**	**159.39**	**332**	*e*PKP	**PKPab**	**07 19 30.5**	**-0.7**
KRUC	**Moravsky**	**159.67**	**332**	*e*PKP	**PKPab**	**07 19 33.0**	**+0.6**
MODS	**Modra-Piesok**	**159.84**	**330**	*e*PKP	**PKPab**	**07 19 33.3**	**+0.1**
GERES	**GERESS Array B**	**160.85**	**336**	PKPab	**PKPab**	**07 19 35.6**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=46,slow=3.9,SNR=5.9						
TORD	**Torodi Ar. Bea**	**161.44**	**179**	PKPab	**PKPab**	**07 19 41.2**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=190,slow=5.1,SNR=3.7						

DDA 14 07:12:13.3, 37°.83N×30°.64E, h7^{km}±4^{km}, ML1.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAGO	**Egridir - ISPA**	**0.20**	**36**	*i* P	Pg	07 12 17.7	+0.3
BAGO				IAML		07 12 21.0	
	comp=E,240nm,0.4s						
BAGO				*i* S	Sg	07 12 21.1	+0.9
BAGO				IAML		07 12 22.0	
	comp=N,227nm,0.5s						
BUCA	**Burdur, Bucak-**	**0.50**	**187**	*i* P	Pg	07 12 22.7	-0.3
BUCA				*i* S	Sb	07 12 31.9	-0.1
BUCA				IAML		07 12 36.0	
	comp=E,53nm,0.3s						
BUCA				IAML		07 12 39.0	
	comp=N,33nm,0.3s						
YVAC	**Isparta, Yalva**	**0.65**	**47**	*i* P	Pg	07 12 25.8	-0.1
YVAC				*i* S	Sb	07 12 37.4	+1.0
YVAC				IAML		07 12 39.0	
	comp=E,14nm,0.3s						
YVAC				IAML		07 12 39.0	
	comp=N,12nm,0.2s						
DOGA	**KONYA_Doganhis**	**0.86**	**71**	*i* P	Pg	07 12 30.1	+0.3
DOGA				*i* S	Sb	07 12 42.3	-0.1
DOGA				IAML		07 12 47.0	
	comp=N,52nm,0.3s						
DOGA				IAML		07 12 47.0	
	comp=E,41nm,0.4s						
SEDI	**Konya, Seydise**	**0.96**	**113**	*i* P	Pg	07 12 31.0	-0.8

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*NNC **14** 07:12:13.8±0.8, 49°.98N×78°.69E, h4^{km}±11^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=8.2km s-min=6.4km az=54.0, Suspected Mining explosion.*

*IDC **14** 07:12:16.1±0.9, 50°.07N×78°.81E, h0^{km}, mb1 2.7/3, mb1mx2.6/47, mbtmp2.7/3, ML2.3/3, Error ellipse: s-maj=11.1km s-min=6.3km az=57.0*

ISC 14 07:12:15.7±0.9**, 50°.03N**±0°.06×**78°.73E**±0°.05**, h0^{km}, n15, σ1^{s}.23**/20**, 13C-1D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.61**	**348**	Pg	**Pg**	**07 12 26.2**	**-1.2**
	1.6nm,0.3s,baz=167,slow=19,SNR=59						
KURBB				Lg	Lg	07 12 36.0	
	4.4nm,0.3s,baz=162,slow=21,SNR=8.9						
KURBB	**Kurchatov Arra**	**0.61**	**348**	⇑P	**Pg**	**07 12 26.1**	**-1.2**
	18nm,0.4s						
KURBB				⇑S	**Sg**	**07 12 36.8**	**+1.5**
	112nm,0.6s						
KURK	**Kurchatov**	**0.69**	**354**	⇑P	**Pg**	**07 12 27.6**	**-1.4**
	18nm,0.9s						
KURK				⇑S	**Sg**	**07 12 38.7**	**+0.8**
	24nm,0.8s						
SEM	**Semipalatinsk**	**1.05**	**68**	P	**Pg**	**07 12 34.5**	**-1.2**
	5.6nm,0.2s						
SEM				S	**Sg**	**07 12 49.9**	**+0.6**
	45nm,0.6s						
MAKZ	**Makanchi**	**3.88**	**145**	⇑Pg	**Pb**	**07 13 26.6**	**+1.6**
	2.9nm,0.7s						
MAKZ				⇓Lg	Lg	07 14 18.3	
	8.0nm,0.7s						
BRZS	**Berezniki**	**3.91**	**272**	Pg	**Pb**	**07 13 25.5**	**+0.1**
	2.2nm,0.3s						
BRZS				Lg	Lg	07 14 16.8	
	3.9nm,0.6s						
MK31	**Makanchi Array**	**4.01**	**142**	⇑Pn	**Pn**	**07 13 18.4**	**0.0**
	0.2nm,0.3s,baz=324,slow=10,SNR=16						
MK31				⇑Pg	**Pb**	**07 13 26.6**	**-0.6**
	2.2nm,0.6s,baz=320,slow=13,SNR=8.9						
MK31				⇑Lg	Lg	07 14 20.3	
	7.1nm,0.6s,baz=326,slow=26,SNR=16						
MKAR	**Makanchi Array**	**4.01**	**142**	Pn	**Pn**	**07 13 18.6**	**+0.2**
	0.2nm,0.3s,baz=326,slow=11,SNR=15						
MKAR				Pg	**Pb**	**07 13 27.3**	**+0.1**
	0.6nm,0.3s,baz=328,slow=16,SNR=9.8						
MKAR				Lg	Lg	07 14 21.1	
	1.7nm,0.3s,baz=349,slow=17,SNR=7.0						
OTUK	**Ortayu**	**4.56**	**249**	⇑Pn	**Pn**	**07 13 25.0**	**-0.9**
	0.7nm,0.3s						
OTUK				⇑Lg	Lg	07 14 35.5	
	7.2nm,0.8s						
KAPS	**Kapalarasan**	**4.76**	**175**	Pg	**Pb**	**07 13 41.5**	**+1.5**
KAPS				Lg	Lg	07 14 44.1	
ZALV	**Zalesovo Beam**	**5.44**	**41**	Pn	**Pn**	**07 13 39.0**	**+1.0**
	0.4nm,0.3s,baz=236,slow=14,SNR=7.7						
ZALV				Lg	Lg	07 15 07.1	
	0.3nm,0.3s,baz=204,slow=20,SNR=2.8						
I46RU	**ZALESOVO INFRA**	**5.44**	**41**	*i*		07 43 20.0	
	baz=223,slow=319,SNR=1.6						
BVAR	**Borovoye Array**	**6.01**	**303**	Pn	**Pn**	**07 13 46.8**	**+1.0**
	0.1nm,0.3s,baz=155,slow=18,SNR=1.9						
BVAR				Sn	**Sn**	**07 14 54.6**	**-0.6**
	1.2nm,0.3s,baz=130,slow=23,SNR=12						
BVAR				Lg	Lg	07 15 18.3	
	0.3nm,0.3s,baz=140,slow=28,SNR=1.8						
BRVK	**Borovoye**	**6.08**	**303**	⇑Pg	**Pb**	**07 14 03.8**	**+1.4**
	2.0nm,0.8s						
BRVK				⇑Sn	**Sn**	**07 14 54.6**	**-2.4**
	3.2nm,0.6s						
BRVK				⇑Lg	Lg	07 15 30.3	
	2.2nm,0.6s						
AAK	**Ala-Archa**	**7.95**	**203**	Lg	Lg	07 16 25.9	
	0.2nm,0.3s,baz=258,slow=19,SNR=3.9						

IDC 14 07:12:37.7±3.5**, 31°.98S×177°.57W, h0^{km}, mb3.7**/2**, mb1 4.0**/3**, mb1mx3.5**/35**, mbtmp3.9**/3**, ML2.9**/1**, Error ellipse: s-maj=81.1km s-min=49.7km az=121.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.63**	**213**	Pn	Pn	07 14 29.4	-0.7
	0.2nm,0.3s,baz=307,slow=20,SNR=2.5						
URZ				Sn	Sn	07 15 55.6	-1.6
	0.9nm,0.3s,baz=302,slow=23,SNR=1.5						
ASAR	**Alice Springs**	**43.41**	**268**	P	P	07 20 42.5	+0.1
	1.0nm,0.7s,baz=104,slow=7.7,SNR=8.1						
WRA	**Warramunga Arr**	**44.54**	**274**	P	P	07 20 51.4	-0.2
	0.7nm,0.5s,baz=114,slow=7.8,SNR=7.5						
FINES	**FINESS Array B**	**146.75**	**339**	PKPbc	PKPdf	07 32 20.0	+0.8
	1.9nm,0.8s,baz=54,slow=2.4,SNR=1.8						

ISK 14 07:12:46.5, 38°.56N×31°.97E, h5^{km}, ML1.9/6**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIZT	**Kizilcal**	**0.33**	**348**	PG	Pg	07 12 53.5	+0.6
KIZT				SG	Sg	07 12 58.7	+1.4
LADK	**Ladik-KONYA**	**0.47**	**139**	PG	Pg	07 12 56.2	+0.6
LADK				SG	Sb	07 13 03.3	-1.5
KONT	**Konya--Tatoy**	**0.69**	**153**	PG	Pg	07 12 59.9	+0.3
KONT				SG	Sb	07 13 09.9	-0.9
CHBY	**Cihanbeyli**	**0.72**	**88**	PG	Pg	07 13 00.9	+0.5
CHBY				SG	Sb	07 13 11.5	-0.4
AUSIV	**SIVRIHISAR**	**0.94**	**339**	PG	Pb	07 13 05.1	-0.3
SVRH	**Sivrihisar-ESK**	**0.95**	**339**	PG	Pb	07 13 05.4	-0.2

IDC 14 07:14:52.6±3.5**, 31°.89S×177°.94W, h0^{km}, mb3.7**/2**, mb1 4.0**/3**, mb1mx3.5**/34**, mbtmp3.8**/3**, Error ellipse: s-maj=78.9km s-min=49.8km az=119.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.54**	**211**	Pn	Pn	07 16 43.3	-0.5
	baz=307,slow=20,SNR=2.0						
URZ				Sn	Sn	07 18 07.9	-2.1
	0.8nm,0.3s,baz=120,slow=22,SNR=2.6						
ASAR	**Alice Springs**	**43.10**	**268**	P	P	07 22 54.6	-0.1
	0.6nm,0.6s,baz=112,slow=7.9,SNR=6.7						
WRA	**Warramunga Arr**	**44.22**	**274**	P	P	07 23 03.8	-0.1
	0.8nm,0.7s,baz=111,slow=8.1,SNR=7.0						
FINES	**FINESS Array B**	**146.55**	**339**	PKPbc	PKPdf	07 34 34.4	+0.7
	1.6nm,0.8s,baz=53,slow=5.4,SNR=1.9						

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*BEO **14** 07:17:51.9±0.6, 40°.85N×20°.07E, h0^{km}, ML2.8/12*

*PDG **14** 07:17:53.8±0.2, 41°.12N×20°.20E, h0^{km}±11^{km}, ML2.9/11, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*

*SKO **14** 07:17:53.3, 41°.04N×20°.14E, h4^{km}*

*TIR **14** 07:17:53.2, 41°.19N×20°.43E, h4^{km}, Md2.7*

*ATH **14** 07:17:53.2, 41°.19N×20°.29E, h23^{km}±5^{km}, ML2.9/1, Error ellipse: s-maj=10.3km s-min=1.4km az=34.0*

*THE **14** 07:17:54.0, 41°.12N×20°.24E, h0^{km}±2^{km}, ML2.6/5, Error ellipse: s-maj=2.5km s-min=0.6km az=35.0*

ISC 14 07:17:54.2±0.9**, 41°.12N**±0°.02×**20°.21E**±0°.02**, h14^{km}**±8^{km}**, n81, σ1^{s}.13**/142**, 17C-10D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.34**	**312**	P	**Pg**	**07 18 00.4**	**-0.9**
TIR				S	**Sb**	**07 18 07.0**	**-0.4**
	935nm,0.3s						
TIR	**Tirane**	**0.34**	**312**	P	**Pg**	**07 18 00.4**	**-0.9**
TIR				S	**Sb**	**07 18 07.0**	**-0.4**
TIR				AML	AML	07 18 07.7	
	comp=E,4683µm,0.3s						
TIR				AML	AML	07 18 08.1	
	comp=N,4781µm,0.3s						
TIR	**Tirane**	**0.34**	**312**	⇑*i*Pg	**Pg**	**07 18 00.4**	**-0.9**
TIR	**Tirane**	**0.34**	**312**	P	**Pg**	**07 18 00.5**	**-0.7**
	baz=308						
TIR				S	**Sb**	**07 18 07.6**	**+0.1**
	baz=308						
TIR	**Tirane**	**0.34**	**312**	*e*Pg	**Pg**	**07 18 00.3**	**-0.9**
TIR				*e*Sg	**Sb**	**07 18 07.1**	**-0.4**
OHR	**Ohrid**	**0.45**	**91**	⇓*i*Pg	**Pg**	**07 18 02.0**	**-1.1**
OHR				*i* Sg	**Sb**	**07 18 10.1**	**-0.4**
OHR				*e*Lg	Lg	07 18 10.2	
	comp=N,847nm,0.3s						
OHR	**Ohrid**	**0.45**	**91**	*e*Pg	**Pg**	**07 18 02.4**	**-0.7**
OHR				*e*Sg	**Sb**	**07 18 09.9**	**-0.5**
PHP	**Peshkopia**	**0.59**	**17**	P	**Pg**	**07 18 05.1**	**-0.7**
PHP				S	**Sb**	**07 18 14.5**	**-0.1**
PHP	**Peshkopia**	**0.59**	**17**	P	**Pg**	**07 18 05.2**	**-0.7**
	baz=12						
PHP				S	**Sb**	**07 18 15.1**	**+0.4**
	baz=12						
KBN	**Korca**	**0.66**	**138**	P	**Pg**	**07 18 05.8**	**-1.3**
KBN				S	**Sb**	**07 18 16.4**	**-0.2**
	comp=N,1µm,0.6s						
KBN	**Korca**	**0.66**	**138**	P	**Pg**	**07 18 05.9**	**-1.3**
	baz=141						
KBN				S	**Sb**	**07 18 17.1**	**+0.5**
	baz=141						
FNA	**Florina**	**0.95**	**110**	P	**Pg**	**07 18 11.1**	**-1.4**
FNA				S	**Sb**	**07 18 25.5**	**+0.7**
	comp=N,580nm,0.5s						
FNA	**Florina**	**0.95**	**110**	P	**Pg**	**07 18 11.3**	**-1.2**
FNA	**Florina**	**0.95**	**110**	⇑*i*Pg	**Pg**	**07 18 11.0**	**-1.4**
FNA				*i* Sg	**Sg**	**07 18 23.9**	**-0.9**
FNA	**Florina**	**0.95**	**110**	P	**Pg**	**07 18 11.2**	**-1.4**
	baz=111						
FNA				S	**Sb**	**07 18 25.5**	**+0.7**
	baz=111						
NEST	**Nestorio**	**0.95**	**137**	P	**Pg**	**07 18 11.6**	**-1.0**
NEST				S	**Sb**	**07 18 25.1**	**+0.1**
	comp=N,178nm,0.6s						
NEST	**Nestorio**	**0.95**	**137**	P	**Pg**	**07 18 11.7**	**-0.8**
LSK	**Leskovik**	**1.01**	**163**	P	**Pg**	**07 18 11.5**	**-2.2**
	baz=165						
LSK				S	**Sn**	**07 18 28.3**	**+0.2**
	baz=165						
ULC	**Ulcinj**	**1.11**	**320**	*i* Pg	**Pb**	**07 18 13.8**	**-1.5**
ULC	**Ulcinj**	**1.11**	**320**	⇑*i*Pg	**Pb**	**07 18 13.7**	**-1.5**
ULC				*i* Sg	**Sn**	**07 18 31.4**	**+0.9**
ULC	**Ulcinj**	**1.11**	**320**	⇓*i*Pg	**Pb**	**07 18 14.0**	**-1.2**
ULC				*i* Sg	**Sn**	**07 18 31.5**	**+0.9**
PENT	**Pentalofos**	**1.16**	**142**	P	**Pb**	**07 18 14.9**	**-1.2**
PENT				S	**Sn**	**07 18 32.6**	**+0.8**
PENT	**Pentalofos**	**1.16**	**142**	P	**Pb**	**07 18 16.0**	**-0.1**
SRN	**Sarande**	**1.25**	**187**	P	**Pg**	**07 18 18.3**	**+0.1**
	baz=190						
SRN				S	**Sg**	**07 18 37.6**	**+3.2**
	baz=190						
BCI	**Bajram Curri**	**1.25**	**355**	P	**Pg**	**07 18 18.2**	**0.0**
	baz=354						
BCI				S	**Sg**	**07 18 37.5**	**+2.9**
	baz=354						
SKO	**Skopje**	**1.26**	**47**	*i* Pg	**Pg**	**07 18 19.8**	**+1.4**
SKO				*i* Sg	**Sg**	**07 18 35.6**	**+0.9**
DRME	**Dracevica, Mon**	**1.31**	**325**	⇑*i*Pg	**Pn**	**07 18 17.9**	**-0.2**
DRME				*i* Sg	**Sg**	**07 18 38.7**	**+2.1**
DRME	**Dracevica, Mon**	**1.31**	**325**	⇓*i*Pg	**Pn**	**07 18 17.7**	**-0.4**
DRME				*i* Sg	**Sg**	**07 18 38.4**	**+1.8**
KEK	**Kerkira**	**1.44**	**193**	P	**Pg**	**07 18 21.3**	**-0.5**
KEK				S	**Sg**	**07 18 40.5**	**0.0**
KPRO	**Kipourio**	**1.46**	**142**	P	**Pb**	**07 18 21.1**	**0.0**
KPRO	**Kipourio**	**1.46**	**142**	P	**Pb**	**07 18 20.9**	**-0.2**
PVY	**Plav**	**1.49**	**353**	⇓*i*Pg	**Pn**	**07 18 21.1**	**+0.5**
PVY				*i* Sg	**Sg**	**07 18 44.9**	**+2.8**
PVY	**Plav**	**1.49**	**353**	⇑*i*Pg	**Pn**	**07 18 21.1**	**+0.5**
PVY				*i* Sg	**Sg**	**07 18 44.3**	**+2.2**
PDG	**Podgorica**	**1.49**	**332**	*i* Pn	**Pn**	**07 18 20.8**	**+0.2**
PDG	**Podgorica**	**1.49**	**332**	*e*Pn	**Pn**	**07 18 20.8**	**+0.2**
PDG				*e*Sn	**Sg**	**07 18 44.0**	**+1.8**
TTG	**Podgorica**	**1.49**	**332**	⇑*i*Pg	**Pn**	**07 18 20.8**	**+0.2**
TTG				*i* Sg	**Sg**	**07 18 44.3**	**+2.1**
TTG	**Podgorica**	**1.49**	**332**	⇑*i*Pg	**Pn**	**07 18 20.9**	**+0.4**
TTG				*i* Sg	**Sg**	**07 18 44.1**	**+1.8**
BUM	**Brajici-Budva**	**1.54**	**321**	⇓*i*Pg	**Pn**	**07 18 21.6**	**+0.3**
BUM				*i* Sg	**Sg**	**07 18 45.4**	**+1.7**
BUM	**Brajici-Budva**	**1.54**	**321**	⇑*i*Pg	**Pb**	**07 18 22.1**	**-0.4**
BUM				*i* Sg	**Sg**	**07 18 45.9**	**+2.2**
IGT	**Igoumenitsa**	**1.59**	**177**	P	**Pb**	**07 18 23.3**	**0.0**
IGT				S	**Sg**	**07 18 45.5**	**+0.2**
	comp=N,168nm,0.6s						
IGT	**Igoumenitsa**	**1.59**	**177**	P	**Pg**	**07 18 24.7**	**0.0**
	baz=178						
IGT				S	**Sg**	**07 18 48.4**	**+3.1**
	baz=178						
GRG	**Griva**	**1.67**	**95**	P	**Pn**	**07 18 23.8**	**+0.8**
GRG	**Griva**	**1.67**	**95**	*i* Pn	**Pn**	**07 18 23.8**	**+0.8**
CEME	**Cevo**	**1.72**	**326**	⇑*i*Pn	**Pn**	**07 18 24.4**	**+0.6**
CEME				*i* Sn	**Sg**	**07 18 49.9**	**+0.3**
CEME	**Cevo**	**1.72**	**326**	⇓*i*Pn	**Pb**	**07 18 25.2**	**-0.4**
CEME				*i* Sn	**Sg**	**07 18 51.4**	**+1.8**
IVA	**Berane**	**1.77**	**352**	⇓*i*Pn	**Pb**	**07 18 25.9**	**-0.5**
IVA				*i* Sn	**Sg**	**07 18 51.9**	**+0.8**
IVA	**Berane**	**1.77**	**352**	⇑*i*Pn	**Pb**	**07 18 26.2**	**-0.2**
IVA				*i* Sn	**Sg**	**07 18 52.6**	**+1.5**
VAY	**Valandovo**	**1.79**	**83**	*i* Pn	**Pb**	**07 18 26.3**	**-0.5**
VAY	**Valandovo**	**1.79**	**83**	*e*Pn	**Pb**	**07 18 26.5**	**-0.3**
VAY				*e*Sn	**Sg**	**07 18 50.9**	**-1.0**
KOME	**Kolasin**	**1.81**	**344**	⇑*i*Pn	**Pn**	**07 18 26.1**	**+1.1**
KOME				*i* Sn	**Sg**	**07 18 52.7**	**+0.4**
KOME	**Kolasin**	**1.81**	**344**	⇓*i*Pn	**Pb**	**07 18 26.7**	**-0.4**
KOME				*i* Sn	**Sg**	**07 18 53.8**	**+1.5**
HCY	**Herceg Novi**	**1.84**	**317**	⇑*i*Pn	**Pb**	**07 18 26.7**	**-1.0**
HCY				*i* Sn	**Sg**	**07 18 52.9**	**-0.7**
HCY	**Herceg Novi**	**1.84**	**317**	⇓*i*Pn	**Pb**	**07 18 27.4**	**-0.3**
HCY				*i* Sn	**Sg**	**07 18 54.8**	**+1.2**
NKME	**Niksic**	**1.89**	**331**	⇓*i*Pn	**Pb**	**07 18 27.7**	**-0.9**
NKME				*i* Sn	**Sg**	**07 18 54.4**	**-0.7**
NKME	**Niksic**	**1.89**	**331**	⇑*i*Pn	**Pb**	**07 18 28.2**	**-0.4**
NKME				*i* Sn	**Sg**	**07 18 56.0**	**+0.9**
NKY	**Niksic**	**1.92**	**332**	⇑*i*Pn	**Pn**	**07 18 27.7**	**+1.1**
NKY				*i* Sn	**Sg**	**07 18 54.8**	**-1.2**
NKY	**Niksic**	**1.92**	**332**	⇑*i*Pn	**Pb**	**07 18 28.7**	**-0.3**
NKY				*i* Sn	**Sg**	**07 18 56.0**	**0.0**
KNT	**Kendrikon**	**2.03**	**88**	*i* Pn	**Pn**	**07 18 29.0**	**+1.0**
BARS	**Barje**	**2.08**	**35**	*e*Pn	**Pb**	**07 18 31.9**	**+0.2**
BARS	**Barje**	**2.08**	**35**	*e*Pn	Pg	07 18 47.3	+13
BARS				*e*Sn	**Sg**	**07 19 02.2**	**+1.2**
TREB	**Trebinje**	**2.12**	**320**	*e*Pn	**Pb**	**07 18 31.7**	**-0.6**
TREB				*e*Sn	**Sb**	**07 18 59.3**	**+0.9**
SJES	**Sjenica**	**2.15**	**355**	*e*Pn	**Pb**	**07 18 33.3**	**+0.4**
SJES				*e*Sn	**Sg**	**07 19 04.2**	**+0.9**
BOSS	**Bosilegrad**	**2.19**	**50**	*e*Pn	**Pb**	**07 18 33.5**	**0.0**
SELS	**Selova**	**2.21**	**18**	*e*Pn	**Pb**	**07 18 33.4**	**-0.5**
UPM	**Unac-Piva**	**2.30**	**335**	⇑*i*Pn	**Pn**	**07 18 32.7**	**+0.9**
UPM				*i* Sn	**Sb**	**07 19 04.1**	**+0.3**
UPM	**Unac-Piva**	**2.30**	**335**	⇑*i*Pn	**Pb**	**07 18 33.9**	**-1.6**
UPM				*i* Sn	**Sb**	**07 19 05.4**	**+1.6**
IVAS	**Ivanjica**	**2.46**	**359**	*e*Pn	**Pb**	**07 18 36.8**	**-1.4**
IVAS				*e*Sn	**Sg**	**07 19 11.5**	**-1.6**
STON	**Ston**	**2.56**	**314**	*e*Pn	**Pn**	**07 18 35.9**	**+0.6**
STON				Sn	**Sn**	**07 19 06.1**	**-0.1**
STON	**Ston**	**2.56**	**314**	*e*Pn	**Pn**	**07 18 35.5**	**+0.3**
VTS	**Vitosha**	**2.71**	**55**	*e*Pn	**Pn**	**07 18 39.2**	**+1.7**
VTS				*e*Sn	**Sb**	**07 19 15.0**	**-0.7**
GRUS	**Gruza**	**2.79**	**8**	*e*Pn	**Pb**	**07 18 41.7**	**-2.2**
ZAPS	**Zavoj**	**2.81**	**39**	*e*Pn	**Pb**	**07 18 42.7**	**-1.4**
BBLS	**Lazići**	**2.81**	**348**	*e*Pn	**Pb**	**07 18 42.5**	**-1.7**
BBLS				*e*Sn	**Sb**	**07 19 18.7**	**+0.2**
LSTV	**Lastovo**	**2.97**	**305**	*e*Pn	**Pn**	**07 18 41.5**	**+0.6**
LSTV				Sn	**Sn**	**07 19 14.9**	**-1.5**
ZAGS	**Zajecar**	**3.08**	**28**	*e*Pn	**Pb**	**07 18 46.1**	**-2.6**
MAKA	**Makarska**	**3.21**	**314**	*e*Pn	**Pn**	**07 18 44.3**	**+0.2**
MAKA				Sn	**Sn**	**07 19 21.7**	**-0.5**
RICI	**Ricice**	**3.29**	**317**	*e*Pn	**Pn**	**07 18 46.2**	**+0.8**
RICI				Sn	**Sn**	**07 19 25.3**	**+1.1**
HVAR	**Hvar**	**3.47**	**308**	*i* Pn	**Pn**	**07 18 48.0**	**+0.2**
HVAR				Sn	**Sn**	**07 19 27.2**	**-1.5**
ZIRJ	**Zirje**	**4.22**	**308**	*e*Pn	**Pn**	**07 18 58.2**	**+0.1**
ZIRJ				Sn	**Sn**	**07 19 46.0**	**-1.2**
MORI	**Morici**	**4.31**	**311**	*e*Pn	**Pn**	**07 18 58.8**	**-0.6**
MORI				Sn	**Sn**	**07 19 48.9**	**-0.5**
DUGI	**Dugi Otok**	**4.76**	**309**	*e*Pn	**Pn**	**07 19 05.7**	**+0.1**
DUGI				Sn	**Sn**	**07 19 58.9**	**-1.7**

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*IDC **14** 07:19:26.9±1.0, 23°.93N×121°.94E, h0^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.7/49, mbtmp3.8/8, MS3.2/2, Ms1 3.3/2, ms1mx2.7/40, Error ellipse: s-maj=38.1km s-min=18.8km az=64.0*

*JMA **14** 07:19:30.3, 23°.85N×121°.55E, h18^{km}±2^{km}, M3.4*

*IASPEI **14** 07:19:31.5±0.9, 23°.91N±0°.01×121°.50E±0°.02, h19^{km}±2^{km}, mb3.7/8, Error ellipse: s-maj=2.9km s-min=1.7km az=109.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ASIES **14** 07:19:31.6, 23°.91N×121°.46E, h19^{km}, MW3.6*

*TAP **14** 07:19:31.1, 23°.92N×121°.46E, h22^{km}, ML4.2, B*

ISC 14 07:19:31.5±0.7**, 23°.90N**±0°.01×**121°.51E**±0°.02**, h23^{km}**±4^{km}**, n144, σ1^{s}.04**/229**, mb3.7**/8**, 19C-12D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETM	**Tongmen**	**0.07**	**345**	⇓*i*P	**Pb**	**07 19 35.1**	**-0.6**
	baz=36						
ETM				*i* S	**Sb**	**07 19 37.8**	**-0.7**
	baz=36						
TEYL	**Yanliau Villag**	**0.08**	**111**	⇓*i*P	**Pb**	**07 19 36.0**	**+0.2**
	baz=98						
TEYL				*i* S	**Sb**	**07 19 39.6**	**+1.0**
	baz=98						
ESL	**Shilin**	**0.11**	**221**	⇓*i*P	**Pb**	**07 19 35.4**	**-0.6**
	baz=188						
ESL				*i* S	**Sb**	**07 19 38.1**	**-0.9**
	baz=188						
HWA	**Hwalien**	**0.12**	**47**	⇓*i*P	**Pb**	**07 19 36.3**	**+0.3**
	baz=69						
HWA				*i* S	**Sb**	**07 19 40.0**	**+0.9**
	baz=69						
TWD	**Chiawan**	**0.20**	**23**	⇑*i*P	**Pb**	**07 19 36.6**	**-0.4**
	baz=40						
TWD				*i* S	**Sb**	**07 19 40.2**	**-0.4**
	baz=40						
EGFH	**Guangfu**	**0.24**	**199**	⇓*i*P	**Pb**	**07 19 36.8**	**-0.7**
	baz=181						
EGFH				*i* S	**Sb**	**07 19 41.5**	**0.0**
	baz=181						
ETL	**Fush Village**	**0.28**	**21**	P	**Pb**	**07 19 37.6**	**-0.6**
	baz=33						
ETL				S	**Sb**	**07 19 41.8**	**-0.8**
	baz=33						
NACB	**Ninganchiao**	**0.28**	**15**	⇑*i*P	**Pb**	**07 19 37.5**	**-0.7**
	baz=26						
NACB				*i* S	**Sb**	**07 19 41.6**	**-1.1**
	baz=26						
ETLH	**Xiulin Townshi**	**0.31**	**355**	⇑*i*P	**Pb**	**07 19 37.8**	**-0.8**
	baz=4.0						
ETLH				S	**Sb**	**07 19 41.9**	**-1.6**
	baz=4.0						
OWD	**Renai**	**0.31**	**280**	⇑*i*P	**Pb**	**07 19 37.7**	**-1.0**
	baz=282						
OWD				S	**Sb**	**07 19 41.8**	**-1.8**
	baz=282						
WHF	**Hehuan Shan**	**0.34**	**317**	⇑*i*P	**Pb**	**07 19 38.0**	**-1.3**
	baz=318						
WHF				*i* S	**Sb**	**07 19 42.6**	**-1.9**
	baz=318						
CHGB	**Renai**	**0.35**	**298**	⇑*i*P	**Pb**	**07 19 38.3**	**-1.0**
	baz=303						
CHGB				*i* S	**Sb**	**07 19 43.1**	**-1.5**
	baz=303						
VWDT	**VWDT**	**0.37**	**247**	⇑*i*P	**Pb**	**07 19 38.9**	**-0.6**
	baz=240						
VWDT				*i* S	**Sb**	**07 19 43.8**	**-1.1**
	baz=240						
HGSD	**Ruisui**	**0.41**	**191**	*e*P	**Pb**	**07 19 39.7**	**-0.5**
	baz=187						
HGSD				*e*S	**Sb**	**07 19 46.2**	**+0.2**
	baz=187						
EHY	**Hungye**	**0.43**	**204**	⇓*i*P	**Pb**	**07 19 39.1**	**-1.4**
	baz=192						
EHY				*e*S	**Sb**	**07 19 45.9**	**-0.6**
	baz=192						
FUSS	**Fushou**	**0.43**	**325**	⇑*i*P	**Pb**	**07 19 39.8**	**-0.9**
	baz=329						
FUSS				*i* S	**Sb**	**07 19 45.0**	**-1.8**
	baz=329						
TWT	**Tachien**	**0.47**	**319**	⇑*i*P	**Pb**	**07 19 40.6**	**-0.7**
	baz=318						
TWT				*i* S	**Sb**	**07 19 46.3**	**-1.6**
	baz=318						
TDCB	**Techi**	**0.48**	**318**	⇑*i*P	**Pb**	**07 19 40.6**	**-0.9**
	baz=318						
TDCB				*i* S	**Sb**	**07 19 46.2**	**-2.0**
	baz=318						
SSLB	**Suanglung**	**0.52**	**258**	⇑*i*P	**Pb**	**07 19 40.9**	**-1.2**
	baz=260						
SSLB				S	**Sb**	**07 19 47.2**	**-2.1**
	baz=260						
YULB	**Yu-li**	**0.54**	**202**	*e*P	**Pb**	**07 19 40.7**	**-1.7**
	baz=190						
YULB				S	**Sb**	**07 19 49.2**	**-0.6**
	baz=190						
NNSB	**Datong**	**0.54**	**347**	⇓*i*P	**Pb**	**07 19 41.8**	**-0.7**
	baz=358						
NNSB				*i* S	**Sb**	**07 19 48.5**	**-1.4**
	baz=358						
NNS	**Nan Shan**	**0.56**	**347**	⇓*i*P	**Pb**	**07 19 42.0**	**-0.7**
	baz=358						
NNS				*i* S	**Sb**	**07 19 49.0**	**-1.4**
	baz=358						
ENA	**Nanau**	**0.57**	**21**	⇑*i*P	**Pb**	**07 19 41.9**	**-0.9**
	baz=28						
ENA				*e*S	**Sb**	**07 19 49.8**	**-0.7**
	baz=28						
WCS	**Beigang Elemen**	**0.57**	**286**	⇑*i*P	**Pb**	**07 19 41.8**	**-1.1**
	baz=286						
WCS				S	**Sb**	**07 19 48.3**	**-2.4**
	baz=286						
EYUL	**Yuli**	**0.58**	**198**	*e*P	**Pb**	**07 19 42.5**	**-0.5**
	baz=192						
EYUL				S	**Sb**	**07 19 50.8**	**+0.1**
	baz=192						
EWUT	**Wuta**	**0.60**	**24**	*e*P	**Pb**	**07 19 42.5**	**-0.8**
	baz=29						
TYC	**Yuchr**	**0.60**	**271**	⇑*i*P	**Pb**	**07 19 42.2**	**-1.2**
	baz=271						
TYC				S	**Sb**	**07 19 49.7**	**-1.8**
	baz=271						
WHP	**Taichung City**	**0.64**	**306**	⇑*i*P	**Pb**	**07 19 43.2**	**-1.0**
	baz=305						
WHP				*e*S	**Sb**	**07 19 51.3**	**-1.5**
	baz=305						
YUS	**Yu-Shan**	**0.66**	**232**	⇑*i*P	**Pb**	**07 19 43.9**	**-0.8**
	baz=218						

YUS				eS	Sb	07 19 51.7	-1.8
	baz=218						
NDT	Datong Townshi	0.70	360	P	Pb	07 19 44.8	-0.4
	baz=11						
WJS	Zhushan	0.72	264	eP	Pb	07 19 45.3	-0.1
	baz=262						
WJS				S	Sn	07 19 55.8	-0.9
	baz=262						
FULB	Fuli	0.72	196	eP	Pn	07 19 46.6	+0.2
	baz=201						
FULB				S	Sn	07 19 56.9	+0.1
	baz=201						
ENTT	Nioudou	0.74	4	⇑eP	Pb	07 19 44.9	-0.9
	baz=9.0						
ENTT				eS	Sb	07 19 55.2	-0.3
	baz=9.0						
ALS	Alishan	0.76	239	⇑iP	Pb	07 19 45.6	-0.6
	baz=229						
ALS				eS	Sb	07 19 55.7	-0.4
	baz=229						
NDS	Dongshan	0.76	14	eP	Pb	07 19 46.2	+0.2
	baz=26						
NDS				eS	Sb	07 19 55.3	-0.7
	baz=26						
WNT	Mingjian	0.76	269	⇑iP	Pb	07 19 46.0	0.0
	baz=267						
WNT				S	Sb	07 19 56.6	+0.6
	baz=267						
TWC	Suao	0.77	23	eP	Pb	07 19 45.2	-1.1
	baz=28						
TWC				S	Sb	07 19 56.9	+0.5
	baz=28						
YHNB	Yeheng	0.78	351	eP	Pb	07 19 45.9	-0.5
	baz=349						
YHNB				eS	Sb	07 19 54.6	-2.1
	baz=349						
NSK	Sanguang	0.79	350	⇓iP	Pb	07 19 46.0	-0.6
	baz=348						
NSK				eS	Sb	07 19 56.4	-0.6
	baz=348						
TCU	Taichung	0.81	288	eP	Pn	07 19 47.2	-0.3
	baz=288						
TCU				eS	Sb	07 19 57.8	+0.5
	baz=288						
CHKT	Chengkung	0.81	190	eP	Pb	07 19 45.8	-1.1
	baz=185						
CHKT				eS	Sb	07 19 57.4	+0.1
	baz=185						
TWQ1	Liyutan	0.81	304	eP	Pb	07 19 46.9	-0.1
	baz=313						
TWQ1				S	Sb	07 19 56.4	-1.2
	baz=313						
CHN5	Tsauling	0.82	249	P	Pb	07 19 47.2	+0.1
	baz=245						
CHN5				S	Sn	07 19 58.7	-0.6
	baz=245						
TWE	Neicheng	0.83	10	eP	Pb	07 19 46.2	-1.1
	baz=15						
TWE				eS	Sb	07 19 56.1	-2.0
	baz=15						
ELDTW	Lidau	0.84	213	eP	Pb	07 19 46.7	-0.8
	baz=208						
ELDTW				S	Sb	07 19 57.6	-0.8
	baz=208						
NSY	Sanyi	0.86	307	⇓P	Pn	07 19 48.3	0.0
	baz=316						
NSY				S	Sb	07 19 59.3	+0.4
	baz=316						
NSTT	Nanjuang	0.87	327	⇓iP	Pb	07 19 47.6	-0.3
	baz=323						
NSTT				eS	Sb	07 19 58.2	-0.9
	baz=323						
LIOB	Emei	0.87	329	⇓P	Pb	07 19 47.8	-0.2
	baz=324						
LIOB				eS	Sb	07 19 58.7	-0.6
	baz=324						
NWLT	Wulai	0.88	359	eP	Pb	07 19 47.3	-0.8
	baz=14						
WCHH	Zhanghua	0.89	282	eP	Pb	07 19 48.3	0.0
	baz=280						
WCHH				S	Sb	07 20 00.2	+0.4
	baz=280						
WDJ	Dajia District	0.92	300	i P	Pn	07 19 49.1	+0.1
	baz=300						
WDJ				S	Sb	07 20 00.6	+0.1
	baz=300						
NMLH	Miaoli	0.92	314	eP	Pn	07 19 49.2	+0.2
	baz=323						
NMLH				eS	Sb	07 20 00.5	0.0
	baz=323						
WDLH	Douliu	0.92	257	eP	Pb	07 19 48.7	-0.1
	baz=254						
WDLH				eS	Sn	07 20 01.2	-0.3
	baz=254						
EDH	Donghe	0.94	192	eP	Pb	07 19 48.4	-0.8
	baz=189						
EDH				eS	Sb	07 20 01.2	0.0
	baz=189						
STYH	Taoyuan	0.99	223	eP	Pb	07 19 49.6	-0.4
	baz=219						
NTC	Toucheng	0.99	17	eP	Pb	07 19 49.9	-0.2
	baz=21						
CHN4	Tsaushan	1.00	237	eP	Pb	07 19 48.7	-1.6
	baz=225						
CHN4				eS	Sb	07 20 02.6	-0.5
	baz=225						
TPUB	Ta-pu	1.00	234	P	Pn	07 19 50.4	+0.1
	baz=221						
TPUB				eS	Sn	07 20 04.0	+0.3
	baz=221						
SBCB	Hsinchu	1.01	332	eP	Pn	07 19 50.5	+0.2
	baz=334						
SBCB				eS	Sb	07 20 02.9	-0.4
	baz=334						
EGS		1.02	22	eP	Pb	07 19 50.2	-0.3
	baz=26						
CHN2	Minshiung	1.02	249	eP	Pn	07 19 51.0	+0.6
	baz=246						
CHN2				eS	Sn	07 20 04.8	+0.8
	baz=246						
HSN	Hsinchu	1.03	331	eP	Pn	07 19 51.4	+0.9
	baz=320						
HSN				eS	Sn	07 20 06.6	+2.4
	baz=320						
WRL	Guolierlin Hig	1.04	270	eP	Pn	07 19 50.9	+0.2
	baz=268						
LONT	Longtian	1.05	200	eP	Pn	07 19 51.1	+0.3
	baz=184						
WTP	Ta-pu	1.05	232	P	Pn	07 19 51.0	+0.1
	baz=220						
WTP				eS	Sn	07 20 04.8	-0.1
	baz=220						
WTK	Tuku	1.05	259	P	Pb	07 19 50.6	-0.4
	baz=256						
WTK				eS	Sn	07 20 05.3	+0.5
	baz=256						
NHDH	Xindian Distri	1.06	1	eP	Pn	07 19 51.0	0.0
	baz=9.0						
NHDH				eS	Sn	07 20 05.9	+0.8
	baz=9.0						
CHY	Chiayi	1.07	248	eP	Pb	07 19 51.2	-0.3
	baz=245						
CHY				S	Sn	07 20 06.9	+1.5
	baz=245						
TWA	Mucha	1.08	3	eP	Pb	07 19 50.5	-1.0
	baz=7.0						
TWA				eS	Sn	07 20 05.9	+0.3
	baz=7.0						
NCUH	Zhongli	1.11	344	eP	Pb	07 19 51.9	-0.2
	baz=347						
NCUH				eS	Sn	07 20 07.8	+1.5
	baz=347						
TIPB	Shuangxi	1.11	15	eP	Pn	07 19 50.9	-0.8
	baz=18						
TIPB				eS	Sb	07 20 05.3	-0.8
	baz=18						
NCU	National Centr	1.11	345	eP	Pb	07 19 52.2	+0.2
	baz=348						
NCU				eS	Sn	07 20 08.4	+2.1
	baz=348						
WTCT	Ta-ch'eng	1.13	269	eP	Pn	07 19 51.8	-0.1
	baz=266						
WTCT				eS	Sn	07 20 06.9	+0.2
	baz=266						
TWK	Hsinying	1.13	236	P	Pb	07 19 52.4	0.0
	baz=232						
TWK				eS	Sn	07 20 08.4	+1.5
	baz=232						
TAP	Taipei	1.14	360	eP	Pb	07 19 53.4	+0.9
	baz=13						
TAP				eS	Sn	07 20 08.7	+1.7
	baz=13						
TWG	Pinlang	1.15	201	eP	Pn	07 19 49.9	-2.3
	baz=185						
TWGBT	Beinan	1.15	200	eP	Pn	07 19 49.5	-2.7
	baz=185						
CHN1	Nanshi	1.15	232	P	Pb	07 19 52.7	0.0
	baz=228						
CHN1				eS	Sn	07 20 08.6	+1.4
	baz=228						
SNST	Tainan City	1.15	234	eP	Pb	07 19 53.1	+0.3
	baz=230						
SNST				eS	Sn	07 20 09.4	+2.1
	baz=230						
SGST	Jiashian	1.18	227	eP	Pn	07 19 52.6	-0.1
	baz=212						
SGST				eS	Sn	07 20 08.9	+0.9
	baz=212						
TTN	Taitung	1.19	197	eP	Pn	07 19 52.4	-0.3
	baz=179						
TWB1	Santiao Chiao	1.19	21	eP	Pb	07 19 53.5	+0.1
	baz=16						
NWF	Wu-fen Shan	1.19	12	eP	Pn	07 19 52.6	-0.3
	baz=21						
NWF				eS	Sb	07 20 07.2	-1.4
	baz=21						
TWS1	Kuangyinshan	1.20	356	eP	Pb	07 19 53.5	-0.1
	baz=9.0						
TWS1				eS	Sn	07 20 11.0	+2.5
	baz=9.0						
SLGT	Liugui	1.20	222	eP	Pb	07 19 55.3	+1.7
	baz=219						
SLGT				eS	Sn	07 20 09.9	+1.3
	baz=219						
WSF	Szhu	1.21	258	eP	Pb	07 19 53.8	0.0
	baz=255						
WSF				eS	Sn	07 20 09.6	+0.8
	baz=255						
LDUT	Ludao	1.22	182	eP	Pn	07 19 51.0	-2.1
	baz=179						
YM01	YM01	1.24	2	eP	Pn	07 19 53.0	-0.6
	baz=5.0						
YM01				eS	Sb	07 20 09.0	-1.0
	baz=5.0						
ICHU	Yijhu	1.25	245	eP	Pn	07 19 53.9	+0.3
	baz=240						
NTST	Danshui	1.26	357	eP	Pn	07 19 53.7	-0.1
	baz=12						
NTST				eS	Sb	07 20 12.9	+2.4
	baz=12						
ANP	Anpu	1.28	0	eP	Pb	07 19 55.0	0.0
	baz=22						
CHN8	Yiju	1.31	246	eP	Pn	07 19 55.0	+0.5
	baz=241						
CHN8				eS	Sb	07 20 12.8	+0.8
	baz=241						
CHN3	Shinhua	1.33	232	eP	Pb	07 19 56.5	+0.6
	baz=228						
SSHA	Shanhua	1.36	236	eP	Pn	07 19 54.9	-0.2
	baz=231						
SSHA				eS	Sb	07 20 15.7	+2.5
	baz=231						
TWY	Chenhua	1.37	3	eP	Pb	07 19 56.5	0.0
	baz=7.0						
ECL	Taimali	1.39	202	eP	Pn	07 19 55.1	-0.5
	baz=187						
SSD	Sandimen	1.40	215	eP	Pb	07 19 56.6	-0.4
	baz=213						
SSD				eS	Sb	07 20 15.3	+0.7
	baz=213						
JYNG	Yonagunijimaku	1.42	67	P	Pn	07 19 55.1	-0.8
JYNG				eS	Sn	07 20 13.4	-0.5
TSMG	Majia	1.43	214	eP	Pb	07 19 57.7	+0.2
	baz=220						
TWM1	Shoushan	1.47	223	eP	Pb	07 19 59.8	+1.7
	baz=221						
YOJ	Yonaguni jima	1.48	67	eP	Pn	07 19 56.7	0.0
	baz=68						
YOJ	Yonaguni jima	1.48	67	P	Pn	07 19 56.7	0.0
YOJ				eS	Sn	07 20 15.7	+0.3
SGLT	Jiouru	1.50	219	eP	Pb	07 20 00.0	+1.4
	baz=216						
MASBT	Mashibuluo	1.51	212	eP	Pn	07 19 56.9	-0.4
	baz=211						
EAST	Anshuo	1.63	202	eP	Pb	07 19 60.0	-0.9
	baz=189						
SSPT	Xinbi	1.65	212	eP	Pb	07 20 01.7	+0.4
	baz=211						
SCZT	Fangliau	1.73	209	eP	Pb	07 20 01.6	-1.0
	baz=207						
SCZT				eS	Sb	07 20 22.9	-0.9
	baz=207						
PCYT	Pengchaiyu	1.80	16	eP	Pn	07 20 02.3	+1.1
	baz=19						
WDGT	Dungji	1.81	250	eP	Pn	07 20 01.0	-0.3
	baz=244						
WDGT				eS	Sn	07 20 24.3	+0.6
	baz=244						
PHUB	P'eng-hu	1.82	258	eP	Pn	07 20 01.1	-0.3
	baz=253						
PHUB				eS	Sn	07 20 24.0	+0.2
	baz=253						
PNG	Penghu	1.82	260	eP	Pn	07 20 01.0	-0.5
	baz=255						
PNG				eS	Sn	07 20 24.3	+0.4
	baz=255						
LAY	Lan-yu	1.85	179	eP	Pn	07 19 60.0	-1.9
	baz=167						
WLCH	Liuqiu	1.86	214	eP	Pb	07 20 05.1	+0.3
	baz=227						
VCHM	Qimei	2.03	251	eP	Pn	07 20 04.5	+0.1
	baz=244						
TWK1	Hengchun	2.05	199	eP	Pn	07 20 05.6	+0.9
	baz=189						
TWKBT	Hengchun	2.05	198	eP	Pb	07 20 06.7	-1.5
	baz=189						
IRIF	Iriomote-Funau	2.07	77	P	Pn	07 20 05.2	+0.3
IRIF				eS	Sn	07 20 30.8	+0.8
HATJ	Hateruma jima	2.10	85	P	Pn	07 20 05.4	+0.1
HATJ				S	Sn	07 20 29.9	-0.9
JKRS	Kuro-shima	2.31	81	P	Pn	07 20 08.8	+0.7
JKRS				eS	Sn	07 20 37.0	+1.2
JIJ	Ishigaki jima	2.45	79	P	Pn	07 20 10.0	-0.1
JIJ				S	Sn	07 20 38.5	-0.8
PTMZ	Houxiangcun	2.46	298	eP	Pn	07 20 08.7	-1.6
	baz=299						
JISG	Ishigakijimahi	2.64	74	P	Pn	07 20 12.6	-0.2
JISG				S	Sn	07 20 43.1	-1.1
MATB	Ma-tsu	2.66	328	eP	Pn	07 20 11.0	-2.0
	baz=334						
KNM	Kinmen	2.86	281	eP	Pn	07 20 16.6	+0.8
	baz=275						
KNMB	Chin-men Tao	2.91	282	eP	Pn	07 20 15.4	-1.0
	baz=277						
JTJ	Tarama	3.00	75	P	Pn	07 20 18.1	+0.4
JTJ				eS	Sn	07 20 52.9	-0.1
LYJJ	Jianjiangzhen	3.08	329	eP	Pn	07 20 17.3	-1.5
	baz=337						
AXDP	Jialang	3.38	288	eP	Pn	07 20 21.8	-1.1
	baz=284						
ZPLA	Ao Xicun	3.44	271	eP	Pn	07 20 22.6	-1.2
	baz=263						
KSRS	Korea Array	14.59	21	Pn	Pn	07 22 58.2	+1.7
	baz=206,slow=15,SNR=1.8						
CMAR	Chiang Mai Arr	21.72	260	P	P	07 24 24.8	+3.5
	1.1nm,0.3s,baz=67,slow=7.8,SNR=6.6						
CMAR				LR	LR	07 32 45.1	
	comp=Z,28nm,18.2s,baz=220,slow=36						
SONM	Songino Array	26.75	337	P	P	07 25 10.6	+1.1
	0.9nm,0.8s,baz=146,slow=10,SNR=2.7						
MKAR	Makanchi Array	38.75	316	P	P	07 26 55.1	+0.9
	1.7nm,0.7s,baz=108,slow=10,SNR=14						
ZALV	Zalesovo Beam	40.65	327	P	P	07 27 09.2	-0.6
	1.6nm,0.6s,baz=112,slow=8.9,SNR=7.1						
ZALV				LR	LR	07 46 33.3	
	comp=Z,70nm,18.2s,baz=43,slow=40						
H11N1	WAKE ISLAND Hy	42.20	87	T	T	08 12 25.4	
	baz=283,slow=74,SNR=9.8						
H11N2	WAKE ISLAND Hy	42.20	87	T	T	08 12 40.0	
	baz=283,slow=74,SNR=9.3						
H11N3	WAKE ISLAND Hy	42.22	87	T	T	08 12 35.0	
	baz=283,slow=74,SNR=11						
H11S3	WAKE ISLAND Hy	42.33	88	T	T	08 12 33.6	
	baz=284,slow=74,SNR=28						
H11S1	WAKE ISLAND Hy	42.33	88	T	T	08 12 50.9	
	baz=284,slow=74,SNR=14						
H11S2	WAKE ISLAND Hy	42.34	88	T	T	08 12 52.1	
	baz=284,slow=74,SNR=13						
KURBB	Kurchatov Arra	42.52	320	P	P	07 27 25.2	+0.1
	0.6nm,0.4s,baz=110,slow=9.6,SNR=3.4						
WRA	Warramunga Arr	45.33	163	P	P	07 27 45.5	-2.6
	0.2nm,0.4s,baz=345,slow=8.7,SNR=7.2						
ASAR	Alice Springs	48.79	165	P	P	07 28 13.8	-1.1
	0.3nm,0.3s,baz=340,slow=6.6,SNR=6.6						
YKA	Yellowknife Ar	83.11	23	P	P	07 31 53.9	-1.3
	0.4nm,0.7s,baz=309,slow=5.0,SNR=5.3						

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*IDC **14** 07:28:16.4±1.4, 13°.72S×175°.35W, h0^{km}, mb4.0/3, mb1 4.3/4, mb1mx3.8/48, mbtmp4.1/4, ML4.4/1, Error ellipse: s-maj=63.3km s-min=26.3km az=162.0*

*NEIC **14** 07:28:30.4±1.2, 15°.0S±0°.1×174°.0W±0°.2, h178^{km}±11^{km}, mb4.1/8, Error ellipse: s-maj=22.2km s-min=16.4km az=86.0*

ISC 14 07:28:28.5±0.9**, 15°.14S**±0°.09×**174°.24W**±0°.09**, h150**^{km}**, n14,** σ**1^s.01**/16**, mb4.2**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.68	63	Pn	Pn	07 29 12.2	+0.3
	35nm,0.3s,baz=273,slow=18,SNR=34						
AFI				Sn	Sn	07 29 45.9	+0.6
	22nm,0.3s,baz=89,slow=19,SNR=2.1						
NIUE	Niue	5.69	134	Pn	Pn	07 29 52.5	+1.5
NIUE				Sn	Sn	07 30 53.5	-2.0
QRZ	Quartz Range	28.07	202	P	P	07 34 06.4	+0.5
THZ	Tophouse	28.77	200	P	P	07 34 12.0	-0.1
BBOO	Buckleboo	48.25	239	P	P	07 36 54.5	+0.1
BBOO				IAmb	IAmb	07 36 55.1	
	comp=Z,4.6nm,0.8s						
WR0	Warramunga Arr	48.93	257	P	P	07 37 00.1	+0.3
WB0	Warramunga Arr	49.08	257	P	P	07 37 00.9	-0.1
WB0				IAmb	IAmb	07 37 18.5	
	comp=Z,6.6nm,1.4s						
WRAB	Tennant Creek	49.11	257	P	P	07 37 00.1	-1.0
WRAB				IAmb	IAmb	07 37 15.9	
	comp=Z,8.0nm,1.5s						
WRA	Warramunga Arr	49.12	257	P	P	07 37 00.9	-0.4
	comp=Z,0.6nm,0.6s,baz=91,slow=6.1,SNR=15						
WRA	Warramunga Arr	49.12	257	P	P	07 37 00.4	-0.8
AS31	Alice Springs	49.42	252	P	P	07 37 04.1	+0.5
AS31				IAmb	IAmb	07 37 05.0	
	comp=Z,2.6nm,0.6s						
ASAR	Alice Springs	49.42	252	P	P	07 37 04.0	+0.4
	comp=Z,8.2nm,0.6s,baz=86,slow=8.0,SNR=193						
ILAR	Eielson Array	82.35	11	P	P	07 40 33.6	+0.6
	comp=Z,0.8nm,1.1s,baz=221,slow=6.3,SNR=5.3						
ILAR	Eielson Array	82.35	11	P	P	07 40 31.2	-1.9

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*NNC **14** 07:30:55.4±2.6, 54°.44N×86°.44E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=29.5km s-min=12.9km az=166.0, Suspected Mining explosion.*

*IDC **14** 07:31:01.7±2.4, 54°.26N×86°.11E, h0^{km}, mb1 3.2/2, mb1mx3.0/57, mbtmp3.2/2, ML3.0/2, Error ellipse: s-maj=18.5km s-min=11.5km az=54.0*

ISC 14 07:30:51.1±2.2**, 53°.00N**±0°.05×**86°.1E**±0°.2**, h0**^{km}**, n9,** σ**1^s.53**/10**, 8C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.21	322	i		07 36 00.0	
	baz=67,slow=350,SNR=14						
ZAA0	Zalesovo Array	1.21	322	⇓P	Pb	07 31 15.2	+0.2
	0.3nm,0.3s						
ZAA0				⇑S	Sg	07 31 30.7	+0.7
	2.5nm,0.3s						
ZALV	Zalesovo Beam	1.21	322	Pg	Pn	07 31 15.7	+0.4
	2.3nm,0.3s,baz=64,slow=17,SNR=21						
ZALV				Lg	Lg	07 31 29.2	
	9.3nm,0.3s,baz=70,slow=28,SNR=13						
KURK	Kurchatov	5.15	247	⇑Pn	Pg	07 32 28.7	-1.1
	0.9nm,0.5s						
KURK				⇑Lg	Lg	07 34 06.3	
	1.7nm,0.8s						
KURBB	Kurchatov Arra	5.25	246	Pn	Pg	07 32 31.7	+0.1
	0.2nm,0.3s,baz=52,slow=13,SNR=9.9						
KURBB				Lg	Lg	07 34 10.6	
	0.1nm,0.3s,baz=32,slow=18,SNR=2.4						
KURBB	Kurchatov Arra	5.25	246	⇓Pn	Pg	07 32 29.2	-2.4
	0.9nm,0.3s						
KURBB				⇑Lg	Lg	07 34 10.2	
	2.2nm,0.8s						
MK31	Makanchi Array	6.67	203	⇑Pn	Pg	07 32 57.6	-1.3
	0.2nm,0.3s,baz=24,slow=13,SNR=9.7						
MK31				⇓Sn	Sg	07 34 25.8	+0.6
	0.3nm,0.5s						
MK31				⇑Lg	Lg	07 35 11.0	
	0.9nm,0.7s,baz=21,slow=30						
MKAR	Makanchi Array	6.67	203	Pn	Pg	07 32 57.8	-1.1
	0.4nm,0.3s,baz=22,slow=12,SNR=9.2						
MAKZ	Makanchi	6.74	205	⇑Pn	Pb	07 32 54.6	+5.6
	0.7nm,0.6s						
MAKZ				⇓Sn	Sg	07 34 29.7	+2.3
	1.9nm,1.0s						
MAKZ				⇑Lg	Lg	07 35 14.0	
	3.3nm,1.4s						

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*IDC **14** 07:33:45.2±0.8, 55°.59S×25°.92W, h0^{km}, mb4.3/8, mb1 4.3/8, mb1mx4.0/26, mbtmp4.3/8, MS3.9/3, Ms1 3.9/3, ms1mx3.5/18, Error ellipse: s-maj=29.6km s-min=20.2km az=76.0*

*NEIC **14** 07:33:48.9±1.6, 55°.7S±0°.2×26°.4W±0°.3, h23^{km}±8^{km}, mb4.5/18, Error ellipse: s-maj=26.8km s-min=14.9km az=224.0*

ISC 14 07:33:50.5±0.8**, 55°.6S**±0°.1×**26°.4W**±0°.1**, h38**^{km}**, n32,** σ**0^s.85**/28**, mb4.5**/12**, MS3.9**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.95	279	Pn	Pn	07 35 16.2	+0.2
HOPE				Sn	Sn	07 36 21.0	-1.7
PMSA	Palmer Station	20.50	228	P	Pn	07 38 28.9	+1.7
	15nm,0.7s,baz=66,slow=6.8,SNR=14						
PMSA	Palmer Station	20.50	228	P	Pn	07 38 26.4	-0.9
PMSA				IAmb	IAmb	07 38 30.1	
	comp=Z,16nm,0.8s						
SMAI	San Martin Ant	22.37	220	P	P	07 38 46.0	+1.1
SMAI				IAmb	IAmb	07 38 47.7	
	comp=Z,24nm,1.5s						
TRQA	Tornquist	29.56	291	P	P	07 39 52.1	+0.6
TRQA				IAmb	IAmb	07 40 07.1	
	comp=Z,6.8nm,0.9s						
QSPA	South Pole Qui	34.63	180	P	P	07 40 36.0	+0.3
	comp=Z,4.7nm,0.7s,baz=223,slow=3.7,SNR=6.5						
QSPA	South Pole Qui	34.63	180	P	P	07 40 36.0	+0.3
QSPA				IAmb	IAmb	07 40 49.5	
	comp=Z,5.6nm,0.8s						
MT09	Talagante	37.59	287	P	P	07 41 00.5	-0.9
MT02	Curacav	38.07	287	P	P	07 41 05.0	-0.2
ZON	Zonda	38.07	291	P	P	07 41 05.4	0.0
ZON				IAmb	IAmb	07 41 05.9	
	comp=Z,6.0nm,0.7s						
CO03	El Pedregal	39.69	290	P	P	07 41 19.0	0.0
MAW	Mawson	40.24	144	P	P	07 41 21.4	-1.4
	comp=Z,0.8nm,0.3s,baz=298,slow=11,SNR=2.6						
AC02	Maricunga	42.08	295	P	P	07 41 39.8	+0.7
LVC	Limon Verde	45.47	299	P	P	07 42 07.3	+1.1
	comp=Z,4.7nm,0.6s,baz=168,slow=10,SNR=3.2						
LVC	Limon Verde	45.47	299	P	P	07 42 06.5	+0.4
LVC				IAmb	IAmb	07 42 12.3	
	comp=Z,5.0nm,0.7s						
VNDA	Vanda	47.02	182	P	P	07 42 17.6	+0.3
	comp=Z,1.9nm,0.7s,baz=178,slow=4.9,SNR=12						
VNDA	Vanda	47.02	182	P	P	07 42 17.8	+0.5
PB01	IPOC Station P	47.07	299	P	P	07 42 18.6	+0.2
PTLB	Pontes e Lacer	47.30	315	P	P	07 42 20.5	+0.4
PTLB				IAmb	IAmb	07 42 37.9	
	comp=Z,6.2nm,1.2s						
SIV	San Ignacio	47.60	312	LR	LR	08 01 50.7	
	comp=Z,94nm,18.7s,baz=84,slow=35						
LPAZ	La Paz	50.49	304	P	P	07 42 46.6	+1.3
	comp=Z,4.1nm,0.7s,baz=174,slow=4.9,SNR=21						
LPAZ	La Paz	50.49	304	P	P	07 42 46.3	+0.9
LPAZ				IAmb	IAmb	07 42 47.5	
	comp=Z,5.5nm,0.8s						
SAML	Samuel	54.81	314	P	P	07 43 16.4	-0.2
ETMB	Extrema	55.32	310	P	P	07 43 20.1	-0.1

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ETMB                                 IAmb   IAmb   07 43 21.5
       comp=Z,5.6nm,1.0s
DBIC   Dimbokro           64.60  24  LR     LR     08 06 39.4
       comp=Z,75nm,18.4s,baz=198,slow=31
OTAV   Otavalo            69.78 303  P      P      07 44 57.6 +0.3
OTAV                                 IAmb   IAmb   07 44 60.0
       comp=Z,6.6nm,1.5s
ROSC   El Rosal           71.94 309  LR     LR     08 19 18.4
       comp=Z,122nm,19.3s,baz=175,slow=38
TORD   Torodi Ar. Bea     72.47  29  P      P      07 45 13.1 +0.1
       comp=Z,1.4nm,0.6s,baz=199,slow=6.2,SNR=12
ASAR   Alice Springs      99.26 162  P      Pdif   07 47 27.4 -1.0
       comp=Z,0.2nm,0.7s,baz=205,slow=3.7,SNR=2.3
YKA    Yellowknife Ar    136.14 318  PKP    PKPdf  07 53 06.7 +0.6
       comp=Z,0.5nm,0.7s,baz=126,slow=1.1,SNR=3.5
ILAR   Eielson Array     150.15 312  PKPbc  PKiKP  07 53 36.5 +0.1
       comp=Z,3.0nm,0.9s,baz=145,slow=2.0,SNR=21
ILAR   Eielson Array     150.15 312  PKPdf  PKPbc  07 53 33.6 -2.0
```

IDC 14 07:34:39.8±1.4, 60°.22S×23°.80W, h0km, mb4.2/2, mb1 4.4/3, mb1mx3.9/26, mbtmp4.4/3, ML4.9/1, MS3.7/4, Ms1 3.7/4, ms1mx3.4/22, Error ellipse: s-maj=57.6km s-min=40.3km az=48.0

ISC 14 07:34:40.9±1.0**, 60°.3S**±0°.2×**23°.9W**±0°.3**, h10km, n21,** σ**0s.64**/11**, MS3.7**/3**, South Sandwich Islands region**

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Code   Station Name         Δ°   AZ°   Phase ID         Time      Res
                                     Op     ISC     h  m  s     ISC
VNA1   Neumayer--Stat     12.20 155  P      Pn     07 37 35.0 +0.5
VNA3   Neumayer Olymp     12.40 158  P      Pn     07 37 37.0 -0.2
VNA2   Neumayer--Watz     12.60 155  P      Pn     07 37 39.9  0.0
       baz=322,slow=14
VNA2   Neumayer--Watz     12.60 155  S      Sn     07 39 48.3  -12
       baz=320,slow=24
SNAA   Sanae              14.16 152  P      Pn     07 38 01.3 +0.1
SNAA   Sanae              14.16 152  Pn     Pn     07 38 01.1 -0.1
       5.4nm,0.3s,baz=319,slow=15,SNR=288
SNAA                                 Sn     Sn     07 40 23.3  -15
       0.1nm,0.3s,baz=41,slow=22,SNR=2.8
SNAA   Sanae              14.16 152  P      Pn     07 38 00.7 -0.5
PMSA   Palmer Station     18.81 239  LR     LR     07 44 04.8
       comp=Z,214nm,19.6s,baz=250,slow=30
PLCA   Paso Flores        34.57 283  LR     LR     07 54 13.4
       comp=Z,122nm,18.6s,baz=3.0,slow=34
H10S2  ASCENSION HYDR51.69  12       T      T      08 39 39.1
       baz=184
H10S3  ASCENSION HYDR51.69  12       T      T      08 39 36.0
       baz=36
H10N1  ASCENSION HYDR52.81  12       T      T      08 41 04.4
       baz=184
H10N3  ASCENSION HYDR52.81  12       T      T      08 40 52.4
       baz=184,SNR=3.8
H10N2  ASCENSION HYDR52.82  12       T      T      08 40 54.8
       baz=184
LPAZ   La Paz             54.24 304  P      P      07 44 07.5  0.0
       0.6nm,0.4s,baz=153,slow=4.5,SNR=1.6
RPN    Rapa Nui           64.63 260  LR     LR     08 07 36.8
       comp=Z,33nm,21.5s,baz=100,slow=31
TORD   Torodi Ar. Bea     76.01  26  P      P      07 46 28.0  0.0
       4.5nm,0.7s,baz=197,slow=6.3,SNR=7.7
WRA    Warramunga Arr     98.12 159  LR     LR     08 34 06.4
       comp=Z,36nm,18.1s,baz=70,slow=36
YKA    Yellowknife Ar    140.43 313  PKP    PKiKP  07 54 10.0 -1.2
       0.6nm,0.8s,baz=131,slow=2.5,SNR=2.3
SONM   Songino Array     149.06  91  PKPbc  PKPbc  07 54 28.4 +0.1
       1.0nm,0.7s,baz=195,slow=4.2,SNR=4.0
ILAR   Eielson Array     154.12 305  PKPbc  PKiKP  07 54 40.4 +1.1
       0.7nm,0.8s,baz=132,slow=4.6,SNR=1.2
```

IDC 14 07:34:41.4±1.6, 4°.15S×129°.58E, h0km, mb3.6/1, mb1 4.0/5, mb1mx3.6/42, mbtmp3.8/5, ML3.4/4, Error ellipse: s-maj=51.1km s-min=22.8km az=93.0

DJA 14 07:34:44.2±0.8, 4°S±8°×13°0E±°, h10km, M3.4/6, MLv3.4/6

ISC 14 07:34:45.7±1.0**, 4°.14S**±0°.08×**129°.48E**±0°.07**, h36km, n8,** σ**1s.41**/10**, Banda Sea**

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Code   Station Name         Δ°   AZ°   Phase ID         Time      Res
                                     Op     ISC     h  m  s     ISC
MSAI   Masohi              0.97 325  P      Pn     07 35 01.5 -1.3
MSAI                                 S      Sn     07 35 15.3  0.0
AAI    Ambon               1.36 289  P      Pn     07 35 08.4 +0.2
FAKI   Fak Fak             3.02  66  P      Pn     07 35 31.6 +0.6
SIJI   Sorong              3.71  29  Pn     Pn     07 35 39.4 -1.1
       5.5nm,0.3s,baz=189,slow=14,SNR=5.5
SIJI                                 Sn     Sn     07 36 23.2 +0.3
       3.2nm,0.3s,baz=234,slow=23,SNR=2.0
FITZ   Fitzroy Crossi     14.37 195  Pn     Pn     07 38 06.5 -0.2
       0.1nm,0.3s,baz=19,slow=16,SNR=1.7
WRA    Warramunga Arr     16.40 164  Pn     Pn     07 38 30.7 -2.6
       0.1nm,0.3s,baz=344,slow=13,SNR=10
ASAR   Alice Springs      19.88 168  P      Pn     07 39 14.9 -0.9
       0.2nm,0.3s,baz=348,slow=11,SNR=34
MKAR   Makanchi Array     65.57 326  P      P      07 45 27.6 +1.7
       0.5nm,0.7s,baz=112,slow=6.4,SNR=3.9
```

VAO 14 07:57:53.4±0.4, 21°.88S×67°.96W, h228km±6km, mb3.8

IDC 14 07:57:53.8±0.8, 21°.70S×67°.43W, h173km±10km, mb3.8/5, mb1 3.9/9, mb1mx3.6/28, mbtmp4.3/9, MS3.0/1, Ms1 3.0/1, ms1mx2.6/21, Error ellipse: s-maj=22.9km s-min=14.7km az=135.0

NEIC 14 07:57:53.9±1.8, 21°.85S±0°.06×67°.52W±0°.09, h192km±8km, mb4.2/10, Error ellipse: s-maj=12.2km s-min=8.7km az=106.0

GUC 14 07:57:55.5±0.7, 21°.86S×67°.79W, h210km±7km, ML4.6

ISC 14 07:57:53.8±0.6**, 21°.81S**±0°.04×**67°.53W**±0°.06**, h187km**±7km**, n106,** σ**1s.46**/128**, mb4.1**/9**, 13C-1D, Chile-Bolivia border region**

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Code   Station Name         Δ°   AZ°   Phase ID         Time      Res
                                     Op     ISC     h  m  s     ISC
LVC    Limon Verde         1.51 238  P      Pn     07 58 27.8 +0.9
       34nm,0.3s,baz=79,slow=5.8,SNR=639
LVC                                  S      Sn     07 58 52.5  0.0
       50nm,0.3s,baz=251,slow=20,SNR=55
LVC    Limon Verde         1.51 238  eP     Pn     07 58 27.9 +1.0
PB09   IPOC Station P      1.59 270 ⇑iP     Pn     07 58 29.0 +1.5
PB09                                 i S    Sn     07 58 54.2 +0.7
PB09   IPOC Station P      1.59 270         Pn     07 58 28.8 +1.3
PB09                                 Sn     Sn     07 58 53.8 +0.2
PB01   IPOC Station P      1.98 292 ⇑iP     Pn     07 58 32.5 +1.2
PB01                                 i S    Sn     07 59 00.6 +0.2
PB01                                 IAML          07 59 01.9
       comp=N,5μm,0.3s
PB01   IPOC Station P      1.98 292         Pn     07 58 32.5 +1.2
PB01                                 Sn     Sn     07 59 00.6 +0.2
PB06   IPOC Station P      2.10 244 ⇑iP     Pn     07 58 33.2 +0.6
PB06                                 i S    Sn     07 59 02.2 -0.5
PB06                                 IAML          07 59 03.8
       comp=E,2μm,0.4s
PB06   IPOC Station P      2.10 244         Pn     07 58 33.1 +0.6
PB07   IPOC Station P      2.20 272 ⇑iP     Pn     07 58 34.5 +0.9
PB07                                 i S    Sn     07 59 04.2 -0.5
PB07                                 IAML          07 59 05.4
       comp=N,2μm,0.4s
PB07   IPOC Station P      2.20 272         Pn     07 58 33.4 -0.3
PB08   IPOC Station P      2.25 317 ⇓iP     Pn     07 58 36.8 +2.3
PB08                                 i S    Sn     07 59 07.8 +1.6
PB08                                 IAML          07 59 11.1
       comp=N,1μm,0.7s
PB08   IPOC Station P      2.25 317         Pn     07 58 35.9 +1.3
PB15   IPOC Station P      2.27 232  i P    Pn     07 58 35.4 +0.8
PB15                                 i S    Sn     07 59 05.7 -0.7
PB15   IPOC Station P      2.27 232         Pn     07 58 34.6  0.0
PB04   IPOC Station P      2.49 257 ⇑iP     Pn     07 58 37.6 +0.7
PB04                                 i S    Sn     07 59 08.5 -2.0
PB04                                 IAML          07 59 12.9
       comp=N,1μm,0.2s
PB04   IPOC Station P      2.49 257  Pn     Pn     07 58 37.3 +0.3
PATCX  Punta Patache       2.64 291 ⇑iP     Pn     07 58 39.4 +0.8
PATCX                                i S    Sn     07 59 12.4 -1.1
PATCX  Punta Patache       2.64 291  Pn     Pn     07 58 39.3 +0.6
HMBC   Humberstone         2.68 304 ⇑iP     Pn     07 58 39.8 +0.6
HMBC                                 i S    Sn     07 59 13.9 -0.6
HMBC                                 IAML          07 59 15.5
       comp=N,2μm,0.2s
PB05   IPOC Station P      2.69 247 ⇑iP     Pn     07 58 39.7 +0.5
PB05                                 i S    Sn     07 59 12.7 -1.9
PB05                                 IAML          07 59 13.8
       comp=N,821nm,0.4s
TA01   Diego Aracena       2.77 296 ⇑iP     Pn     07 58 40.5 +0.5
TA01                                 i S    Sn     07 59 15.1 -1.0
TA01                                 IAML          07 59 17.5
       comp=N,1μm,0.6s
TA01   Diego Aracena       2.77 296  Pn     Pn     07 58 40.6 +0.5
PB11   IPOC Station P      2.85 315 ⇑iP     Pn     07 58 42.0 +0.8
PB11                                 i S    Sn     07 59 17.8 -0.4
PB11                                 IAML          07 59 20.5
       comp=E,2μm,0.1s
PB11   IPOC Station P      2.85 315  Pn     Pn     07 58 41.5 +0.2
TA02   Huaiquique          2.88 302  eP     Pn     07 58 41.7 +0.4
TA02                                 i S    Sn     07 59 17.4 -1.0
TA02                                 IAML          07 59 19.4
       comp=N,2μm,0.1s
TA02   Huaiquique          2.88 302         Pn     07 58 41.8 +0.4
PB10   IPOC Station P      3.27 238 ⇑iP     Pn     07 58 46.0 -0.1
PB10                                 i S    Sn     07 59 24.4 -2.6
PB10                                 IAML          07 59 28.3
       comp=E,344nm,0.3s
PB10   IPOC Station P      3.27 238  Pn     Pn     07 58 46.1  0.0
PB14   IPOC Station P      3.86 223  eP     Pn     07 58 53.6 -0.1
PB14                                 i S    Sn     07 59 36.8 -3.7
PB14   IPOC Station P      3.86 223  Pn     Pn     07 58 53.6 -0.1
PB16   IPOC Station P      3.93 331 ⇑iP     Pn     07 58 56.7 +1.9
PB16                                 i S    Sn     07 59 43.5 +0.9
PB16   IPOC Station P      3.93 331         Pn     07 58 56.3 +1.5
PB12   IPOC Station P      4.13 320 ⇑iP     Pn     07 58 56.2 -0.7
PB12                                 i S    Sn     07 59 43.3 -3.0
PB12   IPOC Station P      4.13 320  Pn     Pn     07 58 56.4 -0.5
AC02   Maricunga           5.21 196  Pn     Pn     07 59 10.8 -0.3
LPAZ   La Paz              5.52 354  P      Pn     07 59 17.8 +2.4
       comp=E,2.9nm,0.3s,baz=148,slow=5.7,SNR=78
LPAZ                                 S      Sn     08 00 19.6 +0.2
       comp=E,1.0nm,0.3s,baz=331,slow=17,SNR=4.8
GO03   Copiap              6.26 203  Pn     Pn     07 59 22.1 -2.3
SIV    San Ignacio         8.41  48  P      Pn     07 59 50.7 -1.9
       comp=E,20nm,0.3s,baz=231,slow=8.4,SNR=385
SIV                                  S      Sn     08 01 20.5 -6.5
       comp=E,7.8nm,0.3s,baz=309,slow=23,SNR=12
CO03   El Pedregal         9.43 197  Pn     Pn     08 00 02.5 -3.3
PTLB   Pontes e Lacer     10.16  53  Pn     Pn     08 00 14.2 -1.2
CPUP   Villa Florida      10.34 118  P      Pn     08 00 18.6 +0.8
       comp=E,0.9nm,0.3s,baz=299,slow=11,SNR=11
CPUP   Villa Florida      10.34 118         Pn     08 00 16.7 -1.0
VA03   San Esteban        11.24 193         Pn     08 00 29.2 -0.1
VILB   Vilhena            11.24  40  eP     Pn     08 00 29.7 +0.3
VILB   Vilhena            11.24  40  Pn     Pn     08 00 29.4 -0.1
MT02   Curacav            11.85 195         Pn     08 00 35.8 -1.3
ETMB   Extrema            11.99   6  eP     Pn     08 00 38.8 -0.3
ETMB   Extrema            11.99   6  P      Pn     08 00 38.1 -0.9
MT09   Talagante          12.31 194  P      Pn     08 00 42.4 -0.6
MT01   Popeta             12.45 195  P      Pn     08 00 44.2 -0.6
ITQB   Itaqui             12.56 131  eP     P      08 00 48.2 -2.2
BO01   Tunca              12.92 193         Pn     08 00 50.8 +0.1
NNA    Nana               13.22 316  P      P      08 00 57.5 -0.4
       comp=E,0.8nm,0.3s,baz=154,slow=18,SNR=1.3
NNA                                  LR     LR     08 06 05.7
       comp=E,66nm,21.5s,baz=128,slow=37
BO02   Sierra Bellavi     13.25 192  P      Pn     08 00 54.7 -0.2
PDRB   Porto dos Gac      14.47  47  eP     P      08 01 13.1 +1.3
PTGB   Pitanga            14.50 104  eP     P      08 01 14.2 +2.1
CZSB   Cruzeiro do Su     14.86 340  eP     Pn     08 01 12.0 -3.0
ITAB   Concordia          15.01 114  eP     P      08 01 17.3 -0.3
PCMB   Pacaembu           15.12  92  eP     P      08 01 21.2 +2.3
CPSB   Cacapava Do Su     15.27 127  eP     P      08 01 20.7 +0.2
CLDB   Colider            15.64  48  eP     P      08 01 26.4 +1.6
PLTB   Pedras Altas       15.88 132  eP     P      08 01 27.6 +0.3
ARAG   Araguaiana, MT     16.07  70  eP     Pn     08 01 31.0 +1.4
ITRB   Iturama            16.19  86  eP     Pn     08 01 31.4 +0.2
TRQA   Tornquist          16.88 165  eP     P      08 01 33.6 -4.7
TBTG   Tabatinga, AM      17.67 352  eP     P      08 01 44.1 -2.9
TBTG   Tabatinga, AM      17.67 352  P      P      08 01 44.3 -2.7
TBTG                                 IAmb   IAmb   08 01 53.5
       comp=Z,12nm,0.8s
BB19B  Bebedouro          17.70  91  eP     Pn     08 01 48.6 -0.6
SNDB   Serra Nova Dou     18.34  60  eP     P      08 01 54.7 +0.4
IPMB   Ipameri, GO        18.55  82  eP     P      08 01 57.5 +0.8
PET01  Itanhaem-SP        18.80 101  eP     P      08 01 59.8 +0.6
NPGB   Novo Progresso     18.80  40  eP     P      08 01 59.0 -0.3
PLCA   Paso Flores        19.04 187  P      P      08 02 03.0 +1.2
       comp=Z,0.6nm,0.3s,baz=7.5,slow=12,SNR=27
PLCA   Paso Flores        19.04 187  P      P      08 02 02.5 +0.7
PLCA                                 IAmb   IAmb   08 02 03.6
       comp=Z,7.9nm,0.8s
VAO    Valinhos           19.05  97  eP     P      08 02 02.5 +0.5
BDFB   Brasilia           19.46  75  P      P      08 02 06.5 -0.1
       comp=Z,0.7nm,0.3s,baz=244,slow=11,SNR=4.3
BDFB   Brasilia           19.46  75  P      P      08 02 05.2 -1.4
LL04   Puerto Octay       19.49 191  P      P      08 02 07.1 +0.7
PEXB   Peixe              20.75  65  eP     P      08 02 20.7 +0.5
ITTB   Itaituba           20.77  35  eP     P      08 02 20.0 -0.5
BSCB   Bom Sucesso        21.20  92  eP     P      08 02 26.2 +1.1
PTGA   Pitinga            22.21  20  P      P      08 02 34.2 -1.1
       comp=Z,1.4nm,0.2s,baz=144,slow=2.4,SNR=9.2
MC01   Montes Claros      22.82  81  eP     P      08 02 40.9 -0.1
JANB   Januaria           23.01  77  eP     P      08 02 42.8 +0.2
SMTB   Santa Maria do     23.10  59  eP     P      08 02 44.4 +1.1
SDBA   SAO DESIDERIO      23.53  70  eP     P      08 02 47.4 +0.1
MALB   Monte Alegre       23.67  35  eP     P      08 02 47.6 -0.8
COYC   Coyhaique          24.00 188  P      P      08 02 50.2 -0.9
COYC                                 IAmb   IAmb   08 02 58.2
       comp=Z,4.2nm,0.8s
FLOC   Florencia          24.57 340  P      P      08 02 55.4 -1.4
FLOC                                 IAmb   IAmb   08 03 00.2
       comp=Z,4.2nm,0.5s
GDU01  Guandu, BA         27.77  78  eP     P      08 03 25.2 -0.2
VNA3   Neumayer Olymp     59.37 161  P      P      08 07 38.0 +2.0
VNA2   Neumayer--Watz     59.93 161  P      P      08 07 42.0 +2.2
       baz=286,slow=7.4
SNAA   Sanae              61.57 161  P      P      08 07 52.9 +2.0
SNAA   Sanae              61.57 161  P      P      08 07 52.4 +1.5
SNAA                                 IAmb   IAmb   08 07 53.6
       comp=Z,2.0nm,0.6s
QSPA   South Pole Qui     68.38 180  P      P      08 08 34.6 -0.4
QSPA                                 IAmb   IAmb   08 08 38.0
       comp=Z,3.3nm,0.6s
TORD   Torodi Ar. Bea     76.25  70  P      P      08 09 23.3 +1.0
       comp=Z,3.3nm,0.4s,baz=256,slow=5.4,SNR=38
BOSA   Boshof             82.16 118  P      P      08 09 55.1 +0.8
       comp=Z,3.4nm,1.1s,baz=264,slow=3.1,SNR=3.8
BOSA   Boshof             82.16 118  P      P      08 09 53.1 -1.2
MAW    Mawson             83.66 163  P      P      08 10 03.2 +2.2
       comp=Z,1.8nm,0.7s,baz=240,slow=13,SNR=2.7
MAW    Mawson             83.66 163  P      P      08 10 01.9 +0.9
YKA    Yellowknife Ar     91.91 340  P      P      08 10 41.9 +1.5
       comp=Z,0.5nm,0.7s,baz=136,slow=4.2,SNR=5.1
ASAR   Alice Springs     130.22 206  PKP    PKiKP  08 16 44.2 +0.9
       comp=Z,0.6nm,0.5s,baz=140,slow=2.3,SNR=4.6
WRA    Warramunga Arr    133.32 209  PKP    PKiKP  08 16 50.7 +1.1
       comp=Z,0.7nm,0.5s,baz=159,slow=1.7,SNR=6.3
WRA    Warramunga Arr    133.32 209         PKiKP  08 16 50.3 +0.7
MKAR   Makanchi Array    145.11  37  PKP    PKPab  08 17 10.4 +1.3
       comp=Z,1.3nm,0.7s,baz=317,slow=4.3,SNR=9.9
MKAR   Makanchi Array    145.11  37         PKPab  08 17 10.1 +1.0
```

IDC 14 08:02:32.5±2.7, 30°.17S×177°.62W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/32, mbtmp3.9/3, Error ellipse: s-maj=55.8km s-min=21.2km az=100.0

NEIC 14 08:02:33.7±1.2, 30°.26S±0°.07×177°.6W±0°.2, h9km±10km, mb4.1/7, Error ellipse: s-maj=31.4km s-min=6.5km az=75.0

ISC 14 08:02:36.0±1.8**, 30°.28S**±0°.07×**177°.6W**±0°.3**, h35km, n20,** σ**1s.46**/23**, mb4.1**/7**, Kermadec Islands**

```
Code   Station Name         Δ°   AZ°   Phase ID         Time      Res
                                     Op     ISC     h  m  s     ISC
RAO    Raoul Island        1.05 346  Pn     Pn     08 02 53.5 -0.7
       260nm,0.3s,baz=121,slow=9.2,SNR=9.9
RAO                                  LR     LR     08 02 56.5
       comp=Z,107nm,18.7s,baz=82,slow=25
RAO                                  Sn     Sn     08 03 08.6 +0.9
       535nm,0.3s,baz=103,slow=24,SNR=12
RAO    Raoul Island        1.05 346  Pg     Pn     08 02 53.6 -0.7
RAO                                  Sg     Sn     08 03 07.7  0.0
URZ    Urewera             9.07 207  Pn     Pn     08 04 42.0 -2.4
       0.2nm,0.3s,baz=121,slow=22,SNR=1.7
URZ                                  Sn     Sn     08 06 23.9 -1.4
       1.8nm,0.3s,baz=221,slow=22,SNR=6.1
URZ    Urewera             9.07 207         Pn     08 04 43.3 -1.1
URZ                                         Sn     08 06 27.4 +2.1
MARNC  Mare, Loyalty      15.59 301  Pn     Pn     08 06 11.6 -1.5
STKA   Stephens Creek     34.82 257  P      P      08 09 27.1 +3.5
       1.3nm,0.4s,baz=98,slow=8.5,SNR=9.7
STKA   Stephens Creek     34.82 257  P      P      08 09 23.9 +0.3
STKA                                 IAmb   IAmb   08 09 29.2
       comp=Z,0.5nm,1.0s
RABL   Rabaul             38.55 306  P      P      08 09 54.1 -1.5
ASAR   Alice Springs      43.44 267  P      P      08 10 36.0 +0.3
       comp=Z,0.8nm,0.6s,baz=106,slow=7.4,SNR=15
ASAR                                 PcP    PcP    08 12 26.1 +2.4
       comp=Z,0.2nm,0.6s,baz=124,slow=4.7,SNR=1.9
ASAR   Alice Springs      43.44 267  P      P      08 10 35.7 -0.1
WR0    Warramunga Arr     44.24 272  P      P      08 10 43.1 +0.9
WR0                                  IAmb   IAmb   08 11 03.0
       comp=Z,4.2nm,1.4s
WB2    Warramunga Arr     44.41 272  P      P      08 10 44.5 +1.0
WB2                                  IAmb   IAmb   08 10 58.0
       comp=Z,2.7nm,0.5s
WRAB   Tennant Creek      44.41 272  P      P      08 10 44.4 +0.9
WRAB                                 IAmb   IAmb   08 10 58.0
       comp=Z,2.1nm,0.7s
WRA    Warramunga Arr     44.42 272  P      P      08 10 44.7 +1.1
       comp=Z,0.9nm,0.4s,baz=110,slow=8.0,SNR=33
WRA    Warramunga Arr     44.42 272  P      P      08 10 44.5 +0.9
WB0    Warramunga Arr     44.44 272  P      P      08 10 44.5 +0.7
WB0                                  IAmb   IAmb   08 10 50.9
       comp=Z,3.4nm,0.8s
VNA3   Neumayer Olymp     78.41 176  P      P      08 14 43.0  +10
VNA2   Neumayer--Watz     78.84 177  P      P      08 14 46.2  +11
       baz=191,slow=3.4
FINES  FINESS Array B    145.14 340  PKPbc  PKPdf  08 22 09.0  0.0
       comp=Z,2.6nm,0.8s,baz=72,slow=4.5,SNR=5.0
FINES  FINESS Array B    145.14 340         PKPdf  08 22 09.0  0.0
```

NNC 14 08:03:06.5±2.1**, 53°.69N×88°.15E, h0km, mb3.9, mpv3.5, 5C-6D, Error ellipse: s-maj=16.7km s-min=9.2km az=58.0, Suspected Mining explosion., Southwestern Siberia**

```
Code   Station Name         Δ°   AZ°   Phase ID         Time      Res
                                     Op     ISC     h  m  s     ISC
ZAA0   Zalesovo Array      1.99 279  Pn     Pn     08 03 40.6 -0.7
       9.5nm,0.6s
ZAA0                                 Sn     Sb     08 04 08.3 -0.6
       42nm,0.8s
KURK   Kurchatov           6.57 247 ⇑Pn     Pn     08 04 44.7 +0.4
       3.5nm,0.5s
KURK                                ⇑Sn     Sn     08 06 01.9 +2.0
       2.3nm,0.5s
KURK                                ⇑Lg     Lg     08 06 32.4
       21nm,0.9s
KURBB  Kurchatov Arra      6.67 246 ⇑Pn     Pn     08 04 45.8 +0.1
       6.8nm,0.4s
KURBB                               ⇓Sn     Sn     08 06 01.3 -0.9
       24nm,0.6s
KURBB                               ⇓Lg     Lg     08 06 40.0
       30nm,0.7s
MK31   Makanchi Array      7.86 211  Pn     Pn     08 05 03.5 +1.5
       1.0nm,0.6s,baz=30,slow=13,SNR=30
MK31                                ⇑Sn     Sn     08 06 34.2 +2.6
       0.8nm,0.4s,baz=31,slow=22,SNR=8.2
MK31                                ⇓Lg     Lg     08 07 18.7
       6.0nm,0.8s,baz=27,slow=39,SNR=4.4
MAKZ   Makanchi            7.95 212 ⇓Pn     Pn     08 05 04.4 +1.2
       1.7nm,0.8s
MAKZ                                ⇓Sn     Sn     08 06 32.8 -0.9
       4.2nm,0.9s
MAKZ                                ⇓Lg     Lg     08 07 16.9
       4.6nm,0.8s
```

NEIC 14 08:08:48.9±1.8, 5°.4S±0°.1×147°.2E±0°.2, h221km±12km, mb4.3/10, Error ellipse: s-maj=23.1km s-min=18.3km az=103.0

IDC 14 08:08:50.9±3.1, 5°.58S×147°.23E, h236km±29km, mb3.6/4, mb1 3.8/6, mb1mx3.3/33, mbtmp4.2/6, Error ellipse: s-maj=48.1km s-min=24.7km az=132.0

ISC 14 08:08:48.3±1.3**, 5°.3S**±0°.1×**147°.0E**±0°.1**, h200km, n33,** σ**1s.72**/36**, mb4.1**/6**, Eastern New Guinea region**

```
Code   Station Name         Δ°   AZ°   Phase ID         Time      Res
                                     Op     ISC     h  m  s     ISC
PMG    Port Moresby        4.04 178  P      Pn     08 09 52.7 +2.2
       7.5nm,0.3s,baz=349,slow=5.2,SNR=13
PMG                                  S      Sn     08 10 39.9 +0.3
       8.0nm,0.3s,baz=202,slow=18,SNR=7.2
PMG    Port Moresby        4.04 178         Pn     08 09 52.5 +1.9
PMG    Port Moresby        4.04 178  P      Pn     08 09 53.0 +2.4
PMG    Port Moresby        4.04 178  P      Pn     08 09 52.8 +2.2
COEN   Coen                9.35 203         Pn     08 11 01.3 +2.2
COEN   Coen                9.35 203  P      Pn     08 11 01.7 +2.5
FAKI   Fak Fak            14.90 279  Pn     P      08 12 14.5 +4.2
KDU    Kakadu             16.09 242  P      P      08 12 22.6 -0.7
QIS    Mount Isa          16.74 205  P      P      08 12 31.3 +0.8
MTN    Manton Dam         17.34 243  P      P      08 12 36.4 -0.7
MTN                                  IAmb   IAmb   08 12 38.4
       comp=Z,7.6nm,0.5s
WB0    Warramunga Arr     18.87 219  P      P      08 12 53.2 -0.4
WB0                                  IAmb   IAmb   08 12 57.5
       comp=Z,13nm,1.1s
WR0    Warramunga Arr     18.92 219  P      P      08 12 53.8 -0.4
WRAB   Tennant Creek      19.02 219  P      P      08 12 54.2 -1.1
WRAB   Tennant Creek      19.02 219  P      P      08 12 55.1 -0.2
WB2    Warramunga Arr     19.02 219  P      P      08 12 55.0 -0.4
WB2                                  IAmb   IAmb   08 12 59.2
       comp=Z,13nm,0.7s
WRA    Warramunga Arr     19.03 219  P      P      08 12 54.5 -1.0
       comp=Z,2.3nm,0.3s,baz=55,slow=10,SNR=77
WRA                                  S      S      08 16 16.2 -4.6
       comp=Z,0.1nm,0.3s,baz=31,slow=22,SNR=3.8
WRA    Warramunga Arr     19.03 219  P      P      08 12 54.1 -1.3
KNRA   Kununurra          20.64 239  P      P      08 13 12.6  0.0
KNRA                                 IAmb   IAmb   08 13 14.7
       comp=Z,13nm,0.8s
KNRA   Kununurra          20.64 239  P      P      08 13 13.1 +0.5
AS31   Alice Springs      22.16 213         P      08 13 27.7 -0.4
AS31                                 IAmb   IAmb   08 13 28.6
       comp=Z,3.8nm,0.6s
ASAR   Alice Springs      22.16 213  P      P      08 13 28.0 -0.2
       comp=Z,8.7nm,0.6s,baz=44,slow=7.6,SNR=130
ASAR                                 S      S      08 17 14.1 -3.4
       comp=Z,0.3nm,0.7s,baz=36,slow=17,SNR=3.0
ASAR   Alice Springs      22.16 213         P      08 13 28.0 -0.2
INKA   Innaminka          23.05 194  P      P      08 13 36.7 +0.6
FITZ   Fitzroy Crossi     24.41 237  P      P      08 13 47.6 -1.0
       comp=Z,5.6nm,0.3s,baz=31,slow=6.1,SNR=59
OOD    Oodnadatta         24.78 204  P      P      08 13 51.9  0.0
LCRK   Leigh Creek        26.30 197  P      P      08 14 05.3 -0.2
WRKA   Warakurna          26.56 221  P      P      08 14 07.1 -0.8
STKA   Stephens Creek     26.88 190  P      P      08 14 10.1 -0.6
       comp=Z,0.5nm,0.4s,baz=18,slow=13,SNR=1.7
MULG   Mulgathing         27.64 205  P      P      08 14 17.0 -0.5
FORT   Forrest            30.94 213  P      P      08 14 46.1 -0.5
MORW   Morawa             37.60 228  P      P      08 15 42.7 -1.2
MORW                                 IAmb   IAmb   08 15 43.0
       comp=Z,5.1nm,1.1s
ILAR   Eielson Array      84.88  23  P      P      08 20 59.0 -1.2
       comp=Z,0.5nm,0.7s,baz=256,slow=4.7,SNR=7.6
ILAR   Eielson Array      84.88  23  P      P      08 20 58.4 -1.9
```

IDC 14 08:23:03.1±1.1, 25°.59N×141°.00E, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.6/48, mbtmp4.1/4, Error ellipse: s-maj=80.2km s-min=24.6km az=95.0

NEIC 14 08:23:14.6±0.8, 25°.7N±0°.1×140°.9E±0°.2, h98km±16km, mb4.5/7, Error ellipse: s-maj=25.6km s-min=16.7km az=99.0

JMA 14 08:23:15.3±0.1, 25°.56N×141°.39E, h89km, M4.1

ISC 14 08:23:14.8±0.9**, 25°.55N**±0°.08×**141°.4E**±0°.2**, h98km, n19,** σ**0s.79**/21**, mb4.4**/9**, Volcano Islands region**

```
Code   Station Name         Δ°   AZ°   Phase ID         Time      Res
                                     Op     ISC     h  m  s     ISC
JHH2   Haha-jima-NKT2      1.30  34  P      Pn     08 23 38.5 -0.1
JHH2                                 S      Sn     08 23 55.6 -1.0
CBIJ   Chichi jima         1.71  25  P      Pn     08 23 43.7 +0.1
CBIJ                                 eS     Sn     08 24 05.5  0.0
JCJ    Chichijima          1.71  25         Pn     08 23 44.2 +0.6
JCJ                                  Sn     Sn     08 24 05.5  0.0
BSO3   Boso 3              9.26 356  P      Pn     08 25 26.4 +1.3
JHO    Hitachi            11.05 357  P      Pn     08 25 50.8 +1.0
JHO                                  eS     Sn     08 27 49.8 -1.5
JMM    Marumori           12.29 358  Pn     Pn     08 26 05.1 -1.3
SONM   Songino Array      35.35 318  P      P      08 29 56.4 -4.5
SONM                                 IAmb   IAmb   08 29 59.7
       comp=Z,1.1nm,1.2s
```

WB0	Warramunga Arr	45.55	189	P	P	08 31 25.0	0.0
WB0				IAmb	IAmb	08 31 25.4	
	comp=Z,4.7nm,0.6s						
CTAO	Charters Tower	45.61	174	P	P	08 31 24.6	-0.9
CTAO				IAmb	IAmb	08 31 37.1	
	comp=Z,8.4nm,1.2s						
WR0	Warramunga Arr	45.72	189	P	P	08 31 25.9	-0.4
WR0				IAmb	IAmb	08 31 26.8	
	comp=Z,6.1nm,0.6s						
WRAB	Tennant Creek	45.72	189	P	P	08 31 26.4	+0.1
WB2	Warramunga Arr	45.73	189	P	P	08 31 26.3	-0.1
WB2				IAmb	IAmb	08 31 26.9	
	comp=Z,12nm,0.5s						
WRA	Warramunga Arr	45.73	189	P	P	08 31 26.3	-0.1
	comp=Z,10nm,0.5s,baz=9.7,slow=8.6,SNR=108						
WRA	Warramunga Arr	45.73	189	P	P	08 31 26.6	+0.2
ASAR	Alice Springs	49.45	189	P	P	08 31 54.8	-0.4
	comp=Z,0.4nm,0.6s,baz=13,slow=13,SNR=6.3						
ASAR	Alice Springs	49.45	189	P	P	08 31 55.2	0.0
MKAR	Makanchi Array	50.91	311	P	P	08 32 02.1	-3.9
YKA	Yellowknife Ar	73.85	28	P	P	08 34 40.0	+1.5
	comp=Z,0.6nm,0.6s,baz=295,slow=6.2,SNR=5.3						
FINES	FINESS Array B	79.01	334	P	P	08 35 07.8	+0.1
	comp=Z,0.9nm,0.4s,baz=76,slow=4.5,SNR=8.8						

IDC 14 08:28:13.8±2.3**, 54°.66N×83°.79E, h0^{km}, mb1 2.6**/2**, mb1mx2.6**/41**, mbtmp2.6**/2**, ML2.4**/2**, Error ellipse: s-maj=19.0km s-min=11.2km az=170.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.94	139	*i*		08 33 51.9	
	baz=318,slow=339,SNR=22						
ZALV	Zalesovo Beam	0.94	139	Pg	Pg	08 28 31.0	-0.7
	3.9nm,0.3s,baz=319,slow=15,SNR=28						
ZALV				Lg	Lg	08 28 45.6	
	5.9nm,0.3s,baz=322,slow=28,SNR=18						
KURBB	Kurchatov Arra	5.16	220	Pn	Pn	08 29 32.0	-0.2
	0.1nm,0.3s,baz=40,slow=13,SNR=4.2						
KURBB				Lg	Lg	08 31 00.1	
	0.0nm,0.3s,baz=43,slow=31,SNR=1.6						
MKAR	Makanchi Array	7.94	187	Pn	Pn	08 30 10.6	+0.3
	0.1nm,0.3s,baz=15,slow=14,SNR=4.4						

NNC 14 08:42:04.7±9.2**, 37°.14N×71°.02E, h0^{km}, mb4.0, mpv3.6, 5C-1D, Error ellipse: s-maj=71.6km s-min=60.3km az=168.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	Karatay Array	5.97	356	⇑P	Pn	08 43 35.4	+1.1
	3.6nm,0.3s,baz=176,slow=12						
KK02				⇑S	Sn	08 44 45.8	+2.4
	5.6nm,0.6s,baz=182,slow=22						
AAK	Ala-Archa	6.10	25	⇓P	Pn	08 43 36.8	+0.5
	3.5nm,0.8s						
AAK				⇑S	Sn	08 44 45.4	-1.5
	3.4nm,0.9s						
TKM2	Tokmak 2	6.75	30	⇑P	Pn	08 43 44.2	-1.1
	2.5nm,0.5s						
TKM2				⇑S	Sn	08 45 05.2	+2.2
	1.3nm,0.6s						

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*IDC **14** 08:56:58.5±1.3, 15°.03S×173°.63W, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.6/43, mbtmp3.7/4, ML4.3/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/35, Error ellipse: s-maj=58.0km s-min=26.4km az=153.0*

*NOU **14** 08:56:58.9, 15°.24S×173°.53W, h0^{km}, ML4.5/4, Tonga Islands*

*NEIC **14** 08:56:59.8±1.4, 14°.6S±0°.1×172°.9W±0°.2, h46^{km}±11^{km}, mb4.3/8, Error ellipse: s-maj=37.2km s-min=8.9km az=59.0*

ISC 14 08:57:01.9±0.8**, 14°.5S**±0°.2×**173°.7W**±0°.1**, h35^{km}, n24, σ1^{s}.79**/15**, mb4.2**/6**, MS3.1**/3**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.95	72	Pn	Pn	08 57 34.9	+2.3
	107nm,0.3s,baz=197,slow=2.8,SNR=142						
AFI				Sn	Sn	08 57 54.9	-1.1
	192nm,0.3s,baz=52,slow=22,SNR=25						
NIUE	Niue	5.77	142	Pn	Pn	08 58 19.5	-5.7
NIUE				Sn	Sn	08 59 11.7	-19
DZM	Mont Dzumac	20.29	245	LR	LR	09 08 45.4	
	comp=Z,56nm,19.4s,baz=352,slow=35						
LHI	Lord Howe Isla	30.12	231	P	P	09 03 10.3	+1.8
ARMA	Armidale	35.56	238	P	P	09 03 56.0	-0.1
ARMA				IAmb	IAmb	09 04 02.0	
	comp=Z,7.2nm,1.2s						
H11S2	WAKE ISLAND Hy	38.08	329	T	T	09 45 11.7	
	baz=146,slow=76,SNR=8.6						
H11S3	WAKE ISLAND Hy	38.10	329	T	T	09 45 13.2	
	baz=146,slow=76,SNR=9.0						
H11S1	WAKE ISLAND Hy	38.10	329	T	T	09 45 12.3	
	baz=146,slow=76,SNR=7.3						
H11N3	WAKE ISLAND Hy	39.03	330	T	T	09 46 54.8	
	baz=146						
H11N1	WAKE ISLAND Hy	39.03	330	T	T	09 46 31.9	
	baz=146						
H11N2	WAKE ISLAND Hy	39.05	330	T	T	09 46 28.6	
	baz=146						
WB0	Warramunga Arr	49.73	256	P	P	09 05 52.6	+1.3
WB0				IAmb	IAmb	09 05 54.8	
	comp=Z,5.6nm,1.4s						
WB2	Warramunga Arr	49.77	256	P	P	09 05 52.6	+1.2
WB2				IAmb	IAmb	09 06 00.2	
	comp=Z,5.5nm,1.4s						
WRA	Warramunga Arr	49.78	256	P	P	09 05 52.8	+1.2
	comp=Z,0.1nm,0.3s,baz=97,slow=7.8,SNR=1.8						
WRA	Warramunga Arr	49.78	256	P	P	09 05 52.3	+0.7
AS31	Alice Springs	50.12	251	P	P	09 05 56.0	+1.8
ASAR	Alice Springs	50.12	251	P	P	09 05 54.9	+0.7
	comp=Z,0.7nm,0.5s,baz=86,slow=8.1,SNR=13						
ASAR	Alice Springs	50.12	251	P	P	09 05 55.3	+1.1
VNDA	Vanda	64.20	186	LR	LR	09 34 15.5	
	comp=Z,12nm,18.6s,baz=119,slow=35						
ERM	Erimo	68.89	327	P	P	09 08 01.9	-1.2
QSPA	South Pole Qui	75.50	180	P	P	09 08 42.2	-0.3
	comp=Z,0.9nm,0.8s,baz=90,slow=4.0,SNR=2.5						
QSPA	South Pole Qui	75.50	180	P	P	09 08 38.8	-3.8
QSPA				IAmb	IAmb	09 08 46.7	
	comp=Z,3.8nm,1.4s						
CMIG	Matias Romero	83.86	71	LR	LR	09 38 39.2	
	comp=Z,32nm,21.1s,baz=54,slow=30						
BRTR	Keskin Array B	145.31	322	PKPbc	PKiKP	09 16 38.9	-1.6
	comp=Z,0.4nm,0.5s,baz=94,slow=2.0,SNR=2.6						

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*IDC **14** 09:02:56.6±0.7, 57°.84S×25°.39W, h54^{km}±6^{km}, mb4.1/10, mb1 4.2/12, mb1mx4.0/30, mbtmp4.4/12, MS3.4/5, Ms1 3.4/5, ms1mx3.1/28, Error ellipse: s-maj=21.4km s-min=15.0km az=76.0*

*NEIC **14** 09:02:57.3±1.6, 57°.8S±0°.1×25°.2W±0°.2, h62^{km}±6^{km}, mb4.5/20, Error ellipse: s-maj=21.0km s-min=13.2km az=51.0*

ISC 14 09:02:56.0±0.5**, 57°.90S**±0°.08×**25°.26W**±0°.10**, h49^{km}, n89, σ0^{s}.91**/85**, mb4.4**/15**, MS3.4**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.25	295		Pn	09 04 41.3	+2.1
VNA1	Neumayer--Stat	14.68	157	P	Pn	09 06 20.1	-0.3
VNA3	Neumayer Olymp	14.89	160	P	Pn	09 06 22.3	-0.8
VNA3				S	Sn	09 08 55.7	-11
VNA2	Neumayer--Watz	15.08	157	P	Pn	09 06 24.6	-0.9
	baz=320,slow=14						
VNA2				S	Sn	09 08 58.7	-12
	baz=320,slow=24						
SNAA	Sanae	16.62	155	P	Pn	09 06 45.4	+0.1
SNAA				S	Sn	09 09 36.7	-12
SNAA	Sanae	16.62	155	P	Pn	09 06 46.2	+0.9
	1.0nm,0.3s,baz=39,slow=9.5,SNR=65						
SNAA				S	Sn	09 09 37.0	-12
	0.1nm,0.3s,baz=18,slow=12,SNR=1.7						
SNAA				LR	LR	09 11 26.4	
	comp=Z,64nm,20.2s,baz=302,slow=30						
SNAA	Sanae	16.62	155	Pn	Pn	09 06 45.9	+0.6
PMSA	Palmer Station	19.56	233	P	Pn	09 07 20.4	-0.5
	0.6nm,0.3s,baz=124,slow=5.7,SNR=10						
PMSA				LR	LR	09 13 15.4	
	comp=Z,111nm,21.8s,baz=48,slow=32						
PMSA	Palmer Station	19.56	233	P	Pn	09 07 20.6	-0.4
EFI	East Falkland	19.77	274	P	Pn	09 07 22.8	-0.7
SMAI	San Martin Ant	21.10	224	P	P	09 07 37.5	+1.5
USHA	Ushuaia	23.80	259	LR	LR	09 15 06.4	
	comp=Z,146nm,21.4s,baz=328,slow=31						
MG02	Cerro Sombrero	25.16	263	P	P	09 08 17.0	+0.6
GO09	Cerro Castillo	27.59	263	P	P	09 08 37.7	-0.6
GO09				IAmb	IAmb	09 08 43.2	
	comp=Z,22nm,1.1s						
TRQA	Tornquist	31.03	294	P	P	09 09 09.1	+0.3
QSPA	South Pole Qui	32.35	180	P	P	09 09 20.8	+0.5
	comp=Z,3.3nm,0.5s,baz=209,slow=1.6,SNR=48						
QSPA	South Pole Qui	32.35	180	P	P	09 09 21.0	+0.6
QSPA				IAmb	IAmb	09 09 21.7	
	comp=Z,20nm,1.4s						
PLTB	Pedras Altas	32.52	311	*e*P	P	09 09 20.9	-1.1
PLTB	Pedras Altas	32.52	311	P	P	09 09 20.9	-1.1
PLTB				IAmb	IAmb	09 09 24.1	
	comp=Z,5.4nm,1.0s						
PLCA	Paso Flores	33.38	281	P	P	09 09 28.1	-1.4
	comp=Z,1.0nm,0.4s,baz=136,slow=4.3,SNR=4.8						
PLCA	Paso Flores	33.38	281	*e*P	P	09 09 28.2	-1.3
PLCA	Paso Flores	33.38	281	P	P	09 09 28.4	-1.1
PLCA				IAmb	IAmb	09 09 45.2	
	comp=Z,14nm,1.5s						
LL05	Los Muermos	34.44	277	P	P	09 09 37.2	-1.4
LC01	Cunco	35.42	282	P	P	09 09 46.0	-1.1
LC01				IAmb	IAmb	09 09 47.0	
	comp=Z,4.8nm,1.1s						
ITAB	Concordia	36.00	317	*e*P	P	09 09 52.6	+0.5
PET01	Itanhaem-SP	37.10	325	*e*P	P	09 10 01.2	-0.3
VAS01	Vassouras-RJ	37.94	332	*e*P	P	09 10 09.2	+0.6
VAO	Valinhos	38.22	327	*e*P	P	09 10 11.8	+0.8
RIB01	Linhares ES	40.11	337	*e*P	P	09 10 27.4	+0.6
SJMB	Sao Joao De Ma	40.87	337	*e*P	P	09 10 33.2	+0.1
NAN01	Guarapari, ES	41.48	338	*e*P	P	09 10 38.7	+0.6
IPMB	Ipameri, GO	43.33	327	*e*P	P	09 10 54.2	+1.1
MC01	Montes Claros	43.42	333	*e*P	P	09 10 53.9	0.0
VNDA	Vanda	44.77	182	P	P	09 11 04.8	+0.9
	comp=Z,4.0nm,0.8s,baz=193,slow=7.2,SNR=17						
VNDA	Vanda	44.77	182	P	P	09 11 04.9	+0.9
VNDA				IAmb	IAmb	09 11 05.9	
	comp=Z,4.6nm,0.8s						
JANB	Januaria	45.09	334	*e*P	P	09 11 08.2	+0.9
BOSA	Boshof	45.46	72	LR	LR	09 27 29.7	
	comp=Z,25nm,19.6s,baz=193,slow=32						
BDFB	Brasilia	45.49	328	P	P	09 11 10.7	+0.2
	comp=Z,3.7nm,0.6s,baz=134,slow=3.6,SNR=4.6						
BDFB	Brasilia	45.49	328	P	P	09 11 09.7	-0.9
BDFB				IAmb	IAmb	09 11 12.2	
	comp=Z,4.9nm,1.0s						
ARAG	Araguaiana, MT	46.56	324	*e*P	P	09 11 19.5	+0.7
SDBA	SAO DESIDERIO	47.79	334	*e*P	P	09 11 29.0	+0.6
NBPN	Ponto Novo - B	48.32	340	*e*P	P	09 11 33.1	+0.6
PEXB	Peixe	48.94	329	*e*P	P	09 11 38.4	+1.2
PTLB	Pontes e Lacer	49.36	315	*e*P	P	09 11 39.4	-1.0
PTLB	Pontes e Lacer	49.36	315	P	P	09 11 39.7	-0.7
PTLB				IAmb	IAmb	09 11 40.8	
	comp=Z,3.5nm,0.8s						
H10S2	ASCENSION HYDR	49.51	14	T	T	10 06 15.8	
	baz=187,slow=74,SNR=16						
H10S3	ASCENSION HYDR	49.51	14	T	T	10 06 16.1	
	baz=33,slow=74,SNR=14						
SIV	San Ignacio	49.61	312	P	P	09 11 41.0	-1.4
	comp=Z,1.7nm,0.5s,baz=183,slow=8.1,SNR=15						
SNDB	Serra Nova Dou	49.92	326	*e*P	P	09 11 45.6	+0.9
H10N1	ASCENSION HYDR	50.62	14	T	T	10 07 39.7	
	baz=187,slow=76,SNR=13						
H10N3	ASCENSION HYDR	50.63	14	T	T	10 07 38.9	
	baz=187,slow=76,SNR=40						
H10N2	ASCENSION HYDR	50.64	14	T	T	10 07 41.3	
	baz=187,slow=76,SNR=15						
NBLV	Livramento - P	51.22	345	*e*P	P	09 11 55.8	+1.3
SMTB	Santa Maria do	51.86	331	*e*P	P	09 12 00.1	+0.8
PDRB	Porto dos Gac	52.02	320	*e*P	P	09 11 59.6	-0.9
VILB	Vilhena	52.04	315	*e*P	P	09 12 00.8	+0.2
LPAZ	La Paz	52.30	304	P	P	09 12 02.2	-1.0
	comp=Z,1.3nm,0.4s,baz=183,slow=6.3,SNR=8.5						
LPAZ				PcP	PcP	09 13 13.9	-0.1
	comp=Z,0.6nm,0.4s,baz=119,slow=6.2,SNR=1.8						
LPAZ	La Paz	52.30	304	*e*P	P	09 12 02.4	-0.9
LPAZ	La Paz	52.30	304	P	P	09 12 02.2	-1.0
LPAZ					PcP	09 13 13.7	-0.3
CLDB	Colider	52.39	321	*e*P	P	09 12 03.3	0.0
NBPB	Pedra_Branca-C	53.41	342	*e*P	P	09 12 11.4	+0.7
PRPB	Parauapebas	55.02	330	*e*P	P	09 12 23.6	+1.1
NPGB	Novo Progresso	55.83	323	*e*P	P	09 12 28.6	+0.3
SAML	Samuel	56.85	314	P	P	09 12 34.6	-0.9
ETMB	Extrema	57.27	310	*e*P	P	09 12 37.3	-1.2
ITTB	Itaituba	58.48	324	*e*P	P	09 12 46.7	-0.2
MALB	Monte Alegre	60.40	326	*e*P	P	09 13 00.9	+0.7
MCPB	Macapa, AP	61.19	329	*e*P	P	09 13 06.9	+1.3
MACA	Manacapuru-AM	61.26	319	*e*P	P	09 13 04.6	-1.5
MACA	Manacapuru-AM	61.26	319	P	P	09 13 03.9	-2.2
BOAV	Boa Vista	66.39	321	*e*P	P	09 13 38.7	-1.0
BOAV	Boa Vista	66.39	321	P	P	09 13 38.8	-1.0
BOAV				IAmb	IAmb	09 13 40.1	
	comp=Z,13nm,1.3s						
DBIC	Dimbokro	66.45	22	P	P	09 13 39.3	-0.8
	comp=Z,2.8nm,0.5s,baz=207,slow=8.0,SNR=5.7						
DBIC	Dimbokro	66.45	22	P	P	09 13 39.2	-0.8
DBIC				IAmb	IAmb	09 13 41.9	
	comp=Z,6.1nm,0.9s						
TORD	Torodi Ar. Bea	74.18	27	P	P	09 14 27.5	+0.2
	comp=Z,2.5nm,0.4s,baz=198,slow=6.3,SNR=26						
STKA	Stephens Creek	89.89	169	P	P	09 15 49.4	-0.2
	comp=Z,1.3nm,0.6s,baz=153,slow=5.8,SNR=3.9						
PPT	Papeete	91.92	232	LR	LR	09 48 17.0	
	comp=Z,39nm,18.5s,baz=94,slow=30						
ASAR	Alice Springs	96.90	161	P	P	09 16 21.1	-0.8
	comp=Z,0.8nm,0.7s,baz=187,slow=3.8,SNR=15						
ASAR	Alice Springs	96.90	161	P	P	09 16 21.4	-0.5
PDAR	Pinedale Array	122.20	300	PKP	PKPdf	09 21 43.6	-1.1
	comp=Z,0.4nm,0.5s,baz=127,slow=5.2,SNR=7.2						
PDAR	Pinedale Array	122.20	300	PKPdf	PKPdf	09 21 43.9	-0.8
FINES	FINESS Array B	125.53	27	PKP	PKPdf	09 21 50.1	0.0
	comp=Z,1.6nm,0.5s,baz=190,slow=2.4,SNR=14						
FINES	FINESS Array B	125.53	27	PKPdf	PKPdf	09 21 50.0	-0.1
YKA	Yellowknife Ar	138.24	316	PKhKP	PKPpre	09 22 04.0	
	comp=Z,0.2nm,0.5s,baz=125,slow=2.9,SNR=5.6						
YKA				PKP	PKPdf	09 22 13.9	-0.2
	comp=Z,1.6nm,0.5s,baz=130,slow=2.2,SNR=28						
YKA				pPKP	pPKPdf	09 22 29.8	+2.1
	comp=Z,2.3nm,0.7s,baz=131,slow=2.0,SNR=9.2						
INK	Inuvik	147.90	318	PKPbc	PKPbc	09 22 33.9	-0.1
	comp=Z,9.6nm,0.8s,baz=66,slow=2.3,SNR=50						
INK	Inuvik	147.90	318		PKPbc	09 22 34.0	+0.1
SONM	Songino Array	149.76	88	PKPbc	PKPbc	09 22 39.6	+0.1
	comp=Z,3.8nm,0.5s,baz=216,slow=3.5,SNR=22						
SONM				pPKPbc	sPKPdf	09 22 55.1	+1.9
	comp=Z,0.8nm,0.6s,baz=212,slow=4.4,SNR=3.6						
ILAR	Eielson Array	152.12	309	PKPbc	PKPbc	09 22 44.0	-0.3
	comp=Z,8.2nm,0.8s,baz=133,slow=3.6,SNR=69						
ILAR				pPKPbc	pPKPbc	09 22 59.9	+1.9
	comp=Z,2.8nm,0.7s,baz=145,slow=6.4,SNR=7.9						
ILAR	Eielson Array	152.12	309	PKPbc	PKPbc	09 22 44.2	-0.1

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*IDC **14** 09:11:05.7±0.9, 0°.88N×127°.22E, h0^{km}, mb4.0/6, mb1 4.1/7, mb1mx3.8/48, mbtmp4.0/7, ML3.2/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/47, Error ellipse: s-maj=58.1km s-min=16.7km az=63.0*

*NEIC **14** 09:11:06.5±1.0, 1°.07N±0°.05×127°.3E±0°.2, h10^{km}±2^{km}, mb4.0/9, Error ellipse: s-maj=32.7km s-min=5.6km az=258.0*

*DJA **14** 09:11:07.9±0.4, 1°N±3°×12°7E±°, h10^{km}, M3.8/7, mb4.2/1, mB4.4/1, MLv3.6/7, Mw(mB)3.6/1*

ISC 14 09:11:07.9±1.5**, 0°.96N**±0°.08×**127°.4E**±0°.1**, h15^{km}**±8^{km}**, n24, σ0^{s}.78**/23**, mb4.0**/11**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.18	181	P	Pg	09 11 12.2	-0.1
TNTI				S	Sg	09 11 15.4	+0.1
TNTI	Ternate	0.18	181		Pg	09 11 12.3	-0.1
TNTI				Sg	Sb	09 11 16.6	+0.1
LBMI	Labuha	1.59	175	P	Pn	09 11 36.4	+0.8
SANI	Sanana	3.29	205	P	Pn	09 11 59.7	+0.7
SIJI	Sorong	4.30	115	Pn	Pn	09 12 13.5	+0.7
	1.2nm,0.3s,baz=331,slow=19,SNR=7.6						
GTOI	Gorontalo	4.37	266	P	Pn	09 12 18.8	+4.9
WB0	Warramunga Arr	21.72	162	P	P	09 15 58.2	-0.6
WB0				IAmb	IAmb	09 16 03.1	
	comp=Z,7.4nm,0.9s						
WRAB	Tennant Creek	21.86	162	P	P	09 15 59.8	-0.5
WRAB				IAmb	IAmb	09 16 04.6	
	comp=Z,5.6nm,0.8s						
WRA	Warramunga Arr	21.87	162	P	P	09 16 00.3	-0.1
	comp=Z,5.3nm,0.7s,baz=341,slow=11,SNR=45						
WRA	Warramunga Arr	21.87	162	P	P	09 15 59.0	-1.4
WB2	Warramunga Arr	21.87	162	P	P	09 16 00.1	-0.3
WB2				IAmb	IAmb	09 16 04.7	
	comp=Z,7.4nm,0.8s						
WR0	Warramunga Arr	21.95	162	P	P	09 16 00.5	-0.7
WR0				IAmb	IAmb	09 16 05.5	
	comp=Z,7.3nm,1.0s						
PMG	Port Moresby	22.23	118	LR	LR	09 26 17.8	
	comp=Z,69nm,19.9s,baz=112,slow=41						
AS31	Alice Springs	25.29	166	P	P	09 16 34.0	-0.1
AS31				IAmb	IAmb	09 16 37.4	
	comp=Z,2.0nm,0.8s						
ASAR	Alice Springs	25.29	166	P	P	09 16 33.9	-0.1
	comp=Z,4.5nm,0.7s,baz=346,slow=11,SNR=51						
BBOO	Buckleboo	34.57	167	P	P	09 17 55.6	-0.6
STKA	Stephens Creek	35.33	159	P	P	09 18 02.2	-0.6
	comp=Z,1.6nm,0.8s,baz=318,slow=8.6,SNR=4.4						
STKA	Stephens Creek	35.33	159	P	P	09 18 03.4	+0.6
KSRS	Korea Array	36.32	1	LR	LR	09 36 40.0	
	comp=Z,20nm,18.9s,baz=53,slow=42						
SONM	Songino Array	50.11	342	P	P	09 20 03.8	+1.1
	comp=Z,0.8nm,0.8s,baz=163,slow=6.2,SNR=4.5						
MKAR	Makanchi Array	60.19	326	P	P	09 21 15.7	+0.3
	comp=Z,0.9nm,0.6s,baz=123,slow=8.8,SNR=7.1						
MKAR	Makanchi Array	60.19	326	P	P	09 21 15.0	-0.4
KURBB	Kurchatov Arra	64.41	328	P	P	09 21 42.7	-0.8
	comp=Z,2.1nm,0.8s,baz=126,slow=5.9,SNR=13						
KURK	Kurchatov	64.41	328	P	P	09 21 41.6	-1.9

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*SJA **14** 09:12:10.5±1.1, 30°.29S×72°.83W, h16^{km}±17^{km}, ML4.6, MW4.6*

*IDC **14** 09:12:16.1±0.7, 30°.43S×72°.08W, h0^{km}, mb4.3/7, mb1 4.3/12, mb1mx4.1/28, mbtmp4.2/12, ML4.0/5, MS3.7/12, Ms1 3.7/12, ms1mx3.5/28, Error ellipse: s-maj=27.2km s-min=19.4km az=98.0*

*GUC **14** 09:12:16.8±0.8, 30°.39S×72°.17W, h42^{km}±3^{km}, ML4.4*

*NEIC **14** 09:12:17.2±2.5, 30°.38S±0°.03×72°.18W±0°.06, h10^{km}±1^{km}, mb4.5/11, ML4.2(GUC), Error ellipse: s-maj=10.1km s-min=4.6km az=114.0*

*VAO **14** 09:12:20.7±1.2, 30°.35S×71°.74W, h10^{km}, mb4.4*

ISC 14 09:12:15.4±0.5**, 30°.38S**±0°.03×**72°.40W**±0°.03**, h10^{km}, n157, σ1^{s}.86**/173**, mb4.4**/11**, MS3.9**/8**, 4C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.72	114	⇓*i*P	Pg	09 12 28.6	-0.8
CO06				*e*S	Sg	09 12 37.7	-1.2
CO06				IAML		09 12 41.5	
	comp=N,16μm,0.6s						
CO06	Fray Jorge	0.72	114		Pg	09 12 28.6	-0.8
CO05	La Serena	1.11	66	⇓*i*P	Pb	09 12 35.0	-1.7
CO05				*i* S	Sg	09 12 48.0	-3.2
CO05				IAML		09 12 59.7	
	comp=N,9μm,0.6s						
CO05	La Serena	1.11	66		Pb	09 12 35.1	-1.7
GO04	Tololo Observa	1.40	82	⇓*i*P	Pn	09 12 39.6	-1.7
GO04				*e*S	Sb	09 12 57.1	-2.8
GO04				IAML		09 13 07.0	
	comp=N,28μm,0.5s						
GO04	Tololo Observa	1.40	82		Pn	09 12 39.8	-1.5
GO04	Tololo Observa	1.40	82	*i* P	Pn	09 12 40.0	-1.3
CO03	El Pedregal	1.54	108	⇓*i*P	Pn	09 12 41.6	-1.6
CO03				*i* S	Sn	09 13 00.4	-2.9
CO03				IAML		09 13 04.0	
	comp=N,6μm,0.6s						
CO03	El Pedregal	1.54	108	Pn	Pn	09 12 42.0	-1.1
LCO	Las Campanas	2.01	48	*e*P	Pn	09 12 49.0	-0.7
LCO				*i* S	Sn	09 13 14.5	-0.7
LCO	Las Campanas	2.01	48	Pn	Pn	09 12 49.2	-0.5
LCO	Las Campanas	2.01	48	*i* P	Pn	09 12 49.0	-0.7
LCO				*e*S	Sg	09 13 18.6	-1.7
LCO				IAML		09 13 20.8	
	comp=Z,11μm,1.0s						
VA06	Catapilco	2.37	157	⇑*i*P	Pn	09 12 54.7	+0.3
VA06				*e*S	Sn	09 13 22.3	-1.2
VA06				IAML		09 13 44.4	
	comp=N,3μm,0.5s						
AC04	Llanos de Chal	2.46	28	*e*P	Pn	09 12 54.6	-1.0
AC04				*i* S	Sn	09 13 23.2	-2.5
AC04	Llanos de Chal	2.46	28	Pn	Pn	09 12 55.0	-0.6
AC04	Llanos de Chal	2.46	28	*i* P	Pn	09 12 55.0	-0.6
AC04				*e*S	Sg	09 13 34.2	-0.3
AC04				IAML		09 13 49.3	
	comp=Z,1μm,0.9s						
AROD	Rodeo	2.54	86	*i* P	Pb	09 12 59.0	-2.4
AROD				*e*S	Sn	09 13 29.8	+1.5
VA01	Torpederas	2.71	166	Pn	Pn	09 12 59.1	0.0
ROCH	El Roble	2.84	156	⇑*i*P	Pn	09 13 01.6	+0.5
ROCH				*e*S	Sn	09 13 34.1	-1.4
ROCH				IAML		09 13 59.8	
	comp=N,2μm,0.5s						
ROC1	El Roble	2.84	156	*i* P	Pn	09 13 01.0	-0.1
ROC1				*e*S	Sg	09 13 45.0	-1.8
ACDV	Cuesta del Vie	2.85	87	*i* P	Pb	09 13 04.0	-2.5
ACDV				*e*S	Sb	09 13 43.6	+2.2
ACDV				IAML		09 13 45.1	
	comp=Z,1μm,0.7s						
VA03	San Esteban	2.85	147	*e*P	Pn	09 13 01.9	+0.8
VA03				*e*S	Sn	09 13 34.6	-0.9
VA03				IAML		09 13 55.5	
	comp=E,2μm,0.5s						
VA03	San Esteban	2.85	147		Pn	09 13 02.3	+1.2
ACCO	Cerro Coronel	2.89	95	*i* P	Pb	09 13 04.7	-2.6
ACCO				*e*S	Sn	09 13 39.2	+2.4
ACCO				IAML		09 13 45.7	
	comp=Z,2μm,0.9s						
RTLS	Leoncito	3.01	119	*i* P	Pb	09 13 06.4	-3.0
RTLS				*e*S	Sb	09 13 47.7	+1.3
RTLS				IAML		09 13 56.2	
	comp=Z,723nm,0.9s						
MT02	Curacav	3.06	160		Pn	09 13 04.8	+0.8
MT02	Curacav	3.06	160	*i* P	Pn	09 13 04.0	+0.1
MT02				IAML		09 14 10.8	
	comp=Z,569nm,0.8s						
PEL	Peldehue	3.12	152	⇑*e*P	Pn	09 13 05.6	+0.9
PEL				*e*S	Sn	09 13 41.1	-0.9
PEL				IAML		09 14 01.8	
	comp=E,882nm,0.5s						
PEL	Peldehue	3.12	152		Pn	09 13 05.8	+1.1
PEL	Peldehue	3.12	152	*i* P	Pn	09 13 06.0	+1.3
AUSP	Uspallata	3.17	126	*i* P	Pb	09 13 09.0	-3.0
MT05	Renca	3.32	155	*e*P	Pn	09 13 08.2	+0.8
MT05				*e*S	Sn	09 13 44.3	-2.7
MT05				IAML		09 14 12.1	
	comp=E,1μm,0.5s						
MT05	Renca	3.32	155	Pn	Pn	09 13 08.6	+1.1
MT05	Renca	3.32	155	*i* P	Pn	09 13 09.0	+1.5
MT05				IAML		09 14 07.8	
	comp=Z,1μm,1.6s						
VA05	Santo Domingo	3.33	169	*e*P	Pn	09 13 07.8	+0.2
VA05				*e*S	Sn	09 13 44.8	-2.5
VA05	Santo Domingo	3.33	169		Pn	09 13 07.8	+0.2
GO03	Copiap	3.37	35	Pn	Pn	09 13 09.7	+1.5
GO03	Copiap	3.37	35	*i* P	Pn	09 13 09.0	+0.9
ZON	Zonda	3.40	111		Pn	09 13 10.8	+2.2
ZON	Zonda	3.40	111	*i* P	Pn	09 13 11.0	+2.4
ZON				*e*S	Sb	09 13 59.8	+2.5
ZON				IAML		09 14 01.2	
	comp=Z,512nm,1.4s						
FCH	Farellones	3.44	149	*e*P	Pn	09 13 10.5	+1.1
FCH				*i* S	Sn	09 13 45.0	-5.4
FCH				IAML		09 14 09.2	
	comp=E,474nm,0.4s						
MT09	Talagante	3.59	161		Pn	09 13 12.3	+1.0
MT01	Popeta	3.61	165		Pn	09 13 11.9	+0.6
MT01	Popeta	3.61	165	*i* P	Pn	09 13 12.0	+0.6
MT01				IAML		09 14 14.7	
	comp=Z,538nm,0.8s						
RTCV	Cerro Valdivia	3.62	115	*i* P	Pn	09 13 15.0	+3.3
RTCV				*e*S	Sg	09 14 08.2	-3.6
RTCV				IAML		09 14 10.6	
	comp=Z,668nm,2.3s						

ASAL	Salagasta	3.76	127	*i* P	Pn	09 13 17.0	+3.4
ASAL				IAML		09 14 25.5	
	comp=Z,781nm,1.1s						
ARCO	CERRO ARCO	3.84	131	*i* P	Pb	09 13 19.0	-4.4
ARCO				IAML		09 14 20.0	
	comp=Z,1µm,1.0s						
BO04	La Punta	3.90	158	⇑*i*P	Pn	09 13 16.4	+0.9
VCA	Vinchina	4.01	67	*i* P	Pn	09 13 20.0	+3.0
VCA				IAML		09 14 24.5	
	comp=Z,2µm,1.2s						
AAGR	Agrelo	4.07	132	*i* P	Pn	09 13 22.0	+4.2
AAGR				IAML		09 14 35.7	
	comp=Z,826nm,1.2s						
BO01	Tunca	4.15	165	Pn	Pn	09 13 19.4	+0.6
BO01	Tunca	4.15	165	*i* P	Pn	09 13 19.0	+0.1
BO01				IAML		09 14 36.5	
	comp=Z,236nm,0.9s						
AVFE	Valle Fertil	4.28	95	*i* P	Pn	09 13 22.0	+1.3
AVFE				IAML		09 14 29.7	
	comp=Z,483nm,0.8s						
AC02	Maricunga	4.56	40	Pn	Pn	09 13 25.5	+0.6
AC02	Maricunga	4.56	40	*i* P	Pn	09 13 25.0	+0.1
AC02				IAML		09 14 57.4	
	comp=Z,533nm,0.8s						
BO02	Sierra Bellavi	4.61	163	*i* P	Pn	09 13 26.0	+0.8
BO02				IAML		09 14 53.2	
	comp=Z,578nm,0.8s						
GO05	Huala	4.63	175	Pn	Pn	09 13 25.4	-0.1
GO05	Huala	4.63	175	*i* P	Pn	09 13 25.0	-0.5
ACLC	CERRO LA CRUZ	4.83	80	*i* P	Pn	09 13 30.0	+1.7
ACLC				IAML		09 14 46.1	
	comp=Z,748nm,1.0s						
RFA	San Rafael	5.49	144	*i* P	Pn	09 13 39.0	+1.6
RFA				IAML		09 15 21.9	
	comp=Z,201nm,1.0s						
PB14	IPOC Station P	6.00	18	Pn	Pn	09 13 45.0	+0.4
H03N1	Juan Fernandez	6.32	239	Pn	Pn	09 13 50.6	+2.2
	baz=114,slow=19,SNR=47						
H03N1				Sn	Sn	09 14 56.7	-3.9
	baz=111,slow=22,SNR=5.2						
H03N1				T	T	09 20 58.9	
	baz=71,slow=72,SNR=71						
H03N2	Juan Fernandez	6.33	240	Pn	Pn	09 13 51.1	+2.5
H03N2				Sn	Sn	09 14 57.6	-3.3
	baz=111,slow=22,SNR=5.8						
H03N2				T	T	09 20 54.8	
	baz=71,slow=72,SNR=56						
H03N3	Juan Fernandez	6.33	239	Pn	Pn	09 13 50.7	+2.0
	baz=114,slow=19,SNR=49						
H03N3				Sn	Sn	09 14 56.4	-4.6
	baz=111,slow=22,SNR=4.3						
H03N3				T	T	09 21 01.9	
	baz=71,slow=72,SNR=726						
H03S3	Juan Fernandez	6.50	236	Pn	Pn	09 13 52.3	+1.4
	SNR=15						
H03S3				Sn	Sn	09 15 03.3	-1.7
	SNR=7.5						
H03S1	Juan Fernandez	6.51	236	Pn	Pn	09 13 51.8	+0.8
	SNR=13						
H03S1				Sn	Sn	09 15 01.5	-3.6
	SNR=5.3						
H03S2	Juan Fernandez	6.52	236	Pn	Pn	09 13 52.9	+1.7
	SNR=12						
H03S2				Sn	Sn	09 15 02.2	-3.3
PB05	IPOC Station P	7.75	15	*i* P	Pn	09 14 06.7	-1.8
PB05				IAML		09 16 17.7	
	comp=Z,30nm,1.7s						
LVC	Limon Verde	8.35	23	Pn	Pn	09 14 15.5	-1.3
	comp=Z,0.4nm,0.3s,baz=198,slow=6.4,SNR=1.8						
LVC				Sn	Sn	09 15 47.0	-4.4
	comp=Z,0.6nm,0.3s,baz=333,slow=19,SNR=1.8						
LVC	Limon Verde	8.35	23	*i* P	Pn	09 14 18.0	+1.1
LVC				IAML		09 16 24.1	
	comp=Z,26nm,2.5s						
LC01	Cunco	8.51	177	Pn	Pn	09 14 18.9	+0.2
PLCA	Paso Flores	10.44	172	Pn	Pn	09 14 46.2	+1.0
	comp=Z,0.8nm,0.3s,baz=333,slow=11,SNR=18						
PLCA				LR	LR	09 18 44.3	
	comp=Z,123nm,19.4s,baz=12,slow=38						
TRQA	Tornquist	11.53	134	Pn	Pn	09 14 58.8	-1.3
ITQB	Itaqui	13.69	91	*e*P	Pn	09 15 27.1	-2.5
CPUP	Villa Florida	13.87	77	Pn	Pn	09 15 31.9	-0.3
	comp=Z,0.2nm,0.3s,baz=277,slow=8.1,SNR=1.7						
CPUP				Sn	S	09 18 16.9	-12
	comp=Z,0.2nm,0.3s,baz=312,slow=11,SNR=3.1						
CPUP				LR	LR	09 21 08.0	
	comp=Z,460nm,18.1s,baz=220,slow=39						
CPUP	Villa Florida	13.87	77	*e*P	Pn	09 15 29.3	-2.9
LPAZ	La Paz	14.56	17	Pn	P	09 15 45.1	-3.8
	comp=Z,0.3nm,0.3s,baz=199,slow=8.8,SNR=9.2						
LPAZ				LR	LR	09 22 09.8	
	comp=Z,182nm,20.6s,baz=169,slow=41						
LPAZ	La Paz	14.56	17	*e*P	P	09 15 45.1	-3.8
LPAZ	La Paz	14.56	17		P	09 15 45.0	-3.9
PLTB	Pedras Altas	16.17	100	*e*P	Pn	09 16 00.3	-2.4
CPSB	Cacapava Do Su	16.36	95	*e*P	Pn	09 16 03.8	-1.5
SIV	San Ignacio	17.69	38	P	P	09 16 23.0	+0.1
	comp=Z,0.3nm,0.3s,baz=223,slow=11,SNR=38						
SIV				LR	LR	09 23 32.7	
	comp=Z,272nm,20.9s,baz=240,slow=39						
AQDB	Aquidauana	18.00	61	*e*P	P	09 16 25.7	-0.7
ITAB	Concordia	18.04	85	*e*P	Pn	09 16 23.5	-2.8
ITAB	Concordia	18.04	85		P	09 16 27.9	+1.2
ITAB				IAmb	IAmb	09 16 31.7	
	comp=Z,30nm,1.0s						
CNLB	Canela	18.72	92	*e*P	Pn	09 16 34.0	-0.7
PTGB	Pitanga	18.89	78	*e*P	Pn	09 16 36.1	-0.7
PTLB	Pontes e Lacer	19.21	42	*e*P	Pn	09 16 40.2	-0.4
PTLB	Pontes e Lacer	19.21	42		P	09 16 39.2	-0.5
TER01	Tubaro-SC	20.34	91	*e*P	P	09 16 52.1	+0.1
PP1B	Ponte de Pedra	20.41	55	*e*P	P	09 16 51.9	-0.9
VILB	Vilhena	20.69	36	*e*P	Pn	09 16 58.0	-0.2
VILB	Vilhena	20.69	36		Pn	09 16 56.2	-2.0
VILB				IAmb	IAmb	09 17 09.2	
	comp=Z,22nm,0.9s						
PCMB	Pacaembu	20.89	70	*e*P	P	09 16 57.6	-0.4
SALV	Santo Antonio	21.03	50	*e*P	P	09 16 59.4	0.0
ETMB	Extrema	21.26	17	*e*P	P	09 17 04.0	+2.1
ETMB	Extrema	21.26	17	P	P	09 17 03.2	+1.3
ETMB				IAmb	IAmb	09 17 23.3	
	comp=Z,14nm,1.0s						
FRTB	Fartura	21.52	76	*e*P	P	09 17 04.0	-0.8
CZSB	Cruzeiro do Su	22.54	359	*e*P	P	09 17 22.5	+6.8
CZSB	Cruzeiro do Su	22.54	359	P	P	09 17 20.9	+5.3
CZSB				IAmb	IAmb	09 17 38.1	
	comp=Z,35nm,1.2s						
ITRB	Iturama	22.58	67	*e*P	P	09 17 15.1	-1.1
SAML	Samuel	23.00	24	P	P	09 17 21.0	+0.5
SAML				IAmb	IAmb	09 17 31.7	
	comp=Z,12nm,0.9s						
PET01	Itanhaem-SP	23.11	81	*e*P	P	09 17 20.9	-0.7
SPB	Sao Paulo	23.23	79	*e*P	P	09 17 22.8	0.0
BB19B	Bebedouro	23.38	72	*e*P	P	09 17 23.5	-1.0
PDRB	Porto dos Gac	23.67	41	*e*P	P	09 17 28.7	+1.4
VAO	Valinhos	23.85	78	*e*P	P	09 17 28.8	-0.3
ARAG	Araguaiana, MT	23.86	57	*e*P	P	09 17 30.1	+0.9
USHA	Ushuaia	24.60	174	P	P	09 17 37.7	+2.1
	comp=Z,11nm,0.8s,baz=52,slow=4.8,SNR=4.0						
CLDB	Colider	24.80	42	*e*P	P	09 17 38.4	+0.5
IPMB	Ipameri, GO	25.22	66	*e*P	P	09 17 40.8	-0.9
TBTG	Tabatinga, AM	26.16	6	P	P	09 17 50.1	0.0
BSCB	Bom Sucesso	26.54	76	*e*P	P	09 17 53.1	-0.5
BDFB	Brasilia	26.73	62	P	P	09 17 55.1	-0.3
	comp=Z,6.0nm,0.7s,baz=226,slow=7.2,SNR=10						
BDFB	Brasilia	26.73	62	P	P	09 17 54.0	-1.4
BDFB				IAmb	IAmb	09 17 56.2	
	comp=Z,21nm,1.3s						
SNDB	Serra Nova Dou	26.80	51	*e*P	P	09 17 58.7	+2.8
NPGB	Novo Progresso	28.19	38	*e*P	P	09 18 08.6	+0.2
PEXB	Peixe	28.79	56	*e*P	P	09 18 13.7	0.0
MC01	Montes Claros	29.33	69	*e*P	P	09 18 18.3	-0.3
JANB	Januaria	29.95	66	*e*P	P	09 18 24.2	+0.1
SJMB	Sao Joao De Ma	30.58	75	*e*P	P	09 18 30.1	+0.5
BSFB	Barra de Sao F	30.81	75	*e*P	P	09 18 31.1	-0.5
SDBA	SAO DESIDERIO	31.10	61	*e*P	P	09 18 34.1	-0.1
PTGA	Pitinga	31.77	24	LR	LR	09 32 15.2	
	comp=Z,126nm,18.6s,baz=190,slow=38						
NAN01	Guarapari, ES	31.88	74	*e*P	P	09 18 40.5	-0.5
NBIT	Itapeh - BA	33.93	70	*e*P	P	09 18 59.9	+0.9
NBPN	Ponto Novo - B	35.67	64	*e*P	P	09 19 13.8	-0.2
NBLA	Lagarto - SE	37.47	66	*e*P	P	09 19 29.8	+0.4
ZARC	Zaragoza, Cauc	37.73	356	P	P	09 19 32.4	+0.8
NBMA	Muriti-CE	38.95	61	*e*P	P	09 19 42.5	+0.6
MDP	Montagnes des	40.04	32	LR	LR	09 38 19.5	
	comp=Z,135nm,19.8s,baz=198,slow=39						
NBPA	Parau_RN	41.24	61	*e*P	P	09 20 02.5	+1.6
VNA3	Neumayer Olymp	52.83	159	P	P	09 21 32.0	+1.4
VNA1	Neumayer--Stat	53.12	158	P	P	09 21 41.4	+8.6
VNA2	Neumayer--Watz	53.47	158	P	P	09 21 37.3	+1.9
	baz=292,slow=8.2						
SNAA	Sanae	55.05	159	P	P	09 21 48.7	+1.7
SNAA	Sanae	55.05	159	P	P	09 21 47.6	+0.6
QSPA	South Pole Qui	59.84	180	P	P	09 22 22.9	+2.0
QSPA				IAmb	IAmb	09 22 34.1	
	comp=Z,6.2nm,0.9s						
TXAR	Lajitas Array	66.44	330	P	P	09 23 09.1	+4.0
	comp=Z,0.8nm,0.7s,baz=151,slow=8.2,SNR=11						
DBIC	Dimbokro	74.35	72	P	P	09 23 54.6	+0.9
	comp=Z,1.7nm,0.7s,baz=230,slow=5.8,SNR=2.3						
DBIC				LR	LR	09 54 07.3	
	comp=Z,66nm,19.4s,baz=269,slow=34						
MAW	Mawson	76.73	164	P	P	09 24 07.8	+1.3
	comp=Z,2.4nm,0.8s,baz=266,slow=7.1,SNR=3.6						
MAW				LR	LR	09 59 55.5	
	comp=Z,65nm,18.4s,baz=238,slow=37						
PDAR	Pinedale Array	80.40	333	P	P	09 24 29.7	+2.4
	comp=Z,0.4nm,0.7s,baz=133,slow=6.5,SNR=3.8						
BOSA	Boshof	82.04	118	LR	LR	09 57 37.9	
	comp=Z,35nm,20.0s,baz=192,slow=33						
TORD	Torodi Ar. Bea	83.28	71	P	P	09 24 43.5	+0.7
	comp=Z,5.8nm,0.8s,baz=280,slow=5.1,SNR=25						
TORD				LR	LR	10 00 10.9	
	comp=Z,94nm,18.6s,baz=285,slow=35						
AFI	Afiamalu	90.94	253	LR	LR	09 59 33.8	
	comp=Z,54nm,18.1s,baz=28,slow=31						
ESDC	Sonseca Array	94.30	46	LR	LR	10 07 47.4	
	comp=Z,40nm,18.1s,baz=310,slow=35						
WRA	Warramunga Arr	123.74	211	PKP	PKiKP	09 31 15.6	+1.1
	comp=Z,0.4nm,0.8s,baz=148,slow=1.8,SNR=7.6						
H11S2	WAKE ISLAND Hy	125.43	272	T	T	11 50 03.2	
	baz=115,slow=75,SNR=6.7						
H11S1	WAKE ISLAND Hy	125.44	272	T	T	11 50 03.4	
	baz=115,slow=75,SNR=7.5						
H11S3	WAKE ISLAND Hy	125.45	272	T	T	11 50 05.6	
	baz=115,slow=75,SNR=6.4						
BVAR	Borovoye Array	144.76	39	PKP	PKiKP	09 31 53.5	-2.4
	comp=Z,0.8nm,0.6s,baz=252,slow=9.0,SNR=4.8						
KURK	Kurchatov	150.35	39		PKiKP	09 32 08.5	+1.1
KURBB	Kurchatov Arra	150.35	39	PKPbc	PKiKP	09 32 08.2	+0.8
	comp=Z,1.8nm,0.6s,baz=303,slow=3.2,SNR=16						
AAK	Ala-Archa	150.90	56	PKPbc	PKiKP	09 32 11.0	+1.9
	comp=Z,4.1nm,0.6s,baz=215,slow=2.4,SNR=12						
ZALV	Zalesovo Beam	151.27	28	PKPbc	PKiKP	09 32 11.0	+1.8
	comp=Z,5.4nm,0.6s,baz=290,slow=3.1,SNR=18						
ZALV	Zalesovo Beam	151.27	28		PKiKP	09 32 10.5	+1.3
MKAR	Makanchi Array	154.47	43	PKPbc	PKiKP	09 32 17.6	+1.5
	comp=Z,0.5nm,0.6s,baz=308,slow=2.9,SNR=4.0						

IDC 14 09:20:46.5±2.4**,3°.88S**×**129°.97E,h0**^{km}**,mb3.1**/2**,**
mb1 3.3/3**,mb1mx3.2**/48**,mbtmp3.1**/3**,ML3.0**/1**,Error**
ellipse: s-maj=125.0km s-min=31.5km az=70.0,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.53	165	Pn	Pn	09 24 38.9	-1.0
	0.1nm,0.3s,baz=345,slow=11,SNR=5.4						
ASAR	Alice Springs	20.04	169	P	P	09 25 21.9	+0.5
	0.4nm,0.6s,baz=346,slow=9.8,SNR=6.7						
MKAR	Makanchi Array	65.62	326	P	P	09 31 32.5	0.0
	0.1nm,0.3s,baz=115,slow=7.7,SNR=1.9						

IDC 14 09:22:42.2±2.1**,54°.45N**×**83°.65E,h0**^{km}**,mb1 2.5**/2**,**
mb1mx2.5/46**,mbtmp2.5**/2**,ML2.7**/1**,Error ellipse:**
s-maj=16.6km s-min=10.1km az=158.0,Southwestern
Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.85	126	*i*		09 28 03.9	
	baz=307,slow=336,SNR=12						
ZALV	Zalesovo Beam	0.85	126	Pg	Pg	09 22 57.8	-0.7
	2.8nm,0.3s,baz=304,slow=17,SNR=21						
ZALV				Lg	Lg	09 23 11.4	
	2.9nm,0.3s,baz=307,slow=29,SNR=14						
KURBB	Kurchatov Arra	4.94	221	Pn	Pn	09 23 58.6	+1.0
	baz=40,slow=13,SNR=1.5						
KURBB				Lg	Lg	09 25 18.5	
	0.1nm,0.3s,baz=45,slow=30,SNR=1.8						
MKAR	Makanchi Array	7.72	187	Pn	Pn	09 24 35.4	-0.3
	0.1nm,0.3s,baz=22,slow=11,SNR=3.1						

NNC ***14*** *09:25:43.1*±*2.2, 54°.10N*×*86°.67E, h0*^{km}*, mb3.3, mpv3.1,*
Error ellipse: s-maj=20.1km s-min=9.3km az=16.0,
Suspected Mining explosion.
IDC ***14*** *09:25:46.8*±*2.2, 54°.02N*×*86°.39E, h0*^{km}*, mb1 3.7/2,*
mb1mx3.2/42, mbtmp3.7/2, ML3.5/2, Error ellipse:
s-maj=18.1km s-min=11.4km az=61.0
ISC 14 09:25:50.8±2.9**,54°.2N**±0°.2×**83°.74E**±0°.09**,h0**^{km}**,n9,**
σ**1**^{s}**.15**/13**,8C-4D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.69	111	*i*		09 31 40.0	
	baz=83,slow=350,SNR=11						
ZAA0	Zalesovo Array	0.69	111	⇑P	Pg	09 26 03.5	-0.4
	0.6nm,0.3s						
ZAA0				⇑S	Sn	09 26 19.5	+0.4
	1.2nm,0.3s						
ZALV	Zalesovo Beam	0.69	111	Pg	Pg	09 26 03.9	-0.1
	4.8nm,0.3s,baz=87,slow=17,SNR=36						
ZALV				Lg	Lg	09 26 17.9	
	6.1nm,0.3s,baz=88,slow=26,SNR=8.1						
ZALV				Rg	Rg	09 26 25.2	
	4.9nm,0.3s,baz=74,slow=26,SNR=13						
KURK	Kurchatov	4.69	224	⇑Pn	Pb	09 27 15.0	+1.3
	1.7nm,0.6s						
KURK				⇑Lg	Lg	09 28 55.8	
	1.9nm,0.6s						
KURBB	Kurchatov Arra	4.79	224	Pn	Pb	09 27 16.2	+0.6
	0.7nm,0.3s,baz=55,slow=13,SNR=21						
KURBB				Sn	Sg	09 28 22.9	-1.8
	baz=233,slow=11,SNR=1.1						
KURBB				Lg	Lg	09 28 54.0	
	0.1nm,0.3s,baz=61,slow=34,SNR=3.2						
KURBB	Kurchatov Arra	4.79	224	⇑Pn	Pb	09 27 16.8	+1.2
	3.9nm,0.3s						
KURBB				⇑Lg	Lg	09 28 55.3	
	4.7nm,1.0s						
MK31	Makanchi Array	7.47	188	⇑Pn	Pn	09 27 40.2	-0.8
	0.4nm,0.3s,baz=26,slow=13,SNR=64						
MK31				⇓Sn	Sn	09 29 08.1	+1.7
	0.3nm,0.5s,baz=27,slow=27,SNR=4.5						
MK31				⇑Lg	Lg	09 29 54.5	
	1.1nm,0.8s,baz=23,slow=30,SNR=3.8						
MKAR	Makanchi Array	7.47	188	Pn	Pn	09 27 41.1	+0.1
	1.5nm,0.3s,baz=25,slow=14,SNR=58						
MKAR				Sn	Sn	09 29 06.7	+0.4
	0.2nm,0.3s,baz=38,slow=28,SNR=1.0						
MKAR				Lg	Lg	09 29 52.5	
	0.1nm,0.3s,baz=29,slow=29,SNR=1.8						
MAKZ	Makanchi	7.48	189	⇓Pn	Pn	09 27 39.6	-1.5
	0.6nm,0.4s						
MAKZ				⇓Sn	Sn	09 29 07.2	+0.5
	0.3nm,0.5s						
MAKZ				⇓Lg	Lg	09 29 53.8	
	3.4nm,1.1s						

GUC ***14*** *09:28:06.9*±*0.7, 19°.87S*×*71°.12W, h33*^{km}±*3*^{km}*, ML3.9*
IDC ***14*** *09:28:08.4*±*4.6, 19°.77S*×*70°.61W, h16*^{km}±*29*^{km}*, mb3.6/5,*
mb1 3.9/7, mb1mx3.7/26, mbtmp3.8/7, ML3.9/2, MS2.7/2,
Ms1 2.8/2, ms1mx2.6/21, Error ellipse: s-maj=34.3km
s-min=21.0km az=80.0
ISC 14 09:28:07.3±1.9**,19°.93S**±0°.03×**71°.10W**±0°.07**,h28**^{km}±14^{km}**,**
n34,σ1^{s}**.28**/47**,mb3.9**/4**,10C-2D,Off coast of northern**
Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.97	111	*e*P	Pn	09 28 24.3	-0.8
TA02				*i* S	Sb	09 28 37.1	-0.8
TA02				IAML		09 28 38.6	
	comp=N,7µm,0.1s						
TA01	Diego Aracena	1.07	127	⇑*i*P	Pn	09 28 26.2	-0.2
TA01				*i* S	Sn	09 28 39.7	-0.7
TA01				IAML		09 28 45.9	
	comp=E,3µm,0.3s						
HMBC	Humberstone	1.19	107	⇓*i*P	Pn	09 28 27.5	-0.8
HMBC				*i* S	Sn	09 28 43.3	-0.3
HMBC				IAML		09 28 46.1	
	comp=N,7µm,0.3s						
PATCX	Punta Patache	1.25	135	⇑*i*P	Pn	09 28 29.0	-0.1
PATCX				*i* S	Sn	09 28 44.5	-0.6
PATCX				IAML		09 28 45.9	
	comp=E,3µm,0.3s						
PB11	IPOC Station P	1.37	83	⇓*i*P	Pn	09 28 30.0	-0.7
PB11				*i* S	Sn	09 28 47.6	-0.4
PB11				IAML		09 28 48.4	
	comp=N,4µm,0.4s						
PB12	IPOC Station P	1.49	29	⇑*i*P	Pn	09 28 31.5	-0.9
PB12				*i* S	Sn	09 28 49.3	-1.7
PB12				IAML		09 29 01.5	
	comp=E,1µm,0.6s						
AP01	Chacalluta	1.70	25	*e*P	Pn	09 28 34.7	-0.5
AP01				*e*S	Sn	09 28 54.9	-1.2
AP01				IAML		09 29 08.7	
	comp=N,2µm,0.6s						
PB08	IPOC Station P	1.84	97	⇑*i*P	Pn	09 28 37.2	-0.2
PB08				*i* S	Sn	09 29 01.5	+1.5
PB08				IAML		09 29 03.8	
	comp=N,1µm,0.2s						
PB01	IPOC Station P	1.87	127	⇑*i*P	Pn	09 28 38.0	+0.3
PB01				*e*S	Sn	09 29 00.9	+0.4
PB01				IAML		09 29 10.4	
	comp=N,2µm,0.5s						
PB07	IPOC Station P	2.12	148	⇑*i*P	Pn	09 28 41.3	+0.2
PB07				*e*S	Sn	09 29 04.8	-1.8
PB16	IPOC Station P	2.18	44	⇑*i*P	Pn	09 28 42.1	-0.2
PB16				*i* S	Sn	09 29 09.5	+0.8
PB03	IPOC Station P	2.46	150	⇑*e*P	Pn	09 28 46.0	+0.2
PB03				*e*S	Sn	09 29 13.7	-1.2
PB03				IAML		09 29 38.6	
	comp=E,772nm,0.4s						
PB09	IPOC Station P	2.54	137	⇑*e*P	Pn	09 28 48.3	+1.4
PB09				*e*S	Sn	09 29 19.2	+2.1
PB09				IAML		09 29 33.5	
	comp=E,1µm,0.7s						
PB04	IPOC Station P	2.55	160	⇑*e*P	Pn	09 28 47.0	-0.1
PB04				*e*S	Sn	09 29 15.6	-1.8
PB04				IAML		09 29 43.1	
	comp=E,862nm,0.5s						
PB05	IPOC Station P	3.03	164	*e*P	Pn	09 28 53.2	-0.3
PB05				*e*S	Sn	09 29 26.1	-2.9
PB05				IAML		09 29 54.2	
	comp=E,341nm,0.4s						
PB06	IPOC Station P	3.11	153	*e*P	Pn	09 28 54.7	0.0
PB06				*e*S	Sn	09 29 29.1	-1.9
PB06				IAML		09 29 54.4	
	comp=E,460nm,0.6s						
LVC	Limon Verde	3.36	143	Pn	Pn	09 28 59.9	+1.6
	comp=E,9.4nm,0.3s,baz=324,slow=7.8,SNR=92						
LVC				Pg	Pb	09 29 07.0	+0.6
	comp=E,32nm,0.3s,baz=348,slow=10,SNR=25						
LVC				Sn	Sn	09 29 38.8	+1.3
	comp=E,53nm,0.3s,baz=133,slow=22,SNR=18						
LVC				Lg	Lg	09 29 52.0	
	comp=E,36nm,0.3s,baz=173,slow=9.0,SNR=9.6						
LPAZ	La Paz	4.59	38	Pn	Pn	09 29 18.8	+3.3
	comp=E,2.5nm,0.3s,baz=241,slow=9.3,SNR=30						
LPAZ				LR	LR	09 31 09.5	
	comp=E,139nm,19.8s,baz=240,slow=43						
SIV	San Ignacio	10.31	69	Pn	Pn	09 30 31.1	-2.4
	comp=E,1.7nm,0.3s,baz=268,slow=7.9,SNR=23						
SIV				LR	LR	09 34 27.8	
	comp=E,39nm,22.0s,baz=230,slow=39						
H03N1	Juan Fernandez	15.15	206	Pn	Pn	09 31 40.1	+0.9
H03N1				T	T	09 47 28.5	
	baz=32,slow=72,SNR=54						
H03N2	Juan Fernandez	15.16	206	Pn	Pn	09 31 40.0	+0.7
H03N2				T	T	09 47 28.2	
	baz=32,slow=72,SNR=44						
H03N3	Juan Fernandez	15.17	206	Pn	Pn	09 31 39.8	+0.3
H03N3				T	T	09 47 22.7	
	baz=32,slow=72,SNR=42						
H03S1	Juan Fernandez	15.50	205	Pn	Pn	09 31 43.9	+0.1
	SNR=6.5						
H03S2	Juan Fernandez	15.51	205	Pn	Pn	09 31 44.3	+0.5
	SNR=8.4						
PLCA	Paso Flores	20.75	179	P	Pn	09 32 49.8	+1.4
	comp=E,0.7nm,0.6s,baz=5.6,slow=16,SNR=1.6						
PTGA	Pitinga	21.97	31	P	P	09 32 57.3	-1.9
	comp=E,3.1nm,0.5s,baz=207,slow=12,SNR=13						
TXAR	Lajitas Array	58.18	326	P	P	09 38 04.0	+4.8
	comp=E,0.3nm,0.8s,baz=155,slow=8.7,SNR=2.6						
TORD	Torodi Ar. Bea	78.78	72	P	P	09 40 07.8	-0.3
	comp=E,1.8nm,0.6s,baz=254,slow=5.4,SNR=12						
YKA	Yellowknife Ar	89.04	341	P	P	09 41 01.0	+1.7
	comp=E,0.4nm,0.7s,baz=141,slow=5.1,SNR=2.7						
H11S2	WAKE ISLAND Hy	125.63	279	T	T	12 06 34.2	
	baz=101,slow=74,SNR=13						
H11S1	WAKE ISLAND Hy	125.64	279	T	T	12 06 31.8	
	baz=101,slow=74,SNR=3.4						
H11S3	WAKE ISLAND Hy	125.65	279	T	T	12 06 28.9	
	baz=101,slow=74,SNR=2.5						
ZALV	Zalesovo Beam	141.35	23	PKP	PKiKP	09 47 37.1	-1.0
	comp=E,0.6nm,0.5s,baz=276,slow=1.3,SNR=2.1						
MKAR	Makanchi Array	145.50	33	PKPbc	PKPab	09 47 44.1	+0.8
	comp=E,0.8nm,0.9s,baz=354,slow=2.9,SNR=3.0						

IDC 14 09:42:35.4±3.1**,54°.24N**×**87°.01E,h0**^{km}**,mb1 2.8**/2**,**
mb1mx2.3/47**,mbtmp2.8**/2**,ML2.3**/2**,Error ellipse:**
s-maj=27.7km s-min=17.4km az=64.0,Southwestern
Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.32	258	*i*		09 50 18.1	
	baz=77,slow=350,SNR=1.8						
ZALV	Zalesovo Beam	1.32	258	Pg	Pg	09 42 59.7	-1.0
	0.6nm,0.3s,baz=78,slow=16,SNR=8.1						
ZALV				Lg	Lg	09 43 18.1	
	0.8nm,0.3s,baz=76,slow=29,SNR=3.7						
KURBB	Kurchatov Arra	6.32	239	Pn	Pn	09 44 10.3	+0.5
	0.1nm,0.3s,baz=55,slow=14,SNR=5.9						
KURBB				Lg	Lg	09 45 56.2	
	0.0nm,0.3s,baz=58,slow=33,SNR=2.9						
MKAR	Makanchi Array	8.03	204	Pn	Pn	09 44 34.8	+1.5
	0.1nm,0.3s,baz=26,slow=14,SNR=1.9						

TAP ***14*** *09:47:13.6, 24°.27N*×*122°.47E, h65*^{km}*, ML3.0, C*
JMA ***14*** *09:47:13.4*±*0.1, 24°.17N*×*122°.47E, h64*^{km}±*2*^{km}*, M2.2*
ISC 14 09:47:12.6±1.2**,24°.18N**±0°.02×**122°.48E**±0°.02**,h20**^{km}±5^{km}**,**
n73,σ**0**^{s}**.73**/134**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.51	57	P	Pn	09 47 25.9	+1.1
JYNG				*e*S	Sn	09 47 35.1	+2.1
YOJ	Yonaguni jima	0.56	60	P	Pn	09 47 26.5	+0.9
	baz=62						
YOJ				*e*S	Sn	09 47 36.4	+2.0
	baz=62						
YOJ	Yonaguni jima	0.56	60	P	Pn	09 47 26.6	+1.0
YOJ				*e*S	Sn	09 47 36.0	+1.6
EWUT	Wuta	0.69	293	*e*P	Pn	09 47 27.7	+0.4
	baz=285						
EWUT				*e*S	Sn	09 47 38.7	+1.3
	baz=285						
ENA	Nanau	0.72	291	*e*P	Pn	09 47 28.2	+0.6
	baz=290						
ENA				*e*S	Sn	09 47 38.9	+0.9
	baz=290						
TWC	Suao	0.72	307	*e*P	Pn	09 47 27.6	-0.1
	baz=301						
TWC				*e*S	Sn	09 47 37.8	-0.3
	baz=301						
ETL	Fush Village	0.78	269	P	Pn	09 47 29.1	+0.6
	baz=261						
ETL				S	Sn	09 47 40.7	+1.0
	baz=261						
NACB	Ninganchiao	0.80	270	P	Pn	09 47 29.1	+0.2
	baz=263						
NACB				S	Sn	09 47 40.6	+0.3
	baz=263						
TWD	Chiawan	0.81	263	P	Pn	09 47 29.3	+0.4
	baz=248						
TWD				S	Sn	09 47 41.1	+0.8
	baz=248						
NDS	Dongshan	0.83	304	*e*P	Pn	09 47 29.6	+0.3
	baz=295						
NDS				*e*S	Sn	09 47 40.7	-0.2

	baz=295						
EGS		0.83	324	eP	Pn	09 47 30.3	+1.0
	baz=319						
EGS				eS	Sg	09 47 39.5	-0.5
	baz=319						
NTC	Toucheng	0.90	319	eS	Sg	09 47 41.5	-0.5
	baz=324						
ETLH	Xiulin Townshi	0.91	272	P	Pg	09 47 30.5	+0.1
	baz=265						
ETLH				S	Sn	09 47 43.0	0.0
	baz=265						
TWE	Neicheng	0.92	307	eP	Pg	09 47 31.0	+0.5
	baz=308						
TWB1	Santiao Chiao	0.94	332	eS	Sb	09 47 42.0	-0.3
	baz=318						
ENTT	Nioudou	0.95	299	eP	Pg	09 47 31.2	0.0
	baz=286						
ENTT				eS	Sn	09 47 43.9	0.0
	baz=286						
NDT	Datong Townshi	0.97	296	eP	Pg	09 47 31.7	0.0
	baz=284						
NDT				eS	Sn	09 47 44.8	+0.3
	baz=284						
TIPB	Shuangxi	0.99	323	eP	Pb	09 47 30.8	-0.3
	baz=319						
TIPB				eS	Sb	09 47 43.1	-0.7
	baz=319						
ESL	Shilin	1.02	250	P	Pn	09 47 32.2	+0.4
	baz=238						
ESL				eS	Sn	09 47 45.6	+0.1
	baz=238						
NNSB	Datong	1.03	284	eP	Pb	09 47 32.1	+0.2
	baz=278						
NNSB				eS	Sn	09 47 45.9	-0.1
	baz=278						
NNS	Nan Shan	1.04	285	eP	Pb	09 47 32.1	+0.1
	baz=279						
NNS				eS	Sb	09 47 45.8	+0.5
	baz=279						
NWLT	Wulai	1.07	304	eP	Pg	09 47 33.2	-0.2
	baz=306						
NWLT				eS	Sn	09 47 46.7	-0.2
	baz=306						
EGFH	Guangfu	1.08	242	eP	Pb	09 47 33.0	+0.3
	baz=232						
EGFH				eS	Sg	09 47 47.9	0.0
	baz=232						
NWF	Wu-fen Shan	1.09	325	eP	Pb	09 47 31.9	-1.0
	baz=321						
NWF				eS	Sb	09 47 45.2	-1.7
	baz=321						
WHF	Hehuan Shan	1.11	269	eP	Pb	09 47 33.5	+0.1
	baz=254						
WHF				eS	Sb	09 47 48.0	+0.4
	baz=254						
YHNB	Yeheng	1.12	296	P	Pn	09 47 33.3	+0.1
	baz=282						
YHNB				S	Sb	09 47 47.7	+0.2
	baz=282						
FUSS	Fushou	1.13	274	eP	Pb	09 47 34.1	+0.5
	baz=269						
NSK	Sanguang	1.13	296	P	Pn	09 47 33.6	+0.2
	baz=282						
NSK				S	Sb	09 47 47.9	0.0
	baz=282						
IRIF	Iriomote-Funau	1.16	82	P	Pn	09 47 34.0	+0.3
IRIF				eS	Sn	09 47 49.0	+0.1
HGSD	Ruisui	1.18	235	P	Pb	09 47 34.5	+0.2
	baz=226						
HGSD				eS	Sn	09 47 50.3	+0.8
	baz=226						
TWT	Tachien	1.19	274	eP	Pb	09 47 35.2	+0.5
	baz=268						
TWT				eS	Sn	09 47 50.3	+0.3
	baz=268						
CHGB	Renai	1.20	265	eP	Pb	09 47 35.1	+0.3
	baz=251						
CHGB				eS	Sn	09 47 51.0	+0.8
	baz=251						
TDCB	Techi	1.21	274	eP	Pn	09 47 34.8	+0.2
	baz=268						
TDCB				eS	Sb	09 47 50.3	+0.2
	baz=268						
OWD	Renai	1.21	260	eP	Pb	09 47 35.0	0.0
	baz=254						
OWD				eS	Sb	09 47 49.8	-0.4
	baz=254						
HATJ	Hateruma jima	1.22	95	eS	Sb	09 47 50.5	+0.1
EHY	Hungye	1.25	238	eP	Pn	09 47 35.1	+0.1
	baz=233						
EHY				eS	Sb	09 47 51.1	-0.2
	baz=233						
VWDT	VWDT	1.29	251	P	Pb	09 47 36.3	+0.1
	baz=246						
VWDT				eS	Sb	09 47 52.9	+0.5
	baz=246						
YULB	Yu-li	1.33	234	P	Pn	09 47 36.3	+0.2
	baz=241						
YULB				eS	Sn	09 47 53.3	0.0
	baz=241						
EYUL	Yuli	1.34	232	eP	Pn	09 47 36.8	+0.5
	baz=239						
EYUL				eS	Sb	09 47 54.9	+1.0
	baz=239						
WHP	Taichung City	1.40	274	eP	Pb	09 47 38.1	-0.1
	baz=264						
WHP				eS	Sb	09 47 55.6	0.0
	baz=264						
JKRS	Kuro-shima	1.40	87	P	Pb	09 47 38.1	0.0
JKRS				S	Sn	09 47 55.3	+0.3
LIOB	Emei	1.41	290	eP	Pn	09 47 37.4	+0.2
	baz=285						
LIOB				eS	Sn	09 47 55.4	+0.1
	baz=285						
WCS	Beigang Elemen	1.43	266	eP	Pb	09 47 38.3	-0.4
	baz=256						
WCS				eS	Sn	09 47 55.5	-0.3
	baz=256						
SSLB	Suanglung	1.44	255	eP	Pn	09 47 37.8	+0.1
	baz=255						
SSLB				eS	Sn	09 47 55.7	-0.5
	baz=255						
FULB	Fuli	1.46	228	eP	Pn	09 47 38.1	+0.3
	baz=218						
FULB				eS	Sn	09 47 56.4	0.0
	baz=218						
SMLT	Sun Moon Lake	1.47	259	eP	Pn	09 47 38.9	+0.8
	baz=248						
SMLT				eS	Sn	09 47 57.4	+0.5
	baz=248						
CHKT	Chengkung	1.48	224	eP	Pn	09 47 38.0	-0.2
	baz=216						
CHKT				eS	Sn	09 47 56.1	-0.7
	baz=216						
TYC	Yuchr	1.50	260	eP	Pn	09 47 39.2	+0.7
	baz=249						
TYC				eS	Sn	09 47 58.0	+0.5
	baz=249						
JIJ	Ishigaki jima	1.53	83	P	Pn	09 47 38.9	0.0
JIJ				S	Sn	09 47 57.3	-1.0
YUS	Yu-Shan	1.55	244	eP	Pn	09 47 40.3	+0.7
	baz=232						
YUS				eS	Sn	09 47 59.0	-0.4
	baz=232						
EDH	Donghe	1.61	222	eP	Pn	09 47 39.6	-0.3
	baz=215						
EDH				eS	Sn	09 47 59.4	-0.7
	baz=215						
ELDTW	Lidau	1.66	234	eP	Pn	09 47 40.9	+0.2
	baz=224						
ELDTW				eS	Sn	09 48 01.2	-0.3
	baz=224						
ALS	Alishan	1.67	247	eP	Pn	09 47 41.6	+0.6
	baz=236						
ALS				eS	Sn	09 48 01.1	-0.9
	baz=236						
JISG	Ishigakijimahi	1.72	76	P	Pn	09 47 41.2	-0.3
JISG				S	Sn	09 48 01.8	-1.1
CHN5	Tsauling	1.74	251	eP	Pb	09 47 43.4	-0.6
	baz=239						
CHN5				eS	Sb	09 48 05.2	-0.3
	baz=239						
LDUT	Ludao	1.76	212	eS	Sn	09 48 03.9	+0.1
	baz=210						
LONT	Longtian	1.77	225	eP	Pn	09 47 42.8	+0.7
	baz=229						
LONT				eS	Sn	09 48 04.0	-0.1
	baz=229						
WDLH	Douliu	1.84	255	eS	Sb	09 48 07.8	-0.4
	baz=242						
STYH	Taoyuan	1.85	238	eP	Pn	09 47 44.4	+1.1
	baz=228						
STYH				eS	Sn	09 48 07.0	+0.9
	baz=228						
TWGBT	Beinan	1.86	224	eP	Pn	09 47 43.8	+0.4
	baz=228						
TWGBT				eS	Sn	09 48 06.1	-0.3
	baz=228						
TWG	Pinlang	1.86	224	eP	Pn	09 47 43.8	+0.3
	baz=228						
TWG				eS	Sn	09 48 06.0	-0.4
	baz=228						
TPUB	Ta-pu	1.90	243	eP	Pb	09 47 46.1	-0.6
	baz=240						
TPUB				eS	Sb	09 48 09.7	-0.4
	baz=240						
CHN4	Tsaushan	1.91	245	eP	Pn	09 47 45.4	+1.3
	baz=236						
CHN4				eS	Sn	09 48 08.5	+0.9
	baz=236						
WTP	Ta-pu	1.94	242	eP	Pb	09 47 47.0	-0.4
	baz=238						
WTP				eS	Sb	09 48 10.3	-0.9
	baz=238						
CHN1	Nanshi	2.04	241	eP	Pb	09 47 48.2	-0.8
	baz=238						
CHN1				eS	Sb	09 48 13.1	-0.9
	baz=238						
SLGT	Liugui	2.05	235	eP	Pn	09 47 47.7	+1.7
	baz=225						
SLGT				eS	Sn	09 48 12.5	+1.5
	baz=225						
JTJ	Tarama	2.08	77	P	Pn	09 47 46.8	+0.4
JTJ				eS	Sn	09 48 10.5	-1.3
ECL	Taimali	2.10	222	eS	Sn	09 48 11.5	-0.8
	baz=218						
MASBT	Mashibuluo	2.30	228	eP	Pn	09 47 49.7	+0.2
	baz=224						
MASBT				eS	Sn	09 48 19.1	+1.9
	baz=224						
JIRB	Irabujima	2.54	75	S	Sn	09 48 21.4	-1.8
JIKM	Ikemajima	2.63	73	S	Sn	09 48 25.6	+0.2
JMJ2	Miyako jima3	2.66	77	S	Sn	09 48 25.7	-0.4
PHUB	P'eng-hu	2.74	257	eS	Sn	09 48 25.4	-2.6
	baz=253						

IDC 14 09:54:26.4±3.8,**18°.00S**×**178°.65W**,**h583**^{km}±28^{km},**mb2.9**/3,**mb1 3.3**/4,**mb1mx2.9**/35,**mbtmp3.9**/4,**Error ellipse: s-maj=242.2km s-min=28.1km az=159.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.15	274	P	P	09 55 45.2	0.0
	14nm,0.3s,baz=121,slow=4.0,SNR=84						
WRA	Warramunga Arr	44.39	260	P	P	10 01 46.2	-0.3
	0.3nm,0.4s,baz=96,slow=6.9,SNR=18						
WRA				PcP	PcP	10 03 17.3	-0.2
	0.3nm,1.1s,baz=94,slow=4.5,SNR=1.5						
ASAR	Alice Springs	44.55	254	P	P	10 01 47.8	0.0
	3.2nm,0.5s,baz=88,slow=8.4,SNR=94						
ASAR				PcP	PcP	10 03 17.7	-0.3
	0.2nm,0.7s,baz=92,slow=5.7,SNR=1.8						
TXAR	Lajitas Array	86.23	58	P	P	10 06 07.4	-0.1
	0.2nm,0.8s,baz=224,slow=3.5,SNR=3.9						

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*IDC **14** 09:55:26.7±2.6,53°.74N×87°.05E,h0^{km},mb1 3.2/2, mb1mx3.0/46,mbtmp3.2/2,ML2.9/2,Error ellipse: s-maj=26.0km s-min=15.2km az=67.0*

*NNC **14** 09:55:28.8±3.9,53°.70N×86°.73E,h0^{km},mb2.9,mpv2.7, Error ellipse: s-maj=38.5km s-min=15.7km az=36.0, Suspected Mining explosion.*

ISC 14 09:55:28.1±4.0,**53°.8N**±0°.2×**86°.8E**±0°.2,**h0**^{km},**n8,**σ**0**^{s}**.84**/9,**4C-5D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.19	280	i		10 02 33.2	
	baz=98,slow=348,SNR=2.9						
ZAA0	Zalesovo Array	1.19	280	⇑P	Pb	09 55 50.9	-0.6
	0.4nm,0.5s						
ZAA0				⇓S	Sg	09 56 06.7	+0.5
	0.3nm,0.3s						
ZALV	Zalesovo Beam	1.19	280	Pg	Pg	09 55 50.6	-0.2
	1.9nm,0.3s,baz=96,slow=17,SNR=22						
ZALV				Lg	Lg	09 56 10.1	
	2.2nm,0.3s,baz=102,slow=29,SNR=19						
KURK	Kurchatov	5.88	242	⇓Pn	Pn	09 56 57.8	+1.4
	1.0nm,0.7s						
KURK				⇑Lg	Lg	09 58 34.6	
	4.0nm,1.0s						
KURBB	Kurchatov Arra	5.98	242	Pn	Pn	09 56 58.5	+0.8
	0.2nm,0.3s,baz=58,slow=13,SNR=5.7						
KURBB	Kurchatov Arra	5.98	242	⇓Pn	Pn	09 56 57.5	-0.3
	2.5nm,0.9s						
KURBB				⇓Lg	Lg	09 58 37.9	
	4.6nm,0.7s						
MK31	Makanchi Array	7.55	204	⇑Pn	Pn	09 57 19.8	+0.4
	0.7nm,0.7s,baz=24,slow=13,SNR=9.4						
MK31				⇓Sn	Sn	09 58 45.0	-0.7
	1.6nm,1.0s,baz=143,slow=8.5,SNR=4.6						
MK31				⇑Lg	Lg	09 59 26.4	
	3.3nm,1.1s,baz=29,slow=25,SNR=3.9						
MKAR	Makanchi Array	7.55	204	Pn	Pn	09 57 20.0	+0.6
	0.2nm,0.3s,baz=24,slow=12,SNR=9.1						

IDC 14 09:59:37.0±3.9,**55°.94N**×**86°.22E**,**h0**^{km},**mb1 3.1**/3,**mb1mx3.0**/40,**mbtmp3.1**/3,**ML2.4**/3,**Error ellipse: s-maj=34.0km s-min=29.2km az=41.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	2.16	203	i		10 12 40.0	
	baz=21,slow=345,SNR=2.9						
ZALV	Zalesovo Beam	2.16	203	Pn	Pn	10 00 14.6	+0.4
	2.1nm,0.3s,baz=22,slow=16,SNR=39						
ZALV				Lg	Lg	10 00 45.6	
	4.7nm,0.3s,baz=24,slow=26,SNR=22						
KURBB	Kurchatov Arra	7.04	224	Pn	Pn	10 01 20.6	-0.7
	0.1nm,0.3s,baz=43,slow=14,SNR=1.5						
MKAR	Makanchi Array	9.48	197	Pn	Pn	10 01 54.8	+0.1
	0.1nm,0.3s,baz=28,slow=14,SNR=1.7						

IDC 14 10:00:30.3±2.4,**4°.14S**×**130°.56E**,**h0**^{km},**mb3.3**/1,**mb1 3.3**/3,**mb1mx3.1**/43,**mbtmp3.1**/3,**ML2.7**/2,**Error ellipse: s-maj=176.2km s-min=16.4km az=71.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.14	167	Pn	Pn	10 04 17.2	-1.5
	0.0nm,0.3s,baz=349,slow=13,SNR=1.7						
ASAR	Alice Springs	19.68	171	P	P	10 05 01.9	+0.6
	0.1nm,0.3s,baz=343,slow=10.0,SNR=6.4						
MKAR	Makanchi Array	66.16	326	P	P	10 11 19.6	-0.2
	0.1nm,0.4s,baz=112,slow=8.4,SNR=1.8						

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*SJA **14** 10:03:52.3±0.6,21°.28S×68°.66W,h142^{km}±3^{km},ML4.6, MW4.4*

*IDC **14** 10:03:53.9±0.5,21°.28S×68°.38W,h116^{km}±5^{km},mb4.1/10, mb1 4.3/14,mb1mx4.2/23,mbtmp4.5/14,MS3.3/2, Ms1 3.3/2,ms1mx2.8/20,Error ellipse: s-maj=16.2km s-min=8.5km az=104.0*

*NEIC **14** 10:03:53.7±1.9,21°.26S±0°.05×68°.52W±0°.04,h118^{km}±5^{km}, Error ellipse: s-maj=7.8km s-min=4.2km az=215.0*

*VAO **14** 10:03:53.1±0.4,21°.16S×68°.47W,h119^{km}±4^{km},mb4.8*

*GUC **14** 10:03:54.6±0.6,21°.29S×68°.57W,h119^{km}±4^{km},ML4.7*

ISC 14 10:03:53.4±0.4,**21°.26S**±0°.03×**68°.49W**±0°.04,**h121**^{km}±4^{km},**n202,**σ**1**^{s}**.37**/244,**mb4.7**/26,**8C-2D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.88	233	⇑iP	Pn	10 04 15.1	+0.5
PB09				i S	Sn	10 04 30.8	+0.3
PB09	IPOC Station P	0.88	233		Pn	10 04 15.0	+0.5
PB09	IPOC Station P	0.88	233	eP	Pn	10 04 15.0	+0.5
PB09				eS	Sn	10 04 32.0	+1.6
PB09				eP	Sn	10 04 32.1	+1.7
PB09				IAML		10 04 32.2	
	comp=Z,6µm,0.7s						
PB01	IPOC Station P	0.96	283	⇑iP	Pn	10 04 14.9	-0.2
PB01				i S	Sn	10 04 30.5	-1.1
PB01				IAML		10 04 32.3	
	comp=N,15µm,0.2s						
PB01	IPOC Station P	0.96	283		Pn	10 04 15.0	-0.2
PB01	IPOC Station P	0.96	283	eP	Pn	10 04 15.0	-0.2
PB01				eP	Pn	10 04 25.4	+10
PB01				eP	S	10 04 32.1	+0.6
PB01				eS	S	10 04 32.1	+0.6
PB01				IAML		10 04 33.3	
	comp=Z,7µm,0.2s						
PB08	IPOC Station P	1.28	331	⇓iP	Pn	10 04 19.8	+1.0
PB08				i S	Sn	10 04 38.7	+0.7
PB08				IAML		10 04 42.0	
	comp=N,18µm,0.5s						
PB08	IPOC Station P	1.28	331		Pn	10 04 19.6	+0.8
PB08	IPOC Station P	1.28	331	eP	Pn	10 04 19.8	+1.0
PB08				eP	Pn	10 04 19.9	+1.1
PB08				eS	Sn	10 04 39.8	+1.8
PB08				eS	Sn	10 04 39.9	+1.9
PB08				IAML		10 04 41.0	
	comp=Z,9µm,0.5s						
PB07	IPOC Station P	1.38	250	⇑iP	Pn	10 04 19.5	-0.1
PB07				i S	Sn	10 04 38.3	-1.3
PB07				IAML		10 04 40.0	
	comp=E,15µm,0.5s						
PB07	IPOC Station P	1.38	250		Pn	10 04 19.6	-0.1
PB07	IPOC Station P	1.38	250	eP	Pn	10 04 19.4	-0.3
PB07				eS	Sn	10 04 39.5	-0.1
PB07				IAML		10 04 42.5	
	comp=Z,6µm,0.4s						
LVC	Limon Verde	1.40	196	P	Pn	10 04 20.7	+0.7
	comp=Z,85nm,0.3s,baz=48,slow=9.3,SNR=597						
LVC				S	Sn	10 04 40.3	0.0
	comp=Z,395nm,0.3s,baz=116,slow=23,SNR=26						
LVC	Limon Verde	1.40	196	eP	Pn	10 04 20.3	+0.3
LVC				i S	Sn	10 04 40.4	+0.1
LVC	Limon Verde	1.40	196	eP	Pn	10 04 20.4	+0.4
LVC	Limon Verde	1.40	196	Pn	Pn	10 04 20.8	+0.8
LVC	Limon Verde	1.40	196	eP	Pn	10 04 20.8	+0.7
LVC				eS	Sn	10 04 41.6	+1.4
PB03	IPOC Station P	1.41	236	⇑iP	Pn	10 04 19.9	-0.1
PB03				i S	Sn	10 04 39.3	-0.9
PB03				IAML		10 04 40.2	
	comp=N,13µm,0.2s						
PB03	IPOC Station P	1.41	236	eP	Pn	10 04 19.9	-0.1
PB03				eS	Sn	10 04 39.8	-0.5
PB03				eS	Sn	10 04 39.9	-0.3
PB03				IAML		10 04 42.8	
	comp=Z,8µm,0.4s						
PATCX	Punta Patache	1.61	286	⇑iP	Pn	10 04 22.3	+0.1
PATCX				i S	Sn	10 04 43.0	-1.2
PATCX				IAML		10 04 44.8	
	comp=N,16µm,0.6s						
PATCX	Punta Patache	1.61	286	Pn	Pn	10 04 22.4	+0.1
PATCX	Punta Patache	1.61	286	eP	Pn	10 04 22.0	-0.3
PATCX				eP	P	10 04 22.4	+0.1
PATCX				eP	P	10 04 22.4	+0.1
PATCX				eP	Pn	10 04 22.6	+0.3
PATCX				IAML		10 04 45.5	
	comp=Z,8µm,0.5s						
HMBC	Humberstone	1.63	307	eP	Pn	10 04 22.4	-0.2
HMBC				i S	Sn	10 04 43.7	-1.0
TA01	Diego Aracena	1.73	293	i P	Pn	10 04 23.2	-0.3
TA01				i S	Sn	10 04 45.0	-1.5
TA01				IAML		10 04 45.9	
	comp=N,17µm,0.3s						
TA01	Diego Aracena	1.73	293	Pn	Pn	10 04 23.3	-0.3
TA01	Diego Aracena	1.73	293	eP	Pn	10 04 23.0	-0.5
TA01				eS	Sn	10 04 45.9	-0.6
TA01				IAML		10 04 47.2	
	comp=Z,4µm,0.3s						
PB06	IPOC Station P	1.75	215	⇑iP	Pn	10 04 24.1	+0.2
PB06				i S	Sn	10 04 46.8	-0.6
PB06				IAML		10 04 47.8	
	comp=E,7µm,0.2s						
PB06	IPOC Station P	1.75	215		Pn	10 04 24.1	+0.2
PB06	IPOC Station P	1.75	215	eP	Pn	10 04 24.0	0.0
PB06				eS	Sn	10 04 47.4	0.0
PB06				IAML		10 04 48.0	
	comp=Z,4µm,0.3s						
TA02	Huaiquique	1.82	302	⇑iP	Pn	10 04 24.4	-0.3
TA02				i S	Sn	10 04 46.8	-1.8
TA02				IAML		10 04 48.9	
	comp=N,11µm,0.6s						
TA02	Huaiquique	1.82	302		Pn	10 04 24.4	-0.3
TA02	Huaiquique	1.82	302	eP	Pn	10 04 24.0	-0.7
TA02				eS	Sn	10 04 48.9	+0.3
TA02				IAML		10 04 52.5	
	comp=Z,4µm,0.4s						
PB11	IPOC Station P	1.85	324	⇓iP	Pn	10 04 25.2	0.0
PB11				i S	Sn	10 04 48.7	-0.8
PB11				IAML		10 04 51.4	
	comp=N,11µm,0.4s						
PB11	IPOC Station P	1.85	324	Pn	Pn	10 04 25.3	0.0
PB11	IPOC Station P	1.85	324	eP	Pn	10 04 25.4	+0.1
PB11				eS	Sn	10 04 49.5	0.0
PB11				eS	Sn	10 04 49.6	0.0
PB11				IAML		10 04 53.3	
	comp=Z,4µm,0.4s						
PB04	IPOC Station P	1.87	235	⇑iP	Pn	10 04 24.9	-0.5
PB04				i S	Sn	10 04 48.3	-1.6
PB04				IAML		10 04 58.1	
	comp=N,5µm,0.5s						
PB04	IPOC Station P	1.87	235	Pn	Pn	10 04 25.2	-0.3
PB04	IPOC Station P	1.87	235	eP	Pn	10 04 24.9	-0.5
PB04				eS	Sn	10 04 48.8	-1.2
PB04				eS	Sn	10 04 49.5	-0.5
PB04				IAML		10 04 52.9	
	comp=Z,3µm,0.2s						
PB15	IPOC Station P	2.14	205	eP	Pn	10 04 29.1	+0.2
PB15	IPOC Station P	2.14	205		Pn	10 04 28.9	+0.1
PB15	IPOC Station P	2.14	205	eP	Pn	10 04 29.0	+0.2
PB15				eP	Pn	10 04 29.5	+0.7
PB15				eS	Sn	10 04 55.2	-0.7
PB15				IAML		10 05 00.8	
	comp=Z,11µm,0.3s						
PB05	IPOC Station P	2.24	225	eP	Pn	10 04 29.0	-1.0
PB05				eP	Pn	10 04 29.5	-0.5
PB05				eS	Sn	10 04 56.7	-1.4
PB05				IAML		10 05 05.0	
	comp=Z,2µm,0.4s						
YJA	Yavi	2.91	109	eP	Pn	10 04 42.0	+3.0
YJA				eS	Sn	10 05 15.4	+1.4
PB10	IPOC Station P	2.94	220	eP	Pn	10 04 38.4	-0.6
PB10				i S	Sn	10 05 06.7	-7.4
PB10	IPOC Station P	2.94	220	Pn	Pn	10 04 38.4	-0.6
PB10	IPOC Station P	2.94	220	eP	Pn	10 04 38.2	-0.7
PB10				eS	Sn	10 05 11.9	-2.1
PB10				IAML		10 05 28.6	
	comp=Z,802nm,0.7s						
PB16	IPOC Station P	3.07	342		Pn	10 04 42.0	+0.9
PB12	IPOC Station P	3.15	326	Pn	Pn	10 04 40.5	-1.3
PB12	IPOC Station P	3.15	326	eP	Pn	10 04 40.5	-1.3
PB12				eS	Sn	10 05 17.9	-1.3
PB12				IAML		10 05 30.3	
	comp=Z,1µm,0.5s						
AP01	Chacalluta	3.37	328		Pn	10 04 43.5	-1.0
AP01	Chacalluta	3.37	328	eP	Pn	10 04 44.0	-0.5
AP01				IAML		10 05 29.9	
	comp=Z,2µm,0.6s						
PB14	IPOC Station P	3.78	207	Pn	Pn	10 04 49.9	-0.4
SLA	San Lorenzo	4.41	142	eP	Pn	10 04 56.0	-2.6
ASTB	Santa Barbara	4.59	126	eP	Pn	10 05 02.0	+1.0
ASTB				eS	Sn	10 05 55.4	+2.0
LPAZ	La Paz	4.96	4	P	Pn	10 05 08.3	+1.9
	comp=Z,21nm,0.3s,baz=170,slow=6.9,SNR=303						
LPAZ				S	Sn	10 06 02.5	-0.7
	baz=278,slow=2.7,SNR=1.6						
LPAZ	La Paz	4.96	4	eP	Pn	10 05 08.1	+1.6
LPAZ	La Paz	4.96	4	eP	Pn	10 05 08.0	+1.6
AC02	Maricunga	5.58	186	Pn	Pn	10 05 14.0	-0.6
AC02	Maricunga	5.58	186	eS	Sn	10 05 56.0	-22
AHML	Horco Molle	6.21	153	eP	Pn	10 05 24.0	+1.3
GO03	Copiap	6.50	194	Pn	Pn	10 05 23.9	-2.7
GO03	Copiap	6.50	194	eS	Sn	10 06 34.8	-4.6
AC04	Llanos de Chal	7.30	198	Pn	Pn	10 05 33.0	-4.3
LCO	Las Campanas	7.97	194	Pn	Pn	10 05 42.8	-3.9

SIV	San Ignacio	8.77	55	P	Pn	10 05 55.4	-2.0
	comp=Z,13nm,0.3s,baz=240,slow=11,SNR=297						
SIV				S	Sn	10 07 28.1	-6.5
	comp=Z,1.1nm,0.3s,baz=267,slow=15,SNR=6.9						
SIV				LR	LR	10 10 04.8	
	comp=Z,134nm,21.0s,baz=272,slow=43						
PTLB	Pontes e Lacer	10.60	58	eP	Pn	10 06 19.6	-2.4
PTLB	Pontes e Lacer	10.60	58	Pn	Pn	10 06 19.6	-2.4
CPUP	Villa Florida	11.39	118	P	Pn	10 06 32.5	-0.1
	comp=Z,0.4nm,0.3s,baz=308,slow=15,SNR=5.4						
CPUP	Villa Florida	11.39	118	eP	Pn	10 06 33.2	+0.7
VILB	Vilhena	11.45	45	eP	Pn	10 06 32.4	-1.0
VILB	Vilhena	11.45	45	Pn	Pn	10 06 32.8	-0.6
ETMB	Extrema	11.59	11	eP	Pn	10 06 33.8	-1.4
ETMB	Extrema	11.59	11	Pn	Pn	10 06 32.9	-2.4
VA03	San Esteban	11.60	189		Pn	10 06 35.1	-0.3
AQDB	Aquidauana	11.98	89	eP	Pn	10 06 37.5	-2.8
AQDB	Aquidauana	11.98	89	Pn	Pn	10 06 38.8	-1.6
SALV	Santo Antonio	13.25	68	eP	Pn	10 06 52.3	-4.6
SAML	Samuel	13.27	23		Pn	10 06 55.1	-2.1
PP1B	Ponte de Pedra	13.35	76	eP	Pn	10 06 59.2	+1.0
CZSB	Cruzeiro do Su	14.06	343	eP	Pn	10 07 01.9	-5.5
PDRB	Porto dos Gac	14.80	51	eP	Pn	10 07 14.1	-2.7
PTGB	Pitanga	15.51	106	eP	Pn	10 07 25.1	-0.6
CLDB	Colider	15.97	52	eP	Pn	10 07 31.6	+0.2
PCMB	Pacaembu	16.05	94	eP	Pn	10 07 31.6	-0.7
ITAB	Concordia	16.05	115	eP	P	10 07 32.9	-0.5
ITAB	Concordia	16.05	115	P	P	10 07 33.3	0.0
ITAB				IAmb	IAmb	10 07 35.1	
	comp=Z,48nm,0.8s						
CPSB	Cacapava Do Su	16.31	127	eP	Pn	10 07 35.0	-0.4
ARAG	Araguaiana, MT	16.75	74	eP	Pn	10 07 40.8	-0.2
PLTB	Pedras Altas	16.92	131	eP	P	10 07 43.0	+0.1
TBTG	Tabatinga, AM	17.03	355	eP	Pn	10 07 45.1	+0.8
TBTG	Tabatinga, AM	17.03	355	eP	P	10 07 43.5	-0.7
TBTG	Tabatinga, AM	17.03	355	P	P	10 07 44.0	-0.2
ITRB	Iturama	17.06	88	eP	Pn	10 07 45.1	+0.4
FRTB	Fartura	17.64	100	eP	P	10 07 51.2	+0.3
TRQA	Tornquist	17.66	163		P	10 07 50.1	-0.9
TRQA				IAmb	IAmb	10 07 53.5	
	comp=Z,32nm,0.8s						
CNLB	Canela	17.84	120	eP	P	10 07 53.2	+0.2
TIJ01	Guaruva-PR	18.35	106	eP	P	10 07 58.8	+0.1
BB19B	Bebedouro	18.62	93	eP	P	10 08 01.9	+0.2
SNDB	Serra Nova Dou	18.88	63	eP	P	10 08 04.2	-0.2
TER01	Tubaro-SC	18.98	116	eP	Pn	10 08 06.9	-0.6
NPGB	Novo Progresso	19.00	44	eP	P	10 08 03.3	-2.5
IPMB	Ipameri, GO	19.38	84	eP	P	10 08 10.2	+0.2
PLCA	Paso Flores	19.49	185	P	Pn	10 08 12.4	-1.0
	comp=Z,1.3nm,0.3s,baz=0.8,slow=13,SNR=47						
PLCA	Paso Flores	19.49	185	eP	P	10 08 11.8	+0.8
PLCA	Paso Flores	19.49	185	P	P	10 08 11.9	+0.9
PLCA				IAmb	IAmb	10 08 17.2	
	comp=Z,24nm,0.8s						
RCLB	Rio Claro- Sao	19.49	97	eP	P	10 08 10.9	-0.3
MACA	Manacapuru-AM	19.53	24	eP	P	10 08 08.5	-3.0
MACA	Manacapuru-AM	19.53	24	P	P	10 08 10.2	-1.3
MACA				IAmb	IAmb	10 08 14.0	
	comp=Z,43nm,0.7s						
SPB	Sao Paulo	19.61	101	eP	P	10 08 12.7	+0.4
SPB	Sao Paulo	19.61	101	P	P	10 08 12.7	+0.4
PET01	Itanhaem-SP	19.79	103	eP	P	10 08 14.1	-0.2
LL04	Puerto Octay	19.86	189	P	P	10 08 15.6	+0.6
LL04				IAmb	IAmb	10 08 16.7	
	comp=Z,82nm,0.9s						
VAO	Valinhos	20.02	99	eP	P	10 08 15.9	-0.9
BDFB	Brasilia	20.21	77	P	P	10 08 19.1	+0.1
	comp=Z,27nm,0.5s,baz=251,slow=10,SNR=44						
LL05	Los Muermos	20.52	191	P	P	10 08 23.2	+1.3
ITTB	Itaituba	20.87	38	eP	P	10 08 24.6	-1.4
PARB	Paraibuna	21.26	100	eP	P	10 08 29.3	-0.9
PEXB	Peixe	21.36	68	eP	P	10 08 29.6	-1.6
PTGA	Pitinga	22.04	23	P	P	10 08 37.2	-1.2
	comp=Z,7.8nm,0.4s,baz=205,slow=15,SNR=58						
BSCB	Bom Sucesso	22.12	94	eP	P	10 08 39.4	0.0
GO07	Milladeo Hill,	22.21	190	P	P	10 08 39.5	-0.4
MAN01	Angra dos Reis	22.78	99	eP	P	10 08 44.8	-1.1
VAS01	Vassouras-RJ	23.28	97	eP	P	10 08 50.3	-0.2
PRPB	Parauapebas	23.50	53	eP	P	10 08 51.2	-1.3
SMTB	Santa Maria do	23.61	62	eP	P	10 08 52.7	-0.9
MC01	Montes Claros	23.64	83	eP	P	10 08 52.1	-1.8
MALB	Monte Alegre	23.76	38	eP	P	10 08 54.3	-0.6
FLOC	Florencia	23.76	342	eP	P	10 08 53.9	-1.0
JANB	Januaria	23.77	79	eP	P	10 08 53.8	-1.4
SDBA	SAO DESIDERIO	24.21	72	eP	P	10 08 57.5	-1.5
COYC	Coyhaique	24.42	186	P	P	10 09 00.0	-0.6
COYC				IAmb	IAmb	10 09 02.3	
	comp=Z,26nm,0.9s						
BOAV	Boa Vista	24.77	19	eP	P	10 09 03.9	-0.2
BOAV	Boa Vista	24.77	19	P	P	10 09 04.0	0.0
SJMB	Sao Joao De Ma	25.78	89	eP	P	10 09 12.7	-0.5
ORTC	Ortega, Tolima	25.88	344	eP	P	10 09 17.9	+3.7
ALF01	Guarapari-ES	25.93	94	eP	P	10 09 14.1	-0.4
MCPB	Macapa, AP	26.25	40	eP	P	10 09 16.6	-0.8
RIB01	Linhares ES	26.41	91	eP	P	10 09 18.8	-0.1
NAN01	Guarapari, ES	26.93	88	eP	P	10 09 22.9	-0.6
PLMC	San Jos del P	27.11	343	eP	P	10 09 27.4	+2.2
GUY2C	Guyana, Caldas	27.17	345	eP	P	10 09 16.9	-9.3
TMAB	Tom-Au,PA,Br	27.34	49	eP	P	10 09 27.1	-0.1
GUA01	Guaratinga, BA	27.51	85	eP	P	10 09 28.4	-0.4
CMC01	Camacan, BA	28.10	83	eP	P	10 09 34.5	+0.5
NBIT	Itapeh - BA	28.30	82	eP	P	10 09 36.1	+0.3
GDU01	Guandu, BA	28.55	80	eP	P	10 09 35.5	-2.4
NBPN	Ponto Novo - B	29.04	74	eP	P	10 09 42.0	-0.4
ZARC	Zaragoza, Cauc	29.25	347	P	P	10 09 41.7	-2.5
ROSB	Rosrio	29.93	56	eP	P	10 09 48.9	-1.3
SMLC	San Martn de	30.38	349	eP	P	10 09 52.3	-1.8
MDP	Montagnes des	30.47	32	LR	LR	10 21 49.6	
	comp=Z,94nm,19.3s,baz=182,slow=35						
NBLA	Lagarto - SE	31.15	76	eP	P	10 09 59.6	-1.5
NBPS	Pedro II - PI	31.16	61	eP	P	10 10 01.4	+0.3
LL6C	La Loma 6 Bece	31.16	351	eP	P	10 10 01.9	+0.9
PCRV	Puerto La Cruz	31.47	7	P	P	10 10 02.9	-0.9
	comp=Z,5.7nm,0.6s,baz=97,slow=3.0,SNR=2.4						
NBMA	Muriti-CE	31.86	69	eP	P	10 10 06.5	-0.8
NBPB	Pedra_Branca-C	32.08	65	eP	P	10 10 09.4	+0.3
NBMO	Morrinhos-CE	32.92	61	eP	P	10 10 16.4	0.0
NBAN	Anadia - AL	33.05	75	eP	P	10 10 17.2	-0.4
OBIP	Obispado Ponce	39.11	3	P	P	10 11 08.6	-0.4
PDPR	Patillas Dam,	39.11	4	P	P	10 11 07.6	-1.5
PDPR				IAmb	IAmb	10 11 08.3	
	comp=Z,26nm,1.0s						
CELP	Cerrillos	39.14	3	P	P	10 11 07.5	-1.8
CELP				IAmb	IAmb	10 11 10.4	
	comp=Z,27nm,1.1s						
SMAI	San Martin Ant	46.87	179	P	P	10 12 12.5	+1.5
U54A	Nelsons Funny	58.84	347	P	P	10 13 40.1	+0.8
S54A	Dingess, Beckl	59.97	348	P	P	10 13 47.6	+0.5
S54A				IAmb	IAmb	10 13 48.8	
	comp=Z,15nm,0.8s						
VNA3	Neumayer Olymp	60.17	161	P	P	10 13 49.7	+1.7
T47A	Sharon Grove	60.54	343	P	P	10 13 50.4	-0.6
T47A				IAmb	IAmb	10 13 51.5	
	comp=Z,24nm,1.2s						
TXAR	Lajitas Array	60.66	325	P	P	10 13 52.6	+0.6
	comp=Z,0.2nm,0.7s,baz=157,slow=4.9,SNR=2.1						
TXAR				pP	pP	10 14 22.1	-0.4
	comp=Z,0.4nm,0.7s,baz=146,slow=8.6,SNR=4.5						
VNA2	Neumayer--Watz	60.74	161	P	P	10 13 53.6	+1.7
	baz=279,slow=7.2						
Q56A	Snyder Ridge,	60.82	350	IAmb	IAmb	10 13 55.2	
	comp=Z,13nm,0.8s						
O54A	Avella	62.12	350	IAmb	IAmb	10 14 03.1	
	comp=Z,6.8nm,0.7s						
SNAA	Sanae	62.37	161	P	P	10 14 04.3	+1.4
SNAA	Sanae	62.37	161	P	P	10 14 03.7	+0.8
FVM	French Village	62.44	341	IAmb	IAmb	10 14 05.0	
	comp=Z,10nm,0.9s						
CCM	Cathedral Cave	62.76	340	P	P	10 14 06.0	+0.3
CCM				IAmb	IAmb	10 14 06.9	
	comp=Z,6.6nm,0.8s						
N54A	Moraine State	62.82	350	IAmb	IAmb	10 14 08.2	
	comp=Z,18nm,1.1s						
S39A	Bolivar	63.13	338	P	P	10 14 07.9	-0.4
S39A				IAmb	IAmb	10 14 09.6	
	comp=Z,6.3nm,0.7s						
LIC	Lamto	67.95	74	eP	P	10 14 39.7	-0.1
	comp=Z,16nm,0.7s						
TIC	Toumodi	68.14	73	eP	P	10 14 41.1	+0.1
KIC	Kosan Boka	68.26	74	eP	P	10 14 42.0	+0.3
	comp=Z,36nm,0.7s						
DBIC	Dimbokro	68.29	73	P	P	10 14 42.4	+0.4
	comp=Z,21nm,0.7s,baz=244,slow=5.5,SNR=28						
DBIC	Dimbokro	68.29	73	P	P	10 14 41.2	-0.7
QSPA	South Pole Qui	68.93	180	P	P	10 14 45.6	+0.4
QSPA				IAmb	IAmb	10 14 47.9	
	comp=Z,7.9nm,0.7s						
KOWA	Kowa	72.57	66	P	P	10 15 07.9	0.0
KOWA				IAmb	IAmb	10 15 09.1	
	comp=Z,18nm,0.8s						
PDAR	Pinedale Array	74.10	330	P	P	10 15 18.3	+1.7
	comp=Z,0.5nm,0.8s,baz=136,slow=7.9,SNR=4.7						
NVAR	Mina Array Bea	75.55	322	P	P	10 15 26.9	+1.9
	comp=Z,0.2nm,0.3s,baz=207,slow=6.3,SNR=3.7						
TORD	Torodi Ar. Bea	76.91	70	P	P	10 15 33.2	+0.3
	comp=Z,32nm,0.6s,baz=254,slow=5.4,SNR=194						
BOSA	Boshof	83.21	118	P	P	10 16 07.2	+0.4
	comp=Z,2.5nm,0.7s,baz=286,slow=3.7,SNR=6.7						
MAW	Mawson	84.44	163	P	P	10 16 13.7	+1.6
	comp=Z,2.5nm,0.9s,baz=232,slow=8.6,SNR=4.3						
ESDC	Sonseca Array	85.39	44	P	P	10 16 17.8	+0.4
	comp=Z,3.9nm,1.0s,baz=244,slow=5.8,SNR=10						
ESDC	Sonseca Array	85.39	44	P	P	10 16 18.1	+0.7
YKA	Yellowknife Ar	91.10	340	P	P	10 16 44.9	+1.0
	comp=Z,3.1nm,0.6s,baz=134,slow=4.4,SNR=50						
YKA				pP	pP	10 17 15.9	-0.6
	comp=Z,1.4nm,0.7s,baz=133,slow=4.6,SNR=4.3						
YKA	Yellowknife Ar	91.10	340	P	P	10 16 44.5	+0.7
ASAR	Alice Springs	130.30	207	PKP	PKiKP	10 22 51.0	0.0
	comp=Z,0.2nm,0.5s,baz=124,slow=1.7,SNR=5.8						
ASAR				pPKP	pPKPdf	10 23 23.2	-1.1
	comp=Z,0.3nm,0.8s,baz=122,slow=1.5,SNR=2.7						
WRA	Warramunga Arr	133.35	210	PKP	PKiKP	10 22 57.5	+0.2
	comp=Z,0.5nm,0.9s,baz=161,slow=1.9,SNR=8.3						
WRA				pPKP	pPKPdf	10 23 29.5	-0.6
	comp=Z,0.5nm,0.6s,baz=158,slow=1.8,SNR=3.6						
ZALV	Zalesovo Beam	141.57	25	PKP	PKPdf	10 23 10.6	+0.5
	comp=Z,2.0nm,0.5s,baz=295,slow=1.6,SNR=6.5						
KSH	Kashi	144.65	51	PKP	PKPdf	10 23 17.3	+1.2
MKAR	Makanchi Array	145.21	36	PKPbc	PKPab	10 23 18.2	+1.3
	comp=Z,9.2nm,0.7s,baz=322,slow=3.5,SNR=66						
MKAR	Makanchi Array	145.21	36		PKPab	10 23 17.7	+0.8
KLR	Kul'dur	147.78	335	PKPbc	PKPbc	10 23 24.8	+0.9
	comp=Z,0.7nm,0.5s,baz=58,slow=4.5,SNR=3.9						
USRK	Ussuriysk Ar.	151.52	328	PKPbc	PKiKP	10 23 34.1	+0.4
	comp=Z,1.3nm,0.7s,baz=15,slow=1.2,SNR=5.3						
SONM	Songino Array	153.17	8	PKPbc	PKiKP	10 23 38.1	+0.9
	comp=Z,0.4nm,0.4s,baz=287,slow=0.3,SNR=4.2						

IDC 14 10:05:41.7±2.6**, 53°.92N×86°.56E, h0^{km}, mb1 3.1**/2**, mb1mx3.0**/47**, mbtmp3.1**/2**, ML2.6**/2**, Error ellipse: s-maj=21.8km s-min=13.0km az=64.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.03	272	i		10 12 05.0	
	baz=89,slow=348,SNR=19						
ZALV	Zalesovo Beam	1.03	272	Pg	Pg	10 06 00.7	-0.7
	0.6nm,0.3s,baz=94,slow=19,SNR=5.0						
ZALV				Lg	Lg	10 06 15.9	
	1.6nm,0.3s,baz=94,slow=29,SNR=14						
KURBB	Kurchatov Arra	5.93	239	Pn	Pn	10 07 11.6	+0.9
	0.1nm,0.3s,baz=57,slow=13,SNR=3.6						
MKAR	Makanchi Array	7.64	203	Pn	Pn	10 07 35.2	+1.1
	0.1nm,0.3s,baz=22,slow=12,SNR=6.5						

IDC 14 10:30:05.6±1.9**, 3°.88S×130°.36E, h0^{km}, mb3.2**/1**, mb1 3.3**/3**, mb1mx3.2**/40**, mbtmp3.2**/3**, ML2.7**/2**, Error ellipse: s-maj=131.1km s-min=15.9km az=71.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.43	167	Pn	Pn	10 33 55.9	-1.8
	0.0nm,0.3s,baz=346,slow=10,SNR=2.4						
ASAR	Alice Springs	19.96	170	P	P	10 34 40.0	+0.4
	0.1nm,0.3s,baz=352,slow=12,SNR=8.6						
MKAR	Makanchi Array	65.85	326	P	P	10 40 52.9	-0.2
	0.1nm,0.4s,baz=116,slow=9.8,SNR=1.6						

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*NNC **14** 10:35:06.7±5.6, 36°.86N×70°.55E, h172^{km}±73^{km}, mb3.0, mpv4.0, Error ellipse: s-maj=47.5km s-min=32.9km az=26.0*

*IDC **14** 10:35:06.2±8.8, 36°.69N×70°.75E, h203^{km}±54^{km}, mb3.2/2, mb1 3.2/7, mb1mx2.8/46, mbtmp3.7/7, Error ellipse: s-maj=84.5km s-min=39.5km az=173.0*

ISC 14 10:35:06.9±1.9**, 36°.8N**±0°.1×**70°.7E**±0°.1**, h200^{km}, n18, σ0^{s}.75**/24**, 4C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.80	23	P	Pn	10 36 31.6	-0.2
	SNR=70						
UCH	Uchtor	6.16	28	P	Pn	10 36 36.4	-0.2
	SNR=22						
KK02	Karatay Array	6.28	359	⇓P	Pn	10 36 37.6	-0.1
	5.8nm,0.3s,baz=178,slow=13						
KK02				⇓S	Sn	10 37 48.2	-1.6
	11nm,0.4s,baz=185,slow=20						
EKS2	Erkin-Say	6.31	21	P	Pn	10 36 38.5	+0.4
	SNR=19						
AAK	Ala-Archa	6.52	26	P	Pn	10 36 41.1	+0.3
	2.6nm,0.3s,baz=183,slow=5.7,SNR=26						
AAK				S	Sn	10 37 56.6	+1.2
	1.8nm,0.3s,baz=358,slow=22,SNR=17						
AAK	Ala-Archa	6.52	26	P	Pn	10 36 41.2	+0.3
	SNR=7.5						
AAK	Ala-Archa	6.52	26	⇑P	Pn	10 36 40.7	-0.2
	2.4nm,0.3s						
AAK				⇓S	Sn	10 37 55.5	+0.1
	8.2nm,0.5s						
KBK	Karagaybulak	6.70	28	P	Pn	10 36 43.5	+0.2
	SNR=5.1						
TKM2	Tokmak 2	7.17	30	P	Pn	10 36 49.6	+0.1
	SNR=6.2						
TKM2	Tokmak 2	7.17	30	⇑P	Pn	10 36 48.1	-1.4
	4.8nm,0.5s						
TKM2				⇓S	Sn	10 38 09.7	-1.3
	4.4nm,0.8s						
MKAR	Makanchi Array	13.19	37	P	Pn	10 38 07.3	+0.7
	0.2nm,0.3s,baz=211,slow=11,SNR=7.3						
AB31	Akbulak array	14.69	331	⇓P	P	10 38 26.9	+0.8
	1.1nm,0.6s,baz=147,slow=12,SNR=25						
AB31				⇑S	S	10 41 08.9	+0.9
	0.5nm,0.6s						
KURBB	Kurchatov Arra	14.91	20	P	P	10 38 29.3	+0.7
	0.1nm,0.3s,baz=204,slow=12,SNR=2.0						
AKTO	Aktyubinsk	16.38	330	P	P	10 38 45.4	+0.6
	0.3nm,0.3s,baz=123,slow=9.6,SNR=4.4						
AKTO	Aktyubinsk	16.38	330	⇓P	P	10 38 45.0	+0.2
	1.9nm,0.7s						
AKTO				⇑S	S	10 41 45.6	-0.4
	0.9nm,1.0s						
ZALV	Zalesovo Beam	19.74	25	P	P	10 39 21.7	+0.5
	0.6nm,0.3s,baz=222,slow=10,SNR=11						
FINES	FINESS Array B	37.08	326	P	P	10 41 57.4	-0.1
	2.0nm,0.9s,baz=116,slow=7.9,SNR=1.6						
YKA	Yellowknife Ar	80.94	2	P	P	10 46 57.6	-0.9
	0.3nm,0.6s,baz=347,slow=5.4,SNR=4.8						

MAN 14 10:49:54.0, 6°.70N×126°.83E, h25^{km}, mb4.3, ML3.1, MS2.8, Mindanao

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*IDC **14** 10:51:53.6±1.1, 30°.86N×140°.36E, h0^{km}, mb3.8/6, mb1 3.9/9, mb1mx3.4/49, mbtmp3.7/9, ML3.0/3, Error ellipse: s-maj=37.8km s-min=19.5km az=82.0*

*JMA **14** 10:51:56.4±0.1, 31°.28N×140°.76E, h0^{km}, M3.5*

ISC 14 10:51:57.0±1.2**, 31°.02N**±0°.08×**140°.8E**±0°.1**, h35^{km}, n25, σ1^{s}.23**/16**, mb3.8**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.69	329	P	Pn	10 52 23.8	-0.3
JAOM				eS	Sn	10 52 43.2	-1.3
JHCJ	Hachijojimakas	2.22	338	eS	Sn	10 52 56.9	-0.6
JHJ2	Mitsune	2.25	338	P	Pn	10 52 32.2	+0.5
JHJ2				eS	Sn	10 52 58.0	-0.2
JHJ	Hachijo jima 2	2.27	338	Pn	Pn	10 52 32.4	+0.4
	12nm,0.3s,baz=112,slow=8.8,SNR=1.6						
JHJ				Sn	Sn	10 52 58.8	+0.1
	54nm,0.3s,baz=275,slow=22,SNR=6.9						
BSO1	Boso 1	3.63	2	P	Pn	10 52 51.7	+1.5
BSO1				eS	Sn	10 53 32.5	+1.0
BSO3	Boso 3	3.78	356	eS	Sn	10 53 36.2	+0.5
TTO1	TONANKAI O.B.S	4.28	308	eS	Sn	10 53 51.3	+3.4
JRY	Ryogami san	5.23	343	eS	Sn	10 54 14.2	+2.3
MJAR	Matsushiro Arr	5.92	339	Pn	Pn	10 53 24.2	+2.0
	0.2nm,0.3s,baz=149,slow=13,SNR=5.0						
KSRS	Korea Array	12.44	305	Pn	Pn	10 54 49.9	-1.6
	0.2nm,0.3s,baz=113,slow=12,SNR=1.4						
H11N2	WAKE ISLAND Hy	26.05	109	T	T	11 25 08.0	
	baz=301,slow=75,SNR=10.0						
H11N1	WAKE ISLAND Hy	26.06	109	T	T	11 25 09.3	
	baz=301,slow=75,SNR=8.0						
H11N3	WAKE ISLAND Hy	26.07	109	T	T	11 25 18.3	
	baz=301,slow=75,SNR=5.9						
H11S3	WAKE ISLAND Hy	26.53	112	T	T	11 25 40.5	
	baz=303,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	26.54	112	T	T	11 25 40.7	
	baz=303,slow=75,SNR=50						
H11S2	WAKE ISLAND Hy	26.55	112	T	T	11 25 40.2	
	baz=303,slow=75,SNR=20						
CMAR	Chiang Mai Arr	39.80	262	P	P	10 59 26.8	-0.2
	0.9nm,0.7s,baz=48,slow=7.8,SNR=6.8						
WRA	Warramunga Arr	51.05	188	P	P	11 00 55.3	-0.6
	0.6nm,0.6s,baz=3.2,slow=7.7,SNR=7.8						
ASAR	Alice Springs	54.77	188	P	P	11 01 23.7	+0.4
	0.4nm,0.6s,baz=18,slow=13,SNR=10						
FINES	FINESS Array B	73.91	333	P	P	11 03 29.2	+1.1
	1.9nm,0.8s,baz=58,slow=7.2,SNR=3.5						
AKASG	Malin Array Be	78.76	323	P	P	11 03 55.8	0.0
	0.6nm,0.5s,baz=56,slow=6.7,SNR=3.4						
TXAR	Lajitas Array	94.19	52	P	P	11 05 18.6	+5.8
	0.4nm,0.7s,baz=305,slow=3.9,SNR=6.0						
H03N2	Juan Fernandez	146.44	105	T	T	13 55 39.9	
	baz=281,slow=75,SNR=5.5						
H03N3	Juan Fernandez	146.45	105	T	T	13 55 41.6	
	baz=281,slow=75,SNR=5.3						
H03N1	Juan Fernandez	146.46	105	T	T	13 55 40.9	
	baz=281,slow=75,SNR=5.8						

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*IDC **14** 10:57:04.1±0.9, 1°.55N×126°.34E, h0^{km}, mb4.2/6, mb1 4.3/8, mb1mx3.8/43, mbtmp4.1/8, ML3.6/1, MS2.9/1, Ms1 2.9/1, ms1mx2.2/32, Error ellipse: s-maj=57.9km s-min=15.9km az=67.0*

*DJA **14** 10:57:09.2±0.3, 2°N±4°×12°7E±°, h10^{km}, M4.2/13, mb4.4/2, mB4.7/1, MLv4.1/13, Mw(mB)3.9/1*

*NEIC **14** 10:57:11.5±1.4, 1°.61N±0°.08×126°.73E±0°.08, h56^{km}±6^{km}, mb4.3/12, Error ellipse: s-maj=14.4km s-min=8.4km az=47.0*

ISC 14 10:57:09.7±0.7**, 1°.70N**±0°.07×**126°.76E**±0°.08**, h35^{km}, n38, σ2^{s}.05**/37**, mb4.4**/11**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.10	147	P	Pn	10 57 29.5	+0.9
TNTI	Ternate	1.10	147	Pn	Pn	10 57 29.5	+0.9
SGSI	Sangihe	2.33	328	P	Pn	10 57 48.6	+3.0
LBMI	Labuha	2.43	162	P	Pn	10 57 48.5	+1.5
KMSI	Cibinong	3.00	248	P	Pn	10 57 56.9	+2.2
SANI	Sanana	3.80	192	P	Pn	10 58 06.1	+0.3
GTOI	Gorontalo	3.90	254	P	Pn	10 58 10.7	+3.6
LUWI	Luwuk	4.83	236	P	Pn	10 58 22.0	+2.0
LUWI	Luwuk	4.83	236		Pn	10 58 23.4	+3.5
SIJI	Sorong	5.17	119	Pn	Pn	10 58 27.7	+2.9
	2.0nm,0.3s,baz=221,slow=19,SNR=4.6						
SIJI				LR	LR	11 00 47.6	
	comp=Z,116nm,19.6s,baz=294,slow=41						
APSI	Ampana	5.73	243	P	Pn	10 58 34.7	+2.3
TOLI2	Tolitoli	6.01	265		Pn	10 58 36.2	+0.1
FAKI	Fak Fak	7.15	130	Pn	Pn	10 58 54.5	+2.6
MYLDM	Lahad Datu	8.94	293	Pn	Pn	10 59 20.7	+4.2
SBUM	Sibu	14.55	273	Pn	Pn	11 00 32.4	-0.9
KNRA	Kununurra	17.37	174		Pn	11 01 09.1	-0.5
KNRA				IAmb	IAmb	11 01 11.4	
	comp=Z,13nm,0.8s						
FITZ	Fitzroy Crossi	19.70	183	P	P	11 01 34.3	-1.9
	baz=16,slow=13						
WB0	Warramunga Arr	22.61	161	P	P	11 02 05.4	-2.1
WRAB	Tennant Creek	22.75	161	P	P	11 02 07.1	-1.9
WRAB				IAmb	IAmb	11 02 10.2	
	comp=Z,20nm,0.8s						
WRA	Warramunga Arr	22.75	161	P	P	11 02 07.5	-1.6
	comp=Z,19nm,0.7s,baz=339,slow=11,SNR=56						
WRA	Warramunga Arr	22.75	161	P	P	11 02 07.5	-1.6
WB2	Warramunga Arr	22.76	161	P	P	11 02 07.4	-1.7
WR0	Warramunga Arr	22.83	161	P	P	11 02 08.1	-1.8
WR0				IAmb	IAmb	11 02 11.1	
	comp=Z,11nm,0.7s						
AS31	Alice Springs	26.15	165	P	P	11 02 39.6	-1.3
ASAR	Alice Springs	26.15	165	P	P	11 02 39.9	-1.0
	comp=Z,9.4nm,0.9s,baz=350,slow=14,SNR=62						
ASAR				S	S	11 07 15.2	+4.6
	comp=Z,0.5nm,0.6s,baz=346,slow=18,SNR=4.2						
ASAR	Alice Springs	26.15	165	P	P	11 02 39.6	-1.3
CTA	Charters Tower	28.88	140	LR	LR	11 15 06.8	
	comp=Z,4μm,20.2s,baz=262,slow=37						
STKA	Stephens Creek	36.23	158	P	P	11 04 09.1	-0.5
	comp=Z,0.9nm,0.3s,baz=347,slow=8.3,SNR=6.6						
STKA	Stephens Creek	36.23	158	IAmb	IAmb	11 04 09.9	
	comp=Z,0.7nm,1.0s						
SONM	Songino Array	49.23	342	P	P	11 05 54.6	-0.2
	comp=Z,0.8nm,0.8s,baz=148,slow=8.4,SNR=5.5						
MK31	Makanchi Array	59.24	326	P	P	11 07 06.1	-1.6
MK31				IAmb	IAmb	11 07 30.0	
	comp=Z,3.8nm,1.1s						
MKAR	Makanchi Array	59.24	326	P	P	11 07 06.7	-1.0
	comp=Z,1.5nm,0.4s,baz=119,slow=7.0,SNR=24						
ZALV	Zalesovo Beam	62.41	334	P	P	11 07 27.9	-1.1
	comp=Z,0.6nm,0.4s,baz=121,slow=7.3,SNR=3.9						
KURK	Kurchatov	63.47	328	P	P	11 07 35.2	-0.9
KKAR	Karatay Array	64.74	318	P	P	11 07 43.5	-1.2
ABKAR	Akbulak array	73.74	321	P	P	11 08 39.9	-0.5
ABKAR				IAmb	IAmb	11 08 41.5	
	comp=Z,4.0nm,1.4s						
ABKAR	Akbulak array	73.74	321	P	P	11 08 39.8	-0.5
VNDA	Vanda	81.42	173	P	P	11 09 21.9	-0.7
VNDA				IAmb	IAmb	11 09 23.7	
	comp=Z,2.6nm,0.7s						

IDC 14 10:57:25.2±2.0**, 53°.00S×137°.24W, h0^{km}, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.5**/35**, mbtmp3.8**/3**, MS3.7**/12**, Ms1 3.7**/12**, ms1mx3.7**/17**, Error ellipse: s-maj=430.3km s-min=33.3km az=172.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBI	Tubuai	31.04	338	eT	T	11 37 36.0	
	30nm,0.3s						
VNDA	Vanda	32.69	201	LR	LR	11 13 20.4	
	comp=Z,79nm,20.3s,baz=84,slow=29						
URZ	Urewera	34.52	277	LR	LR	11 15 10.5	
	comp=Z,110nm,20.4s,baz=211,slow=31						
PAE	Paea	36.57	340	eT	T	11 44 30.9	
	2.0nm,0.2s						
TIAR	Tiarei	36.62	340	eT	T	11 44 34.9	
	0.6nm,0.2s						
PPT2	Papeete2	36.64	340	eLR	LR	11 14 58.6	
	comp=Z,306nm,26.0s						
PPT2	Papeete2	36.64	340	eT	T	11 44 35.9	
	3.6nm,0.3s						
PPT	Papeete	36.66	340	LR	LR	11 16 06.0	
	comp=Z,209nm,21.2s,baz=154,slow=31						
QSPA	South Pole Qui	37.17	180	LR	LR	11 17 15.9	
	comp=Z,201nm,18.7s,baz=72,slow=32						
VAH	Vaihoa	38.57	344	eT	T	11 47 00.0	
	31nm,0.2s						
TAOE	Nuku Hiva Isla	44.09	356	eLR	LR	11 18 32.7	
	comp=Z,258nm,24.6s						
H03S2	Juan Fernandez	45.11	89	T	T	11 53 42.3	
	SNR=33						
H03S1	Juan Fernandez	45.11	89	T	T	11 53 51.1	
	SNR=29						
H03S3	Juan Fernandez	45.12	89	T	T	11 53 45.7	
	SNR=30						
H03N3	Juan Fernandez	45.37	89	T	T	11 53 53.5	
	baz=226,slow=72,SNR=172						
H03N2	Juan Fernandez	45.38	89	T	T	11 53 52.4	
	baz=226,slow=72,SNR=263						
H03N1	Juan Fernandez	45.39	89	T	T	11 53 57.6	
	baz=226,slow=72,SNR=200						
PLCA	Paso Flores	45.60	102	LR	LR	11 20 08.7	
	comp=Z,67nm,19.4s,baz=223,slow=30						
DZM	Mont Dzumac	52.51	283	eLR	LR	11 22 16.2	
	comp=Z,116nm,22.4s						
MAW	Mawson	58.77	189	LR	LR	11 29 44.7	

	comp=Z,48nm,19.0s,baz=66,slow=33						
STKA	**Stephens Creek**	**60.15**	**256**	LR	LR	11 28 03.8	
	comp=Z,39nm,21.8s,baz=34,slow=31						
CPUP	**Villa Florida**	**63.48**	**99**	LR	LR	11 30 22.5	
	comp=Z,80nm,20.6s,baz=213,slow=31						
LPAZ	**La Paz**	**64.59**	**83**	P	P	11 08 05.0	-0.1
	0.7nm,0.5s,baz=212,slow=9.5,SNR=3.8						
ASAR	**Alice Springs**	**70.79**	**256**	P	P	11 08 43.1	-0.3
	1.1nm,1.1s,baz=138,slow=7.0,SNR=3.2						
ASAR				LR	LR	11 35 01.3	
	comp=Z,72nm,21.0s,baz=186,slow=32						
WRA	**Warramunga Arr**	**73.39**	**259**	P	P	11 08 59.4	+0.4
	0.6nm,1.0s,baz=129,slow=4.6,SNR=3.6						
WRA				LR	LR	11 38 20.5	
	comp=Z,59nm,19.1s,baz=125,slow=34						
BOSA	**Boshof**	**97.31**	**165**	LR	LR	11 48 12.7	
	comp=Z,53nm,21.6s,baz=186,slow=31						
PDAR	**Pinedale Array**	**98.33**	**20**	LR	LR	11 48 00.4	
	comp=Z,34nm,18.3s,baz=13,slow=31						
TORD	**Torodi Ar. Bea**	**128.60**	**125**	PKP	PKPdf	11 16 34.0	-0.2
	0.3nm,0.5s,baz=215,slow=2.0,SNR=2.6						

IDC 14 11:04:40.0±2.9**, 28°.58N**×**88°.44E, h0^{km}, mb3.3**/3**, mb1 3.5**/4**, mb1mx3.2**/43**, mbtmp3.3**/4**, ML3.2**/1**, Error ellipse: s-maj=102.5km s-min=29.0km az=77.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	**2.62**	**64**	P	Pg	11 05 34.0	+3.7
MKAR	**Makanchi Array**	**18.81**	**347**	P	P	11 09 00.6	-0.5
	0.1nm,0.3s,baz=166,slow=10,SNR=2.0						
SONM	**Songino Array**	**23.74**	**31**	P	P	11 09 54.6	+0.6
	0.3nm,0.6s,baz=227,slow=12,SNR=1.9						
WRA	**Warramunga Arr**	**65.51**	**132**	P	P	11 15 25.5	+0.1
	0.4nm,0.7s,baz=327,slow=6.6,SNR=9.5						
ASAR	**Alice Springs**	**67.94**	**135**	P	P	11 15 40.6	-0.2
	0.3nm,0.6s,baz=318,slow=6.2,SNR=6.4						

*EAF **14** 11:15:07.7±1.1, 26°.34S×28°.57E, h0^{km}±21^{km}, MD3.6*
*BUL **14** 11:15:07.4±1.2, 26°.45S×28°.44E, h13^{km}±24^{km}, MD3.8*
*PRE **14** 11:15:07.7±1.1, 26°.23S×28°.64E, h5^{km}, ML2.5*
ISC 14 11:15:08.3±1.4**, 26°.21S**±0°.04×**28°.61E**±0°.03**, h9^{km}**±10^{km}**, n21, σ1^{s}.03**/40**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLR	**Silverton**	**0.56**	**328**	*e*P	**Pg**	**11 15 18.9**	**-0.3**
SLR				*e*S	**Sg**	**11 15 27.7**	**+1.0**
SLR				IAML		11 15 32.8	
	comp=Z,198nm,0.8s						
HRAO	**HartRAO**	**0.89**	**291**	*e*P	**Pb**	**11 15 24.8**	**-1.3**
HRAO				*e*S	**Sb**	**11 15 37.9**	**-0.3**
HRAO				IAML		11 15 46.1	
	comp=Z,127nm,0.9s						
CRLN	**Carolina, Mapu**	**1.28**	**81**	*e*P	**Pn**	**11 15 31.2**	**-1.4**
CRLN				*e*S	**Sb**	**11 15 49.1**	**-0.4**
CRLN				IAML		11 15 50.5	
	comp=Z,23nm,0.4s						
PRYS	**Parys**	**1.33**	**237**	*e*P	**Pn**	**11 15 33.3**	**+0.1**
PRYS				*e*S	**Sg**	**11 15 51.1**	**0.0**
PRYS				IAML		11 15 54.5	
	comp=Z,93nm,0.4s						
KSR	**Koster**	**1.59**	**283**	*e*P	**Pb**	**11 15 37.8**	**-0.1**
KSR				*e*S	**Sg**	**11 15 59.5**	**+0.1**
KSR				IAML		11 16 05.1	
	comp=Z,271nm,0.1s						
NWCL	**Newcastle**	**1.90**	**143**	*e*P	**Pn**	**11 15 41.5**	**+0.5**
NWCL				*e*S	**Sn**	**11 16 05.4**	**+0.3**
NWCL				IAML		11 16 19.2	
	comp=Z,58nm,1.9s						
SNKL	**Senekal, Frees**	**2.19**	**200**	*e*P	**Pn**	**11 15 45.1**	**+0.1**
SNKL				*e*S	**Sn**	**11 16 12.9**	**+0.6**
SNKL				IAML		11 16 19.6	
	comp=Z,72nm,0.3s						
POGA	**Pongola**	**2.99**	**113**	*e*P	**Pn**	**11 15 56.6**	**+0.7**
POGA				*e*S	**Sn**	**11 16 32.4**	**+0.6**
POGA				IAML		11 16 36.9	
	comp=Z,34nm,0.4s						
SWZ	**Schweizer**	**3.09**	**251**	*e*P	**Pn**	**11 15 58.8**	**+1.3**
SWZ				*e*S	**Sn**	**11 16 35.7**	**+1.1**
SWZ				IAML		11 16 50.0	
	comp=Z,23nm,0.3s						
CNG	**Changalane**	**3.21**	**92**	*i* P	**Pn**	**11 15 59.8**	**+0.8**
CNG				*i* S	**Sn**	**11 16 37.0**	**-0.3**
CNG	**Changalane**	**3.21**	**92**	*i* P	**Pn**	**11 15 59.8**	**+0.8**
CNG				*i* S	**Sn**	**11 16 37.0**	**-0.3**
MOPA	**Mopani**	**3.69**	**44**	*e*P	**Pn**	**11 16 06.2**	**+0.7**
MOPA				*e*S	**Sn**	**11 16 49.1**	**-0.1**
MOPA				IAML		11 17 02.1	
	comp=Z,15nm,0.5s						
MOPA	**Mopani**	**3.69**	**44**	*i* P	**Pn**	**11 16 07.3**	**+1.8**
MOPA				*i* S	**Sn**	**11 16 49.8**	**+0.6**
MOPA	**Mopani**	**3.69**	**44**	*i* P	**Pn**	**11 16 07.3**	**+1.8**
MOPA				*i* S	**Sn**	**11 16 49.8**	**+0.6**
MSNA	**Messina**	**4.06**	**19**	*i* P	**Pn**	**11 16 11.5**	**+0.8**
MSNA				*i* S	**Sn**	**11 17 00.0**	**+1.6**
MSNA	**Messina**	**4.06**	**19**	*i* P	**Pn**	**11 16 11.5**	**+0.8**
MSNA				*i* S	**Sn**	**11 17 00.0**	**+1.6**
MATP	**Matopo**	**5.76**	**359**	*i* S	**Sn**	**11 17 39.0**	**-1.5**
MATP	**Matopo**	**5.76**	**359**	*i* S	**Sn**	**11 17 39.0**	**-1.5**
BLWY	**Bulawayo**	**6.04**	**360**	*i* P	**Pn**	**11 16 38.9**	**+0.8**
BLWY				*i* S	**Sn**	**11 17 46.6**	**-0.9**
BLWY	**Bulawayo**	**6.04**	**360**	*i* P	**Pn**	**11 16 38.9**	**+0.8**
BLWY				*i* S	**Sn**	**11 17 46.6**	**-0.9**
UPI	**Upington**	**6.89**	**250**	*e*P	**Pn**	**11 16 50.9**	**+1.3**
UPI				*e*S	**Sn**	**11 18 06.2**	**-2.0**
UPI				IAML		11 18 24.4	
	comp=Z,5.8nm,5.0s						

MAN 14 11:25:18.7, 13°.85N×**120°.61E, h100^{km}, mb3.7, ML2.4, MS1.9, 2C, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.37**	**252**⇑	*e*P	Pn	11 25 35.2	+1.6
LUBP				*e*S	Sn	11 25 48.2	+3.4
PGP	**Puerto Galera**	**0.48**	**136**⇑	*e*P	Pn	11 25 36.0	+1.6
PGP				*i* S	Sn	11 25 49.1	+2.9

*NEIC **14** 11:45:12.4±1.2, 19°.4S±0°.3×177°.6W±0°.3, h571^{km}±30^{km}, mb4.0/10, Error ellipse: s-maj=54.9km s-min=34.8km az=216.0*
*IDC **14** 11:45:12.1±2.2, 18°.89S×177°.76W, h578^{km}±17^{km}, mb2.7/4, mb1 3.2/6, mb1mx2.8/27, mbtmp3.8/6, Error ellipse: s-maj=87.8km s-min=15.7km az=155.0*
ISC 14 11:45:10.4±0.8**, 19°.2S**±0°.2×**177°.5W**±0°.1**, h570^{km}, n19, σ1^{s}.43**/22**, mb3.9**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.46**	**288**	P	**P**	**11 46 38.6**	**+1.3**
	2.3nm,0.3s,baz=169,slow=22,SNR=13						
MSVF	**Nonsavu**	**4.46**	**288**	P	**P**	**11 46 38.1**	**+0.9**
AFI	**Afiamalu**	**7.59**	**47**	P	**P**	**11 47 05.0**	**+0.1**
	6.9nm,0.3s,baz=175,slow=1.2,SNR=12						
AFI				S	**S**	**11 48 36.8**	**-1.9**
	2.3nm,0.3s,baz=317,slow=24,SNR=1.9						
URZ	**Urewera**	**19.58**	**193**	P	**P**	**11 49 00.8**	**-0.7**
BBOO	**Buckleboo**	**43.56**	**242**	P	**P**	**11 52 25.1**	**+0.4**
BBOO				IAmb	IAmb	11 52 26.2	
	comp=Z,4.3nm,0.8s						
WR0	**Warramunga Arr**	**45.07**	**261**	P	**P**	**11 52 32.5**	**-4.1**
WR0				IAmb	IAmb	11 52 33.1	
	comp=Z,3.5nm,0.9s						
WB0	**Warramunga Arr**	**45.23**	**261**	P	**P**	**11 52 38.2**	**+0.4**
WB0				IAmb	IAmb	11 52 43.4	
	comp=Z,6.3nm,1.5s						
WB2	**Warramunga Arr**	**45.25**	**261**	P	**P**	**11 52 36.4**	**-1.5**
WB2				IAmb	IAmb	11 52 48.9	
	comp=Z,6.2nm,1.4s						
WRAB	**Tennant Creek**	**45.25**	**261**	P	**P**	**11 52 35.7**	**-2.2**
WRAB				IAmb	IAmb	11 53 04.4	
	comp=Z,4.2nm,1.2s						
WRA	**Warramunga Arr**	**45.26**	**261**	P	**P**	**11 52 36.9**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=97,slow=7.3,SNR=25						
WRA	**Warramunga Arr**	**45.26**	**261**	P	**P**	**11 52 38.2**	**+0.2**
AS31	**Alice Springs**	**45.29**	**255**	P	**P**	**11 52 39.1**	**+0.9**
ASAR	**Alice Springs**	**45.29**	**255**	P	**P**	**11 52 38.6**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=87,slow=8.8,SNR=22						
ASAR				PcP	**PcP**	**11 54 06.2**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=108,slow=3.8,SNR=6.6						
ASAR				S	**S**	**11 58 36.1**	**-1.8**
	comp=Z,0.4nm,0.7s,baz=90,slow=16,SNR=5.7						
ASAR	**Alice Springs**	**45.29**	**255**	P	**P**	**11 52 38.2**	**0.0**
FORT	**Forrest**	**50.26**	**246**	P	**P**	**11 53 14.8**	**-0.3**
KNRA	**Kununurra**	**51.23**	**265**	P	**P**	**11 53 22.8**	**+0.4**
KNRA				IAmb	IAmb	11 53 48.6	
	comp=Z,17nm,1.3s						
TXAR	**Lajitas Array**	**85.95**	**57**	P	**P**	**11 56 52.6**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=224,slow=8.8,SNR=4.2						
ILAR	**Eielson Array**	**86.93**	**13**	P	**P**	**11 56 54.9**	**0.0**
	comp=Z,0.9nm,1.1s,baz=230,slow=5.0,SNR=5.9						
GERES	**GERESS Array B**	**149.06**	**346**	PKPbc	**PKiKP**	**12 03 55.1**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=19,slow=5.7,SNR=4.2						

*IDC **14** 12:03:23.1±2.2, 3°.70S×131°.09E, h0^{km}, mb3.9/2, mb1 4.1/3, mb1mx3.6/21, mbtmp3.9/3, ML3.2/1, Error ellipse: s-maj=138.8km s-min=13.9km az=72.0*
*DJA **14** 12:03:27.8±0.4, 4°S±4°×12°9E±°, h10^{km}, M3.7/6, mb4.0/1, MLv3.5/6*
ISC 14 12:03:30.2±0.9**, 4°.18S**±0°.08×**129°.46E**±0°.07**, h36^{km}, n16, σ1^{s}.66**/15**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.56**	**127**	P	**Pn**	**12 03 39.4**	**-2.3**
MSAI	**Masohi**	**0.99**	**327**	P	**Pn**	**12 03 45.9**	**-1.6**
MSAI				S	**Sn**	**12 03 59.5**	**-0.8**
AAI	**Ambon**	**1.36**	**291**	P	**Pn**	**12 03 51.4**	**-1.2**
FAKI	**Fak Fak**	**3.05**	**66**	P	**Pn**	**12 04 15.8**	**-0.1**
FAKI	**Fak Fak**	**3.05**	**66**	P	**Pn**	**12 04 16.3**	**+0.4**
LBMI	**Labuha**	**4.03**	**331**	P	**Pn**	**12 04 30.4**	**+1.0**
SANI	**Sanana**	**4.07**	**301**	P	**Pn**	**12 04 29.9**	**0.0**
MTN	**Manton Dam**	**8.76**	**169**	P	**Pn**	**12 05 35.5**	**+1.1**
KDU	**Kakadu**	**8.96**	**161**	P	**Pn**	**12 05 36.2**	**-0.9**
KAPI	**Kappang**	**9.71**	**265**	P	Pn	12 06 00.9	+13
KNRA	**Kununurra**	**11.44**	**183**	P	**Pn**	**12 06 13.1**	**+2.0**
WRA	**Warramunga Arr**	**16.37**	**164**	Pn	**Pn**	**12 07 13.9**	**-3.5**
	0.1nm,0.3s,baz=347,slow=13,SNR=9.7						
ASAR	**Alice Springs**	**19.84**	**168**	P	**Pn**	**12 07 58.0**	**-1.8**
	6.1nm,0.9s,baz=350,slow=11,SNR=34						
WRKA	**Warakurna**	**20.76**	**183**	P	Pn	12 08 10.1	-0.6
OOD	**Oodnadatta**	**24.22**	**166**	P	**P**	**12 08 44.1**	**+0.5**
MKAR	**Makanchi Array**	**65.59**	**326**	P	**P**	**12 14 11.1**	**+0.7**
	0.6nm,0.5s,baz=118,slow=7.8,SNR=3.3						

*TUL **14** 12:19:19.5±0.9, 36°.90N±0°.01×97°.66W±0°.01, h5^{km}±6^{km}, ML2.5, ML2.3/38(NEIC), Error ellipse: s-maj=1.6km s-min=1.3km az=174.0*
NEIC 14 12:19:19.8±0.9**, 36°.882N**±0°.007×**97°.65W**±0°.01**, h4^{km}**±6^{km}**, Error ellipse: s-maj=1.8km s-min=0.9km az=111.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.17**	**260**		Pg	12 19 23.2	+0.1
GC02				Sg	Sg	12 19 25.7	+0.3
KAN17	**Caldwell West**	**0.19**	**330**		Pg	12 19 23.3	-0.1
KAN17				Sg	Sg	12 19 25.9	0.0
KAN17				IAML		12 19 26.3	
	comp=N,952nm,0.3s						
KAN17				IAML		12 19 26.3	
	comp=E,988nm,0.2s						
KAN13	**South Haven SW**	**0.19**	**47**	Pg	Pg	12 19 23.5	0.0
KAN13				Sg	Sg	12 19 26.3	+0.3
KAN13				IAML		12 19 26.6	
	comp=E,1µm,0.3s						
KAN09	**Caldwell North**	**0.26**	**6**	Pg	Pg	12 19 24.6	-0.1
KAN09				Sg	Sg	12 19 27.8	-0.3
KAN09				IAML		12 19 28.4	
	comp=E,712nm,0.2s						
KAN09				IAML		12 19 30.2	
	comp=N,549nm,0.2s						
KAN14	**Manchester OK**	**0.26**	**287**		Pg	12 19 24.9	+0.1
KAN14				Sg	Sg	12 19 28.1	-0.2
KAN14				IAML		12 19 28.8	
	comp=N,469nm,0.1s						
KAN14				IAML		12 19 31.2	
	comp=E,380nm,0.1s						
KAN01	**Argonia South**	**0.28**	**342**	Pg	Pg	12 19 25.2	-0.1
KAN01				Sg	Sg	12 19 29.2	+0.2
KAN01				IAML		12 19 29.4	
	comp=E,764nm,0.2s						
KAN01				IAML		12 19 30.7	
	comp=N,359nm,0.1s						
BLOK	**Blackwell**	**0.37**	**109**	Pg	Pg	12 19 26.9	0.0
BLOK				Sg	Sg	12 19 32.0	+0.2
KAN06	**Argonia West S**	**0.40**	**336**	Pg	Pg	12 19 27.4	-0.1
KAN06				Sg	Sg	12 19 32.9	+0.2
KAN06				IAML		12 19 34.6	
	comp=E,221nm,0.3s						
KAN08	**Anthony NE Sta**	**0.43**	**323**	Pg	Pg	12 19 27.8	-0.2
KAN08				Sg	Sg	12 19 33.9	+0.3
KAN08				IAML		12 19 35.7	
	comp=E,345nm,0.4s						
KAN08				IAML		12 19 35.9	
	comp=N,251nm,0.2s						
CROK	**Carrier**	**0.46**	**216**		Pg	12 19 28.8	+0.2
CROK				Sg	Sg	12 19 35.0	+0.4
CROK				IAML		12 19 43.1	
	comp=N,332nm,0.3s						
KAN12	**Harper NE Stat**	**0.50**	**326**		Pg	12 19 29.5	+0.1
KAN12				Sg	Sg	12 19 35.7	-0.2
KAN12				IAML		12 19 37.8	
	comp=N,370nm,0.4s						
T35A	**Sooner Cattle**	**0.91**	**88**	Pg	Pg	12 19 36.7	-0.6
T35A				Sg	Sg	12 19 49.9	+0.8
QUOK	**Quay**	**1.04**	**133**	Pg	Pg	12 19 39.2	-0.5
QUOK				Sg	Sg	12 19 53.4	+0.2
OK034	**N. Norfolk Rd.**	**1.15**	**139**	Pg	Pg	12 19 41.4	-0.5
OK034				Sg	Sg	12 19 56.9	+0.1
OK030	**Cody Creek RV**	**1.18**	**143**	Pg	Pg	12 19 41.4	-1.0
OK030				Sg	Sb	12 19 58.3	-0.2
U32A	**Winter Ranch,**	**1.20**	**246**	Pg	Pg	12 19 42.0	-0.7
U32A				Sg	Sg	12 19 58.0	-0.3
U32A				IAML		12 19 59.1	
	comp=N,53nm,0.1s						
U32A				IAML		12 20 05.5	
	comp=E,52nm,0.1s						
BCOK	**Bluff Creek, N**	**1.22**	**178**	Pg	Pg	12 19 42.3	-0.9
BCOK				Sg	Sb	12 19 59.9	+0.2
OK025	**Westminster Rd**	**1.32**	**169**	Pn	Pn	12 19 44.5	-0.6
OK025				IAML		12 20 03.4	
	comp=E,82nm,0.3s						
OK025				IAML		12 20 05.1	
	comp=E,79nm,0.3s						
OKCSW	**OKLAHOMA CITY**	**1.48**	**173**	Pn	Pn	12 19 45.9	-1.4
FNO	**Franklin**	**1.63**	**173**	Pn	Pn	12 19 49.3	-0.1
R32A	**Long Quarter,**	**1.75**	**332**		Pn	12 19 50.9	-0.2
TUL1	**Leonard**	**1.79**	**122**	Pn	Pn	12 19 51.9	+0.5
W35A	**Tecumseh**	**1.84**	**160**		Pn	12 19 52.5	+0.3
X34A	**Smith Ranch, M**	**2.28**	**184**		Pn	12 19 58.6	+0.3
S39A	**Bolivar**	**3.54**	**76**		Pn	12 20 14.7	-1.0
W39A	**Magazine**	**3.56**	**117**		Pn	12 20 15.0	-0.8
U40A	**Yellville**	**3.89**	**96**	Pn	Pn	12 20 21.9	+1.5
MIAR	**Mount Ida**	**4.05**	**124**	Pn	Pn	12 20 22.5	-0.2
P38A	**Dawn**	**4.24**	**49**	Pn	Pn	12 20 24.8	-0.4
MGMO	**Mountain Grove**	**4.32**	**85**	Pn	Pn	12 20 24.4	-1.8
R40A	**Maddies Statio**	**4.50**	**70**	Pn	Pn	12 20 30.4	+1.6
WHAR	**Wooly Hollow**	**4.62**	**109**	Pn	Pn	12 20 29.4	-1.1
CCM	**Cathedral Cave**	**5.23**	**75**	Pn	Pn	12 20 39.5	+0.7
T42A	**Van Buren**	**5.25**	**86**	Pn	Pn	12 20 38.2	-0.9
T25A	**Trinidad**	**5.42**	**275**	Pn	Pn	12 20 41.8	+0.3

*IDC **14** 12:28:31.1±6.5, 5°.16S×152°.62E, h61^{km}±53^{km}, mb3.5/6, mb1 3.8/7, mb1mx3.5/33, mbtmp3.9/7, ML1.7/1, Error ellipse: s-maj=72.3km s-min=31.8km az=122.0*
ISC 14 12:28:30.3±2.0**, 5°.1S**±0°.4×**152°.7E**±0°.4**, h55^{km}, n8, σ0^{s}.96**/9**, mb3.6**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.95**	**232**	P	**Pn**	**12 30 10.3**	**+0.8**
	0.9nm,0.3s,baz=29,slow=9.6,SNR=3.8						
PMG				S	**Sn**	**12 31 27.2**	**0.0**
	1.0nm,0.3s,baz=138,slow=21,SNR=2.6						
WRA	**Warramunga Arr**	**23.15**	**229**	P	**P**	**12 33 30.6**	**-1.6**
	1.5nm,0.6s,baz=54,slow=10,SNR=26						
ASAR	**Alice Springs**	**25.84**	**223**	P	**P**	**12 33 57.4**	**+0.6**
	0.6nm,0.3s,baz=56,slow=9.1,SNR=32						
FITZ	**Fitzroy Crossi**	**29.41**	**242**	P	**P**	**12 34 27.5**	**-1.3**
	1.1nm,0.3s,baz=46,slow=5.3,SNR=7.2						
MKAR	**Makanchi Array**	**80.51**	**319**	P	**P**	**12 40 37.2**	**+0.5**
	0.4nm,0.7s,baz=103,slow=6.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**81.37**	**326**	P	**P**	**12 40 41.0**	**-0.1**
	0.7nm,0.5s,baz=103,slow=5.9,SNR=2.7						
ILAR	**Eielson Array**	**82.50**	**22**	P	**P**	**12 40 46.7**	**0.0**
	0.5nm,0.8s,baz=242,slow=4.7,SNR=5.0						
TORD	**Torodi Ar. Bea**	**150.31**	**288**	PKPbc	**PKPbc**	**12 48 16.6**	**+0.1**
	0.4nm,0.4s,baz=53,slow=1.8,SNR=4.9						

IDC 14 12:39:19.4±4.0**, 26°.11S**×**69°.50E, h0^{km}, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.3**/38**, mbtmp3.6**/4**, MS3.1**/1**, Ms1 3.0**/1**, ms1mx2.6**/29**, Error ellipse: s-maj=106.7km s-min=25.1km az=60.0, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**18.58**	**9**	T	T	13 01 50.5	
	baz=189,slow=76,SNR=6.4						
H08S2	**Diego Garcia H**	**18.58**	**9**	T	T	13 01 50.5	
	baz=189,slow=76,SNR=16						
H08S3	**Diego Garcia H**	**18.60**	**9**	T	T	13 01 51.1	
	baz=189,slow=76,SNR=11						
BOSA	**Boshof**	**39.21**	**256**	LR	LR	13 00 53.7	
	comp=Z,25nm,18.5s,baz=46,slow=33						
CMAR	**Chiang Mai Arr**	**52.73**	**36**	P	P	12 48 36.0	-0.2
	0.5nm,0.3s,baz=221,slow=6.4,SNR=4.2						
ASAR	**Alice Springs**	**57.94**	**103**	P	P	12 49 13.8	-0.1
	0.6nm,0.9s,baz=247,slow=6.9,SNR=6.4						
WRA	**Warramunga Arr**	**59.47**	**99**	P	P	12 49 24.6	+0.1
	0.4nm,0.8s,baz=253,slow=6.3,SNR=3.3						
MKAR	**Makanchi Array**	**73.47**	**9**	P	P	12 50 53.7	+0.1
	0.3nm,0.7s,baz=193,slow=5.8,SNR=2.0						

*IDC **14** 12:52:01.7±0.8, 4°.19S×129°.24E, h0^{km}, mb3.6/1, mb1 3.5/4, mb1mx3.4/30, mbtmp3.4/4, ML3.0/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/27, Error ellipse: s-maj=23.9km s-min=6.3km az=97.0*
*DJA **14** 12:52:03.4±0.7, 4°S±6°×12°9E±°, h10^{km}, M3.2/7, MLv3.2/7*
ISC 14 12:52:06.5±1.1**, 4°.14S**±0°.08×**129°.41E**±0°.06**, h36^{km}, n8, σ0^{s}.78**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.92**	**329**	P	**Pn**	**12 52 21.9**	**-1.0**
MSAI				S	**Sn**	**12 52 34.6**	**-0.4**
AAI	**Ambon**	**1.29**	**290**	P	**Pn**	**12 52 27.3**	**-0.7**
AAI				S	**Sn**	**12 52 44.4**	**+0.4**
FAKI	**Fak Fak**	**3.08**	**67**	P	**Pn**	**12 52 51.8**	**-0.9**
SIJI	**Sorong**	**3.74**	**30**	Pn	**Pn**	**12 53 02.6**	**+0.8**
	baz=252,slow=20						
SIJI				Sn	**Sn**	**12 53 44.2**	**-0.4**
	1.3nm,0.3s,baz=234,slow=23,SNR=1.6						
SANI	**Sanana**	**4.00**	**301**	P	**Pn**	**12 53 05.3**	**+0.1**
WRA	**Warramunga Arr**	**16.43**	**163**	Pn	**Pn**	**12 55 55.1**	**+0.7**
	0.1nm,0.3s,baz=345,slow=10,SNR=5.8						
ASAR	**Alice Springs**	**19.89**	**168**	P	**P**	**12 56 34.4**	**-0.7**
	0.1nm,0.3s,baz=349,slow=11,SNR=12						
ASAR				LR	LR	13 05 23.1	
	comp=Z,52nm,18.5s,baz=282,slow=40						
MKAR	**Makanchi Array**	**65.53**	**326**	P	**P**	**13 02 47.0**	**+0.6**
	0.3nm,0.5s,baz=114,slow=7.6,SNR=4.2						

*IDC **14** 12:59:29.9±1.5, 7°.52S×128°.34E, h170^{km}±22^{km}, mb3.1/1, mb1 3.4/6, mb1mx3.2/35, mbtmp3.9/6, MS2.8/2, Ms1 2.8/2, ms1mx2.5/8, Error ellipse: s-maj=24.9km s-min=13.7km az=122.0*
*DJA **14** 12:59:31.2±0.7, 8°S±22°×12°8E±°, h129^{km}±30^{km}, M4.1/5, mb4.1/4, MLv4.0/5*
ISC 14 12:59:28.9±0.8**, 7°.66S**±0°.06×**128°.46E**±0°.07**, h151^{km}, n13, σ1^{s}.73**/19**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.83**	**97**	P	**Pn**	**13 00 17.5**	**+3.3**
SOEI	**Soe**	**4.64**	**243**	P	**Pn**	**13 00 39.1**	**+1.4**
SOEI				S	**Sn**	**13 01 32.3**	**+1.0**
BATI	**Baumata**	**5.37**	**242**	P	**Pn**	**13 00 49.0**	**+1.6**
	18nm,0.3s,baz=92,slow=3.0,SNR=19						
BATI				S	**Sn**	**13 01 49.2**	**+0.7**
	14nm,0.3s,baz=62,slow=18,SNR=10.0						
BATI	**Baumata**	**5.37**	**242**	P	**Pn**	**13 00 48.6**	**+1.3**
	0.2nm40nm,0.5s						
BATI				S	**Sn**	**13 01 48.3**	**-0.3**
	0.2nm40nm,0.5s						
EDFI	**Ende, Flores**	**6.79**	**260**	P	**Pn**	**13 01 07.4**	**+1.1**
	0.0nm2.2nm,0.5s						
SIJI	**Sorong**	**7.30**	**23**	P	**Pn**	**13 01 13.7**	**+0.6**
	1.6nm,0.3s,baz=220,slow=23,SNR=11						
SIJI				S	**Sn**	**13 02 34.4**	**-0.5**
	1.0nm,0.3s,baz=245,slow=23,SNR=1.7						
BASI	**Baing, Sumba**	**8.19**	**251**	P	**Pn**	**13 01 25.1**	**+0.2**
	18nm,0.7s						
WBSI	**Waikabubak, Su**	**9.18**	**257**	P	**Pn**	**13 01 38.1**	**-0.1**
FITZ	**Fitzroy Crossi**	**10.73**	**195**	P	**Pn**	**13 01 59.8**	**+1.2**
	0.2nm,0.3s,baz=12,slow=8.6,SNR=15						
FITZ				S	**Sn**	**13 03 56.2**	**-1.2**
	0.7nm,0.3s,baz=248,slow=22,SNR=3.2						
WRA	**Warramunga Arr**	**13.47**	**156**	P	**Pn**	**13 02 35.2**	**+0.9**
	0.6nm,0.3s,baz=339,slow=12,SNR=49						
WRA				S	**Sn**	**13 05 00.9**	**-2.6**
	0.9nm,0.3s,baz=328,slow=21,SNR=8.5						
WRA				LR	LR	13 07 58.6	
	comp=Z,37nm,20.8s,baz=160,slow=37						
ASAR	**Alice Springs**	**16.75**	**162**	P	**Pn**	**13 03 17.6**	**+2.7**
	0.3nm,0.3s,baz=343,slow=11,SNR=32						
ASAR				S	**S**	**13 06 18.9**	**-2.2**
	0.3nm,0.3s,baz=317,slow=16,SNR=6.3						
PMG	**Port Moresby**	**18.57**	**97**	LR	LR	13 11 18.8	
	comp=Z,42nm,20.4s,baz=40,slow=38						
MKAR	**Makanchi Array**	**67.95**	**328**	P	**P**	**13 10 09.2**	**-2.3**
	0.4nm,0.7s,baz=120,slow=8.4,SNR=2.8						

*BJI **14** 13:01:44.5±0.0, 21°.78S×174°.04W, h9^{km}, mB5.5/7, mb5.0/17, Ms4.9/1, Ms7 4.6/1*
*NEIC **14** 13:01:44.9±2.9, 21°.6S±0°.1×173°.85W±0°.05, h10^{km}±1^{km}, mb4.7/30, Error ellipse: s-maj=18.7km s-min=6.9km az=161.0*
*IDC **14** 13:01:46.1±0.8, 21°.76S×174°.31W, h0^{km}, mb4.3/13, mb1 4.5/15, mb1mx4.4/30, mbtmp4.3/15, ML4.2/2, MS3.8/18, Ms1 3.8/18, ms1mx3.6/32, Error ellipse: s-maj=31.8km s-min=17.9km az=147.0*
*NOU **14** 13:01:50.8, 21°.45S×173°.60W, h63^{km}, mb5.2/9, Tonga Islands*
ISC 14 13:01:45.5±0.4**, 21°.68S**±0°.07×**173°.87W**±0°.06**, h10^{km}, n91, σ2^{s}.41**/81**, mb4.7**/30**, MS3.8**/17**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.52**	**56**	Pn	**Pn**	**13 02 52.6**	**-1.4**
AFI	**Afiamalu**	**7.98**	**15**	Pn	**Pn**	**13 03 41.0**	**-0.6**
	4.2nm,0.3s,baz=90,slow=1.6,SNR=6.1						
AFI				Sn	**Sn**	**13 05 03.2**	**-8.9**
	3.1nm,0.3s,baz=22,slow=20,SNR=1.7						
AFI				LR	LR	13 06 39.0	
	comp=Z,381nm,18.7s,baz=192,slow=36						
DGTI	**Dogotuki**	**8.07**	**310**	P	**Pn**	**13 03 46.2**	**+3.3**
RAO	**Raoul Island**	**8.38**	**205**	Sn	**Sn**	**13 05 15.5**	**-6.2**
	125nm,0.3s,baz=239,slow=23,SNR=5.5						
MSVF	**Nonsavu**	**8.56**	**296**	Pn	**Pn**	**13 03 51.0**	**+1.3**
	2.4nm,0.3s,baz=122,slow=14,SNR=31						
MSVF				LR	LR	13 06 45.9	
	comp=Z,781nm,19.6s,baz=97,slow=36						
MSVF	**Nonsavu**	**8.56**	**296**	Pn	**Pn**	**13 03 53.0**	**+3.3**
MSVF	**Nonsavu**	**8.56**	**296**	P	Pn	13 03 53.9	+4.2
RAR	**Rarotonga**	**13.14**	**91**	Pn	**Pn**	**13 04 50.8**	**-1.4**
	5.9nm,0.3s,baz=274,slow=8.1,SNR=31						
RAR				LR	LR	13 09 42.4	
	comp=Z,314nm,20.1s,baz=234,slow=35						
RAR	**Rarotonga**	**13.14**	**91**	Pn	**Pn**	**13 04 50.1**	**-2.2**
MARNC	**Mare, Loyalty**	**16.84**	**267**		**P**	**13 05 43.5**	**-0.1**
PINNC	**Pines Island,**	**17.33**	**263**	P	**P**	**13 05 48.5**	**-0.6**
PINNC				IAmb	IAmb	13 06 07.5	
	comp=Z,116nm,1.5s						
PINNC	**Pines Island,**	**17.33**	**263**	P	**P**	**13 05 51.8**	**+2.7**
DVP	**Devils Point**	**17.34**	**280**	P	**P**	**13 05 51.3**	**+2.1**
OUENC	**Ouen Island, N**	**17.90**	**264**	P	**Pn**	**13 05 54.6**	**-0.1**
URZ	**Urewera**	**18.26**	**203**	P	**P**	**13 05 59.4**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=120,slow=23,SNR=6.5						

URZ				S	Sn	13 09 04.1	-19
	comp=Z,1.7nm,0.3s,baz=138,slow=23,SNR=7.4						
URZ	Urewera	18.26	203	P	P	13 05 59.7	+0.6
DZM	Mont Dzumac	18.28	265	eP	P	13 06 00.3	+0.7
	comp=Z,80nm,1.6s						
DZM				eLR	LR	13 10 13.1	
	comp=Z,178nm,21.3s						
DZM	Mont Dzumac	18.28	265	P	Pn	13 05 58.3	-1.1
	comp=Z,0.7nm,0.3s,baz=74,slow=19,SNR=12						
DZM	Mont Dzumac	18.28	265	Pn	P	13 06 01.7	+2.1
DZM	Mont Dzumac	18.28	265	P	P	13 06 02.2	+2.6
SANVU	Saraoutou	18.97	286		P	13 06 06.3	-0.9
SANVU				IAmb	IAmb	13 06 14.7	
	comp=Z,34nm,0.9s						
THZ	Tophouse	22.91	206	P	P	13 06 48.9	-0.8
THZ				IAmb	IAmb	13 07 17.2	
	comp=Z,21nm,1.2s						
PPT2	Papeete2	23.23	84	eLR	LR	13 12 55.3	
	comp=Z,202nm,20.5s						
PPT	Papeete	23.24	84	LR	LR	13 14 30.5	
	comp=Z,295nm,19.0s,baz=268,slow=32						
LTZ	Lake Taylor	24.02	206	P	P	13 07 01.3	+0.7
LTZ				IAmb	IAmb	13 07 08.7	
	comp=Z,20nm,0.9s						
FOZ	Fox Glacier	25.67	208	P	P	13 07 15.8	+0.3
HNR	Honiara	27.95	292	LR	LR	13 18 00.3	
	comp=Z,105nm,19.6s,baz=113,slow=35						
TAOE	Nuku Hiva Isla	34.85	74	eLR	LR	13 17 59.3	
	comp=Z,267nm,23.9s						
CTAO	Charters Tower	37.22	265	P	P	13 08 55.5	-1.9
CTAO				IAmb	IAmb	13 09 13.4	
	comp=Z,15nm,1.4s						
TOO	Toolangi	38.39	236	P	P	13 09 06.1	-1.0
TOO				IAmb	IAmb	13 09 21.8	
	comp=Z,13nm,1.5s						
PMG	Port Moresby	39.36	282	P	P	13 09 14.5	-1.0
	comp=Z,5.9nm,0.7s,baz=80,slow=19,SNR=3.8						
STKA	Stephens Creek	40.79	246	P	P	13 09 25.6	-1.6
	comp=Z,2.1nm,0.5s,baz=97,slow=11,SNR=7.3						
STKA				LR	LR	13 25 11.6	
	comp=Z,165nm,19.8s,baz=30,slow=35						
STKA	Stephens Creek	40.79	246	P	P	13 09 25.0	-2.2
BBOO	Buckleboo	45.51	245	P	P	13 10 02.7	-2.6
BBOO				IAmb	IAmb	13 10 05.9	
	comp=Z,9.5nm,0.9s						
AS31	Alice Springs	48.01	257	P	P	13 10 23.0	-2.1
ASAR	Alice Springs	48.01	257	P	P	13 10 23.4	-1.7
	comp=Z,7.4nm,0.8s,baz=94,slow=8.1,SNR=53						
ASAR				PcP	PcP	13 11 54.7	+1.5
	comp=Z,1.1nm,0.6s,baz=99,slow=3.9,SNR=5.0						
ASAR				LR	LR	13 31 08.1	
	comp=Z,101nm,18.4s,baz=78,slow=37						
ASAR	Alice Springs	48.01	257	P	P	13 10 22.8	-2.4
ASAR					PcP	13 11 52.8	-0.5
WR0	Warramunga Arr	48.07	262	P	P	13 10 22.3	-3.3
WR0				IAmb	IAmb	13 10 23.8	
	comp=Z,10nm,1.1s						
WB0	Warramunga Arr	48.24	262	P	P	13 10 24.3	-2.7
WB2	Warramunga Arr	48.25	262	P	P	13 10 24.2	-2.8
WRAB	Tennant Creek	48.25	262	P	P	13 10 24.0	-3.0
WRAB				IAmb	IAmb	13 10 25.2	
	comp=Z,14nm,1.0s						
WRA	Warramunga Arr	48.26	262	P	P	13 10 24.4	-2.7
	comp=Z,8.2nm,0.9s,baz=99,slow=7.3,SNR=43						
WRA				LR	LR	13 30 49.4	
	comp=Z,84nm,18.1s,baz=105,slow=36						
WRA	Warramunga Arr	48.26	262	P	P	13 10 24.4	-2.7
FORT	Forrest	52.38	247	P	P	13 10 56.5	-1.6
MTN	Manton Dam	53.02	270	P	P	13 11 00.7	-2.4
MTN				IAmb	IAmb	13 11 26.7	
	comp=Z,6.1nm,0.9s						
KNRA	Kununurra	54.42	266	P	P	13 11 11.8	-1.6
KNRA				IAmb	IAmb	13 11 12.4	
	comp=Z,12nm,0.8s						
FITZ	Fitzroy Crossi	56.69	262	P	P	13 11 27.9	-1.7
	comp=Z,4.8nm,0.8s,baz=57,slow=10.0,SNR=7.1						
VNDA	Vanda	57.12	186	LR	LR	13 31 33.2	
	comp=Z,56nm,21.3s,baz=6.0,slow=31						
BATI	Baumata	60.80	270	LR	LR	13 39 04.3	
	comp=Z,93nm,18.7s,baz=154,slow=37						
PSA00	Pilbara Seismi	61.15	257	P	P	13 11 57.2	-3.4
PSA00				IAmb	IAmb	13 12 02.3	
	comp=Z,10.0nm,1.2s						
MORW	Morawa	62.95	248	P	P	13 12 12.2	-0.3
MORW				IAmb	IAmb	13 12 30.5	
	comp=Z,7.7nm,1.1s						
DAV	Davao City (W)	65.86	289	LR	LR	13 37 09.9	
	comp=Z,32nm,21.2s,baz=244,slow=32						
KAPI	Kappang	66.22	274	LR	LR	13 41 33.7	
	comp=Z,23nm,18.9s,baz=134,slow=36						
QSPA	South Pole Qui	68.40	180	P	P	13 12 48.5	+1.2
QSPA				IAmb	IAmb	13 13 05.2	
	comp=Z,6.7nm,1.0s						
MJAR	Matsushiro Arr	73.49	321	P	P	13 13 19.4	+1.0
	comp=Z,5.7nm,0.7s,baz=148,slow=6.2,SNR=6.3						
MJAR	Matsushiro Arr	73.49	321	IAmb	IAmb	13 13 20.0	
	comp=Z,11nm,1.3s						
MAT	Matsushiro	73.49	321	P	P	13 13 19.3	+0.9
JSD	Sado	74.50	323	P	P	13 13 24.1	-0.1
JSD				IAmb	IAmb	13 13 28.5	
	comp=Z,7.5nm,0.8s						
JHS	Saijyo	75.54	317	P	P	13 13 29.8	-0.6
PETK	Petropavlovsk-	78.46	343	LR	LR	13 43 03.9	
	comp=Z,60nm,21.7s,baz=73,slow=32						
NVAR	Mina Array Bea	79.30	41	P	P	13 13 55.2	+3.6
	comp=Z,0.5nm,0.5s,baz=245,slow=8.6,SNR=2.0						
KSRS	Korea Array	80.35	317	P	P	13 13 59.2	+2.2
	comp=Z,2.7nm,0.9s,baz=133,slow=6.1,SNR=9.1						
KSRS				LR	LR	13 45 03.6	
	comp=Z,25nm,20.6s,baz=40,slow=32						
MAW	Mawson	81.73	199	P	P	13 14 05.8	+1.8
	comp=Z,2.4nm,0.8s,baz=140,slow=6.3,SNR=6.3						
USRK	Ussuriysk Ar.	82.14	324	LR	LR	13 46 38.4	
	comp=Z,75nm,19.3s,baz=162,slow=33						
NJ2	Nanjing	83.62	308	eP	P	13 14 14.6	+0.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TXAR	Lajitas Array	84.49	56	P	P	13 14 22.6	+3.6
	comp=Z,0.4nm,0.9s,baz=213,slow=6.7,SNR=4.3						
TXAR				LR	LR	13 45 37.1	
	comp=Z,68nm,19.8s,baz=0.0,slow=31						
CN2	Changchun	85.61	321	eP	P	13 14 25.8	+1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PLCA	Paso Flores	85.65	132	LR	LR	13 45 18.9	
	comp=Z,90nm,18.8s,baz=248,slow=30						
VNA3	Neumayer Olymp	86.67	175	P	P	13 14 31.9	+2.8
SNAA	Sanae	86.69	177	P	P	13 14 32.5	+3.2
IPM	Ipoh	87.10	276	P	P	13 14 30.0	-2.2
VNA2	Neumayer--Watz	87.16	176	P	P	13 14 34.7	+3.2
	baz=220,slow=4.4						
PDAR	Pinedale Array	87.23	42	P	P	13 14 35.4	+2.9
	comp=Z,0.9nm,0.9s,baz=193,slow=2.6,SNR=6.4						
ILAR	Eielson Array	88.66	11	P	P	13 14 41.5	+3.1
	comp=Z,0.3nm,0.6s,baz=211,slow=4.4,SNR=6.4						
ENH	Enshi	89.90	303	P	P	13 14 43.0	-2.1
XAN	Xi'an	91.93	306	P	P	13 14 57.0	+2.5
XAN				sP	pwP	13 15 07.4	+0.6
XAN				pmax	pmax		
	comp=Z,15nm,1.6s						
HHC	Hu-ho-hao-te	92.95	313	eP	P	13 14 57.4	-1.8
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,5.6s						
CMAR	Chiang Mai Arr	94.14	288	P	P	13 15 06.4	+1.4
	comp=Z,2.1nm,0.8s,baz=122,slow=3.1,SNR=16						
LPAZ	La Paz	98.05	111	LR	LR	13 52 32.1	
	comp=Z,78nm,18.4s,baz=87,slow=31						
WMQ	Urumqi	110.62	310	ePKP	PKiKP	13 20 17.6	-1.0
AKASG	Malin Array Be	145.84	334	PKPbc	PKiKP	13 21 26.4	-2.0
	comp=Z,2.5nm,0.5s,baz=42,slow=4.1,SNR=17						
CLL	Collm	149.94	351	i PKiKP	PKPbc	13 21 33.5	-2.4
CLL				i PKPbc	PKPab	13 21 38.6	-2.9
CLL				i		13 21 50.2	
CRVS	Cervenica-Dubn	150.21	339	ePKP	PKiKP	13 21 36.9	-0.6
BRG	Berggiesshubel	150.23	350	ePKP	PKPab	13 21 39.5	-3.2
BRG				Amp		13 21 42.3	
	comp=Z,5.5nm,0.8s						
MORC	Moravsky Berou	150.54	345	ePKP	PKiKP	13 21 40.1	+1.9
VRAC	Vranov	151.20	346	ePKP	PKiKP	13 21 41.5	+1.9
JAVC	Velka Javorina	151.36	344	ePKP	PKiKP	13 21 42.8	+2.8
VYHS	Vyhne	151.38	342	ePKP	PKiKP	13 21 40.0	0.0
KRUC	Moravsky	151.48	346	ePKP	PKiKP	13 21 42.2	+2.1
KHC	Kasperske Hory	151.97	350	ePKP	PKiKP	13 21 42.5	+1.3
GERES	GERESS Array B	152.23	349	PKPbc	PKiKP	13 21 44.1	+2.3
	comp=Z,0.3nm,0.3s,baz=48,slow=2.0,SNR=7.5						

IDC 14 13:10:04.2±2.0**, 4°.09S**×**129°.83E, h0^{km}, mb3.8**/1**, mb1 3.6**/3**, mb1mx3.4**/24**, mbtmp3.5**/3**, ML3.1**/2**, MS3.0**/1**, Ms1 3.2**/1**, ms1mx2.7**/21**, Error ellipse: s-maj=175.2km s-min=5.8km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.36	165	Pn	Pn	13 13 54.6	-0.9
	0.1nm,0.3s,baz=346,slow=13,SNR=3.4						
ASAR	Alice Springs	19.86	169	P	P	13 14 37.1	+0.1
	0.2nm,0.3s,baz=346,slow=10,SNR=15						
CMAR	Chiang Mai Arr	37.79	307	LR	LR	13 35 06.7	
	comp=Z,21nm,18.2s,baz=173,slow=40						
MKAR	Makanchi Array	65.72	326	P	P	13 20 50.8	0.0
	0.5nm,0.4s,baz=114,slow=7.4,SNR=11						

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*SOME **14** 13:45:37.3, 36°.37N×70°.92E, h0^{km}, MS3.5*

*IDC **14** 13:45:38.3±2.1, 36°.27N×70°.76E, h197^{km}±19^{km}, mb3.7/18, mb1 3.8/25, mb1mx3.6/57, mbtmp4.3/25, Error ellipse: s-maj=14.1km s-min=10.4km az=16.0*

*BJI **14** 13:45:38.0±0.0, 36°.54N×70°.52E, h207^{km}, mB4.7/11, mb4.2/23*

*MOS **14** 13:45:39.1±0.8, 36°.43N×70°.74E, h211^{km}, mb4.4/15, Error ellipse: s-maj=8.5km s-min=4.0km az=80.5*

*NEIC **14** 13:45:40.3±1.1, 36°.39N±0°.06×70°.69E±0°.08, h210^{km}±4^{km}, mb4.4/62, Error ellipse: s-maj=9.8km s-min=9.0km az=86.0*

*NNC **14** 13:45:41.2±4.4, 36°.63N×70°.49E, h202^{km}±38^{km}, mb3.8, mpv5.2, Error ellipse: s-maj=36.0km s-min=23.4km az=12.0*

ISC 14 13:45:39.2±0.4**, 36°.37N**±0°.04×**70°.68E**±0°.04**, h201**^{km}±4^{km}**, h201^{km}:pP-P, n240, σ1^{s}39**/272**, mb4.4**/55**, 21C-12D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.26	217	PN	Pn	13 46 22.9	+2.0
KBL	Kabul	2.26	217	Pn	Pn	13 46 22.9	+2.0
CHGR	Chuyangaron	2.58	332	Pn	Pn	13 46 25.5	+1.3
GAR	Garm	2.64	354		Pn	13 46 26.3	+1.4
CEP	Cherat	2.73	158	⇑P	Pn	13 46 28.3	+2.2
CEP				S	S	13 47 04.0	+2.1
DRK	Karamyk	3.23	16		Pn	13 46 33.2	+1.4
NIL	Nilore	3.44	141	PN	Pn	13 46 35.8	+1.6
NIL	Nilore	3.44	141	Pn	Pn	13 46 35.8	+1.6
THW	Thamme Wali	3.67	166	P	Pn	13 46 38.9	+1.8
THW				S	S	13 47 23.0	+1.1
BTK	Batken	3.68	2	PN	Pn	13 46 39.1	+1.9
BTK	Batken	3.68	2	Pn	Pn	13 46 39.1	+1.9
SARP	Sargodha	4.74	159	P	Pn	13 46 51.4	+1.1
TAS	Tashkent	5.06	348	PN	Pn	13 46 55.7	+1.3
TAS	Tashkent	5.06	348	Pn	Pn	13 46 55.7	+1.3
KSH	Kashi	5.23	52	P	Pn	13 46 52.8	-3.9
KSH				S	S	13 47 47.0	-10
KSH				smax	smax		
	comp=N,610nm,0.6s						
KSH				smax	smax		
	comp=E,440nm,0.7s						
IUG	Iuzhnay	5.79	355	⇓eP	Pn	13 47 05.0	+1.1
	5µm,0.5s						
IUG				eS	S	13 48 07.5	-2.9
	5µm,1.1s						
IUG	Iuzhnay	5.79	355	eP	Pn	13 47 03.3	-0.5
	baz=354						
IUG				eS	S	13 48 08.9	-1.6
	baz=354						
IUG	Iuzhnay	5.79	355	ePN	Pn	13 47 03.3	-0.5
IUG				eS	S	13 48 08.8	-1.6
CHM	Chimkent	6.00	352	eP	Pn	13 47 08.1	+1.7
	160nm,0.2s						
CHM				eS	S	13 48 12.7	-2.5
	347nm,5.8s						
AML	Almayashu	6.21	21	P	Pn	13 47 09.8	+0.2
	SNR=935						
DZA	Taraz	6.53	4	eP	Pn	13 47 15.1	+1.8
	114nm,0.2s						
DZA				eS	S	13 48 24.9	-2.8
	720nm,5.2s						
DZA	Taraz	6.53	4	eP	Pn	13 47 12.1	-1.2
	baz=3.7						
DZA	Taraz	6.53	4	ePN	Pn	13 47 12.9	-0.4
UCH	Uchtor	6.56	26	P	Pn	13 47 14.5	+0.4
	SNR=309						
MRKS	Merke	6.66	16	eP	Pn	13 47 15.7	+0.6
	195nm,0.5s						
MRKS				eS	S	13 48 26.0	-5.0
	221nm,0.7s						
BRLS	Borolday	6.68	355	eP	Pn	13 47 13.4	-1.9
	36nm,0.2s						
BRLS				eS	S	13 48 21.7	-10
	1µm,13.2s						
BRLS	Borolday	6.68	355	eP	Pn	13 47 11.7	-3.7
	baz=353						
BRLS				eS	S	13 48 22.2	-9.1
	baz=353						
BRLS	Borolday	6.68	355	ePN	Pn	13 47 11.6	-3.7
EKS2	Erkin-Say	6.72	20	P	Pn	13 47 16.5	+0.6
	SNR=97						
KK02	Karatay Array	6.73	359	⇓P	Pn	13 47 15.7	-0.2
	48nm,0.3s,baz=178,slow=12						
KK02				⇑S	S	13 48 28.7	-3.6
	64nm,0.5s,baz=188,slow=23						
KKAR	Karatay Array	6.73	359	PN	Pn	13 47 16.0	+0.2
KKAR	Karatay Array	6.73	359	Pn	Pn	13 47 16.0	+0.2
AAK	Ala-Archa	6.92	24	P	Pn	13 47 19.0	+0.6
	34nm,0.3s,baz=200,slow=7.2,SNR=383						
AAK				S	S	13 48 35.1	-1.9
	11nm,0.3s,baz=132,slow=21,SNR=9.5						
AAK	Ala-Archa	6.92	24	P	Pn	13 47 19.1	+0.6
	SNR=181						
AAK	Ala-Archa	6.92	24	dePN	Pn	13 47 18.8	+0.3
AAK				pmax	pmax		
	comp=Z,260nm,0.6s						
AAK	Ala-Archa	6.92	24	P	Pn	13 47 18.5	0.0
	comp=Z,94nm,0.7s						
AAK				S	S	13 48 34.6	-2.4
	comp=Z,52nm,0.5s						
AAK	Ala-Archa	6.92	24	Pn	Pn	13 47 18.7	+0.3
KBK	Karagaybulak	7.09	26	P	Pn	13 47 21.5	+0.8
	SNR=91						
FRU1	Bishkek	7.12	24	PN	Pn	13 47 21.5	+0.6
FRU1	Bishkek	7.12	24		Pn	13 47 21.5	+0.6
HRA	Herat	7.17	256	Pn	Pn	13 47 22.1	+0.2
ULHL	Ulahol	7.28	35	P	Pn	13 47 23.6	+0.4
	SNR=9.4						
CHMS	Chumysh	7.32	24	P	Pn	13 47 23.7	+0.1
	SNR=33						
BOOM	Boomskoye usch	7.34	32	PN	Pn	13 47 23.9	-0.1
BOOM	Boomskoye usch	7.34	32	Pn	Pn	13 47 23.9	-0.1
USP	Ospenovka	7.49	22	P	Pn	13 47 26.1	+0.4
	SNR=25						
SMLA	Simla	7.51	132	eP	Pn	13 47 26.3	+0.1
SMLA				eS	S	13 48 47.2	-3.9
SMLA				IAML		13 48 50.0	
	comp=N,199nm,0.4s						
SMLA				IAML		13 48 51.7	
	comp=E,193nm,0.3s						
TKM2	Tokmak 2	7.56	29	P	Pn	13 47 27.2	+0.4
	SNR=217						
TKM2	Tokmak 2	7.56	29	⇓P	Pn	13 47 26.8	-0.1
	comp=E,147nm,0.7s						
TKM2				⇑S	S	13 48 50.1	-2.3
	comp=E,35nm,0.8s						
KDJ	Kajisay	7.65	39	PN	Pn	13 47 27.7	-0.3
KDJ	Kajisay	7.65	39	Pn	Pn	13 47 27.7	-0.3
SGDS	Sogindy	7.70	22	eP	Pn	13 47 27.4	-1.0
	comp=E,11nm,0.4s,baz=22						
SGDS				eS	S	13 48 51.6	-3.7
	baz=22						
SGDS	Sogindy	7.70	22	ePN	Pn	13 47 27.9	-0.6
TNSS	Tian-Shan	8.22	34	eP	Pn	13 47 34.9	-0.7
	baz=34						
MDOK	Medeo	8.37	34	eP	Pn	13 47 36.4	-0.9
	baz=34						
MDOK	Medeo	8.37	34	ePN	Pn	13 47 36.4	-0.9
MDOK	Medeo	8.37	34	P	Pn	13 47 37.7	+0.4
	comp=E,53nm,0.6s						
MDOK				S	S	13 49 14.8	+3.3
	comp=E,8.5nm,0.6s						
KNDC	Almaty	8.37	33	⇓P	Pn	13 47 38.2	+0.9
	comp=E,108nm,0.5s						
KNDC				⇑S	S	13 49 12.9	+1.4
	comp=E,18nm,0.3s						
PRZ	Przheval'sk	8.54	42	PN	Pn	13 47 39.4	-0.2
PRZ	Przheval'sk	8.54	42	Pn	Pn	13 47 39.4	-0.2
KUU	Kurty	8.67	28	eP	Pn	13 47 38.9	-2.2
	comp=E,6.0nm,0.4s,baz=28						
KUU	Kurty	8.67	28	ePN	Pn	13 47 38.9	-2.2
KUU				pmax	pmax		
	comp=Z,6.0nm,0.4s						
SATY	Saty	8.94	39	eP	Pn	13 47 43.7	-1.1
	baz=40						
SATY	Saty	8.94	39	ePN	Pn	13 47 43.7	-1.1
BTLS	Baital	9.03	15	eP	Pn	13 47 44.9	-0.8
	baz=15						
BTLS	Baital	9.03	15	ePN	Pn	13 47 44.9	-0.8
UZB	Uzynbulak	9.32	41	eP	Pn	13 47 49.2	-0.5
	baz=41						
UZB	Uzynbulak	9.32	41	eP	Pn	13 47 49.2	-0.5
SHLS	Shalkode	9.57	42	eP	Pn	13 47 54.9	+2.0
	baz=44						
SHLS	Shalkode	9.57	42	eP	Pn	13 47 54.9	+2.0
PDGK	Podgornoye	9.70	42	⇑P	Pn	13 47 53.8	-0.8
	comp=Z,5.9nm,0.8s						
PDGK				⇓S	S	13 49 39.3	-4.0
	comp=Z,9.2nm,0.8s						
GEYT	Alibeck	10.15	283	P	Pn	13 48 00.3	-0.1
	comp=Z,0.5nm,0.3s,baz=84,slow=13,SNR=1.8						
GEYT	Alibeck	10.15	283	Pn	Pn	13 47 59.6	-0.8
GYA0B	ALIBECK ARRAY	10.15	283	Pn	Pn	13 47 59.6	-0.8
TDK	Taldyqorghan	10.42	32	eP	Pn	13 48 03.4	-0.4
	comp=Z,6.0nm,0.5s,baz=32						
TDK	Taldyqorghan	10.42	32	eP	Pn	13 48 03.4	-0.4
TDK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
OTUK	Ortayu	11.93	5	⇑P	Pn	13 48 22.8	-0.3
	comp=Z,7.4nm,0.7s						
JHNI	Jhansi	12.79	146	eP	P	13 48 38.7	+1.2
JHNI				eS	S	13 50 45.1	-11
BHUJ	Bhuj	13.10	184	eS	S	13 50 57.7	-6.4
PYUN	Piuthan	13.28	125	eP	Pn	13 48 39.6	-0.8
	comp=Z,11nm,0.4s						
MAKZ	Makanchi	13.41	35	P	Pn	13 48 40.8	-0.8
MAKZ	Makanchi	13.41	35	⇓P	Pn	13 48 40.4	-1.2
	comp=Z,14nm,0.6s						
MAKZ	Makanchi	13.41	35	Pn	Pn	13 48 40.8	-0.8
MK31	Makanchi Array	13.55	36	c iP	Pn	13 48 43.1	-0.3
MK31	Makanchi Array	13.55	36	⇓P	Pn	13 48 42.5	-0.8
	comp=Z,5.6nm,0.5s,baz=229,slow=9.2,SNR=50						
MK31	Makanchi Array	13.55	36	Pn	Pn	13 48 42.1	-1.3
MKAR	Makanchi Array	13.55	36	P	Pn	13 48 43.4	0.0
	comp=Z,0.9nm,0.3s,baz=214,slow=13,SNR=28						
MKAR	Makanchi Array	13.55	36	i P	Pn	13 48 43.4	0.0
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR	Makanchi Array	13.55	36	Pn	Pn	13 48 42.1	-1.3
DANN	Dangsing	13.63	122	eP	P	13 48 46.8	-0.5
	comp=Z,15nm,0.3s						
BRZS	Berezniki	13.68	5	eP	Pn	13 48 45.2	+0.1
	baz=5.3						
BRZS	Berezniki	13.68	5	eP	Pn	13 48 45.1	+0.1
KOLN	Koldanda	13.90	124	eP	Pn	13 48 46.7	-1.4
	comp=Z,4.4nm,0.2s						
BHPL	Bhopal	14.33	154	eP	P	13 48 56.5	+1.8
BHPL				eS	S	13 51 24.6	-8.0
GKN	Gorkha	14.45	121	eP	P	13 48 57.0	+0.8
	comp=Z,9.1nm,0.3s						
WMQ	Urumqi	14.98	55	eP	P	13 49 02.6	+0.8
WMQ				pmax	pmax		
	comp=Z,19nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,240nm,5.3s						
KKN	Kakani	15.03	121	eP	P	13 49 04.1	+1.5
	comp=Z,17nm,0.5s						
AB31	Akbulak array	15.07	332	⇓P	Pn	13 49 01.7	-0.4
	comp=Z,3.4nm,0.3s,baz=146,slow=12,SNR=220						
AB31				⇑S	S	13 51 44.4	-4.9
	comp=Z,2.3nm,0.5s,baz=169,slow=21,SNR=4.7						
ABKAR	Akbulak array	15.07	332		Pn	13 49 01.5	-0.6
ABKAR	Akbulak array	15.07	332		Pn	13 49 01.5	-0.6
ABKAR				IAmb	IAmb	13 49 05.0	
	comp=Z,10nm,0.6s						
PKI	Pulchoki	15.26	121	eP	P	13 49 05.5	+0.2
	comp=Z,17nm,0.5s						
ZSN	Zaisan	15.27	39	eP	Pn	13 49 03.4	-1.2
	baz=39						
ZSN	Zaisan	15.27	39	eP	Pn	13 49 03.3	-1.2
KURBB	Kurchatov Arra	15.33	19	P	Pn	13 49 03.7	-1.4
	comp=Z,0.4nm,0.3s,baz=206,slow=11,SNR=33						
KURBB	Kurchatov Arra	15.33	19	⇑P	Pn	13 49 03.6	-1.6
	comp=Z,7.2nm,0.7s						
GUN	Gumba	15.38	119	eP	P	13 49 09.5	+2.9
	comp=Z,19nm,0.5s						
KURK	Kurchatov	15.44	19	ceP	P	13 49 07.2	+0.6
KURK				pmax	pmax		
	comp=Z,13nm,1.7s						
KURK	Kurchatov	15.44	19	⇓P	Pn	13 49 06.2	-0.3
	comp=Z,5.4nm,0.8s						
KURK	Kurchatov	15.44	19		Pn	13 49 06.2	-0.3
JIRN	Jiri	15.75	119	eP	Pn	13 49 12.6	+1.7
	comp=Z,23nm,0.4s						
RAMN	Ramite	16.47	120	eP	P	13 49 18.8	+0.2
	comp=Z,19nm,0.4s						
BVAR	Borovoye Array	16.65	359	P	Pn	13 49 21.3	+0.2
	comp=Z,3.1nm,0.3s,baz=184,slow=15,SNR=30						
BVAR				S	S	13 52 24.0	+0.3
	comp=Z,0.2nm,0.3s,baz=176,slow=27,SNR=5.0						
BRVK	Borovoye	16.69	359	ceP	Pn	13 49 21.7	+0.2
BRVK				pmax	pmax		
	comp=Z,11nm,0.8s						
BRVK	Borovoye	16.69	359	⇑P	P	13 49 20.8	+0.4
	comp=Z,13nm,1.0s						
BRVK	Borovoye	16.69	359	P	P	13 49 20.4	0.0
BRVK				IAmb	IAmb	13 49 25.0	
	comp=Z,11nm,0.6s						
WSAR	Wadi Sarin	16.73	222	P	P	13 49 21.4	+0.2
	comp=Z,0.6nm,0.3s,baz=69,slow=10.0,SNR=5.6						
AKTO	Aktyubinsk	16.77	331	P	Pn	13 49 22.9	+0.4
	comp=Z,5.3nm,0.3s,baz=141,slow=9.2,SNR=84						
AKTO	Aktyubinsk	16.77	331	⇓P	Pn	13 49 22.4	0.0
	comp=Z,17nm,0.5s						
AKTO				⇑S	S	13 52 22.9	-3.0
	comp=Z,9.8nm,1.4s						
UOSS	Minazif	16.85	232	P	P	13 49 22.5	0.0
UOSS				IAmb	IAmb	13 49 25.3	
	comp=Z,9.9nm,0.9s						
TAPN	Taplejung	17.01	117	eP	Pn	13 49 26.7	+0.7
ODAN	Odare	17.08	119	eP	P	13 49 25.8	+0.6
DGZ	Jazzator, Alta	18.04	37	i P	P	13 49 36.1	+0.7
DGZ				pmax	pmax		
	comp=Z,14nm,0.6s						
LSA	Lhasa	18.39	105	P	P	13 49 39.6	-0.1
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LSA	Lhasa	18.39	105	P	P	13 49 39.6	-0.1
LSA				IAmb	IAmb	13 49 47.0	
	comp=Z,5.7nm,0.6s						
HYB	Hyderabad	20.13	158	i P	Pn	13 50 01.0	-1.6
ZAA0	Zalesovo Array	20.14	25	⇓P	P	13 49 57.4	-0.3
	comp=Z,2.4nm,0.8s						
ZAA0	Zalesovo Array	20.14	25	P	P	13 49 57.2	-0.5
ZAA0				IAmb	IAmb	13 50 01.2	
	comp=Z,13nm,0.9s						
ZALV	Zalesovo Beam	20.14	25	P	P	13 49 57.6	-0.1
	comp=Z,13nm,0.4s,baz=217,slow=12,SNR=49						
ZALV	Zalesovo Beam	20.14	25	P	P	13 49 57.2	-0.5
SHL	Shillong	21.09	115	P	P	13 50 08.2	-0.1
SHL				pmax	pmax		
	comp=Z,13nm,0.7s						
SHL	Shillong	21.09	115	P	P	13 50 08.2	-0.1
SHL				IAmb	IAmb	13 50 10.9	
	comp=Z,13nm,0.7s						
SVE	Sverdlovsk	21.55	345	eP	P	13 50 13.5	+0.9
ARU	Arti	21.67	342	P	P	13 50 13.7	-0.1
	comp=Z,4.7nm,0.4s,baz=140,slow=5.7,SNR=21						
ARU	Arti	21.67	342	ceP	P	13 50 14.7	+0.9
ARU				pmax	pmax		
	comp=Z,20nm,0.9s						
ARU	Arti	21.67	342	P	P	13 50 13.4	-0.4
ARU				IAmb	IAmb	13 50 17.0	
	comp=Z,19nm,0.9s						
KBZ	Khabaz	22.43	298	i P	P	13 50 20.9	-0.3
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BELG	Belogornoye	22.83	322	P	P	13 50 25.4	+0.7
	comp=Z,16nm,0.6s,baz=26,slow=2.2,SNR=9.1						

GTA	Gaotai	23.15	74	⇑P	P	13 50 29.1	+1.2
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIRV	Kirov	26.25	335	ceP	P	13 50 56.2	+0.8
SONM	Songino Array	28.62	55	P	P	13 51 16.1	-0.8
	comp=Z,0.6nm,0.6s,baz=246,slow=11,SNR=3.9						
SONM	Songino Array	28.62	55	IAmb	IAmb	13 51 18.1	
	comp=Z,4.0nm,1.4s						
KMI	Kunming	29.62	103	⇑P	P	13 51 26.8	+0.8
KMI				pmax	pmax		
	comp=Z,14nm,1.0s						
OBN	Obninsk	29.87	320	eP	P	13 51 28.3	+0.7
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR	Chiang Mai Arr	30.62	118	P	P	13 51 34.2	-0.5
	comp=Z,0.3nm,0.4s,baz=293,slow=7.6,SNR=5.1						
CMAR	Chiang Mai Arr	30.62	118	ceP	P	13 51 37.0	+2.3
KLMR	Klimovskoe	31.47	331	eP	P	13 51 40.8	-0.8
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLMR	Klimovskoe	31.47	331	eP	P	13 51 40.9	-0.7
KLMR				AMP		13 51 44.2	
	comp=Z,10.0nm,1.0s						
HHC	Hu-ho-hao-te	32.05	69	eP	P	13 51 49.0	+1.9
AKASG	Malin Array Be	32.83	309	P	P	13 51 54.0	+0.5
	comp=Z,1.6nm,0.3s,baz=81,slow=8.3,SNR=8.1						
AKASG	Malin Array Be	32.83	309	P	P	13 51 54.0	+0.5
AKBB	Malin Array Si	32.83	309	P	P	13 51 53.5	-0.1
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKBB	Malin Array Si	32.83	309	P	P	13 51 53.5	-0.1
AKBB				IAmb	IAmb	13 51 54.5	
	comp=Z,4.8nm,0.7s						
NRIK	Noril'sk	34.30	11	P	P	13 52 07.3	+1.3
	comp=Z,6.9nm,0.5s,baz=201,slow=6.2,SNR=9.9						
NRIK	Noril'sk	34.30	11	ceP	P	13 52 07.2	+1.2
NRIK				i *PP	pP	13 52 46.4	-2.1
NRIK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NRIK	Noril'sk	34.30	11	P	P	13 52 07.1	+1.0
NRIK				IAmb	IAmb	13 52 08.2	
	comp=Z,12nm,0.9s						
MNK	Minsk	34.41	315	i P	P	13 52 07.8	+0.6
MNK				i *PP	pP	13 52 50.8	+2.0
MNK				i *SP	sP	13 53 12.4	+0.3
MNK				i		13 53 29.9	
MNK				i		13 54 39.0	
MNK				i S	S	13 57 20.5	+0.7
MNK				i *SS	sS	13 58 34.7	-0.2
MNK				pmax	pmax		
	comp=N,23nm,0.8s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MNK				MLR	MLR		
	comp=N,166nm,17.0s						
MNK				MLR	MLR		
	comp=E,12nm,18.0s						
MNK				MLR	MLR		
	comp=Z,53nm,16.0s						
MNK	Minsk	34.41	315	i P	P	13 52 07.9	+0.7
	comp=E,1.0nm,0.8s						
MNK				i P	P	13 52 07.9	+0.7
	comp=N,23nm,0.8s						
MNK				i P	P	13 52 07.9	+0.7
	comp=Z,7.0nm,0.7s,baz=103						
MNK				i pP	pP	13 52 50.9	+2.1
MNK				i sP	sP	13 53 12.5	+0.4
MNK				i PP	PP	13 53 29.9	+0.6
MNK				i S	S	13 57 20.5	+0.7
MNK				i sS	sS	13 58 34.8	-0.2
MNK				i SS	SS	13 59 56.3	+0.7
MNK				i LRM	MLR	14 07 24.0	
	comp=N,166nm,16.6s						
MNK				i LRM	MLR	14 07 37.0	
	comp=E,12nm,17.7s						
MNK				i LRM	MLR	14 08 09.6	
	comp=Z,53nm,16.3s						
FIA1	FINESS Array S	37.45	326	P	P	13 52 33.3	+0.4
FIA1				IAmb	IAmb	13 52 54.9	
	comp=Z,28nm,1.5s						
FINES	FINESS Array B	37.45	326	P	P	13 52 33.5	+0.6
	comp=Z,2.0nm,0.4s,baz=121,slow=9.2,SNR=43						
FINES	FINESS Array B	37.45	326	P	P	13 52 33.3	+0.4
KEV	Kevo	40.83	338	P	P	13 53 01.2	+0.5
KEV				pmax	pmax		
	comp=Z,43nm,1.3s						
KEV	Kevo	40.83	338	P	P	13 53 01.2	+0.5
ARCES	ARCESS Array B	41.17	338	P	P	13 53 04.4	+0.9
	comp=Z,5.8nm,0.8s,baz=117,slow=7.4,SNR=16						
ARCES	ARCESS Array B	41.17	338	eP	P	13 53 04.1	+0.7
ARCES	ARCESS Array B	41.17	338	P	P	13 53 04.2	+0.7
ARCES				IAmb	IAmb	13 53 21.3	
	comp=Z,35nm,1.5s						
ZEA	Zeya	42.34	47	eP	P	13 53 14.0	+0.8
GERES	GERESS Array B	42.80	305	P	P	13 53 17.0	-0.1
	comp=Z,0.2nm,0.3s,baz=57,slow=11,SNR=1.8						
CIMO	Cimolais	43.94	302	P	P	13 53 26.4	+0.2
NC405	NORSAR Array S	44.09	323	P	P	13 53 26.2	-0.9
NC405				IAmb	IAmb	13 53 31.3	
	comp=Z,24nm,1.3s						
NORES	NORESS Array B	44.14	323	eP	P	13 53 27.5	0.0
YAK	Yakutsk	44.22	35	i P	P	13 53 28.2	+0.1
YAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NC303	NORSAR Array S	44.27	323	P	P	13 53 28.5	0.0
NC303				IAmb	IAmb	13 53 42.3	
	comp=Z,34nm,1.5s						
NB201	NORSAR Array S	44.29	323	P	P	13 53 28.4	-0.3
NB2	NORSAR Subarra	44.33	323	P	P	13 53 28.9	-0.1
	comp=Z,1.4nm,0.4s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.33	323	P	P	13 53 29.0	0.0
	comp=Z,1.6nm,0.5s,baz=97,slow=7.8,SNR=14						
NBO00	NORSAR Array S	44.54	323	P	P	13 53 29.5	-1.1
NBO00				IAmb	IAmb	13 53 30.2	
	comp=Z,40nm,1.3s						
NC204	NORSAR Array S	44.57	323	P	P	13 53 30.5	-0.4
SSLB	Suanglung	44.82	92	P	P	13 53 34.8	+1.4
KSRS	Korea Array	45.16	71	P	P	13 53 36.0	+0.1
	comp=Z,0.4nm,0.4s,baz=274,slow=6.9,SNR=5.3						
TIXI	Tiksi	45.99	22	ceP	P	13 53 42.0	+0.2
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TIXI	Tiksi	45.99	22	P	P	13 53 41.8	0.0
YOJ	Yonaguni jima	46.16	90	P	P	13 53 44.3	+0.4
YOJ				pmax	pmax		
	comp=Z,359nm,1.5s						
YOJ	Yonaguni jima	46.16	90	P	P	13 53 44.3	+0.4
MSSA	Maissana	46.33	300	P	P	13 53 45.0	0.0
MSSA				IAmb	IAmb	13 54 09.8	
	comp=Z,18nm,1.1s						
KEST	Kesra	48.83	288	P	P	13 54 05.8	+1.4
	comp=Z,2.4nm,0.5s,baz=348,slow=0.3,SNR=5.0						
KEST	Kesra	48.83	288	P	P	13 54 05.2	+0.8
BILL	Bilibino	58.84	26	eP	P	13 55 17.2	+1.0
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BILL	Bilibino	58.84	26	P	P	13 55 17.0	+0.8
SUMG	Summit	61.10	341	P	P	13 55 33.0	+1.0
SUMG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SUMG	Summit	61.10	341	P	P	13 55 33.0	+1.0
TORD	Torodi Ar. Bea	65.46	268	P	P	13 55 60.0	-1.0
	comp=Z,2.2nm,0.5s,baz=39,slow=5.7,SNR=16						
TORD	Torodi Ar. Bea	65.46	268	P	P	13 55 59.3	-1.7
TOLK	Toolik Lake Re	71.11	14	P	P	13 56 35.7	+0.4
A36M	Sachs Harbour	71.36	5	P	P	13 56 36.7	+0.1
A36M				IAmb	IAmb	13 56 38.2	
	comp=Z,6.2nm,0.8s						
COLD	Coldfoot	72.16	16	P	P	13 56 41.6	+0.1
IMAR	Indian Mountai	72.37	17	P	P	13 56 42.3	-0.4
H21K	Melozitna Rive	72.87	17	P	P	13 56 45.8	+0.1
H21K				IAmb	IAmb	13 57 06.6	
	comp=Z,7.2nm,1.4s						
BMAR	Burnt Mountain	73.13	13	P	P	13 56 48.0	+0.8
J20K	Nowinta River	73.73	19	P	P	13 56 51.0	+0.2
J20K				IAmb	IAmb	13 57 16.0	
	comp=Z,13nm,1.5s						
H24K	Noodor Dome	73.84	15	P	P	13 56 52.0	+0.6
H24K				IAmb	IAmb	13 57 18.4	
	comp=Z,7.6nm,1.4s						
MDM	Murphy Dome	74.51	16	P	P	13 56 55.1	-0.2
MDM				IAmb	IAmb	13 56 56.4	
	comp=Z,6.4nm,1.0s						
BPAW	Bear Paw Mtn.	74.59	18	P	P	13 56 55.2	-0.5
CAST	Castle Rocks	74.89	18	P	P	13 56 57.5	+0.1
CAST				IAmb	IAmb	13 56 58.6	
	comp=Z,5.3nm,0.8s						
ILAR	Eielson Array	74.97	16	P	P	13 56 57.2	-0.7
	comp=Z,1.2nm,0.8s,baz=319,slow=5.1,SNR=12						
ILAR	Eielson Array	74.97	16	P	P	13 56 57.3	-0.6
MTN	Manton Dam	75.06	119	P	P	13 56 58.0	-1.1
MTN				IAmb	IAmb	13 57 18.1	
	comp=Z,11nm,1.4s						
KTH	Kantishna Hill	75.07	18	P	P	13 56 57.9	-0.7
KTH				IAmb	IAmb	13 57 17.0	
	comp=Z,12nm,1.4s						
L19K	White Mountain	75.16	20	P	P	13 56 59.0	0.0
L19K				IAmb	IAmb	13 57 23.0	
	comp=Z,15nm,1.4s						
PPLA	Purkeypile	75.29	19	P	P	13 56 59.5	-0.4
KNRA	Kununurra	75.37	122	P	P	13 57 00.2	-0.7
KNRA				IAmb	IAmb	13 57 09.9	
	comp=Z,18nm,1.4s						
MCK	McKinley	75.40	17	P	P	13 57 00.0	-0.3
MCK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MCK	McKinley	75.40	17	P	P	13 57 00.0	-0.3
MCK				IAmb	IAmb	13 57 16.7	
	comp=Z,8.4nm,1.4s						
RND	Reindeer	75.69	17	P	P	13 57 01.4	-0.7
RND				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RND	Reindeer	75.69	17	P	P	13 57 01.4	-0.7
RND				IAmb	IAmb	13 57 28.4	
	comp=Z,6.9nm,1.0s						
SCRK	Sand Creek	76.29	15	P	P	13 57 05.4	-0.1
DHY	Denali Highway	76.33	17	P	P	13 57 05.6	-0.2
DHY				IAmb	IAmb	13 57 30.1	
	comp=Z,10.0nm,1.3s						
PAX	Paxson	76.85	16	P	P	13 57 08.5	-0.2
PAX				pmax	pmax		
	comp=Z,19nm,1.5s						
PAX	Paxson	76.85	16	P	P	13 57 08.5	-0.2
PAX				IAmb	IAmb	13 57 35.1	
	comp=Z,18nm,1.5s						
GHO	Glory Hole Cre	77.07	18	P	P	13 57 09.6	-0.2
DAWY	Dawson	77.11	13	P	P	13 57 09.7	-0.3
PMR	Palmer	77.17	18	P	P	13 57 10.1	-0.2
PMR				pmax	pmax		
	comp=Z,31nm,1.5s						
PMR	Palmer	77.17	18	P	P	13 57 10.1	-0.2
SML	Sawmill	77.19	18	P	P	13 57 10.1	-0.4
SCM	Sheep Creek Mo	77.41	17	P	P	13 57 11.4	-0.3
SCM				pmax	pmax		
	comp=Z,58nm,1.4s						
SCM	Sheep Creek Mo	77.41	17	P	P	13 57 11.4	-0.3
RC01	Rabbit Creek A	77.44	19	P	P	13 57 11.3	-0.5
L27K	Beaver Creek,	77.55	15	P	P	13 57 12.6	+0.2
L27K				IAmb	IAmb	13 57 13.6	
	comp=Z,12nm,1.4s						
BCAR	Beaver Creek A	77.55	14	P	P	13 57 12.8	+0.3
KLU	Klutina	78.04	17	P	P	13 57 15.3	0.0
M27K	Edge Creek, AK	78.17	15	P	P	13 57 16.3	+0.3
M27K				IAmb	IAmb	13 57 17.4	
	comp=Z,9.5nm,1.1s						
N25K	Chitina, Valde	78.25	16	P	P	13 57 16.8	+0.4
TGL	Tana Glacier	79.40	16	P	P	13 57 23.1	+0.4
CTGM	Chitina Glacie	79.54	15	P	P	13 57 23.8	+0.3
CTGM				IAmb	IAmb	13 57 45.2	
	comp=Z,18nm,1.2s						
LOGN	Logan Glacier	79.74	15	P	P	13 57 24.6	0.0
YAH	Yahtse	79.99	16	P	P	13 57 26.1	0.0
YKA	Yellowknife Ar	81.39	2	P	P	13 57 33.1	0.0
	comp=Z,2.6nm,0.5s,baz=349,slow=5.4,SNR=37						
WRA	Warramunga Arr	82.14	122	P	P	13 57 36.3	-1.3
	comp=Z,0.9nm,0.5s,baz=323,slow=4.9,SNR=20						
WRA	Warramunga Arr	82.14	122	ceP	P	13 57 36.2	-1.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	84.39	125	P	P	13 57 47.7	-1.4
	comp=Z,0.8nm,0.5s,baz=313,slow=4.8,SNR=31						
PLCA	Paso Flores	149.54	250	PKPbc	PKPbc	14 05 03.3	-1.3
	comp=Z,1.5nm,0.9s,baz=143,slow=5.1,SNR=3.0						

WEL 14 14:16:10.6, 43°S±5°×**17°4E**±°**, h44**^{km}±13^{km}**, M3.5**/38**, ML3.1**/18**, MLv3.5**/38**, Error ellipse: s-maj=0.0km s-min=0.0km az=82.4, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.43	307	P	Pn	14 16 20.8	+0.1
KHZ				S	Sn	14 16 27.8	-0.1
GVZ	Greta Valley S	0.77	248	P	Pn	14 16 25.8	+0.7
CMWZ	Cape Campbell	0.94	9	P	Pn	14 16 29.1	+1.6
CMWZ				S	Sn	14 16 43.3	+3.5
BSWZ	Blackbirch Sta	0.97	354	P	Pn	14 16 29.2	+1.4
BSWZ				S	Sn	14 16 42.6	+2.1
AMCZ	Amberley	1.11	243	P	Pn	14 16 30.2	+0.5
THZ	Tophouse	1.23	318	P	Pn	14 16 32.8	+1.4
THZ				S	Sn	14 16 49.7	+2.9
OKCZ	Okains Bay	1.25	213	P	Pn	14 16 31.8	+0.2
OKCZ				S	Sn	14 16 47.0	-0.4
LTZ	Lake Taylor	1.28	265	P	Pn	14 16 33.0	+0.9
LTZ				S	Sn	14 16 48.9	+0.8
MQZ	McQueen's Vall	1.42	224	P	Pn	14 16 33.6	-0.4
MQZ				S	Sn	14 16 50.2	-1.3
AKCZ	Akaroa Harbour	1.44	214	P	Pn	14 16 34.2	0.0
AKCZ				S	Sn	14 16 51.1	-0.7
PLWZ	Palliser	1.45	40	P	Pn	14 16 34.7	+0.3
PLWZ				S	Sn	14 16 51.7	-0.5
WEL	Wellington	1.51	22	P	Pn	14 16 36.2	+1.0
OXZ	Oxford	1.58	245	P	Pn	14 16 36.3	+0.1
RACZ	Rakaia	1.72	232	P	Pn	14 16 38.2	+0.2
TRWZ	Traveller	1.79	45	P	Pn	14 16 39.2	+0.2
DUWZ	D'Urville Isla	1.88	358	P	Pn	14 16 41.6	+1.3
DSZ	Denniston Nort	1.88	299	P	Pn	14 16 42.2	+1.9
INZ	Inchbonnie	1.89	268	P	Pn	14 16 42.0	+1.6
INZ				S	Sn	14 17 03.8	+0.8
MHCZ	Mount Hutt	1.98	244	P	Pn	14 16 41.9	+0.2
WACZ	Wakanui South	2.02	231	P	Pn	14 16 42.6	+0.3
RPZ	Rata Peaks	2.39	243	P	Pn	14 16 47.7	+0.4
RPZ				S	Sn	14 17 13.4	-2.0
ARCZ	Arundel	2.42	238	P	Pn	14 16 48.1	+0.4
WVZ	Waitaha Valley	2.44	260	P	Pn	14 16 49.8	+1.9
WVZ				S	Sn	14 17 16.8	+0.4
TMZ	Timaru	2.77	231	P	Pn	14 16 53.0	+0.5
FOZ	Fox Glacier	3.19	253	P	Pn	14 17 00.8	+2.7
FOZ				S	Sn	14 17 35.7	+0.8
LBZ	Lake Benmore	3.26	237	P	Pn	14 17 00.2	+1.0
KHEZ	Kahui Hut	3.38	0	P	Pn	14 17 04.3	+3.3
ODZ	Otahua Downs	3.39	225	P	Pn	14 17 01.4	+0.4
ODZ				S	Sn	14 17 37.0	-2.9
PXZ	Pawanui	3.41	40	P	Pn	14 17 03.8	+2.5
DREZ	Durham Road	3.49	2	P	Pn	14 17 05.5	+3.1
KRHZ	Kereru	3.52	31	P	Pn	14 17 03.8	+0.9
VRZ	Vera Road	3.60	9	P	Pn	14 17 06.5	+2.6
ARHZ	Aropaoanui	4.10	35	P	Pn	14 17 11.5	+0.8
HIZ	Hauiti	4.21	9	P	Pn	14 17 14.6	+2.3
EAZ	Earnscleugh	4.24	231	P	Pn	14 17 13.1	+0.4
TLZ	Tolley Road	4.50	16	P	Pn	14 17 18.1	+1.8
MUGZ	Murupara	4.70	28	P	Pn	14 17 20.1	+1.2
TOZ	Tahuroa Road	5.08	14	P	Pn	14 17 25.7	+1.5
MWZ	Matawai	5.10	33	P	Pn	14 17 23.6	-1.0
RUGZ	Raukumara Rang	5.48	32	P	Pn	14 17 31.2	+1.3
AWAZ	Awhitu Peninsu	5.63	5	P	Pn	14 17 33.3	+1.5
HAZ	Te Kaha	5.71	32	P	Pn	14 17 33.1	+0.4
PKGZ	Pakihiroa	5.71	34	P	Pn	14 17 35.1	+2.2
ETAZ	East Tamaki Re	5.76	7	P	Pn	14 17 35.8	+2.2
WMGZ	Waiomatatini S	5.91	36	P	Pn	14 17 36.8	+1.2
WIAZ	Waiheke Island	5.95	9	P	Pn	14 17 38.0	+1.9
KUZ	Kuaotunu	6.07	13	P	Pn	14 17 38.8	+0.9

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*NEIC **14** 14:17:52.9±1.2, 6°.98S±0°.10×125°.1E±0°.1, h523^{km}±10^{km}, mb4.2/21, Error ellipse: s-maj=21.7km s-min=10.1km az=57.0*

*IDC **14** 14:17:52.9±0.2, 7°.05S×125°.15E, h524^{km}±3^{km}, mb3.0/6, mb1 3.2/11, mb1mx2.9/48, mbtmp4.0/11, Error ellipse: s-maj=7.1km s-min=3.6km az=60.0*

*DJA **14** 14:17:54.3±0.5, 7°S±4°×12°5E±°, h501^{km}±7^{km}, M3.9/10, mB4.2/3, mb3.7/9, MLv4.0/10, Mw(mB)3.2/3*

ISC 14 14:17:53.6±0.5**, 7°.14S**±0°.07×**125°.06E**±0°.08**, h543**^{km}**, n69, σ1**^{s}**.46**/71**, mb3.8**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	2.72	197	P	P	14 19 04.0	-2.5
SOEI				S	S	14 20 01.5	-4.3
SOEI	Soe	2.72	197	P	P	14 19 04.8	-1.7
SOEI	Soe	2.72	197	P	P	14 19 04.5	-2.0
BATI	Baumata	3.35	204	P	P	14 19 09.1	-1.3
	23nm,0.3s,baz=104,slow=3.5,SNR=24						
BATI	Baumata	3.35	204	P	P	14 19 09.0	-1.3
BATI				S	S	14 20 09.8	-3.0
EDFI	Ende, Flores	3.70	244	P	P	14 19 10.2	-2.7
SANI	Sanana	5.14	10	P	P	14 19 22.2	-2.1
	0.4nm896nm107nm,0.6s						
SANI	Sanana	5.14	10	P	P	14 19 22.5	-1.8
MSAI	Masohi	5.39	46	P	P	14 19 24.1	-2.3
	0.0nm277nm2.9nm,0.5s						
BNSI	Bone	5.63	299	P	P	14 19 28.3	-0.2
	0.1nm16nm,1.4s						
SAUI	Saumlaki	6.24	98	P	P	14 19 32.9	-1.2
LBMI	Labuha	6.90	21	P	P	14 19 39.2	-1.2
	0.1nm15nm,0.9s						
APSI	Ampana	7.06	331	P	P	14 19 42.0	+0.1
	0.1nm13nm,1.1s						
PLAI	Plampang	7.41	256	P	P	14 19 43.3	-2.0
KMSI	Cibinong	7.74	352	P	P	14 19 48.2	-0.4
	0.3nm73nm,0.6s						
DRS	Darwin Rock St	7.79	133	P	P	14 19 49.1	0.0
GTOI	Gorontalo	7.99	345	P	P	14 19 51.6	+0.5
	4.8nm,0.9s						
MTN	Manton Dam	8.24	134	P	P	14 19 52.6	-0.9
MTN	Manton Dam	8.24	134	P	P	14 19 53.2	-0.3
FAKI	Fak Fak	8.30	60	P	P	14 19 52.4	-1.7
	14nm,0.6s						
FAKI	Fak Fak	8.30	60	P	P	14 19 50.8	-3.4
FAKI	Fak Fak	8.30	60	P	P	14 19 51.2	-2.9
SIJI	Sorong	8.78	45	P	P	14 19 57.6	-1.4
	2.8nm,0.3s,baz=214,slow=10,SNR=8.9						
KNRA	Kununurra	9.23	157	P	P	14 20 03.2	-0.2
KNRA	Kununurra	9.23	157	P	P	14 20 03.7	+0.2
TOLI2	Tolitoli	9.24	332	P	P	14 20 02.8	-0.9
FITZ	Fitzroy Crossi	10.91	177	P	P	14 20 20.5	-0.3
	baz=360,slow=10						
MBWA	Marble Bar	14.86	200	P	P	14 21 01.6	-0.1
PSA00	Pilbara Seismi	15.21	199	P	P	14 21 04.7	-0.7
PSA00				IAmb	IAmb	14 21 17.6	
	comp=Z,20nm,1.3s						
WB0	Warramunga Arr	15.48	145	P	P	14 21 06.9	-1.3
WB0				IAmb	IAmb	14 21 13.5	
	comp=Z,4.1nm,1.1s						
WRAB	Tennant Creek	15.59	146	P	P	14 21 08.1	-1.2
WRAB				IAmb	IAmb	14 21 10.4	
	comp=Z,2.4nm,0.7s						
WRAB	Tennant Creek	15.59	146	P	P	14 21 08.6	-0.7
WRA	Warramunga Arr	15.59	146	P	P	14 21 08.6	-0.7
	comp=Z,0.7nm,0.3s,baz=349,slow=14,SNR=18						
WRA	Warramunga Arr	15.59	146	P	P	14 21 07.6	-1.7
WB2	Warramunga Arr	15.60	146	P	P	14 21 08.2	-1.1
WB2				IAmb	IAmb	14 21 14.1	
	comp=Z,5.6nm,1.1s						
WR0	Warramunga Arr	15.72	145	P	P	14 21 08.9	-1.7
WR0				IAmb	IAmb	14 21 11.6	
	comp=Z,5.8nm,0.6s						
KSM	Kuching	17.02	300	P	P	14 21 23.3	+0.3
WRKA	Warakurna	18.07	170	P	P	14 21 34.1	+1.7
AS31	Alice Springs	18.50	154	P	P	14 21 37.1	+0.7
AS31				IAmb	IAmb	14 21 38.8	
	comp=Z,1.4nm,0.4s						
ASAR	Alice Springs	18.50	154	P	P	14 21 37.5	+1.1
	comp=Z,0.7nm,0.3s,baz=332,slow=8.4,SNR=54						
ASAR	Alice Springs	18.50	154	P	P	14 21 37.4	+1.0
GIRL	Giralia	18.61	213	P	P	14 21 39.5	+2.1
COEN	Coen	19.05	112	P	P	14 21 41.0	-0.5
COEN				IAmb	IAmb	14 22 05.0	
	comp=Z,15nm,1.5s						
COEN	Coen	19.05	112	P	P	14 21 41.6	+0.1
QIS	Mount Isa	19.40	135	P	P	14 21 45.1	+0.4
MEEK	Meekatharra	20.34	197	P	P	14 21 54.0	+0.9
OOD	Oodnadatta	22.88	155	P	P	14 22 17.1	+1.2
FORT	Forrest	23.69	174	P	P	14 22 23.8	+0.8
CTAO	Charters Tower	24.25	124	P	P	14 22 28.3	+0.1
CTAO				IAmb	IAmb	14 22 42.4	
	comp=Z,18nm,1.5s						
MULG	Mulgathing	24.52	161	P	P	14 22 31.8	+1.3
BLDU	Ballidu	24.63	197	P	P	14 22 32.6	+1.2
LCRK	Leigh Creek	26.27	154	P	P	14 22 47.3	+1.4
BBOO	Buckleboo	27.51	160	P	P	14 22 57.5	+0.7
BBOO				IAmb	IAmb	14 23 25.1	
	comp=Z,10.0nm,1.2s						
BBOO	Buckleboo	27.51	160	P	P	14 22 57.9	+1.1
STKA	Stephens Creek	29.05	150	P	P	14 23 11.6	+1.4
	comp=Z,1.6nm,0.5s,baz=326,slow=11,SNR=4.7						
STKA	Stephens Creek	29.05	150	P	P	14 23 11.4	+1.3
TOO	Toolangi	35.53	151	P	P	14 24 07.6	+2.5
TOO				IAmb	IAmb	14 24 28.7	
	comp=Z,15nm,1.4s						
CAN	Canberra	35.63	145	P	P	14 24 07.5	+1.4
CAN				IAmb	IAmb	14 24 26.1	
	comp=Z,8.4nm,1.2s						
SONM	Songino Array	57.17	345	P	P	14 26 49.9	+1.0
	comp=Z,0.6nm,0.8s,baz=146,slow=10,SNR=2.4						
MK31	Makanchi Array	65.74	329	P	P	14 27 45.5	+0.6
MKAR	Makanchi Array	65.74	329	P	P	14 27 45.5	+0.7
	comp=Z,1.2nm,0.7s,baz=124,slow=8.4,SNR=8.3						
ZALV	Zalesovo Beam	69.62	336	P	P	14 28 08.2	-0.1
	comp=Z,0.8nm,0.4s,baz=155,slow=4.9,SNR=4.6						
KURBB	Kurchatov Arra	70.14	331	P	P	14 28 11.3	-0.2
	comp=Z,0.7nm,0.7s,baz=138,slow=3.7,SNR=9.5						
KURK	Kurchatov	70.16	331	P	P	14 28 11.8	+0.2
SOCY	Socotra	73.21	285	P	P	14 28 30.2	0.0
RAR	Rarotonga	73.65	110	P	P	14 28 33.7	+1.2
BVAR	Borovoye Array	75.63	329	P	P	14 28 43.3	+0.4
	comp=Z,0.5nm,0.4s,baz=158,slow=9.6,SNR=3.5						
TIXI	Tiksi	78.67	1	P	P	14 28 58.9	-0.1
ABKAR	Akbulak array	79.61	323	P	P	14 29 04.8	+0.3

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*IDC **14** 14:22:46.1±1.9, 31°.64S×177°.83W, h0^{km}, mb4.2/3, mb1 4.4/4, mb1mx3.9/26, mbtmp4.3/4, ML4.2/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/34, Error ellipse: s-maj=51.8km s-min=27.6km az=124.0*

*NEIC **14** 14:22:47.2±1.1, 31°.6S±0°.1×177°.72W±0°.05, h10^{km}±1^{km}, mb4.5/18, Error ellipse: s-maj=18.6km s-min=7.2km az=178.0*

ISC 14 14:22:50.5±0.7**, 31°.68S**±0°.07×**177°.8W**±0°.1**, h35**^{km}**, n37, σ1**^{s}**.21**/37**, mb4.4**/12**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.42	358	Pn	Pn	14 23 26.8	-0.7
	60nm,0.3s,baz=90,slow=23,SNR=2.0						
RAO				Sn	Sn	14 23 57.3	+1.4
	156nm,0.3s,baz=74,slow=20,SNR=3.9						
RAO				LR	LR	14 24 05.8	
	comp=Z,158nm,20.9s,baz=123,slow=33						
RAO	Raoul Island	2.42	358		Pn	14 23 25.5	-2.0
MSWZ	Moikau Station	11.21	208	Pn	Pn	14 25 25.6	-2.5
TUWZ	Tuamarina	11.77	212	Pn	Pn	14 25 30.1	-5.7
THZ	Tophouse	12.52	214	Pn	Pn	14 25 44.0	-2.0
KHZ	Kahutara	12.75	210	Pn	Pn	14 25 47.4	-1.8
WHZ	Wether Hill Ro	17.98	214	Pn	Pn	14 26 55.9	-1.7
LHI	Lord Howe Isla	19.70	264	P	P	14 27 16.6	-0.2
LHI				IAmb	IAmb	14 27 30.9	
	comp=Z,37nm,0.9s						
CTAO	Charters Tower	34.18	281	P	P	14 29 33.4	+0.7
STKA	Stephens Creek	34.37	259	P	P	14 29 36.3	+2.1
	comp=Z,1.2nm,0.7s,baz=89,slow=12,SNR=4.5						
STKA	Stephens Creek	34.37	259	P	P	14 29 35.4	+1.1
BBOO	Buckleboo	38.80	256	P	P	14 30 11.5	-0.5
BBOO				IAmb	IAmb	14 30 19.0	
	comp=Z,14nm,1.2s						
TAOE	Nuku Hiva Isla	41.67	65	P	P	14 30 34.6	-1.4
AS31	Alice Springs	43.22	268	P	P	14 30 48.3	-0.2
ASAR	Alice Springs	43.22	268	P	P	14 30 48.4	-0.1
	comp=Z,3.4nm,0.9s,baz=106,slow=7.1,SNR=36						
ASAR	Alice Springs	43.22	268	P	P	14 30 48.1	-0.4
WR0	Warramunga Arr	44.15	273	P	P	14 30 56.0	+0.1
WR0				IAmb	IAmb	14 30 57.8	
	comp=Z,10nm,1.5s						
WB2	Warramunga Arr	44.31	273	P	P	14 30 57.1	-0.2
WB2				IAmb	IAmb	14 31 26.9	
	comp=Z,8.4nm,1.2s						
WRAB	Tennant Creek	44.32	273	P	P	14 30 57.2	-0.1
WRAB				IAmb	IAmb	14 31 01.0	

	comp=Z,9.2nm,1.4s						
WRA	**Warramunga Arr**	**44.32**	**273**	P	**P**	**14 30 57.3**	**-0.1**
	comp=Z,2.3nm,0.3s,baz=112,slow=7.8,SNR=56						
WRA	**Warramunga Arr**	**44.32**	**273**	P	**P**	**14 30 57.2**	**-0.2**
WB0	**Warramunga Arr**	**44.35**	**274**	P	**P**	**14 30 57.5**	**-0.1**
WB0				IAmb	IAmb	14 31 15.0	
	comp=Z,4.3nm,0.7s						
MTN	**Manton Dam**	**50.35**	**280**	P	**P**	**14 31 44.3**	**0.0**
MTN				IAmb	IAmb	14 31 45.0	
	comp=Z,6.6nm,1.1s						
KNRA	**Kununurra**	**50.98**	**275**	P	**P**	**14 31 50.2**	**+1.2**
KNRA				IAmb	IAmb	14 31 50.9	
	comp=Z,10nm,1.2s						
QSPA	**South Pole Qui**	**58.44**	**180**	P	**P**	**14 32 43.9**	**+1.3**
SMAI	**San Martin Ant**	**68.19**	**158**	P	**P**	**14 33 49.4**	**+2.6**
SMAI				IAmb	IAmb	14 34 17.5	
	comp=Z,4.1nm,1.2s						
PMSA	**Palmer Station**	**71.04**	**155**	P	**P**	**14 34 04.3**	**-0.1**
SNAA	**Sanae**	**76.88**	**178**	P	**P**	**14 34 40.3**	**+1.7**
SNAA	**Sanae**	**76.88**	**178**	P	**P**	**14 34 38.8**	**+0.2**
SNAA				IAmb	IAmb	14 35 03.1	
	comp=Z,6.7nm,1.2s						
VNA3	**Neumayer Olymp**	**77.03**	**176**	P	**P**	**14 34 39.8**	**+0.4**
VNA2	**Neumayer--Watz**	**77.46**	**177**	P	**P**	**14 34 42.3**	**+0.6**
	baz=163,slow=5.0						
VNA1	**Neumayer--Stat**	**77.69**	**176**	P	**P**	**14 34 44.0**	**+1.0**
KURK	**Kurchatov**	**122.04**	**313**		**PKiKP**	**14 41 41.0**	**0.0**
KURBB	**Kurchatov Arra**	**122.08**	**313**	PKP	**PKiKP**	**14 41 41.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=119,slow=1.9,SNR=5.2						
KBZ	**Khabaz**	**145.95**	**302**	PKPbc	**PKiKP**	**14 42 28.1**	**-1.5**
	comp=Z,2.7nm,0.8s,baz=238,slow=2.4,SNR=5.2						
FINES	**FINESS Array B**	**146.40**	**339**	PKPbc	**PKPab**	**14 42 27.2**	**-0.6**
	comp=Z,5.2nm,0.8s,baz=57,slow=4.1,SNR=8.8						
BRTR	**Keskin Array B**	**153.33**	**296**	PKPbc	**PKiKP**	**14 42 46.2**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=37,slow=6.0,SNR=2.2						

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*BUL **14** 14:26:20.2±1.9,26°.38S×29°.43E,h10^{km},MD4.1*
*EAF **14** 14:26:21.4±1.7,26°.29S×29°.52E,h10^{km},MD3.9*
ISC 14 14:26:21.7±2.3,**26°.16S**±0°.09×**29°.6E**±0°.1,**h10**^{km}**,n8,**
σ**1^{s}.19**/16,**South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	**Changalane**	**2.31**	**94**	*i* P	**Pn**	**14 26 59.4**	**-0.5**
CNG				*i* Sg	**Sg**	**14 27 37.0**	**+1.0**
CNG	**Changalane**	**2.31**	**94**	*i* P	**Pn**	**14 26 59.4**	**-0.5**
CNG				*i* Sg	**Sg**	**14 27 37.0**	**+1.0**
MOPA	**Mopani**	**3.09**	**32**	*i* P	**Pn**	**14 27 10.6**	**+0.1**
MOPA				*i* Sg	**Sg**	**14 28 01.5**	**+0.6**
MOPA	**Mopani**	**3.09**	**32**	*i* P	**Pn**	**14 27 10.6**	**+0.1**
MOPA				*i* Sg	**Sg**	**14 28 01.5**	**+0.6**
MSNA	**Messina**	**3.82**	**6**	*i* P	**Pn**	**14 27 22.4**	**+1.8**
MSNA				*i* Sg	**Sg**	**14 28 23.9**	**-0.4**
MSNA	**Messina**	**3.82**	**6**	*i* P	**Pn**	**14 27 22.4**	**+1.8**
MSNA				*i* Sg	**Sg**	**14 28 23.9**	**-0.4**
MATP	**Matopo**	**5.80**	**350**	*i* P	**Pn**	**14 27 48.8**	**+0.9**
MATP				*i* S	**Sn**	**14 28 52.8**	**-1.8**
MATP	**Matopo**	**5.80**	**350**	*i* P	**Pn**	**14 27 48.8**	**+0.9**
MATP				*i* S	**Sn**	**14 28 52.8**	**-1.8**

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*IDC **14** 14:39:12.1±1.3,47°.99S×102°.82E,h0^{km},mb3.9/6,*
mb1 4.1/6,mb1mx3.9/30,mbtmp3.9/6,MS3.6/9,Ms1 3.6/9,
ms1mx3.3/31,Error ellipse: s-maj=48.5km s-min=20.8km
az=121.0
*NEIC **14** 14:39:13.8±0.9,48°.0S±0°.1×102°.8E±0°.1,h10^{km}±1^{km},*
mb4.1/13,Error ellipse: s-maj=26.3km s-min=7.9km
az=327.0
ISC 14 14:39:13.6±1.0,**48°.0S**±0°.1×**102°.8E**±0°.2,**h10**^{km}**,n33,**
σ**0^{s}.54**/21,**mb4.1**/11,**MS3.5**/9,**Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.53**	**37**	T	T	14 58 46.4	
	baz=209,slow=73,SNR=47						
H01W1	**Cape Leeuwin H**	**15.55**	**37**	T	T	14 58 42.3	
	baz=209,slow=73,SNR=60						
H01W3	**Cape Leeuwin H**	**15.55**	**37**	T	T	14 58 47.1	
	baz=209,slow=73,SNR=49						
MAW	**Mawson**	**28.20**	**211**	LR	LR	14 54 27.7	
	comp=Z,57nm,19.5s,baz=60,slow=32						
STKA	**Stephens Creek**	**33.38**	**75**	P	**P**	**14 45 52.1**	**0.0**
	0.7nm,0.5s,baz=214,slow=3.6,SNR=2.5						
STKA				LR	LR	14 56 41.1	
	comp=Z,110nm,21.8s,baz=207,slow=31						
ASAR	**Alice Springs**	**34.57**	**57**	P	**P**	**14 46 02.5**	**0.0**
	0.9nm,0.8s,baz=218,slow=8.7,SNR=7.6						
ASAR				LR	LR	14 57 47.1	
	comp=Z,76nm,21.0s,baz=175,slow=32						
AS31	**Alice Springs**	**34.57**	**57**	P	**P**	**14 46 02.4**	**-0.2**
VNDA	**Vanda**	**37.07**	**162**	LR	LR	15 00 34.1	
	comp=Z,172nm,18.4s,baz=297,slow=35						
VNDA	**Vanda**	**37.07**	**162**	P	**P**	**14 46 23.9**	**+0.6**
VNDA				IAmb	IAmb	14 46 25.3	
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**37.80**	**53**	P	**P**	**14 46 30.4**	**+0.3**
	comp=Z,2.1nm,1.1s,baz=216,slow=9.4,SNR=9.8						
WRA				LR	LR	15 00 24.9	
	comp=Z,69nm,19.9s,baz=100,slow=34						
WRA	**Warramunga Arr**	**37.80**	**53**	IAmb	IAmb	14 46 31.5	
	comp=Z,0.3nm,1.4s						
WB2	**Warramunga Arr**	**37.80**	**53**	P	**P**	**14 46 30.3**	**+0.1**
WB2				IAmb	IAmb	14 46 38.2	
	comp=Z,4.4nm,1.1s						
WRAB	**Tennant Creek**	**37.81**	**53**	P	**P**	**14 46 30.2**	**0.0**
WRAB				IAmb	IAmb	14 46 36.6	
	comp=Z,5.8nm,1.3s						
WR0	**Warramunga Arr**	**37.89**	**54**	P	**P**	**14 46 31.1**	**+0.2**
WR0				IAmb	IAmb	14 46 56.2	
	comp=Z,5.9nm,1.4s						
WB0	**Warramunga Arr**	**37.97**	**53**	P	**P**	**14 46 31.5**	**-0.1**
SBA	**Scott Base**	**38.17**	**162**	P	**P**	**14 46 33.9**	**+1.3**
SBA				IAmb	IAmb	14 46 42.1	
	comp=Z,2.9nm,1.1s						
LEM	**Lembang**	**41.19**	**7**	LR	LR	15 00 17.7	
	comp=Z,76nm,19.9s,baz=168,slow=31						
QSPA	**South Pole Qui**	**42.18**	**180**	P	**P**	**14 47 06.0**	**-0.2**
	comp=Z,4.5nm,1.0s,baz=294,slow=0.6,SNR=13						
QSPA	**South Pole Qui**	**42.18**	**180**	P	**P**	**14 47 06.3**	**0.0**
QSPA				IAmb	IAmb	14 47 07.9	
	comp=Z,4.9nm,1.0s						
MTN	**Manton Dam**	**42.20**	**43**	P	**P**	**14 47 05.9**	**-0.8**
H08S2	**Diego Garcia H**	**47.71**	**317**	T	T	15 38 44.3	
	baz=152,slow=76,SNR=3.8						
H08S1	**Diego Carcia H**	**47.72**	**317**	T	T	15 38 48.1	
	baz=152,slow=76,SNR=4.0						
H08S3	**Diego Garcia H**	**47.73**	**317**	T	T	15 38 51.6	
	baz=152,slow=76,SNR=3.9						
KHZ	**Kahutara**	**48.55**	**111**	P	**P**	**14 47 56.2**	**-0.5**
SNAA	**Sanae**	**49.84**	**203**	P	**P**	**14 48 06.8**	**+0.4**
SNAA	**Sanae**	**49.84**	**203**	P	**P**	**14 48 05.9**	**-0.5**
	comp=Z,2.8nm,1.0s,baz=122,slow=13,SNR=5.9						
SNAA	**Sanae**	**49.84**	**203**	P	**P**	**14 48 05.9**	**-0.5**
SNAA				IAmb	IAmb	14 48 10.4	
	comp=Z,4.6nm,1.2s						
VNA2	**Neumayer--Watz**	**51.48**	**203**	P	**P**	**14 48 19.1**	**+0.5**
	baz=122,slow=7.0						
VNA3	**Neumayer Olymp**	**51.88**	**202**	P	**P**	**14 48 21.8**	**+0.1**
BOSA	**Boshof**	**61.32**	**258**	LR	LR	15 10 19.2	
	comp=Z,30nm,20.5s,baz=186,slow=30						
CMAR	**Chiang Mai Arr**	**66.20**	**356**	P	**P**	**14 50 01.8**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=204,slow=5.9,SNR=1.9						
CMAR				LR	LR	15 16 33.3	
	comp=Z,50nm,18.6s,baz=192,slow=34						
PMSA	**Palmer Station**	**67.14**	**186**	P	**P**	**14 50 05.9**	**-1.0**
PLCA	**Paso Flores**	**91.50**	**185**	LR	LR	15 33 19.4	
	comp=Z,55nm,18.0s,baz=250,slow=36						

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*NAO **14** 14:53:26.8±1.4,67°.19N×21°.33E,ML2.3*
*HEL **14** 14:53:26.0,67°.20N×20°.73E,h0^{km},ML2.1,Confirmed*
Induced event
*BER **14** 14:53:28.3±3.0,67°.14N×20°.84E,h0^{km},ML1.8,*
ML2.3(NAO),Confirmed Induced event
ISC 14 14:53:23.9±0.8,**67°.16N**±0°.02×**20°.72E**±0°.03,**h0**^{km}**,n28,**
σ**1^{s}.04**/42,**Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	**Masugnsbyn**	**0.58**	**58**	*i* P	**Pb**	**14 53 36.3**	**-0.7**
MASU				*i* S	**Sb**	**14 53 44.1**	**-1.6**
RATU	**Laukkuluspa**	**0.80**	**328**	*i* P	**Pg**	**14 53 39.4**	**+0.2**
KUA	**Kurravaara**	**0.81**	**350**	*i* P	**Pg**	**14 53 39.6**	**+0.1**
ERTU	**Ertsjaerv**	**0.84**	**135**	*e*P	**Pb**	**14 53 41.2**	**-0.1**
SALU	**Saltoluokta**	**0.89**	**286**	*i* P	**Pg**	**14 53 41.4**	**+0.5**
PAJU	**Pajala**	**0.95**	**97**	*e*P	**Pb**	**14 53 43.1**	**-0.1**
HARU	**Harads**	**1.00**	**174**	*e*P	**Pb**	**14 53 44.1**	**0.0**
LANU	**Lannavaara**	**1.02**	**28**	*e*P	**Pg**	**14 53 43.6**	**+0.2**
KOVU	**Salmi**	**1.09**	**349**	*e*P	**Pg**	**14 53 44.8**	**0.0**
KALU	**Kalix**	**1.68**	**140**	*e*P	**Pb**	**14 53 56.1**	**+0.5**
HEF	**Hetta**	**1.68**	**40**	Pn	**Pb**	**14 53 55.2**	**-0.4**
HEF				Sn	**Sg**	**14 54 17.9**	**-0.1**
HEF	**Hetta**	**1.68**	**40**	*e*P	**Pb**	**14 53 55.2**	**-0.4**
HEF				*e*S	**Sn**	**14 54 16.5**	**-0.3**
HEF	**Hetta**	**1.68**	**40**	*e*P	**Pb**	**14 53 55.3**	**-0.4**
HEF				MSG		14 54 20.9	
	comp=Z,13nm,0.3s						
SJUU	**Sjulsmark**	**1.69**	**167**	*e*P	**Pb**	**14 53 56.4**	**+0.5**
TOF	**Tornio**	**1.80**	**125**	MSG		14 54 26.1	
	comp=Z,15nm,0.4s						
KIF	**Kilpisjarvi**	**1.86**	**1**	Pn	**Pb**	**14 53 58.6**	**0.0**
KIF				Sn	**Sg**	**14 54 23.6**	**+0.2**
KTK1	**Kautokeino**	**2.09**	**26**	*e*P	**Pb**	**14 54 02.3**	**-0.4**
KTK1				*e*S	**Sb**	**14 54 29.3**	**+0.1**
KTK1				IAML		14 54 31.0	
	comp=Z,23nm,0.3s						
FAUS	**Fauske**	**2.12**	**279**	*e*P	**Pb**	**14 54 02.8**	**-0.4**
FAUS				*e*S	**Sb**	**14 54 29.8**	**-0.1**
FAUS				IAML		14 54 34.7	
	comp=Z,14nm,0.5s						
STEI	**Steigen**	**2.24**	**293**	*e*P	**Pb**	**14 54 04.3**	**-0.8**
STEI				IAML		14 54 40.9	
	comp=Z,7.4nm,0.4s						
JETT	**Jettan, Norway**	**2.41**	**357**	Pn	**Pb**	**14 54 07.5**	**-0.7**
JETT				Sn	**Sb**	**14 54 38.2**	**-0.2**
BURU	**Burvik**	**2.60**	**174**	*e*P	**Pb**	**14 54 09.7**	**-1.5**
MOR8	**Moi Rana**	**2.69**	**251**	*e*P	**Pn**	**14 54 08.9**	**+0.6**
MOR8				*e*S	**Sn**	**14 54 40.5**	**-1.0**
MOR8				IAML		14 54 47.3	
	comp=Z,13nm,0.4s						
ARA0	**ARCESS Array S**	**2.98**	**34**	Pn	**Pn**	**14 54 14.0**	**+1.7**
	baz=210,slow=14						
ARA0				Sn	**Sn**	**14 54 48.5**	**-0.1**
	baz=222,slow=16						
ARA0				Lg	Lg	14 54 54.8	
	baz=222,slow=37						
ARA0	**ARCESS Array S**	**2.98**	**34**	Pn	**Pn**	**14 54 14.0**	**+1.7**
	baz=210,slow=14						
ARA0				Sn	**Sn**	**14 54 48.5**	**-0.1**
	baz=222,slow=16						
ARA0				IAML		14 54 55.5	
	comp=Z,4.4nm,0.5s						
APA0	**Apatity Array**	**4.76**	**79**	Pn	**Pn**	**14 54 36.9**	**+0.1**
APA0				Sn	**Sn**	**14 55 32.6**	**0.0**
	baz=268,slow=28						
APA0				Lg	Lg	14 55 50.0	
	baz=263,slow=28						
APA0	**Apatity Array**	**4.76**	**79**	Pn	**Pn**	**14 54 36.9**	**+0.1**
APA0				Sn	**Sn**	**14 55 32.6**	**0.0**
	baz=268,slow=28						
FIA0	**FINESS Array S**	**6.19**	**155**	Pn	**Pn**	**14 54 58.9**	**+2.5**
	baz=351,slow=16						
FIA0				Sn	**Sn**	**14 56 08.1**	**+0.4**
	baz=348,slow=22						
FIA0				Lg	Lg	14 56 38.8	
	baz=344,slow=37						
FIA0	**FINESS Array S**	**6.19**	**155**	Pn	**Pn**	**14 54 58.9**	**+2.5**
	baz=351,slow=16						
FIA0				Sn	**Sn**	**14 56 08.1**	**+0.4**
	baz=348,slow=22						
FIA0				Sg	**Sg**	**14 56 38.8**	**-3.6**
	baz=344,slow=37						

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*IDC **14** 14:53:22.3±1.9,2°.37N×126°.45E,h0^{km},mb3.6/4,*
mb1 3.9/4,mb1mx3.5/40,mbtmp3.7/4,MS3.0/2,Ms1 3.1/2,
ms1mx2.5/41,Error ellipse: s-maj=118.9km s-min=24.5km
az=69.0
*DJA **14** 14:53:23.2±0.3,2°N±3°×12°7E±°,h10^{km},M3.7/6,mb4.1/1,*
MLv3.4/6
ISC 14 14:53:28.3±1.7,**2°.5N**±0°.2×**126°.8E**±0°.2,**h50**^{km}**,n7,**σ**0^{s}.44**/5,
mb3.7/3,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**4.21**	**245**	P	**Pn**	**14 54 30.0**	**0.0**
FITZ	**Fitzroy Crossi**	**20.46**	**183**	P	**P**	**14 58 01.9**	**+0.1**
	1.1nm,0.7s,baz=3.9,slow=8.8,SNR=6.0						
PMG	**Port Moresby**	**23.45**	**120**	LR	LR	15 11 10.0	
	comp=Z,38nm,18.9s,baz=252,slow=45						
WRA	**Warramunga Arr**	**23.46**	**162**	P	**P**	**14 58 33.0**	**-0.4**
	0.9nm,0.3s,baz=337,slow=10,SNR=46						
ASAR	**Alice Springs**	**26.87**	**166**	P	**P**	**14 59 05.0**	**+0.4**
	0.3nm,0.3s,baz=348,slow=12,SNR=11						
MKAR	**Makanchi Array**	**58.64**	**326**	P	**P**	**15 03 20.4**	**0.0**
	0.3nm,0.4s,baz=116,slow=8.1,SNR=5.0						
NOA	**NORSAR Array B**	**99.95**	**334**	LR	LR	15 57 28.5	
	comp=Z,6.5nm,19.5s,baz=280,slow=38						

IDC 14 15:10:21.0±53.0,**16°.88S**×**179°.64E,h0**^{km}**,mb4.2**/3,
mb1 4.4/3,**mb1mx3.5**/45,**mbtmp4.2**/3,**Error ellipse:**
s-maj=954.8km s-min=144.2km az=77.0,Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.52**	**239**	P	P	15 17 36.6	-0.2
	1.7nm,0.5s,baz=73,slow=9.0,SNR=7.2						
WRA	**Warramunga Arr**	**42.99**	**259**	P	P	15 18 22.3	-0.2
	0.4nm,0.3s,baz=92,slow=8.0,SNR=56						
ASAR	**Alice Springs**	**43.29**	**253**	P	P	15 18 24.8	0.0
	7.6nm,0.6s,baz=88,slow=8.4,SNR=212						

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*BUL **14** 15:44:31.2±1.4,26°.24S×29°.02E,h10^{km},MD4.0*
*EAF **14** 15:44:32.1±0.8,26°.19S×29°.16E,h10^{km},MD3.7*
ISC 14 15:44:37.2±2.1,**25°.68S**±0°.09×**29°.7E**±0°.1,**h10**^{km}**,n10,**
σ**0^{s}.92**/18,**South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	**Changalane**	**2.30**	**106**	*i* P	**Pn**	**15 45 15.4**	**+0.2**
CNG	**Changalane**	**2.30**	**106**	*i* P	**Pn**	**15 45 15.4**	**+0.2**
MOPA	**Mopani**	**2.64**	**36**	*i* P	**Pb**	**15 45 24.7**	**+0.1**
MOPA				*i* S	**Sg**	**15 46 02.1**	**+0.1**
MOPA	**Mopani**	**2.64**	**36**	*i* P	**Pb**	**15 45 24.7**	**+0.1**
MOPA				*i* S	**Sg**	**15 46 02.1**	**+0.1**
MSNA	**Messina**	**3.33**	**5**	*i* P	**Pn**	**15 45 31.3**	**+1.8**
MSNA				*i* S	**Sb**	**15 46 15.7**	**-1.4**
MSNA	**Messina**	**3.33**	**5**	*i* P	**Pn**	**15 45 31.3**	**+1.8**
MSNA				*i* S	**Sb**	**15 46 15.7**	**-1.4**
MATP	**Matopo**	**5.35**	**348**	*i* P	**Pn**	**15 45 57.0**	**-0.4**
MATP				*i* S	**Sn**	**15 46 59.5**	**+0.4**
MATP	**Matopo**	**5.35**	**348**	*i* P	**Pn**	**15 45 57.0**	**-0.4**
MATP				*i* S	**Sn**	**15 46 59.5**	**+0.4**
BLWY	**Bulawayo**	**5.61**	**349**	*i* P	**Pn**	**15 46 01.5**	**+0.6**
BLWY				*i* S	**Sn**	**15 47 04.9**	**-0.6**
BLWY	**Bulawayo**	**5.61**	**349**	*i* P	**Pn**	**15 46 01.5**	**+0.6**
BLWY				*i* S	**Sn**	**15 47 04.9**	**-0.6**

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*NEIC **14** 15:56:47.1±1.4,36°.31N±0°.05×70°.82E±0°.09,h127^{km}±7^{km},*
mb4.3/4,Error ellipse: s-maj=11.0km s-min=5.6km
az=114.0
*NNC **14** 15:56:50.8±10.0,36°.64N×70°.89E,h192^{km}±163^{km},mb2.5,*
mpv3.5,Error ellipse: s-maj=91.9km s-min=58.0km
az=20.0
ISC 14 15:56:45.5±0.9,**36°.26N**±0°.07×**70°.91E**±0°.08,**h127**^{km}**,n23,**
σ**2^{s}.34**/28,**mb4.4**/3,**3C-3D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.29**	**222**		**Pn**	**15 57 25.0**	**+1.8**
CHGR	**Chuyangaron**	**2.77**	**330**		**Pn**	**15 57 29.4**	**+0.3**
GAR	**Garm**	**2.77**	**350**		**Pn**	**15 57 30.1**	**+0.9**
NIL	**Nilore**	**3.24**	**143**	Pn	**Pn**	**15 57 37.4**	**+2.2**
DRK	**Karamyk**	**3.29**	**12**	Pn	**Pn**	**15 57 37.9**	**+1.8**
BTK	**Batken**	**3.79**	**359**		**Pn**	**15 57 44.5**	**+2.0**
KSH	**Kashi**	**5.16**	**49**	Pn	**Pn**	**15 57 58.1**	**-2.7**
KSH				Sn	Sn	15 58 50.8	-8.6
KSH				pmax	pmax		
	comp=Z,11nm,0.6s						
KSH				smax	smax		
	comp=N,77nm,0.6s						
KSH				smax	smax		
	comp=E,51nm,0.6s						
KK02	**Karatay Array**	**6.84**	**358**	⇓P	**Pn**	**15 58 23.2**	**-0.1**
	comp=E,5.0nm,0.5s,baz=178,slow=12						
KK02				⇓S	**Sn**	**15 59 40.9**	**+1.2**
	comp=E,3.9nm,0.7s,baz=183,slow=23						
KKAR	**Karatay Array**	**6.84**	**358**	Pn	**Pn**	**15 58 23.2**	**0.0**
AAK	**Ala-Archa**	**6.95**	**22**	⇑P	**Pn**	**15 58 25.7**	**+0.9**
	comp=E,1.3nm,0.4s						
AAK				⇑S	**Sn**	**15 59 38.8**	**-3.7**
	comp=E,2.4nm,0.4s						
AAK	**Ala-Archa**	**6.95**	**22**	Pn	**Pn**	**15 58 26.2**	**+1.4**
SMLA	**Simla**	**7.31**	**133**	*e*P	**Pn**	**15 58 27.8**	**-1.8**
SMLA				*e*S	**Sn**	**15 59 47.1**	**-4.0**
BOOM	**Boomskoye usch**	**7.34**	**31**	Pn	**Pn**	**15 58 31.0**	**+0.9**
TKM2	**Tokmak 2**	**7.57**	**27**	⇓P	**Pn**	**15 58 35.1**	**+1.8**
	comp=E,0.7nm,0.4s						
TKM2				⇑S	**Sn**	**15 59 56.9**	**-0.8**
	comp=E,1.2nm,0.5s						
MAKZ	**Makanchi**	**13.39**	**35**	Pn	**Pn**	**15 59 49.8**	**-0.7**
WMQ	**Urumqi**	**14.89**	**54**	*e*P	**Pn**	**16 00 12.3**	**+2.6**
AB31	**Akbulak array**	**15.26**	**332**	P	**Pn**	**16 00 14.2**	**+0.2**
	comp=E,0.3nm,0.4s,baz=152,slow=12,SNR=25						
AB31				S	**Sn**	**16 02 55.5**	**-7.5**
	comp=E,0.3nm,0.5s						
ABKAR	**Akbulak array**	**15.26**	**332**	Pn	**Pn**	**16 00 14.5**	**+0.5**
HHC	**Hu-ho-hao-te**	**31.92**	**69**	*e*P	**P**	**16 03 01.8**	**+2.7**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,6.4s						
UBPT	**Khong Chiam**	**37.20**	**115**	P	**P**	**16 03 45.0**	**+0.4**
UBPT				IAmb	IAmb	16 03 51.6	
	comp=Z,14nm,1.5s						
FIA1	**FINESS Array S**	**37.64**	**326**	P	**P**	**16 03 48.4**	**+0.7**
FINES	**FINESS Array B**	**37.64**	**326**	P	**P**	**16 03 48.0**	**+0.3**
TIXI	**Tiksi**	**46.02**	**22**	P	**P**	**16 04 56.3**	**+0.6**
TIXI				IAmb	IAmb	16 04 57.7	
	comp=Z,2.3nm,0.8s						

NNC 14 16:11:01.8±2.8,**38°.63N**×**73°.21E,h0**^{km}**,mb3.7,mpv3.2,**
2C-4D,Error ellipse: s-maj=20.2km s-min=12.8km
az=170.0,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	**Merke**	**4.11**	**0**	Pg	Pb	16 12 15.5	+0.3
	3.8nm,0.4s						
MRKS				Lg	Lg	16 13 10.4	
	7.0nm,0.9s						
AAK	**Ala-Archa**	**4.12**	**13**	⇓Pn	Pn	16 12 06.8	+0.6
	2.2nm,0.5s						
AAK				⇓Lg	Lg	16 13 14.0	
	13nm,1.0s						
IUG	**Iuzhnay**	**4.27**	**326**	Pg	Pb	16 12 17.5	-0.3
	128nm,0.7s						
IUG				Lg	Lg	16 13 13.8	
	26nm,0.7s						
TKM2	**Tokmak 2**	**4.66**	**22**	⇓Pg	Pg	16 12 29.1	-1.9
	1.3nm,0.5s						
TKM2				⇑Lg	Lg	16 13 34.3	
	4.9nm,0.8s						
KST	**Kastek**	**4.88**	**24**	Pg	Pb	16 12 28.3	0.0
	1.1nm,0.3s						
KST				Lg	Lg	16 13 32.0	
	5.9nm,1.5s						
KK02	**Karatay Array**	**4.92**	**336**	⇓Pn	Pn	16 12 16.4	-0.6
	1.6nm,0.4s,baz=152,slow=13						
KK02				⇑Sn	Sn	16 13 17.8	+3.3
	2.0nm,0.6s,baz=154,slow=28						
SGDS	**Sogindy**	**4.94**	**12**	Pg	Pb	16 12 31.6	+2.4
	1.8nm,0.6s						
SGDS				Lg	Lg	16 13 38.2	
	3.9nm,0.9s						
DGS	**Degeres**	**5.00**	**22**	Pg	Pb	16 12 31.1	+0.8
	2.2nm,0.9s						
DGS				Lg	Lg	16 13 37.3	
	3.6nm,1.0s						
BRLS	**Borolday**	**5.09**	**331**	Pg	Pb	16 12 31.9	+0.2
	1.7nm,0.7s						
BRLS				Lg	Lg	16 13 38.7	
	2.7nm,0.7s						
KRBS	**Karabastau**	**5.39**	**19**	Pg	Pb	16 12 40.9	+4.0
	1.0nm,0.6s						
KRBS				Lg	Lg	16 13 53.9	
	2.7nm,1.0s						
KOTS	**Kotyrbulak**	**5.47**	**31**	Pg	Pg	16 12 43.2	-3.4
	2.0nm,0.8s						
KOTS				Lg	Lg	16 13 57.4	
	9.3nm,0.6s						
KTBS	**Karatobe**	**5.72**	**26**	Pg	Pg	16 12 47.0	-4.3
	0.9nm,0.8s						
KTBS				Lg	Lg	16 14 04.6	
	4.4nm,0.6s						

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*IDC **14** 16:12:31.6±1.3,4°.20S×129°.72E,h0^{km},mb3.9/2,*
mb1 4.1/6,mb1mx3.6/39,mbtmp3.9/6,ML3.5/4,MS2.5/2,
Ms1 2.5/2,ms1mx2.3/33,Error ellipse: s-maj=44.2km
s-min=21.3km az=88.0
*NEIC **14** 16:12:34.0±1.3,4°.14S±0°.06×129°.59E±0°.06,h10^{km}±1^{km},*
mb4.1/16,Error ellipse: s-maj=12.3km s-min=8.3km
az=223.0
*DJA **14** 16:12:34.4±0.7,4°S±6°×12°9E±°,h10^{km},M3.8/7,MLv3.8/7*
ISC 14 16:12:36.7±0.6,**4°.16S**±0°.05×**129°.52E**±0°.05,**h36**^{km}**,n46,**
σ**1^{s}.78**/47,**mb4.1**/6,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.53**	**133**	P	**Pn**	**16 12 45.5**	**-2.3**
MSAI	**Masohi**	**0.99**	**324**	P	**Pn**	**16 12 52.3**	**-1.8**
MSAI				S	**Sn**	**16 13 06.2**	**-0.7**
AAI	**Ambon**	**1.40**	**289**	P	**Pn**	**16 12 58.4**	**-1.2**
AAI				S	**Sn**	**16 13 16.5**	**-0.4**
FAKI	**Fak Fak**	**2.99**	**66**	P	**Pn**	**16 13 22.5**	**+1.0**
FAKI	**Fak Fak**	**2.99**	**66**		**Pn**	**16 13 21.9**	**+0.3**
FAKI	**Fak Fak**	**2.99**	**66**	P	**Pn**	**16 13 22.6**	**+1.0**
SIJI	**Sorong**	**3.70**	**28**	Pn	**Pn**	**16 13 29.7**	**-1.7**
	5.6nm,0.3s,baz=209,slow=23,SNR=18						
SIJI				Sn	**Sn**	**16 14 13.1**	**-0.7**
	6.3nm,0.3s,baz=254,slow=7.6,SNR=5.4						
SIJI				LR	LR	16 14 39.3	
	comp=Z,33nm,20.7s,baz=271,slow=35						
SWI	**Sorong**	**3.71**	**28**	P	**Pn**	**16 13 31.6**	**+0.2**
LBMI	**Labuha**	**4.03**	**330**	P	**Pn**	**16 13 36.7**	**+0.8**
LBMI				S	**Sn**	**16 14 24.2**	**+2.3**
SANI	**Sanana**	**4.10**	**301**	P	**Pn**	**16 13 37.4**	**+0.6**
SANI	**Sanana**	**4.10**	**301**	P	**Pn**	**16 13 37.3**	**+0.5**
BATI	**Baumata**	**8.36**	**224**	LR	LR	16 18 05.5	
	comp=Z,76nm,19.9s,baz=101,slow=39						
MTN	**Manton Dam**	**8.78**	**170**		**Pn**	**16 14 40.9**	**-0.2**
MTN	**Manton Dam**	**8.78**	**170**	P	**Pn**	**16 14 42.3**	**+1.2**
KNRA	**Kununurra**	**11.47**	**184**	Pn	**Pn**	**16 15 17.7**	**-0.4**
KNRA	**Kununurra**	**11.47**	**184**	P	**Pn**	**16 15 18.1**	**0.0**
FITZ	**Fitzroy Crossi**	**14.37**	**195**	Pn	**Pn**	**16 15 56.3**	**-1.3**
	0.1nm,0.3s,baz=30,slow=14,SNR=2.1						
WB0	**Warramunga Arr**	**16.23**	**163**	Pn	**Pn**	**16 16 18.2**	**-3.8**
WB0				IAmb	IAmb	16 16 36.5	
	comp=Z,4.5nm,0.9s						
WRAB	**Tennant Creek**	**16.38**	**164**	Pn	**Pn**	**16 16 19.1**	**-4.8**
WRA	**Warramunga Arr**	**16.38**	**164**	Pn	**Pn**	**16 16 19.7**	**-4.3**
	comp=Z,0.2nm,0.3s,baz=348,slow=13,SNR=19						
WRA	**Warramunga Arr**	**16.38**	**164**		**Pn**	**16 16 19.4**	**-4.6**
WB2	**Warramunga Arr**	**16.39**	**164**	Pn	**Pn**	**16 16 20.0**	**-4.1**
COEN	**Coen**	**16.62**	**127**	Pn	**Pn**	**16 16 25.6**	**-1.5**
COEN				IAmb	IAmb	16 16 42.3	
	comp=Z,6.6nm,0.9s						
COEN	**Coen**	**16.62**	**127**	P	**P**	**16 16 28.5**	**-0.7**
KKM	**Kota Kinabalu**	**16.70**	**307**	P	**P**	**16 16 30.8**	**+0.6**
KKM				IAmb	IAmb	16 16 34.7	
	comp=Z,18nm,1.1s						
QIS	**Mount Isa**	**19.03**	**150**	P	**Pn**	**16 16 56.5**	**-0.2**
MBWA	**Marble Bar**	**19.39**	**209**	P	**Pn**	**16 17 01.5**	**+0.5**
PSA00	**Pilbara Seismi**	**19.70**	**208**	P	**Pn**	**16 17 03.9**	**-0.8**
PSA00				IAmb	IAmb	16 17 05.9	
	comp=Z,19nm,1.2s						
PSA00	**Pilbara Seismi**	**19.70**	**208**	P	**Pn**	**16 17 04.3**	**-0.3**
AS31	**Alice Springs**	**19.85**	**168**	P	**Pn**	**16 17 04.9**	**-1.6**
ASAR	**Alice Springs**	**19.86**	**168**	P	**P**	**16 17 04.2**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=347,slow=11,SNR=48						
ASAR	**Alice Springs**	**19.86**	**168**	P	**P**	**16 17 04.8**	**0.0**
MTSU	**Mount Surprise**	**20.07**	**135**	P	Pn	16 17 08.3	-0.8
WRKA	**Warakurna**	**20.80**	**183**	P	Pn	16 17 16.7	-0.8
RABL	**Rabaul**	**22.59**	**91**	P	**P**	**16 17 34.0**	**-0.3**
RABL				IAmb	IAmb	16 17 45.0	
	comp=Z,14nm,0.9s						

CTAO	Charters Tower	22.73	136	P	P	16 17 36.2	+0.4
CTAO				IAmb	IAmb	16 17 46.8	
	comp=Z,7.7nm,1.1s						
OOD	Oodnadatta	24.23	167	P	P	16 17 51.8	+1.6
FORT	Forrest	26.52	183	P	P	16 18 10.6	-0.4
RMQ	Roma	28.85	142	P	P	16 18 32.7	+0.8
HNR	Honiara	30.66	101	P	P	16 18 46.6	-1.4
PET	Petropavlovsk	62.04	19	P	P	16 22 53.9	+0.6
MK31	Makanchi Array	65.60	326	P	P	16 23 17.8	+0.8
MKAR	Makanchi Array	65.60	326	P	P	16 23 17.8	+0.8
	comp=Z,0.5nm,0.4s,baz=116,slow=8.0,SNR=11						
ZALV	Zalesovo Beam	68.84	334	P	P	16 23 39.6	+2.3
	comp=Z,1.0nm,0.7s,baz=125,slow=4.4,SNR=4.8						
KURK	Kurchatov	69.86	328	P	P	16 23 44.1	+0.5
KURK				IAmb	IAmb	16 23 50.8	
	comp=Z,3.5nm,0.8s						
TIXI	Tiksi	75.66	360	P	P	16 24 18.0	+0.3
TIXI				IAmb	IAmb	16 24 35.7	
	comp=Z,3.2nm,1.4s						

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*IDC **14** 16:57:24.1±1.6, 4°.10S×129°.63E, h0^{km}, mb3.6/1, mb1 3.5/5, mb1mx3.4/30, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=50.8km s-min=22.6km az=94.0*

*DJA **14** 16:57:26.0±0.7, 4°S±6°×12°9E±°, h10^{km}, M3.3/7, MLv3.3/7*

ISC 14 16:57:28.9±1.0**, 4°.11S**±0°.07×**129°.50E**±0°.06**, h36^{km}, n11, σ1^s.28**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.95	323	P	Pn	16 57 43.9	-1.8
MSAI				S	Sn	16 57 57.5	-0.5
AAI	Ambon	1.37	288	P	Pn	16 57 50.0	-1.5
AAI				S	Sn	16 58 07.9	-0.5
FAKI	Fak Fak	2.98	67	P	Pn	16 58 13.3	-0.4
SIJI	Sorong	3.67	29	Pn	Pn	16 58 22.3	-0.8
	1.5nm,0.3s,baz=38,slow=23,SNR=16						
SIJI				Sn	Sn	16 59 05.4	+0.3
	2.2nm,0.3s,baz=238,slow=23,SNR=1.9						
SWI	Sorong	3.67	29	P	Pn	16 58 23.2	+0.1
LBMI	Labuha	3.98	330	P	Pn	16 58 28.0	+0.5
SANI	Sanana	4.06	300	P	Pn	16 58 29.4	+0.9
FITZ	Fitzroy Crossi	14.41	195	Pn	Pn	17 00 51.9	+1.5
	0.1nm,0.3s,baz=30,slow=14,SNR=2.0						
WRA	Warramunga Arr	16.43	164	Pn	Pn	17 01 14.1	-2.7
	0.1nm,0.3s,baz=348,slow=13,SNR=7.2						
ASAR	Alice Springs	19.90	168	P	P	17 01 57.5	+0.1
	0.1nm,0.3s,baz=348,slow=10,SNR=12						
MKAR	Makanchi Array	65.55	326	P	P	17 08 09.8	+0.9
	0.4nm,0.6s,baz=123,slow=8.0,SNR=4.2						

IDC 14 16:59:48.8±9.4**, 1°.47S**×**126°.97E, h0^{km}, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.3**/26**, mbtmp3.3**/3**, ML3.3**/1**, Error ellipse: s-maj=157.8km s-min=125.1km az=99.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.73	159	P	P	17 04 20.4	+0.2
	0.1nm,0.3s,baz=338,slow=11,SNR=6.1						
ASAR	Alice Springs	23.07	164	P	P	17 04 55.5	-0.7
	0.1nm,0.3s,baz=348,slow=13,SNR=2.6						
STKA	Stephens Creek	33.25	157	P	P	17 06 28.0	+0.1
	0.6nm,0.3s,baz=339,slow=8.6,SNR=3.5						

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*IDC **14** 17:14:03.2±3.2, 1°.77S×100°.57E, h0^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.6/32, mbtmp3.6/7, Error ellipse: s-maj=137.8km s-min=18.0km az=57.0*

*DJA **14** 17:14:09.9±0.4, 2°S±3°×10°0E±°, h57^{km}±11^{km}, M3.7/12, mb3.6/1, MLv3.7/12*

ISC 14 17:14:10.2±0.8**, 1°.80S**±0°.05×**100°.35E**±0°.05**, h56^{km}, n21, σ1^s.36**/21**, mb3.7**/6**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDSI	Padang	0.89	7	P	Pn	17 14 27.2	+0.5
PDSI				S	Sn	17 14 39.6	+0.9
PPSI	Pulau Pagai	1.02	199	P	Pn	17 14 28.6	+0.3
PPSI				S	Sn	17 14 45.7	+4.0
KRJI	Kerinci	1.15	105	P	Pn	17 14 31.0	+0.8
KRJI				S	Sn	17 14 46.6	+1.5
PPI	Padang Panjang	1.33	2	P	Pn	17 14 34.1	+1.5
SISI	Saibi	1.34	290	P	Pn	17 14 33.0	+0.3
BKNI	Bangkinang	2.22	18	P	Pn	17 14 45.4	+0.8
MASI	Maura Aman, Be	2.31	125	P	Pn	17 14 45.0	-1.0
MNSI	Mandailing Nat	2.69	343	P	Pn	17 14 51.0	0.0
GSI	Gunungsitoli	4.14	318	P	Pn	17 15 10.0	-1.0
DSRI	Dabo	4.43	73	P	Pn	17 15 15.8	+0.9
CMAR	Chiang Mai Arr	20.17	356	P	P	17 18 40.5	+0.3
	0.6nm,1.0s,baz=190,slow=10,SNR=4.8						
H08S2	Diego Garcia H	28.35	257	T	T	17 48 58.6	
	baz=79,slow=76,SNR=3.7						
H08S3	Diego Garcia H	28.35	257	T	T	17 48 59.5	
	baz=79,slow=76,SNR=4.5						
H08S1	Diego Carcia H	28.37	257	T	T	17 49 00.7	
	baz=79,slow=76,SNR=2.5						
FITZ	Fitzroy Crossi	29.64	125	P	P	17 20 09.2	-1.4
	1.7nm,1.0s,baz=298,slow=15,SNR=2.0						
WRA	Warramunga Arr	37.80	121	P	P	17 21 19.9	-1.6
	0.3nm,0.4s,baz=302,slow=9.3,SNR=12						
ASAR	Alice Springs	39.09	127	P	P	17 21 31.7	-0.6
	0.8nm,0.6s,baz=305,slow=8.0,SNR=26						
SONM	Songino Array	49.71	5	P	P	17 22 55.8	-1.0
	0.4nm,0.5s,baz=183,slow=9.4,SNR=2.7						
MKAR	Makanchi Array	50.93	344	P	P	17 23 06.9	+1.0
	0.8nm,0.6s,baz=157,slow=8.7,SNR=9.4						
ZALV	Zalesovo Beam	57.03	349	P	P	17 23 50.6	+0.4
	0.6nm,0.3s,baz=160,slow=4.7,SNR=7.0						
TXAR	Lajitas Array	144.33	38	PKP	PKPdf	17 33 40.1	-0.8
	0.3nm,0.6s,baz=314,slow=1.5,SNR=4.1						

DJA 14 17:18:11.2±0.6**, 8°S**±8°×**12°4E**±°**, h179^{km}**±7^{km}**, M3.6**/6**, mB4.5**/1**, mb3.7**/4**, MLv3.5**/6**, Mw(mB)3.7**/1**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.64	170	P	Pn	17 18 45.2	+0.6
SOEI				S	Sn	17 19 10.5	0.0
BATI	Baumata	2.09	189	P	Pn	17 18 49.6	+0.4
BATI				S	Sn	17 19 19.5	+0.7
EDFI	Ende, Flores	2.36	255	P	Pn	17 18 52.9	+0.6
BASI	Baing, Sumba	3.96	238	P	Pn	17 19 11.7	0.0
WBSI	Waikabubak, Su	4.79	251	P	Pn	17 19 22.2	-0.2
PLAI	Plampang	6.18	263	P	Pn	17 19 40.7	0.0
	0.1nm16nm,1.7s						
TWSI	Taliwang, Sumb	7.06	265	P	Pn	17 19 51.9	-0.2
	0.0nm3.5nm,0.8s						

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*IDC **14** 17:46:14.2±1.5, 5°.62S×147°.45E, h207^{km}±19^{km}, mb3.4/6, mb1 3.7/8, mb1mx3.4/27, mbtmp4.0/8, Error ellipse: s-maj=42.2km s-min=11.2km az=114.0*

*NEIC **14** 17:46:16.2±0.8, 5°.61S±0°.08×147°.3E±0°.1, h202^{km}±9^{km}, mb4.4/8, Error ellipse: s-maj=18.2km s-min=10.8km az=106.0*

ISC 14 17:46:13.9±0.8**, 5°.54S**±0°.07×**147°.2E**±0°.1**, h195^{km}, n35, σ1^s.35**/37**, mb3.7**/7**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.47	2		Pn	17 47 12.2	+3.2
PMG	Port Moresby	3.85	181	P	Pn	17 47 15.0	+1.4
	13nm,0.3s,baz=27,slow=6.4,SNR=108						
PMG				S	Sn	17 47 58.9	-1.6
	17nm,0.3s,baz=211,slow=21,SNR=14						
PMG	Port Moresby	3.85	181	Pn	Pn	17 47 14.8	+1.2
PMG	Port Moresby	3.85	181	P	Pn	17 47 15.0	+1.4
PMG	Port Moresby	3.85	181	P	Pn	17 47 15.1	+1.4
RABL	Rabaul	5.10	75	Pn	Pn	17 47 31.3	+1.8
COEN	Coen	9.27	205	Pn	Pn	17 48 25.8	+2.0
COEN	Coen	9.27	205	P	Pn	17 48 33.3	+9.5
MTSU	Mount Surprise	12.84	193	P	P	17 49 13.1	-0.1
KDU	Kakadu	16.20	243	P	Pn	17 49 51.8	+0.8
QIS	Mount Isa	16.67	206	P	Pn	17 49 58.0	+1.4
MTN	Manton Dam	17.46	244		Pn	17 50 05.7	-0.3
MTN				IAmb	IAmb	17 50 06.9	
	comp=Z,21nm,1.4s						
MTN	Manton Dam	17.46	244	P	Pn	17 50 06.1	+0.1
DRS	Darwin Rock St	17.51	246	P	Pn	17 50 05.9	-0.7
WB0	Warramunga Arr	18.87	220	P	P	17 50 20.8	+1.2
WB0				IAmb	IAmb	17 50 24.9	
	comp=Z,8.9nm,0.8s						
WR0	Warramunga Arr	18.92	220	P	P	17 50 21.3	+1.1
WRAB	Tennant Creek	19.02	220	P	P	17 50 22.2	+0.9
WRAB				IAmb	IAmb	17 50 26.6	
	comp=Z,12nm,0.6s						
WRAB	Tennant Creek	19.02	220	P	P	17 50 22.9	+1.7
WB2	Warramunga Arr	19.02	220	P	P	17 50 22.4	+1.1
WRA	Warramunga Arr	19.03	220	P	P	17 50 22.4	+1.0
	comp=Z,1.7nm,0.3s,baz=44,slow=12,SNR=132						
WRA				S	S	17 53 45.2	-1.9
	comp=Z,0.1nm,0.3s,baz=45,slow=18,SNR=5.7						
WRA	Warramunga Arr	19.03	220	P	P	17 50 21.7	+0.3
KNRA	Kununurra	20.74	239	P	P	17 50 38.1	-1.5
AS31	Alice Springs	22.12	214	P	P	17 50 54.9	+1.0
AS31				IAmb	IAmb	17 51 04.7	
	comp=Z,3.0nm,0.5s						
ASAR	Alice Springs	22.13	214	P	P	17 50 55.2	+1.3
	comp=Z,2.8nm,0.8s,baz=37,slow=12,SNR=72						
ASAR				S	S	17 54 43.8	+0.3
	comp=Z,0.2nm,0.8s,baz=42,slow=42,SNR=3.6						
ASAR	Alice Springs	22.13	214	P	P	17 50 54.9	+1.0
FITZ	Fitzroy Crossi	24.50	238	P	P	17 51 17.5	+2.0
	comp=Z,4.2nm,0.5s,baz=53,slow=10,SNR=27						
SONM	Songino Array	64.11	331	P	P	17 56 26.8	-0.7
	comp=Z,0.3nm,0.4s,baz=97,slow=4.8,SNR=4.3						
SONM	Songino Array	64.11	331	P	P	17 56 26.7	-0.7
MKAR	Makanchi Array	77.28	320	P	P	17 57 46.5	-0.3
	comp=Z,0.3nm,0.4s,baz=98,slow=8.3,SNR=7.4						
MKAR	Makanchi Array	77.28	320	P	P	17 57 46.4	-0.5
ZALV	Zalesovo Beam	78.74	328	P	P	17 57 52.8	-1.8
	comp=Z,0.8nm,0.5s,baz=68,slow=4.0,SNR=3.8						
ILAR	Eielson Array	84.97	23	P	P	17 58 25.6	-1.2
	comp=Z,0.9nm,0.7s,baz=250,slow=4.4,SNR=9.2						
ILAR	Eielson Array	84.97	23	P	P	17 58 25.9	-1.0
TORD	Torodi Ar. Bea	145.19	285	PKPbc	PKPbc	18 05 28.6	-0.7
	comp=Z,1.5nm,0.6s,baz=75,slow=4.2,SNR=9.4						
TORD	Torodi Ar. Bea	145.19	285		PKPbc	18 05 28.4	-0.9

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*KRNET **14** 18:00:51.5±0.1, 43°.17N×78°.36E, h22^{km}, mb2.2*

*NNC **14** 18:00:53.5±1.2, 43°.18N×78°.47E, h5^{km}±8^{km}, mb2.5, mpv2.7, Error ellipse: s-maj=6.1km s-min=4.0km az=35.0*

*SOME **14** 18:00:53.2, 43°.18N×78°.42E, h0^{km}*

ISC 14 18:00:52.4±0.8**, 43°.12N**±0°.03×**78°.32E**±0°.03**, h13^{km}**±5^{km}**, n15, σ2^s.08**/28**, 8C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.09	135	*e*P	Pg	18 00 56.0	+0.5
	106nm,0.1s						
SATY				*e*S	Sg	18 00 58.0	+0.4
	432nm,0.1s						
SATY	Saty	0.09	135	P	Pg	18 00 56.0	+0.5
	106nm,0.1s						
SATY				S	Sg	18 00 58.0	+0.4
	432nm,0.1s						
ZHN	Zhinishke	0.10	62	P	Pg	18 00 55.7	+0.2
	3.9nm,0.0s						
ZHN				S	Sg	18 00 57.4	-0.3
	206nm,0.1s						
KURS	Kuram	0.38	343	*e*P	Pb	18 01 01.1	0.0
	2.6nm,0.1s						
KURS				*e*S	Sb	18 01 06.8	-0.2
	1.8nm,0.1s						
KURS	Kuram	0.38	343	P	Pb	18 01 01.2	0.0
	2.6nm,0.1s						
KURS				S	Sb	18 01 06.8	-0.2
	1.8nm,0.1s						
UZB	Uzynbulak	0.51	87	*e*P	Pb	18 01 02.1	-1.3
	4.0nm,0.1s						
UZB				*e*S	Sb	18 01 08.4	-2.4
	23nm,0.1s						
UZB	Uzynbulak	0.51	87	P	Pb	18 01 02.1	-1.3
	4.0nm,0.1s						
UZB				S	Sb	18 01 08.4	-2.4
	23nm,0.1s						
ANVS	Anan'yevo	0.59	235	⇑*i*P	Pg	18 01 03.5	-0.5
	baz=33						
ANVS				⇑*i*S	Sb	18 01 12.7	-0.3
	baz=33						
PRZ	Przheval'sk	0.64	175	⇑*i*P	Pb	18 01 04.4	-1.2
	baz=77						
PRZ				⇑*i*S	Sb	18 01 13.6	-0.9
	baz=77						
SHLS	Shalkode	0.84	87	*e*P	Pn	18 01 13.8	+3.7
	1.6nm,0.4s						
SHLS				*e*S	Sn	18 01 28.4	+6.1
	2.0nm,0.2s						
SHLS	Shalkode	0.84	87	P	Pn	18 01 13.8	+3.7
	1.6nm,0.4s						
SHLS				S	Sn	18 01 28.4	+6.1
	2.0nm,0.2s						
PDGK	Podgornoye	0.88	76	P	Pb	18 01 08.4	-1.2
	0.4nm,0.2s						
PDGK				S	Sb	18 01 19.4	-2.0
	1.0nm,0.1s						
BLB	Baldybastay	0.98	7	P	Pn	18 01 11.3	-0.7
	1.4nm,0.1s						
BLB				S	Sn	18 01 24.3	-1.6
	3.7nm,0.1s						
KDJ	Kajisay	1.30	221	⇑*i*P	Pn	18 01 16.3	-0.2
	baz=20						
KDJ				⇑*i*S	Sn	18 01 34.3	+0.5
	baz=20						
BOOM	Boomskoye usch	1.86	251	⇑*i*P	Pb	18 01 25.5	-0.9
	baz=50						
BOOM				⇑*i*S	Sb	18 01 50.4	+0.7
	baz=50						

INET 14 18:06:02.4, 10°.98N×87°.01W, h14^{km}, MW3.5, Off coast of Costa Rica

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*TUL **14** 18:15:26.4±0.8, 36°.30N±0°.02×97°.52W±0°.02, h5^{km}±6^{km}, ML2.7, mb_Lg2.6/11(NEIC), Error ellipse: s-maj=2.6km s-min=1.8km az=217.0*

NEIC 14 18:15:26.3±0.8**, 36°.29N**±0°.01×**97°.535W**±0°.008**, h4^{km}**±6^{km}**, Error ellipse: s-maj=2.2km s-min=0.7km az=165.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.42	301	Pg	Pg	18 15 34.2	-0.2
OK029	Liberty Lake	0.49	172	Pg	Pg	18 15 36.1	+0.4
BLOK	Blackwell	0.54	29		Pg	18 15 36.8	+0.2
OK033	Mehan	0.54	117	Pg	Pg	18 15 36.5	-0.2
GC02	Grant County #	0.62	335	Pg	Pg	18 15 38.3	+0.1
BCOK	Bluff Creek, N	0.63	185	Pg	Pg	18 15 38.7	+0.3
OK031	S. Brethren Rd	0.66	120	Pg	Pg	18 15 39.0	+0.2
QUOK	Quay	0.68	100	Pg	Pg	18 15 39.4	+0.1
OK030	Cody Creek RV	0.71	120		Pg	18 15 39.6	-0.3
OK034	N. Norfolk Rd.	0.72	112		Pg	18 15 40.1	0.0
OK025	Westminster Rd	0.72	167	Pg	Pg	18 15 40.4	+0.2
KAN13	South Haven SW	0.72	4	Pg	Pg	18 15 40.3	+0.1
OK032	Salt Plains WL	0.75	314	Pg	Pg	18 15 40.7	0.0
KAN14	Manchester OK	0.75	333		Pg	18 15 40.6	-0.1
KAN17	Caldwell West	0.78	346	Pg	Pg	18 15 41.1	-0.1
KAN09	Caldwell North	0.85	356	Pg	Pg	18 15 42.5	-0.1
KAN05	Bluff City Nor	0.86	342	Pg	Pg	18 15 42.7	-0.1
OKCFA	Oklahoma City	0.87	176	Pg	Pg	18 15 42.7	-0.3
KAN01	Argonia South	0.88	348		Pg	18 15 42.9	-0.3
OKCSW	OKLAHOMA CITY	0.88	175	Pg	Pg	18 15 43.2	0.0
KAN10	Anthony SW Sta	0.95	332	Pg	Pg	18 15 44.0	-0.5
KAN06	Argonia West S	0.99	345		Pg	18 15 44.9	-0.4
KAN08	Anthony NE Sta	1.00	340	Pg	Pg	18 15 44.9	-0.6
KAN16	Harper SW Stat	1.03	336	Pg	Pg	18 15 45.8	-0.2
FNO	Franklin	1.03	174		Pg	18 15 45.8	-0.3
T35A	Sooner Cattle	1.03	52		Pg	18 15 45.9	-0.2
U32A	Winter Ranch,	1.19	275		Pg	18 15 48.7	-0.4
W35A	Tecumseh	1.25	154		Pg	18 15 49.5	-0.9
TUL1	Leonard	1.46	104		Pn	18 15 52.7	-0.8
TUL1					Sg	18 16 13.2	-0.1
X34A	Smith Ranch, M	1.70	188		Pn	18 15 56.3	-0.4
LOOK	Love County	2.31	173	Pn	Pn	18 16 05.3	+0.2
X37A	Clayton	2.45	133	Pn	Pn	18 16 07.0	0.0
X37A				Sg	Sg	18 16 44.4	-0.5
U38A	Gravette	2.55	86		Pn	18 16 09.2	+0.8
KSU1	Kansas State U	2.90	14	Pg	Pg	18 16 21.2	-0.7
HHAR	Hobbs	2.91	89		Pn	18 16 13.7	+0.4
Z35A	Perchaven, San	2.96	175	Pn	Pn	18 16 15.3	+1.3
S39A	Bolivar	3.65	66		Pn	18 16 22.6	-1.0
AMTX	Amarillo	3.66	249	IAmb_Lg		18 17 28.2	
	comp=Z,11nm,0.8s						
MIAR	Mount Ida	3.67	117		Pn	18 16 24.4	+0.6
U40A	Yellville	3.78	88	Pn	Pn	18 16 26.7	+1.3
U40A				IAmb_Lg		18 17 27.6	
	comp=Z,9.3nm,0.8s						
MGMO	Mountain Grove	4.32	77	IAmb_Lg		18 17 46.7	
	comp=Z,12nm,0.9s						
R40A	Maddies Statio	4.65	63	IAmb_Lg		18 17 52.7	
	comp=Z,17nm,0.7s						
CCM	Cathedral Cave	5.32	69	IAmb_Lg		18 18 13.7	
	comp=Z,10nm,0.9s						
JCT	Junction City	6.09	199	IAmb_Lg		18 18 41.7	
	comp=Z,14nm,1.0s						
S44A	Carbondale	6.77	76	IAmb_Lg		18 19 04.6	
	comp=Z,6.0nm,0.7s						

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*ATH **14** 18:47:27.7, 36°.25N×28°.31E, h71^{km}±2^{km}, ML2.6/5, Error ellipse: s-maj=3.6km s-min=1.4km az=5.0*

*ISK **14** 18:47:28.5, 36°.20N×28°.28E, h63^{km}±2^{km}, ML2.7/12*

*THE **14** 18:47:29.8, 36°.18N×28°.28E, h62^{km}±1^{km}, ML2.5/4, Error ellipse: s-maj=2.4km s-min=1.0km az=4.0*

*NIC **14** 18:47:29.9±0.0, 35°.96N×28°.40E, h43^{km}±5^{km}, Ml3.5/5*

*DDA **14** 18:47:29.0, 36°.35N×28°.34E, h60^{km}±2^{km}, ML2.5*

ISC 14 18:47:28.4±1.2**, 36°.22N**±0°.03×**28°.30E**±0°.02**, h70^{km}**±6^{km}**, n64, σ1^s.16**/97**, 2D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.14	268	P	Pn	18 47 38.9	+0.1
ARG				S	Sn	18 47 45.9	-0.5
	438nm,0.2s						
ARG	Arkhangelos	0.14	268	P	Pn	18 47 39.0	+0.1
ARG				S	Sn	18 47 46.2	-0.2
ARG				AML	AML	18 47 46.4	
	comp=E,975µm,0.3s						
ARG				AML	AML	18 47 46.5	
	comp=N,757µm,0.1s						
ARG	Arkhangelos	0.14	268	P	Pn	18 47 38.7	0.0
ARG				S	Sn	18 47 45.9	-0.5
TURN	Turunc	0.55	355	*i* P	Pn	18 47 41.7	0.0
TURN				*i* S	Sn	18 47 50.5	-1.0
TURN				IAML		18 47 53.0	
	comp=E,267nm,0.2s						
TURN				IAML		18 47 53.0	
	comp=N,219nm,0.2s						
TURN	Turunc	0.55	355	PG	Pn	18 47 42.3	+0.6
TURN				SG	Sn	18 47 52.1	+0.5
DALY	Dalyan (Mula)	0.66	26	*i* P	Pn	18 47 43.7	+0.9
DALY				*i* S	Sn	18 47 50.9	-2.6
DALY	Dalyan (Mula)	0.66	26	PG	Pn	18 47 43.6	+0.8
DALY				SG	Sn	18 47 54.3	+0.8
FETY	Fethiye	0.76	57	*i* P	Pn	18 47 44.1	+0.1
FETY				*i* S	Sn	18 47 54.5	-0.9
FETY				IAML		18 47 56.0	
	comp=N,293nm,0.6s						
FETY				IAML		18 47 57.0	
	comp=E,139nm,0.4s						
FETY	Fethiye	0.76	57	PG	Pn	18 47 44.5	+0.5
FETY				SG	Sn	18 47 56.0	+0.5
DAT	Datca	0.77	311	*i* P	Pn	18 47 44.4	+0.1
DAT				*i* S	Sn	18 47 55.7	-0.3
DAT				IAML		18 47 57.0	
	comp=N,165nm,0.5s						
DAT				IAML		18 47 59.0	
	comp=E,104nm,0.2s						
DAT	Datca	0.77	311	PG	Pn	18 47 44.6	+0.4
DAT				SG	Sn	18 47 56.3	+0.3
NIS1	Nisyros Isl.	0.98	293	P	Pn	18 47 47.1	+0.4
NIS1				S	Sn	18 48 00.2	-0.1
	comp=E,455nm,0.2s						
NIS1	Nisyros Isl.	0.98	293	P	Pn	18 47 47.1	+0.4
NIS1				S	Sn	18 48 00.5	+0.3
NIS1				AML	AML	18 48 02.5	
	comp=N,920µm,0.2s						
NIS1				AML	AML	18 48 05.6	
	comp=E,926µm,0.4s						
NIS1	Nisyros Isl.	0.98	293	PG	Pn	18 47 46.9	+0.2
MULA	Mugla, Merkez-	1.03	1	*i* P	Pn	18 47 49.2	+1.8
MULA				*i* S	Sn	18 48 00.5	-1.0
KSL	Kastellorizon	1.04	94	P	Pn	18 47 48.3	+0.9
KSL				S	Sn	18 48 01.8	+0.3
	comp=E,172nm,0.3s						
KSL	Kastellorizon	1.04	94	P	Pn	18 47 48.2	+0.9
KSL				S	Sn	18 48 01.4	-0.2
KSL				AML	AML	18 48 03.1	
	comp=E,498µm,0.3s						
KSL				AML	AML	18 48 03.8	
	comp=N,184µm,0.3s						
KSL	Kastellorizon	1.04	94	P	Pn	18 47 48.3	+0.9
KSL				S	Sn	18 48 01.6	+0.1
KSL				AML	AML	18 48 03.1	
	comp=N,0.5nm,0.3s						
KSL				AML	AML	18 48 03.1	
	comp=N,0.5nm,0.3s						
KSL				AML	AML	18 48 03.9	
	comp=N,0.2nm,0.3s						
KSL				AML	AML	18 48 03.9	
	comp=N,0.2nm,0.3s						
AKAS	Kas	1.06	89	*i* P	Pn	18 47 48.1	+0.4
AKAS				*i* S	Sn	18 48 00.1	-2.0
AKAS				IAML		18 48 03.0	
	comp=N,167nm,0.4s						
AKAS	Kas	1.06	89	PG	Pn	18 47 48.4	+0.7
BDRM	Kayabasi	1.09	321	*i* P	Pn	18 47 46.7	-1.3
BDRM				*i* S	Sn	18 48 01.3	-1.4
MLSB	Milas	1.15	339	PN	Pn	18 47 49.7	+0.9
BODT	Bodrum	1.16	317	PN	Pn	18 47 49.4	+0.5
CAEL	Denizli, Camel	1.22	42	*i* P	Pn	18 47 50.5	+0.7
TAVA	DENIZLI_Tavas	1.34	21	*i* P	Pn	18 47 52.9	+1.6
TAVA				*i* S	Sn	18 48 09.1	+0.6
ELL	Elmali	1.40	67	PN	Pn	18 47 53.4	+1.3
ELL	Elmali	1.40	67	P	Pn	18 47 53.8	+1.7
ELL				S	Sn	18 48 12.7	+2.7
GOLH	Golhisar	1.43	45	*i* P	Pn	18 47 53.7	+1.1
AYDN	Tasoluk	1.48	347	*i* P	Pn	18 47 54.7	+1.6
AYDN				*i* S	Sn	18 48 11.3	-0.4
AKUM	Antalya-Kumluc	1.66	86	*i* P	Pn	18 47 56.7	+1.3
GCAM	G?zelcaml?	1.71	330	*i* P	Pn	18 47 56.0	0.0
GCAM				*i* S	Sn	18 48 16.0	-1.0
GCAM				IAML		18 48 17.0	
	comp=E,46nm,0.3s						
GCAM				IAML		18 48 17.0	
	comp=N,48nm,0.7s						
AYDB	Zeytinkoy-Aydi	1.75	349	PN	Pn	18 47 57.8	+1.0
KORT	Korkueli	1.82	64	*i* P	Pn	18 47 59.8	+2.0
KORT				*i* S	Sn	18 48 21.9	+1.7
KORT	Korkueli	1.82	64	PN	Pn	18 47 59.4	+1.6
SMG	Samos	1.89	322	P	Pn	18 47 58.9	+0.3
SMG	Samos	1.89	322	P	Pn	18 47 58.1	-0.5
ZKR	Zakros	2.02	238	P	Pn	18 48 01.5	+1.1
ZKR				S	Sn	18 48 23.3	-1.4
	comp=N,48nm,0.3s						
ZKR	Zakros	2.02	238	P	Pn	18 48 01.8	+1.4
ZKR	Zakros	2.02	238	PN	Pn	18 48 01.1	+0.7
ZKR	Zakros	2.02	238	P	Pn	18 48 01.5	+1.1
ZKR				S	Sn	18 48 25.4	+0.7
STIA	Sitia Lasithi	2.06	241	P	Pn	18 48 01.7	+0.8
STIA				S	Sn	18 48 24.6	-1.1
PASA	Karahalli, USA	2.32	24	*i* P	Pn	18 48 04.0	-0.5
PASA				*i* S	Sn	18 48 30.7	-1.4
STAX	Taxiarchis Har	2.34	275	P	Pn	18 48 05.2	+0.6
THR3	Thira Island,	2.35	275	P	Pn	18 48 05.4	+0.7
NPS	Neapolis	2.39	247	P	Pn	18 48 05.6	+0.3
NPS	Neapolis	2.39	247	P	Pn	18 48 05.6	+0.3
NPS				AML	AML	18 48 33.1	
	comp=N,194µm,0.3s						
NPS				AML	AML	18 48 33.4	
	comp=E,325µm,0.3s						
ZEYE	Izmir, Urla-Ze	2.47	325	*i* P	Pn	18 48 06.3	0.0
USAK	Uak-Merkez	2.55	13	*i* P	Pn	18 48 07.3	-0.3
USAK				*i* S	Sn	18 48 35.8	-1.8
USAK				IAML		18 48 51.0	
	comp=N,15nm,0.9s						
USAK				IAML		18 48 56.0	
	comp=E,102nm,1.2s						
CHOS	Chios island	2.81	321	P	Pn	18 48 11.4	+0.4
DEMI	Demirci	2.84	7	*i* P	Pn	18 48 11.6	+0.2
DEMI				*i* S	Sn	18 48 40.9	-3.6
DEMI				IAML		18 48 44.0	
	comp=E,18nm,0.3s						
IDI	Anoyia	2.92	252	P	Pn	18 48 12.7	0.0
IDI				AML	AML	18 48 47.5	

	comp=E,66µm,0.2s						
IDI				AML	AML	18 48 48.8	
	comp=N,59µm,0.3s						
SIVA	**Sivas**	**3.09**	**248**	P	**Pn**	**18 48 16.7**	**+2.0**
AKMS	**Akamas**	**3.50**	**109**	⇓P	**Pn**	**18 48 20.2**	**-0.2**
AKMS				AML	AML	18 48 57.2	
	comp=N,0.3nm,0.6s						
AKMS				AML	AML	18 48 59.2	
	comp=N,0.3nm,0.7s						
IMMV	**Iera Moni Meta**	**3.59**	**259**	P	**Pn**	**18 48 24.0**	**+2.4**
OSC1	**CSNet OBS 1**	**3.66**	**137**	P	**Pn**	**18 48 21.8**	**-0.7**
OSC1				S	**Sn**	**18 49 00.9**	**-3.5**
ALFC	**Alefka**	**3.66**	**106**	P	**Pn**	**18 48 22.1**	**-0.4**
ALFC				AML	AML	18 49 03.6	
	comp=N,0.2nm,0.3s						
ALFC				AML	AML	18 49 03.6	
	comp=N,0.2nm,0.3s						
ALFC				S	**Sn**	**18 49 03.7**	**-0.8**
ALFC				AML	AML	18 49 03.9	
	comp=N,0.2nm,0.3s						
ALFC				AML	AML	18 49 03.9	
	comp=N,0.2nm,0.3s						
GVD	**Gavdhos**	**3.70**	**249**	P	**Pn**	**18 48 24.3**	**+1.2**
NATA	**Nata**	**3.77**	**111**	P	**Pn**	**18 48 24.2**	**+0.1**
NATA				AML	AML	18 49 06.7	
	comp=N,0.4nm,0.4s						
NATA				AML	AML	18 49 06.7	
	comp=N,0.4nm,0.4s						
NATA				S	**Sn**	**18 49 07.0**	**-0.3**
NATA				AML	AML	18 49 07.8	
	comp=N,0.5nm,0.2s						
NATA				AML	AML	18 49 07.8	
	comp=N,0.5nm,0.2s						
ANKY	**Antikythira Is**	**4.07**	**266**	P	**Pn**	**18 48 29.8**	**+1.7**
KTHA	**Kythira Island**	**4.23**	**272**	P	**Pn**	**18 48 31.9**	**+1.5**
ASGA	**Asgata**	**4.28**	**108**	⇓P	**Pn**	**18 48 31.0**	**-0.1**
ASGA				AML	AML	18 49 16.1	
	comp=N,0.1nm,0.7s						
ASGA				AML	AML	18 49 18.5	
	comp=N,0.2nm,1.4s						
CSS	**Mathiatis**	**4.29**	**106**	P	**Pn**	**18 48 31.0**	**-0.1**
VLI	**Veliai**	**4.35**	**278**	P	**Pn**	**18 48 33.8**	**+1.8**
OSC2	**CSNet OBS 4**	**4.53**	**133**	P	**Pn**	**18 48 34.8**	**+0.4**

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*IDC **14** 19:06:21.1±26.0, 28°.88N×72°.04E, h0^{km}, mb4.0/1, mb1 3.7/3, mb1mx3.3/31, mbtmp3.7/3, ML3.4/2, Error ellipse: s-maj=421.8km s-min=69.0km az=178.0*

*NNC **14** 19:07:34.8±3.4, 36°.41N×69°.78E, h94^{km}±74^{km}, mb3.4, mpv3.8, Error ellipse: s-maj=25.0km s-min=24.4km az=157.0*

ISC 14 19:07:34.9±1.9, **36°.4N**±0°.1×**69°.90E**±0°.09, **h100**^{km}, **n8**, σ**1^{s}49**/13, **8C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	**Karatay Array**	**6.71**	**4**	⇑P	**Pn**	**19 09 11.5**	**+0.7**
	5.4nm,0.5s						
KK02				⇑S	**Sn**	**19 10 26.7**	**+1.0**
	2.6nm,0.4s						
AAK	**Ala-Archa**	**7.17**	**28**	⇓P	**Pn**	**19 09 17.2**	**+0.1**
	1.8nm,0.4s						
AAK				⇑S	**Sn**	**19 10 37.3**	**+0.2**
	4.4nm,0.6s						
TKM2	**Tokmak 2**	**7.85**	**32**	⇑P	**Pn**	**19 09 26.4**	**-0.1**
	1.6nm,0.5s						
TKM2				⇑S	**Sn**	**19 10 57.0**	**+3.2**
	1.1nm,0.5s						
GEYT	**Alibeck**	**9.53**	**283**	Pn	**Pn**	**19 09 50.6**	**+1.4**
	0.3nm,0.3s,baz=94,slow=15,SNR=1.4						
MKAR	**Makanchi Array**	**13.90**	**38**	P	**P**	**19 10 51.0**	**-1.4**
	0.1nm,0.3s,baz=209,slow=9.8,SNR=5.4						
AB31	**Akbulak array**	**14.75**	**334**	⇑P	**Pn**	**19 10 58.1**	**-0.3**
	0.3nm,0.2s,baz=150,slow=13,SNR=31						
AB31				⇑S	**Sn**	**19 13 40.1**	**-0.9**
	0.8nm,0.5s,baz=160,slow=22,SNR=6.0						
AKTO	**Aktyubinsk**	**16.43**	**332**	⇑P	**P**	**19 11 19.8**	**-0.6**
	4.9nm,1.1s						
AKTO				⇓S	**Sn**	**19 14 19.7**	**-1.8**
	2.5nm,1.1s						
ZALV	**Zalesovo Beam**	**20.38**	**26**	P	**P**	**19 12 02.1**	**-1.3**
	0.8nm,0.3s,baz=218,slow=10,SNR=5.9						

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*IDC **14** 19:07:57.5±1.2, 29°.43S×178°.84W, h330^{km}±13^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.3/21, mbtmp4.2/4, Error ellipse: s-maj=45.4km s-min=25.0km az=112.0*

ISC 14 19:07:58.3±1.0, **29°.6S**±0°.1×**179°.1W**±0°.1, **h315**^{km}, **n7**, σ**1^{s}61**/9, **mb3.5**/3, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.05**	**72**	P	**Pn**	**19 08 41.4**	**+0.9**
	181nm,0.3s,baz=80,slow=20,SNR=8.3						
RAO				S	**S**	**19 09 14.9**	**+0.8**
	158nm,0.3s,baz=269,slow=23,SNR=15						
URZ	**Urewera**	**9.22**	**199**	P	**P**	**19 10 09.2**	**-1.3**
	2.1nm,0.3s,baz=279,slow=3.5,SNR=15						
URZ				S	**S**	**19 11 52.7**	**+1.2**
	2.6nm,0.3s,baz=57,slow=23,SNR=5.7						
DZM	**Mont Dzumac**	**15.03**	**296**	P	**Pn**	**19 11 18.3**	**+1.6**
	0.9nm,0.3s,baz=172,slow=18,SNR=11						
STKA	**Stephens Creek**	**33.77**	**256**	P	**P**	**19 14 12.2**	**+1.0**
	2.8nm,0.6s,baz=102,slow=13,SNR=12						
ASAR	**Alice Springs**	**42.23**	**267**	P	**P**	**19 15 21.1**	**-0.4**
	1.6nm,0.5s,baz=103,slow=6.9,SNR=56						
WRA	**Warramunga Arr**	**43.14**	**272**	P	**P**	**19 15 27.1**	**-1.6**
	1.0nm,0.5s,baz=110,slow=7.7,SNR=24						
FINES	**FINESS Array B**	**144.05**	**340**	PKP	**PKPab**	**19 26 52.0**	**-2.2**
	3.6nm,1.0s,baz=66,slow=4.0,SNR=13						

IDC 14 19:34:39.9±1.6, **4°.04S**×**129°.49E**, **h0**^{km}, **mb3.5**/1, **mb1 3.4**/4, **mb1mx3.0**/39, **mbtmp3.3**/4, **ML3.1**/3, **Error ellipse: s-maj=47.8km s-min=24.8km az=91.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.62**	**29**	Pn	Pn	19 35 38.9	+1.7
	1.9nm,0.3s,baz=250,slow=21,SNR=5.5						
SIJI				Sn	Sn	19 36 21.7	+1.0
	1.7nm,0.3s,baz=81,slow=24,SNR=3.5						
WRA	**Warramunga Arr**	**16.50**	**164**	Pn	Pn	19 38 32.5	-0.3
	0.1nm,0.3s,baz=347,slow=11,SNR=3.0						
ASAR	**Alice Springs**	**19.97**	**168**	P	P	19 39 14.2	+0.3
	0.1nm,0.3s,baz=347,slow=11,SNR=8.5						
MKAR	**Makanchi Array**	**65.50**	**326**	P	P	19 45 24.6	-0.5
	0.2nm,0.4s,baz=116,slow=7.1,SNR=6.6						

IDC 14 19:35:12.2±54.0, **17°.96S**×**178°.37E**, **h0**^{km}, **mb3.8**/3, **mb1 4.0**/3, **mb1mx3.3**/34, **mbtmp3.8**/3, **Error ellipse: s-maj=966.9km s-min=152.8km az=78.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.92**	**240**	P	P	19 42 15.2	+0.8
	0.7nm,0.5s,baz=98,slow=14,SNR=1.4						
WRA	**Warramunga Arr**	**41.60**	**260**	P	P	19 43 02.1	-0.2
	0.4nm,0.5s,baz=96,slow=7.5,SNR=12						
ASAR	**Alice Springs**	**41.82**	**254**	P	P	19 43 03.5	-0.6
	2.1nm,0.6s,baz=87,slow=8.9,SNR=47						

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*TUL **14** 19:54:15.2±1.1, 36°.611N±0°.010×97°.94W±0°.02, h6^{km}±5^{km}, ML2.6, mb_Lg2.4/5(NEIC), Error ellipse: s-maj=2.1km s-min=1.3km az=112.0*

NEIC 14 19:54:13.9±0.6, **36°.56N**±0°.02×**97°.99W**±0°.04, **h19**^{km}±4^{km}, **Error ellipse: s-maj=5.4km s-min=3.0km az=104.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.05**	**178**		Pg	19 54 17.8	+0.4
CROK				Sg	Sg	19 54 19.5	-0.1
OK032	**Salt Plains WL**	**0.30**	**324**	Pg	Pb	19 54 20.9	0.0
OK032				Sg	Sb	19 54 25.7	+0.2
GC02	**Grant County #**	**0.31**	**19**	Pg	Pg	19 54 20.6	-0.2
GC02				Sg	Sg	19 54 24.4	-1.0
KAN14	**Manchester OK**	**0.40**	**3**	Pg	Pg	19 54 22.3	0.0
KAN14				Sg	Sg	19 54 27.3	-0.6
KAN17	**Caldwell West**	**0.52**	**20**	Pg	Pg	19 54 24.4	0.0
KAN05	**Bluff City Nor**	**0.56**	**9**		Pb	19 54 24.4	-0.7
KAN05				Sg	Sg	19 54 32.2	-0.5
KAN10	**Anthony SW Sta**	**0.57**	**351**	Pg	Pg	19 54 25.7	+0.3
KAN13	**South Haven SW**	**0.61**	**42**	Pg	Pb	19 54 26.0	0.0
KAN01	**Argonia South**	**0.62**	**17**		Pb	19 54 26.3	+0.1
KAN09	**Caldwell North**	**0.65**	**27**	Pg	Pb	19 54 26.6	0.0
BLOK	**Blackwell**	**0.65**	**72**	Pg	Pb	19 54 26.8	+0.1
KAN08	**Anthony NE Sta**	**0.67**	**1**		Pg	19 54 27.2	0.0
KAN16	**Harper SW Stat**	**0.67**	**355**	Pg	Pb	19 54 27.0	0.0
KAN06	**Argonia West S**	**0.70**	**8**		Pb	19 54 27.5	0.0
KAN12	**Harper NE Stat**	**0.74**	**359**		Pg	19 54 28.4	-0.1
U32A	**Winter Ranch,**	**0.84**	**258**		Pb	19 54 29.6	-0.3
OK029	**Liberty Lake**	**0.87**	**150**		Pb	19 54 29.8	-0.7
BCOK	**Bluff Creek, N**	**0.95**	**161**		Pg	19 54 32.4	0.0
OK033	**Mehan**	**0.99**	**121**		Pb	19 54 31.9	-0.6
QUOK	**Quay**	**1.10**	**110**		Pn	19 54 34.3	-0.1
OK031	**S. Brethren Rd**	**1.10**	**123**		Pg	19 54 35.8	+0.4
OK034	**N. Norfolk Rd.**	**1.16**	**118**		Pg	19 54 36.7	+0.2
T35A	**Sooner Cattle**	**1.24**	**73**	Pg	Pg	19 54 37.5	-0.4
W35A	**Tecumseh**	**1.67**	**147**		Pg	19 54 45.2	-0.8
TUL1	**Leonard**	**1.89**	**109**	IAmb_Lg		19 55 15.3	
	comp=Z,18nm,0.8s						
WMOK	**Wichita Mounta**	**1.93**	**200**	IAmb_Lg		19 55 23.7	
	comp=Z,8.4nm,0.8s						
R32A	**Long Quarter,**	**1.95**	**343**		Pb	19 54 50.0	+1.1
X34A	**Smith Ranch, M**	**1.96**	**176**		Pg	19 54 50.6	-0.9
L34A	**Svendsen Farm,**	**5.54**	**13**	IAmb_Lg		19 57 14.7	
	comp=Z,14nm,0.8s						

IDC 14 20:02:50.8±2.2, **3°.07N**×**127°.85E**, **h0**^{km}, **mb3.3**/3, **mb1 3.5**/3, **mb1mx3.2**/45, **mbtmp3.3**/3, **Error ellipse: s-maj=154.5km s-min=27.2km az=67.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.74**	**165**	P	P	20 08 04.7	-0.2
	0.4nm,0.5s,baz=344,slow=10,SNR=9.6						
ASAR	**Alice Springs**	**27.22**	**168**	P	P	20 08 36.4	-0.2
	0.1nm,0.6s,baz=354,slow=7.5,SNR=1.8						
MKAR	**Makanchi Array**	**58.73**	**325**	P	P	20 12 50.8	+0.2
	0.3nm,0.3s,baz=116,slow=7.6,SNR=4.4						

GUC 14 20:21:44.4±0.9, **22°.46S**×**68°.60W**, **h105**^{km}±5^{km}, **ML3.8**, **3C-5D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.32**	**243**	*e*P	Pn	20 21 58.8	-1.3
LVC				*e*S	Sn	20 22 10.4	-1.4
PB09	**IPOC Station P**	**0.89**	**318**	⇓*i*P	Pn	20 22 04.5	+0.2
PB09				*e*S	Sn	20 22 19.2	0.0
PB09				IAML		20 22 23.4	
	comp=E,1µm,0.3s						
PB06	**IPOC Station P**	**0.93**	**255**	⇑*i*P	Pn	20 22 04.4	-0.3
PB06				*e*S	Sn	20 22 19.8	0.0
PB06				IAML		20 22 21.6	
	comp=N,3µm,0.1s						
PB15	**IPOC Station P**	**1.09**	**227**	⇑*i*P	Pn	20 22 06.6	+0.2
PB15				*e*S	Sn	20 22 23.5	+0.5
PB03	**IPOC Station P**	**1.14**	**291**	⇓*i*P	Pn	20 22 06.7	-0.2
PB03				*e*S	Sn	20 22 23.2	-0.8
PB03				IAML		20 22 25.2	
	comp=E,2µm,0.4s						
PB07	**IPOC Station P**	**1.40**	**301**	⇓*i*P	Pn	20 22 09.8	-0.1
PB07				*e*S	Sn	20 22 28.6	-0.5
PB07				IAML		20 22 33.0	
	comp=E,2µm,0.3s						
PB04	**IPOC Station P**	**1.44**	**275**	*e*P	Pn	20 22 09.7	-0.6
PB04				*e*S	Sn	20 22 29.7	-0.3
PB04				IAML		20 22 32.4	
	comp=N,3µm,0.2s						
PB05	**IPOC Station P**	**1.53**	**255**	⇑*i*P	Pn	20 22 10.9	-0.5
PB05				*e*S	Sn	20 22 30.8	-1.1
PB05				IAML		20 22 36.6	
	comp=E,1µm,0.2s						
PB01	**IPOC Station P**	**1.64**	**330**	⇓*i*P	Pn	20 22 12.6	-0.1
PB01				*e*S	Sn	20 22 34.4	+0.2
PB01				IAML		20 22 42.1	
	comp=E,924nm,0.2s						
PB02	**IPOC Station P**	**1.66**	**313**	⇓*i*P	Pn	20 22 12.9	-0.1
PB02				*i* S	Sn	20 22 34.7	+0.1
PB02				IAML		20 22 38.7	
	comp=E,2µm,0.4s						
PB10	**IPOC Station P**	**2.08**	**239**	*e*P	Pn	20 22 17.7	-0.5
PB10				IAML		20 22 53.0	
	comp=N,374nm,0.1s						
PATCX	**Punta Patache**	**2.18**	**318**	*e*P	Pn	20 22 19.1	-0.5
PATCX				*e*S	Sn	20 22 46.4	-0.2
PATCX				IAML		20 22 53.7	
	comp=N,1µm,0.5s						
PB08	**IPOC Station P**	**2.37**	**347**	*e*P	Pn	20 22 23.4	+1.1
PB08				IAML		20 22 59.3	
	comp=E,390nm,0.2s						
TA01	**Diego Aracena**	**2.39**	**322**	*e*P	Pn	20 22 22.1	-0.2
TA01				IAML		20 22 56.5	
	comp=N,500nm,0.3s						
HMBC	**Humberstone**	**2.48**	**331**	*i* P	Pn	20 22 22.9	-0.7
HMBC				IAML		20 23 01.5	
	comp=E,543nm,0.2s						
TA02	**Huaiquique**	**2.61**	**327**	*e*P	Pn	20 22 24.5	-0.6
PB11	**IPOC Station P**	**2.86**	**340**	*e*P	Pn	20 22 28.1	-0.5
PB11				IAML		20 23 10.9	
	comp=E,522nm,0.2s						
PB12	**IPOC Station P**	**4.16**	**337**	*e*P	Pn	20 22 43.8	-2.1
PB16	**IPOC Station P**	**4.20**	**348**	*e*P	Pn	20 22 47.7	+0.8

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*IDC **14** 20:32:53.9±0.8, 36°.28N×142°.74E, h0^{km}, mb3.9/16, mb1 4.0/22, mb1mx3.8/60, mbtmp4.0/22, ML4.0/5, MS2.9/4, Ms1 3.0/4, ms1mx2.7/48, Error ellipse: s-maj=17.6km s-min=15.2km az=104.0*

*NIED **14** 20:32:58.8, 36°.41N×142°.42E, h52^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.93; M$_{\theta\theta}$0.09; M$_{\phi\phi}$-1.03; M$_{r\theta}$0.06; M$_{\theta\phi}$-0.39; M$_{\phi r}$0.25; Fault plane solution: M$_{0}$1.07000×10^{15} NP1:φ$_{s}$16.00000°, δ52.00000°, λ88.00000°. NP2:φ$_{s}$199.00000°, δ38.00000°, λ92.00000°.*

*NEIC **14** 20:32:58.1±1.9, 36°.40N±0°.06×142°.54E±0°.07, h23^{km}±4^{km}, mb4.6/13 Error ellipse: s-maj=9.2km s-min=7.0km az=143.0*

*JMA **14** 20:32:58.7±0.2, 36°.41N×142°.42E, h52^{km}, M3.6*

ISC 14 20:32:56.7±0.6, **36°.39N**±0°.05×**142°.56E**±0°.06, **h15**^{km}, **n85**, σ**1^{s}51**/85, **mb4.2**/21, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.54**	**244**	P	**Pn**	**20 33 23.4**	**-0.2**
CHOJ				*e*S	**Sn**	**20 33 40.6**	**-2.7**
ONAJ	**Iwakimizuishiy**	**1.58**	**297**	P	**Pn**	**20 33 23.5**	**-0.7**
JHYU	**Hitachinakayam**	**1.59**	**269**	P	**Pn**	**20 33 23.3**	**-1.0**
JHYU				*e*S	**Sn**	**20 33 41.7**	**-2.9**
JHO	**Hitachi**	**1.62**	**278**	P	**Pn**	**20 33 24.1**	**-0.6**
JFK	**Kawauchi**	**1.67**	**306**	P	**Pn**	**20 33 24.6**	**-0.7**
JYT	**Yasato**	**1.92**	**266**	Pn	**Pn**	**20 33 27.5**	**-1.3**
JMM	**Marumori**	**2.04**	**317**		**Pn**	**20 33 29.3**	**-1.2**
JFT	**Otama**	**2.11**	**303**	P	**Pn**	**20 33 30.7**	**-0.7**
JFT				*e*S	**Sn**	**20 33 54.8**	**-2.5**
BSO1	**Boso 1**	**2.16**	**217**	P	**Pn**	**20 33 31.4**	**-0.2**
BSO1				*e*S	**Sn**	**20 33 57.6**	**-0.3**
JAG	**Ashikaga**	**2.51**	**272**	P	**Pn**	**20 33 36.7**	**-0.2**
JMK	**Ichinoseki**	**2.77**	**338**	P	**Pn**	**20 33 39.9**	**-0.5**
JRY	**Ryogami san**	**2.98**	**264**	P	**Pn**	**20 33 43.3**	**-0.2**
JOD2	**Odawara 2**	**3.04**	**249**	P	**Pn**	**20 33 44.4**	**+0.2**
JOD2				*e*S	**Sn**	**20 34 18.0**	**-2.3**
JYK	**Kaneyama**	**3.07**	**326**	P	**Pn**	**20 33 44.5**	**-0.1**
JOM	**Ohasama**	**3.23**	**342**	P	**Pn**	**20 33 46.6**	**-0.3**
JYN	**Shimob**	**3.38**	**256**	P	**Pn**	**20 33 49.4**	**+0.5**
MJAR	**Matsushiro Arr**	**3.51**	**274**	Pn	**Pn**	**20 33 51.1**	**+0.4**
	1.5nm,0.3s,baz=113,slow=9.9,SNR=43						
MJAR				Sn	**Sn**	**20 34 36.5**	**+4.5**
	0.5nm,0.3s,baz=180,slow=33,SNR=4.7						
MJAR				LR	LR	20 35 31.2	
	comp=Z,161nm,19.2s,baz=100,slow=43						
MJAR	**Matsushiro Arr**	**3.51**	**274**	Pn	**Pn**	**20 33 50.3**	**-0.4**
MAJO	**Matsushiro**	**3.51**	**274**	Pn	**Pn**	**20 33 51.0**	**+0.3**
MAT	**Matsushiro**	**3.51**	**274**	P	**Pn**	**20 33 51.6**	**+0.9**
MAT				*e*S	**Sn**	**20 34 28.5**	**-3.5**
MAT	**Matsushiro**	**3.51**	**274**	P	**Pn**	**20 33 51.6**	**+0.9**
MJB9	**Matsu-Tunnel**	**3.52**	**274**		**Pn**	**20 33 50.9**	**+0.1**
JSD	**Sado**	**3.80**	**297**	P	**Pn**	**20 33 54.8**	**+0.1**
JSD	**Sado**	**3.80**	**297**	Pn	**Pn**	**20 33 54.0**	**-0.7**
JSG	**Sagara**	**3.96**	**246**	Pn	**Pn**	**20 33 55.6**	**-1.3**
JHJ2	**Mitsune**	**3.98**	**215**	Pn	**Pn**	**20 33 55.7**	**-1.4**
JHJ	**Hachijo jima 2**	**3.99**	**216**	Pn	**Pn**	**20 33 56.9**	**-0.3**
	15nm,0.3s,baz=59,slow=18,SNR=2.1						
JHJ				Sn	**Sn**	**20 34 38.8**	**-4.9**
	37nm,0.3s,baz=50,slow=23,SNR=6.7						
JGF	**Kuroka**	**4.29**	**261**		**Pn**	**20 34 02.3**	**+0.8**
JTM	**Tenmabayashi**	**4.54**	**346**	Pn	**Pn**	**20 34 05.4**	**+0.6**
INU	**Inuyama**	**4.62**	**259**	Pn	**Pn**	**20 34 05.7**	**-0.2**
ERM	**Erimo**	**5.63**	**5**	Pn	**Pn**	**20 34 18.0**	**-1.8**
JWT	**Wachi**	**5.92**	**261**	Pn	**Pn**	**20 34 24.4**	**+0.6**
JEW	**Eniwo**	**6.50**	**353**		**Pn**	**20 34 31.3**	**-0.3**
JMN	**Monobe**	**7.60**	**252**	Pn	**Pn**	**20 34 47.8**	**+1.0**
JKA	**Kamikawa-asahi**	**7.71**	**0**	Pn	**Pn**	**20 34 47.6**	**-0.8**
JKA	**Kamikawa-asahi**	**7.71**	**0**		**Sn**	**20 36 11.9**	**-3.5**
ASAJ	**Asahikawa**	**7.71**	**0**	Pn	**Pn**	**20 34 47.5**	**-0.9**
	5.9nm,0.3s,baz=216,slow=11,SNR=39						
ASAJ				Sn	**Sn**	**20 36 11.9**	**-3.6**
	1.5nm,0.3s,baz=43,slow=25,SNR=2.5						
ASAJ				LR	LR	20 37 54.2	
	comp=Z,35nm,18.8s,baz=160,slow=38						
JHS	**Saijyo**	**7.81**	**263**	Pn	**Pn**	**20 34 51.2**	**+1.4**
JCJ	**Chichijima**	**9.28**	**182**	Pn	Pn	20 35 05.5	-4.4
	5.1nm,0.3s,baz=274,slow=23,SNR=1.8						
JCJ				Sn	Sn	20 36 43.7	-10
	5.8nm,0.3s,baz=232,slow=22,SNR=2.1						
JCJ	**Chichijima**	**9.28**	**182**	Pn	**Pn**	**20 35 10.3**	**+0.4**
YSS	**Yuzh-Sakhalins**	**10.55**	**1**	Pn	**Pn**	**20 35 25.1**	**-2.2**
USRK	**Ussuriysk Ar.**	**11.22**	**317**	Pn	**Pn**	**20 35 38.2**	**+1.8**
	baz=120,slow=14,SNR=5.5						
KSRS	**Korea Array**	**11.77**	**280**	Pn	**Pn**	**20 35 47.3**	**+3.4**
	0.3nm,0.3s,baz=91,slow=14,SNR=5.9						
KSRS				LR	LR	20 39 41.8	
	comp=Z,46nm,20.6s,baz=85,slow=34						
KLR	**Kul'dur**	**15.06**	**332**	Pn	**P**	**20 36 33.2**	**-0.9**
	0.2nm,0.3s,baz=151,slow=1.3,SNR=5.2						
YAK	**Yakutsk**	**26.90**	**347**	P	**P**	**20 38 37.8**	**+1.1**
	3.4nm,0.6s,baz=320,slow=1.8,SNR=2.0						
YAK	**Yakutsk**	**26.90**	**347**	P	**P**	**20 38 37.5**	**+0.8**
YAK				IAmb	IAmb	20 38 49.3	
	comp=Z,13nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**27.03**	**121**	T	T	21 06 59.0	
	baz=313,slow=75,SNR=6.5						
H11N1	**WAKE ISLAND Hy**	**27.04**	**121**	T	T	21 06 58.9	
	baz=313,slow=75,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**27.05**	**121**	T	T	21 07 01.7	
	baz=313,slow=75,SNR=5.0						
SEY	**Seymchan**	**27.25**	**10**	P	**P**	**20 38 41.1**	**+1.2**
	comp=Z,2.3nm,0.9s,baz=95,slow=21,SNR=4.2						
XAN	**Xi'an**	**27.51**	**275**	P	**P**	**20 38 43.6**	**+1.0**
XAN				sP	pwP	20 39 03.8	+12
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
H11S1	**WAKE ISLAND Hy**	**27.74**	**124**	T	T	21 08 00.2	
	baz=320,slow=74,SNR=4.7						
H11S3	**WAKE ISLAND Hy**	**27.74**	**124**	T	T	21 07 57.0	
	SNR=16						
H11S2	**WAKE ISLAND Hy**	**27.75**	**124**	T	T	21 08 06.1	
	baz=10.0,slow=74,SNR=4.6						
ENH	**Enshi**	**28.21**	**267**	P	**P**	**20 38 48.9**	**0.0**
ENH				IAmb	IAmb	20 38 50.0	
	comp=Z,10.0nm,0.8s						
ULN	**Ulaanbaatar**	**28.48**	**305**	P	**P**	**20 38 51.8**	**+0.5**
SONM	**Songino Array**	**28.91**	**305**	P	**P**	**20 38 56.3**	**+1.3**
	comp=Z,1.4nm,0.5s,baz=104,slow=8.0,SNR=12						
SONM	**Songino Array**	**28.91**	**305**	P	**P**	**20 38 55.0**	**-0.1**
LZH	**Lanzhou**	**31.09**	**281**	*e*P	**P**	**20 39 15.9**	**+1.4**
LZH				pP	pwP	20 39 25.8	+2.3
LZH				sP	sP	20 39 32.6	+13
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
CMAR	**Chiang Mai Arr**	**42.24**	**257**	P	**P**	**20 40 50.5**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=55,slow=7.6,SNR=4.4						
CMAR				LR	LR	21 01 22.0	
	comp=Z,34nm,18.1s,baz=285,slow=40						
CMAR	**Chiang Mai Arr**	**42.24**	**257**	P	**P**	**20 40 48.1**	**-1.3**
ZALV	**Zalesovo Beam**	**43.03**	**313**	P	**P**	**20 40 55.6**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=90,slow=7.2,SNR=6.9						
ZALV	**Zalesovo Beam**	**43.03**	**313**	P	**P**	**20 40 55.7**	**+0.3**
MKAR	**Makanchi Array**	**45.24**	**303**	P	**P**	**20 41 14.1**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=84,slow=10,SNR=11						
MKAR	**Makanchi Array**	**45.24**	**303**	P	**P**	**20 41 13.0**	**-0.3**
JOHN	**Johnston Islan**	**46.59**	**102**	P	**P**	**20 41 25.5**	**+1.3**
KURK	**Kurchatov**	**47.05**	**309**	P	**P**	**20 41 27.4**	**0.0**
KURK				IAmb	IAmb	20 41 48.4	
	comp=Z,3.8nm,0.8s						
KURBB	**Kurchatov Arra**	**47.12**	**309**	P	**P**	**20 41 28.4**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=83,slow=8.1,SNR=13						
ILAR	**Eielson Array**	**49.54**	**32**	P	**P**	**20 41 46.0**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=266,slow=5.2,SNR=3.6						
KLU	**Klutina**	**50.13**	**36**	P	**P**	**20 41 51.7**	**+0.6**
BVAR	**Borovoye Array**	**51.68**	**313**	P	**P**	**20 42 05.5**	**+2.7**
	comp=Z,0.7nm,0.5s,baz=72,slow=4.7,SNR=3.0						
KKAR	**Karatay Array**	**54.24**	**301**	P	**P**	**20 42 22.0**	**+0.1**
INK	**Inuvik**	**54.54**	**27**	P	**P**	**20 42 22.6**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=274,slow=10.0,SNR=1.8						
INK	**Inuvik**	**54.54**	**27**	IAmb	IAmb	20 42 33.6	
	comp=Z,4.7nm,1.4s						
WRA	**Warramunga Arr**	**56.57**	**189**	P	**P**	**20 42 37.9**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=7.4,slow=7.6,SNR=7.4						
WRA	**Warramunga Arr**	**56.57**	**189**	P	**P**	**20 42 37.2**	**-1.5**
CHGR	**Chuyangaron**	**56.77**	**296**	P	**P**	**20 42 39.4**	**-0.8**
ARU	**Arti**	**57.45**	**319**	P	**P**	**20 42 44.6**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=27,slow=8.3,SNR=3.5						
ARU	**Arti**	**57.45**	**319**	IAmb	IAmb	20 43 00.0	
	comp=Z,12nm,1.5s						
ABKAR	**Akbulak array**	**59.06**	**311**	P	**P**	**20 42 56.3**	**+0.4**
ABKAR				IAmb	IAmb	20 43 09.5	
	comp=Z,3.9nm,1.1s						
ASAR	**Alice Springs**	**60.29**	**189**	P	**P**	**20 43 02.8**	**-1.9**
	comp=Z,0.2nm,0.5s,baz=356,slow=7.0,SNR=4.9						
KIRV	**Kirov**	**61.31**	**323**	P	**P**	**20 43 12.2**	**+0.9**
	comp=Z,3.8nm,0.5s,baz=153,slow=2.3,SNR=2.5						
YKA	**Yellowknife Ar**	**63.90**	**30**	P	**P**	**20 43 27.2**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=147,slow=38,SNR=3.3						
TXAR	**Lajitas Array**	**89.78**	**53**	P	**P**	**20 45 55.9**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=10,slow=7.6,SNR=2.3						
LPAZ	**La Paz**	**146.20**	**62**	PKPbc	**PKPbc**	**20 52 38.3**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=259,slow=7.3,SNR=2.4						

NNC 14 20:35:26.9±6.2, **36°.95N**×**70°.57E**, **h0**^{km}, **mb3.8**, **mpv3.4**, **3C-3D, Error ellipse: s-maj=52.7km s-min=48.6km az=121.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	**Karatay Array**	**6.15**	**360**	⇓P	Pn	20 37 00.3	+1.4
	2.8nm,0.3s						
KK02				⇑S	Sn	20 38 10.5	+0.5
	2.6nm,0.4s						
AAK	**Ala-Archa**	**6.43**	**27**	⇑P	Pn	20 37 03.0	-0.1
	1.5nm,0.8s						
AAK				⇑S	Sn	20 38 18.5	+1.2
	3.8nm,0.6s						
TKM2	**Tokmak 2**	**7.11**	**31**	⇓P	Pn	20 37 10.7	-1.5
	0.9nm,0.5s						
TKM2				⇓S	Sn	20 38 35.8	+2.0
	2.8nm,0.9s						

IDC 14 21:10:59.8±55.0, **17°.44S**×**179°.49E**, **h0**^{km}, **mb4.2**/3, **mb1 4.4**/3, **mb1mx3.5**/33, **mbtmp4.2**/3, **Error ellipse: s-maj=987.5km s-min=147.9km az=77.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.12**	**240**	P	P	21 18 12.7	+0.4
	1.7nm,0.8s,baz=102,slow=12,SNR=4.7						
WRA	**Warramunga Arr**	**42.75**	**259**	P	P	21 18 59.1	-0.1
	1.1nm,0.5s,baz=95,slow=7.5,SNR=52						
ASAR	**Alice Springs**	**42.99**	**254**	P	P	21 19 00.8	-0.5
	4.9nm,0.5s,baz=86,slow=8.9,SNR=88						

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*BJI **14** 21:11:58.3±0.0, 52°.95N×167°.71W, h44^{km}, mB5.1/43, mb4.8/66, Ms4.9/48, Ms7 4.7/48*

*MOS **14** 21:11:59.4±1.1, 52°.92N×167°.91W, h38^{km}, mb5.1/33, MS4.5/16, Error ellipse: s-maj=10.0km s-min=6.0km az=94.6*

*IDC **14** 21:12:00.9±2.6, 52°.93N×168°.01W, h34^{km}±18^{km}, mb4.6/48, mb1 4.7/49, mb1mx4.6/72, mbtmp4.8/49, ML4.0/1, MS4.4/39, Ms1 4.4/39, ms1mx4.3/52, Error ellipse: s-maj=13.9km s-min=8.6km az=0.0*

*AEIC **14** 21:12:00±3.5, 52°.94N±0°.06×168°.11W±0°.07, h64^{km}±3^{km},*

Error ellipse: s-maj=10.7km s-min=1.9km az=148.0

NEIC **14** *21:12:01.8±2.1, 52.°84N±0.°05×167.°92W±0.°06, h47^{km}±5^{km}, mb5.2/444, ML4.7(AEIC), Error ellipse: s-maj=8.3km s-min=2.0km az=146.0*

GCMT **14** *21:12:02.8±0.2, 52.°69N±0.°01×167.°72W±0.°02, h34^{km}, MW5.2/120, Moment Tensor Solution. s105,c160; s120,c193; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.75±.02; $M_{\theta\theta}$-0.68±.01; $M_{\phi\phi}$-0.07±.01; $M_{r\theta}$0.47±.02; $M_{\theta\phi}$-0.29±.01; $M_{\phi r}$0.18±.02; Best double couple: $M_0$0.91900×10^{17} NP1:ϕ_s247.00000°, δ29.00000°, λ89.00000°. NP2:ϕ_s69.00000°, δ61.00000°, λ91.00000°. Principal axes: T 0.9000, Plg74.0000°, Azm340.0000°; N 0.0380, Plg1.0000°, Azm248.0000°; P -0.9380, Plg16.0000°, Azm158.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ANF **14** *21:12:02.9±0.5, 52.°96N×167.°92W, h48^{km}±3^{km}, ML5.0/6 Error ellipse: s-maj=4.9km s-min=4.4km az=68.0*

BGR **14** *21:12:10.5±0.0, 54.°30N×167.°45W, h33^{km}, mb5.1, Ms4.4*

ISC 14 21:12:02.2±0.5, **52.°86N**±0.°05×**167.°97W**±0.°03, **h49**^{km}±3^{km}, **h49**^{km}**:pP-P, n941,** σ1^s**27**/796, **mb5.1**/351, **MS4.5**/67, **66C-16D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKSP	**Okmok Steeple**	**0.44**	**334**		**Pn**	**21 12 12.0**	**-0.8**
OKSO	**Okmok South**	**0.51**	**347**		**Pn**	**21 12 13.0**	**-0.6**
OKSO					**Sn**	**21 12 22.2**	**+0.4**
OKTU	**Okmok Mt. Tuli**	**0.53**	**355**		**Pn**	**21 12 13.2**	**-0.6**
NIKH	**Nikolski High**	**0.55**	**282**	Pn	**Pn**	**21 12 12.8**	**-1.2**
NIKH				Sn	**Sn**	**21 12 21.8**	**-0.7**
NIKH	**Nikolski High**	**0.55**	**282**	P	**Pn**	**21 12 12.9**	**-1.1**
	baz=93						
NIKH				S	**Sn**	**21 12 20.2**	**-2.3**
	baz=93						
OKFG	**Magazine Ridge**	**0.55**	**3**		**Pn**	**21 12 13.4**	**-0.7**
OKFG					**Sn**	**21 12 23.0**	**+0.4**
OKCE	**Okmok Cone E**	**0.58**	**348**		**Pn**	**21 12 14.3**	**-0.2**
OKER	**Okmok East Rim**	**0.60**	**355**		**Pn**	**21 12 14.3**	**-0.4**
MAPS	**Pakushin South**	**1.13**	**32**		**Pn**	**21 12 20.2**	**-1.5**
MREP	**Makushin Rep't**	**1.20**	**37**		**Pn**	**21 12 21.2**	**-1.5**
MSW	**Makushin Switc**	**1.27**	**33**		**Pn**	**21 12 22.3**	**-1.3**
MSW					**Sn**	**21 12 41.8**	**+2.2**
MNAT	**Makushin Natee**	**1.28**	**36**		**Pn**	**21 12 22.5**	**-1.3**
UNV	**Unalaska Valle**	**1.32**	**41**		**Pn**	**21 12 22.4**	**-1.8**
UNV	**Unalaska Valle**	**1.32**	**41**	P	**Pn**	**21 12 22.7**	**-1.5**
	baz=227						
UNV				S	**Sn**	**21 12 39.7**	**-1.0**
	baz=227						
MTBL	**Makushin Table**	**1.35**	**34**		**Pn**	**21 12 23.8**	**-1.0**
AKMO	**Akutan Morgan**	**1.70**	**43**		**Pn**	**21 12 28.5**	**-0.9**
AKMO					**Sn**	**21 12 49.9**	**-0.1**
AKRB	**Akutan Reef Bi**	**1.70**	**41**		**Pn**	**21 12 29.2**	**-0.3**
AKLV	**Akutan Long Va**	**1.77**	**42**		**Pn**	**21 12 30.2**	**-0.2**
AKGG	**Akutan Green G**	**1.79**	**41**		**Pn**	**21 12 30.4**	**-0.2**
WESP	**Westdahl Peak**	**2.53**	**48**		**Pn**	**21 12 40.5**	**-0.3**
WEBT	**Westdahl Beart**	**2.58**	**46**		**Pn**	**21 12 41.7**	**+0.3**
SSBA	**Shishaldin**	**2.98**	**48**		**Pn**	**21 12 46.6**	**-0.3**
SSLS	**Shishaldin Sou**	**3.00**	**50**		**Pn**	**21 12 47.4**	**+0.2**
SSLN	**Shishaldin Nor**	**3.06**	**49**		**Pn**	**21 12 48.4**	**+0.4**
ISLZ	**Isanotski Laza**	**3.14**	**52**		**Pn**	**21 12 49.3**	**+0.2**
ISNN	**Isanotski Nort**	**3.17**	**50**		**Pn**	**21 12 50.4**	**+0.9**
FALS	**False Pass**	**3.35**	**52**		**Pn**	**21 12 52.5**	**+0.5**
FALS	**False Pass**	**3.35**	**52**	P	**Pn**	**21 12 52.9**	**+0.9**
	baz=237,SNR=18						
ATKA	**Atka Island**	**3.86**	**263**		**Pn**	**21 13 00.4**	**+1.5**
SPIA	**Saint Paul Isl**	**4.52**	**344**	Pn	**Pn**	**21 13 10.2**	**+2.2**
SPIA	**Saint Paul Isl**	**4.52**	**344**	P	**Pn**	**21 13 09.5**	**+1.5**
	baz=163						
SDPT	**Sand Point**	**5.06**	**58**	Pn	**Pn**	**21 13 13.5**	**-1.9**
SDPT	**Sand Point**	**5.06**	**58**	P	**Pn**	**21 13 16.2**	**+0.7**
	baz=245,SNR=12						
CNBA	**Chernabura Isl**	**5.33**	**65**		**Pn**	**21 13 18.2**	**-1.0**
CHNA	**Chernabura Isl**	**5.34**	**65**	P	**Pn**	**21 13 20.2**	**+1.0**
	baz=253						
ADK	**Adak**	**5.43**	**263**	P	**Pn**	**21 13 21.7**	**+1.2**
ADK	**Adak**	**5.43**	**263**		**Pn**	**21 13 21.7**	**+1.2**
CHIR	**Chirikof Islan**	**7.80**	**63**	Pn	**Pn**	**21 13 51.8**	**-1.2**
CHIR	**Chirikof Islan**	**7.80**	**63**	P	**Pn**	**21 13 53.1**	**+0.1**
	baz=254						
SII	**Sitkinak Islan**	**8.79**	**60**	P	**Pn**	**21 14 06.2**	**-0.4**
	baz=252						
P18K	**Big Mountain,**	**9.65**	**42**	Pn	**Pn**	**21 14 18.2**	**-0.1**
P18K	**Big Mountain,**	**9.65**	**42**	P	**Pn**	**21 14 18.6**	**+0.2**
	baz=234,SNR=8.7						
KDAK	**Kodiak Island**	**10.05**	**55**	P	**Pn**	**21 14 21.5**	**-2.2**
KDAK	**Kodiak Island**	**10.05**	**55**	Pn	**Pn**	**21 14 21.5**	**-2.2**
Q19K	**Cape Douglas,**	**10.07**	**47**	Pn	**Pn**	**21 14 23.7**	**-0.3**
Q19K	**Cape Douglas,**	**10.07**	**47**	P	**Pn**	**21 14 23.9**	**-0.1**
	baz=240						
O19K	**Port Alsworth**	**10.51**	**40**		**Pn**	**21 14 29.6**	**-0.3**
O19K	**Port Alsworth**	**10.51**	**40**	P	**Pn**	**21 14 29.8**	**-0.2**
	baz=232						
N19K	**Bonanza Creek**	**10.85**	**37**	Pn	**Pn**	**21 14 37.0**	**+2.4**
GAMB	**Gambell**	**11.12**	**351**	Pn	**Pn**	**21 14 41.1**	**+2.8**
GAMB	**Gambell**	**11.12**	**351**	P	**Pn**	**21 14 37.7**	**-0.6**
	baz=169,SNR=5.5						
O20K	**Slope Mountain**	**11.13**	**43**	P	**Pn**	**21 14 38.3**	**-0.2**
	baz=237						
RSO	**Redoubt South**	**11.29**	**42**	Pn	**Pn**	**21 14 41.1**	**+0.2**
HOM	**Homer**	**11.33**	**47**	P	**Pn**	**21 14 40.6**	**-0.5**
	baz=241						
CNPM	**China Poot**	**11.44**	**48**		**Pn**	**21 14 41.1**	**-1.6**
M19K	**Big River Lodg**	**11.63**	**33**	P	**Pn**	**21 14 45.4**	**+0.2**
	baz=226,SNR=6.4						
L19K	**White Mountain**	**11.68**	**32**		**Pn**	**21 14 47.4**	**+1.4**
L19K	**White Mountain**	**11.68**	**32**	P	**Pn**	**21 14 46.7**	**+0.8**
	baz=223,SNR=26						
BRLK	**Bradley Lake**	**11.71**	**47**		**Pn**	**21 14 45.2**	**-1.3**
BRSE	**Bradley Lake S**	**11.77**	**47**	P	**Pn**	**21 14 46.9**	**-0.3**
	baz=242						
TTA	**Tatalina**	**11.91**	**27**	P	**Pn**	**21 14 48.7**	**-0.4**
TTA	**Tatalina**	**11.91**	**27**	Pn	**Pn**	**21 14 48.7**	**-0.4**
TTA	**Tatalina**	**11.91**	**27**	P	**Pn**	**21 14 49.5**	**+0.3**
	baz=218,SNR=22						
L20K	**Farewell, AK**	**12.21**	**32**	P	**Pn**	**21 14 51.9**	**-1.2**
	baz=225						
SEW	**Seward**	**12.51**	**47**	Pn	**Pn**	**21 14 56.7**	**-0.6**
SEW	**Seward**	**12.51**	**47**	P	**Pn**	**21 14 56.6**	**-0.6**
	baz=243,SNR=6.9						
O22K	**Cooper Landing**	**12.57**	**45**	P	**Pn**	**21 14 57.5**	**-0.6**
	baz=241						
FIS	**Fire Island**	**12.71**	**42**	Pn	**Pn**	**21 15 01.2**	**+1.3**
TNA	**Tin City**	**12.74**	**0**	Pn	**Pn**	**21 15 02.1**	**+1.8**
TNA	**Tin City**	**12.74**	**0**	P	**Pn**	**21 15 01.3**	**+1.0**
	baz=180						
RC01	**Rabbit Creek A**	**12.88**	**43**		**Pn**	**21 15 01.7**	**-0.5**
RC01	**Rabbit Creek A**	**12.88**	**43**	P	**Pn**	**21 15 01.2**	**-1.0**
	baz=239						
PPLA	**Purkeypile**	**13.06**	**33**	Pn	**Pn**	**21 15 06.8**	**+1.9**
PPLA	**Purkeypile**	**13.06**	**33**	P	**Pn**	**21 15 03.7**	**-1.2**
	baz=227,SNR=14						
M22K	**Willow**	**13.09**	**40**	P	**Pn**	**21 15 04.6**	**-0.5**
	baz=236,SNR=6.0						
GCSA	**Galena City Sc**	**13.20**	**21**	P	**Pn**	**21 15 06.7**	**+0.1**
	baz=211,SNR=12						
PWL	**Port Wells**	**13.35**	**45**	Pn	**Pn**	**21 15 05.6**	**-3.2**
PWL	**Port Wells**	**13.35**	**45**	P	**Pn**	**21 15 05.6**	**-3.2**
	baz=242						
PMR	**Palmer**	**13.39**	**42**	P	**Pn**	**21 15 08.5**	**-0.7**
	baz=238,SNR=7.6						
J20K	**Nowinta River**	**13.41**	**27**	P	**Pn**	**21 15 08.8**	**-0.7**
	baz=219,SNR=26						
CUT	**Chulitna**	**13.41**	**38**	P	**Pn**	**21 15 08.6**	**-1.0**
	baz=233						
CAST	**Castle Rocks**	**13.46**	**32**	P	**Pn**	**21 15 10.1**	**0.0**
	baz=226,SNR=33						
GHO	**Glory Hole Cre**	**13.57**	**41**	Pn	**Pn**	**21 15 11.0**	**-0.9**
KNK	**Knik Glacier**	**13.57**	**43**	P	**Pn**	**21 15 09.9**	**-1.9**
	baz=240						
CHUM	**Lake Minchumin**	**13.71**	**30**	P	**Pn**	**21 15 11.7**	**-1.9**
	baz=224,SNR=21						
SML	**Sawmill**	**13.83**	**42**	P	**Pn**	**21 15 13.4**	**-1.9**
	baz=239,SNR=10.0						
GLI	**Glacier Island**	**13.90**	**46**	P	**Pn**	**21 15 14.2**	**-2.1**
	baz=244						
TRF	**Thorofare Moun**	**14.07**	**34**	P	**Pn**	**21 15 18.1**	**-0.5**
	baz=230						
FID	**Port Fidalgo**	**14.12**	**48**	Pn	**Pn**	**21 15 15.6**	**-3.6**
SCM	**Sheep Creek Mo**	**14.25**	**43**	P	**Pn**	**21 15 19.3**	**-1.7**
	baz=241,SNR=20						
BPAW	**Bear Paw Mtn.**	**14.28**	**31**	P	**Pn**	**21 15 20.5**	**-0.9**
	baz=226						
WAT1	**Susitna Watana**	**14.31**	**38**	P	**Pn**	**21 15 20.8**	**-0.9**
	baz=235						
EYAK	**Cordova Ski Ar**	**14.37**	**49**	P	**Pn**	**21 15 20.0**	**-2.4**
	baz=248						
WAT6	**Susitna Watana**	**14.48**	**40**	P	**Pn**	**21 15 22.2**	**-1.9**
	baz=237,SNR=9.2						
RND	**Reindeer**	**14.54**	**36**	P	**Pn**	**21 15 25.7**	**+0.9**
RND	**Reindeer**	**14.54**	**36**	Pn	**Pn**	**21 15 25.7**	**+0.9**
KLU	**Klutina**	**14.68**	**45**	P	**Pn**	**21 15 23.3**	**-3.4**
	baz=244						
KLU				S	**Sn**	**21 18 03.1**	**-4.8**
	baz=244						
MCK	**McKinley**	**14.72**	**35**	P	**Pn**	**21 15 25.5**	**-1.6**
	baz=232,SNR=18						
KAIM	**Kayak Island**	**14.78**	**52**	P	**Pn**	**21 15 25.4**	**-2.5**
	baz=252						
RAGM	**Ragged Mountai**	**14.81**	**50**	Pn	**Pn**	**21 15 26.1**	**-2.2**
M24K	**Tolsona, Glenn**	**14.86**	**43**	P	**Pn**	**21 15 27.7**	**-1.3**
	baz=242						
M24K				S	**Sn**	**21 18 15.5**	**+3.3**
	baz=242						
DHY	**Denali Highway**	**14.89**	**39**	Pn	**Pn**	**21 15 28.9**	**-0.6**
DHY	**Denali Highway**	**14.89**	**39**	P	**Pn**	**21 15 29.2**	**-0.3**
	baz=236,SNR=18						
HMT	**Hamilton**	**14.98**	**51**	Pn	**Pn**	**21 15 28.4**	**-2.1**
MLY	**Manley**	**15.02**	**29**	P	**Pn**	**21 15 31.5**	**+0.5**
	baz=224,SNR=122						
BMRM	**Bremner River**	**15.05**	**48**	IAmb	IAmb	21 15 44.3	
	comp=Z,88nm,0.8s						
BMRM	**Bremner River**	**15.05**	**48**	P	**Pn**	**21 15 29.7**	**-1.7**
	baz=248						
NEA2	**Nenana**	**15.23**	**32**	P	**Pn**	**21 15 32.8**	**-1.0**
	baz=229,SNR=24						
N25K	**Chitina, Valde**	**15.30**	**46**	P	**Pn**	**21 15 32.8**	**-2.0**
	baz=246						
HARP	**HAARP**	**15.42**	**43**	P	**Pn**	**21 15 35.4**	**-0.8**
	baz=243,SNR=15						
I23K	**Minto, Yukon-K**	**15.52**	**30**	IAmb	IAmb	21 15 43.3	
	comp=Z,150nm,1.1s						
I23K	**Minto, Yukon-K**	**15.52**	**30**	P	**Pn**	**21 15 36.6**	**-0.8**
	baz=227						
PAX	**Paxson**	**15.57**	**41**	P	**Pn**	**21 15 36.6**	**-1.6**
	baz=240						
SNH	**Sunshine Point**	**15.61**	**52**	Pn	**Pn**	**21 15 38.7**	**0.0**
CRQE	**Cirque**	**15.66**	**50**	P	**Pn**	**21 15 38.5**	**-1.0**
	baz=251,SNR=20						
VRDI	**Verde Repeater**	**15.67**	**48**	Pn	**Pn**	**21 15 37.4**	**-2.1**
TCOL	**CIGO, UAF Yank**	**15.81**	**33**	IAmb	IAmb	21 15 42.9	
	comp=Z,97nm,0.8s						
TCOL	**CIGO, UAF Yank**	**15.81**	**33**	P	**Pn**	**21 15 40.6**	**-0.5**
	baz=230						
COLA	**College**	**15.81**	**33**	*i* P	**Pn**	**21 15 39.8**	**-1.3**
COLA				pmax	pmax		
	comp=Z,98nm,0.9s						
COLA	**College**	**15.81**	**33**	P	**Pn**	**21 15 39.3**	**-1.9**
COLA				IAmb	IAmb	21 15 42.9	
	comp=Z,90nm,0.8s						
COLA	**College**	**15.81**	**33**	P	**Pn**	**21 15 40.4**	**-0.7**
	baz=230						
HDA	**Harding Lake**	**15.82**	**35**	P	**Pn**	**21 15 40.3**	**-1.1**
	baz=233						
MCARA	**McCarthy VSAT**	**15.91**	**48**	IAmb	IAmb	21 15 52.2	
	comp=Z,121nm,0.9s						
MCARA	**McCarthy VSAT**	**15.91**	**48**	P	**Pn**	**21 15 41.3**	**-1.2**
	baz=249						
MESA	**MESA**	**16.03**	**53**	IAmb	IAmb	21 15 49.9	
	comp=Z,172nm,1.0s						
MESA	**MESA**	**16.03**	**53**	P	**Pn**	**21 15 42.6**	**-1.6**
	baz=255						
ILAR	**Eielson Array**	**16.07**	**34**	Pn	**Pn**	**21 15 43.0**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=234,slow=10.0,SNR=93						
ILAR				PcP	**PcP**	**21 20 39.0**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=282,slow=3.0,SNR=4.3						
ILAR				LR	LR	21 22 33.2	
	comp=Z,3µm,18.5s,baz=238,slow=40						
ILAR	**Eielson Array**	**16.07**	**34**	P	**Pn**	**21 15 41.7**	**-2.7**
ILAR	**Eielson Array**	**16.07**	**34**	Pn	**Pn**	**21 15 41.7**	**-2.7**
POKR	**Poker Plat Res**	**16.10**	**32**	P	**Pn**	**21 15 42.9**	**-2.0**
	baz=230						
YAH	**Yahtse**	**16.18**	**52**	IAmb	IAmb	21 15 52.6	
	comp=Z,149nm,0.8s						
RIDG	**Independent Ri**	**16.21**	**39**	IAmb	IAmb	21 16 07.5	
	comp=Z,164nm,1.4s						
RIDG	**Independent Ri**	**16.21**	**39**	P	**Pn**	**21 15 45.4**	**-0.9**
	baz=239,SNR=10						
M26K	**Nabesna, AK**	**16.32**	**44**		**Pn**	**21 15 48.2**	**+0.4**
M26K				IAmb	IAmb	21 15 51.5	
	comp=Z,172nm,1.0s						
BARN	**Barnard Glacie**	**16.43**	**50**	IAmb	IAmb	21 15 54.2	
	comp=Z,166nm,1.0s						
H24K	**Noodor Dome**	**16.44**	**30**	IAmb	IAmb	21 15 53.6	
	comp=Z,154nm,1.1s						
H24K	**Noodor Dome**	**16.44**	**30**	P	**Pn**	**21 15 48.0**	**-1.2**
	baz=228						
L26K	**Log Cabin Wild**	**16.45**	**42**	IAmb	IAmb	21 15 52.0	
	comp=Z,130nm,1.0s						
L26K	**Log Cabin Wild**	**16.45**	**42**	P	**Pn**	**21 15 49.5**	**+0.2**
	baz=244,SNR=58						
TABL	**Table Mountain**	**16.49**	**52**	IAmb	IAmb	21 16 13.9	
	comp=Z,152nm,0.8s						
J25K	**Salcha River,**	**16.50**	**36**	P	**Pn**	**21 15 48.3**	**-1.6**
	baz=236						
CTG	**Chitna Glacier**	**16.55**	**50**	P	**Pn**	**21 15 49.6**	**-1.1**
	baz=253,SNR=24						
SCRK	**Sand Creek**	**16.66**	**39**	P	**Pn**	**21 15 51.1**	**-0.9**
	baz=240						
M27K	**Edge Creek, AK**	**16.78**	**45**	IAmb	IAmb	21 15 56.8	
	comp=Z,221nm,1.1s						
M27K	**Edge Creek, AK**	**16.78**	**45**	P	**Pn**	**21 15 52.2**	**-1.4**
	baz=248						
COLD	**Coldfoot**	**16.81**	**24**	P	**Pn**	**21 15 53.7**	**-0.1**
	baz=220,SNR=62						
PCA	**Pinnacle**	**16.83**	**54**	P	**P**	**21 15 56.5**	**+0.8**
PCA				IAmb	IAmb	21 15 58.9	
	comp=Z,265nm,1.0s						
PINM	**Pinnacle**	**16.84**	**54**	P	**Pn**	**21 15 53.2**	**-1.0**
	baz=257,SNR=14						
PRP	**Porcupine Dome**	**16.98**	**33**	P	**Pn**	**21 15 54.3**	**-1.7**
	baz=233						
L27K	**Beaver Creek,**	**17.09**	**43**	P	**Pn**	**21 15 56.3**	**-1.0**
	baz=246,SNR=25						
BCPM	**Bancas Point**	**17.11**	**54**	IAmb	IAmb	21 16 01.2	
	comp=Z,245nm,1.1s						
PNL	**Peninsula**	**17.17**	**55**	P	**Pn**	**21 15 57.5**	**-0.8**
	baz=260						
YUK3	**Moose Creek**	**17.20**	**48**	P	**Pn**	**21 15 57.5**	**-1.4**
	baz=252						
BVCY	**Beaver Creek**	**17.25**	**46**	P	**Pn**	**21 15 57.6**	**-1.7**
	baz=249						
FYU	**Fort Yukon**	**17.73**	**30**	IAmb	IAmb	21 16 09.6	
	comp=Z,113nm,1.0s						
TOLK	**Toolik Lake Re**	**18.07**	**22**	P	**P**	**21 16 07.0**	**-2.2**
	baz=218,SNR=28						
EGAK	**Eagle**	**18.12**	**38**		**P**	**21 16 07.9**	**-1.9**
DAWY	**Dawson**	**18.50**	**42**	P	**P**	**21 16 13.0**	**-1.0**
	baz=246						
SIT	**Sitka**	**19.09**	**64**	P	**P**	**21 16 20.1**	**-0.4**
	baz=272						
SKAG	**Skagway**	**19.19**	**57**	IAmb	IAmb	21 16 24.4	
	comp=Z,165nm,0.9s						
SKAG	**Skagway**	**19.19**	**57**	P	**P**	**21 16 21.0**	**-0.4**
	baz=265,SNR=16						
A21K	**Barrow**	**19.21**	**11**	P	**P**	**21 16 21.3**	**-0.3**
	baz=202						
N31M	**Braeburn, Yuko**	**19.28**	**51**	P	**Pn**	**21 16 24.0**	**0.0**
	baz=258,SNR=207						
I29M	**Ogilvie Camp,**	**19.47**	**38**	P	**P**	**21 16 23.4**	**-1.2**
	baz=244						
BILL	**Bilibino**	**19.57**	**331**	⇓*e*P	**Pn**	**21 16 27.4**	**+0.1**
BILL				pmax	pmax		
	comp=Z,37nm,1.1s						
BILL				MLR	MLR		
	comp=Z,1µm,15.0s						
BILL	**Bilibino**	**19.57**	**331**	P	**P**	**21 16 26.3**	**+0.7**
JIS	**Juneau Island**	**19.60**	**61**	P	**P**	**21 16 26.8**	**+0.8**
JIS				IAmb	IAmb	21 16 29.0	
	comp=Z,146nm,1.0s						
MAYO	**Mayo, Yukon**	**19.78**	**45**	P	**P**	**21 16 27.3**	**-0.6**
	baz=252						
PET	**Petropavlovsk**	**20.02**	**284**	*e*P	**P**	**21 16 30.9**	**+0.3**
PET				*e**SP	**sP**	**21 16 54.2**	**+6.0**
PET				*e*S	**S**	**21 20 06.7**	**-6.0**
PET				pmax	pmax		
	comp=Z,54nm,1.2s						
PET				MLR	MLR		
	comp=Z,1µm,19.0s						
M31M	**Drury Creek, Y**	**20.08**	**49**	P	**P**	**21 16 30.9**	**-0.3**
	baz=258,SNR=79						
P33M	**Teslin, Yukon**	**20.52**	**55**	P	**P**	**21 16 36.2**	**+0.1**
	baz=265,SNR=57						
FARO	**Faro, Yukon**	**20.56**	**49**	P	**P**	**21 16 36.7**	**+0.2**
	baz=259,SNR=98						
PEA0B	**Petropavlovsk-**	**20.56**	**284**	*i* P	Pn	21 16 38.9	-0.2
PEA0B	**Petropavlovsk-**	**20.56**	**284**	P	**P**	**21 16 37.1**	**+0.7**
PEA0B				IAmb	IAmb	21 16 54.0	
	comp=Z,106nm,1.4s						
PETK	**Petropavlovsk-**	**20.56**	**284**	P	**P**	**21 16 36.8**	**+0.3**
	comp=Z,8.3nm,0.5s,baz=91,slow=14,SNR=14						
PETK				LR	LR	21 24 37.2	
	comp=Z,810nm,20.3s,baz=92,slow=37						
DLBC	**Dease Lake**	**21.90**	**60**	P	**P**	**21 16 52.6**	**+1.8**
	comp=Z,30nm,1.0s,baz=271,slow=11,SNR=22						
DLBC				LR	LR	21 25 49.8	
	comp=Z,691nm,18.4s,baz=274,slow=38						
SKR	**Severo-Kuril's**	**22.19**	**279**	*e*P	**P**	**21 16 58.5**	**+4.6**
SKR				pmax	pmax		
	comp=Z,600nm,4.6s						
SKR				pmax	pmax		
	comp=Z,300nm,6.1s						
SKR				MLR	MLR		
	comp=Z,900nm,14.0s						
SKR				MLR	MLR		
	comp=Z,500nm,14.0s						
RUBB	**Prince Rupert**	**22.26**	**71**	IAmb	IAmb	21 17 03.8	
	comp=Z,74nm,1.3s						
INK	**Inuvik**	**22.46**	**33**	P	**P**	**21 16 54.8**	**-1.9**
	comp=Z,81nm,0.9s,baz=230,slow=11,SNR=103						
INK				PcP	**PcP**	**21 20 49.7**	**+0.7**
	comp=Z,7.0nm,0.8s,baz=184,slow=1.8,SNR=4.8						
INK				LR	LR	21 26 35.2	
	comp=Z,2µm,19.2s,baz=236,slow=39						
INK	**Inuvik**	**22.46**	**33**	P	**P**	**21 16 53.9**	**-2.8**
INK				pmax	pmax		
	comp=Z,88nm,1.0s						
INK	**Inuvik**	**22.46**	**33**	P	**P**	**21 16 53.9**	**-2.8**
INK				IAmb	IAmb	21 16 57.9	
	comp=Z,88nm,0.9s						
INK	**Inuvik**	**22.46**	**33**	P	**P**	**21 16 54.7**	**-1.9**
	baz=244						
WTLY	**Watson Lake, Y**	**22.52**	**56**	P	**P**	**21 16 56.0**	**-1.5**
	baz=269						
SEY	**Seymchan**	**22.97**	**312**	P	**P**	**21 17 02.9**	**+0.7**
	comp=Z,9.3nm,0.7s,baz=91,slow=11,SNR=15						
SEY				PcP	**PcP**	**21 20 51.3**	**+1.2**
	comp=Z,3.1nm,0.8s,baz=174,slow=22,SNR=3.2						
SEY				LR	LR	21 25 38.8	
	comp=Z,1µm,21.8s,baz=101,slow=36						
MA2	**Magadan**	**23.59**	**303**	*ce*P	**P**	**21 17 09.3**	**+1.2**
MA2				pmax	pmax		
	comp=Z,42nm,1.7s						
MA2	**Magadan**	**23.59**	**303**	P	**P**	**21 17 08.1**	**0.0**
MA2				IAmb	IAmb	21 17 10.0	
	comp=Z,65nm,1.3s						
BBB	**Bella Bella**	**24.05**	**76**	LR	LR	21 24 58.3	
	comp=Z,471nm,21.2s,baz=283,slow=32						
WRGLY	**Wrigley**	**25.20**	**48**	P	**P**	**21 17 23.1**	**+0.4**
	baz=267,SNR=18						
A36M	**Sachs Harbour**	**26.58**	**28**	P	**P**	**21 17 34.5**	**-0.6**
A36M				IAmb	IAmb	21 17 43.3	
	comp=Z,63nm,0.9s						
A36M	**Sachs Harbour**	**26.58**	**28**	P	**P**	**21 17 34.7**	**-0.4**
	baz=247						
LLLB	**Lillooet**	**28.25**	**76**	P	**P**	**21 17 51.0**	**+0.6**
B05A	**Bryant**	**29.11**	**80**	P	**P**	**21 17 57.9**	**0.0**
	baz=297						
YKA	**Yellowknife Ar**	**29.27**	**50**	P	**P**	**21 17 59.6**	**+0.3**
	comp=Z,14nm,1.0s,baz=274,slow=10,SNR=58						
YKA				PcP	**PcP**	**21 21 05.5**	**+0.8**
	comp=Z,6.0nm,0.8s,baz=282,slow=2.3,SNR=12						
YKA				ScP	**ScP**	**21 24 44.5**	**+2.5**
	comp=Z,0.3nm,0.6s,baz=290,slow=2.8,SNR=4.2						
YKA				LR	LR	21 30 04.5	
	comp=Z,445nm,20.1s,baz=0.0,slow=37						
YKA	**Yellowknife Ar**	**29.27**	**50**	*i* P	**P**	**21 17 59.5**	**+0.3**
YKA				pmax	pmax		
	comp=Z,16nm,1.0s						
YKA	**Yellowknife Ar**	**29.27**	**50**	P	**P**	**21 17 59.2**	**0.0**
E04D	**Cinebar**	**29.62**	**84**	P	**P**	**21 18 03.3**	**+0.8**
	baz=299						
D05A	**Enumclaw**	**29.66**	**82**	P	**P**	**21 18 03.9**	**+1.0**
D05A				IAmb	IAmb	21 18 06.6	
	comp=Z,104nm,1.4s						
H04D	**Lebanon**	**30.55**	**87**	P	**P**	**21 18 10.5**	**-0.2**
	baz=302						
HOOD	**Mount Hood Mea**	**30.79**	**85**	IAmb	IAmb	21 18 17.7	
	comp=Z,37nm,1.1s						
H04A	**Detroit Lake**	**30.80**	**87**	IAmb	IAmb	21 18 34.1	
	comp=Z,33nm,1.0s						
K02D	**Willamette Mer**	**31.00**	**91**	P	**P**	**21 18 15.1**	**+0.3**
	baz=305						
G05D	**Wamic, OR**	**31.04**	**85**	P	**P**	**21 18 15.4**	**+0.3**
	baz=302						
I04A	**Tendick Farm,**	**31.14**	**88**	P	**P**	**21 18 16.4**	**+0.4**
	baz=303						
L02E	**Cave Junction**	**31.34**	**92**	P	**P**	**21 18 18.4**	**+0.6**
	baz=306						
I05D	**Terrebonne, OR**	**31.50**	**87**	P	**P**	**21 18 19.6**	**+0.4**
	baz=303						
HAWA	**Hanford**	**31.53**	**82**	P	**P**	**21 18 19.8**	**+0.4**
HAWA				IAmb	IAmb	21 18 22.1	
	comp=Z,38nm,1.2s						
F07A	**Phinny Hill Vi**	**31.54**	**83**	P	**P**	**21 18 20.1**	**+0.7**
F07A				IAmb	IAmb	21 18 22.4	
	comp=Z,26nm,1.0s						
J04D	**Umpqua Nationa**	**31.63**	**89**	P	**P**	**21 18 21.0**	**+0.4**
	baz=304						
PINE	**Pine Mountain**	**32.04**	**87**	IAmb	IAmb	21 18 29.3	
	comp=Z,58nm,1.5s						
NEW	**Newport**	**32.06**	**77**	P	**P**	**21 18 24.7**	**+0.6**
	comp=Z,18nm,0.8s,baz=304,slow=7.3,SNR=38						
NEW	**Newport**	**32.06**	**77**	IAmb	IAmb	21 18 25.7	
	comp=Z,22nm,0.8s						
NEW	**Newport**	**32.06**	**77**	P	**P**	**21 18 23.6**	**-0.5**
	baz=298						
L04D	**Klamath Falls**	**32.10**	**91**	P	**P**	**21 18 24.3**	**-0.3**
	baz=306						
YBH	**Yreka Blue Hor**	**32.13**	**92**	P	**P**	**21 18 26.7**	**+1.9**
	comp=Z,9.1nm,0.8s,baz=307,slow=5.4,SNR=14						
YBH	**Yreka Blue Hor**	**32.13**	**92**	P	**P**	**21 18 26.1**	**+1.3**
YBH				pmax	pmax		
	comp=Z,39nm,1.6s						
YBH	**Yreka Blue Hor**	**32.13**	**92**	P	**P**	**21 18 26.1**	**+1.3**
YBH				IAmb	IAmb	21 18 28.4	
	comp=Z,39nm,1.6s						
J05D	**Fort Rock, OR**	**32.14**	**88**	P	**P**	**21 18 25.1**	**+0.1**
	baz=304,SNR=6.8						
M02C	**Callahan**	**32.25**	**92**	P	**P**	**21 18 26.2**	**+0.4**
	baz=307						
N02D	**Trinity Center**	**32.59**	**93**	P	**P**	**21 18 27.8**	**-1.0**
	baz=307						
M04C	**Macdoel**	**32.63**	**91**	P	**P**	**21 18 28.3**	**-1.0**
	baz=306,SNR=5.6						
TIXI	**Tiksi**	**32.76**	**329**	P	**P**	**21 18 30.0**	**+0.2**
	comp=Z,6.7nm,1.1s,baz=99,slow=9.0,SNR=15						
TIXI				PcP	**PcP**	**21 21 14.0**	**+0.1**
	comp=Z,7.6nm,0.9s,baz=22,slow=1.5,SNR=8.4						
TIXI	**Tiksi**	**32.76**	**329**	*ce*P	**P**	**21 18 30.0**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,14nm,1.3s						
TIXI	**Tiksi**	**32.76**	**329**	P	**P**	**21 18 29.4**	**-0.4**
O02D	**Mt. Diablo Mer**	**33.02**	**94**	P	**P**	**21 18 31.3**	**-1.3**
	baz=308,SNR=8.8						
YAK	**Yakutsk**	**33.49**	**311**	LR	LR	21 32 04.4	
	comp=Z,835nm,21.8s,baz=92,slow=36						
YAK	**Yakutsk**	**33.49**	**311**	*e*P	**P**	**21 18 34.8**	**-1.5**
YAK				*e**PP	**pP**	**21 18 44.7**	**-4.5**
YAK				*e*		21 19 51.3	
YAK				*e*		21 21 16.5	
YAK				*e*S	**S**	**21 23 55.1**	**+0.8**
YAK				*e**SS	**sS**	**21 24 15.6**	**+0.3**
YAK				*e*		21 28 54.6	
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,290nm,6.8s						
YAK				smax	smax		
	comp=E,333nm,5.8s						
YAK				smax	smax		
	comp=N,195nm,5.2s						

YAK				MLR	MLR		
	comp=Z,1µm,26.0s						
YAK				MLR	MLR		
	comp=E,598nm,21.0s						
O03E	**Paynes Creek**	**33.54**	**93**	P	**P**	**21 18 36.6**	**-0.5**
	baz=308,SNR=8.1						
GRNR	**Gornyy**	**33.72**	**289**	⇑*i*P	**P**	**21 18 39.3**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,420nm,18.0s						
GRNR				MLR	MLR		
	comp=N,220nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,520nm,17.0s						
J08A	**Circle Bar Ran**	**33.77**	**86**	IAmb	IAmb	21 18 42.1	
	comp=Z,27nm,1.0s						
GDXM	**Geysers**	**33.87**	**96**	IAmb	IAmb	21 18 44.2	
	comp=Z,54nm,1.3s						
JTMT	**Jette**	**33.99**	**77**	P	**P**	**21 18 41.0**	**0.0**
WVOR	**Wild Horse Val**	**34.20**	**88**	IAmb	IAmb	21 19 05.6	
	comp=Z,26nm,0.9s						
MSO	**Missoula**	**34.65**	**78**	P	**P**	**21 18 46.4**	**-0.2**
	baz=301						
MPK	**Martis Peak**	**35.23**	**93**	IAmb	IAmb	21 19 08.8	
	comp=Z,52nm,1.3s						
VCNR	**Virginia City**	**35.46**	**93**	P	**P**	**21 18 54.0**	**+0.1**
VCNR				IAmb	IAmb	21 19 10.9	
	comp=Z,27nm,1.0s						
RES	**Resolute Bay**	**35.56**	**26**	P	**P**	**21 18 53.1**	**-0.9**
	comp=Z,4.7nm,0.9s,baz=242,slow=16,SNR=7.2						
RES				PcP	**PcP**	**21 21 21.5**	**-0.3**
	comp=Z,4.9nm,0.9s,baz=281,slow=7.8,SNR=3.9						
RES	**Resolute Bay**	**35.56**	**26**	P	**P**	**21 18 52.3**	**-1.7**
RES				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RES	**Resolute Bay**	**35.56**	**26**	P	**P**	**21 18 52.3**	**-1.7**
PNTR	**Pine Nut**	**35.62**	**93**	P	**P**	**21 18 55.6**	**+0.3**
CMB	**Columbia Colle**	**35.82**	**95**	P	**P**	**21 18 56.1**	**-0.6**
CMB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CMB	**Columbia Colle**	**35.82**	**95**	P	**P**	**21 18 56.1**	**-0.6**
YERR	**Yerington**	**35.91**	**93**	IAmb	IAmb	21 19 14.5	
	comp=Z,21nm,1.0s						
HLID	**Hailey**	**36.11**	**83**	IAmb	IAmb	21 19 01.2	
	comp=Z,21nm,1.1s						
HLID	**Hailey**	**36.11**	**83**	P	**P**	**21 18 58.6**	**-0.7**
	baz=304,SNR=17						
BMN	**Battle Mountai**	**36.24**	**89**	IAmb	IAmb	21 19 03.5	
	comp=Z,30nm,1.5s						
EGMT	**Eagleton**	**36.50**	**74**	P	**P**	**21 19 01.8**	**-0.7**
	baz=300						
RYN	**Ryan**	**36.57**	**93**	P	**P**	**21 19 02.6**	**-0.6**
RYN				IAmb	IAmb	21 19 19.4	
	comp=Z,30nm,1.4s						
BOZ	**Bozeman (W)**	**36.66**	**78**	P	**P**	**21 19 03.9**	**-0.1**
	baz=303						
NVAR	**Mina Array Bea**	**36.83**	**93**	P	**P**	**21 19 06.5**	**+0.9**
	comp=Z,5.6nm,0.8s,baz=295,slow=8.7,SNR=22						
NVAR				PcP	**PcP**	**21 21 27.7**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=63,slow=19,SNR=2.9						
NVAR				LR	LR	21 31 10.2	
	comp=Z,321nm,19.7s,baz=276,slow=31						
KLR	**Kul'dur**	**37.10**	**289**	*ce*P	**P**	**21 19 08.3**	**+0.8**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ELK	**Elko**	**37.25**	**87**	IAmb	IAmb	21 19 11.9	
	comp=Z,35nm,1.5s						
ZEA	**Zeya**	**37.52**	**298**	*e*P	P	21 19 24.0	+13
ZEA				MLR	MLR		
	comp=Z,400nm,19.0s						
YMR	**Madison River**	**37.56**	**79**		**P**	**21 19 11.2**	**-0.5**
YMR				IAmb	IAmb	21 19 13.3	
	comp=Z,32nm,0.9s						
YHH	**Holmes Hill**	**37.56**	**79**	IAmb	IAmb	21 19 13.7	
	comp=Z,48nm,1.1s						
YNR	**Norris Junctio**	**37.70**	**79**	IAmb	IAmb	21 19 15.6	
	comp=Z,49nm,1.1s						
TIN	**Tinemaha, Big**	**37.76**	**94**	P	**P**	**21 19 13.0**	**-0.3**
	baz=311						
H17A	**Grant Village**	**37.94**	**79**	IAmb	IAmb	21 19 17.9	
	comp=Z,28nm,1.1s						
H17A	**Grant Village**	**37.94**	**79**	P	**P**	**21 19 14.5**	**-0.4**
	baz=304,SNR=6.0						
LKWY	**Lake**	**37.95**	**79**	IAmb	IAmb	21 19 17.7	
	comp=Z,25nm,0.9s						
LCH	**Last Change Ra**	**37.99**	**94**	P	**P**	**21 19 15.8**	**+0.5**
LCH				IAmb	IAmb	21 19 42.6	
	comp=Z,24nm,1.3s						
YMP	**Mirror Lake Pl**	**38.00**	**78**	IAmb	IAmb	21 19 17.2	
	comp=Z,18nm,1.0s						
FLWY	**Flagg Ranch**	**38.04**	**80**	IAmb	IAmb	21 19 18.5	
	comp=Z,24nm,1.0s						
HVU	**Hansel Valley**	**38.12**	**84**	IAmb	IAmb	21 19 18.3	
	comp=Z,18nm,0.9s						
PKM	**Mcpherson Peak**	**38.25**	**98**	P	**P**	**21 19 17.1**	**-0.5**
	baz=313						
RLMT	**Red Lodge**	**38.31**	**77**	P	**P**	**21 19 16.8**	**-1.2**
	baz=304,SNR=7.3						
REDW	**Red Top Meadow**	**38.36**	**81**	IAmb	IAmb	21 19 21.9	
	comp=Z,28nm,1.2s						
SNOW	**Snow King Moun**	**38.36**	**81**	P	**P**	**21 19 19.0**	**+0.6**
H11N2	**WAKE ISLAND Hy**	**38.38**	**220**	T	T	22 00 06.8	
	baz=24,slow=76,SNR=237						
H11N3	**WAKE ISLAND Hy**	**38.38**	**220**	T	T	22 00 10.6	
	baz=24,slow=76,SNR=262						
H11N1	**WAKE ISLAND Hy**	**38.39**	**220**	T	T	22 00 09.5	
	baz=24,slow=76,SNR=25						
R11A	**Troy Canyon, C**	**38.52**	**91**	P	**P**	**21 19 19.6**	**-0.2**
	baz=310,SNR=7.5						
ISA	**Isabella, Lake**	**38.53**	**96**	P	**P**	**21 19 19.7**	**0.0**
	baz=312						
AHID	**Auburn Hatcher**	**38.55**	**82**	IAmb	IAmb	21 19 22.5	
	comp=Z,26nm,1.1s						
SBC	**Santa Barbara**	**38.62**	**99**	P	**P**	**21 19 20.1**	**-0.3**
	baz=314						
MPMC	**Manual Prospec**	**38.86**	**95**	P	**P**	**21 19 22.6**	**-0.1**
	baz=312,SNR=8.3						
FURC	**Furnace Creek,**	**38.97**	**94**	P	**P**	**21 19 24.0**	**+0.8**
	baz=312						
DUG	**Dugway, Tooele**	**39.05**	**86**	IAmb	IAmb	21 19 26.9	
	comp=Z,63nm,1.3s						
DUG	**Dugway, Tooele**	**39.05**	**86**	P	**P**	**21 19 24.2**	**+0.1**
	baz=308,SNR=34						
LRMC	**Laurel Mtn Rad**	**39.13**	**96**	P	**P**	**21 19 25.2**	**+0.3**
	baz=313						
LAO	**LASA Array**	**39.25**	**73**	P	**P**	**21 19 25.7**	**0.0**
	baz=303						
EDW2	**Edwards Air Fo**	**39.35**	**97**	P	**P**	**21 19 26.0**	**-0.6**
	baz=313						
CTU	**Camp Tracy**	**39.39**	**85**	P	**P**	**21 19 26.7**	**-0.3**
PRN	**Pahroc Range**	**39.45**	**91**	IAmb	IAmb	21 19 30.5	
	comp=Z,38nm,1.2s						
BW06	**Boulder Array**	**39.48**	**81**	P	**P**	**21 19 26.9**	**-0.9**
BW06				IAmb	IAmb	21 19 29.1	
	comp=Z,25nm,0.8s						
BW06	**Boulder Array**	**39.48**	**81**	P	**P**	**21 19 26.8**	**-0.9**
	baz=306,SNR=18						
PD31	**Pinedale Array**	**39.48**	**81**	IAmb	IAmb	21 19 29.1	
	comp=Z,22nm,0.8s						
PDAR	**Pinedale Array**	**39.48**	**81**	P	**P**	**21 19 27.6**	**-0.2**
	comp=Z,20nm,1.0s,baz=307,slow=5.4,SNR=44						
PDAR				LR	LR	21 33 41.0	
	comp=Z,351nm,20.1s,baz=320,slow=33						
DGMT	**Dagmar**	**39.48**	**70**	IAmb	IAmb	21 19 28.8	
	comp=Z,24nm,1.0s						
DGMT	**Dagmar**	**39.48**	**70**	P	**P**	**21 19 26.4**	**-1.1**
	baz=301						
H11S1	**WAKE ISLAND Hy**	**39.56**	**220**	T	T	22 01 39.4	
	baz=23,slow=76,SNR=3896						
JSD	**Sado**	**39.57**	**270**	P	**P**	**21 19 28.3**	**0.0**
JSD				IAmb	IAmb	21 19 49.8	
	comp=Z,29nm,1.0s						
JYT	**Yasato**	**39.57**	**266**	P	**P**	**21 19 28.4**	**0.0**
H11S2	**WAKE ISLAND Hy**	**39.58**	**220**	T	T	22 01 41.9	
	baz=23,slow=76,SNR=2302						
H11S3	**WAKE ISLAND Hy**	**39.58**	**220**	T	T	22 01 44.2	
	baz=23,slow=76,SNR=3318						
USRK	**Ussuriysk Ar.**	**39.63**	**282**	P	**P**	**21 19 27.9**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=145,slow=42,SNR=2.0						
USRK				LR	LR	21 37 50.5	
	comp=Z,251nm,19.0s,baz=52,slow=39						
USRK	**Ussuriysk Ar.**	**39.63**	**282**	P	**P**	**21 19 27.7**	**-1.0**
USRK	**Ussuriysk Ar.**	**39.63**	**282**	P	**P**	**21 19 27.7**	**-1.0**
BFSC	**Mount Baldy Ra**	**39.99**	**97**	P	**P**	**21 19 31.8**	**-0.2**
	baz=314						
CIS	**Catalina Islan**	**40.11**	**99**	P	**P**	**21 19 32.4**	**-0.5**
	baz=314						
TUQ	**Turquoise Moun**	**40.22**	**94**	P	**P**	**21 19 34.5**	**+0.5**
	baz=312						
VLA	**Vladivostok**	**40.31**	**281**	*i* P	**P**	**21 19 32.2**	**-2.2**
VLA				pmax	pmax		
	comp=Z,16nm,0.6s						
HEC	**Hector,Ludlow**	**40.38**	**95**	P	**P**	**21 19 36.0**	**+0.7**
	baz=313						
BBRC	**Big Bear Solar**	**40.42**	**97**	P	**P**	**21 19 34.4**	**-1.2**
	baz=314						
MVU	**Marysvale**	**40.47**	**88**	IAmb	IAmb	21 19 38.9	
	comp=Z,65nm,1.1s						
MSU	**Marysvale**	**40.49**	**88**	P	**P**	**21 19 36.4**	**+0.2**
MSU	**Marysvale**	**40.49**	**88**	P	**P**	**21 19 36.4**	**+0.2**
MJAR	**Matsushiro Arr**	**40.57**	**268**	P	**P**	**21 19 37.3**	**+0.7**
	comp=Z,3.5nm,0.4s,baz=49,slow=7.7,SNR=9.9						
MJAR				LR	LR	21 34 44.8	
	comp=Z,590nm,21.8s,baz=60,slow=34						
MJAR	**Matsushiro Arr**	**40.57**	**268**	P	**P**	**21 19 36.6**	**0.0**
MJAR				pmax	pmax		
	comp=Z,34nm,1.5s						
MJAR	**Matsushiro Arr**	**40.57**	**268**	P	**P**	**21 19 36.6**	**0.0**
MAJO	**Matsushiro**	**40.57**	**268**	*i* P	**P**	**21 19 37.0**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,48nm,1.2s						
MAJO	**Matsushiro**	**40.57**	**268**	P	**P**	**21 19 36.2**	**-0.4**
MAJO				IAmb	IAmb	21 19 38.6	
	comp=Z,39nm,1.1s						
MAT	**Matsushiro**	**40.57**	**268**	P	**P**	**21 19 37.0**	**+0.3**
MAT				*e*S	**S**	**21 25 35.0**	**-7.4**
TMUT	**Trail Mountain**	**40.58**	**86**	IAmb	IAmb	21 19 39.1	
	comp=Z,36nm,0.9s						
MURC	**Murrieta**	**40.71**	**98**	P	**P**	**21 19 37.4**	**-0.4**
	baz=314						
RDMU	**Red Mountain**	**40.78**	**83**	P	**P**	**21 19 38.7**	**+0.1**
RDMU				IAmb	IAmb	21 19 41.0	
	comp=Z,75nm,1.2s						
MDJ	**Mudanjiang**	**40.80**	**284**	P	**P**	**21 19 38.6**	**+0.1**
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,230nm,4.5s						
GMRC	**Granite Mounta**	**40.82**	**95**	P	**P**	**21 19 37.9**	**-1.0**
	baz=313						
Q16A	**Castle Valley**	**40.84**	**87**	IAmb	IAmb	21 19 42.0	
	comp=Z,63nm,1.3s						
P18A	**Preston Nutter**	**40.95**	**85**	IAmb	IAmb	21 19 42.8	
	comp=Z,67nm,1.2s						
SRU	**San Rafael Swe**	**41.11**	**86**	IAmb	IAmb	21 19 44.0	
	comp=Z,36nm,1.0s						
PFO	**Pinyon Flats O**	**41.14**	**97**	P	**P**	**21 19 41.3**	**-0.2**
	baz=314						
TPFO	**Pinon Flats**	**41.15**	**97**	P	**P**	**21 19 41.5**	**-0.1**
	baz=314						
BELC	**Belle Mtn. Jos**	**41.15**	**96**	P	**P**	**21 19 41.6**	**-0.1**
	baz=314						
K22A	**Casper**	**41.35**	**79**	P	**P**	**21 19 43.1**	**-0.2**
	baz=306						
TULEG	**Thule**	**41.37**	**20**	P	**P**	**21 19 41.8**	**-0.9**
RWWY	**Rawlins**	**41.52**	**80**	IAmb	IAmb	21 19 46.2	
	comp=Z,35nm,1.2s						
IRM	**Iron Mountain**	**41.56**	**95**	P	**P**	**21 19 45.6**	**+0.8**
	baz=314						
MONP2	**Monument Peak**	**41.66**	**98**	P	**P**	**21 19 46.4**	**+0.5**
	baz=315						
JGF	**Kuroka**	**41.71**	**268**	IAmb	IAmb	21 19 48.1	
	comp=Z,79nm,1.5s						
BC3	**Big Chuckawall**	**41.72**	**96**	P	**P**	**21 19 46.7**	**+0.4**
	baz=314						
O20A	**White River Ci**	**41.85**	**83**	P	**P**	**21 19 47.5**	**+0.1**
	baz=308						
RSSD	**Black Hills**	**41.96**	**75**	P	**P**	**21 19 48.0**	**-0.3**
	baz=306						
SWSC	**Sam W. Stewart**	**42.00**	**97**	P	**P**	**21 19 48.5**	**+0.1**
	baz=315						
IKP	**In-Ko-Pah, Jac**	**42.02**	**98**	P	**P**	**21 19 48.0**	**-0.7**
	baz=315						
PDMCI	**Parker Dam,Lak**	**42.07**	**94**	P	**P**	**21 19 48.9**	**0.0**
	baz=313						
BOD	**Bodaibo**	**42.35**	**309**	*e*P	**P**	**21 19 50.0**	**-0.9**
BOD				pmax	pmax		
	comp=Z,23nm,1.3s						
MDND	**Maddock**	**42.41**	**68**	P	**P**	**21 19 51.5**	**-0.1**
MDND				IAmb	IAmb	21 19 52.9	
	comp=Z,74nm,1.1s						
MDND	**Maddock**	**42.41**	**68**	P	**P**	**21 19 51.0**	**-0.6**
	baz=304,SNR=7.3						
E28A	**Huff**	**42.50**	**70**	IAmb	IAmb	21 19 53.7	
	comp=Z,87nm,1.2s						
GLA	**Glamis**	**42.51**	**96**	P	**P**	**21 19 52.8**	**+0.2**
	baz=314						
N23A	**Red Feather La**	**42.76**	**80**	P	**P**	**21 19 54.0**	**-0.8**
	baz=308						
WUAZ	**Wupatki**	**42.92**	**91**	P	**P**	**21 19 56.1**	**0.0**
WUAZ				IAmb	IAmb	21 19 58.9	
	comp=Z,48nm,1.3s						
WUAZ	**Wupatki**	**42.92**	**91**	P	**P**	**21 19 57.0**	**+0.9**
	baz=312,SNR=6.2						
JWT	**Wachi**	**43.10**	**269**	IAmb	IAmb	21 19 59.4	
	comp=Z,37nm,1.1s						
ULM	**Lac du Bonnet**	**43.16**	**63**	P	**P**	**21 19 56.8**	**-0.9**
	comp=Z,11nm,0.9s,baz=311,slow=8.7,SNR=5.3						
ULM				LR	LR	21 38 50.7	
	comp=Z,510nm,18.6s,baz=313,slow=37						
MVCO	**Mesa Verde**	**43.55**	**86**	P	**P**	**21 20 01.1**	**-0.1**
	baz=311						
ISCO	**Idaho Springs**	**43.63**	**81**	P	**P**	**21 20 02.1**	**+0.1**
ISCO				pmax	pmax		
	comp=Z,14nm,1.3s						
ISCO	**Idaho Springs**	**43.63**	**81**	P	**P**	**21 20 02.0**	**+0.1**
ISCO	**Idaho Springs**	**43.63**	**81**	P	**P**	**21 20 01.8**	**-0.2**
	baz=309,SNR=5.3						
CN2	**Changchun**	**43.70**	**286**	*e*P	**P**	**21 20 02.3**	**+0.2**
CN2				S	**S**	**21 26 20.4**	**-8.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,600nm,18.0s						
CN2				LR	LR		
	comp=Z,400nm,18.0s						
CN2				LR	LR		
	comp=Z,500nm,22.0s						
W18A	**Petrified Fore**	**44.18**	**90**	IAmb	IAmb	21 20 08.2	
	comp=Z,29nm,1.1s						
W18A	**Petrified Fore**	**44.18**	**90**	P	**P**	**21 20 06.6**	**+0.3**
	baz=313,SNR=6.7						
S22A	**4UR Ranch, Cre**	**44.21**	**85**	P	**P**	**21 20 06.9**	**+0.4**
	baz=311,SNR=22						
AGMN	**Agassiz Nation**	**44.25**	**66**	IAmb	IAmb	21 20 07.4	
	comp=Z,49nm,1.4s						
AGMN	**Agassiz Nation**	**44.25**	**66**	P	**P**	**21 20 05.5**	**-0.8**
	baz=304						
NEEM	**North Greenlan**	**44.28**	**16**	*i* P	**P**	**21 20 05.8**	**-0.9**
NEEM				IAmb	IAmb	21 20 07.7	
	comp=Z,16nm,0.7s						
Q24A	**Divide**	**44.44**	**82**	P	**P**	**21 20 08.6**	**+0.2**
	baz=310						
X18A	**Snowflake**	**44.45**	**90**	P	**P**	**21 20 09.2**	**+0.8**
X18A				IAmb	IAmb	21 20 10.7	
	comp=Z,42nm,1.4s						
214A	**Organ Pipe Nat**	**44.49**	**95**	P	**P**	**21 20 08.9**	**+0.4**
	baz=315						
SUSD	**Miller**	**44.73**	**72**	P	**P**	**21 20 09.9**	**-0.4**
	baz=307						
SDCO	**Great Sand Dun**	**45.01**	**84**	P	**P**	**21 20 12.8**	**-0.2**
SDCO				IAmb	IAmb	21 20 14.7	
	comp=Z,26nm,1.1s						
SDCO	**Great Sand Dun**	**45.01**	**84**	P	**P**	**21 20 13.4**	**+0.4**
	baz=311,SNR=14						
OGNE	**Ogallala**	**45.05**	**78**	P	**P**	**21 20 12.9**	**-0.1**
OGNE				IAmb	IAmb	21 20 14.3	
	comp=Z,36nm,0.8s						
OGNE	**Ogallala**	**45.05**	**78**	P	**P**	**21 20 12.6**	**-0.4**
	baz=309						
TUC	**Tucson**	**45.47**	**93**	P	**P**	**21 20 16.5**	**+0.1**
TUC				pmax	pmax		
	comp=Z,17nm,1.2s						
TUC	**Tucson**	**45.47**	**93**	P	**P**	**21 20 16.5**	**+0.1**
TUC	**Tucson**	**45.47**	**93**	P	**P**	**21 20 16.9**	**+0.5**
	baz=315						
KSCO	**Kaye Shedlock’**	**45.92**	**80**	P	**P**	**21 20 20.4**	**+0.4**
	baz=310						
T25A	**Trinidad**	**46.07**	**84**	P	**P**	**21 20 21.2**	**0.0**
	baz=311,SNR=26						
KSRS	**Korea Array**	**46.19**	**277**	P	**P**	**21 20 22.6**	**+0.7**
	comp=Z,2.9nm,0.8s,baz=66,slow=7.7,SNR=8.8						
KSRS				LR	LR	21 38 22.8	
	comp=Z,281nm,21.9s,baz=56,slow=34						
ANMO	**Albuquerque**	**46.29**	**87**	P	**P**	**21 20 23.2**	**+0.3**
	comp=Z,16nm,1.2s,baz=311,slow=8.4,SNR=15						
ANMO				PcP	**PcP**	**21 21 57.8**	**+0.2**
	comp=Z,5.2nm,0.8s,baz=273,slow=3.3,SNR=4.3						
ANMO	**Albuquerque**	**46.29**	**87**	*ce*P	**P**	**21 20 23.4**	**+0.5**
ANMO				pmax	pmax		
	comp=Z,24nm,1.3s						
ANMO	**Albuquerque**	**46.29**	**87**	P	**P**	**21 20 22.6**	**-0.3**
ANMO	**Albuquerque**	**46.29**	**87**	P	**P**	**21 20 22.9**	**-0.1**
	baz=313						
NRIK	**Noril'sk**	**46.40**	**332**	P	**P**	**21 20 22.9**	**-0.3**
	comp=Z,7.8nm,0.9s,baz=82,slow=4.5,SNR=9.1						
NRIK				LR	LR	21 42 36.1	
	comp=Z,764nm,19.0s,baz=75,slow=40						
NRIK	**Noril'sk**	**46.40**	**332**	*ce*P	**P**	**21 20 23.6**	**+0.5**
NRIK				pmax	pmax		
	comp=Z,12nm,1.1s						
NRIK	**Noril'sk**	**46.40**	**332**	P	**P**	**21 20 23.1**	**-0.1**
ECSD	**EROS Data Cent**	**46.50**	**71**	IAmb	IAmb	21 20 24.2	
	comp=Z,24nm,1.1s						
ECSD	**EROS Data Cent**	**46.50**	**71**	P	**P**	**21 20 23.1**	**-1.2**
	baz=308						
EYMN	**Ely**	**46.84**	**64**	P	**P**	**21 20 24.3**	**-2.6**
	baz=306						
BGNE	**Belgrade**	**47.05**	**75**	P	**P**	**21 20 27.9**	**-0.7**
	baz=309						
121A	**Cookes Peak, D**	**47.13**	**91**	IAmb	IAmb	21 20 31.5	
	comp=Z,23nm,1.1s						
121A	**Cookes Peak, D**	**47.13**	**91**	P	**P**	**21 20 30.1**	**+0.5**
	baz=314						
JNU	**Nakatsue**	**47.32**	**271**	P	**P**	**21 20 30.6**	**-0.2**
CBKS	**Cedar Bluff**	**47.77**	**78**	P	**P**	**21 20 34.0**	**-0.2**
	baz=311						
I37A	**Lemond, Waseca**	**48.16**	**69**	P	**P**	**21 20 35.7**	**-1.5**
MNTX	**Cornudas Mount**	**49.17**	**90**	IAmb	IAmb	21 20 47.0	
	comp=Z,22nm,0.9s						
MNTX	**Cornudas Mount**	**49.17**	**90**	P	**P**	**21 20 45.7**	**+0.6**
	baz=315,SNR=14						
DAG	**Danmarks Havn**	**49.18**	**9**	*i* P	**P**	**21 20 42.9**	**-1.6**
DAG				IAmb	IAmb	21 20 45.2	
	comp=Z,12nm,0.8s						
MSTX	**Muleshoe**	**49.18**	**85**	P	**P**	**21 20 44.7**	**-0.5**
MSTX	**Muleshoe**	**49.18**	**85**	P	**P**	**21 20 45.1**	**-0.2**
	baz=314						
SPITS	**Spitsbergen Ar**	**49.20**	**359**	P	**P**	**21 20 44.1**	**-0.6**
	comp=Z,7.8nm,0.9s,baz=39,slow=5.4,SNR=8.4						
SPITS				LR	LR	21 41 07.2	
	comp=Z,445nm,20.2s,baz=340,slow=36						
AMTX	**Amarillo**	**49.22**	**84**	IAmb	IAmb	21 20 46.5	
	comp=Z,21nm,0.9s						
AMTX	**Amarillo**	**49.22**	**84**	P	**P**	**21 20 45.5**	**0.0**
	baz=313						
KSU1	**Kansas State U**	**49.44**	**76**	IAmb	IAmb	21 20 47.0	
	comp=Z,28nm,0.8s						
KSU1	**Kansas State U**	**49.44**	**76**	P	**P**	**21 20 45.7**	**-1.3**
	baz=311						
OK032	**Salt Plains WL**	**50.00**	**79**	IAmb	IAmb	21 20 51.7	
	comp=Z,31nm,1.1s						
KAN01	**Argonia South**	**50.04**	**79**	IAmb	IAmb	21 20 52.5	
	comp=Z,42nm,1.2s						
SUMG	**Summit**	**50.06**	**18**	P	**P**	**21 20 51.1**	**-0.6**
SUMG				pmax	pmax		
	comp=Z,25nm,0.9s						
SUMG	**Summit**	**50.06**	**18**	*i* P	**P**	**21 20 51.8**	**+0.1**
SUMG				IAmb	IAmb	21 20 53.1	
	comp=Z,13nm,0.8s						
SUMG	**Summit**	**50.06**	**18**	P	**P**	**21 20 51.1**	**-0.6**
SUMG				IAmb	IAmb	21 20 53.6	
	comp=Z,25nm,0.9s						
KAN17	**Caldwell West**	**50.11**	**79**	IAmb	IAmb	21 20 52.3	
	comp=Z,28nm,1.0s						
CROK	**Carrier**	**50.34**	**80**		**P**	**21 20 52.3**	**-1.6**
BLOK	**Blackwell**	**50.63**	**79**	IAmb	IAmb	21 20 56.3	
	comp=Z,35nm,1.0s						
L40A	**Anamosa**	**50.63**	**70**	IAmb	IAmb	21 20 55.8	
	comp=Z,31nm,1.1s						
JFWS	**Jewell Farm**	**50.63**	**68**	IAmb	IAmb	21 20 55.4	
	comp=Z,22nm,0.9s						
JFWS	**Jewell Farm**	**50.63**	**68**	P	**P**	**21 20 54.5**	**-1.5**
	baz=310						
TLY	**Talaya**	**50.74**	**307**	LR	LR	21 42 10.5	
	comp=Z,388nm,21.8s,baz=30,slow=36						
TLY	**Talaya**	**50.74**	**307**	*e*P	**P**	**21 20 55.3**	**-1.4**
TLY				*e*		21 22 51.8	
TLY				*e*S	**S**	**21 28 13.7**	**+5.4**
TLY				pmax	pmax		
	comp=Z,34nm,1.0s						
TLY				MLR	MLR		
	comp=Z,727nm,17.0s						
TLY	**Talaya**	**50.74**	**307**	P	**P**	**21 20 56.0**	**-0.7**
T35A	**Sooner Cattle**	**50.94**	**78**	IAmb	IAmb	21 20 58.5	
	comp=Z,30nm,1.0s						
DBG	**Daneborg**	**51.27**	**11**	*i* P	**P**	**21 20 59.4**	**-1.0**
DBG				IAmb	IAmb	21 21 01.2	
	comp=Z,12nm,0.8s						
QUOK	**Quay**	**51.32**	**79**		**P**	**21 20 59.9**	**-1.5**
QUOK				IAmb	IAmb	21 21 01.5	
	comp=Z,29nm,0.8s						
ULN	**Ulaanbaatar**	**51.42**	**301**	*ce*P	**P**	**21 21 02.1**	**+0.1**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULN	**Ulaanbaatar**	**51.42**	**301**	P	**P**	**21 21 01.4**	**-0.6**
X34A	**Smith Ranch, M**	**51.72**	**81**		**P**	**21 21 04.1**	**-0.2**
X34A				IAmb	IAmb	21 21 05.7	
	comp=Z,29nm,1.0s						
ZAK	**Zakamensk**	**51.73**	**305**	*e*P	**P**	**21 21 03.7**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SONM	**Songino Array**	**51.78**	**301**	P	**P**	**21 21 04.8**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=72,slow=5.9,SNR=13						
SONM				PcP	**PcP**	**21 22 17.3**	**+0.1**
	comp=Z,1.9nm,0.4s,baz=61,slow=2.6,SNR=8.1						
SONM				LR	LR	21 46 30.6	
	comp=Z,671nm,18.4s,baz=42,slow=40						
SONM	**Songino Array**	**51.78**	**301**	P	**P**	**21 21 04.0**	**-0.7**
SONM				pmax	pmax		
	comp=Z,13nm,1.5s						
SONM	**Songino Array**	**51.78**	**301**	P	**P**	**21 21 04.0**	**-0.7**
TX32	**Lajitas Array**	**51.89**	**90**	IAmb	IAmb	21 21 07.2	
	comp=Z,30nm,0.9s						
TXAR	**Lajitas Array**	**51.89**	**90**	P	**P**	**21 21 06.0**	**+0.3**
	comp=Z,15nm,0.8s,baz=299,slow=5.3,SNR=124						
TXAR				ScP	**ScP**	**21 26 11.6**	**+1.3**
	comp=Z,1.2nm,1.0s,baz=306,slow=4.5,SNR=3.7						
TXAR				LR	LR	21 41 16.0	
	comp=Z,380nm,19.4s,baz=0.0,slow=34						
W35A	**Tecumseh**	**51.92**	**80**		**P**	**21 21 04.3**	**-1.4**
ABTX	**Abilene, Hawle**	**52.00**	**84**	P	**P**	**21 21 05.3**	**-1.1**
	baz=315						
TUL1	**Leonard**	**52.05**	**79**	P	**P**	**21 21 05.4**	**-1.2**
	baz=313						
S39A	**Bolivar**	**52.30**	**75**	IAmb	IAmb	21 21 07.2	
	comp=Z,20nm,0.9s						
L44A	**Lake County Fo**	**52.42**	**67**	P	**P**	**21 21 08.7**	**-0.7**
	baz=311						
U38A	**Gravette**	**52.52**	**77**	IAmb	IAmb	21 21 09.8	
	comp=Z,28nm,0.8s						
ICESG	**Greenland Ices**	**52.61**	**21**	*i* P	**P**	**21 21 09.6**	**-1.3**
ICESG				IAmb	IAmb	21 21 10.7	
	comp=Z,7.6nm,1.0s						
HDIL	**Hopedale**	**52.72**	**70**	P	**P**	**21 21 10.2**	**-1.4**
	baz=312						
HHAR	**Hobbs**	**52.89**	**77**	P	**P**	**21 21 09.7**	**-3.2**
HHAR				IAmb	IAmb	21 21 12.3	
	comp=Z,15nm,0.8s						
CCM	**Cathedral Cave**	**53.27**	**73**	P	**P**	**21 21 13.5**	**-2.1**
	baz=313						
MGMO	**Mountain Grove**	**53.28**	**75**	IAmb	IAmb	21 21 14.5	
	comp=Z,32nm,0.9s						
JCT	**Junction City**	**53.41**	**86**	P	**P**	**21 21 16.0**	**-0.9**
	baz=316						
TIA	**Tai'an**	**53.46**	**284**	⇓P	**P**	**21 21 17.6**	**+0.5**
TIA				pmax	pmax		
	comp=Z,16nm,1.2s						
TIA				LR	LR		
	comp=Z,260nm,19.1s						
TIA				LR	LR		
	comp=Z,250nm,16.7s						
TIA				LR	LR		
	comp=Z,280nm,14.1s						
U40A	**Yellville**	**53.48**	**76**	IAmb	IAmb	21 21 16.4	
	comp=Z,26nm,0.8s						
U40A	**Yellville**	**53.48**	**76**	P	**P**	**21 21 15.4**	**-1.9**
	baz=313						
HHC	**Hu-ho-hao-te**	**53.54**	**292**	*e*P	**P**	**21 21 18.8**	**+1.0**
HHC				S	**S**	**21 28 42.3**	**-4.8**

HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,230nm,5.6s						
HHC				LR	LR		
	comp=Z,620nm,17.0s						
HHC				LR	LR		
	comp=Z,650nm,19.6s						
HHC				LR	LR		
	comp=Z,870nm,17.0s						
W39A	Magazine	53.73	78	P	P	21 21 18.1	-1.0
	baz=314						
WHTX	Lake Whitney,	53.76	83	P	P	21 21 19.2	-0.2
	baz=315						
FVM	French Village	53.79	73	IAmb	IAmb	21 21 19.0	
	comp=Z,32nm,1.0s						
T42A	Van Buren	54.05	74	IAmb	IAmb	21 21 19.8	
	comp=Z,13nm,0.8s						
SFIN	Lafayette	54.08	69	IAmb	IAmb	21 21 21.8	
	comp=Z,44nm,1.1s						
SFIN	Lafayette	54.08	69	P	P	21 21 20.2	-1.3
	baz=313						
FCAR	Ozark Folk Cen	54.23	76	P	P	21 21 20.4	-2.4
MIAR	Mount Ida	54.30	78	IAmb	IAmb	21 21 23.8	
	comp=Z,35nm,1.0s						
MIAR	Mount Ida	54.30	78	P	P	21 21 22.5	-0.7
	baz=314						
SCHQ	Schefferville	54.49	44	P	P	21 21 23.8	-0.6
	comp=Z,39nm,0.9s,baz=324,slow=7.9,SNR=21						
SCHQ				LR	LR	21 47 47.7	
	comp=Z,473nm,18.5s,baz=318,slow=39						
P46A	Rosedale	54.53	69	IAmb	IAmb	21 21 24.8	
	comp=Z,28nm,1.1s						
435B	Jarrell	54.54	84	P	P	21 21 24.8	-0.2
	baz=316						
SCO	Scoresbysund	54.55	13	*i* P	P	21 21 24.0	-0.5
SCO				IAmb	IAmb	21 21 32.2	
	comp=Z,5.4nm,0.9s						
PBMO	Poplar Bluff	54.61	74	IAmb	IAmb	21 21 25.2	
	comp=Z,16nm,0.8s						
W41B	Gary Mavity, V	54.65	77	P	P	21 21 24.3	-1.5
	baz=314						
S44A	Carbondale	54.67	72	IAmb	IAmb	21 21 25.4	
	comp=Z,22nm,0.8s						
SIUC	Southern Illin	54.67	72	IAmb	IAmb	21 21 25.4	
	comp=Z,26nm,0.9s						
LCAR	Lake Charles	54.67	75	P	P	21 21 23.2	-2.7
X40A	Basin Creek Fa	54.78	78	P	P	21 21 25.7	-1.1
	baz=314						
833A	Chaparral WMA,	55.21	88	P	P	21 21 29.9	0.0
	baz=317						
NJ2	Nanjing	55.32	279	*e*P	P	21 21 30.9	+0.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SADO	Sadowa	55.46	60	P	P	21 21 30.9	-0.6
	comp=Z,11nm,0.9s,baz=298,slow=6.5,SNR=4.2						
SADO	Sadowa	55.46	60	IAmb	IAmb	21 21 31.8	
	comp=Z,15nm,1.0s						
NATX	Nacogdoches	55.60	81	P	P	21 21 32.2	-0.5
	baz=316						
Z41A	Richland Creek	55.66	79	P	P	21 21 32.6	-0.4
	baz=315						
P49A	Miami Univ. Ec	55.99	68	IAmb	IAmb	21 21 34.5	
	comp=Z,25nm,0.9s						
P49A	Miami Univ. Ec	55.99	68	P	P	21 21 33.5	-1.9
	baz=314						
WCI	Wyandotte Cave	56.00	70	P	P	21 21 33.9	-1.6
	baz=314						
HKT	Hockley	56.19	84	P	P	21 21 36.5	-0.3
HKT				pmax	pmax		
	comp=Z,50nm,1.4s						
HKT	Hockley	56.19	84	P	P	21 21 36.5	-0.3
HKT				IAmb	IAmb	21 21 39.2	
	comp=Z,50nm,1.4s						
T47A	Sharon Grove	56.39	72	IAmb	IAmb	21 21 38.4	
	comp=Z,32nm,0.9s						
DELO	Deloro Mine	56.43	59	IAmb	IAmb	21 21 39.2	
	comp=Z,20nm,1.1s						
ACSO	Alum Creek Sta	56.48	66	P	P	21 21 37.5	-1.4
	baz=314						
WVT	Waverly	56.57	73	P	P	21 21 38.5	-1.1
WVT				pmax	pmax		
	comp=Z,37nm,1.2s						
WVT	Waverly	56.57	73	P	P	21 21 38.5	-1.1
WVT				IAmb	IAmb	21 21 39.8	
	comp=Z,37nm,1.1s						
WVT	Waverly	56.57	73	P	P	21 21 38.3	-1.3
	baz=314						
ERPA	Erie	56.82	63	P	P	21 21 40.1	-1.1
	baz=314						
TRQ	Mont Tremblant	56.82	56	IAmb	IAmb	21 21 41.3	
	comp=Z,19nm,1.1s						
M53A	WI Miller and	56.92	64	P	P	21 21 40.3	-1.6
	baz=314						
R50A	Paris	57.08	69	IAmb	IAmb	21 21 43.2	
	comp=Z,29nm,1.1s						
PECO	Prince Edward	57.16	59	IAmb	IAmb	21 21 44.4	
	comp=Z,39nm,1.2s						
PLAL	Pickwick Lake	57.23	74	IAmb	IAmb	21 21 44.0	
	comp=Z,22nm,0.8s						
N53A	Lisbon	57.27	64	P	P	21 21 43.6	-0.9
N53A				IAmb	IAmb	21 21 44.9	
	comp=Z,22nm,1.0s						
WVNY	West Valley, N	57.36	62	IAmb	IAmb	21 21 45.7	
	comp=Z,28nm,1.0s						
P52A	Corning	57.37	66	P	P	21 21 44.2	-1.0
	baz=314						
ZAIG	Zacatecas	57.39	95	P	P	21 21 45.4	-0.5
ZAIG				IAmb	IAmb	21 21 47.8	
	comp=Z,20nm,1.3s						
M54A	Oil Creek Stat	57.42	63	IAmb	IAmb	21 21 45.7	
	comp=Z,35nm,1.1s						
M54A	Oil Creek Stat	57.42	63	P	P	21 21 44.2	-1.4
	baz=314						
V48A	Smith Brothers	57.43	73	IAmb	IAmb	21 21 45.4	
	comp=Z,14nm,1.1s						
O53A	New Philadelph	57.45	65	P	P	21 21 44.5	-1.2
	baz=314						
CLTN	Cedars of Leba	57.46	72	IAmb	IAmb	21 21 46.2	
	comp=Z,28nm,1.1s						
U49A	Red Boiling Sp	57.49	71	IAmb	IAmb	21 21 45.9	
	comp=Z,20nm,1.1s						
MMNY	Mt. Morris Dam	57.51	61	IAmb	IAmb	21 21 46.6	
	comp=Z,35nm,1.2s						
ARCES	ARCESS Array B	57.52	354	P	P	21 21 44.9	-0.9
	comp=Z,5.1nm,0.9s,baz=12,slow=8.3,SNR=19						
ARCES				PcP	PcP	21 22 38.9	+0.2
	comp=Z,13nm,0.9s,baz=26,slow=5.9,SNR=5.5						
ARCES				LR	LR	21 49 47.2	
	comp=Z,260nm,18.2s,baz=5.0,slow=39						
ARCES	ARCESS Array B	57.52	354	P	P	21 21 45.4	-0.4
ARCES				pmax	pmax		
	comp=Z,33nm,1.5s						
ARCES	ARCESS Array B	57.52	354	P	P	21 21 45.4	-0.4
ARCES				IAmb	IAmb	21 21 57.7	
	comp=Z,33nm,1.5s						
N54A	Moraine State	57.62	64	P	P	21 21 45.9	-1.1
	baz=314						
ZALV	Zalesovo Beam	57.63	318	PcP	PcP	21 22 39.8	+0.4
	comp=Z,3.5nm,0.6s,baz=41,slow=4.7,SNR=7.8						
ZALV				LR	LR	21 47 33.3	
	comp=Z,651nm,21.8s,baz=48,slow=37						
T50A	Nancy	57.67	70	IAmb	IAmb	21 21 47.3	
	comp=Z,19nm,1.1s						
VBMS	Vicksburg	57.75	78	P	P	21 21 47.0	-0.9
	baz=316						
LONY	Lake Ozonia	57.92	57	IAmb	IAmb	21 21 49.0	
	comp=Z,13nm,0.9s						
LONY	Lake Ozonia	57.92	57	P	P	21 21 47.8	-1.2
	baz=315						
S51A	Beattyville	57.94	69	IAmb	IAmb	21 21 49.1	
	comp=Z,32nm,1.1s						
O54A	Avella	57.95	65	IAmb	IAmb	21 21 49.3	
	comp=Z,22nm,0.9s						
J57A	Williamstown	58.04	59	IAmb	IAmb	21 21 50.6	
	comp=Z,26nm,1.0s						
X48A	Hartselle	58.21	74	IAmb	IAmb	21 21 50.4	
	comp=Z,18nm,0.8s						
R53A	Hurricane	58.38	67	P	P	21 21 50.9	-1.4
R53A				IAmb	IAmb	21 21 52.5	
	comp=Z,37nm,1.2s						
LVZ	Lovozero	58.38	350	*ce*P	P	21 21 53.0	+1.1
LVZ				pmax	pmax		
	comp=Z,126nm,2.5s						
Q54A	Coxs Mills	58.54	66	IAmb	IAmb	21 21 53.5	
	comp=Z,23nm,1.1s						
NCB	Newcomb	58.56	58	IAmb	IAmb	21 22 02.2	
	comp=Z,40nm,1.5s						
MCWV	Mont Chateau	58.61	65	P	P	21 21 52.6	-1.2
	baz=315						
W50A	Signal Mountai	58.68	72	IAmb	IAmb	21 21 54.3	
	comp=Z,24nm,1.1s						
TZTN	Tazewell	58.74	70	P	P	21 21 53.8	-1.0
	baz=315						
J59A	Piesco	58.77	58	IAmb	IAmb	21 21 55.4	
	comp=Z,18nm,0.9s						
O56A	Blue Knob Stat	58.88	63	IAmb	IAmb	21 21 55.8	
	comp=Z,23nm,1.0s						
O56A	Blue Knob Stat	58.88	63	P	P	21 21 54.4	-1.4
	baz=315						
BINY	Binghamton	58.90	60	P	P	21 21 54.9	-0.9
	baz=315						
M57A	Sunshine Farm,	58.90	62	IAmb	IAmb	21 21 58.5	
	comp=Z,28nm,1.2s						
D62A	Allapoint, All	58.91	52	IAmb	IAmb	21 21 56.5	
	comp=Z,33nm,1.3s						
FPAL	Fort Paine	58.98	73	IAmb	IAmb	21 21 56.1	
	comp=Z,23nm,0.9s						
SSPA	Standing Stone	58.99	63	P	P	21 21 55.0	-1.4
SSPA	Standing Stone	58.99	63	P	P	21 21 55.6	-0.9
	baz=315						
Y49A	Blount Mountai	59.00	74	IAmb	IAmb	21 21 56.0	
	comp=Z,17nm,0.8s						
WHN	Wuhan	59.09	281	⇑P	P	21 21 57.4	+0.1
WHN				pmax	pmax		
	comp=Z,34nm,0.8s						
WHN				LR	LR		
	comp=Z,830nm,22.5s						
S54A	Dingess, Beckl	59.11	67	IAmb	IAmb	21 21 57.2	
	comp=Z,32nm,1.2s						
V52A	Sevierville	59.21	70	IAmb	IAmb	21 21 58.1	
	comp=Z,42nm,1.5s						
ACCN	Adirondack Com	59.26	58	IAmb	IAmb	21 21 59.1	
	comp=Z,24nm,1.1s						
R55A	Marlinton	59.43	66	IAmb	IAmb	21 22 27.5	
	comp=Z,36nm,1.4s						
KSPA	Keystone Colle	59.47	61	IAmb	IAmb	21 22 00.5	
	comp=Z,12nm,0.9s						
N58A	Sunbury	59.47	62	IAmb	IAmb	21 22 00.4	
	comp=Z,32nm,1.1s						
LBNH	Lisbon	59.53	56	P	P	21 21 59.3	-0.9
	baz=316						
DGZ	Jazzator, Alta	59.63	313	*i* P	P	21 22 01.5	+0.5
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
P57A	Homestead Farm	59.74	64	IAmb	IAmb	21 22 02.0	
	comp=Z,28nm,1.1s						
XAN	Xi'an	59.77	287	P	P	21 22 02.8	+0.8
XAN				pP	pP	21 22 14.9	-0.8
XAN				SS	SS	21 34 01.8	-3.6
XAN				pmax	pmax		
	comp=Z,25nm,1.4s						
XAN				LR	LR		
	comp=Z,410nm,14.4s						
XAN				LR	LR		
	comp=Z,300nm,19.9s						
XAN				LR	LR		
	comp=Z,590nm,17.1s						
V53A	Saluda	59.78	70	IAmb	IAmb	21 22 03.0	
	comp=Z,28nm,1.1s						
PAGS	Pennsylvania G	59.90	62	IAmb	IAmb	21 22 03.0	
	comp=Z,19nm,1.0s						
N59A	State Game Lan	59.92	61	IAmb	IAmb	21 22 03.6	
	comp=Z,38nm,1.3s						
N59A	State Game Lan	59.92	61	P	P	21 22 02.2	-0.7
	baz=316						
BLA	Blacksburg	60.03	67	P	P	21 22 03.2	-0.5
BLA				pmax	pmax		
	comp=Z,38nm,1.0s						
BLA	Blacksburg	60.03	67	P	P	21 22 03.2	-0.5
BLA	Blacksburg	60.03	67	P	P	21 22 03.3	-0.5
	baz=316						
Z51A	Franklin	60.10	73	IAmb	IAmb	21 22 03.4	
	comp=Z,22nm,0.9s						
PKME	Peaks-Kenny Pk	60.10	54	P	P	21 22 03.2	-0.9
	baz=316						
BG3	Lake Jocassee	60.19	70	IAmb	IAmb	21 22 04.9	
	comp=Z,29nm,1.3s						
Y52A	Lilburn	60.35	72	IAmb	IAmb	21 22 05.7	
	comp=Z,31nm,1.4s						
ODNJ	Ogdensburg	60.42	60	IAmb	IAmb	21 22 06.9	
	comp=Z,34nm,1.2s						
L61B	Northampton	60.44	58	P	P	21 22 05.9	-0.5
	baz=316						
K62A	Royalston	60.51	57	IAmb	IAmb	21 22 07.7	
	comp=Z,23nm,0.9s						
KSCT	Kent School, K	60.54	59	IAmb	IAmb	21 22 08.0	
	comp=Z,32nm,1.1s						
BRAL	Brewton	60.55	76	P	P	21 22 07.1	-0.2
	baz=317						
WUPA	West Chester U	60.71	62	IAmb	IAmb	21 22 08.9	
	comp=Z,13nm,1.1s						
P60A	Greenville	60.78	62	P	P	21 22 07.9	-0.8
	baz=316						
T57A	Hurt	60.83	66	IAmb	IAmb	21 22 09.9	
	comp=Z,17nm,0.9s						
152A	Waverly Hall	60.84	74	P	P	21 22 06.8	-2.5
152A				IAmb	IAmb	21 22 08.2	
	comp=Z,21nm,1.1s						
PAL	Palisades	60.84	60	P	P	21 22 08.2	-0.9
	baz=316						
R58B	Mineral	60.90	65	IAmb	IAmb	21 22 10.3	
	comp=Z,26nm,1.1s						
HRV	Adam Dziewonsk	60.97	57	P	P	21 22 09.4	-0.5
	baz=317						
KMSC	Kings Mountain	61.00	69	P	P	21 22 09.4	-0.9
	baz=316						
CBN	Corbin Frederi	61.00	64	P	P	21 22 09.5	-0.8
	baz=316						
GTA	Gaotai	61.01	298	⇑P	P	21 22 10.3	-0.2
GTA				pP	pP	21 22 23.1	-1.1
GTA				sP	sP	21 22 28.3	-1.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,80nm,7.6s						
GTA				LR	LR		
	comp=Z,430nm,20.7s						
GTA				LR	LR		
	comp=Z,410nm,20.7s						
GTA				LR	LR		
	comp=Z,520nm,20.7s						
GOGA	Godfrey	61.02	72	IAmb	IAmb	21 22 09.3	
	comp=Z,22nm,1.1s						
GOGA	Godfrey	61.02	72	P	P	21 22 09.5	-1.0
	baz=317						
HODGE	Hodges	61.13	71	IAmb	IAmb	21 22 11.0	
	comp=Z,12nm,0.9s						
LZH	Lanzhou	61.19	292	*e*P	P	21 22 12.4	+0.6
LZH				pP	pP	21 22 26.0	+0.4
LZH				sP	sP	21 22 30.3	-0.9
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				LR	LR		
	comp=Z,630nm,13.8s						
LZH				LR	LR		
	comp=Z,490nm,14.1s						
LZH				LR	LR		
	comp=Z,520nm,14.9s						
U59A	Littleton	62.11	66	IAmb	IAmb	21 22 20.0	
	comp=Z,38nm,1.4s						
KURK	Kurchatov	62.57	319	*ce*P	P	21 22 20.8	+0.2
KURK				pmax	pmax		
	comp=Z,13nm,1.7s						
PRGR	Permogore	62.78	343	*e*P	P	21 22 20.6	-1.2
PRGR				pmax	pmax		
	comp=Z,33nm,1.5s						
NHSC	New Hope	63.13	70	P	P	21 22 23.6	-1.0
	baz=318						
SVE	Sverdlovsk	63.65	333	*e*P	P	21 22 28.6	+0.9
SVE				pmax	pmax		
	comp=Z,26nm,1.3s						
TLIG	Tlapa	63.77	95	P	P	21 22 28.9	-0.3
TLIG				IAmb	IAmb	21 22 30.4	
	comp=Z,24nm,1.1s						
BRVK	Borovoye	63.80	325	*ce*P	P	21 22 29.2	+0.4
BRVK				pmax	pmax		
	comp=Z,19nm,1.7s						
BRVK	Borovoye	63.80	325	P	P	21 22 27.5	-1.2
WMQ	Urumqi	63.90	309	*e*P	P	21 22 30.0	+0.4
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.9s						
WMQ				LR	LR		
	comp=Z,430nm,18.1s						
WMQ				LR	LR		
	comp=Z,590nm,17.5s						
WMQ				LR	LR		
	comp=Z,420nm,18.1s						
MKAR	Makanchi Array	64.08	314	P	P	21 22 30.6	-0.2
	comp=Z,1.2nm,0.3s,baz=57,slow=6.3,SNR=32						
MKAR				LR	LR	21 50 50.4	
	comp=Z,474nm,21.6s,baz=31,slow=36						
KLMR	Klimovskoe	64.53	346	*e*P	P	21 22 31.6	-1.7
KLMR				*e*SS	SS	21 35 25.2	+6.9
KLMR				pmax	pmax		
	comp=Z,43nm,1.5s						
KLMR	Klimovskoe	64.53	346	*e*P	P	21 22 31.6	-1.7
KLMR				AMP		21 22 34.6	
	comp=Z,43nm,1.5s						
KLMR				*e*SS	SS	21 35 25.2	+6.9
KLMR				*e*SS	SS	21 35 25.2	+6.9
KLMR				LQ	LQ	21 47 11.7	
KLMR				LQ	LQ	21 47 11.7	
KLMR				LR	LR	21 50 27.3	
ARU	Arti	64.57	333	*d i*P	P	21 22 34.4	+0.7
ARU						21 23 06.7	
ARU						21 24 54.0	
ARU				S	S	21 31 13.9	+4.8
ARU				pmax	pmax		
	comp=Z,32nm,1.4s						
ARU				MLR	MLR		
	comp=Z,538nm,24.0s						
ARU	Arti	64.57	333	P	P	21 22 33.0	-0.6
ARU				IAmb	IAmb	21 22 35.6	
	comp=Z,27nm,1.2s						
KIRV	Kirov	64.85	339	P	P	21 22 35.1	-0.4
	comp=Z,5.3nm,0.5s,baz=9.4,slow=5.8,SNR=5.6						
KIRV	Kirov	64.85	339	*ce*P	P	21 22 35.6	+0.2
FIA1	FINESS Array S	65.50	353	IAmb	IAmb	21 22 40.3	
	comp=Z,46nm,1.2s						
FINES	FINESS Array B	65.50	353	P	P	21 22 39.1	-0.5
	comp=Z,4.5nm,0.3s,baz=9.7,slow=5.9,SNR=41						
FINES				LR	LR	21 53 10.5	
	comp=Z,245nm,20.4s,baz=16,slow=38						
TAOE	Nuku Hiva Isla	65.90	150	*e*LR	LR	21 42 43.4	
	comp=Z,895nm,23.3s						
TAOE	Nuku Hiva Isla	65.90	150	*e*T	T	22 34 34.0	
	comp=Z,50nm,0.2s						
NB2	NORSAR Subarra	66.45	0	P	P	21 22 45.0	-0.8
	comp=Z,15nm,1.2s,baz=0.7,slow=6.9						
NOA	NORSAR Array B	66.45	0	P	P	21 22 45.4	-0.5
	comp=Z,6.6nm,1.0s,baz=360,slow=6.4,SNR=8.2						
NOA				LR	LR	21 53 45.1	
	comp=Z,168nm,18.6s,baz=355,slow=38						
GYA	Guiyang	66.65	283	⇑*i*P	P	21 22 48.4	+0.6
GYA				sP	sP	21 23 06.4	-0.5
GYA				pmax	pmax		
	comp=Z,33nm,0.9s						
HFS	Hagfors	67.35	359	P	P	21 22 51.0	-0.5
	comp=Z,4.3nm,0.3s,baz=27,slow=3.4,SNR=64						
VSU	Vasula	68.39	352	*e*P	P	21 22 58.4	+0.4
CCIG	Comitan	68.65	91	P	P	21 23 00.2	-0.3
CCIG				IAmb	IAmb	21 23 21.5	
	comp=Z,30nm,1.3s						
SOR	Soroa	69.18	80	IAmb	IAmb	21 23 04.3	
	comp=Z,56nm,1.3s						
MOS	Moscow	69.72	345	*e*P	P	21 23 05.2	-1.2
MOS				*e*		21 23 28.9	
MOS				pmax	pmax		
	comp=Z,40nm,1.2s						
MOS				MLR	MLR		
	comp=Z,600nm,17.0s						
PMOR	Pomariorio Ree	69.77	159	*e*T	T	22 39 29.5	
	comp=Z,5.8nm,0.2s						
KMI	Kunming	69.97	285	⇑P	P	21 23 09.5	+0.8
KMI				pP	pP	21 23 22.4	0.0
KMI				sP	sP	21 23 27.8	0.0
KMI				PcP	PcP	21 23 32.0	+1.3
KMI				S	S	21 32 15.1	-0.2
KMI				ScS	ScS	21 33 07.0	+0.1
KMI				SS	SS	21 36 42.5	-2.2
KMI				pmax	pmax		
	comp=Z,32nm,1.4s						
KMI				pmax	pmax		
	comp=Z,250nm,5.5s						
KMI				LR	LR		
	comp=Z,260nm,21.8s						
KMI				LR	LR		
	comp=Z,210nm,19.0s						
KMI				LR	LR		
	comp=Z,420nm,24.9s						
AKTO	Aktyubinsk	70.01	331	P	P	21 23 07.7	-0.6
	comp=Z,9.5nm,0.9s,baz=36,slow=4.8,SNR=19						
DAV	Davao City (W)	70.27	255	LR	LR	21 49 19.4	
	comp=Z,312nm,21.1s,baz=70,slow=32						
QIZ	Qiongzhong	70.39	276	P	P	21 23 11.3	+0.3
QIZ				S	S	21 32 20.6	+0.7
QIZ				LR	LR		
	comp=Z,290nm,16.4s						
QIZ				LR	LR		
	comp=Z,210nm,20.7s						
ABKAR	Akbulak array	70.46	329	P	P	21 23 10.6	-0.4
ABKAR	Akbulak array	70.46	329	IAmb	IAmb	21 23 12.4	
	comp=Z,16nm,1.1s						
OBN	Obninsk	70.49	345	⇓*i*P	P	21 23 10.6	-0.4
OBN				*e*		21 25 49.4	
OBN				pmax	pmax		
	comp=Z,39nm,1.7s						
OBN				MLR	MLR		
	comp=Z,425nm,18.0s						
FRU1	Bishkek	70.55	316	IAmb	IAmb	21 23 14.3	
	comp=Z,28nm,1.2s						
AAK	Ala-Archa	70.74	316	*ce*P	P	21 23 14.2	+1.1
AAK				pmax	pmax		
	comp=Z,46nm,1.7s						
AAK	Ala-Archa	70.74	316	P	P	21 23 12.8	-0.3
BELG	Belogornoye	70.96	338	P	P	21 23 13.6	-0.4
	comp=Z,22nm,1.0s,baz=148,slow=2.0,SNR=6.6						
BELG	Belogornoye	70.96	338	*i* P	P	21 23 15.1	+1.2
BELG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
EKA	Eskdalemuir Ar	71.44	9	P	P	21 23 16.5	-0.4
	comp=Z,14nm,0.9s,baz=359,slow=4.2,SNR=17						
NACGM	Naroch	71.91	351	*i* P	P	21 23 18.7	-0.9
PPT	Papeete	71.92	162	LR	LR	21 47 12.4	
	comp=Z,445nm,21.1s,baz=356,slow=29						
PPT2	Papeete2	71.94	162	*e*S	S	21 32 44.7	+7.0
	comp=Z,276nm,28.8s						
PPT2	Papeete2	71.94	162	*e*LR	LR	21 45 29.4	
	comp=Z,823nm,23.8s,baz=338						
SLVN	Son La	72.18	282	IAmb	IAmb	21 23 24.6	
	comp=Z,50nm,1.3s						
BBSR	BB Station	72.19	60	P	P	21 23 20.8	-0.8
MNK	Minsk	72.20	350	*i* P	P	21 23 20.6	-0.8
MNK				*i*		21 23 38.4	
MNK				*i*		21 26 01.0	
MNK				*i* PPP	PPP	21 27 45.3	
MNK				*i* S	S	21 32 40.0	+0.2
MNK				*i*		21 33 24.1	
MNK				pmax	pmax		
	comp=Z,35nm,1.0s						
MNK				pmax	pmax		
	comp=N,23nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,329nm,23.0s						
MNK				MLR	MLR		
	comp=E,33nm,22.0s						
MNK				MLR	MLR		
	comp=N,76nm,17.0s						
MNK	Minsk	72.20	350	*i* P	P	21 23 20.6	-0.8
	comp=E,3.0nm,1.0s						
MNK				*i* P	P	21 23 20.6	-0.8
	comp=N,23nm,0.9s						
MNK				*i* P	P	21 23 20.6	-0.8
	comp=Z,35nm,1.0s,baz=190						
MNK				*i* PP	PP	21 26 01.1	-0.4
MNK				*i* PPP	PPP	21 27 45.4	
MNK				*i* S	S	21 32 40.1	+0.3
MNK				*i* SS	SS	21 37 05.2	-12
MNK				*i* SSS	SSS	21 40 40.9	
MNK				*i* LQ	LQ	21 49 03.4	
MNK				*i* LR	LR	21 52 22.1	
	comp=Z,329nm,23.1s						
MNK				*i* LRM	MLR	21 57 24.6	
	comp=E,33nm,21.7s						
MNK				*i* LRM	MLR	21 57 38.0	
	comp=N,76nm,17.4s						

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MNK                               i LRM  MLR    21 57 47.0
LPSR  Galich'ya Gora   72.52 343 eP     P      21 23 22.7 -0.6
KSH   Kashi            72.67 313  P     P      21 23 28.3 +3.7
KSH                               PcP   sP     21 23 44.8 +0.6
KSH                               sP    PcP    21 23 46.8 +4.9
KSH                               pmax  pmax
      comp=N,18nm,1.2s
KSH                               LR    LR
      comp=N,490nm,19.4s
KSH                               LR    LR
      comp=N,560nm,18.9s
KSH                               LR    LR
      comp=N,840nm,22.3s
PMG   Port Moresby     72.85 227  LR    LR     21 49 52.5
      comp=N,243nm,21.8s,baz=52,slow=31
LSA   Lhasa            73.00 297  P     P      21 23 28.5 +1.3
LSA   Lhasa            73.00 297  P     P      21 23 27.7 +0.5
LSA                               pmax  pmax
      comp=Z,38nm,1.4s
LSA   Lhasa            73.00 297  P     P      21 23 27.7 +0.5
LSA                               IAmb  IAmb   21 23 50.5
      comp=Z,38nm,1.4s
SUW   Suwalki          73.09 353 eP     P      21 23 26.2 -0.4
SUW   Suwalki          73.09 353 eP     P      21 23 26.1 -0.6
VRH   Novokhopyorsk    73.34 341 eP     P      21 23 26.9 -1.3
VRH                               pmax  pmax
      comp=Z,20nm,1.2s
SWI   Sorong           73.49 246  P     P      21 23 30.4 +0.8
      comp=Z,61nm,1.1s
SIJI  Sorong           73.50 246  P     P      21 23 29.1 -0.5
      comp=Z,21nm,0.8s,baz=17,slow=8.1,SNR=22
SIJI                              LR    LR     21 51 17.2
      comp=Z,127nm,19.8s,baz=50,slow=32
BSEG  Bad Segeberg     73.56   1 eP     P      21 23 30.1 +0.7
      comp=Z,23nm,1.1s,baz=359,slow=5.7
VSR   Storozhevoye     73.81 343 eP     P      21 23 30.0 -1.0
VSR                               pmax  pmax
      comp=Z,10.0nm,1.1s
VORD  Divnogorie       74.03 342 eP     P      21 23 31.4 -0.8
VORD                              pmax  pmax
      comp=Z,20nm,1.1s
BTK   Batken           74.42 317  IAmb  IAmb   21 23 36.4
      comp=Z,23nm,1.1s
FAKI  Fak Fak          74.66 243  P     P      21 23 37.3 +0.9
      comp=Z,898nmcomp=Z,45nm,1.1s
RETH  Rethem/Aller,    74.75   2 eP     P      21 23 36.9 +0.5
      comp=Z,30nm,1.2s,baz=359,slow=5.7
NRDL  Niedersach Rie   75.00   1 eP     P      21 23 38.3 +0.5
      comp=Z,23nm,1.1s,baz=359,slow=5.7
RUE   Ruedersdorf      75.02 359 eP     P      21 23 38.5 +0.6
RUE   Ruedersdorf      75.02 359 eP     P      21 23 38.5 +0.6
      comp=Z,27nm,0.8s,baz=359,slow=5.7
IBBN  Ibbenburen       75.14   3 eP     P      21 23 39.2 +0.5
      comp=Z,31nm,1.0s,baz=359,slow=5.7
FLTG  Flechtingen      75.18   1 eP     P      21 23 38.8  0.0
      comp=Z,22nm,1.2s,baz=359,slow=5.7
LBMI  Labuha           75.41 249  P     P      21 23 40.5 -0.2
      comp=Z,25nm,1.4s
BEL   Belsk            75.42 354 eP     P      21 23 40.9 +0.6
CLZ   Clausthal        75.66   1 eP     P      21 23 42.2 +0.4
      comp=Z,29nm,1.1s,baz=359,slow=5.7
AKASG Malin Array Be   75.80 349  P     P      21 23 41.6 -0.8
      comp=Z,6.7nm,0.5s,baz=14,slow=5.9,SNR=44
AKASG                             LR    LR     22 04 41.6
      comp=Z,194nm,18.2s,baz=40,slow=42
AKBB  Malin Array Si   75.80 349  IAmb  IAmb   21 23 42.8
      comp=Z,37nm,1.1s
SHL   Shillong         75.83 294  IAmb  IAmb   21 23 45.6
      comp=Z,22nm,0.9s
UBPT  Khong Chiam      75.92 277  P     P      21 23 44.0 +0.4
GTTG  Gottingen        75.95   1 eP     P      21 23 43.9 +0.6
      comp=Z,32nm,1.0s,baz=359,slow=5.7
MYLDM Lahad Datu       75.97 260  IAmb  IAmb   21 24 12.0
      comp=Z,34nm,1.4s
BUG   Bochum--Univer   76.00   3 eP     P      21 23 43.7 +0.1
      comp=Z,17nm,1.0s,baz=359,slow=5.7
CLL   Collm            76.20 359 i P    P      21 23 44.8 +0.1
CLL                              e*PP   pP     21 23 58.0 -0.9
CLL                               pmax  pmax
      comp=Z,16nm,1.1s
CLL                               MLR   MLR
      comp=Z,300nm,20.5s
CLL   Collm            76.20 359 i P    P      21 23 44.8 +0.1
      comp=Z,16nm,1.1s
CLL                              epP    pP     21 23 58.0 -0.9
CLL                              ePS    PnS    21 34 12.0 +5.2
CLL                              eSS    SS     21 38 30.0  +12
CLL                              eSSS   SSS    21 41 48.0
CLL                              e             21 44 12.0
CLL                               LmV          21 59 00.0
      comp=Z,300nm,20.5s
CLL                               LmH          22 04 00.0
      comp=N,200nm,19.9s
CLL                               LmH          22 04 00.0
      comp=E,100nm,20.4s
CLL                               LmH          22 04 00.0
      comp=Z,200nm,19.0s
CLL   Collm            76.20 359 eP     P      21 23 44.8 +0.1
      comp=Z,16nm,1.1s,baz=359,slow=5.7
NEUB  Neuenburg        76.31   0 eP     P      21 23 45.8 +0.4
      comp=Z,27nm,0.9s,baz=359,slow=5.7
FBE   Freiberg         76.59 359 eP     P      21 23 47.6 +0.6
      comp=Z,32nm,1.2s,baz=359,slow=5.7
KSP   Ksiaz            76.61 357 eP     P      21 23 46.5 -0.6
BRG   Berggiesshubel   76.63 359 eP     P      21 23 47.4 +0.3
      comp=Z,16nm,1.0s,baz=359,slow=5.7
BRG   Berggiesshubel   76.63 359 eP     P      21 23 47.5 +0.3
BRG                               Amp          21 23 49.3
      comp=Z,15nm,1.1s
BRG   Berggiesshubel   76.63 359  P     P      21 23 54.6 +7.5
BRG                               Amp          21 23 58.7
      comp=Z,6.6nm,1.0s
UBBA  Unterbreizbach   76.68   1 eP     P      21 23 47.5 +0.1
      comp=Z,35nm,1.7s,baz=359,slow=5.7
TAPN  Taplejung        76.70 298 eP     P      21 23 48.6 +0.2
MEM   Membach          76.78   4 dP     P      21 23 47.9 -0.1
      comp=Z,11nm,1.0s
BTNL  Ternell          76.81   4 dP     P      21 23 48.4 +0.1
      comp=Z,14nm,1.1s
MOX   Moxa             76.87   0 eP     P      21 23 49.0 +0.5
      comp=Z,28nm,1.1s,baz=359,slow=5.7
MOX                              eL     L      22 04 15.8
      comp=Z,198nm,18.7s
CHVC  Chvalec          76.87 357 eP     P      21 23 49.4 +0.8
CHVC                              AMS   AMS    22 07 20.0
AHRW  Bad Neuenahr-A   76.89   3 eP     P      21 23 49.3 +0.7
      comp=Z,18nm,1.0s,baz=359,slow=5.7
OSTC  Ostas            76.90 357 eP     P      21 23 49.5 +0.8
OSTC                              AMS   AMS    22 04 00.0
BCLA  Clavier          76.94   4 κP     P      21 23 49.3 +0.3
      comp=Z,9.4nm,1.1s
UPC   Upice            76.95 357 eP     P      21 23 49.8 +0.8
UPC                               MLR   MLR
      comp=Z,400nm,23.2s
UPC   Upice            76.95 357 eP     P      21 23 49.8 +0.8
UPC                               AMS   AMS    22 06 30.0
      comp=Z,400nm,23.2s
BGES  Gesves           76.96   5 dP     P      21 23 49.0 -0.1
      comp=Z,8.5nm,1.1s
PVCC  Panska Ves       76.96 358 eP     P      21 23 49.9 +0.8
PVCC  Panska Ves       76.96 358 eP     P      21 23 49.9 +0.8
PVCC                              AMS   AMS    22 04 10.0
BMRD  Maredsous        77.03   5 dP     P      21 23 49.8 +0.4
      comp=Z,13nm,1.0s
PLN   Plauen           77.03 360 eP     P      21 23 50.0 +0.5
      comp=Z,12nm,1.2s,baz=359,slow=5.7
CHTO  Chiang Mai       77.06 284  P     P      21 23 49.8 -0.3
CHTO                              pmax  pmax
      comp=Z,42nm,1.4s
CHTO  Chiang Mai       77.06 284  P     P      21 23 49.8 -0.3
CHTO                              IAmb  IAmb   21 23 52.0
      comp=Z,42nm,1.4s
WERD  Werda            77.07 360 eP     P      21 23 50.1 +0.4
      comp=Z,17nm,1.4s,baz=359,slow=5.7
OJC   Ojcow            77.09 355 eP     P      21 23 50.2 +0.4
OJC   Ojcow            77.09 355  IAmb  IAmb   21 23 51.5
      comp=Z,26nm,1.1s
TANN  Tannenbergstha   77.10 360 eP     P      21 23 50.4 +0.4
      comp=Z,13nm,1.2s,baz=359,slow=5.7
DPC   Dobruska-Polom   77.10 357 eP     P      21 23 50.4 +0.5
DPC   Dobruska-Polom   77.10 357 eP     P      21 23 50.4 +0.5
DPC                               AMS   AMS    22 07 10.0
GUNZ  Gunzen           77.15 360 eP     P      21 23 50.7 +0.5
      comp=Z,13nm,1.1s,baz=359,slow=5.7
LVV   L'vov            77.19 352 eP     P      21 23 50.2 -0.2
RCHB  Rochefort        77.20   4 dP     P      21 23 50.4  0.0
      comp=Z,13nm,1.0s
DOU   Dourbes          77.23   5 dP     P      21 23 50.0 -0.5
      comp=Z,7.7nm,1.0s
WERN  Wernitzgruen     77.23 360 eP     P      21 23 51.4 +0.8
      comp=Z,19nm,1.1s,baz=359,slow=5.7
GUN   Gumba            77.23 299 eP     P      21 23 51.7 +0.3
TNS   Taunus Mts       77.25   2 eP     P      21 23 51.0 +0.2
      comp=Z,17nm,1.1s,baz=359,slow=5.7
ODAN  Odare            77.27 298 eP     P      21 23 51.5  0.0
JIRN  Jiri             77.27 299 eP     P      21 23 52.5 +0.9
NKC   Novy Kostel      77.28 360 eP     P      21 23 51.5 +0.6
NKC   Novy Kostel      77.28 360 eP     P      21 23 51.5 +0.6
CMAR  Chiang Mai Arr   77.34 284  P     P      21 23 52.6 +0.9
      comp=Z,25nm,1.1s,baz=23,slow=5.5,SNR=112
KRLC  Kraliky          77.36 357 eP     P      21 23 52.1 +0.7
KRLC                              smax  smax
      comp=N,2.0nm,0.5s
KRLC  Kraliky          77.36 357 eP     P      21 23 52.1 +0.7
SANI  Sanana           77.42 249  P     P      21 23 52.1  0.0
      comp=N,24nm,1.1s
KWP   Kalwaria Pacla   77.48 353 eP     P      21 23 52.7 +0.7
PRU   Pruhonice        77.50 358 eP     P      21 23 52.7 +0.6
PRU                               MLR   MLR
      comp=Z,400nm,21.8s
PRU   Pruhonice        77.50 358 eP     P      21 23 52.7 +0.6
PRU                               AMS   AMS    22 01 00.0
      comp=Z,400nm,21.8s
AAI   Ambon            77.53 247  P     P      21 23 53.5 +0.8
      comp=Z,36nm,0.8s
MANZ  Manzenberg       77.53 360 eP     P      21 23 52.7 +0.4
      comp=Z,3.4nm,1.2s,baz=359,slow=5.7
OKC   Ostrava-Krasne   77.55 356 eP     P      21 23 53.1 +0.8
OKC   Ostrava-Krasne   77.55 356 eP     P      21 23 53.1 +0.8
SPMM  Sapulut          77.56 261  P     P      21 23 54.0 +1.0
TBI   Tubuai           77.58 163 eLR    LR     21 48 11.1
      comp=Z,626nm,23.5s,baz=338
TBI   Tubuai           77.58 163 eT     T      22 49 16.5
      comp=Z,9.6nm,0.4s
RAMN  Ramite           77.62 298 eP     P      21 23 53.8 +0.4
MORC  Moravsky Berou   77.63 356 ⇑P     P      21 23 53.6 +0.7
MORC  Moravsky Berou   77.63 356 eP     P      21 23 53.3 +0.4
MORC  Moravsky Berou   77.63 356  IAmb  IAmb   21 23 54.6
      comp=Z,16nm,1.0s
KKN   Kakani           77.65 300 eP     P      21 23 53.7 +0.1
MRSI  Marisa           77.70 254  P     P      21 23 53.3 -0.4
      comp=Z,546nmcomp=Z,24nm,1.3s
ROTZ  Rotzenmuhle      77.75 360 eP     P      21 23 54.2 +0.7
      comp=Z,4.7nm,1.3s,baz=359,slow=5.7
PKI   Pulchoki         77.75 299 eP     P      21 23 54.3  0.0
PKIN  Phulchoki        77.75 300 eP     P      21 23 54.3 +0.1
GKN   Gorkha           77.81 300 eP     P      21 23 54.4  0.0
GRA1  Grafenberg Arr   77.82   1  IAmb  IAmb   21 23 56.0
      comp=Z,26nm,1.0s
GRF   Grafenberg Arr   77.82   1 eP     P      21 23 54.8 +0.9
      comp=Z,32nm,1.2s,baz=359,slow=5.7
GRF                              eL     L      21 57 00.6
      comp=Z,211nm,19.6s
GRFO  Grafenberg       77.82   1  P     P      21 23 55.0 +1.1
GRFO                              pmax  pmax
      comp=Z,28nm,1.1s
GRFO  Grafenberg       77.82   1  P     P      21 23 55.0 +1.1
GRFO                              IAmb  IAmb   21 23 56.0
      comp=Z,28nm,1.1s
NIE   Niedzica         77.86 354 eP     P      21 23 55.6 +1.4
DZM   Mont Dzumac      77.87 204 eLR    LR     21 48 20.4
      comp=Z,885nm,22.2s
TOLI2 Tolitoli         77.87 256  IAmb  IAmb   21 23 55.6
      comp=Z,28nm,1.4s
DMN   Daman            77.88 300 eP     P      21 23 55.1 +0.2
DANN  Dangsing         77.99 301 eP     P      21 23 55.9 +0.3
VRAC  Vranov           78.13 357 ⇑P     P      21 23 56.2 +0.6
VRAC  Vranov           78.13 357  P     P      21 23 56.4 +0.8
      comp=Z,18nm,0.9s,baz=9.0,slow=5.7,SNR=22
VRAC  Vranov           78.13 357 eP     P      21 23 56.2 +0.6
LANS  Liptovska Anna   78.17 355 eP     P      21 23 57.4 +1.5
KOLS  Kolonicke sedl   78.21 353 eP     P      21 23 56.6 +0.5
CRVS  Cervenica-Dubn   78.30 354 eP     P      21 23 57.2 +0.6
WET   Wettzell         78.37 359 eP     P      21 23 57.8 +0.8
      comp=Z,18nm,1.3s,baz=359,slow=5.7
KHC   Kasperske Hory   78.38 359 eP     P      21 23 57.9 +0.9
KHC                               MLR   MLR
      comp=Z,500nm,21.7s
KHC   Kasperske Hory   78.38 359 eP     P      21 23 57.9 +0.9
KHC                               sP    sP     21 24 19.0 +2.3
KHC                               AMS   AMS    22 05 30.0
      comp=Z,500nm,21.7s
KHC   Kasperske Hory   78.38 359  IAmb  IAmb   21 23 59.9
      comp=Z,44nm,1.5s
KRUC  Moravsky         78.39 357 eP     P      21 23 57.4 +0.4
SORM  Soroca           78.43 349 ⇑P     P      21 23 57.1 -0.1
LUWI  Luwuk            78.44 253  P     P      21 23 57.2 -0.6
      comp=Z,58nm,0.7s
UZH   Uzhgorod         78.51 353 eP     P      21 23 57.2 -0.5
UZH                              e             21 24 07.0
KOLN  Koldanda         78.54 301 eP     P      21 23 58.6 +0.1
JAVC  Velka Javorina   78.54 356 eP     P      21 23 59.6 +1.6
PYUN  Piuthan          78.59 302 eP     P      21 23 58.9 +0.1
COEN  Coen             78.66 228  P     P      21 24 06.8 +8.0
GEC2  GERESS Array S   78.66 359 eP     P      21 23 59.1 +0.4
      comp=Z,15nm,1.2s,baz=359,slow=5.7
GERES GERESS Array B   78.66 359  P     P      21 23 59.4 +0.7
      comp=Z,5.1nm,0.9s,baz=7.6,slow=4.0,SNR=36
GERES                             LR    LR     22 01 40.8
      comp=Z,109nm,18.0s,baz=15,slow=38
CKRC  Cesky Krumlov    78.68 358 eP     P      21 24 00.4 +1.7
CKRC                              AMS   AMS    22 09 00.0
NIL   Nilore           78.75 312  P     P      21 23 59.6 +0.3
NIL                               pmax  pmax
      comp=Z,15nm,0.9s
NIL   Nilore           78.75 312  P     P      21 23 59.6 +0.3
NIL                               IAmb  IAmb   21 24 19.1
      comp=Z,15nm,0.8s
KECS  Kecovo           78.78 354 eP     P      21 24 00.1 +0.9
VYHS  Vyhne            78.86 355 eP     P      21 24 00.6 +0.9
GOF   Gofitskoye       78.89 338⇑eP     P      21 24 03.2 +3.3
SMOL  Smolenice        78.90 356 eP     P      21 24 01.2 +1.3
MPSI  Mapaga           79.01 256  P     P      21 23 59.6 -1.3
      comp=Z,20nm,0.9s
SDDR  Presa de Saban   79.03  73  IAmb  IAmb   21 24 02.2
      comp=Z,24nm,0.8s
MODS  Modra-Piesok     79.05 356 eP     P      21 24 01.0 +0.3
BFO   Black Forest     79.14   3  P     P      21 23 59.7 -1.5
BFO                               pmax  pmax
      comp=Z,23nm,1.3s
BFO   Black Forest     79.14   3 eP     P      21 24 01.6 +0.4
      comp=Z,35nm,1.5s,baz=359,slow=5.7
BFO   Black Forest     79.14   3  P     P      21 23 59.7 -1.5
BFO                               IAmb  IAmb   21 24 02.8
      comp=Z,23nm,1.3s
ECH   Echery           79.22   3  IAmb  IAmb   21 24 03.7
      comp=Z,27nm,1.2s
ZST   Bratislava       79.23 357 eP     P      21 24 03.2 +1.5
BURAR Bucovina Array   79.27 351 ⇑P     P      21 24 02.0 -0.1
FUR   Furstenfeldbru   79.35   1 eP     P      21 24 03.2 +0.8
      comp=Z,43nm,1.3s,baz=359,slow=5.7
PSZ   Piszkesteto      79.38 355 ⇑P     P      21 24 03.9 +1.3
PSZ   Piszkesteto      79.38 355 eP     P      21 24 04.1 +1.5
PSZ   Piszkesteto      79.38 355  IAmb  IAmb   21 24 04.9
      comp=Z,35nm,1.1s
SAUI  Saumlaki         79.40 242  P     P      21 24 04.6 +1.6
      comp=Z,6µmcomp=Z,79nm,1.0s
KIS   Kishinev         79.49 348 eP     P      21 24 01.0 -2.1
KIS                              eLR    LR     22 01 12.0
      comp=Z,150nm,18.0s
KIS   Kishinev         79.49 348 eP     P      21 24 01.0 -2.1
CONA  Conrad Observa   79.54 357 i P    P      21 24 04.6 +1.1
      comp=Z,33nm,1.1s,SNR=13
SRO   Srobarova        79.56 356 eP     P      21 24 05.3 +1.8
MILM  Milestii Mici    79.57 348 eP     P      21 24 01.0 -2.5
MILM                             e             21 24 21.0
MILM                             ePS    PnS    21 35 07.0  +17
MILM                              pmax  pmax
      comp=Z,40nm,1.2s
MOA   Molln            79.65 358 i P    P      21 24 04.5 +0.5
      comp=Z,10nm,1.1s
SOP   Sopron           79.76 357 eP     P      21 24 05.8 +1.2
MAK   Makhachkala      79.78 334 eP     P      21 24 04.1 -0.6
MAK                              eS     S      21 34 05.8 +2.3
MAK                               pmax  pmax
      comp=Z,244nm,1.2s
RJOB  Jochberg         79.78 359 eP     P      21 24 05.5 +0.7
      comp=Z,15nm,1.0s,baz=359,slow=5.7
UBR   Ueberruh         79.82   1 eP     P      21 24 05.5 +0.5
      comp=Z,28nm,1.2s,baz=359,slow=5.7
KBL   Kabul            79.85 315  P     P      21 24 04.0 -1.6
KBL                               pmax  pmax
      comp=Z,23nm,1.2s
KBL   Kabul            79.85 315  P     P      21 24 04.0 -1.6
KBL                               IAmb  IAmb   21 24 06.0
      comp=Z,23nm,1.2s
BUD   Budapest         79.86 355 eP     P      21 24 05.3 +0.2
ARCR  ARCALIA          79.88 351 ⇑P     P      21 24 06.4 +1.1
BSZH  Besenyszg        79.97 354 ⇓P     P      21 24 05.2 -0.5
BSZH  Besenyszg        79.97 354 eP     P      21 24 06.9 +1.3
EGYH  Egyhazaskeszo    80.00 356 eP     P      21 24 05.8  0.0
CSKK  Cskako           80.01 356 eP     P      21 24 07.2 +1.2
KVAR  Kislovodsk Arr   80.02 338  P     P      21 24 07.7 +1.5
      comp=Z,13nm,1.1s,baz=91,slow=18,SNR=4.3
KIV   Kislovodsk       80.02 338 ⇑P     P      21 24 07.3 +1.1
KIV   Kislovodsk       80.02 338 eP     P      21 24 07.3 +1.1
KIV                               pmax  pmax
      comp=Z,22nm,1.1s
KIV                               MLR   MLR
      comp=Z,267nm,19.0s
KIV   Kislovodsk       80.02 338  P     P      21 24 06.2  0.0
KIV                               IAmb  IAmb   21 24 08.4
      comp=Z,21nm,1.1s
RETA  Reutte           80.03   1 i P    P      21 24 06.8 +0.7
      comp=Z,20nm,1.3s,SNR=6.5
MOTA  Moosalm          80.17   1 i P    P      21 24 07.6 +0.6
      comp=Z,37nm,1.2s,SNR=10
WATA  Walderalm        80.18   0 i P    P      21 24 07.7 +0.7
      comp=Z,39nm,1.2s,SNR=12
KBZ   Khabaz           80.19 338  P     P      21 24 07.5 +0.6
      comp=Z,8.2nm,0.9s,baz=335,slow=1.0,SNR=11
KBZ                               LR    LR     22 04 22.3
      comp=Z,350nm,20.1s,baz=5.0,slow=39
KBZ   Khabaz           80.19 338ceP     P      21 24 08.2 +1.3
KBZ                               pmax  pmax
      comp=Z,16nm,1.1s
ARSA  Arzberg          80.22 358 i P    P      21 24 08.2 +1.1
      comp=Z,23nm,1.2s,SNR=12
MPLH  Magyarpolny      80.24 356 eP     P      21 24 07.6 +0.5
WTTA  Wattenberg       80.25   0 i P    P      21 24 08.3 +0.9
      comp=Z,23nm,1.0s,SNR=9.5
SQTA  Sankt Quirin     80.30   1 i P    P      21 24 08.5 +0.9
      comp=Z,36nm,1.1s,SNR=14
DRGR                   80.31 353 ⇑P     P      21 24 08.0 +0.4
KBA   Koelnbreinsper   80.43 359 i P    P      21 24 09.7 +1.3
      comp=Z,66nm,1.0s,SNR=32
FETA  Feichten         80.49   1 i P    P      21 24 09.7 +1.0
      comp=Z,38nm,1.0s,SNR=14
GHRR                   80.58 349 ⇑P     P      21 24 08.6 -0.4
VLDR  Vladesti         80.72 349 ⇑P     P      21 24 09.8 +0.1
OZUR                   80.72 350 ⇑P     P      21 24 10.4 +0.6
ABTA  Abfaltersbach    80.77 360 i P    P      21 24 10.7 +0.6
      comp=Z,38nm,1.2s,SNR=15
SOKA  Soboth           80.81 358 i P    P      21 24 11.2 +0.9
      comp=Z,56nm,1.2s,SNR=38
ZEI   Tsey             80.84 337 eP     P      21 24 10.8 +0.1
ZEI                               pmax  pmax
      comp=Z,6.0nm,1.1s
PERS  Pernice          80.85 358 eP     P      21 24 11.3 +0.8
PLOR  Plostina         80.87 350 ⇓P     P      21 24 11.3 +0.7
MYKA  Terra Mystica    80.88 359 i P    P      21 24 11.2 +0.5
      comp=Z,24nm,1.5s,SNR=6.4
DOPR  Dopca            80.89 351 ⇑P     P      21 24 11.6 +0.9
SIRR  Siria            80.91 353 ⇑P     P      21 24 11.2 +0.4
COVR  Voineasa-Covas   80.92 350 ⇓P     P      21 24 11.8 +0.9
ZOU   Zoufplan         80.96 359  IAmb  IAmb   21 24 13.6
      comp=Z,26nm,1.2s
OBKA  Obir             80.98 358 i P    P      21 24 11.8 +0.5
      comp=Z,35nm,1.0s,SNR=14
KOGS  Kog              81.00 357 i P    P      21 24 12.0 +0.7
PRED  Cave del Predi   81.07 359  IAmb  IAmb   21 24 13.0
      comp=Z,28nm,1.1s
GEYT  Alibeck          81.13 325  P     P      21 24 12.9 +0.8
      comp=Z,12nm,1.0s,baz=262,slow=18,SNR=11
GEYT                              LR    LR     22 03 42.5
      comp=Z,435nm,21.2s,baz=255,slow=38
GYA0B ALIBECK ARRAY    81.13 325  IAmb  IAmb   21 24 13.9
      comp=Z,25nm,1.1s
MORH  Mrgy, Hungar     81.14 355 ⇑P     P      21 24 11.9 -0.1
MORH  Mrgy, Hungar     81.14 355 eP     P      21 24 11.6 -0.4
STAL  STALIGIAL        81.26 360  P     P      21 24 12.8 +0.2
ROBS  Robic            81.27 359 i P    P      21 24 12.6 -0.1
KOVH  Kovagotottos     81.29 356 eP     P      21 24 11.9 -0.9
MLR   Muntele Rosu     81.30 350 ⇑P     P      21 24 14.2 +1.2
NEHR  Nehoiu           81.33 350 ⇑P     P      21 24 12.8 -0.2
CFR   Carcaliu         81.37 349 ⇑P     P      21 24 13.1 -0.1
ARR   Arges            81.56 351 ⇑P     P      21 24 15.6 +1.3
BZS   Buzias           81.56 353 ⇑P     P      21 24 14.4 +0.2
TPGR  Topolog          81.65 348 ⇑P     P      21 24 14.4 -0.4
TTSI  Tana Toraja      81.78 254  P     P      21 24 15.6 -0.1
      comp=Z,1µmcomp=Z,29nm,1.1s
HARR  Harsova          81.87 349 ⇑P     P      21 24 15.6 -0.2
SALO  Salr             81.89   1  IAmb  IAmb   21 24 17.5
      comp=Z,40nm,1.1s
SBUM  Sibu             81.90 263  P     P      21 24 17.1 +0.7
TLBR  Topalu           82.00 349 ⇓P     P      21 24 17.1 +0.6
SSB   Saint Sauveur    82.03   5  IAmb  IAmb   21 24 18.7
      comp=Z,32nm,1.2s
TIRR  Tirgusor         82.04 348 ⇑P     P      21 24 16.7  0.0
FRGS  Fruska Gora      82.13 354 ⇑P     P      21 24 17.4 +0.2
FRGS  Fruska Gora      82.13 354⇑iP     P      21 24 17.3  0.0
TEOL  Teolo            82.16   0  P     P      21 24 17.6 +0.2
HERR  Herculane        82.23 353 ⇑P     P      21 24 17.6 -0.1
AKH   Akhalkalaki      82.25 337 ⇑P     P      21 24 19.4 +1.3
SJG   San Juan         82.67  70  P     P      21 24 20.7 +0.3
SJG                               pmax  pmax
      comp=Z,34nm,1.0s
SJG   San Juan         82.67  70  P     P      21 24 20.7 +0.3
SJG                               IAmb  IAmb   21 24 21.8
      comp=Z,34nm,1.0s
KUBS  Kucevo           82.75 353⇑iP     P      21 24 19.4 -1.1
BAIL  Bailesti         83.01 352 ⇑P     P      21 24 21.5 -0.3
TRUS  Trudelj          83.03 354⇑iP     P      21 24 21.9  0.0
GNI   Garni            83.13 335  P     P      21 24 23.7 +1.0
      comp=Z,4.6nm,0.8s,baz=25,slow=15,SNR=4.6
GNI   Garni            83.13 335ceP     P      21 24 24.3 +1.6
GNI                               pmax  pmax
      comp=Z,11nm,1.3s
GNI   Garni            83.13 335  P     P      21 24 23.6 +0.8
ZCCA  Zocca            83.16   1  IAmb  IAmb   21 24 26.1
      comp=Z,30nm,1.1s
DIVS  Divibare         83.18 354⇑iP     P      21 24 22.8  0.0
ZAGS  Zajecar          83.31 353⇑iP     P      21 24 23.2 -0.1
GRUS  Gruza            83.34 354⇑iP     P      21 24 23.8 +0.3
VLC   Villacollemand   83.35   1  P     P      21 24 23.8 +0.1
VLC                               IAmb  IAmb   21 24 26.6
      comp=Z,27nm,1.1s
BBLS  Lazi&#263;i      83.44 355⇑iP     P      21 24 25.0 +0.8
BOVS  Bovan            83.52 353⇑iP     P      21 24 23.9 -0.6
MTN   Manton Dam       83.57 239  IAmb  IAmb   21 24 41.9
      comp=Z,24nm,0.9s
IVAS  Ivanjica         83.69 354⇑iP     P      21 24 25.3 -0.1
ZAPS  Zavoj            83.81 352⇑iP     P      21 24 25.6 -0.4
KSM   Kuching          83.83 264  P     P      21 24 28.0 +1.6
KSM   Kuching          83.83 264  IAmb  IAmb   21 24 45.9
      comp=Z,36nm,1.2s
SJCC  San Jacinto, C   83.87  82  P     P      21 24 26.4 -0.4
SELS  Selova           83.98 353⇑iP     P      21 24 26.6 -0.3
OSSC  Osservatorio P   83.99   1  IAmb  IAmb   21 24 28.4
      comp=Z,33nm,1.1s
SJES  Sjenica          84.01 354⇑iP     P      21 24 27.8 +0.7
PBRG  Braganca         84.33  14 eP     P      21 24 29.7 +1.0
      comp=Z,19nm,1.6s
BARS  Barje            84.33 353⇑iP     P      21 24 20.3 -8.3
BARS  Barje            84.33 353⇑iP     P      21 24 28.3 -0.3
VTS   Vitosha          84.41 352 ⇑P     P      21 24 29.2 -0.1
BOSS  Bosilegrad       84.59 352⇑iP     P      21 24 29.4 -0.6
CASP  Castiglione de   84.72   1  P     P      21 24 30.2 -0.4
CASP                              IAmb  IAmb   21 24 34.6
      comp=Z,36nm,1.3s
PDG   Podgorica        84.88 355  IAmb  IAmb   21 24 32.4
      comp=Z,30nm,1.1s
MVO   Moncorvo         84.91  14 eP     P      21 24 32.5 +0.8
      comp=Z,34nm,1.2s
PVIS  Viseu            85.22  15 eP     P      21 24 34.4 +1.2
      comp=Z,47nm,1.4s
GURO  Guroymak-BITLI   85.31 337  P     P      21 24 34.4 +0.6
GURO                              IAmb  IAmb   21 24 36.5
      comp=Z,20nm,1.5s
BATI  Baumata          85.41 247  P     P      21 24 34.2 -0.1
      comp=Z,5.7nm,0.4s,baz=29,slow=3.5,SNR=3.8
BATI                              LR    LR     21 57 47.5
      comp=Z,55nm,19.9s,baz=56,slow=32
NVR   Nevrokopi        85.61 351  P     P      21 24 35.7 +0.6
RDO   Rodhopi          85.64 350  P     P      21 24 35.9 +0.7
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ALN	Alexandroupoli	85.83	349	IAmb	IAmb	21 24 37.6	
	comp=Z,25nm,1.1s						
KNT	Kendrikon	85.88	352	P	P	21 24 37.0	+0.6
BRTR	Keskin Array B	85.90	343	P	P	21 24 38.0	+1.3
	comp=Z,18nm,0.9s,baz=48,slow=1.8,SNR=35						
BRTR				LR	LR	22 06 55.2	
	comp=Z,433nm,21.6s,baz=28,slow=38						
ANTO	Ankara	85.91	344	P	P	21 24 37.2	+0.5
ANTO				pmax	pmax		
	comp=Z,60nm,1.1s						
ANTO	Ankara	85.91	344	P	P	21 24 37.2	+0.5
GRG	Griva	86.13	352	P	P	21 24 38.1	+0.4
BORA	Eskisehir	86.26	346	P	P	21 24 39.0	+0.6
FNA	Florina	86.38	353	IAmb	IAmb	21 24 39.9	
	comp=Z,16nm,1.1s						
PAOL	Paolisi	86.46	358	P	P	21 24 38.6	-0.7
PAOL				IAmb	IAmb	21 24 41.1	
	comp=Z,20nm,1.0s						
KULM	Kulim	86.66	274	P	P	21 24 42.0	+1.4
KULM	Kulim	86.66	274	IAmb	IAmb	21 24 42.9	
	comp=Z,24nm,1.2s						
PMAFR	Mafra	86.70	16	*e*P	P	21 24 41.1	+0.6
	comp=Z,189nm,1.4s						
MATE	Matera	86.78	356	⇑P	P	21 24 41.1	+0.3
ESDC	Sonseca Array	86.80	12	P	P	21 24 41.1	+0.1
	comp=Z,6.1nm,0.9s,baz=348,slow=4.7,SNR=29						
ESDC				LR	LR	22 06 32.4	
	comp=Z,145nm,18.5s,baz=325,slow=38						
ESDC	Sonseca Array	86.80	12	IAmb	IAmb	21 24 42.3	
	comp=Z,11nm,1.1s						
IPM	Ipoh	87.07	274	P	P	21 24 44.0	+1.4
IPM	Ipoh	87.07	274	P	P	21 24 42.1	-0.5
IPM				IAmb	IAmb	21 24 45.7	
	comp=Z,16nm,1.1s						
GAZ	Gaziantep	87.70	340	IAmb	IAmb	21 24 47.4	
	comp=Z,12nm,1.2s						
WB0	Warramunga Arr	87.81	233	IAmb	IAmb	21 25 03.8	
	comp=Z,11nm,1.1s						
WR0	Warramunga Arr	87.90	233	IAmb	IAmb	21 25 02.7	
	comp=Z,12nm,1.1s						
WRAB	Tennant Creek	87.97	233	*ce*P	P	21 24 46.8	+0.2
WRAB				pmax	pmax		
	comp=Z,12nm,1.3s						
WRAB	Tennant Creek	87.97	233	P	P	21 24 46.1	-0.6
WRAB				IAmb	IAmb	21 25 03.3	
	comp=Z,15nm,1.2s						
WB2	Warramunga Arr	87.97	233	P	P	21 24 45.6	-1.1
WB2				IAmb	IAmb	21 25 03.3	
	comp=Z,15nm,1.1s						
WRA	Warramunga Arr	87.98	233	P	P	21 24 46.3	-0.4
	comp=Z,5.8nm,1.1s,baz=38,slow=5.8,SNR=20						
WRA				LR	LR	21 59 15.0	
	comp=Z,114nm,21.8s,baz=50,slow=32						
AGG	Agios Georgios	88.06	352	IAmb	IAmb	21 24 47.2	
	comp=Z,9.0nm,1.0s						
MAKR	Makrakomi, Fth	88.08	352	P	P	21 24 47.1	-0.1
TIP	Timpagrande	88.24	356	⇑P	P	21 24 48.0	+0.1
TIP	Timpagrande	88.24	356	IAmb	IAmb	21 24 49.4	
	comp=Z,17nm,1.2s						
EFP	Efpalio	88.68	352	P	P	21 24 50.3	+0.4
KLV	Kalavryta, Ach	89.04	352	P	P	21 24 50.7	-1.0
HYB	Hyderabad	89.66	299	*i* P	P	21 24 55.0	+0.1
FITZ	Fitzroy Crossi	90.84	241	P	P	21 25 00.0	-0.1
	comp=Z,2.1nm,0.5s,baz=26,slow=7.0,SNR=7.2						
ASAR	Alice Springs	91.37	231	LR	LR	22 01 23.9	
	comp=Z,119nm,21.5s,baz=32,slow=32						
ASAR	Alice Springs	91.37	231	P	P	21 25 01.6	-0.9
ASAR	Alice Springs	91.37	231	P	P	21 25 01.6	-0.9
KEST	Kesra	91.75	2	P	P	21 25 04.7	+0.3
	comp=Z,7.3nm,1.1s,baz=55,slow=2.1,SNR=4.9						
KEST	Kesra	91.75	2	P	P	21 25 03.9	-0.5
KEST				IAmb	IAmb	21 25 06.8	
	comp=Z,15nm,1.2s						
MMAI	Mount Meron Ar	92.09	341	P	P	21 25 06.1	+0.1
	comp=Z,6.3nm,0.9s,baz=57,slow=6.1,SNR=6.6						
ASF	Jabal al Asfar	92.59	339	P	P	21 25 08.5	+0.1
	comp=Z,7.3nm,0.9s,baz=23,slow=3.4,SNR=6.2						
MDT	Midelt	93.46	14	P	P	21 25 12.5	+0.1
	comp=Z,7.1nm,1.0s,baz=11,slow=4.4,SNR=13						
STKA	Stephens Creek	95.13	221	LR	LR	22 03 12.6	
	comp=Z,157nm,21.4s,baz=23,slow=32						
RAYN	Ar Rayn	98.55	329	P	P	21 25 34.8	-0.8
RAYN				pmax	pmax		
	comp=Z,16nm,1.2s						
RAYN	Ar Rayn	98.55	329	P	P	21 25 34.8	-0.8
TORD	Torodi Ar. Bea	113.66	11	PKiKP	PKiKP	21 30 34.8	-0.4
	comp=Z,0.3nm,0.3s,baz=168,slow=38,SNR=4.6						
H03N2	Juan Fernandez	115.32	112	T	T	23 36 34.6	
	baz=322,slow=78,SNR=99						
H03N1	Juan Fernandez	115.33	112	T	T	23 36 28.8	
	baz=322,slow=78,SNR=113						
H03N3	Juan Fernandez	115.33	112	T	T	23 36 22.7	
	baz=322,slow=78,SNR=106						
KMBO	Kilima Mbogo	124.33	329	PKP	PKiKP	21 30 56.6	+0.3
	comp=Z,1.3nm,0.3s,baz=43,slow=4.9,SNR=3.9						
PLCA	Paso Flores	125.19	113	PKP	PKiKP	21 30 57.5	+0.6
	comp=Z,1.7nm,0.9s,baz=286,slow=4.6,SNR=3.7						
BLWY	Bulawayo	144.91	332	*i* P	PKPdf	21 31 33.9	+0.1
BLWY	Bulawayo	144.91	332	*i* P	PKPdf	21 31 33.9	+0.1
MATP	Matopo	145.21	332	*i* P	PKPdf	21 31 35.7	+1.4
MATP	Matopo	145.21	332	*i* P	PKPdf	21 31 35.7	+1.4
MSNA	Messina	146.56	329	*i* P	PKPbc	21 31 37.7	-0.3
MSNA	Messina	146.56	329	*i* P	PKPbc	21 31 37.7	-0.3
MOPA	Mopani	147.20	326	*i* P	PKPdf	21 31 36.7	-0.8
MOPA	Mopani	147.20	326	*i* P	PKPdf	21 31 36.7	-0.8
CNG	Changalane	149.47	322	*i* P	PKiKP	21 31 47.9	+1.3
CNG	Changalane	149.47	322	*i* P	PKiKP	21 31 47.9	+1.3
MAW	Mawson	151.79	219		PKPbc	21 31 49.4	-0.3
BOSA	Boshof	153.87	333	PKP	PKPdf	21 31 48.4	+0.6
	comp=Z,3.6nm,1.0s,baz=117,slow=6.8,SNR=3.0						
BOSA	Boshof	153.87	333	PKIKP	PKPdf	21 31 49.0	+1.2
BOSA	Boshof	153.87	333		PKPdf	21 31 49.0	+1.2
VNA3	Neumayer Olymp	159.18	160	P	PKPdf	21 31 51.1	-2.1
SYO	Syowa Base	159.31	208	⇑*e*PKPdf	PKPdf	21 31 52.8	-0.5
SYO	Syowa Base	159.31	208	⇑*e*X	PKPdf	21 32 05.8	+12
VNA2	Neumayer--Watz	159.88	161	P	PKPdf	21 31 52.5	-1.5
	baz=232,slow=1.4						

IDC **14** *21:13:23.5±0.7, 39°.11N×20°.65E, h0^{km}, mb4.1/12, mb1 4.1/19, mb1mx3.9/48, mbtmp4.1/19, ML4.0/6, MS3.4/15, Ms1 3.4/15, ms1mx3.2/57, Error ellipse: s-maj=13.2km s-min=12.3km az=119.0*

MOS **14** *21:13:23.4±1.3, 39°.00N×20°.48E, h11^{km}, mb4.5/9, Error ellipse: s-maj=7.4km s-min=4.5km az=83.0*

ATH **14** *21:13:24.1, 39°.00N×20°.63E, h26^{km}±1^{km}, ML4.1/20, Error ellipse: s-maj=2.0km s-min=0.7km az=264.0*

PDG **14** *21:13:25.0±0.3, 38°.99N×20°.61E, h18^{km}, ML4.1/13, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*

NEIC **14** *21:13:25.8±3.0, 39°.04N±0°.05×20°.57E±0°.06, h10^{km}±1^{km}, mb4.6/15, Mwr4.3/25, ML4.1(ATH), ML4.1(THE), Error ellipse: s-maj=8.6km s-min=7.3km az=181.0*

NEIC **14** *21:13:25.9, 39°.04N×20°.55E, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.24; $M_{\theta\theta}$0.58; $M_{\phi\phi}$-0.82; $M_{r\theta}$-1.75; $M_{\theta\phi}$3.28; $M_{\phi r}$0.93; Fault plane solution: $M_0$3.91000×10^{15} NP1:ϕ_s188.25000°, δ62.37000°, λ-174.87000°. NP2:ϕ_s95.86000°, δ85.45000°, λ-27.72000°. Principal axes: T 3.4584, Plg16.0000°, Azm145.0000°; N 0.7782, Plg62.0000°, Azm267.0000°; P -4.2366, Plg23.0000°, Azm49.0000°;*

THE **14** *21:13:25.4, 39°.02N×20°.63E, h14^{km}, ML4.1/14 Error ellipse: s-maj=0.8km s-min=0.3km az=88.0*

HLW **14** *21:13:27.0, 39°.02N×21°.44E, h25^{km}±41^{km}, Md4.8, Ml4.6*

BEO **14** *21:13:26.0±0.7, 38°.88N×20°.44E, h32^{km}±5^{km}, ML4.1/11*

ISC 14 21:13:25.1±0.7, **39°.00N**±0°.02×**20°.57E**±0°.02, **h15**^{km}±4^{km}, **n352**, **σ1§76**/445, **mb4.4**/29, **MS3.5**/8, **47C-14D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSLK	Tsoukalades, L	0.18	159	P	Pg	21 13 29.6	0.0
TSLK				S	Sb	21 13 33.4	-0.2
	99µm,0.6s						
TSLK	Tsoukalades, L	0.18	159	P	Pg	21 13 29.4	-0.1
TSLK				S	Sb	21 13 33.2	-0.3
TSLK				AML	AML	21 13 35.4	
TSLK				AML	AML	21 13 36.3	
LKD2	Lefkada island	0.22	162	P	Pg	21 13 30.0	-0.1
LKD2				S	Sb	21 13 34.5	-0.1
	85µm,0.5s						
LKD2	Lefkada island	0.22	162	P	Pg	21 13 29.9	-0.3
LKD2				S	Sb	21 13 34.6	-0.1
LKD2				AML	AML	21 13 35.3	
LKD2				AML	AML	21 13 42.5	
NYDR	Nydri-Lefkada	0.30	160	P	Pg	21 13 31.2	-0.2
NYDR				S	Sg	21 13 36.1	+0.4
NYDR	Nydri-Lefkada	0.30	160	P	Pg	21 13 31.0	-0.4
NYDR				S	Sb	21 13 36.6	-0.3
DRAG	Dragano-Lefkad	0.31	179	P	Pg	21 13 31.9	+0.2
DRAG				S	Sb	21 13 38.1	+0.8
	97µm,0.4s						
DRAG	Dragano-Lefkad	0.31	179	P	Pg	21 13 31.5	-0.2
DRAG				S	Sb	21 13 37.3	0.0
EVGI	Lefkada island	0.38	170	P	Pg	21 13 32.8	-0.1
EVGI				S	Sb	21 13 39.6	+0.4
	47µm,0.3s						
EVGI	Lefkada island	0.38	170	P	Pg	21 13 32.6	-0.3
EVGI				S	Sg	21 13 37.8	-0.3
FSK	Fiskardo	0.54	181	P	Pg	21 13 35.7	0.0
FSK				S	Sb	21 13 44.9	+1.2
	10µm,0.3s						
FSK	Fiskardo	0.54	181	P	Pg	21 13 35.5	-0.2
FSK				S	Sb	21 13 44.0	+0.3
FSK				AML	AML	21 13 55.7	
	comp=N,22352µm,0.5s						
FSK				AML	AML	21 13 57.3	
	comp=E,16891µm,0.5s						
IGT	Igoumenitsa	0.57	341	P	Pg	21 13 35.8	-0.5
IGT				S	Sb	21 13 45.2	+0.6
	comp=E,11µm,0.6s						
IGT	Igoumenitsa	0.57	341	P	Pg	21 13 35.6	-0.7
IGT				S	Sb	21 13 44.9	+0.3
IGT				AML	AML	21 13 53.3	
	comp=N,17798µm,0.6s						
IGT				AML	AML	21 13 55.9	
	comp=E,25698µm,0.6s						
JAN	Janina	0.69	18	P	Pb	21 13 38.2	-0.8
JAN				S	Sg	21 13 48.3	+0.3
	comp=E,43µm,0.8s						
JAN	Janina	0.69	18	P	Pb	21 13 37.7	-1.2
JAN				S	Sb	21 13 48.0	-0.4
JAN				AML	AML	21 13 51.6	
JAN				AML	AML	21 13 51.7	
	comp=N,47723µm,0.7s						
KEF4	Livadi, Kephal	0.75	189	P	Pb	21 13 39.3	-0.5
KEF4				S	Sn	21 13 51.8	-0.3
KEF4	Livadi, Kephal	0.75	189	P	Pb	21 13 39.0	-0.8
DMLN	Damoulianata-K	0.77	192	P	Pg	21 13 40.8	+0.6
LXRA	Lixouri, Kepha	0.80	187	P	Pb	21 13 40.4	-0.4
KEF3	Kipouria, Keph	0.81	192	P	Pg	21 13 41.5	+0.6
KEF3				S	Sn	21 13 53.3	-0.4
KEF3	Kipouria, Keph	0.81	192	P	Pb	21 13 39.7	-1.2
VLS	Valsamata	0.82	179	P	Pb	21 13 41.0	0.0
VLS				S	Sn	21 13 53.5	-0.4
	comp=N,28µm,0.5s						
VLS	Valsamata	0.82	179	P	Pb	21 13 39.9	-1.2
VLS				AML	AML	21 13 56.3	
	comp=E,75025µm,0.6s						
VLS				AML	AML	21 13 57.0	
	comp=N,36279µm,0.5s						
PSDA	Pessada-Kefalo	0.88	179	P	Pb	21 13 42.0	-0.1
PSDA				S	Sn	21 13 55.9	+0.5
PSDA	Pessada-Kefalo	0.88	179	P	Pb	21 13 41.1	-1.0
KASA	Kassiopi	0.90	327	P	Pb	21 13 41.5	-0.8
KASA				AML	AML	21 14 00.9	
	comp=E,14899µm,0.5s						
KASA				AML	AML	21 14 13.5	
	comp=N,10930µm,0.6s						
KEK	Kerkira	0.93	320	P	Pb	21 13 42.8	-0.2
KEK				S	Sn	21 13 56.8	0.0
	comp=N,6µm,0.4s						
KEK	Kerkira	0.93	320	P	Pb	21 13 42.2	-0.8
KEK				AML	AML	21 14 02.9	
	comp=N,8936µm,0.4s						
KEK				AML	AML	21 14 04.9	
	comp=E,14335µm,0.4s						
EVR	Evrytania	0.97	94	P	Pb	21 13 42.4	-1.3
EVR				S	Sg	21 13 56.6	0.0
	comp=E,12µm,0.7s						
EVR	Evrytania	0.97	94	P	Pb	21 13 42.0	-1.6
EVR				AML	AML	21 13 57.3	
	comp=N,30120µm,0.9s						
EVR				AML	AML	21 14 00.0	
	comp=E,16370µm,0.6s						
KPRO	Kipourio	1.14	32	P	Pn	21 13 45.7	-0.9
KPRO	Kipourio	1.14	32	P	Pn	21 13 45.3	-1.2
KPRO				AML	AML	21 14 09.5	
	comp=N,17149µm,1.2s						
KPRO				AML	AML	21 14 09.9	
	comp=E,25769µm,0.5s						
RLS	Riolos of Patr	1.17	143	P	Pn	21 13 45.8	-1.1
RLS				S	Sn	21 14 02.2	-0.4
	comp=E,5µm,0.5s						
RLS	Riolos of Patr	1.17	143	P	Pn	21 13 45.6	-1.3
RLS				AML	AML	21 14 11.1	
	comp=E,12695µm,0.4s						
RLS				AML	AML	21 14 11.8	
	comp=N,9125µm,0.5s						
VTN	Vitineika	1.18	156	P	Pn	21 13 46.7	-0.3
EFP	Efpalio	1.19	118	P	Pn	21 13 45.8	-1.4
EFP				S	Sg	21 14 03.6	0.0
	comp=N,9µm,0.7s						
EFP	Efpalio	1.19	118	P	Pn	21 13 45.5	-1.7
EFP				AML	AML	21 14 10.4	
	comp=E,15478µm,0.4s						
EFP				AML	AML	21 14 14.8	
	comp=N,17223µm,0.7s						
MAKR	Makrakomi, Fth	1.22	89	P	Pn	21 13 47.0	-0.7
MAKR				AML	AML	21 14 09.2	
	comp=E,9905µm,0.9s						
MAKR				AML	AML	21 14 10.8	
	comp=N,21118µm,1.3s						
THL	Klokotos Trika	1.26	63	P	Pn	21 13 46.8	-1.3
THL				AML	AML	21 14 11.1	
	comp=E,12800µm,0.5s						
THL				AML	AML	21 14 11.4	
	comp=N,8554µm,0.6s						
PENT	Pentalofos	1.28	20	P	Pn	21 13 48.5	0.0
PENT				AML	AML	21 14 13.8	
	comp=N,14031µm,0.8s						
PENT				AML	AML	21 14 13.9	
	comp=E,8111µm,1.1s						
TRIZ	Trizonia	1.33	118	P	Pn	21 13 48.0	-1.2
TRIZ				S	Sn	21 14 05.3	-1.3
	comp=E,250nm,0.7s						
TRIZ	Trizonia	1.33	118	P	Pn	21 13 47.9	-1.3
LAKA	Lakka	1.34	124	P	Pn	21 13 48.2	-1.1
LAKA				S	Sb	21 14 07.1	+0.3
LAKA	Lakka	1.34	124	P	Pn	21 13 47.9	-1.4
LAKA				AML	AML	21 14 22.4	
	comp=N,16235µm,0.7s						
LAKA				AML	AML	21 14 24.2	
	comp=E,20548µm,0.9s						
AGG	Agios Georgios	1.37	88	P	Pn	21 13 49.4	-0.3
AGG				AML	AML	21 14 16.1	
	comp=E,15051µm,0.6s						
AGG				AML	AML	21 14 19.2	
	comp=N,13705µm,0.5s						
AGG	Agios Georgios	1.37	88	P	Pn	21 13 49.0	-0.7
AGG	Agios Georgios	1.37	88		Pn	21 13 49.0	-0.7
DRO	Drossia	1.37	139	P	Pn	21 13 48.9	-0.9
DRO				S	Sn	21 14 07.0	-0.7
	comp=N,7µm,0.5s						
DRO	Drossia	1.37	139	P	Pn	21 13 48.7	-1.1
DRO				AML	AML	21 14 23.8	
	comp=N,15730µm,0.4s						
DRO				AML	AML	21 14 27.1	
	comp=E,15839µm,0.5s						
NEST	Nestorio	1.46	14	P	Pb	21 13 52.1	0.0
KLV	Kalavryta, Ach	1.56	127	P	Pn	21 13 52.0	-0.4
KLV				S	Sb	21 14 12.8	-0.6
KLV	Kalavryta, Ach	1.56	127	P	Pn	21 13 51.4	-1.0
KLV				AML	AML	21 14 29.8	
	comp=E,3811µm,0.6s						
KLV				AML	AML	21 14 36.4	
	comp=N,4304µm,0.9s						
LRSO	Larissa Observ	1.57	64	P	Pn	21 13 52.7	+0.3
KZN	Kozani	1.60	35	P	Pb	21 13 53.7	-0.8
KZN				AML	AML	21 14 24.0	
	comp=N,5842µm,1.0s						
KZN				AML	AML	21 14 29.4	
	comp=E,7634µm,0.6s						
KBN	Korca	1.63	6	P	Pb	21 13 54.5	-0.5
KBN	Korca	1.63	6		Pb	21 13 54.5	-0.5
VLO	Vlora	1.69	331	P	Pb	21 13 56.1	+0.3
VLO	Vlora	1.69	331		Pb	21 13 56.1	+0.3
FNA	Florina	1.89	19	P	Pb	21 13 58.9	-0.4
FNA	Florina	1.89	19		Pb	21 13 58.9	-0.4
ITM	Ithomi	2.11	149	Pn	Pb	21 14 02.5	-0.5
OHR	Ohrid	2.12	5	*i* Pn	Pb	21 14 02.8	-0.5
OHR	Ohrid	2.12	5	*e*Pn	Pb	21 14 02.7	-0.5
OHR				*e*Sn	Sb	21 14 27.8	-1.6
TIR	Tirane	2.41	347	P	Pn	21 14 05.6	+1.6
TIR	Tirane	2.41	347		Pn	21 14 05.6	+1.6
TIR	Tirane	2.41	347	*e*Pn	Pb	21 14 06.4	-1.8
TIR				*e*Sn	Sn	21 14 34.9	+1.7
VAY	Valandovo	2.78	33	*i* Pn	Pn	21 14 10.6	+1.5
VAY	Valandovo	2.78	33	*e*Pn	Pn	21 14 10.7	+1.6
VAY				*e*Sn	Sb	21 14 45.3	-3.1
TIP	Timpagrande	2.97	275	⇓P	Pn	21 14 12.9	+1.1
TIP	Timpagrande	2.97	275	Pn	Pn	21 14 13.3	+1.5
SKO	Skopje	3.05	12	*i* Pn	Pn	21 14 14.7	+1.9
ULC	Ulcinj	3.13	342	⇓*i*Pn	Pn	21 14 14.6	+0.7
ULC				*i* Sn	Sn	21 14 52.7	+1.6
DRME	Dracevica, Mon	3.36	342	⇑*i*Pn	Pn	21 14 17.7	+0.7
DRME	Dracevica, Mon	3.36	342	⇑*i*Pn	Pn	21 14 17.9	+0.9
DRME				*i* Sn	Sn	21 14 58.6	+2.0
MATE	Matera	3.40	300	⇑P	Pn	21 14 18.2	+0.6
MATE				⇑S	Sn	21 14 59.0	+1.3
BUM	Brajici-Budva	3.54	339	⇓*i*Pn	Pn	21 14 20.1	+0.5
BUM				*i* Sn	Sn	21 15 03.0	+1.9
PDG	Podgorica	3.57	344	⇑P	Pn	21 14 20.8	+0.8
PDG	Podgorica	3.57	344	⇑*i*Pn	Pn	21 14 20.5	+0.5
PDG	Podgorica	3.57	344	Pn	Pn	21 14 20.5	+0.5
PDG	Podgorica	3.57	344	*e*Pn	Pn	21 14 20.7	+0.8
PDG				*e*Sn	Sn	21 15 00.7	-1.2
TTG	Podgorica	3.57	344	⇑*i*Pn	Pn	21 14 20.7	+0.8
TTG				*i* Sn	Sn	21 15 03.9	+2.0
PVY	Plav	3.62	353	⇓*i*Pn	Pn	21 14 22.1	+1.3
PVY				*i* Sn	Sn	21 15 04.6	+1.2
CEL	Celeste	3.73	260	Pn	Pn	21 14 23.4	+1.2
CEME	Cevo	3.76	341	⇑*i*Pn	Pn	21 14 23.3	+0.7
CEME				*i* Sn	Sn	21 15 08.0	+1.4
BOSS	Bosilegrad	3.79	22	*e*Pn	Pn	21 14 24.5	+1.6
BOSS				*e*Sn	Sn	21 15 08.3	+1.1
HCY	Herceg Novi	3.79	336	*e*Pn	Pn	21 14 23.3	+0.3
HCY	Herceg Novi	3.79	336	⇓*i*Pn	Pn	21 14 22.9	-0.1
HCY				*i* Sn	Sn	21 15 08.5	+1.2
IVA	Berane	3.91	353	⇑*i*Pn	Pn	21 14 25.9	+1.3
IVA				*i* Sn	Sn	21 15 11.6	+1.4
BARS	Barje	3.93	13	*e*Pn	Pn	21 14 26.1	+1.2
BARS	Barje	3.93	13	*e*Pn	Pg	21 14 42.2	+1.8
BARS				*e*Sn	Sn	21 15 11.1	+0.3
KOME	Kolasin	3.93	349	⇑*i*Pn	Pn	21 14 26.3	+1.3
KOME				*i* Sn	Sn	21 15 12.5	+1.6
NKME	Niksic	3.96	342	⇓*i*Pn	Pn	21 14 26.2	+0.8
NKME				*i* Sn	Sn	21 15 12.8	+1.3
NKY	Niksic	4.00	343	⇓*i*Pn	Pn	21 14 26.8	+0.9
NKY				*i* Sn	Sn	21 15 13.9	+1.4
TREB	Trebinje	4.08	336	⇑*i*Pn	Pn	21 14 27.3	+0.4
VTS	Vitosha	4.14	28	⇓P	Pn	21 14 30.6	+2.6
VTS				⇑S	Sn	21 15 20.0	+3.8
VTS	Vitosha	4.14	28	P	Pn	21 14 29.6	+1.6
VTS	Vitosha	4.14	28	Pn	Pn	21 14 29.6	+1.6
VTS	Vitosha	4.14	28	*e*Pn	Pn	21 14 28.5	+0.5
VTS				*e*Sn	Sn	21 15 15.1	-1.1
SELS	Selova	4.24	5	*e*Pn	Pn	21 14 29.6	+0.4
SJES	Sjenica	4.29	354	*e*Pn	Pn	21 14 31.2	+1.3
UPM	Unac-Piva	4.39	344	⇑*i*Pn	Pn	21 14 32.9	+1.6
UPM	Unac-Piva	4.39	344	⇓*i*Pn	Pn	21 14 32.4	+1.1
UPM				*i* Sn	Sn	21 15 23.1	+0.9
PLE	Pljevlja	4.42	349	⇑*i*Pn	Pn	21 14 33.0	+1.3
PLE				*i* Sn	Sn	21 15 23.8	+0.8
STON	Ston	4.44	332	⇑*i*Pn	Pn	21 14 31.2	-0.6
STON	Ston	4.44	332	*i* Pn	Pn	21 14 31.6	-0.3
STON				Sn	Sn	21 15 19.8	-3.4
ZAPS	Zavoj	4.55	19	*e*Pn	Pn	21 14 34.9	+1.5
IVAS	Ivanjica	4.59	356	*e*Pn	Pn	21 14 34.1	+0.1
SGRT	San Giovanni R	4.60	308	Pn	Pn	21 14 35.0	+0.8
ALN	Alexandroupoli	4.62	64	P	Pn	21 14 35.9	+1.6
ALN	Alexandroupoli	4.62	64	Pn	Pn	21 14 35.9	+1.6
SANT	Santorini	4.68	123	Pn	Pn	21 14 37.6	+2.4
LSTV	Lastovo	4.69	325	*e*Pn	Pn	21 14 34.9	-0.4
LSTV				Sn	Sn	21 15 24.7	-4.6
RUDO	Rudo	4.71	349	⇑*i*Pn	Pn	21 14 35.5	0.0
BOVS	Bovan	4.71	10	⇑P	Pn	21 14 36.3	+0.7
BOVS	Bovan	4.71	10	*e*Pn	Pn	21 14 35.9	+0.3
BOVS				*e*Sn	Sn	21 15 29.7	-0.3
GRUS	Gruza	4.89	1	*e*Pn	Pn	21 14 38.3	+0.2
GRUS				*e*Sn	Sn	21 15 33.8	-0.5
BBLS	Lazići	4.94	350	⇑*i*Pn	Pn	21 14 39.0	+0.1
BBLS	Lazići	4.94	350	*e*Pn	Pn	21 14 38.8	-0.1
BBLS				*e*Sn	Sn	21 15 35.6	-0.2
ZAGS	Zajecar	4.97	14	*e*Pn	Pn	21 14 39.8	+0.6
ZAGS				*e*Sn	Sn	21 15 35.5	-0.9
PAOL	Paolisi	5.04	296	Pn	Pn	21 14 42.7	+2.5
MAKA	Makarska	5.06	329	*e*Pn	Pn	21 14 40.5	+0.1
MAKA				Sn	Sn	21 15 35.0	-3.4
IDI	Anoyia	5.06	136	Pn	Pn	21 14 40.5	0.0
	comp=E,2.3nm,0.3s,baz=260,slow=10,SNR=27						
IDI				Sn	Sn	21 15 38.6	-0.1
	comp=E,7.6nm,0.3s,baz=50,slow=22,SNR=2.3						
IDI				LR	LR	21 16 55.2	
	comp=E,476nm,18.6s,baz=246,slow=42						
VAE	Valguarnera	5.08	255	Pn	Pn	21 14 44.5	+3.8
	comp=E,0.8nm,0.3s,baz=190,slow=17,SNR=4.6						
VAE				Sn	Sn	21 15 44.8	+5.6
	comp=E,4.4nm,0.3s,baz=327,slow=13,SNR=4.4						
DIVS	Divibare	5.12	355	⇑*i*Pn	Pn	21 14 41.4	+0.1
DIVS	Divibare	5.12	355		Pn	21 14 41.2	0.0
DIVS	Divibare	5.12	355	*e*Pn	Pn	21 14 41.3	0.0
DIVS				*e*Sn	Sn	21 15 37.6	-2.5
RICI	Ricice	5.19	331	*e*Pn	Pn	21 14 42.3	+0.2
RICI				Sn	Sn	21 15 38.2	-3.5
RAFF	Raffo Rosso	5.21	252	Pn	Pn	21 14 42.9	+0.5
HVAR	Hvar	5.21	325	*e*Pn	Pn	21 14 42.4	-0.1
HVAR				Sn	Sn	21 15 38.0	-4.2
TRUS	Trudelj	5.22	359	*e*Pn	Pn	21 14 43.4	+0.7
KUBS	Kucevo	5.47	8	*e*Pn	Pn	21 14 46.1	0.0
TEKS	Tekeris	5.60	352	⇑*i*Pn	Pn	21 14 46.8	-1.1
TEKS	Tekeris	5.60	352	*e*Pn	Pn	21 14 47.3	-0.6
BALB	Balikesir	5.71	81	Pn	Pn	21 14 51.8	+2.5
VLAD	Vladila	5.77	29	⇑P	Pn	21 14 52.0	+1.9
MDVR	Moldovita	5.84	8	⇑P	Pn	21 14 52.4	+1.2
ZIRJ	Zirje	5.95	323	*e*Pn	Pn	21 14 52.6	0.0
ZIRJ				Sn	Sn	21 15 56.1	-4.3
CLTB	Caltabellotta	5.96	259	Pn	Pn	21 14 54.9	+2.1
MGRS	Mrkonjic Grad	6.01	335	*e*Pn	Pn	21 14 52.7	-0.8
MORI	Morici	6.08	325	*i* Pn	Pn	21 14 55.0	+0.5
MORI				Sn	Sn	21 16 00.1	-3.7
FRGS	Fruska Gora	6.18	355	⇑P	Pn	21 14 55.9	0.0
FRGS	Fruska Gora	6.18	355	⇑*i*Pn	Pn	21 14 55.1	-0.7
FRGS	Fruska Gora	6.18	355	*e*Pn	Pn	21 14 55.5	-0.3
BLY	Banja Luka	6.28	337	⇑*i*Pn	Pn	21 14 57.1	0.0
AQU	L'Aquila	6.40	304	P	Pn	21 15 00.0	+1.2
AQU	L'Aquila	6.40	304	⇑*i*Pn	Pn	21 15 01.6	+2.8
AQU	L'Aquila	6.40	304	Pn	Pn	21 15 00.0	+1.2
HUMR	Humele	6.43	29	⇑P	Pn	21 15 02.9	+3.6
DUGI	Dugi Otok	6.48	322	*e*Pn	Pn	21 15 00.3	+0.3
DUGI				Sn	Sn	21 16 09.9	-3.7
UDBI	Udbina	6.59	329	*e*Pn	Pn	21 15 02.4	+0.9
UDBI				Sn	Sn	21 16 12.7	-3.7
MRAK	Mrakovica	6.60	337	⇑*i*Pn	Pn	21 15 01.3	-0.4
SGRR	Singureni	6.61	36	⇓P	Pn	21 15 04.0	+2.4
BZS	Buzias	6.66	6	⇑P	Pn	21 15 04.0	+1.6
NRCA	Norcia	6.82	307		Pn	21 15 06.6	+1.9
PLIT	Plitvice	6.94	329	*e*Pn	Pn	21 15 07.2	+1.0
PLIT				Sn	Sn	21 16 21.4	-3.4
NVLJ	Novalja	7.00	324	*e*Pn	Pn	21 15 07.5	+0.4
NVLJ				Sn	Sn	21 16 21.5	-4.9
ARR	Arges	7.04	24	⇓P	Pn	21 15 09.9	+2.2
RABC	Rab	7.19	325	*e*Pn	Pn	21 15 10.2	+0.6
RABC				Sn	Sn	21 16 27.1	-3.8
MOSL	Moslavina	7.19	338	*e*Pn	Pn	21 15 09.3	-0.4
MOSL				Sn	Sn	21 16 26.6	-4.5
VOIR		7.24	26	⇑P	Pn	21 15 13.2	+2.7
KOVH	Kovagotottos	7.32	346	*e*P	Pn	21 15 10.7	-0.7
MORH	Mrgy, Hungar	7.35	349	⇑P	Pn	21 15 12.6	+0.8
MORH	Mrgy, Hungar	7.35	349	*e*P	Pn	21 15 11.0	-0.8
MORH	Mrgy, Hungar	7.35	349	*e*Pn	Pn	21 15 10.7	-1.1
MURB	Monte Urbino	7.42	308	Pn	Pn	21 15 14.3	+1.4
ISR	Istrita	7.56	34	⇑P	Pn	21 15 17.6	+2.8
MLR	Muntele Rosu	7.62	30	⇑P	Pn	21 15 18.3	+2.7
MLR	Muntele Rosu	7.62	30	Pn	Pn	21 15 17.0	+1.4
	comp=E,1.2nm,0.3s,baz=263,slow=6.1,SNR=24						
MLR				Sn	Sn	21 16 47.3	+5.7

	comp=E,0.5nm,0.3s,baz=252,slow=16,SNR=1.2						
MLR				LR	LR	21 19 02.9	
	comp=E,282nm,19.7s,baz=208,slow=45						
MLR	Muntele Rosu	7.62	30	P	Pn	21 15 17.0	+1.4
MLR	Muntele Rosu	7.62	30	Pn	Pn	21 15 17.4	+1.8
OZLJ	Ozalj	7.62	332	ePn	Pn	21 15 15.9	+0.4
OZLJ				Sn	Sn	21 16 37.0	-4.5
SMRN	Sveta Marina	7.69	324	ePn	Pn	21 15 16.6	+0.1
SMRN				Sn	Sn	21 16 38.6	-4.7
PTJ	Puntijarka	7.70	335	ePn	Pn	21 15 16.6	-0.1
PTJ				Sn	Sn	21 16 39.4	-4.2
NEHR	Nehoiu	7.70	32	⇑P	Pn	21 15 19.9	+3.2
ELL	Elmali	7.72	104	P	Pn	21 15 20.7	+3.6
ELL	Elmali	7.72	104	Pn	Pn	21 15 20.7	+3.6
KALN	Kalnik	7.75	338	ePn	Pn	21 15 17.3	-0.1
KALN				Sn	Sn	21 16 40.0	-4.7
RIY	Rijeka	7.77	326	ePn	Pn	21 15 18.1	+0.5
RIY	Rijeka	7.77	326	ePn	Pn	21 15 17.7	+0.1
RIY				Sn	Sn	21 16 40.5	-4.8
BRJN	Brijuni	7.79	321	ePn	Pn	21 15 17.7	-0.1
BRJN				Sn	Sn	21 16 41.5	-4.2
CRES	Cresnjev	7.80	333	i Pn	Pn	21 15 17.7	-0.4
CRES				eSn	Sn	21 16 42.6	-3.4
CRES	Cresnjev	7.80	333	⇑iPn	Pn	21 15 17.5	-0.5
GBRS	Gornja Briga	7.80	329	i Pn	Pn	21 15 18.4	+0.3
DOPR	Dopca	7.82	26	⇑P	Pn	21 15 20.1	+1.8
LOBO	Lobor	7.89	337	ePn	Pn	21 15 19.3	+0.1
LOBO				Sn	Sn	21 16 43.8	-4.3
HARR	Harsova	7.91	42	⇑P	Pn	21 15 21.9	+2.5
LEGS	Legarje	7.96	333	i Pn	Pn	21 15 19.6	-0.5
BISRR	Bisoca	7.97	33	⇑P	Pn	21 15 24.3	+3.8
TIRR	Tirgusor	8.01	45	P	Pn	21 15 23.2	+2.4
TIRR	Tirgusor	8.01	45	Pn	Pn	21 15 23.2	+2.4
COVR	Voineasa-Covas	8.01	30	⇑P	Pn	21 15 24.0	+3.1
OZUR		8.07	27	⇑P	Pn	21 15 23.9	+2.2
CEY	Cerknica	8.13	328	ePn	Pn	21 15 22.1	-0.4
PLOR	Plostina	8.19	31	⇓P	Pn	21 15 27.1	+3.7
VRI	Vrincioaia	8.24	32	⇑P	Pn	21 15 27.1	+3.1
ODBI	Odobesti	8.29	33	⇑P	Pn	21 15 28.1	+3.3
VNDS	Vrh nad Dolski	8.31	331	i Pn	Pn	21 15 24.6	-0.5
LJU	Ljubljana	8.34	330	⇑iPn	Pn	21 15 24.3	-1.0
OSSC	Osservatorio P	8.35	306	Pn	Pn	21 15 27.6	+2.0
CFR	Carcaliu	8.35	40	⇑P	Pn	21 15 27.9	+2.3
SLUM	Salum	8.39	152	P	Pn	21 15 25.1	-1.0
	baz=156						
SLUM				S	Sn	21 16 49.1	-12
	baz=156						
SLUM				AMP		21 17 00.0	
	baz=156						
MPLH	Magyarpolny	8.46	346	eP	Pn	21 15 27.2	+0.1
SOKA	Soboth	8.69	334	i Pn	Pn	21 15 29.2	-1.0
	comp=E,9.4nm,0.5s,SNR=8.8						
SOKA				eSn	Sn	21 17 04.2	-3.7
	comp=E,11nm,0.9s						
VSL	Villasalto	8.70	277	Pn	Pn	21 15 30.6	+0.2
OBKA	Obir	8.71	331	ePn	Pn	21 15 30.8	+0.1
	comp=E,14nm,0.6s,SNR=10						
VLDR	Vladesti	8.81	37	⇑P	Pn	21 15 35.3	+3.4
PSZ	Piszkesteto	8.93	357	⇑P	Pn	21 15 34.1	+0.6
PSZ	Piszkesteto	8.93	357	eP	Pn	21 15 34.6	+1.0
PSZ	Piszkesteto	8.93	357	P	Pn	21 15 32.7	-0.9
PSZ	Piszkesteto	8.93	357	Pn	Pn	21 15 32.7	-0.9
ZCCA	Zocca	8.95	310	Pn	Pn	21 15 37.7	+3.8
ARSA	Arzberg	9.04	338	ePn	Pn	21 15 35.0	0.0
	comp=E,4.8nm,0.4s						
PRED	Cave del Predi	9.05	328	Pn	Pn	21 15 35.1	-0.1
MYKA	Terra Mystica	9.17	329	ePn	Pn	21 15 36.9	+0.1
	comp=E,3.9nm,0.4s						
MYKA				i Sn	Sn	21 17 19.0	-0.7
	comp=E,2.3nm,0.5s						
BURAR	Bucovina Array	9.25	20	⇑P	Pn	21 15 40.9	+2.9
BUR08	Bucovina Ar. S	9.28	20	Pn	Pn	21 15 41.0	+2.7
STAL	STALIGIAL	9.28	324	Pn	Pn	21 15 38.8	+0.4
ZOU	Zoufplan	9.39	326		Pn	21 15 40.1	+0.1
CIMO	Cimolais	9.44	323	Pn	Pn	21 15 39.8	-0.8
KEST	Kesra	9.51	253	Pn	Pn	21 15 44.0	+2.4
	comp=E,0.2nm,0.3s,baz=15,slow=5.9,SNR=9.9						
KEST				Sn	Sn	21 17 26.5	-1.7
	comp=E,0.1nm,0.3s,baz=237,slow=22,SNR=1.5						
KEST				LR	LR	21 20 43.6	
	comp=E,152nm,20.2s,baz=58,slow=46						
KEST	Kesra	9.51	253	Pn	Pn	21 15 42.9	+1.3
CONA	Conrad Observa	9.56	341	ePn	Pn	21 15 41.3	-0.9
	comp=E,2.0nm,0.6s						
VYHS	Vyhne	9.58	353	ePN	Pn	21 15 44.9	+2.5
CTI	Castel Tesino	9.64	320	P	Pn	21 15 43.0	-0.3
CTI	Castel Tesino	9.64	320		Pn	21 15 43.0	-0.3
KBA	Koelnbreinsper	9.65	329	ePn	Pn	21 15 43.2	-0.4
	comp=E,2.2nm,0.3s						
KBA				i Sn	Sn	21 17 32.3	+0.6
	comp=E,4.5nm,0.7s						
MODS	Modra-Piesok	9.67	347	ePN	Pn	21 15 43.3	-0.4
ABTA	Abfaltersbach	9.74	325	ePn	Pn	21 15 44.5	-0.2
	comp=E,7.2nm,0.6s						
ABTA				eSn	Sn	21 17 35.0	+1.2
	comp=E,22nm,1.0s						
SMOL	Smolenice	9.78	348	ePN	Pn	21 15 50.0	+4.8
MSSA	Maissana	9.83	306	Pn	Pn	21 15 48.9	+3.0
CRVS	Cervenica-Dubn	9.92	3	ePN	Pn	21 15 51.6	+4.5
SALO	Salr	9.95	315	Pn	Pn	21 15 48.3	+0.8
MOA	Molln	9.96	335	ePn	Pn	21 15 47.9	+0.2
	comp=E,4.4nm,0.3s,SNR=6.0						
MOA				eSn	Sn	21 17 39.1	0.0
	comp=E,6.8nm,0.6s						
JAVC	Velka Javorina	10.08	349	ePN	Pn	21 15 50.6	+1.3
BRTR	Keskin Array B	10.15	82	Pn	Pn	21 15 55.7	+5.3
	comp=E,0.3nm,0.3s,baz=256,slow=10,SNR=3.5						
LANS	Liptovska Anna	10.18	356	ePN	Pn	21 15 54.3	+3.6
KRUC	Moravsky	10.50	345	ePN	Pn	21 15 54.9	-0.1
WTTA	Wattenberg	10.52	325	i Pn	Pn	21 15 56.7	+1.2
	comp=E,3.3nm,0.4s						
WTTA				eSn	Sn	21 17 52.2	-0.9
	comp=E,17nm,0.6s						
SWA2		10.54	156	P	Pn	21 15 53.5	-2.0
	baz=160						
SWA2				AMP		21 18 00.0	
	baz=160						
WATA	Walderalm	10.61	325	ePn	Pn	21 15 57.5	+0.9
	comp=E,9.9nm,0.6s,SNR=6.1						
WATA				eSn	Sn	21 17 53.8	-1.2
	comp=E,12nm,0.7s						
SQTA	Sankt Quirin	10.69	323	i Pn	Pn	21 15 58.5	+0.8
	comp=E,8.1nm,0.5s						
SQTA				eSn	Sn	21 17 56.2	-0.9
	comp=E,13nm,0.8s						
VRAC	Vranov	10.70	346	LR	LR	21 20 18.4	
	comp=E,381nm,18.5s,baz=168,slow=39						
VRAC	Vranov	10.70	346	ePN	Pn	21 15 58.6	+0.9
FETA	Feichten	10.77	321	ePn	Pn	21 15 59.9	+1.0
	comp=E,1.1nm,0.4s						
FETA				eSn	Sn	21 18 00.3	+1.0
	comp=E,4.1nm,0.6s						
CKRC	Cesky Krumlov	10.80	337	ePN	Pn	21 15 59.8	+0.6
CKRC				AMS	AMS	21 21 10.0	
	comp=E,800nm,8.3s						
MOTA	Moosalm	10.83	323	ePn	Pn	21 16 00.7	+1.0
	comp=E,14nm,0.7s,SNR=9.4						
MOTA				eSn	Sn	21 18 01.8	+1.2
	comp=E,7.3nm,0.7s						
MORC	Moravsky Berou	10.99	350	⇓P	Pn	21 16 02.6	+0.8
MORC	Moravsky Berou	10.99	350	ePN	Pn	21 16 02.4	+0.6
MORC	Moravsky Berou	10.99	350	P	Pn	21 16 03.3	+1.5
MORC	Moravsky Berou	10.99	350	Pn	Pn	21 16 03.3	+1.5
GEC2	GERESS Array S	11.02	336	Pn	Pn	21 16 02.6	+0.5
GERES	GERESS Array B	11.02	336	Pn	Pn	21 16 01.5	-0.6
	comp=E,0.6nm,0.3s,baz=158,slow=15,SNR=15						
GERES				Sn	Sn	21 18 01.7	-3.3
	comp=E,0.3nm,0.3s,baz=155,slow=22,SNR=1.4						
GERES				LR	LR	21 20 51.0	
	comp=E,209nm,19.1s,baz=144,slow=41						
GERES	GERESS Array B	11.02	336	Pn	Pn	21 16 02.8	+0.7
DAVOX	Davos/Dischmat	11.04	318	Pn	Pn	21 16 03.9	+1.4
	comp=E,0.6nm,0.3s,baz=145,slow=19,SNR=4.9						
DAVOX				Sn	Sn	21 18 03.9	-1.9
	comp=E,0.2nm,0.3s,baz=317,slow=23,SNR=1.6						
DAVOX				LR	LR	21 22 32.7	
	comp=E,166nm,19.0s,baz=124,slow=50						
RETA	Reutte	11.09	323	ePn	Pn	21 16 05.1	+1.9
	comp=E,3.1nm,0.6s						
RETA				eSn	Sn	21 18 05.9	-0.9
	comp=E,4.2nm,0.5s						
KHC	Kasperske Hory	11.30	336	i P	Pn	21 16 06.8	+0.8
KHC				pmax	pmax		
	comp=Z,18nm,1.4s						
KHC	Kasperske Hory	11.30	336	ePN	Pn	21 16 05.0	-1.0
KHC				x	x	21 16 22.5	
KHC				AMS	AMS	21 21 20.0	
	comp=Z,600nm,11.3s						
KHC	Kasperske Hory	11.30	336	Pn	Pn	21 16 05.7	-0.3
KRLC	Kraliky	11.40	348	eP	Pn	21 16 11.3	+3.9
KRLC				MLR	MLR		
	comp=Z,400nm,16.0s						
KRLC	Kraliky	11.40	348	ePN	Pn	21 16 11.3	+3.9
KRLC				AMS	AMS	21 20 40.0	
	comp=Z,400nm,16.0s						
SENIN	Lac Senin/Sane	12.22	311	Pn	Pn	21 16 20.1	+1.4
RYAN	Fayoum	12.74	138	P	Pn	21 16 22.7	-3.0
	baz=141						
RYAN				AMP		21 18 49.3	
	baz=141						
BFO	Black Forest	12.85	321	P	Pn	21 16 27.6	+0.4
BFO	Black Forest	12.85	321	Pn	Pn	21 16 27.6	+0.4
GLL	Jalalah	13.14	132	P	Pn	21 16 27.8	-3.5
	baz=135						
AKBB	Malin Array Si	13.20	25	i P	Pn	21 16 33.1	+1.2
ECH	Echery	13.38	318	P	Pn	21 16 35.0	+0.7
ECH	Echery	13.38	318	Pn	Pn	21 16 35.0	+0.7
MMAI	Mount Meron Ar	13.40	112	Pn	Pn	21 16 32.3	-2.5
	comp=Z,0.8nm,0.3s,baz=318,slow=12,SNR=6.3						
CLL	Collm	13.41	339	eP	P	21 16 41.0	-3.1
HFRF	Wahat Farafira	13.47	149	P	Pn	21 16 33.7	-2.0
	baz=152						
HFRF				AMP		21 18 49.3	
	baz=152						
SUZ	Suez	13.62	128	P	Pn	21 16 34.5	-3.3
	baz=131						
NBNS	Bani Suef	13.65	136	P	Pn	21 16 34.5	-3.6
	baz=139						
EIL	Elat	15.07	124	Pn	Pn	21 16 53.3	-4.2
	comp=Z,0.4nm,0.3s,baz=205,slow=17,SNR=4.6						
EIL				Sn	Sn	21 19 32.2	-12
	comp=Z,0.6nm,0.3s,baz=50,slow=15,SNR=4.2						
EIL				LR	LR	21 26 04.6	
	comp=Z,52nm,18.1s,baz=292,slow=50						
KLNR	Kaliningrad	15.62	359	i P	Pn	21 17 04.0	-0.5
KLNR				pmax	pmax		
	comp=Z,93nm,1.0s						
MNK	Minsk	16.29	15	i P	Pn	21 17 11.3	-1.8
MNK				i S	Sn	21 20 12.4	-0.9
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,20nm,1.1s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MNK				MLR	MLR		
	comp=E,34nm,15.0s						
MNK				MLR	MLR		
	comp=Z,126nm,19.0s						
MNK				MLR	MLR		
	comp=N,77nm,13.0s						
MNK	Minsk	16.29	15	i P	Pn	21 17 11.3	-1.7
	comp=E,2.0nm,0.9s						
MNK				i P	Pn	21 17 11.3	-1.7
	comp=N,20nm,1.1s						
MNK				i P	Pn	21 17 11.3	-1.7
	comp=Z,8.0nm,0.7s,baz=21						
MNK				i PP	pP	21 17 20.2	-0.1
MNK				i S	Sn	21 20 12.5	-0.9
MNK				i SS	SnSn	21 20 27.2	+0.9
MNK				i LQ	LQ	21 21 53.5	
MNK				i LR	LR	21 22 30.9	
MNK				i LRM	MLR	21 23 50.0	
	comp=E,34nm,15.4s						
MNK				i LRM	MLR	21 23 54.3	
	comp=Z,126nm,19.3s						
MNK				i LRM	MLR	21 24 01.2	
	comp=N,77nm,13.3s						
NACGM	Naroch	16.46	13	i P	P	21 17 22.1	+4.1
IIGN	Ignalina	16.80	11	eP	Pn	21 17 18.8	-0.8
ISAL	Salakas	17.00	11	eP	Pn	21 17 20.9	-1.2
NEY	Neytrino	17.21	69	i P	P	21 17 26.6	0.0
NEY				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KIV	Kislovodsk	17.28	66	eP	P	21 17 27.5	+0.2
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,34nm,14.0s						
KBZ	Khabaz	17.40	67	i P	P	21 17 34.1	+5.7
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ONI	Oni	17.68	71	P	P	21 17 33.8	+2.1
ONI				pmax	pmax		
	comp=Z,13nm,1.4s						
ONI	Oni	17.68	71	P	P	21 17 33.8	+2.1
LPSR	Galich'ya Gora	18.61	37	eP	Pn	21 17 43.7	+1.8
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GNI	Garni	18.66	79	LR	LR	21 24 46.7	
	comp=Z,65nm,19.4s,baz=258,slow=37						
ESBB	Sonseca Array	18.98	280	P	Pn	21 17 47.9	+1.3
ESDC	Sonseca Array	18.98	280	P	Pn	21 17 48.0	+1.3
	comp=Z,0.1nm,0.3s,baz=76,slow=10,SNR=9.0						
VRH	Novokhopyorsk	19.20	44	eP	Pn	21 17 51.5	+2.3
VRH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
OBN	Obninsk	19.38	28	LR	LR	21 26 04.7	
	comp=Z,25nm,21.6s,baz=217,slow=40						
OBN	Obninsk	19.38	28	eP	Pn	21 17 51.1	-0.2
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
VSU	Vasula	19.89	10	eP	P	21 17 54.4	-1.2
MOS	Moscow	20.25	29	eP	Pn	21 18 03.0	+1.4
MOS				e		21 18 25.0	
MAK	Makhachkala	20.68	70	eP	P	21 18 01.0	-3.4
MAK				eS	S	21 21 51.3	-3.6
MAK				pmax	pmax		
	comp=Z,150nm,0.7s						
UPP	Uppsala	20.97	356	eP	P	21 18 06.3	-1.0
HFS	Hagfors	21.60	351	P	P	21 18 14.3	+0.2
	comp=Z,5.2nm,0.6s,baz=159,slow=13,SNR=14						
HFS				LR	LR	21 26 41.1	
	comp=Z,145nm,21.9s,baz=172,slow=37						
NC602	NORSAR Array S	22.48	348	P	P	21 18 23.0	-0.6
NC602				IAmb	IAmb	21 18 23.9	
	comp=Z,37nm,1.4s						
NAO01	NORSAR Array S	22.69	348	P	P	21 18 25.8	0.0
FINES	FINESS Array B	22.73	7	P	P	21 18 24.7	-1.5
	comp=Z,3.7nm,0.6s,baz=163,slow=12,SNR=28						
FINES				PcP	PcP	21 22 18.0	+0.4
	comp=Z,1.1nm,0.7s,baz=116,slow=4.4,SNR=1.4						
FINES	FINESS Array B	22.73	7	P	P	21 18 25.0	-1.3
FIA1	FINESS Array S	22.73	7	P	P	21 18 26.2	-0.1
FIA1				IAmb	IAmb	21 18 42.0	
	comp=Z,22nm,1.1s						
EKA	Eskdalemuir Ar	22.79	324	P	P	21 18 27.1	+0.1
	comp=Z,6.8nm,0.6s,baz=122,slow=10,SNR=39						
ESK	Eskdalemuir	22.80	324	P	P	21 18 27.0	0.0
ESK				pmax	pmax		
	comp=Z,20nm,1.0s						
ESK	Eskdalemuir	22.80	324	P	P	21 18 26.9	0.0
ESK				IAmb	IAmb	21 18 30.6	
	comp=Z,20nm,0.9s						
NC405	NORSAR Array S	22.82	349	P	P	21 18 25.4	-1.8
NOA	NORSAR Array B	22.82	348	P	P	21 18 26.8	-0.5
	comp=Z,1.0nm,0.5s,baz=157,slow=9.2,SNR=13						
NOA				LR	LR	21 28 03.4	
	comp=Z,125nm,18.3s,baz=160,slow=39						
BELG	Belogornoye	23.00	46	P	P	21 18 28.5	-0.6
	comp=Z,14nm,0.8s,baz=167,slow=21,SNR=5.8						
BELG				LR	LR	21 28 14.4	
	comp=Z,51nm,21.3s,baz=214,slow=39						
BELG	Belogornoye	23.00	46	i P	P	21 18 30.7	+1.6
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KLMR	Klimovskoe	24.87	22	eP	P	21 18 48.8	+2.0
KLMR				pmax	pmax		
	comp=Z,19nm,1.5s						
KLMR	Klimovskoe	24.87	22	eP	P	21 18 48.8	+2.0
KLMR				AMP		21 19 05.4	
	comp=Z,19nm,1.5s						
AKTO	Aktyubinsk	28.66	54	P	P	21 19 20.2	-0.9
	comp=Z,0.5nm,0.3s,baz=254,slow=15,SNR=2.2						
GEYT	Alibeck	29.29	80	P	P	21 19 26.6	-0.3
	comp=Z,1.8nm,0.5s,baz=212,slow=15,SNR=1.6						
APA	Apatity	29.51	10	⇓iP	P	21 19 23.8	-4.6
APA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,1µm,22.0s						
ABKAR	Akbulak array	29.76	57	P	P	21 19 30.4	-0.4
ARU	Arti	30.43	42	i P	P	21 19 38.4	+1.8
ARU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TORD	Torodi Ar. Bea	30.69	218	P	P	21 19 40.8	+1.5
	comp=Z,2.9nm,0.6s,baz=31,slow=9.2,SNR=14						
TORD	Torodi Ar. Bea	30.69	218	P	P	21 19 40.6	+1.3
ARCES	ARCESS Array B	30.71	3	P	P	21 19 37.9	-1.2
	comp=Z,1.4nm,0.5s,baz=186,slow=8.1,SNR=11						
ARCES	ARCESS Array B	30.71	3	P	P	21 19 37.3	-1.7
ARCES				IAmb	IAmb	21 20 02.9	
	comp=Z,14nm,1.2s						
BRVK	Borovoye	36.51	51	i P	P	21 20 31.3	+1.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KKAR	Karatay Array	37.44	67	P	P	21 20 38.0	+0.3
KKAR	Karatay Array	37.44	67	P	P	21 20 38.0	+0.3
CHGR	Chuyangaron	37.49	75	P	P	21 20 37.7	-0.5
DBIC	Dimbokro	39.52	222	P	P	21 20 56.7	+1.3
	comp=Z,1.4nm,0.5s,baz=269,slow=11,SNR=2.1						
DBIC				LR	LR	21 38 16.7	
	comp=Z,111nm,19.1s,baz=40,slow=38						
KURK	Kurchatov	41.76	54	i P	P	21 21 15.2	+1.7
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NIL	Nilore	42.29	80	P	P	21 21 18.8	+0.6
NIL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NIL	Nilore	42.29	80	P	P	21 21 18.8	+0.6
NIL				IAmb	IAmb	21 21 39.2	
	comp=Z,8.0nm,0.8s						
KMBO	Kilima Mbogo	42.77	155	LR	LR	21 40 55.4	
	comp=Z,35nm,20.0s,baz=236,slow=38						
MAKZ	Makanchi	44.63	59	P	P	21 21 35.3	-1.6
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.5s						
MAKZ	Makanchi	44.63	59	P	P	21 21 35.2	-1.6
MAKZ				IAmb	IAmb	21 21 39.5	
	comp=Z,10.0nm,1.4s						
MK31	Makanchi Array	44.84	59	P	P	21 21 37.4	-1.2
MK31				pmax	pmax		
	comp=Z,7.0nm,1.5s						
MK31	Makanchi Array	44.84	59	P	P	21 21 37.4	-1.2
MK31				IAmb	IAmb	21 21 38.1	
	comp=Z,6.7nm,1.5s						
MKAR	Makanchi Array	44.84	59	P	P	21 21 37.9	-0.7
	comp=Z,1.4nm,0.7s,baz=279,slow=7.4,SNR=17						
MKAR	Makanchi Array	44.84	59	P	P	21 21 37.6	-0.9
ZAA0	Zalesovo Array	45.12	49	P	P	21 21 40.0	-0.5
ZAA0				IAmb	IAmb	21 21 44.4	
	comp=Z,5.4nm,0.6s						
ZALV	Zalesovo Beam	45.12	49	P	P	21 21 40.2	-0.3
	comp=Z,6.8nm,0.6s,baz=277,slow=8.3,SNR=23						
ZALV	Zalesovo Beam	45.12	49	i P	P	21 21 41.0	+0.4
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ZALV	Zalesovo Beam	45.12	49	P	P	21 21 40.0	-0.5
WMQ	Urumqi	49.33	62	eP	P	21 22 17.1	+3.4
EUNU	Eureka	54.72	348	P	P	21 22 52.9	-0.3
EUNU				IAmb	IAmb	21 23 07.7	
	comp=Z,6.8nm,1.4s						
LZH	Lanzhou	63.80	64	eP	P	21 23 56.5	-0.4
LZH				sP	pP	21 24 00.0	-1.8
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC	Hu-ho-hao-te	66.54	56	eP	P	21 24 16.8	+2.3
HHC				S	S	21 33 05.5	+0.6
HHC	Hu-ho-hao-te	66.54	56	SS	SS	21 37 19.8	-1.6
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,5.5s						
HHC				LR	LR		
	comp=N,640nm,18.7s						
HHC				LR	LR		
	comp=E,650nm,17.9s						
HHC				LR	LR		
	comp=Z,940nm,17.9s						
BOSA	Boshof	67.40	176	LR	LR	21 56 02.2	
	comp=Z,52nm,18.9s,baz=262,slow=38						
XAN	Xi'an	68.42	63	P	P	21 24 25.4	-1.0
XAN				pP	pP	21 24 29.6	-1.8
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NJ2	Nanjing	76.37	60	eP	P	21 25 14.3	+0.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WRA	Warramunga Arr	120.53	92	PKP	PKiKP	21 32 17.0	+0.5
	comp=Z,0.7nm,0.7s,baz=315,slow=1.9,SNR=3.0						
WRA	Warramunga Arr	120.53	92	PKIKP	PKiKP	21 32 17.0	+0.5
ASAR	Alice Springs	122.22	96	PKP	PKPdf	21 32 19.3	-0.3
	comp=Z,0.8nm,0.7s,baz=325,slow=1.5,SNR=3.7						
DZM	Mont Dzumac	146.36	70	PKPbc	PKiKP	21 33 07.8	-0.9
	comp=Z,4.0nm,0.7s,baz=278,slow=14,SNR=1.4						

IDC **14** *21:20:59.3±0.7, 5°.57S×153°.36E, h0^{km}, mb4.5/20, mb1 4.6/21, mb1mx4.5/38, mbtmp4.5/21, ML2.9/1, MS4.0/9, Ms1 4.0/9, ms1mx3.6/35, Error ellipse: s-maj=25.1km s-min=11.6km az=118.0*

NEIC **14** *21:21:02.5±2.3, 5°.38S±0°.07×153°.14E±0°.06, h13^{km}±3^{km}, mb4.9/51, Error ellipse: s-maj=11.0km s-min=6.9km az=207.0*

BJI **14** *21:21:02.1±0.0, 5°.14S×153°.48E, h22^{km}, mB5.1/23, mb4.6/36, Ms4.7/5, Ms7 4.3/6*

DJA **14** *21:21:03.5±1.6, 6°S±3°×15°3E±°, h11^{km}±11^{km}, M4.8/25, mB5.1/10, mb4.8/25, MLv5.2/4, Mw(mB)4.5/10*

ISC 14 21:21:05.9±0.3**, 5°.42S**±0°.05×**153°.17E**±0°.06**, h37^{km}, n178,** σ**1^{s}31**/167**, mb4.7**/58**, MS3.8**/10**, 1D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.58	320		Pn	21 21 30.7	-0.7
RABL	Rabaul	1.58	320	P	Pn	21 21 31.7	+0.3
MANU	Manus Island	6.70	300	Pn	Pn	21 22 44.9	+3.1
PMG	Port Moresby	7.16	236	Pn	Pn	21 22 48.3	+0.3
	12nm,0.3s,baz=53,slow=8.0,SNR=30						
PMG				Sn	Sn	21 24 07.7	-0.5
	29nm,0.3s,baz=59,slow=12,SNR=7.7						
PMG	Port Moresby	7.16	236	Pn	Pn	21 22 47.9	-0.2
PMG	Port Moresby	7.16	236	P	Pn	21 22 49.6	+1.5
PMG	Port Moresby	7.16	236	P	Pn	21 22 49.4	+1.3
HNR	Honiara	7.81	121	Pn	Pn	21 22 57.3	+0.3
HNR	Honiara	7.81	121	P	Pn	21 23 00.8	+3.8
COEN	Coen	13.00	229	Pn	Pn	21 24 06.2	-1.9
MTSU	Mount Surprise	15.31	214	P	Pn	21 24 39.6	+0.1
CTA	Charters Tower	16.06	204	Pn	Pn	21 24 49.2	+0.2
	0.6nm,0.3s,baz=24,slow=15,SNR=12						
CTAO	Charters Tower	16.06	204		Pn	21 24 49.5	+0.5
CTAO	Charters Tower	16.06	204	P	P	21 24 50.0	-2.0
SANVU	Saraoutou	17.00	127	P	P	21 25 01.3	-1.3
SANVU				IAmb	IAmb	21 25 03.4	
	comp=Z,75nm,0.8s						
SANVU	Saraoutou	17.00	127	P	P	21 25 03.0	+0.5
RK1H	Rockhampton Ha	18.05	188	P	P	21 25 14.7	+0.7
KOUNC	Koumac, New Ca	18.51	145	P	Pn	21 25 22.7	+3.2
DVP	Devils Point	19.11	131	P	Pn	21 25 28.5	+1.8
EIDS	Eidsvold	19.94	186	P	P	21 25 34.8	+0.1
EIDS				IAmb	IAmb	21 25 36.7	
	comp=Z,37nm,1.0s						
EIDS	Eidsvold	19.94	186	P	Pn	21 25 35.8	-0.8
QIS	Mount Isa	20.00	220	P	Pn	21 25 36.1	-1.3
NOUC	Port Laguerre	20.89	144	P	Pn	21 25 48.7	+1.0
DZM	Mont Dzumac	20.95	143	eP	Pn	21 25 48.9	+0.4
	comp=Z,134nm,1.2s						
DZM				eLR	LR	21 30 03.4	
	comp=Z,560nm,26.6s						
DZM	Mont Dzumac	20.95	143	P	Pn	21 25 47.1	-1.4
DZM				IAmb	IAmb	21 25 54.4	
	comp=Z,44nm,0.7s						
DZM	Mont Dzumac	20.95	143	P	Pn	21 25 48.4	-0.1
FAKI	Fak Fak	21.02	276	P	P	21 25 47.5	+1.0
	comp=Z,25nm,1.0s						
FAKI	Fak Fak	21.02	276	P	P	21 25 44.0	-2.5
ONTNC	Ouen Toro	21.14	144	P	P	21 25 46.4	-1.4
ONTNC				IAmb	IAmb	21 25 57.9	
	comp=Z,114nm,1.3s						
ONTNC	Ouen Toro	21.14	144	P	P	21 25 51.5	+3.8
YATNC	Mamie plateau,	21.21	143	P	P	21 25 51.4	+2.9
RMQ	Roma	21.37	191	P	P	21 25 51.1	+0.9
OUENC	Ouen Island, N	21.45	143	P	P	21 25 52.6	+1.6
OUENC				IAmb	IAmb	21 25 55.8	

	comp=Z,65nm,1.0s						
OUENC	Ouen Island, N	21.45	143	P	P	21 25 54.5	+3.4
KDU	Kakadu	21.67	249	P	P	21 25 52.6	-0.9
SWI	Sorong	22.34	281	P	P	21 25 59.9	-0.9
QLP	Quilpie	22.71	201	P	P	21 26 04.6	0.0
MTN	Manton Dam	22.96	250	P	P	21 26 06.1	-1.2
MTN				IAmb	IAmb	21 26 15.5	
	comp=Z,26nm,0.8s						
MTN	Manton Dam	22.96	250	P	P	21 26 06.2	-1.1
DRS	Darwin Rock St	23.07	251	P	P	21 26 07.3	-1.1
WB0	Warramunga Arr	23.18	230	P	P	21 26 08.4	-1.1
WB0				IAmb	IAmb	21 26 16.6	
	comp=Z,58nm,1.4s						
WR0	Warramunga Arr	23.18	230	P	P	21 26 08.3	-1.1
WR0				IAmb	IAmb	21 26 16.6	
	comp=Z,23nm,0.8s						
WRAB	Tennant Creek	23.31	230	P	P	21 26 08.9	-1.9
WRAB				IAmb	IAmb	21 26 33.5	
	comp=Z,32nm,1.0s						
WRAB	Tennant Creek	23.31	230	P	P	21 26 10.0	-0.8
WB2	Warramunga Arr	23.32	230	P	P	21 26 09.5	-1.3
WB2				IAmb	IAmb	21 26 12.4	
	comp=Z,44nm,1.2s						
WRA	Warramunga Arr	23.32	230	P	P	21 26 09.6	-1.3
	comp=Z,10nm,0.7s,baz=54,slow=9.8,SNR=47						
WRA				S	S	21 30 24.0	+2.8
	comp=Z,0.9nm,0.9s,baz=65,slow=18,SNR=4.6						
WRA				LR	LR	21 35 04.1	
	comp=Z,281nm,20.7s,baz=60,slow=36						
WRA	Warramunga Arr	23.32	230	P	P	21 26 08.9	-2.1
ARMA	Armidale	24.91	183	P	P	21 26 24.3	-1.4
ARMA				IAmb	IAmb	21 26 27.6	
	comp=Z,32nm,1.4s						
INKA	Innaminka	25.15	207	P	P	21 26 27.6	-0.1
AS31	Alice Springs	25.95	224	P	P	21 26 33.9	-1.2
ASAR	Alice Springs	25.95	224	P	P	21 26 34.2	-0.9
	comp=Z,6.3nm,0.6s,baz=53,slow=8.9,SNR=36						
ASAR				PcP	PcP	21 30 04.2	+1.0
	comp=Z,1.7nm,0.7s,baz=57,slow=3.1,SNR=4.4						
ASAR				LR	LR	21 36 24.5	
	comp=Z,256nm,21.1s,baz=52,slow=36						
ASAR	Alice Springs	25.95	224	P	P	21 26 33.4	-1.7
KNRA	Kununurra	26.04	245	P	P	21 26 35.1	-0.8
KNRA	Kununurra	26.04	245	P	P	21 26 35.9	0.0
LBMI	Labuha	26.07	280	P	P	21 26 36.6	+0.4
	comp=Z,40nm,1.1s						
CMSA	Cobar Meteorol	26.91	194	P	P	21 26 43.1	-0.5
H11S3	WAKE ISLAND Hy	27.25	29	T	T	21 55 22.5	
	baz=240,slow=74,SNR=8.4						
H11S2	WAKE ISLAND Hy	27.25	29	T	T	21 56 00.4	
	SNR=4.9						
H11S1	WAKE ISLAND Hy	27.26	29	T	T	21 55 24.5	
	baz=205,slow=74,SNR=1.8						
OOD	Oodnadatta	27.78	215	P	P	21 26 50.7	-0.7
STKA	Stephens Creek	28.47	201	P	P	21 26 55.9	-1.7
	comp=Z,15nm,0.8s,baz=2.1,slow=9.6,SNR=26						
STKA				LR	LR	21 38 00.5	
	comp=Z,211nm,19.4s,baz=30,slow=36						
STKA	Stephens Creek	28.47	201	P	P	21 26 56.3	-1.2
STKA	Stephens Creek	28.47	201	P	P	21 26 56.6	-0.9
LCRK	Leigh Creek	28.60	208	P	P	21 26 58.5	-0.3
SOEI	Soe	28.97	260	P	P	21 27 03.5	+1.2
	comp=Z,22nm,1.4s						
FITZ	Fitzroy Crossi	29.70	243	P	P	21 27 07.5	-1.1
	comp=Z,24nm,0.6s,baz=64,slow=7.0,SNR=67						
MULG	Mulgathing	30.59	214	P	P	21 27 15.2	-1.2
WRKA	Warakurna	30.82	228	P	P	21 27 17.2	-1.3
HTT	Hallett	30.86	204	P	P	21 27 18.2	-0.6
EDFI	Ende, Flores	31.41	262	P	P	21 27 24.1	+0.2
	comp=Z,12nm,0.9s						
BBOO	Buckleboo	31.58	208	P	P	21 27 24.1	-1.0
BBOO				IAmb	IAmb	21 27 25.3	
	comp=Z,22nm,1.1s						
ARPS	Mount Arapiles	32.88	197	P	P	21 27 36.2	-0.3
KAPI	Kappang	33.28	269	LR	LR	21 42 08.1	
	comp=Z,52nm,22.0s,baz=113,slow=38						
FORT	Forrest	34.55	220	P	P	21 27 49.9	-1.2
FORT	Forrest	34.55	220	P	P	21 27 50.2	-0.8
PSA00	Pilbara Seismi	36.04	240	P	P	21 28 03.2	-0.9
PSA00				IAmb	IAmb	21 28 10.5	
	comp=Z,11nm,1.0s						
PSA00	Pilbara Seismi	36.04	240	P	P	21 28 03.1	-0.9
MEEK	Meekatharra	39.13	234	P	P	21 28 29.7	-0.4
URZ	Urewera	39.27	150	P	P	21 28 32.3	+1.3
THZ	Tophouse	40.24	157	P	P	21 28 39.7	+0.6
THZ				IAmb	IAmb	21 28 48.7	
	comp=Z,14nm,0.8s						
TUWZ	Tuamarina	40.37	156	P	P	21 28 40.7	+0.5
MORW	Morawa	42.25	232	P	P	21 28 53.8	-2.0
LEM	Lembang	45.31	266	LR	LR	21 53 32.5	
	comp=Z,57nm,18.1s,baz=111,slow=43						
JTM	Tenmabayashi	47.31	347	P	P	21 29 34.9	-1.0
RAR	Rarotonga	48.19	114	P	P	21 29 43.7	+0.7
KSRS	Korea Array	48.72	333	P	P	21 29 47.5	+0.7
	comp=Z,0.9nm,0.5s,baz=144,slow=7.8,SNR=2.5						
NJ2	Nanjing	49.56	321	*e*P	P	21 29 53.8	+0.5
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
PPI	Padang Panjang	52.92	274	P	P	21 30 19.5	+0.6
USRK	Ussuriysk Ar.	52.95	341	P	P	21 30 20.3	+1.7
	comp=Z,0.9nm,0.7s,baz=180,slow=6.8,SNR=2.1						
CN2	Changchun	55.02	336	*e*P	P	21 30 34.5	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
XAN	Xi'an	57.33	316	P	P	21 30 51.1	+0.7
XAN				pP	pP	21 30 57.6	-3.2
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PEA0B	Petropavlovsk-	58.43	3	P	P	21 30 58.1	+0.3
PETK	Petropavlovsk-	58.43	3	P	P	21 30 57.4	-0.3
	comp=Z,2.0nm,0.5s,baz=168,slow=7.6,SNR=7.8						
PETK	Petropavlovsk-	58.43	3	P	P	21 30 58.2	+0.4
CMAR	Chiang Mai Arr	58.48	295	P	P	21 31 00.0	+1.3
	comp=Z,2.6nm,0.4s,baz=120,slow=5.3,SNR=20						
CHTO	Chiang Mai	58.59	296	P	P	21 30 59.1	-0.4
CHTO				IAmb	IAmb	21 31 07.9	
	comp=Z,7.2nm,1.1s						
HHC	Hu-ho-hao-te	59.77	324	*e*P	P	21 31 09.5	+2.1
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,5.5s						
LZH	Lanzhou	61.93	316	*e*P	P	21 31 23.3	+1.0
LZH				pP	pP	21 31 29.1	-3.7
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GTA	Gaotai	66.36	317	*e*P	P	21 31 51.3	0.0
GTA				pP	pP	21 31 55.8	-6.1
GTA				sP	pwP	21 31 58.8	-5.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
ULN	Ulaanbaatar	66.72	328	P	P	21 31 52.8	-0.6
SHL	Shillong	66.94	301	P	P	21 31 55.7	+0.4
SHL				IAmb	IAmb	21 31 57.3	
	comp=Z,9.6nm,0.9s						
SONM	Songino Array	67.05	328	P	P	21 31 55.8	+0.4
	comp=Z,1.2nm,0.6s,baz=144,slow=5.5,SNR=8.3						
SONM	Songino Array	67.05	328	P	P	21 31 54.9	-0.5
SEY	Seymchan	68.16	360	P	P	21 32 01.6	-0.3
	comp=Z,3.3nm,0.7s,baz=149,slow=4.8,SNR=11						
YAK	Yakutsk	69.65	348	P	P	21 32 11.6	+0.4
	comp=Z,3.1nm,0.4s,baz=188,slow=4.9,SNR=6.1						
YAK	Yakutsk	69.65	348	P	P	21 32 10.7	-0.5
TAPN	Taplejung	71.04	301	*e*P	P	21 32 22.5	+1.6
ODAN	Odare	71.18	301	*e*P	P	21 32 23.4	+1.7
VNDA	Vanda	72.20	178	P	P	21 32 26.8	+0.2
GUN	Gumba	72.76	301	*e*P	P	21 32 33.0	+1.7
	comp=Z,23nm,0.7s						
PKI	Pulchoki	73.07	301	*e*P	P	21 32 34.0	+0.9
PKIN	Phulchoki	73.08	301	*e*P	P	21 32 34.3	+1.2
KKN	Kakani	73.24	301	*e*P	P	21 32 35.5	+1.6
	comp=Z,11nm,0.7s						
DMN	Daman	73.34	301	*e*P	P	21 32 36.4	+1.8
GKN	Gorkha	73.84	301	*e*P	P	21 32 39.0	+1.6
BILL	Bilibino	73.87	5	P	P	21 32 36.5	-0.1
BILL				IAmb	IAmb	21 32 57.8	
	comp=Z,10nm,1.0s						
KOLN	Koldanda	74.67	301	*e*P	P	21 32 44.0	+1.7
	comp=Z,20nm,0.8s						
DANN	Dangsing	74.68	301	*e*P	P	21 32 43.5	+1.0
PYUN	Piuthan	75.27	301	*e*P	P	21 32 47.2	+1.4
	comp=Z,19nm,0.9s						
WMQ	Urumqi	76.45	317	*e*P	P	21 32 54.5	+2.5
WMQ				pP	pP	21 33 01.6	-0.9
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,160nm,5.3s						
Q19K	Cape Douglas,	76.75	25	P	P	21 32 52.6	-0.7
HYB	Hyderabad	77.05	289	*i*P	P	21 33 02.0	+6.2
CNPM	China Poot	78.11	25	P	P	21 33 00.4	-0.5
L19K	White Mountain	78.18	22	P	P	21 33 01.1	-0.1
TIXI	Tiksi	78.56	352	P	P	21 33 03.9	+0.8
	comp=Z,2.6nm,0.7s,baz=160,slow=6.4,SNR=8.9						
TIXI	Tiksi	78.56	352	P	P	21 33 02.8	-0.3
TIXI				IAmb	IAmb	21 33 17.1	
	comp=Z,7.5nm,1.0s						
CAST	Castle Rocks	79.94	22	P	P	21 33 10.2	-0.6
PWL	Port Wells	80.05	25	P	P	21 33 10.1	-1.4
PWL				IAmb	IAmb	21 33 11.5	
	comp=Z,23nm,1.0s						
SML	Sawmill	80.53	24	P	P	21 33 12.9	-1.2
SML				IAmb	IAmb	21 33 22.7	
	comp=Z,29nm,1.4s						
IMAR	Indian Mountai	80.84	19	P	P	21 33 14.5	-1.1
MKAR	Makanchi Array	81.04	319	P	P	21 33 18.1	+1.0
	comp=Z,2.3nm,0.9s,baz=95,slow=7.9,SNR=8.1						
MKAR	Makanchi Array	81.04	319	P	P	21 33 17.1	0.0
ZAA0	Zalesovo Array	81.87	326	P	P	21 33 20.6	-0.7
ZAA0				IAmb	IAmb	21 33 32.2	
	comp=Z,5.0nm,0.7s						
ZALV	Zalesovo Beam	81.87	326	P	P	21 33 20.7	-0.6
	comp=Z,3.4nm,0.6s,baz=112,slow=5.8,SNR=13						
IL31		82.59	22	P	P	21 33 22.3	-2.5
IL31				IAmb	IAmb	21 33 37.2	
	comp=Z,6.3nm,1.1s						
ILAR	Eielson Array	82.59	22	P	P	21 33 23.0	-1.9
	comp=Z,2.4nm,0.8s,baz=252,slow=5.4,SNR=18						
ILAR				LR	LR	22 02 21.6	
	comp=Z,78nm,21.9s,baz=191,slow=30						
ILAR	Eielson Array	82.59	22	P	P	21 33 22.3	-2.6
KSH	Kashi	83.62	311	P	P	21 33 34.8	+3.9
KSH				pP	pP	21 33 40.8	-0.7
KSH				sP	sP	21 33 43.8	-2.2
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BCAR	Beaver Creek A	83.81	25	P	P	21 33 30.5	-0.8
KURK	Kurchatov	84.48	322	P	P	21 33 34.9	+0.1
KURBB	Kurchatov Arra	84.52	322	P	P	21 33 34.9	-0.2
	comp=Z,1.4nm,0.2s,baz=105,slow=4.1,SNR=8.9						
QSPA	South Pole Qui	84.54	180	P	P	21 33 35.3	+0.3
NIL	Nilore	84.63	304	P	P	21 33 36.0	-0.1
NIL				IAmb	IAmb	21 34 04.6	
	comp=Z,8.3nm,0.7s						
BMAR	Burnt Mountain	84.70	20	P	P	21 33 35.4	-0.3
MAW	Mawson	85.14	203	P	P	21 33 36.2	-1.7
	comp=Z,5.4nm,0.6s,baz=98,slow=5.7,SNR=6.8						
MAW	Mawson	85.14	203	P	P	21 33 37.2	-0.6
AAK	Ala-Archa	85.36	313	P	P	21 33 38.4	-1.3
AAK				IAmb	IAmb	21 33 55.5	
	comp=Z,6.4nm,0.9s						
NRIK	Noril'sk	86.67	341	P	P	21 33 45.3	0.0
	comp=Z,2.9nm,0.6s,baz=85,slow=4.8,SNR=5.4						
NRIK	Noril'sk	86.67	341	P	P	21 33 45.6	+0.3
NRIK				IAmb	IAmb	21 33 55.4	
	comp=Z,6.0nm,0.7s						
BTK	Batken	87.62	310	P	P	21 33 50.9	+0.1
BTK				IAmb	IAmb	21 34 03.8	
	comp=Z,5.9nm,0.9s						
DLBC	Dease Lake	87.72	31	LR	LR	22 05 30.2	
	comp=Z,186nm,20.7s,baz=311,slow=30						
KKAR	Karatay Array	88.33	313	P	P	21 33 54.6	+0.7
BVAR	Borovoye Array	89.96	323	P	P	21 34 00.4	-1.0
	comp=Z,3.7nm,0.8s,baz=176,slow=4.5,SNR=16						
BRVK	Borovoye	90.03	323	P	P	21 34 00.6	-1.0
BRVK				IAmb	IAmb	21 34 18.2	
	comp=Z,5.3nm,0.8s						
SYO	Syowa Base	93.21	199⇓	*e*P	P	21 34 15.8	-0.3
PFO	Pinyon Flats O	93.27	57	LR	LR	22 07 06.5	
	comp=Z,374nm,21.3s,baz=102,slow=30						
YKA	Yellowknife Ar	95.80	28	P	P	21 34 26.2	-1.8
	comp=Z,1.5nm,0.9s,baz=280,slow=4.9,SNR=7.5						
YKA	Yellowknife Ar	95.80	28	P	P	21 34 26.5	-1.6
YHL	Hebgen Lake	97.79	46	P	P	21 34 34.4	-3.5
PDAR	Pinedale Array	98.99	48	LR	LR	22 14 27.5	
	comp=Z,146nm,19.3s,baz=299,slow=32						
AKASG	Malin Array Be	115.21	324	PKP	PKPdf	21 39 43.5	+0.2
	comp=Z,0.5nm,0.5s,baz=48,slow=2.8,SNR=4.7						
CLL	Collm	123.57	331	*e*PKPdf	PKiKP	21 40 01.0	+1.3
CLL				*i*		21 40 12.9	
FNA	Florina	124.40	317	PKPdf	PKPdf	21 40 01.1	-0.4
AGG	Agios Georgios	124.47	314	PKPdf	PKPdf	21 40 01.0	-0.7
KHC	Kasperske Hory	124.66	329	*e*PKP	PKiKP	21 40 03.5	+1.5
KHC	Kasperske Hory	124.66	329	PKPdf	PKiKP	21 40 01.8	-0.2
GERES	GERESS Array B	124.78	328	PKP	PKiKP	21 40 02.4	+0.1
	comp=Z,1.7nm,0.7s,baz=93,slow=2.8,SNR=18						
GERES	GERESS Array B	124.78	328	PKPdf	PKiKP	21 40 02.1	-0.2
STAL	STALIGIAL	126.89	326	PKPdf	PKPdf	21 40 06.2	+0.1
CIMO	Cimolais	127.01	327	PKPdf	PKiKP	21 40 06.5	-0.2
SGRT	San Giovanni R	127.65	320	PKPdf	PKPdf	21 40 07.5	-0.2
LPAZ	La Paz	133.80	119	PKP	PKPdf	21 40 20.7	0.0
	comp=Z,1.5nm,0.7s,baz=329,slow=6.2,SNR=5.1						
BOAV	Boa Vista	146.25	94	PKPdf	PKPdf	21 40 40.9	-1.7
BDFB	Brasilia	150.37	135	PKPbc	PKPbc	21 40 53.2	-1.3
	comp=Z,7.5nm,0.8s,baz=251,slow=1.8,SNR=10						
BDFB	Brasilia	150.37	135	PKPbc	PKPbc	21 40 54.2	-0.3
TORD	Torodi Ar. Bea	150.85	287	PKPbc	PKPbc	21 40 55.2	-0.4
	comp=Z,10nm,0.7s,baz=55,slow=2.8,SNR=31						
TORD	Torodi Ar. Bea	150.85	287	PKPbc	PKPbc	21 40 53.2	-2.4
KOWA	Kowa	155.81	294	PKPab	PKPab	21 41 25.4	+1.6
	comp=Z,1.2nm,0.3s,baz=53,slow=4.4,SNR=5.6						

PRU 14 21:41:27.0±0.0, 49°.81N×18°.48E, h0^{km}, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.22	277	*e*PG	Pg	21 41 30.7	-0.5
OKC				*e*SG	Sg	21 41 34.5	+0.5
	comp=Z,8.1nm,0.5s						
MORC	Moravsky Berou	0.61	267	*e*PG	Pg	21 41 38.3	-0.3
MORC				*e*SG	Sg	21 41 45.9	-0.6
LANS	Liptovska Anna	0.92	135	*e*PG	Pg	21 41 44.8	+0.1
LANS				*e*SG	Sb	21 41 58.6	-0.1
LANS				*e*LG	Lg	21 42 01.1	
KRLC	Kraliky	1.13	284	*e*PG	Pg	21 41 47.3	-1.3
KRLC				*e*SG	Sg	21 42 03.0	-0.2
	comp=Z,1.9nm,0.5s						
VRAC	Vranov	1.33	248	*e*PG	Pg	21 41 51.1	-1.3
VRAC				*e*SG	Sg	21 42 08.6	-1.0
DPC	Dobruska-Polom	1.49	292	*e*PG	Pn	21 41 54.1	-1.0
DPC				*e*SG	Sg	21 42 13.4	-1.5
KRUC	Moravsky	1.55	242	*e*PG	Pn	21 41 54.8	-1.1
KRUC				*e*SG	Sn	21 42 15.9	-0.8

IDC 14 21:42:58.9±5.9, 31°.61S×179°.77W, h215^{km}±49^{km}, mb3.9/3, mb1 4.0/4, mb1mx3.4/40, mbtmp4.4/4, Error ellipse: s-maj=52.5km s-min=26.1km az=38.0

WEL 14 21:43:11.1±1.0, 33°S±17°×17°9W±3°3, h363^{km}±15^{km}, M3.8/7, mB4.2/6, ML4.5/7, MLv4.2/7, Mw(mB)3.2/6, Error ellipse: s-maj=0.0km s-min=0.0km az=116.1

ISC 14 21:42:59.5±0.9, 31°.86S±0°.09×179°.5W±0°.2, h250^{km}, n36, σ3^{s}10/38, mb4.0/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.92	28	P	Pn	21 43 48.8	-2.5
GLKZ				S	S	21 44 27.3	-4.8
MXZ	Matakaoa Point	5.97	197	P	Pn	21 44 29.8	+2.6
MXZ				S	S	21 45 33.5	-3.8
PKGZ	Pakihiroa	6.33	198	P	Pn	21 44 34.7	+2.8
PKGZ				S	S	21 45 40.8	-5.0
PUZ	Puketiti	6.46	196	P	Pn	21 44 35.7	+2.3
PUZ				S	S	21 45 43.7	-5.0
RUGZ	Raukumara Rang	6.52	200	P	Pn	21 44 36.0	+1.9
RUGZ				S	S	21 45 43.3	-6.7
TWGZ	Tauwhareparae	6.63	197	P	Pn	21 44 38.5	+3.0
MWZ	Matawai	6.90	200	P	Pn	21 44 41.0	+2.0
MWZ				S	S	21 45 52.6	-6.1
TKGZ	Te Karaka	6.91	198	P	Pn	21 44 40.5	+1.5
TKGZ				S	S	21 45 54.3	-4.5
URZ	Urewera	6.96	203	P	Pn	21 44 40.7	+1.1
	1.2nm,0.3s,baz=302,slow=22,SNR=12						
URZ				S	S	21 45 54.3	-5.7
	1.4nm,0.3s,baz=296,slow=24,SNR=2.3						
URZ	Urewera	6.96	203	P	Pn	21 44 40.8	+1.1
URZ				S	S	21 45 54.3	-5.7
MUGZ	Murupara	7.27	204	P	Pn	21 44 44.6	+1.0
MUGZ				S	S	21 46 03.2	-4.0
RTZ	Ruatahuna	7.33	202	P	Pn	21 44 44.7	+0.4
HIZ	Hauiti	8.09	213	P	Pn	21 44 58.0	+4.2
TMVZ	Te Maari	8.23	207	P	Pn	21 44 56.3	+0.5
ETVZ	East Tongariro	8.24	207	P	Pn	21 44 56.4	+0.5
KAHZ	Kahuranaki	8.45	199	P	Pn	21 44 58.6	+0.2
KRHZ	Kereru	8.46	202	P	Pn	21 44 57.8	-0.8
KRHZ				S	S	21 46 27.1	-7.5
PNHZ	Pukenui	8.76	202	P	Pn	21 45 01.1	-1.3
PNHZ				S	S	21 46 33.9	-7.7
PRHZ	Porangahau	8.95	199	P	Pn	21 45 03.8	-0.9
PRHZ				S	S	21 46 38.2	-7.8
BFZ	Birch Farm	9.45	200	P	Pn	21 45 09.7	-1.4
BFZ				S	S	21 46 47.1	-10
MRZ	Mangatainoka R	9.64	203	P	Pn	21 45 11.2	-2.2
MRZ				S	S	21 46 50.9	-11
HOWZ	Holdsworth Sta	9.87	203	P	Pn	21 45 13.9	-2.5
HOWZ				S	S	21 46 55.8	-12
ASAR	Alice Springs	41.78	269	P	P	21 50 25.6	+0.6
	1.9nm,0.4s,baz=104,slow=7.7,SNR=22						
WRA	Warramunga Arr	42.90	275	P	P	21 50 34.4	+0.5
	3.1nm,0.4s,baz=114,slow=7.5,SNR=45						
QSPA	South Pole Qui	58.25	180	P	P	21 52 32.3	+4.5
	5.0nm,0.6s,baz=11,slow=1.7,SNR=4.8						
SNAA	Sanae	76.73	179	P	P	21 54 25.5	+2.6
VNA3	Neumayer Olymp	76.93	177	P	P	21 54 27.4	+3.4
VNA2	Neumayer--Watz	77.35	177	P	P	21 54 29.8	+3.5
	baz=177,slow=5.0						
VNA1	Neumayer--Stat	77.59	177	P	P	21 54 30.8	+3.3
H03S2	Juan Fernandez	80.72	124	T	T	23 23 26.1	
	SNR=7.2						
H03S1	Juan Fernandez	80.73	124	T	T	23 23 30.5	
	SNR=6.0						
H03S3	Juan Fernandez	80.74	124	T	T	23 23 30.7	
	SNR=6.3						
H03N3	Juan Fernandez	80.93	124	T	T	23 23 43.4	
	baz=221,slow=72,SNR=20						
H03N2	Juan Fernandez	80.93	124	T	T	23 23 46.7	
	baz=221,slow=72,SNR=22						
H03N1	Juan Fernandez	80.94	124	T	T	23 23 42.3	
	baz=221,slow=72,SNR=16						
FINES	FINESS Array B	146.05	338	PKPbc	PKiKP	22 02 10.9	-1.3
	1.0nm,0.4s,baz=44,slow=4.6,SNR=19						

IDC 14 21:46:33.2±3.5, 5°.21S×152°.96E, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.6/41, mbtmp3.8/3, Error ellipse: s-maj=128.5km s-min=49.1km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.30	229	P	P	21 51 42.3	-0.6
	0.8nm,0.4s,baz=54,slow=9.8,SNR=9.4						
ASAR	Alice Springs	25.96	223	P	P	21 52 08.1	+0.4
	0.9nm,0.8s,baz=57,slow=9.1,SNR=8.1						
FITZ	Fitzroy Crossi	29.61	242	P	P	21 52 40.2	-0.1
	2.0nm,0.6s,baz=64,slow=7.8,SNR=9.6						
TORD	Torodi Ar. Bea	150.59	288	PKPbc	PKPbc	22 06 28.1	-0.2
	0.6nm,0.7s,baz=62,slow=2.1,SNR=4.2						

IDC 14 22:04:31.8±2.4, 4°.07S×129°.98E, h0^{km}, mb3.7/1, mb1 3.6/3, mb1mx3.4/28, mbtmp3.5/3, ML3.2/2, Error ellipse: s-maj=158.3km s-min=28.7km az=70.0

DJA 14 22:04:35.5±0.7, 4°S±7°×12°9E±°, h10^{km}, M3.3/7, MLv3.3/7

ISC 14 22:04:36.7±1.1, 4°.23S±0°.09×129°.49E±0°.07, h36^{km}, n9, σ1^{s}36/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.04	328	P	Pn	22 04 54.1	-0.7
MSAI				S	Sn	22 05 06.1	-2.0
AAI	Ambon	1.40	293	P	Pn	22 04 59.5	-0.2
AAI				S	Sn	22 05 16.9	0.0
FAKI	Fak Fak	3.05	65	P	Pn	22 05 22.5	0.0
SWI	Sorong	3.79	28	P	Pn	22 05 32.7	+0.1
LBMI	Labuha	4.08	331	P	Pn	22 05 37.4	+0.7
SANI	Sanana	4.11	302	P	Pn	22 05 37.4	+0.4
WRA	Warramunga Arr	16.32	164	Pn	Pn	22 08 20.8	-2.4
	0.1nm,0.3s,baz=348,slow=13,SNR=5.5						
ASAR	Alice Springs	19.79	168	P	P	22 09 05.3	+1.3
	0.1nm,0.3s,baz=356,slow=13,SNR=10						
MKAR	Makanchi Array	65.65	326	P	P	22 15 18.8	+1.5
	0.4nm,0.5s,baz=117,slow=7.8,SNR=8.4						

NEIC 14 22:09:00.4±0.7, 39°.04N±0°.05×96°.89W±0°.04, h3^{km}±8^{km}, mb_Lg2.5/23, Error ellipse: s-maj=6.8km s-min=4.8km az=163.0, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSU1	Kansas State U	0.22	74	Pg	Pg	22 09 04.3	-0.4
KSU1				Sg	Sg	22 09 07.5	-0.2
R32A	Long Quarter,	1.56	247		Pn	22 09 27.9	-1.2
N33A	J Bar K, Exete	1.75	346	Pn	Pn	22 09 31.1	-0.6
KAN06	Argonia West S	1.95	204	Pn	Pn	22 09 34.3	-0.1
KAN12	Harper NE Stat	1.95	207	Pn	Pn	22 09 34.8	+0.3
KAN12				IAmb_Lg		22 10 04.5	
	comp=Z,23nm,0.9s						
KAN09	Caldwell North	1.99	197	Pn	Pn	22 09 34.6	-0.3
KAN09				IAmb_Lg		22 10 07.8	
	comp=Z,25nm,0.8s						
KAN08	Anthony NE Sta	2.00	206	Pn	Pn	22 09 34.9	-0.3
KAN01	Argonia South	2.01	200	Pn	Pn	22 09 35.2	0.0
KAN01				IAmb_Lg		22 10 05.6	
	comp=Z,20nm,0.7s						
KAN16	Harper SW Stat	2.04	208	Pn	Pn	22 09 35.0	-0.7
N35A	Tabor	2.05	27	Pn	Pn	22 09 35.6	-0.3
KAN05	Bluff City Nor	2.08	202	Pn	Pn	22 09 35.9	-0.3
KAN05				IAmb_Lg		22 10 06.7	
	comp=Z,22nm,0.8s						
KAN17	Caldwell West	2.11	199	Pn	Pn	22 09 36.4	-0.3
KAN17				IAmb_Lg		22 10 06.3	
	comp=Z,22nm,0.9s						
KAN10	Anthony SW Sta	2.14	207	Pn	Pn	22 09 36.6	-0.5
T35A	Sooner Cattle	2.14	172	Pn	Pn	22 09 37.1	0.0
T35A				IAmb_Lg		22 10 08.5	
	comp=Z,25nm,1.0s						
CBKS	Cedar Bluff	2.24	265	Pn	Pn	22 09 37.3	-1.1
KAN14	Manchester OK	2.25	203	Pn	Pn	22 09 38.0	-0.5
GC02	Grant County #	2.32	200	Pn	Pn	22 09 38.9	-0.6
BGNE	Belgrade	2.56	338	Pn	Pn	22 09 42.6	-0.2
P38A	Dawn	2.67	76	Pn	Pn	22 09 43.4	-0.9
L34A	Svendsen Farm,	2.95	7	Pn	Pn	22 09 47.9	-0.3
L34A				IAmb_Lg		22 10 37.3	
	comp=Z,20nm,0.9s						
S39A	Bolivar	3.11	115	Pn	Pn	22 09 49.3	-1.1
TUL1	Leonard	3.24	164	Pn	Pn	22 09 51.6	-0.6
TUL1				IAmb_Lg		22 10 46.7	
	comp=Z,22nm,0.9s						
U38A	Gravette	3.27	142	Pn	Pn	22 09 51.8	-0.8
U38A				IAmb_Lg		22 10 50.3	
	comp=Z,15nm,0.9s						
R40A	Maddies Statio	3.69	100	Pn	Pn	22 09 57.3	-1.1
P40A	Paris	3.79	81	Pn	Pn	22 09 58.9	-0.8
W35A	Tecumseh	3.88	180	Pn	Pn	22 10 00.2	-0.8
MGMO	Mountain Grove	4.10	116	Pn	Pn	22 10 03.3	-0.7
MGMO				IAmb_Lg		22 11 07.5	
	comp=Z,15nm,0.8s						
U40A	Yellville	4.17	129	Pn	Pn	22 10 04.7	-0.3
U40A				IAmb_Lg		22 11 10.6	
	comp=Z,11nm,0.8s						
CCM	Cathedral Cave	4.53	101	Pn	Pn	22 10 09.6	-0.3
W39A	Magazine	4.57	146	Pn	Pn	22 10 09.6	-0.8
ECSD	EROS Data Cent	4.69	2	Pn	Pn	22 10 11.7	-0.5
FVM	French Village	5.17	100	Pn	Pn	22 10 17.6	-1.2
MIAR	Mount Ida	5.21	148	Pn	Pn	22 10 19.0	-0.3
WHAR	Wooly Hollow	5.24	134	Pn	Pn	22 10 18.5	-1.2
LCAR	Lake Charles	5.43	121	IAmb_Lg		22 11 53.8	
	comp=Z,7.9nm,0.8s						
X40A	Basin Creek Fa	5.59	143	Pn	Pn	22 10 23.5	-0.9
ISCO	Idaho Springs	6.80	279	Pn	Pn	22 10 42.2	+0.8

NIED 14 22:30:52.2, 26°.91N×127°.45E, h24^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.93; $M_{\theta\theta}$0.62; $M_{\phi\phi}$1.31; $M_{r\theta}$0.10; $M_{\theta\phi}$-1.14; $M_{\phi r}$-0.91; Fault plane solution: $M_0$2.25000×10^{14} NP1: ϕ_s336.00000°, δ57.00000°, λ-75.00000°. NP2:

ϕ_s130.00000°,δ36.00000°,λ-112.00000°.

JMA 14 22:30:52.1±0.1**,26°.90N**×**127°.45E,h24**^{km}±2^{km}**,M3.6, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGN	Aguni-jima	0.36	211	P	Pb	22 30 59.9	-0.1
JAGN				S	Sb	22 31 05.2	-0.1
JIH	Iheya	0.48	74	P	Pb	22 31 01.9	-0.1
JIH				S	Sb	22 31 08.4	-0.2
JNTH	Nagotoyohara	0.64	126	P	Pb	22 31 04.5	-0.1
JNTH				S	Sb	22 31 13.1	0.0
JOW	Kunigami	0.74	95	P	Pb	22 31 05.8	-0.5
JOW				S	Sb	22 31 15.7	-0.3
JJT3	Tamagusuku3	0.81	158	P	Pn	22 31 07.9	-0.1
JJT3				S	Sn	22 31 19.1	-0.2
JKE	Kume jima 2	0.82	226	P	Pb	22 31 07.5	-0.3
JKE				S	Sb	22 31 19.0	+0.5
JYRO	Yoronjima	0.90	82	P	Pb	22 31 08.7	-0.4
JYRO				S	Sb	22 31 20.4	-0.3
JOKE	Okinoerabujima	1.10	65	P	Pn	22 31 11.9	-0.1
JOKE				S	Sn	22 31 26.7	+0.2

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*TUL **14** 22:50:06.3±1.0,36°.57N±0°.01×97°.39W±0°.02,h6^{km}±7^{km}, ML2.7,mb_Lg2.4/12(NEIC),Error ellipse: s-maj=2.0km s-min=1.4km az=48.0*

NEIC 14 22:50:06.5±0.8**,36°.56N**±0°.01×**97°.40W**±0°.01**,h6**^{km}±7^{km}**, Error ellipse: s-maj=2.1km s-min=1.3km az=219.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLOK	Blackwell	0.25	37	Pg	Pg	22 50 11.5	0.0
BLOK				Sg	Sg	22 50 15.1	+0.2
KAN13	South Haven SW	0.46	353	Pg	Pg	22 50 15.4	0.0
KAN13				Sg	Sg	22 50 21.7	+0.3
CROK	Carrier	0.47	264	Pg	Pg	22 50 15.8	+0.2
CROK				Sg	Sg	22 50 22.4	+0.7
GC02	Grant County #	0.47	309	Pg	Pg	22 50 15.7	+0.1
GC02				Sg	Sg	22 50 22.1	+0.3
KAN17	Caldwell West	0.57	329	Pg	Pg	22 50 17.4	-0.1
KAN17				Sg	Sg	22 50 25.1	+0.3
KAN14	Manchester OK	0.60	312	Pg	Pg	22 50 18.0	-0.1
KAN14				Sg	Sg	22 50 26.3	+0.4
KAN09	Caldwell North	0.60	343		Pg	22 50 17.9	-0.2
KAN09				Sg	Sg	22 50 26.2	+0.2
KAN01	Argonia South	0.66	335		Pg	22 50 19.0	-0.2
KAN01				Sg	Sg	22 50 27.7	-0.1
KAN05	Bluff City Nor	0.67	326	Pg	Pg	22 50 18.6	-0.7
KAN05				Sg	Sg	22 50 28.2	+0.1
QUOK	Quay	0.68	124	Pg	Pg	22 50 19.5	-0.1
QUOK				Sg	Sg	22 50 28.5	+0.2
OK032	Salt Plains WL	0.69	291	Pg	Pg	22 50 19.7	-0.1
OK032				Sg	Sg	22 50 29.1	+0.2
OK031	S. Brethren Rd	0.76	143		Pg	22 50 21.0	0.0
OK029	Liberty Lake	0.76	183	Pg	Pg	22 50 21.1	+0.1
OK029				Sg	Sg	22 50 31.5	+0.6
OK034	N. Norfolk Rd.	0.78	134		Pg	22 50 21.4	-0.1
OK034				Sg	Sg	22 50 31.7	+0.1
KAN06	Argonia West S	0.78	332	Pg	Pg	22 50 21.2	-0.3
KAN06				Sg	Sg	22 50 31.8	+0.2
KAN10	Anthony SW Sta	0.79	316	Pg	Pg	22 50 21.4	-0.3
KAN10				Sg	Sg	22 50 32.3	+0.3
T35A	Sooner Cattle	0.80	63		Pg	22 50 20.8	-1.0
OK030	Cody Creek RV	0.80	141	Pg	Pg	22 50 21.6	-0.3
OK030				Sg	Sg	22 50 32.0	-0.3
KAN08	Anthony NE Sta	0.81	326	Pg	Pg	22 50 21.7	-0.3
KAN08				Sg	Sg	22 50 32.9	+0.3
KAN16	Harper SW Stat	0.85	322	Pg	Pg	22 50 22.4	-0.5
KAN16				Sg	Sg	22 50 34.0	+0.1
BCOK	Bluff Creek, N	0.91	191	Pg	Pg	22 50 23.7	-0.3
BCOK				Sg	Sg	22 50 36.3	+0.5
OK025	Westminster Rd	0.97	177	Pg	Pg	22 50 24.9	-0.2
OKCFA	Oklahoma City	1.14	182	Pg	Pg	22 50 27.9	-0.5
FNO	Franklin	1.30	180	Pn	Pn	22 50 30.6	-0.5
U32A	Winter Ranch,	1.30	263	Pn	Pn	22 50 30.5	-0.7
TUL1	Leonard	1.45	116	Pn	Pn	22 50 33.1	-0.1
W35A	Tecumseh	1.47	163	Pn	Pn	22 50 32.8	-0.6
X34A	Smith Ranch, M	1.98	190	IAmb_Lg		22 51 10.3	
	comp=Z,16nm,0.8s						
WMOK	Wichita Mounta	2.13	212	IAmb_Lg		22 51 16.4	
	comp=Z,27nm,0.8s						
X37A	Clayton	2.57	139	IAmb_Lg		22 51 34.1	
	comp=Z,11nm,1.0s						
CBKS	Cedar Bluff	2.92	321	IAmb_Lg		22 51 37.7	
	comp=Z,10nm,0.9s						
MIAR	Mount Ida	3.71	122	Pn	Pn	22 51 04.7	+0.5
FCAR	Ozark Folk Cen	4.32	97	Pn	Pn	22 51 13.0	+0.3
CCM	Cathedral Cave	5.13	71	IAmb_Lg		22 52 55.9	
	comp=Z,8.1nm,1.0s						
SDCO	Great Sand Dun	6.58	283	IAmb_Lg		22 53 38.7	
	comp=Z,4.1nm,1.1s						

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*IDC **14** 22:56:11.6±0.4,5°.38S×153°.18E,h0^{km},mb4.6/23, mb1 4.7/25,mb1mx4.6/37,mbtmp4.6/25,ML3.7/2,MS3.8/21, Ms1 3.8/21,ms1mx3.7/30,Error ellipse: s-maj=15.5km s-min=12.1km az=90.0*

*BJI **14** 22:56:12.7±0.0,5°.20S×153°.05E,h5^{km},mB5.1/19, mb4.5/37,Ms4.6/4,Ms7 4.3/2*

*MOS **14** 22:56:15.4±1.3,5°.45S×153°.07E,h39^{km},mb5.1/14,Error ellipse: s-maj=10.4km s-min=8.4km az=102.8*

*NEIC **14** 22:56:17.2±2.7,5°.41S±0°.07×153°.07E±0°.07,h38^{km}±2^{km}, mb5.0/56,Error ellipse: s-maj=11.5km s-min=8.4km az=53.0*

*GCMT **14** 22:56:18.2±0.3,5°.60S±0°.02×153°.14E±0°.02,h26^{km}±1^{km}, MW4.9/70,Moment Tensor Solution. s19,c19; s70,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.71±.17; $M_{\theta\theta}$-2.43±.12; $M_{\phi\phi}$1.71±.11; $M_{r\theta}$0.62±.23; $M_{\theta\phi}$1.10±.10; $M_{\phi r}$-0.68±.23; Best double couple: $M_0$2.52500×10^{16} NP1:ϕ_s239.00000°,δ66.00000°,λ6.00000°. NP2: ϕ_s147.00000°,δ84.00000°,λ156.00000°. Principal axes: T 2.1780, Plg21.0000°, Azm101.0000°; N 0.6890, Plg66.0000°, Azm314.0000°; P -2.8720, Plg12.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **14** 22:56:20.0±0.8,5°S±4°×15°3E±°,h58^{km}±6^{km},M4.8/24, mB5.2/11,mb4.9/24,MLv5.2/3,Mw(mB)4.6/11*

ISC 14 22:56:17.3±0.3**,5°.45S**±0°.04×**153°.07E**±0°.05**,h37**^{km}**,n253,** σ1^{s}.**68**/252**,mb4.9**/65**,MS3.8**/23**,9C-1D,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.54	324	Pn	Pn	22 56 42.4	+0.2
RABL	Rabaul	1.54	324	P	Pn	22 56 43.4	+1.2
MANU	Manus Island	6.62	301	Pn	Pn	22 57 52.2	+0.1
PMG	Port Moresby	7.06	236	Pn	Pn	22 57 58.3	+0.2
	18nm,0.3s,baz=57,slow=8.5,SNR=38						
PMG				Sn	Sn	22 59 18.8	+1.7
	23nm,0.3s,baz=9.1,slow=19,SNR=13						
PMG	Port Moresby	7.06	236	P	Pn	22 57 58.0	-0.1
PMG	Port Moresby	7.06	236	Pn	Pn	22 57 58.0	-0.1
PMG	Port Moresby	7.06	236	P	Pn	22 57 58.3	+0.2
PMG	Port Moresby	7.06	236	P	Pn	22 57 58.2	+0.2
HNR	Honiara	7.89	121	Pn	Pn	22 58 10.2	+0.7
	12nm,0.3s,baz=93,slow=11,SNR=3.9						
HNR				LR	LR	23 01 01.8	
	comp=Z,844nm,20.3s,baz=292,slow=37						
HNR	Honiara	7.89	121	P	Pn	22 58 10.1	+0.6
HNR	Honiara	7.89	121	Pn	Pn	22 58 10.1	+0.6
COEN	Coen	12.90	228	Pn	Pn	22 59 16.5	-1.7
COEN	Coen	12.90	228	P	Pn	22 59 17.7	-0.5
GENI	Genyem	13.17	282	P	Pn	22 59 22.6	+0.7
	4μm72nm,1.5s						
PATS	Pohnpei	13.28	23	Pn	Pn	22 59 20.9	-2.4
PATS	Pohnpei	13.28	23	P	Pn	22 59 24.7	+1.4
CTA	Charters Tower	15.99	204	Pn	Pn	23 00 00.4	+0.8
	0.7nm,0.3s,baz=30,slow=13,SNR=12						
CTAO	Charters Tower	15.99	204	P	Pn	22 59 59.5	-0.1
CTAO				pmax	pmax		
	comp=Z,30nm,0.9s						
CTAO	Charters Tower	15.99	204	Pn	Pn	22 59 59.5	-0.1
CTAO	Charters Tower	15.99	204	P	Pn	23 00 01.0	+1.4
SANVU	Saraoutou	17.08	127		Pn	23 00 13.1	-0.2
DVP	Devils Point	19.17	131	P	Pn	23 00 39.6	+0.7
RTV	Rentapao	19.39	131	P	Pn	23 00 43.3	+1.8
	comp=Z,886μm,1.3s						
EIDS	Eidsvold	19.90	185	P	P	23 00 46.0	+0.3
QIS	Mount Isa	19.92	220	P	Pn	23 00 47.2	-0.6
LIFNC	LIFOU	20.53	139	P	Pn	23 00 53.8	-1.2
LIFNC	LIFOU	20.53	139	P	Pn	23 00 55.5	+0.5
GUMO	Guam	20.59	337	LR	LR	23 08 33.5	
	comp=Z,142nm,18.2s,baz=114,slow=36						
FAKI	Fak Fak	20.91	276	P	P	23 00 53.9	-2.9
	comp=Z,34nm,1.0s						
FAKI	Fak Fak	20.91	276	P	P	23 00 56.1	-0.7
NOUC	Port Laguerre	20.93	144	P	Pn	23 01 00.3	+0.7
DZM	Mont Dzumac	20.99	143	eP	P	23 00 57.8	+0.1
	comp=Z,231nm,1.2s						
DZM				eLR	LR	23 05 56.6	
	comp=Z,615nm,25.4s						
DZM	Mont Dzumac	20.99	143	P	P	23 00 58.6	+0.9
	comp=Z,63nm,0.5s,baz=351,slow=20,SNR=30						
DZM				LR	LR	23 08 00.4	
	comp=Z,416nm,18.9s,baz=53,slow=34						
DZM	Mont Dzumac	20.99	143	P	P	23 00 57.8	+0.1
DZM				IAmb	IAmb	23 01 01.9	
	comp=Z,72nm,0.8s						
DZM	Mont Dzumac	20.99	143	P	Pn	23 00 59.1	-1.3
ONTNC	Ouen Toro	21.18	144	P	P	23 01 00.3	+0.7
ONTNC				IAmb	IAmb	23 01 11.2	
	comp=Z,81nm,0.8s						
YATNC	Mamie plateau,	21.25	142	P	P	23 01 03.0	+2.6
RMQ	Roma	21.32	191	P	P	23 01 02.0	+0.9
OUENC	Ouen Island, N	21.50	143	P	P	23 01 03.5	+0.6
OUENC				IAmb	IAmb	23 01 07.3	
	comp=Z,64nm,0.7s						
OUENC	Ouen Island, N	21.50	143	P	P	23 01 06.1	+3.1
MARNC	Mare, Loyalty	21.55	139	P	P	23 01 04.2	+0.7
PINNC	Pines Island,	22.01	142	P	P	23 01 08.1	-0.4
SIJI	Sorong	22.23	281	P	P	23 01 11.9	+0.9
	comp=Z,18nm,0.6s,baz=79,slow=11,SNR=12						
SWI	Sorong	22.24	281	P	P	23 01 11.1	0.0
	comp=Z,56nm,0.7s						
MTN	Manton Dam	22.85	250	P	P	23 01 16.1	-1.5
MTN				IAmb	IAmb	23 01 41.2	
	comp=Z,30nm,0.8s						
WB0	Warramunga Arr	23.08	230	P	P	23 01 18.2	-1.8
WB0				IAmb	IAmb	23 01 27.9	
	comp=Z,70nm,1.1s						
WR0	Warramunga Arr	23.08	230	P	P	23 01 18.6	-1.3
WR0				IAmb	IAmb	23 01 48.6	
	comp=Z,35nm,0.9s						
WRAB	Tennant Creek	23.21	230	ceP	P	23 01 20.9	-0.3
WRAB				pmax	pmax		
	comp=Z,32nm,1.3s						
WRAB	Tennant Creek	23.21	230	P	P	23 01 19.0	-2.2
WRAB				IAmb	IAmb	23 01 29.1	
	comp=Z,75nm,1.4s						
WRAB	Tennant Creek	23.21	230	P	P	23 01 21.0	-0.3
WB2	Warramunga Arr	23.22	230	P	P	23 01 19.6	-1.7
WB2				IAmb	IAmb	23 01 38.5	
	comp=Z,75nm,1.3s						
WRA	Warramunga Arr	23.23	230	P	P	23 01 20.8	-0.6
	comp=Z,7.3nm,0.5s,baz=53,slow=9.7,SNR=91						
WRA				PcP	PcP	23 05 10.6	+1.9
	comp=Z,1.4nm,0.6s,baz=131,slow=2.9,SNR=4.9						
WRA				LR	LR	23 10 05.2	
	comp=Z,326nm,21.3s,baz=60,slow=36						
WRA	Warramunga Arr	23.23	230	P	P	23 01 19.2	-2.2
WRA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WRA	Warramunga Arr	23.23	230	P	P	23 01 19.2	-2.2
ARMA	Armidale	24.88	183	P	P	23 01 36.9	+0.1
INKA	Innaminka	25.08	206	P	P	23 01 39.2	+0.8
AS31	Alice Springs	25.86	224	P	P	23 01 44.3	-1.4
ASAR	Alice Springs	25.86	224	P	P	23 01 45.4	-0.3
	comp=Z,6.3nm,0.6s,baz=55,slow=9.1,SNR=50						
ASAR				PcP	PcP	23 05 16.8	+2.4
	comp=Z,3.1nm,0.7s,baz=64,slow=2.4,SNR=6.4						
ASAR	Alice Springs	25.86	224	P	P	23 01 44.2	-1.5
ASAR	Alice Springs	25.86	224	P	P	23 01 44.1	-1.5
KNRA	Kununurra	25.93	245	P	P	23 01 44.6	-1.7
KNRA				IAmb	IAmb	23 02 22.9	
	comp=Z,38nm,0.7s						
KNRA	Kununurra	25.93	245	P	P	23 01 46.7	+0.4
LBMI	Labuha	25.96	280	P	P	23 01 45.1	-1.6
	comp=Z,40nm,0.9s						
CMSA	Cobar Meteorol	26.86	194	P	P	23 01 54.2	-0.4
SANI	Sanana	27.23	276	P	P	23 01 56.5	-1.6
	comp=Z,23nm,0.7s						
MSVF	Nonsavu	27.30	119	P	P	23 01 57.6	-1.2
	comp=Z,8.0nm,0.8s,baz=249,slow=12,SNR=7.2						
MSVF				LR	LR	23 13 18.1	
	comp=Z,225nm,19.3s,baz=312,slow=38						
MSVF	Nonsavu	27.30	119	P	P	23 01 57.9	-0.9
MSVF				pmax	pmax		
	comp=Z,52nm,1.7s						
MSVF	Nonsavu	27.30	119	P	P	23 01 57.9	-0.9
MSVF				IAmb	IAmb	23 02 12.9	
	comp=Z,52nm,1.7s						
MSVF	Nonsavu	27.30	119	P	P	23 02 01.2	+2.4
H11S3	WAKE ISLAND Hy	27.32	29	T	T	23 30 26.8	
	baz=208,slow=74,SNR=9.9						
H11S2	WAKE ISLAND Hy	27.32	29	T	T	23 30 32.8	
	baz=0.7,slow=74,SNR=7.2						
H11S1	WAKE ISLAND Hy	27.34	29	T	T	23 31 18.6	
	SNR=9.3						
OOD	Oodnadatta	27.70	215	P	P	23 02 03.5	+1.4
STKA	Stephens Creek	28.41	201	P	P	23 02 07.1	-1.3
	comp=Z,14nm,0.8s,baz=2.1,slow=9.1,SNR=24						
STKA				LR	LR	23 13 56.4	
	comp=Z,196nm,18.9s,baz=21,slow=37						
STKA	Stephens Creek	28.41	201	P	P	23 02 07.1	-1.3
STKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	Stephens Creek	28.41	201	P	P	23 02 07.1	-1.3
STKA	Stephens Creek	28.41	201	P	P	23 02 09.3	+0.9
SOEI	Soe	28.86	260	P	P	23 02 12.4	-0.4
	comp=Z,15nm,0.7s						
BATI	Baumata	29.50	259	P	P	23 02 15.9	-2.5
	comp=Z,20nm,0.7s						
FITZ	Fitzroy Crossi	29.59	243	P	P	23 02 18.7	-0.3
	comp=Z,20nm,0.6s,baz=63,slow=7.3,SNR=92						
DAV	Davao City (W)	30.12	294	LR	LR	23 13 59.7	
	comp=Z,222nm,18.1s,baz=78,slow=35						
MULG	Mulgathing	30.51	214	P	P	23 02 26.5	-0.6
WRKA	Warakurna	30.72	228	P	P	23 02 28.4	-0.7
HTT	Hallett	30.80	204	P	P	23 02 29.5	-0.1
EDFI	Ende, Flores	31.30	262	P	P	23 02 31.9	-2.5
	comp=Z,11nm,0.9s						
BBOO	Buckleboo	31.51	208	P	P	23 02 35.4	-0.5
KAPI	Kappang	33.18	269	LR	LR	23 19 39.7	
	comp=Z,48nm,18.7s,baz=116,slow=42						
FORT	Forrest	34.46	220	P	P	23 03 00.9	-0.8
FORT	Forrest	34.46	220	P	P	23 03 02.3	+0.6
PSA00	Pilbara Seismi	35.94	240	P	P	23 03 13.2	-1.4
PSA00				IAmb	IAmb	23 03 21.7	
	comp=Z,16nm,1.1s						
KMRZ	Kaimai	38.40	150	P	P	23 03 56.3	+21
MEEK	Meekatharra	39.03	234	P	P	23 03 42.0	+1.3
HAZ	Te Kaha	39.26	148	P	P	23 03 41.6	-0.7
URZ	Urewera	39.30	150	P	P	23 03 43.0	+0.3
	comp=Z,7.0nm,0.6s,baz=120,slow=22,SNR=6.2						
URZ	Urewera	39.30	150	P	P	23 03 48.1	+5.5
URZ	Urewera	39.30	150	P	P	23 03 43.4	+0.7
URZ	Urewera	39.30	150	P	P	23 03 46.2	+3.5
PKGZ	Pakihiroa	39.51	148	P	P	23 03 47.0	+2.4
MWZ	Matawai	39.57	149	P	P	23 03 47.0	+2.0
MTHZ	Maungataniwha	39.62	150	P	P	23 03 47.5	+2.1
WMGZ	Waiomatatini S	39.64	148	P	P	23 03 46.8	+1.3
BKZ	Black Stump Fm	39.70	151	P	P	23 03 49.2	+3.2
BKZ	Black Stump Fm	39.70	151	P	P	23 03 46.7	+0.6
BKZ				IAmb	IAmb	23 03 52.9	
	comp=Z,12nm,0.6s						
BKZ	Black Stump Fm	39.70	151	P	P	23 03 49.3	+3.2
PUZ	Puketiti	39.75	148	P	P	23 03 49.0	+2.5
KRHZ	Kereru	40.01	152	P	P	23 03 51.9	+3.2
CNGZ	Carnagh Statio	40.03	149	P	P	23 03 51.6	+2.8
JOW	Kunigami	40.07	324	P	P	23 03 48.1	-1.2
KAHZ	Kahuranaki	40.37	151	P	P	23 03 54.4	+2.7
TUWZ	Tuamarina	40.39	156	P	P	23 03 52.3	+0.5
BFZ	Birch Farm	40.78	153	P	P	23 03 57.5	+2.5
LTZ	Lake Taylor	40.89	158	P	P	23 03 56.9	+0.9
KHZ	Kahutara	41.06	157	P	P	23 03 59.3	+2.1
RPZ	Rata Peaks	41.28	160	P	P	23 04 01.0	+2.0
MORW	Morawa	42.15	232	P	P	23 04 05.3	-1.1
MORW				IAmb	IAmb	23 05 41.3	
	comp=Z,54nm,2.0s						
BLDU	Ballidu	42.36	229	P	P	23 04 07.2	-0.9
JNU	Nakatsue	43.75	333	P	P	23 04 18.5	-0.8
	comp=Z,19nm,0.9s,baz=127,slow=6.6,SNR=4.3						
MJAR	Matsushiro Arr	44.02	343	LR	LR	23 21 06.7	
	comp=Z,78nm,20.9s,baz=220,slow=34						
MAT	Matsushiro	44.02	343	P	P	23 04 18.5	-2.9
JTM	Tenmabayashi	47.31	348	P	P	23 04 46.3	-0.9
RAR	Rarotonga	48.28	114	P	P	23 04 55.0	-0.1
RAR				pmax	pmax		
	comp=Z,52nm,0.8s						
RAR	Rarotonga	48.28	114	P	P	23 04 55.0	-0.1
KSRS	Korea Array	48.69	333	P	P	23 04 57.8	-0.2
	comp=Z,0.9nm,0.6s,baz=148,slow=10,SNR=4.6						
KSRS				LR	LR	23 23 40.0	
	comp=Z,59nm,21.6s,baz=140,slow=34						
NJ2	Nanjing	49.51	321	eP	P	23 05 03.8	-0.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JKA	Kamikawa-asahi	50.23	350	P	P	23 05 09.4	-0.2
ASAJ	Asahikawa	50.23	350	P	P	23 05 09.8	+0.2
	comp=Z,11nm,0.8s,baz=248,slow=7.8,SNR=6.8						
ASAJ	Asahikawa	50.23	350	P	P	23 05 09.4	-0.2
ASAJ				pmax	pmax		
	comp=Z,61nm,1.6s						
USRK	Ussuriysk Ar.	52.94	341	P	P	23 05 30.7	+0.8
	comp=Z,1.9nm,0.7s,baz=148,slow=5.8,SNR=5.1						
USRK				LR	LR	23 26 20.8	
	comp=Z,43nm,20.7s,baz=159,slow=34						
USRK	Ussuriysk Ar.	52.94	341	P	P	23 05 27.5	-2.4
USRK	Ussuriysk Ar.	52.94	341	P	P	23 05 27.5	-2.4
XAN	Xi'an	57.27	317	P	P	23 06 02.3	+0.9
XAN				pP	pP	23 06 06.4	-5.4
XAN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PPT	Papeete	57.28	107	LR	LR	23 27 03.8	
	comp=Z,34nm,19.5s,baz=220,slow=32						
PPT2	Papeete2	57.28	107	eLR	LR	23 22 49.9	
	comp=Z,189nm,33.0s						
KLR	Kul'dur	57.53	344	ceP	P	23 06 02.5	-0.4
KLR				pmax	pmax		
	comp=Z,21nm,1.4s						
CMAR	Chiang Mai Arr	58.39	295	P	P	23 06 10.9	+1.4
	comp=Z,3.1nm,0.8s,baz=116,slow=5.3,SNR=15						
CMAR				LR	LR	23 30 54.0	
	comp=Z,38nm,20.1s,baz=167,slow=36						
CMAR	Chiang Mai Arr	58.39	295	P	P	23 06 10.2	+0.7
CMAR	Chiang Mai Arr	58.39	295	P	P	23 06 10.2	+0.7
PETK	Petropavlovsk-	58.46	3	P	P	23 06 09.0	-0.4
	comp=Z,4.6nm,0.5s,baz=179,slow=8.6,SNR=15						
PETK				LR	LR	23 28 05.0	
	comp=Z,40nm,21.3s,baz=169,slow=33						
CHTO	Chiang Mai	58.50	296	P	P	23 06 10.5	+0.2
CHTO				pmax	pmax		
	comp=Z,12nm,1.2s						
CHTO	Chiang Mai	58.50	296	P	P	23 06 10.5	+0.2
CHTO				IAmb	IAmb	23 06 19.1	
	comp=Z,12nm,1.2s						
HHC	Hu-ho-hao-te	59.72	324	eP	P	23 06 18.4	-0.1
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,79nm,6.7s						
LZH	Lanzhou	61.88	316	eP	P	23 06 35.3	+2.0
LZH				pP	pP	23 06 40.3	-3.2
LZH				sP	sP	23 06 44.6	-3.0
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
ZEA	Zeya	62.84	343	eP	P	23 06 24.2	-15
MA2	Magadan	64.84	359	ceP	P	23 06 53.7	+1.5
MA2				pmax	pmax		
	comp=Z,61nm,2.5s						
GTA	Gaotai	66.31	317	eP	P	23 07 04.1	+1.8
GTA				pP	pP	23 07 08.3	-4.3
GTA				sP	pwP	23 07 11.1	-5.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ULN	Ulaanbaatar	66.68	328	i P	P	23 07 04.1	-0.5
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SHL	Shillong	66.86	301	P	P	23 07 05.4	-0.8
SHL				pmax	pmax		
	comp=Z,11nm,0.7s						
SHL	Shillong	66.86	301	P	P	23 07 05.4	-0.8
SHL				IAmb	IAmb	23 07 27.0	
	comp=Z,11nm,0.7s						
SONM	Songino Array	67.01	328	P	P	23 07 07.3	+0.7
	comp=Z,2.8nm,0.8s,baz=146,slow=4.5,SNR=5.1						
SONM				LR	LR	23 35 35.7	
	comp=Z,44nm,20.3s,baz=64,slow=35						
SONM	Songino Array	67.01	328	P	P	23 07 07.1	+0.5
SONM				pmax	pmax		
	comp=Z,13nm,1.6s						
SONM	Songino Array	67.01	328	P	P	23 07 07.1	+0.5
YAK	Yakutsk	69.66	348	eP	P	23 07 23.2	+0.5
YAK				e		23 07 40.7	
YAK				eS	S	23 16 32.8	+4.5
YAK				e		23 17 24.3	
YAK				eSS	SS	23 20 58.2	+1.1
YAK				pmax	pmax		
	comp=Z,33nm,1.3s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,331nm,5.5s						
YAK				pmax	pmax		
	comp=N,254nm,4.7s						
YAK				pmax	pmax		
	comp=E,128nm,4.6s						
YAK				smax	smax		
	comp=E,105nm,3.8s						
YAK				smax	smax		
	comp=N,82nm,3.2s						
YAK	Yakutsk	69.66	348	P	P	23 07 22.3	-0.4
ZAK	Zakamensk	70.18	329	eP	P	23 07 26.6	+0.3
ZAK				pmax	pmax		
	comp=Z,13nm,1.2s						
VNDA	Vanda	72.18	178	P	P	23 07 37.0	-0.8
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
VNDA	Vanda	72.18	178	P	P	23 07 37.0	-0.8
BILL	Bilibino	73.91	5	ceP	P	23 07 47.3	-0.8
BILL				i		23 07 57.1	
BILL				e		23 10 34.2	
BILL				pmax	pmax		
	comp=Z,12nm,1.3s						
BILL	Bilibino	73.91	5	P	P	23 07 45.9	-2.2
BILL				IAmb	IAmb	23 07 57.9	
	comp=Z,9.5nm,0.8s						
WMQ	Urumqi	76.39	317	eP	P	23 08 05.8	+2.7
WMQ				pP	pP	23 08 09.4	-4.1
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,130nm,5.1s						
HYB	Hyderabad	76.95	289	i P	P	23 08 08.0	+1.3
TIXI	Tiksi	78.57	352	ceP	P	23 08 16.2	+1.7
TIXI				pmax	pmax		
	comp=Z,12nm,1.2s						
TIXI	Tiksi	78.57	352	P	P	23 08 13.1	-1.5
DGZ	Jazzator, Alta	78.76	323	i P	P	23 08 16.2	0.0
DGZ				pmax	pmax		
	comp=Z,13nm,1.3s						
SML	Sawmill	80.60	24	P	P	23 08 24.5	-1.3
SML				IAmb	IAmb	23 08 56.4	
	comp=Z,31nm,1.2s						
TRF	Thorofare Moun	80.69	22	P	P	23 08 24.4	-2.0
IMAR	Indian Mountai	80.90	19	P	P	23 08 25.8	-1.5
MK31	Makanchi Array	80.98	319	i P	P	23 08 28.2	0.0
MK31	Makanchi Array	80.98	319	P	P	23 08 27.1	-1.1
MKAR	Makanchi Array	80.98	319	P	P	23 08 28.2	0.0
	comp=Z,2.2nm,0.9s,baz=101,slow=7.8,SNR=11						
MKAR				LR	LR	23 44 26.8	
	comp=Z,42nm,19.8s,baz=64,slow=36						
MKAR	Makanchi Array	80.98	319	P	P	23 08 27.5	-0.7
MKAR	Makanchi Array	80.98	319	P	P	23 08 27.5	-0.7
MAKZ	Makanchi	81.19	319	P	P	23 08 28.5	-0.8
MAKZ				pmax	pmax		
	comp=Z,21nm,1.1s						
MAKZ	Makanchi	81.19	319	P	P	23 08 28.5	-0.8
MAKZ				IAmb	IAmb	23 08 43.2	
	comp=Z,21nm,1.1s						
RND	Reindeer	81.22	23	P	P	23 08 26.9	-2.2
RND				pmax	pmax		
	comp=Z,42nm,1.6s						

RND	Reindeer	81.22	23	P	P	23 08 26.9	-2.2
RND				IAmb	IAmb	23 09 31.9	
	comp=Z,42nm,1.6s						
MCK	McKinley	81.35	22	P	P	23 08 26.7	-3.1
MCK				pmax	pmax		
	comp=Z,33nm,1.3s						
MCK	McKinley	81.35	22	P	P	23 08 26.7	-3.1
MCK				IAmb	IAmb	23 08 59.0	
	comp=Z,33nm,1.3s						
MLY	Manley	81.39	21	P	P	23 08 28.2	-1.7
MLY				IAmb	IAmb	23 09 17.5	
	comp=Z,52nm,2.0s						
DHY	Denali Highway	81.62	23	P	P	23 08 30.5	-0.9
M24K	Tolsona, Glenn	81.63	25	P	P	23 08 29.7	-1.7
ZAA0	Zalesovo Array	81.83	326	P	P	23 08 30.7	-1.8
ZALV	Zalesovo Beam	81.83	326	P	P	23 08 31.7	-0.8
	comp=Z,7.0nm,0.8s,baz=112,slow=6.1,SNR=16						
ZALV				LR	LR	23 45 10.2	
	comp=Z,33nm,21.7s,baz=80,slow=36						
ZALV	Zalesovo Beam	81.83	326	P	P	23 08 30.2	-2.3
ZALV	Zalesovo Beam	81.83	326		P	23 08 30.2	-2.3
ILAR	Eielson Array	82.65	22	P	P	23 08 34.2	-2.4
	comp=Z,3.2nm,0.9s,baz=259,slow=5.2,SNR=16						
ILAR				LR	LR	23 40 19.4	
	comp=Z,100nm,20.7s,baz=184,slow=32						
ILAR	Eielson Array	82.65	22	P	P	23 08 33.9	-2.7
ILAR	Eielson Array	82.65	22	P	P	23 08 33.9	-2.7
KSH	Kashi	83.55	311	P	P	23 08 43.4	+1.4
KSH				pP	PcP	23 08 48.3	+2.1
KSH				sP	pP	23 08 50.8	-1.9
KSH				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TOLK	Toolik Lake Re	83.74	18		P	23 08 41.9	-0.3
TOLK				IAmb	IAmb	23 08 56.6	
	comp=Z,33nm,2.0s						
KURK	Kurchatov	84.44	322	*ce*P	P	23 08 46.8	+0.8
KURK				pmax	pmax		
	comp=Z,14nm,1.3s						
KURK	Kurchatov	84.44	322	P	P	23 08 45.4	-0.6
KURK				IAmb	IAmb	23 08 59.4	
	comp=Z,14nm,1.0s						
QSPA	South Pole Qui	84.52	180	P	P	23 08 46.6	+0.2
BMAR	Burnt Mountain	84.76	20	P	P	23 08 46.8	-0.6
MAW	Mawson	85.08	203	P	P	23 08 48.7	-0.2
	comp=Z,2.7nm,0.6s,baz=76,slow=7.1,SNR=9.5						
MAW	Mawson	85.08	203	P	P	23 08 48.8	-0.2
MAW				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MAW	Mawson	85.08	203	P	P	23 08 48.8	-0.2
MAW				IAmb	IAmb	23 10 46.4	
	comp=Z,7.9nm,0.9s						
AAK	Ala-Archa	85.30	313	*i* P	P	23 08 50.6	-0.2
AAK				pmax	pmax		
	comp=Z,14nm,1.1s						
AAK	Ala-Archa	85.30	313	P	P	23 08 51.5	+0.8
AAK				IAmb	IAmb	23 09 06.7	
	comp=Z,10.0nm,0.9s						
NRIK	Noril'sk	86.66	341	P	P	23 08 56.6	0.0
	comp=Z,5.5nm,0.6s,baz=102,slow=4.4,SNR=8.6						
NRIK	Noril'sk	86.66	341	*ce*P	P	23 08 56.9	+0.2
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NRIK	Noril'sk	86.66	341		P	23 08 56.5	-0.1
NRIK				IAmb	IAmb	23 08 59.4	
	comp=Z,5.9nm,0.7s						
INK	Inuvik	88.96	21	P	P	23 09 06.7	-0.9
	comp=Z,2.6nm,0.9s,baz=205,slow=6.6,SNR=5.7						
INK	Inuvik	88.96	21	P	P	23 09 06.5	-1.2
INK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
INK	Inuvik	88.96	21	P	P	23 09 06.5	-1.2
INK				IAmb	IAmb	23 09 52.7	
	comp=Z,6.8nm,1.2s						
BRVK	Borovoye	89.98	323	*ce*P	P	23 09 11.5	-1.3
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	Borovoye	89.98	323	P	P	23 09 11.1	-1.8
BRVK				IAmb	IAmb	23 09 30.6	
	comp=Z,12nm,1.2s						
NVAR	Mina Array Bea	92.27	52	P	P	23 09 21.7	-2.4
	comp=Z,0.2nm,0.3s,baz=260,slow=5.9,SNR=3.9						
NVAR				LR	LR	23 44 08.0	
	comp=Z,155nm,19.6s,baz=271,slow=31						
SYO	Syowa Base	93.15	199	⇑*e*P	P	23 09 26.2	-1.0
SYO	Syowa Base	93.15	199	⇓*e*PcP	PcP	23 09 28.8	+1.0
YKA	Yellowknife Ar	95.87	28	P	P	23 09 37.7	-2.0
	comp=Z,1.9nm,1.0s,baz=272,slow=4.5,SNR=6.4						
YKA				LR	LR	23 48 53.9	
	comp=Z,114nm,20.1s,baz=0.0,slow=33						
ABKAR	Akbulak array	96.13	319	P	P	23 09 39.0	-2.2
ARU	Arti	97.00	326	P		23 09 45.6	
ARU						23 13 40.7	
ARU				S	SKSac	23 20 21.1	+2.0
ARU				SS	SS	23 27 48.5	+6.8
PDAR	Pinedale Array	99.08	48	LR	LR	23 50 44.9	
	comp=Z,185nm,18.3s,baz=304,slow=33						
MNK	Minsk	114.28	328	*i* P	Pdif	23 11 07.4	+5.4
MNK				*i*		23 14 51.8	
MNK				*i*		23 15 46.8	
MNK				*i* PPP	PPP	23 18 11.1	
MNK				*i*		23 22 02.8	
MNK				*i* PS	SP	23 25 17.1	-4.3
MNK				*i* SS	SS	23 31 38.1	+1.0
MNK				*i* SSS	SSS	23 35 52.5	
MNK				pmax	pmax		
	comp=N,9.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,5.0nm,1.4s						
MNK				MLR	MLR		
	comp=Z,130nm,22.0s						
MNK				MLR	MLR		
	comp=N,220nm,25.0s						
MNK				MLR	MLR		
	comp=E,7.0nm,17.0s						
MNK	Minsk	114.28	328	*i* P	Pdif	23 11 07.4	+5.4
	comp=E,5.0nm,1.4s						
MNK				*i* LR	LR	00 01 56.0	
MNK				*i* LRM	MLR	00 03 20.8	
	comp=Z,130nm,22.4s						
MNK				*i* LRM	MLR	00 03 25.8	
	comp=N,220nm,25.3s						
MNK				*i* LRM	MLR	00 03 30.1	
	comp=E,7.0nm,16.7s						
MNK				*i* P	Pdif	23 11 07.4	+5.4
	comp=N,9.0nm,1.0s						
MNK				*i* P	Pdif	23 11 07.4	+5.4
	comp=Z,6.0nm,0.8s,baz=64						
MNK				*i* PKP	PKPdf	23 14 51.9	-1.0
MNK				*i* PP	PP	23 15 46.9	-1.5
MNK				*i* PPP	PPP	23 18 11.2	
MNK				*i* SKS	SKSdf	23 22 02.9	+0.7
MNK				*i* PS	SP	23 25 17.1	-4.2
MNK				*i* SS	SS	23 31 38.1	+1.1
MNK				*i* SSS	SSS	23 35 52.5	
FRB	Frobisher Bay	114.55	19	PKP	PKiKP	23 14 52.5	-0.6
	comp=Z,1.9nm,0.9s,baz=311,slow=2.7,SNR=5.9						
AKASG	Malin Array Be	115.17	324	PKP	PKiKP	23 14 54.3	-0.4
	comp=Z,1.0nm,0.5s,baz=57,slow=2.7,SNR=4.6						
AKASG	Malin Array Be	115.17	324	*i* PKIKP	PKiKP	23 14 53.4	-1.3
AKASG	Malin Array Be	115.17	324		PKiKP	23 14 53.4	-1.3
PLCA	Paso Flores	119.11	143	PKP	PKPdf	23 15 02.6	-0.2
	comp=Z,1.1nm,0.6s,baz=222,slow=0.9,SNR=4.3						
PLCA	Paso Flores	119.11	143	PKIKP	PKPdf	23 15 02.3	-0.5
PLCA	Paso Flores	119.11	143		PKPdf	23 15 02.3	-0.5
BOSA	Boshof	119.45	233	PKP	PKiKP	23 15 06.7	+2.8
	comp=Z,1.1nm,0.6s,baz=166,slow=6.9,SNR=4.7						
BOSA	Boshof	119.45	233	PKIKP	PKiKP	23 15 05.7	+1.8
BOSA	Boshof	119.45	233	PKPdf	PKiKP	23 15 05.7	+1.8
MODS	Modra-Piesok	123.10	326	*e*PKP	PKPdf	23 15 10.0	-0.1
CLL	Collm	123.54	331	*i* PKIKP	PKiKP	23 15 11.8	+0.8
CLL				*e*		23 15 24.0	
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CLL	Collm	123.54	331	*i* PKPdf	PKiKP	23 15 11.8	+0.8
	comp=Z,4.0nm,0.7s						
CLL				*e*pPKPdf	sPKPdf	23 15 24.0	-1.8
CONA	Conrad Observa	124.13	326	*e*P	PKiKP	23 15 13.9	+1.4
	comp=Z,2.0nm,0.6s						
KHC	Kasperske Hory	124.63	329	*e*PKIKP	PKiKP	23 15 14.0	+0.7
KHC	Kasperske Hory	124.63	329	*e*PKPDF	PKiKP	23 15 14.0	+0.7
GERES	GERESS Array B	124.74	328	PKP	PKiKP	23 15 13.5	-0.1
	comp=Z,2.1nm,0.6s,baz=86,slow=1.9,SNR=23						
GERES	GERESS Array B	124.74	328	PKIKP	PKPdf	23 15 12.8	-0.5
GERES	GERESS Array B	124.74	328	PKPdf	PKPdf	23 15 12.8	-0.5
KBA	Koelnbreinsper	126.01	327	*i* P	PKiKP	23 15 16.5	+0.1
	comp=Z,3.0nm,0.6s						
ABTA	Abfaltersbach	126.66	327	*e*P	PKiKP	23 15 18.1	+0.6
	comp=Z,5.9nm,1.1s						
WATA	Walderalm	126.80	328	*e*P	PKiKP	23 15 18.7	+0.8
	comp=Z,3.4nm,0.7s						
WTTA	Wattenberg	126.81	328	*e*P	PKiKP	23 15 19.2	+1.3
	comp=Z,6.2nm,0.8s						
MOTA	Moosalm	127.04	328	*e*P	PKiKP	23 15 19.3	+1.0
	comp=Z,3.6nm,0.7s						
SQTA	Sankt Quirin	127.06	328	*e*P	PKiKP	23 15 19.4	+1.1
	comp=Z,4.5nm,0.7s						
FETA	Feichten	127.44	328	*e*P	PKiKP	23 15 20.4	+1.2
	comp=Z,4.8nm,0.9s						
DAVA	Damuels	127.71	329	*e*P	PKiKP	23 15 21.6	+1.9
	comp=Z,3.6nm,0.8s						
LPAZ	La Paz	133.88	119	PKP	PKiKP	23 15 32.9	-0.7
	comp=Z,3.2nm,0.6s,baz=272,slow=2.9,SNR=13						
LPAZ	La Paz	133.88	119	PKIKP	PKPdf	23 15 31.8	-0.4
LPAZ	La Paz	133.88	119	PKPdf	PKPdf	23 15 31.8	-0.4
CPUP	Villa Florida	136.81	138	PKP	PKiKP	23 15 37.7	-0.8
	comp=Z,3.6nm,0.9s,baz=285,slow=2.9,SNR=3.1						
PTLB	Pontes e Lacer	141.94	124	PKPdf	PKPdf	23 15 44.0	-2.3
BDFB	Brasilia	150.42	135	PKP	PKPdf	23 16 02.2	+1.4
	comp=Z,24nm,0.8s,baz=179,slow=1.0,SNR=18						
BDFB				PKPbc	PKiKP	23 16 06.6	-0.2
	comp=Z,13nm,0.9s,baz=26,slow=9.7,SNR=6.2						
BDFB	Brasilia	150.42	135	PKIKP	PKPdf	23 16 02.0	+1.2
BDFB	Brasilia	150.42	135		PKPdf	23 16 02.0	+1.2
TORD	Torodi Ar. Bea	150.75	287	PKPbc	PKPbc	23 16 06.2	-0.5
	comp=Z,15nm,0.7s,baz=34,slow=3.1,SNR=32						
TORD	Torodi Ar. Bea	150.75	287		PKPbc	23 16 04.5	-2.2
DBIC	Dimbokro	158.01	274	PKPab	PKPab	23 16 47.5	+2.7
	comp=Z,1.4nm,0.6s,baz=78,slow=11,SNR=1.7						

THE ***14*** *23:01:33.9, 38°.52N×20°.54E, h10^{km}±1^{km}, ML2.7/9, Error ellipse: s-maj=1.6km s-min=0.4km az=74.0*

ATH ***14*** *23:01:33.8, 38°.53N×20°.56E, h14^{km}±1^{km}, ML2.3/15, Error ellipse: s-maj=1.7km s-min=0.5km az=284.0*

ISC 14 23:01:32.6±0.8**, 38°.54N**±0°.02×**20°.50E**±0°.03**, h18**^{km}±2^{km}**, n54,** σ**1^{s}.26**/89**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.10	151	P	Pb	23 01 36.4	+0.2
FSK				S	Sb	23 01 37.9	-0.7
	21µm,0.2s						
EVGI	Lefkada island	0.14	57	P	Pg	23 01 37.0	+0.2
EVGI				S	Sg	23 01 39.4	-0.2
	14µm,0.1s						
EVGI	Lefkada island	0.14	57	P	Pg	23 01 37.1	+0.2
EVGI				S	Sg	23 01 39.2	-0.4
DRAG	Dragano-Lefkad	0.15	22	P	Pg	23 01 37.5	+0.5
DRAG				S	Sg	23 01 40.4	+0.6
	22µm,0.2s						
DRAG	Dragano-Lefkad	0.15	22	P	Pg	23 01 37.4	+0.5
DRAG				S	Sg	23 01 40.2	+0.3
NYDR	Nydri-Lefkada	0.23	42	P	Pg	23 01 38.4	+0.4
NYDR				S	Sg	23 01 41.8	+0.1
NYDR	Nydri-Lefkada	0.23	42	P	Pg	23 01 38.4	+0.4
LKD2	Lefkada island	0.27	26	P	Pg	23 01 39.4	+0.6
LKD2				S	Sg	23 01 43.5	+0.5
	912nm,0.2s						
LKD2	Lefkada island	0.27	26	P	Pg	23 01 39.4	+0.6
LKD2				S	Sg	23 01 43.0	0.0
LKD2				AML	AML	23 01 45.6	
	comp=N,2034µm,0.2s						
LKD2				AML	AML	23 01 48.1	
	comp=E,1966µm,0.2s						
KEF4	Livadi, Kephal	0.29	192	P	Pg	23 01 39.6	+0.6
KEF4				S	Sg	23 01 44.4	+1.1
KEF4	Livadi, Kephal	0.29	192	P	Pg	23 01 39.5	+0.6
KEF4				S	Sg	23 01 44.1	+0.8
TSLK	Tsoukalades, L	0.31	23	P	Pg	23 01 40.1	+0.8
TSLK				S	Sg	23 01 45.5	+1.7
	comp=E,912nm,0.3s						
TSLK	Tsoukalades, L	0.31	23	P	Pg	23 01 40.1	+0.8
TSLK				S	Sg	23 01 45.3	+1.5
TSLK				AML	AML	23 01 50.5	
	comp=N,2550µm,0.5s						
TSLK				AML	AML	23 01 50.6	
	comp=E,1785µm,0.2s						
LXRA	Lixouri, Kepha	0.35	189	P	Pg	23 01 40.5	+0.6
LXRA				S	Sg	23 01 46.2	+1.3
KEF3	Kipouria, Keph	0.36	200	P	Pg	23 01 40.3	+0.1
KEF3				S	Sg	23 01 45.6	+0.3
KEF3	Kipouria, Keph	0.36	200	P	Pg	23 01 40.2	+0.1
KEF3				S	Sg	23 01 45.7	+0.3
ARGA	Argostoli. Kep	0.37	183	P	Pg	23 01 41.5	+1.3
ARGA				S	Sg	23 01 46.9	+1.4
VLS	Valsamata	0.37	169	P	Pg	23 01 40.6	+0.2
VLS				S	Sg	23 01 46.0	+0.3
	comp=E,2µm,0.1s						
VLS	Valsamata	0.37	169	P	Pg	23 01 40.6	+0.2
VLS				S	Sg	23 01 46.3	+0.6
VLS				AML	AML	23 01 46.5	
	comp=N,5395µm,0.2s						
VLS				AML	AML	23 01 47.5	
	comp=E,3834µm,0.2s						
PSDA	Pessada-Kefalo	0.43	171	P	Pg	23 01 41.7	+0.2
PSDA				S	Sg	23 01 48.2	+0.8
PSDA	Pessada-Kefalo	0.43	171	P	Pg	23 01 41.6	+0.2
PSDA				S	Sg	23 01 48.3	+0.8
VTN	Vitineika	0.82	139	P	Pb	23 01 48.8	+0.3
LTHK	Lithakia	0.87	162	P	Pb	23 01 49.0	-0.3
LTHK				S	Sb	23 02 01.8	+1.3
	comp=E,352nm,0.2s						
LTHK	Lithakia	0.87	162	P	Pb	23 01 48.9	-0.3
LTHK				S	Sb	23 02 01.8	+1.3
LTHK				AML	AML	23 02 03.1	
	comp=E,583µm,0.3s						
LTHK				AML	AML	23 02 04.8	
	comp=N,812µm,0.2s						
RLS	Riolos of Patr	0.90	122	P	Pb	23 01 50.1	+0.4
RLS				S	Sn	23 02 03.2	+0.3
	comp=N,128nm,0.2s						
RLS	Riolos of Patr	0.90	122	P	Pb	23 01 49.9	+0.1
RLS				S	Sg	23 02 02.1	+0.1
RLS				AML	AML	23 02 05.5	
	comp=N,356µm,0.3s						
RLS				AML	AML	23 02 13.7	
	comp=E,218µm,0.5s						
IGT	Igoumenitsa	1.00	352	P	Pg	23 01 52.9	+0.9
IGT				S	Sg	23 02 09.0	+3.9
	comp=E,232nm,0.4s						
IGT	Igoumenitsa	1.00	352	P	Pn	23 01 52.5	+0.8
IGT				S	Sn	23 02 06.0	+0.6
IGT				AML	AML	23 02 11.0	
	comp=E,534µm,0.5s						
IGT				AML	AML	23 02 12.5	
	comp=N,384µm,0.2s						
EVR	Evrytania	1.09	70	P	Pn	23 01 53.2	+0.1
EVR				AML	AML	23 02 15.9	
	comp=N,196µm,0.5s						
EVR				AML	AML	23 02 18.7	
	comp=E,149µm,0.4s						
EFP	Efpalio	1.11	96	P	Pb	23 01 52.8	-0.5
EFP				AML	AML	23 02 17.2	
	comp=E,229µm,0.4s						
EFP				AML	AML	23 02 19.3	
	comp=N,229µm,0.4s						
DRO	Drossia	1.12	121	P	Pb	23 01 53.7	+0.2
DRO				AML	AML	23 02 13.4	
	comp=E,808µm,0.3s						
DRO				AML	AML	23 02 13.9	
	comp=N,592µm,0.3s						
JAN	Janina	1.15	14	P	Pg	23 01 55.6	+0.8
JAN				AML	AML	23 02 15.6	
	comp=N,308µm,0.2s						
JAN				AML	AML	23 02 16.8	
	comp=E,323µm,0.3s						
LAKA	Lakka	1.20	104	P	Pn	23 01 54.6	+0.1
LAKA				AML	AML	23 02 25.1	
	comp=E,138µm,0.8s						
LAKA				AML	AML	23 02 26.2	
	comp=N,104µm,0.5s						
TRIZ	Trizonia	1.25	98	P	Pb	23 01 55.5	-0.1
KEK	Kerkira	1.29	335	P	Pg	23 01 58.7	+1.1
MAKR	Makrakomi, Fth	1.36	69	P	Pg	23 01 58.5	-0.4
MAKR				AML	AML	23 02 26.4	
	comp=E,546µm,0.3s						
MAKR				AML	AML	23 02 27.9	
	comp=N,351µm,0.6s						
KLV	Kalavryta, Ach	1.39	111	P	Pn	23 01 57.7	+0.5
AGG	Agios Georgios	1.51	71	P	Pb	23 02 00.5	+0.4
AGG				AML	AML	23 02 31.6	
	comp=N,179µm,0.4s						
AGG				AML	AML	23 02 32.6	
	comp=E,135µm,0.4s						
THL	Klokotos Trika	1.56	49	P	Pb	23 02 00.9	0.0
THL				AML	AML	23 02 31.0	
	comp=E,123µm,0.5s						
THL				AML	AML	23 02 35.6	
	comp=N,112µm,0.8s						
KPRO	Kipourio	1.56	25	P	Pb	23 02 01.8	+0.8
ITM	Ithomi	1.77	140	P	Pb	23 02 05.4	+0.9
ITM				AML	AML	23 02 40.6	
	comp=N,74µm,0.4s						
ITM				AML	AML	23 02 44.1	
	comp=E,64µm,0.5s						
THAL	Thalero	1.77	106	P	Pb	23 02 04.8	+0.2
VIL2	Platees	2.20	98	P	Pb	23 02 12.7	+0.8
NEO	Neokhori	2.25	69	P	Pb	23 02 13.0	+0.2
DION	Dionisos Attik	2.74	99	P	Pb	23 02 19.6	-1.5
STON	Ston	4.82	335	*e*Pn	Pn	23 02 44.7	+0.4
STON				Sn	Sn	23 03 37.1	-2.5
LSTV	Lastovo	5.04	328	*e*Pn	Pn	23 02 47.4	+0.2
LSTV				Sn	Sn	23 03 42.0	-2.9
MAKA	Makarska	5.42	332	*e*Pn	Pn	23 02 52.7	+0.1
MAKA				Sn	Sn	23 03 50.8	-3.7
HVAR	Hvar	5.56	328	*e*Pn	Pn	23 02 55.1	+0.7
HVAR				Sn	Sn	23 03 54.9	-2.8
RICI	Ricice	5.56	334	*e*Pn	Pn	23 02 54.4	-0.1
RICI				Sn	Sn	23 03 55.1	-2.9
ZIRJ	Zirje	6.29	326	*e*Pn	Pn	23 03 04.3	-0.2
ZIRJ				Sn	Sn	23 04 12.3	-3.5
MORI	Morici	6.43	327	*e*Pn	Pn	23 03 07.2	+0.8
MORI				Sn	Sn	23 04 16.7	-2.6
DUGI	Dugi Otok	6.81	325	*e*Pn	Pn	23 03 12.1	+0.4
DUGI				Sn	Sn	23 04 25.7	-3.1
UDBI	Udbina	6.96	331	*e*Pn	Pn	23 03 14.2	+0.5
UDBI				Sn	Sn	23 04 28.8	-3.5

IDC ***14*** *23:09:52.1±3.1, 3°.60S×135°.51E, h0^{km}, mb3.3/2, mb1 3.8/4, mb1mx3.3/24, mbtmp3.6/4, ML3.9/2, Error ellipse: s-maj=99.7km s-min=28.2km az=72.0*

NEIC ***14*** *23:09:57.6±1.5, 4°.03S±0°.04×133°.78E±0°.06, h10^{km}±2^{km}, mb4.1/8, Error ellipse: s-maj=10.7km s-min=6.5km az=68.0*

ISC 14 23:09:56.3±1.1**, 4°.04S**±0°.09×**134°.4E**±0°.2**, h21**^{km}**, n16,** σ**2^{s}.93**/16**, mb4.0**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.43	297	Pn	Pn	23 10 27.3	-7.5
FAKI				Sn	Sn	23 10 52.9	-11
SIJI	Sorong	4.45	315	Pn	Pb	23 11 09.6	-4.2
	6.6nm,0.3s,baz=147,slow=9.7,SNR=14						
SIJI				Sn	Sn	23 11 57.6	+3.8
	1.8nm,0.3s,baz=164,slow=22,SNR=1.5						
MTN	Manton Dam	9.33	200		Pn	23 12 10.2	+0.5
KNRA	Kununurra	12.83	205		Pn	23 12 56.7	-1.0
KNRA					Sn	23 15 13.4	-6.5
COEN	Coen	13.11	139	Pn	P	23 13 09.2	-2.3
WB0	Warramunga Arr	15.63	180	Pn	Pn	23 13 37.4	+1.9
WB0				IAmb	IAmb	23 13 48.5	
	comp=Z,5.1nm,1.1s						
WB2	Warramunga Arr	15.81	180	Pn	Pn	23 13 40.2	+2.4
WRA	Warramunga Arr	15.81	180	Pn	Pn	23 13 40.7	+2.9
	comp=Z,0.4nm,0.3s,baz=357,slow=13,SNR=11						
WRA				Sn	Sn	23 16 28.2	-4.3
	comp=Z,0.2nm,0.3s,baz=359,slow=23,SNR=5.7						
WRA	Warramunga Arr	15.81	180		Pn	23 13 39.9	+2.1
WRA					Sn	23 16 29.5	-3.0
ASAR	Alice Springs	19.52	181	P	Pn	23 14 27.4	+3.6
	comp=Z,1.2nm,0.5s,baz=5.9,slow=11,SNR=10						
PSA00	Pilbara Seismi	22.45	218	P	P	23 14 54.2	+0.1
PSA00				IAmb	IAmb	23 14 55.8	
	comp=Z,3.0nm,1.1s						
PATS	Pohnpei	26.19	66	P	P	23 15 36.9	+7.2
BBOO	Buckleboo	28.67	177	P	P	23 15 54.9	+3.1
BBOO				IAmb	IAmb	23 16 14.7	
	comp=Z,6.1nm,0.9s						
MORW	Morawa	30.39	213	P	P	23 16 06.5	-0.6
MORW				IAmb	IAmb	23 16 15.7	
	comp=Z,9.6nm,1.1s						
SSLB	Suanglung	30.61	335	P	P	23 16 09.1	0.0
MKAR	Makanchi Array	68.29	324	P	P	23 20 56.6	+0.8
	comp=Z,0.2nm,0.6s,baz=116,slow=7.3,SNR=4.3						

IDC ***14*** *23:46:07.9±3.0, 6°.89S×129°.30E, h109^{km}±38^{km}, mb3.5/1, mb1 3.5/5, mb1mx3.1/28, mbtmp3.8/5, Error ellipse: s-maj=58.0km s-min=20.6km az=95.0*

NEIC ***14*** *23:46:11.3±2.5, 6°.77S±0°.06×129°.81E±0°.06, h167^{km}±13^{km}, mb4.0/2, Error ellipse: s-maj=10.5km s-min=6.7km az=139.0*

ISC 14 23:46:10.3±0.8**, 6°.78S**±0°.05×**129°.82E**±0°.07**, h150**^{km}**, n18,** σ**1^{s}.76**/24**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.90	129		Pn	23 46 47.2	+2.9
SAUI				Sn	Sn	23 47 11.5	+1.2
FAKI	Fak Fak	4.54	32	Pn	Pn	23 47 19.0	+1.4
FAKI				Sn	Sn	23 48 08.6	-1.5
SIJI	Sorong	6.04	14	P	Pn	23 47 38.8	+1.1
	1.1nm,0.3s,baz=258,slow=23,SNR=1.7						
SIJI				S	Sn	23 48 44.1	-1.9
	3.5nm,0.3s,baz=240,slow=22,SNR=9.4						
MTN	Manton Dam	6.17	168		Pn	23 47 40.1	+0.8
MTN				Sn	Sn	23 48 45.9	-3.0
SOEI	Soe	6.24	241		Pn	23 47 41.8	+1.4
SOEI					Sn	23 48 52.4	+1.7
KNRA	Kununurra	8.90	187		Pn	23 48 15.4	-0.4
FITZ	Fitzroy Crossi	11.97	200	P	Pn	23 48 53.1	-3.1
	0.1nm,0.3s,baz=116,slow=16,SNR=1.6						
FITZ				S	Sn	23 50 58.8	-10
	0.5nm,0.3s,baz=295,slow=18,SNR=6.6						
WB0	Warramunga Arr	13.66	161	Pn	Pn	23 49 16.1	-1.8
WRAB	Tennant Creek	13.80	162		Pn	23 49 20.4	+0.7
WRA	Warramunga Arr	13.80	162	P	Pn	23 49 18.0	-1.8
	0.5nm,0.3s,baz=339,slow=13,SNR=16						
WRA				S	Sn	23 51 43.0	-10
	0.7nm,0.3s,baz=334,slow=23,SNR=8.5						
WRA	Warramunga Arr	13.80	162		Pn	23 49 18.5	-1.3
WB2	Warramunga Arr	13.81	162	Pn	Pn	23 49 18.1	-1.8
COEN	Coen	14.95	120		Pn	23 49 34.9	+0.7
AS31	Alice Springs	17.25	167	P	P	23 50 01.3	-0.1
AS31				IAmb	IAmb	23 50 07.3	
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	17.25	167	P	Pn	23 50 03.5	+1.3
	comp=Z,0.4nm,0.3s,baz=348,slow=10,SNR=22						
ASAR				S	S	23 53 10.9	-2.7
	comp=Z,0.2nm,0.3s,baz=357,slow=24,SNR=4.8						
ASAR	Alice Springs	17.25	167	P	P	23 50 01.8	+0.3
PSA00	Pilbara Seismi	17.59	212	P	P	23 50 05.0	-0.1
PSA00				IAmb	IAmb	23 51 01.7	
	comp=Z,53nm,1.9s						
MKAR	Makanchi Array	67.94	327	P	P	23 56 53.7	+0.8
	comp=Z,0.5nm,0.4s,baz=117,slow=7.7,SNR=13						

FUNV ***14*** *23:54:01.5, 8°.48N×71°.46W, h5^{km}, MW3.7*

ISC 14 23:53:59.6±0.8**, 8°.58N**±0°.03×**71°.42W**±0°.03**, h10**^{km}**, n14,** σ**1^{s}.79**/27**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	Capacho	1.13	231	*e*P	Pg	23 54 20.5	-0.9
CAPV				*e*S	Sg	23 54 35.6	-0.7
TORV	Torococo	1.53	50	*e*P	Pg	23 54 28.8	-0.1
MCQV	Machiques	1.83	323	*e*P	Pg	23 54 34.1	-0.5
MCQV				*e*S	Sg	23 54 58.4	0.0
DABV	Dabajuro	2.45	18	*e*P	Pb	23 54 43.4	-0.4
DABV				*e*S	Sb	23 55 13.2	-0.9
ELOV	Elorza	2.48	129	*e*P	Pb	23 54 42.1	-2.2
ELOV				*e*S	Sb	23 55 13.9	-1.0
ELOV	Elorza	2.48	129	*e*P	Pb	23 54 41.9	-2.4
ELOV				*e*S	Sn	23 55 11.1	+0.6
SIQV	Siquisique	2.60	38	*e*P	Pb	23 54 44.5	-1.8
SIQV				*e*S	Sb	23 55 16.4	-1.9
BARC	Barichara	2.64	222	*e*P	Pb	23 54 47.3	+0.2

BARC				*e*S	Sg	23 55 22.4	-2.0
BARC				*i*		23 55 27.3	
	comp=Z,115nm,0.4s						
BRRC	Barranca, Sant	2.70	237	*e*P	Pn	23 54 44.9	+1.7
BRRC				*e*S	Sb	23 55 23.2	+1.9
CRJC	Cerrejon, Guaj	2.82	329	*e*P	Pb	23 54 47.4	-2.7
CRJC				*e*S	Sb	23 55 22.9	-1.8
MAPV	Macapo	3.18	67	*e*P	Pn	23 54 51.0	+1.3
MAPV				*e*S	Sn	23 55 30.5	+2.8
BAUV	El Baul	3.36	84	*e*P	Pn	23 54 54.9	+2.7
BAUV				*e*S	Sn	23 55 33.4	+1.2
MONV	Montecano	3.64	23	*e*P	Pn	23 54 59.1	+3.0
MONV				*e*S	Sn	23 55 40.6	+1.4
BENV	Beln	4.01	70	*e*P	Pn	23 55 03.3	+2.0
BENV				*e*S	Sn	23 55 48.5	+0.1

*IDC **15** 00:03:47.8±0.5, 47°.60S×85°.16E, h0^{km}, mb4.5/13, mb1 4.6/13, mb1mx4.2/38, mbtmp4.5/13, MS3.9/7, Ms1 3.9/7, ms1mx3.6/32, Error ellipse: s-maj=21.3km s-min=15.3km az=119.0*

*BJI **15** 00:03:47.3±0.0, 47°.55S×84°.63E, h7^{km}, mB5.1/17, mb4.9/36, Ms5.4/3, Ms7 5.2/5*

*NEIC **15** 00:03:49.0±1.1, 47°.7S±0°.1×85°.0E±0°.1, h10^{km}±1^{km}, mb4.9/45, Error ellipse: s-maj=17.8km s-min=15.2km az=328.0*

ISC 15 00:03:49.1±0.3**, 47°.65S**±0°.07×**85°.08E**±0°.07**, h10^{km}, n163, σ0^{s}69**/160**, mb4.9**/51**, MS3.9**/8**, 3C-1D, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAF	Port-aux-Franc	10.02	255	Pn	Pn	00 06 10.2	-2.8
MAW	Mawson	23.02	202	P	P	00 08 53.8	-0.1
	9.8nm,1.0s,baz=40,slow=14,SNR=13						
MAW				LR	LR	00 16 14.0	
	comp=Z,235nm,20.1s,baz=60,slow=32						
MAW	Mawson	23.02	202	P	P	00 08 52.8	-1.1
H01W2	Cape Leeuwin H	25.11	70	T	T	00 35 09.8	
	baz=230,slow=75,SNR=3.9						
H01W3	Cape Leeuwin H	25.13	70	T	T	00 35 14.3	
	baz=230,slow=75,SNR=4.8						
H01W1	Cape Leeuwin H	25.13	70	T	T	00 35 16.2	
	baz=230,slow=75,SNR=4.8						
SYO	Syowa Base	30.90	210	⇑*e*pP	pP	00 10 08.5	+1.2
FORT	Forrest	36.78	78	P	P	00 10 56.8	-0.1
FORT				IAmb	IAmb	00 11 11.4	
	comp=Z,12nm,1.0s						
PSA00	Pilbara Seismi	38.15	59	P	P	00 11 07.6	-1.0
VNDA	Vanda	41.17	161	P	P	00 11 33.6	+0.5
	comp=Z,8.2nm,0.8s,baz=277,slow=8.7,SNR=42						
VNDA				PcP	PcP	00 13 32.1	+0.1
	comp=Z,1.9nm,0.9s,baz=284,slow=4.2,SNR=2.9						
VNDA				LR	LR	00 27 51.2	
	comp=Z,151nm,18.2s,baz=282,slow=35						
VNDA	Vanda	41.17	161	P	P	00 11 32.9	-0.2
DGAR	Diego Garcia	41.51	341	P	P	00 11 35.8	-0.7
SBA	Scott Base	42.21	162	P	P	00 11 42.6	+1.1
QSPA	South Pole Qui	42.51	180	P	P	00 11 45.0	+0.6
	comp=Z,22nm,0.7s,baz=294,slow=2.7,SNR=65						
QSPA	South Pole Qui	42.51	180	P	P	00 11 44.5	+0.1
QSPA				IAmb	IAmb	00 11 46.0	
	comp=Z,24nm,0.8s						
TOO	Toolangi	44.55	100	P	P	00 12 01.4	+0.3
LEM	Lembang	44.99	33	LR	LR	00 26 21.2	
	comp=Z,69nm,21.0s,baz=162,slow=30						
SNAA	Sanae	45.04	207	P	P	00 12 05.3	+0.8
SNAA	Sanae	45.04	207	P	P	00 12 05.2	+0.7
	comp=Z,2.6nm,0.6s,baz=122,slow=12,SNR=26						
SNAA	Sanae	45.04	207	P	P	00 12 04.1	-0.4
STKA	Stephens Creek	45.20	91	P	P	00 12 06.3	0.0
	comp=Z,7.6nm,0.8s,baz=219,slow=4.3,SNR=15						
STKA				PcP	PcP	00 13 45.3	-1.0
	comp=Z,2.8nm,0.8s,baz=191,slow=5.2,SNR=5.0						
STKA	Stephens Creek	45.20	91	P	P	00 12 05.9	-0.3
ASAR	Alice Springs	45.39	76	P	P	00 12 07.8	-0.1
	comp=Z,7.7nm,0.7s,baz=223,slow=7.0,SNR=93						
ASAR				PcP	PcP	00 13 46.0	-1.1
	comp=Z,2.7nm,0.8s,baz=210,slow=2.8,SNR=10						
ASAR	Alice Springs	45.39	76	P	P	00 12 07.1	-0.7
AS31	Alice Springs	45.39	76	P	P	00 12 07.4	-0.5
VNA2	Neumayer--Watz	46.67	207	P	P	00 12 18.1	+0.8
	baz=104,slow=7.0						
VNA1	Neumayer--Stat	47.04	207	P	P	00 12 21.1	+0.9
VNA3	Neumayer Olymp	47.23	206	P	P	00 12 22.6	+0.9
KNRA	Kununurra	48.02	64	P	P	00 12 28.1	-0.3
KNRA				IAmb	IAmb	00 12 29.5	
	comp=Z,7.4nm,0.7s						
WRA	Warramunga Arr	48.32	73	P	P	00 12 30.6	-0.2
	comp=Z,9.9nm,0.8s,baz=222,slow=7.3,SNR=57						
WRA				PcP	PcP	00 13 56.2	-1.2
	comp=Z,2.1nm,0.7s,baz=228,slow=3.3,SNR=12						
WRA	Warramunga Arr	48.32	73	P	P	00 12 30.9	+0.1
WB2	Warramunga Arr	48.33	73	P	P	00 12 30.8	-0.1
WB2				IAmb	IAmb	00 12 31.6	
	comp=Z,13nm,0.9s						
WR0	Warramunga Arr	48.44	73	P	P	00 12 30.3	-1.4
WR0				IAmb	IAmb	00 12 32.4	
	comp=Z,11nm,0.9s						
WB0	Warramunga Arr	48.48	73	P	P	00 12 31.7	-0.3
WB0				IAmb	IAmb	00 12 32.7	
	comp=Z,12nm,0.7s						
KAAM	Kaadhehdhoo	49.09	344	P	P	00 12 36.2	-0.4
BOSA	Boshof	49.47	270	P	P	00 12 40.8	+1.1
	comp=Z,1.6nm,0.6s,baz=130,slow=7.9,SNR=3.4						
BOSA				LR	LR	00 28 51.7	
	comp=Z,112nm,21.4s,baz=185,slow=30						
RPSI	Rantau Prapat	51.58	18	P	P	00 12 55.7	+0.2
RPSI				IAmb	IAmb	00 12 58.3	
	comp=Z,6.8nm,0.8s						
MTN	Manton Dam	51.65	64	P	P	00 12 56.0	-0.1
MTN				IAmb	IAmb	00 12 57.1	
	comp=Z,12nm,0.7s						
PSI	Prapat	51.68	18	LR	LR	00 31 08.6	
	comp=Z,100nm,19.5s,baz=204,slow=32						
ARMA	Armidale	52.87	96	P	P	00 13 05.7	+0.5
ARMA				IAmb	IAmb	00 13 07.1	
	comp=Z,14nm,0.8s						
SBUM	Sibu	55.26	34	P	P	00 13 21.9	-0.6
WKZ	Wanaka	55.36	121	P	P	00 13 22.2	-0.8
WKZ				IAmb	IAmb	00 13 32.8	
	comp=Z,17nm,1.0s						
EIDS	Eidsvold	55.76	91	P	P	00 13 25.8	-0.3
EIDS				IAmb	IAmb	00 13 27.4	
	comp=Z,9.2nm,0.8s						
CTAO	Charters Tower	56.08	83	P	P	00 13 28.2	-0.4
CTAO				IAmb	IAmb	00 13 29.3	
	comp=Z,8.5nm,0.8s						
FOZ	Fox Glacier	56.58	120	P	P	00 13 32.6	+0.9
LSZ	Lusaka	56.68	285	P	P	00 13 33.8	+0.9
LSZ				IAmb	IAmb	00 13 40.5	
	comp=Z,8.2nm,1.1s						
SRIT	Nakonsritamara	57.46	17	P	P	00 13 38.0	-0.2
TOLI2	Tolitoli	57.67	44	P	P	00 13 39.1	-0.6
TOLI2				IAmb	IAmb	00 13 40.1	
	comp=Z,20nm,0.9s						
FAKI	Fak Fak	60.24	58	P	P	00 13 57.5	-0.2
FAKI				IAmb	IAmb	00 13 59.2	
	comp=Z,11nm,0.7s						
CMWZ	Cape Campbell	60.24	120	P	P	00 13 58.0	+0.6
SMAI	San Martin Ant	62.68	191	P	P	00 14 13.4	+0.1
BKZ	Black Stump Fm	63.23	119	P	P	00 14 16.6	-1.0
BKZ				IAmb	IAmb	00 14 18.1	
	comp=Z,9.3nm,0.7s						
OUZ	Omahuta	64.07	114	P	P	00 14 22.9	-0.1
PMG	Port Moresby	64.40	75	LR	LR	00 39 42.5	
	comp=Z,303nm,20.1s,baz=314,slow=34						
PMG	Port Moresby	64.40	75	P	P	00 14 24.2	-1.3
PMG				IAmb	IAmb	00 14 26.7	
	comp=Z,12nm,0.9s						
ORCD	Orcadas	64.60	205	P	P	00 14 25.8	-0.4
HYB	Hyderabad	65.03	353	*i* P	P	00 14 29.5	+0.1
CMAR	Chiang Mai Arr	66.96	14	P	P	00 14 42.2	+0.4
	comp=Z,4.7nm,0.9s,baz=212,slow=6.2,SNR=22						
CHTO	Chiang Mai	67.31	14	P	P	00 14 43.1	-1.0
CHTO				IAmb	IAmb	00 14 44.8	
	comp=Z,3.3nm,0.8s						
DZM	Mont Dzumac	68.32	99	LR	LR	00 40 44.2	
	comp=Z,124nm,18.7s,baz=206,slow=32						
SANVU	Saraoutou	73.48	95	P	P	00 15 21.5	-0.5
KMI	Kunming	74.16	17	⇑P	P	00 15 27.8	+1.9
KMI				sP	pwP	00 15 33.8	+0.8
KMI				pmax	pmax		
	comp=Z,15nm,0.6s						
PKI	Pulchoki	74.87	0	*e*P	P	00 15 29.7	-0.4
	comp=Z,43nm,1.3s						
PKIN	Phulchoki	74.87	0	*e*P	P	00 15 29.8	-0.2
	comp=Z,81nm,1.7s						
DMN	Daman	74.90	0	*e*P	P	00 15 30.3	+0.1
	comp=Z,126nm,1.4s						
KOLN	Koldanda	75.08	359	*e*P	P	00 15 30.8	-0.3
	comp=Z,101nm,1.6s						
KKN	Kakani	75.08	0	*e*P	P	00 15 31.0	-0.2
	comp=Z,115nm,1.6s						
GUN	Gumba	75.21	1	*e*P	P	00 15 32.4	+0.3
	comp=Z,154nm,1.4s						
GKN	Gorkha	75.30	360	*e*P	P	00 15 32.1	-0.2
	comp=Z,27nm,1.1s						
PYUN	Piuthan	75.42	358	*e*P	P	00 15 32.7	-0.4
	comp=Z,190nm,1.5s						
DANN	Dangsing	75.65	359	*e*P	P	00 15 34.2	-0.3
	comp=Z,78nm,1.3s						
GYA	Guiyang	76.28	20	⇑P	P	00 15 39.3	+1.4
GYA				pmax	pmax		
	comp=Z,12nm,0.7s						
LSA	Lhasa	77.18	5	P	P	00 15 43.8	+0.4
LSA				IAmb	IAmb	00 15 44.8	
	comp=Z,12nm,0.8s						
ENH	Enshi	80.61	21	P	P	00 16 02.0	+0.3
ENH				IAmb	IAmb	00 16 02.7	
	comp=Z,8.0nm,0.9s						
KBL	Kabul	83.07	347	P	P	00 16 14.5	-0.2
XAN	Xi'an	84.08	20	P	P	00 16 20.6	+0.8
XAN				pP	PcP	00 16 23.4	-0.2
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
HRA	Herat	84.19	341	P	P	00 16 20.0	-0.5
HRA				IAmb	IAmb	00 16 21.6	
	comp=Z,6.9nm,1.0s						
NJ2	Nanjing	84.94	28	*e*P	P	00 16 26.6	+2.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
LZH	Lanzhou	85.03	15	*e*P	P	00 16 25.5	+0.8
LZH				sP	pwP	00 16 33.5	+1.7
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
CHGR	Chuyangaron	87.09	348	P	P	00 16 34.0	-0.6
CHGR				IAmb	IAmb	00 16 35.5	
	comp=Z,8.3nm,0.8s						
KSH	Kashi	87.16	353	P	P	00 16 32.5	-2.5
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GAR	Garm	87.26	349	P	P	00 16 35.3	-0.3
DRK	Karamyk	87.55	350	P	P	00 16 37.2	+0.1
GTA	Gaotai	87.66	11	⇓P	P	00 16 38.1	+0.6
GTA				pP	sP	00 16 42.1	+1.8
GTA				sP	pwP	00 16 44.8	+0.2
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
WMQ	Urumqi	91.11	2	*e*P	P	00 16 55.1	+1.6
WMQ				LR	LR		
	comp=Z,270nm,13.9s						
HHC	Hu-ho-hao-te	91.20	20	*e*P	P	00 16 55.1	+1.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,6.3s						
KSRS	Korea Array	92.96	33	P	P	00 17 02.5	+0.4
	comp=Z,1.1nm,0.5s,baz=190,slow=3.7,SNR=5.3						
MKAR	Makanchi Array	94.09	358	P	P	00 17 07.0	-0.1
	comp=Z,0.8nm,0.8s,baz=158,slow=6.7,SNR=4.2						
TORD	Torodi Ar. Bea	95.20	284	P	P	00 17 13.5	+0.5
	comp=Z,0.9nm,0.8s,baz=115,slow=4.9,SNR=6.3						
SONM	Songino Array	96.89	14	P	P	00 17 19.5	-0.5
	comp=Z,0.4nm,0.6s,baz=191,slow=4.4,SNR=4.0						
M19K	Big River Lodg	144.25	44	P	PKPdf	00 23 24.5	+0.4
	baz=266						
Q19K	Cape Douglas,	144.29	49	P	PKPdf	00 23 25.5	+1.3
	baz=262						
J20K	Nowinta River	144.47	40	P	PKPdf	00 23 24.3	0.0
	baz=269						
K20K	Telida	144.48	42	P	PKPdf	00 23 23.9	-0.6
	baz=268						
L20K	Farewell, AK	144.53	43	P	PKPdf	00 23 24.1	-0.5
	baz=267						
KDAK	Kodiak Island	144.67	52	PKP	PKPbc	00 23 24.2	+0.4
	comp=Z,8.2nm,0.8s,baz=263,slow=8.1,SNR=4.1						
H21K	Melozitna Rive	145.03	38	P	PKPdf	00 23 25.9	+0.5
	baz=272						
CHUM	Lake Minchumin	145.28	41	P	PKPdf	00 23 26.6	+0.9
	baz=270						
PPLA	Purkeypile	145.32	43	P	PKPdf	00 23 26.1	+0.1
	baz=269						
CAST	Castle Rocks	145.38	42	P	PKPab	00 23 26.9	+0.8
	baz=270						
I21K	Tanana	145.39	39	P	PKPab	00 23 27.1	+1.0
	baz=272						
HOM	Homer	145.39	48	P	PKPab	00 23 26.6	+0.4
	baz=265						
BRSE	Bradley Lake S	145.86	48	P	PKPbc	00 23 27.4	-0.2
	baz=265						
BPAW	Bear Paw Mtn.	145.86	40	P	PKPdf	00 23 27.0	+0.2
	baz=272,SNR=9.6						
MLY	Manley	145.93	39	P	PKPab	00 23 28.2	0.0
	baz=273,SNR=13						
COLD	Coldfoot	145.95	35	P	PKPab	00 23 28.5	+0.4
	baz=277,SNR=13						
TOLK	Toolik Lake Re	145.98	32	P	PKPab	00 23 29.1	+0.8
	baz=280						
TRF	Thorofare Moun	146.18	42	P	PKPbc	00 23 28.7	0.0
	baz=271						
CUT	Chulitna	146.20	44	P	PKPbc	00 23 28.3	-0.2
	baz=270						
M22K	Willow	146.26	45	P	PKPbc	00 23 28.3	-0.3
	baz=269						
O22K	Cooper Landing	146.41	47	P	PKPbc	00 23 29.6	+0.5
	baz=267						
RC01	Rabbit Creek A	146.43	46	P	PKPbc	00 23 29.3	+0.1
	baz=268						
I23K	Minto, Yukon-K	146.50	39	P	PKPab	00 23 29.9	-0.4
	baz=275						
SEW	Seward	146.53	48	P	PKPbc	00 23 29.6	+0.1
	baz=267						
NEA2	Nenana	146.67	40	P	PKPbc	00 23 29.8	0.0
	baz=274						
PMR	Palmer	146.73	45	P	PKPbc	00 23 30.2	+0.2
	baz=270						
MCK	McKinley	146.78	41	P	PKPbc	00 23 29.9	-0.3
	baz=273,SNR=5.6						
WAT1	Susitna Watana	146.99	43	P	PKPbc	00 23 30.9	+0.1
	baz=272						
H24K	Noodor Dome	147.04	37	P	PKPbc	00 23 31.4	+0.5
	baz=277						
KNK	Knik Glacier	147.06	45	P	PKPbc	00 23 31.3	+0.3
	baz=270						
PWL	Port Wells	147.11	46	P	PKPbc	00 23 31.6	+0.4
	baz=269						
SML	Sawmill	147.11	45	P	PKPbc	00 23 31.4	+0.2
	baz=271						
POKR	Poker Plat Res	147.31	38	P	PKPbc	00 23 31.1	-0.6
	baz=277						
WAT6	Susitna Watana	147.37	43	P	PKPbc	00 23 32.3	+0.3
	baz=272,SNR=9.4						
DHY	Denali Highway	147.52	42	P	PKPbc	00 23 32.7	+0.3
	baz=273,SNR=7.2						
ILAR	Eielson Array	147.59	39	PKPbc	PKPbc	00 23 31.2	-1.1
	comp=Z,3.4nm,0.7s,baz=275,slow=3.3,SNR=30						
SCM	Sheep Creek Mo	147.59	45	P	PKPbc	00 23 32.9	+0.3
	baz=272						
HDA	Harding Lake	147.60	40	P	PKPbc	00 23 33.4	+0.9
	baz=276						
PRP	Porcupine Dome	148.05	37	P	PKPbc	00 23 33.6	-0.2
	baz=279						
PAX	Paxson	148.39	42	P	PKPbc	00 23 34.9	+0.2
	baz=275,SNR=8.2						
HARP	HAARP	148.58	43	P	PKPbc	00 23 35.7	+0.7
	baz=274						
BMRM	Bremner River	148.93	46	P	PKPbc	00 23 36.5	+0.4
	baz=273						
SCRK	Sand Creek	148.94	40	P	PKPbc	00 23 36.5	+0.4
	baz=278						
L26K	Log Cabin Wild	149.35	42	P	PKPbc	00 23 37.6	+0.6
	baz=277						
M26K	Nabesna, AK	149.58	43	P	PKiKP	00 23 38.5	-0.2
	baz=276,SNR=7.3						
MCARA	McCarthy VSAT	149.67	45	P	PKiKP	00 23 38.7	-0.1
	baz=275						
CRQE	Cirque	149.68	46	P	PKiKP	00 23 38.8	-0.2
	baz=274						
L27K	Beaver Creek,	150.03	42	P	PKiKP	00 23 39.6	0.0
	baz=279						
M27K	Edge Creek, AK	150.10	43	P	PKiKP	00 23 39.8	-0.1
	baz=278						
CTG	Chitna Glacier	150.52	46	P	PKiKP	00 23 40.5	-0.2
	baz=276						
BVCY	Beaver Creek	150.57	43	P	PKiKP	00 23 41.0	+0.3
	baz=279						
YUK3	Moose Creek	150.84	44	P	PKPbc	00 23 41.2	+0.3
	baz=278						
DAWY	Dawson	150.91	39	P	PKPbc	00 23 40.9	+0.1
	baz=283,SNR=5.6						
I29M	Ogilvie Camp,	151.03	36	P	PKPbc	00 23 40.8	-0.2
	baz=287,SNR=9.2						
J29M	Klondike Camp	151.31	38	P	PKiKP	00 23 42.5	+0.3
	baz=285						
INK	Inuvik	151.69	29	PKPbc	PKPbc	00 23 42.4	+0.1
	comp=Z,9.9nm,0.9s,baz=324,slow=2.9,SNR=28						
INK	Inuvik	151.69	29	P	PKPbc	00 23 42.4	+0.1
	baz=297						
RES	Resolute Bay	152.87	360	PKPbc	PKPbc	00 23 44.5	-0.3
	comp=Z,4.3nm,0.9s,baz=3.6,slow=1.9,SNR=11						
M31M	Drury Creek, Y	153.57	42	P	PKPbc	00 23 46.8	0.0
	baz=285						
SKAG	Skagway	153.68	48	P	PKiKP	00 23 47.2	0.0
	baz=279						
SIT	Sitka	153.94	54	P	PKiKP	00 23 48.1	+0.3
	baz=274						
TPFO	Pinon Flats	158.56	123	P	PKPdf	00 23 46.7	0.0
	baz=222						
MPMC	Manual Prospec	159.67	116	P	PKPdf	00 23 47.9	-0.2
	baz=228						
TXAR	Lajitas Array	160.50	157	PKP	PKPdf	00 23 49.5	+0.5
	comp=Z,0.5nm,0.8s,baz=212,slow=3.2,SNR=5.0						
TXAR				PKPab	PKPab	00 24 31.2	+1.1
	comp=Z,0.5nm,0.9s,baz=185,slow=5.9,SNR=4.3						
NVAR	Mina Array Bea	160.65	110	PKPab	PKPab	00 24 30.8	-0.1
	comp=Z,0.6nm,0.6s,baz=202,slow=7.5,SNR=5.7						
MNTX	Cornudas Mount	162.18	150	P	PKPdf	00 23 51.0	+0.4
	baz=203						
R11A	Troy Canyon, C	162.30	114	P	PKPdf	00 23 51.8	+1.0
	baz=232						
TZTN	Tazewell	166.08	221	P	PKPdf	00 23 53.6	-0.4
	baz=146						
O20A	White River Ci	167.82	123	P	PKPdf	00 23 55.5	+0.1
	baz=227						
BW06	Boulder Array	168.58	110	P	PKPdf	00 23 56.0	+0.1
	baz=239						
PDAR	Pinedale Array	168.58	110	PKP	PKPdf	00 23 56.0	+0.1
	comp=Z,2.2nm,0.9s,baz=207,slow=1.0,SNR=12						
PDAR				PKPab	PKPab	00 25 04.7	-1.1
	comp=Z,0.5nm,0.7s,baz=227,slow=3.5,SNR=3.8						
ISCO	Idaho Springs	168.99	132	P	PKPdf	00 23 56.6	+0.2
	baz=221						
CCM	Cathedral Cave	170.04	197	P	PKPdf	00 23 56.7	+0.1
	baz=165						

*IDC **15** 00:12:12.6±0.8, 14°.96N×120°.45E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.4/58, mbtmp3.9/8, Error ellipse: s-maj=57.3km s-min=8.8km az=60.0*

*NEIC **15** 00:12:13.5±1.2, 15°.01N±0°.09×120°.7E±0°.3, h11^{km}±8^{km}, mb4.1/8, Error ellipse: s-maj=39.7km s-min=8.9km az=75.0*

*MAN **15** 00:12:14.5, 13°.77N×120°.53E, h83^{km}, mb4.3, ML3.1, MS2.9*

ISC 15 00:12:16.7±0.8**, 14°.91N**±0°.07×**120°.6E**±0°.1**, h43^{km}, n26, σ1^{s}98**/26**, mb4.1**/11**, 4C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	0.86	158	Pg	Pn	00 12 31.6	-1.0
	387nm,0.3s,baz=252,slow=1.7,SNR=23						
TGY				Lg	Lg	00 12 43.3	
	3µm,0.3s,baz=180,slow=24,SNR=25						
TGY	Tagaytay City	0.86	158	⇑*e*P	Pn	00 12 31.0	-1.6
TGY				*i* S	Sn	00 12 43.2	-0.9
LQP	Lukban	1.20	131	⇓*e*P	Pn	00 12 36.7	-0.6
LQP				*e*S	Sn	00 12 48.4	-4.1
LUBP	Lubang	1.22	197	⇑*e*P	Pn	00 12 29.1	-8.2
LUBP				*e*S	Sn	00 12 38.6	-14
PGP	Puerto Galera	1.44	166	⇑*e*P	Pn	00 12 30.5	-10
PGP				*i* S	Sn	00 12 41.3	-17
JCNP	Jose Panganiba	2.12	107	⇑*i*P	Pn	00 12 51.9	+2.2
TWG	Pinlang	7.88	3	Pn	Pn	00 14 06.9	-1.9
NACB	Ninganchiao	9.27	6	Pn	Pn	00 14 24.2	-3.6
KNMB	Chin-men Tao	9.73	348	Pn	Pn	00 14 32.6	-1.6
CMAR	Chiang Mai Arr	21.04	283	P	P	00 16 56.6	-0.6
	1.2nm,0.3s,baz=96,slow=8.3,SNR=4.8						
SONM	Songino Array	34.88	343	P	P	00 19 05.8	+1.7
	1.9nm,0.6s,baz=162,slow=9.8,SNR=14						
SONM	Songino Array	34.88	343	P	P	00 19 04.8	+0.7
SONM				IAmb	IAmb	00 19 07.8	
	comp=Z,1.9nm,0.8s						
WB0	Warramunga Arr	37.03	158	P	P	00 19 25.1	+2.5
WB0				IAmb	IAmb	00 19 30.9	
	comp=Z,2.9nm,1.1s						
WRA	Warramunga Arr	37.17	158	P	P	00 19 27.2	+3.3
	comp=Z,0.9nm,0.7s,baz=333,slow=9.9,SNR=2.6						
WRA	Warramunga Arr	37.17	158	P	P	00 19 23.4	-0.5
WB2	Warramunga Arr	37.18	158	P	P	00 19 24.4	+0.5
WR0	Warramunga Arr	37.26	158	P	P	00 19 26.5	+1.9
WR0				IAmb	IAmb	00 19 27.3	
	comp=Z,3.5nm,0.6s						
ASAR	Alice Springs	40.48	161	P	P	00 19 56.0	+4.4
	comp=Z,0.6nm,0.6s,baz=343,slow=7.5,SNR=7.4						
MK31	Makanchi Array	45.01	323	P	P	00 20 28.1	0.0
MK31				IAmb	IAmb	00 20 30.1	
	comp=Z,3.8nm,1.1s						
MKAR	Makanchi Array	45.01	323	P	P	00 20 28.6	+0.5
	comp=Z,0.2nm,0.4s,baz=119,slow=8.2,SNR=6.4						
MKAR	Makanchi Array	45.01	323	P	P	00 20 28.1	0.0
ZALV	Zalesovo Beam	47.95	332	P	P	00 20 50.9	0.0
	comp=Z,0.6nm,0.3s,baz=126,slow=7.3,SNR=2.6						
KURBB	Kurchatov Arra	49.14	326	P	P	00 21 00.6	+0.4
	comp=Z,2.1nm,0.7s,baz=124,slow=7.8,SNR=16						
KURK	Kurchatov	49.14	326	P	P	00 21 00.7	+0.5
BVAR	Borovoye Array	54.73	325	P	P	00 21 41.8	0.0
	comp=Z,1.3nm,0.5s,baz=134,slow=6.2,SNR=9.8						
BRVK	Borovoye	54.80	325	P	P	00 21 42.4	+0.1

*GEN **15** 00:15:47, 45°.61N×10°.26E, h5^{km}±1^{km}, ML2.5*

*STR **15** 00:15:47.5±0.5, 46°N±2°×1°0E±°, h0^{km}, MLv3.1/23, preliminary*

*IASPEI **15** 00:15:48.4±0.9, 45°.63N±0°.02×10°.21E±0°.02, h5^{km}±6^{km}, Error ellipse: s-maj=3.5km s-min=2.5km az=1.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ROM **15** 00:15:48.0±0.1, 45°.660N±0°.004×10°.213E±0°.005, h3^{km}, ML2.9/65, Error ellipse: s-maj=0.4km s-min=0.1km az=319.0*

*PRU **15** 00:15:49.4±0.0, 45°.56N×10°.01E, h22^{km}*

*LDG **15** 00:15:49.7±0.1, 45°.63N×10°.30E, h5^{km}, Md3.1/1, Ml3.0/38, Error ellipse: s-maj=1.4km s-min=1.3km az=56.0*

*BGR **15** 00:15:51.4±0.3, 45°.62N×10°.22E, h10^{km}, ML3.0/19, Error ellipse: s-maj=5.6km s-min=4.4km az=17.0*

ISC 15 00:15:48.6±0.8**, 45°.61N**±0°.01×**10°.22E**±0°.01**, h8^{km}**±4^{km}**, n278, σ1^{s}78**/363**, 12C-5D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCS	Concesio	0.00	274	⇓P	Pg	00 15 49.5	-0.6
CNCS				S	Sg	00 15 50.2	-0.9
LEOD	Capriano del C	0.16	205	⇑P	Pg	00 15 52.5	+0.5
LEOD				S	Sg	00 15 57.1	+2.8
LEOD				AML	AML		
LEOD				AML	AML		
LEOD				AML	AML		
	comp=N,56850µm,0.3s						
ZONE	Zone	0.17	335	P	Pg	00 15 49.7	-2.6
ZONE				S	Sg	00 15 52.8	-2.0
ZONE				AML	AML		
	comp=E,1260µm,1.6s						
ZONE				AML	AML		
	comp=E,5080µm,1.6s						
ZONE				AML	AML		
	comp=N,6135µm,0.2s						
ZONE				AML	AML		
	comp=N,1460µm,0.3s						
ZONE				AML	AML		

	comp=E,1265µm,1.6s						
VOBA	**Vobarno**	**0.20**	**79**	P	**Pg**	**00 15 52.5**	**-0.2**
VOBA				S	**Sg**	**00 15 56.4**	**+0.9**
CAPR	**Capriolo**	**0.20**	**279**	⇑P	**Pg**	**00 15 52.4**	**-0.3**
CAPR				S	**Sg**	**00 15 55.7**	**+0.1**
CAPR				AML	AML		
	comp=N,7125µm,0.4s						
CAPR				AML	AML		
	comp=N,7130µm,0.4s						
CAPR				AML	AML		
	comp=E,4990µm,0.3s						
SALO	**Salr**	**0.21**	**87**	⇓P	**Pg**	**00 15 52.8**	**-0.1**
SALO				S	**Sg**	**00 15 57.1**	**+1.3**
SALO				AML	AML		
	comp=E,3505µm,1.6s						
SALO				AML	AML		
	comp=N,4650µm,0.4s						
SALO				AML	AML		
	comp=E,3390µm,1.3s						
SALO				AML	AML		
	comp=N,4465µm,1.5s						
BAG8	**Bagolino**	**0.28**	**38**	P	**Pg**	**00 15 53.9**	**-0.3**
BAG8				S	**Sg**	**00 15 58.6**	**+0.7**
ORZI	**Orzinuovi**	**0.29**	**226**	P	**Pg**	**00 15 55.2**	**+1.0**
ORZI				AML	AML		
	comp=N,6650µm,0.7s						
ORZI				AML	AML		
	comp=N,6645µm,0.7s						
ORZI				AML	AML		
	comp=E,6215µm,0.9s						
GARGN	**Gargnano BS**	**0.32**	**75**	⇑*e*Pg	**Pg**	**00 15 54.6**	**-0.3**
GARGN				*e*Sg	**Sg**	**00 16 00.5**	**+1.3**
MAGA	**Magasa**	**0.33**	**59**	⇑P	**Pg**	**00 15 54.8**	**-0.4**
MAGA				S	**Sg**	**00 16 00.4**	**+0.8**
MAGA				AML	AML		
	comp=E,5320µm,0.5s						
MAGA				AML	AML		
	comp=N,3755µm,1.1s						
ZEN8	**San Zeno di Mo**	**0.36**	**85**	P	**Pg**	**00 15 55.1**	**-0.6**
BALD	**Monte Baldo**	**0.43**	**79**	*e*Pg	**Pg**	**00 15 56.8**	**-0.1**
BALD				*e*Sg	**Sg**	**00 16 03.7**	**+1.2**
CTL8	**Castelleone**	**0.46**	**225**	P	**Pg**	**00 15 58.9**	**+1.4**
CTL8				AML	AML		
	comp=N,2275µm,0.7s						
CTL8				AML	AML		
	comp=E,870µm,0.7s						
CTL8				AML	AML		
	comp=N,1075µm,0.3s						
CTL8				AML	AML		
	comp=E,2395µm,1.1s						
CTL8				AML	AML		
	comp=N,2270µm,0.7s						
CTL8				AML	AML		
	comp=N,1080µm,0.3s						
CTL8				AML	AML		
	comp=E,871µm,0.7s						
RONC	**Roncone**	**0.47**	**37**	P	**Pg**	**00 15 57.6**	**-0.1**
RONC				S	**Sg**	**00 16 04.8**	**+0.9**
MABI	**Malga Bissina**	**0.49**	**24**	⇑P	**Pg**	**00 15 58.0**	**-0.3**
MABI				S	**Sg**	**00 16 05.0**	**+0.3**
MABI				AML	AML		
	comp=N,749µm,0.3s						
MABI				AML	AML		
	comp=E,1370µm,0.3s						
MABI				AML	AML		
	comp=N,750µm,0.3s						
MERA	**Merate**	**0.57**	**277**	P	**Pg**	**00 15 58.9**	**-0.6**
ROVR	**Rover Verones**	**0.60**	**86**	⇑P	**Pg**	**00 15 59.9**	**-0.3**
ROVR				S	**Sb**	**00 16 10.1**	**+0.1**
ROVR				AML	AML		
	comp=N,798µm,0.2s						
ROVR				AML	AML		
	comp=E,310µm,0.2s						
MNTV	**Mantova**	**0.61**	**138**	P	**Pg**	**00 16 01.6**	**+1.3**
MNTV				S	**Sb**	**00 16 11.1**	**+1.1**
MNTV				AML	AML		
	comp=E,4070µm,0.6s						
MNTV				AML	AML		
	comp=N,4170µm,0.3s						
MARN	**Marana (Italy)**	**0.69**	**87**	⇑*e*Pg	**Pg**	**00 16 01.6**	**-0.4**
MARN				*e*Sg	**Sb**	**00 16 12.8**	**+0.1**
GAGG	**Gaggia**	**0.70**	**47**	*e*Pg	**Pg**	**00 16 02.2**	**0.0**
GAGG				*e*Sg	**Sb**	**00 16 12.9**	**-0.2**
GAGG	**Gaggia**	**0.70**	**47**	P	**Pg**	**00 16 01.8**	**-0.4**
GAGG				AML	AML		
	comp=E,505µm,1.2s						
GAGG				AML	AML		
	comp=E,506µm,1.2s						
GAGG				AML	AML		
	comp=N,592µm,0.3s						
MILN	**Milano**	**0.71**	**260**	P	**Pg**	**00 16 02.2**	**0.0**
DOSS	**Dosso del Somm**	**0.73**	**68**	*e*Pg	**Pg**	**00 16 02.3**	**-0.5**
DOSS				*e*Sg	**Sb**	**00 16 13.6**	**-0.3**
DOSS	**Dosso del Somm**	**0.73**	**68**	P	**Pg**	**00 16 02.2**	**-0.5**
DOSS				S	**Sb**	**00 16 13.9**	**0.0**
DOSS				AML	AML		
	comp=E,1032µm,1.2s						
DOSS				AML	AML		
	comp=N,798µm,0.8s						
DOSS				AML	AML		
	comp=E,844µm,0.4s						
DOSS				AML	AML		
	comp=N,1082µm,1.2s						
DOSS				AML	AML		
	comp=E,1034µm,1.2s						
OPPE	**Oppeano**	**0.73**	**114**	P	**Pg**	**00 16 03.5**	**+0.9**
OPPE				AML	AML		
	comp=E,2080µm,0.5s						
OPPE				AML	AML		
	comp=N,2255µm,0.4s						
OPPE				AML	AML		
	comp=E,2075µm,0.5s						
SBPO	**S.Benedetto Po**	**0.74**	**138**	P	**Pg**	**00 16 03.3**	**+0.4**
GAZZ	**Gazzo Veronese**	**0.79**	**128**	*e*Pg	**Pg**	**00 16 04.1**	**+0.3**
BERNI	**Berninapass**	**0.82**	**350**	⇑P	**Pg**	**00 16 04.2**	**-0.1**
BERNI				S	**Sg**	**00 16 15.3**	**+0.2**
BERNI				AML	AML		
	comp=E,318µm,0.5s						
BERNI				AML	AML		
	comp=N,322µm,0.3s						
PRMA	**PARMA**	**0.84**	**176**	AML	AML		
	comp=E,690µm,0.3s						
PRMA				AML	AML		
	comp=N,706µm,1.4s						
PRMA				AML	AML		
	comp=N,706µm,1.4s						
NDIM	**Novi di Modena**	**0.86**	**146**	P	**Pg**	**00 16 05.6**	**+0.4**
BRMO	**Bormio**	**0.88**	**7**	⇑P	**Pg**	**00 16 05.1**	**-0.3**
BRMO				S	**Sg**	**00 16 16.5**	**-0.4**
BRMO				AML	AML		
	comp=N,248µm,1.3s						
BRMO				AML	AML		
	comp=E,376µm,0.4s						
CARE	**Lago del Cares**	**0.88**	**22**	*e*Pg	**Pg**	**00 16 05.0**	**-0.6**
CARE	**Lago del Cares**	**0.88**	**22**	P	**Pg**	**00 16 05.0**	**-0.6**
MUGIO	**Muggio**	**0.88**	**291**	P	**Pg**	**00 16 04.4**	**-1.2**
MUGIO				S	**Sg**	**00 16 18.1**	**+1.0**
MUGIO				AML	AML		
	comp=N,550µm,0.4s						
MUGIO				AML	AML		
	comp=E,401µm,0.3s						
PANI	**Panarotta**	**0.90**	**60**	*e*Pg	**Pg**	**00 16 05.7**	**-0.1**
ZOVE	**Zovencedo**	**0.90**	**99**	P	**Pg**	**00 16 05.5**	**-0.5**
CAVE	**Cavezzo**	**0.92**	**143**	AML	AML		
	comp=N,1865µm,0.2s						
CAVE				AML	AML		
	comp=E,1660µm,1.5s						
SERM	**Sermide**	**0.96**	**128**	P	**Pg**	**00 16 07.5**	**+0.4**
SERM				AML	AML		
	comp=E,732µm,0.8s						
SERM				AML	AML		
	comp=N,1220µm,0.7s						
SERM				AML	AML		
	comp=E,1284µm,0.4s						
SERM				AML	AML		
	comp=N,1952µm,1.0s						
SERM				AML	AML		
	comp=N,1224µm,0.7s						
SERM				AML	AML		
	comp=N,1952µm,1.0s						
SERM				AML	AML		
	comp=E,1281µm,0.4s						
SANR	**Sandrigo**	**0.97**	**87**	P	**Pg**	**00 16 07.3**	**0.0**
OZOL	**Ozolo**	**0.99**	**36**	*e*Pg	**Pg**	**00 16 06.8**	**-0.7**
BOB	**Bobbio (Coli)**	**1.00**	**213**	P	**Pg**	**00 16 08.3**	**+0.5**
NEVI	**Neviano degli**	**1.02**	**176**	P	**Pb**	**00 16 09.8**	**+1.3**
MOSI	**Grossmontoni**	**1.04**	**13**	P	**Pg**	**00 16 08.0**	**-0.5**
MOSI				AML	AML		
	comp=N,1210µm,1.4s						
MOSI				AML	AML		
	comp=E,992µm,1.0s						
TEOL	**Teolo**	**1.05**	**103**	P	**Pg**	**00 16 08.3**	**-0.4**
TEOL				S	**Sb**	**00 16 23.4**	**+0.6**
TEOL				AML	AML		
	comp=N,1640µm,0.6s						
TEOL				AML	AML		
	comp=E,2590µm,1.0s						
VARE	**Varese**	**1.05**	**285**	P	**Pg**	**00 16 08.5**	**-0.2**
VARE				AML	AML		
	comp=E,836µm,0.4s						
VARE				AML	AML		
	comp=N,744µm,0.8s						
VARE				AML	AML		
	comp=E,836µm,0.4s						
VARE				AML	AML		
	comp=N,744µm,0.8s						
RAVA	**Ravarino**	**1.06**	**143**	AML	AML		
	comp=N,2265µm,1.2s						
RAVA				AML	AML		
	comp=N,2270µm,1.2s						
RAVA				AML	AML		
	comp=E,3515µm,0.6s						
CTI	**Castel Tesino**	**1.09**	**66**	P	**Pg**	**00 16 08.9**	**-0.6**
CTI				AML	AML		
	comp=E,1760µm,0.5s						
CTI				AML	AML		
	comp=N,1885µm,0.5s						
APPI	**Appiano**	**1.12**	**38**	P	**Pg**	**00 16 09.3**	**-0.8**
APPI				AML	AML		
	comp=E,2930µm,0.3s						
APPI				AML	AML		
	comp=N,2810µm,0.4s						
APPI				AML	AML		
	comp=E,2925µm,0.3s						
GRAM	**Graiana**	**1.12**	**186**	P	**Pg**	**00 16 11.1**	**+1.0**
GRAM	**Graiana**	**1.12**	**186**	P	**Pg**	**00 16 10.9**	**+0.8**
CGRP	**Cima Grappa**	**1.14**	**76**	P	**Pg**	**00 16 09.9**	**-0.6**
CGRP				AML	AML		
	comp=N,540µm,0.4s						
CGRP				AML	AML		
	comp=E,844µm,0.5s						
FERS	**Ferrara-Casagl**	**1.17**	**127**	P	**Pg**	**00 16 11.4**	**+0.4**
BOSI	**Bolzano**	**1.17**	**40**	AML	AML		
	comp=E,2830µm,0.6s						
BOSI				AML	AML		
	comp=N,1910µm,1.3s						
KOSI	**Kohlern**	**1.18**	**43**	AML	AML		
	comp=N,987µm,0.8s						
KOSI				AML	AML		
	comp=E,896µm,0.9s						
GORR	**Gorreto**	**1.20**	**214**	P	**Pg**	**00 16 12.4**	**+0.9**
GORR	**Gorreto**	**1.20**	**214**	P	**Pg**	**00 16 12.4**	**+0.9**
DAVOX	**Davos/Dischmat**	**1.20**	**349**	AML	AML		
	comp=N,425µm,0.5s						
DAVOX				AML	AML		
	comp=E,203µm,0.3s						
FIU	**Minerbio Fiu**	**1.32**	**137**	AML	AML		
	comp=N,1195µm,0.5s						
FIU				AML	AML		
	comp=E,1275µm,0.3s						
ZCCA	**Zocca**	**1.36**	**157**	AML	AML		
	comp=E,1016µm,0.4s						
ZCCA				AML	AML		
	comp=N,874µm,0.4s						
ZCCA				AML	AML		
	comp=N,782µm,0.4s						
ZCCA				AML	AML		
	comp=E,948µm,0.4s						
VARN	**Col Varnada, M**	**1.37**	**73**	P	**Pn**	**00 16 13.9**	**-0.1**
VARN				AML	AML		
	comp=N,506µm,0.3s						
VARN				AML	AML		
	comp=E,846µm,0.3s						
FUSIO	**Fusio**	**1.38**	**309**	P	**Pn**	**00 16 13.2**	**-1.0**
FUSIO				AML	AML		
	comp=E,472µm,1.2s						
FUSIO				AML	AML		
	comp=N,318µm,0.6s						
FUSIO				AML	AML		
	comp=N,318µm,0.6s						
FUSIO				AML	AML		
	comp=E,472µm,1.2s						
MSSA	**Maissana**	**1.38**	**201**	AML	AML		
	comp=E,196µm,1.2s						
MSSA				AML	AML		
	comp=N,271µm,0.6s						
SARO	**Sassorosso**	**1.43**	**175**	P	**Pn**	**00 16 15.8**	**+1.0**
SARO	**Sassorosso**	**1.43**	**175**	⇑P	**Pn**	**00 16 16.3**	**+1.5**
SARO				AML	AML		
	comp=N,132µm,1.3s						
SARO				AML	AML		
	comp=E,112µm,0.9s						
AGOR	**Agordo**	**1.44**	**61**	AML	AML		
	comp=N,388µm,0.4s						
AGOR				AML	AML		
	comp=E,296µm,0.5s						
VLC	**Villacollemand**	**1.45**	**175**	AML	AML		
	comp=N,257µm,0.8s						
VLC				AML	AML		
	comp=N,247µm,0.8s						
VLC				AML	AML		
	comp=E,226µm,1.2s						
VLC				AML	AML		
	comp=E,206µm,1.3s						
FETA	**Feichten**	**1.46**	**14**	*e*Pn	**Pn**	**00 16 15.4**	**0.0**
	comp=E,32nm,0.7s,SNR=20						
FETA				Sg	**Sb**	**00 16 34.4**	**-0.4**
	comp=E,20nm,0.4s						
MTRZ	**Monterenzio**	**1.51**	**144**	AML	AML		
	comp=E,930µm,0.5s						
MTRZ				AML	AML		
	comp=N,538µm,0.8s						
BRES	**Bressanone**	**1.52**	**43**	⇑P	**Pn**	**00 16 17.5**	**+1.3**
ROTM	**Rocchetta Tana**	**1.52**	**241**	P	**Pn**	**00 16 17.6**	**+1.6**
PLONS	**Plons/SG**	**1.56**	**338**	AML	AML		
	comp=N,172µm,0.6s						
PLONS				AML	AML		
	comp=E,216µm,1.0s						
PLONS	**Plons/SG**	**1.56**	**338**	*e*Pn	**Pn**	**00 16 18.0**	**+1.4**
PLONS				*e*Pg	**Pg**	**00 16 20.3**	**+1.8**
PLONS				*e*Sg	**Sg**	**00 16 40.7**	**+2.0**
ROSI	**Rosskopf**	**1.56**	**32**	AML	AML		
	comp=N,482µm,0.6s						
ROSI				AML	AML		
	comp=E,508µm,0.7s						
BDI	**Bagni Di Lucca**	**1.57**	**170**	AML	AML		
	comp=E,403µm,1.0s						
BDI				AML	AML		
	comp=E,448µm,1.0s						
BDI				AML	AML		
	comp=N,395µm,0.3s						
BDI				AML	AML		
	comp=N,316µm,0.4s						
FNVD	**Fontana Vidola**	**1.57**	**156**	AML	AML		
	comp=N,452µm,0.3s						
FNVD				AML	AML		
	comp=E,470µm,0.4s						
PLMA	**Palmaria, Port**	**1.58**	**190**	AML	AML		
	comp=E,287µm,0.4s						
PLMA				AML	AML		
	comp=N,257µm,0.4s						
CARD	**Cardoso**	**1.59**	**173**	P	**Pn**	**00 16 18.4**	**+1.4**
PCP	**Piancastagn**	**1.59**	**229**	P	**Pn**	**00 16 17.8**	**+0.7**
MMK	**Mattmark**	**1.64**	**287**	AML	AML		
	comp=E,348µm,0.4s						
MMK				AML	AML		
	comp=N,314µm,0.4s						
SATI	**Passo dei Sala**	**1.67**	**280**	P	**Pn**	**00 16 18.8**	**+0.4**
MTCR	**Monte La Croce**	**1.67**	**160**	P	**Pn**	**00 16 19.2**	**+1.0**
DAVA	**Damuels**	**1.70**	**352**	*e*Pg	**Pb**	**00 16 20.6**	**+0.5**
	comp=N,12nm,0.3s,SNR=26						
DAVA				*e*Sg	**Sb**	**00 16 42.3**	**+0.7**
	comp=N,59nm,0.3s						
DAVA	**Damuels**	**1.70**	**352**	*e*Pn	**Pb**	**00 16 21.0**	**+0.9**
DAVA				*e*Sn	**Sn**	**00 16 41.0**	**+0.4**
DAVA				*e*Sg	**Sg**	**00 16 47.6**	**+4.5**
CIMO	**Cimolais**	**1.70**	**65**	AML	AML		
	comp=N,132µm,0.4s						
CIMO				AML	AML		
	comp=E,154µm,0.5s						
MONC	**Moncucco Torin**	**1.70**	**253**	P	**Pn**	**00 16 20.2**	**+1.7**
SEI	**Scarperia**	**1.75**	**152**	P	**Pb**	**00 16 21.3**	**+0.4**
SQTA	**Sankt Quirin**	**1.75**	**23**	*e*Pg	**Pn**	**00 16 20.9**	**+1.6**
	comp=E,24nm,0.3s,SNR=27						
SQTA				*e*Sg	**Sg**	**00 16 44.8**	**-0.1**
	comp=E,86nm,0.5s						
BNALP	**Bannalp**	**1.78**	**316**	AML	AML		
	comp=E,200µm,0.7s						
BNALP				AML	AML		
	comp=N,230µm,0.6s						
EMBD	**Embd, Matterta**	**1.78**	**291**	P	**Pn**	**00 16 20.5**	**+0.9**
EMBD	**Embd, Matterta**	**1.78**	**291**	Pn	**Pn**	**00 16 19.6**	**0.0**
OBER	**Oberstdorf**	**1.80**	**2**	*e*Pn	**Pb**	**00 16 23.1**	**+1.2**
OBER				*e*Sg	**Sg**	**00 16 49.8**	**+3.3**
MOTA	**Moosalm**	**1.84**	**19**	*e*Pg	**Pb**	**00 16 23.6**	**+1.1**
	comp=N,20nm,0.4s,SNR=20						
MOTA				*e*Sg	**Sg**	**00 16 48.0**	**+0.2**
	comp=N,19nm,0.3s						
QLNO	**Quiliano**	**1.85**	**227**	AML	AML		
	comp=N,147µm,0.4s						
QLNO				AML	AML		
	comp=E,146µm,0.6s						
STAL	**STALIGIAL**	**1.86**	**68**	AML	AML		
	comp=E,379µm,0.3s						
STAL				AML	AML		
	comp=N,389µm,0.3s						
LMD	**Lutirano**	**1.86**	**145**	AML	AML		
	comp=N,146µm,0.5s						
LMD				AML	AML		
	comp=E,162µm,0.5s						
RISI	**Rein**	**1.86**	**43**	AML	AML		
	comp=N,862µm,0.4s						
RISI				AML	AML		
	comp=E,540µm,1.3s						
ZUGS	**Zugspitze, Sch**	**1.89**	**16**	*e*Pn	**Pg**	**00 16 25.0**	**+0.3**
ZUGS				*e*Sg	**Sg**	**00 16 51.3**	**+2.1**
PII	**Pisa**	**1.90**	**173**	⇓P	**Pn**	**00 16 21.9**	**+0.7**
PII				AML	AML		
	comp=E,451µm,0.9s						
PII				AML	AML		
	comp=N,420µm,1.3s						
RETA	**Reutte**	**1.92**	**11**	*e*Pg	**Pb**	**00 16 24.3**	**+0.4**
	comp=N,5.2nm,0.2s,SNR=6.9						
RETA				*e*Sg	**Sg**	**00 16 51.7**	**+1.5**
	comp=N,16nm,0.3s						
WTTA	**Wattenberg**	**1.93**	**30**	*e*Pg	**Pb**	**00 16 24.4**	**+0.4**
	comp=N,6.7nm,0.2s,SNR=7.4						
WTTA				*e*Sg	**Sg**	**00 16 49.9**	**-0.6**
	comp=N,53nm,0.5s						
WTTA	**Wattenberg**	**1.93**	**30**	AML	AML		
	comp=N,146µm,1.0s						
WTTA				AML	AML		
	comp=E,140µm,0.5s						
WTTA	**Wattenberg**	**1.93**	**30**	*e*Pn	**Pb**	**00 16 24.4**	**+0.4**
WTTA				*e*Sg	**Sg**	**00 16 50.6**	**+0.1**
ABTA	**Abfaltersbach**	**1.96**	**54**	*e*Pg	**Pb**	**00 16 24.4**	**-0.2**
	comp=E,14nm,0.4s,SNR=16						
ABTA				*e*Sn	**Sb**	**00 16 50.0**	**+0.9**
	comp=E,38nm,0.3s						
WATA	**Walderalm**	**1.97**	**28**	*e*Pg	**Pb**	**00 16 25.0**	**+0.3**
	comp=E,5.5nm,0.3s						
WATA				*e*Sg	**Sg**	**00 16 52.1**	**+0.3**
	comp=E,20nm,0.3s						
PART	**Garmisch-Parte**	**1.99**	**18**	*e*Pn	**Pb**	**00 16 25.3**	**+0.2**
PART				*e*Sg	**Sg**	**00 16 53.5**	**+1.0**
DIX	**Grande Dixence**	**2.02**	**285**	Pg	**Pb**	**00 16 25.9**	**+0.2**
DIX	**Grande Dixence**	**2.02**	**285**	Pn	**Pn**	**00 16 22.7**	**-0.5**
WILA	**Wila**	**2.02**	**334**	*e*Pn	**Pn**	**00 16 25.0**	**+2.0**
WILA				*e*Sg	**Sg**	**00 16 56.4**	**+2.8**
UBR	**Ueberruh**	**2.08**	**358**	*e*Pn	**Pn**	**00 16 26.1**	**+2.4**
UBR				*e*Sn	**Sn**	**00 16 49.4**	**-0.4**
UBR				*e*Sg	**Sg**	**00 16 55.2**	**-0.2**
ZUR	**Degenried**	**2.10**	**328**	P	**Pn**	**00 16 26.2**	**+2.2**
ZUR	**Degenried**	**2.10**	**328**	Pn	**Pn**	**00 16 25.6**	**+1.6**
ASQU	**Asqua**	**2.13**	**148**	AML	AML		
	comp=N,124µm,0.4s						
ASQU				AML	AML		
	comp=E,94µm,0.9s						
OSSC	**Osservatorio P**	**2.21**	**160**	AML	AML		
	comp=E,138µm,0.7s						
OSSC				AML	AML		
	comp=N,99µm,0.5s						
MRGE	**Morge**	**2.22**	**275**	AML	AML		
	comp=N,223µm,0.6s						
MRGE				AML	AML		
	comp=E,202µm,0.6s						
WALHA	**Wallhausen, DE**	**2.28**	**341**	*e*Pn	**Pn**	**00 16 27.8**	**+1.4**
WALHA				*e*Pg	**Pg**	**00 16 32.9**	**+0.7**
CRE	**Caprese Michel**	**2.34**	**148**	AML	AML		
	comp=E,86µm,0.5s						
CRE				AML	AML		
	comp=N,103µm,1.2s						
IMI	**Imperia**	**2.37**	**225**	AML	AML		
	comp=E,80µm,1.3s						
IMI				AML	AML		
	comp=N,99µm,0.4s						
AIGLE	**Aigle**	**2.39**	**289**	Pn	**Pn**	**00 16 29.2**	**+1.1**
SULZ	**Cheisacher**	**2.41**	**324**	P	**Pn**	**00 16 29.4**	**+1.1**
SULZ	**Cheisacher**	**2.41**	**324**	Pg	**Pg**	**00 16 35.2**	**+0.4**
SULZ	**Cheisacher**	**2.41**	**324**	Pn	**Pn**	**00 16 29.1**	**+0.8**
SULZ	**Cheisacher**	**2.41**	**324**	*e*Pn	**Pn**	**00 16 29.3**	**+1.1**
SULZ				*e*Pg	**Pg**	**00 16 35.3**	**+0.4**
SULZ				*e*Sg	**Sg**	**00 17 06.8**	**+0.8**
LPG	**La Plagne**	**2.44**	**269**	*e*Pn	**Pn**	**00 16 28.9**	**0.0**
LPG	**La Plagne**	**2.44**	**269**	*e*P	**Pn**	**00 16 32.0**	**+3.1**
LPG				*e*Sn	**Sn**	**00 16 59.0**	**-0.1**
	comp=N,27nm,0.4s						
LPL	**La Plagne**	**2.45**	**269**	*e*Pn	**Pn**	**00 16 29.4**	**+0.4**
LPL	**La Plagne**	**2.45**	**269**	*e*P	**Pn**	**00 16 31.8**	**+2.8**
LPL				*e*Sn	**Sn**	**00 16 58.7**	**-0.6**
	comp=N,17nm,0.3s						
BALST	**Balsthal**	**2.46**	**316**	P	**Pn**	**00 16 29.9**	**+0.9**
BALST	**Balsthal**	**2.46**	**316**	Pn	**Pn**	**00 16 29.9**	**+0.9**
BALST	**Balsthal**	**2.46**	**316**	*e*Pn	**Pn**	**00 16 29.9**	**+0.9**
SLE	**Schleitheim**	**2.46**	**332**	P	**Pn**	**00 16 29.9**	**+0.8**
SLE	**Schleitheim**	**2.46**	**332**	Pn	**Pn**	**00 16 29.7**	**+0.7**
SLE	**Schleitheim**	**2.46**	**332**	*e*Pn	**Pn**	**00 16 29.9**	**+0.8**
SLE				*e*Pg	**Pg**	**00 16 36.0**	**+0.2**
SLE				*e*Sg	**Sg**	**00 17 08.7**	**+0.9**
EMING	**Emmingen-Lipti**	**2.48**	**338**	*e*Pn	**Pn**	**00 16 30.4**	**+1.2**
SAOF	**Saorge**	**2.49**	**230**	P	**Pn**	**00 16 31.2**	**+1.8**
SAOF	**Saorge**	**2.49**	**230**	Pn	**Pn**	**00 16 30.0**	**+0.5**
METMA	**Mettma DE**	**2.50**	**328**	*e*Pn	**Pn**	**00 16 30.2**	**+0.6**
METMA				*e*Pg	**Pg**	**00 16 36.8**	**+0.2**
RSL	**Roselend**	**2.52**	**273**	P	**Pn**	**00 16 32.6**	**+2.6**
TORNY	**Torny/Romont**	**2.55**	**298**	Pn	**Pn**	**00 16 31.4**	**+1.2**
GUT	**Gutenstein**	**2.58**	**343**	P	**Pn**	**00 16 32.0**	**+1.3**
GUT	**Gutenstein**	**2.58**	**343**	Pn	**Pn**	**00 16 31.9**	**+1.3**
BRJN	**Brijuni**	**2.59**	**104**	*e*Pn	**Pn**	**00 16 30.4**	**-0.3**
BRJN				Sn	**Sn**	**00 16 58.6**	**-3.6**
TURF	**col de Turini**	**2.59**	**232**	P	**Pn**	**00 16 31.8**	**+0.9**
TURF	**col de Turini**	**2.59**	**232**	Pn	**Pn**	**00 16 31.5**	**+0.6**
MBDF	**Montbardon**	**2.59**	**251**	*e*Pn	**Pn**	**00 16 30.1**	**-0.8**
MBDF				*e*Sg	**Sg**	**00 17 12.5**	**+0.6**
	comp=N,18nm,0.4s						
NARO	**Abbazia di Nar**	**2.61**	**139**	AML	AML		
	comp=E,38µm,1.4s						
NARO				AML	AML		
	comp=N,34µm,0.8s						
KBA	**Koelnbreinsper**	**2.62**	**55**	*e*Pn	**Pb**	**00 16 35.5**	**-0.3**
	comp=N,2.7nm,0.2s						
KBA				*e*Sn	**Sn**	**00 17 05.8**	**+2.5**
	comp=N,16nm,0.5s						
KBA	**Koelnbreinsper**	**2.62**	**55**	*e*Pn	**Pn**	**00 16 34.0**	**+2.7**
SPIF	**crte de Spivo**	**2.63**	**235**	P	**Pn**	**00 16 34.0**	**+2.7**
SPIF	**crte de Spivo**	**2.63**	**235**	Pn	**Pn**	**00 16 31.1**	**-0.3**
SBF	**Sospel**	**2.64**	**230**	*e*Pn	**Pn**	**00 16 32.2**	**+0.7**
SBF				*e*Sn	**Sn**	**00 17 03.2**	**-0.5**
	comp=N,37nm,0.4s						
FSSB	**Fossombrone**	**2.64**	**135**	AML	AML		
	comp=E,114µm,1.6s						
FSSB				AML	AML		
	comp=N,168µm,0.4s						
FUR	**Furstenfeldbru**	**2.66**	**15**	*e*Pg	**Pg**	**00 16 40.8**	**+1.3**
FUR				*e*Sg	**Sg**	**00 17 14.4**	**+0.4**
SURF	**Saint Ours**	**2.67**	**246**	P	**Pn**	**00 16 32.9**	**+1.0**
SURF	**Saint Ours**	**2.67**	**246**	Pn	**Pn**	**00 16 31.5**	**-0.4**
SURF				Pg	**Pb**	**00 16 38.6**	**+2.0**
BERGE	**Lenzkirch (DE)**	**2.67**	**329**	*e*Pn	**Pn**	**00 16 32.4**	**+0.5**
BERGE				*e*Pg	**Pg**	**00 16 39.5**	**-0.1**
BERGE				*e*Sn	**Sn**	**00 17 04.4**	**+0.1**
BOURR	**Bourrignon**	**2.73**	**312**	P	**Pn**	**00 16 33.5**	**+0.8**
BOURR	**Bourrignon**	**2.73**	**312**	Pn	**Pn**	**00 16 33.5**	**+0.8**
FELD	**Feldberg im Sc**	**2.73**	**327**	Pn	**Pn**	**00 16 33.3**	**+0.5**
ATFO	**Monte Foce - G**	**2.80**	**142**	AML	AML		
	comp=E,78µm,0.6s						

ATFO				AML	AML		
	comp=N,51µm,1.2s						
SMRN	Sveta Marina	2.83	100	ePn	Pn	00 16 32.8	-1.2
SMRN				Sn	Sn	00 17 04.5	-3.7
KIZ	Kirchzarten	2.83	327	Pn	Pn	00 16 34.5	+0.4
ATTE	AVT- Monte Tez	2.85	147	AML	AML		
	comp=N,42µm,1.3s						
ATTE				AML	AML		
	comp=E,39µm,1.5s						
CASP	Castiglione de	2.85	170	AML	AML		
	comp=N,53µm,0.7s						
CASP				AML	AML		
	comp=E,42µm,1.5s						
ARVD	Arcevia	2.87	136	AML	AML		
	comp=N,42µm,0.5s						
ARVD				AML	AML		
	comp=E,46µm,0.6s						
GIMEL	St. Georges /	2.91	290	P	Pn	00 16 36.3	+1.2
GIMEL	St. Georges /	2.91	290	Pn	Pn	00 16 35.9	+0.8
BRANT	Les Verrieres	2.92	298	P	Pn	00 16 36.3	+1.0
BRANT	Les Verrieres	2.92	298	Pn	Pn	00 16 36.1	+0.7
CHMF	Charmoille	2.96	305	P	Pn	00 16 36.4	+0.5
CHMF	Charmoille	2.96	305	Pn	Pn	00 16 36.4	+0.5
CHMF				Sn	Sn	00 17 11.0	-0.7
CALF	Calern	3.00	233	P	Pn	00 16 37.1	+0.7
CALF	Calern	3.00	233	Pn	Pn	00 16 37.1	+0.7
RIY	Rijeka	3.01	94	ePn	Pn	00 16 35.9	-0.7
RIY				Sn	Sn	00 17 09.0	-3.7
BFO	Black Forest	3.02	335	ePn	Pn	00 16 37.4	+0.8
BFO				ePg	Pg	00 16 46.1	-0.3
VOGT	Vogtsburg - To	3.03	326	Pn	Pn	00 16 37.5	+0.7
CABF	La Chapelle	3.05	291	ePn	Pn	00 16 37.2	+0.1
CABF				eSn	Sn	00 17 12.8	-0.9
	comp=E,78nm,1.1s						
ORIF	Oris-en-Rattie	3.14	259	ePn	Pn	00 16 38.8	+0.4
ORIF				eSn	Sn	00 17 16.1	0.0
	comp=E,21nm,0.4s						
ORIF	Oris-en-Rattie	3.14	259	Pn	Pn	00 16 40.7	+2.3
OBKA	Obir	3.15	72	i Pn	Pn	00 16 39.9	+1.5
	comp=E,0.3nm,0.1s						
OBKA				eSg	Sg	00 17 31.4	+1.8
	comp=E,21nm,0.6s						
OBKA	Obir	3.15	72	ePn	Pn	00 16 39.9	+1.5
OBKA				ePg	Pg	00 16 48.8	0.0
OBKA				eSg	Sg	00 17 28.3	-1.3
GRN	Grenoble	3.17	265	P	Pn	00 16 42.4	+3.6
OGSM	Saint Maurice	3.17	272	P	Pn	00 16 41.5	+2.7
OGSM	Saint Maurice	3.17	272	Pn	Pn	00 16 40.1	+1.3
PGF	Pioggiola	3.18	196	ePn	Pn	00 16 39.4	+0.5
PGF	Pioggiola	3.18	196	eP	Pn	00 16 42.1	+3.2
PGF				eSn	Sn	00 17 14.8	-2.3
	comp=E,7.1nm,0.3s						
PGF	Pioggiola	3.18	196	Pn	Pn	00 16 38.7	-0.2
HINF	Hinteralfeld	3.20	315	ePn	Pn	00 16 39.1	-0.1
HINF	Hinteralfeld	3.20	315	ePg	Pg	00 16 49.5	-0.4
HINF				eSn	Sn	00 17 15.5	-2.0
	comp=E,13nm,0.3s						
HINF				eSg	Sg	00 17 30.5	-0.9
	comp=E,6.7nm,0.2s						
OPP	Oppenau	3.21	335	Pn	Pn	00 16 39.9	+0.7
RONF	Ronchamp	3.24	312	Pn	Pn	00 16 40.1	+0.5
FRF	La Foret Royal	3.27	233	ePn	Pn	00 16 39.4	-0.7
FRF				eSn	Sn	00 17 18.0	-1.1
	comp=E,18nm,0.6s						
MOMA	Monte Martano	3.27	148	AML	AML		
	comp=E,27µm,1.1s						
MOMA				AML	AML		
	comp=N,29µm,0.3s						
OG35	Corcelles	3.28	279	Pn	Pn	00 16 41.1	+0.8
OG35				Sn	Sn	00 17 18.9	-0.5
FDMO	Fiordimonte	3.29	140	AML	AML		
	comp=E,27µm,1.4s						
FDMO				AML	AML		
	comp=N,26µm,0.8s						
RABC	Rab	3.34	103	ePn	Pn	00 16 40.0	-1.0
RABC				Sn	Sn	00 17 17.1	-3.6
ECH	Echery	3.35	322	P	Pn	00 16 42.2	+1.0
ECH	Echery	3.35	322	Pn	Pn	00 16 42.1	+1.0
ECH	Echery	3.35	322	Pn	Pn	00 16 41.7	+0.5
ECH	Echery	3.35	322	ePn	Pn	00 16 42.0	+0.8
ECH				eSn	Sn	00 17 19.8	-1.4
WLS	Welschbruch	3.43	326	Pn	Pn	00 16 43.2	+0.9
CDF	Champ du Feu	3.46	325	ePn	Pn	00 16 42.6	-0.1
CDF	Champ du Feu	3.46	325	ePg	Pg	00 16 53.7	-1.1
CDF				eSn	Sn	00 17 20.8	-3.0
	comp=N,8.9nm,0.3s						
NVLJ	Novalja	3.46	106	ePn	Pn	00 16 41.7	-0.9
NVLJ				Sn	Sn	00 17 18.9	-4.7
NRCA	Norcia	3.46	142	⇓P	Pb	00 16 51.1	+1.0
LMR	La Mourre	3.50	231	ePn	Pn	00 16 43.2	+0.1
LMR	La Mourre	3.50	231	eP	Pn	00 16 46.1	+3.0
LMR				eSn	Sn	00 17 22.7	-1.9
LMR				eSg	Sg	00 17 39.8	-1.0
	comp=N,4.4nm,0.2s						
SOKA	Soboth	3.51	71	i Sn	Sn	00 17 26.3	+1.0
	comp=N,2.2nm,0.3s						
SOKA				Sg	Sg	00 17 41.8	+0.5
	comp=N,3.3nm,0.4s						
BOJS	Bojanci	3.54	90	⇓P	Pn	00 16 44.6	+0.9
BOJS				AML	AML		
	comp=N,88µm,0.8s						
BOJS				AML	AML		
	comp=E,84µm,1.1s						
MOA	Molln	3.57	50	i Pn	Pn	00 16 45.3	+1.0
	comp=E,0.8nm,0.3s						
MOA				i Sn	Sn	00 17 28.6	+1.9
	comp=E,5.6nm,0.5s						
HAU	Haudompre	3.58	313	ePn	Pn	00 16 45.2	+0.8
HAU	Haudompre	3.58	313	ePg	Pb	00 16 55.7	+3.6
HAU				eSn	Sn	00 17 25.0	-1.9
	comp=E,30nm,0.4s						
HAU				eSg	Sg	00 17 41.9	-1.7
	comp=E,9.9nm,0.4s						
OZLJ	Ozalj	3.68	88	ePn	Pn	00 16 45.4	-0.3
OZLJ				Sn	Sn	00 17 26.4	-2.8
SMRF	Simiane la Rot	3.69	245	ePn	Pn	00 16 46.3	+0.5
SMRF				eSn	Sn	00 17 28.5	-1.0
	comp=E,4.2nm,0.3s						
ARTF	Artigues	3.74	239	Pn	Pn	00 16 46.5	-0.1
RUSF	Rustrel	3.76	245	P	Pn	00 16 50.6	+3.7
RM33	Pellescritta (	3.77	144	P	Pn	00 16 49.4	+2.3
RM33				AML	AML		
	comp=N,80µm,1.2s						
RM33				AML	AML		
	comp=E,107µm,0.7s						
DUGI	Dugi Otok	3.80	113	ePn	Pn	00 16 46.6	-0.8
DUGI				Sn	Sn	00 17 28.5	-3.8
CAMP	Campotosto	3.83	142	⇑P	Pn	00 16 49.5	+1.6
CAMP				AML	AML		
	comp=N,26µm,1.3s						
CAMP				AML	AML		
	comp=E,26µm,0.6s						
PLIT	Plitvice	3.88	99	ePn	Pn	00 16 47.1	-1.5
PLIT				Sn	Sn	00 17 29.6	-4.7
WET	Wettzell	3.97	26	ePn	Pn	00 16 51.1	+1.3
VIVF	Saint-Julien-l	3.99	261	ePn	Pn	00 16 49.7	-0.3
VIVF	Saint-Julien-l	3.99	261	ePg	Pg	00 17 04.9	-0.1
VIVF				eSn	Sn	00 17 35.8	-1.1
	comp=E,3.4nm,0.3s						
GEC2	GERESS Array S	4.02	35	ePn	Pn	00 16 51.0	+0.6
GEC2				eSn	Sn	00 17 37.6	0.0
ARSA	Arzberg	4.02	64	ePn	Pn	00 16 50.5	+0.1
	comp=E,0.8nm,0.3s						
ARSA	Arzberg	4.02	64	ePn	Pn	00 16 52.8	+2.4
UDBI	Udbina	4.07	103	ePn	Pn	00 16 50.2	-1.0
UDBI				Sn	Sn	00 17 34.8	-4.2
LOBO	Lobor	4.12	80	ePn	Pn	00 16 50.9	-0.9
LOBO				Sn	Sn	00 17 36.5	-3.6
GRF	Grafenberg Arr	4.14	9	ePg	Pg	00 17 09.8	+1.9
KHC	Kasperske Hory	4.20	32	ePN	Pn	00 16 53.9	+1.0
KHC				ePG	Pb	00 17 06.4	+3.7
KHC				eSN	Sn	00 17 41.6	-0.5
CKRC	Cesky Krumlov	4.25	39	ePN	Pn	00 16 53.6	0.0
CKRC				eSN	Sn	00 17 44.2	+0.8
PAGF	Fort de Pagny	4.26	315	ePn	Pn	00 16 53.7	+0.1
PAGF				eSn	Sn	00 17 41.1	-2.4
	comp=E,8.2nm,0.2s						
MILB	Miltenberg	4.27	352	ePg	Pg	00 17 11.7	+1.3
MORI	Morici	4.28	112	ePn	Pn	00 16 52.7	-1.2
MORI				Sn	Sn	00 17 38.9	-5.1
ZIRJ	Zirje	4.33	115	ePn	Pn	00 16 53.9	-0.8
ZIRJ				Sn	Sn	00 17 41.1	-4.2
KALN	Kalnik	4.39	81	ePn	Pn	00 16 54.5	-0.9
KALN				Sn	Sn	00 17 43.2	-3.4
SFTF	Sexfontaines	4.40	308	ePn	Pn	00 16 55.8	+0.2
	baz=128						
SFTF				eSn	Sn	00 17 44.3	-2.7
	comp=E,9.6nm,0.3s						
CONA	Conrad Observa	4.52	57	ePn	Pn	00 16 59.4	+2.1
CONA				i Sn	Sn	00 17 50.1	+0.1
	comp=E,2.2nm,0.5s						
SMF	Signal de Mont	4.56	285	ePn	Pn	00 16 57.7	0.0
SMF	Signal de Mont	4.56	285	eP	Pn	00 17 01.5	+3.8
SMF				eSn	Sn	00 17 48.5	-2.3
	comp=E,20nm,0.4s						
MEZF	Maizieres J'vi	4.57	311	ePn	Pn	00 16 58.9	+1.0
	baz=130						
MOSL	Moslavina	4.58	88	ePn	Pn	00 16 57.4	-0.8
MOSL				Sn	Sn	00 17 48.8	-2.7
SAVF	Savonnieres en	4.60	313	ePn	Pn	00 16 58.9	+0.6
	baz=134						
SAVF				eSn	Sn	00 17 49.7	-2.2
	comp=E,1.8nm,0.2s						
ABH	Alteburg	4.64	338	Pn	Pn	00 17 00.1	+1.1
ABH	Alteburg	4.64	338	ePn	Pn	00 17 00.3	+1.3
TRBF	Trabuc cave	4.70	254	Pn	Pn	00 17 00.1	+0.4
LOR	Lormes	4.70	293	ePn	Pn	00 16 59.2	-0.6
	baz=113						
LOR				eSn	Sn	00 17 51.9	-2.5
	comp=E,24nm,0.3s						
LOR	Lormes	4.70	293	Pn	Pn	00 17 00.0	+0.3
RIVT	Riveris	4.72	332	ePn	Pn	00 17 01.4	+1.4
LASF	Ste Croix	4.78	254	ePn	Pn	00 17 00.5	-0.3
LASF	Ste Croix	4.78	254	ePg	Pg	00 17 18.3	-1.8
LASF				eSn	Sn	00 17 54.2	-2.1
	comp=E,12nm,0.6s						
SSF	Saint Saulge	4.87	290	ePn	Pn	00 17 01.5	-0.6
SSF	Saint Saulge	4.87	290	eP	Pn	00 17 04.9	+2.8
SSF				eSn	Sn	00 17 55.4	-3.2
	comp=E,3.7nm,0.3s						
AVF	Avril sur Loir	4.91	286	ePn	Pn	00 17 03.0	+0.4
AVF	Avril sur Loir	4.91	286	eP	Pn	00 17 06.7	+4.1
AVF				eSn	Sn	00 17 57.6	-2.0
	comp=E,5.8nm,0.5s						
AGO	Saint Agoulin	4.98	278	Pn	Pn	00 17 03.4	-0.1
HVAR	Hvar	5.08	116	ePn	Pn	00 17 03.6	-1.3
HVAR				Sn	Sn	00 17 59.3	-4.4
BGF	Bois d'Agland	5.22	283	ePn	Pn	00 17 07.7	+0.9
BGF				eSn	Sn	00 18 04.9	-2.2
	comp=E,14nm,0.5s						
PRU	Pruhonice	5.26	32	eSN	Sn	00 18 07.2	-1.0
PRU				eSG	Sg	00 18 39.3	+1.8
	comp=E,2.7nm,0.4s						
RICI	Ricice	5.37	111	ePn	Pn	00 17 08.3	-0.6
RICI				Sn	Sn	00 18 06.2	-4.8
MAKA	Makarska	5.39	113	ePn	Pn	00 17 08.0	-1.2
MAKA				Sn	Sn	00 18 05.8	-5.6
HYF	Humbligny	5.50	290	ePn	Pn	00 17 10.9	+0.2
HYF				eSn	Sn	00 18 11.1	-2.9
LSTV	Lastovo	5.57	118	ePn	Pn	00 17 10.0	-1.7
LSTV				Sn	Sn	00 18 10.4	-5.5
TCF	Toulx Ste Croi	5.63	280	ePn	Pn	00 17 12.8	+0.3
TCF				eSn	Sn	00 18 14.0	-3.3
	comp=E,2.2nm,0.3s						
GIVF	Givet	5.78	323	ePn	Pn	00 17 13.4	-1.1
CAF	Calviac	5.80	266	ePn	Pn	00 17 14.8	0.0
CAF				eSn	Sn	00 18 18.1	-3.4
	comp=E,0.6nm,0.2s						
BRG	Berggiesshubel	5.83	24	Sg	Sg	00 18 56.3	+0.8
BRG				Amp		00 19 03.1	
	comp=Z,3.2nm,0.8s						
BAIF	Baives	6.02	320	ePn	Pn	00 17 19.7	+1.9
STON	Ston	6.03	114	ePn	Pn	00 17 16.3	-1.6
STON				Sn	Sn	00 18 21.8	-5.3
RJF	Les Rejaudoux	6.13	270	ePn	Pn	00 17 20.2	+0.8
RJF				eSn	Sn	00 18 26.5	-3.1
	comp=Z,1.1nm,0.4s						
MTLF	Montolieu	6.16	251	ePn	Pn	00 17 19.0	-0.7
MTLF				eSn	Sn	00 18 27.9	-2.4
	comp=Z,0.9nm,0.4s						
DPC	Dobruska-Polom	6.27	39	eSG	Sg	00 19 12.8	+3.1
CHVC	Chvalec	6.33	36	eSG	Sg	00 19 14.9	+3.2
LFF	La Frestale	6.72	268	ePn	Pn	00 17 27.5	0.0
LFF				eSn	Sn	00 18 40.0	-4.2
	comp=Z,1.2nm,0.3s						
MFF	Saint Martin d	7.28	282	ePn	Pn	00 17 34.9	-0.2
MFF				eSn	Sn	00 18 53.7	-4.1
	comp=Z,1.4nm,0.4s						
LDF	La Druitiere	7.66	297	eP	Pn	00 17 44.7	+4.3
LDF				eSn	Sn	00 19 02.0	-5.3
	comp=Z,1.4nm,0.4s						
FLN	La Foliniere	7.95	297	ePn	Pn	00 17 44.1	-0.1
	baz=113						
FLN				eSn	Sn	00 19 08.1	-6.1
	comp=Z,9.7nm,1.0s						
GRR	Gorron	8.07	294	ePn	Pn	00 17 45.6	-0.3
GRR				eSn	Sn	00 19 11.9	-5.4
	comp=Z,3.3nm,0.2s						
SGMF	Saint Gilles	9.14	291	ePn	Pn	00 18 00.5	-0.1
SGMF				eSn	Sn	00 19 37.7	-5.8
	comp=Z,0.4nm,0.2s						

BJI ***15*** *00:20:28.3±0.0, 25°.53N×142°.14E, h62^{km}, mB5.4/73, mb4.9/68, Ms5.4/88, Ms7 5.1/81*

MOS ***15*** *00:20:29.9±1.2, 25°.54N×141°.67E, h45^{km}, mb5.1/45, MS5.0/17, Error ellipse: s-maj=8.6km s-min=4.4km az=116.1*

IDC ***15*** *00:20:32.6±1.5, 25°.63N×141°.27E, h44^{km}±13^{km}, mb4.3/30, mb1 4.4/32, mb1mx4.2/51, mbtmp4.5/32, ML2.8/2, MS4.7/38, Ms1 4.7/38, ms1mx4.7/42, Error ellipse: s-maj=13.1km s-min=8.9km az=114.0*

NEIC ***15*** *00:20:33.5±2.1, 25°.72N±0°.07×141°.95E±0°.09, h56^{km}±5^{km}, mb5.1/137, Error ellipse: s-maj=12.1km s-min=10.1km az=120.0*

GCMT ***15*** *00:20:36.5±0.1, 25°.48N±0°.01×141°.27E±0°.01, h12^{km}, MW5.2/134, Moment Tensor Solution. s66,c85; s134,c212; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.84±.01; M$_{\theta\theta}$-0.47±.01; M$_{\phi\phi}$-0.36±.01; M$_{r\theta}$0.23±.04; M$_{\theta\phi}$-0.28±.01; M$_{\phi r}$0.11±.04; Best double couple: M$_0$0.81100×10^{17} NP1:ϕ_s227.00000°, δ36.00000°, λ84.00000°. NP2:ϕ_s54.00000°, δ54.00000°, λ94.00000°. Principal axes: T 0.8810, Plg81.0000°, Azm342.0000°; N -0.1410, Plg3.0000°, Azm232.0000°; P -0.7400, Plg9.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 00:20:34.2±0.4**, 25°.62N**±0°.04×**141°.88E**±0°.04**, h70**^{km}±3^{km}**, h70**^{km}**:pP-P, n435, σ2^{s}34**/453**, mb5.1**/158**, 17C-6D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.50	10	P	Pn	00 20 57.6	-1.4
	293nm,0.3s,baz=186,slow=6.4,SNR=163						
JCJ				S	Sn	00 21 19.9	+2.1
	293nm,0.3s,baz=264,slow=23,SNR=12						
JCJ				LR	LR	00 21 51.1	
	comp=Z,29µm,18.1s,baz=232,slow=47						
JCJ	Chichijima	1.50	10	Pn	Pn	00 20 57.5	-1.6
JHJ	Hachijo jima 2	7.69	347	LR	LR	00 25 09.4	
	comp=Z,10µm,19.3s,baz=152,slow=37						
JMZ	Minamidaito 2	9.62	273	Pn	Pn	00 22 52.1	+2.3
INU	Inuyama	10.56	338	Pn	Pn	00 23 02.1	-0.6
JMN	Monobe	10.66	321	Pn	Pn	00 23 03.0	-1.0
JGF	Kuroka	10.68	340		Pn	00 23 03.8	-0.6
JWT	Wachi	11.13	331	Pn	Pn	00 23 10.3	-0.1
MJAR	Matsushiro Arr	11.33	345	P	Pn	00 23 10.1	-3.1
	0.0nm,0.3s,baz=157,slow=11,SNR=2.3						
MJAR				LR	LR	00 27 23.8	
	comp=Z,13µm,18.8s,baz=185,slow=37						
MJAR	Matsushiro Arr	11.33	345	P	Pn	00 23 11.8	-1.4
MJAR	Matsushiro Arr	11.33	345	Pn	Pn	00 23 11.8	-1.4
MAJO	Matsushiro	11.33	345	i P	Pn	00 23 13.8	+0.6
MAJO	Matsushiro	11.33	345	Pn	Pn	00 23 12.1	-1.1
MAT	Matsushiro	11.33	345	P	Pn	00 23 15.6	+2.4
JSU	Suzuyama	11.63	303	Pn	Pn	00 23 16.4	-0.9
JHS	Saijyo	12.02	323		Pn	00 23 22.2	-0.4
JNU	Nakatsue	12.16	310	P	Pn	00 23 19.4	-5.2
	0.1nm,0.3s,baz=151,slow=10,SNR=3.6						
JNU				LR	LR	00 27 16.2	
	comp=Z,4µm,18.9s,baz=146,slow=34						
JNU	Nakatsue	12.16	310		Pn	00 23 21.6	-2.9
GUMO	Guam	12.29	166	LR	LR	00 27 26.5	
	comp=Z,6µm,20.2s,baz=358,slow=33						
ULDB	Ullung-do Bore	15.07	324	P	P	00 24 08.2	+1.5
	SNR=12						
HAMB	Hamyang	15.65	312	P	P	00 24 18.0	+4.8
	SNR=7.0						
KSSAJ	Sangju	15.92	316	P	P	00 24 20.8	+4.6
	SNR=10						
YOJB	Youngju	15.99	318	P	P	00 24 22.1	+5.1
	SNR=16						
KSJEO	Jeonju	16.20	313	P	P	00 24 24.0	+4.6
	SNR=13						
KSBON	Boeun	16.20	315	P	P	00 24 24.4	+5.0
	SNR=7.7						
OKEB	Okgye-meyeon	16.23	321	P	P	00 24 23.2	+3.6
	SNR=15						
GOCB	Gochang-gun	16.34	310	P	P	00 24 27.0	+6.1
	SNR=9.5						
TJN	Taejon	16.41	314	ceP	Pn	00 24 20.0	0.0
TJN	Taejon	16.41	314	P	P	00 24 26.5	+4.8
KSDGY	Daegwallycong	16.45	320	P	P	00 24 26.1	+3.9
	SNR=12						
KSWJU	Wonju	16.62	318	P	P	00 24 30.0	+5.9
	SNR=8.6						
KSRS	Korea Array	16.73	318	P	Pn	00 24 24.5	+0.5
	0.4nm,0.3s,baz=132,slow=12,SNR=63						
KSRS				LR	LR	00 30 10.5	
	comp=Z,6µm,19.2s,baz=130,slow=35						
KSAR	Wonju Array Be	16.75	318	P	Pn	00 24 23.3	-0.9
KSAR	Wonju Array Be	16.75	318	Pn	Pn	00 24 23.3	-0.9
KS19	Wonju Array Si	16.80	318		Pn	00 24 25.0	+0.1
KS19				IAmb	IAmb	00 24 32.8	
	comp=Z,198nm,1.2s						
SEHB	SEOHWA	17.09	321	P	P	00 24 35.6	+6.4
	SNR=10						
OYDB	Oeyeondo	17.18	312	P	P	00 24 37.1	+6.9
	SNR=8.2						
ECDB	Euchungdo	17.18	311	P	P	00 24 37.0	+6.8
	SNR=6.0						
GAPB	Gapyeong	17.25	318	P	P	00 24 38.1	+7.2
	SNR=9.9						
KSSEO	Seoul	17.37	317	P	P	00 24 39.0	+6.7
	SNR=7.6						
HWCB	Hwacheon	17.39	320	P	P	00 24 40.0	+7.5
	SNR=9.3						
INCN	Inchon	17.55	316	P	Pn	00 24 34.0	-0.1
INCN				pmax	pmax		
	comp=Z,48nm,0.8s						
INCN	Inchon	17.55	316		Pn	00 24 34.0	-0.1
INCN	Inchon	17.55	316	P	P	00 24 40.6	+6.4
	comp=Z,116nm,1.9s						
ASAJ	Asahikawa	18.46	2	P	Pn	00 24 49.2	+4.1
	comp=Z,0.5nm,0.3s,baz=213,slow=17,SNR=1.8						
ASAJ				LR	LR	00 31 29.4	
	comp=Z,1µm,21.5s,baz=215,slow=36						
YUK	Yuzh-Kuril'sk	18.66	9	eP	P	00 24 44.4	-1.9
YUK				eS	S	00 28 10.9	-3.9
YUK				pmax	pmax		
	comp=Z,353nm,1.4s						
YUK				MLR	MLR		
	comp=Z,2µm,12.0s						
YUK				MLR	MLR		
	comp=N,2µm,10.0s						
YUK				MLR	MLR		
	comp=E,1µm,10.0s						
YULB	Yu-li	18.86	268	P	Pn	00 24 49.7	-0.4
SSE	Sheshan	19.00	291	P	Pn	00 24 52.4	+0.7
SSE				S	Sn	00 28 24.1	0.0
SSE				pmax	pmax		
	comp=E,49nm,1.5s						
SSE				pmax	pmax		
	comp=E,1µm,6.5s						
SSE				LR	LR		
	comp=E,1µm,11.9s						
SSE				LR	LR		
	comp=E,1µm,11.5s						
SSLB	Suanglung	19.10	269	P	Pn	00 24 52.4	-0.5
SSLB				IAmb	IAmb	00 24 59.3	
	comp=Z,90nm,1.2s						
SSLB	Suanglung	19.10	269	P	P	00 24 50.1	-1.4
TWG	Pinlang	19.18	266	P	P	00 24 52.2	-0.1
VLA	Vladivostok	19.28	337	i P	Pn	00 24 54.4	-0.5
TPUB	Ta-pu	19.48	268	P	Pn	00 24 56.9	-0.6
TPUB				IAmb	IAmb	00 25 01.1	
	comp=Z,157nm,1.4s						
TEY	Ternei	19.84	349	ceP	Pn	00 25 01.2	-0.2
TEY				pmax	pmax		
	comp=N,100nm,6.7s						
TEY				pmax	pmax		
	comp=Z,200nm,6.5s						
TEY				MLR	MLR		
	comp=N,100nm,17.0s						
TEY				MLR	MLR		
	comp=Z,200nm,17.0s						
KUR	Kuril'sk	20.16	12	eP	P	00 24 57.1	-5.6
KUR				e		00 25 15.8	
KUR				S	S	00 28 41.7	-3.3
KUR				pmax	pmax		
	comp=Z,3µm,5.6s						
KUR				pmax	pmax		
	comp=Z,148nm,2.9s						
KUR				MLR	MLR		
	comp=N,4µm,10.0s						
KUR				MLR	MLR		
	comp=E,3µm,10.0s						
KUR				MLR	MLR		
	comp=Z,3µm,10.0s						
USA0B	Ussuriysk Arra	20.21	339	P	P	00 25 02.5	-0.7
USA0B				pmax	pmax		
	comp=Z,7.0nm,1.0s						
USA0B	Ussuriysk Arra	20.21	339	P	P	00 25 02.5	-0.7
USRK	Ussuriysk Ar.	20.21	339	P	P	00 25 02.1	-1.1
	comp=Z,2.5nm,0.8s,baz=146,slow=10,SNR=3.3						
USRK	Ussuriysk Ar.	20.21	339	P	P	00 25 03.1	-0.2
USRK	Ussuriysk Ar.	20.21	339	P	P	00 25 03.0	-0.2
QZH	Quanzhou	21.07	273	eP	P	00 25 12.6	-0.1
QZH				S	S	00 29 04.3	+0.8
QZH				sS	Sn	00 29 17.3	+3.6
QZH				pmax	pmax		
	comp=Z,1µm,8.0s						
QZH				LR	LR		
	comp=Z,2µm,11.5s						
QZH				LR	LR		
	comp=Z,1µm,9.7s						
QZH				LR	LR		
	comp=Z,2µm,9.7s						
NJ2	Nanjing	21.15	293	eP	P	00 25 14.4	+0.9
NJ2				S	S	00 29 06.8	+1.9
NJ2				sS	sS	00 29 27.0	-0.5
NJ2				SS	SnSn	00 29 39.4	+7.8
NJ2				pmax	pmax		
	comp=Z,140nm,1.5s						
NJ2				pmax	pmax		
	comp=Z,1µm,4.0s						
NJ2				LR	LR		
	comp=Z,4µm,9.9s						
NJ2				LR	LR		
	comp=Z,3µm,13.3s						
NJ2				LR	LR		
	comp=Z,3µm,13.7s						
YSS	Yuzh-Sakhalins	21.30	2	eP	P	00 25 16.4	+1.4
YSS				eS	S	00 29 03.7	-4.0
YSS				pmax	pmax		
	comp=Z,2µm,7.6s						
YSS				smax	smax		
	comp=N,5µm,8.6s						
YSS				smax	smax		
	comp=E,3µm,9.9s						
YSS				MLR	MLR		
	comp=Z,5µm,15.0s						
YSS				MLR	MLR		
	comp=N,4µm,13.0s						
YSS				MLR	MLR		
	comp=E,4µm,14.0s						
YSS	Yuzh-Sakhalins	21.30	2	P	P	00 25 13.9	-1.1
YSS				IAmb	IAmb	00 25 39.4	
	comp=Z,74nm,1.4s						
KNMB	Chin-men Tao	21.32	272	P	P	00 25 13.4	-2.0
KNMB				IAmb	IAmb	00 25 27.9	
	comp=Z,103nm,1.2s						
DL2	Dalian	21.59	313	P	P	00 25 20.4	+2.2
DL2				S	S	00 29 14.8	+1.2
DL2				pmax	pmax		
	comp=Z,53nm,1.7s						
DL2				pmax	pmax		
	comp=Z,750nm,7.1s						
DL2				LR	LR		

	comp=Z,5µm,9.9s						
DL2				LR	LR		
	comp=Z,4µm,9.1s						
DL2				LR	LR		
	comp=Z,4µm,13.7s						
SNY	**Shenyang**	**22.13**	**321**	⇑P	**P**	**00 25 21.4**	**-2.5**
SNY				S	**S**	**00 29 24.8**	**+1.2**
SNY				pmax	pmax		
	comp=Z,28nm,1.6s						
SNY				pmax	pmax		
	comp=Z,2µm,4.4s						
SNY				LR	LR		
	comp=Z,7µm,11.4s						
SNY				LR	LR		
	comp=Z,6µm,10.8s						
SNY				LR	LR		
	comp=Z,6µm,10.5s						
CN2	**Changchun**	**22.54**	**328**	eP	**P**	**00 25 26.6**	**-1.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,900nm,5.0s						
CN2				LR	LR		
	comp=Z,6µm,11.0s						
CN2				LR	LR		
	comp=Z,5µm,11.0s						
CN2				LR	LR		
	comp=Z,6µm,12.0s						
UGL	**Uglegorsk**	**23.42**	**0**	eP	**P**	**00 25 43.5**	**+6.6**
UGL				pmax	pmax		
	comp=Z,3µm,6.5s						
UGL				MLR	MLR		
	comp=E,2µm,16.0s						
UGL				MLR	MLR		
	comp=N,3µm,9.0s						
UGL				MLR	MLR		
	comp=Z,2µm,11.0s						
TIA	**Tai'an**	**23.66**	**302**	⇓P	**P**	**00 25 36.3**	**-3.0**
TIA				pmax	pmax		
	comp=Z,2µm,7.8s						
TIA				LR	LR		
	comp=Z,5µm,16.2s						
TIA				LR	LR		
	comp=Z,3µm,11.8s						
TIA				LR	LR		
	comp=Z,4µm,15.7s						
H11N1	**WAKE ISLAND Hy**	**23.79**	**99**	T	T	00 51 00.1	
	baz=289,slow=75,SNR=515						
H11N2	**WAKE ISLAND Hy**	**23.79**	**99**	T	T	00 50 59.3	
	baz=289,slow=75,SNR=526						
H11N3	**WAKE ISLAND Hy**	**23.81**	**99**	T	T	00 51 00.5	
	baz=289,slow=75,SNR=399						
H11S3	**WAKE ISLAND Hy**	**24.03**	**102**	T	T	00 51 16.1	
	baz=292,slow=75,SNR=1695						
H11S1	**WAKE ISLAND Hy**	**24.04**	**102**	T	T	00 51 16.7	
	baz=292,slow=75,SNR=1469						
H11S2	**WAKE ISLAND Hy**	**24.05**	**102**	T	T	00 51 17.4	
	baz=292,slow=75,SNR=1775						
DAV	**Davao City (W)**	**24.14**	**223**	LR	LR	00 32 59.2	
	comp=Z,798nm,21.5s,baz=346,slow=31						
WHN	**Wuhan**	**24.75**	**288**	⇑P	**P**	**00 25 49.8**	**+0.5**
WHN				pmax	pmax		
	comp=Z,3µm,4.6s						
WHN				LR	LR		
	comp=Z,7µm,9.8s						
WHN				LR	LR		
	comp=Z,5µm,12.2s						
WHN				LR	LR		
	comp=Z,9µm,10.0s						
KLR	**Kul'dur**	**24.86**	**344**	P	**P**	**00 25 48.6**	**-1.5**
	comp=Z,2.3nm,0.7s,baz=143,slow=8.9,SNR=5.5						
KLR				LR	LR	00 34 44.6	
	comp=Z,4µm,21.1s,baz=162,slow=34						
KLR	**Kul'dur**	**24.86**	**344**	ceP	**P**	**00 25 50.2**	**+0.2**
KLR				pmax	pmax		
	comp=Z,14nm,1.7s						
TYV	**Tymovskoe**	**25.21**	**1**	eP	**P**	**00 25 58.4**	**+5.2**
TYV				pmax	pmax		
	comp=Z,17nm,0.9s						
TYV				pmax	pmax		
	comp=Z,1µm,7.2s						
TYV				MLR	MLR		
	comp=Z,2µm,17.0s						
GRNR	**Gornyy**	**25.46**	**352**	eP	**P**	**00 25 57.2**	**+1.7**
GRNR				MLR	MLR		
	comp=E,1µm,19.0s						
GRNR				MLR	MLR		
	comp=N,2µm,16.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,17.0s						
BJT	**Baijiatuau**	**25.83**	**310**	P	**P**	**00 25 57.6**	**-1.4**
BJT				pmax	pmax		
	comp=Z,27nm,1.1s						
BJT	**Baijiatuau**	**25.83**	**310**	P	**P**	**00 25 57.5**	**-1.4**
BJI	**Beijing**	**25.83**	**310**	P	**P**	**00 26 00.9**	**+1.9**
BJI				S	**S**	**00 30 29.0**	**+5.5**
BJI				pmax	pmax		
	comp=Z,1µm,6.8s						
BJI				LR	LR		
	comp=Z,4µm,10.8s						
BJI				LR	LR		
	comp=Z,3µm,10.3s						
BJI				LR	LR		
	comp=Z,5µm,11.0s						
NKL	**Nikolayevsk**	**27.51**	**358**	eP	**P**	**00 26 12.1**	**-1.8**
NKL				eS	**S**	**00 30 48.2**	**-1.4**
NKL				pmax	pmax		
	comp=N,2.0nm,0.9s						
NKL				pmax	pmax		
	comp=E,2.0nm,0.9s						
NKL				pmax	pmax		
	comp=Z,28nm,0.9s						
NKL				smax	smax		
	comp=N,17nm,6.0s						
NKL				smax	smax		
	comp=E,17nm,6.0s						
NKL				MLR	MLR		
	comp=N,28nm,11.0s						
NKL				MLR	MLR		
	comp=E,32nm,11.0s						
NKL				MLR	MLR		
	comp=Z,819nm,11.0s						
TIY	**Taiyuan**	**27.70**	**303**	⇑P	**P**	**00 26 17.6**	**+1.7**
TIY				pmax	pmax		
	comp=Z,710nm,5.0s						
TIY				LR	LR		
	comp=Z,3µm,9.3s						
TIY				LR	LR		
	comp=Z,2µm,8.4s						
TIY				LR	LR		
	comp=Z,2µm,7.7s						
SIJI	**Sorong**	**28.26**	**203**	P	**P**	**00 26 21.2**	**+0.3**
	comp=Z,8.6nm,0.6s,baz=52,slow=18,SNR=2.1						
SIJI				LR	LR	00 35 17.6	
	comp=Z,1µm,19.5s,baz=14,slow=32						
TNTI	**Ternate**	**28.40**	**212**	P	**P**	**00 26 22.3**	**+0.2**
TNTI				IAmb	IAmb	00 26 27.4	
	comp=Z,66nm,1.3s						
ENH	**Enshi**	**28.93**	**287**	P	**P**	**00 26 26.4**	**-0.5**
HIA	**Hailar**	**29.23**	**330**	i P	**P**	**00 26 28.9**	**-0.4**
HIA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
HIA	**Hailar**	**29.23**	**330**	P	**P**	**00 26 30.1**	**+0.9**
HHC	**Hu-ho-hao-te**	**29.38**	**309**	eP	**P**	**00 26 29.0**	**-1.8**
HHC				S	**S**	**00 31 16.4**	**-3.2**
HHC				SS	**SnSn**	**00 32 55.0**	**+2.5**
HHC				ScS	**ScS**	**00 37 00.8**	**-5.0**
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,630nm,4.4s						
HHC				LR	LR		
	comp=Z,2µm,12.8s						
HHC				LR	LR		
	comp=Z,3µm,12.8s						
HHC				LR	LR		
	comp=Z,4µm,13.6s						
XAN	**Xi'an**	**29.70**	**294**	P	**P**	**00 26 34.6**	**+0.9**
XAN				pP	pP	00 26 49.4	0.0
XAN				S	**S**	**00 31 28.5**	**+3.8**
XAN				ScP	**ScP**	**00 33 08.1**	**-4.2**
XAN				ScS	**ScS**	**00 36 59.6**	**-7.8**
XAN				pmax	pmax		
	comp=Z,26nm,2.0s						
XAN				pmax	pmax		
	comp=Z,640nm,4.7s						
XAN				LR	LR		
	comp=Z,3µm,11.4s						
XAN				LR	LR		
	comp=Z,2µm,10.5s						
XAN				LR	LR		
	comp=Z,3µm,12.7s						
FAKI	**Fak Fak**	**29.87**	**200**	P	**P**	**00 26 35.0**	**-0.2**
PEA0B	**Petropavlovsk-**	**29.91**	**19**	P	**P**	**00 26 31.5**	**-3.8**
PEA0B				pmax	pmax		
	comp=Z,88nm,1.5s						
PEA0B	**Petropavlovsk-**	**29.91**	**19**	P	**P**	**00 26 31.4**	**-3.8**
PEA0B				IAmb	IAmb	00 26 33.4	
	comp=Z,88nm,1.4s						
PETK	**Petropavlovsk-**	**29.91**	**19**	LR	LR	00 40 05.1	
	comp=Z,640nm,18.9s,baz=182,slow=39						
PETK	**Petropavlovsk-**	**29.91**	**19**	P	**P**	**00 26 31.6**	**-3.7**
PETK	**Petropavlovsk-**	**29.91**	**19**	P	**P**	**00 26 31.6**	**-3.7**
PET	**Petropavlovsk**	**30.13**	**20**	eP	**P**	**00 26 41.4**	**+4.3**
PET				e*SP	**sP**	**00 27 03.1**	**+2.4**
PET				eS	**S**	**00 31 35.0**	**+4.1**
PET				e*SS	**sS**	**00 31 58.6**	**+0.7**
PET				pmax	pmax		
	comp=Z,47nm,1.3s						
PET				MLR	MLR		
	comp=Z,2µm,13.0s						
PET	**Petropavlovsk**	**30.13**	**20**	P	**P**	**00 26 36.7**	**-0.4**
PET				IAmb	IAmb	00 26 47.1	
	comp=Z,48nm,1.2s						
ZEA	**Zeya**	**30.13**	**343**	eP	**P**	**00 26 41.7**	**+4.5**
ZEA				eS	**S**	**00 31 35.7**	**+4.8**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA				smax	smax		
	comp=E,600nm,14.5s						
ZEA				MLR	MLR		
	comp=E,1µm,10.0s						
ZEA				MLR	MLR		
	comp=N,2µm,16.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,15.0s						
MYLDM	**Lahad Datu**	**30.24**	**232**	P	**P**	**00 26 39.2**	**+0.7**
MYLDM				IAmb	IAmb	00 27 02.4	
	comp=Z,49nm,1.4s						
QIZ	**Qiongzhong**	**30.30**	**264**	P	**P**	**00 26 41.8**	**+2.7**
QIZ				pP	**pP**	**00 26 53.3**	**-2.0**
QIZ				S	**S**	**00 31 36.8**	**+2.5**
QIZ				pmax	pmax		
	comp=Z,340nm,4.9s						
QIZ				LR	LR		
	comp=Z,1µm,10.0s						
QIZ				LR	LR		
	comp=Z,1µm,9.8s						
QIZ				LR	LR		
	comp=Z,1µm,10.4s						
BTO	**Baotou**	**30.39**	**307**	eP	**P**	**00 26 39.3**	**-0.5**
KKM	**Kota Kinabalu**	**31.32**	**236**	P	**P**	**00 26 45.3**	**-2.9**
KKM				IAmb	IAmb	00 27 08.5	
	comp=Z,36nm,1.3s						
GYA	**Guiyang**	**31.60**	**279**	⇑P	**P**	**00 26 51.1**	**+0.5**
GYA				pP	pP	00 27 04.1	-2.4
GYA				S	**S**	**00 31 56.3**	**+1.6**
GYA				SS	**SnSn**	**00 33 43.8**	**-2.9**
GYA				pmax	pmax		
	comp=Z,22nm,0.9s						
GYA				pmax	pmax		
	comp=Z,310nm,4.6s						
GYA				LR	LR		
	comp=Z,2µm,12.4s						
GYA				LR	LR		
	comp=Z,2µm,9.7s						
GYA				LR	LR		
	comp=Z,2µm,9.6s						
LUWI	**Luwuk**	**32.31**	**218**	P	**P**	**00 26 55.8**	**-0.9**
LUWI				IAmb	IAmb	00 27 21.2	
	comp=Z,20nm,0.6s						
CD2	**Chengdu**	**33.88**	**288**	P	**P**	**00 27 07.0**	**-3.4**
CD2				pP	pP	00 27 23.8	-2.4
CD2				PP	**PP**	**00 28 27.9**	**-0.3**
CD2				S	**S**	**00 32 32.3**	**+2.4**
CD2				sS	sS	00 33 01.3	+4.2
CD2				pmax	pmax		
	comp=Z,60nm,1.3s						
CD2				pmax	pmax		
	comp=Z,450nm,4.1s						
CD2				LR	LR		
	comp=Z,4µm,11.8s						
CD2				LR	LR		
	comp=Z,4µm,10.6s						
CD2				LR	LR		
	comp=Z,5µm,11.0s						
LZH	**Lanzhou**	**34.09**	**297**	⇓P	**P**	**00 27 12.5**	**+0.2**
LZH				pP	pwP	00 27 31.8	-0.4
LZH				S	**S**	**00 32 38.4**	**+5.1**
LZH				pmax	pmax		
	comp=Z,32nm,1.2s						
LZH				pmax	pmax		
	comp=Z,750nm,5.4s						
LZH				LR	LR		
	comp=Z,3µm,16.3s						
LZH				LR	LR		
	comp=Z,2µm,15.2s						
LZH				LR	LR		
	comp=Z,3µm,15.1s						
MA2	**Magadan**	**34.50**	**8**	i P	**P**	**00 27 15.5**	**+0.2**
MA2				pmax	pmax		
	comp=Z,55nm,2.0s						
MA2	**Magadan**	**34.50**	**8**	P	**P**	**00 27 13.9**	**-1.4**
MA2				IAmb	IAmb	00 27 20.5	
	comp=Z,59nm,1.5s						
SLVN	**Son La**	**35.02**	**271**	P	**P**	**00 27 19.4**	**-0.9**
ULN	**Ulaanbaatar**	**35.22**	**318**	ceP	**P**	**00 27 20.7**	**-1.2**
ULN				pmax	pmax		
	comp=Z,26nm,1.3s						
ULN	**Ulaanbaatar**	**35.22**	**318**	P	**P**	**00 27 20.8**	**-1.0**
ULN				IAmb	IAmb	00 27 28.4	
	comp=Z,22nm,1.0s						
KMI	**Kunming**	**35.28**	**278**	⇑P	**P**	**00 27 22.9**	**+0.1**
KMI				pP	pP	00 27 37.3	-1.6
KMI				sP	sP	00 27 44.8	-1.9
KMI				PP	**PP**	**00 28 44.5**	**+0.5**
KMI				S	**S**	**00 32 52.9**	**+0.9**
KMI				SS	**SnSn**	**00 35 08.1**	**-8.1**
KMI				pmax	pmax		
	comp=Z,68nm,1.0s						
KMI				pmax	pmax		
	comp=Z,640nm,6.6s						
KMI				LR	LR		
	comp=Z,2µm,13.1s						
KMI				LR	LR		
	comp=Z,1µm,9.9s						
KMI				LR	LR		
	comp=Z,2µm,9.5s						
UBPT	**Khong Chiam**	**35.53**	**260**	P	**P**	**00 27 24.9**	**+0.2**
UBPT				IAmb	IAmb	00 27 33.2	
	comp=Z,21nm,1.3s						
SONM	**Songino Array**	**35.60**	**318**	P	**P**	**00 27 23.3**	**-1.8**
	comp=Z,5.3nm,0.9s,baz=126,slow=8.2,SNR=23						
SONM				LR	LR	00 42 21.7	
	comp=Z,3µm,18.4s,baz=116,slow=37						
SONM	**Songino Array**	**35.60**	**318**	P	**P**	**00 27 24.9**	**-0.3**
SONM				pmax	pmax		
	comp=Z,28nm,1.4s						
SONM	**Songino Array**	**35.60**	**318**	P	**P**	**00 27 24.9**	**-0.3**
SONM				IAmb	IAmb	00 27 36.9	
	comp=Z,28nm,1.4s						
BKB	**Balikpapan**	**36.03**	**226**	P	**P**	**00 27 25.0**	**-3.9**
SBUM	**Sibu**	**36.67**	**236**	P	**P**	**00 27 34.7**	**+0.3**
KAPI	**Kappang**	**37.27**	**218**	LR	LR	00 41 17.8	
	comp=Z,305nm,21.6s,baz=42,slow=34						
KAPI	**Kappang**	**37.27**	**218**	P	**P**	**00 27 38.5**	**-0.9**
KAPI				pmax	pmax		
	comp=Z,39nm,1.4s						
KAPI	**Kappang**	**37.27**	**218**	P	**P**	**00 27 38.5**	**-0.9**
KAPI				IAmb	IAmb	00 27 51.4	
	comp=Z,39nm,1.4s						
YAK	**Yakutsk**	**37.32**	**351**	eP	P	00 27 32.7	-6.6
YAK				e*PP	pP	00 27 41.7	-14
YAK				eS	**S**	**00 33 16.3**	**-5.4**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
YAK				smax	smax		
	comp=N,349nm,14.7s						
YAK				smax	smax		
	comp=E,176nm,10.3s						
YAK				MLR	MLR		
	comp=Z,4µm,18.0s						
YAK				MLR	MLR		
	comp=N,2µm,14.0s						
YAK				MLR	MLR		
	comp=E,700nm,12.0s						
GTA	**Gaotai**	**37.71**	**302**	⇓P	**P**	**00 27 40.9**	**-2.3**
GTA				pP	pP	00 27 56.0	-3.2
GTA				sP	pwP	00 28 03.8	+0.4
GTA				S	**S**	**00 33 35.4**	**+6.9**
GTA				pmax	pmax		
	comp=E,9.0nm,1.4s						
GTA				pmax	pmax		
	comp=E,570nm,6.4s						
GTA				LR	LR		
	comp=E,2µm,17.1s						
GTA				LR	LR		
	comp=E,2µm,17.1s						
GTA				LR	LR		
	comp=E,2µm,17.9s						
SEY	**Seymchan**	**37.96**	**8**	P	**P**	**00 27 45.1**	**+0.4**
	comp=E,1.3nm,0.2s,baz=201,slow=18,SNR=1.9						
TARA	**Tarawa**	**38.42**	**124**	P	**P**	**00 27 49.2**	**0.0**
ZAK	**Zakamensk**	**38.55**	**320**	eP	**P**	**00 27 49.8**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,29nm,1.7s						
TLY	**Talaya**	**38.92**	**322**	eP	**P**	**00 27 53.7**	**+0.7**
TLY				ePPP	PPP	00 29 53.1	
TLY				eS	**S**	**00 33 52.4**	**+6.1**
TLY				eSSS	SSS	00 36 59.4	
TLY				pmax	pmax		
	comp=Z,75nm,2.0s						
TLY				MLR	MLR		
	comp=Z,4µm,13.0s						
TLY	**Talaya**	**38.92**	**322**	P	**P**	**00 27 52.8**	**-0.2**
TLY				IAmb	IAmb	00 28 09.9	
	comp=Z,22nm,1.3s						
SOEI	**Soe**	**39.12**	**208**	P	**P**	**00 27 55.5**	**+0.4**
SOEI				IAmb	IAmb	00 28 15.2	
	comp=Z,40nm,0.9s						
KDU	**Kakadu**	**39.16**	**195**	P	**P**	**00 27 57.0**	**+1.7**
	comp=Z,16nm,1.0s						
DRS	**Darwin Rock St**	**39.30**	**197**	P	**P**	**00 27 57.5**	**+1.0**
	comp=Z,16nm,1.0s						
COEN	**Coen**	**39.36**	**178**	P	**P**	**00 27 57.9**	**+0.9**
MTN	**Manton Dam**	**39.64**	**197**	P	**P**	**00 27 57.3**	**-2.0**
MTN				IAmb	IAmb	00 28 03.9	
	comp=Z,35nm,0.8s						
MTN	**Manton Dam**	**39.64**	**197**	P	**P**	**00 27 58.7**	**-0.6**
BATI	**Baumata**	**39.78**	**209**	P	**P**	**00 28 00.4**	**-0.2**
	comp=Z,58nm,0.9s,baz=29,slow=19,SNR=17						
CHTO	**Chiang Mai**	**40.19**	**269**	P	**P**	**00 28 03.9**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,15nm,1.1s						
CHTO	**Chiang Mai**	**40.19**	**269**	P	**P**	**00 28 03.9**	**-0.1**
CHTO	**Chiang Mai**	**40.19**	**269**	P	**P**	**00 28 04.5**	**+0.5**
	comp=Z,10.0nm,1.7s						
CMAR	**Chiang Mai Arr**	**40.30**	**269**	P	**P**	**00 28 01.4**	**-3.4**
	comp=Z,0.6nm,0.3s,baz=60,slow=8.4,SNR=1.7						
CMAR				PcP	**PcP**	**00 30 08.2**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=51,slow=2.9,SNR=1.4						
CMAR				LR	LR	00 43 32.4	
	comp=Z,392nm,20.9s,baz=113,slow=35						
CMAR	**Chiang Mai Arr**	**40.30**	**269**	P	**P**	**00 28 05.4**	**+0.5**
KOHI	**KOHIMA**	**42.87**	**281**	eP	**P**	**00 28 24.9**	**-1.1**
KNRA	**Kununurra**	**42.99**	**199**	P	**P**	**00 28 26.4**	**-0.3**
KNRA	**Kununurra**	**42.99**	**199**	P	**P**	**00 28 30.4**	**+3.7**
	comp=Z,19nm,1.0s						
JAGI	**Jajag, Banyuwa**	**43.31**	**222**	P	**P**	**00 28 29.4**	**0.0**
JAGI				IAmb	IAmb	00 28 33.3	
	comp=Z,57nm,1.2s						
LSA	**Lhasa**	**44.83**	**287**	P	**P**	**00 28 42.1**	**0.0**
LSA				LR	LR		
	comp=Z,3µm,7.6s						
LSA				LR	LR		
	comp=Z,2µm,9.6s						
LSA	**Lhasa**	**44.83**	**287**	P	**P**	**00 28 41.6**	**-0.5**
LSA				pmax	pmax		
	comp=Z,25nm,1.2s						
LSA	**Lhasa**	**44.83**	**287**	P	**P**	**00 28 41.6**	**-0.5**
LSA				IAmb	IAmb	00 28 48.6	
	comp=Z,25nm,1.2s						
SHL	**Shillong**	**44.87**	**281**	P	**P**	**00 28 40.8**	**-1.3**
SHL				pmax	pmax		
	comp=Z,94nm,1.4s						
SHL	**Shillong**	**44.87**	**281**	P	**P**	**00 28 40.8**	**-1.3**
BILL	**Bilibino**	**44.95**	**13**	i P	**P**	**00 28 44.8**	**+2.9**
BILL				i		00 28 58.0	
BILL				i		00 30 22.3	
BILL				i S	**S**	**00 35 16.3**	**+1.6**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,825nm,15.0s						
BILL	**Bilibino**	**44.95**	**13**	P	**P**	**00 28 41.7**	**-0.2**
CTA	**Charters Tower**	**45.63**	**174**	P	**P**	**00 28 48.5**	**+0.7**
	comp=Z,7.0nm,0.8s,baz=349,slow=7.7,SNR=2.8						
CTAO	**Charters Tower**	**45.63**	**174**	P	**P**	**00 28 47.7**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,25nm,1.2s						
CTAO	**Charters Tower**	**45.63**	**174**	P	**P**	**00 28 47.7**	**-0.1**
CTAO				IAmb	IAmb	00 28 55.4	
	comp=Z,25nm,1.1s						
CTAO	**Charters Tower**	**45.63**	**174**	P	P	00 28 52.7	+4.9
NIKH	**Nikolski High**	**45.67**	**40**	P	**P**	**00 28 46.3**	**-1.4**
WB0	**Warramunga Arr**	**45.70**	**190**	P	**P**	**00 28 47.7**	**-0.6**
WR0	**Warramunga Arr**	**45.87**	**190**	P	**P**	**00 28 49.5**	**-0.2**
WRAB	**Tennant Creek**	**45.87**	**190**	i P	**P**	**00 28 49.1**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,104nm,0.8s						
WRAB	**Tennant Creek**	**45.87**	**190**	P	**P**	**00 28 49.2**	**-0.5**
WRAB	**Tennant Creek**	**45.87**	**190**	P	**P**	**00 28 49.6**	**-0.1**
WB2	**Warramunga Arr**	**45.88**	**190**	P	**P**	**00 28 49.1**	**-0.6**
WRA	**Warramunga Arr**	**45.88**	**190**	P	**P**	**00 28 49.1**	**-0.6**
	comp=Z,57nm,0.8s,baz=9.3,slow=8.2,SNR=122						
WRA				LR	LR	00 47 36.9	
	comp=Z,423nm,19.4s,baz=15,slow=36						
WRA	**Warramunga Arr**	**45.88**	**190**	i P	**P**	**00 28 49.2**	**-0.6**
WRA				pmax	pmax		
	comp=Z,58nm,0.8s						
WRA	**Warramunga Arr**	**45.88**	**190**	IAmb	IAmb	00 28 55.9	
	comp=Z,13nm,0.9s						
LEM	**Lembang**	**46.36**	**231**	P	**P**	**00 28 51.7**	**-2.1**
	comp=Z,31nm,0.8s,baz=114,slow=12,SNR=6.8						
TIXI	**Tiksi**	**46.65**	**354**	ceP	**P**	**00 28 56.1**	**+1.0**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIXI	**Tiksi**	**46.65**	**354**	P	**P**	**00 28 54.7**	**-0.5**
PSI	**Prapat**	**47.09**	**248**	P	**P**	**00 28 57.7**	**-1.9**
	comp=Z,13nm,0.8s,baz=38,slow=4.8,SNR=6.6						
RPSI	**Rantau Prapat**	**47.15**	**248**	IAmb	IAmb	00 29 06.2	
	comp=Z,18nm,0.8s						
WMQ	**Urumqi**	**47.23**	**307**	eP	**P**	**00 29 00.3**	**+0.1**
WMQ				pP	pP	00 29 11.5	-5.3
WMQ				S	**S**	**00 35 55.5**	**+7.3**
WMQ				pmax	pmax		
	comp=Z,51nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,870nm,4.1s						
WMQ				LR	LR		
	comp=Z,2µm,11.9s						
WMQ				LR	LR		
	comp=Z,2µm,15.7s						
WMQ				LR	LR		
	comp=Z,2µm,17.9s						
DGPR	**DIGLIPUR**	**47.56**	**265**	eP	**P**	**00 29 02.1**	**-0.9**
DGPR				IAmb	IAmb	00 29 07.8	
	comp=Z,41nm,0.8s						
DGZ	**Jazzator, Alta**	**48.10**	**315**	i P	**P**	**00 29 07.4**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,15nm,1.2s						
PBA	**Port Blair**	**48.32**	**263**	P	**P**	**00 29 11.2**	**+2.3**
PBA				IAmb	IAmb	00 29 16.6	
	comp=Z,26nm,0.8s						
GSI	**Gunungsitoli**	**49.03**	**248**		**P**	**00 29 13.2**	**-1.3**
GSI	**Gunungsitoli**	**49.03**	**248**	P	**P**	**00 29 13.2**	**-1.3**
RK1H	**Rockhampton Ha**	**49.43**	**170**	P	P	00 29 24.0	+6.9
	comp=Z,18nm,1.1s						
JIRN	**Jiri**	**49.46**	**285**	eP	**P**	**00 29 16.2**	**-1.8**
	comp=Z,118nm,0.9s						
JIRN	**Jiri**	**49.46**	**285**	eP	**P**	**00 29 16.6**	**-1.4**
	comp=Z,12nm,0.8s						
ZSN	**Zaisan**	**49.50**	**312**	eP	**P**	**00 29 17.0**	**-0.6**
	baz=312						
ZSN	**Zaisan**	**49.50**	**312**	eP	**P**	**00 29 17.0**	**-0.6**
AS31	**Alice Springs**	**49.60**	**190**	P	**P**	**00 29 18.5**	**0.0**
ASAR	**Alice Springs**	**49.60**	**190**	P	**P**	**00 29 18.0**	**-0.5**

	comp=Z,6.5nm,0.8s,baz=12,slow=8.8,SNR=30						
ASAR				LR	LR	00 49 43.4	
	comp=Z,385nm,19.7s,baz=18,slow=35						
ASAR	Alice Springs	49.60	190	P	P	00 29 17.8	-0.7
GUN	Gumba	49.69	286	eP	P	00 29 17.8	-1.9
GUN	Gumba	49.69	286	eP	P	00 29 18.4	-1.3
	comp=Z,126nm,1.6s						
PKI	Pulchoki	50.16	285	eP	P	00 29 21.3	-2.0
PKI	Pulchoki	50.16	285	eP	P	00 29 21.4	-1.9
PKIN	Phulchoki	50.17	285	eP	P	00 29 21.5	-1.8
PKIN	Phulchoki	50.17	285	eP	P	00 29 21.9	-1.4
	comp=Z,439nm,2.8s						
KKN	Kakani	50.23	286	eP	P	00 29 21.9	-1.8
KKN	Kakani	50.23	286	eP	P	00 29 22.6	-1.1
	comp=Z,424nm,2.6s						
XMIS	Christmas Isla	50.32	229	P	P	00 29 23.6	-0.5
DMN	Daman	50.42	286	eP	P	00 29 22.7	-2.4
DMN	Daman	50.42	286	eP	P	00 29 23.7	-1.4
	comp=Z,192nm,2.2s						
ZAA0	Zalesovo Array	50.43	320	P	P	00 29 23.9	-0.6
ZALV	Zalesovo Beam	50.43	320	P	P	00 29 22.8	-1.7
	comp=Z,1.6nm,0.8s,baz=95,slow=6.5,SNR=5.2						
ZALV				PcP	PcP	00 30 40.9	-1.0
	comp=Z,2.2nm,0.8s,baz=104,slow=3.0,SNR=4.5						
ZALV				LR	LR	00 51 07.7	
	comp=Z,1µm,18.9s,baz=90,slow=37						
ZALV	Zalesovo Beam	50.43	320	i P	P	00 29 24.2	-0.3
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZALV	Zalesovo Beam	50.43	320	P	P	00 29 23.2	-1.3
BOK	Bokaro	50.58	281	eP	P	00 29 23.6	-2.5
BOK				IAmb	IAmb	00 29 34.4	
	comp=Z,41nm,1.1s						
GKN	Gorkha	50.75	286	eP	P	00 29 26.2	-1.3
GKN	Gorkha	50.75	286	eP	P	00 29 26.5	-1.0
	comp=Z,126nm,1.6s						
TNA	Tin City	50.84	24	P	P	00 29 25.9	-1.4
TNA				IAmb	IAmb	00 29 40.5	
	comp=Z,19nm,1.1s						
SDPT	Sand Point	51.02	38	P	P	00 29 27.9	-1.0
MK31	Makanchi Array	51.21	311	i P	P	00 29 30.8	+0.2
MK31	Makanchi Array	51.21	311	IAmb	IAmb	00 29 40.1	
	comp=Z,20nm,1.2s						
MKAR	Makanchi Array	51.21	311	P	P	00 29 29.5	-1.1
	comp=Z,4.2nm,0.8s,baz=97,slow=9.4,SNR=16						
MKAR				PcP	PcP	00 30 45.2	+0.2
	comp=Z,1.3nm,0.8s,baz=90,slow=2.9,SNR=1.4						
MKAR				LR	LR	00 52 27.3	
	comp=Z,1µm,18.6s,baz=86,slow=38						
CNBA	Chernabura Isl	51.43	39	P	P	00 29 31.4	-0.5
MAKZ	Makanchi	51.43	311	P	P	00 29 32.1	0.0
MAKZ				pmax	pmax		
	comp=Z,39nm,1.3s						
MAKZ	Makanchi	51.43	311	P	P	00 29 32.1	0.0
MAKZ				IAmb	IAmb	00 29 41.8	
	comp=Z,39nm,1.3s						
DANN	Dangsing	51.44	287	eP	P	00 29 31.1	-1.7
	comp=Z,190nm,1.0s						
DANN	Dangsing	51.44	287	eP	P	00 29 31.6	-1.2
	comp=Z,1µm,2.5s						
EIDS	Eidsvold	51.46	169	P	P	00 29 33.1	+0.6
EIDS				IAmb	IAmb	00 29 40.2	
	comp=Z,15nm,1.0s						
EIDS	Eidsvold	51.46	169	P	P	00 29 39.0	+6.5
PSA00	Pilbara Seismi	51.56	206	P	P	00 29 34.4	+1.1
KOLN	Koldanda	51.69	286	eP	P	00 29 32.7	-1.9
	comp=Z,103nm,1.3s						
KOLN	Koldanda	51.69	286	eP	P	00 29 33.7	-0.9
	comp=Z,293nm,2.0s						
QLP	Quilpie	51.95	177	P	P	00 29 40.1	+4.0
	comp=Z,42nm,1.6s						
WRKA	Warakurna	52.04	196	P	P	00 29 39.1	+2.2
PYUN	Piuthan	52.15	287	eP	P	00 29 36.2	-1.9
	comp=Z,135nm,1.2s						
PYUN	Piuthan	52.15	287	eP	P	00 29 37.3	-0.8
	comp=Z,377nm,1.8s						
RMQ	Roma	52.23	172	P	P	00 29 44.2	+6.0
	comp=Z,9.7nm,1.3s						
SEM	Semipalatinsk	52.77	315	eP	P	00 29 40.8	-1.5
	baz=315						
SEM	Semipalatinsk	52.77	315	eP	P	00 29 40.8	-1.5
DZM	Mont Dzumac	53.06	151	eP	P	00 29 51.8	+7.3
	comp=Z,53nm,1.2s						
DZM				eS	S	00 37 18.7	+9.2
	comp=Z,443nm,28.8s						
DZM				eLR	LR	00 45 12.5	
	comp=Z,2µm,26.6s						
SHLS	Shalkode	53.20	306	eP	P	00 29 42.1	-3.4
	baz=306						
SHLS	Shalkode	53.20	306	eP	P	00 29 42.1	-3.4
OOD	Oodnadatta	53.44	187	P	P	00 29 52.2	+5.2
	comp=Z,14nm,1.0s						
RDOG	Red Dog Mine	53.69	23	P	P	00 29 48.3	-0.2
RDOG				IAmb	IAmb	00 30 11.4	
	comp=Z,25nm,1.2s						
KURK	Kurchatov	53.83	315	ceP	P	00 29 49.9	+0.1
KURK				pmax	pmax		
	comp=Z,31nm,1.7s						
KURK	Kurchatov	53.83	315	P	P	00 29 48.9	-0.9
KURK				IAmb	IAmb	00 30 05.9	
	comp=Z,25nm,1.1s						
KURBB	Kurchatov Arra	53.88	315	P	P	00 29 48.4	-1.8
	comp=Z,8.9nm,1.1s,baz=93,slow=7.7,SNR=34						
KURBB	Kurchatov Arra	53.88	315	P	P	00 29 49.0	-1.2
NRIK	Noril'sk	53.92	339	P	P	00 29 49.5	-0.6
	comp=Z,2.9nm,0.6s,baz=112,slow=8.9,SNR=7.2						
NRIK				LR	LR	00 53 49.6	
	comp=Z,2µm,18.4s,baz=120,slow=37						
NRIK	Noril'sk	53.92	339	ceP	P	00 29 50.4	+0.3
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
NRIK	Noril'sk	53.92	339	P	P	00 29 49.3	-0.8
SATY	Saty	53.98	306	eP	P	00 29 49.7	-1.5
	baz=306						
SATY	Saty	53.98	306	eP	P	00 29 49.7	-1.5
PRZ	Przheval'sk	54.02	305	P	P	00 29 51.2	-0.3
PRZ				pmax	pmax		
	comp=Z,34nm,1.0s						
PRZ	Przheval'sk	54.02	305	P	P	00 29 51.2	-0.3
PRZ				IAmb	IAmb	00 30 03.8	
	comp=Z,34nm,1.0s						
ARXS	Arharly	54.35	307	eP	P	00 29 52.1	-1.7
TARG	Taragay, Kyrgy	54.51	304	IAmb	IAmb	00 30 08.9	
	comp=Z,41nm,1.3s						
MDOK	Medeo	54.97	306	eP	P	00 29 57.1	-1.3
	baz=306						
MDOK	Medeo	54.97	306	eP	P	00 29 57.0	-1.3
KUU	Kurty	55.44	307	eP	P	00 30 00.1	-1.5
	comp=Z,11nm,1.1s,baz=307						
KUU	Kurty	55.44	307	eP	P	00 30 00.1	-1.5
KUU				pmax	pmax		
	comp=Z,11nm,1.1s						
KDAK	Kodiak Island	55.71	36	P	P	00 30 07.6	+4.5
	comp=Z,14nm,1.0s,baz=270,slow=9.1,SNR=7.3						
K20K	Telida	55.81	29	P	P	00 30 04.7	+0.8
K20K				IAmb	IAmb	00 30 19.9	
	comp=Z,23nm,1.3s						
BOOM	Boomskoye usch	55.83	305	P	P	00 30 04.7	+0.1
BOOM				pmax	pmax		
	comp=Z,24nm,1.3s						
BOOM	Boomskoye usch	55.83	305	P	P	00 30 04.7	+0.1
BOOM				IAmb	IAmb	00 30 17.1	
	comp=Z,24nm,1.2s						
LCRK	Leigh Creek	55.86	184	P	P	00 30 06.3	+1.8
	comp=Z,107nm,1.0s						
J20K	Nowinta River	55.94	28	P	P	00 30 06.6	+1.9
J20K				IAmb	IAmb	00 30 20.0	
	comp=Z,22nm,1.0s						
JBP	Jabalpur	55.97	282	eP	P	00 30 03.1	-2.5
TKM2	Tokmak 2	56.05	306	P	P	00 30 05.2	-1.0
MULG	Mulgathing	56.09	188	P	P	00 30 10.9	+4.7
	comp=Z,29nm,1.1s						
KSH	Kashi	56.11	302	P	P	00 30 08.8	+2.2
KSH				sP	sP	00 30 32.0	+0.9
KSH				ScP	ScP	00 34 57.6	+0.6
KSH				S	S	00 37 48.8	-1.7
KSH				ScS	ScS	00 39 44.3	-5.4
KSH				pmax	pmax		
	comp=Z,14nm,0.9s						
KSH				pmax	pmax		
	comp=Z,400nm,4.9s						
KSH				LR	LR		
	comp=Z,920nm,16.0s						
KSH				LR	LR		
	comp=Z,2µm,16.3s						
KSH				LR	LR		
	comp=Z,2µm,18.9s						
IMAR	Indian Mountai	56.48	26	P	P	00 30 10.5	+1.9
ARMA	Armidale	56.50	170	P	P	00 30 10.0	+0.7
SMLA	Simla	56.50	292	eP	P	00 30 07.6	-1.7
SMLA				IAmb	IAmb	00 30 21.7	
	comp=Z,101nm,1.4s						
JHNI	Jhansi	56.63	285	eP	P	00 30 06.3	-4.0
HLK	Haleakala	56.64	81	P	P	00 30 10.2	-0.6
CAST	Castle Rocks	56.70	29	P	P	00 30 11.4	+1.2
CAST				IAmb	IAmb	00 30 31.7	
	comp=Z,22nm,1.2s						
SGDS	Sogindy	56.71	307	eP	P	00 30 09.1	-1.6
	baz=307						
FRU1	Bishkek	56.77	306	P	P	00 30 11.5	+0.4
FRU1				pmax	pmax		
	comp=Z,29nm,1.2s						
FRU1	Bishkek	56.77	306	P	P	00 30 11.5	+0.4
FRU1				IAmb	IAmb	00 30 23.6	
	comp=Z,29nm,1.2s						
H21K	Melozitna Rive	56.79	27	P	P	00 30 12.9	+2.0
H21K				IAmb	IAmb	00 30 26.0	
	comp=Z,43nm,1.4s						
AAK	Ala-Archa	56.88	306	P	P	00 30 10.6	-1.4
	comp=Z,1.9nm,0.8s,baz=97,slow=16,SNR=3.5						
AAK	Ala-Archa	56.88	306	i P	P	00 30 11.5	-0.6
AAK				pmax	pmax		
	comp=Z,18nm,1.0s						
AAK	Ala-Archa	56.88	306	P	P	00 30 11.8	-0.3
AAK				IAmb	IAmb	00 30 27.6	
	comp=Z,16nm,1.4s						
CMSA	Cobar Meteorol	56.95	176	P	P	00 30 16.2	+3.9
	comp=Z,20nm,1.2s						
BTLS	Baital	56.99	308	eP	P	00 30 11.6	-1.0
	baz=308						
BTLS	Baital	56.99	308	eP	P	00 30 11.6	-1.0
I21K	Tanana	57.04	27	P	P	00 30 13.2	+0.6
I21K				IAmb	IAmb	00 30 23.4	
	comp=Z,34nm,1.2s						
STKA	Stephens Creek	57.17	180	P	P	00 30 14.1	+0.3
	comp=Z,17nm,1.1s,baz=336,slow=7.7,SNR=11						
STKA				LR	LR	00 53 30.2	
	comp=Z,505nm,21.9s,baz=7.2,slow=35						
STKA	Stephens Creek	57.17	180	P	P	00 30 16.3	+2.4
	comp=Z,5.9nm,1.1s						
MLY	Manley	57.54	28	P	P	00 30 17.1	+1.0
MLY				IAmb	IAmb	00 30 31.1	
	comp=Z,25nm,1.4s						
SEW	Seward	57.54	34	P	P	00 30 15.4	-0.7
BRZS	Berezniki	57.63	314	eP	P	00 30 16.3	-0.8
	baz=314						
BRZS	Berezniki	57.63	314	eP	P	00 30 16.2	-0.8
COCO	West Island	57.76	235	P	P	00 30 19.1	+0.8
COCO				pmax	pmax		
	comp=Z,69nm,1.1s						
COCO	West Island	57.76	235	P	P	00 30 19.1	+0.8
BWN	Browne	57.96	29	P	P	00 30 20.2	+1.1
BWN				IAmb	IAmb	00 30 30.4	
	comp=Z,29nm,1.1s						
COLD	Coldfoot	58.11	25	P	P	00 30 21.5	+1.4
MCK	McKinley	58.14	29	P	P	00 30 21.0	+0.6
MCK				pmax	pmax		
	comp=Z,36nm,1.2s						
MCK	McKinley	58.14	29	P	P	00 30 21.0	+0.6
MCK				IAmb	IAmb	00 30 36.3	
	comp=Z,36nm,1.2s						
RND	Reindeer	58.14	30	P	P	00 30 20.3	-0.1
RND				pmax	pmax		
	comp=Z,12nm,1.0s						
RND	Reindeer	58.14	30	P	P	00 30 20.3	-0.1
RND				IAmb	IAmb	00 30 33.6	
	comp=Z,12nm,1.0s						
NEA2	Nenana	58.18	28	P	P	00 30 21.1	+0.5
NEA2				IAmb	IAmb	00 30 35.1	
	comp=Z,33nm,1.3s						
BHPL	Bhopal	58.21	282	eP	P	00 30 19.6	-2.0
BHPL				IAmb	IAmb	00 30 30.3	
	comp=Z,29nm,1.2s						
SML	Sawmill	58.22	32	P	P	00 30 21.8	+0.8
BBOO	Buckleboo	58.37	186	P	P	00 30 25.4	+3.2
	comp=Z,44nm,1.8s						
WHYH	Whyalla	58.47	184	P	P	00 30 29.4	+6.5
	comp=Z,17nm,1.1s						
MDM	Murphy Dome	58.58	28	P	P	00 30 24.6	+1.2
MDM				IAmb	IAmb	00 30 44.7	
	comp=Z,16nm,1.1s						
NAPP	Napperby	58.58	184	P	P	00 30 27.6	+3.9
	comp=Z,41nm,1.0s						
WRH	Wood River Hil	58.59	29	P	P	00 30 23.9	+0.4
WRH				IAmb	IAmb	00 30 43.4	
	comp=Z,18nm,1.3s						
TOLK	Toolik Lake Re	58.59	24	P	P	00 30 25.1	+1.6
SCM	Sheep Creek Mo	58.70	32	P	P	00 30 26.1	+1.7
SCM				pmax	pmax		
	comp=Z,65nm,1.3s						
SCM	Sheep Creek Mo	58.70	32	P	P	00 30 26.1	+1.7
CCB	Clear Creek Bu	58.73	28	P	P	00 30 25.8	+1.4
CCB				IAmb	IAmb	00 30 45.8	
	comp=Z,12nm,1.3s						
TCOL	CIGO, UAF Yank	58.73	28	P	P	00 30 25.0	+0.6
COLA	College	58.73	28	P	P	00 30 24.4	0.0
COLA				pmax	pmax		
	comp=Z,32nm,0.3s						
COLA	College	58.73	28	P	P	00 30 24.4	0.0
DHY	Denali Highway	58.77	30	P	P	00 30 25.4	+0.5
DHY				IAmb	IAmb	00 30 54.6	
	comp=Z,12nm,1.2s						
HTT	Hallett	58.79	183	P	P	00 30 30.7	+5.5
	comp=Z,19nm,1.2s						
H24K	Noodor Dome	58.83	27	P	P	00 30 26.6	+1.4
H24K				IAmb	IAmb	00 30 46.2	
	comp=Z,18nm,1.2s						
POKR	Poker Plat Res	58.94	28	P	P	00 30 25.3	-0.6
POKR				IAmb	IAmb	00 30 40.9	
	comp=Z,20nm,1.2s						
POKR	Poker Plat Res	58.94	28		P	00 30 26.5	+0.6
BVAR	Borovoye Array	58.95	318	P	P	00 30 25.3	-0.8
	comp=Z,3.7nm,0.6s,baz=156,slow=7.6,SNR=20						
BRVK	Borovoye	59.01	318	ceP	P	00 30 26.4	-0.2
BRVK				pmax	pmax		
	comp=Z,17nm,1.3s						
BRVK	Borovoye	59.01	318	P	P	00 30 26.4	-0.2
BRVK				IAmb	IAmb	00 30 38.1	
	comp=Z,16nm,1.1s						
HYB	Hyderabad	59.02	276	i P	P	00 30 27.0	-0.2
HDA	Harding Lake	59.08	29	P	P	00 30 27.3	+0.5
IL31		59.13	28	P	P	00 30 27.6	+0.5
IL31				IAmb	IAmb	00 30 42.3	
	comp=Z,31nm,1.3s						
ILAR	Eielson Array	59.13	28	P	P	00 30 30.3	+3.1
	comp=Z,6.9nm,0.9s,baz=263,slow=5.3,SNR=31						
ILAR				LR	LR	00 57 01.2	
	comp=Z,212nm,18.8s,baz=270,slow=37						
ILAR	Eielson Array	59.13	28	P	P	00 30 27.8	+0.5
DZA	Taraz	59.17	306	eP	P	00 30 27.2	-0.7
	baz=306						
DZA	Taraz	59.17	306	eP	P	00 30 27.2	-0.7
NIL	Nilore	59.23	295	P	P	00 30 28.0	-0.5
NIL				pmax	pmax		
	comp=Z,36nm,1.4s						
NIL	Nilore	59.23	295	P	P	00 30 28.0	-0.5
NIL				IAmb	IAmb	00 30 35.1	
	comp=Z,36nm,1.4s						
DRK	Karamyk	59.31	302	P	P	00 30 29.5	+0.2
DRK				IAmb	IAmb	00 30 44.7	
	comp=Z,12nm,1.1s						
KLU	Klutina	59.35	32	P	P	00 30 29.2	+0.4
KLU				IAmb	IAmb	00 30 39.1	
	comp=Z,28nm,1.2s						
PAX	Paxson	59.63	30	P	P	00 30 30.5	-0.3
PAX				pmax	pmax		
	comp=Z,42nm,1.4s						
PAX	Paxson	59.63	30	P	P	00 30 30.5	-0.3
PRP	Porcupine Dome	59.77	27	P	P	00 30 32.5	+0.7
MORW	Morawa	59.77	206	P	P	00 30 32.6	+0.6
MORW				IAmb	IAmb	00 30 39.6	
	comp=Z,20nm,1.2s						
BTK	Batken	59.97	303	P	P	00 30 33.8	+0.3
BTK				pmax	pmax		
	comp=Z,18nm,1.3s						
BTK	Batken	59.97	303	P	P	00 30 33.8	+0.3
BTK				IAmb	IAmb	00 30 46.5	
	comp=Z,18nm,1.2s						
FYU	Fort Yukon	59.97	26	P	P	00 30 34.2	+1.2
IUG	Iuzhnay	60.22	305	eP	P	00 30 34.1	-1.2
	baz=306						
IUG	Iuzhnay	60.22	305	eP	P	00 30 34.0	-1.2
BRLS	Borolday	60.23	307	eP	P	00 30 34.6	-0.6
	baz=306						
BRLS	Borolday	60.23	307	eP	P	00 30 34.6	-0.6
DOT	Dot Lake	60.30	30	P	P	00 30 37.3	+2.0
DOT				IAmb	IAmb	00 30 49.3	
	comp=Z,25nm,1.1s						
BMAR	Burnt Mountain	60.30	25	P	P	00 30 35.5	+0.2
SCRK	Sand Creek	60.34	29	P	P	00 30 37.5	+1.8
SCRK				IAmb	IAmb	00 30 45.3	
	comp=Z,27nm,1.0s						
GLB	Gilahina Butte	60.37	32	P	P	00 30 36.4	+0.6
GLB				IAmb	IAmb	00 30 50.6	
	comp=Z,36nm,1.4s						
L26K	Log Cabin Wild	60.60	30	P	P	00 30 38.1	+0.7
L26K				IAmb	IAmb	00 30 51.3	
	comp=Z,26nm,1.3s						
BLDU	Ballidu	60.89	205	P	P	00 30 44.7	+5.1
	comp=Z,14nm,1.0s						
PALK	Pallekele	60.93	264	P	P	00 30 41.3	+0.9
PALK				pmax	pmax		
	comp=Z,25nm,1.4s						
PALK	Pallekele	60.93	264	P	P	00 30 41.3	+0.9
PALK				IAmb	IAmb	00 30 46.0	
	comp=Z,25nm,1.4s						
CAN	Canberra	60.98	173	P	P	00 30 40.7	+0.5
CAN				pmax	pmax		
	comp=Z,26nm,1.1s						
CAN	Canberra	60.98	173	P	P	00 30 40.7	+0.5
CAN				IAmb	IAmb	00 30 48.9	
	comp=Z,26nm,1.1s						
CAN	Canberra	60.98	173	P	P	00 30 46.9	+6.7
	comp=Z,34nm,1.2s						
M27K	Edge Creek, AK	61.28	31	P	P	00 30 41.5	-0.6
L27K	Beaver Creek,	61.30	30	P	P	00 30 43.4	+1.4
L27K				IAmb	IAmb	00 30 56.9	
	comp=Z,24nm,1.3s						
BCAR	Beaver Creek A	61.31	30	P	P	00 30 43.8	+1.6
KBL	Kabul	62.45	297	P	P	00 30 49.2	-1.3
KBL				pmax	pmax		
	comp=Z,21nm,0.9s						
KBL	Kabul	62.45	297	P	P	00 30 49.2	-1.3
KBL				IAmb	IAmb	00 30 55.0	
	comp=Z,21nm,0.9s						
POO	Poona	62.85	279	eP	P	00 30 50.0	-3.2
TOO	Toolangi	62.95	177	P	P	00 30 54.9	+1.6
TOO				pmax	pmax		
	comp=Z,41nm,1.3s						
TOO	Toolangi	62.95	177	P	P	00 30 54.9	+1.6
INK	Inuvik	64.48	24	P	P	00 31 05.5	+2.5
	comp=Z,4.1nm,0.8s,baz=276,slow=6.0,SNR=12						
INK	Inuvik	64.48	24	P	P	00 31 04.1	+1.1
NIUE	Niue	64.56	129	P	P	00 31 05.3	+1.0
ARU	Arti	65.42	323	i P	P	00 31 09.5	+0.1
ARU				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AB31	Akbulak array	65.93	315	i P	P	00 31 12.2	-0.6
ABKAR	Akbulak array	65.93	315	P	P	00 31 13.4	+0.6
ABKAR	Akbulak array	65.93	315	P	P	00 31 13.2	+0.4
ABKAR				IAmb	IAmb	00 31 24.2	
	comp=Z,15nm,1.4s						
A36M	Sachs Harbour	66.76	20	P	P	00 31 19.6	+2.0
KIRV	Kirov	69.76	326	ceP	P	00 31 36.5	-0.1
GEYT	Alibeck	70.08	303	LR	LR	01 07 05.3	
	comp=Z,358nm,18.0s,baz=60,slow=40						
BELG	Belogornoye	72.62	320	i P	P	00 31 54.9	+0.9
BELG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
YKA	Yellowknife Ar	73.56	28	P	P	00 32 03.0	+3.6
	comp=Z,8.2nm,0.8s,baz=292,slow=6.0,SNR=23						
YKA	Yellowknife Ar	73.56	28	P	P	00 32 02.8	+3.3
KLMR	Klimovskoe	73.72	330	eP	P	00 31 58.6	-1.7
KLMR				eS	SKiKP	00 41 22.0	-1.2
KLMR				SSS	SSS	00 49 30.8	
KLMR				pmax	pmax		
	comp=Z,18nm,1.1s						
KLMR	Klimovskoe	73.72	330	eP	P	00 31 58.6	-1.7
KLMR				AMP		00 32 11.4	
	comp=Z,18nm,1.1s						
KLMR				eS	SKiKP	00 41 22.1	-1.2
KLMR				eS	SKiKP	00 41 22.1	-1.2
KLMR				eSS	SS	00 46 01.7	-7.8
KLMR				eSS	SS	00 46 01.7	-7.8
KLMR				⇃SSS	SSS	00 49 30.8	
KLMR				⇃SSS	SSS	00 49 30.8	
KLMR				LQ	LQ	00 59 39.9	
KLMR				LQ	LQ	00 59 39.9	
KLMR				LR	LR	01 04 10.4	
ARCES	ARCESS Array B	74.84	341	LR	LR	01 09 05.5	
	comp=Z,473nm,18.3s,baz=25,slow=39						
MAK	Makhachkala	76.03	311	eP	P	00 32 10.9	-3.1
MAK				e*PP	PcP	00 32 27.5	+1.5
MAK				eS	S	00 41 49.4	-2.5
MAK				e*SS	SKKSac	00 42 19.1	-0.1
MAK				eSS	SS	00 46 41.9	-3.5
MAK				eSSS	SSS	00 50 06.1	
MAK				pmax	pmax		
	comp=Z,441nm,1.2s						
MAK				MLR	MLR		
	comp=Z,2µm,15.0s						
TULEG	Thule	76.34	7	P	P	00 32 15.7	+0.6
MOS	Moscow	76.77	326	eP	P	00 32 22.9	+5.0
MOS				e		00 32 32.5	
MOS				MLR	MLR		
	comp=Z,2µm,17.0s						
OBN	Obninsk	77.59	325	i P	P	00 32 22.1	-0.4
OBN				i		00 32 29.0	
OBN				i S	S	00 42 06.2	-2.1
OBN				i SS	SS	00 47 07.9	-0.3
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,1µm,18.0s						
KBZ	Khabaz	78.81	313	P	P	00 32 30.0	+0.4
	comp=Z,3.0nm,0.8s,baz=79,slow=2.5,SNR=5.6						
KBZ				LR	LR	01 10 14.5	
	comp=Z,1µm,19.2s,baz=62,slow=38						
KBZ	Khabaz	78.81	313	i P	P	00 32 29.1	-0.4
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIV	Kislovodsk	78.86	313	eP	P	00 32 30.6	+0.7
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1µm,19.0s						
FINES	FINESS Array B	79.15	334	P	P	00 32 29.3	-1.8
	comp=Z,5.5nm,0.7s,baz=67,slow=4.7,SNR=23						
FINES				LR	LR	01 08 53.0	
	comp=Z,436nm,20.5s,baz=37,slow=37						
FINES	FINESS Array B	79.15	334	i P	P	00 32 29.7	-1.3
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PPT	Papeete	79.28	115	LR	LR	01 06 36.2	
	comp=Z,310nm,18.6s,baz=300,slow=35						
PPT2	Papeete2	79.29	115	eS	S	00 42 35.5	+7.7
	comp=Z,78nm,24.2s						
PPT2	Papeete2	79.29	115	eLR	LR	00 57 15.2	
	comp=Z,1µm,28.0s						
PMOR	Pomariorio Ree	79.36	112	eT	T	02 00 18.0	
	comp=Z,20nm,0.2s						
SOC	Sochi	80.96	314	eP	P	00 32 38.9	-2.3
SOC				eS	S	00 42 44.1	-0.5
SOC				eSS	SS	00 48 03.3	+4.0
SOC				eSSS	SSS	00 51 26.3	
SOC				MLR	MLR		
	comp=Z,1µm,18.0s						
NVAR	Mina Array Bea	81.64	51	P	P	00 32 50.4	+5.2
	comp=Z,3.5nm,0.8s,baz=289,slow=5.6,SNR=15						
NVAR				LR	LR	01 03 38.1	
	comp=Z,442nm,20.6s,baz=271,slow=32						
NVAR	Mina Array Bea	81.64	51	P	P	00 32 45.1	-0.1
NV11	Mina Array Sit	81.75	51	P	P	00 32 43.7	-2.0
MNK	Minsk	82.23	327	i P	P	00 32 44.8	-2.8
MNK				i		00 32 55.0	
MNK				i *PP	pP	00 33 00.6	-5.0
MNK				i		00 35 53.6	
MNK				i PPP	PPP	00 37 44.6	
MNK				i S	S	00 42 56.1	-1.2
MNK				pmax	pmax		
	comp=E,1.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,7.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.9s						

MNK				MLR	MLR		
	comp=E,124nm,19.0s						
MNK				MLR	MLR		
	comp=Z,1µm,19.0s						
MNK				MLR	MLR		
	comp=N,749nm,19.0s						
MNK	**Minsk**	**82.23**	**327**	*i* P	**P**	**00 32 44.9**	**-2.8**
	comp=E,1.0nm,1.0s						
MNK				*i* P	**P**	**00 32 44.9**	**-2.8**
	comp=N,7.0nm,1.0s						
MNK				*i* P	**P**	**00 32 44.9**	**-2.8**
	comp=Z,7.0nm,0.9s,baz=56						
MNK				*i* pP	**pP**	**00 33 00.6**	**-5.0**
MNK				*i* sP	**pwP**	**00 33 07.5**	**-2.4**
MNK				*i* PP	**PP**	**00 35 53.7**	**-2.6**
MNK				*i* PPP	PPP	00 37 44.6	
MNK				*i* S	**S**	**00 42 56.1**	**-1.2**
MNK				*i* sS	**sS**	**00 43 32.6**	**+4.8**
MNK				*i* SS	SS	00 48 04.9	-13
MNK				*i* SSS	SSS	00 51 54.2	
MNK				*i* LR	LR	01 06 06.0	
MNK				*i* LRM	MLR	01 11 37.7	
	comp=E,124nm,18.9s						
MNK				*i* LRM	MLR	01 11 50.8	
	comp=Z,1µm,18.8s						
MNK				*i* LRM	MLR	01 11 55.2	
	comp=N,749nm,18.8s						
TBI	**Tubuai**	**82.38**	**120**	*e*T	T	02 03 56.9	
	comp=N,13nm,0.3s						
TAOE	**Nuku Hiva Isla**	**83.10**	**103**	*e*LR	LR	00 59 06.7	
	comp=N,952nm,24.9s						
TAOE	**Nuku Hiva Isla**	**83.10**	**103**	*e*T	T	02 05 04.7	
	comp=N,20nm,0.2s						
AKASG	**Malin Array Be**	**83.64**	**324**	P	**P**	**00 32 52.9**	**-2.1**
	comp=N,3.0nm,0.7s,baz=52,slow=5.0,SNR=14						
AKASG				LR	LR	01 12 32.3	
	comp=N,890nm,19.2s,baz=40,slow=37						
AKASG	**Malin Array Be**	**83.64**	**324**	*ce*P	**P**	**00 32 55.0**	**0.0**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**83.64**	**324**	P	**P**	**00 32 54.7**	**-0.3**
AKBB	**Malin Array Si**	**83.64**	**324**	*ce*P	**P**	**00 32 55.3**	**+0.3**
AKBB	**Malin Array Si**	**83.64**	**324**	P	**P**	**00 32 54.8**	**-0.2**
NC405	**NORSAR Array S**	**84.65**	**338**	P	**P**	**00 32 59.8**	**-0.2**
NB2	**NORSAR Subarra**	**84.88**	**338**	P	**P**	**00 32 59.6**	**-1.5**
	comp=Z,16nm,1.4s,baz=46,slow=5.1						
NOA	**NORSAR Array B**	**84.88**	**338**	P	**P**	**00 32 59.6**	**-1.5**
	comp=Z,3.4nm,0.9s,baz=48,slow=4.9,SNR=9.4						
NOA				LR	LR	01 14 12.7	
	comp=Z,626nm,20.9s,baz=40,slow=38						
PDAR	**Pinedale Array**	**85.45**	**44**	P	**P**	**00 33 08.7**	**+4.1**
	comp=Z,4.9nm,0.9s,baz=298,slow=1.9,SNR=22						
PDAR				LR	LR	01 05 38.4	
	comp=Z,673nm,21.5s,baz=312,slow=32						
RAYN	**Ar Rayn**	**85.49**	**294**	P	**P**	**00 33 05.5**	**+0.6**
RAYN				pmax	pmax		
	comp=Z,11nm,1.1s						
RAYN	**Ar Rayn**	**85.49**	**294**	P	**P**	**00 33 05.5**	**+0.6**
RAYN				IAmb	IAmb	00 33 11.9	
	comp=Z,11nm,1.1s						
BNN	**Bunyan**	**85.76**	**311**	P	**P**	**00 33 06.0**	**-0.1**
BRTR	**Keskin Array B**	**86.80**	**313**	LR	LR	01 15 25.9	
	comp=Z,475nm,18.4s,baz=54,slow=38						
ULM	**Lac du Bonnet**	**88.83**	**33**	LR	LR	01 10 54.3	
	comp=Z,227nm,22.0s,baz=309,slow=34						
VRAC	**Vranov**	**90.93**	**328**	LR	LR	01 17 57.2	
	comp=Z,1µm,18.1s,baz=50,slow=38						
EIL	**Elat**	**90.98**	**304**	LR	LR	01 20 10.4	
	comp=Z,251nm,18.1s,baz=52,slow=40						
CLL	**Collm**	**91.20**	**331**	*e*S	**S**	**00 44 23.0**	**-1.1**
CLL				*e*SP	**SPn**	**00 45 34.0**	**+1.7**
CLL				*e*PPS	PPS	00 46 10.0	
CLL				*e*SS	**SS**	**00 50 30.0**	**+1.4**
CLL				*e*SSS	SSS	00 54 18.0	
CLL				*e*		00 56 18.0	
GERES	**GERESS Array B**	**92.63**	**329**	P	**P**	**00 33 36.5**	**-1.8**
	comp=Z,1.7nm,1.0s,baz=46,slow=2.8,SNR=7.6						
GERES				LR	LR	01 19 20.0	
	comp=Z,672nm,18.1s,baz=52,slow=38						
IDI	**Anoyia**	**95.04**	**313**	LR	LR	01 21 35.7	
	comp=Z,250nm,18.7s,baz=36,slow=39						
DAVOX	**Davos/Dischmat**	**95.90**	**329**	LR	LR	01 21 37.6	
	comp=Z,504nm,20.2s,baz=40,slow=38						
SCHQ	**Schefferville**	**96.16**	**16**	LR	LR	01 20 16.4	
	comp=Z,199nm,20.6s,baz=320,slow=37						
TXAR	**Lajitas Array**	**96.70**	**53**	P	**P**	**00 34 01.8**	**+4.5**
	comp=Z,1.0nm,1.0s,baz=296,slow=2.7,SNR=5.7						
TXAR	**Lajitas Array**	**96.70**	**53**	P	**P**	**00 33 56.7**	**-0.7**
VAE	**Valguarnera**	**100.16**	**320**	LR	LR	01 25 17.1	
	comp=Z,349nm,18.1s,baz=58,slow=39						
SYO	**Syowa Base**	**118.06**	**204**	⇓*e*X	**Pdif**	**00 35 30.2**	**-1.0**
SYO	**Syowa Base**	**118.06**	**204**	⇑*e*pPdiff	pPdif	00 35 48.2	-1.3
TORD	**Torodi Ar. Bea**	**125.33**	**310**	PKP	**PKPdf**	**00 39 27.6**	**-0.3**
	comp=Z,1.5nm,1.1s,baz=46,slow=2.3,SNR=6.0						
KOWA	**Kowa**	**128.10**	**316**	PKP	**PKPdf**	**00 39 32.8**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=30,slow=5.5,SNR=2.3						
H03N2	**Juan Fernandez**	**143.82**	**112**	T	T	03 20 58.5	
	baz=269,SNR=70						
H03N3	**Juan Fernandez**	**143.83**	**112**	T	T	03 21 19.4	
	baz=269,SNR=79						
H03N1	**Juan Fernandez**	**143.84**	**112**	T	T	03 21 19.0	
	baz=269,SNR=86						
PLCA	**Paso Flores**	**149.16**	**127**	PKPbc	**PKiKP**	**00 40 17.5**	**+1.5**
	comp=Z,4.5nm,0.9s,baz=198,slow=3.2,SNR=3.3						
PLCA	**Paso Flores**	**149.16**	**127**	PKP2	**PKPab**	**00 40 17.9**	**-1.5**
PLCA	**Paso Flores**	**149.16**	**127**		**PKPab**	**00 40 17.9**	**-1.5**
BO01	**Tunca**	**150.25**	**115**		**PKPab**	**00 40 22.3**	**-1.6**
LPAZ	**La Paz**	**150.53**	**78**	PKPbc	**PKiKP**	**00 40 22.4**	**+2.2**
	comp=Z,6.9nm,0.7s,baz=312,slow=11,SNR=19						
PEL	**Peldehue**	**150.73**	**113**	PKIKP	**PKPab**	**00 40 23.7**	**-2.4**
PEL	**Peldehue**	**150.73**	**113**		**PKPab**	**00 40 23.7**	**-2.4**
PB14	**IPOC Station P**	**150.79**	**95**		**PKPab**	**00 40 24.7**	**-2.2**
SAML	**Samuel**	**150.98**	**60**	PKIKP	**PKPab**	**00 40 24.1**	**-3.3**
SAML	**Samuel**	**150.98**	**60**		**PKPbc**	**00 40 18.8**	**-1.1**
SAML				PKPab	**PKPab**	**00 40 24.1**	**-3.3**

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*IDC **15** 00:21:00.8±4.5, 36°.40N×71°.48E, h76^{km}±41^{km}, mb3.6/10, mb1 3.7/15, mb1mx3.3/60, mbtmp3.9/15, ML3.6/5, Error ellipse: s-maj=28.5km s-min=22.7km az=12.0*

*NEIC **15** 00:21:03.4±1.6, 36°.53N±0°.05×71°.19E±0°.07, h86^{km}±8^{km}, mb4.1/13, Error ellipse: s-maj=8.8km s-min=7.5km az=109.0*

*NNC **15** 00:21:03.3±3.6, 37°.02N×71°.02E, h0^{km}, mb4.2, mpv4.0, Error ellipse: s-maj=29.3km s-min=21.6km az=179.0*

ISC 15 00:21:02.9±0.6, **36°.58N**±0°.06×**71°.20E**±0°.06, **h100**^{km}**, n69,** σ**2^s.40**/68, **mb3.8**/14, **6C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	**Garm**	**2.51**	**344**	Pn	**Pn**	**00 21 43.6**	**+1.4**
CHGR	**Chuyangaron**	**2.63**	**323**	Pn	**Pn**	**00 21 44.2**	**+0.4**
KBL	**Kabul**	**2.69**	**221**	Pn	**Pn**	**00 21 43.9**	**-0.9**
DRK	**Karamyk**	**2.93**	**9**	Pn	**Pn**	**00 21 48.0**	**0.0**
NIL	**Nilore**	**3.38**	**150**		**Pn**	**00 21 53.3**	**-0.4**
BTK	**Batken**	**3.48**	**355**	Pn	**Pn**	**00 21 56.9**	**+1.7**
AML	**Almayashu**	**5.87**	**18**	P	**Pn**	**00 22 28.4**	**+0.7**
	SNR=62						
UCH	**Uchtor**	**6.19**	**23**	P	**Pn**	**00 22 34.3**	**+2.1**
	SNR=7.1						
EKS2	**Erkin-Say**	**6.39**	**17**	P	**Pn**	**00 22 35.8**	**+1.3**
	SNR=10						
KKAR	**Karatay Array**	**6.53**	**356**		**Pn**	**00 22 36.8**	**+0.4**
KK08	**Karatay Array**	**6.54**	**355**	⇑P	**Pn**	**00 22 35.3**	**-1.1**
	5.5nm,0.6s,baz=175,slow=12						
KK08				⇑S	**Sn**	**00 23 47.8**	**-1.7**
	4.4nm,0.5s,baz=176,slow=24						
AAK	**Ala-Archa**	**6.56**	**22**	P	**Pn**	**00 22 37.7**	**+0.8**
	4.6nm,0.3s,baz=193,slow=6.1,SNR=76						
AAK				S	**Sn**	**00 23 49.4**	**-0.8**
	0.4nm,0.3s,baz=350,slow=18,SNR=1.5						
AAK	**Ala-Archa**	**6.56**	**22**	P	**Pn**	**00 22 38.0**	**+1.2**
	SNR=6.6						
AAK	**Ala-Archa**	**6.56**	**22**	⇓P	**Pn**	**00 22 37.5**	**+0.6**
	8.6nm,0.5s						
AAK				⇑S	**Sn**	**00 23 47.9**	**-2.4**
	5.2nm,0.6s						
KBK	**Karagaybulak**	**6.72**	**24**	P	**Pn**	**00 22 41.3**	**+2.2**
	SNR=6.0						
FRU1	**Bishkek**	**6.76**	**22**	Pn	**Pn**	**00 22 40.8**	**+1.3**
BOOM	**Boomskoye usch**	**6.94**	**30**	Pn	**Pn**	**00 22 42.9**	**+0.8**
CHMS	**Chumysh**	**6.96**	**22**	P	**Pn**	**00 22 42.7**	**+0.4**
	SNR=9.8						
USP	**Ospenovka**	**7.14**	**20**	P	**Pn**	**00 22 45.2**	**+0.5**
	SNR=5.7						
TKM2	**Tokmak 2**	**7.18**	**27**	P	**Pn**	**00 22 46.2**	**+0.9**
	SNR=6.3						
TKM2	**Tokmak 2**	**7.18**	**27**	⇑P	**Pn**	**00 22 45.7**	**+0.4**
	4.3nm,0.5s						
GEYT	**Alibeck**	**10.52**	**281**	P	**Pn**	**00 23 28.3**	**-2.3**
	1.9nm,0.3s,baz=105,slow=11,SNR=10						
GEYT				S	**Sn**	**00 25 19.6**	**-6.8**
	2.1nm,0.3s,baz=61,slow=29,SNR=4.6						
GYA0B	**ALIBECK ARRAY**	**10.52**	**281**	Pn	**Pn**	**00 23 29.1**	**-1.4**
PYUN	**Piuthan**	**13.06**	**127**	*e*P	Pn	00 23 57.9	-6.9
	33nm,0.5s						
MKAR	**Makanchi Array**	**13.13**	**36**	P	**Pn**	**00 24 04.7**	**-0.6**
	0.0nm,0.3s,baz=225,slow=14,SNR=1.6						
DANN	**Dangsing**	**13.40**	**124**	*e*P	Pn	00 24 02.8	-6.5
	7.4nm,0.3s						
KOLN	**Koldanda**	**13.68**	**126**	*e*P	Pn	00 24 06.5	-6.4
	13nm,0.3s						
GKN	**Gorkha**	**14.21**	**123**	*e*P	Pn	00 24 13.5	-6.2
	18nm,0.3s						
DMN	**Daman**	**14.78**	**123**	*e*P	Pn	00 24 21.4	-5.7
	8.5nm,0.3s						
KKN	**Kakani**	**14.79**	**122**	*e*P	Pn	00 24 20.9	-6.2
KURBB	**Kurchatov Arra**	**14.99**	**18**	P	**P**	**00 24 32.2**	**-0.2**
	0.0nm,0.3s,baz=206,slow=11,SNR=5.9						
PKIN	**Phulchoki**	**15.00**	**123**	*e*P	Pn	00 24 24.3	-5.6
	9.7nm,0.3s						
PKI	**Pulchoki**	**15.01**	**123**	*e*P	Pn	00 24 24.6	-5.5
AB31	**Akbulak array**	**15.09**	**331**	P	**Pn**	**00 24 29.2**	**-1.3**
	0.3nm,0.3s,baz=140,slow=12,SNR=25						
AB31				⇑S	**Sn**	**00 27 14.3**	**-2.7**
	0.5nm,0.4s,baz=152,slow=24,SNR=5.7						
ABKAR	**Akbulak array**	**15.09**	**331**	P	**Pn**	**00 24 29.6**	**-1.0**
ABKAR	**Akbulak array**	**15.09**	**331**	Pn	**Pn**	**00 24 29.9**	**-0.6**
KURK	**Kurchatov**	**15.10**	**18**		**Pn**	**00 24 32.2**	**+1.5**
GUN	**Gumba**	**15.12**	**121**	*e*P	**Pn**	**00 24 25.6**	**-5.9**
	5.3nm,0.4s						
JIRN	**Jiri**	**15.49**	**121**	*e*P	**Pn**	**00 24 30.5**	**-5.7**
	14nm,0.3s						
BVAR	**Borovoye Array**	**16.45**	**358**	P	**Pn**	**00 24 47.8**	**+0.3**
	0.2nm,0.3s,baz=179,slow=18,SNR=4.6						
BRVK	**Borovoye**	**16.49**	**358**	Pn	**Pn**	**00 24 48.1**	**+0.1**
AKTO	**Aktyubinsk**	**16.79**	**330**	P	**Pn**	**00 24 52.9**	**+1.2**
	0.8nm,0.3s,baz=150,slow=9.4,SNR=18						
AKTO				S	**Sn**	**00 27 49.8**	**-8.2**
	0.1nm,0.3s,baz=270,slow=16,SNR=2.3						
AKTO	**Aktyubinsk**	**16.79**	**330**	⇓P	**Pn**	**00 24 52.6**	**+0.9**
	4.8nm,0.8s						
AKTO				⇑S	**Sn**	**00 27 55.5**	**-2.4**
	3.5nm,1.2s						
ZAA0	**Zalesovo Array**	**19.77**	**24**	P	**P**	**00 25 25.9**	**+1.1**
ZAA0				IAmb	IAmb	00 25 37.8	
	comp=Z,2.2nm,0.7s						
ZALV	**Zalesovo Beam**	**19.77**	**24**	P	**P**	**00 25 24.8**	**0.0**
	comp=Z,0.4nm,0.3s,baz=213,slow=10,SNR=6.8						
GNI	**Garni**	**21.02**	**288**	P	**P**	**00 25 41.9**	**+3.3**
	comp=Z,4.7nm,1.0s,baz=78,slow=9.3,SNR=4.6						
GNI	**Garni**	**21.02**	**288**	P	**P**	**00 25 39.9**	**+1.2**
GNI				IAmb	IAmb	00 25 50.5	
	comp=Z,8.1nm,1.1s						
KBZ	**Khabaz**	**22.70**	**297**	P	**P**	**00 25 59.6**	**+3.6**
	comp=Z,1.7nm,0.9s,baz=141,slow=6.5,SNR=2.5						
KIV	**Kislovodsk**	**22.89**	**298**	P	**P**	**00 25 58.9**	**+0.8**
KIV				IAmb	IAmb	00 26 08.5	
	comp=Z,4.7nm,1.0s						
BELG	**Belogornoye**	**22.93**	**321**	P	**P**	**00 26 00.9**	**+2.8**
	comp=Z,4.1nm,0.8s,baz=219,slow=2.9,SNR=5.1						
AKASG	**Malin Array Be**	**33.02**	**309**	P	**P**	**00 27 31.1**	**+2.8**
	comp=Z,0.8nm,0.6s,baz=110,slow=8.1,SNR=4.8						
FIA1	**FINESS Array S**	**37.50**	**326**	P	**P**	**00 28 09.0**	**+2.4**
FINES	**FINESS Array B**	**37.50**	**326**	P	**P**	**00 28 09.1**	**+2.4**
	comp=Z,1.0nm,0.4s,baz=121,slow=10,SNR=18						
ARCES	**ARCESS Array B**	**41.13**	**338**	P	**P**	**00 28 39.5**	**+2.9**
	comp=Z,5.8nm,1.0s,baz=114,slow=8.0,SNR=7.0						
ARCES	**ARCESS Array B**	**41.13**	**338**	P	**P**	**00 28 40.1**	**+3.5**
KULM	**Kulim**	**41.21**	**132**	P	**P**	**00 28 38.1**	**+0.1**
KULM				IAmb	IAmb	00 28 46.5	
	comp=Z,9.7nm,0.9s						
KULM	**Kulim**	**41.21**	**132**	P	**P**	**00 28 38.1**	**+0.1**
NC405	**NORSAR Array S**	**44.17**	**323**	P	**P**	**00 29 03.8**	**+2.4**
NC602	**NORSAR Array S**	**44.22**	**323**		**P**	**00 29 04.0**	**+2.2**
NC303	**NORSAR Array S**	**44.35**	**323**	P	**P**	**00 29 05.2**	**+2.4**
NC303				IAmb	IAmb	00 29 22.3	
	comp=Z,8.9nm,1.1s						
NB201	**NORSAR Array S**	**44.37**	**323**	P	**P**	**00 29 05.5**	**+2.5**
NB2	**NORSAR Subarra**	**44.41**	**323**	P	**P**	**00 29 05.5**	**+2.2**
	comp=Z,1.3nm,0.4s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.41**	**323**	P	**P**	**00 29 06.5**	**+3.2**
	comp=Z,0.3nm,0.4s,baz=103,slow=7.1,SNR=16						
NAO01	**NORSAR Array S**	**44.55**	**323**	P	**P**	**00 29 06.6**	**+2.2**
NAO01				IAmb	IAmb	00 29 14.3	
	comp=Z,4.2nm,0.8s						
NBO00	**NORSAR Array S**	**44.62**	**323**	P	**P**	**00 29 06.9**	**+2.0**
NC204	**NORSAR Array S**	**44.65**	**323**	P	**P**	**00 29 08.0**	**+2.7**
TORD	**Torodi Ar. Bea**	**65.88**	**269**	P	**P**	**00 31 38.5**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=40,slow=5.5,SNR=6.3						
BOSA	**Boshof**	**77.91**	**220**	P	**P**	**00 32 51.3**	**+1.4**
	comp=Z,3.5nm,1.1s,baz=142,slow=6.1,SNR=2.3						
WRA	**Warramunga Arr**	**81.90**	**122**	P	**P**	**00 33 10.7**	**-0.8**
	comp=Z,0.5nm,1.1s,baz=327,slow=4.7,SNR=1.2						

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*TAP **15** 00:26:27.6, 25°.23N×122°.31E, h218^{km}, ML4.1, C*

*JMA **15** 00:26:29.3±0.2, 25°.13N×122°.22E, h200^{km}±2^{km}, M4.2*

*IDC **15** 00:26:44.9±21.0, 25°.65N×122°.79E, h408^{km}±309^{km}, mb2.8/6, mb1 3.0/7, mb1mx2.8/51, mbtmp3.6/7, Error ellipse: s-maj=223.4km s-min=15.7km az=59.0*

ISC 15 00:26:28.3±0.8, **25°.23N**±0°.05×**122°.25E**±0°.03, **h208**^{km}±5^{km}**, n117,** σ**0^s.66**/207, **mb3.3**/6, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.32**	**228**	P	**Pn**	**00 26 56.1**	**+0.3**
	baz=218						
TWB1				S	**S**	**00 27 17.8**	**+0.6**
	baz=218						
PCYT	**Pengchaiyu**	**0.43**	**338**	*i* P	**Pn**	**00 26 56.9**	**+0.8**
	baz=338						
TNOU	**National Taiwa**	**0.44**	**260**	*e*P	**Pn**	**00 26 56.5**	**+0.4**
	baz=251						
NWF	**Wu-fen Shan**	**0.45**	**250**	*i* P	**Pn**	**00 26 56.5**	**+0.2**
	baz=250						
NWF				S	**S**	**00 27 18.8**	**+0.8**
	baz=250						
WFSB	**Wu-fen Shan**	**0.45**	**250**	P	**Pn**	**00 26 56.4**	**+0.3**
	baz=250						
WFSB				S	**S**	**00 27 18.1**	**+0.3**
	baz=250						
TIPB	**Shuangxi**	**0.46**	**237**	*i* P	**Pn**	**00 26 56.2**	**0.0**
	baz=248						
TIPB				S	**S**	**00 27 17.3**	**-0.7**
	baz=248						
NTC	**Toucheng**	**0.53**	**226**	*i* P	**Pn**	**00 26 56.8**	**+0.4**
	baz=219						
NTC				*i* S	**S**	**00 27 18.9**	**+0.6**
	baz=219						
TWY	**Chenhua**	**0.59**	**275**	P	**Pn**	**00 26 57.1**	**+0.4**
	baz=264						
YM08	**YM08**	**0.60**	**267**	P	**Pn**	**00 26 56.4**	**-0.3**
	baz=266						
YM01	**YM01**	**0.62**	**263**	P	**Pn**	**00 26 56.8**	**-0.1**
	baz=272						
YM01				S	**S**	**00 27 18.3**	**-0.7**
	baz=272						
TWA	**Mucha**	**0.65**	**248**	*i* P	**Pn**	**00 26 56.7**	**-0.3**
	baz=244						
TWA				*i* S	**S**	**00 27 19.3**	**+0.2**
	baz=244						
ANP	**Anpu**	**0.67**	**267**	*e*P	**Pn**	**00 26 58.2**	**+1.1**
	baz=259						
NHDH	**Xindian Distri**	**0.71**	**249**	*i* P	**Pn**	**00 26 57.6**	**+0.4**
	baz=256						
NHDH				*i* S	**S**	**00 27 19.4**	**-0.2**
	baz=256						
TWC	**Suao**	**0.71**	**211**	*i* P	**Pn**	**00 26 57.2**	**0.0**
	baz=207						
TWC				*i* S	**S**	**00 27 18.6**	**-1.1**
	baz=207						
NTST	**Danshui**	**0.73**	**265**	P	**Pn**	**00 26 58.5**	**+1.2**
	baz=265						
TWE	**Neicheng**	**0.73**	**227**	*i* P	**Pn**	**00 26 57.7**	**+0.4**
	baz=225						
TWE				*i* S	**S**	**00 27 20.6**	**+0.8**
	baz=225						
TATO	**Taipei**	**0.74**	**250**	P	**Pn**	**00 26 57.1**	**-0.2**
	baz=256						
TATO				S	**S**	**00 27 19.7**	**-0.1**
	baz=256						
NDS	**Dongshan**	**0.77**	**220**	P	**Pn**	**00 26 58.5**	**+1.0**
	baz=219						
NDS				S	**S**	**00 27 20.4**	**+0.2**
	baz=219						
TWS1	**Kuangyinshan**	**0.77**	**261**	P	**Pn**	**00 26 57.7**	**+0.3**
	baz=268						
TWS1				S	**S**	**00 27 20.3**	**+0.3**
	baz=268						
NWLT	**Wulai**	**0.81**	**237**	*i* P	**Pn**	**00 26 57.7**	**-0.1**
	baz=240						
NWLT				*i* S	**S**	**00 27 19.7**	**-0.9**
	baz=240						
ENTT	**Nioudou**	**0.85**	**227**	P	**Pn**	**00 26 58.5**	**+0.5**
	baz=226						
ENTT				S	**S**	**00 27 21.1**	**+0.1**
	baz=226						
EWUT	**Wuta**	**0.89**	**209**	P	**Pn**	**00 26 58.7**	**+0.5**
	baz=207						
EWUT				S	**S**	**00 27 20.9**	**-0.5**
	baz=207						
NDT	**Datong Townshi**	**0.91**	**227**	*i* P	**Pn**	**00 26 58.7**	**+0.4**
	baz=238						
NDT				*i* S	**S**	**00 27 21.4**	**-0.2**
	baz=238						
ENA	**Nanau**	**0.92**	**210**	P	**Pn**	**00 26 58.9**	**+0.5**
	baz=207						
ENA				S	**S**	**00 27 21.5**	**-0.2**
	baz=207						
YHNB	**Yeheng**	**0.97**	**235**	P	**Pn**	**00 26 58.5**	**-0.2**
	baz=244						
YHNB				S	**S**	**00 27 21.3**	**-1.0**
	baz=244						
NSK	**Sanguang**	**0.98**	**236**	P	**Pn**	**00 26 58.8**	**-0.1**
	baz=244						
NSK				S	**S**	**00 27 21.1**	**-1.2**
	baz=244						
JYNG	**Yonagunijimaku**	**0.99**	**141**	P	**Pn**	**00 26 59.1**	**+0.3**
JYNG				S	**S**	**00 27 21.9**	**-0.5**
NCU	**National Centr**	**1.00**	**255**	P	**Pn**	**00 26 59.3**	**+0.4**
	baz=261						
NCU				*i* S	**S**	**00 27 22.5**	**+0.1**
	baz=261						
NCUH	**Zhongli**	**1.00**	**255**	*i* P	**Pn**	**00 26 59.1**	**+0.2**
	baz=261						
NCUH				*i* S	**S**	**00 27 22.0**	**-0.5**
	baz=261						
YOJ	**Yonaguni jima**	**1.03**	**138**	P	**Pn**	**00 26 59.2**	**+0.2**
	baz=146						
YOJ				S	**S**	**00 27 22.4**	**-0.3**
	baz=146						
YOJ	**Yonaguni jima**	**1.03**	**138**	P	**Pn**	**00 26 59.3**	**+0.3**
YOJ				*e*S	**S**	**00 27 22.2**	**-0.6**
NNS	**Nan Shan**	**1.12**	**226**	*i* P	**Pn**	**00 27 00.2**	**+0.3**
	baz=225						
NNS				*i* S	**S**	**00 27 24.1**	**-0.1**
	baz=225						
NNSB	**Datong**	**1.12**	**225**	P	**Pn**	**00 27 00.3**	**+0.4**
	baz=225						
NNSB				S	**S**	**00 27 24.0**	**-0.2**
	baz=225						
ETL	**Fush Village**	**1.21**	**208**	P	**Pn**	**00 26 59.6**	**-0.7**
	baz=208						
ETL				S	**S**	**00 27 25.0**	**-0.2**
	baz=208						
NACB	**Ninganchiao**	**1.21**	**210**	P	**Pn**	**00 26 59.9**	**-0.5**
	baz=204						
NACB				S	**S**	**00 27 24.4**	**-0.7**
	baz=204						
SBCB	**Hsinchu**	**1.23**	**250**	P	**Pn**	**00 27 00.9**	**+0.4**
	baz=243						
SBCB				S	**S**	**00 27 25.9**	**+0.6**
	baz=243						
ETLH	**Xiulin Townshi**	**1.23**	**215**	P	**Pn**	**00 27 00.8**	**+0.1**
	baz=215						
ETLH				S	**S**	**00 27 25.1**	**-0.5**
	baz=215						
NSTT	**Nanjuang**	**1.28**	**243**	*i* P	**Pn**	**00 27 01.1**	**+0.2**
	baz=243						
NSTT				*i* S	**S**	**00 27 25.5**	**-0.4**
	baz=243						
TWD	**Chiawan**	**1.29**	**208**	*i* P	**Pn**	**00 27 00.8**	**-0.1**
	baz=207						
TWD				*i* S	**S**	**00 27 25.3**	**-0.8**
	baz=207						
FUSS	**Fushou**	**1.34**	**224**	*i* P	**Pn**	**00 27 02.5**	**+0.8**
	baz=228						
FUSS				*i* S	**S**	**00 27 27.4**	**+0.1**
	baz=228						
HWA	**Hwalien**	**1.38**	**206**	P	**Pn**	**00 27 02.3**	**+0.6**
	baz=200						
HWA				S	**S**	**00 27 27.2**	**-0.1**
	baz=200						
TWT	**Tachien**	**1.38**	**226**	P	**Pn**	**00 27 02.7**	**+0.8**
	baz=231						
TWT				S	**S**	**00 27 28.4**	**+0.7**
	baz=231						
TDCB	**Techi**	**1.39**	**226**	P	**Pn**	**00 27 02.5**	**+0.6**
	baz=231						
TDCB				S	**S**	**00 27 27.9**	**+0.1**
	baz=231						
WHF	**Hehuan Shan**	**1.40**	**220**	*i* P	**Pn**	**00 27 02.9**	**+0.5**
	baz=213						
WHF				*i* S	**S**	**00 27 28.5**	**-0.1**
	baz=213						
TEYL	**Yanliau Villag**	**1.48**	**204**	*e*P	**Pn**	**00 27 03.1**	**+0.6**
	baz=204						
NMLH	**Miaoli**	**1.49**	**243**	*i* P	**Pn**	**00 27 02.9**	**+0.3**
	baz=244						
NMLH				*i* S	**S**	**00 27 29.1**	**0.0**
	baz=244						
WHP	**Taichung City**	**1.52**	**232**	*i* P	**Pn**	**00 27 03.4**	**+0.5**
	baz=232						
WHP				*i* S	**S**	**00 27 29.2**	**-0.3**
	baz=232						
CHGB	**Renai**	**1.52**	**220**	P	**Pn**	**00 27 04.1**	**+1.0**
	baz=215						
CHGB				S	**S**	**00 27 30.9**	**+1.0**
	baz=215						
NSY	**Sanyi**	**1.58**	**240**	P	**Pn**	**00 27 04.0**	**+0.7**
	baz=245						
NSY				S	**S**	**00 27 29.9**	**-0.5**
	baz=245						
ESL	**Shilin**	**1.59**	**208**	*i* P	**Pn**	**00 27 03.0**	**-0.6**
	baz=202						
ESL				S	**S**	**00 27 29.0**	**-1.6**
	baz=202						
OWD	**Renai**	**1.60**	**218**	*i* P	**Pn**	**00 27 04.8**	**+1.0**
	baz=218						
OWD				*i* S	**S**	**00 27 31.4**	**+0.4**
	baz=218						
TWQ1	**Liyutan**	**1.60**	**237**	*i* P	**Pn**	**00 27 03.7**	**0.0**
	baz=241						
TWQ1				*i* S	**S**	**00 27 30.5**	**-0.2**
	baz=241						
IRIF	**Iriomote-Funau**	**1.61**	**123**	P	**Pn**	**00 27 03.8**	**+0.2**
IRIF				S	**S**	**00 27 30.1**	**-0.7**
WCS	**Beigang Elemen**	**1.69**	**227**	P	**Pn**	**00 27 03.7**	**-0.7**
	baz=233						
WCS				S	**S**	**00 27 30.7**	**-1.4**
	baz=233						
WPL	**Puli Township**	**1.69**	**225**	*e*P	**Pn**	**00 27 05.0**	**+0.6**
	baz=229						
WDJ	**Dajia District**	**1.71**	**240**	*i* P	**Pn**	**00 27 04.9**	**+0.3**
	baz=245						
WDJ				S	**S**	**00 27 32.6**	**+0.2**
	baz=245						
EGFH	**Guangfu**	**1.72**	**206**	P	**Pn**	**00 27 05.2**	**+0.5**
	baz=206						
EGFH				S	**S**	**00 27 32.2**	**-0.5**
	baz=206						
VWDT	**VWDT**	**1.78**	**215**	P	**Pn**	**00 27 06.4**	**+1.2**
	baz=220						
VWDT				S	**S**	**00 27 34.9**	**+1.2**
	baz=220						
TCU	**Taichung**	**1.79**	**234**	*i* P	**Pn**	**00 27 06.1**	**+0.7**
	baz=242						
TCU				*i* S	**S**	**00 27 34.2**	**+0.5**
	baz=242						
SMLT	**Sun Moon Lake**	**1.82**	**223**	*i* P	**Pn**	**00 27 06.2**	**+0.5**
	baz=216						
SMLT				*i* S	**S**	**00 27 35.0**	**+0.5**
	baz=216						
TYC	**Yuchr**	**1.83**	**224**	P	**Pn**	**00 27 06.2**	**+0.5**
	baz=217						
TYC				S	**S**	**00 27 34.5**	**0.0**
	baz=217						

HATJ	Hateruma jima	1.83	129	P	Pn	00 27 06.7	+1.0
HATJ				S	S	00 27 34.2	-0.2
SSLB	Suanglung baz=220	1.86	220	P	Pn	00 27 06.5	+0.4
SSLB	baz=220			S	S	00 27 34.9	-0.2
JKRS	Kuro-shima	1.88	121	P	Pn	00 27 06.8	+0.7
JKRS				S	S	00 27 34.8	-0.4
HGSD	Ruisui baz=207	1.88	204	P	Pn	00 27 06.5	+0.3
HGSD	baz=207			S	S	00 27 35.6	+0.2
EHY	Hungye baz=203	1.91	207	P	Pn	00 27 06.2	-0.4
EHY	baz=203			S	S	00 27 33.8	-2.1
WCHH	Zhanghua baz=241	1.92	234	P	Pn	00 27 06.9	+0.3
JIJ	Ishigaki jima	1.92	116	P	Pn	00 27 06.8	+0.2
JIJ				S	S	00 27 34.6	-1.4
WNT	Mingjian baz=227	1.96	227	P	Pn	00 27 07.4	+0.4
WNT	baz=227			S	S	00 27 36.7	0.0
WJS	Zhushan baz=232	1.97	225	iP	Pn	00 27 07.5	+0.4
WJS	baz=232			iS	S	00 27 36.9	-0.1
JISG	Ishigakijimahi	1.97	108	P	Pn	00 27 07.4	+0.3
JISG				S	S	00 27 36.0	-0.9
YULB	Yu-li baz=205	2.02	206	P	Pn	00 27 07.0	-0.7
YULB	baz=205			S	S	00 27 35.5	-2.5
EYUL	Yuli baz=204	2.06	205	iP	Pn	00 27 07.7	-0.3
TWF1	Yuli baz=204	2.06	205	P	Pn	00 27 07.5	-0.5
YUS	Yu-Shan baz=214	2.10	215	P	Pn	00 27 09.8	+0.8
YUS	baz=214			S	S	00 27 41.4	+1.2
WRL	Guolierlin Hig baz=228	2.16	233	P	Pn	00 27 09.2	+0.2
WRL	baz=228			S	S	00 27 40.6	+0.3
ALS	Alishan baz=224	2.16	218	iP	Pn	00 27 10.0	+0.6
ALS	baz=224			iS	S	00 27 41.4	+0.5
CHN5	Tsauling baz=222	2.17	222	P	Pn	00 27 09.6	+0.4
CHN5	baz=222			S	S	00 27 40.8	+0.1
WDLH	Douliu baz=233	2.19	226	iP	Pn	00 27 09.7	+0.3
WDLH	baz=233			iS	S	00 27 41.3	+0.5
FULB	Fuli baz=207	2.20	204	iP	Pn	00 27 09.8	+0.3
FULB	baz=207			S	S	00 27 41.4	+0.2
CHKT	Chengkung baz=204	2.27	201	P	Pn	00 27 10.8	+0.6
MATB	Ma-tsu baz=293	2.28	294	eP	Pn	00 27 10.7	+0.5
WTK	Tuku baz=229	2.29	228	iP	Pn	00 27 10.5	+0.2
WTK	baz=229			iS	S	00 27 42.5	-0.2
JTJ	Tarama	2.30	104	P	Pn	00 27 11.1	+0.7
JTJ				S	S	00 27 42.5	-0.4
ELDTW	Lidau baz=205	2.32	209	iP	Pn	00 27 10.9	0.0
ELDTW	baz=205			S	S	00 27 42.9	-0.8
CHY	Chiayi baz=221	2.40	224	P	Pn	00 27 11.4	-0.2
CHY	baz=221			iS	S	00 27 45.1	+0.2
CHN4	Tsaushan baz=214	2.40	219	iP	Pn	00 27 10.6	-1.1
CHN4	baz=214			S	S	00 27 43.5	-1.6
EDH	Donghe baz=204	2.41	201	iP	Pn	00 27 11.7	0.0
EDH	baz=204			S	S	00 27 43.6	-1.4
TPUB	Ta-pu baz=218	2.42	218	P	Pn	00 27 12.2	+0.4
TPUB	baz=218			S	S	00 27 45.2	-0.2
STYH	Taoyuan baz=219	2.45	214	P	Pn	00 27 12.7	+0.6
STYH	baz=219			S	S	00 27 46.0	+0.1
STYT	Tauyuan baz=220	2.47	214	eP	Pn	00 27 13.2	+0.8
WTP	Ta-pu baz=217	2.47	218	iP	Pn	00 27 12.7	+0.3
WTP	baz=217			S	S	00 27 46.2	-0.3
XPSS	Dashiqiu baz=311	2.52	313	P	Pn	00 27 12.2	-0.6
LONT	Longtian baz=202	2.53	204	iP	Pn	00 27 12.3	-0.7
TWK	Hsinying baz=227	2.53	220	P	Pn	00 27 13.5	+0.4
TWK	baz=227			S	S	00 27 47.7	+0.2
SNST	Tainan City baz=213	2.56	219	eP	Pn	00 27 14.2	+0.9
SNST	baz=213			eS	S	00 27 47.5	-0.6
CHN1	Nanshi baz=213	2.57	218	eP	Pn	00 27 14.2	+0.7
CHN1	baz=213			eS	S	00 27 48.4	0.0
ICHU	Yijhu baz=219	2.59	225	P	Pn	00 27 13.8	+0.2
ICHU	baz=219			S	S	00 27 49.6	+1.1
LYJJ	Jianjiangzhen baz=299	2.60	301	P	Pn	00 27 13.5	-0.3
SGST	Jiashian baz=219	2.62	216	P	Pn	00 27 14.1	0.0
SGST	baz=219			S	S	00 27 49.0	-0.4
TWGBT	Beinan baz=201	2.63	204	P	Pn	00 27 13.6	-0.6
SLGT	Liugui baz=208	2.66	214	iP	Pn	00 27 15.5	+1.0
SLGT	baz=208			iS	S	00 27 50.8	+0.6
JIRB	Irabujima	2.68	98	S	S	00 27 49.8	-0.5
JIKM	Ikemajima	2.73	96	P	Pn	00 27 16.2	+1.0
JIKM				S	S	00 27 51.7	+0.3
JMJ2	Miyako jima3	2.83	99	P	Pn	00 27 17.5	+1.1
JMJ2				eS	S	00 27 53.5	0.0
PTMZ	Houxiangcun baz=267	2.85	267	eP	Pn	00 27 17.1	+0.6
SSD	Sandimen baz=210	2.88	211	iP	Pn	00 27 17.9	+0.9
SSD	baz=210			S	S	00 27 54.9	+0.3
TSMG	Majia baz=210	2.91	211	iP	Pn	00 27 17.8	+0.5
TSMG	baz=210			S	S	00 27 54.2	-1.0
PHUB	P'eng-hu baz=237	2.98	236	P	Pn	00 27 18.9	+0.8
PHUB	baz=237			S	S	00 27 55.6	-0.9
MASBT	Mashibuluo baz=209	2.99	210	P	Pn	00 27 19.4	+1.1
MASBT	baz=209			S	S	00 27 57.3	+0.4
KSRS	Korea Array 0.4nm,0.3s,baz=204,slow=11,SNR=5.6	13.11	20	P	P	00 29 30.0	+0.4
SONM	Songino Array 0.9nm,0.8s,baz=145,slow=6.9,SNR=3.2	25.81	335	P	P	00 31 40.0	-0.4
MKAR	Makanchi Array 0.5nm,0.8s,baz=102,slow=10,SNR=1.8	38.28	315	P	P	00 33 28.6	+0.1
ZALV	Zalesovo Beam 0.3nm,0.3s,baz=121,slow=7.4,SNR=2.0	39.91	326	P	P	00 33 40.2	-1.7
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=112,slow=9.3,SNR=1.9	41.95	319	P	P	00 33 57.5	-1.1
WRA	Warramunga Arr 1.3nm,0.4s,baz=348,slow=8.8,SNR=20	46.41	164	P	P	00 34 34.5	+0.3
ASAR	Alice Springs 0.6nm,0.4s,baz=352,slow=6.9,SNR=8.6	49.90	166	P	P	00 35 01.9	+1.0

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*IDC **15** 00:29:47.5±1.2, 6°.95S×155°.66E, h0^{km}, mb3.7/6, mb1 4.0/6, mb1mx3.7/30, mbtmp3.7/6, Error ellipse: s-maj=48.6km s-min=27.9km az=135.0*

ISC 15 00:29:54.0±1.1, **7°.1S**±0°.3×**155°.8E**±0°.3, **h50**^{km}, **n8,** σ**0**^{s}**.55**/8, **mb3.7**/6, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 1.0nm,1.0s,baz=59,slow=9.4,SNR=4.9	24.37	236	P	P	00 35 07.0	-0.7
ASAR	Alice Springs 0.3nm,0.7s,baz=66,slow=9.2,SNR=2.0	26.66	230	P	P	00 35 29.2	+0.7
CMAR	Chiang Mai Arr 1.2nm,0.4s,baz=124,slow=5.3,SNR=7.6	61.52	295	P	P	00 40 06.2	-0.1
ILAR	Eielson Array 0.4nm,0.5s,baz=233,slow=5.3,SNR=7.8	83.21	21	P	P	00 42 14.4	-0.3
MKAR	Makanchi Array 0.6nm,0.8s,baz=127,slow=5.0,SNR=2.6	83.99	319	P	P	00 42 19.6	+0.4
YKA	Yellowknife Ar 0.2nm,0.5s,baz=269,slow=4.9,SNR=2.0	96.09	28	P	P	00 43 16.2	+0.2
BDFB	Brasilia 1.5nm,0.4s,baz=326,slow=2.2,SNR=3.5	147.35	134	PKPbc	PKPab	00 49 35.2	0.0
TORD	Torodi Ar. Bea 0.2nm,0.5s,baz=82,slow=2.5,SNR=1.3	153.78	285	PKPbc	PKPbc	00 49 48.3	-0.4

NDI 15 00:33:46.1±0.3, **27°.28N**×**97°.04E**, **h18**^{km}±21^{km}, **ML3.4, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKP	Lekhapani	1.06	273	eP	Pb	00 34 05.9	0.0
LKP				eS	Sn	00 34 20.2	-0.2
MOKO	MOKOCHONG	2.45	248	eP	Pn	00 34 25.5	+0.2
MOKO				eS	Sn	00 34 54.5	-0.4
MOKO	comp=N,230nm,0.5s			IAML		00 35 06.1	
MOKO	comp=E,168nm,0.7s			IAML		00 35 06.5	
KOHI	KOHIMA	3.05	240	eP	Pn	00 34 33.8	+0.1
KOHI				eS	Sn	00 35 08.6	-1.2
KOHI	comp=E,161nm,1.0s			IAML		00 35 20.4	
KOHI	comp=N,79nm,0.6s			IAML		00 35 21.0	
JIRN	Jiri comp=N,14nm,0.4s	9.64	275	eP	Pn	00 36 04.3	-0.1
GUN	Gumba comp=N,3.4nm,0.3s	9.92	276	eP	Pn	00 36 07.1	-1.1
PKIN	Phulchoki comp=N,3.8nm,0.3s	10.35	274	eP	Pn	00 36 13.5	-0.4
KKN	Kakani comp=N,1.7nm,0.2s	10.45	275	eP	Pn	00 36 15.5	+0.2
GKN	Gorkha	11.02	277	eP	Pn	00 36 22.8	-0.3
DANN	Dangsing comp=N,3.6nm,0.4s	11.80	278	eP	Pn	00 36 33.4	-0.5
KOLN	Koldanda comp=N,3.2nm,0.3s	11.94	275	eP	Pn	00 36 35.4	-0.3
PYUN	Piuthan comp=N,3.0nm,0.3s	12.47	277	eP	Pn	00 36 41.7	-1.3

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*IDC **15** 00:47:14.4±1.4, 22°.62N×123°.23E, h0^{km}, mb3.6/5, mb1 3.9/7, mb1mx3.6/34, mbtmp3.7/7, ML3.7/2, Error ellipse: s-maj=41.4km s-min=27.0km az=71.0*

*TAP **15** 00:47:17.0, 22°.68N×122°.97E, h86^{km}±1^{km}, ML4.4, D*

*NIED **15** 00:47:16.3, 22°.74N×123°.02E, h51^{km}, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.10; $M_{\theta\theta}$0.74; $M_{\phi\phi}$-0.65; $M_{r\theta}$0.55; $M_{\theta\phi}$-0.44; $M_{\phi r}$0.29; Fault plane solution: $M_0$1.03000×10^{15} NP1: ϕ_s243.00000°, δ87.00000°, λ-143.00000°. NP2: ϕ_s151.00000°, δ53.00000°, λ-4.00000°.*

*JMA **15** 00:47:16.3±0.3, 22°.74N×123°.02E, h51^{km}, M3.9*

ISC 15 00:47:12.7±0.9, **22°.73N**±0°.03×**123°.01E**±0°.03, **h20**^{km}, **n140,** σ**1**^{s}**.15**/180, **mb3.4**/5, **Southeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LDUT	Ludao baz=277	1.43	268	eP	Pb	00 47 39.3	+0.7
LDUT	baz=277			eS	Sb	00 47 55.5	-0.7
HATJ	Hateruma jima	1.51	29	P	Pb	00 47 41.5	+1.4
HATJ				S	Sb	00 47 59.3	+0.5
LAY	Lan-yu baz=244	1.51	243	eP	Pb	00 47 41.4	+1.3
ECBN	Changbin baz=294	1.55	293	eP	Pb	00 47 42.0	+1.2
CHKT	Chengkung baz=284	1.56	284	eP	Pb	00 47 41.4	+0.5
CHKT	baz=284			eS	Sb	00 48 01.1	+0.9
EDH	Donghe baz=281	1.59	279	eP	Pb	00 47 42.1	+0.7
EDH	baz=281			eS	Sb	00 48 00.5	-0.7
HGSD	Ruisui baz=300	1.65	298	eP	Pb	00 47 42.8	+0.4
FULB	Fuli baz=295	1.65	287	eP	Pb	00 47 42.9	+0.4
EYUL	Yuli baz=294	1.68	292	P	Pb	00 47 43.7	+0.8
ECS	Chishang baz=279	1.69	283	eP	Pb	00 47 44.3	+1.1
TWF1	Yuli baz=294	1.70	292	eP	Pb	00 47 43.8	+0.6
YULB	Yu-li baz=290	1.71	293	P	Pb	00 47 44.1	+0.6
YULB	baz=290			eS	Sb	00 48 06.4	+1.8
JYNG	Yonagunijimaku	1.72	358	P	Pb	00 47 44.9	+1.3
JYNG				S	Sb	00 48 04.5	-0.3
TEYL	Yanliau Villag baz=321	1.73	311	eP	Pb	00 47 46.2	+2.5
YOJ	Yonaguni jima baz=1.0	1.73	360	eP	Pb	00 47 45.0	+1.2
YOJ	Yonaguni jima	1.73	360	P	Pb	00 47 44.9	+1.2
YOJ				eS	Sb	00 48 05.6	+0.6
IRIF	Iriomote-Funau	1.73	22	P	Pb	00 47 44.8	+1.0
IRIF				S	Sb	00 48 05.0	-0.1
EGFH	Guangfu baz=311	1.73	303	eP	Pb	00 47 45.2	+1.4
EGFH	baz=311			eS	Sb	00 48 06.1	+0.9
EHY	Hungye baz=302	1.74	297	eP	Pb	00 47 44.5	+0.6
EHY	baz=302			S	Sb	00 48 06.1	+0.7
LONT	Longtian baz=278	1.75	276	eP	Pb	00 47 45.3	+1.3
LONT	baz=278			S	Sb	00 48 05.6	+0.1
JKRS	Kuro-shima	1.76	31	P	Pb	00 47 45.2	+0.9
JKRS				S	Sb	00 48 05.3	-0.7
TWGBT	Beinan baz=278	1.79	273	eP	Pb	00 47 45.5	+0.8
TWGBT	baz=278			eS	Sb	00 48 06.1	-0.6
TWG	Pinlang baz=278	1.79	273	P	Pb	00 47 45.6	+0.8
TWG	baz=278			eS	Sb	00 48 06.4	-0.4
ESL	Shilin baz=309	1.81	307	eP	Pb	00 47 45.1	0.0
ESL	baz=309			eS	Sb	00 48 06.1	-1.3
ETM	Tongmen baz=317	1.86	312	eP	Pb	00 47 46.2	+0.2
TWD	Chiawan baz=318	1.87	316	eP	Pb	00 47 46.4	+0.1
TWD	baz=318			eS	Sb	00 48 08.1	-1.1
ELDTW	Lidau baz=280	1.90	284	eP	Pb	00 47 46.9	+0.2
ECL	Taimali baz=276	1.91	267	eP	Pb	00 47 46.8	+0.1
ECL	baz=276			eS	Sb	00 48 08.2	-1.9
ETL	Fush Village baz=314	1.91	318	eP	Pb	00 47 47.2	+0.3
JIJ	Ishigaki jima	1.93	32	P	Pb	00 47 47.0	-0.2
JIJ				S	Sn	00 48 08.7	+0.6
NACB	Ninganchiao baz=315	1.94	318	P	Pb	00 47 47.3	-0.1
NACB	baz=315			S	Sb	00 48 09.6	-1.6
TAW	Tawu baz=252	1.99	260	eP	Pb	00 47 47.9	-0.3
TAW	baz=252			eS	Sb	00 48 11.4	-1.2
VWDT	VWDT baz=298	2.00	301	eP	Pb	00 47 49.0	+0.6
VWDT	baz=298			eS	Sb	00 48 12.2	-0.6
EAST	Anshuo baz=253	2.03	261	eP	Pb	00 47 49.0	+0.1
EAST	baz=253			S	Sb	00 48 13.1	-0.6
ETLH	Xiulin Townshi baz=320	2.04	317	eP	Pb	00 47 48.9	-0.1
ETLH	baz=320			eS	Sb	00 48 12.8	-1.2
YUS	Yu-Shan baz=294	2.04	292	eP	Pb	00 47 49.7	+0.3
YUS	baz=294			S	Sb	00 48 14.1	-0.5
EWUT	Wuta baz=328	2.05	327	P	Pb	00 47 50.2	+0.9
EWUT	baz=328			eS	Sb	00 48 14.1	-0.3
ENA	Nanau baz=321	2.06	326	eP	Pb	00 47 49.8	+0.5
ENA	baz=321			eS	Sb	00 48 14.1	-0.4
OWD	Renai baz=308	2.08	306	P	Pb	00 47 50.1	+0.2
STYH	Taoyuan baz=284	2.11	283	P	Pb	00 47 50.4	+0.2
TSEB	Hengchuen, Pin baz=256	2.12	248	eS	Sb	00 48 16.5	+0.2
STYT	Tauyuan baz=283	2.12	282	eP	Pb	00 47 51.0	+0.5
WHF	Hehuan Shan baz=319	2.14	312	eP	Pb	00 47 50.6	-0.4
WHF	baz=319			eS	Sb	00 48 15.9	-1.3
CHGB	Renai baz=315	2.15	309	P	Pb	00 47 51.1	+0.1
CHGB	baz=315			eS	Sb	00 48 16.1	-1.2
TWC	Suao baz=339	2.16	331	eP	Pb	00 47 51.8	+0.8
TWC	baz=339			eS	Sb	00 48 17.3	-0.1
SSLB	Suanglung baz=301	2.17	300	P	Pb	00 47 51.3	0.0
ALS	Alishan baz=293	2.18	291	eP	Pb	00 47 52.5	+0.9
TWKBT	Hengchun baz=257	2.18	249	eP	Pb	00 47 51.4	0.0
TWKBT	baz=257			eS	Sb	00 48 16.6	-1.4
TSMG	Majia baz=271	2.19	270	eP	Pb	00 47 51.4	-0.1
TWK1	Hengchun baz=257	2.19	250	eS	Sb	00 48 16.6	-1.6
SSD	Sandimen baz=272	2.20	271	eP	Pb	00 47 51.7	0.0
SLGT	Liugui baz=276	2.20	277	eP	Pb	00 47 52.0	+0.3
MASBT	Mashibuluo baz=271	2.20	268	P	Pb	00 47 51.5	-0.2
JISG	Ishigakijimahi	2.20	32	P	Pb	00 47 50.5	-1.3
JISG				eS	Sn	00 48 15.8	+1.0
FUSS	Fushou baz=321	2.22	313	P	Pb	00 47 52.3	0.0
FUSS	baz=321			eS	Sb	00 48 17.9	-1.6
HEN	Hengchun baz=255	2.22	252	eS	Sb	00 48 17.5	-1.7
SCZT	Fangliau baz=255	2.24	261	eP	Pb	00 47 53.0	+0.6
NDS	Dongshan baz=336	2.24	328	P	Pb	00 47 52.9	+0.4
NDS	baz=336			eS	Sb	00 48 19.2	-0.5
SMLT	Sun Moon Lake baz=306	2.26	301	P	Pb	00 47 52.9	+0.1
SMLT	baz=306			eS	Sb	00 48 19.4	-0.9
NNSB	Datong baz=320	2.26	319	P	Pb	00 47 52.7	-0.2
SGST	Jiashian baz=284	2.27	279	eP	Pb	00 47 53.0	+0.1
TPUB	Ta-pu baz=283	2.27	285	eP	Pb	00 47 54.0	+1.0
WTP	Ta-pu baz=285	2.27	284	eP	Pb	00 47 54.1	+1.1
TWT	Tachien baz=319	2.27	312	eP	Pb	00 47 53.4	+0.3
TWT	baz=319			eS	Sb	00 48 19.5	-1.3
SSPT	Xinbi baz=257	2.27	264	eP	Pb	00 47 53.9	+0.9
NNS	Nan Shan baz=315	2.27	319	eP	Pb	00 47 53.4	+0.2
NNS	baz=315			eS	Sb	00 48 19.7	-1.2
WPL	Puli Township baz=306	2.28	305	eP	Pb	00 47 53.4	+0.2
TDCB	Techi baz=317	2.28	312	eP	Pb	00 47 53.2	0.0
TYC	Yuchr baz=306	2.30	301	eP	Pb	00 47 53.7	+0.2
CHN4	Tsaushan baz=292	2.31	286	eP	Pb	00 47 53.2	-0.5
DPDB	Guoxing baz=310	2.32	305	eP	Pb	00 47 53.9	+0.1
DPDB	baz=310			eS	Sb	00 48 20.5	-1.5
NDT	Datong Townshi baz=325	2.32	324	eP	Pb	00 47 54.1	+0.2
NDT	baz=325			eS	Sb	00 48 21.0	-1.0
ENTT	Nioudou baz=321	2.32	325	eP	Pb	00 47 54.0	+0.1
ENTT	baz=321			eS	Sb	00 48 20.9	-1.3
CHN1	Nanshi baz=283	2.33	282	eP	Pb	00 47 55.2	+1.1
CHN1	baz=283			eS	Sb	00 48 23.7	+1.2
TWE	Neicheng baz=336	2.34	328	eP	Pb	00 47 54.1	-0.1
TWE	baz=336			eS	Sb	00 48 21.6	-1.0
WCS	Beigang Elemen baz=310	2.34	305	eP	Pb	00 47 54.2	0.0
WJS	Zhushan baz=299	2.37	298	eP	Pb	00 47 55.8	+1.2
SNST	Tainan City baz=283	2.37	282	eP	Pb	00 47 55.8	+1.2
NTC	Toucheng baz=342	2.38	333	eS	Sb	00 48 22.9	-0.9
TWK	Hsinying baz=284	2.39	284	eP	Pb	00 47 55.8	+0.8
TWM1	Shoushan baz=273	2.39	273	eP	Pb	00 47 57.0	+1.9
WNT	Mingjian baz=300	2.43	299	eP	Pb	00 47 56.9	+1.2
WHP	Taichung City baz=315	2.45	310	eP	Pb	00 47 56.1	+0.1
WGK	Gukeng baz=303	2.45	293	eP	Pb	00 47 56.4	+0.4
YHNB	Yeheng baz=324	2.45	323	eP	Pb	00 47 55.6	-0.4
JTJ	Tarama	2.46	39	P	Pb	00 47 54.4	-1.8
JTJ				S	Sn	00 48 22.1	+1.0
TWB1	Santiao Chiao baz=345	2.46	338	eP	Pb	00 47 56.5	+0.3
WLCH	Liuqiu baz=255	2.46	262	eP	Pb	00 47 55.9	-0.3
NSK	Sanguang baz=316	2.46	322	eP	Pb	00 47 56.0	-0.3
NSK	baz=316			eS	Sb	00 48 24.2	-2.1
NWLT	Wulai baz=327	2.47	326	eP	Pb	00 47 56.0	-0.4
NWLT				eS	Sb	00 48 24.8	-1.6

	baz=327						
WDLH	Douliu	2.47	293	eP	Pb	00 47 57.5	+1.1
	baz=302						
TIPB	Shuangxi	2.49	334	eP	Pb	00 47 56.7	+0.1
	baz=341						
TIPB				eS	Sb	00 48 25.2	-1.7
	baz=341						
WWF	Wufeng	2.50	302	eP	Pb	00 47 58.2	+1.3
	baz=303						
CHY	Chiayi	2.50	288	eP	Pb	00 47 58.4	+1.5
	baz=289						
CHY				eS	Sb	00 48 27.9	+0.5
	baz=289						
TCU	Taichung	2.57	304	eP	Pb	00 47 59.5	+1.4
	baz=315						
NWF	Wu-fen Shan	2.59	335	eP	Pb	00 47 57.5	-1.0
	baz=345						
NWF				eS	Sb	00 48 27.7	-2.3
	baz=345						
WFSB	Wu-fen Shan	2.59	335	eP	Pb	00 47 57.7	-0.8
	baz=344						
ICHU	Yijhu	2.59	285	eP	Pb	00 47 58.3	-0.2
	baz=285						
TWA	Mucha	2.60	330	eP	Pb	00 47 57.9	-0.7
	baz=338						
TWA				eS	Sb	00 48 28.7	-1.4
	baz=338						
NHDH	Xindian Distri	2.61	329	eP	Pb	00 47 58.1	-0.6
	baz=336						
NHDH				eS	Sb	00 48 29.1	-1.4
	baz=336						
TWQ1	Liyutan	2.61	309	eP	Pb	00 47 59.4	+0.6
	baz=317						
TWQ1				eS	Sb	00 48 29.2	-1.3
	baz=317						
WCHH	Zhanghua	2.63	301	eP	Pb	00 48 00.4	+1.3
	baz=302						
TATO	Taipei	2.64	328	eS	Sb	00 48 29.4	-1.9
	baz=329						
NSTT	Nanjuang	2.65	316	eP	Pb	00 47 59.3	-0.1
	baz=317						
NSTT				eS	Sb	00 48 29.7	-1.8
	baz=317						
NSY	Sanyi	2.66	310	eP	Pb	00 47 60.0	+0.3
	baz=311						
TNOU	National Taiwa	2.67	335	eS	Sb	00 48 29.3	-2.7
	baz=344						
WRL	Guolierlin Hig	2.69	296	eP	Pb	00 48 00.1	0.0
	baz=297						
WDJ	Dajia District	2.71	307	eP	Pb	00 47 59.9	-0.6
	baz=320						
YM01	YM01	2.75	332	eP	Pb	00 48 01.1	0.0
	baz=341						
SBCB	Hsinchu	2.77	318	eP	Pb	00 48 00.6	-0.9
	baz=319						
YM08	YM08	2.77	332	eP	Pb	00 48 00.1	-1.5
	baz=341						
TWS1	Kuangyinshan	2.78	329	eP	Pb	00 48 00.6	-1.1
	baz=318						
HSN	Hsinchu	2.79	318	eP	Pb	00 48 00.9	-0.9
	baz=320						
NCUH	Zhongli	2.79	324	eP	Pb	00 48 00.6	-1.2
	baz=324						
NCU	National Centr	2.79	324	eP	Pb	00 48 00.5	-1.3
	baz=324						
ANP	Anpu	2.81	331	eP	Pb	00 48 00.4	-1.8
	baz=321						
NTST	Danshui	2.82	330	eP	Pb	00 48 01.1	-1.2
	baz=319						
TWY	Chenhua	2.85	333	eP	Pb	00 48 01.3	-1.5
	baz=341						
JIRB	Irabujima	2.88	43	S	Sn	00 48 33.0	+1.5
JMJ2	Miyako jima3	2.92	46	S	Sn	00 48 33.6	+1.1
JMJ	Miyako jima 2	2.95	45	eP	Pb	00 48 00.4	-4.1
	baz=45						
JOGS	Gusukube	2.99	47	eS	Sn	00 48 35.5	+1.4
JIKM	Ikemajima	3.00	43	eS	Sn	00 48 35.7	+1.3
WDGT	Dungji	3.13	280	eP	Pb	00 48 05.6	-2.1
	baz=281						
PHUB	P'eng-hu	3.26	285	eP	Pb	00 48 06.9	-3.0
	baz=285						
PNG	Penghu	3.29	285	eP	Pb	00 48 07.3	-3.0
	baz=286						
VCHM	Qimei	3.34	279	eP	Pb	00 48 08.0	-3.2
	baz=287						
PTMZ	Houxiangcun	4.24	304	eP	Pb	00 48 20.1	-6.5
	baz=304						
MATB	Ma-tsu	4.41	321	eP	Pn	00 48 21.6	+3.2
	baz=321						
MATB				eS	Sn	00 49 09.6	+0.4
	baz=321						
KNM	Kinmen	4.53	293	eP	Pb	00 48 25.2	-6.2
	baz=292						
KNMB	Chin-men Tao	4.58	293	eP	Pb	00 48 24.3	-8.1
	baz=293						
LYJJ	Jianjiangzhen	4.82	323	eP	Pn	00 48 27.7	+3.6
	baz=323						
XPSS	Dashiqiu	4.91	329	eP	Pn	00 48 28.7	+3.4
	baz=329						
KSRS	Korea Array	15.28	15	Pn	P	00 50 51.6	-0.2
	0.6nm,0.3s,baz=188,slow=12,SNR=6.8						
MJAR	Matsushiro Arr	19.05	40	P	Pn	00 51 38.5	+4.0
	0.1nm,0.3s,baz=226,slow=9.3,SNR=6.1						
SONM	Songino Array	28.37	336	P	P	00 53 10.1	+4.5
	0.4nm,0.6s,baz=146,slow=10,SNR=3.9						
MKAR	Makanchi Array	40.55	316	P	P	00 54 57.7	+7.1
	0.5nm,0.7s,baz=121,slow=8.6,SNR=3.8						
ZALV	Zalesovo Beam	42.38	327	P	P	00 55 12.8	+7.3
	0.7nm,0.3s,baz=122,slow=7.2,SNR=4.7						
WRA	Warramunga Arr	43.83	165	P	P	00 55 20.8	+3.3
	0.4nm,0.6s,baz=345,slow=8.9,SNR=3.5						
YKA	Yellowknife Ar	83.65	23	P	P	00 59 44.6	+5.1
	0.2nm,0.6s,baz=306,slow=5.4,SNR=1.8						

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*TUL **15** 01:07:48.9±0.5, 36°.75N±0°.02×98°.13W±0°.07, h6^{km}±6^{km}, ML3.1, mb_Lg2.5/13(NEIC), Error ellipse: s-maj=7.8km s-min=2.5km az=100.0*

*ANF **15** 01:07:49.6±0.5, 36°.68N×98°.12W, h10^{km}, ML3.2/7, Error ellipse: s-maj=5.5km s-min=4.3km az=177.0*

*NEIC **15** 01:07:49.1±1.4, 36°.71N±0°.04×98°.12W±0°.07, h10^{km}±4^{km}, Error ellipse: s-maj=8.4km s-min=5.6km az=94.0*

ISC 15 01:07:49.0±0.9, **36°.73N**±0°.03×**98°.12W**±0°.03, **h7**^{km}±9^{km}, **n47**, σ**0^s.47**/47, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.11	315	Pg	Pg	01 07 51.3	-0.2
OK032				Sg	Sg	01 07 52.9	-0.2
GC02	Grant County #	0.24	59	Pg	Pg	01 07 54.1	+0.3
GC02				Sg	Sg	01 07 57.8	+0.8
CROK	Carrier	0.25	154		Pg	01 07 54.4	+0.5
KAN14	Manchester OK	0.26	28	Pg	Pg	01 07 54.2	+0.1
KAN10	Anthony SW Sta	0.40	2	Pg	Pg	01 07 56.6	-0.1
KAN17	Caldwell West	0.42	42	Pg	Pg	01 07 57.3	0.0
KAN05	Bluff City Nor	0.43	27		Pg	01 07 57.3	0.0
KAN16	Harper SW Stat	0.50	5	Pg	Pg	01 07 58.5	-0.2
KAN08	Anthony NE Sta	0.51	13		Pg	01 07 58.9	0.0
KAN01	Argonia South	0.51	34		Pg	01 07 58.9	0.0
KAN06	Argonia West S	0.56	22		Pg	01 07 59.7	-0.1
KAN09	Caldwell North	0.57	44	Pg	Pg	01 07 59.8	-0.2
KAN13	South Haven SW	0.58	61	Pg	Pg	01 08 00.1	-0.1
BLOK	Blackwell	0.72	87	Pg	Pg	01 08 02.9	0.0
U32A	Winter Ranch,	0.79	244	Pg	Pg	01 08 03.9	-0.3
U32A	Winter Ranch,	0.79	244	P	Pg	01 08 03.9	-0.3
	baz=62						
U32A				S	Sg	01 08 14.9	+0.4
	baz=62						
BCOK	Bluff Creek, N	1.15	159		Pb	01 08 10.5	-0.6
QUOK	Quay	1.26	116	Pn	Pn	01 08 12.6	-0.4
OK031	S. Brethren Rd	1.29	127		Pn	01 08 13.0	-0.4
T35A	Sooner Cattle	1.30	81		Pn	01 08 13.2	-0.4
T35B	Sooner Cattle	1.30	81	P	Pn	01 08 13.1	-0.4
	baz=263						
T35B				S	Sg	01 08 31.0	+0.2
	baz=263						
OK025	Westminster Rd	1.31	151		Pb	01 08 13.4	-0.4
OK030	Cody Creek RV	1.34	126		Pn	01 08 13.8	-0.3
OK034	N. Norfolk Rd.	1.34	122		Pn	01 08 13.9	-0.2
OKCFA	Oklahoma City	1.42	157	S	Sg	01 08 34.7	+0.2
	baz=338						
FNO	Franklin	1.58	158	Pn	Pb	01 08 17.8	-0.7
R32A	Long Quarter,	1.76	345		Pn	01 08 20.7	+0.8
R32A	Long Quarter,	1.76	345	P	Pn	01 08 20.7	+0.8
	baz=165						
R32A				S	Sb	01 08 43.9	0.0
	baz=165						
W35A	Tecumseh	1.87	147		Pn	01 08 22.0	+0.6
TUL1	Leonard	2.05	113		Pn	01 08 24.4	+0.5
TUL1				IAmb_Lg		01 08 55.6	
	comp=Z,32nm,1.0s						
TUL1	Leonard	2.05	113	P	Pb	01 08 25.4	-1.1
	baz=294						
X34A	Smith Ranch, M	2.13	174		Pn	01 08 25.8	+0.8
CBKS	Cedar Bluff	2.45	329	IAmb_Lg		01 09 04.0	
	comp=Z,9.5nm,0.8s						
CBKS	Cedar Bluff	2.45	329	S	Sb	01 09 04.2	+0.5
	baz=148						
KSU1	Kansas State U	2.65	26		Pn	01 08 32.1	-0.1
U38A	Gravette	3.02	94	Pn	Pn	01 08 37.7	+0.5
U38A				IAmb_Lg		01 09 29.4	
	comp=Z,9.1nm,0.8s						
U38A	Gravette	3.02	94	P	Pn	01 08 38.1	+0.9
	baz=277						
X37A	Clayton	3.09	133	Pn	Pn	01 08 38.6	+0.4
AMTX	Amarillo	3.43	239	IAmb_Lg		01 09 36.7	
	comp=Z,15nm,1.0s						
W39A	Magazine	3.83	112	Pn	Pn	01 08 48.6	+0.3
S39A	Bolivar	3.94	74	Pn	Pn	01 08 50.0	+0.1
S39A	Bolivar	3.94	74	P	Pn	01 08 50.2	+0.3
	baz=258						
U40A	Yellville	4.25	93	Pn	Pn	01 08 54.4	+0.3
P38A	Dawn	4.63	50	IAmb_Lg		01 10 25.3	
	comp=Z,7.2nm,0.8s						
MGMO	Mountain Grove	4.70	83	Pn	Pn	01 09 01.1	+0.7
R40A	Maddies Statio	4.90	70	IAmb_Lg		01 10 27.7	
	comp=Z,14nm,0.8s						
CCM	Cathedral Cave	5.63	74	IAmb_Lg		01 10 48.4	
	comp=Z,11nm,1.0s						

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*IDC **15** 01:13:36.4±0.6, 42°.49N×29°.92E, h0^{km}, mb3.9/18, mb1 3.9/27, mb1mx3.9/52, mbtmp3.9/27, ML3.5/9, Error ellipse: s-maj=11.5km s-min=7.6km az=37.0*

*MOS **15** 01:13:37.5±1.1, 42°.40N×29°.80E, h26^{km}, mb4.3/12, Error ellipse: s-maj=5.2km s-min=3.7km az=99.3*

*NEIC **15** 01:13:38.3±1.3, 42°.35N±0°.03×29°.71E±0°.05, h16^{km}±4^{km}, Error ellipse: s-maj=5.8km s-min=4.1km az=84.0*

*ISK **15** 01:13:38.9, 42°.25N×29°.72E, h19^{km}, ML4.0/47*

*DDA **15** 01:13:39.2, 42°.25N×29°.73E, h50^{km}±5^{km}, MW4.0*

*CFUSG **15** 01:13:41.7, 42°.60N×29°.93E, h27^{km}, mb4.0/6, MD3.5/5, Southwest Black Sea Magtype MSH 3.8 from 6 stations*

*BEO **15** 01:13:48.0±3.0, 42°.50N×29°.08E, h89^{km}±1^{km}, ML3.6/10*

ISC 15 01:13:36.0±1.4, **42°.35N**±0°.02×**29°.80E**±0°.03, **h3**^{km}±9^{km}, **n447**, σ**1^s.58**/562, **mb4.0**/27, **75C-49D**, **Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SILT	Sile	1.20	186	PN	Pn	01 13 59.9	+0.2
SILT				SN	Sg	01 14 14.6	-0.1
SILT	Sile	1.20	186	Pn	Pn	01 13 59.7	0.0
SILT				Sn	Sg	01 14 14.2	-0.5
KLYT	Kilyos	1.24	208	PN	Pn	01 14 00.2	+0.1
KLYT				SN	Sg	01 14 14.9	-0.8
KLYT	Kilyos	1.24	208		Pg	01 13 60.0	+0.3
KAND	Kocaeli-Kandir	1.29	167	⇓iP	Pb	01 14 01.1	+0.2
KAND				IAML		01 14 17.0	
	comp=N,6μm,0.6s						
KAND				i S	Sb	01 14 17.2	-0.6
KAND				IAML		01 14 18.0	
	comp=E,5μm,0.4s						
BGKT	Bogazkoy	1.40	214	PN	Pn	01 14 02.4	0.0
BGKT				SN	Sb	01 14 19.2	-1.8
BGKT	Bogazkoy	1.40	214	Pn	Pn	01 14 02.5	+0.2
ISK	Istanbul-Kandi	1.40	204	PN	Pn	01 14 02.5	+0.1
ISK				SN	Sb	01 14 19.2	-1.8
ISK	Istanbul-Kandi	1.40	204	Pn	Pn	01 14 02.4	0.0
ISK				Sn	Sb	01 14 19.0	-2.0
KAVV	Kandilli-Istan	1.40	204	PN	Pn	01 14 01.9	-0.5
KAVV				SN	Sb	01 14 19.4	-1.6
KAVV	Kandilli-Istan	1.40	204	Pn	Pn	01 14 02.4	0.0
KAVV				Sn	Sb	01 14 19.3	-1.7
CTYL	Yalikoy Yolu	1.43	233	PN	Pn	01 14 02.2	-0.6
CTYL	Yalikoy Yolu	1.43	233	Pn	Pn	01 14 02.0	-0.7
KAYN	Sakarya, Kayna	1.44	164	⇓iP	Pn	01 14 03.3	+0.3
KAYN				i S	Sn	01 14 21.0	-1.4
KAYN				IAML		01 14 21.0	
	comp=E,1μm,0.7s						
KAYN				IAML		01 14 22.0	
	comp=N,2μm,0.6s						
KALB	Balgarevo	1.46	316	⇓P	Pn	01 14 03.6	+0.4
KALB				⇑S	Sn	01 14 21.5	-1.4
KALB	Balgarevo	1.46	316		Pn	01 14 03.6	+0.4
KALB					Sn	01 14 21.5	-1.4
CTKS	Kestanelik-??a	1.48	221	PN	Pn	01 14 03.5	+0.1
CTKS				SN	Sn	01 14 20.9	-2.3
CTKS	Kestanelik-??a	1.48	221	Pn	Pn	01 14 03.5	+0.1
HRT	Hereke	1.53	184	PN	Pb	01 14 04.8	-0.2
HRT				SN	Sn	01 14 23.0	-1.7
HRTX	Hereke-Izmit	1.55	184	Pn	Pn	01 14 05.0	+0.5
AVCI	Avcilar-stanb	1.58	211	PN	Pn	01 14 05.1	+0.3
AVCI				SN	Sn	01 14 23.3	-2.4
AVCI	Avcilar-stanb	1.58	211	Pn	Pb	01 14 05.4	-0.4
ELBA	Catalca	1.58	221	i P	Pn	01 14 04.9	0.0
ELBA				i S	Sn	01 14 23.9	-1.9
KDZE	Karadeniz Ereo	1.61	130	PN	Pb	01 14 06.3	0.0
SLVT	Silivri	1.63	227	PN	Pn	01 14 05.7	+0.1
SLVT				SN	Sn	01 14 24.8	-2.3
SLVT	Silivri	1.63	227	Pn	Pb	01 14 06.4	-0.4
VIZE	Kirklareli, Vi	1.65	243	⇑iP	Pn	01 14 05.8	-0.1
VIZE				i S	Sn	01 14 24.4	-3.2
SAUV	Serdivan-Sakar	1.66	166	PN	Pn	01 14 06.5	+0.6
SAUV				SN	Sn	01 14 26.1	-1.6
SAUV	Serdivan-Sakar	1.66	166	Pn	Pn	01 14 06.7	+0.7
SAHE	Sakarya_HENDEK	1.69	152	⇓iP	Pn	01 14 06.9	+0.5
SAHE				i S	Sn	01 14 27.5	-1.2
SAHE				IAML		01 14 30.0	
	comp=E,986nm,0.7s						
TSMN	Mangalia Port-	1.69	329	⇓P	Pn	01 14 07.2	+0.8
TSMN				⇑S	Sn	01 14 27.5	-1.1
TSMN	Mangalia Port-	1.69	329		Pn	01 14 07.2	+0.8
TSMN					Sn	01 14 27.5	-1.1
MANR	Mangalia	1.71	329	⇓P	Pn	01 14 07.2	+0.5
MANR				⇑S	Sn	01 14 27.6	-1.4
MANR	Mangalia	1.71	329		Pn	01 14 07.2	+0.5
MANR					Sn	01 14 27.6	-1.4
TRML	Termal-Yalova	1.80	195	PN	Pn	01 14 08.7	+0.8
TRML				SN	Sn	01 14 28.9	-2.4
TRML	Termal-Yalova	1.80	195	Pn	Pn	01 14 08.9	+0.9
YLV	Yalova	1.81	190	P	Pn	01 14 08.9	+0.8
YLV	Yalova	1.81	190	PN	Pn	01 14 08.8	+0.7
YLV				SN	Sn	01 14 29.2	-2.4
YLV	Yalova	1.81	190	Pn	Pn	01 14 08.9	+0.7
KURT	Yalova, Merkez	1.82	194	i P	Pn	01 14 08.1	0.0
KURT				⇓iP	Pb	01 14 08.3	-1.5
KURT				IAML		01 14 30.0	
	comp=E,885nm,0.4s						
KURT				i S	Sn	01 14 30.2	-1.3
KURT				IAML		01 14 31.0	
	comp=N,1μm,0.5s						
ARMN	Kirklareli, Me	1.83	255	i P	Pn	01 14 08.5	+0.2
ARMN				i S	Sn	01 14 26.9	-5.1
ARMN				IAML		01 14 30.0	
	comp=N,272nm,0.3s						
ARMN				IAML		01 14 31.0	
	comp=E,317nm,0.3s						
PHSR	Pinarhisar	1.84	248	PN	Pn	01 14 08.8	+0.3
PHSR	Pinarhisar	1.84	248	Pn	Pn	01 14 09.1	+0.6
YIGI	Dzce	1.86	138	⇓iP	Pn	01 14 09.2	+0.5
YIGI				i S	Sn	01 14 29.4	-3.3
YIGI				IAML		01 14 34.0	
	comp=E,1μm,0.4s						
YIGI				IAML		01 14 35.0	
	comp=N,997nm,0.4s						
GEYV	SAKARYA_Geyve	1.90	169	⇓iP	Pb	01 14 10.5	-0.8
GEYV				i S	Sn	01 14 33.4	-0.4
ADVT	Abdulvahap	1.92	181	PN	Pn	01 14 10.5	+1.0
ADVT	Abdulvahap	1.92	181	Pn	Pn	01 14 10.6	+1.0
EFOR	EFORIE	1.93	334	⇑P	Pn	01 14 10.0	+0.4
EFOR				⇑S	Sn	01 14 33.8	-0.5
EFOR	EFORIE	1.93	334		Pn	01 14 10.0	+0.4
EFOR					Sn	01 14 33.8	-0.5
CRLT	Corlu	1.97	232	PN	Pn	01 14 10.3	+0.1
CRLT	Corlu	1.97	232	Pn	Pn	01 14 10.7	+0.5
GEMT	Gemlik	1.97	194	PN	Pn	01 14 10.8	+0.6
GEMT	Gemlik	1.97	194	Pn	Pn	01 14 10.9	+0.7
TSCT	Constanta Port	1.99	336	⇑P	Pn	01 14 10.9	+0.4
TSCT				⇑S	Sn	01 14 34.8	-1.1
TSCT	Constanta Port	1.99	336		Pn	01 14 10.9	+0.4
TSCT					Sn	01 14 34.8	-1.1
GULT	Gulveren	1.99	164	PN	Pn	01 14 11.9	+1.3
BTAS	Taskesti	2.00	153	⇓iP	Pn	01 14 11.7	+1.0
BTAS				i S	Sn	01 14 33.9	-2.2
BTAS				IAML		01 14 37.0	
	comp=E,972nm,0.5s						
DEVR	Zonguldak/Devr	2.03	126	⇓iP	Pn	01 14 11.5	+0.5
DEVR				i S	Sn	01 14 34.9	-1.9
DEVR				IAML		01 14 35.0	
	comp=E,1μm,0.2s						
DEVR				IAML		01 14 35.0	
	comp=N,2μm,0.2s						
IZI	Iznik	2.03	187	PN	Pn	01 14 11.3	+0.2
IZI	Iznik	2.03	187	Pn	Pn	01 14 12.1	+1.0
MASR	Amasra-Bartin	2.08	106	PN	Pb	01 14 14.2	-0.1
MFTR	Murfatlar	2.08	332	⇑P	Pn	01 14 12.5	+0.7
MFTR				⇑S	Sn	01 14 36.7	-1.5
MFTR	Murfatlar	2.08	332		Pn	01 14 12.5	+0.7
MFTR					Sn	01 14 36.7	-1.5
KIRK	Kırklareli	2.09	255	i P	Pn	01 14 12.1	+0.2
KIRK				i S	Sn	01 14 34.8	-3.6
GPA	Golpazari	2.10	169	PN	Pn	01 14 12.6	+0.6
MDNY	Mudanya-Bursa	2.10	199	PN	Pn	01 14 12.1	+0.1
MDNY	Mudanya-Bursa	2.10	199	Pn	Pn	01 14 13.0	+1.0
IGD	Bursa	2.13	192	⇓iP	Pn	01 14 13.2	+0.7
IGD				i S	Sn	01 14 37.7	-1.8
IGD				IAML		01 14 46.0	
	comp=E,254nm,0.4s						
CAVI	Cavuskoy	2.15	179	PN	Pn	01 14 13.1	+0.4
CAVI	Cavuskoy	2.15	179	Pn	Pn	01 14 14.1	+1.4
MDUB	Mudurnu	2.15	150	PN	Pn	01 14 13.7	+0.8
MDUB	Mudurnu	2.15	150	Pn	Pn	01 14 14.2	+1.4
MDUB				Sn	Sn	01 14 40.8	+0.6
TKR	Tekirdag	2.17	232	PN	Pn	01 14 13.5	+0.5
TKR	Tekirdag	2.17	232	Pn	Pn	01 14 12.3	-0.8
BILE	Bilecik/Merkez	2.19	178	⇓iP	Pn	01 14 14.5	+1.2
BILE				i S	Sn	01 14 41.4	+0.4
BILE				IAML		01 14 46.0	
	comp=N,687nm,0.4s						
ULDT	Uludag	2.26	193	i P	Pn	01 14 14.8	+0.4
ULDT				i S	Sn	01 14 41.2	-1.7
ICOR	Ion Corvin	2.29	321	⇓P	Pn	01 14 15.2	+0.6
ICOR	Ion Corvin	2.29	321		Pn	01 14 15.2	+0.6
BCAM	Yenicaga	2.29	131	⇓iP	Pn	01 14 16.2	+1.4
BCAM				i S	Sn	01 14 43.0	-0.5
BCAM				IAML		01 14 45.0	
	comp=E,888nm,0.6s						
BCAM				IAML		01 14 45.0	
	comp=N,635nm,0.4s						
EDRB	Edirne	2.33	258	PN	Pn	01 14 16.2	+1.1
EDRB	Edirne	2.33	258	Pn	Pn	01 14 16.3	+1.1
TIRR	Tirgusor	2.33	335	⇓P	Pn	01 14 15.9	+0.7
TIRR				⇑S	Sn	01 14 42.0	-2.3
TIRR	Tirgusor	2.33	335	P	Pn	01 14 15.9	+0.7
TIRR						01 14 42.0	
TIRR	Tirgusor	2.33	335		Pn	01 14 15.9	+0.7
TIRR	Tirgusor	2.33	335		Pn	01 14 15.9	+0.7
TIRR					Sn	01 14 42.0	-2.3
KCTX	Karacabey (Bur	2.35	208	PN	Pn	01 14 15.7	+0.2
KCTX	Karacabey (Bur	2.35	208	Pn	Pn	01 14 15.6	+0.1
CVDA	Cernavoda	2.36	328	⇑P	Pn	01 14 16.3	+0.7
CVDA				⇑S	Sn	01 14 43.3	-1.7
CVDA	Cernavoda	2.36	328		Pn	01 14 16.2	+0.7
CVDA					Sn	01 14 43.3	-1.7
GRDE	Gerede-Bolu	2.38	130	PN	Pn	01 14 17.6	+1.6
CIDE	Kastamonu/Cide	2.39	100	⇓iP	Pn	01 14 17.5	+1.5
CIDE				i S	Sn	01 14 44.6	-1.1
CIDE				IAML		01 14 46.0	
	comp=E,3μm,0.3s						
CIDE				IAML		01 14 47.0	
	comp=N,1μm,0.3s						
KBUK	KARABUK-Merkez	2.39	117	⇓iP	Pn	01 14 17.2	+1.1
KBUK				i S	Sn	01 14 44.7	-1.2
KBUK				IAML		01 14 45.0	
	comp=E,871nm,0.6s						
KBUK				IAML		01 14 46.0	
	comp=N,647nm,0.8s						
SRCK	Saricakaya, Es	2.39	165	PN	Pn	01 14 16.8	+0.8
ORLT	Orhaneli	2.40	197	PN	Pn	01 14 16.6	+0.4
ORLT	Orhaneli	2.40	197	Pn	Pn	01 14 17.6	+1.3
MRMT	Marmara Adasi	2.41	224	PN	Pn	01 14 16.5	+0.2
MRMT	Marmara Adasi	2.41	224	Pn	Pn	01 14 15.6	-0.7
SAFT	Safranbolu	2.43	116	PN	Pb	01 14 18.9	-1.4
MAR4	Marsite Statio	2.44	231	PN	Pn	01 14 17.3	+0.5
MAR4	Marsite Statio	2.44	231	Pn	Pn	01 14 16.3	-0.5
AUBOZ	BOZOYUK	2.45	176	PN	Pn	01 14 17.4	+0.6
GZKV	Gazikoy-Tekird	2.45	230	PN	Pn	01 14 17.2	+0.4
GZKV	Gazikoy-Tekird	2.45	230	Pn	Pn	01 14 17.0	+0.2
KIBS	BOLU	2.47	141	⇓iP	Pn	01 14 19.2	+1.9
KIBS				i S	Sn	01 14 48.6	+0.6
KIBS				IAML		01 14 50.0	
	comp=E,597nm,0.8s						
KIBS				IAML		01 14 51.0	
	comp=N,455nm,0.6s						
MAR3	Marsite Statio	2.47	230	PN	Pn	01 14 17.3	+0.1
MAR3	Marsite Statio	2.47	230	Pn	Pn	01 14 17.6	+0.4
EDC	Edincik	2.48	217	P	Pn	01 14 17.7	+0.5
EDC	Edincik	2.48	217	PN	Pn	01 14 17.4	+0.2
EDC	Edincik	2.48	217	Pn	Pn	01 14 17.7	+0.5
MAR2	Marsite Statio	2.48	230	PN	Pn	01 14 17.6	+0.4
MAR2	Marsite Statio	2.48	230	Pn	Pn	01 14 17.1	-0.1
JURR	Jurilovca	2.50	345	⇓P	Pn	01 14 18.0	+0.5
JURR	Jurilovca	2.50	345		Pn	01 14 18.1	+0.5
MAR6	Marsite Statio	2.52	230	PN	Pn	01 14 18.3	+0.6
MAR6	Marsite Statio	2.52	230	Pn	Pn	01 14 18.1	+0.4
BORA	Eskisehir	2.52	168	⇓iP	Pn	01 14 18.9	+1.1
BORA				i S	Sn	01 14 47.6	-1.5
BORA	Eskisehir	2.52	168	PN	Pn	01 14 18.4	+0.5
TLBR	Topalu	2.54	330	⇓P	Pn	01 14 18.6	+0.6
TLBR				⇑S	Sn	01 14 48.3	-1.0
TLBR	Topalu	2.54	330		Pn	01 14 18.6	+0.6
TLBR					Sn	01 14 48.3	-1.0
RKY	Sarkoy-Tekirda	2.58	231	PN	Pn	01 14 19.2	+0.6
RKY	Sarkoy-Tekirda	2.58	231	Pn	Pn	01 14 17.1	-1.5
UKOP	Uzunkopru-Edir	2.67	244	PN	Pn	01 14 20.8	+1.0
UKOP	Uzunkopru-Edir	2.67	244	Pn	Pn	01 14 20.8	+1.0
TPGR	Topolog	2.70	339	⇑P	Pn	01 14 20.8	+0.5
TPGR	Topolog	2.70	339		Pn	01 14 20.8	+0.5
HARR	Harsova	2.70	330	⇑P	Pn	01 14 20.8	+0.5
HARR	Harsova	2.70	330	P	Pn	01 14 20.8	+0.5
HARR	Harsova	2.70	330		Pn	01 14 20.8	+0.5
RAZG	Razgrad	2.70	298	⇑P	Pn	01 14 21.3	+1.0
RAZG	Razgrad	2.70	298		Pn	01 14 21.3	+1.0
KRBG	Karabiga-Canak	2.72	225	PN	Pn	01 14 20.9	+0.4
KRBG	Karabiga-Canak	2.72	225	Pn	Pn	01 14 21.4	+1.0
CMDR	Camlidere-ANKA	2.74	132	i P	Pn	01 14 23.1	+2.2
GONE	Gonen-Balikesi	2.80	215	PN	Pn	01 14 22.2	+0.6
GONE	Gonen-Balikesi	2.80	215	Pn	Pn	01 14 19.4	-2.2
TSSL	Sulina	2.81	359	⇑P	Pn	01 14 21.9	+0.1
TSSL	Sulina	2.81	359		Pn	01 14 21.9	+0.1
PELI	Kastamonı-Ara	2.83	111	i P	Pn	01 14 24.3	+2.2
PELI				i S	Sn	01 14 57.1	+0.4
PELI				IAML		01 14 59.0	
	comp=N,529nm,0.5s						
PELI				IAML		01 14 59.0	
	comp=E,619nm,0.6s						
AMRR	Amara	2.88	322	⇓P	Pn	01 14 23.5	+0.7
AMRR				⇑S	Sn	01 14 56.7	-1.1
AMRR	Amara	2.88	322		Pn	01 14 23.5	+0.7
AMRR					Sn	01 14 56.8	-1.1
DST	Dursunbey	2.89	198	PN	Pn	01 14 23.2	+0.3
TVSB	Tavsanli	2.91	185	PN	Pn	01 14 23.8	+0.5
TLCR		2.92	346	⇑P	Pn	01 14 23.9	+0.6
TLCR				⇑S	Sn	01 14 57.5	-1.3
TLCR		2.92	346	P	Pn	01 14 23.9	+0.6
TLCR						01 14 57.5	
TLCR		2.92	346		Pn	01 14 23.9	+0.6
TLCR					Sn	01 14 57.5	-1.3
DURS	Dursunbey	2.93	200	i P	Pn	01 14 22.7	-0.7
DURS				i S	Sn	01 14 52.2	-7.0
DURS				IAML		01 15 14.0	
	comp=N,275nm,0.5s						
DURS				IAML		01 15 24.0	
	comp=E,272nm,0.7s						
SGAZ	Eskisehir, Sey	2.93	164	i P	Pn	01 14 23.8	+0.3
ESKT	Eskisehir	2.94	164	PN	Pn	01 14 24.5	+0.8
ERIK	Erikli-Kesan	2.98	237	PN	Pn	01 14 24.8	+0.6
ERIK	Erikli-Kesan	2.98	237	Pn	Pn	01 14 22.8	-1.4
LPK	Lapseki	3.02	230	PN	Pn	01 14 25.4	+0.7

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LEHL  Lehliu             3.04 315 ⇓P     Pn     01 14 25.1 +0.3
LEHL  Lehliu             3.04 315        Pn     01 14 25.1 +0.3
CFR   Carcaliu           3.07 337 ⇑P     Pn     01 14 25.8 +0.5
CFR                               ⇑S     Sn     01 15 01.5 -1.0
CFR   Carcaliu           3.07 337  P     Pn     01 14 25.9 +0.5
CFR                                             01 15 01.5
CFR   Carcaliu           3.07 337        Pn     01 14 25.9 +0.5
CFR                                      Sn     01 15 01.5 -1.0
BALB  Balikesir          3.08 209  PN    Pn     01 14 26.0 +0.6
BALB  Balikesir          3.08 209  Pn    Pn     01 14 25.5 +0.1
AUKIR Kırka- Seyitga     3.12 170 i P    Pn     01 14 28.0 +1.8
CIFT  Cifteler, Eski     3.14 162  PN    Pn     01 14 27.3 +0.9
BZK   Bozkurt            3.15  96  PN    Pn     01 14 29.8 +3.4
BZK   Bozkurt            3.15  96  Pn    Pn     01 14 28.6 +2.1
ALN   Alexandroupoli     3.17 244  P     Pn     01 14 26.1 -0.6
ALN   Alexandroupoli     3.17 244  PN    Pn     01 14 27.4 +0.7
ALN   Alexandroupoli     3.17 244  Pn    Pn     01 14 26.1 -0.6
GELI  Tayfur-Gelibol     3.17 233  PN    Pn     01 14 27.4 +0.6
GELI  Tayfur-Gelibol     3.17 233  Pn    Pn     01 14 27.2 +0.4
ENEZ  Enez               3.18 241  PN    Pn     01 14 27.9 +1.1
ENEZ  Enez               3.18 241  Pn    Pn     01 14 24.3 -2.5
SVRH  Sivrihisar-ESK     3.18 155  PN    Pn     01 14 28.1 +1.1
AUSIV SIVRIHISAR         3.19 155 i P    Pn     01 14 26.4 -0.8
AUSIV SIVRIHISAR         3.19 155  PN    Pn     01 14 28.5 +1.3
ILGA  Ilgaz              3.21 113 i P    Pb     01 14 31.2 -2.6
ELDT  Eldivan            3.30 123 i P    Pn     01 14 31.1 +2.4
GEDZ  Gediz              3.32 185  PN    Pn     01 14 29.4 +0.6
SIMA  Simav-Kutahya      3.32 191  PN    Pn     01 14 29.6 +0.7
LOD   Lodumlu            3.33 137  PN    Pn     01 14 31.2 +2.2
GIUM  Giurgiulesti       3.34 340 ⇑P     Pn     01 14 29.5 +0.5
GIUM                              ⇑S     Sn     01 15 07.7 -1.4
GIUM  Giurgiulesti       3.34 340        Pn     01 14 29.5 +0.5
GIUM                                     Sn     01 15 07.7 -1.4
SHAP  Saphane-Kutahy     3.35 188  PN    Pn     01 14 29.8 +0.4
ANTO  Ankara             3.36 137  P     Pn     01 14 31.3 +1.9
ANTO  Ankara             3.36 137  PN    Pn     01 14 31.3 +1.9
ANTO  Ankara             3.36 137        Pn     01 14 31.3 +1.9
CANT  Cankiri            3.36 120  PN    Pn     01 14 31.4 +2.0
SGRR  Singureni          3.36 305 ⇑P     Pn     01 14 29.7 +0.4
SGRR                              ⇑S     Sn     01 15 08.7 -1.0
SGRR  Singureni          3.36 305        Pn     01 14 29.7 +0.4
SGRR                                     Sn     01 15 08.7 -1.0
BR231 Keskin MP Arra     3.37 137        Pn     01 14 31.6 +2.1
BUC1  Bucharest          3.40 307 ⇑P     Pn     01 14 30.5 +0.6
BUC1                              ⇓S     Sn     01 15 09.3 -1.3
BUC1  Bucharest          3.40 307  P     Pn     01 14 30.5 +0.6
BUC1                                            01 15 09.3
BUC1  Bucharest          3.40 307        Pn     01 14 30.5 +0.6
BUC1                                     Sn     01 15 09.3 -1.3
RDO   Rodhopi            3.41 251  PN    Pn     01 14 30.7 +0.7
SCHL  Schela             3.45 336 ⇑P     Pn     01 14 30.8 +0.2
SCHL                              ⇑S     Sn     01 15 10.1 -1.8
SCHL  Schela             3.45 336        Pn     01 14 30.8 +0.2
SCHL                                     Sn     01 15 10.1 -1.8
SULR                     3.47 313 ⇓P     Pn     01 14 31.8 +0.9
SULR                     3.47 313        Pn     01 14 31.8 +0.9
TATR  Tatarca            3.48 339 ⇑S     Sn     01 15 11.9 -0.7
TATR  Tatarca            3.48 339        Sn     01 15 11.9 -0.7
ZIMR                     3.50 293 ⇓P     Pn     01 14 31.4 +0.1
ZIMR                     3.50 293  P     Pn     01 14 31.4 +0.1
ZIMR                     3.50 293        Pn     01 14 31.4 +0.1
IZVR  Izvoarele          3.51 336 ⇓P     Pn     01 14 31.8 +0.4
IZVR                              ⇓S     Sn     01 15 12.8 -0.6
IZVR  Izvoarele          3.51 336        Pn     01 14 31.8 +0.4
IZVR                                     Sn     01 15 12.8 -0.6
SCTR  Scanteiesti        3.57 339 ⇑P     Pn     01 14 33.0 +0.8
SCTR                              ⇑S     Sn     01 15 13.9 -0.9
SCTR  Scanteiesti        3.57 339        Pn     01 14 33.0 +0.8
SCTR                                     Sn     01 15 13.9 -0.9
SEV   Sevastopol'        3.57  51⇓eP     Pn     01 14 32.2  0.0
SEV                               e             01 15 11.1
SEV   Sevastopol'        3.57  51⇓ePn    Pn     01 14 32.2  0.0
SEV                                Pnm          01 14 32.8
      comp=Z,45nm,0.3s
SEV                               eSn    Sn     01 15 11.1 -3.7
SEV                                Snm          01 15 13.6
      comp=N,78nm,0.5s
SEV                                Snm          01 15 13.6
      comp=E,43nm,0.4s
TUDR                     3.59 335 ⇑S     Sn     01 15 14.6 -0.7
TUDR                     3.59 335        Sn     01 15 14.6 -0.7
EZN   Ezine              3.64 227  PN    Pn     01 14 34.3 +1.1
GADA  Gvkgeada           3.65 235  PN    Pn     01 14 34.3 +1.0
VLDR  Vladesti           3.70 341 ⇑P     Pn     01 14 34.2 +0.1
VLDR  Vladesti           3.70 341        Pn     01 14 34.2 +0.1
BOZC  Bozcaada           3.78 230  PN    Pn     01 14 36.3 +1.2
COPA  Copaceanca         3.79 300 ⇑P     Pn     01 14 35.0 -0.2
COPA  Copaceanca         3.79 300        Pn     01 14 35.0 -0.2
PLD   Plovdiv            3.79 268 ePn    Pn     01 14 34.4 -0.9
PLD                               eSn    Sn     01 15 06.6  -14
SECR                     3.81 316 ⇓P     Pn     01 14 36.1 +0.6
SECR                     3.81 316        Pn     01 14 36.1 +0.6
KIZT  Kizilcal           3.81 155  PN    Pn     01 14 36.8 +1.1
VARL  Varlezi            3.81 339 ⇓P     Pn     01 14 36.0 +0.5
VARL                              ⇑S     Sn     01 15 19.1 -1.8
VARL  Varlezi            3.81 339        Pn     01 14 36.0 +0.5
VARL                                     Sn     01 15 19.1 -1.8
YAL   Yalta              3.82  55⇑iP     Pn     01 14 35.4 -0.3
YAL                               e             01 15 16.5
YAL   Yalta              3.82  55⇑iPn    Pn     01 14 35.4 -0.3
YAL                                Pnm          01 14 35.8
      comp=Z,309nm,0.4s
YAL                               eSn    Sn     01 15 16.5 -4.6
YAL                                Snm          01 15 18.0
      comp=N,112nm,0.3s
YAL                                Snm          01 15 20.2
      comp=E,165nm,0.4s
SHUT  Suhut-Afyon        3.84 171  PN    Pn     01 14 36.8 +0.8
BR131 Keskin Array S     3.91 131  P     Pn     01 14 38.5 +1.4
BR131 Keskin Array S     3.91 131        Pn     01 14 38.5 +1.4
BRTR  Keskin Array B     3.91 131  Pn    Pn     01 14 38.6 +1.6
      comp=E,1.8nm,0.3s,baz=306,slow=12,SNR=23
BRTR                               Sn    Sn     01 15 21.4 -2.2
      comp=E,4.1nm,0.3s,baz=320,slow=13,SNR=2.4
BRTR  Keskin Array B     3.91 131 i P    Pn     01 14 38.7 +1.6
BRTR                               pmax  pmax
      comp=Z,5.0nm,0.4s
BRTR  Keskin Array B     3.91 131  PN    Pn     01 14 39.6 +2.5
BRTR  Keskin Array B     3.91 131  Pn    Pn     01 14 38.4 +1.4
KULA  Kula-Manisa        3.93 193  PN    Pn     01 14 38.0 +0.7
ODBI  Odobesti           3.94 331 ⇑P     Pn     01 14 37.6 +0.3
ODBI  Odobesti           3.94 331        Pn     01 14 37.6 +0.3
DKL   Dikili             3.95 215  PN    Pn     01 14 38.5 +1.1
SNOP  Sinop              4.03  93  Pn    Pn     01 14 40.8 +2.3
SIM   Simferopol'        4.07  49 eP     Pn     01 14 39.2 +0.1
SIM                                S     Sn     01 15 22.8 -4.4
SIM                                pmax  pmax
      comp=Z,294nm,0.3s
SIM                                smax  smax
      comp=E,161nm,0.5s
SIM                                smax  smax
      comp=N,90nm,0.3s
SIM   Simferopol'        4.07  49⇑iPn    Pn     01 14 39.2 +0.1
SIM                                Pnm          01 14 39.8
      comp=Z,264nm,0.3s
SIM                               eSn    Sn     01 15 22.8 -4.4
SIM                                Snm          01 15 27.0
      comp=N,58nm,0.5s,comp=E,161nm,0.5s
ALU   Alushta            4.08  54⇓iP     Pn     01 14 39.4 +0.2
ALU                               e             01 15 23.0
ALU   Alushta            4.08  54⇑iPn    Pn     01 14 39.4 +0.2
ALU                                Pnm          01 14 40.6
      comp=Z,130nm,0.4s
ALU                               ex     x      01 15 22.2
ALU                               eSn    Sn     01 15 23.0 -4.4
ALU                                Snm          01 15 24.6
      comp=E,161nm,0.5s
ALU                                Snm          01 15 28.8
      comp=N,140nm,0.3s
GHRR                     4.09 336 ⇓P     Pn     01 14 40.2 +0.9
GHRR                              ⇑S     Sn     01 15 26.1 -1.5
GHRR                     4.09 336        Pn     01 14 40.2 +0.9
GHRR                                     Sn     01 15 26.1 -1.5
HUMR  Humele             4.13 303 ⇑P     Pn     01 14 40.1 +0.2
HUMR  Humele             4.13 303        Pn     01 14 40.1 +0.2
VRI   Vrincioaia         4.15 329 ⇓P     Pn     01 14 40.9 +0.7
VRI   Vrincioaia         4.15 329  P     Pn     01 14 40.9 +0.7
VRI   Vrincioaia         4.15 329        Pn     01 14 40.9 +0.7
PLOR  Plostina           4.17 328 ⇑P     Pn     01 14 41.3 +0.8
PLOR  Plostina           4.17 328  P     Pn     01 14 41.3 +0.8
PLOR  Plostina           4.17 328        Pn     01 14 41.3 +0.8
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MLR   Muntele Rosu       4.19 320 ⇓P     Pn     01 14 42.1 +1.2
MLR   Muntele Rosu       4.19 320  Pn    Pn     01 14 42.7 +1.7
      comp=N,3.4nm,0.3s,baz=44,slow=2.4,SNR=124
MLR                                Sn    Sn     01 15 29.7 -0.8
      comp=N,5.6nm,0.3s,baz=152,slow=15,SNR=4.5
MLR   Muntele Rosu       4.19 320        Pn     01 14 42.1 +1.2
LEOM  Leova              4.27 345 ⇓P     Pn     01 14 42.8 +1.0
LEOM  Leova              4.27 345  P     Pn     01 14 42.8 +1.0
LEOM  Leova              4.27 345        Pn     01 14 42.8 +1.0
VLAD  Vladila            4.28 294 ⇓P     Pn     01 14 41.6 -0.3
VLAD  Vladila            4.28 294        Pn     01 14 41.6 -0.3
SIGR  SIGRI              4.34 225  PN    Pn     01 14 44.1 +1.4
COVR  Voineasa-Covas     4.35 325 ⇓S     Sn     01 15 33.2 -0.9
COVR  Voineasa-Covas     4.35 325        Sn     01 15 33.2 -0.9
MTUR  Matau              4.47 312 ⇑P     Pn     01 14 45.7 +1.0
MTUR  Matau              4.47 312  P     Pn     01 14 45.7 +1.0
MTUR  Matau              4.47 312        Pn     01 14 45.7 +1.0
BLCB  Balcova            4.49 209  PN    Pn     01 14 46.1 +1.3
VASR  Vaslui             4.52 342 ⇑P     Pn     01 14 45.7 +0.4
VASR                              ⇑S     Sn     01 15 36.4 -2.0
VASR  Vaslui             4.52 342        Pn     01 14 45.7 +0.4
VASR                                     Sn     01 15 36.4 -2.0
SUDU  Sudak              4.55  54beP     Pn     01 14 46.3 +0.7
SUDU                              e             01 15 34.4
SUDU  Sudak              4.55  54⇑ePn    Pn     01 14 46.3 +0.7
SUDU                             ⇓iPn    Pn     01 14 46.7 +1.1
SUDU                               Pnm          01 14 46.9
      comp=Z,437nm,0.4s
SUDU                              eSn    Sn     01 15 34.4 -4.6
SUDU                              eSn    Sn     01 15 35.0 -4.0
SUDU                               Snm          01 15 41.1
      comp=N,190nm,0.4s
SUDU                               Snm          01 15 46.2
      comp=E,93nm,0.4s
ISP   Isparta            4.56 173  P     Pn     01 14 44.4 -1.5
ISP   Isparta            4.56 173  PN    Pn     01 14 47.9 +2.0
ISP   Isparta            4.56 173        Pn     01 14 44.4 -1.5
VOIR                     4.61 314 ⇓P     Pn     01 14 47.7 +1.0
VOIR                     4.61 314  P     Pn     01 14 47.7 +1.0
VOIR                     4.61 314        Pn     01 14 47.7 +1.0
MILM  Milestii Mici      4.62 352 ⇑P     Pn     01 14 46.7 +0.1
MILM  Milestii Mici      4.62 352c iP    Pn     01 14 46.8 +0.1
MILM                              eS     Sn     01 15 35.5 -5.2
MILM                               pmax  pmax
      comp=Z,20nm,0.1s
MILM                               smax  smax
      comp=E,170nm,0.3s
MILM                               smax  smax
      comp=N,220nm,0.3s
MILM  Milestii Mici      4.62 352        Pn     01 14 46.7 +0.1
AYDB  Zeytinkoy-Aydi     4.64 199  PN    Pn     01 14 47.4 +0.4
URLA  Izmir              4.68 213  PN    Pn     01 14 48.9 +1.4
KIS   Kishinev           4.70 352 eP     Pn     01 14 46.8 -0.9
      comp=N,18nm,0.3s
KIS                               eS     Sn     01 15 38.7 -3.9
      comp=N,290nm,0.9s
KIS                                LRM   MLR    01 16 41.0
KIS   Kishinev           4.70 352 ⇓P     Pn     01 14 47.5 -0.1
KIS                               ⇓S     Sn     01 15 41.4 -1.2
KIS   Kishinev           4.70 352 eP     Pn     01 14 46.8 -0.9
KIS                               eS     Sn     01 15 38.7 -3.9
KIS                                pmax  pmax
      comp=Z,18nm,0.3s
KIS                                smax  smax
      comp=E,330nm,0.4s
KIS                                smax  smax
      comp=N,170nm,0.4s
KIS   Kishinev           4.70 352        Pn     01 14 47.5 -0.1
KIS                                      Sn     01 15 41.4 -1.2
OZUR                     4.72 324 ⇑S     Sn     01 15 41.6 -1.8
OZUR                     4.72 324        Sn     01 15 41.6 -1.8
TESR  Tescani            4.73 333 ⇓P     Pn     01 14 48.8 +0.6
TESR  Tescani            4.73 333        Pn     01 14 48.8 +0.6
ARR   Arges              4.80 311 ⇑P     Pn     01 14 50.0 +0.8
ARR   Arges              4.80 311        Pn     01 14 50.0 +0.8
FEO   Feodosiya          4.85  55 eP     Pn     01 14 50.2 +0.4
FEO                               e             01 15 42.1
FEO   Feodosiya          4.85  55 ePn    Pn     01 14 50.2 +0.4
FEO                                Pnm          01 14 50.5
      comp=Z,100nm,0.3s
FEO                               eSn    Sn     01 15 42.1 -4.3
FEO                                Snm          01 15 45.5
      comp=N,64nm,0.3s
FEO                                Snm          01 15 48.0
      comp=E,76nm,0.3s
VTS   Vitosha            4.86 275 ⇓P     Pn     01 14 50.6 +0.5
VTS   Vitosha            4.86 275  P     Pn     01 14 50.6 +0.5
VTS   Vitosha            4.86 275        Pn     01 14 50.6 +0.5
VTS   Vitosha            4.86 275 ePn    Pn     01 14 49.8 -0.3
VTS                               eSn    Sn     01 15 31.1  -16
CHOS  Chios island       4.88 217  PN    Pn     01 14 52.1 +1.7
IAS   Iasi               5.09 343 ⇑P     Pn     01 14 53.8 +0.6
IAS   Iasi               5.09 343  P     Pn     01 14 53.8 +0.6
IAS   Iasi               5.09 343        Pn     01 14 53.8 +0.6
GIRR  Girov              5.17 334 ⇑P     Pn     01 14 54.8 +0.6
GIRR  Girov              5.17 334        Pn     01 14 54.8 +0.6
MLSB  Milas              5.29 198  PN    Pn     01 14 57.4 +1.6
LOT   Lotru              5.34 307 ⇑P     Pn     01 14 57.7 +1.0
LOT   Lotru              5.34 307        Pn     01 14 57.7 +1.0
ZAPS  Zavoj              5.35 282 ePn    Pn     01 14 56.9 +0.2
BOSS  Bosilegrad         5.42 274 ePn    Pn     01 14 57.8 +0.1
BOSS                              eSn    Sn     01 15 44.5  -16
MDB   Medias             5.43 316 ⇑P     Pn     01 14 58.0 +0.2
MDB                               ⇑S     Sn     01 15 59.6 -1.1
MDB   Medias             5.43 316  P     Pn     01 14 58.0 +0.2
MDB                                             01 15 59.6
MDB   Medias             5.43 316        Pn     01 14 58.0 +0.2
MDB                                      Sn     01 15 59.6 -1.1
VAY   Valandovo          5.50 262 ePn    Pn     01 14 59.7 +1.0
VAY   Valandovo          5.50 262 ePn    Pn     01 14 59.3 +0.6
ELL   Elmali             5.60 179  P     Pn     01 15 02.4 +2.2
ELL   Elmali             5.60 179        Pn     01 15 02.4 +2.2
ZAGS  Zajecar            5.73 287 ePn    Pn     01 15 00.6 -1.3
ZAGS                              eSn    Sn     01 15 51.7  -16
BNN   Bunyan             5.78 125  Pn    Pn     01 15 05.5 +2.8
SORM  Soroca             5.87 350 ⇓P     Pn     01 15 03.5 -0.3
SORM  Soroca             5.87 350  P     Pn     01 15 03.5 -0.3
SORM  Soroca             5.87 350        Pn     01 15 03.5 -0.3
BARS  Barje              5.91 277 ePn    Pn     01 15 02.2 -2.2
BARS  Barje              5.91 277 ePn    Pn     01 15 04.6 +0.2
BARS                              eSn    Sn     01 15 57.2  -15
BOVS  Bovan              6.07 285 ⇑P     Pn     01 15 06.5 -0.1
BOVS  Bovan              6.07 285        Pn     01 15 06.5 -0.1
BOVS  Bovan              6.07 285 ePn    Pn     01 15 06.5 -0.1
BOVS                              eSn    Sn     01 15 59.2  -17
ARCR  ARCALIA            6.12 323 ⇑P     Pn     01 15 07.7 +0.5
ARCR  ARCALIA            6.12 323        Pn     01 15 07.7 +0.5
BURAR Bucovina Array     6.18 330 ⇑P     Pn     01 15 09.0 +0.7
BURAR                             ⇑S     Sn     01 16 18.7 -0.7
BURAR Bucovina Array     6.18 330  P     Pn     01 15 08.9 +0.7
BURAR                              S     Sn     01 16 18.7 -0.7
BURAR Bucovina Array     6.18 330  Pn    Pn     01 15 09.6 +1.4
BURAR Bucovina Array     6.18 330        Pn     01 15 09.0 +0.7
BURAR                                    Sn     01 16 18.7 -0.7
BUR08 Bucovina Ar. S     6.21 330  Pn    Pn     01 15 10.3 +1.6
CJR   Cluj-Napoca        6.22 317 ⇑P     Pn     01 15 08.9 +0.3
CJR                               ⇑S     Sn     01 16 18.4 -1.8
CJR   Cluj-Napoca        6.22 317  P     Pn     01 15 08.9 +0.3
CJR                                             01 16 18.4
CJR   Cluj-Napoca        6.22 317        Pn     01 15 08.9 +0.3
CJR                                      Sn     01 16 18.4 -1.8
KUBS  Kucevo             6.27 292 ePn    Pn     01 15 07.5 -1.8
CBBR  Cluj-Babes-Bol     6.28 317 ⇑P     Pn     01 15 10.0 +0.6
CBBR  Cluj-Babes-Bol     6.28 317        Pn     01 15 10.0 +0.6
GL1R  Gelendzhik         6.41  67 i P    Pn     01 15 11.2  0.0
GL1R                              i S    Sn     01 16 20.2 -4.6
SELS  Selova             6.45 281 ePn    Pn     01 15 11.4 -0.4
SELS                              eSn    Sn     01 16 07.2  -19
SVIS  Svilajnac          6.55 290 ePn    Pn     01 15 12.1 -1.0
SVIS                              eSn    Sn     01 16 12.0  -16
AGG   Agios Georgios     6.58 242  P     Pn     01 15 13.5 -0.1
AGG   Agios Georgios     6.58 242  Pn    Pn     01 15 13.5 -0.1
DRGR                     6.73 314 ⇑P     Pn     01 15 15.8 +0.1
DRGR                     6.73 314  P     Pn     01 15 15.8 +0.1
DRGR                     6.73 314        Pn     01 15 15.8 +0.1
BZS   Buzias             6.74 302 ePn    Pn     01 15 15.2 -0.6
GRUS  Gruza              6.82 286 ePn    Pn     01 15 16.7 -0.2
GRUS                              eSn    Sn     01 16 16.4  -19
BMR   Baia Mare          6.95 322 ⇑P     Pn     01 15 18.7 +0.1
BMR   Baia Mare          6.95 322  P     Pn     01 15 18.7 +0.1
BMR   Baia Mare          6.95 322        Pn     01 15 18.7 +0.1
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SIRR  Siria              7.03 307 ⇑P     Pn     01 15 19.5 -0.2
SIRR  Siria              7.03 307        Pn     01 15 19.6 -0.2
TRUS  Trudelj            7.11 288 ePn    Pn     01 15 20.2 -0.6
TRUS                              eSn    Sn     01 16 24.6  -17
IVAS  Ivanjica           7.18 283 ePn    Pn     01 15 20.9 -1.0
IVAS                              eSn    Sn     01 16 25.5  -18
SJES  Sjenica            7.28 280 ePn    Pn     01 15 23.4 +0.1
DIVS  Divibare           7.37 287        Pn     01 15 24.3 -0.2
DIVS  Divibare           7.37 287 ePn    Pn     01 15 23.8 -0.7
DIVS                              eSn    Sn     01 16 31.0  -18
SOC   Sochi              7.38  77 eP     Pn     01 15 25.0 +0.5
SOC                               e             01 16 43.2
SOC                                pmax  pmax
      comp=Z,29nm,0.9s
SOC                                MLR   MLR
      comp=Z,472nm,13.0s
TRPA  Tarpa              7.72 321 ePN    Pn     01 15 28.5 -0.7
BBLS  Lazi&#263;i        7.75 285 ePn    Pn     01 15 29.9 +0.1
BBLS                              eSn    Sn     01 16 39.3  -19
FRGS  Fruska Gora        7.76 295 ePn    Pn     01 15 28.7 -1.0
RPOR  Krasnaya Polya     7.79  77 i P    Pn     01 15 29.0 -1.2
RPOR                              i S    Sn     01 16 52.1 -6.7
UZH   Uzhgorod           8.20 323 eP     Pn     01 15 36.8 +1.1
LABN  Labinsk            8.27  70 i P    Pn     01 15 37.4 +0.7
LABN                              i S    Sn     01 17 06.7 -3.8
AKASG Malin Array Be     8.36 357  Pn    Pn     01 15 34.7 -3.2
      comp=Z,1.2nm,0.3s,baz=84,slow=8.4,SNR=6.0
AKASG                              Sn    Sn     01 17 05.0 -7.8
      comp=Z,7.3nm,0.3s,baz=158,slow=37,SNR=6.9
AKBB  Malin Array Si     8.36 357ceP     Pn     01 15 36.8 -1.2
KOLS  Kolonicke sedl     8.43 324 ePN    Pn     01 15 40.6 +1.7
LVV   L'vov              8.47 334 eP     Pn     01 15 39.7 +0.2
LVV                               eS     Sn     01 17 13.6 -2.0
LVV                                pmax  pmax
      comp=Z,60nm,1.4s
LVV                                smax  smax
      comp=E,30nm,1.1s
LVV                                smax  smax
      comp=N,600nm,1.0s
CRVS  Cervenica-Dubn     8.77 321 ePN    Pn     01 15 45.3 +1.7
MORH  Mrgy, Hungar       8.88 300 ePN    Pn     01 15 36.4 -8.8
PSZ   Piszkesteto        8.94 312 ePN    Pn     01 15 49.1 +3.1
NVNR  Nevinnomyssk       9.13  72 i P    Pn     01 15 48.2 -0.3
NVNR                              i S    Sn     01 17 24.8 -6.9
BUD   Budapest           9.20 308 ePN    Pn     01 15 43.3 -6.2
NEY   Neytrino           9.54  80 i P    Pn     01 15 55.1 +0.7
NEY                                pmax  pmax
      comp=Z,4.0nm,0.8s
KIV   Kislovodsk         9.56  76 eP     Pn     01 15 54.0 -0.5
KIV                               eS     Sn     01 17 42.8 +0.4
KIV                                pmax  pmax
      comp=Z,30nm,1.0s
KVAR  Kislovodsk Arr     9.56  76  Pn    Pn     01 15 53.5 -1.1
      baz=80,slow=19,SNR=4.3
KVAR                               Sn    Sn     01 17 34.2 -8.3
      baz=294,slow=20,SNR=3.3
KBZ   Khabaz             9.69  77  Pn    Pn     01 15 55.8 -0.4
      comp=Z,0.8nm,0.3s,baz=280,slow=9.4,SNR=23
KBZ                                Sn    Sn     01 17 39.9 -5.6
      comp=Z,0.3nm,0.3s,baz=270,slow=20,SNR=2.6
KBZ   Khabaz             9.69  77ceP     Pn     01 15 56.4 +0.2
LANS  Liptovska Anna     9.91 317 ePN    Pn     01 16 01.4 +2.1
MMAI  Mount Meron Ar    10.32 153  Pn    Pn     01 16 05.7 +0.8
      comp=Z,0.8nm,0.3s,baz=332,slow=12,SNR=9.2
ZEI   Tsey              10.41  83 eP     Pn     01 16 07.2 +0.9
ZEI                               eS     Sn     01 17 57.8 -5.8
ZEI                                pmax  pmax
      comp=Z,2.0nm,0.8s
ZEI                                smax  smax
      comp=N,11nm,0.8s
ZEI                                smax  smax
      comp=E,12nm,0.7s
VORD  Divnogorie        10.80  34 eP     Pn     01 16 09.7 -1.6
VORD                              eS     Sn     01 18 07.5 -5.1
VORD                               pmax  pmax
      comp=Z,10.0nm,0.6s
VORD                               smax  smax
      comp=N,40nm,0.6s
VSR   Storozhevoye      10.94  33 eP     Pn     01 16 10.6 -2.7
VSR                                pmax  pmax
      comp=Z,8.0nm,0.9s
GNI   Garni             11.46  96  Pn    Pn     01 16 25.6 +5.0
      comp=Z,0.3nm,0.3s,baz=37,slow=5.2,SNR=11
GNI   Garni             11.46  96ceP     Pn     01 16 25.0 +4.3
GNI                                pmax  pmax
      comp=Z,34nm,1.7s
GNI   Garni             11.46  96  Pn    Pn     01 16 25.3 +4.7
LPSR  Galich'ya Gora    11.96  28 eP     Pn     01 16 24.7 -2.5
LPSR                               pmax  pmax
      comp=Z,10.0nm,0.6s
VRH   Novokhopyorsk     12.03  39 eP     Pn     01 16 26.8 -1.4
VRH                                pmax  pmax
      comp=Z,10.0nm,0.6s
DPC   Dobruska-Polom    12.26 315 ePN    Pn     01 16 42.7  +11
DPC                                AMS   AMS    01 19 40.0
      comp=Z,1µm,13.5s
GERES GERESS Array B    13.00 305  Pn    Pn     01 16 43.2 +1.7
      comp=Z,0.1nm,0.3s,baz=89,slow=12,SNR=1.5
KHC   Kasperske Hory    13.19 306 eP     Pn     01 16 43.6 -0.5
KHC                                MLR   MLR
      comp=Z,1µm,12.7s
KHC   Kasperske Hory    13.19 306 ePN    Pn     01 16 43.6 -0.5
KHC                                AMS   AMS    01 20 50.0
      comp=Z,1µm,12.7s
IIGN  Ignalina          13.22 351 eP     P      01 16 51.2 -3.3
ISAL  Salakas           13.45 351 eP     Pn     01 16 50.3 +2.8
OBN   Obninsk           13.52  17  Sn    Sn     01 19 07.8  -11
      comp=Z,1.1nm,0.3s,baz=176,slow=22,SNR=7.6
OBN   Obninsk           13.52  17 i P    Pn     01 16 44.2 -4.3
OBN                                pmax  pmax
      comp=Z,11nm,0.9s
MOS   Moscow            14.33  18 eP     Pn     01 16 56.4 -3.2
MOS                               eS     Sn     01 19 29.1  -10
BELG  Belogornoye       15.66  44  Pn    Pn     01 17 15.7 -1.7
      comp=Z,1.3nm,0.3s,baz=46,slow=0.8,SNR=15
BELG  Belogornoye       15.66  44 i P    Pn     01 17 18.3 +0.9
BELG                               pmax  pmax
      comp=Z,13nm,1.0s
VSU   Vasula            16.24 354 eP     P      01 17 29.3 +1.2
FINES FINESS Array B    19.25 355  P     P      01 17 59.1 -2.1
      comp=Z,0.1nm,0.3s,baz=188,slow=19,SNR=1.5
FINES                              S     Sn     01 21 14.3  -24
      comp=Z,0.1nm,0.3s,baz=111,slow=15,SNR=2.5
FINES FINESS Array B    19.25 355  P     P      01 18 00.1 -1.1
FINES FINESS Array B    19.25 355  P     P      01 18 00.1 -1.1
KLMR  Klimovskoe        19.45  14 eP     P      01 18 00.7 -2.6
KLMR                               pmax  pmax
      comp=Z,20nm,0.8s
KLMR  Klimovskoe        19.45  14 ePn    P      01 18 00.7 -2.6
KLMR                               AMP          01 18 05.6
      comp=Z,20nm,0.8s
KLMR                              eSn    Sn     01 21 23.4  -19
KLMR                              eSn    Sn     01 21 23.4  -19
HFS   Hagfors           20.36 336  P     P      01 18 12.5 -0.8
      comp=Z,2.2nm,0.6s,baz=130,slow=14,SNR=7.4
HFS                                S     S      01 21 47.5  -14
      comp=Z,2.0nm,0.8s,baz=139,slow=22,SNR=2.1
AKTO  Aktyubinsk        20.98  58  P     P      01 18 21.1 +1.0
      comp=Z,9.6nm,0.6s,baz=262,slow=8.7,SNR=48
NC602 NORSAR Array S    21.49 335  P     P      01 18 26.5 +1.0
PRGR  Permogore         21.52  21 eP     P      01 18 25.4 -0.4
PRGR                               pmax  pmax
      comp=Z,91nm,1.4s
NB2   NORSAR Subarra    21.83 335  P     P      01 18 28.2 -1.0
      comp=Z,1.6nm,0.7s,baz=141,slow=11
NOA   NORSAR Array B    21.83 335  P     P      01 18 28.4 -0.8
      comp=Z,0.5nm,0.5s,baz=44,slow=24,SNR=1.4
ABKAR Akbulak array     22.02  61  P     P      01 18 32.7 +1.4
ABKAR Akbulak array     22.02  61  P     P      01 18 32.7 +1.4
ABKAR                              IAmb  IAmb   01 18 37.1
      comp=Z,18nm,1.1s
GEYT  Alibeck           22.05  92  P     P      01 18 33.5 +1.7
      comp=Z,3.7nm,0.9s,baz=285,slow=17,SNR=3.9
RAYN  Ar Rayn           22.87 140  P     P      01 18 41.6 +1.0
RAYN                               pmax  pmax
      comp=Z,4.0nm,0.9s
RAYN  Ar Rayn           22.87 140  P     P      01 18 41.6 +1.0
ARU   Arti              23.20  43  P     P      01 18 43.3 -0.5
      comp=Z,2.2nm,0.6s,baz=246,slow=7.8,SNR=14
ARU   Arti              23.20  43d iP    P      01 18 44.2 +0.4
ARU                                             01 19 07.7
ARU                                S     S      01 22 57.7 +1.6
ARU                                SS    SnSn   01 23 28.2 -0.8
ARU                                pmax  pmax
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	comp=Z,6.0nm,0.7s						
ARU	Arti	23.20	43	P	P	01 18 44.0	+0.2
ARU				IAmb	IAmb	01 18 50.0	
	comp=Z,7.5nm,0.8s						
SVE	Sverdlovsk	24.41	43	*e*P	P	01 18 56.8	+1.4
SVE				pmax	pmax		
	comp=Z,14nm,1.4s						
EKA	Eskdalemuir Ar	25.01	313	P	P	01 19 01.0	+0.2
	comp=Z,1.5nm,0.8s,baz=100,slow=8.0,SNR=2.3						
BRVK	Borovoye	28.90	54	*ce*P	P	01 19 38.0	+2.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BVAR	Borovoye Array	28.96	54	P	P	01 19 37.1	+0.7
	comp=Z,0.4nm,0.6s,baz=262,slow=14,SNR=2.6						
AAK	Ala-Archa	32.67	74	*ce*P	P	01 20 10.9	+1.5
AAK				pmax	pmax		
	comp=Z,16nm,1.0s						
KSH	Kashi	34.67	79	P	P	01 20 29.1	+2.3
MK31	Makanchi Array	37.08	65	P	P	01 20 48.5	+1.2
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	Makanchi Array	37.08	65	P	P	01 20 48.5	+1.2
MK31				IAmb	IAmb	01 20 49.9	
	comp=Z,2.7nm,0.9s						
MKAR	Makanchi Array	37.08	65	P	P	01 20 48.8	+1.6
	comp=Z,2.6nm,0.8s,baz=279,slow=8.1,SNR=11						
MKAR	Makanchi Array	37.08	65	P	P	01 20 49.0	+1.8
ZALV	Zalesovo Beam	37.57	53	P	P	01 20 52.2	+0.9
	comp=Z,0.9nm,0.4s,baz=274,slow=8.8,SNR=8.0						
ZALV				PP	PP	01 22 16.1	-0.7
	comp=Z,2.2nm,0.8s,baz=301,slow=14,SNR=5.9						
ZALV	Zalesovo Beam	37.57	53	*i* P	P	01 20 52.5	+1.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	37.57	53	P	P	01 20 52.7	+1.4
ZALV					PnPn	01 22 18.3	+0.7
TORD	Torodi Ar. Bea	37.94	228	P	P	01 20 56.2	+1.4
	comp=Z,0.8nm,0.9s,baz=30,slow=8.4,SNR=3.5						
DGZ	Jazzator, Alta	39.81	59	*i* P	P	01 21 10.9	+0.5
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NRIK	Noril'sk	39.84	28	P	P	01 21 11.2	+1.1
	comp=Z,4.4nm,0.7s,baz=239,slow=5.1,SNR=10						
NRIK	Noril'sk	39.84	28	*ce*P	P	01 21 12.0	+1.9
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NRIK	Noril'sk	39.84	28	P	P	01 21 11.0	+0.9
NRIK				IAmb	IAmb	01 21 13.3	
	comp=Z,5.2nm,0.8s						
KOWA	Kowa	40.23	237	P	P	01 21 14.2	+0.2
	comp=Z,0.7nm,0.6s,baz=80,slow=6.1,SNR=2.1						
DBIC	Dimbokro	46.91	231	P	P	01 22 11.3	+3.5
	comp=Z,1.5nm,0.5s,baz=8.4,slow=10,SNR=2.3						
SONM	Songino Array	52.28	56	P	P	01 22 50.2	+1.5
	comp=Z,0.9nm,0.7s,baz=286,slow=8.6,SNR=6.9						
SONM				PcP	PcP	01 24 00.2	+0.3
	comp=Z,0.3nm,0.8s,baz=297,slow=6.3,SNR=4.2						
TIXI	Tiksi	53.16	23	*i* P	P	01 22 55.3	+0.8
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CMAR	Chiang Mai Arr	62.50	90	P	P	01 24 01.4	+0.5
	comp=Z,0.8nm,0.3s,baz=306,slow=7.7,SNR=9.4						
CMAR	Chiang Mai Arr	62.50	90	*i* P	P	01 24 01.9	+0.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BILL	Bilibino	65.18	17	*i* P	P	01 24 16.2	-1.7
BILL				pmax	pmax		
	comp=Z,3.0nm,1.5s						
KLR	Kul'dur	66.03	45	*i* P	P	01 24 24.2	+0.5
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSRS	Korea Array	71.15	56	P	P	01 24 55.8	-0.1
	comp=Z,2.1nm,0.8s,baz=312,slow=4.5,SNR=5.5						
YKA	Yellowknife Ar	71.66	343	P	P	01 24 58.3	-0.2
	comp=Z,0.8nm,0.8s,baz=26,slow=6.0,SNR=4.1						
PDAR	Pinedale Array	87.71	331	P	P	01 26 25.9	-0.3
	comp=Z,0.3nm,0.6s,baz=58,slow=3.9,SNR=4.4						

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*IDC **15** 01:49:30.7±5.2, 17°.93S×168°.82E, h222km±73km, mb3.5/5, mb1 3.8/7, mb1mx3.5/37, mbtmp4.1/7, Error ellipse: s-maj=124.8km s-min=18.2km az=157.0*

*NOU **15** 01:49:30.6, 18°.01S×169°.01E, h203km, MLv4.6/15, Vanuatu Islands*

ISC 15 01:49:29.6±0.9**, 17°.98S**±0°.07×**168°.8E**±0°.1**, h200km, n20,** σ**2s.04**/19**, mb3.7**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.43	295	P	Pn	01 49 59.2	+2.8
DVP	Devils Point	0.67	292	P	Pn	01 50 00.1	+2.7
SANVU	Saraoutou	2.96	328	P	Pn	01 50 20.9	+2.1
LIFNC	LIFOU	3.17	208	P	Pn	01 50 22.3	+1.1
MARNC	Mare, Loyalty	3.57	192	P	Pn	01 50 27.5	+1.5
YATNC	Mamie plateau,	4.46	204	P	Pn	01 50 37.8	+0.7
DZM	Mont Dzumac	4.65	209	P	Pn	01 50 41.6	+2.0
	7.0nm,0.3s,baz=50,slow=21,SNR=28						
DZM	Mont Dzumac	4.65	209	P	Pn	01 50 41.6	+2.0
NOUC	Port Laguerre	4.75	210	P	Pn	01 50 42.2	+1.5
OUENC	Ouen Island, N	4.80	203	P	Pn	01 50 43.6	+2.2
ONTNC	Ouen Toro	4.86	207	P	Pn	01 50 44.4	+2.3
KOUNC	Koumac, New Ca	5.00	238	P	Pn	01 50 47.2	+3.2
MSVF	Nonsavu	8.78	90	P	Pn	01 51 34.6	+1.5
	0.2nm,0.3s,baz=231,slow=12,SNR=5.6						
WRA	Warramunga Arr	32.65	261	P	P	01 55 41.5	-1.5
	0.3nm,0.3s,baz=80,slow=6.0,SNR=12						
ASAR	Alice Springs	33.08	254	P	P	01 55 46.1	-0.6
	1.7nm,0.3s,baz=85,slow=8.7,SNR=28						
SONM	Songino Array	85.98	323	P	P	02 01 46.1	-1.3
	0.9nm,0.8s,baz=151,slow=7.2,SNR=6.0						
ILAR	Eielson Array	89.15	17	P	P	02 01 59.6	-2.3
	0.8nm,0.8s,baz=224,slow=6.0,SNR=8.4						
YKA	Yellowknife Ar	99.73	27	P	Pdif	02 02 49.5	-0.7
	0.5nm,0.6s,baz=250,slow=4.9,SNR=6.0						
MKAR	Makanchi Array	100.57	316	P	Pdif	02 02 53.5	-1.0
	0.2nm,0.7s,baz=94,slow=5.3,SNR=1.5						
GERES	GERESS Array B	143.20	332	PKP	PKPab	02 08 37.2	+1.2
	0.1nm,0.3s,baz=51,slow=5.2,SNR=2.6						

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*IDC **15** 01:57:50.8±0.6, 45°.65N×142°.72E, h304km±7km, mb3.4/16, mb1 3.6/21, mb1mx3.5/42, mbtmp4.1/21, Error ellipse: s-maj=13.0km s-min=11.4km az=144.0*

*JMA **15** 01:57:50.1±0.3, 45°.59N×142°.80E, h314km±2km, M4.0*

*SKHL **15** 01:57:51.2±0.4, 45°.60N×142°.90E, h313km±2km, mb4.9/7, msh4.6/1, msha5.3/10*

ISC 15 01:57:50.5±0.6**, 45°.50N**±0°.06×**142°.82E**±0°.06**, h308**km±5km**, n46,** σ**1s.32**/62**, mb3.8**/16**, 10C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	Soyaes	0.57	197	⇑P	Pn	01 58 30.6	+0.3
JSE				*e*S	S	01 59 02.5	+0.5
JWK2	Keihoku	0.68	254	⇑P	Pn	01 58 31.2	+0.6
JWK2				*e*S	S	01 59 02.3	-0.1
JRR	Rishiri	1.13	252	P	Pn	01 58 32.7	+0.3
JRBN	Rebuntou	1.24	267	⇑P	Pn	01 58 32.6	-0.3
JRBN				*e*S	S	01 59 04.6	-2.1
JSS	Shosan	1.30	212	⇑P	Pn	01 58 34.1	+0.7
ASAJ	Asahikawa	1.40	187	P	Pn	01 58 35.0	+1.0
	36nm,0.3s,baz=347,slow=6.2,SNR=166						
ASAJ				S	S	01 59 09.6	+1.0
	baz=73,slow=19,SNR=0.7						
ASAJ	Asahikawa	1.40	187	⇑P	Pn	01 58 34.9	+1.0
YSS	Yuzh-Sakhalins	1.45	358	*e*P	Pn	01 58 34.2	+0.1
YSS				AMB	AMB	01 58 34.6	
	150nm,0.3s						
YSS				*i* S	S	01 59 07.3	-1.5
YSS				A	A	01 59 08.1	
	600nm,2.0s						
YSS				A	A	01 59 08.3	
	800nm,0.6s						
YSS				A	A	01 59 08.3	
	200nm,0.6s						
JYG	Yagishiri	1.46	223	⇑P	Pn	01 58 34.8	+0.5
JMP	Maruseppu	1.54	165	⇑P	Pn	01 58 35.8	+0.9
JKK2	Kamakawa 2	1.63	182	⇑P	Pn	01 58 36.4	+0.9
JTKR	Abashiri--Toko	1.72	153	⇑P	Pn	01 58 37.1	+1.1
JTKR				*e*S	S	01 59 13.2	+1.0
JHR	Hokuryu	1.93	204	⇑P	Pn	01 58 38.3	+0.8
JAR	Ashorobuto	2.31	163	P	Pn	01 58 41.8	+1.2
JAR				*e*S	S	01 59 21.3	+0.7
JEW	Eniwo	2.84	201	P	Pn	01 58 46.8	+1.4
JAK	Akkeshi	2.84	151	*e*S	S	01 59 27.2	-2.1
NMR	Nemuro--Hokkai	2.98	135	*e*P	Pn	01 58 46.7	0.0
NMR				*e*S	S	01 59 29.4	-2.2
NMR				A	A	01 59 30.4	
	120nm,0.3s						
NMR				A	A	01 59 30.4	
	80nm,0.3s						
NEM2	Nemuro 2	2.99	135	P	Pn	01 58 46.5	-0.3
NEM2				*e*S	S	01 59 28.9	-2.8
JNBK	Urakawa-nobuka	3.22	181	P	Pn	01 58 49.2	+0.1
JNBK				*e*S	S	01 59 32.3	-3.7
SHO	Shikotan	3.29	118	*e*P	Pn	01 58 50.4	+0.7
SHO				*e*S	S	01 59 34.7	-2.4
SHO				A	A	01 59 36.6	
	80nm,0.3s						
SHO				A	A	01 59 36.6	
	110nm,0.3s						
UGL	Uglegorsk	3.61	352	*e*P	Pn	01 58 52.4	-0.5
UGL				AMB	AMB	01 58 54.0	
	260nm,0.6s						
JKB	Kayabe	3.84	200	P	Pn	01 58 55.3	-0.2
JKB				*e*S	S	01 59 43.0	-4.6
USRK	Ussuriysk Ar.	7.81	264	P	Pn	01 59 41.9	+0.1
	baz=72,slow=11,SNR=15						
KLR	Kul'dur	8.39	300	P	Pn	01 59 48.5	-0.3
	0.5nm,0.3s,baz=118,slow=10,SNR=14						
MJAR	Matsushiro Arr	9.61	203	P	Pn	02 00 04.5	+0.7
	0.2nm,0.3s,baz=9.5,slow=12,SNR=5.3						
KSRS	Korea Array	13.75	239	P	Pn	02 00 55.6	+1.8
	0.4nm,0.3s,baz=62,slow=10,SNR=7.4						
SEY	Seymchan	18.30	14	P	P	02 01 42.0	-0.5
	1.8nm,0.3s,baz=201,slow=8.7,SNR=21						
SONM	Songino Array	24.96	289	P	P	02 02 46.5	-0.1
	0.9nm,0.4s,baz=81,slow=9.2,SNR=9.1						
SONM				ScP	ScP	02 09 22.0	+0.5
	0.8nm,1.0s,baz=157,slow=4.8,SNR=3.8						
ZALV	Zalesovo Beam	37.47	305	PcP	PcP	02 06 44.9	-1.0
	0.5nm,0.4s,baz=115,slow=2.1,SNR=2.5						
MKAR	Makanchi Array	41.04	294	P	P	02 05 04.5	+0.2
	0.5nm,0.5s,baz=75,slow=11,SNR=2.0						
MKAR				ScP	ScP	02 10 17.8	+0.6
	0.4nm,0.6s,baz=72,slow=4.7,SNR=2.6						
ILAR	Eielson Array	41.93	37	P	P	02 05 10.4	-0.7
	0.7nm,0.6s,baz=274,slow=9.7,SNR=16						
ILAR				PcP	PcP	02 06 59.0	-1.0
	0.6nm,0.7s,baz=275,slow=3.2,SNR=4.6						
YKA	Yellowknife Ar	56.04	33	P	P	02 06 57.6	+0.2
	3.3nm,0.6s,baz=309,slow=7.4,SNR=40						
ARCES	ARCESS Array B	56.50	338	P	P	02 06 60.0	-0.6
	3.3nm,1.0s,baz=40,slow=8.6,SNR=1.4						
FINES	FINESS Array B	61.88	331	P	P	02 07 35.8	-1.4
	2.1nm,0.6s,baz=50,slow=7.6,SNR=19						
FINES				PcP	PcP	02 08 14.3	-0.5
	2.3nm,1.0s,baz=51,slow=6.1,SNR=4.1						
WRA	Warramunga Arr	65.59	189	P	P	02 08 02.5	+0.7
	0.3nm,0.6s,baz=6.3,slow=6.8,SNR=6.7						
KBZ	Khabaz	66.31	309	P	P	02 08 06.9	+0.8
	2.9nm,0.8s,baz=94,slow=3.4,SNR=6.2						
NB2	NORSAR Subarra	66.81	337	P	P	02 08 07.9	-1.2
	comp=Z,0.9nm,0.4s,baz=34,slow=6.9						
NOA	NORSAR Array B	66.81	337	P	P	02 08 07.3	-1.7
	comp=Z,0.3nm,0.4s,baz=38,slow=5.1,SNR=10						
NVAR	Mina Array Bea	69.22	56	P	P	02 08 25.9	+1.3
	comp=Z,1.5nm,0.6s,baz=303,slow=6.1,SNR=8.2						
ASAR	Alice Springs	69.31	189	P	P	02 08 26.7	+1.8
	comp=Z,0.6nm,0.6s,baz=8.0,slow=7.4,SNR=6.5						
PDAR	Pinedale Array	71.08	48	P	P	02 08 36.5	+0.7
	comp=Z,1.8nm,0.7s,baz=303,slow=1.7,SNR=18						
ULM	Lac du Bonnet	71.91	35	P	P	02 08 40.5	+0.3
	comp=Z,3.2nm,0.6s,baz=276,slow=2.6,SNR=3.7						
GERES	GERESS Array B	76.08	328	P	P	02 09 04.2	-0.1
	comp=Z,0.4nm,0.3s,baz=11,slow=7.0,SNR=5.1						
SCHQ	Schefferville	76.92	17	P	P	02 09 08.8	0.0
	comp=Z,1.7nm,0.5s,baz=342,slow=6.3,SNR=5.3						
TXAR	Lajitas Array	84.17	54	P	P	02 09 49.0	+1.4
	comp=Z,0.8nm,0.5s,baz=292,slow=4.2,SNR=24						
BDFB	Brasilia	148.87	21	PKPbc	PKiKP	02 17 02.8	-0.6
	comp=Z,1.5nm,0.4s,baz=162,slow=5.3,SNR=3.5						

IDC 15 02:05:32.0±1.7**, 6°.73S**×**129°.48E, h0km, mb3.9**/2**, mb1 4.2**/5**, mb1mx3.7**/42**, mbtmp4.1**/5**, ML4.3**/3**, Error ellipse: s-maj=53.2km s-min=28.4km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.71	239	Pn	Pn	02 07 12.6	+0.8
	13nm,0.3s,baz=168,slow=5.0,SNR=8.9						
BATI				Sn	Sn	02 08 14.6	-15
	18nm,0.3s,baz=72,slow=21,SNR=9.2						
WRA	Warramunga Arr	13.96	161	Pn	Pn	02 08 49.5	-1.7
	1.3nm,0.3s,baz=341,slow=13,SNR=48						
WRA				Sn	Sn	02 11 14.0	-13
	1.4nm,0.3s,baz=332,slow=24,SNR=8.9						
ASAR	Alice Springs	17.37	166	P	P	02 09 37.0	-0.5
	0.7nm,0.3s,baz=337,slow=9.8,SNR=61						
ASAR				S	Sn	02 12 37.8	-12
	0.4nm,0.3s,baz=84,slow=16,SNR=5.7						
MKAR	Makanchi Array	67.71	327	P	P	02 16 31.5	+0.2
	0.4nm,0.4s,baz=113,slow=8.1,SNR=6.3						
KURBB	Kurchatov Arra	72.01	329	P	P	02 16 57.3	-0.3
	0.5nm,0.3s,baz=134,slow=4.9,SNR=6.2						

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*IDC **15** 02:35:12.6±1.1, 23°.51N×86°.13E, h0km, mb3.7/9, mb1 3.9/10, mb1mx3.6/39, mbtmp3.7/10, ML4.3/1, MS3.0/3, Ms1 3.0/3, ms1mx2.6/41, Error ellipse: s-maj=37.1km s-min=17.9km az=46.0*

*NEIC **15** 02:35:15.5±1.0, 23°.8N±0°.1×86°.6E±0°.1, h15km±5km, mb4.5/14, Error ellipse: s-maj=18.0km s-min=14.3km az=202.0*

*NDI **15** 02:35:15.6±2.8, 24°.18N×86°.56E, h10km, ML4.2, mb4.5(NEIC)*

ISC 15 02:35:17.6±0.6**, 24°.11N**±0°.06×**86°.57E**±0°.04**, h35km, n47,** σ**2s.57**/56**, mb3.8**/15**, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOK	Bokaro	0.70	243	*e*P	Pn	02 35 30.8	-0.2
BOK				*e*S	Sn	02 35 40.4	-0.1
BOK				IAML		02 35 41.4	
	comp=N,15µm,0.1s						
BOK				IAML		02 35 41.5	
	comp=E,10µm,0.1s						
BLSP	Bilaspur	4.53	245	*e*P	Pn	02 36 24.2	+0.5
BLSP				*e*S	Sn	02 37 15.0	-0.2
BRDH	Bariadhala	4.88	106	Pn	Pn	02 36 29.8	+1.4
	comp=E,0.1nm,0.3s,baz=216,slow=24,SNR=7.3						
BRDH				Sn	Sn	02 37 22.0	-1.7
	comp=E,0.2nm,0.3s,baz=153,slow=24,SNR=13						
SHL	Shillong	5.04	72	*e*P	Pn	02 36 29.9	-1.0
SHL				*e*S	Sn	02 37 24.1	-4.0
SHL				IAML		02 37 28.4	
	comp=E,356nm,0.2s						
SHL				IAML		02 37 28.7	
	comp=N,559nm,0.3s						
SHL	Shillong	5.04	72	Pn	Pn	02 36 30.0	-1.0
SHL				Sn	Sn	02 37 24.6	-3.5
JBP	Jabalpur	6.11	262	*e*P	Pn	02 36 45.5	+0.1
JBP				*e*S	Sn	02 37 53.8	-0.2
IMP	Imphal	6.76	82	*e*P	Pn	02 36 55.0	+0.6
LSA	Lhasa	6.91	35	P	Pn	02 37 07.3	+11
LSA	Lhasa	6.91	35	Pn	Pn	02 36 59.4	+2.6
KOHI	KOHIMA	7.03	75	*e*P	Pn	02 36 58.4	+0.2
KOHI				*e*S	Sn	02 38 15.7	-1.4
JHNI	Jhansi	7.42	282	*e*P	Pn	02 37 02.7	-0.7
JHNI				*e*S	Sn	02 38 19.8	-6.6
MOKO	MOKOCHONG	7.53	71	*e*P	Pn	02 37 05.4	+0.4
PTH	Pithoragarh	7.84	315	*e*PN	Pn	02 37 07.9	-1.4
PTH				*e*SN	Sn	02 38 33.0	-4.0
BHPL	Bhopal	8.42	266	*e*P	Pn	02 37 17.5	+0.3
BHPL				*e*S	Sn	02 38 47.4	-3.7
BHPL				IAML		02 38 55.2	
	comp=N,116nm,0.2s						
BHPL				IAML		02 38 58.9	
	comp=E,102nm,0.2s						
HYB	Hyderabad	10.02	230	*i* P	Pn	02 37 38.0	-1.2
HYB				*e*S	Sn	02 39 25.0	-5.5
HYB	Hyderabad	10.02	230	*e*P	Pn	02 37 38.3	-0.9
HYB				*e*S	Sn	02 39 25.5	-5.0
SMLA	Simla	10.87	312	*e*P	Pn	02 37 49.3	-1.4
SMLA				*e*S	Sn	02 39 44.8	-6.3
CHTO	Chiang Mai	12.67	112	Pn	Pn	02 38 13.2	-2.1
CMAR	Chiang Mai Arr	12.83	114	Pn	Pn	02 38 18.1	+0.6
	comp=E,0.6nm,0.3s,baz=293,slow=14,SNR=11						
CMAR				LR	LR	02 44 08.3	
	comp=E,22nm,21.8s,baz=356,slow=41						
CMAR	Chiang Mai Arr	12.83	114		Pn	02 38 17.2	-0.4
KSH	Kashi	17.78	332	P	Pn	02 39 17.6	-4.8
KSH				S	Sn	02 42 28.8	-11
KSH				sS	S	02 42 33.6	-12
KSH				SS	SnSn	02 42 49.8	-3.6
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GAR	Garm	20.25	321	P	P	02 39 50.9	+0.8
GAR				IAmb	IAmb	02 40 02.2	
	comp=Z,21nm,0.9s						
CHGR	Chuyangaron	20.71	319	P	P	02 39 56.3	+1.3
AAK	Ala-Archa	21.01	335	P	P	02 40 01.5	+3.3
	comp=Z,0.8nm,0.4s,baz=216,slow=16,SNR=3.8						
ENH	Enshi	21.27	68	P	P	02 40 02.0	+1.0
ENH				IAmb	IAmb	02 40 09.1	
	comp=Z,16nm,0.7s						
MK31	Makanchi Array	22.89	352	P	P	02 40 21.6	+3.4
MK31				IAmb	IAmb	02 40 31.4	
	comp=Z,4.4nm,1.1s						
MKAR	Makanchi Array	22.89	352	P	P	02 40 21.6	+3.4
	comp=Z,0.6nm,0.6s,baz=173,slow=9.8,SNR=3.7						
MKAR	Makanchi Array	22.89	352	P	P	02 40 21.3	+3.1
SONM	Songino Array	28.44	29	P	P	02 41 16.5	+7.4
	comp=Z,1.2nm,0.7s,baz=219,slow=13,SNR=4.8						
SONM	Songino Array	28.44	29	P	P	02 41 11.3	+2.2
ZALV	Zalesovo Beam	29.83	358	P	P	02 41 28.5	+7.3
	comp=Z,0.4nm,0.4s,baz=168,slow=8.4,SNR=2.0						
ZALV				LR	LR	02 55 33.6	
	comp=Z,46nm,18.9s,baz=280,slow=40						
ABKAR	Akbulak array	32.64	327	P	P	02 41 48.6	+2.6
ABKAR				IAmb	IAmb	02 41 59.0	
	comp=Z,3.0nm,0.6s						
KLR	Kul'dur	43.20	43	P	P	02 43 23.2	+8.1
	comp=Z,0.4nm,0.5s,baz=247,slow=7.7,SNR=4.1						
KLR				LR	LR	03 04 34.2	
	comp=Z,36nm,21.1s,baz=48,slow=40						
BURAR	Bucovina Array	53.45	312	P	P	02 44 35.0	+0.8
FINES	FINESS Array B	55.07	329	P	P	02 44 48.2	+2.5
	comp=Z,1.4nm,0.9s,baz=111,slow=7.7,SNR=1.6						
FINES	FINESS Array B	55.07	329	P	P	02 44 47.6	+1.9
NB2	NORSAR Subarra	62.14	328	P	P	02 45 37.3	+2.3
	comp=Z,1.4nm,0.6s,baz=92,slow=6.9						
NOA	NORSAR Array B	62.14	328	P	P	02 45 37.5	+2.6
	comp=Z,0.4nm,0.6s,baz=90,slow=6.7,SNR=1.5						
WB0	Warramunga Arr	63.82	129	P	P	02 45 45.2	-1.4
WB0				IAmb	IAmb	02 45 54.9	
	comp=Z,3.5nm,1.1s						
WRA	Warramunga Arr	63.90	129	P	P	02 45 46.8	-0.4
	comp=Z,0.4nm,0.7s,baz=322,slow=6.8,SNR=5.2						
WRA	Warramunga Arr	63.90	129	P	P	02 45 46.4	-0.8
WB2	Warramunga Arr	63.91	129	P	P	02 45 46.0	-1.3
ASAR	Alice Springs	66.07	132	P	P	02 46 01.1	-0.2
	comp=Z,0.5nm,0.5s,baz=311,slow=6.2,SNR=5.8						
KEST	Kesra	66.38	300	P	P	02 46 03.6	+0.3
	comp=Z,1.6nm,0.6s,baz=71,slow=1.4,SNR=6.0						
KEST	Kesra	66.38	300	P	P	02 46 04.1	+0.8
KEST				IAmb	IAmb	02 46 15.7	
	comp=Z,4.1nm,0.8s						
ILAR	Eielson Array	82.31	20	P	P	02 47 40.5	+5.2
	comp=Z,0.5nm,0.7s,baz=286,slow=5.1,SNR=6.0						
ILAR	Eielson Array	82.31	20	P	P	02 47 37.5	+2.2

RSNC 15 02:40:39.3±0.9**, 2°.95N**×**78°.33W, h0**km±3km**, ML2.8, Mw3.6, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUMC	Tumaco	1.19	199	*e*P	Pg	02 41 00.7	-1.4
TUMC				*e*S	Sg	02 41 17.7	+0.1
TUMC				*i*		02 41 30.3	
	comp=Z,221nm,0.5s						
BBAC	Balboa, Cauca	1.43	130	*e*P	Pn	02 41 03.7	-3.0
BBAC				*e*S	Sg	02 41 24.1	-1.1
POPC	Popayan, Colom	1.71	104	*e*P	Pn	02 41 07.3	-3.3
POPC				*e*S	Sn	02 41 32.4	-0.8
POPC				*i*		02 41 34.9	
	comp=Z,45nm,0.4s						
SOTA	Rioblanco	1.91	115	*e*P	Pn	02 41 12.4	-1.1
SOTA				*e*S	Sn	02 41 38.2	-0.3
SOTA				*i*		02 41 42.1	
	comp=Z,205nm,0.5s						
CCUFI	Cufio, Nario	1.98	150	*e*P	Pn	02 41 13.3	-1.2
CCUFI				*e*S	Sn	02 41 40.2	-0.1
GCUF	Volcan Galeras	1.98	150	*e*P	Pn	02 41 13.3	-1.3
GCUF				*e*S	Sn	02 41 40.0	-0.4
GCUF				*i*		02 41 45.6	
	comp=Z,72nm,0.3s						
CPAS1	Pasto	2.02	150	*e*P	Pn	02 41 13.8	-1.2
CPAS1				*e*S	Sn	02 41 41.1	-0.2
PCON	Cinco Dias	2.03	108	*e*P	Pn	02 41 13.7	-1.6
PCON				*e*S	Sn	02 41 41.7	0.0
PCON				*i*		02 41 51.4	
	comp=Z,113nm,0.7s						
YOTC	Yotoco, Valle	2.23	63	*e*P	Pn	02 41 13.8	-3.9
YOTC				*e*S	Sn	02 41 43.9	-2.2
YOTC				*i*		02 42 09.3	
	comp=Z,25nm,0.5s						
TULM	Tulcn-Chalpat	2.29	166	*e*P	Pn	02 41 18.2	-0.6
MARP	Paez Belalcaza	2.38	93	*e*P	Pn	02 41 18.8	-1.1
MARP				*e*S	Sn	02 41 49.4	-0.5
MARP				*i*		02 41 53.6	
	comp=Z,17nm,0.3s						
OTAV	Otavalo	2.70	182	*e*P	Pn	02 41 22.9	-1.6
OTAV				*e*S	Sn	02 41 57.6	-0.5
OTAV				*i*		02 42 02.0	
	comp=Z,11nm,0.5s						
PAC1	Pacto, Paraso	2.71	190	*e*P	Pn	02 41 22.8	-1.4
PAC1				*e*S	Sn	02 41 56.8	-1.0
PAC1				*i*		02 42 06.5	
	comp=Z,60nm,0.5s						
PLMC	San Jos del P	2.82	46	*e*P	Pn	02 41 23.4	-2.3
PLMC				*e*S	Sn	02 41 59.5	-1.0
PLMC				*i*		02 42 16.2	
	comp=Z,39nm,0.7s						
BETC	Betania	2.90	95	*e*P	Pn	02 41 27.9	+1.0
BETC				*e*S	Sn	02 42 02.6	+0.1
BETC				*i*		02 42 10.0	
	comp=Z,40nm,0.5s						
GARC	Garzon, Huila	2.94	105	*e*P	Pn	02 41 28.1	+0.6
GARC				*e*S	Sn	02 42 01.6	-2.1
ORTC	Ortega, Tolima	3.23	73	*e*P	Pn	02 41 30.4	-0.9
ORTC				*e*S	Sn	02 42 09.8	-0.7
ORTC				*i*		02 42 22.3	
	comp=Z,46nm,0.6s						
ANIL	Santa Ana	3.30	62	*e*P	Pn	02 41 30.4	-2.1
ANIL				*e*S	Sn	02 42 11.6	-1.1
ANIL				*i*		02 42 18.8	
	comp=Z,59nm,0.4s						
PRAC	Prado	3.52	78	*e*P	Pn	02 41 34.3	-1.1
PRAC				*e*S	Sn	02 42 17.8	-0.1
PRAC				*i*		02 42 26.8	
	comp=Z,26nm,0.5s						
CBOC	Ciudad Bolivar	3.70	39	*e*P	Pn	02 41 35.0	-3.0
CBOC				*e*S	Sn	02 42 22.5	0.0
CBOC				*i*		02 42 43.8	
	comp=Z,12nm,0.8s						
GUY2C	Guyana, Caldas	3.72	53	*e*P	Pn	02 41 36.1	-2.4
GUY2C				*e*S	Sn	02 42 23.4	0.0
GUY2C				*i*		02 42 31.0	
	comp=Z,16nm,0.6s						
MACC	Macarena, Meta	4.55	100	*e*P	Pn	02 41 48.8	-0.8
MACC				*e*S	Sn	02 42 42.9	-0.4
MACC				*i*		02 43 06.0	
	comp=Z,17nm,0.6s						

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*REN **15** 02:46:51.7±1.2, 41°.86N±0°.03×119°.64W±0°.03, h10km±5km, ML2.8/5, ML2.5/24(NEIC), Error ellipse: s-maj=5.1km s-min=2.4km az=147.0*

*ANF **15** 02:46:51.8±0.8, 41°.86N×119°.62W, h10km, ML2.8/3, Error ellipse: s-maj=7.6km s-min=4.8km az=79.0*

*NEIC **15** 02:46:52.3±1.1, 41°.92N±0°.05×119°.65W±0°.03, h15km±3km, Error ellipse: s-maj=6.8km s-min=3.1km az=170.0*

ISC 15 02:46:51.8±1.3**, 41°.85N**±0°.04×**119°.64W**±0°.04, **h12**km±13km**, n21,** σ**0s.83**/27**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.50	276		Pg	02 47 02.1	+0.4
MOD					Sg	02 47 09.1	+0.8
MOD	Modoc Plateau	0.50	276	IAML		02 47 09.4	

	comp=N,485nm,0.4s						
MOD				IAML		02 47 09.6	
	comp=E,1µm,0.3s						
WVOR	**Wild Horse Val**	**0.94**	**52**		**Pg**	**02 47 09.9**	**-0.2**
WVOR					**Sb**	**02 47 22.8**	**+0.1**
WVOR	**Wild Horse Val**	**0.94**	**52**	IAML		02 47 26.3	
	comp=E,115nm,0.8s						
K05A	**Summer Lake**	**1.28**	**314**		**Pb**	**02 47 16.0**	**+0.1**
K05A				IAML		02 47 36.7	
	comp=N,70nm,0.8s						
M04C	**Macdoel**	**1.65**	**268**	P	**Pn**	**02 47 21.1**	**+0.4**
	baz=87,SNR=36						
M04C				Sb	**Sg**	**02 47 45.2**	**+0.3**
	baz=87						
J08A	**Circle Bar Ran**	**1.73**	**29**		**Pn**	**02 47 21.8**	**-0.1**
J08A				IAML		02 47 48.0	
	comp=E,53nm,0.5s						
J08A				IAML		02 47 50.2	
	comp=N,64nm,0.5s						
K04D	**Chiloquin, OR**	**1.75**	**297**	Pb	**Pb**	**02 47 23.7**	**-0.2**
	baz=115,SNR=11						
K04D				Sb	**Sg**	**02 47 48.3**	**+0.1**
	baz=115						
J05D	**Fort Rock, OR**	**1.86**	**321**	Pb	**Pb**	**02 47 25.8**	**0.0**
	baz=140,SNR=21						
J05D				Sb	**Sg**	**02 47 51.4**	**-0.1**
	baz=140						
L04D	**Klamath Falls**	**2.02**	**281**	P	**Pn**	**02 47 25.9**	**+0.1**
	baz=100,SNR=27						
L04D				Sb	**Sg**	**02 47 56.0**	**-0.8**
	baz=100						
PINE	**Pine Mountain**	**2.16**	**334**		**Pn**	**02 47 27.1**	**-0.7**
PINE				IAML		02 48 11.2	
	comp=E,34nm,4.3s						
PINE				IAML		02 48 18.7	
	comp=N,38nm,4.7s						
O03E	**Paynes Creek**	**2.26**	**227**	P	**Pn**	**02 47 29.7**	**+0.7**
	baz=46						
O03E				Sb	**Sg**	**02 48 03.0**	**-1.4**
	baz=46						
YBH	**Yreka Blue Hor**	**2.30**	**268**		**Pn**	**02 47 29.7**	**0.0**
BMN	**Battle Mountai**	**2.31**	**127**	Pn	**Pn**	**02 47 30.5**	**+0.7**
N02D	**Trinity Center**	**2.47**	**250**	Pb	**Pb**	**02 47 35.7**	**-0.4**
	baz=68						
N02D				Sb	**Sg**	**02 48 09.9**	**-1.3**
	baz=68						
HUMO	**Hull Mountain**	**2.58**	**288**		**Pn**	**02 47 31.7**	**-1.6**
HUMO				IAML		02 48 13.8	
	comp=N,28nm,5.0s						
HUMO				IAML		02 48 17.6	
	comp=E,21nm,3.0s						
K02D	**Willamette Mer**	**3.11**	**287**	P	**Pn**	**02 47 42.5**	**+1.9**
	baz=104,SNR=16						
MFID	**Camas Ranch**	**3.22**	**60**	Pn	**Pn**	**02 47 41.9**	**-0.3**
MFID				IAML		02 48 45.3	
	comp=E,16nm,1.1s						
BMO	**Blue Mountains**	**3.45**	**29**	Pn	**Pn**	**02 47 46.5**	**+1.1**
BMO				IAML		02 48 16.5	
	comp=E,7.2nm,4.6s						
HLID	**Hailey**	**4.21**	**64**	Pn	**Pn**	**02 47 55.3**	**-0.7**
HLID				IAML		02 49 10.3	
	comp=E,7.4nm,3.6s						
HLID				IAML		02 50 01.9	
	comp=E,6.8nm,4.9s						
HVU	**Hansel Valley**	**5.13**	**89**	Pn	**Pn**	**02 48 09.4**	**+0.8**

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*IDC **15** 03:06:47.0±3.4, 16.°67S×173.°60W, h50^{km}±32^{km}, mb3.6/8, mb1 3.9/9, mb1mx3.7/23, mbtmp3.9/9, ML4.5/1, Error ellipse: s-maj=45.5km s-min=16.6km az=137.0*

ISC 15 03:06:48.4±0.9, **16.°5S**±0.°2×**173.°6W**±0.°3, **h66**^{km}, **n9,**
σ**1^{s}65**/10, **mb3.8**/8, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.12**	**34**	P	**Pn**	**03 07 35.7**	**+0.4**
	55nm,0.3s,baz=208,slow=3.5,SNR=46						
AFI				S	**Sn**	**03 08 08.6**	**-2.9**
	125nm,0.3s,baz=95,slow=22,SNR=12						
URZ	**Urewera**	**23.16**	**199**	P	**P**	**03 11 47.5**	**-1.8**
	8.1nm,0.3s,baz=304,slow=23,SNR=12						
STKA	**Stephens Creek**	**43.34**	**241**	P	**P**	**03 14 44.2**	**0.0**
	2.0nm,0.8s,baz=54,slow=4.1,SNR=4.2						
WRA	**Warramunga Arr**	**49.43**	**258**	P	**P**	**03 15 31.4**	**-0.7**
	0.1nm,0.3s,baz=96,slow=6.9,SNR=7.8						
ASAR	**Alice Springs**	**49.60**	**253**	P	**P**	**03 15 33.2**	**-0.3**
	4.3nm,0.5s,baz=88,slow=8.6,SNR=67						
NVAR	**Mina Array Bea**	**75.27**	**42**	P	**P**	**03 18 26.8**	**+2.1**
	0.7nm,0.8s,baz=230,slow=8.2,SNR=3.9						
TXAR	**Lajitas Array**	**81.38**	**56**	P	**P**	**03 18 58.4**	**-0.1**
	0.1nm,0.7s,baz=230,slow=7.0,SNR=1.9						
PDAR	**Pinedale Array**	**83.21**	**42**	P	**P**	**03 19 09.2**	**+1.2**
	1.1nm,0.9s,baz=200,slow=3.5,SNR=7.3						
ILAR	**Eielson Array**	**83.57**	**11**	P	**P**	**03 19 09.9**	**+0.9**
	0.3nm,0.7s,baz=240,slow=5.0,SNR=4.7						

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*NNC **15** 03:47:36.8±1.6, 45.°69N×83.°32E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=11.1km s-min=6.5km az=97.0*

*SOME **15** 03:47:38.2, 45.°65N×83.°17E, h5^{km}*

ISC 15 03:47:36.6±1.3, **45.°64N**±0.°05×**83.°29E**±0.°06, **h10**^{km}, **n12,**
σ**1^{s}33**/20, **3C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**1.34**	**329**	⇑P	**Pb**	**03 48 01.7**	**-0.2**
	0.8nm,0.3s,baz=143,slow=17,SNR=74						
MK31				⇑S	**Sn**	**03 48 19.0**	**-0.5**
	3.2nm,0.3s,baz=145,slow=29,SNR=15						
MAKZ	**Makanchi**	**1.48**	**322**	⇑P	**Pb**	**03 48 04.1**	**-0.1**
	3.8nm,0.6s						
MAKZ				⇓S	**Sg**	**03 48 24.3**	**0.0**
	2.6nm,0.4s						
ZSN	**Zaisan**	**2.11**	**30**	*e*P	**Pg**	**03 48 16.6**	**-0.5**
	5.2nm,0.3s						
ZSN				*e*S	**Sg**	**03 48 44.5**	**+0.1**
	12nm,0.5s						
KAPS	**Kapalarasan**	**2.79**	**264**	*e*P	**Pb**	**03 48 28.0**	**+1.4**
	0.9nm,0.3s						
KAPS				*e*S	**Sb**	**03 49 03.8**	**+2.9**
	4.2nm,0.4s						
KAPS	**Kapalarasan**	**2.79**	**264**	Pg	**Pb**	**03 48 28.0**	**+1.4**
	0.9nm,0.1s						
KAPS				Lg	Lg	03 49 03.9	
	4.0nm,0.3s						
PDGK	**Podgornoye**	**3.57**	**231**	Pg	**Pb**	**03 48 41.9**	**+1.9**
	0.6nm,0.4s						
PDGK				Lg	Lg	03 49 27.7	
	1.5nm,0.3s						
SHLS	**Shalkode**	**3.70**	**229**	*e*P	**Pb**	**03 48 42.1**	**-0.1**
	1.5nm,0.3s						
SHLS				*e*S	**Sb**	**03 49 28.1**	**+0.9**
	231nm,0.7s						
SHLS	**Shalkode**	**3.70**	**229**	Pg	**Pb**	**03 48 42.1**	**-0.1**
	1.1nm,0.2s						
SHLS				Lg	Lg	03 49 28.1	
	4.6nm,0.3s						
UZB	**Uzynbulak**	**3.95**	**232**	*e*P	**Pg**	**03 48 51.5**	**-0.8**
	1.9nm,0.2s						
UZB				*e*S	**Sg**	**03 49 44.0**	**+0.6**
	2.2nm,0.4s						
ARXS	**Arharly**	**4.14**	**252**	*e*P	**Pg**	**03 48 54.4**	**-1.4**
	1.0nm,0.4s						
ARXS				*e*S	**Sg**	**03 49 48.9**	**-0.5**
	2.6nm,1.0s						
ARXS	**Arharly**	**4.14**	**252**	Pg	**Pg**	**03 48 54.1**	**-1.7**
	1.3nm,0.5s						
ARXS				Lg	Lg	03 49 48.7	
	2.4nm,0.3s						
SATY	**Saty**	**4.35**	**235**	*e*P	**Pg**	**03 48 58.0**	**-2.0**
	1.1nm,0.2s						
SATY				*e*S	**Sg**	**03 49 54.8**	**-1.6**
	4.7nm,0.3s						

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*VAO **15** 03:48:56.5±0.6, 19.°74S×69.°81W, h154^{km}±5^{km}, mb3.9*

*GUC **15** 03:48:57.9±0.7, 19.°74S×69.°33W, h100^{km}±2^{km}, ML3.8*

*IDC **15** 03:48:58.7±1.6, 19.°80S×69.°08W, h114^{km}±15^{km}, mb3.5/5, mb1 3.6/8, mb1mx3.4/24, mbtmp3.8/8, Error ellipse: s-maj=25.1km s-min=14.5km az=102.0*

ISC 15 03:48:56.5±0.6, **19.°76S**±0.°03×**69.°35W**±0.°06, **h105**^{km}±6^{km},
n67, σ**1^{s}28**/79, **mb3.8**/4, **7C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	**IPOC Station P**	**0.29**	**270**	⇑*i*P	**Pn**	**03 49 12.1**	**+0.3**
PB11				*i* S	**Sn**	**03 49 23.4**	**+0.1**
PB11				IAML		03 49 24.7	
	comp=E,8µm,0.3s						
PB08	**IPOC Station P**	**0.42**	**154**	⇓*i*P	**Pn**	**03 49 13.4**	**+0.6**
PB08				*i* S	**Sn**	**03 49 25.4**	**+0.4**
PB08				IAML		03 49 26.0	
	comp=N,3µm,0.3s						
HMBC	**Humberstone**	**0.72**	**224**	⇑*i*P	**Pn**	**03 49 15.4**	**+0.7**
HMBC				*i* S	**Sn**	**03 49 29.0**	**+0.5**
HMBC				IAML		03 49 30.9	
	comp=N,8µm,0.4s						
TA02	**Huaiquique**	**0.89**	**235**	⇑*i*P	**Pn**	**03 49 17.0**	**+0.8**
TA02				*i* S	**Sn**	**03 49 31.7**	**+0.6**
TA02				IAML		03 49 32.3	
	comp=N,8µm,0.4s						
TA01	**Diego Aracena**	**1.12**	**224**	⇑*i*P	**Pn**	**03 49 19.1**	**+0.5**
TA01				*i* S	**Sn**	**03 49 35.6**	**+0.4**
TA01				IAML		03 49 36.5	
	comp=E,2µm,0.2s						
PB01	**IPOC Station P**	**1.28**	**186**	⇑*i*P	**Pn**	**03 49 21.5**	**+0.9**
PB01				*i* S	**Sn**	**03 49 39.8**	**+1.1**
PB01				IAML		03 49 40.8	
	comp=E,3µm,0.3s						
PATCX	**Punta Patache**	**1.30**	**215**	⇑*i*P	**Pn**	**03 49 21.2**	**+0.5**
PATCX				*i* S	**Sn**	**03 49 39.2**	**+0.1**
PATCX				IAML		03 49 46.2	
	comp=E,2µm,0.4s						
PB16	**IPOC Station P**	**1.43**	**354**	⇓*i*P	**Pn**	**03 49 24.3**	**+1.5**
PB16				*i* S	**Sn**	**03 49 44.2**	**+1.7**
PB16				IAML		03 49 46.5	
	comp=N,646nm,0.4s						
PB12	**IPOC Station P**	**1.47**	**321**	*e*P	**Pn**	**03 49 23.4**	**+0.7**
PB12				*i* S	**Sn**	**03 49 42.7**	**0.0**
PB12				IAML		03 49 49.0	
	comp=N,1µm,0.8s						
PB02	**IPOC Station P**	**1.63**	**198**	⇑*i*P	**Pn**	**03 49 25.5**	**+0.7**
PB02				*i* S	**Sn**	**03 49 46.5**	**+0.3**
PB02				IAML		03 49 55.7	
	comp=E,2µm,0.1s						
AP01	**Chacalluta**	**1.67**	**326**	*e*P	**Pn**	**03 49 26.0**	**+0.9**
AP01				*i* S	**Sn**	**03 49 47.3**	**+0.4**
AP01				IAML		03 49 56.0	
	comp=N,2µm,0.8s						
PB07	**IPOC Station P**	**2.02**	**194**	*e*P	**Pn**	**03 49 30.4**	**+0.6**
PB07				IAML		03 50 01.7	
	comp=E,914nm,0.5s						
PB09	**IPOC Station P**	**2.03**	**177**	*e*P	**Pn**	**03 49 31.4**	**+1.6**
PB09				*i* S	**Sn**	**03 49 57.1**	**+1.8**
PB09				IAML		03 50 05.2	
	comp=N,467nm,0.4s						
PB03	**IPOC Station P**	**2.31**	**189**	*e*P	**Pn**	**03 49 34.3**	**+0.8**
PB03				IAML		03 50 06.9	
	comp=E,334nm,0.1s						
PB04	**IPOC Station P**	**2.67**	**196**	*e*P	**Pn**	**03 49 39.1**	**+0.9**
PB04				IAML		03 50 31.1	
	comp=N,524nm,0.4s						
LVC	**Limon Verde**	**2.87**	**172**	P	**Pn**	**03 49 42.7**	**+1.7**
	comp=N,24nm,0.3s,baz=350,slow=9.2,SNR=146						
LVC				S	**Sn**	**03 50 16.7**	**+1.6**
	comp=N,35nm,0.3s,baz=216,slow=20,SNR=14						
LVC	**Limon Verde**	**2.87**	**172**	*e*P	**Pn**	**03 49 42.9**	**+1.9**
PB06	**IPOC Station P**	**2.94**	**184**	*e*P	**Pn**	**03 49 42.7**	**+0.9**
PB06				IAML		03 50 45.8	
	comp=N,265nm,0.5s						
PB05	**IPOC Station P**	**3.18**	**194**	*e*P	**Pn**	**03 49 45.2**	**+0.3**
PB15	**IPOC Station P**	**3.43**	**182**	*e*P	**Pn**	**03 49 49.8**	**+1.4**
LPAZ	**La Paz**	**3.64**	**19**	P	**Pn**	**03 49 54.5**	**+2.9**
	comp=N,1.5nm,0.3s,baz=213,slow=5.4,SNR=36						
LPAZ	**La Paz**	**3.64**	**19**	*e*P	**Pn**	**03 49 54.6**	**+3.0**
PB10	**IPOC Station P**	**3.90**	**196**	*e*P	**Pn**	**03 49 54.6**	**+0.2**
SIV	**San Ignacio**	**8.73**	**66**	P	**Pn**	**03 50 57.7**	**-2.3**
	comp=N,1.1nm,0.3s,baz=250,slow=11,SNR=26						
ETMB	**Extrema**	**10.34**	**17**	*e*P	**Pn**	**03 51 22.8**	**+0.9**
PTLB	**Pontes e Lacer**	**10.64**	**68**	*e*P	Pn	03 51 30.5	+4.6
VILB	**Vilhena**	**11.08**	**54**	*e*P	**Pn**	**03 51 35.5**	**+3.5**
AQDB	**Aquidauana**	**12.84**	**96**	*e*P	**P**	**03 51 59.6**	**-2.4**
SALV	**Santo Antonio**	**13.56**	**76**	*e*P	**P**	**03 52 08.4**	**-1.5**
PP1B	**Ponte de Pedra**	**13.88**	**83**	*e*P	**P**	**03 52 12.5**	**-1.1**
PDRB	**Porto dos Gac**	**14.60**	**58**	*e*P	**P**	**03 52 20.7**	**-0.9**
ITQB	**Itaqui**	**15.19**	**133**	*e*P	**P**	**03 52 27.6**	**-0.4**
TBTG	**Tabatinga, AM**	**15.49**	**358**	*e*P	**Pn**	**03 52 26.8**	**-2.5**
CLDB	**Colider**	**15.77**	**58**	*e*P	**P**	**03 52 35.0**	**+0.4**
PTGB	**Pitanga**	**16.74**	**110**	*e*P	**P**	**03 52 47.1**	**+1.7**
PCMB	**Pacaembu**	**17.03**	**99**	*e*P	**P**	**03 52 50.0**	**+1.5**
ARAG	**Araguaiana, MT**	**17.18**	**79**	*e*P	**Pn**	**03 52 51.8**	**+1.6**
NPGB	**Novo Progresso**	**18.55**	**49**	*e*P	**P**	**03 53 04.4**	**-0.9**
FRTB	**Fartura**	**18.75**	**104**	*e*P	**Pn**	**03 53 07.8**	**-1.2**
SNDB	**Serra Nova Dou**	**19.00**	**69**	*e*P	**P**	**03 53 09.2**	**-1.0**
CNLB	**Canela**	**19.31**	**123**	*e*P	**P**	**03 53 14.3**	**+0.8**
TRQA	**Tornquist**	**19.32**	**162**	*e*P	**P**	**03 53 11.7**	**-1.8**
BB19B	**Bebedouro**	**19.56**	**97**	*e*P	**P**	**03 53 15.5**	**-0.8**
IPMB	**Ipameri, GO**	**20.08**	**88**	*e*P	**P**	**03 53 21.7**	**-0.3**
ITTB	**Itaituba**	**20.25**	**43**	*e*P	**P**	**03 53 22.0**	**-1.7**
TER01	**Tubaro-SC**	**20.39**	**119**	*e*P	**P**	**03 53 25.8**	**+0.6**
BDFB	**Brasilia**	**20.73**	**82**	P	**P**	**03 53 28.5**	**-0.5**
	comp=N,2.3nm,0.4s,baz=266,slow=6.8,SNR=7.1						
PEXB	**Peixe**	**21.61**	**73**	*e*P	**P**	**03 53 38.7**	**+0.4**
PARB	**Paraibuna**	**22.35**	**103**	*e*P	**P**	**03 53 46.5**	**+0.5**
MALB	**Monte Alegre**	**23.12**	**41**	*e*P	**P**	**03 53 51.8**	**-1.9**
MAN01	**Angra dos Reis**	**23.84**	**102**	*e*P	**P**	**03 53 59.8**	**-0.5**
MC01	**Montes Claros**	**24.32**	**87**	*e*P	**P**	**03 54 03.2**	**-1.5**
JANB	**Januaria**	**24.33**	**83**	*e*P	**P**	**03 54 04.5**	**-0.3**
SDBA	**SAO DESIDERIO**	**24.58**	**76**	*e*P	**P**	**03 54 06.5**	**-0.6**
MCPB	**Macapa, AP**	**25.66**	**43**	*e*P	**P**	**03 54 15.2**	**-1.6**
CAM01	**Campos-RJ**	**25.96**	**99**	*e*P	**P**	**03 54 18.8**	**-0.6**
SJMB	**Sao Joao De Ma**	**26.60**	**92**	*e*P	**P**	**03 54 24.9**	**-0.4**
BSFB	**Barra de Sao F**	**26.91**	**93**	*e*P	**P**	**03 54 27.4**	**-0.6**
GUA01	**Guaratinga, BA**	**28.23**	**88**	*e*P	**P**	**03 54 39.6**	**-0.3**
NBLA	**Lagarto - SE**	**31.61**	**79**	*e*P	**P**	**03 55 08.8**	**-0.9**
NBMA	**Muriti-CE**	**32.11**	**72**	*e*P	**P**	**03 55 13.3**	**-0.9**
TXAR	**Lajitas Array**	**58.97**	**325**	P	**P**	**03 58 46.8**	**+1.4**
	comp=N,0.1nm,0.4s,baz=152,slow=8.5,SNR=2.2						
DBIC	**Dimbokro**	**68.65**	**74**	P	**P**	**03 59 49.5**	**+0.4**
	comp=N,0.8nm,0.5s,baz=210,slow=8.5,SNR=1.5						
TORD	**Torodi Ar. Bea**	**77.17**	**71**	P	**P**	**04 00 38.6**	**-0.8**
	comp=N,0.4nm,0.3s,baz=250,slow=5.2,SNR=14						
YKA	**Yellowknife Ar**	**89.42**	**341**	P	**P**	**04 01 42.6**	**+1.5**
	comp=N,1.4nm,0.6s,baz=137,slow=4.4,SNR=12						
WRA	**Warramunga Arr**	**134.22**	**212**	PKP	**PKiKP**	**04 08 04.3**	**+0.1**
	comp=N,0.1nm,0.5s,baz=155,slow=1.6,SNR=1.3						
SONM	**Songino Array**	**151.78**	**6**	PKPbc	**PKiKP**	**04 08 40.8**	**+1.3**
	comp=N,0.5nm,0.5s,baz=276,slow=0.9,SNR=4.5						

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*IDC **15** 03:52:46.4±2.2, 25.°22N×122.°95E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.2/39, mbtmp3.5/4, MS3.1/7, Ms1 3.1/7, ms1mx2.8/35, Error ellipse: s-maj=174.5km s-min=23.6km az=65.0*

*TAP **15** 03:52:48.1, 24.°95N×122.°47E, h19^{km}, ML3.7, C*

*JMA **15** 03:52:48.9±0.1, 24.°81N×122.°43E, h7^{km}, M2.9*

ISC 15 03:52:48.0±1.1, **24.°94N**±0.°03×**122.°47E**±0.°02, **h8**^{km}±8^{km},
n103, σ**0^{s}65**/122, **mb3.4**/4, **MS3.2**/5, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.44**	**280**	*e*P	**Pg**	**03 52 57.1**	**+0.5**
	baz=277						
TWB1				S	**Sb**	**03 53 04.0**	**-0.8**
	baz=277						
EGS		**0.50**	**260**	*e*P	**Pg**	**03 52 58.4**	**+0.8**
	baz=252						
TIPB	**Shuangxi**	**0.58**	**274**	*e*P	**Pb**	**03 53 00.1**	**-0.4**
	baz=272						
TIPB				*e*S	**Sb**	**03 53 09.1**	**+0.1**
	baz=272						
NTC	**Toucheng**	**0.59**	**262**	P	**Pg**	**03 53 00.1**	**+0.7**
	baz=261						
NWF	**Wu-fen Shan**	**0.64**	**282**	P	**Pb**	**03 53 01.3**	**-0.2**
	baz=281						
WFSB	**Wu-fen Shan**	**0.64**	**282**	P	**Pb**	**03 53 01.2**	**-0.2**
	baz=281						
JYNG	**Yonagunijimaku**	**0.65**	**138**	P	**Pg**	**03 53 00.2**	**-0.3**
JYNG				*e*S	**Sg**	**03 53 08.1**	**-0.9**
TWC	**Suao**	**0.65**	**240**	P	**Pg**	**03 53 00.6**	**0.0**
	baz=239						
TNOU	**National Taiwa**	**0.67**	**289**	P	**Pb**	**03 53 01.6**	**-0.2**
	baz=288						
ILA	**Ilan**	**0.68**	**256**	*e*P	**Pg**	**03 53 01.7**	**+0.6**
	baz=254						
ILA				S	**Sb**	**03 53 11.8**	**+0.2**
	baz=254						
YOJ	**Yonaguni jima**	**0.68**	**134**	P	**Pg**	**03 53 01.1**	**-0.1**
	baz=134						
YOJ	**Yonaguni jima**	**0.68**	**134**	P	**Pg**	**03 53 01.3**	**+0.1**
YOJ				*e*S	**Sg**	**03 53 09.2**	**-0.9**
NDS	**Dongshan**	**0.75**	**246**	*e*P	**Pg**	**03 53 02.4**	**0.0**
	baz=245						
NDS				*e*S	**Sg**	**03 53 12.3**	**+0.1**
	baz=245						
TWE	**Neicheng**	**0.76**	**254**	P	**Pg**	**03 53 02.9**	**+0.3**
	baz=252						
TWE				S	**Sg**	**03 53 13.3**	**+0.8**
	baz=252						
PCYT	**Pengchaiyu**	**0.78**	**333**	*e*P	**Pb**	**03 53 03.5**	**-0.4**
	baz=316						
NWRT	**Kuosheng**	**0.78**	**290**	*e*P	**Pb**	**03 53 03.5**	**-0.3**
	baz=289						
EWUT	**Wuta**	**0.80**	**232**	*e*P	**Pg**	**03 53 03.5**	**+0.1**
	baz=231						
EWUT				*e*S	**Sg**	**03 53 14.1**	**+0.4**
	baz=231						
TWA	**Mucha**	**0.81**	**273**	P	**Pg**	**03 53 04.0**	**+0.5**
	baz=272						
ENA	**Nanau**	**0.83**	**233**	P	**Pg**	**03 53 03.9**	**-0.1**
	baz=231						
ENA				S	**Sg**	**03 53 14.4**	**-0.5**
	baz=231						
YM08	**YM08**	**0.84**	**288**	P	**Pg**	**03 53 04.4**	**+0.3**
	baz=287						
YM01	**YM01**	**0.84**	**285**	*e*P	**Pb**	**03 53 04.7**	**-0.2**
	baz=284						
NHDH	**Xindian Distri**	**0.86**	**272**	*e*P	**Pb**	**03 53 05.1**	**0.0**
	baz=271						
NHDH				*e*S	**Sb**	**03 53 17.0**	**+0.2**
	baz=271						
TWY	**Chenhua**	**0.86**	**293**	P	**Pg**	**03 53 04.8**	**+0.3**
	baz=292						
ENTT	**Nioudou**	**0.87**	**250**	P	**Pg**	**03 53 05.0**	**+0.2**
	baz=231						
ENTT				*e*S	**Sg**	**03 53 16.8**	**+0.6**
	baz=231						
TAP	**Taipei**	**0.88**	**277**	P	**Pg**	**03 53 05.2**	**+0.2**
	baz=276						
TATO	**Taipei**	**0.89**	**273**	P	**Pg**	**03 53 05.2**	**0.0**
	baz=271						
NWLT	**Wulai**	**0.89**	**260**	*e*P	**Pg**	**03 53 05.1**	**-0.1**
	baz=259						
ANP	**Anpu**	**0.90**	**286**	P	**Pg**	**03 53 05.5**	**+0.2**
	baz=285						
NDT	**Datong Townshi**	**0.93**	**249**	*e*P	**Pg**	**03 53 06.1**	**+0.1**
	baz=235						
NDT				*e*S	**Sb**	**03 53 19.0**	**+0.1**
	baz=235						
NTST	**Danshui**	**0.95**	**284**	*e*P	**Pn**	**03 53 07.5**	**-0.2**
	baz=283						
TWS1	**Kuangyinshan**	**0.97**	**280**	P	**Pg**	**03 53 06.8**	**+0.2**
	baz=279						
YHNB	**Yeheng**	**1.03**	**255**	*e*P	**Pg**	**03 53 07.6**	**-0.2**
	baz=267						
NSK	**Sanguang**	**1.04**	**256**	*e*P	**Pg**	**03 53 07.9**	**-0.2**
	baz=268						
NSK				*e*S	**Sg**	**03 53 21.4**	**-0.2**
	baz=268						
ETL	**Fush Village**	**1.09**	**225**	*e*P	**Pg**	**03 53 08.9**	**-0.1**
	baz=233						
ETL				*e*S	**Sg**	**03 53 23.1**	**-0.1**
	baz=233						
NACB	**Ninganchiao**	**1.10**	**227**	*e*P	**Pg**	**03 53 07.9**	**-1.3**
	baz=235						
NACB				*e*S	**Sg**	**03 53 23.0**	**-0.5**
	baz=235						
NNSB	**Datong**	**1.11**	**243**	*e*P	**Pg**	**03 53 08.8**	**-0.6**
	baz=241						
NNSB				*e*S	**Sg**	**03 53 24.0**	**+0.2**
	baz=241						
NNS	**Nan Shan**	**1.11**	**244**	*e*P	**Pg**	**03 53 08.8**	**-0.6**
	baz=242						
NNS				*e*S	**Sg**	**03 53 24.0**	**+0.1**
	baz=242						
ETLH	**Xiulin Townshi**	**1.16**	**231**	*e*P	**Pg**	**03 53 09.4**	**-0.8**
	baz=230						
ETLH				*e*S	**Sg**	**03 53 25.3**	**0.0**
	baz=230						
TWD	**Chiawan**	**1.17**	**223**	*e*P	**Pg**	**03 53 10.0**	**-0.4**
	baz=231						
TWD				*e*S	**Sg**	**03 53 25.1**	**-0.4**
	baz=231						
IRIF	**Iriomote-Funau**	**1.29**	**117**	P	**Pg**	**03 53 13.2**	**+0.3**
IRIF				*e*S	**Sg**	**03 53 30.0**	**+0.3**
FUSS	**Fushou**	**1.31**	**239**	*e*P	**Pn**	**03 53 12.5**	**-0.3**
	baz=228						
FUSS				*e*S	**Sg**	**03 53 29.8**	**-0.4**
	baz=228						
ETM	**Tongmen**	**1.31**	**223**	*e*P	**Pn**	**03 53 12.8**	**+0.1**
	baz=204						
WHF	**Hehuan Shan**	**1.35**	**235**	*e*P	**Pn**	**03 53 13.1**	**-0.4**
	baz=233						
WHF				*e*S	**Sg**	**03 53 30.5**	**-1.1**
	baz=233						
LIOB	**Emei**	**1.35**	**258**	*e*P	**Pn**	**03 53 12.5**	**-0.8**
	baz=256						
TWT	**Tachien**	**1.36**	**240**	*e*P	**Pn**	**03 53 13.3**	**-0.2**
	baz=239						
TWT				*e*S	**Sb**	**03 53 31.2**	**-0.2**
	baz=239						
NSTT	**Nanjuang**	**1.37**	**257**	*e*P	**Pn**	**03 53 12.6**	**-0.8**
	baz=256						
TDCB	**Techi**	**1.37**	**241**	*e*P	**Pn**	**03 53 13.4**	**-0.2**
	baz=239						
TDCB				*e*S	**Sb**	**03 53 30.9**	**-0.9**
	baz=239						
ESL	**Shilin**	**1.46**	**220**	*e*P	**Pn**	**03 53 14.0**	**-0.7**
	baz=219						
CHGB	**Renai**	**1.47**	**234**	*e*P	**Pn**	**03 53 15.4**	**+0.4**
	baz=243						
CHGB				*e*S	**Sn**	**03 53 33.6**	**-0.8**
	baz=243						
WHP	**Taichung City**	**1.53**	**245**	*e*P	**Pb**	**03 53 16.6**	**-0.2**
	baz=243						
WHP				*e*S	**Sn**	**03 53 36.1**	**+0.2**
	baz=243						
JKRS	**Kuro-shima**	**1.56**	**116**	P	**Pn**	**03 53 16.6**	**+0.5**
NMLH	**Miaoli**	**1.58**	**256**	*e*P	**Pg**	**03 53 18.8**	**+0.5**
	baz=267						
JIJ	**Ishigaki jima**	**1.63**	**110**	P	**Pn**	**03 53 17.5**	**+0.6**
NSY	**Sanyi**	**1.64**	**252**	*e*P	**Pg**	**03 53 20.3**	**+0.9**
	baz=264						
WCS	**Beigang Elemen**	**1.67**	**239**	*e*P	**Pb**	**03 53 19.0**	**+0.1**
	baz=237						
DPDB	**Guoxing**	**1.67**	**238**	*e*P	**Pb**	**03 53 19.0**	**-0.1**
	baz=236						
VWDT	**VWDT**	**1.69**	**226**	*e*P	**Pn**	**03 53 18.0**	**+0.2**
	baz=208						
HGSD	**Ruisui**	**1.73**	**214**	*e*P	**Pn**	**03 53 18.3**	**0.0**
	baz=198						
EHY	**Hungye**	**1.77**	**217**	*e*P	**Pn**	**03 53 19.6**	**+0.7**
	baz=215						
SMLT	**Sun Moon Lake**	**1.77**	**234**	*e*P	**Pn**	**03 53 20.2**	**+1.1**
	baz=216						
SSLB	**Suanglung**	**1.79**	**231**	*e*P	**Pn**	**03 53 19.8**	**+0.5**
	baz=212						
TYC	**Yuchr**	**1.79**	**235**	*e*P	**Pn**	**03 53 19.9**	**+0.7**
	baz=217						
YULB	**Yu-li**	**1.87**	**215**	*e*P	**Pn**	**03 53 20.0**	**-0.4**
	baz=214						
TWF1	**Yuli**	**1.91**	**214**	*e*P	**Pn**	**03 53 20.7**	**-0.1**
	baz=213						
WJS	**Zhushan**	**1.94**	**235**	*e*P	**Pn**	**03 53 21.9**	**+0.6**
	baz=234						
WNT	**Mingjian**	**1.94**	**237**	*e*P	**Pn**	**03 53 21.6**	**+0.4**
	baz=236						
FULB	**Fuli**	**2.04**	**212**	*e*P	**Pn**	**03 53 23.1**	**+0.4**
	baz=197						
ALS	**Alishan**	**2.08**	**227**	*e*P	**Pn**	**03 53 24.8**	**+1.3**
	baz=210						
WDLH	**Douliu**	**2.15**	**235**	*e*P	**Pn**	**03 53 24.6**	**+0.4**
	baz=250						
ELDTW	**Lidau**	**2.19**	**218**	*e*P	**Pn**	**03 53 25.5**	**+0.7**
	baz=203						
EDH	**Donghe**	**2.23**	**209**	*e*P	**Pn**	**03 53 25.2**	**0.0**
	baz=195						
WTK	**Tuku**	**2.27**	**237**	*e*P	**Pn**	**03 53 26.2**	**+0.4**
	baz=236						
CHN4	**Tsaushan**	**2.33**	**228**	*e*P	**Pn**	**03 53 27.1**	**+0.5**
	baz=211						
TPUB	**Ta-pu**	**2.34**	**226**	*e*P	**Pn**	**03 53 28.2**	**+1.4**
	baz=210						
STYH	**Taoyuan**	**2.34**	**222**	*e*P	**Pn**	**03 53 26.9**	**+0.1**
	baz=206						
STYT	**Tauyuan**	**2.36**	**222**	*e*P	**Pn**	**03 53 27.7**	**+0.6**
	baz=206						

LONT	Longtian	2.36	212	eP	Pn	03 53 26.2	-0.9
	baz=210						
WTP	Ta-pu	2.39	226	eP	Pn	03 53 28.7	+1.2
	baz=210						
TWK	Hsinying	2.46	228	eP	Pn	03 53 29.2	+0.7
	baz=212						
CHN1	Nanshi	2.49	226	eP	Pn	03 53 29.0	+0.1
	baz=225						
SGST	Jiashian	2.53	223	eP	Pn	03 53 30.6	+1.3
	baz=207						
ICHU	Yijhu	2.54	232	eP	Pn	03 53 30.1	+0.5
	baz=231						
SLGT	Liugui	2.55	221	eP	Pn	03 53 31.4	+1.7
	baz=220						
MATB	Ma-tsu	2.58	299	eP	Pn	03 53 29.2	-0.9
	baz=297						
TSMG	Majia	2.78	217	eP	Pn	03 53 34.1	+1.3
	baz=216						
XPSS	Dashiqiu	2.86	315	eP	Pn	03 53 34.4	+0.5
	baz=313						
MASBT	Mashibuluo	2.86	216	eP	Pn	03 53 34.8	+0.8
	baz=216						
LYJJ	Jianjiangzhen	2.92	304	eP	Pn	03 53 33.8	-1.1
	baz=302						
EAST	Anshuo	2.94	211	eP	Pn	03 53 36.3	+1.2
	baz=199						
PTMZ	Houxiangcun	3.04	273	eP	Pn	03 53 36.2	-0.2
	baz=271						
SCZT	Fangliau	3.06	214	eP	Pn	03 53 38.4	+1.6
	baz=200						
KNMB	Chin-men Tao	3.74	264	eP	Pn	03 53 45.5	-0.6
	baz=261						
KSRS	Korea Array	13.32	19	LR	LR	04 01 55.2	
	comp=Z,64nm,19.5s,baz=166,slow=43						
DAV	Davao City (W)	18.01	170	LR	LR	04 04 01.9	
	comp=Z,33nm,21.9s,baz=191,slow=37						
CMAR	Chiang Mai Arr	22.77	258	LR	LR	04 07 31.5	
	comp=Z,25nm,18.1s,baz=65,slow=38						
KLR	Kul'dur	25.32	14	LR	LR	04 08 23.0	
	comp=Z,35nm,18.2s,baz=176,slow=38						
SONM	Songino Array	26.16	335	P	P	03 58 22.5	-0.4
	0.6nm,0.9s,baz=137,slow=7.2,SNR=3.5						
MKAR	Makanchi Array	38.63	315	P	P	04 00 11.5	-0.3
	1.2nm,0.9s,baz=97,slow=10,SNR=4.6						
ZALV	Zalesovo Beam	40.26	326	LR	LR	04 19 58.2	
	comp=Z,30nm,18.1s,baz=56,slow=40						
WRA	Warramunga Arr	46.08	164	P	P	04 01 11.8	-0.8
	0.4nm,0.7s,baz=353,slow=9.2,SNR=3.3						
ASAR	Alice Springs	49.57	166	P	P	04 01 42.2	+2.5
	0.4nm,1.0s,baz=348,slow=13,SNR=1.5						
BRTR	Keskin Array B	73.67	307	LR	LR	04 43 35.7	
	comp=Z,22nm,18.2s,baz=342,slow=41						
NOA	NORSAR Array B	78.11	332	LR	LR	04 42 36.9	
	comp=Z,11nm,18.4s,baz=250,slow=38						

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*SJA **15** 04:22:53.5±0.8, 30°.61S×72°.12W, h14^{km}±4^{km}, ML4.0, MW3.9*

*IDC **15** 04:22:54.1±1.8, 30°.64S×71°.69W, h0^{km}, mb4.1/3, mb1 3.9/8, mb1mx3.7/25, mbtmp3.8/8, ML3.6/5, MS3.1/2, Ms1 3.1/2, ms1mx2.9/17, Error ellipse: s-maj=52.8km s-min=29.8km az=106.0*

*NEIC **15** 04:22:57.2±1.4, 30°.63S±0°.04×71°.90W±0°.08, h20^{km}±5^{km}, mb4.0/6, ML4.1(GUC), Error ellipse: s-maj=10.1km s-min=6.0km az=101.0*

*GUC **15** 04:22:58.4±0.7, 30°.70S×71°.73W, h35^{km}±2^{km}, ML4.1*

ISC 15 04:22:57.2±0.9, **30°.66S**±0°.02×**71°.87W**±0°.04, **h30**^{km}±5^{km}, **n108,** σ**2ˢ.22**/137, **mb4.1**/5, **2C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.21	95	eP	Pb	04 23 03.8	+0.2
CO06				i S	Sb	04 23 07.2	-0.6
CO06	Fray Jorge	0.21	95	Pg	Pb	04 23 03.6	+0.1
CO06				Sg	Sb	04 23 07.2	-0.6
CO05	La Serena	0.92	37	⇓iP	Pn	04 23 14.2	+0.1
CO05				i S	Sb	04 23 26.4	-0.1
CO05				IAML		04 23 28.4	
	comp=N,13μm,0.5s						
CO05	La Serena	0.92	37		Pn	04 23 14.3	+0.1
CO05				Sg	Sb	04 23 26.3	-0.1
CO03	El Pedregal	1.04	100	⇓iP	Pn	04 23 15.2	-0.7
CO03				i S	Sn	04 23 27.0	-2.5
CO03				IAML		04 23 28.4	
	comp=N,7μm,0.4s						
CO03	El Pedregal	1.04	100		Pn	04 23 15.1	-0.9
CO03	El Pedregal	1.04	100	eP	Pn	04 23 15.0	-0.9
CO03				IAML		04 23 34.4	
	comp=Z,2μm,0.2s						
GO04	Tololo Observa	1.05	63	⇓iP	Pn	04 23 15.9	-0.3
GO04				i S	Sn	04 23 29.0	-0.9
GO04	Tololo Observa	1.05	63		Pn	04 23 15.9	-0.3
GO04					Sb	04 23 30.9	+0.5
GO04	Tololo Observa	1.05	63	eP	Pb	04 23 16.9	0.0
GO04				eS	Sn	04 23 21.7	-8.2
LCO	Las Campanas	1.93	32	eP	Pn	04 23 29.4	+1.1
LCO				i S	Sb	04 23 53.5	-2.2
LCO	Las Campanas	1.93	32		Pn	04 23 29.2	+0.9
LCO	Las Campanas	1.93	32	eP	Pn	04 23 29.0	+0.7
VA06	Catapilco	1.96	166	eP	Pn	04 23 29.8	+1.3
VA06				i S	Sb	04 23 54.6	-1.8
VA06				IAML		04 24 07.2	
	comp=E,2μm,0.3s						
AROD	Rodeo	2.13	77	eP	Pb	04 23 34.3	-1.1
AROD				eS	Sb	04 24 02.5	+0.9
VA01	Torpederas	2.37	175	IAML		04 24 16.5	
	comp=E,480nm,0.3s						
VA01	Torpederas	2.37	175	Pn	Pn	04 23 35.2	+1.1
VA01	Torpederas	2.37	175	eP	Pn	04 23 35.6	+1.5
VA01				eS	Sn	04 24 04.7	+2.5
VA03	San Esteban	2.39	152	eP	Pn	04 23 36.8	+2.3
VA03				i S	Sn	04 24 04.2	+1.5
VA03				IAML		04 24 15.6	
	comp=E,2μm,0.3s						
VA03	San Esteban	2.39	152		Pn	04 23 35.8	+1.3
VA03	San Esteban	2.39	152	eP	Pn	04 23 36.8	+2.3
VA03				eP	Pb	04 23 37.0	-2.6
VA03				eS	Sb	04 24 08.2	-0.5
VA03				eS	Sn	04 24 13.7	+11
VA03				IAML		04 24 14.0	
	comp=Z,1μm,0.5s						
ACCO	Cerro Coronel	2.42	89	eP	Pb	04 23 39.0	-1.3
ACCO				eP	Pb	04 23 39.1	-1.3
ACCO				eS	Sb	04 24 10.8	+0.9
ROCH	El Roble	2.42	163	eP	Pb	04 23 36.8	-3.5
ROCH				eP	Pn	04 23 36.5	+1.4
ROCH				IAML		04 24 13.6	
	comp=N,1μm,0.5s						
ROCH				IAML		04 24 13.9	
	comp=N,2μm,0.4s						
ROC1	El Roble	2.43	163	eP	Pn	04 23 37.0	+1.8
ROC1				eS	Sb	04 24 12.5	+2.5
ACDV	Cuesta del Vie	2.43	79	eP	Pb	04 23 39.0	-1.4
ACDV				eS	Sb	04 24 13.8	+3.9
ACDV				IAML		04 24 19.5	
	comp=Z,519nm,0.5s						
RTLS	Leoncito	2.48	118	eP	Pb	04 23 39.0	-2.4
RTLS				eP	Pn	04 23 39.5	+3.5
RTLS				eS	Sb	04 24 13.9	+2.2
RTLS				IAML		04 24 20.3	
	comp=Z,1μm,0.6s						
AC04	Llanos de Chal	2.54	16	⇑iP	Pn	04 23 37.4	+0.8
AC04				IAML		04 24 25.5	
	comp=E,696nm,0.5s						
AC04	Llanos de Chal	2.54	16	Pn	Pn	04 23 37.3	+0.8
AC04	Llanos de Chal	2.54	16	eP	Pn	04 23 37.0	+0.5
AC04				eS	Sb	04 24 09.7	-3.3
AC04				eS	Sn	04 24 10.7	+4.3
AC04				IAML		04 24 22.2	
	comp=Z,456nm,0.8s						
AUSP	Uspallata	2.64	127	eP	Pb	04 23 41.8	-2.2
AUSP				eS	Sn	04 24 11.7	+2.4
AUSP				eS	Sb	04 24 17.3	+1.1
MT02	Curacav	2.67	167		Pn	04 23 39.9	+1.6
PEL	Peldehue	2.68	158	eP	Pn	04 23 40.5	+2.1
PEL				i S	Sn	04 24 12.1	+2.2
PEL				IAML		04 24 27.8	
	comp=N,750nm,0.3s						
PEL	Peldehue	2.68	158	Pn	Pn	04 23 40.6	+2.1
PEL	Peldehue	2.68	158	eP	Pn	04 23 40.7	+2.2
PEL				eS	Sn	04 24 12.7	+2.8
ZON	Zonda	2.88	109	eP	Pb	04 23 44.9	-3.1
ZON				eS	Sb	04 24 22.7	-0.2
ZON				IAML		04 24 28.2	
	comp=Z,316nm,0.6s						
MT05	Renca	2.90	161	eP	Pn	04 23 43.4	+2.0
MT05				i S	Sn	04 24 17.1	+1.9
MT05				IAML		04 24 40.5	
	comp=E,2μm,0.4s						
MT05	Renca	2.90	161		Pn	04 23 42.9	+1.5
MT05	Renca	2.90	161	eP	Pn	04 23 44.0	+2.6
MT05				eP	Pb	04 23 44.2	-4.0
MT05				eS	Sb	04 24 20.7	-2.5
MT05				IAML		04 24 28.6	
	comp=Z,622nm,0.7s						
RTLL	Cerro Villicun	3.00	104	eP	Pn	04 23 46.1	+3.3
RTLL				eS	Sb	04 24 22.6	-3.5
VA05	Santo Domingo	3.00	176	IAML		04 24 41.1	
	comp=N,707nm,0.2s						
VA05	Santo Domingo	3.00	176	Pn	Pn	04 23 43.7	+0.9
RTCV	Cerro Valdivia	3.10	114	eP	Pb	04 23 48.0	-3.7
MT09	Talagante	3.20	167	eP	Pn	04 23 47.8	+2.1
MT09				IAML		04 24 40.9	
	comp=N,521nm,0.4s						
MT09	Talagante	3.20	167		Pn	04 23 47.5	+1.8
ASAL	Salagasta	3.23	127	eP	Pb	04 23 50.0	-4.0
ASAL				eS	Sb	04 24 31.7	-1.3
MT01	Popeta	3.24	171	eP	Pn	04 23 47.4	+1.2
MT01				IAML		04 24 41.1	
	comp=E,424nm,0.7s						
MT01	Popeta	3.24	171		Pn	04 23 47.4	+1.2
MT01	Popeta	3.24	171	eP	Pn	04 23 47.8	+1.6
MT01				eS	Sb	04 24 29.7	-3.5
MT01				IAML		04 24 41.5	
	comp=Z,253nm,0.5s						
ARCO	CERRO ARCO	3.32	132	eP	Pb	04 23 52.8	-2.8
ARCO				eS	Sb	04 24 45.5	+10
ARCO				IAML		04 24 46.0	
	comp=Z,278nm,0.3s						
GO03	Copiap	3.37	26	⇑iP	Pn	04 23 49.4	+1.4
GO03	Copiap	3.37	26	Pn	Pn	04 23 48.6	+0.7
GO03	Copiap	3.37	26	eP	Pn	04 23 49.4	+1.4
GO03				eS	Sn	04 24 28.7	+1.7
LMEL	Las Melosas	3.48	156	IAML		04 24 49.6	
	comp=E,318nm,0.4s						
AAGR	Agrelo	3.55	134	eP	Pb	04 23 55.0	-4.4
AAGR				eS	Sb	04 24 48.2	+6.1
VCA	Vinchina	3.72	60	eP	Pb	04 23 57.7	-4.6
VCA				eS	Sn	04 24 41.2	+5.4
VCA				eS	Sb	04 24 48.2	+1.1
VCA				IAML		04 24 55.5	
	comp=Z,666nm,0.4s						
BO01	Tunca	3.79	170	eP	Pn	04 23 55.0	+1.4
BO01				i S	Sn	04 24 38.4	+1.2
BO01				IAML		04 25 11.8	
	comp=N,107nm,0.3s						
BO01	Tunca	3.79	170	Pn	Pn	04 23 55.1	+1.5
BO01	Tunca	3.79	170	eP	Pn	04 23 55.0	+1.4
BO01				eP	Pn	04 23 55.5	+1.9
BO01				eS	Sb	04 24 45.7	-3.1
BO01				IAML		04 25 00.4	
	comp=Z,109nm,0.7s						
BO02	Sierra Bellavi	4.23	168		Pn	04 24 01.6	+1.9
BO02	Sierra Bellavi	4.23	168	eP	Pn	04 24 02.1	+2.3
BO02				eS	Sb	04 24 57.2	-4.4
BO02				IAML		04 25 11.1	
	comp=Z,206nm,0.5s						
GO05	Huala	4.34	181	Pn	Pn	04 24 01.6	+0.3
GO05	Huala	4.34	181	eP	Pn	04 24 01.8	+0.5
GO05				eS	Sb	04 25 11.7	+6.9
AC02	Maricunga	4.50	33	eP	Pn	04 24 05.5	+1.6
AC02	Maricunga	4.50	33	Pn	Pn	04 24 05.3	+1.3
ML02	Panimavida	5.11	176	Pn	Pn	04 24 12.6	+0.8
CYA	Choya	5.73	69	eP	Pn	04 24 22.8	+2.4
PB14	IPOC Station P	6.15	13	Pn	Pn	04 24 24.6	-1.8
H03N1	Juan Fernandez	6.59	243	T	T	04 31 30.0	
	baz=71,slow=72						
H03N3	Juan Fernandez	6.60	243	T	T	04 31 26.4	
	baz=71,slow=72,SNR=7794						
H03N2	Juan Fernandez	6.60	243	T	T	04 31 29.9	
	baz=71,slow=72						
H03S3	Juan Fernandez	6.75	240	T	T	04 31 39.6	
	baz=98,SNR=9.8						
H03S1	Juan Fernandez	6.75	240	T	T	04 31 39.1	
	baz=98,SNR=12						
H03S2	Juan Fernandez	6.76	240	T	T	04 31 38.0	
	baz=98,SNR=13						
PB15	IPOC Station P	7.72	17	Pn	Pn	04 24 48.1	+0.2
PB06	IPOC Station P	8.18	15	Pn	Pn	04 24 52.9	-1.3
LC01	Cunco	8.22	180	Pn	Pn	04 24 53.8	-0.7
LVC	Limon Verde	8.44	19	Pn	Pn	04 24 56.2	-1.7
	comp=Z,0.3nm,0.3s,baz=239,slow=11,SNR=1.9						
LVC				LR	LR	04 28 08.1	
	comp=Z,85nm,19.5s,baz=214,slow=38						
LVC	Limon Verde	8.44	19	Pn	Pn	04 24 55.9	-2.0
PB01	IPOC Station P	9.81	13	Pn	Pn	04 25 15.3	-1.2
PLCA	Paso Flores	10.11	174	Pn	Pn	04 25 22.1	+1.5
	comp=Z,0.1nm,0.3s,baz=305,slow=16,SNR=1.5						
PLCA	Paso Flores	10.11	174		Pn	04 25 21.5	+0.9
PB08	IPOC Station P	10.75	14	Pn	Pn	04 25 29.4	-0.3
TRQA	Tornquist	11.01	135	Pn	Pn	04 25 33.7	+0.9
ITQB	Itaqui	13.23	90	Pn	Pn	04 26 01.2	-2.0
CPUP	Villa Florida	13.50	75	Pn	Pn	04 26 05.7	-1.1
	comp=Z,0.2nm,0.3s,baz=243,slow=16,SNR=3.2						
CPUP				LR	LR	04 31 46.2	
	comp=Z,112nm,19.6s,baz=226,slow=40						
CPUP	Villa Florida	13.50	75		Pn	04 26 05.2	-1.5
LPAZ	La Paz	14.71	14	Pn	Pn	04 26 24.6	+0.7
	comp=Z,0.2nm,0.3s,baz=194,slow=6.3,SNR=7.6						
LPAZ	La Paz	14.71	14	Pn	Pn	04 26 23.0	-0.8
SIV	San Ignacio	17.63	37	P	P	04 27 01.8	+0.3
	comp=Z,0.1nm,0.3s,baz=222,slow=12,SNR=9.4						
PTLB	Pontes e Lacer	19.12	40	P	Pn	04 27 18.4	-0.4
ETMB	Extrema	21.39	15	P	P	04 27 42.9	+0.2
ETMB				IAmb	IAmb	04 27 52.6	
	comp=Z,2.3nm,0.9s						
BDFB	Brasilia	26.46	61	P	P	04 28 31.8	-0.2
	comp=Z,2.1nm,0.5s,baz=258,slow=5.6,SNR=5.4						
BDFB	Brasilia	26.46	61	P	P	04 28 32.1	0.0
BDFB				IAmb	IAmb	04 28 44.1	
	comp=Z,4.9nm,0.7s						
BOAV	Boa Vista	34.60	20	P	P	04 29 44.1	+0.3
BOAV				IAmb	IAmb	04 29 45.4	
	comp=Z,3.2nm,1.1s						
DBIC	Dimbokro	74.00	72	P	P	04 34 30.3	-0.1
	comp=Z,1.4nm,0.5s,baz=247,slow=6.6,SNR=5.8						
DBIC	Dimbokro	74.00	72	P	P	04 34 31.3	+0.8
TORD	Torodi Ar. Bea	82.95	70	P	P	04 35 20.3	+0.5
	comp=Z,0.3nm,0.4s,baz=280,slow=6.1,SNR=22						
TORD	Torodi Ar. Bea	82.95	70	P	P	04 35 20.5	+0.7
TORD				IAmb	IAmb	04 35 33.6	
	comp=Z,0.9nm,0.8s						
H11S2	WAKE ISLAND Hy	125.89	271	T	T	07 00 41.9	
	baz=115,slow=74,SNR=84						
H11S1	WAKE ISLAND Hy	125.90	271	T	T	07 00 43.9	
	baz=115,slow=74,SNR=105						
H11S3	WAKE ISLAND Hy	125.91	271	T	T	07 00 43.2	
	baz=115,slow=74,SNR=86						
H11N3	WAKE ISLAND Hy	126.22	273	T	T	07 01 07.0	
	baz=116,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	126.23	273	T	T	07 01 08.8	
	baz=116,slow=75,SNR=6.9						
H11N2	WAKE ISLAND Hy	126.24	273	T	T	07 01 08.2	
	baz=116,slow=75,SNR=21						
KURBB	Kurchatov Arra	150.27	39	PKPbc	PKiKP	04 42 46.2	+0.3
	comp=Z,0.2nm,0.3s,baz=289,slow=3.0,SNR=4.4						
KURK	Kurchatov	150.27	39	PKPdf	PKPdf	04 42 41.3	+1.4
ZALV	Zalesovo Beam	151.29	29	PKPbc	PKiKP	04 42 48.8	+0.9
	comp=Z,1.1nm,0.7s,baz=285,slow=2.9,SNR=6.6						
ZALV	Zalesovo Beam	151.29	29	PKPdf	PKPdf	04 42 43.0	+1.6

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*KRSC **15** 04:41:39.8±1.2, 52°.80N×160°.27E, h46^{km}±11^{km}, ML4.3*

*MOS **15** 04:41:41.3±0.9, 52°.78N×160°.18E, h51^{km}, mb4.2/7, Error ellipse: s-maj=7.8km s-min=5.5km az=82.4*

*IDC **15** 04:41:46.8±2.1, 53°.03N×159°.79E, h84^{km}±16^{km}, mb3.3/9, mb1 3.5/10, mb1mx3.3/44, mbtmp3.7/10, Error ellipse: s-maj=25.2km s-min=23.2km az=155.0*

ISC 15 04:41:41.6±0.9, **52°.82N**±0°.04×**160°.21E**±0°.04, **h42**^{km}±7^{km}, **n91,** σ**1ˢ.43**/111, **mb3.7**/12, **1C-1D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.30	338	PN	Pn	04 41 50.6	+0.5
SPN				S	Sn	04 41 56.4	+0.4
SPN	Mys Shipunski	0.30	338	eP	Pn	04 41 50.6	+0.5
SPN				eS	Sn	04 41 56.4	+0.4
NLC	Nalytchevo	0.63	304	PN	Pn	04 41 54.0	-0.2
NLC	Nalytchevo	0.63	304	eP	Pn	04 41 54.0	-0.2
DALK	Dalny	0.91	284	PN	Pn	04 41 58.0	+0.1
DALK				S	Sn	04 42 09.6	-0.2
DALK	Dalny	0.91	284	eP	Pn	04 41 58.0	+0.1
DALK				eS	Sn	04 42 09.6	-0.2
SDLR	Sedlovina	0.93	300	PN	Pn	04 41 58.3	0.0
SDLR	Sedlovina	0.93	300	eP	Pn	04 41 58.3	0.0
UGLR	Uglovaya	0.93	296	PN	Pn	04 41 58.5	+0.2
UGLR	Uglovaya	0.93	296	eP	Pn	04 41 58.5	+0.2
SMAR	Somma	0.96	298	PN	Pn	04 41 58.7	-0.2
SMAR	Somma	0.96	298	eP	Pn	04 41 58.7	-0.2
PET	Petropavlovsk	0.97	283	⇑iPN	Pn	04 41 58.6	-0.1
PET				eS	Sn	04 42 10.8	-0.4
PET				pmax	pmax		
	comp=Z,2μm,0.3s						
PET				smax	smax		
	comp=E,4μm,0.6s						
PET				smax	smax		
	comp=N,2μm,0.4s						
PET	Petropavlovsk	0.97	283	eP	Pn	04 41 58.7	0.0
PET				eS	Sn	04 42 10.5	-0.7
AVH	Avacha	1.00	297	PN	Pn	04 41 59.6	+0.4
AVH	Avacha	1.00	297	eP	Pn	04 41 59.6	+0.4
KRER	Koryakskii	1.01	299	PN	Pn	04 41 59.8	+0.3
KRER	Koryakskii	1.01	299	eP	Pn	04 41 59.8	+0.3
KOK	Koryaka	1.06	297	PN	Pn	04 42 00.4	+0.3
KOK	Koryaka	1.06	297	eP	Pn	04 42 00.4	+0.3
RUS	Russkaya	1.11	250	PN	Pn	04 42 00.6	0.0
RUS				S	Sn	04 42 14.8	+0.2
RUS	Russkaya	1.11	250	eP	Pn	04 42 00.6	0.0
RUS				eS	Sn	04 42 14.8	+0.2
KRMR	Karymshinskiy	1.26	271	PN	Pn	04 42 02.9	+0.1
KRMR				S	Sn	04 42 19.1	+0.6
KRMR	Karymshinskiy	1.26	271	eP	Pn	04 42 02.9	+0.1
KRMR				eS	Sn	04 42 19.1	+0.6
MTVR	Mutnovka	1.28	256	PN	Pn	04 42 03.6	+0.4
MTVR				S	Sn	04 42 19.8	+0.6
MTVR	Mutnovka	1.28	256	eP	Pn	04 42 03.6	+0.4
MTVR				eS	Sn	04 42 19.8	+0.6
KII	Karymskiy	1.30	340	PN	Pn	04 42 04.3	+0.9
KII				S	Sn	04 42 20.6	+0.9
KII	Karymskiy	1.30	340	eP	Pn	04 42 04.3	+0.9
KII				eS	Sn	04 42 20.6	+0.9
ASAK	Asacha	1.48	254	PN	Pn	04 42 06.7	+0.9
ASAK				S	Sn	04 42 24.9	+1.0
ASAK	Asacha	1.48	254	eP	Pn	04 42 06.7	+0.9
ASAK				eS	Sn	04 42 24.9	+1.0
PEA0B	Petropavlovsk-	1.55	282	d iPN	Pn	04 42 07.5	+0.8
PETK	Petropavlovsk-	1.55	282	P	Pn	04 42 07.8	+1.1
	comp=N,128nm,0.3s,baz=101,slow=19,SNR=364						
PETK				S	Sn	04 42 26.4	+0.9
	comp=N,132nm,0.3s,baz=235,slow=10.0,SNR=29						
PETK				LR	LR	04 42 56.9	
	comp=N,221nm,20.5s,baz=107,slow=56						
GNL	Ganaly	1.62	304	PN	Pn	04 42 09.3	+1.5
GNL				S	Sn	04 42 29.4	+1.8
GNL	Ganaly	1.62	304	eP	Pn	04 42 09.3	+1.5
GNL				eS	Sn	04 42 29.4	+1.8
KDTR	Khodutka, Kamc	1.66	233	PN	Pn	04 42 09.0	+0.9
KDTR				S	Sn	04 42 29.0	+0.9
KDTR	Khodutka, Kamc	1.66	233	eP	Pn	04 42 09.0	+0.9
KDTR				eS	Sn	04 42 29.0	+0.9
APC	Apacha	1.85	275	PN	Pn	04 42 12.8	+1.9
APC				S	Sn	04 42 35.6	+2.5
APC	Apacha	1.85	275	eP	Pn	04 42 12.8	+1.9
APC				eS	Sn	04 42 35.6	+2.5
MKZ	Mys Kozlova	1.96	27	PN	Pn	04 42 12.8	+0.5
MKZ	Mys Kozlova	1.96	27	eP	Pn	04 42 12.8	+0.5
MIPR	Malaya Ipel'ka	2.18	257	PN	Pn	04 42 17.7	+2.4
MIPR	Malaya Ipel'ka	2.18	257	eP	Pn	04 42 17.7	+2.4
TUMD	Tumrok D	2.39	3	eP	Pn	04 42 19.9	+1.6
TUMD				eS	Sn	04 42 47.1	+0.7
TUMR	Tumrok	2.47	359	PN	Pn	04 42 19.9	+0.4
TUMR				S	Sn	04 42 47.1	-1.3
PAU	Pauzhetka	2.50	239	PN	Pn	04 42 22.4	+2.8
PAU	Pauzhetka	2.50	239	eP	Pn	04 42 22.4	+2.8
KMNR	Kamenistaya	2.94	0	PN	Pn	04 42 28.9	+3.0
KMNR	Kamenistaya	2.94	0	eP	Pn	04 42 28.9	+3.0
ESO	Esso	3.24	345	PN	Pn	04 42 32.9	+3.0
ESO	Esso	3.24	345	eP	Pn	04 42 32.9	+3.0
SKR	Severo-Kuril's	3.32	232	ePN	Pn	04 42 32.5	+1.5
SKR	Severo-Kuril's	3.32	232	eP	Pn	04 42 33.3	+2.3
KBTR	Krutoberegovo	3.72	23	PN	Pn	04 42 39.3	+2.8
KBTR	Krutoberegovo	3.72	23	eP	Pn	04 42 39.3	+2.8
KBG	Krutoberegovo	3.74	22	PN	Pn	04 42 38.9	+2.2
KBG	Krutoberegovo	3.74	22	eP	Pn	04 42 38.9	+2.2
SMKR	Semkarok	3.84	10	PN	Pn	04 42 41.6	+3.4
SMKR	Semkarok	3.84	10	eP	Pn	04 42 41.6	+3.4
BKI	Bering	4.15	53	PN	Pn	04 42 43.7	+1.3
BKI	Bering	4.15	53	eP	Pn	04 42 43.7	+1.3
BKI				eS	Sn	04 43 26.9	-2.7
KUR	Kuril'sk	11.09	232	i PN	Pn	04 44 17.9	+0.4
YSS	Yuzh-Sakhalins	12.68	249	ePN	Pn	04 44 38.8	-0.4
BILL	Bilibino	15.55	9	i P	P	04 45 20.6	-0.7
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ERM	Erimo	15.77	234	eP	Pn	04 45 20.2	-0.3
KLR	Kul'dur	18.21	270	P	Pn	04 45 51.5	+0.6
	comp=Z,0.1nm,0.3s,baz=90,slow=8.5,SNR=4.9						
KLR	Kul'dur	18.21	270	i P	Pn	04 45 51.2	+0.3
KLR				pmax	pmax		
	comp=Z,6.0nm,2.0s						
USA0B	Ussuriysk Arra	20.48	256	eP	P	04 46 14.3	-1.3
MAJO	Matsushiro	22.43	232	i P	P	04 46 36.8	+0.1
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TIXI	Tiksi	23.36	335	P	P	04 46 43.2	-2.6
	comp=Z,0.6nm,0.3s,baz=120,slow=7.1,SNR=2.5						
TIXI	Tiksi	23.36	335	i P	P	04 46 44.3	-1.6
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KDAK	Kodiak Island	26.88	60	eP	P	04 47 19.0	+1.0
COLA	College	28.55	45	i P	P	04 47 33.4	+0.5
COLA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ILAR	Eielson Array	28.96	45	P	P	04 47 39.3	+2.7
	comp=Z,0.2nm,0.6s,baz=237,slow=8.3,SNR=2.2						
H11N2	WAKE ISLAND Hy	33.43	169	T	T	05 23 52.0	
	baz=352,slow=76,SNR=192						
H11N3	WAKE ISLAND Hy	33.44	169	T	T	05 23 54.2	
	baz=352,slow=76,SNR=76						
H11N1	WAKE ISLAND Hy	33.45	169	T	T	05 23 53.7	
	baz=352,slow=76,SNR=114						
H11S1	WAKE ISLAND Hy	34.61	169	T	T	05 25 22.8	
	baz=352,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	34.62	169	T	T	05 25 28.5	
	baz=352,slow=76,SNR=52						
H11S2	WAKE ISLAND Hy	34.63	169	T	T	05 25 27.4	
	baz=352,slow=76,SNR=25						
MKAR	Makanchi Array	48.34	296	P	P	04 50 16.0	-2.7
	comp=Z,0.5nm,0.4s,baz=58,slow=6.6,SNR=8.4						
FINES	FINESS Array B	60.40	337	P	P	04 51 44.5	-1.5
	comp=Z,4.0nm,1.0s,baz=27,slow=8.8,SNR=7.0						
FINES	FINESS Array B	60.40	337	eP	P	04 51 45.7	-0.3
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN	Obninsk	62.79	327	i P	P	04 52 02.4	+0.2
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NB2	NORSAR Subarra	63.83	344	P	P	04 52 08.7	-0.4
	comp=Z,0.4nm,0.3s,baz=20,slow=6.9						
NOA	NORSAR Array B	63.83	344	P	P	04 52 08.2	-0.8
	comp=Z,0.6nm,0.6s,baz=14,slow=5.8,SNR=5.1						
AKASG	Malin Array Be	68.89	329	P	P	04 52 40.3	-1.2
	comp=Z,0.3nm,0.3s,baz=32,slow=6.0,SNR=4.6						
AKASG	Malin Array Be	68.89	329	eP	P	04 52 41.3	-0.2
TXAR	Lajitas Array	70.68	67	P	P	04 52 54.0	+1.0
	comp=Z,0.2nm,0.5s,baz=302,slow=5.2,SNR=5.0						
TXAR	Lajitas Array	70.68	67	P	P	04 52 54.0	+1.0
GERES	GERESS Array B	74.80	338	P	P	04 53 16.7	-0.4
	comp=Z,0.2nm,0.4s,baz=39,slow=6.3,SNR=3.8						
ASAR	Alice Springs	79.54	204	P	P	04 53 44.7	+0.9
	comp=Z,0.3nm,0.7s,baz=2.3,slow=4.6,SNR=3.2						

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*SJA **15** 04:50:57.8±0.6, 29°.22S×72°.67W, h26^{km}±12^{km}, ML4.8, MW4.7*

*IDC **15** 04:51:03.5±0.7, 29°.38S×71°.82W, h0^{km}, mb4.4/6,* *mb1 4.3/10, mb1mx4.1/22, mbtmp4.2/10, ML3.9/4, MS3.6/9, Ms1 3.6/9, ms1mx3.4/26, Error ellipse: s-maj=25.7km s-min=19.5km az=99.0*

NEIC ***15*** *04:51:03.7, 29°.36S×72°.00W, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.82; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-3.74; $M_{r\theta}$0.54; $M_{\theta\phi}$0.74; $M_{\phi r}$-0.34; Fault plane solution: $M_0$3.90000×10^{15} NP1:ϕ_s162.09000°, δ48.63000°, λ80.82000°. NP2:ϕ_s355.83000°, δ42.20000°, λ100.26000°. Principal axes: T 3.9030, Plg82.0000°, Azm14.0000°; N 0.0021, Plg7.0000°, Azm168.0000°; P -3.9051, Plg3.0000°, Azm259.0000°;*

NEIC ***15*** *04:51:03.8±1.9, 29°.36S±0°.03×72°.00W±0°.03, h10^{km}±4^{km}, mb4.6/15, Mwr4.3/32, ML4.7(GUC) Error ellipse: s-maj=5.8km s-min=1.7km az=220.0*

GUC ***15*** *04:51:03.1±0.8, 29°.35S×71°.99W, h23^{km}±6^{km}, ML4.7*

VAO ***15*** *04:51:08.0±1.0, 29°.03S×71°.61W, h10^{km}, mb4.4*

ISC 15 04:51:02.3±1.1**, 29°.32S**±0°.03×**72°.17W**±0°.04**, h8**^{km}±6^{km}**, n171, σ1^{s}80**/198**, mb4.6**/11**, MS3.6**/5**, 3C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	**La Serena**	**1.01**	**127**	⇓*i*P	**Pn**	**04 51 20.2**	**-2.6**
CO05				*i* S	**Sb**	**04 51 32.0**	**-3.5**
CO05				IAML		04 51 34.4	
	comp=E,36μm,0.4s						
CO05	**La Serena**	**1.01**	**127**		**Pn**	**04 51 20.2**	**-2.6**
CO05				Sn	**Sb**	**04 51 33.3**	**-2.2**
LCO	**Las Campanas**	**1.32**	**77**	⇓*i*P	**Pn**	**04 51 25.4**	**-2.0**
LCO				*i* S	**Sn**	**04 51 42.6**	**-2.7**
LCO	**Las Campanas**	**1.32**	**77**		**Pn**	**04 51 25.4**	**-2.0**
LCO				Sn	**Sn**	**04 51 42.6**	**-2.7**
LCO	**Las Campanas**	**1.32**	**77**	*e*P	**Pn**	**04 51 25.0**	**-2.4**
CO06	**Fray Jorge**	**1.43**	**161**	*e*P	**Pn**	**04 51 27.8**	**-0.8**
CO06	**Fray Jorge**	**1.43**	**161**	Pn	**Pn**	**04 51 27.8**	**-0.8**
GO04	**Tololo Observa**	**1.47**	**126**	*e*P	**Pn**	**04 51 27.9**	**-1.5**
GO04				*i* S	**Sn**	**04 51 46.6**	**-2.3**
GO04	**Tololo Observa**	**1.47**	**126**		**Pn**	**04 51 27.9**	**-1.5**
GO04				Sn	**Sn**	**04 51 46.1**	**-2.8**
GO04	**Tololo Observa**	**1.47**	**126**	*e*P	**Pn**	**04 51 28.1**	**-1.2**
GO04				*e*S	**Sb**	**04 51 51.5**	**+2.6**
AC04	**Llanos de Chal**	**1.47**	**41**	Pn	**Pn**	**04 51 28.1**	**-1.1**
CO03	**El Pedregal**	**1.99**	**140**	*e*P	**Pn**	**04 51 36.1**	**-0.3**
CO03				*i* S	**Sn**	**04 52 02.0**	**+0.4**
CO03				IAML		04 52 04.1	
	comp=E,7μm,0.4s						
CO03	**El Pedregal**	**1.99**	**140**	Pn	**Pn**	**04 51 35.8**	**-0.6**
CO03				Sn	**Sn**	**04 51 58.5**	**-3.1**
GO03	**Copiap**	**2.42**	**45**	*e*P	**Pn**	**04 51 42.2**	**-0.1**
GO03				*i* S	**Sn**	**04 52 13.6**	**+1.5**
GO03				IAML		04 52 23.7	
	comp=N,3μm,0.3s						
GO03	**Copiap**	**2.42**	**45**	Pn	**Pn**	**04 51 42.2**	**-0.1**
GO03	**Copiap**	**2.42**	**45**	*e*P	**Pn**	**04 51 42.4**	**+0.1**
GO03				*e*S	**Sb**	**04 52 14.9**	**-1.3**
AROD	**Rodeo**	**2.49**	**111**	*e*P	**Pn**	**04 51 45.0**	**+1.4**
AROD				*e*P	**Pb**	**04 51 45.1**	**-2.5**
AROD				*e*S	**Sn**	**04 52 17.9**	**+3.5**
ACDV	**Cuesta del Vie**	**2.79**	**109**	*e*P	Pn	04 51 41.0	-6.5
ACDV				*e*P	**Pb**	**04 51 50.0**	**-2.5**
ACDV				*e*S	**Sb**	**04 52 29.1**	**+2.2**
ACDV				IAML		04 52 31.2	
	comp=Z,3μm,0.8s						
ACCO	**Cerro Coronel**	**2.98**	**116**	*e*P	**Pn**	**04 51 53.0**	**+2.8**
ACCO				*e*S	**Sb**	**04 52 34.0**	**+1.5**
VA06	**Catapilco**	**3.32**	**167**	⇑*i*P	**Pn**	**04 51 54.9**	**+0.3**
VA06				IAML		04 53 02.9	
	comp=E,2μm,0.4s						
RTLS	**Leoncito**	**3.50**	**136**	*e*P	**Pn**	**04 52 00.0**	**+2.6**
RTLS				*e*S	**Sb**	**04 52 45.5**	**-2.2**
RTLS				IAML		04 52 54.1	
	comp=Z,2μm,0.9s						
VCA	**Vinchina**	**3.52**	**82**	*e*P	**Pn**	**04 51 56.5**	**-1.1**
VCA				*e*P	**Pb**	**04 52 01.0**	**-4.0**
VCA				*e*S	**Sb**	**04 52 49.5**	**+1.4**
VCA				IAML		04 52 57.7	
	comp=Z,2μm,0.6s						
AC02	**Maricunga**	**3.65**	**48**	⇑*i*P	**Pn**	**04 52 00.7**	**+1.0**
AC02				IAML		04 53 06.5	
	comp=E,1μm,0.4s						
AC02	**Maricunga**	**3.65**	**48**	Pn	**Pn**	**04 52 00.6**	**+1.0**
AC02	**Maricunga**	**3.65**	**48**	*e*P	**Pn**	**04 52 00.0**	**+0.4**
AC02				*e*P	**Pn**	**04 52 00.7**	**+1.0**
AC02				*e*S	**Sg**	**04 53 01.3**	**+1.6**
AC02				IAML		04 53 05.8	
	comp=Z,1μm,0.6s						
VA03	**San Esteban**	**3.71**	**158**		**Pn**	**04 52 00.5**	**+0.5**
VA01	**Torpederas**	**3.72**	**173**		**Pn**	**04 52 00.3**	**+0.2**
ZON	**Zonda**	**3.75**	**127**	*e*P	**Pn**	**04 52 04.0**	**+3.5**
ZON				*e*P	**Pn**	**04 52 04.5**	**+3.9**
AUSP	**Uspallata**	**3.76**	**141**	*e*P	**Pn**	**04 52 04.0**	**+3.1**
AUSP				*e*S	**Sb**	**04 52 56.5**	**+1.4**
ROCH	**El Roble**	**3.78**	**165**	*e*P	**Pn**	**04 52 01.5**	**+0.4**
ROCH				*e*P	**Pn**	**04 52 01.3**	**+0.2**
ROCH				IAML		04 53 09.4	
	comp=N,1μm,0.2s						
ROC1	**El Roble**	**3.78**	**165**	*e*P	**Pn**	**04 52 01.0**	**-0.2**
ROC1				*e*P	**Pn**	**04 52 01.4**	**+0.3**
ROC1				*e*S	**Sn**	**04 52 46.2**	**+0.2**
ROC1				*e*S	**Sb**	**04 52 56.5**	**+0.9**
PEL	**Peldehue**	**4.02**	**162**	Pn	**Pn**	**04 52 04.5**	**+0.1**
PEL	**Peldehue**	**4.02**	**162**	*e*P	**Pn**	**04 52 05.0**	**+0.7**
PEL				*e*S	**Sb**	**04 53 04.5**	**+2.1**
MT02	**Curacav**	**4.03**	**168**		**Pn**	**04 52 04.8**	**+0.4**
RTCV	**Cerro Valdivia**	**4.03**	**130**	*e*P	**Pn**	**04 52 07.0**	**+2.6**
MT05	**Renca**	**4.24**	**164**	*e*P	**Pn**	**04 52 08.3**	**+1.0**
MT05	**Renca**	**4.24**	**164**		**Pn**	**04 52 08.0**	**+0.6**
MT05	**Renca**	**4.24**	**164**	*e*P	**Pn**	**04 52 03.0**	**-4.4**
MT05				*e*P	**Pn**	**04 52 08.0**	**+0.6**
MT05				*e*S	**Sn**	**04 52 56.7**	**-0.5**
MT05				IAML		04 53 24.9	
	comp=Z,922nm,0.8s						
AVFE	**Valle Fertil**	**4.30**	**109**	*e*P	**Pn**	**04 52 04.5**	**-3.8**
AVFE				*e*P	Pb	04 52 10.0	-8.3
AVFE				*e*S	**Sb**	**04 53 07.5**	**-3.0**
AVFE				IAML		04 53 17.1	
	comp=Z,870nm,0.7s						
ASAL	**Salagasta**	**4.34**	**140**	*e*P	**Pn**	**04 52 12.0**	**+3.2**
ASAL				*e*P	**Pn**	**04 52 12.4**	**+3.7**
ASAL				*e*S	**Sb**	**04 53 14.4**	**+2.8**
ASAL				IAML		04 53 22.0	
	comp=Z,966nm,1.8s						
VA05	**Santo Domingo**	**4.35**	**174**	Pn	**Pn**	**04 52 08.4**	**-0.4**
ARCO	**CERRO ARCO**	**4.48**	**142**	*e*P	Pn	04 52 15.0	+4.3
ARCO				IAML		04 53 32.4	
	comp=Z,818nm,0.7s						
ACLC	**CERRO LA CRUZ**	**4.56**	**93**	*e*P	**Pn**	**04 52 07.5**	**-4.4**
ACLC				*e*P	**Pn**	**04 52 13.0**	**+1.2**
ACLC				*e*S	**Sb**	**04 53 17.9**	**+0.1**
ACLC				IAML		04 53 27.7	
	comp=Z,574nm,0.7s						
MT09	**Talagante**	**4.56**	**168**	⇑*i*P	**Pn**	**04 52 12.5**	**+0.7**
MT09	**Talagante**	**4.56**	**168**		**Pn**	**04 52 12.5**	**+0.7**
MT01	**Popeta**	**4.60**	**170**		**Pn**	**04 52 12.2**	**0.0**
MT01	**Popeta**	**4.60**	**170**	*e*P	**Pn**	**04 52 12.0**	**-0.2**
MT01				*e*P	Pb	04 52 12.4	-11
MT01				*e*S	**Sb**	**04 53 20.4**	**+1.5**
MT01				IAML		04 53 38.0	
	comp=Z,403nm,0.7s						
PB14	**IPOC Station P**	**4.93**	**19**	Pn	**Pn**	**04 52 15.5**	**-1.6**
BO01	**Tunca**	**5.14**	**170**	Pn	**Pn**	**04 52 19.8**	**+0.1**
BO01	**Tunca**	**5.14**	**170**	*e*P	Pn	04 52 14.4	-5.2
BO01				*e*P	**Pn**	**04 52 20.0**	**+0.3**
BO01				*e*S	**Sb**	**04 53 39.0**	**+4.4**
BO01				IAML		04 53 50.9	
	comp=Z,327nm,0.8s						
BO02	**Sierra Bellavi**	**5.58**	**168**		**Pn**	**04 52 26.2**	**+0.4**
BO02	**Sierra Bellavi**	**5.58**	**168**	*e*P	**Pn**	**04 52 26.4**	**+0.6**
BO02				*e*S	**Sb**	**04 53 49.0**	**+1.6**
CYA	**Choya**	**5.65**	**83**	*e*P	**Pn**	**04 52 28.9**	**+2.2**
CYA				*e*S	**Sn**	**04 53 37.5**	**+5.5**
CYA				IAML		04 53 46.0	
	comp=Z,378nm,0.9s						
GO05	**Huala**	**5.68**	**178**		**Pn**	**04 52 26.5**	**-0.6**
GO05	**Huala**	**5.68**	**178**	*e*P	**Pn**	**04 52 26.4**	**-0.6**
PB10	**IPOC Station P**	**5.96**	**14**	Pn	**Pn**	**04 52 31.0**	**+0.1**
PB10	**IPOC Station P**	**5.96**	**14**	*e*P	**Pn**	**04 52 28.9**	**-2.0**
PB10				*e*P	**Pn**	**04 52 30.4**	**-0.5**
PB10				*e*S	**Sn**	**04 53 38.7**	**-0.7**
RFA	**San Rafael**	**6.28**	**151**	*e*P	**Pn**	**04 52 37.5**	**+2.0**
MRA	**San Martin**	**6.35**	**121**	*e*S	**Sn**	**04 53 53.0**	**+3.8**
ML02	**Panimavida**	**6.46**	**175**	Pn	**Pn**	**04 52 36.8**	**-1.0**
PB15	**IPOC Station P**	**6.55**	**22**		**Pn**	**04 52 38.9**	**-0.3**
PB15	**IPOC Station P**	**6.55**	**22**	*e*P	**Pn**	**04 52 40.0**	**+0.8**
PB15				*e*S	**Sn**	**04 53 54.5**	**+0.2**
PB05	**IPOC Station P**	**6.68**	**16**	*e*P	**Pn**	**04 52 39.0**	**-1.9**
PB05				*e*S	**Sn**	**04 53 54.8**	**-2.5**
PB06	**IPOC Station P**	**6.99**	**20**		**Pn**	**04 52 43.8**	**-1.4**
H03N1	**Juan Fernandez**	**7.08**	**233**	T	T	05 00 36.5	
	baz=64,slow=71,SNR=1654						
H03N2	**Juan Fernandez**	**7.09**	**233**	T	T	05 00 32.2	
	baz=64,slow=71,SNR=1532						
H03N3	**Juan Fernandez**	**7.09**	**233**	T	T	05 00 35.0	
	baz=64,slow=71,SNR=1421						
PB04	**IPOC Station P**	**7.19**	**15**		**Pn**	**04 52 46.0**	**-2.0**
LVC	**Limon Verde**	**7.29**	**24**	Pn	**Pn**	**04 52 48.7**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=160,slow=6.4,SNR=17						
LVC				LR	LR	04 55 36.7	
	comp=Z,449nm,18.9s,baz=212,slow=38						
LVC	**Limon Verde**	**7.29**	**24**	*e*P	**Pn**	**04 52 48.5**	**-1.1**
H03S3	**Juan Fernandez**	**7.30**	**230**	T	T	05 00 47.7	
	baz=6.4,SNR=6.5						
H03S1	**Juan Fernandez**	**7.30**	**230**	T	T	05 00 46.2	
	baz=6.4,SNR=5.4						
H03S2	**Juan Fernandez**	**7.32**	**230**	T	T	05 00 47.8	
	baz=6.4,SNR=5.1						
PB07	**IPOC Station P**	**7.83**	**16**		**Pn**	**04 52 56.0**	**-0.8**
LC01	**Cunco**	**9.56**	**179**	Pn	**Pn**	**04 53 19.3**	**-1.0**
LR03	**Panguipulli**	**10.29**	**181**		**Pn**	**04 53 30.3**	**-0.1**
PLCA	**Paso Flores**	**11.47**	**174**	Pn	**Pn**	**04 53 46.9**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=336,slow=12,SNR=13						
PLCA	**Paso Flores**	**11.47**	**174**		**Pn**	**04 53 46.4**	**-0.1**
LL04	**Puerto Octay**	**11.57**	**181**		**Pn**	**04 53 48.0**	**+0.2**
TRQA	**Tornquist**	**12.16**	**138**	Pn	**Pn**	**04 53 55.1**	**-0.8**
CPUP	**Villa Florida**	**13.47**	**81**	Pn	**Pn**	**04 54 13.9**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=20,SNR=1.7						
CPUP				Sn	**Sn**	**04 56 48.1**	**+4.4**
	baz=27,slow=2.3,SNR=1.7						
CPUP				LR	LR	04 59 42.3	
	comp=Z,425nm,18.0s,baz=268,slow=39						
CPUP	**Villa Florida**	**13.47**	**81**	*e*P	**Pn**	**04 54 12.2**	**-1.6**
CPUP	**Villa Florida**	**13.47**	**81**	Pn	**Pn**	**04 54 12.7**	**-1.1**
LPAZ	**La Paz**	**13.49**	**17**	Pn	**Pn**	**04 54 13.2**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=166,slow=8.3,SNR=5.2						
LPAZ				LR	LR	04 59 52.7	
	comp=Z,120nm,19.6s,baz=163,slow=39						
LPAZ	**La Paz**	**13.49**	**17**	*e*P	**Pn**	**04 54 13.3**	**-1.4**
LPAZ	**La Paz**	**13.49**	**17**		**Pn**	**04 54 12.7**	**-2.1**
ITQB	**Itaqui**	**13.55**	**95**	*e*P	**Pn**	**04 54 14.1**	**-0.8**
ITQB	**Itaqui**	**13.55**	**95**	Pn	**Pn**	**04 54 12.7**	**-2.2**
PLTB	**Pedras Altas**	**16.18**	**103**	*e*P	**Pn**	**04 54 51.2**	**+1.0**
CPSB	**Cacapava Do Su**	**16.29**	**98**	*e*P	**Pn**	**04 54 52.3**	**+0.7**
SIV	**San Ignacio**	**16.74**	**40**	Pn	**Pn**	**04 54 55.8**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=220,slow=14,SNR=26						
SIV				LR	LR	05 02 11.0	
	comp=Z,187nm,18.1s,baz=260,slow=40						
AQDB	**Aquidauana**	**17.33**	**63**	*e*P	**Pn**	**04 55 02.1**	**-2.6**
AQDB	**Aquidauana**	**17.33**	**63**	P	**P**	**04 55 05.2**	**-0.9**
PTLB	**Pontes e Lacer**	**18.30**	**44**	P	**Pn**	**04 55 17.1**	**+0.3**
PTGB	**Pitanga**	**18.49**	**80**	*e*P	**Pn**	**04 55 19.0**	**-0.1**
CNLB	**Canela**	**18.59**	**95**	*e*P	**Pn**	**04 55 22.8**	**+2.5**
VILB	**Vilhena**	**19.72**	**37**	*e*P	**Pn**	**04 55 33.1**	**-0.8**
VILB	**Vilhena**	**19.72**	**37**		**Pn**	**04 55 32.1**	**-1.9**
VILB				IAmb	IAmb	04 55 38.0	
	comp=Z,13nm,0.8s						
TER01	**Tubaro-SC**	**20.18**	**93**	*e*P	**P**	**04 55 36.7**	**-0.8**
ETMB	**Extrema**	**20.19**	**17**	*e*P	Pn	04 55 40.2	+0.8
ETMB	**Extrema**	**20.19**	**17**		Pn	04 55 37.9	-1.6
ETMB				IAmb	IAmb	04 55 45.3	
	comp=Z,14nm,0.9s						
SALV	**Santo Antonio**	**20.21**	**52**	*e*P	Pn	04 55 37.5	-2.2
PCMB	**Pacaembu**	**20.36**	**73**	*e*P	**P**	**04 55 39.5**	**0.0**
FRTB	**Fartura**	**21.10**	**79**	*e*P	**P**	**04 55 47.0**	**-0.6**
CZSB	**Cruzeiro do Su**	**21.48**	**359**	*e*P	**P**	**04 55 55.0**	**+3.5**
CZSB	**Cruzeiro do Su**	**21.48**	**359**	P	**P**	**04 55 54.1**	**+2.5**
CZSB				IAmb	IAmb	04 56 11.0	
	comp=Z,37nm,1.2s						
SAML	**Samuel**	**21.95**	**24**	P	**P**	**04 55 57.6**	**+1.0**
ITRB	**Iturama**	**22.00**	**69**	*e*P	**P**	**04 55 56.4**	**-0.8**
PDRB	**Porto dos Gac**	**22.75**	**42**	*e*P	**P**	**04 56 04.9**	**-0.3**
SPB	**Sao Paulo**	**22.85**	**81**	*e*P	**P**	**04 56 06.5**	**+0.3**
BB19B	**Bebedouro**	**22.89**	**74**	*e*P	**P**	**04 56 04.8**	**-1.9**
ARAG	**Araguaiana, MT**	**23.13**	**59**	*e*P	**P**	**04 56 09.5**	**+0.4**
RCLB	**Rio Claro- Sao**	**23.18**	**78**	*e*P	**P**	**04 56 08.8**	**-0.9**
VAO	**Valinhos**	**23.46**	**80**	*e*P	**P**	**04 56 11.6**	**-0.9**
CLDB	**Colider**	**23.89**	**43**	*e*P	**P**	**04 56 16.8**	**+0.2**
IPMB	**Ipameri, GO**	**24.62**	**68**	*e*P	**P**	**04 56 21.8**	**-1.8**
TBTG	**Tabatinga, AM**	**25.09**	**5**	*e*P	**P**	**04 56 30.1**	**+2.6**
TBTG	**Tabatinga, AM**	**25.09**	**5**	P	**P**	**04 56 29.7**	**+2.2**
USHA	**Ushuaia**	**25.64**	**175**	P	**P**	**04 56 33.7**	**+1.4**
	comp=Z,3.4nm,0.6s,baz=19,slow=11,SNR=5.0						
USHA				LR	LR	05 08 21.7	
	comp=Z,167nm,19.6s,baz=306,slow=41						
SNDB	**Serra Nova Dou**	**25.99**	**53**	*e*P	**P**	**04 56 35.5**	**-0.4**
BDFB	**Brasilia**	**26.07**	**64**	P	**P**	**04 56 36.4**	**-0.4**
	comp=Z,6.6nm,0.6s,baz=235,slow=8.6,SNR=15						
BDFB				LR	LR	05 08 29.0	
	comp=Z,178nm,19.6s,baz=233,slow=40						
BDFB	**Brasilia**	**26.07**	**64**	P	**P**	**04 56 36.5**	**-0.2**
BDFB				IAmb	IAmb	04 56 36.8	
	comp=Z,9.8nm,0.7s						
NPGB	**Novo Progresso**	**27.24**	**39**	*e*P	**P**	**04 56 47.5**	**+0.4**
PEXB	**Peixe**	**28.04**	**57**	*e*P	**P**	**04 56 54.0**	**-0.4**
DIAM	**Diamantina, MG**	**28.21**	**74**	*e*P	**P**	**04 56 56.0**	**0.0**
CAM01	**Campos-RJ**	**28.46**	**82**	*e*P	**P**	**04 56 59.9**	**+1.9**
MC01	**Montes Claros**	**28.77**	**70**	*e*P	**P**	**04 57 00.3**	**-0.6**
ITTB	**Itaituba**	**29.30**	**35**	*e*P	**P**	**04 57 05.7**	**+0.3**
JANB	**Januaria**	**29.34**	**67**	*e*P	**P**	**04 57 05.6**	**-0.3**
SJMB	**Sao Joao De Ma**	**30.13**	**76**	*e*P	**P**	**04 57 12.5**	**-0.3**
BSFB	**Barra de Sao F**	**30.36**	**77**	*e*P	**P**	**04 57 14.3**	**-0.6**
SDBA	**SAO DESIDERIO**	**30.41**	**62**	*e*P	**P**	**04 57 15.3**	**-0.1**
NBIT	**Itapeh - BA**	**33.40**	**72**	*e*P	**P**	**04 57 42.5**	**+0.9**
BOAV	**Boa Vista**	**33.45**	**21**	*e*P	**P**	**04 57 43.4**	**+1.4**
GDU01	**Guandu, BA**	**33.92**	**70**	*e*P	**P**	**04 57 45.3**	**-0.8**
NBPN	**Ponto Novo - B**	**35.03**	**65**	*e*P	**P**	**04 57 55.6**	**-0.2**
TMAB	**Tom-Au,PA,Br**	**35.24**	**45**	*e*P	**P**	**04 57 58.6**	**+1.0**
NBPS	**Pedro II - PI**	**38.22**	**55**	*e*P	**P**	**04 58 23.4**	**+0.3**
NBMA	**Muriti-CE**	**38.27**	**62**	*e*P	**P**	**04 58 23.8**	**+0.3**
NBPB	**Pedra_Branca-C**	**38.81**	**59**	*e*P	**P**	**04 58 28.5**	**+0.5**
NBPA	**Parau_RN**	**40.55**	**62**	*e*P	**P**	**04 58 42.9**	**+0.4**
NBPV	**Pedro Velho**	**41.55**	**64**	*e*P	**P**	**04 58 51.0**	**+0.3**
VNA3	**Neumayer Olymp**	**53.74**	**159**	P	**P**	**05 00 26.1**	**+1.4**
VNA1	**Neumayer--Stat**	**54.03**	**158**	P	**P**	**05 00 28.4**	**+1.6**
VNA2	**Neumayer--Watz**	**54.38**	**159**	P	**P**	**05 00 30.6**	**+1.3**
	baz=288,slow=8.6						
SNAA	**Sanae**	**55.97**	**159**	P	**P**	**05 00 41.9**	**+1.0**
SNAA	**Sanae**	**55.97**	**159**	P	**P**	**05 00 41.9**	**+1.0**
SNAA				IAmb	IAmb	05 00 42.8	
	comp=Z,4.8nm,0.8s						
QSPA	**South Pole Qui**	**60.91**	**180**	P	**P**	**05 01 15.5**	**0.0**
QSPA				IAmb	IAmb	05 01 19.6	
	comp=Z,2.6nm,0.7s						
TXAR	**Lajitas Array**	**65.62**	**330**	P	P	05 01 50.9	+3.8
	comp=Z,0.8nm,0.7s,baz=154,slow=8.1,SNR=12						
TXAR	**Lajitas Array**	**65.62**	**330**	P	**P**	**05 01 47.8**	**+0.7**
SIUC	**Southern Illin**	**68.57**	**346**	P	P	05 02 07.8	+2.3
DBIC	**Dimbokro**	**73.84**	**73**	P	**P**	**05 02 38.8**	**+0.7**
	comp=Z,4.7nm,0.7s,baz=250,slow=5.4,SNR=7.4						
DBIC	**Dimbokro**	**73.84**	**73**	P	**P**	**05 02 37.8**	**-0.2**
DBIC				IAmb	IAmb	05 02 39.6	
	comp=Z,6.2nm,0.8s						
MAW	**Mawson**	**77.69**	**164**	P	**P**	**05 03 00.5**	**+1.3**
	comp=Z,1.6nm,0.6s,baz=349,slow=19,SNR=4.8						
MAW				LR	LR	05 36 06.5	
	comp=Z,58nm,20.7s,baz=231,slow=35						
MAW	**Mawson**	**77.69**	**164**	P	**P**	**05 03 00.2**	**+1.0**
KOWA	**Kowa**	**78.84**	**66**	P	**P**	**05 03 06.1**	**-0.3**
KOWA				IAmb	IAmb	05 03 08.3	
	comp=Z,6.8nm,0.8s						
PDAR	**Pinedale Array**	**79.55**	**333**	P	P	05 03 13.1	+3.1
	comp=Z,21nm,0.4s,baz=129,slow=7.1,SNR=3.9						
BOSA	**Boshof**	**82.37**	**118**	LR	LR	05 37 22.4	
	comp=Z,17nm,18.1s,baz=1.5,slow=34						
TORD	**Torodi Ar. Bea**	**82.74**	**71**	P	**P**	**05 03 28.4**	**+1.1**
	comp=Z,4.6nm,0.7s,baz=266,slow=5.1,SNR=34						
TORD				LR	LR	05 38 42.4	
	comp=Z,61nm,19.7s,baz=280,slow=35						
TORD	**Torodi Ar. Bea**	**82.74**	**71**	P	**P**	**05 03 27.0**	**-0.3**
TORD				IAmb	IAmb	05 03 29.1	
	comp=Z,4.4nm,0.8s						
WRA	**Warramunga Arr**	**124.75**	**211**	PKP	**PKiKP**	**05 10 04.7**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=159,slow=1.7,SNR=12						
H11S2	**WAKE ISLAND Hy**	**125.59**	**273**	T	T	07 29 05.8	
	baz=114,slow=74,SNR=15						
H11S1	**WAKE ISLAND Hy**	**125.60**	**273**	T	T	07 29 06.8	
	baz=114,slow=74,SNR=9.2						
H11S3	**WAKE ISLAND Hy**	**125.61**	**273**	T	T	07 29 07.2	
	baz=114,slow=74,SNR=12						
BVAR	**Borovoye Array**	**143.81**	**38**	PKP	**PKiKP**	**05 10 38.4**	**-2.8**
	comp=Z,0.5nm,0.5s,baz=207,slow=6.0,SNR=2.5						
KURK	**Kurchatov**	**149.39**	**38**	PKPdf	**PKPbc**	**05 10 48.7**	**-2.9**
KURBB	**Kurchatov Arra**	**149.39**	**38**	PKPbc	**PKPab**	**05 10 53.9**	**-2.4**
	comp=Z,3.0nm,0.5s,baz=304,slow=3.1,SNR=20						
AAK	**Ala-Archa**	**150.13**	**55**	PKPbc	**PKPab**	**05 10 56.1**	**-3.8**
	comp=Z,3.2nm,0.6s,baz=215,slow=4.5,SNR=9.2						
ZALV	**Zalesovo Beam**	**150.24**	**28**	PKP	**PKPbc**	**05 10 51.2**	**-2.4**
	comp=Z,11nm,0.6s,baz=286,slow=2.8,SNR=27						
ZALV				PKPbc	**sPKPbc**	**05 10 56.4**	**+1.9**
	comp=Z,11nm,0.6s,baz=300,slow=3.7,SNR=32						
ZALV	**Zalesovo Beam**	**150.24**	**28**	PKPdf	**PKPbc**	**05 10 49.4**	**-4.2**
MKAR	**Makanchi Array**	**153.55**	**42**	PKPbc	**PKiKP**	**05 11 03.4**	**+1.8**
	comp=Z,1.5nm,0.6s,baz=333,slow=2.5,SNR=9.7						

PRU 15 05:05:33.5±0.0**, 49°.81N**×**18°.49E, h0**^{km}**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.22**	**277**	*e*PG	Pg	05 05 36.9	-0.9
OKC				*e*SG	Sg	05 05 41.6	+0.9
	comp=Z,8.5nm,0.8s						
MORC	**Moravsky Berou**	**0.61**	**267**	*e*PG	Pg	05 05 45.4	+0.1
MORC				*e*SG	Sg	05 05 52.8	-0.4
KRLC	**Kraliky**	**1.14**	**284**	*e*PG	Pg	05 05 53.6	-1.6
KRLC				*e*SG	Sg	05 06 09.3	-0.6
	comp=Z,1.9nm,0.5s						
DPC	**Dobruska-Polom**	**1.50**	**292**	*e*PG	Pn	05 06 00.2	-1.5
DPC				*e*SG	Sg	05 06 20.1	-1.5
CHVC	**Chvalec**	**1.75**	**297**	*e*PG	Pn	05 06 04.8	-0.3
CHVC				*e*SG	Sg	05 06 29.9	+0.3

VIE ***15*** *05:06:17.9±0.2, 46°.31N×13°.66E, h12^{km}±2^{km}, mb1.9/9, ml2.5/15, Error ellipse: s-maj=1.4km s-min=1.1km az=13.0 6 km WNW of Camporosso*

PRU ***15*** *05:06:17.4±0.0, 46°.21N×13°.87E, h0^{km}*

ROM ***15*** *05:06:17.3±0.5, 46°.33N±0°.01×13°.75E±0°.03, h10^{km}±3^{km}, ML2.4/5, Error ellipse: s-maj=2.0km s-min=1.6km az=73.0*

IASPEI ***15*** *05:06:18.4±0.8, 46°.30N±0°.02×13°.67E±0°.02, h7^{km}±6^{km}, Error ellipse: s-maj=2.7km s-min=2.0km az=28.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

LJU ***15*** *05:06:18.0, 46°.30N×13°.67E, h9^{km}, ML2.2*

RHSSO ***15*** *05:06:19.7±1.1, 46°.32N×13°.70E, h4^{km}±3^{km}, ML2.4/3*

ISC 15 05:06:18.4±0.8**, 46°.30N**±0°.01×**13°.68E**±0°.01**, h7**^{km}±6^{km}**, n101, σ0^{s}78**/172**, 3C-9D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CADS	**Cadrg**	**0.08**	**149**	⇓*i*Pg	**Pg**	**05 06 20.5**	**+0.1**
CADS				*i* Sg	**Sg**	**05 06 22.1**	**+0.2**
CADS				IAML		05 06 22.3	
	comp=Z,936nm,0.1s						
DRE	**Drenchia**	**0.13**	**191**	⇓*e*Pg	**Pg**	**05 06 21.2**	**+0.1**
DRE				*e*Sg	**Sg**	**05 06 23.3**	**+0.3**
ROBS	**Robic**	**0.13**	**246**	⇓*i*Pg	**Pg**	**05 06 21.1**	**-0.1**
ROBS				*i* Sg	**Sg**	**05 06 23.1**	**+0.1**
ROBS				IAML		05 06 23.2	
	comp=Z,567nm,0.2s						
PRED	**Cave del Predi**	**0.17**	**332**	⇓*e*Pg	**Pg**	**05 06 21.5**	**-0.3**
PRED				*e*Sg	**Sg**	**05 06 24.2**	**+0.1**
LSR	**Lussari**	**0.21**	**330**	⇓*e*Pg	**Pg**	**05 06 22.4**	**-0.2**
LSR				*e*Sg	**Sg**	**05 06 25.8**	**+0.3**
GORS	**Gorjuse**	**0.22**	**85**	*i* Pg	**Pg**	**05 06 22.9**	**+0.1**
GORS				*i* Sg	**Sg**	**05 06 26.6**	**+0.8**
GORS				IAML		05 06 28.3	
	comp=Z,419nm,0.1s						
COLI	**Coloredo**	**0.26**	**232**	⇓*e*Pg	**Pg**	**05 06 23.6**	**0.0**
COLI				*e*Sg	**Sg**	**05 06 28.0**	**+0.9**
ACOM	**Acomizza, Ital**	**0.28**	**336**	⇓*e*Pg	**Pg**	**05 06 23.6**	**-0.3**
ACOM				*e*Sg	**Sg**	**05 06 28.0**	**+0.4**
ACOM	**Acomizza, Ital**	**0.28**	**336**	⇓P	**Pg**	**05 06 23.6**	**-0.3**
ACOM				S	**Sg**	**05 06 27.7**	**+0.1**
VINO	**Villanova**	**0.28**	**262**	*e*Pg	**Pg**	**05 06 23.6**	**-0.3**
VOJS	**Vojsko**	**0.30**	**152**	⇓*i*Pg	**Pg**	**05 06 24.4**	**+0.1**
VOJS				*i* Sg	**Sg**	**05 06 29.1**	**+0.7**
VOJS				IAML		05 06 30.3	
	comp=Z,182nm,0.1s						
BAD	**Bernadia**	**0.31**	**259**	*e*Pg	**Pg**	**05 06 24.1**	**-0.4**
BAD				*e*Sg	**Sg**	**05 06 29.5**	**+1.0**
SABO	**M.te Sabotino**	**0.32**	**190**	⇑*e*Pg	**Pg**	**05 06 24.5**	**-0.2**
SABO	**M.te Sabotino**	**0.32**	**190**	P	**Pg**	**05 06 24.6**	**-0.1**
SABO				S	**Sb**	**05 06 30.4**	**-1.5**
MYKA	**Terra Mystica**	**0.33**	**356**	*e*Pg	**Pg**	**05 06 24.8**	**-0.2**
	comp=Z,30nm,0.3s,SNR=44						
MYKA				*e*Sg	**Sg**	**05 06 29.9**	**+0.5**
	comp=Z,38nm,0.1s						
BUA	**Buia**	**0.39**	**259**	⇑*e*Pg	**Pg**	**05 06 25.9**	**-0.1**
BOO	**Bordano**	**0.40**	**273**	⇑*e*Pg	**Pg**	**05 06 25.6**	**-0.7**
BOO				*e*Sg	**Sg**	**05 06 31.4**	**0.0**
PLRO	**Paularo**	**0.45**	**305**	*e*Pg	**Pg**	**05 06 27.1**	**0.0**
CRNS	**Crni Vrh**	**0.46**	**118**	*i* Pg	**Pg**	**05 06 27.3**	**0.0**
CRNS				*i* Sg	**Sb**	**05 06 34.5**	**-1.4**
CRNS				IAML		05 06 39.2	
	comp=Z,71nm,0.1s						
MPRI	**Monte Prat**	**0.48**	**264**	*e*Pg	**Pg**	**05 06 27.6**	**-0.1**
MPRI	**Monte Prat**	**0.48**	**264**	P	**Pg**	**05 06 27.5**	**-0.2**
MPRI				S	**Sb**	**05 06 35.3**	**-1.3**
FUSE	**Fusea**	**0.48**	**284**	*e*Pg	**Pg**	**05 06 27.7**	**0.0**
JAVS	**Javornik**	**0.49**	**146**	*i* Pg	**Pg**	**05 06 27.4**	**-0.4**
JAVS				*e*Sg	**Sb**	**05 06 35.4**	**-1.3**
JAVS				IAML		05 06 36.3	
	comp=Z,34nm,0.1s						
MOZS	**Mozjanca**	**0.53**	**90**	*i* Pg	**Pg**	**05 06 28.9**	**+0.2**
MOZS				*i* Sg	**Sb**	**05 06 36.8**	**-1.1**
MOZS				IAML		05 06 40.5	
	comp=Z,32nm,0.1s						
TLI	**Talmassons**	**0.55**	**227**	*e*Pg	**Pg**	**05 06 28.8**	**-0.2**
ZOU	**Zoufplan**	**0.55**	**298**	*e*Pg	**Pg**	**05 06 29.1**	**0.0**
ZOU	**Zoufplan**	**0.55**	**298**	P	**Pg**	**05 06 29.0**	**-0.1**
ZOU				S	**Sb**	**05 06 37.7**	**-1.0**
CLUD	**Cludinico**	**0.57**	**286**	*e*Pg	**Pg**	**05 06 29.2**	**-0.3**
CLUD				*e*Sg	**Sb**	**05 06 38.1**	**-1.1**
CLUD	**Cludinico**	**0.57**	**286**	P	**Pg**	**05 06 28.9**	**-0.5**
CLUD				S	**Sb**	**05 06 38.1**	**-1.1**
OBKA	**Obir**	**0.64**	**70**	*e*Pg	**Pg**	**05 06 30.5**	**-0.3**
	comp=Z,4.7nm,0.1s,SNR=26						
OBKA				*e*Sg	**Sb**	**05 06 39.9**	**-1.2**
	comp=Z,77nm,0.2s						
LJU	**Ljubljana**	**0.64**	**113**	*i* Pg	**Pb**	**05 06 31.2**	**-0.7**
LJU				*i* Sg	**Sb**	**05 06 40.0**	**-1.2**
LJU				IAML		05 06 44.6	
	comp=Z,54nm,0.1s						
LJU	**Ljubljana**	**0.64**	**113**	*e*Pg	**Pg**	**05 06 31.0**	**+0.2**
LJU				*e*Sg	**Sb**	**05 06 40.6**	**-0.6**
LJU	**Ljubljana**	**0.64**	**113**	S	**Sb**	**05 06 41.0**	**-0.2**
GBAS	**Gorenja Brezov**	**0.64**	**124**	*i* Pg	**Pg**	**05 06 30.4**	**-0.4**
GBAS				*i* Sg	**Sb**	**05 06 40.6**	**-0.6**
GBAS				IAML		05 06 43.1	
	comp=Z,34nm,0.1s						
STAL	**STALIGIAL**	**0.67**	**267**	P	**Pg**	**05 06 30.4**	**-1.0**
STAL				AML	AML		
	comp=N,396μm,0.7s						
STAL				AML	AML		
	comp=E,228μm,0.3s						
STAL				AML	AML		
	comp=N,231μm,0.2s						
STAL				AML	AML		
	comp=E,212μm,1.3s						
FVI	**Forni Avoltri**	**0.69**	**296**	P	**Pg**	**05 06 31.5**	**-0.1**
FVI				S	**Sg**	**05 06 41.5**	**+0.8**
VNDS	**Vrh nad Dolski**	**0.74**	**105**	*i* Pg	**Pg**	**05 06 32.8**	**+0.2**
VNDS				*e*Sg	**Sb**	**05 06 43.3**	**-0.6**
VNDS				IAML		05 06 48.7	
	comp=Z,48nm,0.2s						
MLNI	**Malnisio**	**0.76**	**259**	*e*Pg	**Pg**	**05 06 32.3**	**-0.6**
CEY	**Cerknica**	**0.77**	**137**	*i* Pg	**Pg**	**05 06 32.9**	**-0.2**
CEY				*e*Sg	**Sb**	**05 06 44.6**	**-0.1**
CEY				IAML		05 06 46.6	
	comp=Z,44nm,0.2s						
CEY	**Cerknica**	**0.77**	**137**	*e*Pg	**Pg**	**05 06 33.1**	**0.0**
CEY				*e*Sg	**Sb**	**05 06 44.4**	**-0.3**

SKDS	**Skadanscina**	0.79	162	*e*Sg	Sb	05 06 45.2	-0.1
SKDS				IAML		05 06 51.4	
	comp=Z,16nm,0.1s						
KBA	**Koelnbreinsper**	0.81	344	*e*Pg	Pg	05 06 33.8	-0.3
	comp=Z,3.8nm,0.1s,SNR=6.0						
KBA				*e*Sg	Sg	05 06 44.9	+0.2
	comp=Z,22nm,0.2s						
CIMO	**Cimolais**	0.86	271	P	Pg	05 06 34.4	-0.5
CIMO				AML	AML		
	comp=N,41µm,0.5s						
CIMO				AML	AML		
	comp=E,34µm,1.6s						
KNDS	**Knezji Dol**	0.91	147	*i* Sg	Sb	05 06 49.3	+0.3
KNDS				IAML		05 06 56.5	
	comp=Z,25nm,0.1s						
ABTA	**Abfaltersbach**	0.92	300	*e*Pg	Pg	05 06 36.0	-0.1
	comp=Z,0.5nm,0.1s,SNR=6.0						
ABTA				*e*Sg	Sb	05 06 48.7	-0.6
	comp=Z,14nm,0.3s,SNR=6.8						
PDKS	**Podkum**	0.95	104	*i* Pg	Pb	05 06 36.7	-0.5
PDKS				*e*Sg	Sn	05 06 50.6	-1.4
PDKS				IAML		05 06 53.8	
	comp=Z,35nm,0.2s						
VISS	**Visnje**	0.95	121	*e*Pg	Pg	05 06 36.4	-0.2
VISS				*e*Sg	Sn	05 06 50.9	-1.1
VISS				IAML		05 06 55.4	
	comp=Z,47nm,0.2s						
SOKA	**Soboth**	1.01	67	*e*Pg	Pg	05 06 37.1	-0.7
	comp=Z,1.6nm,0.2s,SNR=12						
SOKA				*e*Sg	Sb	05 06 51.3	-0.5
	comp=Z,13nm,0.2s						
PERS	**Pernice**	1.05	71	*i* Pg	Pg	05 06 38.1	-0.5
GBRS	**Gornja Briga**	1.10	134	*i* Pg	Pn	05 06 39.9	-0.4
GBRS				*e*Sg	Sn	05 06 56.0	+0.2
GBRS				IAML		05 07 00.4	
	comp=Z,16nm,0.1s						
RIY	**Rijeka**	1.12	150	*e*Pg	Pn	05 06 40.2	-0.3
RIY				*e*Sg	Sn	05 06 56.2	0.0
RIY	**Rijeka**	1.12	150	*e*Pg	Pn	05 06 40.9	+0.3
RIY				Sg	Sb	05 06 55.2	+0.2
VARN	**Col Varnada, M**	1.14	255	P	Pg	05 06 40.1	-0.1
VARN				AML	AML		
	comp=E,485µm,1.1s						
VARN				AML	AML		
	comp=N,388µm,1.1s						
LEGS	**Legarje**	1.19	106	*e*Pg	Pn	05 06 41.1	-0.4
LEGS				*e*Sg	Sn	05 06 59.0	+1.0
DOBS	**Dobrina**	1.25	96	*i* Pg	Pg	05 06 42.3	-0.2
SMRN	**Sveta Marina**	1.30	165	*e*Pg	Pg	05 06 43.7	+0.3
SMRN				Sg	Sn	05 07 01.7	+1.0
CRES	**Cresnjev**	1.33	110	*i* Pg	Pg	05 06 43.6	-0.2
CRES				*i* Sg	Sn	05 07 03.7	+2.4
CRES				IAML		05 07 04.8	
	comp=Z,21nm,0.4s						
CRES	**Cresnjev**	1.33	110	*e*Pg	Pb	05 06 43.4	-0.2
CRES				*e*Sg	Sn	05 07 02.0	+0.7
BOJS	**Bojanci**	1.36	125	*i* Pg	Pb	05 06 44.0	-0.1
CGRP	**Cima Grappa**	1.37	253	P	Pb	05 06 44.3	-0.2
CGRP				AML	AML		
	comp=N,125µm,0.7s						
CGRP				AML	AML		
	comp=E,148µm,1.2s						
GOLS	**Golise**	1.38	101	*e*Pg	Pb	05 06 44.4	-0.2
BRJN	**Brijuni**	1.39	178	*e*Pn	Pb	05 06 44.7	-0.1
BRJN				Sg	Sg	05 07 03.3	+0.1
OZLJ	**Ozalj**	1.42	118	Sg	Sg	05 07 04.4	+0.2
OZLJ	**Ozalj**	1.42	118	*e*Pn	Pb	05 06 45.1	-0.1
GCIS	**Gornji Cirnik**	1.42	107	*i* Pg	Pg	05 06 45.6	-0.1
GCIS				*i* Sg	Sg	05 07 06.3	+2.1
GCIS				IAML		05 07 09.6	
	comp=Z,21nm,0.2s						
ARSA	**Arzberg**	1.59	52	*e*Pg	Pb	05 06 48.1	0.0
	comp=Z,3.8nm,0.2s,SNR=9.3						
ARSA				*e*Sg	Sg	05 07 09.2	-0.2
	comp=Z,8.4nm,0.2s,SNR=6.6						
MOA	**Molln**	1.60	14	*e*Pg	Pg	05 06 49.3	+0.1
	comp=Z,5.8nm,0.2s						
MOA				*e*Sg	Sg	05 07 11.9	+2.0
	comp=Z,13nm,0.3s						
PTJ	**Puntijarka**	1.64	103	*e*Pn	Pb	05 06 49.1	+0.1
PTJ				Sn	Sg	05 07 11.1	0.0
LOBO	**Lobor**	1.67	94	*e*Pn	Pg	05 06 49.7	-0.7
LOBO				Sn	Sb	05 07 10.9	+0.3
ZAG	**Zagreb**	1.68	105	*e*Pn	Pb	05 06 49.7	+0.1
ZAG				*e*Sn	Sg	05 07 11.7	-0.5
ABSI	**Aberstueckl**	1.68	286	AML	AML		
	comp=E,194µm,0.6s						
ABSI				AML	AML		
	comp=N,290µm,0.6s						
WTTA	**Wattenberg**	1.70	305	*e*Pg	Pg	05 06 50.6	-0.5
	comp=N,2.8nm,0.3s						
WTTA				*e*Sg	Sg	05 07 13.4	+0.3
	comp=N,12nm,0.5s						
RABC	**Rab**	1.73	153	*e*Pn	Pb	05 06 49.9	-0.6
RABC				Sn	Sg	05 07 13.4	-0.6
DOSS	**Dosso del Somm**	1.78	257	P	Pb	05 06 51.1	-0.4
DOSS				AML	AML		
	comp=N,128µm,0.8s						
DOSS				AML	AML		
	comp=E,126µm,0.4s						
NVLJ	**Novalja**	1.93	154	*e*Pn	Pb	05 06 53.2	-0.7
NVLJ				Sn	Sb	05 07 17.6	-0.5
SQTA	**Sankt Quirin**	1.93	299	*e*Pg	Pg	05 06 54.8	-0.7
	comp=E,2.1nm,0.3s						
SQTA				Sg	Sg	05 07 21.1	+0.6
	comp=E,7.1nm,0.3s						
KALN	**Kalnik**	1.94	94	*e*Pn	Pb	05 06 53.5	-0.6
KALN				Sn	Sb	05 07 18.5	+0.1
PLIT	**Plitvice**	1.97	135	Sn	Sb	05 07 19.3	0.0
PLIT	**Plitvice**	1.97	135	*e*Pn	Pb	05 06 53.6	-1.0
MOTA	**Moosalm**	2.05	302	*e*Pg	Pb	05 06 56.6	+0.4
	comp=E,0.9nm,0.2s						
MOTA				*e*Sg	Sg	05 07 24.9	+0.5
	comp=E,9.3nm,0.5s						
FETA	**Feichten**	2.16	291	*e*Pg	Pb	05 06 58.3	+0.4
	comp=E,0.3nm,0.2s						
FETA				*e*Sg	Sg	05 07 27.4	-0.3
	comp=E,0.8nm,0.2s						
CONA	**Conrad Observa**	2.21	42	*e*Pg	Pg	05 07 01.0	+0.2
	comp=E,1.2nm,0.2s						
CONA				*e*Sn	Sn	05 07 23.7	+0.5
	comp=E,5.0nm,0.4s						
MOSL	**Moslavina**	2.25	107	*e*Pn	Pn	05 06 56.5	+0.4
MOSL				Sn	Sb	05 07 26.6	-0.9
UDBI	**Udbina**	2.30	140	Sn	Sb	05 07 27.0	-1.9
UDBI	**Udbina**	2.30	140	*e*Pn	Pb	05 06 58.4	-1.9
DUGI	**Dugi Otok**	2.50	157	*e*Pn	Pn	05 07 00.2	+0.7
DUGI				Sn	Sn	05 07 31.1	+0.8
CKRC	**Cesky Krumlov**	2.56	9	*e*PG	Pg	05 07 06.8	-0.7
CKRC				*e*SG	Sg	05 07 41.6	+1.0
MRAK	**Mrakovica**	2.60	118	*e*Pn	Pn	05 07 02.6	+1.7
MRAK				*e*Sn	Sn	05 07 33.8	+1.0
DAVA	**Damuels**	2.79	292	*e*Sg	Sg	05 07 49.5	+1.5
	comp=E,6.2nm,0.4s						
MORI	**Morici**	2.83	149	*e*Pn	Pn	05 07 05.0	+1.1
MORI				Sn	Sn	05 07 38.9	+0.7
KHC	**Kasperske Hory**	2.84	359	*e*PN	Pn	05 07 04.8	+0.6
KHC				*e*PG	Pg	05 07 11.7	-1.0
KHC				*e*SN	Sn	05 07 39.3	+0.7
KHC				*e*SG	Sg	05 07 49.5	0.0
BLY	**Banja Luka**	2.91	121	*e*Pn	Pb	05 07 07.6	-3.0
BLY				*e*Sn	Sn	05 07 42.6	+2.3
ZIRJ	**Zirje**	2.99	151	*i* Pn	Pn	05 07 06.9	+0.7
ZIRJ				Sn	Sn	05 07 42.4	+0.2
HVAR	**Hvar**	3.69	147	*e*Pn	Pn	05 07 16.6	+0.8
HVAR				Sn	Sn	05 08 00.0	+0.4
RICI	**Ricice**	3.73	138	*e*Pn	Pn	05 07 17.7	+1.4
RICI				Sn	Sn	05 08 01.9	+1.5
PRU	**Pruhonice**	3.74	9	*e*SG	Sg	05 08 18.5	+0.1
	comp=E,21nm,1.6s						
MAKA	**Makarska**	3.84	140	*e*Pn	Pn	05 07 18.2	+0.3
MAKA				Sn	Sn	05 08 03.0	-0.1
NKC	**Novy Kostel**	4.02	349	*e*PG	Pg	05 07 34.5	-1.0
NKC				*e*SG	Sg	05 08 29.7	+2.1
	comp=E,3.9nm,0.7s						
LSTV	**Lastovo**	4.21	146	*e*Pn	Pn	05 07 23.6	+0.6
LSTV				Sn	Sn	05 08 13.5	+1.1
DPC	**Dobruska-Polom**	4.42	23	*e*SG	Sg	05 08 38.8	-1.6
	comp=E,2.5nm,0.6s						
STON	**Ston**	4.47	139	*e*Pn	Pn	05 07 26.9	+0.3
STON				Sn	Sn	05 08 19.1	+0.4

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*IPEC **15** 05:18:38.7±0.3, 51.°63N×16.°12E, h0^{km}, ML2.5/4, Error ellipse: s-maj=3.0km s-min=1.5km az=65.0*

*VIE **15** 05:18:40.5±0.9, 51.°54N×16.°17E, h0^{km}, mb2.5/4, ml2.9/3, Error ellipse: s-maj=13.2km s-min=5.9km az=68.0 76 km NW of Wroclaw Suspected Mining induced.*

*PRU **15** 05:18:41.0±0.0, 51.°52N×16.°04E, h0^{km}*

*IDC **15** 05:18:41.4±1.2, 51.°50N×15.°97E, h0^{km}, mb1 3.2/4, mb1mx3.0/41, mbtmp3.1/4, ML2.8/4, Error ellipse: s-maj=16.7km s-min=10.1km az=128.0*

ISC 15 05:18:38.9±0.9**, 51.°62N**±0.°04×**16.°08E**±0.°03**, h0^{km}, n36, σ0.^{s}88**/68**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.79	170	*e*Pg	Pg	05 18 54.4	+0.5
KSP				*e*Sg	Sg	05 19 04.2	+0.1
CHVC	**Chvalec**	1.03	181	*e*PG	Pg	05 18 58.8	+0.2
CHVC				*e*SG	Sg	05 19 11.1	-0.8
	comp=Z,36nm,0.4s						
OSTC	**Ostas**	1.06	175	*e*PG	Pg	05 18 59.4	+0.1
OSTC				*e*SG	Sg	05 19 12.6	-0.4
	comp=Z,63nm,0.4s						
UPC	**Upice**	1.11	182	*e*PG	Pg	05 19 00.1	0.0
UPC				*e*SG	Sg	05 19 14.3	-0.2
	comp=Z,116nm,0.6s						
DPC	**Dobruska-Polom**	1.28	173	*e*PG	Pg	05 19 03.3	0.0
DPC				*e*SG	Sg	05 19 18.6	-1.2
	comp=Z,38nm,0.4s						
PVCC	**Panska Ves**	1.45	222	*e*PG	Pg	05 19 06.8	+0.2
PVCC				*e*SG	Sb	05 19 25.7	+0.1
	comp=Z,156nm,0.3s						
BRG	**Berggiesshubel**	1.53	242	Pg	Pg	05 19 08.9	+0.7
BRG				Sg	Sn	05 19 29.0	+0.9
BRG				Amp		05 19 29.4	
	comp=Z,117nm,0.4s						
KRLC	**Kraliky**	1.60	164	*e*PG	Pn	05 19 08.2	-0.3
KRLC				*e*SG	Sn	05 19 28.2	-1.8
	comp=Z,50nm,0.6s						
PRA	**Prague**	1.86	215	*e*PG	Pn	05 19 12.3	+0.2
PRA				*e*SG	Sb	05 19 37.7	+0.1
	comp=Z,41nm,0.6s						
PRU	**Pruhonice**	1.90	211	*e*PG	Pn	05 19 12.9	+0.4
PRU				*e*SG	Sb	05 19 38.6	0.0
	comp=Z,41nm,0.4s						
CLL	**Collm**	1.95	262	*i* Pn	Pn	05 19 13.1	-0.1
CLL				*i* Pg	Pg	05 19 16.6	+0.4
CLL				*i*		05 19 20.0	
CLL				*i* Sg	Sg	05 19 41.8	+0.4
	comp=Z,24nm,0.7s						
MORC	**Moravsky Berou**	2.06	153	*e*Pn	Pn	05 19 14.5	-0.3
	baz=335						
MORC				*e*Sg	Sb	05 19 43.5	+0.1
	comp=Z,19nm,0.5s,baz=335						
OKC	**Ostrava-Krasne**	2.21	143	*e*PG	Pb	05 19 19.8	0.0
OKC				*e*SG	Sb	05 19 48.0	+0.3
	comp=Z,65nm,0.7s						
VRAC	**Vranov**	2.33	172	Pn	Pn	05 19 19.3	+0.8
	comp=Z,2.5nm,0.3s,baz=344,slow=14,SNR=9.3						
VRAC				Lg	Lg	05 19 52.1	
	comp=Z,5.4nm,0.3s,baz=59,slow=17,SNR=10						
VRAC	**Vranov**	2.33	172	*e*PN	Pn	05 19 18.4	-0.1
VRAC				*e*SG	Sb	05 19 52.0	+0.8
VRAC	**Vranov**	2.33	172	*e*Pn	Pn	05 19 18.3	-0.2
	baz=353						
VRAC				*e*Sg	Sb	05 19 51.9	+0.8
	comp=Z,23nm,0.5s,baz=353						
TREC	**Trest**	2.35	189	*e*PN	Pn	05 19 19.8	+1.0
TREC				*e*PG	Pb	05 19 22.5	+0.3
TREC				*e*SG	Sb	05 19 52.4	+0.7
	comp=Z,23nm,0.3s						
KRUC	**Moravsky**	2.56	175	*e*Pn	Pn	05 19 21.4	-0.3
	baz=356						
KRUC				*e*Sg	Sb	05 19 59.5	+1.7
	comp=Z,18nm,0.6s,baz=356						
NKC	**Novy Kostel**	2.68	240	*e*SG	Sg	05 20 04.1	-0.9
OJC	**Ojcow**	2.74	119	*e*Pg	Pg	05 19 32.0	+0.7
OJC				*e*Sg	Sg	05 20 07.6	+0.8
JAVC	**Velka Javorina**	2.94	159	*e*Pn	Pn	05 19 26.8	-0.1
	baz=341						
JAVC				*e*Sg	Sg	05 20 11.4	-2.0
	comp=Z,32nm,1.1s,baz=341						
KHC	**Kasperske Hory**	2.96	214	*e*PN	Pn	05 19 27.5	+0.4
KHC				*e*PG	Pb	05 19 32.9	+0.4
KHC				*e*SN	Sn	05 20 02.5	-0.8
KHC				*e*SG	Sg	05 20 12.8	-1.0
	comp=Z,15nm,0.5s						
CKRC	**Cesky Krumlov**	3.02	203	*e*PN	Pn	05 19 29.0	+1.0
CKRC				*e*PG	Pb	05 19 34.5	+1.0
CKRC				*e*SG	Sg	05 20 14.2	-1.6
GERES	**GERESS Array B**	3.16	210	Pn	Pn	05 19 30.6	+0.6
	comp=Z,1.0nm,0.3s,baz=31,slow=13,SNR=24						
GERES				Pg	Pb	05 19 36.6	+0.6
	comp=Z,2.2nm,0.3s,baz=33,slow=17,SNR=17						
GERES				Lg	Lg	05 20 17.1	
	comp=Z,4.4nm,0.3s,baz=29,slow=29,SNR=9.8						
SMOL	**Smolenice**	3.22	164	*e*SG	Sg	05 20 22.9	+0.5
LANS	**Liptovska Anna**	3.29	137	*e*PG	Pg	05 19 41.5	-0.3
LANS				*e*SG	Sg	05 20 24.2	-0.2
MODS	**Modra-Piesok**	3.34	166	*e*PG	Pg	05 19 41.5	-1.3
MODS				*e*SG	Sg	05 20 23.7	-2.3
NIE	**Niedzica**	3.48	128	*e*P	Pg	05 19 46.0	+0.5
NIE				*e*S	Sg	05 20 30.9	+0.3
VYHS	**Vyhne**	3.59	149	*e*PG	Pg	05 19 49.0	+1.2
VYHS				*e*SG	Sg	05 20 35.3	+1.0
CONA	**Conrad Observa**	3.69	182	*i* Pn	Pn	05 19 37.9	+0.6
	comp=Z,1.1nm,0.2s						
CONA				Sg	Sg	05 20 37.5	0.0
	comp=Z,20nm,0.6s						
MOA	**Molln**	3.95	198	*i* Pn	Pn	05 19 41.3	+0.6
	comp=Z,3.7nm,0.3s						
MOA				*e*Sg	Sg	05 20 44.4	-1.2
	comp=Z,12nm,0.6s						
ARSA	**Arzberg**	4.38	185	*i* Pn	Pn	05 19 48.4	+1.6
	comp=Z,0.6nm,0.2s						
ARSA				Sg	Sg	05 21 02.2	+2.5
	comp=Z,2.0nm,0.3s						
DAVOX	**Davos/Dischmat**	6.32	222	Lg	Lg	05 21 59.4	
	comp=Z,0.1nm,0.3s,baz=322,slow=19,SNR=1.8						
AKASG	**Malin Array Be**	8.32	91	Pn	Pn	05 20 40.9	+0.2
	comp=Z,0.6nm,0.3s,baz=279,slow=12,SNR=4.5						
FINES	**FINESS Array B**	11.28	25	Pn	Pn	05 21 19.9	-1.2
	comp=Z,0.1nm,0.3s,baz=208,slow=11,SNR=1.5						
EKA	**Eskdalemuir Ar**	12.04	296	Pn	Pn	05 21 27.3	-4.3
	baz=106,slow=14,SNR=1.3						

IDC 15 05:19:25.0±2.0**, 17.°34S×179.°07W, h574^{km}**±19^{km}**, mb3.2**/4**, mb1 3.4**/5**, mb1mx3.0**/24**, mbtmp4.0**/5**, Error ellipse: s-maj=109.2km s-min=21.4km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	2.77	261	P	P	05 20 40.8	0.0
	2.3nm,0.3s,baz=126,slow=12,SNR=13						
STKA	**Stephens Creek**	38.36	240	P	P	05 25 58.1	+0.1
	1.4nm,0.4s,baz=88,slow=12,SNR=7.1						
WRA	**Warramunga Arr**	44.12	259	P	P	05 26 43.2	-0.5
	1.1nm,0.7s,baz=98,slow=6.9,SNR=25						
ASAR	**Alice Springs**	44.34	254	P	P	05 26 45.4	0.0
	10nm,0.6s,baz=88,slow=8.1,SNR=155						
TXAR	**Lajitas Array**	86.23	58	P	P	05 31 07.2	+0.3
	0.4nm,0.8s,baz=234,slow=4.3,SNR=4.7						
PDAR	**Pinedale Array**	87.38	44	P	P	05 31 11.7	-0.5
	0.2nm,0.5s,baz=270,slow=2.7,SNR=2.5						

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*JMA **15** 05:34:58.3±0.2, 29.°41N×140.°01E, h421^{km}±4^{km}, M3.8*

*IDC **15** 05:34:59.2±1.1, 29.°18N×139.°36E, h412^{km}±17^{km}, mb3.2/13, mb1 3.3/17, mb1mx3.0/56, mbtmp4.0/17, Error ellipse: s-maj=42.0km s-min=11.2km az=75.0*

ISC 15 05:34:57.9±0.7**, 29.°28N**±0.°09×**139.°6E**±0.°2**, h400^{km}, n22, σ0.^{s}95**/23**, mb3.5**/12**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	3.17	133	P	Pn	05 36 03.5	+0.8
CBIJ				*e*S	S	05 36 54.8	-0.2
JCJ	**Chichijima**	3.17	133	P	Pn	05 36 03.6	+0.9
	37nm,0.3s,baz=4.5,slow=24,SNR=28						
JCJ				S	S	05 36 53.9	-1.1
	34nm,0.3s,baz=271,slow=21,SNR=8.1						
JHJ	**Hachijo jima 2**	3.83	3	P	Pn	05 36 12.9	+4.6
	64nm,0.3s,baz=68,slow=22,SNR=9.2						
BSO4	**Boso 4**	5.73	6	*e*S	S	05 37 38.8	-1.5
JRY	**Ryogami san**	6.74	355	P	P	05 36 39.8	+0.6
JAG	**Ashikaga**	7.12	359	P	P	05 36 42.7	-0.7
MJAR	**Matsushiro Arr**	7.33	351	P	P	05 36 48.2	+2.4
	0.2nm,0.3s,baz=166,slow=15,SNR=2.1						
JHO	**Hitachi**	7.36	6	P	P	05 36 45.9	-0.1
USRK	**Ussuriysk Ar.**	16.07	340	P	P	05 38 23.2	+1.5
	baz=148,slow=8.9,SNR=6.1						
KLR	**Kul'dur**	20.80	345	P	P	05 39 10.5	+1.1
	1.3nm,0.5s,baz=156,slow=12,SNR=4.8						
SONM	**Songino Array**	31.54	315	P	P	05 40 44.6	-0.5
	0.6nm,0.5s,baz=128,slow=9.7,SNR=8.1						
ZALV	**Zalesovo Beam**	46.33	318	P	P	05 42 45.6	+0.1
	0.9nm,0.3s,baz=93,slow=7.4,SNR=3.2						
MKAR	**Makanchi Array**	47.31	308	P	P	05 42 52.5	-0.8
	0.7nm,0.6s,baz=86,slow=10,SNR=7.4						
WRA	**Warramunga Arr**	49.20	187	P	P	05 43 07.0	-0.7
	0.4nm,0.3s,baz=2.7,slow=7.7,SNR=20						
KURBB	**Kurchatov Arra**	49.87	313	P	P	05 43 11.8	-0.5
	1.6nm,0.4s,baz=91,slow=7.9,SNR=9.3						
ASAR	**Alice Springs**	52.93	187	P	P	05 43 34.9	-0.1
	0.2nm,0.3s,baz=1.5,slow=6.9,SNR=5.5						
BVAR	**Borovoye Array**	54.88	316	P	P	05 43 48.4	-0.2
	1.5nm,0.4s,baz=151,slow=3.7,SNR=7.6						
ARU	**Arti**	61.28	321	P	P	05 44 32.1	-0.2
	1.3nm,0.4s,baz=73,slow=19,SNR=4.2						
ARCES	**ARCESS Array B**	70.72	340	P	P	05 45 32.4	+0.9
	4.3nm,0.9s,baz=74,slow=8.8,SNR=7.3						
FINES	**FINESS Array B**	74.97	333	P	P	05 45 56.1	-0.1
	2.8nm,0.9s,baz=49,slow=4.5,SNR=11						
AKASG	**Malin Array Be**	79.49	323	P	P	05 46 20.6	-0.6
	0.3nm,0.3s,baz=50,slow=5.7,SNR=4.7						
NOA	**NORSAR Array B**	80.72	337	P	P	05 46 27.3	-0.3
	0.4nm,0.5s,baz=27,slow=5.4,SNR=4.8						

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*IDC **15** 05:36:15.4±1.3, 13.°64N×91.°23W, h0^{km}, mb3.8/7, mb1 4.1/9, mb1mx3.7/45, mbtmp3.8/9, ML3.8/2, Error ellipse: s-maj=53.0km s-min=23.2km az=55.0*

*UCR **15** 05:36:20.1±1.4, 13.°56N×91.°41W, h8^{km}±16^{km}, ML3.3, mb4.1(NEIC)*

*SNET **15** 05:36:20.1±1.4, 13.°56N×91.°41W, h8^{km}±16^{km}, ML3.4*

*GCG **15** 05:36:21.2±0.5, 13.°71N×91.°52W, h17^{km}±5^{km}, MD4.0*

*NEIC **15** 05:36:22.7±2.9, 13.°73N±0.°08×91.°47W±0.°08, h36^{km}±10^{km}, mb4.1/8, Error ellipse: s-maj=15.1km s-min=5.4km az=45.0*

ISC 15 05:36:20.5±0.8**, 13.°64N**±0.°08×**91.°50W**±0.°04**, h28^{km}, n61, σ1.^{s}10**/66**, mb4.0**/9**, 2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	0.90	348		Pb	05 36 36.3	-1.2
FUG	**Fuego 3**	1.02	38	*e*P	Pb	05 36 39.7	-0.1
STG3	**Santiaguito 3,**	1.06	356	*e*P	Pn	05 36 39.6	-0.1
PCG	**Pacaya**	1.14	49	*e*P	Pb	05 36 41.7	-0.1
NBG	**Las Nubes**	1.46	50	*e*P	Pb	05 36 47.1	-0.1
NBG				*e*S	Sb	05 37 07.2	+1.8
HUEH	**Huehuetenango**	1.67	360		Pn	05 36 48.3	+0.3
SLOZ	**Alcaldia de Sa**	1.71	77	*e*P	Pn	05 36 48.5	+0.1
SLOZ				*e*S	Sb	05 37 11.6	-0.8
SLOZ				IAML		05 37 19.5	
	comp=Z,280nm,0.5s						
RTR	**El Retiro**	1.82	82	*e*P	Pn	05 36 50.8	+0.7
RTR	**El Retiro**	1.82	82	*e*P	Pn	05 36 50.8	+0.7
CEVE	**Cerro Verde**	1.83	84	*e*P	Pn	05 36 50.9	+0.5
CEVE	**Cerro Verde**	1.83	84	*e*P	Pn	05 36 50.9	+0.5
SBLS	**San Blas**	1.83	84	*e*P	Pn	05 36 50.5	+0.2
SBLS	**San Blas**	1.83	84	*e*P	Pn	05 36 50.5	+0.2
JAYA	**Jayaque - finc**	1.99	89	*e*P	Pn	05 36 52.2	-0.2
JAYA				*e*S	Sn	05 37 16.7	+0.1
JAYA				IAML		05 37 24.8	
	comp=Z,482nm,0.3s						
JAYA	**Jayaque - finc**	1.99	89	*e*P	Pn	05 36 52.2	-0.2
JAYA				*e*S	Sn	05 37 16.7	+0.1
JAYA				IAML		05 37 24.8	
	comp=Z,482nm,0.3s						
TACO	**Tacachico**	2.11	81	⇓*e*P	Pn	05 36 54.3	+0.3
TACO	**Tacachico**	2.11	81	⇓*e*P	Pn	05 36 54.3	+0.3
UEES	**Universidad Ev**	2.20	88	*e*P	Pn	05 36 56.2	+0.9
UEES				IAML		05 37 32.8	
	comp=Z,347nm,0.3s						
UEES	**Universidad Ev**	2.20	88	*e*P	Pn	05 36 56.2	+0.9
UEES				IAML		05 37 32.8	
	comp=Z,347nm,0.3s						
SNET	**Serv Nac Est T**	2.20	89		Pn	05 36 55.4	+0.1
MTO3	**Montecristo**	2.21	70	*e*P	Pn	05 36 56.5	+1.0
MTO3				*e*S	Sb	05 37 25.9	-1.0
MTO3	**Montecristo**	2.21	70	*e*P	Pn	05 36 56.5	+1.0
MTO3				*e*S	Sb	05 37 25.9	-1.0
MTO3	**Montecristo**	2.21	70		Pn	05 36 55.9	+0.4
ESQI	**Esquipulas**	2.28	66		Pn	05 36 57.6	+1.1
SJTE	**Alcalda de S**	2.42	90	*e*P	Pn	05 36 59.1	+0.8
SJTE	**Alcalda de S**	2.42	90	*e*P	Pn	05 36 59.1	+0.8
PAVA	**Las Pavas**	2.49	88	*e*P	Pn	05 37 00.8	+1.5
PAVA	**Las Pavas**	2.49	88	*e*P	Pn	05 37 00.8	+1.5
COEG	**Centro de Oper**	2.54	90	*e*P	Pn	05 37 01.0	+0.9
COEG	**Centro de Oper**	2.54	90	*e*P	Pn	05 37 01.0	+0.9
SCLA	**Alcaldia de Sa**	2.69	88	*e*P	Pn	05 37 02.8	+0.8
SCLA	**Alcaldia de Sa**	2.69	88	*e*P	Pn	05 37 02.8	+0.8
CCIG	**Comitan**	2.69	347		Pn	05 37 03.6	+1.4
COEB	**Comit de Eme**	2.89	93	*e*P	Pn	05 37 05.8	+1.0
COEB	**Comit de Eme**	2.89	93	*e*P	Pn	05 37 05.8	+1.0
PETF	**Flores**	3.62	26		Pn	05 37 16.2	+1.5
TGUH	**Tegucigalpa,Un**	4.12	84		Pn	05 37 22.9	+1.0
CMIG	**Matias Romero**	4.73	317	Pn	Pn	05 37 29.6	-0.5
	comp=Z,2.4nm,0.3s,baz=131,slow=9.8,SNR=16						
CMIG				Sn	Sn	05 38 25.3	+1.2
	comp=Z,3.0nm,0.3s,baz=303,slow=0.7,SNR=4.3						
CMIG	**Matias Romero**	4.73	317		Pn	05 37 29.8	-0.2
HZTE	**Horizontes, Gu**	6.46	116	Pn	Pn	05 37 56.2	+2.3
TLIG	**Tlapa**	7.84	301		Pn	05 38 13.5	+0.6
SRBA	**San Rafael, Bu**	9.10	118		Pn	05 38 32.8	+2.6
TXAR	**Lajitas Array**	19.26	326	P	P	05 40 45.1	+2.1
	comp=Z,0.1nm,0.3s,baz=153,slow=11,SNR=34						
TXAR	**Lajitas Array**	19.26	326	P	P	05 40 44.7	+1.6
TX31	**Lajitas Ar. Si**	19.26	326	P	P	05 40 44.4	+1.3
TX31				IAmb	IAmb	05 40 49.1	
	comp=Z,9.6nm,0.9s						
TX32	**Lajitas Array**	19.26	326	P	P	05 40 44.7	+1.6
LCAR	**Lake Charles**	22.33	1	P	P	05 41 15.5	-0.6
TKL	**Tuckaleechee C**	23.00	16	P	P	05 41 22.5	-0.6
	comp=Z,2.8nm,0.6s,baz=193,slow=13,SNR=5.4						
ANMO	**Albuquerque**	25.15	330	P	P	05 41 44.0	+0.4
	comp=Z,1.0nm,0.6s,baz=139,slow=11,SNR=5.8						
PDAR	**Pinedale Array**	32.95	335	P	P	05 42 52.9	-0.1
	comp=Z,0.2nm,0.5s,baz=141,slow=12,SNR=2.1						
PDAR				PcP	PcP	05 45 37.0	+0.1
	comp=Z,0.1nm,0.4s,baz=126,slow=4.7,SNR=1.7						
NVAR	**Mina Array Bea**	34.25	321	P	P	05 43 06.3	+1.9
	comp=Z,1.7nm,0.8s,baz=126,slow=7.9,SNR=8.7						
J08A	**Circle Bar Ran**	37.60	327	P	P	05 43 33.5	+0.6
PLID	**Pearl Lake**	37.62	331	P	P	05 43 33.1	-0.1
PLID				IAmb	IAmb	05 43 35.6	
	comp=Z,1.9nm,0.8s						
LPAZ	**La Paz**	37.66	141	P	P	05 43 31.7	-2.5
	comp=Z,0.7nm,0.9s,baz=329,slow=12,SNR=2.0						
LPAZ	**La Paz**	37.66	141	IAmb	IAmb	05 43 58.2	
	comp=Z,2.5nm,1.4s						
YKA	**Yellowknife Ar**	51.48	347	P	P	05 45 21.6	-1.7
	comp=Z,1.5nm,0.8s,baz=139,slow=9.5,SNR=6.5						
INK	**Inuvik**	60.92	343	P	P	05 46 29.5	-1.0
	comp=Z,0.8nm,0.6s,baz=116,slow=5.7,SNR=4.8						
INK	**Inuvik**	60.92	343	IAmb	IAmb	05 46 31.4	
	comp=Z,3.5nm,1.3s						
ILAR	**Eielson Array**	63.36	337	P	P	05 46 45.2	-1.8
	comp=Z,1.6nm,1.1s,baz=128,slow=3.8,SNR=8.9						
ASAR	**Alice Springs**	136.00	250	PKhKP	PKPpre	05 55 36.0	
	comp=Z,0.5nm,0.7s,baz=101,slow=3.6,SNR=5.8						
CMAR	**Chiang Mai Arr**	146.48	342	PKPbc	PKPdf	05 55 60.0	+1.3
	comp=Z,1.9nm,0.4s,baz=344,slow=3.7,SNR=9.3						

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*NEIC **15** 05:43:02.6±2.0, 14.°8S±0.°1×167.°5E±0.°2, h141^{km}±5^{km}, mb4.4/21, Error ellipse: s-maj=24.9km s-min=15.1km az=66.0*

*NOU **15** 05:43:02.9, 14.°81S×167.°46E, h140^{km}, mb4.6/30, Vanuatu Islands*

*IDC **15** 05:43:04.0±2.9, 14.°85S×167.°29E, h156^{km}±23^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.5/44, mbtmp4.5/9, MS3.1/2, Ms1 3.1/2, ms1mx2.7/33, Error ellipse: s-maj=27.2km s-min=17.2km az=73.0*

ISC 15 05:43:03.1±0.8**,14°.83S**±0°.07×**167°.41E**±0°.10**,h150^{km},n66,σ1^{s}.14**/67**,mb4.4**/14**,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.64**	**198**	Pn	**Pn**	**05 43 23.6**	**-1.6**
SANVU	**Saraoutou**	**0.64**	**198**	P	**Pn**	**05 43 23.7**	**-1.6**
DVP	**Devils Point**	**2.97**	**166**	P	**Pn**	**05 43 49.9**	**-0.2**
RTV	**Rentapao**	**3.10**	**162**	P	**Pn**	**05 43 51.5**	**-0.2**
LIFNC	**LIFOU**	**5.92**	**182**	Pn	**Pn**	**05 44 27.1**	**-1.6**
LIFNC	**LIFOU**	**5.92**	**182**	P	**Pn**	**05 44 27.2**	**-1.5**
KOUNC	**Koumac, New Ca**	**6.42**	**207**	P	**Pn**	**05 44 36.4**	**+1.0**
MARNC	**Mare, Loyalty**	**6.64**	**175**		**Pn**	**05 44 36.9**	**-1.5**
MARNC	**Mare, Loyalty**	**6.64**	**175**	P	**Pn**	**05 44 36.6**	**-1.7**
YATNC	**Mamie plateau,**	**7.21**	**184**	P	**Pn**	**05 44 45.4**	**-0.5**
DZM	**Mont Dzumac**	**7.26**	**187**	*e*Pn	**Pn**	**05 44 46.8**	**+0.1**
	113nm,0.3s						
DZM				*e*Sn	**Sn**	**05 46 03.7**	**-4.3**
	32nm,0.3s						
DZM	**Mont Dzumac**	**7.26**	**187**	P	**Pn**	**05 44 46.8**	**+0.1**
	25nm,0.3s,baz=321,slow=16,SNR=139						
DZM				S	**Sn**	**05 46 07.9**	**-0.1**
	15nm,0.3s,baz=327,slow=22,SNR=4.3						
DZM				LR	LR	05 47 16.7	
	comp=Z,111nm,18.1s,baz=24,slow=35						
DZM	**Mont Dzumac**	**7.26**	**187**	P	**Pn**	**05 44 47.1**	**+0.4**
NOUC	**Port Laguerre**	**7.31**	**188**	P	**Pn**	**05 44 47.7**	**+0.5**
ONTNC	**Ouen Toro**	**7.49**	**187**	Pn	**Pn**	**05 44 49.6**	**-0.1**
ONTNC	**Ouen Toro**	**7.49**	**187**	P	**Pn**	**05 44 50.1**	**+0.4**
OUENC	**Ouen Island, N**	**7.57**	**184**	Pn	**Pn**	**05 44 51.3**	**+0.6**
OUENC	**Ouen Island, N**	**7.57**	**184**	P	**Pn**	**05 44 51.0**	**+0.3**
PINNC	**Pines Island,**	**7.74**	**180**		**Pn**	**05 44 53.0**	**0.0**
HNR	**Honiara**	**9.05**	**306**	P	**Pn**	**05 45 11.2**	**+0.6**
	40nm,0.3s,baz=95,slow=1.2,SNR=5.0						
HNR				S	**Sn**	**05 46 50.9**	**-0.2**
	62nm,0.3s,baz=30,slow=22,SNR=6.4						
HNR	**Honiara**	**9.05**	**306**	P	**Pn**	**05 45 11.1**	**+0.5**
EIDS	**Eidsvold**	**18.55**	**233**	P	**P**	**05 47 09.2**	**+0.8**
EIDS				IAmb	IAmb	05 47 11.2	
	comp=Z,14nm,0.7s						
RAO	**Raoul Island**	**19.74**	**139**	LR	LR	05 53 06.1	
	comp=Z,76nm,19.2s,baz=282,slow=30						
PMG	**Port Moresby**	**20.51**	**283**	P	**P**	**05 47 29.3**	**-0.4**
	comp=Z,6.6nm,0.2s,baz=135,slow=5.7,SNR=1.9						
PMG	**Port Moresby**	**20.51**	**283**	IAmb	IAmb	05 47 30.3	
	comp=Z,14nm,0.8s						
CTA	**Charters Tower**	**20.84**	**252**	P	**P**	**05 47 33.0**	**-0.2**
	comp=Z,8.3nm,0.6s,baz=77,slow=13,SNR=6.9						
CTAO	**Charters Tower**	**20.84**	**252**	P	**P**	**05 47 33.3**	**+0.2**
CTAO				IAmb	IAmb	05 47 34.5	
	comp=Z,19nm,0.9s						
CTAO	**Charters Tower**	**20.84**	**252**	P	**P**	**05 47 34.5**	**+1.3**
RMQ	**Roma**	**20.92**	**233**	P	**P**	**05 47 35.4**	**+1.4**
OUZ	**Omahuta**	**21.05**	**166**	P	**P**	**05 47 36.6**	**+1.4**
OUZ				IAmb	IAmb	05 47 39.3	
	comp=Z,15nm,0.9s						
ARMA	**Armidale**	**21.24**	**220**	P	**P**	**05 47 38.3**	**+0.9**
ARMA				IAmb	IAmb	05 47 41.2	
	comp=Z,21nm,1.2s						
COEN	**Coen**	**23.49**	**269**	P	**P**	**05 47 59.4**	**-0.1**
MGCD	**Mangrove Creek**	**23.53**	**216**	P	**P**	**05 48 00.8**	**+1.1**
BKZ	**Black Stump Fm**	**25.52**	**163**	P	**P**	**05 48 18.4**	**+0.6**
CMSA	**Cobar Meteorol**	**25.90**	**226**	P	**P**	**05 48 22.3**	**+1.1**
CNB	**Canberra Magne**	**26.05**	**215**	P	**P**	**05 48 23.6**	**+1.0**
THZ	**Tophouse**	**27.25**	**171**	P	**P**	**05 48 35.1**	**+1.8**
THZ				IAmb	IAmb	05 48 37.7	
	comp=Z,15nm,1.0s						
FOZ	**Fox Glacier**	**28.68**	**176**	P	**P**	**05 48 47.0**	**+1.2**
STKA	**Stephens Creek**	**29.03**	**230**	P	**P**	**05 48 50.5**	**+1.4**
	comp=Z,7.0nm,0.6s,baz=56,slow=9.5,SNR=14						
STKA	**Stephens Creek**	**29.03**	**230**	P	**P**	**05 48 50.3**	**+1.2**
STKA	**Stephens Creek**	**29.03**	**230**	P	**P**	**05 48 50.5**	**+1.4**
LBZ	**Lake Benmore**	**29.55**	**176**	P	**P**	**05 48 54.2**	**+0.6**
LCRK	**Leigh Creek**	**30.98**	**235**	P	**P**	**05 49 07.5**	**+1.2**
WR0	**Warramunga Arr**	**31.74**	**256**	P	**P**	**05 49 11.6**	**-1.6**
HTT	**Hallett**	**31.75**	**229**	P	**P**	**05 49 14.3**	**+1.1**
WB0	**Warramunga Arr**	**31.87**	**256**		**P**	**05 49 12.6**	**-1.7**
WB0				IAmb	IAmb	05 49 13.1	
	comp=Z,4.0nm,0.6s						
WB2	**Warramunga Arr**	**31.92**	**256**	P	**P**	**05 49 13.6**	**-1.1**
WB2				IAmb	IAmb	05 49 13.8	
	comp=Z,7.1nm,1.3s						
WRAB	**Tennant Creek**	**31.92**	**256**	P	**P**	**05 49 13.8**	**-0.9**
WRAB	**Tennant Creek**	**31.92**	**256**	P	**P**	**05 49 15.3**	**+0.6**
WRA	**Warramunga Arr**	**31.93**	**256**	P	**P**	**05 49 12.9**	**-1.9**
	comp=Z,1.6nm,0.6s,baz=85,slow=9.2,SNR=27						
AS31	**Alice Springs**	**32.76**	**249**	P	**P**	**05 49 20.8**	**-1.3**
AS31				IAmb	IAmb	05 49 21.0	
	comp=Z,2.0nm,0.3s						
ASAR	**Alice Springs**	**32.76**	**249**	P	**P**	**05 49 20.8**	**-1.3**
	comp=Z,2.2nm,0.3s,baz=76,slow=9.1,SNR=67						
BBOO	**Buckleboo**	**33.62**	**232**	P	**P**	**05 49 29.9**	**+0.5**
BBOO	**Buckleboo**	**33.62**	**232**	P	**P**	**05 49 30.2**	**+0.8**
MULG	**Mulgathing**	**34.27**	**238**	P	**P**	**05 49 35.4**	**+0.4**
EDFI	**Ende, Flores**	**45.10**	**272**	P	**P**	**05 51 03.7**	**-1.1**
	comp=Z,6.5nm,0.6s						
VNDA	**Vanda**	**62.76**	**181**	P	**P**	**05 53 12.1**	**+0.2**
VNDA				IAmb	IAmb	05 53 13.2	
	comp=Z,3.1nm,0.6s						
SBA	**Scott Base**	**63.04**	**180**	P	**P**	**05 53 15.4**	**+1.7**
QSPA	**South Pole Qui**	**75.20**	**180**	P	**P**	**05 54 29.5**	**+0.5**
QSPA				IAmb	IAmb	05 54 30.4	
	comp=Z,6.9nm,0.8s						
SONM	**Songino Array**	**82.66**	**324**	P	**P**	**05 55 08.9**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=143,slow=5.0,SNR=1.8						
ILAR	**Eielson Array**	**86.58**	**18**	P	**P**	**05 55 29.5**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=234,slow=5.5,SNR=2.5						
SNAA	**Sanae**	**93.45**	**183**	P	**P**	**05 56 00.8**	**-0.5**
VNA3	**Neumayer Olymp**	**94.11**	**181**	P	**P**	**05 56 03.5**	**-0.7**
VNA2	**Neumayer--Watz**	**94.38**	**182**	P	**P**	**05 56 05.3**	**-0.2**
	baz=187,slow=4.2						
VNA1	**Neumayer--Stat**	**94.68**	**181**	P	**P**	**05 56 06.6**	**-0.2**
ARCES	**ARCESS Array B**	**120.38**	**345**	PKP	**PKiKP**	**06 01 36.6**	**+0.5**
	comp=Z,8.0nm,1.2s,baz=67,slow=2.3,SNR=3.9						

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*IDC **15** 05:51:20.9±0.9, 13°.89N×58°.36W, h0^{km}, mb4.0/10, mb1 4.3/13, mb1mx4.0/43, mbtmp4.0/13, ML4.0/3, MS3.4/4, Ms1 3.4/4, ms1mx3.0/31, Error ellipse: s-maj=26.4km s-min=17.0km az=13.0*
*TRN **15** 05:51:25.7, 13°.97N×58°.54W, h93^{km}, MD4.1*
*NEIC **15** 05:51:25.4±2.0, 13°.91N±0°.07×58°.39W±0°.08, h27^{km}±5^{km}, mb4.2/7, Error ellipse: s-maj=12.3km s-min=9.3km az=224.0*
ISC 15 05:51:24.8±1.7**,13°.93N**±0°.04×**58°.39W**±0°.06**,h30^{km}**±12^{km}**,n81,σ1^{s}.47**/97**,mb4.2**/11**,MS3.5**/3**,North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBSP	**Saint Philip**	**1.32**	**232**	*e*P	**Pb**	**05 51 49.7**	**+0.7**
BBSP				*e*S	**Sb**	**05 52 08.2**	**+2.6**
BBGH	**Gun Hill**	**1.38**	**236**	*e*P	**Pb**	**05 51 49.8**	**-0.1**
BBGH				*e*S	**Sb**	**05 52 07.9**	**+0.7**
BBGH	**Gun Hill**	**1.38**	**236**		**Pb**	**05 51 49.7**	**-0.3**
H05S1	**Guadeloupe/Mar**	**2.42**	**282**	Pn	**Pn**	**05 52 01.8**	**-0.6**
H05S1				Sn	**Sn**	**05 52 28.4**	**-2.7**
H05S1				T	T	05 54 55.8	
	SNR=28						
MPOM	**Morne Pois Mar**	**2.45**	**282**	*e*P	**Pn**	**05 52 02.5**	**-0.2**
MPOM	**Morne Pois Mar**	**2.45**	**282**	Pn	**Pn**	**05 52 02.8**	**0.0**
MCLT	**Moule a Chique**	**2.49**	**265**	*e*P	**Pn**	**05 52 03.1**	**-0.2**
MCLT				*e*S	**Sn**	**05 52 31.1**	**-1.6**
MCLT	**Moule a Chique**	**2.49**	**265**	Pn	**Pn**	**05 52 01.2**	**-2.1**
MVM	**Montagne Vaucl**	**2.51**	**285**	*e*P	**Pn**	**05 52 03.4**	**-0.1**
SLBI	**Saint Lucia, B**	**2.51**	**272**	*e*P	**Pn**	**05 52 03.3**	**-0.3**
SLBI				*e*S	**Sn**	**05 52 31.4**	**-1.8**
ILAM	**Ilet Lapin Mar**	**2.55**	**290**	*e*P	**Pn**	**05 52 04.6**	**+0.5**
ILAM				*e*S	**Sn**	**05 52 33.4**	**-0.8**
ILAM	**Ilet Lapin Mar**	**2.55**	**290**	Pn	**Pn**	**05 52 04.7**	**+0.5**
LPMF	**Morne Lapointe**	**2.58**	**285**	*e*P	**Pn**	**05 52 04.0**	**-0.6**
ZAM	**Aeronautique**	**2.64**	**284**	*e*P	**Pn**	**05 52 05.3**	**0.0**
TRMF	**Trois Ilets**	**2.65**	**283**	*e*P	**Pn**	**05 52 05.2**	**-0.3**
BIM	**Bigot**	**2.66**	**283**	*e*P	**Pn**	**05 52 06.1**	**+0.3**
BIM				*e*S	**Sn**	**05 52 35.4**	**-1.6**
BIM	**Bigot**	**2.66**	**283**		**Pn**	**05 52 05.9**	**+0.1**
SSV	**Crater Summit**	**2.79**	**258**	*e*P	**Pn**	**05 52 08.5**	**+1.0**
SSV				*e*S	**Sn**	**05 52 39.1**	**-1.2**
FDF	**Fort de France**	**2.79**	**287**	*e*P	**Pn**	**05 52 08.1**	**+0.5**
FDF				*e*S	**Sn**	**05 52 38.5**	**-1.7**
FDF	**Fort de France**	**2.79**	**287**		**Pn**	**05 52 08.1**	**+0.5**
BAMF	**Morne Balai**	**2.81**	**289**	*e*P	**Pn**	**05 52 08.2**	**+0.4**
SVV	**Soufriere Volc**	**2.81**	**258**	*e*P	**Pn**	**05 52 09.1**	**+1.3**
SVV				*e*S	**Sn**	**05 52 39.4**	**-1.3**
GBMF	**Grand Be**	**2.82**	**288**	*e*P	**Pn**	**05 52 08.1**	**+0.1**
CXM	**Morne La Croix**	**2.83**	**288**	*e*P	**Pn**	**05 52 09.9**	**+1.8**
PML	**Morne Lenard**	**2.84**	**288**	*e*P	**Pn**	**05 52 08.9**	**+0.8**
SVN	**Savane Anatole**	**2.84**	**289**	*e*P	**Pn**	**05 52 09.4**	**+1.2**
SVN	**Savane Anatole**	**2.84**	**289**		**Pn**	**05 52 09.6**	**+1.4**
SVB	**Belmont**	**2.86**	**257**	*e*P	**Pn**	**05 52 09.1**	**+0.7**
SVB				*e*S	**Sn**	**05 52 41.2**	**-0.6**
SVB	**Belmont**	**2.86**	**257**	Pn	**Pn**	**05 52 08.4**	**0.0**
PCM	**Pelee Case Pet**	**2.87**	**288**	*e*P	**Pn**	**05 52 09.0**	**+0.4**
DLPL	**La Plaine**	**3.10**	**297**	*e*S	**Sn**	**05 52 45.3**	**-2.5**
GCMP	**Grenada, Carri**	**3.29**	**244**	*e*P	**Pn**	**05 52 15.3**	**+1.0**
GCMP				*e*S	**Sn**	**05 52 51.4**	**-1.0**
DSLB	**Salisbury**	**3.29**	**297**	*e*P	**Pn**	**05 52 14.8**	**+0.4**
DSLB				*e*S	**Sn**	**05 52 50.3**	**-2.3**
TOSP	**Speyside**	**3.35**	**219**	*e*P	**Pn**	**05 52 16.3**	**+1.1**
TOSP	**Speyside**	**3.35**	**219**		**Pn**	**05 52 16.5**	**+1.3**
MDVC	**Dominica, Viel**	**3.36**	**300**	*e*P	**Pn**	**05 52 15.3**	**-0.1**
MDVC				*e*S	**Sn**	**05 52 52.8**	**-1.5**
MAGL	**Barre de l’ile**	**3.44**	**306**	*e*P	**Pn**	**05 52 16.7**	**+0.3**
MAGL				*e*S	**Sn**	**05 52 53.9**	**-2.3**
H05N1	**Guadeloupe/Mar**	**3.50**	**313**	Pn	**Pn**	**05 52 16.3**	**-1.0**
H05N1				Sn	**Sn**	**05 52 53.2**	**-4.5**
GRGR	**Grenville**	**3.65**	**241**	*e*P	**Pn**	**05 52 19.9**	**+0.7**
GRGR	**Grenville**	**3.65**	**241**	Pn	**Pn**	**05 52 20.1**	**+0.8**
TDBA	**Terre de Bas,**	**3.67**	**302**	*e*P	**Pn**	**05 52 20.6**	**+1.0**
TDBA				*e*S	**Sn**	**05 52 59.6**	**-2.3**
TBG	**Guadaloupe-3**	**3.68**	**302**	*e*P	**Pn**	**05 52 19.7**	**0.0**
CBE	**Ff, Capester**	**3.77**	**305**	*e*P	**Pn**	**05 52 21.8**	**+0.9**
CBE				*e*S	**Sn**	**05 53 02.2**	**-2.1**
TRN	**Trinidad (W)**	**4.39**	**222**	*e*P	**Pn**	**05 52 30.9**	**+1.4**
TRN	**Trinidad (W)**	**4.39**	**222**	*e*S	**Sn**	**05 53 17.5**	**-2.2**
ANBD	**Bethesda, Anti**	**4.49**	**314**	*e*P	**Pn**	**05 52 30.7**	**-0.2**
ANBD	**Bethesda, Anti**	**4.49**	**314**	*e*S	**Sn**	**05 53 18.6**	**-3.5**
ANWB	**Willy Bob**	**4.95**	**319**	*e*P	**Pn**	**05 52 36.7**	**-0.5**
ANWB	**Willy Bob**	**4.95**	**319**	*e*S	**Sn**	**05 53 30.7**	**-2.7**
PLCV	**Puerto La Cruz**	**7.13**	**239**		**Pn**	**05 53 08.0**	**+0.9**
PLCV					**Sn**	**05 54 24.9**	**-2.3**
PCRV	**Puerto La Cruz**	**7.16**	**239**	Pn	**Pn**	**05 53 08.0**	**+0.5**
	2.1nm,0.3s,baz=75,slow=2.5,SNR=13						
PCRV				Sn	**Sn**	**05 54 24.9**	**-3.1**
	baz=338,slow=13,SNR=1.1						
STVI	**Saint Thomas**	**7.69**	**306**	Pn	**Pn**	**05 53 16.1**	**+1.3**
CUPR	**Culebra, Puert**	**7.92**	**304**	Pn	**Pn**	**05 53 18.1**	**0.0**
MTP	**Monte Pirata**	**8.04**	**302**	Pn	**Pn**	**05 53 19.3**	**-0.2**
CBYP	**Canovanas**	**8.37**	**302**	Pn	**Pn**	**05 53 25.2**	**+0.9**
CELP	**Cerrillos**	**8.88**	**299**	Pn	**Pn**	**05 53 32.6**	**+1.4**
AOPR	**Arecibo Observ**	**9.16**	**300**		**Pn**	**05 53 35.6**	**+0.7**
CRPR	**Cabo Rojo, PR**	**9.31**	**297**	Pn	**Pn**	**05 53 38.3**	**+1.3**
MDP	**Montagnes des**	**10.44**	**147**	Pn	**Pn**	**05 53 49.1**	**-3.5**
	1.0nm,0.3s,baz=334,slow=16,SNR=25						
MDP				Sn	Sn	05 55 35.6	-13
	2.7nm,0.3s,baz=49,slow=18,SNR=12						
MDP				LR	LR	05 57 52.9	
	comp=Z,120nm,20.5s,baz=284,slow=38						
BAUV	**El Baul**	**10.68**	**243**	Pn	**Pn**	**05 53 56.1**	**+0.3**
BOAV	**Boa Vista**	**11.65**	**191**		**Pn**	**05 54 06.8**	**-2.4**
PTGA	**Pitinga**	**14.65**	**186**	Pn	**Pn**	**05 54 48.7**	**-1.4**
	0.9nm,0.3s,baz=30,slow=20,SNR=10						
PTGA				Sn	Sn	05 57 17.1	-15
	0.1nm,0.3s,baz=90,slow=20,SNR=1.8						
OCAC	**Ocana**	**15.70**	**250**		**Pn**	**05 55 04.8**	**+0.6**
BDFB	**Brasilia**	**31.12**	**160**	LR	LR	06 11 55.5	
	comp=Z,57nm,18.9s,baz=290,slow=40						
LCO	**Las Campanas**	**44.32**	**196**	P	**P**	**05 59 29.5**	**-3.0**
TXAR	**Lajitas Array**	**44.50**	**298**	P	**P**	**05 59 35.2**	**+1.2**
	1.2nm,0.9s,baz=117,slow=7.2,SNR=9.1						
TXAR				LR	LR	06 21 04.5	
	comp=Z,55nm,20.3s,baz=0.0,slow=40						
PD31	**Pinedale Array**	**52.40**	**314**	P	**P**	**06 00 36.3**	**+1.6**
PD31				IAmb	IAmb	06 00 37.2	
	comp=Z,3.1nm,1.0s						
PDAR	**Pinedale Array**	**52.40**	**314**	P	**P**	**06 00 36.4**	**+1.6**
	comp=Z,17nm,0.3s,baz=113,slow=8.2,SNR=10						
NVAR	**Mina Array Bea**	**57.97**	**307**	P	**P**	**06 01 16.4**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=101,slow=7.7,SNR=5.1						
TORD	**Torodi Ar. Bea**	**58.28**	**83**	P	**P**	**06 01 18.0**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=284,slow=6.1,SNR=5.5						
TORD				LR	LR	06 23 31.1	
	comp=Z,48nm,20.1s,baz=260,slow=33						
TORD	**Torodi Ar. Bea**	**58.28**	**83**	IAmb	IAmb	06 01 18.7	
	comp=Z,1.1nm,1.0s						
NEW	**Newport**	**59.02**	**318**	P	**P**	**06 01 22.4**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=121,slow=10.0,SNR=5.9						
NEW	**Newport**	**59.02**	**318**	IAmb	IAmb	06 01 24.4	
	comp=Z,2.7nm,0.9s						
YKA	**Yellowknife Ar**	**62.45**	**334**	P	**P**	**06 01 45.5**	**+0.6**
	comp=Z,2.4nm,0.9s,baz=107,slow=7.5,SNR=6.4						
KEST	**Kesra**	**64.00**	**57**	P	**P**	**06 01 57.2**	**+1.3**
	comp=Z,2.4nm,0.8s,baz=336,slow=8.0,SNR=3.9						
GERES	**GERESS Array B**	**67.86**	**43**	P	**P**	**06 02 21.5**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=250,slow=2.7,SNR=5.4						
INK	**Inuvik**	**71.66**	**338**	P	**P**	**06 02 43.9**	**+0.6**
	comp=Z,1.8nm,1.0s,baz=110,slow=1.4,SNR=4.1						
INK	**Inuvik**	**71.66**	**338**	IAmb	IAmb	06 02 44.8	
	comp=Z,4.2nm,1.2s						
FINES	**FINESS Array B**	**75.24**	**30**	P	**P**	**06 03 05.2**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=316,slow=5.8,SNR=4.0						
BURAR	**Bucovina Array**	**75.56**	**44**	P	**P**	**06 03 08.7**	**+1.8**
ILAR	**Eielson Array**	**76.88**	**334**	P	**P**	**06 03 14.8**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=108,slow=5.0,SNR=8.5						

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*IDC **15** 05:53:21.5±1.3, 5°.78S×146°.94E, h0^{km}, mb3.6/3, mb1 3.9/5, mb1mx3.3/46, mbtmp3.7/5, ML3.1/2, MS2.8/2, Ms1 2.8/2, ms1mx2.5/34, Error ellipse: s-maj=61.3km s-min=23.4km az=105.0*
ISC 15 05:53:31.1±1.3**,6°.0S**±0°.1×**146°.8E**±0°.3**,h78^{km},n6,σ2^{s}.43**/8**,mb3.6**/3**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.44**	**174**	Pn	**Pn**	**05 54 19.4**	**-3.1**
	14nm,0.3s,baz=30,slow=4.9,SNR=9.4						
PMG				Sn	**Sn**	**05 55 05.2**	**+3.0**
	6.1nm,0.3s,baz=108,slow=8.4,SNR=3.2						
PMG				LR	LR	05 56 12.9	
	comp=Z,77nm,20.0s,baz=25,slow=47						
WRA	**Warramunga Arr**	**18.43**	**220**	P	**Pn**	**05 57 40.5**	**-0.9**
	0.2nm,0.3s,baz=37,slow=11,SNR=21						
WRA				PcP	**PcP**	**06 02 11.5**	**+3.1**
	0.1nm,0.3s,baz=31,slow=1.9,SNR=8.4						
ASAR	**Alice Springs**	**21.54**	**214**	P	**P**	**05 58 14.6**	**+0.4**
	1.3nm,0.5s,baz=55,slow=9.1,SNR=20						
ASAR				LR	LR	06 06 30.8	
	comp=Z,55nm,19.9s,baz=48,slow=36						
STKA	**Stephens Creek**	**26.24**	**190**	P	**P**	**05 58 59.4**	**+0.5**
	0.9nm,0.5s,baz=356,slow=14,SNR=3.8						
ILAR	**Eielson Array**	**85.53**	**23**	P	**P**	**06 06 00.0**	**-0.3**
	0.4nm,0.6s,baz=251,slow=4.8,SNR=6.3						
TORD	**Torodi Ar. Bea**	**144.88**	**284**	PKP	**PKPdf**	**06 13 00.0**	**-0.2**
	0.4nm,0.5s,baz=55,slow=3.6,SNR=4.5						

IDC 15 06:10:00.8±3.4**,53°.76N**×**90°.96E,h0^{km},mb1 3.4**/3**,mb1mx3.1**/56**,mbtmp3.4**/3**,ML3.0**/3**,Error ellipse: s-maj=28.5km s-min=24.4km az=40.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**3.64**	**275**	Pn	Pn	06 10 59.5	+1.0
	1.3nm,0.3s,baz=92,slow=13,SNR=23						
ZALV				Lg	Lg	06 11 55.2	
	1.3nm,0.3s,baz=93,slow=28,SNR=3.8						
KURBB	**Kurchatov Arra**	**8.26**	**253**	Pn	Pn	06 12 01.6	-0.2
	0.3nm,0.3s,baz=66,slow=14,SNR=5.2						
KURBB				Sn	Sn	06 13 33.9	-1.9
	baz=69,slow=28,SNR=13						
KURBB				Lg	Lg	06 14 21.6	
	0.1nm,0.3s,baz=68,slow=32,SNR=6.2						
MKAR	**Makanchi Array**	**8.91**	**222**	Pn	Pn	06 12 11.1	+0.3
	0.4nm,0.3s,baz=36,slow=13,SNR=8.2						
MKAR				Sn	Sn	06 13 52.1	+0.3
	baz=38,slow=19,SNR=2.4						
MKAR				Lg	Lg	06 14 44.2	
	baz=37,slow=29,SNR=5.6						
I34MN	**SONGINO INFRAS**	**11.45**	**115**	*i*		07 16 50.0	
	baz=309,slow=324,SNR=1.1						

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*IDC **15** 06:24:07.6±4.6, 5°.87S×149°.04E, h73^{km}±39^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.6/29, mbtmp4.1/7, ML4.2/1, Error ellipse: s-maj=35.5km s-min=25.2km az=155.0*
ISC 15 06:24:10.3±1.2**,5°.9S**±0°.2×**148°.9E**±0°.2**,h100^{km},n8,σ1^{s}.13**/9**,mb3.7**/5**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.87**	**207**	P	**Pn**	**06 25 08.1**	**+0.3**
	26nm,0.3s,baz=50,slow=6.7,SNR=21						
PMG				S	**Sn**	**06 25 51.1**	**-1.2**
	36nm,0.3s,baz=132,slow=19,SNR=14						
WRA	**Warramunga Arr**	**19.88**	**224**	P	**Pn**	**06 28 35.0**	**-1.5**
	0.7nm,0.3s,baz=50,slow=11,SNR=55						
ASAR	**Alice Springs**	**22.81**	**218**	P	**P**	**06 29 06.1**	**+1.2**
	1.4nm,0.5s,baz=53,slow=9.5,SNR=19						
DZM	**Mont Dzumac**	**23.31**	**135**	P	**P**	**06 29 09.9**	**0.0**
	6.8nm,0.6s,baz=124,slow=21,SNR=7.2						
FITZ	**Fitzroy Crossi**	**25.75**	**240**	P	**P**	**06 29 32.9**	**+1.0**
	6.0nm,0.7s,baz=59,slow=8.4,SNR=23						
STKA	**Stephens Creek**	**26.70**	**194**	P	**P**	**06 29 41.3**	**+1.0**
	1.6nm,0.7s,baz=5.7,slow=10,SNR=2.6						
ILAR	**Eielson Array**	**84.67**	**23**	P	**P**	**06 36 31.9**	**-0.7**
	0.6nm,0.7s,baz=242,slow=4.9,SNR=7.6						
BDFB	**Brasilia**	**152.77**	**142**	PKPbc	**PKiKP**	**06 43 56.8**	**-0.2**
	1.5nm,0.3s,baz=135,slow=1.4,SNR=5.2						

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*ISK **15** 06:32:41.7, 36°.42N×26°.73E, h127^{km}±1^{km}, ML2.6/11*
*THE **15** 06:32:43.3, 36°.39N×26°.69E, h145^{km}±5^{km}, ML3.0/6, Error ellipse: s-maj=5.9km s-min=1.0km az=160.0*
*HLW **15** 06:32:44.9, 35°.98N×26°.96E, h25^{km}±24^{km}, Md4.2, Ml4.0*
*DDA **15** 06:32:44.1, 36°.61N×26°.68E, h46^{km}±5^{km}, ML2.6*
ISC 15 06:32:40.4±1.4**,36°.36N**±0°.05×**26°.74E**±0°.04**,h138^{km}**±10^{km}**,n42,σ1^{s}.37**/58**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAT	**Datca**	**0.77**	**61**	PG	**Pn**	**06 33 02.9**	**+0.7**
DAT				SG	**Sn**	**06 33 17.9**	**-0.9**
BODT	**Bodrum**	**0.84**	**33**	PG	**Pn**	**06 33 03.1**	**+0.4**
BODT				SG	**Sn**	**06 33 18.7**	**-1.0**
THR8	**Santorini-Mono**	**1.02**	**273**	P	**Pn**	**06 33 04.8**	**+0.7**
SANT	**Santorini**	**1.03**	**271**	P	**Pn**	**06 33 05.0**	**+0.6**
SANT	**Santorini**	**1.03**	**271**	PG	**Pn**	**06 33 04.9**	**+0.6**
THR3	**Thira Island,**	**1.08**	**273**	P	**Pn**	**06 33 05.4**	**+0.7**
THR6	**Thira Island,**	**1.08**	**270**	P	**Pn**	**06 33 05.7**	**+1.0**
ARG	**Arkhangelos**	**1.13**	**97**	P	**Pn**	**06 33 06.5**	**+1.3**
ARG				S	**Sn**	**06 33 24.2**	**+0.2**
	402nm,0.2s						
ARG	**Arkhangelos**	**1.13**	**97**	PN	**Pn**	**06 33 06.5**	**+1.3**
ARG				SN	**Sn**	**06 33 24.3**	**+0.2**
APE	**Apeiranthos**	**1.20**	**307**	P	**Pn**	**06 33 06.4**	**+0.4**
APE				S	**Sn**	**06 33 24.4**	**-1.1**
APE	**Apeiranthos**	**1.20**	**307**	PN	**Pn**	**06 33 06.6**	**+0.6**
MLSB	**Milas**	**1.26**	**41**	PN	**Pn**	**06 33 07.3**	**+0.8**
STIA	**Sitia Lasithi**	**1.26**	**205**	P	**Pn**	**06 33 07.6**	**+1.1**
STIA				S	**Sn**	**06 33 26.0**	**-0.4**
TURN	**Turunc**	**1.28**	**70**	*i* P	**Pn**	**06 33 07.4**	**+0.7**
TURN				*i* S	**Sn**	**06 33 25.1**	**-1.6**
TURN				IAML		06 33 26.0	
	comp=N,145nm,0.3s						
TURN				IAML		06 33 27.0	
	comp=E,143nm,0.6s						
TURN	**Turunc**	**1.28**	**70**	PN	**Pn**	**06 33 07.6**	**+0.9**
ZKR	**Zakros**	**1.31**	**199**	P	**Pn**	**06 33 08.7**	**+1.7**
ZKR				S	**Sn**	**06 33 28.4**	**+1.1**
	comp=E,578nm,0.4s						
ZKR	**Zakros**	**1.31**	**199**	PN	**Pn**	**06 33 08.8**	**+1.7**
SMG	**Samos**	**1.35**	**3**	P	**Pn**	**06 33 07.7**	**+0.2**
NPS	**Neapolis**	**1.42**	**220**	P	**Pn**	**06 33 09.1**	**+0.9**
NPS				S	**Sn**	**06 33 28.7**	**-0.7**
	comp=E,582nm,0.2s						
MULA	**Mugla, Merkez-**	**1.56**	**54**	*i* P	**Pn**	**06 33 10.9**	**+1.1**
MULA				*i* S	**Sn**	**06 33 29.5**	**-2.7**
MULA				IAML		06 33 33.0	
	comp=E,48nm,1.2s						
AYDN	**Tasoluk**	**1.59**	**35**	*i* P	**Pn**	**06 33 10.5**	**+0.4**
DALY	**Dalyan (Mula)**	**1.61**	**73**	PN	**Pn**	**06 33 11.9**	**+1.7**
AYDB	**Zeytinkoy-Aydi**	**1.84**	**30**	PN	**Pn**	**06 33 13.5**	**+0.5**
IDI	**Anoyia**	**1.84**	**235**	P	**Pn**	**06 33 13.8**	**+0.8**
IDI				S	**Sn**	**06 33 36.8**	**-1.1**
	comp=E,175nm,0.2s						
FETY	**Fethiye**	**1.91**	**81**	PN	**Pn**	**06 33 14.5**	**+0.8**
URLA	**Izmir**	**2.00**	**357**	*i* P	**Pn**	**06 33 13.8**	**-1.1**
TAVA	**DENIZLI_Tavas**	**2.07**	**57**	*i* P	**Pn**	**06 33 16.6**	**+1.0**
TAVA				*i* S	**Sn**	**06 33 41.1**	**-1.6**
CHOS	**Chios island**	**2.10**	**345**	P	**Pn**	**06 33 16.4**	**+0.4**
CAEL	**Denizli, Camel**	**2.21**	**69**	*i* P	Pn	06 33 34.4	+17
AKAS	**Kas**	**2.32**	**92**	*i* P	**Pn**	**06 33 19.1**	**+0.3**
AKAS				*i* S	**Sn**	**06 33 46.9**	**-1.4**
IMMV	**Iera Moni Meta**	**2.41**	**249**	P	**Pn**	**06 33 21.4**	**+1.6**
IMMV				S	**Sn**	**06 33 49.0**	**-1.0**
	comp=E,85nm,0.3s						
GOLH	**Golhisar**	**2.43**	**68**	*i* P	**Pn**	**06 33 21.4**	**+1.3**
ANKY	**Antikythira Is**	**2.82**	**261**	P	**Pn**	**06 33 26.3**	**+1.3**
PASA	**Karahalli, USA**	**2.96**	**47**	*i* P	**Pn**	**06 33 27.0**	**+0.2**
KTHA	**Kythira Island**	**2.97**	**269**	P	**Pn**	**06 33 27.7**	**+0.8**
KORT	**Korkueli**	**2.98**	**76**	*i* P	**Pn**	**06 33 28.9**	**+1.8**
KORT				*i* S	**Sn**	**06 34 04.4**	**+1.3**
KORT				IAML		06 34 09.0	
	comp=E,31nm,0.4s						
KORT				IAML		06 34 09.0	
	comp=N,19nm,0.3s						
ITM	**Ithomi**	**3.95**	**283**	P	**Pn**	**06 33 41.2**	**+1.6**
ITM				S	**Sn**	**06 34 25.2**	**-0.4**
	comp=N,22nm,0.2s						
SLUM	**Salum**	**5.01**	**195**	P	**Pn**	**06 33 54.7**	**+0.9**
	baz=199						
SLUM				AMP		06 34 00.0	
	baz=199						
SLUM				S	**Sn**	**06 34 44.8**	**-6.1**
	baz=199						
SWA2		**7.17**	**189**	P	**Pn**	**06 34 23.1**	**+0.4**
	baz=192						
SWA2				AMP		06 35 00.0	
	baz=192						
RYAN	**Fayoum**	**7.84**	**157**	P	**Pn**	**06 34 32.2**	**+0.5**
	baz=156						
GLL	**Jalalah**	**7.94**	**147**	P	**Pn**	**06 34 33.8**	**+0.7**
	baz=146						
NBNS	**Bani Suef**	**8.62**	**152**	P	**Pn**	**06 34 42.6**	**+0.5**
	baz=152						

IDC 15 06:49:45.6±4.8**,19°.04S**×**175°.50W,h0^{km},mb4.0**/5**,mb1 4.2**/5**,mb1mx3.7**/34**,mbtmp4.0**/5**,Error ellipse: s-maj=198.7km s-min=39.0km az=140.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.54**	**243**	P	P	06 57 27.3	+0.4
	1.2nm,0.3s,baz=106,slow=7.4,SNR=2.1						
WRA	**Warramunga Arr**	**47.15**	**260**	P	P	06 58 20.5	+0.3
	1.5nm,0.6s,baz=97,slow=8.5,SNR=34						
ASAR	**Alice Springs**	**47.16**	**255**	P	P	06 58 20.2	0.0
	2.7nm,0.5s,baz=93,slow=8.3,SNR=33						
FITZ	**Fitzroy Crossi**	**55.57**	**261**	P	P	06 59 21.9	-1.4
	0.9nm,0.5s,baz=111,slow=4.0,SNR=1.7						
ILAR	**Eielson Array**	**86.39**	**12**	P	P	07 02 29.4	0.0
	0.3nm,0.8s,baz=219,slow=7.0,SNR=2.1						

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*NEIC **15** 06:54:37.7±1.1, 19°.76N±0°.04×66°.08W±0°.06, h26^{km}±13^{km}, Error ellipse: s-maj=8.0km s-min=6.2km az=69.0*
*RSPR **15** 06:54:39.3, 19°.60N×66°.04W, h97^{km}±11^{km}, MD3.8/9*
ISC 15 06:54:39.0±2.4**,19°.6N**±0°.1×**66°.05W**±0°.04**,h14^{km},n46,σ0^{s}.57**/46**,12C,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**1.19**	**203**	Pn	**Pb**	**06 55 01.1**	**-0.3**
EMPR				IAML		06 55 23.3	
	comp=N,239nm,1.1s						
EMPR				IAML		06 55 39.6	
	comp=E,271nm,0.8s						
GCPR	**Guaynabo City**	**1.27**	**182**		**Pn**	**06 55 01.4**	**-0.9**
GCPR				IAML		06 55 25.1	
	comp=E,122nm,1.0s						
CBYP	**Canovanas**	**1.32**	**172**	⇑*e*P	**Pn**	**06 55 02.2**	**-0.9**
CBYP	**Canovanas**	**1.32**	**172**		**Pn**	**06 55 02.2**	**-0.9**
CBYP	**Canovanas**	**1.32**	**172**	IAML		06 55 29.4	
	comp=E,231nm,0.2s						
AOPR	**Arecibo Observ**	**1.40**	**209**	⇑*e*P	**Pn**	**06 55 03.4**	**-0.8**
AOPR	**Arecibo Observ**	**1.40**	**209**	*e*S	**Sn**	**06 55 22.4**	**-0.1**
AOPR	**Arecibo Observ**	**1.40**	**209**		**Pn**	**06 55 03.4**	**-0.8**
AOPR					**Sn**	**06 55 22.4**	**-0.1**
HUMP	**Col San Antoni**	**1.45**	**173**	⇑*e*P	**Pn**	**06 55 04.0**	**-0.8**
HUMP	**Col San Antoni**	**1.45**	**173**		**Pn**	**06 55 04.0**	**-0.8**

CUPR	Culebra, Puert	1.46	150	⇑eP	Pn	06 55 04.2	-0.8
CUPR	Culebra, Puert	1.46	150	eS	Sb	06 55 24.9	+0.5
CUPR	Culebra, Puert	1.46	150		Pn	06 55 04.2	-0.8
CUPR					Sb	06 55 24.9	+0.5
SJG	San Juan	1.47	184		Pn	06 55 04.2	-0.8
SJG				IAML		06 55 24.9	
	comp=E,125nm,0.6s						
SJG				IAML		06 55 27.5	
	comp=E,99nm,0.8s						
AGPR	Aguadilla, PR	1.50	222	eS	Sb	06 55 26.4	+0.8
AGPR	Aguadilla, PR	1.50	222		Sb	06 55 26.4	+0.8
AGPR	Aguadilla, PR	1.50	222	Pn	Pg	06 55 07.4	-0.4
AGPR	Aguadilla, PR	1.50	222	IAML		06 55 39.1	
	comp=N,131nm,2.8s						
AGPR				IAML		06 56 00.4	
	comp=E,108nm,3.3s						
MTP	Monte Pirata	1.55	162	⇑eP	Pn	06 55 05.7	-0.6
MTP	Monte Pirata	1.55	162	eS	Sn	06 55 26.9	+0.7
MTP	Monte Pirata	1.55	162		Pn	06 55 05.7	-0.6
MTP					Sn	06 55 26.9	+0.7
PDPR	Patillas Dam,	1.56	179		Pn	06 55 05.7	-0.6
PDPR				IAML		06 55 36.0	
	comp=E,116nm,1.4s						
CELP	Cerrillos	1.58	199	⇑eP	Pn	06 55 06.3	-0.4
CELP	Cerrillos	1.58	199	eS	Sn	06 55 27.2	+0.2
CELP	Cerrillos	1.58	199		Pn	06 55 06.3	-0.4
CELP					Sn	06 55 27.2	+0.2
CELP	Cerrillos	1.58	199	IAML		06 55 31.1	
	comp=E,68nm,0.8s						
CELP				IAML		06 55 39.4	
	comp=N,73nm,0.7s						
STVI	Saint Thomas	1.61	140	⇑eP	Pb	06 55 08.2	-0.2
STVI	Saint Thomas	1.61	140	eS	Sg	06 55 31.4	+0.6
STVI	Saint Thomas	1.61	140		Pb	06 55 08.2	-0.2
STVI					Sg	06 55 31.4	+0.6
STVI	Saint Thomas	1.61	140	IAML		06 55 51.8	
	comp=N,62nm,0.8s						
IGPR	InterUniversit	1.61	182	⇑eP	Pn	06 55 06.8	-0.2
IGPR	InterUniversit	1.61	182	eS	Sn	06 55 28.1	+0.5
OBIP	Obispado Ponce	1.62	199	⇑eP	Pn	06 55 06.8	-0.4
OBIP	Obispado Ponce	1.62	199	eS	Sn	06 55 27.8	-0.1
OBIP	Obispado Ponce	1.62	199		Pn	06 55 06.8	-0.4
OBIP					Sn	06 55 27.8	-0.1
OBIP	Obispado Ponce	1.62	199	IAML		06 55 37.8	
	comp=N,113nm,0.7s						
LSP	Las Mesas	1.71	215	⇑eP	Pn	06 55 07.9	-0.5
MLPR	Magueyes Islan	1.86	211	⇑eP	Pn	06 55 10.2	-0.3
MLPR	Magueyes Islan	1.86	211	eS	Sn	06 55 33.4	-0.4
MLPR	Magueyes Islan	1.86	211		Pn	06 55 10.2	-0.3
MLPR					Sn	06 55 33.4	-0.4
MLPR	Magueyes Islan	1.86	211	IAML		06 55 38.0	
	comp=N,54nm,2.2s						
CRPR	Cabo Rojo, PR	1.86	213	⇑eP	Pn	06 55 10.9	+0.4
CRPR	Cabo Rojo, PR	1.86	213		Pn	06 55 10.9	+0.4
CRPR	Cabo Rojo, PR	1.86	213	IAML		06 56 07.1	
	comp=E,72nm,2.4s						
CRPR				IAML		06 56 08.9	
	comp=N,58nm,1.7s						
CDVI	St. Croix	2.19	146	Pn	Pn	06 55 15.2	+0.2
PCDR	Punta Cana, DR	2.45	245	Pn	Pn	06 55 19.0	+0.4

NEIC ***15*** *06:55:17.0±2.0, 3°.59S±0°.09×101°.47E±0°.08, h64^{km}±7^{km}, mb4.9/47, Error ellipse: s-maj=13.9km s-min=9.7km az=218.0*

IDC ***15*** *06:55:16.9±3.4, 3°.42S×101°.63E, h62^{km}±29^{km}, mb4.4/27, mb1 4.4/29, mb1mx4.2/51, mbtmp4.7/29, ML4.4/2, MS3.2/9, Ms1 3.2/9, ms1mx3.0/38, Error ellipse: s-maj=21.4km s-min=10.0km az=49.0*

DJA ***15*** *06:55:16.9±0.2, 4°S±2°×10°2E±°, h49^{km}±3^{km}, M4.8/31, mB5.3/8, mb4.8/31, MLv4.8/26, Mw(mB)4.8/8*

KLM ***15*** *06:55:18, 3°.47S×101°.40E, h81^{km}, mb4.8*

ISC 15 06:55:15.1±0.4**, 3°.58S**±0°.05×**101°.53E**±0°.05**, h50^{km}, n168,** σ**1^{s}.47**/164**, mb4.9**/60**, MS3.1**/6**, 1D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.83	59	P	Pn	06 55 30.6	-0.1
MASI				S	Sn	06 55 41.9	-0.1
KSI	Kapahiang	1.06	94	P	Pn	06 55 34.1	+0.3
KSI				S	Sn	06 55 48.2	+0.6
KRJI	Kerinci	1.48	357	P	Pn	06 55 40.3	+0.8
KRJI				S	Sn	06 55 58.7	+1.0
PPSI	Pulau Pagai	1.72	298	P	Pn	06 55 44.9	+2.2
LHSI	Lahat	2.00	97	P	Pn	06 55 48.5	+1.9
MDSI	Maura Dua	2.79	109	P	Pn	06 56 00.2	+2.8
PDSI	Padang	2.85	338	P	Pn	06 55 59.2	+0.9
JMBI	JAMBI	2.86	48	P	Pn	06 55 58.8	+0.5
LWLI	Liwa	2.90	120	P	Pn	06 56 03.7	+4.8
PMBI	Palembang	3.30	79	P	Pn	06 56 05.2	+0.9
PMBI	Palembang	3.30	79	Pn	Pn	06 56 06.2	+1.9
RGRI	Rengat	3.31	14	P	Pn	06 56 06.1	+1.7
SISI	Saibi	3.31	312	P	Pn	06 56 06.1	+1.6
KLSI		3.38	109	P	Pn	06 56 08.5	+3.1
KASI	Kota Agung	3.53	123	P	Pn	06 56 09.6	+2.1
KLI	Kotabumi	3.56	111	P	Pn	06 56 12.0	+4.2
BKNI	Bangkinang	3.91	353	P	Pn	06 56 16.8	+4.1
BLSI	Bandar Lampung	4.11	116	P	Pn	06 56 17.2	+1.7
DSRI	Dabo	4.33	45	P	Pn	06 56 19.5	+1.0
MNSI	Mandailing Nat	4.76	336	P	Pn	06 56 25.3	+0.9
PBSI	Pulau Batu	4.77	317	P	Pn	06 56 25.6	+1.0
PPBI	Pangkal Pinang	4.81	73	P	Pn	06 56 25.3	+0.2
CGJI	Cibinong	5.13	126	P	Pn	06 56 29.9	+0.5
	114nm,0.9s						
DBJI	Dramaga	5.98	120	P	Pn	06 56 44.3	+3.1
	0.8nm103nm,0.8s						
CBJI	Citeko	6.00	118	P	Pn	06 56 47.2	+5.7
	16µm193nm,0.8s						
GSI	Gunungsitoli	6.26	321	P	Pn	06 56 46.4	+1.5
	1.7nm9µm240nm,0.4s						
GSI	Gunungsitoli	6.26	321	Pn	Pn	06 56 46.0	+1.1
GSI	Gunungsitoli	6.26	321	P	Pn	06 56 46.8	+1.9
	236nm,0.5s						
CNJI	Cibinong	6.69	124	P	Pn	06 56 56.7	+5.8
	0.4nm69nm,1.0s						
RPSI	Rantau Prapat	6.75	337		Pn	06 56 52.3	+0.5
PSI	Prapat	6.85	338	P	Pn	06 56 52.3	-0.9
	4.1nm,0.3s,baz=165,slow=5.0,SNR=9.5						
PSI				LR	LR	06 59 59.8	
	comp=Z,186nm,20.4s,baz=183,slow=43						
LEM	Lembang	6.87	118	LR	LR	06 59 59.6	
	comp=Z,153nm,21.8s,baz=243,slow=41						
LEM	Lembang	6.87	118	P	Pn	06 56 55.1	+1.6
	0.1nm31nm,0.7s						
JRMM	Jerantut	7.47	7	P	Pn	06 57 04.0	+2.3
KCSI	Kotacane, Aceh	7.99	332	P	Pn	06 57 09.6	+0.9
	0.4nm1µm23nm,0.5s						
IPM	Ipoh	8.02	356	P	Pn	06 57 14.0	+4.8
IPM	Ipoh	8.02	356	Pn	Pn	06 57 12.6	+3.5
IPM	Ipoh	8.02	356	P	Pn	06 57 13.6	+4.5
	56nm,0.8s						
CMJI	Cimerak	8.05	122	P	Pn	06 57 12.1	+2.5
	51nm,0.8s						
TPTI		8.06	327	P	Pn	06 57 11.4	+1.7
	612nm8.8nm,0.6s						
KULM	Kulim	8.85	354	P	Pn	06 57 23.0	+2.5
COCO	West Island	9.74	208		Pn	06 57 33.0	+0.4
UGM	Wanagama	9.93	116	P	Pn	06 57 37.6	+2.3
	80nm,1.8s						
UGM	Wanagama	9.93	116	Pn	Pn	06 57 36.0	+0.6
UGM	Wanagama	9.93	116	P	Pn	06 57 36.5	+1.2
	78nm,1.8s						
PCJI	Pacitan	10.63	116	P	Pn	06 57 45.4	+0.5
	24nm,0.7s						
BBKI	Banjar Baru	13.29	90	P	P	06 58 31.2	+1.6
JAGI	Jajag, Banyuwa	13.46	112	P	Pn	06 58 24.1	+0.5
	69nm,0.7s						
JAGI	Jajag, Banyuwa	13.46	112	Pn	Pn	06 58 23.4	-0.1
JAGI	Jajag, Banyuwa	13.46	112	P	Pn	06 58 23.4	-0.1
	67nm,0.7s						
PLAI	Plampang	16.97	109	P	P	06 59 11.2	+0.7
	41nm,0.6s						
PLAI	Plampang	16.97	109	P	Pn	06 59 09.3	+0.1
	39nm,0.5s						
KAPI	Kappang	18.23	95	P	Pn	06 59 25.4	+0.7
	2.3nm,0.3s,baz=300,slow=3.9,SNR=7.9						
KAPI				LR	LR	07 07 13.6	
	comp=Z,56nm,18.5s,baz=297,slow=40						
KAPI	Kappang	18.23	95	P	Pn	06 59 25.2	+0.6
KAPI	Kappang	18.23	95	P	Pn	06 59 26.4	+1.7
	35nm,1.0s						
WBSI	Waikabubak, Su	18.73	110	P	Pn	06 59 32.3	+1.5
	76nm,0.6s						
MYLDM	Lahad Datu	19.05	63	P	Pn	06 59 34.4	-0.2
MYLDM				IAmb	IAmb	06 59 44.6	
	comp=Z,56nm,1.3s						
UBPT	Khong Chiam	19.14	12	P	P	06 59 34.0	-0.3
TOLI2	Tolitoli	19.80	77	P	P	06 59 42.5	+0.9
TOLI2				IAmb	IAmb	06 59 45.0	
	comp=Z,29nm,0.7s						
TOLI2	Tolitoli	19.80	77	P	Pn	06 59 42.9	-0.6
	comp=Z,41nm,0.9s						
APSI	Ampana	20.27	83	P	Pn	06 59 48.5	-0.6
	comp=Z,62nm,0.8s						
EDFI	Ende, Flores	20.68	105	P	Pn	06 59 53.3	-0.8
	comp=Z,5.4nm,0.4s						
MRSI	Marisa	20.79	79	P	P	06 59 53.4	+1.0
	comp=Z,39nm,0.6s						
LUWI	Luwuk	21.37	84	P	P	06 59 59.9	+1.2
LUWI				IAmb	IAmb	07 00 17.4	
	comp=Z,34nm,0.5s						
GTOI	Gorontalo	21.87	79	P	P	07 00 03.4	-0.6
	comp=Z,8.6nm,0.6s						
CM31	Chiang Mai Arr	22.04	353	P	P	07 00 06.0	+0.3
CMAR	Chiang Mai Arr	22.04	353	P	P	07 00 05.8	+0.1
	comp=Z,6.3nm,0.5s,baz=187,slow=8.7,SNR=29						
CMAR				PcP	PcP	07 04 03.5	+1.0
	comp=Z,1.5nm,0.7s,baz=204,slow=4.3,SNR=4.8						
CMAR				LR	LR	07 08 11.4	
	comp=Z,68nm,20.1s,baz=190,slow=35						
CMAR	Chiang Mai Arr	22.04	353	P	P	07 00 05.2	-0.6
SLVN	Son La	24.87	5	P	P	07 00 34.1	+0.8
FITZ	Fitzroy Crossi	27.67	123	P	P	07 00 58.5	-0.1
	comp=Z,1.8nm,0.7s,baz=293,slow=7.7,SNR=6.1						
H08S2	Diego Garcia H	29.17	261	T	T	07 31 04.4	
	baz=84,slow=75,SNR=248						
H08S3	Diego Garcia H	29.18	261	T	T	07 31 02.9	
	baz=84,slow=75,SNR=150						
H08S1	Diego Carcia H	29.19	261	T	T	07 31 06.0	
	baz=84,slow=75,SNR=252						
KNRA	Kununurra	29.37	116	P	P	07 01 11.0	-2.7
SHL	Shillong	30.45	343	P	P	07 01 21.1	-2.3
SHL				IAmb	IAmb	07 01 23.4	
	comp=Z,10nm,0.6s						
FAKI	Fak Fak	30.68	90	P	P	07 01 24.3	-1.1
FAKI				IAmb	IAmb	07 01 50.1	
	comp=Z,11nm,0.8s						
ODAN	Odare	33.20	337	eP	P	07 01 47.8	+0.1
	comp=Z,26nm,0.5s						
TAPN	Taplejung	33.52	337	eP	P	07 01 50.7	+0.2
	comp=Z,49nm,0.7s						
RAMN	Ramite	33.60	335	eP	P	07 01 52.0	+0.8
	comp=Z,20nm,0.4s						
JIRN	Jiri	34.40	335	eP	P	07 01 58.6	+0.4
	comp=Z,12nm,0.3s						
ENH	Enshi	34.51	12	P	P	07 01 57.4	-1.3
PKI	Pulchoki	34.65	334	eP	P	07 02 00.2	-0.1
	comp=Z,6.5nm,0.4s						
GUN	Gumba	34.75	335	eP	P	07 02 01.7	+0.5
	comp=Z,59nm,0.4s						
DMN	Daman	34.82	334	eP	P	07 02 02.0	+0.3
KKN	Kakani	34.90	334	eP	P	07 02 02.6	+0.3
GKN	Gorkha	35.36	334	eP	P	07 02 06.4	+0.1
	comp=Z,19nm,0.3s						
KOLN	Koldanda	35.64	332	eP	P	07 02 09.4	+0.7
	comp=Z,77nm,0.8s						
WB0	Warramunga Arr	35.87	119	P	P	07 02 09.6	-0.9
WB0				IAmb	IAmb	07 02 11.5	
	comp=Z,8.3nm,0.6s						
WRA	Warramunga Arr	35.88	120	P	P	07 02 10.8	+0.1
	comp=Z,4.9nm,0.3s,baz=304,slow=9.1,SNR=118						
WRA				S	S	07 07 42.2	-3.3
	comp=Z,1.2nm,0.9s,baz=295,slow=16,SNR=4.5						
WRA				LR	LR	07 19 05.9	
	comp=Z,20nm,20.5s,baz=65,slow=40						
WRAB	Tennant Creek	35.89	120	P	P	07 02 11.0	+0.2
WB2	Warramunga Arr	35.90	120	P	P	07 02 10.5	-0.3
DANN	Dangsing	36.06	333	eP	P	07 02 12.8	+0.4
	comp=Z,49nm,0.4s						
WR0	Warramunga Arr	36.07	119	P	P	07 02 12.0	-0.3
WR0				IAmb	IAmb	07 02 13.5	
	comp=Z,15nm,0.8s						
PYUN	Piuthan	36.20	332	eP	P	07 02 14.2	+0.7
	comp=Z,46nm,0.6s						
AS31	Alice Springs	37.10	126	P	P	07 02 21.4	+0.3
AS31				IAmb	IAmb	07 02 23.5	
	comp=Z,6.4nm,0.3s						
ASAR	Alice Springs	37.10	126	P	P	07 02 21.4	+0.4
	comp=Z,7.0nm,0.4s,baz=298,slow=8.0,SNR=98						
ASAR				S	S	07 08 00.9	-3.0
	comp=Z,0.9nm,0.8s,baz=300,slow=14,SNR=6.8						
ASAR				LR	LR	07 20 01.7	
	comp=Z,36nm,19.7s,baz=328,slow=40						
XAN	Xi'an	38.06	10	P	P	07 02 28.0	-1.0
XAN				pP	pP	07 02 43.0	+0.8
XAN				pmax	pmax		
	comp=Z,15nm,0.7s						
NJ2	Nanjing	39.07	24	eP	P	07 02 40.4	+3.0
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
LZH	Lanzhou	39.52	3	eP	P	07 02 45.8	+4.5
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
COEN	Coen	42.36	107	P	P	07 03 04.8	0.0
BBOO	Buckleboo	43.46	136	P	P	07 03 14.8	+1.3
BBOO				IAmb	IAmb	07 03 38.4	
	comp=Z,23nm,1.4s						
HHC	Hu-ho-hao-te	45.16	11	eP	P	07 03 31.3	+4.2
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,7.3s						
NIL	Nilore	45.65	326	P	P	07 03 31.1	+0.1
CTAO	Charters Tower	46.55	114	P	P	07 03 37.5	-0.8
CTAO				IAmb	IAmb	07 04 02.6	
	comp=Z,14nm,1.3s						
STKA	Stephens Creek	46.97	131	P	P	07 03 42.8	+1.4
	comp=Z,11nm,0.6s,baz=299,slow=6.9,SNR=20						
STKA	Stephens Creek	46.97	131	P	P	07 03 42.0	+0.7
KSRS	Korea Array	47.63	29	P	P	07 03 45.5	-0.8
	comp=Z,1.2nm,0.5s,baz=225,slow=7.4,SNR=4.6						
WMQ	Urumqi	48.80	347	⇓P	P	07 03 56.3	+0.9
WMQ				pP	sP	07 04 13.9	-0.6
WMQ				pmax	pmax		
	comp=Z,210nm,4.9s						
KSH	Kashi	48.91	334	P	P	07 03 55.4	-1.0
KSH				pP	pP	07 04 11.8	+1.9
KSH				sP	sP	07 04 17.8	+2.1
KSH				pmax	pmax		
	comp=Z,13nm,0.6s						
WSAR	Wadi Sarin	49.59	305	LR	LR	07 23 42.2	
	comp=Z,15nm,20.4s,baz=114,slow=34						
KDJ	Kajisay	50.58	337	P	P	07 04 10.0	+0.9
DRK	Karamyk	50.84	330	P	P	07 04 12.4	+1.2
GAR	Garm	51.22	329	P	P	07 04 13.2	-0.8
GAR				IAmb	IAmb	07 04 15.6	
	comp=Z,22nm,1.4s						
SONM	Songino Array	51.38	4	P	P	07 04 15.1	+0.2
	comp=Z,13nm,0.6s,baz=188,slow=9.6,SNR=90						
SONM				PcP	PcP	07 05 28.6	-0.4
	comp=Z,2.1nm,0.6s,baz=186,slow=3.6,SNR=4.3						
SONM	Songino Array	51.38	4	P	P	07 04 15.3	+0.4
SONM				IAmb	IAmb	07 04 15.7	
	comp=Z,12nm,0.6s						
ULN	Ulaanbaatar	51.46	5	P	P	07 04 15.4	-0.2
ULN				IAmb	IAmb	07 04 15.8	
	comp=Z,7.4nm,0.6s						
BTK	Batken	51.77	330	P	P	07 04 18.3	+0.4
AAK	Ala-Archa	52.11	335	P	P	07 04 20.4	-0.1
	comp=Z,2.4nm,0.5s,baz=143,slow=2.9,SNR=6.5						
EIDS	Eidsvold	52.25	119	P	P	07 04 21.2	-0.5
EIDS				IAmb	IAmb	07 04 23.0	
	comp=Z,7.6nm,0.9s						
MJAR	Matsushiro Arr	52.56	37	P	P	07 04 22.0	-1.9
	comp=Z,2.8nm,0.4s,baz=205,slow=7.3,SNR=4.7						
MK31	Makanchi Array	52.96	344	P	P	07 04 26.5	0.0
MKAR	Makanchi Array	52.96	344	P	P	07 04 26.5	-0.1
	comp=Z,26nm,0.4s,baz=156,slow=9.0,SNR=546						
MAKZ	Makanchi	53.06	343	P	P	07 04 27.3	0.0
MAKZ				IAmb	IAmb	07 04 28.5	
	comp=Z,23nm,1.2s						
ARMA	Armidale	54.25	125	P	P	07 04 38.1	+1.6
ARMA				IAmb	IAmb	07 04 39.3	
	comp=Z,5.4nm,0.8s						
KKAR	Karatay Array	54.25	332	P	P	07 04 35.3	-0.8
USA0B	Ussuriysk Arra	54.85	26	P	P	07 04 40.0	-0.4
USA0B				IAmb	IAmb	07 04 41.4	
	comp=Z,11nm,0.8s						
USRK	Ussuriysk Ar.	54.85	26	P	P	07 04 39.7	-0.7
	comp=Z,9.2nm,0.6s,baz=215,slow=4.8,SNR=23						
USRK	Ussuriysk Ar.	54.85	26	P	P	07 04 39.8	-0.5
KURBB	Kurchatov Arra	57.49	343	P	P	07 04 58.2	-0.9
	comp=Z,6.8nm,0.5s,baz=165,slow=7.0,SNR=45						
KURBB				PcP	PcP	07 05 51.8	-0.4
	comp=Z,2.2nm,0.5s,baz=154,slow=3.3,SNR=5.3						
KURK	Kurchatov	57.55	343	P	P	07 04 58.7	-0.8
KURK	Kurchatov	57.55	343		PcP	07 05 51.8	-0.6
ZAA0	Zalesovo Array	59.00	349	P	P	07 05 08.8	-0.8
ZALV	Zalesovo Beam	59.00	349	P	P	07 05 08.7	-0.9
	comp=Z,10.0nm,0.3s,baz=170,slow=5.2,SNR=30						
ZALV				LR	LR	07 33 30.0	
	comp=Z,32nm,18.2s,baz=25,slow=39						
ZALV	Zalesovo Beam	59.00	349	P	P	07 05 08.5	-1.0
BVAR	Borovoye Array	62.19	339	P	P	07 05 30.1	-1.2
	comp=Z,4.0nm,0.3s,baz=170,slow=8.9,SNR=51						
BRVK	Borovoye	62.25	339	P	P	07 05 30.5	-1.2
BRVK				IAmb	IAmb	07 05 30.9	
	comp=Z,6.7nm,0.5s						
ABKAR	Akbulak array	63.75	331	P	P	07 05 41.0	-0.8
ABKAR	Akbulak array	63.75	331	P	P	07 05 40.8	-1.0
ABKAR				IAmb	IAmb	07 05 41.8	
	comp=Z,10nm,0.8s						
DZM	Mont Dzumac	65.44	113	P	P	07 05 53.5	0.0
	comp=Z,4.3nm,0.6s,baz=290,slow=18,SNR=7.3						
DZM	Mont Dzumac	65.44	113	P	P	07 05 54.3	+0.9
DZM				IAmb	IAmb	07 06 00.6	
	comp=Z,22nm,1.2s						
AKTO	Aktyubinsk	65.47	331	P	P	07 05 52.1	-0.8
	comp=Z,1.9nm,0.3s,baz=140,slow=7.5,SNR=10						
GNI	Garni	67.72	316	P	P	07 06 09.1	+1.4
	baz=72,slow=20						
MAW	Mawson	69.15	195	LR	LR	07 30 04.3	
	comp=Z,53nm,20.2s,baz=57,slow=30						
ARU	Arti	69.26	336	P	P	07 06 15.5	-1.3
	comp=Z,1.8nm,0.3s,baz=135,slow=6.5,SNR=4.8						
ARU				PcP	PcP	07 06 39.6	-0.6
	comp=Z,1.6nm,0.2s,baz=312,slow=4.6,SNR=3.7						
KBZ	Khabaz	70.49	319	P	P	07 06 25.2	+0.6
	comp=Z,11nm,0.8s,baz=116,slow=6.2,SNR=12						
BELG	Belogornoye	71.86	329	P	P	07 06 31.9	-0.9
	comp=Z,13nm,0.8s,baz=120,slow=5.5,SNR=4.7						
NRIK	Noril'sk	73.39	355	P	P	07 06 39.9	-1.6
	comp=Z,3.0nm,0.3s,baz=146,slow=6.3,SNR=7.9						
NRIK	Noril'sk	73.39	355	P	P	07 06 39.7	-1.8
NRIK				IAmb	IAmb	07 06 41.0	
	comp=Z,16nm,1.4s						
PETK	Petropavlovsk-	73.41	32	P	P	07 06 41.1	-0.9
	comp=Z,2.0nm,0.5s,baz=233,slow=8.4,SNR=5.0						
BRTR	Keskin Array B	75.51	312	P	P	07 06 54.6	0.0
	comp=Z,5.2nm,0.6s,baz=139,slow=6.9,SNR=15						
BOSA	Boshof	76.25	242	P	P	07 07 00.5	+1.4
	comp=Z,1.8nm,0.7s,baz=118,slow=5.7,SNR=4.8						
KLMR	Klimovskoe	79.91	334	eP	P	07 07 08.8	-10
KLMR				AMP		07 07 11.0	
	comp=Z,16nm,1.2s						
VNDA	Vanda	80.33	169	P	P	07 07 19.9	-0.6
AKASG	Malin Array Be	81.66	322	P	P	07 07 27.4	-0.6
	comp=Z,1.9nm,0.5s,baz=93,slow=5.2,SNR=14						
BURAR	Bucovina Array	83.45	319	P	P	07 07 37.8	+0.3
BUR08	Bucovina Ar. S	83.46	319	P	P	07 07 38.3	+0.7
FINES	FINESS Array B	86.21	332	P	P	07 07 50.9	-0.1
	comp=Z,1.2nm,0.5s,baz=99,slow=5.8,SNR=14						
FINES				PP	PP	07 11 09.0	-3.2
	comp=Z,2.6nm,0.9s,baz=150,slow=8.8,SNR=3.4						
ARCES	ARCESS Array B	88.47	340	P	P	07 08 01.4	-0.3
	comp=Z,5.3nm,0.9s,baz=42,slow=2.0,SNR=13						
PRED	Cave del Predi	91.16	316	P	P	07 08 15.5	+0.6
PRED				IAmb	IAmb	07 08 17.1	
	comp=Z,6.2nm,0.8s						
GERES	GERESS Array B	91.23	319	P	P	07 08 15.8	+0.6
	comp=Z,1.0nm,0.7s,baz=87,slow=4.5,SNR=8.5						
CIMO	Cimolais	91.93	316	P	P	07 08 18.8	+0.3
NOA	NORSAR Array B	93.26	331	PP	PP	07 12 07.0	-1.3
	comp=Z,0.7nm,0.9s,baz=90,slow=9.8,SNR=2.3						
NVAR	Mina Array Bea	129.82	41	PKP	PKiKP	07 14 20.9	+0.3
	comp=Z,0.6nm,0.5s,baz=304,slow=2.7,SNR=5.1						
PDAR	Pinedale Array	132.17	31	PKP	PKPdf	07 14 23.7	-0.5
	comp=Z,14nm,0.3s,baz=219,slow=1.2,SNR=6.3						
CPUP	Villa Florida	143.91	213	PKP	PKPdf	07 14 45.6	-0.2
	comp=Z,1.9nm,0.6s,baz=120,slow=3.8,SNR=5.0						
BDFB	Brasilia	144.32	237	PKP	PKPdf	07 14 46.7	-0.2
	comp=Z,2.6nm,0.4s,baz=150,slow=5.1,SNR=7.4						
TXAR	Lajitas Array	144.96	40	PKP	PKPbc	07 14 47.2	+0.2
	comp=Z,9.5nm,0.5s,baz=277,slow=1.1,SNR=108						
TXAR	Lajitas Array	144.96	40		PKPab	07 14 47.0	0.0

NNC ***15*** *07:02:37.6±1.4, 41°.68N×78°.15E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=9.3km s-min=6.3km az=1.0, Suspected Mining explosion.*

KRNET ***15*** *07:02:43.2±0.1, 42°.31N×78°.09E, h9^{km}, mb1.9*

ISC 15 07:02:43.2±1.5**, 42°.15N**±0°.08×**78°.13E**±0°.04**, h0^{km}, n13,** σ**2^{s}.49**/21**, 8C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.39	31	⇑iP	Pg	07 02 49.2	-1.4
	baz=50						
PRZ				⇑iS	Sg	07 02 53.6	-2.0
	baz=50						
KDJ	Kajisay	0.71	268	⇑iP	Pg	07 02 56.4	-0.4
	baz=55						
KDJ				⇑iS	Sg	07 03 06.6	+0.7
	baz=55						
ANVS	Anan'yevo	0.72	332	⇓iP	Pg	07 02 54.6	-2.3
	baz=27						
ANVS				⇓iS	Sg	07 03 02.6	-3.6
	baz=27						
SATY	Saty	0.93	13	P	Pn	07 03 04.1	+0.4
SATY				S	Sn	07 03 22.2	+4.4
MDOK	Medeo	1.29	322	⇑P	Pn	07 03 07.9	-0.7
	0.7nm,0.4s						
MDOK				⇓S	Sn	07 03 31.4	+4.8
	3.2nm,0.8s						
KNDC	Almaty	1.37	321	⇑P	Pb	07 03 09.0	-0.7
	18nm,0.3s						
KNDC				⇓S	Sn	07 03 33.1	+4.6
	27nm,0.5s						
PDGK	Podgornoye	1.54	40	P	Pb	07 03 12.4	-0.3
	1.0nm,0.2s						
PDGK				S	Sn	07 03 36.5	+3.6
	1.4nm,0.6s						
BOOM	Boomskoye usch	1.66	282	⇑iP	Pb	07 03 13.8	-0.9
	baz=77						
BOOM				⇑iS	Sb	07 03 35.8	-0.5
	baz=77						
KST	Kastek	1.83	300	Pg	Pg	07 03 17.4	-0.9
	5.6nm,0.4s						
KST				Lg	Lg	07 03 45.4	
	3.9nm,0.6s						
KTBS	Karatobe	1.89	326	Pg	Pg	07 03 20.0	+0.6
	2.6nm,0.2s						
KTBS				Lg	Lg	07 03 49.6	
	9.4nm,0.7s						
TKM2	Tokmak 2	2.02	293	⇓Pg	Pn	07 03 16.9	-1.8
	5.3nm,1.0s						
TKM2				⇓Lg	Lg	07 03 49.5	
	2.3nm,0.6s						
DGS	Degeres	2.05	303	Pg	Pg	07 03 21.6	-1.0
	3.0nm,0.4s						
DGS				Lg	Lg	07 03 52.4	
	3.4nm,0.3s						
KUU	Kurty	2.18	324	Pg	Pg	07 03 26.1	+1.2
	2.3nm,0.2s						
KUU				Lg	Lg	07 04 00.2	
	5.4nm,0.6s						

NNC ***15*** *07:06:17.9±0.4, 50°.02N×78°.82E, h0^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=4.3km s-min=2.0km az=63.0, Suspected Mining explosion.*

IDC ***15*** *07:06:17.7±0.9, 50°.03N×78°.56E, h0^{km}, mb1 3.0/2, mb1mx2.8/50, mbtmp3.0/2, ML2.3/2, Error ellipse: s-maj=8.2km s-min=5.7km az=50.0*

ISC 15 07:06:18.2±0.9**, 50°.09N**±0°.05×**78°.76E**±0°.05**, h0^{km}, n23,** σ**1^{s}.44**/36**, 15C-13D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.52	343	⇑P	Pb	07 06 29.5	-0.7
KUR07				⇓S	Sb	07 06 38.5	+0.2
KUR06	Kurchatov Arra	0.54	344	⇓P	Pb	07 06 30.0	-0.6
KUR06				⇓S	Sb	07 06 39.4	+0.6
KUR14	Kurchatov Arra	0.54	349	⇑P	Pb	07 06 29.9	-0.7
KUR14				⇓S	Sb	07 06 38.9	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR15	Kurchatov Arra	0.55	347	⇑P	Pb	07 06 30.0	-0.7
KUR15				⇑S	Sb	07 06 39.2	+0.2
KURBB	Kurchatov Arra	0.55	345	Pg	Pg	07 06 29.2	+0.4
	2.3nm,0.3s,baz=182,slow=29,SNR=39						
KURBB				Lg	Lg	07 06 38.0	
	5.2nm,0.3s,baz=177,slow=31,SNR=21						
KURBB	Kurchatov Arra	0.55	345	⇑P	Pb	07 06 30.2	-0.7
	19nm,0.3s						
KURBB				⇓S	Sb	07 06 39.1	-0.2
	99nm,0.5s						
KUR16	Kurchatov Arra	0.56	343	⇓P	Pb	07 06 30.3	-0.7
KUR16				⇓S	Sb	07 06 39.4	-0.2
KUR05	Kurchatov Arra	0.57	346	⇑P	Pb	07 06 30.5	-0.6
KUR05				⇑S	Sb	07 06 39.8	0.0
KUR17	Kurchatov Arra	0.57	341	⇓P	Pb	07 06 30.7	-0.5
KUR17				⇑S	Sb	07 06 40.4	+0.4
KUR04	Kurchatov Arra	0.59	346	⇓P	Pb	07 06 30.9	-0.5
KUR04				⇓S	Sb	07 06 40.2	-0.1
KURK	Kurchatov	0.63	352	⇑P	Pb	07 06 31.4	-0.8
	23nm,0.9s						
KURK				⇑S	Sb	07 06 41.5	-0.1
	60nm,0.7s						
SEM	Semipalatinsk	1.01	71	P	Pg	07 06 35.9	-1.7
	2.6nm,0.1s						
SEM				S	Sb	07 06 52.0	-0.7
	12nm,0.2s						
MAKZ	Makanchi	3.92	146	⇑Pg	Pb	07 07 28.1	-0.2
	4.6nm,0.8s						
MAKZ				⇑Lg	Lg	07 08 18.8	
	11nm,0.6s						
MK31	Makanchi Array	4.05	143	⇓Pn	Pn	07 07 22.3	+0.8
	0.1nm,0.2s,baz=322,slow=9.9,SNR=12						
MK31				⇓Pg	Pb	07 07 30.1	-0.3
	2.2nm,0.6s,baz=332,slow=14,SNR=14						
MK31				Lg	Lg	07 08 24.0	
	13nm,0.6s,baz=328,slow=27,SNR=14						
MKAR	Makanchi Array	4.05	143	Pn	Pn	07 07 22.4	+1.0
	0.2nm,0.3s,baz=328,slow=10,SNR=7.6						
MKAR				Pg	Pb	07 07 28.5	-1.9
	0.4nm,0.3s,baz=320,slow=14,SNR=8.1						
MKAR				Sn	Sn	07 08 10.1	+0.5
	0.7nm,0.3s,baz=328,slow=14,SNR=4.9						
MKAR				Lg	Lg	07 08 23.0	
	2.7nm,0.3s,baz=328,slow=26,SNR=14						
OTUK	Ortayu	4.60	249	⇓Pn	Pn	07 07 29.2	+0.1
	1.2nm,0.3s						
OTUK				⇑Lg	Lg	07 08 44.2	
	6.3nm,0.6s						
KAPS	Kapalarasan	4.82	175	Pg	Pb	07 07 43.3	-0.4
	2.4nm,0.7s						
KAPS				Lg	Lg	07 08 48.1	
	18nm,0.7s						
ZSN	Zaisan	4.82	121	Pg	Pb	07 07 44.0	+0.3
	3.0nm,0.2s						
ZSN				Lg	Lg	07 08 49.8	
	14nm,0.6s						
ZALV	Zalesovo Beam	5.38	42	Pn	Pn	07 07 42.5	+2.8
	0.5nm,0.3s,baz=232,slow=14,SNR=6.6						
ZALV				Lg	Lg	07 09 09.1	
	0.4nm,0.3s,baz=230,slow=30,SNR=4.0						
I46RU	ZALESOVO INFRA	5.38	42	*i*		07 36 10.0	
	baz=223,slow=328,SNR=3.5						
BVAR	Borovoye Array	5.99	303	Pg	Pb	07 07 59.5	-3.9
	0.2nm,0.3s,baz=121,slow=16,SNR=2.1						
BVAR				Sn	Sn	07 08 52.5	-4.8
	0.2nm,0.3s,baz=121,slow=28,SNR=2.0						
BVAR				Lg	Lg	07 09 27.4	
	1.0nm,0.3s,baz=137,slow=28,SNR=5.5						
BRVK	Borovoye	6.06	303	⇑Sn	Sn	07 09 01.9	+2.7
	2.6nm,0.5s						
BRVK				⇑Lg	Lg	07 09 34.0	
	2.3nm,0.5s						
AAK	Ala-Archa	8.02	203	Lg	Lg	07 10 27.6	
	0.2nm,0.3s,baz=77,slow=19,SNR=2.5						

NNC 15 07:20:32.4±2.5**,54°.24N×87°.27E,h0^{km},mb3.6,mpv3.3, 7C-4D,Error ellipse: s-maj=23.0km s-min=12.5km az=9.0,Suspected Mining explosion.,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.47	260	⇑P	Pn	07 20 59.4	-0.8
	1.5nm,0.6s						
ZAA0				⇑S	Sg	07 21 19.8	+0.1
	17nm,1.1s						
KURK	Kurchatov	6.35	240	⇑Pn	Pn	07 22 07.7	+0.5
	4.5nm,1.1s						
KURK				⇓Sn	Sn	07 23 19.9	-0.4
	2.7nm,0.9s						
KURK				⇑Lg	Lg	07 23 53.9	
	10nm,0.8s						
KURBB	Kurchatov Arra	6.46	239	⇑Pn	Pn	07 22 10.1	+1.5
	5.7nm,0.7s						
KURBB				⇓Sn	Sn	07 23 22.2	-0.7
	7.7nm,0.6s						
KURBB				⇓Lg	Lg	07 23 60.0	
	17nm,0.8s						
MK31	Makanchi Array	8.10	205	⇑Pn	Pn	07 22 30.2	-1.0
	5.0nm,1.1s,baz=27,slow=14,SNR=11						
MK31				⇓Sn	Sn	07 24 07.1	+3.7
	6.1nm,1.1s,baz=24,slow=27,SNR=3.8						
MK31				⇑Lg	Lg	07 24 50.1	
	14nm,1.1s,baz=22,slow=32,SNR=4.2						

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*NEIC **15** 07:38:10.9±2.6,9°.64S±0°.07×112°.86E±0°.05,h43^{km}±7^{km}, mb4.6/32,Error ellipse: s-maj=11.3km s-min=4.8km az=147.0*

*BJI **15** 07:38:11.0±0.0,9°.70S×112°.90E,h63^{km},mB5.1/18, mb4.7/36,Ms4.6/4,Ms7 4.1/5*

*DJA **15** 07:38:13.0±0.3,10°S±3°×11°3E±°,h50^{km}±4^{km},M4.9/28, mB5.5/8,mb4.8/28,MLv4.8/24,Mw(mB)5.0/8*

*IDC **15** 07:38:14.8±2.1,9°.34S×113°.09E,h75^{km}±18^{km},mb4.1/16, mb1 4.2/19,mb1mx3.8/39,mbtmp4.4/19,MS3.5/16, Ms1 3.5/16,ms1mx3.3/37,Error ellipse: s-maj=18.7km s-min=10.0km az=35.0*

ISC 15 07:38:10.1±0.4**,9°.61S**±0°.05×**113°.02E**±0°.04**,h36**^{km}**,n149,** σ**2^{s}.04**/138**,mb4.7**/38**,MS3.6**/13**,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.39	18	P	Pn	07 38 33.6	+0.6
GMJI				S	Sn	07 38 47.9	-2.2
JAGI	Jajag, Banyuwa	1.59	45	P	Pn	07 38 37.4	+1.6
JAGI				S	Sn	07 38 59.4	+4.3
JAGI	Jajag, Banyuwa	1.59	45	Pn	Pn	07 38 37.4	+1.6
BLJI	Banyuglugur	1.94	17	P	Pn	07 38 43.6	+3.1
ABJI	Asem Bagus	2.17	34	P	Pn	07 38 47.1	+3.5
IGBI	Denpasar	2.24	70	P	Pn	07 38 47.7	+3.0
PCJI	Pacitan	2.30	308	P	Pn	07 38 45.3	-0.1
DNP	Denpasar	2.35	67	P	Pn	07 38 49.8	+3.6
SRBI	Singaraja	2.65	55	P	Pn	07 38 53.4	+3.2
WOJI	Wonogiri, Jawa	2.72	310	P	Pn	07 38 52.3	+1.1
UGM	Wanagama	2.99	304	P	Pn	07 38 56.0	+1.0
UGM	Wanagama	2.99	304	Pn	Pn	07 38 56.1	+1.2
UGM	Wanagama	2.99	304	P	Pn	07 38 57.2	+2.2
YOGI	Yogyakarta	3.23	303	P	Pn	07 38 59.4	+1.2
SMRI	Semarang	3.60	315	P	Pn	07 39 05.4	+2.0
SMRI	Semarang	3.60	315	Pn	Pn	07 39 05.4	+2.0
SMRI	Semarang	3.60	315	P	Pn	07 39 05.9	+2.5
BWJI	Bawean	3.75	355	P	Pn	07 39 08.2	+2.8
UWJI	Ujung Watu	3.77	327	P	Pn	07 39 06.7	+0.9
TWSI	Taliwang, Sumb	3.91	78	P	Pn	07 39 12.7	+5.0
PLAI	Plampang	4.76	81	P	Pn	07 39 24.3	+4.9
PLAI	Plampang	4.76	81	P	Pn	07 39 24.6	+5.2
CMJI	Cimerak	4.87	292	P	Pn	07 39 20.4	-0.4
LEM	Lembang	6.02	297	P	Pn	07 39 39.7	+2.9
	5.1nm,0.3s,baz=359,slow=21,SNR=2.5						
LEM				S	Sn	07 40 49.4	+4.9
	5.0nm,0.3s,baz=15,slow=22,SNR=1.4						
LEM				LR	LR	07 42 00.4	
	comp=Z,241nm,20.6s,baz=219,slow=38						
LEM	Lembang	6.02	297	P	Pn	07 39 38.8	+2.0
	0.3nm56nm,1.1s						
WBSI	Waikabubak, Su	6.29	91	P	Pn	07 39 44.3	+4.0
	0.8nm1μm169nm,0.8s						
BBKI	Banjar Baru	6.37	17	P	Pn	07 39 43.7	+2.2
	0.3nm79nm,1.1s						
SKJI	Sukabumi	6.90	292	P	Pn	07 39 46.5	-2.2
	0.7nm74nm,0.4s						
DBJI	Dramaga	6.91	296	P	Pn	07 39 55.4	+6.5
XMIS	Christmas Isla	7.30	263	Pn	Pn	07 39 53.8	-0.5
BASI	Baing, Sumba	7.47	95	P	Pn	07 40 01.2	+4.6
	0.5nm771nm45nm,0.9s						
CGJI	Cibinong	7.84	292	P	Pn	07 40 03.7	+2.1
	0.4nm80nm,0.6s						
KAPI	Kappang	8.09	56	P	Pn	07 40 07.7	+2.7
	1.2nm,0.3s,baz=244,slow=11,SNR=2.4						
KAPI				S	Sn	07 41 34.8	-0.5
	0.7nm,0.3s,baz=223,slow=23,SNR=1.7						
KAPI				LR	LR	07 43 46.6	
	comp=Z,182nm,18.4s,baz=260,slow=42						
KAPI	Kappang	8.09	56	Pn	Pn	07 40 09.7	+4.6
BSSI	Bau Bau, Buton	8.16	66	P	Pn	07 40 10.4	+4.3
	53nm,0.8s						
BKSI	Bulukumba	8.23	59	P	Pn	07 40 11.2	+4.2
	38nm,0.7s						
EDFI	Ende, Flores	8.61	85	P	Pn	07 40 14.7	+2.4
	304nm14nm,0.7s						
BNSI	Bone	8.73	54	P	Pn	07 40 17.6	+3.7
	51nm,1.2s						
MTKI	Muara Teweh, K	8.81	12	P	Pn	07 40 13.6	-1.4
TTSI	Tana Toraja	9.39	46	P	Pn	07 40 27.0	+4.1
	20nm,0.4s						
STKI	Sintang	9.73	351	P	Pn	07 40 29.8	+2.2
BATI	Baumata	10.51	94	S	Sn	07 42 30.6	-4.2
	3.4nm,0.3s,baz=275,slow=23,SNR=1.3						
SOEI	Soe	11.09	92	P	Pn	07 40 51.9	+5.5
	56nm,0.8s						
SOEI	Soe	11.09	92		Pn	07 40 50.1	+3.8
SOEI	Soe	11.09	92	P	Pn	07 40 51.4	+5.0
KSI	Kapahiang	11.92	299	P	Pn	07 40 58.0	+0.3
	118nm,0.7s						
SBUM	Sibu	12.01	356	Pn	Pn	07 41 00.7	+1.9
MASI	Maura Aman, Be	12.49	300	P	Pn	07 41 05.0	-0.4
	106nm,0.8s						
GIRL	Giralia	13.01	175	Pn	Pn	07 41 12.3	-0.1
MBWA	Marble Bar	13.18	151	P	Pn	07 41 13.2	-1.5
MRSI	Marisa	13.39	42	P	Pn	07 41 21.9	+4.2
	20nm,0.5s						
PSA00	Pilbara Seismi	13.59	152	Pn	Pn	07 41 18.3	-2.0
PSA00	Pilbara Seismi	13.59	152	Pn	Pn	07 41 19.6	-0.8
PSA00	Pilbara Seismi	13.59	152	P	Pn	07 41 20.2	-0.1
GTOI	Gorontalo	14.23	45	P	P	07 41 33.1	-2.9
	19nm,0.8s						
FITZ	Fitzroy Crossi	14.87	126	P	Pn	07 41 37.2	-0.6
	0.6nm,0.3s,baz=304,slow=9.3,SNR=16						
FITZ				S	Sn	07 44 10.9	-10
	0.3nm,0.3s,baz=142,slow=14,SNR=2.7						
FITZ				LR	LR	07 47 41.8	
	comp=Z,122nm,19.6s,baz=357,slow=38						
SANI	Sanana	14.92	61	P	P	07 41 42.4	-1.3
	26nm,0.9s						
SANI	Sanana	14.92	61	P	P	07 41 45.1	+1.4
KNRA	Kununurra	16.50	113	P	Pn	07 41 59.4	+0.5
MTN	Manton Dam	18.06	102		P	07 42 20.0	+1.6
MTN				IAmb	IAmb	07 42 32.4	
	comp=Z,15nm,0.6s						
PSI	Prapat	18.69	311	LR	LR	07 50 15.5	
	comp=Z,188nm,21.8s,baz=138,slow=39						
MORW	Morawa	19.57	172	P	P	07 42 34.5	-0.4
SWI	Sorong	20.12	65	P	Pn	07 42 42.9	-0.2
	comp=Z,5μmcomp=Z,28nm,0.9s						
SIJI	Sorong	20.12	66	P	P	07 42 41.3	+0.1
	comp=Z,1.9nm,0.3s,baz=299,slow=7.0,SNR=6.5						
SIJI				LR	LR	07 50 18.8	
	comp=Z,63nm,20.9s,baz=280,slow=36						
FAKI	Fak Fak	20.23	72	P	P	07 42 42.9	+0.6
	comp=Z,40nm,0.7s						
FAKI	Fak Fak	20.23	72	P	P	07 42 42.3	0.0
FAKI				IAmb	IAmb	07 42 59.4	
	comp=Z,28nm,0.6s						
WB0	Warramunga Arr	22.98	118	P	P	07 43 13.5	+1.7
WRA	Warramunga Arr	23.00	119	P	P	07 43 13.6	+1.5
	comp=Z,1.0nm,0.7s,baz=292,slow=12,SNR=16						
WRA				S	S	07 47 20.5	+0.2
	comp=Z,0.6nm,0.8s,baz=286,slow=25,SNR=2.2						
WRA				LR	LR	07 52 50.9	
	comp=Z,82nm,20.1s,baz=285,slow=38						
WRA	Warramunga Arr	23.00	119	P	P	07 43 12.9	+0.8
WRAB	Tennant Creek	23.01	119	P	P	07 43 14.1	+2.1
WB2	Warramunga Arr	23.02	119	P	P	07 43 13.8	+1.7
WB2				IAmb	IAmb	07 43 38.1	
	comp=Z,6.3nm,0.6s						
BSI	Banda Aceh	23.17	310	P	P	07 43 20.2	+6.5
	comp=Z,4μm,1.8s						
WR0	Warramunga Arr	23.19	119	P	P	07 43 15.2	+1.4
ASAR	Alice Springs	24.36	128	P	P	07 43 26.8	+1.8
	comp=Z,5.0nm,0.7s,baz=304,slow=9.0,SNR=62						
ASAR				S	S	07 47 43.7	+1.5
	comp=Z,0.5nm,0.8s,baz=303,slow=25,SNR=1.8						
ASAR				LR	LR	07 53 39.5	
	comp=Z,81nm,20.4s,baz=330,slow=38						
ASAR	Alice Springs	24.36	128	P	P	07 43 25.1	+0.2
AS31	Alice Springs	24.36	128	P	P	07 43 25.7	+0.7
FORT	Forrest	25.30	148	P	P	07 43 34.2	+0.9
FORT				IAmb	IAmb	07 44 00.0	
	comp=Z,25nm,0.8s						
COEN	Coen	29.82	101	P	P	07 44 15.0	+0.9
COEN				IAmb	IAmb	07 44 39.5	
	comp=Z,18nm,1.5s						
CMAR	Chiang Mai Arr	31.16	334	P	P	07 44 25.9	+0.2
	comp=Z,6.8nm,0.9s,baz=170,slow=8.0,SNR=35						
CMAR				LR	LR	07 57 55.4	
	comp=Z,85nm,18.4s,baz=178,slow=38						
BBOO	Buckleboo	31.39	141	P	P	07 44 27.4	-0.3
STKA	Stephens Creek	34.52	134	P	P	07 44 57.9	+2.8
	comp=Z,3.1nm,0.7s,baz=306,slow=8.7,SNR=8.6						
STKA				LR	LR	07 59 32.3	
	comp=Z,156nm,21.8s,baz=357,slow=37						
STKA	Stephens Creek	34.52	134	P	P	07 44 57.4	+2.3
H08S2	Diego Garcia H	40.10	270	T	T	08 28 32.2	
	baz=95,slow=75,SNR=9.7						
H08S3	Diego Garcia H	40.11	270	T	T	08 28 33.3	
	baz=95,slow=75,SNR=13						
H08S1	Diego Carcia H	40.12	270	T	T	08 28 32.2	
	baz=95,slow=75,SNR=11						
SHL	Shillong	40.57	330	P	P	07 45 45.8	-0.8
NJ2	Nanjing	41.80	7	*e*P	P	07 45 58.1	+1.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
XAN	Xi'an	43.58	355	P	P	07 46 11.6	+0.8
XAN				sP	sP	07 46 34.5	+10
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN				LR	LR		
	comp=Z,170nm,13.7s						
XAN				LR	LR		
	comp=Z,210nm,15.7s						
XAN				LR	LR		
	comp=Z,220nm,17.9s						
ODAN	Odare	43.97	326	*e*P	P	07 46 13.0	-1.2
TAPN	Taplejung	44.18	327	*e*P	P	07 46 14.8	-1.2
	comp=Z,20nm,0.8s						
LSA	Lhasa	44.40	332	P	P	07 46 16.9	-1.0
LSA				IAmb	IAmb	07 46 19.2	
	comp=Z,7.2nm,0.8s						
JIRN	Jiri	45.25	326	*e*P	P	07 46 23.4	-1.2
	comp=Z,23nm,0.8s						
GUN	Gumba	45.62	326	*e*P	P	07 46 26.1	-1.4
	comp=Z,27nm,0.9s						
LZH	Lanzhou	46.27	350	*e*P	P	07 46 32.8	+0.5
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
KOLN	Koldanda	46.82	323	*e*P	P	07 46 35.1	-1.7
DANN	Dangsing	47.16	324	*e*P	P	07 46 37.8	-1.8
	comp=Z,16nm,0.7s						
PYUN	Piuthan	47.42	323	*e*P	P	07 46 40.3	-1.2
	comp=Z,8.4nm,0.7s						
KSAR	Wonju Array Be	48.84	16	P	P	07 46 52.3	+0.3
KSRS	Korea Array	48.86	16	P	P	07 46 51.4	-0.7
	comp=Z,1.9nm,0.7s,baz=201,slow=6.7,SNR=5.2						
KS19	Wonju Array Si	48.89	16	P	P	07 46 51.9	-0.5
HHC	Hu-ho-hao-te	50.22	359	*e*P	P	07 47 05.3	+2.6
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,89nm,5.5s						
MAT	Matsushiro	51.66	26	P	P	07 47 11.2	-2.2
MJAR	Matsushiro Arr	51.66	26	P	P	07 47 11.2	-2.3
	comp=Z,12nm,0.8s,baz=194,slow=7.8,SNR=12						
USRK	Ussuriysk Ar.	56.25	16	P	P	07 47 45.8	-1.0
	comp=Z,5.8nm,1.0s,baz=207,slow=4.7,SNR=6.5						
USRK	Ussuriysk Ar.	56.25	16	P	P	07 47 46.4	-0.4
NIL	Nilore	57.26	321	P	P	07 47 52.1	-2.1
ULN	Ulaanbaatar	57.47	355	P	P	07 47 55.3	-0.3
ULN				IAmb	IAmb	07 47 56.4	
	comp=Z,9.0nm,1.1s						
SONM	Songino Array	57.49	355	P	P	07 47 54.1	-1.6
	comp=Z,5.0nm,0.8s,baz=175,slow=8.1,SNR=31						
SONM				LR	LR	08 14 32.0	
	comp=Z,92nm,18.6s,baz=28,slow=38						
SONM	Songino Array	57.49	355	P	P	07 47 55.9	+0.2
SONM				IAmb	IAmb	07 47 56.1	
	comp=Z,5.9nm,0.9s						
WMQ	Urumqi	57.94	339	*e*P	P	07 48 00.1	+1.2
KSH	Kashi	59.75	327	P	P	07 48 09.8	-1.8
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ASAJ	Asahikawa	59.82	24	P	P	07 48 10.4	-1.4
	comp=Z,7.6nm,0.7s,baz=167,slow=6.2,SNR=5.8						
KBL	Kabul	60.51	319	P	P	07 48 15.2	-1.8
KBL				IAmb	IAmb	07 48 17.1	
	comp=Z,5.2nm,0.8s						
KLR	Kul'dur	60.86	14	P	P	07 48 16.8	-2.0
	comp=Z,1.6nm,0.7s,baz=207,slow=5.1,SNR=4.6						
TLY	Talaya	61.58	353	LR	LR	08 18 21.6	
	comp=Z,31nm,18.5s,baz=97,slow=39						
TKM2	Tokmak 2	62.43	330	P	P	07 48 29.4	-0.5
	SNR=5.7						
MKAR	Makanchi Array	62.49	337	P	P	07 48 28.8	-1.1
	comp=Z,4.2nm,0.7s,baz=147,slow=7.6,SNR=11						
MKAR	Makanchi Array	62.49	337	P	P	07 48 28.7	-1.2
GAR	Garm	62.56	323	P	P	07 48 29.5	-1.2
KBK	Karagaybulak	62.56	329	P	P	07 48 30.4	-0.3
	SNR=8.8						
AAK	Ala-Archa	62.78	329	P	P	07 48 31.6	-0.5
	SNR=5.5						
AAK	Ala-Archa	62.78	329	P	P	07 48 30.9	-1.2
AAK				IAmb	IAmb	07 48 32.6	
	comp=Z,5.0nm,0.7s						
AML	Almayashu	62.83	328	P	P	07 48 32.5	-0.3
	SNR=8.1						
CHGR	Chuyangaron	63.03	323	P	P	07 48 31.6	-2.1
EKS2	Erkin-Say	63.17	328	P	P	07 48 34.7	+0.1
	SNR=7.1						
MAW	Mawson	66.71	199	LR	LR	08 12 04.6	
	comp=Z,51nm,21.9s,baz=55,slow=30						
KURK	Kurchatov	67.09	337	P	P	07 48 59.0	-0.7
KURK				IAmb	IAmb	07 48 60.0	
	comp=Z,5.6nm,0.8s						
ZAA0	Zalesovo Array	67.67	342	P	P	07 49 02.0	-1.3
ZAA0				IAmb	IAmb	07 49 02.8	
	comp=Z,5.8nm,0.8s						
ZALV	Zalesovo Beam	67.67	342	P	P	07 49 02.3	-1.0
	comp=Z,5.9nm,0.8s,baz=139,slow=4.0,SNR=26						
ZALV	Zalesovo Beam	67.67	342	P	P	07 49 01.8	-1.6
GEYT	Alibeck	69.70	316	P	P	07 49 15.4	-1.1
	comp=Z,5.4nm,0.9s,baz=163,slow=5.6,SNR=5.4						
GEYT				LR	LR	08 20 41.4	
	comp=Z,39nm,20.8s,baz=20,slow=37						
GEYT	Alibeck	69.70	316	P	P	07 49 17.1	+0.6
GEYT				IAmb	IAmb	07 49 17.3	
	comp=Z,7.0nm,0.9s						
VNDA	Vanda	72.36	170	LR	LR	08 20 44.1	
	comp=Z,43nm,18.3s,baz=6.0,slow=35						
ABKAR	Akbulak array	74.76	327	P	P	07 49 45.7	-0.6
ABKAR	Akbulak array	74.76	327	P	P	07 49 45.7	-0.6
ABKAR				IAmb	IAmb	07 49 47.1	
	comp=Z,21nm,0.8s						
ARU	Arti	79.60	333	P	P	07 50 10.8	-2.6
ARU				IAmb	IAmb	07 50 13.7	
	comp=Z,13nm,1.1s						
NRIK	Noril'sk	80.74	351	P	P	07 50 18.6	-0.5
	comp=Z,3.3nm,0.8s,baz=150,slow=5.1,SNR=6.5						
NRIK	Noril'sk	80.74	351	P	P	07 50 18.7	-0.5
NRIK				IAmb	IAmb	07 50 19.5	
	comp=Z,5.0nm,1.0s						
TIXI	Tiksi	81.77	5	P	P	07 50 23.4	-1.3
TIXI				IAmb	IAmb	07 50 24.2	
	comp=Z,6.6nm,0.8s						
BOSA	Boshof	83.52	242	LR	LR	08 24 04.9	
	comp=Z,27nm,18.9s,baz=94,slow=33						
BRTR	Keskin Array B	88.02	311	P	P	07 50 56.3	-0.7
	comp=Z,2.7nm,0.8s,baz=141,slow=6.8,SNR=6.8						
BRTR	Keskin Array B	88.02	311	P	P	07 50 55.0	-2.0
AKASG	Malin Array Be	93.45	321	P	P	07 51 20.2	-1.6
	comp=Z,0.2nm,0.3s,baz=86,slow=4.3,SNR=1.8						
ARCES	ARCESS Array B	98.06	339	LR	LR	08 42 21.5	
	comp=Z,28nm,19.3s,baz=195,slow=39						
VYHS	Vyhne	99.88	318	*e*PDIFF	Pdif	07 51 50.0	-1.1
TXAR	Lajitas Array	140.48	55	PKhKP	PKPpre	07 57 28.0	
	comp=Z,0.2nm,0.6s,baz=217,slow=4.4,SNR=2.5						
WCI	Wyandotte Cave	146.63	28	PKPab	PKPbc	07 57 48.8	+0.5
WVT	Waverly	147.51	32	PKPab	PKPbc	07 57 51.8	+1.0
Y45A	Yeager Farm, C	148.18	37		PKPbc	07 57 52.9	+0.2

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*IDC **15** 07:39:32.3±1.0,13°.01N×143°.90E,h149^{km}±8^{km},mb3.5/9, mb1 3.8/9,mb1mx3.2/42,mbtmp3.9/9,Error ellipse: s-maj=25.2km s-min=17.8km az=118.0*

ISC 15 07:39:32.3±0.8**,13°.0N**±0°.2×**143°.9E**±0°.1**,h150**^{km}**,n14,** σ**0^{s}.98**/12**,mb3.8**/9**,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.14	58	P	Pn	07 39 58.7	+0.4
	56nm,0.3s,baz=352,slow=2.9,SNR=16						
GUMO				LR	LR	07 40 10.7	
	comp=Z,81nm,20.6s,baz=247,slow=35						
GUMO				S	Sn	07 40 17.7	-0.5
	246nm,0.3s,baz=112,slow=22,SNR=35						
H11N1	WAKE ISLAND Hy	23.06	70	T	T	08 08 26.6	
	baz=259,slow=76						
H11N2	WAKE ISLAND Hy	23.07	70	T	T	08 08 26.6	
	baz=259						
H11N3	WAKE ISLAND Hy	23.08	70	T	T	08 08 26.6	
	baz=259,slow=76						
WRA	Warramunga Arr	34.04	196	P	P	07 46 01.5	-0.8
	1.0nm,0.8s,baz=14,slow=9.6,SNR=3.5						
ASAR	Alice Springs	37.71	195	P	P	07 46 34.8	+1.2
	0.5nm,0.7s,baz=14,slow=12,SNR=2.8						
CMAR	Chiang Mai Arr	43.51	283	P	P	07 47 21.2	-0.1
	1.1nm,0.3s,baz=70,slow=7.8,SNR=1.9						
SONM	Songino Array	46.68	326	P	P	07 47 46.0	-0.1
	0.6nm,0.5s,baz=147,slow=6.8,SNR=5.6						
MKAR	Makanchi Array	61.26	316	P	P	07 49 31.7	0.0
	1.1nm,0.6s,baz=94,slow=7.5,SNR=2.0						
ILAR	Eielson Array	69.53	25	P	P	07 50 23.5	-1.0
	0.5nm,0.6s,baz=251,slow=5.9,SNR=14						
INK	Inuvik	75.29	22	P	P	07 50 58.8	+0.2
	2.3nm,1.2s,baz=273,slow=7.3,SNR=5.2						
YKA	Yellowknife Ar	83.84	27	P	P	07 51 45.3	+0.5
	0.9nm,0.5s,baz=286,slow=5.2,SNR=12						
NVAR	Mina Array Bea	88.05	51	P	P	07 52 07.2	+0.9
	2.5nm,0.7s,baz=262,slow=5.9,SNR=18						
LPAZ	La Paz	148.87	100	PKPbc	PKPbc	07 59 02.1	-2.0
	1.4nm,0.9s,baz=302,slow=6.4,SNR=1.9						

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*IDC **15** 07:43:23.5±2.0,9°.16S×113°.40E,h0^{km},mb3.9/6, mb1 3.9/7,mb1mx3.6/33,mbtmp3.9/7,ML3.6/1,Error ellipse: s-maj=95.0km s-min=15.1km az=47.0*

*DJA **15** 07:43:27.9±0.4,9°S±4°×11°3E±°,h10^{km},M4.0/12, MLv4.0/12*

*NEIC **15** 07:43:29.1±2.1,9°.64S±0°.08×112°.94E±0°.07,h53^{km}±10^{km}, mb4.3/4,Error ellipse: s-maj=13.0km s-min=8.4km az=146.0*

ISC 15 07:43:27.8±0.7**,9°.65S**±0°.07×**112°.91E**±0°.04**,h36**^{km}**,n32,** σ**1^{s}.69**/37**,mb4.2**/7**,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.46	21	P	Pn	07 43 51.0	-0.7
GMJI				S	Sn	07 44 06.7	-2.9
JAGI	Jajag, Banyuwa	1.69	46	P	Pn	07 43 55.0	+0.2
JAGI				S	Sn	07 44 17.8	+2.5
JAGI	Jajag, Banyuwa	1.69	46	Pn	Pn	07 43 55.2	+0.3
BLJI	Banyuglugur	2.01	20	P	Pn	07 44 00.8	+1.6
PCJI	Pacitan	2.24	310	P	Pn	07 44 03.2	+0.8
PCJI				S	Sn	07 44 31.2	+2.4
ABJI	Asem Bagus	2.26	35	P	Pn	07 44 05.1	+2.5
ABJI				S	Sn	07 44 31.9	+2.7
IGBI	Denpasar	2.35	70	P	Pn	07 44 05.7	+1.8
WOJI	Wonogiri, Jawa	2.66	312	P	Pn	07 44 09.6	+1.4
SRBI	Singaraja	2.75	56	P	Pn	07 44 11.6	+2.2
UGM	Wanagama	2.92	306	P	Pn	07 44 13.3	+1.5
UGM	Wanagama	2.92	306	Pn	Pn	07 44 13.3	+1.5
YOGI	Yogyakarta	3.16	305	P	Pn	07 44 16.1	+1.0
SMRI	Semarang	3.56	316	Pn	Pn	07 44 23.1	+2.6
TWSI	Taliwang, Sumb	4.02	77	P	Pn	07 44 29.1	+2.2
CMJI	Cimerak	4.79	292	P	Pn	07 44 39.0	+1.6

PLAI	Plampang	4.87	81	P	Pn	07 44 40.7	+2.1
XMIS	Christmas Isla	7.20	263		Pn	07 45 10.8	+0.2
GIRL	Giralia	12.98	175	Pn	Pn	07 46 30.3	+0.5
PSA00	Pilbara Seismi	13.60	151	Pn	Pn	07 46 37.9	-0.4
FITZ	Fitzroy Crossi	14.93	126	Pn	Pn	07 46 54.6	-1.8
	0.2nm,0.3s,baz=303,slow=14,SNR=0.9						
FITZ				Sn	Sn	07 49 28.4	-12
	0.2nm,0.3s,baz=311,slow=20,SNR=1.7						
MTN	Manton Dam	18.15	102	P	P	07 47 38.0	+0.8
WRA	Warramunga Arr	23.08	119	P	P	07 48 29.8	-0.7
	0.8nm,0.8s,baz=290,slow=10,SNR=1.9						
WRA				S	S	07 52 40.6	+1.4
	0.3nm,0.8s,baz=290,slow=24,SNR=1.5						
ASAR	Alice Springs	24.42	127	P	P	07 48 43.4	+0.2
	1.3nm,0.7s,baz=297,slow=8.6,SNR=6.6						
BBOO	Buckleboo	31.43	141	P	P	07 49 45.2	-0.6
STKA	Stephens Creek	34.57	134	P	P	07 50 14.8	+1.6
	1.2nm,0.5s,baz=323,slow=10,SNR=2.9						
SONM	Songino Array	57.52	355	P	P	07 53 13.0	-0.6
	1.0nm,0.5s,baz=176,slow=8.2,SNR=7.0						
SONM	Songino Array	57.52	355	P	P	07 53 12.7	-1.0
SONM				IAmb	IAmb	07 53 14.0	
	comp=Z,3.1nm,1.3s						
MK31	Makanchi Array	62.48	337	P	P	07 53 45.2	-2.3
MK31				IAmb	IAmb	07 54 01.1	
	comp=Z,3.2nm,0.9s						
MKAR	Makanchi Array	62.48	337	P	P	07 53 46.5	-1.0
	comp=Z,1.3nm,0.5s,baz=144,slow=7.1,SNR=11						
MKAR	Makanchi Array	62.48	337	P	P	07 53 46.1	-1.5
ZALV	Zalesovo Beam	67.67	342	P	P	07 54 19.0	-2.1
	comp=Z,1.1nm,0.5s,baz=157,slow=3.9,SNR=4.3						
ABKAR	Akbulak array	74.73	327	P	P	07 55 03.0	-0.9

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*DNK **15** 07:48:07.9±0.3, 81°.05N×22°.20W, h18^{km}, ML1.4*

BER 15 07:47:54.4±2.3**, 81°.33N×3°.71W, h10^{km}, ML1.8, Confirmed Earthquake, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOR	Nord	1.95	284	i P	Pn	07 48 26.1	-1.4
NOR	Nord	1.95	284	eP	Pn	07 48 26.3	-1.2
NOR				eS	Sn	07 48 47.7	-4.3
KBS	Kingsbay	3.61	124	eP	Pn	07 48 48.5	-1.7
KBS				eS	Sn	07 49 26.8	-6.0
KBS				IAML		07 49 32.8	
	comp=Z,4.4nm,0.6s						
BRBB	Barentsburg B	4.55	126	eP	Pn	07 49 03.2	+0.2
BRBB				eS	Sn	07 49 50.5	-5.4
SPA0	Spitsbergen Ar	4.75	121	eP	Pn	07 49 04.5	-1.4
SPA0				eS	Sn	07 49 54.8	-6.1
SPA0				IAML		07 50 10.5	
	comp=Z,3.5nm,0.7s						
DAG	Danmarks Havn	5.37	219	i P	Pn	07 49 12.5	-1.9
DAG				IAML		07 49 19.2	
	comp=Z,1.1nm,1.1s						
DAG	Danmarks Havn	5.37	219	eP	Pn	07 49 11.4	-2.9
DAG				eS	Sn	07 50 10.3	-5.9
HSPB	Hornsund (broa	5.62	130	eP	Pn	07 49 17.0	-0.8
HSPB				eS	Sn	07 50 15.4	-6.9
HSPB				IAML		07 50 24.1	
	comp=Z,3.2nm,0.7s						
DBG	Daneborg	7.82	215	i P	Pn	07 49 45.3	-2.7
DBG				IAML		07 49 47.7	
	comp=Z,1.9nm,0.8s						
DBG	Daneborg	7.82	215	eP	Pn	07 49 45.3	-2.7
DBG				eS	Sn	07 51 06.4	-10

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*IDC **15** 08:29:12.9±0.8, 21°.89S×68°.44W, h100^{km}±9^{km}, mb3.8/7, mb1 3.8/10, mb1mx3.6/25, mbtmp4.1/10, Error ellipse: s-maj=36.7km s-min=14.4km az=106.0*

*SJA **15** 08:29:12.8±0.7, 21°.86S×68°.69W, h122^{km}±3^{km}, ML4.0, MW3.9*

*NEIC **15** 08:29:13.9±1.5, 21°.88S±0°.05×68°.65W±0°.06, h116^{km}±9^{km}, Error ellipse: s-maj=10.1km s-min=4.2km az=134.0*

*GUC **15** 08:29:15.0±0.6, 21°.86S×68°.64W, h106^{km}±3^{km}, ML3.9*

ISC 15 08:29:13.3±0.6**, 21°.85S**±0°.03×**68°.71W**±0°.04**, h118**^{km}±6^{km}**, n71, σ1.s58**/116**, mb4.1**/8**, 12C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.50	276	⇑iP	Pn	08 29 31.9	+0.7
PB09				i S	Sn	08 29 45.1	+0.4
PB09				IAML		08 29 47.1	
	comp=E,3μm,0.5s						
PB09	IPOC Station P	0.50	276		Pn	08 29 31.9	+0.7
PB09	IPOC Station P	0.50	276	eP	Pn	08 29 31.9	+0.7
PB09				eS	Sn	08 29 46.4	+1.7
PB09				IAML		08 29 46.6	
	comp=Z,3μm,0.6s						
LVC	Limon Verde	0.78	194	P	Pn	08 29 33.8	+0.3
	comp=Z,38nm,0.3s,baz=31,slow=10,SNR=579						
LVC				S	Sn	08 29 47.1	-1.7
	comp=Z,84nm,0.3s,baz=270,slow=22,SNR=13						
LVC	Limon Verde	0.78	194	eP	Pn	08 29 33.8	+0.3
LVC				eS	Sn	08 29 49.7	+1.0
PB03	IPOC Station P	0.99	258	⇑iP	Pn	08 29 36.0	+0.8
PB03				i S	Sn	08 29 52.6	+0.8
PB03				IAML		08 29 54.2	
	comp=E,3μm,0.5s						
PB03	IPOC Station P	0.99	258	eP	Pn	08 29 36.1	+0.8
PB03				eS	Sn	08 29 52.6	+0.8
PB03				eS	Sn	08 29 53.0	+1.2
PB03				IAML		08 29 53.1	
	comp=Z,3μm,0.5s						
PB01	IPOC Station P	1.08	318	⇑iP	Pn	08 29 36.6	+0.5
PB01				i S	Sn	08 29 53.5	+0.1
PB01				IAML		08 29 56.9	
	comp=N,3μm,0.3s						
PB01	IPOC Station P	1.08	318	eP	Pn	08 29 36.7	+0.6
PB01				eS	Sn	08 29 54.7	+1.4
PB01				IAML		08 29 58.6	
	comp=Z,2μm,0.2s						
PB07	IPOC Station P	1.10	276	⇑iP	Pn	08 29 37.2	+0.9
PB07				i S	Sn	08 29 54.7	+0.8
PB07				IAML		08 29 57.4	
	comp=E,2μm,0.6s						
PB07	IPOC Station P	1.10	276	eP	Pn	08 29 37.0	+0.6
PB07				eP	Pn	08 29 37.3	+0.9
PB07				eS	Sn	08 29 55.3	+1.4
PB07				IAML		08 29 58.5	
	comp=Z,2μm,0.4s						
PB06	IPOC Station P	1.17	223	⇑iP	Pn	08 29 38.0	+1.0
PB06				i S	Sn	08 29 56.1	+1.1
PB06				IAML		08 29 57.5	
	comp=E,2μm,0.2s						
PB06	IPOC Station P	1.17	223	eP	Pn	08 29 38.0	+1.0
PB06				eS	Sn	08 29 56.3	+1.3
PB06				IAML		08 29 57.8	
	comp=Z,1μm,0.4s						
PB04	IPOC Station P	1.42	250	⇑iP	Pn	08 29 40.7	+0.9
PB04				i S	Sn	08 30 01.1	+1.1
PB04				IAML		08 30 03.2	
	comp=N,1μm,0.3s						
PB04	IPOC Station P	1.42	250	eP	Pn	08 29 40.5	+0.7
PB04				eP	Pn	08 29 40.8	+0.9
PB04				eS	Sn	08 30 01.8	+1.8
PB04				IAML		08 30 02.5	
	comp=Z,965nm,0.5s						
PB15	IPOC Station P	1.52	207	eP	Pn	08 29 42.3	+1.2
PB15				i S	Sn	08 30 03.6	+1.3
PB15	IPOC Station P	1.52	207	eP	Pn	08 29 36.8	-4.3
PB15				eP	Pn	08 29 37.3	-3.8
PB15				eP	Pn	08 29 42.0	+0.9
PB15				eS	Sn	08 30 04.3	+2.0
PB15				IAML		08 30 08.3	
	comp=Z,3μm,0.1s						
PATCX	Punta Patache	1.69	307	⇑iP	Pn	08 29 43.9	+0.9
PATCX				i S	Sn	08 30 06.6	+1.0
PATCX				IAML		08 30 09.0	
	comp=E,3μm,0.4s						
PATCX	Punta Patache	1.69	307		Pn	08 29 44.1	+1.1
PATCX	Punta Patache	1.69	307	eP	Pn	08 29 44.0	+0.9
PATCX				eP	Pn	08 29 44.0	+1.1
PATCX				eP	Pn	08 29 44.0	+1.1
PATCX				eP	Pn	08 29 44.1	+1.1
PATCX				eP	Pn	08 29 44.1	+1.1
PATCX				eS	Sn	08 30 01.8	-3.8
PATCX				eS	Sn	08 30 07.5	+1.9
PATCX				IAML		08 30 09.2	
	comp=Z,1μm,0.3s						
PB05	IPOC Station P	1.71	234	⇑iP	Pn	08 29 43.9	+0.8
PB05				i S	Sn	08 30 06.4	+0.4
PB05				IAML		08 30 12.3	
	comp=N,840nm,0.4s						
PB05	IPOC Station P	1.71	234	eP	Pn	08 29 44.0	+0.8
PB05				eS	Sn	08 30 01.8	-4.1
PB05				eS	Sn	08 30 07.0	+1.1
PB05				IAML		08 30 13.5	
	comp=Z,577nm,0.4s						
PB08	IPOC Station P	1.75	346	⇓eP	Pn	08 29 45.5	+1.4
PB08				i S	Sn	08 30 08.9	+1.6
PB08				IAML		08 30 10.1	
	comp=E,1μm,0.3s						
PB08	IPOC Station P	1.75	346	eP	Pn	08 29 45.0	+1.0
PB08				eS	Sn	08 30 04.3	-3.1
PB08				eS	Sn	08 30 09.6	+2.2
PB08				IAML		08 30 10.1	
	comp=Z,773nm,0.6s						
TA01	Diego Aracena	1.88	313	⇑iP	Pn	08 29 45.7	+0.6
TA01				i S	Sn	08 30 10.4	+0.9
TA01				IAML		08 30 12.7	
	comp=E,3μm,0.4s						
TA01	Diego Aracena	1.88	313	Pn	Pn	08 29 45.8	+0.7
TA01	Diego Aracena	1.88	313	eP	Pn	08 29 45.0	-0.1
TA01				eP	Pn	08 29 45.8	+0.7
TA01				eS	Sn	08 30 11.2	+1.7
TA01				eS	Sn	08 30 11.7	+2.2
TA01				IAML		08 30 13.1	
	comp=Z,889nm,0.6s						
HMBC	Humberstone	1.92	325	⇑iP	Pn	08 29 46.3	+0.6
HMBC				i S	Sn	08 30 11.0	+0.5
TA02	Huaiquique	2.06	320	eP	Pn	08 29 48.1	+0.7
TA02				eS	Sn	08 30 15.4	+1.9
TA02				IAML		08 30 17.3	
	comp=Z,733nm,0.1s						
PB11	IPOC Station P	2.26	337	⇑iP	Pn	08 29 50.6	+0.5
PB11				i S	Sn	08 30 18.4	+0.1
PB11	IPOC Station P	2.26	337	eP	Pn	08 29 50.9	+0.7
PB11				eS	Sn	08 30 19.4	+1.0
PB11				IAML		08 30 20.6	
	comp=Z,919nm,0.3s						
PB10	IPOC Station P	2.38	226	eP	Pn	08 29 52.8	+1.4
PB10	IPOC Station P	2.38	226	eP	Pn	08 29 52.6	+1.2
PB10				eS	Sn	08 30 20.6	-0.1
YJA	Yavi	2.98	97	eP	Pn	08 30 01.3	+1.6
YJA				eS	Sn	08 30 39.8	+4.4
PB14	IPOC Station P	3.17	209	eP	Pn	08 30 03.0	+0.9
PB14				IAML		08 30 51.8	
	comp=Z,308nm,0.6s						
HJA	Humahuaca	3.33	115	eP	Pn	08 30 06.0	+1.7
PB12	IPOC Station P	3.56	334	⇑iP	Pn	08 30 06.1	-1.0
PB12				i S	Sn	08 30 46.3	-2.3
PB12	IPOC Station P	3.56	334	eP	Pn	08 30 06.4	-0.7
PB12				IAML		08 30 54.0	
	comp=Z,235nm,0.4s						
PB16	IPOC Station P	3.58	348	eP	Pn	08 30 09.1	+1.3
PB16	IPOC Station P	3.58	348	eS	Sn	08 30 48.8	-1.0
ASTB	Santa Barbara	4.44	119	eP	Pn	08 30 19.5	+0.6
FSA	Cafayete	4.92	150	eP	Pn	08 30 27.0	+1.7
AC02	Maricunga	4.98	184	Pn	Pn	08 30 26.5	+0.1
LPAZ	La Paz	5.56	6	P	Pn	08 30 36.0	+1.6
	comp=Z,1.8nm,0.3s,baz=190,slow=5.5,SNR=45						
LPAZ				S	Sn	08 31 26.1	-11
	comp=Z,0.6nm,0.3s,baz=192,slow=13,SNR=6.0						
LPAZ	La Paz	5.56	6	Pn	Pn	08 30 37.4	+3.0
VCA	Vinchina	6.87	176	eP	Pn	08 30 48.3	-3.3
SIV	San Ignacio	9.28	52	P	Pn	08 31 20.9	-3.3
	comp=Z,2.3nm,0.3s,baz=232,slow=12,SNR=35						
SIV				S	Sn	08 32 57.0	-10
	comp=Z,0.1nm,0.3s,baz=314,slow=22,SNR=1.4						
RTLS	Leoncito	9.92	183	eP	Pn	08 31 30.7	-2.3
PTLB	Pontes e Lacer	11.08	57		Pn	08 31 45.6	-2.8
MT02	Curacav	11.57	190	Pn	Pn	08 31 52.8	-2.0
AQDB	Aquidauana	12.21	86		Pn	08 32 03.0	-0.4
PLTB	Pedras Altas	16.69	129		P	08 33 00.5	0.0
PLTB				IAmb	IAmb	08 33 24.0	
	comp=Z,21nm,1.3s						
TRQA	Tornquist	17.16	162	P	P	08 33 04.5	-1.1
TRQA				IAmb	IAmb	08 33 29.8	
	comp=Z,13nm,1.4s						
PLCA	Paso Flores	18.89	184	P	P	08 33 25.2	+0.6
	comp=Z,0.2nm,0.3s,baz=353,slow=9.3,SNR=8.0						
PLCA	Paso Flores	18.89	184	P	P	08 33 24.8	+0.2
PLCA				IAmb	IAmb	08 33 32.0	
	comp=Z,2.3nm,0.7s						
LL04	Puerto Octay	19.26	189	P	Pn	08 33 30.4	-0.3
LL04				IAmb	IAmb	08 33 31.0	
	comp=Z,9.4nm,0.6s						
PTGA	Pitinga	22.66	23	P	P	08 34 03.5	-1.2
	comp=Z,0.5nm,0.2s,baz=167,slow=9.5,SNR=2.3						
USHA	Ushuaia	32.93	180	P	P	08 35 33.5	-2.7
	comp=Z,4.3nm,1.0s,baz=334,slow=18,SNR=1.8						
VNA3	Neumayer Olymp	59.68	161	P	P	08 39 06.9	+2.0
VNA2	Neumayer--Watz	60.26	161	P	P	08 39 10.9	+2.1
	baz=287,slow=8.0						
SNAA	Sanae	61.89	161	P	P	08 39 21.8	+1.9
SNAA	Sanae	61.89	161	P	P	08 39 21.7	+1.9
	comp=Z,2.2nm,0.6s,baz=278,slow=9.4,SNR=18						
SNAA	Sanae	61.89	161	P	P	08 39 21.3	+1.4
DBIC	Dimbokro	68.65	73	P	P	08 40 04.5	+0.1
	comp=Z,1.2nm,0.4s,baz=172,slow=16,SNR=2.2						
TORD	Torodi Ar. Bea	77.30	70	P	P	08 40 55.7	+0.4
	comp=Z,0.5nm,0.4s,baz=255,slow=5.5,SNR=8.5						
TORD	Torodi Ar. Bea	77.30	70	P	P	08 40 54.4	-0.9
BOSA	Boshof	83.12	118	P	P	08 41 27.1	+0.6
	comp=Z,1.9nm,0.8s,baz=340,slow=9.4,SNR=3.5						
MAW	Mawson	83.94	163	P	P	08 41 29.8	+0.1
	comp=Z,4.9nm,0.6s,baz=183,slow=14,SNR=27						
YKA	Yellowknife Ar	91.58	341	P	P	08 42 08.2	+1.9
	comp=Z,0.4nm,0.5s,baz=125,slow=4.7,SNR=4.9						
WRA	Warramunga Arr	132.75	210	PKP	PKiKP	08 48 16.9	+0.6
	comp=Z,0.4nm,0.8s,baz=153,slow=1.6,SNR=2.5						
MKAR	Makanchi Array	145.81	36	PKPbc	PKPab	08 48 39.8	+0.5
	comp=Z,0.4nm,0.6s,baz=316,slow=2.0,SNR=2.4						

JMA 15 08:29:32.3±0.1**, 28°.71N×142°.50E, h40^{km}, M3.9, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.63	190	P	Pn	08 29 59.4	+0.8
CBIJ				eS	Sn	08 30 19.3	+1.0
JHU	Hanno	7.62	340	P	Pn	08 31 23.8	+3.0
JRY	Ryogami san	7.89	338	P	Pn	08 31 27.6	+3.0

NNC 15 08:45:43.2±5.0**, 38°.85N×73°.47E, h0^{km}, mb4.1, mpv3.7, 2C-2D, Error ellipse: s-maj=37.1km s-min=18.9km az=172.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	3.86	11	Pg	Pb	08 46 49.4	-2.9
	5.9nm,0.6s						
AAK				Lg	Lg	08 47 43.0	
	13nm,0.7s						
IUG	Iuzhnay	4.21	323	Pg	Pg	08 47 01.1	-2.8
	471nm,0.7s						
IUG				Lg	Lg	08 47 59.1	
	36nm,0.5s						
TKM2	Tokmak 2	4.38	21	⇓Pg	Pb	08 47 01.5	+0.4
	3.6nm,0.6s						
TKM2				⇑Lg	Lg	08 47 59.7	
	7.8nm,0.8s						
IZV	Izvestkoviy	4.81	29	Pg	Pg	08 47 13.0	-2.4
	5.8nm,0.8s						
IZV				Lg	Lg	08 48 19.5	
	8.3nm,0.1s						
KK09	Karatay Array	4.83	333	⇑Pn	Pn	08 46 57.2	0.0
	3.6nm,0.7s,baz=149,slow=12						
KK09				⇓Sn	Sn	08 47 55.4	+1.7
	10nm,0.8s,baz=154,slow=22						
TNSS	Tian-Shan	4.94	31	Pg	Pg	08 47 15.0	-2.9
	3.8nm,0.6s						
TNSS				Lg	Lg	08 48 23.6	
	3.9nm,0.7s						
KOTS	Kotyrbulak	5.17	31	Pg	Pg	08 47 20.0	-2.3
	5.3nm,0.6s						
KOTS				Lg	Lg	08 48 31.5	
	11nm,0.6s						

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*IDC **15** 08:49:32.2±2.6, 53°.60N×87°.91E, h0^{km}, mb1 3.2/3, mb1mx3.1/38, mbtmp3.2/3, ML3.0/3, Error ellipse: s-maj=22.1km s-min=13.6km az=60.0*

*NNC **15** 08:49:32.5±2.7, 53°.56N×87°.81E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=20.5km s-min=11.9km az=61.0, Suspected Mining explosion.*

ISC 15 08:49:33.4±3.7**, 53°.6N**±0°.1×**87°.7E**±0°.2**, h0^{km}, n9, σ0.s97**/14**, 9C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.74	282	i		09 01 40.0	
	baz=92,slow=339,SNR=2.3						
ZAA0	Zalesovo Array	1.74	282	⇑Pg	Pn	08 50 05.0	+0.1
	1.7nm,0.6s						
ZAA0				⇑Lg	Lg	08 50 31.1	
	7.6nm,0.8s						
ZALV	Zalesovo Beam	1.74	282	Pg	Pn	08 50 05.2	+0.3
	4.1nm,0.3s,baz=95,slow=14,SNR=24						
ZALV				Lg	Lg	08 50 30.3	
	4.4nm,0.3s,baz=99,slow=25,SNR=18						
KURK	Kurchatov	6.30	246	⇑Pn	Pn	08 51 08.3	+0.8
	3.2nm,1.3s						
KURK				⇓Sn	Sn	08 52 19.3	-0.8
	2.4nm,0.7s						
KURK				⇑Lg	Lg	08 52 54.0	
	9.9nm,1.2s						
KURBB	Kurchatov Arra	6.40	246	Pn	Pn	08 51 09.7	+0.8
	0.1nm,0.3s,baz=62,slow=14,SNR=7.7						
KURBB				Sn	Sn	08 52 22.4	-0.1
	0.1nm,0.3s,baz=61,slow=25,SNR=2.2						
KURBB				Lg	Lg	08 52 56.9	
	0.1nm,0.3s,baz=59,slow=30,SNR=5.3						
KURBB	Kurchatov Arra	6.40	246	⇑Pn	Pn	08 51 09.5	+0.7
	1.4nm,0.4s						
KURBB				⇑Sn	Sn	08 52 24.2	+1.7
	5.0nm,0.6s						
KURBB				⇑Lg	Lg	08 52 57.2	
	9.8nm,0.7s						
MK31	Makanchi Array	7.66	209	⇑Pn	Pn	08 51 26.2	-0.1
	0.8nm,0.6s,baz=28,slow=13,SNR=8.8						
MK31				⇑Sn	Sn	08 52 53.2	-0.5
	3.7nm,1.0s						
MK31				⇓Lg	Lg	08 53 34.7	
	2.4nm,0.7s,baz=28,slow=27						
MKAR	Makanchi Array	7.66	209	Pn	Pn	08 51 26.4	+0.1
	0.2nm,0.3s,baz=27,slow=13,SNR=8.4						
MKAR				Sn	Sn	08 52 53.4	-0.4
	0.2nm,0.3s,baz=27,slow=29,SNR=2.4						
MKAR				Lg	Lg	08 53 35.3	
	0.2nm,0.3s,baz=29,slow=30,SNR=3.7						
BVAR	Borovoye Array	10.38	274	Pn	Pn	08 52 04.4	+1.0
	0.2nm,0.3s,baz=88,slow=14,SNR=2.5						
BVAR				Sn	Sn	08 53 58.5	-1.8
	0.3nm,0.3s,baz=100,slow=17,SNR=5.1						

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*NEIC **15** 09:16:48.6±1.4, 10°.9S±0°.1×164°.3E±0°.1, h44^{km}±9^{km}, mb4.2/10, Error ellipse: s-maj=18.1km s-min=12.3km az=215.0*

*IDC **15** 09:16:49.0±3.8, 10°.82S×164°.15E, h52^{km}±34^{km}, mb3.7/3, mb1 4.0/6, mb1mx3.6/43, mbtmp4.2/6, ML4.4/3, MS3.3/7, Ms1 3.3/7, ms1mx3.1/35, Error ellipse: s-maj=29.4km s-min=22.7km az=56.0*

ISC 15 09:16:46.4±0.8**, 10°.88S**±0°.09×**164°.30E**±0°.08**, h29^{km}, n31, σ1.s20**/23**, mb4.2**/6**, MS3.2**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.52	288	P	Pn	09 17 53.8	+0.9
	73nm,0.3s,baz=172,slow=17,SNR=6.2						
HNR				S	Sn	09 18 42.6	-2.0
	baz=245,slow=20,SNR=1.1						
HNR				LR	LR	09 19 47.2	
	comp=Z,478nm,18.9s,baz=135,slow=41						
HNR	Honiara	4.52	288		Pn	09 17 54.1	+1.2
SANVU	Saraoutou	5.35	148		Pn	09 18 05.4	+1.1
LIFNC	LIFOU	10.24	164	Pn	Pn	09 19 11.3	-0.2
DZM	Mont Dzumac	11.32	170	P	Pn	09 19 28.6	+2.2
	1.6nm,0.3s,baz=24,slow=8.9,SNR=46						
DZM				S	Sn	09 21 29.6	-2.4
	0.1nm,0.3s,baz=300,slow=21,SNR=1.4						
MSVF	Nonsavu	14.96	119	LR	LR	09 24 50.1	
	comp=Z,110nm,19.6s,baz=149,slow=32						
PMG	Port Moresby	16.94	273	LR	LR	09 27 06.2	
	comp=Z,126nm,19.6s,baz=119,slow=37						
EIDS	Eidsvold	19.10	219	P	Pn	09 21 10.1	+2.2
EIDS				IAmb	IAmb	09 21 12.1	
	comp=Z,11nm,0.8s						
CTA	Charters Tower	19.64	240	P	P	09 21 13.4	+0.5
	comp=Z,0.5nm,0.3s,baz=64,slow=14,SNR=3.5						
CTAO	Charters Tower	19.64	240	P	Pn	09 21 14.1	-0.4
CTAO				IAmb	IAmb	09 21 17.1	
	comp=Z,9.7nm,0.9s						
COEN	Coen	20.86	259	P	P	09 21 26.6	+0.4
COEN				IAmb	IAmb	09 21 40.2	
	comp=Z,5.9nm,0.9s						
AFI	Afiamalu	23.56	100	LR	LR	09 29 21.2	
	comp=Z,71nm,20.8s,baz=316,slow=32						
H11S2	WAKE ISLAND Hy	29.27	5	T	T	09 53 14.2	
	baz=184,slow=76						
H11S3	WAKE ISLAND Hy	29.28	5	T	T	09 53 10.4	
	baz=184,slow=76						
H11S1	WAKE ISLAND Hy	29.29	5	T	T	09 53 13.5	
	baz=184,slow=76						
STKA	Stephens Creek	29.61	222	P	P	09 22 49.2	0.0
	comp=Z,2.1nm,0.7s,baz=30,slow=8.3,SNR=5.5						
STKA				LR	LR	09 35 16.4	
	comp=Z,54nm,18.1s,baz=24,slow=38						
STKA	Stephens Creek	29.61	222	P	P	09 22 49.9	+0.7
WB0	Warramunga Arr	30.12	249	P	P	09 22 53.0	-1.0
WB0				IAmb	IAmb	09 22 56.1	
	comp=Z,8.2nm,1.5s						
H11N1	WAKE ISLAND Hy	30.50	5	T	T	09 54 45.9	
	baz=184,slow=76						
H11N3	WAKE ISLAND Hy	30.51	5	T	T	09 54 46.2	
	baz=184,slow=76						
H11N2	WAKE ISLAND Hy	30.52	5	T	T	09 54 46.2	
	baz=184,slow=76						
ASAR	Alice Springs	31.61	242	P	P	09 23 05.8	-1.2
	comp=Z,0.3nm,0.4s,baz=64,slow=10,SNR=9.4						
ASAR				LR	LR	09 35 20.8	
	comp=Z,44nm,19.4s,baz=50,slow=35						
BBOO	Buckleboo	33.92	226	P	P	09 23 27.7	+0.6
KNRA	Kununurra	34.89	258	P	P	09 23 35.1	-0.6
KNRA				IAmb	IAmb	09 23 36.2	
	comp=Z,16nm,1.2s						
XMAS	Kiritimati	40.16	74	P	P	09 24 19.6	-0.7
KLR	Kul'dur	66.34	337	LR	LR	09 52 03.7	
	comp=Z,27nm,20.9s,baz=160,slow=32						
QSPA	South Pole Qui	79.13	180	P	P	09 28 47.5	-0.7
IMAR	Indian Mountai	82.65	16	P	P	09 29 07.0	+0.3
ILAR	Eielson Array	83.81	19	P	P	09 29 12.6	-0.2
	comp=Z,1.1nm,0.8s,baz=231,slow=5.7,SNR=11						
ILAR	Eielson Array	83.81	19	P	P	09 29 13.4	+0.7
SCRK	Sand Creek	84.25	20	P	P	09 29 15.3	+0.2
SCRK				IAmb	IAmb	09 29 16.5	
	comp=Z,1.6nm,0.8s						

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*IDC **15** 09:18:34.4±2.4, 41°.79N×143°.22E, h0^{km}, mb3.7/7, mb1 3.8/8, mb1mx3.6/70, mbtmp3.8/8, ML3.9/1, MS2.2/1, Ms1 2.2/1, ms1mx1.9/45, Error ellipse: s-maj=44.9km s-min=29.2km az=159.0*

*MOS **15** 09:18:43.3±1.2, 42°.23N×143°.19E, h67^{km}, mb4.5/1, Error ellipse: s-maj=17.6km s-min=10.2km az=67.7*

*SKHL **15** 09:18:44.5±0.6, 42°.20N×143°.20E, h69^{km}±3^{km}, mb4.4/4*

*NEIC **15** 09:18:45.4±1.4, 42°.27N±0°.06×143°.1E±0°.1, h62^{km}±8^{km}, mb4.4/3, Error ellipse: s-maj=15.3km s-min=9.4km az=92.0*

*JMA **15** 09:18:45.6±0.1, 42°.35N×143°.11E, h50^{km}±1^{km}, M3.6*

JMA Felt I J1.

*NIED **15** 09:18:45.7, 42°.35N×143°.11E, h50^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.43; $M_{\theta\theta}$-1.08; $M_{\phi\phi}$-1.36; $M_{r\theta}$1.22; $M_{\theta\phi}$-1.22; $M_{\phi r}$1.97; Fault plane solution: $M_0$3.36000×10^{14} NP1:ϕ_s35.00000°, δ67.00000°, λ85.00000°. NP2:ϕ_s228.00000°, δ24.00000°, λ102.00000°.*

ISC 15 09:18:44.6±0.8**, 42°.25N**±0°.05×**143°.23E**±0°.04**, h60**^{km}±6^{km}**, n56, σ1.s57**/67**, mb4.0**/10**, 4C-4D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTHR	Tokachihiroo	0.07	51	⇑P	Pn	09 18 53.7	+0.2
JTHR				eS	Sn	09 18 59.8	-0.1

JEM	Erimo	0.24	193	⇑P	Pn	09 18 55.2	+1.0
ERM	Erimo	0.24	193	PN	Pn	09 18 55.4	+1.2
ERM	Erimo	0.24	193	Pn	Pn	09 18 55.4	+1.2
JNBK	Urakawa-nobuka	0.35	275	⇓P	Pn	09 18 54.5	-0.6
JNBK				*e*S	Sn	09 19 01.6	-1.1
JCH	Churui	0.38	15	⇑P	Pn	09 18 54.9	-0.4
JCH				*e*S	Sn	09 19 02.2	-0.9
JSHD	Hidakashinhida	0.59	286	⇓P	Pn	09 18 57.0	-0.4
JOB	Onbets	0.79	34	⇑P	Pn	09 19 00.9	+1.0
JBT2	Biratori 2	0.83	310	⇓P	Pn	09 18 59.6	-0.8
JAR	Ashorobuto	1.12	21	P	Pn	09 19 04.1	-0.1
JAR				*e*S	Sn	09 19 18.0	-0.8
JAK	Akkeshi	1.32	55	P	Pn	09 19 07.3	+0.6
JAK				*e*S	Sn	09 19 25.2	+1.8
AKK	Akkeshi	1.42	57	*e*P	Pn	09 19 08.9	+0.8
AKK				*e*S	Sn	09 19 26.8	+1.0
JEW	Eniwo	1.44	295	P	Pn	09 19 08.4	0.0
JEW	Eniwo	1.44	295		Pn	09 19 08.2	-0.2
JAB	Ashibetsu	1.46	330	⇓P	Pn	09 19 08.5	-0.1
JKA	Kamikawa-asahi	1.92	346	*e*P	Pn	09 19 15.2	+0.3
JKA	Kamikawa-asahi	1.92	346		Pn	09 19 15.2	+0.3
ASAJ	Asahikawa	1.92	346	Pn	Pn	09 19 15.2	+0.3
	20nm,0.3s,baz=192,slow=15,SNR=166						
ASAJ				Sn	Sn	09 19 44.6	+6.6
	12nm,0.3s,baz=240,slow=32,SNR=7.2						
ASAJ				LR	LR	09 20 07.3	
	comp=Z,51nm,19.3s,baz=138,slow=39						
NMR	Nemuro--Hokkai	2.15	58	*e*P	Pn	09 19 18.5	+0.4
NMR				*e*S	Sn	09 19 43.6	-0.1
JTM	Tenmabayashi	2.18	229		Pn	09 19 19.0	+0.6
GLVR	Golovnino	2.25	48	PN	Pn	09 19 17.6	-1.7
GLVR				S	Sn	09 19 42.0	-3.9
GLVR				smax	smax		
	comp=N,331nm,0.2s						
GLVR				smax	smax		
	comp=E,735nm,0.3s						
GLVR	Golovnino	2.25	48	*e*P	Pn	09 19 17.6	-1.7
GLVR				*e*S	Sn	09 19 43.0	-2.9
GLVR				A	A	09 19 49.0	
	comp=E,330nm,0.3s						
GLVR				A	A	09 19 49.0	
	comp=E,740nm,0.3s						
RUSJ	Misakicho	2.37	38	*e*PN	Pn	09 19 23.0	+2.0
RUSJ				*e*S	Sn	09 19 52.0	+3.0
YUK	Yuzh-Kuril'sk	2.63	46	*e*PN	Pn	09 19 23.0	-1.5
YUK				*e*S	Sn	09 19 51.3	-3.9
YUK				pmax	pmax		
	comp=Z,342nm,0.4s						
YUK				pmax	pmax		
	comp=E,58nm,0.3s						
YUK				pmax	pmax		
	comp=N,293nm,0.4s						
YUK				smax	smax		
	comp=E,274nm,0.4s						
YUK				smax	smax		
	comp=N,194nm,0.3s						
YUK	Yuzh-Kuril'sk	2.63	46	*e*P	Pn	09 19 23.5	-1.0
YUK				AMB	AMB	09 19 25.0	
	comp=N,240nm,0.4s						
YUK				*e*S	Sn	09 19 53.3	-1.9
YUK				A	A	09 20 10.8	
	comp=N,300nm,0.6s						
YUK				A	A	09 20 10.8	
	comp=N,470nm,0.6s						
SHO	Shikotan	3.10	57	*e*PN	Pn	09 19 31.3	+0.4
SHO				*e*S	Sn	09 20 06.3	-0.4
SHO				pmax	pmax		
	comp=Z,25nm,0.2s						
SHO				smax	smax		
	comp=N,133nm,0.3s						
SHO				smax	smax		
	comp=E,77nm,0.3s						
SHO	Shikotan	3.10	57	*e*P	Pn	09 19 31.3	+0.4
SHO				AMB	AMB	09 19 33.0	
	comp=E,30nm,0.2s						
SHO				*e*S	Sn	09 20 06.3	-0.4
SHO				A	A	09 20 11.0	
	comp=E,130nm,0.3s						
SHO				A	A	09 20 11.0	
	comp=E,80nm,0.3s						
KUR	Kuril'sk	4.50	47	*e*PN	Pn	09 19 52.8	+2.8
KUR				*i* S	Sn	09 20 44.6	+3.6
KUR				smax	smax		
	comp=E,60nm,0.8s						
KUR	Kuril'sk	4.50	47	*e*P	Pn	09 19 51.5	+1.5
KUR				AMB	AMB	09 19 56.2	
	comp=E,30nm,0.6s						
KUR				*i* S	Sn	09 20 41.1	+0.1
KUR				A	A	09 20 56.6	
	comp=E,40nm,0.4s						
KUR				A	A	09 20 56.6	
	comp=E,30nm,0.4s						
YSS	Yuzh-Sakhalins	4.72	356	*e*P	Pn	09 19 54.0	+0.9
YSS				AMB	AMB	09 19 55.2	
	comp=E,8.0nm,0.4s						
JMM	Marumori	4.76	204	Pn	Pn	09 19 53.8	+0.1
JSD	Sado	5.67	224	Pn	Pn	09 20 07.0	+0.8
SONM	Songino Array	26.44	295	P	P	09 24 15.2	-0.5
	comp=E,0.4nm,0.5s,baz=79,slow=9.1,SNR=4.1						
H11N2	WAKE ISLAND Hy	30.07	131	T	T	09 56 22.3	
	baz=322						
H11N1	WAKE ISLAND Hy	30.08	131	T	T	09 56 28.1	
	baz=322						
H11N3	WAKE ISLAND Hy	30.09	131	T	T	09 56 24.2	
	baz=322						
H11S1	WAKE ISLAND Hy	30.95	133	T	T	09 57 29.6	
	baz=325,slow=76,SNR=10.0						
H11S3	WAKE ISLAND Hy	30.95	133	T	T	09 57 25.0	
	baz=325,slow=76,SNR=8.3						
H11S2	WAKE ISLAND Hy	30.97	133	T	T	09 57 29.9	
	baz=325,slow=76,SNR=4.4						
ZALV	Zalesovo Beam	39.63	308	P	P	09 26 09.8	-0.2
	comp=E,0.8nm,0.4s,baz=78,slow=9.2,SNR=3.7						
IMAR	Indian Mountai	41.49	33	P	P	09 26 27.0	+1.7
MK31	Makanchi Array	42.73	298	P	P	09 26 35.6	-0.1
MK31				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MK31	Makanchi Array	42.73	298	P	P	09 26 35.6	-0.1
MK31				IAmb	IAmb	09 26 47.4	
	comp=Z,5.8nm,1.4s						
MKAR	Makanchi Array	42.73	298	P	P	09 26 34.8	-0.9
	comp=Z,0.6nm,0.6s,baz=83,slow=9.1,SNR=6.3						
MKAR	Makanchi Array	42.73	298	P	P	09 26 35.1	-0.6
MKAR	Makanchi Array	42.73	298	*e*P	P	09 26 35.1	-0.6
MKAR	Makanchi Array	42.73	298	P	P	09 26 35.1	-0.6
ILAR	Eielson Array	44.39	35	P	P	09 26 49.8	+1.1
	comp=Z,0.6nm,1.0s,baz=265,slow=5.4,SNR=2.7						
SCRK	Sand Creek	45.73	36	P	P	09 26 59.5	0.0
SCRK				IAmb	IAmb	09 27 27.7	
	comp=Z,7.6nm,1.4s						
BVAR	Borovoye Array	48.23	309	P	P	09 27 19.0	0.0
	comp=Z,0.7nm,0.4s,baz=135,slow=5.4,SNR=5.9						
BVAR	Borovoye Array	48.23	309	P	P	09 27 19.0	0.0
INK	Inuvik	49.13	29	P	P	09 27 26.1	+0.4
	comp=Z,0.4nm,0.6s,baz=295,slow=6.3,SNR=2.3						
ABKAR	Akbulak array	55.74	308	P	P	09 28 14.7	-0.1
FINES	FINESS Array B	64.87	332	P	P	09 29 15.9	-1.0
	comp=Z,3.7nm,1.0s,baz=34,slow=8.4,SNR=1.9						
SUMG	Summit	65.47	1	P	P	09 29 21.1	-0.1
SUMG	Summit	65.47	1	P	P	09 29 21.1	-0.1
SUMG				IAmb	IAmb	09 29 28.2	
	comp=Z,23nm,1.5s						

IDC ***15*** *09:34:45.7±4.3, 36°.23N×71°.72E, h110^{km}±29^{km}, mb3.8/11, mb1 3.8/17, mb1mx3.5/56, mbtmp4.1/17, Error ellipse: s-maj=40.7km s-min=16.8km az=151.0*

NNC ***15*** *09:34:55.1±3.3, 37°.17N×71°.05E, h0^{km}, mb4.4, mpv4.2, Error ellipse: s-maj=25.9km s-min=18.5km az=168.0*

NEIC ***15*** *09:34:56.4±1.4, 36°.72N±0°.07×71°.4E±0°.1, h177^{km}±7^{km}, mb4.0/15, Error ellipse: s-maj=12.5km s-min=10.2km az=102.0*

SOME ***15*** *09:35:06.7, 38°.67N×71°.97E, h10^{km}*

ISC 15 09:34:54.0±0.5**, 36°.72N**±0°.04×**71°.33E**±0°.05**, h150^{km}, n96, σ1^{s}.83**/102**, mb4.1**/16**, 5C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.42	341		Pn	09 35 38.1	+3.9
CHGR	Chuyangaron	2.59	319		Pn	09 35 40.2	+3.9
DRK	Karamyk	2.79	8		Pn	09 35 43.0	+4.1
KBL	Kabul	2.86	221		Pn	09 35 43.0	+3.3
CEP	Cherat	2.92	170	P	Pn	09 35 43.3	+2.7
CEP				S	Sn	09 36 19.0	+2.5
BTK	Batken	3.36	353		Pn	09 35 50.9	+4.9
NIL	Nilore	3.44	152	Pn	Pn	09 35 50.4	+3.3
THW	Thamme Wali	3.93	175	P	Pn	09 35 55.5	+2.2
IUG	Iuzhnay	5.52	350	*e*P	Pn	09 36 18.9	+4.6
	169nm,0.3s						
IUG				*e*S	Sn	09 37 16.2	-0.8
	215nm,0.5s						
AML	Almayashu	5.71	18	P	Pn	09 36 18.8	+1.6
	SNR=212						
UCH	Uchtor	6.03	23	P	Pn	09 36 22.8	+1.4
	SNR=81						
DHRM	DHARAMSHALA	6.06	136	*e*P	Pn	09 36 22.8	+1.1
DHRM				*e*S	Sn	09 37 27.8	-2.4
DHRM				IAML		09 37 31.1	
	comp=E,918nm,0.5s						
MRKS	Merke	6.20	13	*e*P	Pn	09 36 28.0	+4.6
	comp=E,12nm,0.2s						
MRKS				*e*S	Sn	09 37 32.8	-0.5
	comp=E,122nm,0.5s						
EKS2	Erkin-Say	6.23	17	P	Pn	09 36 26.1	+2.3
	SNR=8.3						
AAK	Ala-Archa	6.40	21	P	Pn	09 36 23.2	-2.9
	comp=E,1.3nm,0.3s,baz=231,slow=11,SNR=4.4						
AAK				S	Sn	09 37 36.6	-1.6
	comp=E,1.3nm,0.3s,baz=319,slow=22,SNR=2.5						
AAK	Ala-Archa	6.40	21	P	Pn	09 36 28.3	+2.2
	SNR=12						
AAK	Ala-Archa	6.40	21	⇑P	Pn	09 36 28.3	+2.2
	comp=E,16nm,0.5s						
AAK				S	Sn	09 37 37.3	-0.9
	comp=E,33nm,0.6s						
AAK	Ala-Archa	6.40	21	Pn	Pn	09 36 26.5	+0.4
BRLS	Borolday	6.41	350	*e*P	Pn	09 36 26.9	+0.8
	comp=E,3.8nm,0.1s						
BRLS				*e*S	Sn	09 37 30.7	-7.6
	comp=E,28nm,0.4s						
KKAR	Karatay Array	6.41	355	Pn	Pn	09 36 28.2	+2.1
KK09	Karatay Array	6.43	355	⇓P	Pn	09 36 25.0	-1.4
	comp=E,8.9nm,0.4s						
KK09				⇑S	Sn	09 37 35.5	-3.3
	comp=E,13nm,0.5s						
KBK	Karagaybulak	6.56	24	P	Pn	09 36 30.6	+2.4
	SNR=8.3						
ULHL	Ulahol	6.71	33	P	Pn	09 36 31.3	+1.1
	SNR=11						
BOOM	Boomskoye usch	6.78	30	Pn	Pn	09 36 32.9	+1.8
CHMS	Chumysh	6.81	22	P	Pn	09 36 33.2	+1.8
	SNR=11						
USP	Ospenovka	6.98	19	P	Pn	09 36 34.9	+1.1
	SNR=5.8						
TKM2	Tokmak 2	7.01	27	⇑P	Pn	09 36 33.4	-1.0
	comp=E,11nm,0.6s						
TKM2				⇑S	Sn	09 37 53.4	+0.3
	comp=E,9.2nm,0.7s						
KDJ	Kajisay	7.05	38	Pn	Pn	09 36 36.2	+1.4
TARG	Taragay, Kyrgy	7.10	43	Pn	Pn	09 36 36.8	+1.2
KST	Kastek	7.26	28	*e*P	Pn	09 36 42.8	+5.3
	comp=E,9.8nm,0.5s						
KST				*e*S	Sn	09 37 58.9	+0.2
	comp=E,16nm,0.3s						
DGS	Degeres	7.36	26	*e*P	Pn	09 36 43.7	+4.8
	comp=E,4.7nm,0.6s						
DGS				*e*S	Sn	09 38 00.7	-0.5
	comp=E,8.1nm,0.6s						
SMLA	Simla	7.39	137	*e*P	Pn	09 36 38.9	-0.3
SMLA				*e*S	Sn	09 37 57.1	-4.7
SMLA				IAML		09 37 59.4	
	comp=N,155nm,0.4s						
SMLA				IAML		09 37 59.6	
	comp=E,271nm,0.5s						
TNSS	Tian-Shan	7.65	33	*e*P	Pn	09 36 50.5	+7.5
	comp=E,4.1nm,0.0s						
TNSS				*e*S	Sn	09 38 13.0	+4.4
	comp=E,3.9nm,0.4s						
HRA	Herat	7.76	255		Pn	09 36 46.4	+2.1
PRZ	Przheval'sk	7.94	41	Pn	Pn	09 36 48.8	+2.2
GEYT	Alibeck	10.59	281	P	Pn	09 37 20.0	-1.8
	comp=E,0.8nm,0.3s,baz=84,slow=15,SNR=5.4						
GEYT				S	Sn	09 39 17.1	-1.8
	comp=E,1.0nm,0.3s,baz=138,slow=54,SNR=2.1						
GEYT	Alibeck	10.59	281		Pn	09 37 22.4	+0.6
MAKZ	Makanchi	12.83	35	Pn	Pn	09 37 50.9	+0.1
MK31	Makanchi Array	12.96	36	Pn	Pn	09 37 52.6	+0.1
MKAR	Makanchi Array	12.96	36	P	Pn	09 37 49.6	-3.0
	comp=E,0.2nm,0.3s,baz=219,slow=13,SNR=11						
MKAR	Makanchi Array	12.96	36		Pn	09 37 53.3	+0.7
PYUN	Piuthan	13.06	128	*e*P	Pn	09 37 51.3	-2.9
	comp=E,27nm,0.4s						
DANN	Dangsing	13.39	125	*e*P	Pn	09 37 56.6	-1.9
	comp=E,12nm,0.3s						
KOLN	Koldanda	13.68	127	*e*P	Pn	09 38 00.0	-2.0
	comp=E,7.4nm,0.3s						
GKN	Gorkha	14.20	124	*e*P	Pn	09 38 07.5	-1.1
	comp=E,35nm,0.4s						
BHPL	Bhopal	14.42	157	*e*P	Pn	09 38 14.5	+3.2
BHPL				*e*S	Sn	09 40 39.8	-12
KKN	Kakani	14.77	123	*e*P	Pn	09 38 14.5	-1.3
	comp=E,14nm,0.4s						
KURBB	Kurchatov Arra	14.84	18	P	Pn	09 38 14.4	-1.8
	comp=E,0.1nm,0.3s,baz=206,slow=10,SNR=2.2						
KURK	Kurchatov	14.94	18		Pn	09 38 19.4	+1.9
PKIN	Phulchoki	14.99	123	*e*P	Pn	09 38 17.8	-0.7
	comp=E,19nm,0.4s						
PKI	Pulchoki	15.00	123	*e*P	Pn	09 38 17.9	-0.8
	comp=E,8.8nm,0.3s						
AB31	Akbulak array	15.03	330	⇓P	Pn	09 38 21.6	+3.0
	comp=E,1.0nm,0.5s,baz=143,slow=13,SNR=40						
AB31				⇓S	Sn	09 41 03.9	-1.4
	comp=E,1.3nm,0.5s,baz=149,slow=23,SNR=5.1						
ABKAR	Akbulak array	15.03	330	P	Pn	09 38 21.6	+3.1
ABKAR	Akbulak array	15.03	330	P	Pn	09 38 18.9	+0.4
ABKAR				IAmb	IAmb	09 38 22.5	
	comp=Z,3.6nm,1.0s						
GUN	Gumba	15.10	121	*e*P	Pn	09 38 18.7	-1.3
	comp=Z,26nm,0.4s						
JIRN	Jiri	15.47	121	*e*P	Pn	09 38 23.3	-1.3
	comp=Z,32nm,0.3s						
RAMN	Ramite	16.21	123	*e*P	Pn	09 38 32.1	-1.4
	comp=Z,21nm,0.6s						
BVAR	Borovoye Array	16.32	358	P	Pn	09 38 33.7	-0.7
	comp=Z,0.7nm,0.3s,baz=184,slow=13,SNR=10						
BRVK	Borovoye	16.36	358		Pn	09 38 36.3	+1.4
BRVK				IAmb	IAmb	09 38 38.5	
	comp=Z,2.3nm,0.5s						
TAPN	Taplejung	16.72	119	*e*P	P	09 38 39.6	+0.1
	comp=Z,9.4nm,0.3s						
AKTO	Aktyubinsk	16.73	329	P	P	09 38 40.2	+1.2
	comp=Z,1.9nm,0.3s,baz=144,slow=8.6,SNR=17						
AKTO				S	S	09 41 42.1	-3.1
	comp=Z,0.1nm,0.3s,baz=25,slow=21,SNR=1.4						
AKTO	Aktyubinsk	16.73	329	⇓P	Pn	09 38 44.1	+4.8
	comp=Z,3.5nm,0.4s						
AKTO				⇑S	S	09 41 44.3	-0.9
	comp=Z,2.7nm,0.7s						
ODAN	Odare	16.80	121	*e*P	P	09 38 39.9	-0.5
ZAA0	Zalesovo Array	19.61	24	P	P	09 39 11.8	+1.3
ZAA0				IAmb	IAmb	09 39 28.6	
	comp=Z,2.1nm,0.6s						
ZALV	Zalesovo Beam	19.61	24	P	P	09 39 08.2	-2.2
	comp=Z,1.1nm,0.3s,baz=213,slow=13,SNR=12						
ZALV	Zalesovo Beam	19.61	24	P	P	09 39 10.1	-0.4
BELG	Belogornoye	22.89	321	P	P	09 39 45.1	+0.7
	comp=Z,6.8nm,0.5s,baz=54,slow=1.4,SNR=7.3						
BRTR	Keskin Array B	29.62	287	P	P	09 40 45.9	+0.7
	comp=Z,1.1nm,0.6s,baz=64,slow=8.2,SNR=2.4						
BRTR	Keskin Array B	29.62	287	P	P	09 40 45.3	+0.1
AKASG	Malin Array Be	33.02	309	P	P	09 41 14.9	+0.3
	comp=Z,1.7nm,0.4s,baz=80,slow=8.2,SNR=7.5						
AKASG	Malin Array Be	33.02	309	P	P	09 41 14.6	-0.1
FIA1	FINESS Array S	37.45	326	P	P	09 41 52.5	+0.1
FIA1				IAmb	IAmb	09 42 16.6	
	comp=Z,10nm,1.3s						
FINES	FINESS Array B	37.45	326	P	P	09 41 52.9	+0.5
	comp=Z,1.9nm,0.4s,baz=122,slow=9.3,SNR=25						
FINES	FINESS Array B	37.45	326	P	P	09 41 52.3	-0.1
ARCES	ARCESS Array B	41.05	337	P	P	09 42 22.6	+0.5
	comp=Z,2.1nm,0.5s,baz=112,slow=7.7,SNR=18						
ARCES	ARCESS Array B	41.05	337	P	P	09 42 22.4	+0.3
NC405	NORSAR Array S	44.13	323	P	P	09 42 46.1	-1.1
CIMO	Cimolais	44.20	302	P	P	09 42 48.4	+0.4
CIMO				IAmb	IAmb	09 42 49.2	
	comp=Z,2.3nm,0.7s						
NB2	NORSAR Subarra	44.37	323	P	P	09 42 48.7	-0.4
	comp=Z,2.2nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.37	323	P	P	09 42 49.0	-0.1
	comp=Z,3.5nm,0.6s,baz=96,slow=7.7,SNR=18						
ESDC	Sonseca Array	57.59	298	P	P	09 44 27.5	-0.6
	comp=Z,1.6nm,1.1s,baz=56,slow=8.0,SNR=6.7						
SUMG	Summit	60.94	341	P	P	09 44 51.4	+0.4
TORD	Torodi Ar. Bea	65.98	269	P	P	09 45 21.9	-2.6
	comp=Z,1.8nm,0.5s,baz=49,slow=5.9,SNR=17						
TORD	Torodi Ar. Bea	65.98	269	P	P	09 45 22.4	-2.2
TORD				IAmb	IAmb	09 45 22.5	
	comp=Z,1.1nm,0.7s						
TOLK	Toolik Lake Re	70.65	15	P	P	09 45 52.8	+0.1
COLD	Coldfoot	71.69	16	P	P	09 45 58.7	-0.3
BMAR	Burnt Mountain	72.67	14	P	P	09 46 04.3	-0.6
J20K	Nowinta River	73.24	19	P	P	09 46 08.1	-0.1
J20K				IAmb	IAmb	09 46 37.1	
	comp=Z,6.6nm,1.3s						
INK	Inuvik	73.65	9	P	P	09 46 09.9	-0.6
	comp=Z,1.2nm,0.5s,baz=340,slow=7.1,SNR=14						
INK	Inuvik	73.65	9	P	P	09 46 10.2	-0.3
INK				IAmb	IAmb	09 46 26.6	
	comp=Z,6.2nm,1.5s						
K20K	Telida	73.92	20	P	P	09 46 12.0	-0.2
CAST	Castle Rocks	74.39	19	P	P	09 46 13.9	-1.1
CAST				IAmb	IAmb	09 46 41.4	
	comp=Z,3.7nm,1.2s						
ILAR	Eielson Array	74.50	16	P	P	09 46 13.2	-2.3
	comp=Z,0.4nm,0.7s,baz=311,slow=5.5,SNR=5.7						
KTH	Kantishna Hill	74.58	18	P	P	09 46 15.0	-1.1
KTH				IAmb	IAmb	09 46 22.2	
	comp=Z,8.0nm,1.4s						
BCAR	Beaver Creek A	77.09	15	P	P	09 46 29.0	-1.3
YKA	Yellowknife Ar	81.02	3	P	P	09 46 50.6	-1.0
	comp=Z,0.7nm,0.5s,baz=350,slow=5.4,SNR=4.7						

NEIC ***15*** *09:38:22.8±1.7, 5°.28N±0°.09×94°.4E±0°.1, h33^{km}±5^{km}, mb4.6/33, Error ellipse: s-maj=16.2km s-min=12.6km az=67.0*

DJA ***15*** *09:38:22.1±0.7, 5°N±4°×9°4E±°, h65^{km}±9^{km}, M4.5/10, mB5.2/2, mb4.7/10, MLv4.4/6, Mw(mB)4.5/2*

IDC ***15*** *09:38:24.2±3.4, 5°.27N×94°.39E, h54^{km}±30^{km}, mb4.0/18, mb1 4.1/20, mb1mx3.8/42, mbtmp4.3/20, ML4.6/2, MS3.3/7, Ms1 3.3/7, ms1mx3.0/40, Error ellipse: s-maj=28.3km s-min=11.7km az=56.0*

ISC 15 09:38:21.8±0.5**, 5°.22N**±0°.06×**94°.28E**±0°.08**, h35^{km}, n89, σ1^{s}.08**/87**, mb4.5**/42**, MS3.5**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPTI		3.48	124	P	Pn	09 39 14.1	+0.6
TPTI				S	Sn	09 39 51.7	-1.8
KCSI	Kotacane, Aceh	3.87	116	P	Pn	09 39 21.4	+2.6
GSI	Gunungsitoli	5.09	140	P	Pn	09 39 36.1	+0.5
	0.5nm43nm,0.6s						
GSI				S	Sn	09 40 31.9	-1.3
	0.5nm43nm,0.6s						
GSI	Gunungsitoli	5.09	140	Pn	Pn	09 39 35.6	0.0
PSI	Prapat	5.22	117	P	Pn	09 39 39.9	+2.4
	3.9nm,0.3s,baz=286,slow=6.4,SNR=13						
PSI				S	Sn	09 40 38.1	+1.6
	1.2nm,0.3s,baz=189,slow=23,SNR=1.3						
PSI				LR	LR	09 42 04.9	
	comp=Z,185nm,19.3s,baz=98,slow=42						
SRIT	Nakonsritamara	6.26	57	Pn	Pn	09 39 51.6	-0.1
KULM	Kulim	6.34	89	Pn	Pn	09 39 53.7	+0.9
PBSI	Pulau Batu	6.58	143	P	Pn	09 39 54.4	-1.8
	0.3nm38nm,0.6s						
PBSI				S	Sn	09 41 08.7	-1.4
	0.3nm38nm,0.6s						
IPM	Ipoh	6.76	96	Pn	Pn	09 39 59.4	+0.8
MNSI	Mandailing Nat	6.88	130	P	Pn	09 40 00.1	0.0
	0.5nm39nm,0.5s						
CMAR	Chiang Mai Arr	13.93	19	P	Pn	09 41 39.5	+2.8
	3.0nm,0.3s,baz=207,slow=14,SNR=39						
CMAR				LR	LR	09 46 44.4	
	comp=Z,87nm,20.4s,baz=244,slow=36						
CMAR	Chiang Mai Arr	13.93	19	Pn	Pn	09 41 39.0	+2.3
CHTO	Chiang Mai	14.26	18	Pn	P	09 41 44.7	-3.4
ODAN	Odare	22.50	344	*e*P	P	09 43 18.7	0.0
	18nm,0.5s						
RAMN	Ramite	22.82	342	*e*P	P	09 43 21.4	-0.7
	30nm,0.5s						
TAPN	Taplejung	22.88	345	*e*P	P	09 43 21.8	-1.0
	12nm,0.5s						
JIRN	Jiri	23.61	342	*e*P	P	09 43 29.5	-0.6
PKI	Pulchoki	23.78	340	*e*P	P	09 43 30.8	-0.9
	15nm,0.5s						
PKIN	Phulchoki	23.79	340	*e*P	P	09 43 31.5	-0.2
	9.9nm,0.5s						
GUN	Gumba	23.94	341	*e*P	P	09 43 32.0	-1.2
	24nm,0.5s						
KKN	Kakani	24.03	340	*e*P	P	09 43 32.9	-0.9
LSA	Lhasa	24.53	353	P	P	09 43 38.4	-0.3
KOLN	Koldanda	24.62	337	*e*P	P	09 43 39.5	+0.2
	20nm,0.4s						
DANN	Dangsing	25.08	338	*e*P	P	09 43 43.6	+0.1
	50nm,0.5s						
PYUN	Piuthan	25.16	336	*e*P	P	09 43 44.6	+0.5
	48nm,0.4s						
H08S2	Diego Garcia H	25.21	240	T	T	10 09 41.0	
	baz=60,slow=76,SNR=269						
H08S3	Diego Garcia H	25.21	240	T	T	10 09 40.4	
	baz=60,slow=76,SNR=298						
H08S1	Diego Carcia H	25.23	240	T	T	10 09 41.0	
	baz=60,slow=76,SNR=217						
ENH	Enshi	28.75	28	P	P	09 44 14.8	-1.4
ENH				IAmb	IAmb	09 44 39.6	
	comp=Z,16nm,1.4s						
SOEI	Soe	33.37	116	P	P	09 44 57.2	0.0
NIL	Nilore	34.39	328	P	P	09 45 06.2	+0.5
NIL				IAmb	IAmb	09 45 23.6	
	comp=Z,8.0nm,0.7s						
FITZ	Fitzroy Crossi	38.65	128	P	P	09 45 41.6	-0.6
	comp=Z,0.9nm,0.5s,baz=333,slow=4.5,SNR=2.0						
TARG	Taragay, Kyrgy	39.22	340	P	P	09 45 48.6	+1.4
TARG				IAmb	IAmb	09 45 50.7	
	comp=Z,8.7nm,0.6s						
DRK	Karamyk	39.70	332	P	P	09 45 51.7	+0.6
KNRA	Kununurra	39.96	122	P	P	09 45 52.3	-0.9
KNRA				IAmb	IAmb	09 46 18.9	
	comp=Z,6.1nm,0.8s						
GAR	Garm	40.03	331	P	P	09 45 53.0	-0.6
GAR				IAmb	IAmb	09 46 14.1	
	comp=Z,4.7nm,0.6s						
BOOM	Boomskoye usch	40.54	339	P	P	09 45 58.9	+1.0
BTK	Batken	40.62	332	P	P	09 45 56.8	-1.6
BTK				IAmb	IAmb	09 46 21.1	
	comp=Z,6.1nm,0.8s						
MTN	Manton Dam	40.77	116	P	P	09 45 58.6	-1.3
MTN				IAmb	IAmb	09 46 19.9	
	comp=Z,12nm,1.1s						
AAK	Ala-Archa	41.20	338	P	P	09 46 03.1	-0.1
	comp=Z,1.3nm,0.5s,baz=188,slow=9.5,SNR=2.7						
AAK	Ala-Archa	41.20	338	P	P	09 46 03.7	+0.4
MK31	Makanchi Array	42.70	348	P	P	09 46 15.7	+0.4
MKAR	Makanchi Array	42.70	348	P	P	09 46 15.7	+0.4
	comp=Z,16nm,0.5s,baz=162,slow=7.2,SNR=145						
MKAR				PcP	PcP	09 48 06.9	+0.2
	comp=Z,0.4nm,0.4s,baz=170,slow=4.1,SNR=1.5						
MAKZ	Makanchi	42.78	348	P	P	09 46 16.6	+0.7
KKAR	Karatay Array	43.19	334	P	P	09 46 19.9	+0.5
SONM	Songino Array	43.71	12	P	P	09 46 22.8	-0.8
	comp=Z,2.9nm,0.7s,baz=194,slow=8.3,SNR=17						
SONM				PcP	PcP	09 48 10.5	+0.3
	comp=Z,1.3nm,0.5s,baz=197,slow=2.6,SNR=6.1						
SONM				LR	LR	10 05 04.2	
	comp=Z,61nm,20.8s,baz=258,slow=37						
SONM	Songino Array	43.71	12	P	P	09 46 22.9	-0.8
ULN	Ulaanbaatar	43.88	12	P	P	09 46 23.8	-1.2
H01W3	Cape Leeuwin H	44.06	156	T	T	10 34 06.8	
	baz=330						
H01W2	Cape Leeuwin H	44.07	156	T	T	10 34 12.2	
	baz=330						
H01W1	Cape Leeuwin H	44.07	156	T	T	10 34 11.2	
	baz=330						
KSRS	Korea Array	44.40	39	P	P	09 46 28.1	-1.0
	comp=Z,1.3nm,0.7s,baz=225,slow=7.8,SNR=3.2						
KSRS				LR	LR	10 07 30.5	
	comp=Z,43nm,20.9s,baz=172,slow=40						
GEYT	Alibeck	46.28	320	P	P	09 46 44.6	+0.5
	comp=Z,2.0nm,0.4s,baz=70,slow=13,SNR=2.0						
WB0	Warramunga Arr	46.61	123	P	P	09 46 46.9	0.0
WB0				IAmb	IAmb	09 47 01.8	
	comp=Z,6.5nm,0.6s						
WRA	Warramunga Arr	46.65	124	P	P	09 46 47.2	0.0

	comp=Z,2.3nm,0.5s,baz=305,slow=9.0,SNR=34						
WRA	Warramunga Arr	46.65	124	P	P	09 46 47.7	+0.5
WRAB	Tennant Creek	46.65	124	P	P	09 46 47.2	-0.1
WRAB				IAmb	IAmb	09 47 07.0	
	comp=Z,6.7nm,0.8s						
WB2	Warramunga Arr	46.66	124	P	P	09 46 47.4	+0.2
WB2				IAmb	IAmb	09 47 02.1	
	comp=Z,7.5nm,0.7s						
WR0	Warramunga Arr	46.82	124	P	P	09 46 48.7	+0.2
WR0				IAmb	IAmb	09 47 00.5	
	comp=Z,9.4nm,1.1s						
KURBB	Kurchatov Arra	47.14	346	P	P	09 46 51.3	+0.8
	comp=Z,6.8nm,0.4s,baz=172,slow=6.9,SNR=70						
KURK	Kurchatov	47.21	346	P	P	09 46 51.6	+0.6
AS31	Alice Springs	48.14	128	P	P	09 46 59.6	+0.8
ASAR	Alice Springs	48.14	128	P	P	09 46 58.8	0.0
	comp=Z,1.4nm,0.7s,baz=302,slow=7.9,SNR=18						
ASAR				PcP	PcP	09 48 26.7	+0.6
	comp=Z,0.4nm,0.4s,baz=318,slow=3.0,SNR=0.8						
ASAR	Alice Springs	48.14	128	P	P	09 46 59.8	+1.0
ZAA0	Zalesovo Array	49.19	353	P	P	09 47 06.6	+0.3
ZALV	Zalesovo Beam	49.19	353	P	P	09 47 06.6	+0.3
	comp=Z,9.8nm,0.5s,baz=181,slow=7.1,SNR=27						
ZALV	Zalesovo Beam	49.19	353	P	P	09 47 06.7	+0.4
MJAR	Matsushiro Arr	50.86	46	LR	LR	10 11 35.2	
	comp=Z,44nm,19.7s,baz=190,slow=39						
BRVK	Borovoye	51.60	342	P	P	09 47 24.6	+0.1
BRVK				IAmb	IAmb	09 47 25.3	
	comp=Z,5.1nm,0.6s						
ABKAR	Akbulak array	52.62	332	P	P	09 47 32.8	+0.5
ABKAR				IAmb	IAmb	09 47 48.8	
	comp=Z,5.0nm,1.1s						
STKA	Stephens Creek	58.20	133	P	P	09 48 13.3	+0.7
	comp=Z,1.0nm,0.7s,baz=277,slow=8.1,SNR=2.0						
NRIK	Noril'sk	64.19	357	P	P	09 48 52.2	-0.3
	comp=Z,2.4nm,0.6s,baz=139,slow=11,SNR=2.5						
BRTR	Keskin Array B	64.28	312	P	P	09 48 53.9	-0.1
	comp=Z,1.6nm,0.5s,baz=118,slow=7.4,SNR=3.4						
TIXI	Tiksi	69.80	11	P	P	09 49 27.3	-0.8
TIXI				IAmb	IAmb	09 49 39.7	
	comp=Z,11nm,1.5s						
AKASG	Malin Array Be	70.32	322	P	P	09 49 30.9	-0.8
	comp=Z,0.9nm,0.4s,baz=87,slow=6.0,SNR=9.6						
BURAR	Bucovina Array	72.11	318	P	P	09 49 43.1	+0.3
BOSA	Boshof	74.31	239	P	P	09 49 57.7	+1.5
	comp=Z,1.0nm,0.6s,baz=68,slow=5.4,SNR=3.6						
BOSA				LR	LR	10 21 27.1	
	comp=Z,26nm,18.1s,baz=8.0,slow=35						
BOSA	Boshof	74.31	239	P	P	09 49 58.6	+2.4
BOSA				IAmb	IAmb	09 50 05.3	
	comp=Z,10.0nm,1.4s						
FINES	FINESS Array B	75.11	333	P	P	09 49 59.6	-0.4
	comp=Z,1.5nm,0.7s,baz=80,slow=6.6,SNR=7.8						
FINES	FINESS Array B	75.11	333	P	P	09 50 00.1	+0.1
ARCES	ARCESS Array B	77.80	340	P	P	09 50 16.1	+0.9
	comp=Z,2.6nm,0.6s,baz=64,slow=5.6,SNR=9.6						
ARCES	ARCESS Array B	77.80	340	P	P	09 50 16.4	+1.2
GERES	GERESS Array B	79.89	319	P	P	09 50 28.1	+0.9
	comp=Z,2.7nm,0.6s,baz=108,slow=5.5,SNR=21						
GERES	GERESS Array B	79.89	319	P	P	09 50 28.4	+1.2
STAL	STALIGIAL	80.42	316	P	P	09 50 30.2	+0.2
STAL				IAmb	IAmb	09 50 47.1	
	comp=Z,5.1nm,1.0s						
NOA	NORSAR Array B	82.10	331	LR	LR	10 30 19.0	
	comp=Z,13nm,19.6s,baz=340,slow=38						
PDAR	Pinedale Array	127.57	22	PKP	PKPdf	09 57 21.6	-2.3
	comp=Z,0.3nm,0.6s,baz=15,slow=3.9,SNR=2.4						
PDAR	Pinedale Array	127.57	22		PKPdf	09 57 24.2	+0.3
TXAR	Lajitas Array	141.56	26	PKhKP	PKPpre	09 57 44.0	
	comp=Z,0.3nm,0.4s,baz=284,slow=0.9,SNR=11						

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*NIED **15** 09:41:17.4, 37°.83N×142°.71E, h55^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.74; M$_{\theta\theta}$0.63; M$_{\phi\phi}$-1.37; M$_{r\theta}$0.74; M$_{\theta\phi}$-0.30; M$_{\phi r}$1.05; Fault plane solution: M$_0$1.74000×10^{14} NP1:φ$_s$35.00000°, δ74.00000°, λ118.00000°. NP2:φ$_s$153.00000°, δ32.00000°, λ32.00000°.*

JMA 15 09:41:17.3±0.1**, 37°.83N×142°.71E, h55**^{km}±4^{km}**, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.09	296	P	Pn	09 41 36.9	+0.5
JIKH				S	Sn	09 41 50.6	+0.1
JIO	Ouri	1.24	301	P	Pn	09 41 39.0	+0.6
JIO				S	Sn	09 41 55.0	+0.9
JKMT	Kesennumamotoy	1.38	316	P	Pn	09 41 40.7	+0.5
JKMT				S	Sn	09 41 57.8	+0.4
JMST	Minamisoumatoc	1.45	266	P	Pn	09 41 41.4	+0.3
JMST				S	Sn	09 41 58.9	-0.2
JMM	Marumori	1.52	272	P	Pn	09 41 42.7	+0.6
JMM				S	Sn	09 42 01.0	+0.2
JFK	Kawauchi	1.53	253	P	Pn	09 41 42.4	+0.1
JFK				*e*S	Sn	09 42 00.7	-0.4
JMK	Ichinoseki	1.62	314	P	Pn	09 41 44.2	+0.7
JMK				S	Sn	09 42 04.0	+0.7
JOU	Okura	1.70	289	P	Pn	09 41 45.8	+1.2
JOU				*e*S	Sn	09 42 06.3	+1.0
JFT	Otama	1.91	261	P	Pn	09 41 48.9	+1.5
JFT				*e*S	Sn	09 42 11.8	+1.4
JOM	Ohasama	1.98	326	P	Pn	09 41 49.2	+0.8
JOM				S	Sn	09 42 13.3	+1.2
JYS	Shirataka	2.12	281	P	Pn	09 41 52.1	+1.7
JYS				*e*S	Sn	09 42 17.4	+1.8
JYK	Kaneyama	2.14	301	P	Pn	09 41 51.8	+1.2
JYK				*e*S	Sn	09 42 17.8	+1.7
JANG	Nango	2.71	340	P	Pn	09 41 58.5	+0.2
JANG				S	Sn	09 42 29.5	-0.3
JAG	Ashikaga	2.96	243	P	Pn	09 42 02.5	+0.7

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*SNET **15** 09:44:36.0±0.9, 13°.63N×90°.59W, h70^{km}±21^{km}, ML2.9*

*GCG **15** 09:44:40.9±0.3, 13°.95N×90°.62W, h63^{km}±10^{km}, MD3.4*

ISC 15 09:44:37.1±2.5**, 13°.5N**±0°.2×**90°.57W**±0°.09**, h50**^{km}**, n11, σ0**^{s}**.58**/13**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.87	357	*e*P	Pn	09 44 53.4	0.0
SLOZ	Alcaldia de Sa	0.92	56⇓	*e*P	Pn	09 44 53.2	-0.6
SLOZ				*e*S	Sn	09 45 06.6	+0.6
SLOZ				IAML		09 45 09.9	
	comp=Z,179nm,0.4s						
FUG	Fuego 3	0.96	344	*e*P	Pn	09 44 54.1	-0.5
CEVE	Cerro Verde	0.97	71	*e*P	Pn	09 44 54.5	-0.1
NBG	Las Nubes	1.08	11	*e*P	Pn	09 44 56.1	-0.2
JAYA	Jayaque - finc	1.10	83	*e*P	Pn	09 44 56.0	-0.4
JAYA				*e*S	Sn	09 45 11.1	+0.6
JAYA				IAML		09 45 13.6	
	comp=Z,313nm,0.2s						
TACO	Tacachico	1.26	69	*e*P	Pn	09 44 57.3	-1.1
UEES	Universidad Ev	1.31	81	*e*P	Pn	09 44 59.7	+0.6
SJTE	Alcalda de S	1.52	86	*e*P	Pn	09 45 01.5	-0.5
STG3	Santiaguito 3,	1.53	321	*e*P	Pn	09 45 02.2	-0.1
COEG	Centro de Oper	1.64	86	*e*P	Pn	09 45 03.5	-0.2
COEG				IAML		09 45 29.2	
	comp=Z,145nm,0.3s						

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*TUL **15** 09:57:48.8±1.2, 36°.213N±0°.006×97°.55W±0°.02, h6^{km}±7^{km}, ML3.2, mb_Lg2.9/50(NEIC), Error ellipse: s-maj=2.5km s-min=0.5km az=69.0*

*ANF **15** 09:57:48.4±0.3, 36°.23N×97°.56W, h4^{km}, ML3.6/9, Error ellipse: s-maj=3.6km s-min=2.9km az=162.0*

*NEIC **15** 09:57:48.9±0.9, 36°.217N±0°.006×97°.56W±0°.02, h3^{km}±7^{km}, Error ellipse: s-maj=2.6km s-min=0.2km az=69.0*

ISC 15 09:57:48.9±1.0**, 36°.22N**±0°.02×**97°.56W**±0°.02**, h9**^{km}±10^{km}**, n86, σ0**^{s}**.82**/110**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.43	169	Pg	Pg	09 57 57.3	0.0
OK029				Sg	Sg	09 58 02.3	-0.6
CROK	Carrier	0.45	310	Pg	Pg	09 57 57.8	+0.1
CROK				Sg	Sg	09 58 04.3	+0.7
BCOK	Bluff Creek, N	0.56	184	Pg	Pg	09 57 59.6	-0.1
BCOK				Sg	Sg	09 58 06.9	-0.3
BLOK	Blackwell	0.61	27	Pg	Pg	09 58 00.8	+0.1
BLOK				Sg	Sg	09 58 09.0	+0.2
OK031	S. Brethren Rd	0.64	114	Pg	Pg	09 58 01.1	-0.2
OK031				Sg	Sg	09 58 09.8	+0.1
OK025	Westminster Rd	0.66	164	Pg	Pg	09 58 01.5	-0.2
OK025				Sg	Sg	09 58 10.5	+0.2
GC02	Grant County #	0.68	339	Pg	Pg	09 58 01.9	-0.2
GC02				Sg	Sb	09 58 12.6	+0.2
OK001	Jones High Sch	0.69	161	Pg	Pg	09 58 02.2	0.0
OK001				Sg	Sg	09 58 11.6	+0.3
QUOK	Quay	0.69	93	Pg	Pg	09 58 02.1	-0.2
QUOK				Sg	Sg	09 58 11.4	+0.1
OK030	Cody Creek RV	0.69	114		Pg	09 58 02.2	-0.1
OK030				Sg	Sg	09 58 11.4	+0.1
OK034	N. Norfolk Rd.	0.71	106		Pg	09 58 02.6	-0.1
OK034				Sg	Sg	09 58 12.1	0.0
OK032	Salt Plains WL	0.79	318	Pg	Pg	09 58 03.8	-0.3
OK032				Sg	Sg	09 58 14.9	+0.6
KAN13	South Haven SW	0.80	5	Pg	Pg	09 58 04.1	-0.2
KAN13					Sb	09 58 16.0	+0.1
OKCFA	Oklahoma City	0.80	174		Pg	09 58 04.0	-0.4
OKCFA				Sg	Sg	09 58 15.5	+0.6
OKCFA	Oklahoma City	0.80	174	P	Pg	09 58 04.1	-0.4
	baz=354,SNR=25						
OKCFA				S	Sg	09 58 15.3	+0.4
	baz=354						
KAN14	Manchester OK	0.81	336	Pg	Pg	09 58 04.2	-0.3
KAN14				Sg	Sb	09 58 15.8	-0.4
OKCSW	OKLAHOMA CITY	0.81	173	Pg	Pg	09 58 04.3	-0.4
OKCSW				Sg	Sg	09 58 15.2	0.0
KAN17	Caldwell West	0.84	349	Pg	Pg	09 58 05.0	-0.1
KAN17				Sg	Sb	09 58 16.8	-0.3
KAN09	Caldwell North	0.92	357	Pg	Pg	09 58 06.4	-0.3
KAN09				Sg	Sg	09 58 18.1	-0.5
KAN05	Bluff City Nor	0.93	344		Pg	09 58 06.5	-0.2
KAN05				Sg	Sg	09 58 18.6	-0.2
KAN01	Argonia South	0.95	350		Pg	09 58 06.9	-0.3
KAN01				Sg	Sg	09 58 19.3	-0.3
FNO	Franklin	0.97	172	Pg	Pg	09 58 07.0	-0.5
FNO				Sg	Sg	09 58 19.9	-0.2
KAN10	Anthony SW Sta	1.00	335	Pg	Pg	09 58 07.8	-0.4
KAN10				Sg	Sg	09 58 21.4	+0.1
KAN06	Argonia West S	1.06	347		Pg	09 58 08.9	-0.4
KAN06				Sg	Sg	09 58 22.7	-0.4
KAN08	Anthony NE Sta	1.06	342		Pg	09 58 08.9	-0.5
KAN08				Sg	Sg	09 58 23.2	0.0
KAN16	Harper SW Stat	1.09	338	Pg	Pg	09 58 09.3	-0.5
KAN16				Sg	Sg	09 58 24.1	+0.1
T35A	Sooner Cattle	1.09	50	Pg	Pg	09 58 09.5	-0.4
T35A				Sg	Sg	09 58 23.5	-0.7
T35B	Sooner Cattle	1.09	50	P	Pg	09 58 09.4	-0.5
	baz=230,SNR=226						
T35B				S	Sg	09 58 23.8	-0.4
	baz=230						
KAN12	Harper NE Stat	1.14	342	Pg	Pg	09 58 10.4	-0.3
KAN12				Sg	Sg	09 58 25.2	-0.3
U32A	Winter Ranch,	1.18	278		Pg	09 58 10.9	-0.7
U32A				Sg	Sg	09 58 26.7	-0.2
U32A	Winter Ranch,	1.18	278	P	Pg	09 58 10.6	-0.9
	baz=98						
U32A				S	Sg	09 58 26.8	0.0
	baz=98						
W35A	Tecumseh	1.20	152	Pg	Pg	09 58 10.8	-1.2
W35A				Sg	Sg	09 58 26.7	-0.8
TUL1	Leonard	1.46	102	Pn	Pn	09 58 15.3	-0.2
TUL1	Leonard	1.46	102	P	Pn	09 58 15.1	-0.4
	baz=282						
TUL1				S	Sb	09 58 35.0	0.0
	baz=282						
X34A	Smith Ranch, M	1.63	188		Pn	09 58 18.3	+0.5
LOOK	Love County	2.24	172		Pn	09 58 27.5	+1.3
LOOK				IAmb_Lg		09 59 04.5	
	comp=Z,32nm,0.7s						
R32A	Long Quarter,	2.39	338		Pn	09 58 28.5	+0.3
X37A	Clayton	2.42	132		Pn	09 58 29.5	+1.0
X37A				IAmb_Lg		09 59 10.3	
	comp=Z,34nm,0.8s						
X37A	Clayton	2.42	132	P	Pn	09 58 29.6	+1.1
	baz=313,SNR=29						
KSU1	Kansas State U	2.98	14	Pn	Pn	09 58 37.6	+1.3
CBKS	Cedar Bluff	3.12	327	Pn	Pn	09 58 39.2	+0.9
W39A	Magazine	3.24	107	Pn	Pn	09 58 41.2	+1.3
W39A	Magazine	3.24	107	P	Pn	09 58 41.2	+1.3
	baz=289,SNR=7.7						
AMTX	Amarillo	3.61	250	Pn	Pn	09 58 45.1	-0.1
Z38A	Mt. Pleasant	3.63	144	Pn	Pn	09 58 46.4	+1.1
Z38A				IAmb_Lg		09 59 53.8	
	comp=Z,45nm,0.7s						
MIAR	Mount Ida	3.66	116		Pn	09 58 46.9	+1.3
MIAR				IAmb_Lg		09 59 52.5	
	comp=Z,27nm,0.9s						
MIAR	Mount Ida	3.66	116	P	Pn	09 58 46.8	+1.1
	baz=298,SNR=11						
S39A	Bolivar	3.70	65	Pn	Pn	09 58 47.2	+0.9
S39A				IAmb_Lg		09 59 52.8	
	comp=Z,24nm,0.7s						
S39A	Bolivar	3.70	65	P	Pn	09 58 47.0	+0.8
	baz=248,SNR=17						
U40A	Yellville	3.80	87		Pn	09 58 48.5	+0.8
U40A				IAmb_Lg		09 59 55.9	
	comp=Z,29nm,0.7s						
ABTX	Abilene, Hawle	3.98	206	Pn	Pn	09 58 50.2	+0.2
ABTX				IAmb_Lg		09 59 55.2	
	comp=Z,22nm,0.7s						
WHTX	Lake Whitney,	4.21	179	Pn	Pn	09 58 55.0	+1.7
X40A	Basin Creek Fa	4.23	113	Pn	Pn	09 58 55.3	+1.8
X40A				IAmb_Lg		10 00 12.2	
	comp=Z,40nm,0.9s						
MGMO	Mountain Grove	4.35	76	Pn	Pn	09 58 56.3	+1.0
MGMO				IAmb_Lg		10 00 10.1	
	comp=Z,28nm,0.8s						
WHAR	Wooly Hollow	4.38	101	Pn	Pn	09 58 58.4	+2.7
WHAR				IAmb_Lg		10 00 12.1	
	comp=Z,20nm,0.9s						
FCAR	Ozark Folk Cen	4.42	93	Pn	Pn	09 58 56.5	+0.4
WLAR	White Oak Lake	4.44	123	IAmb_Lg		10 00 16.1	
	comp=Z,26nm,0.8s						
W41B	Gary Mavity, V	4.45	102	P	Pn	09 58 57.0	+0.5
	baz=285						
W41B				S	Sn	09 59 48.1	-0.2
	baz=285						
N33A	J Bar K, Exete	4.52	1	Pn	Pn	09 58 58.1	+0.7
N33A				IAmb_Lg		10 00 23.7	
	comp=Z,27nm,0.7s						
P38A	Dawn	4.66	42	Pn	Pn	09 59 02.0	+2.6
P38A				IAmb_Lg		10 00 17.9	
	comp=Z,26nm,0.7s						
R40A	Maddies Statio	4.70	62		Pn	09 59 00.6	+0.6
R40A	Maddies Statio	4.70	62	P	Pn	09 59 00.6	+0.6
	baz=245,SNR=17						
N35A	Tabor	4.88	17	Pn	Pn	09 59 01.6	-0.8
KSCO	Kaye Shedlock’	4.90	306	Pn	Pn	09 59 03.4	+0.6
KSCO				IAmb_Lg		10 00 36.5	
	comp=Z,18nm,0.8s						
LCAR	Lake Charles	5.18	90	IAmb_Lg		10 00 39.0	
	comp=Z,15nm,0.8s						
BGNE	Belgrade	5.21	355	IAmb_Lg		10 00 44.0	
	comp=Z,30nm,0.7s						
T42A	Van Buren	5.26	79	Pn	Pn	09 59 10.1	+2.3
T42A				IAmb_Lg		10 00 34.5	
	comp=Z,16nm,0.9s						
CCM	Cathedral Cave	5.37	68	Pn	Pn	09 59 09.6	+0.4
CCM				IAmb_Lg		10 00 49.7	
	comp=Z,12nm,0.7s						
435B	Jarrell	5.42	180	IAmb_Lg		10 00 45.8	
	comp=Z,18nm,0.8s						
P40A	Paris	5.47	51	Pn	Pn	09 59 12.3	+1.7
T25A	Trinidad	5.58	282	IAmb_Lg		10 00 51.8	
	comp=Z,25nm,0.8s						
PBMO	Poplar Bluff	5.77	82	IAmb_Lg		10 01 04.9	
	comp=Z,13nm,0.8s						
L34A	Svendsen Farm,	5.81	9	Pn	Pn	09 59 14.1	-1.2
FVM	French Village	5.97	71	Pn	Pn	09 59 16.5	-0.9
JCT	Junction City	6.02	199		Pn	09 59 18.6	+0.3
143A	Socs Landing,	6.17	123	IAmb_Lg		10 01 10.4	
	comp=Z,21nm,0.8s						
K31A	O'Neill	6.46	352	IAmb_Lg		10 01 22.3	
	comp=Z,24nm,0.7s						
SDCO	Great Sand Dun	6.54	286	Pn	Pn	09 59 27.5	+1.9
S44A	Carbondale	6.81	75	Pn	Pn	09 59 28.7	-0.2
S44A				IAmb_Lg		10 01 30.1	
	comp=Z,23nm,1.1s						
W45A	Hickory Valley	6.89	96	IAmb_Lg		10 01 44.7	
	comp=Z,20nm,0.7s						
Y45A	Yeager Farm, C	6.98	107	Pn	Pn	09 59 33.2	+1.9
P43A	Skaggs, Pawnee	7.21	59	Pn	Pn	09 59 33.2	-1.3
ISCO	Idaho Springs	7.29	302	IAmb_Lg		10 01 49.4	
	comp=Z,8.2nm,0.8s						
Q44A	Meyer Farm, Va	7.29	66	Pn	Pn	09 59 35.4	-0.2
ANMO	Albuquerque	7.36	263	Pn	Pn	09 59 35.3	-1.4
ECSD	EROS Data Cent	7.54	5	Pn	Pn	09 59 39.3	+0.3

MAN 15 10:00:22.6, 10°.02N×126°.05E, h16^{km}**, mb4.3, ML3.1, MS2.8, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.60	247	*e*P	Pb	10 00 35.0	+0.3
SCPH				*e*S	Sn	10 00 46.2	+0.3

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*ISK **15** 10:15:41.7, 35°.87N×31°.18E, h8^{km}, ML2.7/15*

*NIC **15** 10:15:43.8±0.0, 36°.16N×31°.27E, h54^{km}±16^{km}, Ml2.9/2*

*DDA **15** 10:15:44.8, 36°.14N×31°.26E, h8^{km}±2^{km}, ML2.2*

ISC 15 10:15:41.3±1.6**, 35°.96N**±0°.05×**31°.19E**±0°.03**, h1**^{km}±13^{km}**, n32, σ1**^{s}**.16**/45**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.78	298	*i* P	Pb	10 15 59.6	+2.0
AKUM				*i* S	Sn	10 16 13.8	+2.0
AKUM				IAML		10 16 17.0	
	comp=N,98nm,0.3s						
AKUM				IAML		10 16 20.0	
	comp=E,112nm,0.4s						
KEMT	Kemer-ANTALYA	0.82	322	PG	Pb	10 15 59.1	+0.6
KEMT				SG	Sn	10 16 11.9	-1.1
GAZI	Gazipasa	0.95	73	*i* P	Pb	10 16 01.1	+0.3
GAZI				*i* S	Sb	10 16 13.6	-0.3
GAZI				IAML		10 16 14.0	
	comp=N,66nm,0.2s						
GAZI				IAML		10 16 15.0	
	comp=E,73nm,0.3s						
GAZI	Gazipasa	0.95	73	PG	Pb	10 16 00.9	+0.2
KORT	Korkueli	1.24	327	PN	Pn	10 16 07.1	+1.1
KORT				SN	Sn	10 16 25.1	+1.6
ELL	Elmali	1.30	308	PN	Pn	10 16 07.5	+0.7
ELL	Elmali	1.30	308	S	Sb	10 16 22.1	-1.9
AKAS	Kas	1.31	283	*i* P	Pn	10 16 06.7	-0.3
AKAS				*i* S	Sb	10 16 21.7	-2.6
AKAS				IAML		10 16 31.0	
	comp=N,29nm,0.4s						
AKAS				IAML		10 16 36.0	
	comp=E,40nm,0.4s						
AKAS	Kas	1.31	283	PN	Pn	10 16 06.7	-0.3
KSL	Kastellorizon	1.31	279	P	Pn	10 16 06.8	-0.1
KSL				S	Sb	10 16 24.2	-0.1
AKMS	Akamas	1.32	135	P	Pn	10 16 08.3	+1.3
AKMS				S	Sn	10 16 27.0	+1.8
AKMS				AML	AML	10 16 32.7	
	comp=E,0.6nm,0.3s						
AKMS				AML	AML	10 16 32.7	
	comp=E,0.6nm,0.3s						
AKMS				AML	AML	10 16 33.6	
	comp=E,0.5nm,0.7s						
AKMS				AML	AML	10 16 33.6	
	comp=E,0.5nm,0.7s						
ALFC	Alefka	1.40	124	P	Pn	10 16 06.8	-1.2
ALFC				S	Sn	10 16 26.9	-0.3
ALFC				AML	AML	10 16 31.8	
	comp=E,0.7nm,0.2s						
ALFC				AML	AML	10 16 31.8	
	comp=E,0.7nm,0.2s						
ALFC				AML	AML	10 16 36.8	
	comp=E,0.4nm,0.4s						
ALFC				AML	AML	10 16 36.8	
	comp=E,0.4nm,0.4s						
HDMB	Hadim	1.45	46	PN	Pg	10 16 09.6	+0.4
HDMB				SN	Sn	10 16 30.1	+1.3
ERMK	Ermenek	1.55	63	*i* P	Pg	10 16 11.9	+0.8
ERMK				*i* S	Sg	10 16 32.9	+1.7
ERMK				IAML		10 16 37.0	
	comp=E,52nm,0.3s						
ERMK				IAML		10 16 42.0	
	comp=N,79nm,0.7s						
SEDI	Konya, Seydise	1.56	17	*i* P	Pg	10 16 11.1	-0.2
SEDI				*i* S	Sg	10 16 30.1	-1.4
SEDI				IAML		10 16 31.0	
	comp=E,44nm,0.6s						
SEDI				IAML		10 16 33.0	
	comp=N,38nm,0.4s						
TEKE	Tekeli-Mersin	1.57	83	PN	Pn	10 16 10.0	-0.4
LEF	Lefka	1.62	121	PN	Pn	10 16 09.8	-1.2
NATA	Nata	1.63	136	P	Pn	10 16 12.0	+0.8
BERE	Bereket-Mersin	1.69	76	PN	Pn	10 16 12.6	+0.4
YORU	Yoruktepe-Mers	1.81	83	PN	Pn	10 16 13.9	+0.2
TEVE	Tevekalti-Mers	1.89	75	PN	Pn	10 16 15.5	+0.7
KKBE	Karaman, Kazim	1.89	48	*i* P	Pg	10 16 17.0	-0.6
KKBE				*i* S	Sg	10 16 41.0	-1.2
AKKU	Akkuyu-Mersin	1.93	83	PN	Pn	10 16 15.8	+0.5
CSS	Mathiatis	2.01	119	PN	Pn	10 16 16.5	+0.1
CSS	Mathiatis	2.01	119	S	Sn	10 16 41.1	-1.1
LFK	Lefkose	2.02	109	PN	Pn	10 16 16.8	+0.1
TISA	Tisan-Mersin	2.03	83	PN	Pn	10 16 17.4	+0.7
IKL	Isikli	2.04	81	PN	Pn	10 16 17.7	+0.8
KRMN	Karaman	2.07	53	PN	Pb	10 16 18.6	-1.1
KEBE	Keben-Mersin	2.10	76	PN	Pn	10 16 19.0	+1.3
EREN	Erenkoy	2.46	99	PN	Pn	10 16 23.2	+0.6
TURN	Turunc	2.51	290	*i* P	Pn	10 16 24.1	+0.8
TURN				*i* S	Sn	10 16 52.2	-2.4

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*NEIC **15** 10:20:24.1±1.9, 14°.17S±0°.08×74°.7W±0°.1, h72^{km}±6^{km}, mb4.2/19, Error ellipse: s-maj=15.8km s-min=10.5km az=58.0*

*IDC **15** 10:20:24.6±1.4, 14°.20S×74°.77W, h92^{km}±12^{km}, mb3.7/8, mb1 3.9/14, mb1mx3.8/33, mbtmp4.0/14, MS2.6/1, Ms1 2.6/1, ms1mx2.4/28, Error ellipse: s-maj=28.3km s-min=10.6km az=44.0*

*VAO **15** 10:20:27.5±0.7, 13°.91S×74°.65W, h100^{km}, mb4.2*

ISC 15 10:20:25.5±0.5**, 14°.20S**±0°.06×**74°.70W**±0°.07**, h98**^{km}**, n104, σ1**^{s}**.57**/104**, mb4.2**/14**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.03	316	P	Pn	10 21 10.4	-1.3
	37nm,0.3s,baz=128,slow=13,SNR=79						
NNA				S	Sn	10 21 45.4	-1.9
	88nm,0.3s,baz=83,slow=6.2,SNR=13						
NNA	Nana	3.03	316	Pn	Pn	10 21 10.6	-1.1
PB12	IPOC Station P	6.07	137	*e*P	Pn	10 21 50.7	-2.2
PB12	IPOC Station P	6.07	137		Pn	10 21 50.5	-2.4
PB16	IPOC Station P	6.46	130		Pn	10 21 58.1	-0.5
LPAZ	La Paz	6.67	109	P	Pn	10 22 03.5	+2.0
	2.3nm,0.3s,baz=324,slow=9.3,SNR=55						
LPAZ	La Paz	6.67	109	*e*P	Pn	10 22 04.0	+2.5
LPAZ	La Paz	6.67	109	*e*P	Pn	10 22 03.8	+2.3
LPAZ	La Paz	6.67	109	Pn	Pn	10 22 03.6	+2.1
CZSB	Cruzeiro do Su	6.72	17	*e*P	Pn	10 21 59.6	-2.1
CZSB	Cruzeiro do Su	6.72	17	Pn	Pn	10 21 59.7	-2.0
PB11	IPOC Station P	7.34	140	*e*P	Pn	10 22 07.8	-2.4
PB11	IPOC Station P	7.34	140	Pn	Pn	10 22 09.0	-1.2
TA01	Diego Aracena	7.66	146	*e*P	Pn	10 22 12.6	-1.8
TA01	Diego Aracena	7.66	146	Pn	Pn	10 22 13.5	-0.9
PATCX	Punta Patache	7.88	147	Pn	Pn	10 22 17.1	-0.5
ATAH	Atahualpa	7.90	332	P	Pn	10 22 17.5	-0.6
	0.4nm,0.3s,baz=105,slow=20,SNR=2.0						
PB08	IPOC Station P	7.94	139	*e*P	Pn	10 22 16.6	-1.9
PB08	IPOC Station P	7.94	139		Pn	10 22 16.6	-1.9
PB01	IPOC Station P	8.43	145		Pn	10 22 23.6	-1.3
PB07	IPOC Station P	8.78	149		Pn	10 22 29.8	0.0
PB09	IPOC Station P	9.17	146		Pn	10 22 36.4	+1.3
PB04	IPOC Station P	9.17	153	Pn	Pn	10 22 34.6	-0.5
ETMB	Extrema	9.38	63	*e*P	Pn	10 22 36.8	-1.0
ETMB	Extrema	9.38	63	Pn	Pn	10 22 36.6	-1.2
LVC	Limon Verde	10.01	148	P	Pn	10 22 45.6	-1.1
	0.3nm,0.3s,baz=214,slow=20,SNR=2.0						
LVC				S	Sn	10 24 32.6	-4.7
	1.0nm,0.3s,baz=120,slow=13,SNR=2.4						
LVC				LR	LR	10 26 49.1	
	comp=Z,36nm,21.3s,baz=342,slow=38						
LVC	Limon Verde	10.01	148	*e*P	Pn	10 22 51.2	+4.6
LVC	Limon Verde	10.01	148	Pn	Pn	10 22 46.7	+0.1
TBTG	Tabatinga, AM	11.02	26	*e*P	Pn	10 22 58.2	-1.9
TBTG	Tabatinga, AM	11.02	26	Pn	Pn	10 22 58.6	-1.5
SAML	Samuel	12.43	66		Pn	10 23 16.0	-3.1
SIV	San Ignacio	13.28	99	P	Pn	10 23 29.1	-1.2
	0.3nm,0.3s,baz=277,slow=13,SNR=9.5						
VILB	Vilhena	14.15	87	*e*P	Pn	10 23 41.9	+0.2

VILB	Vilhena	14.15	87	Pn	Pn	10 23 42.0	+0.3
OTAV	Otavalo	14.82	345	eP	Pn	10 23 48.4	-2.1
PTLB	Pontes e Lacer	15.10	97	eP	P	10 23 56.3	-0.3
PTLB	Pontes e Lacer	15.10	97		Pn	10 23 54.9	+1.1
PTLB				IAmb	IAmb	10 23 58.1	
	comp=Z,13nm,0.9s						
PCON	Cinco Dias	16.51	354	eP	P	10 24 15.2	+2.5
POPC	Popayan, Colom	16.75	353	eP	P	10 24 19.1	+4.0
MACA	Manacapuru-AM	17.66	53	eP	P	10 24 24.0	-0.9
MACA	Manacapuru-AM	17.66	53	P	P	10 24 23.9	-0.9
MACA				IAmb	IAmb	10 24 24.9	
	comp=Z,19nm,0.9s						
PDRB	Porto dos Gac	17.71	84	eP	Pn	10 24 26.8	+0.9
ORTC	Ortega, Tolima	18.00	358	eP	Pn	10 24 39.3	+10
SALV	Santo Antonio	18.44	98	eP	Pn	10 24 35.1	+0.4
CLDB	Colider	18.75	82	eP	Pn	10 24 38.0	-0.4
AQDB	Aquidauana	19.18	112	eP	Pn	10 24 44.3	+0.8
AQDB	Aquidauana	19.18	112	P	Pn	10 24 43.6	+0.2
AQDB				IAmb	IAmb	10 24 44.7	
	comp=Z,16nm,1.1s						
GUY2C	Guyana, Caldas	19.31	358	eP	Pn	10 24 45.2	-0.3
PP1B	Ponte de Pedra	19.36	103	eP	Pn	10 24 45.0	-0.6
NORC	Norcasia	19.64	360	eP	P	10 24 47.0	+0.4
PTGA	Pitinga	19.79	49	P	P	10 24 48.0	-0.2
	comp=Z,0.3nm,0.3s,baz=234,slow=14,SNR=5.6						
RUSC	La Rusia	20.03	5	eP	Pn	10 24 53.0	-0.8
CPUP	Villa Florida	20.25	129	P	P	10 24 52.5	-0.6
	comp=Z,4.5nm,1.0s,baz=309,slow=6.8,SNR=3.0						
CPUP	Villa Florida	20.25	129	eP	Pn	10 24 56.4	+0.5
CPUP	Villa Florida	20.25	129	P	P	10 24 52.0	-1.1
CPUP				IAmb	IAmb	10 25 14.9	
	comp=Z,14nm,1.4s						
NPGB	Novo Progresso	20.29	71	eP	P	10 24 53.4	-0.2
ITTB	Itaituba	21.10	64	eP	P	10 25 02.5	+0.2
ZARC	Zaragoza, Cauc	21.55	360	eP	P	10 25 06.2	-0.9
ZARC	Zaragoza, Cauc	21.55	360	P	P	10 25 06.3	-0.9
BOAV	Boa Vista	21.67	42	eP	P	10 25 07.8	-0.6
BOAV	Boa Vista	21.67	42	P	P	10 25 08.7	+0.4
BOAV				IAmb	IAmb	10 25 15.5	
	comp=Z,9.1nm,0.9s						
ARAG	Araguaiana, MT	22.16	97	eP	P	10 25 13.8	+0.1
SMLC	San Martn de	22.86	2	eP	P	10 25 18.7	-2.1
SNDB	Serra Nova Dou	22.91	87	eP	P	10 25 21.5	+0.2
MALB	Monte Alegre	23.63	61	eP	P	10 25 28.7	+0.6
ITRB	Iturama	23.91	107	eP	P	10 25 32.3	+1.8
SJCC	San Jacinto, C	23.95	359	eP	P	10 25 30.2	-0.6
SJCC	San Jacinto, C	23.95	359	P	P	10 25 31.8	+1.0
SJCC				IAmb	IAmb	10 25 33.5	
	comp=Z,16nm,1.0s						
CRJC	Cerrejon, Guaj	25.12	4	eP	P	10 25 46.6	+5.0
IPMB	Ipameri, GO	25.72	102	eP	P	10 25 49.1	+2.1
PEXB	Peixe	25.79	88	eP	P	10 25 49.7	+2.1
PLCA	Paso Flores	26.68	173	P	P	10 25 55.3	-0.1
	comp=Z,1.4nm,0.8s,baz=357,slow=8.2,SNR=3.8						
PLCA	Paso Flores	26.68	173	P	P	10 25 55.6	+0.2
RCLB	Rio Claro- Sao	27.03	112	eP	P	10 26 00.5	+1.7
SPB	Sao Paulo	27.40	114	eP	P	10 26 03.6	+1.7
BSCB	Bom Sucesso	29.29	108	eP	P	10 26 20.9	+2.0
MC01	Montes Claros	29.74	99	eP	P	10 26 25.3	+2.4
NBMO	Morrinhos-CE	35.87	76	eP	P	10 27 16.1	-0.1
NBAN	Anadia - AL	37.84	88	eP	P	10 27 34.9	+1.9
TXAR	Lajitas Array	51.53	327	P	P	10 29 21.6	0.0
	comp=Z,1.9nm,0.6s,baz=151,slow=8.9,SNR=30						
TXAR				pP	pP	10 29 45.9	-0.6
	comp=Z,0.8nm,1.0s,baz=156,slow=9.6,SNR=2.7						
TXAR	Lajitas Array	51.53	327	P	P	10 29 21.4	-0.2
TX31	Lajitas Ar. Si	51.53	327	P	P	10 29 21.3	-0.3
TX32	Lajitas Array	51.53	327	P	P	10 29 20.6	-1.0
TX32				IAmb	IAmb	10 29 22.4	
	comp=Z,2.2nm,0.7s						
MIAR	Mount Ida	51.69	340	P	P	10 29 22.3	-0.3
ANMO	Albuquerque	57.42	329	P	P	10 30 04.4	+0.1
ANMO				IAmb	IAmb	10 30 04.7	
	comp=Z,2.2nm,0.9s						
DUG	Dugway, Tooele	64.67	328	P	P	10 30 53.9	+0.7
DUG				IAmb	IAmb	10 30 54.5	
	comp=Z,3.4nm,1.0s						
PDAR	Pinedale Array	65.09	332	P	P	10 30 55.2	-0.8
	comp=Z,0.3nm,0.6s,baz=101,slow=9.3,SNR=2.7						
NVAR	Mina Array Bea	66.38	324	P	P	10 31 03.4	-0.9
	comp=Z,1.2nm,0.8s,baz=140,slow=6.5,SNR=5.9						
NVAR	Mina Array Bea	66.38	324	P	P	10 31 04.7	+0.4
ULM	Lac du Bonnet	66.82	345	P	P	10 31 05.6	-1.0
	comp=Z,3.2nm,0.7s,baz=164,slow=6.2,SNR=3.7						
RLMT	Red Lodge	66.84	334	P	P	10 31 07.9	+0.8
SNAA	Sanae	70.93	161	P	P	10 31 33.1	+1.2
SNAA				IAmb	IAmb	10 31 34.1	
	comp=Z,4.1nm,1.1s						
FCC	Fort Churchill	74.41	350	P	P	10 31 52.2	-0.2
QSPA	South Pole Qui	75.95	180	P	P	10 32 02.8	+1.3
QSPA				IAmb	IAmb	10 32 03.9	
	comp=Z,2.9nm,0.9s						
TORD	Torodi Ar. Bea	80.38	74	P	P	10 32 26.8	+0.1
	comp=Z,1.5nm,0.9s,baz=277,slow=4.3,SNR=6.3						
TORD	Torodi Ar. Bea	80.38	74	P	P	10 32 29.3	+2.6
YKA	Yellowknife Ar	82.56	343	P	P	10 32 36.5	-0.6
	comp=Z,2.0nm,0.9s,baz=137,slow=5.7,SNR=9.6						
YKA	Yellowknife Ar	82.56	343	P	P	10 32 38.3	+1.2
WRA	Warramunga Arr	135.64	221	PKP	PKPdf	10 39 34.2	-1.1
	comp=Z,1.0nm,0.9s,baz=167,slow=1.5,SNR=6.2						
WRA	Warramunga Arr	135.64	221		PKPdf	10 39 35.1	-0.3
ZALV	Zalesovo Beam	137.19	18	PKP	PKPdf	10 39 36.2	-1.0
	comp=Z,1.5nm,0.7s,baz=276,slow=2.8,SNR=4.5						
KURBB	Kurchatov Arra	137.69	25	PKP	PKPdf	10 39 37.5	-0.6
	comp=Z,0.2nm,0.4s,baz=300,slow=2.2,SNR=2.4						
SONM	Songino Array	146.45	359	PKPbc	PKPab	10 39 56.1	-0.5
	comp=Z,2.4nm,0.7s,baz=326,slow=2.9,SNR=13						
SONM				pPKPbc	pPKPbc	10 40 23.2	-0.4
	comp=Z,0.6nm,0.5s,baz=273,slow=2.3,SNR=2.6						
SONM	Songino Array	146.45	359		PKPab	10 39 55.8	-0.7

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*MOS **15** 10:31:23.3±0.9, 45°.05N×146°.76E, h194^{km}, mb4.0/4, Error ellipse: s-maj=11.9km s-min=7.8km az=75.1*

*SKHL **15** 10:31:24.2±0.4, 45°.00N×146°.80E, h173^{km}±8^{km}, mb4.9/11, msha5.3/6*

*NEIC **15** 10:31:25.5±1.8, 45°.0N±0°.1×146°.5E±0°.2, h200^{km}±9^{km}, mb4.0/18, Error ellipse: s-maj=19.0km s-min=16.0km az=85.0*

*JMA **15** 10:31:25.9±0.4, 44°.79N×146°.77E, h187^{km}±4^{km}, M3.7*

*IDC **15** 10:31:26.8±1.4, 45°.36N×146°.48E, h195^{km}±16^{km}, mb3.3/14, mb1 3.5/17, mb1mx3.4/55, mbtmp3.9/17, Error ellipse: s-maj=31.6km s-min=14.0km az=172.0*

ISC 15 10:31:23.9±0.6**, 44°.94N**±0°.05×**146°.82E**±0°.05**, h190**^{km}±5^{km}**, n115,** σ1§**37**/136**, mb3.8**/27**, 11C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.80	68	c iPN	Pn	10 31 51.8	+0.6
KUR				eS	Sn	10 32 12.7	+0.3
KUR				pmax	pmax		
	comp=Z,185nm,0.5s						
KUR				pmax	pmax		
	comp=E,44nm,0.2s						
KUR				pmax	pmax		
	comp=N,41nm,0.4s						
KUR				smax	smax		
	comp=E,162nm,0.6s						
KUR				smax	smax		
	comp=N,119nm,0.4s						
KUR	Kuril'sk	0.80	68	i P	Pn	10 31 51.9	+0.7
KUR				AMB	AMB	10 31 52.0	
	comp=N,210nm,0.3s						
KUR				eS	Sn	10 32 12.6	+0.2
KUR				A	A	10 32 13.0	
	comp=N,260nm,0.3s						
KUR				A	A	10 32 13.0	
	comp=N,210nm,0.3s						
SHO	Shikotan	1.07	180	c iPN	Pn	10 31 52.9	-0.2
SHO				i S	Sn	10 32 14.4	-1.2
SHO				pmax	pmax		
	comp=Z,907nm,0.5s						
SHO				pmax	pmax		
	comp=N,295nm,0.2s						
SHO				pmax	pmax		
	comp=E,327nm,0.2s						
SHO				smax	smax		
	comp=N,413nm,0.2s						
SHO				smax	smax		
	comp=E,599nm,0.2s						
SHO	Shikotan	1.07	180	i P	Pn	10 31 53.0	-0.2
SHO				AMB	AMB	10 31 53.4	
	comp=E,750nm,0.5s						
SHO				i S	Sn	10 32 15.1	-0.5
SHO				A	A	10 32 16.2	
	comp=E,410nm,0.4s						
SHO				A	A	10 32 16.2	
	comp=E,600nm,0.4s						
YUK	Yuzh-Kuril'sk	1.13	218	c iPN	Pn	10 31 54.3	+0.7
YUK	Yuzh-Kuril'sk	1.13	218	i P	Pn	10 31 54.4	+0.8
YUK				AMB	AMB	10 31 54.9	
	comp=E,560nm,0.4s						
YUK				i S	Sn	10 32 17.1	+0.6
YUK				A	A	10 32 18.0	
	comp=E,190nm,0.3s						
YUK				A	A	10 32 18.0	
	comp=E,500nm,0.3s						
GRPR	Tuman	1.21	219	ePN	Pn	10 31 55.1	+0.9
GRPR				eS	Sn	10 32 18.1	+0.5
GRPR				pmax	pmax		
	comp=N,207nm,0.2s						
GRPR				pmax	pmax		
	comp=E,243nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,513nm,0.2s						
GRPR				smax	smax		
	comp=N,397nm,0.3s						
GRPR				smax	smax		
	comp=E,492nm,0.3s						
GRPR	Tuman	1.21	219	eP	Pn	10 31 55.1	+0.9
GRPR				AMB	AMB	10 31 57.0	
	comp=E,210nm,0.4s						
GRPR				AMB	AMB	10 31 57.0	
	comp=E,240nm,0.4s						
GRPR				AMB	AMB	10 31 57.0	
	comp=E,510nm,0.4s						
GRPR				eS	Sn	10 32 18.5	+0.9
GRPR				A	A	10 32 21.0	
	comp=E,397nm,0.3s						
GRPR				A	A	10 32 21.0	
	comp=E,492nm,0.3s						
RUSJ	Misakicho	1.40	234	ePN	Pn	10 31 56.6	+0.8
RUSJ				S	Sn	10 32 20.9	+0.5
GLVR	Golovnino	1.52	218	ePN	Pn	10 31 58.2	+1.3
GLVR				eS	Sn	10 32 22.5	+0.1
GLVR				pmax	pmax		
	comp=Z,558nm,0.3s						
GLVR				pmax	pmax		
	comp=N,90nm,0.2s						
GLVR				pmax	pmax		
	comp=E,95nm,0.3s						
GLVR				smax	smax		
	comp=N,685nm,0.6s						
GLVR				smax	smax		
	comp=E,2μm,0.6s						
GLVR	Golovnino	1.52	218	eP	Pn	10 31 58.2	+1.3
GLVR				AMB	AMB	10 31 58.8	
	comp=E,560nm,0.3s						
GLVR				eS	Sn	10 32 23.5	+1.1
GLVR				A	A	10 32 25.0	
	comp=E,690nm,0.6s						
GLVR				A	A	10 32 25.0	
	comp=E,2μm,0.6s						
JRA	Rausu	1.57	231	P	Pn	10 31 58.1	+0.7
JNSB	Nemuroshibetsu	1.75	229	P	Pn	10 32 00.2	+1.2
NEM2	Nemuro 2	1.75	207	P	Pn	10 31 59.1	0.0
NEM2				eS	Sn	10 32 24.7	-1.7
NMR	Nemuro--Hokkai	1.75	207	⇑ iPN	Pn	10 31 59.2	+0.1
NMR				eS	Sn	10 32 24.8	-1.6
NMR	Nemuro--Hokkai	1.75	207	i P	Pn	10 31 59.2	+0.1
NMR				eS	Sn	10 32 24.9	-1.5
JNK	Nakash	2.03	229	P	Pn	10 32 02.9	+1.0
JKHN	Kushirohamanak	2.21	213	P	Pn	10 32 04.4	+0.5
JKHN				eS	Sn	10 32 33.6	-1.3
JTKR	Abashiri--Toko	2.30	246	P	Pn	10 32 05.7	+0.9
JTKR				eS	Sn	10 32 37.0	+0.3
AKK	Akkeshi	2.39	217	eP	Pn	10 32 05.9	0.0
AKK				eS	Sn	10 32 37.3	-1.3
JAK	Akkeshi	2.47	219	P	Pn	10 32 07.2	+0.4
JAK				eS	Sn	10 32 38.7	-1.5
JAR	Ashorobuto	2.74	234	P	Pn	10 32 11.7	+1.8
JSE	Soyaes	3.01	272	P	Pn	10 32 13.8	+0.8
JKK2	Kamakawa 2	3.11	251	P	Pn	10 32 15.5	+1.2
JKK2				eS	Sn	10 32 54.2	+0.6
JKA	Kamikawa-asahi	3.13	256	eP	Pn	10 32 16.1	+1.6
JKA	Kamikawa-asahi	3.13	256		Pn	10 32 15.7	+1.1
ASAJ	Asahikawa	3.13	256	P	Pn	10 32 16.1	+1.6
	comp=E,12nm,0.3s,baz=68,slow=9.7,SNR=119						
ASAJ				S	Sn	10 32 55.8	+1.7
	comp=E,0.6nm,0.3s,baz=296,slow=32,SNR=1.2						
JCH	Churui	3.42	228	P	Pn	10 32 18.6	+0.6
JCH				eS	Sn	10 32 57.9	-2.4
YSS	Yuzh-Sakhalins	3.48	307	⇑ iPN	Pn	10 32 19.1	+0.4
YSS				eS	Sn	10 33 00.2	-1.5
YSS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YSS	Yuzh-Sakhalins	3.48	307	eP	Pn	10 32 19.1	+0.4
YSS				AMB	AMB	10 32 19.4	
	comp=Z,40nm,0.6s						
YSS				eS	Sn	10 33 00.2	-1.5
YSS				A	A	10 33 01.9	
	comp=Z,200nm,0.9s						
YSS				A	A	10 33 01.9	
	comp=Z,20nm,0.9s						
YSS	Yuzh-Sakhalins	3.48	307		Pn	10 32 18.5	-0.2
JWK2	Keihoku	3.50	278	P	Pn	10 32 21.1	+2.0
JFR	Furan	3.53	241	P	Pn	10 32 21.4	+2.0
ERM	Erimo	3.96	224	c iPN	Pn	10 32 26.0	+1.3
ERM	Erimo	3.96	224	Pn	Pn	10 32 26.1	+1.4
JNBK	Urakawa-nobuka	3.97	229	P	Pn	10 32 24.6	-0.3
JNBK				eS	Sn	10 33 08.3	-4.5
JRBN	Rebuntou	4.10	279	P	Pn	10 32 27.4	+0.9
JKB	Kayabe	5.20	236	P	Pn	10 32 40.1	-0.5
JKB				eS	Sn	10 33 35.9	-5.1
JTM	Tenmabayashi	5.92	228	Pn	Pn	10 32 49.9	-0.1
JMM	Marumori	8.39	215	Pn	Pn	10 33 20.9	-1.4
SKR	Severo-Kuril's	8.49	44	ePN	Pn	10 33 24.0	+0.6
SKR				eS	Sn	10 34 51.5	-7.0
SKR				pmax	pmax		
	comp=Z,76nm,0.6s						
SKR				smax	smax		
	comp=E,70nm,0.6s						
SKR				smax	smax		
	comp=N,148nm,0.5s						
SKR				MLR	MLR		
	comp=Z,500nm,12.0s						
SKR				MLR	MLR		
	comp=N,2μm,15.0s						
SKR				MLR	MLR		
	comp=E,5μm,15.0s						
SKR				MLR	MLR		
	comp=N,3μm,12.0s						
SKR				MLR	MLR		
	comp=Z,1μm,12.0s						
SKR				MLR	MLR		
	comp=E,6μm,17.0s						
SKR	Severo-Kuril's	8.49	44	eP	Pn	10 33 24.0	+0.6
SKR				AMB	AMB	10 33 25.0	
	comp=E,80nm,0.6s						
SKR				erx	rx	10 34 53.5	
SKR				A	A	10 34 54.0	
	comp=E,50nm,0.7s						
SKR				A	A	10 34 54.0	
	comp=E,30nm,0.7s						
SKR				AMS	AMS	10 36 42.2	
	comp=E,2μm,14.0s						
SKR				AMS	AMS	10 36 42.2	
	comp=E,5μm,14.0s						
SKR				AMS	AMS	10 36 42.2	
	comp=E,500nm,14.0s						
USRK	Ussuriysk Ar.	10.61	271	P	Pn	10 33 51.1	0.0
	baz=84,slow=13,SNR=5.3						
VLA	Vladivostok	10.91	266	⇑ ePN	Pn	10 33 55.6	+0.7
VLA	Vladivostok	10.91	266	eP	Pn	10 33 55.6	+0.7
PET	Petropavlovsk	11.21	40	⇓ ePN	Pn	10 33 57.6	-1.1
PET	Petropavlovsk	11.21	40	eP	Pn	10 33 57.6	-1.1
MA2	Magadan	14.85	8	⇑ eP	P	10 34 44.4	-1.1
MA2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MA2	Magadan	14.85	8	eP	P	10 34 44.4	-1.1
SEY	Seymchan	18.31	8	P	P	10 35 22.4	-1.0
	comp=Z,0.4nm,0.3s,baz=178,slow=8.6,SNR=6.2						
YAK	Yakutsk	19.82	336	c iP	P	10 35 37.5	-2.1
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YAK	Yakutsk	19.82	336	eP	P	10 35 37.5	-2.1
ULN	Ulaanbaatar	27.37	290	⇑ eP	P	10 36 51.6	+0.2
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ULN	Ulaanbaatar	27.37	290	eP	P	10 36 51.6	+0.2
SONM	Songino Array	27.81	291	P	P	10 36 55.6	+0.3
	comp=Z,0.7nm,0.5s,baz=85,slow=9.1,SNR=6.0						
TLY	Talaya	29.15	299	⇑ eP	P	10 37 07.1	+0.1
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TLY	Talaya	29.15	299	eP	P	10 37 07.1	+0.1
H11N2	WAKE ISLAND Hy	30.16	140	T	T	11 08 40.7	
	baz=329,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	30.17	140	T	T	11 08 43.1	
	baz=329,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	30.18	140	T	T	11 08 42.1	
	baz=329,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	31.14	141	T	T	11 09 50.6	
	baz=329,slow=80						
H11S3	WAKE ISLAND Hy	31.14	141	T	T	11 09 42.3	
	baz=329,slow=80						
H11S2	WAKE ISLAND Hy	31.16	141	T	T	11 09 52.7	
	baz=329,slow=80						
J20K	Nowinta River	37.54	38	P	P	10 38 21.0	+1.8
J20K				IAmb	IAmb	10 38 29.5	
	comp=Z,10nm,1.5s						
IMAR	Indian Mountai	37.80	35	P	P	10 38 22.1	+0.8
CAST	Castle Rocks	38.45	39	P	P	10 38 28.2	+1.4
CAST				IAmb	IAmb	10 38 47.2	
	comp=Z,7.3nm,1.4s						
TOLK	Toolik Lake Re	39.59	31	P	P	10 38 36.5	+0.3
ZALV	Zalesovo Beam	40.10	306	PcP	PcP	10 40 41.9	+0.8
	comp=Z,0.7nm,0.4s,baz=91,slow=4.0,SNR=2.5						
H24K	Noodor Dome	40.21	35	P	P	10 38 42.8	+1.4
H24K				IAmb	IAmb	10 39 10.7	
	comp=Z,4.2nm,1.5s						
IL31		40.67	37	P	P	10 38 45.6	+0.5
IL31				IAmb	IAmb	10 38 46.4	
	comp=Z,4.4nm,1.3s						
ILAR	Eielson Array	40.67	37	P	P	10 38 46.5	+1.3
	comp=Z,1.3nm,0.7s,baz=281,slow=9.9,SNR=18						
FYU	Fort Yukon	41.25	34	P	P	10 38 50.5	+0.8
BMAR	Burnt Mountain	41.46	33	P	P	10 38 52.0	+0.4
BCAR	Beaver Creek A	43.12	39	P	P	10 39 07.0	+2.0
MK31	Makanchi Array	43.83	296	P	P	10 39 10.9	-0.1
MK31				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MK31	Makanchi Array	43.83	296	P	P	10 39 10.9	-0.1
MK31				IAmb	IAmb	10 39 39.6	
	comp=Z,3.8nm,1.1s						
MKAR	Makanchi Array	43.83	296	P	P	10 39 10.7	-0.3
	comp=Z,0.3nm,0.4s,baz=78,slow=8.6,SNR=4.2						
MKAR				PcP	PcP	10 40 54.7	+1.0
	comp=Z,0.3nm,0.3s,baz=66,slow=5.8,SNR=8.0						
MKAR	Makanchi Array	43.83	296	eP	P	10 39 12.5	+1.6
MKAR	Makanchi Array	43.83	296	eP	P	10 39 12.5	+1.6
EPYK	Eagle Plains	44.66	34	P	P	10 39 18.1	+0.8
EPYK				IAmb	IAmb	10 39 30.7	
	comp=Z,4.0nm,1.1s						
KURK	Kurchatov	44.68	303	P	P	10 39 17.4	-0.1
KURK						10 40 57.5	
KURK	Kurchatov	44.68	303	eP	P	10 39 17.4	-0.1
KURK	Kurchatov	44.68	303	P	P	10 39 16.4	-1.1
KURBB	Kurchatov Arra	44.76	303	P	P	10 39 17.4	-0.8
	comp=Z,0.4nm,0.3s,baz=75,slow=8.5,SNR=5.3						
KURBB				PcP	PcP	10 40 57.5	+0.7
	comp=Z,0.1nm,0.3s,baz=69,slow=3.4,SNR=5.3						
INK	Inuvik	45.50	31	P	P	10 39 23.9	+0.2
INK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
INK	Inuvik	45.50	31	P	P	10 39 23.9	+0.2
RES	Resolute Bay	53.90	17	P	P	10 40 27.4	+0.5
RES				pmax	pmax		
	comp=Z,4.0nm,1.4s						
RES	Resolute Bay	53.90	17	P	P	10 40 27.4	+0.5
RES				IAmb	IAmb	10 40 36.0	
	comp=Z,3.7nm,1.4s						
YKA	Yellowknife Ar	54.95	34	P	P	10 40 35.6	+1.0
	comp=Z,0.5nm,0.5s,baz=303,slow=7.5,SNR=5.6						
YKA	Yellowknife Ar	54.95	34	eP	P	10 40 35.8	+1.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	ARCESS Array B	58.05	339	P	P	10 40 55.0	-1.5
	comp=Z,6.4nm,1.0s,baz=30,slow=5.6,SNR=4.4						
ARCES	ARCESS Array B	58.05	339	eP	P	10 40 55.6	-0.8
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARCES	ARCESS Array B	58.05	339	P	P	10 40 55.2	-1.2
SUMG	Summit	62.73	2	P	P	10 41 27.7	-0.8
SUMG	Summit	62.73	2	P	P	10 41 27.7	-0.8
FIA1	FINESS Array S	63.71	333	P	P	10 41 34.3	-0.3
FINES	FINESS Array B	63.71	333	P	P	10 41 33.1	-1.5
	comp=Z,1.0nm,0.4s,baz=42,slow=6.6,SNR=9.9						
FINES	FINESS Array B	63.71	333	P	P	10 41 32.8	-1.8
FCC	Fort Churchill	65.11	30	P	P	10 41 44.6	+0.8
FCC				pmax	pmax		
	comp=Z,12nm,1.1s						
FCC	Fort Churchill	65.11	30	P	P	10 41 44.6	+0.8
NVAR	Mina Array Bea	67.15	58	P	P	10 41 58.9	+1.5
	comp=Z,0.1nm,0.3s,baz=307,slow=6.6,SNR=2.7						
NC405	NORSAR Array S	68.22	338	P	P	10 42 02.3	-1.1
NC405				IAmb	IAmb	10 42 14.0	
	comp=Z,11nm,1.4s						
NB2	NORSAR Subarra	68.41	339	P	P	10 42 03.4	-1.2
	comp=Z,0.5nm,0.3s,baz=32,slow=6.5						
NOA	NORSAR Array B	68.41	339	P	P	10 42 03.5	-1.1
	comp=Z,0.3nm,0.4s,baz=32,slow=6.6,SNR=9.9						
BW06	Boulder Array	69.32	50	P	P	10 42 12.8	+1.9
BW06				IAmb	IAmb	10 42 13.2	
	comp=Z,3.9nm,1.4s						
PDAR	Pinedale Array	69.32	50	P	P	10 42 12.8	+2.0
	comp=Z,0.6nm,0.5s,baz=325,slow=0.6,SNR=13						
PDAR	Pinedale Array	69.32	50	P	P	10 42 12.3	+1.5
AKASG	Malin Array Be	70.48	323	P	P	10 42 15.5	-1.9
	comp=Z,0.4nm,0.3s,baz=37,slow=6.1,SNR=2.7						
BUR08	Bucovina Ar. S	74.53	323	P	P	10 42 42.0	+0.5
BUR08				IAmb	IAmb	10 42 50.5	
	comp=Z,5.2nm,1.4s						
BURAR	Bucovina Array	74.54	323	P	P	10 42 41.1	-0.5
SCHQ	Schefferville	76.58	19	P	P	10 42 53.3	+0.4
	comp=Z,1.1nm,0.5s,baz=323,slow=10,SNR=1.0						
SCHQ	Schefferville	76.58	19	P	P	10 42 53.1	+0.2
GERES	GERESS Array B	78.01	330	P	P	10 43 00.8	-0.3
	comp=Z,0.2nm,0.3s,baz=25,slow=6.6,SNR=3.5						
GERES	GERESS Array B	78.01	330	P	P	10 43 00.1	-1.0
TXAR	Lajitas Array	82.19	56	P	P	10 43 25.8	+2.1
	comp=Z,0.3nm,0.5s,baz=299,slow=3.8,SNR=10.0						

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*IDC **15** 10:50:47.6±1.1, 4°.10S×129°.43E, h0^{km}, mb4.3/8, mb1 4.3/11, mb1mx3.9/46, mbtmp4.3/11, ML3.9/3, MS3.0/3, Ms1 3.0/3, ms1mx2.6/42, Error ellipse: s-maj=36.8km s-min=22.0km az=87.0*

*NEIC **15** 10:50:50.2±1.6, 4°.07S±0°.07×129°.51E±0°.09, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=17.2km s-min=8.5km az=233.0*

*DJA **15** 10:50:51.3±0.9, 4°S±4°×12°9E±°, h23^{km}±8^{km}, M3.8/7, MLv3.8/7*

ISC 15 10:50:52.5±0.5**, 4°.14S**±0°.05×**129°.45E**±0°.05**, h36**^{km}**, n46,** σ1§**35**/51**, mb4.3**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.59	130	P	Pn	10 51 02.8	-1.6
MSAI	Masohi	0.95	326	P	Pn	10 51 07.2	-2.0
MSAI				S	Sn	10 51 19.6	-2.0
AAI	Ambon	1.33	290	P	Pn	10 51 13.2	-1.4
AAI				S	Sn	10 51 30.1	-1.0
FAKI	Fak Fak	3.04	67	P	Pn	10 51 38.1	0.0
FAKI	Fak Fak	3.04	67		Pn	10 51 37.5	-0.6
FAKI	Fak Fak	3.04	67	P	Pn	10 51 38.4	+0.3
SIJI	Sorong	3.72	29	Pn	Pn	10 51 47.0	-0.4
	7.3nm,0.3s,baz=251,slow=22,SNR=9.0						
SIJI				Sn	Sn	10 52 28.3	-1.7
	8.5nm,0.3s,baz=246,slow=23,SNR=2.9						
SWI	Sorong	3.72	29	P	Pn	10 51 47.1	-0.3
SWI				S	Sn	10 52 27.8	-2.2
LBMI	Labuha	3.99	331	P	Pn	10 51 49.4	-1.7
SANI	Sanana	4.04	301	P	Pn	10 51 51.5	-0.2
SANI	Sanana	4.04	301	P	Pn	10 51 52.2	+0.5
GTOI	Gorontalo	8.00	306	P	Pn	10 52 51.3	+5.1
BATI	Baumata	8.32	223	Pn	Pn	10 52 49.9	-0.8
	2.2nm,0.3s,baz=278,slow=17,SNR=1.3						
BATI				LR	LR	10 56 13.0	
	comp=Z,80nm,20.3s,baz=63,slow=39						
EDFI	Ende, Flores	8.97	239	P	Pn	10 52 59.9	+0.3

KDU	Kakadu	9.00	161	P	Pn	10 53 00.8	+0.9
KNRA	Kununurra	11.48	183	Pn	Pn	10 53 34.9	+0.9
WRA	Warramunga Arr	16.41	164	Pn	Pn	10 54 36.9	-3.2
	0.2nm,0.3s,baz=348,slow=13,SNR=8.0						
WRA				Sn	Sn	10 57 35.3	-6.0
	0.0nm,0.3s,baz=352,slow=22,SNR=4.2						
WRA				LR	LR	11 01 39.4	
	comp=Z,46nm,19.2s,baz=55,slow=40						
COEN	Coen	16.68	127		Pn	10 54 43.6	0.0
COEN	Coen	16.68	127	P	P	10 54 46.2	+0.6
QIS	Mount Isa	19.08	150	P	Pn	10 55 14.0	+1.0
PSA00	Pilbara Seismi	19.68	207	P	Pn	10 55 20.4	+0.2
PSA00				IAmb	IAmb	10 55 29.4	
	comp=Z,9.3nm,0.8s						
AS31	Alice Springs	19.88	168	P	Pn	10 55 22.1	-0.5
ASAR	Alice Springs	19.88	168	P	Pn	10 55 22.8	+0.2
	comp=Z,0.4nm,0.3s,baz=345,slow=9.4,SNR=41						
ASAR				S	S	10 59 02.7	-0.2
	comp=Z,0.1nm,0.3s,baz=353,slow=23,SNR=3.1						
ASAR				PcP	PcP	10 59 37.1	-0.3
	comp=Z,0.1nm,0.3s,baz=357,slow=1.3,SNR=5.5						
ASAR				LR	LR	11 03 44.1	
	comp=Z,62nm,18.1s,baz=12,slow=39						
ASAR	Alice Springs	19.88	168	P	Pn	10 55 22.4	-0.3
KSM	Kuching	19.93	286	P	Pn	10 55 23.0	-0.2
KSM				IAmb	IAmb	10 55 31.8	
	comp=Z,9.9nm,0.9s						
WRKA	Warakurna	20.81	183	P	Pn	10 55 32.6	-0.8
CTAO	Charters Tower	22.79	135	P	P	10 55 51.9	-0.2
CTAO				IAmb	IAmb	10 56 00.7	
	comp=Z,24nm,1.4s						
OOD	Oodnadatta	24.26	166	P	P	10 56 08.4	+2.1
IPM	Ipoh	29.66	286	P	P	10 56 55.9	+0.9
CMAR	Chiang Mai Arr	37.53	308	P	P	10 58 04.5	+1.2
	comp=Z,1.5nm,0.3s,baz=137,slow=7.6,SNR=11						
CHTO	Chiang Mai	37.72	308	P	P	10 58 05.8	+0.8
CHTO				IAmb	IAmb	10 58 07.1	
	comp=Z,4.8nm,0.8s						
USRK	Ussuriysk Ar.	48.17	2	P	P	10 59 30.0	+0.9
	comp=Z,1.5nm,0.5s,baz=196,slow=7.5,SNR=3.2						
SONM	Songino Array	55.58	341	P	P	11 00 25.0	+0.5
	comp=Z,0.4nm,0.3s,baz=145,slow=10,SNR=3.4						
MK31	Makanchi Array	65.56	326	P	P	11 01 32.8	+0.3
MK31				IAmb	IAmb	11 01 33.6	
	comp=Z,2.3nm,0.8s						
MKAR	Makanchi Array	65.56	326	P	P	11 01 32.9	+0.4
	comp=Z,2.3nm,0.4s,baz=113,slow=7.8,SNR=51						
MKAR	Makanchi Array	65.56	326	P	P	11 01 32.5	+0.1
MAKZ	Makanchi	65.74	326	P	P	11 01 33.9	+0.3
MAKZ				IAmb	IAmb	11 01 34.6	
	comp=Z,4.8nm,1.0s						
ZAA0	Zalesovo Array	68.80	334	P	P	11 01 53.0	+0.2
ZAA0				IAmb	IAmb	11 01 53.5	
	comp=Z,3.5nm,1.1s						
ZALV	Zalesovo Beam	68.80	334	P	P	11 01 52.3	-0.5
	comp=Z,1.3nm,0.7s,baz=108,slow=4.8,SNR=7.3						
ZALV	Zalesovo Beam	68.80	334	P	P	11 01 52.7	-0.1
KURBB	Kurchatov Arra	69.81	328	P	P	11 01 59.6	+0.5
	comp=Z,5.8nm,0.7s,baz=130,slow=5.6,SNR=48						
KURK	Kurchatov	69.81	328	P	P	11 01 59.3	+0.1
BVAR	Borovoye Array	75.37	328	P	P	11 02 32.9	+0.6
	comp=Z,2.6nm,0.8s,baz=188,slow=9.0,SNR=9.8						
ABKAR	Akbulak array	79.95	321	P	P	11 02 58.6	+0.8
AKTO	Aktyubinsk	81.50	322	P	P	11 03 06.5	+0.4
	comp=Z,1.7nm,0.7s,baz=118,slow=9.3,SNR=6.2						
TORD	Torodi Ar. Bea	127.67	283	PKP	PKPdf	11 09 54.7	-0.3
	comp=Z,0.4nm,0.7s,baz=43,slow=2.7,SNR=3.1						

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*IDC **15** 11:00:58.5±1.4, 4°.12S×129°.43E, h0^{km}, mb3.9/2, mb1 3.7/5, mb1mx3.3/47, mbtmp3.6/5, ML2.9/3, Error ellipse: s-maj=52.3km s-min=25.5km az=79.0*

*DJA **15** 11:01:01.1±1.8, 4°S±12°×12°9E±°, h18^{km}±16^{km}, M3.4/6, MLv3.4/6*

ISC 15 11:01:03.3±1.0, **4°.09S**±0°.09×**129°.45E**±0°.06, **h36**^{km}, **n8**, σ**1ˢ.00**/11, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	Ambon	1.31	288	P	Pn	11 01 24.8	-0.3
AAI				S	Sn	11 01 41.8	+0.4
FAKI	Fak Fak	3.03	67	P	Pn	11 01 48.4	-0.3
FAKI				S	Sn	11 02 25.3	+1.6
SIJI	Sorong	3.68	30	Pn	Pn	11 01 57.8	+0.1
	2.8nm,0.3s,baz=254,slow=23,SNR=22						
SIJI				Sn	Sn	11 02 39.5	-0.4
	4.2nm,0.3s,baz=160,slow=23,SNR=7.0						
SWI	Sorong	3.68	29	P	Pn	11 01 55.9	-1.8
WRA	Warramunga Arr	16.46	164	Pn	Pn	11 04 50.8	-0.8
	0.0nm,0.3s,baz=345,slow=10,SNR=1.4						
ASAR	Alice Springs	19.93	168	P	P	11 05 31.9	-0.3
	0.1nm,0.3s,baz=347,slow=9.3,SNR=17						
MKAR	Makanchi Array	65.51	326	P	P	11 11 43.7	+0.7
	0.3nm,0.4s,baz=115,slow=8.2,SNR=6.8						
KURBB	Kurchatov Arra	69.76	328	P	P	11 12 10.5	+0.8
	0.5nm,0.2s,baz=132,slow=5.7,SNR=4.1						

IDC 15 11:02:25.4±1.7, **24°.91S**×**115°.76W**, **h0**^{km}, **mb3.8**/3, **mb1 4.1**/3, **mb1mx3.7**/24, **mbtmp3.8**/3, **MS3.7**/7, **Ms1 3.8**/7, **ms1mx3.6**/20, **Error ellipse: s-maj=66.6km s-min=45.6km az=19.0**, **Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAOE	Nuku Hiva Isla	28.20	300	*e*LR	LR	11 15 23.4	
	comp=Z,457nm,26.5s						
TBI	Tubuai	30.76	266	*e*LR	LR	11 16 46.0	
	comp=Z,162nm,25.2s						
PPT2	Papeete2	32.29	276	*e*LR	LR	11 17 18.5	
	comp=Z,232nm,29.0s						
PPT	Papeete	32.30	276	LR	LR	11 18 10.5	
	comp=Z,151nm,20.6s,baz=98,slow=29						
H03N2	Juan Fernandez	33.12	113	T	T	11 44 02.4	
	baz=281,slow=75,SNR=27						
H03N3	Juan Fernandez	33.13	114	T	T	11 44 02.6	
	baz=281,slow=75,SNR=30						
H03N1	Juan Fernandez	33.14	113	T	T	11 44 02.3	
	baz=281,slow=75,SNR=35						
PLCA	Paso Flores	40.67	124	LR	LR	11 22 46.1	
	comp=Z,177nm,21.4s,baz=246,slow=30						
LPAZ	La Paz	45.21	89	P	P	11 10 45.1	-0.1
	0.8nm,0.7s,baz=247,slow=7.7,SNR=2.0						
LPAZ				LR	LR	11 24 54.5	
	comp=Z,84nm,21.2s,baz=268,slow=30						
CPUP	Villa Florida	52.30	105	LR	LR	11 30 14.6	
	comp=Z,60nm,18.5s,baz=284,slow=32						
NVAR	Mina Array Bea	63.05	358	P	P	11 12 55.0	+0.4
	1.1nm,0.9s,baz=184,slow=9.9,SNR=4.2						
VNDA	Vanda	64.22	194	LR	LR	11 35 39.9	
	comp=Z,48nm,18.8s,baz=94,slow=31						
MDP	Montagnes des	68.16	73	LR	LR	11 38 18.7	
	comp=Z,69nm,20.8s,baz=88,slow=32						
H11S2	WAKE ISLAND Hy	86.91	292	T	T	12 51 12.3	
	baz=117,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	86.92	292	T	T	12 51 12.2	
	baz=117,slow=75,SNR=68						
H11S3	WAKE ISLAND Hy	86.93	292	T	T	12 51 12.6	
	baz=117,slow=75,SNR=70						
YKA	Yellowknife Ar	87.10	1	P	P	11 15 12.1	-0.4
	0.7nm,0.8s,baz=179,slow=4.3,SNR=2.4						
H11N3	WAKE ISLAND Hy	87.30	293	T	T	12 51 38.7	
	baz=117,slow=73						
H11N1	WAKE ISLAND Hy	87.31	293	T	T	12 51 45.0	
	baz=117,slow=73						
H11N2	WAKE ISLAND Hy	87.32	293	T	T	12 51 40.0	
	baz=117,slow=73						
PMG	Port Moresby	92.44	259	LR	LR	11 51 19.1	
	comp=Z,41nm,18.5s,baz=74,slow=32						
ZALV	Zalesovo Beam	147.18	337	PKPbc	PKPbc	11 22 09.6	-0.6
	0.2nm,0.3s,baz=35,slow=3.5,SNR=1.3						
CMAR	Chiang Mai Arr	147.19	266	PKPbc	PKPbc	11 22 11.3	0.0
	0.5nm,0.3s,baz=96,slow=1.8,SNR=1.9						
BVAR	Borovoye Array	151.54	352	PKPbc	PKiKP	11 22 21.6	0.0
	0.5nm,0.5s,baz=179,slow=5.8,SNR=2.1						
KURBB	Kurchatov Arra	152.06	340	PKPbc	PKPbc	11 22 20.6	-1.8
	0.6nm,0.2s,baz=23,slow=3.0,SNR=2.6						

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*IDC **15** 11:03:31.7±1.1, 4°.23S×129°.44E, h0^{km}, mb3.9/6, mb1 4.1/9, mb1mx3.7/50, mbtmp3.9/9, ML3.6/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/27, Error ellipse: s-maj=47.2km s-min=22.3km az=73.0*

*NEIC **15** 11:03:34.1±1.6, 4°.13S±0°.04×129°.55E±0°.09, h10^{km}±1^{km}, mb4.1/7, Error ellipse: s-maj=15.3km s-min=4.9km az=103.0*

*DJA **15** 11:03:35.0±1.9, 4°S±7°×12°9E±°, h17^{km}±15^{km}, M3.7/7, MLv3.7/7*

ISC 15 11:03:36.5±0.6, **4°.21S**±0°.06×**129°.49E**±0°.05, **h36**^{km}, **n29**, σ**1ˢ.81**/34, **mb4.0**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.03	327	P	Pn	11 03 52.9	-1.4
MSAI				S	Sn	11 04 05.7	-1.8
AAI	Ambon	1.39	292	P	Pn	11 03 58.2	-1.2
AAI				S	Sn	11 04 15.2	-1.3
FAKI	Fak Fak	3.04	65	P	Pn	11 04 22.9	+0.8
FAKI				S	Sn	11 04 55.0	-2.3
FAKI	Fak Fak	3.04	65	Pn	Pn	11 04 22.8	+0.8
FAKI				Sn	Sn	11 04 56.2	-1.1
SIJI	Sorong	3.77	28	Pn	Pn	11 04 32.7	+0.6
	5.1nm,0.3s,baz=266,slow=22,SNR=16						
SIJI				Sn	Sn	11 05 13.5	-1.7
	8.7nm,0.3s,baz=220,slow=23,SNR=2.6						
SWI	Sorong	3.77	28	P	Pn	11 04 31.0	-1.1
TNTI	Ternate	5.39	337	Pn	Pn	11 04 54.6	+0.3
BATI	Baumata	8.29	224	LR	LR	11 09 06.2	
	comp=Z,66nm,21.3s,baz=113,slow=40						
MTN	Manton Dam	8.73	169	Pn	Pn	11 05 42.8	+2.5
KNRA	Kununurra	11.41	184	Pn	Pn	11 06 18.8	+1.7
WB0	Warramunga Arr	16.18	163	Pn	Pn	11 07 19.2	-2.0
WRA	Warramunga Arr	16.33	164	Pn	Pn	11 07 20.5	-2.7
	0.1nm,0.3s,baz=336,slow=13,SNR=8.4						
WRA				Sn	Sn	11 10 16.1	-7.3
	0.0nm,0.3s,baz=355,slow=19,SNR=2.9						
COEN	Coen	16.61	127		Pn	11 07 25.8	-1.0
COEN				IAmb	IAmb	11 07 44.6	
	comp=Z,23nm,1.5s						
PSA00	Pilbara Seismi	19.63	208	P	Pn	11 08 03.7	+0.1
PSA00				IAmb	IAmb	11 08 05.4	
	comp=Z,34nm,1.4s						
AS31	Alice Springs	19.80	168	P	Pn	11 08 05.0	-0.8
AS31				IAmb	IAmb	11 08 09.1	
	comp=Z,2.5nm,0.7s						
ASAR	Alice Springs	19.80	168	P	Pn	11 08 05.4	-0.3
	comp=Z,0.5nm,0.3s,baz=349,slow=11,SNR=29						
ASAR				PcP	PcP	11 12 21.4	+0.1
	comp=Z,0.1nm,0.3s,baz=0.0,slow=1.9,SNR=1.7						
ASAR	Alice Springs	19.80	168	P	Pn	11 08 05.0	-0.7
CTAO	Charters Tower	22.71	135	P	P	11 08 34.5	-0.9
CTAO				IAmb	IAmb	11 08 49.7	
	comp=Z,15nm,1.4s						
CMAR	Chiang Mai Arr	37.60	308	P	P	11 10 49.1	+1.1
	comp=Z,0.6nm,0.3s,baz=142,slow=7.5,SNR=4.5						
ASAJ	Asahikawa	49.53	12	LR	LR	11 32 25.6	
	comp=Z,22nm,18.6s,baz=335,slow=35						
SONM	Songino Array	55.66	341	P	P	11 13 09.6	+0.5
	comp=Z,0.4nm,0.8s,baz=147,slow=8.1,SNR=2.4						
MK31	Makanchi Array	65.63	326	P	P	11 14 17.4	+0.4
MKAR	Makanchi Array	65.63	326	P	P	11 14 17.5	+0.5
	comp=Z,1.1nm,0.5s,baz=114,slow=8.1,SNR=16						
ZALV	Zalesovo Beam	68.88	334	P	P	11 14 37.1	-0.2
	comp=Z,0.5nm,0.4s,baz=123,slow=7.4,SNR=2.0						
ZALV	Zalesovo Beam	68.88	334	P	P	11 14 38.3	+1.0
KURBB	Kurchatov Arra	69.89	328	P	P	11 14 44.5	+0.9
	comp=Z,1.9nm,0.7s,baz=121,slow=5.4,SNR=12						
VNDA	Vanda	75.26	173	P	P	11 15 15.8	+0.6
VNDA				IAmb	IAmb	11 15 37.2	
	comp=Z,1.6nm,1.1s						
BVAR	Borovoye Array	75.45	328	P	P	11 15 17.1	+0.4
	comp=Z,0.8nm,0.5s,baz=140,slow=11,SNR=5.5						
ABKAR	Akbulak array	80.02	321	P	P	11 15 42.7	+0.4

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*IDC **15** 11:06:10.6±5.5, 6°.33S×150°.51E, h58^{km}±47^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.3/43, mbtmp3.9/9, ML1.8/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/23, Error ellipse: s-maj=48.5km s-min=27.9km az=115.0*

ISC 15 11:06:07.7±1.3, **6°.3S**±0°.2×**150°.6E**±0°.3, **h33**^{km}, **n11**, σ**1ˢ.12**/11, **mb3.8**/7, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.64	228	P	Pn	11 07 16.2	+0.6
	3.3nm,0.3s,baz=39,slow=9.2,SNR=7.5						
PMG				S	Sn	11 08 09.1	+0.7
	4.9nm,0.3s,baz=125,slow=23,SNR=7.3						
WRA	Warramunga Arr	20.86	228	P	P	11 10 45.9	-1.2
	1.5nm,0.9s,baz=54,slow=11,SNR=6.3						
DZM	Mont Dzumac	21.92	137	LR	LR	11 17 38.9	
	comp=Z,49nm,19.8s,baz=30,slow=31						
ASAR	Alice Springs	23.62	221	P	P	11 11 14.1	-2.0
	2.7nm,0.9s,baz=54,slow=8.7,SNR=16						
STKA	Stephens Creek	26.85	197	P	P	11 11 45.7	+0.4
	2.1nm,0.9s,baz=350,slow=12,SNR=3.7						
FITZ	Fitzroy Crossi	27.07	242	P	P	11 11 47.8	+0.4
	3.0nm,0.5s,baz=60,slow=9.0,SNR=6.2						
SONM	Songino Array	66.43	329	P	P	11 16 54.2	+0.3
	0.4nm,0.7s,baz=134,slow=4.2,SNR=1.9						
MKAR	Makanchi Array	80.02	320	P	P	11 18 13.3	-0.7
	1.0nm,1.0s,baz=120,slow=5.7,SNR=2.0						
ILAR	Eielson Array	84.32	22	P	P	11 18 36.6	+0.5
	0.6nm,0.6s,baz=250,slow=5.3,SNR=14						
INK	Inuvik	90.59	21	P	P	11 19 07.4	+1.2
	1.0nm,0.9s,baz=268,slow=2.4,SNR=2.1						
TORD	Torodi Ar. Bea	148.65	285	PKPbc	PKPbc	11 25 51.6	-1.0
	0.9nm,0.7s,baz=55,slow=3.1,SNR=4.7						

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*IDC **15** 11:09:45.8±1.3, 4°.19S×129°.30E, h0^{km}, mb3.6/3, mb1 3.8/6, mb1mx3.2/54, mbtmp3.7/6, ML3.4/3, Error ellipse: s-maj=53.3km s-min=24.6km az=78.0*

*DJA **15** 11:09:47.6±0.8, 4°S±6°×12°9E±°, h10^{km}, M3.2/6, MLv3.2/6*

ISC 15 11:09:50.5±0.9, **4°.16S**±0°.08×**129°.43E**±0°.05, **h36**^{km}, **n9**, σ**0ˢ.89**/13, **mb3.7**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.95	328	P	Pn	11 10 05.7	-1.6
MSAI				S	Sn	11 10 19.6	0.0
AAI	Ambon	1.32	291	P	Pn	11 10 12.0	-0.3
AAI				S	Sn	11 10 28.2	-0.4
FAKI	Fak Fak	3.07	66	P	Pn	11 10 36.2	-0.3
FAKI				S	Sn	11 11 10.8	-1.3
SIJI	Sorong	3.75	29	Pn	Pn	11 10 46.5	+0.7
	2.6nm,0.3s,baz=198,slow=23,SNR=8.5						
SIJI				Sn	Sn	11 11 28.0	-0.7
	2.6nm,0.3s,baz=231,slow=23,SNR=1.9						
WRA	Warramunga Arr	16.40	163	Pn	Pn	11 13 37.4	-0.7
	0.1nm,0.3s,baz=343,slow=11,SNR=4.9						
ASAR	Alice Springs	19.87	168	P	P	11 14 18.9	+0.2
	0.2nm,0.3s,baz=349,slow=11,SNR=19						
SONM	Songino Array	55.59	341	P	P	11 19 23.2	+0.7
	0.4nm,0.7s,baz=151,slow=9.1,SNR=3.6						
MKAR	Makanchi Array	65.56	326	P	P	11 20 31.6	+1.1
	0.3nm,0.5s,baz=108,slow=8.3,SNR=2.4						
KURBB	Kurchatov Arra	69.81	328	P	P	11 20 57.5	+0.3
	0.4nm,0.2s,baz=125,slow=5.4,SNR=7.1						

IDC 15 11:09:58.8±430.0, **46°.78N**×**65°.91E**, **h0**^{km}, **Error ellipse: s-maj=182.5km s-min=136.4km az=155.0**, **Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	6.36	308	*i*		11 50 19.3	
	baz=122,slow=296,SNR=0.9						
I46RU	ZALESOVO INFRA	14.01	52	*i*		12 32 10.0	
	baz=246,slow=311,SNR=1.7						
I34MN	SONGINO INFRAS	27.27	73	*i*		13 58 20.0	
	baz=283,slow=330,SNR=1.7						
I18DK	QAANAAQ INFRAS	52.95	349	*i*		17 10 00.0	
	baz=25,slow=344,SNR=1.0						

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*EAF **15** 11:19:27.4±2.8, 25°.96S×29°.51E, h10^{km}, MD3.5*

BUL 15 11:19:27.4±2.3, **25°.97S**×**29°.36E**, **h10**^{km}, **MD3.6**, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	Mopani	3.06	38	*i* P	Pn	11 20 13.0	-2.9
MOPA				*i* S	Sn	11 20 48.1	-4.4
MOPA	Mopani	3.06	38	*i* P	Pn	11 20 13.0	-2.9
MOPA				*i* S	Sn	11 20 48.1	-4.4
MSNA	Messina	3.65	10	*i* P	Pn	11 20 25.2	+1.2
MSNA				*i* S	Sn	11 21 06.3	-1.0
MSNA	Messina	3.65	10	*i* P	Pn	11 20 25.2	+1.2
MSNA				*i* S	Sn	11 21 06.3	-1.0
MATP	Matopo	5.57	352	*i* P	Pn	11 20 50.6	+0.1
MATP				*i* S	Sn	11 21 50.0	-4.7
MATP	Matopo	5.57	352	*i* P	Pn	11 20 50.6	+0.1
MATP				*i* S	Sn	11 21 50.0	-4.7
BLWY	Bulawayo	5.84	353	*i* P	Pn	11 20 52.9	-1.4
BLWY				*i* S	Sn	11 21 53.8	-7.6
BLWY	Bulawayo	5.84	353	*i* P	Pn	11 20 52.9	-1.4
BLWY				*i* S	Sn	11 21 53.8	-7.6

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*TEH **15** 11:24:09.8, 32°.81N×47°.76E, h8^{km}, ML3.0*

*ISN **15** 11:24:10.0±0.5, 32°.80N×47°.73E, h14^{km}±3^{km}, ML2.7*

*KISR **15** 11:24:12.8±0.8, 32°.57N×47°.58E, h137^{km}±68^{km}, ML3.5*

ISC 15 11:24:09.8±1.2, **32°.81N**±0°.03×**47°.69E**±0°.03, **h4**^{km}±11^{km}, **n39**, σ**0ˢ.98**/50, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHL1	Dehloran	0.37	249	*e*Pg	Pb	11 24 18.5	-0.5
DHL1				*e*Sg	Sb	11 24 25.1	0.0
IKFM	Kafar-mosalman	0.72	10	*e*Pg	Pg	11 24 23.4	-0.3
IKFM				*e*		11 24 36.4	
	comp=Z,16µm,0.3s						
IDOB	Doab	1.05	23	*e*Pg	Pg	11 24 29.2	-0.9
IDOB				*e*Sg	Sn	11 24 46.1	-0.8
BMDN	Meydan	1.28	48	*e*Pg	Pg	11 24 33.2	-1.2
IBDR	Badra	1.51	282	*e*Pg	Pn	11 24 38.0	+0.3
IBDR				*e*Sg	Sg	11 24 59.0	+0.6
IBDR				AML	AML	11 25 10.7	
	comp=N,65nm,0.6s						
IBDR				AML	AML	11 25 20.0	
	comp=E,94nm,0.2s						
IBDR	Badra	1.51	282	*e*Pg	Pn	11 24 37.0	-0.7
	baz=100						
IBDR				*e*Sg	Sg	11 24 59.0	+0.6
IBDR				AML	AML	11 25 06.1	
	comp=E,68nm,0.5s						
IBDR				AML	AML	11 25 10.7	
	comp=N,65nm,0.7s						
KCHF	Cheshme Sefid,	1.56	340	*e*Pg	Pn	11 24 38.7	+0.2
KCHF				*e*		11 25 09.9	
	comp=Z,2µm,0.3s						
HSAM	Samen	1.59	28	*e*Pg	Pg	11 24 40.2	-0.1
HSAM				*e*		11 24 41.0	
	comp=Z,2µm,0.2s						
KER	Kermanshah	1.64	344	*e*Pn	Pn	11 24 40.0	+0.4
IBZA	Bozab	1.66	5	*e*Pg	Pb	11 24 41.3	+0.1
IBZA				*e*		11 25 07.9	
	comp=Z,2µm,0.4s						
AHWZ	Ahwaz	1.68	151	*e*Pg	Pg	11 24 41.8	-0.3
RAFI	Al-Rafai	1.72	231	*e*Pg	Pb	11 24 42.0	0.0
RAFI				*e*Sg	Sg	11 25 05.0	-0.1
RAFI				AML	AML	11 25 09.5	
	comp=E,183nm,0.4s						
AMIS	Naft Sefid	1.77	130	*e*Pg	Pb	11 24 43.1	+0.2
AMIS				*e*Sg	Sg	11 25 07.8	+1.1
IGHG	Ghaleghazi	1.78	329	*e*Pn	Pb	11 24 43.5	+0.3
IGHG				*e*		11 25 22.5	
	comp=Z,1µm,0.8s						
KHMZ	Khomeyn	2.11	63	*e*Pn	Pb	11 24 47.8	-1.1
IDHR	Dehrash	2.17	330	*e*Pn	Pb	11 24 48.6	-1.3
IDHR				*e*		11 25 25.1	
	comp=Z,1µm,0.2s						
ILIN	Lien	2.19	344	*e*Pn	Pn	11 24 48.5	+1.2
ILIN				*e*		11 25 24.9	
	comp=Z,581nm,0.3s						
SNGE	Sanandaj	2.29	353	*e*Pn	Pn	11 24 48.5	-0.2
HAGD	Aghdareh	2.34	31	*e*Pn	Pn	11 24 50.4	+1.1
HAGD				*e*		11 24 58.0	
	comp=Z,538nm,0.2s						
ASAO	Ashtian	2.60	48	*e*Pn	Pn	11 24 54.2	+1.2
IPIR	Pirpir	2.70	92	*e*Pn	Pn	11 24 55.5	+1.2
IPIR				*e*		11 25 35.5	
	comp=Z,543nm,0.5s						
BHD	Baghdad	2.82	280	*e*Pn	Pn	11 24 57.0	+1.3
BHD				*e*Sn	Sn	11 25 31.5	+1.4
BHD	Baghdad	2.82	280	*e*Pn	Pn	11 24 56.0	+0.3
BHD				*e*Sn	Sn	11 25 31.0	+0.9
MIB	Mutribah	3.01	186	*e*P	Pn	11 24 59.6	+1.3
IBRJ	Brojen	3.15	106	*e*Pn	Pn	11 25 00.7	+0.2
IRAZ	Razeghan	3.18	35	*e*Pn	Pn	11 25 02.0	+1.1
QAMS	Qamsar	3.24	72	*e*Pn	Pn	11 25 02.5	+0.8
QABG	Abgarm-Qazvin	3.29	28	*e*Pn	Pn	11 25 03.1	+0.7
IKLH	Kolahrood	3.30	80	*e*Pn	Pn	11 25 03.4	+0.8
RST	Umm Al-Ruwaisa	3.35	190	*e*P	Pn	11 25 04.1	+1.0
RST				*e*S	Sn	11 25 41.5	-1.8
IQOM	Qom	3.47	53	*e*		11 25 15.2	
	comp=Z,275nm,0.7s						
IQOM				*e*Pn	Pn	11 25 05.0	+0.2
KBD	Kabd	3.62	180	*e*P	Pn	11 25 07.4	+0.6
KBD				*e*S	Sn	11 25 49.0	-1.1
KBD				IAML		11 25 54.9	
	comp=Z,79nm,0.4s						
KLNJ	Kolanjah	3.77	117	*e*		11 25 57.8	
	comp=Z,191nm,0.4s						
KLNJ				*e*Pn	Pn	11 25 09.1	0.0
KRSH	Karshahi	3.89	72	*e*Pn	Pn	11 25 11.5	+0.9
IZEF	Zefreh	3.90	88	*e*Pn	Pn	11 25 11.8	+0.9
IVRN	Varamin	4.00	56	*e*Pn	Pn	11 25 12.6	+0.6
QRN	Al-Qurain	4.06	177	*e*P	Pn	11 25 13.2	+0.4
QRN				*e*S	Sn	11 25 59.3	-1.5
QRN				IAML		11 26 04.3	
	comp=Z,69nm,0.5s						
ISFB	Sefidab	4.10	67	*e*Pn	Pn	11 25 13.8	+0.5
NASN	Na'in	4.31	89	*e*Pn	Pn	11 25 19.7	+3.2

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*IDC **15** 11:27:02.9±2.5, 51°.49N×174°.58W, h22^{km}±15^{km}, mb4.5/36, mb1 4.6/38, mb1mx4.4/56, mbtmp4.6/38, ML4.1/2, MS3.8/23, Ms1 3.8/23, ms1mx3.8/33, Error ellipse: s-maj=16.0km s-min=9.7km az=170.0*

*MOS **15** 11:27:03.8±0.9, 51°.53N×174°.56W, h41^{km}, mb5.0/32, Error ellipse: s-maj=8.9km s-min=5.9km az=101.6*

*AEIC **15** 11:27:03.9±2.0, 51°.39N±0°.07×174°.7W±0°.1, h25^{km}±4^{km}, Error ellipse: s-maj=10.5km s-min=9.5km az=83.0*

*BJI **15** 11:27:06.8±0.0, 51°.92N×175°.31W, h40^{km}, mB5.0/31, mb5.0/59, Ms4.6/16, Ms7 4.2/16*

*NEIC **15** 11:27:06.7±1.9, 51°.54N±0°.07×174°.62W±0°.10, h48^{km}±5^{km}, mb4.6/144, ML4.5/22(AEIC), Error ellipse: s-maj=9.9km s-min=8.9km az=182.0*

*BGR **15** 11:27:22.3±0.0, 53°.75N×176°.68W, h47^{km}, mb5.0*

ISC 15 11:27:05.0±0.4, **51°.49N**±0°.07×**174°.58W**±0°.04, **h38**^{km}, **n622**, σ**1ˢ.09**/616, **mb4.8**/154, **MS4.1**/30, **41C-21D**, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	Atka Island	0.76	18		Pn	11 27 19.4	+0.2
ATKA					Sn	11 27 31.9	+2.5
KOFP	Korovin Flat P	0.85	20		Pn	11 27 21.2	+0.7
KOKL	Mount Kliuchef	0.87	15		Pn	11 27 21.5	+0.7
KOSE	Korovin Southe	0.92	21		Pn	11 27 22.6	+1.1
KONE	Korovin Northe	0.95	17		Pn	11 27 22.9	+1.0
ADK	Adak	1.37	288	P	Pn	11 27 27.8	+0.2
ADK	Adak	1.37	288		Pn	11 27 27.8	+0.2
NIKH	Nikolski High	3.82	65	Pn	Pn	11 28 03.1	+1.9
NIKH	Nikolski High	3.82	65		Sn	11 28 50.0	+5.1
NIKH	Nikolski High	3.82	65	P	Pn	11 28 02.5	+1.3
	baz=248						
OKCE	Okmok Cone E	4.38	61		Pn	11 28 11.4	+2.5
OKTU	Okmok Mt. Tuli	4.43	62		Pn	11 28 12.0	+2.3
MAPS	Pakushin South	5.20	60		Pn	11 28 21.8	+1.6
MSW	Makushin Switc	5.33	60		Pn	11 28 23.7	+1.7
MNAT	Makushin Natee	5.37	60		Pn	11 28 24.2	+1.7
MTBL	Makushin Table	5.41	60		Pn	11 28 25.7	+2.6
UNV	Unalaska Valle	5.45	61	Pn	Pn	11 28 26.7	+3.1
UNV	Unalaska Valle	5.45	61	P	Pn	11 28 25.1	+1.5
	baz=247						
AKV	Akutan Volcano	5.86	60		Pn	11 28 32.8	+3.6
AKLV	Akutan Long Va	5.87	59		Pn	11 28 32.6	+3.1
SPIA	Saint Paul Isl	6.24	22	Pn	Pn	11 28 37.8	+3.4
SPIA	Saint Paul Isl	6.24	22	P	Pn	11 28 36.4	+2.0
	baz=206						
SHEM	Shemya Is, Ala	7.09	285	Pn	Pn	11 28 49.5	+3.4
	16nm,0.3s,baz=8.4,slow=3.1,SNR=5.6						
SHEM				Sn	Sn	11 30 09.5	+4.3
	2.2nm,0.3s,baz=63,slow=24,SNR=1.8						
SHEM				LR	LR	11 31 49.8	
	comp=Z,785nm,18.6s,baz=92,slow=40						
ISLZ	Isanotski Laza	7.30	59		Pn	11 28 52.2	+3.1

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FALS  False Pass        7.51  59  Pn     Pn     11 28 51.8  0.0
FALS  False Pass        7.51  59  P      Pn     11 28 52.2 +0.4
      baz=247
SDPT  Sand Point        9.26  60  Pn     Pn     11 29 17.8 +1.9
GAMB  Gambell          12.42   6  Pn     Pn     11 30 05.0 +6.0
SII   Sitkinak Islan   13.00  59  Pn     Pn     11 30 07.0  0.0
P18K  Big Mountain,    13.50  47  Pn     Pn     11 30 16.6 +2.8
P18K  Big Mountain,    13.50  47  P      Pn     11 30 14.5 +0.7
      baz=242
ANM   Nome             13.97  17  P      Pn     11 30 19.4 -0.7
      baz=204
Q19K  Cape Douglas,    14.04  50         Pn     11 30 21.0 -0.2
Q19K  Cape Douglas,    14.04  50  P      Pn     11 30 20.9 -0.2
      baz=247
KDAK  Kodiak Island    14.17  55  Pn     Pn     11 30 20.4 -2.5
      1.5nm,0.3s,baz=219,slow=4.7,SNR=24
KDAK                              Sn     Sn     11 32 51.4 -7.2
      0.8nm,0.3s,baz=184,slow=23,SNR=1.8
KDAK  Kodiak Island    14.17  55  P      Pn     11 30 21.8 -1.1
      baz=253
O19K  Port Alsworth    14.28  45         Pn     11 30 25.9 +1.6
O19K  Port Alsworth    14.28  45  P      Pn     11 30 23.7 -0.7
      baz=241
N19K  Bonanza Creek    14.52  42         Pn     11 30 28.8 +1.1
N19K  Bonanza Creek    14.52  42  P      Pn     11 30 28.0 +0.3
      baz=239
TNA   Tin City         14.52  11         Pn     11 30 30.8 +3.2
TNA   Tin City         14.52  11  P      Pn     11 30 28.8 +1.2
      baz=197
P19K  Oil Pt           14.53  47         Pn     11 30 28.4 +0.7
O20K  Slope Mountain   14.99  46  P      Pn     11 30 35.9 +2.0
      baz=244
M19K  Big River Lodg   15.15  39  P      P      11 30 39.6 -1.0
M19K                              IAmb   IAmb   11 30 56.4
      comp=Z,24nm,0.8s
M19K  Big River Lodg   15.15  39  P      Pn     11 30 38.1 +2.1
      baz=236
TTA   Tatalina         15.18  34  P      P      11 30 40.5 -0.5
TTA                               pmax   pmax
      comp=Z,23nm,1.0s
TTA   Tatalina         15.18  34  P      P      11 30 40.5 -0.5
TTA   Tatalina         15.18  34  P      P      11 30 40.0 -1.0
      baz=229,SNR=9.3
HOM   Homer            15.27  49  P      Pn     11 30 39.0 +1.5
      baz=248
CNPM  China Poot       15.41  49         Pn     11 30 38.2 -1.2
CNPM                              IAmb   IAmb   11 30 57.2
      comp=Z,62nm,1.2s
BRLK  Bradley Lake     15.66  49  P      Pn     11 30 41.1 -1.6
BRLK                              IAmb   IAmb   11 30 58.3
      comp=Z,26nm,0.8s
L20K  Farewell, AK     15.68  37  P      Pn     11 30 43.1 +0.3
      baz=235
BRSE  Bradley Lake S   15.72  49  P      Pn     11 30 42.9 -0.6
      baz=249
SPU   Mount Spurr      15.73  43  P      Pn     11 30 45.4 +1.8
K20K  Telida           16.13  35  P      P      11 30 51.4 -0.1
K20K  Telida           16.13  35  P      P      11 30 50.7 -0.8
      baz=232
GCSA  Galena City Sc   16.16  28  P      P      11 30 51.6 -0.1
      baz=223,SNR=10
SUA   Susitna One      16.42  43  P      Pn     11 30 52.4 -0.1
SUA   Susitna One      16.42  43  P      Pn     11 30 52.2 -0.2
      baz=243
PET   Petropavlovsk    16.43 286 eP      Pn     11 30 51.0 -1.5
PET                              eS      Sn     11 33 50.5 -3.0
PET                               MLR    MLR
      comp=Z,600nm,19.0s
PET                               MLR    MLR
      comp=Z,600nm,18.0s
SEW   Seward           16.46  49         Pn     11 30 51.3 -1.5
SEW   Seward           16.46  49  P      Pn     11 30 51.1 -1.7
      baz=249
O22K  Cooper Landing   16.47  47  P      Pn     11 30 52.4 -0.5
O22K  Cooper Landing   16.47  47  P      Pn     11 30 52.4 -0.5
      baz=248
PPLA  Purkeypile       16.56  38  P      P      11 30 56.9 +0.5
PPLA                              IAmb   IAmb   11 31 04.7
      comp=Z,31nm,0.8s
PPLA  Purkeypile       16.56  38  P      Pn     11 30 54.4 +0.2
      baz=237
J20K  Nowinta River    16.62  32  P      P      11 30 57.0 +0.1
J20K  Nowinta River    16.62  32  P      Pn     11 30 56.1 +1.2
      baz=230
RC01  Rabbit Creek A   16.70  45  P      Pn     11 30 55.6 -0.3
RC01  Rabbit Creek A   16.70  45  P      Pn     11 30 56.5 +0.7
      baz=246
M22K  Willow           16.82  43  P      P      11 30 58.4 -0.7
      baz=243
CAST  Castle Rocks     16.89  36  P      P      11 31 00.2 +0.3
CAST  Castle Rocks     16.89  36  P      Pn     11 30 55.9 -2.3
      baz=235
PEA0B Petropavlovsk-   17.00 286⥣eP     P      11 31 00.5 -0.6
PEA0B Petropavlovsk-   17.00 286  P      P      11 31 00.6 -0.6
PEA0B                             IAmb   IAmb   11 31 20.8
      comp=Z,76nm,1.4s
PETK  Petropavlovsk-   17.00 286  Pn     P      11 31 00.0 -1.1
      comp=Z,1.1nm,0.3s,baz=91,slow=14,SNR=22
PETK  Petropavlovsk-   17.00 286  P      P      11 31 01.2 +0.1
CUT   Chulitna         17.06  41  P      P      11 31 02.2 +0.4
CUT                               IAmb   IAmb   11 31 29.1
      comp=Z,48nm,1.2s
CUT   Chulitna         17.06  41  P      P      11 31 01.4 -0.3
      baz=241
CHUM  Lake Minchumin   17.08  35  P      P      11 31 02.5 +0.6
      baz=234
PMR   Palmer           17.18  44  P      Pn     11 31 01.4 -0.3
PMR                               pmax   pmax
      comp=Z,8.0nm,0.6s
PMR   Palmer           17.18  44  P      Pn     11 31 01.4 -0.3
PMR   Palmer           17.18  44  P      Pn     11 31 00.7 -1.0
      baz=245
PWL   Port Wells       17.25  47  P      Pn     11 31 01.7 -1.0
PWL                               IAmb   IAmb   11 31 21.9
      comp=Z,26nm,0.7s
PWL   Port Wells       17.25  47  P      Pn     11 31 00.5 -2.2
      baz=249
GHO   Glory Hole Cre   17.34  44  P      Pn     11 31 03.0 -0.9
KTH   Kantishna Hill   17.40  37  P      P      11 31 06.5 +1.0
KTH                               IAmb   IAmb   11 31 24.6
      comp=Z,30nm,0.8s
KNK   Knik Glacier     17.40  45         Pn     11 31 03.5 -1.1
KNK   Knik Glacier     17.40  45  P      Pn     11 31 03.2 -1.4
      baz=247,SNR=8.9
TRF   Thorofare Moun   17.58  38  P      P      11 31 09.1 +1.4
TRF   Thorofare Moun   17.58  38  P      Pn     11 31 07.3 +0.4
      baz=238
SML   Sawmill          17.61  44  P      Pn     11 31 06.9 -0.4
SML   Sawmill          17.61  44  P      Pn     11 31 06.3 -0.9
      baz=246
BPAW  Bear Paw Mtn.    17.68  35  P      P      11 31 10.0 +1.4
BPAW                              IAmb   IAmb   11 31 27.1
      comp=Z,32nm,0.9s
BPAW  Bear Paw Mtn.    17.68  35  P      P      11 31 08.7  0.0
      baz=235,SNR=18
GLI   Glacier Island   17.82  48  P      Pn     11 31 08.9 -0.8
GLI   Glacier Island   17.82  48  P      Pn     11 31 08.2 -1.6
      baz=250
WAT1  Susitna Watana   17.96  41  P      Pn     11 31 10.8 -0.8
      baz=243
IMAR  Indian Mountai   17.97  28  P      P      11 31 13.3 +1.5
I21K  Tanana           17.98  32  P      P      11 31 13.5 +1.6
I21K  Tanana           17.98  32  P      P      11 31 13.0 +1.1
      baz=231
H21K  Melozitna Rive   18.03  30  P      Pn     11 31 14.7 +2.4
H21K                              IAmb   IAmb   11 31 29.8
      comp=Z,48nm,1.2s
H21K  Melozitna Rive   18.03  30  P      Pn     11 31 13.4 +1.1
      baz=228
SCM   Sheep Creek Mo   18.06  44  P      P      11 31 11.8 -1.1
SCM                               pmax   pmax
      comp=Z,35nm,0.7s
SCM   Sheep Creek Mo   18.06  44  P      P      11 31 11.8 -1.1
SCM                               IAmb   IAmb   11 31 14.8
      comp=Z,34nm,0.7s
SCM   Sheep Creek Mo   18.06  44  P      P      11 31 11.7 -1.1
      baz=247,SNR=10
FID   Port Fidalgo     18.07  48  P      P      11 31 10.7 -2.2
FID                               IAmb   IAmb   11 31 14.1
      comp=Z,28nm,0.6s
RND   Reindeer         18.12  39  P      P      11 31 12.6 -0.9
RND                               pmax   pmax
      comp=Z,19nm,0.7s
RND   Reindeer         18.12  39  P      P      11 31 12.6 -0.9
WAT6  Susitna Watana   18.19  42  P      P      11 31 13.5 -0.9
      baz=245
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MCK   McKinley         18.25  38  P      P      11 31 14.9  0.0
MCK                               pmax   pmax
      comp=Z,32nm,0.9s
MCK   McKinley         18.25  38  P      P      11 31 14.9  0.0
MCK                               IAmb   IAmb   11 31 28.8
      comp=Z,32nm,0.9s
MCK   McKinley         18.25  38  P      P      11 31 14.5 -0.4
      baz=240,SNR=9.1
BWN   Browne           18.28  36  P      Pn     11 31 16.5 +1.2
BWN                               IAmb   IAmb   11 31 36.0
      comp=Z,58nm,0.9s
MLY   Manley           18.31  33  P      Pn     11 31 17.1 +1.4
MLY                               IAmb   IAmb   11 31 34.4
      comp=Z,31nm,0.9s
MLY   Manley           18.31  33  P      Pn     11 31 16.1 +0.4
      baz=234,SNR=12
EYAK  Cordova Ski Ar   18.35  49  P      P      11 31 14.4 -1.6
EYAK                              IAmb   IAmb   11 31 19.0
      comp=Z,53nm,1.4s
EYAK  Cordova Ski Ar   18.35  49  P      P      11 31 15.0 -0.9
      baz=253
SKR   Severo-Kuril's   18.38 279 eP      Pn     11 31 31.1  +15
SKR                               pmax   pmax
      comp=Z,82nm,1.2s
SKR                               MLR    MLR
      comp=Z,300nm,15.0s
SKR                               MLR    MLR
      comp=Z,200nm,16.0s
DIV   Divide           18.52  47  P      P      11 31 17.8 -0.1
DHY   Denali Highway   18.56  41  P      P      11 31 18.5 +0.1
DHY   Denali Highway   18.56  41  P      P      11 31 18.1 -0.3
      baz=244,SNR=5.9
KLU   Klutina          18.57  46  P      P      11 31 17.6 -0.8
KLU                               IAmb   IAmb   11 31 34.8
      comp=Z,19nm,0.6s
KLU   Klutina          18.57  46  P      P      11 31 16.9 -1.5
      baz=250,SNR=7.7
NEA2  Nenana           18.65  36  P      P      11 31 19.6 +0.4
NEA2  Nenana           18.65  36  P      P      11 31 18.9 -0.4
      baz=237,SNR=9.4
M24K  Tolsona, Glenn   18.67  44  P      P      11 31 19.8 +0.3
M24K                              IAmb   IAmb   11 31 22.3
      comp=Z,38nm,0.6s
M24K  Tolsona, Glenn   18.67  44  P      P      11 31 18.9 -0.7
      baz=248
RAGM  Ragged Mountai   18.82  50  P      P      11 31 21.0 -0.1
RAGM                              IAmb   IAmb   11 31 45.6
      comp=Z,43nm,1.1s
KAIM  Kayak Island     18.83  52  P      Pn     11 31 22.3 +0.3
I23K  Minto, Yukon-K   18.85  34  P      Pn     11 31 22.7 +0.4
I23K                              IAmb   IAmb   11 31 26.0
      comp=Z,38nm,0.8s
I23K  Minto, Yukon-K   18.85  34  P      Pn     11 31 22.2  0.0
      baz=236,SNR=29
WRH   Wood River Hil   18.95  37  P      P      11 31 21.4 -1.1
HMT   Hamilton         19.00  50  P      P      11 31 23.3 +0.1
HMT                               IAmb   IAmb   11 31 38.9
      comp=Z,28nm,0.8s
BMRM  Bremner River    19.01  48  P      Pn     11 31 23.7 -0.5
BMRM                              IAmb   IAmb   11 31 38.6
      comp=Z,50nm,1.4s
BMRM  Bremner River    19.01  48  P      P      11 31 22.7 -0.6
      baz=253
BILL  Bilibino         19.05 338c iP     Pn     11 31 25.9 +1.4
BILL                             i S     Sn     11 34 46.3  -10
BILL                              pmax   pmax
      comp=Z,39nm,1.0s
BILL                              MLR    MLR
      comp=Z,216nm,20.0s
BILL  Bilibino         19.05 338         Pn     11 31 24.5  0.0
BILL                              IAmb   IAmb   11 31 32.6
      comp=Z,58nm,1.1s
CCB   Clear Creek Bu   19.14  36  P      P      11 31 24.0 -0.6
CCB                               IAmb   IAmb   11 31 30.9
      comp=Z,25nm,0.5s
MDM   Murphy Dome      19.15  35  P      P      11 31 25.3 +0.6
MDM                               IAmb   IAmb   11 31 54.2
      comp=Z,37nm,1.3s
SUCK  Suckling Hills   19.18  51  P      Pn     11 31 25.9 -0.3
N25K  Chitina, Valde   19.20  47         P      11 31 25.4  0.0
N25K                              IAmb   IAmb   11 31 40.4
      comp=Z,18nm,0.7s
N25K  Chitina, Valde   19.20  47  P      P      11 31 24.9 -0.5
      baz=252,SNR=6.3
HARP  HAARP            19.22  44  P      P      11 31 25.2 -0.3
      baz=249,SNR=9.6
TCOL  CIGO, UAF Yank   19.24  36  P      P      11 31 25.4 -0.2
      baz=238
COLA  College          19.24  36⥣eP     Pn     11 31 26.8 -0.1
COLA                              pmax   pmax
      comp=Z,12nm,0.8s
COLA  College          19.24  36  P      P      11 31 25.2 -0.5
      baz=238
BERG  Berg Lake        19.29  50  P      P      11 31 26.3  0.0
BERG                              IAmb   IAmb   11 31 30.3
      comp=Z,37nm,0.6s
PAX   Paxson           19.30  42  P      P      11 31 27.0 +0.5
PAX                               pmax   pmax
      comp=Z,15nm,0.7s
PAX   Paxson           19.30  42  P      P      11 31 27.0 +0.5
PAX   Paxson           19.30  42  P      P      11 31 27.0 +0.5
      baz=247,SNR=11
HDA   Harding Lake     19.34  37  P      P      11 31 26.2 -0.6
HDA   Harding Lake     19.34  37  P      P      11 31 26.9 +0.1
      baz=241
BGLC  Bering Glacier   19.43  51  P      P      11 31 27.8 +0.1
      baz=257
GLB   Gilahina Butte   19.51  47  P      P      11 31 28.9 +0.1
POKR  Poker Plat Res   19.52  35  P      P      11 31 29.6 +0.8
POKR  Poker Plat Res   19.52  35  P      P      11 31 28.8 +0.1
      baz=239
IL31                   19.54  37  P      P      11 31 27.1 -1.8
IL31                              IAmb   IAmb   11 31 45.0
      comp=Z,16nm,0.6s
ILAR  Eielson Array    19.54  37  P      P      11 31 27.1 -1.9
      comp=Z,1.9nm,0.3s,baz=237,slow=8.1,SNR=80
ILAR                              PcP    PcP    11 35 46.8 -1.0
      comp=Z,0.1nm,0.3s,baz=252,slow=2.7,SNR=3.1
ILAR                              LR     LR     11 37 57.8
      comp=Z,119nm,19.0s,baz=250,slow=34
ILAR  Eielson Array    19.54  37  P      P      11 31 28.0 -1.0
ILAR  Eielson Array    19.54  37  P      P      11 31 28.0 -1.0
VRDI  Verde Repeater   19.62  48         Pn     11 31 31.9 +0.2
CRQM  Cirque           19.64  50  P      Pn     11 31 31.4 -0.6
CRQM                              IAmb   IAmb   11 31 54.6
      comp=Z,22nm,0.6s
CRQE  Cirque           19.66  50  P      P      11 31 30.7 +0.2
      baz=256
WAX   Waxell Ridge     19.71  51  P      Pn     11 31 31.7 -0.9
WAX                               IAmb   IAmb   11 31 53.5
      comp=Z,27nm,0.7s
H24K  Noodor Dome      19.75  33  P      P      11 31 31.9 +0.6
H24K                              IAmb   IAmb   11 31 52.5
      comp=Z,47nm,1.1s
H24K  Noodor Dome      19.75  33  P      P      11 31 31.5 +0.1
      baz=236
TGL   Tana Glacier     19.79  50  P      P      11 31 32.1 +0.2
TGL                               IAmb   IAmb   11 31 53.1
      comp=Z,35nm,1.1s
COLD  Coldfoot         19.86  28  P      Pn     11 31 34.0 -0.2
COLD                              IAmb   IAmb   11 31 51.9
      comp=Z,38nm,1.2s
COLD  Coldfoot         19.86  28  P      Pn     11 31 33.9 -0.3
      baz=229,SNR=18
MCARA McCarthy VSAT    19.86  48  P      Pn     11 31 33.8 -0.5
MCARA                             IAmb   IAmb   11 31 36.9
      comp=Z,24nm,0.9s
MCARA McCarthy VSAT    19.86  48  P      Pn     11 31 33.7 -0.5
      baz=254
RIDG  Independent Ri   19.87  40  P      P      11 31 33.2 +0.5
RIDG                              IAmb   IAmb   11 31 56.4
      comp=Z,22nm,0.5s
RIDG  Independent Ri   19.87  40  P      P      11 31 32.4 -0.2
      baz=246,SNR=12
ISLE  Juniper Island   19.99  50  P      Pn     11 31 35.4 -0.6
ISLE                              IAmb   IAmb   11 31 54.3
      comp=Z,34nm,0.8s
MESA  MESA             20.09  52  P      Pn     11 31 37.0 -0.3
DOT   Dot Lake         20.15  41  P      P      11 31 35.4 -0.3
DOT                               IAmb   IAmb   11 32 04.1
      comp=Z,17nm,0.7s
M26K  Nabesna, AK      20.17  45  P      P      11 31 36.8 +0.9
M26K                              IAmb   IAmb   11 31 39.2
      comp=Z,25nm,0.5s
M26K  Nabesna, AK      20.17  45  P      Pn     11 31 37.0 -1.0
      baz=252
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L26K  Log Cabin Wild   20.22  43  P      Pn     11 31 37.9 -0.7
L26K                              IAmb   IAmb   11 31 57.7
      comp=Z,16nm,0.7s
L26K  Log Cabin Wild   20.22  43  P      Pn     11 31 37.5 -1.0
      baz=250,SNR=20
YAH   Yahtse           20.23  51  P      P      11 31 37.1 +0.4
YAH                               IAmb   IAmb   11 32 03.0
      comp=Z,36nm,0.8s
SCRK  Sand Creek       20.32  40  P      P      11 31 36.9 -0.6
SCRK  Sand Creek       20.32  40  P      P      11 31 36.6 -0.9
      baz=246,SNR=65
PRP   Porcupine Dome   20.41  35         P      11 31 38.7 +0.1
PRP   Porcupine Dome   20.41  35  P      P      11 31 38.6 -0.1
      baz=240,SNR=8.5
BARN  Barnard Glacie   20.42  49  P      P      11 31 39.5 +0.8
TABL  Table Mountain   20.54  51  P      Pn     11 31 41.8 -0.7
TABL                              IAmb   IAmb   11 32 05.7
      comp=Z,42nm,1.1s
CTG   Chitna Glacier   20.55  50  P      P      11 31 40.3 +0.1
      baz=257,SNR=5.8
CTGM  Chitina Glacie   20.55  50  P      Pn     11 31 41.2 -1.4
CTGM                              IAmb   IAmb   11 31 44.3
      comp=Z,28nm,0.7s
M27K  Edge Creek, AK   20.65  46  P      Pn     11 31 43.0 -0.7
M27K                              IAmb   IAmb   11 31 45.6
      comp=Z,23nm,0.8s
M27K  Edge Creek, AK   20.65  46  P      P      11 31 41.0 -0.3
      baz=253
LOGN  Logan Glacier    20.68  50  P      Pn     11 31 43.3 -0.8
LOGN                              IAmb   IAmb   11 31 58.5
      comp=Z,24nm,0.8s
L27K  Beaver Creek,    20.89  44  P      P      11 31 44.5 +0.9
      baz=252
BCAR  Beaver Creek A   20.91  44  P      P      11 31 44.0 +0.1
PINM  Pinnacle         20.91  52  P      P      11 31 42.8 -1.3
      baz=261
TOLK  Toolik Lake Re   20.97  26         P      11 31 45.8 +1.2
TOLK                              IAmb   IAmb   11 31 46.8
      comp=Z,40nm,0.8s
TOLK  Toolik Lake Re   20.97  26  P      P      11 31 45.6 +1.1
      baz=228,SNR=34
SEY   Seymchan         20.98 316  P      P      11 31 45.1 +0.6
      comp=Z,11nm,0.9s,baz=98,slow=9.8,SNR=10
SEY                               PcP    PcP    11 35 50.7 +0.3
      comp=Z,1.9nm,0.6s,baz=7.9,slow=23,SNR=3.0
FYU   Fort Yukon       21.05  33  P      P      11 31 45.7 +0.4
FYU                               IAmb   IAmb   11 31 59.0
      comp=Z,40nm,1.3s
BVCY  Beaver Creek     21.12  46  P      P      11 31 46.4 +0.2
      baz=254,SNR=8.4
YUK3  Moose Creek      21.15  48  P      P      11 31 46.7 +0.1
      baz=256
PNL   Peninsula        21.28  54  P      P      11 31 48.7 +0.8
      baz=263
BMAR  Burnt Mountain   21.73  31  P      P      11 31 53.6 +1.0
EGAK  Eagle            21.76  40  P      P      11 31 52.8 -0.2
DAWY  Dawson           22.24  42  P      P      11 31 58.4 +0.3
DAWY  Dawson           22.24  42  P      P      11 31 57.9 -0.3
      baz=252,SNR=12
J29M  Klondike Camp    22.84  41  P      P      11 32 04.2 -0.4
      baz=253
I29M  Ogilvie Camp,    23.10  39  P      P      11 32 06.8 -0.3
      baz=250
M31M  Drury Creek, Y   24.04  48  P      P      11 32 15.7 -0.5
      baz=262
EPYK  Eagle Plains     24.05  37  P      P      11 32 15.3 -1.0
      baz=250,SNR=7.4
FARO  Faro, Yukon      24.53  48  P      P      11 32 21.2 +0.6
      baz=263
P33M  Teslin, Yukon    24.63  53  P      P      11 32 21.7 +0.1
      baz=268
WRAK  Wrangell Islan   25.03  62  P      P      11 32 25.8 +0.7
      baz=276
INK   Inuvik           25.87  34  P      P      11 32 32.4 -0.3
      comp=Z,9.5nm,0.8s,baz=243,slow=8.8,SNR=54
INK                               PcP    PcP    11 36 00.4 -0.2
      comp=Z,2.2nm,0.6s,baz=325,slow=4.2,SNR=4.7
INK   Inuvik           25.87  34  P      P      11 32 32.6 -0.1
INK   Inuvik           25.87  34  P      P      11 32 31.9 -0.7
      baz=250,SNR=11
DLBC  Dease Lake       26.09  57  P      P      11 32 36.5 +1.6
      comp=Z,13nm,0.8s,baz=240,slow=7.1,SNR=22
DLBC  Dease Lake       26.09  57  P      P      11 32 37.7 +2.9
DLBC                              IAmb   IAmb   11 32 40.5
      comp=Z,23nm,1.1s
YSS   Yuzh-Sakhalins   27.93 278 eP      P      11 32 51.9 +0.5
YSS                               pmax   pmax
      comp=Z,20nm,0.7s
YSS                               MLR    MLR
      comp=Z,400nm,17.0s
YSS                               MLR    MLR
      comp=N,200nm,18.0s
YSS                               MLR    MLR
      comp=E,200nm,14.0s
JKA   Kamikawa-asahi   29.34 273  P      P      11 33 05.8 +1.8
JKA                               IAmb   IAmb   11 33 09.1
      comp=Z,20nm,0.9s
ASAJ  Asahikawa        29.35 273  P      P      11 33 04.0  0.0
      comp=Z,18nm,0.8s,baz=77,slow=6.7,SNR=4.5
A36M  Sachs Harbour    29.72  28  P      P      11 33 07.4 +0.4
A36M                              IAmb   IAmb   11 33 10.5
      comp=Z,12nm,0.8s
A36M  Sachs Harbour    29.72  28  P      P      11 33 06.2 -0.8
      baz=253,SNR=17
YAK   Yakutsk          31.33 311 eP      P      11 33 19.0 -2.3
YAK                               pmax   pmax
      comp=Z,20nm,0.9s
YAK                               MLR    MLR
      comp=Z,251nm,15.0s
YAK                               MLR    MLR
      comp=N,134nm,14.0s
YAK                               MLR    MLR
      comp=E,139nm,14.0s
TIXI  Tiksi            31.86 330  P      P      11 33 25.5 -0.3
      comp=E,3.8nm,0.5s,baz=102,slow=11,SNR=16
TIXI                              PcP    PcP    11 36 16.1 +0.5
      comp=E,8.0nm,0.6s,baz=96,slow=1.4,SNR=17
TIXI  Tiksi            31.86 330⥣eP     P      11 33 26.4 +0.6
TIXI                              pmax   pmax
      comp=Z,3.0nm,0.5s
TIXI  Tiksi            31.86 330  P      P      11 33 26.3 +0.4
D03D  Eldon            33.10  76  P      P      11 33 37.0  0.0
      baz=296
YKA   Yellowknife Ar   33.23  47  P      P      11 33 37.6 -0.3
      comp=Z,0.4nm,0.3s,baz=276,slow=8.9,SNR=15
YKA                               PcP    PcP    11 36 20.5 +0.9
      comp=Z,2.4nm,0.9s,baz=285,slow=3.3,SNR=9.2
YKA                               ScP    ScP    11 40 01.9 +1.3
      comp=Z,0.7nm,0.7s,baz=300,slow=3.7,SNR=4.2
YKA   Yellowknife Ar   33.23  47  P      P      11 33 38.1 +0.1
YKA   Yellowknife Ar   33.23  47  P      P      11 33 38.1 +0.1
KLR   Kul'dur          33.68 288c iP     P      11 33 41.9 -0.1
KLR                               pmax   pmax
      comp=Z,11nm,0.5s
H11N2 WAKE ISLAND Hy   34.88 212  T      T      12 10 56.2
      baz=18,slow=75,SNR=105
H11N3 WAKE ISLAND Hy   34.88 212  T      T      12 10 51.9
      baz=18,slow=75,SNR=83
H11N1 WAKE ISLAND Hy   34.89 212  T      T      12 10 51.0
      baz=18,slow=75,SNR=79
B08A  Colville Reser   34.99  73  P      P      11 33 55.0 +1.6
B08A                              IAmb   IAmb   11 34 18.5
      comp=Z,8.2nm,0.7s
K02D  Willamette Mer   35.12  84  P      P      11 33 54.8 +0.1
      baz=302
HAWA  Hanford          35.78  76  P      P      11 34 01.6 +1.4
HAWA                              IAmb   IAmb   11 34 30.8
      comp=Z,7.1nm,0.8s
USA0B Ussuriysk Arra   35.89 280  P      P      11 34 01.5 +0.3
USA0B                             pmax   pmax
      comp=Z,33nm,1.2s
USA0B Ussuriysk Arra   35.89 280  P      P      11 34 01.5 +0.3
USRK  Ussuriysk Ar.    35.89 280  P      P      11 34 01.2  0.0
      comp=Z,16nm,0.6s,baz=54,slow=9.8,SNR=36
USRK                              LR     LR     11 48 18.0
      comp=Z,127nm,20.8s,baz=37,slow=36
USRK  Ussuriysk Ar.    35.89 280  P      P      11 34 01.5 +0.3
USRK  Ussuriysk Ar.    35.89 280  P      P      11 34 01.5 +0.3
H11S1 WAKE ISLAND Hy   36.08 211  T      T      12 12 56.7
      baz=20,slow=76,SNR=142
H11S2 WAKE ISLAND Hy   36.10 211  T      T      12 13 10.3
      baz=20,slow=76,SNR=87
H11S3 WAKE ISLAND Hy   36.10 211  T      T      12 13 07.2
      baz=20,slow=76,SNR=51
J05D  Fort Rock, OR    36.32  82  P      P      11 34 05.2 +0.2
      baz=302
NEW   Newport          36.35  72  P      P      11 34 05.4 +0.2
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	baz=297						
MAJO	Matsushiro	36.42	265	deP	P	11 34 06.7	+0.9
MAJO				pmax	pmax		
	comp=Z,23nm,1.1s						
MAT	Matsushiro	36.42	265	P	P	11 34 06.4	+0.6
MJAR	Matsushiro Arr	36.42	265	P	P	11 34 05.8	0.0
	comp=Z,2.8nm,0.6s,baz=42,slow=7.3,SNR=5.2						
MJAR				LR	LR	11 47 12.3	
	comp=Z,101nm,21.9s,baz=50,slow=33						
MJAR	Matsushiro Arr	36.42	265	P	P	11 34 05.6	-0.2
K05A	Summer Lake	36.83	82		P	11 34 11.6	+2.2
O02D	Mt. Diablo Mer	37.08	87	P	P	11 34 13.2	+1.7
	baz=305						
MDJ	Mudanjiang	37.15	282	P	P	11 34 11.8	-0.1
MDJ				pmax	pmax		
	comp=Z,29nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,170nm,3.5s						
MDJ	Mudanjiang	37.15	282	P	P	11 34 11.3	-0.6
O03E	Paynes Creek	37.62	86	P	P	11 34 16.0	-0.1
	baz=305						
MOD	Modoc Plateau	37.65	83	P	P	11 34 17.1	+0.8
MOD				IAmb	IAmb	11 34 31.9	
	comp=Z,19nm,1.4s						
BMO	Blue Mountains	37.91	77	P	P	11 34 18.8	+0.4
BMO				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BMO	Blue Mountains	37.91	77	P	P	11 34 18.8	+0.4
BMO				IAmb	IAmb	11 34 36.9	
	comp=Z,8.2nm,1.4s						
JTMT	Jette	38.28	71	P	P	11 34 23.8	+2.2
JTMT				IAmb	IAmb	11 34 39.0	
	comp=Z,8.6nm,1.1s						
MSO	Missoula	38.93	72	P	P	11 34 27.8	+0.8
MSO				IAmb	IAmb	11 34 34.0	
	comp=Z,13nm,1.2s						
MSO	Missoula	38.93	72	P	P	11 34 27.3	+0.3
	baz=300						
BOD	Bodaibo	40.02	308	eP	P	11 34 34.8	-1.0
BOD				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CN2	Changchun	40.11	283	eP	P	11 34 36.3	-0.4
CN2				eS	S	11 40 38.8	-1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,17.0s						
CN2				LR	LR		
	comp=Z,200nm,12.0s						
CN2				LR	LR		
	comp=Z,400nm,22.0s						
HRY	Holter Researc	40.24	71	P	P	11 34 38.4	+0.5
HLID	Hailey	40.35	77	P	P	11 34 39.6	+0.7
HLID	Hailey	40.35	77	P	P	11 34 39.0	0.0
	baz=303						
BCYI	Bear Canyon	40.56	75	P	P	11 34 41.7	+0.9
MCMT	McKenzie Canyo	40.62	74	P	P	11 34 42.0	+0.8
EGMT	Eagleton	40.80	68	P	P	11 34 43.3	+0.8
EGMT				IAmb	IAmb	11 34 59.1	
	comp=Z,13nm,0.9s						
EGMT	Eagleton	40.80	68	P	P	11 34 42.0	-0.5
	baz=300						
NVAR	Mina Array Bea	40.91	86	P	P	11 34 43.1	-0.6
	comp=Z,0.8nm,0.6s,baz=294,slow=6.8,SNR=6.6						
NVAR				ScP	ScP	11 40 31.0	+1.0
	comp=Z,1.1nm,1.1s,baz=269,slow=5.3,SNR=3.9						
NV11	Mina Array Sit	41.00	86	P	P	11 34 44.6	+0.3
ELK	Elko	41.44	81	P	P	11 34 49.2	+1.2
ELK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ELK	Elko	41.44	81	P	P	11 34 49.1	+1.2
ELK				IAmb	IAmb	11 35 06.3	
	comp=Z,6.8nm,0.7s						
YHL	Hebgen Lake	41.61	73	P	P	11 34 49.1	-0.4
YHL				IAmb	IAmb	11 35 06.5	
	comp=Z,24nm,1.5s						
YHH	Holmes Hill	41.84	73	P	P	11 34 51.9	+0.6
YHH				IAmb	IAmb	11 35 06.7	
	comp=Z,19nm,1.3s						
KSRS	Korea Array	42.27	274	P	P	11 34 55.2	+0.7
	comp=Z,8.7nm,0.8s,baz=55,slow=7.8,SNR=17						
KSRS				LR	LR	11 52 19.5	
	comp=Z,68nm,19.5s,baz=51,slow=36						
KS19	Wonju Array Si	42.28	274	P	P	11 34 57.2	+2.6
KSAR	Wonju Array Be	42.31	274	P	P	11 34 55.8	+1.0
KSAR	Wonju Array Be	42.31	274	P	P	11 34 55.8	+1.0
RLMT	Red Lodge	42.60	72	P	P	11 34 56.0	-1.4
	baz=303,SNR=9.5						
R11A	Troy Canyon, C	42.65	84	P	P	11 34 58.6	+0.7
R11A	Troy Canyon, C	42.65	84	P	P	11 34 58.0	+0.1
	baz=308						
DUG	Dugway, Tooele	43.26	80	P	P	11 35 03.1	+0.4
	baz=306						
BW06	Boulder Array	43.74	75	P	P	11 35 07.2	+0.5
BW06				IAmb	IAmb	11 35 21.9	
	comp=Z,16nm,1.2s						
BW06	Boulder Array	43.74	75	P	P	11 35 06.0	-0.7
	baz=305,SNR=9.3						
PD31	Pinedale Array	43.74	75	P	P	11 35 07.2	+0.5
PD31				IAmb	IAmb	11 35 21.9	
	comp=Z,16nm,1.2s						
PDAR	Pinedale Array	43.74	75	P	P	11 35 07.0	+0.4
	comp=Z,6.5nm,0.8s,baz=315,slow=3.2,SNR=36						
PDAR				LR	LR	11 53 10.7	
	comp=Z,89nm,18.0s,baz=321,slow=36						
DGMT	Dagmar	43.76	65	P	P	11 35 06.4	-0.1
	baz=302						
GSC	Goldstone, Bar	43.80	88	P	P	11 35 07.2	+0.1
	baz=310						
TULEG	Thule	44.04	19	P	P	11 35 08.7	+0.4
RDMU	Red Mountain	45.02	77	P	P	11 35 18.0	+1.1
NRIK	Noril'sk	45.64	331	P	P	11 35 21.1	-0.1
	comp=Z,3.5nm,0.4s,baz=78,slow=10,SNR=5.0						
NRIK				PcP	PcP	11 36 58.2	-0.4
	comp=Z,5.9nm,0.7s,baz=97,slow=2.9,SNR=4.9						
NRIK	Noril'sk	45.64	331	⇓eP	P	11 35 21.4	+0.3
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
O20A	White River Ci	46.09	77	P	P	11 35 24.9	-0.5
	baz=307						
RSSD	Black Hills	46.26	70	P	P	11 35 26.9	+0.3
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RSSD	Black Hills	46.26	70	P	P	11 35 26.9	+0.3
RSSD				IAmb	IAmb	11 35 47.5	
	comp=Z,4.6nm,0.7s						
RSSD	Black Hills	46.26	70	P	P	11 35 25.9	-0.7
	baz=305						
MDND	Maddock	46.69	63	P	P	11 35 28.9	-0.8
	baz=304						
WUAZ	Wupatki	47.05	84	P	P	11 35 33.3	+0.4
	baz=310						
ULM	Lac du Bonnet	47.39	59	P	P	11 35 35.2	+0.1
	comp=Z,7.6nm,0.5s,baz=298,slow=8.0,SNR=8.8						
ULM	Lac du Bonnet	47.39	59	P	P	11 35 35.2	+0.1
BJI	Beijing	47.92	285	P	P	11 35 40.3	+1.0
BJI				pmax	pmax		
	comp=Z,22nm,0.7s						
TLY	Talaya	48.21	304	P	P	11 35 41.9	+0.4
	comp=Z,7.0nm,0.5s,baz=27,slow=5.2,SNR=9.9						
TLY	Talaya	48.21	304	eP	P	11 35 42.3	+0.8
TLY				pmax	pmax		
	comp=Z,39nm,1.1s						
TLY				MLR	MLR		
	comp=Z,229nm,11.0s						
TLY	Talaya	48.21	304	P	P	11 35 42.1	+0.6
AGMN	Agassiz Nation	48.50	61	P	P	11 35 43.8	0.0
AGMN	Agassiz Nation	48.50	61	P	P	11 35 42.6	-1.1
	baz=305,SNR=5.1						
214A	Organ Pipe Nat	48.51	89	P	P	11 35 43.4	-0.7
	baz=313						
ULN	Ulaanbaatar	48.56	298	deP	P	11 35 44.7	+0.3
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULN	Ulaanbaatar	48.56	298	P	P	11 35 44.9	+0.5
ULN				IAmb	IAmb	11 35 45.9	
	comp=Z,5.2nm,0.8s						
Q24A	Divide	48.70	76	P	P	11 35 45.2	-0.5
	baz=309						
SONM	Songino Array	48.94	299	P	P	11 35 47.3	+0.1
	comp=Z,5.6nm,0.9s,baz=49,slow=8.2,SNR=29						
SONM				PcP	PcP	11 37 09.7	-1.3
	comp=Z,4.4nm,0.7s,baz=56,slow=2.3,SNR=8.7						
SONM				ScP	ScP	11 41 05.5	+2.7
	comp=Z,0.7nm,0.9s,baz=37,slow=3.6,SNR=3.4						
SONM				LR	LR	11 57 47.1	
	comp=Z,235nm,19.1s,baz=38,slow=38						
SONM	Songino Array	48.94	299	P	P	11 35 47.4	+0.1
SONM				IAmb	IAmb	11 35 48.6	
	comp=Z,4.2nm,0.8s						
UPNV	Upernavik	48.98	20	iP	P	11 35 46.2	-0.8
UPNV				IAmb	IAmb	11 35 47.4	
	comp=Z,13nm,0.5s						
SUSD	Miller	49.02	67	P	P	11 35 46.4	-1.4
	baz=307,SNR=5.2						
ZAK	Zakamensk	49.14	303	eP	P	11 35 48.3	-0.4
ZAK				e		11 37 12.0	
ZAK				pmax	pmax		
	comp=Z,16nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TUC	Tucson	49.54	87	P	P	11 35 51.7	-0.2
	baz=312						
MOY	Mondy	49.58	305	eP	P	11 35 52.0	-0.1
MOY				pmax	pmax		
	comp=Z,22nm,2.4s						
TIA	Tai'an	49.76	280	⇑P	P	11 35 54.0	+0.5
TIA				pmax	pmax		
	comp=Z,19nm,1.0s						
GUMO	Guam	49.90	236	LR	LR	11 56 00.6	
	comp=Z,43nm,19.0s,baz=102,slow=35						
HHC	Hu-ho-hao-te	50.18	288	eP	P	11 35 56.6	-0.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,6.9s						
HHC				LR	LR		
	comp=Z,190nm,16.2s						
HHC				LR	LR		
	comp=Z,220nm,16.2s						
HHC				LR	LR		
	comp=Z,150nm,16.2s						
KSCO	Kaye Shedlock’	50.19	75	P	P	11 35 56.5	-0.5
	baz=309						
T25A	Trinidad	50.31	78	P	P	11 35 57.6	-0.3
	baz=310						
SPA0	Spitsbergen Ar	50.43	357	eP	P	11 35 58.3	+0.2
ANMO	Albuquerque	50.47	81	⇑eP	P	11 35 59.7	+0.5
ANMO	Albuquerque	50.47	81	P	P	11 35 58.9	-0.3
	baz=311						
Y22D	IRIS PASSCAL I	50.76	82	P	P	11 36 01.2	-0.1
	baz=312						
ECSD	EROS Data Cent	50.79	66	P	P	11 36 00.5	-0.8
ECSD	EROS Data Cent	50.79	66	P	P	11 36 00.7	-0.6
	baz=308						
DAG	Danmarks Havn	51.10	7	iP	P	11 36 01.5	-1.6
DAG				IAmb	IAmb	11 36 02.8	
	comp=Z,2.0nm,0.9s						
BGNE	Belgrade	51.35	69	P	P	11 36 04.3	-1.2
	baz=309						
NJ2	Nanjing	51.44	275	eP	P	11 36 06.1	-0.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TIY	Taiyuan	51.65	285	eP	P	11 36 09.6	+1.8
SPMN	Marine on St.	52.02	63	P	P	11 36 09.7	-0.7
	baz=308						
CBKS	Cedar Bluff	52.05	73	P	P	11 36 10.5	-0.3
	baz=310						
SUMG	Summit	52.53	15	iP	P	11 36 14.0	-0.3
SUMG				IAmb	IAmb	11 36 14.5	
	comp=Z,3.7nm,0.5s						
DBG	Daneborg	53.31	8	iP	P	11 36 17.4	-2.1
DBG				IAmb	IAmb	11 36 18.9	
	comp=Z,3.3nm,0.8s						
MSTX	Muleshoe	53.40	80	P	P	11 36 21.1	+0.3
	baz=312						
KSU1	Kansas State U	53.73	71	P	P	11 36 22.2	-0.9
	baz=311						
ICESG	Greenland Ices	55.26	18	iP	P	11 36 33.1	-1.0
ICESG				IAmb	IAmb	11 36 33.9	
	comp=Z,9.0nm,0.5s						
WHN	Wuhan	55.28	277	P	P	11 36 36.1	+1.7
ZALV	Zalesovo Beam	55.84	315	P	P	11 36 38.0	-0.1
	comp=Z,1.2nm,0.4s,baz=32,slow=8.7,SNR=4.0						
ZALV				PcP	PcP	11 37 37.4	+0.8
	comp=Z,3.7nm,0.6s,baz=46,slow=4.9,SNR=10						
ZALV				LR	LR	12 02 21.2	
	comp=Z,134nm,18.3s,baz=44,slow=38						
ZALV	Zalesovo Beam	55.84	315	P	P	11 36 37.6	-0.5
SSLB	Suanglung	55.95	266	P	P	11 36 39.7	+0.3
TX31	Lajitas Ar. Si	56.02	84	P	P	11 36 40.0	+0.2
TXAR	Lajitas Array	56.02	84	P	P	11 36 39.7	-0.1
	comp=Z,2.2nm,0.6s,baz=300,slow=5.3,SNR=14						
TXAR				ScP	ScP	11 41 35.4	+1.7
	comp=Z,0.3nm,0.8s,baz=288,slow=3.7,SNR=3.0						
P40A	Paris	56.11	67	P	P	11 36 39.7	-0.6
XAN	Xi'an	56.22	284	P	P	11 36 41.8	+0.6
XAN				pP	pwP	11 36 55.8	-0.4
XAN				pmax	pmax		
	comp=Z,31nm,1.0s						
XAN				pmax	pmax		
	comp=Z,170nm,3.7s						
XAN				LR	LR		
	comp=Z,250nm,19.9s						
XAN				LR	LR		
	comp=Z,220nm,20.1s						
XAN				LR	LR		
	comp=Z,200nm,19.2s						
HDIL	Hopedale	57.00	65	P	P	11 36 46.1	-0.5
DGZ	Jazzator, Alta	57.52	310	c iP	P	11 36 50.6	+0.3
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CCM	Cathedral Cave	57.56	68	P	P	11 36 49.1	-1.5
	baz=313						
U40A	Yellville	57.77	71	P	P	11 36 50.7	-1.5
	baz=313						
LZH	Lanzhou	57.87	289	eP	P	11 36 54.1	+1.1
LZH				pP	pP	11 37 04.0	+1.0
LZH				sP	pwP	11 37 09.5	+1.1
LZH				pmax	pmax		
	comp=Z,22nm,1.4s						
LZH				LR	LR		
	comp=Z,190nm,14.6s						
LZH				LR	LR		
	comp=Z,280nm,15.6s						
LZH				LR	LR		
	comp=Z,180nm,15.7s						
GTA	Gaotai	57.96	294	⇓P	P	11 36 54.0	+0.5
GTA				pP	sP	11 37 05.9	-3.0
GTA				sP	pwP	11 37 11.3	+2.2
GTA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
W39A	Magazine	58.01	72	P	P	11 36 53.5	-0.3
	baz=313						
SCHQ	Schefferville	58.25	40	P	P	11 36 55.3	+0.1
	comp=Z,7.3nm,0.8s,baz=285,slow=7.2,SNR=7.2						
SCHQ				LR	LR	12 01 43.4	
	comp=Z,142nm,18.5s,baz=308,slow=36						
T42A	Van Buren	58.35	69	P	P	11 36 55.2	-0.9
T42A				IAmb	IAmb	11 37 07.9	
	comp=Z,4.1nm,0.8s						
SFIN	Lafayette	58.36	64	P	P	11 36 55.3	-0.9
	baz=313						
ARA0	ARCESS Array S	58.40	352	eP	P	11 36 55.2	-0.8
ARCES	ARCESS Array B	58.40	352	P	P	11 36 55.4	-0.6
	comp=Z,11nm,0.8s,baz=21,slow=8.1,SNR=20						
ARCES				PcP	PcP	11 37 46.3	-0.1
	comp=Z,10nm,0.7s,baz=15,slow=4.7,SNR=8.5						
ARCES	ARCESS Array B	58.40	352	P	P	11 36 56.0	0.0
FCAR	Ozark Folk Cen	58.52	71	P	P	11 36 56.5	-0.9
MIAR	Mount Ida	58.58	73	P	P	11 36 57.7	-0.1
	baz=314						
JETT	Jettan, Norway	58.77	354	eP	P	11 36 59.8	+1.1
TRO	Tromso	58.79	355	eP	P	11 36 58.9	+0.2
W41B	Gary Mavity, V	58.94	71	P	P	11 36 59.5	-0.7
	baz=314						
KTK1	Kautokeino	59.10	353	eP	P	11 37 00.5	-0.3
P49A	Miami Univ. Ec	60.27	63	P	P	11 37 07.9	-1.5
	baz=314						
WCI	Wyandotte Cave	60.29	65	P	P	11 37 08.8	-0.7
	baz=314						
LOF	Lofoten	60.55	357	eP	P	11 37 10.6	-0.2
STEI	Steigen	60.68	356	eP	P	11 37 11.7	0.0
T47A	Sharon Grove	60.69	67	P	P	11 37 12.4	+0.2
KURK	Kurchatov	60.82	316	c iP	P	11 37 13.0	+0.1
KURK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KURK	Kurchatov	60.82	316	P	P	11 37 13.1	+0.1
M53A	WI Miller and	61.15	59	P	P	11 37 15.4	+0.1
	baz=315						
FAUS	Fauske	61.23	356	eP	P	11 37 15.2	-0.2
WMQ	Urumqi	61.47	305	eP	P	11 37 18.8	+1.2
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,89nm,5.9s						
O53A	New Philadelph	61.70	60	P	P	11 37 19.0	0.0
	baz=315						
NBB30	Finnes	61.70	356	eP	P	11 37 17.3	-1.3
N54A	Moraine State	61.85	59	P	P	11 37 20.0	0.0
	baz=315						
MK31	Makanchi Array	62.00	311	P	P	11 37 20.8	-0.3
MK31				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MK31	Makanchi Array	62.00	311	P	P	11 37 20.8	-0.3
MK31				IAmb	IAmb	11 37 22.1	
	comp=Z,8.0nm,1.1s						
MKAR	Makanchi Array	62.00	311	P	P	11 37 20.8	-0.3
	comp=Z,5.3nm,0.4s,baz=48,slow=6.1,SNR=136						
MKAR				LR	LR	12 04 45.0	
	comp=Z,107nm,19.9s,baz=34,slow=36						
LONY	Lake Ozonia	62.05	53	P	P	11 37 21.4	+0.1
LONY	Lake Ozonia	62.05	53	P	P	11 37 20.2	-1.1
	baz=316,SNR=5.2						
P53A	Whipple	62.14	61	P	P	11 37 22.5	+0.5
NBB40	Tonnes	62.19	357	eP	P	11 37 22.7	+0.8
KONS	Konsvik	62.20	357	eP	P	11 37 21.9	-0.1
MOR8	Moi Rana	62.47	356	eP	P	11 37 22.2	-1.6
BRVK	Borovoye	62.49	322	d iP	P	11 37 24.6	+0.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRVK	Borovoye	62.49	322	P	P	11 37 25.0	+0.8
BRVK				IAmb	IAmb	11 37 39.9	
	comp=Z,5.8nm,0.8s						
MCWV	Mont Chateau	62.85	60	P	P	11 37 25.5	-1.2
	baz=316						
GYA	Guiyang	62.93	279	⇑P	P	11 37 42.3	+15
GYA				pmax	pmax		
	comp=Z,21nm,0.7s						
TZTN	Tazewell	63.02	65	P	P	11 37 27.2	-0.7
	baz=316						
BINY	Binghamton	63.07	55	P	P	11 37 27.3	-0.9
	baz=316,SNR=9.3						
O56A	Blue Knob Stat	63.11	59	P	P	11 37 28.5	0.0
	baz=316						
SSPA	Standing Stone	63.20	58	P	P	11 37 29.9	+0.8
SSPA	Standing Stone	63.20	58	P	P	11 37 28.9	-0.1
	baz=316						
FPAL	Fort Paine	63.27	68	P	P	11 37 29.4	-0.2
LBNH	Lisbon	63.63	52	P	P	11 37 31.0	-0.9
	baz=317						
ARU	Arti	63.86	330	c iP	P	11 37 33.4	+0.2
ARU				*PP	sP	11 37 46.8	-2.2
ARU						11 38 06.8	
ARU				S	S	11 46 06.0	+0.6
ARU				SS	SS	11 50 09.9	-3.1
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARU	Arti	63.86	330	P	P	11 37 33.3	+0.2
P57A	Homestead Farm	63.97	59	P	P	11 37 35.3	+1.2
N59A	State Game Lan	64.11	56	P	P	11 37 35.4	+0.3
	baz=317						
NSS	Namsos	64.21	357	eP	P	11 37 36.3	+1.0
L61B	Northampton	64.57	53	P	P	11 37 38.4	+0.4
	baz=317						
KIRV	Kirov	64.59	336	⇓eP	P	11 37 38.1	+0.3
KLMR	Klimovskoe	64.72	342	eP	P	11 37 36.9	-1.7
KLMR				pmax	pmax		
	comp=Z,17nm,1.4s						
KLMR	Klimovskoe	64.72	342	eP	P	11 37 37.0	-1.7
KLMR				AMP		11 37 48.3	
	comp=Z,17nm,1.4s						
PAL	Palisades	65.01	55	P	P	11 37 40.4	-0.5
	baz=317						
KMSC	Kings Mountain	65.28	64	P	P	11 37 42.0	-0.8
	baz=317						
GOGA	Godfrey	65.32	67	P	P	11 37 42.5	-0.5
	baz=317						
FINES	FINESS Array B	66.22	349	P	P	11 37 47.7	-0.7
	comp=Z,4.2nm,0.6s,baz=14,slow=7.1,SNR=15						
FINES				LR	LR	12 09 46.5	
	comp=Z,67nm,19.6s,baz=12,slow=39						
FINES	FINESS Array B	66.22	349	P	P	11 37 47.3	-1.1
MOL	Molde	66.28	359	eP	P	11 37 49.2	+0.5
KMI	Kunming	66.32	281	⇑P	P	11 37 51.9	+2.1
KMI				pP	pwP	11 38 04.8	-0.4
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
AKN	Aaknes	66.68	359	eP	P	11 37 51.4	+0.1
DOMB	Dombas	66.78	358	eP	P	11 37 52.4	+0.4
NC405	NORSAR Array S	67.64	357	P	P	11 37 56.6	-0.9
NB2	NORSAR Subarra	67.73	357	P	P	11 37 57.8	-0.3
	comp=Z,5.8nm,0.7s,baz=7.4,slow=6.9						
NB2	NORSAR Subarra	67.73	357	P	P	11 37 57.8	-0.3
	baz=7.4,slow=6.9						
NOA	NORSAR Array B	67.73	357	P	P	11 37 58.0	-0.1
	comp=Z,4.4nm,0.6s,baz=4.5,slow=6.4,SNR=23						
NOA				LR	LR	12 08 08.1	
	comp=Z,34nm,19.9s,baz=345,slow=36						
NOA	NORSAR Array B	67.73	357	P	P	11 37 58.0	-0.1
SKAR	Skarslia	68.16	358	eP	P	11 38 01.2	+0.4
BOOM	Boomskoye usch	68.23	311	P	P	11 38 02.4	+0.8
BOOM				pmax	pmax		
	comp=Z,14nm,1.4s						
BOOM	Boomskoye usch	68.23	311	P	P	11 38 02.4	+0.8
AAK	Ala-Archa	68.78	312	P	P	11 38 05.3	+0.2
	comp=Z,3.5nm,0.4s,baz=33,slow=0.6,SNR=16						
AAK	Ala-Archa	68.78	312	c iP	P	11 38 06.0	+0.9
AAK				pmax	pmax		
	comp=Z,31nm,1.3s						
AAK	Ala-Archa	68.78	312	P	P	11 38 06.2	+1.1
AAK				IAmb	IAmb	11 38 07.1	
	comp=Z,10nm,1.1s						
ODD1	Odda	68.95	359	eP	P	11 38 06.3	+0.5
AKTO	Aktyubinsk	69.08	327	P	P	11 38 06.7	+0.1
	comp=Z,9.4nm,0.5s,baz=60,slow=7.4,SNR=34						
AKTO				LR	LR	12 11 55.6	
	comp=Z,98nm,19.0s,baz=36,slow=39						
SIJI	Sorong	69.25	240	P	P	11 38 08.1	0.0
	comp=Z,15nm,0.8s,baz=56,slow=7.3						
ABKAR	Akbulak array	69.41	325	P	P	11 38 09.4	+0.8
ABKAR				IAmb	IAmb	11 38 33.8	
	comp=Z,5.7nm,0.8s						
ABKAR	Akbulak array	69.41	325	P	P	11 38 09.0	+0.3
BLS5	Blasjo	69.45	359	eP	P	11 38 09.2	+0.5
LSA	Lhasa	69.87	292	P	P	11 38 14.6	+2.2
PMOR	Pomariorio Ree	70.17	153	eT	T	12 55 13.5	
	comp=Z,3.9nm,0.2s						
KKAR	Karatay Array	70.22	315	P	P	11 38 14.0	+0.2
KKAR	Karatay Array	70.22	315	P	P	11 38 14.0	+0.2
KSH	Kashi	70.52	309	P	P	11 38 20.4	+4.6
KSH				pmax	pmax		
	comp=Z,23nm,1.0s						
HOMB	Homborsund	70.58	358	eP	P	11 38 16.0	+0.4
PPT	Papeete	72.15	155	LR	LR	12 04 11.0	
	comp=Z,99nm,21.2s,baz=329,slow=31						
PPT2	Papeete2	72.17	155	eLR	LR	12 00 23.0	
	comp=Z,123nm,21.5s						
PPT2	Papeete2	72.17	155	eT	T	12 57 43.5	
	comp=Z,4.5nm,0.3s						
LPSR	Galich'ya Gora	72.52	339	eP	P	11 38 26.2	-1.2
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
VRH	Novokhopyorsk	73.17	337	eP	P	11 38 30.7	-0.6
VRH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GAR	Garm	73.60	313	P	P	11 38 35.0	+0.8
CMAR	Chiang Mai Arr	73.62	279	P	P	11 38 34.6	+0.1
	comp=Z,1.3nm,0.3s,baz=67,slow=33,SNR=6.1						
CMAR				PP	PP	11 41 18.5	-0.2
	comp=Z,0.5nm,0.4s,baz=50,slow=8.4,SNR=1.4						
CMAR				LR	LR	12 11 01.6	
	comp=Z,41nm,21.2s,baz=60,slow=36						
TAPN	Taplejung	73.62	293	eP	P	11 38 35.9	+1.1
	comp=Z,91nm,0.8s						
VSR	Storozhevoye	73.76	339	eP	P	11 38 33.8	-1.0
VSR				pmax	pmax		
	comp=Z,30nm,1.1s						
GUN	Gumba	74.24	295	eP	P	11 38 39.6	+1.2
	comp=Z,150nm,0.5s						
JIRN	Jiri	74.25	295	eP	P	11 38 39.9	+1.4
	comp=Z,186nm,0.7s						
RAMN	Ramite	74.56	294	eP	P	11 38 41.1	+0.9
	comp=Z,112nm,0.5s						
KKN	Kakani	74.67	295	eP	P	11 38 41.8	+1.0

	comp=Z,44nm,0.6s						
PKI	Pulchoki	74.77	295	*e*P	P	11 38 42.1	+0.6
PKIN	Phulchoki	74.77	295	*e*P	P	11 38 42.0	+0.6
	comp=Z,21nm,0.4s						
GKN	Gorkha	74.87	296	*e*P	P	11 38 42.5	+0.6
	comp=Z,23nm,0.4s						
BSEG	Bad Segeberg	74.87	357	*e*P	P	11 38 42.2	+1.0
	comp=Z,18nm,0.8s,baz=4.7,slow=5.7						
DANN	Dangsing	75.09	297	*e*P	P	11 38 44.3	+1.0
	comp=Z,189nm,0.8s						
KOLN	Koldanda	75.63	296	*e*P	P	11 38 47.1	+0.8
PYUN	Piuthan	75.72	297	*e*P	P	11 38 47.6	+0.8
	comp=Z,196nm,0.9s						
RETH	Rethem/Aller,	76.10	358	*e*P	P	11 38 49.1	+0.9
	comp=Z,15nm,1.2s,baz=4.7,slow=5.7						
RUE	Ruedersdorf	76.17	355	*e*P	P	11 38 49.4	+0.8
	comp=Z,29nm,0.5s,baz=4.7,slow=5.7						
AKASG	Malin Array Be	76.20	345	P	P	11 38 48.1	-0.8
	comp=Z,3.9nm,0.4s,baz=19,slow=6.0,SNR=24						
AKASG				LR	LR	12 16 44.6	
	comp=Z,64nm,19.1s,baz=15,slow=39						
AKASG	Malin Array Be	76.20	345	*i* P	P	11 38 48.0	-0.9
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
AKASG	Malin Array Be	76.20	345	P	P	11 38 48.2	-0.6
AKBB	Malin Array Si	76.20	345	*ce*P	P	11 38 47.8	-1.1
NRDL	Niedersach Rie	76.32	357	*e*P	P	11 38 50.2	+0.8
	comp=Z,8.9nm,0.9s,baz=4.7,slow=5.7						
FLTG	Flechtingen	76.44	356	*e*P	P	11 38 50.5	+0.3
	comp=Z,16nm,1.0s,baz=4.7,slow=5.7						
NIL	Nilore	76.49	307	P	P	11 38 52.3	+1.4
NIL				pmax	pmax		
	comp=Z,37nm,0.7s						
NIL	Nilore	76.49	307	P	P	11 38 52.3	+1.4
IBBN	Ibbenburen	76.56	359	*e*P	P	11 38 52.4	+1.5
	comp=Z,41nm,1.1s,baz=4.7,slow=5.7						
ASSE	Asse, Remlinge	76.66	357	*e*P	P	11 38 52.6	+1.2
	comp=Z,10.0nm,1.1s,baz=4.7,slow=5.7						
CLZ	Clausthal	76.96	357	*e*P	P	11 38 54.7	+1.5
	comp=Z,25nm,0.9s,baz=4.7,slow=5.7						
GTTG	Gottingen	77.27	357	*e*P	P	11 38 56.3	+1.4
	comp=Z,21nm,1.0s,baz=4.7,slow=5.7						
CLL	Collm	77.38	355	*i* P	P	11 38 56.0	+0.5
CLL				pmax	pmax		
	comp=Z,11nm,0.7s						
CLL	Collm	77.38	355	*i* P	P	11 38 56.0	+0.5
	comp=Z,11nm,0.7s						
CLL	Collm	77.38	355	*e*P	P	11 38 56.2	+0.6
	comp=Z,11nm,0.7s,baz=4.7,slow=5.7						
BUG	Bochum--Univer	77.44	359	*e*P	P	11 38 56.8	+1.0
	comp=Z,14nm,0.9s,baz=4.7,slow=5.7						
NEUB	Neuenburg	77.54	356	*e*P	P	11 38 57.5	+1.1
	comp=Z,21nm,0.6s,baz=4.7,slow=5.7						
TBI	Tubuai	77.71	156	*e*LR	LR	12 02 48.2	
	comp=Z,99nm,24.0s						
FBE	Freiberg	77.75	355	*e*P	P	11 38 58.7	+1.1
	comp=Z,12nm,0.8s,baz=4.7,slow=5.7						
BRG	Berggiesshubel	77.76	354	*e*P	P	11 38 58.4	+0.6
	comp=Z,12nm,0.8s,baz=4.7,slow=5.7						
BRG	Berggiesshubel	77.76	354	*i* P	P	11 38 58.3	+0.6
BRG				Amp		11 38 59.5	
	comp=Z,10nm,0.7s						
KBL	Kabul	77.81	311	P	P	11 38 58.5	0.0
KBL				pmax	pmax		
	comp=Z,27nm,1.0s						
KBL	Kabul	77.81	311	P	P	11 38 58.5	0.0
CHVC	Chvalec	77.90	353	*e*P	P	11 38 58.7	+0.2
OSTC	Ostas	77.92	353	*e*P	P	11 38 59.6	+1.0
UPC	Upice	77.99	353	*e*P	P	11 38 59.5	+0.6
UPC	Upice	77.99	353	*e*P	P	11 38 59.5	+0.6
MOX	Moxa	78.11	356	*e*P	P	11 39 00.7	+1.0
	comp=Z,13nm,1.1s,baz=4.7,slow=5.7						
DPC	Dobruska-Polom	78.12	353	*e*P	P	11 39 00.5	+0.8
DPC	Dobruska-Polom	78.12	353	*e*P	P	11 39 00.5	+0.8
PLN	Plauen	78.25	356	*e*P	P	11 39 01.3	+1.0
	comp=Z,7.9nm,1.1s,baz=4.7,slow=5.7						
MEM	Membach	78.28	360	*d*P	P	11 39 01.5	+1.0
	comp=Z,13nm,1.0s						
TANN	Tannenbergstha	78.30	355	*e*P	P	11 39 01.8	+1.1
	comp=Z,7.8nm,1.3s,baz=4.7,slow=5.7						
BTNL	Ternell	78.30	360	*d*P	P	11 39 01.9	+1.2
BSTI	Sart Tilman	78.31	360	*d*P	P	11 39 01.9	+1.2
AHRW	Bad Neuenahr-A	78.34	359	*e*P	P	11 39 02.4	+1.5
	comp=Z,17nm,0.7s,baz=4.7,slow=5.7						
KRLC	Kraliky	78.36	353	*e*P	P	11 39 01.2	+0.1
KRLC	Kraliky	78.36	353	*e*P	P	11 39 01.2	+0.1
GUNZ	Gunzen	78.36	355	*e*P	P	11 39 02.2	+1.1
	comp=Z,6.5nm,1.0s,baz=4.7,slow=5.7						
WERN	Wernitzgruen	78.43	355	*e*P	P	11 39 02.7	+1.2
	comp=Z,18nm,1.1s,baz=4.7,slow=5.7						
BCLA	Clavier	78.47	0	*d*P	P	11 39 02.4	+0.7
	comp=Z,9.3nm,1.0s						
NKC	Novy Kostel	78.48	355	*e*P	P	11 39 02.2	+0.5
NKC	Novy Kostel	78.48	355	*e*P	P	11 39 02.2	+0.5
BGES	Gesves	78.51	0	*d*P	P	11 39 02.0	+0.2
	comp=Z,7.3nm,1.0s						
BMRD	Maredsous	78.59	0	*d*P	P	11 39 02.9	+0.6
	comp=Z,14nm,1.0s						
MORC	Moravsky Berou	78.59	352	⇑P	P	11 39 02.4	+0.1
MORC	Moravsky Berou	78.59	352	⇑P	P	11 39 02.4	+0.1
PRU	Pruhonice	78.61	354	*e*P	P	11 39 03.2	+0.8
PRU	Pruhonice	78.61	354	*e*P	P	11 39 03.2	+0.8
TNS	Taunus Mts	78.64	358	*e*P	P	11 39 03.7	+1.1
	comp=Z,18nm,0.8s,baz=4.7,slow=5.7						
RCHB	Rochefort	78.74	0	*d*P	P	11 39 03.1	+0.1
	comp=Z,11nm,0.9s						
DOU	Dourbes	78.79	1	*d*P	P	11 39 03.9	+0.5
	comp=Z,11nm,1.0s						
SORM	Soroca	78.83	345	⇑P	P	11 39 03.1	-0.5
SORM	Soroca	78.83	345	⇑P	P	11 39 03.1	-0.5
ROTZ	Rotzenmuhle	78.96	356	*e*P	P	11 39 05.4	+1.1
	comp=Z,1.0nm,0.7s,baz=4.7,slow=5.7						
CRVS	Cervenica-Dubn	79.06	349	*e*P	P	11 39 04.7	-0.2
GRF	Grafenberg Arr	79.08	356	*e*P	P	11 39 06.6	+1.6
	comp=Z,26nm,0.7s,baz=4.7,slow=5.7						
GRF				*e*pP	sP	11 39 20.0	-0.9
UZH	Uzhgorod	79.22	349	*e*P	P	11 39 04.0	-1.7
UZH				*e*		11 39 11.9	
UZH				*e*		11 39 16.0	
UZH				*i*		11 39 21.4	
WLF	Walferdange	79.23	360	*d*P	P	11 39 07.2	+1.5
WLF	Walferdange	79.23	360	*e*P	P	11 39 07.4	+1.6
	comp=Z,14nm,0.8s,baz=4.7,slow=5.7						
KHC	Kasperske Hory	79.52	355	*c i*P	P	11 39 08.0	+0.6
KHC				pmax	pmax		
	comp=Z,20nm,1.0s						
KHC	Kasperske Hory	79.52	355	*e*P	P	11 39 08.3	+0.9
WET	Wettzell	79.55	355	*e*P	P	11 39 08.6	+1.0
	comp=Z,10nm,1.4s,baz=4.7,slow=5.7						
KIV	Kislovodsk	79.61	334	*e*P	P	11 39 06.8	-1.3
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GEYT	Alibeck	79.75	320	P	P	11 39 08.2	-0.6
	comp=Z,1.7nm,0.4s,baz=233,slow=29,SNR=4.6						
GEYT				LR	LR	12 19 01.8	
	comp=Z,116nm,18.9s,baz=95,slow=39						
KBZ	Khabaz	79.76	333	P	P	11 39 09.2	+0.4
	comp=Z,2.8nm,0.8s,baz=222,slow=3.5,SNR=3.6						
KBZ				LR	LR	12 20 55.6	
	comp=Z,75nm,18.4s,baz=29,slow=40						
KBZ	Khabaz	79.76	333	⇑*e*P	P	11 39 09.7	+1.0
CKRC	Cesky Krumlov	79.78	354	*e*P	P	11 39 11.0	+2.1
GEC2	GERESS Array S	79.80	354	*e*P	P	11 39 09.8	+0.7
	comp=Z,8.1nm,1.1s,baz=4.7,slow=5.7						
GERES	GERESS Array B	79.80	354	P	P	11 39 09.0	0.0
	comp=Z,5.5nm,0.9s,baz=20,slow=4.7,SNR=28						
GERES	GERESS Array B	79.80	354	P	P	11 39 09.0	0.0
GERES	GERESS Array B	79.80	354	P	P	11 39 09.6	+0.6
BUR08	Bucovina Ar. S	79.80	347	P	P	11 39 09.6	+0.5
BUR08				IAmb	IAmb	11 39 11.1	
	comp=Z,7.7nm,1.1s						
BURAR	Bucovina Array	79.83	347	⇑P	P	11 39 09.5	+0.3
BURAR	Bucovina Array	79.83	347	⇑P	P	11 39 09.5	+0.3
BURAR	Bucovina Array	79.83	347	P	P	11 39 09.7	+0.5
BURAR				IAmb	IAmb	11 39 11.1	
	comp=Z,8.1nm,0.9s						
MODS	Modra-Piesok	80.00	352	*e*P	P	11 39 10.8	+0.8
BFO	Black Forest	80.53	358	*e*P	P	11 39 13.8	+0.9
	comp=Z,10nm,1.0s,baz=4.7,slow=5.7						
CONA	Conrad Observa	80.56	353	*i* P	P	11 39 13.8	+0.6
	comp=Z,8.1nm,1.1s						
TESR	Tescani	80.69	345	⇑P	P	11 39 13.1	-0.6
MOA	Molln	80.75	354	*e*P	P	11 39 16.3	+2.2
	comp=Z,1.9nm,0.7s						
VLDR	Vladesti	81.10	344	⇑P	P	11 39 16.2	+0.3
VRI	Vrincioaia	81.30	345	⇓P	P	11 39 15.3	-1.7
VRI	Vrincioaia	81.30	345	⇓P	P	11 39 15.3	-1.7
PLOR	Plostina	81.33	345	⇓P	P	11 39 16.9	-0.3
PLOR	Plostina	81.33	345	⇓P	P	11 39 16.9	-0.3
COVR	Voineasa-Covas	81.41	345	⇓P	P	11 39 19.1	+1.5
DOPR	Dopca	81.41	346	⇓P	P	11 39 19.1	+1.5
WATA	Walderalm	81.42	356	*i* P	P	11 39 18.8	+1.0
	comp=Z,6.2nm,0.9s						
MOTA	Moosalm	81.43	356	*i* P	P	11 39 18.7	+0.8
	comp=Z,4.0nm,0.7s						
WTTA	Wattenberg	81.49	356	*i* P	P	11 39 19.5	+1.3
	comp=Z,5.1nm,0.7s						
SQTA	Sankt Quirin	81.55	356	*i* P	P	11 39 19.8	+1.3
	comp=Z,6.0nm,0.7s						
KBA	Koelnbreinsper	81.58	355	*e*P	P	11 39 20.3	+1.6
	comp=Z,18nm,0.9s						
SIRR	Siria	81.63	349	⇑P	P	11 39 18.2	-0.5
CFR	Carcaliu	81.74	344	⇑P	P	11 39 19.5	+0.2
CFR	Carcaliu	81.74	344	⇑P	P	11 39 19.5	+0.2
FETA	Feichten	81.77	356	*e*P	P	11 39 20.7	+1.1
	comp=Z,9.0nm,1.0s,SNR=10						
MLR	Muntele Rosu	81.79	346	⇑P	P	11 39 21.5	+1.7
MLR	Muntele Rosu	81.79	346	P	P	11 39 21.1	+1.3
	comp=Z,8.3nm,0.9s,baz=184,slow=2.2,SNR=10.0						
SOKA	Soboth	81.87	353	*e*P	P	11 39 21.1	+1.0
	comp=Z,9.0nm,0.8s,SNR=6.9						
ABTA	Abfaltersbach	81.96	355	*e*P	P	11 39 21.1	+0.6
	comp=Z,5.9nm,0.9s						
VOIR		81.98	346	⇑P	P	11 39 22.2	+1.5
VOIR		81.98	346	⇑P	P	11 39 22.2	+1.5
TPGR	Topolog	82.00	344	⇑P	P	11 39 20.8	+0.1
OBKA	Obir	82.07	354	*e*P	P	11 39 22.1	+0.9
	comp=Z,6.9nm,0.9s						
HARR	Harsova	82.25	344	⇑P	P	11 39 23.2	+1.2
HARR	Harsova	82.25	344	⇑P	P	11 39 23.2	+1.2
TIRR	Tirgusor	82.39	344	⇑P	P	11 39 22.8	+0.1
TIRR	Tirgusor	82.39	344	⇑P	P	11 39 22.8	+0.1
HERR	Herculane	82.89	348	⇑P	P	11 39 22.9	-2.5
FRGS	Fruska Gora	82.94	350	*e*P	P	11 39 26.1	+0.5
TEKS	Tekeris	83.57	350	*e*P	P	11 39 37.4	+8.5
DIVS	Divibare	83.96	350	*e*P	P	11 39 31.2	+0.2
WRAB	Tennant Creek	83.96	227	⇑*e*P	P	11 39 29.1	-1.9
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	83.98	227	P	P	11 39 30.1	-1.0
	comp=Z,0.8nm,0.5s,baz=31,slow=5.7,SNR=9.5						
BOVS	Bovan	84.21	348	⇑P	P	11 39 31.9	-0.2
BOVS	Bovan	84.21	348	*e*P	P	11 39 31.7	-0.4
BBLS	Lazići	84.26	350	*e*P	P	11 39 32.1	-0.4
ZAPS	Zavoj	84.44	347	*e*P	P	11 39 33.2	-0.2
IVAS	Ivanjica	84.46	349	*e*P	P	11 39 33.4	-0.1
SELS	Selova	84.70	349	*e*P	P	11 39 32.7	-2.0
SJES	Sjenica	84.79	349	*e*P	P	11 39 36.0	+0.8
BARS	Barje	85.00	348	*e*P	P	11 39 36.2	0.0
VTS	Vitosha	85.01	347	⇑P	P	11 39 36.8	+0.4
VTS	Vitosha	85.01	347	⇑P	P	11 39 36.8	+0.4
BOSS	Bosilegrad	85.23	347	*e*P	P	11 39 37.8	+0.5
PDG	Podgorica	85.69	350	⇑P	P	11 39 38.9	-0.7
BRTR	Keskin Array B	85.88	339	P	P	11 39 41.0	+0.3
	comp=Z,1.6nm,0.8s,baz=38,slow=6.3,SNR=5.7						
BRTR				LR	LR	12 24 38.5	
	comp=Z,69nm,18.3s,baz=16,slow=40						
PGAV	Gavieira, Arco	86.17	10	*e*P	P	11 39 45.1	+3.0
	comp=Z,35nm,1.7s						
HYB	Hyderabad	86.62	294	*i* P	P	11 39 44.0	-0.6
HYB				*e*pP	pwP	11 39 59.0	-1.3
POLO	Lamas de Olo	86.81	10	*e*P	P	11 39 45.8	+0.6
	comp=Z,23nm,1.3s						
PVRL	Vila Real	86.91	10	*e*P	P	11 39 45.5	-0.2
	comp=Z,58nm,1.6s						
MVO	Moncorvo	87.09	9	*e*P	P	11 39 47.0	+0.4
	comp=Z,36nm,1.5s						
AS31	Alice Springs	87.41	226	P	P	11 39 48.1	0.0
ASAR	Alice Springs	87.41	226	P	P	11 39 48.0	-0.1
	comp=Z,2.2nm,0.7s,baz=21,slow=5.1,SNR=24						
ASAR				LR	LR	12 15 09.4	
	comp=Z,66nm,20.3s,baz=60,slow=33						
ASAR	Alice Springs	87.41	226	P	P	11 39 48.0	-0.1
ASAR	Alice Springs	87.41	226	P	P	11 39 47.4	-0.7
PVIS	Viseu	87.44	10	*e*P	P	11 39 48.2	-0.1
	comp=Z,38nm,1.9s						
PCAS	Casmilo, Conde	88.03	11	*e*P	P	11 39 52.0	+1.0
	comp=Z,79nm,1.8s						
ESDC	Sonseca Array	88.85	7	P	P	11 39 54.3	-0.6
	comp=Z,4.4nm,0.9s,baz=349,slow=4.6,SNR=16						
ESDC				LR	LR	12 21 16.7	
	comp=Z,30nm,18.5s,baz=260,slow=37						
ESDC	Sonseca Array	88.85	7	P	P	11 39 55.3	+0.4
ESDC				IAmb	IAmb	11 39 56.6	
	comp=Z,5.5nm,1.1s						
STKA	Stephens Creek	91.51	216	LR	LR	12 19 24.0	
	comp=Z,65nm,18.4s,baz=26,slow=34						
WSAR	Wadi Sarin	92.19	313	P	P	11 40 10.3	-0.5
	comp=Z,13nm,0.8s,baz=31,slow=1.8,SNR=14						
TORD	Torodi Ar. Bea	115.56	4	PKP	PKPdf	11 45 42.2	-0.9
	comp=Z,0.4nm,0.4s,baz=340,slow=1.9,SNR=3.4						
TORD	Torodi Ar. Bea	115.56	4		PKiKP	11 45 42.0	-1.1
H03N2	Juan Fernandez	118.65	109	T	T	13 56 33.1	
	baz=316,slow=76						
H03N1	Juan Fernandez	118.66	109	T	T	13 56 27.7	
	baz=316,slow=76						
H03N3	Juan Fernandez	118.67	109	T	T	13 56 09.1	
	baz=316						
DBIC	Dimbokro	121.41	12	PKP	PKPdf	11 45 53.4	-0.9
	comp=Z,0.9nm,0.4s,baz=18,slow=12,SNR=1.6						
PLCA	Paso Flores	128.49	110	PKP	PKiKP	11 46 07.2	-0.6
	comp=Z,1.5nm,0.9s,baz=292,slow=3.6,SNR=4.5						
PLCA	Paso Flores	128.49	110		PKiKP	11 46 09.8	+2.0
MAW	Mawson	148.19	218	PKPbc	PKiKP	11 46 45.6	-1.3
	comp=Z,4.6nm,0.7s,baz=67,slow=1.8,SNR=6.3						
BOSA	Boshof	152.74	319	PKPbc	PKiKP	11 46 57.8	+0.1
	comp=Z,4.8nm,0.6s,baz=16,slow=2.4,SNR=15						
BOSA	Boshof	152.74	319		PKiKP	11 46 58.0	+0.2

NOU 15 11:30:37.0, 14°.87S×167°.13E, h67^{km}, MLv4.7/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.58	173	P	Pn	11 30 51.3	+0.9
DVP	Devils Point	3.02	160	P	Pn	11 31 21.6	-0.8
RTV	Rentapao	3.16	157	P	Pn	11 31 24.0	-0.4
LIFNC	LIFOU	5.88	179	P	Pn	11 32 01.9	+0.4
KOUNC	Koumac, New Ca	6.27	205	P	Pn	11 32 07.1	+0.3
YATNC	Mamie plateau,	7.15	182	P	Pn	11 32 17.7	-1.3
DZM	Mont Dzumac	7.19	185	P	Pn	11 32 19.0	-0.6
OUENC	Ouen Island, N	7.51	182	P	Pn	11 32 25.0	+1.1

NEIC 15 11:33:13.5±1.8, 15°.48S±0°.05×71°.0W±0°.2, h170^{km}±8^{km}, mb4.2/7, Error ellipse: s-maj=25.6km s-min=2.3km az=106.0

IDC 15 11:33:16.6±1.4, 15°.53S×70°.65W, h208^{km}±13^{km}, mb3.1/3, mb1 3.6/7, mb1mx3.3/26, mbtmp4.0/7, Error ellipse: s-maj=20.3km s-min=18.4km az=78.0

ISC 15 11:33:12.3±0.6, 15°.53S±0°.06×71°.05W±0°.08, h167^{km}, n29, σ1^s.70/35, mb3.8/6, 3C, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	2.91	106	P	Pn	11 34 02.1	+2.2
	5.6nm,0.3s,baz=282,slow=10,SNR=94						
LPAZ				S	Sn	11 34 38.3	+1.6
	2.2nm,0.3s,baz=30,slow=20,SNR=8.5						
LPAZ	La Paz	2.91	106	Pn	Pn	11 34 01.4	+1.5
AP01	Chacalluta	2.91	167	*e*P	Pn	11 34 01.0	+1.8
AP01				*i* S	Sn	11 34 36.3	+0.5
AP01	Chacalluta	2.91	167		Pn	11 34 01.1	+1.9
PB12	IPOC Station P	3.15	167	⇑*i*P	Pn	11 34 03.4	+1.1
PB12				*i* S	Sn	11 34 40.5	-0.9
PB16	IPOC Station P	3.16	152	⇑*i*P	Pn	11 34 05.6	+2.7
PB16				*i* S	Sn	11 34 44.7	+2.4
PB16	IPOC Station P	3.16	152		Pn	11 34 04.8	+1.9
PB11	IPOC Station P	4.42	163	⇑*i*P	Pn	11 34 18.8	+0.2
PB11				*i* S	Sn	11 35 07.9	-2.5
TA02	Huaiquique	4.80	170		Pn	11 34 23.6	+0.2
TA01	Diego Aracena	5.08	171		Pn	11 34 27.8	+0.7
PATCX	Punta Patache	5.34	171	Pn	Pn	11 34 30.9	+0.3
NNA	Nana	6.64	301	P	Pn	11 34 56.8	+9.0
	3.4nm,0.3s,baz=99,slow=13,SNR=4.3						
NNA				S	Sn	11 36 04.1	+1.4
	2.9nm,0.3s,baz=256,slow=19,SNR=4.4						
LVC	Limon Verde	7.33	164	P	Pn	11 34 58.4	+1.3
	14nm,0.3s,baz=340,slow=10,SNR=80						
LVC				S	Sn	11 36 15.2	-4.5
	9.1nm,0.3s,baz=237,slow=24,SNR=18						
ETMB	Extrema	7.38	40	Pn	Pn	11 34 57.3	-0.2
SAML	Samuel	10.09	51	Pn	Pn	11 35 32.3	-1.1
AC02	Maricunga	11.40	171		Pn	11 35 51.7	+0.9
MACA	Manacapuru-AM	15.97	41		Pn	11 36 46.4	-1.7
OTAV	Otavalo	17.29	334	P	P	11 37 03.7	+0.5
OTAV				IAmb	IAmb	11 37 17.7	
	comp=Z,13nm,1.4s						
PTGA	Pitinga	18.32	38	P	P	11 37 13.0	-1.0
	comp=Z,3.0nm,0.3s,baz=218,slow=13,SNR=46						
BOAV	Boa Vista	20.63	31	P	P	11 37 38.4	-0.5
BOAV				IAmb	IAmb	11 37 39.2	
	comp=Z,5.0nm,0.6s						
PLCA	Paso Flores	25.12	179	P	P	11 38 23.2	+1.4
	comp=Z,1.4nm,0.8s,baz=331,slow=12,SNR=5.1						
SJCC	San Jacinto, C	25.59	351	P	P	11 38 25.4	-0.8
SJCC				IAmb	IAmb	11 38 27.0	
	comp=Z,19nm,1.3s						
PDAR	Pinedale Array	67.94	330	P	P	11 43 54.1	+0.7
	comp=Z,0.3nm,0.8s,baz=126,slow=6.1,SNR=2.0						
SNAA	Sanae	68.56	162	P	P	11 43 57.8	+1.1
SNAA				IAmb	IAmb	11 43 59.6	
	comp=Z,4.7nm,1.2s						
QSPA	South Pole Qui	74.63	180	P	P	11 44 34.3	+1.2
QSPA				IAmb	IAmb	11 44 35.4	
	comp=Z,2.6nm,0.9s						
TORD	Torodi Ar. Bea	77.38	72	P	P	11 44 46.4	-3.0
	comp=Z,0.4nm,0.5s,baz=266,slow=6.8,SNR=2.4						
TORD	Torodi Ar. Bea	77.38	72	P	P	11 44 47.3	-2.1
SONM	Songino Array	147.71	3	PKPbc	PKPbc	11 52 36.6	-0.9
	comp=Z,0.7nm,0.7s,baz=341,slow=2.2,SNR=4.4						
SONM	Songino Array	147.71	3		PKPbc	11 52 37.7	+0.2

IDC 15 11:42:34.0±1.6, 4°.23S×129°.53E, h0^{km}, mb3.6/2, mb1 3.6/5, mb1mx3.3/28, mbtmp3.4/5, ML3.0/3, MS2.9/2, Ms1 2.9/2, ms1mx2.5/30, Error ellipse: s-maj=49.0km s-min=27.1km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.76	27	Pn	Pn	11 43 33.7	+0.4
	1.7nm,0.3s,baz=242,slow=23,SNR=9.0						
SIJI				Sn	Sn	11 44 17.0	-1.3
	2.6nm,0.3s,baz=357,slow=6.3,SNR=4.2						
BATI	Baumata	8.31	224	LR	LR	11 47 55.2	
	comp=Z,85nm,21.6s,baz=60,slow=39						
WRA	Warramunga Arr	16.30	164	Pn	Pn	11 46 23.3	-1.2
	0.0nm,0.3s,baz=344,slow=13,SNR=1.1						
WRA				LR	LR	11 52 31.1	
	comp=Z,39nm,18.5s,baz=190,slow=37						
ASAR	Alice Springs	19.78	168	P	Pn	11 47 06.7	-0.7
	0.1nm,0.3s,baz=350,slow=11,SNR=4.0						
CMAR	Chiang Mai Arr	37.64	308	P	P	11 49 52.2	+1.1
	0.4nm,0.3s,baz=135,slow=9.0,SNR=1.9						
MKAR	Makanchi Array	65.67	326	P	P	11 53 19.0	-1.3
	0.2nm,0.5s,baz=119,slow=7.5,SNR=2.1						

IDC 15 11:55:17.8±4.8, 3°.71S×131°.48E, h0^{km}, mb3.6/2, mb1 3.5/4, mb1mx3.1/37, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=368.3km s-min=28.8km az=73.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.37	170	Pn	Pn	11 59 07.6	-1.6
	0.1nm,0.3s,baz=352,slow=10,SNR=2.9						
ASAR	Alice Springs	19.98	173	P	P	11 59 52.6	+0.7
	0.1nm,0.3s,baz=345,slow=10.0,SNR=4.6						
MKAR	Makanchi Array	66.33	325	P	P	12 06 08.0	-0.3
	0.2nm,0.4s,baz=114,slow=9.0,SNR=2.4						
KURBB	Kurchatov Arra	70.52	327	P	P	12 06 34.7	+0.3
	0.4nm,0.5s,baz=126,slow=6.0,SNR=4.4						

NNC 15 12:17:55.3±5.7, 38°.82N×74°.20E, h0^{km}, mb4.1, mpv3.6, 3C-2D, Error ellipse: s-maj=40.2km s-min=30.0km az=164.0, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	3.82	3	⇓Pg	Pb	12 19 05.7	+2.0
	4.6nm,1.0s						
AAK				⇑Lg	Lg	12 19 59.6	
	3.3nm,0.7s						
MRKS	Merke	3.99	350	Pg	Pg	12 19 15.6	+3.8
MRKS				Lg	Lg	12 20 11.7	
IUG	Iuzhnay	4.59	318	Pg	Pg	12 19 22.1	-1.3
	122nm,0.5s						
IUG				Lg	Lg	12 20 22.9	
	33nm,0.6s						
KK08	Karatay Array	5.12	328	⇓Lg	Lg	12 20 40.1	
	1.9nm,0.6s						
KK09	Karatay Array	5.13	328	⇑Pn	Pn	12 19 12.1	-1.3
	1.0nm,0.5s,baz=144,slow=15						
KK09				⇑Sn	Sn	12 20 13.6	+0.3
	3.3nm,0.7s,baz=143,slow=25						
BRLS	Borolday	5.35	323	Pg	Pb	12 19 30.1	+0.4
	1.5nm,0.4s						
BRLS				Lg	Lg	12 20 36.5	
	2.4nm,0.5s						

NOU 15 12:22:33.0, 40°.72S×174°.39E, h76^{km}, MLv4.0/10, Cook Strait, New Zealand

WEL 15 12:22:34.5, 41°S±5°×17°4E±°, h49^{km}±9^{km}, M3.8/13, ML4.0/13, MLv3.8/13, Error ellipse: s-maj=0.0km s-min=0.0km az=113.5

ISC 15 12:22:33.1±1.4, 40°.73S±0°.03×174°.37E±0°.04, h72^{km}±9^{km}, n123, σ1^s.42/127, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.35	258	P	Pn	12 22 43.7	-1.1
DUWZ				S	Sn	12 22 51.4	-2.0
KIW	Kapiti Island	0.43	108	P	Pn	12 22 45.6	+0.1
KIW				S	Sn	12 22 53.9	-0.7
TCW	Tory Channel	0.48	188	P	Pn	12 22 46.3	+0.4
TCW				S	Sn	12 22 54.8	-0.6
OGWZ	Otaki Gorge	0.62	98	P	Pn	12 22 47.6	+0.4
OGWZ				S	Sn	12 22 58.2	+0.6
WEL	Wellington	0.63	151	P	Pn	12 22 48.2	+0.9
SNZO	South Karori	0.63	156	P	Pn	12 22 48.7	+1.3
CAW	Cannon Point	0.65	126	P	Pn	12 22 48.2	+0.7
CAW				S	Sn	12 22 59.9	+1.6
TUWZ	Tuamarina	0.77	205	P	Pn	12 22 49.2	+0.4
BHW	Baring Head	0.78	151	P	Pn	12 22 49.6	+0.7
BHW				S	Sn	12 23 03.1	+2.4
HOWZ	Holdsworth Sta	0.89	101	P	Pn	12 22 50.5	+0.2
OHWZ	Ohakea	0.89	54	P	Pn	12 22 51.2	+0.9
MRZ	Mangatainoka R	0.92	86	P	Pn	12 22 50.8	0.0
MSWZ	Moikau Station	0.95	136	P	Pn	12 22 51.4	+0.3
MTW	Mount Morrison	0.96	117	P	Pn	12 22 51.5	+0.4
PAWZ	Paruwai Farm	1.03	129	P	Pn	12 22 52.5	+0.4
WAZ	Wanganui	1.08	26	P	Pn	12 22 53.0	+0.3
LREZ	Lake Rotokare	1.27	1	P	Pn	12 22 55.6	+0.6
NMEZ	Namu Road	1.37	344	P	Pn	12 22 56.5	+0.2
PREZ	Palmer Road	1.40	353	P	Pn	12 22 57.4	+0.6
QRZ	Quartz Range	1.40	266	P	Pn	12 22 56.7	-0.1
QRZ	Quartz Range	1.40	266	P	Pn	12 22 56.8	+0.1
CPWZ	Castlepoint	1.40	98	P	Pn	12 22 57.5	+0.7
BFZ	Birch Farm	1.43	89	P	Pn	12 22 56.9	-0.2
KHEZ	Kahui Hut	1.46	349	P	Pn	12 22 57.8	+0.1
NEZ	North Egmont	1.47	352	P	Pn	12 22 57.9	+0.1
THZ	Tophouse	1.51	226	P	Pn	12 22 59.7	+1.4
NBEZ	Newall Road No	1.51	345	P	Pn	12 22 58.4	+0.1
DREZ	Durham Road	1.55	355	P	Pn	12 22 59.2	+0.5
PKE	Pukeiti	1.56	349	P	Pn	12 22 59.3	+0.4
MTVZ	Mangateitei	1.59	33	P	Pn	12 23 00.5	+1.2
PKVZ	Pokaka	1.62	28	P	Pn	12 23 00.2	+0.4
VRZ	Vera Road	1.63	11	P	Pn	12 23 00.2	+0.3
WNVZ	Wahianoa	1.69	34	P	Pn	12 23 01.6	+0.8
TRVZ	Turoa	1.69	33	P	Pn	12 23 01.6	+0.7
MOVZ	Moawhango	1.70	39	P	Pn	12 23 01.2	+0.4
DRZ	Dome Shelter	1.72	33	P	Pn	12 23 02.5	+1.1
WHVZ	Whangaehu Hut	1.72	33	P	Pn	12 23 02.3	+1.1
FWVZ	Far West T-bar	1.73	32	P	Pn	12 23 02.1	+0.6
TUVZ	Tukino	1.77	34	P	Pn	12 23 02.7	+1.0
PRHZ	Porangahau	1.79	76	P	Pn	12 23 01.7	-0.2
KHZ	Kahutara	1.79	200	P	Pn	12 23 03.3	+1.4
KHZ	Kahutara	1.79	200	P	Pn	12 23 03.3	+1.4
BHHZ	Black Hill Sta	1.80	47	P	Pn	12 23 02.3	+0.2

NGZ	Ngauruhoe	1.82	32	P	Pn	12 23 03.4	+0.9
TWVZ	Taurewa	1.85	27	P	Pn	12 23 03.3	+0.5
OTVZ	Oturere	1.86	33	P	Pn	12 23 04.7	+1.7
NNVZ	North Ngauruho	1.86	31	P	Pn	12 23 03.9	+0.8
WTVZ	West Tongariro	1.87	31	P	Pn	12 23 04.7	+1.6
KRHZ	Kereru	1.88	55	P	Pn	12 23 02.8	-0.4
ETVZ	East Tongariro	1.90	33	P	Pn	12 23 04.6	+1.1
KRVZ	Karewarewa	1.91	31	P	Pn	12 23 08.2	+4.5
TMVZ	Te Maari	1.91	33	P	Pn	12 23 04.7	+1.0
NTVZ	North Tongarir	1.92	32	P	Pn	12 23 05.3	+1.6
PXZ	Pawanui	2.03	71	P	Pn	12 23 04.3	-0.8
KWHZ	Kaweka Forest	2.05	51	P	Pn	12 23 09.2	+3.8
RITZ	Rihia Road	2.09	34	P	Pn	12 23 09.5	+3.4
KAHZ	Kahuranaki	2.14	65	P	Pn	12 23 05.8	-0.8
RATZ	Rangitukua	2.15	31	P	Pn	12 23 11.7	+4.8
DSZ	Denniston Nort	2.18	242	P	Pn	12 23 08.3	+1.1
MCHZ	McNeill Hill	2.20	55	P	Pn	12 23 13.3	+5.8
HIZ	Hauiti	2.25	10	P	Pn	12 23 08.2	+0.2
HIZ	Hauiti	2.25	10	P	Pn	12 23 08.3	+0.2
BKZ	Black Stump Fm	2.26	47	P	Pn	12 23 07.9	-0.4
BKZ	Black Stump Fm	2.26	47	P	Pn	12 23 08.5	+0.2
WATZ	Wairara	2.28	28	P	Pn	12 23 10.2	+1.6
GVZ	Greta Valley S	2.45	204	P	Pn	12 23 11.4	+0.7
MRHZ	Matea Rd	2.47	40	P	Pn	12 23 10.4	-0.7
NMHZ	Naumai	2.49	50	P	Pn	12 23 10.9	-0.5
ARHZ	Aropaoanui	2.50	55	P	Pn	12 23 10.7	-0.7
KUTZ	Kaahu Road	2.51	27	P	Pn	12 23 15.7	+4.1
TLZ	Tolley Road	2.56	21	P	Pn	12 23 13.2	+0.8
LTZ	Lake Taylor	2.58	217	P	Pn	12 23 13.3	+0.7
WPRZ	Whakapapatarin	2.61	33	P	Pn	12 23 16.8	+3.8
ALRZ	Allen Road	2.65	36	P	Pn	12 23 18.0	+4.5
MTHZ	Maungataniwha	2.67	46	P	Pn	12 23 12.8	-1.1
PRRZ	Plateau Road	2.72	36	P	Pn	12 23 17.7	+3.2
AMCZ	Amberley	2.76	207	P	Pn	12 23 15.1	+0.2
RAHZ	Arahi	2.77	50	P	Pn	12 23 21.1	+6.0
MUGZ	Murupara	2.92	40	P	Pn	12 23 15.6	-1.6
RTZ	Ruatahuna	2.92	45	P	Pn	12 23 19.5	+2.2
INZ	Inchbonnie	2.96	227	P	Pn	12 23 18.3	+0.6
OXZ	Oxford	3.12	213	P	Pn	12 23 19.2	-0.7
TOZ	Tahuroa Road	3.12	17	P	Pn	12 23 20.2	+0.2
OKCZ	Okains Bay	3.14	198	P	Pn	12 23 20.0	-0.3
MHGZ	Mahia Peninsul	3.15	61	P	Pn	12 23 18.5	-1.7
MQZ	McQueen's Vall	3.23	203	P	Pn	12 23 20.3	-1.1
PRGZ	Paritu Road	3.25	57	P	Pn	12 23 19.5	-2.3
URZ	Urewera	3.26	42	P	Pn	12 23 19.6	-2.1
URZ	Urewera	3.26	42	P	Pn	12 23 20.6	-1.1
RIGZ	Rimuhau	3.31	53	P	Pn	12 23 20.5	-2.1
AKCZ	Akaroa Harbour	3.32	199	P	Pn	12 23 22.4	-0.3
RACZ	Rakaia	3.42	208	P	Pn	12 23 23.1	-0.9
MWZ	Matawai	3.42	47	P	Pn	12 23 22.1	-1.9
MHCZ	Mount Hutt	3.49	216	P	Pn	12 23 24.3	-0.6
TKGZ	Te Karaka	3.53	51	P	Pn	12 23 23.4	-2.1
WVZ	Waitaha Valley	3.58	228	P	Pn	12 23 26.7	+0.6
AWAZ	Awhitu Peninsu	3.67	3	P	Pn	12 23 27.4	+0.1
WACZ	Wakanui South	3.72	209	P	Pn	12 23 27.4	-0.6
RUGZ	Raukumara Rang	3.77	44	P	Pn	12 23 27.2	-1.7
TWGZ	Tauwhareparae	3.79	49	P	Pn	12 23 27.4	-1.7
ETAZ	East Tamaki Re	3.80	7	P	Pn	12 23 29.3	+0.1
WTAZ	Waiatarua	3.80	2	P	Pn	12 23 29.7	+0.5
RPZ	Rata Peaks	3.87	218	P	Pn	12 23 30.3	+0.2
RPZ	Rata Peaks	3.87	218	P	Pn	12 23 30.4	+0.3
RVAZ	Riverhead Bore	3.96	2	P	Pn	12 23 31.2	-0.1
GCSZ	Gaunt Creek Bo	3.97	228	P	Pn	12 23 32.0	+0.6
MBAZ	Motutapu North	3.98	6	P	Pn	12 23 31.8	+0.2
WIAZ	Waiheke Island	3.98	9	P	Pn	12 23 31.8	+0.2
HAZ	Te Kaha	3.98	43	P	Pn	12 23 29.5	-2.2
ARCZ	Arundel	3.99	215	P	Pn	12 23 31.9	+0.1
PUZ	Puketiti	4.02	50	P	Pn	12 23 29.7	-2.5
PKGZ	Pakihiroa	4.04	47	P	Pn	12 23 30.4	-2.1
KUZ	Kuaotunu	4.12	15	P	Pn	12 23 33.4	-0.2
ABAZ	Army Bay	4.14	5	P	Pn	12 23 34.0	+0.1
FOZ	Fox Glacier	4.39	229	P	Pn	12 23 37.3	+0.1
TMZ	Timaru	4.41	213	P	Pn	12 23 36.8	-0.7
ODZ	Otahua Downs	5.10	211	P	Pn	12 23 46.3	-0.7
ODZ	Otahua Downs	5.10	211	P	Pn	12 23 46.6	-0.4
JCZ	Jackson Bay	5.31	229	P	Pn	12 23 50.0	+0.1
OUZ	Omahuta	5.54	353	P	Pn	12 23 52.8	-0.1
OUZ	Omahuta	5.54	353	P	Pn	12 23 52.9	0.0
WKZ	Wanaka	5.68	222	P	Pn	12 23 55.4	+0.6
CTZ	Chatham Island	7.33	117	P	Pn	12 24 17.3	-0.1

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*IDC **15** 12:25:03.5±0.9, 36°.17N×69°.52E, h0km, mb3.8/16, mb1 4.0/22, mb1mx3.7/57, mbtmp3.8/22, ML3.8/6, MS3.0/3, Ms1 3.0/3, ms1mx2.6/46, Error ellipse: s-maj=18.4km s-min=15.1km az=25.0*

*SOME **15** 12:25:05.8, 37°.38N×70°.97E, h10km*

*NNC **15** 12:25:12.8±6.6, 36°.88N×69°.43E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=56.8km s-min=41.3km az=155.0*

ISC 15 12:25:04.6±0.5**, 36°.23N**±0°.05×**69°.45E**±0°.06**, h10km, n53, σ2s.24**/60**, mb3.7**/15**, 5C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.14	139	P	Pg	12 26 02.6	-2.1
CEP				S	Sg	12 26 45.0	-0.4
THW	Thamme Wali	3.92	150	P	Pb	12 26 12.2	-1.6
SARP	Sargodha	5.06	147	P	Pb	12 26 26.8	-6.5
IUG	Iuzhnay	5.92	4	eP	Pn	12 26 36.8	+4.3
	304nm,0.2s						
IUG				eS	Sn	12 27 38.2	-2.3
	133nm,0.2s						
CHM	Chimkent	6.08	1	eP	Pn	12 26 39.6	+5.1
	143nm,0.0s						
CHM				eS	Sn	12 27 43.3	-0.9
	220nm,0.3s						
AML	Almayashu	6.75	28	P	Pn	12 26 46.8	+2.7
	SNR=48						
BRLS	Borolday	6.80	2	eP	Pn	12 26 44.7	+0.4
	4.9nm,0.1s						
BRLS				eS	Sn	12 27 52.0	-10
	27nm,0.3s						
KK07	Karatay Array	6.90	6	⇓Pn	Pn	12 26 47.6	+1.8
	4.2nm,0.3s,baz=177,slow=12						
KK07				⇓Sn	Sn	12 27 57.6	-6.7
	6.1nm,0.4s,baz=182,slow=22						
KK07				⇓Lg	Lg	12 28 32.9	
	12nm,0.6s						
MRKS	Merke	7.13	23	eP	Pn	12 26 54.9	+5.9
	6.6nm,0.2s						
MRKS				eS	Sn	12 28 09.6	-0.5
	28nm,0.4s						
UCH	Uchtor	7.16	32	P	Pn	12 26 52.5	+2.7
	SNR=22						
EKS2	Erkin-Say	7.24	26	P	Pn	12 26 53.2	+2.6
	SNR=13						
AAK	Ala-Archa	7.49	30	Pn	Pn	12 26 56.7	+2.6
	5.9nm,0.3s,baz=189,slow=3.8,SNR=57						
AAK				Sn	Sn	12 28 17.7	-1.4
	2.5nm,0.3s,baz=122,slow=22,SNR=7.2						
AAK				Lg	Lg	12 28 58.7	
	baz=300,slow=21,SNR=1.2						
AAK	Ala-Archa	7.49	30	P	Pn	12 26 56.8	+2.6
	SNR=19						
AAK	Ala-Archa	7.49	30	⇑Pn	Pn	12 26 56.6	+2.6
	4.0nm,0.3s						
AAK				⇑Sn	Sn	12 28 18.3	-0.9
	9.8nm,0.5s						
KBK	Karagaybulak	7.70	32	P	Pn	12 26 59.9	+3.0
	SNR=9.2						
CHMS	Chumysh	7.90	30	P	Pn	12 27 02.2	+2.7
	SNR=12						
ULHL	Ulahol	7.99	39	P	Pn	12 27 03.4	+2.5
	SNR=9.0						
USP	Ospenovka	8.03	27	P	Pn	12 27 03.2	+1.9
	SNR=39						
TKM2	Tokmak 2	8.19	34	⇑Pn	Pn	12 27 05.4	+1.7
	4.1nm,0.5s						
TKM2				⇓Sn	Sn	12 28 36.6	+0.2
	6.4nm,0.7s						
TKM2				⇓Lg	Lg	12 29 18.1	
	5.6nm,0.6s						
KRBS	Karabastau	8.85	31	eP	Pn	12 27 19.5	+6.9
	2.1nm,0.2s						
KRBS				eS	Sn	12 28 51.2	-1.2
	3.6nm,0.5s						
GEYT	Alibeck	9.21	284	Pn	Pn	12 27 17.9	+0.3
	1.5nm,0.3s,baz=112,slow=11,SNR=14						
GEYT				Sn	Sn	12 28 58.7	-2.6
	1.4nm,0.3s,baz=108,slow=7.7,SNR=1.8						
GEYT				Lg	Lg	12 29 54.6	
	baz=144,slow=25,SNR=1.1						
PYUN	Piuthan	14.03	121	eP	Pn	12 28 23.8	+0.1
	9.0nm,0.4s						
MKAR	Makanchi Array	14.26	38	Pn	Pn	12 28 26.4	-0.1
	0.1nm,0.3s,baz=226,slow=17,SNR=5.1						
DANN	Dangsing	14.42	119	eP	Pn	12 28 28.2	-0.9
	16nm,0.4s						
AB31	Akbulak array	14.75	335	⇑Pn	Pn	12 28 32.5	-0.7
	7.8nm,0.7s,baz=157,slow=13,SNR=135						
GKN	Gorkha	15.25	118	eP	Pn	12 28 39.0	-1.1
	6.8nm,0.3s						
KURBB	Kurchatov Arra	15.81	22	Pn	Pn	12 28 44.0	-3.1
	0.0nm,0.3s,baz=216,slow=11,SNR=2.8						
KKN	Kakani	15.83	118	eP	Pn	12 28 46.8	-1.0
PKI	Pulchoki	16.05	118	eP	Pn	12 28 50.4	-0.4
	12nm,0.3s						
GUN	Gumba	16.20	116	eP	Pn	12 28 52.2	-0.4
	7.6nm,0.3s						
AKTO	Aktyubinsk	16.42	333	Pn	Pn	12 28 54.5	-0.6
	0.6nm,0.3s,baz=130,slow=13,SNR=9.2						
AKTO				Sn	Sn	12 31 49.0	-8.3
	0.1nm,0.3s,baz=339,slow=23,SNR=2.5						
AKTO				LR	LR	12 35 31.6	
	comp=Z,43nm,18.3s,baz=51,slow=38						
AKTO	Aktyubinsk	16.42	333	⇑Pn	Pn	12 28 55.2	+0.2
	8.3nm,1.0s						
JIRN	Jiri	16.56	116	eP	P	12 28 57.2	-2.7
	12nm,0.3s						
BVAR	Borovoye Array	16.80	2	Pn	Pn	12 28 56.7	-3.2
	0.5nm,0.3s,baz=234,slow=48,SNR=8.4						
RAMN	Ramite	17.27	118	eP	P	12 29 06.9	-0.8
	6.6nm,0.3s						
ODAN	Odare	17.90	116	eP	P	12 29 15.6	+1.1
ZALV	Zalesovo Beam	20.69	26	P	P	12 29 44.4	-0.3
	2.0nm,0.3s,baz=216,slow=9.9,SNR=11						
ARU	Arti	21.50	343	P	P	12 29 54.3	+0.9
	0.7nm,0.4s,baz=130,slow=14,SNR=3.4						
KBZ	Khabaz	21.62	298	P	P	12 29 56.4	+1.7
	3.1nm,0.7s,baz=127,slow=8.4,SNR=4.4						
BELG	Belogornoye	22.34	323	P	P	12 30 02.7	+0.4
	12nm,0.6s,baz=261,slow=3.1,SNR=4.7						
SONM	Songino Array	29.52	55	P	P	12 31 10.8	+1.7
	1.1nm,0.9s,baz=256,slow=9.1,SNR=7.8						
SONM				LR	LR	12 42 29.2	
	comp=Z,62nm,20.2s,baz=12,slow=35						
CMAR	Chiang Mai Arr	31.44	116	P	P	12 31 27.0	+0.7
	0.3nm,0.3s,baz=306,slow=7.7,SNR=4.7						
AKASG	Malin Array Be	32.15	309	P	P	12 31 33.7	+1.6
	0.8nm,0.5s,baz=86,slow=7.3,SNR=8.5						
FINES	FINESS Array B	37.02	327	P	P	12 32 15.9	+1.8
	2.4nm,0.8s,baz=110,slow=11,SNR=1.4						
ARCES	ARCESS Array B	40.92	338	P	P	12 32 48.5	+1.8
	3.7nm,0.9s,baz=94,slow=8.2,SNR=1.9						
NB2	NORSAR Subarra	43.84	323	P	P	12 33 11.6	+0.9
	comp=Z,0.6nm,0.5s,baz=98,slow=7.9						
NOA	NORSAR Array B	43.84	323	P	P	12 33 11.8	+1.1
	comp=Z,0.7nm,0.5s,baz=98,slow=7.9,SNR=4.9						
NOA				LR	LR	12 52 05.4	
	comp=Z,11nm,18.9s,baz=50,slow=37						
TORD	Torodi Ar. Bea	64.46	268	P	P	12 35 42.4	+0.8
	comp=Z,0.2nm,0.5s,baz=53,slow=5.3,SNR=1.8						
INK	Inuvik	74.36	9	P	P	12 36 43.1	+1.2
	comp=Z,0.4nm,0.5s,baz=334,slow=4.8,SNR=5.4						
ILAR	Eielson Array	75.37	15	P	P	12 36 48.4	+0.5
	comp=Z,0.6nm,1.1s,baz=310,slow=5.4,SNR=3.4						
YKA	Yellowknife Ar	81.56	2	P	P	12 37 22.8	+0.7
	comp=Z,0.3nm,0.5s,baz=350,slow=5.5,SNR=5.5						
WRA	Warramunga Arr	82.92	121	P	P	12 37 29.3	-0.5
	comp=Z,0.4nm,0.5s,baz=326,slow=4.9,SNR=5.2						
ASAR	Alice Springs	85.14	124	P	P	12 37 40.9	-0.2
	comp=Z,0.2nm,0.4s,baz=309,slow=5.0,SNR=5.8						

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*IDC **15** 12:34:37.0±1.6, 31°.85N×140°.23E, h64km±18km, mb3.5/3, mb1 3.7/5, mb1mx3.0/37, mbtmp3.7/5, MS3.8/1, Ms1 3.8/1, ms1mx2.5/37, Error ellipse: s-maj=60.9km s-min=13.8km az=73.0*

*JMA **15** 12:34:39.1±0.1, 32°.24N×140°.61E, h44km, M3.6*

ISC 15 12:34:36.2±1.2**, 32°.03N**±0°.05×**140°.63E**±0°.09**, h56km**±14km**, n24, σ1s.53**/26**, mb3.6**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	0.85	301	P	Pn	12 34 53.4	+1.2
JAOM				eS	Sn	12 35 03.7	-0.2
JHCJ	Hachijojimakas	1.25	326	P	Pn	12 34 58.2	+0.7
JHCJ				S	Sn	12 35 12.2	-1.2
JHJ2	Mitsune	1.28	328	P	Pn	12 34 58.7	+0.9
JHJ2				S	Sn	12 35 13.0	-1.0
JHJ	Hachijo jima 2	1.30	327	P	Pn	12 34 58.9	+0.7
	16nm,0.3s,baz=50,slow=22,SNR=6.4						
JHJ				S	Sn	12 35 11.5	-3.0
	92nm,0.3s,baz=251,slow=23,SNR=14						
JMKN	Mikurajimanish	2.05	335	P	Pn	12 35 09.4	+1.0
JMKN				S	Sn	12 35 31.7	-1.1
JKO	Kozu shima	2.49	330	P	Pn	12 35 15.2	+0.9
BSO1	Boso 1	2.64	6	P	Pn	12 35 17.0	+1.2
BSO3	Boso 3	2.77	358	P	Pn	12 35 19.2	+1.3
BSO3				eS	Sn	12 35 49.2	-0.8
BSO4	Boso 4	2.96	355	S	Sn	12 35 54.3	-0.7
TK02	Tokai 2	3.08	309	P	Pn	12 35 24.5	+2.3
JHU	Hanno	3.98	344	P	Pn	12 35 36.6	+1.9
JHU				eS	Sn	12 36 17.6	-2.4
JIE	Ise	4.04	307	P	Pn	12 35 37.3	+1.7
JIE				eS	Sn	12 36 20.1	-1.6
MJAR	Matsushiro Arr	4.93	337	P	Pn	12 35 49.3	+1.6
	0.1nm,0.3s,baz=160,slow=13,SNR=3.2						
JCJ	Chichijima	5.10	164	P	Pn	12 35 51.2	+1.1
	1.0nm,0.3s,baz=339,slow=21,SNR=1.6						
JCJ				S	Sn	12 36 46.7	-1.0
	2.9nm,0.3s,baz=255,slow=23,SNR=1.3						
GUMO	Guam	18.76	167	LR	LR	12 44 42.4	
	comp=Z,292nm,20.5s,baz=278,slow=32						
H11N2	WAKE ISLAND Hy	26.54	111	T	T	13 09 09.6	
	baz=304,slow=75,SNR=4.4						
H11N1	WAKE ISLAND Hy	26.55	111	T	T	13 09 08.8	
	baz=304,slow=75,SNR=4.4						
H11N3	WAKE ISLAND Hy	26.56	111	T	T	13 09 09.8	
	baz=304,slow=75,SNR=3.9						
H11S3	WAKE ISLAND Hy	27.06	114	T	T	13 09 23.7	
	baz=304,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	27.07	114	T	T	13 09 23.1	
	baz=304,slow=75,SNR=10						
H11S2	WAKE ISLAND Hy	27.08	114	T	T	13 09 24.1	
	baz=304,slow=75,SNR=8.3						
WRA	Warramunga Arr	52.02	188	P	P	12 43 38.7	-1.5
	0.2nm,0.4s,baz=5.4,slow=7.7,SNR=4.6						
FINES	FINESS Array B	72.95	333	P	P	12 45 58.9	-0.4
	4.7nm,1.1s,baz=58,slow=8.7,SNR=1.7						
TXAR	Lajitas Array	93.70	52	P	P	12 47 48.8	+1.5
	0.1nm,0.4s,baz=248,slow=1.1,SNR=3.7						

IDC 15 12:45:51.0±2.4**, 3°.97N**×**127°.26E, h0km, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/31**, mbtmp3.5**/3**, Error ellipse: s-maj=184.5km s-min=28.3km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.76	164	P	P	12 51 14.3	-0.4
	1.8nm,0.7s,baz=344,slow=11,SNR=10						
ASAR	Alice Springs	28.23	167	P	P	12 51 46.5	+0.6
	0.2nm,0.5s,baz=340,slow=10,SNR=2.2						
MKAR	Makanchi Array	57.66	325	P	P	12 55 43.2	-0.1
	0.3nm,0.6s,baz=118,slow=7.4,SNR=4.2						

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*IDC **15** 13:08:59.8±5.0, 36°.28N×70°.80E, h173km±44km, mb3.2/8, mb1 3.3/12, mb1mx3.0/46, mbtmp3.7/12, Error ellipse: s-maj=37.3km s-min=22.0km az=34.0*

ISC 15 13:09:03.6±1.1**, 36°.6N**±0°.1×**70°.8E**±0°.1**, h200km, n20, σ1s.46**/23**, mb3.3**/7**, 4C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.95	22	P	Pn	13 10 30.4	0.0
	SNR=44						
UCH	Uchtor	6.30	26	P	Pn	13 10 34.9	-0.2
	SNR=11						
EKS2	Erkin-Say	6.46	20	P	Pn	13 10 37.2	+0.5
	SNR=7.1						
KK09	Karatay Array	6.48	358	⇑Pn	Pn	13 10 35.5	-1.5
	5.7nm,0.3s,baz=181,slow=13						
KK09				⇑Sn	Sn	13 11 47.3	-3.8
	15nm,0.4s,baz=190,slow=23						
AAK	Ala-Archa	6.66	25	P	Pn	13 10 39.3	-0.1
	2.5nm,0.3s,baz=178,slow=6.0,SNR=30						
AAK				S	Sn	13 11 53.3	-2.0
	1.2nm,0.3s,baz=342,slow=20,SNR=12						
AAK	Ala-Archa	6.66	25	P	Pn	13 10 39.8	+0.4
	SNR=8.2						
AAK	Ala-Archa	6.66	25	⇑Pn	Pn	13 10 39.3	-0.1
	2.0nm,0.3s						
AAK				⇑Sn	Sn	13 11 55.2	-0.2
	6.0nm,0.6s						
USP	Ospenovka	7.22	22	P	Pn	13 10 46.5	-0.2
	SNR=8.1						
MKAR	Makanchi Array	13.30	37	P	P	13 12 08.0	+0.5
	0.1nm,0.3s,baz=230,slow=11,SNR=2.3						
KURBB	Kurchatov Arra	15.06	19	P	P	13 12 28.2	+1.3
	0.1nm,0.3s,baz=212,slow=10,SNR=4.7						
BVAR	Borovoye Array	16.39	359	P	Pn	13 12 44.1	+1.8
	0.3nm,0.3s,baz=185,slow=14,SNR=4.9						
AKTO	Aktyubinsk	16.56	330	P	Pn	13 12 45.3	+0.9
	0.7nm,0.3s,baz=133,slow=9.9,SNR=10						
ZALV	Zalesovo Beam	19.88	25	P	P	13 13 20.6	+1.2
	1.6nm,0.5s,baz=221,slow=13,SNR=7.5						
FINES	FINESS Array B	37.26	326	P	P	13 15 56.5	+0.8
	1.7nm,0.8s,baz=134,slow=9.9,SNR=1.4						
ARCES	ARCESS Array B	40.94	338	P	P	13 16 27.8	+1.7
	4.3nm,1.1s,baz=93,slow=6.1,SNR=4.7						
NOA	NORSAR Array B	44.15	323	P	P	13 16 53.4	+1.3
	0.4nm,0.6s,baz=95,slow=7.8,SNR=2.1						
TORD	Torodi Ar. Bea	65.52	268	P	P	13 19 25.1	-0.7
	0.2nm,0.4s,baz=42,slow=5.6,SNR=1.6						
INK	Inuvik	73.80	9	P	P	13 20 16.5	+1.0
	0.4nm,0.6s,baz=313,slow=5.6,SNR=1.7						
WRA	Warramunga Arr	82.23	122	P	P	13 21 00.7	-2.0
	0.2nm,0.4s,baz=324,slow=4.9,SNR=1.5						
ASAR	Alice Springs	84.50	125	P	P	13 21 12.3	-1.8
	0.2nm,0.7s,baz=302,slow=4.3,SNR=5.2						

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*BJI **15** 13:29:35.4±0.0, 15°.08S×167°.30E, h23km, mB5.3/46, mb5.2/69, Ms5.0/46, Ms7 4.7/47*

*NEIC **15** 13:29:36.0±1.9, 15°.62S±0°.05×167°.29E±0°.06, h29km±3km, mb5.2/131, Error ellipse: s-maj=10.1km s-min=4.9km az=58.0*

*MOS **15** 13:29:36.8±1.1, 15°.63S×167°.17E, h48km, mb5.5/42, MS4.7/9, Error ellipse: s-maj=8.1km s-min=6.8km az=133.1*

*GCMT **15** 13:29:38.0±0.1, 15°.65S±0°.01×166°.99E±0°.01, h35km, MW5.4/135, Moment Tensor Solution. s135,c223; s132,c202; Duration: 1s.2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.43±.02; $M_{\theta\theta}$-0.16±.02; $M_{\phi\phi}$-1.26±.02; $M_{r\theta}$-0.10±.02; $M_{\theta\phi}$0.57±.01; $M_{\phi r}$-0.18±.02; Best double couple: $M_0$1.48300×10^{17} NP1:ϕ_s330.00000°, δ43.00000°, λ80.00000°. NP2:ϕ_s164.00000°, δ48.00000°, λ99.00000°. Principal axes: T 1.4550, Plg83.0000°, Azm137.0000°; N 0.0630, Plg7.0000°, Azm337.0000°; P -1.5110, Plg2.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **15** 13:29:39.5±1.1, 15°.68S×167°.23E, h62km±9km, mb4.7/38, mb1 4.7/40, mb1mx4.5/52, mbtmp5.0/40, MS4.6/27, Ms1 4.6/27, ms1mx4.5/32 Error ellipse: s-maj=10.1km s-min=10.0km az=7.0*

ISC 15 13:29:35.4±0.2**, 15°.71S**±0°.04×**167°.21E**±0°.04**, h28km, n686, σ1s.49**/723**, mb5.2**/158**, MS4.7**/49**, 36C-32D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.26	358	Pg	Pb	13 29 42.0	-0.3
SANVU					Sb	13 29 46.4	-0.4
LIFNC	LIFOU	5.04	180	Pn	Pn	13 30 47.8	-1.4
MARNC	Mare, Loyalty	5.79	172		Pn	13 30 59.2	-0.3
DZM	Mont Dzumac	6.37	186	ePn	Pn	13 31 08.2	+0.7
	526nm,0.4s						
DZM				eSn	Sn	13 32 16.6	-2.8
	781nm,0.6s						
DZM				eLR	LR	13 32 38.0	
	comp=Z,13µm,24.2s						
DZM	Mont Dzumac	6.37	186	P	Pn	13 31 08.3	+0.7
	46nm,0.3s,baz=7.0,slow=12,SNR=245						
DZM				S	Sn	13 32 17.6	-1.8
	9.1nm,0.3s,baz=325,slow=23,SNR=2.9						
DZM				LR	LR	13 33 28.8	
	comp=Z,11µm,19.6s,baz=358,slow=36						
DZM	Mont Dzumac	6.37	186	Pn	Pn	13 31 07.9	+0.4
ONTNC	Ouen Toro	6.60	186	Pn	Pn	13 31 11.5	+0.9
OUENC	Ouen Island, N	6.68	183	Pn	Pn	13 31 12.7	+0.9
PINNC	Pines Island,	6.87	178		Pn	13 31 15.7	+1.4
HNR	Honiara	9.45	311	P	Pn	13 31 52.1	+2.4
	60nm,0.3s,baz=206,slow=5.8,SNR=17						
HNR				S	Sn	13 33 37.4	+2.4
	16nm,0.3s,baz=225,slow=6.7,SNR=1.3						
HNR				LR	LR	13 35 10.8	
	comp=Z,7µm,21.0s,baz=162,slow=35						
HNR	Honiara	9.45	311	Pn	Pn	13 31 50.9	+1.2
MSVF	Nonsavu	10.58	102	P	Pn	13 32 08.8	+3.5
	2.1nm,0.3s,baz=262,slow=9.6,SNR=57						
MSVF				LR	LR	13 35 28.4	
	comp=Z,12µm,18.1s,baz=283,slow=33						
NFK	Norfolk Island	13.29	177	P	Pn	13 32 45.5	+3.2
	baz=14,SNR=3.0						
FUNA	Funafuti	13.72	60	Pn	Pn	13 32 48.9	+0.7
EIDS	Eidsvold	17.89	235	P	P	13 33 45.6	+2.8
	baz=18,SNR=10						
EIDS	Eidsvold	17.89	235	P	P	13 33 44.9	+2.1
RAO	Raoul Island	19.22	137	LR	LR	13 39 59.5	
	comp=Z,2µm,18.9s,baz=309,slow=32						
OUZ	Omahuta	20.25	165	Pn	Pn	13 34 12.3	+1.6
OUZ				IAmb	IAmb	13 34 14.0	
	comp=Z,172nm,0.9s						
RMQ	Roma	20.25	235	P	Pn	13 34 12.0	+1.2
	baz=21,SNR=51						
AFI	Afiamalu	20.39	88	P	Pn	13 34 12.7	+0.1
	comp=Z,115nm,0.9s,baz=39,slow=19,SNR=12						
AFI				LR	LR	13 40 13.2	
	comp=Z,2µm,18.6s,baz=268,slow=31						
CTA	Charters Tower	20.41	255	P	Pn	13 34 12.7	0.0
	comp=Z,15nm,0.8s,baz=72,slow=13,SNR=5.8						
CTAO	Charters Tower	20.41	255	P	Pn	13 34 13.4	+0.7
CTAO				pmax	pmax		
	comp=Z,36nm,0.9s						
CTAO	Charters Tower	20.41	255	Pn	Pn	13 34 13.4	+0.7
ARMA	Armidale	20.45	222	P	Pn	13 34 13.2	0.0
	baz=21,SNR=4.9						
ARMA	Armidale	20.45	222	Pn	Pn	13 34 14.0	+0.8
PMG	Port Moresby	20.54	285	P	Pn	13 34 13.6	-0.6
	comp=Z,18nm,1.0s,baz=85,slow=3.3,SNR=10						
PMG				LR	LR	13 41 39.4	
	comp=Z,5µm,18.7s,baz=103,slow=35						
PMG	Port Moresby	20.54	285		P	13 34 12.9	+1.0
PMG				IAmb	IAmb	13 34 29.7	
	comp=Z,94nm,1.1s						
MTSU	Mount Surprise	22.03	260	P	P	13 34 30.4	+2.4
	baz=22,SNR=35						
COEN	Coen	23.30	271	P	P	13 34 41.6	+0.3
OPRZ	Ohinepanea	23.54	161	P	P	13 34 46.4	+3.0
HIZ	Hauiti	23.69	165	P	P	13 34 46.2	+1.3
OMRZ	Omania	23.73	162	P	P	13 34 48.9	+3.6
MANU	Manus Island	23.81	303	P	P	13 34 46.6	+0.3
MANU				IAmb	IAmb	13 34 48.4	
	comp=Z,84nm,1.5s						
HAZ	Te Kaha	23.86	159	P	P	13 34 48.1	+1.6
QLP	Quilpie	23.96	239	P	P	13 34 49.0	+1.4
	baz=24,SNR=4.7						
RUGZ	Raukumara Rang	24.02	159	P	P	13 34 51.3	+3.2
PATS	Pohnpei	24.07	338	P	P	13 34 48.5	-0.1
PATS				IAmb	IAmb	13 35 00.1	
	comp=Z,140nm,1.1s						
URZ	Urewera	24.10	161	P	P	13 34 50.0	+1.4
	comp=Z,121nm,1.0s,baz=310,slow=18,SNR=28						
URZ				LR	LR	13 43 35.7	
	comp=Z,3µm,18.9s,baz=31,slow=35						
URZ	Urewera	24.10	161	P	P	13 34 50.1	+1.4
URZ	Urewera	24.10	161	P	P	13 34 50.1	+1.4
URZ				IAmb	IAmb	13 34 53.8	
	comp=Z,147nm,1.0s						
WMGZ	Waiomatatini S	24.14	158	P	P	13 34 50.4	+1.3
MUGZ	Murupara	24.19	161	P	P	13 34 52.9	+3.4
PUZ	Puketiti	24.31	158	P	P	13 34 51.5	+0.8
SNGZ	Shannon Statio	24.65	161	P	P	13 34 55.1	+1.3
BKZ	Black Stump Fm	24.74	163	P	P	13 34 56.7	+2.0
CMSA	Cobar Meteorol	25.16	227	P	P	13 34 59.8	+1.4
	baz=26,SNR=51						
CNB	Canberra Magne	25.23	216	P	P	13 35 00.9	+1.8

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      baz=26,SNR=6.6
TUWZ  Tuamarina         26.28 169   P      P       13 35 09.2 +0.7
THZ   Tophouse          26.42 170   P      P       13 35 10.7 +0.9
THZ                                 IAmb   IAmb    13 35 20.9
      comp=Z,58nm,0.8s
MSWZ  Moikau Station    26.54 166   P      P       13 35 10.0 -0.8
QIS   Mount Isa         26.66 255   P      P       13 35 13.8 +1.6
      baz=27,SNR=18
LTZ   Lake Taylor       27.32 172   P      P       13 35 18.7 +0.8
LTZ                                 IAmb   IAmb    13 35 20.6
      comp=Z,58nm,0.8s
RPZ   Rata Peaks        28.10 174   P      P       13 35 26.4 +1.5
RPZ                                 IAmb   IAmb    13 35 27.6
      comp=Z,64nm,0.8s
STKA  Stephens Creek    28.32 231   P      P       13 35 27.4 +0.5
      comp=Z,10nm,1.1s,baz=64,slow=8.6,SNR=12
STKA                                PcP    PcP     13 38 40.2 +0.7
      comp=Z,11nm,0.7s,baz=57,slow=2.6,SNR=9.3
STKA                                LR     LR      13 46 31.5
      comp=Z,2µm,18.6s,baz=77,slow=36
STKA  Stephens Creek    28.32 231   P      P       13 35 27.8 +0.9
      baz=29,SNR=4.8
STKA  Stephens Creek    28.32 231   P      P       13 35 25.4 -1.5
LBZ   Lake Benmore      28.69 176   P      P       13 35 28.8 -1.3
LBZ                                 IAmb   IAmb    13 35 33.2
      comp=Z,38nm,0.8s
TOO   Toolangi          29.04 217   P      P       13 35 33.6 +0.3
      baz=29,SNR=6.1
TOO   Toolangi          29.04 217   P      P       13 35 33.8 +0.5
TOO                                 pmax   pmax
      comp=Z,24nm,1.3s
TOO   Toolangi          29.04 217   P      P       13 35 33.8 +0.5
MLZ   Mavora Lakes      29.57 179   P      P       13 35 39.0 +1.1
MLZ                                 IAmb   IAmb    13 35 40.9
      comp=Z,28nm,0.9s
ARPS  Mount Arapiles    30.78 222   P      P       13 35 44.9 -3.8
      baz=31,SNR=6.1
HTT   Hallett           31.04 230   P      P       13 35 50.3 -0.9
      baz=31,SNR=4.2
WB0   Warramunga Arr    31.49 258   P      P       13 35 53.8 -1.3
WB2   Warramunga Arr    31.54 257   P      P       13 35 54.0 -1.5
WRAB  Tennant Creek     31.54 257ceP       P       13 35 55.0 -0.5
WRAB                                pmax   pmax
      comp=Z,24nm,1.7s
WRAB  Tennant Creek     31.54 257   P      P       13 35 54.1 -1.4
WRA   Warramunga Arr    31.55 257   P      P       13 35 55.1 -0.5
      comp=Z,5.6nm,0.8s,baz=86,slow=9.0,SNR=39
WRA                                 PcP    PcP     13 38 47.7 -0.4
      comp=Z,2.7nm,0.9s,baz=87,slow=3.5,SNR=3.7
WRA                                 ScP    ScP     13 42 24.5 -5.1
      comp=Z,0.9nm,1.0s,baz=86,slow=3.2,SNR=2.5
WRA                                 PKiKP  PKiKP   13 46 15.9 -1.6
      comp=Z,1.2nm,0.7s,baz=51,slow=0.4,SNR=9.0
WRA                                 LR     LR      13 47 39.5
      comp=Z,3µm,21.2s,baz=80,slow=34
WRA   Warramunga Arr    31.55 257   P      P       13 35 54.1 -1.5
MOO   Moorlands         31.70 209   P      P       13 35 57.2 +0.5
      baz=32,SNR=4.6
RAR   Rarotonga         31.75 105   LR     LR      13 48 25.2
      comp=Z,172nm,19.4s,baz=288,slow=36
AS31  Alice Springs     32.28 251   P      P       13 36 01.2 -0.9
ASAR  Alice Springs     32.28 251   P      P       13 36 01.9 -0.3
      comp=Z,25nm,0.9s,baz=76,slow=9.4,SNR=208
ASAR                                PcP    PcP     13 38 49.7 -0.4
      comp=Z,5.2nm,1.0s,baz=91,slow=2.7,SNR=3.5
ASAR                                S      S       13 41 12.5 -1.8
      comp=Z,0.7nm,0.9s,baz=76,slow=19,SNR=2.9
ASAR                                ScP    ScP     13 42 28.4 -3.6
      comp=Z,1.1nm,0.9s,baz=89,slow=3.5,SNR=2.9
ASAR                                PKiKP  PKiKP   13 46 15.8 -2.2
      comp=Z,0.3nm,0.6s,baz=96,slow=1.3,SNR=8.0
ASAR                                LR     LR      13 48 27.9
      comp=Z,3µm,19.9s,baz=90,slow=35
BBOO  Buckleboo         32.94 233   P      P       13 36 07.7  0.0
KDU   Kakadu            33.79 271   P      P       13 36 15.2  0.0
      baz=34,SNR=16
MTN   Manton Dam        35.05 270   P      P       13 36 26.5 +0.3
      baz=35,SNR=8.6
MTN   Manton Dam        35.05 270   P      P       13 36 25.4 -0.9
MTN                                 IAmb   IAmb    13 36 29.5
      comp=Z,28nm,1.3s
GUMO  Guam              36.55 322   LR     LR      13 51 31.5
      comp=Z,502nm,19.1s,baz=144,slow=36
FAKI  Fak Fak           36.69 287   P      P       13 36 40.6 +0.3
      comp=Z,574nmcomp=Z,52nm,1.3s
FAKI  Fak Fak           36.69 287   P      P       13 36 40.0 -0.3
FAKI                                IAmb   IAmb    13 36 43.7
      comp=Z,54nm,1.1s
KNRA  Kununurra         36.98 265   P      P       13 36 42.1 -0.6
      baz=37,SNR=13
KNRA  Kununurra         36.98 265   P      P       13 36 42.2 -0.6
KNRA                                IAmb   IAmb    13 36 45.0
      comp=Z,37nm,0.8s
WRKA  Warakurna         37.53 249   P      P       13 36 47.3 -0.1
      baz=38,SNR=14
SIJI  Sorong            38.40 289   P      P       13 36 55.7 +0.9
      comp=Z,24nm,0.8s,baz=70,slow=7.2,SNR=11
SWI   Sorong            38.41 289   P      P       13 36 57.9 +3.0
      comp=Z,834nmcomp=Z,55nm,1.0s
FORT  Forrest           38.76 240   P      P       13 36 58.5 +0.9
      baz=39,SNR=17
FORT  Forrest           38.76 240   P      P       13 36 58.2 +0.6
MSAI  Masohi            39.62 284   P      P       13 37 06.9 +1.9
      comp=Z,5.8nm,0.8s
FITZ  Fitzroy Crossi    39.79 260   P      P       13 37 06.6 +0.2
      comp=Z,13nm,0.6s,baz=78,slow=8.8,SNR=44
PPT2  Papeete2          41.38  99  eS      S       13 43 37.9 +4.9
      comp=Z,554nm,27.2s
PPT2                               eLQ     LQ      13 47 01.5
      comp=Z,2µm,27.5s
PPT2                               eLR     LR      13 48 46.6
      comp=Z,2µm,24.2s,baz=259
PPT   Papeete           41.38  99   LR     LR      13 50 58.0
      comp=Z,699nm,19.6s,baz=259,slow=31
TBI   Tubuai            41.41 108  eS      S       13 43 39.1 +5.9
      comp=Z,531nm,28.2s
TBI                                eLQ     LQ      13 47 02.2
      comp=Z,2µm,32.8s
TBI                                eLR     LR      13 48 48.0
      comp=Z,923nm,27.8s,baz=285
LBMI  Labuha            41.94 287   P      P       13 37 26.9 +2.7
      comp=Z,1µmcomp=Z,61nm,1.1s
SOEI  Soe               42.25 273   P      P       13 37 32.5 +5.7
BATI  Baumata           42.73 272   P      P       13 37 31.3 +0.6
      comp=Z,32nm,0.7s,baz=314,slow=18,SNR=7.5
BATI  Baumata           42.73 272   P      P       13 37 34.5 +3.9
      comp=Z,20nm,1.1s
SANI  Sanana            42.82 284   P      P       13 37 32.6 +1.3
      comp=Z,1µmcomp=Z,53nm,1.6s
EDFI  Ende, Flores      44.95 273   P      P       13 37 49.2 +0.6
      comp=Z,14nm,1.0s
PSA00 Pilbara Seismi    45.13 255   P      P       13 37 49.4 -0.4
PSA00                               IAmb   IAmb    13 37 52.9
      comp=Z,55nm,1.4s
PSA00 Pilbara Seismi    45.13 255   P      P       13 37 49.4 -0.4
PSA00                               IAmb   IAmb    13 37 53.0
      comp=Z,37nm,1.4s
KMSI  Cibinong          45.65 287   P      P       13 37 58.3 +4.3
      comp=Z,64nm,0.8s
BASI  Baing, Sumba      45.70 271   P      P       13 37 57.1 +2.7
      comp=Z,38nm,1.1s
LUWI  Luwuk             46.18 284   P      P       13 38 01.6 +3.4
      comp=Z,4µmcomp=Z,102nm,1.4s
MEEK  Meekatharra       46.36 248   P      P       13 38 00.8 +1.2
      baz=47,SNR=16
WBSI  Waikabubak, Su    46.97 271   P      P       13 38 07.2 +2.8
      comp=Z,35nm,0.9s
BKSI  Bulukumba         47.33 277   P      P       13 38 10.6 +3.4
      comp=Z,26nm,1.3s
KLBR  Kellerberrin      47.58 241   P      P       13 38 10.0 +1.1
      baz=48,SNR=5.2
BNSI  Bone              47.61 279   P      P       13 38 11.4 +2.0
      comp=Z,654nmcomp=Z,53nm,1.4s
KAPI  Kappang           47.77 278   P      P       13 38 11.1 +0.5
      comp=Z,29nm,0.9s,baz=142,slow=6.2,SNR=7.3
KAPI  Kappang           47.77 278   P      P       13 38 11.1 +0.5
SPSI  Sidrap Palu       48.06 279   P      P       13 38 07.5 -5.4
TTSI  Tana Toraja       48.30 280   P      P       13 38 16.7 +2.0
      comp=Z,29nm,1.5s
PLAI  Plampang          48.70 272   P      P       13 38 20.3 +2.5
      comp=Z,677nmcomp=Z,49nm,0.9s
MORW  Morawa            48.80 245   P      P       13 38 19.1 +0.7
      baz=49,SNR=5.4
MORW  Morawa            48.80 245   P      P       13 38 17.3 -1.1
MORW                                IAmb   IAmb    13 38 23.5
      comp=Z,21nm,0.9s
TOLI2 Tolitoli          48.81 286   P      P       13 38 17.5 -1.2

JCJ   Chichijima        49.00 330   P      P       13 38 18.9 -0.9
MPSI  Mapaga            49.35 284   P      P       13 38 24.3 +1.5
      comp=Z,822nmcomp=Z,57nm,1.4s
TWSI  Taliwang, Sumb    49.58 272   P      P       13 38 25.5 +1.0
      comp=Z,1µmcomp=Z,84nm,1.1s
KHU   Kahuku            50.44  48   P      P       13 38 31.1 -0.1
KHU                                 pmax   pmax
      comp=Z,263nm,1.4s
KHU   Kahuku            50.44  48   P      P       13 38 31.1 -0.1
HPAH  Hawaii Prepara    50.90  47   P      P       13 38 34.5 +0.1
DNP   Denpasar          51.20 271   P      P       13 38 39.2 +2.4
      comp=Z,29µmcomp=Z,302nm,0.8s
IGBI  Denpasar          51.23 271   P      P       13 38 38.9 +1.9
      comp=Z,1µmcomp=Z,134nm,0.7s
SRBI  Singaraja         51.34 272   P      P       13 38 39.7 +1.9
      comp=Z,797nmcomp=Z,53nm,0.8s
TAOE  Nuku Hiva Isla    51.78  89  eS      S       13 46 06.7 +4.7
      comp=Z,490nm,27.9s
TAOE                               eLR     LR      13 53 31.3
      comp=Z,946nm,26.6s
JAGI  Jajag, Banyuwa    52.27 271   P      P       13 38 46.0 +1.2
      comp=Z,45nm,1.1s
JAGI  Jajag, Banyuwa    52.27 271   P      P       13 38 43.9 -0.9
JAGI                                IAmb   IAmb    13 38 54.5
      comp=Z,58nm,1.1s
ABJI  Asem Bagus        52.35 272   P      P       13 38 49.5 +4.1
      comp=Z,70nm,1.1s
MYLDM Lahad Datu        52.50 289   P      P       13 38 46.4 -0.1
BBKI  Banjar Baru       52.91 278   P      P       13 38 51.7 +2.2
      comp=Z,5µmcomp=Z,31nm,1.1s
SPMM  Sapulut           54.17 288   P      P       13 39 00.0 +1.2
KKM   Kota Kinabalu     54.92 289   P      P       13 39 04.5 +0.1
WOJI  Wonogiri, Jawa    55.52 271   P      P       13 39 11.5 +2.9
      comp=Z,805nmcomp=Z,31nm,1.0s
UGM   Wanagama          55.89 271   P      P       13 39 11.2 -0.1
SBUM  Sibu              57.28 283   P      P       13 39 22.0 +0.9
SBUM  Sibu              57.28 283   P      P       13 39 21.4 +0.4
JMN   Monobe            58.54 328   P      P       13 39 30.1 +0.5
KSM   Kuching           58.74 282   P      P       13 39 32.0 +0.6
KSM   Kuching           58.74 282   P      P       13 39 31.2 -0.1
KSM                                 IAmb   IAmb    13 39 43.4
      comp=Z,53nm,1.4s
MJAR  Matsushiro Arr    58.75 333   P      P       13 39 29.5 -1.4
      comp=Z,8.7nm,0.9s,baz=173,slow=7.8,SNR=6.1
MJAR                                PcP    PcP     13 40 21.3 +0.8
      comp=Z,6.8nm,1.0s,baz=160,slow=2.9,SNR=3.1
MJAR                                LR     LR      14 00 26.8
      comp=Z,126nm,21.6s,baz=215,slow=32
MJAR  Matsushiro Arr    58.75 333   P      P       13 39 29.7 -1.2
MJAR                                pmax   pmax
      comp=Z,16nm,1.4s
MJAR  Matsushiro Arr    58.75 333   P      P       13 39 29.7 -1.2
MAJO  Matsushiro        58.75 333⇓eP       P       13 39 29.9 -1.1
MAJO                                pmax   pmax
      comp=Z,6.0nm,0.4s
MAJO  Matsushiro        58.75 333   P      P       13 39 29.8 -1.2
MAJO                                IAmb   IAmb    13 39 41.5
      comp=Z,30nm,1.1s
MAT   Matsushiro        58.75 333   P      P       13 39 29.7 -1.3
MAT                                eS      S       13 47 33.2 -1.1
JMM   Marumori          58.79 336   P      P       13 39 30.9 -0.3
LEM   Lembang           58.95 271   P      P       13 39 33.5 +0.5
      comp=Z,34nm,0.9s,baz=104,slow=9.3,SNR=5.7
JWT   Wachi             59.01 330   P      P       13 39 33.9 +1.1
JWT                                 IAmb   IAmb    13 39 52.5
      comp=Z,37nm,1.3s
NACB  Ninganchiao       59.62 311   P      P       13 39 37.4 +0.2
TPUB  Ta-pu             59.82 309   P      P       13 39 40.2 +1.6
DBJI  Dramaga           59.85 271   P      P       13 39 41.8 +2.7
      comp=Z,75nm,1.7s
SSLB  Suanglung         59.86 310   P      P       13 39 39.7 +0.8
JHS   Saijyo            59.93 328   P      P       13 39 39.1  0.0
JHS                                 IAmb   IAmb    13 39 51.5
      comp=Z,19nm,0.9s
JSD   Sado              59.98 334   P      P       13 39 40.2 +0.8
YHNB  Yeheng            60.08 311   P      P       13 39 40.4 -0.1
CGJI  Cibinong          60.85 271   P      P       13 39 47.8 +1.9
      comp=Z,1µmcomp=Z,99nm,1.2s
JTM   Tenmabayashi      61.23 338   P      P       13 39 48.4 +0.5
JTM                                 IAmb   IAmb    13 39 48.4
      comp=Z,43nm,1.1s
ERM   Erimo             61.58 340   P      P       13 39 50.5 +0.3
ERM                                 pmax   pmax
      comp=Z,119nm,1.3s
ERM   Erimo             61.58 340   P      P       13 39 50.5 +0.3
VNDA  Vanda             61.88 181   P      P       13 39 51.8 -0.1
      comp=Z,5.6nm,0.7s,baz=357,slow=7.4,SNR=28
VNDA  Vanda             61.88 181   P      P       13 39 51.7 -0.1
VNDA                                IAmb   IAmb    13 40 04.2
      comp=Z,24nm,1.2s
SBA   Scott Base        62.16 180   P      P       13 39 55.3 +1.6
SBA                                 pmax   pmax
      comp=Z,45nm,1.0s
SBA   Scott Base        62.16 180   P      P       13 39 55.3 +1.6
YUK   Yuzh-Kuril'sk     62.58 343   P      P       13 39 42.7  -14
MDSI  Maura Dua         62.85 273   P      P       13 40 05.0 +5.7
JKA   Kamikawa-asahi    63.64 340   P      P       13 40 04.6 +0.7
JKA                                 IAmb   IAmb    13 40 14.7
      comp=Z,48nm,1.1s
ASAJ  Asahikawa         63.64 340   P      P       13 40 04.8 +0.8
      comp=Z,24nm,0.9s,baz=195,slow=6.4,SNR=11
KSRS  Korea Array       64.52 326   P      P       13 40 09.4 -0.4
      comp=Z,4.3nm,0.8s,baz=139,slow=6.7,SNR=12
KSRS                                LR     LR      14 06 22.4
      comp=Z,200nm,21.1s,baz=149,slow=34
KSAR  Wonju Array Be    64.53 326   P      P       13 40 09.0 -0.9
KSAR  Wonju Array Be    64.53 326   P      P       13 40 09.0 -0.9
YSS   Yuzh-Sakhalins    66.14 342αeP       P       13 40 21.0 +0.9
YSS                                e               13 42 45.6
YSS                                eS      S       13 49 02.9 -3.9
YSS                                eSS     SS      13 53 18.0 -5.4
YSS                                 pmax   pmax
      comp=Z,30nm,1.4s
YSS                                 pmax   pmax
      comp=Z,400nm,5.6s
YSS                                 MLR    MLR
      comp=Z,400nm,20.0s
YSS                                 MLR    MLR
      comp=N,300nm,18.0s
YSS   Yuzh-Sakhalins    66.14 342   P      P       13 40 20.3 +0.2
QIZ   Qiongzhong        66.17 299   P      P       13 40 21.1 +0.2
QIZ                                 S      S       13 49 12.5 +4.2
QIZ                                 LR     LR
      comp=N,540nm,20.6s
NJ2   Nanjing           66.34 316  eP      P       13 40 24.0 +2.3
NJ2                                 pmax   pmax
      comp=N,11nm,0.5s
SKR   Severo-Kuril's    66.82 352  eP      P       13 40 15.4 -9.0
SKR                                 pmax   pmax
      comp=Z,34nm,1.5s
SKR                                 pmax   pmax
      comp=Z,100nm,4.7s
SKR                                 MLR    MLR
      comp=Z,200nm,15.0s
SKR                                 MLR    MLR
      comp=Z,300nm,14.0s
JRMM  Jerantut          66.92 281   P      P       13 40 27.0 +1.1
USA0B Ussuriysk Arra    67.73 333   P      P       13 40 30.2 -0.1
USA0B                               pmax   pmax
      comp=Z,59nm,1.5s
USA0B Ussuriysk Arra    67.73 333   P      P       13 40 30.2 -0.1
USA0B                               IAmb   IAmb    13 40 41.7
      comp=Z,59nm,1.4s
USRK  Ussuriysk Ar.     67.73 333   P      P       13 40 30.4 +0.1
      comp=Z,7.0nm,0.7s,baz=142,slow=4.3,SNR=13
USRK                                LR     LR      14 08 19.6
      comp=Z,200nm,20.6s,baz=133,slow=34
IPM   Ipoh              68.48 281   P      P       13 40 36.0 +0.3
IPM   Ipoh              68.48 281   P      P       13 40 34.7 -1.0
IPM                                 IAmb   IAmb    13 40 44.0
      comp=Z,18nm,1.0s
WHN   Wuhan             68.56 312 ⇑P       P       13 40 36.4 +0.6
WHN                                 pmax   pmax
      comp=Z,56nm,1.0s
MNSI  Mandailing Nat    68.73 277   P      P       13 40 37.2 -0.1
      comp=Z,24nm,1.0s
PET   Petropavlovsk     68.85 354  eP      P       13 40 40.3 +3.2
PET                                eS      S       13 49 42.9 +3.8
PET                                ePPS    PPS     13 50 18.0
PET                                e               13 50 36.2
PET                                 pmax   pmax
      comp=Z,300nm,16.7s
PET                                 pmax   pmax
      comp=Z,54nm,1.4s
PET   Petropavlovsk     68.85 354   P      P       13 40 37.3 +0.2

PEA0B Petropavlovsk-    69.03 354deP       P       13 40 39.0 +0.8
PEA0B Petropavlovsk-    69.03 354   P      P       13 40 38.0 -0.2
PETK  Petropavlovsk-    69.03 354   P      P       13 40 38.4 +0.2
      comp=Z,20nm,0.9s,baz=184,slow=13,SNR=11
PETK                                LR     LR      14 04 59.2
      comp=Z,328nm,21.2s,baz=169,slow=31
PETK  Petropavlovsk-    69.03 354   P      P       13 40 37.7 -0.5
DL2   Dalian            69.05 323   P      P       13 40 41.5 +2.8
DL2                                 pmax   pmax
      comp=Z,29nm,1.0s
KULM  Kulim             69.09 282   P      P       13 40 40.0 +0.5
MDJ   Mudanjiang        69.12 332   P      P       13 40 39.6 +0.6
MDJ                                 S      S       13 49 46.4 +3.7
MDJ                                 pmax   pmax
      comp=Z,16nm,1.5s
MDJ                                 pmax   pmax
      comp=Z,130nm,4.9s
MDJ                                 LR     LR
      comp=Z,240nm,9.9s
MDJ                                 LR     LR
      comp=Z,230nm,18.6s
MDJ                                 LR     LR
      comp=Z,480nm,19.5s
ATKA  Atka Island       69.53  12   P      P       13 40 41.2 -0.1
TYV   Tymovskoe         69.70 344  eP      P       13 40 43.2 +0.8
TYV                                 pmax   pmax
      comp=Z,10.0nm,0.9s
TYV                                 pmax   pmax
      comp=Z,200nm,5.0s
RPSI  Rantau Prapat     69.92 279   P      P       13 40 44.0 -0.7
PSI   Prapat            69.95 279   P      P       13 40 44.0 -1.0
      comp=Z,9.9nm,0.9s,baz=123,slow=3.3,SNR=7.7
PSI   Prapat            69.95 279   P      P       13 40 44.0 -1.0
TIA   Tai'an            70.03 319  eP      P       13 40 44.0 -0.9
TIA                                 S      S       13 49 53.3 -0.6
TIA                                 pmax   pmax
      comp=Z,13nm,1.6s
TIA                                 LR     LR
      comp=Z,230nm,15.7s
TIA                                 LR     LR
      comp=Z,340nm,19.6s
TIA                                 LR     LR
      comp=Z,430nm,17.6s
CN2   Changchun         70.46 329  eP      P       13 40 47.3  0.0
CN2                                eS      S       13 49 57.5 -1.0
CN2                                 pmax   pmax
      comp=Z,10.0nm,1.0s
CN2                                 pmax   pmax
      comp=Z,100nm,4.0s
CN2                                 LR     LR
      comp=Z,300nm,21.0s
CN2                                 LR     LR
      comp=Z,300nm,21.0s
CN2                                 LR     LR
      comp=Z,400nm,24.0s
GSI   Gunungsitoli      70.79 277   P      P       13 40 51.4 +1.4
      comp=Z,40nm,0.9s
GSI   Gunungsitoli      70.79 277   P      P       13 40 49.2 -0.8
GSI                                 IAmb   IAmb    13 40 51.6
      comp=Z,36nm,1.0s
GRNR  Gornyy            71.49 340⇑iP       P       13 40 54.6 +1.2
GRNR                                pmax   pmax
      comp=Z,20nm,1.1s
KLR   Kul'dur           71.88 336   P      P       13 40 56.1 +0.4
      comp=Z,6.0nm,0.7s,baz=136,slow=4.3,SNR=17
KLR   Kul'dur           71.88 336ceP       P       13 40 56.4 +0.6
KLR                                 pmax   pmax
      comp=Z,28nm,1.3s
ENH   Enshi             71.94 310   P      P       13 40 56.5 -0.1
ENH                                 IAmb   IAmb    13 40 58.1
      comp=Z,56nm,1.0s
SLVN  Son La            72.18 299   P      P       13 40 57.9 -0.4
SLVN                                IAmb   IAmb    13 41 02.1
      comp=Z,40nm,1.4s
GYA   Guiyang           72.23 305 ⇑P       P       13 40 59.4 +0.9
GYA                                 sP     sP      13 41 10.1 -0.4
GYA                                 S      S       13 50 24.0 +4.1
GYA                                 pmax   pmax
      comp=Z,35nm,0.9s
GYA                                 LR     LR
      comp=Z,490nm,26.7s
BJT   Baijiatuau        72.98 321   P      P       13 41 02.5 -0.1
BJT                                 pmax   pmax
      comp=Z,33nm,1.4s
BJT   Baijiatuau        72.98 321   P      P       13 41 02.5 -0.1
BJT                                 IAmb   IAmb    13 41 05.5
      comp=Z,33nm,1.4s
BJI   Beijing           72.99 321   P      P       13 41 03.5 +0.9
BJI                                 S      S       13 50 29.6 +1.8
BJI                                 pmax   pmax
      comp=Z,24nm,1.7s
BJI                                 pmax   pmax
      comp=Z,290nm,9.6s
BJI                                 LR     LR
      comp=Z,410nm,19.5s
BJI                                 LR     LR
      comp=Z,260nm,21.4s
BJI                                 LR     LR
      comp=Z,400nm,19.7s
TIY   Taiyuan           73.94 318 ⇓P       P       13 41 10.3 +1.9
TIY                                 pmax   pmax
      comp=Z,43nm,0.7s
XAN   Xi'an             74.31 313   P      P       13 41 11.5 +0.9
XAN                                 pP     pP      13 41 19.3 -0.2
XAN                                 S      S       13 50 43.3 +0.2
XAN                                 pmax   pmax
      comp=Z,50nm,0.8s
XAN                                 pmax   pmax
      comp=Z,360nm,3.7s
XAN                                 LR     LR
      comp=Z,460nm,22.0s
XAN                                 LR     LR
      comp=Z,510nm,23.4s
XAN                                 LR     LR
      comp=Z,910nm,23.1s
QSPA  South Pole Qui    74.32 180   P      P       13 41 10.6 +0.4
      comp=Z,24nm,0.7s,baz=25,slow=1.5,SNR=30
QSPA  South Pole Qui    74.32 180   P      P       13 41 10.3 +0.1
QSPA                                IAmb   IAmb    13 41 19.7
      comp=Z,43nm,0.8s
KMI   Kunming           74.78 302 ⇑P       P       13 41 15.8 +2.1
KMI                                 sP     sP      13 41 25.3 -0.4
KMI                                 PP     PP      13 44 05.0 +3.7
KMI                                 S      S       13 50 51.8 +2.8
KMI                                 pmax   pmax
      comp=Z,48nm,0.6s
KMI                                 LR     LR
      comp=Z,220nm,15.7s
KMI                                 LR     LR
      comp=Z,380nm,18.6s
KMI                                 LR     LR
      comp=Z,580nm,28.1s
CMAR  Chiang Mai Arr    75.30 294   P      P       13 41 17.5 +1.0
      comp=Z,7.4nm,0.9s,baz=132,slow=4.9,SNR=39
CMAR                                LR     LR      14 11 05.8
      comp=Z,115nm,21.8s,baz=180,slow=33
CMAR  Chiang Mai Arr    75.30 294   P      P       13 41 17.0 +0.5
CHTO  Chiang Mai        75.43 295   P      P       13 41 17.0 -0.3
CHTO                                pmax   pmax
      comp=Z,50nm,1.4s
CHTO  Chiang Mai        75.43 295   P      P       13 41 17.0 -0.3
CHTO                                IAmb   IAmb    13 41 20.8
      comp=Z,50nm,1.4s
MA2   Magadan           76.20 351deP       P       13 41 20.7 -0.1
MA2                                 pmax   pmax
      comp=Z,33nm,1.3s
MA2   Magadan           76.20 351   P      P       13 41 20.5 -0.3
MA2                                 IAmb   IAmb    13 41 21.5
      comp=Z,26nm,0.9s
HHC   Hu-ho-hao-te      76.30 320  eP      P       13 41 22.8 +0.9
HHC                                 S      S       13 51 05.5 +0.5
HHC                                 pmax   pmax
      comp=Z,25nm,1.1s
HHC                                 pmax   pmax
      comp=Z,240nm,6.6s
HHC                                 LR     LR
      comp=Z,350nm,17.0s
HHC                                 LR     LR
      comp=Z,240nm,17.9s
HHC                                 LR     LR
      comp=Z,430nm,18.7s
CD2   Chengdu           76.56 308   P      P       13 41 23.8 +0.2
CD2                                 pmax   pmax
      comp=Z,70nm,1.0s
ZEA   Zeya              77.17 337  eP      P       13 41 27.2 +0.8
ZEA                                 pmax   pmax
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      comp=E,10.0nm,1.2s
ZEA                             pmax    pmax
      comp=N,10.0nm,0.8s
ZEA                             pmax    pmax
      comp=Z,20nm,0.8s
ZEA                             pmax    pmax
      comp=E,100nm,5.7s
ZEA                             pmax    pmax
      comp=N,100nm,4.2s
ZEA                             pmax    pmax
      comp=Z,200nm,5.7s
LZH   Lanzhou          78.94 312 ⇑P     P       13 41 38.8 +2.0
LZH                             pP      sP      13 41 48.3 -0.7
LZH                             S       S       13 51 39.0 +5.1
LZH                             SS      SS      13 56 40.0 +0.1
LZH                             pmax    pmax
      comp=Z,55nm,1.2s
LZH                             pmax    pmax
      comp=Z,230nm,4.9s
LZH                             LR      LR
      comp=Z,410nm,19.5s
LZH                             LR      LR
      comp=Z,380nm,19.5s
LZH                             LR      LR
      comp=Z,420nm,20.6s
SEY   Seymchan         79.25 353  P     P       13 41 37.5 -0.2
      comp=Z,32nm,1.1s,baz=155,slow=5.3,SNR=30
P18K  Big Mountain,    80.83  18  P     P       13 41 48.6 +2.2
      baz=216
GAMB  Gambell          80.90   9  P     P       13 41 49.9 +3.4
      baz=200
MAW   Mawson           80.96 202  P     P       13 41 47.7 +0.7
      comp=Z,11nm,1.0s,baz=108,slow=6.7,SNR=17
MAW                             LR      LR      14 13 36.5
      comp=Z,522nm,19.4s,baz=74,slow=33
MAW   Mawson           80.96 202  P     P       13 41 48.0 +1.0
      baz=81,SNR=13
O19K  Port Alsworth    81.75  18  P     P       13 41 52.8 +1.7
      baz=217
BRLK  Bradley Lake     82.49  20  P     P       13 41 54.8 -0.4
BRLK                            IAmb    IAmb    13 41 59.7
      comp=Z,21nm,0.8s
BRSE  Bradley Lake S   82.52  20  P     P       13 41 56.1 +0.8
      baz=220
ANM   Nome             82.73  12  P     P       13 41 59.1 +2.8
      baz=206
ULN   Ulaanbaatar      82.89 324c iP    P       13 41 58.3 +0.6
ULN                             pmax    pmax
      comp=Z,39nm,0.9s
ULN   Ulaanbaatar      82.89 324  P     P       13 41 57.1 -0.6
ULN                             IAmb    IAmb    13 42 01.9
      comp=Z,36nm,0.8s
YAK   Yakutsk          82.95 343  P     P       13 41 57.1 -0.3
      comp=Z,45nm,0.7s,baz=101,slow=0.8,SNR=20
YAK   Yakutsk          82.95 343  P     P       13 41 56.9 -0.5
M19K  Big River Lodg   83.09  17  P     P       13 41 59.6 +1.4
      baz=217
SEW   Seward           83.22  20  P     P       13 41 59.7 +0.8
      baz=222
SONM  Songino Array    83.25 324  P     P       13 41 59.8 +0.3
      comp=Z,24nm,0.9s,baz=141,slow=4.3,SNR=68
SONM                            LR      LR      14 17 01.9
      comp=Z,226nm,21.9s,baz=118,slow=34
SONM  Songino Array    83.25 324  P     P       13 41 58.5 -1.0
GTA   Gaotai           83.31 314 ⇑P     P       13 42 01.1 +1.1
GTA                             pP      pP      13 42 09.9 +0.9
GTA                             sP      sP      13 42 14.8 +2.6
GTA                             pmax    pmax
      comp=Z,44nm,1.2s
GTA                             pmax    pmax
      comp=Z,240nm,7.6s
GTA                             LR      LR
      comp=Z,270nm,20.7s
GTA                             LR      LR
      comp=Z,330nm,22.7s
GTA                             LR      LR
      comp=Z,510nm,21.9s
O22K  Cooper Landing   83.42  20  P     P       13 41 59.4 -0.5
O22K  Cooper Landing   83.42  20  P     P       13 42 01.1 +1.2
      baz=221
TTA   Tatalina         83.47  16  P     P       13 42 01.4 +1.2
      baz=215
BILL  Bilibino         83.52 360d iP    P       13 41 59.9 -0.3
BILL                              i             13 42 17.0
BILL                              i             13 45 12.2
BILL                            pmax    pmax
      comp=Z,42nm,1.1s
BILL  Bilibino         83.52 360  P     P       13 41 59.6 -0.7
L20K  Farewell, AK     83.69  17  P     P       13 42 01.3  0.0
      baz=217
SUA   Susitna One      83.83  19  P     P       13 42 01.6 -0.6
      baz=220
RC01  Rabbit Creek A   83.87  19  P     P       13 42 01.5 -0.7
RC01                            IAmb    IAmb    13 42 06.7
      comp=Z,32nm,1.2s
RC01  Rabbit Creek A   83.87  19  P     P       13 42 00.5 -1.6
      baz=221
SHL   Shillong         83.98 299  P     P       13 42 03.8  0.0
SHL                             pmax    pmax
      comp=Z,126nm,1.0s
SHL   Shillong         83.98 299  P     P       13 42 03.8  0.0
PWL   Port Wells       84.16  20  P     P       13 42 02.6 -1.1
      baz=223
M22K  Willow           84.25  19  P     P       13 42 03.6 -0.5
      baz=221
K20K  Telida           84.34  16  P     P       13 42 04.5 -0.1
K20K                            IAmb    IAmb    13 42 09.8
      comp=Z,29nm,1.3s
K20K  Telida           84.34  16  P     P       13 42 04.5 -0.1
      baz=217
PMR   Palmer           84.44  19  P     P       13 42 05.1  0.0
PMR                             pmax    pmax
      comp=Z,13nm,1.0s
PMR   Palmer           84.44  19  P     P       13 42 05.0  0.0
PMR                             IAmb    IAmb    13 42 23.7
      comp=Z,12nm,1.0s
PMR   Palmer           84.44  19  P     P       13 42 04.2 -0.8
      baz=222
PPLA  Purkeypile       84.51  17  P     P       13 42 06.0 +0.4
      baz=219
KNK   Knik Glacier     84.52  20  P     P       13 42 06.5 +0.9
      baz=222
GLI   Glacier Island   84.59  21  P     P       13 42 05.8 -0.1
      baz=224
CUT   Chulitna         84.70  18  P     P       13 42 06.0 -0.4
      baz=221
GCSA  Galena City Sc   84.75  15  P     P       13 42 07.4 +0.9
      baz=214
EYAK  Cordova Ski Ar   84.81  21  P     P       13 42 08.7 +1.8
      baz=225
SML   Sawmill          84.86  20  P     P       13 42 07.1 -0.1
      baz=223
CAST  Castle Rocks     84.94  17  P     P       13 42 06.8 -0.8
CAST                            IAmb    IAmb    13 42 11.1
      comp=Z,13nm,0.8s
CAST  Castle Rocks     84.94  17  P     P       13 42 06.4 -1.2
      baz=219
J20K  Nowinta River    84.98  16  P     P       13 42 07.3 -0.4
J20K                            IAmb    IAmb    13 42 12.3
      comp=Z,13nm,0.9s
J20K  Nowinta River    84.98  16  P     P       13 42 08.0 +0.2
      baz=217
SCM   Sheep Creek Mo   85.20  20  P     P       13 42 09.4 +0.4
      baz=224
CHUM  Lake Minchumin   85.24  17  P     P       13 42 08.3 -0.8
      baz=219
BOD   Bodaibo          85.33 335 eP     P       13 42 08.7 -0.9
BOD                             pmax    pmax
      comp=Z,41nm,1.7s
O02D  Mt. Diablo Mer   85.44  46  P     P       13 42 10.7  0.0
      baz=245
TRF   Thorofare Moun   85.49  18  P     P       13 42 09.2 -1.3
TRF                             IAmb    IAmb    13 42 29.7
      comp=Z,19nm,1.2s
TRF   Thorofare Moun   85.49  18  P     P       13 42 09.1 -1.5
      baz=221
BMRM  Bremner River    85.51  21  P     P       13 42 11.1 +0.6
      baz=226
WAT6  Susitna Watana   85.61  19  P     P       13 42 11.3 +0.1
      baz=223
BPAW  Bear Paw Mtn.    85.78  17  P     P       13 42 11.5 -0.3
      baz=220
N02D  Trinity Center   85.83  46  P     P       13 42 12.7  0.0
      baz=245
RND   Reindeer         85.88  18  P     P       13 42 11.5 -0.9
RND                             pmax    pmax
      comp=Z,10.0nm,0.8s
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RND   Reindeer         85.88  18  P     P       13 42 11.4 -0.9
RND                             IAmb    IAmb    13 42 20.0
      comp=Z,9.9nm,0.8s
CRQE  Cirque           85.90  22  P     P       13 42 12.5 -0.1
      baz=227
M02C  Callahan         85.91  45  P     P       13 42 12.8 -0.2
      baz=245
N25K  Chitina, Valde   85.95  21  P     P       13 42 14.2 +1.4
      baz=226
CIS   Catalina Islan   86.01  54  P     P       13 42 13.4 -0.2
      baz=248
LSA   Lhasa            86.03 302  P     P       13 42 15.6 +1.2
LSA   Lhasa            86.03 302  P     P       13 42 14.5 +0.1
LSA                             pmax    pmax
      comp=Z,16nm,0.9s
LSA   Lhasa            86.03 302  P     P       13 42 14.5 +0.1
LSA                             IAmb    IAmb    13 42 16.1
      comp=Z,16nm,0.9s
DHY   Denali Highway   86.09  19  P     P       13 42 13.8 +0.3
      baz=223
MCK   McKinley         86.10  18  P     P       13 42 12.8 -0.6
MCK                             pmax    pmax
      comp=Z,15nm,0.9s
MCK   McKinley         86.10  18  P     P       13 42 12.8 -0.6
MCK                             IAmb    IAmb    13 42 18.1
      comp=Z,15nm,0.9s
MCK   McKinley         86.10  18  P     P       13 42 13.3 -0.1
      baz=222
O03E  Paynes Creek     86.18  46  P     P       13 42 13.9 -0.5
      baz=246
CMB   Columbia Colle   86.28  49  P     P       13 42 13.9 -1.0
CMB                             pmax    pmax
      comp=Z,5.0nm,1.0s
CMB   Columbia Colle   86.28  49  P     P       13 42 13.9 -1.0
ZAK   Zakamensk        86.32 325 eP     P       13 42 14.2 -0.7
ZAK                             pmax    pmax
      comp=Z,41nm,1.3s
HARP  HAARP            86.32  20  P     P       13 42 13.5 -0.9
      baz=225
I21K  Tanana           86.34  16  P     P       13 42 13.9 -0.5
I21K                            IAmb    IAmb    13 42 19.9
      comp=Z,16nm,1.0s
I21K  Tanana           86.34  16  P     P       13 42 14.5  0.0
      baz=219
H21K  Melozitna Rive   86.50  15  P     P       13 42 15.3  0.0
H21K  Melozitna Rive   86.50  15  P     P       13 42 15.3  0.0
      baz=218
IMAR  Indian Mountai   86.52  15  P     P       13 42 14.9 -0.5
MLY   Manley           86.57  17  P     P       13 42 14.8 -0.9
MLY   Manley           86.57  17  P     P       13 42 15.8 +0.1
      baz=220
CTG   Chitna Glacier   86.68  22  P     P       13 42 15.9 -0.6
      baz=229
NEA2  Nenana           86.70  17  P     P       13 42 15.9 -0.3
NEA2  Nenana           86.70  17  P     P       13 42 17.0 +0.7
      baz=222
TLY   Talaya           86.77 326  P     P       13 42 16.2 -0.7
      comp=Z,17nm,0.8s,baz=245,slow=4.0,SNR=14
TLY   Talaya           86.77 326⇑eP     P       13 42 17.5 +0.6
TLY                              eS     S       13 52 49.8 -2.9
TLY                             pmax    pmax
      comp=Z,78nm,1.3s
TLY                             MLR     MLR
      comp=Z,476nm,17.0s
TLY   Talaya           86.77 326  P     P       13 42 16.2 -0.7
TLY                             IAmb    IAmb    13 42 20.4
      comp=Z,19nm,0.8s
ISA   Isabella, Lake   86.80  52  P     P       13 42 16.1 -1.5
      baz=248
EDW2  Edwards Air Fo   86.88  53  P     P       13 42 17.7 -0.3
      baz=248
WRH   Wood River Hil   86.90  18  P     P       13 42 16.3 -0.9
BFSC  Mount Baldy Ra   86.90  53  P     P       13 42 17.8 -0.4
      baz=249
I23K  Minto, Yukon-K   87.04  17  P     P       13 42 18.0 +0.2
      baz=221
M26K  Nabesna, AK      87.05  21  P     P       13 42 16.9 -1.2
      baz=227
CCB   Clear Creek Bu   87.11  18  P     P       13 42 16.9 -1.3
HDA   Harding Lake     87.19  18  P     P       13 42 17.4 -1.3
HDA                             IAmb    IAmb    13 42 22.8
      comp=Z,14nm,1.0s
HDA   Harding Lake     87.19  18  P     P       13 42 17.4 -1.3
      baz=224
I04A  Tendick Farm,    87.21  43  P     P       13 42 17.6 -1.7
      baz=245
MDM   Murphy Dome      87.22  17  P     P       13 42 16.8 -2.0
TCOL  CIGO, UAF Yank   87.26  18  P     P       13 42 17.2 -1.7
TCOL                            IAmb    IAmb    13 42 22.4
      comp=Z,13nm,0.8s
TCOL  CIGO, UAF Yank   87.26  18  P     P       13 42 18.1 -0.8
      baz=223
COLA  College          87.26  18⇓eP     P       13 42 17.1 -1.9
COLA                            pmax    pmax
      comp=Z,5.0nm,1.0s
COLA  College          87.26  18  P     P       13 42 17.4 -1.6
COLA                            IAmb    IAmb    13 42 22.4
      comp=Z,14nm,0.9s
L26K  Log Cabin Wild   87.36  20  P     P       13 42 19.0 -0.6
      baz=227
RIDG  Independent Ri   87.36  19  P     P       13 42 19.0 -0.6
      baz=226
CWC   Cottonwood Cre   87.38  51  P     P       13 42 19.5 -1.0
      baz=248
MONP2 Monument Peak    87.39  55  P     P       13 42 19.9 -0.7
      baz=250
M27K  Edge Creek, AK   87.41  21  P     P       13 42 20.2 +0.2
      baz=228
IL31                   87.47  18  P     P       13 42 17.4 -2.5
IL31                            IAmb    IAmb    13 42 19.5
      comp=Z,6.8nm,0.6s
ILAR  Eielson Array    87.47  18  P     P       13 42 18.1 -1.9
      comp=Z,5.1nm,0.5s,baz=237,slow=4.9,SNR=116
ILAR                            PKiKP   PKiKP   13 47 23.0 -0.8
      comp=Z,0.5nm,0.7s,baz=255,slow=2.4,SNR=5.9
ILAR                            LR      LR      14 15 54.8
      comp=Z,686nm,20.5s,baz=228,slow=32
ILAR  Eielson Array    87.47  18  P     P       13 42 17.6 -2.4
DOT   Dot Lake         87.55  20  P     P       13 42 18.6 -1.9
DOT                             IAmb    IAmb    13 42 21.8
      comp=Z,15nm,1.4s
RRX   Edison Barstow   87.64  53  P     P       13 42 22.1 +0.6
      baz=249
MPMC  Manual Prospec   87.69  52  P     P       13 42 20.6 -1.4
      baz=249
SYO   Syowa Base       87.75 197⇓eP     P       13 42 20.8 -0.6
SYO   Syowa Base       87.75 197⇑ePcP   PcP     13 42 22.7 -0.6
SYO   Syowa Base       87.75 197⇑ipP    pP      13 42 31.0 +0.5
J05D  Fort Rock, OR    87.78  44  P     P       13 42 21.5 -0.7
      baz=246
SCRK  Sand Creek       87.80  19  P     P       13 42 21.9 +0.1
      baz=226
NVAR  Mina Array Bea   87.95  49  P     P       13 42 22.0 -1.3
      comp=Z,3.1nm,0.8s,baz=232,slow=7.5,SNR=14
NVAR                            PKKPbc  PKKPbc  14 00 11.1 +0.7
      comp=Z,0.7nm,0.6s,baz=77,slow=3.9,SNR=5.9
NVAR                            LR      LR      14 13 55.1
      comp=Z,532nm,21.1s,baz=274,slow=30
NVAR  Mina Array Bea   87.95  49  P     P       13 42 21.4 -1.8
H24K  Noodor Dome      87.97  17  P     P       13 42 23.1 +0.6
      baz=223
NV11  Mina Array Sit   88.06  49  P     P       13 42 22.6 -1.0
TAPN  Taplejung        88.10 299 eP     P       13 42 23.6 -0.7
      comp=Z,46nm,0.9s
BELC  Belle Mtn. Jos   88.11  54  P     P       13 42 23.9  0.0
      baz=250
HEC   Hector,Ludlow    88.13  53  P     P       13 42 23.6 -0.3
      baz=249
I05D  Terrebonne, OR   88.14  43  P     P       13 42 23.0 -0.8
      baz=246
PINE  Pine Mountain    88.18  44  P     P       13 42 23.5 -0.6
PINE                            IAmb    IAmb    13 42 27.5
      comp=Z,7.8nm,0.8s
ODAN  Odare            88.22 298 eP     P       13 42 24.8  0.0
      comp=Z,78nm,1.0s
J26L  Joseph Creek     88.30  19  P     P       13 42 24.2 +0.1
      baz=227
FURC  Furnace Creek,   88.31  51  P     P       13 42 24.1 -0.5
      baz=249
KVN   Kaiserville      88.33  49  P     P       13 42 24.2 -0.8
KVN                             pmax    pmax
      comp=Z,5.0nm,1.0s
KVN   Kaiserville      88.33  49  P     P       13 42 24.2 -0.8
D03D  Eldon            88.37  39  P     P       13 42 24.9 +0.3
      baz=245
COLD  Coldfoot         88.39  15  P     P       13 42 25.6 +1.3
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      baz=221
PRP   Porcupine Dome   88.41  18  P     P       13 42 24.3 -0.3
      baz=225
PALK  Pallekele        88.61 278  P     P       13 42 25.8 -0.8
PALK                            pmax    pmax
      comp=Z,13nm,1.0s
PALK  Pallekele        88.61 278  P     P       13 42 25.8 -0.8
PALK                            IAmb    IAmb    13 42 28.3
      comp=Z,13nm,1.0s
TPH   Tonopah          88.61  50  P     P       13 42 26.3 -0.1
TPH                             pmax    pmax
      comp=Z,19nm,1.0s
TPH   Tonopah          88.61  50  P     P       13 42 26.3 -0.1
TPH                             IAmb    IAmb    13 42 32.6
      comp=Z,19nm,1.0s
GMRC  Granite Mounta   88.64  53  P     P       13 42 26.4  0.0
      baz=250
IRM   Iron Mountain    88.83  54  P     P       13 42 27.1 -0.1
      baz=250
D05A  Enumclaw         88.90  40  P     P       13 42 27.4 +0.2
WVOR  Wild Horse Val   89.21  45  P     P       13 42 28.0 -0.9
WVOR                            pmax    pmax
      comp=Z,11nm,1.3s
WVOR  Wild Horse Val   89.21  45  P     P       13 42 28.0 -0.9
B05A  Bryant           89.28  39  P     P       13 42 29.0 +0.1
      baz=245
DAWY  Dawson           89.38  21  P     P       13 42 29.2 +0.1
      baz=231
BMN   Battle Mountai   89.46  48  P     P       13 42 29.4 -0.8
BMN                             pmax    pmax
      comp=Z,8.0nm,1.0s
BMN   Battle Mountai   89.46  48  P     P       13 42 29.4 -0.8
JIRN  Jiri             89.48 299 eP     P       13 42 30.3 -0.6
P33M  Teslin, Yukon    89.57  26  P     P       13 42 32.9 +2.8
      baz=236
TOLK  Toolik Lake Re   89.61  15  P     P       13 42 29.9 -0.2
TOLK  Toolik Lake Re   89.61  15  P     P       13 42 31.4 +1.3
      baz=221
PDMCI Parker Dam,Lak   89.66  54  P     P       13 42 31.0 -0.1
      baz=251
J08A  Circle Bar Ran   89.67  45  P     P       13 42 30.4 -0.6
J08A                            IAmb    IAmb    13 42 56.2
      comp=Z,11nm,1.1s
GUN   Gumba            89.82 299 eP     P       13 42 32.0 -0.4
R11A  Troy Canyon, C   89.92  50  P     P       13 42 30.2 -2.2
      baz=250
E07A  Sunnyside        89.98  41  P     P       13 42 31.4 -0.9
E07A                            IAmb    IAmb    13 42 34.5
      comp=Z,11nm,0.8s
G08A  Pilot Rock       90.07  43  P     P       13 42 32.1 -0.8
PKI   Pulchoki         90.11 299 eP     P       13 42 33.4 -0.4
      comp=Z,122nm,1.5s
HAWA  Hanford          90.12  42  P     P       13 42 31.8 -1.2
HAWA                            IAmb    IAmb    13 42 35.1
      comp=Z,9.0nm,0.8s
PKIN  Phulchoki        90.13 299 eP     P       13 42 33.3 -0.5
KKN   Kakani           90.29 299 eP     P       13 42 34.0 -0.5
DMN   Daman            90.38 298 eP     P       13 42 34.6 -0.3
D08A  Wollman Farm,    90.77  41  P     P       13 42 35.0 -0.9
PMSA  Palmer Station   90.87 160  P     P       13 42 36.0 -0.2
      comp=Z,32nm,0.9s,baz=219,slow=3.7,SNR=15
PMSA  Palmer Station   90.87 160  P     P       13 42 35.0 -1.1
GKN   Gorkha           90.90 299 eP     P       13 42 36.6 -0.6
TIXI  Tiksi            90.92 349  P     P       13 42 35.0 -1.1
      comp=Z,21nm,1.3s,baz=124,slow=7.2,SNR=12
TIXI  Tiksi            90.92 349deP     P       13 42 35.5 -0.5
TIXI                            pmax    pmax
      comp=Z,18nm,1.3s
TIXI  Tiksi            90.92 349  P     P       13 42 34.7 -1.3
TIXI                            IAmb    IAmb    13 42 38.5
      comp=Z,24nm,1.3s
BMO   Blue Mountains   91.00  44  P     P       13 42 36.1 -1.1
BMO                             pmax    pmax
      comp=Z,8.0nm,1.2s
BMO   Blue Mountains   91.00  44  P     P       13 42 36.1 -1.1
B08A  Colville Reser   91.01  40  P     P       13 42 35.6 -1.4
SPR3  Spring Creek 3   91.06  50  P     P       13 42 37.4 -0.5
SPR3                            IAmb    IAmb    13 43 00.0
      comp=Z,9.7nm,1.2s
F10A  Beach Ranch, E   91.45  42  P     P       13 42 38.1 -1.1
F10A                            IAmb    IAmb    13 42 40.9
      comp=Z,8.5nm,0.8s
KOLN  Koldanda         91.71 298 eP     P       13 42 39.8 -1.2
DANN  Dangsing         91.74 299 eP     P       13 42 40.0 -1.3
U15A  North Rim        91.77  53  P     P       13 42 41.4 +0.2
U15A                            IAmb    IAmb    13 43 04.0
      comp=Z,15nm,1.1s
X16A  Lo Mia Camp, P   91.81  55  P     P       13 42 41.7 +0.4
X16A                            IAmb    IAmb    13 43 04.1
      comp=Z,7.5nm,1.0s
PLID  Pearl Lake       91.95  44  P     P       13 42 40.6 -1.2
NVL   N'lazarevskaya   92.08 188 eP     P       13 42 45.6 +4.0
NVL                             pmax    pmax
      comp=Z,19nm,0.8s
PYUN  Piuthan          92.32 298 eP     P       13 42 42.6 -1.2
SNAA  Sanae            92.57 183  P     P       13 42 43.7 -0.4
SNAA  Sanae            92.57 183ceP     P       13 42 43.2 -0.8
SNAA                            pmax    pmax
      comp=Z,7.0nm,0.9s
SNAA  Sanae            92.57 183  P     P       13 42 43.0 -1.0
VNA3  Neumayer Olymp   93.24 181  P     P       13 42 46.3 -0.7
HYB   Hyderabad        93.36 287 i P    P       13 42 48.0 -0.6
WMQ   Urumqi           93.37 315 eP     P       13 42 49.0 +0.8
WMQ                             pP      pP      13 42 56.6 -0.7
WMQ                             pmax    pmax
      comp=Z,33nm,1.3s
WMQ                             pmax    pmax
      comp=Z,130nm,5.5s
WMQ                             LR      LR
      comp=Z,320nm,23.3s
WMQ                             LR      LR
      comp=Z,420nm,26.3s
WMQ                             LR      LR
      comp=Z,510nm,22.9s
VNA2  Neumayer--Watz   93.50 182  P     P       13 42 47.9 -0.4
      baz=186,slow=3.9
VNA1  Neumayer--Stat   93.80 182  P     P       13 42 49.5 -0.1
INK   Inuvik           93.83  19  P     P       13 42 49.6 +0.1
      comp=Z,0.7nm,0.8s,baz=327,slow=3.3,SNR=4.7
INK                             PKiKP   PKiKP   13 47 33.8 -0.6
      comp=Z,1.8nm,0.9s,baz=355,slow=2.2,SNR=5.4
DGZ   Jazzator, Alta   95.38 320ceP     P       13 42 57.0 -0.3
DGZ                             pmax    pmax
      comp=Z,9.0nm,0.9s
USHA  Ushuaia          95.45 151  P     P       13 42 56.6 -0.9
      comp=Z,3.2nm,0.6s,baz=240,slow=5.3,SNR=4.0
PDAR  Pinedale Array   95.65  47  P     P       13 42 57.2 -1.6
      comp=Z,0.2nm,0.5s,baz=251,slow=2.5,SNR=2.3
PDAR                            PP      PP      13 46 50.3 -0.4
      comp=Z,0.2nm,0.7s,baz=223,slow=3.6,SNR=1.6
PDAR                            PKKPbc  PKKPbc  13 59 50.7 -0.1
      comp=Z,0.5nm,0.7s,baz=95,slow=4.3,SNR=5.3
PDAR                            LR      LR      14 17 56.1
      comp=Z,220nm,21.4s,baz=304,slow=30
TXAR  Lajitas Array    96.79  62  P     P       13 43 03.2 -1.0
      comp=Z,0.4nm,0.7s,baz=236,slow=5.4,SNR=5.1
TXAR                            PP      PP      13 46 59.5 -0.1
      comp=Z,0.7nm,1.0s,baz=248,slow=7.4,SNR=3.5
TXAR                            PKKP    PKKPdf  13 59 48.5 -0.4
      comp=Z,0.3nm,0.7s,baz=89,slow=3.8,SNR=3.6
TXAR                            LR      LR      14 20 49.2
      comp=Z,424nm,18.6s,baz=0.0,slow=32
MK31  Makanchi Array   97.87 316d iP    Pdif    13 43 08.6  0.0
MK31  Makanchi Array   97.87 316  P     P       13 43 07.6 -0.9
MK31                            IAmb    IAmb    13 43 11.4
      comp=Z,8.4nm,1.0s
MKAR  Makanchi Array   97.87 316  P     P       13 43 07.9 -0.7
      comp=Z,10nm,1.0s,baz=95,slow=6.1,SNR=22
MKAR                            PP      PP      13 47 06.0 -1.4
      comp=Z,0.7nm,0.8s,baz=128,slow=6.3,SNR=2.2
MKAR                            PKiKP   PKiKP   13 47 42.6 +0.5
      comp=Z,1.6nm,0.8s,baz=126,slow=3.9,SNR=5.5
MKAR                            PKKPbc  PKKPbc  13 59 42.1 -2.5
      comp=Z,0.7nm,0.7s,baz=259,slow=3.9,SNR=4.4
MKAR                            LR      LR      14 26 55.4
      comp=Z,158nm,21.5s,baz=86,slow=35
MKAR  Makanchi Array   97.87 316  P     P       13 43 08.0 -0.6
MAKZ  Makanchi         98.08 316  P     P       13 43 08.6 -0.9
MAKZ                            pmax    pmax
      comp=Z,7.0nm,0.8s
MAKZ  Makanchi         98.08 316  P     P       13 43 08.6 -0.9
MAKZ                            IAmb    IAmb    13 43 18.7
      comp=Z,7.2nm,0.8s
A36M  Sachs Harbour    98.12  17  P     P       13 43 07.2 -1.8
A36M                            IAmb    IAmb    13 43 15.1
      comp=Z,6.7nm,1.0s
```

A36M	**Sachs Harbour**	**98.12**	**17**	P	Pdif	13 43 09.0	-0.1
	baz=244						
ZAA0	**Zalesovo Array**	**98.15**	**324**	P	**P**	**13 43 07.9**	**-1.7**
ZAA0				IAmb	IAmb	13 43 11.6	
	comp=Z,15nm,0.8s						
ZALV	**Zalesovo Beam**	**98.15**	**324**	P	**P**	**13 43 08.6**	**-1.0**
	comp=Z,16nm,0.8s,baz=108,slow=4.8,SNR=36						
ZALV				LR	LR	14 27 33.0	
	comp=Z,216nm,21.2s,baz=103,slow=35						
ZALV	**Zalesovo Beam**	**98.15**	**324**	P	**P**	**13 43 07.7**	**-1.8**
YKA	**Yellowknife Ar**	**98.44**	**27**	P	**P**	**13 43 09.1**	**-1.5**
	comp=Z,2.5nm,0.9s,baz=256,slow=4.4,SNR=10						
YKA				PKiKP	**PKiKP**	**13 47 42.3**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=249,slow=1.7,SNR=7.3						
YKA				PKKPbc	**PKKPbc**	**13 59 42.7**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=58,slow=2.7,SNR=3.6						
YKA				LR	LR	14 26 02.1	
	comp=Z,183nm,18.1s,baz=0.0,slow=34						
NRIK	**Noril'sk**	**100.97**	**339**	P	**Pdif**	**13 43 20.1**	**-1.6**
	comp=Z,7.5nm,0.8s,baz=81,slow=3.4,SNR=10						
NRIK	**Noril'sk**	**100.97**	**339***c*	*i*P	**Pdif**	**13 43 20.9**	**-0.9**
NRIK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KURK	**Kurchatov**	**101.11**	**320**	⇓*e*P	**Pdif**	**13 43 23.6**	**+0.8**
KURK	**Kurchatov**	**101.11**	**320**		**Pdif**	**13 43 22.4**	**-0.4**
KURK					**PP**	**13 47 31.9**	**0.0**
KURBB	**Kurchatov Arra**	**101.15**	**320**	P	**Pdif**	**13 43 22.4**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=97,slow=4.7,SNR=9.8						
KURBB				PP	**PP**	**13 47 31.9**	**-0.3**
	comp=Z,1.5nm,1.1s,baz=107,slow=8.2,SNR=4.4						
KURBB				PKiKP	**PKiKP**	**13 47 47.2**	**-0.6**
	comp=Z,2.3nm,0.8s,baz=100,slow=1.4,SNR=9.1						
BVAR	**Borovoye Array**	**106.47**	**321**	Pdiff	**Pdif**	**13 43 46.2**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=180,slow=1.0,SNR=5.7						
BVAR				PKiKP	**PKiKP**	**13 47 58.0**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=207,slow=6.2,SNR=13						
RES	**Resolute Bay**	**107.13**	**16**	PKiKP	**PKiKP**	**13 47 57.5**	**-0.7**
	comp=Z,2.3nm,0.6s,baz=283,slow=3.8,SNR=14						
TULEG	**Thule**	**112.81**	**12**	*i* P	**PKiKP**	**13 48 07.8**	**-1.0**
TULEG				IAmb	IAmb	13 48 08.4	
	comp=Z,2.7nm,0.7s						
ARU	**Arti**	**113.26**	**325**	PKiKP	**PKiKP**	**13 48 09.8**	**-0.4**
	comp=Z,3.1nm,0.5s,baz=158,slow=4.1,SNR=7.2						
ARU	**Arti**	**113.26**	**325**	*i* PKIKP	**PKiKP**	**13 48 10.0**	**-0.2**
ARU						13 49 02.3	
ARU						13 55 17.8	
ARU				SS	SS	14 04 41.8	-2.4
ARU				MLR	MLR		
	comp=Z,344nm,22.0s						
ARU	**Arti**	**113.26**	**325**	PKiKP	**PKiKP**	**13 48 10.0**	**-0.2**
NOR	**Nord**	**114.05**	**1**	*i* P	PKPdf	13 48 09.4	-1.7
NOR				IAmb	IAmb	13 48 19.6	
	comp=Z,1.2nm,0.7s						
AKTO	**Aktyubinsk**	**114.17**	**319**	PKP	PKPdf	13 48 11.8	-0.4
	comp=Z,3.2nm,0.5s,baz=99,slow=5.4,SNR=8.8						
GEYT	**Alibeck**	**114.45**	**305**	PKP	PKPdf	13 48 10.7	-2.4
	comp=Z,6.4nm,0.7s,baz=128,slow=2.4,SNR=6.9						
NEEM	**North Greenlan**	**115.34**	**9**	*i* P	**PKiKP**	**13 48 13.2**	**-0.9**
NEEM				IAmb	IAmb	13 48 13.8	
	comp=Z,17nm,0.6s						
SPA0	**Spitsbergen Ar**	**115.90**	**354**	*e*PKPdf	**PKiKP**	**13 48 14.5**	**-0.2**
SPITS	**Spitsbergen Ar**	**115.90**	**354**	PKP	**PKiKP**	**13 48 12.9**	**-1.8**
	comp=Z,9.6nm,0.8s,baz=35,slow=5.3,SNR=7.4						
LPAZ	**La Paz**	**116.81**	**118**	PKP	**PKPdf**	**13 48 17.4**	**-1.7**
	comp=Z,0.5nm,0.4s,baz=286,slow=7.4,SNR=2.3						
KIRV	**Kirov**	**117.68**	**328**	PKP	**PKiKP**	**13 48 19.2**	**+0.6**
	comp=Z,10nm,0.6s,baz=346,slow=1.7,SNR=4.5						
KIRV	**Kirov**	**117.68**	**328**	⇑*i*PKIKP	**PKiKP**	**13 48 21.0**	**+2.4**
UPNV	**Upernavik**	**117.74**	**13**	*i* P	**PKPdf**	**13 48 17.2**	**-1.2**
UPNV				IAmb	IAmb	13 48 18.0	
	comp=Z,20nm,0.6s						
DAG	**Danmarks Havn**	**118.85**	**2**	*i* P	**PKPdf**	**13 48 18.5**	**-1.9**
DAG				IAmb	IAmb	13 48 19.5	
	comp=Z,7.3nm,0.7s						
NUUG	**Nuugaatsiaq**	**119.26**	**14**	*i* P	**PKPdf**	**13 48 20.5**	**-0.8**
NUUG				IAmb	IAmb	13 48 20.8	
	comp=Z,14nm,0.6s						
CPUP	**Villa Florida**	**119.82**	**133**	PKP	**PKPdf**	**13 48 22.8**	**-1.1**
	comp=Z,6.0nm,1.0s,baz=278,slow=5.3,SNR=4.0						
CPUP				PKKPab	**PKKPab**	**13 58 36.4**	**-0.2**
	comp=Z,2.4nm,0.9s,baz=63,slow=2.3,SNR=3.0						
BELG	**Belogornoye**	**120.27**	**322**	PKP	**PKPdf**	**13 48 23.6**	**-0.2**
	comp=Z,37nm,0.7s,baz=65,slow=0.3,SNR=9.9						
APA	**Apatity**	**120.29**	**341**	⇓*i*PKIKP	**PKPdf**	**13 48 18.7**	**-4.7**
APA				pmax	pmax		
	comp=Z,13nm,1.1s						
APA				MLR	MLR		
	comp=Z,1µm,18.0s						
ARA0	**ARCESS Array S**	**121.18**	**345**	*e*PKPdf	**PKPdf**	**13 48 25.1**	**0.0**
ARCES	**ARCESS Array B**	**121.18**	**345**	PKP	**PKPdf**	**13 48 24.5**	**-0.6**
	comp=Z,12nm,0.6s,baz=57,slow=1.2,SNR=35						
ARCES				PKKPbc	**PKKPab**	**13 58 26.8**	**-0.4**
	comp=Z,2.7nm,0.9s,baz=251,slow=2.8,SNR=5.0						
ARCES	**ARCESS Array B**	**121.18**	**345**	PKIKP	**PKPdf**	**13 48 24.8**	**-0.3**
ARCES	**ARCESS Array B**	**121.18**	**345**	PKPdf	**PKPdf**	**13 48 24.8**	**-0.3**
SUMG	**Summit**	**121.21**	**9**	PKIKP	**PKPdf**	**13 48 25.6**	**0.0**
SUMG	**Summit**	**121.21**	**9**	*i* P	**PKPdf**	**13 48 24.8**	**-0.8**
SUMG				IAmb	IAmb	13 48 27.0	
	comp=Z,6.9nm,0.7s						
SUMG	**Summit**	**121.21**	**9**	PKPdf	**PKPdf**	**13 48 25.6**	**0.0**
DBG	**Daneborg**	**121.26**	**2**	*i* P	**PKPdf**	**13 48 23.7**	**-1.4**
DBG				IAmb	IAmb	13 48 25.3	
	comp=Z,7.0nm,0.8s						
KLMR	**Klimovskoe**	**121.53**	**333**	*e*PKIKP	**PKPdf**	**13 48 23.6**	**-2.3**
KLMR				pmax	pmax		
	comp=Z,26nm,1.0s						
KLMR	**Klimovskoe**	**121.53**	**333**	*e*PKPdf	**PKPdf**	**13 48 23.6**	**-2.3**
KLMR				AMP		13 48 29.4	
	comp=Z,26nm,1.0s						
KLMR				*e*PKKPbc	**PKKPab**	**13 58 24.8**	**-1.1**
KTK1	**Kautokeino**	**122.12**	**346**	*e*PKPdf	**PKPdf**	**13 48 26.6**	**-0.3**
MAK	**Makhachkala**	**122.22**	**311**	*e*P	**Pdif**	**13 44 57.5**	**+0.6**
MAK				*i*		13 48 28.4	
MAK				*e*		13 50 03.3	
MAK				*e*PS	**PS**	**13 59 57.7**	**-0.5**
MAK				*e*SS	SS	14 06 36.8	-4.5
MAK				pmax	pmax		
	comp=Z,178nm,1.0s						
BOSA	**Boshof**	**122.59**	**220**	PKP	**PKPdf**	**13 48 28.5**	**-0.7**
	comp=Z,5.7nm,0.8s,baz=110,slow=1.9,SNR=8.5						
BOSA	**Boshof**	**122.59**	**220**	PKPdf	**PKPdf**	**13 48 28.6**	**-0.6**
TRO	**Tromso**	**122.61**	**347**	*e*PKPdf	**PKPdf**	**13 48 27.7**	**-0.1**
QRN	**Al-Qurain**	**122.86**	**294**	*e*P	**PKPdf**	**13 48 29.1**	**-0.4**
SFJD	**Kangerlussuaq**	**123.12**	**17**	*i* P	**PKPdf**	**13 48 27.5**	**-1.3**
SFJD				IAmb	IAmb	13 48 28.2	
	comp=Z,3.8nm,0.7s						
SCHQ	**Schefferville**	**123.14**	**34**	PKP	**PKPdf**	**13 48 27.6**	**-1.7**
	comp=Z,5.0nm,0.8s,baz=281,slow=11,SNR=4.4						
SCHQ				PKKPbc	**PKKPbc**	**13 58 21.2**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=108,slow=2.2,SNR=3.8						
MIB	**Mutribah**	**123.37**	**296**	*e*P	**PKPdf**	**13 48 29.6**	**-0.9**
RST	**Umm Al-Ruwaisa**	**123.67**	**295**	*e*P	**PKPdf**	**13 48 30.0**	**-1.0**
ICESG	**Greenland Ices**	**124.03**	**11**	*i* P	**PKPdf**	**13 48 29.5**	**-1.5**
ICESG				IAmb	IAmb	13 48 30.5	
	comp=Z,17nm,0.7s						
VRH	**Novokhopyorsk**	**124.12**	**322**	*e*PKIKP	**PKPdf**	**13 48 31.1**	**-0.1**
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
AQDB	**Aquidauana**	**124.59**	**129**	PKPdf	**PKPdf**	**13 48 32.5**	**-0.6**
DY2G	**Dye2**	**124.68**	**16**	*i* P	**PKPdf**	**13 48 31.2**	**-1.0**
DY2G				IAmb	IAmb	13 48 33.2	
	comp=Z,52nm,0.7s						
MOS	**Moscow**	**124.68**	**328**	*e*PKIKP	**PKPdf**	**13 48 30.7**	**-1.4**
GNI	**Garni**	**124.69**	**308**	PKP	**PKiKP**	**13 48 33.1**	**-0.2**
	comp=Z,13nm,0.6s,baz=49,slow=8.1,SNR=6.0						
GNI	**Garni**	**124.69**	**308***d*	*i*PKIKP	**PKiKP**	**13 48 34.0**	**+0.8**
GNI				pmax	pmax		
	comp=Z,16nm,0.7s						
GNI	**Garni**	**124.69**	**308**	PKPdf	**PKiKP**	**13 48 33.0**	**-0.2**
PTLB	**Pontes e Lacer**	**124.74**	**122**	PKPdf	**PKPdf**	**13 48 32.6**	**-0.9**
NUUK	**Nuuk**	**124.75**	**20**	*i* P	**PKPdf**	**13 48 31.2**	**-0.8**
NUUK				IAmb	IAmb	13 48 32.6	
	comp=Z,21nm,0.7s						
STEI	**Steigen**	**124.78**	**348**	*e*PKPdf	**PKPdf**	**13 48 31.4**	**-0.6**
ZEI	**Tsey**	**124.86**	**311**	*i* PKIKP	**PKiKP**	**13 48 35.6**	**+2.1**
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LBTB	**Lobatse**	**124.87**	**223**	PKIKP	**PKPdf**	**13 48 32.9**	**-0.8**
LBTB	**Lobatse**	**124.87**	**223**		**PKPdf**	**13 48 32.9**	**-0.8**
SCO	**Scoresbysund**	**124.96**	**4**	*i* P	**PKPdf**	**13 48 32.2**	**-0.1**
SCO				IAmb	IAmb	13 48 32.9	
	comp=Z,12nm,0.7s						
ONI	**Oni**	**125.22**	**311**	PKIKP	**PKPdf**	**13 48 33.1**	**-0.6**
ONI	**Oni**	**125.22**	**311**		**PKPdf**	**13 48 33.1**	**-0.6**
FAUS	**Fauske**	**125.23**	**347**	*e*PKPdf	**PKPdf**	**13 48 32.9**	**+0.1**
LPSR	**Galich'ya Gora**	**125.25**	**324**	*e*PKIKP	**PKiKP**	**13 48 34.1**	**+0.4**
LPSR				pmax	pmax		
	comp=Z,40nm,1.0s						
KBZ	**Khabaz**	**125.38**	**313**	PKP	**PKPdf**	**13 48 33.0**	**-0.9**
	comp=Z,6.2nm,0.8s,baz=101,slow=5.9,SNR=6.9						
KBZ	**Khabaz**	**125.38**	**313**	⇓*i*PKIKP	**PKiKP**	**13 48 34.2**	**0.0**
AKH	**Akhalkalaki**	**125.42**	**310**	⇓P	**PKiKP**	**13 48 35.3**	**+0.6**
KIV	**Kislovodsk**	**125.48**	**313**	*i* PKIKP	**PKiKP**	**13 48 35.1**	**+0.5**
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KIV				MLR	MLR		
	comp=Z,150nm,23.0s						
OBN	**Obninsk**	**125.50**	**328**	*i* PKIKP	**PKiKP**	**13 48 35.0**	**+0.9**
OBN				*i*		13 50 24.1	
OBN				pmax	pmax		
	comp=Z,35nm,1.3s						
OBN				MLR	MLR		
	comp=Z,187nm,20.0s						
VSR	**Storozhevoye**	**125.63**	**322**	*e*PKIKP	**PKPdf**	**13 48 33.9**	**-0.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORD	**Divnogorie**	**125.64**	**322**	*e*PKIKP	**PKPdf**	**13 48 33.8**	**-0.3**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BAUV	**El Baul**	**125.72**	**90**	PKPdf	**PKPdf**	**13 48 34.6**	**-0.8**
MOR8	**Moi Rana**	**126.43**	**347**	*e*PKPdf	**PKPdf**	**13 48 34.9**	**-0.4**
KONS	**Konsvik**	**126.44**	**347**	*e*PKPdf	**PKiKP**	**13 48 35.8**	**+0.2**
FINES	**FINESS Array B**	**126.61**	**338**	PKP	**PKPdf**	**13 48 34.7**	**-1.0**
	comp=Z,13nm,1.0s,baz=11,slow=3.9,SNR=10						
KIBK	**Kibwezi**	**126.64**	**255**		**PKPdf**	**13 48 35.8**	**-1.5**
GURO	**Guroymak-BITLI**	**127.02**	**307**	PKPdf	**PKPdf**	**13 48 36.9**	**-0.5**
ISOG	**Isortoq, Green**	**127.19**	**13**	*i* P	**PKPdf**	**13 48 35.2**	**-1.4**
ISOG				IAmb	IAmb	13 48 36.1	
	comp=Z,17nm,0.7s						
SOC	**Sochi**	**127.65**	**313**	*i* PKIKP	**PKPdf**	**13 48 36.4**	**-1.8**
SOC				*e*		13 50 35.6	
SOC				*e*PS	**PS**	**14 00 43.3**	**-2.8**
SOC				MLR	MLR		
	comp=Z,179nm,22.0s						
KMBO	**Kilima Mbogo**	**127.82**	**256**	PKP	**PKPdf**	**13 48 39.0**	**-0.8**
	comp=Z,1.8nm,0.4s,baz=22,slow=7.5,SNR=3.0						
NSS	**Namsos**	**128.38**	**347**	*e*PKPdf	**PKiKP**	**13 48 39.4**	**-0.2**
MNK	**Minsk**	**130.14**	**330**	*i* PKIKP	**PKPdf**	**13 48 40.8**	**-1.8**
MNK				*i*		13 48 55.9	
MNK				*i*		13 50 53.7	
MNK				*i* SS	SS	14 08 16.6	-2.5
MNK				pmax	pmax		
	comp=N,17nm,1.0s						
MNK				pmax	pmax		
	comp=E,1.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,11nm,1.0s						
MNK				MLR	MLR		
	comp=E,38nm,20.0s						
MNK				MLR	MLR		
	comp=Z,264nm,19.0s						
MNK				MLR	MLR		
	comp=N,303nm,20.0s						
MNK	**Minsk**	**130.14**	**330**	*i* PKP	**PKPdf**	**13 48 40.8**	**-1.8**
	comp=E,1.0nm,1.0s						
MNK				*i* PKP	**PKPdf**	**13 48 40.8**	**-1.8**
	comp=N,17nm,1.0s						
MNK				*i* PKP	**PKPdf**	**13 48 40.8**	**-1.8**
	comp=Z,11nm,1.0s,baz=55						
MNK				*i* pPKP	**sPKPdf**	**13 48 56.0**	**+0.8**
MNK				*i* PP	**PP**	**13 50 53.7**	**-1.6**
MNK				*i* PPP	PPP	13 52 47.9	
MNK				*i* SKS	SKSdf	13 54 56.9	-55
MNK				*i* SKKS	**SKSac**	**13 55 57.6**	**+7.7**
MNK				*i* PS	PS	14 01 26.3	+19
MNK				*i* SS	**SS**	**14 08 16.6**	**-2.5**
MNK				*i* SSS	SSS	14 13 20.9	
MNK				*i* LR	LR	14 40 50.1	
MNK				*i* LRM	MLR	14 46 20.4	
	comp=E,38nm,20.4s						
MNK				*i* LRM	MLR	14 46 56.2	
	comp=Z,264nm,19.5s						
MNK				*i* LRM	MLR	14 47 15.4	
	comp=N,303nm,20.4s						
NACGM	**Naroch**	**130.43**	**331**	*i* PKP	**PKPdf**	**13 48 41.5**	**-1.7**
PABE	**Paberze**	**131.32**	**333**	PKPdf	**PKPdf**	**13 48 45.1**	**+0.3**
NC303	**NORSAR Array S**	**131.35**	**345**		**PKiKP**	**13 48 45.2**	**-0.5**
AKASG	**Malin Array Be**	**131.51**	**325**	PKP	**PKPdf**	**13 48 45.2**	**-0.1**
	comp=N,3.3nm,0.6s,baz=65,slow=2.7,SNR=14						
AKASG				SKP	**SKPab**	**13 52 13.3**	**+3.9**
	comp=N,0.8nm,0.2s,baz=49,slow=3.9,SNR=6.8						
NB2	**NORSAR Subarra**	**131.55**	**345**	PKPdf	**PKPdf**	**13 48 45.3**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**131.55**	**345**	PKPdf	**PKPdf**	**13 48 45.3**	**+0.1**
	baz=31,slow=1.9						
NOA	**NORSAR Array B**	**131.55**	**345**	PKP	**PKiKP**	**13 48 46.0**	**-0.2**
	comp=Z,2.3nm,0.6s,baz=31,slow=2.0,SNR=14						
NOA				SKPbc	**SKPbc**	**13 52 05.2**	**-3.5**
	comp=Z,0.3nm,0.5s,baz=33,slow=2.9,SNR=1.5						
NOA				SKP	**SKPab**	**13 52 14.8**	**+5.5**
	comp=Z,2.4nm,0.8s,baz=31,slow=2.9,SNR=7.1						
NOA	**NORSAR Array B**	**131.55**	**345**	PKIKP	**PKiKP**	**13 48 46.0**	**-0.2**
NC602	**NORSAR Array S**	**131.73**	**344**	*e*PKPdf	**PKiKP**	**13 48 46.4**	**-0.1**
NC602	**NORSAR Array S**	**131.73**	**344**		**PKPdf**	**13 48 45.2**	**-0.2**
ASF	**Jabal al Asfar**	**132.15**	**299**	PKP	**PKiKP**	**13 48 47.8**	**-0.5**
	comp=Z,7.8nm,0.8s,baz=338,slow=1.4,SNR=11						
BRTR	**Keskin Array B**	**133.10**	**310**	PKP	**PKPdf**	**13 48 48.0**	**-0.9**
	comp=Z,5.7nm,0.9s,baz=108,slow=4.0,SNR=9.5						
BRTR				SKP	**SKPab**	**13 52 17.2**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=119,slow=1.8,SNR=2.3						
BRTR	**Keskin Array B**	**133.10**	**310**	PKPdf	**PKPdf**	**13 48 47.4**	**-1.5**
BDFB	**Brasilia**	**133.30**	**130**	PKP	**PKPdf**	**13 48 48.9**	**-1.0**
	comp=Z,3.7nm,0.5s,baz=204,slow=3.5,SNR=5.0						
BER	**Bergen**	**133.49**	**348**	*e*PKPdf	**PKPdf**	**13 48 49.3**	**+0.5**
MILM	**Milestii Mici**	**133.60**	**321**	*e*PKIKP	**PKiKP**	**13 48 50.0**	**-0.6**
MILM				pmax	pmax		
	comp=Z,9.0nm,0.3s						
MILM				MLR	MLR		
	comp=Z,300nm,23.0s						
MBAR	**Mbarara**	**134.06**	**253**	⇓*i*PKIKP	**PKiKP**	**13 48 53.0**	**+0.2**
CSS	**Mathiatis**	**134.57**	**304**	PKPdf	**PKPdf**	**13 48 50.2**	**-1.4**
CFR	**Carcaliu**	**134.82**	**319**	⇓P	**PKiKP**	**13 48 54.6**	**+1.4**
CFR	**Carcaliu**	**134.82**	**319**	⇓PKIKP	**PKiKP**	**13 48 54.6**	**+1.4**
TIRR	**Tirgusor**	**134.97**	**318**	⇑P	**PKiKP**	**13 48 53.0**	**-0.5**
TIRR	**Tirgusor**	**134.97**	**318**	⇑PKIKP	**PKiKP**	**13 48 53.0**	**-0.5**
HARR	**Harsova**	**135.18**	**319**	⇓P	**PKiKP**	**13 48 54.2**	**+0.3**
HARR	**Harsova**	**135.18**	**319**	⇓PKIKP	**PKiKP**	**13 48 54.2**	**+0.3**
BUR08	**Bucovina Ar. S**	**135.36**	**324**	PKPdf	**PKPdf**	**13 48 52.0**	**-0.9**
BURAR	**Bucovina Array**	**135.37**	**324**	⇓P	**PKiKP**	**13 48 55.5**	**+1.1**
BURAR	**Bucovina Array**	**135.37**	**324**	PKPdf	**PKPdf**	**13 48 51.0**	**-1.8**
VRI	**Vrincioaia**	**135.37**	**321**	⇑P	**PKiKP**	**13 48 54.2**	**-0.1**
VRI	**Vrincioaia**	**135.37**	**321**	⇑PKIKP	**PKiKP**	**13 48 54.2**	**-0.1**
PLOR	**Plostina**	**135.43**	**321**	⇓P	PKiKP	13 49 05.0	+11
PLOR	**Plostina**	**135.43**	**321**	⇓PKIKP	PKiKP	13 49 05.0	+11
MLR	**Muntele Rosu**	**136.03**	**321**	⇑P	**PKiKP**	**13 48 55.7**	**-0.1**
MLR	**Muntele Rosu**	**136.03**	**321**	⇑PKIKP	**PKiKP**	**13 48 55.7**	**-0.1**
DOPR	**Dopca**	**136.13**	**322**	⇓P	**PKiKP**	**13 48 57.0**	**+1.2**
KOLS	**Kolonicke sedl**	**136.23**	**327**	*e*PKP	**PKiKP**	**13 48 55.9**	**-0.1**
UZH	**Uzhgorod**	**136.41**	**326**	*e*PKIKP	**PKiKP**	**13 48 56.9**	**+0.6**
UZH				*i*		13 49 07.2	
UZH				*i*		13 49 16.0	
TRPA	**Tarpa**	**136.57**	**326**	⇓P	**PKiKP**	**13 48 59.0**	**+2.4**
VOIR		**136.60**	**321**	⇑P	**PKiKP**	**13 48 58.4**	**+1.5**
VOIR		**136.60**	**321**	⇑PKIKP	**PKiKP**	**13 48 58.4**	**+1.5**
SGRR	**Singureni**	**136.63**	**319**	⇓P	**PKPdf**	**13 48 53.8**	**-1.4**
CRVS	**Cervenica-Dubn**	**136.68**	**327**	*e*PKP	**PKPdf**	**13 48 55.0**	**-0.1**
OJC	**Ojcow**	**136.68**	**330**	PKIKP	**PKPdf**	**13 48 53.7**	**-1.4**
OJC	**Ojcow**	**136.68**	**330**	PKPdf	**PKPdf**	**13 48 53.6**	**-1.4**
ARR	**Arges**	**136.89**	**321**	⇑P	**PKiKP**	**13 48 57.3**	**-0.2**
MORC	**Moravsky Berou**	**138.06**	**331**	⇓P	**PKiKP**	**13 48 59.6**	**-0.1**
MORC	**Moravsky Berou**	**138.06**	**331**	*e*PKP	**PKPdf**	**13 48 57.0**	**-0.7**
MORC	**Moravsky Berou**	**138.06**	**331**	⇓PKIKP	**PKiKP**	**13 48 59.6**	**-0.1**
PSZ	**Piszkesteto**	**138.11**	**327**	⇓P	**PKiKP**	**13 49 01.5**	**+1.6**
PSZ	**Piszkesteto**	**138.11**	**327**	⇓PKIKP	**PKiKP**	**13 49 01.5**	**+1.6**
CHVC	**Chvalec**	**138.17**	**333**	*e*PKPDF	**PKiKP**	**13 49 02.0**	**+2.1**
KRLC	**Kraliky**	**138.21**	**332**	*e*PKIKP	PKPpre	13 48 52.4	
KRLC	**Kraliky**	**138.21**	**332**	*e*PKPpre	PKPpre	13 48 52.4	
DPC	**Dobruska-Polom**	**138.22**	**332**	*e*PKIKP	**PKiKP**	**13 49 00.9**	**+0.9**
DPC				*e*		13 49 09.9	
DPC	**Dobruska-Polom**	**138.22**	**332**	*e*PKPDF	**PKiKP**	**13 49 00.9**	**+0.9**
DPC				*e*pPKP	**sPKPdf**	**13 49 09.9**	**-0.6**
VYHS	**Vyhne**	**138.28**	**328**	*e*PKP	**PKPdf**	**13 48 58.9**	**+0.8**
HERR	**Herculane**	**138.48**	**322**	⇑P	**PKiKP**	**13 49 01.3**	**+0.6**
BZS	**Buzias**	**138.54**	**323**	⇑P	**PKiKP**	**13 48 59.9**	**-0.9**
BZS	**Buzias**	**138.54**	**323**	⇑PKIKP	**PKiKP**	**13 48 59.9**	**-0.9**
JAVC	**Velka Javorina**	**138.62**	**330**	*e*PKP	**PKiKP**	**13 49 00.4**	**-0.5**
VRAC	**Vranov**	**138.83**	**331**	*e*PKP	**PKPdf**	**13 48 59.6**	**+0.5**
BRG	**Berggiesshubel**	**138.87**	**334**	*e*PKP	**PKPdf**	**13 48 54.7**	**-4.3**
BRG				Amp		13 48 59.3	
	comp=Z,3.8nm,0.7s						
BRG	**Berggiesshubel**	**138.87**	**334**	P	**PKiKP**	**13 49 01.9**	**+0.6**
BRG				Amp		13 49 03.6	
	comp=Z,16nm,1.3s						
CLL	**Collm**	**138.92**	**335**	*e*PKIKP	PKPpre	13 48 54.0	
CLL				*i*		13 49 02.4	
CLL				*e*		13 49 11.0	
CLL	**Collm**	**138.92**	**335**	*e*PKPpre	PKPpre	13 48 54.0	
CLL				*e*PKPdf	**PKPdf**	**13 48 58.0**	**-1.1**
CLL				*i* PKiKP	**PKiKP**	**13 49 02.4**	**+1.0**
	comp=Z,10.0nm,0.9s						
CLL				*e*pPKiKP	pPKiKP	13 49 11.0	+0.3
CLL				*e*PP	**PP**	**13 51 52.0**	**+1.2**
CLL				*i* PKSdf	**PKSdf**	**13 52 37.7**	**+2.7**
	comp=Z,8.0nm,1.1s						
CLL				*e*PPS	PPS	14 04 06.0	
CLL				*e*SS	SS	14 10 00.0	-4.5
CLL				*e*PSPS		14 11 00.0	
CLL				*e*		14 16 18.0	
MDVR	**Moldovita**	**138.95**	**322**	⇑P	**PKiKP**	**13 49 02.1**	**+0.4**
KRUC	**Moravsky**	**139.09**	**331**	*e*PKP	**PKiKP**	**13 49 00.8**	**-1.0**
MODS	**Modra-Piesok**	**139.14**	**329**	*e*PKP	**PKiKP**	**13 49 02.0**	**+0.1**
VTS	**Vitosha**	**139.16**	**318**	⇓P	**PKPdf**	**13 48 58.8**	**-1.3**
VTS	**Vitosha**	**139.16**	**318**	⇓PKIKP	**PKPdf**	**13 48 58.8**	**-1.3**
ZAGS	**Zajecar**	**139.17**	**321**	*e*P	**PKiKP**	**13 49 01.7**	**-0.4**
ZAPS	**Zavoj**	**139.21**	**320**	*e*P	**PKPdf**	**13 48 58.9**	**-1.1**
BOVS	**Bovan**	**139.59**	**321**	⇓P	**PKiKP**	**13 49 01.8**	**-1.2**
BOVS	**Bovan**	**139.59**	**321**	*e*P	**PKPdf**	**13 49 00.2**	**-0.4**
BOSS	**Bosilegrad**	**139.70**	**319**	*e*P	**PKPdf**	**13 49 00.3**	**-0.6**
FRGS	**Fruska Gora**	**139.84**	**324**	*e*P	**PKPdf**	**13 48 57.0**	**-4.1**
MORH	**Mrgy, Hungar**	**139.84**	**326**	⇑P	**PKPdf**	**13 49 02.1**	**+1.1**
BARS	**Barje**	**139.96**	**319**	*e*P	**PKPdf**	**13 49 00.1**	**-1.2**
BARS	**Barje**	**139.96**	**319**	*e*P	**PKPdf**	**13 49 00.4**	**-0.9**
NKC	**Novy Kostel**	**139.97**	**335**	*e*PKIKP	**PKPdf**	**13 49 00.2**	**-1.0**
NKC	**Novy Kostel**	**139.97**	**335**	*e*PKPDF	**PKPdf**	**13 49 00.2**	**-1.0**
MOX	**Moxa**	**139.99**	**336**	*e*L	L	14 53 21.7	
	comp=Z,266nm,21.9s						
GRUS	**Gruza**	**140.05**	**322**	*e*P	**PKPdf**	**13 49 02.5**	**+1.1**
CONA	**Conrad Observa**	**140.14**	**330**	*e*P	**PKPdf**	**13 48 59.9**	**-1.7**
	comp=Z,9.0nm,0.9s						
CKRC	**Cesky Krumlov**	**140.23**	**332**	*e*PKPDF	PKPpre	13 48 56.6	
CKRC				*e*x	x	13 49 05.3	
KHC	**Kasperske Hory**	**140.33**	**333***c*	*i*PKIKP	**PKiKP**	**13 49 03.1**	**-1.3**
KHC	**Kasperske Hory**	**140.33**	**333**	*e*PKPpre	PKPpre	13 48 59.6	
KHC				*e*PKPDF	**PKiKP**	**13 49 03.2**	**-1.2**
KHC				*e*PKS	**PKSdf**	**13 52 38.5**	**+0.8**
KHC	**Kasperske Hory**	**140.33**	**333**	PKPdf	**PKPdf**	**13 49 01.7**	**-0.2**
DIVS	**Divibare**	**140.36**	**322**	*e*P	**PKPdf**	**13 49 01.2**	**-0.9**
GERES	**GERESS Array B**	**140.49**	**332**	PKhKP	PKPpre	13 48 53.7	
	comp=Z,1.4nm,0.7s,baz=45,slow=2.5,SNR=11						
GERES				SKPab	**SKiKP**	**13 52 41.5**	**+2.4**
	comp=Z,1.3nm,0.7s,baz=46,slow=2.8,SNR=5.8						
GERES	**GERESS Array B**	**140.49**	**332**	PKIKP	**PKPdf**	**13 49 01.5**	**-0.7**
GERES	**GERESS Array B**	**140.49**	**332**	PKPdf	**PKPdf**	**13 49 01.5**	**-0.7**
IVAS	**Ivanjica**	**140.56**	**322**	*e*P	PKPpre	13 48 54.6	
ARSA	**Arzberg**	**140.77**	**329**	*e*P	**PKPdf**	**13 49 02.3**	**-0.4**
	comp=Z,6.2nm,1.2s						
BBLS	**Lazići**	**140.84**	**322**	*e*P	**PKPdf**	**13 49 02.8**	**-0.2**
SJES	**Sjenica**	**140.84**	**321**	*e*P	**PKPdf**	**13 49 03.0**	**-0.1**
GRF	**Grafenberg Arr**	**140.90**	**335**	*e*PKPdf	**PKPdf**	**13 48 59.2**	**-3.6**
	baz=38,slow=1.3						
GRF				*e*L	L	14 54 21.3	
	comp=Z,321nm,20.3s						
MOA	**Molln**	**140.95**	**331**	*e*P	**PKPdf**	**13 49 01.4**	**-1.6**
	comp=Z,2.9nm,0.6s						
FNA	**Florina**	**141.28**	**317**	PKIKP	**PKPdf**	**13 49 02.3**	**-1.6**
FNA	**Florina**	**141.28**	**317**	PKPdf	**PKPdf**	**13 49 02.2**	**-1.6**
SOKA	**Soboth**	**141.41**	**329**	*e*P	**PKPdf**	**13 48 59.6**	**-4.3**
	comp=Z,3.9nm,0.8s						
PDG	**Podgorica**	**141.75**	**321**	⇑P	**PKiKP**	**13 49 10.8**	**+3.4**
KBA	**Koelnbreinsper**	**141.94**	**331**	*e*P	**PKPdf**	**13 49 01.1**	**-3.9**
	comp=Z,6.0nm,0.8s						
MYKA	**Terra Mystica**	**142.12**	**330**	*e*P	**PKPdf**	**13 49 01.4**	**-3.8**
	comp=Z,2.5nm,0.4s						
WATA	**Walderalm**	**142.56**	**333**	*e*P	**PKPdf**	**13 49 02.7**	**-3.4**
	comp=Z,5.9nm,0.6s						
ABTA	**Abfaltersbach**	**142.57**	**331**	*e*P	**PKPdf**	**13 49 01.8**	**-4.2**
	comp=Z,8.9nm,0.7s						
WTTA	**Wattenberg**	**142.59**	**332**	*e*P	**PKPdf**	**13 49 02.4**	**-3.7**
	comp=Z,11nm,1.0s						
MOTA	**Moosalm**	**142.76**	**333**	*e*P	**PKPdf**	**13 49 02.9**	**-3.6**
	comp=Z,18nm,0.9s,SNR=10						
RETA	**Reutte**	**142.80**	**333**	*e*P	**PKPdf**	**13 49 03.4**	**-3.0**
	comp=Z,12nm,1.1s						
SQTA	**Sankt Quirin**	**142.81**	**333**	*e*P	**PKPdf**	**13 49 03.1**	**-3.4**
	comp=Z,11nm,0.6s						
STAL	**STALIGIAL**	**142.84**	**330**		PKPpre	13 49 00.5	
STAL				PKPdf	**PKPdf**	**13 49 05.5**	**-0.9**
CIMO	**Cimolais**	**142.93**	**331**		**PKPdf**	**13 49 06.8**	**+0.2**
FETA	**Feichten**	**143.18**	**333**	*e*P	PKPbc	13 49 04.3	+0.2
	comp=Z,22nm,0.8s,SNR=15						
DAVA	**Damuels**	**143.34**	**334**	*e*P	PKPbc	13 49 05.2	+0.6
	comp=Z,16nm,0.8s						
ECH	**Echery**	**143.66**	**337**	PKIKP	PKPbc	13 49 06.2	+0.9
ECH	**Echery**	**143.66**	**337**		PKPbc	13 49 06.2	+0.9
TEOL	**Teolo**	**143.99**	**330**		PKPbc	13 49 06.3	0.0
SGRT	**San Giovanni R**	**144.26**	**322**		**PKPab**	**13 49 06.9**	**-0.2**
SALO	**Salr**	**144.34**	**332**		**PKPab**	**13 49 07.1**	**-0.1**
MATE	**Matera**	**144.34**	**320**	⇑P	PKPbc	13 49 08.0	+0.5
NRCA	**Norcia**	**145.04**	**326**		**PKPbc**	**13 49 08.8**	**-1.1**
MURB	**Monte Urbino**	**145.06**	**327**		**PKPbc**	**13 49 09.1**	**-0.8**
SENIN	**Lac Senin/Sane**	**145.14**	**335**		**PKPbc**	**13 49 09.6**	**-0.7**
TIP	**Timpagrande**	**145.14**	**318**	⇑P	**PKPdf**	**13 49 10.8**	**+0.1**
TIP	**Timpagrande**	**145.14**	**318**		**PKPbc**	**13 49 09.7**	**-0.6**
PAOL	**Paolisi**	**145.40**	**322**		**PKPbc**	**13 49 09.9**	**-1.1**
CLF	**Chambon-Foret**	**145.47**	**342**		**PKPdf**	**13 49 10.0**	**-0.9**
OSSC	**Osservatorio P**	**145.54**	**328**	PKPdf	**PKPdf**	**13 49 09.0**	**-2.2**
MSSA	**Maissana**	**145.79**	**331**		**PKPdf**	**13 49 10.2**	**-1.5**
CASP	**Castiglione de**	**146.26**	**328**	PKPdf	**PKPdf**	**13 49 11.6**	**-0.9**
BNI	**Bardonecchia**	**146.46**	**335**	PKIKP	**PKPdf**	**13 49 11.1**	**-1.8**
BNI	**Bardonecchia**	**146.46**	**335**	PKPdf	**PKPdf**	**13 49 11.1**	**-1.8**
RAFF	**Raffo Rosso**	**147.80**	**317**	PKPbc	**PKPdf**	**13 49 16.0**	**+0.8**
CLTB	**Caltabellotta**	**148.34**	**318**	PKPdf	**PKPdf**	**13 49 14.5**	**-1.7**
VSL	**Villasalto**	**149.39**	**325**	PKPdf	**PKPdf**	**13 49 16.3**	**-1.5**
KEST	**Kesra**	**151.92**	**319**	PKP	**PKPdf**	**13 49 20.7**	**-1.2**
	comp=Z,4.6nm,0.7s,baz=326,slow=3.6,SNR=3.2						
KEST				PKPbc	**PKiKP**	**13 49 29.0**	**+0.3**
	comp=Z,25nm,0.7s,baz=261,slow=1.7,SNR=17						
KEST	**Kesra**	**151.92**	**319**		**PKPdf**	**13 49 20.4**	**-1.4**
CMAH	**Djebel Manchou**	**152.49**	**323**	P	**PKPbc**	**13 49 28.9**	**-0.7**
ABSA	**Djebel Ababsia**	**152.70**	**322**	P	**PKiKP**	**13 49 30.6**	**+0.3**
CKFL	**Kef-Lekhel**	**153.05**	**324**	P	**PKPbc**	**13 49 28.0**	**-2.9**
DFRA	**Djebel Bou Aff**	**153.43**	**325**	P	**PKPdf**	**13 49 25.0**	**+0.9**
POLO	**Lamas de Olo**	**154.07**	**351**	*e*PKPdf	**PKiKP**	**13 49 33.0**	**0.0**
POLO	**Lamas de Olo**	**154.07**	**351**	*e*PKPab	**PKPab**	**13 49 46.9**	**+0.6**
MVO	**Moncorvo**	**154.15**	**350**	*e*PKPdf	**PKPdf**	**13 49 24.6**	**-0.3**
MVO	**Moncorvo**	**154.15**	**350**	*e*PKPab	**PKPab**	**13 49 48.9**	**+2.2**
PVRL	**Vila Real**	**154.15**	**351**	*e*PKPdf	**PKPbc**	**13 49 31.3**	**-1.7**
PVRL	**Vila Real**	**154.15**	**351**	*e*PKPab	**PKPab**	**13 49 47.4**	**+0.8**
PVIS	**Viseu**	**154.73**	**351**	*e*PKPab	**PKPab**	**13 49 51.8**	**+2.7**
ESDC	**Sonseca Array**	**154.91**	**344**	PKP	**PKPdf**	**13 49 25.6**	**-0.5**
	comp=Z,2.3nm,1.1s,baz=349,slow=2.6,SNR=5.8						
ESDC				PKPbc	**pPKPdf**	**13 49 35.1**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=15,slow=3.1,SNR=4.2						
ESDC				PKPab	**PKPab**	**13 49 49.0**	**-0.9**
	comp=Z,6.4nm,0.9s,baz=14,slow=4.1,SNR=12						
ESDC				PP	**PP**	**13 53 22.7**	**-2.1**
	comp=Z,2.1nm,1.0s,baz=14,slow=5.5,SNR=5.0						
MTE	**Manteigas**	**154.98**	**351**	*e*PKPdf	**PKPdf**	**13 49 26.4**	**+0.3**
MTE	**Manteigas**	**154.98**	**351**	*e*PKPab	**PKPab**	**13 49 51.5**	**+1.3**
PCAS	**Casmilo, Conde**	**155.46**	**352**	*e*PKPdf	**PKPdf**	**13 49 25.6**	**-1.1**
PCAS	**Casmilo, Conde**	**155.46**	**352**	*e*PKPab	**PKPab**	**13 49 53.2**	**+1.0**
PBEJ	**Beja**	**157.35**	**350**	*e*PKPab	**PKPab**	**13 50 01.4**	**+1.1**
MESJ	**Messejana**	**157.59**	**350**	*e*PKPab	**PKPab**	**13 50 02.2**	**+0.9**
PCVE	**Castro Verde**	**157.76**	**350**	*e*PKPab	**PKPab**	**13 50 04.0**	**+1.9**
PVAQ	**Vaqueiros**	**157.93**	**349**	*e*PKPab	**PKPab**	**13 50 05.9**	**+3.1**
MORF	**Marmelete**	**158.18**	**351**	*e*PKPab	**PKPab**	**13 50 02.3**	**-1.7**
TORD	**Torodi Ar. Bea**	**165.74**	**262**	PKP	**PKPdf**	**13 49 38.1**	**-0.4**
	comp=Z,3.3nm,0.7s,baz=86,slow=1.9,SNR=16						
TORD				PKPab	**PKPab**	**13 50 37.7**	**-0.2**
	comp=Z,11nm,0.9s,baz=99,slow=3.9,SNR=13						
TORD				PP	**PP**	**13 54 24.4**	**-0.9**
	comp=Z,4.3nm,1.2s,baz=112,slow=3.9,SNR=4.8						
TORD	**Torodi Ar. Bea**	**165.74**	**262**		**PKPdf**	**13 49 36.6**	**-1.9**
KIC	**Kosan Boka**	**167.81**	**221**	*e*PKIKP	**PKPdf**	**13 49 39.1**	**-1.1**
	comp=Z,14nm,0.8s						
KIC	**Kosan Boka**	**167.81**	**221**	*e*PKP2	**PKPab**	**13 50 47.1**	**+0.3**
	comp=Z,17nm,1.2s						
LIC	**Lamto**	**167.88**	**220**	*e*PKIKP	**PKPdf**	**13 49 39.3**	**-0.9**
	comp=Z,36nm,1.1s						
LIC	**Lamto**	**167.88**	**220**	*e*PKP2	**PKPab**	**13 50 47.2**	**+0.1**
	comp=Z,35nm,1.1s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	Dimbokro	168.12	222	PKP	PKPdf	13 49 39.0	-1.4
	comp=Z,5.2nm,0.7s,baz=178,slow=1.8,SNR=9.1						
DBIC				PKPab	PKPab	13 50 48.1	0.0
	comp=Z,2.9nm,0.9s,baz=166,slow=4.2,SNR=2.2						
DBIC	Dimbokro	168.12	222		PKPdf	13 49 38.4	-2.0
DBIC					PKPab	13 50 47.4	-0.8
TIC	Toumodi	168.20	221	*e*PKIKP	PKPdf	13 49 39.4	-1.1
TIC	Toumodi	168.20	221	*e*PKP2	PKPab	13 50 48.6	0.0
KOWA	Kowa	171.44	263		PKPdf	13 49 40.5	-1.8

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*IDC **15** 13:35:06.2±9.1, 35.°27N×70.°63E, h75^{km}±51^{km}, mb3.9/1, mb1 3.7/7, mb1mx3.1/66, mbtmp3.9/7, ML3.5/6, MS3.4/1, Ms1 3.4/1, ms1mx2.5/46, Error ellipse: s-maj=128.7km s-min=34.2km az=162.0*

*NNC **15** 13:35:14.9±13.0, 36.°57N×69.°55E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=115.3km s-min=87.6km az=161.0*

ISC 15 13:35:12.5±1.0**, 35.°95N**±0.°08×**70.°22E**±0.°07**, h124^{km}, n25, σ2.s57**/29**, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	6.74	23	P	Pn	13 36 50.1	+0.8
	SNR=52						
UCH	Uchtor	7.10	27	P	Pn	13 36 55.1	+0.8
	SNR=16						
KK07	Karatay Array	7.14	2	⇑Pn	Pn	13 36 53.6	-0.7
	1.9nm,0.4s,baz=193,slow=13						
KK07				⇓Sn	Sn	13 38 10.8	-3.1
	5.8nm,0.6s,baz=191,slow=25						
EKS2	Erkin-Say	7.25	21	P	Pn	13 36 59.1	+3.2
	SNR=8.2						
AAK	Ala-Archa	7.46	25	P	Pn	13 36 59.6	+0.9
	1.9nm,0.3s,baz=194,slow=4.2,SNR=17						
AAK				S	Sn	13 38 18.3	-3.5
	0.9nm,0.3s,baz=322,slow=22,SNR=14						
AAK	Ala-Archa	7.46	25	P	Pn	13 36 59.8	+1.1
	SNR=8.6						
AAK	Ala-Archa	7.46	25	⇑Pn	Pn	13 36 59.4	+0.6
	2.9nm,0.4s						
AAK				⇑Sn	Sn	13 38 21.8	0.0
	9.7nm,0.7s						
CHMS	Chumysh	7.86	25	P	Pn	13 37 04.5	+0.3
	SNR=7.0						
GEYT	Alibeck	9.89	285	P	Pn	13 37 32.7	+1.2
	0.9nm,0.3s,baz=103,slow=11,SNR=6.0						
GEYT				S	Sn	13 39 18.0	-2.6
	0.4nm,0.3s,baz=83,slow=28,SNR=1.6						
PYUN	Piuthan	13.35	122	*e*P	Pn	13 38 15.0	-2.4
	15nm,0.3s						
DANN	Dangsing	13.74	120	*e*P	Pn	13 38 20.0	-2.4
	6.7nm,0.3s						
KOLN	Koldanda	13.98	122	*e*P	Pn	13 38 23.2	-2.3
	5.2nm,0.3s						
MKAR	Makanchi Array	14.11	36	P	Pn	13 38 26.1	-0.6
	0.0nm,0.3s,baz=221,slow=15,SNR=1.7						
GKN	Gorkha	14.56	119	*e*P	Pn	13 38 30.5	-2.3
	9.6nm,0.4s						
AB31	Akbulak array	15.28	334	⇓Pn	Pn	13 38 43.2	+1.7
	2.1nm,0.5s,baz=147,slow=10,SNR=56						
PKIN	Phulchoki	15.36	119	*e*P	Pn	13 38 41.9	-1.0
	15nm,0.4s						
PKI	Pulchoki	15.37	119	*e*P	Pn	13 38 42.1	-1.0
	12nm,0.4s						
KURBB	Kurchatov Arra	15.85	20	P	Pn	13 38 49.7	+1.2
	0.1nm,0.3s,baz=206,slow=10,SNR=6.3						
JIRN	Jiri	15.88	117	*e*P	Pn	13 38 48.9	-0.5
	22nm,0.4s						
RAMN	Ramite	16.59	118	*e*P	P	13 38 58.1	-0.3
	9.3nm,0.3s						
AKTO	Aktyubinsk	16.96	332	P	Pn	13 39 07.4	+5.3
	0.2nm,0.3s,baz=151,slow=13,SNR=2.6						
AKTO				S	Sn	13 42 04.4	-6.6
	0.1nm,0.3s,baz=128,slow=23,SNR=1.7						
BVAR	Borovoye Array	17.08	0	P	Pn	13 39 07.9	+4.4
	0.5nm,0.3s,baz=196,slow=14,SNR=9.1						
TAPN	Taplejung	17.16	115	*e*P	Pn	13 39 05.0	-0.1
	7.1nm,0.4s						
ZALV	Zalesovo Beam	20.68	25	P	P	13 39 45.3	+2.9
	5.2nm,0.5s,baz=220,slow=11,SNR=26						
TLY	Talaya	28.48	46	LR	LR	13 53 21.9	
	comp=Z,78nm,20.1s,baz=122,slow=38						

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*NCEDC **15** 13:49:19.6±1.6, 36.°24N±0.°03×120.°81W±0.°03, h6^{km}±5^{km}, ML3.0/23, ML2.9/34(NEIC), Error ellipse: s-maj=5.6km s-min=1.7km az=222.0*

*ANF **15** 13:49:19.9±1.4, 36.°18N×120.°74W, h5^{km}, ML3.0/12, Error ellipse: s-maj=15.5km s-min=7.2km az=121.0*

*NEIC **15** 13:49:19.7±1.4, 36.°21N±0.°02×120.°86W±0.°03, h14^{km}±4^{km}, Error ellipse: s-maj=4.1km s-min=1.6km az=48.0*

ISC 15 13:49:19.3±0.9**, 36.°22N**±0.°03×**120.°85W**±0.°03**, h8**^{km}±6^{km}**, n61, σ0.s64**/72**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMPB	Monarch Peak	0.04	88	Pg	Pg	13 49 21.1	0.0
PMPB				Sg	Sg	13 49 22.3	0.0
BBNM	San Benito	0.35	328		Pg	13 49 27.2	+1.1
PKD	Bear Valley Ra	0.37	137		Pg	13 49 27.0	+0.5
PKD					Sg	13 49 32.2	+0.9
PDRM	Domengine Ranc	0.41	73		Pg	13 49 28.4	+1.1
BSMM	Soledad Missio	0.50	290		Pg	13 49 29.7	+0.7
PAPM	Alder Peak	0.51	234		Pb	13 49 30.6	0.0
BJCM	Johnson Can.	0.55	307		Pg	13 49 30.3	+0.3
BLRM	Lewis Ranch	0.57	323		Pg	13 49 30.9	+0.6
RAMR	Ramage Ranch	0.58	182		Pb	13 49 31.4	-0.3
SCZ	Santa Cruz	0.59	311		Pg	13 49 30.9	+0.2
SCZ					Sg	13 49 37.1	-1.3
HAST	Hastings Reser	0.59	287		Pg	13 49 31.2	+0.4
HAST					Sb	13 49 41.0	+0.5
TCHL	Shandon	0.64	145		Pb	13 49 32.4	-0.2
PAGB	Antelope Grade	0.69	135		Pg	13 49 32.4	-0.1
PAGB				IAML		13 49 50.0	
	comp=N,682nm,0.6s						
PAGB				IAML		13 49 50.1	
	comp=E,708nm,0.7s						
THIS	South End of C	0.70	134		Pg	13 49 33.4	+0.6
TRAM	Private Proper	0.71	139		Pg	13 49 33.5	+0.5
SAO	San Andreas Ge	0.73	319		Pg	13 49 33.5	+0.1
SAO	San Andreas Ge	0.73	319	Pg	Pg	13 49 33.1	-0.3
TSCN	Private Proper	0.78	149		Pb	13 49 34.9	-0.2
PACP	Pacheco Peak	0.87	336		Pb	13 49 36.7	+0.1
HFEM	San Felipe	0.89	330		Pb	13 49 37.0	+0.1
HCOM	Corn Cob Canyo	0.96	314		Pb	13 49 38.1	-0.1
GHS	Gilroy Hot Spr	1.00	331		Pg	13 49 39.3	+0.7
MOBB	Monterey Bay O	1.16	294		Pn	13 49 41.1	-0.6
VOG	Valley Oaks Go	1.19	84	P	Pn	13 49 40.6	-1.5
	baz=266						
VOG				S	Sb	13 49 56.7	-0.9
	baz=266						
MHC	Mount Hamilton	1.29	331		Pn	13 49 42.8	-1.0
PMLM	Mount Lospe	1.33	172		Pn	13 49 43.9	-0.3
VES	Vestal, Richgr	1.48	104	P	Pn	13 49 45.4	-0.7
	baz=286						
VES				S	Sn	13 50 05.2	-0.4
	baz=286						
HELL	Mitchell Peak,	1.54	72		Pn	13 49 45.9	-1.3
PKM	Mcpherson Peak	1.57	147	P	Pn	13 49 47.3	-0.3
	baz=329						
PKM				S	Sg	13 50 09.7	-0.1
	baz=329						
JRSC	Jasper Ridge	1.63	317		Pn	13 49 47.9	-0.3
KCC	Kaiser Creek	1.65	48		Pn	13 49 48.9	+0.2
CMB	Columbia Colle	1.85	11		Pn	13 49 50.8	-0.6
CMB	Columbia Colle	1.85	11	Pn	Pn	13 49 50.6	-0.8
ARVC	Arvin	1.97	123	P	Pn	13 49 52.9	0.0
	baz=305						
ARVC				S	Sn	13 50 17.8	+0.1
	baz=305						
SBC	Santa Barbara	2.00	152	P	Pn	13 49 53.4	+0.2
	baz=334						
ISA	Isabella, Lake	2.00	105	Pn	Pn	13 49 52.6	-0.9
ISA				IAML		13 50 23.3	
	comp=E,97nm,0.9s						
ISA				IAML		13 50 23.6	
	comp=N,101nm,0.3s						
ISA	Isabella, Lake	2.00	105	P	Pn	13 49 53.2	-0.3
	baz=288						
ISA				S	Sn	13 50 19.0	+0.3
	baz=288						
MDCM	Deadman Creek	2.08	44		Pn	13 49 56.0	+1.4
MLAC	Mammoth, Mammo	2.14	48	P	Pn	13 49 56.3	+0.8
	baz=229						
MLAC				S	Sn	13 50 22.9	+0.5
	baz=229						
MTUM	Tungsten Hills	2.16	58		Pn	13 49 57.0	+1.3
CWC	Cottonwood Cre	2.25	83	P	Pn	13 49 57.3	+0.4
	baz=266						
CWC				S	Sn	13 50 24.2	-0.7
	baz=266						
MCCM	Marconi Confer	2.52	320	Pn	Pn	13 50 00.8	+0.4
MCCM				IAML		13 51 04.3	
	comp=N,64nm,2.7s						
LRMC	Laurel Mtn Rad	2.67	105	P	Pn	13 50 02.5	-0.2
	baz=288						
EDW2	Edwards Air Fo	2.68	119	P	Pn	13 50 02.9	+0.1
	baz=302						
MPMC	Manual Prospec	2.72	92	P	Pn	13 50 04.1	+0.6
	baz=275						
LCH	Last Change Ra	2.77	68		Pn	13 50 03.8	-0.2
LCH				IAML		13 50 48.0	
	comp=E,49nm,0.4s						
EMB	Emerald Bay	2.82	12	Pn	Pn	13 50 04.7	-0.1
EMB				IAML		13 50 58.4	
	comp=E,37nm,1.0s						
NVAR	Mina Array Bea	3.00	42	Pn	Pn	13 50 06.4	-0.9
MWC	Mount Wilson	3.03	130		Pn	13 50 07.7	+0.1
MWC				IAML		13 50 57.5	
	comp=N,32nm,4.0s						
MWC				IAML		13 51 06.2	
	comp=E,26nm,1.1s						
NV11	Mina Array Sit	3.08	43	Pn	Pn	13 50 08.0	-0.3
MPK	Martis Peak	3.14	12	Pn	Pn	13 50 08.5	-0.8
VCNR	Virginia City	3.22	17	Pn	Pn	13 50 09.3	-1.0
VCNR				IAML		13 51 06.2	
	comp=E,39nm,0.9s						
VCNR				IAML		13 51 08.2	
	comp=N,38nm,0.9s						
QSM	Queen of Sheba	3.23	93	Pn	Pn	13 50 09.4	-0.9
QSM				IAML		13 51 23.9	
	comp=E,20nm,0.8s						
BFSC	Mount Baldy Ra	3.27	126	P	Pn	13 50 11.5	+0.5
	baz=309						
HOPS	Hopland Field	3.29	328	Pn	Pn	13 50 11.8	+0.8
GWY	Greenwater Val	3.38	89	Pn	Pn	13 50 12.3	-0.1
GWY				IAML		13 51 23.9	
	comp=N,19nm,1.6s						
GSC	Goldstone, Bar	3.41	104		Pn	13 50 12.0	-0.9
GSC				IAML		13 51 09.9	
	comp=N,23nm,1.1s						
GSC				IAML		13 51 12.4	
	comp=E,32nm,1.1s						
GSC	Goldstone, Bar	3.41	104	P	Pn	13 50 12.7	-0.1
	baz=287						
PFO	Pinyon Flats O	4.44	124	Pn	Pn	13 50 27.3	+0.3
PFO				IAML		13 52 19.6	
	comp=E,14nm,4.8s						
SHPR	Sheep Range	4.60	85		Pn	13 50 29.3	0.0
SHPR				IAML		13 53 24.1	
	comp=E,7.4nm,4.8s						
CBX	Cerro Bola	5.21	137	Pn	Pn	13 50 37.4	-0.2
CBX				IAML		13 52 26.4	
	comp=N,8.6nm,1.2s						

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*NEIC **15** 14:04:42.6±1.2, 17.°89S±0.°10×173.°33W±0.°09, h121^{km}±11^{km}, mb4.7/15, Error ellipse: s-maj=14.3km s-min=12.2km az=198.0*

*IDC **15** 14:04:42.6±1.7, 17.°82S×173.°50W, h124^{km}±18^{km}, mb3.6/6, mb1 3.9/9, mb1mx3.6/36, mbtmp4.2/9, MS3.3/3, Ms1 3.3/3, ms1mx3.0/26, Error ellipse: s-maj=25.1km s-min=14.8km az=131.0*

ISC 15 14:04:41.1±0.6**, 17.°96S**±0.°07×**173.°45W**±0.°06**, h100**^{km}**, n41, σ1.s65**/30**, mb4.7**/14**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	3.52	109	Pn	Pn	14 05 35.1	+1.3
AFI	Afiamalu	4.33	22	P	Pn	14 05 45.5	+0.6
	5.7nm,0.3s,baz=218,slow=5.1,SNR=35						
AFI				S	Sn	14 06 33.2	-1.2
	25nm,0.3s,baz=132,slow=20,SNR=9.2						
MSVF	Nonsavu	8.10	270	P	Pn	14 06 38.5	+2.4
	1.7nm,0.3s,baz=108,slow=13,SNR=24						
MSVF				LR	LR	14 09 21.9	
	comp=Z,222nm,18.7s,baz=21,slow=35						
MSVF	Nonsavu	8.10	270		Pn	14 06 38.8	+2.7
FUNA	Funafuti	11.80	322	Pn	Pn	14 07 26.9	+0.7
RAR	Rarotonga	13.29	106	P	Pn	14 07 46.5	+0.8
	2.3nm,0.3s,baz=284,slow=7.8,SNR=11						
RAR				S	Sn	14 10 09.2	-2.8
	0.6nm,0.3s,baz=2.0,slow=22,SNR=1.3						
RAR				LR	LR	14 11 13.2	
	comp=Z,81nm,20.9s,baz=295,slow=29						
RAR	Rarotonga	13.29	106	P	Pn	14 07 48.7	+3.0
PINNC	Pines Island,	18.51	252	P	P	14 08 50.2	+0.6
DZM	Mont Dzumac	19.33	254	LR	LR	14 14 58.6	
	comp=Z,130nm,18.4s,baz=352,slow=32						
URZ	Urewera	21.85	200	P	P	14 09 25.3	-0.2
	18nm,0.5s,baz=120,slow=22,SNR=24						
URZ				S	S	14 13 12.8	-8.2
	2.3nm,0.4s,baz=126,slow=23,SNR=1.4						
URZ	Urewera	21.85	200	P	P	14 09 24.9	-0.6
URZ				IAmb	IAmb	14 09 26.9	
	comp=Z,63nm,1.5s						
PAE	Paea	22.72	93	*e*T	T	14 33 12.0	
	comp=Z,2.7nm,0.2s						
PPT2	Papeete2	22.73	93	*e*LR	LR	14 15 06.4	
	comp=Z,119nm,25.5s						
PPT2	Papeete2	22.73	93	*e*T	T	14 33 13.8	
	comp=Z,2.2nm,0.3s						
BKZ	Black Stump Fm	22.87	200	P	P	14 09 34.6	-1.5
BKZ				IAmb	IAmb	14 09 43.1	
	comp=Z,32nm,1.5s						
HIZ	Hauiti	22.89	204	P	P	14 09 37.5	+1.2
HIZ				IAmb	IAmb	14 10 01.1	
	comp=Z,84nm,1.3s						
TBI	Tubuai	23.06	107	*e*LR	LR	14 14 48.1	
	comp=Z,137nm,27.5s						
TBI	Tubuai	23.06	107	*e*T	T	14 33 37.6	
	comp=Z,5.5nm,0.3s						
MEH	Mehetia	24.14	94	*e*T	T	14 34 59.0	
	comp=Z,6.9nm,0.2s						
VAH	Vaihoa	24.88	88	*e*T	T	14 35 53.9	
	comp=Z,4.1nm,0.3s						
QRZ	Quartz Range	25.79	205	P	P	14 10 03.5	+0.8
QRZ				IAmb	IAmb	14 10 03.9	
	comp=Z,27nm,1.0s						
ARMA	Armidale	34.05	242	P	P	14 11 15.2	-0.8
ARMA				IAmb	IAmb	14 11 41.1	
	comp=Z,19nm,1.5s						
CTAO	Charters Tower	38.10	260	P	P	14 11 50.6	+0.1
CTAO				IAmb	IAmb	14 12 10.5	
	comp=Z,12nm,1.1s						
STKA	Stephens Creek	42.77	242	P	P	14 12 28.9	0.0
	comp=Z,1.3nm,0.8s,baz=117,slow=14,SNR=3.0						
BBOO	Buckleboo	47.53	242	P	P	14 13 06.3	-0.3
BBOO				IAmb	IAmb	14 13 18.5	
	comp=Z,13nm,1.2s						
WB0	Warramunga Arr	49.23	259	P	P	14 13 18.9	-0.9
WB2	Warramunga Arr	49.25	259	P	P	14 13 19.0	-0.9
WB2				IAmb	IAmb	14 13 27.9	
	comp=Z,11nm,0.6s						
WRA	Warramunga Arr	49.26	259	P	P	14 13 19.2	-0.9
	comp=Z,0.9nm,0.3s,baz=97,slow=7.2,SNR=30						
WRA	Warramunga Arr	49.26	259	P	P	14 13 18.8	-1.2
AS31	Alice Springs	49.32	254	P	P	14 13 19.7	-0.8
ASAR	Alice Springs	49.32	254	P	P	14 13 19.5	-1.0
	comp=Z,4.6nm,0.6s,baz=88,slow=8.0,SNR=80						
ASAR				S	S	14 20 14.7	-5.1
	comp=Z,0.2nm,0.7s,baz=91,slow=15,SNR=1.8						
FORT	Forrest	54.26	245	P	P	14 13 56.6	-0.4
KNRA	Kununurra	55.18	263	P	P	14 14 04.0	+0.1
KNRA				IAmb	IAmb	14 14 22.9	
	comp=Z,13nm,1.2s						
H03S2	Juan Fernandez	83.83	123	T	T	15 49 53.2	
	baz=252						
H03S1	Juan Fernandez	83.85	123	T	T	15 49 56.0	
	baz=252						
H03S3	Juan Fernandez	83.85	123	T	T	15 49 54.7	
	baz=252						
H03N2	Juan Fernandez	83.94	123	T	T	15 49 56.9	
	baz=257,slow=72,SNR=10						
H03N3	Juan Fernandez	83.95	123	T	T	15 50 02.6	
	baz=257,slow=72,SNR=6.2						
H03N1	Juan Fernandez	83.96	123	T	T	15 50 02.9	
	baz=257,slow=72,SNR=7.7						
PDAR	Pinedale Array	84.19	42	P	P	14 17 01.7	0.0
	comp=Z,0.1nm,0.3s,baz=212,slow=3.2,SNR=1.0						
ILAR	Eielson Array	84.95	11	P	P	14 17 03.5	-1.1
	comp=Z,0.2nm,0.6s,baz=196,slow=4.7,SNR=1.8						

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*SOME **15** 14:16:41.6, 43.°67N×69.°75E*

NNC 15 14:16:42.6±0.4**, 43.°63N×69.°71E, h0^{km}, mb3.5, mpv3.2, 12C-8D, Error ellipse: s-maj=4.0km s-min=1.8km az=53.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK09	Karatay Array	0.76	131	⇑P	Pg	14 16 57.3	0.0
KK09				⇑S	Sg	14 17 08.2	+1.0
	74nm,0.8s						
KK08	Karatay Array	0.77	133	⇑P	Pg	14 16 58.1	+0.8
KK08				⇑S	Sb	14 17 08.7	-1.2
KK04	Karatay Array	0.78	132	⇑P	Pg	14 16 57.9	+0.4
KK04				⇑S	Sb	14 17 08.8	-1.3
KK03	Karatay Array	0.78	132	⇓P	Pg	14 16 57.9	+0.4
KK03				⇓S	Sg	14 17 08.8	+1.2
KK01	Karatay Array	0.78	132	⇑P	Pg	14 16 57.8	+0.3
KK01				⇓S	Sg	14 17 08.7	+1.1
KK05	Karatay Array	0.78	131	⇑P	Pg	14 16 57.9	+0.3
KK05				⇑S	Sg	14 17 08.8	+1.1
KK02	Karatay Array	0.78	132	⇓P	Pg	14 16 57.9	+0.3
KK02				⇓S	Sg	14 17 08.8	+1.1
KK07	Karatay Array	0.79	133	⇓P	Pg	14 16 58.0	+0.3
KK07				⇓S	Sg	14 17 08.8	+0.9
KK06	Karatay Array	0.80	132	⇑P	Pg	14 16 58.0	+0.1
KK06				⇑S	Sg	14 17 08.7	+0.5
MRKS	Merke	2.72	108	Pg	Pb	14 17 32.7	+0.5
	5.5nm,0.5s						
MRKS				Lg	Lg	14 18 09.6	
	9.9nm,0.7s						
BTLS	Baital	3.42	64	Pg	Pb	14 17 45.3	+1.4
	1.4nm,0.3s						
BTLS				Lg	Lg	14 18 31.3	
	5.2nm,0.7s						
AAK	Ala-Archa	3.64	104	⇑Pg	Pb	14 17 48.2	+0.3
	5.6nm,0.6s						
AAK				⇓Lg	Lg	14 18 39.0	
	6.4nm,0.9s						
KRBS	Karabastau	4.33	87	Pg	Pb	14 18 02.0	+2.4
	4.0nm,0.7s						
KRBS				Lg	Lg	14 18 59.3	
	6.2nm,0.6s						
DGS	Degeres	4.43	93	Pg	Pb	14 18 03.0	+1.7
	2.9nm,0.5s						
DGS				Lg	Lg	14 19 01.4	
	6.4nm,0.6s						
KST	Kastek	4.60	95	Pg	Pb	14 18 07.2	+3.0
	2.3nm,0.3s						
KST				Lg	Lg	14 19 08.1	
	11nm,0.9s						
KUU	Kurty	4.81	85	Pg	Pb	14 18 10.9	+3.2
	1.6nm,0.5s						
KUU				Lg	Lg	14 19 14.5	
	6.4nm,0.6s						
KTBS	Karatobe	5.06	87	Pg	Pb	14 18 15.1	+3.2
	0.7nm,0.5s						
KTBS				Lg	Lg	14 19 21.8	
	8.2nm,0.6s						

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*IDC **15** 14:19:00.8±1.1, 25.°43N×142.°02E, h0^{km}, mb3.4/5, mb1 3.7/7, mb1mx3.4/43, mbtmp3.5/7, ML3.3/1, Error ellipse: s-maj=44.6km s-min=18.0km az=93.0*

ISC 15 14:19:02.3±1.1**, 25.°49N**±0.°09×**142.°0E**±0.°2**, h10^{km}, n14, σ1.s15**/9**, mb3.4**/5**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	1.61	7	Pn	Pn	14 19 29.1	-1.8
	11nm,0.3s,baz=111,slow=22,SNR=2.1						
JCJ				Sn	Sg	14 19 54.2	0.0
	13nm,0.3s,baz=64,slow=22,SNR=1.8						
MJAR	Matsushiro Arr	11.48	345	Pn	Pn	14 21 46.7	+0.4
	baz=207,slow=5.2,SNR=1.3						
KSRS	Korea Array	16.89	318	Pn	P	14 23 00.1	-0.7
	0.1nm,0.3s,baz=134,slow=12,SNR=2.8						
H11N2	WAKE ISLAND Hy	23.69	99	T	T	14 50 03.3	
	baz=288,slow=75,SNR=10						
H11N1	WAKE ISLAND Hy	23.70	99	T	T	14 50 02.7	
	baz=288,slow=75,SNR=5.4						
H11N3	WAKE ISLAND Hy	23.71	99	T	T	14 50 04.0	
	baz=288,slow=75,SNR=7.4						
H11S3	WAKE ISLAND Hy	23.93	102	T	T	14 50 13.0	
	baz=292,slow=75,SNR=33						
H11S1	WAKE ISLAND Hy	23.93	102	T	T	14 50 17.6	
	baz=292,slow=75,SNR=40						
H11S2	WAKE ISLAND Hy	23.95	102	T	T	14 50 18.2	
	baz=292,slow=75,SNR=39						
SONM	Songino Array	35.76	318	P	P	14 26 02.5	+1.0
	0.4nm,0.8s,baz=125,slow=7.5,SNR=1.9						
WRA	Warramunga Arr	45.76	190	P	P	14 27 23.0	-1.2
	1.5nm,0.7s,baz=9.3,slow=8.6,SNR=6.7						
ASAR	Alice Springs	49.48	190	P	P	14 27 53.0	-0.1
	0.2nm,0.8s,baz=17,slow=11,SNR=1.5						
ILAR	Eielson Array	59.21	28	P	P	14 29 04.7	+1.3
	0.3nm,0.9s,baz=281,slow=5.4,SNR=1.7						
YKA	Yellowknife Ar	73.64	28	P	P	14 30 36.1	+0.4
	0.9nm,0.8s,baz=295,slow=6.2,SNR=4.1						

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*TAP **15** 14:50:34.0, 24.°04N×122.°63E, h19^{km}±1^{km}, ML3.4, D*

*JMA **15** 14:50:34.5±0.2, 24.°04N×122.°62E, h24^{km}±3^{km}, M2.9*

ISC 15 14:50:33.9±1.0**, 24.°03N**±0.°03×**122.°62E**±0.°02**, h16**^{km}±9^{km}**, n122, σ0.s72**/143**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.51	35	P	Pb	14 50 44.6	0.0
JYNG				*e*S	Sb	14 50 51.7	-0.1
YOJ	Yonaguni jima	0.56	40	*i* P	Pb	14 50 45.6	+0.3
	baz=38						
YOJ				S	Sb	14 50 53.5	+0.4
	baz=38						
YOJ	Yonaguni jima	0.56	40	P	Pb	14 50 45.4	+0.1
YOJ				S	Sb	14 50 53.0	-0.1
EWUT	Wuta	0.87	298	*e*P	Pb	14 50 50.8	+0.1
	baz=297						
EWUT				*e*S	Sn	14 51 04.0	+0.1
	baz=297						
ENA	Nanau	0.90	296	P	Pb	14 50 51.3	+0.3
	baz=295						
ENA				S	Sg	14 51 03.9	+0.8
	baz=295						
TWC	Suao	0.91	309	*e*P	Pb	14 50 51.2	-0.1
	baz=308						
TWC				*e*S	Sg	14 51 03.8	+0.2
	baz=308						
ETL	Fush Village	0.92	278	P	Pg	14 50 51.9	+0.1
	baz=277						
HWA	Hwalien	0.93	267	P	Pg	14 50 52.0	0.0
	baz=265						
TWD	Chiawan	0.94	273	P	Pb	14 50 52.0	+0.2
	baz=272						
NACB	Ninganchiao	0.95	279	*e*P	Pb	14 50 51.8	-0.2
	baz=277						
TEYL	Yanliau Villag	0.95	260	P	Pb	14 50 52.3	+0.3
	baz=261						
NDS	Dongshan	1.02	306	P	Pb	14 50 53.3	0.0
	baz=305						
NDS				*e*S	Sn	14 51 08.6	+1.0
	baz=305						
EGS		1.02	322	*e*P	Pn	14 50 53.7	+0.1
	baz=321						
ETM	Tongmen	1.03	267	*e*P	Pb	14 50 52.9	-0.5
	baz=265						
ETLH	Xiulin Townshi	1.05	280	*e*P	Pb	14 50 53.5	-0.3
	baz=278						
ETLH				*e*S	Sb	14 51 07.8	+0.4
	baz=278						
IRIF	Iriomote-Funau	1.06	73	P	Pb	14 50 53.8	-0.1
IRIF				*e*S	Sg	14 51 07.8	-0.5
ILA	Ilan	1.08	313	*e*P	Pg	14 50 54.9	0.0
	baz=312						
HATJ	Hateruma jima	1.08	88	P	Pg	14 50 54.8	-0.1
HATJ				*e*S	Sg	14 51 09.6	+0.5
NTC	Toucheng	1.09	319	*e*P	Pb	14 50 54.0	-0.4
	baz=317						
NTC				S	Sg	14 51 09.4	+0.1
	baz=317						
ESL	Shilin	1.11	259	*e*P	Pb	14 50 53.7	-1.0

	baz=257						
ESL				eS	Sb	14 51 08.9	0.0
	baz=257						
TWE	Neicheng	1.11	309	eP	Pb	14 50 54.7	0.0
	baz=307						
TWE				eS	Sg	14 51 10.2	+0.3
	baz=307						
TWB1	Santiao Chiao	1.13	330	eP	Pn	14 50 54.0	-1.1
	baz=329						
ENTT	Nioudou	1.14	302	eP	Pn	14 50 55.2	0.0
	baz=301						
ENTT				S	Sn	14 51 10.4	0.0
	baz=301						
EGFH	Guangfu	1.15	252	P	Pn	14 50 55.5	+0.1
	baz=251						
NDT	Datong Townshi	1.16	300	eP	Pn	14 50 55.6	+0.1
	baz=298						
TIPB	Shuangxi	1.18	322	eP	Pn	14 50 55.2	-0.7
	baz=321						
NNSB	Datong	1.20	290	P	Pn	14 50 55.9	-0.2
	baz=288						
NNS	Nan Shan	1.21	290	P	Pn	14 50 56.0	-0.3
	baz=288						
HGSD	Ruisui	1.22	244	eP	Pn	14 50 55.6	-0.7
	baz=243						
WHF	Hehuan Shan	1.24	276	P	Pn	14 50 56.5	-0.6
	baz=274						
WHF				S	Sb	14 51 13.1	-0.1
	baz=274						
NWLT	Wulai	1.26	306	eP	Pn	14 50 57.2	+0.3
	baz=305						
FUSS	Fushou	1.28	280	eP	Pn	14 50 56.9	-0.4
	baz=279						
ECBN	Changbin	1.29	237	P	Pn	14 50 57.5	+0.3
	baz=236						
JKRS	Kuro-shima	1.29	81	P	Pn	14 50 57.4	+0.2
JKRS				eS	Sg	14 51 15.2	-0.3
NWF	Wu-fen Shan	1.29	324	eP	Pn	14 50 56.6	-0.7
	baz=323						
NWF				S	Sb	14 51 14.0	-0.1
	baz=323						
WFSB	Wu-fen Shan	1.29	324	eP	Pn	14 50 56.6	-0.7
	baz=322						
WFSB				S	Sb	14 51 14.1	0.0
	baz=322						
EHY	Hungye	1.30	247	eP	Pn	14 50 57.1	-0.3
	baz=245						
YHNB	Yeheng	1.30	300	P	Pn	14 50 57.6	+0.1
	baz=298						
NSK	Sanguang	1.32	299	P	Pn	14 50 57.7	-0.1
	baz=298						
NSK				S	Sn	14 51 14.8	-0.2
	baz=298						
CHGB	Renai	1.32	272	P	Pn	14 50 57.8	-0.1
	baz=270						
OWD	Renai	1.32	267	eP	Pn	14 50 57.7	-0.2
	baz=266						
TWA	Mucha	1.34	315	eP	Pn	14 50 58.2	+0.3
	baz=314						
TWT	Tachien	1.34	280	eP	Pb	14 50 58.6	-0.2
	baz=278						
TDCB	Techi	1.35	280	P	Pn	14 50 58.4	+0.1
	baz=278						
NHDH	Xindian Distri	1.36	313	eP	Pn	14 50 58.4	+0.2
	baz=312						
YULB	Yu-li	1.37	243	eP	Pn	14 50 58.1	-0.3
	baz=242						
EYUL	Yuli	1.37	241	eP	Pn	14 50 58.3	-0.1
	baz=239						
VWDT	VWDT	1.38	259	P	Pn	14 50 58.7	+0.1
	baz=258						
TWF1	Yuli	1.39	241	eP	Pn	14 50 58.6	0.0
	baz=240						
TATO	Taipei	1.40	313	eP	Pn	14 50 58.8	+0.1
	baz=311						
JIJ	Ishigaki jima	1.43	76	P	Pn	14 50 58.8	-0.4
JIJ				eS	Sn	14 51 16.8	-0.8
FULB	Fuli	1.47	236	P	Pn	14 51 00.2	+0.4
	baz=235						
CHKT	Chengkung	1.48	231	eP	Pn	14 51 00.1	+0.3
	baz=230						
YM08	YM08	1.48	321	eP	Pn	14 50 59.3	-0.7
	baz=320						
WPL	Puli Township	1.52	270	eP	Pn	14 51 00.9	+0.4
	baz=268						
ANP	Anpu	1.52	319	eP	Pn	14 51 00.8	+0.2
	baz=318						
TWS1	Kuangyinshan	1.53	314	eP	Pn	14 51 01.1	+0.6
	baz=313						
SSLB	Suanglung	1.54	261	eP	Pn	14 51 01.1	+0.3
	baz=260						
DPDB	Guoxing	1.55	270	eP	Pn	14 51 01.3	+0.4
	baz=269						
WHP	Taichung City	1.55	279	eP	Pn	14 51 01.6	+0.7
	baz=278						
WCS	Beigang Elemen	1.56	271	eP	Pn	14 51 01.4	+0.4
	baz=270						
NJD	Zhudong	1.56	297	eP	Pn	14 51 01.3	+0.2
	baz=296						
SMLT	Sun Moon Lake	1.58	265	eP	Pn	14 51 01.8	+0.4
	baz=264						
LIOB	Emei	1.59	293	eP	Pb	14 51 02.3	-0.6
	baz=292						
ECS	Chishang	1.59	234	eP	Pn	14 51 01.6	+0.2
	baz=233						
NSTT	Nanjuang	1.59	292	eP	Pb	14 51 02.4	-0.6
	baz=291						
EDH	Donghe	1.60	229	eP	Pn	14 51 01.1	-0.4
	baz=228						
NCUH	Zhongli	1.61	306	eP	Pn	14 51 02.1	+0.5
	baz=304						
TYC	Yuchr	1.62	266	eP	Pn	14 51 02.3	+0.5
	baz=265						
YUS	Yu-Shan	1.62	251	eP	Pn	14 51 02.6	+0.3
	baz=250						
JISG	Ishigakijimahi	1.64	70	P	Pn	14 51 01.5	-0.6
JISG				eS	Sn	14 51 21.3	-1.5
WHYT	Xinyi Township	1.65	259	eP	Pn	14 51 02.9	+0.6
	baz=257						
ELDTW	Lidau	1.69	241	eP	Pn	14 51 02.5	-0.4
	baz=239						
TWQ1	Liyutan	1.72	281	eP	Pb	14 51 04.4	-0.7
	baz=280						
NSY	Sanyi	1.74	283	eP	Pn	14 51 04.0	+0.5
	baz=282						
ALS	Alishan	1.74	253	eP	Pn	14 51 04.5	+0.8
	baz=252						
NMLH	Miaoli	1.74	287	eP	Pn	14 51 04.1	+0.6
	baz=286						
WJS	Zhushan	1.74	264	eP	Pb	14 51 05.1	-0.5
	baz=262						
WWF	Wufeng	1.76	271	eP	Pb	14 51 05.7	-0.1
	baz=269						
LONT	Longtian	1.77	231	eP	Pn	14 51 04.5	+0.7
	baz=230						
WNT	Mingjian	1.78	265	eP	Pb	14 51 05.7	-0.5
	baz=264						
WNT1	Nantou City	1.78	266	eP	Pn	14 51 05.2	+1.1
	baz=265						
TCU	Taichung	1.78	274	eP	Pn	14 51 05.2	+1.2
	baz=273						
CHN5	Tsauling	1.83	257	eP	Pb	14 51 06.3	-0.8
	baz=256						
WDJ	Dajia District	1.83	280	eP	Pn	14 51 05.5	+0.7
	baz=279						
TWGBT	Beinan	1.86	230	eP	Pn	14 51 05.0	-0.1
	baz=229						
WCHH	Zhanghua	1.89	272	eP	Pn	14 51 06.3	+0.8
	baz=271						
STYH	Taoyuan	1.90	244	eP	Pn	14 51 06.4	+0.8
	baz=242						
STYT	Tauyuan	1.92	244	eP	Pn	14 51 06.8	+0.9
	baz=242						
WGK	Gukeng	1.92	260	eP	Pn	14 51 06.6	+0.8
	baz=259						
WDLH	Douliu	1.94	260	eP	Pb	14 51 07.8	-1.1
	baz=259						
TPUB	Ta-pu	1.96	249	eP	Pb	14 51 08.2	-1.2
	baz=248						
CHN4	Tsaushan	1.98	250	eP	Pn	14 51 07.1	+0.4
	baz=249						
JTJ	Tarama	1.99	72	eS	Sn	14 51 32.5	+0.9
WTP	Ta-pu	2.00	247	eP	Pb	14 51 08.8	-1.2
	baz=246						
CHN2	Minshiung	2.03	256	eP	Pn	14 51 08.3	+0.9
	baz=255						
WRL	Guolierlin Hig	2.06	267	eP	Pb	14 51 09.5	-1.4
	baz=266						
WTK	Tuku	2.07	261	eP	Pb	14 51 09.8	-1.4
	baz=260						
CHY	Chiayi	2.08	256	eP	Pb	14 51 10.0	-1.3
	baz=254						
SLGT	Liugui	2.08	241	eP	Pn	14 51 09.7	+1.5
	baz=240						
ECL	Taimali	2.09	227	eP	Pn	14 51 08.7	+0.4
	baz=226						
SGST	Jiashian	2.09	244	eP	Pn	14 51 09.7	+1.3
	baz=242						
CHN1	Nanshi	2.10	247	eP	Pb	14 51 10.4	-1.2
	baz=246						
TWK	Hsinying	2.10	249	eP	Pb	14 51 10.4	-1.3
	baz=248						
SNST	Tainan City	2.11	248	eP	Pb	14 51 10.5	-1.3
	baz=247						
SSD	Sandimen	2.23	235	eP	Pn	14 51 11.9	+1.7
	baz=234						
TSMG	Majia	2.24	234	eP	Pn	14 51 12.2	+1.8
	baz=233						
ICHU	Yijhu	2.25	253	eP	Pn	14 51 11.6	+1.1
	baz=252						
MASBT	Mashibuluo	2.31	233	eP	Pn	14 51 12.1	+0.7
	baz=232						
EAST	Anshuo	2.31	225	eP	Pn	14 51 11.2	-0.1
	baz=224						
SLIU	Shizi	2.46	223	eP	Pn	14 51 12.9	-0.5
	baz=222						
SCZT	Fangliau	2.47	228	eP	Pn	14 51 15.2	+1.6
	baz=227						
JMJ	Miyako jima 2	2.56	72	eP	Pn	14 51 16.9	+2.1
	baz=72						
HEN	Hengchun	2.66	221	eP	Pn	14 51 17.2	+1.1
	baz=220						
TWKBT	Hengchun	2.67	219	eP	Pn	14 51 17.7	+1.5
	baz=218						
TWK1	Hengchun	2.67	219	eP	Pn	14 51 17.4	+1.2
	baz=218						
PHUB	P'eng-hu	2.84	260	eP	Pn	14 51 19.2	+0.6
	baz=259						
PTMZ	Houxiangcun	3.34	288	eP	Pn	14 51 25.2	-0.3
	baz=287						
LYJJ	Jianjiangzhen	3.60	315	eP	Pn	14 51 28.5	-0.6
	baz=313						
XPSS	Dashiqiu	3.63	323	eP	Pn	14 51 29.1	-0.3
	baz=322						
KNM	Kinmen	3.84	277	eP	Pn	14 51 34.7	+2.4
	baz=275						
KNMB	Chin-men Tao	3.89	277	eP	Pn	14 51 33.0	0.0
	baz=276						

IDC 15 14:54:24.0±10.0, 12°.52S×166°.90E, h282^{km}±123^{km}, mb2.9/3, mb1 3.2/4, mb1mx2.9/26, mbtmp3.6/4, Error ellipse: s-maj=97.0km s-min=33.7km az=155.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	9.51	183	P	Pn	14 56 36.7	+0.4
	0.4nm,0.3s,baz=322,slow=19,SNR=23						
DZM				S	S	14 58 22.8	-1.0
	0.1nm,0.3s,baz=86,slow=19,SNR=1.4						
WRA	Warramunga Arr	32.08	252	P	P	15 00 24.8	-0.6
	0.1nm,0.3s,baz=83,slow=8.6,SNR=5.1						
ASAR	Alice Springs	33.18	246	P	P	15 00 35.0	+0.2
	0.9nm,0.7s,baz=70,slow=9.7,SNR=18						
ILAR	Eielson Array	84.55	18	P	P	15 06 25.2	-0.1
	0.3nm,0.9s,baz=224,slow=5.0,SNR=1.9						

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*STR **15** 14:58:42.3±0.8, 44°N±4°×°±°, h3^{km}, MLv2.3/6, preliminary*

*LDG **15** 14:58:42.2±0.1, 43°.65N×7°.90E, h21^{km}, Md2.7/2, Ml2.6/18, Error ellipse: s-maj=1.2km s-min=1.1km az=75.0*

*GEN **15** 14:58:43, 43°.69N×7°.86E, h21^{km}±1^{km}, ML2.0*

ISC 15 14:58:40.7±1.1, 43°.59N±0°.03×7°.96E±0°.03, h23^{km}±10^{km}, n40, σ1^{s}.45/66, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMI	Imperia	0.32	351	P	Pb	14 58 48.5	+0.5
IMI				S	Sb	14 58 52.6	-0.3
BURY	Giardini Botan	0.35	303	P	Pb	14 58 48.3	0.0
BURY				S	Sb	14 58 52.7	-0.9
MGRO	Montegrosso	0.46	346	P	Pb	14 58 51.7	+1.3
MGRO				S	Sb	14 58 56.8	-0.1
SBF	Sospel	0.47	305	ePg	Pb	14 58 50.9	+0.5
SBF				eSg	Sb	14 58 56.6	-0.3
	564nm,0.3s						
ESCA	l'Escarene	0.49	299	Pg	Pb	14 58 51.1	+0.4
ESCA				Sg	Sb	14 58 57.2	-0.3
SAOF	Saorge	0.49	323	Pg	Pb	14 58 51.0	+0.2
SAOF				Sg	Sb	14 58 56.9	-0.7
RORO	Rocca Rossa	0.53	8	P	Pb	14 58 52.7	+1.3
RORO				S	Sb	14 58 58.6	+0.1
TURF	col de Turini	0.56	313	Pg	Pb	14 58 52.2	+0.2
TURF				Sg	Sb	14 58 59.3	-0.5
EILF	Villa Eilenroc	0.61	266	Pg	Pb	14 58 52.3	-0.4
CANO	Canova, Maglio	0.65	18	P	Pn	14 58 54.8	+0.2
CANO				S	Sb	14 59 02.8	+0.8
GBOS	Grotte di Boss	0.66	352	P	Pb	14 58 54.4	+0.8
GBOS				S	Sb	14 59 02.4	+0.1
MVIF	Mont Vial	0.66	298	Pg	Pb	14 58 54.2	+0.5
MVIF				Sg	Sb	14 59 02.4	-0.1
SPIF	crte de Spivo	0.70	312	Pg	Pb	14 58 54.9	+0.5
SPIF				Sg	Sb	14 59 03.5	-0.2
ENR	Entracque	0.74	328	P	Pb	14 58 55.7	+0.6
ENR				S	Sb	14 59 04.7	-0.2
CALF	Calern	0.77	282	Pg	Pb	14 58 56.0	+0.5
CALF				Sg	Sb	14 59 05.5	-0.2
ISO	Isola	0.89	312	Pg	Pb	14 58 58.1	+0.6
ISO				Sg	Sb	14 59 08.6	-0.3
FRF	La Foret Royal	0.96	269	ePn	Pn	14 58 58.7	-0.1
FRF	La Foret Royal	0.96	269	ePg	Pb	14 58 59.9	+1.3
FRF				eSn	Sb	14 59 10.2	-0.7
	36nm,0.2s						
FRF				eSg	Sn	14 59 11.9	+0.2
	28nm,0.2s						
PCP	Piancastagn	1.04	24	P	Pb	14 59 00.7	+0.7
LMR	La Mourre	1.09	257	ePn	Pn	14 59 00.4	-0.2
LMR	La Mourre	1.09	257	ePg	Pb	14 59 02.5	+1.6
LMR				eSn	Sb	14 59 13.0	-1.7
	18nm,0.2s						
LMR				eSg	Sn	14 59 16.6	+1.6
	10nm,0.2s						
PZZ	Stroppo	1.10	327	P	Pn	14 59 01.5	+0.6
PZZ				S	Sn	14 59 15.3	-0.1
SURF	Saint Ours	1.22	317	Pg	Pb	14 59 04.1	+0.9
SURF				Sg	Sb	14 59 19.6	+1.1
PGF	Pioggiola	1.29	144	ePn	Pb	14 59 04.6	+0.2
PGF				eSn	Sb	14 59 20.8	+0.2
	1.7nm,0.2s						
OGAG	Argentiere	1.34	311	Pn	Pb	14 59 10.2	+5.0
MBDF	Montbardon	1.42	323	eP	Pn	14 59 06.4	+1.1
MBDF	Montbardon	1.42	323	ePg	Pb	14 59 07.8	+1.1
MBDF				eSg	Sb	14 59 25.6	+1.2
	38nm,0.2s						
SMRF	Simiane la Rot	1.77	283	ePn	Pn	14 59 08.4	-1.6
SMRF	Simiane la Rot	1.77	283	eP	Pn	14 59 11.5	+1.5
SMRF	Simiane la Rot	1.77	283	ePg	Pb	14 59 14.5	+2.0
SMRF				eSg	Sb	14 59 36.6	+2.3
	25nm,0.2s						
ORIF	Oris-en-Rattie	2.00	312	eP	Pn	14 59 14.6	+1.4
ORIF	Oris-en-Rattie	2.00	312	ePg	Pb	14 59 18.3	+1.9
ORIF				eSn	Sn	14 59 34.2	-3.4
	4.5nm,0.4s						
ORIF				eSg	Sb	14 59 43.8	+2.9
	10nm,0.3s						
LPG	La Plagne	2.09	336	ePn	Pn	14 59 13.8	-0.9
LPG	La Plagne	2.09	336	ePg	Pb	14 59 20.2	+2.0
LPG				eSn	Sn	14 59 36.6	-3.6
LPG				eSg	Sb	14 59 46.3	+2.5
	3.8nm,0.3s						
LPL	La Plagne	2.12	336	ePn	Pn	14 59 13.9	-1.0
LPL	La Plagne	2.12	336	ePg	Pb	14 59 19.9	+1.4
LPL				eSn	Sn	14 59 37.3	-3.3
	3.8nm,0.3s						
LPL				eSg	Sb	14 59 47.1	+2.7
	6.1nm,0.4s						
VIVF	Saint-Julien-l	2.68	299	eP	Pn	14 59 23.1	+0.6
VIVF	Saint-Julien-l	2.68	299	ePg	Pb	14 59 30.2	+2.2
VIVF				eSn	Sn	14 59 50.8	-3.5
	2.2nm,0.2s						
VIVF				eSg	Sb	15 00 04.5	+4.0
	3.8nm,0.3s						
LASF	Ste Croix	3.01	281	ePn	Pn	14 59 26.4	-0.6
LASF	Ste Croix	3.01	281	eP	Pn	14 59 29.4	+2.4
LASF				eSn	Sn	14 59 58.8	-3.6
LASF				eSg	Sb	15 00 15.5	+5.6
	2.0nm,0.3s						

IDC 15 14:59:26.0±28.0, 22°.38S×175°.15W, h0^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.6/22, mbtmp3.6/4, ML4.8/1, Error ellipse: s-maj=529.9km s-min=65.3km az=72.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	7.88	305	Pn	Pn	15 01 21.8	-0.3
	0.5nm,0.3s,baz=120,slow=20,SNR=1.3						
STKA	Stephens Creek	39.42	247	P	P	15 06 57.9	0.0
	1.8nm,1.0s,baz=93,slow=9.2,SNR=3.2						
ASAR	Alice Springs	46.70	258	P	P	15 07 56.9	-0.1
	0.2nm,0.6s,baz=93,slow=7.3,SNR=11						
WRA	Warramunga Arr	46.99	263	P	P	15 07 59.1	-0.2
	0.5nm,0.5s,baz=103,slow=8.2,SNR=18						

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*IDC **15** 15:24:49.6±1.3, 34°.79N×142°.53E, h0^{km}, mb3.4/6, mb1 3.6/9, mb1mx3.3/53, mbtmp3.5/9, ML3.2/3, MS2.5/1, Ms1 2.5/1, ms1mx2.1/30, Error ellipse: s-maj=29.8km s-min=22.5km az=86.0*

*JMA **15** 15:24:55.1±0.4, 34°.94N×141°.99E, h59^{km}, M3.5*

ISC 15 15:24:54.0±0.9, 34°.86N±0°.06×142°.30E±0°.08, h35^{km}, n24, σ2^{s}.35/24, mb3.4/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	1.11	260	P	Pn	15 25 11.8	-0.7
BSO3	Boso 3	1.47	268	eS	Sn	15 25 32.0	-3.7
JMKN	Mikurajimanish	2.44	247	P	Pn	15 25 29.8	-1.5
JMKN				eS	Sn	15 25 56.5	-3.4
JOD2	Odawara 2	2.67	280	P	Pn	15 25 33.2	-1.2
JHJ2	Mitsune	2.70	230	eS	Sn	15 26 04.4	-1.9
JHJ	Hachijo jima 2	2.72	231	Pn	Pn	15 25 34.3	-0.9
	12nm,0.3s,baz=80,slow=12,SNR=15						
JHJ				Sn	Sn	15 26 03.8	-3.0
	78nm,0.3s,baz=67,slow=19,SNR=12						
JAG	Ashikaga	2.79	305	P	Pn	15 25 35.1	-1.1
JRY	Ryogami san	3.00	294	P	Pn	15 25 38.7	-0.4
JFT	Otama	3.09	330	P	Pn	15 25 38.7	-1.6
JFT				eS	Sn	15 26 13.2	-2.8
JYN	Shimob	3.14	283	P	Pn	15 25 40.1	-0.9
MJAR	Matsushiro Arr	3.73	298	Pn	Pn	15 25 49.0	-0.1
	0.2nm,0.3s,baz=184,slow=5.4,SNR=5.1						
MAT	Matsushiro	3.73	298	P	Pn	15 25 48.7	-0.4
MAT				eS	Sn	15 26 28.4	-3.4
JCJ	Chichijima	7.74	181	Pn	Pn	15 26 41.1	-3.1
	1.9nm,0.3s,baz=20,slow=21,SNR=6.3						
JCJ				Sn	Sn	15 27 57.5	-13
	1.3nm,0.3s,baz=326,slow=20,SNR=1.6						
ASAJ	Asahikawa	9.25	1	Pn	Pn	15 27 01.5	-3.3
	2.0nm,0.3s,baz=235,slow=9.4,SNR=18						
ASAJ				Sn	Sn	15 28 37.5	-10
	0.3nm,0.3s,baz=217,slow=20,SNR=1.3						
KSRS	Korea Array	11.91	287	LR	LR	15 32 12.1	
	comp=Z,25nm,21.4s,baz=95,slow=36						
H11S1	WAKE ISLAND Hy	27.11	121	T	T	15 58 42.4	
	baz=312						
H11S3	WAKE ISLAND Hy	27.11	121	T	T	15 58 44.5	
	baz=312						
H11S2	WAKE ISLAND Hy	27.12	121	T	T	15 58 46.0	
	baz=312						
SONM	Songino Array	29.63	307	P	P	15 30 58.3	+2.2
	0.2nm,0.4s,baz=103,slow=9.8,SNR=2.9						
CMAR	Chiang Mai Arr	41.70	258	P	P	15 32 42.0	+2.4
	0.2nm,0.3s,baz=50,slow=8.4,SNR=0.8						
MKAR	Makanchi Array	45.91	304	P	P	15 33 17.0	+4.0
	0.7nm,0.9s,baz=104,slow=10,SNR=2.6						
ILAR	Eielson Array	50.96	31	P	P	15 33 51.3	-0.3
	0.7nm,0.9s,baz=264,slow=6.6,SNR=4.6						
WRA	Warramunga Arr	55.02	189	P	P	15 34 22.9	+0.9
	0.4nm,0.9s,baz=1.6,slow=7.5,SNR=2.3						
ASAR	Alice Springs	58.75	189	P	P	15 34 49.9	+1.4
	0.1nm,0.7s,baz=359,slow=6.6,SNR=1.2						

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*MDD **15** 15:31:23.9±1.0, 36°.20N×1°.55W, h15^{km}±7^{km}, mbLg2.6/19, Error ellipse: s-maj=6.2km s-min=4.8km az=151.0, PRXIMO*

*CNRM **15** 15:31:23.3, 36°.34N×1°.69W, h30^{km}, ml2.3*

*SFS **15** 15:31:24.0, 36°.18N×1°.54W, h22^{km}, ML2.6, MEDITERRANEO ARGELIA*

*INMG **15** 15:31:24.9±1.3, 36°.21N×1°.55W, h24^{km}±9^{km}, ML2.2, Error ellipse: s-maj=3.1km s-min=2.3km az=132.0*

ISC 15 15:31:23.2±1.3, 36°.22N±0°.02×1°.54W±0°.03, h27^{km}±13^{km}, n41, σ1^{s}.64/78, 3C-2D, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENIJ	Nijar	0.92	325	⇓P	Pb	15 31 40.8	+0.2
	33nm,0.1s,SNR=18						
ENIJ				S	Sb	15 31 51.9	-0.6
	593nm,0.2s,SNR=7.9						
EALB	Alboran	1.24	257	⇑P	Pn	15 31 45.3	+0.6
	18nm,0.2s,SNR=18						
EALB				S	Sn	15 32 01.2	+0.5
	52nm,0.3s,SNR=7.6						
EBER	Berja	1.28	302	P	Pn	15 31 46.1	+0.6
	3.6nm,0.1s,SNR=34						
EBER				S	Sb	15 32 03.4	+0.5
	182nm,0.2s,SNR=19						
CART	Cartagena	1.43	17	P	Pn	15 31 47.1	-0.2
CART				S	Sn	15 32 02.8	-2.4
CART	Cartagena	1.43	17	P	Pn	15 31 47.1	-0.2
CART				S	Sn	15 32 02.8	-2.4
CART	Cartagena	1.43	17	P	Pn	15 31 47.1	-0.2
CART				S	Sn	15 32 01.1	-4.2
EMEL	Melilla	1.48	232	⇑P	Pn	15 31 48.7	+0.8
	55nm,0.1s,SNR=18						
EMEL				S	Sn	15 32 06.3	0.0
	66nm,0.2s,SNR=7.9						
GOG	Mont Gurugu	1.55	230	P	Pn	15 31 49.6	+0.6
GOG				S	Sn	15 32 07.6	-0.7
TAF	Taforalt	1.57	207	P	Pn	15 31 50.2	+0.9
TAF				S	Sb	15 32 10.8	-0.4
EMUR	La Murta	1.64	8	⇓P	Pn	15 31 50.9	+0.7
	3.6nm,0.1s,SNR=18						
EMUR				S	Sn	15 32 10.8	+0.4
	17nm,0.2s,SNR=7.1						
EZAR	Zarzadilla de	1.66	356	⇑P	Pn	15 31 51.9	+1.4
	1.2nm,0.1s,SNR=18						
EZAR				S	Sn	15 32 11.3	+0.3
	13nm,0.2s,SNR=7.9						
OKGL	Djebel Kef Gue	1.77	95	P	Pn	15 31 53.1	+1.0
	7.3nm,0.1s,SNR=7.9						
OKGL				S	Sn	15 32 14.2	+0.4
	136nm,0.3s,SNR=7.9						
ELGU	Los Guajares,	1.80	292	P	Pn	15 31 53.0	+0.5
	3.8nm,0.1s,SNR=7.9						
ELGU				S	Sn	15 32 14.4	-0.2
	24nm,0.1s,SNR=7.9						
EQES	Quesada	2.00	323	P	Pb	15 31 58.6	-0.4
	2.4nm,0.1s,SNR=9.6						
EQES				S	Sn	15 32 22.2	+2.8
	9.6nm,0.1s,SNR=6.2						
SESP	Santiago Espad	2.06	337	P	Pn	15 31 58.8	+2.6
	18nm,0.2s,SNR=7.9						
SESP				S	Sn	15 32 23.7	+2.7
	34nm,0.2s,SNR=7.9						
JBK	JBK	2.06	204	P	Pn	15 31 58.4	+2.2
JBK				S	Sn	15 32 22.2	+1.1
PALE	Palemas	2.19	244	P	Pn	15 31 59.7	+1.8
PALE				S	Sn	15 32 21.8	-2.4
ETOB	Tobarra	2.42	360	P	Pn	15 32 03.3	+2.3
	3.2nm,0.1s,SNR=25						
ETOB				S	Sn	15 32 30.4	+0.6
	5.5nm,0.2s,SNR=5.8						
AFON	Font Roja	2.57	18	P	Pn	15 32 03.8	+0.8
	1.1nm,0.1s,SNR=7.9						
AFON				S	Sn	15 32 34.2	+0.7
	12nm,0.3s,SNR=7.9						
EMIJ	Mijas	2.63	278	P	Pn	15 32 03.8	-0.1
	1.3nm,0.1s,SNR=7.9						
EMIJ				S	Sn	15 32 32.9	-2.1
	3.5nm,0.2s,SNR=4.9						
EADA	Adamuz	3.11	310	P	Pn	15 32 11.1	+0.7
	0.1nm,0.1s,SNR=7.9						
EADA				S	Sn	15 32 47.0	+0.3

	2.4nm,0.2s,SNR=7.9						
TDRA	**Tendrara**	3.20	187	P	Pn	15 32 12.8	+1.0
TDRA				S	Sb	15 32 55.6	-2.4
CHEFC	**Chefchaouen**	3.29	251	P	Pn	15 32 13.5	+0.5
CHEFC				S	Sn	15 32 49.0	-2.2
ECHE	**Chera**	3.40	7	P	Pn	15 32 15.8	+1.4
	1.0nm,0.2s,SNR=7.9						
ECHE				S	Sn	15 32 53.7	-0.1
	0.7nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	3.61	302	P	Pn	15 32 18.8	+1.5
	0.2nm,0.1s,SNR=7.9						
ECAB				S	Sn	15 32 58.5	-0.6
	2.0nm,0.3s,SNR=5.5						
EIBI	**Ibiza**	3.62	38	P	Pn	15 32 18.7	+1.3
	1.2nm,0.1s,SNR=8.2						
EIBI				S	Sn	15 32 56.3	-2.9
	8.8nm,0.3s,SNR=7.9						
PAB	**San Pablo**	4.00	327	P	Pn	15 32 24.9	+2.2
	0.1nm,0.2s,SNR=7.9						
PAB				S	Sn	15 33 07.0	-1.6
	1.0nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	4.22	11	P	Pn	15 32 28.0	+2.2
	1.2nm,0.2s,SNR=7.9						
EMOS				S	Sn	15 33 14.1	-0.3
	0.5nm,0.1s,SNR=7.9						
MDT	**Midelt**	4.24	218	P	Pn	15 32 29.6	+3.6
MDT				S	Sn	15 33 16.2	+1.5
MD31	**MD31**	4.27	219	P	Pn	15 32 28.0	+1.5
MD31				S	Sn	15 33 14.9	-0.6
EMIN	**Mina Concepcio**	4.39	292	P	Pn	15 32 28.9	+0.9
	0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	15 33 17.1	-1.1
	0.6nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	4.94	43	P	Pn	15 32 37.4	+1.8
	0.9nm,0.1s,SNR=7.9						
ETOS				S	Sn	15 33 29.5	-2.2
	0.8nm,0.2s,SNR=7.9						
EGRO	**El Granado**	4.94	287	P	Pn	15 32 36.6	+1.0
	0.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	15 33 29.4	-2.5
	1.5nm,0.4s,SNR=7.9						
EBAD	**Badajoz**	5.04	302	P	Pn	15 32 37.5	+0.6
	0.7nm,0.1s,SNR=7.9						
EBAD				S	Sn	15 33 32.6	-1.6
	2.1nm,0.2s,SNR=7.9						
PVAQ	**Vaqueiros**	5.10	285	*e*Pn	Pn	15 32 39.0	+1.3
PVAQ				*e*Sn	Sn	15 33 34.1	-1.6
PVAQ				A	A	15 33 35.4	
	5.0nm,0.8s						
PVAQ	**Vaqueiros**	5.10	285	P	Pn	15 32 36.2	-1.5
PVAQ				S	Sn	15 33 31.7	-4.0
PBDV	**Barranco-do-Ve**	5.24	283	*e*Pn	Pn	15 32 41.9	+2.2
MESJ	**Messejana**	5.58	289	*e*Pn	Pn	15 32 45.7	+1.3
PMRV	**Marv??o**	5.63	306	*e*Sn	Sn	15 33 47.5	-1.4
PNCL	**Nicolau / Gran**	5.89	291	*e*Pn	Pn	15 32 50.0	+1.3
PMTG	**Montargil**	6.02	300	*e*Pn	Pn	15 32 52.0	+1.6
PMTG				*e*Sn	Sn	15 33 57.3	-1.1

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*NEIC **15** 15:36:10.0±1.8, 41°.95N±0°.10×49°.16E±0°.09, h49^{km}±10^{km}, mb4.0/25, Error ellipse: s-maj=14.0km s-min=10.1km az=183.0*

*IDC **15** 15:36:09.8±2.1, 41°.82N×48°.99E, h53^{km}±23^{km}, mb3.5/6, mb1 3.6/14, mb1mx3.4/47, mbtmp3.7/14, ML3.8/7, Error ellipse: s-maj=25.9km s-min=13.4km az=16.0*

*MOS **15** 15:36:11.5±0.0, 41°.83N×49°.16E, h41^{km}, MPVA4.6*

*AZER **15** 15:36:13.1±0.2, 41°.83N×48°.89E, h60^{km}, ml3.5/32, Error ellipse: s-maj=3.6km s-min=2.0km az=25.0*

*DRS **15** 15:36:14.0±0.0, 41°.90N×49°.23E, h22^{km}*

*NNC **15** 15:36:18.4±5.3, 42°.24N×50°.40E, h0^{km}, mb4.0, Error ellipse: s-maj=52.1km s-min=18.9km az=76.0*

ISC 15 15:36:11.2±0.6, **41°.87N**±0°.03×**49°.04E**±0°.03, **h80**^{km}±6^{km}, **n168**, σ**2^{s}57**/239, **mb3.9**/14, **4C-5D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRN	**Derbent**	0.56	287	⇓*i*PG	Pn	15 36 25.8	+0.4
DRN				*e*S	Sn	15 36 36.0	+0.1
DRN	**Derbent**	0.56	287	*i* Pg	Pn	15 36 25.8	+0.4
DRN				*e*Sg	Sn	15 36 36.0	+0.1
QUBA	**Quba, Azerbaij**	0.66	219	P	Pn	15 36 27.6	+1.1
	SNR=280						
QUBA				S	Sn	15 36 39.4	+1.6
QSAR	**Qusar**	0.68	239	P	Pn	15 36 27.6	+0.9
	SNR=26						
QSAR				S	Sn	15 36 39.7	+1.4
KSMR	**Kasumkent**	0.73	249	*e*PG	Pn	15 36 28.5	+1.2
KSMR				*e*S	Sn	15 36 39.6	+0.3
KSMR				pmax	pmax		
	comp=Z,558nm,0.2s						
KSMR	**Kasumkent**	0.73	249	*i* Pg	Pn	15 36 28.3	+1.0
KSMR				*e*Sg	Sn	15 36 38.2	-1.1
SIZA	**Siyzn**	0.80	188	P	Pn	15 36 29.2	+1.2
	SNR=39						
SIZA				S	Sn	15 36 42.7	+2.1
XNQ	**Khinaliq**	0.97	225	P	Pn	15 36 31.1	+0.9
	SNR=711						
XNQ				S	Sn	15 36 45.8	+1.5
ATGJ	**Altiaghaj**	1.01	185	P	Pn	15 36 32.4	+1.9
	SNR=20						
ATGJ				S	Sn	15 36 48.1	+3.2
AKT	**Akhty**	1.06	249	*e*PG	Pn	15 36 32.8	+1.7
AKT				*e*S	Sn	15 36 48.4	+2.5
AKT				pmax	pmax		
	comp=Z,790nm,0.1s						
AKT	**Akhty**	1.06	249	*i* Pg	Pn	15 36 32.6	+1.6
AKT				*e*Sg	Sn	15 36 47.9	+1.9
URKR	**Urkarakh**	1.09	286	*e*PG	Pn	15 36 33.1	+1.6
URKR				*e*S	Sn	15 36 48.4	+1.7
URKR	**Urkarakh**	1.09	286	*e*Pg	Pn	15 36 33.1	+1.6
URKR				*e*Sg	Sn	15 36 48.4	+1.7
PQL	**Pirkuli**	1.13	198	P	Pn	15 36 33.7	+1.7
	SNR=98						
PQL				S	Sn	15 36 49.5	+1.9
SGKR	**Sergokala**	1.19	300	*e*PG	Pn	15 36 34.4	+1.8
SGKR				*e*S	Sn	15 36 51.0	+2.4
SGKR				pmax	pmax		
	comp=Z,250nm,0.1s						
SGKR	**Sergokala**	1.19	300	*e*Pg	Pn	15 36 33.8	+1.2
SGKR				*e*Sg	Sn	15 36 50.7	+2.1
IML	**Ismayilli**	1.25	211	P	Pn	15 36 34.7	+1.3
	SNR=20						
IML				S	Sn	15 36 51.9	+1.8
QBL	**Gabala**	1.29	225	P	Pn	15 36 35.2	+1.3
	SNR=31						
QBL				S	Sn	15 36 52.2	+1.2
GBS	**Qobustan**	1.33	183	Pn	Pn	15 36 37.4	+2.9
	SNR=10						
GBS				Sn	Sn	15 36 54.8	+2.9
NDR	**Nardaran**	1.47	151	Pn	Pn	15 36 40.1	+4.0
NDR				Sg	Sn	15 37 03.8	+8.9
KMKR	**Kumukh**	1.47	281	*e*PN	Pn	15 36 39.7	+3.3
KMKR				pmax	pmax		
	comp=Z,298nm,0.4s						
KMKR	**Kumukh**	1.47	281	*e*Pg	Pn	15 36 38.9	+2.6
KMKR				*e*Sg	Sn	15 36 59.6	+4.3
SEKA	**Sheki**	1.54	245	Pn	Pn	15 36 38.3	+1.3
	SNR=116						
SEKA				Sg	Sn	15 37 00.4	+3.9
GOBA	**Gobu**	1.56	160	Pg	Pn	15 36 43.3	+6.1
GOBA				Sn	Sn	15 37 01.3	+4.4
MAK	**Makhachkala**	1.58	314	*e*PN	Pn	15 36 40.5	+3.0
MAK	**Makhachkala**	1.58	314	*e*Pg	Pn	15 36 40.5	+3.0
MAK				*e*Sg	Sn	15 36 60.0	+2.6
KDMR	**Kurdemir**	1.63	204	Pn	Pn	15 36 39.2	+1.1
KDMR				Sn	Sn	15 37 00.5	+1.9
GNBR	**Gunib**	1.63	289	*e*PN	Pn	15 36 41.6	+3.3
GNBR				pmax	pmax		
	comp=Z,133nm,0.1s						
GNBR	**Gunib**	1.63	289	*e*Pg	Pn	15 36 41.4	+3.1
GNBR				*e*Sg	Sn	15 37 03.3	+4.5
ARKR	**Arakani**	1.69	296	*e*PN	Pn	15 36 42.6	+3.6
ARKR	**Arakani**	1.69	296	*e*Pg	Pn	15 36 42.0	+3.0
ARKR				*e*Pg		15 37 04.1	
BUJR	**Buynaksk**	1.72	304	*e*PN	Pn	15 36 45.2	+5.7
BUJR	**Buynaksk**	1.72	304	*e*Pg	Pn	15 36 45.2	+5.7
BUJR				*e*Sg	Sn	15 37 04.8	+3.9
KANR	**Karaman**	1.75	320	*e*PN	Pn	15 36 42.8	+3.0
KANR	**Karaman**	1.75	320	*e*Pg	Pn	15 36 42.8	+3.0
KANR				*e*Sg	Sn	15 37 05.3	+3.8
ZKTA	**Zakatala**	1.83	264	Pn	Pn	15 36 43.0	+2.2
	SNR=21						
ZKTA				Sn	Sn	15 37 02.8	-0.5
MNGR	**Mingechevir, A**	1.84	234	Pn	Pn	15 36 42.7	+1.8
	SNR=13						
MNGR				Sn	Sn	15 37 04.3	+0.9
KRNR	**Karanay**	1.85	302	*e*PN	Pn	15 36 44.2	+3.0
KRNR				pmax	pmax		
	comp=Z,52nm,0.3s						
KRNR	**Karanay**	1.85	302	*e*Pg	Pn	15 36 43.6	+2.4
KRNR				*e*Sg	Sn	15 37 07.8	+3.8
XNZR	**Khunzakh**	1.86	292	*e*PN	Pn	15 36 45.0	+3.6
XNZR				pmax	pmax		
	comp=Z,64nm,0.6s						
XNZR	**Khunzakh**	1.86	292	*e*Pg	Pn	15 36 44.8	+3.4
XNZR				*e*Sg	Sn	15 37 09.2	+4.8
UNCR	**Uncukul**	1.87	298	*e*PN	Pn	15 36 44.6	+3.2
UNCR				pmax	pmax		
	comp=Z,63nm,0.5s						
UNCR	**Uncukul**	1.87	298	*e*Pg	Pn	15 36 44.5	+3.1
UNCR				*e*Sg	Sn	15 37 07.9	+3.5
ZRD	**Zardab**	1.89	213	Pn	Pn	15 36 42.8	+1.2
	SNR=88						
ZRD				Sn	Sn	15 37 07.1	+2.4
ALIB	**Äli-Bayra**	1.91	181	Pn	Pn	15 36 45.2	+3.3
	SNR=3.7						
ALIB				Sn	Sn	15 37 10.5	+5.4
DBC	**Dubki**	2.00	306	*e*PN	Pn	15 36 46.0	+2.8
DBC				*e*S	Sn	15 37 11.2	+3.7
DBC				pmax	pmax		
	comp=Z,52nm,0.4s						
DBC	**Dubki**	2.00	306	*e*Pg	Pn	15 36 45.7	+2.5
DBC				*e*Sg	Sn	15 37 09.9	+2.4
SAAT	**Saatly**	2.06	193	Pn	Pn	15 36 45.6	+1.8
SAAT				Sn	Sn	15 37 10.7	+1.9
LGD	**Lagodekhi**	2.09	270	P	Pn	15 36 46.4	+2.1
LGD	**Lagodekhi**	2.09	270	*e*PN	Pn	15 36 46.4	+2.1
BRDA	**Brd**	2.14	222	Pn	Pn	15 36 46.4	+1.5
BRDA				Sn	Sn	15 37 12.0	+1.5
DLMR	**Dylym**	2.15	305	*e*PN	Pn	15 36 48.8	+3.7
DLMR				*e*S	Sn	15 37 17.6	+6.6
DLMR				pmax	pmax		
	comp=Z,109nm,0.2s						
DLMR	**Dylym**	2.15	305	*e*Pn	Pn	15 36 45.9	+0.8
DLMR				*e*Sn	Sn	15 37 13.7	+2.7
DDFL	**Dedoflistskaro**	2.23	260	P	Pn	15 36 50.2	+3.9
DDFL	**Dedoflistskaro**	2.23	260	*e*PN	Pn	15 36 50.1	+3.9
BTLR	**Botlikh**	2.24	292	*e*PN	Pn	15 36 49.1	+2.8
BTLR	**Botlikh**	2.24	292	*e*Pn	Pn	15 36 49.1	+2.8
BTLR				*e*Sn	Sn	15 37 16.1	+2.9
AGDM	**Agdam**	2.29	220	Pn	Pn	15 36 47.6	+0.6
	SNR=70						
AGDM				Sn	Sn	15 37 14.4	+0.1
GANJ	**Ganja**	2.39	240	Pn	Pn	15 36 48.6	+0.3
	SNR=18						
GANJ				Sn	Sn	15 37 15.7	-1.1
DVE	**Vedeno**	2.42	298	*e*PN	Pn	15 36 51.9	+3.2
DVE				*e*S	Sn	15 37 23.1	+5.6
DVE	**Vedeno**	2.42	298	*e*Pn	Pn	15 36 51.9	+3.2
DVE				*e*Sn	Sn	15 37 23.1	+5.6
BLQ	**Beylaqan**	2.42	208	Pn	Pn	15 36 49.2	+0.5
	SNR=7.5						
BLQ				Sn	Sn	15 37 17.8	+0.3
GLBA	**Clilabad**	2.67	191	Pn	Pn	15 36 53.1	+1.0
	SNR=16						
GLBA				Sn	Sn	15 37 22.9	-0.5
GDB	**GEDABAY**	2.73	246	Pn	Pn	15 36 53.0	-0.1
	SNR=15						
GDB				Sn	Sn	15 37 23.0	-2.2
QRD	**Qoradiz**	2.74	209	Pn	Pn	15 36 53.5	+0.5
	SNR=3.4						
QRD				Sn	Sn	15 37 24.3	-0.8
GROC	**Groznyy**	2.75	300	*e*PN	Pn	15 36 59.3	+6.2
GROC				*e*S	Sn	15 37 30.8	+5.5
GROC				pmax	pmax		
	comp=Z,29nm,0.4s						
GROC				smax	smax		
	comp=N,152nm,0.6s						
GROC				smax	smax		
	comp=N,146nm,0.4s						
GROC				smax	smax		
	comp=E,212nm,1.0s						
GROC				MLR	MLR		
	comp=Z,52nm,2.0s						
GROC	**Groznyy**	2.75	300	*e*Pn	Pn	15 36 55.9	+2.9
GROC				*e*Sn	Sn	15 37 29.6	+4.4
DGRG	**David-gareji**	2.78	263	P	Pn	15 36 55.4	+1.8
DGRG				S	Sn	15 37 28.3	+2.0
DGRG	**David-gareji**	2.78	263	*e*PN	Pn	15 36 55.4	+1.8
QZX	**Qazax, Azerbai**	2.88	255	Pn	Pn	15 36 55.3	+0.5
	SNR=6.7						
QZX				Sn	Sn	15 37 27.4	-1.1
YRD	**Yardimli**	3.01	192	Pn	Pn	15 36 57.0	+0.1
	SNR=45						
YRD				Sn	Sn	15 37 31.2	-0.8
LKRN	**Lenkeran, Azer**	3.16	184	Pn	Pn	15 36 58.7	0.0
LKRN				Sn	Sn	15 37 34.5	-0.8
LRK	**Lerik**	3.27	190	Pn	Pn	15 37 00.3	0.0
	SNR=3.9						
LRK				Sn	Sn	15 37 37.4	-0.8
ASTR	**Astara**	3.31	183	Pn	Pn	15 37 00.6	-0.2
	SNR=3.1						
ASTR				Sn	Sn	15 37 37.7	-1.3
PNSH	**Pansheti**	3.38	285	P	Pn	15 36 55.9	-5.9
PNSH	**Pansheti**	3.38	285	*e*PN	Pn	15 36 55.8	-6.0
MTEO	**Meteo**	3.44	285	P	Pn	15 37 05.0	+2.1
SBZ	**Shahbuz**	3.63	228	Pn	Pn	15 37 06.5	+1.4
	SNR=7.0						
SBZ				Sn	Sn	15 37 48.0	+1.1
BTKR	**Batakoyurt**	3.65	296	*e*PN	Pn	15 37 07.9	+2.6
BTKR	**Batakoyurt**	3.65	296	*e*Pn	Pn	15 37 08.0	+2.6
BTKR				*e*Sn	Sn	15 37 50.3	+3.1
LACR	**Lac**	3.65	287	*e*PN	Pn	15 37 07.4	+2.0
LACR	**Lac**	3.65	287	*e*Pn	Pn	15 37 07.4	+2.0
LACR				*e*Sn	Sn	15 37 47.8	+0.5
DMNI	**Dmanisi**	3.68	263	P	Pn	15 37 06.1	+0.3
DMNI				S	Sn	15 37 46.6	-1.6
DMNI	**Dmanisi**	3.68	263	*e*PN	Pn	15 37 06.1	+0.3
GNI	**Garni**	3.68	244	P	Pn	15 37 07.3	+1.4
	comp=Z,6.9nm,0.3s,baz=25,slow=13,SNR=16						
GNI				S	Sn	15 37 48.9	+0.7
	comp=Z,2.2nm,0.3s,baz=82,slow=15,SNR=4.1						
GNI	**Garni**	3.68	244	PN	Pn	15 37 07.1	+1.2
GNI	**Garni**	3.68	244		Pn	15 37 07.1	+1.2
TRLG	**Trialeti**	3.71	267	P	Pn	15 37 07.1	+0.7
TRLG				S	Sn	15 37 48.0	-1.1
TRLG	**Trialeti**	3.71	267	*e*PN	Pn	15 37 07.0	+0.7
ORD	**Ordubad**	3.75	219	Pn	Pn	15 37 08.3	+1.5
	SNR=6.2						
ORD				Sn	Sn	15 37 50.3	+0.5
KORR	**Kora**	3.88	290	*e*PN	Pn	15 37 12.5	+4.1
KORR	**Kora**	3.88	290	*e*Pn	Pn	15 37 12.5	+4.1
KORR				*e*Sn	Sn	15 37 53.5	+0.7
ZEI	**Tsey**	3.92	285	*e*PN	Pn	15 37 10.7	+1.5
ZEI	**Tsey**	3.92	285	*e*Pn	Pn	15 37 10.7	+1.5
ZEI				*e*Sn	Sn	15 37 55.7	+1.5
DIGR	**Digorskoe uzhe**	4.18	286	*e*PN	Pn	15 37 13.7	+1.0
DIGR	**Digorskoe uzhe**	4.18	286	*e*Pn	Pn	15 37 13.7	+1.0
DIGR				*i* Sn	Sn	15 37 58.6	-1.8
ONI	**Oni**	4.21	282	PN	Pn	15 37 12.8	-0.3
ONI	**Oni**	4.21	282	Pn	Pn	15 37 12.8	-0.3
KBZ	**Khabaz**	4.89	294	P	Pn	15 37 21.8	-0.3
	comp=Z,0.3nm,0.3s,baz=103,slow=14,SNR=15						
KBZ				S	Sn	15 38 14.1	-3.3
	comp=Z,1.4nm,0.3s,baz=194,slow=18,SNR=2.9						
KBZ	**Khabaz**	4.89	294	*e*PN	Pn	15 37 22.8	+0.7
KBZ	**Khabaz**	4.89	294	*e*Pn	Pn	15 37 22.8	+0.7
KBZ				*e*Sn	Sn	15 38 15.7	-1.7
BEYR	**Belyy Ugol+**	5.05	297	*e*PN	Pn	15 37 24.9	+0.5
BEYR	**Belyy Ugol+**	5.05	297	*e*Pn	Pn	15 37 24.9	+0.5
BEYR				*e*Sn	Sn	15 38 17.9	-3.5
SHA1	**Shidzhatmaz**	5.06	294	*e*PN	Pn	15 37 25.8	+1.1
SHA1	**Shidzhatmaz**	5.06	294	*e*Pn	Pn	15 37 25.8	+1.1
SHA1				*e*Sn	Sn	15 38 18.9	-2.9
KVAR	**Kislovodsk Arr**	5.11	296	P	Pn	15 37 24.5	-0.8
	baz=13,slow=15,SNR=2.1						
KVAR				S	Sn	15 38 19.5	-3.4
	baz=176,slow=5.1,SNR=5.3						
KIV	**Kislovodsk**	5.11	296	*e*PN	Pn	15 37 27.8	+2.5
KIV	**Kislovodsk**	5.11	296	*e*Pn	Pn	15 37 27.8	+2.5
KIV				*e*Sn	Sn	15 38 21.8	-1.3
GEYT	**Alibeck**	8.01	116	P	Pn	15 38 02.6	-2.1
	comp=Z,3.0nm,0.3s,baz=301,slow=15,SNR=28						
GEYT				S	Sn	15 39 32.9	-0.9
	comp=Z,1.1nm,0.3s,baz=237,slow=33,SNR=2.0						
GEYT	**Alibeck**	8.01	116		Pn	15 38 02.9	-1.9
GYA0B	**ALIBECK ARRAY**	8.01	116	⇓P	Pn	15 38 07.1	+2.3
GYA0B				⇑S	Sn	15 39 31.7	-2.0
GYA0B	**ALIBECK ARRAY**	8.01	116	Pn	Pn	15 38 02.9	-1.8
BELG	**Belogornoye**	10.57	355	P	Pn	15 38 38.1	-1.5
	comp=Z,2.2nm,0.3s,baz=246,slow=6.2,SNR=7.0						
BELG				S	Sn	15 40 27.1	-8.9
	comp=Z,1.4nm,0.3s,baz=180,slow=19,SNR=5.0						
AKTO	**Aktyubinsk**	10.58	33	P	Pn	15 38 38.5	-1.2
	comp=Z,1.9nm,0.3s,baz=212,slow=8.7,SNR=17						
AKTO				S	Sn	15 40 27.7	-8.7
	comp=Z,0.6nm,0.3s,baz=203,slow=17,SNR=2.7						
AKTO	**Aktyubinsk**	10.58	33	⇓P	Pn	15 38 38.3	-1.5
	comp=Z,2.0nm,0.5s						
AKTO				⇑S	Sn	15 40 30.1	-6.3
	comp=Z,12nm,0.6s						
AB31	**Akbulak array**	10.62	42	⇓P	Pn	15 38 38.2	-2.1
	comp=Z,1.1nm,0.4s,baz=226,slow=13,SNR=47						
AB31				⇓S	Sn	15 40 31.6	-5.7
	comp=Z,2.1nm,0.4s,baz=223,slow=23,SNR=7.9						
ABKAR	**Akbulak array**	10.62	42		Pn	15 38 37.1	-3.2
CHGR	**Chuyangaron**	15.68	95	Pn	Pn	15 39 45.5	-2.0
CHGR				IAmb	IAmb	15 39 53.5	
	comp=Z,12nm,0.7s						
ARU	**Arti**	15.82	20	P	Pn	15 39 46.8	-2.2
	comp=Z,0.0nm,0.3s,baz=206,slow=10,SNR=10						
ARU				S	Sn	15 42 29.6	-14
	comp=Z,0.0nm,0.3s,baz=298,slow=22,SNR=2.5						
ARU	**Arti**	15.82	20		Pn	15 39 46.2	-2.8
ARU				IAmb	IAmb	15 39 47.9	
	comp=Z,17nm,1.5s						
KK09	**Karatay Array**	15.87	78	⇑P	Pn	15 39 49.2	-0.5
	comp=Z,0.9nm,0.5s						
KK09				⇑S	Sn	15 42 35.4	-10
	comp=Z,2.1nm,0.6s						
KKAR	**Karatay Array**	15.88	78	P	Pn	15 39 48.6	-1.3
KKAR	**Karatay Array**	15.88	78	Pn	Pn	15 39 48.6	-1.3
AKASG	**Malin Array Be**	16.26	310	P	Pn	15 39 56.4	+1.9
	comp=Z,0.3nm,0.3s,baz=114,slow=12,SNR=1.6						
AKASG	**Malin Array Be**	16.26	310	Pn	Pn	15 39 53.9	-0.6
AKBB	**Malin Array Si**	16.26	310	P	Pn	15 39 56.9	+2.4
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKBB	**Malin Array Si**	16.26	310	P	Pn	15 39 56.9	+2.4
AKBB				IAmb	IAmb	15 39 57.4	
	comp=Z,3.0nm,0.8s						
GAR	**Garm**	16.44	93	P	P	15 39 59.7	+1.3
GAR				IAmb	IAmb	15 40 04.0	
	comp=Z,4.9nm,0.9s						
BTK	**Batken**	16.54	89	P	Pn	15 39 58.6	+0.4
BTK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BTK	**Batken**	16.54	89	P	Pn	15 39 58.6	+0.4
BURAR	**Bucovina Array**	17.84	297	P	P	15 40 14.5	+0.8
BUR08	**Bucovina Ar. S**	17.86	297	P	P	15 40 13.5	-0.4
BRVK	**Borovoye**	18.13	45	P	P	15 40 15.2	-1.5
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRVK	**Borovoye**	18.13	45	P	P	15 40 15.2	-1.5
BVAR	**Borovoye Array**	18.17	45	P	P	15 40 18.1	+1.0
	comp=Z,0.5nm,0.3s,baz=234,slow=20,SNR=13						
AAK	**Ala-Archa**	18.84	79	P	P	15 40 26.5	+1.7
	comp=Z,0.1nm,0.3s,baz=270,slow=9.9,SNR=5.5						
VTS	**Vitosha**	19.11	281	P	P	15 40 29.1	+1.4
VTS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VTS	**Vitosha**	19.11	281	P	P	15 40 29.1	+1.4
KURBB	**Kurchatov Arra**	22.07	57	P	P	15 41 02.1	+2.7
	comp=Z,1.4nm,0.2s,baz=262,slow=12,SNR=6.5						
KURK	**Kurchatov**	22.15	56	P	P	15 41 02.1	+2.0
MAKZ	**Makanchi**	23.96	67	P	P	15 41 19.7	+1.8
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MAKZ	**Makanchi**	23.96	67	P	P	15 41 19.7	+1.8
MAKZ				IAmb	IAmb	15 41 39.8	
	comp=Z,7.7nm,1.2s						
FINES	**FINESS Array B**	24.00	333	P	P	15 41 18.8	+0.8
	comp=Z,0.9nm,0.3s,baz=134,slow=10,SNR=11						
FINES	**FINESS Array B**	24.00	333	P	P	15 41 18.6	+0.6
MK31	**Makanchi Array**	24.17	67	P	P	15 41 21.8	+1.9
MK31				pmax	pmax		
	comp=Z,6.0nm,1.5s						
MK31	**Makanchi Array**	24.17	67	P	P	15 41 21.8	+1.9
MK31				IAmb	IAmb	15 41 28.9	
	comp=Z,5.6nm,1.4s						
MKAR	**Makanchi Array**	24.17	67	P	P	15 41 22.1	+2.2
	comp=Z,1.1nm,0.5s,baz=262,slow=10,SNR=15						
MKAR	**Makanchi Array**	24.17	67	P	P	15 41 21.7	+1.9
PRED	**Cave del Predi**	25.72	292	P	P	15 41 33.0	-1.0
PRED				IAmb	IAmb	15 41 48.3	
	comp=Z,2.9nm,0.7s						
ZOU	**Zoufplan**	26.12	293	P	P	15 41 36.6	-1.1
ZOU				IAmb	IAmb	15 41 48.0	
	comp=Z,8.2nm,1.4s						
HFS	**Hagfors**	28.29	322	P	P	15 41 57.9	+1.2
	comp=Z,0.8nm,0.3s,baz=104,slow=11,SNR=7.5						
NC405	**NORSAR Array S**	29.58	323	P	P	15 42 07.9	-0.3
NB201	**NORSAR Array S**	29.74	323	P	P	15 42 10.3	+0.7
NOA	**NORSAR Array B**	29.77	323	P	P	15 42 10.6	+0.7
	comp=Z,0.1nm,0.4s,baz=118,slow=8.5,SNR=3.7						
TORD	**Torodi Ar. Bea**	49.97	249	P	P	15 44 58.0	+0.8
	comp=Z,0.3nm,0.6s,baz=56,slow=6.8,SNR=2.2						
TORD	**Torodi Ar. Bea**	49.97	249	IAmb	IAmb	15 45 20.2	
	comp=Z,1.2nm,1.5s						
TULEG	**Thule**	55.62	345	P	P	15 45 41.0	+2.9
EUNU	**Eureka**	55.79	352	P	P	15 45 42.2	+2.9
EUNU				IAmb	IAmb	15 45 42.7	
	comp=Z,2.1nm,1.1s						
RES	**Resolute Bay**	61.28	350	P	P	15 46 18.7	+1.3
RES				pmax	pmax		
	comp=Z,4.0nm,1.5s						
RES	**Resolute Bay**	61.28	350	P	P	15 46 18.7	+1.3
IMAR	**Indian Mountai**	71.04	10	P	P	15 47 22.0	+2.0
MLY	**Manley**	72.32	9	P	P	15 47 30.2	+2.4
MLY				IAmb	IAmb	15 47 32.1	
	comp=Z,2.9nm,1.3s						
J20K	**Nowinta River**	72.72	10	P	P	15 47 32.6	+2.6
J20K				IAmb	IAmb	15 47 33.3	
	comp=Z,3.2nm,1.1s						
KTH	**Kantishna Hill**	73.73	9	P	P	15 47 37.9	+1.8
RND	**Reindeer**	74.10	8	P	P	15 47 39.7	+1.4
RND	**Reindeer**	74.10	8	P	P	15 47 39.7	+1.4
SCM	**Sheep Creek Mo**	75.80	8	P	P	15 47 50.6	+2.5
SCM	**Sheep Creek Mo**	75.80	8	P	P	15 47 50.6	+2.5

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*IDC **15** 15:53:29.5±0.8, 35°.42N×138°.84E, h0^{km}, mb3.6/7, mb1 3.8/11, mb1mx3.6/42, mbtmp3.7/11, ML3.6/4, MS2.7/2, Ms1 2.7/2, ms1mx2.5/34, Error ellipse: s-maj=31.6km s-min=10.2km az=72.0*

*JMA **15** 15:53:33.6, 35°.53N×138°.96E, h19^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s201.00000°, δ32.00000°, λ41.00000°. NP2: ϕ_s75.00000°, δ70.00000°, λ115.00000°. Principal axes: T Plg58.0000°, Azm19.0000°; N Plg23.0000°, Azm246.0000°; P Plg21.0000°, Azm146.0000°;*

JMA Felt II J1.

*NIED **15** 15:53:33.6, 35°.53N×138°.96E, h19^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.47; $M_{\theta\theta}$0.53; $M_{\phi\phi}$-0.06; $M_{r\theta}$3.36; $M_{\theta\phi}$-1.11; $M_{\phi r}$1.10; Fault plane solution: $M_0$3.71000×10^{14} NP1: ϕ_s256.00000°, δ88.00000°, λ-108.00000°. NP2: ϕ_s160.00000°, δ18.00000°, λ-7.00000°.*

ISC 15 15:53:32.9±0.7, **35°.52N**±0°.03×**138°.97E**±0°.04, **h22**^{km}±2^{km}, **n27**, σ**0^{s}87**/28, **mb3.6**/7, **2C-3D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSGW	**Sagamiharawaka**	0.21	67	P	Pb	15 53 38.6	0.0
JSGW				S	Sb	15 53 42.5	0.0
JOD2	**Odawara 2**	0.27	159	⇑P	Pb	15 53 39.5	+0.2
JOD2				S	Sb	15 53 44.1	+0.4
JYN	**Shimob**	0.34	267	⇓P	Pb	15 53 40.5	0.0
JYN				S	Sb	15 53 45.9	+0.3
JFNN	**Fujinakano**	0.40	216	⇑P	Pb	15 53 41.4	+0.2
JFNN				S	Sb	15 53 47.7	+0.8
JRY	**Ryogami san**	0.50	354	⇓P	Pb	15 53 43.1	0.0
JRY				S	Sb	15 53 49.9	-0.1
SHZ3	**Shizuoka 3**	0.77	234	P	Pb	15 53 47.8	+0.2
JIZS	**Izushimoda**	0.80	185	⇓P	Pb	15 53 47.8	-0.3
JIM2	**Oshima 3**	0.88	154	P	Pb	15 53 49.0	-0.6
MJAR	**Matsushiro Arr**	1.19	329	Pg	Pn	15 53 54.1	-0.2

	32nm,0.3s,baz=110,slow=23,SNR=329						
MJAR				Lg	Lg	15 54 08.2	
	111nm,0.3s,baz=254,slow=12,SNR=23						
MAT	**Matsushiro**	**1.20**	**329**	P	**Pn**	**15 53 54.9**	**+0.6**
MAT				S	**Sb**	**15 54 10.2**	**+0.3**
JHJ	**Hachijo jima 2**	**2.48**	**164**	Pn	**Pn**	**15 54 12.6**	**+0.6**
	82nm,0.3s,baz=320,slow=3.0,SNR=27						
JHJ				Sn	**Sn**	**15 54 43.3**	**+1.6**
	34nm,0.3s,baz=247,slow=23,SNR=2.1						
JCJ	**Chichijima**	**8.83**	**161**	Pn	**Pn**	**15 55 39.0**	**-0.3**
	5.5nm,0.3s,baz=305,slow=22,SNR=7.8						
ASAJ	**Asahikawa**	**9.03**	**17**	Pn	**Pn**	**15 55 43.2**	**+1.4**
	0.3nm,0.3s,baz=208,slow=13,SNR=6.2						
ASAJ				LR	LR	15 59 21.6	
	comp=Z,55nm,20.1s,baz=202,slow=38						
KSRS	**Korea Array**	**9.10**	**285**	Pn	**Pn**	**15 55 40.2**	**-2.7**
	0.1nm,0.3s,baz=100,slow=15,SNR=1.3						
KSRS				LR	LR	15 59 11.5	
	comp=Z,32nm,18.1s,baz=115,slow=38						
H11N2	**WAKE ISLAND Hy**	**29.18**	**115**	T	T	16 29 24.0	
	baz=308,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	**29.19**	**115**	T	T	16 29 24.1	
	baz=308,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**29.20**	**115**	T	T	16 29 25.0	
	baz=308,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hy**	**29.81**	**117**	T	T	16 30 43.2	
	baz=306						
H11S1	**WAKE ISLAND Hy**	**29.81**	**117**	T	T	16 30 47.7	
	baz=306						
H11S2	**WAKE ISLAND Hy**	**29.83**	**117**	T	T	16 30 46.2	
	baz=306						
MKAR	**Makanchi Array**	**43.27**	**303**	P	**P**	**16 01 33.3**	**+0.7**
	0.3nm,0.6s,baz=77,slow=9.1,SNR=2.2						
ILAR	**Eielson Array**	**51.83**	**32**	P	**P**	**16 02 39.1**	**+0.3**
	0.7nm,0.8s,baz=254,slow=6.0,SNR=7.1						
WRA	**Warramunga Arr**	**55.33**	**185**	P	**P**	**16 03 03.4**	**-1.6**
	0.7nm,0.7s,baz=0.2,slow=7.6,SNR=18						
ASAR	**Alice Springs**	**59.05**	**185**	P	**P**	**16 03 30.4**	**-0.9**
	0.2nm,0.5s,baz=18,slow=11,SNR=9.4						
FINES	**FINESS Array B**	**69.22**	**332**	P	**P**	**16 04 37.5**	**0.0**
	3.7nm,0.9s,baz=64,slow=6.3,SNR=6.6						
AKASG	**Malin Array Be**	**74.27**	**322**	P	**P**	**16 05 08.6**	**+0.5**
	0.2nm,0.3s,baz=51,slow=5.9,SNR=1.7						
NOA	**NORSAR Array B**	**74.80**	**336**	P	**P**	**16 05 11.5**	**+0.4**
	0.2nm,0.4s,baz=46,slow=5.1,SNR=2.5						

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*IDC **15** 16:04:01.9±8.4, 26°.11S×29°.21E, h0^{km}, mb1 2.7/1, mb1mx2.6/32, mbtmp2.7/1, ML2.0/1, Error ellipse: s-maj=84.2km s-min=57.7km az=143.0*

*BUL **15** 16:04:02.3±2.1, 25°.97S×29°.19E, h10^{km}, MD4.5*

*EAF **15** 16:04:03.0±2.0, 25°.94S×29°.31E, h10^{km}, MD4.2*

ISC 15 16:03:59.5±1.1**, 26°.23S**±0°.06×**29°.39E**±0°.07**, h10^{km}, n11, σ1^s.41**/16**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	**Changalane**	**2.51**	**92**	*i* P	**Pb**	**16 04 44.1**	**-0.6**
CNG	**Changalane**	**2.51**	**92**	*i* P	**Pb**	**16 04 44.1**	**-0.6**
MOPA	**Mopani**	**3.26**	**34**	*i* P	**Pn**	**16 04 51.8**	**+1.0**
MOPA				*i* Sg	**Sb**	**16 05 37.8**	**+0.5**
MOPA	**Mopani**	**3.26**	**34**	*i* P	**Pn**	**16 04 51.8**	**+1.0**
MOPA				*i* Sg	**Sb**	**16 05 37.8**	**+0.5**
MSNA	**Messina**	**3.91**	**9**	*i* P	**Pn**	**16 05 00.6**	**+0.9**
MSNA				*i* Sg	**Sb**	**16 05 57.3**	**+1.2**
MSNA	**Messina**	**3.91**	**9**	*i* P	**Pn**	**16 05 00.6**	**+0.9**
MSNA				*i* Sg	**Sb**	**16 05 57.3**	**+1.2**
BOSA	**Boshof**	**4.37**	**236**	Pn	**Pn**	**16 05 08.2**	**+2.1**
	0.1nm,0.3s,baz=59,slow=13,SNR=0.9						
BOSA				Pg	**Pg**	**16 05 21.9**	**-1.5**
	0.5nm,0.3s,baz=55,slow=15,SNR=9.1						
BOSA				Lg	Lg	16 06 18.5	
	3.7nm,0.3s,baz=144,slow=20,SNR=16						
I47ZA	**BOSHOF INFRASO**	**4.39**	**236**	*i*		16 33 50.0	
	baz=55,slow=308,SNR=0.7						
MATP	**Matopo**	**5.84**	**352**	*i* P	**Pn**	**16 05 24.5**	**-1.8**
MATP				*i* Sg	**Sb**	**16 06 53.2**	**+1.6**
MATP	**Matopo**	**5.84**	**352**	*i* P	**Pn**	**16 05 24.5**	**-1.8**
MATP				*i* Sg	**Sb**	**16 06 53.2**	**+1.6**
I35NA	**TSUMEB INFRASO**	**12.96**	**300**	*i*		17 23 20.0	
	baz=127,slow=307,SNR=1.8						

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*IDC **15** 16:09:23.6±2.2, 20°.90N×103°.40W, h0^{km}, mb3.6/4, mb1 4.0/6, mb1mx3.7/36, mbtmp3.6/6, ML3.7/2, MS3.2/5, Ms1 3.1/5, ms1mx3.0/23, Error ellipse: s-maj=47.5km s-min=22.0km az=49.0*

*NEIC **15** 16:09:25.3±1.6, 20°.77N±0°.03×103°.56W±0°.06, h27^{km}±5^{km}, mb4.1/8, Md4.4/30(MEX), Error ellipse: s-maj=7.9km s-min=4.9km az=89.0*

*MEX **15** 16:09:26.5±0.7, 20°.83N×103°.50W, h20^{km}±34^{km}, MD4.4*

ISC 15 16:09:23.3±0.7**, 20°.82N**±0°.03×**103°.55W**±0°.04**, h10^{km}, n50, σ1^s.97**/64**, mb3.7**/6**, 1C-1D, Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JUBC	**Volcan de Coli**	**1.29**	**181**	*e*P	**Pn**	**16 09 46.9**	**-0.9**
JUBC				*i* S	**Sb**	**16 10 02.6**	**-2.1**
EZ5V		**1.33**	**182**		**Pn**	**16 09 47.2**	**-1.0**
EZ5V		**1.33**	**182**	*e*P	**Pn**	**16 09 47.2**	**-1.0**
EZ5V				*e*S	**Sb**	**16 10 03.4**	**-2.4**
MNGA	**Volcan de Coli**	**1.34**	**183**	*e*P	**Pn**	**16 09 47.7**	**-0.7**
MNGA				*i* S	**Sb**	**16 10 03.8**	**-2.4**
TEPI	**Tepic**	**1.46**	**299**	*e*P	**Pn**	**16 09 50.6**	**+0.8**
TEPI				*e*S	**Sn**	**16 10 07.9**	**-1.2**
AAIG	**Aguscalientes**	**1.58**	**43**	⇓*i*P	**Pn**	**16 09 49.9**	**-1.7**
AAIG				*i* S	**Sn**	**16 10 08.8**	**-3.5**
COIG	**Colima**	**1.63**	**185**	⇑*e*P	**Pn**	**16 09 51.1**	**-1.2**
COIG				*e*S	**Sn**	**16 10 11.6**	**-1.8**
R15V		**1.69**	**194**		**Pn**	**16 09 52.1**	**-0.9**
R15V		**1.69**	**194**	*e*P	**Pn**	**16 09 52.1**	**-0.9**
R15V				*i* S	**Sn**	**16 10 13.2**	**-1.4**
CJM	**Chamela**	**1.92**	**227**	*i* P	Pn	16 09 53.7	-2.4
CJM				*e*S	**Sn**	**16 10 17.6**	**-2.8**
URUA	**Uruapan**	**1.96**	**135**		**Pn**	**16 09 54.0**	**-2.8**
URUA					**Sn**	**16 10 17.2**	**-4.3**
URUA	**Uruapan**	**1.96**	**135**	*e*P	**Pn**	**16 09 54.0**	**-2.8**
URUA				*i* S	**Sn**	**16 10 17.2**	**-4.3**
IGIG	**Irapuato, Guan**	**2.08**	**91**		**Pn**	**16 09 58.3**	**-0.2**
IGIG					**Sn**	**16 10 22.8**	**-1.7**
IGIG	**Irapuato, Guan**	**2.08**	**91**	*e*P	**Pn**	**16 09 58.3**	**-0.2**
IGIG				*i* S	**Sn**	**16 10 22.8**	**-1.7**
ZAIG	**Zacatecas**	**2.15**	**25**	Pn	**Pn**	**16 09 58.4**	**-1.1**
ZAIG	**Zacatecas**	**2.15**	**25**		**Sn**	**16 10 23.1**	**-3.2**
ZAIG	**Zacatecas**	**2.15**	**25**	*i* P	**Pn**	**16 09 59.4**	**-0.1**
ZAIG				*i* S	**Sn**	**16 10 23.1**	**-3.2**
MOIG	**Morelia**	**2.49**	**117**	Pn	**Pn**	**16 10 02.7**	**-1.4**
MOIG	**Morelia**	**2.49**	**117**		**Sn**	**16 10 34.7**	**0.0**
MOIG	**Morelia**	**2.49**	**117**	*e*P	**Pn**	**16 10 02.7**	**-1.4**
MOIG				*i* S	**Sn**	**16 10 34.7**	**0.0**
MMIG	**Aquila**	**2.52**	**176**		**Pn**	**16 10 04.6**	**+0.2**
MMIG					**Sn**	**16 10 39.0**	**+3.9**
MMIG	**Aquila**	**2.52**	**176**	*e*P	**Pn**	**16 10 04.6**	**+0.2**
MMIG				*e*S	**Sn**	**16 10 39.0**	**+3.9**
JRQG	**Juriquilla Cam**	**2.90**	**92**		**Pn**	**16 10 12.3**	**+2.5**
JRQG					**Sn**	**16 10 48.7**	**+3.8**
JRQG	**Juriquilla Cam**	**2.90**	**92**	*e*P	**Pn**	**16 10 12.3**	**+2.5**
JRQG				*e*S	**Sn**	**16 10 48.7**	**+3.8**
TLIG	**Tlapa**	**5.71**	**124**	Pn	**Pn**	**16 10 48.1**	**-0.3**
HPIG		**6.39**	**343**	Pn	**Pn**	**16 10 58.1**	**+0.3**
SLBS	**Sierra La Lagu**	**6.58**	**297**	Pn	**Pn**	**16 10 59.3**	**-0.9**
LPIG	**La Paz**	**7.06**	**299**	LR	LR	16 13 33.3	
	comp=Z,172nm,21.9s,baz=176,slow=35						
TX31	**Lajitas Ar. Si**	**8.48**	**359**	Pn	**Pn**	**16 11 27.4**	**+1.0**
TX32	**Lajitas Array**	**8.48**	**359**	Pn	**Pn**	**16 11 26.2**	**-0.2**
TXAR	**Lajitas Array**	**8.48**	**359**	Pn	**Pn**	**16 11 28.1**	**+1.7**
	0.5nm,0.3s,baz=178,slow=13,SNR=18						
TXAR				Lg	Lg	16 13 48.4	
	0.9nm,0.3s,baz=178,slow=28,SNR=6.4						
TXAR				LR	LR	16 14 51.2	
	comp=Z,103nm,19.9s,baz=0.0,slow=39						
TXAR	**Lajitas Array**	**8.48**	**359**	Pn	**Pn**	**16 11 27.2**	**+0.8**
CMIG	**Matias Romero**	**8.99**	**113**	Pn	**Pn**	**16 11 34.7**	**+1.4**
	0.3nm,0.3s,baz=292,slow=14,SNR=6.5						
CMIG				Lg	Lg	16 14 05.3	
	0.1nm,0.3s,baz=30,slow=21,SNR=1.2						
CMIG				LR	LR	16 15 20.8	
	comp=Z,113nm,20.0s,baz=334,slow=40						
MNTX	**Cornudas Mount**	**10.96**	**352**	Pn	**Pn**	**16 12 00.9**	**+0.6**
ANMO	**Albuquerque**	**14.31**	**350**	Lg	Lg	16 16 55.9	
	0.1nm,0.3s,baz=263,slow=16,SNR=2.5						
ANMO				LR	LR	16 18 47.2	
	comp=Z,110nm,20.1s,baz=330,slow=40						
WMOK	**Wichita Mounta**	**14.49**	**16**	P	**P**	**16 12 56.0**	**+0.7**
W35A	**Tecumseh**	**15.44**	**21**	P	**P**	**16 13 06.8**	**+1.0**
W35A				IAmb	IAmb	16 13 08.0	
	comp=Z,16nm,0.9s						
TUL1	**Leonard**	**16.50**	**23**	P	**P**	**16 13 18.2**	**+0.6**
TUL1				IAmb	IAmb	16 13 20.6	
	comp=Z,9.2nm,0.9s						
X40A	**Basin Creek Fa**	**16.58**	**33**	P	**P**	**16 13 19.0**	**+0.5**
PFO	**Pinyon Flats O**	**17.13**	**321**	LR	LR	16 19 33.4	
	comp=Z,92nm,18.6s,baz=354,slow=36						
NVAR	**Mina Array Bea**	**21.69**	**327**	P	**P**	**16 14 17.9**	**+3.3**
	comp=Z,0.4nm,0.3s,baz=143,slow=8.1,SNR=2.6						
GOGA	**Godfrey**	**21.79**	**51**	P	**P**	**16 14 14.9**	**-0.5**
GOGA				IAmb	IAmb	16 14 16.1	
	comp=Z,26nm,1.5s						
BW06	**Boulder Array**	**22.46**	**348**	P	**P**	**16 14 22.7**	**-0.2**
BW06				IAmb	IAmb	16 14 26.1	
	comp=Z,3.3nm,1.0s						
PD31	**Pinedale Array**	**22.46**	**348**	P	**P**	**16 14 22.2**	**-0.6**
PDAR	**Pinedale Array**	**22.46**	**348**	P	**P**	**16 14 24.8**	**+1.9**
	comp=Z,2.4nm,0.9s,baz=152,slow=9.9,SNR=16						
PDAR	**Pinedale Array**	**22.46**	**348**	P	**P**	**16 14 23.0**	**+0.1**
DOT	**Dot Lake**	**50.69**	**338**	P	**P**	**16 18 22.0**	**-0.8**
INK	**Inuvik**	**51.01**	**346**	P	**P**	**16 18 25.4**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=120,slow=8.1,SNR=4.2						
KNK	**Knik Glacier**	**51.07**	**334**	P	**P**	**16 18 27.1**	**+1.5**
ILAR	**Eielson Array**	**52.35**	**338**	P	**P**	**16 18 36.1**	**+0.9**
	comp=Z,0.6nm,1.0s,baz=145,slow=6.6,SNR=5.3						

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*IDC **15** 16:10:30.4±2.3, 22°.80N×11°.81W, h0^{km}, mb3.8/2, mb1 3.8/5, mb1mx3.5/40, mbtmp3.9/5, ML3.8/3, Error ellipse: s-maj=72.4km s-min=27.0km az=68.0*

*NEIC **15** 16:10:36.7±0.4, 23°.1N±0°.2×11°.0W±0°.2, h10^{km}±2^{km}, mb4.1/2, Error ellipse: s-maj=40.3km s-min=27.8km az=245.0*

ISC 15 16:10:30.9±1.6**, 22°.6N**±0°.1×**11°.8W**±0°.2**, h10^{km}, n12, σ2^s.96**/13**, mb3.9**/3**, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOWA	**Kowa**	**10.91**	**136**	Pn	**Pn**	**16 13 10.9**	**+3.7**
	0.9nm,0.3s,baz=319,slow=10,SNR=16						
KOWA				Sn	**Sn**	**16 15 12.4**	**+3.1**
	0.5nm,0.3s,baz=158,slow=18,SNR=6.4						
KOWA				Lg	Lg	16 16 14.9	
	0.2nm,0.3s,baz=294,slow=12,SNR=1.4						
KOWA	**Kowa**	**10.91**	**136**		**Pn**	**16 13 10.4**	**+3.3**
MDT	**Midelt**	**12.04**	**30**	Lg	Lg	16 16 43.8	
	0.4nm,0.3s,baz=169,slow=19,SNR=3.9						
TORD	**Torodi Ar. Bea**	**15.90**	**124**	Pn	**P**	**16 14 17.5**	**-1.0**
	0.2nm,0.3s,baz=312,slow=12,SNR=10						
TORD				Sn	**Sn**	**16 17 08.4**	**-2.8**
	0.1nm,0.3s,baz=315,slow=20,SNR=1.9						
TORD				Lg	Lg	16 18 59.7	
	baz=153,slow=10,SNR=1.5						
TORD	**Torodi Ar. Bea**	**15.90**	**124**		**Pn**	**16 14 14.9**	**0.0**
TORD				IAmb	IAmb	16 14 23.8	
	comp=Z,3.3nm,1.4s						
DBIC	**Dimbokro**	**17.17**	**156**	P	**P**	**16 14 32.9**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=342,slow=11,SNR=4.9						
DBIC				S	**Sn**	**16 17 35.6**	**-6.4**
	comp=Z,0.1nm,0.3s,baz=116,slow=4.2,SNR=1.9						
DBIC				Lg	Lg	16 19 37.8	
	comp=Z,0.1nm,0.3s,baz=25,slow=21,SNR=3.0						
I48TN	**KESRA INFRASON**	**22.63**	**50**	*i*		18 29 00.0	
	baz=240,slow=305,SNR=1.2						
FINES	**FINESS Array B**	**46.76**	**24**	P	**P**	**16 18 58.7**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=241,slow=9.4,SNR=3.6						
MAKZ	**Makanchi**	**76.39**	**45**	P	**P**	**16 22 20.9**	**+0.3**
MAKZ				IAmb	IAmb	16 22 49.7	
	comp=Z,11nm,1.4s						
MKAR	**Makanchi Array**	**76.60**	**45**	P	**P**	**16 22 22.2**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=283,slow=5.9,SNR=7.0						
WRA	**Warramunga Arr**	**148.39**	**92**	PKPbc	**PKPbc**	**16 30 19.1**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=292,slow=2.7,SNR=4.6						
ASAR	**Alice Springs**	**148.49**	**99**	PKPbc	**PKiKP**	**16 30 19.8**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=276,slow=2.7,SNR=11						

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*INET **15** 16:30:36.4, 10°.82N×86°.12W, h34^{km}, MW3.3*

UCR 15 16:30:30.6±1.4**, 10°.57N**×**86°.23W, h6**^{km}±17^{km}**, MW3.9, 2C-6D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	**Horizontes, Gu**	**0.64**	**77**	*e*P	Pg	16 30 43.5	+0.5
HZTE				*e*S	Sb	16 30 53.8	+0.2
GUAI	**GUAI**	**0.77**	**113**	⇓*i*P	Pg	16 30 45.5	+0.1
GUAI				*i* S	Sb	16 30 56.8	-0.3
GBS3	**Finca Las Img**	**0.79**	**74**	⇓*i*P	Pg	16 30 45.6	-0.2
GBS3				*i* S	Sb	16 30 57.0	-0.8
LAPC	**Finca la Perla**	**0.81**	**76**	⇓*i*P	Pg	16 30 45.8	-0.4
BUEV	**Buena Vista**	**0.84**	**74**	*i* P	Pg	16 30 46.4	-0.4
BUEV				*i* S	Sg	16 30 58.3	+0.5
GB1A	**Borinquen Arri**	**0.86**	**73**	⇓*i*P	Pg	16 30 46.8	-0.3
GB1A				*i* S	Sg	16 30 58.9	+0.7
GRZA	**Playa Garza**	**0.88**	**138**	*e*P	Pg	16 30 46.6	-0.9
VRLE	**La Escondida,**	**0.88**	**76**	*e*P	Pg	16 30 46.9	-0.7
PLVR	**Palo Verde**	**0.90**	**104**	*e*P	Pg	16 30 47.5	-0.3
PLVR				*e*S	Sb	16 31 00.5	-0.4
BUAI	**Buenos Aires**	**0.94**	**71**	⇑*i*P	Pg	16 30 48.4	-0.2
LIM1	**Limonal**	**0.97**	**82**	*i* P	Pg	16 30 48.9	-0.5
GUAB	**Guayabo de Bag**	**1.00**	**82**	*i* P	Pg	16 30 49.1	-0.7
INDI	**Punta indio, G**	**1.00**	**134**	*e*P	Pg	16 30 48.3	-1.6
COLC	**Colonia**	**1.02**	**85**	⇓*i*P	Pg	16 30 49.3	-0.8
HORNC	**Hornillas**	**1.05**	**82**	⇓*i*P	Pg	16 30 49.7	-1.1
CUI	**Cuipilapa**	**1.05**	**85**	*e*P	Pg	16 30 50.0	-0.8
VMAR	**Armenia, Volca**	**1.12**	**77**	*e*P	Pg	16 30 51.0	-1.1
ACAL	**Aguas Claras**	**1.18**	**87**	⇑*i*P	Pg	16 30 52.1	-1.1
ARE1	**Arenal 1**	**1.49**	**94**	*e*P	Pn	16 30 57.0	-1.0
LAFE	**Finca La Fe, P**	**1.51**	**120**	*e*P	Pn	16 30 55.9	-2.3
COVE	**Coope Vega, Sa**	**1.81**	**85**	*e*P	Pn	16 31 02.2	-0.1
LCR2	**La Lucha 2**	**2.34**	**110**	*e*P	Pn	16 31 10.0	+0.1
RIMA	**Rio Macho**	**2.46**	**109**	*e*P	Pn	16 31 10.7	-0.9

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*SSNC **15** 16:42:06.4±0.9, 19°.76N×75°.04W, h54^{km}±5^{km}, MD3.2, ML2.9, MW2.8*

*JSN **15** 16:42:10.3±1.3, 17°.50N×74°.93W, h0^{km}±901^{km}, MD3.5*

ISC 15 16:42:05.0±1.9**, 19°.74N**±0°.06×**75°.05W**±0°.09**, h58**^{km}±12^{km}**, n12, σ1^s.98**/20**, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTBY	**Guantanamo Bay**	**0.20**	**343**	*i* P	**Pn**	**16 42 14.5**	**+0.3**
GTBY				*e*S	**Sn**	**16 42 19.8**	**-0.9**
GTMO	**Guantanamo**	**0.35**	**346**	*i* P	**Pn**	**16 42 17.0**	**+1.7**
GTMO				*e*S	**Sn**	**16 42 20.6**	**-2.1**
GTMO				IAML		16 42 22.0	
	comp=N,37µm,0.1s						
GTMO				IAML		16 42 22.0	
	comp=E,35µm,0.1s						
RCC	**Rio Carpintero**	**0.66**	**293**	*i* P	**Pn**	**16 42 19.2**	**+0.6**
RCC				*e*S	**Sn**	**16 42 29.5**	**+1.0**
RCC				IAML		16 42 30.1	
	comp=E,685nm,0.1s						
RCC				IAML		16 42 30.1	
	comp=N,436nm,0.1s						
MOAC	**Moa**	**0.92**	**5**	*i* P	**Pn**	**16 42 21.7**	**-0.2**
MOAC				*e*S	**Sn**	**16 42 33.1**	**-1.2**
MOAC				IAML		16 42 34.5	
	comp=N,160nm,0.1s						
MOAC				IAML		16 42 34.5	
	comp=E,282nm,0.2s						
HLGC	**Holguin**	**1.49**	**321**	*e*P	**Pn**	**16 42 32.2**	**+2.7**
HLGC				*e*S	**Sn**	**16 42 52.1**	**+4.2**
HLGC				IAML		16 42 58.5	
	comp=E,31nm,0.2s						
HLGC				IAML		16 42 58.8	
	comp=N,20nm,0.2s						
LMGC	**Las Mercedes**	**1.87**	**280**	*e*P	**Pn**	**16 42 34.5**	**-0.1**
LMGC				*e*S	**Sn**	**16 42 55.8**	**-1.3**
LMGC				IAML		16 42 57.3	
	comp=N,148nm,0.1s						
LMGC				IAML		16 42 58.0	
	comp=E,111nm,0.1s						
CMJ	**Castle Mountai**	**2.03**	**218**	*i* P	**Pn**	**16 42 37.5**	**+0.7**
GWJ	**Greenwich**	**2.29**	**224**	*i* P	**Pn**	**16 42 40.9**	**+0.3**
STH	**Stony Hill**	**2.35**	**226**	*i* P	**Pn**	**16 42 41.6**	**+0.4**
HOJ	**Hope**	**2.36**	**223**	*i* P	**Pn**	**16 42 41.7**	**+0.4**
CCCC	**Cccc**	**2.93**	**300**	*e*P	**Pn**	**16 42 47.4**	**-1.8**
CCCC				*e*S	**Sn**	**16 43 19.4**	**-3.8**
CCCC				IAML		16 43 21.1	
	comp=N,4.6nm,0.3s						
CCCC				IAML		16 43 21.6	
	comp=E,5.7nm,0.3s						
MCJ	**Malvern**	**3.08**	**235**	*i* P	**Pn**	**16 42 53.7**	**+2.4**
MCJ				*i* S	**Sn**	**16 43 25.9**	**-1.1**

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*TUL **15** 16:49:11.4±0.7, 36°.77N±0°.02×98°.05W±0°.05, h6^{km}±6^{km}, ML3.3, mb_Lg2.9/42(NEIC), Error ellipse: s-maj=5.5km s-min=2.1km az=74.0*

NEIC 15 16:49:11.4±0.5**, 36°.74N**±0°.02×**98°.05W**±0°.05**, h10**^{km}±5^{km}**, Error ellipse: s-maj=5.8km s-min=2.4km az=86.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	**Salt Plains WL**	**0.14**	**295**	Pg	Pg	16 49 14.4	-0.2
GC02	**Grant County #**	**0.19**	**55**	Pg	Pg	16 49 15.5	+0.2
GC02				Sg	Sg	16 49 18.0	0.0
KAN14	**Manchester OK**	**0.22**	**18**	Pg	Pg	16 49 15.9	-0.1
KAN14				Sg	Sg	16 49 19.1	-0.1
CROK	**Carrier**	**0.24**	**167**		Pg	16 49 16.9	+0.5
KAN17	**Caldwell West**	**0.38**	**37**	Pg	Pg	16 49 18.8	-0.1
KAN10	**Anthony SW Sta**	**0.38**	**355**	Pg	Pg	16 49 18.8	-0.1
KAN10				Sg	Sg	16 49 24.1	+0.1
KAN05	**Bluff City Nor**	**0.39**	**21**		Pg	16 49 19.0	-0.1
KAN01	**Argonia South**	**0.47**	**30**		Pg	16 49 20.5	0.0
KAN01				Sg	Sg	16 49 26.2	-0.6
KAN16	**Harper SW Stat**	**0.48**	**359**	Pg	Pg	16 49 20.7	-0.1
KAN08	**Anthony NE Sta**	**0.49**	**7**		Pg	16 49 20.9	0.0
KAN08				Sg	Sg	16 49 27.2	-0.1
KAN09	**Caldwell North**	**0.52**	**41**		Pg	16 49 21.5	-0.1
KAN06	**Argonia West S**	**0.53**	**17**		Pg	16 49 21.5	-0.1
KAN06				Sg	Sg	16 49 28.2	-0.4
KAN13	**South Haven SW**	**0.53**	**59**	Pg	Pg	16 49 21.7	0.0
KAN12	**Harper NE Stat**	**0.55**	**4**	Pg	Pg	16 49 22.0	-0.2
KAN12				Sg	Sg	16 49 29.5	0.0
BLOK	**Blackwell**	**0.67**	**88**	Pg	Pg	16 49 24.3	0.0
U32A	**Winter Ranch,**	**0.85**	**245**	Pg	Pg	16 49 27.6	-0.1
OK029	**Liberty Lake**	**1.06**	**153**		Pg	16 49 31.6	-0.1
OK033	**Mehan**	**1.14**	**128**		Pb	16 49 32.9	-0.3
BCOK	**Bluff Creek, N**	**1.14**	**162**		Pb	16 49 32.8	-0.4
QUOK	**Quay**	**1.22**	**117**		Pn	16 49 34.5	-0.1
T35A	**Sooner Cattle**	**1.25**	**82**		Pn	16 49 34.7	-0.2
OK031	**S. Brethren Rd**	**1.26**	**129**		Pn	16 49 34.5	-0.6
OK025	**Westminster Rd**	**1.29**	**153**		Pn	16 49 35.2	-0.4
OK034	**N. Norfolk Rd.**	**1.30**	**124**	Pn	Pn	16 49 35.8	+0.1
OK030	**Cody Creek RV**	**1.31**	**128**		Pn	16 49 35.8	+0.1
OKCFA	**Oklahoma City**	**1.41**	**160**	Pn	Pb	16 49 37.5	-0.3
FNO	**Franklin**	**1.57**	**160**	Pn	Pb	16 49 40.4	-0.3
R32A	**Long Quarter,**	**1.76**	**343**		Pn	16 49 42.5	+0.6
X34A	**Smith Ranch, M**	**2.15**	**175**		Pn	16 49 47.6	+0.4
X34A				IAmb_Lg		16 50 25.4	
	comp=Z,46nm,0.9s						
KSU1	**Kansas State U**	**2.61**	**25**		Pn	16 49 54.2	+0.5
LOOK	**Love County**	**2.84**	**165**	Pn	Pn	16 49 56.9	+0.1
X37A	**Clayton**	**3.06**	**134**	Pn	Pn	16 50 00.7	+0.8
X37A				IAmb_Lg		16 50 53.4	
	comp=Z,26nm,0.9s						
HHAR	**Hobbs**	**3.34**	**97**	Pn	Pn	16 50 04.3	+0.6
W39A	**Magazine**	**3.79**	**113**	Pn	Pn	16 50 10.6	+0.7
W39A				IAmb_Lg		16 51 19.3	
	comp=Z,25nm,0.9s						
S39A	**Bolivar**	**3.89**	**75**	Pn	Pn	16 50 12.0	+0.8
N33A	**J Bar K, Exete**	**4.02**	**7**	Pn	Pn	16 50 13.4	+0.4
U40A	**Yellville**	**4.20**	**94**	Pn	Pn	16 50 16.0	+0.4
MIAR	**Mount Ida**	**4.25**	**120**	IAmb_Lg		16 51 30.2	
	comp=Z,22nm,0.9s						
Z38A	**Mt. Pleasant**	**4.29**	**143**	IAmb_Lg		16 51 29.9	
	comp=Z,34nm,0.8s						
N35A	**Tabor**	**4.52**	**24**	Pn	Pn	16 50 19.7	-0.2
P38A	**Dawn**	**4.58**	**50**	IAmb_Lg		16 51 36.9	
	comp=Z,22nm,0.8s						
MGMO	**Mountain Grove**	**4.65**	**83**	IAmb_Lg		16 51 43.3	
	comp=Z,18nm,0.7s						
BGNE	**Belgrade**	**4.66**	**359**	Pn	Pn	16 50 22.3	+0.5
BGNE				IAmb_Lg		16 51 47.7	
	comp=Z,33nm,0.8s						
R40A	**Maddies Statio**	**4.85**	**70**	IAmb_Lg		16 51 47.1	
	comp=Z,32nm,0.8s						
WLAR	**White Oak Lake**	**5.06**	**126**	IAmb_Lg		16 51 50.1	
	comp=Z,19nm,1.0s						
T25A	**Trinidad**	**5.11**	**276**	Pn	Pn	16 50 28.2	-0.1
T25A				IAmb_Lg		16 52 03.3	
	comp=Z,24nm,1.1s						
OGNE	**Ogallala**	**5.22**	**325**	Pn	Pn	16 50 29.6	0.0
OGNE				IAmb_Lg		16 52 07.1	
	comp=Z,31nm,0.8s						
P40A	**Paris**	**5.49**	**58**	IAmb_Lg		16 52 07.9	
	comp=Z,22nm,0.7s						
N38A	**Joes South For**	**5.52**	**41**	Pn	Pn	16 50 33.7	0.0
N38A				IAmb_Lg		16 52 19.5	
	comp=Z,26nm,0.8s						
CCM	**Cathedral Cave**	**5.57**	**74**	IAmb_Lg		16 52 20.5	
	comp=Z,14nm,0.8s						
K31A	**O'Neill**	**5.90**	**355**	IAmb_Lg		16 52 28.3	
	comp=Z,21nm,0.7s						
435B	**Jarrell**	**5.96**	**176**	IAmb_Lg		16 52 30.7	
	comp=Z,13nm,0.7s						
PBMO	**Poplar Bluff**	**6.12**	**87**	IAmb_Lg		16 52 29.6	
	comp=Z,21nm,0.8s						
JCT	**Junction City**	**6.42**	**194**	IAmb_Lg		16 52 49.9	
	comp=Z,11nm,0.9s						
SLM	**Saint Louis**	**6.48**	**71**	IAmb_Lg		16 52 45.6	
	comp=Z,15nm,0.7s						
SIUC	**Southern Illin**	**7.11**	**80**	IAmb_Lg		16 53 15.5	
	comp=Z,16nm,0.7s						
L40A	**Anamosa**	**7.49**	**43**	IAmb_Lg		16 53 13.2	
	comp=Z,12nm,0.7s						

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*NEIC **15** 16:53:43.3±1.4, 10°.6S±0°.1×161°.7E±0°.1, h73^{km}±10^{km}, mb4.0/6, Error ellipse: s-maj=22.4km s-min=5.7km az=220.0*

*IDC **15** 16:53:45.0±2.5, 10°.68S×161°.62E, h94^{km}±20^{km}, mb3.3/6, mb1 3.6/8, mb1mx3.4/31, mbtmp3.8/8, MS3.2/1, Ms1 3.2/1, ms1mx2.4/18, Error ellipse: s-maj=27.0km s-min=20.6km az=70.0*

ISC 15 16:53:44.9±0.8**, 10°.7S**±0°.1×**161°.6E**±0°.1**, h100^{km}, n23, σ1^s.75**/18**, mb3.7**/9**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.07**	**308**	P	**Pn**	**16 54 16.9**	**-1.5**
	67nm,0.3s,baz=186,slow=10,SNR=30						
HNR				S	**Sn**	**16 54 44.3**	**+0.3**
	152nm,0.3s,baz=137,slow=22,SNR=6.9						
HNR	**Honiara**	**2.07**	**308**		**Pn**	**16 54 16.5**	**-1.9**
HNR				Sn	**Sn**	**16 54 40.3**	**-3.6**
SANVU	**Saraoutou**	**7.21**	**131**		**Pn**	**16 55 25.6**	**-2.1**
LIFNC	**LIFOU**	**11.38**	**152**	Pn	**Pn**	**16 56 23.0**	**-1.4**
DZM	**Mont Dzumac**	**12.21**	**158**	P	**Pn**	**16 56 36.5**	**+0.9**
	0.4nm,0.3s,baz=308,slow=23,SNR=13						
DZM				S	**Sn**	**16 58 47.6**	**-2.4**
	0.2nm,0.3s,baz=19,slow=22,SNR=1.9						
WB0	**Warramunga Arr**	**27.72**	**248**	P	**P**	**16 59 25.8**	**+1.5**
WRAB	**Tennant Creek**	**27.80**	**247**	P	**P**	**16 59 26.0**	**+1.1**
WRAB				IAmb	IAmb	16 59 37.3	
	comp=Z,6.6nm,1.4s						
WB2	**Warramunga Arr**	**27.81**	**247**	P	**P**	**16 59 26.4**	**+1.5**
WB2				IAmb	IAmb	16 59 41.8	
	comp=Z,5.0nm,1.4s						
WRA	**Warramunga Arr**	**27.82**	**247**	P	**P**	**16 59 26.1**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=76,slow=8.8,SNR=5.9						
ASAR	**Alice Springs**	**29.37**	**240**	P	**P**	**16 59 39.4**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=64,slow=10,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	**29.44**	**10**	T	T	17 30 55.9	
	baz=188,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**29.45**	**10**	T	T	17 30 54.9	
	baz=188,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**29.46**	**10**	T	T	17 30 56.8	
	baz=188,slow=76,SNR=15						
H11N1	**WAKE ISLAND Hy**	**30.67**	**10**	T	T	17 32 27.8	
	baz=188,slow=76,SNR=9.6						
H11N3	**WAKE ISLAND Hy**	**30.68**	**10**	T	T	17 32 28.5	
	baz=188,slow=76,SNR=9.1						
H11N2	**WAKE ISLAND Hy**	**30.69**	**10**	T	T	17 32 28.2	
	baz=188,slow=76,SNR=8.6						
FITZ	**Fitzroy Crossi**	**35.55**	**254**	LR	LR	17 13 40.4	
	comp=Z,39nm,19.1s,baz=90,slow=34						
SONM	**Songino Array**	**76.03**	**325**	P	**P**	**17 05 22.3**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=140,slow=7.0,SNR=5.7						
SONM	**Songino Array**	**76.03**	**325**	IAmb	IAmb	17 05 27.4	
	comp=Z,1.3nm,1.2s						

QSPA	South Pole Qui	79.30	180	P	P	17 05 40.8	+1.5
QSPA				IAmb	IAmb	17 05 45.4	
	comp=Z,2.0nm,1.3s						
ILAR	Eielson Array	84.52	20	P	P	17 06 06.6	+0.1
	comp=Z,0.6nm,0.7s,baz=238,slow=4.8,SNR=6.7						
NVAR	Mina Array Bea	88.93	51	P	P	17 06 30.5	+1.7
	comp=Z,0.3nm,0.5s,baz=236,slow=6.4,SNR=1.6						
MKAR	Makanchi Array	90.51	318	P	P	17 06 36.2	+0.4
	comp=Z,0.5nm,0.9s,baz=86,slow=6.5,SNR=1.4						

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*UUSS **15** 16:56:03.5±1.3, 38°.21N±0°.01×112°.28W±0°.02, h-0^{km}±7^{km}, ML2.5/9, ML2.5/54(NEIC), Error ellipse: s-maj=2.4km s-min=2.0km az=71.0*

NEIC 15 16:56:03.4±0.8**, 38°.20N**±0°.02×**112°.25W**±0°.02**, h5^{km}**±1^{km}**, Error ellipse: s-maj=3.1km s-min=2.9km az=259.0, Utah**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTPU	Mount Pierson	0.17	164		Pg	16 56 07.7	+0.8
MTPU				IAML		16 56 11.4	
	comp=E,863nm,0.4s						
MVU	Marysvale	0.30	5		Pg	16 56 09.6	+0.2
MSU	Marysvale	0.31	10		Pg	16 56 09.7	+0.1
NMUT	North Mineral	0.57	303		Pg	16 56 14.2	-0.2
DWU	Dry Willow Pea	0.60	261		Pg	16 56 15.1	+0.1
MMU	Miners Mountai	0.75	90		Pg	16 56 18.1	+0.2
PKCU	Pink Cliffs	0.76	184		Pg	16 56 18.2	+0.2
PKCU				Sg	Sg	16 56 28.5	+0.6
PKCU				IAML		16 56 31.4	
	comp=N,303nm,0.2s						
WCU	Willow Creek	0.77	9		Pg	16 56 18.1	-0.2
IMU	Iron Mountain	0.83	301		Pg	16 56 19.5	0.0
SZCU	Shurtz Canyon	0.90	228		Pg	16 56 20.6	-0.1
SZCU				Sg	Sg	16 56 32.4	0.0
ARUT	Antelope Range	1.03	247		Pg	16 56 23.4	+0.2
CCUT	Cedar City	1.10	234		Pg	16 56 24.1	-0.4
CCUT				Sg	Sg	16 56 37.7	-1.1
CCUT				IAML		16 56 43.4	
	comp=N,78nm,0.5s						
CCUT				IAML		16 56 43.8	
	comp=E,62nm,0.6s						
FLU	Fool Peak	1.17	3		Pg	16 56 25.8	-0.1
HMU	Henry Mountain	1.22	102		Pg	16 56 26.6	-0.1
SNO	Snow College	1.24	26		Pg	16 56 27.0	-0.2
KNB	Kanab	1.27	201	Pg	Pg	16 56 27.4	-0.4
PSUT	Pine Spring	1.31	285		Pg	16 56 27.5	-1.0
LEVU	Levan	1.34	14		Pn	16 56 29.0	-0.1
TMUT	Trail Mountain	1.36	36		Pn	16 56 28.5	-0.8
TMUT				IAML		16 56 47.8	
	comp=E,87nm,0.3s						
LCMT	Little Creek M	1.43	214		Pn	16 56 29.8	-0.4
LCMT				IAML		16 56 50.4	
	comp=N,82nm,0.2s						
LCMT				IAML		16 56 50.7	
	comp=E,84nm,0.1s						
SRU	San Rafael Swe	1.62	56		Pn	16 56 33.1	+0.3
SRU				IAML		16 56 56.8	
	comp=N,50nm,0.4s						
SRU				IAML		16 56 59.1	
	comp=E,82nm,0.4s						
P17A	Butcher Ranch,	1.73	42		Pn	16 56 34.2	-0.1
P17A				IAML		16 56 59.4	
	comp=N,45nm,0.4s						
P17A				IAML		16 56 59.6	
	comp=E,41nm,0.4s						
NLU	North Lily Min	1.75	4		Pn	16 56 34.6	-0.1
NLU				IAML		16 57 00.1	
	comp=E,40nm,0.4s						
NLU				IAML		16 57 01.4	
	comp=N,26nm,0.6s						
U15A	North Rim	1.77	181		Pn	16 56 35.4	+0.4
U15A				IAML		16 57 04.9	
	comp=E,49nm,0.4s						
U15A				IAML		16 57 08.1	
	comp=N,55nm,0.6s						
SPR3	Spring Creek 3	1.82	297		Pn	16 56 35.0	-0.7
SPR3				IAML		16 57 03.7	
	comp=N,24nm,0.3s						
DUG	Dugway, Tooele	2.04	348		Pn	16 56 37.5	-1.0
DUG				IAML		16 57 09.1	
	comp=N,22nm,1.9s						
P18A	Preston Nutter	2.11	47		Pb	16 56 42.1	-0.3
P18A				IAML		16 57 12.3	
	comp=E,50nm,0.6s						
P18A				IAML		16 57 17.3	
	comp=N,22nm,0.8s						
PRN	Pahroc Range	2.36	251		Pn	16 56 42.7	-0.2
R11A	Troy Canyon, C	2.63	274		Pn	16 56 46.2	-0.5
R11A				IAML		16 57 28.4	
	comp=N,12nm,0.3s						
WUAZ	Wupatki	2.77	165		Pn	16 56 49.9	+1.3
BGU	Big Grassy Mou	2.78	348	Pn	Pn	16 56 48.2	-0.7
SHPR	Sheep Range	2.88	235	Pn	Pn	16 56 50.6	+0.5
SHPR				IAML		16 57 34.2	
	comp=E,10nm,0.5s						
MVCO	Mesa Verde	3.13	107	Pn	Pn	16 56 55.3	+1.6
MVCO				IAML		16 57 51.6	
	comp=E,23nm,1.5s						
ELK	Elko	3.44	319	Pn	Pn	16 56 58.6	+0.7
HVU	Hansel Valley	3.59	354	Pn	Pn	16 57 00.5	+0.6
HVU				IAML		16 57 43.1	
	comp=E,7.5nm,2.8s						
HVU				IAML		16 57 59.6	
	comp=N,6.7nm,0.9s						
TPH	Tonopah	3.93	270	Pn	Pn	16 57 04.5	-0.1
GWY	Greenwater Val	4.07	242	Pn	Pn	16 57 06.7	+0.2
GWY				IAML		16 58 12.8	
	comp=N,11nm,4.8s						
GWY				IAML		16 59 06.3	
	comp=E,11nm,4.5s						

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*IDC **15** 17:08:24.0±0.5, 56°.32S×25°.62W, h0^{km}, mb4.7/19, mb1 4.7/20, mb1mx4.6/30, mbtmp4.7/20, ML4.7/1, MS4.4/17, Ms1 4.3/17, ms1mx4.3/23, Error ellipse: s-maj=15.7km s-min=13.1km az=48.0*

*NEIC **15** 17:08:25.1±1.9, 56°.38S±0°.10×25°.8W±0°.2, h13^{km}±3^{km}, mb5.1/85, Error ellipse: s-maj=14.2km s-min=12.9km az=190.0*

*MOS **15** 17:08:28.0±2.0, 56°.35S×25°.96W, h39^{km}, mb5.2/19, Error ellipse: s-maj=18.6km s-min=10.0km az=110.2*

*GCMT **15** 17:08:30.1±0.2, 56°.53S±0°.02×25°.43W±0°.02, h23^{km}±1^{km}, MW5.1/103, Moment Tensor Solution. s39,c44; s103,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.15±.18; M$_{\theta\theta}$3.85±.15; M$_{\phi\phi}$-5.00±.16; M$_{r\theta}$0.66±.22; M$_{\theta\phi}$-0.81±.11; M$_{\phi r}$2.22±.22; Best double couple: M$_0$4.91500×10^{16} NP1:ϕ_s138.00000°, δ69.00000°, λ-5.00000°. NP2:ϕ_s230.00000°, δ85.00000°, λ-159.00000°. Principal axes: T 4.0130, Plg11.0000°, Azm2.0000°; N 1.8020, Plg69.0000°, Azm242.0000°; P -5.8160, Plg18.0000°, Azm96.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 17:08:27.8±0.3**, 56°.48S**±0°.06×**25°.77W**±0°.06**, h33^{km}, n249, σ1^{s}46**/239**, mb5.1**/63**, MS4.4**/17**, 8C-7D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	16.11	159	P	P	17 12 13.9	-0.4
VNA3	Neumayer Olymp	16.33	161	P	P	17 12 16.4	-0.5
VNA2	Neumayer--Watz	16.50	159	P	P	17 12 18.3	-0.4
	baz=321,slow=16						
ESPZ	Base Esperanza	16.97	233	Pn	Pn	17 12 20.4	-1.8
SNAA	Sanae	18.03	157	P	P	17 12 38.9	+3.2
SNAA	Sanae	18.03	157	P	P	17 12 37.0	+1.3
	2.4nm,0.3s,baz=315,slow=9.2,SNR=91						
SNAA				S	Sn	17 15 46.2	-9.1
	0.1nm,0.3s,baz=230,slow=22,SNR=1.1						
SNAA				LR	LR	17 17 47.2	
	comp=Z,543nm,20.5s,baz=320,slow=31						
SNAA	Sanae	18.03	157	P	P	17 12 36.1	+0.4
SNAA				pmax	pmax		
	comp=Z,49nm,1.0s						
SNAA	Sanae	18.03	157		P	17 12 36.1	+0.4
EFI	East Falkland	19.43	271⇑	*e*P	Pn	17 12 51.9	-0.5
EFI				pmax	pmax		
	comp=Z,12nm,0.7s						
EFI	East Falkland	19.43	271		P	17 12 50.9	-0.1
EFI				IAmb	IAmb	17 13 11.7	
	comp=Z,79nm,1.1s						
PMSA	Palmer Station	20.23	230	P	Pn	17 13 02.8	+1.2
	comp=Z,40nm,0.8s,baz=84,slow=10,SNR=20						
PMSA				LR	LR	17 20 10.3	
	comp=Z,2μm,18.5s,baz=78,slow=35						
PMSA	Palmer Station	20.23	230	*e*P	Pn	17 13 03.2	+1.5
PMSA	Palmer Station	20.23	230	P	P	17 12 59.2	-0.4
PMSA				IAmb	IAmb	17 13 09.7	
	comp=Z,98nm,1.1s						
NVL	N'lazarevskaya	21.47	146⇑	*i*P	P	17 13 19.7	+6.7
NVL				*i*		17 13 33.4	
NVL				*e*S	Sn	17 17 16.1	-1.8
NVL				*i*		17 17 51.8	
NVL				pmax	pmax		
	comp=Z,31nm,0.9s						
SMAI	San Martin Ant	21.96	221	P	P	17 13 18.2	0.0
SMAI				IAmb	IAmb	17 13 54.3	
	comp=Z,81nm,1.2s						
MG01	Puerto William	23.38	256	P	P	17 13 34.7	+1.6
MG01				IAmb	IAmb	17 13 41.9	
	comp=Z,38nm,0.7s						
USHA	Ushuaia	23.85	256	P	P	17 13 39.3	+1.7
	comp=Z,4.8nm,0.7s,baz=142,slow=9.7,SNR=3.2						
USHA				LR	LR	17 20 37.7	
	comp=Z,2μm,21.6s,baz=108,slow=31						
DSPA	Despedida	24.09	258	P	P	17 13 36.4	-3.5
MG02	Cerro Sombrero	25.10	260	P	P	17 13 47.6	-1.5
GO09	Cerro Castillo	27.51	261	P	P	17 14 09.7	-1.1
GO09				IAmb	IAmb	17 14 31.7	
	comp=Z,70nm,1.6s						
TRQA	Tornquist	30.22	292	P	P	17 14 32.8	-2.2
TRQA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TRQA	Tornquist	30.22	292	P	P	17 14 32.8	-2.2
SYO	Syowa Base	30.75	140⇑	*e*P	P	17 14 37.0	-2.4
PLTB	Pedras Altas	31.38	310	*e*P	P	17 14 47.4	+2.1
PLTB	Pedras Altas	31.38	310	P	P	17 14 45.8	+0.5
PLTB				IAmb	IAmb	17 14 47.7	
	comp=Z,18nm,1.0s						
PLCA	Paso Flores	32.85	279	P	P	17 14 57.8	-0.4
	comp=Z,0.8nm,0.5s,baz=290,slow=14,SNR=1.9						
PLCA				LR	LR	17 27 20.9	
	comp=Z,722nm,21.6s,baz=136,slow=34						
QSPA	South Pole Qui	33.77	180	P	P	17 15 08.4	+2.2
	comp=Z,32nm,0.6s,baz=206,slow=2.5,SNR=267						
QSPA	South Pole Qui	33.77	180	P	P	17 15 07.2	+1.0
ITQB	Itaqui	34.48	308	*e*P	P	17 15 14.5	+2.1
ITAB	Concordia	34.78	316	P	P	17 15 14.7	-0.3
ITAB				IAmb	IAmb	17 16 30.1	
	comp=Z,27nm,0.9s						
SPB	Sao Paulo	36.47	325	P	P	17 15 28.0	-1.5
DUB01	Friburgo-RJ	36.47	334	*e*P	P	17 15 29.1	-0.6
ML02	Panimavida	36.91	284	P	P	17 15 32.4	-0.9
ML02				IAmb	IAmb	17 15 51.2	
	comp=Z,25nm,1.1s						
BO02	Sierra Bellavi	37.31	286	P	P	17 15 35.1	-1.6
BO02				IAmb	IAmb	17 16 50.5	
	comp=Z,57nm,2.0s						
CPUP	Villa Florida	37.69	310	P	P	17 15 40.1	+0.3
	comp=Z,12nm,0.9s,baz=150,slow=7.3,SNR=12						
CPUP				LR	LR	17 29 00.8	
	comp=Z,455nm,21.8s,baz=154,slow=33						
CPUP	Villa Florida	37.69	310	P	P	17 15 39.5	-0.4
CPUP				pmax	pmax		
	comp=Z,22nm,1.2s						
CPUP	Villa Florida	37.69	310	*e*P	P	17 15 40.9	+1.0
CPUP	Villa Florida	37.69	310	P	P	17 15 39.5	-0.4
GO05	Huala	37.76	285	P	P	17 15 39.6	-0.8
GO05				IAmb	IAmb	17 16 27.3	
	comp=Z,50nm,1.6s						
BO01	Tunca	37.77	286	P	P	17 15 38.9	-1.6
BSCB	Bom Sucesso	38.13	330	*e*P	P	17 15 45.8	+2.0
MT09	Talagante	38.19	287	P	P	17 15 43.5	-0.8
MT01	Popeta	38.27	287	P	P	17 15 43.5	-1.2
MT01				IAmb	IAmb	17 16 19.4	
	comp=Z,39nm,1.4s						
PEL	Peldehue	38.52	288	P	P	17 15 45.6	-1.3
PEL				pmax	pmax		
	comp=Z,18nm,0.7s						
PEL	Peldehue	38.52	288	P	P	17 15 45.6	-1.3
PEL				IAmb	IAmb	17 16 02.8	
	comp=Z,18nm,0.7s						
VA05	Santo Domingo	38.62	287	P	P	17 15 47.0	-0.6
VA05				IAmb	IAmb	17 16 36.8	
	comp=Z,84nm,1.4s						
MT02	Curacav	38.67	287	P	P	17 15 47.2	-0.8
MT02				IAmb	IAmb	17 15 57.4	
	comp=Z,81nm,1.7s						
ZON	Zonda	38.73	292	P	P	17 15 47.5	-1.1
ZON				pmax	pmax		
	comp=Z,13nm,0.7s						
ZON	Zonda	38.73	292	P	P	17 15 47.5	-1.1
VA03	San Esteban	38.74	289	P	P	17 15 47.7	-1.2
VA01	Torpederas	39.12	287	P	P	17 15 51.4	-0.5
VA01				IAmb	IAmb	17 16 19.4	
	comp=Z,35nm,0.8s						
MAW	Mawson	39.33	143	P	P	17 15 55.3	+2.1
	comp=Z,8.8nm,0.6s,baz=238,slow=6.0,SNR=24						
MAW	Mawson	39.33	143	P	P	17 15 54.0	+0.8
MAW				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MAW	Mawson	39.33	143	P	P	17 15 54.0	+0.8
SUR	Sutherland	40.00	73	P	P	17 15 59.9	+0.5
	comp=Z,5.4nm,1.0s,baz=76,slow=5.6,SNR=1.5						
SUR	Sutherland	40.00	73	P	P	17 15 58.6	-0.8
SUR				IAmb	IAmb	17 15 59.6	
	comp=Z,126nm,1.8s						
CO03	El Pedregal	40.33	290	P	P	17 16 01.8	-0.2
DIAM	Diamantina, MG	40.43	333	*e*P	P	17 16 02.9	-0.1
GO04	Tololo Observa	40.92	291	P	P	17 16 05.6	-1.5
GO04				IAmb	IAmb	17 17 10.1	
	comp=Z,26nm,0.6s						
CO06	Fray Jorge	40.96	289	P	P	17 16 06.6	-0.5
LCO	Las Campanas	41.80	292	*e*P	P	17 16 15.3	+1.0
LCO	Las Campanas	41.80	292	P	P	17 16 15.3	+1.0
MC01	Montes Claros	42.02	333	*e*P	P	17 16 16.4	+0.4
AQDB	Aquidauana	42.25	316	*e*P	P	17 16 19.2	+1.4
AQDB	Aquidauana	42.25	316	P	P	17 16 17.5	-0.3
CMC01	Camacan, BA	42.36	340	*e*P	P	17 16 19.1	+0.4
AC04	Llanos de Chal	42.64	292	P	P	17 16 19.7	-1.2
AC04				IAmb	IAmb	17 16 23.6	
	comp=Z,42nm,1.0s						
GO03	Copiap	42.71	294	P	P	17 16 19.9	-1.6
GO03				IAmb	IAmb	17 16 32.9	
	comp=Z,21nm,0.8s						
AC02	Maricunga	42.77	295	P	P	17 16 22.4	-0.1
AC02				IAmb	IAmb	17 16 35.9	
	comp=Z,31nm,0.9s						
SHEL	Horse Pasture	43.21	29	P	P	17 16 24.5	-1.2
SHEL				pmax	pmax		
	comp=Z,104nm,1.1s						
SHEL	Horse Pasture	43.21	29	P	P	17 16 24.5	-1.2
JANB	Januaria	43.70	334	*e*P	P	17 16 30.7	+1.2
BDFB	Brasilia	44.13	328	P	P	17 16 34.1	+1.0
	comp=Z,1.7nm,0.4s,baz=145,slow=16,SNR=2.7						
BDFB				LR	LR	17 35 38.8	
	comp=Z,308nm,18.2s,baz=144,slow=37						
BDFB	Brasilia	44.13	328	P	P	17 16 32.4	-0.8
BDFB				pmax	pmax		
	comp=Z,12nm,1.3s						
BDFB	Brasilia	44.13	328	P	P	17 16 32.4	-0.8
PP1B	Ponte de Pedra	44.57	319	*e*P	P	17 16 38.3	+1.8
PB14	IPOC Station P	45.24	296	P	P	17 16 39.9	-2.3
PB14				IAmb	IAmb	17 17 26.5	
	comp=Z,16nm,0.7s						
ARAG	Araguaiana, MT	45.25	323	*e*P	P	17 16 44.3	+2.4
BOSA	Boshof	45.32	74	P	P	17 16 42.0	-0.5
	comp=Z,2.4nm,0.8s,baz=209,slow=15,SNR=2.5						
BOSA				LR	LR	17 31 39.0	
	comp=Z,1μm,20.9s,baz=218,slow=31						
BOSA	Boshof	45.32	74	P	P	17 16 41.8	-0.7
BOSA				pmax	pmax		
	comp=Z,26nm,1.4s						
BOSA	Boshof	45.32	74	P	P	17 16 41.8	-0.7
BOSA				IAmb	IAmb	17 17 02.2	
	comp=Z,26nm,1.4s						
SBA	Scott Base	45.71	184	P	P	17 16 46.2	+1.4
SBA				pmax	pmax		
	comp=Z,16nm,1.2s						
SBA	Scott Base	45.71	184	P	P	17 16 46.2	+1.4
SBA				IAmb	IAmb	17 17 30.7	
	comp=Z,16nm,1.1s						
PB15	IPOC Station P	45.97	298	P	P	17 16 47.6	-0.2
VNDA	Vanda	46.18	182	P	P	17 16 51.1	+2.5
	comp=Z,7.9nm,0.7s,baz=184,slow=6.5,SNR=44						
VNDA	Vanda	46.18	182	P	P	17 16 50.7	+2.1
VNDA				pmax	pmax		
	comp=Z,11nm,0.9s						
VNDA	Vanda	46.18	182	P	P	17 16 50.7	+2.1
VNDA				IAmb	IAmb	17 16 53.2	
	comp=Z,11nm,0.8s						
LVC	Limon Verde	46.20	299	P	P	17 16 51.4	+1.6
	comp=Z,21nm,0.3s,baz=151,slow=5.0,SNR=30						
LVC	Limon Verde	46.20	299	*e*P	P	17 16 50.2	+0.4
LVC	Limon Verde	46.20	299	*e*P	P	17 16 51.2	+1.4
LVC	Limon Verde	46.20	299	P	P	17 16 50.2	+0.4
PB10	IPOC Station P	46.25	296	P	P	17 16 49.8	+0.1
PB10				IAmb	IAmb	17 17 15.5	
	comp=Z,28nm,1.0s						
SDBA	SAO DESIDERIO	46.39	334	*e*P	P	17 16 52.8	+1.8
SALV	Santo Antonio	46.43	319	*e*P	P	17 16 51.7	+0.6
PB06	IPOC Station P	46.44	298	P	P	17 16 51.2	-0.3
PB06				IAmb	IAmb	17 16 53.4	
	comp=Z,18nm,0.8s						
NBPN	Ponto Novo - B	46.89	340	*e*P	P	17 16 56.0	+1.2
CRZF	Crozet Islands	46.92	112	P	P	17 16 55.9	+1.1
PB04	IPOC Station P	47.04	298	P	P	17 16 55.6	-0.5
PB09	IPOC Station P	47.05	299	P	P	17 16 56.3	+0.1
NBAN	Anadia - AL	47.41	346	*e*P	P	17 16 59.5	+0.6
PB07	IPOC Station P	47.42	298	P	P	17 16 59.3	+0.1
PEXB	Peixe	47.58	329	*e*P	P	17 17 00.5	+0.4
PB01	IPOC Station P	47.81	299	P	P	17 17 02.3	+0.2
PTLB	Pontes e Lacer	48.16	315	*e*P	P	17 17 06.2	+1.6
PTLB	Pontes e Lacer	48.16	315	P	P	17 17 04.8	+0.2
PTLB				IAmb	IAmb	17 17 07.0	
	comp=Z,17nm,0.9s						
H10S2	ASCENSION HYDR	48.20	15	T	T	18 09 55.6	
	baz=189,slow=74,SNR=16						
H10S3	ASCENSION HYDR	48.20	15	T	T	18 09 55.9	
	baz=31,slow=74,SNR=22						
PATCX	Punta Patache	48.32	299	P	P	17 17 06.0	0.0
LBTB	Lobatse	48.38	71	P	P	17 17 05.7	-0.8
LBTB				pmax	pmax		
	comp=Z,71nm,2.0s						
LBTB	Lobatse	48.38	71	P	P	17 17 05.7	-0.8
PB08	IPOC Station P	48.42	300	P	P	17 17 07.8	+0.7
PB08				IAmb	IAmb	17 17 09.6	
	comp=Z,22nm,0.7s						
SIV	San Ignacio	48.45	312	P	P	17 17 07.5	+0.6
	comp=Z,4.6nm,0.8s,baz=131,slow=7.7,SNR=11						
TA01	Diego Aracena	48.55	299	P	P	17 17 07.6	0.0
TA01				IAmb	IAmb	17 17 12.5	
	comp=Z,34nm,1.2s						
SNDB	Serra Nova Dou	48.59	326	*e*P	P	17 17 09.9	+1.9
TA02	Huaiquique	48.78	299	P	P	17 17 10.3	+0.9
PB11	IPOC Station P	48.98	300	P	P	17 17 11.3	+0.1
TSUM	Tsumeb	49.21	59	P	P	17 17 12.5	-0.4
H10N1	ASCENSION HYDR	49.31	15	T	T	18 11 21.4	
	baz=194,slow=74						
H10N3	ASCENSION HYDR	49.31	15	T	T	18 11 17.0	
	baz=194						
H10N2	ASCENSION HYDR	49.33	15	T	T	18 11 21.7	
	baz=194,slow=74						
PB16	IPOC Station P	50.14	301	P	P	17 17 20.1	-0.4
PB16				IAmb	IAmb	17 17 23.2	
	comp=Z,38nm,1.6s						
PB12	IPOC Station P	50.29	300	P	P	17 17 20.9	-0.2
PB12				IAmb	IAmb	17 17 24.1	
	comp=Z,50nm,1.6s						
PDRB	Porto dos Gac	50.76	319	*e*P	P	17 17 26.0	+1.5
VILB	Vilhena	50.84	315	*e*P	P	17 17 27.1	+1.9
VILB	Vilhena	50.84	315	P	P	17 17 24.6	-0.6
VILB				IAmb	IAmb	17 17 30.4	
	comp=Z,15nm,0.7s						
CLDB	Colider	51.11	321	*e*P	P	17 17 28.3	+1.2
LPAZ	La Paz	51.27	304	P	P	17 17 30.8	+1.8
	comp=Z,12nm,0.4s,baz=143,slow=5.3,SNR=32						
LPAZ				LR	LR	17 38 45.4	
	comp=Z,156nm,21.8s,baz=150,slow=36						
LPAZ	La Paz	51.27	304	*e*P	P	17 17 28.4	-0.7
LPAZ	La Paz	51.27	304	*e*P	P	17 17 31.1	+2.0
LPAZ	La Paz	51.27	304	P	P	17 17 29.1	0.0
LPAZ				IAmb	IAmb	17 17 45.5	
	comp=Z,30nm,0.9s						
PRPB	Parauapebas	53.65	330	*e*P	P	17 17 46.0	0.0
PAF	Port-aux-Franc	53.73	126	P	P	17 17 46.5	+0.3
PAF				pmax	pmax		
	comp=Z,603nm,2.0s						
PAF	Port-aux-Franc	53.73	126	P	P	17 17 46.5	+0.3
NPGB	Novo Progresso	54.53	323	*e*P	P	17 17 54.1	+1.7
SAML	Samuel	55.67	313	P	P	17 17 59.9	-0.7
SAML				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SAML	Samuel	55.67	313	P	P	17 17 59.9	-0.7
ETMB	Extrema	56.14	310	*e*P	P	17 18 05.8	+1.8
ETMB	Extrema	56.14	310	P	P	17 18 03.2	-0.8
ETMB				IAmb	IAmb	17 18 26.8	
	comp=Z,18nm,1.2s						
TMAB	Tom-Au,PA,Br	56.84	333	*e*P	P	17 18 12.3	+3.4
ITTB	Itaituba	57.16	324	*e*P	P	17 18 11.5	+0.2
LSZ	Lusaka	57.80	67	P	P	17 18 16.5	+0.6
	comp=Z,1.0nm,0.6s,baz=218,slow=10,SNR=2.3						
MALB	Monte Alegre	59.06	326	*e*P	P	17 18 25.5	+1.0
NNA	Nana	59.15	298	P	P	17 18 23.5	-1.7
NNA				pmax	pmax		
	comp=Z,86nm,1.7s						
NNA	Nana	59.15	298	P	P	17 18 23.5	-1.7
MCPB	Macapa, AP	59.82	329	*e*P	P	17 18 31.5	+1.7
MACA	Manacapuru-AM	60.01	319	*e*P	P	17 18 31.7	+0.7
MACA	Manacapuru-AM	60.01	319	P	P	17 18 29.9	-1.2
CZSB	Cruzeiro do Su	60.88	304		P	17 18 35.1	-2.0
CZSB				IAmb	IAmb	17 18 40.2	
	comp=Z,17nm,1.0s						
LIC	Lamto	64.77	23	*e*P	P	17 19 03.2	+0.4
	comp=Z,62nm,1.0s						
KIC	Kosan Boka	64.96	23	*e*P	P	17 19 04.3	+0.2
	comp=Z,22nm,0.8s						
BOAV	Boa Vista	65.10	321	*e*P	P	17 19 06.2	+1.1
BOAV	Boa Vista	65.10	321	P	P	17 19 05.0	0.0
BOAV				IAmb	IAmb	17 19 19.4	
	comp=Z,11nm,0.8s						
TIC	Toumodi	65.18	23	*e*P	P	17 19 05.8	+0.3
DBIC	Dimbokro	65.24	23	P	P	17 19 06.2	+0.3
	comp=Z,10.0nm,0.8s,baz=193,slow=7.0,SNR=15						
DBIC				LR	LR	17 40 37.7	
	comp=Z,387nm,20.6s,baz=197,slow=30						
DBIC	Dimbokro	65.24	23	P	P	17 19 05.6	-0.2
DBIC				pmax	pmax		
	comp=Z,15nm,1.0s						
DBIC	Dimbokro	65.24	23	P	P	17 19 05.6	-0.2
DBIC				IAmb	IAmb	17 19 07.8	
	comp=Z,15nm,0.9s						
RER	Riviere de l'E	67.98	95	P	P	17 19 24.1	+0.6
FLOC	Florencia	70.45	306	P	P	17 19 37.9	-0.9
OTAV	Otavalo	70.55	303	P	P	17 19 39.3	-0.6
OTAV				pmax	pmax		
	comp=Z,29nm,1.2s						
OTAV	Otavalo	70.55	303	P	P	17 19 39.3	-0.6
OTAV				IAmb	IAmb	17 19 44.9	
	comp=Z,29nm,1.2s						
SACV	Santiago Islan	71.20	2	P	P	17 19 42.4	-0.8
SACV				IAmb	IAmb	17 20 46.5	
	comp=Z,26nm,0.9s						
MBAR	Mbarara	71.65	61	P	P	17 19 45.5	-0.7
MBAR				pmax	pmax		
	comp=Z,17nm,1.7s						
MBAR	Mbarara	71.65	61	P	P	17 19 45.5	-0.7
ROSC	El Rosal	72.77	309	P	P	17 19 55.2	+2.1
	comp=Z,13nm,0.4s,baz=149,slow=22,SNR=2.4						
ROSC				LR	LR	17 51 17.7	
	comp=Z,168nm,21.9s,baz=200,slow=35						
KOWA	Kowa	73.01	22	P	P	17 19 54.2	+0.2
TORD	Torodi Ar. Bea	73.05	28	P	P	17 19 54.7	+0.4
	comp=Z,12nm,0.7s,baz=200,slow=6.2,SNR=51						
TORD				LR	LR	17 45 23.8	
	comp=Z,205nm,21.1s,baz=200,slow=30						
TORD	Torodi Ar. Bea	73.05	28	P	P	17 19 52.9	-1.3
TOSP	Speyside	73.43	324	P	P	17 19 55.7	-0.8
BAUV	El Baul	73.91	316	P	P	17 19 59.5	+0.2
BAUV				IAmb	IAmb	17 20 15.3	
	comp=Z,31nm,1.0s						
KMBO	Kilima Mbogo	74.46	68	LR	LR	17 51 17.5	
	comp=Z,234nm,18.4s,baz=198,slow=35						
SDV	Santo Domingo	74.87	314	*e*P	P	17 20 06.9	+1.7
SDV	Santo Domingo	74.87	314	P	P	17 20 04.4	-0.8
SDV				IAmb	IAmb	17 20 15.2	
	comp=Z,12nm,0.8s						
SJCC	San Jacinto, C	77.66	310	P	P	17 20 21.4	+0.6
URIC	Uribia, Colomb	77.97	314	P	P	17 20 21.6	-0.8

JTS	**Las Juntas de**	**82.41**	**302**	⇑eP	**P**	**17 20 45.5**	**-1.0**
JTS				pmax	pmax		
	comp=Z,12nm,1.2s						
OUZ	**Omahuta**	**87.19**	**196**	P	**P**	**17 21 10.3**	**0.0**
OUZ				IAmb	IAmb	17 21 26.2	
	comp=Z,16nm,1.0s						
MTO3	**Montecristo**	**88.08**	**300**	P	**P**	**17 21 14.2**	**-0.8**
MTO3				IAmb	IAmb	17 21 22.4	
	comp=Z,17nm,1.4s						
STKA	**Stephens Creek**	**91.34**	**169**	P	**P**	**17 21 33.4**	**+3.4**
	comp=Z,1.5nm,0.5s,baz=177,slow=2.1,SNR=6.2						
STKA				LR	LR	18 00 47.2	
	comp=Z,196nm,19.1s,baz=199,slow=34						
PPT	**Papeete**	**92.57**	**233**	LR	LR	17 57 19.7	
	comp=Z,153nm,18.0s,baz=166,slow=32						
KEST	**Kesra**	**96.57**	**28**	LR	LR	18 00 12.3	
	comp=Z,208nm,19.9s,baz=287,slow=32						
ESDC	**Sonseca Array**	**97.55**	**17**	LR	LR	18 01 48.1	
	comp=Z,60nm,19.5s,baz=205,slow=33						
ASAR	**Alice Springs**	**98.34**	**161**	P	Pdif	17 22 03.1	+0.9
	comp=Z,1.5nm,0.8s,baz=190,slow=4.0,SNR=5.0						
ASAR				PP	**PP**	**17 26 01.8**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=177,slow=7.2,SNR=4.4						
ASAR				LR	LR	18 04 58.0	
	comp=Z,98nm,18.3s,baz=188,slow=34						
ASAR	**Alice Springs**	**98.34**	**161**	P	**P**	**17 22 01.0**	**-1.1**
ASAR	**Alice Springs**	**98.34**	**161**	P	**P**	**17 22 01.0**	**-1.1**
WRA	**Warramunga Arr**	**102.05**	**161**	P	**Pdif**	**17 22 19.2**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=202,slow=4.3,SNR=3.6						
WRA				PKiKP	**PKiKP**	**17 26 41.7**	**+0.7**
	comp=Z,0.4nm,0.9s,baz=214,slow=1.5,SNR=1.5						
WRAB	**Tennant Creek**	**102.06**	**161**	⇑eP	**Pdif**	**17 22 17.1**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES	**GERESS Array B**	**109.98**	**27**	PP	**PP**	**17 27 24.3**	**-4.6**
	comp=Z,0.1nm,0.3s,baz=214,slow=6.5,SNR=3.7						
UZH	**Uzhgorod**	**112.12**	**32**	ePKIKP	**PKiKP**	**17 27 01.7**	**+3.1**
UZH				e		17 27 08.5	
UZH				e		17 27 17.0	
KIV	**Kislovodsk**	**115.36**	**48**	i PKIKP	**PKPdf**	**17 27 03.8**	**-1.3**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,71nm,22.0s						
AKASG	**Malin Array Be**	**116.08**	**35**	i PKIKP	**PKiKP**	**17 27 06.5**	**+0.4**
AKASG				pmax	pmax		
	comp=Z,37nm,0.8s						
KONO	**Kongsberg**	**119.14**	**20**	⇑iPKIKP	**PKPdf**	**17 27 11.5**	**-0.2**
PDAR	**Pinedale Array**	**121.24**	**301**	PKP	**PKiKP**	**17 27 17.1**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=132,slow=3.8,SNR=4.5						
PDAR	**Pinedale Array**	**121.24**	**301**		**PKiKP**	**17 27 16.8**	**+0.1**
OBN	**Obninsk**	**122.20**	**37**	i PKIKP	**PKPdf**	**17 27 17.4**	**-0.3**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NVAR	**Mina Array Bea**	**122.29**	**292**	PKP	**PKiKP**	**17 27 20.3**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=190,slow=2.7,SNR=1.8						
BELG	**Belogornoye**	**124.07**	**45**	⇓iPKIKP	**PKiKP**	**17 27 21.7**	**0.0**
CMAR	**Chiang Mai Arr**	**124.18**	**109**	PKP	**PKiKP**	**17 27 23.8**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=227,slow=3.3,SNR=8.9						
CMAR	**Chiang Mai Arr**	**124.18**	**109**	PKIKP	**PKPdf**	**17 27 22.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**124.18**	**109**		**PKPdf**	**17 27 22.6**	**-0.1**
FINES	**FINESS Array B**	**124.40**	**27**	PKP	**PKiKP**	**17 27 21.9**	**-0.2**
	comp=Z,2.8nm,0.9s,baz=355,slow=2.1,SNR=5.1						
KSH	**Kashi**	**127.92**	**74**	PKP	**PKiKP**	**17 27 30.6**	**+0.6**
AAK	**Ala-Archa**	**129.38**	**70**	⇓iPKIKP	**PKiKP**	**17 27 33.1**	**+0.2**
ARCES	**ARCESS Array B**	**131.05**	**21**	PKP	**PKiKP**	**17 27 34.7**	**-0.4**
	comp=Z,3.0nm,0.9s,baz=249,slow=1.5,SNR=1.2						
ARU	**Arti**	**131.40**	**47**	⇓iPKIKP	**PKiKP**	**17 27 36.8**	**+0.6**
KMI	**Kunming**	**131.64**	**108**	⇓PKP	**PKiKP**	**17 27 38.8**	**+0.8**
BRVK	**Borovoye**	**134.32**	**57**	⇓iPKIKP	**PKiKP**	**17 27 42.7**	**+0.5**
MK31	**Makanchi Array**	**136.28**	**71**	⇑iPKIKP	**PKiKP**	**17 27 49.4**	**+2.9**
MKAR	**Makanchi Array**	**136.28**	**71**	PKP	**PKiKP**	**17 27 47.5**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=345,slow=1.6,SNR=2.0						
CD2	**Chengdu**	**136.78**	**105**	PKP	**PKPdf**	**17 27 46.4**	**+0.1**
KURK	**Kurchatov**	**136.88**	**64**	⇓iPKIKP	**PKiKP**	**17 27 48.6**	**+1.1**
YKA	**Yellowknife Ar**	**137.02**	**317**	PKP	**PKiKP**	**17 27 46.8**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=126,slow=2.1,SNR=12						
WMQ	**Urumqi**	**137.22**	**78**	ePKP	**PKiKP**	**17 27 47.9**	**-0.7**
RES	**Resolute Bay**	**138.55**	**338**	PKIKP	**PKPdf**	**17 27 48.6**	**+0.5**
RES	**Resolute Bay**	**138.55**	**338**	PKPdf	**PKPdf**	**17 27 48.6**	**+0.5**
DGZ	**Jazzator, Alta**	**140.77**	**71**	⇓iPKIKP	**PKiKP**	**17 27 55.4**	**-0.3**
GTA	**Gaotai**	**140.91**	**92**	PKP	**PKPdf**	**17 27 48.6**	**-5.1**
ZALV	**Zalesovo Beam**	**141.85**	**64**	PKhKP	PKPpre	17 27 49.4	
	comp=Z,1.2nm,0.4s,baz=227,slow=7.0,SNR=6.0						
XAN	**Xi'an**	**141.96**	**107**	PKP	**PKiKP**	**17 27 58.3**	**-0.3**
A36M	**Sachs Harbour**	**144.99**	**328**	PKPdf	**PKPdf**	**17 27 59.7**	**+0.1**
NJ2	**Nanjing**	**145.44**	**120**	ePKPbc	**PKPab**	**17 28 02.8**	**+0.8**
BTO	**Baotou**	**147.37**	**100**	ePKPbc	**PKPbc**	**17 28 08.0**	**+0.6**
TIA	**Tai'an**	**147.91**	**113**	ePKPbc	**PKPbc**	**17 28 09.4**	**+0.6**
BCAR	**Beaver Creek A**	**148.37**	**309**	PKPdf	**PKPdf**	**17 28 05.3**	**-0.4**
NRIK	**Noril'sk**	**148.84**	**39**	PKPbc	**PKPbc**	**17 28 09.2**	**-0.9**
	comp=Z,2.6nm,0.5s,baz=254,slow=1.5,SNR=6.0						
NRIK	**Noril'sk**	**148.84**	**39**	⇑iPKP2	**PKiKP**	**17 28 11.6**	**+0.1**
NRIK	**Noril'sk**	**148.84**	**39**		**PKPbc**	**17 28 09.9**	**-0.2**
MOY	**Mondy**	**149.06**	**76**	ePKP2	**PKiKP**	**17 28 12.2**	**-0.5**
MOY				pmax	pmax		
	comp=Z,16nm,1.4s						
ZAK	**Zakamensk**	**149.64**	**80**	ePKP2	**PKPbc**	**17 28 12.9**	**0.0**
ZAK				pmax	pmax		
	comp=Z,13nm,1.4s						
PAX	**Paxson**	**149.96**	**308**	PKHKP	PKPpre	17 28 11.3	
PAX	**Paxson**	**149.96**	**308**	PKPdf	**PKPbc**	**17 28 11.2**	**-2.0**
SONM	**Songino Array**	**149.97**	**86**	PKPbc	**PKiKP**	**17 28 14.6**	**-0.1**
	comp=Z,6.1nm,0.5s,baz=223,slow=3.4,SNR=43						
SONM	**Songino Array**	**149.97**	**86**	PKPdf	**PKPbc**	**17 28 11.9**	**-1.9**
ULN	**Ulaanbaatar**	**150.35**	**87**	PKIKP	**PKPbc**	**17 28 12.9**	**-1.9**
ULN	**Ulaanbaatar**	**150.35**	**87**		**PKPbc**	**17 28 12.9**	**-1.9**
TLY	**Talaya**	**150.50**	**78**	ePKIKP	**PKiKP**	**17 28 16.2**	**+0.7**
TLY				pmax	pmax		
	comp=Z,34nm,1.4s						
BMAR	**Burnt Mountain**	**150.54**	**317**		**PKPbc**	**17 28 14.3**	**-0.1**
PRP	**Porcupine Dome**	**150.58**	**313**		**PKPbc**	**17 28 13.7**	**-1.0**
FYU	**Fort Yukon**	**150.65**	**315**		**PKiKP**	**17 28 15.0**	**-0.3**
ILAR	**Eielson Array**	**150.99**	**311**	PKPbc	**PKiKP**	**17 28 16.6**	**+0.4**
	comp=Z,12nm,1.1s,baz=128,slow=1.4,SNR=41						
ILAR	**Eielson Array**	**150.99**	**311**	PKIKP	**PKPbc**	**17 28 15.3**	**-0.2**
ILAR	**Eielson Array**	**150.99**	**311**		**PKPbc**	**17 28 15.3**	**-0.2**
RND	**Reindeer**	**151.55**	**308**	PKIKP	**PKPbc**	**17 28 15.1**	**-1.9**
RND	**Reindeer**	**151.55**	**308**		**PKPbc**	**17 28 15.1**	**-1.9**
H24K	**Noodor Dome**	**151.59**	**313**		**PKPbc**	**17 28 15.3**	**-1.7**
MCK	**McKinley**	**151.66**	**308**	PKIKP	**PKPdf**	**17 28 12.7**	**+1.9**
MCK	**McKinley**	**151.66**	**308**	PKPdf	**PKPdf**	**17 28 12.7**	**+1.9**
MCK					**PKPbc**	**17 28 17.0**	**-0.2**
TOLK	**Toolik Lake Re**	**152.52**	**319**		**PKiKP**	**17 28 19.9**	**+0.7**
COLD	**Coldfoot**	**152.68**	**316**		**PKiKP**	**17 28 20.2**	**+0.7**
BILL	**Bilibino**	**167.15**	**339**	i PKIKP	**PKPdf**	**17 28 30.4**	**+2.0**
BILL				i		17 29 34.5	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						

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*NOU **15** 17:21:34.2, 17°.69S×178°.19W, h582km, mb4.9/11, Fiji Islands Region*
*NEIC **15** 17:21:35.1±2.1, 17°.9S±0°.1×178°.5W±0°.1, h568km±9km, mb4.4/37, Error ellipse: s-maj=22.2km s-min=16.3km az=158.0*
*IDC **15** 17:21:37.8±1.1, 17°.81S×178°.71W, h588km±11km, mb3.3/9, mb1 3.6/12, mb1mx3.3/29, mbtmp4.2/12, Error ellipse: s-maj=28.7km s-min=14.0km az=152.0*
ISC 15 17:21:36.5±0.5, **18°.0S**±0°.1×**178°.57W**±0°.08, **h579**km, **n65**, σ**1ˢ.28**/65, **mb4.3**/28, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGTI	**Dogotuki**	**2.34**	**316**	P	**P**	**17 22 49.7**	**-0.7**
MSVF	**Nonsavu**	**3.23**	**274**	P	**P**	**17 22 56.0**	**+0.6**
	2.1nm,0.3s,baz=99,slow=23,SNR=4.0						
MSVF				S	**S**	**17 24 01.0**	**+1.4**
	baz=323,slow=22,SNR=1.3						
MSVF	**Nonsavu**	**3.23**	**274**	P	**P**	**17 22 55.8**	**+0.4**
MSVF	**Nonsavu**	**3.23**	**274**	P	**P**	**17 22 55.3**	**-0.1**
NIUE	**Niue**	**8.27**	**99**	P	**P**	**17 23 35.0**	**-2.7**
DVP	**Devils Point**	**12.61**	**269**	P	**P**	**17 24 23.6**	**+2.2**
MARNC	**Mare, Loyalty**	**13.08**	**252**	P	**P**	**17 24 23.8**	**-2.5**
LIFNC	**LIFOU**	**13.67**	**256**	P	**P**	**17 24 29.1**	**-3.2**
SANVU	**Saraoutou**	**13.86**	**278**	P	**P**	**17 24 33.7**	**-0.6**
SANVU	**Saraoutou**	**13.86**	**278**	P	**P**	**17 24 34.9**	**+0.6**
PINNC	**Pines Island,**	**13.90**	**248**	P	**P**	**17 24 32.5**	**-2.1**
DZM	**Mont Dzumac**	**14.65**	**251**	P	**P**	**17 24 41.9**	**-0.2**
	0.9nm,0.3s,baz=114,slow=22,SNR=12						
DZM	**Mont Dzumac**	**14.65**	**251**	P	**P**	**17 24 41.7**	**-0.4**
DZM	**Mont Dzumac**	**14.65**	**251**	P	**P**	**17 24 42.6**	**+0.5**
KOUNC	**Koumac, New Ca**	**16.38**	**258**	P	**P**	**17 24 59.4**	**+1.0**
RAR	**Rarotonga**	**18.00**	**103**	P	**P**	**17 25 17.2**	**+4.2**
	1.5nm,0.3s,baz=306,slow=10,SNR=1.2						
OUZ	**Omahuta**	**18.52**	**201**	P	**P**	**17 25 19.7**	**+2.2**
QRZ	**Quartz Range**	**24.01**	**197**	P	**P**	**17 26 07.7**	**+0.9**
THZ	**Tophouse**	**24.79**	**195**	P	**P**	**17 26 13.3**	**-0.4**
WKZ	**Wanaka**	**28.70**	**199**	P	**P**	**17 26 46.9**	**-1.0**
EIDS	**Eidsvold**	**29.09**	**250**	P	**P**	**17 26 52.2**	**+0.6**
EIDS				IAmb	IAmb	17 27 13.1	
	comp=Z,7.7nm,1.2s						
ARMA	**Armidale**	**29.76**	**240**	P	**P**	**17 26 58.1**	**+0.6**
ARMA				IAmb	IAmb	17 26 58.8	
	comp=Z,17nm,1.4s						
CTAO	**Charters Tower**	**33.28**	**261**	P	**P**	**17 27 27.5**	**+0.1**
CTAO				IAmb	IAmb	17 27 50.2	
	comp=Z,20nm,1.4s						
COEN	**Coen**	**36.95**	**271**	P	**P**	**17 27 57.1**	**-0.7**
TOO	**Toolangi**	**37.00**	**231**	P	**P**	**17 27 58.7**	**+0.8**
STKA	**Stephens Creek**	**38.45**	**241**	P	**P**	**17 28 11.0**	**+1.1**
	comp=Z,4.9nm,0.7s,baz=99,slow=11,SNR=13						
STKA	**Stephens Creek**	**38.45**	**241**	P	**P**	**17 28 11.2**	**+1.3**
BBOO	**Buckleboo**	**43.23**	**241**	P	**P**	**17 28 48.0**	**+0.4**
BBOO				IAmb	IAmb	17 28 55.0	
	comp=Z,16nm,1.2s						
WB0	**Warramunga Arr**	**44.43**	**260**	P	**P**	**17 28 56.7**	**-0.5**
WB2	**Warramunga Arr**	**44.45**	**260**	P	**P**	**17 28 56.6**	**-0.7**
WRAB	**Tennant Creek**	**44.45**	**260**	P	**P**	**17 28 54.9**	**-2.4**
WRA	**Warramunga Arr**	**44.47**	**260**	P	**P**	**17 28 57.0**	**-0.4**
	comp=Z,1.9nm,0.4s,baz=96,slow=6.8,SNR=18						
WRA	**Warramunga Arr**	**44.47**	**260**	P	**P**	**17 28 55.8**	**-1.6**
AS31	**Alice Springs**	**44.62**	**254**	P	**P**	**17 28 58.8**	**+0.2**
AS31				IAmb	IAmb	17 28 59.4	
	comp=Z,6.2nm,0.8s						
ASAR	**Alice Springs**	**44.62**	**254**	P	**P**	**17 28 58.9**	**+0.3**
	comp=Z,20nm,0.6s,baz=88,slow=8.4,SNR=426						
MTN	**Manton Dam**	**48.64**	**269**	P	**P**	**17 29 28.6**	**-0.3**
MTN				IAmb	IAmb	17 29 44.9	
	comp=Z,18nm,1.4s						
FORT	**Forrest**	**49.83**	**245**	P	**P**	**17 29 37.2**	**-0.2**
FORT				IAmb	IAmb	17 29 44.4	
	comp=Z,11nm,0.8s						
KNRA	**Kununurra**	**50.33**	**264**	P	**P**	**17 29 40.7**	**-0.5**
KNRA				IAmb	IAmb	17 29 53.7	
	comp=Z,22nm,1.3s						
QSPA	**South Pole Qui**	**72.06**	**180**	P	**P**	**17 32 02.2**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=37,slow=10,SNR=3.6						
QSPA	**South Pole Qui**	**72.06**	**180**	IAmb	IAmb	17 32 02.3	
	comp=Z,5.9nm,1.6s						
NVAR	**Mina Array Bea**	**79.59**	**44**	P	**P**	**17 32 45.0**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=221,slow=7.8,SNR=4.8						
SUA	**Susitna One**	**82.25**	**13**	P	**P**	**17 32 56.6**	**-1.0**
PWL	**Port Wells**	**82.26**	**14**	P	**P**	**17 32 56.3**	**-1.2**
PWL				IAmb	IAmb	17 33 01.5	
	comp=Z,22nm,1.4s						
U15A	**North Rim**	**82.69**	**48**	P	**P**	**17 33 01.6**	**+1.0**
GHO	**Glory Hole Cre**	**82.93**	**14**	P	**P**	**17 33 00.1**	**-0.8**
GHO				IAmb	IAmb	17 33 14.1	
	comp=Z,29nm,1.6s						
SML	**Sawmill**	**83.09**	**14**	P	**P**	**17 33 00.9**	**-0.8**
SML				IAmb	IAmb	17 33 16.8	
	comp=Z,28nm,1.6s						
PPLA	**Purkeypile**	**83.25**	**12**	P	**P**	**17 33 01.2**	**-1.4**
BMRM	**Bremner River**	**83.28**	**16**	P	**P**	**17 33 01.9**	**-0.9**
K20K	**Telida**	**83.32**	**11**	P	**P**	**17 33 02.1**	**-0.7**
K20K				IAmb	IAmb	17 33 10.9	
	comp=Z,16nm,1.6s						
SCM	**Sheep Creek Mo**	**83.35**	**14**	P	**P**	**17 33 02.3**	**-0.8**
SCM				IAmb	IAmb	17 33 02.7	
	comp=Z,14nm,1.2s						
CAST	**Castle Rocks**	**83.74**	**12**	P	**P**	**17 33 03.0**	**-1.9**
CAST				IAmb	IAmb	17 33 18.4	
	comp=Z,10.0nm,1.4s						
VRDI	**Verde Repeater**	**83.81**	**16**	P	**P**	**17 33 04.4**	**-1.1**
VRDI				IAmb	IAmb	17 33 21.0	
	comp=Z,13nm,1.4s						
N25K	**Chitina, Valde**	**83.83**	**16**	P	**P**	**17 33 04.1**	**-1.4**
N25K				IAmb	IAmb	17 33 08.4	
	comp=Z,19nm,1.6s						
M24K	**Tolsona, Glenn**	**83.86**	**15**	P	**P**	**17 33 05.8**	**+0.2**
GLB	**Gilahina Butte**	**83.89**	**16**	P	**P**	**17 33 04.8**	**-0.9**
GLB				IAmb	IAmb	17 33 15.2	
	comp=Z,22nm,1.6s						
J20K	**Nowinta River**	**84.06**	**10**	P	**P**	**17 33 06.1**	**-0.3**
J20K				IAmb	IAmb	17 33 07.1	
	comp=Z,11nm,1.4s						
TRF	**Thorofare Moun**	**84.13**	**12**	P	**P**	**17 33 05.7**	**-1.3**
RND	**Reindeer**	**84.39**	**13**	P	**P**	**17 33 07.6**	**-0.6**
DHY	**Denali Highway**	**84.42**	**14**	P	**P**	**17 33 07.0**	**-1.4**
DHY				IAmb	IAmb	17 33 24.6	
	comp=Z,9.7nm,1.5s						
ILAR	**Eielson Array**	**86.01**	**13**	P	**P**	**17 33 14.3**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=220,slow=5.1,SNR=17						
TXAR	**Lajitas Array**	**86.17**	**58**	P	**P**	**17 33 18.8**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=223,slow=7.1,SNR=13						
PDAR	**Pinedale Array**	**87.52**	**43**	P	**P**	**17 33 23.7**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=212,slow=3.3,SNR=8.1						
YKA	**Yellowknife Ar**	**94.47**	**25**	P	**P**	**17 33 54.4**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=238,slow=4.4,SNR=2.1						
CLL	**Collm**	**145.51**	**347**	ePKPbc	**PKPbc**	**17 40 11.0**	**+0.4**
	comp=Z,5.0nm,0.9s						
GERES	**GERESS Array B**	**147.66**	**345**	PKPbc	**PKPbc**	**17 40 16.6**	**0.0**
	comp=Z,0.8nm,0.5s,baz=44,slow=4.1,SNR=8.3						

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*SNET **15** 17:44:45.0±0.4, 13°.99N×89°.95W, h10km±3km, mb3.2(NEIC)*
*GCG **15** 17:44:47.8±0.6, 13°.98N×89°.90W, h32km±3km, MD3.3*
ISC 15 17:44:46.5±1.1, **13°.97N**±0°.05×**89°.90W**±0°.06, **h11**km±8km, **n10**, σ**0ˢ.52**/17, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOAL	**Lomas de Alarc**	**0.12**	**76**	eP	**Pg**	**17 44 49.4**	**-0.2**
LOAL				eS	**Sg**	**17 44 52.6**	**+0.8**
LOAL				IAML		17 44 53.8	
	comp=Z,7796µm,0.1s						
NUBE	**Las Nubes**	**0.14**	**119**	eP	**Pg**	**17 44 49.4**	**-0.5**
NUBE				eS	**Sg**	**17 44 52.1**	**-0.3**
RTR	**El Retiro**	**0.26**	**106**	eP	**Pg**	**17 44 52.0**	**0.0**
SBLS	**San Blas**	**0.30**	**115**	eP	**Pg**	**17 44 53.0**	**+0.2**
CEVE	**Cerro Verde**	**0.31**	**117**	eP	**Pg**	**17 44 53.0**	**+0.1**
CEVE				IAML		17 45 01.0	
	comp=Z,3µm,0.3s						
JAYA	**Jayaque - finc**	**0.54**	**125**	eP	**Pg**	**17 44 56.5**	**-0.6**
JAYA				eS	**Sg**	**17 45 05.4**	**+1.0**
MTO3	**Montecristo**	**0.68**	**51**	eP	**Pg**	**17 44 59.1**	**-0.7**
MTO3				eS	**Sg**	**17 45 08.9**	**+0.2**
NBG	**Las Nubes**	**0.75**	**325**	eP	**Pg**	**17 45 01.2**	**+0.1**
NBG				eS	**Sn**	**17 45 14.7**	**-0.1**
FUG	**Fuego 3**	**1.03**	**298**	eP	**Pb**	**17 45 06.3**	**-0.1**
FUG				eS	**Sn**	**17 45 21.3**	**-0.2**
MRL	**Marmol**	**1.13**	**11**	eP	**Pn**	**17 45 08.2**	**-0.2**
MRL				eS	**Sb**	**17 45 23.5**	**+0.6**

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*IDC **15** 17:48:47.8±0.5, 56°.33S×25°.68W, h0km, mb4.5/14, mb1 4.5/15, mb1mx4.4/27, mbtmp4.5/15, ML4.6/1, MS3.8/12, Ms1 3.8/12, ms1mx3.6/22, Error ellipse: s-maj=18.1km s-min=15.4km az=82.0*
*NEIC **15** 17:48:50.2±2.0, 56°.37S±0°.07×25°.7W±0°.1, h20km±4km, mb5.0/60, Error ellipse: s-maj=15.0km s-min=2.6km az=48.0*
*MOS **15** 17:48:51.2±1.8, 56°.39S×26°.01W, h33km, mb5.1/15, Error ellipse: s-maj=21.5km s-min=12.3km az=116.5*
ISC 15 17:48:51.5±0.3, **56°.43S**±0°.07×**25°.74W**±0°.07, **h29**km, **n170**, σ**1ˢ.45**/162, **mb4.9**/41, **MS3.8**/11, **10C-2D**, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.50**	**285**	P	**Pn**	**17 50 25.4**	**+0.3**
HOPE	**Hope Point**	**6.50**	**285**	Pn	**Pn**	**17 50 25.4**	**+0.3**
VNA1	**Neumayer--Stat**	**16.14**	**159**	P	**Pn**	**17 52 37.4**	**+1.6**
VNA3	**Neumayer Olymp**	**16.36**	**161**	P	**Pn**	**17 52 39.7**	**+0.9**
VNA2	**Neumayer--Watz**	**16.54**	**159**	P	**Pn**	**17 52 41.8**	**+0.9**
	baz=323,slow=14						
ESPZ	**Base Esperanza**	**17.01**	**233**		**P**	**17 52 48.4**	**-0.1**
SNAA	**Sanae**	**18.07**	**157**	P	**P**	**17 53 01.2**	**+0.9**
SNAA	**Sanae**	**18.07**	**157**	P	**P**	**17 53 02.0**	**+1.8**
	1.9nm,0.3s,baz=313,slow=12,SNR=54						
SNAA				S	**Sn**	**17 56 11.1**	**-9.3**
	0.1nm,0.3s,baz=352,slow=20,SNR=1.6						
SNAA				LR	LR	17 59 29.6	
	comp=Z,200nm,19.4s,baz=324,slow=35						
SNAA	**Sanae**	**18.07**	**157**	⇑eP	**P**	**17 53 01.2**	**+0.9**
SNAA				pmax	pmax		
	comp=Z,7.0nm,0.4s						
SNAA	**Sanae**	**18.07**	**157**	P	**P**	**17 53 01.0**	**+0.8**
EFI	**East Falkland**	**19.45**	**270**	⇑eP	**P**	**17 53 15.1**	**-0.4**
EFI				pmax	pmax		
	comp=Z,94nm,1.7s						
EFI	**East Falkland**	**19.45**	**270**	P	**P**	**17 53 15.6**	**+0.1**
EFI				IAmb	IAmb	17 53 22.7	
	comp=Z,144nm,1.6s						
PMSA	**Palmer Station**	**20.27**	**230**	P	Pn	17 53 26.1	-0.3
	comp=Z,12nm,0.6s,baz=73,slow=10,SNR=10						
PMSA	**Palmer Station**	**20.27**	**230**	eP	Pn	17 53 26.0	-0.3
PMSA	**Palmer Station**	**20.27**	**230**	P	**P**	**17 53 24.8**	**+0.5**
SMAI	**San Martin Ant**	**22.01**	**221**	P	**P**	**17 53 43.5**	**+0.5**
USHA	**Ushuaia**	**23.88**	**256**	P	**P**	**17 54 03.1**	**+1.0**
	comp=Z,3.0nm,0.5s,baz=58,slow=7.1,SNR=2.5						
USHA				LR	LR	18 00 59.2	
	comp=Z,424nm,19.6s,baz=114,slow=31						
TRQA	**Tornquist**	**30.22**	**292**	P	**P**	**17 54 57.6**	**-1.7**
TRQA				pmax	pmax		
	comp=Z,29nm,1.8s						
TRQA	**Tornquist**	**30.22**	**292**	P	**P**	**17 54 57.6**	**-1.7**
TRQA				IAmb	IAmb	17 55 03.7	
	comp=Z,29nm,1.8s						
PLTB	**Pedras Altas**	**31.36**	**310**	eP	**P**	**17 55 09.8**	**+0.4**
PLTB	**Pedras Altas**	**31.36**	**310**	P	**P**	**17 55 07.5**	**-1.9**
PLTB				IAmb	IAmb	17 55 11.1	
	comp=Z,12nm,0.9s						
CNLB	**Canela**	**32.40**	**316**	eP	**P**	**17 55 18.6**	**-0.1**
CPSB	**Cacapava Do Su**	**32.47**	**312**	eP	**P**	**17 55 19.9**	**+0.7**
PLCA	**Paso Flores**	**32.87**	**279**	P	**P**	**17 55 21.6**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=142,slow=7.6,SNR=3.3						
PLCA				LR	LR	18 08 41.8	
	comp=Z,159nm,18.4s,baz=131,slow=36						
PLCA	**Paso Flores**	**32.87**	**279**	eP	**P**	**17 55 23.8**	**+1.1**
PLCA	**Paso Flores**	**32.87**	**279**	P	**P**	**17 55 21.9**	**-0.7**
LL07	**Hotel Espejo d**	**33.06**	**274**	P	**P**	**17 55 23.0**	**-1.2**
QSPA	**South Pole Qui**	**33.82**	**180**	P	**P**	**17 55 32.1**	**+1.3**
	comp=Z,14nm,0.5s,baz=199,slow=2.9,SNR=98						
QSPA	**South Pole Qui**	**33.82**	**180**	P	**P**	**17 55 31.0**	**+0.1**
QSPA				IAmb	IAmb	17 55 32.8	
	comp=Z,18nm,0.7s						
ITQB	**Itaqui**	**34.47**	**308**	eP	**P**	**17 55 37.7**	**+1.1**
ITAB	**Concordia**	**34.76**	**316**	P	**P**	**17 55 37.2**	**-1.9**
PTGB	**Pitanga**	**37.01**	**318**	eP	**P**	**17 55 58.9**	**+0.4**
CPUP	**Villa Florida**	**37.68**	**310**	P	**P**	**17 56 04.3**	**+0.3**
	comp=Z,13nm,1.0s,baz=153,slow=7.7,SNR=7.8						
CPUP				LR	LR	18 12 13.0	
	comp=Z,116nm,18.7s,baz=167,slow=37						
CPUP	**Villa Florida**	**37.68**	**310**	P	**P**	**17 56 03.8**	**-0.2**
CPUP				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CPUP	**Villa Florida**	**37.68**	**310**	eP	**P**	**17 56 04.4**	**+0.4**
CPUP	**Villa Florida**	**37.68**	**310**	P	**P**	**17 56 03.8**	**-0.2**
GO05	**Huala**	**37.76**	**285**	P	**P**	**17 56 02.9**	**-1.9**
BO01	**Tunca**	**37.78**	**286**	P	**P**	**17 56 02.6**	**-2.3**
BO01				IAmb	IAmb	17 56 28.9	
	comp=Z,62nm,1.9s						
MT09	**Talagante**	**38.20**	**287**	P	**P**	**17 56 07.2**	**-1.4**
MT01	**Popeta**	**38.27**	**287**	P	**P**	**17 56 06.0**	**-3.0**
MT01				IAmb	IAmb	17 56 09.9	
	comp=Z,62nm,1.6s						
PEL	**Peldehue**	**38.53**	**288**	P	**P**	**17 56 09.0**	**-2.2**
PEL				pmax	pmax		
	comp=Z,54nm,1.5s						
PEL	**Peldehue**	**38.53**	**288**	P	**P**	**17 56 09.0**	**-2.2**
PEL				IAmb	IAmb	17 57 22.0	
	comp=Z,54nm,1.5s						
MT02	**Curacav**	**38.68**	**287**	P	**P**	**17 56 10.4**	**-2.0**
MT02				IAmb	IAmb	17 56 31.9	
	comp=Z,66nm,1.7s						
MAW	**Mawson**	**39.36**	**143**	P	**P**	**17 56 18.8**	**+1.1**
	comp=Z,2.5nm,0.6s,baz=223,slow=8.2,SNR=5.0						
MAW				LR	LR	18 11 46.3	
	comp=Z,84nm,18.7s,baz=237,slow=35						
MAW	**Mawson**	**39.36**	**143**	P	**P**	**17 56 17.5**	**-0.2**
MAW				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MAW	**Mawson**	**39.36**	**143**	P	**P**	**17 56 17.5**	**-0.2**
SJMB	**Sao Joao De Ma**	**39.42**	**337**	eP	**P**	**17 56 20.0**	**+1.3**
SUR	**Sutherland**	**39.97**	**73**	P	**P**	**17 56 23.7**	**+0.3**
	comp=Z,11nm,1.2s,baz=191,slow=5.2,SNR=2.0						
SUR	**Sutherland**	**39.97**	**73**	P	**P**	**17 56 20.9**	**-2.5**
SUR				IAmb	IAmb	17 56 55.8	
	comp=Z,45nm,1.4s						
GO04	**Tololo Observa**	**40.92**	**291**	P	**P**	**17 56 29.4**	**-1.9**
GO04				IAmb	IAmb	17 56 51.0	
	comp=Z,26nm,1.0s						
CO06	**Fray Jorge**	**40.96**	**289**	P	**P**	**17 56 29.8**	**-1.6**
MC01	**Montes Claros**	**41.99**	**333**	eP	**P**	**17 56 40.9**	**+0.8**
AQDB	**Aquidauana**	**42.24**	**316**	eP	**P**	**17 56 42.0**	**+0.1**
AQDB	**Aquidauana**	**42.24**	**316**	P	**P**	**17 56 41.6**	**-0.3**
AC04	**Llanos de Chal**	**42.65**	**292**	P	**P**	**17 56 43.7**	**-1.5**
AC02	**Maricunga**	**42.77**	**295**	P	**P**	**17 56 46.3**	**-0.5**
AC02				IAmb	IAmb	17 56 48.9	
	comp=Z,22nm,0.9s						
JANB	**Januaria**	**43.66**	**334**	eP	**P**	**17 56 54.7**	**+1.1**
ARAG	**Araguaiana, MT**	**45.23**	**323**	eP	**P**	**17 57 07.8**	**+1.8**
BOSA	**Boshof**	**45.29**	**74**	LR	LR	18 12 13.4	
	comp=Z,182nm,18.7s,baz=200,slow=31						
BOSA	**Boshof**	**45.29**	**74**	P	**P**	**17 57 05.2**	**-1.4**
BOSA				pmax	pmax		
	comp=Z,17nm,1.4s						
BOSA	**Boshof**	**45.29**	**74**	P	**P**	**17 57 05.2**	**-1.4**
BOSA				IAmb	IAmb	17 58 29.7	
	comp=Z,16nm,1.4s						
SBA	**Scott Base**	**45.75**	**184**	P	**P**	**17 57 10.5**	**+1.0**
SBA				pmax	pmax		
	comp=Z,45nm,1.8s						
SBA	**Scott Base**	**45.75**	**184**	P	**P**	**17 57 10.5**	**+1.0**
SBA				IAmb	IAmb	17 57 43.4	
	comp=Z,45nm,1.8s						
PB15	**IPOC Station P**	**45.97**	**298**	P	**P**	**17 57 11.5**	**-0.6**
PB15				IAmb	IAmb	17 57 17.3	
	comp=Z,15nm,0.6s						
LVC	**Limon Verde**	**46.20**	**299**	P	**P**	**17 57 14.6**	**+0.5**
LVC				pmax	pmax		
	comp=Z,24nm,0.8s						
LVC	**Limon Verde**	**46.20**	**299**	eP	**P**	**17 57 15.1**	**+1.1**
LVC	**Limon Verde**	**46.20**	**299**	P	**P**	**17 57 14.6**	**+0.5**
VNDA	**Vanda**	**46.23**	**182**	P	**P**	**17 57 14.8**	**+1.6**
	comp=Z,4.3nm,0.7s,baz=182,slow=7.2,SNR=25						
VNDA				LR	LR	18 14 39.2	
	comp=Z,84nm,20.0s,baz=164,slow=34						
VNDA	**Vanda**	**46.23**	**182**	P	**P**	**17 57 13.9**	**+0.7**
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VNDA	**Vanda**	**46.23**	**182**	P	**P**	**17 57 13.9**	**+0.7**
PB10	**IPOC Station P**	**46.24**	**296**	P	**P**	**17 57 12.8**	**-1.2**
PB10				IAmb	IAmb	17 57 30.8	
	comp=Z,20nm,0.9s						
SDBA	**SAO DESIDERIO**	**46.36**	**334**	eP	**P**	**17 57 16.1**	**+1.1**
SALV	**Santo Antonio**	**46.41**	**318**	eP	**P**	**17 57 16.5**	**+1.2**
PB06	**IPOC Station P**	**46.44**	**298**	P	**P**	**17 57 15.3**	**-0.4**
PB06				IAmb	IAmb	17 57 16.7	
	comp=Z,15nm,0.8s						
NBPN	**Ponto Novo - B**	**46.85**	**340**	eP	**P**	**17 57 19.2**	**+0.4**
PB04	**IPOC Station P**	**47.03**	**298**	P	**P**	**17 57 20.4**	**-0.1**
PB09	**IPOC Station P**	**47.05**	**299**	P	**P**	**17 57 20.7**	**+0.2**
PB09				PcP	**PcP**	**17 58 51.9**	**-0.3**
PB07	**IPOC Station P**	**47.42**	**298**	P	**P**	**17 57 23.6**	**+0.2**
PB01	**IPOC Station P**	**47.80**	**299**	P	**P**	**17 57 26.7**	**+0.4**
PTLB	**Pontes e Lacer**	**48.14**	**315**	eP	**P**	**17 57 29.4**	**+0.6**
PTLB	**Pontes e Lacer**	**48.14**	**315**	P	**P**	**17 57 29.2**	**+0.5**
PTLB				IAmb	IAmb	17 57 30.9	
	comp=Z,14nm,0.9s						
PATCX	**Punta Patache**	**48.32**	**299**	P	**P**	**17 57 30.2**	**0.0**
LBTB	**Lobatse**	**48.35**	**71**	P	**P**	**17 57 29.6**	**-0.9**
LBTB				pmax	pmax		
	comp=Z,33nm,1.9s						
LBTB	**Lobatse**	**48.35**	**71**	P	**P**	**17 57 29.6**	**-0.9**
LBTB				IAmb	IAmb	17 57 44.0	
	comp=Z,33nm,1.9s						
PB08	**IPOC Station P**	**48.41**	**300**	P	**P**	**17 57 31.6**	**+0.2**
PB08				IAmb	IAmb	17 57 33.4	
	comp=Z,19nm,0.8s						
TA01	**Diego Aracena**	**48.55**	**299**	P	**P**	**17 57 30.8**	**-1.1**
TA01				IAmb	IAmb	17 57 34.0	
	comp=Z,21nm,0.9s						
SNDB	**Serra Nova Dou**	**48.56**	**326**	eP	**P**	**17 57 33.7**	**+1.6**
TA02	**Huaiquique**	**48.77**	**299**	P	**P**	**17 57 33.7**	**+0.1**
PB11	**IPOC Station P**	**48.98**	**300**	P	**P**	**17 57 35.2**	**-0.2**
H10N1	**ASCENSION HYDR**	**49.27**	**15**	T	T	18 51 43.0	

	baz=197						
H10N3	ASCENSION HYDR	49.27	15	T	T	18 51 36.0	
	baz=197						
H10N2	ASCENSION HYDR	49.28	15	T	T	18 51 42.7	
	baz=197						
PB16	IPOC Station P	50.13	301	P	P	17 57 42.8	-2.0
PB12	IPOC Station P	50.29	300	P	P	17 57 43.2	-2.1
PB12				IAmb	IAmb	17 58 06.4	
	comp=Z,16nm,1.1s						
SMTB	Santa Maria do	50.45	332	eP	P	17 57 48.1	+1.6
PDRB	Porto dos Gac	50.74	319	eP	P	17 57 49.3	+0.6
VILB	Vilhena	50.83	315	eP	P	17 57 50.3	+1.0
VILB	Vilhena	50.83	315	P	P	17 57 48.4	-0.9
VILB				IAmb	IAmb	17 57 51.1	
	comp=Z,14nm,0.9s						
CLDB	Colider	51.09	321	eP	P	17 57 51.6	+0.3
LPAZ	La Paz	51.26	304	P	P	17 57 54.6	+1.3
	comp=Z,8.1nm,0.4s,baz=128,slow=4.0,SNR=35						
LPAZ				LR	LR	18 24 34.8	
	comp=Z,28nm,18.1s,baz=128,slow=42						
LPAZ	La Paz	51.26	304	P	P	17 57 53.8	+0.5
LPAZ				pmax	pmax		
	comp=Z,13nm,0.8s						
LPAZ	La Paz	51.26	304	eP	P	17 57 54.0	+0.7
LPAZ	La Paz	51.26	304	P	P	17 57 53.8	+0.5
LPAZ				IAmb	IAmb	17 57 55.2	
	comp=Z,13nm,0.8s						
PRPB	Parauapebas	53.62	330	eP	P	17 58 11.8	+1.7
NBMO	Morrinhos-CE	54.19	342	eP	P	17 58 16.2	+2.0
NPGB	Novo Progresso	54.51	323	eP	P	17 58 17.5	+1.0
ROSB	Rosrio	55.38	337	eP	P	17 58 24.2	+1.4
SAML	Samuel	55.65	313	P	P	17 58 23.5	-1.3
SAML				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SAML	Samuel	55.65	313	P	P	17 58 23.5	-1.3
ETMB	Extrema	56.13	310	eP	P	17 58 28.9	+0.6
ETMB	Extrema	56.13	310	P	P	17 58 28.0	-0.2
ETMB				IAmb	IAmb	17 58 30.1	
	comp=Z,12nm,1.3s						
ITTB	Itaituba	57.14	324	eP	P	17 58 36.4	+1.0
MALB	Monte Alegre	59.04	326	eP	P	17 58 50.3	+1.7
NNA	Nana	59.15	297	P	P	17 58 46.9	-2.6
NNA				pmax	pmax		
	comp=Z,15nm,1.0s						
NNA	Nana	59.15	297	P	P	17 58 46.9	-2.6
NNA				IAmb	IAmb	17 59 01.5	
	comp=Z,15nm,1.0s						
MCPB	Macapa, AP	59.80	329	eP	P	17 58 55.7	+1.8
MACA	Manacapuru-AM	59.99	319	P	P	17 58 54.4	-0.8
MACA				IAmb	IAmb	17 58 56.0	
	comp=Z,16nm,0.9s						
VA02	Isla de Pascua	64.41	259	P	P	17 59 24.3	-0.5
LIC	Lamto	64.72	23	eP	P	17 59 26.9	+0.1
	comp=Z,14nm,0.7s						
KIC	Kosan Boka	64.92	23	eP	P	17 59 28.1	0.0
	comp=Z,5.5nm,0.7s						
BOAV	Boa Vista	65.08	321	eP	P	17 59 29.5	+0.3
BOAV	Boa Vista	65.08	321	P	P	17 59 28.8	-0.4
BOAV				IAmb	IAmb	17 59 30.2	
	comp=Z,9.6nm,0.9s						
TIC	Toumodi	65.13	23	eP	P	17 59 29.4	-0.1
DBIC	Dimbokro	65.19	23	P	P	17 59 29.9	+0.1
	comp=Z,3.6nm,0.6s,baz=190,slow=6.1,SNR=9.1						
DBIC				LR	LR	18 21 48.1	
	comp=Z,78nm,18.9s,baz=245,slow=30						
DBIC	Dimbokro	65.19	23	P	P	17 59 29.7	-0.1
DBIC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DBIC	Dimbokro	65.19	23	P	P	17 59 29.7	-0.1
OTAV	Otavalo	70.54	302	P	P	18 00 02.3	-1.9
OTAV				pmax	pmax		
	comp=Z,24nm,1.6s						
OTAV	Otavalo	70.54	302	eP	P	18 00 06.3	+2.1
OTAV	Otavalo	70.54	302	P	P	18 00 02.3	-1.9
OTAV				IAmb	IAmb	18 00 08.1	
	comp=Z,24nm,1.6s						
ROSC	El Rosal	72.75	309	LR	LR	18 32 36.0	
	comp=Z,61nm,21.5s,baz=264,slow=36						
KOWA	Kowa	72.96	22	P	P	18 00 18.6	+0.6
	comp=Z,1.4nm,0.5s,baz=188,slow=6.2,SNR=3.7						
KOWA	Kowa	72.96	22	IAmb	IAmb	18 01 24.5	
	comp=Z,21nm,1.9s						
TORD	Torodi Ar. Bea	73.00	28	P	P	18 00 18.5	+0.3
	comp=Z,2.5nm,0.4s,baz=199,slow=6.1,SNR=25						
TORD	Torodi Ar. Bea	73.00	28	P	P	18 00 17.8	-0.5
BAUV	El Baul	73.89	316	P	P	18 00 21.4	-2.1
BAUV				IAmb	IAmb	18 00 49.6	
	comp=Z,32nm,1.3s						
SDV	Santo Domingo	74.86	314	eP	P	18 00 30.7	+1.2
ZARC	Zaragoza, Cauc	75.36	309	P	P	18 00 31.3	-0.8
JTS	Las Juntas de	82.40	301	⇑eP	P	18 01 10.9	+0.1
JTS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
URZ	Urewera	83.70	198	LR	LR	18 33 38.9	
	comp=Z,129nm,21.8s,baz=204,slow=32						
STKA	Stephens Creek	91.38	169	P	P	18 01 55.9	+1.4
	comp=Z,0.8nm,0.6s,baz=278,slow=4.7,SNR=3.1						
PPT	Papeete	92.62	232	LR	LR	18 33 17.9	
	comp=Z,39nm,21.3s,baz=60,slow=29						
ASAR	Alice Springs	98.37	161	P	P	18 02 26.3	-0.3
	comp=Z,0.5nm,0.9s,baz=188,slow=4.2,SNR=5.6						
ASAR				PP	PP	18 06 32.0	+6.3
	comp=Z,0.3nm,0.9s,baz=169,slow=8.8,SNR=4.5						
KBZ	Khabaz	115.22	48	⇓iPKIKP	PKiKP	18 07 29.0	0.0
AKBB	Malin Array Si	116.03	35	⇑iPKIKP	PKiKP	18 07 32.8	+2.4
PDAR	Pinedale Array	121.23	301	PKP	PKiKP	18 07 41.4	+0.3
	comp=Z,0.2nm,0.4s,baz=116,slow=4.1,SNR=2.2						
CMAR	Chiang Mai Arr	124.17	109	PKP	PKiKP	18 07 47.8	+0.5
	comp=Z,0.7nm,0.8s,baz=231,slow=3.8,SNR=7.4						
FINES	FINESS Array B	124.35	27	PKP	PKiKP	18 07 46.4	+0.1
	comp=Z,3.2nm,0.9s,baz=350,slow=5.6,SNR=3.8						
KIRV	Kirov	129.33	41	⇑iPKIKP	PKiKP	18 07 55.7	-0.6
AAK	Ala-Archa	129.34	70	⇑iPKIKP	PKPdf	18 07 55.3	-1.1
ARCES	ARCESS Array B	131.00	21	PKP	PKPdf	18 07 58.3	-0.2
	comp=Z,6.0nm,1.0s,baz=258,slow=0.8,SNR=1.7						
ARU	Arti	131.36	47	i PKIKP	PKPdf	18 07 58.5	-1.0
BRVK	Borovoye	134.28	57	⇑iPKIKP	PKiKP	18 08 06.5	0.0
MKAR	Makanchi Array	136.24	71	PKP	PKiKP	18 08 11.1	+0.3
	comp=Z,0.4nm,0.7s,baz=214,slow=2.9,SNR=2.1						
CD2	Chengdu	136.78	104	PKP	PKPdf	18 08 09.4	-1.2
KURK	Kurchatov	136.84	64	⇑iPKIKP	PKiKP	18 08 13.9	+2.1
YKA	Yellowknife Ar	137.00	317	PKP	PKiKP	18 08 10.4	-1.3
	comp=Z,1.2nm,0.6s,baz=124,slow=2.1,SNR=12						
DGZ	Jazzator, Alta	140.74	71	⇑iPKIKP	PKiKP	18 08 20.5	+0.5
ZALV	Zalesovo Beam	141.81	64	PKhKP	PKPpre	18 08 12.8	
	comp=Z,0.6nm,0.3s,baz=238,slow=4.9,SNR=3.7						
INK	Inuvik	146.62	320	PKPbc	PKPab	18 08 29.1	-0.6
	comp=Z,9.4nm,1.1s,baz=103,slow=3.4,SNR=17						
DAWY	Dawson	147.65	311		PKPbc	18 08 30.8	-0.9
NRIK	Noril'sk	148.80	39	⇑iPKP2	PKiKP	18 08 35.0	-0.8
ZAK	Zakamensk	149.62	80	ePKP2	PKPbc	18 08 37.0	-0.2
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
SONM	Songino Array	149.94	86	PKPbc	PKiKP	18 08 38.3	-0.7
	comp=Z,2.2nm,0.5s,baz=222,slow=3.8,SNR=26						
ULN	Ulaanbaatar	150.32	86	⇓iPKIKP	PKPbc	18 08 39.0	-0.1
ILAR	Eielson Array	150.98	311	PKPbc	PKiKP	18 08 40.4	-0.1
	comp=Z,13nm,1.0s,baz=128,slow=1.7,SNR=59						
ILAR	Eielson Array	150.98	311	PKIKP	PKiKP	18 08 39.8	-0.7
ILAR	Eielson Array	150.98	311		PKiKP	18 08 39.8	-0.7
CCB	Clear Creek Bu	151.34	310		PKPbc	18 08 40.3	-0.4
WRH	Wood River Hil	151.43	310		PKPbc	18 08 40.2	-0.7
H24K	Noodor Dome	151.58	313		PKiKP	18 08 41.2	-0.5

IDC ***15*** *18:08:15.9±2.0, 56°.28S×25°.33W, h0^{km}, mb4.1/1, mb1 4.1/1, mb1mx3.6/18, mbtmp4.1/1, Error ellipse: s-maj=108.7km s-min=71.7km az=135.0*

NEIC ***15*** *18:08:17.8±2.7, 56°.3S±0°.1×25°.0W±0°.4, h10^{km}±1^{km}, mb4.1/5, Error ellipse: s-maj=33.0km s-min=19.3km az=85.0*

ISC 15 18:08:21.5±0.9, **56°.3S**±0°.2×**25°.1W**±0°.2, **h40**^{km}, **n9**, σ**0**^{s}**93**/8, **mb4.0**/3, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	6.80	283	Pn	Pn	18 09 59.4	+0.8
SNAA	Sanae	18.04	157		P	18 12 29.7	+0.8
QSPA	South Pole Qui	33.94	180	P	P	18 15 00.3	-0.3
QSPA				IAmb	IAmb	18 15 00.9	
	comp=Z,3.0nm,0.7s						
VNDA	Vanda	46.36	182	P	P	18 16 42.4	-0.6
VNDA				IAmb	IAmb	18 16 58.7	
	comp=Z,2.6nm,1.2s						
BOAV	Boa Vista	65.20	320	P	P	18 18 57.1	-1.4
TORD	Torodi Ar. Bea	72.74	27	P	P	18 19 45.9	+0.6
	comp=Z,1.5nm,0.8s,baz=196,slow=6.5,SNR=8.7						
TORD	Torodi Ar. Bea	72.74	27	IAmb	IAmb	18 19 48.1	
	comp=Z,1.2nm,1.1s						
SONM	Songino Array	149.60	85	PKPbc	PKPbc	18 28 06.3	+0.5
	comp=Z,0.5nm,0.6s,baz=228,slow=4.3,SNR=4.9						
ILAR	Eielson Array	151.15	311	PKPbc	PKPbc	18 28 08.9	+0.2
	comp=Z,1.3nm,0.9s,baz=132,slow=2.0,SNR=9.1						

IDC ***15*** *18:15:35.8±4.0, 5°.09S×149°.40E, h131^{km}±34^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.0/40, mbtmp3.9/6, Error ellipse: s-maj=28.8km s-min=28.1km az=24.0*

NEIC ***15*** *18:15:41.7±1.4, 5°.49S±0°.10×149°.4E±0°.1, h163^{km}±13^{km}, mb4.3/9, Error ellipse: s-maj=19.6km s-min=11.2km az=124.0*

ISC 15 18:15:38.7±1.0, **5°.2S**±0°.1×**149°.1E**±0°.1, **h150**^{km}, **n18**, σ**2**^{s}**01**/22, **mb4.0**/6, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.24	72		Pn	18 16 31.3	+2.2
PMG	Port Moresby	4.57	205	P	Pn	18 16 47.9	+1.5
	3.2nm,0.3s,baz=353,slow=5.1,SNR=12						
PMG				S	Sn	18 17 41.7	+2.6
	6.0nm,0.3s,baz=142,slow=22,SNR=11						
PMG	Port Moresby	4.57	205		Pn	18 16 47.6	+1.2
PMG				Sn	Sn	18 17 39.1	-0.1
MTN	Manton Dam	19.26	246	P	Pn	18 19 55.6	+1.1
WB0	Warramunga Arr	20.33	223	P	P	18 20 04.3	+1.0
WB0				IAmb	IAmb	18 20 10.8	
	comp=Z,15nm,1.6s						
WR0	Warramunga Arr	20.36	223	P	P	18 20 05.3	+1.7
WR0				IAmb	IAmb	18 20 42.3	
	comp=Z,19nm,1.6s						
WB2	Warramunga Arr	20.48	223	P	P	18 20 06.2	+1.4
WB2				IAmb	IAmb	18 20 07.4	
	comp=Z,4.3nm,0.5s						
WRA	Warramunga Arr	20.49	223	P	P	18 20 06.4	+1.5
	comp=Z,2.2nm,0.5s,baz=49,slow=10,SNR=47						
WRA				S	S	18 23 42.4	-3.9
	comp=Z,1.1nm,1.0s,baz=41,slow=18,SNR=5.0						
WRA	Warramunga Arr	20.49	223	P	P	18 20 04.7	-0.3
KNRA	Kununurra	22.49	241	P	P	18 20 28.0	+2.1
KNRA				IAmb	IAmb	18 20 30.4	
	comp=Z,19nm,0.8s						
AS31	Alice Springs	23.45	217	P	P	18 20 36.2	+1.5
ASAR	Alice Springs	23.45	217	P	P	18 20 36.2	+1.5
	comp=Z,0.7nm,0.5s,baz=51,slow=9.7,SNR=69						
ASAR				S	S	18 24 34.7	-2.4
	comp=Z,0.2nm,0.8s,baz=35,slow=19,SNR=1.5						
ASAR	Alice Springs	23.45	217	P	P	18 20 35.8	+1.1
DZM	Mont Dzumac	23.72	137	P	P	18 20 35.0	-2.2
	comp=Z,1.5nm,0.5s,baz=318,slow=12,SNR=6.1						
DZM	Mont Dzumac	23.72	137	P	P	18 20 34.8	-2.4
ARMA	Armidale	25.17	175	P	P	18 20 49.2	-1.2
ARMA				IAmb	IAmb	18 21 46.4	
	comp=Z,10nm,1.2s						
FITZ	Fitzroy Crossi	26.23	239	P	P	18 21 02.5	+2.6
	comp=Z,3.8nm,0.5s,baz=55,slow=8.2,SNR=13						
KSRS	Korea Array	46.82	337	P	P	18 23 51.9	-1.5
	comp=Z,0.8nm,0.7s,baz=155,slow=8.8,SNR=1.8						

NOU ***15*** *18:51:55.6, 17°.86S×178°.37W, h586^{km}, mb4.7/64, Fiji Islands Region*

NEIC ***15*** *18:51:56.7±1.7, 17°.9S±0°.1×178°.6W±0°.1, h583^{km}±8^{km}, mb4.5/100, Error ellipse: s-maj=19.8km s-min=14.0km az=158.0*

IDC ***15*** *18:51:58.1±1.2, 17°.82S×178°.66W, h596^{km}±9^{km}, mb3.9/13, mb1 4.1/15, mb1mx3.8/31, mbtmp4.8/15, Error ellipse: s-maj=36.3km s-min=10.8km az=152.0*

ISC 15 18:51:55.4±0.4, **17°.98S**±0°.09×**178°.44W**±0°.07, **h579**^{km}, **n200**, σ**1**^{s}**16**/200, **mb4.5**/69, **10C-30D**, **Fault plane solution: NP1:**ϕ_s179.31017°, δ83.67846°, λ36.21496°. **NP2:**ϕ_s84.70033°, δ54.03974°, λ172.18167°. **Principal axes:** T Plg29.5438°, Azm48.3328°; N Plg53.3120°, Azm187.8612°; P Plg19.7168°, Azm306.6131°; **Fault plane solution: NP1:**ϕ_s353.84219°, δ71.38987°, λ-76.74313°. **NP2:**ϕ_s137.40559°, δ22.71202°, λ-124.25501°. **Principal axes:** T Plg25.2532°, Azm73.5140°; N Plg12.5521°, Azm169.5425°; P Plg61.3940°, Azm283.6383°; **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVE	Taveuni	1.89	312	P	P	18 53 08.6	+1.2
DGTI	Dogotuki	2.41	313	P	P	18 53 10.2	+0.5
MSVF	Nonsavu	3.35	274	P	P	18 53 16.3	+1.3
	34nm,0.3s,baz=124,slow=5.6,SNR=50						
MSVF				S	S	18 54 23.5	+3.5
	baz=303,slow=22,SNR=8.2						
MSVF	Nonsavu	3.35	274	P	P	18 53 16.2	+1.1
NIUE	Niue	8.15	99	P	P	18 53 56.2	+0.7
NIUE	Niue	8.15	99	P	P	18 53 56.5	+1.0
RTV	Rentapao	12.51	269	P	P	18 54 40.6	+1.3
DVP	Devils Point	12.74	269	P	P	18 54 43.0	+1.4
MARNC	Mare, Loyalty	13.21	252	P	P	18 54 45.2	-1.2
MARNC	Mare, Loyalty	13.21	252	P	P	18 54 46.9	+0.5
LIFNC	LIFOU	13.80	256	P	P	18 54 49.8	-2.7
SANVU	Saraoutou	13.98	278	P	P	18 54 52.3	-2.1
SANVU	Saraoutou	13.98	278	P	P	18 54 55.0	+0.6
PINNC	Pines Island,	14.02	248	P	P	18 54 53.7	-1.0
YATNC	Mamie plateau,	14.37	251	P	P	18 54 59.3	+1.1
DZM	Mont Dzumac	14.78	252	eP	P	18 55 01.3	-0.9
	46nm,0.8s						
DZM	Mont Dzumac	14.78	252	P	P	18 55 02.5	+0.3
	2.5nm,0.3s,baz=86,slow=18,SNR=28						
DZM	Mont Dzumac	14.78	252	P	P	18 55 01.3	-0.9
DZM	Mont Dzumac	14.78	252	P	P	18 55 03.1	+0.9
ONTNC	Ouen Toro	14.82	251	P	P	18 55 01.3	-1.2
ONTNC	Ouen Toro	14.82	251	P	P	18 55 03.4	+0.9
NOUC	Port Laguerre	14.91	252	P	P	18 55 04.2	+0.8
KOUNC	Koumac, New Ca	16.51	258	P	P	18 55 19.7	+1.3
FOZ	Fox Glacier	27.34	199	P	P	18 56 54.3	-0.7
EIDS	Eidsvold	29.22	250	P	P	18 57 10.6	-1.0
EIDS				IAmb	IAmb	18 57 12.2	
	comp=Z,19nm,0.8s						
MLZ	Mavora Lakes	29.52	199	P	P	18 57 14.7	+0.8
ARMA	Armidale	29.88	240	P	P	18 57 17.5	+0.1
ARMA				IAmb	IAmb	18 57 19.2	
	comp=Z,18nm,0.7s						
ARMA	Armidale	29.88	240	P	P	18 57 18.6	+1.2
MGCD	Mangrove Creek	31.23	235	P	P	18 57 30.6	+1.8
RMQ	Roma	31.45	249	P	P	18 57 30.7	-0.1
RABL	Rabaul	31.86	292	P	P	18 57 32.6	-1.8
CNB	Canberra Magne	33.36	232	P	P	18 57 47.5	+0.6
CTAO	Charters Tower	33.41	261	P	P	18 57 47.3	-0.1
CTAO				IAmb	IAmb	18 57 48.0	
	comp=Z,17nm,0.8s						
CTAO	Charters Tower	33.41	261	P	P	18 57 47.3	-0.1
CAN	Canberra	33.64	233	P	P	18 57 49.8	+0.7
CAN				IAmb	IAmb	18 57 50.8	
	comp=Z,14nm,0.8s						
CAN	Canberra	33.64	233	P	P	18 57 49.1	-0.1
PMG	Port Moresby	34.44	280	P	P	18 57 56.2	+0.1
PMG	Port Moresby	34.44	280	P	P	18 57 57.8	+1.7
PMG	Port Moresby	34.44	280	P	P	18 57 57.8	+1.7
CMSA	Cobar Meteorol	35.09	240	P	P	18 58 02.1	+0.8
MTSU	Mount Surprise	35.37	264	P	P	18 58 03.7	-0.1
QLP	Quilpie	35.48	249	P	P	18 58 05.5	+0.9
GLAD	Gladstone	36.78	224	P	P	18 58 15.5	+0.5
	comp=Z,21nm,0.8s						
COEN	Coen	37.08	271	P	P	18 58 18.0	+0.2
COEN	Coen	37.08	271	P	P	18 58 18.4	+0.6
TOO	Toolangi	37.10	231	P	P	18 58 18.9	+1.1
TOO	Toolangi	37.10	231	P	P	18 58 19.2	+1.4
TAU	Tasmania Unive	38.17	222	P	P	18 58 26.0	-0.3
TAU				IAmb	IAmb	18 58 52.7	
	comp=Z,41nm,1.6s						
STKA	Stephens Creek	38.57	241	P	P	18 58 30.7	+1.0
	comp=Z,21nm,0.5s,baz=92,slow=10,SNR=86						
STKA	Stephens Creek	38.57	241	P	P	18 58 30.7	+1.0
STKA				IAmb	IAmb	18 58 31.2	
	comp=Z,5.2nm,0.6s						
STKA	Stephens Creek	38.57	241	P	P	18 58 31.0	+1.3
INKA	Innaminka	38.69	248	P	P	18 58 32.2	+1.4
ARPS	Mount Arapiles	39.59	234	P	P	18 58 39.0	+1.2
QIS	Mount Isa	39.61	259	P	P	18 58 37.5	-0.8
HTT	Hallett	41.09	240	P	P	18 58 49.9	0.0
LCRK	Leigh Creek	41.20	244	P	P	18 58 51.4	+0.7
NAPP	Napperby	41.68	240	P	P	18 58 55.0	+0.5
	comp=Z,37nm,1.1s						
TWOA	Tennyson Woods	41.70	237	P	P	18 58 55.2	+0.6
	comp=Z,25nm,0.8s						
WHYH	Whyalla	42.12	240	P	P	18 58 58.3	+0.4
	comp=Z,43nm,0.7s						
OOD	Oodnadatta	43.17	248	P	P	18 59 07.4	+1.2
BBOO	Buckleboo	43.35	241	P	P	18 59 08.0	+0.4
BBOO	Buckleboo	43.35	241	P	P	18 59 07.9	+0.4
GENI	Genyem	43.36	286	P	P	18 59 10.5	+2.7
MLH	Mauna Loa	43.58	32	P	P	18 59 10.9	+1.2
HMH	Humuʻula Sheep	43.62	32	P	P	18 59 11.2	+1.2
DHH	Diamond Head	43.93	28	P	P	18 59 13.1	+1.1
WMR	Waimanalo Ridg	44.03	28	P	P	18 59 13.9	+1.0
OPA	Opana	44.21	28	P	P	18 59 15.2	+1.0
HLK	Haleakala	44.22	30	P	P	18 59 15.5	+0.9
WR0	Warramunga Arr	44.40	260	P	P	18 59 14.8	-1.1
WR0				IAmb	IAmb	18 59 16.6	
	comp=Z,31nm,1.6s						
WB0	Warramunga Arr	44.56	260	P	P	18 59 16.1	-1.0
WB0				IAmb	IAmb	18 59 17.1	
	comp=Z,16nm,0.6s						
WB2	Warramunga Arr	44.58	260	P	P	18 59 16.4	-0.9
WB2				IAmb	IAmb	18 59 17.4	
	comp=Z,20nm,0.6s						
WRAB	Tennant Creek	44.58	260	P	P	18 59 16.4	-0.9
WRAB				IAmb	IAmb	18 59 17.3	
	comp=Z,17nm,0.7s						
WRAB	Tennant Creek	44.58	260	P	P	18 59 16.9	-0.3
WRA	Warramunga Arr	44.59	260	P	P	18 59 16.3	-1.0
	comp=Z,11nm,0.5s,baz=96,slow=7.1,SNR=396						
WRA				PcP	PcP	19 00 48.0	+0.4
	comp=Z,1.1nm,0.4s,baz=96,slow=3.1,SNR=2.7						
WRA	Warramunga Arr	44.59	260	P	P	18 59 16.5	-0.8
AS31	Alice Springs	44.74	254	P	P	18 59 18.6	+0.1
ASAR	Alice Springs	44.74	254	P	P	18 59 18.5	0.0
	comp=Z,108nm,0.6s,baz=88,slow=8.4,SNR=2665						
ASAR				PcP	PcP	19 00 48.2	+0.2
	comp=Z,1.7nm,0.5s,baz=104,slow=3.2,SNR=4.1						
ASAR				S	S	19 05 11.4	-2.8
	comp=Z,1.0nm,0.9s,baz=90,slow=17,SNR=7.3						
MULG	Mulgathing	44.76	245	P	P	18 59 18.5	+0.1
KDU	Kakadu	47.53	269	P	P	18 59 39.5	-0.1
MTN	Manton Dam	48.77	269	P	P	18 59 48.1	-0.7
MTN				IAmb	IAmb	18 59 48.7	
	comp=Z,17nm,0.7s						
DRS	Darwin Rock St	49.08	269	P	P	18 59 50.1	-1.0
	comp=Z,14nm,0.8s						
WRKA	Warakurna	49.80	252	P	P	18 59 56.5	+0.2
SAUI	Saumlaki	49.84	275	P	P	18 59 56.1	-0.6
FORT	Forrest	49.95	245	P	P	18 59 56.9	-0.4
FORT	Forrest	49.95	245	P	P	18 59 56.4	-0.9
KNRA	Kununurra	50.45	264	P	P	19 00 00.5	-0.6
KNRA				IAmb	IAmb	19 00 01.5	
	comp=Z,26nm,0.7s						
KNRA	Kununurra	50.45	264	P	P	19 00 01.0	-0.1
FAKI	Fak Fak	50.56	281	P	P	19 00 01.4	-0.6
FAKI				IAmb	IAmb	19 00 34.9	
	comp=Z,23nm,1.1s						
FAKI	Fak Fak	50.56	281	P	P	19 00 01.3	-0.6
SIJI	Sorong	52.22	283	P	P	19 00 14.0	+0.1
	comp=Z,35nm,0.6s,baz=110,slow=5.4,SNR=36						
FITZ	Fitzroy Crossi	52.99	261	P	P	19 00 19.6	+0.2
	comp=Z,2.6nm,0.3s,baz=109,slow=4.1,SNR=22						
SOEI	Soe	56.04	270	P	P	19 00 40.5	-0.4
SOEI				IAmb	IAmb	19 00 43.1	
	comp=Z,37nm,0.8s						
SOEI	Soe	56.04	270	P	P	19 00 42.3	+1.4
TNTI	Ternate	56.45	283	P	P	19 00 42.3	-1.3
TNTI				IAmb	IAmb	19 00 44.5	
	comp=Z,15nm,0.8s						
BATI	Baumata	56.50	270	P	P	19 00 45.2	+1.3
	comp=Z,14nm,0.6s,baz=138,slow=5.2,SNR=8.1						
PSA00	Pilbara Seismi	57.86	255	P	P	19 00 52.1	-1.0
PSA00	Pilbara Seismi	57.86	255	P	P	19 00 52.4	-0.7
PSA00				IAmb	IAmb	19 00 53.1	
	comp=Z,20nm,0.7s						
PSA00	Pilbara Seismi	57.86	255	P	P	19 00 52.8	-0.3
MBWA	Marble Bar	58.03	256	P	P	19 00 54.0	-0.2
MMRI	Maumere	58.27	271	P	P	19 00 54.4	-1.5
MMRI				IAmb	IAmb	19 00 56.1	
	comp=Z,14nm,0.9s						
MEEK	Meekatharra	58.38	249	P	P	19 00 56.3	-0.2
KLBR	Kellerberrin	58.77	244	P	P	19 00 58.9	-0.1
NWAO	Narrogin (SRO)	59.15	242	P	P	19 01 01.9	+0.3
BLDU	Ballidu	59.73	245	P	P	19 01 05.0	-0.4
MUN	Mundaring	60.07	243	P	P	19 01 08.3	+0.7
LUWI	Luwuk	60.09	279	P	P	19 01 07.6	-0.4
LUWI				IAmb	IAmb	19 01 12.6	
	comp=Z,22nm,0.9s						
MORW	Morawa	60.43	246	P	P	19 01 09.3	-0.8
MORW				IAmb	IAmb	19 01 10.0	
	comp=Z,30nm,1.4s						
PLAI	Plampang	62.46	269	P	P	19 01 23.9	+0.3
TOLI2	Tolitoli	62.70	281	P	P	19 01 24.9	-0.2
TOLI2	Tolitoli	62.70	281	P	P	19 01 26.1	+1.0
GIRL	Giralia	62.85	253	P	P	19 01 26.2	+0.3
GIRL	Giralia	62.85	253	P	P	19 01 26.4	+0.5
JHJ2	Mitsune	64.58	322	P	P	19 01 35.6	-1.0
JAGI	Jajag, Banyuwa	66.01	269	P	P	19 01 44.3	-1.7
JAGI				IAmb	IAmb	19 01 45.4	
	comp=Z,24nm,0.9s						
MYLDM	Lahad Datu	66.30	284	P	P	19 01 49.3	+1.6
MYLDM				IAmb	IAmb	19 01 50.9	
	comp=Z,16nm,1.2s						
MAJO	Matsushiro	67.95	323	P	P	19 01 57.3	-0.1
MAJO				IAmb	IAmb	19 02 00.9	
	comp=Z,26nm,1.6s						
KKM	Kota Kinabalu	68.73	284	P	P	19 02 01.4	-1.3
JSD	Sado	68.98	325	P	P	19 02 02.8	-0.7
UGM	Wanagama	69.61	268	P	P	19 02 07.5	-0.5
UGM	Wanagama	69.61	268	P	P	19 02 08.1	+0.1
JHS	Saijyo	69.93	319	P	P	19 02 09.8	+0.4
JHS				IAmb	IAmb	19 02 10.5	
	comp=Z,52nm,1.5s						
TWG	Pinlang	71.68	302	P	P	19 02 18.5	-1.3
TWG				IAmb	IAmb	19 02 30.6	
	comp=Z,42nm,1.2s						
YULB	Yu-li	71.78	303	P	P	19 02 19.3	-1.1
YULB				IAmb	IAmb	19 02 23.0	
	comp=Z,49nm,1.4s						
SSLB	Suanglung	72.25	303	P	P	19 02 22.1	-1.1
SSLB				IAmb	IAmb	19 02 39.4	
	comp=Z,46nm,1.4s						
UNV	Unalaska Valle	72.26	7	P	P	19 02 21.7	-0.8
TPUB	Ta-pu	72.27	302	P	P	19 02 22.6	-0.7
KSM	Kuching	72.66	277	P	P	19 02 25.4	-0.4
KSM				IAmb	IAmb	19 02 27.4	
	comp=Z,23nm,0.9s						
PEA0B	Petropavlovsk-	73.74	345	P	P	19 02 31.0	0.0
PETK	Petropavlovsk-	73.74	345	P	P	19 02 31.0	0.0
	comp=Z,7.2nm,1.1s,baz=161,slow=7.4,SNR=4.3						
KMRM	Mail Ridge	77.09	40	P	P	19 02 52.0	+2.1
KMRM				IAmb	IAmb	19 03 11.7	
	comp=Z,21nm,1.0s						
ISA	Isabella, Lake	77.89	46	P	P	19 02 55.6	+1.2
CMB	Columbia Colle	77.91	43	P	P	19 02 54.7	+0.3
NJ2	Nanjing	77.96	310	eP	P	19 02 56.0	+1.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
RMX	La Rumorosa	77.98	50	P	P	19 02 56.8	+1.7
RMX				IAmb	IAmb	19 03 35.2	
	comp=Z,18nm,1.4s						
ORV	Oroville	78.06	41	P	P	19 02 56.2	+1.0
SFX	San Felipe	78.11	52	P	P	19 02 56.5	+1.0
SFX				IAmb	IAmb	19 03 00.3	
	comp=Z,12nm,0.8s						
PFO	Pinyon Flats O	78.22	49	P	P	19 02 57.3	+1.0
KEBM	Edson Butte	78.33	37	P	P	19 02 56.2	-0.4
YBH	Yreka Blue Hor	78.60	39	P	P	19 02 59.6	+1.6
SLBS	Sierra La Lagu	78.62	60	P	P	19 03 00.8	+2.2
SLBS				IAmb	IAmb	19 03 10.3	
	comp=Z,15nm,1.1s						
MPK	Martis Peak	78.85	42	P	P	19 03 01.0	+1.4
MPK				IAmb	IAmb	19 03 30.4	
	comp=Z,38nm,1.2s						
HUMO	Hull Mountain	78.97	38	P	P	19 03 01.8	+1.9
PNTR	Pine Nut	79.01	43	P	P	19 03 01.6	+1.1
PNTR				IAmb	IAmb	19 03 03.0	
	comp=Z,13nm,0.9s						
YERR	Yerington	79.19	43	P	P	19 03 03.0	+1.6
YERR				IAmb	IAmb	19 03 03.6	
	comp=Z,15nm,1.2s						

LHV	Little Huntoon	79.26	44	P	P	19 03 03.4	+1.9
NVAR	Mina Array Bea	79.49	44	P	P	19 03 04.5	+1.5
	comp=Z,3.9nm,0.8s,baz=224,slow=8.7,SNR=21						
NVAR	Mina Array Bea	79.49	44	P	P	19 03 03.4	+0.3
PAHR	Pah Rah Range	79.49	42	P	P	19 03 03.5	+0.5
NV11	Mina Array Sit	79.59	44	P	P	19 03 03.8	+0.3
KVN	Kaiserville	79.96	43	P	P	19 03 06.4	+1.0
MOD	Modoc Plateau	80.16	40	P	P	19 03 07.8	+1.4
MOD				IAmb	IAmb	19 03 08.5	
	comp=Z,7.0nm,0.7s						
K05A	Summer Lake	80.27	39	P	P	19 03 08.7	+1.7
K05A				IAmb	IAmb	19 03 09.5	
	comp=Z,11nm,1.0s						
BRLK	Bradley Lake	80.65	14	P	P	19 03 08.4	+0.1
H04A	Detroit Lake	80.67	37	P	P	19 03 09.6	+0.8
H04A				IAmb	IAmb	19 03 44.1	
	comp=Z,24nm,1.4s						
PINE	Pine Mountain	80.86	38	P	P	19 03 11.1	+1.1
PINE				IAmb	IAmb	19 03 12.7	
	comp=Z,9.4nm,0.9s						
PRN	Pahroc Range	81.14	46	P	P	19 03 13.3	+1.7
BMN	Battle Mountai	81.28	43	P	P	19 03 13.7	+1.5
WVOR	Wild Horse Val	81.48	40	P	P	19 03 14.1	+1.0
WVOR				IAmb	IAmb	19 03 15.6	
	comp=Z,8.9nm,1.0s						
J08A	Circle Bar Ran	82.09	40	P	P	19 03 17.6	+1.4
J08A				IAmb	IAmb	19 03 18.5	
	comp=Z,15nm,1.2s						
LCMT	Little Creek M	82.20	47	P	P	19 03 18.3	+1.4
X16A	Lo Mia Camp, P	82.25	50	P	P	19 03 18.8	+1.5
CCUT	Cedar City	82.38	47	P	P	19 03 18.8	+0.8
SPR3	Spring Creek 3	82.44	45	P	P	19 03 18.9	+0.6
KNB	Kanab	82.50	47	P	P	19 03 19.2	+0.7
ELK	Elko	82.73	43	P	P	19 03 20.5	+0.9
G08A	Pilot Rock	82.88	38	P	P	19 03 21.2	+1.1
CAST	Castle Rocks	83.70	12	P	P	19 03 22.4	-1.2
CAST				IAmb	IAmb	19 03 23.6	
	comp=Z,6.4nm,0.7s						
MFID	Camas Ranch	83.74	41	P	P	19 03 24.6	+0.1
TRF	Thorofare Moun	84.08	12	P	P	19 03 24.2	-1.5
TRF				IAmb	IAmb	19 03 26.2	
	comp=Z,8.2nm,0.7s						
F10A	Beach Ranch, E	84.27	38	P	P	19 03 26.8	-0.1
F10A				IAmb	IAmb	19 03 28.6	
	comp=Z,8.4nm,0.9s						
RND	Reindeer	84.34	13	P	P	19 03 25.9	-1.0
RND				IAmb	IAmb	19 03 27.1	
	comp=Z,9.7nm,1.0s						
HLID	Hailey	84.70	41	P	P	19 03 29.7	+0.5
ILAR	Eielson Array	85.96	13	P	P	19 03 33.8	-0.7
	comp=Z,1.4nm,0.4s,baz=221,slow=5.1,SNR=24						
TX31	Lajitas Ar. Si	86.06	58	P	P	19 03 36.3	+0.4
TX31				IAmb	IAmb	19 03 39.4	
	comp=Z,24nm,1.1s						
TX32	Lajitas Array	86.06	58	P	P	19 03 36.0	+0.1
TX32				IAmb	IAmb	19 03 39.4	
	comp=Z,8.2nm,1.1s						
TXAR	Lajitas Array	86.06	58	P	P	19 03 38.4	+2.4
	comp=Z,4.1nm,0.7s,baz=220,slow=6.3,SNR=38						
TXAR	Lajitas Array	86.06	58	P	P	19 03 36.7	+0.8
XAN	Xi'an	86.28	307	P	P	19 03 38.3	+1.5
XAN				pP	pP	19 05 36.1	-5.5
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MCMT	McKenzie Canyo	86.31	40	P	P	19 03 37.3	+0.4
REDW	Red Top Meadow	86.86	42	P	P	19 03 39.1	-0.4
REDW				IAmb	IAmb	19 03 42.0	
	comp=Z,11nm,1.2s						
HHC	Hu-ho-hao-te	87.30	314	*e*P	P	19 03 40.4	-1.1
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,6.2s						
BW06	Boulder Array	87.42	43	P	P	19 03 42.5	+0.3
BW06				IAmb	IAmb	19 03 44.0	
	comp=Z,18nm,1.6s						
PD31	Pinedale Array	87.42	43	P	P	19 03 42.5	+0.3
PD31				IAmb	IAmb	19 03 44.0	
	comp=Z,14nm,1.6s						
PDAR	Pinedale Array	87.42	43	P	P	19 03 43.2	+1.0
	comp=Z,2.4nm,0.6s,baz=220,slow=3.5,SNR=19						
PDAR	Pinedale Array	87.42	43	P	P	19 03 41.9	-0.3
YHH	Holmes Hill	87.53	41	P	P	19 03 44.0	+1.3
YHH				IAmb	IAmb	19 03 46.6	
	comp=Z,9.5nm,1.4s						
PAYG	Puerto Ayora	88.04	90	P	P	19 03 44.0	-1.5
CMAR	Chiang Mai Arr	88.88	290	P	P	19 03 51.0	+1.7
	comp=Z,0.5nm,0.4s,baz=110,slow=3.3,SNR=10						
CMAR	Chiang Mai Arr	88.88	290	P	P	19 03 50.5	+1.3
YKA	Yellowknife Ar	94.41	25	P	P	19 04 13.4	-0.2
	comp=Z,0.5nm,0.5s,baz=237,slow=4.6,SNR=6.9						
BOAB	BOACO BROADBAN	96.36	79		PKKPdf	19 21 00.6	-5.6
JTS	Las Juntas de	96.40	81		PKKPdf	19 21 02.8	-3.3
S39A	Bolivar	97.04	53	PP	PP	19 08 26.1	-6.0
S39A					PKKPbc	19 21 01.6	-2.9
SRBA	San Rafael, Bu	97.59	83		PKKPdf	19 21 07.3	+3.3
LVC	Limon Verde	100.18	118		PKKPdf	19 21 00.1	+0.9
BRTR	Keskin Array B	144.81	315	PKP	PKPbc	19 10 28.5	+0.4
	comp=Z,1.7nm,0.8s,baz=252,slow=2.9,SNR=3.8						
CRVS	Cervenica-Dubn	145.19	337	*e*PKP	PKPbc	19 10 29.1	+0.4
CLL	Collm	145.52	347	*i* PKPbc	PKPbc	19 10 29.7	+0.2
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	147.67	345	PKPbc	PKPbc	19 10 35.8	+0.2
	comp=Z,0.5nm,0.5s,baz=25,slow=3.2,SNR=7.3						

BJI **15** *19:01:43.8±0.0, 7°.31S×128°.02E, h260^{km}, mB4.7/27, mb4.4/56*
KLM **15** *19:01:44, 7°.29S×128°.14E, h243^{km}, mb5.1*
NEIC **15** *19:01:45.7±2.5, 7°.14S±0°.06×127°.81E±0°.05, h243^{km}±5^{km}, mb4.8/105, Error ellipse: s-maj=8.8km s-min=7.9km az=180.0*
IDC **15** *19:01:46.0±0.5, 7°.09S×127°.70E, h240^{km}±4^{km}, mb4.2/15, mb1 4.3/20, mb1mx4.2/27, mbtmp4.9/20, Error ellipse: s-maj=12.0km s-min=7.5km az=70.0*
DJA **15** *19:01:46.8±0.1, 7°S±2°×12°8E±°, h229^{km}±2^{km}, M4.7/61, mb5.1/61, mB5.2/48, MLv5.6/24, Mw(mB)4.7/48, MwMwp4.5/7, Mwp4.9/7*
GCMT **15** *19:01:46.7±0.3, 7°.13S±0°.02×127°.80E±0°.02, h246^{km}±2^{km}, MW5.0/76, Moment Tensor Solution. s38,c45; s76,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.30±.14; M$_{\theta\theta}$2.87±.15; M$_{\phi\phi}$-0.56±.16; M$_{r\theta}$-2.01±.12; M$_{\theta\phi}$1.67±.13; M$_{\phi r}$1.57±.13; Best double couple: M$_0$4.01800×10^{16} NP1:ϕ$_s$217.00000°, δ43.00000°, λ-145.00000°. NP2: ϕ$_s$100.00000°, δ67.00000°, λ-52.00000°. Principal axes: T 3.8590, Plg14.0000°, Azm164.0000°; N 0.3210, Plg34.0000°, Azm264.0000°; P -4.1760, Plg52.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 15 19:01:45.3±0.3, **7°.14S**±0°.03×**127°.77E**±0°.03, **h239**^{km}±3^{km}, **h240**^{km}**:pP-P, n334,** σ**1**^{s}**62**/385, **mb4.7**/82, **63C-27D, Fault plane solution: NP1:**ϕ$_s$115.62491°, δ82.46095°, λ-57.97340°. **NP2:**ϕ$_s$217.47098°, δ32.80986°, λ-165.98738°. **Principal axes:** T Plg30.1013°, Azm179.9387°; N Plg31.7173°, Azm290.9332°; P Plg43.3993°, Azm56.6957°; **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	3.35	39	P	Pn	19 02 44.0	+2.9
AAI	Ambon	3.45	7	P	Pn	19 02 44.8	+2.6
SAUI	Saumlaki	3.60	104	P	Pn	19 02 45.7	+1.8
SAUI				S	S	19 03 30.0	-0.3
SAUI	Saumlaki	3.60	104	Pn	Pn	19 02 44.6	+0.7
SAUI				Sn	S	19 03 26.5	-3.8
SAUI	Saumlaki	3.60	104	P	Pn	19 02 46.2	+2.3
MSAI	Masohi	3.94	17	P	Pn	19 02 50.7	+2.8
SOEI	Soe	4.33	233	P	Pn	19 02 53.5	+0.8
SOEI	Soe	4.33	233	Pn	Pn	19 02 53.6	+0.9
SOEI				Sn	S	19 03 43.4	-2.8
SOEI	Soe	4.33	233	P	Pn	19 02 54.9	+2.2
BATI	Baumata	5.08	233	P	Pn	19 03 03.3	+1.5
	2μm,0.3s,baz=105,slow=1.4,SNR=2394						
BATI				S	S	19 03 59.7	-2.8
	2μm,0.3s,baz=195,slow=3.4,SNR=14						
BATI	Baumata	5.08	233	P	Pn	19 03 02.7	+1.0
	22nm2μm59μm6μm,0.8s						
SANI	Sanana	5.35	341	P	Pn	19 03 07.2	+2.0
	5.4nm3μm14μm2μm,1.1s						
SANI	Sanana	5.35	341	P	Pn	19 03 07.9	+2.7
MMRI	Maumere	5.68	254	P	Pn	19 03 10.1	+0.9
	4.5nm2μm13μm1μm,0.6s						
MMRI	Maumere	5.68	254	Pn	Pn	19 03 09.5	+0.3
MMRI				Sn	S	19 04 15.8	-0.2
MMRI	Maumere	5.68	254	P	Pn	19 03 10.7	+1.5
DRS	Darwin Rock St	6.10	150	P	Pn	19 03 15.8	+1.3
FAKI	Fak Fak	6.12	47	P	Pn	19 03 15.8	+1.0
	1.6nm5μm262nm,0.8s						
FAKI	Fak Fak	6.12	47		Pn	19 03 14.2	-0.6
FAKI				Sn	S	19 04 21.1	-5.1
FAKI	Fak Fak	6.12	47	P	Pn	19 03 15.3	+0.5
EDFI	Ende, Flores	6.23	255	P	Pn	19 03 17.1	+0.9
	1.9nm2μm5μm656nm,0.7s						
LBMI	Labuha	6.46	358	P	Pn	19 03 22.0	+2.9
	2.5nm7μm696nm,1.1s						
MTN	Manton Dam	6.57	150	P	Pn	19 03 20.9	+0.5
	baz=6.7,SNR=1000						
MTN	Manton Dam	6.57	150		Pn	19 03 20.9	+0.5
MTN	Manton Dam	6.57	150	P	Pn	19 03 21.3	+0.9
SIJI	Sorong	7.14	29	P	Pn	19 03 28.1	+0.4
	45nm,0.3s,baz=199,slow=7.9,SNR=196						
SIJI				S	S	19 04 45.6	-4.0
	15nm,0.3s,baz=129,slow=23,SNR=15						
SWI	Sorong	7.14	29	P	Pn	19 03 28.1	+0.5
KDU	Kakadu	7.21	140	P	Pn	19 03 28.8	+0.3
	baz=7.3,SNR=1000						
KDU				S	S	19 04 44.8	-6.3
	baz=7.3						
KDU	Kakadu	7.21	140	P	Pn	19 03 29.1	+0.6
BSSI	Bau Bau, Buton	7.29	277	P	Pn	19 03 32.8	+3.2
	0.6nm1μm151nm,1.1s						
BASI	Baing, Sumba	7.74	246	P	Pn	19 03 34.9	-0.4
	6.9nm1μm10μm1μm,0.9s						
BKSI	Bulukumba	7.81	283	P	Pn	19 03 39.3	+3.1
	0.4nm952nm130nm,0.8s						
LUWI	Luwuk	7.84	320	P	Pn	19 03 39.4	+2.8
	1.3nm5μm453nm,1.2s						
LUWI	Luwuk	7.84	320		Pn	19 03 38.5	+1.9
LUWI	Luwuk	7.84	320	P	Pn	19 03 40.0	+3.4
TNTI	Ternate	7.87	357	P	Pn	19 03 39.1	+2.2
	0.7nm1μm3μm232nm,1.0s						
TNTI	Ternate	7.87	357		Pn	19 03 38.3	+1.4
TNTI	Ternate	7.87	357	P	Pn	19 03 39.4	+2.5
BNSI	Bone	8.09	289	P	Pn	19 03 42.3	+2.5
	0.3nm969nm90nm,0.8s						
KAPI	Kappang	8.24	284	P	Pn	19 03 43.3	+1.6
	1.9nm,0.3s,baz=155,slow=5.5,SNR=7.8						
KAPI				S	S	19 05 11.4	-4.0
	baz=235,slow=15,SNR=1.1						
KAPI	Kappang	8.24	284	P	Pn	19 03 45.3	+3.6
KMSI	Cibinong	8.54	334	P	Pn	19 03 49.3	+3.8
	1.0nm3μm292nm,0.9s						
KNRA	Kununurra	8.54	174	P	Pn	19 03 45.6	+0.1
	baz=8.6,SNR=1000						
KNRA				S	S	19 05 15.5	-6.9
	baz=8.6						
KNRA	Kununurra	8.54	174	Pn	Pn	19 03 45.5	+0.1
KNRA	Kununurra	8.54	174	P	Pn	19 03 46.2	+0.7
SPSI	Sidrap Palu	8.56	291	P	Pn	19 03 48.0	+2.3
	0.2nm822nm64nm,1.2s						
WBSI	Waikabubak, Su	8.65	253	P	Pn	19 03 45.3	-1.7
APSI	Ampana	8.69	315	P	Pn	19 03 50.9	+3.6
	1.0nm3μm256nm,1.3s						
TTSI	Tana Toraja	8.90	297	P	Pn	19 03 53.5	+3.5
	0.2nm1μm92nm,1.0s						
GTOI	Gorontalo	9.06	328	P	P	19 03 57.7	-2.1
	2μm207nm,0.9s						
MRSI	Marisa	9.54	322	P	Pn	19 04 01.4	+3.2
	8μm995nm,1.0s						
SRPI	Serui, Papua	9.93	59	P	Pn	19 04 04.3	+1.1
	3μm323nm,0.7s						
PLAI	Plampang	10.04	260	P	Pn	19 04 02.6	-1.9
BAKI	Biak	10.20	55	P	Pn	19 04 08.6	+2.0
	4μm582nm,1.0s						
TOLI2	Tolitoli	10.76	319	Pn	Pn	19 04 16.0	+2.4
TOLI2	Tolitoli	10.76	319	P	P	19 04 16.6	-2.1
MPSI	Mapaga	10.80	313	P	P	19 04 17.3	-2.0
	1μm2μm177nm,1.2s						
SGSI	Sangihe	10.98	348	P	P	19 04 22.5	+1.3
FITZ	Fitzroy Crossi	11.09	191	P	Pn	19 04 17.1	-0.6
	19nm,0.3s,baz=22,slow=11,SNR=106						
FITZ				S	S	19 06 18.5	-2.8
	44nm,0.3s,baz=278,slow=5.7,SNR=7.0						
FITZ	Fitzroy Crossi	11.09	191	P	Pn	19 04 16.7	-1.1
	baz=11,SNR=298						
BKB	Balikpapan	12.31	298	P	P	19 04 38.3	+2.3
	3μm307nm,1.2s						
BKB	Balikpapan	12.31	298	P	P	19 04 37.6	+1.6
BKB	Balikpapan	12.31	298	P	P	19 04 36.1	+0.1
SMKI	Samarinda	12.45	302	P	P	19 04 40.7	+3.1
GENI	Genyem	13.15	71	P	P	19 04 45.4	0.0
	7μm938nm,0.8s						
GENI	Genyem	13.15	71	P	P	19 04 45.8	+0.4
BBKI	Banjar Baru	13.38	285	P	P	19 04 49.7	+1.8
	90nm,1.4s						
JAGI	Jajag, Banyuwa	13.55	263	P	P	19 04 49.5	-0.4
	1μm65nm,0.7s						
JAGI	Jajag, Banyuwa	13.55	263	Pn	Pn	19 04 47.7	-0.8
JAGI	Jajag, Banyuwa	13.55	263	P	Pn	19 04 48.9	+0.4
JAY	Jayapura	13.68	71	P	P	19 04 51.6	+0.3
	3μm317nm,1.2s						
BLJI	Banyuglugur	14.07	267	P	P	19 04 57.4	+1.9
	37nm,0.8s						
WB0	Warramunga Arr	14.11	154		Pn	19 04 54.1	-1.0
MTKI	Muara Teweh, K	14.23	295	P	P	19 04 59.9	+2.5
	998nm34nm,0.9s						
WRAB	Tennant Creek	14.24	154	P	Pn	19 04 55.7	-1.0
WRAB	Tennant Creek	14.24	154	P	Pn	19 04 56.3	-0.4
WRA	Warramunga Arr	14.24	154	P	Pn	19 04 56.7	0.0
	65nm,0.3s,baz=330,slow=12,SNR=515						
WRA				S	S	19 07 32.6	-1.8
	45nm,0.3s,baz=329,slow=21,SNR=16						
WRA	Warramunga Arr	14.24	154	Pn	Pn	19 04 54.6	-2.2
WB2	Warramunga Arr	14.24	154		Pn	19 04 55.7	-1.1
DAV	Davao City (W)	14.28	351	P	P	19 04 58.0	+0.2
	44nm,0.3s,baz=180,slow=8.1,SNR=0.8						
KCP	Kidapawan	14.30	349	⇓ *i*P	P	19 04 59.0	+0.8
WR0	Warramunga Arr	14.34	153	P	Pn	19 04 56.8	-1.3
BUKP	Musuan	15.16	350	⇓ *e*P	Pn	19 05 11.8	+3.8
MYLDM	Lahad Datu	15.34	323		Pn	19 05 11.1	+1.1
PAGZ	Pagadian	15.51	344	⇓ *i*P	Pn	19 05 15.2	+3.0
MBWA	Marble Bar	15.96	208	P	P	19 05 16.8	+0.4
MBWA	Marble Bar	15.96	208	P	Pn	19 05 17.8	+0.4
PSA00	Pilbara Seismi	16.27	207	P	P	19 05 20.2	+0.5
PSA00	Pilbara Seismi	16.27	207	P	P	19 05 19.4	-0.3
PSA00				IAmb	IAmb	19 05 21.8	
	comp=Z,39nm,0.7s						
PSA00	Pilbara Seismi	16.27	207	P	Pn	19 05 21.3	+0.2
PCJI	Pacitan	16.48	265	P	Pn	19 05 23.2	-0.4
	comp=Z,68nm,0.6s						
COEN	Coen	16.59	115		P	19 05 23.9	+0.6
COEN	Coen	16.59	115	P	Pn	19 05 25.6	+0.7
PBKI	Pangkalan Bun	16.63	285	P	Pn	19 05 27.1	+1.7
	comp=Z,2μmcomp=Z,262nm,0.9s						
WOJI	Wonogiri, Jawa	16.71	267	P	Pn	19 05 27.7	+1.3
	comp=Z,1μmcomp=Z,30nm,0.9s						
UGM	Wanagama	17.11	266	P	P	19 05 28.3	-0.8
TBP	Tagbilaran	17.16	347	*e*P	Pn	19 05 31.5	-0.1
KKM	Kota Kinabalu	17.44	318	P	Pn	19 05 34.1	-1.0
KKM				IAmb	IAmb	19 05 46.7	
	comp=Z,66nm,1.0s						
AS31	Alice Springs	17.46	161	P	Pn	19 05 34.2	-0.9
ASAR	Alice Springs	17.46	161	P	Pn	19 05 34.8	-0.3
	comp=Z,313nm,0.3s,baz=336,slow=11,SNR=1332						
ASAR				S	S	19 08 37.0	-4.9
	comp=Z,2.6nm,0.3s,baz=334,slow=21,SNR=3.1						
ASAR	Alice Springs	17.46	161	P	Pn	19 05 34.0	-1.1
QIS	Mount Isa	17.59	141	P	Pn	19 05 36.2	-0.4
	baz=18,SNR=419						
QIS	Mount Isa	17.59	141	P	Pn	19 05 36.3	-0.4
CNOP	Candoni, Negro	17.61	343	⇑ *i*P	Pn	19 05 37.8	+0.9
STKI	Sintang	17.75	293	P	Pn	19 05 39.6	+1.0
	comp=Z,3μmcomp=Z,29nm,1.4s						
WRKA	Warakurna	17.81	178	P	Pn	19 05 38.6	-0.6
	baz=18,SNR=701						
WRKA	Warakurna	17.81	178	P	Pn	19 05 38.7	-0.5
SBUM	Sibu	18.20	301	P	Pn	19 05 44.0	+0.1
SBUM	Sibu	18.20	301	P	P	19 05 42.0	+1.1
SBUM				IAmb	IAmb	19 05 45.8	
	comp=Z,44nm,1.1s						
PMG	Port Moresby	19.32	98	P	Pn	19 05 56.0	-1.0
	comp=Z,8.5nm,0.3s,baz=297,slow=3.9,SNR=62						
PMG				S	S	19 09 27.2	+8.5
	comp=Z,0.1nm,0.3s,baz=298,slow=13,SNR=1.8						
PMG	Port Moresby	19.32	98	P	P	19 05 53.2	+0.2
PMG	Port Moresby	19.32	98	P	Pn	19 05 55.0	-2.1
PMG	Port Moresby	19.32	98	P	Pn	19 05 55.0	-2.1
KSM	Kuching	19.41	295	P	P	19 05 52.4	-1.4
KSM				IAmb	IAmb	19 06 02.1	
	comp=Z,38nm,0.9s						
KSM	Kuching	19.41	295	P	P	19 05 55.9	+2.1
MTSU	Mount Surprise	19.48	126	P	P	19 05 56.2	+1.6
	baz=20,SNR=50						
MTSU	Mount Surprise	19.48	126	P	P	19 05 56.2	+1.6
MANU	Manus Island	20.17	76	P	P	19 06 02.6	+0.5
GIRL	Giralia	20.19	219	P	P	19 06 02.1	-0.1
	baz=20,SNR=6.2						
GIRL	Giralia	20.19	219	P	P	19 06 01.4	-0.7
CBJI	Citeko	20.78	271	P	Pn	19 06 17.1	+2.6
TNG	Tangerang	21.00	271	P	P	19 06 09.3	-1.5
TNG				P	P	19 06 07.5	-3.3
MEEK	Meekatharra	21.26	203	P	P	19 06 13.3	0.0
	baz=21,SNR=82						
MEEK	Meekatharra	21.26	203	P	P	19 06 13.7	+0.4
OOD	Oodnadatta	21.88	161	P	P	19 06 20.3	+1.3
CTA	Charters Tower	22.07	128	P	P	19 06 23.3	+2.3
	comp=Z,11nm,0.6s,baz=299,slow=15,SNR=9.9						
CTA	Charters Tower	22.07	128	P	P	19 06 23.7	+2.7
CTAO	Charters Tower	22.07	128	P	P	19 06 21.2	+0.2
CTAO				IAmb	IAmb	19 07 07.5	
	comp=Z,45nm,0.8s						
CTAO	Charters Tower	22.07	128	P	P	19 06 23.0	+2.0
FORT	Forrest	23.52	179	P	P	19 06 35.1	+1.1
	baz=24,SNR=102						
FORT	Forrest	23.52	179	P	P	19 06 33.8	-0.2
FORT	Forrest	23.52	179	P	P	19 06 35.1	+1.1
MULG	Mulgathing	23.77	166	P	P	19 06 38.1	+1.8
INKA	Innaminka	23.90	151	P	P	19 06 39.5	+2.0
RABL	Rabaul	24.45	84	P	P	19 06 42.4	-0.3
RABL	Rabaul	24.45	84	P	P	19 06 44.7	+2.0
MORW	Morawa	24.46	205	P	P	19 06 43.3	+0.7
	baz=24,SNR=48						
MORW	Morawa	24.46	205	P	P	19 06 42.6	0.0
MORW	Morawa	24.46	205	P	P	19 06 44.4	+1.8
QLP	Quilpie	24.89	143	P	P	19 06 48.6	+2.1
	baz=25,SNR=6.8						
QLP	Quilpie	24.89	143	P	P	19 06 46.7	+0.2
LCRK	Leigh Creek	25.18	158	P	P	19 06 50.5	+1.5
BLDU	Ballidu	25.56	203	P	P	19 06 52.8	+0.3
	baz=26,SNR=22						
BLDU	Ballidu	25.56	203	P	P	19 06 52.9	+0.5
KLBR	Kellerberrin	26.07	200	P	P	19 06 57.6	+0.6
	baz=26,SNR=17						
KLBR	Kellerberrin	26.07	200	P	P	19 06 57.6	+0.6
	comp=Z,116nm,0.8s						
BBOO	Buckleboo	26.68	164	P	P	19 07 03.6	+1.1
	baz=27,SNR=82						
BBOO	Buckleboo	26.68	164	P	P	19 07 03.2	+0.7
BBOO	Buckleboo	26.68	164	P	P	19 07 03.9	+1.4
MUN	Mundaring	26.97	202	P	P	19 07 05.4	+0.4
	baz=27,SNR=5.4						
RK1H	Rockhampton Ha	27.16	129	P	P	19 07 08.5	+1.6
WHYH	Whyalla	27.33	162	P	P	19 07 09.7	+1.5
NWAO	Narrogin (SRO)	27.47	199	P	P	19 07 10.3	+0.9
RMQ	Roma	27.74	136	P	P	19 07 14.1	+2.2
STKA	Stephens Creek	27.79	154	P	P	19 07 13.7	+1.3
	comp=Z,16nm,0.4s,baz=331,slow=9.0,SNR=76						
STKA	Stephens Creek	27.79	154	P	P	19 07 13.5	+1.2
	baz=28,SNR=18						
STKA	Stephens Creek	27.79	154	P	P	19 07 12.5	+0.2
STKA				IAmb	IAmb	19 07 59.7	
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	27.79	154	P	P	19 07 13.7	+1.3
HTT	Hallett	28.14	160	P	P	19 07 17.0	+1.6
	baz=28,SNR=44						
HTT	Hallett	28.14	160	P	P	19 07 17.3	+1.9
EIDS	Eidsvold	28.71	132	P	P	19 07 21.9	+1.3
IPM	Ipoh	29.08	293	P	P	19 07 23.6	-0.3
CMSA	Cobar Meteorol	29.49	148	P	P	19 07 29.1	+1.7
	baz=30,SNR=36						
CMSA	Cobar Meteorol	29.49	148	P	P	19 07 29.1	+1.7
KULM	Kulim	29.74	294	P	P	19 07 30.6	+0.8
PSI	Prapat	30.43	288	P	P	19 07 36.1	+0.1
	comp=Z,5.7nm,0.8s,baz=100,slow=7.2,SNR=6.9						
PSI				pP	pP	19 08 23.2	+0.8
	comp=Z,7.2nm,0.7s,baz=168,slow=4.8,SNR=2.6						
YULB	Yu-li	30.99	348	P	P	19 07 39.3	-1.3
TPUB	Ta-pu	31.04	347	P	P	19 07 39.0	-2.1
UBPT	Khong Chiam	31.37	315	P	P	19 07 44.2	+0.2
UBPT				IAmb	IAmb	19 08 16.6	
	comp=Z,66nm,1.7s						
SSLB	Suanglung	31.45	348	P	P	19 07 42.2	-2.4
SSLB				IAmb	IAmb	19 07 51.8	
	comp=Z,27nm,1.1s						
ARPS	Mount Arapiles	32.17	158	P	P	19 07 53.0	+2.3
	baz=32,SNR=31						
ARPS	Mount Arapiles	32.17	158	P	P	19 07 53.1	+2.3
ARMA	Armidale	32.21	139	P	P	19 07 54.4	+3.1
	baz=32,SNR=5.9						
ARMA	Armidale	32.21	139	P	P	19 07 50.5	-0.9
ARMA	Armidale	32.21	139	P	P	19 07 53.4	+2.1
YHNB	Yeheng	32.22	349	P	P	19 07 50.8	-0.6
PATS	Pohnpei	33.48	66	P	P	19 08 00.6	-1.8
	baz=34						
BRAT	Ballarat	33.65	156	P	P	19 08 05.3	+1.8
JOW	Kunigami	33.77	1	P	P	19 08 04.0	-0.7
JOW	Kunigami	33.77	1	P	P	19 08 06.2	+1.5
	comp=Z,188nm,0.9s						
CAN	Canberra	34.16	148	P	P	19 08 09.1	+1.0
CAN				IAmb	IAmb	19 08 11.7	
	comp=Z,32nm,0.7s						
CAN	Canberra	34.16	148	P	P	19 08 11.1	+3.0
TOO	Toolangi	34.31	155	P	P	19 08 12.4	+3.1
	baz=34,SNR=16						
TOO	Toolangi	34.31	155	P	P	19 08 10.2	+0.9
TOO				IAmb	IAmb	19 08 13.5	
	comp=Z,55nm,1.3s						
TOO	Toolangi	34.31	155	P	P	19 08 12.6	+3.3
CNB	Canberra Magne	34.35	148	P	P	19 08 12.2	+2.5
	baz=34,SNR=6.2						
GEXS	Deakin Univers	34.36	157	P	P	19 08 12.1	+2.5
JCJ	Chichijima	36.78	22	P	P	19 08 29.6	-0.7
KOUNC	Koumac, New Ca	37.77	114	P	P	19 08 41.1	+2.3
CMAR	Chiang Mai Arr	38.15	312	P	P	19 08 43.5	+1.6
	comp=Z,0.8nm,0.4s,baz=344,slow=35,SNR=4.2						
CMAR				pP	pP	19 09 32.0	+2.2
	comp=Z,1.7nm,0.5s,baz=143,slow=6.7,SNR=2.3						
CMAR				PcP	PcP	19 10 53.0	+1.5
	comp=Z,1.9nm,0.5s,baz=162,slow=3.4,SNR=4.1						
CMAR				ScP	ScP	19 14 16.4	-0.1
	comp=Z,2.3nm,1.0s,baz=164,slow=3.4,SNR=6.8						
CMAR	Chiang Mai Arr	38.15	312	P	P	19 08 42.3	+0.4
CHTO	Chiang Mai	38.37	313	P	P	19 08 44.3	+0.5
CHTO	Chiang Mai	38.37	313	P	P	19 08 45.5	+1.7
JSU	Suzuyama	38.51	4	P	P	19 08 44.8	+0.1
GYA	Guiyang	39.17	329	⇑P	P	19 08 51.3	+0.9
GYA				pmax	pmax		
	comp=Z,14nm,0.9s						
SANVU	Saraoutou	39.49	106	P	P	19 08 53.0	-0.1
SANVU	Saraoutou	39.49	106	P	P	19 08 55.0	+1.9
WHN	Wuhan	39.61	342	⇑ *i*P	P	19 08 55.3	+1.5
WHN				pmax	pmax		
	comp=Z,90nm,1.1s						
NJ2	Nanjing	39.88	348	⇓P	P	19 08 56.3	+0.3
NJ2				pmax	pmax		
	comp=Z,34nm,0.9s						
NOUC	Port Laguerre	40.00	116	P	P	19 08 58.8	+1.6
DZM	Mont Dzumac	40.12	116	P	P	19 08 58.9	+0.6
DZM				IAmb	IAmb	19 09 02.1	
	comp=Z,16nm,0.8s						
DZM	Mont Dzumac	40.12	116	P	P	19 09 00.0	+1.7
JNU	Nakatsue	40.14	4	P	P	19 08 57.8	-0.5
JNU				IAmb	IAmb	19 08 59.1	
	comp=Z,35nm,0.9s						
JNU	Nakatsue	40.14	4	P	P	19 09 01.7	+3.5
ONTNC	Ouen Toro	40.19	116	P	P	19 08 59.6	+0.8
KMI	Kunming	40.27	324	⇑P	P	19 09 01.6	+2.0
KMI				pP	pwP	19 09 53.1	+0.2
KMI				pmax	pmax		
	comp=Z,17nm,0.7s						
YATNC	Mamie plateau,	40.51	116	P	P	19 09 03.5	+2.1
JMN	Monobe	41.05	8	P	P	19 09 04.6	-1.0
JMN				IAmb	IAmb	19 09 07.3	
	comp=Z,52nm,0.9s						
ENH	Enshi	41.12	336	P	P	19 09 06.2	0.0
PINNC	Pines Island,	41.16	116	P	P	19 09 06.2	-0.4
PINNC				IAmb	IAmb	19 09 10.2	
	comp=Z,63nm,1.0s						

MARNC	**Mare, Loyalty**	41.39	114	P	P	19 09 09.5	+0.9
JHS	**Saijyo**	42.21	7	P	P	19 09 15.0	+0.1
JWT	**Wachi**	42.80	9	P	P	19 09 20.1	+0.4
JWT				IAmb	IAmb	19 09 21.1	
	comp=Z,60nm,0.9s						
INU	**Inuyama**	43.15	11	P	P	19 09 22.2	-0.2
TJN	**Taejon**	43.28	360	P	P	19 09 25.1	+1.6
	comp=Z,366nm,1.6s						
JGF	**Kuroka**	43.46	11	P	P	19 09 24.1	-0.8
KSAR	**Wonju Array Be**	44.34	0	P	P	19 09 32.6	+0.7
KSAR				PcP	PcP	19 11 12.4	+0.9
KSRS	**Korea Array**	44.36	0	P	P	19 09 32.9	+0.9
	comp=Z,24nm,0.8s,baz=176,slow=10,SNR=58						
KSRS				PcP	PcP	19 11 11.6	+0.1
	comp=Z,4.4nm,0.8s,baz=186,slow=3.3,SNR=6.1						
INCN	**Inchon**	44.40	359	P	P	19 09 33.0	+0.7
INCN				IAmb	IAmb	19 09 37.2	
	comp=Z,29nm,0.9s						
KS19	**Wonju Array Si**	44.40	0	P	P	19 09 32.2	-0.1
KS19				IAmb	IAmb	19 09 35.1	
	comp=Z,30nm,0.8s						
MJAR	**Matsushiro Arr**	44.54	12	P	P	19 09 32.7	-0.8
	comp=Z,30nm,0.9s,baz=186,slow=9.4,SNR=23						
MJAR	**Matsushiro Arr**	44.54	12	P	P	19 09 33.4	-0.1
MAJO	**Matsushiro**	44.54	12	P	P	19 09 32.2	-1.2
MAJO				IAmb	IAmb	19 09 33.4	
	comp=Z,41nm,0.8s						
MAT	**Matsushiro**	44.54	12	P	P	19 09 31.8	-1.7
MJB9	**Matsu-Tunnel**	44.54	12	P	P	19 09 31.7	-1.8
XAN	**Xi'an**	44.67	338	P	P	19 09 34.6	0.0
XAN				pP	pwP	19 10 29.3	+1.3
XAN				pmax	pmax		
	comp=Z,23nm,0.9s						
JYT	**Yasato**	44.69	14	P	P	19 09 33.0	-1.6
JYT				IAmb	IAmb	19 09 34.1	
	comp=Z,22nm,0.7s						
JMM	**Marumori**	46.39	14	P	P	19 09 46.7	-1.2
JMM				IAmb	IAmb	19 09 51.1	
	comp=Z,41nm,0.8s						
SHL	**Shillong**	47.68	314	P	P	19 09 57.6	-0.7
SHL				PcP	PcP	19 11 22.4	-1.4
BJT	**Baijiatuau**	48.13	348	P	P	19 10 00.0	-1.2
BJT				IAmb	IAmb	19 10 02.4	
	comp=Z,29nm,1.2s						
BJI	**Beijing**	48.15	348	P	P	19 10 01.3	-0.1
BJI				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH	**Lanzhou**	48.52	334	⇓P	P	19 10 05.3	+0.8
LZH				pP	pwP	19 11 01.4	+2.7
LZH				sP	PcP	19 11 28.6	+2.0
LZH				pmax	pmax		
	comp=Z,30nm,1.6s						
JTM	**Tenmabayashi**	49.23	13	P	P	19 10 09.4	-0.2
JTM				IAmb	IAmb	19 10 10.9	
	comp=Z,50nm,0.9s						
HHC	**Hu-ho-hao-te**	50.02	344	*e*P	P	19 10 16.4	+0.7
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,6.1s						
MSVF	**Nonsavu**	50.08	107	P	P	19 10 15.4	-1.2
CN2	**Changchun**	50.74	358	*e*P	P	19 10 22.8	+1.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LSA	**Lhasa**	50.79	318	P	P	19 10 22.1	0.0
USA0B	**Ussuriysk Arra**	51.24	4	P	P	19 10 24.7	+0.1
USA0B				IAmb	IAmb	19 10 26.1	
	comp=Z,22nm,0.9s						
USRK	**Ussuriysk Ar.**	51.24	4	P	P	19 10 24.9	+0.4
	comp=Z,18nm,0.8s,baz=193,slow=7.0,SNR=21						
USRK	**Ussuriysk Ar.**	51.24	4	P	P	19 10 24.5	0.0
MDJ	**Mudanjiang**	51.54	2	P	P	19 10 27.2	+0.5
MDJ				IAmb	IAmb	19 10 28.7	
	comp=Z,46nm,1.4s						
MDJ	**Mudanjiang**	51.54	2	P	P	19 10 28.6	+1.8
	comp=Z,24nm,1.3s						
DGTI	**Dogotuki**	51.57	105	P	P	19 10 29.9	+2.3
JKA	**Kamikawa-asahi**	52.75	13	P	P	19 10 36.6	+0.9
JKA				IAmb	IAmb	19 10 37.0	
	comp=Z,25nm,1.0s						
JIRN	**Jiri**	53.02	313	*e*P	P	19 10 38.7	+0.2
GTA	**Gaotai**	53.05	333	⇓P	P	19 10 38.8	+0.6
GTA				pP	pwP	19 11 35.5	+1.5
GTA				sP	sP	19 12 02.3	+6.6
GTA				pmax	pmax		
	comp=Z,17nm,1.0s						
TUWZ	**Tuamarina**	53.27	137	P	P	19 10 40.3	+0.7
GUN	**Gumba**	53.39	313	*e*P	P	19 10 41.2	+0.1
	comp=Z,29nm,0.9s						
KHZ	**Kahutara**	53.45	139	P	P	19 10 42.1	+1.3
PKI	**Pulchoki**	53.55	312	*e*P	P	19 10 41.8	-0.4
	comp=Z,0.7nm,0.2s						
PKIN	**Phulchoki**	53.56	312	*e*P	P	19 10 42.1	-0.2
	comp=Z,7.1nm,0.5s						
KKN	**Kakani**	53.77	312	*e*P	P	19 10 43.7	0.0
DMN	**Daman**	53.79	312	*e*P	P	19 10 44.0	+0.1
BKZ	**Black Stump Fm**	54.09	134	P	P	19 10 46.8	+1.1
BKZ				IAmb	IAmb	19 11 02.6	
	comp=Z,55nm,1.7s						
MSWZ	**Moikau Station**	54.15	137	P	P	19 10 44.6	-1.4
URZ	**Urewera**	54.19	133	P	P	19 10 45.4	-1.0
URZ				IAmb	IAmb	19 10 52.5	
	comp=Z,17nm,0.7s						
GKN	**Gorkha**	54.36	312	*e*P	P	19 10 47.9	0.0
	comp=Z,2.9nm,0.2s						
HYB	**Hyderabad**	54.40	297	*i* P	P	19 10 48.0	-0.2
KOLN	**Koldanda**	55.00	311	*e*P	P	19 10 52.9	+0.4
	comp=Z,7.4nm,0.5s						
DANN	**Dangsing**	55.19	312	*e*P	P	19 10 54.0	0.0
YSS	**Yuzh-Sakhalins**	55.47	12	P	P	19 10 54.3	-0.9
YSS				IAmb	IAmb	19 11 11.3	
	comp=Z,66nm,1.4s						
PYUN	**Piuthan**	55.63	311	*e*P	P	19 10 57.1	+0.1
	comp=Z,44nm,1.1s						
ULN	**Ulaanbaatar**	57.74	344	P	P	19 11 11.4	0.0
ULN				IAmb	IAmb	19 11 13.6	
	comp=Z,20nm,1.1s						
ULN				PcP	PcP	19 11 60.0	-1.4
SONM	**Songino Array**	57.90	343	P	P	19 11 13.6	+1.2
	comp=Z,8.4nm,0.9s,baz=171,slow=6.3,SNR=50						
SONM				PcP	PcP	19 12 02.2	+0.3
	comp=Z,3.1nm,0.8s,baz=155,slow=3.9,SNR=4.9						
SONM	**Songino Array**	57.90	343	P	P	19 11 13.2	+0.8
SONM				IAmb	IAmb	19 11 14.5	
	comp=Z,13nm,1.0s						
SONM				PcP	PcP	19 12 00.7	-1.3
TLY	**Talaya**	62.14	343	P	P	19 11 40.7	-0.3
TLY				IAmb	IAmb	19 11 43.4	
	comp=Z,19nm,1.5s						
WMQ	**Urumqi**	62.32	328	*e*P	P	19 11 43.4	+1.0
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,77nm,4.1s						
PEA0B	**Petropavlovsk-**	65.16	19	P	P	19 12 01.2	+0.5
PEA0B				IAmb	IAmb	19 12 02.4	
	comp=Z,33nm,1.1s						
PETK	**Petropavlovsk-**	65.16	19	P	P	19 12 01.0	+0.3
	comp=Z,19nm,0.8s,baz=191,slow=5.2,SNR=28						
PETK	**Petropavlovsk-**	65.16	19	P	P	19 12 00.7	0.0
PET	**Petropavlovsk**	65.41	20	P	P	19 12 01.7	-0.5
PET				IAmb	IAmb	19 12 04.3	
	comp=Z,36nm,1.2s						
NIL	**Nilore**	65.64	312	P	P	19 12 03.4	-0.8
KSH	**Kashi**	66.64	319	P	P	19 12 12.0	+1.5
KSH				PcP	PcP	19 12 39.3	+1.5
KSH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MK31	**Makanchi Array**	67.14	328	P	P	19 12 12.3	-1.1
MKAR	**Makanchi Array**	67.14	328	P	P	19 12 13.8	+0.4
	comp=Z,5.5nm,0.8s,baz=120,slow=8.2,SNR=30						
MKAR				pP	pP	19 13 08.2	+1.2
	comp=Z,3.6nm,0.7s,baz=130,slow=7.2,SNR=3.7						
MKAR	**Makanchi Array**	67.14	328	P	P	19 12 12.9	-0.5
MKAR				PcP	PcP	19 12 39.0	-0.6
MKAR					pP	19 13 07.5	+0.4
MAKZ	**Makanchi**	67.32	328	P	P	19 12 13.7	-0.8
BOOM	**Boomskoye usch**	68.25	321	P	P	19 12 20.9	+0.3
YAK	**Yakutsk**	68.97	1	P	P	19 12 24.0	-0.4
MA2	**Magadan**	68.98	12	P	P	19 12 25.4	+0.9
MA2				IAmb	IAmb	19 12 26.3	
	comp=Z,18nm,0.9s						
KBL	**Kabul**	69.17	311	P	P	19 12 25.6	-0.8
KBL				pP	pP	19 13 19.2	-1.2
AAK	**Ala-Archa**	69.23	321	P	P	19 12 26.3	-0.3
AAK				pP	pP	19 13 21.1	+0.6
GAR	**Garm**	70.20	316	P	P	19 12 32.4	-0.2
GAR				IAmb	IAmb	19 12 35.3	
	comp=Z,17nm,1.1s						
GAR				pP	pP	19 13 26.4	-0.2
BTK	**Batken**	70.35	317	P	P	19 12 32.6	-0.7
ZAA0	**Zalesovo Array**	70.74	335	P	P	19 12 34.2	-1.1
ZAA0				IAmb	IAmb	19 12 36.0	
	comp=Z,42nm,1.8s						
ZAA0				pP	pP	19 13 29.8	+0.4
ZALV	**Zalesovo Beam**	70.74	335	P	P	19 12 34.9	-0.4
	comp=Z,6.8nm,0.8s,baz=128,slow=4.4,SNR=30						
ZALV				pP	pP	19 13 30.3	+0.8
	comp=Z,1.1nm,0.6s,baz=134,slow=42,SNR=2.3						
ZALV	**Zalesovo Beam**	70.74	335	P	P	19 12 34.3	-1.0
ZALV				pP	pP	19 13 32.1	+2.6
CHGR	**Chuyangaron**	70.86	315	P	P	19 12 35.8	-0.7
CHGR				IAmb	IAmb	19 12 37.6	
	comp=Z,18nm,1.1s						
KURK	**Kurchatov**	71.49	330	P	P	19 12 40.0	+0.1
KURK				IAmb	IAmb	19 12 41.2	
	comp=Z,18nm,0.8s						
KURK				pP	pP	19 13 35.4	+1.3
KKAR	**Karatay Array**	71.99	320	P	P	19 12 43.4	+0.3
VNDA	**Vanda**	72.59	173	P	P	19 12 47.0	+1.0
	comp=Z,2.0nm,0.7s,baz=321,slow=6.9,SNR=17						
VNDA	**Vanda**	72.59	173	P	P	19 12 46.0	0.0
MAW	**Mawson**	74.02	201	P	P	19 12 55.6	+1.2
	comp=Z,4.1nm,0.6s,baz=90,slow=9.5,SNR=10						
MAW	**Mawson**	74.02	201	P	P	19 12 55.6	+1.2
	baz=74,SNR=14						
MAW	**Mawson**	74.02	201	P	P	19 12 55.4	+0.9
HRA	**Herat**	74.30	309	P	P	19 12 57.3	+0.3
BRVK	**Borovoye**	77.08	329	P	P	19 13 11.5	-0.5
BRVK				pP	pP	19 14 07.7	+0.6
TIXI	**Tiksi**	78.62	0	P	P	19 13 18.2	-1.9
TIXI				IAmb	IAmb	19 13 20.8	
	comp=Z,14nm,0.8s						
TIXI				pP	pP	19 14 14.5	-0.9
NRIK	**Noril'sk**	81.16	347	P	P	19 13 34.4	+0.7
	comp=Z,11nm,0.9s,baz=138,slow=5.9,SNR=8.8						
NRIK	**Noril'sk**	81.16	347	P	P	19 13 32.8	-0.9
NRIK				IAmb	IAmb	19 13 35.5	
	comp=Z,14nm,1.0s						
NRIK				pP	pP	19 14 28.4	-1.1
ABKAR	**Akbulak array**	81.25	322	P	P	19 13 33.4	-1.3
ABKAR					pP	19 14 30.4	+0.1
ABKAR	**Akbulak array**	81.25	322	P	P	19 13 34.0	-0.6
ABKAR					pP	19 14 29.4	-0.8
SYO	**Syowa Base**	82.73	201	⇓*e*P	P	19 13 43.0	+1.0
SYO	**Syowa Base**	82.73	201	⇑*e*PcP	PcP	19 13 45.4	-0.9
QSPA	**South Pole Qui**	82.84	180	P	P	19 13 42.3	-0.5
QSPA				IAmb	IAmb	19 13 44.1	
	comp=Z,13nm,0.8s						
QSPA				pP	pP	19 14 39.1	-0.6
ARU	**Arti**	84.66	329	P	P	19 13 51.2	-0.7
ARU				IAmb	IAmb	19 13 53.6	
	comp=Z,15nm,1.1s						
ARU				pP	pP	19 14 48.8	+0.7
RAYN	**Ar Rayn**	85.78	294	P	P	19 13 57.8	-0.5
RAYN				IAmb	IAmb	19 13 59.3	
	comp=Z,7.7nm,0.9s						
RAYN				pP	pP	19 14 54.9	+0.3
TTA	**Tatalina**	90.09	26	P	P	19 14 17.5	-0.4
TTA				IAmb	IAmb	19 14 19.4	
	comp=Z,27nm,1.4s						
SIRT	**Sirnak**	90.60	308	P	P	19 14 20.1	-0.7
GURO	**Guroymak-BITLI**	91.07	309	P	P	19 14 22.6	-0.5
GURO				IAmb	IAmb	19 14 24.8	
	comp=Z,7.6nm,0.9s						
GURO					pP	19 15 18.8	-1.0
KBZ	**Khabaz**	91.18	314	P	P	19 14 23.4	+0.1
	comp=Z,2.6nm,0.9s,baz=71,slow=5.5,SNR=4.0						
MLY	**Manley**	92.83	25	P	P	19 14 29.8	-0.7
RND	**Reindeer**	93.36	27	P	P	19 14 31.0	-2.0
RND				IAmb	IAmb	19 14 33.0	
	comp=Z,15nm,0.9s						
COLD	**Coldfoot**	93.45	23	P	P	19 14 32.5	-0.7
COLD				IAmb	IAmb	19 14 34.1	
	comp=Z,8.7nm,1.2s						
WRH	**Wood River Hil**	93.86	26	P	P	19 14 33.7	-1.5
WRH				IAmb	IAmb	19 14 35.3	
	comp=Z,12nm,1.1s						
DHY	**Denali Highway**	93.98	27	P	P	19 14 34.8	-1.2
DHY				IAmb	IAmb	19 14 36.7	
	comp=Z,9.1nm,0.9s						
CCB	**Clear Creek Bu**	94.01	25	P	P	19 14 33.8	-2.0
CCB				IAmb	IAmb	19 14 35.6	
	comp=Z,13nm,1.2s						
H24K	**Noodor Dome**	94.14	24	P	P	19 14 35.7	-0.8
H24K				IAmb	IAmb	19 14 37.2	
	comp=Z,11nm,1.1s						
ILAR	**Eielson Array**	94.42	25	P	P	19 14 35.2	-2.4
	comp=Z,3.2nm,1.0s,baz=259,slow=4.0,SNR=11						
ILAR	**Eielson Array**	94.42	25	P	P	19 14 35.5	-2.1
PAX	**Paxson**	94.83	27	P	P	19 14 38.0	-1.8
PAX				IAmb	IAmb	19 14 40.4	
	comp=Z,8.6nm,1.1s						
SNAA	**Sanae**	95.01	194	P	P	19 14 40.4	-0.1
SNAA				IAmb	IAmb	19 14 42.4	
	comp=Z,4.1nm,0.8s						
KLMR	**Klimovskoe**	95.32	331	*e*P	P	19 14 39.3	-2.6
KLMR				AMP		19 14 42.3	
	comp=Z,26nm,1.5s						
KLMR				*e*pP	pP	19 15 39.6	+0.9
BMAR	**Burnt Mountain**	95.63	23	P	P	19 14 42.3	-0.9
YKA	**Yellowknife Ar**	108.84	26	PKiKP	PKiKP	19 19 45.2	-0.4
	comp=Z,1.1nm,0.7s,baz=293,slow=1.4,SNR=6.2						
GERES	**GERESS Array B**	111.10	320	PKiKP	PKiKP	19 19 50.0	-0.5
	comp=Z,0.6nm,0.6s,baz=90,slow=4.0,SNR=5.8						
PDAR	**Pinedale Array**	118.56	45	PKP	PKPdf	19 20 04.8	-0.4
	comp=Z,1.1nm,0.8s,baz=211,slow=1.7,SNR=7.3						
PDAR				PP	sPKPdf	19 21 27.8	-0.5
	comp=Z,0.4nm,0.8s,baz=349,slow=2.9,SNR=3.4						
PDAR				PKKPbc	PKKPbc	19 30 24.3	+0.3
	comp=Z,0.6nm,0.9s,baz=115,slow=4.1,SNR=3.5						
ULM	**Lac du Bonnet**	123.75	32	PKP	PKPdf	19 20 14.1	-0.5
	comp=Z,2.7nm,0.7s,baz=267,slow=3.3,SNR=3.3						
TORD	**Torodi Ar. Bea**	126.66	281	PKP	PKPdf	19 20 21.2	0.0
	comp=Z,2.8nm,0.9s,baz=51,slow=1.9,SNR=14						
TORD				pPKP	pPKPdf	19 21 21.7	+0.9
	comp=Z,0.9nm,1.1s,baz=292,slow=1.4,SNR=1.7						
TORD	**Torodi Ar. Bea**	126.66	281	PKPdf	PKPdf	19 20 21.0	-0.2
TXAR	**Lajitas Array**	126.89	59	PKP	PKiKP	19 20 22.0	+0.1
	comp=Z,0.7nm,0.7s,baz=242,slow=2.7,SNR=5.0						
SCHQ	**Schefferville**	131.01	11	PKP	PKiKP	19 20 28.9	-0.3
	comp=Z,2.8nm,0.8s,baz=0.0,slow=0.0,SNR=1.4						
SCHQ				SKPbc	SKPbc	19 23 28.4	-1.8
	comp=Z,12nm,0.9s,baz=329,slow=5.0,SNR=6.0						
CPUP	**Villa Florida**	146.37	172	PKPbc	PKPbc	19 20 58.0	-0.6
	comp=Z,15nm,1.0s,baz=164,slow=2.4,SNR=14						
CPUP				pPKPbc	pPKPab	19 22 01.2	+2.5
	comp=Z,4.0nm,0.7s,baz=188,slow=4.7,SNR=2.1						
LPAZ	**La Paz**	151.91	146	PKP	PKPdf	19 21 08.3	+1.4
	comp=Z,1.6nm,0.8s,baz=13,slow=1.7,SNR=4.3						
LPAZ				PKPbc	PKiKP	19 21 14.3	+0.4
	comp=Z,5.5nm,0.8s,baz=150,slow=2.1,SNR=12						
LPAZ				PKPab	PKPab	19 21 24.1	+0.5
	comp=Z,18nm,0.7s,baz=194,slow=4.0,SNR=25						

ROM 15 19:15:41.7±0.1**,43°.041N**±0°.003×**12°.652E**±0°.010**,**
h8^{km},Md0.7/2 **Error ellipse: s-maj=0.8km s-min=0.3km**
az=274.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASSB	**Assisi San Ben**	0.01	68	P	Pg	19 15 43.5	+0.2
ASSB				S	Sg	19 15 44.5	+0.1
ASSB				AML	AML		
	comp=E,372µm,0.3s						
ASSB				AML	AML		
	comp=N,288µm,1.1s						
ASSB				END			
ATCC	**AVT- Casa Cast**	0.14	356	P	Pg	19 15 45.5	+0.6
ATCC				S	Sg	19 15 48.1	+1.0
ATCC				END			
MOMA	**Monte Martano**	0.24	194	P	Pg	19 15 47.8	+1.1
MOMA				S	Sg	19 15 51.4	+1.5
SNTG	**Esanatoglia**	0.30	44	P	Pb	19 15 48.6	-0.8
SNTG				S	Sb	19 15 53.6	-0.8
FDMO	**Fiordimonte**	0.32	91	P	Pb	19 15 49.1	-0.5
ATFO	**Monte Foce - G**	0.33	350	P	Pg	19 15 49.1	+0.8
ATFO				S	Sb	19 15 54.4	-1.0
AQU	**L'Aquila**	0.88	141	S	Sg	19 16 07.0	-3.1

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*SKO **15** 19:16:00.6,41°.37N×20°.38E,h15^{km}*
TIR 15 19:16:00.3,41°.36N×20°.38E,h5^{km}±1^{km},Md2.3,Ml1.7,
Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	**Peshkopia**	0.32	8	P	Pg	19 16 07.2	+0.6
	baz=7.0						
PHP				S	Sg	19 16 12.4	+1.5
	baz=7.0						
PHP				AMP			
	comp=N,0.7nm,0.3s,baz=7.0						
TIR	**Tirane**	0.39	268	*i* Pg	Pg	19 16 08.6	+0.7
TIR	**Tirane**	0.39	268	P	Pg	19 16 08.4	+0.5
	baz=268						
TIR				S	Sb	19 16 14.7	-1.4
	baz=268						
TIR				AMP			
	comp=N,0.3nm,0.6s,baz=268						
OHR	**Ohrid**	0.40	129	*i* Pg	Pb	19 16 09.3	-0.7
OHR				*i* Sg	Sb	19 16 16.9	+0.4
OHR				*e*Lg	Lg	19 16 17.1	
	comp=N,86nm,0.3s						
FNA	**Florina**	0.95	127	*i* Pg	Pb	19 16 19.3	0.0
FNA				*i* Sg	Sn	19 16 33.7	-0.6
FNA	**Florina**	0.95	127	P	Pb	19 16 19.3	0.0
	baz=127						
FNA				S	Sn	19 16 33.5	-0.9
	baz=127						
BCI	**Bajram Curri**	1.03	347	P	Pb	19 16 21.0	+0.3
	baz=347						
ULC	**Ulcinj**	1.04	305	*i* Pg	Pg	19 16 19.4	-1.0
PDG	**Podgorica**	1.36	322	*i* Pn	Pn	19 16 23.5	-2.4
BEY	**Berane**	1.55	347	*i* Pn	Pg	19 16 30.8	+0.8
GRG	**Griva**	1.58	104	*i* Pn	Pb	19 16 30.0	0.0
STON	**Ston**	2.50	308	*e*Pn	Pn	19 16 42.0	+0.4
STON				Sn	Sn	19 17 14.5	+2.0
LSTV	**Lastovo**	2.95	300	*e*Pn	Pn	19 16 50.5	+2.6
LSTV				Sn	Sb	19 17 30.7	+0.9

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*IDC **15** 19:31:51.8±1.4,22°.22S×173°.94W,h0^{km},mb4.2/6,*
mb1 4.4/9,mb1mx3.9/48,mbtmp4.3/9,ML4.5/3,Error
ellipse: s-maj=52.4km s-min=24.8km az=165.0
*NEIC **15** 19:31:52.0±2.9,22°.2S±0°.1×173°.66W±0°.09,h10^{km}±1^{km},*
mb4.8/14,Error ellipse: s-maj=18.8km s-min=12.5km
az=331.0
ISC 15 19:31:52.3±0.6**,22°.0S**±0°.1×**173°.67W**±0°.07**,h10^{km},n30,**
σ**1^s.98**/31**,mb4.6**/14**,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	4.57	51		Pn	19 33 01.3	-0.2
NIUE				Sn	Sn	19 33 49.6	-5.2
MSVF	**Nonsavu**	8.88	297	Pn	Pn	19 34 00.5	-0.3
	0.9nm,0.3s,baz=133,slow=18,SNR=11						
MSVF	**Nonsavu**	8.88	297		Pn	19 34 01.6	+0.8
RAR	**Rarotonga**	12.95	89	Pn	Pn	19 34 59.0	+2.5
	4.1nm,0.3s,baz=279,slow=7.9,SNR=15						
RAR	**Rarotonga**	12.95	89		Pn	19 34 56.7	+0.3
DZM	**Mont Dzumac**	18.44	266	P	P	19 36 07.0	-1.2
	0.3nm,0.3s,baz=72,slow=15,SNR=4.6						
DZM	**Mont Dzumac**	18.44	266		Pn	19 36 09.5	+1.3
LTZ	**Lake Taylor**	23.80	206	P	P	19 37 05.1	-0.1
LTZ				IAmb	IAmb	19 37 30.0	
	comp=Z,49nm,1.6s						
RPZ	**Rata Peaks**	25.07	207		P	19 37 16.5	-0.4
CTAO	**Charters Tower**	37.38	265	P	P	19 39 04.5	-1.1
CTAO				IAmb	IAmb	19 39 10.3	
	comp=Z,16nm,1.6s						
AS31	**Alice Springs**	48.12	257	P	P	19 40 31.1	-1.6
ASAR	**Alice Springs**	48.12	257	P	P	19 40 31.6	-1.1
	comp=Z,3.1nm,1.0s,baz=93,slow=8.2,SNR=22						
ASAR	**Alice Springs**	48.12	257	P	P	19 40 30.4	-2.4
WR0	**Warramunga Arr**	48.21	262	P	P	19 40 31.1	-2.4
WR0				IAmb	IAmb	19 40 35.1	
	comp=Z,10nm,1.5s						
WB0	**Warramunga Arr**	48.39	263	P	P	19 40 33.0	-1.8
WB0				IAmb	IAmb	19 40 33.9	
	comp=Z,10nm,1.5s						
WB2	**Warramunga Arr**	48.39	262	P	P	19 40 33.2	-1.7
WB2				IAmb	IAmb	19 40 34.1	
	comp=Z,9.9nm,1.3s						
WRAB	**Tennant Creek**	48.39	262	P	P	19 40 32.6	-2.2
WRAB				IAmb	IAmb	19 40 34.1	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	48.40	262	P	P	19 40 32.4	-2.5
	comp=Z,3.0nm,0.9s,baz=101,slow=8.3,SNR=15						
WRA	**Warramunga Arr**	48.40	262	P	P	19 40 33.1	-1.8
FORT	**Forrest**	52.42	247	P	P	19 41 05.1	-0.1
FORT				IAmb	IAmb	19 41 07.5	
	comp=Z,9.6nm,0.7s						
KNRA	**Kununurra**	54.59	266	P	P	19 41 19.0	-2.2
SOEI	**Soe**	60.58	271	P	P	19 42 05.9	+2.2
SOEI				IAmb	IAmb	19 42 24.7	
	comp=Z,13nm,1.1s						
CASY	**Casey**	64.34	206	P	P	19 42 25.5	-2.3
MJAR	**Matsushiro Arr**	73.87	321	P	P	19 43 27.3	-0.1
	comp=Z,2.0nm,0.5s,baz=116,slow=8.3,SNR=2.1						
PETK	**Petropavlovsk-**	78.84	343	P	P	19 43 55.9	+0.7
	comp=Z,1.4nm,0.6s,baz=157,slow=7.7,SNR=1.7						
PDAR	**Pinedale Array**	87.36	42	P	P	19 44 43.8	+3.9
	comp=Z,0.3nm,0.7s,baz=258,slow=4.5,SNR=2.7						
CMAR	**Chiang Mai Arr**	94.43	288	P	P	19 45 15.2	+2.2
	comp=Z,1.1nm,1.0s,baz=131,slow=3.7,SNR=6.8						
CMAR	**Chiang Mai Arr**	94.43	288	P	P	19 45 13.5	+0.5
AKASG	**Malin Array Be**	146.24	334	PKPbc	PKPab	19 51 34.3	+0.7
	comp=Z,1.0nm,0.5s,baz=46,slow=4.0,SNR=5.7						
AKASG	**Malin Array Be**	146.24	334		PKPdf	19 51 31.8	+0.1

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*TAP **15** 19:36:55.8,24°.51N×122°.35E,h51^{km},ML3.1,B*
*JMA **15** 19:36:55.3±0.1,24°.62N×122°.40E,h67^{km}±2^{km},M2.5*
ISC 15 19:36:56.4±1.2**,24°.51N**±0°.03×**122°.38E**±0°.02**,h53^{km}**±8^{km}**,**
n98,σ**0^s.40**/186**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao**	0.49	282	*i* P	Pn	19 37 07.3	-0.3
	baz=282						
TWC				*i* S	Sn	19 37 15.4	-0.4
	baz=282						
JYNG	**Yonagunijimaku**	0.52	96	P	Pn	19 37 08.2	+0.2
JYNG				S	Sn	19 37 17.3	+0.8
EWUT	**Wuta**	0.55	264	P	Pn	19 37 08.3	0.0
	baz=262						
EWUT				S	Sn	19 37 16.8	-0.2
	baz=262						
YOJ	**Yonaguni jima**	0.58	94	P	Pn	19 37 08.8	+0.1
	baz=93						
YOJ				S	Sn	19 37 18.3	+0.6
	baz=93						
YOJ	**Yonaguni jima**	0.58	94	P	Pn	19 37 08.8	+0.1
YOJ				*e*S	Sn	19 37 18.5	+0.8
ENA	**Nanau**	0.58	262	*i* P	Pn	19 37 08.8	0.0
	baz=261						
ENA				*e*S	Sn	19 37 18.5	+0.7
	baz=261						
NTC	**Toucheng**	0.60	305	P	Pn	19 37 08.6	-0.5
	baz=305						
NTC				S	Sn	19 37 18.1	-0.2
	baz=305						
EHP	**Heping Village**	0.61	251	*e*P	Pn	19 37 08.9	-0.2
	baz=249						
EHP				*e*S	Sn	19 37 18.2	-0.2
	baz=249						
TWB1	**Santiao Chiao**	0.61	325	*e*P	Pn	19 37 08.9	-0.2
	baz=326						
TWB1				*e*S	Sn	19 37 18.4	+0.1
	baz=326						
NDS	**Dongshan**	0.61	282	P	Pn	19 37 08.9	-0.2
	baz=281						
NDS				S	Sn	19 37 18.4	0.0
	baz=281						
ILA	**Ilan**	0.63	294	P	Pn	19 37 09.4	+0.1
	baz=294						
ILA				S	Sn	19 37 18.9	+0.2
	baz=294						
TWE	**Neicheng**	0.68	288	P	Pn	19 37 09.7	-0.2
	baz=288						
TWE				S	Sn	19 37 19.7	-0.2
	baz=288						

TIPB	Shuangxi baz=313	0.68	313	P	Pn	19 37 09.5	-0.5
TIPB	baz=313			S	Sn	19 37 19.3	-0.7
ENTT	Nioudou baz=280	0.75	280	P	Pn	19 37 11.0	+0.2
ENTT	baz=280			*e*S	Sn	19 37 21.4	0.0
ETL	Fush Village baz=242	0.77	243	*e*P	Pn	19 37 11.0	-0.1
ETL	baz=242			*e*S	Sn	19 37 21.5	-0.4
NWF	Wu-fen Shan baz=317	0.78	316	P	Pn	19 37 10.9	-0.4
NWF	baz=317			S	Sn	19 37 21.7	-0.5
NACB	Ninganchiao baz=244	0.79	245	*e*P	Pn	19 37 10.6	-0.7
NACB	baz=244			*e*S	Sn	19 37 22.0	-0.3
NDT	Datong Townshi baz=276	0.79	277	P	Pn	19 37 11.8	+0.4
NDT	baz=276			S	Sn	19 37 22.6	+0.2
TWD	Chiawan baz=237	0.83	239	P	Pn	19 37 11.3	-0.5
TWD	baz=237			S	Sn	19 37 22.6	-0.6
NWLT	Wulai baz=288	0.84	289	P	Pn	19 37 12.0	0.0
NWLT	baz=288			S	Sn	19 37 23.6	0.0
TWA	Mucha baz=303	0.86	303	P	Pn	19 37 11.9	-0.4
TWA	baz=303			*e*S	Sn	19 37 24.1	+0.1
ETLH	Xiulin Townshi baz=249	0.87	250	*e*P	Pn	19 37 12.1	-0.4
ETLH	baz=249			S	Sn	19 37 23.6	-0.7
HWA	Hwalien baz=231	0.88	233	*e*P	Pn	19 37 12.7	+0.1
HWA	baz=231			*e*S	Sn	19 37 24.7	+0.3
NHDH	Xindian Distri baz=300	0.90	301	P	Pn	19 37 12.3	-0.4
NHDH	baz=300			S	Sn	19 37 24.4	-0.5
NNSB	Datong baz=264	0.91	265	P	Pn	19 37 12.7	-0.4
NNSB	baz=264			*e*S	Sn	19 37 25.4	+0.1
NNS	Nan Shan baz=265	0.92	266	P	Pn	19 37 12.9	-0.3
NNS	baz=265			*e*S	Sn	19 37 24.8	-0.7
YHNB	Yeheng baz=280	0.92	280	P	Pn	19 37 13.4	+0.1
YHNB	baz=280			S	Sn	19 37 25.8	+0.2
NSK	Sanguang baz=280	0.94	281	P	Pn	19 37 13.5	+0.1
NSK	baz=280			S	Sn	19 37 26.2	+0.2
TAP	Taipei baz=304	0.95	304	*e*P	Pn	19 37 13.6	+0.1
TAP	baz=304			*e*S	Sn	19 37 25.8	-0.3
YM01	YM01 baz=311	0.97	311	*e*P	Pn	19 37 13.1	-0.7
YM01	baz=311			*e*S	Sn	19 37 26.0	-0.6
ANP	Anpu baz=311	1.03	311	*e*P	Pn	19 37 14.8	+0.1
ANP	baz=311			*e*S	Sn	19 37 28.2	+0.1
TWY	Chenhua baz=318	1.04	318	*e*P	Pn	19 37 14.9	+0.3
TWY	baz=318			*e*S	Sn	19 37 28.4	+0.2
TWS1	Kuangyinshan baz=304	1.05	304	*e*P	Pn	19 37 14.6	-0.3
TWS1	baz=304			*e*S	Sn	19 37 28.6	+0.1
FUSS	Fushou baz=255	1.06	256	*e*P	Pn	19 37 15.1	-0.1
FUSS	baz=255			*e*S	Sn	19 37 28.9	-0.3
NTST	Danshui baz=308	1.07	308	*e*P	Pn	19 37 14.8	-0.2
NTST	baz=308			*e*S	Sn	19 37 28.5	-0.4
WHF	Hehuan Shan baz=249	1.07	251	*e*P	Pn	19 37 15.4	-0.2
WHF	baz=249			*e*S	Sn	19 37 29.1	-0.6
ESL	Shilin baz=230	1.10	231	P	Pn	19 37 14.6	-0.9
ESL	baz=230			*e*S	Sn	19 37 29.4	-0.4
TWT	Tachien baz=256	1.12	257	*e*P	Pn	19 37 16.2	+0.3
TWT	baz=256			*e*S	Sn	19 37 30.7	+0.3
TDCB	Techi baz=256	1.14	257	P	Pn	19 37 16.2	+0.1
TDCB	baz=256			S	Sn	19 37 30.6	-0.2
NCUH	Zhongli baz=293	1.18	293	*e*P	Pn	19 37 16.8	+0.3
NCUH	baz=293			*e*S	Sn	19 37 31.8	+0.3
CHGB	Renai baz=247	1.18	248	P	Pn	19 37 16.9	+0.1
CHGB	baz=247			*e*S	Sn	19 37 31.7	-0.3
EGFH	Guangfu baz=225	1.20	226	*e*P	Pn	19 37 17.0	+0.2
EGFH	baz=225			*e*S	Sn	19 37 32.5	+0.3
OWD	Renai baz=242	1.23	244	*e*P	Pn	19 37 17.4	+0.1
OWD	baz=242			*e*S	Sn	19 37 32.3	-0.6
LIOB	Emei baz=276	1.25	277	*e*P	Pn	19 37 17.6	+0.1
LIOB	baz=276			*e*S	Sn	19 37 33.7	+0.4
IRIF	Iriomote-Funau	1.25	98	P	Pn	19 37 17.0	-0.5
IRIF				*e*S	Sn	19 37 33.1	-0.1
NSTT	Nanjuang baz=275	1.26	276	*e*P	Pn	19 37 17.8	+0.2
NSTT	baz=275			*e*S	Sn	19 37 33.5	0.0
WHP	Taichung City baz=259	1.32	260	*e*P	Pn	19 37 18.9	+0.3
WHP	baz=259			*e*S	Sn	19 37 35.0	-0.1
HGSD	Ruisui baz=219	1.33	221	*e*P	Pn	19 37 18.9	+0.2
HGSD	baz=219			*e*S	Sn	19 37 35.5	+0.2
VWDT	VWDT baz=235	1.35	237	*e*P	Pn	19 37 18.8	-0.1
VWDT	baz=235			*e*S	Sn	19 37 35.2	-0.6
EHY	Hungye baz=222	1.39	224	*e*P	Pn	19 37 19.7	+0.3
EHY	baz=222			*e*S	Sn	19 37 36.7	+0.1
WCS	Beigang Elemen baz=251	1.41	252	*e*P	Pn	19 37 20.0	+0.3
WCS	baz=251			*e*S	Sn	19 37 37.3	+0.2
NMLH	Miaoli baz=271	1.44	272	*e*P	Pn	19 37 20.5	+0.3
NMLH	baz=271			*e*S	Sn	19 37 38.3	+0.3
TWQ1	Liyutan baz=263	1.47	264	*e*P	Pn	19 37 20.6	+0.1
TWQ1	baz=263			*e*S	Sn	19 37 38.6	0.0
SSLB	Suanglung baz=240	1.48	241	*e*P	Pn	19 37 20.9	+0.2
SSLB	baz=240			*e*S	Sn	19 37 38.9	-0.1
SMLT	Sun Moon Lake baz=244	1.48	246	*e*P	Pn	19 37 21.0	+0.2
SMLT	baz=244			*e*S	Sn	19 37 39.1	0.0
YULB	Yu-li baz=220	1.48	222	*e*P	Pn	19 37 20.9	+0.2
YULB	baz=220			*e*S	Sn	19 37 38.9	-0.2
EYUL	Yuli baz=219	1.50	220	*e*S	Sn	19 37 39.4	-0.2
TYC	Yuchr baz=245	1.51	247	*e*P	Pn	19 37 21.2	+0.2
TYC	baz=245			*e*S	Sn	19 37 39.6	0.0
JKRS	Kuro-shima	1.51	100	P	Pn	19 37 21.1	0.0
JKRS				*e*S	Sn	19 37 39.9	+0.2
TCU	Taichung baz=256	1.59	257	*e*P	Pn	19 37 22.4	+0.3
TCU	baz=256			*e*S	Sn	19 37 41.6	+0.1
WHYT	Xinyi Township baz=239	1.61	240	*e*P	Pn	19 37 22.8	+0.3
WHYT	baz=239			*e*S	Sn	19 37 42.1	0.0
JIJ	Ishigaki jima	1.62	95	P	Pn	19 37 21.9	-0.6
JIJ				S	Sn	19 37 41.4	-0.8
FULB	Fuli baz=216	1.64	217	*e*S	Sn	19 37 42.6	-0.1
WJS	Zhushan baz=245	1.65	246	*e*P	Pn	19 37 23.4	+0.4
WJS	baz=245			*e*S	Sn	19 37 43.2	+0.1
WNT	Mingjian baz=247	1.67	248	*e*P	Pn	19 37 23.6	+0.4
WNT	baz=247			*e*S	Sn	19 37 43.1	-0.3
ALS	Alishan baz=234	1.75	236	*e*P	Pn	19 37 25.0	+0.5
ALS	baz=234			*e*S	Sn	19 37 45.4	-0.4
JISG	Ishigakijimahi	1.77	87	P	Pn	19 37 24.0	-0.5
JISG				*e*S	Sn	19 37 45.0	-0.8
CHN5	Tsauling baz=239	1.80	240	*e*P	Pn	19 37 25.6	+0.5
CHN5	baz=239			*e*S	Sn	19 37 46.9	+0.2
ELDTW	Lidau baz=222	1.81	224	*e*P	Pn	19 37 25.3	+0.1
ELDTW	baz=222			*e*S	Sn	19 37 46.7	-0.3
EDH	Donghe baz=212	1.81	213	*e*S	Sn	19 37 47.0	-0.1
WDLH	Douliu baz=243	1.87	244	*e*P	Pn	19 37 26.3	+0.4
WDLH	baz=243			*e*S	Sn	19 37 48.3	0.0
WRL	Guolierlin Hig baz=251	1.92	252	*e*P	Pn	19 37 27.0	+0.4
WRL	baz=251			*e*S	Sn	19 37 49.4	-0.3
LONT	Longtian baz=215	1.96	216	*e*S	Sn	19 37 50.8	+0.2
STYH	Taoyuan baz=227	1.98	228	*e*P	Pn	19 37 27.9	+0.5
STYH	baz=227			*e*S	Sn	19 37 51.0	-0.1
WTK	Tuku baz=245	1.99	246	*e*P	Pn	19 37 28.1	+0.5
WTK	baz=245			*e*S	Sn	19 37 51.1	-0.2
TPUB	Ta-pu baz=232	2.00	233	*e*P	Pn	19 37 28.2	+0.4
TPUB	baz=232			*e*S	Sn	19 37 51.6	0.0
WTP	Ta-pu baz=231	2.04	232	*e*P	Pn	19 37 28.8	+0.4
WTP	baz=231			*e*S	Sn	19 37 52.4	-0.4
CHY	Chiayi baz=240	2.05	241	*e*P	Pn	19 37 28.7	+0.3
CHY	baz=240			*e*S	Sn	19 37 52.7	0.0
TWGBT	Beinan baz=214	2.06	215	*e*P	Pn	19 37 29.1	+0.5
TWGBT	baz=214			*e*S	Sn	19 37 53.0	-0.1
TWG	Pinlang baz=214	2.06	216	*e*S	Sn	19 37 53.2	+0.1
JTJ	Tarama	2.12	86	P	Pn	19 37 29.5	+0.1
TWK	Hsinying baz=233	2.12	235	*e*P	Pn	19 37 29.8	+0.3
TWK	baz=233			*e*S	Sn	19 37 54.3	-0.4
CHN1	Nanshi baz=231	2.14	232	*e*P	Pn	19 37 30.1	+0.4
CHN1	baz=231			*e*S	Sn	19 37 54.8	-0.4
SNST	Tainan City baz=232	2.14	234	*e*S	Sn	19 37 54.9	-0.2
WSF	Szhu baz=245	2.15	247	*e*P	Pn	19 37 30.0	+0.3
WSF	baz=245			*e*S	Sn	19 37 54.7	-0.5
SGST	Jiashian baz=228	2.17	230	*e*P	Pn	19 37 30.3	+0.3
SGST	baz=228			*e*S	Sn	19 37 55.5	-0.3
SLGT	Liugui baz=225	2.19	227	*e*P	Pn	19 37 30.7	+0.4
SLGT	baz=225			*e*S	Sn	19 37 56.0	-0.2
ICHU	Yijhu baz=238	2.23	240	*e*S	Sn	19 37 56.8	-0.4
ECL	Taimali baz=213	2.31	215	*e*S	Sn	19 37 58.9	-0.2
SSD	Sandimen baz=221	2.37	223	*e*P	Pn	19 37 32.7	-0.1
SSD	baz=221			*e*S	Sn	19 38 00.0	-0.7
MASBT	Mashibuluo baz=219	2.47	221	*e*P	Pn	19 37 34.9	+0.7
MASBT	baz=219			*e*S	Sn	19 38 02.9	-0.4
EAST	Anshuo baz=212	2.54	214	*e*P	Pn	19 37 35.3	+0.2
EAST	baz=212			*e*S	Sn	19 38 03.8	-1.0
MATB	Ma-tsu baz=306	2.74	307	*e*P	Pn	19 37 38.6	+0.7
MATB	baz=306			*e*S	Sn	19 38 09.4	-0.4
PHUB	P'eng-hu baz=248	2.75	249	*e*S	Sn	19 38 09.0	-0.9
PTMZ	Houxiangcun baz=280	3.01	281	*e*P	Pn	19 37 42.3	+0.8
PTMZ	baz=280			*e*S	Sn	19 38 15.5	-0.8
XPSS	Dashiqiu baz=321	3.12	321	*e*P	Pn	19 37 43.8	+0.8
XPSS	baz=321			*e*S	Sn	19 38 18.7	-0.3
LYJJ	Jianjiangzhen baz=310	3.12	311	*e*P	Pn	19 37 43.9	+0.9
LYJJ	baz=310			*e*S	Sn	19 38 18.5	-0.6
KNMB	Chin-men Tao baz=269	3.63	270	*e*P	Pn	19 37 50.8	+0.7
KNMB	baz=269			*e*S	Sn	19 38 30.4	-1.3

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*IDC **15** 19:47:30.4±1.6, 8°.44N×71°.31W, h0^{km}, mb3.3/1, mb1 3.8/3, mb1mx3.4/31, mbtmp3.7/3, ML2.8/2, Error ellipse: s-maj=42.3km s-min=26.4km az=147.0*

*FUNV **15** 19:47:33.5, 8°.49N×71°.43W, h5^{km}, MW3.8*

ISC 15 19:47:33.0±1.1, **8°.49N**±0°.03×**71°.37W**±0°.02, **h11**^{km}±9^{km}, **n28,** σ**1^{s}.19**/51, **1C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	Socops	0.55	111	⇑*i*P	Pg	19 47 43.4	-0.3
SOCV				*e*S	Sg	19 47 51.0	+0.1
SDV	Santo Domingo	0.83	61	⇓*e*P	Pg	19 47 48.9	-0.2
SDV				*e*S	Sg	19 48 00.5	+0.6
SDV	comp=Z,316nm,0.3s			*i*		19 48 02.1	
CAPV	Capacho	1.12	237	*e*P	Pb	19 47 52.8	-1.7
CAPV				*e*S	Sb	19 48 08.6	-0.6
PAMC	Pamplona, Colo	1.74	229	*e*P	Pn	19 48 04.4	+0.8
PAMC				*e*S	Sb	19 48 28.6	+1.2
PAMC	comp=Z,220nm,0.4s			*i*		19 48 30.8	
MCQV	Machiques	1.94	324	*e*P	Pn	19 48 06.2	+0.4
MCQV				*e*S	Sn	19 48 29.8	-0.3
OCAC	Ocana	1.95	263	*e*P	Pn	19 48 06.5	+0.4
OCAC				*e*S	Sn	19 48 31.0	+0.4
OCAC	comp=Z,2μm,0.3s			*i*		19 48 34.0	
TAMC	Tame, Arauca	2.08	192	*e*P	Pb	19 48 10.4	-0.4
TAMC				*e*S	Sg	19 48 39.7	-0.2
ELOV	Elorza	2.38	128	*e*P	Pg	19 48 19.2	+0.5
ELOV				*e*S	Sb	19 48 45.6	+0.3
ELOV	comp=Z,1μm,0.6s			*i*		19 48 56.7	
LL1C	La Loma 1 Cana	2.40	296	*e*S	Sb	19 48 45.9	0.0
BARC	Barichara	2.60	224	*e*P	Pb	19 48 19.9	+0.1
BARC				*e*S	Sg	19 48 55.0	-1.7
BARC	comp=Z,79nm,0.4s			*i*		19 48 56.7	
LL5C	La Loma 5 El P	2.64	299	*e*S	Sb	19 48 53.0	+0.2
SMLC	San Martn de	2.69	277	*e*P	Pb	19 48 21.6	+0.4
SMLC				*e*S	Sb	19 48 52.7	-1.5
BRRC	Barranca, Sant	2.69	240	*e*P	Pb	19 48 21.1	-0.1
BRRC				*e*S	Sb	19 48 56.7	+2.4
BRRC	comp=Z,50nm,0.4s			*i*		19 48 59.6	
CRJC	Cerrejon, Guaj	2.93	329	*e*P	Pg	19 48 29.7	+0.5
CRJC				*e*S	Sn	19 48 54.6	-0.2
CRJC	comp=Z,97nm,0.3s			*i*		19 48 56.0	
RUSC	La Rusia	3.09	214	*e*P	Pn	19 48 23.7	+1.5
RUSC				*e*S	Sb	19 49 08.7	+2.6
RUSC	comp=Z,42nm,0.7s			*i*		19 49 14.1	
MAPV	Macapo	3.17	65	*e*P	Pn	19 48 24.4	+1.6
MAPV				*e*S	Sn	19 49 00.7	0.0
BAUV	El Baul	3.32	82	*e*P	Pn	19 48 26.4	+1.5
BAUV				*e*S	Sn	19 49 04.3	-0.1
ZARC	Zaragoza, Cauc	3.59	254	*e*P	Pn	19 48 28.9	+0.3
ZARC				*e*S	Sn	19 49 14.4	+3.3
PTBC	PUERTO BERRIO,	3.62	238	*e*P	Pn	19 48 28.1	-0.9
PTBC				*e*S	Sb	19 49 19.5	-1.5
PTBC	comp=Z,23nm,0.3s			*i*		19 49 27.4	
MONV	Montecano	3.71	22	*e*P	Pn	19 48 30.8	+0.5
MONV				*e*S	Sn	19 49 12.9	-1.2
SPBC	San Pablo de B	3.89	224	*e*P	Pg	19 48 47.5	0.0
BENV	Beln	4.00	68	*e*P	Pn	19 48 35.6	+1.3
BENV				*e*S	Sn	19 49 20.3	-1.0
SJCC	San Jacinto, C	4.01	291	*e*P	Pn	19 48 36.0	+1.5
SJCC				*e*S	Sn	19 49 22.7	+1.0
ROSC	El Rosal comp=Z,2.8nm,0.3s,baz=129,slow=20,SNR=2.3	4.66	219	Pn	Pn	19 48 43.5	-0.1
ROSC	comp=Z,4.4nm,0.3s,baz=230,slow=21,SNR=2.1			Sn	Sn	19 49 39.0	+1.1
MERV	Las Mercedes	5.07	81	*e*P	Pn	19 48 49.2	+0.3
MERV				*e*S	Sn	19 49 45.2	-2.3
PCRV	Puerto La Cruz comp=Z,0.8nm,0.3s,baz=12,slow=20,SNR=1.9	6.85	75	Pn	Pn	19 49 12.6	-0.9
PCRV	comp=Z,1.8nm,0.3s,baz=88,slow=21,SNR=5.7			Sn	Sn	19 50 33.0	+1.4
PDAR	Pinedale Array comp=Z,0.2nm,0.4s,baz=125,slow=8.9,SNR=6.2	47.80	322	P	P	19 56 10.8	0.0
WRA	Warramunga Arr comp=Z,0.3nm,0.9s,baz=110,slow=2.8,SNR=4.9	152.65	243	PKPbc	PKPbc	20 07 29.1	-1.6

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*NNC **15** 19:52:44.4±5.9, 37°.89N×71°.36E, h0^{km}, mb4.2, mpv4.0, Error ellipse: s-maj=46.2km s-min=32.0km az=173.0*

*IDC **15** 19:52:44.9±4.3, 37°.81N×71°.09E, h136^{km}±44^{km}, mb1 3.1/6, mb1mx2.8/43, mbtmp3.6/6, Error ellipse: s-maj=52.1km s-min=18.3km az=154.0*

ISC 15 19:52:38.6±1.0, **37°.30N**±0°.08×**71°.45E**±0°.07, **h150**^{km}**, n22,** σ**2^{s}.31**/28**, 4C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu SNR=27	5.12	19	P	Pn	19 53 55.7	+1.8
UCH	Uchtor SNR=7.9	5.46	25	P	Pn	19 53 60.0	+1.5
EKS2	Erkin-Say SNR=11	5.64	18	P	Pn	19 54 03.0	+2.4
AAK	Ala-Archa 5.3nm,0.3s,baz=187,slow=6.0,SNR=51	5.82	23	P	Pn	19 54 05.1	+2.1
AAK	4.1nm,0.3s,baz=320,slow=23,SNR=18			S	Sn	19 55 07.3	-1.6
AAK	Ala-Archa SNR=26	5.82	23	P	Pn	19 54 05.1	+2.1
AAK	Ala-Archa 7.4nm,0.4s	5.82	23	⇑P	Pn	19 54 05.0	+2.1
AAK	16nm,0.6s			⇑S	Sn	19 55 07.4	-1.5
KK08	Karatay Array 7.6nm,0.3s,baz=176,slow=13	5.84	353	⇓P	Pn	19 54 05.8	+2.7
KK08	3.9nm,0.4s,baz=172,slow=23			⇑S	Sn	19 55 07.2	-2.1
CHMS	Chumysh SNR=14	6.22	23	P	Pn	19 54 10.2	+1.9
USP	Ospenovka SNR=15	6.40	20	P	Pn	19 54 12.4	+1.8
GEYT	Alibeck 0.6nm,0.3s,baz=87,slow=14,SNR=2.7	10.60	277	P	Pn	19 55 09.2	+2.7
GEYT	0.7nm,0.3s,baz=88,slow=15,SNR=4.1			S	Sn	19 57 02.0	-1.7
MKAR	Makanchi Array 0.0nm,0.3s,baz=243,slow=14,SNR=1.4	12.43	37	P	Pn	19 55 34.1	+3.8
PYUN	Piuthan 6.8nm,0.3s	13.35	130	*e*P	Pn	19 55 39.9	-2.6
DANN	Dangsing 2.8nm,0.3s	13.66	127	*e*P	Pn	19 55 44.3	-2.2
KOLN	Koldanda 2.3nm,0.3s	13.96	129	*e*P	Pn	19 55 48.1	-2.2
KURBB	Kurchatov Arra 0.0nm,0.3s,baz=203,slow=11,SNR=5.5	14.25	19	P	P	19 55 56.5	+0.2
GKN	Gorkha 4.8nm,0.3s	14.46	126	*e*P	Pn	19 55 54.6	-1.8
AB31	Akbulak array 1.0nm,0.7s,baz=137,slow=14,SNR=4.4	14.57	329	⇑P	P	19 56 01.4	+1.5
AB31	0.5nm,0.4s,baz=149,slow=22,SNR=5.0			⇓S	Sn	19 58 39.1	+0.1
KKN	Kakani 0.6nm,0.2s	15.02	125	*e*P	Pn	19 56 02.3	-1.2
PKIN	Phulchoki 5.2nm,0.5s	15.24	126	*e*P	Pn	19 56 05.3	-0.9
JIRN	Jiri 6.4nm,0.3s	15.70	124	*e*P	Pn	19 56 11.0	-1.1
AKTO	Aktyubinsk 0.2nm,0.3s,baz=58,slow=20,SNR=2.1	16.28	328	P	Pn	19 56 17.8	-0.8
AKTO	0.1nm,0.3s,baz=294,slow=5.3,SNR=1.5			S	S	19 59 13.3	-6.0
ZALV	Zalesovo Beam 0.3nm,0.3s,baz=221,slow=11,SNR=4.6	19.04	25	P	Pn	19 56 51.8	+0.6

IDC 15 20:27:16.8±2.5, **3°.94S**×**130°.00E, h0**^{km}**, mb3.5**/1**, mb1 3.5**/3**, mb1mx3.3**/29**, mbtmp3.3**/3**, ML3.0**/2**, Error ellipse: s-maj=168.0km s-min=29.1km az=70.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.0nm,0.3s,baz=349,slow=12,SNR=2.4	16.46	165	Pn	Pn	20 31 07.3	-2.0
ASAR	Alice Springs 0.2nm,0.3s,baz=339,slow=9.7,SNR=10	19.97	169	P	Pn	20 31 51.7	-0.8
MKAR	Makanchi Array 0.2nm,0.4s,baz=117,slow=7.5,SNR=7.1	65.69	326	P	P	20 38 03.2	0.0

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*SJA **15** 20:37:52.6±0.7, 30°.77S×71°.79W, h14^{km}±3^{km}, ML4.2, MW4.0*

*NEIC **15** 20:37:57.7±2.2, 30°.79S±0°.03×71°.56W±0°.05, h35^{km}±7^{km}, mb4.4/11, ML4.3(GUC), Error ellipse: s-maj=6.9km s-min=4.0km az=103.0*

*IDC **15** 20:37:57.1±2.3, 30°.80S×71°.54W, h39^{km}±22^{km}, mb3.9/8, mb1 3.9/13, mb1mx3.8/39, mbtmp4.0/13, ML3.8/5, MS3.0/5, Ms1 3.0/5, ms1mx2.9/28, Error ellipse: s-maj=25.4km s-min=14.9km az=113.0*

*GUC **15** 20:37:58.5±0.7, 30°.79S×71°.42W, h39^{km}±5^{km}, ML4.3*

ISC 15 20:37:57.0±0.7, **30°.83S**±0°.03×**71°.63W**±0°.05, **h36**^{km}±1^{km}, **n130,** σ**2^{s}.04**/147**, mb4.1**/9**, 4C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.15	358	⇑*i*P	Pn	20 38 05.1	-1.6
CO06				*e*S	Sn	20 38 09.5	-6.4
CO06				IAML		20 38 10.9	
	comp=E,70µm,0.2s						
CO06	Fray Jorge	0.15	358		Pn	20 38 04.8	-1.9
CO06					Sn	20 38 09.6	-6.2
CO03	El Pedregal	0.81	91	⇓*i*P	Pn	20 38 11.1	-0.8
CO03				*e*S	Sn	20 38 20.2	-2.6
CO03	El Pedregal	0.81	91		Pn	20 38 11.0	-0.8
CO03				Sn	Sn	20 38 20.6	-2.2
CO03	El Pedregal	0.81	91	*e*P	Pn	20 38 11.0	-0.9
CO03				*e*S	Pn	20 38 11.0	-0.9
CO03				IAML		20 38 21.6	
	comp=Z,10µm,0.6s						
CO05	La Serena	0.96	21	*e*P	Pn	20 38 14.7	+0.7
CO05				*e*S	Sn	20 38 27.0	+0.6
CO05	La Serena	0.96	21		Pn	20 38 14.6	+0.7
CO05				Sn	Sn	20 38 23.8	-2.7
GO04	Tololo Observa	0.97	48	⇓*i*P	Pn	20 38 14.0	-0.2
GO04				*e*S	Sn	20 38 24.9	-2.0
GO04	Tololo Observa	0.97	48		Pn	20 38 13.2	-1.1
GO04				Sn	Sn	20 38 25.1	-1.7
GO04	Tololo Observa	0.97	48	*e*P	Pn	20 38 14.0	-0.2
GO04				*e*S	Sn	20 38 26.9	0.0
VA06	Catapilco	1.75	171	*e*P	Pn	20 38 25.1	+0.4
VA06				IAML		20 38 55.5	
	comp=E,4µm,0.3s						
AROD	Rodeo	1.97	71	*e*P	Pn	20 38 30.0	+1.9
AROD				*e*S	Sn	20 38 49.5	-2.3
LCO	Las Campanas	1.98	24	*i* P	Pn	20 38 29.0	+0.8
LCO				*e*S	Sn	20 38 52.6	+0.7
LCO	Las Campanas	1.98	24	Pn	Pn	20 38 28.9	+0.7
LCO				Sn	Sn	20 38 52.9	+1.0
LCO	Las Campanas	1.98	24	*e*P	Pn	20 38 29.0	+0.8
VA03	San Esteban	2.14	155	*e*P	Pn	20 38 31.6	+1.3
VA03				*e*S	Sn	20 38 57.6	+2.1
VA03				IAML		20 39 04.4	
	comp=N,2µm,0.5s						
VA03	San Esteban	2.14	155		Pn	20 38 31.4	+1.3
VA03				Sn	Sn	20 38 58.1	+2.5
VA03	San Esteban	2.14	155	*e*P	Pn	20 38 32.0	+1.8
VA03				*e*S	Sn	20 39 01.9	+6.3
VA03				IAML		20 39 03.4	
	comp=Z,998nm,0.6s						
VA01	Torpederas	2.19	180		Pn	20 38 31.3	+0.5
VA01	Torpederas	2.19	180	*e*P	Pn	20 38 31.6	+0.8
VA01				*e*P		20 38 34.0	
ROCH	El Roble	2.20	166	⇑*i*P		20 38 32.5	
ROCH				*e*P	Pn	20 38 32.1	+0.9
ROCH				IAML		20 39 05.2	
	comp=N,2µm,0.5s						
ROCH				IAML		20 39 05.5	
	comp=N,3µm,0.5s						
ROC1	El Roble	2.21	166	*e*P	Pn	20 38 32.0	+0.7
ROC1				*e*S	Sn	20 39 03.2	+5.8
RTLS	Leoncito	2.22	117	*e*P	Pn	20 38 34.0	+2.5
RTLS				IAML		20 39 24.2	
	comp=Z,576nm,0.5s						
ACCO	Cerro Coronel	2.22	85	*e*P	Pn	20 38 34.0	+2.5
ACDV	Cuesta del Vie	2.26	74	*e*P	Pn	20 38 35.0	+3.0
AUSP	Uspallata	2.37	127	*e*P	Pn	20 38 36.0	+2.5
PEL	Peldehue	2.45	161	⇑*i*P	Pn	20 38 35.8	+1.4
PEL				*e*S	Sn	20 39 04.1	+1.0
PEL				IAML		20 39 20.9	
	comp=E,1µm,0.5s						
PEL	Peldehue	2.45	161	Pn	Pn	20 38 35.9	+1.6
PEL	Peldehue	2.45	161	*e*P	Pn	20 38 36.0	+1.6
PEL				*e*S	Sn	20 39 07.5	+4.4
MT02	Curacav	2.46	170	*e*P	Pn	20 38 35.2	+0.6
MT02				*e*S	Sn	20 39 05.4	+2.0
MT02	Curacav	2.46	170		Pn	20 38 35.2	+0.6
MT02	Curacav	2.46	170	*e*P	Pn	20 38 36.0	+1.4
MT02				*e*S	Sn	20 39 10.8	+7.4
MT02				IAML		20 39 20.9	
	comp=Z,682nm,0.4s						
ZON	Zonda	2.63	107		Pn	20 38 38.0	+1.1
ZON	Zonda	2.63	107	*e*P	Pn	20 38 40.0	+3.1
ZON				IAML		20 39 29.3	
	comp=Z,728nm,0.6s						
AC04	Llanos de Chal	2.66	11	*e*P	Pn	20 38 38.2	+1.0
AC04				IAML		20 39 20.6	
	comp=E,751nm,0.5s						
AC04	Llanos de Chal	2.66	11	Pn	Pn	20 38 38.3	+1.1
AC04	Llanos de Chal	2.66	11	*e*P	Pn	20 38 38.5	+1.3
AC04				*e*S	Sn	20 39 10.0	+1.8
AC04				IAML		20 39 20.0	
	comp=Z,544nm,1.0s						
MT05	Renca	2.67	164	*e*P	Pn	20 38 38.4	+0.9
MT05	Renca	2.67	164		Pn	20 38 38.5	+1.1
MT05	Renca	2.67	164	*e*P	Pn	20 38 40.0	+2.5
MT05				IAML		20 39 26.3	
	comp=Z,672nm,0.6s						
RTLL	Cerro Villicun	2.75	101	*e*P	Pn	20 38 41.0	+2.4
RTLL				*e*S	Sn	20 39 32.8	+22
VA05	Santo Domingo	2.82	180	*e*P	Pn	20 38 40.0	+0.5
VA05				IAML		20 39 30.9	
	comp=E,1µm,0.6s						
VA05	Santo Domingo	2.82	180	Pn	Pn	20 38 39.7	+0.2
RTCV	Cerro Valdivia	2.84	112	*e*P	Pn	20 38 37.5	-2.3
RTCV				*e*S	Sn	20 39 37.0	+24
ASAL	Salagasta	2.96	127	*e*P	Pn	20 38 45.0	+3.5
ASAL				*e*S	Sn	20 39 32.0	+16
MT09	Talagante	2.99	170	⇑*i*P	Pn	20 38 43.4	+1.4
MT09				IAML		20 39 33.0	
	comp=N,1µm,0.4s						
MT09	Talagante	2.99	170		Pn	20 38 43.4	+1.4
MT01	Popeta	3.05	174	*e*P	Pn	20 38 43.5	+0.9
MT01				IAML		20 39 30.9	
	comp=E,589nm,0.5s						
MT01	Popeta	3.05	174		Pn	20 38 43.5	+0.9
MT01	Popeta	3.05	174	*e*P	Pn	20 38 44.0	+1.4
MT01				IAML		20 39 33.4	
	comp=Z,342nm,0.6s						
ARCO	CERRO ARCO	3.05	132	*e*P	Pn	20 38 47.0	+4.2
ARCO				*e*S	Sn	20 39 32.4	+14
ARCO				IAML		20 39 34.4	
	comp=Z,563nm,0.6s						
LMEL	Las Melosas	3.25	159	*e*P	Pn	20 38 48.2	+2.7
LMEL				*e*S	Sn	20 39 25.4	+2.4
LMEL				IAML		20 39 33.8	
	comp=N,721nm,0.6s						
BO04	La Punta	3.27	165	*e*P	Pn	20 38 47.0	+1.3
BO04				IAML		20 39 36.6	
	comp=E,802nm,0.4s						
AAGR	Agrelo	3.28	134	*e*P	Pn	20 38 50.0	+4.1
GO03	Copiap	3.44	21	*e*P	Pn	20 38 49.3	+1.2
GO03				*e*S	Sn	20 39 30.1	+2.4
GO03	Copiap	3.44	21	Pn	Pn	20 38 49.1	+1.0
GO03	Copiap	3.44	21	*e*P	Pn	20 38 49.7	+1.6
GO03				*e*S	Sn	20 39 33.0	+5.3
BO01	Tunca	3.58	173	*e*P	Pn	20 38 50.5	+0.5
BO01	Tunca	3.58	173	Pn	Pn	20 38 50.8	+0.8
BO01	Tunca	3.58	173	*e*P	Pn	20 38 52.0	+2.0
BO01				*e*S	Sn	20 39 35.0	+3.9
BO01				IAML		20 39 51.4	
	comp=Z,263nm,0.6s						
AVFE	Valle Fertil	3.60	88	*e*P	Pn	20 38 51.8	+1.6
AVFE				*e*S	Sn	20 39 38.0	+6.5
AVFE				IAML		20 39 44.9	
	comp=Z,610nm,0.5s						
VCA	Vinchina	3.63	56	*e*P	Pn	20 38 50.0	-0.8
VCA				*e*P		20 38 54.9	
VCA				*e*S	Sn	20 39 37.0	+4.5
VCA				IAML		20 39 50.2	
	comp=Z,689nm,0.6s						
BO02	Sierra Bellavi	4.02	170	*e*P	Pn	20 38 57.4	+1.3
BO02	Sierra Bellavi	4.02	170		Pn	20 38 56.9	+0.9
BO02	Sierra Bellavi	4.02	170	*e*P	Pn	20 38 58.0	+2.0
BO02				*e*S	Sn	20 39 47.0	+5.1
BO02				IAML		20 40 04.1	
	comp=Z,304nm,0.6s						
GO05	Huala	4.18	183	*e*P	Pn	20 38 57.0	-1.2
GO05	Huala	4.18	183		Pn	20 38 58.0	-0.2
GO05	Huala	4.18	183	*e*P	Pn	20 38 58.0	-0.2
GO05				*e*S	Sn	20 40 03.5	+18
ACLC	CERRO LA CRUZ	4.29	72	*e*P	Pn	20 38 52.4	-7.4
ACLC				*e*S	Sn	20 39 48.0	-0.7
ACLC				IAML		20 40 01.0	
	comp=Z,701nm,0.5s						
AC02	Maricunga	4.54	29	*e*P	Pn	20 39 05.0	+1.4
AC02	Maricunga	4.54	29	Pn	Pn	20 39 04.7	+1.1
AC02	Maricunga	4.54	29	*e*P	Pn	20 39 05.5	+1.9
AC02				IAML		20 40 26.0	
	comp=Z,327nm,0.6s						
RFA	San Rafael	4.75	147	*e*P	Pn	20 39 08.0	+1.9
RFA				*e*S	Sn	20 40 22.5	+23
RFA				IAML		20 40 32.4	
	comp=Z,130nm,0.6s						
ML02	Panimavida	4.93	178		Pn	20 39 09.8	+1.4
MRA	San Martin	5.29	109	IAML		20 40 51.9	
	comp=Z,212nm,0.7s						
PB14	IPOC Station P	6.27	10		Pn	20 39 25.6	-1.6
H03N1	Juan Fernandez	6.71	245	Pn	Pn	20 39 33.9	+1.2
	baz=114,slow=18,SNR=48						
H03N1				T	T	20 46 25.1	
	baz=72,slow=72						
H03N3	Juan Fernandez	6.72	245	Pn	Pn	20 39 34.5	+1.6
	baz=114,slow=18,SNR=35						
H03N3				T	T	20 46 24.4	
	baz=72,slow=72						
H03N2	Juan Fernandez	6.72	245	Pn	Pn	20 39 34.2	+1.4
	baz=114,slow=18,SNR=68						
H03N2				T	T	20 46 25.9	
	baz=72,slow=72						
H03S3	Juan Fernandez	6.85	242	Pn	Pn	20 39 35.1	+0.5
	SNR=8.7						
H03S3				T	T	20 46 36.7	
	baz=62						
H03S1	Juan Fernandez	6.85	242	Pn	Pn	20 39 34.8	+0.2
	SNR=12						
H03S1				T	T	20 46 34.9	
	baz=62						
H03S2	Juan Fernandez	6.87	242	Pn	Pn	20 39 35.0	+0.2
	SNR=12						
H03S2				T	T	20 46 32.9	
	baz=62						
PB10	IPOC Station P	7.35	8	Pn	Pn	20 39 42.0	+0.2
PB15	IPOC Station P	7.83	15		Pn	20 39 46.8	-1.7
LC01	Cunco	8.05	181	Pn	Pn	20 39 50.3	-1.1
PB06	IPOC Station P	8.29	13	Pn	Pn	20 39 54.4	-0.4
LVC	Limon Verde	8.54	17	Pn	Pn	20 39 58.0	-0.3
	comp=Z,0.4nm,0.3s,baz=200,slow=5.8,SNR=3.1						
LVC				Sn	Sn	20 41 38.2	+4.5
	comp=Z,1.0nm,0.3s,baz=29,slow=14,SNR=1.9						
LVC				LR	LR	20 43 06.0	
	comp=Z,76nm,21.1s,baz=200,slow=36						
LVC	Limon Verde	8.54	17		Pn	20 39 56.6	-1.7
PB04	IPOC Station P	8.56	9	Pn	Pn	20 39 58.3	-0.2
PB07	IPOC Station P	9.20	10		Pn	20 40 05.5	-1.8
PB09	IPOC Station P	9.24	14		Pn	20 40 07.0	-0.9
PLCA	Paso Flores	9.92	175	Pn	Pn	20 40 17.2	+0.1
	comp=Z,0.2nm,0.3s,baz=341,slow=12,SNR=6.6						
PLCA				Sn	Sn	20 42 11.4	+4.2
	comp=Z,0.1nm,0.3s,baz=270,slow=17,SNR=1.9						
PLCA	Paso Flores	9.92	175	Pn	Pn	20 40 17.4	+0.3
PB01	IPOC Station P	9.93	12	Pn	Pn	20 40 15.1	-2.1
LL04	Puerto Octay	10.08	183	Pn	Pn	20 40 17.8	-1.4
TRQA	Tornquist	10.74	135	Pn	Pn	20 40 28.0	-0.3
PB16	IPOC Station P	12.59	9	Pn	Pn	20 40 50.4	-3.6
ITQB	Itaqui	13.03	89		Pn	20 40 56.6	-2.8
CPUP	Villa Florida	13.34	74	Pn	Pn	20 41 03.2	-0.5
	comp=Z,0.2nm,0.3s,baz=297,slow=7.6,SNR=1.5						
CPUP				LR	LR	20 46 35.4	
	comp=Z,79nm,20.0s,baz=232,slow=39						
LPAZ	La Paz	14.82	13	Pn	Pn	20 41 24.6	0.0
	comp=Z,0.1nm,0.3s,baz=176,slow=2.1,SNR=7.5						
SIV	San Ignacio	17.64	36	P	Pn	20 41 59.7	-0.3
	comp=Z,0.3nm,0.3s,baz=201,slow=11,SNR=5.6						
SIV				LR	LR	20 50 14.4	
	comp=Z,46nm,19.9s,baz=35,slow=42						
NNA	Nana	19.36	344	LR	LR	20 47 21.8	
	comp=Z,26nm,20.6s,baz=209,slow=29						
ETMB	Extrema	21.50	15	P	P	20 42 43.9	+1.1
USHA	Ushuaia	24.10	175	P	P	20 43 09.1	+0.1
	comp=Z,3.7nm,0.7s,baz=310,slow=16,SNR=2.3						
ATAH	Atahualpa	24.41	344	LR	LR	20 50 54.1	
	comp=Z,62nm,18.9s,baz=299,slow=32						
BDFB	Brasilia	26.36	60	P	P	20 43 28.4	-1.6
	comp=Z,1.5nm,0.4s,baz=192,slow=9.1,SNR=4.3						
BDFB	Brasilia	26.36	60	IAmb	IAmb	20 43 29.4	
	comp=Z,3.6nm,0.7s						
PTGA	Pitinga	31.91	22	P	P	20 44 17.5	-1.7
	comp=Z,1.4nm,0.7s,baz=157,slow=16,SNR=2.9						
VA02	Isla de Pascua	33.17	267	P	P	20 44 32.0	+1.9
ESPZ	Base Esperanza	33.90	168	P	P	20 44 34.1	-2.0
BOAV	Boa Vista	34.69	20	P	P	20 44 43.2	-0.2
BOAV				IAmb	IAmb	20 45 04.3	
	comp=Z,6.1nm,1.3s						
SNAA	Sanae	54.40	159	P	P	20 47 19.6	-0.3
	comp=Z,1.6nm,0.6s,baz=277,slow=9.0,SNR=18						
SNAA	Sanae	54.40	159	P	P	20 47 19.9	-0.1
SNAA				IAmb	IAmb	20 47 22.9	
	comp=Z,8.3nm,1.6s						
QSPA	South Pole Qui	59.40	180	P	P	20 47 55.6	0.0
	comp=Z,1.2nm,0.5s,baz=171,slow=3.8						
QSPA	South Pole Qui	59.40	180	P	P	20 47 55.9	+0.3
QSPA				IAmb	IAmb	20 48 28.0	
	comp=Z,6.2nm,1.3s						
SHEL	Horse Pasture	61.48	92	P	P	20 48 10.5	+0.1
TXAR	Lajitas Array	67.16	330	P	P	20 48 47.5	+0.2
	comp=Z,0.6nm,0.7s,baz=129,slow=7.1,SNR=3.1						
DBIC	Dimbokro	73.85	72	P	P	20 49 28.0	-0.4
	comp=Z,3.0nm,0.6s,baz=236,slow=5.0,SNR=8.0						
DBIC	Dimbokro	73.85	72	IAmb	IAmb	20 49 28.5	
	comp=Z,3.8nm,0.7s						
TORD	Torodi Ar. Bea	82.81	70	P	P	20 50 17.3	-0.5
	comp=Z,1.1nm,0.7s,baz=278,slow=6.3,SNR=12						
TORD	Torodi Ar. Bea	82.81	70	P	P	20 50 17.8	0.0
TORD				IAmb	IAmb	20 50 36.7	
	comp=Z,1.9nm,0.8s						
WRA	Warramunga Arr	123.69	210	PKP	PKPdf	20 56 50.2	-1.2
	comp=Z,0.4nm,0.8s,baz=158,slow=1.6,SNR=2.1						
H11S2	WAKE ISLAND Hy	126.11	271	T	T	23 15 49.4	
	baz=116,slow=75,SNR=57						
H11S1	WAKE ISLAND Hy	126.12	271	T	T	23 15 47.3	
	baz=116,slow=75,SNR=47						
H11S3	WAKE ISLAND Hy	126.12	271	T	T	23 15 50.3	
	baz=116,slow=75,SNR=60						
H11N3	WAKE ISLAND Hy	126.44	273	T	T	23 16 08.7	
	baz=116						
H11N1	WAKE ISLAND Hy	126.45	273	T	T	23 16 10.2	
	baz=116						
H11N2	WAKE ISLAND Hy	126.46	273	T	T	23 16 09.9	
	baz=116						
ZALV	Zalesovo Beam	151.33	29	PKPbc	PKPbc	20 57 46.0	-0.2
	comp=Z,1.8nm,0.7s,baz=311,slow=4.0,SNR=9.5						
ZALV	Zalesovo Beam	151.33	29		PKPbc	20 57 46.0	-0.2

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*TUL **15** 20:42:07.6±2.0, 36°.53N±0°.02×98°.59W±0°.04, h5^{km}±6^{km}, ML3.2, mb_Lg2.8/45(NEIC), Error ellipse: s-maj=4.1km s-min=2.3km az=93.0*

NEIC 15 20:42:07.1±1.7**, 36°.52N**±0°.02×**98°.61W**±0°.02**, h5**^{km}±1^{km}**, Error ellipse: s-maj=3.5km s-min=2.9km az=50.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.34	246		Pb	20 42 14.9	-0.8
U32A				Sg	Sg	20 42 19.9	+1.6
OK032	Salt Plains WL	0.43	49	Pg	Pg	20 42 16.0	+0.6
OK032				Sg	Sg	20 42 21.9	+0.9
CROK	Carrier	0.51	92	Pg	Pg	20 42 17.5	+0.6
CROK				Sg	Sg	20 42 23.7	+0.3
KAN14	Manchester OK	0.68	50	Pg	Pg	20 42 20.5	+0.3
KAN14				Sg	Sg	20 42 28.2	-0.8
GC02	Grant County #	0.69	61	Pg	Pg	20 42 20.7	+0.3
GC02				Sg	Sg	20 42 29.9	+0.6
KAN10	Anthony SW Sta	0.73	34	Pg	Pg	20 42 21.4	+0.2
KAN10				Sg	Sg	20 42 31.2	+0.6
KAN16	Harper SW Stat	0.83	32	Pg	Pg	20 42 22.5	-0.5
KAN16				Sg	Sg	20 42 34.2	+0.4
KAN05	Bluff City Nor	0.83	45	Pg	Pg	20 42 22.5	-0.6
KAN05				Sg	Sg	20 42 34.2	+0.2
KAN17	Caldwell West	0.86	52		Pg	20 42 23.4	-0.2
KAN17				Sg	Sg	20 42 35.0	+0.3
KAN08	Anthony NE Sta	0.87	36	Pg	Pg	20 42 24.2	+0.4
KAN08				Sg	Sg	20 42 35.8	+0.6
KAN12	Harper NE Stat	0.92	32		Pg	20 42 24.8	+0.1
KAN12				Sg	Sg	20 42 37.3	+0.7
KAN01	Argonia South	0.93	47	Pg	Pg	20 42 25.0	0.0
KAN01				Sg	Sg	20 42 37.3	+0.3
KAN06	Argonia West S	0.94	40		Pg	20 42 25.3	+0.1
KAN06				Sg	Sg	20 42 37.8	+0.3
KAN09	Caldwell North	1.01	52	Pg	Pg	20 42 26.1	-0.3
KAN09				Sg	Sg	20 42 39.6	+0.1
KAN13	South Haven SW	1.03	61	Pg	Pg	20 42 26.5	-0.4
KAN13				Sg	Sg	20 42 40.4	0.0
BLOK	Blackwell	1.15	78	Pg	Pg	20 42 28.9	-0.3
OK029	Liberty Lake	1.18	127	Pg	Pg	20 42 29.2	-0.5
OK029				Sg	Sb	20 42 45.6	0.0
BCOK	Bluff Creek, N	1.18	136		Pg	20 42 29.1	-0.7
BCOK				Sg	Sb	20 42 45.8	+0.1
OK025	Westminster Rd	1.39	132		Pn	20 42 33.1	-0.1
OK025				Sn	Sn	20 42 52.0	0.0
OK031	S. Brethren Rd	1.54	111	Pn	Pn	20 42 35.7	+0.4
QUOK	Quay	1.58	102	Pn	Pn	20 42 35.9	+0.1
FNO	Franklin	1.60	142		Pb	20 42 36.6	-0.5
T35A	Sooner Cattle	1.73	76		Pn	20 42 36.9	-1.0
R32A	Long Quarter,	1.90	358		Pn	20 42 39.6	-0.7
W35A	Tecumseh	1.96	134		Pn	20 42 41.1	+0.1
X34A	Smith Ranch, M	2.02	161		Pn	20 42 42.2	+0.4
X34A				IAmb_Lg		20 43 13.7	
	comp=Z,58nm,1.0s						
TUL1	Leonard	2.36	104	Pn	Pn	20 42 46.1	-0.4
TUL1				IAmb_Lg		20 43 25.2	
	comp=Z,34nm,0.8s						
CBKS	Cedar Bluff	2.46	339	Pn	Pn	20 42 46.6	-1.3
LOOK	Love County	2.78	155		Pn	20 42 52.4	+0.1
AMTX	Amarillo	2.98	238		Pn	20 42 53.7	-1.5
KSU1	Kansas State U	3.02	31	IAmb_Lg		20 43 42.9	
	comp=Z,23nm,0.8s						
X37A	Clayton	3.27	125		Pn	20 42 57.9	-1.1
Z35A	Perchaven, San	3.37	160	Pn	Pn	20 43 00.2	-0.2
U38A	Gravette	3.41	90		Pn	20 43 00.2	-0.7
U38A				IAmb_Lg		20 43 58.9	
	comp=Z,27nm,0.8s						
HHAR	Hobbs	3.78	92		Pn	20 43 05.4	-0.6
ABTX	Abilene, Hawle	3.98	193		Pn	20 43 07.8	-1.0
KSCO	Kaye Shedlock’	4.04	309	Pn	Pn	20 43 09.6	-0.1
KSCO				IAmb_Lg		20 44 17.7	
	comp=Z,24nm,0.7s						
W39A	Magazine	4.14	107		Pn	20 43 09.0	-1.9
W39A				IAmb_Lg		20 44 21.0	
	comp=Z,33nm,0.8s						
N33A	J Bar K, Exete	4.31	12	Pn	Pn	20 43 11.5	-1.9
N33A				IAmb_Lg		20 44 34.0	
	comp=Z,28nm,0.7s						
S39A	Bolivar	4.39	73		Pn	20 43 14.2	-0.2
Z38A	Mt. Pleasant	4.41	136	Pn	Pn	20 43 13.1	-1.6
Z38A				IAmb_Lg		20 44 33.5	
	comp=Z,22nm,1.0s						
MIAR	Mount Ida	4.55	114		Pn	20 43 15.3	-1.4
MIAR				IAmb_Lg		20 44 39.3	
	comp=Z,16nm,0.7s						
WHTX	Lake Whitney,	4.62	168	Pn	Pn	20 43 16.6	-0.9
U40A	Yellville	4.64	90		Pn	20 43 17.3	-0.7
U40A				IAmb_Lg		20 44 39.2	
	comp=Z,23nm,0.8s						
T25A	Trinidad	4.69	279		Pn	20 43 17.4	-1.4
BGNE	Belgrade	4.89	4	Pn	Pn	20 43 19.8	-1.6
P38A	Dawn	5.07	51		Pn	20 43 22.3	-1.4
P38A				IAmb_Lg		20 44 59.2	
	comp=Z,15nm,0.8s						
MGMO	Mountain Grove	5.13	81	Pn	Pn	20 43 24.0	-0.6
MGMO				IAmb_Lg		20 45 01.6	
	comp=Z,12nm,0.8s						
X40A	Basin Creek Fa	5.13	112	Pn	Pn	20 43 24.7	+0.1
X40A				IAmb_Lg		20 44 53.7	
	comp=Z,19nm,0.7s						
OGNE	Ogallala	5.16	330	Pn	Pn	20 43 25.0	-0.1
WHAR	Wooly Hollow	5.28	102	Pn	Pn	20 43 27.1	+0.5
FCAR	Ozark Folk Cen	5.28	95	IAmb_Lg		20 44 55.1	
	comp=Z,19nm,0.8s						
WLAR	White Oak Lake	5.32	120	Pn	Pn	20 43 25.7	-1.5
WLAR				IAmb_Lg		20 45 04.7	
	comp=Z,21nm,0.8s						
R40A	Maddies Statio	5.35	69		Pn	20 43 27.3	-0.3
SDCO	Great Sand Dun	5.64	285		Pn	20 43 28.9	-2.9
L34A	Svendsen Farm,	5.71	17	Pn	Pn	20 43 30.8	-1.8
435B	Jarrell	5.79	171	IAmb_Lg		20 45 15.8	
	comp=Z,14nm,0.9s						
P40A	Paris	5.99	58	Pn	Pn	20 43 33.5	-2.9
P40A				IAmb_Lg		20 45 21.0	
	comp=Z,22nm,0.8s						
N38A	Joes South For	5.99	43	Pn	Pn	20 43 35.2	-1.2
LCAR	Lake Charles	6.04	92	Pn	Pn	20 43 34.4	-2.6
LCAR				IAmb_Lg		20 45 21.7	
	comp=Z,11nm,0.9s						
CCM	Cathedral Cave	6.07	73	IAmb_Lg		20 45 24.1	
	comp=Z,20nm,0.8s						
K31A	O'Neill	6.10	359	IAmb_Lg		20 45 24.0	
	comp=Z,20nm,0.7s						
JCT	Junction City	6.11	190	Pn	Pn	20 43 35.2	-2.9
JCT				IAmb_Lg		20 45 28.1	
	comp=Z,14nm,0.8s						
PBMO	Poplar Bluff	6.58	85	IAmb_Lg		20 45 37.6	
	comp=Z,14nm,0.8s						
ECSD	EROS Data Cent	7.37	11	IAmb_Lg		20 46 07.2	
	comp=Z,13nm,0.9s						

IDC 15 20:54:10.6±5.4**, 19°.58S×179°.29W, h627**^{km}±40^{km}**, mb2.6**/3**, mb1 2.9**/4**, mb1mx2.7**/26**, mbtmp3.5**/4**, Error ellipse: s-maj=195.5km s-min=28.8km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.12	306	P	P	20 55 32.6	-0.3
	0.4nm,0.3s,baz=121,slow=20,SNR=2.2						
WRA	Warramunga Arr	43.53	261	P	P	21 01 21.5	+0.2
	0.3nm,0.3s,baz=97,slow=7.5,SNR=14						
ASAR	Alice Springs	43.55	256	P	P	21 01 21.3	-0.1
	0.8nm,0.5s,baz=96,slow=7.8,SNR=20						
ASAR				PcP	PcP	21 02 54.1	-0.5
	0.3nm,0.6s,baz=101,slow=3.8,SNR=4.5						
PDAR	Pinedale Array	89.13	44	P	P	21 06 01.5	+0.4
	0.1nm,0.6s,baz=239,slow=5.2,SNR=2.0						
AKASG	Malin Array Be	141.62	331	PKP	PKPdf	21 12 29.5	-2.3
	0.5nm,0.4s,baz=40,slow=3.7,SNR=7.2						

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*KRNET **15** 21:06:14.1±0.1, 40°.73N×77°.93E, mb3.9*
*SOME **15** 21:06:14.6, 40°.72N×78°.03E, h5^{km}*
*IDC **15** 21:06:16.4±2.9, 40°.88N×77°.99E, h0^{km}, mb3.1/1, mb1 3.1/5, mb1mx2.7/70, mbtmp3.1/5, ML2.5/4, Error ellipse: s-maj=30.5km s-min=15.6km az=176.0*
*NNC **15** 21:06:19.0±1.4, 40°.88N×78°.08E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=10.1km s-min=7.4km az=158.0*

ISC 15 21:06:18.1±1.4**, 40°.85N**±0°.07×**77°.94E**±0°.03**, h10**^{km}**, n75, σ1^s.52**/108**, 33C-9D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.40	336	⇑*e*P	Pn	21 06 42.6	-1.3
	baz=39						
KDJ				⇑*i*S	Sg	21 07 03.3	+0.1
	baz=39						
PRZ	Przheval'sk	1.67	12	⇓*i*P	Pb	21 06 47.8	-1.2
	baz=11						
PRZ				⇓*i*S	Sg	21 07 12.6	+0.8
	baz=11						
ULHL	Ulahol	1.89	318	P	Pb	21 06 53.0	+0.2
	SNR=54						
ULHL	Ulahol	1.89	318	⇑*i*P	Pn	21 06 51.1	+0.4
	baz=21						
ULHL				⇑*e*S	Sg	21 07 17.8	-1.1
	baz=21						
ANVS	Anan'yevo	1.94	354	⇑*e*P	Pb	21 06 52.3	-1.4
	baz=55						
ANVS				⇑*i*S	Sg	21 07 20.2	-0.4
	baz=55						
BOOM	Boomskoye usch	2.22	318	⇑*e*P	Pn	21 06 55.5	+0.3
	baz=20						
BOOM				⇑*i*S	Sb	21 07 25.9	-0.2
	baz=20						
SATY	Saty	2.23	9	*e*P	Pb	21 06 58.9	+0.2
	31nm,0.4s						
SATY				*e*S	Sg	21 07 30.5	+0.5
	210nm,0.4s						
SATY	Saty	2.23	9	Pg	Pb	21 06 58.8	+0.2
	31nm,0.4s						
SATY				Lg	Lg	21 07 30.5	
	210nm,0.4s						
TNSS	Tian-Shan	2.31	342	*e*P	Pb	21 07 00.7	+0.6
	136nm,0.4s						
TNSS				*e*S	Sg	21 07 33.8	+1.5
	56nm,0.5s						

TNSS	Tian-Shan 136nm,0.4s	2.31	342	Pg	Pb	21 07 00.7	+0.6
TNSS	56nm,0.5s			Lg	Lg	21 07 33.8	
ZHN	Zhinishke 28nm,0.3s	2.34	9	eP	Pb	21 07 01.2	+0.7
ZHN	76nm,0.9s			eS	Sg	21 07 34.5	+1.0
ZHN	Zhinishke 28nm,0.3s	2.34	9	Pg	Pb	21 07 01.2	+0.7
ZHN	76nm,0.9s			Lg	Lg	21 07 34.4	
MDOK	Medeo 64nm,0.5s	2.41	344	eP	Pb	21 07 02.3	+0.7
MDOK	352nm,0.7s			eS	Sg	21 07 36.3	+0.9
MDOK	Medeo 43nm,0.5s	2.41	344	⇓Pg	Pb	21 07 01.6	0.0
MDOK	326nm,0.6s			Lg	Lg	21 07 37.6	
MDOK	Medeo 64nm,0.5s	2.41	344	Pg	Pb	21 07 02.3	+0.7
MDOK	352nm,0.7s			Lg	Lg	21 07 36.3	
UZB	Uzynbulak 21nm,0.4s	2.43	19	eP	Pb	21 07 02.1	0.0
UZB	113nm,0.7s			eS	Sg	21 07 36.2	-0.1
UZB	Uzynbulak 21nm,0.4s	2.43	19	Pg	Pb	21 07 02.1	0.0
UZB	113nm,0.7s			Lg	Lg	21 07 36.2	
KOTS	Kotyrbulak 54nm,0.5s	2.46	346	eP	Pg	21 07 03.6	-1.7
KOTS	452nm,0.4s			eS	Sg	21 07 39.0	+1.8
KOTS	Kotyrbulak 54nm,0.5s	2.46	346	Pg	Pg	21 07 03.6	-1.7
KOTS	452nm,0.4s			Lg	Lg	21 07 39.0	
KNDC	Almaty 62nm,0.6s	2.47	343	⇑Pg	Pg	21 07 04.1	-1.5
KNDC	466nm,0.7s			⇑Lg	Lg	21 07 40.1	
MTBS	Maitube 93nm,0.3s	2.54	334	eP	Pg	21 07 05.0	-1.9
MTBS	62nm,0.3s			eS	Sg	21 07 41.4	+1.7
MTBS	Maitube 93nm,0.3s	2.54	334	Pg	Pg	21 07 05.0	-1.9
MTBS	62nm,0.3s			Lg	Lg	21 07 41.4	
SHLS	Shalkode 15nm,0.2s	2.57	26	eP	Pg	21 07 06.1	-1.2
SHLS	119nm,0.4s			eS	Sg	21 07 43.0	+2.3
SHLS	Shalkode 15nm,0.2s	2.57	26	Pg	Pg	21 07 06.1	-1.2
SHLS	119nm,0.4s			Lg	Lg	21 07 43.0	
KST	Kastek 53nm,0.3s	2.64	327	eP	Pg	21 07 06.7	-2.0
KST	116nm,0.7s			eS	Sg	21 07 44.3	+1.3
KST	Kastek 53nm,0.3s	2.64	327	Pg	Pg	21 07 06.7	-2.0
KST	116nm,0.7s			Lg	Lg	21 07 44.3	
TKM2	Tokmak 2 SNR=6.8	2.71	321	P	Pg	21 07 08.2	-1.9
TKM2	Tokmak 2 36nm,0.7s	2.71	321	⇓Pn	Pb	21 07 07.5	+0.7
TKM2	43nm,0.6s			⇑Lg	Lg	21 07 46.9	
PDGK	Podgornoye 36nm,0.4s	2.73	24	Pg	Pb	21 07 06.7	-0.4
PDGK	70nm,0.6s			Lg	Lg	21 07 44.1	
KBK	Karagaybulak SNR=45	2.88	310	P	Pb	21 07 10.1	+0.5
KBK	Karagaybulak baz=12	2.88	310	⇑eP	Pn	21 07 04.4	+0.2
KBK	baz=12			⇑eS	Sn	21 07 41.3	+2.4
DGS	Degeres 64nm,0.5s	2.88	327	eP	Pb	21 07 10.9	+1.1
DGS	78nm,0.5s			eS	Sg	21 07 51.6	+0.8
DGS	Degeres 64nm,0.5s	2.88	327	Pg	Pb	21 07 10.9	+1.1
DGS	78nm,0.5s			Lg	Lg	21 07 51.6	
ARLS	Aral baz=94	2.91	292	⇑iP	Pn	21 07 04.3	-0.3
ARLS	baz=94			⇑eS	Sn	21 07 40.9	+1.3
UCH	Uchtor SNR=22	2.92	299	P	Pn	21 07 05.5	+0.4
UCH	Uchtor baz=1.0	2.92	299	⇑eP	Pn	21 07 04.9	-0.1
UCH	baz=1.0			⇑eS	Sn	21 07 41.9	+1.6
KTBS	Karatobe 20nm,0.3s	3.01	342	eP	Pb	21 07 13.2	+1.3
KTBS	262nm,0.4s			eS	Sg	21 07 55.0	+0.3
KTBS	Karatobe 20nm,0.3s	3.01	342	Pg	Pb	21 07 13.1	+1.3
KTBS	262nm,0.4s			Lg	Lg	21 07 55.0	
AAK	Ala-Archa 0.5nm,0.3s,baz=135,slow=10,SNR=3.9	3.14	306	Pn	Pn	21 07 09.3	+1.6
AAK	9.6nm,0.3s,baz=138,slow=15,SNR=100			Pg	Pb	21 07 14.0	-0.1
AAK	4.1nm,0.3s,baz=1.6,slow=23,SNR=8.9			Lg	Lg	21 07 58.5	
AAK	Ala-Archa SNR=22	3.14	306	P	Pb	21 07 14.9	+0.8
AAK	Ala-Archa 38nm,0.8s	3.14	306	⇑Pn	Pb	21 07 14.6	+0.5
AAK	66nm,0.7s			⇑Lg	Lg	21 07 58.8	
AAK	Ala-Archa baz=8.0	3.14	306	⇑iP	Pn	21 07 08.1	+0.3
AAK	baz=8.0			⇑iS	Sn	21 07 47.3	+2.0
FRU1	Bishkek baz=11	3.15	309	⇑eP	Pn	21 07 08.6	+0.7
FRU1	baz=11			⇑eS	Sn	21 07 48.2	+2.5
CHMS	Chumysh SNR=11	3.21	313	P	Pb	21 07 16.0	+0.8
CHMS	Chumysh baz=15	3.21	313	⇑iP	Pn	21 07 08.9	+0.3
CHMS	baz=15			⇑eS	Sn	21 07 49.3	+2.5
KUU	Kurty 10nm,0.4s	3.26	339	eP	Pb	21 07 17.4	+1.2
KUU	53nm,0.5s			eS	Sg	21 08 02.6	-0.3
KUU	Kurty 10nm,0.4s	3.26	339	Pg	Pb	21 07 17.4	+1.2
KUU	53nm,0.5s			Lg	Lg	21 08 02.6	
BLB	Baldybastay 43nm,0.4s	3.27	7	Pg	Pg	21 07 18.1	-2.7
BLB	342nm,0.4s			Lg	Lg	21 08 03.3	
KRBS	Karabastau 34nm,0.5s	3.30	330	eP	Pb	21 07 17.6	+0.8
KRBS	58nm,0.7s			eS	Sg	21 08 03.0	-1.2
KRBS	Karabastau 34nm,0.5s	3.30	330	Pg	Pb	21 07 17.6	+0.8
KRBS	58nm,0.7s			Lg	Lg	21 08 03.0	
ARXS	Arharly 12nm,0.4s	3.36	359	eP	Pb	21 07 19.6	+1.7
ARXS	126nm,0.5s			eS	Sg	21 08 06.2	+0.1
ARXS	Arharly 12nm,0.4s	3.36	359	Pg	Pb	21 07 19.6	+1.7
ARXS	126nm,0.5s			Lg	Lg	21 08 06.2	
AML	Almayashu SNR=18	3.44	293	P	Pg	21 07 21.3	-2.7
AML	Almayashu baz=95	3.44	293	⇓iP	Pn	21 07 12.0	-0.1
AML	baz=95			⇓iS	Sn	21 07 54.4	+1.3
USP	Ospenovka SNR=34	3.52	314	P	Pb	21 07 21.4	+0.8
USP	Ospenovka baz=16	3.52	314	⇑eP	Pn	21 07 13.4	+0.5
USP	baz=16			⇑iS	Sn	21 07 56.8	+2.2
EKS2	Erkin-Say SNR=16	3.60	302	P	Pg	21 07 24.0	-3.1
EKS2	Erkin-Say baz=3.0	3.60	302	⇑eP	Pn	21 07 14.3	+0.2
EKS2	baz=3.0			⇑iS	Sn	21 07 58.1	+1.3
MRKS	Merke 26nm,0.5s	4.00	300	eP	Pb	21 07 30.8	+2.0
MRKS	18nm,0.6s			eS	Sg	21 08 25.3	-1.3
MRKS	Merke 26nm,0.5s	4.00	300	Pg	Pb	21 07 30.8	+2.0
MRKS	18nm,0.6s			Lg	Lg	21 08 25.3	
TDK	Taldyqorghan 13nm,0.2s	4.16	5	eP	Pb	21 07 34.0	+2.5
TDK	67nm,0.6s			eS	Sg	21 08 30.9	-0.8
TDK	Taldyqorghan 13nm,0.2s	4.16	5	Pg	Pb	21 07 34.0	+2.5
TDK	67nm,0.6s			Lg	Lg	21 08 30.9	
MNAS	Manas baz=95	4.39	294	⇑iP	Pn	21 07 24.9	0.0
MNAS	baz=95			⇑iS	Sn	21 08 17.3	+1.1
KAPS	Kapalarasan 5.5nm,0.7s	4.55	13	eP	Pb	21 07 40.0	+1.9
KAPS	37nm,0.5s			eS	Sg	21 08 41.5	-2.8
KAPS	Kapalarasan 5.5nm,0.7s	4.55	13	Pg	Pb	21 07 40.0	+1.9
KAPS	37nm,0.5s			Lg	Lg	21 08 41.5	
BTLS	Baital 5.0nm,0.3s	5.07	327	eP	Pg	21 07 50.6	-4.6
BTLS	13nm,0.7s			eS	Sg	21 08 59.5	-1.3
BTLS	Baital 5.0nm,0.3s	5.07	327	Pg	Pg	21 07 50.6	-4.6
BTLS	13nm,0.7s			Lg	Lg	21 08 59.5	
KK09	Karatay Array 3.0nm,0.5s,baz=112,slow=16	5.99	295	⇓Pg	Pg	21 08 10.4	-2.4
KK09	3.2nm,0.5s,baz=109,slow=29			⇓Lg	Lg	21 09 31.6	
MK31	Makanchi Array 2.1nm,0.8s,baz=199,slow=13,SNR=12	6.72	26	⇓Pn	Pn	21 07 58.8	+1.9
MK31	2.0nm,0.5s			⇑Lg	Lg	21 09 49.8	
MKAR	Makanchi Array 0.1nm,0.3s,baz=213,slow=14,SNR=2.5	6.72	26	Pn	Pn	21 07 56.7	-0.2
MKAR	0.4nm,0.3s,baz=211,slow=24,SNR=2.8			Sn	Sn	21 09 12.6	-0.9
MKAR	0.4nm,0.3s,baz=208,slow=29,SNR=2.4			Lg	Lg	21 09 46.9	
KURBB	Kurchatov Arra 0.0nm,0.3s,baz=188,slow=12,SNR=2.7	9.78	2	Pn	Pn	21 08 36.4	-2.3
KURBB	0.2nm,0.3s,baz=185,slow=29,SNR=7.5			Lg	Lg	21 11 27.9	
KURBB	Kurchatov Arra 12nm,0.7s	9.78	2	⇑Lg	Lg	21 11 30.1	
BVAR	Borovoye Array baz=168,slow=28,SNR=1.5	13.22	340	Lg	Lg	21 13 17.1	
ZALV	Zalesovo Beam 0.1nm,0.3s,baz=220,slow=9.4,SNR=2.0	13.90	17	Pn	Pn	21 09 35.5	+0.5
SONM	Songino Array 0.6nm,0.7s,baz=252,slow=12,SNR=6.3	21.43	61	P	P	21 11 06.4	0.0

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*IDC **15** 21:19:36.2±2.3, 7°.47S×129°.62E, h113km±27km, mb3.3/2, mb1 3.6/7, mb1mx3.2/39, mbtmp3.9/7, Error ellipse: s-maj=39.1km s-min=21.4km az=93.0*

ISC 15 21:19:33.4±0.8, **7°.48S**±0°.06×**129°.72E**±0°.10, **h79**km, **n7**, σ**2s.69**/12, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata 5.1nm,0.3s,baz=101,slow=7.1,SNR=4.1	6.56	245	P	Pn	21 21 10.0	+2.6
BATI	7.2nm,0.3s,baz=109,slow=24,SNR=9.5			S	Sn	21 22 19.4	-1.5
SIJI	Sorong 0.8nm,0.3s,baz=141,slow=21,SNR=8.6	6.75	13	P	Pn	21 21 12.8	+2.9
SIJI	2.2nm,0.3s,baz=126,slow=23,SNR=6.3			S	Sn	21 22 21.1	-4.3
FITZ	Fitzroy Crossi baz=38,slow=12	11.28	200	P	Pn	21 22 12.7	+1.1
FITZ	0.8nm,0.3s,baz=77,slow=15,SNR=2.7			S	Sn	21 24 11.7	-4.2
WRA	Warramunga Arr 1.4nm,0.3s,baz=332,slow=13,SNR=76	13.17	161	P	Pn	21 22 38.5	+1.2
WRA	0.9nm,0.3s,baz=338,slow=20,SNR=8.7			S	Sn	21 25 00.5	-1.6
ASAR	Alice Springs 0.4nm,0.3s,baz=343,slow=11,SNR=19	16.59	166	P	P	21 23 24.0	+1.7
ASAR	0.3nm,0.3s,baz=332,slow=13,SNR=5.6			S	Sn	21 26 23.7	-1.2
SONM	Songino Array 0.6nm,1.0s,baz=149,slow=5.9,SNR=2.4	58.81	342	P	P	21 29 22.8	-0.8
MKAR	Makanchi Array 0.6nm,0.4s,baz=137,slow=6.9,SNR=6.1	68.47	327	P	P	21 30 25.6	-1.5

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*IDC **15** 21:22:39.9±0.8, 1°.71N×125°.89E, h0km, mb4.0/8, mb1 4.2/9, mb1mx3.8/41, mbtmp4.0/9, ML3.4/1, MS2.6/3, Ms1 2.6/3, ms1mx2.3/39, Error ellipse: s-maj=53.8km s-min=16.3km az=67.0*

*DJA **15** 21:22:44.5±0.3, 2°N±4°×12°7E±°, h10km, M4.0/7, MLv4.0/7*

*NEIC **15** 21:22:46.3±2.1, 1°.77N±0°.09×126°.40E±0°.08, h47km±8km, mb4.4/23, Error ellipse: s-maj=15.1km s-min=8.9km az=218.0*

ISC 15 21:22:46.0±0.5, **1°.82N**±0°.06×**126°.31E**±0°.08, **h47**km, **n54**, σ**1s.28**/49, **mb4.2**/18, **1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.48	135	P	Pn	21 23 09.2	-1.0
TNTI	Ternate	1.48	135	Pn	Pn	21 23 09.2	-1.0
SGSI	Sangihe	2.01	337	P	Pn	21 23 17.7	+0.2
KMSI	Cibinong	2.64	242	P	Pn	21 23 32.0	+5.9
LBMI	Labuha	2.71	154	P	Pn	21 23 30.4	+3.3
LUWI	Luwuk	4.54	231	P	Pn	21 24 10.0	+18
LUWI	Luwuk	4.54	231		Pn	21 23 52.8	+0.7
MRSI	Marisa	4.57	253	P	Pn	21 23 57.8	+5.2
DAV	Davao City (W) comp=Z,30nm,20.9s,baz=154,slow=35	5.27	352	LR	LR	21 25 44.3	
APSI	Ampana	5.39	240	P	Pn	21 24 24.6	+21
TOLI2	Tolitoli	5.57	263	Pn	Pn	21 24 08.9	+2.5
SIJI	Sorong 0.9nm,0.3s,baz=293,slow=15,SNR=3.6	5.63	118	Pn	Pn	21 24 08.8	+1.7
PAGZ	Pagadian	6.66	334	⇑iP	Pn	21 24 22.3	+1.0
MYLDM	Lahad Datu	8.48	293	Pn	Pn	21 24 48.4	+2.1
KKM	Kota Kinabalu	10.91	293	Pn	Pn	21 25 22.3	+2.6
PBKI	Pangkalan Bun	15.31	253	P	Pn	21 26 15.3	-3.8
MTN	Manton Dam	15.33	162	Pn	Pn	21 26 19.9	+0.5
MTN	comp=Z,23nm,1.3s			IAmb	IAmb	21 26 43.6	
KNRA	Kununurra	17.55	172	P	P	21 26 47.2	-0.7
KNRA	comp=Z,21nm,1.2s			IAmb	IAmb	21 27 06.8	
DLV	T Lat	20.34	300	P	P	21 27 18.3	-0.4
LEM	Lembang comp=Z,39nm,18.8s,baz=250,slow=43	20.54	245	LR	LR	21 37 13.6	
TPUB	Ta-pu	22.05	346	P	P	21 27 37.8	+0.8
WB0	Warramunga Arr	22.87	160	P	P	21 27 44.6	-1.0
WB0	comp=Z,4.7nm,0.5s			IAmb	IAmb	21 27 49.4	
COEN	Coen	22.91	134	P	P	21 27 45.3	-0.8
COEN	comp=Z,13nm,1.4s			IAmb	IAmb	21 28 11.3	
WRAB	Tennant Creek	23.01	160	P	P	21 27 46.1	-0.9
WRAB	comp=Z,6.0nm,0.6s			IAmb	IAmb	21 27 50.6	
WRA	Warramunga Arr comp=Z,4.9nm,0.5s,baz=340,slow=11,SNR=11	23.02	160	P	P	21 27 46.5	-0.6
WRA	comp=Z,1.1nm,1.3s,baz=338,slow=2.4,SNR=2.3			PcP	PcP	21 31 36.3	+0.6
WRA	Warramunga Arr	23.02	160	P	P	21 27 45.6	-1.5
PMG	Port Moresby comp=Z,11nm,20.4s,baz=178,slow=42	23.57	119	LR	LR	21 39 26.3	
UBPT	Khong Chiam	24.53	304	P	P	21 28 00.1	-1.3
UBPT	comp=Z,19nm,1.2s			IAmb	IAmb	21 28 14.3	
AS31	Alice Springs	26.39	164	P	P	21 28 18.9	+0.7
ASAR	Alice Springs comp=Z,1.3nm,0.4s,baz=345,slow=11,SNR=9.2	26.39	164	P	P	21 28 20.0	+1.9
ASAR	comp=Z,0.2nm,0.4s,baz=341,slow=2.7,SNR=4.8			PcP	PcP	21 31 43.6	+0.5
ASAR	Alice Springs	26.39	164	P	P	21 28 19.5	+1.4
FORT	Forrest	32.46	177	P	P	21 29 10.3	-1.6
FORT	comp=Z,13nm,0.8s			IAmb	IAmb	21 29 11.4	
KSRS	Korea Array comp=Z,1.0nm,0.6s,baz=181,slow=11,SNR=2.9	35.49	2	P	P	21 29 39.7	+1.6
BBOO	Buckleboo	35.65	166	P	P	21 29 39.0	-0.6
BBOO	comp=Z,10nm,1.1s			IAmb	IAmb	21 29 55.0	
SHL	Shillong	40.70	308	P	P	21 30 21.4	-1.1
LSA	Lhasa	43.41	313	P	P	21 30 44.3	-0.6
SONM	Songino Array comp=Z,0.5nm,0.4s,baz=159,slow=8.8,SNR=9.5	48.97	342	P	P	21 31 27.6	-0.3
SONM	Songino Array	48.97	342	P	P	21 31 27.5	-0.4
MK31	Makanchi Array	58.89	326	P	P	21 32 40.0	-0.2
MK31	comp=Z,5.9nm,1.4s			IAmb	IAmb	21 32 44.8	
MKAR	Makanchi Array comp=Z,2.2nm,0.4s,baz=120,slow=7.7,SNR=36	58.89	326	P	P	21 32 40.2	0.0
MKAR	Makanchi Array	58.89	326	P	P	21 32 40.0	-0.2
ZALV	Zalesovo Beam comp=Z,0.5nm,0.3s,baz=126,slow=8.8,SNR=4.6	62.10	334	P	P	21 33 02.0	+0.1
GAR	Garm	62.92	313	P	P	21 33 07.0	-0.8
GAR	comp=Z,3.6nm,0.7s			IAmb	IAmb	21 33 11.9	
KURK	Kurchatov	63.13	328	P	P	21 33 08.5	-0.3
KKAR	Karatay Array	64.35	318	P	P	21 33 16.9	-0.1
BRVK	Borovoye	68.76	328	P	P	21 33 45.3	+0.3
BRVK	comp=Z,2.5nm,1.1s			IAmb	IAmb	21 33 45.7	
CASY	Casey	68.88	187	P	P	21 33 46.1	+0.7
ABKAR	Akbulak array	73.36	321	P	P	21 34 13.0	+0.1
ABKAR	Akbulak array	73.36	321	P	P	21 34 12.8	-0.2
ARU	Arti	76.32	328	P	P	21 34 29.5	-0.4
ARU	comp=Z,8.6nm,1.3s			IAmb	IAmb	21 34 41.7	
VNDA	Vanda comp=Z,0.8nm,0.8s,baz=328,slow=3.9,SNR=1.9	81.59	173	P	P	21 34 57.7	-0.6
VNDA	Vanda	81.59	173	P	P	21 34 58.7	+0.4
VNDA	comp=Z,5.1nm,1.5s			IAmb	IAmb	21 35 21.3	
KBZ	Khabaz comp=Z,1.1nm,0.7s,baz=135,slow=5.7,SNR=1.9	83.98	314	P	P	21 35 10.5	-0.9
BMAR	Burnt Mountain	87.99	23		P	21 35 31.9	+1.1

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*ISK **15** 21:42:29.1, 41°.86N×32°.45E, h5km, ML2.6/8*

*DDA **15** 21:42:29.7, 41°.70N×32°.42E, h7km±3km, ML2.5*

*CFUSG **15** 21:42:32.3, 41°.96N×32°.53E, h2km, mb2.2/2, MD2.7/2, Northern Turkey Magtype MSH 2.5 from 2 stations*

ISC 15 21:42:27.3±1.0, **41°.88N**±0°.03×**32°.43E**±0°.02, **h16**km±8km, **n31**, σ**1s.13**/48, **1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASR	Amasra-Bartin	0.12	168	PG	Pb	21 42 32.0	+0.8
MASR				SG	Sg	21 42 33.5	+0.2
KURC	Kurucasile-Bar	0.23	98	PG	Pb	21 42 33.6	+0.5
KURC				SG	Sb	21 42 37.9	+0.8
CIDE	Kastamonu/Cide	0.38	89	iP	Pn	21 42 38.5	+0.3
CIDE				iS	Sn	21 42 44.2	-1.0
KBUK	KARABUK-Merkez	0.66	167	iP	Pg	21 42 39.9	-0.2
KBUK				iS	Sg	21 42 46.9	-2.0
KBUK	comp=E,365nm,0.3s			IAML		21 42 47.0	
KBUK	comp=N,278nm,0.2s			IAML		21 42 47.0	
SAFT	Safranbolu	0.67	163	PG	Pn	21 42 42.0	-0.1
DEVR	Zonguldak/Devr	0.81	205	iP	Pg	21 42 42.8	-0.3
DEVR				iS	Sg	21 42 51.6	-2.2
PELI	Kastamonı-Ara	0.88	131	iP	Pb	21 42 44.2	+0.1
PELI				iS	Sg	21 42 54.9	-0.9
KDZE	Karadeniz Ereo	0.93	233	PG	Pn	21 42 47.4	+1.6
BCAM	Yenicaga	1.10	195	iP	Pn	21 42 48.5	+0.4
BCAM				iS	Sb	21 42 59.8	-2.3
BZK	Bozkurt	1.17	86	PN	Pg	21 42 51.9	+2.0
YIGI	Dzce	1.18	219	iP	Pg	21 42 50.3	+0.3
ILGA	Ilgaz	1.27	130	iP	Pg	21 42 52.4	+0.6
ILGA				iS	Sg	21 43 08.7	+0.3
CMDR	Camlidere-ANKA	1.38	179	iP	Pb	21 42 53.2	+0.4
CMDR				iS	Sn	21 43 10.9	+0.8
CMDR	comp=E,78nm,0.5s			IAML		21 43 14.0	
KIBS	BOLU	1.52	197	iP	Pg	21 42 56.5	-0.1
CANT	Cankiri	1.56	145	PN	Pg	21 42 57.6	+0.4
SAHE	Sakarya_HENDEK	1.57	230	iP	Pg	21 42 57.2	-0.3
SAHE				iS	Sb	21 43 16.9	+1.3
ELDT	Eldivan	1.58	151	iP	Pg	21 42 57.6	0.0
ELDT				iS	Sg	21 43 18.0	-0.1
KAGI	orum-Kargı	1.70	115	iP	Pg	21 43 01.0	+1.0
KAGI	comp=N,57nm,0.8s			IAML		21 43 24.0	
BOYA	Sinop/Boyabat-	1.72	101	iP	Pg	21 43 01.0	+0.7
BOYA				iS	Sg	21 43 24.6	+2.0
BOYA	comp=N,67nm,0.8s			IAML		21 43 26.0	
KAYN	Sakarya, Kayna	1.82	241	iP	Pb	21 43 00.8	+0.6
KAYN				iS	Sb	21 43 24.4	+1.6
KAND	Kocaeli-Kandir	1.86	246	iP	Pg	21 43 02.7	-0.2
GULT	Gulveren	2.05	226	PN	Pb	21 43 05.1	+1.0
CTAK	Corum_Osmancik	2.16	124	iP	Pg	21 43 08.1	-0.6
CTAK				iS	Sg	21 43 36.2	-0.6
DELI	KIRIKKALE	2.19	149	iP	Pg	21 43 08.3	-1.0
BRTR	Keskin Array B	2.34	157	PN	Pb	21 43 08.9	-0.2
CORM	Corum	2.38	135	PN	Pb	21 43 09.7	-0.1
BORA	Eskisehir	2.50	218	PN	Pb	21 43 11.6	-0.2
COAL	Corum-Alaca	2.52	129	iP	Pg	21 43 14.0	-1.6
HAVZ	Havza	2.59	107	iP	Pg	21 43 17.2	+0.2
HAVZ				iS	Sg	21 43 51.9	+1.2
SEV	Sevastopol'	2.81	18	⇑eP	Pb	21 43 17.0	-0.1
SEV	comp=Z,6.0nm,0.3s			Pm		21 43 17.6	
SEV				ex	x	21 43 50.2	
SEV				eS	Sb	21 43 51.3	0.0
SEV	comp=N,3.0nm,0.3s,comp=E,5.0nm,0.3s			Sm		21 43 51.7	
SUDU	Sudak	3.54	31	eP	Pb	21 43 27.4	-2.2
SUDU	comp=Z,5.0nm,0.6s			Pm		21 43 27.8	
SUDU				eS	Sb	21 44 09.5	-2.8
SUDU	comp=N,9.0nm,0.3s			Sm		21 44 12.4	
SUDU	comp=E,11nm,0.4s			Sm		21 44 13.1	

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*ECX **15** 21:50:25.4±0.5, 32°.39N×115°.23W, h13km±3km, MD3.5, ML3.7*

*NEIC **15** 21:50:26.2±2.6, 32°.38N±0°.04×115°.20W±0°.05, h15km±6km, Error ellipse: s-maj=6.7km s-min=4.5km az=221.0*

*PAS **15** 21:50:26.5±2.1, 32°.39N±0°.02×115°.23W±0°.04, h12km±5km, ML3.3/22, ML3.4/44(NEIC), ML3.7(ECX), Error ellipse: s-maj=5.3km s-min=3.4km az=83.0*

*ANF **15** 21:50:26.1±0.5, 32°.45N×115°.23W, h28km±3km, ML3.4/14, Error ellipse: s-maj=4.6km s-min=2.0km az=166.0*

*MEX **15** 21:50:27.1±1.1, 32°.48N×115°.12W, h6km±5km, MD4.1*

ISC 15 21:50:25.8±0.8, **32°.40N**±0°.02×**115°.23W**±0°.02, **h13**km±4km, **n65**, σ**0s.89**/85, **5C-4D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.03	83		Pg	21 50 26.9	-1.1
MBIG					Sg	21 50 29.1	-0.5
MBIG	Mexicali	0.03	83	⇑eP	Pg	21 50 26.9	-1.1
MBIG				eP	Pg	21 50 28.8	+0.8
MBIG				eS	Sg	21 50 29.1	-0.5
MBIG				eS	Sg	21 50 29.8	+0.2
CPBX	Cerro Prieto	0.06	285	Pg	Pg	21 50 28.8	+0.5
CPBX	Cerro Prieto	0.06	285	⇑eP	Pg	21 50 28.9	+0.5
CPBX				⇓e		21 50 33.1	

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CPBX                               IAML           21 50 33.1
       comp=N,136µm,0.5s
GUVIX  Guadalupe Vict   0.17 127   Pg      Pb     21 50 30.7 -0.1
GUVIX                              Sg      Sg     21 50 34.3 +1.9
GUVIX                              IAML           21 50 34.9
       comp=N,15µm,0.2s
GUVIX  Guadalupe Vict   0.17 127⇓ eP      Pb     21 50 30.8  0.0
YUCAX  Ej. Yucat¡n      0.23  30  eP      Pb     21 50 31.9  0.0
POT2   Potabilizadora   0.26 330  eP      Pb     21 50 32.8 +0.5
POT2                              eS      Sb     21 50 37.9 +1.2
UABX   UABC, Campus M   0.29 323   Pg      Pb     21 50 33.1 +0.3
UABX                               Sg      Sb     21 50 38.7 +1.2
UABX   UABC, Campus M   0.29 323  eP      Pb     21 50 33.3 +0.5
RITX   Riito Sonora     0.33 136  eP      Pb     21 50 33.8 +0.2
EMSC   East Mesa        0.40  32  eP      Pb     21 50 34.8 +0.1
DREC   Desert Rsrch C   0.44 336  eP      Pb     21 50 36.1 +0.7
DREC                             ⇓e               21 50 47.4
DREC                               IAML           21 50 47.4
       comp=E,11µm,0.7s
SLRCX  San Luis Rio C   0.45  83  eP      Pb     21 50 35.5 -0.1
SLRCX                            ⇑e               21 51 43.8
SLRCX                              IAML           21 51 43.8
       comp=N,5µm,0.9s
YMD    Yuma Desert      0.60  75⇓ iP      Pg     21 50 37.8 +0.2
YUH2   Yuha Desert      0.63 293⇑ eP      Pb     21 50 38.5 -0.2
SWSC   Sam W. Stewart   0.72 319   P       Pg     21 50 39.5 -0.3
       baz=139,SNR=109
SWSC                               S       Sg     21 50 49.5 +0.3
       baz=139
SWSC   Sam W. Stewart   0.72 319  eP      Pg     21 50 39.8  0.0
GLA    Glamis           0.73  28   Pg      Pg     21 50 39.8 -0.2
GLA                                IAML           21 51 05.1
       comp=N,1µm,0.7s
GLA    Glamis           0.73  28   P       Pg     21 50 39.8 -0.2
       baz=207,SNR=156
GLA                                S       Sg     21 50 49.6 -0.1
       baz=207
RMX    La Rumorosa      0.74 286   Pg      Pg     21 50 39.9 -0.3
RMX                                Sg      Sg     21 50 49.4 -0.6
RMX    La Rumorosa      0.74 286  eP      Pg     21 50 39.9 -0.3
IKP    In-Ko-Pah, Jac   0.78 289   P       Pb     21 50 41.2 -0.1
       baz=109,SNR=162
IKP                                S       Sb     21 50 51.8  0.0
       baz=109
IKP    In-Ko-Pah, Jac   0.78 289  eP      Pb     21 50 41.1 -0.1
MONP2  Monument Peak    1.11 296   P       Pb     21 50 46.1 -1.0
       baz=116,SNR=65
MONP2                              Sb      Sb     21 51 01.4 -0.2
       baz=116
MONP2  Monument Peak    1.11 296  eP      Pb     21 50 46.3 -0.8
TKX    Tecate           1.17 278   Pn      Pg     21 50 48.4  0.0
TKX                                IAML           21 50 50.6
       comp=E,530nm,0.8s
TKX                                IAML           21 51 05.9
       comp=N,493nm,0.5s
CBX    Cerro Bola       1.21 266           Pn     21 50 48.6  0.0
CBX                                IAML           21 51 08.8
       comp=E,648nm,0.7s
CBX                                IAML           21 51 10.2
       comp=N,842nm,0.9s
CBX    Cerro Bola       1.21 266  eP      Pn     21 50 48.6  0.0
CBX                               eS      Sb     21 51 04.6 +0.3
CBX    Cerro Bola       1.21 266  eP      Pb     21 50 48.9 +0.2
CBX                               eS      Sn     21 51 05.8 +0.8
TJIG   Tijuana          1.22 272           Pb     21 50 48.9 +0.1
TJIG                                       Sb     21 51 04.4  0.0
TJIG   Tijuana          1.22 272  eP      Pb     21 50 48.9 +0.1
TJIG                              eS      Sb     21 51 04.4  0.0
BAR    Barrett          1.25 283   Pn      Pn     21 50 48.6 -0.3
BAR                                IAML           21 51 08.8
       comp=N,631nm,0.7s
BAR    Barrett          1.25 283  eP      Pn     21 50 48.9 -0.1
BAR                               eS      Sg     21 51 06.4 +0.4
BC3    Big Chuckawall   1.26 352   P       Pn     21 50 47.7 -1.6
       baz=172,SNR=67
CCX    Cicese           1.33 247           Pn     21 50 50.1 +0.1
CCX                                IAML           21 51 10.4
       comp=E,958nm,0.8s
CCX                                IAML           21 51 18.5
       comp=N,635nm,0.6s
SPIG   San Pedro Mart   1.37 188           Pn     21 50 50.6 -0.3
SPIG                                       Sb     21 51 09.0  0.0
SPIG   San Pedro Mart   1.37 188  eP      Pn     21 50 50.6 -0.3
SPIG                              eS      Sb     21 51 09.0  0.0
SFX    San Felipe       1.40 166   Pn      Pb     21 50 51.5 -0.3
SFX    San Felipe       1.40 166  eP      Pg     21 50 52.4 -0.3
SFX                              ⇑e               21 51 13.4
SFX                                IAML           21 51 13.4
       comp=N,422nm,0.3s
EML    El Monte Cty P   1.44 290  eP      Pn     21 50 51.6 -0.1
TJX    Tijuana          1.54 274           Pb     21 50 54.1 -0.1
TPFO   Pinon Flats      1.58 320   P       Pn     21 50 51.9 -1.7
       baz=139
PFO    Pinyon Flats O   1.58 320   Pn      Pn     21 50 52.3 -1.4
PFO    Pinyon Flats O   1.58 320   P       Pn     21 50 52.1 -1.6
       baz=139,SNR=24
109C   Camp Elliot, M   1.65 288   Pb      Pb     21 50 56.1  0.0
       baz=107
109C                               Sb      Sb     21 51 17.6 +0.7
       baz=107
IRM    Iron Mountain    1.75   2   Pb      Pb     21 50 56.9 -0.9
       baz=182
214A   Organ Pipe Nat   2.10 102   Pn      Pn     21 50 59.3 -1.4
214A                               IAML           21 51 55.8
       comp=N,275nm,1.3s
214A                               IAML           21 52 07.4
       comp=E,199nm,0.8s
214A   Organ Pipe Nat   2.10 102   P       Pn     21 50 59.1 -1.7
       baz=283,SNR=16
BBRC   Big Bear Solar   2.33 323   S       Sn     21 51 30.2 -2.5
       baz=142
NEE2   Needles Airpor   2.41  12   Pb      Pb     21 51 08.4 -0.7
       baz=192
SCI2   San Clemente I   2.85 283   Sb      Sb     21 51 52.3 +0.9
       baz=101
CIS    Catalina Islan   2.85 291   Sb      Sb     21 51 51.9 +0.4
       baz=110
MWC    Mount Wilson     2.98 308           Pn     21 51 14.2 +1.2
MWC                                IAML           21 52 16.6
       comp=E,77nm,1.6s
MWC                                IAML           21 52 30.6
       comp=N,76nm,1.0s
GSC    Goldstone, Bar   3.17 336           Pn     21 51 15.4 -0.1
GSC                                IAML           21 51 43.5
       comp=N,94nm,0.8s
GSC                                IAML           21 52 27.7
       comp=E,154nm,1.3s
X16A   Lo Mia Camp, P   3.75  57   Pn      Pn     21 51 23.9 +0.3
TUC    Tucson           3.77  90           Pn     21 51 26.3 +2.6
TUC                                IAML           21 52 57.0
       comp=E,53nm,1.2s
SHPR   Sheep Range      4.09   1   Pn      Pn     21 51 29.8 +1.6
SHPR                               IAML           21 52 59.4
       comp=E,57nm,1.3s
U15A   North Rim        4.69  30           Pn     21 51 37.5 +0.9
U15A                               IAML           21 53 56.6
       comp=N,41nm,1.1s
X18A   Snowflake        4.90  63           Pn     21 51 40.0 +0.7
PRN    Pahroc Range     4.99   2           Pn     21 51 43.1 +2.5
KNB    Kanab            5.01  23   Pn      Pn     21 51 43.1 +2.3
CCUT   Cedar City       5.36  16           Pn     21 51 44.7 -1.0
CCUT                               IAML           21 53 41.4
       comp=N,25nm,1.2s
SZCU   Shurtz Canyon    5.47  18   Pn      Pn     21 51 46.5 -0.7
121A   Cookes Peak, D   6.30  87   Pn      Pn     21 51 58.5 -0.1
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JMA ***15*** *21:53:57.4±0.1, 30°.85N×131°.43E, h33^{km}±2^{km}, M3.9*
JMA Felt I J1.
NEIC ***15*** *21:53:57.4±1.4, 30°.84N±0°.06×131°.36E±0°.07, h32^{km}±5^{km}, mb4.5/29, Error ellipse: s-maj=9.2km s-min=8.4km az=81.0*
BJI ***15*** *21:53:57.9±0.0, 30°.81N×131°.31E, h50^{km}, mB4.7/18, mb4.2/30, Ms4.1/20, Ms7 4.0/20*
NIED ***15*** *21:53:57.5, 30°.85N×131°.43E, h33^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.95; $M_{\theta\theta}$-1.24; $M_{\phi\phi}$-1.71; $M_{r\theta}$1.56; $M_{\theta\phi}$-1.61; $M_{\phi r}$1.93; Fault plane solution: $M_0$3.91000×10^{15} NP1:ϕ_s40.00000°, δ65.00000°, λ89.00000°. NP2:ϕ_s222.00000°, δ25.00000°, λ92.00000°.*
IDC ***15*** *21:53:58.5±2.4, 30°.86N×131°.30E, h44^{km}±21^{km}, mb3.7/12, mb1 3.9/16, mb1mx3.8/37, mbtmp3.9/16, ML3.0/4, MS3.7/18, Ms1 3.7/18, ms1mx3.5/50 Error ellipse: s-maj=25.8km s-min=16.2km az=74.0*

ISC 15 21:53:57.9±0.6**, 30°.84N**±0°.04×**131°.41E**±0°.05**, h39**^{km}±2^{km}**, n100,** σ0^{s}**90**/100**, mb4.3**/32**, MS3.9**/16**, 7C-2D, Kyushu**

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Code   Station Name       Δ°   AZ°    Phase ID        Time      Res
                                   Op      ISC     h  m  s    ISC
JTN    Tanegashima 3    0.41 244 ⇓P       Pn     21 54 06.5 -0.8
JTN                               eS      Sn     21 54 14.3 +0.2
JTSR   Tashiro 2        0.53 308 ⇓P       Pn     21 54 07.9 -1.2
JMTN   Minamitane       0.62 225 ⇑P       Pn     21 54 10.0 -0.3
JMTN                               S       Sn     21 54 20.2 +1.2
JNAR   Kushima--Naru    0.70 350 ⇑P       Pn     21 54 10.9 -0.5
JNAR                               S       Sn     21 54 21.1 +0.2
JNKG   Nichinankitago   0.82 358 ⇑P       Pn     21 54 12.8 -0.3
JNKG                               S       Sn     21 54 24.7 +0.7
JYAK   Yakushimahirau   0.98 233   P       Pn     21 54 15.3 +0.2
JYAK                               S       Sn     21 54 29.3 +1.6
JSU    Suzuyama         1.05 310 ⇑P       Pn     21 54 15.9 -0.4
JSU    Suzuyama         1.05 310           Pn     21 54 15.8 -0.4
JTZ    Takazaki         1.10 346 ⇑P       Pn     21 54 16.8  0.0
JTZ                                S       Sn     21 54 32.4 +1.7
JKC    Kuchinoerabu     1.11 251   P       Pn     21 54 17.3 +0.4
JKC                                S       Sn     21 54 32.9 +1.9
JTSN   Tsuno            1.41   3   P       Pn     21 54 20.5 -0.6
JZO    Okuchi           1.47 332 ⇑P       Pn     21 54 21.9 -0.1
JNU    Nakatsue         2.32 349   P       Pn     21 54 34.2 +0.6
       3.2nm,0.3s,baz=107,slow=1.0,SNR=52
JNU                                S       Sn     21 55 01.1 +0.1
       28nm,0.3s,baz=166,slow=7.0,SNR=6.8
JNU                                LR      LR     21 55 11.2
       comp=Z,693nm,19.5s,baz=231,slow=32
JNU    Nakatsue         2.32 349           Pn     21 54 33.4 -0.3
JMN    Monobe           3.56  35           Pn     21 54 49.8 -0.9
JTU    Tsushima         4.05 336   Pn      Pn     21 54 56.3 -1.0
JHS    Saijyo           4.39  19   Pn      Pn     21 55 02.4 +0.3
JOW    Kunigami         4.84 215   Pn      Pn     21 55 08.2 -0.1
JMZ    Minamidaito 2    5.00 182   Pn      Pn     21 55 09.9 -0.6
JWT    Wachi            5.56  36   Pn      Pn     21 55 18.2 +0.1
INU    Inuyama          6.51  45   Pn      Pn     21 55 32.1 +1.0
JGF    Kuroka           6.89  45           Pn     21 55 36.9 +0.5
KSRS   Korea Array      7.21 337   P       Pn     21 55 41.9 +1.2
       0.3nm,0.3s,baz=150,slow=14,SNR=4.7
KSRS                               LR      LR     21 58 43.7
       comp=Z,625nm,19.1s,baz=158,slow=40
JHJ    Hachijo jima 2   7.47  70   LR      LR     21 58 29.6
       comp=Z,187nm,19.7s,baz=3.5,slow=36
JHJ2   Mitsune          7.50  70   Pn      Pn     21 55 45.6 +0.9
MAJO   Matsushiro       8.03  43   Pn      Pn     21 55 52.0 -0.1
MJAR   Matsushiro Arr   8.03  43   P       Pn     21 55 51.9 -0.1
       0.3nm,0.3s,baz=221,slow=14,SNR=5.0
NJ2    Nanjing         10.79 280  eP      Pn     21 56 29.1 -0.7
NJ2                                pmax    pmax
       comp=Z,5.0nm,0.5s
NJ2                                LR      LR
       comp=N,350nm,7.1s
NJ2                                LR      LR
       comp=E,720nm,12.8s
NJ2                                LR      LR
       comp=Z,630nm,10.9s
BJI    Beijing         15.43 311   P       Pn     21 57 32.8 +0.2
BJI                                pP      P      21 57 38.5 +1.8
BJI                                S       Sn     22 00 20.8 -1.5
BJI                                SS      S      22 00 38.8 +1.7
BJI                                pmax    pmax
       comp=Z,4.0nm,0.8s
BJI                                pmax    pmax
       comp=Z,140nm,4.6s
BJI                                LR      LR
       comp=N,290nm,13.8s
BJI                                LR      LR
       comp=E,430nm,14.0s
BJI                                LR      LR
       comp=Z,600nm,14.5s
KLR    Kul'dur         18.38   1   P       Pn     21 58 09.8 +0.3
       0.1nm,0.3s,baz=176,slow=7.8,SNR=9.7
KLR                                LR      LR     22 05 05.8
       comp=Z,155nm,21.1s,baz=174,slow=36
HHC    Hu-ho-hao-te    18.90 307  eP      Pn     21 58 16.8 +0.7
HHC                                pmax    pmax
       comp=Z,10.0nm,0.8s
HHC                                pmax    pmax
       comp=Z,72nm,6.8s
HHC                                LR      LR
       comp=N,310nm,12.3s
HHC                                LR      LR
       comp=E,280nm,12.3s
HHC                                LR      LR
       comp=Z,370nm,12.8s
XAN    Xi'an           19.24 285   P       Pn     21 58 21.8 +1.6
XAN                                pP      pP     21 58 30.9 +2.2
XAN                                pmax    pmax
       comp=Z,6.0nm,0.8s
XAN                                LR      LR
       comp=N,310nm,14.4s
XAN                                LR      LR
       comp=E,680nm,14.3s
XAN                                LR      LR
       comp=Z,760nm,12.4s
DAV    Davao City (W)  24.27 194   LR      LR     22 07 43.1
       comp=Z,69nm,19.5s,baz=5.0,slow=34
ULN    Ulaanbaatar     25.21 319   P       P      21 59 19.4 -0.8
ULN                                IAmb    IAmb   21 59 20.9
       comp=Z,6.9nm,0.9s
SONM   Songino Array   25.57 319   P       P      21 59 22.3 -1.0
       comp=Z,4.0nm,0.8s,baz=139,slow=9.3,SNR=25
SONM                               LR      LR     22 10 34.2
       comp=Z,316nm,19.2s,baz=114,slow=39
SONM   Songino Array   25.57 319   P       P      21 59 22.3 -1.0
KMI    Kunming         25.91 264 ⇑P       P      21 59 26.3 -0.4
KMI                                sP      sP     21 59 41.0 -1.0
KMI                                pmax    pmax
       comp=Z,10.0nm,1.2s
KMI                                LR      LR
       comp=Z,260nm,9.6s
KMI                                LR      LR
       comp=Z,250nm,14.5s
KMI                                LR      LR
       comp=Z,310nm,16.8s
GTA    Gaotai          27.11 297  eP      P      21 59 40.1 +2.8
GTA                                pmax    pmax
       comp=Z,2.0nm,1.0s
YAK    Yakutsk         31.23 358   LR      LR     22 12 38.2
       comp=Z,106nm,21.1s,baz=90,slow=36
CMAR   Chiang Mai Arr  31.86 255   P       P      22 00 17.9 -1.5
       comp=Z,0.4nm,0.3s,baz=52,slow=8.4,SNR=6.6
CMAR                               LR      LR     22 13 55.2
       comp=Z,70nm,18.6s,baz=100,slow=38
CMAR   Chiang Mai Arr  31.86 255   P       P      22 00 18.8 -0.6
H11N2  WAKE ISLAND Hy  33.81 101   T       T      22 36 22.6
       baz=296,slow=75,SNR=68
H11N1  WAKE ISLAND Hy  33.81 101   T       T      22 36 25.4
       baz=296,slow=75,SNR=40
H11N3  WAKE ISLAND Hy  33.83 101   T       T      22 36 26.4
       baz=296,slow=75,SNR=46
WMQ    Urumqi          36.68 303  eP      P      22 01 02.4 +1.3
WMQ                                LR      LR
       comp=Z,300nm,17.3s
WMQ                                LR      LR
       comp=Z,160nm,20.3s
ZALV   Zalesovo Beam   40.47 319   P       P      22 01 31.3 -1.3
       comp=Z,0.5nm,0.6s,baz=111,slow=8.1,SNR=4.1
ZALV                               LR      LR     22 19 35.5
       comp=Z,190nm,18.7s,baz=102,slow=38
ZALV   Zalesovo Beam   40.47 319           P      22 01 30.8 -1.8
MK31   Makanchi Array  40.77 307   P       P      22 01 34.1 -1.1
MKAR   Makanchi Array  40.77 307   P       P      22 01 34.1 -1.1
       comp=Z,0.9nm,0.7s,baz=98,slow=9.0,SNR=6.0
MKAR                               LR      LR     22 20 08.8
       comp=Z,121nm,18.2s,baz=66,slow=39
MKAR   Makanchi Array  40.77 307   P       P      22 01 34.0 -1.3
BILL   Bilibino        42.44  19   P       P      22 01 49.5 +0.9
KURK   Kurchatov       43.58 313   P       P      22 01 56.7 -1.3
KURK                               IAmb    IAmb   22 01 57.9
       comp=Z,6.7nm,0.9s
NRIK   Noril'sk        45.81 340   LR      LR     22 22 59.9
       comp=Z,115nm,20.0s,baz=162,slow=38
NIL    Nilore          48.71 289   P       P      22 02 38.3 -0.4
NIL                                IAmb    IAmb   22 02 40.0
       comp=Z,5.7nm,0.7s
BRVK   Borovoye        48.90 315   P       P      22 02 38.8 -1.0
BRVK                               IAmb    IAmb   22 02 40.0
       comp=Z,6.1nm,0.9s
KKAR   Karatay Array   49.18 302   P       P      22 02 41.3 -0.8
WB0    Warramunga Arr  50.39 176   P       P      22 02 52.0 +0.6
WB0                                IAmb    IAmb   22 03 15.9
       comp=Z,8.3nm,1.4s
WRA    Warramunga Arr  50.56 176   P       P      22 02 52.9 +0.2
       comp=Z,0.8nm,1.0s,baz=355,slow=7.9,SNR=4.0
WRA    Warramunga Arr  50.56 176   P       P      22 02 52.7 -0.1
CHGR   Chuyangaron     50.89 297   P       P      22 02 54.7 -0.6
CHGR                               IAmb    IAmb   22 02 55.7
       comp=Z,11nm,1.0s
KBL    Kabul           51.89 292   P       P      22 03 02.5 -0.4
KBL                                IAmb    IAmb   22 03 03.6
       comp=Z,3.0nm,0.9s
ASAR   Alice Springs   54.24 177   P       P      22 03 20.4 +0.4
       comp=Z,0.2nm,0.5s,baz=11,slow=13,SNR=6.7
ARU    Arti            55.60 320   P       P      22 03 28.1 -1.3
ARU                                IAmb    IAmb   22 03 29.1
       comp=Z,8.2nm,0.9s
ABKAR  Akbulak array   55.63 311   P       P      22 03 29.0 -0.9
ABKAR                              IAmb    IAmb   22 03 43.9
       comp=Z,6.1nm,1.5s
ABKAR  Akbulak array   55.63 311   P       P      22 03 28.8 -1.0
IMAR   Indian Mountai  56.12  28   P       P      22 03 34.4 +1.3
CAST   Castle Rocks    56.92  31   P       P      22 03 39.8 +1.0
CAST                               IAmb    IAmb   22 04 06.9
       comp=Z,4.2nm,1.3s
MDM    Murphy Dome     58.48  29   P       P      22 03 50.8 +1.1
MDM                                IAmb    IAmb   22 03 57.7
       comp=Z,4.3nm,1.1s
ILAR   Eielson Array   59.07  30   P       P      22 03 54.0 +0.2
       comp=Z,0.4nm,0.8s,baz=286,slow=8.8,SNR=5.8
BMAR   Burnt Mountain  59.66  26   P       P      22 03 59.2 +1.3
STKA   Stephens Creek  63.11 170   LR      LR     22 31 16.8
       comp=Z,31nm,20.3s,baz=24,slow=35
A36M   Sachs Harbour   64.98  20   P       P      22 04 34.3 +1.0
ARCES  ARCESS Array B  66.76 338   LR      LR     22 39 13.8
       comp=Z,133nm,18.4s,baz=35,slow=41
KBZ    Khabaz          68.44 309   P       P      22 04 56.5 +0.6
       comp=Z,7.0nm,0.9s,baz=98,slow=4.9,SNR=10
KBZ                                LR      LR     22 38 25.4
       comp=Z,79nm,19.5s,baz=52,slow=39
KIV    Kislovodsk      68.49 309   P       P      22 04 55.6 -0.7
FIA1   FINESS Array S  70.24 331   P       P      22 05 06.2 -0.4
FINES  FINESS Array B  70.24 331   P       P      22 05 06.3 -0.4
       comp=Z,1.7nm,0.6s,baz=70,slow=6.2,SNR=8.0
FINES                              LR      LR     22 39 21.9
       comp=Z,164nm,18.1s,baz=28,slow=39
FINES  FINESS Array B  70.24 331   P       P      22 05 06.1 -0.6
RES    Resolute Bay    70.50  12   P       P      22 05 08.2 +0.2
MARD   Mardin          72.52 303   P       P      22 05 21.0 -0.1
AKASG  Malin Array Be  73.85 320   P       P      22 05 27.6 -0.8
       comp=Z,1.5nm,0.6s,baz=57,slow=6.3,SNR=9.3
AKASG  Malin Array Be  73.85 320   P       P      22 05 27.6 -0.8
NB201  NORSAR Array S  76.37 334   P       P      22 05 42.3 -0.6
NB2    NORSAR Subarra  76.41 334   P       P      22 05 42.3 -0.8
       comp=Z,0.7nm,0.6s,baz=46,slow=5.9
NOA    NORSAR Array B  76.41 334   P       P      22 05 42.6 -0.5
       comp=Z,1.0nm,0.6s,baz=48,slow=5.6,SNR=4.8
NOA                                LR      LR     22 42 48.6
       comp=Z,48nm,18.1s,baz=335,slow=38
BR131  Keskin Array S  76.41 308   P       P      22 05 43.2 -0.4
BR131                              IAmb    IAmb   22 05 45.2
       comp=Z,8.0nm,0.8s
BRTR   Keskin Array B  76.41 308   P       P      22 05 43.5 -0.1
       comp=Z,4.7nm,0.9s,baz=98,slow=5.1,SNR=9.0
BRTR   Keskin Array B  76.41 308   P       P      22 05 43.0 -0.7
BUR08  Bucovina Ar. S  77.68 318   P       P      22 05 50.4 -0.2
BUR08                              IAmb    IAmb   22 06 01.9
       comp=Z,4.2nm,1.2s
BURAR  Bucovina Array  77.68 318   P       P      22 05 50.6  0.0
ELL    Elmali          80.44 307   P       P      22 06 05.8 -0.1
SFJD   Kangerlussuaq   82.46   1   LR      LR     22 44 53.9
       comp=Z,88nm,21.8s,baz=312,slow=37
CONA   Conrad Observa  82.65 322  eP      P      22 06 17.9 +0.5
       comp=Z,1.9nm,1.1s
DIVS   Divibare        82.68 317   P       P      22 06 17.3 -0.2
DIVS                               IAmb    IAmb   22 06 39.9
       comp=Z,4.6nm,1.1s
SOKA   Soboth          83.87 322  eP      P      22 06 23.2 -0.4
       comp=Z,2.7nm,0.9s
OBKA   Obir            84.23 322  eP      P      22 06 26.3 +0.8
       comp=Z,1.7nm,0.7s
KBA    Koelnbreinsper  84.50 323  eP      P      22 06 27.5 +0.6
       comp=Z,2.2nm,0.9s
ABTA   Abfaltersbach   85.15 323  eP      P      22 06 30.2  0.0
       comp=Z,3.4nm,0.9s
NRCA   Norcia          87.39 320   P       P      22 06 41.0 -0.2
ESDC   Sonseca Array   98.52 327   LR      LR     22 58 09.5
       comp=Z,64nm,21.6s,baz=340,slow=39
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BJI ***15*** *22:07:17.5±0.0, 42°.81N×146°.88E, h43^{km}, mB4.9/19, mb4.6/38, Ms4.2/8, Ms7 3.9/9*
NIED ***15*** *22:07:19.3, 42°.86N×146°.54E, h43^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.43; $M_{\theta\theta}$-1.11; $M_{\phi\phi}$-1.32; $M_{r\theta}$0.68; $M_{\theta\phi}$-1.27; $M_{\phi r}$1.09; Fault plane solution: $M_0$2.78000×10^{15} NP1:ϕ_s38.00000°, δ59.00000°, λ85.00000°. NP2:ϕ_s228.00000°, δ32.00000°, λ99.00000°.*
JMA ***15*** *22:07:19.2±0.1, 42°.85N×146°.54E, h43^{km}±2^{km}, M4.3*
JMA Felt I J1.
SKHL ***15*** *22:07:19.5±0.1, 42°.80N×146°.60E, h51^{km}±4^{km}, mb5.3/6*
MOS ***15*** *22:07:20.6±0.9, 42°.94N×146°.41E, h46^{km}, mb4.9/18, Error ellipse: s-maj=9.0km s-min=5.3km az=115.4*
NEIC ***15*** *22:07:20.8±1.2, 42°.83N±0°.07×146°.5E±0°.1, h33^{km}±3^{km}, mb4.6/35, Error ellipse: s-maj=13.0km s-min=8.1km az=126.0*
IDC ***15*** *22:07:24.6±2.2, 42°.92N×146°.47E, h68^{km}±18^{km}, mb3.9/18, mb1 4.0/24, mb1mx3.8/53, mbtmp4.1/24, MS3.7/13, Ms1 3.7/13, ms1mx3.4/43, Error ellipse: s-maj=17.3km s-min=14.0km az=152.0*

ISC 15 22:07:20.3±1.3**, 42°.89N**±0°.05×**146°.45E**±0°.04**, h29**^{km}±8^{km}**, n192,** σ1^{s}**02**/210**, mb4.6**/58**, MS3.8**/14**, 12C-9D, Off southeast coast of Hokkaido**

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Code   Station Name       Δ°   AZ°    Phase ID        Time      Res
                                   Op      ISC     h  m  s    ISC
NEM2   Nemuro 2         0.70 313   P       Pb     22 07 33.8 -0.2
NEM2                              eS      Sn     22 07 44.5 +0.4
NMR    Nemuro--Hokkai   0.71 313  ePN     Pb     22 07 32.9 -1.3
NMR                               eS      Sn     22 07 44.6 +0.2
NMR    Nemuro--Hokkai   0.71 313  eP      Pb     22 07 33.9 -0.3
NMR                               eS      Sn     22 07 44.7 +0.3
JKHN   Kushirohamanak   0.96 282   P       Pn     22 07 37.6 -0.2
JKHN                              eS      Sb     22 07 51.4 +0.6
SHO    Shikotan         1.02  16  ePN     Pn     22 07 38.1 -0.5
SHO                               eS      Sn     22 07 51.7 -0.3
SHO                                pmax    pmax
       comp=Z,778nm,0.6s
SHO                                pmax    pmax
       comp=E,431nm,0.7s
SHO                                pmax    pmax
       comp=N,431nm,0.6s
SHO                                smax    smax
       comp=N,12µm,0.4s
SHO                                smax    smax
       comp=E,10µm,0.4s
SHO    Shikotan         1.02  16  eP      Pn     22 07 38.1 -0.5
SHO                                AMB     AMB    22 07 39.0
       comp=E,780nm,0.4s
SHO                               eS      Sn     22 07 51.4 -0.6
SHO                                A       A      22 07 52.0
       comp=E,12µm,0.4s
SHO                                A       A      22 07 52.0
       comp=E,10µm,0.4s
GLVR   Golovnino        1.09 322  ePN     Pn     22 07 39.3 -0.2
GLVR                              eS      Sb     22 07 54.6 +0.3
GLVR                               pmax    pmax
       comp=Z,1µm,0.3s
GLVR                               pmax    pmax
       comp=E,222nm,0.4s
GLVR                               pmax    pmax
       comp=N,174nm,0.3s
GLVR                               smax    smax
       comp=N,5µm,0.2s
GLVR                               smax    smax
       comp=E,7µm,0.2s
GLVR   Golovnino        1.09 322  eP      Pn     22 07 39.5  0.0
GLVR                               AMB     AMB    22 07 39.8
       comp=E,1µm,0.3s
GLVR                              eS      Sb     22 07 54.6 +0.3
GLVR                               A       A      22 07 58.0
       comp=E,5µm,0.3s
GLVR                               A       A      22 07 58.0
       comp=E,7µm,0.3s
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AKK	Akkeshi	1.19	277	eP	Pn	22 07 40.8	-0.1
GRPR	Tuman	1.21	336	ePN	Pn	22 07 40.7	-0.5
GRPR				eS	Sn	22 07 56.2	-0.4
GRPR				pmax	pmax		
	comp=Z,6µm,0.3s						
GRPR				pmax	pmax		
	comp=E,925nm,0.4s						
GRPR				pmax	pmax		
	comp=N,1µm,0.2s						
GRPR				smax	smax		
	comp=N,7µm,0.5s						
GRPR				smax	smax		
	comp=E,17µm,0.5s						
GRPR	Tuman	1.21	336	eP	Pn	22 07 40.7	-0.5
GRPR				AMB	AMB	22 07 41.0	
	comp=E,3µm,0.4s						
GRPR				eS	Sn	22 07 56.5	-0.1
GRPR				A	A	22 07 57.0	
	comp=E,7µm,0.5s						
GRPR				A	A	22 07 57.0	
	comp=E,17µm,0.5s						
YUK	Yuzh-Kuril'sk	1.23	340	ePN	Pn	22 07 40.8	-0.6
YUK				eS	Sn	22 07 56.5	-0.5
YUK				pmax	pmax		
	comp=Z,2µm,0.2s						
YUK				pmax	pmax		
	comp=N,350nm,0.3s						
YUK				smax	smax		
	comp=N,5µm,0.6s						
YUK				smax	smax		
	comp=E,9µm,0.6s						
YUK	Yuzh-Kuril'sk	1.23	340	eP	Pn	22 07 40.8	-0.6
YUK				AMB	AMB	22 07 45.0	
	comp=E,1µm,0.4s						
YUK				eS	Sn	22 07 56.8	-0.2
YUK				A	A	22 07 57.0	
	comp=E,5µm,0.6s						
YUK				A	A	22 07 57.0	
	comp=E,8µm,0.6s						
JAK	Akkeshi	1.29	275	P	Pn	22 07 42.1	-0.2
JAK				eS	Sn	22 07 59.2	+0.6
JNSB	Nemuroshibetsu	1.38	311	P	Pn	22 07 43.3	-0.2
JRA	Rausu	1.43	318	P	Pn	22 07 44.2	0.0
JRA				eS	Sn	22 08 02.9	+0.9
JNK	Nakash	1.44	300	P	Pn	22 07 44.3	-0.1
JNK				eS	Sn	22 08 02.6	+0.2
RUSJ	Misakicho	1.50	325	ePN	Pn	22 07 45.5	+0.3
RUSJ				eS	Sb	22 08 06.3	+0.3
JOB	Onbets	1.92	271	P	Pn	22 07 51.1	+0.1
JAR	Ashorobuto	2.00	283	P	Pn	22 07 52.4	+0.3
JAR				eS	Sn	22 08 16.9	+0.7
JTKR	Abashiri--Toko	2.14	301	P	Pn	22 07 55.0	+1.0
JTKR				eS	Sn	22 08 21.6	+1.9
JCH	Churui	2.29	264	P	Pn	22 07 56.1	+0.1
JCH				eS	Sn	22 08 22.9	-0.3
JMP	Maruseppu	2.51	298	P	Pn	22 08 00.2	+1.0
KUR	Kuril'sk	2.56	23	⇑ iPN	Pn	22 08 00.9	+1.2
KUR				i S	Sn	22 08 31.8	+1.9
KUR				pmax	pmax		
	comp=E,79nm,0.3s						
KUR				pmax	pmax		
	comp=Z,175nm,0.3s						
KUR				pmax	pmax		
	comp=N,65nm,0.2s						
KUR				smax	smax		
	comp=N,626nm,0.5s						
KUR				smax	smax		
	comp=E,230nm,0.3s						
KUR	Kuril'sk	2.56	23	i P	Pn	22 08 00.2	+0.5
KUR				AMB	AMB	22 08 11.0	
	comp=E,180nm,0.3s						
KUR				i S	Sn	22 08 30.1	+0.2
KUR				A	A	22 08 40.0	
	comp=E,650nm,0.4s						
KUR				A	A	22 08 40.0	
	comp=E,270nm,0.4s						
ERM	Erimo	2.59	251	c iPN	Pn	22 08 01.7	+1.6
ERM	Erimo	2.59	251	Pn	Pn	22 08 01.8	+1.6
JEM	Erimo	2.59	251	P	Pn	22 08 00.8	+0.7
JKA	Kamikawa-asahi	3.06	295	eP	Pn	22 08 08.8	+2.2
JKA	Kamikawa-asahi	3.06	295	Pn	Pn	22 08 07.4	+0.8
ASAJ	Asahikawa	3.06	295	P	Pn	22 08 08.8	+2.1
	comp=E,13nm,0.3s,baz=127,slow=13,SNR=54						
ASAJ				S	Sb	22 08 47.7	-3.2
	comp=E,9.6nm,0.3s,baz=76,slow=21,SNR=4.6						
JEW	Eniwo	3.67	271		Pn	22 08 16.7	+1.6
YSS	Yuzh-Sakhalins	4.84	328	ePN	Pn	22 08 32.7	+1.6
YSS				eS	Sn	22 09 26.9	+0.8
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				smax	smax		
	comp=N,50nm,0.8s						
YSS				MLR	MLR		
	comp=Z,1µm,14.0s						
YSS	Yuzh-Sakhalins	4.84	328	eP	Pn	22 08 32.7	+1.6
YSS				AMB	AMB	22 08 33.5	
	comp=Z,30nm,0.5s						
YSS				eS	Sn	22 09 26.9	+0.8
YSS				A	A	22 09 37.8	
	comp=Z,10.0nm,0.6s						
YSS				A	A	22 09 37.8	
	comp=Z,40nm,0.6s						
YSS				AMS	AMS	22 10 36.0	
	comp=Z,1µm,14.0s						
YSS	Yuzh-Sakhalins	4.84	328	Pn	Pn	22 08 32.6	+1.6
JMM	Marumori	6.62	223		Pn	22 08 55.1	-0.4
JSD	Sado	7.90	235	Pn	Pn	22 09 12.7	-0.4
JYT	Yasato	8.22	218	Pn	Pn	22 09 17.4	-0.1
TYV	Tymovskoe	8.39	343	eP	Pn	22 09 21.8	+2.0
TYV				AMB	AMB	22 09 24.5	
	comp=Z,40nm,0.7s						
MAJO	Matsushiro	8.97	228	⇑ ePN	Pn	22 09 26.7	-1.1
MAJO	Matsushiro	8.97	228	Pn	Pn	22 09 27.4	-0.3
MAT	Matsushiro	8.97	228	P	Pn	22 09 27.3	-0.5
MJAR	Matsushiro Arr	8.97	228	P	Pn	22 09 31.3	+3.5
	comp=Z,0.1nm,0.3s,baz=34,slow=12,SNR=2.9						
JGF	Kuroka	10.13	227	Pn	Pn	22 09 44.1	+0.4
USA0B	Ussuriysk Arra	10.58	282	PN	Pn	22 09 52.2	+2.4
USA0B	Ussuriysk Arra	10.58	282	Pn	Pn	22 09 52.2	+2.4
USRK	Ussuriysk Ar.	10.58	282	P	Pn	22 09 53.3	+3.5
	baz=92,slow=15,SNR=3.3						
USRK				LR	LR	22 14 13.3	
	comp=Z,198nm,18.8s,baz=68,slow=39						
PAU	Pauzhetka	11.10	36	eP	Pn	22 09 57.2	+0.3
PAU				AMB	AMB	22 10 03.6	
	comp=Z,30nm,0.4s						
JWT	Wachi	11.45	232	Pn	Pn	22 10 01.1	-0.7
KLR	Kul'dur	12.01	307	P	Pn	22 10 13.1	+3.8
	comp=Z,0.1nm,0.3s,baz=112,slow=15,SNR=8.3						
KLR				LR	LR	22 15 09.0	
	comp=Z,213nm,19.5s,baz=117,slow=39						
KLR	Kul'dur	12.01	307	⇓ ePN	Pn	22 10 08.6	-0.8
KLR				pmax	pmax		
	comp=Z,2.0nm,1.4s						
KLR	Kul'dur	12.01	307	eP	Pn	22 10 10.3	+0.9
PETK	Petropavlovsk-	12.69	32	P	Pn	22 10 22.1	+3.5
	comp=Z,0.3nm,0.3s,baz=192,slow=13,SNR=5.6						
PETK	Petropavlovsk-	12.69	32		Pn	22 10 18.7	+0.2
KSRS	Korea Array	15.16	255	P	P	22 10 55.8	-1.2
	comp=Z,0.2nm,0.3s,baz=62,slow=12,SNR=2.8						
KSRS				LR	LR	22 16 32.9	
	comp=Z,146nm,20.1s,baz=72,slow=36						
ZEA	Zeya	16.70	317	eP	P	22 11 16.3	+2.2
ZEA				MLR	MLR		
	comp=E,200nm,13.0s						
ZEA				MLR	MLR		
	comp=N,300nm,11.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,14.0s						
ZEA	Zeya	16.70	317	eP	Pn	22 11 08.9	-3.1
HIA	Hailar	19.53	298	⇓ eP	P	22 11 46.0	+0.7
HIA				pmax	pmax		
	comp=Z,9.0nm,1.8s						
SEY	Seymchan	20.38	8	P	P	22 11 54.1	-0.2
	comp=Z,1.7nm,0.7s,baz=153,slow=8.6,SNR=5.0						
YAK	Yakutsk	21.60	338	⇑ eP	P	22 12 07.9	+0.4
YAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
YAK	Yakutsk	21.60	338	eP	P	22 12 07.9	+0.4
BJI	Beijing	22.81	273	P	P	22 12 19.6	-1.0
BJI				S	S	22 16 27.3	-0.5
BJI				pmax	pmax		
	comp=Z,14nm,1.1s						
BJI				pmax	pmax		
	comp=Z,110nm,4.1s						
BJI				LR	LR		
	comp=Z,150nm,19.4s						
BJI				LR	LR		
	comp=Z,160nm,15.7s						
BJI				LR	LR		
	comp=Z,190nm,17.5s						
BJT	Baijiatuau	22.82	273	P	P	22 12 19.7	-1.0
BJT				pmax	pmax		
	comp=Z,12nm,1.1s						
BJT	Baijiatuau	22.82	273	P	P	22 12 19.7	-1.0
TIA	Tai'an	23.50	263	eP	P	22 12 26.1	-1.5
TIA				pmax	pmax		
	comp=Z,14nm,1.2s						
NJ2	Nanjing	24.32	253	eP	P	22 12 36.5	+1.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	25.95	277	eP	P	22 12 52.0	+1.8
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,97nm,4.8s						
ULN	Ulaanbaatar	27.90	294	ceP	P	22 13 07.6	-0.1
ULN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ULN	Ulaanbaatar	27.90	294	eP	P	22 13 07.6	-0.1
ULN	Ulaanbaatar	27.90	294	P	P	22 13 07.6	-0.1
ULN				IAmb	IAmb	22 13 08.7	
	comp=Z,13nm,1.1s						
SONM	Songino Array	28.34	294	P	P	22 13 11.8	+0.2
	comp=Z,15nm,0.8s,baz=86,slow=8.8,SNR=52						
SONM				LR	LR	22 25 35.4	
	comp=Z,173nm,19.9s,baz=70,slow=38						
SONM	Songino Array	28.34	294	P	P	22 13 11.5	-0.1
SONM				IAmb	IAmb	22 13 12.7	
	comp=Z,13nm,0.9s						
H11N2	WAKE ISLAND Hy	28.80	137	T	T	22 44 07.9	
	baz=329,slow=75,SNR=500						
H11N1	WAKE ISLAND Hy	28.81	137	T	T	22 44 17.8	
	baz=329,slow=75,SNR=504						
H11N3	WAKE ISLAND Hy	28.82	137	T	T	22 44 09.9	
	baz=329,slow=75,SNR=409						
H11S1	WAKE ISLAND Hy	29.74	139	T	T	22 45 20.4	
	baz=330,slow=76,SNR=802						
H11S3	WAKE ISLAND Hy	29.75	139	T	T	22 45 25.1	
	baz=330,slow=76,SNR=609						
H11S2	WAKE ISLAND Hy	29.76	139	T	T	22 45 21.0	
	baz=330,slow=76,SNR=437						
TLY	Talaya	29.96	302	ceP	P	22 13 25.5	-0.3
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TLY	Talaya	29.96	302	eP	P	22 13 25.6	-0.3
TIXI	Tiksi	30.11	349	⇑ eP	P	22 13 27.1	+0.3
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.3s						
TIXI	Tiksi	30.11	349	eP	P	22 13 27.1	+0.3
XAN	Xi'an	30.48	266	P	P	22 13 31.6	+1.0
XAN				pP	sP	22 13 41.4	-0.1
XAN				pmax	pmax		
	comp=Z,14nm,1.1s						
GTA	Gaotai	34.94	280	eP	P	22 14 10.1	+0.5
GTA				pP	sP	22 14 19.3	-1.3
GTA				sP	pwP	22 14 23.8	+2.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
IMAR	Indian Mountai	39.65	34	P	P	22 14 49.9	+0.8
KMI	Kunming	39.83	258	⇑P	P	22 14 50.1	-1.2
KMI				pP	pwP	22 15 03.4	+1.0
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KDAK	Kodiak Island	40.21	47	LR	LR	22 35 04.0	
	comp=Z,120nm,18.3s,baz=164,slow=41						
DGZ	Jazzator, Alta	40.41	301	⇓ iP	P	22 14 56.7	+0.9
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ZAA0	Zalesovo Array	41.12	308	P	P	22 15 01.7	+0.3
ZALV	Zalesovo Beam	41.12	308	P	P	22 15 01.1	-0.2
	comp=Z,0.7nm,0.4s,baz=95,slow=7.9,SNR=5.5						
ZALV				PcP	PcP	22 17 00.6	+0.3
	comp=Z,2.2nm,0.5s,baz=86,slow=3.7,SNR=10						
ZALV				LR	LR	22 33 11.9	
	comp=Z,77nm,20.0s,baz=44,slow=38						
ZALV	Zalesovo Beam	41.12	308	P	P	22 15 01.8	+0.5
WMQ	Urumqi	41.94	292	eP	P	22 15 10.5	+2.2
WMQ				pP	sP	22 15 19.5	-0.2
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.9s						
WMQ				LR	LR		
	comp=Z,91nm,14.5s						
H24K	Noodor Dome	42.05	34	P	P	22 15 10.2	+1.3
DHY	Denali Highway	42.36	38	P	P	22 15 11.6	0.0
ILAR	Eielson Array	42.49	36	P	P	22 15 12.3	-0.2
	comp=Z,1.1nm,0.7s,baz=254,slow=6.6,SNR=4.2						
ILAR	Eielson Array	42.49	36	P	P	22 15 13.2	+0.8
BMAR	Burnt Mountain	43.34	32	P	P	22 15 18.7	-0.6
MK31	Makanchi Array	44.54	298	c iP	P	22 15 29.0	-0.2
MK31	Makanchi Array	44.54	298	P	P	22 15 29.2	0.0
MK31				IAmb	IAmb	22 15 30.0	
	comp=Z,12nm,0.7s						
MKAR	Makanchi Array	44.54	298	P	P	22 15 29.2	0.0
	comp=Z,12nm,0.7s,baz=82,slow=9.2,SNR=90						
MKAR				LR	LR	22 35 18.4	
	comp=Z,87nm,19.6s,baz=22,slow=38						
MAKZ	Makanchi	44.73	298	P	P	22 15 30.6	-0.2
MAKZ				pmax	pmax		
	comp=Z,18nm,0.9s						
MAKZ	Makanchi	44.73	298	P	P	22 15 30.6	-0.2
MAKZ				IAmb	IAmb	22 15 31.6	
	comp=Z,18nm,0.9s						
BCAR	Beaver Creek A	44.89	38	P	P	22 15 32.0	+0.1
KURK	Kurchatov	45.59	305	P	P	22 15 37.3	-0.2
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KURK	Kurchatov	45.59	305	eP	P	22 15 37.3	-0.2
KURK	Kurchatov	45.59	305	P	P	22 15 37.3	-0.2
KURK				IAmb	IAmb	22 15 38.2	
	comp=Z,5.2nm,0.6s						
CMAR	Chiang Mai Arr	46.79	254	P	P	22 15 48.2	+0.9
	comp=Z,0.6nm,0.3s,baz=34,slow=7.0,SNR=1.9						
CMAR				LR	LR	22 36 08.7	
	comp=Z,47nm,19.4s,baz=47,slow=37						
INK	Inuvik	47.41	30	P	P	22 15 50.6	-0.8
	comp=Z,5.3nm,0.8s,baz=291,slow=7.1,SNR=20						
BRVK	Borovoye	49.70	310	⇑ eP	P	22 16 10.1	+0.7
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.9s						
BRVK	Borovoye	49.70	310	eP	P	22 16 10.1	+0.7
BRVK	Borovoye	49.70	310	P	P	22 16 09.7	+0.3
BOOM	Boomskoye usch	50.38	295	P	P	22 16 15.4	+0.6
BOOM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BOOM	Boomskoye usch	50.38	295	P	P	22 16 15.4	+0.6
BOOM				IAmb	IAmb	22 16 41.2	
	comp=Z,10nm,1.1s						
AAK	Ala-Archa	51.27	296	⇓ iP	P	22 16 21.7	+0.2
AAK				pmax	pmax		
	comp=Z,49nm,4.7s						
AAK	Ala-Archa	51.27	296	eP	P	22 16 21.7	+0.2
AAK	Ala-Archa	51.27	296	P	P	22 16 21.4	-0.2
KSH	Kashi	51.70	292	P	P	22 16 28.8	+4.0
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SVE	Sverdlovsk	53.42	317	eP	P	22 16 36.5	-0.6
SVE				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SVE	Sverdlovsk	53.42	317	eP	P	22 16 36.5	-0.6
KKAR	Karatay Array	53.67	298	P	P	22 16 38.8	-0.3
KKAR	Karatay Array	53.67	298	P	P	22 16 38.8	-0.3
ARU	Arti	54.63	317	d iP	P	22 16 45.3	-0.5
ARU						22 17 42.9	
ARU				S	S	22 24 22.7	-0.8
ARU				pmax	pmax		
	comp=Z,11nm,0.9s						
ARU	Arti	54.63	317	eP	P	22 16 45.4	-0.5
ARU	Arti	54.63	317	P	P	22 16 45.4	-0.5
ARU				IAmb	IAmb	22 16 46.0	
	comp=Z,8.5nm,0.8s						
BTK	Batken	54.92	295	P	P	22 16 47.8	-0.6
BTK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BTK	Batken	54.92	295	P	P	22 16 47.8	-0.6
BTK				IAmb	IAmb	22 16 56.7	
	comp=Z,3.7nm,1.1s						
BBB	Bella Bella	55.23	48	LR	LR	22 38 58.7	
	comp=Z,138nm,19.4s,baz=222,slow=34						
RES	Resolute Bay	55.94	16	P	P	22 16 55.0	0.0
RES				pmax	pmax		
	comp=Z,10.0nm,1.2s						
RES	Resolute Bay	55.94	16	P	P	22 16 55.0	0.0
RES				IAmb	IAmb	22 16 55.4	
	comp=Z,10nm,1.1s						
CHGR	Chuyangaron	56.74	294	P	P	22 17 00.7	-0.7
YKA	Yellowknife Ar	56.80	33	P	P	22 17 01.0	-0.4
	comp=Z,1.2nm,0.8s,baz=293,slow=6.1,SNR=4.1						
YKA	Yellowknife Ar	56.80	33	i P	P	22 17 01.6	+0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ABKAR	Akbulak array	57.21	309	P	P	22 17 04.5	+0.1
KIRV	Kirov	57.96	322	⇓ eP	P	22 17 09.2	-0.4
KBL	Kabul	59.00	290	P	P	22 17 16.6	-0.9
KBL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBL	Kabul	59.00	290	P	P	22 17 16.6	-0.9
KBL				IAmb	IAmb	22 17 28.9	
	comp=Z,3.5nm,0.7s						
ARCES	ARCESS Array B	59.88	340	P	P	22 17 22.5	-0.3
	comp=Z,11nm,1.1s,baz=42,slow=4.9,SNR=7.6						
BELG	Belogornoye	62.18	317	d iP	P	22 17 38.5	0.0
BELG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WB0	Warramunga Arr	63.32	193	P	P	22 17 45.8	-0.7
WB0				IAmb	IAmb	22 17 55.2	
	comp=Z,4.2nm,1.0s						
WRA	Warramunga Arr	63.50	193	P	P	22 17 46.7	-1.0
	comp=Z,0.8nm,1.1s,baz=5.9,slow=6.6,SNR=2.2						
GEYT	Alibeck	64.41	299	LR	LR	22 48 26.5	
	comp=Z,126nm,18.3s,baz=245,slow=38						
SUMG	Summit	64.79	2	P	P	22 17 56.0	0.0
SUMG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SUMG	Summit	64.79	2	P	P	22 17 56.0	0.0
SUMG				IAmb	IAmb	22 17 56.5	
	comp=Z,2.6nm,0.4s						
FIA1	FINESS Array S	65.41	333	P	P	22 17 59.0	-0.7
FINES	FINESS Array B	65.41	333	P	P	22 17 59.2	-0.5
	comp=Z,8.6nm,0.6s,baz=45,slow=7.9,SNR=51						
FINES	FINESS Array B	65.41	333	P	P	22 17 59.0	-0.7
OBN	Obninsk	65.71	324	i P	P	22 18 01.3	-0.4
OBN				i		22 18 32.7	
OBN				pmax	pmax		
	comp=Z,29nm,2.5s						
OBN				MLR	MLR		
	comp=Z,69nm,16.0s						
OBN	Obninsk	65.71	324	eP	P	22 18 01.3	-0.4
VRH	Novokhopyorsk	65.82	318	eP	P	22 18 01.7	-0.9
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
LPSR	Galich'ya Gora	66.27	321	eP	P	22 18 04.5	-0.9
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR	Storozhevoye	67.05	319	eP	P	22 18 09.3	-1.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORD	Divnogorie	67.16	319	eP	P	22 18 10.1	-1.0
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ASAR	Alice Springs	67.22	192	P	P	22 18 12.0	+0.3
	comp=Z,0.3nm,0.6s,baz=26,slow=5.5,SNR=4.2						
VSU	Vasula	67.33	330	eP	P	22 18 11.9	-0.1
UPP	Uppsala	69.34	335	eP	P	22 18 23.9	-0.7
IIGN	Ignalina	69.80	328	eP	P	22 18 27.8	+0.2
NACGM	Naroch	69.91	328	i P	P	22 18 28.0	-0.2
KIV	Kislovodsk	69.96	312	eP	P	22 18 29.6	+0.8
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,74nm,17.0s						
KIV	Kislovodsk	69.96	312	eP	P	22 18 29.6	+0.8
KIV	Kislovodsk	69.96	312	P	P	22 18 29.1	+0.3
KIV				IAmb	IAmb	22 18 41.9	
	comp=Z,7.5nm,0.7s						
KBZ	Khabaz	69.99	311	P	P	22 18 29.3	+0.5
	comp=Z,4.3nm,0.8s,baz=77,slow=6.2,SNR=6.8						
KBZ	Khabaz	69.99	311	⇑ eP	P	22 18 29.4	+0.5
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NC405	NORSAR Array S	70.03	338	P	P	22 18 27.9	-0.9
NB2	NORSAR Subarra	70.22	339	P	P	22 18 29.7	-0.4
	comp=Z,1.8nm,0.6s,baz=33,slow=6.5						
NOA	NORSAR Array B	70.22	339	P	P	22 18 29.7	-0.4
	comp=Z,4.6nm,0.8s,baz=34,slow=6.2,SNR=13						
PABE	Paberze	70.54	329	eP	P	22 18 31.9	-0.1
PDAR	Pinedale Array	70.86	49	P	P	22 18 34.7	+0.1
	comp=Z,0.4nm,0.4s,baz=359,slow=1.1,SNR=5.3						
PDAR				LR	LR	22 48 25.1	
	comp=Z,146nm,20.5s,baz=305,slow=35						
PDAR	Pinedale Array	70.86	49	P	P	22 18 34.2	-0.3
AKASG	Malin Array Be	71.97	324	P	P	22 18 40.1	-0.7
	comp=Z,3.0nm,0.5s,baz=44,slow=6.0,SNR=18						
AKASG	Malin Array Be	71.97	324	ceP	P	22 18 40.0	-0.8
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	71.97	324	P	P	22 18 39.9	-0.8
AKBB	Malin Array Si	71.97	324	deP	P	22 18 40.6	-0.2
GURO	Guroymak-BITLI	73.90	308	P	P	22 18 52.6	0.0
GURO				IAmb	IAmb	22 18 54.8	
	comp=Z,4.4nm,0.9s						
MARD	Mardin	75.46	308	P	P	22 19 02.2	+0.5
MARD				IAmb	IAmb	22 19 03.6	
	comp=Z,8.1nm,0.8s						
KWP	Kalwaria Pacla	75.54	326	P	P	22 19 02.2	+0.5
KWP				pmax	pmax		
	comp=Z,227nm,1.3s						
KWP	Kalwaria Pacla	75.54	326	P	P	22 19 02.2	+0.5
BUR08	Bucovina Ar. S	76.01	323	P	P	22 19 04.9	+0.3
BUR08				IAmb	IAmb	22 19 05.7	
	comp=Z,6.5nm,1.2s						
BURAR	Bucovina Array	76.03	323	P	P	22 19 04.9	+0.2
BURAR				IAmb	IAmb	22 19 05.6	
	comp=Z,2.8nm,0.7s						
CLL	Collm	77.84	332	i P	P	22 19 14.1	-0.6
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL	Collm	77.84	332	i P	P	22 19 14.1	-0.6
	comp=Z,4.0nm,1.0s						
CLL				ePP	PP	22 22 11.0	+1.2
CLL				LmV		22 46 00.0	
	comp=Z,100nm,18.1s						
KHC	Kasperske Hory	79.46	331	⇓ iP	P	22 19 24.2	+0.5
KHC				pmax	pmax		
	comp=Z,30nm,3.5s						
KHC	Kasperske Hory	79.46	331	eP	P	22 19 23.6	-0.1
GERES	GERESS Array B	79.66	330	P	P	22 19 22.9	-2.0
	comp=Z,0.4nm,0.6s,baz=20,slow=3.1,SNR=4.4						
GERES				LR	LR	22 58 09.6	
	comp=Z,60nm,18.4s,baz=10,slow=38						
VTS	Vitosha	80.78	321	P	P	22 19 31.6	+0.5
VTS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VTS	Vitosha	80.78	321	P	P	22 19 31.6	+0.5
VTS				IAmb	IAmb	22 19 32.2	
	comp=Z,3.0nm,0.7s						
DIVS	Divibare	81.05	324	P	P	22 19 32.1	-0.3
TXAR	Lajitas Array	83.56	56	P	P	22 19 47.1	+1.3
	comp=Z,1.0nm,0.8s,baz=305,slow=4.4,SNR=7.3						
TXAR	Lajitas Array	83.56	56	P	P	22 19 46.5	+0.7
TXAR	Lajitas Array	83.56	56	P	P	22 19 46.5	+0.7
PPT	Papeete	84.02	120	LR	LR	22 47 31.5	
	comp=Z,24nm,21.8s,baz=354,slow=29						
NRCA	Norcia	84.93	328	P	P	22 19 52.5	-0.1
NRCA				IAmb	IAmb	22 20 00.8	
	comp=Z,3.8nm,0.9s						
ITM	Ithomi	85.68	319	P	P	22 19 55.2	-1.1

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*PGC **15** 22:34:02.9±9.9, 49°.18N×129°.32W, h10^{km}, MLSn3.0/31, Mw3.6/31, Mw3.6/31, 217km southwest of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **15** 22:34:03.6±1.9, 49°.32N×129°.13W, h0^{km}, mb4.2/1, mb1 3.8/10, mb1mx3.4/59, mbtmp3.6/10, ML3.3/9, MS3.6/1, Ms1 3.6/1, ms1mx2.7/45, Error ellipse: s-maj=32.3km s-min=11.6km az=68.0*

ISC 15 22:34:03.7±2.3**, 49°.32N**±0°.06×**129°.18W**±0°.07**, h6^{km}**±14^{km}**, n69, σ1^{s}73**/74**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BPBC	Brooks Peninsu	1.24	47	Pn	Pg	22 34 26.1	-1.3

KEMF	NEPTUNE Canada	1.37	178	P	Pg	22 34 18.0	-12
EDB	Eliza Dome	1.45	67	Pn	Pn	22 34 28.6	-1.8
HOLB	Holberg	1.48	27	Pn	Pn	22 34 29.3	-1.7
PACB	Port Alice, BC	1.56	44	Pn	Pn	22 34 30.1	-1.8
PACB				Sn	Sn	22 34 51.6	-0.9
MAYB	Maynard	1.69	49	Pn	Pn	22 34 32.6	-1.3
PHC	Port Hardy	1.79	38	Pn	Pn	22 34 34.0	-1.1
PHC				Sn	Sn	22 34 57.3	-0.8
WOSB	Woss	1.89	63	Pn	Pn	22 34 35.6	-1.0
TLCB	Telegraph Cove	1.95	50	Pn	Pn	22 34 36.7	-0.6
TLCB				Sn	Sn	22 35 01.7	-0.4
GDR	Gold River	2.10	76	Pn	Pn	22 34 37.5	-1.9
TOFB	Tofino	2.15	93	Pn	Pn	22 34 36.5	-3.5
TOFB				Sn	Sn	22 35 04.1	-2.9
NCRB	Newcastle Ridg	2.29	61	Pn	Pn	22 34 42.0	-0.1
SPLB	Strathcona Par	2.36	75	Pn	Pn	22 34 42.1	-0.9
SPLB				Sn	Sn	22 35 12.7	+0.4
BTB	Buttle Lake	2.39	85	Pn	Pn	22 34 42.1	-1.5
BTB				Sn	Sn	22 35 12.3	-1.0
B012	Ucluelet	2.42	98	Pn	Pn	22 34 39.7	-4.1
OZB	Mount Ozzard	2.44	97	Pn	Pn	22 34 41.0	-3.2
OZB				Sn	Sn	22 35 10.5	-3.9
CBB	Campbell River	2.58	72	Pn	Pn	22 34 45.6	-0.3
BFSB	Bamfield	2.70	99	Pn	Pn	22 34 41.4	-6.2
BFSB				Sn	Sn	22 35 16.6	-4.0
B928	Bamfield	2.70	99	Pn	Pn	22 34 44.8	-2.8
B928				Sn	Sn	22 35 16.5	-4.0
BBB	Bella Bella	2.95	13	Pn	Pn	22 34 50.4	-0.6
	2.6nm,0.3s,baz=202,slow=14,SNR=30						
BBB				Sn	Sn	22 35 25.2	-1.4
	7.5nm,0.3s,baz=75,slow=17,SNR=8.0						
BBB	Bella Bella	2.95	13	Pn	Pn	22 34 49.9	-1.1
BBB				Sn	Sn	22 35 25.2	-1.4
MGB	Mount Grey	2.96	94	Pn	Pn	22 34 49.0	-2.4
MGB				Sn	Sn	22 35 24.7	-2.5
TXB	Texada	3.11	81	Pn	Pn	22 34 52.7	-0.6
OCP	Olym-Cheeka Pk	3.18	107	Pn	Pn	22 34 52.2	-2.0
PFB	Port Renfrew	3.21	102	Pn	Pn	22 34 52.7	-2.0
PFB				Sn	Sn	22 35 30.8	-2.4
B926	Mesachie Lake	3.35	97	Pn	Pn	22 34 55.4	-1.2
B926				Sn	Sn	22 35 34.4	-2.3
CLRS	Cowichan Lake	3.35	97	Pn	Pn	22 34 54.7	-1.9
CLRS				Sn	Sn	22 35 35.1	-1.7
NLLB	Nanaimo Lost L	3.40	90	Pn	Pn	22 34 56.3	-0.9
NLLB				Sn	Sn	22 35 38.5	+0.7
SHB	Sechelt	3.47	83	Pn	Pn	22 34 58.4	+0.1
OBC	Olympics--Boni	3.61	109	Pn	Pn	22 34 58.7	-1.6
OBC				Sn	Sn	22 35 41.8	-1.5
BUTB	Butedale	3.78	7	Pn	Pn	22 35 01.1	-1.4
BUTB				Sn	Sn	22 35 43.9	-3.4
STW	Striped Peak	3.83	106	Sn	Sn	22 35 45.2	-3.3
B009	North Saanich	3.83	98	Pn	Pn	22 35 02.1	-1.0
B010	North Saanich	3.83	98	Pn	Pn	22 35 02.0	-1.1
B010				Sn	Sn	22 35 47.1	-1.3
PGC	Sidney	3.83	98	Pn	Pn	22 35 02.0	-1.2
PGC				Sn	Sn	22 35 47.2	-1.2
B011	North Saanich	3.83	98	Pn	Pn	22 35 01.9	-1.3
BIB	Bowen Island	3.84	86	Pn	Pn	22 35 02.9	-0.4
SNB	Saturna Island	3.99	96	Pn	Pn	22 35 04.8	-0.6
BNKB	Banks Island	4.04	354	Pn	Pn	22 35 04.2	-1.9
WSLR	Whistler	4.14	76	Pn	Pn	22 35 08.2	+0.7
HNBB	Haney	4.32	88	Pn	Pn	22 35 09.6	-0.3
GRNB	Grenville Isla	4.56	354	Pn	Pn	22 35 11.1	-2.1
GRNB				Sn	Sn	22 36 02.7	-3.8
VDB	Vedder Mountai	4.65	91	Pn	Pn	22 35 14.3	-0.1
A05A	Maple Falls	4.67	91	Pn	Pn	22 35 14.5	-0.1
CMW	Cultus Mountai	4.74	98	Pn	Pn	22 35 15.6	-0.2
UBRB	Upper Baezaeko	4.80	40	Pn	Pn	22 35 18.5	+1.8
LLLB	Lillooet	4.88	72	Pn	Pn	22 35 17.6	-0.1
JCW	Jim Creek	4.92	100	Pn	Pn	22 35 18.5	+0.3
HOPB	Hope	5.07	86	Pn	Pn	22 35 20.6	+0.4
RPW	Rockport	5.13	97	Pn	Pn	22 35 20.6	-0.5
GPW	Glacier Peak	5.46	100	Pn	Pn	22 35 24.9	-0.8
FMW	Mount Fremont	5.56	113	Pn	Pn	22 35 28.0	+0.9
FSJB	Fort St James	5.97	29	Pn	Pn	22 35 33.0	+0.4
FSB	Fort Saint Jam	5.97	28	Pn	Pn	22 35 33.8	+1.2
PNT	Penticton	6.25	86	Pn	Pn	22 35 36.0	-0.5
MNB	Mounoet Dainar	7.43	63	P	Pn	22 35 53.7	+1.0
NEW	Newport	8.03	93	Pn	Pn	22 36 00.3	-0.6
	0.4nm,0.3s,baz=279,slow=7.8,SNR=2.8						
YBH	Yreka Blue Hor	8.84	147	Pn	Pn	22 36 14.2	+2.2
	0.2nm,0.3s,baz=325,slow=14,SNR=5.7						
NBC5	NorthernBC 5	9.08	23	P	Pn	22 36 17.1	+1.8
DLBC	Dease Lake	9.15	357	Pn	Pn	22 36 18.0	+1.8
	0.1nm,0.3s,baz=200,slow=18,SNR=2.1						
DLBC				LR	LR	22 39 37.1	
	comp=Z,337nm,20.4s,baz=171,slow=36						
NVAR	Mina Array Bea	13.40	140	Pn	Pn	22 37 16.2	+1.7
	0.1nm,0.3s,baz=316,slow=11,SNR=4.7						
PDAR	Pinedale Array	15.10	108	Pn	Pn	22 37 41.8	+4.1
	0.1nm,0.3s,baz=308,slow=17,SNR=4.4						
YKA	Yellowknife Ar	15.47	26	Pn	Pn	22 37 40.7	-1.5
	0.1nm,0.3s,baz=216,slow=13,SNR=4.1						
ILAR	Eielson Array	18.13	335	P	Pn	22 38 15.7	-0.1
	0.0nm,0.3s,baz=156,slow=11,SNR=11						
INK	Inuvik	19.17	355	P	P	22 38 29.3	+1.8
	0.0nm,0.3s,baz=186,slow=10,SNR=4.4						
ULM	Lac du Bonnet	21.43	75	P	P	22 38 53.9	+1.7
	10nm,1.0s,baz=282,slow=10,SNR=4.6						
H11N2	WAKE ISLAND Hy	58.35	264	T	T	23 46 54.7	
	baz=43,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	58.35	264	T	T	23 47 00.6	
	baz=43,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	58.37	264	T	T	23 47 01.5	
	baz=43,slow=75,SNR=10						

JMA ***15*** *22:41:36.7±0.1, 38°.92N×141°.93E, h51^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s210.00000°, δ29.00000°, λ102.00000°. NP2: ϕ_s16.00000°, δ61.00000°, λ83.00000°. Principal axes: T Plg73.0000°, Azm270.0000°; N Plg6.0000°, Azm19.0000°; P Plg16.0000°, Azm111.0000°;*

JMA Felt II J1.

NEIC ***15*** *22:41:36.6±1.4, 38°.89N±0°.06×142°.0E±0°.1, h49^{km}±2^{km}, mb4.5/20 Error ellipse: s-maj=13.8km s-min=7.6km az=111.0*

NIED ***15*** *22:41:36.8, 38°.92N×141°.93E, h51^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.86; $M_{\theta\theta}$-0.41; $M_{\phi\phi}$-4.46; $M_{r\theta}$1.90; $M_{\theta\phi}$-1.22; $M_{\phi r}$6.48; Fault plane solution: $M_0$8.31000×10^{14} NP1:ϕ_s16.00000°, δ72.00000°, λ90.00000°. NP2:ϕ_s195.00000°, δ18.00000°, λ89.00000°.*

IDC ***15*** *22:41:37.8±2.1, 38°.90N×141°.92E, h64^{km}±18^{km}, mb3.6/12, mb1 3.7/17, mb1mx3.5/48, mbtmp3.9/17, MS2.6/5, Ms1 2.6/5, ms1mx2.5/45 Error ellipse: s-maj=21.2km s-min=13.6km az=103.0*

ISC 15 22:41:36.4±1.1, **38°.90N**±0°.04×**141°.98E**±0°.09, **h50**^{km}±7^{km}, **n72,** σ1^{s}.**21**/77, **mb4.2**/21, **7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.30	306	⇓P	Pn	22 41 45.7	+0.2
OFUJ				S	Sn	22 41 51.9	0.0
JKMT	Kesennumamotoy	0.40	257	⇓P	Pn	22 41 46.6	+0.1
JKMT				S	Sn	22 41 53.4	-0.3
JMK	Ichinoseki	0.59	275	P	Pn	22 41 48.7	0.0
JMK				S	Sn	22 41 57.2	-0.4
JIO	Ouri	0.67	228	⇓P	Pn	22 41 49.6	0.0
JIO				S	Sn	22 41 58.5	-0.7
JOM	Ohasama	0.78	317	⇓P	Pn	22 41 51.2	0.0
JOM				S	Sn	22 42 01.7	-0.2
JRG	Rokugo	1.16	296	⇓P	Pn	22 41 56.0	-0.2
JRG				S	Sn	22 42 10.4	-0.5
JOU	Okura	1.16	243	⇓P	Pn	22 41 56.1	-0.2
JOU				*e*S	Sn	22 42 10.4	-0.6
JYK	Kaneyama	1.26	271	⇓P	Pn	22 41 57.6	0.0
JMM	Marumori	1.39	222	P	Pn	22 41 59.0	-0.4
JMM				*e*S	Sn	22 42 16.1	-0.5
JMM	Marumori	1.39	222		Pn	22 41 59.0	-0.4
JMM				Sn	Sn	22 42 15.5	-1.2
JANG	Nango	1.51	346	P	Pn	22 42 00.8	-0.2
JTM	Tenmabayashi	2.01	340		Pn	22 42 08.4	+0.6
JYT	Yasato	3.02	208		Pn	22 42 22.2	+0.5
JSD	Sado	3.04	255	Pn	Pn	22 42 22.2	+0.2
MJAR	Matsushiro Arr	3.81	233	P	Pn	22 42 33.9	+1.4
	0.8nm,0.3s,baz=36,slow=12,SNR=19						
MJAR				LR	LR	22 43 55.4	
	comp=Z,16nm,20.1s,baz=70,slow=37						
MJAR	Matsushiro Arr	3.81	233		Pn	22 42 33.4	+0.9
MAJO	Matsushiro	3.81	233		Pn	22 42 34.1	+1.6
MAT	Matsushiro	3.81	233	P	Pn	22 42 34.2	+1.7
MAT				*e*S	Sn	22 43 21.3	+5.3
JGF	Kuroka	4.94	230		Pn	22 42 50.9	+2.7
JKA	Kamikawa-asahi	5.23	5		Pn	22 42 51.7	-0.3
ASAJ	Asahikawa	5.23	5	P	Pn	22 42 52.9	+0.9
	1.6nm,0.3s,baz=193,slow=15,SNR=11						
ASAJ				S	Sn	22 43 48.5	-2.4
	1.2nm,0.3s,baz=212,slow=25,SNR=4.3						
ASAJ				LR	LR	22 45 09.0	
	comp=Z,57nm,21.1s,baz=164,slow=40						
JHJ	Hachijo jima 2	6.04	198	P	Pn	22 43 04.3	+1.1
	9.3nm,0.3s,baz=141,slow=19,SNR=1.5						
JHJ				S	Sn	22 44 07.2	-3.7
	4.6nm,0.3s,baz=252,slow=21,SNR=1.8						
JWT	Wachi	6.38	238	Pn	Pn	22 43 10.4	+2.7
JMN	Monobe	8.33	234	Pn	Pn	22 43 36.5	+1.9
USA0B	Ussuriysk Arra	9.17	308	Pn	Pn	22 43 48.1	+2.2
USRK	Ussuriysk Ar.	9.17	308	P	Pn	22 43 46.3	+0.4
	baz=116,slow=14,SNR=21						
USRK				LR	LR	22 46 58.2	
	comp=Z,72nm,21.4s,baz=353,slow=35						
USRK	Ussuriysk Ar.	9.17	308	Pn	Pn	22 43 47.8	+1.9
KSRS	Korea Array	11.16	267	P	Pn	22 44 13.8	+0.6
	0.3nm,0.3s,baz=76,slow=14,SNR=3.4						
KSRS				LR	LR	22 48 00.2	
	comp=Z,54nm,20.0s,baz=64,slow=34						
KLR	Kul'dur	12.66	328	LR	LR	22 49 23.3	
	comp=Z,47nm,19.6s,baz=90,slow=37						
MA2	Magadan	21.43	12	P	P	22 46 19.6	-0.5
	0.0nm,0.3s,baz=259,slow=5.2						
SEY	Seymchan	24.87	11	P	P	22 46 55.3	+1.2
	2.1nm,0.8s,baz=191,slow=6.1,SNR=4.2						
SONM	Songino Array	27.16	301	P	P	22 47 15.1	0.0
	0.5nm,0.5s,baz=99,slow=8.2,SNR=5.1						
SONM	Songino Array	27.16	301	P	P	22 47 14.4	-0.6
ENH	Enshi	27.98	262	P	P	22 47 23.0	+0.5
ENH				IAmb	IAmb	22 47 25.9	
	comp=Z,20nm,1.5s						
H11N2	WAKE ISLAND Hy	28.78	124	T	T	23 17 53.5	
	baz=317,slow=75,SNR=110						
H11N1	WAKE ISLAND Hy	28.79	125	T	T	23 17 57.2	
	baz=317,slow=75,SNR=353						
H11N3	WAKE ISLAND Hy	28.80	124	T	T	23 17 54.9	
	baz=317,slow=75,SNR=218						
H11S1	WAKE ISLAND Hy	29.55	126	T	T	23 18 54.2	
	baz=318,slow=76,SNR=78						
H11S3	WAKE ISLAND Hy	29.56	126	T	T	23 19 00.2	
	baz=318,slow=76,SNR=103						
H11S2	WAKE ISLAND Hy	29.57	126	T	T	23 19 01.3	
	baz=318,slow=76,SNR=62						
ZAA0	Zalesovo Array	41.01	311	P	P	22 49 14.1	-0.2
ZALV	Zalesovo Beam	41.01	311	P	P	22 49 14.2	-0.1
	comp=Z,3.1nm,0.6s,baz=85,slow=8.1,SNR=17						
ZALV				PcP	PcP	22 51 11.8	-1.7
	comp=Z,0.4nm,0.3s,baz=67,slow=3.7,SNR=2.7						
CMAR	Chiang Mai Arr	42.42	254	P	P	22 49 26.5	+0.1
	comp=Z,0.6nm,0.4s,baz=58,slow=7.7,SNR=1.8						
MK31	Makanchi Array	43.53	301	P	P	22 49 34.9	-0.1
MK31				IAmb	IAmb	22 49 35.7	
	comp=Z,5.9nm,0.9s						
MKAR	Makanchi Array	43.53	301	P	P	22 49 34.9	-0.1
	comp=Z,4.1nm,0.7s,baz=86,slow=9.8,SNR=27						
MKAR	Makanchi Array	43.53	301	P	P	22 49 34.8	-0.3
MAKZ	Makanchi	43.74	301	P	P	22 49 36.6	0.0
MAKZ				IAmb	IAmb	22 49 37.4	
	comp=Z,7.5nm,0.9s						
KURK	Kurchatov	45.15	307	P	P	22 49 47.3	-0.5
KURK				IAmb	IAmb	22 49 48.3	
	comp=Z,10.0nm,1.1s						
ILAR	Eielson Array	47.68	33	P	P	22 50 08.2	+0.7
	comp=Z,0.5nm,0.8s,baz=271,slow=5.6,SNR=4.8						
BMAR	Burnt Mountain	48.49	30	P	P	22 50 15.9	+2.1
BOOM	Boomskoye usch	49.06	297	P	P	22 50 18.0	-0.7
BRVK	Borovoye	49.72	311	P	P	22 50 23.3	0.0
BRVK				IAmb	IAmb	22 50 24.7	
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	50.01	297	P	P	22 50 24.8	-1.1
INK	Inuvik	52.52	28	P	P	22 50 44.3	+0.2
	comp=Z,0.6nm,0.6s,baz=43,slow=4.5,SNR=3.9						
KKAR	Karatay Array	52.59	299	P	P	22 50 44.3	-0.7
ARU	Arti	55.27	318	P	P	22 51 03.6	-0.7
CHGR	Chuyangaron	55.28	294	P	P	22 51 04.6	-0.2
DLBC	Dease Lake	56.89	39	LR	LR	23 16 49.2	
	comp=Z,220nm,18.9s,baz=150,slow=37						
ABKAR	Akbulak array	57.09	309	P	P	22 51 16.9	-0.5
ABKAR	Akbulak array	57.09	309	P	P	22 51 16.9	-0.5
ABKAR				IAmb	IAmb	22 51 17.6	
	comp=Z,3.0nm,0.6s						
WB0	Warramunga Arr	58.79	188	P	P	22 51 29.1	-0.5
WB0				IAmb	IAmb	22 51 39.5	
	comp=Z,4.5nm,1.4s						
WRA	Warramunga Arr	58.97	188	P	P	22 51 30.2	-0.6
	comp=Z,0.7nm,0.5s,baz=5.6,slow=7.2,SNR=12						
WRA	Warramunga Arr	58.97	188	P	P	22 51 30.3	-0.5
ASAR	Alice Springs	62.70	188	P	P	22 51 56.0	-0.1
	comp=Z,0.4nm,0.6s,baz=11,slow=7.8,SNR=4.8						
FIA1	FINESS Array S	67.37	332	P	P	22 52 25.6	-0.4
FINES	FINESS Array B	67.37	332	P	P	22 52 25.6	-0.3
	comp=Z,1.9nm,0.7s,baz=32,slow=11,SNR=8.7						
NOA	NORSAR Array B	72.64	337	P	P	22 52 58.0	-0.4
	comp=Z,0.6nm,0.7s,baz=40,slow=6.2,SNR=1.8						
AKASG	Malin Array Be	73.09	322	P	P	22 53 00.1	-1.1
	comp=Z,303nm,1.3s,baz=44,slow=6.4,SNR=13						
KWP	Kalwaria Pacla	76.87	324	P	P	22 53 23.5	+0.5
BUR08	Bucovina Ar. S	77.11	322	P	P	22 53 24.5	0.0
BUR08				IAmb	IAmb	22 53 38.1	
	comp=Z,6.5nm,1.4s						
BURAR	Bucovina Array	77.12	322	P	P	22 53 24.4	-0.2
GERES	GERESS Array B	81.36	328	P	P	22 53 47.5	-0.2
	comp=Z,0.3nm,0.5s,baz=30,slow=8.0,SNR=2.6						

TUL ***15*** *22:56:07.9±1.2, 36°.21N±0°.01×97°.55W±0°.02, h6^{km}±7^{km}, ML3.2, mb_Lg3.0/54(NEIC), Error ellipse: s-maj=2.2km s-min=1.7km az=80.0*

ANF ***15*** *22:56:07.8±0.4, 36°.22N×97°.54W, h2^{km}, ML3.5/10, Error ellipse: s-maj=3.7km s-min=2.6km az=118.0*

NEIC ***15*** *22:56:07.9±0.8, 36°.22N±0°.01×97°.56W±0°.02, h2^{km}±7^{km}, Error ellipse: s-maj=2.2km s-min=1.7km az=82.0*

ISC 15 22:56:08.1±1.2, **36°.22N**±0°.02×**97°.55W**±0°.03, **h3**^{km}±12^{km}, **n80,** σ**0**^{s}.**49**/73, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.43	169	Pg	Pg	22 56 16.4	0.0
OK029				Sg	Sg	22 56 22.5	+0.6
CROK	Carrier	0.45	309	Pg	Pg	22 56 16.9	+0.1
CROK				Sg	Sg	22 56 23.3	+0.7
BCOK	Bluff Creek, N	0.56	185	Pg	Pg	22 56 18.8	-0.1
BCOK				Sg	Sg	22 56 26.6	+0.4
BLOK	Blackwell	0.60	27	Pg	Pg	22 56 19.9	+0.2
BLOK				Sg	Sg	22 56 28.4	+0.8
OK031	S. Brethren Rd	0.64	115	Pg	Pg	22 56 20.3	0.0
OK031				Sg	Sg	22 56 29.0	+0.5
OK025	Westminster Rd	0.66	165	Pg	Pg	22 56 20.6	-0.1
GC02	Grant County #	0.68	339	Pg	Pg	22 56 21.0	-0.1
QUOK	Quay	0.68	94	Pg	Pg	22 56 21.2	0.0
OK030	Cody Creek RV	0.69	115		Pg	22 56 21.2	0.0
OK030				Sg	Sg	22 56 30.6	+0.4
OK034	N. Norfolk Rd.	0.71	107		Pg	22 56 21.7	-0.1
OK032	Salt Plains WL	0.79	318	Pg	Pg	22 56 22.9	-0.3
KAN13	South Haven SW	0.79	4		Pg	22 56 23.2	-0.1
KAN14	Manchester OK	0.81	336	Pg	Pg	22 56 23.4	-0.2
OKCFA	Oklahoma City	0.81	174		Pg	22 56 23.1	-0.5
OKCFA	Oklahoma City	0.81	174	P	Pg	22 56 23.1	-0.5
	baz=354,SNR=9.8						
OKCFA				S	Sg	22 56 34.3	+0.3
	baz=354						
OKCSW	OKLAHOMA CITY	0.82	173	Pg	Pg	22 56 23.4	-0.4
KAN17	Caldwell West	0.84	348	Pg	Pg	22 56 24.0	-0.2
KAN09	Caldwell North	0.92	357	Pg	Pg	22 56 25.4	-0.3
KAN05	Bluff City Nor	0.92	344	Pg	Pg	22 56 25.6	-0.3
KAN01	Argonia South	0.95	350		Pg	22 56 26.0	-0.2
FNO	Franklin	0.97	173	Pg	Pg	22 56 26.0	-0.6
KAN10	Anthony SW Sta	1.00	334	Pg	Pg	22 56 26.8	-0.5
KAN06	Argonia West S	1.05	347		Pg	22 56 28.0	-0.4
KAN08	Anthony NE Sta	1.06	342		Pg	22 56 28.0	-0.4
KAN16	Harper SW Stat	1.08	338	Pg	Pg	22 56 28.4	-0.5
T35A	Sooner Cattle	1.09	50	Pg	Pg	22 56 28.5	-0.4
T35B	Sooner Cattle	1.09	50	P	Pg	22 56 28.6	-0.4
	baz=230,SNR=282						
T35B				S	Sg	22 56 42.9	-0.1
	baz=230						
KAN12	Harper NE Stat	1.13	342	Pg	Pg	22 56 29.3	-0.6
U32A	Winter Ranch,	1.18	278	Pg	Pg	22 56 29.9	-0.9
U32A	Winter Ranch,	1.18	278	P	Pg	22 56 30.0	-0.7
	baz=98						
W35A	Tecumseh	1.20	152	Pg	Pg	22 56 29.8	-1.3
TUL1	Leonard	1.46	102	Pn	Pn	22 56 34.3	-1.0
TUL1	Leonard	1.46	102	P	Pn	22 56 34.3	-1.0
	baz=283						
TUL1				S	Sb	22 56 54.3	-0.5
	baz=283						
X34A	Smith Ranch, M	1.63	188	Pn	Pn	22 56 37.9	+0.2
LOOK	Love County	2.24	172		Pn	22 56 46.3	+0.2
R32A	Long Quarter,	2.38	338		Pn	22 56 49.0	+0.9
X37A	Clayton	2.41	132	Pn	Pn	22 56 48.7	+0.2
X37A	Clayton	2.41	132	P	Pn	22 56 48.6	+0.1
	baz=313,SNR=34						
X37A				S	Sn	22 57 19.5	+1.0
	baz=313						
U38A	Gravette	2.57	84		Pn	22 56 50.8	+0.2
U38A	Gravette	2.57	84	P	Pn	22 56 51.1	+0.5
	baz=266,SNR=32						
Z35A	Perchaven, San	2.89	175	Pn	Pn	22 56 55.3	+0.2
Z35A	Perchaven, San	2.89	175	P	Pn	22 56 55.6	+0.6
	baz=355						
HHAR	Hobbs	2.92	88		Pn	22 56 55.7	+0.3
KSU1	Kansas State U	2.97	14		Pn	22 56 55.7	-0.4
CBKS	Cedar Bluff	3.12	327	Pn	Pn	22 56 58.4	+0.2
W39A	Magazine	3.23	107	Pn	Pn	22 56 59.8	+0.1
W39A				IAmb_Lg		22 57 52.8	
	comp=Z,42nm,0.7s						
W39A	Magazine	3.23	107	P	Pn	22 57 00.1	+0.4
	baz=290,SNR=6.5						
Z38A	Mt. Pleasant	3.63	144	IAmb_Lg		22 58 12.9	
	comp=Z,42nm,0.7s						
MIAR	Mount Ida	3.65	116		Pn	22 57 05.6	+0.1
MIAR				IAmb_Lg		22 58 13.6	
	comp=Z,31nm,0.8s						
MIAR	Mount Ida	3.65	116	P	Pn	22 57 05.8	+0.3
	baz=298,SNR=12						
S39A	Bolivar	3.69	65	Pn	Pn	22 57 06.0	-0.1
S39A				IAmb_Lg		22 58 11.9	
	comp=Z,27nm,0.7s						
S39A	Bolivar	3.69	65	P	Pn	22 57 06.1	+0.1
	baz=248,SNR=15						
U40A	Yellville	3.80	87	Pn	Pn	22 57 07.4	-0.1
U40A				IAmb_Lg		22 58 07.1	
	comp=Z,26nm,0.7s						
ABTX	Abilene, Hawle	3.98	206	IAmb_Lg		22 58 14.7	
	comp=Z,26nm,0.9s						
WHTX	Lake Whitney,	4.22	179	Pn	Pn	22 57 12.7	-0.6
X40A	Basin Creek Fa	4.23	113		Pn	22 57 13.2	-0.1
X40A				IAmb_Lg		22 58 31.3	
	comp=Z,38nm,0.8s						
MGMO	Mountain Grove	4.35	76		Pn	22 57 14.7	-0.4
MGMO				IAmb_Lg		22 58 29.2	
	comp=Z,32nm,0.8s						
WHAR	Wooly Hollow	4.38	101	Pn	Pn	22 57 15.2	-0.3
FCAR	Ozark Folk Cen	4.41	93	IAmb_Lg		22 58 26.1	
	comp=Z,23nm,0.7s						
WLAR	White Oak Lake	4.44	123	IAmb_Lg		22 58 29.7	
	comp=Z,27nm,0.9s						
N33A	J Bar K, Exete	4.51	1	Pn	Pn	22 57 16.2	-1.1
N33A				IAmb_Lg		22 58 43.2	
	comp=Z,33nm,0.8s						
P38A	Dawn	4.65	42		Pn	22 57 19.4	+0.2
P38A				IAmb_Lg		22 58 38.0	
	comp=Z,28nm,0.8s						
R40A	Maddies Statio	4.69	62		Pn	22 57 19.5	-0.3
R40A	Maddies Statio	4.69	62	P	Pn	22 57 19.7	-0.1
	baz=245,SNR=12						
KSCO	Kaye Shedlock’	4.90	306	IAmb_Lg		22 58 53.1	
	comp=Z,21nm,0.8s						
BGNE	Belgrade	5.20	355		Pn	22 57 26.2	-0.6
BGNE				IAmb_Lg		22 59 08.1	
	comp=Z,33nm,0.7s						
CCM	Cathedral Cave	5.36	68		Pn	22 57 28.6	-0.4
CCM				IAmb_Lg		22 59 04.9	
	comp=Z,16nm,0.8s						
435B	Jarrell	5.42	180	IAmb_Lg		22 59 04.9	
	comp=Z,21nm,0.8s						
P40A	Paris	5.46	51	IAmb_Lg		22 59 06.9	
	comp=Z,24nm,0.7s						
T25A	Trinidad	5.59	281	IAmb_Lg		22 59 10.9	
	comp=Z,26nm,0.8s						
PBMO	Poplar Bluff	5.76	82	IAmb_Lg		22 59 11.5	
	comp=Z,21nm,0.7s						
FVM	French Village	5.96	71		Pn	22 57 36.5	-0.7
FVM				IAmb_Lg		22 59 18.1	
	comp=Z,20nm,1.0s						
143A	Socs Landing,	6.17	123	IAmb_Lg		22 59 30.4	
	comp=Z,24nm,0.8s						
K31A	O'Neill	6.46	352	IAmb_Lg		22 59 36.8	
	comp=Z,26nm,0.8s						
SDCO	Great Sand Dun	6.54	286	IAmb_Lg		22 59 37.9	
	comp=Z,12nm,1.1s						
S44A	Carbondale	6.80	75	IAmb_Lg		22 59 39.5	
	comp=Z,19nm,0.9s						
SIUC	Southern Illin	6.84	75	IAmb_Lg		22 59 46.6	
	comp=Z,20nm,0.8s						
W45A	Hickory Valley	6.89	96	IAmb_Lg		22 59 49.7	
	comp=Z,22nm,0.8s						
O44A	Mansfield	8.16	59	IAmb_Lg		23 00 43.3	
	comp=Z,16nm,0.9s						
K22A	Casper	9.45	316	IAmb_Lg		23 01 24.2	
	comp=Z,12nm,1.0s						

NOU 15 23:04:23.6, 14°.25S×167°.23E, h140^{km}**, MLv4.9**/8, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.19	181	P	Pn	23 04 49.6	+0.4
DVP	Devils Point	3.58	165	P	Pn	23 05 17.6	-0.4
DZM	Mont Dzumac	7.81	185	P	Pn	23 06 13.8	-0.8
NOUC	Port Laguerre	7.86	186	P	Pn	23 06 16.1	+1.0
OUENC	Ouen Island, N	8.13	183	P	Pn	23 06 18.9	+0.1

ATH ***15*** *23:06:15.0, 35°.64N×21°.01E, h10^{km}±31^{km}, ML3.5/4, Error ellipse: s-maj=31.6km s-min=2.5km az=0.0*

IDC ***15*** *23:06:19.3±1.0, 36°.04N×21°.53E, h0^{km}, mb3.9/13, mb1 3.9/22, mb1mx3.7/52, mbtmp3.8/22, ML3.3/8, MS2.9/2, Ms1 2.9/2, ms1mx2.5/36, Error ellipse: s-maj=19.4km s-min=14.1km az=12.0*

NEIC ***15*** *23:06:21.6±2.6, 35°.96N±0°.08×21°.53E±0°.09, h10^{km}±2^{km}, mb4.3/10, ML3.5(ATH), Error ellipse: s-maj=13.9km s-min=12.2km az=156.0*

THE ***15*** *23:06:24.3, 36°.05N×21°.55E, h2^{km}±1^{km}, ML3.3/3, Error ellipse: s-maj=2.2km s-min=1.0km az=34.0*

ISC 15 23:06:21.5±0.6, **36°.00N**±0°.05×**21°.48E**±0°.04, **h14**^{km}**, n122,** σ**1**^{s}.**57**/127, **mb4.0**/16, **6C-4D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	PYLOS	0.92	13	P	Pn	23 06 40.4	+0.4
ITM	Ithomi	1.23	17	P	Pg	23 06 46.3	+1.1
ITM	Ithomi	1.23	17	P	Pg	23 06 46.1	+0.9
ITM	Ithomi	1.23	17		Pg	23 06 45.9	+0.7
KTHR	Kythira	1.26	78	P	Pg	23 06 46.3	+0.5
KTHR				S	Sg	23 07 03.5	+1.3
	1µm,0.4s						
KTHA	Kythira Island	1.31	78	P	Pg	23 06 47.4	+0.8
KTHA	Kythira Island	1.31	78	P	Pg	23 06 47.4	+0.8
KTHA				AML	AML	23 07 15.1	
	comp=N,603µm,1.2s						
KTHA				AML	AML	23 07 17.6	
	comp=E,2983µm,0.6s						
VLI	Veliai	1.38	58	P	Pg	23 06 48.3	+0.3
VLI				S	Sg	23 07 07.2	+1.3
	comp=E,1µm,0.7s						
VLI	Veliai	1.38	58	P	Pg	23 06 48.3	+0.3
VLI				AML	AML	23 07 21.6	
	comp=E,2911µm,0.8s						
VLI				AML	AML	23 07 22.0	
	comp=N,1800µm,0.6s						
MNVA	Monemvasia	1.43	61	P	Pg	23 06 50.7	+1.7
ANKY	Antikythira Is	1.49	95	P	Pg	23 06 49.6	-0.4
ANKY				S	Sg	23 07 11.8	+2.4
	comp=N,990nm,0.7s						
ANKY	Antikythira Is	1.49	95	P	Pg	23 06 49.6	-0.4
ANKY				AML	AML	23 07 15.3	

	comp=N,1804µm,0.8s						
ANKY				AML	AML	23 07 18.3	
	comp=E,2193µm,0.7s						
DRO	**Drossia**	**1.96**	**5**	P	**Pb**	**23 06 57.1**	**+0.2**
DRO	**Drossia**	**1.96**	**5**	P	**Pb**	**23 06 57.1**	**+0.2**
RLS	**Riolos of Patr**	**2.05**	**360**	P	**Pb**	**23 06 58.9**	**+0.4**
RLS	**Riolos of Patr**	**2.05**	**360**	P	**Pb**	**23 06 58.9**	**+0.4**
IMMV	**Iera Moni Meta**	**2.11**	**104**	P	**Pn**	**23 06 57.3**	**+1.0**
IMMV	**Iera Moni Meta**	**2.11**	**104**	P	**Pn**	**23 06 57.4**	**+1.0**
KLV	**Kalavryta, Ach**	**2.11**	**15**	P	**Pb**	**23 06 59.2**	**-0.3**
KLV	**Kalavryta, Ach**	**2.11**	**15**	P	**Pb**	**23 06 59.2**	**-0.3**
PSDA	**Pessada-Kefalo**	**2.23**	**342**	P	**Pn**	**23 06 59.8**	**+1.9**
PSDA	**Pessada-Kefalo**	**2.23**	**342**	P	**Pn**	**23 06 59.8**	**+1.9**
LAKA	**Lakka**	**2.27**	**10**	P	**Pb**	**23 07 01.7**	**-0.6**
LAKA	**Lakka**	**2.27**	**10**	P	**Pb**	**23 07 01.7**	**-0.6**
VLS	**Valsamata**	**2.29**	**342**	P	**Pn**	**23 07 00.3**	**+1.5**
VLS	**Valsamata**	**2.29**	**342**	P	**Pn**	**23 07 00.3**	**+1.5**
VAM	**Vamos**	**2.29**	**104**	P	**Pn**	**23 06 59.8**	**+0.9**
VAM	**Vamos**	**2.29**	**104**	P	**Pn**	**23 06 59.8**	**+0.9**
TRIZ	**Trizonia**	**2.41**	**11**	P	**Pb**	**23 07 04.3**	**-0.2**
TRIZ	**Trizonia**	**2.41**	**11**	P	**Pb**	**23 07 04.3**	**-0.2**
GVD	**Gavdhos**	**2.43**	**118**	P	**Pn**	**23 07 01.2**	**+0.5**
GVD	**Gavdhos**	**2.43**	**118**	P	**Pn**	**23 07 01.2**	**+0.5**
GVD				AML	AML	23 07 38.8	
	comp=N,421µm,0.4s						
GVD				AML	AML	23 07 50.6	
	comp=E,479µm,0.4s						
FSK	**Fiskardo**	**2.56**	**344**	P	**Pn**	**23 07 05.5**	**+2.9**
IDI	**Anoyia**	**2.87**	**103**	Pn	**Pn**	**23 07 07.5**	**+0.7**
	comp=E,2.7nm,0.3s,baz=253,slow=6.8,SNR=23						
IDI				Sn	**Sn**	**23 07 42.8**	**+1.6**
	comp=E,7.4nm,0.3s,baz=148,slow=24,SNR=7.2						
AGG	**Agios Georgios**	**3.09**	**12**	Pn	**Pn**	**23 07 12.7**	**+2.9**
KBN	**Korca**	**4.65**	**354**	Pn	**Pn**	**23 07 34.3**	**+3.0**
FNA	**Florina**	**4.78**	**359**		**Pn**	**23 07 35.2**	**+2.1**
TIP	**Timpagrande**	**4.91**	**312**	Pn	**Pn**	**23 07 35.9**	**+1.0**
CEL	**Celeste**	**5.00**	**298**	Pn	**Pn**	**23 07 37.3**	**+1.2**
OHR	**Ohrid**	**5.13**	**354**	*i* Pn	**Pn**	**23 07 39.5**	**+1.6**
VAY	**Valandovo**	**5.38**	**9**	*i* Pn	**Pn**	**23 07 43.3**	**+2.0**
RAFF	**Raffo Rosso**	**5.85**	**284**	Pn	**Pn**	**23 07 48.7**	**+0.9**
VAE	**Valguarnera**	**5.86**	**287**	Pn	**Pn**	**23 07 47.3**	**-0.7**
	comp=E,1.3nm,0.3s,baz=214,slow=23,SNR=1.7						
VAE				Sn	**Sn**	**23 08 58.5**	**+3.5**
	comp=E,1.3nm,0.3s,baz=71,slow=22,SNR=1.4						
BOSS	**Bosilegrad**	**6.53**	**7**	*e*Pn	**Pn**	**23 07 58.4**	**+1.3**
AKAS	**Kas**	**6.58**	**86**	Pn	**Pn**	**23 08 00.0**	**+2.1**
PDG	**Podgorica**	**6.65**	**346**	Pn	**Pn**	**23 07 58.9**	**+0.3**
VTS	**Vitosha**	**6.75**	**11**	⇑P	**Pn**	**23 08 01.9**	**+1.7**
VTS	**Vitosha**	**6.75**	**11**		**Pn**	**23 08 01.1**	**+0.9**
BARS	**Barje**	**6.81**	**2**	*e*Pn	**Pn**	**23 08 01.9**	**+1.0**
CORL	**Corleone**	**6.81**	**289**	Pn	**Pn**	**23 08 03.4**	**+2.4**
CLTB	**Caltabellotta**	**6.81**	**286**	Pn	**Pn**	**23 08 02.1**	**+1.1**
ELL	**Elmali**	**6.84**	**81**	Pn	**Pn**	**23 08 02.1**	**+0.6**
SELS	**Selova**	**7.21**	**358**	*e*Pn	**Pn**	**23 08 06.1**	**-0.4**
SGRT	**San Giovanni R**	**7.28**	**324**	Pn	**Pn**	**23 08 07.4**	**0.0**
ZAPS	**Zavoj**	**7.32**	**7**	*e*Pn	**Pn**	**23 08 09.3**	**+1.4**
SJES	**Sjenica**	**7.34**	**351**	*e*Pn	**Pn**	**23 08 09.1**	**+0.8**
STON	**Ston**	**7.46**	**338**	*i* Pn	**Pn**	**23 08 08.8**	**-1.0**
STON				Sn	**Sn**	**23 09 26.5**	**-7.6**
BOVS	**Bovan**	**7.63**	**1**	⇑P	**Pn**	**23 08 12.6**	**+0.5**
LSTV	**Lastovo**	**7.63**	**334**	*e*Pn	**Pn**	**23 08 10.3**	**-1.9**
LSTV				Sn	Sn	23 09 29.0	-9.4
IVAS	**Ivanjica**	**7.63**	**353**	*e*Pn	**Pn**	**23 08 11.4**	**-0.9**
ZAGS	**Zajecar**	**7.82**	**4**	*e*Pn	**Pn**	**23 08 15.5**	**+0.7**
GRUS	**Gruza**	**7.90**	**356**	*e*Pn	**Pn**	**23 08 15.7**	**-0.2**
MAKA	**Makarska**	**8.05**	**336**	*e*Pn	**Pn**	**23 08 16.3**	**-1.5**
MAKA				Sn	Sn	23 09 40.0	-8.7
HVAR	**Hvar**	**8.15**	**333**	*e*Pn	**Pn**	**23 08 17.1**	**-2.2**
HVAR				Sn	Sn	23 09 42.1	-9.0
DIVS	**Divibare**	**8.17**	**352**	Pn	**Pn**	**23 08 18.8**	**-0.8**
DIVS	**Divibare**	**8.17**	**352**	*e*Pn	**Pn**	**23 08 18.5**	**-1.1**
RICI	**Ricice**	**8.20**	**337**	*e*Pn	**Pn**	**23 08 19.1**	**-0.8**
RICI				Sn	Sn	23 09 44.2	-8.1
ZIRJ	**Zirje**	**8.86**	**331**	*e*Pn	**Pn**	**23 08 26.9**	**-2.1**
ZIRJ				Sn	Sn	23 09 58.8	-10
HERR	**Herculane**	**8.90**	**4**	⇑P	**Pn**	**23 08 29.7**	**+0.1**
MORI	**Morici**	**9.02**	**332**	*e*Pn	**Pn**	**23 08 29.6**	**-1.6**
MORI				Sn	Sn	23 10 03.1	-9.3
DUGI	**Dugi Otok**	**9.37**	**330**	*e*Pn	**Pn**	**23 08 34.4**	**-1.7**
DUGI				Sn	Sn	23 10 12.1	-9.2
NRCA	**Norcia**	**9.40**	**319**	Pn	**Pn**	**23 08 38.8**	**+2.3**
UDBI	**Udbina**	**9.57**	**335**	*e*Pn	**Pn**	**23 08 37.3**	**-1.5**
UDBI				Sn	Sn	23 10 17.4	-8.7
LOT	**Lotru**	**9.60**	**10**	⇑P	**Pn**	**23 08 41.3**	**+2.1**
VOIR		**9.81**	**15**	⇑P	**Pn**	**23 08 43.9**	**+1.8**
PLIT	**Plitvice**	**9.92**	**335**	*e*Pn	**Pn**	**23 08 42.7**	**-0.9**
PLIT				Sn	Sn	23 10 25.0	-10
NVLJ	**Novalja**	**9.93**	**332**	*e*Pn	**Pn**	**23 08 41.1**	**-2.5**
NVLJ				Sn	Sn	23 10 25.5	-9.2
MLR	**Muntele Rosu**	**10.06**	**18**	⇓P	**Pn**	**23 08 48.7**	**+3.0**
MLR	**Muntele Rosu**	**10.06**	**18**	Pn	**Pn**	**23 08 45.7**	**0.0**
	comp=E,0.0nm,0.3s,baz=156,slow=5.8,SNR=4.0						
RABC	**Rab**	**10.12**	**332**	*e*Pn	**Pn**	**23 08 44.8**	**-1.4**
RABC				Sn	Sn	23 10 29.8	-10
TPGR	**Topolog**	**10.30**	**29**	⇑P	**Pn**	**23 08 49.3**	**+0.4**
BRTR	**Keskin Array B**	**10.31**	**65**	LR	LR	23 12 26.1	
	comp=E,28nm,21.3s,baz=290,slow=36						
PLOR	**Plostina**	**10.59**	**20**	⇓P	**Pn**	**23 08 56.3**	**+3.5**
OZUR		**10.59**	**17**	⇓P	**Pn**	**23 08 54.6**	**+1.8**
VRI	**Vrincioaia**	**10.62**	**20**	⇓P	**Pn**	**23 08 55.9**	**+2.7**
BRJN	**Brijuni**	**10.66**	**329**	*e*Pn	**Pn**	**23 08 52.5**	**-1.2**
BRJN				Sn	Sn	23 10 42.7	-10
MMAI	**Mount Meron Ar**	**11.87**	**101**	Pn	**Pn**	**23 09 07.2**	**-3.1**
	comp=E,0.4nm,0.3s,baz=282,slow=10,SNR=1.7						
MMAI				Sn	Sn	23 11 09.8	-13
	comp=E,0.5nm,0.3s,baz=294,slow=22,SNR=1.7						
CTI	**Castel Tesino**	**12.47**	**327**	Pn	**Pn**	**23 09 20.9**	**+2.3**
GHAJ	**Ghor Haditha**	**12.64**	**108**	Pn	**Pn**	**23 09 21.7**	**+1.0**
EIL	**Elat**	**12.96**	**115**	Pn	**Pn**	**23 09 23.7**	**-1.6**
	comp=E,0.2nm,0.3s,baz=287,slow=2.8,SNR=12						
EIL				Sn	Sn	23 11 35.2	-14
	comp=E,0.2nm,0.3s,baz=53,slow=12,SNR=1.6						
GERES	**GERESS Array B**	**14.05**	**338**	Pn	**Pn**	**23 09 39.7**	**-0.4**
	comp=E,0.1nm,0.3s,baz=159,slow=14,SNR=1.8						
GERES				LR	LR	23 16 45.9	
	comp=E,103nm,18.5s,baz=324,slow=45						
AKASG	**Malin Array Be**	**15.72**	**18**	Pn	**Pn**	**23 09 59.6**	**-2.8**
	comp=E,0.3nm,0.3s,baz=208,slow=13,SNR=2.1						
AKASG	**Malin Array Be**	**15.72**	**18**	P	**P**	**23 10 08.2**	**+1.9**
SUW	**Suwalki**	**18.05**	**3**	P	**Pn**	**23 10 32.2**	**+0.6**
SUW				IAmb	IAmb	23 10 33.4	
	comp=Z,17nm,0.6s						
KBZ	**Khabaz**	**18.13**	**58**	P	**P**	**23 10 33.4**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=243,slow=10,SNR=8.8						
GNI	**Garni**	**18.76**	**70**	P	**Pn**	**23 10 41.2**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=261,slow=23,SNR=1.9						
ESDC	**Sonseca Array**	**20.40**	**288**	P	**P**	**23 10 59.1**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=88,slow=9.8,SNR=4.0						
OBN	**Obninsk**	**21.75**	**24**	P	**P**	**23 11 11.1**	**-1.2**
	comp=Z,1.5nm,0.4s,baz=173,slow=8.1,SNR=2.3						
OBN	**Obninsk**	**21.75**	**24**	P	**P**	**23 11 11.3**	**-1.0**
HFS	**Hagfors**	**24.67**	**351**	P	**P**	**23 11 41.5**	**0.0**
	comp=Z,2.3nm,0.5s,baz=156,slow=11,SNR=17						
BELG	**Belogornoye**	**24.70**	**40**	P	**P**	**23 11 41.5**	**-0.4**
	comp=Z,5.0nm,0.5s,baz=108,slow=5.0,SNR=4.5						
NC602	**NORSAR Array S**	**25.56**	**349**	P	**P**	**23 11 50.4**	**+0.8**
FINES	**FINESS Array B**	**25.63**	**5**	P	**P**	**23 11 50.0**	**-0.2**
	comp=Z,3.3nm,0.8s,baz=155,slow=12,SNR=12						
FINES	**FINESS Array B**	**25.63**	**5**	P	**P**	**23 11 49.6**	**-0.6**
FIA1	**FINESS Array S**	**25.63**	**5**	P	**P**	**23 11 50.1**	**-0.1**
FIA1				IAmb	IAmb	23 11 54.0	
	comp=Z,13nm,1.1s						
EKA	**Eskdalemuir Ar**	**25.65**	**327**	P	**P**	**23 11 50.6**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=134,slow=8.2,SNR=2.6						
NB2	**NORSAR Subarra**	**25.90**	**349**	P	**P**	**23 11 53.6**	**+0.8**
	comp=Z,3.7nm,1.0s,baz=160,slow=10						
NOA	**NORSAR Array B**	**25.90**	**349**	P	**P**	**23 11 52.7**	**-0.1**
	comp=Z,1.8nm,1.0s,baz=150,slow=8.7,SNR=4.6						
NC204	**NORSAR Array S**	**26.20**	**348**	P	**P**	**23 11 57.6**	**+2.2**
TORD	**Torodi Ar. Bea**	**28.89**	**223**	P	**P**	**23 12 20.7**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=43,slow=11,SNR=6.1						
TORD	**Torodi Ar. Bea**	**28.89**	**223**	P	**P**	**23 12 20.4**	**+0.4**
AKTO	**Aktyubinsk**	**29.94**	**50**	P	**P**	**23 12 28.4**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=247,slow=7.7,SNR=2.1						
ARCES	**ARCESS Array B**	**33.66**	**3**	P	**P**	**23 13 00.9**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=186,slow=7.0,SNR=8.4						
CHGR	**Chuyangaron**	**37.67**	**71**	P	**P**	**23 13 35.8**	**-0.6**
CHGR				IAmb	IAmb	23 13 36.9	
	comp=Z,4.7nm,0.7s						
KKAR	**Karatay Array**	**38.02**	**64**	P	**P**	**23 13 39.2**	**0.0**
MK31	**Makanchi Array**	**45.82**	**57**	P	**P**	**23 14 42.3**	**-0.6**
MK31				IAmb	IAmb	23 14 55.2	
	comp=Z,3.4nm,1.1s						
MKAR	**Makanchi Array**	**45.82**	**57**	P	**P**	**23 14 42.1**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=270,slow=7.8,SNR=11						
MKAR	**Makanchi Array**	**45.82**	**57**	P	**P**	**23 14 41.6**	**-1.3**
ZAA0	**Zalesovo Array**	**46.60**	**47**	P	**P**	**23 14 46.4**	**-2.4**
ZAA0				IAmb	IAmb	23 14 48.0	
	comp=Z,3.3nm,1.1s						
ZALV	**Zalesovo Beam**	**46.60**	**47**	P	**P**	**23 14 47.4**	**-1.5**
	comp=Z,1.5nm,0.5s,baz=268,slow=8.9,SNR=6.6						
ZALV	**Zalesovo Beam**	**46.60**	**47**	P	**P**	**23 14 48.2**	**-0.6**
SONM	**Songino Array**	**61.26**	**50**	P	**P**	**23 16 35.4**	**-0.9**
	comp=Z,1.4nm,1.1s,baz=298,slow=9.8,SNR=7.1						

STR ***15*** *23:30:13.7±0.8, 44˚N±3˚×1˚2E±1˚2, h16^{km}±13^{km},*
MLv3.1/11, preliminary
LDG ***15*** *23:30:16.4, 43˚.80N×12˚.31E, h52^{km}*
ROM ***15*** *23:30:16.6±0.1, 43˚.816N±0˚.008×12˚.27E±0˚.01,*
h52^{km}±1^{km}, ML2.9/95, Error ellipse: s-maj=0.9km
s-min=0.2km az=26.0
PRU ***15*** *23:30:16.5±0.0, 43˚.98N×12˚.30E, h20^{km}*
ISC 15 23:30:15.6±1.1, **43˚.86N**±0˚.02×**12˚.28E**±0˚.02, **h59**^{km}±4^{km},
n257, σ1§53/343, **49C-33D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPGN	**Carpegna, Ital**	**0.07**	**153**	⇑P	**Pn**	**23 30 24.3**	**-0.3**
CPGN				S	**Sn**	**23 30 30.7**	**-0.4**
CPGN				AML	AML		
	comp=N,2025µm,0.9s						
CPGN				AML	AML		
	comp=E,2105µm,0.3s						
CPGN				AML	AML		
	comp=N,2410µm,0.3s						
CPGN				AML	AML		
	comp=E,2125µm,0.3s						
CPGN				AML	AML		
	comp=N,2020µm,0.9s						
CPGN				AML	AML		
	comp=E,2106µm,0.3s						
CPGN				AML	AML		
	comp=N,2415µm,0.3s						
CPGN				AML	AML		
	comp=E,2104µm,0.3s						
RSM	**Repubblica di**	**0.14**	**60**	⇑P	**Pn**	**23 30 24.9**	**+0.1**
RSM				S	**Sn**	**23 30 31.9**	**+0.5**
RSM				AML	AML		
	comp=N,1815µm,0.8s						
RSM				AML	AML		
	comp=E,1700µm,0.6s						
PARC	**Parchiule**	**0.21**	**188**	⇑P	**Pn**	**23 30 24.7**	**-0.4**
PARC				S	**Sn**	**23 30 31.6**	**-0.3**
PARC				AML	AML		
	comp=N,4565µm,0.5s						
PARC				AML	AML		
	comp=E,3865µm,0.5s						
PE3	**Peglio**	**0.23**	**136**	⇑P	**Pn**	**23 30 24.8**	**-0.4**
PE3				S	**Sn**	**23 30 31.7**	**-0.3**
PE3				AML	AML		
	comp=N,9015µm,0.6s						
PE3				AML	AML		
	comp=E,568µm,0.1s						
PE3				AML	AML		
	comp=N,9020µm,0.6s						
PE3				AML	AML		
	comp=E,567µm,0.1s						
SSP9	**Sansepolcro**	**0.30**	**201**	⇑P	**Pn**	**23 30 25.8**	**+0.1**
SSP9				S	**Sn**	**23 30 33.0**	**0.0**
SSP9				AML	AML		
	comp=E,1952µm,0.5s						
SSP9				AML	AML		
	comp=N,1952µm,0.7s						
SSP9				AML	AML		
	comp=E,1950µm,0.5s						
SSP9				AML	AML		
	comp=N,1949µm,0.7s						
BLLA	**Bellaria**	**0.32**	**26**	P	**Pn**	**23 30 26.9**	**+1.1**
APEC	**Apecchio**	**0.32**	**161**	P	**Pn**	**23 30 25.5**	**-0.3**
APEC				S	**Sn**	**23 30 32.6**	**-0.5**
APEC				AML	AML		
	comp=N,2135µm,1.0s						
APEC				AML	AML		
	comp=E,3315µm,0.3s						
NARO	**Abbazia di Nar**	**0.33**	**139**	⇑P	**Pn**	**23 30 25.5**	**-0.4**
NARO				S	**Sn**	**23 30 32.7**	**-0.6**
NARO				AML	AML		
	comp=E,2320µm,0.3s						
NARO				AML	AML		
	comp=N,2095µm,0.5s						
CRE	**Caprese Michel**	**0.34**	**225**	⇓P	**Pn**	**23 30 26.2**	**+0.1**
CRE				S	**Sn**	**23 30 33.6**	**0.0**
CRE				AML	AML		
	comp=E,1725µm,0.3s						
CRE				AML	AML		
	comp=N,2465µm,0.7s						
BADI	**Badiali**	**0.35**	**184**	⇓P	**Pn**	**23 30 26.3**	**+0.2**
BADI				S	**Sn**	**23 30 34.0**	**+0.3**
BADI				AML	AML		
	comp=E,4945µm,0.6s						
BADI				AML	AML		
	comp=N,4460µm,0.8s						
BADI				AML	AML		
	comp=E,4950µm,0.6s						
BADI				AML	AML		
	comp=N,4455µm,0.8s						
ASQU	**Asqua**	**0.36**	**260**	⇓P	**Pn**	**23 30 26.6**	**+0.3**
ASQU				S	**Sn**	**23 30 34.0**	**+0.1**
ASQU				AML	AML		
	comp=E,1685µm,0.3s						
ASQU				AML	AML		
	comp=N,1400µm,0.4s						
PIEI	**Pieia**	**0.37**	**150**	⇑P	**Pn**	**23 30 25.9**	**-0.4**
PIEI				S	**Sn**	**23 30 33.5**	**-0.6**
PIEI				AML	AML		
	comp=E,3085µm,0.3s						
PIEI				AML	AML		
	comp=N,1485µm,0.8s						
FSSB	**Fossombrone**	**0.40**	**115**	S	**Sn**	**23 30 35.2**	**+0.8**
CDCA	**Citt‘ di Caste**	**0.40**	**185**	P	**Pn**	**23 30 26.8**	**+0.3**
CDCA				AML	AML		
	comp=E,2315µm,1.4s						
CDCA				AML	AML		
	comp=N,4870µm,0.8s						
CDCA				AML	AML		
	comp=E,2310µm,1.4s						
PESA	**Pesaro**	**0.41**	**78**	⇓P	**Pn**	**23 30 27.3**	**+0.7**
PESA				S	**Sn**	**23 30 36.0**	**+1.4**
PESA				AML	AML		
	comp=N,4975µm,1.0s						
PESA				AML	AML		
	comp=E,6690µm,0.3s						
MPAG	**Monte Paganucc**	**0.42**	**123**	⇑P	**Pn**	**23 30 26.8**	**+0.1**
MPAG				S	**Sn**	**23 30 35.1**	**+0.3**
MPAG				AML	AML		
	comp=E,3320µm,1.3s						
MPAG				AML	AML		
	comp=N,2475µm,0.9s						
MPAG				AML	AML		
	comp=E,3325µm,1.3s						
MPAG				AML	AML		
	comp=N,3320µm,1.4s						
MPAG				AML	AML		
	comp=E,2790µm,0.6s						
ATPI	**Pietralunga -**	**0.42**	**168**	⇑P	**Pn**	**23 30 26.9**	**+0.2**
ATPI				AML	AML		
	comp=E,1420µm,0.9s						
ATPI				AML	AML		
	comp=N,2190µm,0.6s						
ATPI				AML	AML		
	comp=E,1425µm,0.9s						
LMD	**Lutirano**	**0.47**	**298**	P	**Pn**	**23 30 28.0**	**+0.8**
LMD				S	**Sn**	**23 30 37.5**	**+2.0**
LMD				AML	AML		
	comp=N,1885µm,0.2s						
LMD				AML	AML		
	comp=E,1830µm,0.3s						
FRON	**Frontone**	**0.47**	**136**	⇑P	**Pn**	**23 30 27.4**	**+0.2**
FRON				S	**Sn**	**23 30 36.2**	**+0.6**
FRON				AML	AML		
	comp=E,1860µm,0.4s						
FRON				AML	AML		
	comp=N,2115µm,0.9s						
FRON				AML	AML		
	comp=N,2110µm,0.9s						
FRON				AML	AML		
	comp=E,1865µm,0.4s						
ATVO	**AVT- Monte Val**	**0.49**	**169**	⇑P	**Pn**	**23 30 28.0**	**+0.6**
ATVO				S	**Sn**	**23 30 36.8**	**+0.8**
ATVO				AML	AML		
	comp=N,1935µm,0.9s						
ATVO				AML	AML		
	comp=E,1705µm,0.4s						
FAEN	**Faenza**	**0.52**	**326**	P	**Pn**	**23 30 30.2**	**+2.5**
ATMI	**Monte Miggiano**	**0.53**	**181**	⇓P	**Pn**	**23 30 28.2**	**+0.4**
ATMI				S	**Sn**	**23 30 36.8**	**+0.1**
ATMI				AML	AML		
	comp=N,2555µm,0.4s						
ATMI				AML	AML		
	comp=E,2545µm,1.2s						
ATFO	**Monte Foce - G**	**0.54**	**157**	⇑P	**Pn**	**23 30 28.4**	**+0.3**
ATFO				AML	AML		
	comp=E,1515µm,0.5s						
ATFO				AML	AML		
	comp=N,1420µm,0.5s						
RUFI	**Rufina**	**0.56**	**268**	⇓P	**Pn**	**23 30 29.1**	**+1.0**
RUFI				S	**Sn**	**23 30 38.0**	**+0.8**
RUFI				AML	AML		
	comp=E,1100µm,0.9s						
RUFI				AML	AML		
	comp=N,668µm,0.4s						
RUFI				AML	AML		
	comp=E,1100µm,0.9s						
RUFI				AML	AML		
	comp=N,671µm,0.4s						
SSFR	**Montelago di S**	**0.56**	**139**	⇑P	**Pn**	**23 30 28.6**	**+0.4**
SSFR				S	**Sn**	**23 30 38.4**	**+1.0**
SSFR				AML	AML		
	comp=N,3485µm,1.5s						
SSFR				AML	AML		
	comp=E,4105µm,0.8s						
SSFR				AML	AML		
	comp=N,3985µm,1.5s						
SSFR				AML	AML		
	comp=E,4395µm,0.8s						
CAFI	**Castiglion Fio**	**0.58**	**203**	⇓P	**Pn**	**23 30 28.2**	**-0.2**
CAFI				S	**Sn**	**23 30 36.9**	**-0.8**
CAFI				AML	AML		
	comp=E,634µm,0.6s						
CAFI				AML	AML		
	comp=N,719µm,0.8s						
CAFI				AML	AML		
	comp=E,668µm,0.6s						
CAFI				AML	AML		
	comp=N,684µm,0.8s						
CAFI				AML	AML		
	comp=E,634µm,0.6s						
ARVD	**Arcevia**	**0.60**	**127**	P	**Pn**	**23 30 29.1**	**+0.5**
ARVD				S	**Sn**	**23 30 39.7**	**+1.5**
ARVD				AML	AML		
	comp=E,914µm,0.2s						
ARVD				AML	AML		
	comp=N,618µm,0.6s						
MURB	**Monte Urbino**	**0.62**	**163**	⇓P	**Pn**	**23 30 30.0**	**+1.0**
MURB				S	**Sn**	**23 30 39.8**	**+1.1**
MURB				AML	AML		
	comp=E,2920µm,1.1s						
MURB				AML	AML		
	comp=N,3565µm,0.2s						
MURB				AML	AML		
	comp=N,3585µm,0.2s						
MURB				AML	AML		
	comp=E,3380µm,0.7s						
MURB				AML	AML		
	comp=N,3570µm,0.2s						
MURB				AML	AML		
	comp=E,2920µm,1.1s						
BRIS	**BRISIGHELLA**	**0.63**	**298**	P	**Pn**	**23 30 29.4**	**+0.5**
BRIS				S	**Sn**	**23 30 38.3**	**-0.4**
BRIS				AML	AML		
	comp=E,626µm,0.4s						
BRIS				AML	AML		
	comp=N,2235µm,0.3s						
IMOL	**Imola, Italy**	**0.63**	**322**	P	**Pn**	**23 30 31.5**	**+2.5**
ATTE	**AVT- Monte Tez**	**0.66**	**175**	⇓P	**Pn**	**23 30 29.9**	**+0.4**
ATTE				AML	AML		
	comp=E,1120µm,0.5s						
ATTE				AML	AML		
	comp=N,1020µm,0.6s						
FOSV	**Fossato di Vic**	**0.66**	**148**	⇑P	**Pn**	**23 30 30.1**	**+0.7**
FOSV				AML	AML		
	comp=E,486µm,1.0s						
FOSV				AML	AML		
	comp=E,487µm,1.0s						
FOSV				AML	AML		
	comp=N,520µm,0.8s						
SEI	**Scarperia**	**0.69**	**287**	P	**Pn**	**23 30 31.6**	**+1.8**
SEI				S	**Sn**	**23 30 42.6**	**+2.5**
SEI				AML	AML		
	comp=E,1195µm,0.4s						
SEI				AML	AML		
	comp=N,2040µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.72**	**159**	P	**Pn**	**23 30 31.2**	**+1.0**
ATCC				AML	AML		
	comp=N,744µm,1.3s						
ATCC				AML	AML		
	comp=E,1275µm,0.5s						
SNTG	**Esanatoglia**	**0.77**	**141**	P	**Pn**	**23 30 31.6**	**+0.8**
SNTG				AML	AML		
	comp=N,692µm,1.3s						
SNTG				AML	AML		
	comp=E,472µm,0.5s						
SNTG				AML	AML		
	comp=N,692µm,1.3s						
EL6	**Elcito**	**0.80**	**131**	P	**Pn**	**23 30 32.2**	**+1.1**
CSNT	**Castellina Chi**	**0.81**	**242**	⇓P	**Pn**	**23 30 31.6**	**+0.3**
CSNT				S	**Sn**	**23 30 42.5**	**-0.3**
CSNT				AML	AML		
	comp=E,249µm,0.7s						
CSNT				AML	AML		
	comp=N,335µm,0.4s						
OSSC	**Osservatorio P**	**0.82**	**246**	P	**Pn**	**23 30 31.8**	**+0.5**
OSSC				AML	AML		
	comp=N,380µm,0.9s						
OSSC				AML	AML		
	comp=E,450µm,0.4s						
CING	**Cingoli**	**0.82**	**126**	⇓P	**Pn**	**23 30 32.5**	**+1.1**
CING				AML	AML		
	comp=E,452µm,0.4s						
CING				AML	AML		
	comp=N,290µm,1.6s						
ASSB	**Assisi San Ben**	**0.86**	**161**	⇑P	**Pn**	**23 30 32.5**	**+0.5**
MPPT	**Montemurlo**	**0.86**	**277**	P	**Pn**	**23 30 33.0**	**+1.1**
MPPT				AML	AML		
	comp=E,295µm,0.6s						
MPPT				AML	AML		
	comp=N,229µm,0.5s						
FNVD	**Fontana Vidola**	**0.89**	**291**	⇓P	**Pn**	**23 30 34.9**	**+2.6**
FNVD				AML	AML		
	comp=E,491µm,0.5s						
FNVD				AML	AML		
	comp=N,444µm,0.7s						
MTCR	**Monte La Croce**	**0.94**	**281**	⇑P	**Pn**	**23 30 34.1**	**+1.1**
CRMI	**Carmignano**	**0.95**	**266**	⇑P	**Pn**	**23 30 33.9**	**+0.9**
CRMI				AML	AML		
	comp=N,288µm,1.4s						
CRMI				AML	AML		
	comp=E,436µm,0.3s						
MGAB	**Montegabbione**	**0.95**	**187**	⇓P	**Pn**	**23 30 33.5**	**+0.4**
MGAB				AML	AML		
	comp=E,1106µm,0.3s						
MGAB				AML	AML		
	comp=N,1765µm,0.6s						
MGAB				AML	AML		
	comp=E,1056µm,0.3s						
MGAB				AML	AML		
	comp=E,1102µm,0.3s						
MGAB				AML	AML		
	comp=N,1740µm,0.6s						
FIU	**Minerbio Fiu**	**0.96**	**324**	P	Pn	23 30 37.2	+4.1
AOI	**Ancona**	**1.01**	**107**	P	**Pn**	**23 30 35.5**	**+1.8**
AOI				AML	AML		
	comp=N,254µm,0.7s						
AOI				AML	AML		
	comp=E,202µm,0.6s						
FDMO	**Fiordimonte**	**1.01**	**144**	⇑P	**Pn**	**23 30 35.2**	**+1.4**
FDMO				AML	AML		
	comp=E,330µm,0.2s						
FDMO				AML	AML		
	comp=N,310µm,1.1s						
CSP1	**Cessapalombo**	**1.02**	**138**	P	**Pn**	**23 30 35.2**	**+1.2**
FROS	**Frosini**	**1.04**	**232**	P	**Pn**	**23 30 34.4**	**+0.2**
FROS				AML	AML		

	comp=N,326µm,0.6s						
FROS				AML	AML		
	comp=E,352µm,0.4s						
FROS				AML	AML		
	comp=N,326µm,0.6s						
SACS	**San Casciano d**	1.04	195	P	Pn	23 30 34.4	+0.1
SACS				AML	AML		
	comp=N,476µm,0.9s						
SACS				AML	AML		
	comp=E,300µm,0.9s						
SACS				AML	AML		
	comp=N,464µm,0.9s						
SACS				AML	AML		
	comp=E,300µm,0.9s						
MOMA	**Monte Martano**	1.08	169	⇑P	Pn	23 30 34.9	+0.2
MOMA				AML	AML		
	comp=N,990µm,1.6s						
MOMA				AML	AML		
	comp=N,668µm,0.8s						
MOMA				AML	AML		
	comp=N,990µm,1.6s						
MOMA				AML	AML		
	comp=E,824µm,1.4s						
MOMA				AML	AML		
	comp=E,864µm,1.4s						
PP3	**Marolino**	1.08	116	⇓P	Pn	23 30 36.5	+1.9
PP3				AML	AML		
	comp=N,378µm,0.5s						
PP3				AML	AML		
	comp=E,440µm,0.6s						
ARCI	**Arcidosso**	1.17	210	⇓P	Pn	23 30 35.9	0.0
ARCI				AML	AML		
	comp=E,178µm,0.9s						
ARCI				AML	AML		
	comp=N,182µm,0.7s						
MCIV	**Monte Civitell**	1.17	202	⇑P	Pn	23 30 36.6	+0.7
MCIV				AML	AML		
	comp=N,124µm,0.8s						
MCIV				AML	AML		
	comp=E,134µm,0.8s						
NRCA	**Norcia**	1.19	149	⇓P	Pn	23 30 38.6	+2.3
NRCA				AML	AML		
	comp=N,374µm,1.1s						
NRCA				AML	AML		
	comp=E,346µm,0.1s						
NRCA				AML	AML		
	comp=N,310µm,1.5s						
NRCA				AML	AML		
	comp=E,322µm,0.7s						
BDI	**Bagni Di Lucca**	1.23	280	⇓P	Pn	23 30 37.6	+0.9
TRIF	**Trifonti**	1.25	234	⇓P	Pn	23 30 37.4	+0.4
TRIF				AML	AML		
	comp=E,252µm,1.0s						
TRIF				AML	AML		
	comp=N,204µm,0.6s						
CESX	**Cesi**	1.27	170	⇑P	Pn	23 30 37.8	+0.6
CESX				S	Sn	23 30 55.0	+1.7
CESX				AML	AML		
	comp=E,829µm,1.5s						
CESX				AML	AML		
	comp=N,572µm,0.3s						
PII	**Pisa**	1.28	264	⇑P	Pn	23 30 38.1	+0.9
PII				AML	AML		
	comp=E,1228µm,0.8s						
PII				AML	AML		
	comp=N,1040µm,0.3s						
MAIM	**Mastiano**	1.29	273	P	Pn	23 30 38.5	+1.0
CARD	**Cardoso**	1.31	278	P	Pn	23 30 38.6	+0.8
ARRO	**Arrone**	1.33	164	⇓P	Pn	23 30 38.9	+0.9
ARRO				AML	AML		
	comp=E,255µm,0.3s						
ARRO				AML	AML		
	comp=N,286µm,0.2s						
LNSS	**Leonessa**	1.37	156	⇑P	Pn	23 30 39.9	+1.2
LNSS				AML	AML		
	comp=N,377µm,0.4s						
LNSS				AML	AML		
	comp=E,392µm,0.4s						
SARO	**Sassorosso**	1.39	284	P	Pn	23 30 40.0	+1.1
SARO	**Sassorosso**	1.39	284	⇑P	Pn	23 30 40.0	+1.1
SARO				AML	AML		
	comp=E,66µm,0.4s						
SARO				AML	AML		
	comp=N,73µm,0.5s						
VLC	**Villacollemand**	1.40	283	⇑P	Pn	23 30 40.0	+1.1
VLC				AML	AML		
	comp=E,76µm,1.1s						
VLC				AML	AML		
	comp=N,80µm,1.1s						
GUMA	**Gualdo di Mace**	1.45	123	⇑P	Pn	23 30 37.5	-2.1
GUMA				AML	AML		
	comp=E,1295µm,0.5s						
GUMA				AML	AML		
	comp=N,964µm,0.4s						
GUMA				AML	AML		
	comp=E,1170µm,0.6s						
GUMA				AML	AML		
	comp=N,898µm,1.1s						
SMA1	**SAN MARTINO**	1.45	148	⇓P	Pn	23 30 41.8	+2.0
SMA1				AML	AML		
	comp=N,300µm,0.7s						
SMA1				AML	AML		
	comp=E,363µm,0.9s						
BRJN	**Brijuni**	1.48	45	*e*Pg	Pn	23 30 40.1	0.0
BRJN				Sg	Sn	23 30 56.5	-2.0
CASP	**Castiglione de**	1.48	224	⇓P	Pn	23 30 40.0	-0.1
CASP				AML	AML		
	comp=N,472µm,0.3s						
CASP				AML	AML		
	comp=E,278µm,1.1s						
RM33	**Pellescritta (**	1.51	153	P	Pn	23 30 41.8	+1.2
RM33				AML	AML		
	comp=E,250µm,1.1s						
RM33				AML	AML		
	comp=N,247µm,0.9s						
RM33				AML	AML		
	comp=E,161µm,0.7s						
RM33				AML	AML		
	comp=N,185µm,1.6s						
CAMP	**Campotosto**	1.56	148	P	Pn	23 30 43.4	+2.1
CAMP				AML	AML		
	comp=E,102µm,0.6s						
CAMP				AML	AML		
	comp=N,144µm,0.8s						
TEOL	**Teolo**	1.56	344	⇑P	Pn	23 30 41.8	+0.7
TEOL				AML	AML		
	comp=N,310µm,0.5s						
TEOL				AML	AML		
	comp=E,460µm,0.6s						
TRTR	**Tortoreto Alta**	1.59	131	⇑P	Pn	23 30 48.1	+6.7
SRES	**S.Oreste - Sor**	1.63	174	⇓P	Pn	23 30 43.0	+0.9
SRES				S	Sn	23 31 03.0	+1.0
SRES				AML	AML		
	comp=E,116µm,0.4s						
SRES				AML	AML		
	comp=N,136µm,0.4s						
OPPE	**Oppeano**	1.65	332	⇑P	Pn	23 30 43.8	+1.5
MAON	**Monte Argentar**	1.66	211	⇓P	Pn	23 30 42.6	+0.1
MAON				AML	AML		
	comp=E,89µm,0.8s						
MAON				AML	AML		
	comp=N,67µm,1.2s						
ZOVE	**Zovencedo**	1.69	341	P	Pn	23 30 43.1	+0.3
FIAM	**Fiamignano**	1.71	159	⇓P	Pn	23 30 44.8	+1.6
FIAM				AML	AML		
	comp=E,132µm,0.3s						
FIAM				AML	AML		
	comp=N,136µm,0.4s						
AQU	**L'Aquila**	1.71	151	*e*Pn	Pn	23 30 47.2	+3.9
PLMA	**Palmaria, Port**	1.76	277	⇑P	Pn	23 30 45.2	+1.3
PLMA				AML	AML		
	comp=N,162µm,0.4s						
PLMA				AML	AML		
	comp=E,118µm,1.1s						
SMRN	**Sveta Marina**	1.79	48	*i* Pn	Pn	23 30 44.1	0.0
SMRN				Sn	Sn	23 31 04.8	-0.9
TOLF	**Tolfa**	1.81	187	⇑P	Pn	23 30 45.2	+0.7
TOLF				AML	AML		
	comp=E,82µm,0.5s						
TOLF				AML	AML		
	comp=N,81µm,1.5s						
FAGN	**Fagnano**	1.86	149	⇑P	Pn	23 30 51.3	+6.1
CELB	**S.Piero in Cam**	1.88	234	⇑P	Pn	23 30 45.8	+0.3
CELB				AML	AML		
	comp=N,53µm,0.5s						
CELB				AML	AML		
	comp=E,59µm,1.4s						
ASOL	**Asolo**	1.96	352	P	Pn	23 30 47.2	+0.7
CRND	**Cornuda**	1.98	356	P	Pn	23 30 47.6	+0.8
ROVR	**Rover Verones**	1.98	335	⇑P	Pn	23 30 47.5	+0.5
ROVR				AML	AML		
	comp=E,69µm,0.2s						
ROVR				AML	AML		
	comp=N,170µm,0.2s						
NVLJ	**Novalja**	1.99	68	*e*Pn	Pn	23 30 47.2	+0.3
NVLJ				Sn	Sn	23 31 08.7	-2.1
RABC	**Rab**	2.00	63	*e*Pn	Pn	23 30 47.5	+0.5
RABC				Sn	Sn	23 31 09.6	-1.4
DUGI	**Dugi Otok**	2.01	85	*e*Pn	Pn	23 30 47.2	0.0
DUGI				Sn	Sn	23 31 09.5	-1.8
CGRP	**Cima Grappa**	2.05	351	⇓P	Pn	23 30 48.2	+0.3
CGRP				S	Sn	23 31 12.0	-0.5
CGRP				AML	AML		
	comp=N,186µm,0.7s						
CGRP				AML	AML		
	comp=E,280µm,1.4s						
SKDS	**Skadanscina**	2.09	36	*i* Pn	Pn	23 30 48.0	-0.3
VARN	**Col Varnada, M**	2.14	357	P	Pn	23 30 49.5	+0.5
VARN				AML	AML		
	comp=N,170µm,0.2s						
VARN				AML	AML		
	comp=E,186µm,1.3s						
VIVA	**Pratoni del Vi**	2.14	170	P	Pn	23 30 46.5	-2.4
RIY	**Rijeka**	2.15	46	*e*Pn	Pn	23 30 49.3	+0.2
RIY	**Rijeka**	2.15	46	*e*Pn	Pn	23 30 49.4	+0.3
RIY				Sn	Sn	23 31 14.7	0.0
SALO	**Salr**	2.16	325	P	Pn	23 30 50.6	+1.4
SALO				S	Sn	23 31 15.0	+0.1
SALO				AML	AML		
	comp=N,158µm,0.6s						
SALO				AML	AML		
	comp=E,121µm,0.8s						
DOSS	**Dosso del Somm**	2.17	339	P	Pn	23 30 50.0	+0.5
DOSS				S	Sn	23 31 15.0	-0.3
DOSS				AML	AML		
	comp=E,190µm,0.5s						
DOSS				AML	AML		
	comp=N,149µm,0.4s						
CTI	**Castel Tesino**	2.23	349	⇑P	Pn	23 30 50.9	+0.5
CTI				S	Sn	23 31 16.0	-0.9
CTI				AML	AML		
	comp=N,302µm,0.2s						
CTI				AML	AML		
	comp=E,366µm,0.2s						
KNDS	**Knezji Dol**	2.24	41	*i* Pn	Pn	23 30 50.6	+0.2
KNDS				*i* Sn	Sn	23 31 17.8	+0.7
SABO	**M.te Sabotino**	2.32	23	⇓P	Pn	23 30 51.6	+0.1
SABO				AML	AML		
	comp=N,157µm,0.5s						
SABO				AML	AML		
	comp=E,140µm,1.4s						
JAVS	**Javornik**	2.40	31	*i* Pn	Pn	23 30 52.3	-0.2
GAGG	**Gaggia**	2.41	338	P	Pn	23 30 53.8	+1.0
GAGG				AML	AML		
	comp=N,118µm,0.9s						
GAGG				AML	AML		
	comp=E,116µm,0.8s						
STAL	**STALIGIAL**	2.42	7	⇑P	Pn	23 30 53.1	+0.3
STAL				S	Sn	23 31 22.0	+0.7
STAL				AML	AML		
	comp=E,204µm,1.3s						
STAL				AML	AML		
	comp=N,258µm,1.3s						
CEY	**Cerknica**	2.42	38	*i* Pn	Pn	23 30 52.8	0.0
CEY	**Cerknica**	2.42	38	*e*Pn	Pn	23 30 52.6	-0.2
MPRI	**Monte Prat**	2.44	12	⇑P	Pn	23 30 54.0	+1.0
MPRI				AML	AML		
	comp=N,130µm,0.4s						
MPRI				AML	AML		
	comp=E,96µm,0.3s						
ZIRJ	**Zirje**	2.45	94	*e*Pn	Pn	23 30 53.2	+0.1
ZIRJ				Sn	Sn	23 31 18.9	-2.9
ZONE	**Zone**	2.45	322	P	Pn	23 30 52.2	-1.0
ZONE				AML	AML		
	comp=E,124µm,0.7s						
ZONE				AML	AML		
	comp=N,109µm,1.5s						
CIMO	**Cimolais**	2.45	3	⇑P	Pn	23 30 53.4	+0.1
CIMO				S	Sn	23 31 22.0	-0.1
CIMO				AML	AML		
	comp=N,53µm,0.8s						
CIMO				AML	AML		
	comp=E,61µm,0.5s						
MORI	**Morici**	2.48	89	*e*Pn	Pn	23 30 54.1	+0.5
MORI				Sn	Sn	23 31 20.6	-2.1
MABI	**Malga Bissina**	2.53	331	P	Pn	23 30 55.4	+1.0
MABI				AML	AML		
	comp=N,92µm,0.7s						
MABI				AML	AML		
	comp=E,95µm,0.6s						
GBAS	**Gorenja Brezov**	2.58	36	*i* Pn	Pn	23 30 55.2	+0.2
UDBI	**Udbina**	2.59	74	*e*Pn	Pn	23 30 55.9	+0.7
UDBI				Sn	Sn	23 31 24.0	-1.6
PLIT	**Plitvice**	2.60	66	*e*Pn	Pn	23 30 55.8	+0.4
PLIT				Sn	Sn	23 31 23.7	-2.1
CRNS	**Crni Vrh**	2.63	32	*i* Pn	Pn	23 30 55.8	+0.1
CRNS				*e*Sn	Sn	23 31 26.7	+0.3
PTCC	**Patocco-Chiusa**	2.66	16	⇑P	Pn	23 30 56.4	+0.3
PTCC				AML	AML		
	comp=E,34µm,1.6s						
PTCC				AML	AML		
	comp=N,37µm,0.4s						
KOSI	**Kohlern**	2.68	347	⇑P	Pn	23 30 57.9	+1.4
KOSI				AML	AML		
	comp=N,73µm,0.3s						
KOSI				AML	AML		
	comp=E,68µm,1.3s						
BOJS	**Bojanci**	2.68	51	⇓P	Pn	23 30 57.1	+0.8
BOJS				S	Sn	23 31 29.0	+1.3
BOJS				AML	AML		
	comp=E,118µm,1.4s						
BOJS				AML	AML		
	comp=N,106µm,0.5s						
LJU	**Ljubljana**	2.71	35	*e*Pn	Pn	23 30 57.3	+0.6
LJU	**Ljubljana**	2.71	35	P	Pn	23 30 56.3	-0.4
LJU				S	Sn	23 31 30.0	+1.8
LJU				AML	AML		
	comp=E,765µm,0.2s						
LJU				AML	AML		
	comp=N,948µm,1.1s						
APPI	**Appiano**	2.72	345	P	Pn	23 30 58.2	+1.2
APPI				AML	AML		
	comp=N,97µm,0.3s						
APPI				AML	AML		
	comp=E,120µm,0.9s						
PGF	**Pioggiola**	2.73	242	*e*Pn	Pn	23 30 58.1	+1.0
PGF				*e*Sn	Sn	23 31 27.7	-1.4
	comp=E,22nm,0.4s						
PGF	**Pioggiola**	2.73	242	S	Sn	23 31 29.0	0.0
PGF	**Pioggiola**	2.73	242	P	Pn	23 30 58.2	+1.0
ZOU	**Zoufplan**	2.74	10	P	Pn	23 30 57.6	+0.3
ZOU				AML	AML		
	comp=E,46µm,0.9s						
ZOU				AML	AML		
	comp=N,50µm,1.3s						
FVI	**Forni Avoltri**	2.76	7	⇓P	Pn	23 30 58.6	+1.1
FVI				AML	AML		
	comp=E,31µm,0.6s						
FVI				AML	AML		
	comp=N,28µm,0.7s						
CORF	**Corte**	2.77	237	P	Pn	23 30 58.9	+1.3
CORF				S	Sn	23 31 30.2	+0.3
SMPL	**Sampolo**	2.82	232	P	Pn	23 30 60.0	+1.7
SMPL				S	Sn	23 31 31.8	+0.8
BRES	**Bressanone**	2.87	352	⇑P	Pn	23 31 00.4	+1.3
OZLJ	**Ozalj**	2.87	51	*e*Pn	Pn	23 30 58.9	0.0
OZLJ				Sn	Sn	23 31 31.7	-0.5
QLNO	**Quiliano**	2.87	281	⇑P	Pn	23 31 00.0	+1.0
QLNO				AML	AML		
	comp=N,54µm,1.6s						
QLNO				AML	AML		
	comp=E,56µm,1.6s						
ABTA	**Abfaltersbach**	2.89	3	*e*Pn	Pn	23 31 00.7	+1.3
	comp=E,1.9nm,0.1s,SNR=12						
MYKA	**Terra Mystica**	2.93	19	*e*Pn	Pn	23 31 00.9	+1.1
	comp=E,0.7nm,0.1s						
BRMO	**Bormio**	2.94	333	⇑P	Pn	23 31 03.1	+3.0
ABSI	**Aberstueckl**	2.95	347	P	Pn	23 31 01.4	+1.3
ABSI				AML	AML		
	comp=N,116µm,0.7s						
ABSI				AML	AML		
	comp=E,153µm,0.2s						
CRES	**Cresnjev**	3.00	48	*e*Pn	Pn	23 31 01.4	+0.7
MUGIO	**Muggio**	3.09	313	⇓P	Pn	23 31 02.5	+0.5
MUGIO				AML	AML		
	comp=N,30µm,0.3s						
MUGIO				AML	AML		
	comp=E,34µm,1.3s						
RISI	**Rein**	3.09	357	⇑P	Pn	23 31 03.8	+1.6
RISI				AML	AML		
	comp=E,129µm,0.6s						
RISI				AML	AML		
	comp=N,128µm,0.3s						
OBKA	**Obir**	3.10	30	*i* Pn	Pn	23 31 02.6	+0.4
	comp=N,1.1nm,0.1s,SNR=11						
OBKA				*e*Sn	Sn	23 31 38.6	+0.6
	comp=N,6.8nm,0.2s						
HVAR	**Hvar**	3.11	101	*e*Pn	Pn	23 31 02.3	+0.1
HVAR				Sn	Sn	23 31 36.1	-2.0
ROSI	**Rosskopf**	3.13	349	⇓P	Pn	23 31 04.4	+1.7
ROSI				AML	AML		
	comp=E,104µm,1.2s						
ROSI				AML	AML		
	comp=N,103µm,0.2s						
VARE	**Varese**	3.20	310	⇓P	Pn	23 31 04.6	+1.0
VARE				AML	AML		
	comp=E,53µm,0.9s						
VARE				AML	AML		
	comp=N,61µm,1.2s						
KBA	**Koelnbreinsper**	3.31	13	*i* Pn	Pn	23 31 06.5	+1.4
	comp=N,1.4nm,0.1s,SNR=7.5						
KBA				*e*Sn	Sn	23 31 43.7	+0.6
	comp=N,3.2nm,0.2s						
PTJ	**Puntijarka**	3.33	51	*e*Pn	Pn	23 31 05.6	+0.4
PTJ				Sn	Sn	23 31 42.2	-1.4
FETA	**Feichten**	3.34	342	*e*Pn	Pn	23 31 07.6	+2.0
	comp=N,0.2nm,0.1s,SNR=5.1						
FETA				*e*Sn	Sn	23 31 45.5	+1.4
	comp=N,1.7nm,0.3s						
DAVOX	**Davos/Dischmat**	3.38	331	⇑P	Pn	23 31 09.3	+3.2
SAOF	**Saorge**	3.42	274	P	Pn	23 31 08.0	+1.5
SAOF	**Saorge**	3.42	274	P	Pn	23 31 07.7	+1.3
SAOF				S	Sn	23 31 46.3	+0.6
SOKA	**Soboth**	3.42	34	*e*Pn	Pn	23 31 06.9	+0.3
	comp=N,0.4nm,0.3s						
MSAG	**Monte S. Angel**	3.43	128	⇑P	Pn	23 31 05.9	-0.8
WTTA	**Wattenberg**	3.43	353	*i* Pn	Pn	23 31 09.0	+2.2
	comp=N,2.1nm,0.2s,SNR=12						
WTTA				*e*Sn	Sn	23 31 47.5	+1.2
	comp=N,17nm,0.5s						
WTTA	**Wattenberg**	3.43	353	⇓P	Pn	23 31 09.2	+2.3
WTTA				AML	AML		
	comp=E,36µm,1.3s						
WTTA				AML	AML		
	comp=N,38µm,0.5s						
SQTA	**Sankt Quirin**	3.44	348	*i* Pn	Pn	23 31 09.1	+2.2
	comp=N,4.4nm,0.1s,SNR=23						
SQTA				*e*Sn	Sn	23 31 47.9	+1.4
	comp=N,5.8nm,0.2s						
MAKA	**Makarska**	3.49	98	*e*Pn	Pn	23 31 07.9	+0.5
MAKA				Sn	Sn	23 31 46.1	-1.4
MGRS	**Mrkonjic Grad**	3.50	79	*e*Pn	Pn	23 31 09.0	+1.4
SBF	**Sospel**	3.50	272	*e*Pn	Pn	23 31 08.3	+0.6
SBF	**Sospel**	3.50	272	*e*P	Pn	23 31 11.5	+3.8
SBF				*e*Sn	Sn	23 31 47.3	-0.6
	comp=N,20nm,0.3s						
MRAK	**Mrakovica**	3.50	69	*e*Pn	Pn	23 31 08.1	+0.4
WATA	**Walderalm**	3.51	352	*i* Pn	Pn	23 31 10.4	+2.6
	comp=N,3.1nm,0.2s,SNR=13						
WATA				*e*Sn	Sn	23 31 50.6	+2.4
	comp=N,3.5nm,0.2s						
TURF	**col de Turini**	3.53	274	P	Pn	23 31 10.0	+1.8
TURF	**col de Turini**	3.53	274	P	Pn	23 31 09.3	+1.2
TURF				S	Sn	23 31 48.7	-0.1
LOBO	**Lobor**	3.53	48	*e*Pn	Pn	23 31 08.1	+0.1
LOBO				Sn	Sn	23 31 46.8	-1.7
LSTV	**Lastovo**	3.54	106	*e*Pn	Pn	23 31 08.6	+0.5
LSTV				Sn	Sn	23 31 46.6	-2.0
RICI	**Ricice**	3.54	94	*e*Pn	Pn	23 31 09.2	+1.1
RICI				Sn	Sn	23 31 46.7	-2.0
MOTA	**Moosalm**	3.58	347	*i* Pn	Pn	23 31 11.0	+2.2
	comp=N,0.6nm,0.1s,SNR=6.1						
MOTA				*e*Sn	Sn	23 31 52.3	+2.4
	comp=N,6.2nm,0.2s						
BLY	**Banja Luka**	3.63	74	*e*Pn	Pn	23 31 10.2	+0.9
BLY	**Banja Luka**	3.63	74	⇑P	Pn	23 31 09.9	+0.6
BLY				AML	AML		
	comp=E,28µm,0.5s						
BLY				AML	AML		
	comp=N,24µm,1.2s						
MOSL	**Moslavina**	3.64	60	*e*Pn	Pn	23 31 09.5	0.0
MOSL				Sn	Sn	23 31 48.9	-2.3
FUSIO	**Fusio**	3.64	317	⇓P	Pn	23 31 11.1	+1.4
FUSIO				AML	AML		
	comp=N,26µm,1.4s						
FUSIO				AML	AML		
	comp=E,36µm,0.1s						
SPIF	**crte de Spivo**	3.65	275	P	Pn	23 31 11.5	+1.8
RETA	**Reutte**	3.78	344	*i* Pn	Pn	23 31 13.9	+2.5
	comp=E,1.2nm,0.1s,SNR=9.0						
RETA				*e*Sn	Sn	23 31 56.0	+1.4
	comp=E,10nm,0.4s						
ISO	**Isola**	3.79	277	P	Pn	23 31 12.8	+1.3
DAVA	**Damuels**	3.82	335	*i* Pn	Pn	23 31 15.7	+3.7
	comp=E,0.7nm,0.1s						
DAVA				*e*Sn	Sn	23 31 57.9	+2.2
	comp=E,5.0nm,0.2s						
KOGS	**Kog**	3.82	46	⇑P	Pn	23 31 12.0	+0.1
CALF	**Calern**	3.88	270	P	Pn	23 31 14.4	+1.6
CALF	**Calern**	3.88	270	P	Pn	23 31 14.2	+1.3
CALF				S	Sn	23 31 57.2	+0.1
SURF	**Saint Ours**	3.98	281	P	Pn	23 31 15.8	+1.4
SURF	**Saint Ours**	3.98	281	P	Pn	23 31 15.3	+1.0
SURF				S	Sn	23 32 01.9	+2.1
MBDF	**Montbardon**	4.05	284	*e*Pn	Pn	23 31 15.4	+0.2
MBDF	**Montbardon**	4.05	284	*e*P	Pn	23 31 19.0	+3.8
MBDF				*e*Sn	Sn	23 31 59.2	-2.2
	comp=E,2.2nm,0.4s						
STON	**Ston**	4.07	102	*e*Pn	Pn	23 31 16.7	+1.3
STON	**Ston**	4.07	102	*e*Pn	Pn	23 31 15.7	+0.3
STON				Sn	Sn	23 31 59.7	-2.0
STON	**Ston**	4.07	102	⇑P	Pn	23 31 15.9	+0.5
ARSA	**Arzberg**	4.08	33	*e*Pn	Pn	23 31 15.7	+0.1
	comp=E,2.4nm,0.3s						
ARSA				*e*Sn	Sn	23 31 59.8	-2.3
	comp=E,0.6nm,0.2s						
FRF	**La Foret Royal**	4.09	268	*e*Pn	Pn	23 31 16.4	+0.7
FRF				*e*Sn	Sn	23 32 00.6	-1.7
	comp=E,7.2nm,0.3s						
DIX	**Grande Dixence**	4.11	304	P	Pn	23 31 16.3	+0.2
LMR	**La Mourre**	4.22	265	*e*Pn	Pn	23 31 18.3	+0.9
LMR	**La Mourre**	4.22	265	*e*P	Pn	23 31 21.7	+4.3
LMR				*e*Sn	Sn	23 32 03.5	-2.0
	comp=E,3.1nm,0.2s						
MOA	**Molln**	4.22	18	*i* Pn	Pn	23 31 18.8	+1.3
	comp=E,1.4nm,0.1s,SNR=9.6						
MOA				*i* Sn	Sn	23 32 05.4	-0.1
	comp=E,2.7nm,0.3s						
LPG	**La Plagne**	4.27	294	*e*Pn	Pn	23 31 18.2	-0.1
LPG	**La Plagne**	4.27	294	*e*P	Pn	23 31 23.0	+4.7
LPG				*e*Sn	Sn	23 32 04.4	-2.6
	comp=E,3.4nm,0.3s						
LPL	**La Plagne**	4.29	295	*e*Pn	Pn	23 31 19.2	+0.7
LPL	**La Plagne**	4.29	295	*e*P	Pn	23 31 23.3	+4.8
LPL				*e*Sn	Sn	23 32 05.2	-2.2
	comp=E,3.8nm,0.4s						
AIGLE	**Aigle**	4.51	305	P	Pn	23 31 23.2	+1.8
AIGLE	**Aigle**	4.51	305	S	Sn	23 32 11.9	-0.8
SULZ	**Cheisacher**	4.69	323	P	Pn	23 31 25.1	+1.3
SULZ	**Cheisacher**	4.69	323	P	Pn	23 31 25.1	+1.3
NOCI	**Noci**	4.69	129	S	Sn	23 32 16.0	-1.0
ARTF	**Artigues**	4.70	269	P	Pn	23 31 26.1	+2.1
ORIF	**Oris-en-Rattie**	4.71	285	*e*Pn	Pn	23 31 24.7	+0.5
ORIF	**Oris-en-Rattie**	4.71	285	*e*P	Pn	23 31 28.8	+4.6
ORIF				*e*Sn	Sn	23 32 14.8	-2.7
	comp=E,2.1nm,0.4s						
ORIF	**Oris-en-Rattie**	4.71	285	P	Pn	23 31 26.2	+2.0
SLE	**Schleitheim**	4.72	327	P	Pn	23 31 25.3	+1.1
SLE	**Schleitheim**	4.72	327	S	Sn	23 32 13.8	-3.8
SLE	**Schleitheim**	4.72	327	P	Pn	23 31 25.3	+1.1
BALST	**Balsthal**	4.74	319	P	Pn	23 31 25.6	+1.0
BALST	**Balsthal**	4.74	319	S	Sn	23 32 15.0	-3.1
BALST	**Balsthal**	4.74	319	P	Pn	23 31 25.6	+1.0
CONA	**Conrad Observa**	4.78	30	*i* Pn	Pn	23 31 25.6	+0.5

	comp=E,0.6nm,0.1s						
CONA				eSn	Sn	23 32 17.8	-1.3
	comp=E,1.1nm,0.2s						
BSTF	la Bastide-des	4.80	273	P	Pn	23 31 28.1	+2.7
BSTF	la Bastide-des	4.80	273	P	Pn	23 31 27.4	+2.1
BSTF				S	Sn	23 32 19.0	-0.6
SMRF	Simiane la Rot	4.84	274	ePn	Pn	23 31 27.9	+1.9
SMRF	Simiane la Rot	4.84	274	eP	Pn	23 31 30.9	+4.9
SMRF				eSn	Sn	23 32 18.5	-2.3
	comp=E,3.8nm,0.4s						
RUSF	Rustrel	4.91	273	P	Pn	23 31 29.8	+2.9
RUSF	Rustrel	4.91	273	P	Pn	23 31 29.8	+2.9
BOURR	Bourrignon	5.00	317	P	Pn	23 31 29.6	+1.4
KIZ	Kirchzarten	5.10	325	P	Pn	23 31 30.3	+0.8
RUDO	Rudo	5.14	90	ePn	Pn	23 31 30.4	+0.3
CKRC	Cesky Krumlov	5.16	15	ePN	Pn	23 31 30.8	+0.6
CKRC				eSN	Sn	23 32 27.0	-1.4
CABF	La Chapelle	5.17	304	ePn	Pn	23 31 31.2	+0.8
CABF				eSn	Sn	23 32 26.2	-2.5
	comp=E,0.7nm,0.2s						
DRME	Dracevica, Mon	5.33	106	ePn	Pn	23 31 31.6	-1.0
KHC	Kasperske Hory	5.35	9	ePN	Pn	23 31 32.4	-0.5
KHC				eSN	Sn	23 32 30.5	-2.6
HINF	Hinteralfeld	5.48	318	ePn	Pn	23 31 34.7	0.0
HINF	Hinteralfeld	5.48	318	eP	Pn	23 31 39.5	+4.8
HINF				eSn	Sn	23 32 33.0	-3.3
	comp=E,6.1nm,0.3s						
RONF	Ronchamp	5.51	316	P	Pn	23 31 36.0	+1.0
ISTR	Stromboli Gino	5.52	156	P	Pn	23 31 54.8	+20
VIVF	Saint-Julien-l	5.54	283	ePn	Pn	23 31 35.4	-0.2
VIVF				eSn	Sn	23 32 35.5	-2.4
	comp=E,1.2nm,0.4s						
ECH	Echery	5.63	323	P	Pn	23 31 37.4	+0.7
WLS	Welschbruch	5.70	325	P	Pn	23 31 38.9	+1.2
CDF	Champ du Feu	5.73	324	ePn	Pn	23 31 38.2	+0.1
CDF	Champ du Feu	5.73	324	eP	Pn	23 31 43.4	+5.3
CDF				eSn	Sn	23 32 39.4	-3.1
	comp=E,3.9nm,0.3s						
HAU	Haudompre	5.86	317	ePn	Pn	23 31 39.4	-0.4
HAU	Haudompre	5.86	317	eP	Pn	23 31 45.0	+5.2
HAU				eSn	Sn	23 32 42.2	-3.3
	comp=E,8.1nm,0.3s						
MILZ	Milazzo	6.01	157	P	Pn	23 31 48.1	+6.2
LASF	Ste Croix	6.08	275	ePn	Pn	23 31 43.9	+1.0
LASF	Ste Croix	6.08	275	eP	Pn	23 31 46.7	+3.8
LASF				eSn	Sn	23 32 48.1	-3.0
	comp=E,1.1nm,0.6s						
PAGF	Fort de Pagny	6.54	318	ePn	Pn	23 31 50.4	+1.3
PAGF				eSn	Sn	23 32 58.0	-4.2
	comp=E,3.1nm,0.3s						
SMF	Signal de Mont	6.58	298	ePn	Pn	23 31 49.4	-0.2
SMF				eSn	Sn	23 32 59.3	-3.9
	comp=E,1.5nm,0.3s						
SFTF	Sexfontaines	6.65	313	eSn	Sn	23 33 01.6	-3.5
	comp=E,1.3nm,0.2s						
LOR	Lormes	6.82	303	ePn	Pn	23 31 53.2	+0.2
	baz=124						
LOR				eSn	Sn	23 33 05.1	-4.1
	comp=E,2.5nm,0.3s						
MEZF	Maizieres J'vi	6.83	315	ePn	Pn	23 31 54.6	+1.5
	baz=135						
MEZF				eSn	Sn	23 33 06.4	-3.1
	comp=E,2.3nm,0.4s						
SAVF	Savonnieres en	6.87	316	ePn	Pn	23 31 54.6	+0.9
	baz=135						
SAVF	Savonnieres en	6.87	316	eP	Pn	23 31 59.1	+5.4
SAVF				eSn	Sn	23 33 06.6	-3.8
	comp=E,0.9nm,0.2s						
KRLC	Kraliky	6.94	25	ePN	Pn	23 31 54.8	+0.2
AVF	Avril sur Loir	6.94	298	ePn	Pn	23 31 55.0	+0.4
AVF				eSn	Sn	23 33 08.6	-3.5
	comp=E,0.7nm,0.2s						
SSF	Saint Saulge	6.95	300	ePn	Pn	23 31 55.0	+0.2
SSF				eSn	Sn	23 33 08.2	-4.2
	comp=E,0.5nm,0.3s						
BGF	Bois d'Agland	7.19	295	ePn	Pn	23 31 58.6	+0.6
BGF	Bois d'Agland	7.19	295	eP	Pn	23 32 03.3	+5.3
BGF				eSn	Sn	23 33 14.3	-3.9
	comp=E,1.6nm,0.3s						
MTLF	Montolieu	7.32	269	ePn	Pn	23 32 00.9	+1.0
MTLF	Montolieu	7.32	269	eP	Pn	23 32 05.9	+6.0
MTLF				eSn	Sn	23 33 18.2	-3.4
	comp=E,0.5nm,0.4s						
CAF	Calviac	7.39	282	ePn	Pn	23 32 01.8	+0.9
TCF	Toulx Ste Croi	7.53	292	ePn	Pn	23 32 03.6	+0.9
TCF				eSn	Sn	23 33 22.1	-4.5
	comp=E,0.3nm,0.2s						
HYF	Humbligny	7.58	300	ePn	Pn	23 32 02.3	-1.0
EPF	Esparros	8.73	269	ePn	Pn	23 32 19.9	+0.8
EPF				eSn	Sn	23 33 51.4	-4.6
	comp=E,0.4nm,0.3s						

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*IDC **15** 23:31:13.7±0.8, 28°.06S×178°.14W, h247^{km}±9^{km}, mb3.2/4, mb1 3.7/7, mb1mx3.4/28, mbtmp4.1/7, Error ellipse: s-maj=26.1km s-min=21.6km az=160.0*

ISC 15 23:31:13.8±0.8**, 28°.1S**±0°.1×**178°.2W**±0°.2**, h250**^{km}**, n11,** σ**1**^{s}**.16**/12**, mb3.4**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.20	170	P	Pn	23 31 50.1	+0.2
	460nm,0.3s,baz=80,slow=5.6,SNR=19						
RAO				S	S	23 32 18.0	-0.5
	641nm,0.3s,baz=292,slow=23,SNR=8.5						
MSVF	Nonsavu	10.86	340	P	Pn	23 33 42.2	-1.2
	5.4nm,0.3s,baz=164,slow=9.2,SNR=51						
URZ	Urewera	10.91	200	P	Pn	23 33 42.9	-0.7
	2.5nm,0.3s,baz=119,slow=23,SNR=13						
DZM	Mont Dzumac	15.18	290	P	Pn	23 34 37.4	+1.1
	0.7nm,0.3s,baz=127,slow=8.1,SNR=8.8						
ASAR	Alice Springs	43.15	265	P	P	23 38 52.2	+1.9
	0.7nm,0.8s,baz=95,slow=7.1,SNR=5.5						
WRA	Warramunga Arr	43.93	270	P	P	23 38 55.3	-1.1
	0.6nm,0.7s,baz=109,slow=7.3,SNR=8.8						
NVAR	Mina Array Bea	86.62	43	P	P	23 43 30.8	+1.5
	1.1nm,0.8s,baz=210,slow=7.1,SNR=4.2						
TXAR	Lajitas Array	91.24	57	P	P	23 43 51.0	0.0
	0.5nm,0.6s,baz=255,slow=3.5,SNR=3.1						
NB2	NORSAR Subarra	146.43	352	PKP	PKPbc	23 50 24.7	-0.1
	comp=Z,3.1nm,1.0s,baz=12,slow=3.1						
NOA	NORSAR Array B	146.43	352	PKPbc	PKPbc	23 50 24.0	-0.7
	comp=Z,1.5nm,0.7s,baz=16,slow=2.9,SNR=4.6						
AKASG	Malin Array Be	149.35	325	PKPbc	PKPbc	23 50 31.8	-0.9
	comp=Z,1.2nm,0.6s,baz=48,slow=3.5,SNR=6.4						

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*ATH **15** 23:44:42.5, 39°.45N×20°.73E, h24^{km}±9^{km}, ML2.6/1, Error ellipse: s-maj=9.7km s-min=1.7km az=353.0*

*THE **15** 23:44:43.0, 39°.42N×20°.72E, h15^{km}±1^{km}, ML2.7/2, Error ellipse: s-maj=1.9km s-min=0.6km az=17.0*

*IDC **15** 23:44:51.5±13.0, 38°.70N×19°.96E, h0^{km}, mb3.6/3, mb1 3.5/4, mb1mx3.3/29, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=247.3km s-min=35.0km az=36.0*

ISC 15 23:44:41.4±1.0**, 39°.32N**±0°.04×**20°.69E**±0°.05**, h9**^{km}**, n35,** σ**1**^{s}**.08**/32**, mb3.6**/3**, 2C-2D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.35	307	P	Pb	23 44 48.8	-1.1
IGT				S	Sb	23 44 55.2	-0.3
	1µm,0.3s						
IGT	Igoumenitsa	0.35	307	P	Pb	23 44 48.9	-0.9
IGT				S	Sb	23 44 55.2	-0.3
IGT				AML	AML	23 44 56.2	
	comp=E,2794µm,0.2s						
IGT				AML	AML	23 44 56.2	
	comp=N,2290µm,0.3s						
JAN	Janina	0.36	20	P	Pg	23 44 48.2	-0.3
JAN				S	Sg	23 44 52.8	-0.4
	comp=N,3µm,0.2s						
JAN	Janina	0.36	20	P	Pg	23 44 48.4	-0.1
TSLK	Tsoukalades, L	0.50	183	P	Pn	23 44 54.8	+0.1
TSLK	Tsoukalades, L	0.50	183	P	Pn	23 44 54.8	+0.1
LKD2	Lefkada island	0.53	183	P	Pn	23 44 55.2	0.0
LKD2	Lefkada island	0.53	183	P	Pn	23 44 55.2	0.0
NYDR	Nydri-Lefkada	0.61	180	P	Pn	23 44 56.2	0.0
NYDR	Nydri-Lefkada	0.61	180	P	Pn	23 44 56.2	0.0
DRAG	Dragano-Lefkad	0.64	188	P	Pn	23 44 57.0	+0.2
DRAG	Dragano-Lefkad	0.64	188	P	Pn	23 44 56.9	+0.2
EVGI	Lefkada island	0.70	182	P	Pn	23 44 58.0	+0.5
EVGI	Lefkada island	0.70	182	P	Pn	23 44 58.0	+0.5
SRN	Sarande	0.77	316	P	Pb	23 44 56.9	-0.1
KEK	Kerkira	0.80	300	P	Pb	23 44 57.4	-0.1
KEK	Kerkira	0.80	300	P	Pb	23 44 57.3	-0.1
LSK	Leskovik	0.83	355	P	Pb	23 44 57.4	-0.7
AGG	Agios Georgios	1.31	103	P	Pg	23 45 07.6	+1.1
OHR	Ohrid	1.79	3	i Pn	Pg	23 45 17.0	+1.3
VAY	Valandovo	2.46	35	i Pn	Pg	23 45 28.4	-0.1
BOSS	Bosilegrad	3.45	23	ePn	Pb	23 45 40.1	-2.6
BARS	Barje	3.59	13	ePn	Pb	23 45 41.6	-3.5
SELS	Selova	3.91	5	ePn	Pg	23 45 55.6	-0.7
ZAPS	Zavoj	4.21	20	ePn	Pb	23 45 55.4	-0.3
IVAS	Ivanjica	4.27	355	ePn	Pn	23 45 51.2	+4.5
DIVS	Divibare	4.80	354	ePn	Pn	23 45 56.5	+2.5
MLR	Muntele Rosu	7.29	31	⇑P	Pb	23 46 52.5	+4.4
BISRR	Bisoca	7.65	34	⇓P	Pb	23 46 55.5	+1.4
PLOR	Plostina	7.87	32	⇓P	Pb	23 46 57.7	-0.2
VRI	Vrincioaia	7.91	32	⇑P	Pb	23 46 58.8	+0.2
GERES	GERESS Array B	10.76	334	Pn	Pn	23 47 32.4	+17
	comp=N,0.2nm,0.3s,baz=158,slow=16,SNR=2.2						
FINES	FINESS Array B	22.40	7	P	P	23 49 59.0	+19
	comp=N,1.6nm,0.7s,baz=167,slow=14,SNR=3.8						
MKAR	Makanchi Array	44.59	59	P	P	23 53 11.6	+18
	comp=N,0.4nm,0.7s,baz=282,slow=8.0,SNR=1.8						
ZALV	Zalesovo Beam	44.83	49	P	P	23 53 13.6	+18
	comp=N,0.6nm,0.4s,baz=284,slow=8.5,SNR=2.7						

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*IDC **15** 23:49:58.3±2.2, 15°.48S×75°.34W, h0^{km}, mb4.6/1, mb1 4.4/2, mb1mx3.7/19, mbtmp4.4/2, ML4.2/1, MS3.1/2, Ms1 3.2/2, ms1mx2.9/26, Error ellipse: s-maj=133.2km s-min=35.6km az=11.0*

*NEIC **15** 23:50:04.1±1.8, 15°.97S±0°.09×75°.1W±0°.1, h33^{km}±2^{km}, mb4.5/11, Error ellipse: s-maj=19.2km s-min=9.8km az=59.0*

ISC 15 23:50:03.1±0.7**, 16°.01S**±0°.08×**75°.29W**±0°.09**, h30**^{km}**, n43,** σ**1**^{s}**.72**/35**, mb4.4**/7**, Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	4.27	339		Pn	23 51 07.4	+1.2
AP01	Chacalluta	5.28	117	Pn	Pn	23 51 19.2	-0.7
PB12	IPOC Station P	5.40	119	Pn	Pn	23 51 20.6	-1.1
PB16	IPOC Station P	5.99	114	Pn	Pn	23 51 29.7	-0.5
TA02	Huaiquique	6.48	132	Pn	Pn	23 51 35.0	-1.4
PB11	IPOC Station P	6.53	126	Pn	Pn	23 51 36.0	-1.3
TA01	Diego Aracena	6.64	134	Pn	Pn	23 51 37.2	-1.4
PATCX	Punta Patache	6.83	135		Pn	23 51 39.7	-1.7
LPAZ	La Paz	6.88	93	Pn	Pn	23 51 44.2	+1.7
	2.1nm,0.3s,baz=278,slow=7.4,SNR=39						
LPAZ				Sn	Sn	23 53 03.5	+3.4
	baz=203,slow=19,SNR=1.3						
LPAZ				LR	LR	23 54 44.0	
	comp=Z,178nm,18.8s,baz=282,slow=41						
LPAZ	La Paz	6.88	93	Pn	Pn	23 51 43.8	+1.3
PB08	IPOC Station P	7.13	126	Pn	Pn	23 51 44.2	-1.6
PB01	IPOC Station P	7.44	133	Pn	Pn	23 51 48.6	-1.1
PB07	IPOC Station P	7.65	139		Pn	23 51 51.1	-1.5
PB04	IPOC Station P	7.95	143	Pn	Pn	23 51 55.8	-0.9
PB09	IPOC Station P	8.12	136	Pn	Pn	23 51 58.5	-0.5
PB06	IPOC Station P	8.57	142	Pn	Pn	23 52 04.3	-1.0
LVC	Limon Verde	8.91	138	Pn	Pn	23 52 09.8	-0.3
ETMB	Extrema	10.77	56	Pn	Pn	23 52 32.4	-2.9
SAML	Samuel	13.74	61	Pn	Pn	23 53 10.5	-5.4
H03N1	Juan Fernandez	17.66	190	T	T	00 13 02.9	
	baz=13,slow=74,SNR=630						
H03N2	Juan Fernandez	17.67	190	T	T	00 12 55.3	
	baz=13,slow=74,SNR=591						
H03N3	Juan Fernandez	17.68	190	T	T	00 13 01.1	
	baz=13,slow=74,SNR=630						
CPUP	Villa Florida	19.62	125	LR	LR	00 03 25.9	
	comp=Z,56nm,21.4s,baz=36,slow=40						
ITQB	Itaqui	21.88	132	P	P	23 54 55.7	+2.0
ITQB				IAmb	IAmb	23 54 56.4	
	comp=Z,16nm,0.9s						
BOAV	Boa Vista	23.40	40	P	P	23 55 05.6	-4.0
BOAV				IAmb	IAmb	23 55 26.0	
	comp=Z,13nm,1.5s						
PLCA	Paso Flores	24.98	171	P	P	23 55 23.1	-1.1
BAUV	El Baul	25.81	17	P	P	23 55 29.5	-2.3
BAUV				IAmb	IAmb	23 55 30.3	
	comp=Z,36nm,1.5s						
MOIG	Morelia	43.66	323	P	P	23 58 07.6	+2.0
656A	Willston	45.65	351	P	P	23 58 22.7	+1.7
MIAR	Mount Ida	53.20	341	P	P	23 59 18.7	+0.1
MIAR				IAmb	IAmb	23 59 32.6	
	comp=Z,6.3nm,1.4s						
X37A	Clayton	53.82	339	P	P	23 59 23.3	+0.1
F36A	Milaca	63.75	346	P	P	00 00 31.2	-0.8
F36A				IAmb	IAmb	00 00 32.9	
	comp=Z,6.3nm,0.9s						
SNAA	Sanae	69.41	161	P	P	00 01 08.8	+0.9
SNAA				IAmb	IAmb	00 01 27.3	
	comp=Z,4.0nm,1.4s						
TORD	Torodi Ar. Bea	81.42	74	P	P	00 02 16.7	-1.1
	comp=Z,5.3nm,1.0s,baz=260,slow=5.4,SNR=23						
TORD	Torodi Ar. Bea	81.42	74	P	P	00 02 16.7	-1.1
TORD				IAmb	IAmb	00 02 18.2	
	comp=Z,5.5nm,1.2s						
H11S2	WAKE ISLAND Hy	121.00	282	T	T	02 21 28.9	
	baz=98,slow=74,SNR=4.8						
H11S1	WAKE ISLAND Hy	121.00	282	T	T	02 21 34.2	
	baz=98,slow=74,SNR=5.8						
H11S3	WAKE ISLAND Hy	121.02	282	T	T	02 21 26.9	
	baz=98,slow=74,SNR=4.2						
WRA	Warramunga Arr	133.91	220	PKP	PKPdf	00 09 18.7	+0.5
	comp=Z,0.2nm,0.6s,baz=135,slow=2.0,SNR=1.3						
ZALV	Zalesovo Beam	139.08	18	PKP	PKPdf	00 09 24.6	-2.0
	comp=Z,0.6nm,0.6s,baz=313,slow=5.3,SNR=3.5						
ZALV	Zalesovo Beam	139.08	18		PKPdf	00 09 25.3	-1.4
MKAR	Makanchi Array	144.09	27	PKP	PKPab	00 09 33.0	-0.5
	comp=Z,0.8nm,0.9s,baz=310,slow=1.8,SNR=2.0						
SONM	Songino Array	148.23	358	PKPbc	PKPdf	00 09 45.6	+2.5
	comp=Z,1.0nm,0.6s,baz=2.8,slow=2.0,SNR=8.0						

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*FUNV **16** 00:08:57.3, 8°.60N×71°.51W, h10^{km}, MW3.3*

ISC 16 00:08:55.4±1.5**, 8°.62N**±0°.03×**71°.41W**±0°.02**, h5**^{km}±12^{km}**, n24,** σ**1**^{s}**.23**/46**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.64	121	i P	Pg	00 09 07.2	-0.5
SOCV				eS	Sg	00 09 16.0	-0.1
SDV	Santo Domingo	0.81	71	eP	Pb	00 09 12.5	+0.4
SDV				eS	Sb	00 09 23.8	+0.3
SDV	Santo Domingo	0.81	71	eP	Pb	00 09 12.4	+0.3
SDV				eS	Sb	00 09 23.7	+0.3
CAPV	Capacho	1.17	230	eS	Sb	00 09 31.8	-1.9
PAMC	Pamplona, Colo	1.80	225	eP	Pn	00 09 28.6	+1.1
PAMC				eS	Sb	00 09 53.5	+1.3
PAMC				i		00 09 56.3	
	comp=Z,56nm,0.7s						
PAMC	Pamplona, Colo	1.80	225	eP	Pn	00 09 27.6	+0.1
PAMC				eS	Sb	00 09 52.4	+0.2
PAMC				i		00 09 54.8	
	comp=Z,51nm,0.4s						
OCAC	Ocana	1.93	259	eP	Pn	00 09 29.9	+1.0
OCAC				eS	Sb	00 09 55.9	+0.4
OCAC				i		00 09 57.5	
	comp=Z,338nm,0.7s						
OCAC	Ocana	1.93	259	eP	Pn	00 09 29.7	+0.7
OCAC				eS	Sn	00 09 54.1	+0.5
OCAC				i		00 09 57.0	
	comp=Z,328nm,0.3s						
SANV	Sanarito	2.05	64	eS	Sb	00 09 59.4	+0.5
TAMC	Tame, Arauca	2.20	190	eP	Pn	00 09 33.8	+1.1
TAMC				eS	Sb	00 10 03.4	+0.1
TAMC				i		00 10 07.2	
	comp=Z,40nm,0.3s						
ELOV	Elorza	2.50	130	eP	Pg	00 09 44.5	+1.3
ELOV				eS	Sb	00 10 10.9	-0.8
ELOV	Elorza	2.50	130	eP	Pn	00 09 38.0	+1.4
ELOV				eS	Sn	00 10 08.1	+0.7
SMLC	San Martn de	2.64	274	eP	Pn	00 09 38.9	+0.2
SMLC				eS	Sb	00 10 15.5	-0.4
BARC	Barichara	2.67	221	⇓iP	Pb	00 09 44.0	+0.1
BARC				eS	Sb	00 10 16.5	-0.6
BARC				i		00 10 25.1	
	comp=Z,20nm,0.7s						
BARC	Barichara	2.67	221	eP	Pb	00 09 43.1	-0.8
BARC				eS	Sb	00 10 16.8	-0.3
BARC				i		00 10 22.5	
	comp=Z,18nm,0.5s						
BRRC	Barranca, Sant	2.73	237	eP	Pb	00 09 43.8	-1.0
BRRC				eS	Sb	00 10 19.8	+1.2
BRRC				i		00 10 23.8	
	comp=Z,12nm,0.4s						
CRJC	Cerrejon, Guaj	2.79	329	eP	Pn	00 09 42.4	+1.6
CRJC				eS	Sb	00 10 18.7	-1.7
MAPV	Macapo	3.15	67	eP	Pn	00 09 47.5	+1.8
MAPV				eS	Sn	00 10 24.3	+0.5
RUSC	La Rusia	3.18	212	eP	Pn	00 09 47.3	+0.8
RUSC				eS	Sb	00 10 33.1	+1.2
BAUV	El Baul	3.34	84	eP	Pn	00 09 49.8	+1.4
BAUV				eS	Sn	00 10 29.1	+0.7
ZARC	Zaragoza, Cauc	3.59	252	eP	Pn	00 09 52.2	+0.4
ZARC				eS	Sn	00 10 33.2	-1.4
MONV	Montecano	3.60	23	eP	Pn	00 09 53.4	+1.5
MONV				eS	Sn	00 10 34.1	-0.7
BENV	Beln	3.99	70	eP	Pn	00 09 58.3	+1.0
BENV				eS	Sn	00 10 42.2	-2.3
CACV	CAICARA DEL OR	4.93	102	eP	Pb	00 10 18.9	-3.4
CACV				eS	Sb	00 11 19.1	-2.8

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*NEIC **16** 00:35:58.9±2.2, 27°.19S±0°.05×70°.05W±0°.07, h99^{km}±4^{km}, mb4.1/9, ML4.1(GUC), Error ellipse: s-maj=10.0km s-min=5.5km az=122.0*

*GUC **16** 00:35:59.2±0.6, 27°.28S×70°.00W, h104^{km}±4^{km}, ML4.1*

*IDC **16** 00:36:00.3±1.3, 27°.13S×69°.55W, h98^{km}±6^{km}, mb3.8/3, mb1 3.8/6, mb1mx3.5/32, mbtmp4.1/6, MS4.2/2, Ms1 4.3/2, ms1mx3.0/27, Error ellipse: s-maj=58.2km s-min=12.5km az=93.0*

ISC 16 00:35:58.2±0.6**, 27°.18S**±0°.04×**70°.10W**±0°.05**, h100**^{km}±5^{km}**, n54,** σ**1**^{s}**.35**/70**, mb4.0**/5**, 2C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	Copiap	0.43	196	eP	Pn	00 36 14.2	+0.6
GO03				i S	Sn	00 36 25.8	+0.6
GO03				IAML		00 36 26.5	
	comp=N,18µm,0.2s						
GO03	Copiap	0.43	196	Pn	Pn	00 36 14.4	+0.8
GO03				Sn	Sn	00 36 25.4	+0.3
AC02	Maricunga	0.93	69	⇑iP	Pn	00 36 19.3	+0.9
AC02				eS	Sn	00 36 33.9	+0.2
AC02				IAML		00 36 34.8	
	comp=N,8µm,0.4s						
AC02	Maricunga	0.93	69	Pn	Pn	00 36 19.3	+0.9
AC02				Sn	Sn	00 36 33.5	-0.1
AC04	Llanos de Chal	1.34	220	⇓iP	Pn	00 36 23.6	+1.1
AC04				i S	Sn	00 36 42.2	+1.3
AC04				IAML		00 36 44.0	
	comp=N,4µm,0.2s						
AC04	Llanos de Chal	1.34	220	Pn	Pn	00 36 23.6	+1.1
AC04				Sn	Sn	00 36 42.1	+1.3
LCO	Las Campanas	1.90	196	eP	Pn	00 36 29.9	+0.1
LCO				eS	Sn	00 36 53.5	-0.4
LCO	Las Campanas	1.90	196	Pn	Pn	00 36 30.0	+0.1
LCO				Sn	Sn	00 36 54.0	+0.2
VCA	Vinchina	2.29	133	eP	Pn	00 36 36.4	+1.7
VCA				i S	Sn	00 37 02.8	+0.1
VCA				IAML		00 37 06.3	
	comp=E,648nm,0.1s						
PB14	IPOC Station P	2.55	354	⇑iP	Pn	00 36 39.5	+1.1
PB14				i S	Sn	00 37 06.8	-2.2
PB14				IAML		00 37 11.4	
	comp=E,611nm,0.5s						
PB14	IPOC Station P	2.55	354	Pn	Pn	00 36 39.1	+0.8
PB14				Sn	Sn	00 37 08.5	-0.6
CO05	La Serena	2.91	200	eP	Pn	00 36 42.0	-0.8
CO05				i S	Sn	00 37 07.8	-9.2
CO05	La Serena	2.91	200		Pn	00 36 41.9	-0.8
GO04	Tololo Observa	3.05	191	eP	Pn	00 36 44.4	-0.5
GO04				i S	Sn	00 37 18.6	-2.2
GO04	Tololo Observa	3.05	191		Pn	00 36 44.3	-0.5
GO04				Sn	Sn	00 37 19.0	-1.7
PB10	IPOC Station P	3.67	354	eP	Pn	00 36 52.9	-0.1
PB10	IPOC Station P	3.67	354	Pn	Pn	00 36 52.9	-0.1
CO03	El Pedregal	3.69	188	eP	Pn	00 36 52.8	-0.5
CO03	El Pedregal	3.69	188	Pn	Pn	00 36 52.6	-0.7
CO06	Fray Jorge	3.73	201	Pn	Pn	00 36 52.3	-1.6
PB15	IPOC Station P	3.99	8	Pn	Pn	00 36 58.2	+0.7
PB06	IPOC Station P	4.48	6		Pn	00 37 03.6	-0.4
ZON	Zonda	4.53	164	Pn	Pn	00 37 05.1	+0.4
LVC	Limon Verde	4.67	14	P	Pn	00 37 07.1	+0.3
	comp=E,4.4nm,0.3s,baz=165,slow=9.6,SNR=44						
LVC				S	Sn	00 37 59.6	-0.5
	comp=E,16nm,0.3s,baz=97,slow=23,SNR=11						
LVC				LR	LR	00 39 11.9	
	comp=E,76nm,18.5s,baz=200,slow=42						
LVC	Limon Verde	4.67	14	Pn	Pn	00 37 06.3	-0.6
PB04	IPOC Station P	4.82	360	Pn	Pn	00 37 08.2	-0.5
PB09	IPOC Station P	5.41	9	Pn	Pn	00 37 17.9	+1.1
VA03	San Esteban	5.58	184	Pn	Pn	00 37 17.5	-1.5
PB01	IPOC Station P	6.13	5		Pn	00 37 25.4	-1.1
PATCX	Punta Patache	6.33	360	Pn	Pn	00 37 29.8	+0.7
MT09	Talagante	6.62	186	Pn	Pn	00 37 30.0	-3.1
MT01	Popeta	6.74	188	Pn	Pn	00 37 30.7	-3.8
PB11	IPOC Station P	7.39	3	Pn	Pn	00 37 41.0	-2.7
LPAZ	La Paz	10.99	10	P	Pn	00 38 32.8	-0.2
	comp=E,0.2nm,0.3s,baz=192,slow=5.2,SNR=3.3						
TRQA	Tornquist	12.82	150	Pn	Pn	00 38 53.7	-3.1
SIV	San Ignacio	13.94	39	P	Pn	00 39 08.1	-3.3
	comp=E,0.7nm,0.3s,baz=233,slow=11,SNR=7.0						
VILB	Vilhena	16.92	35	P	P	00 39 50.1	+0.7
VILB				IAmb	IAmb	00 39 50.9	
	comp=Z,9.8nm,0.7s						
ETMB	Extrema	17.65	13	P	P	00 39 58.5	+1.1
SAML	Samuel	19.27	21	P	P	00 40 16.4	+1.2
CZSB	Cruzeiro do Su	19.50	352	P	P	00 40 18.2	+0.6
CZSB				IAmb	IAmb	00 40 22.6	
	comp=Z,9.9nm,0.7s						
TBTG	Tabatinga, AM	22.86	1	P	P	00 40 55.5	+2.2
MACA	Manacapuru-AM	25.52	22	P	P	00 41 18.0	+0.4
MACA				IAmb	IAmb	00 41 20.9	
	comp=Z,12nm,0.7s						
USHA	Ushuaia	27.66	178	P	P	00 41 40.3	+3.9
	comp=Z,4.9nm,0.6s,baz=360,slow=7.1,SNR=5.1						
BOAV	Boa Vista	30.82	19	P	P	00 42 05.8	+1.0
BOAV				IAmb	IAmb	00 42 28.3	
	comp=Z,3.1nm,1.1s						
SNAA	Sanae	57.33	160	P	P	00 45 35.3	-0.1
	comp=Z,1.5nm,0.9s,baz=273,slow=9.0,SNR=7.5						
SNAA				pP	pP	00 46 01.0	+0.4
	comp=Z,0.9nm,0.9s,baz=272,slow=5.4,SNR=2.5						
SNAA	Sanae	57.33	160	P	P	00 45 35.5	+0.1
SNAA				IAmb	IAmb	00 45 36.1	
	comp=Z,1.1nm,0.8s						
NVAR	Mina Array Bea	79.33	323	LR	LR	01 19 52.1	
	comp=Z,132nm,19.5s,baz=286,slow=33						
TORD	Torodi Ar. Bea	80.31	70	P	P	00 47 59.0	+0.4
	comp=Z,0.9nm,0.6s,baz=260,slow=5.3,SNR=12						
TORD				pP	pP	00 48 24.9	-0.5
	comp=Z,0.5nm,0.6s,baz=248,slow=5.2,SNR=3.5						
TORD	Torodi Ar. Bea	80.31	70	P	P	00 47 58.7	0.0
NEW	Newport	86.11	331	LR	LR	01 27 06.9	
	comp=Z,165nm,21.9s,baz=260,slow=36						
ZALV	Zalesovo Beam	147.50	28	PKPbc	PKPbc	00 55 31.1	+0.9
	comp=Z,0.5nm,0.3s,baz=318,slow=1.9,SNR=3.6						
ZALV				pPKPbc	pPKPdf	00 55 56.9	+1.4
	comp=Z,0.4nm,0.4s,baz=298,slow=3.1,SNR=1.8						
ZALV	Zalesovo Beam	147.50	28		PKPbc	00 55 30.9	+0.6
MKAR	Makanchi Array	150.75	41	PKPbc	PKPbc	00 55 39.8	+1.0
	comp=Z,0.4nm,0.6s,baz=291,slow=2.3,SNR=5.7						
MKAR				pPKPbc	pPKPbc	00 56 06.8	+0.2
	comp=Z,0.6nm,0.8s,baz=295,slow=2.4,SNR=3.0						
MKAR	Makanchi Array	150.75	41		PKPbc	00 55 38.4	-0.4

IDC 16 00:39:46.7±1.7**, 4°.21S**×**129°.28E, h0**^{km}**, mb3.4**/1**, mb1 3.8**/4**, mb1mx3.5**/36**, mbtmp3.6**/4**, ML3.5**/3**, Error ellipse: s-maj=60.9km s-min=27.8km az=83.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.86	31	Pn	Pn	00 40 47.5	+0.1
	3.6nm,0.3s,baz=249,slow=23,SNR=2.9						
SIJI				Sn	Sn	00 41 29.6	-4.1
	4.7nm,0.3s,baz=248,slow=23,SNR=2.4						
WRA	Warramunga Arr	16.40	163	Pn	Pn	00 43 36.7	-1.7
	0.1nm,0.3s,baz=346,slow=13,SNR=7.5						
ASAR	Alice Springs	19.85	167	P	P	00 44 20.2	+0.7
	0.2nm,0.3s,baz=346,slow=9.8,SNR=18						
MKAR	Makanchi Array	65.52	326	P	P	00 50 32.0	-0.1
	0.2nm,0.4s,baz=127,slow=8.4,SNR=1.4						

*IDC **16** 00:41:08.0±10.0, 15°.79S×175°.10W, h268km±99km, mb3.2/8, mb1 3.6/9, mb1mx3.4/34, mbtmp3.9/9, MS3.6/6, Ms1 3.6/6, ms1mx3.5/12, Error ellipse: s-maj=42.7km s-min=24.7km az=136.0*

ISC 16 00:41:08.8±0.9**, 15°.8S**±0°.3×**175°.2W**±0°.2**, h278**km**, n25, σ1s.33**/10**, mb3.5**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.78	253	LR	LR	00 44 45.9	
	comp=Z,2µm,18.8s,baz=102,slow=32						
DZM	Mont Dzumac	18.48	247	eP	P	00 45 02.5	-2.5
	79nm,1.4s						
DZM				eLR	LR	00 49 38.0	
	comp=Z,868nm,25.7s						
DZM	Mont Dzumac	18.48	247	P	P	00 45 05.5	+0.4
	0.2nm,0.3s,baz=74,slow=19,SNR=5.3						
URZ	Urewera	23.39	195	LR	LR	00 54 18.3	
	comp=Z,172nm,20.1s,baz=31,slow=34						
PAE	Paea	24.57	98	eT	T	01 10 57.5	
	2.5nm,0.3s						
PPT	Papeete	24.57	98	LR	LR	00 53 01.8	
	comp=Z,120nm,20.0s,baz=197,slow=29						
PPT2	Papeete2	24.57	98	eLQ	LQ	00 50 42.5	
	429nm,25.2s						
PPT2				eLR	LR	00 51 46.4	
	comp=Z,396nm,26.2s						
TBI	Tubuai	25.33	111	eLQ	LQ	00 51 05.4	
	633nm,28.8s						
TBI				eLR	LR	00 52 14.9	
	comp=Z,301nm,25.8s						
TBI	Tubuai	25.33	111	eT	T	01 11 52.0	
	7.6nm,0.3s						
TAOE	Nuku Hiva Isla	34.86	83	eLR	LR	00 56 20.3	
	comp=Z,374nm,29.5s						
H11S2	WAKE ISLAND Hy	38.46	332	T	T	01 29 13.2	
	baz=148						
H11S3	WAKE ISLAND Hy	38.48	332	T	T	01 29 09.9	
	baz=148						
H11S1	WAKE ISLAND Hy	38.48	332	T	T	01 29 13.5	
	baz=148						
H11N3	WAKE ISLAND Hy	39.45	333	T	T	01 30 21.8	
	baz=151,slow=76,SNR=54						
H11N1	WAKE ISLAND Hy	39.45	333	T	T	01 30 25.8	
	baz=151,slow=76,SNR=70						
H11N2	WAKE ISLAND Hy	39.47	333	T	T	01 30 23.2	
	baz=151,slow=76,SNR=54						
STKA	Stephens Creek	42.37	240	P	P	00 48 36.9	+0.5
	4.1nm,0.8s,baz=71,slow=8.9,SNR=7.5						
STKA				LR	LR	01 04 11.5	
	comp=Z,87nm,20.9s,baz=31,slow=33						
WRA	Warramunga Arr	48.10	257	P	P	00 49 21.7	+0.3
	0.8nm,0.8s,baz=95,slow=7.4,SNR=4.9						
WRA				LR	LR	01 07 54.4	
	comp=Z,56nm,20.0s,baz=75,slow=33						
ASAR	Alice Springs	48.37	252	P	P	00 49 23.5	+0.1
	3.1nm,0.8s,baz=86,slow=8.3,SNR=22						
VNDA	Vanda	62.82	185	P	P	00 51 05.2	+0.5
	1.4nm,0.9s,baz=45,slow=2.2,SNR=3.6						
MJAR	Matsushiro Arr	68.16	321	LR	LR	01 18 09.2	
	comp=Z,17nm,20.0s,baz=135,slow=33						
NVAR	Mina Array Bea	75.76	43	P	P	00 52 24.7	0.0
	1.3nm,0.8s,baz=229,slow=8.2,SNR=6.7						
TXAR	Lajitas Array	82.25	57	P	P	00 52 57.9	-1.8
	0.2nm,0.5s,baz=238,slow=5.2,SNR=2.2						
ILAR	Eielson Array	83.17	12	P	P	00 53 04.2	+0.7
	0.5nm,0.9s,baz=196,slow=6.2,SNR=2.7						
PDAR	Pinedale Array	83.70	42	P	P	00 53 08.2	+1.2
	0.3nm,0.6s,baz=235,slow=3.2,SNR=4.5						

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*NIC **16** 01:34:13.0±0.0, 35°.51N×32°.49E, h47km±2km, Ml2.6/8*
*ISK **16** 01:34:12.0, 35°.44N×32°.49E, h22km, ML2.8/25*
*DDA **16** 01:34:13.0, 35°.41N×32°.48E, h22km, ML2.4*
*GII **16** 01:34:15.2±0.0, 35°.26N×32°.53E, h40km±2km, Mm2.5/3*

ISC 16 01:34:13.6±1.2**, 35°.41N**±0°.02×**32°.47E**±0°.03**, h56**km±8km**, n70, σ0s.96**/102**, 1C, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALFC	Alefka	0.27	157	P	Pn	01 34 22.8	-0.4
ALFC				S	Sn	01 34 30.2	+0.2
ALFC				AML	AML	01 34 31.8	
	2.1nm,0.1s						
ALFC				AML	AML	01 34 31.8	
	2.1nm,0.1s						
ALFC				AML	AML	01 34 32.9	
	1.9nm,0.2s						
ALFC				AML	AML	01 34 32.9	
	1.9nm,0.2s						
AKMS	Akamas	0.40	196	P	Pn	01 34 24.2	-0.1
AKMS				S	Sn	01 34 32.7	+0.8
AKMS				AML	AML	01 34 35.1	
	0.6nm,0.3s						
AKMS				AML	AML	01 34 35.1	
	0.6nm,0.3s						
AKMS				AML	AML	01 34 38.5	
	0.7nm,0.4s						
AKMS				AML	AML	01 34 38.5	
	0.7nm,0.4s						
NATA	Nata	0.63	172⇑	eP	Pn	01 34 27.2	+0.4
NATA				S	Sn	01 34 38.2	+1.8
NATA				AML	AML	01 34 44.2	
	1.5nm,0.5s						
NATA				AML	AML	01 34 44.2	
	1.5nm,0.5s						
NATA				AML	AML	01 34 44.5	
	1.3nm,0.4s						
NATA				AML	AML	01 34 44.5	
	1.3nm,0.4s						
ATHAL	Athalassa	0.81	109	P	Pn	01 34 28.1	-0.8
ATHAL				S	Sn	01 34 41.7	+1.5
ATHAL				AML	AML	01 34 44.1	
	1.7nm,0.5s						
ATHAL				AML	AML	01 34 44.1	
	1.7nm,0.5s						
ATHAL				AML	AML	01 34 46.8	
	1.0nm,0.5s						
ATHAL				AML	AML	01 34 46.8	
	1.0nm,0.5s						
BOZY	Bozyazi-Mersin	0.81	31	PG	Pn	01 34 28.2	-0.8
BOZY				SG	Sn	01 34 39.8	-0.5
CSS	Mathiatis	0.83	122	PG	Pn	01 34 29.0	-0.3
CSS				SG	Sn	01 34 41.6	+0.7
CSS	Mathiatis	0.83	122	P	Pn	01 34 29.3	-0.1
CSS				S	Sn	01 34 41.4	+0.5
CSS				AML	AML	01 34 45.2	
	0.1nm,0.3s						
CSS				AML	AML	01 34 45.2	
	0.1nm,0.3s						
CSS				AML	AML	01 34 49.3	
	0.2nm,0.6s						
CSS				AML	AML	01 34 49.3	
	0.2nm,0.6s						
GAZI	Gazipasa	0.83	352	iP	Pn	01 34 27.9	-1.5
GAZI				iS	Sn	01 34 38.8	-2.2
GAZI	Gazipasa	0.83	352	PG	Pn	01 34 27.9	-1.5
LFK	Lefkose	0.88	98	PG	Pn	01 34 29.6	-0.4
ASGA	Asgata	0.89	134	P	Pn	01 34 30.2	+0.2
ASGA				S	Sn	01 34 44.4	+2.3
ASGA				AML	AML	01 34 49.7	
	0.5nm,0.4s						
ASGA				AML	AML	01 34 49.7	
	0.5nm,0.4s						
ASGA				AML	AML	01 34 51.9	
	0.4nm,0.4s						
ASGA				AML	AML	01 34 51.9	
	0.4nm,0.4s						
TEKE	Tekeli-Mersin	0.90	35	PG	Pn	01 34 29.5	-0.7
TEKE				SG	Sn	01 34 42.4	0.0
AKIN	Akıncılar- Kıb	0.91	115	PG	Pn	01 34 29.9	-0.3
MVOU	Mavrovouni	1.03	112	P	Pn	01 34 31.5	-0.4
MVOU				S	Sn	01 34 44.7	-0.7
MVOU				AML	AML	01 34 50.9	
	0.4nm,0.5s						
MVOU				AML	AML	01 34 50.9	
	0.4nm,0.5s						
YORU	Yoruktepe-Mers	1.07	45	PG	Pn	01 34 31.8	-0.6
BERE	Bereket-Mersin	1.12	33	PN	Pn	01 34 32.7	-0.5
BERE				SN	Sn	01 34 47.1	-0.7
OREN	Orenkoy-Mersin	1.14	45	PN	Pn	01 34 32.4	-0.8
AKK1	Akkuyu-Mersin	1.14	50	PN	Pn	01 34 32.7	-0.6
AKK2	Akkuyu-Mersin	1.14	50	PN	Pn	01 34 32.9	-0.4
AKKU	Akkuyu-Mersin	1.16	49	PN	Pn	01 34 32.8	-0.8
AKKU				SN	Sn	01 34 47.9	-0.5
GULN	MERSIN_Gulnar	1.17	48	iP	Pn	01 34 33.0	-0.7
GULN				iS	Sn	01 34 48.6	-0.1
TEPK	Tepekoy-MERSIN	1.20	47	PN	Pn	01 34 33.3	-0.8
YESI	Yesilovacik-Me	1.24	50	PN	Pn	01 34 33.2	-1.4
TISA	Tisan-Mersin	1.24	52	PN	Pn	01 34 33.9	-0.8
ERMK	Ermenek	1.28	16	iP	Pn	01 34 35.8	+0.3
ERMK				iS	Sn	01 34 53.2	+1.4
ERMK				IAML		01 34 54.0	
	comp=E,115nm,0.4s						
ERMK				IAML		01 34 55.0	
	comp=N,114nm,0.5s						
KARG	Kargicak-Mersi	1.28	51	PN	Pn	01 34 34.9	-0.4
IKL	Isikli	1.29	50	PN	Pn	01 34 34.7	-0.7
TEVE	Tevekalti-Mers	1.30	37	PN	Pn	01 34 35.1	-0.4
TEVE				SN	Sn	01 34 51.7	-0.2
EREN	Erenkoy	1.40	84	iP	Pn	01 34 35.3	-1.4
EREN				iS	Sn	01 34 54.7	+0.5
EREN				IAML		01 34 57.0	
	comp=N,59nm,0.3s						
EREN				IAML		01 34 58.0	
	comp=E,74nm,0.4s						
EREN	Erenkoy	1.40	84	PN	Pn	01 34 36.1	-0.6
KEBE	Keben-Mersin	1.45	44	PN	Pn	01 34 37.1	-0.5
SILI	Silifke-Mersin	1.52	51	PN	Pn	01 34 37.9	-0.6
HDMB	Hadim	1.55	1	PN	Pn	01 34 39.6	+0.5
KEPZ	Antalya-Kepez	1.65	335	iP	Pn	01 34 39.1	-1.1
KEPZ				iS	Sn	01 34 59.3	-1.0
KKBE	Karaman, Kazim	1.85	12	iP	Pn	01 34 43.5	+0.5
KKBE				iS	Sn	01 35 05.9	+0.6
KRMN	Karaman	1.88	20	PN	Pn	01 34 43.0	-0.4
AKUM	Antalya-Kumluc	1.95	299	iP	Pn	01 34 45.0	+0.7
SEYD	Seydisehir-KON	2.06	346	PN	Pn	01 34 46.0	+0.1
SEDI	Konya, Seydise	2.12	344	iP	Pn	01 34 47.4	+0.7
SEDI				iS	Sn	01 35 13.2	+1.2
SEDI				IAML		01 35 17.0	
	comp=E,21nm,0.5s						
MERS	Mersin	2.21	48	PN	Pn	01 34 48.5	+0.6
KORT	Korkueli	2.34	314	iP	Pn	01 34 50.0	+0.4
KMER	Konya-Meram	2.36	358	iP	Pn	01 34 50.8	+0.8
KMER				iS	Sn	01 35 19.6	+1.8
KERG	Konya-Eregli	2.41	33	iP	Pn	01 34 51.8	+1.1
KERG				iS	Sn	01 35 20.1	+1.0
KERG				IAML		01 35 29.0	
	comp=N,19nm,0.4s						
DED	Mersin	2.44	50	iP	Pn	01 34 51.5	+0.5
DED				iS	Sn	01 35 20.3	+0.5
AKAS	Kas	2.47	290	PN	Pn	01 34 52.1	+0.6
ELL	Elmali	2.47	304	PN	Pn	01 34 52.5	+1.0
KONT	Konya--Tatoy	2.53	358	iP	Pn	01 34 52.9	+0.6
GULE	Gulek	2.64	44	iP	Pn	01 34 55.1	+1.2
GULE				iS	Sn	01 35 27.4	+2.5
GULE				IAML		01 35 34.0	
	comp=N,20nm,0.4s						
GULE				IAML		01 35 39.0	
	comp=E,14nm,0.8s						
DOGA	KONYA_Doganhis	2.77	347	iP	Pn	01 34 56.7	+1.1
DOGA				iS	Sn	01 35 28.5	+0.6
LADK	Ladik-KONYA	2.79	358	PN	Pn	01 34 55.9	0.0
KARA	Karaisali	2.79	48	PN	Pn	01 34 55.9	+0.1
ALIN	Konya, Altinte	2.90	6	iP	Pn	01 34 55.2	-2.2
GOLH	Golhisar	2.97	309	iP	Pn	01 34 58.3	-0.1
GOLH				iS	Sn	01 35 31.9	-1.0
GOLH				IAML		01 35 32.0	
	comp=N,11nm,0.9s						
YVAC	Isparta, Yalva	3.02	341	iP	Pn	01 35 01.4	+2.3
YAYL	Yayladag	3.03	77	PN	Pn	01 34 59.0	-0.1
CMRD	Camardi-Nigde	3.03	41	PN	Pn	01 34 59.0	-0.2
CAEL	Denizli, Camel	3.07	305	iP	Pn	01 34 58.5	-1.1
CAEL				iS	Sn	01 35 33.0	-2.2
KDHN	Kadinhani	3.12	355	iP	Pn	01 35 05.2	+4.8
TAHT	Tahtakopru-Hat	3.17	71	PN	Pn	01 35 01.4	+0.4
KOZT	Kozan	3.41	52	PN	Pn	01 35 04.3	+0.1
MMA0B	Mount Meron ar	3.41	134	Pn	Pn	01 35 03.9	-0.4
GEM	Giv'at Ha'Em	3.44	129	Pn	Pn	01 35 04.5	-0.1
GEM				Sn	Sn	01 35 43.1	-1.0
NATI	Neve Ativ	3.45	127	Pn	Pn	01 35 04.9	+0.1
NATI				Sn	Sn	01 35 43.3	-1.1
OFRI	`Ofer	3.48	142	Pn	Pn	01 35 04.8	-0.4
MMLI	Mount Malkishu	3.85	139	Pn	Pn	01 35 10.6	+0.3
MMLI				Sn	Sn	01 35 53.3	-1.0
HMDT	Nahal Hemdat	4.05	140	Pn	Pn	01 35 13.8	+0.8
HMDT				Sn	Sn	01 35 58.3	-0.8
AMAZ	Amatzia	4.37	151	Pn	Pn	01 35 17.6	+0.1
AMAZ				Sn	Sn	01 36 05.3	-1.9
DSI	Dead Sea	4.54	147	Pn	Pn	01 35 20.2	+0.5
YTIR	Yattir	4.60	150	Pn	Pn	01 35 21.0	+0.3
KZIT	Kziot	4.77	160	Pn	Pn	01 35 22.5	-0.5
KZIT				Sn	Sn	01 36 15.4	-1.6

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*IDC **16** 02:11:19.2±1.6, 2°.18N×127°.97E, h0km, mb4.0/5, mb1 4.3/5, mb1mx3.8/36, mbtmp4.1/5, MS3.2/1, Ms1 3.2/1, ms1mx2.2/35, Error ellipse: s-maj=96.0km s-min=21.1km az=68.0*
*NEIC **16** 02:11:33.3±0.4, 1°.90N±0°.08×127°.6E±0°.2, h113km±11km, mb4.1/13, Error ellipse: s-maj=27.1km s-min=11.1km az=103.0*

ISC 16 02:11:31.2±1.1**, 2°.0N**±0°.1×**127°.9E**±0°.3**, h100**km**, n23, σ0s.79**/22**, mb4.2**/10**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.33	203	Pn	Pn	02 11 56.1	+0.6
KNRA	Kununurra	17.59	177	P	P	02 15 29.4	-0.2
KNRA				IAmb	IAmb	02 15 55.7	
	comp=Z,15nm,1.1s						
FITZ	Fitzroy Crossi	20.10	186	P	P	02 15 56.1	-1.0
	comp=Z,0.9nm,0.5s,baz=0.0,slow=7.1,SNR=1.4						
WB0	Warramunga Arr	22.56	164	P	P	02 16 23.4	+0.1
WB0				IAmb	IAmb	02 16 24.2	
	comp=Z,13nm,1.1s						
WRAB	Tennant Creek	22.70	164	P	P	02 16 24.8	+0.1
WRAB				IAmb	IAmb	02 16 25.1	
	comp=Z,6.5nm,0.5s						
WRA	Warramunga Arr	22.71	164	P	P	02 16 24.9	+0.1
	comp=Z,6.0nm,0.4s,baz=345,slow=11,SNR=96						
WRA	Warramunga Arr	22.71	164	P	P	02 16 23.5	-1.3
WB2	Warramunga Arr	22.71	164	P	P	02 16 24.9	+0.1
WB2				IAmb	IAmb	02 16 25.3	
	comp=Z,5.9nm,0.6s						
WR0	Warramunga Arr	22.78	164	P	P	02 16 25.7	+0.2
AS31	Alice Springs	26.18	167	P	P	02 16 56.3	-0.2
AS31				IAmb	IAmb	02 16 56.8	
	comp=Z,1.2nm,0.4s						
ASAR	Alice Springs	26.18	167	P	P	02 16 56.4	-0.1
	comp=Z,1.9nm,0.5s,baz=349,slow=7.4,SNR=40						
ASAR	Alice Springs	26.18	167	P	P	02 16 55.5	-1.0
CHTO	Chiang Mai	32.91	302	P	P	02 17 57.0	+0.8
CHTO				IAmb	IAmb	02 18 22.1	
	comp=Z,2.2nm,0.5s						
BBOO	Buckleboo	35.48	168	P	P	02 18 17.9	-0.3
STKA	Stephens Creek	36.12	160	P	P	02 18 24.5	+0.9
	comp=Z,1.8nm,0.5s,baz=333,slow=6.1,SNR=6.0						
STKA	Stephens Creek	36.12	160	P	P	02 18 24.6	+0.9
PETK	Petropavlovsk-	56.60	21	LR	LR	02 45 16.5	
	comp=Z,24nm,19.8s,baz=106,slow=36						
MK31	Makanchi Array	59.62	325	P	P	02 21 24.3	-0.5
MK31				IAmb	IAmb	02 21 25.2	
	comp=Z,2.0nm,0.9s						
MKAR	Makanchi Array	59.62	325	P	P	02 21 24.5	-0.3
	comp=Z,1.0nm,0.4s,baz=116,slow=8.0,SNR=17						
MKAR	Makanchi Array	59.62	325	P	P	02 21 24.2	-0.5
MAKZ	Makanchi	59.81	325	P	P	02 21 27.8	+1.7
KKAR	Karatay Array	65.28	317	P	P	02 22 01.7	-0.8
ABKAR	Akbulak array	74.21	321	P	P	02 22 56.1	-1.1

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*IDC **16** 02:37:18.6±1.8, 47°.97N×155°.03E, h0km, mb3.6/5, mb1 3.8/8, mb1mx3.6/52, mbtmp3.7/8, ML3.0/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/55, Error ellipse: s-maj=53.6km s-min=21.1km az=159.0*

ISC 16 02:37:23.1±1.8**, 47°.8N**±0°.4×**155°.0E**±0°.2**, h33**km**, n14, σ0s.43**/7**, mb3.5**/5**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	Petropavlovsk-	5.58	17	Pn	Pn	02 38 38.6	-5.1
	7.0nm,0.3s,baz=184,slow=12,SNR=42						
KLR	Kul'dur	15.48	284	Pn	Pn	02 40 59.1	+0.4
	0.1nm,0.3s,baz=92,slow=13,SNR=2.5						
KLR				LR	LR	02 47 52.3	
	comp=Z,44nm,18.5s,baz=19,slow=41						
USRK	Ussuriysk Ar.	16.39	266	Pn	Pn	02 41 10.5	0.0
	baz=77,slow=12,SNR=1.7						
KSRS	Korea Array	22.35	252	P	P	02 42 18.4	+0.2
	3.7nm,0.9s,baz=64,slow=11,SNR=4.9						
H11N2	WAKE ISLAND Hy	29.62	157	T	T	03 15 26.0	
	baz=341,slow=74,SNR=5.2						
H11N1	WAKE ISLAND Hy	29.64	157	T	T	03 15 22.3	
	baz=341,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	29.64	157	T	T	03 15 28.2	
	baz=341,slow=74,SNR=2.9						
H11S1	WAKE ISLAND Hy	30.74	158	T	T	03 17 02.8	
	baz=345,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	30.75	158	T	T	03 16 50.7	
	baz=345,slow=76,SNR=24						
H11S2	WAKE ISLAND Hy	30.76	158	T	T	03 17 06.8	
	baz=345,slow=76,SNR=15						
SONM	Songino Array	32.22	289	P	P	02 43 47.5	-0.7
	0.2nm,0.7s,baz=46,slow=8.3,SNR=2.2						
INK	Inuvik	40.06	33	P	P	02 44 54.7	+0.1
	0.6nm,0.6s,baz=293,slow=8.6,SNR=4.4						
MKAR	Makanchi Array	47.61	297	P	P	02 45 55.9	+0.3
	0.8nm,0.6s,baz=74,slow=4.6,SNR=6.3						
TXAR	Lajitas Array	75.84	62	P	P	02 49 06.2	0.0
	0.1nm,0.4s,baz=289,slow=3.8,SNR=5.8						

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*ISK **16** 03:14:20.9, 38°.05N×42°.66E, h5km, ML3.9/19*
*DDA **16** 03:14:21.8, 38°.04N×42°.65E, h1km±1km, MW3.9*
*IDC **16** 03:14:22.7±1.6, 37°.75N×43°.08E, h0km, mb3.6/5, mb1 3.5/10, mb1mx3.3/50, mbtmp3.5/10, ML3.3/4, MS2.7/4, Ms1 2.7/4, ms1mx2.4/36, Error ellipse: s-maj=31.8km s-min=18.9km az=142.0*
*NSSP **16** 03:14:28.8, 38°.13N×42°.68E, h10km, Ms3.4*

ISC 16 03:14:22.3±1.1**, 38°.03N**±0°.02×**42°.66E**±0°.02**, h2**km±9km**, n84, σ1s.17**/109**, mb3.5**/5**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PERV	Siirt/Pervari-	0.12	230	iP	Pg	03 14 25.4	+0.6
PERV				iS	Sg	03 14 27.0	+0.5
AKDM	Akdamar-Van	0.39	40	PG	Pg	03 14 29.7	-0.2
AKDM				SG	Sg	03 14 35.9	+0.8
SIRT	Sirnak	0.55	199	PG	Pg	03 14 33.3	+0.3
SIRT				SG	Sb	03 14 42.6	-0.6
BLIS	Bitlis-Merkez	0.58	312	iP	Pg	03 14 32.9	-0.5
BLIS				iS	Sg	03 14 41.5	+0.5
GURO	Guroymak-BITLI	0.72	317	PG	Pg	03 14 35.2	-1.0
GURO				SG	Sg	03 14 46.4	+0.9
TVAN	Van	0.77	49	iP	Pg	03 14 36.4	-0.7
TVAN				iS	Sb	03 14 49.5	0.0
ADCV	BITLIS_Adilcev	0.78	4	iP	Pg	03 14 37.2	-0.1
ADCV				iS	Sg	03 14 47.9	+0.4
HAKT	HAKKARI	0.95	119	iP	Pg	03 14 40.9	+0.3
HAKT				iS	Sn	03 14 55.1	-2.0
CUKT	Cukurca	1.08	136	iP	Pg	03 14 42.8	-0.3
CUKT	Cukurca	1.08	136	PN	Pg	03 14 42.7	-0.3
BTMN	Batman	1.11	263	iP	Pg	03 14 43.9	+0.3
BTMN				iS	Sn	03 15 00.0	-0.8
MLAZ	Malazgirt-MUS	1.12	356	PN	Pg	03 14 42.8	-0.9
ERCV	ERCIS-VAN	1.12	28	PN	Pg	03 14 43.2	-0.7
MUSM	Mu-Merkez	1.14	308	iP	Pb	03 14 43.5	-1.4
SVAN	Silvan-Diyarba	1.16	277	iP	Pb	03 14 44.5	-0.7
SVAN	Silvan-Diyarba	1.16	277	PN	Pb	03 14 44.5	-0.7
MIDY	Mardin/Midyat-	1.18	239	iP	Pg	03 14 45.3	+0.4
MIDY				iS	Sn	03 15 02.7	+0.2
OZAP	Van, Ozalp-Mer	1.22	58	iP	Pb	03 14 44.3	-2.0
OZAP				iS	Sn	03 15 07.2	+3.3
EKAR	Karacoban	1.31	339	iP	Pg	03 14 47.6	0.0
YOVA	Hakkari_Yksek	1.36	108	iP	Pb	03 14 48.2	-0.5
YOVA				iS	Sg	03 15 08.2	+2.1
VRTB	Varto-Mus	1.47	321	iP	Pb	03 14 49.8	-0.8
VRTB	Varto-Mus	1.47	321	PN	Pb	03 14 49.7	-0.8
CLDR	Caldiran	1.49	41	iP	Pn	03 14 48.8	-1.5
CLDR	Caldiran	1.49	41	PN	Pn	03 14 48.9	-1.4
AGRB	Hanur-Agry	1.57	9	PN	Pn	03 14 50.9	-0.5
SLHN	Bingol, Solhan	1.58	306	iP	Pb	03 14 51.9	-0.6
SLHN				iS	Sg	03 15 13.3	0.0
MARD	Mardin	1.66	245	iP	Pb	03 14 52.7	-0.9
MARD				iS	Sg	03 15 15.6	+0.1
DYDN	Diyadin	1.71	28	iP	Pb	03 14 54.6	0.0
KARO	Karliova-Bingo	1.80	316	PN	Pn	03 14 54.5	0.0
HANI	Diyarbakir_Han	1.82	283	iP	Pn	03 14 54.8	+0.1
HANI				iS	Sb	03 15 19.1	-0.6
KOTA	Agri, Merkez-K	1.82	13	iP	Pb	03 14 55.1	-1.4
KOTA				iS	Sg	03 15 21.6	+0.7
BNGB	Bingl	1.83	302	PN	Pn	03 14 54.9	0.0
EATA	Eleskirt	1.84	356	iP	Pb	03 14 56.0	-0.8
EATA				iS	Sb	03 15 20.1	-0.3
MAZI	Mazidag	1.84	253	PN	Pn	03 14 54.7	-0.4
DYBB	Diyarbakir	1.99	269	PN	Pn	03 14 57.0	-0.1
DIYA	Diyarbakir	2.01	268	iP	Pn	03 14 57.2	-0.1
DIYA				iS	Sn	03 15 22.1	-0.9
EJDE	Erzurum, Palan	2.09	330	iP	Pb	03 14 59.9	-1.3
HOMI	Horasan	2.10	344	iP	Pb	03 15 00.9	-0.3
HOMI				iS	Sg	03 15 30.9	+1.1
ERZM	Erzurum	2.13	332	iP	Pb	03 15 00.4	-1.4
IGDI	IGDIR	2.14	31	iP	Pb	03 15 02.1	+0.1
IGDI				iS	Sg	03 15 31.4	+0.1
YEDI	Yedisu-Bingol	2.17	311	PN	Pn	03 14 59.7	0.0
VNNZ	Vanand	2.26	23	iP	Pb	03 15 04.4	+0.5
VNNZ				iS	Sg	03 15 34.3	-0.7
TASB	TASBURUN-IGDIR	2.31	32	PN	Pn	03 15 01.8	+0.4
KOVA	Elazig, Kovanc	2.34	288	iP	Pb	03 15 03.8	-1.5
KOVA				iS	Sb	03 15 34.1	-0.5
DIGO	Kars	2.45	13	iP	Pb	03 15 07.6	+0.4
NRKZ	NAREK	2.51	38	iP	Pb	03 15 08.7	+0.6
NRKZ				iS	Sg	03 15 42.6	-0.4
ARUZ	Aruch	2.51	26	iP	Pb	03 15 07.3	-0.9
ARUZ				iS	Sb	03 15 39.9	+0.3
SENK	Senkaya-Erzuru	2.54	355	PN	Pn	03 15 05.2	+0.4
KOPT	Kop Dagi	2.61	320	iP	Pb	03 15 09.5	-0.4
SVRC	Sivrice-ELAZID	2.67	279	PN	Pn	03 15 06.3	-0.1
GNI	Garni	2.67	37	Pn	Pb	03 15 09.5	-1.3
	2.3nm,0.3s,baz=284,slow=3.9,SNR=13						
GNI				LR	LR	03 15 46.0	
	comp=Z,48nm,19.8s,baz=238,slow=31						
GNI				Lg	Lg	03 15 53.3	
	5.9nm,0.3s,baz=308,slow=23,SNR=7.3						
GNI	Garni	2.67	37	iP	Pg	03 15 13.9	+0.5
GNI				iS	Sg	03 15 48.1	+0.1
GNI	Garni	2.67	37	PN	Pn	03 15 06.5	+0.1
KRIK	Erzurum-spir	2.67	330	iP	Pb	03 15 09.1	-1.9
TNCL	Tunceli-Merkez	2.67	295	iP	Pb	03 15 09.4	-1.6
TNCL				iS	Sb	03 15 41.9	-2.4
KAPZ	Kaputan	2.79	34	iP	Pb	03 15 11.3	-1.6
KAPZ				iS	Sb	03 15 47.2	-0.4
EUZM	Uzumlu	2.86	307	iP	Pn	03 15 10.3	+1.2
BAYB	BAYBURT	2.91	321	iP	Pb	03 15 12.1	-2.9
ELZG	Elazig	2.93	280	iP	Pn	03 15 10.2	+0.1
DDEM	Demirkent	2.95	346	iP	Pn	03 15 12.0	+1.8
DBAD	Bademkaya	3.08	346	iP	Pn	03 15 13.8	+1.8
URFA	Urfa	3.10	260	PN	Pn	03 15 13.5	+1.2
DAGI	Agillar	3.10	349	iP	Pn	03 15 14.5	+2.1
MALT	Malatya	3.35	276	PN	Pn	03 15 16.9	+1.1
KELT	Kelkit	3.39	310	iP	Pb	03 15 23.0	-0.3
DBOC	Borcka	3.40	347	iP	Pn	03 15 18.3	+1.9
EPOS	Posof	3.47	1	iP	Pn	03 15 19.9	+2.4
KEMA	Kemaliye	3.49	292	iP	Pn	03 15 18.5	+0.8
ATAB	Bozova	3.51	262	iP	Pn	03 15 17.4	-0.4
BCA	Borcka	3.51	347	PN	Pn	03 15 18.8	+1.0
AKCD	Akcadag	3.75	276	iP	Pn	03 15 21.3	+0.1
GZT	Gaziantep	4.10	262	iP	Pn	03 15 25.6	-0.5
ASF	Jabal al Asfar	7.51	221	Pn	Pn	03 16 14.5	+1.6
	0.2nm,0.3s,baz=36,slow=14,SNR=1.9						
ASF				Lg	Lg	03 18 22.8	
	1.7nm,0.3s,baz=250,slow=22,SNR=4.0						
MMAI	Mount Meron Ar	7.75	232	Pn	Pn	03 16 19.0	+2.8
	0.8nm,0.3s,baz=66,slow=14,SNR=2.8						
MMAI				LR	LR	03 19 37.9	
	comp=Z,50nm,19.5s,baz=20,slow=40						
MIB	Mutribah	9.07	153	eP	Pn	03 16 33.1	-1.2
EIL	Elat	10.51	220	LR	LR	03 21 44.7	
	comp=Z,32nm,20.2s,baz=94,slow=42						
AKASG	Malin Array Be	15.87	327	Pn	P	03 18 12.2	+1.8
	0.1nm,0.3s,baz=135,slow=11,SNR=4.3						
AKTO	Aktyubinsk	16.54	37	Pn	P	03 18 15.9	-2.0
	0.2nm,0.3s,baz=218,slow=11,SNR=12						
ARU	Arti	21.25	25	P	P	03 19 12.5	+3.1
	1.0nm,0.4s,baz=201,slow=12,SNR=4.3						
BVAR	Borovoye Array	24.34	43	P	P	03 19 41.9	+0.7
	0.2nm,0.5s,baz=221,slow=19,SNR=1.5						
FINES	FINESS Array B	25.62	342	P	P	03 19 54.9	+2.2

	1.5nm,0.7s,baz=156,slow=15,SNR=5.6						
KURBB	Kurchatov Arra	28.29	52	P	P	03 20 16.4	-0.6
	0.6nm,0.8s,baz=266,slow=7.3,SNR=4.8						
MKAR	Makanchi Array	30.27	60	P	P	03 20 33.3	-1.3
	0.8nm,0.6s,baz=271,slow=7.1,SNR=5.1						
ZALV	Zalesovo Beam	32.77	47	LR	LR	03 35 10.5	
	comp=Z,45nm,18.4s,baz=23,slow=38						

*IDC **16** 03:49:20.8±1.9,24°.11S×67°.04W,h162^{km}±20^{km},mb3.9/4, mb1 3.9/9,mb1mx3.6/29,mbtmp4.3/9,Error ellipse: s-maj=27.9km s-min=19.6km az=151.0*
*VAO **16** 03:49:20.9±0.4,24°.25S×67°.60W,h223^{km},mb4.1*
*NEIC **16** 03:49:21.3±1.7,24°.16S±0°.06×67°.4W±0°.1,h195^{km}±8^{km}, mb4.2/11,Md4.0(SJA),Error ellipse: s-maj=15.4km s-min=8.9km az=101.0*
*SJA **16** 03:49:22.6±0.8,24°.17S×67°.25W,h150^{km},ML4.0,MW3.8*
*GUC **16** 03:49:22.9±0.7,24°.12S×67°.51W,h202^{km}±10^{km},ML4.4*
ISC 16 03:49:20.4±0.6,**24°.15S**±0°.04×**67°.26W**±0°.03,**h185**^{km}±6^{km}, **n166,**σ1^{s}.**20**/197,**mb4.2**/7,**9C-4D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.70	110	iP	Pn	03 49 55.5	+0.6
SLA				iS	Sn	03 50 19.5	-2.2
HJA	Humahuaca	1.94	61	iP	Pn	03 49 58.2	+0.5
AZAP	Zapla	2.01	92	iP	Pn	03 49 58.3	+0.1
AZAP				iS	Sn	03 50 26.5	-1.0
LVC	Limon Verde	2.16	315	P	Pn	03 50 01.4	+1.4
	21nm,0.3s,baz=120,slow=7.4,SNR=185						
LVC				S	Sn	03 50 30.6	-0.1
	65nm,0.3s,baz=20,slow=22,SNR=66						
LVC	Limon Verde	2.16	315	⇑iP	Pn	03 50 01.4	+1.4
LVC				iS	Sn	03 50 30.6	-0.1
LVC	Limon Verde	2.16	315	eP	Pn	03 50 01.4	+1.4
LVC	Limon Verde	2.16	315	iP	Pn	03 50 01.4	+1.4
LVC				iS	Sn	03 50 31.3	+0.7
PB15	IPOC Station P	2.23	294	⇑iP	Pn	03 50 02.2	+1.5
PB15				iS	Sn	03 50 32.0	+0.3
PB15	IPOC Station P	2.23	294		Pn	03 50 02.2	+1.5
PB15				Sn	Sn	03 50 32.1	+0.3
PB15	IPOC Station P	2.23	294	iP	Pn	03 50 02.0	+1.4
FSA	Cafayete	2.27	149	iP	Pn	03 50 01.3	+0.3
YJA	Yavi	2.54	40	iP	Pn	03 50 05.2	+0.8
PB06	IPOC Station P	2.56	304	⇑iP	Pn	03 50 05.8	+1.5
PB06				iS	Sn	03 50 38.1	-0.4
PB06	IPOC Station P	2.56	304		Pn	03 50 05.4	+1.1
PB06				Sn	Sn	03 50 37.9	-0.7
PB06	IPOC Station P	2.56	304	iP	Pn	03 50 06.0	+1.6
PB06				IAML		03 50 42.2	
	comp=Z,491nm,0.3s						
ASTB	Santa Barbara	2.58	86	iP	Pn	03 50 04.5	+0.1
ASTB				iS	Sn	03 50 37.6	-1.1
PB14	IPOC Station P	2.90	260	⇑iP	Pn	03 50 09.3	+0.8
PB14				iS	Sn	03 50 45.0	-0.9
PB14				IAML		03 50 45.7	
	comp=E,316nm,0.4s						
PB14	IPOC Station P	2.90	260	Pn	Pn	03 50 09.2	+0.8
PB14				Sn	Sn	03 50 43.9	-1.9
PB09	IPOC Station P	2.97	322	⇓iP	Pn	03 50 11.1	+1.9
PB09				iS	Sn	03 50 47.7	+0.5
PB09				IAML		03 50 49.0	
	comp=N,770nm,0.6s						
PB09	IPOC Station P	2.97	322		Pn	03 50 10.1	+0.9
PB05	IPOC Station P	2.99	295	⇑iP	Pn	03 50 10.3	+0.9
PB05				iS	Sn	03 50 46.0	-1.5
PB05				IAML		03 50 48.0	
	comp=N,444nm,0.6s						
PB05	IPOC Station P	2.99	295	iP	Pn	03 50 10.3	+0.9
PB05				IAML		03 50 53.7	
	comp=Z,259nm,0.8s						
ALOL	LOMAS DE OLMED	3.02	84	iP	Pn	03 50 09.7	+0.1
ALOL				iS	Sn	03 50 46.1	-1.8
PB10	IPOC Station P	3.08	281	⇑iP	Pn	03 50 11.6	+1.3
PB10				iS	Sn	03 50 48.0	-1.2
PB10				IAML		03 50 53.0	
	comp=E,331nm,0.2s						
PB10	IPOC Station P	3.08	281	Pn	Pn	03 50 11.2	+0.9
PB10	IPOC Station P	3.08	281	iP	Pn	03 50 11.6	+1.3
PB10				IAML		03 50 53.4	
	comp=Z,306nm,0.6s						
PB03	IPOC Station P	3.11	312	eP	Pn	03 50 12.0	+1.2
PB03				iS	Sn	03 50 49.0	-1.1
PB03				IAML		03 50 50.7	
	comp=E,1µm,0.3s						
PB03	IPOC Station P	3.11	312	iP	Pn	03 50 12.0	+1.2
PB03				iS	Sn	03 50 49.2	-0.9
AHML	Horco Molle	3.15	147	iP	Pn	03 50 11.5	+0.4
AC02	Maricunga	3.16	212	⇑iP	Pn	03 50 13.1	+1.3
AC02	Maricunga	3.16	212	Pn	Pn	03 50 12.9	+1.1
AC02	Maricunga	3.16	212	iP	Pn	03 50 13.0	+1.3
AC02				iS	Sn	03 50 52.9	+1.1
PB04	IPOC Station P	3.21	304	⇑iP	Pn	03 50 13.1	+1.0
PB04				iS	Sn	03 50 51.1	-1.3
PB04				IAML		03 50 53.1	
	comp=N,1µm,0.6s						
PB04	IPOC Station P	3.21	304		Pn	03 50 12.7	+0.5
PB04	IPOC Station P	3.21	304	iP	Pn	03 50 13.0	+0.9
PB07	IPOC Station P	3.42	314	⇓iP	Pn	03 50 15.7	+1.1
PB07				iS	Sn	03 50 55.2	-1.7
PB07	IPOC Station P	3.42	314		Pn	03 50 15.1	+0.5
PB07	IPOC Station P	3.42	314	iP	Pn	03 50 15.6	+1.0
PB01	IPOC Station P	3.72	326	⇓iP	Pn	03 50 18.8	+0.6
PB01				iS	Sn	03 51 01.9	-1.6
PB01	IPOC Station P	3.72	326		Pn	03 50 18.7	+0.4
PB01	IPOC Station P	3.72	326	iP	Pn	03 50 19.0	+0.7
PB01				iS	Sn	03 51 01.8	-1.7
PB01				IAML		03 51 04.8	
	comp=Z,291nm,0.2s						
PB02	IPOC Station P	3.72	319	eP	Pn	03 50 19.1	+0.7
PB02				iS	Sn	03 51 01.4	-2.3
PB02	IPOC Station P	3.72	319	iP	Pn	03 50 19.0	+0.7
PATCX	Punta Patache	4.26	321	eP	Pn	03 50 25.5	+0.3
PATCX				iS	Sn	03 51 13.7	-2.1
PATCX	Punta Patache	4.26	321	Pn	Pn	03 50 25.3	+0.2
PATCX	Punta Patache	4.26	321	iP	Pn	03 50 25.4	+0.3
PATCX				IAML		03 51 22.0	
	comp=Z,175nm,0.5s						
GO03	Copiap	4.35	217	eP	Pn	03 50 25.8	-0.4
GO03				iS	Sn	03 51 15.7	-2.1
GO03	Copiap	4.35	217	Pn	Pn	03 50 25.3	-0.8
PB08	IPOC Station P	4.36	336	⇓iP	Pn	03 50 27.9	+1.2
PB08				iS	Sn	03 51 17.8	-0.8
PB08	IPOC Station P	4.36	336		Pn	03 50 27.6	+0.9
PB08	IPOC Station P	4.36	336	iP	Pn	03 50 27.8	+1.1
CYA	Choya	4.47	163	iP	Pn	03 50 28.3	+0.6
TA01	Diego Aracena	4.48	322	Pn	Pn	03 50 28.2	+0.4
TA01	Diego Aracena	4.48	322	iP	Pn	03 50 28.1	+0.4
HMBC	Humberstone	4.56	327	eP	Pn	03 50 28.2	-0.8
HMBC				iS	Sn	03 51 19.1	-3.7
VCA	Vinchina	4.64	190	⇑iP	Pn	03 50 31.8	+1.8
TA02	Huaiquique	4.69	325		Pn	03 50 30.2	-0.3
PB11	IPOC Station P	4.90	333	eP	Pn	03 50 33.0	-0.5
PB11				iS	Sn	03 51 27.6	-3.2
PB11	IPOC Station P	4.90	333	Pn	Pn	03 50 32.7	-0.8
PB11	IPOC Station P	4.90	333	iP	Pn	03 50 33.0	-0.5
PB11				IAML		03 51 29.8	
	comp=Z,106nm,0.6s						
ACLC	CERRO LA CRUZ	5.26	177	iP	Pn	03 50 38.2	+0.2
ACLC				iS	Sn	03 51 36.9	-2.2
AC04	Llanos de Chal	5.29	220	Pn	Pn	03 50 37.0	-1.2
LCO	Las Campanas	5.73	212		Pn	03 50 42.9	-1.4
PB16	IPOC Station P	6.16	340		Pn	03 50 50.1	0.0
PB12	IPOC Station P	6.21	332	Pn	Pn	03 50 49.0	-1.4
PB12	IPOC Station P	6.21	332	iP	Pn	03 50 49.0	-1.4
PB12				IAML		03 52 06.4	
	comp=Z,36nm,0.6s						
APLL	PUNTA DE LOS L	6.25	174	iP	Pn	03 50 50.4	-0.4
AROD	Rodeo	6.30	198	iP	Pn	03 50 53.0	+1.2
ACCO	Cerro Coronel	6.61	194	iP	Pn	03 50 56.4	+0.7
CO05	La Serena	6.75	211	Pn	Pn	03 50 56.4	-0.8
GO04	Tololo Observa	6.77	207	Pn	Pn	03 50 57.4	-0.4
CO03	El Pedregal	7.32	204	Pn	Pn	03 51 03.3	-1.5
RTCV	Cerro Valdivia	7.76	188	iP	Pn	03 51 11.0	+0.4
RTCV				IAML		03 53 21.4	
	comp=Z,9.7nm,1.9s						
RTLS	Leoncito	7.83	193	iP	Pn	03 51 12.6	+1.0
RTLS				IAML		03 52 47.5	
	comp=Z,10nm,2.4s						
LPAZ	La Paz	7.87	354	P	Pn	03 51 14.1	+1.5
	comp=Z,2.2nm,0.3s,baz=144,slow=5.3,SNR=39						
LPAZ				S	Sn	03 52 42.0	+0.5
	comp=Z,0.2nm,0.3s,baz=331,slow=20,SNR=1.8						
LPAZ	La Paz	7.87	354	eP	Pn	03 51 14.0	+1.4
LPAZ	La Paz	7.87	354	Pn	Pn	03 51 13.1	+0.5
AUSP	Uspallata	8.26	193	iP	Pn	03 51 18.0	+0.7
MRA	San Martin	8.35	171	iP	Pn	03 51 17.0	-1.3
VA03	San Esteban	9.05	198	Pn	Pn	03 51 28.0	+0.4
MT02	Curacav	9.69	200	Pn	Pn	03 51 35.3	-0.5
SIV	San Ignacio	9.99	37	P	Pn	03 51 38.3	-1.6
	comp=Z,1.8nm,0.3s,baz=224,slow=10,SNR=28						
MT01	Popeta	10.29	199	Pn	Pn	03 51 43.4	-0.1
PTLB	Pontes e Lacer	11.55	43	eP	P	03 52 03.7	-2.3
PTLB	Pontes e Lacer	11.55	43	Pn	Pn	03 52 01.6	+1.6
VILB	Vilhena	12.99	32	eP	Pn	03 52 20.4	+2.0
VILB	Vilhena	12.99	32	Pn	Pn	03 52 19.0	+0.5
SALV	Santo Antonio	13.62	55	eP	P	03 52 31.0	+2.0
CPSB	Cacapava Do Su	13.77	120	eP	P	03 52 31.2	+0.5
PTGB	Pitanga	13.86	95	eP	P	03 52 33.7	+2.0
PLTB	Pedras Altas	14.24	125	eP	P	03 52 35.3	-0.6
ETMB	Extrema	14.29	4	eP	Pn	03 52 34.1	-0.6
ETMB	Extrema	14.29	4	Pn	Pn	03 52 34.1	-0.6
PCMB	Pacaembu	14.96	83	eP	P	03 52 46.0	+2.0
LC01	Cunco	15.21	194		P	03 52 46.2	-0.3
CNLB	Canela	15.53	113	eP	Pn	03 52 49.9	0.0
PDRB	Porto dos Gac	15.99	41	eP	Pn	03 52 55.8	+0.3
ITRB	Iturama	16.30	78	eP	Pn	03 53 01.0	+1.9
PLCA	Paso Flores	16.76	189	P	Pn	03 53 06.0	+1.4
	comp=Z,0.1nm,0.3s,baz=7.6,slow=13,SNR=3.3						
PLCA	Paso Flores	16.76	189	eP	P	03 52 59.8	-3.9
PLCA	Paso Flores	16.76	189	Pn	Pn	03 53 05.7	+1.2
ARAG	Araguaiana, MT	16.77	63	eP	Pn	03 53 06.1	+1.3
CLDB	Colider	17.13	42	eP	P	03 53 08.3	+0.5
LL04	Puerto Octay	17.26	193		P	03 53 07.8	-1.2
LL04				IAmb	IAmb	03 53 12.1	
	comp=Z,9.3nm,0.9s						
BB19B	Bebedouro	17.57	84	eP	Pn	03 53 14.3	0.0
RCLB	Rio Claro- Sao	18.21	89	eP	Pn	03 53 21.5	-0.3
PET01	Itanhaem-SP	18.23	95	eP	P	03 53 20.8	+0.9
VAO	Valinhos	18.64	91	eP	P	03 53 24.8	+0.4
IPMB	Ipameri, GO	18.80	75	eP	P	03 53 26.8	+0.7
SNDB	Serra Nova Dou	19.40	54	eP	P	03 53 32.7	+0.2
PARB	Paraibuna	19.83	92	eP	P	03 53 37.6	+0.4
BDFB	Brasilia	19.97	68	P	P	03 53 39.0	+0.3
	comp=Z,3.4nm,0.3s,baz=243,slow=11,SNR=77						
BDFB	Brasilia	19.97	68	P	P	03 53 39.3	+0.6
NPGB	Novo Progresso	20.49	36	eP	P	03 53 44.0	-0.2
BSCB	Bom Sucesso	21.00	86	eP	P	03 53 49.3	-0.4
MAN01	Angra dos Reis	21.40	91	eP	P	03 53 54.3	+0.4
PEXB	Peixe	21.61	60	eP	P	03 53 55.6	-0.5
MACA	Manacapuru-AM	21.82	18	eP	P	03 53 57.9	-0.2
MACA	Manacapuru-AM	21.82	18	P	P	03 53 58.1	0.0
MACA				IAmb	IAmb	03 53 58.7	
	comp=Z,9.1nm,0.5s						
VAS01	Vassouras-RJ	21.97	90	eP	P	03 54 00.3	+0.6
ITTB	Itaituba	22.59	31	eP	P	03 54 05.0	-0.5
DIAM	Diamantina, MG	22.73	80	eP	P	03 54 07.4	+0.4
DUB01	Friburgo-RJ	22.98	90	eP	P	03 54 09.8	+0.7
MC01	Montes Claros	23.05	76	eP	P	03 54 09.8	+0.1
JANB	Januaria	23.41	71	eP	P	03 54 12.9	-0.1
CAM01	Campos-RJ	23.68	90	eP	P	03 54 14.4	-0.8
SMTB	Santa Maria do	24.18	54	eP	P	03 54 20.6	+0.6
SDBA	SAO DESIDERIO	24.19	65	eP	P	03 54 19.6	-0.5
PTGA	Pitinga	24.33	18	P	P	03 54 22.3	+1.0
	comp=Z,1.7nm,0.4s,baz=322,slow=19,SNR=1.2						
PRPB	Parauapebas	24.51	46	eP	P	03 54 22.9	0.0
ALF01	Guarapari-ES	24.77	87	eP	P	03 54 25.6	+0.3
SJMB	Sao Joao De Ma	24.85	82	eP	P	03 54 26.0	0.0
BSFB	Barra de Sao F	25.12	83	eP	P	03 54 28.7	+0.2
RIB01	Linhares ES	25.40	84	eP	P	03 54 30.9	0.0
MALB	Monte Alegre	25.49	31	eP	P	03 54 31.5	-0.2
NAN01	Guarapari, ES	26.07	81	eP	P	03 54 37.0	-0.1
OTAV	Otavalo	26.57	334	eP	P	03 54 39.4	-2.6
GUA01	Guaratinga, BA	26.79	79	eP	P	03 54 43.1	-0.3
BOAV	Boa Vista	27.19	15	eP	P	03 54 45.1	-1.9
BOAV	Boa Vista	27.19	15	P	P	03 54 47.9	+0.9
BOAV				IAmb	IAmb	03 55 03.4	
	comp=Z,6.6nm,1.3s						
CMC01	Camacan, BA	27.49	77	eP	P	03 54 50.0	+0.2
NBIT	Itapeh - BA	27.74	76	eP	P	03 54 52.3	+0.4
GDU01	Guandu, BA	28.12	73	eP	P	03 54 54.8	-0.5
NBPN	Ponto Novo - B	28.93	67	eP	P	03 55 02.9	+0.4
NBLA	Lagarto - SE	30.91	70	eP	P	03 55 18.9	-1.1
NBPS	Pedro II - PI	31.69	56	eP	P	03 55 26.5	-0.4
NBMA	Muriti-CE	32.00	63	eP	P	03 55 29.1	-0.4
NBPB	Pedra_Branca-C	32.41	60	eP	P	03 55 32.7	-0.4
NBAN	Anadia - AL	32.86	69	eP	P	03 55 36.8	-0.1
NBLV	Livramento - P	33.52	65	eP	P	03 55 42.4	-0.3
NBPV	Pedro Velho	35.38	65	eP	P	03 55 58.8	+0.1
MCLT	Moule a Chique	38.13	10	P	P	03 56 20.8	-1.0
SNAA	Sanae	59.28	161	P	P	03 59 04.5	+2.3
SNAA				IAmb	IAmb	03 59 19.9	
	comp=Z,3.8nm,1.4s						
DBIC	Dimbokro	68.08	72	P	P	04 00 01.8	+1.3
	comp=Z,4.0nm,1.0s,baz=211,slow=2.8,SNR=3.8						
DBIC	Dimbokro	68.08	72	P	P	04 00 00.9	+0.4
DBIC				IAmb	IAmb	04 00 08.9	
	comp=Z,4.5nm,1.0s						
TORD	Torodi Ar. Bea	76.85	69	P	P	04 00 53.4	+1.1
	comp=Z,4.7nm,0.8s,baz=263,slow=5.6,SNR=39						
TORD	Torodi Ar. Bea	76.85	69	P	P	04 00 53.5	+1.1
TORD				IAmb	IAmb	04 00 54.7	
	comp=Z,2.4nm,0.7s						
BOSA	Boshof	80.88	117	P	P	04 01 16.6	+2.3
	comp=Z,2.6nm,0.5s,baz=270,slow=3.4,SNR=13						
BOSA	Boshof	80.88	117	P	P	04 01 12.7	-1.6
BOSA				IAmb	IAmb	04 01 17.0	
	comp=Z,2.4nm,0.5s						
ASAR	Alice Springs	128.22	205	PKP	PKiKP	04 08 08.3	+2.3
	comp=Z,0.5nm,0.7s,baz=124,slow=1.5,SNR=5.5						
ASAR	Alice Springs	128.22	205	PKPdf	PKPdf	04 08 02.5	-2.9
WRA	Warramunga Arr	131.38	207	PKP	PKiKP	04 08 14.3	+1.8
	comp=Z,0.3nm,0.5s,baz=148,slow=1.8,SNR=8.0						
WRA	Warramunga Arr	131.38	207	PKPdf	PKPdf	04 08 08.4	-3.0
ZALV	Zalesovo Beam	143.64	28	PKP	PKPdf	04 08 34.1	+1.3
	comp=Z,1.4nm,0.5s,baz=276,slow=3.0,SNR=8.9						
MKAR	Makanchi Array	146.79	39	PKPbc	PKiKP	04 08 43.9	+0.8
	comp=Z,2.6nm,0.6s,baz=312,slow=3.3,SNR=16						
MKAR	Makanchi Array	146.79	39	PKPab	PKPbc	04 08 40.3	-0.3

IDC 16 03:56:15.6±1.2,**12°.51N**×**144°.07E,h0**^{km},**mb3.4**/4, **mb1 3.6**/4,**mb1mx3.4**/38,**mbtmp3.4**/4,**Error ellipse: s-maj=51.2km s-min=17.9km az=118.0,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.33	36	Pn	Pg	03 56 40.5	-0.5
	75nm,0.3s,baz=341,slow=4.3,SNR=23						
GUMO				Sn	Sb	03 56 59.1	+0.1
	124nm,0.3s,baz=34,slow=21,SNR=24						
WRA	Warramunga Arr	33.64	197	P	P	04 02 57.1	-1.0
	0.4nm,0.6s,baz=8.8,slow=8.7,SNR=3.1						
ASAR	Alice Springs	37.30	195	P	P	04 03 29.5	-0.2
	0.3nm,0.7s,baz=21,slow=13,SNR=4.4						
MKAR	Makanchi Array	61.73	317	P	P	04 06 36.3	+0.4
	0.7nm,0.8s,baz=97,slow=7.4,SNR=2.9						
ILAR	Eielson Array	69.87	25	P	P	04 07 29.5	+1.5
	0.3nm,0.9s,baz=253,slow=5.9,SNR=1.9						

IDC 16 03:59:39.6±3.2,**28°.62S**×**178°.33W,h185**^{km}±60^{km}, **mb3.0**/2,**mb1 3.3**/2,**mb1mx3.1**/27,**mbtmp3.5**/2,**Error ellipse: s-maj=249.0km s-min=69.0km az=165.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.73	150	P	Pn	04 00 07.3	+1.3
	196nm,0.3s,baz=77,slow=21,SNR=7.2						
RAO				S	Sn	04 00 26.9	+0.3
	166nm,0.3s,baz=257,slow=23,SNR=5.7						
ASAR	Alice Springs	42.94	265	P	P	04 07 20.1	-0.4
	0.4nm,0.5s,baz=99,slow=6.4,SNR=10						
WRA	Warramunga Arr	43.77	270	P	P	04 07 27.1	0.0
	0.3nm,0.3s,baz=108,slow=8.1,SNR=16						
FINES	FINESS Array B	143.37	341	PKP	PKPbc	04 18 49.4	+0.5
	1.8nm,0.8s,baz=29,slow=3.2,SNR=6.0						

*SNET **16** 04:04:33.6±1.9,12°.81N×90°.77W,h6^{km}±22^{km},ML3.6*
UCR 16 04:04:33.7±1.1,**12°.76N**×**90°.79W,h15**^{km}±15^{km},**ML3.5, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	1.50	41	eP	Pn	04 04 59.5	-0.7
NUBE	Las Nubes	1.50	41	eP	Pn	04 04 59.5	-0.7
CEVE	Cerro Verde	1.56	47	eP	Pn	04 05 00.9	-0.2
CEVE				IAML		04 05 25.9	
	comp=Z,2µm,0.5s						
CEVE	Cerro Verde	1.56	47	eP	Pn	04 05 00.9	-0.2
CEVE				eS	Sg	04 05 24.4	+0.5
CEVE				IAML		04 05 25.9	
	comp=Z,2µm,0.5s						
JAYA	Jayaque - finc	1.58	56	eP	Pn	04 05 00.7	-0.6
JAYA				eS	Sn	04 05 20.9	-0.6
JAYA				IAML		04 05 28.8	
	comp=Z,929nm,0.4s						
JAYA	Jayaque - finc	1.58	56	eP	Pn	04 05 00.7	-0.6
JAYA				eS	Sn	04 05 20.9	-0.6
JAYA				IAML		04 05 28.8	
	comp=Z,929nm,0.4s						
SLOZ	Alcaldia de Sa	1.59	38	eP	Pn	04 05 01.3	-0.2
LALI	Alcalda de L	1.60	63	eP	Pn	04 05 01.4	0.0
LALI	Alcalda de L	1.60	63	eP	Pn	04 05 01.4	0.0
CEDA	San Andres	1.71	53	eP	Pn	04 05 02.9	-0.1
CEDA				eS	Sb	04 05 26.2	0.0
CEDA	San Andres	1.71	53	eP	Pn	04 05 02.9	-0.1
CEDA				eS	Sb	04 05 26.2	0.0
SJTE	Alcalda de S	1.93	64	eP	Pn	04 05 05.9	-0.2
SJTE	Alcalda de S	1.93	64	eP	Pn	04 05 05.9	-0.2
COEB	Comit de Eme	2.32	71	eP	Pn	04 05 11.5	0.0
COEB				IAML		04 05 50.3	
	comp=Z,143nm,0.4s						
COEB	Comit de Eme	2.32	71	eP	Pn	04 05 11.5	0.0
COEB				IAML		04 05 50.3	
	comp=Z,143nm,0.4s						

IDC 16 04:15:15.4±7.7,**18°.28S**×**173°.45W,h0**^{km},**mb3.6**/3, **mb1 4.0**/3,**mb1mx3.6**/22,**mbtmp3.6**/3,**Error ellipse: s-maj=333.7km s-min=39.6km az=141.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.20	259	P	P	04 24 05.7	-0.2
	0.4nm,0.6s,baz=98,slow=8.4,SNR=7.9						
ASAR	Alice Springs	49.23	254	P	P	04 24 06.2	0.0
	1.4nm,0.7s,baz=90,slow=8.4,SNR=16						
ILAR	Eielson Array	85.26	11	P	P	04 27 53.5	-0.1
	0.4nm,0.8s,baz=219,slow=5.7,SNR=4.3						

*DJA **16** 04:48:16.8±0.5,13°N±3°×9°3E±°,h10^{km},M4.5/5,mb4.7/5, MLv4.4/1*
*NDI **16** 04:48:17.5±2.7,12°.71N×93°.63E,h70^{km}±130^{km},mb4.2, ML4.2,mb4.7(NEIC)*
*BJI **16** 04:48:18.4±0.0,12°.57N×93°.25E,h83^{km},mB4.7/20, mb4.5/33,Ms3.9/3,Ms7 3.7/3*
*IDC **16** 04:48:19.9±1.7,12°.65N×93°.42E,h79^{km}±14^{km},mb4.1/22, mb1 4.1/24,mb1mx4.0/48,mbtmp4.4/24,MS2.8/5, Ms1 2.9/5,ms1mx2.7/36,Error ellipse: s-maj=23.6km s-min=9.6km az=54.0*
*NEIC **16** 04:48:20.0±1.4,12°.68N±0°.08×93°.41E±0°.10,h73^{km}±7^{km}, mb4.7/23,Error ellipse: s-maj=14.2km s-min=10.9km az=117.0*
ISC 16 04:48:21.4±0.4,**12°.70N**±0°.05×**93°.32E**±0°.06,**h93**^{km},**n116,** σ1^{s}.**43**/125,**mb4.6**/39,**15C-8D,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGPR	DIGLIPUR	0.61	322	eP	Pn	04 48 33.9	-3.4
DGPR				eS	Sn	04 48 44.8	-4.4
DGPR				IAML		04 48 46.2	
	comp=E,7µm,0.3s						
DGPR				IAML		04 48 46.5	
	comp=N,10µm,0.4s						
PBA	Port Blair	1.18	209	Pn	Pn	04 48 41.5	-1.9
PBA				Sn	Sn	04 48 58.6	-1.3
SRIT	Nakonsritamara	7.40	123	Pn	Pn	04 50 06.2	-0.6
CMAR	Chiang Mai Arr	7.88	43	P	Pn	04 50 11.7	-1.7
	comp=N,1.3nm,0.3s,baz=233,slow=15,SNR=15						
CMAR				S	Sn	04 51 38.8	-2.2
	comp=N,0.8nm,0.3s,baz=235,slow=28,SNR=6.2						
CMAR				LR	LR	04 53 35.1	
	comp=N,17nm,18.4s,baz=312,slow=40						
CMAR	Chiang Mai Arr	7.88	43	Pn	Pn	04 50 10.6	-2.8
CHTO	Chiang Mai	8.14	41	Pn	Pn	04 50 15.4	-1.5
PSI	Prapat	11.29	150	P	Pn	04 51 00.5	+0.6
	baz=337,slow=14,SNR=5.3						
RPSI	Rantau Prapat	11.38	150		Pn	04 51 00.5	-0.5
SHL	Shillong	12.87	354	eP	Pn	04 51 16.3	-4.7
SHL				eS	Sn	04 53 29.2	-13
SHL				IAML		04 53 37.1	
	comp=E,617nm,0.3s						
SHL	Shillong	12.87	354	Pn	Pn	04 51 18.1	-3.0
BOK	Bokaro	13.10	328	eP	Pn	04 51 22.9	-0.9
BOK				IAmb	IAmb	04 51 23.5	
	comp=Z,14nm,0.4s						
BOK				eS	Sn	04 53 35.9	-12
MNSI	Mandailing Nat	13.36	152	P	P	04 51 35.8	+2.4
MOKO	MOKOCHONG	13.60	5	eP	Pn	04 51 27.4	-3.1
HYB	Hyderabad	15.01	290	iP	P	04 51 54.0	+2.2
HYB				e		04 54 20.0	
HYB				eS	Sn	04 54 34.0	-0.3
KMI	Kunming	15.23	34	⇑P	Pn	04 51 51.8	+0.2
KMI				pP	pP	04 52 04.5	-7.1
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
JIRN	Jiri	16.31	337	eP	Pn	04 52 05.8	+0.5
	comp=Z,19nm,0.3s						
JBP	Jabalpur	16.40	311	⇓eP	P	04 52 09.0	+1.9
JBP				IAmb	IAmb	04 52 10.1	
	comp=Z,16nm,0.7s						
JBP				eS	Sn	04 54 56.4	-11
PKI	Pulchoki	16.55	335	eP	Pn	04 52 08.7	+0.6
	comp=Z,8.1nm,0.2s						
PKIN	Phulchoki	16.56	335	eP	Pn	04 52 08.9	+0.7
	comp=Z,32nm,0.3s						
GUN	Gumba	16.66	336	eP	Pn	04 52 10.7	+1.2
DMN	Daman	16.71	334	eP	Pn	04 52 10.1	+0.1
	comp=Z,19nm,0.3s						
GKN	Gorkha	17.25	333	eP	P	04 52 18.2	+1.4
	comp=Z,44nm,0.4s						
KOLN	Koldanda	17.53	330	eP	Pn	04 52 21.2	+1.1
DANN	Dangsing	17.95	332	eP	P	04 52 25.5	+1.0
	comp=Z,9.0nm,0.4s						
PYUN	Piuthan	18.11	329	eP	Pn	04 52 27.7	+0.7
	comp=Z,8.0nm,0.3s						
BHPL	Bhopal	18.38	307	eP	P	04 52 30.5	+1.4
BHPL				IAmb	IAmb	04 52 33.2	
	comp=Z,12nm,0.9s						
BHPL				eS	S	04 55 39.3	-15
POO	Poona	19.62	290	eS	S	04 56 12.3	-7.0
LEM	Lembang	24.05	143	LR	LR	05 02 30.6	
	comp=Z,51nm,20.5s,baz=150,slow=36						
LZH	Lanzhou	25.15	20	⇑P	P	04 53 40.3	+2.2
LZH				pP	pP	04 53 58.9	+0.6
LZH				sP	sP	04 54 10.4	+1.4
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
GTA	Gaotai	27.22	11	eP	P	04 53 57.9	+1.2
GTA				pP	pP	04 54 13.9	-3.3
GTA				sP	sP	04 54 25.8	-2.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,82nm,5.8s						
GTA				LR	LR		
	comp=Z,76nm,14.5s						
GTA				LR	LR		
	comp=Z,170nm,14.9s						
GTA				LR	LR		
	comp=Z,89nm,15.8s						
NIL	Nilore	27.74	322	P	P	04 54 02.1	+0.8
NIL				IAmb	IAmb	04 54 02.8	
	comp=Z,10nm,0.6s						
NJ2	Nanjing	30.34	46	eP	P	04 54 24.0	-0.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSH	Kashi	30.80	333	P	P	04 54 28.3	-0.1
WMQ	Urumqi	31.39	352	eP	P	04 54 35.1	+1.6
WMQ				pP	pP	04 54 55.3	+0.8
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						

WMQ				pmax	pmax		
	comp=Z,85nm,4.9s						
KAPI	Kappang	31.62	122	LR	LR	05 07 26.6	
	comp=Z,14nm,18.2s,baz=331,slow=36						
HHC	Hu-ho-hao-te	32.29	26	eP	P	04 54 44.0	+2.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.9s						
AAK	Ala-Archa	34.00	335	P	P	04 54 57.2	+0.7
	comp=Z,5.8nm,0.9s,baz=216,slow=6.5,SNR=9.6						
FRU1	Bishkek	34.09	335	P	P	04 54 57.2	+0.1
MKAR	Makanchi Array	35.23	347	P	P	04 55 07.4	+0.6
	comp=Z,1.7nm,0.3s,baz=166,slow=8.2,SNR=36						
MKAR				ScP	ScP	05 01 15.3	+2.0
	comp=Z,1.1nm,0.7s,baz=122,slow=4.6,SNR=5.6						
MKAR	Makanchi Array	35.23	347	P	P	04 55 06.8	0.0
MKAR					ScP	05 01 14.7	+1.5
MAKZ	Makanchi	35.32	346	P	P	04 55 08.2	+0.6
MAKZ				IAmb	IAmb	04 55 26.4	
	comp=Z,8.1nm,1.1s						
KKAR	Karatay Array	36.14	331	P	P	04 55 15.7	+1.1
SONM	Songino Array	36.70	15	P	P	04 55 19.5	+0.1
	comp=Z,0.9nm,0.4s,baz=198,slow=8.1,SNR=15						
SONM				ScP	ScP	05 01 20.5	+1.7
	comp=Z,0.7nm,0.7s,baz=187,slow=4.0,SNR=4.8						
SONM	Songino Array	36.70	15	P	P	04 55 20.4	+1.0
KSRS	Korea Array	39.52	45	LR	LR	05 13 39.3	
	comp=Z,15nm,20.3s,baz=50,slow=38						
KURBB	Kurchatov Arra	39.70	345	P	P	04 55 44.9	+0.5
	comp=Z,2.0nm,0.5s,baz=165,slow=8.1,SNR=21						
GEYT	Alibeck	40.16	315	P	P	04 55 49.8	+1.3
	comp=Z,15nm,0.7s,baz=104,slow=19,SNR=12						
GEYT	Alibeck	40.16	315	P	P	04 55 49.8	+1.3
GEYT				IAmb	IAmb	04 55 51.8	
	comp=Z,14nm,0.8s						
GYA0B	ALIBECK ARRAY	40.16	315	P	P	04 55 49.5	+1.0
CN2	Changchun	41.49	36	eP	P	04 55 58.6	-0.7
ZAA0	Zalesovo Array	41.70	352	P	P	04 56 01.5	+0.8
ZALV	Zalesovo Beam	41.70	352	P	P	04 56 01.3	+0.5
	comp=Z,15nm,0.5s,baz=178,slow=8.7,SNR=68						
ZALV				ScP	ScP	05 01 38.5	+0.9
	comp=Z,0.4nm,0.4s,baz=86,slow=2.1,SNR=4.8						
PSA00	Pilbara Seismi	42.88	142	P	P	04 56 09.3	-1.5
PSA00				IAmb	IAmb	04 56 22.8	
	comp=Z,26nm,1.4s						
BVAR	Borovoye Array	44.20	340	P	P	04 56 21.4	+0.4
	comp=Z,1.2nm,0.4s,baz=177,slow=10,SNR=9.1						
FITZ	Fitzroy Crossi	44.20	133	P	P	04 56 20.1	-1.3
	comp=Z,3.3nm,0.3s,baz=339,slow=6.4,SNR=17						
BRVK	Borovoye	44.26	340	P	P	04 56 22.0	+0.5
KNRA	Kununurra	45.00	128	P	P	04 56 26.7	-1.1
KNRA				IAmb	IAmb	04 56 41.8	
	comp=Z,21nm,1.4s						
ABKAR	Akbulak array	45.66	330	P	P	04 56 33.7	+1.0
ABKAR				IAmb	IAmb	04 56 34.6	
	comp=Z,9.5nm,0.8s						
ABKAR	Akbulak array	45.66	330	P	P	04 56 33.4	+0.8
MORW	Morawa	46.97	152	P	P	04 56 42.2	-0.9
MORW				IAmb	IAmb	04 56 58.2	
	comp=Z,21nm,1.4s						
ARU	Arti	51.17	336	P	P	04 57 15.0	+0.1
	comp=Z,2.7nm,0.2s,baz=114,slow=10.0,SNR=3.6						
WB0	Warramunga Arr	51.73	128	P	P	04 57 18.1	-1.4
WB0				IAmb	IAmb	04 57 18.8	
	comp=Z,6.7nm,1.1s						
WRA	Warramunga Arr	51.79	128	P	P	04 57 18.6	-1.4
	comp=Z,2.0nm,0.5s,baz=310,slow=7.7,SNR=65						
WRA				PcP	PcP	04 58 31.7	-0.3
	comp=Z,1.4nm,0.5s,baz=319,slow=3.1,SNR=14						
WRAB	Tennant Creek	51.79	128	P	P	04 57 18.7	-1.3
WRAB				IAmb	IAmb	04 57 19.3	
	comp=Z,3.3nm,0.6s						
WB2	Warramunga Arr	51.80	128	P	P	04 57 18.7	-1.3
WB2				IAmb	IAmb	04 57 19.3	
	comp=Z,4.4nm,0.5s						
ASAR	Alice Springs	53.68	132	P	P	04 57 32.6	-1.3
	comp=Z,2.6nm,0.5s,baz=309,slow=6.7,SNR=49						
ASAR				PcP	PcP	04 58 38.6	-0.5
	comp=Z,0.6nm,0.8s,baz=305,slow=3.8,SNR=4.4						
ASAR				ScP	ScP	05 02 29.2	+0.5
	comp=Z,0.6nm,0.7s,baz=308,slow=4.1,SNR=6.6						
ASAR	Alice Springs	53.68	132	P	P	04 57 32.7	-1.3
ASAR					ScP	05 02 29.9	+1.2
BELG	Belogornoye	53.82	327	P	P	04 57 35.0	+0.6
	comp=Z,8.5nm,0.4s,baz=270,slow=1.0,SNR=5.0						
BRTR	Keskin Array B	58.74	309	P	P	04 58 10.3	+0.4
	comp=Z,4.4nm,0.7s,baz=119,slow=7.2,SNR=11						
ELL	Elmali	61.25	305	P	P	04 58 27.5	+0.4
PURM	Purcari	62.66	316	⇑P	P	04 58 37.4	+1.2
TIXI	Tiksi	62.70	12	P	P	04 58 35.9	-0.1
TIRR	Tirgusor	63.33	313	⇓P	P	04 58 41.6	+1.0
MILM	Milestii Mici	63.45	316	⇓P	P	04 58 41.5	+0.1
CFR	Carcaliu	63.63	314	⇑P	P	04 58 43.8	+1.2
HARR	Harsova	63.70	314	⇑P	P	04 58 44.2	+1.1
AKASG	Malin Array Be	63.92	320	P	P	04 58 44.2	-0.1
	comp=Z,0.9nm,0.4s,baz=86,slow=5.8,SNR=10						
SORM	Soroca	63.97	318	⇓P	P	04 58 45.2	+0.4
STKA	Stephens Creek	64.04	135	P	P	04 58 44.5	-1.0
	comp=Z,0.7nm,0.3s,baz=308,slow=5.5,SNR=6.1						
STKA				LR	LR	05 30 33.8	
	comp=Z,19nm,18.8s,baz=23,slow=40						
VRI	Vrincioaia	64.71	315	⇑P	P	04 58 51.7	+1.9
PLOR	Plostina	64.76	315	⇑P	P	04 58 52.1	+2.0
COVR	Voineasa-Covas	65.07	315	⇑P	P	04 58 53.4	+1.3
MLR	Muntele Rosu	65.21	314	⇑P	P	04 58 54.8	+1.7
MLR	Muntele Rosu	65.21	314	P	P	04 58 54.6	+1.5
MLR				IAmb	IAmb	04 58 55.5	
	comp=Z,14nm,1.0s						
VOIR		65.83	314	⇑P	P	04 58 57.7	+0.6
BURAR	Bucovina Array	65.98	317	⇑P	P	04 58 59.1	+1.1
BUR08	Bucovina Ar. S	65.99	317	P	P	04 58 58.9	+0.8
ARR	Arges	66.11	314	⇑P	P	04 58 59.8	+1.0
VTS	Vitosha	66.88	311	⇓P	P	04 59 04.6	+0.7
VTS	Vitosha	66.88	311	P	P	04 59 04.5	+0.7
HERR	Herculane	67.63	313	⇓P	P	04 59 09.4	+1.0
TRPA	Tarpa	67.83	317	⇓P	P	04 59 10.8	+1.3
BOVS	Bovan	68.06	312	⇓P	P	04 59 10.9	-0.2
FINES	FINESS Array B	68.10	331	P	P	04 59 11.2	+0.2
	comp=Z,3.8nm,0.7s,baz=106,slow=5.4,SNR=12						
FINES	FINESS Array B	68.10	331	P	P	04 59 10.9	-0.1
SIRR	Siria	68.26	315	⇑P	P	04 59 13.6	+1.2
CRVS	Cervenica-Dubn	68.61	318	eP	P	04 59 15.9	+1.4
ARCES	ARCESS Array B	70.48	340	P	P	04 59 25.2	-0.4
	comp=Z,2.5nm,0.7s,baz=64,slow=2.8,SNR=8.0						
MORC	Moravsky Berou	71.23	318	⇑P	P	04 59 31.9	+1.3
GERES	GERESS Array B	73.73	317	P	P	04 59 46.3	+0.8
	comp=Z,2.9nm,0.7s,baz=89,slow=6.2,SNR=27						
GERES				pP	pP	05 00 06.4	-3.0
	comp=Z,1.4nm,0.6s,baz=90,slow=6.5,SNR=7.5						
GERES	GERESS Array B	73.73	317	P	P	04 59 46.2	+0.7
CIMO	Cimolais	74.65	315	P	P	04 59 51.4	+0.6
NOA	NORSAR Array B	75.16	330	P	P	04 59 53.1	-0.4
	comp=Z,0.8nm,0.6s,baz=95,slow=5.5,SNR=2.3						
KEST	Kesra	77.86	304	P	P	05 00 09.9	+0.7
	comp=Z,4.5nm,0.8s,baz=41,slow=7.4,SNR=5.2						
TORD	Torodi Ar. Bea	88.71	283	P	P	05 01 05.5	+0.2
	comp=Z,0.4nm,0.6s,baz=76,slow=6.4,SNR=3.5						
SYO	Syowa Base	89.75	197	⇑eX	P	05 01 07.8	-1.0
MCK	McKinley	90.38	23	P	P	05 01 12.3	+0.3
MCK				IAmb	IAmb	05 01 19.6	
	comp=Z,5.3nm,1.3s						
ILAR	Eielson Array	90.60	22	P	P	05 01 12.9	-0.2
	comp=Z,0.5nm,0.7s,baz=299,slow=4.8,SNR=8.6						
ILAR	Eielson Array	90.60	22	P	P	05 01 13.1	0.0
A36M	Sachs Harbour	91.71	11	P	P	05 01 18.9	+0.9
A36M				IAmb	IAmb	05 01 23.7	
	comp=Z,5.0nm,0.8s						
PDAR	Pinedale Array	120.95	19	PKP	PKiKP	05 07 04.2	+0.4
	comp=Z,0.3nm,0.5s,baz=260,slow=0.9,SNR=4.4						
PDAR	Pinedale Array	120.95	19	PKPdf	PKiKP	05 07 03.9	+0.1
NVAR	Mina Array Bea	121.16	29	PKP	PKiKP	05 07 05.3	+1.1
	comp=Z,0.2nm,0.4s,baz=285,slow=1.9,SNR=2.5						
TXAR	Lajitas Array	135.11	21	PKP	PKiKP	05 07 32.0	-0.3
	comp=Z,0.3nm,0.5s,baz=98,slow=0.4,SNR=7.1						
TXAR	Lajitas Array	135.11	21	PKPdf	PKPdf	05 07 30.6	-0.1
PLCA	Paso Flores	148.69	204	PKPbc	PKiKP	05 07 59.3	-0.4
	comp=Z,2.3nm,0.8s,baz=165,slow=16,SNR=5.0						

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*IDC **16** 04:58:30.2±1.6, 4°.14S×129°.48E, h0^{km}, mb3.7/1, mb1 3.8/4, mb1mx3.5/38, mbtmp3.7/4, ML3.4/3, MS3.3/2, Ms1 3.3/2, ms1mx2.5/40, Error ellipse: s-maj=56.6km s-min=26.8km az=82.0*

*DJA **16** 04:58:30.7±1.0, 4°S±7°×12°9E±°, h12^{km}±7^{km}, M3.5/7, MLv3.5/7*

ISC 16 04:58:34.1±1.1**, 4°.16S**±0°.08×**129°.47E**±0°.06**, h36^{km}, n9, σ1^{s}62**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.97	326	P	Pn	04 58 50.8	-0.4
MSAI				S	Sn	04 59 04.3	+0.6
AAI	Ambon	1.35	290	P	Pn	04 58 54.0	-2.4
AAI				S	Sn	04 59 14.3	+1.1
FAKI	Fak Fak	3.04	66	P	Pn	04 59 19.2	-0.5
SIJI	Sorong	3.73	29	Pn	Pn	04 59 29.3	0.0
	3.2nm,0.3s,baz=212,slow=24,SNR=10						
SIJI				Sn	Sn	05 00 09.4	-2.5
	5.2nm,0.3s,baz=201,slow=22,SNR=6.3						
SWI	Sorong	3.73	29	P	Pn	04 59 29.2	0.0
DAV	Davao City (W)	11.81	341	LR	LR	05 05 38.4	
	comp=Z,76nm,21.0s,baz=325,slow=36						
WRA	Warramunga Arr	16.39	164	Pn	Pn	05 02 20.1	-1.4
	0.1nm,0.3s,baz=348,slow=13,SNR=3.1						
ASAR	Alice Springs	19.86	168	P	P	05 03 03.9	+1.6
	0.3nm,0.3s,baz=348,slow=9.8,SNR=25						
MKAR	Makanchi Array	65.58	326	P	P	05 09 15.7	+1.4
	0.5nm,0.6s,baz=116,slow=7.7,SNR=4.7						
MKAR				LR	LR	05 41 30.1	
	comp=Z,33nm,18.1s,baz=42,slow=39						

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*ISK **16** 05:31:24.4, 39°.26N×40°.22E, h5^{km}, ML3.6/27*

*DDA **16** 05:31:25.2, 39°.25N×40°.18E, h14^{km}±5^{km}, ML3.6*

*IDC **16** 05:31:26.9±1.4, 39°.15N×39°.98E, h0^{km}, mb4.2/2, mb1 3.9/7, mb1mx3.4/50, mbtmp3.8/7, ML3.1/4, MS2.7/5, Ms1 2.7/5, ms1mx2.4/47, Error ellipse: s-maj=26.8km s-min=11.6km az=169.0*

ISC 16 05:31:25.5±1.1**, 39°.25N**±0°.02×**40°.19E**±0°.02**, h4^{km}**±9^{km}**, n69, σ1^{s}59**/92**, 10C-7D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YEDI	Yedisu-Bingol	0.33	56	PG	Pg	05 31 31.7	-0.2
YEDI				SG	Sg	05 31 36.7	+0.4
BNGB	Bingl	0.46	124	PG	Pg	05 31 33.8	-0.5
BNGB				SG	Sb	05 31 41.4	-2.1
ERZN	Erzincan	0.49	313	PG	Pg	05 31 34.9	0.0
ERZN				SG	Sb	05 31 43.1	-1.3
TNCL	Tunceli-Merkez	0.52	255	⇑iP	Pg	05 31 35.4	-0.1
TNCL				iS	Sb	05 31 43.1	-2.1
TNCL				IAML		05 31 45.0	
	comp=N,6µm,0.6s						
TNCL				IAML		05 31 47.0	
	comp=E,8µm,0.5s						
EUZM	Uzumlu	0.59	320	⇑iP	Pg	05 31 36.6	-0.3
EUZM				iS	Sb	05 31 46.3	-1.0
KOVA	Elazig, Kovanc	0.62	208	⇓iP	Pb	05 31 37.7	-1.2
KOVA				iS	Sb	05 31 47.3	-0.7
SLHN	Bingol, Solhan	0.71	114	⇑iP	Pg	05 31 38.6	-0.6
SLHN				iS	Sb	05 31 49.8	-0.9
SLHN				IAML		05 31 55.0	
	comp=E,3µm,0.7s						
SLHN				IAML		05 31 56.0	
	comp=N,2µm,0.4s						
KOPT	Kop Dagi	0.80	17	⇓iP	Pg	05 31 40.7	-0.1
KOPT				iS	Sn	05 31 53.6	-2.7
HANI	Diyarbakir_Han	0.85	169	⇓iP	Pg	05 31 41.6	-0.2
HANI				iS	Sn	05 31 55.5	-1.8
VRTB	Varto-Mus	0.99	95	⇑iP	Pb	05 31 43.5	-1.8
VRTB				iS	Sn	05 32 01.2	+0.4
VRTB	Varto-Mus	0.99	95	PG	Pb	05 31 43.7	-1.5
BAYB	BAYBURT	1.00	3	⇓iP	Pb	05 31 43.0	-2.6
BAYB				iS	Sb	05 31 57.0	-2.3
EJDE	Erzurum, Palan	1.04	56	iP	Pb	05 31 43.8	-2.4
EJDE				iS	Sg	05 31 59.4	+0.5
EJDE				IAML		05 32 04.0	
	comp=N,3µm,0.6s						
EJDE				IAML		05 32 07.0	
	comp=E,3µm,0.6s						
SVRC	Sivrice-ELAZID	1.11	219	PN	Pg	05 31 47.2	+0.4
ERZM	Erzurum	1.12	54	⇑iP	Pb	05 31 46.3	-1.3
ERZM				iS	Sn	05 32 02.9	-1.3
BAYT	Aydıntepe-Bayb	1.14	358	PN	Pb	05 31 46.9	-1.0
KELT	Kelkit	1.15	321	⇑iP	Pb	05 31 46.5	-1.5
KELT				iS	Sn	05 32 04.5	-0.3
MUSM	Mu-Merkez	1.16	117	⇑iP	Pb	05 31 45.9	-2.2
MUSM				iS	Sn	05 32 03.8	-1.1
ELZG	Elazig	1.21	232	iP	Pb	05 31 47.7	-1.2
ELZG				iS	Sg	05 32 04.2	0.0
KRIK	Erzurum-spir	1.22	27	iP	Pg	05 31 49.1	+0.2
KRIK				iS	Sg	05 32 07.4	+2.6
ILIC	ilic-Erzincan	1.27	279	PN	Pb	05 31 49.2	-0.9
REFA	Refahiye_ERZN	1.28	301	iP	Pn	05 31 48.8	-1.5
REFA				iS	Sg	05 32 08.6	+1.9
DYBB	Diyarbakir	1.30	182	PN	Pg	05 31 50.7	+0.4
KEMA	Kemaliye	1.32	271	⇑iP	Pb	05 31 49.5	-1.4
KEMA				iS	Sg	05 32 07.8	+0.1
KEMA				IAML		05 32 14.0	
	comp=E,1µm,0.6s						
KEMA				IAML		05 32 14.0	
	comp=N,926nm,0.5s						
DIYA	Diyarbakir	1.33	182	⇓iP	Pg	05 31 51.5	+0.6
DIYA				iS	Sg	05 32 11.1	+3.0
SVAN	Silvan-Diyarba	1.35	144	⇓iP	Pg	05 31 51.3	-0.1
SVAN				iS	Sg	05 32 11.0	+2.0
SVAN	Silvan-Diyarba	1.35	144	PN	Pg	05 31 50.9	-0.5
ARPR	Arapgir-MALATY	1.45	264	PN	Pg	05 31 53.2	-0.1
EKAR	Karacoban	1.46	89	iP	Pg	05 31 54.0	+0.7
EKAR				IAML		05 32 25.0	
	comp=N,711nm,0.5s						
EKAR				IAML		05 32 26.0	
	comp=E,938nm,0.7s						
KOPR	Koprukoy-ERZUR	1.48	60	PN	Pb	05 31 52.9	-0.8
ALUC	Giresun/Alucra	1.54	315	iP	Pg	05 31 54.5	-0.6
ALUC				iS	Sg	05 32 16.4	+1.3
ALUC				IAML		05 32 22.0	
	comp=N,606nm,0.9s						
GURO	Guroymak-BITLI	1.60	115	PN	Pb	05 31 54.2	-1.5
BTMN	Batman	1.60	148	⇓iP	Pg	05 31 55.5	-0.6
BTMN				iS	Sg	05 32 17.7	+0.8
BTMN				IAML		05 32 21.0	
	comp=E,800nm,0.6s						
BTMN				IAML		05 32 26.0	
	comp=N,1µm,0.5s						
MALT	Malatya	1.67	236	PN	Pb	05 31 55.9	-0.9
MACK	Trabzon	1.72	349	iP	Pg	05 31 57.9	-0.5
MACK				IAML		05 32 27.0	
	comp=N,655nm,0.9s						
MACK				IAML		05 32 28.0	
	comp=E,745nm,1.5s						
BLIS	Bitlis-Merkez	1.72	119	iP	Pb	05 31 56.5	-1.3
KTUT	Trabzon	1.76	350	PN	Pb	05 31 57.7	-0.6
HEKM	Malatya_Hekimh	1.78	259	⇑iP	Pb	05 31 57.7	-1.1
HEKM				iS	Sg	05 32 22.9	+0.4
HEKM				IAML		05 32 27.0	
	comp=N,760nm,0.6s						
HEKM				IAML		05 32 28.0	
	comp=E,1µm,0.5s						
MAZI	Mazidag	1.80	173	PN	Pb	05 31 57.8	-1.3
SUSE	Susehri	1.81	303	iP	Pg	05 31 59.5	-0.6
MLAZ	Malazgirt-MUS	1.84	93	PN	Pb	05 31 57.9	-1.8
EATA	Eleskirt	1.88	70	iP	Pb	05 31 59.9	-0.7
CHOM	Cayeli-Rize	1.89	13	PN	Pb	05 31 59.2	-1.4
MARD	Mardin	1.99	166	iP	Pb	05 32 00.4	-2.0
MARD				iS	Sg	05 32 28.0	-1.4
MARD				IAML		05 32 29.0	
	comp=E,675nm,0.4s						
MARD				IAML		05 32 31.0	
	comp=N,1µm,0.4s						
AKCD	Akcadag	2.01	242	⇑iP	Pb	05 32 01.6	-1.1
AKCD				iS	Sg	05 32 31.8	+1.6
AKCD				IAML		05 32 35.0	
	comp=E,410nm,0.6s						
AKCD				IAML		05 32 37.0	
	comp=N,407nm,0.5s						
ADCV	BITLIS_Adilcev	2.02	102	iP	Pb	05 32 02.1	-0.8
DDEM	Demirkent	2.03	36	iP	Pb	05 32 00.9	-2.1
MIDY	Mardin/Midyat-	2.07	152	iP	Pb	05 32 01.6	-2.1
MIDY				IAML		05 32 36.0	
	comp=E,466nm,0.4s						
MIDY				IAML		05 32 40.0	
	comp=N,486nm,0.5s						
URFA	Urfa	2.10	211	PN	Pb	05 32 02.8	-1.4
SENK	Senkaya-Erzuru	2.11	51	PN	Pn	05 32 01.4	-0.4
AGRB	Hanur-Agry	2.19	81	PN	Pb	05 32 03.8	-2.0
DARE	Darende-Malaty	2.22	253	PN	Pb	05 32 03.9	-2.3
PERV	Siirt/Pervari-	2.26	125	iP	Pb	05 32 05.7	-1.2
PERV				iS	Sb	05 32 35.6	+0.4
PERV				IAML		05 32 50.0	
	comp=E,579nm,0.7s						
PERV				IAML		05 32 55.0	
	comp=N,449nm,0.6s						
AKDM	Akdamar-Van	2.37	112	PN	Pb	05 32 06.1	-2.7
BCA	Borcka	2.45	26	PN	Pb	05 32 07.5	-2.6
RSDY	Resadiye-TOKAT	2.48	298	PN	Pb	05 32 08.1	-2.6
SIRT	Sirnak	2.49	134	PN	Pb	05 32 07.7	-3.1
CLDR	Caldiran	2.90	91	PN	Pn	05 32 13.1	+0.5
TASB	TASBURUN-IGDIR	3.21	76	PN	Pn	05 32 17.7	+0.9
GNI	Garni	3.62	74	Pn	Pb	05 32 29.1	-1.1
	comp=N,1.5nm,0.3s,baz=204,slow=5.9,SNR=11						
KBZ	Khabaz	4.91	24	Pn	Pn	05 32 44.7	+4.7
	comp=N,0.7nm,0.3s,baz=0.0,slow=8.8,SNR=4.4						
KBZ				LR	LR	05 34 48.6	
	comp=N,62nm,18.7s,baz=318,slow=40						
BRTR	Keskin Array B	5.09	277	Pn	Pn	05 32 44.5	+1.8
	comp=N,0.8nm,0.3s,baz=100,slow=14,SNR=9.7						
BRTR				Lg	Lg	05 34 05.6	
	baz=109,slow=27,SNR=1.7						
BRTR				LR	LR	05 35 07.7	
	comp=N,71nm,21.9s,baz=90,slow=45						
MMAI	Mount Meron Ar	7.33	213	LR	LR	05 35 48.4	
	comp=N,17nm,21.7s,baz=40,slow=36						
ASF	Jabal al Asfar	7.55	202	Pn	Pn	05 33 14.6	-1.9
	comp=N,0.2nm,0.3s,baz=19,slow=15,SNR=3.0						
IDI	Anoyia	12.81	257	LR	LR	05 39 09.8	
	comp=N,41nm,20.4s,baz=89,slow=37						
AKTO	Aktyubinsk	16.83	43	Pn	P	05 35 25.9	+1.8
	comp=N,0.1nm,0.3s,baz=216,slow=9.1,SNR=6.8						
VRAC	Vranov	19.58	309	LR	LR	05 43 57.0	
	comp=N,80nm,18.1s,baz=299,slow=38						
ARU	Arti	21.04	29	P	P	05 36 15.6	+5.5
	comp=N,3.7nm,0.2s,baz=231,slow=9.1,SNR=4.1						
FINES	FINESS Array B	23.86	343	P	P	05 36 41.9	+2.3
	comp=N,3.6nm,0.9s,baz=159,slow=12,SNR=3.0						

IDC 16 05:34:31.8±2.8**, 13°.52S**×**74°.30W, h0^{km}, mb4.4**/1**, mb1 4.2**/2**, mb1mx3.6**/22**, mbtmp4.2**/2**, ML3.8**/1**, Error ellipse: s-maj=87.4km s-min=5.0km az=45.0, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	6.57	116	Pn	Pn	05 36 10.3	0.0
	0.9nm,0.3s,baz=296,slow=6.0,SNR=22						
TORD	Torodi Ar. Bea	79.82	74	P	P	05 46 42.8	0.0
	3.0nm,0.8s,baz=262,slow=5.1,SNR=16						
SONM	Songino Array	145.78	359	PKPbc	PKPdf	05 54 12.3	-0.5
	0.7nm,0.6s,baz=336,slow=1.6,SNR=3.9						

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*IDC **16** 06:14:22.6±2.5, 9°.64S×112°.71E, h0^{km}, mb3.7/5, mb1 3.8/6, mb1mx3.5/29, mbtmp3.7/6, ML3.7/1, MS2.1/1, Ms1 2.1/1, ms1mx2.0/33, Error ellipse: s-maj=120.0km s-min=20.6km az=49.0*

*DJA **16** 06:14:30.7±0.4, 9°S±4°×11°3E±°, h10^{km}, M3.8/13, MLv3.8/13*

ISC 16 06:14:28.0±0.9**, 9°.67S**±0°.08×**112°.91E**±0°.06**, h36^{km}, n20, σ2^{s}95**/20**, mb3.9**/5**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.49	21	P	Pn	06 14 53.4	+1.2
GMJI				S	Sn	06 15 07.9	-2.5
JAGI	Jajag, Banyuwa	1.71	46	P	Pn	06 14 56.3	+1.0
PWJI	Pagerwojo	1.97	326	P	Pn	06 14 59.9	+1.1
BLJI	Banyuglugur	2.03	20	P	Pn	06 15 02.5	+2.8
PCJI	Pacitan	2.26	311	P	Pn	06 15 04.5	+1.7
ABJI	Asem Bagus	2.28	35	P	Pn	06 15 06.3	+3.2
IGBI	Denpasar	2.37	69	P	Pn	06 15 08.4	+4.1
WOJI	Wonogiri, Jawa	2.68	313	P	Pn	06 15 10.9	+2.3
SRBI	Singaraja	2.77	55	P	Pn	06 15 12.5	+2.7
UGM	Wanagama	2.94	306	P	Pn	06 15 14.3	+2.1
YOGI	Yogyakarta	3.18	305	P	Pn	06 15 18.9	+3.5
TWSI	Taliwang, Sumb	4.03	77	P	Pn	06 15 31.2	+4.0
KPJI	Karang Pucung	4.57	300	P	Pn	06 15 39.8	+5.2
KAPI	Kappang	8.21	56	LR	LR	06 20 05.7	
	comp=Z,12nm,19.9s,baz=282,slow=41						
FITZ	Fitzroy Crossi	14.92	126	Pn	Pn	06 17 56.6	+0.2
	0.2nm,0.3s,baz=297,slow=10,SNR=7.5						
FITZ				Sn	Sn	06 20 33.6	-6.9
	baz=76,slow=4.2						
WRA	Warramunga Arr	23.07	119	P	P	06 19 31.8	+1.3
	0.5nm,0.7s,baz=291,slow=12,SNR=6.8						
ASAR	Alice Springs	24.41	127	P	P	06 19 45.1	+1.8
	0.2nm,0.5s,baz=306,slow=9.4,SNR=4.6						
SONM	Songino Array	57.55	355	P	P	06 24 13.5	-0.5
	0.6nm,0.5s,baz=174,slow=9.1,SNR=5.7						
MKAR	Makanchi Array	62.51	337	P	P	06 24 47.6	-0.3
	1.1nm,0.5s,baz=149,slow=7.5,SNR=16						
ZALV	Zalesovo Beam	67.70	342	P	P	06 25 20.1	-1.2
	0.9nm,0.7s,baz=132,slow=4.2,SNR=4.6						

IDC 16 06:20:29.3±6.6**, 31°.18S**×**177°.89W, h0^{km}, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.3**/24**, mbtmp3.5**/2**, Error ellipse: s-maj=296.2km s-min=32.9km az=158.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.16	268	P	P	06 28 31.9	-0.1
	0.2nm,0.4s,baz=116,slow=7.7,SNR=4.3						
WRA	Warramunga Arr	44.22	273	P	P	06 28 40.4	-0.1
	0.5nm,0.4s,baz=114,slow=7.8,SNR=6.0						
FINES	FINESS Array B	145.90	340	PKPbc	PKPdf	06 40 09.1	-0.2
	2.0nm,0.8s,baz=62,slow=3.3,SNR=4.3						

IDC 16 06:24:08.1±0.5**, 6°.54S**×**131°.42E, h61^{km}**±9^{km}**, mb3.7**/1**, mb1 3.6**/5**, mb1mx3.2**/24**, mbtmp3.7**/5**, Error ellipse: s-maj=7.8km s-min=3.5km az=78.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.63	358	P	Pn	06 25 28.1	-1.2
	2.4nm,0.3s,baz=240,slow=22,SNR=8.2						
SIJI				S	Sn	06 26 24.7	-8.1
	1.6nm,0.3s,baz=254,slow=23,SNR=6.4						
FITZ	Fitzroy Crossi	12.80	206	P	Pn	06 27 07.2	0.0
	0.3nm,0.3s,baz=31,slow=9.9,SNR=16						
WRA	Warramunga Arr	13.62	168	P	Pn	06 27 19.7	+1.2
	0.3nm,0.3s,baz=351,slow=13,SNR=13						
WRA				S	Sn	06 29 47.4	-0.9
	0.7nm,0.3s,baz=338,slow=22,SNR=11						
ASAR	Alice Springs	17.20	172	P	P	06 28 05.8	+0.6
	0.2nm,0.3s,baz=344,slow=9.6,SNR=7.8						
MKAR	Makanchi Array	68.62	326	P	P	06 35 04.4	-0.4
	0.6nm,0.4s,baz=116,slow=7.8,SNR=7.9						

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*IDC **16** 06:59:19.0±2.8, 30°.85S×177°.78W, h0^{km}, mb3.9/3, mb1 4.1/4, mb1mx3.8/23, mbtmp3.9/4, ML3.3/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/35, Error ellipse: s-maj=66.3km s-min=24.3km az=113.0*

ISC 16 06:59:22.9±2.7**, 30°.8S**±0°.1×**177°.7W**±0°.4**, h35^{km}, n8, σ1^{s}14**/8**, mb3.9**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.59	351	Pn	Pn	06 59 49.1	+0.6
	132nm,0.3s,baz=54,slow=22,SNR=5.1						
RAO				Sn	Sn	07 00 06.4	-1.4
	456nm,0.3s,baz=32,slow=21,SNR=8.1						
RAO				LR	LR	07 00 32.9	
	comp=Z,115nm,21.5s,baz=231,slow=46						
URZ	Urewera	8.58	209	Pn	Pn	07 01 23.9	-0.7
	0.4nm,0.3s,baz=121,slow=23,SNR=1.5						
URZ				Sn	Sn	07 02 59.7	-0.4
	1.1nm,0.3s,baz=312,slow=23,SNR=4.9						
MSVF	Nonsavu	13.61	342	LR	LR	07 06 59.0	
	comp=Z,57nm,19.6s,baz=56,slow=34						
DZM	Mont Dzumac	16.69	298	LR	LR	07 08 16.6	
	comp=Z,48nm,18.4s,baz=190,slow=32						
STKA	Stephens Creek	34.68	257	P	P	07 06 10.9	+1.6
	1.5nm,0.4s,baz=104,slow=11,SNR=5.5						
ASAR	Alice Springs	43.39	267	P	P	07 07 22.5	+0.2
	0.6nm,0.7s,baz=99,slow=8.7,SNR=4.7						
WRA	Warramunga Arr	44.42	272	P	P	07 07 29.6	-1.0

	0.6nm,0.3s,baz=110,slow=8.1,SNR=29						
FINES	FINESS Array B	145.65	340	PKPbc	PKPab	07 18 57.6	+0.1
	1.4nm,0.4s,baz=57,slow=4.8,SNR=13						

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*NNC **16** 07:08:39.5±0.3, 50°.02N×78°.71E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=3.2km s-min=1.6km az=73.0, Suspected Mining explosion.*

*IDC **16** 07:08:41.1±0.9, 50°.06N×78°.73E, h0km, mb1 2.8/3, mb1mx2.7/44, mbtmp2.8/3, ML2.6/3, Error ellipse: s-maj=12.4km s-min=6.1km az=60.0*

ISC 16 07:08:40.7±0.9**, 50°.19N**±0°.04×**78°.87E**±0°.04**, h0km, n28, σ1s.12**/39**, 15C-13D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	Kurchatov Arra	0.46	330	⇓P	Pb	07 08 50.7	-0.9
KUR07				⇓S	Sb	07 08 59.4	+0.5
KUR14	Kurchatov Arra	0.46	337	⇓P	Pb	07 08 51.1	-0.6
KUR14				⇑S	Sb	07 09 00.1	+0.9
KUR06	Kurchatov Arra	0.47	332	⇓P	Pb	07 08 51.2	-0.7
KUR06				⇑S	Sb	07 08 59.9	+0.5
KUR15	Kurchatov Arra	0.47	335	⇑P	Pb	07 08 51.1	-0.8
KUR15				⇓S	Sb	07 08 60.0	+0.5
KURBB	Kurchatov Arra	0.49	333	Pg	Pb	07 08 51.6	-0.5
	2.6nm,0.3s,baz=166,slow=17,SNR=157						
KURBB				Lg	Lg	07 09 00.4	
	3.4nm,0.3s,baz=166,slow=35,SNR=34						
KURBB	Kurchatov Arra	0.49	333	⇓P	Pb	07 08 51.4	-0.7
	23nm,0.3s						
KURBB				⇑S	Sb	07 09 00.6	+0.8
	120nm,0.6s						
KUR16	Kurchatov Arra	0.50	332	⇓P	Pb	07 08 51.5	-0.9
KUR16				⇑S	Sb	07 09 00.7	+0.5
KUR05	Kurchatov Arra	0.50	335	⇑P	Pb	07 08 51.6	-0.8
KUR05				⇑S	Sb	07 09 00.5	+0.2
KUR17	Kurchatov Arra	0.51	330	⇑P	Pb	07 08 51.7	-0.9
KUR17				⇑S	Sb	07 09 00.6	0.0
KUR04	Kurchatov Arra	0.52	336	⇑P	Pb	07 08 52.2	-0.5
KUR04				⇓S	Sb	07 09 01.3	+0.6
KURK	Kurchatov	0.55	343	⇑P	Pb	07 08 52.6	-0.6
	10nm,0.4s						
KURK				⇑S	Sb	07 09 03.1	+1.4
	18nm,0.5s						
SEM	Semipalatinsk	0.91	75	P	Pn	07 09 00.1	-0.8
	8.7nm,0.1s						
SEM				S	Sn	07 09 14.3	-0.5
	39nm,0.2s						
BRZS	Berezniki	4.00	269	Pg	Pb	07 09 51.2	-0.7
	2.4nm,0.3s						
BRZS				Lg	Lg	07 10 42.2	
	5.4nm,0.5s						
MK31	Makanchi Array	4.09	145	⇓Pn	Pn	07 09 43.2	-1.2
	0.1nm,0.1s,baz=322,slow=10,SNR=19						
MK31				⇓Pg	Pb	07 09 52.1	-1.4
	0.5nm,0.2s,baz=327,slow=16,SNR=13						
MK31				⇑Lg	Lg	07 10 45.9	
	5.5nm,0.5s,baz=336,slow=25,SNR=15						
MKAR	Makanchi Array	4.09	145	Pn	Pn	07 09 43.9	-0.5
	0.3nm,0.3s,baz=321,slow=10,SNR=21						
MKAR				Pg	Pb	07 09 52.8	-0.7
	0.9nm,0.3s,baz=336,slow=16,SNR=15						
MKAR				Lg	Lg	07 10 45.3	
	2.9nm,0.3s,baz=327,slow=26,SNR=19						
OTUK	Ortayu	4.71	248	⇑Pn	Pn	07 09 50.6	-2.3
	0.5nm,0.2s						
OTUK				⇓Lg	Lg	07 11 04.2	
	5.5nm,0.6s						
ZSN	Zaisan	4.81	122	Pg	Pb	07 10 05.5	-0.3
	2.6nm,0.2s						
ZSN				Lg	Lg	07 11 06.5	
	6.9nm,0.2s						
KAPS	Kapalarasan	4.92	176	Pg	Pb	07 10 06.7	-1.0
	1.7nm,0.3s						
KAPS				Lg	Lg	07 11 08.7	
	8.5nm,0.4s						
I46RU	ZALESOVO INFRA	5.25	42	*i*		07 38 40.0	
	baz=230,slow=337,SNR=9.4						
ZALV	Zalesovo Beam	5.25	42	Pn	Pn	07 10 04.2	+3.8
	1.0nm,0.3s,baz=233,slow=14,SNR=13						
ZALV				Lg	Lg	07 11 37.3	
	0.6nm,0.3s,baz=238,slow=27,SNR=5.5						
BVAR	Borovoye Array	6.00	302	Pn	Pn	07 10 11.0	+0.4
	0.2nm,0.3s,baz=130,slow=17,SNR=1.7						
BVAR				Sn	Sn	07 11 19.1	-0.9
	0.4nm,0.3s,baz=130,slow=23,SNR=7.3						
BVAR				Lg	Lg	07 11 47.3	
	0.5nm,0.3s,baz=122,slow=26,SNR=3.8						
ARXS	Arharly	6.02	187	Pg	Pb	07 10 26.0	-0.5
	1.9nm,0.6s						
ARXS				Lg	Lg	07 11 41.8	
	6.4nm,0.3s						
BRVK	Borovoye	6.07	302	⇓Sn	Sn	07 11 21.1	-0.7
	1.7nm,0.6s						
BRVK				⇑Lg	Lg	07 11 52.6	
	2.3nm,0.6s						
KUU	Kurty	6.53	196	Pg	Pb	07 10 35.6	+0.5
	2.4nm,0.1s						
KUU				Lg	Lg	07 11 57.9	
	6.0nm,0.4s						
KTBS	Karatobe	6.65	194	Pg	Pb	07 10 38.6	+1.4
	1.7nm,0.2s						
KTBS				Lg	Lg	07 12 03.5	
	10nm,0.5s						
PDGK	Podgornoye	6.88	176	Pg	Pb	07 10 45.0	+4.0
	0.9nm,0.7s						
PDGK				Lg	Lg	07 12 14.5	
	2.5nm,0.3s						
PDGK	Podgornoye	6.88	176	⇓Lg	Lg	07 12 12.9	
	4.0nm,0.6s						
DGS	Degeres	7.27	198	Pg	Pb	07 10 49.9	+2.2
	2.0nm,0.2s						
DGS				Lg	Lg	07 12 22.6	
	6.5nm,0.3s						

IDC 16 07:12:02.8±4.9**, 53°.34N**×**90°.42E, h0km, mb1 2.9**/3**, mb1mx2.8**/49**, mbtmp2.9**/3**, ML2.6**/3**, Error ellipse: s-maj=50.8km s-min=27.7km az=43.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	Zalesovo Beam	3.39	283	Pn	Pn	07 12 58.1	+1.2
	1.2nm,0.3s,baz=95,slow=14,SNR=8.1						
ZALV				Lg	Lg	07 13 48.9	
	1.5nm,0.3s,baz=96,slow=26,SNR=7.5						
KURBB	Kurchatov Arra	7.83	254	Pn	Pn	07 13 57.9	+0.1
	0.1nm,0.3s,baz=66,slow=16,SNR=3.0						
KURBB				Sn	Sn	07 15 29.6	+2.5
	0.1nm,0.3s,baz=68,slow=26,SNR=6.4						
KURBB				Lg	Lg	07 16 12.3	
	0.0nm,0.3s,baz=72,slow=35,SNR=1.1						
MKAR	Makanchi Array	8.38	222	Pn	Pn	07 14 05.9	+0.5
	0.1nm,0.3s,baz=34,slow=12,SNR=1.8						
SONM	Songino Array	11.54	112	Lg	Lg	07 17 58.1	
	0.1nm,0.3s,baz=311,slow=29,SNR=7.5						
I34MN	SONGINO INFRAS	11.57	112	*i*		08 19 10.0	
	baz=310,slow=334,SNR=1.6						

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*OTT **16** 07:19:00.7±0.3, 67°.60N×55°.80W, h18km, ML3.8/1, Offshore western Greenland. 351km east from Qikiqtarjuaq, Nu Davis Strait.*

*DNK **16** 07:19:02.6±2.0, 67°.59N×56°.06W, h37km±37km, ML2.2*

ISC 16 07:18:58.0±0.9**, 67°.57N**±0°.06×**55°.95W**±0°.05**, h10km, n12, σ2s.35**/19**, Davis Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFJD	Kangerlussuaq	2.15	103	*i* P	Pb	07 19 35.9	-1.0
SFJD				*i* S	Sn	07 20 00.2	-0.2
SFJD				IAML		07 20 08.8	
	comp=Z,30nm,0.5s						
SFJD	Kangerlussuaq	2.15	103	PN	Pb	07 19 35.9	-1.0
SFJD				SN	Sn	07 19 59.6	-0.8
SFJD				Trac		07 20 03.5	
	comp=Z,0.8nm,0.1s						
ILULI	Ilulissat	2.43	45	*i* S	Sn	07 20 05.9	-1.6
ILULI	Ilulissat	2.43	45	PN	Pn	07 19 39.5	+1.7
ILULI				SN	Sn	07 20 05.7	-1.8
ILULI				Trac		07 20 07.8	
	comp=Z,3.7nm,0.0s						
NUUK	Nuuk	3.82	151	*i* P	Pn	07 19 58.5	+1.8
NUUK				*i* S	Sn	07 20 40.1	-1.6
DY2G	Dye2	3.95	102	*i* P	Pn	07 20 02.0	+3.2
DY2G				*i* S	Sn	07 20 43.1	-2.2
DY2G				IAML		07 21 00.2	
	comp=Z,9.5nm,0.6s						
CLRN	Clyde River	5.39	308	PN	Pn	07 20 20.1	+1.8
CLRN				Trac		07 21 36.8	
	comp=Z,3.5nm,0.2s						
ICESG	Greenland Ices	6.22	68	*i* P	Pn	07 20 31.5	+1.5
ICESG				*i* S	Sn	07 21 38.3	-3.0
FRB	Frobisher Bay	6.46	240	SN	Sn	07 21 42.9	-3.8
FRB				SN	Sn	07 21 44.7	-2.0
FRB				Trac		07 22 00.8	
	comp=Z,13nm,0.5s						
ISOG	Isortoq, Green	7.06	99	*e*		07 23 06.6	
SUMG	Summit	7.78	42	*i* P	Pn	07 20 51.2	-0.1
KNGQ	Kangiqsujuaq	9.11	236	PN	Pn	07 21 11.3	+2.0
KNGQ				SN	Sn	07 22 47.2	-4.5

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*OTT **16** 07:20:13.4±0.2, 67°.49N×55°.83W, h18km, ML3.8/1, Offshore western Greenland. 350km east from Qikiqtarjuaq, Nu Davis Strait.*

*DNK **16** 07:20:14.0±0.3, 67°.68N×56°.17W, h37km±6km, ML2.4*

ISC 16 07:20:07.3±1.0**, 67°.82N**±0°.08×**56°.23W**±0°.06**, h10km, n10, σ2s.54**/14**, Davis Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFJD	Kangerlussuaq	2.32	108	*i* S	Sn	07 21 13.6	-0.4
SFJD				IAML		07 21 28.9	
	comp=Z,87nm,0.5s						
SFJD	Kangerlussuaq	2.32	108	PN	Pb	07 20 48.5	-0.6
SFJD				SN	Sn	07 21 12.8	-1.2
SFJD				Trac		07 21 16.2	
	comp=Z,1.9nm,0.1s						
ILULI	Ilulissat	2.35	51	*i* S	Sb	07 21 17.6	-1.0
ILULI	Ilulissat	2.35	51	PN	Pg	07 20 52.7	+0.5
ILULI				SN	Sb	07 21 18.4	-0.2
ILULI				Trac		07 21 20.9	
	comp=Z,12nm,0.1s						
DY2G	Dye2	4.12	105	*i* S	Sn	07 21 56.1	-2.5
DY2G				IAML		07 22 17.8	
	comp=Z,22nm,0.5s						
CLRN	Clyde River	5.15	307	PN	Pb	07 21 33.8	-3.6
CLRN				Trac		07 22 35.2	
	comp=Z,4.4nm,0.2s						
ICESG	Greenland Ices	6.23	71	*i* P	Pn	07 21 42.9	+3.3
ICESG				*i* S	Sn	07 22 48.6	-2.3
ICESG				IAML		07 23 00.5	
	comp=Z,7.4nm,0.5s						
FRB	Frobisher Bay	6.50	237	PN	Pn	07 21 45.6	+2.7
FRB				SN	Sn	07 22 56.1	-0.9
FRB				Trac		07 23 02.9	
	comp=Z,14nm,0.5s						
SUMG	Summit	7.67	44	*i* S	Sn	07 23 22.5	-3.6
SUMG				IAML		07 23 32.0	
	comp=Z,5.1nm,0.6s						
KNGQ	Kangiqsujuaq	9.16	234	SN	Sn	07 23 58.7	-3.6
KNGQ				SN	Sn	07 23 59.0	-3.4
KNGQ				Trac		07 24 07.0	
	comp=Z,158nm,1.7s						

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*FUNV **16** 07:30:41.0, 10°.72N×70°.40W, h8km, MW3.9*

ISC 16 07:30:39.3±1.8**, 10°.70N**±0°.04×**70°.41W**±0°.03**, h7km**±15km**, n21, σ1s.54**/40**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIQV	Siquisique	0.59	94	*e*P	Pb	07 30 52.0	0.0
MONV	Montecano	1.32	19	*e*P	Pg	07 31 04.6	-0.1
MONV				*e*S	Sn	07 31 22.5	+0.4
SDV	Santo Domingo	1.81	187	*e*P	Pb	07 31 12.6	-0.3
SDV				*e*S	Sn	07 31 32.4	-2.0
URIC	Uribia, Colomb	1.85	303	*e*P	Pn	07 31 11.5	+0.2
URIC				*e*S	Sn	07 31 36.2	+1.3
VIGV	El Vigia	2.07	207	*e*P	Pn	07 31 15.1	+0.6
VIGV				*e*S	Sn	07 31 42.0	+1.5
MAPV	Macapo	2.10	114	*e*P	Pb	07 31 16.1	-1.7
MAPV				*e*S	Sn	07 31 41.6	+0.3
MCQV	Machiques	2.19	253	*e*S	Sn	07 31 44.1	+0.7
SOCV	Socops	2.44	190	*e*P	Pn	07 31 20.1	+0.6
SOCV				*e*S	Sb	07 31 52.7	-1.0
SOCV	Socops	2.44	190	*e*P	Pn	07 31 19.8	+0.3
SOCV				*e*S	Sn	07 31 50.1	+0.6
CRJC	Cerrejon, Guaj	2.45	278	*e*P	Pn	07 31 19.9	+0.2
CRJC				*e*S	Sn	07 31 49.9	-0.1
CVALL	Valledupar, Ce	2.81	266	*e*P	Pn	07 31 24.9	+0.3
CVALL				*e*S	Sn	07 31 57.5	-1.2
BENV	Beln	2.86	104	*e*P	Pn	07 31 26.8	+1.5
BENV				*e*S	Sn	07 31 58.9	-1.2
BAUV	El Baul	2.91	127	*e*P	Pn	07 31 27.5	+1.5
BAUV				*e*S	Sn	07 32 00.9	-0.3
LL6C	La Loma 6 Bece	2.97	252	*e*P	Pn	07 31 26.5	-0.3
LL6C				*e*S	Sn	07 32 01.7	-1.1
CAPV	Capacho	3.38	214	*e*P	Pn	07 31 33.0	+0.3
CAPV				*e*S	Sn	07 32 13.1	-0.1
OCAC	Ocana	3.77	230	*e*P	Pn	07 31 38.0	+0.1
OCAC				*e*S	Sb	07 32 35.5	+3.4
ELOV	Elorza	3.78	166	*e*P	Pn	07 31 40.1	+2.1
ELOV				*e*S	Sn	07 32 25.6	+2.8
ELOV	Elorza	3.78	166	*e*P	Pn	07 31 39.7	+1.7
ELOV				*e*S	Sn	07 32 21.5	-1.3
ARGC	Ariguani, Magd	3.87	258	*e*P	Pn	07 31 39.0	-0.2
ARGC				*e*S	Sn	07 32 23.6	-1.2
PAMC	Pamplona, Colo	4.03	214	*e*P	Pn	07 31 42.1	+0.3
PAMC				*e*S	Sn	07 32 24.8	-4.7
MERV	Las Mercedes	4.30	109	*e*P	Pn	07 31 45.2	+0.1
MERV				*e*S	Sn	07 32 32.2	-3.3

IDC 16 07:38:55.4±8.4**, 16°.27S**×**173°.15W, h0km, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.1**/45**, mbtmp3.4**/4**, ML3.0**/1**, Error ellipse: s-maj=347.8km s-min=26.4km az=137.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.70	30	Pn	Pn	07 39 38.4	-1.8
	2.8nm,0.3s,baz=50,slow=4.9,SNR=8.8						
AFI				Sn	Sn	07 40 07.0	-6.6
	8.6nm,0.3s,baz=132,slow=4.4,SNR=4.4						
WRA	Warramunga Arr	49.89	257	P	P	07 47 51.2	+0.1
	0.3nm,0.9s,baz=96,slow=6.7,SNR=5.6						
ASAR	Alice Springs	50.08	253	P	P	07 47 51.7	-0.9
	1.0nm,0.8s,baz=89,slow=8.3,SNR=7.7						
ILAR	Eielson Array	83.25	11	P	P	07 51 24.5	+1.1
	0.3nm,0.6s,baz=198,slow=3.6,SNR=6.6						

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*IDC **16** 07:42:24.4±5.4, 51°.88N×178°.53E, h98km±49km, mb3.4/10, mb1 3.7/12, mb1mx3.4/71, mbtmp3.8/12, Error ellipse: s-maj=32.9km s-min=13.1km az=178.0*

*NEIC **16** 07:42:25.4±2.7, 51°.8N±0°.2×178°.5E±0°.1, h103km±9km, mb4.0/18, Error ellipse: s-maj=27.7km s-min=9.9km az=181.0*

ISC 16 07:42:25.6±0.9**, 51°.8N**±0°.2×**178°.46E**±0°.07**, h113km, n38, σ1s.10**/33**, mb3.6**/10**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMY	Shemya	2.84	291	Pn	Pn	07 43 07.5	-2.0
ADK	Adak	3.01	86	Pn	Pn	07 43 10.5	-1.3
ATKA	Atka Island	4.56	82	Pn	Pn	07 43 32.0	-0.4
NIKH	Nikolski High	7.86	76	Pn	Pn	07 44 17.9	+1.0
UNV	Unalaska Valle	9.34	71	Pn	Pn	07 44 38.0	+1.0
PETK	Petropavlovsk-	12.73	284	P	Pn	07 45 23.4	+1.1
	0.3nm,0.3s,baz=85,slow=20,SNR=1.6						
O18K	Koktuh Hills	16.76	51	P	P	07 46 14.1	+0.5
O18K				IAmb	IAmb	07 46 29.1	
	comp=Z,11nm,1.1s						
SVW2	Sparrevohn	17.00	47	P	P	07 46 17.5	+1.4
SVW2				IAmb	IAmb	07 46 41.3	
	comp=Z,15nm,1.5s						
OHAK	Old Harbor	17.21	60	P	P	07 46 16.4	-2.0
OHAK				IAmb	IAmb	07 46 37.3	
	comp=Z,36nm,1.4s						
Q19K	Cape Douglas,	17.30	55	P	P	07 46 18.0	-1.5
N19K	Bonanza Creek	17.40	48	P	Pn	07 46 22.1	+1.0
N19K				IAmb	IAmb	07 46 27.6	
	comp=Z,11nm,1.1s						
KDAK	Kodiak Island	17.66	59	P	P	07 46 21.2	-2.1
	comp=Z,0.7nm,0.3s,baz=301,slow=5.0,SNR=38						
KDAK	Kodiak Island	17.66	59	IAmb	IAmb	07 46 26.2	
	comp=Z,23nm,1.2s						
M19K	Big River Lodg	17.83	45	P	P	07 46 23.8	-1.5
M19K				IAmb	IAmb	07 46 51.6	
	comp=Z,12nm,1.4s						
K20K	Telida	18.56	41	P	P	07 46 33.9	+0.6
K20K				IAmb	IAmb	07 46 41.0	
	comp=Z,9.5nm,1.5s						
CNPM	China Poot	18.63	54	P	P	07 46 33.7	-0.4
BRLK	Bradley Lake	18.86	53	P	P	07 46 35.6	-0.9
J20K	Nowinta River	18.91	38	P	Pn	07 46 38.1	-0.7
SUA	Susitna One	19.33	48	P	P	07 46 42.6	+0.8
SUA				IAmb	IAmb	07 46 45.8	
	comp=Z,12nm,1.2s						
SEW	Seward	19.63	52	P	P	07 46 44.5	-0.4
IMAR	Indian Mountai	19.96	34	P	P	07 46 48.8	+0.4
H21K	Melozitna Rive	20.13	35	P	P	07 46 49.4	-0.8
H21K				IAmb	IAmb	07 47 11.2	
	comp=Z,7.0nm,1.5s						
MLY	Manley	20.60	38	P	P	07 46 55.6	+0.2
I23K	Minto, Yukon-K	21.18	39	P	P	07 47 02.1	+0.6
ILAR	Eielson Array	22.02	41	P	P	07 47 08.4	-2.0
	comp=Z,0.4nm,0.6s,baz=256,slow=10,SNR=7.5						
KLR	Kul'dur	29.43	284	P	P	07 48 17.9	-0.3
	comp=Z,2.9nm,0.6s,baz=65,slow=6.9,SNR=11						
H11N2	WAKE ISLAND Hy	33.25	200	T	T	08 24 15.0	
	baz=11,slow=76,SNR=19						
H11N3	WAKE ISLAND Hy	33.26	200	T	T	08 24 15.7	
	baz=11,slow=76,SNR=17						
H11N1	WAKE ISLAND Hy	33.27	200	T	T	08 24 15.9	
	baz=11,slow=76,SNR=16						
YKA	Yellowknife Ar	36.19	46	P	P	07 49 16.3	-0.4
	comp=Z,0.2nm,0.4s,baz=281,slow=9.2,SNR=5.9						
SONM	Songino Array	44.93	295	P	P	07 50 29.7	+0.7
	comp=Z,1.3nm,0.6s,baz=66,slow=7.6,SNR=11						
SONM	Songino Array	44.93	295	IAmb	IAmb	07 50 29.9	
	comp=Z,1.0nm,0.6s						
NVAR	Mina Array Bea	45.19	81	P	P	07 50 31.9	+0.7
	comp=Z,0.7nm,0.6s,baz=295,slow=7.2,SNR=8.1						
PDAR	Pinedale Array	47.80	71	P	P	07 50 50.9	-0.7
	comp=Z,0.4nm,0.5s,baz=298,slow=3.5,SNR=5.8						
MKAR	Makanchi Array	58.43	307	P	P	07 52 08.6	-0.5
	comp=Z,0.9nm,0.5s,baz=48,slow=4.9,SNR=14						
TXAR	Lajitas Array	60.27	79	P	P	07 52 21.9	-0.1
	comp=Z,0.3nm,0.5s,baz=315,slow=5.5,SNR=8.6						
AKTO	Aktyubinsk	66.35	323	P	P	07 53 02.3	+0.6
	comp=Z,2.8nm,0.6s,baz=47,slow=9.2,SNR=9.7						
WRA	Warramunga Arr	81.15	222	P	P	07 54 29.0	+0.7
	comp=Z,0.5nm,0.4s,baz=31,slow=5.8,SNR=7.9						

IDC 16 07:44:47.3±796.0**, 52°.20N**×**34°.09E, h0km, Error ellipse: s-maj=328.7km s-min=103.3km az=26.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	4.89	21	*i*		08 14 20.0	
	baz=203,slow=326,SNR=1.0						
I31KZ	AKTYUBINSK INF	15.07	87	*i*		09 18 50.0	
	baz=286,slow=302,SNR=0.9						
I46RU	ZALESOVO INFRA	30.00	66	*i*		10 49 40.0	
	baz=287,slow=319,SNR=1.7						

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*NEIC **16** 07:51:18.6±2.6, 6°.09N±0°.07×126°.0E±0°.1, h80km±4km, mb4.4/16, Error ellipse: s-maj=20.3km s-min=8.7km az=71.0*

*IDC **16** 07:51:23.2±0.9, 5°.86N×125°.78E, h133km±5km, mb3.9/21, mb1 4.0/21, mb1mx3.7/58, mbtmp4.3/21, MS2.8/1, Ms1 2.8/1, ms1mx2.1/40, Error ellipse: s-maj=26.7km s-min=11.9km az=74.0*

*MAN **16** 07:51:23.1, 5°.87N×126°.00E, h116km, mb4.9, ML3.9, MS3.9*

*DJA **16** 07:51:23.5±1.5, 6°N±14°×12°6E±°, h129km±15km, M4.6/8, mB4.9/7, mb4.7/6, MLv4.8/8, Mw(mB)4.2/7*

ISC 16 07:51:22.5±0.8**, 5°.90N**±0°.04×**125°.90E**±0°.08**, h127km**±6km**, n66, σ1s.41**/72**, mb4.3**/28**, 3C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	0.96	281	⇓*i*P	Pn	07 51 44.4	-0.6
GSPH				*i* S	Sn	07 52 01.4	-0.6
DAV	Davao City (W)	1.20	345	P	Pn	07 51 47.5	+0.3
	171nm,0.3s,baz=262,slow=4.8,SNR=10						
DAV				S	Sn	07 52 08.1	+2.1
	354nm,0.3s,baz=46,slow=23,SNR=12						
DAV	Davao City (W)	1.20	345		Pn	07 51 48.8	+1.5
KCP	Kidapawan	1.36	324	⇓*e*P	Pn	07 51 50.1	+1.1
KCP				*i* S	Sn	07 52 06.3	-2.8
BUKP	Musuan	2.13	337	⇑*e*P	Pn	07 51 59.6	+1.6
BUKP				*e*S	Sn	07 52 27.3	+1.9
SGSI	Sangihe	2.23	190	P	Pn	07 52 00.6	+1.3
SGSI				S	Sn	07 52 28.7	+1.2
BIPH	Bislig	2.31	11	⇑*e*P	Pn	07 52 00.3	+0.1
BIPH				*e*S	Sn	07 52 31.6	+2.3
PAGZ	Pagadian	3.16	308	⇑*e*P	Pn	07 52 13.5	+2.3
TNTI	Ternate	5.30	164	P	Pn	07 52 39.6	-0.1
TNTI	Ternate	5.30	164	Pn	Pn	07 52 37.9	-1.8
KMSI	Cibinong	5.63	200	P	Pn	07 52 46.6	+2.5
	1.3nm11µm177nm,0.5s						
GTOI	Gorontalo	5.97	209	P	Pn	07 52 49.8	+1.1
MRSI	Marisa	6.68	216	P	Pn	07 53 00.8	+2.5
	0.7nm2µm153nm,0.9s						
LBMI	Labuha	6.69	166	P	Pn	07 52 57.5	-0.9
	0.3nm1µm72nm,0.5s						
TOLI2	Tolitoli	6.98	227	Pn	Pn	07 53 03.3	+1.0
MYLDM	Lahad Datu	7.40	265	Pn	Pn	07 53 06.4	-1.6
LUWI	Luwuk	7.57	204		Pn	07 53 04.9	-5.4
SANI	Sanana	7.90	179	P	Pn	07 53 10.9	-3.8
APSI	Ampana	7.99	212	P	Pn	07 53 17.6	+1.7
	59nm,0.7s						
MPSI	Mapaga	8.15	228	P	Pn	07 53 21.6	+3.5
	534nm18nm,0.5s						
MTN	Manton Dam	19.34	164	P	Pn	07 55 39.4	-1.1
KNRA	Kununurra	21.63	173	P	P	07 56 03.8	+1.1
KNRA				IAmb	IAmb	07 56 14.1	
	comp=Z,16nm,0.9s						
FITZ	Fitzroy Crossi	23.85	181	P	P	07 56 23.7	-0.5
	comp=Z,1.0nm,0.3s,baz=4.8,slow=9.9,SNR=10						
COEN	Coen	26.14	139	P	P	07 56 41.7	-3.3
WB0	Warramunga Arr	26.84	162	P	P	07 56 53.9	+2.6
WB0				IAmb	IAmb	07 57 14.7	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	26.99	162	P	P	07 56 53.0	+0.3
	comp=Z,0.5nm,0.4s,baz=342,slow=10.0,SNR=10						
WRA	Warramunga Arr	26.99	162	P	P	07 56 54.9	+2.2
WB2	Warramunga Arr	27.00	162	P	P	07 56 53.7	+1.1
WB2				IAmb	IAmb	07 57 13.1	
	comp=Z,11nm,1.4s						
PSA00	Pilbara Seismi	27.94	192	P	P	07 57 01.5	+0.4
PSA00				IAmb	IAmb	07 57 30.2	
	comp=Z,21nm,1.4s						
CMAR	Chiang Mai Arr	29.10	298	P	P	07 57 12.5	+1.0
	comp=Z,1.0nm,0.3s,baz=130,slow=6.9,SNR=4.4						
BBOO	Buckleboo	39.69	167	P	P	07 58 43.5	+1.1
STKA	Stephens Creek	40.44	159	P	P	07 58 48.3	-0.3
	comp=Z,2.0nm,1.0s,baz=308,slow=4.0,SNR=3.2						
STKA	Stephens Creek	40.44	159	P	P	07 58 50.0	+1.4
KLR	Kul'dur	43.46	6	P	P	07 59 13.9	+1.0
	comp=Z,1.5nm,0.6s,baz=223,slow=4.7,SNR=7.4						
KLR				LR	LR	08 15 34.4	
	comp=Z,13nm,21.1s,baz=50,slow=33						
SONM	Songino Array	44.99	341	P	P	07 59 24.8	-0.5
	comp=Z,0.4nm,0.6s,baz=152,slow=6.5,SNR=2.7						
SONM				PcP	PcP	08 01 04.5	+0.2
	comp=Z,1.1nm,0.8s,baz=175,slow=4.9,SNR=7.1						
SONM	Songino Array	44.99	341	IAmb	IAmb	07 59 27.3	
	comp=Z,1.6nm,1.4s						
PETK	Petropavlovsk-	53.76	23	P	P	08 00 32.9	+1.3
	comp=Z,1.5nm,0.6s,baz=203,slow=6.3,SNR=1.6						
MKAR	Makanchi Array	55.31	325	P	P	08 00 43.3	+0.3
	comp=Z,1.2nm,0.3s,baz=117,slow=7.1,SNR=44						
MKAR				PcP	PcP	08 01 41.9	-0.2
	comp=Z,2.3nm,0.5s,baz=127,slow=3.7,SNR=11						
ZALV	Zalesovo Beam	58.29	333	P	P	08 01 03.4	-0.4
	comp=Z,0.5nm,0.3s,baz=131,slow=8.1,SNR=4.0						
KURBB	Kurchatov Arra	59.48	327	P	P	08 01 12.0	-0.1
	comp=Z,2.4nm,0.8s,baz=127,slow=6.1,SNR=22						
KURK	Kurchatov	59.48	327	P	P	08 01 11.6	-0.4
KKAR	Karatay Array	61.09	316	P	P	08 01 22.1	-1.1
BVAR	Borovoye Array	65.06	327	P	P	08 01 48.8	-0.4
	comp=Z,1.1nm,0.4s,baz=185,slow=13,SNR=7.0						

TIXI	Tiksi	65.70	1	P	P	08 01 53.6	+0.7
	comp=Z,2.7nm,0.4s,baz=156,slow=4.3,SNR=6.0						
TIXI	Tiksi	65.70	1	P	P	08 01 53.6	+0.7
TIXI				IAmb	IAmb	08 01 55.0	
	comp=Z,3.6nm,0.9s						
NRIK	Noril'sk	68.14	346	P	P	08 02 09.0	+0.5
	comp=Z,5.5nm,0.6s,baz=134,slow=5.7,SNR=10						
NRIK	Noril'sk	68.14	346	P	P	08 02 07.6	-0.9
NRIK				IAmb	IAmb	08 02 09.6	
	comp=Z,5.4nm,0.7s						
ABKAR	Akbulak array	69.96	320	P	P	08 02 19.1	-1.0
ABKAR	Akbulak array	69.96	320	P	P	08 02 19.4	-0.7
ABKAR				IAmb	IAmb	08 02 20.4	
	comp=Z,3.1nm,0.8s						
AKTO	Aktyubinsk	71.46	321	P	P	08 02 28.4	-0.7
	comp=Z,3.6nm,0.5s,baz=110,slow=9.2,SNR=12						
ARU	Arti	72.67	328	P	P	08 02 35.5	-0.8
	comp=Z,2.6nm,0.2s,baz=92,slow=1.2,SNR=10						
KIRV	Kirov	77.95	329	P	P	08 03 05.9	-0.4
	comp=Z,19nm,0.5s,baz=102,slow=1.4,SNR=6.4						
KLMR	Klimovskoe	83.12	331	eP	P	08 03 32.5	-1.4
KLMR				AMP		08 03 34.2	
	comp=Z,7.0nm,0.7s						
ILAR	Eielson Array	83.51	26	P	P	08 03 36.2	+0.3
	comp=Z,1.2nm,0.7s,baz=243,slow=5.1,SNR=11						
RIDG	Independent Ri	84.42	27	P	P	08 03 39.3	-1.3
RIDG				IAmb	IAmb	08 03 52.8	
	comp=Z,7.5nm,1.2s						
ARCES	ARCESS Array B	88.14	340	P	P	08 03 57.9	-0.7
	comp=Z,4.5nm,0.9s,baz=96,slow=7.6,SNR=7.2						
SPITS	Spitsbergen Ar	88.20	349	P	P	08 03 58.7	-0.1
	comp=Z,11nm,0.9s,baz=95,slow=9.3,SNR=13						
FINES	FINESS Array B	89.54	332	P	P	08 04 04.4	-0.9
	comp=Z,1.1nm,0.5s,baz=49,slow=5.8,SNR=10						
HFS	Hagfors	95.72	332	P	P	08 04 32.7	-1.2
	comp=Z,3.2nm,0.9s,baz=63,slow=0.3,SNR=5.7						
NOA	NORSAR Array B	96.49	334	P	P	08 04 36.3	-1.1
	comp=Z,0.4nm,0.6s,baz=71,slow=6.1,SNR=1.5						
TORD	Torodi Ar. Bea	121.44	289	PKP	PKPdf	08 10 02.0	+0.1
	comp=Z,1.5nm,0.4s,baz=66,slow=1.7,SNR=18						
TORD	Torodi Ar. Bea	121.44	289		PKPdf	08 10 01.8	-0.1
KIC	Kosan Boka	129.25	283	ePKIKP	PKiKP	08 10 17.5	-0.2
	comp=Z,5.7nm,0.6s						
DBIC	Dimbokro	129.30	284	PKP	PKiKP	08 10 17.6	-0.1
	comp=Z,1.3nm,0.6s,baz=136,slow=2.3,SNR=4.3						
TIC	Toumodi	129.46	284	ePKIKP	PKPdf	08 10 17.2	-0.1
LIC	Lamto	129.56	283	ePKIKP	PKPdf	08 10 17.6	+0.1
	comp=Z,12nm,0.9s						

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*TIR **16** 08:11:29.4, 38°.57N×20°.66E, h18^{km}±3^{km}, Md3.6, Ml3.0*

*IASPEI **16** 08:11:32.8±0.8, 38°.73N±0°.02×20°.59E±0°.03, h12^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=2.9km az=88.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ATH **16** 08:11:33.4, 38°.74N×20°.62E, h10^{km}±1^{km}, ML3.2/7, Error ellipse: s-maj=1.4km s-min=0.7km az=298.0*

*THE **16** 08:11:33.8, 38°.74N×20°.61E, h7^{km}, ML3.4/11, Error ellipse: s-maj=0.9km s-min=0.5km az=284.0*

ISC 16 08:11:32.3±0.7, **38°.73N**±0°.02×**20°.57E**±0°.03, **h12**^{km}±4^{km}, **n80**, σ**1**^{s}**83**/118, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRAG	Dragano-Lefkad	0.05	172	P	Pg	08 11 35.4	+0.9
DRAG				S	Sg	08 11 36.8	+0.6
	240µm,0.2s						
DRAG	Dragano-Lefkad	0.05	172	P	Pg	08 11 35.5	+0.9
DRAG				S	Sg	08 11 36.9	+0.6
LKD2	Lefkada island	0.09	52	P	Pg	08 11 35.4	+0.4
LKD2				S	Sg	08 11 37.0	-0.1
LKD2	Lefkada island	0.09	52	P	Pg	08 11 35.5	+0.4
LKD2				S	Sg	08 11 36.9	-0.1
LKD2				AML	AML	08 11 37.2	
LKD2				AML	AML	08 11 37.2	
	comp=N,65912µm,0.4s						
LKD2	Lefkada island	0.09	52	P	Pg	08 11 35.5	+0.5
	baz=0.0						
LKD2				S	Sg	08 11 37.0	-0.1
	baz=0.0						
NYDR	Nydri-Lefkada	0.10	101	P	Pg	08 11 35.7	+0.6
NYDR				S	Sg	08 11 37.5	+0.3
	comp=N,66µm,0.2s						
NYDR	Nydri-Lefkada	0.10	101	P	Pg	08 11 35.7	+0.6
NYDR				S	Sg	08 11 37.5	+0.3
TSLK	Tsoukalades, L	0.12	37	P	Pg	08 11 36.0	+0.7
TSLK				S	Sg	08 11 37.7	+0.2
	comp=N,29µm,0.3s						
TSLK	Tsoukalades, L	0.12	37	P	Pg	08 11 36.1	+0.7
TSLK				S	Sg	08 11 38.2	+0.7
TSLK				AML	AML	08 11 39.0	
	comp=E,57894µm,0.2s						
TSLK				AML	AML	08 11 40.5	
	comp=N,59617µm,0.4s						
EVGI	Lefkada island	0.13	148	P	Pb	08 11 36.6	-0.1
EVGI				S	Sg	08 11 38.6	+0.7
	comp=N,50µm,0.2s						
EVGI	Lefkada island	0.13	148	P	Pb	08 11 36.6	-0.1
EVGI				S	Sg	08 11 38.9	+1.0
FSK	Fiskardo	0.27	181	P	Pb	08 11 39.4	+0.2
FSK				S	Sb	08 11 43.9	+0.1
	comp=N,11µm,0.3s						
FSK	Fiskardo	0.27	181	P	Pb	08 11 39.5	+0.4
FSK				S	Sb	08 11 43.9	+0.1
FSK				AML	AML	08 11 44.5	
	comp=N,10845µm,0.4s						
FSK				AML	AML	08 11 44.9	
	comp=E,32918µm,0.2s						
KEF4	Livadi, Kephal	0.49	193	P	Pb	08 11 42.9	+0.1
KEF4				S	Sb	08 11 50.9	+1.0
DMLN	Damoulianata-K	0.52	197	P	Pb	08 11 44.6	+1.3
DMLN				S	Sb	08 11 52.4	+1.6
	comp=E,4µm,0.4s						
LXRA	Lixouri, Kepha	0.54	191	P	Pb	08 11 44.0	+0.3
LXRA				S	Sb	08 11 52.3	+0.8
KEF3	Kipouria, Keph	0.56	198	P	Pg	08 11 43.6	+0.5
KEF3				S	Sb	08 11 52.7	+0.8
	comp=E,7µm,0.2s						
KEF3	Kipouria, Keph	0.56	198	P	Pg	08 11 43.6	+0.5
KEF3				S	Sb	08 11 52.3	+0.4
VLS	Valsamata	0.56	178	P	Pg	08 11 43.8	+0.7
VLS				S	Sb	08 11 52.7	+0.8
	comp=E,3µm,0.2s						
VLS	Valsamata	0.56	178	P	Pg	08 11 43.9	+0.7
VLS				S	Sb	08 11 52.6	+0.7
VLS				AML	AML	08 11 54.1	
	comp=N,4520µm,0.2s						
VLS				AML	AML	08 11 54.5	
	comp=E,5459µm,0.2s						
PSDA	Pessada-Kefalo	0.62	179	P	Pg	08 11 45.0	+0.7
PSDA				S	Sb	08 11 54.9	+1.2
	comp=E,505nm,0.2s						
PSDA	Pessada-Kefalo	0.62	179	P	Pg	08 11 45.0	+0.7
PSDA				S	Sb	08 11 54.6	+0.9
IGT	Igoumenitsa	0.82	347	P	Pb	08 11 48.8	+0.3
IGT				S	Sn	08 12 02.0	+0.2
	comp=E,1µm,0.4s						
IGT	Igoumenitsa	0.82	347	P	Pb	08 11 48.8	+0.3
IGT				AML	AML	08 12 06.0	
	comp=E,2059µm,0.4s						
IGT				AML	AML	08 12 06.7	
	comp=N,1946µm,0.4s						
IGT	Igoumenitsa	0.82	347	P	Pb	08 11 49.1	+0.6
	baz=345						
IGT				S	Sn	08 12 02.3	+0.5
	baz=345						
JAN	Janina	0.95	13	P	Pb	08 11 51.0	+0.3
JAN	Janina	0.95	13	P	Pn	08 11 52.4	+0.9
VTN	Vitineika	0.95	149	P	Pn	08 11 51.7	+0.3
RLS	Riolos of Patr	0.98	133	P	Pg	08 11 51.3	+0.2
EVR	Evrytania	0.99	79	P	Pg	08 11 51.6	+0.3
EVR	Evrytania	0.99	79	P	Pg	08 11 51.6	+0.3
ANX	Ano Chora	1.07	97	P	Pb	08 11 52.7	-0.1
ANX	Ano Chora	1.07	97	P	Pb	08 11 53.0	+0.1
EFP	Efpalio	1.09	106	P	Pb	08 11 53.1	-0.1
EFP	Efpalio	1.09	106	P	Pb	08 11 53.1	-0.1
EFP				AML	AML	08 12 13.9	
	comp=E,1658µm,0.2s						
EFP				AML	AML	08 12 15.9	
	comp=N,1233µm,0.5s						
KASA	Kassiopi	1.12	334	P	Pg	08 11 54.8	+0.9
KEK	Kerkira	1.15	329	P	Pg	08 11 55.6	+1.3
KEK	Kerkira	1.15	329	P	Pg	08 11 55.5	+1.2
DRO	Drossia	1.19	131	P	Pn	08 11 54.8	0.0
DRO				AML	AML	08 12 22.3	
	comp=E,2242µm,0.4s						
DRO				AML	AML	08 12 24.6	
	comp=N,2874µm,0.5s						
LAKA	Lakka	1.21	114	P	Pn	08 11 55.1	0.0
LAKA				S	Sn	08 12 13.4	+1.9
	comp=N,2µm,0.5s						
LAKA	Lakka	1.21	114	P	Pn	08 11 55.3	+0.2
SRN	Sarande	1.23	339	P	Pg	08 11 57.3	+1.4
	baz=339						
SRN				S	Sg	08 12 19.2	+7.4
	baz=339						
SRN				AMP			
	comp=N,0.4nm,0.4s,baz=339						
MAKR	Makrakomi, Fth	1.25	77	P	Pb	08 11 56.3	+0.4
MAKR	Makrakomi, Fth	1.25	77	P	Pg	08 11 56.4	0.0
THL	Klokotos Trika	1.40	53	P	Pb	08 11 58.8	+0.4
THL	Klokotos Trika	1.40	53	P	Pg	08 11 59.2	0.0
AGG	Agios Georgios	1.41	78	P	Pg	08 11 59.4	+0.1
AGG	Agios Georgios	1.41	78	P	Pg	08 11 59.4	+0.1
LSK	Leskovik	1.42	1	P	Pg	08 12 00.8	+1.4
	baz=359						
LSK				S	Sg	08 12 22.9	+5.1
	baz=359						
LSK				AMP			
	comp=E,1.3nm,0.7s,baz=359						
KLV	Kalavryta, Ach	1.42	118	P	Pn	08 11 58.3	+0.3
KLV	Kalavryta, Ach	1.42	118	P	Pn	08 11 58.4	+0.3
ITM	Ithomi	1.89	145	P	Pb	08 12 07.9	+1.2
KBN	Korca	1.90	5	P	Pg	08 12 09.0	+0.4
	baz=2.0						
KBN				S	Sb	08 12 30.0	-0.6
	baz=2.0						
KBN				AMP			
	comp=N,0.5nm,0.6s,baz=2.0						
VLO	Vlora	1.92	335	P	Pn	08 12 04.0	-0.8
	baz=335						
PYL	PYLOS	2.06	153	P	Pb	08 12 09.7	+0.1
SCTE	Santa Cesarea	2.10	310	P	Pn	08 12 09.0	+1.6
	baz=313						
SCTE				AMP			
	comp=E,0.2nm,0.4s,baz=313						
FNA	Florina	2.14	17	P	Pb	08 12 09.8	-1.3
	baz=13						
FNA				S	Sb	08 12 38.7	+1.0
	baz=13						
VIL2	Platees	2.18	103	P	Pb	08 12 12.9	+1.1
OHR	Ohrid	2.38	4	i Pn	Pb	08 12 15.0	-0.2
TIR	Tirane	2.67	349	P	Pn	08 12 15.7	+0.6
	baz=348						
TIR				AMP			
	comp=N,0.1nm,0.5s,baz=348						
PHP	Peshkopia	2.95	358	P	Pb	08 12 22.2	-2.6
	baz=357						
BCI	Bajram Curri	3.65	354	P	Pn	08 12 31.7	+3.1
	baz=354						
BCI				AMP			
	comp=N,0.2nm,0.9s,baz=354						
BOSS	Bosilegrad	4.03	21	ePn	Pn	08 12 35.2	+1.3
BARS	Barje	4.19	13	ePn	Pn	08 12 38.3	+2.3
SELS	Selova	4.50	5	ePn	Pn	08 12 41.8	+1.5
SJES	Sjenica	4.55	355	ePn	Pn	08 12 42.9	+1.9
STON	Ston	4.67	333	ePn	Pn	08 12 42.1	-0.5
STON				Sn	Sn	08 13 32.7	-4.0
ZAPS	Zavoj	4.80	18	ePn	Pn	08 12 49.8	+5.4
IVAS	Ivanjica	4.85	356	ePn	Pn	08 12 46.4	+1.3
GRUS	Gruza	5.15	1	ePn	Pn	08 12 50.7	+1.5
MAKA	Makarska	5.28	331	ePn	Pn	08 12 50.5	-0.5
MAKA				Sn	Sn	08 13 47.3	-4.4
DIVS	Divibare	5.38	356	ePn	Pn	08 12 53.6	+1.2
RICI	Ricice	5.42	333	ePn	Pn	08 12 53.1	+0.3
RICI				Sn	Sn	08 13 51.9	-3.3
HVAR	Hvar	5.42	326	ePn	Pn	08 12 52.8	-0.2
HVAR				Sn	Sn	08 13 51.0	-4.3
ZIRJ	Zirje	6.16	325	ePn	Pn	08 13 02.6	-0.5
ZIRJ				Sn	Sn	08 14 07.6	-5.8
MORI	Morici	6.30	326	ePn	Pn	08 13 04.8	-0.2
MORI				Sn	Sn	08 14 12.7	-4.1
DUGI	Dugi Otok	6.69	324	ePn	Pn	08 13 09.7	-0.7
DUGI				Sn	Sn	08 14 21.9	-4.6
NVLJ	Novalja	7.22	326	ePn	Pn	08 13 16.6	-0.9
NVLJ				Sn	Sn	08 14 34.5	-5.0
SMRN	Sveta Marina	7.91	325	ePn	Pn	08 13 26.7	-0.3
SMRN				Sn	Sn	08 14 50.5	-5.9
BRJN	Brijuni	7.99	323	ePn	Pn	08 13 27.1	-1.1
BRJN				Sn	Sn	08 14 53.8	-4.8

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*IDC **16** 08:15:52.0±2.1, 15°.05S×73°.72W, h76^{km}±18^{km}, mb3.6/3, mb1 4.0/7, mb1mx3.7/39, mbtmp4.2/7, Error ellipse: s-maj=34.6km s-min=14.4km az=37.0*

*NEIC **16** 08:15:53.2±1.5, 15°.06S±0°.09×73°.68W±0°.09, h84^{km}±9^{km}, mb4.5/9, Error ellipse: s-maj=15.9km s-min=9.4km az=220.0*

ISC 16 08:15:52.8±0.6, **15°.16S**±0°.07×**73°.77W**±0°.09, **h100**^{km}, **n45**, σ**1**^{s}**50**/46, **mb4.3**/6, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	4.34	316	P	Pn	08 16 55.2	-1.5
	26nm,0.3s,baz=131,slow=11,SNR=45						
NNA				S	Sn	08 17 44.4	-2.0
	21nm,0.3s,baz=33,slow=23,SNR=6.3						
PB12	IPOC Station P	4.76	137	Pn	Pn	08 17 02.8	+0.4
PB16	IPOC Station P	5.16	128		Pn	08 17 10.2	+1.9
LPAZ	La Paz	5.54	102	P	Pn	08 17 17.3	+3.8
	9.6nm,0.3s,baz=308,slow=7.5,SNR=192						
LPAZ	La Paz	5.54	102	Pn	Pn	08 17 16.9	+3.4
PB11	IPOC Station P	6.03	140	Pn	Pn	08 17 20.0	+0.4
TA02	Huaiquique	6.15	146		Pn	08 17 22.0	+0.8
TA01	Diego Aracena	6.37	148		Pn	08 17 24.9	+0.7
PATCX	Punta Patache	6.60	149	Pn	Pn	08 17 29.4	+2.1
PATCX					Sn	08 18 39.6	-1.6
PB08	IPOC Station P	6.63	139		Pn	08 17 28.8	+0.8
PB01	IPOC Station P	7.13	146		Pn	08 17 34.8	+0.2
CZSB	Cruzeiro do Su	7.46	8	Pn	Pn	08 17 36.8	-2.2
PB07	IPOC Station P	7.50	151		Pn	08 17 39.8	+0.1
PB09	IPOC Station P	7.88	148		Pn	08 17 45.6	+0.8
PB04	IPOC Station P	7.92	155	Pn	Pn	08 17 45.6	+0.2
PB04					Sn	08 19 12.1	-1.3
PB06	IPOC Station P	8.49	153	Pn	Pn	08 17 54.7	+1.6
PB06					Sn	08 19 27.2	-0.2
LVC	Limon Verde	8.72	149	P	Pn	08 17 57.2	+0.7
	2.2nm,0.3s,baz=353,slow=6.9,SNR=23						
LVC				S	Sn	08 19 30.4	-2.8
	3.0nm,0.3s,baz=51,slow=23,SNR=9.7						
LVC	Limon Verde	8.72	149	Pn	Pn	08 17 57.7	+1.3
PB10	IPOC Station P	8.85	160	Pn	Pn	08 17 58.3	+0.5
ETMB	Extrema	9.09	55	Pn	Pn	08 18 00.3	-0.8
ATAH	Atahualpa	9.17	330	P	Pn	08 18 03.5	+0.8
	0.5nm,0.3s,baz=90,slow=16,SNR=1.2						
SAML	Samuel	12.05	60		Pn	08 18 38.1	-3.1
SIV	San Ignacio	12.26	96	P	Pn	08 18 42.6	-1.5
	1.7nm,0.3s,baz=275,slow=11,SNR=32						
AC02	Maricunga	12.40	160	Pn	Pn	08 18 47.1	+0.9
VILB	Vilhena	13.35	82	Pn	Pn	08 18 56.5	-1.9
PTLB	Pontes e Lacer	14.12	93	Pn	Pn	08 19 07.6	-0.8
MACA	Manacapuru-AM	17.56	49		P	08 19 50.4	-0.6
H03N1	Juan Fernandez	18.79	193	T	T	08 38 49.5	
	baz=16,slow=74,SNR=439						
H03N2	Juan Fernandez	18.79	194	T	T	08 38 49.3	
	baz=16,slow=74,SNR=293						
H03N3	Juan Fernandez	18.81	193	T	T	08 38 49.0	
	baz=16,slow=74,SNR=596						
PTGA	Pitinga	19.78	45	P	P	08 20 16.1	+0.8
	2.7nm,0.3s,baz=230,slow=19,SNR=45						
BAUV	El Baul	24.61	14	P	P	08 21 03.6	-0.3
BAUV				IAmb	IAmb	08 21 05.3	
	comp=Z,19nm,1.2s						
TXAR	Lajitas Array	52.82	327	P	P	08 24 59.2	+0.9
	comp=Z,1.0nm,0.6s,baz=150,slow=9.0,SNR=18						
TX31	Lajitas Ar. Si	52.82	327	P	P	08 24 59.3	+1.0
TX31				IAmb	IAmb	08 25 00.1	
	comp=Z,6.8nm,0.9s						
TX32	Lajitas Array	52.82	327	P	P	08 24 59.1	+0.9
MIAR	Mount Ida	52.90	339	P	P	08 24 59.5	+0.9
MIAR				IAmb	IAmb	08 24 59.7	
	comp=Z,5.0nm,0.9s						
ANMO	Albuquerque	58.70	329	P	P	08 25 41.7	+1.3
	comp=Z,0.8nm,0.5s,baz=141,slow=6.5,SNR=4.0						
ANMO	Albuquerque	58.70	329	IAmb	IAmb	08 27 42.3	
	comp=Z,3.2nm,1.0s						
SDCO	Great Sand Dun	60.48	331	P	P	08 25 54.1	+1.5
TORD	Torodi Ar. Bea	79.78	73	P	P	08 27 51.1	+0.6
	comp=Z,0.8nm,0.6s,baz=271,slow=6.0,SNR=5.8						
ASAR	Alice Springs	132.88	216	PKP	PKiKP	08 34 59.0	+0.7
	comp=Z,0.2nm,0.6s,baz=134,slow=2.6,SNR=5.1						
WRA	Warramunga Arr	135.50	219	PKP	PKiKP	08 35 04.3	+0.6
	comp=Z,0.6nm,0.9s,baz=135,slow=2.2,SNR=7.0						
ZALV	Zalesovo Beam	137.82	19	PKP	PKPdf	08 35 06.4	+1.1
	comp=Z,1.0nm,0.5s,baz=329,slow=4.3,SNR=4.2						
MKAR	Makanchi Array	142.67	27	PKP	PKPdf	08 35 16.0	+1.6
	comp=Z,0.5nm,0.7s,baz=300,slow=1.6,SNR=2.0						
SONM	Songino Array	147.42	360	PKPbc	PKPab	08 35 27.3	0.0
	comp=Z,1.4nm,0.7s,baz=315,slow=2.0,SNR=7.2						

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*KRSC **16** 08:20:15.6±1.3, 52°.38N×159°.22E, h72^{km}±13^{km}, ML5.0*

*MOS **16** 08:20:16.7±0.8, 52°.41N×159°.11E, h72^{km}, mb4.7/4, Error ellipse: s-maj=9.7km s-min=4.8km az=82.8*

MOS Felt (III) at Rybachiy, Vilyuchinsk, (II-III) at Shipunskiy, (II) at Petropavlovsk-Kamchatskiy.

*NEIC **16** 08:20:18.2±2.1, 52°.45N±0°.09×158°.9E±0°.1, h77^{km}±3^{km}, mb4.4/13, Error ellipse: s-maj=13.4km s-min=11.7km az=183.0*

*IDC **16** 08:20:20.5±0.8, 52°.63N×158°.63E, h96^{km}±6^{km}, mb3.7/18, mb1 4.0/20, mb1mx3.7/53, mbtmp4.1/20, MS3.0/1, Ms1 3.0/1, ms1mx2.4/52, Error ellipse: s-maj=16.6km s-min=12.7km az=135.0*

ISC 16 08:20:17.4±0.6, **52°.43N**±0°.04×**159°.10E**±0°.04, **h73**^{km}±5^{km}, **n131**, σ**1**^{s}**35**/143, **mb4.2**/25, **2C**, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	Russkaya	0.36	271	PN	Pn	08 20 29.4	+0.1
RUS				S	Sn	08 20 38.1	+0.1
RUS	Russkaya	0.36	271	i P	Pn	08 20 29.4	+0.1
RUS				eS	Sn	08 20 38.1	+0.1
MTVR	Mutnovka	0.56	276	PN	Pn	08 20 31.6	+0.3
MTVR	Mutnovka	0.56	276	i P	Pn	08 20 31.6	+0.3
DALK	Dalny	0.64	341	PN	Pn	08 20 32.2	+0.3
DALK				S	Sn	08 20 42.6	0.0
DALK	Dalny	0.64	341	eP	Pn	08 20 32.2	+0.3
DALK				eS	Sn	08 20 42.6	0.0
PET	Petropavlovsk	0.66	336	⇑ iPN	Pn	08 20 31.8	-0.2
PET				eS	Sn	08 20 42.5	-0.4
PET				pmax	pmax		
	comp=Z,7µm,0.4s						
PET				smax	smax		
	comp=E,6µm,0.3s						
PET				smax	smax		
	comp=N,16µm,0.5s						
PET	Petropavlovsk	0.66	336	i P	Pn	08 20 32.3	+0.3
PET				eS	Sn	08 20 42.9	0.0
PET	Petropavlovsk	0.66	336		Pn	08 20 32.0	0.0
KRMR	Karymshinskiy	0.71	305	PN	Pn	08 20 32.8	+0.1
KRMR				S	Sn	08 20 43.9	-0.1
KRMR	Karymshinskiy	0.71	305	i P	Pn	08 20 32.8	+0.1
KRMR				eS	Sn	08 20 43.9	-0.1
ASAK	Asacha	0.73	267	PN	Pn	08 20 33.6	+0.6
ASAK	Asacha	0.73	267	i P	Pn	08 20 33.6	+0.6
NLC	Nalytchevo	0.76	11	PN	Pn	08 20 33.3	+0.1
NLC				S	Sn	08 20 45.0	+0.1
NLC	Nalytchevo	0.76	11	i P	Pn	08 20 33.3	+0.1
NLC				eS	Sn	08 20 45.0	+0.1
UGLR	Uglovaya	0.80	348	PN	Pn	08 20 34.6	+0.8
UGLR	Uglovaya	0.80	348	eP	Pn	08 20 34.6	+0.8
SMAR	Somma	0.86	348	PN	Pn	08 20 34.7	+0.1
SMAR	Somma	0.86	348	eP	Pn	08 20 34.7	+0.1
SDLR	Sedlovina	0.86	352	PN	Pn	08 20 34.9	+0.4
SDLR	Sedlovina	0.86	352	i P	Pn	08 20 34.9	+0.4
AVH	Avacha	0.87	346	PN	Pn	08 20 35.5	+1.0
AVH	Avacha	0.87	346	i P	Pn	08 20 35.5	+1.0
SPN	Mys Shipunski	0.88	40	PN	Pn	08 20 35.5	+0.9
SPN				S	Sn	08 20 48.2	+0.9
SPN	Mys Shipunski	0.88	40	i P	Pn	08 20 35.5	+0.9
SPN				eS	Sn	08 20 48.2	+0.9
KDTR	Khodutka, Kamc	0.88	226	PN	Pn	08 20 35.0	+0.4
KDTR				S	Sn	08 20 47.4	0.0
KDTR	Khodutka, Kamc	0.88	226	i P	Pn	08 20 35.0	+0.4
KDTR				eS	Sn	08 20 47.4	0.0
KRER	Koryakskii	0.90	347	PN	Pn	08 20 35.9	+0.8
KRER	Koryakskii	0.90	347	i P	Pn	08 20 35.9	+0.8
KOK	Koryaka	0.91	342	PN	Pn	08 20 36.0	+0.9
KOK	Koryaka	0.91	342	i P	Pn	08 20 36.0	+0.9
PEA0B	Petropavlovsk-	1.09	309	c iPN	Pn	08 20 37.3	+0.1
PEA0B	Petropavlovsk-	1.09	309		Pn	08 20 37.6	+0.4
PETK	Petropavlovsk-	1.09	309	P	Pn	08 20 36.5	-0.7
	comp=N,102nm,0.3s,baz=111,slow=18,SNR=1718						
PETK				S	Sn	08 20 52.4	+0.4
	comp=N,256nm,0.3s,baz=122,slow=24,SNR=22						
PETK				LR	LR	08 21 09.0	
	comp=N,522nm,18.6s,baz=144,slow=66						
PETK	Petropavlovsk-	1.09	309		Pn	08 20 36.6	-0.6
APC	Apacha	1.28	294	PN	Pn	08 20 40.4	+0.8
APC				S	Sn	08 20 57.3	+1.1
APC	Apacha	1.28	294	i P	Pn	08 20 40.4	+0.8
APC				eS	Sn	08 20 57.3	+1.1
MIPR	Malaya Ipel'ka	1.44	265	PN	Pn	08 20 42.6	+0.9
MIPR	Malaya Ipel'ka	1.44	265	i P	Pn	08 20 42.6	+0.9
GNL	Ganaly	1.45	332	PN	Pn	08 20 42.5	+0.6
GNL				S	Sn	08 21 01.4	+1.1
GNL	Ganaly	1.45	332	eP	Pn	08 20 42.5	+0.6
GNL				eS	Sn	08 21 01.4	+1.1
KII	Karymskiy	1.63	7	PN	Pn	08 20 45.8	+1.6
KII				S	Sn	08 21 06.5	+2.1
KII	Karymskiy	1.63	7	eP	Pn	08 20 45.8	+1.6
KII				eS	Sn	08 21 06.5	+2.1
PAU	Pauzhetka	1.71	237	PN	Pn	08 20 46.3	+1.1
PAU	Pauzhetka	1.71	237	eP	Pn	08 20 46.3	+1.1
SKR	Severo-Kuril’s	2.55	228	ePN	Pn	08 20 58.6	+2.1
SKR				eS	Sn	08 21 28.3	+1.8
SKR				pmax	pmax		
	comp=Z,55nm,0.3s						
SKR				smax	smax		
	comp=N,581nm,0.4s						
SKR				smax	smax		
	comp=E,472nm,0.4s						
MKZ	Mys Kozlova	2.65	35	PN	Pn	08 20 58.0	+0.2
MKZ				S	Sn	08 21 28.2	-0.7
MKZ	Mys Kozlova	2.65	35	eP	Pn	08 20 58.0	+0.2
MKZ				eS	Sn	08 21 28.2	-0.7
TUMD	Tumrok D	2.89	15	eP	Pn	08 21 02.8	+1.7
TUMR	Tumrok	2.93	12	PN	Pn	08 21 02.8	+1.1
KMNR	Kamenistaya	3.40	11	PN	Pn	08 21 10.7	+2.5
KMNR	Kamenistaya	3.40	11	eP	Pn	08 21 10.7	+2.5
ESO	Esso	3.51	356	PN	Pn	08 21 12.8	+3.2
ESO	Esso	3.51	356	eP	Pn	08 21 12.8	+3.2
KPT	Kopyto	3.61	10	PN	Pn	08 21 12.7	+1.8
KPT	Kopyto	3.61	10	eP	Pn	08 21 12.7	+1.8
KOZ	Kozyrevsk	3.67	7	PN	Pn	08 21 13.6	+1.9
KOZ	Kozyrevsk	3.67	7	eP	Pn	08 21 13.6	+1.9
KBTR	Krutoberegovo	4.37	28	PN	Pn	08 21 22.7	+1.5
KBTR	Krutoberegovo	4.37	28	eP	Pn	08 21 22.7	+1.5
KBG	Krutoberegovo	4.38	27	PN	Pn	08 21 21.9	+0.6
KBG	Krutoberegovo	4.38	27	eP	Pn	08 21 21.9	+0.6
BKI	Bering	4.93	53	PN	Pn	08 21 28.8	-0.1
BKI	Bering	4.93	53	eP	Pn	08 21 28.8	-0.1
BKI				eS	Sn	08 22 18.8	-5.7
MA2	Magadan	8.54	330	i PN	Pn	08 22 19.0	+0.8
MA2	Magadan	8.54	330		Pn	08 22 17.8	-0.4
SMY	Shemya	9.14	82	PN	Pn	08 22 28.3	+1.9
SMY	Shemya	9.14	82	Pn	Pn	08 22 28.3	+1.9
KUR	Kuril'sk	10.32	230	i PN	Pn	08 22 44.1	+1.7
SEY	Seymchan	11.12	344	LR	LR	08 27 42.5	
	comp=E,73nm,20.4s,baz=80,slow=41						
YSS	Yuzh-Sakhalins	11.91	249	i PN	Pn	08 23 05.8	+1.8
ASAJ	Asahikawa	13.75	239	P	Pn	08 23 29.4	+0.5
	comp=E,1.0nm,0.3s,baz=65,slow=11,SNR=18						
ERM	Erimo	14.99	232	i P	Pn	08 23 43.5	-1.4
ERM	Erimo	14.99	232	Pn	Pn	08 23 42.6	-2.4
BILL	Bilibino	16.04	10	i P	Pn	08 23 58.0	-0.1
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KLR	Kul'dur	17.52	270	P	Pn	08 24 15.4	-1.2
	comp=Z,0.1nm,0.3s,baz=82,slow=15,SNR=2.1						
KLR	Kul'dur	17.52	270	i P	Pn	08 24 17.1	+0.5
KLR				pmax	pmax		
	comp=Z,1.0nm,0.8s						

ZEA	Zeya	19.09	287	*e*P	Pn	08 24 44.7	+9.2
MJAR	Matsushiro Arr	21.66	231	P	P	08 25 03.4	+1.7
	comp=Z,3.7nm,0.7s,baz=21,slow=10,SNR=3.7						
TIXI	Tiksi	23.44	336	P	P	08 25 17.5	-2.3
	comp=Z,1.7nm,0.3s,baz=129,slow=9.9,SNR=9.9						
TIXI	Tiksi	23.44	336	*i* P	P	08 25 17.8	-2.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TIXI	Tiksi	23.44	336	P	P	08 25 17.7	-2.0
TIXI				IAmb	IAmb	08 25 38.7	
	comp=Z,6.2nm,1.1s						
Q19K	Cape Douglas,	26.94	57	P	P	08 25 52.1	+0.6
KDAK	Kodiak Island	27.66	60	P	P	08 26 00.3	+2.4
	comp=Z,3.5nm,0.9s,baz=315,slow=8.6,SNR=4.8						
KDAK	Kodiak Island	27.66	60	IAmb	IAmb	08 26 05.4	
	comp=Z,22nm,1.4s						
KNK	Knik Glacier	29.23	51	P	P	08 26 12.7	+0.8
SML	Sawmill	29.25	51	P	P	08 26 12.6	+0.5
ILAR	Eielson Array	29.72	44	P	P	08 26 16.6	+0.5
	comp=Z,0.6nm,1.0s,baz=260,slow=6.4,SNR=5.7						
BMAR	Burnt Mountain	30.64	39	P	P	08 26 25.4	+1.1
BCAR	Beaver Creek A	32.12	47	P	P	08 26 39.2	+1.9
H11N2	WAKE ISLAND Hy	33.20	166	T	T	09 01 58.8	
	baz=352,SNR=326						
H11N3	WAKE ISLAND Hy	33.21	166	T	T	09 01 59.3	
	baz=352,slow=74,SNR=436						
H11N1	WAKE ISLAND Hy	33.21	167	T	T	09 01 57.6	
	baz=352,slow=74,SNR=511						
H11S1	WAKE ISLAND Hy	34.37	167	T	T	09 03 22.8	
	baz=351,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	34.38	167	T	T	09 03 23.7	
	baz=351,slow=76,SNR=62						
H11S2	WAKE ISLAND Hy	34.39	167	T	T	09 03 24.6	
	baz=351,slow=76,SNR=13						
A36M	Sachs Harbour	37.01	30	P	P	08 27 20.3	+1.0
A36M				IAmb	IAmb	08 27 40.5	
	comp=Z,6.9nm,0.9s						
EUNU	Eureka	42.74	13	P	P	08 28 07.3	+0.6
EUNU				IAmb	IAmb	08 28 08.0	
	comp=Z,4.7nm,0.6s						
RES	Resolute Bay	44.17	22	P	P	08 28 18.9	+0.8
	comp=Z,0.6nm,0.5s,baz=327,slow=7.5,SNR=4.6						
SPITS	Spitsbergen Ar	47.69	350	P	P	08 28 44.5	-1.4
SPITS				pmax	pmax		
	comp=Z,40nm,1.2s						
SPB2	Spitsbergen Ar	47.69	350	P	P	08 28 44.8	-1.1
MKAR	Makanchi Array	47.90	296	P	P	08 28 45.0	-2.8
	comp=Z,0.6nm,0.5s,baz=51,slow=6.2,SNR=8.7						
NEEM	North Greenlan	49.03	8	*i* P	P	08 28 55.9	-0.6
NEEM				IAmb	IAmb	08 28 57.1	
	comp=Z,2.2nm,0.4s						
DAG	Danmarks Havn	51.07	359	*i* P	P	08 29 09.6	-1.9
DAG	Danmarks Havn	51.07	359	*i* P	P	08 29 10.4	-1.1
DAG				IAmb	IAmb	08 29 11.7	
	comp=Z,1.3nm,0.7s						
ARCES	ARCESS Array B	53.73	342	P	P	08 29 29.6	-1.8
	comp=Z,3.4nm,0.9s,baz=49,slow=10.0,SNR=1.4						
SUMG	Summit	54.69	6	*i* P	P	08 29 38.7	0.0
SUMG				IAmb	IAmb	08 29 39.4	
	comp=Z,2.5nm,0.6s						
NVAR	Mina Array Bea	56.54	69	P	P	08 29 54.7	+2.4
	comp=Z,0.8nm,0.6s,baz=303,slow=7.2,SNR=8.7						
PDAR	Pinedale Array	58.38	60	P	P	08 30 06.8	+1.6
	comp=Z,1.9nm,0.6s,baz=318,slow=2.7,SNR=15						
FINES	FINESS Array B	60.49	336	P	P	08 30 18.0	-1.0
	comp=Z,3.8nm,1.0s,baz=46,slow=8.0,SNR=3.7						
FINES	FINESS Array B	60.49	336	*i* P	P	08 30 19.6	+0.6
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN	Obninsk	62.75	327	*i* P	P	08 30 32.8	-1.5
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NB2	NORSAR Subarra	64.01	343	P	P	08 30 41.2	-1.4
	comp=Z,1.0nm,0.4s,baz=21,slow=6.9						
NOA	NORSAR Array B	64.01	343	P	P	08 30 41.8	-0.8
	comp=Z,1.1nm,0.4s,baz=21,slow=6.8,SNR=8.3						
AKASG	Malin Array Be	68.87	328	P	P	08 31 11.0	-2.7
	comp=Z,0.7nm,0.3s,baz=30,slow=6.9,SNR=4.6						
TX31	Lajitas Ar. Si	71.46	66	P	P	08 31 31.9	+1.9
TX32	Lajitas Array	71.46	66	P	P	08 31 32.0	+1.9
TX32				IAmb	IAmb	08 31 32.8	
	comp=Z,6.2nm,1.2s						
TXAR	Lajitas Array	71.46	66	P	P	08 31 31.7	+1.6
	comp=Z,2.6nm,0.5s,baz=296,slow=5.1,SNR=62						
TXAR	Lajitas Array	71.46	66	P	P	08 31 31.4	+1.4
TXAR	Lajitas Array	71.46	66	P	P	08 31 31.4	+1.4
GERES	GERESS Array B	74.89	337	P	P	08 31 49.2	-0.8
	comp=Z,0.4nm,0.4s,baz=46,slow=5.8,SNR=3.4						
WRA	Warramunga Arr	75.22	204	P	P	08 31 52.5	+0.5
	comp=Z,2.9nm,0.8s,baz=19,slow=6.1,SNR=13						
WRA	Warramunga Arr	75.22	204	P	P	08 31 52.4	+0.5
ASAR	Alice Springs	78.90	203	P	P	08 32 13.9	+1.4
	comp=Z,1.6nm,0.6s,baz=14,slow=5.3,SNR=22						
ASAR	Alice Springs	78.90	203	P	P	08 32 14.0	+1.4
STKA	Stephens Creek	85.33	195	P	P	08 32 46.7	+0.8
	comp=Z,2.1nm,0.8s,baz=332,slow=3.9,SNR=3.9						
ESDC	Sonseca Array	87.10	347	P	P	08 32 54.2	-0.6
	comp=Z,0.4nm,0.5s,baz=7.8,slow=4.2,SNR=4.3						
H03N2	Juan Fernandez	134.81	89	T	T	11 09 48.2	
	baz=314,slow=77,SNR=77						
H03N1	Juan Fernandez	134.82	89	T	T	11 09 47.2	
	baz=314,slow=77,SNR=67						
H03N3	Juan Fernandez	134.82	89	T	T	11 09 47.6	
	baz=314,slow=77,SNR=59						
PLCA	Paso Flores	144.61	91	PKP	PKPbc	08 39 44.0	+0.2
	comp=Z,2.2nm,0.8s,baz=318,slow=10.0,SNR=4.9						

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*PGC **16** 08:22:30.6±0.7, 50°.54N×130°.35W, h10^{km}, MLSn3.4/37, Mw4.5, 207km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **16** 08:22:33.0±1.5, 50°.65N×129°.95W, h0^{km}, mb3.8/3, mb1 4.1/10, mb1mx3.6/47, mbtmp3.8/10, ML3.7/6, MS3.4/6, Ms1 3.4/6, ms1mx3.0/55, Error ellipse: s-maj=21.6km s-min=9.8km az=71.0*

*NEIC **16** 08:22:36.6±2.3, 50°.66N±0°.08×129°.8W±0°.2, h29^{km}±10^{km}, Error ellipse: s-maj=17.5km s-min=9.4km az=68.0*

*NEIC **16** 08:22:38, 50°.54N×130°.35W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.55; $M_{\theta\theta}$-6.80; $M_{\phi\phi}$6.04; $M_{r\theta}$-1.10; $M_{\theta\phi}$1.81; $M_{\phi r}$-0.82; Fault plane solution: $M_0$6.80000×10^{15} NP1:ϕ_s233.00000°, δ89.00000°, λ12.00000°. NP2:ϕ_s143.00000°, δ78.00000°, λ179.00000°. Principal axes: T 6.5224, Plg9.0000°, Azm99.0000°; N 0.5880, Plg78.0000°, Azm240.0000°; P -7.1104, Plg7.0000°, Azm7.0000°;*

ISC 16 08:22:32.8±2.5**, 50°.61N**±0°.05×**130°.11W**±0°.06**, h14^{km}**±16^{km}**, n139, σ1^{s}.59**/139**, mb4.0**/7**, MS3.3**/4**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	Holberg	1.26	88		Pn	08 22 54.5	-1.5
HOLB	Holberg	1.26	88	Pn	Pn	08 22 54.5	-1.5
HOLB				Sn	Sg	08 23 11.4	-2.0
BPBC	Brooks Peninsu	1.57	106	Pn	Pn	08 22 57.9	-2.4
BPBC				Sn	Sn	08 23 17.4	-2.9
PACB	Port Alice, BC	1.68	95	Pn	Pn	08 23 00.1	-1.6
PACB				Sn	Sn	08 23 20.1	-2.9
PHC	Port Hardy	1.71	86	Pn	Pn	08 23 01.0	-1.1
PHC				Sn	Sn	08 23 22.4	-1.4
HG4B	Hotspring	1.82	339	Pn	Pn	08 22 59.6	-4.1
HG4B				Sn	Sn	08 23 21.5	-5.0
MAYB	Maynard	1.89	95	Pn	Pn	08 23 03.3	-1.4
BBB	Bella Bella	2.02	38	Pn	Pn	08 23 05.0	-1.3
	18nm,0.3s,baz=234,slow=6.6,SNR=276						
BBB				Sn	Sn	08 23 29.5	-1.8
	46nm,0.3s,baz=308,slow=18,SNR=18						
BBB	Bella Bella	2.02	38	Pn	Pn	08 23 04.9	-1.3
BBB				Sn	Sn	08 23 29.3	-2.0
EDB	Eliza Dome	2.06	110	Pn	Pn	08 23 05.0	-1.9
TLCB	Telegraph Cove	2.09	90	Pn	Pn	08 23 06.6	-0.8
TLCB				Sn	Sn	08 23 32.3	-0.8
BNB	Barry Inlet	2.22	333	Pn	Pn	08 23 05.5	-3.8
WOSB	Woss	2.31	100	Pn	Pn	08 23 09.6	-0.9
WOSB				Sn	Sn	08 23 36.6	-2.2
NCRB	Newcastle Ridg	2.60	93	Pn	Pn	08 23 13.4	-1.0
ETB	Estevan Point	2.62	117	Pn	Pn	08 23 12.9	-1.7
BUTB	Butedale	2.66	22	Pn	Pn	08 23 14.3	-1.0
BUTB				Sn	Sn	08 23 45.8	-1.7
BNKB	Banks Island	2.73	3	Pn	Pn	08 23 13.8	-2.4
BNKB				Sn	Sn	08 23 45.5	-3.5
GDR	Gold River	2.75	106	Pn	Pn	08 23 14.8	-1.6
MOBC	Moresby Island	2.79	336	Pn	Pn	08 23 13.2	-3.8
MOBC				Sn	Sn	08 23 46.2	-4.2
NC89	ODP889	2.88	131	Sn	Sn	08 23 52.2	-0.1
BNAB	Bonilla	2.91	354	Pn	Pn	08 23 15.4	-3.2
SPLB	Strathcona Par	2.95	102	Pn	Pn	08 23 18.0	-1.2
DIB	Dawson Inlet,	2.98	332	Pn	Pn	08 23 16.4	-3.2
HWKB	Hawksbury Isla	3.05	11	Pn	Pn	08 23 18.5	-2.2
HWKB				Sn	Sn	08 23 54.3	-2.7
TOFB	Tofino	3.08	117	Pn	Pn	08 23 19.2	-1.8
TOFB				Sn	Sn	08 23 53.8	-3.8
CBB	Campbell River	3.10	99	Pn	Pn	08 23 20.6	-0.6
CBB	Campbell River	3.10	99	Pn	Pn	08 23 20.6	-0.6
CBB				Sn	Sn	08 23 55.4	-2.6
BTB	Buttle Lake	3.17	109	Pn	Pn	08 23 21.1	-1.4
MWAB	Mount Washingt	3.21	104	Pn	Pn	08 23 22.2	-0.7
GRNB	Grenville Isla	3.24	2	Pn	Pn	08 23 21.2	-2.1
GRNB				Sn	Sn	08 23 58.7	-2.9
OZB	Mount Ozzard	3.42	117	Pn	Pn	08 23 24.5	-1.2
OZB	Mount Ozzard	3.42	117	Pn	Pn	08 23 23.9	-1.8
OZB				Sn	Sn	08 24 02.3	-3.7
MBLB	Minette Bay Lo	3.55	14	Pn	Pn	08 23 26.3	-1.1
MBLB				Sn	Sn	08 24 07.9	-1.2
KITB	Kitimat	3.59	14	Pn	Pn	08 23 26.8	-1.2
KITB				Sn	Sn	08 24 08.0	-2.1
BFSB	Bamfield	3.69	117	Pn	Pn	08 23 28.4	-0.8
B928	Bamfield	3.69	117	Pn	Pn	08 23 28.1	-1.2
RUBB	Prince Rupert	3.72	359	Pn	Pn	08 23 28.1	-1.7
TXB	Texada	3.76	102	Pn	Pn	08 23 29.3	-1.1
MGB	Mount Grey	3.86	113	Pn	Pn	08 23 29.8	-2.0
GHNB	Nanoose	4.01	107	Pn	Pn	08 23 32.9	-0.8
SHB	Sechelt	4.14	102	Pn	Pn	08 23 35.0	-0.7
NLLB	Nanaimo Lost L	4.19	107	Pn	Pn	08 23 35.5	-0.8
PFB	Port Renfrew	4.22	117	Pn	Pn	08 23 35.7	-0.9
OCP	Olym-Cheeka Pk	4.26	121	Pn	Pn	08 23 36.6	-0.6
CLRS	Cowichan Lake	4.28	112		Pn	08 23 37.6	+0.2
CLRS	Cowichan Lake	4.28	112	Pn	Pn	08 23 36.9	-0.4
C03A	Quillayute Air	4.50	124	Pn	Pn	08 23 41.5	+1.0
WPB	Watts Point	4.54	99	Pn	Pn	08 23 41.0	0.0
BIB	Bowen Island	4.55	103	Pn	Pn	08 23 40.1	-1.0
GOBB	Galiano Island	4.59	109	Pn	Pn	08 23 41.7	0.0
WSLR	Whistler	4.63	93	Pn	Pn	08 23 42.5	+0.2
OBC	Olympics--Boni	4.71	121	Pn	Pn	08 23 43.8	+0.3
B010	North Saanich	4.75	112	Pn	Pn	08 23 43.8	-0.2
PGC	Sidney	4.75	112	Pn	Pn	08 23 43.4	-0.6
PGC	Sidney	4.75	112	Pn	Pn	08 23 43.3	-0.6
B009	North Saanich	4.75	112	Pn	Pn	08 23 43.8	-0.1
B011	North Saanich	4.75	112	Pn	Pn	08 23 43.6	-0.4
SNB	Saturna Island	4.87	109	Pn	Pn	08 23 44.6	-0.9
STW	Striped Peak	4.88	118	Pn	Pn	08 23 45.1	-0.6
VGZ	Gonzales	4.94	114	Pn	Pn	08 23 45.6	-0.8
VGZ				Sn	Sn	08 24 40.7	-2.7
HNBB	Haney	5.04	102	Pn	Pn	08 23 48.2	+0.2
NLWA	Neilton Lookou	5.22	126	Pn	Pn	08 23 50.3	-0.1
FSB	Fort Saint Jam	5.24	40	Pn	Pn	08 23 50.9	+0.2
FSJB	Fort St James	5.24	40	Pn	Pn	08 23 50.4	-0.3
FSJB				Sn	Sn	08 24 49.1	-1.8
LLLB	Lillooet	5.24	87	Pn	Pn	08 23 50.9	+0.2
VDB	Vedder Mountai	5.42	104	Pn	Pn	08 23 54.1	+1.0
A05A	Maple Falls	5.44	104	Pn	Pn	08 23 54.6	+1.2
WISH	Wishkah	5.45	127	Pn	Pn	08 23 54.2	+0.7
CMW	Cultus Mountai	5.65	110	Pn	Pn	08 23 57.0	+0.7
GNW	Green Mountain	5.67	120	Pn	Pn	08 23 57.2	+0.6
HOPB	Hope	5.74	99	Pn	Pn	08 23 57.3	-0.2
JCW	Jim Creek	5.86	111	Pn	Pn	08 23 59.5	+0.3
RPW	Rockport	6.00	108	Pn	Pn	08 24 01.9	+0.7
D05A	Enumclaw	6.36	119	Pn	Pn	08 24 06.9	+0.9
GPW	Glacier Peak	6.37	110	Pn	Pn	08 24 07.6	+1.2
FMW	Mount Fremont	6.68	120	Pn	Pn	08 24 11.9	+1.3
PNT	Penticton	6.89	97	Pn	Pn	08 24 14.1	+0.7
LTY	Liberty	7.07	115		Pn	08 24 17.2	+1.4
LTY	Liberty	7.07	115	Pn	Pn	08 24 17.1	+1.3
BMBC	Bull Mountain	7.24	38	Pn	Pn	08 24 19.2	+1.1
BMBC				Sn	Sn	08 25 39.8	-0.4
B08A	Colville Reser	7.38	104	Pn	Pn	08 24 20.6	+0.6
B08A	Colville Reser	7.38	104	Pn	Pn	08 24 21.2	+1.2
HOOD	Mount Hood Mea	7.76	130	Pn	Pn	08 24 26.9	+1.5
DLBC	Dease Lake	7.84	0	Pn	Pn	08 24 27.2	+0.7
	0.5nm,0.3s,baz=190,slow=19,SNR=15						
DLBC				Sn	Sn	08 25 56.2	+1.2
	0.1nm,0.3s,baz=100,slow=18,SNR=1.2						
DLBC	Dease Lake	7.84	0	Pn	Pn	08 24 27.4	+1.0
E07A	Sunnyside	7.92	117	Pn	Pn	08 24 27.4	0.0
NBC5	NorthernBC 5	8.19	29	Pn	Pn	08 24 32.0	+0.9
NBC5				Sn	Sn	08 26 03.5	+0.1
D08A	Wollman Farm,	8.19	111	Pn	Pn	08 24 31.0	-0.2
C09A	Chrisman Ranch	8.25	105	Pn	Pn	08 24 32.7	+0.8
C09A	Chrisman Ranch	8.25	105	Pn	Pn	08 24 32.8	+0.8
NEW	Newport	8.79	100	Pn	Pn	08 24 39.8	+0.5
	1.1nm,0.3s,baz=294,slow=12,SNR=16						
NEW				LR	LR	08 27 14.2	
	comp=Z,136nm,20.1s,baz=252,slow=32						
NEW	Newport	8.79	100	Pn	Pn	08 24 39.6	+0.2
FNBB	Fort Nelson	9.25	24	Pn	Pn	08 24 45.9	+0.3
FNBB				Sn	Sn	08 26 28.2	-1.3
NBC6	NorthernBC 6	9.47	29	Sn	Sn	08 26 35.2	+0.5
F10A	Beach Ranch, E	9.76	113		Pn	08 24 53.4	+0.7
BSMT	Bassoo Peak	10.40	99	Pn	Pn	08 25 03.1	+1.6
JTMT	Jette	10.75	99	Pn	Pn	08 25 07.5	+1.2
HLID	Hailey	12.80	117		Pn	08 25 36.1	+1.8
BCYI	Bear Canyon	12.93	113		Pn	08 25 36.1	-0.1
YKA	Yellowknife Ar	14.61	29	Pn	Pn	08 25 57.5	-1.3
	0.2nm,0.3s,baz=227,slow=12,SNR=10						
YKA				Sn	Sn	08 28 33.5	-6.8
	0.1nm,0.3s,baz=212,slow=23,SNR=4.9						
NVAR	Mina Array Bea	14.78	141	Pn	Pn	08 26 05.0	+3.5
	0.1nm,0.3s,baz=301,slow=13,SNR=4.4						
LOHW	Long Hollow	14.99	110	IAmb	IAmb	08 26 14.4	
	comp=Z,6.1nm,0.8s						
RLMT	Red Lodge	15.01	103	IAmb	IAmb	08 26 19.2	
	comp=Z,7.2nm,1.1s						
EGAK	Eagle	15.34	342	IAmb	IAmb	08 26 39.6	
	comp=Z,12nm,1.4s						
DUG	Dugway, Tooele	15.96	124		Pn	08 26 17.2	+0.2
BW06	Boulder Array	16.10	111	IAmb	IAmb	08 26 23.3	
	comp=Z,14nm,1.2s						
PD31	Pinedale Array	16.10	111	IAmb	IAmb	08 26 23.3	
	comp=Z,14nm,1.2s						
PDAR	Pinedale Array	16.10	111	Pn	Pn	08 26 22.4	+3.6
	comp=Z,0.2nm,0.3s,baz=312,slow=12,SNR=29						
LAO	LASA Array	16.24	95	IAmb	IAmb	08 26 23.6	
	comp=Z,15nm,1.0s						
NLU	North Lily Min	16.53	123	P	P	08 26 28.8	+2.0
IL31		16.70	335	P	P	08 26 32.9	+4.5
IL31				IAmb	IAmb	08 27 15.3	
	comp=Z,27nm,1.8s						
ILAR	Eielson Array	16.70	335	Pn	P	08 26 30.8	+2.4
	comp=Z,0.1nm,0.3s,baz=146,slow=10,SNR=17						
ISA	Isabella, Lake	17.15	146	P	Pn	08 26 30.8	-1.2
ISA				IAmb	IAmb	08 26 44.6	
	comp=Z,24nm,1.7s						
INK	Inuvik	17.83	356	P	P	08 26 42.6	+1.9
	comp=Z,0.0nm,0.3s,baz=173,slow=7.5,SNR=4.0						
INK				LR	LR	08 33 02.4	
	comp=Z,152nm,21.2s,baz=168,slow=35						
K22A	Casper	18.00	107	IAmb	IAmb	08 26 53.1	
	comp=Z,7.3nm,0.8s						
I21K	Tanana	18.50	330		pP	08 26 55.8	+4.2
RSSD	Black Hills	18.76	100	P	P	08 26 51.4	-0.1
RSSD				IAmb	IAmb	08 27 02.4	
	comp=Z,4.4nm,0.8s						
U15A	North Rim	19.11	131	IAmb	IAmb	08 27 01.0	
	comp=Z,5.2nm,1.0s						
IMAR	Indian Mountai	19.59	331	P	P	08 27 00.1	-0.1
SMCO	Snowmass	19.89	116	IAmb	IAmb	08 27 09.0	
	comp=Z,7.6nm,1.2s						
WUAZ	Wupatki	20.28	131	P	P	08 27 08.5	+0.4
WUAZ				IAmb	IAmb	08 27 57.7	
	comp=Z,15nm,1.6s						
MVCO	Mesa Verde	20.44	123	IAmb	IAmb	08 27 19.3	
	comp=Z,4.9nm,0.8s						
X16A	Lo Mia Camp, P	21.15	133	IAmb	IAmb	08 27 23.9	
	comp=Z,3.3nm,0.9s						
W18A	Petrified Fore	21.41	129	IAmb	IAmb	08 27 26.5	
	comp=Z,8.5nm,1.1s						
ULM	Lac du Bonnet	21.71	78	P	P	08 27 23.3	+0.2
	comp=Z,3.3nm,0.6s,baz=276,slow=10,SNR=3.1						
ULM				LR	LR	08 36 54.5	
	comp=Z,116nm,18.7s,baz=280,slow=40						
F33A	5 Mile Ranch,	22.90	89	P	P	08 27 36.1	+0.2
TUC	Tucson	23.20	135	P	P	08 27 38.9	-0.4
TUC				IAmb	IAmb	08 27 43.5	
	comp=Z,6.9nm,1.2s						
ANMO	Albuquerque	23.23	123	P	P	08 27 41.0	+1.4
	comp=Z,1.8nm,0.8s,baz=322,slow=12,SNR=5.0						
ANMO				LR	LR	08 37 57.3	
	comp=Z,67nm,18.3s,baz=305,slow=40						
ECSD	EROS Data Cent	23.64	94	P	P	08 27 43.9	+0.5
AMTX	Amarillo	25.92	116	P	P	08 28 04.0	-0.4
MNTX	Cornudas Mount	26.32	126	P	P	08 28 07.1	-0.9
MNTX				IAmb	IAmb	08 28 10.9	
	comp=Z,5.8nm,1.1s						
TXAR	Lajitas Array	29.10	127	P	P	08 28 35.2	+2.2
	comp=Z,1.4nm,1.0s,baz=344,slow=8.1,SNR=8.9						
TXAR				LR	LR	08 41 32.2	
	comp=Z,86nm,20.6s,baz=0.0,slow=39						
H11N2	WAKE ISLAND Hy	57.91	262	T	T	09 34 50.7	
	baz=42,slow=76,SNR=571						
H11N3	WAKE ISLAND Hy	57.91	262	T	T	09 34 51.1	
	baz=42,slow=76,SNR=715						
H11N1	WAKE ISLAND Hy	57.93	262	T	T	09 34 51.9	
	baz=42,slow=76,SNR=430						
KLR	Kul'dur	58.47	310	LR	LR	08 58 25.6	
	comp=Z,31nm,18.7s,baz=42,slow=37						
H11S1	WAKE ISLAND Hy	58.94	261	T	T	09 36 10.0	
	baz=41,slow=75,SNR=41						
H11S2	WAKE ISLAND Hy	58.95	261	T	T	09 36 10.7	
	baz=41,slow=75,SNR=53						
H11S3	WAKE ISLAND Hy	58.96	261	T	T	09 36 11.1	
	baz=41,slow=75,SNR=27						

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*IDC **16** 08:24:37.0±2.5, 10°.67S×161°.63E, h81^{km}±23^{km}, mb3.5/5, mb1 3.8/7, mb1mx3.5/32, mbtmp3.9/7, MS3.0/4, Ms1 3.0/4, ms1mx2.7/30, Error ellipse: s-maj=27.6km s-min=21.6km az=68.0*

ISC 16 08:24:34.6±0.9**, 10°.6S**±0°.1×**161°.9E**±0°.1**, h50^{km}, n9, σ2^{s}.95**/9**, mb3.9**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	2.23	301	P	Pn	08 25 09.6	+0.5
	60nm,0.3s,baz=168,slow=3.6,SNR=17						
HNR				S	Sn	08 25 39.3	+3.9
	325nm,0.3s,baz=142,slow=22,SNR=14						
HNR				LR	LR	08 25 55.1	
	comp=Z,139nm,18.9s,baz=103,slow=38						
DZM	Mont Dzumac	12.23	160	P	Pn	08 27 30.0	+3.7
	0.3nm,0.3s,baz=16,slow=9.8,SNR=20						
DZM				S	Sn	08 29 40.5	-0.8
	0.2nm,0.3s,baz=274,slow=16,SNR=2.4						
PMG	Port Moresby	14.56	273	LR	LR	08 33 12.3	
	comp=Z,51nm,20.4s,baz=65,slow=36						
WRA	Warramunga Arr	28.13	247	P	P	08 30 19.8	-2.4
	0.7nm,0.7s,baz=77,slow=9.1,SNR=6.2						
WRA				LR	LR	08 40 57.2	
	comp=Z,32nm,18.2s,baz=225,slow=35						
STKA	Stephens Creek	28.31	218	LR	LR	08 41 09.3	
	comp=Z,59nm,19.4s,baz=27,slow=35						
ASAR	Alice Springs	29.67	240	P	P	08 30 32.1	-3.8
	0.4nm,0.8s,baz=73,slow=9.8,SNR=3.2						
SONM	Songino Array	76.09	325	P	P	08 36 15.9	-1.2
	2.0nm,0.8s,baz=140,slow=5.8,SNR=8.5						
ILAR	Eielson Array	84.31	20	P	P	08 36 59.8	-1.1
	0.9nm,0.9s,baz=228,slow=4.6,SNR=6.8						
NVAR	Mina Array Bea	88.64	51	P	P	08 37 23.4	+0.5
	0.5nm,0.7s,baz=233,slow=5.9,SNR=4.3						

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*NNC **16** 08:33:27.7±2.3, 38°.40N×56°.75E, h0^{km}, mb3.7, Error ellipse: s-maj=30.6km s-min=8.7km az=43.0*

*TEH **16** 08:33:32.4, 38°.25N×56°.96E, h8^{km}, ML3.0*

ISC 16 08:33:31.3±0.9**, 38°.45N**±0°.06×**56°.96E**±0°.05**, h10^{km}, n13, σ1^{s}.22**/17**, 4C-1D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJRD	Bojnurd	0.83	155	*e*Pg	Pg	08 33 45.7	-1.6
MRVT	Maraveh tapeh	1.05	221	*e*Pg	Pg	08 33 50.6	-0.9
GYA0B	ALIBECK ARRAY	1.05	119	⇓P	Pg	08 33 49.9	-1.5
GYA0B				⇑S	Sg	08 34 06.3	+1.2
ISFR	Sfrayin	1.62	149	*e*Pg	Pn	08 34 00.7	+0.5
ISFR				*e*Sg	Sn	08 34 21.2	-0.1
ISFR				*e*		08 34 31.3	
	comp=Z,3µm,0.5s						
IEMG	Emamgholi	1.69	127	*e*		08 34 03.7	
	comp=Z,3µm,0.2s						
IEMG				*e*Pn	Pn	08 34 01.2	0.0
IMND	Minoodasht	1.71	226	*e*Pg	Pn	08 34 01.9	+0.7
SBZV	Sabzevar	2.12	166	*e*		08 34 37.8	
	comp=Z,582nm,0.8s						
SBZV				*e*Pn	Pn	08 34 08.3	+1.2
IAKL	Akhelmad	2.33	142	*e*Pn	Pn	08 34 11.4	+1.4
IAKL				*e*		08 34 54.0	
	comp=Z,772nm,0.4s						
SHRO	Shahrood	2.57	197	*e*Pn	Pn	08 34 14.1	+1.0
IKRD	Kardeh	2.63	129	*e*Pn	Pn	08 34 15.4	+1.4
IKRD				*e*		08 35 06.5	
	comp=Z,488nm,0.3s						
IMYA	Miami	3.27	129	*e*Pn	Pn	08 34 24.5	+1.7
AB31	Akbulak array	11.01	10	⇑Pn	Pn	08 36 07.8	-1.0
	comp=Z,0.3nm,0.5s,baz=199,slow=12,SNR=16						
AB31				Sn	Sn	08 38 13.4	+1.5
	comp=Z,1.7nm,0.8s,baz=192,slow=25,SNR=6.2						
AKTO	Aktyubinsk	12.00	3	⇑Pn	Pn	08 36 21.6	-0.8
	comp=Z,3.4nm,1.2s						
AKTO				⇑S	Sn	08 38 36.6	+0.3
	comp=Z,2.1nm,0.9s						

TAP 16 08:39:23.7, 22°.15N×121°.11E, h34^{km}, ML3.5, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAW	Tawu	0.29	316	*e*P	Pb	08 39 31.5	0.0
	baz=322						
TAW				S	Sb	08 39 36.9	+0.2
	baz=322						
SLIU	Shizi	0.30	283	*i* P	Pn	08 39 31.6	0.0
	baz=291						
SLIU				*e*S	Sb	08 39 37.5	+0.5
	baz=291						
TSEB	Hengchuen, Pin	0.32	219	*i* P	Pn	08 39 32.2	+0.2
	baz=224						
TSEB				*i* S	Sb	08 39 39.0	+1.7
	baz=224						
EAST	Anshuo	0.34	314	*i* P	Pb	08 39 32.0	-0.2
	baz=322						
EAST				*e*S	Sb	08 39 38.0	+0.1
	baz=322						
TWKBT	Hengchun	0.35	234	P	Pb	08 39 32.1	-0.1
	baz=233						
TWKBT				*e*S	Sb	08 39 38.5	+0.5
	baz=233						
TWK1	Hengchun	0.35	235	*i* P	Pb	08 39 32.1	-0.2
	baz=233						
TWK1				*e*S	Sb	08 39 38.5	+0.4
	baz=233						
HEN	Hengchun	0.38	248	*i* P	Pn	08 39 33.0	+0.1
	baz=247						
HEN				*i* S	Sn	08 39 39.8	+1.1
	baz=247						
SNW	Nanwan	0.39	241	P	Pn	08 39 33.2	+0.2
	baz=241						
LAY	Lan-yu	0.42	105	*i* P	Pb	08 39 33.3	0.0
	baz=96						
LAY				*i* S	Sb	08 39 39.9	+0.1
	baz=96						
ECL	Taimali	0.47	342	*i* P	Pb	08 39 33.3	-0.7
	baz=350						
ECL				*e*S	Sb	08 39 40.5	-0.5
	baz=350						
SCZT	Fangliau	0.51	296	*i* P	Pn	08 39 34.8	+0.2
	baz=300						
SCZT				S	Sn	08 39 42.7	+0.5
	baz=300						
TTN	Taitung	0.60	3	P	Pb	08 39 36.5	+0.5
	baz=353						
SSPT	Xinbi	0.60	304	*i* P	Pb	08 39 36.8	+0.8
	baz=311						
SSPT				S	Sb	08 39 45.2	+0.7
	baz=311						
LDUT	Ludao	0.62	32	P	Pn	08 39 35.5	-0.5
	baz=31						
LDUT				S	Sb	08 39 45.0	+0.1
	baz=31						
MASBT	Mashibuluo	0.64	316	P	Pb	08 39 36.6	0.0
	baz=321						
MASBT				S	Sb	08 39 46.2	+0.7

	baz=321						
TWGBT	**Beinan** baz=351	**0.67**	**357**	P	Pn	08 39 35.8	-0.9
TWGBT	baz=351			*e*S	Sn	08 39 46.0	-0.1
TSMG	**Majia** baz=322	**0.70**	**322**	*i* P	Pn	08 39 37.5	+0.2
TSMG	baz=322			S	Sb	08 39 47.8	+0.6
WLCH	**Liuqiu** baz=287	**0.71**	**287**	P	Pb	08 39 39.5	+1.7
WLCH	baz=287			S	Sb	08 39 50.2	+2.9
SSD	**Sandimen** baz=324	**0.74**	**323**	*i* P	Pn	08 39 38.0	+0.2
SSD	baz=324			S	Sb	08 39 48.5	+0.2
LONT	**Longtian** baz=355	**0.76**	**1**	*i* P	Pn	08 39 37.0	-1.0
EDH	**Donghe** baz=11	**0.84**	**12**	*i* P	Pn	08 39 38.7	-0.5
EDH	baz=11			*i* S	Sn	08 39 50.4	+0.1
TWM1	**Shoushan** baz=317	**0.93**	**317**	*i* P	Pb	08 39 43.0	+1.5
SLGT	**Liugui** baz=333	**0.95**	**333**	*i* P	Pb	08 39 41.5	-0.3
SLGT	baz=333			*e*S	Sb	08 39 55.4	+1.3
CHKT	**Chengkung** baz=13	**0.97**	**14**	*i* P	Pn	08 39 40.4	-0.6
CHKT	baz=13			*i* S	Sn	08 39 54.1	+0.4
ELDTW	**Lidau** baz=5.0	**1.04**	**355**	*i* P	Pn	08 39 41.5	-0.6
SGST	**Jiashian** baz=333	**1.05**	**332**	*i* P	Pb	08 39 42.9	-0.6
FULB	**Fuli** baz=8.0	**1.06**	**9**	*i* P	Pn	08 39 41.9	-0.3
FULB	baz=8.0			S	Sn	08 39 55.7	-0.1
STYH	**Taoyuan** baz=343	**1.06**	**343**	P	Pb	08 39 43.0	-0.7
CHN1	**Nanshi** baz=333	**1.17**	**332**	*i* P	Pb	08 39 45.2	-0.2
WTP	**Ta-pu** baz=325	**1.19**	**337**	*i* P	Pb	08 39 45.8	-0.1
WTP	baz=325			S	Sb	08 40 02.1	+1.2
EYUL	**Yuli** baz=8.0	**1.21**	**9**	*i* P	Pn	08 39 43.3	-1.0
EYUL	baz=8.0			S	Sn	08 39 58.8	-0.7
SNST	**Tainan City** baz=332	**1.21**	**332**	P	Pb	08 39 46.6	+0.5
TPUB	**Ta-pu** baz=326	**1.23**	**339**	P	Pb	08 39 45.9	-0.7
YULB	**Yu-li** baz=8.0	**1.25**	**8**	P	Pn	08 39 43.4	-1.4
TWK	**Hsinying** baz=333	**1.25**	**333**	*i* P	Pb	08 39 46.6	-0.4
HGSD	**Ruisui** baz=11	**1.37**	**12**	P	Pn	08 39 46.3	-0.2
HGSD	baz=11			*e*S	Sb	08 40 05.5	-0.5
ALS	**Alishan** baz=348	**1.39**	**348**	*i* P	Pb	08 39 49.0	-0.3
ALS	baz=348			S	Sb	08 40 08.6	+1.8
ICHU	**Yijhu** baz=328	**1.43**	**328**	P	Pn	08 39 46.9	-0.4
CHY	**Chiayi** baz=334	**1.49**	**335**	P	Pn	08 39 47.8	-0.2
CHY	baz=334			*e*S	Sb	08 40 09.4	0.0
CHN5	**Tsauling** baz=344	**1.50**	**345**	*i* P	Pb	08 39 50.3	-0.8
CHN5	baz=344			S	Sb	08 40 10.8	+1.0
WHYT	**Xinyi Township** baz=5.0	**1.56**	**351**	*i* P	Pb	08 39 51.3	-0.8
VWDT	**VWDT** baz=360	**1.60**	**1**	P	Pn	08 39 50.4	+0.7
VWDT	baz=360			*e*S	Sb	08 40 11.2	-1.3
WDLH	**Douliu** baz=340	**1.62**	**341**	P	Pn	08 39 50.1	+0.2
WDLH	baz=340			S	Sb	08 40 13.1	-0.2
SSLB	**Suanglung** baz=5.0	**1.64**	**355**	P	Pn	08 39 51.6	+1.4
SSLB	baz=5.0			S	Sb	08 40 13.8	0.0
ESL	**Shilin** baz=10.0	**1.68**	**10**	*e*P	Pn	08 39 50.5	-0.3
WJS	**Zhushan** baz=347	**1.70**	**348**	*i* P	Pb	08 39 53.8	-0.7
WJS	baz=347			*e*S	Sb	08 40 15.0	-0.6
SMLT	**Sun Moon Lake** baz=352	**1.74**	**354**	*i* P	Pb	08 39 53.5	-1.6
SMLT	baz=352			S	Sb	08 40 15.7	-1.0
TYC	**Yuchr** baz=351	**1.76**	**352**	*i* P	Pb	08 39 54.2	-1.3
TYC	baz=351			S	Sb	08 40 16.9	-0.3
WNT	**Mingjian** baz=348	**1.77**	**347**	*e*P	Pb	08 39 55.2	-0.4
WRL	**Guolierlin Hig** baz=338	**1.87**	**339**	*e*S	Sn	08 40 16.3	+0.4
VCHM	**Qimei** baz=305	**1.88**	**304**	*e*P	Pn	08 39 55.1	+1.6
VCHM	baz=305			*e*S	Sn	08 40 16.1	+0.1
CHGB	**Renai**	**1.90**	**2**	P	Pn	08 39 55.2	+1.2
CHGB				S	Sb	08 40 19.4	-2.2
WCS	**Beigang Elemen** baz=353	**1.91**	**354**	P	Pb	08 39 56.6	-1.4
WCS	baz=353			S	Sb	08 40 20.2	-1.2
PHUB	**P'eng-hu** baz=303	**1.97**	**314**	P	Pn	08 39 54.2	-0.4
PHUB	baz=303			S	Sn	08 40 17.4	-0.8
WHF	**Hehuan Shan** baz=12	**1.99**	**4**	*i* P	Pn	08 39 55.9	+0.5
WHF	baz=12			S	Sn	08 40 21.2	+1.8
PNG	**Penghu** baz=315	**2.02**	**315**	P	Pn	08 39 55.1	-0.2
PNG	baz=315			S	Sn	08 40 18.7	-0.6
NACB	**Ninganchiao** baz=11	**2.06**	**12**	P	Pn	08 39 55.9	-0.1
NACB	baz=11			*e*S	Sn	08 40 19.5	-1.1
ETLH	**Xiulin Townshi** baz=16	**2.08**	**9**	P	Pn	08 39 56.9	+0.6
ETLH	baz=16			*e*S	Sn	08 40 22.2	+1.2
FUSS	**Fushou** baz=2.0	**2.09**	**3**	*i* P	Pn	08 39 57.5	+0.9
FUSS	baz=2.0			S	Sb	08 40 25.6	-1.4
TDCB	**Techi** baz=1.0	**2.10**	**1**	P	Pn	08 39 57.3	+0.7
TWT	**Tachien** baz=360	**2.10**	**2**	*i* P	Pn	08 39 58.0	+1.4
TWT	baz=360			*e*S	Sn	08 40 23.6	+2.0
WHP	**Taichung City** baz=354	**2.12**	**356**	*i* P	Pn	08 39 58.6	+1.6
WHP	baz=354			*i* S	Sb	08 40 26.2	-1.5
NNSB	**Datong** baz=13	**2.28**	**6**	P	Pn	08 40 01.6	+2.4
NNSB	baz=13			*e*S	Sn	08 40 27.2	+1.0
NNS	**Nan Shan** baz=13	**2.29**	**6**	*e*P	Pb	08 40 02.1	-2.5
NNS	baz=13			*e*S	Sn	08 40 28.0	+1.5
ENA	**Nanau** baz=14	**2.34**	**14**	P	Pn	08 40 01.6	+1.7
EWUT	**Wuta** baz=2.0	**2.37**	**15**	*e*P	Pn	08 40 02.2	+2.1
EWUT	baz=2.0			*e*S	Sn	08 40 28.5	+0.5
LIOB	**Emei** baz=356	**2.49**	**358**	*e*P	Pn	08 40 03.9	+2.0
LIOB	baz=356			*e*S	Sn	08 40 32.7	+1.6
YHNB	**Yeheng** baz=350	**2.52**	**5**	P	Pn	08 40 04.0	+1.6
YHNB	baz=350			*e*S	Sn	08 40 33.9	+1.9
NSK	**Sanguang** baz=350	**2.53**	**5**	*i* P	Pn	08 40 03.9	+1.4
NSK	baz=350			*i* S	Sb	08 40 35.7	-3.5
NDS	**Dongshan** baz=11	**2.54**	**13**	P	Pn	08 40 04.1	+1.6
NDS	baz=11			*e*S	Sn	08 40 32.0	-0.2
NWLT	**Wulai** baz=15	**2.64**	**8**	P	Pn	08 40 06.7	+2.7
NWLT	baz=15			*e*S	Sn	08 40 35.7	+0.8
TIPB	**Shuangxi** baz=11	**2.89**	**13**	*i* P	Pn	08 40 09.0	+1.6
TIPB	baz=11			*e*S	Sn	08 40 41.2	+0.3
KNM	**Kinmen** baz=302	**3.34**	**313**	P	Pn	08 40 15.0	+1.4
KNM	baz=302			S	Sn	08 40 54.6	+2.5
KNMB	**Chin-men Tao** baz=312	**3.40**	**313**	P	Pn	08 40 14.9	+0.4
KNMB	baz=312			S	Sn	08 40 53.5	-0.1
PTMZ	**Houxiangcun** baz=338	**3.41**	**328**	P	Pn	08 40 15.0	+0.5
PTMZ	baz=338			S	Sn	08 40 53.2	-0.6

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*KRNET **16** 08:39:30.4±0.1, 42°.20N×73°.64E, h10^{km}, mb1.7*

*SOME **16** 08:39:31.0, 42°.27N×73°.75E, h0^{km}*

*NNC **16** 08:39:32.5±1.4, 42°.30N×73°.66E, h0^{km}, mb2.8, mpv2.5, Error ellipse: s-maj=12.4km s-min=4.6km az=1.0*

ISC 16 08:39:30.3±1.1, **42°.21N**±0°.04×**73°.63E**±0°.03, **h5**^{km}±13^{km}, **n17,** σ**0^{s}.61**/29, **18C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AML	**Almayashu** baz=51	**0.09**	**151**	⇑*i*P	**Pg**	**08 39 32.3**	**-0.2**
AML	baz=51			⇑*i*S	**Sg**	**08 39 33.6**	**-0.4**
EKS2	**Erkin-Say** baz=12	**0.46**	**13**	⇑*i*P	**Pb**	**08 39 40.1**	**-0.9**
EKS2	baz=12			⇑*i*S	**Sg**	**08 39 45.8**	**+0.5**
MRKS	**Merke** 4.7nm,0.1s	**0.61**	**331**	*e*P	**Pg**	**08 39 42.9**	**+0.8**
MRKS	5.3nm,0.1s			*e*S	**Sb**	**08 39 51.5**	**-1.0**
MRKS	**Merke** 4.7nm,0.1s	**0.61**	**331**	P	**Pg**	**08 39 42.9**	**+0.8**
MRKS	5.3nm,0.1s			S	**Sb**	**08 39 51.5**	**-1.0**
ARLS	**Aral** baz=24	**0.62**	**124**	⇑*i*P	**Pg**	**08 39 42.5**	**+0.3**
ARLS	baz=24			⇑*i*S	**Sg**	**08 39 50.5**	**+0.2**
UCH	**Uchtor** baz=88	**0.65**	**88**	⇑*i*P	**Pg**	**08 39 43.2**	**+0.3**
UCH	baz=88			⇑*i*S	**Sg**	**08 39 51.6**	**+0.2**
AAK	**Ala-Archa** 1.5nm,0.6s	**0.77**	**56**	⇓P	**Pg**	**08 39 45.5**	**+0.4**
AAK	1.4nm,0.5s			⇑S	**Sb**	**08 39 56.2**	**-0.8**
AAK	**Ala-Archa** baz=55	**0.77**	**56**	⇑*i*P	**Pg**	**08 39 45.4**	**+0.4**
AAK	baz=55			⇑*i*S	**Sg**	**08 39 55.1**	**+0.1**
MNAS	**Manas** baz=89	**0.88**	**289**	⇑*i*P	**Pg**	**08 39 47.6**	**+0.4**
MNAS	baz=89			⇑*i*S	**Sg**	**08 39 58.8**	**+0.1**
USP	**Ospenovka** baz=31	**1.23**	**31**	⇑*i*P	**Pb**	**08 39 54.1**	**0.0**
USP	baz=31			⇑*i*S	**Sb**	**08 40 10.6**	**+0.3**
SGDS	**Sogindy** 1.3nm,0.4s	**1.44**	**30**	P	**Pg**	**08 39 57.3**	**-0.6**
SGDS	1.6nm,0.1s			S	**Sb**	**08 40 16.2**	**-0.1**
TKM2	**Tokmak 2** 1.5nm,0.9s	**1.61**	**63**	⇑Pg	**Pg**	**08 40 01.8**	**+0.6**
TKM2	1.1nm,0.7s			⇑Lg	Lg	08 40 22.8	
KRBS	**Karabastau** 1.2nm,0.2s	**2.11**	**45**	*e*P	**Pg**	**08 40 10.1**	**-0.6**
KRBS	3.0nm,0.2s			*e*S	**Sg**	**08 40 38.4**	**+0.4**
KRBS	**Karabastau** 1.2nm,0.2s	**2.11**	**45**	Pg	**Pg**	**08 40 10.1**	**-0.6**
KRBS	3.0nm,0.2s			Lg	Lg	08 40 38.4	
KK02	**Karatay Array** 1.0nm,0.6s	**2.47**	**292**	⇓Pg	**Pg**	**08 40 17.9**	**+0.3**
KK02	0.8nm,0.6s			⇑Lg	Lg	08 40 50.8	
TNSS	**Tian-Shan** 3.0nm,0.2s	**2.58**	**70**	*e*P	**Pb**	**08 40 18.1**	**+0.8**
TNSS	**Tian-Shan** 3.0nm,0.2s	**2.58**	**70**	P	**Pb**	**08 40 18.1**	**+0.8**

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*IDC **16** 08:52:10.1±2.7, 53°.51N×87°.95E, h0^{km}, mb1 3.7/3, mb1mx3.3/61, mbtmp3.7/3, ML3.2/3, Error ellipse: s-maj=24.8km s-min=15.7km az=66.0*

*NNC **16** 08:52:10.0±1.2, 53°.43N×87°.79E, h4^{km}±6^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=9.6km s-min=5.5km az=80.0, Suspected Mining explosion.*

ISC 16 08:52:10.8±3.3, **53°.5N**±0°.1×**87°.7E**±0°.2, **h0**^{km}, **n18,** σ**1^{s}.14**/17, **6C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array** 8.3nm,1.0s	**1.78**	**285**	⇓Pn	**Pn**	**08 52 41.9**	**-0.9**
ZAA0	32nm,0.7s			⇓Sn	**Sb**	**08 53 07.4**	**+0.4**
ZALV	**Zalesovo Beam** 8.8nm,0.3s,baz=106,slow=14,SNR=104	**1.78**	**285**	Pn	**Pn**	**08 52 42.0**	**-0.8**
ZALV	17nm,0.3s,baz=102,slow=28,SNR=34			Sn	**Sg**	**08 53 08.2**	**+0.3**
SEM	**Semipalatinsk** 4.4nm,0.1s	**5.58**	**239**	Pg	**Pb**	**08 53 50.5**	**+1.4**
SEM	40nm,0.4s			Lg	Lg	08 55 06.1	
KURK	**Kurchatov** 4.0nm,0.7s	**6.28**	**247**	⇑Pn	**Pn**	**08 53 43.4**	**-1.2**
KURK	7.8nm,0.9s			⇑Sn	**Sn**	**08 54 55.7**	**-1.1**
KURK	49nm,0.8s			⇑Lg	Lg	08 55 28.2	
ZSN	**Zaisan** 6.3nm,0.5s	**6.35**	**198**	Pg	Pb	08 54 05.5	+3.4
ZSN	28nm,0.7s			Lg	Lg	08 55 32.1	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=62,slow=14,SNR=6.5	**6.37**	**247**	Pn	**Pn**	**08 53 46.2**	**+0.4**
KURBB	0.2nm,0.3s,baz=64,slow=25,SNR=3.0			Sn	**Sn**	**08 54 59.2**	**0.0**
KURBB	0.1nm,0.3s,baz=64,slow=34,SNR=6.1			Lg	Lg	08 55 34.9	
KURBB	**Kurchatov Arra** 5.2nm,0.5s	**6.37**	**247**	⇓Pn	**Pn**	**08 53 44.6**	**-1.3**
KURBB	20nm,0.5s			⇓Sn	**Sn**	**08 54 58.0**	**-1.3**
KURBB	63nm,0.8s			⇑Lg	Lg	08 55 31.4	
MK31	**Makanchi Array** 0.5nm,0.3s,baz=28,slow=14,SNR=29	**7.59**	**210**	⇑Pn	**Pn**	**08 54 01.9**	**-0.7**
MK31	1.5nm,0.5s,baz=278,slow=37,SNR=8.8			⇑Sn	**Sn**	**08 55 27.3**	**-2.0**
MKAR	**Makanchi Array** 0.7nm,0.3s,baz=26,slow=13,SNR=28	**7.59**	**210**	Pn	**Pn**	**08 54 03.9**	**+1.3**
MKAR	0.9nm,0.3s,baz=28,slow=20,SNR=3.9			Sn	**Sn**	**08 55 30.2**	**+0.9**
MKAR	0.5nm,0.3s,baz=28,slow=34,SNR=5.0			Lg	Lg	08 56 13.9	
MAKZ	**Makanchi** 22nm,1.1s	**7.67**	**211**	⇓Lg	Lg	08 56 11.8	
KAPS	**Kapalarasan** 2.1nm,0.9s	**9.88**	**217**	Pg	Pn	08 55 09.5	+35
KAPS	7.4nm,0.9s			Lg	Lg	08 57 22.0	
BRZS	**Berezniki** 1.6nm,0.4s	**9.98**	**255**	Pg	Pn	08 55 13.5	+38
BRZS	6.3nm,0.5s			Lg	Lg	08 57 29.0	
BVAR	**Borovoye Array** 0.5nm,0.3s,baz=75,slow=14,SNR=5.1	**10.40**	**274**	Pn	**Pn**	**08 54 41.9**	**+0.9**
BVAR	0.8nm,0.3s,baz=94,slow=21,SNR=9.5			Sn	**Sn**	**08 56 37.3**	**-0.9**
TDK	**Taldyqorghan** 39nm,0.1s	**10.47**	**219**	Pg	Pn	08 55 23.8	+42
TDK	19nm,0.4s			Lg	Lg	08 57 46.1	
PDGK	**Podgornoye** 0.8nm,0.7s	**11.57**	**211**	Pg	Pn	08 55 41.4	+44
PDGK	2.7nm,1.0s			Lg	Lg	08 58 16.5	
BTLS	**Baital** 1.4nm,0.3s	**12.31**	**232**	Pg	Pn	08 55 55.5	+48
BTLS	4.4nm,0.9s			Lg	Lg	08 58 40.5	
SONM	**Songino Array** 0.0nm,0.3s,baz=288,slow=26,SNR=6.0	**13.12**	**108**	Lg	Lg	08 59 02.1	
I34MN	**SONGINO INFRAS** baz=308,slow=326,SNR=1.3	**13.15**	**108**	*i*		10 07 50.0	

IDC 16 08:59:13.0±572.0, **51°.91N×36°.70E, h0**^{km}, **Error ellipse: s-maj=247.4km s-min=98.7km az=10.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON** baz=184,slow=332,SNR=1.8	**4.83**	**3**	*i*		09 28 30.0	
I31KZ	**AKTYUBINSK INF** baz=284,slow=301,SNR=1.4	**13.47**	**88**	*i*		10 22 50.0	
I46RU	**ZALESOVO INFRA** baz=285,slow=302,SNR=1.8	**28.64**	**67**	*i*		11 55 40.0	

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*IDC **16** 09:12:22.3±2.3, 6°.84S×129°.91E, h0^{km}, mb3.5/1, mb1 3.5/3, mb1mx3.3/31, mbtmp3.3/3, ML3.4/2, Error ellipse: s-maj=100.0km s-min=33.4km az=69.0*

ISC 16 09:12:32.9±1.7, **6°.9S**±0°.2×**130°.4E**±0°.3, **h100**^{km}, **n9,** σ**1^{s}.84**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DRS	**Darwin Rock St**	**5.57**	**175**	P	**Pn**	**09 13 54.5**	**+1.1**
MTN	**Manton Dam**	**6.00**	**173**	P	**Pn**	**09 14 00.2**	**+1.0**
KDU	**Kakadu**	**6.14**	**161**	P	**Pn**	**09 14 01.9**	**+0.7**
KNRA	**Kununurra**	**8.93**	**190**	P	**Pn**	**09 14 37.8**	**-1.2**
WRAB	**Tennant Creek**	**13.55**	**164**	P	**Pn**	**09 15 40.3**	**-0.8**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=342,slow=11,SNR=12	**13.56**	**164**	Pn	**Pn**	**09 15 38.0**	**-3.2**
WRA	0.2nm,0.3s,baz=337,slow=21,SNR=2.5			Sn	Sn	09 17 57.0	-14
ASAR	**Alice Springs** 0.1nm,0.3s,baz=345,slow=8.6,SNR=15	**17.05**	**169**	P	**Pn**	**09 16 23.9**	**-1.4**
ASAR	0.1nm,0.3s,baz=354,slow=26,SNR=3.9			S	Sn	09 19 22.2	-13
CTAO	**Charters Tower** 9.4nm,1.6s	**20.22**	**132**	P	P	09 16 51.9	-8.2
MKAR	**Makanchi Array** 0.4nm,0.8s,baz=108,slow=4.7,SNR=1.7	**68.33**	**327**	P	**P**	**09 23 23.7**	**+0.2**

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*IDC **16** 09:18:14.8±5.8, 4°.58S×153°.62E, h123^{km}±46^{km}, mb3.5/5, mb1 3.8/6, mb1mx3.5/34, mbtmp4.0/6, MS3.2/1, Ms1 3.1/1, ms1mx2.4/29, Error ellipse: s-maj=66.0km s-min=31.3km az=122.0*

ISC 16 09:18:11.7±1.3, **4°.6S**±0°.3×**153°.8E**±0°.3, **h100**^{km}, **n7,** σ**0^{s}.99**/8, **mb3.7**/5, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PMG	**Port Moresby** 11nm,0.3s,baz=19,slow=7.7,SNR=26	**8.15**	**234**	P	**Pn**	**09 20 08.6**	**+1.3**
PMG	4.3nm,0.3s,baz=339,slow=20,SNR=7.9			S	**Sn**	**09 21 37.6**	**-0.2**
WRA	**Warramunga Arr** 5.4nm,0.5s,baz=54,slow=10.0,SNR=37	**24.34**	**230**	P	**P**	**09 23 20.8**	**+0.3**
ASAR	**Alice Springs** 0.5nm,0.5s,baz=56,slow=9.2,SNR=8.5	**26.98**	**223**	P	**P**	**09 23 44.2**	**-0.2**
STKA	**Stephens Creek** 1.2nm,0.7s,baz=28,slow=15,SNR=3.3	**29.47**	**201**	P	**P**	**09 24 06.1**	**-0.2**
STKA	comp=Z,38nm,18.2s,baz=25,slow=39			LR	LR	09 37 26.0	
FITZ	**Fitzroy Crossi** 3.3nm,1.0s,baz=71,slow=5.3,SNR=5.4	**30.64**	**242**	P	**P**	**09 24 15.7**	**-1.1**
ILAR	**Eielson Array** 0.2nm,0.8s,baz=232,slow=4.4,SNR=1.5	**81.59**	**22**	P	**P**	**09 30 19.0**	**+0.8**
TORD	**Torodi Ar. Bea** 0.4nm,0.6s,baz=50,slow=2.3,SNR=4.0	**151.19**	**289**	PKPbc	**PKiKP**	**09 37 53.9**	**-1.1**

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*NEIC **16** 09:20:35.0±1.3, 35°.622N±0°.006×97°.08W±0°.01, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.0km az=308.0*

*TUL **16** 09:20:34.7±1.2, 35°.62N±0°.01×97°.09W±0°.01, h6^{km}±6^{km}, ML3.4, mb_Lg3.1/65(NEIC), Error ellipse: s-maj=1.7km s-min=1.4km az=132.0*

*ANF **16** 09:20:34.9±0.2, 35°.66N×97°.08W, h5^{km}, ML3.4/11, Error ellipse: s-maj=3.0km s-min=2.1km az=150.0*

ISC 16 09:20:35.2±1.0, **35°.63N**±0°.02×**97°.08W**±0°.02, **h8**^{km}±8^{km}, **n76,** σ**0^{s}.51**/70, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.09**	**286**		**Pg**	**09 20 37.0**	**-0.4**
OK025	**Westminster Rd**	**0.21**	**257**		**Pg**	**09 20 39.2**	**-0.3**
OK025				Sg	**Sg**	**09 20 42.4**	**0.0**
OK009	**Oakdale Elemen**	**0.28**	**260**		**Pg**	**09 20 40.5**	**-0.2**
OK029	**Liberty Lake**	**0.34**	**299**	Pg	**Pg**	**09 20 41.8**	**-0.2**
OK029				Sg	**Sg**	**09 20 46.9**	**+0.3**
OKCSW	**OKLAHOMA CITY**	**0.37**	**232**	Pg	**Pg**	**09 20 41.9**	**-0.5**
OKCSW				Sg	**Sg**	**09 20 47.3**	**+0.1**
OKCFA	**Oklahoma City**	**0.37**	**234**		**Pg**	**09 20 42.0**	**-0.4**
OKCFA				Sg	**Sg**	**09 20 47.3**	**0.0**
OKCFA	**Oklahoma City** baz=56	**0.37**	**234**	P	**Pg**	**09 20 42.0**	**-0.4**
OKCFA	baz=56			S	**Sg**	**09 20 47.3**	**0.0**
OK031	**S. Brethren Rd**	**0.38**	**32**		**Pg**	**09 20 42.7**	**+0.1**
OK031				Sg	**Sg**	**09 20 48.4**	**+0.7**
OK030	**Cody Creek RV**	**0.38**	**39**		**Pg**	**09 20 42.9**	**+0.1**
OK030				Sg	**Sg**	**09 20 48.5**	**+0.7**
BCOK	**Bluff Creek, N**	**0.43**	**274**	Pg	**Pg**	**09 20 43.2**	**-0.3**
BCOK				Sg	**Sg**	**09 20 49.5**	**+0.3**
FNO	**Franklin**	**0.45**	**215**	Pg	**Pg**	**09 20 43.5**	**-0.5**
FNO				Sg	**Sg**	**09 20 49.9**	**0.0**
OK034	**N. Norfolk Rd.**	**0.48**	**38**		**Pg**	**09 20 44.7**	**+0.1**
OK034				Sg	**Sg**	**09 20 51.5**	**+0.6**
W35A	**Tecumseh**	**0.51**	**160**	Pg	**Pg**	**09 20 44.6**	**-0.4**
W35A				Sg	**Sg**	**09 20 51.6**	**-0.1**
QUOK	**Quay**	**0.62**	**29**	Pg	**Pg**	**09 20 47.0**	**-0.2**
QUOK				Sg	**Sg**	**09 20 55.7**	**+0.4**
TUL1	**Leonard**	**1.09**	**75**	Pg	**Pg**	**09 20 54.8**	**-1.3**
TUL1	**Leonard** baz=255,SNR=114	**1.09**	**75**	P	**Pg**	**09 20 54.8**	**-1.3**
TUL1	baz=255			S	**Sg**	**09 21 09.8**	**-0.4**
BLOK	**Blackwell**	**1.13**	**355**		**Pg**	**09 20 55.9**	**-1.0**
CROK	**Carrier**	**1.14**	**320**		**Pg**	**09 20 56.5**	**-0.5**
CROK				Sg	**Sg**	**09 21 11.7**	**-0.1**
X34A	**Smith Ranch, M**	**1.20**	**211**		**Pg**	**09 20 57.2**	**-0.9**
X34A				Sn	**Sb**	**09 21 14.0**	**+0.3**
T35A	**Sooner Cattle**	**1.36**	**20**		**Pn**	**09 20 59.8**	**-0.7**
T35B	**Sooner Cattle** baz=200	**1.36**	**20**	P	**Pn**	**09 20 59.8**	**-0.7**
T35B	baz=200			S	**Sb**	**09 21 18.7**	**+0.1**
GC02	**Grant County #**	**1.37**	**333**	Pn	**Pn**	**09 21 00.4**	**-0.2**
GC02				Sn	**Sb**	**09 21 18.8**	**+0.1**
KAN13	**South Haven SW**	**1.42**	**347**		**Pn**	**09 21 01.0**	**-0.3**
OK032	**Salt Plains WL**	**1.48**	**322**		**Pn**	**09 21 02.3**	**+0.2**
KAN14	**Manchester OK**	**1.50**	**332**		**Pn**	**09 21 02.4**	**0.0**

KAN17	Caldwell West	1.51	339		Pn	09 21 02.6	0.0
KAN09	Caldwell North	1.56	344		Pn	09 21 03.4	+0.1
KAN01	Argonia South	1.61	340		Pn	09 21 04.3	+0.4
KAN01				IAmb_Lg		09 21 28.3	
	comp=Z,149nm,1.2s						
LOOK	Love County	1.64	183		Pn	09 21 04.4	+0.2
KAN10	Anthony SW Sta	1.70	332		Pn	09 21 05.9	+0.7
U32A	Winter Ranch,	1.73	296		Pn	09 21 05.8	+0.3
U32A	Winter Ranch,	1.73	296	P	Pn	09 21 05.8	+0.3
	baz=116						
U32A				S	Sb	09 21 29.4	+0.5
	baz=116						
KAN06	Argonia West S	1.73	339		Pn	09 21 06.3	+0.7
KAN06				IAmb_Lg		09 21 31.8	
	comp=Z,109nm,1.0s						
KAN08	Anthony NE Sta	1.75	336	IAmb_Lg		09 21 33.7	
	comp=Z,78nm,0.7s						
X37A	Clayton	1.75	126	IAmb_Lg		09 21 34.0	
	comp=Z,108nm,0.8s						
X37A	Clayton	1.75	126	P	Pn	09 21 06.2	+0.5
	baz=307,SNR=232						
X37A				S	Sb	09 21 29.9	+0.4
	baz=307						
Z35A	Perchaven, San	2.30	184		Pn	09 21 14.2	+0.8
Z35A	Perchaven, San	2.30	184	S	Sb	09 21 45.2	-0.2
	baz=3.5						
U38A	Gravette	2.33	69	Pn	Pn	09 21 13.8	0.0
HHAR	Hobbs	2.63	75	Pn	Pn	09 21 18.3	+0.3
HHAR	Hobbs	2.63	75	P	Pn	09 21 18.6	+0.6
	baz=256						
W39A	Magazine	2.73	98	P	Pn	09 21 19.6	+0.4
	baz=280,SNR=52						
MIAR	Mount Ida	3.07	110	Pn	Pn	09 21 24.6	+0.6
MIAR	Mount Ida	3.07	110	P	Pn	09 21 24.6	+0.6
	baz=292,SNR=24						
KSU1	Kansas State U	3.48	6	Pn	Pn	09 21 28.4	-1.2
KSU1				IAmb_Lg		09 22 31.6	
	comp=Z,50nm,0.9s						
U40A	Yellville	3.51	77	P	Pn	09 21 30.0	0.0
	baz=259,SNR=21						
U40A				P	Pn	09 21 30.0	0.0
	baz=259,SNR=21						
S39A	Bolivar	3.66	55	IAmb_Lg		09 22 36.8	
	comp=Z,40nm,0.7s						
S39A	Bolivar	3.66	55	P	Pn	09 21 32.2	+0.2
	baz=237						
X40A	Basin Creek Fa	3.67	107	IAmb_Lg		09 22 33.7	
	comp=Z,32nm,0.9s						
237A	Washetta, Mont	3.77	163	S	Sn	09 22 18.7	+0.5
	baz=344						
WLAR	White Oak Lake	3.81	119	IAmb_Lg		09 22 42.3	
	comp=Z,32nm,0.9s						
CBKS	Cedar Bluff	3.82	327	IAmb_Lg		09 22 43.9	
	comp=Z,41nm,0.8s						
AMTX	Amarillo	3.83	260	Pn	Pn	09 21 34.2	-0.4
AMTX				IAmb_Lg		09 22 47.0	
	comp=Z,31nm,0.9s						
WHAR	Wooly Hollow	3.93	94	Pn	Pn	09 21 36.3	+0.5
WHAR				IAmb_Lg		09 22 47.0	
	comp=Z,29nm,1.0s						
W41B	Gary Mavity, V	3.98	95	P	Pn	09 21 37.0	+0.5
	baz=278,SNR=32						
FCAR	Ozark Folk Cen	4.04	85		Pn	09 21 36.5	-0.8
FCAR				IAmb_Lg		09 22 43.8	
	comp=Z,47nm,1.1s						
MGMO	Mountain Grove	4.17	67	IAmb_Lg		09 22 58.9	
	comp=Z,51nm,0.9s						
R40A	Maddies Statio	4.68	54	IAmb_Lg		09 23 06.1	
	comp=Z,41nm,0.8s						
435B	Jarrell	4.85	185	IAmb_Lg		09 23 20.6	
	comp=Z,29nm,1.1s						
P38A	Dawn	4.88	34	IAmb_Lg		09 23 16.7	
	comp=Z,42nm,0.8s						
T42A	Van Buren	5.04	72	IAmb_Lg		09 23 16.4	
	comp=Z,22nm,0.7s						
HBAR	Harrisburg	5.24	89	IAmb_Lg		09 23 28.6	
	comp=Z,53nm,0.9s						
CCM	Cathedral Cave	5.27	61	IAmb_Lg		09 23 25.2	
	comp=Z,26nm,0.7s						
N35A	Tabor	5.34	12	IAmb_Lg		09 23 33.5	
	comp=Z,47nm,0.8s						
PBMO	Poplar Bluff	5.50	76	IAmb_Lg		09 23 41.2	
	comp=Z,25nm,0.8s						
KSCO	Kaye Shedlock'	5.56	309	IAmb_Lg		09 23 40.1	
	comp=Z,36nm,1.0s						
JCT	Junction City	5.62	205	IAmb_Lg		09 23 40.8	
	comp=Z,29nm,0.9s						
GNAR	Gosnell	5.75	85	IAmb_Lg		09 23 39.1	
	comp=Z,36nm,0.7s						
FVM	French Village	5.84	64	IAmb_Lg		09 23 45.3	
	comp=Z,33nm,0.9s						
T25A	Trinidad	6.10	286	IAmb_Lg		09 23 55.3	
	comp=Z,22nm,0.8s						
LNXT	Lenox	6.18	83	IAmb_Lg		09 24 06.1	
	comp=Z,45nm,0.7s						
W45A	Hickory Valley	6.47	92	IAmb_Lg		09 24 04.6	
	comp=Z,26nm,0.9s						
OGNE	Ogallala	6.58	325	IAmb_Lg		09 24 14.2	
	comp=Z,26nm,0.7s						
S44A	Carbondale	6.62	70	IAmb_Lg		09 24 06.1	
	comp=Z,39nm,0.8s						
N41A	Harden Midland	7.05	42	IAmb_Lg		09 24 28.4	
	comp=Z,36nm,0.7s						
T47A	Sharon Grove	8.17	78	IAmb_Lg		09 25 01.1	
	comp=Z,14nm,0.9s						

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*IGIL **16** 09:47:37.7, 39°.50N×12°.75W, h2^{km}, ML2.5*
*MDD **16** 09:47:38.5±1.6, 39°.49N×12°.69W, h0^{km}, mb4.2/4, Error ellipse: s-maj=14.6km s-min=9.1km az=91.0, PRXIMO*
*INMG **16** 09:47:40.5±1.1, 39°.46N×13°.12W, h10^{km}, ML2.5, Error ellipse: s-maj=6.4km s-min=3.2km az=88.0*
ISC 16 09:47:33.3±2.5**, 39°.46N**±0°.04×**12°.9W**±0°.1**, h10^{km}, n57, σ2^{s}.58**/102**, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	2.87	99	*e*Pn	Pb	09 48 23.2	-1.4
PMAFR				*e*Sn	Sb	09 48 55.9	-3.8
PMAFR	Mafra	2.87	99	P	Pn	09 48 21.8	+2.7
	5.3nm,0.2s,SNR=7.9						
PMAFR				S	Sn	09 48 55.2	+1.6
	11nm,0.1s,SNR=7.9						
PSBE	So Bento	3.19	88	*e*Sn	Sn	09 49 03.0	+1.4
PCAS	Casmilo, Conde	3.46	79	*e*Pn	Pn	09 48 30.6	+3.4
PCAS				*e*Sn	Sn	09 49 07.7	-0.5
PCAS				A	A	09 49 12.5	
	4.9nm,0.7s						
PCAS	Casmilo, Conde	3.46	79	P	Pn	09 48 30.6	+3.4
PCAS				S	Sn	09 49 07.7	-0.5
	4.9nm,0.7s						
PMTG	Montargil	3.66	95	*e*Pn	Pn	09 48 33.5	+3.5
PMTG				*e*Sn	Sn	09 49 14.2	+1.0
PMTG				A	A	09 49 20.3	
	3.3nm,0.4s						
PMTG	Montargil	3.66	95	P	Pn	09 48 33.5	+3.5
PMTG				S	Sn	09 49 14.2	+1.0
	3.3nm,0.4s						
PNCL	Nicolau / Gran	3.68	110	*e*Pn	Pn	09 48 33.9	+3.6
PNCL				*e*Sn	Sn	09 49 12.5	-1.2
PNCL				A	A	09 49 17.3	
	7.9nm,0.3s						
PNCL	Nicolau / Gran	3.68	110	P	Pn	09 48 33.9	+3.6
PNCL				S	Sn	09 49 12.5	-1.2
	7.9nm,0.3s						
PTEO	Sao Teotonio	3.80	119	*e*Pn	Pn	09 48 34.7	+2.8
PTEO				*e*Sn	Sn	09 49 14.0	-2.7
PTEO				A	A	09 49 18.2	
	14nm,0.4s						
PTEO	Sao Teotonio	3.80	119	P	Pn	09 48 34.7	+2.8
PTEO				S	Sn	09 49 14.0	-2.7
	7.2nm,0.4s						
EVO	Evora	3.93	102	*e*Pn	Pn	09 48 38.2	+4.5
EVO				*e*Sn	Sn	09 49 21.8	+2.0
EVO	Evora	3.93	102	P	Pn	09 48 38.2	+4.5
EVO				S	Sn	09 49 21.8	+2.0
PFVI	Vila Bisbo	3.96	125	*e*Pn	Pn	09 48 36.4	+2.2
PFVI				*e*Sn	Sn	09 49 18.0	-2.7
PFVI				A	A	09 49 22.2	
	12nm,0.7s						
PFVI	Vila Bisbo	3.96	125	P	Pn	09 48 36.1	+1.9
	3.8nm,0.1s,SNR=7.9						
PFVI				S	Sn	09 49 17.7	-3.0
	7.7nm,0.1s,SNR=7.9						
MORF	Marmelete	3.98	121	*e*P	Pn	09 48 36.8	+2.4
MORF	Marmelete	3.98	121	*e*Pn	Pn	09 48 36.9	+2.4
MORF				*e*Sn	Sn	09 49 18.1	-3.1
MORF				A	A	09 49 24.5	
	11nm,0.1s						
MORF	Marmelete	3.98	121	P	Pn	09 48 36.8	+2.4
MORF				S	Sn	09 49 18.1	-3.1
	11nm,0.1s						
MESJ	Messejana	4.01	112	*e*S	Sn	09 49 20.2	-1.8
MESJ				IAML		09 49 25.2	
	comp=N,9.8nm,0.3s						
MESJ	Messejana	4.01	112	*e*Pn	Pn	09 48 38.7	+3.8
MESJ				*e*Sn	Sn	09 49 20.2	-1.8
MESJ				A	A	09 49 23.9	
	comp=N,5.6nm,0.6s						
MESJ	Messejana	4.01	112	P	Pn	09 48 38.7	+3.8
MESJ				S	Sn	09 49 20.2	-1.8
PVIS	Viseu	4.05	70	*e*Sn	Sn	09 49 22.1	-0.8
PVIS	Viseu	4.05	70	S	Sn	09 49 22.1	-0.8
PESTR	Estremoz	4.18	96	*e*Pn	Pn	09 48 40.5	+3.3
PESTR				*e*Sn	Sn	09 49 26.0	-0.1
PESTR				A	A	09 49 29.5	
	comp=N,5.8nm,0.5s						
PBEJ	Beja	4.20	108	*e*Sn	Sn	09 49 28.6	+2.1
PBEJ	Beja	4.20	108	S	Sn	09 49 28.6	+2.1
PCBR	Castelo Branco	4.21	83	*e*Pn	Pn	09 48 41.0	+3.4
PCBR				*e*Sn	Sn	09 49 25.9	-1.0
PCBR	Castelo Branco	4.21	83	P	Pn	09 48 41.0	+3.4
PCBR				S	Sn	09 49 25.9	-1.0
PCVE	Castro Verde	4.23	114	*e*Pn	Pn	09 48 41.5	+3.6
PCVE				*e*Sn	Sn	09 49 26.0	-1.4
PCVE				A	A	09 49 28.7	
	comp=N,4.3nm,0.3s						
PCVE	Castro Verde	4.23	114	P	Pn	09 48 41.5	+3.6
PCVE				S	Sn	09 49 26.0	-1.4
	comp=N,4.3nm,0.3s						
PMRV	Marv??o	4.28	89	*e*Pn	Pn	09 48 41.9	+3.4
PMRV				*e*Sn	Sn	09 49 28.2	-0.2
PMRV				A	A	09 49 30.9	
	comp=N,4.5nm,0.4s						
PMRV	Marv??o	4.28	89	P	Pn	09 48 41.9	+3.4
PMRV				S	Sn	09 49 28.2	-0.2
	comp=N,4.5nm,0.4s						
PGAV	Gavieira, Arco	4.33	53	*e*Pn	Pn	09 48 42.1	+2.8
PGAV				*e*Sn	Sn	09 49 28.4	-1.4
PGAV				A	A	09 49 32.9	
	comp=N,5.9nm,0.6s						
PGAV	Gavieira, Arco	4.33	53	P	Pn	09 48 42.1	+2.8
PGAV				S	Sn	09 49 28.4	-1.4
	comp=N,5.9nm,0.6s						
PCAB	Cabril	4.35	57	*e*Pn	Pn	09 48 42.6	+3.1
PCAB				*e*Sn	Sn	09 49 27.7	-2.6
PCAB				A	A	09 49 35.6	
	comp=N,5.3nm,0.2s						
PCAB	Cabril	4.35	57	P	Pn	09 48 42.6	+3.1
PCAB				S	Sn	09 49 27.7	-2.6
	comp=N,2.7nm,0.2s						
POLO	Lamas de Olo	4.35	62	*e*Sn	Sn	09 49 29.7	-0.7
POLO				A	A	09 49 33.3	
	comp=N,1.8nm,0.7s						
POLO	Lamas de Olo	4.35	62	S	Sn	09 49 29.7	-0.7
	comp=N,1.8nm,0.7s						
ELOB	Lobios	4.41	55	P	Pn	09 48 43.3	+3.0
	comp=N,0.7nm,0.1s,SNR=7.9						
ELOB				S	Sn	09 49 30.3	-1.5
	comp=N,2.1nm,0.0s,SNR=7.9						
PBDV	Barranco-do-Ve	4.50	118	*e*Pn	Pn	09 48 44.2	+2.7
PBDV				*e*Sn	Sn	09 49 33.3	-0.6
PBDV				A	A	09 49 35.7	
	comp=N,5.8nm,0.7s						
PBDV	Barranco-do-Ve	4.50	118	P	Pn	09 48 44.2	+2.7
PBDV				S	Sn	09 49 33.3	-0.6
	comp=N,5.8nm,0.7s						
PVAQ	Vaqueiros	4.57	115	*e*Pn	Pn	09 48 46.3	+3.8
PVAQ				*e*Sn	Sn	09 49 34.0	-1.6
PVAQ				A	A	09 49 39.4	
	comp=N,4.8nm,0.2s						
PVAQ	Vaqueiros	4.57	115	P	Pn	09 48 46.3	+3.8
PVAQ				S	Sn	09 49 34.0	-1.6
	comp=N,4.8nm,0.2s						
EMAZ	Mazaricos	4.58	39	S	Sn	09 49 33.7	-2.3
	comp=N,2.4nm,0.1s,SNR=7.9						
EBAD	Badajoz	4.64	97	P	Pn	09 48 46.6	+3.1
	comp=N,1.1nm,0.1s,SNR=7.9						
EBAD				S	Sn	09 49 36.6	-0.9
	comp=N,3.2nm,0.1s,SNR=7.9						
EGRO	El Granado	4.67	113	P	Pn	09 48 47.0	+3.1
	comp=N,0.7nm,0.1s,SNR=7.9						
EGRO				S	Sn	09 49 36.9	-1.2
	comp=N,4.5nm,0.1s,SNR=7.9						
MVO	Moncorvo	4.81	67	*e*Pn	Pn	09 48 49.6	+3.7
MVO				*e*Sn	Sn	09 49 40.8	-0.9
MVO				A	A	09 49 44.7	
	comp=N,3.1nm,0.2s						
MVO	Moncorvo	4.81	67	P	Pn	09 48 49.2	+3.3
	comp=N,0.8nm,0.1s,SNR=7.9						
MVO				S	Sn	09 49 40.7	-1.0
	comp=N,4.1nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	4.94	46	P	Pn	09 48 50.2	+2.5
	comp=N,1.0nm,0.0s,SNR=7.9						
EAGO				S	Sn	09 49 42.3	-2.6
	comp=N,3.3nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.17	107	P	Pn	09 48 53.2	+2.5
	comp=N,0.4nm,0.1s,SNR=7.9						
EMIN				S	Sn	09 49 48.7	-1.8
	comp=N,1.3nm,0.1s,SNR=7.9						
EPLA	Plasencia	5.30	81	P	Pn	09 48 56.2	+3.6
	comp=N,0.6nm,0.1s,SNR=7.9						
EPLA				S	Sn	09 49 52.5	-1.3
	comp=N,0.8nm,0.1s,SNR=7.9						
ECAL	Calabor	5.31	60	P	Pn	09 48 56.0	+3.3
	comp=N,0.8nm,0.2s,SNR=7.9						
ECAL				S	Sn	09 49 52.9	-1.1
	comp=N,1.9nm,0.1s,SNR=7.9						
EPON	Pontenova	5.81	46	S	Sn	09 50 02.8	-3.4
	comp=N,4.8nm,0.1s,SNR=7.9						
ECAB	El Cabril	6.02	101	P	Pn	09 49 05.4	+3.0
	comp=N,0.1nm,0.1s,SNR=7.9						
ECAB				S	Sn	09 50 09.1	-2.3
	comp=N,0.6nm,0.2s,SNR=7.9						
PAB	San Pablo	6.62	87	P	Pn	09 49 13.7	+2.9
	comp=N,0.3nm,0.2s,SNR=7.9						
PAB				S	Sn	09 50 24.2	-2.3
	comp=N,0.0nm,0.1s,SNR=7.9						
EADA	Adamuz	6.64	99	P	Pn	09 49 14.1	+3.2
	comp=N,0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	09 50 25.3	-1.4
	comp=N,0.9nm,0.1s,SNR=7.9						
GUD	Guadarrama	6.82	77	S	Sn	09 50 28.5	-2.9
	comp=N,0.4nm,0.1s,SNR=7.9						

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*IDC **16** 09:48:17.4±0.8, 50°.87N×121°.10W, h0^{km}, mb3.5/1, mb1 3.6/8, mb1mx3.5/39, mbtmp3.4/8, ML2.9/7, MS3.3/1, Ms1 3.3/1, ms1mx2.6/35, Error ellipse: s-maj=15.2km s-min=9.4km az=49.0*
*PGC **16** 09:48:17.6±0.0, 50°.83N×121°.01W, h5^{km}, ML3.4/37, 51km Wnw of Kamloops, Bc British Columbia, Canada*
*ANF **16** 09:48:17.1±1.0, 50°.89N×121°.05W, h5^{km}, ML4.1/8, Error ellipse: s-maj=9.4km s-min=7.1km az=155.0*
*NEIC **16** 09:48:18.9±1.6, 50°.83N±0°.04×121°.09W±0°.06, h15^{km}±6^{km}, Error ellipse: s-maj=6.9km s-min=3.8km az=138.0*
ISC 16 09:48:16.7±0.6**, 50°.96N**±0°.02×**121°.08W**±0°.02**, h10^{km}, n181, σ1^{s}.77**/247**, British Columbia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLLB	Lillooet	0.62	235	Pg	Pg	09 48 28.5	-0.1
LLLB				Sg	Sg	09 48 36.2	-0.5
LLLB	Lillooet	0.62	235	P	Pg	09 48 28.6	-0.1
LLLB				S	Sg	09 48 36.4	-0.3
WSLR	Whistler	1.44	235	Pn	Pb	09 48 42.9	-0.7
WSLR				Sg	Sn	09 49 01.0	-0.9
WSLR	Whistler	1.44	235	Pn	Pb	09 48 42.9	-0.7
WSLR				Sg	Sn	09 49 01.0	-0.9
BLBC	Blue River	1.58	46	Pn	Pg	09 48 46.7	-0.3
BLBC				Sg	Sg	09 49 09.3	+1.7
BLBC	Blue River	1.58	46	Pn	Pg	09 48 46.7	-0.3
BLBC				Sg	Sg	09 49 09.3	+1.7
HOPB	Hope	1.59	188	Pn	Pn	09 48 43.9	-1.0
HOPB					Sn	09 49 03.1	-2.4
HOPB	Hope	1.59	188	Pn	Pn	09 48 43.9	-1.0
HOPB				Sg	Sn	09 49 03.1	-2.4
SLEB	Sale Mountain	1.87	83	Pn	Pb	09 48 49.5	-1.6
SLEB				Sg	Sb	09 49 14.6	-0.1
SLEB	Sale Mountain	1.87	83	Pn	Pb	09 48 49.5	-1.6
SLEB				Sg	Sb	09 49 14.6	-0.1
WPB	Watts Point	1.89	227	Pn	Pn	09 48 49.3	+0.3
WPB				Sg	Sb	09 49 14.4	-0.4
WPB	Watts Point	1.89	227	Pn	Pn	09 48 49.3	+0.3
WPB				Sg	Sb	09 49 14.4	-0.4
PNT	Penticton	1.90	150	Pn	Pn	09 48 47.9	-1.2
PNT				Sg	Sb	09 49 13.1	-2.1
PNT	Penticton	1.90	150	Pn	Pn	09 48 47.9	-1.2
PNT				Sg	Sb	09 49 13.1	-2.1
HNBB	Haney	1.93	210	Pn	Pn	09 48 49.1	-0.4
HNBB				Sg	Sb	09 49 14.5	-1.6
HNBB	Haney	1.93	210	Pn	Pn	09 48 49.1	-0.4
HNBB				Sg	Sb	09 49 14.5	-1.6
VDB	Vedder Mountai	2.05	199	Pn	Pn	09 48 50.6	-0.6
VDB	Vedder Mountai	2.05	199	Pn	Pn	09 48 50.6	-0.6
VDB				Sg	Sn	09 49 17.1	+0.3
A05A	Maple Falls	2.07	199	Pn	Pn	09 48 50.9	-0.5
A05A				Sg	Sb	09 49 19.4	-0.6
MNB	Mounoet Dainar	2.09	53	Pn	Pb	09 48 53.8	-1.0
MNB	Mounoet Dainar	2.09	53	Pn	Pb	09 48 53.8	-1.0
MNB				Sn	Sb	09 49 20.7	-0.3
BIB	Bowen Island	2.11	223	Pn	Pn	09 48 52.1	+0.1
BIB	Bowen Island	2.11	223	Pn	Pn	09 48 52.1	+0.1
BIB				Sg	Sb	09 49 20.9	-0.3
SHB	Sechelt	2.25	234	Pn	Pn	09 48 54.5	+0.4
SHB	Sechelt	2.25	234	Pn	Pn	09 48 54.5	+0.4
SHB				Sg	Sb	09 49 26.0	+0.5
A04D	Lummi Island	2.48	206	P	Pn	09 48 57.0	-0.1
	baz=27,SNR=14						
A04D				Sb	Sb	09 49 32.0	+0.3
	baz=27						
TXB	Texada	2.49	241	Pn	Pn	09 48 57.9	+0.5
TXB	Texada	2.49	241	Pn	Pn	09 48 57.9	+0.5
RPW	Rockport	2.53	186	Pn	Pn	09 48 57.0	-0.9
RPW	Rockport	2.53	186	Pn	Pn	09 48 57.0	-0.9
RPW				Sg	Sb	09 49 32.5	-0.9
NLLB	Nanaimo Lost L	2.55	228	Pn	Pn	09 48 58.3	+0.2
NLLB	Nanaimo Lost L	2.55	228	Pn	Pn	09 48 58.3	+0.2
NLLB				Sg	Sb	09 49 35.5	+1.6
GOBB	Galiano Island	2.55	219	Pn	Pn	09 48 58.9	+0.8
GOBB	Galiano Island	2.55	219	Pn	Pn	09 48 58.9	+0.8
GOBB				Sg	Sb	09 49 34.5	+0.6
SNB	Saturna Island	2.57	212	Pn	Pn	09 48 58.8	+0.4
SNB	Saturna Island	2.57	212	Pn	Pn	09 48 58.8	+0.4
SNB				Sg	Sb	09 49 34.2	-0.3
GHNB	Nanoose	2.62	232	Pn	Pn	09 49 00.0	+1.0
GHNB	Nanoose	2.62	232	Pn	Pn	09 49 00.0	+1.0
GHNB				Sg	Sg	09 49 37.8	-3.0
CMW	Cultus Mountai	2.63	195	Pn	Pn	09 48 59.2	0.0
CMW				Sg	Sb	09 49 35.9	-0.3
B010	North Saanich	2.77	214	Pn	Pn	09 49 00.7	-0.4
B010	North Saanich	2.77	214	Pn	Pn	09 49 00.7	-0.4
B010				Sg	Sb	09 49 40.5	+0.2
B011	North Saanich	2.77	214	Pn	Pn	09 49 01.8	+0.6
B011	North Saanich	2.77	214	Pn	Pn	09 49 01.8	+0.6
B011				Sg	Sb	09 49 41.3	+0.9
PGC	Sidney	2.77	214		Pn	09 49 00.9	-0.2
PGC				IAML		09 49 42.5	
	comp=E,225nm,0.6s						
PGC	Sidney	2.77	214	Pn	Pn	09 49 01.0	-0.2
PGC				Sg	Sb	09 49 40.5	+0.2
PA12	PA12 Sannich	2.78	214	Sg	Sb	09 49 40.5	+0.2
B009	North Saanich	2.78	214	Pn	Pn	09 49 00.8	-0.4
B009	North Saanich	2.78	214	Pn	Pn	09 49 00.8	-0.4
B009				Sg	Sb	09 49 40.3	-0.1
B05A	Bryant	2.78	194	P	Pn	09 49 01.1	-0.1
	baz=15,SNR=30						
B05A				Sb	Sb	09 49 41.0	+0.6
	baz=15						
JCW	Jim Creek	2.83	192	Pn	Pn	09 49 01.4	-0.5
JCW	Jim Creek	2.83	192	Pn	Pn	09 49 01.4	-0.5
B08A	Colville Reser	2.84	156		Pn	09 49 01.4	-0.8
B08A				IAML		09 49 48.5	
	comp=E,719nm,0.8s						
B08A				IAML		09 49 51.1	
	comp=N,368nm,0.4s						
B08A	Colville Reser	2.84	156	Pn	Pn	09 49 01.3	-0.8
B08A				Sg	Sb	09 49 42.2	-0.2
GPW	Glacier Peak	2.85	181	Pn	Pn	09 49 01.3	-1.1
GPW	Glacier Peak	2.85	181	Pn	Pn	09 49 01.3	-1.1
GPW				Sg	Sb	09 49 42.7	0.0
CBB	Campbell River	2.89	253	Pn	Pn	09 49 04.7	+2.0
CBB	Campbell River	2.89	253	Pn	Pn	09 49 04.5	+1.8
B926	Mesachie Lake	2.91	224	Pn	Pn	09 49 03.1	+0.1
B926	Mesachie Lake	2.91	224	Pn	Pn	09 49 03.1	+0.1
B926				Sg	Sb	09 49 44.1	-0.1
CLRS	Cowichan Lake	2.91	224	Pn	Pn	09 49 03.2	+0.2
CLRS	Cowichan Lake	2.91	224	Pn	Pn	09 49 03.4	+0.4
CLRS				Sg	Sb	09 49 44.0	-0.2
VGZ	Gonzales	2.94	211	Pn	Pn	09 49 03.3	0.0
VGZ	Gonzales	2.94	211	Pn	Pn	09 49 03.3	0.0
VGZ				Sn	Sn	09 49 39.0	+0.4
B927	Port Alberni	2.97	235	Pn	Pn	09 49 05.3	+1.5
B927	Port Alberni	2.97	235	Pn	Pn	09 49 05.3	+1.5
B927				Sg	Sb	09 49 47.0	+1.1
C06D	Leavenworth	3.04	178	Pb	Pb	09 49 11.0	0.0
	baz=359,SNR=23						
C06D				Sb	Sb	09 49 48.2	0.0
	baz=359						
MGB	Mount Grey	3.05	231	Pn	Pn	09 49 06.0	+1.0
MGB	Mount Grey	3.05	231	Pn	Pn	09 49 06.0	+1.0
MGB				Sg	Sb	09 49 49.8	+1.6
SPLB	Strathcona Par	3.11	252	Pn	Pn	09 49 07.3	+1.5
SPLB	Strathcona Par	3.11	252	Pn	Pn	09 49 07.3	+1.5
SPLB				Sg	Sg	09 49 53.4	-3.2
NCRB	Newcastle Ridg	3.21	262	Pn	Pn	09 49 09.2	+1.9
NCRB	Newcastle Ridg	3.21	262	Pn	Pn	09 49 09.2	+1.9
NCRB				Sg	Sg	09 49 57.5	-2.3
BTB	Buttle Lake	3.22	244	Pn	Pn	09 49 08.4	+0.9
BTB	Buttle Lake	3.22	244	Pn	Pn	09 49 08.4	+0.9
BTB				Sg	Sg	09 49 56.7	-3.3
PFB	Port Renfrew	3.23	224	Pn	Pn	09 49 08.2	+0.7
PFB	Port Renfrew	3.23	224	Pn	Pn	09 49 08.2	+0.7
PFB				Sg	Sb	09 49 53.9	+0.3
STW	Striped Peak	3.28	212	Pn	Pn	09 49 08.5	+0.4
STW	Striped Peak	3.28	212	Pn	Pn	09 49 08.5	+0.4
C05A	Tolt Reservoir	3.29	187	Pn	Pn	09 49 07.7	-0.6
C05A	Tolt Reservoir	3.29	187	Pn	Pn	09 49 07.7	-0.6
C05A				Sg	Sb	09 49 56.4	+1.1
B04A	Port Angeles	3.31	209	Pn	Pn	09 49 08.5	0.0
B04A				IAML		09 50 01.5	
	comp=N,147nm,0.9s						
B04A				IAML		09 50 02.0	
	comp=E,158nm,1.2s						
B928	Bamfield	3.38	232	Pn	Pn	09 49 11.0	+1.6
B928	Bamfield	3.38	232	Pn	Pn	09 49 11.0	+1.6
B928				Sg	Sb	09 49 58.7	+1.1
BFSB	Bamfield	3.38	232	Pn	Pn	09 49 11.5	+2.1
BFSB				Sg	Sb	09 49 59.2	+1.5
GDR	Gold River	3.38	251	Pn	Pn	09 49 12.0	+2.5
GDR	Gold River	3.38	251	Pn	Pn	09 49 12.0	+2.5
GDR				Sg	Sg	09 50 02.4	-2.8
OZB	Mount Ozzard	3.48	237	Pn	Pn	09 49 11.3	+0.4
OZB	Mount Ozzard	3.48	237	Pn	Pn	09 49 13.0	+2.1
OBC	Olympics--Boni	3.52	215	Pn	Pn	09 49 12.8	+1.4
OBC	Olympics--Boni	3.52	215	Pn	Pn	09 49 12.8	+1.4
OCP	Olym-Cheeka Pk	3.52	222	Sg	Sb	09 50 04.6	+2.7
OSD	Olympics--Snow	3.58	210	Pn	Pn	09 49 13.8	+1.4
OSD	Olympics--Snow	3.58	210	Pn	Pn	09 49 13.8	+1.4
GNW	Green Mountain	3.59	199	Pn	Pn	09 49 12.8	+0.5
GNW	Green Mountain	3.59	199	Pn	Pn	09 49 12.8	+0.5
WOSB	Woss	3.59	259	Pn	Pn	09 49 14.2	+1.7
WOSB	Woss	3.59	259	Pn	Pn	09 49 14.2	+1.7
C09A	Chrisman Ranch	3.66	149		Pn	09 49 12.9	-0.4
C09A	Chrisman Ranch	3.66	149	Pn	Pn	09 49 12.9	-0.4
C09A				Sg	Sb	09 50 06.8	+1.0
D03D	Eldon	3.67	202	P	Pn	09 49 13.8	+0.3
	baz=22,SNR=32						
TLCB	Telegraph Cove	3.67	266	Pn	Pn	09 49 15.5	+2.0
TLCB	Telegraph Cove	3.67	266	Pn	Pn	09 49 15.5	+2.0
TLCB				Sg	Sg	09 50 10.8	-3.9
LTY	Liberty	3.72	176		Pn	09 49 13.8	-0.4
LTY				IAML		09 50 14.9	
	comp=N,268nm,0.6s						
LTY				IAML		09 50 15.2	
	comp=E,230nm,0.7s						
LTY	Liberty	3.72	176	Pn	Pn	09 49 13.7	-0.5
LTY				Sg	Sb	09 50 08.6	+1.1
NEW	Newport	3.73	135	Pn	Pn	09 49 14.1	-0.3
	comp=E,2.5nm,0.3s,baz=306,slow=12,SNR=27						
NEW				Lg	Lg	09 50 10.1	

	comp=E,18nm,0.3s,baz=35,slow=22,SNR=9.7						
NEW	Newport	3.73	135	Pn	Pn	09 49 14.2	-0.2
NEW				IAML		09 50 14.2	
	comp=E,136nm,0.8s						
NEW				IAML		09 50 17.0	
	comp=E,217nm,0.8s						
NEW	Newport	3.73	135	P	Pn	09 49 14.0	-0.3
	baz=317						
NEW				Sb	Sb	09 50 09.1	+1.1
	baz=317						
D05A	Enumclaw	3.82	189		Pn	09 49 16.9	+1.3
D05A				IAML		09 50 18.1	
	comp=E,111nm,1.4s						
D05A				IAML		09 50 21.6	
	comp=N,146nm,1.5s						
D05A	Enumclaw	3.82	189	Pn	Pn	09 49 15.6	0.0
MAYB	Maynard	3.91	264	Pn	Pn	09 49 19.1	+2.1
MAYB	Maynard	3.91	264	Pn	Pn	09 49 19.1	+2.1
MAYB				Sg	Sg	09 50 20.6	-1.7
D04E	Lakebay	3.94	197	S	Sn	09 50 03.7	+0.2
	baz=17						
FSJB	Fort St James	4.01	332	Pn	Pn	09 49 20.6	+2.4
FSJB				Sg	Sg	09 50 24.5	-0.9
NLWA	Neilton Lookou	4.01	208		Pn	09 49 18.9	+0.7
PHC	Port Hardy	4.03	269	Pg	Pb	09 49 29.8	+2.0
PHC				Sg	Sg	09 50 21.6	-4.5
FSB	Fort Saint Jam	4.04	332	Pn	Pn	09 49 21.0	+2.4
FSB				Sg	Sg	09 50 26.6	+0.4
PACB	Port Alice, BC	4.11	265	Sg	Sg	09 50 23.8	-4.7
D08A	Wollman Farm,	4.16	159	Pn	Pn	09 49 18.9	-1.3
D08A				IAML		09 50 27.6	
	comp=E,272nm,0.3s						
D08A				IAML		09 50 37.8	
	comp=N,116nm,0.5s						
PRDA	Priddis	4.30	89	Pn	Pn	09 49 22.4	+0.2
PRDA				Sg	Sg	09 50 30.6	-4.1
BPBC	Brooks Peninsu	4.34	262	Pn	Pn	09 49 23.3	+0.6
E07A	Sunnyside	4.48	169	Pn	Pn	09 49 24.8	+0.2
HOLB	Holberg	4.48	269	Sg	Sg	09 50 36.5	-4.0
E04D	Cinebar	4.52	193	P	Pn	09 49 25.4	+0.3
	baz=13,SNR=14						
E04D				S	Sn	09 50 17.6	0.0
	baz=13						
BBB	Bella Bella	4.55	288	Pn	Pn	09 49 27.2	+1.6
	comp=N,0.4nm,0.3s,baz=94,slow=13,SNR=1.6						
BBB				Lg	Lg	09 50 40.5	
	comp=N,10nm,0.3s,baz=7.1,slow=13,SNR=6.8						
BBB	Bella Bella	4.55	288	Pn	Pn	09 49 27.2	+1.6
BBB				Sg	Sg	09 50 41.5	-1.2
E08A	Dider Farm, El	4.67	163	Pn	Pn	09 49 26.5	-0.7
E08A				IAML		09 50 47.5	
	comp=N,110nm,0.6s						
HAWA	Hanford	4.69	167	Pn	Pn	09 49 27.7	+0.2
HAWA				IAML		09 50 47.9	
	comp=N,120nm,0.5s						
HAWA				IAML		09 50 50.2	
	comp=N,186nm,0.5s						
E03A	Lebam	4.71	201	Pn	Pn	09 49 28.1	+0.2
E03A				IAML		09 51 14.5	
	comp=N,69nm,2.4s						
E03A				IAML		09 51 34.5	
	comp=E,55nm,4.1s						
E03A	Lebam	4.71	201	Pn	Pn	09 49 28.0	+0.2
RADR	Rader Ridge	4.88	203	Pn	Pn	09 49 30.2	0.0
RADR				IAML		09 50 58.2	
	comp=N,90nm,1.9s						
RADR				IAML		09 51 00.6	
	comp=E,105nm,1.9s						
WALA	Waterton Lakes	5.00	110	Pn	Pn	09 49 33.2	+1.3
WALA				IAML		09 50 58.8	
	comp=N,97nm,0.9s						
WALA				IAML		09 51 01.4	
	comp=E,89nm,1.2s						
WALA	Waterton Lakes	5.00	110	Pn	Pn	09 49 31.7	-0.1
WALA				Sg	Sg	09 50 51.4	-5.7
BUTB	Butedale	5.02	298	Pn	Pn	09 49 34.5	+2.4
BUTB				Sg	Sg	09 50 53.8	-3.9
F04D	Rainier, OR	5.05	195	S	Sn	09 50 30.4	-0.3
	baz=15						
F05D	White Salmon	5.09	183	Sb	Sb	09 50 51.6	+4.8
	baz=3.3						
F07A	Phinny Hill Vi	5.13	171	Pn	Pn	09 49 32.9	-0.6
BMBC	Bull Mountain	5.13	353	Pn	Pn	09 49 36.9	+3.3
BMBC				Sg	Sg	09 51 00.5	-0.8
BSMT	Bassoo Peak	5.16	125	Pn	Pn	09 49 34.5	+0.4
EDM	Edmonton	5.28	62	Pn	Pn	09 49 36.0	+0.4
EDM	Edmonton	5.28	62	Pn	Pn	09 49 36.1	+0.5
EDM				Sg	Sg	09 51 03.2	-2.8
JTMT	Jette	5.49	123	Pn	Pn	09 49 39.2	+0.6
JTMT	Jette	5.49	123	Pn	Pn	09 49 39.0	+0.4
MBLB	Minette Bay Lo	5.54	307	Sg	Sg	09 51 11.7	-2.6
YBMT	Yellow Bay	5.56	121	Pn	Pn	09 49 40.2	+0.7
KITB	Kitimat	5.57	307	Pn	Pn	09 49 42.5	+3.0
KITB				Sg	Sg	09 51 12.3	-3.0
F10A	Beach Ranch, E	5.61	151	Pn	Pn	09 49 40.7	+0.5
HWKB	Hawksbury Isla	5.61	301	Sg	Sg	09 51 13.0	-3.7
G05D	Wamic, OR	5.72	182	Pb	Pb	09 49 57.5	+0.8
	baz=2.0						
G05D				Sb	Sb	09 51 09.5	+4.2
	baz=2.0						
G08A	Pilot Rock	5.85	165	Pn	Pn	09 49 43.7	+0.2
BNKB	Banks Island	5.92	297	Sg	Sg	09 51 21.1	-5.7
GRNB	Grenville Isla	6.15	301	Pn	Pn	09 49 51.0	+3.5
GRNB				Sg	Sg	09 51 30.1	-3.9
MSO	Missoula	6.27	129	Pn	Pn	09 49 48.4	-0.9
MSO	Missoula	6.27	129	P	Pn	09 49 49.0	-0.2
	baz=313						
MSO				S	Sn	09 51 00.1	-0.8
	baz=313						
BNAB	Bonilla	6.39	297	Sg	Sg	09 51 36.3	-5.5
RUBB	Prince Rupert	6.52	305	Sg	Sg	09 51 40.0	-5.8
BMO	Blue Mountains	6.62	156	Pn	Pn	09 49 54.3	+0.3
I05D	Terrebonne, OR	6.63	182	Sb	Sb	09 51 37.7	+6.4
	baz=1.9						
NBC5	NorthernBC 5	6.64	353	Pn	Pn	09 49 57.2	+2.9
PLID	Pearl Lake	6.79	148	Pn	Pn	09 49 57.3	+0.7
NBC6	NorthernBC 6	7.64	359	Sg	Sg	09 52 18.6	-3.1
LRM	Limekiln Ridge	7.71	129	Pn	Pn	09 50 09.3	+0.1
J08A	Circle Bar Ran	7.81	166	Pn	Pn	09 50 09.8	-0.6
FNBB	Fort Nelson	8.02	353	Pn	Pn	09 50 15.6	+2.4
FNBB				Sg	Sg	09 52 31.1	-2.8
MCMT	McKenzie Canyo	8.26	135	Pn	Pn	09 50 18.8	+2.1
MFID	Camas Ranch	8.35	153	Pn	Pn	09 50 19.6	+1.8
BCYI	Bear Canyon	8.43	139	Pn	Pn	09 50 17.9	-1.1
HUMO	Hull Mountain	8.46	189	Pn	Pn	09 50 20.6	+1.4
HLID	Hailey	8.68	146	Pn	Pn	09 50 23.0	+0.6
DLBC	Dease Lake	9.10	329	Pn	Pn	09 50 32.6	+4.7
	comp=E,0.1nm,0.3s,baz=185,slow=12,SNR=2.0						
DLBC				Lg	Lg	09 53 01.9	
	comp=E,0.3nm,0.3s,baz=328,slow=25,SNR=3.2						
DLBC	Dease Lake	9.10	329	Pn	Pn	09 50 31.8	+3.8
DLBC				Sg	Sg	09 53 06.1	
YHH	Holmes Hill	9.24	128	Pn	Pn	09 50 29.3	-0.9
YMR	Madison River	9.27	129	Pn	Pn	09 50 30.8	+0.3
ELK	Elko	11.00	156	Pn	Pn	09 50 57.0	+2.8
	comp=E,0.1nm,0.3s,baz=349,slow=13,SNR=7.7						
ELK				Lg	Lg	09 54 03.9	
	comp=E,0.1nm,0.3s,baz=214,slow=20,SNR=2.4						
PDAR	Pinedale Array	11.37	132	Pn	Pn	09 51 06.8	+7.6
	comp=E,0.0nm,0.3s,baz=324,slow=7.3,SNR=3.5						
PDAR				Lg	Lg	09 54 11.0	
	comp=E,0.0nm,0.3s,baz=326,slow=24,SNR=5.7						
YKA	Yellowknife Ar	12.09	14	Pn	Pn	09 51 07.8	-0.9
	comp=E,0.2nm,0.3s,baz=193,slow=13,SNR=12						
YKA				Lg	Lg	09 54 36.4	
	comp=E,0.2nm,0.3s,baz=188,slow=28,SNR=4.9						
YKA	Yellowknife Ar	12.09	14	Pn	Pn	09 51 07.2	-1.5
NVAR	Mina Array Bea	12.68	170	Pn	Pn	09 51 20.2	+2.9
	comp=E,0.0nm,0.3s,baz=327,slow=13,SNR=1.9						
ULM	Lac du Bonnet	16.00	83	Pn	Pn	09 51 58.5	-3.1
	comp=E,0.2nm,0.3s,baz=282,slow=9.3,SNR=1.3						
INK	Inuvik	18.43	345	LR	LR	10 01 11.4	
	comp=E,103nm,19.8s,baz=175,slow=42						
ANMO	Albuquerque	19.20	141	P	Pn	09 52 43.4	+1.8
	comp=E,0.1nm,0.3s,baz=313,slow=17,SNR=1.7						
TXAR	Lajitas Array	25.25	142	P	P	09 53 46.5	+3.5
	comp=E,1.0nm,1.0s,baz=345,slow=7.9,SNR=6.6						

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*SOME **16** 09:55:24.1, 42°.55N×88°.62E, h5^{km}*

*NNC **16** 09:56:02.2±1.4, 43°.39N×87°.23E, h0^{km}, mb3.8, mpv3.3, Error ellipse: s-maj=11.1km s-min=8.5km az=109.0*

ISC 16 09:56:00.9±3.7**, 43°.2N**±0°.1×**87°.3E**±0°.2**, h10**^{km}**, n7, σ1.ˢ73**/13**, 9C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	4.59	339	eP	Pn	09 57 11.4	+1.0
	5.0nm,0.6s						
ZSN				eS	Sg	09 58 28.1	-0.2
	6.2nm,0.5s						
MK31	Makanchi Array	5.05	317	Pn	Pn	09 57 17.8	+1.1
	0.8nm,0.3s,baz=133,slow=14,SNR=38						
MK31				⇓Sn	Sn	09 58 15.4	+0.3
	3.0nm,0.5s						
MK31				⇑Lg	Lg	09 58 36.5	
	5.2nm,0.6s,baz=127,slow=30,SNR=4.7						
MAKZ	Makanchi	5.22	316	⇓Pn	Pn	09 57 19.5	+0.4
	4.5nm,0.5s						
MAKZ				⇑Lg	Lg	09 58 42.3	
	10nm,1.1s						
PDGK	Podgornoye	5.69	274	⇑Pn	Pn	09 57 26.9	+1.3
	1.3nm,0.4s						
PDGK				⇓Sn	Sn	09 58 34.4	+3.4
	5.1nm,0.8s						
PDGK				⇑Lg	Lg	09 59 00.5	
	17nm,0.8s						
SHLS	Shalkode	5.72	272	eP	Pn	09 57 23.1	-2.9
	4.3nm,0.3s						
SHLS				eS	Sb	09 58 48.3	-1.1
	12nm,0.5s						
KURBB	Kurchatov Arra	9.54	324	⇑Pn	Pn	09 58 17.2	-1.1
	2.1nm,0.8s						
KURBB				⇑Sn	Sn	10 00 06.4	+0.9
	3.1nm,0.7s						
KURBB				⇓Lg	Lg	10 00 58.6	
	9.6nm,0.7s						
KURK	Kurchatov	9.57	325	⇑Pn	Pn	09 58 17.9	-0.8
	1.8nm,0.9s						
KURK				⇑Sn	Sn	10 00 04.7	-1.5
	2.6nm,0.8s						
KURK				⇑Lg	Lg	10 00 59.7	
	3.7nm,0.8s						

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*IDC **16** 10:16:31.5±4.6, 0°.63S×131°.48E, h0^{km}, mb3.4/3, mb1 3.5/4, mb1mx3.2/45, mbtmp3.4/4, ML3.0/1, Error ellipse: s-maj=337.5km s-min=24.3km az=73.0*

*DJA **16** 10:16:37.7±1.4, 1°S±13°×13°1E±1°0, h20^{km}±3^{km}, M3.4/5, MLv3.4/5*

*NEIC **16** 10:16:38.3±1.1, 0°.78S±0°.08×131°.01E±0°.09, h39^{km}±6^{km}, mb4.2/12, Error ellipse: s-maj=13.8km s-min=10.6km az=61.0*

ISC 16 10:16:37.2±0.7**, 0°.71S**±0°.07×**131°.21E**±0°.08**, h35**^{km}**, n24, σ1.ˢ23**/27**, mb4.4**/7**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	0.16	160	P	Pn	10 16 41.7	-1.9
SWI				S	Sn	10 16 45.8	-2.2
FAKI	Fak Fak	2.42	155	P	Pn	10 17 15.7	+1.4
FAKI				S	Sn	10 17 44.1	+1.3
FAKI	Fak Fak	2.42	155	Pn	Pn	10 17 15.7	+1.4
FAKI				Sn	Sn	10 17 44.4	+1.6
MSAI	Masohi	3.47	221	P	Pn	10 17 29.3	+0.6
LBMI	Labuha	3.71	271	P	Pn	10 17 33.3	+1.3
LUWI	Luwuk	8.44	268	Pn	Pn	10 18 35.3	-1.8
MTN	Manton Dam	12.05	180	Pn	Pn	10 19 26.3	-0.3
WB0	Warramunga Arr	19.19	171	P	P	10 20 56.0	-2.1
WRA	Warramunga Arr	19.35	171	P	P	10 20 58.6	-1.3
	0.1nm,0.3s,baz=356,slow=12,SNR=3.5						
WRA	Warramunga Arr	19.35	171	P	P	10 20 59.2	-0.6
WB2	Warramunga Arr	19.36	171	P	P	10 20 58.6	-1.3
WB2				IAmb	IAmb	10 21 22.2	
	comp=Z,8.7nm,1.5s						
WR0	Warramunga Arr	19.40	171	P	P	10 21 00.3	0.0
WR0				IAmb	IAmb	10 21 07.2	
	comp=Z,7.5nm,1.2s						
GUMO	Guam	19.63	43	P	Pn	10 21 04.8	+0.3
AS31	Alice Springs	22.96	174	P	P	10 21 38.9	+0.2
ASAR	Alice Springs	22.96	174	P	P	10 21 38.9	+0.1
	comp=Z,0.4nm,0.7s,baz=354,slow=8.8,SNR=6.7						
PSA00	Pilbara Seismi	23.51	207	P	P	10 21 43.1	-1.0
PSA00				IAmb	IAmb	10 22 00.6	
	comp=Z,20nm,1.4s						
KS19	Wonju Array Si	38.15	356	P	P	10 23 53.6	+0.5
SANVU	Saraoutou	38.43	114	P	P	10 23 56.2	+0.4
SANVU				IAmb	IAmb	10 24 01.2	
	comp=Z,10nm,1.0s						
TOO	Toolangi	38.97	162	P	P	10 23 59.3	-0.8
TOO				IAmb	IAmb	10 24 00.3	
	comp=Z,6.7nm,1.0s						
BKZ	Black Stump Fm	56.31	138	P	P	10 26 16.1	+1.4
MKAR	Makanchi Array	63.74	325	P	P	10 27 06.2	+0.7
	comp=Z,0.3nm,0.4s,baz=109,slow=8.4,SNR=1.6						
BOOM	Boomskoye usch	65.60	318	P	P	10 27 17.1	-0.9
BOOM				IAmb	IAmb	10 27 44.3	
	comp=Z,4.4nm,1.1s						
KURBB	Kurchatov Arra	67.88	327	P	P	10 27 32.0	0.0
	comp=Z,0.5nm,0.6s,baz=129,slow=6.0,SNR=5.0						
KKAR	Karatay Array	69.51	317	P	P	10 27 43.0	+0.6

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*PDG **16** 10:20:10.8±0.2, 41°.71N×20°.17E, h12^{km}, ML2.6/10, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

*TIR **16** 10:20:10.7, 41°.70N×20°.14E, h17^{km}, Md2.5, Ml2.8*

*BEO **16** 10:20:11.0±0.2, 41°.74N×20°.24E, h0^{km}, ML2.3/13*

*SKO **16** 10:20:11.9, 41°.68N×20°.16E, h12^{km}*

*THE **16** 10:20:11.4, 41°.73N×20°.13E, h15^{km}±1^{km}, ML2.7/3, Error ellipse: s-maj=4.1km s-min=1.1km az=334.0*

ISC 16 10:20:11.2±0.9**, 41°.71N**±0°.02×**20°.16E**±0°.02**, h15**^{km}±7^{km}**, n67, σ1.ˢ13**/111**, 13C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	Peshkopia	0.21	97	P	Pb	10 20 16.3	-0.5
PHP				S	Sg	10 20 20.8	+1.5
	6µm,0.2s						
PHP	Peshkopia	0.21	97	P	Pb	10 20 16.3	-0.5
	baz=93						
PHP				S	Sg	10 20 20.2	+0.8
	baz=93						
PHP				AMP			
	comp=N,27nm,0.1s,baz=93						
TIR	Tirane	0.42	212	P	Pg	10 20 19.3	-0.4
TIR				S	Sb	10 20 26.6	-0.1
	comp=N,522nm,0.4s						
TIR	Tirane	0.42	212	i Pg	Pg	10 20 19.3	-0.4
TIR	Tirane	0.42	212	P	Pg	10 20 19.4	-0.3
	baz=211						
TIR				S	Sg	10 20 25.8	+0.2
	baz=211						
TIR				AMP			
	comp=E,2.0nm,0.2s,baz=211						
TIR	Tirane	0.42	212	ePg	Pg	10 20 19.3	-0.4
TIR				eSg	Sg	10 20 25.4	-0.1
BCI	Bajram Curri	0.66	354	P	Pb	10 20 24.2	-0.3
	baz=356						
BCI				S	Sb	10 20 33.4	-0.1
	baz=356						
BCI				AMP			
	comp=E,1.4nm,0.6s,baz=356						
ULC	Ulcinj	0.73	291	i Pg	Pg	10 20 24.7	-0.7
ULC	Ulcinj	0.73	291	⇑iPg	Pg	10 20 24.8	-0.7
ULC				i Sg	Sb	10 20 36.0	+0.5
OHR	Ohrid	0.77	141	i Pg	Pg	10 20 25.1	-1.0
OHR				i Sg	Sb	10 20 37.0	+0.4
OHR				eLg	Lg	10 20 37.6	
	comp=N,186nm,0.3s						
OHR	Ohrid	0.77	141	ePg	Pg	10 20 25.1	-1.0
OHR				eSg	Sg	10 20 35.4	-0.9
DRME	Dracevica, Mon	0.87	303	⇓iPg	Pg	10 20 27.0	-1.1
DRME				i Sg	Sn	10 20 41.1	-0.3
PVY	Plav	0.90	350	⇓iPg	Pg	10 20 27.8	-0.8
PVY				i Sg	Sb	10 20 41.3	+0.9
PDG	Podgorica	0.99	317	⇑P	Pg	10 20 29.1	-1.2
PDG				⇓S	Sn	10 20 45.5	+1.3
PDG	Podgorica	0.99	317	ePn	Pg	10 20 28.8	-1.5
PDG	Podgorica	0.99	317	i Pg	Pg	10 20 29.3	-1.0
PDG				i Sg	Sn	10 20 44.9	+0.7
PDG	Podgorica	0.99	317	ePg	Pg	10 20 29.3	-1.0
PDG				eSg	Sb	10 20 43.0	+0.2
TTG	Podgorica	0.99	317	⇓iPg	Pg	10 20 28.8	-1.5
TTG				i Sg	Sn	10 20 44.9	+0.7
SKO	Skopje	0.99	74	i Pg	Pg	10 20 30.0	-0.4
SKO				i Sg	Sb	10 20 43.7	+0.7
SKO				eLg	Lg	10 20 45.6	
	comp=N,14nm,0.3s						
BUM	Brajici-Budva	1.11	302	⇑iPg	Pb	10 20 31.5	-0.7
BUM				i Sg	Sn	10 20 49.3	+1.8
IVA	Berane	1.18	350	⇑iPg	Pb	10 20 32.8	-0.5
IVA				i Sg	Sn	10 20 50.9	+1.8
KBN	Korca	1.18	156	P	Pg	10 20 34.0	-0.1
	baz=155						
KBN				S	Sn	10 20 50.3	+1.1
	baz=155						
KBN				AMP			
	comp=E,0.9nm,0.7s,baz=155						
KOME	Kolasin	1.24	337	⇓iPg	Pn	10 20 33.6	-0.5
KOME				i Sg	Sn	10 20 53.0	+2.4
CEME	Cevo	1.25	313	⇓iPg	Pn	10 20 34.2	0.0
CEME				i Sg	Sg	10 20 53.7	+2.2
FNA	Florina	1.30	135	P	Pn	10 20 34.8	-0.2
FNA				S	Sn	10 20 52.6	+0.5
	comp=E,355nm,0.3s						
FNA	Florina	1.30	135	i Pg	Pn	10 20 34.8	-0.2
FNA				i Sg	Sb	10 20 51.9	-0.1
NKME	Niksic	1.39	320	⇑iPg	Pn	10 20 36.3	+0.2
NKME				i Sg	Sg	10 20 58.2	+2.3
HCY	Herceg Novi	1.44	301	⇑iPg	Pn	10 20 37.3	+0.5
HCY				i Sg	Sg	10 20 59.4	+1.6
NEST	Nestorio	1.46	152	P	Pn	10 20 37.6	+0.5
SJES	Sjenica	1.56	355	ePg	Pn	10 20 38.9	+0.4
SJES				eSg	Sn	10 20 57.5	-1.0
LSK	Leskovik	1.59	168	P	Pn	10 20 39.3	+0.3
LSK	Leskovik	1.59	168	P	Pb	10 20 40.3	-0.1
	baz=167						
LSK				S	Sg	10 21 02.8	+0.2
	baz=167						
BARS	Barje	1.65	47	i Pn	Pn	10 20 40.3	+0.6
BARS	Barje	1.65	47	ePg	Pn	10 20 40.0	+0.3
BARS	Barje	1.65	47	ePn	Pg	10 20 54.2	+11
BARS				eSg	Sn	10 21 00.8	+0.1
BARS				eSn	Sg	10 21 27.5	+23
SELS	Selova	1.67	25	ePg	Pn	10 20 39.6	-0.3
SELS				eSg	Sb	10 21 02.1	-0.4
TREB	Trebinje	1.68	307	ePn	Pb	10 20 41.0	-0.8
UPM	Unac-Piva	1.76	328	⇑iPn	Pn	10 20 41.3	0.0
GRG	Griva	1.85	113	i Pn	Pn	10 20 43.5	+1.1
IVAS	Ivanjica	1.86	360	ePg	Pn	10 20 43.1	+0.4
IVAS				eSg	Sb	10 21 09.4	+1.2
BOSS	Bosilegrad	1.90	65	ePg	Pn	10 20 43.7	+0.6
BOSS				eSg	Sb	10 21 09.4	+0.4
RUDO	Rudo	1.99	343	ePn	Pn	10 20 45.8	+1.4
STON	Ston	2.16	303	ePn	Pb	10 20 49.7	-0.4
GRUS	Gruza	2.21	10	ePn	Pb	10 20 49.3	-1.7
GRUS				eSn	Sn	10 21 16.0	+1.4
BBLS	Lazići	2.23	346	ePn	Pn	10 20 48.2	+0.5
BBLS	Lazići	2.23	346	ePn	Pn	10 20 48.8	+1.1
BBLS				eSn	Sb	10 21 18.3	-0.3
BOVS	Bovan	2.23	30	⇑P	Pn	10 20 47.0	-0.7
DIVS	Divibare	2.39	357	ePn	Pn	10 20 50.7	+0.8
DIVS	Divibare	2.39	357	ePn	Pn	10 20 50.8	+0.8
DIVS				eSn	Sb	10 21 21.3	-2.0
ZAPS	Zavoj	2.41	49	ePn	Pn	10 20 51.7	+1.6
ZAPS				eSn	Sn	10 21 19.1	-0.2
VTS	Vitosha	2.46	67	⇑P	Pn	10 20 49.9	-1.0
VTS				⇓S	Sn	10 21 20.9	+0.1
VTS	Vitosha	2.46	67	ePn	Pn	10 20 51.5	+0.6
VTS				eSn	Sn	10 21 20.1	-0.7
TRUS	Trudelj	2.52	4	ePn	Pn	10 20 53.0	+1.4
TRUS				eSn	Sb	10 21 25.1	-1.8
ZAGS	Zajecar	2.60	35	ePn	Pn	10 20 53.2	+0.5
BLKB	Belogradchik	2.66	43	⇑S	Sn	10 21 27.0	+1.3
MAKA	Makarska	2.81	305	ePn	Pb	10 20 59.3	-1.7
MAKA				Sn	Sn	10 21 29.2	+0.1
RICI	Ricice	2.86	310	ePn	Pb	10 21 00.7	-1.3
RICI				Sn	Sn	10 21 31.7	+1.2
HVAR	Hvar	3.11	299	ePn	Pn	10 21 02.3	+2.5
HVAR				Sn	Sn	10 21 33.7	-3.0
MDVR	Moldovita	3.27	20	⇑P	Pn	10 21 01.8	-0.2
MDVR				⇑S	Sn	10 21 43.5	+2.8
FRGS	Fruska Gora	3.46	356	ePn	Pn	10 21 04.2	-0.3
ZIRJ	Zirje	3.85	302	ePn	Pn	10 21 11.9	+2.0
ZIRJ				Sn	Sn	10 21 53.6	-1.4
MORI	Morici	3.92	305	ePn	Pn	10 21 13.1	+2.2
MORI				Sn	Sn	10 21 55.2	-1.4
BZS	Buzias	4.04	15	⇑P	Pn	10 21 12.9	+0.3
MRAK	Mrakovica	4.07	325	ePn	Pn	10 21 13.3	+0.3
DUGI	Dugi Otok	4.39	303	ePn	Pn	10 21 19.4	+2.0
DUGI				Sn	Sn	10 22 05.6	-2.6
MORH	Mrgy, Hungar	4.63	347	⇓P	Pn	10 21 21.0	+0.4
MORH	Mrgy, Hungar	4.63	347	ePn	Pn	10 21 19.9	-0.8

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*TUL **16** 10:21:13.6±0.8, 36°.895N±0°.010×97°.75W±0°.01, h3^{km}±6^{km}, ML2.8, mb_Lg2.4/12(NEIC), Error ellipse: s-maj=1.4km s-min=1.3km az=128.0*

NEIC 16 10:21:14.0±0.6**, 36°.881N**±0°.007×**97°.75W**±0°.01**, h3**^{km}±6^{km}**, Error ellipse: s-maj=1.5km s-min=0.9km az=106.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	252	Pg	Pg	10 21 16.0	+0.2
GC02				Sg	Sg	10 21 17.5	+0.4
KAN17	Caldwell West	0.16	355	Pg	Pg	10 21 17.1	-0.1
KAN17				Sg	Sg	10 21 19.5	+0.1
KAN14	Manchester OK	0.19	294	Pg	Pg	10 21 17.6	-0.1
KAN14				Sg	Sg	10 21 20.2	+0.1
KAN05	Bluff City Nor	0.25	337		Pg	10 21 18.6	-0.1
KAN13	South Haven SW	0.25	59	Pg	Pg	10 21 19.0	+0.1
KAN13				Sg	Sg	10 21 22.7	+0.5
KAN01	Argonia South	0.27	358		Pg	10 21 19.1	-0.1
KAN01				Sg	Sg	10 21 23.2	+0.4
KAN09	Caldwell North	0.28	22	Pg	Pg	10 21 19.3	0.0
KAN09				Sg	Sg	10 21 23.1	+0.2
KAN10	Anthony SW Sta	0.37	311	Pg	Pg	10 21 20.9	-0.2
KAN10				Sg	Sg	10 21 25.9	0.0
KAN06	Argonia West S	0.38	347		Pg	10 21 21.1	-0.2
KAN06				Sg	Sg	10 21 26.1	0.0
OK032	Salt Plains WL	0.38	258	Pg	Pg	10 21 21.2	0.0
KAN08	Anthony NE Sta	0.39	333		Pg	10 21 21.3	-0.1
CROK	Carrier	0.42	207	Pg	Pg	10 21 22.4	+0.3
CROK				Sg	Sg	10 21 28.4	+0.9
KAN16	Harper SW Stat	0.43	324	Pg	Pg	10 21 22.0	-0.2
BLOK	Blackwell	0.45	105	Pg	Pg	10 21 22.6	+0.1
BLOK				Sg	Sg	10 21 29.1	+0.8
KAN12	Harper NE Stat	0.46	334	Pg	Pg	10 21 22.6	-0.2
T35A	Sooner Cattle	0.99	88		Pg	10 21 32.5	-0.5
T35A				Sg	Sg	10 21 45.5	-0.3
QUOK	Quay	1.10	130		Pg	10 21 34.6	-0.4
OK029	Liberty Lake	1.11	168		Pg	10 21 34.9	-0.3
U32A	Winter Ranch,	1.12	244		Pg	10 21 34.8	-0.7
OK031	S. Brethren Rd	1.18	141		Pg	10 21 36.2	-0.4
OK034	N. Norfolk Rd.	1.21	136		Pg	10 21 36.6	-0.5
BCOK	Bluff Creek, N	1.23	175		Pg	10 21 37.0	-0.5
OK030	Cody Creek RV	1.23	140		Pg	10 21 37.0	-0.5
OK025	Westminster Rd	1.34	166		Pn	10 21 39.1	-0.4
OKCFA	Oklahoma City	1.48	171		Pn	10 21 41.6	+0.1
OKCSW	OKLAHOMA CITY	1.49	170	Pn	Pn	10 21 41.8	+0.1
FNO	Franklin	1.64	170		Pn	10 21 44.0	+0.2
R32A	Long Quarter,	1.72	334		Pn	10 21 45.2	+0.4
TUL1	Leonard	1.85	121		Pn	10 21 47.0	+0.4
TUL1				IAmb_Lg		10 22 17.4	
	comp=Z,13nm,0.7s						
W35A	Tecumseh	1.86	157		Pn	10 21 46.7	0.0
HHAR	Hobbs	3.12	100	Pn	Pn	10 22 04.5	+0.3
S39A	Bolivar	3.62	76		Pn	10 22 10.7	-0.2
AMTX	Amarillo	3.76	239	Pn	Pn	10 22 13.6	+0.6
U40A	Yellville	3.97	96	Pn	Pn	10 22 15.4	-0.4
U40A				IAmb_Lg		10 23 18.9	
	comp=Z,6.5nm,0.8s						
R40A	Maddies Statio	4.58	70		Pn	10 22 24.0	0.0
FCAR	Ozark Folk Cen	4.64	101	IAmb_Lg		10 23 40.7	
	comp=Z,12nm,0.9s						
WHAR	Wooly Hollow	4.70	108	IAmb_Lg		10 23 41.9	
	comp=Z,5.9nm,0.8s						
CCM	Cathedral Cave	5.30	75	IAmb_Lg		10 24 13.3	
	comp=Z,4.5nm,0.7s						
JCT	Junction City	6.61	196	IAmb_Lg		10 24 49.8	
	comp=Z,6.7nm,1.1s						

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*DJA **16** 10:23:43.0±0.3, 8°S±3°×10°7E±°, h10^{km}, M4.5/11, mb4.6/2, mB5.2/1, MLv4.4/11, Mw(mB)4.5/1*

*NEIC **16** 10:23:43.4±1.9, 8°.10S±0°.05×106°.97E±0°.05, h35^{km}±6^{km},* *mb4.6/35, Error ellipse: s-maj=8.5km s-min=7.0km az=48.0*

*IDC **16** 10:23:49.8±2.6, 7°.75S×107°.31E, h87^{km}±17^{km}, mb3.8/13, mb1 3.8/13, mb1mx3.6/56, mbtmp4.1/13, MS3.3/7, Ms1 3.3/7, ms1mx3.0/42, Error ellipse: s-maj=55.0km s-min=12.7km az=52.0*

ISC 16 10:23:43.3±0.9**, 8°.23S**±0°.04×**107°.03E**±0°.04**, h40**^{km}±9^{km}**, n96,** σ1^{s}.**70**/91**, mb4.5**/31**, MS3.2**/6**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNJI	Cibinong	0.92	6	P	Pn	10 23 59.4	-0.4
CNJI				S	Sn	10 24 09.8	-2.0
SKJI	Sukabumi	1.30	339	P	Pn	10 24 06.0	+1.0
SKJI				S	Sn	10 24 19.9	-1.3
CMJI	Cimerak	1.47	73	P	Pn	10 24 07.2	-0.2
CMJI				S	Sn	10 24 23.8	-1.6
LEM	Lembang	1.51	23	P	Pn	10 24 09.3	+1.2
	401nm,0.3s,baz=144,slow=2.1,SNR=84						
LEM				S	Sn	10 24 28.1	+1.6
	376nm,0.3s,baz=320,slow=23,SNR=20						
LEM	Lembang	1.51	23	S	Sn	10 24 28.6	+2.0
DBJI	Dramaga	1.69	351	P	Pn	10 24 12.2	+1.9
TNG	Tangerang	2.08	349	P	Pn	10 24 18.6	+2.9
CGJI	Cibinong	2.08	320	P	Pn	10 24 16.9	+1.2
SBJI	Serang	2.28	337	P	Pn	10 24 20.8	+2.4
XMIS	Christmas Isla	2.62	211		Pn	10 24 24.4	+1.3
XMIS				Sn	Sn	10 24 52.5	-1.2
BLSI	Bandar Lampung	3.35	328	P	Pn	10 24 36.1	+2.9
UGM	Wanagama	3.47	85	P	Pn	10 24 35.4	+0.5
UGM	Wanagama	3.47	85		Pn	10 24 35.5	+0.6
SMRI	Semarang	3.58	71	P	Pn	10 24 38.9	+2.6
SMRI	Semarang	3.58	71		Pn	10 24 36.0	-0.4
KASI	Kota Agung	3.68	317	P	Pn	10 24 39.8	+2.1
WOJI	Wonogiri, Jawa	3.88	85	P	Pn	10 24 41.8	+1.4
KLI	Kotabumi	3.98	327	P	Pn	10 24 45.6	+3.8
PCJI	Pacitan	4.11	90	P	Pn	10 24 44.6	+1.0
LWLI	Liwa	4.34	317	P	Pn	10 24 50.8	+3.8
MDSI	Maura Dua	4.67	323	P	Pn	10 24 53.7	+2.3
JAGI	Jajag, Banyuwa	7.05	92	P	Pn	10 25 26.1	+2.0
	0.3nm2μm52nm,0.6s						
JAGI	Jajag, Banyuwa	7.05	92		Pn	10 25 25.4	+1.3
COCO	West Island	10.78	248	Pn	Pn	10 26 14.9	-0.2
SBUM	Sibu	11.80	26	Pn	Pn	10 26 28.5	-0.7
KAPI	Kappang	13.04	77	LR	LR	10 32 29.8	
	comp=Z,101nm,19.4s,baz=291,slow=41						
GSI	Gunungsitoli	13.36	315	Pn	Pn	10 26 48.1	-2.4
RPSI	Rantau Prapat	13.53	323	Pn	Pn	10 26 45.9	-6.9
IPM	Ipoh	13.97	334	Pn	Pn	10 26 58.4	-0.5
EDFI	Ende, Flores	14.51	93	P	Pn	10 27 05.1	-1.1
APSI	Ampana	16.28	64	P	P	10 27 31.5	-0.2
LHMI	Lhok Sumawe	16.73	323		Pn	10 27 32.6	-2.2
SOEI	Soe	17.09	96		Pn	10 27 39.2	-0.3
SOEI				IAmb	IAmb	10 28 08.2	
	comp=Z,41nm,1.1s						
MYLDM	Lahad Datu	17.56	41	P	P	10 27 45.7	-0.2
PSA00	Pilbara Seismi	18.13	138	P	Pn	10 27 53.6	+1.5
SANI	Sanana	19.85	73	P	Pn	10 28 15.9	+3.0
DLV	T Lat	20.09	4	P	P	10 28 10.9	-3.0
DLV				IAmb	IAmb	10 28 38.5	
	comp=Z,86nm,1.4s						
FITZ	Fitzroy Crossi	20.59	120	P	Pn	10 28 22.2	+0.8
	comp=Z,7.1nm,0.7s,baz=289,slow=5.7,SNR=10						
KNRA	Kununurra	22.50	111	P	P	10 28 38.2	-1.4
KNRA				IAmb	IAmb	10 28 52.4	
	comp=Z,28nm,1.1s						
SAUI	Saumlaki	24.03	91	P	P	10 28 55.8	+1.0
MTN	Manton Dam	24.13	103	P	P	10 28 56.8	+1.1
MTN				IAmb	IAmb	10 29 17.0	
	comp=Z,20nm,1.2s						
FAKI	Fak Fak	25.64	80	P	P	10 29 09.3	-0.2
FAKI				IAmb	IAmb	10 29 12.4	
	comp=Z,33nm,1.2s						
H01W3	Cape Leeuwin H	27.32	167	T	T	10 59 02.2	
	baz=347,slow=76,SNR=3.8						
H01W1	Cape Leeuwin H	27.33	167	T	T	10 59 02.8	
	baz=347,slow=76,SNR=3.6						
H01W2	Cape Leeuwin H	27.33	167	T	T	10 59 01.8	
	baz=347,slow=76,SNR=5.3						
CMAR	Chiang Mai Arr	27.69	343	P	P	10 29 24.9	-3.0
	comp=Z,1.0nm,0.3s,baz=174,slow=10.0,SNR=6.4						
CMAR				LR	LR	10 40 08.2	
	comp=Z,22nm,21.9s,baz=156,slow=36						
WRA	Warramunga Arr	28.88	117	P	P	10 29 39.6	+1.1
	comp=Z,1.2nm,0.9s,baz=288,slow=12,SNR=5.9						
WRA				LR	LR	10 42 14.3	
	comp=Z,37nm,20.4s,baz=325,slow=38						
WRA	Warramunga Arr	28.88	117	P	P	10 29 37.6	-0.9
WRAB	Tennant Creek	28.89	117	P	P	10 29 36.6	-1.9
WRAB				IAmb	IAmb	10 29 43.6	
	comp=Z,4.6nm,0.5s						
WR0	Warramunga Arr	29.07	117	P	P	10 29 39.2	-0.9
WR0				IAmb	IAmb	10 29 44.1	
	comp=Z,10nm,1.4s						
ASAR	Alice Springs	29.97	124	P	P	10 29 50.0	+1.8
	comp=Z,1.0nm,0.9s,baz=306,slow=8.9,SNR=7.8						
ASAR				LR	LR	10 43 58.4	
	comp=Z,55nm,18.3s,baz=339,slow=40						
ASAR	Alice Springs	29.97	124	P	P	10 29 47.2	-1.0
AS31	Alice Springs	29.97	124	P	P	10 29 47.0	-1.2
H08S2	Diego Garcia H	34.20	268	T	T	11 07 25.4	
	baz=92,slow=76,SNR=8.8						
H08S3	Diego Garcia H	34.21	269	T	T	11 07 23.7	
	baz=92,slow=76,SNR=6.4						
H08S1	Diego Carcia H	34.22	268	T	T	11 07 25.9	
	baz=92,slow=76,SNR=6.1						
COEN	Coen	35.90	102	P	P	10 30 39.4	-0.6
COEN				IAmb	IAmb	10 31 08.1	
	comp=Z,11nm,1.1s						
BBOO	Buckleboo	36.34	136	P	P	10 30 42.8	-0.7
BBOO				IAmb	IAmb	10 30 47.4	
	comp=Z,11nm,1.2s						
MNCI	Minicoy	37.62	295	P	P	10 30 55.1	+0.5
STKA	Stephens Creek	39.81	131	P	P	10 31 15.7	+2.9
	comp=Z,2.4nm,0.4s,baz=303,slow=9.1,SNR=12						
STKA				LR	LR	10 48 23.3	
	comp=Z,34nm,20.7s,baz=18,slow=37						
STKA	Stephens Creek	39.81	131	P	P	10 31 13.8	+1.0
NJ2	Nanjing	41.62	15	*e*P	P	10 31 30.8	+3.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JCJ	Chichijima	48.93	43	P	P	10 32 25.7	0.0
HHC	Hu-ho-hao-te	49.01	5	*e*P	P	10 32 30.0	+3.8
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,77nm,6.1s						
NIL	Nilore	52.56	324	P	P	10 32 52.5	-0.6
NIL				IAmb	IAmb	10 32 53.0	
	comp=Z,7.5nm,0.8s						
WMQ	Urumqi	54.69	343	*e*P	P	10 33 11.4	+2.9
KBL	Kabul	55.68	322	P	P	10 33 15.9	-0.1
KBL				IAmb	IAmb	10 33 16.2	
	comp=Z,5.2nm,1.1s						
SONM	Songino Array	55.82	359	P	P	10 33 14.5	-2.1
	comp=Z,0.5nm,0.6s,baz=168,slow=7.4,SNR=3.6						
SONM				PcP	PcP	10 34 15.3	+0.1
	comp=Z,0.8nm,0.7s,baz=173,slow=3.9,SNR=5.2						
SONM	Songino Array	55.82	359	P	P	10 33 14.3	-2.3
ULN	Ulaanbaatar	55.85	0	P	P	10 33 16.1	-0.7
ULN				IAmb	IAmb	10 33 37.8	
	comp=Z,2.0nm,0.5s						
GAR	Garm	58.05	327	P	P	10 33 31.6	-1.0
GAR				IAmb	IAmb	10 33 42.1	
	comp=Z,4.0nm,0.8s						
CHGR	Chuyangaron	58.45	326	P	P	10 33 33.7	-1.6
BTK	Batken	58.55	328	P	P	10 33 35.5	-0.5
BTK				IAmb	IAmb	10 33 36.6	
	comp=Z,5.6nm,1.1s						
ONTNC	Ouen Toro	58.67	111	P	P	10 33 37.6	+0.4
OPO	Ambohidratompo	58.89	253	LR	LR	10 54 21.7	
	comp=Z,86nm,19.5s,baz=230,slow=31						
MKAR	Makanchi Array	59.05	340	P	P	10 33 38.0	-1.3
	comp=Z,1.6nm,0.5s,baz=156,slow=8.1,SNR=14						
MKAR	Makanchi Array	59.05	340	P	P	10 33 38.7	-0.5
KKAR	Karatay Array	60.93	330	P	P	10 33 51.1	-1.2
KLR	Kul'dur	61.18	18	P	P	10 33 50.7	-3.1
	comp=Z,0.8nm,0.5s,baz=189,slow=5.4,SNR=6.2						
DCZ	Deep Cove	63.38	137	P	P	10 34 09.4	+0.7
KURBB	Kurchatov Arra	63.61	340	P	P	10 34 09.9	-0.1
	comp=Z,1.5nm,0.6s,baz=151,slow=6.2,SNR=17						
KURK	Kurchatov	63.66	340	P	P	10 34 09.8	-0.5
KURK				IAmb	IAmb	10 34 11.6	
	comp=Z,6.4nm,1.2s						
ZALV	Zalesovo Beam	64.72	346	P	P	10 34 16.4	-0.8
	comp=Z,0.7nm,0.4s,baz=154,slow=7.0,SNR=4.1						
BVAR	Borovoye Array	68.50	337	P	P	10 34 41.2	-0.2
	comp=Z,2.6nm,0.6s,baz=177,slow=10,SNR=12						
BRVK	Borovoye	68.57	337	P	P	10 34 41.8	0.0
ABKAR	Akbulak array	70.48	329	P	P	10 34 53.3	-0.4
ABKAR	Akbulak array	70.48	329	P	P	10 34 53.8	+0.1
ABKAR				IAmb	IAmb	10 34 54.6	
	comp=Z,14nm,1.2s						
NRIK	Noril'sk	78.56	353	P	P	10 35 40.0	-0.2
NRIK				IAmb	IAmb	10 35 47.5	
	comp=Z,10nm,0.8s						
BOSA	Boshof	78.91	242	LR	LR	11 02 58.4	
	comp=Z,45nm,19.7s,baz=186,slow=30						
QSPA	South Pole Qui	81.77	180	P	P	10 36 00.7	+2.9
QSPA				IAmb	IAmb	10 36 01.8	
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	82.66	312	P	P	10 36 01.9	-1.0
	comp=Z,2.1nm,0.6s,baz=141,slow=6.1,SNR=4.2						
BRTR	Keskin Array B	82.66	312	P	P	10 36 02.0	-1.0
SNAA	Sanae	88.37	197	P	P	10 36 31.1	+0.5
SNAA				IAmb	IAmb	10 36 46.0	
	comp=Z,6.4nm,1.5s						
AKASG	Malin Array Be	88.67	322	P	P	10 36 31.9	-0.5
	comp=Z,0.2nm,0.3s,baz=93,slow=4.3,SNR=4.4						
AKASG	Malin Array Be	88.67	322	P	P	10 36 30.2	-2.1
TXAR	Lajitas Array	144.34	50	PKP	PKPdf	10 43 16.6	+0.7
	comp=Z,0.2nm,0.5s,baz=351,slow=3.0,SNR=2.0						

IDC 16 10:25:18.4±1.9**, 29°.34N**×**95°.33E, h0**^{km}**, mb3.2**/5**, mb1 3.4**/5**, mb1mx3.1**/65**, mbtmp3.2**/5**, Error ellipse: s-maj=76.3km s-min=25.7km az=63.0, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	20.17	333	P	P	10 29 53.1	-1.3
	0.3nm,0.6s,baz=147,slow=11,SNR=1.6						
SONM	Songino Array	20.35	22	P	P	10 29 56.4	-0.1
	0.4nm,0.8s,baz=219,slow=11,SNR=2.6						
KURBB	Kurchatov Arra	24.74	334	P	P	10 30 42.2	+0.9
	0.1nm,0.4s,baz=138,slow=9.9,SNR=2.3						
ZALV	Zalesovo Beam	25.75	346	P	P	10 30 50.5	0.0
	1.0nm,0.5s,baz=156,slow=9.4,SNR=5.2						
WRA	Warramunga Arr	61.77	138	P	P	10 35 39.0	-0.1
	0.3nm,0.7s,baz=326,slow=7.9,SNR=5.1						

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*TAP **16** 10:30:57.9, 25°.22N×122°.13E, h219^{km}, ML4.3, B*

*IDC **16** 10:30:58.9±3.0, 25°.30N×122°.17E, h211^{km}±30^{km}, mb3.2/10, mb1 3.4/11, mb1mx3.1/52, mbtmp3.8/11, Error ellipse: s-maj=26.3km s-min=11.4km az=72.0*

*JMA **16** 10:30:59.1±0.3, 25°.15N×122°.09E, h200^{km}±3^{km}, M4.2*

ISC 16 10:30:58.4±0.7**, 25°.24N**±0°.04×**122°.15E**±0°.03**, h211**^{km}±5^{km}**, n126,** σ0^{s}.**92**/206**, mb3.4**/10**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.27	212	P	Pn	10 31 26.5	+0.4
	baz=209						
TWB1				S	S	10 31 46.4	-1.4
	baz=209						
TNOU	National Taiwa	0.35	255	P	Pn	10 31 26.1	-0.1
	baz=257						
NWF	Wu-fen Shan	0.37	243	*i* P	Pn	10 31 26.4	0.0
	baz=244						
NWF				*e*S	S	10 31 49.2	+0.9
	baz=244						
WFSB	Wu-fen Shan	0.37	243	P	Pn	10 31 26.4	0.0
	baz=244						
WFSB				*e*S	S	10 31 48.5	+0.4
	baz=244						
PCYT	Pengchaiyu	0.39	350	P	Pn	10 31 27.3	+0.9
	baz=353						
PCYT				*e*S	S	10 31 48.7	+0.2
	baz=353						
TIPB	Shuangxi	0.40	227	*i* P	Pn	10 31 26.4	-0.1
	baz=227						
TIPB				*e*S	S	10 31 50.0	+1.6
	baz=227						
EGS		0.44	206	*i* P	Pn	10 31 26.7	+0.1
	baz=204						
EGS				*e*S	S	10 31 47.9	-0.6
	baz=204						
NTC	Toucheng	0.48	217	P	Pn	10 31 26.6	-0.1
	baz=216						
NTC				S	S	10 31 48.6	-0.1
	baz=216						
TWY	Chenhua	0.50	274	P	Pn	10 31 26.7	0.0
	baz=275						
TWY				S	S	10 31 48.4	-0.3
	baz=275						
NSM	Shimen	0.51	275	P	Pn	10 31 27.4	+0.7
	baz=277						
NSM				S	S	10 31 48.6	-0.2
	baz=277						
YM08	YM08	0.51	264	P	Pn	10 31 26.6	-0.2
	baz=265						
YM08				*e*S	S	10 31 48.6	-0.2
	baz=265						
NHY	Taipei	0.56	249	P	Pn	10 31 27.4	+0.5
	baz=250						
NHY				S	S	10 31 48.8	-0.3
	baz=250						
ANP	Anpu	0.57	265	*i* P	Pn	10 31 27.4	+0.3
	baz=265						
TWA	Mucha	0.57	243	P	Pn	10 31 26.2	-0.8
	baz=243						
TWA				S	S	10 31 48.2	-1.1
	baz=243						
ILA	Ilan	0.60	217	*e*P	Pn	10 31 28.2	+1.0
	baz=216						
ILA				S	S	10 31 48.8	-0.7
	baz=216						
TAP	Taipei	0.61	251	*i* P	Pn	10 31 27.4	+0.2
	baz=251						
TAP				S	S	10 31 48.8	-0.7
	baz=251						
NHDH	Xindian Distri	0.63	244	*e*P	Pn	10 31 27.2	-0.1
	baz=244						
NHDH				S	S	10 31 48.2	-1.4
	baz=244						
NTST	Danshui	0.64	263	*i* P	Pn	10 31 27.4	+0.1
	baz=264						
NTST				*e*S	S	10 31 52.4	+2.7
	baz=264						
TATO	Taipei	0.65	246	P	Pn	10 31 27.3	-0.1
	baz=246						
TATO				S	S	10 31 48.8	-1.0
	baz=246						
TWS1	Kuangyinshan	0.68	258	*e*P	Pn	10 31 27.7	+0.3
	baz=259						
TWS1				S	S	10 31 48.6	-1.4
	baz=259						
TWE	Neicheng	0.68	220	*e*P	Pn	10 31 27.5	0.0
	baz=218						
TWE				S	S	10 31 49.7	-0.3
	baz=218						
TWC	Suao	0.69	203	*i* P	Pn	10 31 27.4	-0.1
	baz=201						
NDS	Dongshan	0.72	213	P	Pn	10 31 28.0	+0.3
	baz=212						
NDS				S	S	10 31 49.0	-1.5
	baz=212						
NWLT	Wulai	0.75	232	*e*P	Pn	10 31 27.6	-0.3
	baz=232						
NWLT				S	S	10 31 49.2	-1.5
	baz=232						
ENTT	Nioudou	0.80	221	P	Pn	10 31 28.3	+0.2
	baz=220						
NTY	Taoyuan	0.81	253	P	Pn	10 31 28.0	-0.2
	baz=253						
NTY				S	S	10 31 50.4	-0.7
	baz=253						
NDT	Datong Townshi	0.86	222	*i* P	Pn	10 31 28.6	+0.2
	baz=222						
NDT				S	S	10 31 50.3	-1.4
	baz=222						
EWUT	Wuta	0.86	203	*e*P	Pn	10 31 28.7	+0.3
	baz=202						
EWUT				S	S	10 31 50.8	-1.0
	baz=202						
ENA	Nanau	0.89	205	P	Pn	10 31 27.8	-0.9
	baz=203						
ENA				S	S	10 31 51.9	-0.2
	baz=203						
YHNB	Yeheng	0.90	231	*e*S	S	10 31 50.3	-2.1
	baz=231						
NSK	Sanguang	0.91	232	*e*P	Pn	10 31 28.6	-0.2
	baz=231						
NSK				*e*S	S	10 31 50.1	-2.3
	baz=231						
NCU	National Centr	0.91	253	*e*P	Pn	10 31 28.9	+0.2
	baz=253						
NCUH	Zhongli	0.91	253	P	Pn	10 31 28.9	+0.1
	baz=253						
NCUH				S	S	10 31 51.4	-0.8
	baz=253						
NHW	Xinwu Township	1.02	257	*e*P	Pn	10 31 29.7	+0.3
	baz=257						
NNS	Nan Shan	1.06	222	*e*P	Pn	10 31 30.0	+0.1
	baz=221						
NNSB	Datong	1.07	221	P	Pn	10 31 29.8	-0.1
	baz=220						
NNSB				S	S	10 31 53.2	-1.1
	baz=220						
JYNG	Yonagunijimaku	1.07	137	P	Pn	10 31 29.8	+0.1
JYNG				S	S	10 31 52.6	-1.4
NJD	Zhudong	1.08	243	P	Pn	10 31 30.4	+0.5
	baz=242						
NJD				S	S	10 31 53.2	-0.9
	baz=242						
YOJ	Yonaguni jima	1.10	135	P	Pn	10 31 30.1	+0.1
	baz=133						
YOJ				S	S	10 31 53.6	-0.8
	baz=133						
YOJ	Yonaguni jima	1.10	135	P	Pn	10 31 29.9	-0.1
YOJ				*e*S	S	10 31 52.7	-1.7
HSN1	Hsinchu	1.12	246	P	Pn	10 31 30.5	+0.4
	baz=246						
HSN1				S	S	10 31 54.0	-0.6
	baz=246						
SBCB	Hsinchu	1.15	247	P	Pn	10 31 30.6	+0.4
	baz=247						
SBCB				S	S	10 31 53.6	-1.2
	baz=247						
HSN	Hsinchu	1.16	248	*e*P	Pn	10 31 30.4	+0.1
	baz=248						
HSN				S	S	10 31 53.6	-1.3
	baz=248						
NACB	Ninganchiao	1.18	205	P	Pn	10 31 30.0	-0.5
	baz=204						
NACB				S	S	10 31 54.0	-1.4
	baz=204						
ETL	Fush Village	1.18	204	P	Pn	10 31 29.9	-0.7
	baz=203						
ETL				S	S	10 31 54.2	-1.2
	baz=203						
LIOB	Emei	1.19	240	*e*P	Pn	10 31 29.8	-0.8
	baz=240						
ETLH	Xiulin Townshi	1.20	211	P	Pn	10 31 30.4	-0.4
	baz=210						
ETLH				S	S	10 31 54.5	-1.2
	baz=210						
NSTT	Nanjuang	1.21	240	P	Pn	10 31 30.6	-0.1
	baz=239						
TWD	Chiawan	1.26	204	P	Pn	10 31 30.5	-0.7
	baz=202						
FUSS	Fushou	1.29	220	*e*P	Pn	10 31 32.1	+0.4
	baz=219						
FUSS				S	S	10 31 56.0	-1.3
	baz=219						
TWT	Tachien	1.32	222	*e*P	Pn	10 31 32.4	+0.6
	baz=222						
TDCB	Techi	1.33	223	P	Pn	10 31 31.6	-0.3
	baz=222						
TDCB				S	S	10 31 57.0	-0.7
	baz=222						
HWA	Hwalien	1.35	202	P	Pn	10 31 31.8	-0.1
	baz=200						
HWA				S	S	10 31 57.3	-0.4
	baz=200						
WHF	Hehuan Shan	1.35	216	*e*P	Pn	10 31 32.8	+0.4
	baz=215						
WHF				*e*S	S	10 31 58.3	-0.3
	baz=215						
ETM	Tongmen	1.40	205	P	Pn	10 31 31.5	-0.8
	baz=204						
ETM				S	S	10 31 56.8	-1.7
	baz=204						
NMLH	Miaoli	1.42	241	P	Pn	10 31 31.9	-0.4
	baz=240						
NMLH				S	S	10 31 57.7	-0.9
	baz=240						
WHP	Taichung City	1.45	229	P	Pn	10 31 32.9	+0.1
	baz=228						
WHP				S	S	10 31 58.4	-0.8
	baz=228						
TEYL	Yanliau Villag	1.46	200	P	Pn	10 31 32.4	-0.3
	baz=200						
TEYL				S	S	10 31 58.2	-0.9
	baz=200						
CHGB	Renai	1.47	217	P	Pn	10 31 33.7	+0.6
	baz=216						
CHGB				*e*S	S	10 31 60.0	+0.1
	baz=216						
NSY	Sanyi	1.50	237	P	Pn	10 31 33.6	+0.4
	baz=236						
NSY				*e*S	S	10 32 00.2	+0.4
	baz=236						
TWQ1	Liyutan	1.53	235	P	Pn	10 31 33.7	+0.3
	baz=234						
TWQ1				S	S	10 31 59.4	-0.9
	baz=234						
OWD	Renai	1.56	215	*i* P	Pn	10 31 34.3	+0.6
	baz=214						
OWD				S	S	10 31 59.4	-1.5
	baz=214						
ESL	Shilin	1.56	205	*e*P	Pn	10 31 32.5	-1.2
	baz=204						
ESL				S	S	10 32 00.2	-0.7
	baz=204						
WCS	Beigang Elemen	1.63	224	P	Pn	10 31 34.4	+0.2
	baz=223						
WCS				S	S	10 32 00.7	-1.1
	baz=223						
WDJ	Dajia District	1.63	237	P	Pn	10 31 34.5	+0.3
	baz=237						
WPL	Puli Township	1.64	222	P	Pn	10 31 34.5	+0.2
	baz=221						
WPL				S	S	10 32 00.8	-1.1
	baz=221						
DPDB	Guoxing	1.64	223	P	Pn	10 31 34.5	+0.2
	baz=222						
DPDB				S	S	10 32 01.5	-0.5
	baz=222						
EGFH	Guangfu	1.70	203	P	Pn	10 31 35.0	+0.1
	baz=202						
EGFH				S	S	10 32 02.2	-0.8
	baz=202						
IRIF	Iriomote-Funau	1.70	122	P	Pn	10 31 34.9	+0.1
IRIF				S	S	10 32 02.4	-0.4
TCU	Taichung	1.73	231	P	Pn	10 31 35.5	+0.4
	baz=230						
TCU				*e*S	S	10 32 01.6	-1.7
	baz=230						
VWDT	VWDT	1.74	212	P	Pn	10 31 36.1	+0.9
	baz=211						
VWDT				S	S	10 32 04.3	+0.7
	baz=211						
SMLT	Sun Moon Lake	1.77	220	P	Pn	10 31 35.9	+0.3
	baz=219						
TYC	Yuchr	1.78	222	P	Pn	10 31 35.7	+0.1
	baz=221						
SSLB	Suanglung	1.81	217	P	Pn	10 31 35.9	-0.1
	baz=216						
SSLB				S	S	10 32 03.6	-1.3
	baz=216						
HGSD	Ruisui	1.86	201	P	Pn	10 31 36.0	-0.4
	baz=200						
HGSD				*e*S	S	10 32 04.7	-1.0
	baz=200						
EHY	Hungye	1.89	204	*e*P	Pn	10 31 35.1	-1.6
	baz=203						
EHY				*e*S	S	10 32 05.0	-1.1
	baz=203						
WNT	Mingjian	1.90	225	*i* P	Pn	10 31 36.9	+0.2
	baz=224						
WNT				S	S	10 32 05.0	-1.3
	baz=224						
HATJ	Hateruma jima	1.92	128	P	Pn	10 31 37.2	+0.3
HATJ				*e*S	S	10 32 05.9	-0.6
WJS	Zhushan	1.92	223	P	Pn	10 31 37.1	+0.2
	baz=222						

WJS				*e*S	S	10 32 05.6	-0.9
	baz=222						
WHYT	Xinyi Township	1.94	218	P	Pn	10 31 37.5	+0.3
	baz=217						
WHYT				*e*S	S	10 32 06.3	-0.7
	baz=217						
JKRS	Kuro-shima	1.97	120	P	Pn	10 31 37.8	+0.4
JKRS				S	S	10 32 06.6	-0.8
YULB	Yu-li	2.00	203	P	Pn	10 31 36.5	-1.3
	baz=202						
YULB				S	S	10 32 06.8	-1.3
	baz=202						
JIJ	Ishigaki jima	2.01	115	P	Pn	10 31 37.8	0.0
JIJ				S	S	10 32 06.2	-2.0
EYUL	Yuli	2.03	202	*e*P	Pn	10 31 40.0	+1.9
	baz=201						
TWF1	Yuli	2.04	203	*e*P	Pn	10 31 37.5	-0.7
	baz=201						
JISG	Ishigakijimahi	2.07	108	P	Pn	10 31 38.0	-0.4
JISG				S	S	10 32 07.5	-1.7
WRL	Guolierlin Hig	2.09	231	*e*P	Pn	10 31 38.7	0.0
	baz=230						
WRL				S	S	10 32 09.1	-0.6
	baz=230						
ALS	Alishan	2.11	216	*e*P	Pn	10 31 39.4	+0.1
	baz=215						
CHN5	Tsauling	2.12	220	P	Pn	10 31 39.4	+0.4
	baz=219						
WGK	Gukeng	2.12	223	*i* P	Pn	10 31 39.2	+0.3
	baz=222						
WGK				S	S	10 32 08.8	-1.3
	baz=222						
WDLH	Douliu	2.13	224	*i* P	Pn	10 31 39.1	+0.1
	baz=223						
WDLH				S	S	10 32 10.4	0.0
	baz=223						
FULB	Fuli	2.18	201	*e*P	Pn	10 31 41.3	+1.7
	baz=200						
MATB	Ma-tsu	2.18	295	P	Pn	10 31 39.5	0.0
	baz=294						
MSUT	Lienchiang	2.21	295	P	Pn	10 31 39.5	-0.3
	baz=295						
WTK	Tuku	2.23	226	*e*P	Pn	10 31 40.1	+0.1
	baz=226						
JTJ	Tarama	2.40	104	P	Pn	10 31 42.4	+0.6
JTJ				S	S	10 32 14.5	-0.8
STYT	Tauyuan	2.43	212	*e*P	Pn	10 31 42.0	-0.3
	baz=211						
WTP	Ta-pu	2.43	215	*e*P	Pn	10 31 42.3	0.0
	baz=214						
XPSS	Dashiqiu	2.43	314	P	Pn	10 31 41.9	-0.3
	baz=314						
TWK	Hsinying	2.48	218	*e*P	Pn	10 31 42.9	+0.1
	baz=217						
LYJJ	Jianjiangzhen	2.51	302	P	Pn	10 31 43.0	0.0
	baz=301						
CHN1	Nanshi	2.53	216	*e*P	Pn	10 31 43.4	+0.1
	baz=215						
SGST	Jiashian	2.58	214	*e*P	Pn	10 31 43.3	-0.6
	baz=213						
PTMZ	Houxiangcun	2.75	266	P	Pn	10 31 45.3	-0.4
	baz=266						
JIRB	Irabujima	2.77	98	P	Pn	10 31 46.8	+0.8
JIRB				S	S	10 32 22.7	-0.1
JIKM	Ikemajima	2.83	96	P	Pn	10 31 47.6	+1.0
JIKM				*e*S	S	10 32 23.6	-0.3
SSD	Sandimen	2.84	209	*e*P	Pn	10 31 47.3	+0.5
	baz=208						
TSMG	Majia	2.88	209	*e*P	Pn	10 31 47.7	+0.5
	baz=208						
JMJ	Miyako jima 2	2.89	98	*e*P	Pn	10 31 48.9	+1.6
	baz=97						
JMJ				*e*S	S	10 32 25.6	+0.6
	baz=97						
PHUB	P'eng-hu	2.91	234	P	Pn	10 31 47.2	-0.4
	baz=233						
JMJ2	Miyako jima3	2.93	99	P	Pn	10 31 48.6	+0.9
JMJ2				*e*S	S	10 32 25.5	-0.4
JOGS	Gusukube	3.00	99	P	Pn	10 31 49.8	+1.3
JOGS				*e*S	S	10 32 27.4	+0.1
SCZT	Fangliau	3.18	206	*e*P	Pn	10 31 51.1	+0.4
	baz=205						
KNMB	Chin-men Tao	3.50	258	P	Pn	10 31 53.7	-0.7
	baz=257						
JOW	Kunigami	5.74	73	P	Pn	10 32 21.6	-0.8
	7.8nm,0.3s,baz=132,slow=18,SNR=15						
JOW				S	S	10 33 22.5	-6.2
	7.4nm,0.3s,baz=323,slow=20,SNR=2.5						
KSRS	Korea Array	13.13	21	P	P	10 33 59.4	-0.3
	0.3nm,0.3s,baz=200,slow=11,SNR=7.5						
KLR	Kul'dur	25.09	15	P	P	10 36 04.8	+1.2
	1.3nm,0.5s,baz=207,slow=7.4,SNR=9.2						
SONM	Songino Array	25.76	335	P	P	10 36 10.4	+0.7
	0.4nm,0.4s,baz=143,slow=10,SNR=4.1						
MKAR	Makanchi Array	38.21	315	P	P	10 37 58.3	+0.6
	0.5nm,0.5s,baz=99,slow=8.9,SNR=4.3						
ZALV	Zalesovo Beam	39.85	326	P	P	10 38 10.8	-0.4
	0.3nm,0.4s,baz=110,slow=8.4,SNR=1.9						
KURBB	Kurchatov Arra	41.88	319	P	P	10 38 26.9	-0.8
	0.2nm,0.4s,baz=115,slow=9.2,SNR=4.6						
WRA	Warramunga Arr	46.45	164	P	P	10 39 05.0	+0.6
	1.2nm,0.6s,baz=347,slow=8.5,SNR=18						
ASAR	Alice Springs	49.94	166	P	P	10 39 32.1	+1.2
	0.6nm,0.4s,baz=350,slow=6.6,SNR=17						
ASAR				PcP	PcP	10 40 48.0	+0.1
	0.1nm,0.6s,baz=346,slow=3.1,SNR=4.1						
STKA	Stephens Creek	59.76	161	P	P	10 40 41.4	+0.3
	1.1nm,0.6s,baz=336,slow=10.0,SNR=3.5						
ILAR	Eielson Array	67.88	28	P	P	10 41 33.4	-0.3
	0.3nm,0.5s,baz=287,slow=5.2,SNR=5.1						
YKA	Yellowknife Ar	81.66	23	P	P	10 42 52.2	-0.5
	0.6nm,0.6s,baz=308,slow=4.8,SNR=6.0						

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*THR **16** 10:46:31.6±0.3, 27.°05N×52.°75E, h28^{km}±4^{km}, ML3.3*
*IDC **16** 10:46:31.2±1.0, 27.°05N×53.°03E, h0^{km}, mb3.9/10, mb1 4.0/12, mb1mx3.7/53, mbtmp3.9/12, ML4.1/1, Error ellipse: s-maj=23.4km s-min=20.3km az=156.0*
*TEH **16** 10:46:33.8, 27.°16N×53.°14E, h12^{km}, ML3.7*
ISC 16 10:46:32.9±0.8**, 27.°10N**±0.°05×**53.°06E**±0.°06**, h10**^{km}**, n43,**
σ**1.^{s}47**/47**, mb3.9**/10**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMD1	Lamerd	0.26	22	*e*Pg	Pg	10 46 37.0	-1.2
LMD1				*e*Sg	Sg	10 46 40.7	-1.0
GHIR	Ghir-Karzin	1.18	357	*e*Pg	Pb	10 46 54.5	-1.0
GHIR				*e*Sg	Sg	10 47 11.2	+0.2
GHIR				IAML		10 47 14.7	
	comp=N,572nm,0.5s						
GHIR				IAML		10 47 17.8	
	comp=E,456nm,0.6s						
LAR1	LAR	1.30	64	*e*Pg	Pg	10 46 58.0	+0.1
LAR1				*e*		10 47 24.8	
	comp=Z,40μm,0.4s						
QIR1	Qir	1.37	359	*e*Pg	Pg	10 46 59.2	-0.1
QIR1				*e*Sg	Sg	10 47 18.6	+1.5
QIR1				*e*		10 47 24.7	
	comp=Z,23μm,0.4s						
JHRM	Jahrom	1.47	18	*e*Pg	Pg	10 47 01.2	0.0
JHRM				*e*		10 47 25.3	
	comp=Z,18μm,0.5s						
GENO	Geno	2.79	83	*e*Pn	Pn	10 47 18.6	+0.8
NAZ	Nazwa, Dubai	3.15	131	*e*Pn	Pn	10 47 25.5	+2.9
MSFE	Esma-Masafi	3.28	121	*e*Pn	Pn	10 47 26.8	+2.4
MDH	Madha	3.42	121	*e*Pn	Pn	10 47 28.7	+2.4
UOSS	Minazif	3.55	126	*e*Pn	Pn	10 47 30.0	+1.9
HATD	Hatta, Dubai	3.58	129	*e*Pn	Pn	10 47 31.0	+2.5
ASHO	Ashiyiah	3.62	131	*e*Pn	Pn	10 47 31.6	+2.5
KLNJ	Kolanjah	4.10	342	*e*Pn	Pn	10 47 37.2	+1.2
NGRK	Negar Kerman	4.11	51	*e*Pn	Pn	10 47 36.9	+0.8
NGRK				*e*		10 48 45.0	
	comp=Z,403nm,0.4s						
SOHO	SOHO	4.31	133	*e*Pn	Pn	10 47 40.4	+1.9
KRBR	Kerman	4.34	48	*e*Pn	Pn	10 47 41.6	+2.3
KRBR				IAML		10 48 42.0	
	comp=N,43nm,0.8s						
KRBR	Kerman	4.34	48	*e*Pn	Pn	10 47 41.6	+2.3
TVBK	TV Kerman	4.34	48	*e*Pn	Pn	10 47 41.5	+2.2
TVBK				*e*		10 47 57.6	
	comp=Z,906nm,0.5s						
KHGB	Koh Gabri	4.43	42	*e*Pn	Pn	10 47 41.1	+0.6
KHGB				*e*		10 48 40.5	
	comp=Z,437nm,0.8s						
IMEH	Mehriz	4.49	17	*e*Pn	Pn	10 47 42.7	+1.5
IRAM	Ramesheh	4.73	353	*e*Pn	Pn	10 47 45.0	+0.5
ISAD	Sadrabad	4.83	6	*e*Pn	Pn	10 47 48.1	+2.2
KBAM	BAM	5.18	66	*e*Pn	Pn	10 47 51.9	+1.3
KBAM				*e*		10 47 53.8	
	comp=Z,873nm,0.4s						
YZKH	Yazd	5.44	14	*e*Pn	Pn	10 47 55.0	+0.8
YZKH				IAML		10 49 04.8	
	comp=N,4.9nm,0.7s						
YZKH	Yazd	5.44	14	*e*Pn	Pn	10 47 55.0	+0.8
NASN	Na'in	5.68	358	*e*P	Pn	10 47 57.5	-0.3
NASN	Na'in	5.68	358	*e*Pn	Pn	10 47 57.5	-0.3
IPIR	Pirpir	5.87	342	*e*Pn	Pn	10 48 02.0	+1.7
WSAR	Wadi Sarin	6.34	126	Pn	Pn	10 48 08.0	+1.5
	comp=N,4.5nm,0.3s,baz=306,slow=12,SNR=14						
WSAR				Sn	Sn	10 49 16.2	-2.9
	comp=N,2.0nm,0.3s,baz=70,slow=19,SNR=6.4						
TPRV	Parvadeh(Tabas	6.69	27	*e*Pn	Pn	10 48 12.3	+0.9
ISFB	Sefidab	7.26	355	*e*Pn	Pn	10 48 19.8	+0.6
TKDS	Koohdasht(Taba	7.38	27	*e*Pn	Pn	10 48 21.5	+0.7
KBZ	Khabaz	18.52	336	P	Pn	10 50 50.9	+1.4
	baz=150,slow=8.8,SNR=3.9						
AKTO	Aktyubinsk	23.61	8	P	P	10 51 44.9	+0.9
	comp=N,1.2nm,0.5s,baz=196,slow=10,SNR=3.9						
BVAR	Borovoye Array	28.94	22	P	P	10 52 32.2	0.0
	comp=N,1.4nm,0.7s,baz=216,slow=12,SNR=8.1						
AKASG	Malin Array Be	29.75	329	P	P	10 52 38.8	-0.5
	comp=N,0.4nm,0.3s,baz=127,slow=7.7,SNR=6.1						
KURBB	Kurchatov Arra	30.46	33	P	P	10 52 46.0	+0.2
	comp=N,0.2nm,0.5s,baz=238,slow=8.8,SNR=2.5						
ZALV	Zalesovo Beam	35.56	32	P	P	10 53 30.1	-0.1
	comp=N,1.5nm,0.4s,baz=254,slow=8.6,SNR=6.9						
SONM	Songino Array	46.09	49	P	P	10 54 58.1	+0.8
	comp=N,0.3nm,0.3s,baz=280,slow=8.6,SNR=4.5						
TORD	Torodi Ar. Bea	49.86	264	P	P	10 55 26.6	-0.1
	comp=N,1.0nm,0.5s,baz=63,slow=6.6,SNR=9.5						
DBIC	Dimbokro	58.49	261	P	P	10 56 29.2	-0.5
	comp=N,2.5nm,0.5s,baz=67,slow=5.1,SNR=4.9						
WRA	Warramunga Arr	91.52	112	P	P	10 59 39.5	-0.7
	comp=N,0.5nm,0.9s,baz=317,slow=3.8,SNR=2.3						
ASAR	Alice Springs	92.91	115	P	P	10 59 45.6	-1.0
	comp=N,0.3nm,0.7s,baz=306,slow=4.4,SNR=5.5						

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*MOS **16** 11:02:10.8±0.7, 50.°18N×157.°99E, h47^{km}, mb3.9/1, Error ellipse: s-maj=22.9km s-min=4.4km az=85.2*
MOS Felt (II) at Severo-Kuril'sk.
*KRSC **16** 11:02:12.9±2.1, 50.°45N×158.°36E, h52^{km}±33^{km}, ML4.3*
*IDC **16** 11:02:16.3±4.1, 50.°44N×157.°28E, h83^{km}±38^{km}, mb3.4/6, mb1 3.7/7, mb1mx3.3/38, mbtmp3.7/7, MS2.8/1, Ms1 2.8/1, ms1mx2.3/33, Error ellipse: s-maj=39.3km s-min=20.5km az=144.0*
ISC 16 11:02:10.8±0.9**, 50.°17N**±0.°07×**157.°95E**±0.°05**, h35**^{km}**, n69,**
σ**1.^{s}85**/87**, mb3.8**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.28	294	*e*PN	Pn	11 02 31.9	-0.2
SKR				*e*S	Sn	11 02 45.8	-2.2
SKR				pmax	pmax		
	comp=Z,3μm,0.5s						
SKR				smax	smax		
	comp=E,4μm,0.3s						
SKR				smax	smax		
	comp=N,7μm,0.2s						
PAU	Pauzhetka	1.48	331	PN	Pn	11 02 35.3	+0.4
PAU				S	Sn	11 02 52.6	-0.5
PAU	Pauzhetka	1.48	331	*e*P	Pn	11 02 35.3	+0.4
PAU				*e*S	Sn	11 02 52.6	-0.5
KDTR	Khodutka, Kamc	1.64	3	PN	Pn	11 02 37.5	+0.4
KDTR				S	Sn	11 02 55.6	-1.3
KDTR	Khodutka, Kamc	1.64	3	*e*P	Pn	11 02 37.5	+0.4
KDTR				*e*S	Sn	11 02 55.6	-1.3
ASAK	Asacha	2.21	359	PN	Pn	11 02 45.7	+0.6
ASAK				S	Sn	11 03 08.9	-2.3
ASAK	Asacha	2.21	359	*e*P	Pn	11 02 45.7	+0.6
ASAK				*e*S	Sn	11 03 08.9	-2.3
RUS	Russkaya	2.29	9	PN	Pn	11 02 46.6	+0.6
RUS				S	Sn	11 03 11.1	-1.9
RUS	Russkaya	2.29	9	*e*P	Pn	11 02 46.6	+0.6
RUS				*e*S	Sn	11 03 11.1	-1.9
MTVR	Mutnovka	2.32	4	PN	Pn	11 02 47.4	+0.8
MTVR				S	Sn	11 03 12.5	-1.4
MTVR	Mutnovka	2.32	4	*e*P	Pn	11 02 47.4	+0.8
MTVR				*e*S	Sn	11 03 12.5	-1.4
KRMR	Karymshinskiy	2.66	2	PN	Pn	11 02 52.6	+1.5
KRMR				S	Sn	11 03 19.3	-2.9
KRMR	Karymshinskiy	2.66	2	*e*P	Pn	11 02 52.6	+1.5
KRMR				*e*S	Sn	11 03 19.3	-2.9
APC	Apacha	2.80	350	PN	Pn	11 02 54.1	+1.1
APC				S	Sn	11 03 24.6	-0.9
APC	Apacha	2.80	350	*e*P	Pn	11 02 54.1	+1.1
APC				*e*S	Sn	11 03 24.6	-0.9
PET	Petropavlovsk	2.89	8	*e*PN	Pn	11 02 55.8	+1.6
PET				*e*S	Sn	11 03 25.7	-2.0
PET				pmax	pmax		
	comp=Z,27nm,0.3s						
PET				smax	smax		
	comp=N,213nm,0.5s						
PET				smax	smax		
	comp=E,169nm,0.4s						
PET	Petropavlovsk	2.89	8	*e*P	Pn	11 02 55.1	+0.9
PET				*e*S	Sn	11 03 26.2	-1.5
DALK	Dalny	2.91	10	PN	Pn	11 02 55.7	+1.2
DALK				S	Sn	11 03 26.6	-1.5
DALK	Dalny	2.91	10	*e*P	Pn	11 02 55.7	+1.2
DALK				*e*S	Sn	11 03 26.6	-1.5
PETK	Petropavlovsk-	2.94	357	P	Pn	11 02 55.7	+0.7
	comp=E,4.2nm,0.3s,baz=170,slow=13,SNR=84						
PETK				S	Sn	11 03 30.1	+1.0
	comp=E,3.8nm,0.3s,baz=189,slow=18,SNR=5.6						
UGLR	Uglovaya	3.09	10	PN	Pn	11 02 58.7	+1.6
UGLR	Uglovaya	3.09	10	*e*P	Pn	11 02 58.7	+1.6
NLC	Nalytchevo	3.13	16	PN	Pn	11 02 57.8	+0.3
NLC	Nalytchevo	3.13	16	*e*P	Pn	11 02 57.8	+0.3
NLC				*e*S	Sn	11 03 29.8	-3.7
AVH	Avacha	3.14	9	PN	Pn	11 02 59.9	+2.2
AVH	Avacha	3.14	9	*e*P	Pn	11 02 59.9	+2.2
SMAR	Somma	3.14	9	PN	Pn	11 02 59.4	+1.5
SMAR	Somma	3.14	9	*e*P	Pn	11 02 59.4	+1.5
KOK	Koryaka	3.15	8	PN	Pn	11 03 00.4	+2.4
KOK	Koryaka	3.15	8	*e*P	Pn	11 03 00.4	+2.4
SDLR	Sedlovina	3.16	10	PN	Pn	11 02 59.2	+1.1
SDLR	Sedlovina	3.16	10	*e*P	Pn	11 02 59.2	+1.1
KRER	Koryakskii	3.17	9	PN	Pn	11 03 00.2	+1.8
KRER	Koryakskii	3.17	9	*e*P	Pn	11 03 00.2	+1.8
SPN	Mys Shipunski	3.20	23	PN	Pn	11 02 59.9	+1.4
SPN				S	Sn	11 03 34.4	-1.0
SPN	Mys Shipunski	3.20	23	*e*P	Pn	11 02 59.9	+1.4
SPN				*e*S	Sn	11 03 34.4	-1.0
GNL	Ganaly	3.53	360	PN	Pn	11 03 04.8	+1.7
GNL	Ganaly	3.53	360	*e*P	Pn	11 03 04.8	+1.7
KII	Karymskiy	3.98	13	PN	Pn	11 03 11.6	+2.3
KII				S	Sn	11 03 54.6	-0.1
KII	Karymskiy	3.98	13	*e*P	Pn	11 03 11.6	+2.3
KII				*e*S	Sn	11 03 54.6	-0.1
MKZ	Mys Kozlova	4.96	26	PN	Pn	11 03 23.6	+0.9
MKZ	Mys Kozlova	4.96	26	*e*P	Pn	11 03 23.6	+0.9
MKZ				*e*S	Sn	11 04 16.4	-2.4
TUMD	Tumrok D	5.25	16	*e*P	Pn	11 03 28.6	+1.8
TUMD				*e*S	Sn	11 04 24.7	-1.3
TUMR	Tumrok	5.29	14	PN	Pn	11 03 28.6	+1.3
KMNR	Kamenistaya	5.76	13	PN	Pn	11 03 36.0	+2.2
KMNR	Kamenistaya	5.76	13	*e*P	Pn	11 03 36.0	+2.2
ESO	Esso	5.78	4	PN	Pn	11 03 37.8	+3.8
ESO	Esso	5.78	4	*e*P	Pn	11 03 37.8	+3.8
KBTR	Krutoberegovo	6.71	24	PN	Pn	11 03 47.9	+1.1
KBTR	Krutoberegovo	6.71	24	*e*P	Pn	11 03 47.9	+1.1
BKI	Bering	7.01	41	PN	Pn	11 03 50.5	-0.3
BKI	Bering	7.01	41	*e*P	Pn	11 03 50.5	-0.3
BKI				*e*S	Sn	11 05 03.3	-5.8
KLR	Kul'dur	16.95	277	LR	LR	11 12 08.9	
	comp=E,35nm,20.0s,baz=72,slow=36						
H11N2	WAKE ISLAND Hy	31.20	164	T	T	11 42 14.7	
	baz=348,slow=76,SNR=48						
H11N3	WAKE ISLAND Hy	31.21	164	T	T	11 42 15.9	
	baz=348,slow=76,SNR=48						
H11N1	WAKE ISLAND Hy	31.22	164	T	T	11 42 15.9	
	baz=348,slow=76,SNR=30						
H11S1	WAKE ISLAND Hy	32.36	164	T	T	11 43 39.7	
	baz=348,slow=76,SNR=148						
H11S3	WAKE ISLAND Hy	32.37	164	T	T	11 43 39.2	
	baz=348,slow=76,SNR=136						
H11S2	WAKE ISLAND Hy	32.38	164	T	T	11 43 41.6	
	baz=348,slow=76,SNR=59						
MKAR	Makanchi Array	48.25	297	P	P	11 10 44.0	-4.0
	comp=E,0.2nm,0.3s,baz=57,slow=7.3,SNR=4.7						
MKAR	Makanchi Array	48.25	297	P	P	11 10 44.0	-4.0
NVAR	Mina Array Bea	58.06	67	P	P	11 12 02.7	+2.2
	comp=E,0.6nm,0.5s,baz=298,slow=7.9,SNR=6.3						
PDAR	Pinedale Array	60.16	58	P	P	11 12 17.0	+2.0
	comp=E,0.7nm,0.7s,baz=338,slow=3.6,SNR=6.9						
WRA	Warramunga Arr	72.86	203	P	P	11 13 36.4	+0.5
	comp=E,0.4nm,1.0s,baz=17,slow=6.2,SNR=4.9						
TXAR	Lajitas Array	73.06	65	P	P	11 13 38.8	+1.5
	comp=E,0.8nm,0.6s,baz=298,slow=5.0,SNR=16						
ASAR	Alice Springs	76.54	203	P	P	11 13 58.6	+1.5
	comp=E,0.3nm,0.5s,baz=15,slow=5.5,SNR=7.4						
H03N2	Juan Fernandez	135.55	90	T	T	13 52 39.6	
	baz=313,slow=77,SNR=12						
H03N1	Juan Fernandez	135.56	90	T	T	13 52 34.9	
	baz=313,slow=77,SNR=10						
H03N3	Juan Fernandez	135.56	90	T	T	13 52 39.5	
	baz=313,slow=77,SNR=11						

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*EAF **16** 11:12:43.1±0.9, 21.°86S×34.°07E, h13^{km}±11^{km}, MD3.8*
BUL 16 11:12:43.2±0.8**, 21.°88S**×**34.°06E, h13**^{km}±11^{km}**, MD4.1,**
Mozambique

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	Mopani	2.95	236	*i* P	Pn	11 13 29.4	-0.4
MOPA				*i* Sg	Sg	11 14 15.7	-2.4
MOPA	Mopani	2.95	236	*i* P	Pn	11 13 29.4	-0.4
MOPA				*i* Sg	Sg	11 14 15.7	-2.4
MSNA	Messina	3.78	262	*i* P	Pn	11 13 40.9	-0.3
MSNA				*i* S	Sn	11 14 22.2	-3.3
MSNA	Messina	3.78	262	*i* P	Pn	11 13 40.9	-0.3
MSNA				*i* S	Sn	11 14 22.2	-3.3
MATP	Matopo	5.39	285	*i* P	Pn	11 14 03.1	-0.4
MATP				*i* S	Sn	11 15 01.1	-4.4
MATP	Matopo	5.39	285	*i* P	Pn	11 14 03.1	-0.4
MATP				*i* S	Sn	11 15 01.1	-4.4

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*NIC **16** 11:24:01.1±0.0, 36.°17N×31.°32E, h60^{km}±4^{km}, Ml3.3/4*
*DDA **16** 11:24:02.4, 36.°17N×31.°17E, h38^{km}±1^{km}, MW3.1*
ISC 16 11:24:02.2±1.6**, 36.°01N**±0.°04×**31.°13E**±0.°05**, h61**^{km}±26^{km}**,**
n16, σ**0.^{s}80**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKUM	Antalya-Kumluc	0.71	297	*i* P	Pn	11 24 16.1	-0.5
AKUM				*i* S	Sn	11 24 27.6	+0.4
ELL	Elmali	1.23	307	P	Pn	11 24 22.9	-0.6
ELL				S	Sn	11 24 40.0	+0.8
AKMS	Akamas	1.40	135	P	Pn	11 24 25.4	-0.1
AKMS				AML	AML	11 24 43.4	
	0.9nm,0.3s						
AKMS				AML	AML	11 24 43.4	
	0.9nm,0.3s						
AKMS				S	Sn	11 24 43.5	+0.4
AKMS				AML	AML	11 24 44.7	
	1.5nm,0.4s						
AKMS				AML	AML	11 24 44.7	
	1.5nm,0.4s						
ALFC	Alefka	1.47	125	P	Pn	11 24 25.6	-1.0
ALFC				S	Sn	11 24 44.2	-0.6
ALFC				AML	AML	11 24 45.8	
	2.2nm,0.3s						
ALFC				AML	AML	11 24 45.8	
	2.2nm,0.3s						
ALFC				AML	AML	11 24 46.3	
	1.4nm,0.3s						
ALFC				AML	AML	11 24 46.3	
	1.4nm,0.3s						
SEDI	Konya, Seydise	1.53	19	*i* P	Pn	11 24 27.6	+0.1
SEDI				*i* S	Sn	11 24 47.4	+1.0
NATA	Nata	1.70	136	P	Pn	11 24 29.5	-0.2
NATA				S	Sn	11 24 51.1	+0.7
NATA				AML	AML	11 24 54.6	
	1.0nm,0.3s						
NATA				AML	AML	11 24 54.6	
	1.0nm,0.3s						
NATA				AML	AML	11 24 55.9	
	1.4nm,0.3s						
NATA				AML	AML	11 24 55.9	
	1.4nm,0.3s						
BRDR	BURDUR-Merkez	1.89	333	*i* P	Pn	11 24 32.7	+0.4
BRDR				*i* S	Sn	11 24 55.3	+0.2
KKBE	Karaman, Kazim	1.90	50	*i* P	Pn	11 24 33.3	+0.9
KKBE				*i* S	Sn	11 24 56.6	+1.3
GULN	MERSIN_Gulnar	1.97	84	*i* P	Pn	11 24 33.6	+0.3
GULN				*i* S	Sn	11 24 57.5	+0.7
KMER	Konya-Meram	2.02	29	*i* P	Pn	11 24 34.2	0.0
KMER				*i* S	Sn	11 24 59.4	+1.0
CSS	Mathiatis	2.08	119	P	Pn	11 24 33.3	-1.5
CSS				S	Sn	11 24 58.6	-1.0
ASGA	Asgata	2.12	124	P	Pn	11 24 35.2	-0.1
ASGA				S	Sn	11 25 00.0	-0.5
ASGA				AML	AML	11 25 08.1	
	0.2nm,0.4s						
ASGA				AML	AML	11 25 08.1	
	0.2nm,0.4s						
ASGA				AML	AML	11 25 15.9	
	0.3nm,0.4s						
ASGA				AML	AML	11 25 15.9	
	0.3nm,0.4s						
DOGA	KONYA_Doganhis	2.14	12	*i* P	Pn	11 24 35.5	-0.2
DOGA				*i* S	Sn	11 25 00.8	-0.5
KZIL	AFYON_Kizioren	2.38	341	*i* P	Pn	11 24 37.7	-1.3
KZIL				*i* S	Sn	11 25 06.7	-0.5
OSC1	CSNet OBS 1	2.50	177	P	Pn	11 24 41.9	+1.4
AFYO	Afyonkarahisar	2.85	347	*i* P	Pn	11 24 44.7	-0.7

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*IDC **16** 11:29:53.9±1.4, 30.°75S×177.°82W, h0^{km}, mb4.5/3, mb1 4.6/4, mb1mx4.0/28, mbtmp4.4/4, ML3.6/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/30, Error ellipse: s-maj=39.5km s-min=22.9km az=117.0*
*NEIC **16** 11:29:56.3±2.0, 30.°61S±0.°07×177.°8W±0.°2, h10^{km}±1^{km}, mb4.6/12, Error ellipse: s-maj=28.3km s-min=11.9km az=97.0*
ISC 16 11:29:55.8±0.7**, 30.°64S**±0.°05×**178.°0W**±0.°2**, h10**^{km}**, n67,**
σ**2.^{s}50**/58**, mb4.6**/10**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.38	3	P	Pb	11 30 21.5	-0.2
GLKZ				S	Sb	11 30 36.7	-2.6
RAO	Raoul Island	1.39	3	Pn	Pg	11 30 22.5	0.0
	121nm,0.3s,baz=252,slow=20,SNR=3.5						
RAO				Sn	Sb	11 30 36.0	-3.6
	791nm,0.3s,baz=143,slow=21,SNR=11						
RAO	Raoul Island	1.39	3		Pn	11 30 20.3	-0.9
RIZ	Raoul Island	1.40	3	P	Pg	11 30 22.4	-0.2
RIZ				S	Sb	11 30 36.4	-3.4
MXZ	Matakaoa Point	7.55	203	S	Sn	11 33 09.3	-2.2
WMGZ	Waiomatatini S	7.75	202	P	Pn	11 31 47.0	-1.6
WMGZ				S	Sn	11 33 13.8	-2.5
HAZ	Te Kaha	7.90	205	P	Pn	11 31 51.4	+0.7
HAZ				S	Sn	11 33 20.8	+0.6
PKGZ	Pakihiroa	7.92	203	P	Pn	11 31 48.4	-2.6
PKGZ				S	Sn	11 33 18.6	-2.1
PUZ	Puketiti	8.03	202	P	Pn	11 31 48.7	-3.8
PUZ				S	Sn	11 33 21.0	-2.3
RUGZ	Raukumara Rang	8.13	205	P	Pn	11 31 52.0	-1.9
RUGZ				S	Sn	11 33 24.4	-1.6
OUZ	Omahuta	8.40	235	Pn	Pn	11 32 06.1	+8.5
URZ	Urewera	8.60	207	Pn	Pn	11 31 57.6	-2.7
	0.7nm,0.3s,baz=132,slow=20,SNR=1.5						
URZ				Sn	Sn	11 33 35.3	-2.0
	4.8nm,0.3s,baz=219,slow=22,SNR=10						
BKZ	Black Stump Fm	9.62	206	P	Pn	11 32 10.1	-4.3
BKZ				S	Sn	11 33 57.7	-4.9
BKZ	Black Stump Fm	9.62	206		Pn	11 32 14.6	+0.1
MCHZ	McNeill Hill	9.79	205	P	Pn	11 32 11.4	-5.2
MCHZ				S	Sn	11 34 03.7	-3.0
CKHZ	Cape Kidnapper	9.85	203	P	Pn	11 32 13.5	-3.9
CKHZ				S	Sn	11 34 03.7	-4.4
KAHZ	Kahuranaki	10.04	203	P	Pn	11 32 16.5	-3.6
KAHZ				S	Sn	11 34 08.3	-4.5
BHHZ	Black Hill Sta	10.07	207	P	Pn	11 32 17.9	-2.6
BHHZ				S	Sn	11 34 08.8	-4.9
MOVZ	Moawhango	10.13	209	S	Sn	11 34 10.4	-4.5

PXZ	**Pawanui**	**10.26**	**203**	P	**Pn**	**11 32 20.2**	**-2.8**
PXZ				S	Sn	11 34 11.7	-6.3
PNHZ	**Pukenui**	**10.39**	**206**	S	**Sn**	**11 34 15.5**	**-5.8**
TSZ	**Takapari Road**	**10.60**	**206**	S	**Sn**	**11 34 21.0**	**-5.6**
MRZ	**Mangatainoka R**	**11.27**	**206**	P	Pn	11 32 31.3	-5.6
MRZ				S	Sn	11 34 33.7	-9.2
MTW	**Mount Morrison**	**11.73**	**205**	P	**Pn**	**11 32 44.4**	**+1.2**
MTW				S	Sn	11 34 45.1	-9.1
CAW	**Cannon Point**	**11.85**	**206**	P	Pn	11 32 40.8	-4.1
CAW				S	Sn	11 34 47.7	-9.4
MSVF	**Nonsavu**	**13.35**	**344**	LR	LR	11 37 22.2	
	comp=Z,50nm,20.9s,baz=123,slow=33						
DZM	**Mont Dzumac**	**16.33**	**298**	*e*LR	LR	11 37 30.8	
DZM	**Mont Dzumac**	**16.33**	**298**	LR	LR	11 38 21.3	
	comp=Z,70nm,21.5s,baz=220,slow=31						
RAR	**Rarotonga**	**18.88**	**64**	LR	LR	11 39 24.6	
	comp=Z,78nm,21.7s,baz=116,slow=30						
TBI	**Tubuai**	**26.40**	**81**	*e*T	T	12 03 21.4	
	6.2nm,0.3s						
CAN	**Canberra**	**27.99**	**252**	P	**P**	**11 35 48.9**	**+2.1**
CAN				IAmb	IAmb	11 36 03.8	
	comp=Z,18nm,1.4s						
PAE	**Paea**	**28.89**	**70**	*e*T	T	12 06 24.2	
	comp=Z,3.4nm,0.3s						
PPT2	**Papeete2**	**28.93**	**70**	*e*LR	LR	11 42 51.3	
	comp=Z,61nm,27.8s						
PPT2	**Papeete2**	**28.93**	**70**	*e*T	T	12 06 27.9	
	comp=Z,2.1nm,0.3s						
VAH	**Vaihoa**	**31.77**	**68**	*e*T	T	12 09 59.3	
	comp=Z,14nm,0.2s						
CTAO	**Charters Tower**	**33.83**	**280**	P	**P**	**11 36 41.4**	**+2.9**
STKA	**Stephens Creek**	**34.42**	**257**	P	**P**	**11 36 46.1**	**+2.6**
	comp=Z,16nm,0.7s,baz=97,slow=9.7,SNR=37						
STKA	**Stephens Creek**	**34.42**	**257**	P	**P**	**11 36 45.7**	**+2.2**
BBOO	**Buckleboo**	**38.90**	**255**	P	**P**	**11 37 23.1**	**+1.5**
BBOO				IAmb	IAmb	11 37 23.4	
	comp=Z,7.2nm,0.9s						
COEN	**Coen**	**39.33**	**286**	P	**P**	**11 37 27.5**	**+2.1**
COEN				IAmb	IAmb	11 37 31.2	
	comp=Z,21nm,1.4s						
AS31	**Alice Springs**	**43.09**	**267**	P	**P**	**11 37 57.2**	**+0.9**
ASAR	**Alice Springs**	**43.09**	**267**	P	**P**	**11 37 56.6**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=104,slow=7.3,SNR=61						
WR0	**Warramunga Arr**	**43.92**	**272**	P	**P**	**11 38 03.5**	**+0.4**
WB2	**Warramunga Arr**	**44.09**	**272**	P	**P**	**11 38 04.7**	**+0.3**
WB2				IAmb	IAmb	11 38 05.4	
	comp=Z,6.3nm,0.5s						
WRA	**Warramunga Arr**	**44.10**	**272**	P	**P**	**11 38 04.7**	**+0.2**
	comp=Z,3.8nm,0.5s,baz=112,slow=7.7,SNR=41						
WB0	**Warramunga Arr**	**44.13**	**273**	P	**P**	**11 38 05.2**	**+0.5**
WB0				IAmb	IAmb	11 38 05.7	
	comp=Z,5.6nm,0.5s						
CASY	**Casey**	**54.92**	**208**	P	**P**	**11 39 26.5**	**+0.1**
CASY				IAmb	IAmb	11 39 45.1	
	comp=Z,12nm,1.4s						
RPN	**Rapa Nui**	**59.38**	**105**	LR	LR	12 05 14.9	
	comp=Z,30nm,18.1s,baz=5.0,slow=36						
QSPA	**South Pole Qui**	**59.47**	**180**	P	**P**	**11 40 01.3**	**+2.6**
TROLL	**Troll, Antarti**	**77.63**	**180**	P	**P**	**11 41 53.1**	**+1.0**
SNAA	**Sanae**	**77.91**	**178**	P	**P**	**11 41 53.5**	**0.0**
SNAA	**Sanae**	**77.91**	**178**	P	**P**	**11 41 54.4**	**+0.9**
SNAA				IAmb	IAmb	11 41 58.3	
	comp=Z,6.4nm,1.5s						
VNA3	**Neumayer Olymp**	**78.06**	**176**	P	**P**	**11 41 55.4**	**+1.1**
VNA2	**Neumayer--Watz**	**78.50**	**177**	P	P	11 41 52.5	-4.2
	baz=34,slow=36						
VNA1	**Neumayer--Stat**	**78.73**	**177**	P	**P**	**11 42 01.7**	**+3.8**
H03S2	**Juan Fernandez**	**80.33**	**124**	T	T	13 11 14.2	
	baz=238,SNR=20						
H03S1	**Juan Fernandez**	**80.35**	**124**	T	T	13 11 17.4	
	baz=238,SNR=18						
H03S3	**Juan Fernandez**	**80.35**	**124**	T	T	13 11 08.5	
	baz=238,SNR=18						
H03N3	**Juan Fernandez**	**80.53**	**123**	T	T	13 11 28.4	
	baz=241,slow=72,SNR=11						
H03N2	**Juan Fernandez**	**80.53**	**123**	T	T	13 11 24.8	
	baz=241,slow=72,SNR=9.3						
H03N1	**Juan Fernandez**	**80.54**	**123**	T	T	13 11 23.1	
	baz=241,slow=72,SNR=17						
FINES	**FINESS Array B**	**145.37**	**340**	PKPbc	**PKPbc**	**11 49 32.1**	**-1.0**
	comp=Z,5.3nm,0.8s,baz=58,slow=3.8,SNR=17						
FINES	**FINESS Array B**	**145.37**	**340**		**PKPbc**	**11 49 32.3**	**-0.8**
NOA	**NORSAR Array B**	**148.99**	**351**	PKPbc	**PKPbc**	**11 49 42.5**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=16,slow=4.3,SNR=3.6						
AKASG	**Malin Array Be**	**151.49**	**322**	PKPbc	**PKPbc**	**11 49 49.1**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=58,slow=2.6,SNR=2.4						
AKASG	**Malin Array Be**	**151.49**	**322**		**PKPdf**	**11 49 41.9**	**-1.6**
AKASG				PKPbc	**sPKPdf**	**11 49 48.5**	**+1.7**
AKASG				PKPab	**PKPab**	**11 49 58.3**	**+0.2**
TORD	**Torodi Ar. Bea**	**162.59**	**179**	PKPab	**PKPab**	**11 50 47.1**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=194,slow=3.7,SNR=2.8						

*SOME **16** 11:38:57.9, 38°.62N×73°.52E, h15^{km}*
*NNC **16** 11:39:02.2±1.0, 38°.80N×73°.41E, h0^{km}, mb4.0, mpv3.6,*
Error ellipse: s-maj=7.5km s-min=4.6km az=171.0
ISC 16 11:39:05.6±2.1,**38°.9N**±0°.1×**73°.28E**±0°.05,**h10**^{km}**,n32,**
σ**1^s.85**/40**,5C-4D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	**Merke**	**3.81**	**359**	*e*P	**Pb**	**11 40 13.3**	**+0.3**
	4.8nm,0.4s						
MRKS				*e*S	**Sg**	**11 41 07.7**	**-0.2**
	15nm,0.6s						
MRKS	**Merke**	**3.81**	**359**	Pg	**Pb**	**11 40 13.3**	**+0.3**
	4.8nm,0.4s						
MRKS				Lg	Lg	11 41 07.7	
	15nm,0.6s						
AAK	**Ala-Archa**	**3.81**	**14**	⇓Pn	**Pn**	**11 40 04.6**	**0.0**
	9.6nm,0.7s						
AAK				⇑Lg	Lg	11 41 06.0	
	21nm,0.9s						
TKM2	**Tokmak 2**	**4.35**	**23**	⇓Pg	**Pb**	**11 40 23.6**	**+1.2**
	9.6nm,1.1s						
TKM2				⇑Lg	Lg	11 41 22.5	
	8.5nm,0.7s						
KST	**Kastek**	**4.58**	**25**	*e*P	**Pb**	**11 40 26.1**	**-0.1**
	6.7nm,0.5s						
KST				*e*S	**Sg**	**11 41 29.8**	**-2.9**
	9.9nm,0.6s						
KST	**Kastek**	**4.58**	**25**	Pg	**Pb**	**11 40 26.1**	**-0.1**
	6.7nm,0.5s						
KST				Lg	Lg	11 41 29.8	
	9.9nm,0.6s						
SGDS	**Sogindy**	**4.63**	**12**	Pg	**Pb**	**11 40 27.2**	**+0.3**
	2.8nm,0.3s						
SGDS				Lg	Lg	11 41 31.7	
	6.2nm,0.9s						
KK02	**Karatay Array**	**4.66**	**334**	⇑Pn	**Pn**	**11 40 16.7**	**+0.6**
	1.5nm,0.3s						
KK02				⇓Sn	**Sn**	**11 41 14.3**	**+4.0**
	14nm,0.8s						
DGS	**Degeres**	**4.70**	**23**	*e*P	**Pb**	**11 40 29.6**	**+1.4**
	6.6nm,0.2s						
DGS				*e*S	**Sg**	**11 41 35.9**	**-0.6**
	7.3nm,0.4s						
DGS	**Degeres**	**4.70**	**23**	Pg	**Pb**	**11 40 29.6**	**+1.4**
	6.6nm,0.2s						
DGS				Lg	Lg	11 41 35.9	
	7.3nm,0.4s						
MTBS	**Maitube**	**4.82**	**29**	*e*P	**Pb**	**11 40 31.7**	**+1.4**
	5.9nm,0.6s						
MTBS				*e*S	**Sg**	**11 41 39.2**	**-1.2**
	6.2nm,0.7s						
MTBS	**Maitube**	**4.82**	**29**	Pg	**Pb**	**11 40 31.7**	**+1.4**
	5.9nm,0.6s						
MTBS				Lg	Lg	11 41 39.2	
	6.2nm,0.7s						
BRLS	**Borolday**	**4.85**	**329**	*e*P	**Pb**	**11 40 30.4**	**-0.3**
	5.2nm,0.2s						
BRLS				*e*S	**Sg**	**11 41 37.2**	**-4.2**
	7.2nm,0.3s						
BRLS	**Borolday**	**4.85**	**329**	Pg	**Pb**	**11 40 30.4**	**-0.3**
	5.2nm,0.2s						
BRLS				Lg	Lg	11 41 37.2	
	7.2nm,0.3s						
TNSS	**Tian-Shan**	**4.95**	**33**	*e*P	**Pb**	**11 40 32.9**	**+0.3**
	3.5nm,0.3s						
TNSS				*e*S	**Sg**	**11 41 41.4**	**-3.2**
	2.6nm,0.4s						
TNSS	**Tian-Shan**	**4.95**	**33**	Pg	**Pb**	**11 40 32.9**	**+0.3**
	3.5nm,0.3s						
TNSS				Lg	Lg	11 41 41.4	
	2.6nm,0.4s						
KRBS	**Karabastau**	**5.09**	**20**	*e*P	**Pb**	**11 40 35.4**	**+0.6**
	4.8nm,0.3s						
KRBS				*e*S	**Sg**	**11 41 45.7**	**-3.3**
	2.9nm,0.4s						
KRBS	**Karabastau**	**5.09**	**20**	Pg	**Pb**	**11 40 35.4**	**+0.6**
	4.8nm,0.3s						
KRBS				Lg	Lg	11 41 45.7	
	2.9nm,0.4s						
MDOK	**Medeo**	**5.10**	**33**	*e*P	Pg	11 40 36.9	-6.4
	4.6nm,0.6s						
MDOK				*e*S	**Sg**	**11 41 48.4**	**-0.8**
	6.1nm,0.5s						
MDOK	**Medeo**	**5.10**	**33**	⇑Pg	Pg	11 40 36.9	-6.4
	7.0nm,1.0s						
MDOK				⇑Lg	Lg	11 41 44.8	
	11nm,0.8s						
MDOK	**Medeo**	**5.10**	**33**	Pg	Pg	11 40 36.9	-6.4
	4.6nm,0.6s						
MDOK				Lg	Lg	11 41 48.4	
	6.1nm,0.5s						
KOTS	**Kotyrbulak**	**5.18**	**33**	*e*P	**Pb**	**11 40 38.2**	**+1.7**
	7.0nm,0.4s						
KOTS				*e*S	**Sg**	**11 41 50.6**	**-1.4**
	13nm,0.4s						
KOTS	**Kotyrbulak**	**5.18**	**33**	Pg	**Pb**	**11 40 38.2**	**+1.7**
	7.0nm,0.4s						
KOTS				Lg	Lg	11 41 50.6	
	13nm,0.4s						
KTBS	**Karatobe**	**5.42**	**27**	*e*P	**Pb**	**11 40 42.4**	**+2.0**
	3.1nm,0.3s						
KTBS				*e*S	**Sg**	**11 41 57.8**	**-1.7**
	7.9nm,0.3s						
KTBS	**Karatobe**	**5.42**	**27**	Pg	**Pb**	**11 40 42.4**	**+2.0**
	3.1nm,0.3s						
KTBS				Lg	Lg	11 41 57.8	
	7.9nm,0.3s						
KUU	**Kurty**	**5.46**	**24**	*e*P	**Pb**	**11 40 42.1**	**+0.9**
	2.3nm,0.7s						
KUU				*e*S	**Sg**	**11 41 57.4**	**-3.6**
	10nm,0.8s						
KUU	**Kurty**	**5.46**	**24**	Pg	**Pb**	**11 40 42.1**	**+0.9**
	2.3nm,0.7s						
KUU				Lg	Lg	11 41 57.4	
	10nm,0.8s						
SATY	**Saty**	**5.66**	**42**	*e*P	**Pb**	**11 40 46.1**	**+1.6**
	5.5nm,0.4s						
SATY				*e*S	**Sg**	**11 42 04.2**	**-3.0**
	5.9nm,0.8s						
SATY	**Saty**	**5.66**	**42**	Pg	**Pb**	**11 40 46.1**	**+1.6**
	5.5nm,0.4s						
SATY				Lg	Lg	11 42 04.3	
	5.9nm,0.8s						
PDGK	**Podgornoye**	**6.42**	**45**	Pg	Pb	11 40 59.7	+2.1
	1.2nm,0.4s						
PDGK				Lg	Lg	11 42 27.6	
	2.1nm,0.5s						
PDGK	**Podgornoye**	**6.42**	**45**	⇓Lg	Lg	11 42 26.4	
	8.7nm,1.1s						
AB31	**Akbulak array**	**14.06**	**322**	Pn	**Pn**	**11 42 23.4**	**-1.4**
	0.4nm,0.3s,baz=132,slow=13,SNR=5.0						

*UPP **16** 11:42:47.8±0.2, 56°.21N×15°.45E, h0^{km}, ML2.5, Explosion*
*DNK **16** 11:42:48.3±1.7, 56°.22N×15°.54E, h15^{km}±18^{km}, ML2.2*
*BER **16** 11:42:48.6±2.0, 56°.19N×15°.49E, h0^{km}±19^{km}, ML1.6,*
ML2.2(DNK)
ISC 16 11:42:47.0±0.9,**56°.23N**±0°.03×**15°.38E**±0°.03,**h0**^{km}**,n18,**
σ**0^s.28**/25**,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLEU	**Blekinge**	**0.26**	**72**	*i* P	**Pg**	**11 42 52.1**	**+0.2**
BLEU				*i* S	**Sg**	**11 42 54.9**	**-0.3**
BLEU	**Blekinge**	**0.26**	**72**	P	**Pg**	**11 42 52.2**	**+0.4**
BLEU				S	**Sg**	**11 42 55.3**	**+0.2**
BLEU	**Blekinge**	**0.26**	**72**	*i* P	**Pg**	**11 42 52.1**	**+0.2**
BLEU				*i* S	**Sg**	**11 42 54.9**	**-0.3**
VXJU	**Vaexsjoe**	**0.74**	**341**	P	**Pb**	**11 43 02.2**	**-0.5**
DEL	**Delary**	**0.88**	**287**	*i* P	**Pb**	**11 43 05.0**	**0.0**
DEL				*i* S	**Sb**	**11 43 17.1**	**-0.1**
DEL	**Delary**	**0.88**	**287**	P	**Pb**	**11 43 05.0**	**0.0**
DEL	**Delary**	**0.88**	**287**	*i* P	**Pb**	**11 43 05.0**	**0.0**
DEL				*i* S	**Sb**	**11 43 17.1**	**-0.1**
BSD	**Bornholm Skovb**	**1.15**	**193**	*i* P	**Pb**	**11 43 09.5**	**-0.1**
BSD				*i* S	**Sg**	**11 43 23.4**	**-0.3**
BSD				IAML		11 43 26.5	
	comp=Z,18nm,0.6s						
BSD	**Bornholm Skovb**	**1.15**	**193**	*i* P	**Pb**	**11 43 09.5**	**-0.1**
BSD				*i* S	**Sg**	**11 43 23.4**	**-0.3**
BSD				IAML		11 43 26.5	
	comp=Z,18nm,0.6s						
LUNU	**Lund**	**1.24**	**242**	*i* P	**Pn**	**11 43 11.8**	**+0.3**
LUNU	**Lund**	**1.24**	**242**	*i* P	**Pn**	**11 43 11.8**	**+0.3**
EKSU	**Eksjoe**	**1.35**	**358**	P	**Pg**	**11 43 13.2**	**+0.4**
GNOU	**Gnosjoe**	**1.39**	**321**	P	**Pb**	**11 43 14.3**	**+0.5**
BYXU	**Byxelkrok**	**1.39**	**39**	P	**Pn**	**11 43 13.2**	**-0.4**
VSTU	**Vaestervik**	**1.57**	**23**	P	**Pb**	**11 43 16.8**	**0.0**
FABU	**Falkenberg**	**1.66**	**299**	P	**Pg**	**11 43 18.7**	**-0.1**
BORU	**Boraas**	**2.01**	**316**	*i* P	**Pb**	**11 43 24.3**	**-0.1**
BORU	**Boraas**	**2.01**	**316**	*i* P	**Pb**	**11 43 24.3**	**-0.1**

*IDC **16** 11:53:19.2±2.8, 20°.88S×178°.64W, h601^{km}±20^{km}, mb3.2/6,*
mb1 3.5/9, mb1mx3.2/26, mbtmp4.2/9, Error ellipse:
s-maj=81.6km s-min=18.2km az=148.0
*NEIC **16** 11:53:20.6±0.9, 20°.8S±0°.1×178°.7W±0°.1, h611^{km}±8^{km},*
mb4.4/25, Error ellipse: s-maj=20.0km s-min=17.5km
az=95.0
ISC 16 11:53:17.9±0.7,**20°.9S**±0°.1×**178°.6W**±0°.1,**h579**^{km}**,n42,**
σ**1^s.36**/42**,mb4.3**/19**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.43**	**314**	P	**P**	**11 54 49.4**	**+4.1**
	7.6nm,0.3s,baz=90,slow=23,SNR=75						
MSVF	**Nonsavu**	**4.43**	**314**	P	**P**	**11 54 49.6**	**+4.3**
AFI	**Afiamalu**	**9.52**	**44**	P	**P**	**11 55 32.3**	**+0.7**
	1.8nm,0.3s,baz=32,slow=19,SNR=4.7						
MARNC	**Mare, Loyalty**	**12.47**	**265**	P	**P**	**11 56 02.0**	**+0.6**
PINNC	**Pines Island,**	**13.06**	**260**	P	**P**	**11 56 08.2**	**+0.7**
LIFNC	**LIFOU**	**13.22**	**268**	P	**P**	**11 56 08.7**	**-0.5**
DZM	**Mont Dzumac**	**13.96**	**262**	P	**P**	**11 56 16.6**	**-0.1**
	0.5nm,0.3s,baz=58,slow=19,SNR=6.9						
SANVU	**Saraoutou**	**14.51**	**289**	P	**P**	**11 56 22.9**	**+0.8**
WHZ	**Wether Hill Ro**	**27.28**	**201**	P	**P**	**11 58 18.7**	**+1.7**
EIDS	**Eidsvold**	**28.19**	**255**	P	**P**	**11 58 25.2**	**0.0**
EIDS				IAmb	IAmb	11 58 42.4	
	comp=Z,15nm,1.4s						
ARMA	**Armidale**	**28.38**	**244**	P	**P**	**11 58 28.1**	**+1.1**
CTAO	**Charters Tower**	**32.88**	**265**	P	**P**	**11 59 05.5**	**+0.1**
CTAO				IAmb	IAmb	11 59 05.8	
	comp=Z,8.7nm,0.6s						
PMG	**Port Moresby**	**34.86**	**284**	P	**P**	**11 59 21.6**	**-0.5**
PMG				IAmb	IAmb	11 59 22.5	
	comp=Z,11nm,0.8s						
TOO	**Toolangi**	**35.21**	**234**	P	**P**	**11 59 25.3**	**+0.6**
TOO				IAmb	IAmb	11 59 48.6	
	comp=Z,17nm,1.4s						
COEN	**Coen**	**37.03**	**274**	P	**P**	**11 59 39.6**	**-0.3**
STKA	**Stephens Creek**	**37.10**	**244**	P	**P**	**11 59 40.7**	**+0.4**
	comp=Z,2.0nm,0.4s,baz=73,slow=9.0,SNR=5.1						
BBOO	**Buckleboo**	**41.86**	**244**	P	**P**	**12 00 18.1**	**-0.4**
BBOO				IAmb	IAmb	12 00 18.6	
	comp=Z,6.6nm,0.8s						
AS31	**Alice Springs**	**43.87**	**257**	P	**P**	**12 00 33.7**	**-0.6**
ASAR	**Alice Springs**	**43.87**	**257**	P	**P**	**12 00 33.8**	**-0.5**
	comp=Z,8.8nm,0.5s,baz=92,slow=7.9,SNR=165						
ASAR				ScP	**ScP**	**12 05 03.0**	**-1.6**
	comp=Z,0.3nm,1.0s,baz=99,slow=3.9,SNR=4.1						
WB0	**Warramunga Arr**	**43.95**	**263**	P	**P**	**12 00 33.9**	**-1.0**
WB2	**Warramunga Arr**	**43.96**	**263**	P	**P**	**12 00 33.9**	**-1.1**
WB2				IAmb	IAmb	12 00 34.5	
	comp=Z,11nm,1.0s						
WRA	**Warramunga Arr**	**43.97**	**263**	P	**P**	**12 00 33.8**	**-1.3**
	comp=Z,4.8nm,0.5s,baz=97,slow=7.7,SNR=81						
WRA	**Warramunga Arr**	**43.97**	**263**	P	**P**	**12 00 34.1**	**-1.0**
MTN	**Manton Dam**	**48.59**	**271**	P	**P**	**12 01 09.0**	**-1.0**
MTN				IAmb	IAmb	12 01 37.8	
	comp=Z,23nm,1.2s						
FORT	**Forrest**	**48.61**	**247**	P	**P**	**12 01 09.1**	**-0.8**
FORT				IAmb	IAmb	12 01 21.3	
	comp=Z,11nm,0.9s						
KNRA	**Kununurra**	**50.05**	**267**	P	**P**	**12 01 20.0**	**-0.7**
KNRA				IAmb	IAmb	12 01 45.5	
	comp=Z,21nm,1.1s						
PSA00	**Pilbara Seismi**	**57.02**	**257**	P	**P**	**12 02 08.9**	**-1.0**
PSA00				IAmb	IAmb	12 02 30.6	
	comp=Z,22nm,1.4s						
QSPA	**South Pole Qui**	**69.20**	**180**	P	**P**	**12 03 28.3**	**+1.1**
YOJ	**Yonaguni jima**	**72.47**	**306**	P	**P**	**12 03 44.4**	**-2.5**
TPUB	**Ta-pu**	**73.69**	**303**	P	**P**	**12 03 52.8**	**-1.1**
PETK	**Petropavlovsk-**	**76.48**	**346**	P	**P**	**12 04 08.5**	**-0.2**
EMB	**Emerald Bay**	**80.86**	**42**	P	**P**	**12 04 31.0**	**-1.6**
EMB				IAmb	IAmb	12 04 32.9	
	comp=Z,10nm,0.9s						
MOD	**Modoc Plateau**	**82.47**	**40**	P	**P**	**12 04 38.5**	**-2.2**
O18K	**Koktuh Hills**	**82.68**	**12**	P	**P**	**12 04 41.2**	**+0.1**
O18K				IAmb	IAmb	12 04 47.3	
	comp=Z,15nm,1.1s						
TRF	**Thorofare Moun**	**86.93**	**12**	P	**P**	**12 05 01.6**	**-0.3**
H21K	**Melozitna Rive**	**88.47**	**10**	P	**P**	**12 05 08.8**	**0.0**
H21K				IAmb	IAmb	12 05 21.4	
	comp=Z,5.7nm,1.5s						
CCB	**Clear Creek Bu**	**88.50**	**13**	P	**P**	**12 05 08.5**	**-0.4**
IMAR	**Indian Mountai**	**88.62**	**10**	P	**P**	**12 05 09.4**	**0.0**
ILAR	**Eielson Array**	**88.80**	**13**	P	**P**	**12 05 09.4**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=231,slow=5.7,SNR=2.2						
PDAR	**Pinedale Array**	**89.63**	**43**	P	**P**	**12 05 15.6**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=218,slow=3.8,SNR=1.7						
CMAR	**Chiang Mai Arr**	**89.69**	**290**	P	**P**	**12 05 15.1**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=113,slow=3.3,SNR=6.0						
AKASG	**Malin Array Be**	**143.05**	**330**	PKP	PKPab	12 11 42.8	-1.2
	comp=Z,0.8nm,0.4s,baz=45,slow=4.6,SNR=13						

*NIC **16** 11:53:40.7±0.0, 34°.54N×34°.08E, h14^{km}, Ml2.6/6*
*GII **16** 11:53:41.5±0.0, 34°.73N×34°.24E, h30^{km}±2^{km}, Mm2.3/3*
*DDA **16** 11:53:41.7, 34°.68N×33°.56E, h6^{km}±3^{km}, MW3.3*
*ISK **16** 11:53:47.7, 35°.06N×33°.73E, h9^{km}, ML2.2/10*
ISC 16 11:53:40.4±1.4,**34°.63N**±0°.03×**34°.16E**±0°.04,**h15**^{km}±11^{km},
n36,σ**1^s.15**/54**,1C,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PARAL	**Paralimni**	**0.38**	**345**	P	**Pb**	**11 53 50.1**	**+1.3**
PARAL				S	**Sn**	**11 53 57.2**	**-1.1**
PARAL				AML	AML	11 53 59.0	
	2.0nm,0.4s						
PARAL				AML	AML	11 53 59.0	
	2.0nm,0.4s						
PARAL				AML	AML	11 53 59.2	
	2.4nm,0.4s						
PARAL				AML	AML	11 53 59.2	
	2.4nm,0.4s						
MVOU	**Mavrovouni**	**0.58**	**312**	P	**Pg**	**11 53 52.3**	**+0.6**
MVOU				S	**Sb**	**11 54 01.6**	**+1.4**
MVOU				AML	AML	11 54 04.2	
	2.6nm,0.9s						
MVOU				AML	AML	11 54 04.2	
	2.6nm,0.9s						
AKIN	**Akıncılar- Kıb**	**0.69**	**304**	PG	**Pg**	**11 53 52.9**	**-0.9**
CSS	**Mathiatis**	**0.76**	**296**	PG	**Pb**	**11 53 55.1**	**-0.2**
CSS	**Mathiatis**	**0.76**	**296**	P	**Pb**	**11 53 54.9**	**-0.4**
CSS				S	**Sb**	**11 54 05.5**	**+0.1**
ASGA	**Asgata**	**0.76**	**282**	⇑*e*P	**Pb**	**11 53 54.9**	**-0.5**
ASGA				S	**Sb**	**11 54 05.8**	**+0.2**
ASGA				AML	AML	11 54 07.3	
	0.7nm,0.7s						
ASGA				AML	AML	11 54 07.3	
	0.7nm,0.7s						
ASGA				AML	AML	11 54 09.7	
	0.6nm,0.5s						
ASGA				AML	AML	11 54 09.7	
	0.6nm,0.5s						
ATHAL	**Athalassa**	**0.81**	**309**	S	**Sn**	**11 54 09.1**	**+0.1**
EREN	**Erenkoy**	**0.90**	**1**	PG	**Pn**	**11 53 59.7**	**+1.2**
LEF	**Lefka**	**1.15**	**295**	PG	**Pn**	**11 54 01.9**	**-0.1**
NATA	**Nata**	**1.31**	**277**	S	**Sn**	**11 54 21.6**	**0.0**
NATA				AML	AML	11 54 25.0	
	1.0nm,0.5s						
NATA				AML	AML	11 54 25.0	
	1.3nm,0.6s						
ALFC	**Alefka**	**1.38**	**293**	P	**Pn**	**11 54 05.0**	**-0.2**
ALFC				S	**Sb**	**11 54 24.2**	**+0.7**
ALFC				AML	AML	11 54 29.6	
	0.4nm,0.6s						
ALFC				AML	AML	11 54 29.6	
	0.4nm,0.6s						
ALFC				AML	AML	11 54 31.4	
	0.4nm,0.5s						
ALFC				AML	AML	11 54 31.4	
	0.4nm,0.5s						
AKMS	**Akamas**	**1.55**	**285**	P	**Pn**	**11 54 07.8**	**+0.3**
AKMS				S	**Sb**	**11 54 28.8**	**+0.6**
AKMS				AML	AML	11 54 39.6	
	0.3nm,0.4s						
AKMS				AML	AML	11 54 39.6	
	0.3nm,0.4s						
AKMS				AML	AML	11 54 41.4	
	0.3nm,0.4s						
AKMS				AML	AML	11 54 41.4	
	0.3nm,0.4s						
GULN	**MERSIN_Gulnar**	**1.63**	**342**	*i* P	**Pb**	**11 54 10.6**	**+0.4**
GULN				*i* S	**Sb**	**11 54 31.2**	**+0.7**
IKL	**Isikli**	**1.65**	**347**	PN	**Pb**	**11 54 10.8**	**+0.3**
IKL				SN	**Sn**	**11 54 27.5**	**-2.3**
TEKE	**Tekeli-Mersin**	**1.73**	**331**	PN	**Pn**	**11 54 11.0**	**+1.0**
KEBE	**Keben-Mersin**	**1.85**	**349**	PN	**Pb**	**11 54 13.8**	**-0.2**
BERE	**Bereket-Mersin**	**1.87**	**336**	PN	**Pn**	**11 54 13.2**	**+1.1**
GEM	**Giv'at Ha'Em**	**1.89**	**138**	Pn	**Pn**	**11 54 11.9**	**-0.3**
GEM				Sn	**Sn**	**11 54 35.1**	**-0.7**
TEVE	**Tevekalti-Mers**	**1.89**	**342**	PN	**Pb**	**11 54 13.9**	**-0.8**
NATI	**Neve Ativ**	**1.90**	**136**	Pn	**Pn**	**11 54 12.5**	**+0.3**
NATI				Sn	**Sn**	**11 54 35.2**	**-0.7**
MMA0B	**Mount Meron ar**	**1.92**	**147**	Pn	**Pn**	**11 54 12.6**	**0.0**
MMA0B				Sn	**Sn**	**11 54 36.4**	**-0.1**
OFRI	**`Ofer**	**2.12**	**161**	Pn	**Pn**	**11 54 15.1**	**-0.3**
GAZI	**Gazipasa**	**2.19**	**317**	*i* P	**Pn**	**11 54 15.3**	**-1.1**
GAZI				*i* S	**Sn**	**11 54 42.9**	**-0.4**
GAZI	**Gazipasa**	**2.19**	**317**	PN	**Pn**	**11 54 17.5**	**+1.1**
ERMK	**Ermenek**	**2.25**	**334**	*i* P	**Pb**	**11 54 19.8**	**-1.0**
ERMK				*i* S	**Sg**	**11 54 52.6**	**-0.1**
MMLI	**Mount Malkishu**	**2.43**	**154**	Pn	**Pn**	**11 54 20.1**	**+0.5**
MMLI				Sn	**Sn**	**11 54 49.6**	**+0.5**
HMDT	**Nahal Hemdat**	**2.63**	**154**	Pn	**Pn**	**11 54 23.2**	**+0.8**
HMDT				Sn	**Sn**	**11 54 54.9**	**+0.8**
OSC1	**CSNet OBS 1**	**2.64**	**246**	S	**Sn**	**11 54 55.4**	**+1.1**
HDMB	**Hadim**	**2.69**	**330**	PN	**Pn**	**11 54 25.0**	**+1.5**
KKBE	**Karaman, Kazim**	**2.77**	**339**	*i* P	**Pn**	**11 54 27.1**	**+2.7**
KKBE				*i* S	**Sb**	**11 55 01.7**	**-1.7**
KERG	**Konya-Eregli**	**2.78**	**360**	*i* P	**Pn**	**11 54 26.5**	**+2.0**
KERG				*i* S	**Sb**	**11 55 02.5**	**-1.3**
DSI	**Dead Sea**	**3.22**	**161**	Pn	**Pn**	**11 54 31.1**	**+0.6**
YTIR	**Yattir**	**3.36**	**166**	Pn	**Pn**	**11 54 33.1**	**+0.7**
SEDI	**Konya, Seydise**	**3.42**	**326**	*i* P	**Pn**	**11 54 35.3**	**+1.9**
SEDI				*i* S	**Sb**	**11 55 18.2**	**-4.1**
PRNI	**Paran**	**4.33**	**170**	Pn	**Pn**	**11 54 46.6**	**+0.9**
MBRI	**Mt Berech**	**4.87**	**172**	Pn	**Pn**	**11 54 53.8**	**+0.6**

*NNC **16** 12:25:08.7±1.8, 43°.23N×80°.24E, h2^{km}±7^{km}, mb2.6,*
mpv2.6, Error ellipse: s-maj=17.3km s-min=10.5km
az=24.0
*SOME **16** 12:25:08.9, 43°.17N×80°.25E, h15^{km}*
ISC 16 12:25:10.2±1.9,**43°.1N**±0°.1×**79°.96E**±0°.06,**h10**^{km}**,n8,**
σ**2^s.41**/16**,2C,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.38**	**285**	*e*P	**Pg**	**12 25 15.0**	**-2.7**
	8.2nm,0.1s						
SHLS				*e*S	**Sg**	**12 25 19.4**	**-3.3**
	58nm,0.2s						
SHLS	**Shalkode**	**0.38**	**285**	P	**Pg**	**12 25 15.0**	**-2.7**
	8.2nm,0.1s						
SHLS				S	**Sg**	**12 25 19.4**	**-3.3**
	58nm,0.2s						
PDGK	**Podgornoye**	**0.43**	**308**	P	**Pb**	**12 25 20.0**	**-0.1**
	0.9nm,0.0s						
PDGK				S	**Sb**	**12 25 27.9**	**+1.1**
	4.8nm,0.1s						
PDGK	**Podgornoye**	**0.43**	**308**	⇑P	**Pb**	**12 25 19.6**	**-0.5**
	0.5nm,0.3s						
PDGK				⇑S	**Sb**	**12 25 27.8**	**+1.1**
	2.5nm,0.3s						
KTMS	**Ketmen**	**0.48**	**37**	*e*P	**Pg**	**12 25 17.8**	**-1.8**
	2.6nm,0.1s						
KTMS				*e*S	**Sg**	**12 25 24.3**	**-1.6**
	18nm,0.2s						

SATY	Saty	1.14	270	eP	Pn	12 25 33.8	+1.4
	2.5nm,0.3s						
SATY				eS	Sn	12 25 51.6	+3.5
	4.5nm,0.3s						
SATY	Saty	1.14	270	P	Pn	12 25 33.8	+1.4
	2.5nm,0.3s						
SATY				S	Sn	12 25 51.6	+3.5
	4.5nm,0.3s						
BLB	Baldybastay	1.49	314	P	Pb	12 25 38.2	+0.1
	1.3nm,0.1s						
BLB				S	Sg	12 25 59.3	+1.0
	5.4nm,0.1s						

*TUL **16** 12:38:28.3±1.9, 35°.82N±0°.01×97°.40W±0°.02, h5^{km}±4^{km}, ML2.5, mb_Lg2.2/3(NEIC), Error ellipse: s-maj=2.1km s-min=1.4km az=130.0*

NEIC 16 12:38:28.2±0.8**, 35°.84N**±0°.01×**97°.43W**±0°.01**, h7**^{km}±4^{km}**, Error ellipse: s-maj=2.3km s-min=0.9km az=143.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	Liberty Lake	0.05	206	Pg	Pg	12 38 29.9	0.0
OK029				Sg	Sg	12 38 31.0	0.0
BCOK	Bluff Creek, N	0.24	219	Pg	Pg	12 38 33.3	+0.3
BCOK				Sg	Sg	12 38 37.0	+0.9
OK025	Westminster Rd	0.27	165	Pg	Pg	12 38 33.5	-0.1
OK025				Sg	Sg	12 38 37.3	+0.1
OKCFA	Oklahoma City	0.43	183	Pg	Pg	12 38 36.4	-0.1
OKCFA				Sg	Sg	12 38 42.5	+0.4
OKCSW	OKLAHOMA CITY	0.44	181	Pg	Pg	12 38 36.6	-0.1
OKCSW				Sg	Sg	12 38 43.1	+0.7
OK031	S. Brethren Rd	0.49	77	Pg	Pg	12 38 37.7	0.0
OK031				Sg	Sg	12 38 44.4	+0.3
OK030	Cody Creek RV	0.53	81		Pg	12 38 38.4	0.0
OK030				IAmb_Lg		12 38 45.5	
	comp=Z,9.4nm,0.7s						
OK030				Sg	Sg	12 38 45.6	+0.2
FNO	Franklin	0.58	178	Pg	Pg	12 38 39.4	-0.2
FNO				Sg	Sg	12 38 47.5	+0.3
OK034	N. Norfolk Rd.	0.60	74		Pg	12 38 39.8	0.0
OK034				Sg	Sg	12 38 47.9	+0.2
QUOK	Quay	0.67	60	Pg	Pg	12 38 41.1	0.0
QUOK				Sg	Sg	12 38 50.0	+0.2
CROK	Carrier	0.80	326	Pg	Pb	12 38 44.0	-0.4
W35A	Tecumseh	0.82	147	Pg	Pg	12 38 43.0	-1.0
W35A				Sg	Sg	12 38 54.0	-0.8
BLOK	Blackwell	0.93	11	Pg	Pg	12 38 46.2	0.0
GC02	Grant County #	1.06	341	Pg	Pg	12 38 48.4	-0.3
OK032	Salt Plains WL	1.15	327	Pg	Pg	12 38 50.2	-0.1
KAN13	South Haven SW	1.17	358	Pg	Pg	12 38 50.5	-0.2
KAN14	Manchester OK	1.19	339	Pg	Pg	12 38 50.9	-0.2
KAN17	Caldwell West	1.23	347	Pg	Pb	12 38 51.7	-0.1
X34A	Smith Ranch, M	1.28	195		Pn	12 38 52.3	-0.3
KAN09	Caldwell North	1.30	353	Pn	Pn	12 38 52.2	-0.7
T35A	Sooner Cattle	1.30	34	Pn	Pn	12 38 52.4	-0.4
TUL1	Leonard	1.33	87	Pn	Pn	12 38 51.9	-1.3
KAN01	Argonia South	1.33	349	Pn	Pb	12 38 53.6	0.0
U32A	Winter Ranch,	1.38	293	Pn	Pb	12 38 54.2	-0.2
W39A	Magazine	3.04	101	Pn	Pn	12 39 14.5	-2.3
MIAR	Mount Ida	3.41	111	Pn	Pn	12 39 22.4	+0.6
AMTX	Amarillo	3.61	256	Pn	Pn	12 39 24.6	0.0
U40A	Yellville	3.74	81	Pn	Pn	12 39 27.8	+1.5
X40A	Basin Creek Fa	4.00	108	Pn	Pn	12 39 30.2	+0.4
WHAR	Wooly Hollow	4.22	96	Pn	Pn	12 39 34.2	+1.2
FCAR	Ozark Folk Cen	4.31	88	Pn	Pn	12 39 34.5	+0.4
R40A	Maddies Statio	4.79	58	IAmb_Lg		12 41 06.2	
	comp=Z,3.9nm,0.7s						
344A	Westbrook Farm	7.09	126	IAmb_Lg		12 42 16.5	
	comp=Z,21nm,1.0s						

*IDC **16** 12:50:19.9±8.6, 25°.74N×125°.05E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.4/41, mbtmp3.5/3, MS2.3/1, Ms1 2.3/1, ms1mx2.2/32, Error ellipse: s-maj=503.5km s-min=26.9km az=60.0*

*JMA **16** 12:50:19.0±0.1, 24°.82N×125°.38E, h49^{km}±1^{km}, M3.3*

ISC 16 12:50:19.2±1.7**, 24°.9N**±0°.1×**125°.4E**±0°.1**, h47**^{km}±9^{km}**, n13,** σ**0^{s}.31**/18**, mb3.5**/3**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	Gusukube	0.09	172	P	Pn	12 50 26.6	-0.1
JOGS				S	Sn	12 50 32.1	+0.2
JMJ2	Miyako jima3	0.12	208	P	Pn	12 50 26.5	-0.3
JMJ2				S	Sn	12 50 32.2	+0.1
JIKM	Ikemajima	0.15	299	P	Pn	12 50 27.0	+0.1
JIKM				S	Sn	12 50 32.9	+0.5
JIRB	Irabujima	0.20	264	P	Pn	12 50 27.0	-0.2
JIRB				S	Sn	12 50 32.8	-0.1
JTJ	Tarama	0.66	252	P	Pn	12 50 32.2	-0.1
JTJ				i S	Sn	12 50 41.7	-0.1
JISG	Ishigakijimahi	1.02	255	P	Pn	12 50 36.5	-0.6
JISG				S	Sn	12 50 50.3	0.0
JIJ	Ishigaki jima	1.24	247	P	Pn	12 50 40.0	-0.1
JIJ				eS	Sn	12 50 55.6	0.0
JKRS	Kuro-shima	1.40	244	P	Pn	12 50 42.7	+0.4
JKRS				eS	Sn	12 51 00.1	+0.5
IRIF	Iriomote-Funau	1.60	252	P	Pn	12 50 45.3	+0.3
KSRS	Korea Array	12.75	9	LR	LR	12 58 17.3	
	comp=Z,14nm,19.0s,baz=70,slow=40						
MKAR	Makanchi Array	40.59	314	P	P	12 57 54.2	-0.1
	0.4nm,0.4s,baz=99,slow=9.9,SNR=8.5						
WRA	Warramunga Arr	45.37	168	P	P	12 58 46.9	+14
	0.9nm,0.9s,baz=351,slow=9.2,SNR=3.5						
ASAR	Alice Springs	48.93	170	P	P	12 59 15.4	+15
	0.2nm,0.4s,baz=354,slow=8.0,SNR=6.0						

*SKHL **16** 13:12:31.7±0.3, 42°.80N×146°.60E, h51^{km}±3^{km}, mb5.1/4*

*NIED **16** 13:12:31.5, 42°.86N×146°.56E, h45^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.24; $M_{\theta\theta}$-0.61; $M_{\phi\phi}$-0.63; $M_{r\theta}$0.17; $M_{\theta\phi}$-0.63; $M_{\phi r}$0.44; Fault plane solution: $M_0$1.33000×10^{15} NP1:ϕ_s36.00000°, δ55.00000°, λ81.00000°. NP2:ϕ_s232.00000°, δ36.00000°, λ103.00000°.*

*JMA **16** 13:12:31.4±0.2, 42°.86N×146°.56E, h45^{km}±3^{km}, M3.9*

*MOS **16** 13:12:33.2±1.2, 42°.94N×146°.38E, h47^{km}, mb4.5/9, Error ellipse: s-maj=12.6km s-min=7.0km az=108.9*

*NEIC **16** 13:12:35.6±1.0, 42°.9N±0°.1×146°.4E±0°.1, h51^{km}±10^{km}, mb4.4/9, Error ellipse: s-maj=17.9km s-min=13.5km az=151.0*

*IDC **16** 13:12:37.6±3.1, 43°.03N×146°.37E, h68^{km}±26^{km}, mb3.7/13, mb1 3.8/16, mb1mx3.6/38, mbtmp3.9/16, MS3.1/9, Ms1 3.1/9, ms1mx2.9/42, Error ellipse: s-maj=29.4km s-min=17.4km az=169.0*

ISC 16 13:12:33.2±1.7**, 42°.94N**±0°.06×**146°.46E**±0°.04**, h31**^{km}±10^{km}**, n88,** σ**1^{s}.18**/98**, mb4.2**/21**, MS3.3**/6**, 4C-2D, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.67	309	P	Pn	13 12 46.1	-0.5
NEM2				eS	Sn	13 12 57.2	+1.2
NMR	Nemuro--Hokkai	0.69	309	⇓ i PN	Pn	13 12 46.2	-0.5
NMR				S	Sb	13 12 57.2	+1.2
NMR	Nemuro--Hokkai	0.69	309	i P	Pn	13 12 46.2	-0.5
NMR				eS	Sb	13 12 57.2	+1.2
SHO	Shikotan	0.96	16c	i PN	Pn	13 12 50.4	-0.2
SHO				i S	Sb	13 13 04.7	+0.9
SHO				pmax	pmax		
	comp=Z,135nm,0.2s						
SHO				smax	smax		
	comp=N,7µm,0.4s						
SHO				smax	smax		
	comp=E,5µm,0.4s						
SHO	Shikotan	0.96	16	i P	Pn	13 12 50.2	-0.4
SHO				AMB	AMB	13 12 51.2	
	comp=E,690nm,0.6s						
SHO				i S	Sb	13 13 04.4	+0.6
SHO				A	A	13 13 05.1	
	comp=E,7µm,0.4s						
SHO				A	A	13 13 05.1	
	comp=E,5µm,0.4s						
JKHN	Kushirohamanak	0.96	279	P	Pn	13 12 50.1	-0.5
GLVR	Golovnino	1.05	319	⇑ i PN	Pn	13 12 51.7	0.0
GLVR				eS	Sb	13 13 07.1	+0.8
GLVR				pmax	pmax		
	comp=Z,611nm,0.4s						
GLVR				smax	smax		
	comp=E,1µm,0.2s						
GLVR				smax	smax		
	comp=N,2µm,0.4s						
GLVR	Golovnino	1.05	319	i P	Pn	13 12 51.8	0.0
GLVR				AMB	AMB	13 12 55.0	
	comp=N,610nm,0.4s						
GLVR				eS	Sb	13 13 07.1	+0.8
GLVR				A	A	13 13 13.0	
	comp=N,2µm,0.4s						
GLVR				A	A	13 13 13.0	
	comp=N,1µm,0.4s						
GRPR	Tuman	1.16	335	⇑ i PN	Pn	13 12 53.0	-0.3
GRPR				i S	Sb	13 13 08.7	-0.8
GRPR				pmax	pmax		
	comp=Z,2µm,0.4s						
GRPR				smax	smax		
	comp=E,5µm,0.5s						
GRPR				smax	smax		
	comp=N,3µm,0.4s						
GRPR	Tuman	1.16	335	i P	Pn	13 12 53.0	-0.3
GRPR				AMB	AMB	13 12 53.0	
	comp=N,2µm,0.5s						
GRPR				i S	Sb	13 13 08.7	-0.8
GRPR				A	A	13 13 09.0	
	comp=N,3µm,0.5s						
GRPR				A	A	13 13 09.0	
	comp=N,5µm,0.5s						
YUK	Yuzh-Kuril'sk	1.18	338	i PN	Pn	13 12 53.2	-0.3
YUK	Yuzh-Kuril'sk	1.18	338	i P	Pn	13 12 53.2	-0.3
YUK				AMB	AMB	13 12 57.0	
	comp=N,1µm,0.5s						
YUK				i S	Sb	13 13 09.1	-0.7
YUK				A	A	13 13 11.0	
	comp=N,2µm,0.5s						
YUK				A	A	13 13 11.0	
	comp=N,2µm,0.5s						
AKK	Akkeshi	1.19	274	eP	Pn	13 12 52.9	-0.8
AKK				eS	Sn	13 13 08.6	-0.2
JAK	Akkeshi	1.30	273	P	Pn	13 12 54.5	-0.6
JNSB	Nemuroshibetsu	1.35	309	P	Pn	13 12 55.9	0.0
JNSB				eS	Sb	13 13 14.3	-0.5
JRA	Rausu	1.39	316	P	Pn	13 12 56.6	+0.2
JRA				eS	Sb	13 13 15.1	-0.9
JNK	Nakash	1.43	297	P	Pn	13 12 56.6	-0.3
JNK				eS	Sn	13 13 15.1	+0.5
RUSJ	Misakicho	1.46	323	PN	Pn	13 12 56.8	-0.6
RUSJ				eS	Sn	13 13 16.5	+1.1
JOB	Onbets	1.93	270	P	Pn	13 13 03.7	-0.1
JAR	Ashorobuto	2.00	281	P	Pn	13 13 04.7	-0.2
JTKR	Abashiri--Toko	2.12	300	P	Pn	13 13 07.3	+0.8
JTKR				eS	Sn	13 13 34.4	+2.6
JCH	Churui	2.31	263	P	Pn	13 13 08.8	-0.2
JCH				eS	Sn	13 13 35.7	-0.6
JMP	Maruseppu	2.50	296	P	Pn	13 13 12.5	+0.8
KUR	Kuril'sk	2.50	23	ePN	Pn	13 13 13.8	+2.1
KUR				eS	Sn	13 13 42.9	+1.8
KUR				pmax	pmax		
	comp=Z,71nm,0.3s						
KUR				pmax	pmax		
	comp=N,32nm,0.4s						
KUR				pmax	pmax		
	comp=E,27nm,0.3s						
KUR				smax	smax		
	comp=N,191nm,0.5s						
KUR				smax	smax		
	comp=E,65nm,0.2s						
KUR	Kuril'sk	2.50	23	eP	Pn	13 13 10.6	-1.1
KUR				AMB	AMB	13 13 23.0	
	comp=E,70nm,0.3s						
KUR				eS	Sn	13 13 40.9	-0.2
KUR				A	A	13 13 46.0	
	comp=E,190nm,0.4s						
KUR				A	A	13 13 46.0	
	comp=E,650nm,0.4s						
ERM	Erimo	2.62	250	⇑ ePN	Pn	13 13 14.1	+0.8
ERM	Erimo	2.62	250		Pn	13 13 14.4	+1.2
JKA	Kamikawa-asahi	3.04	294	eP	Pn	13 13 21.1	+1.9
JKA	Kamikawa-asahi	3.04	294		Pn	13 13 21.1	+1.9
ASAJ	Asahikawa	3.05	294	P	Pn	13 13 20.8	+1.6
	comp=E,2.6nm,0.3s,baz=119,slow=12,SNR=36						
ASAJ				LR	LR	13 14 06.7	
	comp=E,58nm,21.5s,baz=170,slow=30						
ASAJ	Asahikawa	3.05	294	PN	Pn	13 13 21.1	+1.9
JEW	Eniwo	3.69	270	Pn	Pn	13 13 30.0	+2.0
YSS	Yuzh-Sakhalins	4.80	328	ePN	Pn	13 13 45.2	+2.0
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS	Yuzh-Sakhalins	4.80	328	eP	Pn	13 13 45.2	+2.0
YSS				AMB	AMB	13 13 45.8	
	comp=Z,10.0nm,0.5s						
YSS				AMS	AMS	13 15 43.0	
	comp=Z,300nm,16.0s						
YSS	Yuzh-Sakhalins	4.80	328	Pn	Pn	13 13 45.2	+2.0
KLR	Kul'dur	11.98	307	P	Pn	13 15 26.0	+4.3
	comp=Z,0.1nm,0.3s,baz=134,slow=15,SNR=2.3						
KLR				LR	LR	13 19 58.3	
	comp=Z,92nm,21.8s,baz=109,slow=37						
KLR	Kul'dur	11.98	307	eP	Pn	13 15 23.5	+1.8
PETK	Petropavlovsk-	12.63	32	P	Pn	13 15 35.4	+4.8
	comp=Z,0.1nm,0.3s,baz=209,slow=15,SNR=1.7						
PETK				LR	LR	13 21 06.6	
	comp=Z,58nm,19.0s,baz=219,slow=40						
KSRS	Korea Array	15.18	255	LR	LR	13 21 23.2	
	comp=Z,64nm,20.3s,baz=98,slow=35						
ULN	Ulaanbaatar	27.89	294	i P	P	13 18 18.8	-1.4
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ULN	Ulaanbaatar	27.89	294	eP	P	13 18 18.8	-1.4
ULN	Ulaanbaatar	27.89	294	P	P	13 18 19.8	-0.4
SONM	Songino Array	28.33	294	P	P	13 18 24.3	+0.2
	comp=Z,5.5nm,0.8s,baz=91,slow=8.5,SNR=34						
SONM				LR	LR	13 30 47.6	
	comp=Z,96nm,18.4s,baz=63,slow=39						
SONM	Songino Array	28.33	294	P	P	13 18 23.9	-0.2
SONM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SONM	Songino Array	28.33	294	P	P	13 18 23.9	-0.2
SONM				IAmb	IAmb	13 18 25.1	
	comp=Z,5.3nm,0.9s						
H11N2	WAKE ISLAND Hy	28.84	137	T	T	13 49 23.0	
	baz=329,slow=75,SNR=76						
H11N1	WAKE ISLAND Hy	28.85	137	T	T	13 49 24.5	
	baz=329,slow=75,SNR=50						
H11N3	WAKE ISLAND Hy	28.85	137	T	T	13 49 24.6	
	baz=329,slow=75,SNR=57						
H11S1	WAKE ISLAND Hy	29.78	139	T	T	13 50 32.0	
	baz=330,slow=76,SNR=178						
H11S3	WAKE ISLAND Hy	29.78	139	T	T	13 50 28.2	
	baz=330,slow=76,SNR=94						
H11S2	WAKE ISLAND Hy	29.80	139	T	T	13 50 37.0	
	baz=330,slow=76,SNR=96						
TLY	Talaya	29.94	302	LR	LR	13 31 40.9	
	comp=Z,60nm,20.4s,baz=17,slow=38						
DGZ	Jazzator, Alta	40.39	301	i P	P	13 20 08.5	+0.2
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	Zalesovo Beam	41.09	308	LR	LR	13 37 59.3	
	comp=Z,27nm,19.7s,baz=65,slow=37						
ILAR	Eielson Array	42.44	36	P	P	13 20 24.9	+0.3
	comp=Z,0.6nm,0.9s,baz=274,slow=8.0,SNR=6.1						
MK31	Makanchi Array	44.52	298	i P	P	13 20 41.1	-0.6
MK31	Makanchi Array	44.52	298	P	P	13 20 41.7	0.0
MK31				IAmb	IAmb	13 20 42.4	
	comp=Z,5.2nm,0.8s						
MKAR	Makanchi Array	44.52	298	P	P	13 20 41.7	0.0
	comp=Z,4.8nm,0.7s,baz=81,slow=8.8,SNR=22						
MKAR	Makanchi Array	44.52	298	P	P	13 20 41.1	-0.5
KURK	Kurchatov	45.57	304	i P	P	13 20 49.2	-0.7
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	45.57	304	eP	P	13 20 49.2	-0.7
KURK	Kurchatov	45.57	304	P	P	13 20 49.6	-0.3
KURK				IAmb	IAmb	13 20 50.4	
	comp=Z,7.5nm,1.4s						
CMAR	Chiang Mai Arr	46.82	254	LR	LR	13 41 11.9	
	comp=Z,24nm,19.7s,baz=110,slow=37						
INK	Inuvik	47.35	30	P	P	13 21 01.9	-1.7
	comp=Z,3.1nm,0.9s,baz=303,slow=8.0,SNR=11						
BRVK	Borovoye	49.68	310	i P	P	13 21 21.6	-0.2
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRVK	Borovoye	49.68	310	eP	P	13 21 21.6	-0.2
ARU	Arti	54.59	317d	i P	P	13 21 57.6	-0.6
ARU				S	S	13 29 33.2	-2.2
ARU				SS	SKiKP	13 33 09.0	+4.6
ARU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ARU	Arti	54.59	317	eP	P	13 21 57.6	-0.6
RES	Resolute Bay	55.88	16	P	P	13 22 06.9	-0.4
RES				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RES	Resolute Bay	55.88	16	P	P	13 22 06.9	-0.4
RES				IAmb	IAmb	13 22 08.1	
	comp=Z,5.8nm,1.1s						
CHGR	Chuyangaron	56.73	294	P	P	13 22 13.3	-0.7
ABKAR	Akbulak array	57.18	309	P	P	13 22 17.1	+0.2
ABKAR	Akbulak array	57.18	309	P	P	13 22 17.0	+0.2
ABKAR				IAmb	IAmb	13 22 17.5	
	comp=Z,6.6nm,0.6s						
ARCES	ARCESS Array B	59.83	340	P	P	13 22 35.3	+0.2
	comp=Z,2.8nm,0.8s,baz=51,slow=5.9,SNR=1.7						
FINES	FINESS Array B	65.36	333	P	P	13 23 11.7	-0.3
	comp=Z,2.3nm,0.5s,baz=46,slow=8.2,SNR=12						
ASAR	Alice Springs	67.28	192	P	P	13 23 25.0	+0.3
	comp=Z,0.3nm,0.9s,baz=8.9,slow=6.6,SNR=2.6						
NVAR	Mina Array Bea	68.43	57	P	P	13 23 32.7	+0.4
	comp=Z,0.3nm,0.7s,baz=332,slow=7.6,SNR=2.7						
KIV	Kislovodsk	69.92	312	eP	P	13 23 41.4	+0.1
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,36nm,17.0s						
KIV	Kislovodsk	69.92	312	eP	P	13 23 41.4	+0.1
KIV	Kislovodsk	69.92	312	P	P	13 23 42.4	+1.2
KIV				IAmb	IAmb	13 23 43.7	
	comp=Z,5.6nm,0.8s						
NB2	NORSAR Subarra	70.17	339	P	P	13 23 41.5	-0.9
	comp=Z,1.7nm,0.7s,baz=32,slow=6.5						
NOA	NORSAR Array B	70.17	339	P	P	13 23 41.1	-1.3
	comp=Z,2.0nm,0.8s,baz=32,slow=6.2,SNR=5.5						
NOA				LR	LR	13 57 04.3	
	comp=Z,17nm,20.1s,baz=240,slow=38						
NOA	NORSAR Array B	70.17	339	eP	P	13 23 41.9	-0.5
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PDAR	Pinedale Array	70.81	49	P	P	13 23 47.1	+0.2
	comp=Z,0.1nm,0.5s,baz=0.0,slow=0.9,SNR=3.9						
AKASG	Malin Array Be	71.93	324	P	P	13 23 52.5	-0.7
	comp=Z,0.8nm,0.4s,baz=44,slow=6.7,SNR=7.6						
AKASG	Malin Array Be	71.93	324	eP	P	13 23 51.6	-1.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ULM	Lac du Bonnet	72.45	37	P	P	13 23 57.1	+0.9
	comp=Z,0.9nm,0.4s,baz=0.0,slow=2.0,SNR=2.9						
TXAR	Lajitas Array	83.52	56	P	P	13 24 59.5	+1.2
	comp=Z,0.4nm,0.7s,baz=326,slow=1.8,SNR=6.0						

*TAP **16** 13:23:24.7, 21°.11N×121°.86E, h36^{km}±1^{km}, ML3.5, D*

ISC 16 13:23:24.7±1.9**, 21°.05N**±0°.06×**121°.87E**±0°.08**, h26**^{km}±21^{km}**, n63,** σ**1^{s}.42**/74**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBP	Basco	0.61	172	⇑ eP	Pb	13 23 36.3	-0.5
BBP				eS	Sn	13 23 46.3	-0.5
LAY	Lan-yu	1.03	343	P	Pn	13 23 42.4	-1.0
	baz=343						
TWKBT	Hengchun	1.32	312	P	Pn	13 23 47.1	-0.4
	baz=311						
TWK1	Hengchun	1.33	312	P	Pn	13 23 47.5	-0.2
	baz=311						
TWK1				S	Sn	13 24 03.9	-0.7
	baz=311						
HEN	Hengchun	1.42	312	P	Pn	13 23 48.5	-0.4
	baz=311						
SLIU	Shizi	1.53	319	i P	Pn	13 23 49.9	-0.5
	baz=330						
EAST	Anshuo	1.63	324	i P	Pn	13 23 50.9	-1.0
	baz=324						
EAST				S	Sn	13 24 10.2	-1.8
	baz=324						
LDUT	Ludao	1.66	347	eS	Sn	13 24 10.6	-1.9
	baz=347						
SCZT	Fangliau	1.75	319	i P	Pn	13 23 53.7	+0.2
	baz=327						
SCZT				S	Sn	13 24 14.9	-0.1
	baz=327						
ECL	Taimali	1.76	331	i P	Pn	13 23 51.8	-1.7
	baz=331						
ECL				S	Sn	13 24 12.8	-2.3
	baz=331						
SSPT	Xinbi	1.87	320	P	Pn	13 23 55.5	+0.4
	baz=332						
TWGBT	Beinan	1.90	337	P	Pn	13 23 53.9	-1.7
	baz=325						
TWGBT				S	Sn	13 24 17.6	-1.1
	baz=325						
MASBT	Mashibuluo	1.93	324	P	Pn	13 23 55.5	-0.5
	baz=334						
LONT	Longtian	1.97	340	i P	Pn	13 23 55.7	-0.7
	baz=327						
LONT				S	Sn	13 24 19.6	-0.8
	baz=327						
EDH	Donghe	1.98	345	i P	Pn	13 23 55.8	-0.8
	baz=344						
EDH				S	Sn	13 24 18.8	-1.8
	baz=344						
TSMG	Majia	2.00	326	i P	Pn	13 23 55.5	-1.4
	baz=335						
SSD	Sandimen	2.04	326	i P	Pn	13 23 57.5	0.0
	baz=335						
CHKT	Chengkung	2.09	347	eS	Sn	13 24 20.8	-2.5
	baz=356						
FULB	Fuli	2.20	346	P	Pn	13 23 58.9	-0.8
	baz=357						
FULB				S	Sn	13 24 25.6	-0.5
	baz=357						
TWM1	Shoushan	2.22	323	P	Pn	13 24 02.2	+2.3
	baz=323						
SLGT	Liugui	2.24	330	i P	Pn	13 24 02.3	+2.1
	baz=336						
ELDTW	Lidau	2.27	340	i P	Pn	13 24 00.9	+0.2
	baz=331						
STYH	Taoyuan	2.34	334	P	Pn	13 24 03.0	+1.5
	baz=341						
EYUL	Yuli	2.34	347	i P	Pn	13 24 02.1	+0.5
	baz=335						
SGST	Jiashian	2.35	330	i P	Pn	13 24 02.7	+1.0
	baz=329						
YULB	Yu-li	2.39	347	P	Pn	13 24 01.5	-0.7
	baz=335						
CHN1	Nanshi	2.46	330	i P	Pn	13 24 05.5	+2.2
	baz=330						
HGSD	Ruisui	2.46	350	P	Pn	13 24 02.2	-1.0
	baz=350						
WTP	Ta-pu	2.48	332	i P	Pn	13 24 04.7	+1.3
	baz=318						
WTP				eS	Sn	13 24 32.7	-0.2
	baz=318						
EHY	Hungye	2.50	348	i P	Pn	13 24 03.5	-0.1
	baz=335						
EHY				S	Sn	13 24 32.5	-0.8
	baz=335						
TPUB	Ta-pu	2.52	333	P	Pn	13 24 06.1	+2.1
	baz=318						
TPUB				S	Sn	13 24 34.8	+0.9
	baz=318						
TWK	Hsinying	2.55	330	i P	Pn	13 24 05.8	+1.3
	baz=330						
ALS	Alishan	2.64	338	i P	Pn	13 24 07.6	+1.7
	baz=338						
ALS				S	Sn	13 24 37.8	+0.5
	baz=338						
CHN5	Tsauling	2.76	337	i P	Pn	13 24 09.3	+1.9
	baz=322						
CHN5				S	Sn	13 24 39.8	-0.3
	baz=322						
VWDT	VWDT	2.77	346	P	Pn	13 24 08.0	+0.5
	baz=346						
VWDT				S	Sn	13 24 39.3	-0.8
	baz=346						
ESL	Shilin	2.78	352	i P	Pn	13 24 07.2	-0.3
	baz=340						
ESL				S	Sn	13 24 38.1	-2.2
	baz=340						
WHYT	Xinyi Township	2.79	340	i P	Pn	13 24 09.9	+2.1
	baz=325						
WHYT				S	Sn	13 24 42.5	+1.8
	baz=325						

SSLB	Suanglung	2.85	343	P	Pn	13 24 09.8	+1.2
	baz=332						
SSLB				S	Sn	13 24 43.0	+0.9
	baz=332						
WJS	Zhushan	2.95	339	*e*P	Pn	13 24 11.6	+1.6
	baz=326						
SMLT	Sun Moon Lake	2.96	342	*i* P	Pn	13 24 12.1	+2.0
	baz=343						
TYC	Yuchr	2.99	342	*i* P	Pn	13 24 12.2	+1.8
	baz=328						
TYC				S	Sn	13 24 47.3	+1.8
	baz=328						
CHGB	Renai	3.06	348	P	Pn	13 24 12.2	+0.5
	baz=357						
NACB	Ninganchiao	3.12	355	P	Pn	13 24 10.9	-1.3
	baz=4.0						
NACB				S	Sn	13 24 46.6	-2.1
	baz=4.0						
WCS	Beigang Elemen	3.12	344	P	Pn	13 24 13.9	+1.6
	baz=329						
WHF	Hehuan Shan	3.13	350	*i* P	Pn	13 24 12.4	-0.3
	baz=350						
WHF				S	Sn	13 24 49.0	-0.5
	baz=350						
ETLH	Xiulin Townshi	3.16	354	P	Pn	13 24 12.6	-0.3
	baz=343						
ETLH				S	Sn	13 24 50.1	+0.2
	baz=343						
FUSS	Fushou	3.23	350	*i* P	Pn	13 24 14.1	+0.1
	baz=350						
FUSS				*e*S	Sn	13 24 52.6	+0.7
	baz=350						
PHUB	P'eng-hu	3.25	319	P	Pn	13 24 13.2	-0.8
	baz=319						
PHUB				S	Sn	13 24 48.7	-3.1
	baz=319						
TWT	Tachien	3.25	349	P	Pn	13 24 13.9	-0.3
	baz=349						
WHP	Taichung City	3.32	345	*i* P	Pn	13 24 17.2	+2.0
	baz=334						
WHP				S	Sn	13 24 53.7	-0.1
	baz=334						
NNSB	Datong	3.39	352	P	Pn	13 24 16.1	0.0
	baz=1.0						
NNSB				S	Sn	13 24 55.0	-0.6
	baz=1.0						
NNS	Nan Shan	3.40	352	*i* P	Pn	13 24 16.8	+0.5
	baz=1.0						
NNS				S	Sn	13 24 56.0	+0.1
	baz=1.0						
TWQ1	Liyutan	3.43	343	*e*P	Pn	13 24 17.8	+1.2
	baz=330						
TWQ1				*e*S	Sn	13 24 55.6	-0.9
	baz=330						
NDT	Datong Townshi	3.55	355	*e*P	Pn	13 24 19.8	+1.6
	baz=355						
NDS	Dongshan	3.57	358	*e*P	Pn	13 24 19.1	+0.7
	baz=6.0						
NDS				S	Sn	13 24 58.5	-1.3
	baz=6.0						
ENTT	Nioudou	3.58	356	*i* P	Pn	13 24 19.8	+1.2
	baz=356						
YHNB	Yeheng	3.63	353	P	Pn	13 24 19.6	+0.2
	baz=3.0						
YHNB				S	Sn	13 25 00.2	-1.2
	baz=3.0						
NSK	Sanguang	3.64	353	*i* P	Pn	13 24 20.7	+1.2
	baz=3.0						
NSK				S	Sn	13 25 00.1	-1.5
	baz=3.0						
LIOB	Emei	3.66	348	*e*P	Pn	13 24 22.5	+2.7
	baz=334						
NWLT	Wulai	3.72	355	*i* P	Pn	13 24 21.5	+0.9
	baz=4.0						
TIPB	Shuangxi	3.90	359	*i* P	Pn	13 24 24.1	+1.1
	baz=8.0						
TIPB				S	Sn	13 25 07.8	-0.3
	baz=8.0						
KNMB	Chin-men Tao	4.68	317	*e*P	Pn	13 24 33.3	-0.3
	baz=317						
KNMB				S	Sn	13 25 25.6	-1.4
	baz=317						
PTMZ	Houxiangcun	4.71	328	P	Pn	13 24 35.1	+1.0
	baz=328						
PTMZ				S	Sn	13 25 26.0	-1.9
	baz=328						

NDI ***16*** *13:24:46.8±0.8, 34.°41N×82.°59E, h10km, ML4.3, mb4.1(NEIC)*

IDC ***16*** *13:24:49.2±0.7, 34.°01N×82.°02E, h0km, mb3.9/16, mb1 4.1/18, mb1mx4.0/47, mbtmp4.0/18, ML3.5/2, MS3.1/2, Ms1 3.1/2, ms1mx2.4/47, Error ellipse: s-maj=24.1km s-min=13.7km az=48.0*

NEIC ***16*** *13:24:51.7±2.2, 34.°10N±0.°07×82.°21E±0.°06, h10km±1km, mb4.1/8, Error ellipse: s-maj=12.3km s-min=6.2km az=151.0*

ISC 16 13:24:53.5±0.5**, 34.°07N**±0.°05×**82.°18E**±0.°07**, h28km, n44, σ1.s48**/48**, mb4.0**/14**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMLA	Simla	5.15	237	*e*P	Pn	13 26 10.8	+2.1
SMLA				*e*S	Sn	13 27 11.8	+4.7
SMLA				IAML		13 27 14.8	
	comp=N,487nm,0.5s						
SMLA				IAML		13 27 16.6	
	comp=E,454nm,0.4s						
DHRM	DHARAMSHALA	5.25	251	*e*P	Pn	13 26 11.4	+1.0
DHRM				*e*S	Sn	13 27 12.4	+2.2
DHRM				IAML		13 27 20.7	
	comp=E,518nm,0.6s						
DHRM				IAML		13 27 21.0	
	comp=N,340nm,0.7s						
KSH	Kashi	7.38	319	P	Pn	13 26 42.6	+3.2
KSH				S	Sn	13 28 03.0	+0.8
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,100nm,5.2s						
KSH				LR	LR		
	comp=N,250nm,5.5s						
KSH				LR	LR		
	comp=E,400nm,7.2s						
KSH				LR	LR		
	comp=Z,140nm,6.4s						
NIL	Nilore	7.44	269	Pn	Pn	13 26 41.4	+1.1
TARG	Taragay, Kyrgy	8.40	337		Pn	13 26 52.9	-0.8
JHNI	Jhansi	9.13	201	*e*P	Pn	13 27 03.8	+0.3
JHNI				*e*S	Sn	13 28 43.8	-1.6
BOOM	Boomskoye usch	9.73	332	Pn	Pn	13 27 13.4	+1.6
AAK	Ala-Archa	10.47	327	Pn	Pn	13 27 22.6	+0.7
	comp=Z,0.1nm,0.3s,baz=287,slow=11,SNR=3.6						
WMQ	Urumqi	10.64	22	*e*P	Pn	13 27 26.4	+2.2
WMQ				smax	smax		
	comp=N,17nm,0.5s						
WMQ				smax	smax		
	comp=E,14nm,0.7s						
BTK	Batken	10.87	307		Pn	13 27 25.8	-1.5
KBL	Kabul	10.88	276	Pn	Pn	13 27 27.6	0.0
CHGR	Chuyangaron	11.45	297	Pn	Pn	13 27 36.0	+0.7
BHPL	Bhopal	11.56	202	*e*P	Pn	13 27 36.6	-0.2
BHPL				IAmb	IAmb	13 27 43.5	
	comp=Z,7.3nm,0.5s						
BHPL				*e*S	Sn	13 29 41.5	-3.5
MK31	Makanchi Array	12.72	0	Pn	Pn	13 27 51.4	-1.0
MKAR	Makanchi Array	12.72	0	Pn	Pn	13 27 52.0	-0.4
	comp=Z,0.9nm,0.3s,baz=179,slow=12,SNR=40						
MKAR	Makanchi Array	12.72	0	Pn	Pn	13 27 51.4	-1.0
GTA	Gaotai	15.11	64	*e*P	P	13 28 32.3	+2.3
GTA				pP	pP	13 28 36.3	-2.6
GTA				sP	sP	13 28 39.4	-3.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,65nm,5.5s						
GTA				LR	LR		
	comp=N,160nm,13.1s						
GTA				LR	LR		
	comp=E,83nm,14.2s						
GTA				LR	LR		
	comp=Z,180nm,14.5s						
KURBB	Kurchatov Arra	16.76	352	Pn	Pn	13 28 45.3	-0.8
	comp=Z,0.0nm,0.3s,baz=175,slow=11,SNR=32						
KURK	Kurchatov	16.84	352	Pn	Pn	13 28 46.8	-0.3
KURK				IAmb	IAmb	13 28 50.3	
	comp=Z,8.6nm,0.8s						
ZALV	Zalesovo Beam	19.97	5	P	P	13 29 24.0	+0.6
	comp=Z,1.0nm,0.4s,baz=169,slow=8.6,SNR=5.6						
ZALV	Zalesovo Beam	19.97	5	P	P	13 29 23.9	+0.6
BVAR	Borovoye Array	20.74	340	P	P	13 29 32.5	+0.8
	comp=Z,2.1nm,0.5s,baz=157,slow=7.7,SNR=7.7						
BRVK	Borovoye	20.80	339	P	P	13 29 31.3	-1.1
BRVK				IAmb	IAmb	13 29 39.8	
	comp=Z,13nm,1.2s						
CM31	Chiang Mai Arr	21.57	132	P	P	13 29 42.7	+1.7
CMAR	Chiang Mai Arr	21.57	132	P	P	13 29 42.3	+1.3
	comp=Z,6.4nm,0.9s,baz=311,slow=11,SNR=51						
CMAR	Chiang Mai Arr	21.57	132	P	P	13 29 43.0	+2.0
ABKAR	Akbulak array	22.38	319	P	P	13 29 48.7	-0.8
ABKAR	Akbulak array	22.38	319	P	P	13 29 49.1	-0.3
ABKAR				IAmb	IAmb	13 29 54.8	
	comp=Z,2.9nm,0.8s						
SONM	Songino Array	22.76	46	P	P	13 29 54.7	+1.1
	comp=Z,1.0nm,0.8s,baz=246,slow=11,SNR=6.7						
SONM				PcP	PcP	13 33 44.5	-0.2
	comp=Z,0.4nm,0.6s,baz=203,slow=4.6,SNR=2.8						
AKTO	Aktyubinsk	24.08	320	P	P	13 30 06.0	-0.4
	comp=Z,1.3nm,0.5s,baz=126,slow=7.8,SNR=5.4						
AKTO				LR	LR	13 40 16.6	
	comp=Z,47nm,18.4s,baz=40,slow=39						
AKASG	Malin Array Be	41.56	310	P	P	13 32 37.5	-1.0
	comp=Z,0.7nm,0.5s,baz=78,slow=8.4,SNR=7.2						
AKASG	Malin Array Be	41.56	310	IAmb	IAmb	13 33 13.4	
	comp=Z,5.8nm,1.8s						
FINES	FINESS Array B	44.65	325	P	P	13 33 03.2	-0.2
	comp=Z,2.1nm,0.6s,baz=116,slow=8.7,SNR=5.2						
MJAR	Matsushiro Arr	45.24	70	LR	LR	13 55 22.5	
	comp=Z,24nm,21.1s,baz=90,slow=40						
GERES	GERESS Array B	51.70	308	P	P	13 33 58.7	+0.5
	comp=Z,1.3nm,0.7s,baz=76,slow=5.6,SNR=8.9						
NOA	NORSAR Array B	51.77	324	P	P	13 33 57.3	-1.1
	comp=Z,0.8nm,0.7s,baz=87,slow=7.6,SNR=3.4						
WRA	Warramunga Arr	73.14	129	P	P	13 36 22.5	+0.9
	comp=Z,1.9nm,0.4s,baz=327,slow=5.7,SNR=22						
ILAR	Eielson Array	74.30	20	P	P	13 36 27.5	-0.4
	comp=Z,0.6nm,0.9s,baz=292,slow=4.8,SNR=5.7						
TORD	Torodi Ar. Bea	74.95	276	P	P	13 36 31.5	-0.9
	comp=Z,2.5nm,0.5s,baz=46,slow=4.9,SNR=18						
TORD	Torodi Ar. Bea	74.95	276	P	P	13 36 31.6	-0.9
TORD				IAmb	IAmb	13 36 32.1	
	comp=Z,2.3nm,1.1s						
ASAR	Alice Springs	75.58	132	P	P	13 36 36.5	+0.6
	comp=Z,1.9nm,0.6s,baz=315,slow=5.8,SNR=36						
YKA	Yellowknife Ar	82.83	8	P	P	13 37 14.8	-0.1
	comp=Z,0.7nm,0.6s,baz=341,slow=5.2,SNR=6.0						
DBIC	Dimbokro	83.86	274	P	P	13 37 20.1	-0.9
	comp=Z,1.7nm,0.8s,baz=42,slow=6.7,SNR=2.2						
STKA	Stephens Creek	86.19	133	P	P	13 37 31.9	-0.3
	comp=Z,1.1nm,0.6s,baz=329,slow=11,SNR=3.5						

IDC ***16*** *13:27:48.2±1.4, 7.°08S×120.°49E, h586km±17km, mb2.7/3, mb1 2.8/7, mb1mx2.6/47, mbtmp3.6/7, Error ellipse: s-maj=106.3km s-min=16.1km az=58.0*

DJA ***16*** *13:27:51.1±0.7, 7°S±5°×12°0E±°, h555km±6km, M3.2/9, MLv3.2/9*

ISC 16 13:27:48.0±0.9**, 7.°20S**±0.°09×**120.°4E**±0.°1**, h576km, n15, σ1.s24**/21**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSSI	Bau Bau, Buton	1.06	6	P	P	13 28 59.4	+2.3
BKSI	Bulukumba	1.89	352	P	P	13 29 01.8	+2.1
BKSI				S	S	13 29 58.7	+0.9
EDFI	Ende, Flores	2.01	140	P	P	13 29 00.3	0.0
EDFI				S	S	13 29 58.6	-0.5
KAPI	Kappang	2.26	344	P	P	13 29 02.1	+0.8
	2.9nm,0.3s,baz=150,slow=7.6,SNR=4.6						
WBSI	Waikabubak, Su	2.61	202	P	P	13 29 04.3	+1.2
WBSI				S	S	13 30 04.0	-0.2
BASI	Baing, Sumba	3.00	176	P	P	13 29 07.3	+2.1
BASI				S	S	13 30 07.0	-1.0
PLAI	Plampang	3.04	238	P	P	13 29 06.9	+1.5
PLAI				S	S	13 30 08.4	0.0
TWSI	Taliwang, Sumb	3.78	246	P	P	13 29 11.3	+1.1
TWSI				S	S	13 30 16.8	-0.4
BATI	Baumata	4.41	133	P	P	13 29 15.6	+0.8
	5.3nm,0.3s,baz=230,slow=1.0,SNR=4.1						
BATI	Baumata	4.41	133	P	P	13 29 16.1	+1.3
FITZ	Fitzroy Crossi	11.98	155	P	P	13 30 27.2	+0.7
	0.2nm,0.3s,baz=312,slow=14,SNR=6.8						
WRA	Warramunga Arr	18.54	134	P	P	13 31 29.7	0.0
	0.1nm,0.3s,baz=315,slow=10,SNR=8.1						
ASAR	Alice Springs	20.90	143	P	P	13 31 50.9	-0.2
	0.4nm,0.3s,baz=327,slow=8.7,SNR=9.3						
SONM	Songino Array	56.17	349	P	P	13 36 32.9	-1.1
	0.4nm,0.5s,baz=154,slow=9.0,SNR=2.2						
MKAR	Makanchi Array	63.51	332	P	P	13 37 21.3	-1.2
	1.0nm,0.7s,baz=146,slow=7.2,SNR=7.9						

IDC ***16*** *13:35:26.3±1.2, 38.°02N×72.°62E, h0km, mb3.9/11, mb1 4.0/16, mb1mx3.8/52, mbtmp3.9/16, ML3.2/5, MS3.0/5, Ms1 3.0/5, ms1mx2.6/46, Error ellipse: s-maj=22.8km s-min=18.6km az=140.0*

NNC ***16*** *13:35:33.5±1.6, 38.°38N×72.°44E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=13.2km s-min=9.6km az=164.0*

ISC 16 13:35:26.7±0.8**, 38.°07N**±0.°07×**72.°88E**±0.°08**, h10km, n42, σ2.s37**/37**, mb3.9**/10**, 7C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	Merke	4.68	3	Pg	Pn	13 36 42.9	+5.5
	26nm,0.5s						
MRKS				Lg	Lg	13 37 55.3	
	37nm,0.8s						
AAK	Ala-Archa	4.73	15	Pn	Pb	13 36 44.6	-5.1
	1.7nm,0.3s,baz=207,slow=9.1,SNR=22						
AAK				Lg	Lg	13 38 04.2	
	2.1nm,0.3s,baz=218,slow=21,SNR=4.6						
AAK				LR	LR	13 38 06.1	
	comp=Z,23nm,18.5s,baz=208,slow=33						
AAK	Ala-Archa	4.73	15	Pn	Pb	13 36 44.3	-5.4
	9.3nm,0.7s						
AAK				⇓Pg	Pg	13 36 55.7	-1.5
	22nm,0.6s						
AAK				⇑Lg	Lg	13 37 56.5	
	66nm,1.4s						
TKM2	Tokmak 2	5.27	22	⇓Pn	Pn	13 36 51.8	+6.1
	3.2nm,0.6s						
TKM2				⇑Pg	Pg	13 37 05.8	-1.8
	9.7nm,0.6s						
TKM2				⇓Lg	Lg	13 38 17.0	
	76nm,1.6s						
KK02	Karatay Array	5.34	341	⇓Pn	Pn	13 36 50.0	+3.5
	8.2nm,0.5s						
KK02				⇑Sn	Sn	13 37 48.7	+0.6
	15nm,0.6s						
KST	Kastek	5.49	24	Pg	Pb	13 36 59.6	-3.1
	7.6nm,0.5s						
KST				Lg	Lg	13 38 23.6	
	35nm,1.3s						
DGS	Degeres	5.61	22	Pg	Pb	13 37 01.6	-3.2
	9.6nm,1.4s						
DGS				Lg	Lg	13 38 27.7	
	19nm,0.8s						
MDOK	Medeo	5.99	31	Pn	Pn	13 37 03.2	+7.6
	2.6nm,0.6s						
MDOK				Pg	Pg	13 37 21.4	-0.1
	11nm,0.6s						
MDOK				⇑Lg	Lg	13 38 41.5	
	41nm,1.0s						
MDOK	Medeo	5.99	31	Pg	Pb	13 37 10.5	-0.8
	6.3nm,0.9s						
MDOK				Lg	Lg	13 38 41.3	
	22nm,1.3s						
KRBS	Karabastau	6.00	20	Pg	Pb	13 37 09.4	-2.0
	7.3nm,0.5s						
KRBS				Lg	Lg	13 38 39.7	
	11nm,0.8s						
KOTS	Kotyrbulak	6.08	31	Pg	Pb	13 37 11.3	-1.4
	3.6nm,0.3s						
KOTS				Lg	Lg	13 38 43.1	
	46nm,1.0s						
KTBS	Karatobe	6.33	26	Pg	Pb	13 37 14.9	-2.0
	6.8nm,1.0s						
KTBS				Lg	Lg	13 38 49.5	
	23nm,1.0s						
KUU	Kurty	6.38	23	Pg	Pb	13 37 16.0	-1.7
	8.0nm,1.7s						
KUU				Lg	Lg	13 38 50.9	
	26nm,1.0s						
PDGK	Podgornoye	7.26	42	⇓Pn	Pn	13 37 20.4	+7.4
	6.9nm,1.1s						
PDGK				⇑Pg	Pg	13 37 46.2	+0.5
	8.2nm,0.9s						
PDGK				⇑Lg	Lg	13 39 24.3	
	38nm,1.5s						
MKAR	Makanchi Array	11.14	36	Pn	Pn	13 38 11.9	+5.9
	0.1nm,0.3s,baz=225,slow=19,SNR=2.9						
GEYT	Alibeck	11.65	274	LR	LR	13 43 08.6	
	comp=Z,47nm,19.9s,baz=15,slow=40						
PYUN	Piuthan	13.05	137	*e*P	Pn	13 38 29.6	-2.8
	5.6nm,0.4s						
KURBB	Kurchatov Arra	13.18	16	Pn	Pn	13 38 35.3	+1.5
	0.1nm,0.3s,baz=209,slow=12,SNR=4.2						
KURBB				Lg	Lg	13 42 25.5	
	0.0nm,0.3s,baz=206,slow=31,SNR=4.3						
DANN	Dangsing	13.29	134	*e*P	Pn	13 38 32.1	-3.6
	3.7nm,0.4s						
GKN	Gorkha	14.06	132	*e*P	Pn	13 38 41.6	-4.4
	4.8nm,0.5s						
AB31	Akbulak array	14.56	324	Pn	Pn	13 38 50.3	-2.4
	1.5nm,0.5s,baz=137,slow=11,SNR=35						
AB31				Sn	Sn	13 41 28.1	-6.0
	1.2nm,0.5s,baz=140,slow=24,SNR=6.9						
PKI	Pulchoki	14.83	131	*e*P	Pn	13 38 52.7	-4.1
	4.4nm,0.4s						
GUN	Gumba	14.87	129	*e*P	Pn	13 38 53.4	-3.9
	6.2nm,0.5s						
BVAR	Borovoye Array	15.06	354	Pn	Pn	13 38 59.3	-0.1
	0.3nm,0.3s,baz=183,slow=18,SNR=11						
JIRN	Jiri	15.24	129	*e*P	Pn	13 38 58.0	-4.3
	4.3nm,0.4s						
AKTO	Aktyubinsk	16.28	324	Pn	Pn	13 39 15.2	0.0
	0.6nm,0.3s,baz=121,slow=9.7,SNR=11						
AKTO	Aktyubinsk	16.28	324	⇓Pn	P	13 39 17.9	-0.4
	11nm,1.1s						
AKTO				⇑Sn	Sn	13 42 16.3	+0.5
	5.6nm,1.0s						
ZALV	Zalesovo Beam	17.87	23	P	P	13 39 36.8	+0.9
	0.4nm,0.3s,baz=213,slow=11,SNR=6.8						
WSAR	Wadi Sarin	19.17	224	LR	LR	13 48 19.8	
	comp=Z,27nm,18.1s,baz=30,slow=41						
ARU	Arti	20.70	337	P	P	13 40 07.4	+0.6
	1.3nm,0.6s,baz=147,slow=9.1,SNR=7.1						
BELG	Belogornoye	22.68	317	P	P	13 40 27.3	-0.8
	7.1nm,0.7s,baz=157,slow=7.7,SNR=2.1						
KVAR	Kislovodsk Arr	23.45	294	LR	LR	13 52 13.2	
	comp=Z,86nm,22.0s,baz=164,slow=43						
SONM	Songino Array	26.22	57	P	P	13 41 05.1	+3.4
	1.0nm,0.8s,baz=243,slow=9.5,SNR=5.3						
FINES	FINESS Array B	37.05	324	P	P	13 42 36.9	+0.4
	4.6nm,0.9s,baz=115,slow=10.0,SNR=7.5						
ARCES	ARCESS Array B	40.29	336	P	P	13 43 04.5	+0.9
	9.6nm,1.1s,baz=104,slow=7.5,SNR=4.4						
NOA	NORSAR Array B	44.05	322	P	P	13 43 34.3	-0.1
	0.7nm,0.7s,baz=101,slow=7.3,SNR=3.3						
TORD	Torodi Ar. Bea	67.25	269	P	P	13 46 22.6	+0.9
	0.5nm,0.4s,baz=45,slow=7.4,SNR=5.5						
GUMO	Guam	67.62	90	LR	LR	14 14 41.2	
	comp=Z,59nm,21.5s,baz=270,slow=35						
INK	Inuvik	72.11	10	P	P	13 46 52.3	+1.6
	0.9nm,0.4s,baz=341,slow=5.8,SNR=7.3						
ILAR	Eielson Array	72.85	17	P	P	13 46 55.8	+0.5
	0.7nm,0.8s,baz=311,slow=4.4,SNR=10						
YKA	Yellowknife Ar	79.60	4	P	P	13 47 34.8	+1.2
	0.3nm,0.4s,baz=348,slow=5.6,SNR=2.4						
WRA	Warramunga Arr	81.57	123	P	P	13 47 47.0	+2.2
	0.5nm,0.9s,baz=323,slow=4.6,SNR=2.3						

IDC ***16*** *13:44:04.2±2.1, 37.°97N×72.°72E, h0km, mb3.5/2, mb1 3.6/7, mb1mx3.4/48, mbtmp3.6/7, ML3.1/5, MS2.8/3, Ms1 2.8/3, ms1mx2.5/38, Error ellipse: s-maj=36.3km s-min=24.9km az=139.0*

NNC ***16*** *13:44:09.9±2.4, 38.°30N×72.°52E, h6km±11km, mb3.9, mpv3.5, Error ellipse: s-maj=14.2km s-min=11.6km az=48.0*

ISC 16 13:44:06.2±1.6**, 38.°1N**±0.°1×**72.°6E**±0.°1**, h10km, n25, σ2.s18**/19**, 6C-8D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	Merke	4.72	6	Pg	Pn	13 45 20.1	+2.6
	8.1nm,0.6s						
MRKS				Lg	Lg	13 46 32.3	
	13nm,0.5s						
AAK	Ala-Archa	4.82	17	Pn	Pn	13 45 21.9	+3.0
	0.5nm,0.3s,baz=197,slow=8.8,SNR=16						
AAK				LR	LR	13 47 25.0	
	comp=Z,87nm,18.9s,baz=216,slow=41						
AAK	Ala-Archa	4.82	17	⇓Pn	Pn	13 45 20.3	+1.5
	6.6nm,1.0s						
AAK				⇑Pg	Pb	13 45 32.3	+1.6
	12nm,0.7s						
AAK				⇓Lg	Lg	13 46 34.1	
	24nm,0.9s						
KK02	Karatay Array	5.29	343	⇑Pn	Pn	13 45 26.9	+1.6
	2.3nm,0.4s						
KK02				⇑Sn	Sn	13 46 25.2	-1.0
	7.6nm,0.7s						
TKM2	Tokmak 2	5.39	24	⇓Pn	Pn	13 45 28.5	+1.7
	3.1nm,0.9s						
TKM2				⇓Pg	Pb	13 45 43.6	+3.1
	7.2nm,0.8s						
TKM2				⇓Lg	Lg	13 46 52.3	
	19nm,1.0s						
BRLS	Borolday	5.39	338	Pg	Pn	13 45 32.3	+5.6
	3.7nm,0.5s						
BRLS				Lg	Lg	13 46 52.5	
	14nm,1.5s						
KST	Kastek	5.62	26	Pg	Pn	13 45 36.6	+6.7
	5.6nm,1.1s						
KST				Lg	Lg	13 47 02.0	
	19nm,1.3s						
DGS	Degeres	5.73	24	Pg	Pb	13 45 39.1	-7.2
	2.7nm,0.6s						
DGS				Lg	Lg	13 47 05.8	
	8.8nm,1.3s						
MTBS	Maitube	5.87	29	Pg	Pb	13 45 44.2	-4.3
	1.9nm,0.4s						
MTBS				Lg	Lg	13 47 13.9	
	5.5nm,0.5s						
TNSS	Tian-Shan	6.00	32	Pg	Pb	13 45 44.9	-6.1
	2.0nm,0.8s						
TNSS				Lg	Lg	13 47 14.2	
	4.0nm,0.8s						
KRBS	Karabastau	6.12	22	Pg	Pb	13 45 47.0	-5.8
	4.2nm,0.5s						
KRBS				Lg	Lg	13 47 18.0	
	4.9nm,0.8s						
MDOK	Medeo	6.14	32	⇑Pg	Pg	13 45 58.8	-5.0
	5.4nm,0.6s						
MDOK				⇑Lg	Lg	13 47 17.5	
	22nm,1.0s						
KOTS	Kotyrbulak	6.23	32	Pg	Pb	13 45 49.5	-5.3
	4.1nm,0.7s						
KOTS				Lg	Lg	13 47 21.8	
	22nm,1.0s						
KTBS	Karatobe	6.46	28	Pg	Pb	13 45 53.0	-5.6
	3.7nm,0.6s						
KTBS				Lg	Lg	13 47 27.8	
	12nm,1.2s						
PDGK	Podgornoye	7.45	43	⇓Pn	Pn	13 45 57.1	+2.2
	4.4nm,0.9s						
PDGK				⇓Lg	Lg	13 48 00.6	
	14nm,1.2s						
MKAR	Makanchi Array	11.31	36	LR	LR	13 51 23.8	
	comp=Z,63nm,19.3s,baz=202,slow=39						
GEYT	Alibeck	11.41	274	LR	LR	13 52 38.0	
	comp=Z,27nm,18.7s,baz=250,slow=44						
KURBB	Kurchatov Arra	13.27	17	Pn	Pn	13 47 12.4	-2.1
	0.0nm,0.3s,baz=208,slow=12,SNR=4.1						
AB31	Akbulak array	14.44	325	Pn	Pn	13 47 28.0	-2.4
	0.6nm,0.6s,baz=144,slow=8.3,SNR=17						
AB31				⇓Sn	Sn	13 50 09.4	-1.1
	2.9nm,1.1s,baz=159,slow=20,SNR=2.9						
BVAR	Borovoye Array	15.06	355	Pn	Pn	13 47 37.3	-1.6
	0.1nm,0.3s,baz=186,slow=22,SNR=5.3						
AKTO	Aktyubinsk	16.15	325	Pn	Pn	13 47 52.2	-0.9
	0.1nm,0.3s,baz=123,slow=12,SNR=4.3						
AKTO	Aktyubinsk	16.15	325	⇑Pn	Pn	13 47 54.2	+1.0
	11nm,1.6s						
ZALV	Zalesovo Beam	17.99	24	P	Pn	13 48 15.6	-0.6
	0.3nm,0.3s,baz=215,slow=9.7,SNR=4.9						
SONM	Songino Array	26.44	57	P	P	13 49 43.2	0.0
	0.5nm,0.7s,baz=256,slow=10,SNR=5.1						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**67.00**	**269**	P	**P**	**13 54 59.4**	**-0.1**
	0.3nm,0.4s,baz=43,slow=6.3,SNR=4.4						

IDC 16 14:02:05.0±4.6**, 17°.60S**×**178°.69W, h594**^{km}±21^{km}**, mb3.1**/3**, mb1 3.2**/5**, mb1mx2.6**/33**, mbtmp4.0**/5**, Error ellipse: s-maj=115.3km s-min=74.9km az=145.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.11**	**267**	P	P	14 03 24.2	-0.1
	1.0nm,0.3s,baz=107,slow=11,SNR=12						
DZM	**Mont Dzumac**	**14.67**	**250**	P	P	14 05 11.6	+1.1
	0.1nm,0.3s,baz=117,slow=16,SNR=1.9						
STKA	**Stephens Creek**	**38.54**	**241**	P	P	14 08 38.1	0.0
	1.3nm,0.5s,baz=90,slow=8.5,SNR=7.0						
WRA	**Warramunga Arr**	**44.42**	**259**	P	P	14 09 24.3	-0.3
	0.7nm,0.5s,baz=96,slow=7.2,SNR=12						
ASAR	**Alice Springs**	**44.62**	**254**	P	P	14 09 25.9	-0.2
	5.4nm,0.6s,baz=88,slow=8.4,SNR=155						
ASAR				PcP	PcP	14 10 55.7	-0.1
	0.1nm,0.5s,baz=99,slow=3.8,SNR=1.9						

BJI ***16*** *14:14:16.0±0.0, 49°.70N×155°.90E, h70*^{km}*, mB4.5/1, mb4.2/7*

KRSC ***16*** *14:14:17.7±2.5, 49°.66N×156°.86E, h42*^{km}*±30*^{km}*, ML4.9*

MOS ***16*** *14:14:17.3±1.4, 49°.66N×156°.00E, h70*^{km}*, mb4.4/14, Error ellipse: s-maj=9.1km s-min=3.5km az=72.2*

IDC ***16*** *14:14:22.0±2.3, 49°.82N×155°.75E, h87*^{km}*±20*^{km}*, mb3.7/21, mb1 3.9/28, mb1mx3.8/45, mbtmp4.1/28, MS3.0/11, Ms1 3.0/11, ms1mx2.9/45, Error ellipse: s-maj=16.3km s-min=10.3km az=141.0*

NEIC ***16*** *14:14:21.4±1.1, 49°.9N±0°.1×155°.8E±0°.2, h77*^{km}*±8*^{km}*, mb4.5/25, Error ellipse: s-maj=18.9km s-min=11.2km az=135.0*

ISC 16 14:14:17.3±0.5**, 49°.60N**±0°.06×**156°.16E**±0°.06**, h54**^{km}**, n155,** σ**1**^{s}**.72**/178**, mb4.3**/36**, MS3.1**/4**, 5C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.09**	**359**	*e*PN	**Pn**	**14 14 35.8**	**-0.5**
SKR				*e*S	**Sn**	**14 14 48.7**	**-1.6**
SKR				pmax	pmax		
	comp=Z,4µm,0.3s						
SKR				smax	smax		
	comp=N,17µm,0.3s						
SKR				smax	smax		
	comp=E,13µm,0.6s						
SKR	**Severo-Kuril's**	**1.09**	**359**	*e*P	**Pn**	**14 14 36.2**	**-0.1**
SKR				*e*S	**Sn**	**14 14 49.3**	**-1.0**
PAU	**Pauzhetka**	**1.92**	**12**	PN	**Pn**	**14 14 48.2**	**+0.7**
PAU				S	**Sn**	**14 15 09.9**	**-0.6**
PAU	**Pauzhetka**	**1.92**	**12**	*e*P	**Pn**	**14 14 48.2**	**+0.7**
PAU				*e*S	**Sn**	**14 15 09.9**	**-0.6**
KDTR	**Khodutka, Kamc**	**2.53**	**28**	PN	**Pn**	**14 14 56.2**	**+0.3**
KDTR				S	**Sn**	**14 15 24.1**	**-1.3**
KDTR	**Khodutka, Kamc**	**2.53**	**28**	*e*P	**Pn**	**14 14 56.2**	**+0.3**
KDTR				*e*S	**Sn**	**14 15 24.1**	**-1.3**
MIPR	**Malaya Ipel'ka**	**2.71**	**8**	PN	**Pn**	**14 14 59.2**	**+0.8**
MIPR	**Malaya Ipel'ka**	**2.71**	**8**	*e*P	**Pn**	**14 14 59.2**	**+0.8**
ASAK	**Asacha**	**3.00**	**21**	PN	**Pn**	**14 15 03.9**	**+1.5**
ASAK	**Asacha**	**3.00**	**21**	*e*P	**Pn**	**14 15 03.9**	**+1.5**
MTVR	**Mutnovka**	**3.16**	**23**	PN	**Pn**	**14 15 05.5**	**+0.8**
MTVR				S	**Sn**	**14 15 41.4**	**+0.2**
MTVR	**Mutnovka**	**3.16**	**23**	*e*P	**Pn**	**14 15 05.5**	**+0.8**
MTVR				*e*S	**Sn**	**14 15 41.4**	**+0.2**
GRL	**Gorelyy**	**3.20**	**21**	PN	**Pn**	**14 15 05.7**	**+0.6**
GRL				S	**Sn**	**14 15 41.8**	**-0.2**
GRL	**Gorelyy**	**3.20**	**21**	*e*P	**Pn**	**14 15 05.7**	**+0.6**
GRL				*e*S	**Sn**	**14 15 41.8**	**-0.2**
RUS	**Russkaya**	**3.21**	**27**	PN	**Pn**	**14 15 05.2**	**+0.1**
RUS				S	**Sn**	**14 15 40.5**	**-1.5**
RUS	**Russkaya**	**3.21**	**27**	*e*P	**Pn**	**14 15 05.2**	**+0.1**
RUS				*e*S	**Sn**	**14 15 40.5**	**-1.5**
APC	**Apacha**	**3.39**	**10**	PN	**Pn**	**14 15 09.3**	**+1.6**
APC	**Apacha**	**3.39**	**10**	*e*P	**Pn**	**14 15 09.3**	**+1.6**
KRMR	**Karymshinskiy**	**3.47**	**20**	PN	**Pn**	**14 15 09.9**	**+1.2**
KRMR				S	**Sn**	**14 15 48.0**	**-0.5**
KRMR	**Karymshinskiy**	**3.47**	**20**	*e*P	**Pn**	**14 15 09.9**	**+1.2**
KRMR				*e*S	**Sn**	**14 15 48.0**	**-0.5**
PEA0B	**Petropavlovsk-**	**3.65**	**15**	⇑*e*PN	**Pn**	**14 15 13.3**	**+2.1**
PEA0B	**Petropavlovsk-**	**3.65**	**15**		**Pn**	**14 15 13.2**	**+2.1**
PETK	**Petropavlovsk-**	**3.65**	**15**	P	**Pn**	**14 15 13.2**	**+2.0**
	comp=E,5.8nm,0.3s,baz=187,slow=14,SNR=185						
PETK				S	**Sn**	**14 15 58.4**	**+5.5**
	comp=E,5.1nm,0.3s,baz=175,slow=18,SNR=1.6						
PETK				LR	LR	14 16 46.8	
	comp=E,233nm,20.3s,baz=200,slow=41						
PETK	**Petropavlovsk-**	**3.65**	**15**	PN	**Pn**	**14 15 12.7**	**+1.5**
PETK	**Petropavlovsk-**	**3.65**	**15**	Pn	**Pn**	**14 15 12.7**	**+1.5**
PET	**Petropavlovsk**	**3.77**	**24**	*e*PN	**Pn**	**14 15 14.3**	**+1.4**
PET				*e*S	**Sn**	**14 15 55.7**	**-0.2**
PET				smax	smax		
	comp=N,491nm,0.6s						
PET				smax	smax		
	comp=E,422nm,0.4s						
PET				MLR	MLR		
	comp=Z,300nm,12.0s						
PET	**Petropavlovsk**	**3.77**	**24**	*e*P	**Pn**	**14 15 14.4**	**+1.5**
PET				*e*S	**Sn**	**14 15 56.7**	**+0.8**
PET	**Petropavlovsk**	**3.77**	**24**	Pn	**Pn**	**14 15 14.8**	**+1.9**
DALK	**Dalny**	**3.81**	**24**	PN	**Pn**	**14 15 14.7**	**+1.4**
DALK				S	**Sn**	**14 15 57.6**	**+0.9**
DALK	**Dalny**	**3.81**	**24**	*e*P	**Pn**	**14 15 14.7**	**+1.4**
DALK				*e*S	**Sn**	**14 15 57.6**	**+0.9**
AVH	**Avacha**	**4.01**	**23**	PN	**Pn**	**14 15 19.2**	**+2.9**
AVH	**Avacha**	**4.01**	**23**	*e*P	**Pn**	**14 15 19.2**	**+2.9**
KOK	**Koryaka**	**4.01**	**22**	PN	**Pn**	**14 15 19.2**	**+2.9**
KOK	**Koryaka**	**4.01**	**22**	*e*P	**Pn**	**14 15 19.2**	**+2.9**
KRER	**Koryakskii**	**4.05**	**23**	PN	**Pn**	**14 15 19.2**	**+2.3**
KRER	**Koryakskii**	**4.05**	**23**	*e*P	**Pn**	**14 15 19.2**	**+2.3**
SDLR	**Sedlovina**	**4.06**	**24**	PN	**Pn**	**14 15 18.3**	**+1.3**
SDLR	**Sedlovina**	**4.06**	**24**	*e*P	**Pn**	**14 15 18.3**	**+1.3**
NLC	**Nalytchevo**	**4.10**	**28**	PN	**Pn**	**14 15 16.8**	**-0.5**
NLC				S	**Sn**	**14 16 01.3**	**-2.6**
NLC	**Nalytchevo**	**4.10**	**28**	*e*P	**Pn**	**14 15 16.8**	**-0.5**
NLC				*e*S	**Sn**	**14 16 01.3**	**-2.6**
GNL	**Ganaly**	**4.25**	**14**	PN	**Pn**	**14 15 21.5**	**+1.9**
GNL	**Ganaly**	**4.25**	**14**	*e*P	**Pn**	**14 15 21.5**	**+1.9**
SPN	**Mys Shipunski**	**4.26**	**33**	PN	**Pn**	**14 15 20.4**	**+0.8**
SPN				S	**Sn**	**14 16 05.9**	**-2.1**
SPN	**Mys Shipunski**	**4.26**	**33**	*e*P	**Pn**	**14 15 20.4**	**+0.8**
SPN				*e*S	**Sn**	**14 16 05.9**	**-2.1**
KII	**Karymskiy**	**4.89**	**23**	PN	**Pn**	**14 15 31.2**	**+2.9**
KII				S	**Sn**	**14 16 22.4**	**-1.2**
KII	**Karymskiy**	**4.89**	**23**	*e*P	**Pn**	**14 15 31.2**	**+2.9**
KII				*e*S	**Sn**	**14 16 22.4**	**-1.2**
MKZ	**Mys Kozlova**	**6.04**	**33**	PN	**Pn**	**14 15 44.1**	**+0.2**
MKZ	**Mys Kozlova**	**6.04**	**33**	*e*P	**Pn**	**14 15 44.1**	**+0.2**
MKZ				*e*S	**Sn**	**14 16 50.2**	**-1.3**
ESO	**Esso**	**6.52**	**13**	PN	Pn	14 15 55.4	+4.8
ESO	**Esso**	**6.52**	**13**	*e*P	Pn	14 15 55.4	+4.8
KMNR	**Kamenistaya**	**6.65**	**20**	PN	**Pn**	**14 15 55.4**	**+3.0**
KMNR	**Kamenistaya**	**6.65**	**20**	*e*P	**Pn**	**14 15 55.4**	**+3.0**
KUR	**Kuril'sk**	**7.12**	**235**	*e*PN	**Pn**	**14 16 00.4**	**+1.7**
KUR				*e*S	**Sn**	**14 17 20.3**	**+2.1**
KUR				pmax	pmax		
	comp=E,24nm,0.4s						
KUR				pmax	pmax		
	comp=Z,55nm,0.4s						
KUR				pmax	pmax		
	comp=N,11nm,0.3s						
KUR				smax	smax		
	comp=E,61nm,0.5s						
KUR				smax	smax		
	comp=N,58nm,0.4s						
KBTR	**Krutoberegovo**	**7.75**	**29**	PN	**Pn**	**14 16 08.1**	**+0.8**
KBTR	**Krutoberegovo**	**7.75**	**29**	*e*P	**Pn**	**14 16 08.1**	**+0.8**
KBTR				*e*S	**Sn**	**14 17 33.2**	**-0.3**
KBG	**Krutoberegovo**	**7.75**	**28**	PN	**Pn**	**14 16 08.7**	**+1.4**
KBG	**Krutoberegovo**	**7.75**	**28**	*e*P	**Pn**	**14 16 08.7**	**+1.4**
BKI	**Bering**	**8.21**	**43**	PN	**Pn**	**14 16 13.9**	**+0.2**
BKI	**Bering**	**8.21**	**43**	*e*P	**Pn**	**14 16 13.9**	**+0.2**
BKI				*e*S	**Sn**	**14 17 37.5**	**-7.4**
SHO	**Shikotan**	**8.59**	**232**	*e*PN	**Pn**	**14 16 17.2**	**-1.7**
SHO				pmax	pmax		
	comp=Z,24nm,0.3s						
SHO				pmax	pmax		
	comp=N,12nm,0.2s						
SHO				pmax	pmax		
	comp=E,26nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**8.98**	**236**	*e*PN	**Pn**	**14 16 25.5**	**+1.2**
YUK				pmax	pmax		
	comp=E,28nm,0.5s						
YUK				pmax	pmax		
	comp=Z,199nm,0.5s						
YUK				pmax	pmax		
	comp=N,39nm,0.2s						
GRPR	**Tuman**	**9.06**	**236**	*e*PN	**Pn**	**14 16 26.0**	**+0.7**
GRPR				pmax	pmax		
	comp=Z,60nm,0.2s						
UGL	**Uglegorsk**	**9.22**	**272**	*e*PN	Pn	14 16 31.0	+3.5
UGL				S	**Sn**	**14 18 09.8**	**+0.1**
UGL				pmax	pmax		
	comp=Z,157nm,0.8s						
UGL				smax	smax		
	comp=E,130nm,1.0s						
UGL				smax	smax		
	comp=N,98nm,1.1s						
RUSJ	**Misakicho**	**9.27**	**238**	*e*PN	**Pn**	**14 16 31.3**	**+3.1**
YSS	**Yuzh-Sakhalins**	**9.32**	**259**	*e*PN	**Pn**	**14 16 32.0**	**+3.1**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS	**Yuzh-Sakhalins**	**9.32**	**259**	Pn	**Pn**	**14 16 31.8**	**+2.9**
GLVR	**Golovnino**	**9.37**	**235**	*e*PN	**Pn**	**14 16 30.6**	**+1.1**
GLVR				pmax	pmax		
	comp=Z,42nm,0.2s						
NMR	**Nemuro--Hokkai**	**9.51**	**233**	*e*PN	**Pn**	**14 16 29.7**	**-1.8**
MA2	**Magadan**	**10.47**	**345**	*i* PN	**Pn**	**14 16 44.8**	**+0.2**
MA2	**Magadan**	**10.47**	**345**		**Pn**	**14 16 44.5**	**0.0**
JKA	**Kamikawa-asahi**	**10.78**	**245**	Pn	**Pn**	**14 16 51.4**	**+2.6**
ASAJ	**Asahikawa**	**10.78**	**245**	P	**Pn**	**14 16 52.2**	**+3.4**
	comp=Z,2.2nm,0.3s,baz=70,slow=14,SNR=24						
ASAJ				LR	LR	14 20 24.8	
	comp=Z,82nm,20.5s,baz=355,slow=34						
SHEM	**Shemya Is, Ala**	**11.69**	**68**	LR	LR	14 21 07.6	
	comp=Z,75nm,20.0s,baz=286,slow=34						
ERM	**Erimo**	**11.81**	**235**	*i* PN	**Pn**	**14 17 03.0**	**+0.1**
SEY	**Seymchan**	**13.53**	**353**	P	**Pn**	**14 17 28.0**	**+1.8**
	comp=Z,1.4nm,0.3s,baz=168,slow=15,SNR=23						
SEY				LR	LR	14 23 16.1	
	comp=Z,70nm,21.4s,baz=286,slow=40						
KLR	**Kul'dur**	**15.88**	**278**	P	**P**	**14 17 57.6**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=70,slow=12,SNR=2.9						
KLR				LR	LR	14 24 27.6	
	comp=Z,76nm,18.9s,baz=82,slow=39						
USRK	**Ussuriysk Ar.**	**17.34**	**261**	P	**P**	**14 18 17.2**	**+1.1**
	baz=62,slow=13,SNR=4.4						
MJAR	**Matsushiro Arr**	**18.44**	**232**	P	**Pn**	**14 18 28.8**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=27,slow=11,SNR=4.2						
MJAR				LR	LR	14 24 43.3	
	comp=Z,28nm,19.2s,baz=195,slow=34						
MAJO	**Matsushiro**	**18.44**	**232**	P	**Pn**	**14 18 29.3**	**+0.5**
MAJO				pmax	pmax		
	comp=Z,57nm,1.8s						
MAJO	**Matsushiro**	**18.44**	**232**	P	**Pn**	**14 18 29.3**	**+0.5**
MAJO				IAmb	IAmb	14 19 13.9	
	comp=Z,57nm,1.8s						
BILL	**Bilibino**	**19.17**	**12**	*i* P	**P**	**14 18 35.3**	**-0.7**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BILL	**Bilibino**	**19.17**	**12**	P	**P**	**14 18 35.5**	**-0.6**
YAK	**Yakutsk**	**19.22**	**320**	P	**P**	**14 18 35.4**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=73,slow=3.0,SNR=11						
YAK				LR	LR	14 26 04.3	
	comp=Z,58nm,18.9s,baz=75,slow=37						
YAK	**Yakutsk**	**19.22**	**320**	*e*P	**P**	**14 18 34.9**	**-1.7**
YAK				pmax	pmax		
	comp=Z,19nm,0.8s						
YAK	**Yakutsk**	**19.22**	**320**		**P**	**14 18 35.2**	**-1.4**
YAK				IAmb	IAmb	14 18 39.3	
	comp=Z,21nm,0.8s						
JHS	**Saijyo**	**22.31**	**238**	P	**P**	**14 19 10.9**	**+0.7**
KSRS	**Korea Array**	**23.65**	**250**	P	**P**	**14 19 23.7**	**+0.2**
	comp=Z,5.3nm,0.8s,baz=44,slow=10,SNR=9.8						
KSRS				LR	LR	14 27 47.7	
	comp=Z,22nm,20.1s,baz=76,slow=34						
TNA	**Tin City**	**24.53**	**36**	P	**P**	**14 19 33.3**	**+2.0**
TNA				IAmb	IAmb	14 19 34.9	
	comp=Z,15nm,1.0s						
ANM	**Nome**	**25.19**	**39**	P	**P**	**14 19 39.6**	**+2.2**
ANM				pmax	pmax		
	comp=Z,14nm,1.1s						
ANM	**Nome**	**25.19**	**39**	P	**P**	**14 19 39.6**	**+2.2**
ANM				IAmb	IAmb	14 19 41.4	
	comp=Z,14nm,1.1s						
TIXI	**Tiksi**	**25.39**	**340**	P	**P**	**14 19 36.9**	**-2.2**
	comp=Z,5.7nm,0.5s,baz=128,slow=9.2,SNR=24						
TIXI	**Tiksi**	**25.39**	**340**	P	**P**	**14 19 37.6**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TIXI	**Tiksi**	**25.39**	**340**	P	**P**	**14 19 37.5**	**-1.5**
TTA	**Tatalina**	**28.95**	**44**	P	**P**	**14 20 12.7**	**+1.5**
TTA				pmax	pmax		
	comp=Z,23nm,1.8s						
TTA	**Tatalina**	**28.95**	**44**	P	**P**	**14 20 12.7**	**+1.5**
TTA				IAmb	IAmb	14 20 56.5	
	comp=Z,23nm,1.8s						
IMAR	**Indian Mountai**	**30.27**	**39**	P	**P**	**14 20 24.3**	**+1.6**
H11N2	**WAKE ISLAND Hy**	**31.01**	**160**	T	T	14 53 25.4	
	baz=346,slow=76,SNR=184						
H11N1	**WAKE ISLAND Hy**	**31.03**	**160**	T	T	14 53 21.1	
	baz=346,slow=76,SNR=165						
H11N3	**WAKE ISLAND Hy**	**31.03**	**160**	T	T	14 53 20.7	
	baz=346,slow=76,SNR=381						
COLD	**Coldfoot**	**31.83**	**36**	P	**P**	**14 20 37.2**	**+0.7**
H11S1	**WAKE ISLAND Hy**	**32.15**	**161**	T	T	14 54 44.8	
	baz=347,slow=76,SNR=1920						
H11S3	**WAKE ISLAND Hy**	**32.16**	**161**	T	T	14 54 48.0	
	baz=347,slow=76,SNR=4095						
H11S2	**WAKE ISLAND Hy**	**32.17**	**161**	T	T	14 54 46.2	
	baz=347,slow=76,SNR=1832						
SONM	**Songino Array**	**32.40**	**286**	P	**P**	**14 20 40.3**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=51,slow=8.9,SNR=1.7						
SONM				PcP	**PcP**	**14 23 27.9**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=64,slow=3.3,SNR=5.8						
COLA	**College**	**32.64**	**41**	*i* P	**P**	**14 20 44.9**	**+1.3**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
H24K	**Noodor Dome**	**32.65**	**39**	P	**P**	**14 20 45.9**	**+2.1**
H24K				IAmb	IAmb	14 21 58.2	
	comp=Z,16nm,1.8s						
TLY	**Talaya**	**32.78**	**294**	*i* P	**P**	**14 20 42.9**	**-2.1**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HDA	**Harding Lake**	**33.03**	**42**	P	**P**	**14 20 48.4**	**+1.4**
IL31		**33.05**	**41**	P	**P**	**14 20 48.5**	**+1.3**
IL31				IAmb	IAmb	14 20 49.0	
	comp=Z,6.2nm,1.1s						
ILAR	**Eielson Array**	**33.05**	**41**	P	**P**	**14 20 48.2**	**+1.0**
	comp=Z,1.6nm,0.6s,baz=257,slow=5.8,SNR=30						
L27K	**Beaver Creek,**	**35.40**	**44**	P	**P**	**14 21 10.0**	**+2.4**
L27K				IAmb	IAmb	14 21 10.9	
	comp=Z,7.8nm,0.8s						
BCAR	**Beaver Creek A**	**35.42**	**44**	P	**P**	**14 21 09.5**	**+1.7**
INK	**Inuvik**	**38.15**	**35**	P	**P**	**14 21 32.1**	**+1.3**
	comp=Z,1.0nm,0.4s,baz=258,slow=7.7,SNR=8.8						
INK	**Inuvik**	**38.15**	**35**	IAmb	IAmb	14 22 02.3	
	comp=Z,18nm,1.9s						
A36M	**Sachs Harbour**	**40.39**	**28**	P	**P**	**14 21 50.6**	**+1.2**
ZALV	**Zalesovo Beam**	**42.65**	**304**	P	**P**	**14 22 06.0**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=38,slow=7.0,SNR=4.0						
ZALV				PcP	**PcP**	**14 23 59.2**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=54,slow=2.6,SNR=4.3						
ZALV				LR	LR	14 40 55.4	
	comp=Z,19nm,18.1s,baz=226,slow=38						
DGZ	**Jazzator, Alta**	**43.05**	**298**	*i* P	**P**	**14 22 10.5**	**-1.1**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	**Yellowknife Ar**	**47.42**	**39**	P	**P**	**14 22 47.1**	**+1.3**
	comp=Z,1.6nm,0.7s,baz=301,slow=7.8,SNR=4.0						
MKAR	**Makanchi Array**	**47.47**	**296**	P	**P**	**14 22 45.3**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=51,slow=6.0,SNR=8.3						
MKAR				PcP	**PcP**	**14 24 15.6**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=52,slow=4.2,SNR=1.6						
RES	**Resolute Bay**	**47.48**	**20**	P	**P**	**14 22 46.9**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=286,slow=7.6,SNR=6.4						
KURK	**Kurchatov**	**47.51**	**303**	*ce*P	**P**	**14 22 45.9**	**-0.8**
KURK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
KURK	**Kurchatov**	**47.51**	**303**	P	**P**	**14 22 45.4**	**-1.3**
KURK				IAmb	IAmb	14 22 47.2	
	comp=Z,4.0nm,0.7s						
BRVK	**Borovoye**	**50.68**	**309**	*ce*P	**P**	**14 23 08.9**	**-2.0**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARU	**Arti**	**54.30**	**317**	*c i*P	**P**	**14 23 35.0**	**-2.6**
ARU				S	**S**	**14 31 07.8**	**-3.2**
ARU				SS	**SKiKP**	**14 34 44.9**	**+2.2**
ARU				pmax	pmax		
	comp=Z,14nm,2.8s						
AAK	**Ala-Archa**	**54.40**	**296**	*i* P	**P**	**14 23 37.8**	**-1.0**
CHTO	**Chiang Mai**	**54.75**	**257**	P	**P**	**14 23 41.5**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHTO	**Chiang Mai**	**54.75**	**257**	P	**P**	**14 23 41.5**	**+0.1**
CHTO				IAmb	IAmb	14 23 42.7	
	comp=Z,3.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**55.01**	**257**	P	**P**	**14 23 44.1**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=29,slow=7.3,SNR=10						
ARCES	**ARCESS Array B**	**55.82**	**341**	P	**P**	**14 23 48.7**	**+0.3**
	comp=Z,3.9nm,0.8s,baz=50,slow=8.4,SNR=1.8						
SUMG	**Summit**	**57.70**	**5**	*i* P	**P**	**14 24 01.0**	**-1.1**
ABKAR	**Akbulak array**	**58.16**	**310**	P	**P**	**14 24 03.8**	**-1.5**
ABKAR				IAmb	IAmb	14 24 04.8	
	comp=Z,2.0nm,0.6s						
ABKAR	**Akbulak array**	**58.16**	**310**	P	**P**	**14 24 04.0**	**-1.2**
GAR	**Garm**	**59.16**	**295**	P	**P**	**14 24 11.5**	**-0.9**
NVAR	**Mina Array Bea**	**59.35**	**66**	P	**P**	**14 24 16.0**	**+2.1**
	comp=Z,0.6nm,0.7s,baz=278,slow=7.4,SNR=4.6						
CHGR	**Chuyangaron**	**60.06**	**296**	P	**P**	**14 24 17.7**	**-1.0**
PDAR	**Pinedale Array**	**61.45**	**57**	P	**P**	**14 24 30.5**	**+2.3**
	comp=Z,1.1nm,0.8s,baz=319,slow=2.2,SNR=13						
FINES	**FINESS Array B**	**62.31**	**335**	P	**P**	**14 24 31.4**	**-2.0**
	comp=Z,1.1nm,0.5s,baz=35,slow=7.0,SNR=5.3						
FINES	**FINESS Array B**	**62.31**	**335**	*i* P	**P**	**14 24 31.7**	**-1.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**66.17**	**342**	P	**P**	**14 24 59.5**	**+0.8**
	comp=Z,1.0nm,0.9s,baz=25,slow=6.4,SNR=1.9						
NOA				LR	LR	14 58 04.4	
	comp=Z,23nm,19.5s,baz=20,slow=40						
AFI	**Afiamalu**	**69.26**	**147**	LR	LR	14 55 55.1	
	comp=Z,11nm,18.9s,baz=99,slow=36						
SCHQ	**Schefferville**	**69.88**	**25**	P	**P**	**14 25 22.1**	**+0.1**
	comp=Z,2.4nm,0.4s,baz=335,slow=6.1,SNR=7.5						
AKASG	**Malin Array Be**	**70.28**	**327**	P	**P**	**14 25 22.1**	**-2.4**
	comp=Z,1.6nm,0.3s,baz=31,slow=6.6,SNR=8.0						
AKBB	**Malin Array Si**	**70.28**	**327**	*ce*P	**P**	**14 25 25.8**	**+1.3**
KBZ	**Khabaz**	**70.32**	**315**	P	**P**	**14 25 23.6**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=124,slow=3.6,SNR=1.8						
WRA	**Warramunga Arr**	**71.89**	**202**	P	**P**	**14 25 35.3**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=16,slow=6.1,SNR=14						
BUR08	**Bucovina Ar. S**	**74.28**	**328**	P	**P**	**14 25 48.0**	**-0.6**
BUR08				IAmb	IAmb	14 26 08.5	
	comp=Z,13nm,1.6s						
BURAR	**Bucovina Array**	**74.30**	**328**	P	**P**	**14 25 47.5**	**-1.1**
TX31	**Lajitas Ar. Si**	**74.35**	**63**	P	**P**	**14 25 51.2**	**+1.9**
TX32	**Lajitas Array**	**74.35**	**63**	P	**P**	**14 25 51.5**	**+2.2**
TXAR	**Lajitas Array**	**74.35**	**63**	P	**P**	**14 25 51.4**	**+2.1**
	comp=Z,2.8nm,0.7s,baz=301,slow=4.6,SNR=35						
TXAR	**Lajitas Array**	**74.35**	**63**	P	**P**	**14 25 51.2**	**+1.9**
TXAR	**Lajitas Array**	**74.35**	**63**	P	**P**	**14 25 51.2**	**+1.9**
CLL	**Collm**	**74.68**	**337**	*e*P	**P**	**14 25 48.0**	**-2.7**
AS31	**Alice Springs**	**75.58**	**201**	P	**P**	**14 25 57.7**	**+1.6**
ASAR	**Alice Springs**	**75.58**	**201**	P	**P**	**14 25 57.7**	**+1.6**
	comp=Z,1.4nm,0.7s,baz=14,slow=5.2,SNR=34						

NNC 16 14:41:06.3±8.7**, 37°.69N**×**71°.66E, h0**^{km}**, mb3.6, mpv3.3, 3C-2D, Error ellipse: s-maj=69.6km s-min=52.1km az=163.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.40**	**23**	⇑P	Pn	14 42 28.3	0.0
	1.4nm,0.5s						
AAK				⇓S	Sn	14 43 33.1	+1.9
	5.2nm,0.5s						
KK02	**Karatay Array**	**5.48**	**351**	⇑P	Pn	14 42 30.2	+0.9
	2.8nm,0.6s,baz=165,slow=12						
KK02				⇓S	Sn	14 43 33.5	+0.5
	16nm,0.5s,baz=168,slow=22						
AB31	**Akbulak array**	**14.33**	**328**	⇑P	Pn	14 44 26.3	-4.1
	0.4nm,0.4s,baz=346,slow=26,SNR=25						

CRAAG ***16*** *14:41:51.0, 36°.21N×1°.55W, Ml3.2*

IDC ***16*** *14:41:51.5±1.9, 36°.21N×1°.28W, h0*^{km}*, mb3.0/1, mb1 3.3/4, mb1mx3.1/39, mbtmp3.2/4, ML3.0/3, Error ellipse: s-maj=34.3km s-min=24.3km az=70.0*

IGIL ***16*** *14:41:52.5, 36°.21N×1°.55W, h2*^{km}*, ML2.6*

MDD ***16*** *14:41:52.9±0.9, 36°.18N×1°.53W, h14*^{km}*±7*^{km}*, mbLg3.3/40, Error ellipse: s-maj=6.3km s-min=4.1km az=154.0, PRXIMO*

MDD EMS: II INTENSIDAD MAXIMA-ESPAA.

CNRM ***16*** *14:41:53.1, 36°.30N×1°.60W, h57*^{km}*, ml3.3*

SFS ***16*** *14:41:53.0, 36°.20N×1°.50W, h32*^{km}*, ML3.3*

INMG ***16*** *14:41:54.5±1.5, 36°.23N×1°.57W, h30*^{km}*±8*^{km}*, ML3.0, Error ellipse: s-maj=2.8km s-min=2.4km az=140.0*

LDG ***16*** *14:41:54.4±0.2, 36°.14N×1°.44W, h30*^{km}*, Ml3.2/7, Error ellipse: s-maj=4.3km s-min=2.1km az=161.0*

ISC 16 14:41:54.3±1.2**, 36°.29N**±0°.02×**1°.62W**±0°.02**, h33**^{km}±4^{km}**, n122,** σ**1**^{s}**.83**/210**, 4C-3D, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENIJ	**Nijar**	**0.83**	**326**	⇓P	**Pb**	**14 42 09.6**	**-0.8**
	104nm,0.1s,SNR=18						
ENIJ				S	**Sb**	**14 42 20.6**	**-0.7**
	3µm,0.2s,SNR=7.9						
USTO	**Oran**	**1.03**	**122**	P	**Pb**	**14 42 16.0**	**+2.3**
EBER	**Berja**	**1.19**	**301**	P	**Pn**	**14 42 14.9**	**+0.1**
	18nm,0.1s,SNR=54						
EBER				S	**Sb**	**14 42 33.5**	**+1.8**
	2µm,0.3s,SNR=7.9						
EALB	**Alboran**	**1.20**	**254**	⇑P	**Pn**	**14 42 14.1**	**-0.6**
	65nm,0.2s,SNR=18						
EALB				S	**Sn**	**14 42 30.1**	**+0.4**
	261nm,0.2s,SNR=6.6						
OTSS	**Djebel Tessala**	**1.21**	**146**	P	**Pn**	**14 42 13.0**	**-2.0**
CHAS	**Isla Isabel II**	**1.28**	**211**	P	**Pn**	**14 42 14.9**	**-1.0**
CHAS				S	**Sn**	**14 42 28.4**	**-3.5**
TLOR	**Lorca, Murcia**	**1.37**	**358**	P	**Pn**	**14 42 17.1**	**0.0**
	211nm,0.2s,SNR=7.9						
TLOR				S	**Sn**	**14 42 33.9**	**-0.2**
	436nm,0.2s,SNR=7.9						
CART	**Cartagena**	**1.39**	**21**	P	**Pn**	**14 42 16.0**	**-1.4**
CART				S	**Sn**	**14 42 31.7**	**-2.9**
CART	**Cartagena**	**1.39**	**21**	P	**Pn**	**14 42 16.3**	**-1.1**
CART				S	**Sn**	**14 42 33.3**	**-1.3**
EMEL	**Melilla**	**1.47**	**228**	P	**Pn**	**14 42 17.8**	**-0.6**
	141nm,0.1s,SNR=8.4						
EMEL				S	**Sn**	**14 42 35.8**	**-0.7**
	765nm,0.1s,SNR=11						
ODJA	**Bouhanifia**	**1.53**	**128**	P	**Pb**	**14 42 23.0**	**+0.9**
GOG	**Mont Gurugu**	**1.54**	**227**	P	**Pn**	**14 42 19.0**	**-0.6**
GOG				S	**Sn**	**14 42 38.5**	**0.0**
EMUR	**La Murta**	**1.58**	**11**	P	**Pn**	**14 42 19.7**	**-0.4**
	23nm,0.2s,SNR=51						
EMUR				S	**Sn**	**14 42 39.1**	**-0.3**
	146nm,0.3s,SNR=5.7						
EZAR	**Zarzadilla de**	**1.59**	**358**	⇓P	**Pn**	**14 42 20.5**	**+0.2**
	75nm,0.3s,SNR=18						
EZAR				S	**Sn**	**14 42 39.9**	**+0.2**
	86nm,0.2s,SNR=7.9						
TAF	**Taforalt**	**1.60**	**204**	P	**Pn**	**14 42 20.9**	**+0.5**
TAF				S	**Sb**	**14 42 42.7**	**-0.7**
GORA	**Gorafe**	**1.65**	**317**	S	**Sb**	**14 42 44.0**	**-0.6**
	448nm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	**1.71**	**290**	⇑P	**Pn**	**14 42 21.7**	**-0.2**
	31nm,0.1s,SNR=18						
ELGU				S	**Sn**	**14 42 43.4**	**+0.7**
	424nm,0.3s,SNR=7.9						
OJBR	**Djebel Berber**	**1.74**	**113**	P	**Pb**	**14 42 26.0**	**+0.2**
OKGL	**Djebel Kef Gue**	**1.85**	**97**	P	Pb	14 42 35.0	+7.5
OKGL	**Djebel Kef Gue**	**1.85**	**97**	P	**Pn**	**14 42 22.4**	**-1.3**
	11nm,0.1s,SNR=7.9						
OKGL				S	**Sn**	**14 42 43.2**	**-2.8**
	890nm,0.3s,SNR=7.9						
ETRV	**Los Montesinos**	**1.86**	**21**	P	**Pn**	**14 42 23.6**	**-0.3**
	57nm,0.1s,SNR=7.9						
ETRV				S	**Sn**	**14 42 46.0**	**-0.2**
	397nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.91**	**323**	P	**Pb**	**14 42 27.5**	**-1.1**
	16nm,0.2s,SNR=7.9						
EQES				S	**Sb**	**14 42 51.3**	**-0.8**
	122nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**1.97**	**338**	P	**Pn**	**14 42 27.3**	**+1.7**

	60nm,0.2s,SNR=7.9						
SESP				S	Sn	14 42 51.7	+2.5
	268nm,0.2s,SNR=7.9						
OJGS	**Djebel Guires**	2.08	111	P	Pb	14 42 36.0	+4.6
JBK	**JBK**	2.10	202	P	Pb	14 42 29.3	-2.5
JBK				S	Sb	14 42 58.0	+0.4
EGOR	**Sierra Gorda,**	2.16	293	⇑P	Pb	14 42 30.7	-2.3
	11nm,0.2s,SNR=18						
EGOR				S	Sb	14 42 57.1	-2.3
	40nm,0.3s,SNR=7.9						
PALE	**Palemas**	2.17	241	P	Pn	14 42 27.9	-0.2
PALE				S	Sn	14 42 54.1	+0.3
EMAL	**Malaga-Limoner**	2.31	283	P	Pn	14 42 29.6	-0.5
EMAL				S	Sn	14 42 54.8	-2.5
ETOB	**Tobarra**	2.35	1	⇓P	Pn	14 42 32.0	+1.2
	32nm,0.2s,SNR=18						
ETOB				S	Sn	14 42 59.6	+1.1
	46nm,0.2s,SNR=6.0						
AFON	**Font Roja**	2.52	20	P	Pn	14 42 34.1	+1.0
	13nm,0.2s,SNR=16						
AFON				S	Sn	14 43 03.6	+0.9
	76nm,0.3s,SNR=9.2						
EMIJ	**Mijas**	2.56	277	P	Pn	14 42 32.3	-1.2
	16nm,0.2s,SNR=30						
EMIJ				S	Sn	14 43 01.5	-2.0
	38nm,0.3s,SNR=8.0						
EBEN2	**Beniarda presa**	2.64	25	P	Pn	14 42 34.5	-0.1
	8.9nm,0.1s,SNR=7.9						
EBEN2				S	Sn	14 43 02.8	-2.7
	48nm,0.2s,SNR=7.9						
EADA	**Adamuz**	3.02	309	P	Pn	14 42 41.2	+1.4
	0.9nm,0.1s,SNR=7.9						
EADA				S	Sn	14 43 16.1	+1.3
	14nm,0.1s,SNR=7.9						
CEU	**Ceuta**	3.06	264	P	Pn	14 42 39.4	-1.0
CEU				S	Sn	14 43 13.1	-2.7
LIJA	**Lijar**	3.11	283	P	Pn	14 42 43.5	+2.4
SMIR	**Smir Dam**	3.11	260	P	Pn	14 42 39.6	-1.4
SMIR				S	Sn	14 43 15.8	-1.2
EJIF	**Jimena Fronter**	3.11	274	P	Pn	14 42 41.9	+0.8
	SNR=7.9						
CHEFC	**Chefchaouen**	3.25	250	P	Pn	14 42 44.4	+1.4
CHEFC				S	Sn	14 43 21.6	+1.1
TDRA	**Tendrara**	3.26	186	P	Pn	14 42 43.5	+0.2
TDRA				S	Sn	14 43 22.8	+1.8
ECHE	**Chera**	3.34	9	P	Pn	14 42 45.1	+0.8
	2.3nm,0.3s,SNR=7.9						
ECHE				S	Sn	14 43 23.3	+0.5
	7.8nm,0.4s,SNR=7.9						
ESPR	**Espera**	3.46	281	P	Pn	14 42 47.2	+1.4
	3.2nm,0.2s,SNR=7.9						
ESPR				S	Sn	14 43 28.1	+2.4
	14nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	3.52	302	P	Pn	14 42 47.4	+0.7
	2.7nm,0.2s,SNR=16						
ECAB				S	Sn	14 43 27.9	+0.7
	27nm,0.4s,SNR=7.5						
EIBI	**Ibiza**	3.61	40	⇑P	Pn	14 42 47.5	-0.4
	12nm,0.1s,SNR=18						
EIBI				S	Sn	14 43 25.6	-3.7
	56nm,0.3s,SNR=7.5						
LCRM	**LCR**	3.71	227	P	Pn	14 42 51.5	+2.0
LCRM				S	Sn	14 43 36.0	+3.8
ESDC	**Sonseca Array**	3.85	332	Pn	Pn	14 42 53.9	+2.5
	0.4nm,0.3s,baz=145,slow=14,SNR=6.5						
ESDC				Pg	Pb	14 43 07.1	+5.5
	1.2nm,0.3s,baz=148,slow=17,SNR=12						
ESDC				Sn	Sn	14 43 34.1	-1.5
	2.1nm,0.3s,baz=146,slow=22,SNR=7.2						
ESDC				Lg	Lg	14 43 48.1	
	2.6nm,0.3s,baz=146,slow=29,SNR=5.6						
ESDC	**Sonseca Array**	3.85	332	P	Pn	14 42 53.5	+2.2
	0.4nm,0.1s,baz=145,slow=13,SNR=7.3						
ESDC				S	Sn	14 43 34.6	-0.9
	5.9nm,0.3s,baz=146,slow=22,SNR=4.5						
PAB	**San Pablo**	3.90	327	P	Pn	14 42 53.7	+1.6
	2.1nm,0.3s,SNR=7.9						
PAB				S	Sn	14 43 36.1	-0.7
	7.5nm,0.2s,SNR=7.9						
FIGM	**Figuig**	4.15	176	P	Pn	14 42 55.4	-0.2
FIGM				S	Sn	14 43 41.8	-1.2
EMOS	**Mosqueruela**	4.17	12	P	Pn	14 42 57.5	+1.8
	10.0nm,0.3s,SNR=28						
EMOS				S	Sn	14 43 43.8	+0.3
	3.7nm,0.3s,SNR=7.9						
MDT	**Midelt**	4.25	216	Pn	Pn	14 42 57.6	+0.8
	0.7nm,0.3s,baz=68,slow=15,SNR=14						
MDT				Sn	Sn	14 43 44.1	-1.2
	2.0nm,0.3s,baz=299,slow=5.2,SNR=6.7						
MDT	**Midelt**	4.25	216	P	Pn	14 42 58.0	+1.1
MDT				S	Sn	14 43 48.0	+2.7
MD31	**MD31**	4.28	218	P	Pn	14 42 58.4	+1.2
MD31				S	Sn	14 43 46.4	+0.3
EMIN	**Mina Concepcio**	4.30	292	P	Pn	14 42 57.5	+0.1
	1.2nm,0.1s,SNR=18						
EMIN				S	Sn	14 43 46.4	0.0
	3.0nm,0.2s,SNR=7.9						
ETOR	**Torete**	4.54	356	P	Pn	14 43 02.2	+1.4
	8.4nm,0.2s,SNR=6.8						
ETOR				S	Sn	14 43 51.8	-0.6
	14nm,0.4s,SNR=7.9						
PBAR	**Barrancos**	4.72	295	*e*Sn	Sn	14 43 56.5	-0.2
GUD	**Guadarrama**	4.78	336	P	Pn	14 43 06.2	+2.1
	2.2nm,0.2s,SNR=7.5						
GUD				S	Sn	14 43 58.4	-0.1
	3.1nm,0.3s,SNR=7.9						
EGRO	**El Granado**	4.86	287	P	Pn	14 43 05.7	+0.7
	1.8nm,0.1s,SNR=11						
EGRO				S	Sn	14 43 59.5	-0.6
	8.2nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	4.91	18	P	Pn	14 43 06.5	+0.8
	2.5nm,0.3s,SNR=7.9						
ERTA				S	Sn	14 44 00.8	-0.6
	8.1nm,0.4s,SNR=7.9						
ETOS	**Mallorca**	4.93	44	P	Pn	14 43 06.0	-0.1
	3.6nm,0.3s,SNR=19						
ETOS				S	Sn	14 43 58.8	-3.3
	4.6nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	4.94	302	P	Pn	14 43 06.8	+0.6
	3.2nm,0.1s,SNR=22						
EBAD				S	Sn	14 44 01.4	-0.9
	15nm,0.2s,SNR=5.7						
ZHG	**ZHG**	5.01	237	P	Pn	14 43 08.7	+1.5
ZHG				S	Sn	14 44 06.1	+2.1
PVAQ	**Vaqueiros**	5.01	285	*e*Pn	Pn	14 43 07.4	+0.2
PVAQ				*e*Sn	Sn	14 44 02.2	-1.8
PVAQ				A	A	14 44 06.1	
	11nm,0.3s						
PVAQ	**Vaqueiros**	5.01	285	P	Pn	14 43 07.6	+0.4
PVAQ				S	Sn	14 44 04.9	+0.8
EPLA	**Plasencia**	5.15	318	P	Pn	14 43 10.7	+1.5
	1.1nm,0.1s,SNR=7.9						
EPLA				S	Sn	14 44 06.8	-0.7
	5.5nm,0.3s,SNR=7.9						
PBDV	**Barranco-do-Ve**	5.16	283	*e*Pn	Pn	14 43 09.9	+0.7
PBDV				*e*Sn	Sn	14 44 06.2	-1.3
PBDV				A	A	14 44 08.7	
	5.7nm,0.5s						
PBEJ	**Beja**	5.28	291	*e*Pn	Pn	14 43 11.7	+0.8
PBEJ				*e*Sn	Sn	14 44 10.2	-0.4
PCVE	**Castro Verde**	5.31	287	*e*Pn	Pn	14 43 12.0	+0.7
PCVE				*e*Sn	Sn	14 44 10.2	-1.2
PCVE				A	A	14 44 47.0	
	5.3nm,0.5s						
PESTR	**Estremoz**	5.39	300	*e*Pn	Pn	14 43 12.9	+0.4
PESTR				*e*Sn	Sn	14 44 12.8	-0.7
PESTR				A	A	14 44 55.4	
	14nm,0.6s						
PESTR	**Estremoz**	5.39	300	P	Pn	14 43 14.1	+1.6
PESTR				S	Sn	14 44 12.7	-0.7
EPOB	**Poblet**	5.48	22	P	Pn	14 43 14.0	+0.4
	2.5nm,0.2s,SNR=7.9						
EPOB				S	Sn	14 44 14.1	-1.5
	5.5nm,0.4s,SNR=7.9						
MESJ	**Messejana**	5.50	288	*e*P	Pn	14 43 14.2	+0.4
MESJ				*e*S	Sn	14 44 13.9	-2.1
MESJ				IAML		14 44 17.2	
	comp=E,7.2nm,0.2s						
MESJ	**Messejana**	5.50	288	*e*Pn	Pn	14 43 14.6	+0.7
MESJ				*e*Sn	Sn	14 44 14.3	-1.7
MESJ				A	A	14 45 12.1	
	comp=E,7.4nm,0.7s						
PMRV	**Marv??o**	5.54	306	*e*Pn	Pn	14 43 15.2	+0.8
PMRV				*e*Sn	Sn	14 44 16.1	-0.9
PMRV				A	A	14 44 57.3	
	comp=E,14nm,0.6s						
EVO	**Evora**	5.56	296	P	Pn	14 43 15.6	+0.8
EVO				S	Sn	14 44 14.0	-3.4
EVO	**Evora**	5.56	296	*e*Pn	Pn	14 43 15.5	+0.8
EVO				*e*Sn	Sn	14 44 16.0	-1.5
EVO				A	A	14 45 10.6	
	comp=E,17nm,1.0s						
MORF	**Marmelete**	5.73	282	*e*Pn	Pn	14 43 18.3	+1.2
MORF				*e*Sn	Sn	14 44 21.0	-0.8
MORF				A	A	14 44 24.1	
	comp=E,5.7nm,0.2s						
PNCL	**Nicolau / Gran**	5.81	290	*e*Pn	Pn	14 43 18.8	+0.7
PNCL				*e*Sn	Sn	14 44 22.3	-1.2
PNCL				A	A	14 44 56.4	
	comp=E,5.2nm,0.5s						
PCBR	**Castelo Branco**	5.83	309	*e*Pn	Pn	14 43 20.3	+2.0
PCBR				*e*Sn	Sn	14 44 23.2	-0.8
PCBR				A	A	14 45 03.2	
	comp=E,11nm,0.5s						
PTEO	**Sao Teotonio**	5.83	285	*e*Pn	Pn	14 43 19.1	+0.7
PTEO				*e*Sn	Sn	14 44 22.3	-1.8
PTEO				A	A	14 44 40.9	
	comp=E,8.1nm,0.6s						
PFVI	**Vila Bisbo**	5.85	280	*e*Pn	Pn	14 43 19.4	+0.7
PFVI				*e*Sn	Sn	14 44 22.7	-1.9
PFVI				A	A	14 44 31.7	
	comp=E,12nm,0.5s						
PFVI	**Vila Bisbo**	5.85	280	P	Pn	14 43 19.3	+0.6
	comp=E,5.3nm,0.2s,SNR=7.9						
PFVI				S	Sn	14 44 23.0	-1.6
	comp=E,8.2nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	5.85	280	P	Pn	14 43 19.5	+0.8
PFVI				S	Sn	14 44 24.7	+0.1
PMTG	**Montargil**	5.93	300	*e*Pn	Pn	14 43 20.4	+0.6
PMTG				*e*Sn	Sn	14 44 24.7	-1.8
PMTG				A	A	14 45 12.2	
	comp=E,10nm,0.7s						
MTE	**Manteigas**	6.21	313	*e*Sn	Sn	14 44 32.6	-0.9
MTE				A	A	14 45 18.5	
	comp=E,23nm,0.6s						
CFON	**Fontmartina**	6.31	29	P	Pn	14 43 25.1	0.0
	comp=E,1.3nm,0.2s,SNR=7.9						
CFON				S	Sn	14 44 30.6	-5.5
	comp=E,5.1nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	6.45	321	*e*Pn	Pn	14 43 29.8	+2.8
MVO				*e*Sn	Sn	14 44 38.0	-1.4
MVO				A	A	14 45 27.0	
	comp=E,15nm,0.6s						
MVO	**Moncorvo**	6.45	321	P	Pn	14 43 29.1	+2.1
	comp=E,1.6nm,0.2s,SNR=7.9						
MVO				S	Sn	14 44 37.4	-2.1
	comp=E,3.2nm,0.1s,SNR=7.9						
PSBE	**So Bento**	6.52	302	*e*Pn	Pn	14 43 29.3	+1.3
PSBE				*e*Sn	Sn	14 44 40.4	-0.8
PSBE				A	A	14 45 40.0	
	comp=E,17nm,0.6s						
PCAS	**Casmilo, Conde**	6.59	307	*e*Pn	Pn	14 43 28.8	-0.1
PCAS				*e*Sn	Sn	14 44 40.4	-2.5
PCAS				A	A	14 45 39.4	
	comp=E,16nm,0.6s						
EORO	**Oroz-Betelu**	6.60	2	P	Pn	14 43 31.7	+2.6
	comp=E,2.4nm,0.4s,SNR=7.0						
PVIS	**Viseu**	6.61	314	*e*Pn	Pn	14 43 31.4	+2.2
PVIS				*e*Sn	Sn	14 44 41.7	-1.8
PVIS				A	A	14 45 38.0	
	comp=E,11nm,0.6s						
COI	**Coimbra**	6.62	308	*e*Sn	Sn	14 44 41.9	-1.7
PMAFR	**Mafra**	6.64	296	*e*Sn	Sn	14 44 42.7	-1.3
ETSF	**Etsaut**	6.65	7	*e*Pn	Pn	14 43 29.1	-0.7
ETSF	**Etsaut**	6.65	7	*e*P	Pn	14 43 34.1	+4.3
ETSF				*e*Sn	Sn	14 44 41.2	-3.3
	comp=E,0.7nm,0.3s						
CLLI	**Llivia**	6.78	23	P	Pn	14 43 32.7	+1.1
	comp=E,0.5nm,0.2s,SNR=7.9						
CLLI				S	Sn	14 44 45.6	-2.1
	comp=E,0.6nm,0.3s,SNR=7.9						
SJPF	**Ste Jean**	6.83	2	*e*Pn	Pn	14 43 31.9	-0.2
SJPF	**Ste Jean**	6.83	2	*e*P	Pn	14 43 36.2	+4.1
SJPF				*e*Sn	Sn	14 44 44.1	-4.5
	comp=E,1.2nm,0.3s						
ATE	**Arette**	6.83	6	P	Pn	14 43 34.1	+1.9
	comp=E,0.8nm,0.1s,SNR=7.9						
OUZM	**OUZ**	6.87	220	P	Pn	14 43 34.7	+1.9
OUZM				S	Sn	14 44 53.2	+3.3
EPF	**Esparros**	6.90	12	*e*Pn	Pn	14 43 32.6	-0.6
EPF	**Esparros**	6.90	12	*e*P	Pn	14 43 37.5	+4.3
EPF				*e*Sn	Sn	14 44 47.0	-3.6
	comp=E,1.3nm,0.4s						
ECAL	**Calabor**	6.91	326	P	Pn	14 43 35.4	+2.1
	comp=E,1.2nm,0.3s,SNR=7.9						
ECAL				S	Sn	14 44 50.2	-0.5
	comp=E,2.4nm,0.3s,SNR=7.9						
EALK	**Alkurruntz**	6.92	1	P	Pn	14 43 36.1	+2.6
	comp=E,15nm,0.4s,SNR=12						
POLO	**Lamas de Olo**	7.00	318	*e*Pn	Pn	14 43 37.4	+2.8
POLO				*e*Sn	Sn	14 44 52.3	-0.7
ELAN	**Lanestosa**	7.08	349	P	Pn	14 43 36.6	+1.1
	comp=E,1.6nm,0.4s,SNR=7.0						
PCAB	**Cabril**	7.36	319	*e*Pn	Pn	14 43 42.3	+2.8
PCAB				*e*Sn	Sn	14 45 00.8	-1.0
ELOB	**Lobios**	7.49	320	P	Pn	14 43 42.6	+1.3
	comp=E,2.1nm,0.3s,SNR=7.9						
ELOB				S	Sn	14 45 02.7	-2.4
	comp=E,2.8nm,0.3s,SNR=7.9						
EARI	**Arriondas**	7.53	340	P	Pn	14 43 43.6	+1.8
	comp=E,1.1nm,0.3s,SNR=7.9						
EARI				S	Sn	14 45 03.5	-2.5
	comp=E,0.3nm,0.3s,SNR=7.9						
MTLF	**Montolieu**	7.64	22	*e*Pn	Pn	14 43 42.5	-0.7
MTLF	**Montolieu**	7.64	22	*e*P	Pn	14 43 47.1	+3.9
PGAV	**Gavieira, Arco**	7.67	320	*e*Pn	Pn	14 43 46.6	+2.8
PGAV				*e*Sn	Sn	14 45 08.8	-0.7
LFF	**La Frestale**	8.83	11	*e*P	Pn	14 44 04.1	+4.6
LASF	**Ste Croix**	8.84	27	*e*P	Pn	14 44 03.7	+4.0
KEST	**Kesra**	8.90	90	Pn	Pn	14 43 56.9	-3.8
	comp=E,0.3nm,0.3s,baz=346,slow=4.2,SNR=1.3						
CAF	**Calviac**	9.07	17	*e*P	Pn	14 44 07.2	+4.3
LMR	**La Mourre**	9.41	39	*e*Pn	Pn	14 44 05.4	-2.1
LMR	**La Mourre**	9.41	39	*e*P	Pn	14 44 11.0	+3.5
LMR				*e*Sn	Sn	14 45 44.0	-8.1
	comp=E,1.0nm,0.2s						
SBF	**Sospel**	10.26	40	*e*P	Pn	14 44 22.3	+3.1
SBF				*e*Sn	Sn	14 46 04.6	-8.5
	comp=E,4.1nm,0.2s						
PGF	**Pioggiola**	10.32	49	*e*Pn	Pn	14 44 17.3	-2.8
PGF	**Pioggiola**	10.32	49	*e*P	Pn	14 44 22.6	+2.5
PGF				*e*Sn	Sn	14 46 04.3	-10
	comp=E,2.0nm,0.5s						
TORD	**Torodi Ar. Bea**	23.23	172	P	P	14 47 00.3	+1.6
	comp=E,0.3nm,0.4s,baz=351,slow=8.8,SNR=2.5						

NNC 16 14:44:46.4±7.3**, 36°.98N**×**70°.21E, h0^{km}, mb3.9, mpv3.5, 3C-2D, Error ellipse: s-maj=59.6km s-min=56.4km az=46.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK02	**Karatay Array**	6.12	2	⇓P	Pn	14 46 18.9	+0.9
	2.4nm,0.6s,baz=182,slow=13						
KK02				⇑S	Sn	14 47 30.6	+1.9
	2.9nm,0.3s,baz=187,slow=20						
AAK	**Ala-Archa**	6.54	29	⇑P	Pn	14 46 24.1	+0.1
	1.7nm,0.6s						
AAK				⇓S	Sn	14 47 39.4	+0.1
	10nm,0.7s						
TKM2	**Tokmak 2**	7.23	33	⇑P	Pn	14 46 32.7	-0.8
	2.5nm,0.5s						

NNC 16 15:08:58.4±5.4**, 38°.57N**×**74°.27E, h0^{km}, mb3.8, mpv3.2, 3C-3D, Error ellipse: s-maj=41.4km s-min=27.5km az=145.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	4.07	2	⇓Pg	Pb	15 10 13.2	+2.2
	5.1nm,0.6s						
AAK				⇑Lg	Lg	15 11 07.8	
	14nm,1.0s						
MRKS	**Merke**	4.25	350	Pg	Pb	15 10 15.0	+0.9
	3.2nm,0.4s						
MRKS				Lg	Lg	15 11 15.8	
	14nm,0.5s						
KST	**Kastek**	4.65	15	Pg	Pb	15 10 23.6	+2.7
	2.1nm,0.3s						
KST				Lg	Lg	15 11 30.4	
	8.7nm,0.3s						
DGS	**Degeres**	4.81	13	Pg	Pb	15 10 21.6	-2.0
	1.5nm,0.6s						
DGS				Lg	Lg	15 11 27.4	
	15nm,0.3s						
KRBS	**Karabastau**	5.23	11	Pg	Pb	15 10 31.8	+1.1
	0.7nm,0.6s						
KRBS				Lg	Lg	15 11 45.1	
	5.5nm,0.3s						
KK02	**Karatay Array**	5.35	329	⇑Pn	Pn	15 10 22.3	+2.8
	1.7nm,0.3s,baz=153,slow=12						
KK02				⇓Sn	Sn	15 11 22.4	+0.5
	7.2nm,0.7s,baz=151,slow=23						
AB31	**Akbulak array**	14.83	321	⇑Pn	Pn	15 12 29.3	+0.1
	1.3nm,0.9s,baz=260,slow=34,SNR=9.1						
AKTO	**Aktyubinsk**	16.55	321	⇓Pn	P	15 12 53.3	-1.0
	1.3nm,0.6s						

JMA ***16*** *15:14:07.6±0.1, 37°.15N×142°.33E, h18^{km}±3^{km}, M3.6*
IDC ***16*** *15:14:08.0±1.1, 37°.16N×142°.30E, h0^{km}, mb3.5/6, mb1 3.7/9, mb1mx3.3/49, mbtmp3.6/9, ML2.9/3, Error ellipse: s-maj=26.8km s-min=20.8km az=110.0*
ISC 16 15:14:08.5±0.8**, 37°.18N**±0°.05×**142°.28E**±0°.06**, h9^{km}, n24, σ1^{s}.67**/25**, mb3.5**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	1.14	280	P	Pb	15 14 29.0	-1.3
JFK				*e*S	Sg	15 14 44.4	-0.6
ONAJ	**Iwakimizuishiy**	1.19	267	*e*S	Sb	15 14 45.5	-1.2
JMST	**Minamisoumatoc**	1.23	296	P	Pn	15 14 30.4	-1.5
JIKH	**Ishinomakikobu**	1.30	330	P	Pn	15 14 31.7	-1.1
JMM	**Marumori**	1.36	300	P	Pn	15 14 32.5	-1.2
JMM				*e*S	Sn	15 14 50.9	-1.0
JIO	**Ouri**	1.47	330	P	Pn	15 14 34.1	-1.0
JFT	**Otama**	1.58	283	P	Pn	15 14 36.2	-0.5
JFT				*e*S	Sn	15 14 57.4	+0.1
MJAR	**Matsushiro Arr**	3.33	260	Pn	Pn	15 15 01.5	+0.8
	0.3nm,0.3s,baz=82,slow=15,SNR=2.7						
MJAR				Sn	Sn	15 15 43.2	+2.9
	0.3nm,0.3s,baz=73,slow=26,SNR=2.5						
MAT	**Matsushiro**	3.33	260	P	Pn	15 15 02.0	+1.3
MAT				*e*S	Sn	15 15 41.9	+1.5
JHJ	**Hachijo jima 2**	4.54	207	Pn	Pn	15 15 18.0	+0.6
	12nm,0.3s,baz=240,slow=23,SNR=1.7						
JHJ				Sn	Sn	15 16 08.8	-1.5
	6.2nm,0.3s,baz=114,slow=12,SNR=1.7						
ASAJ	**Asahikawa**	6.93	2	Pn	Pn	15 15 51.3	+1.1
	0.1nm,0.3s,baz=91,slow=31,SNR=1.0						
ASAJ				Sn	Sn	15 17 08.2	-0.9
	0.2nm,0.3s,baz=136,slow=24,SNR=1.7						
JCJ	**Chichijima**	10.06	180	Sn	Sn	15 18 20.8	-5.3
	3.0nm,0.3s,baz=292,slow=8.6,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	27.64	122	T	T	15 48 55.0	
	baz=315,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	27.64	122	T	T	15 49 14.5	
	baz=315,slow=75,SNR=9.5						
H11N3	**WAKE ISLAND Hy**	27.65	122	T	T	15 49 11.9	
	baz=315,slow=75,SNR=8.8						
SONM	**Songino Array**	28.28	304	P	P	15 20 02.8	+0.6
	0.4nm,0.5s,baz=100,slow=8.1,SNR=2.5						
H11S1	**WAKE ISLAND Hy**	28.36	124	T	T	15 50 25.1	
	baz=316,slow=76,SNR=9.6						
H11S3	**WAKE ISLAND Hy**	28.37	124	T	T	15 50 27.5	
	baz=316,slow=76,SNR=9.7						
H11S2	**WAKE ISLAND Hy**	28.38	124	T	T	15 50 34.6	
	baz=316,slow=76,SNR=9.7						
KURBB	**Kurchatov Arra**	46.45	308	P	P	15 22 36.6	+1.1
	0.8nm,0.2s,baz=82,slow=8.3,SNR=4.5						
ILAR	**Eielson Array**	49.00	32	P	P	15 22 56.4	+1.3
	0.5nm,0.9s,baz=277,slow=7.0,SNR=4.2						
WRA	**Warramunga Arr**	57.31	189	P	P	15 23 57.1	+0.4
	0.5nm,0.6s,baz=3.5,slow=7.5,SNR=6.9						
ASAR	**Alice Springs**	61.04	189	P	P	15 24 23.5	+1.0
	0.1nm,0.7s,baz=13,slow=10,SNR=2.0						
TXAR	**Lajitas Array**	89.48	53	P	P	15 27 07.3	+0.9
	0.1nm,0.4s,baz=276,slow=3.5,SNR=1.9						

IDC ***16*** *15:15:29.4±1.4, 36°.40N×69°.29E, h0^{km}, mb3.7/9, mb1 3.9/15, mb1mx3.6/56, mbtmp3.8/15, ML3.7/6, MS4.4/2, Ms1 4.4/2, ms1mx2.8/43, Error ellipse: s-maj=24.6km s-min=20.2km az=146.0*
NNC ***16*** *15:15:37.2±5.0, 36°.70N×69°.15E, h118^{km}±101^{km}, mb3.7, mpv4.1, Error ellipse: s-maj=69.8km s-min=38.5km az=143.0*
ISC 16 15:15:35.7±1.1**, 36°.6N**±0°.1×**69°.13E**±0°.08**, h43^{km}, n31, σ1^{s}.56**/32**, mb3.7**/8**, 3C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	6.57	31	P	Pn	15 17 10.2	+0.1
	SNR=34						
KK02	**Karatay Array**	6.59	9	⇑P	Pn	15 17 10.1	0.0
	3.4nm,0.4s						
UCH	**Uchtor**	7.00	35	P	Pn	15 17 16.6	+0.4
	SNR=23						
EKS2	**Erkin-Say**	7.04	29	P	Pn	15 17 17.6	+1.2
	SNR=9.0						
AAK	**Ala-Archa**	7.32	33	Pn	Pn	15 17 20.7	+0.5
	5.1nm,0.3s,baz=208,slow=6.8,SNR=76						
AAK				Sn	Sn	15 18 43.3	+1.2
	0.7nm,0.3s,baz=9.9,slow=18,SNR=1.6						
AAK				Lg	Lg	15 19 21.3	
	0.1nm,0.3s,baz=352,slow=19,SNR=1.4						
AAK	**Ala-Archa**	7.32	33	P	Pn	15 17 20.8	+0.5
	SNR=33						
AAK	**Ala-Archa**	7.32	33	⇑P	Pn	15 17 20.6	+0.4
	16nm,0.6s						
AAK				S	Sn	15 18 41.3	-0.8
	4.2nm,0.5s						
KBK	**Karagaybulak**	7.54	35	P	Pn	15 17 24.3	+1.1
	SNR=11						
CHMS	**Chumysh**	7.72	32	P	Pn	15 17 26.1	+0.5
	SNR=24						
USP	**Ospenovka**	7.84	30	P	Pn	15 17 26.9	-0.3
	SNR=16						
TKM2	**Tokmak 2**	8.05	36	P	Pn	15 17 30.4	+0.2
	SNR=5.8						
TKM2	**Tokmak 2**	8.05	36	⇑P	Pn	15 17 29.7	-0.6
	4.3nm,0.7s						
GEYT	**Alibeck**	8.88	282	Pn	Pn	15 17 39.9	-1.6
	0.6nm,0.3s,baz=102,slow=12,SNR=2.5						
GEYT				Sn	Sn	15 19 22.3	+2.1
	1.0nm,0.3s,baz=127,slow=16,SNR=2.2						
MKAR	**Makanchi Array**	14.14	40	Pn	Pn	15 18 51.2	-2.2
	0.1nm,0.3s,baz=222,slow=12,SNR=4.4						
AB31	**Akbulak array**	14.32	335	P	Pn	15 18 52.1	-3.5
	8.8nm,0.7s,baz=154,slow=12,SNR=117						
KURBB	**Kurchatov Arra**	15.57	23	Pn	Pn	15 19 08.0	-4.2
	0.1nm,0.3s,baz=213,slow=10,SNR=5.1						
AKTO	**Aktyubinsk**	15.99	333	Pn	Pn	15 19 15.9	-1.5
	0.5nm,0.3s,baz=143,slow=15,SNR=15						
AKTO	**Aktyubinsk**	15.99	333	⇓P	Pn	15 19 15.3	-2.1
	3.7nm,0.7s						
BVAR	**Borovoye Array**	16.46	3	Pn	Pn	15 19 21.3	-2.1
	0.4nm,0.3s,baz=185,slow=15,SNR=11						
ZALV	**Zalesovo Beam**	20.49	27	P	P	15 20 09.0	-0.8
	1.4nm,0.4s,baz=214,slow=11,SNR=11						
ARU	**Arti**	21.09	344	P	P	15 20 16.7	+0.5
	0.4nm,0.4s,baz=141,slow=9.3,SNR=3.9						
SONM	**Songino Array**	29.53	56	P	P	15 21 37.0	+0.8
	0.3nm,0.5s,baz=277,slow=7.1,SNR=3.1						
NB2	**NORSAR Subarra**	43.40	323	P	P	15 23 34.9	+1.1
	comp=Z,1.4nm,0.6s,baz=97,slow=8.6						
NOA	**NORSAR Array B**	43.40	323	P	P	15 23 35.1	+1.2
	comp=Z,1.5nm,0.6s,baz=98,slow=8.1,SNR=6.1						
TIXI	**Tiksi**	46.26	22	P	P	15 23 57.2	+0.9
	comp=Z,0.8nm,0.6s,baz=261,slow=2.9,SNR=4.6						
JNU	**Nakatsue**	50.03	75	LR	LR	15 47 58.0	
	comp=Z,488nm,20.1s,baz=269,slow=39						
DAV	**Davao City (W)**	59.07	105	LR	LR	15 53 34.6	
	comp=Z,204nm,19.8s,baz=243,slow=39						
INK	**Inuvik**	74.05	9	P	P	15 27 07.8	+1.2
	comp=Z,1.1nm,0.6s,baz=95,slow=7.1,SNR=4.2						
ILAR	**Eielson Array**	75.09	15	P	P	15 27 13.7	+1.0
	comp=Z,0.5nm,0.9s,baz=292,slow=7.1,SNR=4.5						
YKA	**Yellowknife Ar**	81.21	2	P	P	15 27 48.2	+1.5
	comp=Z,0.8nm,0.6s,baz=351,slow=5.3,SNR=6.1						
ASAR	**Alice Springs**	85.55	124	P	P	15 28 07.8	-1.7
	comp=Z,0.5nm,1.1s,baz=323,slow=6.3,SNR=4.3						

SKHL ***16*** *15:17:11.5±0.8, 47°.50N×145°.90E, h444^{km}±8^{km}, mb4.6/9,*

msha4.9/7
*IDC **16** 15:17:14.1±1.5, 47°.54N×145°.16E, h443km±18km, mb3.1/14, mb1 3.3/17, mb1mx3.1/42, mbtmp4.0/17, Error ellipse: s-maj=15.7km s-min=11.6km az=112.0*
ISC 16 15:17:13.3±0.6, **47°.30N**±0°.05×**145°.43E**±0°.08, **h450km, n42, σ1ˢ.78**/53, **mb3.5**/14, **Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YSS	Yuzh-Sakhalins	1.86	260	eP	P	15 18 13.5	+0.5
YSS				AMB	AMB	15 18 14.8	
	10.0nm,0.7s						
YSS				eS	S	15 19 01.5	0.0
YSS				A	A	15 19 02.0	
	60nm,0.9s						
YSS				A	A	15 19 02.0	
	100nm,0.9s						
KUR	Kuril'sk	2.67	140	eP	P	15 18 16.2	-1.8
KUR				AMB	AMB	15 18 18.2	
	30nm,0.5s						
UGL	Uglegorsk	2.87	310	eP	P	15 18 18.6	-0.6
UGL				AMB	AMB	15 18 20.4	
	110nm,0.8s						
JSE	Soyaes	3.06	221	P	P	15 18 22.0	+1.1
JWK2	Keihoku	3.15	232	P	P	15 18 23.2	+1.7
YUK	Yuzh-Kuril'sk	3.28	175	eP	P	15 18 22.8	+0.3
YUK				AMB	AMB	15 18 25.3	
	90nm,0.5s						
YUK				eS	S	15 19 19.0	+0.3
YUK				A	A	15 19 26.2	
	50nm,0.6s						
YUK				A	A	15 19 26.2	
	70nm,0.6s						
GRPR	Tuman	3.31	176	eP	P	15 18 23.3	+0.5
GRPR				AMB	AMB	15 18 24.0	
	40nm,0.1s						
GRPR				eS	S	15 19 19.5	+0.2
JRA	Rausu	3.37	184	P	P	15 18 24.5	+1.3
JTKR	Abashiri--Toko	3.50	198	P	P	15 18 25.3	+1.0
GLVR	Golovnino	3.56	179	eP	P	15 18 25.3	+0.5
GLVR				AMB	AMB	15 18 27.0	
	40nm,0.2s						
GLVR				eS	S	15 19 22.6	-0.2
GLVR				A	A	15 19 28.0	
	30nm,0.2s						
GLVR				A	A	15 19 28.0	
	20nm,0.2s						
SHO	Shikotan	3.57	163	eP	P	15 18 23.9	-1.0
SHO				AMB	AMB	15 18 24.8	
	80nm,0.3s						
SHO				eS	S	15 19 19.9	-3.0
SHO				A	A	15 19 21.4	
	70nm,0.3s						
SHO				A	A	15 19 21.4	
	110nm,0.3s						
ASAJ	Asahikawa	3.75	213	P	P	15 18 27.6	+1.3
	4.2nm,0.3s,baz=10.0,slow=12,SNR=40						
JKK2	Kamakawa 2	3.91	210	P	P	15 18 29.2	+1.4
NMR	Nemuro--Hokkai	3.94	177	eP	P	15 18 27.1	-0.9
NMR				eS	S	15 19 26.9	-1.7
NEM2	Nemuro 2	3.94	177	P	P	15 18 26.9	-1.1
NEM2				eS	S	15 19 26.1	-2.6
TYV	Tymovskoe	4.00	334	eP	P	15 18 26.5	-1.8
TYV				AMB	AMB	15 18 28.6	
	40nm,0.6s						
TYV				eS	S	15 19 25.8	-3.8
TYV				A	A	15 19 37.5	
	5.0nm,0.8s						
TYV				A	A	15 19 37.5	
	7.0nm,0.8s						
JAR	Ashorobuto	4.17	197	P	P	15 18 30.9	+0.8
JAK	Akkeshi	4.33	187	P	P	15 18 31.2	-0.3
JAK				eS	S	15 19 32.4	-2.7
JHR	Hokuryu	4.41	218	P	P	15 18 33.9	+1.7
JFR	Furan	4.59	207	P	P	15 18 35.5	+1.6
JCH	Churui	4.91	198	P	P	15 18 36.3	-0.6
JCH				eS	S	15 19 40.8	-4.1
JEW	Eniwo	5.27	214	P	P	15 18 41.7	+1.3
JNBK	Urakawa-nobuka	5.37	202	P	P	15 18 41.0	-0.3
JKB	Kayabe	6.25	212	P	P	15 18 50.2	-0.1
JKB				eS	S	15 20 05.4	-4.1
JOT	Ohata	6.70	210	eS	S	15 20 13.3	-4.6
SEY	Seymchan	16.15	11	P	P	15 20 36.1	-0.1
	1.2nm,0.3s,baz=192,slow=12,SNR=12						
YAK	Yakutsk	17.27	334	P	P	15 20 45.3	-2.7
	0.0nm,0.3s,baz=216,slow=2.0,SNR=6.4						
ILAR	Eielson Array	39.40	39	P	P	15 24 03.0	+0.7
	1.3nm,0.8s,baz=277,slow=7.5,SNR=16						
MKAR	Makanchi Array	41.96	294	P	P	15 24 22.6	-0.5
	0.7nm,0.5s,baz=70,slow=7.9,SNR=8.9						
INK	Inuvik	43.99	32	P	P	15 24 38.2	-0.4
	0.8nm,0.3s,baz=300,slow=11,SNR=8.5						
YKA	Yellowknife Ar	53.55	35	P	P	15 25 50.5	+0.5
	1.5nm,0.8s,baz=303,slow=9.0,SNR=4.1						
FINES	FINESS Array B	61.17	331	P	P	15 26 41.6	-0.8
	3.9nm,0.8s,baz=37,slow=7.4,SNR=8.8						
NB2	NORSAR Subarra	65.86	338	P	P	15 27 12.0	-0.7
	comp=Z,0.6nm,0.5s,baz=31,slow=6.5						
NOA	NORSAR Array B	65.86	338	P	P	15 27 12.0	-0.7
	comp=Z,1.1nm,0.7s,baz=34,slow=5.8,SNR=4.8						
KBZ	Khabaz	66.57	310	P	P	15 27 17.4	+0.1
	comp=Z,1.2nm,0.8s,baz=64,slow=7.1,SNR=4.7						
NVAR	Mina Array Bea	66.73	58	P	P	15 27 20.3	+1.6
	comp=Z,0.3nm,0.5s,baz=301,slow=6.2,SNR=2.3						
WRA	Warramunga Arr	67.67	191	P	P	15 27 26.4	+2.0
	comp=Z,1.1nm,0.6s,baz=6.7,slow=6.6,SNR=17						
AKASG	Malin Array Be	68.02	322	P	P	15 27 25.0	-1.1
	comp=Z,0.9nm,0.5s,baz=37,slow=6.2,SNR=6.1						
PDAR	Pinedale Array	68.54	50	P	P	15 27 31.0	+1.2
	comp=Z,0.6nm,0.6s,baz=312,slow=2.2,SNR=5.9						
ASAR	Alice Springs	71.39	191	P	P	15 27 49.8	+3.0
	comp=Z,0.7nm,0.5s,baz=359,slow=4.8,SNR=33						
BRTR	Keskin Array B	74.25	312	P	P	15 28 03.2	-0.2
	comp=Z,0.7nm,0.5s,baz=46,slow=6.2,SNR=1.8						
TXAR	Lajitas Array	81.66	56	P	P	15 28 45.8	+2.2
	comp=Z,0.2nm,0.5s,baz=303,slow=5.1,SNR=3.6						

*IDC **16** 15:41:24.6±3.0, 10°.12S×112°.19E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.2/39, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=162.2km s-min=24.9km az=46.0*
*DJA **16** 15:41:30.6±0.3, 10°S±3°×11°3E±°, h10km, M3.9/8, mb4.2/4, MLv3.8/8*
ISC 16 15:41:32.4±1.1, **9°.8S**±0°.1×**112°.85E**±0°.09, **h35km, n17, σ1ˢ.48**/17, **mb3.2**/3, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	Gumukmas	1.59	22	P	Pn	15 41 57.1	-0.9
JAGI	Jajag, Banyuwa	1.81	45	P	Pn	15 41 59.8	-1.3
BLJI	Banyuglugur	2.13	20	P	Pn	15 42 06.1	+0.6
PCJI	Pacitan	2.27	313	P	Pn	15 42 07.9	+0.5
ABJI	Asem Bagus	2.38	35	P	Pn	15 42 10.4	+1.5
WOJI	Wonogiri, Jawa	2.70	315	P	Pn	15 42 14.4	+1.1
SRBI	Singaraja	2.86	55	P	Pn	15 42 16.5	+0.9
UGM	Wanagama	2.94	308	P	Pn	15 42 18.0	+1.3
TWSI	Taliwang, Sumb	4.11	76	P	Pn	15 42 34.3	+1.6
CMJI	Cimerak	4.77	294	P	Pn	15 42 43.8	+2.0
PLAI	Plampang	4.95	80	P	Pn	15 42 45.6	+1.3
CGJI	Cibinong	7.74	293	P	Pn	15 43 24.8	+2.1
EDFI	Ende, Flores	8.78	84	P	Pn	15 43 39.0	+2.0
	2.5nm,1.2s						
FITZ	Fitzroy Crossi	14.92	125	Pn	Pn	15 45 00.2	-0.7
	0.1nm,0.3s,baz=305,slow=11,SNR=1.4						
FITZ				Sn	Sn	15 47 36.1	-8.9
	0.0nm,0.3s,baz=327,slow=22,SNR=1.0						
WRA	Warramunga Arr	23.08	118	P	P	15 46 35.6	+0.4
	0.4nm,0.8s,baz=290,slow=11,SNR=2.8						
ASAR	Alice Springs	24.40	127	P	P	15 46 48.5	+0.8
	0.7nm,0.8s,baz=303,slow=8.5,SNR=10						
MKAR	Makanchi Array	62.56	337	P	P	15 51 50.9	-1.9
	0.6nm,0.5s,baz=152,slow=7.5,SNR=8.9						

*IDC **16** 15:53:14.4±2.2, 5°.48S×151°.67E, h60km±19km, mb3.8/5, mb1 4.0/6, mb1mx3.6/34, mbtmp4.1/6, ML1.9/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/29, Error ellipse: s-maj=61.2km s-min=11.7km az=124.0*
ISC 16 15:53:13.9±1.4, **5°.5S**±0°.2×**151°.7E**±0°.3, **h57km, n8, σ0ˢ.80**/10, **mb4.0**/5, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.22	13	P	Pn	15 53 34.6	-0.2
	7.8nm,0.3s,baz=351,slow=0.1,SNR=218						
KRVT				S	Sn	15 53 51.2	+0.9
	8.8nm,0.3s,baz=313,slow=24,SNR=1.2						
PMG	Port Moresby	5.98	229	P	Pn	15 54 40.8	+1.0
	2.1nm,0.3s,baz=38,slow=6.4,SNR=7.7						
PMG				S	Sn	15 55 46.5	-0.5
	1.9nm,0.3s,baz=169,slow=14,SNR=2.2						
PMG				LR	LR	15 56 47.9	
	comp=Z,78nm,18.7s,baz=146,slow=36						
WRA	Warramunga Arr	22.20	228	P	P	15 58 05.1	-0.6
	7.7nm,0.6s,baz=52,slow=9.8,SNR=63						
ASAR	Alice Springs	24.93	222	P	P	15 58 32.9	+0.9
	7.1nm,0.6s,baz=58,slow=8.8,SNR=119						
STKA	Stephens Creek	27.91	199	P	P	15 58 58.5	-0.2
	0.7nm,0.7s,baz=27,slow=9.0,SNR=2.2						
FITZ	Fitzroy Crossi	28.40	242	P	P	15 59 02.3	-0.9
	1.6nm,0.4s,baz=52,slow=8.3,SNR=5.6						
ILAR	Eielson Array	83.20	22	P	P	16 05 33.9	+0.1
	0.4nm,0.8s,baz=237,slow=6.3,SNR=2.5						
TORD	Torodi Ar. Bea	149.51	287	PKPbc	PKPbc	16 12 57.4	-0.5
	0.4nm,0.6s,baz=75,slow=2.9,SNR=3.5						

*IDC **16** 16:38:30.2±13.0, 38°.28N×72°.26E, h0km, mb3.3/1, mb1 3.5/3, mb1mx3.2/30, mbtmp3.5/3, ML2.8/2, Error ellipse: s-maj=227.3km s-min=89.9km az=86.0*
*SOME **16** 16:38:41.8, 38°.82N×73°.30E, h10km*
*NNC **16** 16:38:43.0±2.2, 38°.79N×73°.28E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=16.1km s-min=11.4km az=179.0*
ISC 16 16:38:43.9±1.9, **38°.88N**±0°.10×**73°.23E**±0°.06, **h10km, n25, σ3ˢ.07**/35, **6C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	3.27	6	P	Pn	16 39 36.3	+0.8
	SNR=33						
UCH	Uchtor	3.48	16	P	Pn	16 39 40.1	+1.6
	SNR=17						
EKS2	Erkin-Say	3.80	6	P	Pb	16 39 47.3	-3.8
	SNR=8.3						
MRKS	Merke	3.86	360	eP	Pb	16 39 53.9	+1.8
	10nm,0.5s						
MRKS				eS	Sg	16 40 46.1	-1.7
	19nm,0.7s						
MRKS	Merke	3.86	360	Pg	Pn	16 39 46.7	+3.3
	2.3nm,0.5s						
MRKS				Lg	Lg	16 40 46.9	
	19nm,0.7s						
AAK	Ala-Archa	3.87	14	P	Pn	16 39 45.7	+2.0
	SNR=12						
AAK	Ala-Archa	3.87	14	⇓Pn	Pn	16 39 45.4	+1.7
	5.6nm,0.5s						
AAK				⇓Pg	Pb	16 39 55.2	+2.8
	12nm,0.6s						
AAK				⇑Lg	Lg	16 40 46.8	
	34nm,1.1s						
ULHL	Ulahol	4.07	33	P	Pb	16 39 56.8	+1.1
	SNR=6.5						
TKM2	Tokmak 2	4.41	23	⇑Pg	Pb	16 40 04.3	+2.6
	11nm,0.8s						
TKM2				⇑Lg	Lg	16 41 04.7	
	26nm,1.4s						
KST	Kastek	4.64	26	eP	Pb	16 40 06.5	+1.0
	3.5nm,0.6s						
KST				eS	Sb	16 41 07.6	+6.1
	12nm,0.6s						
KST	Kastek	4.64	26	Pg	Pb	16 40 02.8	-2.7
	3.5nm,0.6s						
KST				Lg	Lg	16 41 14.4	
	12nm,0.6s						
KK02	Karatay Array	4.69	335	⇓Pn	Pn	16 39 56.2	+1.4
	3.1nm,0.6s						
KK02				⇑Sn	Sn	16 40 54.2	+4.9
	9.0nm,0.6s						
DGS	Degeres	4.76	23	eP	Pb	16 40 09.6	+2.1
	12nm,0.9s						
DGS				eS	Sg	16 41 12.6	-4.1
	8.4nm,0.8s						
BRLS	Borolday	4.88	329	eP	Pb	16 40 08.7	-0.7
	2.2nm,0.3s						
BRLS				eS	Sb	16 41 11.0	+2.9
	6.0nm,0.5s						
KRBS	Karabastau	5.15	20	eP	Pb	16 40 17.5	+3.4
	6.6nm,0.7s						
KRBS				eS	Sg	16 41 26.3	-2.9
	7.4nm,0.9s						
KRBS	Karabastau	5.15	20	Pg	Pb	16 40 12.4	-1.6
	6.6nm,0.7s						
KRBS				Lg	Lg	16 41 30.7	
	7.4nm,0.9s						
MDOK	Medeo	5.16	33	⇓Pg	Pb	16 40 18.1	+3.8
	8.6nm,0.6s						
MDOK				Lg	Lg	16 41 27.7	
	19nm,0.9s						
KOTS	Kotyrbulak	5.24	33	eP	Pg	16 40 20.4	-3.9
	13nm,0.7s						
KOTS				eS	Sg	16 41 31.6	-0.6
	23nm,0.9s						
KOTS	Kotyrbulak	5.24	33	Pg	Pb	16 40 17.0	+1.2
	13nm,0.7s						
KOTS				Lg	Lg	16 41 38.9	
	23nm,0.9s						
KTBS	Karatobe	5.48	27	eP	Pb	16 40 21.8	+2.1
	5.0nm,0.6s						
KTBS				eS	Sg	16 41 34.2	-5.6
	8.3nm,0.6s						
KTBS	Karatobe	5.48	27	Pg	Pb	16 40 16.1	-3.6
	5.0nm,0.6s						
KTBS				Lg	Lg	16 41 36.7	
	8.3nm,0.6s						
PDGK	Podgornoye	6.49	45	⇓Pn	Pn	16 40 20.6	+1.1
	2.5nm,0.8s						
PDGK				⇑Pg	Pb	16 40 41.4	+4.5
	7.4nm,1.1s						
PDGK				⇑Lg	Lg	16 42 09.1	
	9.9nm,0.9s						
MKAR	Makanchi Array	10.33	37	Pn	Pn	16 41 13.8	+1.7
	0.0nm,0.3s,baz=226,slow=15,SNR=2.8						
ZALV	Zalesovo Beam	17.02	24	P	Pn	16 42 40.2	-1.7
	0.3nm,0.3s,baz=208,slow=11,SNR=5.7						
SONM	Songino Array	25.55	59	P	P	16 44 09.5	-3.4
	0.4nm,0.9s,baz=267,slow=8.7,SNR=2.2						

NNC 16 17:06:15.6±4.1, **36°.86N**×**71°.00E, h0km, mb3.8, mpv3.5, 3C-3D, Error ellipse: s-maj=37.4km s-min=34.4km az=109.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK02	Karatay Array	6.24	357	⇓P	Pn	17 07 50.1	+1.0
	1.4nm,0.3s						
KK02				⇑S	Sn	17 09 01.8	+0.7
	1.5nm,0.5s						
AAK	Ala-Archa	6.36	24	⇓P	Pn	17 07 50.9	0.0
	2.6nm,0.6s						
AAK				⇑S	Sn	17 09 05.8	+1.5
	3.1nm,0.6s						
TKM2	Tokmak 2	7.00	29	⇑P	Pn	17 07 58.7	-1.0
	2.7nm,0.7s						
AB31	Akbulak array	14.77	330	⇓P	Pn	17 09 45.2	-0.5
	0.6nm,0.6s,baz=163,slow=11,SNR=10.0						

DJA 16 17:12:54.1±0.3, **8°S**±5°×**11°3E**±°, **h10km, M4.2**/18, **mb4.4**/6, **MLv4.0**/18, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	Gumukmas	0.24	49	P	Pg	17 12 58.6	-0.4
BLJI	Banyuglugur	0.76	26	P	Pg	17 13 08.5	-0.2
JAGI	Jajag, Banyuwa	0.88	93	P	Pg	17 13 09.8	-1.3
ABJI	Asem Bagus	1.15	57	P	Pb	17 13 15.8	-0.3
DNP	Denpasar	1.94	97	P	Pn	17 13 27.8	+0.6
SRBI	Singaraja	1.96	80	P	Pn	17 13 27.5	0.0
PCJI	Pacitan	2.08	276	P	Pn	17 13 29.3	+0.3
WOJI	Wonogiri, Jawa	2.39	284	P	Pn	17 13 34.4	+1.1
UGM	Wanagama	2.76	281	P	Pn	17 13 39.4	+1.0
TWSI	Taliwang, Sumb	3.59	95	P	Pn	17 13 50.1	+0.2
KPJI	Karang Pucung	4.42	284	P	Pn	17 14 01.8	+0.5
PLAI	Plampang	4.48	95	P	Pn	17 14 03.7	+1.5
CMJI	Cimerak	4.81	277	P	Pn	17 14 06.8	+0.2
WBSI	Waikabubak, Su	6.17	102	P	Pn	17 14 24.4	-1.1
	0.1nm19nm,1.0s						
BKSI	Bulukumba	7.48	66	P	Pn	17 14 43.8	+0.4
	0.1nm8.8nm,0.4s						
BSSI	Bau Bau, Buton	7.52	73	P	Pn	17 14 44.5	+0.5
	0.2nm56nm,1.2s						
CGJI	Cibinong	7.72	283	P	Pn	17 14 47.2	+0.6
	0.3nm68nm,1.6s						
BNSI	Bone	7.89	60	P	Pn	17 14 49.1	+0.1

DDA 16 17:16:54.9, 38°.83N×37°.81E, h7km±1km, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEKM	Malatya_Hekimh	0.13	69	i P	Pg	17 16 57.6	-0.1
HEKM				IAML		17 17 00.0	
	comp=E,148nm,0.1s						
HEKM				i S	Sg	17 17 00.1	+0.4
AKCD	Akcadag	0.55	170	i P	Pg	17 17 05.2	-0.2
AKCD				i S	Sb	17 17 14.2	-0.7
AKCD				IAML		17 17 15.0	
	comp=N,18nm,0.1s						
AKCD				IAML		17 17 16.0	
	comp=E,13nm,0.1s						
CUKAN	kangal_SIVAS	0.55	331	i P	Pb	17 17 06.5	-0.5
CUKAN				i S	Sg	17 17 13.6	+0.8

ISK 16 17:17:04.6, 39°.26N×40°.22E, h6km, ML2.2/8, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YEDI	Yedisu-Bingol	0.31	55	PG	Pg	17 17 11.0	+0.3
YEDI				SG	Sg	17 17 16.1	+1.3
BNGB	Bingl	0.45	127	PG	Pg	17 17 13.5	+0.3
BNGB				SG	Sb	17 17 20.5	-1.4
ERZN	Erzincan	0.51	310	PG	Pg	17 17 14.5	+0.1
ERZN				SG	Sb	17 17 22.4	-1.3
KARO	Karliova-Bingo	0.64	85	PG	Pg	17 17 17.6	+0.6
BAYT	Aydıntepe-Bayb	1.13	357	PN	Pb	17 17 26.7	0.0
SVRC	Sivrice-ELAZID	1.13	219	PN	Pn	17 17 27.2	0.0
ILIC	ilic-Erzincan	1.30	279	PN	Pg	17 17 29.8	+0.3
ARPR	Arapgir-MALATY	1.48	264	PN	Pb	17 17 32.3	-0.2

*IDC **16** 17:22:28.4±1.5, 2°.63N×92°.00E, h0km, mb3.5/6, mb1 3.7/8, mb1mx3.6/37, mbtmp3.5/8, ML3.5/2, Error ellipse: s-maj=48.3km s-min=21.2km az=56.0*
ISC 16 17:22:33.8±1.2, **2°.7N**±0°.2×**92°.1E**±0°.1, **h35km, n8, σ1ˢ.04**/9, **mb3.4**/6, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.80	89	Pn	Pn	17 24 09.8	-1.5
	2.5nm,0.3s,baz=264,slow=7.2,SNR=8.0						
PSI				Sn	Sn	17 25 28.6	+1.0
	0.8nm,0.3s,baz=321,slow=20,SNR=0.9						
CMAR	Chiang Mai Arr	17.03	23	P	Pn	17 26 28.8	-0.6
	0.0nm,0.3s,baz=218,slow=13,SNR=8.0						
MKAR	Makanchi Array	44.75	350	P	P	17 30 44.2	+0.4
	0.2nm,0.4s,baz=172,slow=8.9,SNR=4.4						
SONM	Songino Array	46.63	13	P	P	17 30 60.0	+1.2
	0.1nm,0.4s,baz=199,slow=9.4,SNR=1.8						
WRA	Warramunga Arr	47.15	120	P	P	17 31 03.5	+0.4
	1.0nm,0.5s,baz=305,slow=9.1,SNR=16						
ASAR	Alice Springs	48.38	125	P	P	17 31 12.8	+0.1
	0.1nm,0.4s,baz=300,slow=7.7,SNR=12						
STKA	Stephens Creek	58.16	130	P	P	17 32 24.9	+0.4
	0.8nm,0.7s,baz=278,slow=9.1,SNR=1.4						
GERES	GERESS Array B	80.35	319	P	P	17 34 40.7	-1.0
	0.3nm,0.6s,baz=84,slow=3.1,SNR=2.1						

IDC 16 17:23:02.5±55.0, **16°.11S**×**177°.28W, h0km, mb4.0**/3, **mb1 4.2**/3, **mb1mx3.8**/29, **mbtmp4.0**/3, **Error ellipse: s-maj=1025.0km s-min=172.2km az=77.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	40.45	240	P	P	17 30 43.5	+0.5
	0.7nm,0.4s,baz=80,slow=6.1,SNR=2.8						
WRA	Warramunga Arr	46.04	258	P	P	17 31 28.1	-0.3
	0.3nm,0.2s,baz=94,slow=7.6,SNR=16						
ASAR	Alice Springs	46.34	253	P	P	17 31 30.4	-0.3
	2.3nm,0.4s,baz=90,slow=7.7,SNR=144						

*OSPL **16** 17:28:00.5±0.3, 17°.76N×67°.28W, h48km±4km, ML3.0*
*NEIC **16** 17:28:01.8±1.8, 17°.91N±0°.04×67°.42W±0°.04, h32km±10km, Error ellipse: s-maj=5.8km s-min=5.0km az=206.0*
*RSPR **16** 17:28:02.1, 17°.84N×67°.44W, h28km±5km, MD3.2/16*
ISC 16 17:28:01.7±0.9, **17°.88N**±0°.05×**67°.37W**±0°.03, **h32km, n54, σ0ˢ.95**/66, **11C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRPR	Cabo Rojo, PR	0.27	63	⇑eP	Pn	17 28 08.9	-0.6
CRPR	Cabo Rojo, PR	0.27	63	eS	Sn	17 28 14.9	+0.4
CRPR	Cabo Rojo, PR	0.27	63		Pn	17 28 08.9	-0.6
CRPR					Sn	17 28 14.9	+0.4
CRPR	Cabo Rojo, PR	0.27	63	i P	Pn	17 28 08.9	-0.6
CRPR				eS	Sn	17 28 15.0	+0.5
CRPR				IAML		17 28 15.6	
	comp=Z,4µm,0.1s						
MLPR	Magueyes Islan	0.32	74	⇑eP	Pn	17 28 09.7	-0.4
MLPR	Magueyes Islan	0.32	74	eS	Sn	17 28 16.4	+0.7
MLPR	Magueyes Islan	0.32	74		Pn	17 28 09.7	-0.4
MLPR					Sn	17 28 16.4	+0.7
MLPR	Magueyes Islan	0.32	74	IAML		17 28 16.4	
	comp=E,3µm,0.6s						
MLPR				IAML		17 28 17.4	
	comp=N,2µm,0.2s						
LSP	Las Mesas	0.39	42	⇑eP	Pn	17 28 10.7	-0.5
LSP	Las Mesas	0.39	42	eS	Sn	17 28 19.6	+2.0
IDE	Isla Desecheo	0.51	348	⇑eP	Pb	17 28 11.2	-1.2
IDE	Isla Desecheo	0.51	348	eS	Sb	17 28 19.4	-0.3
AGPR	Aguadilla, PR	0.63	23	⇑eP	Pn	17 28 13.7	-0.7
AGPR	Aguadilla, PR	0.63	23	eS	Sb	17 28 23.3	+0.3
AGPR	Aguadilla, PR	0.63	23		Pn	17 28 13.7	-0.7
AGPR					Sb	17 28 23.3	+0.3
AGPR	Aguadilla, PR	0.63	23	i P	Pn	17 28 13.7	-0.7
AGPR				eS	Sn	17 28 23.5	+0.1
AGPR				IAML		17 28 23.5	
	comp=Z,500nm,0.2s						
OBIP	Obispado Ponce	0.74	77	⇓eP	Pb	17 28 15.9	-0.2
OBIP	Obispado Ponce	0.74	77	eS	Sn	17 28 27.4	+1.3
OBIP	Obispado Ponce	0.74	77		Pb	17 28 15.9	-0.2
OBIP					Sn	17 28 27.4	+1.3
AOPR	Arecibo Observ	0.74	51	⇑eP	Pn	17 28 15.6	-0.4
AOPR	Arecibo Observ	0.74	51	eS	Sb	17 28 26.5	+0.4
AOPR	Arecibo Observ	0.74	51		Pn	17 28 15.6	-0.4
AOPR					Sb	17 28 26.5	+0.4
EMPR	Esperanza - Ma	0.99	53	⇑eP	Pb	17 28 20.0	-0.3
EMPR	Esperanza - Ma	0.99	53	eS	Sb	17 28 33.1	0.0
EMPR	Esperanza - Ma	0.99	53		Pb	17 28 20.0	-0.3
EMPR					Sb	17 28 33.1	0.0
PCDR	Punta Cana, DR	1.15	303	⇑eP	Pn	17 28 20.8	-0.7
PCDR	Punta Cana, DR	1.15	303	eS	Sb	17 28 39.0	+1.4
PCDR	Punta Cana, DR	1.15	303		Pn	17 28 20.8	-0.7
PCDR					Sb	17 28 39.0	+1.4
PCDR	Punta Cana, DR	1.15	303	i P	Pn	17 28 21.2	-0.3
PCDR				IAML		17 28 43.4	
	comp=Z,169nm,1.1s						
SJG	San Juan	1.18	79		Pn	17 28 21.9	0.0
SJG				IAML		17 28 41.2	
	comp=Z,219nm,0.4s						
SJG				IAML		17 28 43.9	
	comp=Z,204nm,0.5s						
IGPR	InterUniversit	1.20	86	⇓eP	Pn	17 28 21.9	-0.4
IGPR	InterUniversit	1.20	86	eS	Sn	17 28 37.5	0.0
PDPR	Patillas Dam,	1.28	84	Pn	Pb	17 28 23.8	-1.4
GCPR	Guaynabo City	1.29	71	⇑eP	Pn	17 28 23.7	+0.2
GCPR	Guaynabo City	1.29	71	eS	Sn	17 28 38.9	-0.8
GCPR	Guaynabo City	1.29	71		Pn	17 28 23.7	+0.2
GCPR					Sn	17 28 38.9	-0.8
HUMP	Col San Antoni	1.47	80	⇓eP	Pb	17 28 26.7	-1.6
HUMP	Col San Antoni	1.47	80	eS	Sb	17 28 46.8	+0.2
HUMP	Col San Antoni	1.47	80		Pb	17 28 26.7	-1.6
HUMP					Sb	17 28 46.8	+0.2
CBYP	Canovanas	1.49	75	⇓eP	Pn	17 28 26.3	+0.1
CBYP	Canovanas	1.49	75		Pn	17 28 26.3	+0.1
MTP	Monte Pirata	1.74	83	⇑eP	Pn	17 28 30.2	+0.6
MTP	Monte Pirata	1.74	83	eS	Sb	17 28 52.8	-1.6
MTP	Monte Pirata	1.74	83		Pn	17 28 30.2	+0.6
MTP					Sb	17 28 52.8	-1.6
MTP	Monte Pirata	1.74	83	IAML		17 28 53.6	
	comp=E,128nm,0.2s						

CUPR	Culebra, Puert	2.02	78	⇑eP	Pn	17 28 34.8	+1.3
CUPR	Culebra, Puert	2.02	78	eS	Sn	17 28 59.2	+1.4
CUPR	Culebra, Puert	2.02	78		Pn	17 28 34.8	+1.3
CUPR					Sn	17 28 59.2	+1.4
STVI	Saint Thomas	2.34	78	⇓eP	Pn	17 28 39.2	+1.3
STVI	Saint Thomas	2.34	78	eS	Sn	17 29 07.9	+2.4
STVI	Saint Thomas	2.34	78		Pn	17 28 39.2	+1.3
STVI					Sn	17 29 07.9	+2.4
SDDR	Presa de Saban	3.88	287		Pn	17 28 59.9	+0.7
SDDR				IAML		17 30 05.8	
	comp=E,36nm,0.7s						
SDDR				IAML		17 30 10.7	
	comp=E,25nm,0.8s						
BIRV	Birongo	7.44	172	Pn	Pn	17 29 47.8	-0.3
BAUV	El Baul	8.91	184	Pn	Pn	17 30 07.6	-0.6

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*UCR **16** 18:34:35.0±1.2, 12.°98N×88.°93W, h52^{km}±15^{km}, ML3.7*
*SNET **16** 18:34:35.0±1.2, 12.°98N×88.°92W, h53^{km}±14^{km}, ML3.7*
*INET **16** 18:34:35.1, 13.°04N×88.°87W, h61^{km}, ML2.3, MW2.5*
ISC 16 18:34:34.7±2.1**, 12.°9N**±0.°1×**88.°95W**±0.°05**, h48**^{km}±24^{km}**,**
n31, σ0.^{s}39/50**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJI	Alcalda de J	0.55	42	eP	Pn	18 34 46.5	+0.1
ALJI				eS	Sn	18 34 55.8	+0.9
ALJI				IAML		18 34 56.3	
	comp=Z,4μm,0.1s						
ALJI	Alcalda de J	0.55	42	eP	Pn	18 34 46.5	+0.1
ALJI				eS	Sn	18 34 55.8	+0.9
ALJI				IAML		18 34 56.3	
	comp=Z,4μm,0.1s						
LALI	Alcalda de L	0.68	328	eP	Pn	18 34 48.1	0.0
LALI	Alcalda de L	0.68	328	eP	Pn	18 34 48.1	0.0
SJTE	Alcalda de S	0.70	355	eP	Pn	18 34 47.9	-0.5
SJTE				eS	Sn	18 34 58.2	-0.2
SJTE				IAML		18 34 59.3	
	comp=Z,2μm,0.1s						
SJTE	Alcalda de S	0.70	355	eP	Pn	18 34 47.9	-0.5
SJTE				eS	Sn	18 34 58.2	-0.2
SJTE				IAML		18 34 59.3	
	comp=Z,2μm,0.1s						
COEG	Centro de Oper	0.71	5	eP	Pn	18 34 48.1	-0.4
COEG				eS	Sn	18 34 58.2	-0.4
COEG				IAML		18 35 01.4	
	comp=Z,3μm,0.3s						
COEG	Centro de Oper	0.71	5	eP	Pn	18 34 48.1	-0.4
COEG				eS	Sn	18 34 58.2	-0.4
COEG				IAML		18 35 01.4	
	comp=Z,3μm,0.3s						
COEB	Comit de Eme	0.71	35	eP	Pn	18 34 48.5	-0.1
COEB				eS	Sn	18 34 58.7	+0.1
COEB	Comit de Eme	0.71	35	eP	Pn	18 34 48.5	-0.1
COEB				eS	Sn	18 34 58.7	+0.1
JUCU	Jucuar¡n	0.76	63	eP	Pn	18 34 48.6	-0.6
JUCU				eS	Sn	18 34 59.3	-0.5
JUCU				IAML		18 35 03.0	
	comp=Z,2μm,0.5s						
JUCU	Jucuar¡n	0.76	63	eP	Pn	18 34 48.6	-0.6
JUCU				eS	Sn	18 34 59.3	-0.5
JUCU				IAML		18 35 03.0	
	comp=Z,2μm,0.5s						
PAVA	Las Pavas	0.80	1	eP	Pn	18 34 49.6	-0.1
PAVA				eS	Sn	18 35 00.9	+0.2
PAVA				IAML		18 35 01.7	
	comp=Z,5μm,0.2s						
PAVA	Las Pavas	0.80	1	eP	Pn	18 34 49.6	-0.1
PAVA				eS	Sn	18 35 00.9	+0.2
PAVA				IAML		18 35 01.7	
	comp=Z,5μm,0.2s						
PQSS	Presa 15 de Se	0.80	28	eP	Pn	18 34 50.1	+0.4
PQSS				eS	Sn	18 35 01.1	+0.4
PQSS				IAML		18 35 02.6	
	comp=Z,5μm,0.1s						
SCLA	Alcaldia de Sa	0.81	15	eP	Pn	18 34 50.0	+0.1
SCLA	Alcaldia de Sa	0.81	15	eP	Pn	18 34 50.0	+0.1
PACA	Pacayal	0.82	48	eP	Pn	18 34 50.1	0.0
PACA				eS	Sn	18 35 01.7	+0.4
PACA				IAML		18 35 03.5	
	comp=Z,2μm,0.2s						
PACA	Pacayal	0.82	48	eP	Pn	18 34 50.1	0.0
PACA				eS	Sn	18 35 01.7	+0.4
PACA				IAML		18 35 03.5	
	comp=Z,2μm,0.2s						
BOQS	Boqueron	0.88	338	eP	Pn	18 34 50.9	-0.1
BOQS	Boqueron	0.88	338	eP	Pn	18 34 50.9	-0.1
JAYA	Jayaque - finc	0.89	327	eP	Pn	18 34 50.5	-0.5
JAYA				IAML		18 35 04.8	
	comp=Z,3μm,0.2s						
JAYA	Jayaque - finc	0.89	327	eP	Pn	18 34 50.5	-0.5
JAYA				IAML		18 35 04.8	
	comp=Z,3μm,0.2s						
LCND	La Caada	1.10	69	eP	Pn	18 34 53.7	0.0
LCND				eS	Sn	18 35 08.1	+0.2
LCND				IAML		18 35 12.4	
	comp=Z,2μm,0.4s						
LCND	La Caada	1.10	69	eP	Pn	18 34 53.7	0.0
LCND				eS	Sn	18 35 08.1	+0.2
LCND				IAML		18 35 12.4	
	comp=Z,2μm,0.4s						
CEVE	Cerro Verde	1.12	324	eP	Pn	18 34 55.0	+0.7
CEVE				IAML		18 35 13.0	
	comp=Z,2μm,0.6s						
CEVE	Cerro Verde	1.12	324	eP	Pn	18 34 55.0	+0.7
CEVE				IAML		18 35 13.0	
	comp=Z,2μm,0.6s						
NUBE	Las Nubes	1.28	321	eP	Pn	18 34 56.3	+0.1
NUBE				eS	Sn	18 35 12.3	0.0
NUBE				IAML		18 35 14.9	
	comp=Z,767nm,0.1s						
NUBE	Las Nubes	1.28	321	eP	Pn	18 34 56.3	+0.1
NUBE				eS	Sn	18 35 12.3	0.0
NUBE				IAML		18 35 14.9	
	comp=Z,767nm,0.1s						
MTO3	Montecristo	1.53	345	eP	Pn	18 34 59.6	-0.2
MTO3	Montecristo	1.53	345	eP	Pn	18 34 59.6	-0.2

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*IDC **16** 18:40:59.3±1.6, 12.°26N×119.°38E, h0^{km}, mb3.1/3, mb1 3.5/3, mb1mx3.2/40, mbtmp3.2/3, Error ellipse: s-maj=36.5km s-min=29.0km az=75.0*
*MAN **16** 18:41:05.9, 14.°26N×120.°47E, h112^{km}, mb4.0, ML2.8, MS2.4*
ISC 16 18:41:04.2±1.8**, 14.°7N**±0.°1×**120.°54E**±0.°10**, h100**^{km}**, n7,**
σ3.^{s}55/8**, mb3.3**/3**, 3C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	0.70	146	Pn	Sn	18 41 39.6	+4.8
LUBP	Lubang	0.99	197	⇑iP	Pn	18 41 24.5	-0.1
LUBP				eS	Sn	18 41 39.5	-0.4
LQP	Lukban	1.13	120	⇑eP	Pn	18 41 22.5	-3.8
LQP				eS	Sn	18 41 47.6	+4.7
PGP	Puerto Galera	1.25	161	⇑eP	Pn	18 41 26.6	-1.0
PGP				i S	Sn	18 41 43.3	-1.8
CMAR	Chiang Mai Arr	21.03	283	P	P	18 45 40.5	+0.4
	0.3nm,0.5s,baz=95,slow=7.9,SNR=4.2						
WRA	Warramunga Arr	37.00	158	P	P	18 47 54.8	-9.4
	0.4nm,0.8s,baz=333,slow=11,SNR=1.6						
ASAR	Alice Springs	40.30	161	P	P	18 48 23.2	-8.7
	0.2nm,0.4s,baz=334,slow=7.4,SNR=10						

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*IDC **16** 18:47:20.2±6.8, 20.°81S×177.°10W, h503^{km}±42^{km}, mb3.4/5, mb1 3.6/6, mb1mx2.8/54, mbtmp4.2/6, Error ellipse: s-maj=117.0km s-min=40.3km az=133.0*
ISC 16 18:47:23.5±5.8**, 20.°8S**±0.°3×**177.°6W**±0.°8**, h500**^{km}**, n7,**
σ0.^{s}78/6**, mb3.9**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.13	306	P	P	18 48 52.2	+0.4
	4.4nm,0.3s,baz=227,slow=23,SNR=20						
STKA	Stephens Creek	37.98	245	P	P	18 53 58.9	+0.8
	1.7nm,0.7s,baz=83,slow=9.6,SNR=4.8						
ASAR	Alice Springs	44.80	257	P	P	18 54 52.2	-0.2
	8.4nm,0.9s,baz=98,slow=7.6,SNR=103						
WRA	Warramunga Arr	44.92	262	P	P	18 54 52.5	-0.9
	1.9nm,0.5s,baz=98,slow=7.7,SNR=23						
FITZ	Fitzroy Crossi	53.35	263	P	P	18 55 55.5	-0.4
	1.5nm,0.6s,baz=144,slow=4.7,SNR=6.4						
CMAR	Chiang Mai Arr	90.57	289	P	P	18 59 32.4	0.0
	0.5nm,0.3s,baz=96,slow=1.7,SNR=8.2						
AKASG	Malin Array Be	143.48	331	PKP	PKPab	19 05 55.5	-3.4
	0.2nm,0.4s,baz=40,slow=3.8,SNR=9.9						

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*IDC **16** 18:54:40.5±1.2, 8.°92S×110.°71E, h0^{km}, mb4.3/10, mb1 4.4/12, mb1mx3.8/57, mbtmp4.2/12, ML3.8/2, MS3.1/3, Ms1 3.1/3, ms1mx2.7/34, Error ellipse: s-maj=39.0km s-min=15.0km az=53.0*
*DJA **16** 18:54:43.6±0.3, 9°S±4°×11°0E±°, h10^{km}, M4.5/20, mb4.7/11, mB5.2/5, MLv4.4/20, Mw(mB)4.6/5*
*NEIC **16** 18:54:47±1.7, 9.°1S±0.°1×110.°4E±0.°1, h51^{km}±7^{km}, mb4.5/14, Error ellipse: s-maj=21.7km s-min=9.8km az=46.0*
ISC 16 18:54:44.0±0.6**, 9.°36S**±0.°07×**110.°41E**±0.°06**, h35**^{km}**, n78,**
σ2.^{s}01/74**, mb4.3**/17**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCJI	Pacitan	1.38	33	P	Pn	18 55 05.5	-1.3
UGM	Wanagama	1.44	4	P	Pn	18 55 07.0	-0.7
UGM	Wanagama	1.44	4		Pn	18 55 06.9	-0.7
UGM	Wanagama	1.44	4	P	Pn	18 55 07.3	-0.4
YOGI	Yogyakarta	1.53	356	P	Pn	18 55 08.2	-0.8
WOJI	Wonogiri, Jawa	1.59	19	P	Pn	18 55 09.1	-0.6
SMRI	Semarang	2.29	1	P	Pn	18 55 21.5	+2.1
SMRI	Semarang	2.29	1		Pn	18 55 20.2	+0.8
SMRI	Semarang	2.29	1	P	Pn	18 55 21.8	+2.4
KPJI	Karang Pucung	2.49	324	P	Pn	18 55 23.6	+1.5
CMJI	Cimerak	2.49	309	P	Pn	18 55 21.8	-0.3
GMJI	Gumukmas	3.18	70	P	Pn	18 55 33.4	+1.8
BLJI	Banyuglugur	3.53	63	P	Pn	18 55 39.2	+2.8
LEM	Lembang	3.74	312	Pn	Pn	18 55 40.8	+1.3
	15nm,0.3s,baz=304,slow=21,SNR=10						
LEM				Sn	Sn	18 56 26.6	+4.2
	6.4nm,0.3s,baz=101,slow=18,SNR=2.4						
LEM	Lembang	3.74	312	P	Pn	18 55 41.8	+2.4
JAGI	Jajag, Banyuwa	3.80	77	P	Pn	18 55 41.6	+1.5
JAGI	Jajag, Banyuwa	3.80	77		Pn	18 55 41.1	+1.0
JAGI	Jajag, Banyuwa	3.80	77	P	Pn	18 55 42.2	+2.1
CNJI	Cibinong	3.83	302	P	Pn	18 55 42.1	+1.5
ABJI	Asem Bagus	4.08	68	P	Pn	18 55 47.2	+3.1
BWJI	Bawean	4.13	33	P	Pn	18 55 46.5	+1.8
DBJI	Dramaga	4.57	307	P	Pn	18 55 53.2	+2.4
IGBI	Denpasar	4.71	84	P	Pn	18 55 54.8	+2.2
XMI	Christmas Isla	4.78	256	P	Pn	18 55 52.8	-0.8
DNP	Denpasar	4.79	82	P	Pn	18 55 54.9	+1.2
XMIS	Christmas Isla	4.82	256	Pn	Pn	18 55 52.4	-1.8
XMIS	Christmas Isla	4.82	256	P	Pn	18 55 53.0	-1.2
SRBI	Singaraja	4.91	75	P	Pn	18 55 58.6	+3.2
TWSI	Taliwang, Sumb	6.42	85	P	Pn	18 56 18.5	+2.3
	0.2nm1μm34nm,0.5s						
PBKI	Pangkalan Bun	6.72	11	P	Pn	18 56 22.2	+1.8
	0.4nm61nm,1.8s						
KASI	Kota Agung	6.99	303	P	Pn	18 56 27.2	+3.2
	0.2nm16nm,0.8s						
PLAI	Plampang	7.29	86	P	Pn	18 56 30.4	+2.3
	0.3nm1μm86nm,0.8s						
PLAI	Plampang	7.29	86	P	Pn	18 56 30.5	+2.3
WBSI	Waikabubak, Su	8.86	93	P	Pn	18 56 53.6	+3.8
	33nm,1.0s						
BASI	Baing, Sumba	10.06	96	P	Pn	18 57 07.3	+1.2
	33nm,0.9s						
KAPI	Kappang	10.22	66	LR	LR	19 01 28.2	
	comp=Z,74nm,20.4s,baz=334,slow=42						
BSSI	Bau Bau, Buton	10.48	73	P	Pn	18 57 14.2	+2.2
	65nm,1.2s						
EDFI	Ende, Flores	11.16	88	P	Pn	18 57 20.7	-0.6
	8.1nm,0.5s						
RGRI	Rengat	12.03	318	P	Pn	18 57 35.3	+2.2
	81μm893nm,0.5s						
BATI	Baumata	13.09	95	Pn	Pn	18 57 47.1	-0.5
	6.7nm,0.3s,baz=312,slow=2.9,SNR=11						
BATI				Sn	Sn	19 00 06.1	-6.0
	1.2nm,0.3s,baz=266,slow=23,SNR=1.9						
SOEI	Soe	13.67	93	Pn	Pn	18 57 53.2	-2.5
GIRL	Giralia	13.71	165	P	Pn	18 57 56.0	-0.1
MBWA	Marble Bar	14.77	144	P	Pn	18 58 12.2	+1.7
FITZ	Fitzroy Crossi	17.14	122	P	Pn	18 58 41.2	+0.1
	0.1nm,0.3s,baz=313,slow=7.7,SNR=7.0						
FITZ				S	Sn	19 01 39.3	-11
	0.3nm,0.3s,baz=166,slow=16,SNR=7.7						
MEEK	Meekatharra	18.86	157	P	Pn	18 59 03.0	+0.9
KNRA	Kununurra	18.98	111	P	Pn	18 59 05.5	+2.0
MTN	Manton Dam	20.62	102	P	Pn	18 59 22.1	-1.0
MTN				IAmb	IAmb	18 59 23.4	
	comp=Z,26nm,1.2s						
MTN	Manton Dam	20.62	102	P	Pn	18 59 22.4	-0.7
WRKA	Warakurna	23.09	135	P	P	18 59 48.9	+2.0
WB0	Warramunga Arr	25.38	117	P	P	19 00 09.6	+1.4
WB0				IAmb	IAmb	19 00 11.3	
	comp=Z,5.3nm,0.7s						
WRA	Warramunga Arr	25.39	117	P	P	19 00 09.7	+1.3
	comp=Z,2.8nm,0.7s,baz=291,slow=11,SNR=52						
WRA	Warramunga Arr	25.39	117	P	P	19 00 10.5	+2.1
WRAB	Tennant Creek	25.40	117	P	P	19 00 09.1	+0.7
WRAB				IAmb	IAmb	19 00 11.6	
	comp=Z,5.3nm,0.7s						
WRAB	Tennant Creek	25.40	117	P	P	19 00 10.3	+1.8
WB2	Warramunga Arr	25.40	117	P	P	19 00 09.5	+1.0
WB2				IAmb	IAmb	19 00 11.6	
	comp=Z,5.3nm,0.8s						
WR0	Warramunga Arr	25.58	117	P	P	19 00 12.1	+2.1
WR0				IAmb	IAmb	19 00 13.4	
	comp=Z,5.6nm,0.7s						
AS31	Alice Springs	26.58	125	P	P	19 00 20.9	+1.7
ASAR	Alice Springs	26.58	125	P	P	19 00 20.9	+1.7
	comp=Z,2.2nm,0.6s,baz=301,slow=9.2,SNR=36						
ASAR				PcP	PcP	19 03 44.6	+1.5
	comp=Z,0.3nm,0.6s,baz=324,slow=2.1,SNR=6.9						
CMAR	Chiang Mai Arr	29.86	338	P	P	19 00 46.9	-1.6
	comp=Z,0.6nm,0.4s,baz=157,slow=8.9,SNR=1.6						
CMAR				LR	LR	19 12 52.0	
	comp=Z,22nm,20.2s,baz=140,slow=37						
MULG	Mulgathing	30.34	137	P	P	19 00 54.6	+2.0
COEN	Coen	32.39	101	P	P	19 01 11.6	+0.8
COEN				IAmb	IAmb	19 01 29.9	
	comp=Z,16nm,1.2s						
STKA	Stephens Creek	36.57	132	P	P	19 01 49.0	+2.2
	comp=Z,1.7nm,0.6s,baz=299,slow=7.3,SNR=8.5						
STKA	Stephens Creek	36.57	132	P	P	19 01 49.0	+2.2
H08S2	Diego Garcia H	37.53	270	T	T	19 42 05.8	
	baz=94,slow=75,SNR=4.9						
H08S3	Diego Garcia H	37.54	270	T	T	19 41 53.7	
	baz=94,slow=75,SNR=4.4						
H08S1	Diego Carcia H	37.55	270	T	T	19 41 44.0	
	baz=94,slow=75,SNR=4.4						
JHS	Saijyo	49.07	25	P	P	19 03 26.8	-1.1
KSRS	Korea Array	49.37	18	P	P	19 03 29.7	-0.4
	comp=Z,2.4nm,0.8s,baz=188,slow=7.6,SNR=5.6						
JWT	Wachi	50.29	27	P	P	19 03 36.0	-1.1
MJAR	Matsushiro Arr	52.60	28	P	P	19 03 52.4	-2.2
	comp=Z,2.4nm,0.6s,baz=114,slow=16,SNR=3.6						
SANVU	Saraoutou	55.67	102	P	P	19 04 16.0	-1.2
SANVU				IAmb	IAmb	19 04 16.7	
	comp=Z,22nm,0.9s						
USRK	Ussuriysk Ar.	56.78	18	P	P	19 04 21.8	-2.8
	comp=Z,4.5nm,0.8s,baz=83,slow=6.3,SNR=4.9						
GAR	Garm	60.85	325	P	P	19 04 50.8	-2.5
MKAR	Makanchi Array	61.27	338	P	P	19 04 54.7	-1.1
	comp=Z,1.9nm,0.5s,baz=152,slow=7.0,SNR=6.8						
KLR	Kul'dur	61.27	16	P	P	19 04 54.1	-1.6
	comp=Z,3.8nm,0.5s,baz=199,slow=6.2,SNR=7.6						
BTK	Batken	61.30	326	P	P	19 04 54.4	-1.8
BTK				IAmb	IAmb	19 04 58.6	
	comp=Z,19nm,1.2s						
PETK	Petropavlovsk-	74.05	27	P	P	19 06 15.2	-1.1
	comp=Z,2.3nm,0.6s,baz=213,slow=2.3,SNR=6.6						
BOSA	Boshof	81.36	242	LR	LR	19 36 36.9	
	comp=Z,26nm,20.1s,baz=188,slow=31						

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*BGR **16** 18:55:15.2±0.0, 29.°43N×140.°24E, h33^{km}, mb5.2*
*BJI **16** 18:55:50.8±0.0, 28.°17N×139.°87E, h413^{km}, mB4.6/38, mb4.6/66*
*JMA **16** 18:55:51.3±0.2, 28.°29N×140.°26E, h474^{km}±3^{km}, M4.4*
*NIED **16** 18:55:51.4, 28.°29N×140.°26E, h474^{km}, MW4.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.72; $M_{\theta\theta}$0.39; $M_{\phi\phi}$1.34; $M_{r\theta}$-0.42; $M_{\theta\phi}$-0.60; $M_{\phi r}$-0.09; Fault plane solution: $M_0$1.72000×10^{16} NP1: ϕ_s142.00000°, δ48.00000°, λ-107.00000°. NP2: ϕ_s346.00000°, δ45.00000°, λ-72.00000°.*
*IDC **16** 18:55:54.2±0.4, 28.°27N×139.°66E, h420^{km}±4^{km}, mb4.3/45, mb1 4.4/50, mb1mx4.2/66, mbtmp5.1/50 Error ellipse: s-maj=7.7km s-min=5.8km az=79.0*
*NEIC **16** 18:55:55.3±1.9, 28.°28N±0.°08×139.°7E±0.°1, h428^{km}±4^{km}, mb4.7/270, Error ellipse: s-maj=13.2km s-min=12.0km az=86.0*
ISC 16 18:55:53.7±0.3**, 28.°30N**±0.°04×**139.°76E**±0.°04**, h417**^{km}±3^{km}**,**
h418^{km}**:pP-P, n857, σ1.^{s}22**/962**, mb4.7**/238**, 89C-124D,**
Fault plane solution: NP1:ϕ_s355.47083°, δ43.86870°, λ-41.49141°. **NP2:**ϕ_s117.99370°, δ62.66946°, λ-125.75555°. **Principal axes:** T Plg10.6684°, Azm232.8567°; N Plg31.2720°, Azm136.2870°; P Plg56.5558°, Azm339.4285°; **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.46	119	P	P	18 56 55.0	+0.8
CBIJ				eS	S	18 57 44.3	+1.0
JCJ	Chichijima	2.46	119	P	P	18 56 55.4	+1.2
	672nm,0.3s,baz=343,slow=1.9,SNR=371						
JCJ				S	S	18 57 43.9	+0.6
	365nm,0.3s,baz=320,slow=22,SNR=11						
JCJ	Chichijima	2.46	119	P	P	18 56 55.0	+0.8
JCJ				S	S	18 57 43.5	+0.2
JHH2	Haha-jima-NKT2	2.72	127	P	P	18 56 56.7	+0.7
JHH2				S	S	18 57 47.3	+0.7
JHCJ	Hachijojimakas	4.75	0	P	P	18 57 15.9	+2.1
JHJ2	Mitsune	4.79	1	P	P	18 57 16.1	+2.0
JHJ2				eS	S	18 58 22.7	+2.7
JHJ2	Mitsune	4.79	1	P	P	18 57 16.4	+2.2
JHJ2				S	S	18 58 17.8	-2.1
JHJ	Hachijo jima 2	4.80	0	P	P	18 57 16.3	+2.1
	80nm,0.3s,baz=334,slow=23,SNR=24						
JHJ				S	S	18 58 18.6	-1.5
	126nm,0.3s,baz=262,slow=21,SNR=7.9						
TTO1	TONANKAI O.B.S	5.88	335	P	P	18 57 27.8	+2.8
BSO1	Boso 1	6.42	9	eS	S	18 58 49.6	-0.4
BSO3	Boso 3	6.51	5	P	P	18 57 32.7	+0.5
BSO3				eS	S	18 58 52.0	-0.3
JTNC	Tanabenakahech	6.55	328	P	P	18 57 35.7	+2.7
JTNC				eS	S	18 58 56.9	+3.3
JIE	Ise	6.61	337	P	P	18 57 36.3	+2.7
JIE				eS	S	18 58 58.3	+3.6
JKN2	Miekihoku	6.62	334	P	P	18 57 36.4	+2.6
BSO4	Boso 4	6.68	4	P	P	18 57 33.1	-1.2
BSO4				eS	S	18 58 55.5	-0.6
JOD2	Odawara 2	6.96	355	P	P	18 57 38.3	+0.8
JNY	Yasuok	7.22	348	P	P	18 57 41.8	+1.5
JAO	Obara	7.26	344	P	P	18 57 43.0	+2.2
JEG	Eigenji	7.39	338	P	P	18 57 45.5	+3.3
INU	Inuyama	7.40	342	P	P	18 57 44.1	+1.9
JTO	Tosashimizu	7.52	309	P	P	18 57 46.5	+2.9
JHU	Hanno	7.54	357	P	P	18 57 42.8	-1.0
JGF	Kuroka	7.56	345	P	P	18 57 45.4	+1.4
JRY	Ryogami san	7.72	355	P	P	18 57 46.3	+0.4
JWT	Wachi	7.88	333	P	P	18 57 49.2	+1.7
JYT	Yasato	7.91	3	P	P	18 57 47.9	+0.1
JYT	Yasato	7.91	3	P	P	18 57 47.6	-0.2
JMZ	Minamidaito 2	8.00	254	P	P	18 57 50.4	+1.5
JMZ	Minamidaito 2	8.00	254	P	P	18 57 49.4	+0.5
JAG	Ashikaga	8.10	358	P	P	18 57 49.5	-0.3
JHO	Hitachi	8.31	5	S	S	18 59 26.6	-2.8
MJAR	Matsushiro Arr	8.32	351	P	P	18 57 52.7	+0.4
	0.6nm,0.3s,baz=172,slow=10,SNR=11						
MJAR				S	S	18 59 19.8	-10
	0.4nm,0.3s,baz=138,slow=11,SNR=4.6						
MJAR	Matsushiro Arr	8.32	351	P	P	18 57 51.9	-0.3
MAJO	Matsushiro	8.32	351	P	P	18 57 52.7	+0.4
MAT	Matsushiro	8.32	351	P	P	18 57 52.8	+0.5
MAT				S	S	18 59 26.3	-3.3
JSU	Suzuyama	8.68	294	P	P	18 57 58.6	+2.2
JHS	Saijyo	8.75	321	P	P	18 58 00.3	+3.2
JHS	Saijyo	8.75	321	P	P	18 58 00.1	+3.0
JNU	Nakatsue	9.03	304	P	P	18 58 03.2	+3.0
	3.2nm,0.3s,baz=184,slow=23,SNR=8.6						
JNU	Nakatsue	9.03	304	P	P	18 57 56.9	-3.3
JFK	Kawauchi	9.09	6	eS	S	18 59 41.9	-3.6
JSJ	Shimokoshiki	9.33	294	P	P	18 58 05.7	+2.2
JMM	Marumori	9.58	5	P	P	18 58 06.8	+0.7
JOW	Kunigami	10.29	264	P	P	18 58 17.2	+3.0
	90nm,0.3s,baz=107,slow=8.4,SNR=71						
JOW	Kunigami	10.29	264	P	P	18 58 16.9	+2.7
JOW	Kunigami	10.29	264	P	P	18 58 16.7	+2.5
JTU	Tsushima	10.80	308	P	P	18 58 23.0	+3.3
JTU				eS	S	19 00 24.0	+3.7
JKE	Kume jima 2	11.70	263	P	P	18 58 31.7	+2.0
KSRS	Korea Array	13.49	316	P	P	18 58 50.5	+1.4
	0.8nm,0.3s,baz=131,slow=9.9,SNR=15						
KSRS				PcP	PcP	19 03 43.7	+0.6
	0.3nm,0.3s,baz=209,slow=2.3,SNR=6.8						
ASAJ	Asahikawa	15.94	7	P	P	18 59 17.5	+2.0
	2.1nm,0.3s,baz=245,slow=13,SNR=14						
JKA	Kamikawa-asahi	15.94	7	P	P	18 59 17.5	+2.0
JKA	Kamikawa-asahi	15.94	7	IAmb	IAmb	18 59 37.1	
	comp=Z,64nm,1.5s						
USA0B	Ussuriysk Arra	17.04	341	P	P	18 59 28.5	+1.3
USRK	Ussuriysk Ar.	17.04	341	P	P	18 59 28.7	+1.5
	baz=145,slow=10,SNR=86						
USRK	Ussuriysk Ar.	17.04	341	P	P	18 59 28.2	+1.0
YULB	Yu-li	17.32	258	P	P	18 59 29.4	-1.0
YULB				IAmb	IAmb	18 59 37.5	
	comp=Z,27nm,0.7s						
SSLB	Suanglung	17.48	259	P	P	18 59 32.2	0.0
MDJ	Mudanjiang	18.19	336	P	P	18 59 41.3	+2.0
MDJ				S	S	19 02 47.6	+2.3
MDJ				pmax	pmax		
	comp=Z,52nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,230nm,4.5s						
MDJ	Mudanjiang	18.19	336	P	P	18 59 38.3	-1.0
MDJ				IAmb	IAmb	18 59 42.7	
	comp=Z,45nm,1.0s						
NJ2	Nanjing	18.45	287	eP	P	18 59 42.1	-0.1
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
CN2	Changchun	19.27	327	eP	P	18 59 50.8	+0.7
CN2				eS	S	19 02 54.0	-9.4
CN2				PcP	PcP	19 03 51.8	-0.2
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
TIA	Tai'an	20.67	298	⇑P	P	19 00 03.3	+0.2
TIA				pmax	pmax		
	comp=Z,200nm,0.8s						
KLR	Kul'dur	21.78	346	P	P	19 00 14.5	+1.6
	comp=Z,96nm,0.6s,baz=165,slow=8.0,SNR=581						
KLR				PcP	PcP	19 03 57.3	+0.6
	comp=Z,6.0nm,0.6s,baz=81,slow=1.9,SNR=5.2						
WHN	Wuhan	22.23	282	⇑P	P	19 00 18.3	+1.0
BJT	Baijiatuau	22.68	307	P	P	19 00 20.5	-0.8
BJI	Beijing	22.68	307	P	P	19 00 21.4	+0.2
BJI				S	S	19 04 03.3	+5.0
BJI				pmax	pmax		
	comp=Z,11nm,0.6s						
HIA	Hailar	25.96	329	P	P	19 00 50.9	+0.5
HIA				IAmb	IAmb	19 00 52.1	
	comp=Z,32nm,0.7s						
HHC	Hu-ho-hao-te	26.25	306	eP	P	19 00 54.3	+1.0
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,5.4s						
ENH	Enshi	26.44	282	P	P	19 00 53.9	-1.1
ENH					S	19 04 54.1	-3.7
PETK	Petropavlovsk-	28.11	23	P	P	19 01 11.5	+2.2
	comp=Z,1.8nm,0.7s,baz=205,slow=5.6,SNR=6.9						
PETK				PcP	PcP	19 04 11.2	+0.2
	comp=Z,9.3nm,1.0s,baz=139,slow=2.7,SNR=4.1						
GYA	Guiyang	29.40	274	⇑iP	P	19 01 21.6	+0.4
GYA				pP	PP	19 02 37.4	-0.5
GYA				pmax	pmax		
	comp=Z,24nm,1.0s						
SIJI	Sorong	30.13	197	P	P	19 01 28.1	+0.6
	comp=Z,5.5nm,0.7s,baz=21,slow=12,SNR=5.5						
SIJI				PcP	PcP	19 04 16.3	-0.5
	comp=Z,4.1nm,0.6s,baz=1.2,slow=4.6,SNR=3.7						
LZH	Lanzhou	31.23	294	⇓P	P	19 01 37.4	+0.3
LZH				PcP	PcP	19 04 20.8	+1.1
LZH				S	S	19 06 11.0	-1.7
LZH				pmax	pmax		
	comp=Z,74nm,1.4s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						

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ULN   Ulaanbaatar       31.97 317   P      P      19 01 43.2  0.0
ULN                                 IAmb   IAmb   19 01 45.0
      comp=Z,37nm,1.1s
ULN                                 PcP    PcP    19 04 21.1 -0.4
MA2   Magadan           32.16  11   P      P      19 01 45.7 +1.2
MA2                                 IAmb   IAmb   19 01 46.9
      comp=Z,47nm,0.8s
SONM  Songino Array     32.36 316   P      P      19 01 47.0 +0.5
      comp=Z,8.3nm,0.5s,baz=126,slow=8.4,SNR=112
SONM                                PcP    PcP    19 04 22.7 +0.2
      comp=Z,3.2nm,0.5s,baz=129,slow=2.3,SNR=15
SONM                                ScP    ScP    19 07 24.2 -1.7
      comp=Z,0.9nm,0.7s,baz=151,slow=5.3,SNR=5.5
SONM  Songino Array     32.36 316   P      P      19 01 46.7 +0.1
SONM                                PcP    PcP    19 04 21.9 -0.6
SANI  Sanana            32.95 206   P      P      19 01 50.9 -0.9
      comp=Z,28nm,0.7s
KMI   Kunming           33.14 273 ⇓P      P      19 01 54.3 +0.7
KMI                                 pP     pP     19 03 09.6 +1.3
KMI                                 PP     PP     19 03 24.5 +5.2
KMI                                 sP     sP     19 04 01.0 +4.9
KMI                                 S      S      19 06 39.5 -2.8
KMI                                 pmax   pmax
      comp=Z,28nm,0.9s
SLVN  Son La            33.19 266   P      P      19 01 53.1 -0.8
YAK   Yakutsk           34.38 352   P      P      19 02 03.9 +0.5
      comp=Z,16nm,0.4s,baz=360,slow=1.0,SNR=50
YAK   Yakutsk           34.38 352   P      P      19 02 03.6 +0.2
YAK                                        PcP    19 04 26.9 -1.0
GTA   Gaotai            34.72 299 ⇓P      P      19 02 06.4 -0.4
GTA                                 PcP    PcP    19 04 30.0 +0.5
GTA                                 S      S      19 07 01.8 -4.0
GTA                                 ScP    ScP    19 07 33.8 -0.7
GTA                                 pmax   pmax
      comp=Z,19nm,0.9s
SEY   Seymchan          35.60  10   P      P      19 02 14.3 +0.7
      comp=Z,16nm,0.6s,baz=196,slow=7.7,SNR=93
SEY                                 PcP    PcP    19 04 31.6 +0.1
      comp=Z,6.0nm,0.6s,baz=186,slow=2.3,SNR=6.3
TLY   Talaya            35.65 321   P      P      19 02 15.0 +0.7
      comp=Z,7.5nm,0.7s,baz=150,slow=4.4,SNR=9.3
TLY   Talaya            35.65 321   P      P      19 02 14.2 -0.1
TLY                                        PcP    19 04 32.3 +0.4
CHTO  Chiang Mai        38.43 265   P      P      19 02 37.6 -0.2
CMAR  Chiang Mai Arr    38.57 264   P      P      19 02 39.0  0.0
      comp=Z,2.5nm,0.6s,baz=82,slow=4.8,SNR=26
CMAR                                PcP    sP     19 04 41.5 -1.3
      comp=Z,2.8nm,0.8s,baz=99,slow=0.4,SNR=10
CMAR                                ScP    ScP    19 07 48.5 -0.6
      comp=Z,0.2nm,0.3s,baz=289,slow=16,SNR=1.0
CMAR  Chiang Mai Arr    38.57 264   P      P      19 02 39.5 +0.6
CMAR                                PcP    sP     19 04 41.2 -1.7
LSA   Lhasa             42.29 284   P      P      19 03 10.3 +1.0
LSA   Lhasa             42.29 284   P      P      19 03 10.1 +0.7
SHL   Shillong          42.55 278   P      P      19 03 10.6 -0.6
BILL  Bilibino          42.79  14   P      P      19 03 13.0 +0.9
KULM  Kulim             43.57 246   P      P      19 03 20.0 +0.9
IPM   Ipoh              43.75 244   P      P      19 03 21.0 +0.5
TIXI  Tiksi             43.81 355   P      P      19 03 20.4 +0.3
      comp=Z,22nm,0.7s,baz=139,slow=6.3,SNR=84
TIXI                                PcP    PcP    19 04 56.9 -0.9
      comp=Z,5.5nm,0.5s,baz=129,slow=2.2,SNR=5.7
TIXI  Tiksi             43.81 355   P      P      19 03 20.0 -0.1
TIXI                                IAmb   IAmb   19 03 21.3
      comp=Z,26nm,0.8s
WMQ   Urumqi            44.12 305   eP     P      19 03 23.8 +0.7
WMQ                                 pmax   pmax
      comp=Z,30nm,1.3s
WMQ                                 pmax   pmax
      comp=Z,160nm,4.3s
ZSN   Zaisan            46.32 310   eP     P      19 03 39.8 -0.2
      baz=310
PSI   Prapat            46.43 244   P      P      19 03 41.5 +0.2
      comp=Z,12nm,0.8s,baz=44,slow=3.4,SNR=18
PSI                                 PcP    pwP    19 05 08.1 -0.6
      comp=Z,3.3nm,0.5s,baz=240,slow=2.0,SNR=6.2
RPSI  Rantau Prapat     46.49 244          PcP    19 05 08.1 -0.2
JIRN  Jiri              46.98 283   eP     P      19 03 46.1 +0.4
      comp=Z,88nm,0.7s
GAMB  Gambell           47.00  27   P      P      19 03 45.5 +0.7
      baz=245
ZAA0  Zalesovo Array    47.17 319   P      P      19 03 45.8 -0.5
ZAA0                                       PcP    19 05 08.9 -1.1
ZALV  Zalesovo Beam     47.17 319   P      P      19 03 46.0 -0.2
      comp=Z,3.8nm,0.5s,baz=99,slow=6.6,SNR=27
ZALV                                PcP    PcP    19 05 09.4 -0.6
      comp=Z,14nm,0.5s,baz=114,slow=3.3,SNR=28
ZALV                                ScP    ScP    19 08 20.6 -2.8
      comp=Z,2.9nm,0.6s,baz=121,slow=4.1,SNR=7.1
ZALV  Zalesovo Beam     47.17 319   P      P      19 03 45.2 -1.0
ZALV                                       PcP    19 05 08.9 -1.1
ZALV                                       ScP    19 08 20.3 -3.1
GUN   Gumba             47.19 283   eP     P      19 03 47.6 +0.3
      comp=Z,89nm,0.6s
MDSI  Maura Dua         47.29 232   P      P      19 03 47.4 -0.3
      comp=Z,26nm,0.9s
PKI   Pulchoki          47.67 283   eP     P      19 03 50.6 -0.4
      comp=Z,8.6nm,0.6s
PKIN  Phulchoki         47.68 283   eP     P      19 03 50.6 -0.4
      comp=Z,8.4nm,0.4s
KKN   Kakani            47.73 283   eP     P      19 03 51.3  0.0
      comp=Z,9.4nm,0.5s
DMN   Daman             47.92 283   eP     P      19 03 53.0 +0.2
      comp=Z,19nm,0.5s
MK31  Makanchi Array    48.05 309   P      P      19 03 53.0 -0.2
MK31                                       pP     19 05 13.2 -1.1
MKAR  Makanchi Array    48.05 309   P      P      19 03 53.1  0.0
      comp=Z,8.7nm,0.7s,baz=90,slow=9.3,SNR=84
MKAR                                PcP    pP     19 05 13.1 -1.2
      comp=Z,13nm,0.7s,baz=81,slow=6.3,SNR=20
MKAR                                ScP    ScP    19 08 24.9 -2.4
      comp=Z,5.2nm,0.7s,baz=86,slow=5.3,SNR=16
MKAR  Makanchi Array    48.05 309   P      P      19 03 52.6 -0.6
MKAR                                PcP    pP     19 05 12.8 -1.5
FITZ  Fitzroy Crossi    48.11 198   P      P      19 03 54.0 +0.1
      comp=Z,7.4nm,0.8s,baz=16,slow=9.7,SNR=12
FITZ                                ScP    ScP    19 08 25.2 -2.5
      comp=Z,3.9nm,0.9s,baz=66,slow=6.4,SNR=4.2
GKN   Gorkha            48.23 283   eP     P      19 03 55.1 +0.1
      comp=Z,13nm,0.5s
WRAB  Tennant Creek     48.24 187   P      P      19 03 54.3 -0.5
WRAB                                PcP    PcP    19 05 14.8 +0.4
WR0   Warramunga Arr    48.24 187   P      P      19 03 54.4 -0.5
WR0                                 PcP    PcP    19 05 14.0 -0.4
WB2   Warramunga Arr    48.25 187   P      P      19 03 54.5 -0.3
WB2                                        PcP    19 05 14.7 +0.3
WRA   Warramunga Arr    48.25 187   P      P      19 03 54.3 -0.6
      comp=Z,8.1nm,0.5s,baz=1.9,slow=7.2,SNR=77
WRA                                 PcP    PcP    19 05 15.0 +0.6
      comp=Z,10nm,0.7s,baz=0.7,slow=2.4,SNR=14
WRA                                 ScP    ScP    19 08 26.7 -1.6
      comp=Z,5.8nm,0.8s,baz=1.8,slow=3.0,SNR=10
WRA   Warramunga Arr    48.25 187   P      P      19 03 54.1 -0.7
WRA                                 PcP    PcP    19 05 14.0 -0.4
WRA                                 ScP    ScP    19 08 26.9 -1.5
GSI   Gunungsitoli      48.40 244   P      P      19 03 56.1 -0.1
      comp=Z,44nm,1.0s
GSI   Gunungsitoli      48.40 244   P      P      19 03 55.8 -0.4
GSI                                 IAmb   IAmb   19 03 57.0
      comp=Z,36nm,0.9s
CTAO  Charters Tower    48.52 172   P      P      19 03 57.8 +0.9
DANN  Dangsing          48.90 284   eP     P      19 04 00.3 +0.2
      comp=Z,56nm,0.5s
KOLN  Koldanda          49.18 283   eP     P      19 04 02.1  0.0
      comp=Z,44nm,0.8s
TNA   Tin City          49.22  26   P      P      19 04 01.3 -0.2
      baz=247
SEM   Semipalatinsk     49.55 314   eP     P      19 04 03.3 -1.2
      baz=314
PYUN  Piuthan           49.62 284   eP     P      19 04 05.7 +0.3
      comp=Z,32nm,0.4s
ANM   Nome              49.87  28   P      P      19 04 08.5 +2.1
ANM   Nome              49.87  28   P      P      19 04 07.9 +1.5
      baz=251
SHLS  Shalkode          50.12 304   eP     P      19 04 05.8 -2.9
      baz=304
UZB   Uzynbulak         50.44 304   eP     P      19 04 10.5 -0.7
      baz=304
KURK  Kurchatov         50.60 314   P      P      19 04 11.6 -0.4
KURK                                IAmb   IAmb   19 04 12.9
      comp=Z,53nm,1.2s
KURBB Kurchatov Arra    50.66 314   P      P      19 04 12.2 -0.2
      comp=Z,18nm,0.7s,baz=92,slow=8.5,SNR=182
KURBB                               PcP    PcP    19 05 22.1 -0.8
      comp=Z,4.9nm,0.7s,baz=96,slow=4.0,SNR=8.1
KURBB                               ScP    ScP    19 08 35.1 -3.2
      comp=Z,1.3nm,0.6s,baz=92,slow=4.2,SNR=7.5
NRIK  Noril'sk          50.74 339   P      P      19 04 13.3 +0.5
      comp=Z,57nm,0.5s,baz=111,slow=9.1,SNR=57
NRIK                                PcP    PcP    19 05 22.9  0.0
      comp=Z,12nm,0.6s,baz=94,slow=7.9,SNR=3.8
NRIK  Noril'sk          50.74 339   P      P      19 04 13.2 +0.5
TDK   Taldyqorghan      50.78 307   eP     P      19 04 13.1 -0.4
      baz=307
SATY  Saty              50.90 304   eP     P      19 04 13.8 -0.7
      baz=304
MDOK  Medeo             51.88 304   eP     P      19 04 21.4 -0.3
      baz=304
AS31  Alice Springs     51.98 187   P      P      19 04 21.7 -0.7
ASAR  Alice Springs     51.98 187   P      P      19 04 22.2 -0.2
      comp=Z,2.1nm,0.6s,baz=18,slow=13,SNR=37
ASAR                                PcP    PcP    19 05 28.8 +0.5
      comp=Z,6.8nm,0.8s,baz=10,slow=4.1,SNR=19
ASAR                                ScP    ScP    19 08 42.3 -2.0
      comp=Z,1.3nm,0.8s,baz=14,slow=5.7,SNR=4.1
ASAR  Alice Springs     51.98 187   P      P      19 04 21.5 -0.9
ASAR                                PcP    PcP    19 05 28.7 +0.5
RDOG  Red Dog Mine      51.98  24   P      P      19 04 31.3 +9.4
      baz=250,SNR=7.4
KUU   Kurty             52.33 305   eP     P      19 04 24.4 -0.4
      comp=Z,21nm,0.6s,baz=305
BOOM  Boomskoye usch    52.76 304   P      P      19 04 28.4 +0.2
BOOM                                PcP    PcP    19 05 30.7 -0.6
TKM2  Tokmak 2          52.96 304   P      P      19 04 30.4 +0.7
      SNR=8.1
KSH   Kashi             53.11 300   P      P      19 04 33.5 +2.8
KSH                                 PcP    PcP    19 05 34.3 +1.7
KSH                                 pmax   pmax
      comp=Z,24nm,0.7s
KSH                                 pmax   pmax
      comp=Z,84nm,4.9s
PSA00 Pilbara Seismi    53.18 203   P      P      19 04 30.2 -0.9
P18K  Big Mountain,     53.43  35   P      P      19 04 33.7 +1.2
      baz=264
KBK   Karagaybulak      53.47 304   P      P      19 04 33.9 +0.7
      SNR=14
O18K  Koktuh Hills      53.48  35   P      P      19 04 34.9 +2.0
      baz=264
TTA   Tatalina          53.50  31   P      P      19 04 34.5 +1.5
      baz=261
CHMS  Chumysh           53.57 304   P      P      19 04 34.1 +0.3
      SNR=5.6
SGDS  Sogindy           53.61 305   eP     P      19 04 33.2 -0.9
      baz=305
USP   Ospenovka         53.72 305   P      P      19 04 35.2 +0.3
      SNR=5.5
SII   Sitkinak Islan    53.78  39   P      P      19 04 35.6 +0.6
      baz=267
AAK   Ala-Archa         53.80 304   P      P      19 04 35.9 +0.2
      comp=Z,5.4nm,0.6s,baz=118,slow=5.6,SNR=20
AAK                                 PcP    PcP    19 05 35.0 -0.2
      comp=Z,6.4nm,0.6s,baz=131,slow=5.2,SNR=10
AAK   Ala-Archa         53.80 304   P      P      19 04 35.9 +0.2
      SNR=7.7
AAK   Ala-Archa         53.80 304 i P      P      19 04 35.8 +0.2
      SNR=9.4
AAK   Ala-Archa         53.80 304   P      P      19 04 34.1 -1.5
AAK                                 PcP    PcP    19 05 34.1 -1.2
UCH   Uchtor            53.84 303   P      P      19 04 37.0 +0.8
      SNR=19
BTLS  Baital            53.86 307   eP     P      19 04 35.2 -0.6
      baz=307
O19K  Port Alsworth     53.96  34   P      P      19 04 35.1 -1.1
O19K                                IAmb   IAmb   19 04 38.9
      comp=Z,19nm,0.8s
O19K  Port Alsworth     53.96  34   P      P      19 04 37.8 +1.6
      baz=265
M19K  Big River Lodg    54.11  32   P      P      19 04 39.1 +1.8
      baz=263
EKS2  Erkin-Say         54.32 304   P      P      19 04 39.5 +0.3
      SNR=6.1
BRZS  Berezniki         54.41 313   eP     P      19 04 39.0 -0.7
      baz=313
K20K  Telida            54.44  30   P      P      19 04 41.6 +2.0
      baz=263
AML   Almayashu         54.45 303   P      P      19 04 41.6 +1.1
      SNR=20
AML   Almayashu         54.45 303 i P      P      19 04 41.4 +0.9
      SNR=21
EIDS  Eidsvold          54.47 167   P      P      19 04 40.4 +0.2
J20K  Nowinta River     54.51  29   P      P      19 04 42.0 +2.0
      baz=262
KDAK  Kodiak Island     54.70  37   P      P      19 04 42.6 +1.1
      comp=Z,16nm,0.9s,baz=185,slow=1.9,SNR=9.4
KDAK  Kodiak Island     54.70  37   IAmb   IAmb   19 05 09.6
      comp=Z,71nm,1.3s
KDAK  Kodiak Island     54.70  37   P      P      19 04 42.4 +0.9
      baz=268
O20K  Slope Mountain    54.80  35   P      P      19 04 43.3 +1.0
      baz=266
IMAR  Indian Mountai    54.95  27   P      P      19 04 44.1 +1.0
IMAR                                       PcP    19 05 40.0 +1.0
SPCR  Spurr Chakacha    55.08  33   P      P      19 04 45.5 +1.3
      baz=266
PPLA  Purkeypile        55.23  31   P      P      19 04 47.1 +1.8
      baz=265
CHUM  Lake Minchumin    55.28  30   P      P      19 04 47.2 +1.7
      baz=264
H21K  Melozitna Rive    55.28  28   P      P      19 04 47.1 +1.6
H21K  Melozitna Rive    55.28  28   P      P      19 04 47.6 +2.0
      baz=262
CAST  Castle Rocks      55.33  31   P      P      19 04 47.9 +2.0
CAST                                PcP    PcP    19 05 41.0 +0.4
CAST  Castle Rocks      55.33  31   P      P      19 04 47.8 +1.9
      baz=264,SNR=6.6
I21K  Tanana            55.57  28   P      P      19 04 49.4 +1.9
I21K  Tanana            55.57  28   P      P      19 04 49.7 +2.3
      baz=263
BVAR  Borovoye Array    55.70 317   P      P      19 04 48.7 +0.1
      comp=Z,41nm,0.9s,baz=142,slow=7.5,SNR=148
BVAR                                PcP    PcP    19 05 42.1  0.0
      comp=Z,13nm,0.8s,baz=193,slow=6.1,SNR=9.8
BVAR                                ScP    ScP    19 08 57.6 -2.7
      comp=Z,2.5nm,0.6s,baz=180,slow=5.9,SNR=4.8
BRSE  Bradley Lake S    55.73  35   P      P      19 04 48.8  0.0
      baz=268
BRVK  Borovoye          55.76 317   P      P      19 04 48.9 -0.2
BRVK                                IAmb   IAmb   19 04 50.2
      comp=Z,48nm,0.9s
BRVK                                PcP    PcP    19 05 41.7 -0.7
BPAW  Bear Paw Mtn.     55.88  30   P      P      19 04 51.5 +1.8
      baz=265,SNR=6.6
DZA   Taraz             56.07 305   eP     P      19 04 50.9 -0.6
      baz=305
MLY   Manley            56.07  29   P      P      19 04 52.2 +1.1
MLY                                 PcP    PcP    19 05 44.6 +1.1
MLY   Manley            56.07  29   P      P      19 04 52.9 +1.8
      baz=265,SNR=15
CUT   Chulitna          56.08  32   P      P      19 04 52.7 +1.6
      baz=267
M22K  Willow            56.12  33   P      P      19 04 52.5 +1.2
      baz=267
TRF   Thorofare Moun    56.14  31   P      P      19 04 52.8 +1.1
      baz=266
RC01  Rabbit Creek A    56.27  33   P      P      19 04 53.8 +1.3
      baz=268
DZM   Mont Dzumac       56.32 150   P      P      19 04 55.5 +2.1
SEW   Seward            56.39  35   P      P      19 04 54.0 +0.7
      baz=269
NIL   Nilore            56.40 293   P      P      19 04 54.3 +0.4
NIL                                 IAmb   IAmb   19 04 56.2
      comp=Z,30nm,0.5s
COLD  Coldfoot          56.52  26   P      P      19 04 55.6 +1.5
COLD  Coldfoot          56.52  26   P      P      19 04 55.9 +1.8
      baz=264,SNR=9.3
BWN   Browne            56.55  30   P      P      19 04 56.4 +2.0
BWN                                 IAmb   IAmb   19 04 58.3
      comp=Z,36nm,1.0s
PMR   Palmer            56.58  33   P      P      19 04 55.0 +0.4
      baz=268
KKAR  Karatay Array     56.63 305   P      P      19 04 55.2 -0.1
I23K  Minto, Yukon-K    56.66  29   P      P      19 04 56.4 +1.3
I23K                                       PcP    19 05 46.6 +0.9
I23K  Minto, Yukon-K    56.66  29   P      P      19 04 56.9 +1.8
      baz=266,SNR=11
NEA2  Nenana            56.75  29   P      P      19 04 56.7 +0.9
NEA2                                IAmb   IAmb   19 04 58.2
      comp=Z,22nm,0.8s
NEA2  Nenana            56.75  29   P      P      19 04 57.3 +1.5
      baz=266,SNR=12
MCK   McKinley          56.76  30   P      P      19 04 56.7 +0.9
MCK                                 IAmb   IAmb   19 04 57.8
      comp=Z,32nm,1.0s
MCK   McKinley          56.76  30   P      P      19 04 56.9 +1.0
      baz=267,SNR=14
WAT1  Susitna Watana    56.89  31   P      P      19 04 57.6 +0.8
      baz=268
KNK   Knik Glacier      56.90  33   P      P      19 04 57.4 +0.6
      baz=269,SNR=6.9
TOLK  Toolik Lake Re    56.92  24   P      P      19 04 58.7 +1.8
TOLK                                       PcP    19 05 46.7  0.0
TOLK  Toolik Lake Re    56.92  24   P      P      19 04 58.4 +1.5
      baz=263
HYB   Hyderabad         56.92 273 i P      P      19 04 57.5 -0.2
PWL   Port Wells        56.95  34   P      P      19 04 57.8 +0.6
      baz=270
SML   Sawmill           56.97  33   P      P      19 04 58.3 +1.0
SML   Sawmill           56.97  33   P      P      19 04 58.4 +1.0
      baz=269
MDM   Murphy Dome       57.13  29   P      P      19 04 59.6 +1.2
BRLS  Borolday          57.13 305   eP     P      19 04 59.4 +0.5
      baz=305
IUG   Iuzhnay           57.14 304   eP     P      19 04 58.6 -0.4
      baz=304
WRH   Wood River Hil    57.17  29   P      P      19 04 59.4 +0.8
WRH                                 PcP    PcP    19 05 48.1 +0.4
WAT6  Susitna Watana    57.26  32   P      P      19 05 00.4 +0.9
      baz=269,SNR=7.7
TCOL  CIGO, UAF Yank    57.28  29   P      P      19 04 60.0 +0.6
TCOL                                IAmb   IAmb   19 05 01.6
      comp=Z,15nm,0.8s
TCOL  CIGO, UAF Yank    57.28  29   P      P      19 05 00.7 +1.4
      baz=267
COLA  College           57.29  29   P      P      19 05 00.1 +0.7
COLA                                IAmb   IAmb   19 05 01.6
      comp=Z,16nm,0.8s
COLA  College           57.29  29   P      P      19 05 00.3 +0.9
      baz=267
CCB   Clear Creek Bu    57.30  29   P      P      19 04 59.8 +0.3
CCB                                        PcP    19 05 48.1  0.0
H24K  Noodor Dome       57.33  28   P      P      19 05 01.4 +1.6
H24K                                IAmb   IAmb   19 05 02.6
      comp=Z,18nm,0.7s
H24K                                PcP    PcP    19 05 49.2 +0.8
H24K  Noodor Dome       57.33  28   P      P      19 05 01.9 +2.2
      baz=267
DHY   Denali Highway    57.44  31   P      P      19 05 02.2 +1.5
      baz=269
SCM   Sheep Creek Mo    57.44  33   P      P      19 05 01.2 +0.5
SCM                                 IAmb   IAmb   19 05 02.8
      comp=Z,20nm,0.9s
SCM   Sheep Creek Mo    57.44  33   P      P      19 05 01.8 +1.1
      baz=270
POKR  Poker Plat Res    57.48  29   P      P      19 05 00.9 +0.1
POKR                                IAmb   IAmb   19 05 03.6
      comp=Z,24nm,0.8s
POKR  Poker Plat Res    57.48  29   P      P      19 05 01.7 +0.9
      baz=268,SNR=8.7
GLI   Glacier Island    57.56  34   P      P      19 05 02.4 +1.1
      baz=271
HDA   Harding Lake      57.66  29   P      P      19 05 02.1 +0.1
HDA                                 IAmb   IAmb   19 05 03.2
      comp=Z,16nm,0.6s
HDA   Harding Lake      57.66  29   P      P      19 05 02.4 +0.3
      baz=268
IL31                    57.70  29   P      P      19 05 02.0 -0.2
ILAR  Eielson Array     57.70  29   P      P      19 05 02.4 +0.1
      comp=Z,8.4nm,0.8s,baz=277,slow=5.8,SNR=73
ILAR                                PcP    PcP    19 05 49.5 -0.3
      comp=Z,2.5nm,0.7s,baz=284,slow=4.4,SNR=5.4
ILAR                                pP     pwP    19 06 29.8 -1.8
      comp=Z,0.3nm,0.6s,baz=77,slow=34,SNR=2.8
ILAR  Eielson Array     57.70  29   P      P      19 05 02.1 -0.2
ILAR                                PcP    PcP    19 05 49.2 -0.6
ILAR                                pP     pwP    19 06 29.3 -2.3
KLU   Klutina           58.12  33   P      P      19 05 06.5 +1.2
      baz=271
EYAK  Cordova Ski Ar    58.23  34   P      P      19 05 07.2 +1.3
      baz=272
PRP   Porcupine Dome    58.29  28   P      P      19 05 06.7 +0.2
PRP   Porcupine Dome    58.29  28   P      P      19 05 06.7 +0.2
      baz=269
PAX   Paxson            58.30  31   P      P      19 05 07.6 +1.1
PAX                                 PcP    PcP    19 05 53.3 +0.9
PAX   Paxson            58.30  31   P      P      19 05 07.7 +1.1
      baz=271,SNR=7.7
FYU   Fort Yukon        58.43  27   P      P      19 05 09.3 +2.1
FYU                                 IAmb   IAmb   19 05 11.9
      comp=Z,21nm,0.8s
HARP  HAARP             58.46  32   P      P      19 05 08.8 +1.2
      baz=271,SNR=8.3
CHGR  Chuyangaron       58.48 300   P      P      19 05 08.2 -0.1
RIDG  Independent Ri    58.58  30   P      P      19 05 08.9 +0.6
RIDG  Independent Ri    58.58  30   P      P      19 05 08.8 +0.4
      baz=271,SNR=7.0
BMAR  Burnt Mountain    58.71  26   P      P      19 05 10.9 +1.7
BMAR                                PcP    PcP    19 05 54.9 +1.0
N25K  Chitina, Valde    58.75  33   P      P      19 05 10.1 +0.5
      baz=272
BMRM  Bremner River     58.77  34   P      P      19 05 11.1 +1.4
BMRM                                IAmb   IAmb   19 05 12.1
      comp=Z,61nm,1.2s
BMRM  Bremner River     58.77  34   P      P      19 05 10.9 +1.2
      baz=273,SNR=8.0
DOT   Dot Lake          58.93  30   P      P      19 05 11.4 +0.7
DOT                                 IAmb   IAmb   19 05 12.5
      comp=Z,29nm,0.8s
SCRK  Sand Creek        58.95  30   P      P      19 05 11.3 +0.3
SCRK                                IAmb   IAmb   19 05 12.8
      comp=Z,27nm,0.8s
SCRK  Sand Creek        58.95  30   P      P      19 05 11.8 +0.8
      baz=271,SNR=26
MENT  Mentasta          59.11  31   P      P      19 05 13.2 +1.3
J26L  Joseph Creek      59.13  29   P      P      19 05 12.7 +0.6
      baz=272,SNR=34
GLB   Gilahina Butte    59.13  33   P      P      19 05 13.5 +1.4
L26K  Log Cabin Wild    59.27  31   P      P      19 05 14.5 +1.4
L26K                                IAmb   IAmb   19 05 15.7
      comp=Z,14nm,0.7s
L26K  Log Cabin Wild    59.27  31   P      P      19 05 14.7 +1.7
      baz=273,SNR=9.1
M26K  Nabesna, AK       59.47  32   P      P      19 05 15.8 +1.4
M26K  Nabesna, AK       59.47  32   P      P      19 05 16.0 +1.6
      baz=273
MCARA McCarthy VSAT     59.51  33   P      P      19 05 15.8 +1.1
MCARA                               IAmb   IAmb   19 05 17.1
      comp=Z,22nm,0.9s
MCARA McCarthy VSAT     59.51  33   P      P      19 05 15.8 +1.1
      baz=274
CRQE  Cirque            59.52  34   P      P      19 05 16.1 +1.2
      baz=274
KBL   Kabul             59.56 295   P      P      19 05 15.5 -0.3
KBL                                 IAmb   IAmb   19 05 16.6
      comp=Z,40nm,1.5s
WAX   Waxell Ridge      59.66  34   P      P      19 05 16.4 +0.6
STKA  Stephens Creek    59.87 178   P      P      19 05 18.0 +0.6
      comp=Z,7.8nm,0.7s,baz=341,slow=8.9,SNR=19
STKA  Stephens Creek    59.87 178   P      P      19 05 17.5 +0.1
L27K  Beaver Creek,     59.96  31   P      P      19 05 19.0 +1.3
L27K                                PcP    PcP    19 06 00.9 +1.9
L27K  Beaver Creek,     59.96  31   P      P      19 05 19.3 +1.6
      baz=274
BCAR  Beaver Creek A    59.98  31   P      P      19 05 18.8 +1.0
BCAR                                PcP    PcP    19 06 00.2 +1.1
M27K  Edge Creek, AK    59.99  32   P      P      19 05 19.4 +1.4
M27K  Edge Creek, AK    59.99  32   P      P      19 05 19.6 +1.5
      baz=274
EGAK  Eagle             60.15  29   P      P      19 05 19.8 +0.9
      baz=274
CTG   Chitna Glacier    60.36  33   P      P      19 05 21.3 +0.7
      baz=276
BVCY  Beaver Creek      60.46  32   P      P      19 05 22.3 +1.3
      baz=275
YUK3  Moose Creek       60.70  32   P      P      19 05 24.3 +1.4
      baz=276,SNR=8.4
BBOO  Buckleboo         60.88 184   P      P      19 05 23.6 -0.5
DAWY  Dawson            60.97  30   P      P      19 05 25.4 +1.0
DAWY                                IAmb   IAmb   19 05 26.7
      comp=Z,27nm,1.4s
DAWY  Dawson            60.97  30   P      P      19 05 25.4 +1.0
      baz=275,SNR=9.9
I29M  Ogilvie Camp,     61.31  28   P      P      19 05 27.8 +1.2
      baz=276,SNR=16
J29M  Klondike Camp     61.44  29   P      P      19 05 29.2 +1.7
      baz=276,SNR=6.2
EPYK  Eagle Plains      61.85  27   P      P      19 05 31.2 +1.0
EPYK  Eagle Plains      61.85  27   P      P      19 05 31.9 +1.7
      baz=276
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ARU	Arti	62.15	322	P	P	19 05 32.1	-0.1
	comp=Z,16nm,0.5s,baz=94,slow=3.6,SNR=102						
ARU				PcP	PcP	19 06 07.3	-0.6
	comp=Z,4.2nm,0.4s,baz=93,slow=7.2,SNR=6.3						
ARU	Arti	62.15	322	P	P	19 05 31.8	-0.4
ARU				PcP	PcP	19 06 07.3	-0.6
ABKAR	Akbulak array	62.71	313	P	P	19 05 35.2	-0.8
ABKAR	Akbulak array	62.71	313	P	P	19 05 35.6	-0.5
ABKAR				IAmb	IAmb	19 05 36.7	
	comp=Z,31nm,0.8s						
INK	Inuvik	62.83	25	P	P	19 05 37.2	+0.8
	comp=Z,7.8nm,0.5s,baz=291,slow=6.0,SNR=61						
INK				PcP	PcP	19 06 11.0	+0.6
	comp=Z,3.7nm,0.6s,baz=230,slow=1.5,SNR=6.9						
INK	Inuvik	62.83	25	P	P	19 05 37.0	+0.5
INK				IAmb	IAmb	19 05 38.0	
	comp=Z,29nm,1.4s						
INK	Inuvik	62.83	25	P	P	19 05 37.2	+0.8
	baz=278						
N31M	Braeburn, Yuko	62.96	32	P	P	19 05 39.5	+2.0
	baz=280,SNR=10						
M31M	Drury Creek, Y	63.48	32	P	P	19 05 42.3	+1.5
	baz=281,SNR=18						
WHY	Whitehorse	63.54	33	P	P	19 05 42.8	+1.5
WHY				IAmb	IAmb	19 05 44.1	
	comp=Z,13nm,0.9s						
WHY	Whitehorse	63.54	33	P	P	19 05 43.1	+1.8
	baz=281						
SKAG	Skagway	63.55	35	P	P	19 05 42.6	+1.4
SKAG				IAmb	IAmb	19 05 43.5	
	comp=Z,27nm,1.3s						
SKAG	Skagway	63.55	35	P	P	19 05 42.6	+1.4
	baz=281						
AKTO	Aktyubinsk	63.66	315	P	P	19 05 41.7	-0.5
	comp=Z,20nm,0.6s,baz=87,slow=7.6,SNR=57						
FARO	Faro, Yukon	63.95	31	P	P	19 05 45.2	+1.3
	baz=282,SNR=18						
P33M	Teslin, Yukon	64.63	34	P	P	19 05 49.4	+1.1
	baz=283,SNR=6.2						
A36M	Sachs Harbour	64.89	20	P	P	19 05 50.6	+0.9
A36M	Sachs Harbour	64.89	20	P	P	19 05 50.7	+1.1
	baz=284						
HRA	Herat	64.99	297	P	P	19 05 50.1	-1.2
HRA				IAmb	IAmb	19 05 52.7	
	comp=Z,14nm,0.9s						
TOO	Toolangi	65.75	175	P	P	19 05 55.7	+0.2
TOO				IAmb	IAmb	19 05 57.6	
	comp=Z,16nm,0.9s						
KIRV	Kirov	66.48	325	P	P	19 06 00.1	+0.2
	comp=Z,114nm,0.7s,baz=52,slow=0.5,SNR=29						
GEYT	Alibeck	67.04	302	P	P	19 06 04.2	+0.4
	comp=Z,11nm,1.0s,baz=52,slow=18,SNR=9.8						
GEYT	Alibeck	67.04	302	P	P	19 06 03.1	-0.7
GEYT				IAmb	IAmb	19 06 05.2	
	comp=Z,12nm,1.0s						
GYA0B	ALIBECK ARRAY	67.04	302	P	P	19 06 02.5	-1.4
GYA0B				IAmb	IAmb	19 06 05.2	
	comp=Z,14nm,0.9s						
WRGLY	Wrigley	68.08	29	P	P	19 06 10.9	+1.3
	baz=289						
SPB2	Spitsbergen Ar	68.81	349	P	P	19 06 14.6	+0.6
SPITS	Spitsbergen Ar	68.81	349	P	P	19 06 14.8	+0.9
	comp=Z,18nm,0.7s,baz=87,slow=7.9,SNR=31						
EUNU	Eureka	69.00	8	P	P	19 06 15.5	+0.3
EUNU				IAmb	IAmb	19 06 17.0	
	comp=Z,20nm,0.7s						
BELG	Belogornoye	69.35	319	P	P	19 06 17.5	-0.1
	comp=Z,65nm,0.8s,baz=11,slow=1.0,SNR=27						
NOR	Nord	69.65	356	*i* P	P	19 06 18.8	-0.3
NOR				IAmb	IAmb	19 06 19.7	
	comp=Z,4.1nm,0.9s						
HSPB	Hornsund (broa	69.69	348	*e*P	P	19 06 20.2	+1.0
KLMR	Klimovskoe	70.45	329	*e*P	P	19 06 23.1	-1.0
KLMR				AMP		19 06 24.3	
	comp=Z,27nm,0.5s						
KEV	Kevo	71.13	340	P	P	19 06 28.4	+0.5
RES	Resolute Bay	71.39	13	P	P	19 06 29.6	+0.2
ARCES	ARCESS Array B	71.69	340	P	P	19 06 31.9	+0.6
	comp=Z,40nm,0.6s,baz=68,slow=8.5,SNR=173						
ARCES	ARCESS Array B	71.69	340	P	P	19 06 31.5	+0.2
YKA	Yellowknife Ar	72.10	28	P	P	19 06 34.4	+0.6
	comp=Z,17nm,0.6s,baz=296,slow=5.9,SNR=63						
YKA	Yellowknife Ar	72.10	28	P	P	19 06 33.9	+0.1
SHME	Shamm	72.89	291	P	P	19 06 39.8	+0.7
MSFE	Esma-Masafi	73.15	290	P	P	19 06 41.0	+0.3
UOSS	Minazif	73.28	290	P	P	19 06 40.9	-0.5
SOHO	SOHO	73.33	289	*i* P	P	19 06 41.5	-0.2
	SNR=6.8						
HATD	Hatta, Dubai	73.39	290	P	P	19 06 42.4	+0.3
ASHO	Ashiyiah	73.51	289	P	P	19 06 42.5	-0.2
TOZ	Tahuroa Road	73.74	151	P	P	19 06 45.0	+1.4
FAQ	Al Faqa, Dubai	73.87	290	P	P	19 06 44.7	-0.1
TULEG	Thule	73.91	7	*i* P	P	19 06 44.0	0.0
TULEG				IAmb	IAmb	19 06 44.5	
	comp=Z,14nm,0.5s						
TULEG	Thule	73.91	7	P	P	19 06 44.2	+0.2
TULEG				IAmb	IAmb	19 06 45.4	
	comp=Z,25nm,1.0s						
ASUD	Al Ashush, Dub	74.14	290	P	P	19 06 46.5	+0.2
D03D	Eldon	74.19	44	P	P	19 06 48.4	+2.3
	baz=295						
NEEM	North Greenlan	74.29	2	*i* P	P	19 06 46.6	0.0
NEEM				IAmb	IAmb	19 06 47.7	
	comp=Z,48nm,0.7s						
OBN	Obninsk	74.31	324	P	P	19 06 46.8	+0.1
	comp=Z,12nm,0.8s,baz=330,slow=1.9,SNR=11						
OBN	Obninsk	74.31	324	P	P	19 06 45.3	-1.4
DAG	Danmarks Havn	74.33	355	*i* P	P	19 06 46.0	-0.4
DAG				IAmb	IAmb	19 06 47.7	
	comp=Z,6.3nm,0.5s						
OMRZ	Omania	74.43	151	P	P	19 06 48.0	+0.5
B05A	Bryant	74.49	43	P	P	19 06 49.6	+1.7
	baz=295						
VRZ	Vera Road	74.61	152	P	P	19 06 50.5	+2.0
HAZ	Te Kaha	74.75	150	P	P	19 06 49.4	+0.1
TWVZ	Taurewa	74.84	152	P	P	19 06 50.8	+0.8
URZ	Urewera	74.87	150	P	P	19 06 50.3	+0.3
URZ	Urewera	74.87	150	P	P	19 06 49.4	-0.6
URZ				IAmb	IAmb	19 06 56.0	
	comp=Z,23nm,1.0s						
RUGZ	Raukumara Rang	74.88	150	P	P	19 06 49.3	-0.9
E04D	Cinebar	74.92	45	P	P	19 06 51.6	+1.2
	baz=295						
WTVZ	West Tongariro	74.94	152	P	P	19 06 51.8	+1.2
NNVZ	North Ngauruho	74.97	152	P	P	19 06 52.2	+1.5
PKVZ	Pokaka	74.99	152	P	P	19 06 51.9	+1.2
TMVZ	Te Maari	74.99	152	P	P	19 06 52.0	+1.2
NGZ	Ngauruhoe	75.00	152	P	P	19 06 52.2	+1.3
ETVZ	East Tongariro	75.01	152	P	P	19 06 52.4	+1.5
OTVZ	Oturere	75.02	152	P	P	19 06 52.4	+1.4
SNVZ	South Ngauruho	75.02	152	P	P	19 06 52.4	+1.4
FWVZ	Far West T-bar	75.05	152	P	P	19 06 52.2	+1.0
TRVZ	Turoa	75.08	152	P	P	19 06 52.6	+1.1
WMGZ	Waiomatatini S	75.09	149	P	P	19 06 51.9	+0.7
RTZ	Ruatahuna	75.11	151	P	P	19 06 51.3	-0.2
MWZ	Matawai	75.12	150	P	P	19 06 51.7	+0.3
WNVZ	Wahianoa	75.12	152	P	P	19 06 52.8	+1.2
MTHZ	Maungataniwha	75.25	151	P	P	19 06 52.9	+0.7
MOVZ	Moawhango	75.26	152	P	P	19 06 52.6	+0.4
F04A	Amboy	75.28	46	P	P	19 06 54.2	+1.8
BKZ	Black Stump Fm	75.36	151	P	P	19 06 53.1	+0.3
BKZ	Black Stump Fm	75.36	151	P	P	19 06 52.8	0.0
SNGZ	Shannon Statio	75.41	150	P	P	19 06 54.0	+1.0
BHHZ	Black Hill Sta	75.45	152	P	P	19 06 53.9	+0.5
KWHZ	Kaweka Forest	75.55	151	P	P	19 06 54.1	+0.2
KBZ	Khabaz	75.61	312	P	P	19 06 54.6	+0.4
	comp=Z,46nm,0.8s,baz=99,slow=3.1,SNR=93						
I03D	Drain, OR	75.64	48	P	P	19 06 56.5	+2.0
	baz=296						
KIV	Kislovodsk	75.65	312	⇑P	P	19 06 55.2	+0.5
KIV	Kislovodsk	75.65	312	*i* P	P	19 06 55.2	+0.5
	SNR=5.6						
KIV	Kislovodsk	75.65	312	P	P	19 06 54.5	-0.1
KRHZ	Kereru	75.71	152	P	P	19 06 55.9	+1.1
ONI	Oni	75.73	311	P	P	19 06 55.8	+0.7
ONI				IAmb	IAmb	19 06 57.0	
	comp=Z,34nm,1.1s						
LTY	Liberty	75.79	44	P	P	19 06 55.3	0.0
LTY				IAmb	IAmb	19 06 57.0	
	comp=Z,8.3nm,0.7s						
NNZ	Nelson	75.86	154	P	P	19 06 55.0	-0.4
K02D	Willamette Mer	75.86	49	P	P	19 06 57.7	+1.9
	baz=296						
PNHZ	Pukenui	75.87	152	P	P	19 06 56.1	+0.5
GNI	Garni	75.89	308	P	P	19 06 56.6	+0.5
GNI	Garni	75.89	308	P	P	19 06 56.0	-0.1
GNI				IAmb	IAmb	19 06 58.1	
	comp=Z,27nm,1.1s						
TSZ	Takapari Road	75.89	152	P	P	19 06 56.2	+0.5
FIA1	FINESS Array S	75.91	333	P	P	19 06 55.0	-0.5
FINES	FINESS Array B	75.91	333	P	P	19 06 55.5	-0.1
	comp=Z,51nm,0.4s,baz=72,slow=5.0,SNR=596						
FINES	FINESS Array B	75.91	333	P	P	19 06 54.9	-0.7
HOOD	Mount Hood Mea	76.03	46	P	P	19 06 58.0	+1.2
HOOD				IAmb	IAmb	19 07 03.1	
	comp=Z,20nm,0.8s						
KAHZ	Kahuranaki	76.05	151	P	P	19 06 57.6	+0.9
B08A	Colville Reser	76.10	42	P	P	19 06 58.0	+1.0
B08A				IAmb	IAmb	19 06 59.3	
	comp=Z,24nm,0.8s						
AKH	Akhalkalaki	76.21	310	⇑P	P	19 06 59.1	+1.2
I04A	Tendick Farm,	76.21	48	P	P	19 06 59.1	+1.3
	baz=296						
MRZ	Mangatainoka R	76.25	153	P	P	19 06 58.0	+0.4
TUWZ	Tuamarina	76.26	154	P	P	19 06 57.1	-0.6
G05D	Wamic, OR	76.28	46	P	P	19 06 59.8	+1.7
	baz=296						
BFZ	Birch Farm	76.53	152	P	P	19 06 59.5	+0.3
CHVG	Ch'k'valeri	76.58	311	⇑P	P	19 07 00.7	+0.9
E07A	Sunnyside	76.60	44	P	P	19 07 01.0	+1.2
E07A				IAmb	IAmb	19 07 02.4	
	comp=Z,10nm,0.9s						
J04D	Umpqua Nationa	76.65	48	P	P	19 07 02.0	+1.6
	baz=296						
I05D	Terrebonne, OR	76.67	47	P	P	19 07 01.7	+1.5
	baz=297						
MSWZ	Moikau Station	76.75	153	P	P	19 06 59.5	-1.0
DBG	Daneborg	76.80	355	*i* P	P	19 06 59.8	-0.5
DBG				IAmb	IAmb	19 07 00.5	
	comp=Z,6.9nm,0.6s						
KARS	Kars	76.83	309	P	P	19 07 01.0	-0.3
PLWZ	Palliser	76.89	153	P	P	19 07 01.3	+0.1
YBH	Yreka Blue Hor	76.92	50	P	P	19 07 03.4	+1.7
	comp=Z,6.2nm,0.7s,baz=3.3,slow=4.6,SNR=12						
YBH	Yreka Blue Hor	76.92	50	P	P	19 07 03.7	+2.0
D08A	Wollman Farm,	76.95	43	P	P	19 07 02.9	+1.2
D08A				IAmb	IAmb	19 07 04.0	
	comp=Z,20nm,0.8s						
M02C	Callahan	76.97	50	P	P	19 07 03.9	+1.9
	baz=296						
L04D	Klamath Falls	76.98	49	P	P	19 07 03.7	+1.6
	baz=296						
C09A	Chrisman Ranch	76.99	43	P	P	19 07 03.0	+1.1
E08A	Dider Farm, El	77.12	44	P	P	19 07 03.9	+1.3
E08A				IAmb	IAmb	19 07 05.0	
	comp=Z,14nm,0.6s						
PINE	Pine Mountain	77.17	47	P	P	19 07 05.5	+2.3
RPZ	Rata Peaks	77.20	157	P	P	19 07 02.6	-0.3
J05D	Fort Rock, OR	77.21	48	P	P	19 07 05.2	+1.9
	baz=297						
N02D	Trinity Center	77.26	50	P	P	19 07 05.2	+1.6
	baz=296						
VSU	Vasula	77.29	330	*e*P	P	19 07 03.6	+0.4
BCA	Borcka	77.45	310	⇑P	P	19 07 06.7	+2.1
NEW	Newport	77.45	42	P	P	19 07 06.1	+1.6
	comp=Z,16nm,0.7s,baz=300,slow=4.1,SNR=23						
NEW	Newport	77.45	42	P	P	19 07 05.7	+1.2
NEW				IAmb	IAmb	19 07 06.7	
	comp=Z,17nm,0.8s						
NEW	Newport	77.45	42	P	P	19 07 05.7	+1.2
	baz=298,SNR=15						
M04C	Macdoel	77.48	49	P	P	19 07 06.4	+1.6
	baz=297,SNR=7.0						
WDC	Whiskeytown Da	77.55	51	P	P	19 07 06.2	+1.1
O02D	Mt. Diablo Mer	77.56	51	P	P	19 07 06.7	+1.5
	baz=297,SNR=6.3						
K05A	Summer Lake	77.68	48	P	P	19 07 07.6	+1.6
K05A				IAmb	IAmb	19 07 09.4	
	comp=Z,20nm,1.0s						
G08A	Pilot Rock	77.74	45	P	P	19 07 07.7	+1.5
O03E	Paynes Creek	78.18	51	P	P	19 07 09.4	+0.8
	baz=297,SNR=6.3						
UMR	Umm Al-Rimmam	78.22	297	*e*P	P	19 07 08.0	-1.0
MTSE	Matsula	78.40	331	*e*P	P	19 07 09.7	+0.4
KBD	Kabd	78.41	297	*e*P	P	19 07 08.4	-1.5
MIB	Mutribah	78.41	298	*e*P	P	19 07 08.9	-1.1
MOD	Modoc Plateau	78.45	49	P	P	19 07 11.6	+1.5
GURO	Guroymak-BITLI	78.47	308	P	P	19 07 11.0	+0.7
GURO				IAmb	IAmb	19 07 11.9	
	comp=Z,20nm,0.9s						
F10A	Beach Ranch, E	78.49	44	P	P	19 07 11.4	+1.2
UPNV	Upernavik	78.60	5	*i* P	P	19 07 09.7	-0.4
UPNV				IAmb	IAmb	19 07 10.5	
	comp=Z,14nm,0.7s						
SIRT	Sirnak	78.66	306	P	P	19 07 11.0	-0.3
ORV	Oroville	78.72	51	P	P	19 07 12.0	+0.5
ORV				IAmb	IAmb	19 07 13.3	
	comp=Z,22nm,1.2s						
ORV					pwP	19 08 47.7	-0.5
RST	Umm Al-Ruwaisa	78.81	297	*e*P	P	19 07 11.1	-1.0
KOPT	Kop Dagi	78.86	309	P	P	19 07 12.8	+0.3
KOPT				IAmb	IAmb	19 07 17.1	
	comp=Z,16nm,0.8s						
WALA	Waterton Lakes	78.92	40	P	P	19 07 14.2	+1.7
WALA				IAmb	IAmb	19 07 14.9	
	comp=Z,20nm,0.7s						
J08A	Circle Bar Ran	78.96	47	P	P	19 07 14.6	+1.8
J08A				IAmb	IAmb	19 07 15.4	
	comp=Z,28nm,1.0s						
MNK	Minsk	78.96	327	*i* P	P	19 07 13.2	+0.8
	comp=E,5.0nm,1.4s						
MNK				*i* P	P	19 07 13.2	+0.8
	comp=N,34nm,1.3s,baz=237						
MNK				*i* P	P	19 07 13.2	+0.8
	comp=Z,57nm,0.9s						
MNK				*i* pP	pwP	19 08 52.0	+3.4
MNK				*i* PP	PP	19 10 19.2	+1.6
MNK				*i* PPP	PPP	19 12 10.9	
MNK				*i* S	S	19 16 35.7	+0.1
MNK				*i* SS	SS	19 22 18.5	+28
MNK				*i* SSS	SSS	19 25 47.7	
MNK				*i* LR	LR	19 38 02.5	
MNK				*i* LRM	MLR	19 42 55.0	
	comp=N,414nm,27.3s						
MNK				*i* LRM	MLR	19 43 02.9	
	comp=E,52nm,24.3s						
MNK				*i* LRM	MLR	19 43 10.1	
	comp=Z,677nm,22.1s						
BMO	Blue Mountains	78.98	45	P	P	19 07 13.8	+0.9
BMO				IAmb	IAmb	19 07 15.2	
	comp=Z,9.8nm,0.8s						
AAL	Aland	79.06	334	*e*P	P	19 07 12.6	-0.2
ISAL	Salakas	79.20	328	*e*P	P	19 07 14.0	+0.4
NACGM	Naroch	79.26	327	*i* P	P	19 07 14.4	+0.4
IIGN	Ignalina	79.28	328	*e*P	P	19 07 14.4	+0.3
WVOR	Wild Horse Val	79.29	48	P	P	19 07 16.2	+1.5
JTMT	Jette	79.37	41	P	P	19 07 15.9	+0.9
JTMT				IAmb	IAmb	19 07 17.4	
	comp=Z,25nm,1.2s						
SUMG	Summit	79.38	359	*i* P	P	19 07 15.0	+0.2
SUMG				IAmb	IAmb	19 07 15.9	
	comp=Z,18nm,0.5s						
SUMG	Summit	79.38	359	P	P	19 07 15.4	+0.5
PLID	Pearl Lake	79.67	44	P	P	19 07 16.9	+0.2
MPK	Martis Peak	79.85	51	P	P	19 07 19.4	+1.5
RUBR	Rubicon Trail	79.88	51	P	P	19 07 19.4	+1.5
RUBR				IAmb	IAmb	19 07 20.2	
	comp=Z,25nm,0.8s						
MARD	Mardin	79.92	307	P	P	19 07 17.9	-0.2
EMB	Emerald Bay	79.95	51	P	P	19 07 19.5	+1.2
EMB				IAmb	IAmb	19 07 20.5	
	comp=Z,19nm,0.7s						
MSO	Missoula	80.04	42	P	P	19 07 19.3	+0.8
	baz=301						
PAHR	Pah Rah Range	80.10	50	P	P	19 07 19.7	+0.7
PAHR				IAmb	IAmb	19 07 21.0	
	comp=Z,13nm,0.9s						
VCNR	Virginia City	80.11	51	P	P	19 07 19.7	+0.5
VCNR				IAmb	IAmb	19 07 21.4	
	comp=Z,13nm,0.9s						
UPP	Uppsala	80.18	334	*e*P	P	19 07 18.6	-0.1
CMB	Columbia Colle	80.20	52	P	P	19 07 19.4	0.0
CMB				IAmb	IAmb	19 07 21.5	
	comp=Z,13nm,0.9s						
PABE	Paberze	80.23	329	*e*P	P	19 07 19.3	+0.2
PABE	Paberze	80.23	329	P	P	19 07 18.8	-0.3
PNTR	Pine Nut	80.24	51	P	P	19 07 20.8	+0.9
PNTR				IAmb	IAmb	19 07 22.6	
	comp=Z,20nm,0.7s						
AKASG	Malin Array Be	80.37	323	P	P	19 07 19.3	-0.6
	comp=Z,25nm,0.7s,baz=54,slow=5.6,SNR=117						
AKASG				pP	pwP	19 08 55.9	-1.2
	comp=Z,1.3nm,0.6s,baz=52,slow=5.3,SNR=1.7						
AKASG	Malin Array Be	80.37	323	P	P	19 07 19.0	-1.0
AKBB	Malin Array Si	80.37	323	P	P	19 07 19.1	-0.8
YERR	Yerington	80.54	51	P	P	19 07 22.4	+1.1
YERR				IAmb	IAmb	19 07 23.6	
	comp=Z,16nm,0.7s						
MFID	Camas Ranch	80.61	46	P	P	19 07 22.7	+1.1
MFID				IAmb	IAmb	19 07 24.1	
	comp=Z,14nm,0.8s						
PBUR	Paburge	80.84	330	*e*P	P	19 07 22.4	+0.1
BMN	Battle Mountai	81.19	49	P	P	19 07 26.1	+1.4
RYN	Ryan	81.20	51	P	P	19 07 26.2	+1.4
RYN				IAmb	IAmb	19 07 27.1	
	comp=Z,15nm,0.8s						
KVN	Kaiserville	81.28	50	P	P	19 07 26.3	+1.1
KVN				IAmb	IAmb	19 07 27.5	
	comp=Z,16nm,0.7s						
LHV	Little Huntoon	81.40	51	P	P	19 07 27.1	+1.5
LHV				IAmb	IAmb	19 07 28.4	
	comp=Z,11nm,0.9s						
TOKA	Tokat	81.42	311	P	P	19 07 25.9	+0.1
HLID	Hailey	81.43	45	P	P	19 07 27.1	+1.2
HLID				IAmb	IAmb	19 07 29.2	
	comp=Z,9.6nm,0.7s						
HLID	Hailey	81.43	45	P	P	19 07 27.3	+1.4
	baz=301,SNR=22						
LRM	Limekiln Ridge	81.44	42	P	P	19 07 27.3	+1.3
LRM					pwP	19 09 02.2	-1.5
NVAR	Mina Array Bea	81.45	51	P	P	19 07 27.6	+1.5
	comp=Z,13nm,0.7s,baz=289,slow=5.4,SNR=106						
NVAR				pP	pwP	19 09 01.7	-2.1
	comp=Z,0.7nm,0.7s,baz=318,slow=2.0,SNR=2.2						
NVAR	Mina Array Bea	81.45	51	P	P	19 07 27.3	+1.2
HFS	Hagfors	81.46	336	P	P	19 07 24.6	-0.8
	comp=Z,31nm,0.5s,baz=92,slow=4.5,SNR=232						
NC405	NORSAR Array S	81.46	337	P	P	19 07 23.5	-2.0
SUW	Suwalki	81.49	328	*e*P	P	19 07 24.9	-0.8
SUW	Suwalki	81.49	328	*e*P	P	19 07 25.4	-0.3
SUW	Suwalki	81.49	328	P	P	19 07 25.0	-0.8
NC303	NORSAR Array S	81.50	337	P	P	19 07 24.7	-1.0
NV11	Mina Array Sit	81.55	51	P	P	19 07 27.3	+0.7
DLMT	Dillon	81.60	43	P	P	19 07 27.1	+0.4
DLMT				IAmb	IAmb	19 07 28.9	
	comp=Z,9.2nm,0.8s						
NB201	NORSAR Array S	81.65	337	P	P	19 07 25.7	-0.8
BCYI	Bear Canyon	81.66	44	P	P	19 07 27.0	-0.1
NC204	NORSAR Array S	81.67	338	P	P	19 07 25.7	-0.9
NB2	NORSAR Subarra	81.68	337	P	P	19 07 25.3	-1.4
	comp=Z,29nm,0.6s,baz=44,slow=5.1						
NB2	NORSAR Subarra	81.68	337	P	P	19 07 25.3	-1.4
	baz=44,slow=5.1						
NOA	NORSAR Array B	81.68	337	P	P	19 07 25.9	-0.7
	comp=Z,26nm,0.6s,baz=54,slow=6.7,SNR=92						
MCMT	McKenzie Canyo	81.73	43	P	P	19 07 27.8	+0.3
NC602	NORSAR Array S	81.79	337	P	P	19 07 26.2	-1.0
EGMT	Eagleton	81.81	39	P	P	19 07 28.1	+0.4
EGMT	Eagleton	81.81	39	P	P	19 07 28.4	+0.7
	baz=304						
NBO00	NORSAR Array S	81.84	338	P	P	19 07 25.9	-1.6
NBO00				IAmb	IAmb	19 07 30.0	
	comp=Z,23nm,0.8s						
NAO01	NORSAR Array S	81.94	337	P	P	19 07 27.1	-0.9
BOZ	Bozeman (W)	82.05	42	P	P	19 07 29.0	0.0
BOZ				IAmb	IAmb	19 07 31.2	
	comp=Z,22nm,1.4s						
BOZ	Bozeman (W)	82.05	42	P	P	19 07 29.7	+0.7
	baz=303,SNR=5.1						
PKM	Mcpherson Peak	82.10	55	P	P	19 07 31.0	+1.4
	baz=299						
BZK	Bozkurt	82.20	314	⇑P	P	19 07 30.6	+0.9
BZK	Bozkurt	82.20	314	P	P	19 07 29.1	-0.5
SORM	Soroca	82.26	321	⇑P	P	19 07 28.9	-0.9
ELK	Elko	82.34	48	P	P	19 07 31.2	+0.5
ELK				IAmb	IAmb	19 07 33.2	
	comp=Z,16nm,1.1s						
TPH	Tonopah	82.36	51	P	P	19 07 31.5	+0.6
FCC	Fort Churchill	82.45	25	P	P	19 07 30.3	-0.2
FCC				IAmb	IAmb	19 07 31.4	
	comp=Z,22nm,0.9s						
GAZ	Gaziantep	82.49	308	P	P	19 07 30.2	-1.1
LCH	Last Change Ra	82.49	52	P	P	19 07 32.4	+1.0
LCH				IAmb	IAmb	19 07 33.7	
	comp=Z,18nm,1.3s						
CWC	Cottonwood Cre	82.58	53	P	P	19 07 32.6	+0.6
	baz=300						
BNN	Bunyan	82.58	310	P	P	19 07 31.8	0.0
QLMT	Earthquake Lak	82.58	43	P	P	19 07 33.3	+1.4
ISA	Isabella, Lake	82.68	53	P	P	19 07 32.5	+0.2
ISA	Isabella, Lake	82.68	53	P	P	19 07 32.6	+0.2
	baz=300						
MILM	Milestii Mici	82.68	320	⇑P	P	19 07 31.3	-0.7
RAYN	Ar Rayn	82.70	293	*i* P	P	19 07 32.7	+0.1
	SNR=40						
RAYN	Ar Rayn	82.70	293	P	P	19 07 32.2	-0.4
GRAC	Grapevine Rang	82.80	52	P	P	19 07 34.1	+1.2
	baz=300						
ILGA	Ilgaz	82.86	313	P	P	19 07 34.1	+0.8
ILGA				IAmb	IAmb	19 07 34.3	
	comp=Z,23nm,0.9s						
ICESG	Greenland Ices	82.89	360	*i* P	P	19 07 32.7	-0.3
ICESG				IAmb	IAmb	19 07 33.9	
	comp=Z,28nm,0.7s						
YMR	Madison River	82.95	43	P	P	19 07 34.8	+1.1
YMR				IAmb	IAmb	19 07 36.7	
	comp=Z,24nm,0.9s						
YHH	Holmes Hill	82.95	43	P	P	19 07 33.5	-0.3
YNR	Norris Junctio	83.09	43	P	P	19 07 35.4	+1.0
YNR				IAmb	IAmb	19 07 38.1	
	comp=Z,19nm,1.0s						
SNCC	San Nicolas Is	83.11	56	P	P	19 07 35.4	+0.9
	baz=299						
STRU	Stroemstad	83.14	336	*i* P	P	19 07 32.6	-1.5
MPMC	Manual Prospec	83.18	53	P	P	19 07 36.1	+1.0
	baz=300,SNR=9.2						
BLEU	Blekinge	83.27	332	*i* P	P	19 07 32.9	-1.9
H17A	Grant Village	83.33	43	P	P	19 07 36.9	+1.2
H17A				IAmb	IAmb	19 07 40.0	
	comp=Z,31nm,1.1s						
H17A	Grant Village	83.33	43	P	P	19 07 39.0	+3.3
	baz=303,SNR=5.2						
LRMC	Laurel Mtn Rad	83.33	53	P	P	19 07 36.6	+0.9
	baz=300,SNR=10						
R11A	Troy Canyon, C	83.34	50	P	P	19 07 37.1	+1.3
R11A				IAmb	IAmb	19 07 38.0	
	comp=Z,14nm,0.9s						
R11A	Troy Canyon, C	83.34	50	P	P	19 07 37.1	+1.3
	baz=301,SNR=19						
HVU	Hansel Valley	83.39	46	P	P	19 07 37.3	+1.4
EDW2	Edwards Air Fo	83.41	54	P	P	19 07 37.5	+1.5
	baz=300,SNR=8.6						
FURC	Furnace Creek,	83.42	52	P	P	19 07 37.1	+1.2
	baz=300,SNR=11						
VASR	Vaslui	83.42	320	⇑P	P	19 07 35.6	-0.1
FLWY	Flagg Ranch	83.43	43	P	P	19 07 38.1	+1.9
FXWY	Fox Creek	83.47	44	P	P	19 07 38.0	+1.6
FXWY				IAmb	IAmb	19 07 39.3	
	comp=Z,31nm,1.5s						
FXWY					pwP	19 09 11.7	-2.8
BORU	Boraas	83.55	334	*i* P	P	19 07 34.6	-1.6
ECR	Eagle Creek	83.58	44	P	P	19 07 38.0	+1.1
MOOW	Moose Ponds	83.58	43	P	P	19 07 38.2	+1.2
MOOW				pP	pwP	19 09 11.8	-3.3
TPNV	Topopah Spring	83.60	51	P	P	19 07 38.0	+0.9
TPNV				IAmb	IAmb	19 07 39.1	
	comp=Z,14nm,0.9s						
TPNV	Topopah Spring	83.60	51	P	P	19 07 38.2	+1.2
	baz=301						
BR131	Keskin Array S	83.60	312	P	P	19 07 36.3	-0.7
BRTR	Keskin Array B	83.60	312	P	P	19 07 36.7	-0.3
	comp=Z,11nm,0.6s,baz=99,slow=3.8,SNR=22						
BRTR	Keskin Array B	83.60	312	P	P	19 07 35.6	-1.4
QSM	Queen of Sheba	83.67	53	P	P	19 07 38.3	+1.1
QSM				IAmb	IAmb	19 07 39.4	
	comp=Z,24nm,0.9s						
BGU	Big Grassy Mou	83.68	47	P	P	19 07 38.5	+1.1
BGU				IAmb	IAmb	19 07 39.7	
	comp=Z,9.2nm,0.7s						
GWY	Greenwater Val	83.69	52	P	P	19 07 38.4	+0.9
GWY				IAmb	IAmb	19 07 39.6	
	comp=Z,24nm,0.9s						
RLMT	Red Lodge	83.70	42	P	P	19 07 39.0	+1.6

RLMT	Red Lodge	83.70	42	P	P	19 07 39.3	+1.8
	baz=304,SNR=12						
VLDR	Vladesti	83.71	319	⇓P	P	19 07 37.6	+0.5
REDW	Red Top Meadow	83.73	44	P	P	19 07 39.2	+1.5
REDW				IAmb	IAmb	19 07 40.3	
	comp=Z,23nm,1.4s						
LOHW	Long Hollow	83.74	43	P	P	19 07 39.1	+1.4
LOHW				IAmb	IAmb	19 07 40.4	
	comp=Z,9.1nm,0.8s						
LOHW					pP	19 09 10.2	-0.5
SPR3	Spring Creek 3	83.84	49	P	P	19 07 39.7	+1.3
SPR3				IAmb	IAmb	19 07 41.0	
	comp=Z,21nm,1.5s						
PRAR	RASCA	83.88	321	⇓P	P	19 07 37.8	-0.3
AHID	Auburn Hatcher	83.90	44	P	P	19 07 39.5	+1.0
AHID				IAmb	IAmb	19 07 40.8	
	comp=Z,15nm,0.8s						
DEL	Delary	83.94	333	iP	P	19 07 36.0	-2.1
GHRR		83.97	320	⇓P	P	19 07 38.6	+0.1
BFSC	Mount Baldy Ra	83.97	54	P	P	19 07 40.5	+1.5
	baz=300						
BEL	Belsk	83.98	327	eP	P	19 07 38.3	-0.1
FABU	Falkenberg	84.02	334	iP	P	19 07 36.5	-2.0
GSC	Goldstone, Bar	84.04	53	P	P	19 07 40.5	+1.3
GSC				IAmb	IAmb	19 07 41.3	
	comp=Z,20nm,0.9s						
GSC	Goldstone, Bar	84.04	53	P	P	19 07 40.6	+1.3
	baz=301,SNR=11						
ONAU	Onsala	84.05	335	iP	P	19 07 36.3	-2.3
CFR	Carcaliu	84.05	319	⇑P	P	19 07 38.7	-0.2
TPGR	Topolog	84.07	318	⇑P	P	19 07 38.2	-0.9
ANTO	Ankara	84.08	312	P	P	19 07 38.7	-0.6
ANTO				IAmb	IAmb	19 07 40.3	
	comp=Z,14nm,0.6s						
SHOC	Shoshone, Teco	84.11	52	P	P	19 07 40.5	+1.0
	baz=301						
TESR	Tescani	84.14	320	⇓P	P	19 07 39.0	-0.3
PRN	Pahroc Range	84.18	51	P	P	19 07 41.3	+1.4
PRN				IAmb	IAmb	19 07 42.3	
	comp=Z,19nm,1.1s						
DUG	Dugway, Tooele	84.21	47	P	P	19 07 41.4	+1.4
DUG				IAmb	IAmb	19 07 42.3	
	comp=Z,19nm,0.7s						
DUG	Dugway, Tooele	84.21	47	P	P	19 07 41.2	+1.2
	baz=302,SNR=22						
BUR08	Bucovina Ar. S	84.28	322	P	P	19 07 39.9	-0.3
BUR08				IAmb	IAmb	19 07 40.9	
	comp=Z,17nm,1.4s						
BURAR	Bucovina Array	84.29	322	⇑P	P	19 07 40.3	+0.1
BURAR	Bucovina Array	84.29	322	P	P	19 07 39.9	-0.3
BURAR				IAmb	IAmb	19 07 40.8	
	comp=Z,8.4nm,0.7s						
HARR	Harsova	84.45	318	⇓P	P	19 07 40.8	-0.1
BSD	Bornholm Skovb	84.46	332	eP	P	19 07 40.2	-0.5
BSD	Bornholm Skovb	84.46	332	iP	P	19 07 38.9	-1.8
TLBR	Topalu	84.46	318	⇑P	P	19 07 41.1	+0.1
VRI	Vrincioaia	84.47	320	⇑P	P	19 07 41.2	+0.2
BBRC	Big Bear Solar	84.49	54	P	P	19 07 42.4	+0.8
	baz=301						
PLOR	Plostina	84.52	320	⇑P	P	19 07 41.0	-0.3
LAO	LASA Array	84.55	39	P	P	19 07 42.4	+1.0
	baz=306						
SHPR	Sheep Range	84.58	51	P	P	19 07 42.4	+0.5
SHPR				IAmb	IAmb	19 07 44.3	
	comp=Z,12nm,0.8s						
DGMT	Dagmar	84.58	37	P	P	19 07 41.6	+0.1
DGMT	Dagmar	84.58	37	P	P	19 07 42.0	+0.4
	baz=307						
TUQ	Turquoise Moun	84.59	53	P	P	19 07 43.1	+1.1
	baz=301,SNR=15						
HEC	Hector,Ludlow	84.62	53	P	P	19 07 43.2	+1.1
	baz=301,SNR=5.8						
CTU	Camp Tracy	84.62	46	P	P	19 07 43.2	+1.1
CTU				IAmb	IAmb	19 07 44.2	
	comp=Z,17nm,1.1s						
MURC	Murrieta	84.62	55	P	P	19 07 42.8	+0.7
	baz=300						
HOMB	Homborsund	84.65	336	iP	P	19 07 40.0	-1.6
BISRR	Bisoca	84.66	320	⇓P	P	19 07 42.7	+0.6
GKP	Gorka Klasztor	84.70	329	eP	P	19 07 41.2	-0.7
GKP	Gorka Klasztor	84.70	329	eP	P	19 07 41.8	-0.2
LUNU	Lund	84.70	333	iP	P	19 07 40.4	-1.5
COVR	Voineasa-Covas	84.78	320	⇑P	P	19 07 42.9	+0.3
MDUB	Mudurnu	84.79	313	P	P	19 07 42.2	-0.6
NLU	North Lily Min	84.81	47	P	P	19 07 43.0	-0.1
NLU				IAmb	IAmb	19 07 45.3	
	comp=Z,10nm,0.9s						
BW06	Boulder Array	84.85	44	P	P	19 07 42.8	-0.5
BW06				IAmb	IAmb	19 07 45.6	
	comp=Z,14nm,1.1s						
BW06	Boulder Array	84.85	44	P	P	19 07 43.9	+0.7
	baz=304						
PD31	Pinedale Array	84.85	44	P	P	19 07 43.6	+0.4
PD31				IAmb	IAmb	19 07 45.6	
	comp=Z,12nm,1.1s						
PDAR	Pinedale Array	84.85	44	P	P	19 07 44.0	+0.7
	comp=Z,8.3nm,0.8s,baz=270,slow=3.0,SNR=19						
PDAR	Pinedale Array	84.85	44	P	P	19 07 42.8	-0.5
ICOR	Ion Corvin	84.85	318	⇑P	P	19 07 43.2	+0.3
JLU	Jordanelle	84.86	46	P	P	19 07 43.5	+0.2
OZUR		84.87	320	⇓P	P	19 07 43.1	+0.1
SNART	Snartemo	85.05	337	iP	P	19 07 42.9	-0.6
KOLS	Kolonicke sedl	85.05	324	eP	P	19 07 43.6	-0.2
GMRC	Granite Mounta	85.11	53	P	P	19 07 45.6	+1.0
	baz=301,SNR=9.8						
MLR	Muntele Rosu	85.13	320	⇑P	P	19 07 43.8	-0.6
PFO	Pinyon Flats O	85.15	54	P	P	19 07 45.6	+0.9
PFO				IAmb	IAmb	19 07 46.6	
	comp=Z,21nm,0.8s						
PFO	Pinyon Flats O	85.15	54	P	P	19 07 45.5	+0.8
	baz=301,SNR=11						
TPFO	Pinon Flats	85.15	54	P	P	19 07 45.8	+1.0
	baz=301,SNR=12						
DOPR	Dopca	85.17	320	⇓P	P	19 07 44.3	-0.1
CCUT	Cedar City	85.25	50	P	P	19 07 46.4	+1.1
BELC	Belle Mtn. Jos	85.28	54	P	P	19 07 45.9	+0.5
	baz=301,SNR=9.9						
SECR		85.33	319	⇑P	P	19 07 44.7	-0.5
DY2G	Dye2	85.41	2	iP	P	19 07 45.1	-0.4
DY2G				IAmb	IAmb	19 07 45.9	
	comp=Z,16nm,0.6s						
TRPA	Tarpa	85.41	323	⇓P	P	19 07 45.3	-0.2
TRPA	Tarpa	85.41	323	eP	P	19 07 44.8	-0.7
SZCU	Shurtz Canyon	85.41	50	P	P	19 07 47.1	+1.0
BAR	Barrett	85.47	55	P	P	19 07 47.3	+1.1
BAR				IAmb	IAmb	19 07 48.0	
	comp=Z,12nm,0.9s						
OJC	Ojcow	85.49	326	eP	P	19 07 44.9	-1.0
OJC	Ojcow	85.49	326	P	P	19 07 44.9	-1.0
OJC				IAmb	IAmb	19 07 46.4	
	comp=Z,20nm,1.1s						
CRVS	Cervenica-Dubn	85.49	324	eP	P	19 07 45.5	-0.5
MVU	Marysvale	85.51	48	P	P	19 07 47.5	+1.0
MSU	Marysvale	85.53	48	P	P	19 07 48.2	+1.5
MONP2	Monument Peak	85.54	55	P	P	19 07 47.4	+0.7
	baz=301,SNR=5.6						
LCMT	Little Creek M	85.62	50	P	P	19 07 48.3	+1.3
LCMT				IAmb	IAmb	19 07 49.9	
	comp=Z,9.3nm,0.9s						
VOIR		85.67	320	⇓P	P	19 07 45.8	-1.2
TMUT	Trail Mountain	85.73	47	P	P	19 07 49.0	+1.3
NIE	Niedzica	85.76	325	eP	P	19 07 47.5	+0.3
MUD	Monsted U'grnd	85.77	335	iP	P	19 07 45.6	-1.4
MTPU	Mount Pierson	85.78	49	P	P	19 07 49.4	+1.3
IRM	Iron Mountain	85.80	53	P	P	19 07 48.8	+1.0
	baz=302,SNR=6.3						
BC3	Big Chuckawall	85.84	54	P	P	19 07 49.1	+1.0
	baz=301,SNR=10						
IKP	In-Ko-Pah, Jac	85.89	55	P	P	19 07 49.3	+1.0
	baz=301						
KNB	Kanab	85.90	50	P	P	19 07 50.1	+1.7
KNB				IAmb	IAmb	19 07 51.0	
	comp=Z,32nm,1.3s						
KNB				pP	pwP	19 09 24.9	-2.4
P17A	Butcher Ranch,	85.94	47	P	P	19 07 50.0	+1.5
P17A				IAmb	IAmb	19 07 50.8	
	comp=Z,13nm,0.9s						
ARR	Arges	85.95	320	⇑P	P	19 07 48.6	+0.3
SWSC	Sam W. Stewart	85.96	55	P	P	19 07 49.4	+0.8
	baz=301						
RDMU	Red Mountain	86.07	46	P	P	19 07 50.5	+1.3
RDMU				IAmb	IAmb	19 07 51.5	
	comp=Z,11nm,0.8s						
DRGR		86.15	322	⇑P	P	19 07 48.9	-0.3
HUMR	Humele	86.25	319	⇑P	P	19 07 48.8	-0.9
SRU	San Rafael Swe	86.28	47	P	P	19 07 50.5	+0.3
SRU				IAmb	IAmb	19 07 52.5	
	comp=Z,7.8nm,0.7s						
CSS	Mathiatis	86.32	308	P	P	19 07 48.8	-1.5
CSS				IAmb	IAmb	19 07 50.0	
	comp=Z,18nm,0.7s						
LANS	Liptovska Anna	86.34	325	eP	P	19 07 50.2	+0.1
LOT	Lotru	86.39	321	⇑P	P	19 07 50.1	-0.4
PDMCI	Parker Dam,Lak	86.44	53	P	P	19 07 51.9	+1.2
	baz=302						
U15A	North Rim	86.58	50	P	P	19 07 52.6	+0.9
GLA	Glamis	86.61	54	P	P	19 07 52.8	+1.1
GLA				IAmb	IAmb	19 07 54.0	
	comp=Z,14nm,0.8s						
GLA	Glamis	86.61	54	P	P	19 07 53.2	+1.5
	baz=302,SNR=6.2						
K22A	Casper	86.75	43	P	P	19 07 53.2	+0.8
K22A				IAmb	IAmb	19 07 54.1	
	comp=Z,9.3nm,0.9s						
K22A	Casper	86.75	43	P	P	19 07 52.8	+0.4
	baz=306						
KSP	Ksiaz	86.76	328	eP	P	19 07 51.5	-0.5
MORC	Moravsky Berou	86.88	327	⇑P	P	19 07 52.4	-0.3
MORC	Moravsky Berou	86.88	327	eP	P	19 07 51.8	-0.8
VLAD	Vladila	86.90	319	⇑P	P	19 07 52.4	-0.3
PSZ	Piszkesteto	86.92	324	⇑P	P	19 07 52.7	-0.2
PSZ	Piszkesteto	86.92	324	eP	P	19 07 51.8	-1.1
PSZ	Piszkesteto	86.92	324	P	P	19 07 52.1	-0.8
PSZ				IAmb	IAmb	19 07 53.4	
	comp=Z,11nm,0.9s						
GZR	Gura Zlata	86.97	321	⇑P	P	19 07 52.4	-0.8
CHVC	Chvalec	87.05	328	eP	P	19 07 53.1	-0.3
KRLC	Kraliky	87.05	327	eP	P	19 07 52.6	-0.8
DPC	Dobruska-Polom	87.08	328	eP	P	19 07 53.5	-0.1
VYHS	Vyhne	87.09	325	eP	P	19 07 53.6	0.0
UPC	Upice	87.12	328	eP	P	19 07 53.4	-0.3
O20A	White River Ci	87.16	45	P	P	19 07 55.5	+1.1
	baz=305						
BSEG	Bad Segeberg	87.18	333	eP	P	19 07 53.0	-0.8
	comp=Z,12nm,0.9s,baz=43,slow=4.7						
SRE	Strehaia	87.18	320	⇑P	P	19 07 53.2	-0.9
RSSD	Black Hills	87.32	40	P	P	19 07 55.2	+0.1
RSSD				IAmb	IAmb	19 07 58.1	
	comp=Z,12nm,0.8s						
RSSD	Black Hills	87.32	40	P	P	19 07 55.7	+0.7
	baz=308						
MDND	Maddock	87.37	35	P	P	19 07 55.6	+0.7
	baz=311						
JAVC	Velka Javorina	87.43	326	eP	P	19 07 55.7	+0.4
BZS	Buzias	87.47	322	⇑P	P	19 07 54.7	-0.8
HERR	Herculane	87.49	321	⇑P	P	19 07 54.7	-0.9
ULM	Lac du Bonnet	87.59	32	P	P	19 07 56.1	+0.2
	comp=Z,7.6nm,0.7s,baz=289,slow=5.1,SNR=7.0						
VRAC	Vranov	87.66	327	⇑P	P	19 07 55.1	-1.2
VRAC	Vranov	87.66	327	eP	P	19 07 55.8	-0.5
ELL	Elmali	87.68	311	P	P	19 07 55.9	-0.9
WUAZ	Wupatki	87.70	51	P	P	19 07 57.8	+0.9
	baz=304						
PVCC	Panska Ves	87.78	329	eP	P	19 07 56.3	-0.5
BRG	Berggiesshubel	87.82	329	eP	P	19 07 56.3	-0.7
	comp=Z,10nm,0.8s,baz=43,slow=4.7						
BRG	Berggiesshubel	87.82	329	⇑iP	P	19 07 56.5	-0.5
BRG				Amp		19 07 57.5	
	comp=Z,9.6nm,0.7s						
BRG				er		19 32 04.2	
BRG				Amp		19 32 08.2	
	comp=Z,1.8nm,0.5s						
KRUC	Moravsky	87.92	327	eP	P	19 07 56.8	-0.7
CLL	Collm	87.94	330	⇓iP	P	19 07 56.4	-1.1
	comp=Z,29nm,1.3s						
CLL				e		19 10 26.0	
CLL				ePP	PP	19 11 25.0	-5.0
CLL	Collm	87.94	330	eP	P	19 07 56.6	-0.9
	comp=Z,29nm,1.3s,baz=43,slow=4.7						
CLL	Collm	87.94	330	P	P	19 07 56.3	-1.2
CLL				IAmb	IAmb	19 07 57.3	
	comp=Z,24nm,1.2s						
MODS	Modra-Piesok	87.95	326	eP	P	19 07 56.8	-0.9
FLTG	Flechtingen	87.97	331	eP	P	19 07 56.4	-1.2
	comp=Z,27nm,1.4s,baz=43,slow=4.7						
FBE	Freiberg	88.05	329	eP	P	19 07 57.4	-0.6
	comp=Z,21nm,0.9s,baz=43,slow=4.7						
N23A	Red Feather La	88.13	44	P	P	19 08 00.6	+1.5
	baz=307						
PRU	Pruhonice	88.16	328	eP	P	19 07 58.2	-0.4
X16A	Lo Mia Camp, P	88.25	52	P	P	19 07 59.2	-0.4
ZAPS	Zavoj	88.36	319	eP	P	19 07 59.3	-0.4
VTS	Vitosha	88.42	319	⇑P	P	19 07 59.6	-0.5
VTS	Vitosha	88.42	319	P	P	19 07 59.4	-0.7
VTS				IAmb	IAmb	19 08 00.8	
	comp=Z,12nm,0.9s						
RETH	Rethem/Aller,	88.45	332	eP	P	19 07 58.9	-1.0
	comp=Z,13nm,0.9s,baz=43,slow=4.7						
SMCO	Snowmass	88.51	46	P	P	19 08 00.6	-0.3
SMCO				IAmb	IAmb	19 08 03.3	
	comp=Z,8.0nm,0.8s						
MPLH	Magyarpolny	88.62	325	eP	P	19 07 59.0	-1.8
214A	Organ Pipe Nat	88.63	54	P	P	19 08 02.5	+1.3
	baz=303						
MORH	Mrgy, Hungar	88.68	324	⇑P	P	19 08 00.5	-0.6
MORH	Mrgy, Hungar	88.68	324	eP	P	19 07 58.8	-2.2
CLZ	Clausthal	88.69	331	eP	P	19 08 00.5	-0.6
	comp=Z,20nm,1.2s,baz=43,slow=4.7						
FRGS	Fruska Gora	88.75	322	⇑P	P	19 08 01.1	-0.4
FRGS	Fruska Gora	88.75	322	eP	P	19 08 00.9	-0.6
TANN	Tannenbergstha	88.81	329	eP	P	19 08 00.8	-0.9
	comp=Z,4.4nm,0.9s,baz=43,slow=4.7						
WERD	Werda	88.86	329	eP	P	19 08 01.2	-0.7
	comp=Z,25nm,1.6s,baz=43,slow=4.7						
PLN	Plauen	88.90	330	eP	P	19 08 01.1	-1.0
	comp=Z,5.9nm,0.9s,baz=43,slow=4.7						
GUNZ	Gunzen	88.91	329	eP	P	19 08 01.5	-0.6
	comp=Z,12nm,0.7s,baz=43,slow=4.7						
AGMN	Agassiz Nation	88.93	33	P	P	19 08 02.6	+0.4
	baz=313						
BOSS	Bosilegrad	88.94	319	eP	P	19 08 01.7	-0.7
WERN	Wernitzgruen	88.94	329	eP	P	19 08 01.7	-0.6
	comp=Z,53nm,1.8s,baz=43,slow=4.7						
CONA	Conrad Observa	88.95	326	eP	P	19 08 02.1	-0.4
	comp=Z,6.6nm,0.8s,SNR=8.9						
NKC	Novy Kostel	88.95	329	eP	P	19 08 01.7	-0.6
ISCO	Idaho Springs	88.99	44	P	P	19 08 04.4	+1.3
ISCO	Idaho Springs	88.99	44	P	P	19 08 04.2	+1.1
	baz=307						
KOVH	Kovagotottos	89.05	324	eP	P	19 08 00.9	-1.9
GRUS	Gruza	89.06	321	eP	P	19 08 02.3	-0.6
CKRC	Cesky Krumlov	89.08	327	eP	P	19 08 03.3	+0.3
BARS	Barje	89.12	319	eP	P	19 07 56.3	-6.9
KHC	Kasperske Hory	89.21	328	eP	P	19 08 03.0	-0.6
KHC	Kasperske Hory	89.21	328	P	P	19 08 02.1	-1.5
KHC				IAmb	IAmb	19 08 03.8	
	comp=Z,13nm,0.8s						
X18A	Snowflake	89.22	51	P	P	19 08 04.6	+0.5
MANZ	Manzenberg	89.28	329	eP	P	19 08 03.2	-0.6
	comp=Z,2.0nm,1.3s,baz=43,slow=4.7						
DIVS	Divibare	89.33	321	P	P	19 08 03.5	-0.8
DIVS				IAmb	IAmb	19 08 04.3	
	comp=Z,13nm,1.1s						
DIVS	Divibare	89.33	321	eP	P	19 08 03.5	-0.8
GEC2	GERESS Array S	89.36	328	eP	P	19 08 03.3	-1.0
	comp=Z,9.7nm,0.8s,baz=43,slow=4.7						
GEC2	GERESS Array S	89.36	328	P	P	19 08 03.4	-0.9
GEC2				IAmb	IAmb	19 08 04.2	
	comp=Z,9.0nm,0.8s						
GERES	GERESS Array B	89.36	328	P	P	19 08 03.5	-0.8
	comp=Z,5.5nm,0.6s,baz=45,slow=5.0,SNR=53						
GERES	GERESS Array B	89.36	328	P	P	19 08 03.0	-1.3
ROTZ	Rotzenmuhle	89.39	329	eP	P	19 08 03.9	-0.4
	comp=Z,3.2nm,1.2s,baz=43,slow=4.7						
MDO	Dochfour	89.40	342	eP	P	19 08 03.6	-0.6
IBBN	Ibbenburen	89.43	333	eP	P	19 08 03.7	-0.7
	comp=Z,44nm,1.0s,baz=43,slow=4.7						
S22A	4UR Ranch, Cre	89.44	47	P	P	19 08 06.4	+1.2
	baz=306						
WET	Wettzell	89.53	328	eP	P	19 08 04.2	-0.8
	comp=Z,6.2nm,1.1s,baz=43,slow=4.7						
IVAS	Ivanjica	89.58	321	eP	P	19 08 04.1	-1.3
ARSA	Arzberg	89.58	326	iP	P	19 08 05.3	0.0
	comp=Z,12nm,1.0s						
UBBA	Unterbreizbach	89.60	331	eP	P	19 08 04.4	-0.8
	comp=Z,4.0nm,0.7s,baz=43,slow=4.7						
KAC	Achnashellach	89.61	342	eP	P	19 08 04.6	-0.6
Q24A	Divide	89.78	45	P	P	19 08 07.5	+0.7
	baz=307						
MOA	Molln	89.78	327	iP	P	19 08 05.9	-0.4
	comp=Z,6.4nm,1.0s						
KPL	Plockton	89.84	342	eP	P	19 08 05.5	-0.7
TUC	Tucson	89.88	53	P	P	19 08 08.3	+1.3
TUC	Tucson	89.88	53	P	P	19 08 08.2	+1.1
	baz=304						
GRA1	Grafenberg Arr	89.89	329	P	P	19 08 06.0	-0.6
GRF	Grafenberg Arr	89.89	329	eP	P	19 08 06.3	-0.4
	comp=Z,25nm,0.9s,baz=43,slow=4.7						
GRFO	Grafenberg	89.89	329	P	P	19 08 05.8	-0.9
SUSD	Miller	89.94	38	P	P	19 08 07.3	+0.3
	baz=311						
INVG	Invergeldie, C	90.18	341	eP	P	19 08 07.3	-0.6
INVG				IAmb	IAmb	19 08 08.2	
	comp=Z,19nm,0.8s						
ESY	Stoneypath	90.19	340	eP	P	19 08 07.2	-0.7
SOKA	Soboth	90.22	326	eP	P	19 08 07.2	-1.1
	comp=Z,14nm,1.1s,SNR=7.7						
BUG	Bochum--Univer	90.28	333	eP	P	19 08 07.1	-1.2
	comp=Z,21nm,0.9s,baz=43,slow=4.7						
SDCO	Great Sand Dun	90.29	46	P	P	19 08 09.6	+0.4
SDCO				IAmb	IAmb	19 08 11.4	
	comp=Z,9.2nm,0.8s						
SDCO	Great Sand Dun	90.29	46	P	P	19 08 10.2	+1.1
	baz=307						
F33A	5 Mile Ranch,	90.40	35	P	P	19 08 09.8	+0.7
F33A				IAmb	IAmb	19 08 10.7	
	comp=Z,18nm,1.0s						
EBL	Broad Law	90.44	340	eP	P	19 08 08.8	-0.3
OGNE	Ogallala	90.45	42	P	P	19 08 10.0	+0.4
	baz=309						
RJOB	Jochberg	90.57	327	eP	P	19 08 09.4	-0.5
	comp=Z,22nm,1.0s,baz=43,slow=4.7						
TNS	Taunus Mts	90.71	331	eP	P	19 08 09.9	-0.7
	comp=Z,9.5nm,0.9s,baz=43,slow=4.7						
KBA	Koelnbreinsper	90.77	327	iP	P	19 08 09.6	-1.4
	comp=Z,6.3nm,0.9s						
MYKA	Terra Mystica	90.94	326	iP	P	19 08 10.3	-1.4
	comp=Z,6.8nm,0.6s						
FUR	Furstenfeldbru	90.97	328	eP	P	19 08 11.5	-0.2
	comp=Z,50nm,1.0s,baz=43,slow=4.7						
KBN	Korca	91.10	318	P	P	19 08 11.4	-1.1
KBN				IAmb	IAmb	19 08 12.1	
	comp=Z,20nm,1.1s						
KSCO	Kaye Shedlock’	91.30	44	P	P	19 08 14.5	+0.9
	baz=309						
ZOU	Zoufplan	91.32	326	P	P	19 08 11.5	-2.1
ZOU				IAmb	IAmb	19 08 13.1	
	comp=Z,10nm,0.7s						
ANMO	Albuquerque	91.33	49	P	P	19 08 15.2	+1.3
ANMO	Albuquerque	91.33	49	P	P	19 08 15.3	+1.4
	baz=306						
T25A	Trinidad	91.34	46	P	P	19 08 14.4	+0.5
T25A	Trinidad	91.34	46	P	P	19 08 14.9	+0.9
	baz=308						
ABTA	Abfaltersbach	91.41	327	iP	P	19 08 12.1	-1.7
	comp=Z,10.0nm,0.7s,SNR=7.0						
WATA	Walderalm	91.43	328	iP	P	19 08 12.5	-1.5
	comp=Z,6.1nm,0.8s						
WTTA	Wattenberg	91.45	328	eP	P	19 08 12.8	-1.4
	comp=Z,6.9nm,0.7s,SNR=5.0						
319A	Douglas	91.46	53	P	P	19 08 15.5	+1.1
STU	Stuttgart	91.47	330	eP	P	19 08 13.3	-0.6
	comp=Z,81nm,0.9s,baz=43,slow=4.7						
STU	Stuttgart	91.47	330	P	P	19 08 12.9	-1.0
HPK	Haverah Park	91.53	338	eP	P	19 08 13.8	-0.3
MOTA	Moosalm	91.65	328	eP	P	19 08 13.7	-1.3
	comp=Z,4.0nm,0.6s						
STAL	STALIGIAL	91.66	326	P	P	19 08 12.7	-2.3
ECSD	EROS Data Cent	91.66	37	P	P	19 08 15.2	+0.2
ECSD				IAmb	IAmb	19 08 16.8	
	comp=Z,10nm,1.1s						
ECSD	EROS Data Cent	91.66	37	P	P	19 08 15.3	+0.2
	baz=313						
SQTA	Sankt Quirin	91.69	328	eP	P	19 08 14.0	-1.2
	comp=Z,3.5nm,0.6s						
RETA	Reutte	91.70	328	iP	P	19 08 14.4	-0.7
	comp=Z,22nm,1.5s						
121A	Cookes Peak, D	91.84	51	P	P	19 08 17.7	+1.4
121A				IAmb	IAmb	19 08 19.1	
	comp=Z,15nm,0.9s						
121A	Cookes Peak, D	91.84	51	P	P	19 08 18.0	+1.8
	baz=306						
UBR	Ueberruh	91.86	329	eP	P	19 08 15.0	-0.9
	comp=Z,12nm,0.8s,baz=43,slow=4.7						
FETA	Feichten	92.06	328	iP	P	19 08 15.8	-1.1
	comp=Z,8.4nm,0.8s,SNR=6.6						
WLF	Walferdange	92.10	332	eP	P	19 08 16.5	-0.4
	comp=Z,28nm,1.0s,baz=43,slow=4.7						
WLF	Walferdange	92.10	332	P	P	19 08 16.2	-0.6
ELMS	Elmsett, Ipswi	92.17	336	eP	P	19 08 16.3	-0.8
ELMS				IAmb	IAmb	19 08 17.2	
	comp=Z,54nm,0.9s						
BFO	Black Forest	92.18	330	eP	P	19 08 16.4	-0.9
	comp=Z,28nm,1.0s,baz=43,slow=4.7						
BFO	Black Forest	92.18	330	P	P	19 08 15.8	-1.5
DAVA	Damuels	92.26	328	iP	P	19 08 16.7	-1.1
	comp=Z,16nm,0.8s,SNR=7.1						
CTI	Castel Tesino	92.32	327	P	P	19 08 16.0	-2.1
CTI				IAmb	IAmb	19 08 20.0	
	comp=Z,10nm,1.2s						
ECH	Echery	92.78	330	P	P	19 08 18.3	-1.8
ECH				IAmb	IAmb	19 08 20.3	
	comp=Z,11nm,0.9s						
FOEL	Foel Wylfa	92.94	339	eP	P	19 08 19.9	-0.7
FOEL				IAmb	IAmb	19 08 20.2	
	comp=Z,39nm,0.8s						
CBKS	Cedar Bluff	93.17	42	P	P	19 08 22.8	+0.7
	baz=311						
MNTX	Cornudas Mount	93.98	51	P	P	19 08 26.7	+0.8
MNTX	Cornudas Mount	93.98	51	P	P	19 08 26.6	+0.8
	baz=307						
SCHQ	Schefferville	94.10	15	P	P	19 08 25.9	0.0
	comp=Z,6.0nm,0.8s,baz=356,slow=7.6,SNR=5.8						
SENIN	Lac Senin/Sane	94.12	329	P	P	19 08 25.0	-1.5
SENIN				IAmb	IAmb	19 08 26.0	
	comp=Z,5.1nm,0.8s						
AMTX	Amarillo	94.48	46	P	P	19 08 29.0	+0.9
	baz=309						
KSU1	Kansas State U	94.80	41	P	P	19 08 30.1	+0.7
	baz=313						
CEL	Celeste	95.51	319	P	P	19 08 30.9	-1.8
TX31	Lajitas Ar. Si	96.58	52	P	P	19 08 39.1	+1.3
TX31					pwP	19 10 14.9	-3.0
TX32	Lajitas Array	96.58	52	P	P	19 08 38.9	+1.1
TX32				IAmb	IAmb	19 08 39.9	
	comp=Z,4.4nm,0.7s						
TX32					pwP	19 10 14.5	-3.4
TXAR	Lajitas Array	96.58	52	P	P	19 08 38.7	+0.9
	comp=Z,4.0nm,0.6s,baz=303,slow=2.6,SNR=59						
TXAR				pP	pwP	19 10 17.3	-0.6
	comp=Z,1.4nm,0.7s,baz=297,slow=3.0,SNR=7.2						
TXAR	Lajitas Array	96.58	52	P	P	19 08 38.7	+0.9
TXAR				pP	pwP	19 10 14.7	-3.2
ESDC	Sonseca Array	104.40	332	PP	PKiKP	19 13 29.8	+3.6
	comp=Z,0.9nm,0.8s,baz=27,slow=6.7,SNR=7.1						
VNDA	Vanda	106.42	175	Pdiff	Pdif	19 09 20.1	-0.1
	comp=Z,0.7nm,0.4s,baz=4.5,slow=5.9,SNR=8.4						
QSPA	South Pole Qui	118.07	180	PKPdf	PKPdf	19 13 50.7	-0.5
SYO	Syowa Base	119.74	204	⇑ePdiff	Pdif	19 10 20.6	+1.0
TORD	Torodi Ar. Bea	122.17	310	PKP	PKPdf	19 13 59.6	-0.9
	comp=Z,7.9nm,0.7s,baz=32,slow=1.2,SNR=47						
TORD				PKKPbc	PKKPbc	19 23 59.5	+1.7
	comp=Z,1.3nm,0.6s,baz=224,slow=3.6,SNR=8.2						
TORD	Torodi Ar. Bea	122.17	310	PKPdf	PKPdf	19 13 59.1	-1.4
TORD					PKKPbc	19 23 59.2	+1.3
BOSA	Boshof	123.11	253	PKP	PKPdf	19 14 02.0	-0.1
	comp=Z,2.6nm,0.6s,baz=34,slow=1.5,SNR=9.4						
SRBA	San Rafael, Bu	124.07	55		PKPdf	19 14 04.7	+0.4
KOWA	Kowa	124.86	316	PKPdf	PKPdf	19 14 04.7	-1.0
BELA	Belgrano 2	130.28	182		PKPdf	19 14 13.5	-0.7
TROLL	Troll, Antarti	130.50	196	PKiKP	PKPdf	19 14 15.0	+0.1
DBIC	Dimbokro	131.27	310	PKP	PKPdf	19 14 17.2	-0.7
	comp=Z,6.1nm,0.7s,baz=25,slow=2.6,SNR=16						
DBIC				SKPbc	SKPbc	19 17 01.1	-2.1
	comp=Z,6.3nm,0.6s,baz=52,slow=3.8,SNR=11						
DBIC	Dimbokro	131.27	310	PKPdf	PKPdf	19 14 15.7	-2.3
TIC	Toumodi	131.40	310	ePKIKP	PKPdf	19 14 18.1	-0.1
KIC	Kosan Boka	131.42	310	ePKIKP	PKPdf	19 14 18.2	0.0
	comp=Z,14nm,0.6s						
LIC	Lamto	131.71	310	ePKIKP	PKPdf	19 14 18.0	-0.8
	comp=Z,16nm,0.5s						
SNAA	Sanae	132.00	195	PKiKP	PKPdf	19 14 17.2	-0.5
SNAA	Sanae	132.00	195	PKPdf	PKPdf	19 14 16.4	-1.2
SDV	Santo Domingo	132.78	43	PKPdf	PKPdf	19 14 19.8	-1.3
VNA2	Neumayer--Watz	133.55	194	PKiKP	PKPdf	19 14 20.6	+0.1

	baz=90,slow=0.6						
VNA3	**Neumayer Olymp**	**133.78**	**193**	PKiKP	**PKPdf**	**19 14 20.6**	**-0.3**
VNA1	**Neumayer--Stat**	**133.95**	**194**	PKiKP	**PKPdf**	**19 14 21.6**	**+0.5**
CZSB	**Cruzeiro do Su**	**143.16**	**63**	PKPdf	PKPab	19 14 36.7	-0.3
ESPZ	**Base Esperanza**	**143.25**	**167**		PKPbc	19 14 37.0	+0.8
BOAV	**Boa Vista**	**143.78**	**36**	PKPdf	PKPab	19 14 38.7	-0.6
MG05	**Puerto Natales**	**146.44**	**143**		**PKPbc**	**19 14 46.3**	**0.0**
ETMB	**Extrema**	**149.45**	**58**	PKPdf	**PKPdf**	**19 14 50.0**	**-0.3**
COYC	**Coyhaique**	**149.53**	**133**	PKPdf	**PKPdf**	**19 14 49.3**	**-0.1**
LL02	**Futaleuf**	**150.56**	**129**		**PKPbc**	**19 14 57.3**	**+0.2**
LL04	**Puerto Octay**	**150.86**	**124**		**PKPbc**	**19 14 57.7**	**-0.1**
LPAZ	**La Paz**	**151.63**	**71**	PKP	**PKPdf**	**19 14 54.2**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=276,slow=3.1,SNR=5.1						
LPAZ				PKPbc	**PKPbc**	**19 15 01.7**	**+0.7**
	comp=Z,17nm,0.7s,baz=277,slow=1.9,SNR=62						
LPAZ				pPKPbc	**pPKPbc**	**19 16 41.4**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=359,slow=7.1,SNR=2.7						
LPAZ	**La Paz**	**151.63**	**71**		**PKPbc**	**19 15 01.5**	**+0.6**
LC01	**Cunco**	**151.74**	**120**		**PKPbc**	**19 15 00.0**	**+0.1**
PLCA	**Paso Flores**	**152.26**	**125**	PKPbc	**PKPbc**	**19 15 01.8**	**+0.7**
	comp=Z,17nm,0.6s,baz=243,slow=2.3,SNR=58						
PB01	**IPOC Station P**	**152.51**	**81**		**PKPbc**	**19 15 01.6**	**-0.6**
BO02	**Sierra Bellavi**	**153.25**	**112**		**PKPbc**	**19 15 03.7**	**+0.3**
VA03	**San Esteban**	**153.56**	**107**		**PKPbc**	**19 15 04.2**	**+0.1**
AC02	**Maricunga**	**154.37**	**94**		**PKiKP**	**19 15 07.4**	**+0.8**
PTLB	**Pontes e Lacer**	**158.33**	**58**		**PKPab**	**19 15 38.3**	**-1.2**
CPUP	**Villa Florida**	**164.68**	**87**	PKPab	**PKPab**	**19 16 07.5**	**+0.3**
	comp=Z,3.8nm,1.0s,baz=321,slow=1.5,SNR=4.0						

TRN ***16*** *19:09:44.1, 11°.37N×62°.07W, h91km, MD3.3*
FUNV ***16*** *19:09:46.0, 11°.34N×62°.11W, h24km, MW3.4*
ISC 16 19:09:43.4±1.5**, 11°.37N**±0°.05×**62°.08W**±0°.05**, h97**km±15km**,**
n16, σ1ˢ16/26**, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRGR	**Grenville**	**0.87**	**29**	*e*P	**Pn**	**19 10 02.1**	**-0.1**
GRGR				*e*S	**Sn**	**19 10 15.6**	**-0.7**
GRHS	**Sauteurs**	**0.95**	**27**	*e*P	**Pn**	**19 10 04.0**	**+1.0**
GRHS				*e*S	**Sn**	**19 10 18.1**	**+0.2**
TRN	**Trinidad (W)**	**0.98**	**137**	*e*P	**Pn**	**19 10 04.0**	**+0.6**
TRN				*e*S	**Sn**	**19 10 18.3**	**0.0**
GCMP	**Grenada, Carri**	**1.28**	**30**	*e*P	**Pn**	**19 10 06.5**	**-0.3**
GCMP				*e*S	**Sn**	**19 10 23.6**	**-1.0**
CRUV	**Carupano**	**1.33**	**239**	*e*P	**Pn**	**19 10 08.0**	**+0.6**
CRUV				*e*S	**Sn**	**19 10 24.6**	**-0.9**
TOSP	**Speyside**	**1.52**	**92**	*e*P	**Pn**	**19 10 09.7**	**0.0**
TOSP				*e*S	**Sn**	**19 10 29.3**	**-0.3**
SVB	**Belmont**	**2.06**	**23**	*e*P	**Pn**	**19 10 18.2**	**+1.5**
SVV	**Soufriere Volc**	**2.12**	**23**	*e*P	**Pn**	**19 10 17.7**	**+0.3**
SSV	**Crater Summit**	**2.13**	**24**	*e*P	**Pn**	**19 10 18.5**	**+0.8**
MCLT	**Moule a Chique**	**2.58**	**25**	*e*P	**Pn**	**19 10 23.8**	**+0.3**
MCLT				*e*S	**Sn**	**19 10 54.3**	**0.0**
PCRV	**Puerto La Cruz**	**2.78**	**245**	*e*P	**Pn**	**19 10 27.9**	**+1.8**
MPOM	**Morne Pois Mar**	**3.28**	**21**	*e*P	**Pn**	**19 10 33.4**	**+0.5**
MPOM				*e*S	**Sn**	**19 11 10.3**	**-0.7**
PRGV	**PARIAGUAN**	**3.62**	**224**	*e*P	**Pn**	**19 10 38.1**	**+0.7**
BIRV	**Birongo**	**4.21**	**258**	*e*P	**Pn**	**19 10 47.5**	**+2.1**
BIRV				*e*S	**Sn**	**19 11 32.0**	**-1.5**
MERV	**Las Mercedes**	**4.65**	**244**	*e*P	**Pn**	**19 10 52.4**	**+1.0**
BAUV	**El Baul**	**6.34**	**248**	*e*P	**Pn**	**19 11 15.0**	**+0.6**
BAUV				*e*S	**Sn**	**19 12 22.3**	**-3.1**

IDC 16 19:25:08.9±6.2**, 20°.07S**×**177°.84W, h525**km±44km**,**
mb2.7/3**, mb1 2.8**/4**, mb1mx2.4**/45**, mbtmp3.6**/4**, Error ellipse: s-maj=136.1km s-min=44.9km az=143.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.54**	**300**	P	P	19 26 33.6	+0.1
	0.9nm,0.3s,baz=257,slow=22,SNR=5.9						
STKA	**Stephens Creek**	**38.11**	**244**	P	P	19 31 43.0	0.0
	0.9nm,0.7s,baz=84,slow=4.2,SNR=2.9						
ASAR	**Alice Springs**	**44.77**	**256**	P	P	19 32 35.6	-0.2
	0.7nm,0.5s,baz=88,slow=8.1,SNR=22						
ASAR				PcP	PcP	19 34 07.6	+0.8
	0.2nm,0.6s,baz=103,slow=4.0,SNR=6.0						
WRA	**Warramunga Arr**	**44.81**	**262**	P	P	19 32 35.7	-0.5
	0.2nm,0.3s,baz=101,slow=7.1,SNR=13						
AKASG	**Malin Array Be**	**142.71**	**331**	PKP	PKPdf	19 43 40.5	-1.6
	0.7nm,0.5s,baz=49,slow=3.7,SNR=5.1						

IDC 16 19:29:34.2±2.2**, 1°.93N**×**127°.25E, h0**km**, mb3.7**/3**,**
mb1 4.0/3**, mb1mx3.5**/42**, mbtmp3.7**/3**, Error ellipse: s-maj=181.0km s-min=24.8km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.82**	**163**	P	P	19 34 38.1	-0.9
	1.9nm,0.6s,baz=341,slow=11,SNR=16						
ASAR	**Alice Springs**	**26.26**	**166**	P	P	19 35 12.1	+0.7
	0.7nm,0.4s,baz=346,slow=12,SNR=32						
MKAR	**Makanchi Array**	**59.32**	**326**	P	P	19 39 37.9	-0.2
	0.3nm,0.5s,baz=123,slow=7.4,SNR=6.5						

ATH 16 19:39:30.0, 38°.72N×**22°.74E, h26**km±5km**, ML1.8**/1**, Error ellipse: s-maj=5.4km s-min=1.0km az=82.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKR	**Lokris**	**0.22**	**108**	P	Pb	19 39 36.0	+0.1
LKR				S	Sb	19 39 40.2	+0.2
LKR				AML	AML	19 39 41.2	
	comp=E,618µm,0.1s						
LKR				AML	AML	19 39 41.6	
	comp=N,454µm,0.2s						
ATAL	**Atalanti**	**0.22**	**97**	P	Pb	19 39 36.3	+0.2
ATAL				S	Sb	19 39 40.4	+0.2
AGG	**Agios Georgios**	**0.44**	**314**	P	Pb	19 39 39.4	+0.1
AGG				S	Sb	19 39 46.0	+0.4
ANX	**Ano Chora**	**0.65**	**259**	P	Pb	19 39 42.8	0.0
ANX				S	Sb	19 39 52.3	+0.7
EFP	**Efpalio**	**0.71**	**246**	P	Pb	19 39 43.8	-0.1
EFP				S	Sn	19 39 54.7	+0.1

NAO ***16*** *19:39:45.4±10.0, 73°.74N×8°.30E, ML2.5*
BER ***16*** *19:39:48.3±2.9, 73°.72N×9°.07E, h10km, ML1.9, ML2.5(NAO), Confirmed Earthquake*
ISC 16 19:39:43.8±1.1**, 73°.56N**±0°.09×**8°.59E**±0°.09**, h10**km**, n14,**
σ2ˢ06/16**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**3.88**	**24**	Pn	**Pn**	**19 40 43.1**	**-0.3**
HSPB	**Hornsund (broa**	**3.88**	**24**	Pn	**Pn**	**19 40 43.1**	**-0.3**
BRBA	**Barentsburg A**	**4.73**	**14**	Pn	**Pn**	**19 40 54.8**	**-0.3**
BRBA	**Barentsburg A**	**4.73**	**14**	Pn	**Pn**	**19 40 54.8**	**-0.3**
BRBB	**Barentsburg B**	**4.76**	**14**	Pn	**Pn**	**19 40 55.3**	**-0.2**
BRBB	**Barentsburg B**	**4.76**	**14**	Pn	**Pn**	**19 40 55.3**	**-0.2**
SPA0	**Spitsbergen Ar**	**5.01**	**19**	Pn	**Pn**	**19 40 59.5**	**+0.6**
	baz=193,slow=12						
SPA0	**Spitsbergen Ar**	**5.01**	**19**	Pn	**Pn**	**19 40 59.5**	**+0.6**
	baz=193,slow=12						
KBS	**Kingsbay**	**5.45**	**7**	Pn	**Pn**	**19 41 04.4**	**-0.6**
KBS	**Kingsbay**	**5.45**	**7**	*e*P	**Pn**	**19 41 04.6**	**-0.4**
KBS				IAML		19 42 11.0	
	comp=Z,2.4nm,0.8s						
LOF	**Lofoten**	**5.69**	**161**	*e*P	Pn	19 41 13.5	+5.2
LOF				*e*S	**Sn**	**19 42 12.1**	**-1.4**
LOF				IAML		19 42 26.0	
	comp=Z,3.6nm,0.7s						
ARA0	**ARCESS Array S**	**6.70**	**119**	Pn	**Pn**	**19 41 26.4**	**+4.3**
	baz=325,slow=12						
ARA0				Sn	**Sn**	**19 42 35.7**	**-2.7**
	baz=315,slow=22						
ARA0	**ARCESS Array S**	**6.70**	**119**	Pn	**Pn**	**19 41 26.4**	**+4.3**
	baz=325,slow=12						
ARA0				Sn	**Sn**	**19 42 35.7**	**-2.7**
	baz=315,slow=22						
SCO	**Scoresbysund**	**9.85**	**267**	*i* P	**Pn**	**19 42 05.0**	**-0.2**

THE 16 19:39:44.1, 38°.53N×**20°.57E, h12**km±1km**, ML1.6**/8**, Error ellipse: s-maj=2.3km s-min=0.6km az=98.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.07**	**186**	P	Pg	19 39 46.4	-0.1
FSK				S	Sg	19 39 48.0	-0.2
	428nm,0.1s						
EVGI	**Lefkada island**	**0.12**	**35**	P	Pg	19 39 47.1	0.0
EVGI				S	Sg	19 39 49.6	+0.3
	295nm,0.1s						
DRAG	**Dragano-Lefkad**	**0.16**	**1**	P	Pg	19 39 47.6	-0.2
DRAG				S	Sg	19 39 50.6	+0.2
	362nm,0.1s						
NYDR	**Nydri-Lefkada**	**0.21**	**28**	P	Pg	19 39 48.6	-0.1
NYDR				S	Sg	19 39 52.0	+0.2
KEF4	**Livadi, Kephal**	**0.29**	**203**	P	Pg	19 39 49.8	-0.2
KEF4				S	Sg	19 39 54.7	+0.7
	528nm,0.1s						
DMLN	**Damoulianata-K**	**0.33**	**209**	P	Pb	19 39 51.5	-0.4
DMLN				S	Sb	19 39 56.5	-0.6
	62nm,0.2s						
VLS	**Valsamata**	**0.35**	**178**	P	Pg	19 39 50.9	-0.2
VLS				S	Sg	19 39 56.4	+0.7
	68nm,0.2s						
KEF3	**Kipouria, Keph**	**0.37**	**209**	P	Pg	19 39 50.5	-0.9
KEF3				S	Sg	19 39 56.0	-0.3
	188nm,0.2s						
PSDA	**Pessada-Kefalo**	**0.41**	**179**	P	Pg	19 39 51.9	-0.3
PSDA				S	Sg	19 39 58.5	+0.8
	10.0nm,0.3s						

IDC 16 20:17:34.2±1.7**, 7°.87S**×**127°.95E, h0**km**, mb3.9**/2**,**
mb1 3.6/4**, mb1mx3.4**/25**, mbtmp3.5**/4**, ML3.1**/2**, Error ellipse: s-maj=219.3km s-min=30.5km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.50**	**153**	Pn	Pn	20 20 46.2	-1.0
	0.1nm,0.3s,baz=334,slow=13,SNR=8.1						
WRA				Sn	Sn	20 23 10.1	-8.0
	0.1nm,0.3s,baz=337,slow=23,SNR=1.6						
ASAR	**Alice Springs**	**16.71**	**161**	Pn	Pn	20 21 30.9	+0.9
	0.1nm,0.3s,baz=336,slow=10,SNR=4.4						
MKAR	**Makanchi Array**	**67.86**	**328**	P	P	20 28 33.9	-0.5
	0.6nm,0.3s,baz=116,slow=6.8,SNR=20						
ZALV	**Zalesovo Beam**	**71.48**	**335**	P	P	20 28 57.7	+1.1
	0.4nm,0.4s,baz=121,slow=5.6,SNR=2.1						

TAP ***16*** *20:18:12.1, 24°.61N×122°.35E, h14km±1km, ML3.2, C*
JMA ***16*** *20:18:13.5±0.1, 24°.55N×122°.32E, h36km±4km, M2.7*
ISC 16 20:18:12.1±1.0**, 24°.64N**±0°.03×**122°.37E**±0°.02**, h15**km±8km**,**
n71, σ0ˢ64/101**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		**0.45**	**298**	*e*S	**Sb**	**20 18 28.3**	**+0.1**
	baz=293						
TWC	**Suao**	**0.47**	**267**	P	**Pg**	**20 18 20.9**	**-0.7**
	baz=270						
TWC				*e*S	**Sg**	**20 18 27.8**	**-0.2**
	baz=270						
TWB1	**Santiao Chiao**	**0.51**	**317**	*e*P	**Pb**	**20 18 22.6**	**-0.1**
	baz=322						
NTC	**Toucheng**	**0.54**	**294**	*e*P	**Pg**	**20 18 22.5**	**-0.2**
	baz=298						
NTC				S	**Sb**	**20 18 31.7**	**+1.0**
	baz=298						
JYNG	**Yonagunijimaku**	**0.56**	**109**	P	**Pn**	**20 18 25.0**	**-0.4**
JYNG				S	**Sn**	**20 18 34.2**	**-0.2**
EWUT	**Wuta**	**0.57**	**251**	*e*P	**Pg**	**20 18 23.0**	**-0.4**
	baz=259						
ILA	**Ilan**	**0.58**	**283**	*e*P	**Pb**	**20 18 23.5**	**-0.4**
	baz=278						
ILA				*e*S	**Sn**	**20 18 33.5**	**-1.4**
	baz=278						
NDS	**Dongshan**	**0.59**	**270**	*e*P	**Pg**	**20 18 23.5**	**-0.3**
	baz=272						
NDS				*e*S	**Sb**	**20 18 31.9**	**-0.5**
	baz=272						
TIPB	**Shuangxi**	**0.60**	**304**	*e*P	**Pb**	**20 18 24.1**	**-0.1**
	baz=300						
TIPB				*e*S	**Sb**	**20 18 33.2**	**+0.7**
	baz=300						
ENA	**Nanau**	**0.61**	**250**	*e*P	**Pg**	**20 18 23.5**	**-0.6**
	baz=260						
ENA				*e*S	**Sb**	**20 18 32.7**	**-0.1**
	baz=260						
YOJ	**Yonaguni jima**	**0.61**	**106**	*e*P	**Pb**	**20 18 25.2**	**+0.8**
	baz=95						
YOJ	**Yonaguni jima**	**0.61**	**106**	P	**Pn**	**20 18 25.6**	**-0.6**
YOJ				S	**Sn**	**20 18 35.7**	**0.0**
TWE	**Neicheng**	**0.64**	**278**	*e*P	**Pg**	**20 18 24.3**	**-0.5**
	baz=273						
TWE				*e*S	**Sb**	**20 18 34.2**	**+0.4**
	baz=273						
NWF	**Wu-fen Shan**	**0.69**	**309**	*e*P	**Pn**	**20 18 27.2**	**-0.2**
	baz=312						
NWF				*e*S	**Sn**	**20 18 37.2**	**-0.6**
	baz=312						
ENTT	**Nioudou**	**0.73**	**271**	*e*P	**Pb**	**20 18 26.4**	**-0.1**
	baz=273						
NDT	**Datong Townshi**	**0.78**	**268**	*e*P	**Pg**	**20 18 26.9**	**-0.4**
	baz=269						
NDT				*e*S	**Sb**	**20 18 37.8**	**+0.1**
	baz=269						
TWA	**Mucha**	**0.79**	**296**	*e*P	**Pn**	**20 18 28.4**	**-0.3**
	baz=290						
TWA				*e*S	**Sn**	**20 18 39.7**	**-0.6**
	baz=290						
NWLT	**Wulai**	**0.80**	**280**	*e*P	**Pb**	**20 18 27.3**	**-0.4**
	baz=276						
NWLT				*e*S	**Sb**	**20 18 38.0**	**-0.4**
	baz=276						
ETL	**Fush Village**	**0.83**	**235**	*e*P	**Pg**	**20 18 28.5**	**+0.2**
	baz=236						
NHDH	**Xindian Distri**	**0.83**	**293**	*e*P	**Pn**	**20 18 28.9**	**-0.4**
	baz=288						
NHDH				*e*S	**Sn**	**20 18 40.1**	**-1.2**
	baz=288						
NACB	**Ninganchiao**	**0.84**	**237**	*e*P	**Pb**	**20 18 27.8**	**-0.6**
	baz=237						
NACB				*e*S	**Sb**	**20 18 38.3**	**-1.2**
	baz=237						
TAP	**Taipei**	**0.88**	**297**	*e*P	**Pn**	**20 18 29.7**	**-0.2**
	baz=300						
TAP				*e*S	**Sn**	**20 18 42.2**	**-0.2**
	baz=300						
TWD	**Chiawan**	**0.90**	**232**	*e*P	**Pb**	**20 18 29.1**	**-0.2**
	baz=238						
YHNB	**Yeheng**	**0.90**	**272**	*e*P	**Pg**	**20 18 29.6**	**-0.1**
	baz=268						
YHNB				S	**Sg**	**20 18 42.0**	**+0.5**
	baz=268						
ETLH	**Xiulin Townshi**	**0.91**	**242**	*e*P	**Pb**	**20 18 28.9**	**-0.8**
	baz=244						
NSK	**Sanguang**	**0.92**	**273**	*e*P	**Pg**	**20 18 30.0**	**0.0**
	baz=274						
NSK				*e*S	**Sb**	**20 18 41.2**	**-0.7**
	baz=274						
NNSB	**Datong**	**0.92**	**257**	*e*P	**Pb**	**20 18 29.0**	**-0.8**
	baz=258						
NNSB				*e*S	**Sb**	**20 18 41.8**	**-0.1**
	baz=258						
NNS	**Nan Shan**	**0.93**	**258**	*e*P	**Pg**	**20 18 30.0**	**-0.1**
	baz=259						
NNS				*e*S	**Sg**	**20 18 42.3**	**0.0**
	baz=259						
ANP	**Anpu**	**0.95**	**306**	*e*P	**Pn**	**20 18 31.1**	**+0.2**
	baz=309						
TWS1	**Kuangyinshan**	**0.98**	**298**	*e*P	**Pn**	**20 18 31.3**	**+0.1**
	baz=302						
NTST	**Danshui**	**0.99**	**302**	*e*P	**Pn**	**20 18 32.7**	**+1.3**
	baz=305						
FUSS	**Fushou**	**1.09**	**250**	*e*P	**Pb**	**20 18 32.8**	**-0.1**
	baz=251						
WHF	**Hehuan Shan**	**1.12**	**244**	*e*P	**Pb**	**20 18 33.1**	**-0.3**
	baz=246						
TWT	**Tachien**	**1.15**	**251**	*e*P	**Pg**	**20 18 35.3**	**+0.9**
	baz=253						
TDCB	**Techi**	**1.17**	**251**	*e*P	**Pn**	**20 18 33.8**	**-0.2**
	baz=253						
ESL	**Shilin**	**1.18**	**226**	*e*P	**Pb**	**20 18 34.5**	**+0.3**
	baz=227						
CHGB	**Renai**	**1.23**	**243**	*e*P	**Pb**	**20 18 35.3**	**+0.1**
	baz=227						
LIOB	**Emei**	**1.23**	**271**	*e*P	**Pg**	**20 18 36.7**	**+0.9**
	baz=272						
LIOB				*e*S	**Sg**	**20 18 52.8**	**+0.8**
	baz=272						
NSTT	**Nanjuang**	**1.24**	**270**	*e*P	**Pg**	**20 18 36.2**	**0.0**
	baz=271						
NSTT				*e*S	**Sg**	**20 18 52.9**	**+0.6**
	baz=271						
IRIF	**Iriomote-Funau**	**1.28**	**103**	P	**Pg**	**20 18 36.3**	**-0.4**
IRIF				S	**Sn**	**20 18 52.7**	**+0.5**
OWD	**Renai**	**1.28**	**238**	*e*P	**Pb**	**20 18 35.9**	**-0.1**
	baz=222						
WHP	**Taichung City**	**1.34**	**255**	*e*P	**Pg**	**20 18 38.2**	**+0.1**
	baz=257						
VWDT	**VWDT**	**1.42**	**232**	*e*P	**Pg**	**20 18 39.0**	**-0.5**
	baz=218						
HGSD	**Ruisui**	**1.43**	**217**	*e*P	**Pn**	**20 18 37.2**	**-0.3**
	baz=204						
HATJ	**Hateruma jima**	**1.43**	**113**	P	**Pn**	**20 18 37.9**	**+0.4**
HATJ				*e*S	**Sn**	**20 18 56.0**	**0.0**
NMLH	**Miaoli**	**1.44**	**266**	*e*P	**Pg**	**20 18 40.5**	**+0.7**
	baz=281						
NMLH				*e*S	**Sg**	**20 19 00.3**	**+1.7**
	baz=281						
WCS	**Beigang Elemen**	**1.45**	**247**	*e*P	**Pg**	**20 18 39.8**	**-0.2**
	baz=235						
EHY	**Hungye**	**1.48**	**221**	*e*P	**Pn**	**20 18 38.1**	**-0.1**
	baz=221						
SMLT	**Sun Moon Lake**	**1.54**	**241**	*e*P	**Pg**	**20 18 41.1**	**-0.6**
	baz=227						
SSLB	**Suanglung**	**1.54**	**237**	*e*P	**Pb**	**20 18 41.0**	**+0.6**
	baz=223						
JKRS	**Kuro-shima**	**1.55**	**104**	P	**Pb**	**20 18 40.3**	**-0.1**
JKRS				*e*S	**Sb**	**20 18 59.8**	**0.0**
TYC	**Yuchr**	**1.56**	**242**	*e*P	**Pb**	**20 18 40.0**	**-0.7**
	baz=228						
YULB	**Yu-li**	**1.58**	**219**	*e*P	**Pn**	**20 18 39.5**	**-0.1**
	baz=219						
JIJ	**Ishigaki jima**	**1.64**	**99**	P	**Pb**	**20 18 41.2**	**-0.8**
JIJ				*e*S	**Sn**	**20 19 01.3**	**+0.2**
WHYT	**Xinyi Township**	**1.67**	**236**	*e*P	**Pb**	**20 18 43.4**	**+0.8**
	baz=223						
WJS	**Zhushan**	**1.70**	**242**	*e*P	**Pg**	**20 18 45.2**	**+0.4**
	baz=224						
WJS				*e*S	**Sg**	**20 19 07.7**	**+0.7**
	baz=224						
FULB	**Fuli**	**1.73**	**215**	*e*P	**Pn**	**20 18 41.9**	**+0.2**
	baz=201						
JISG	**Ishigakijimahi**	**1.77**	**91**	P	**Pb**	**20 18 43.4**	**-0.8**
ALS	**Alishan**	**1.81**	**232**	*e*P	**Pb**	**20 18 45.2**	**0.0**
	baz=219						
CHN5	**Tsauling**	**1.86**	**237**	*e*P	**Pb**	**20 18 45.7**	**-0.1**
	baz=238						
ELDTW	**Lidau**	**1.90**	**221**	*e*P	**Pn**	**20 18 44.4**	**+0.4**
	baz=222						
WDLH	**Douliu**	**1.92**	**241**	*e*P	**Pb**	**20 18 47.2**	**+0.4**
	baz=224						
WDLH				*e*S	**Sb**	**20 19 11.1**	**+0.6**
	baz=224						
EDH	**Donghe**	**1.92**	**211**	*e*P	**Pn**	**20 18 44.7**	**+0.4**
	baz=196						
EDH				*e*S	**Sn**	**20 19 07.8**	**-0.3**
	baz=196						
WRL	**Guolierlin Hig**	**1.96**	**249**	*e*P	**Pb**	**20 18 47.7**	**+0.2**
	baz=250						
STYH	**Taoyuan**	**2.06**	**225**	*e*P	**Pb**	**20 18 48.4**	**-0.8**
	baz=213						
TPUB	**Ta-pu**	**2.07**	**230**	*e*P	**Pb**	**20 18 49.2**	**-0.2**
	baz=232						
WTP	**Ta-pu**	**2.12**	**230**	*e*P	**Pb**	**20 18 49.5**	**-0.7**
	baz=230						
SSD	**Sandimen**	**2.46**	**221**	*e*P	**Pn**	**20 18 53.3**	**+1.6**
	baz=210						
TSMG	**Majia**	**2.49**	**220**	*e*P	**Pb**	**20 18 54.3**	**-2.1**
	baz=210						
MASBT	**Mashibuluo**	**2.57**	**219**	*e*P	**Pn**	**20 18 54.3**	**+1.2**
	baz=208						
SCZT	**Fangliau**	**2.77**	**216**	*e*P	**Pn**	**20 18 57.2**	**+1.4**
	baz=203						

WEL 16 20:23:32.4±0.8**, 31°S**±16°×**18°0E**±4°5**, h296**km±26km**,**
M4.4/5**, mB4.6**/4**, ML4.8**/11**, MLv4.5**/5**, Mw(mB)3.8**/4**, Error ellipse: s-maj=0.1km s-min=0.0km az=109.3, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.85**	**45**	P	Pn	20 24 24.8	-1.6
GLKZ				S	S	20 25 08.4	-1.0
MXZ	**Matakaoa Point**	**6.37**	**191**	P	Pn	20 25 08.0	+2.1
MXZ				S	S	20 26 22.3	+1.1
RUGZ	**Raukumara Rang**	**6.87**	**194**	P	Pn	20 25 13.2	+1.0
RUGZ				S	S	20 26 30.7	-2.0
PUZ	**Puketiti**	**6.87**	**190**	P	Pn	20 25 14.3	+2.3
PUZ				S	S	20 26 34.0	+1.4
MWZ	**Matawai**	**7.26**	**194**	P	Pn	20 25 17.1	+0.3
MWZ				S	S	20 26 44.0	+2.8
URZ	**Urewera**	**7.28**	**197**	P	Pn	20 25 17.1	+0.1
URZ				S	S	20 26 42.9	+1.3
CNGZ	**Carnagh Statio**	**7.28**	**190**	P	Pn	20 25 20.3	+3.2
CNGZ				S	S	20 26 44.4	+2.7
MUGZ	**Murupara**	**7.58**	**198**	P	Pn	20 25 21.9	+1.2
RTZ	**Ruatahuna**	**7.65**	**197**	P	Pn	20 25 22.7	+1.0
BKZ	**Black Stump Fm**	**8.30**	**198**	P	Pn	20 25 29.5	-0.1
BKZ				S	S	20 27 04.6	0.0
OTVZ	**Oturere**	**8.54**	**202**	P	Pn	20 25 33.4	+0.8
KWHZ	**Kaweka Forest**	**8.56**	**198**	P	Pn	20 25 32.2	-0.6
SNVZ	**South Ngauruho**	**8.56**	**202**	P	Pn	20 25 34.1	+1.1
KRHZ	**Kereru**	**8.78**	**197**	P	Pn	20 25 34.9	-0.5
KRHZ				S	S	20 27 13.8	-1.6
KAHZ	**Kahuranaki**	**8.80**	**195**	P	Pn	20 25 34.6	-1.1
PNHZ	**Pukenui**	**9.07**	**198**	P	Pn	20 25 37.8	-1.4
PNHZ				S	S	20 27 19.0	-3.2
PRHZ	**Porangahau**	**9.30**	**195**	P	Pn	20 25 41.5	-0.4
PRHZ				S	S	20 27 26.8	-0.5
BFZ	**Birch Farm**	**9.79**	**196**	P	Pn	20 25 47.0	-0.8
BFZ				S	S	20 27 34.0	-4.3

NEIC ***16*** *20:27:31.9±1.1, 45°.71N±0°.05×26°.56E±0°.06, h152km±5km, Error ellipse: s-maj=7.0km s-min=5.8km az=144.0*
SIGU ***16*** *20:27:32.0, 45°.67N×26°.57E, h148km, mb3.8*
BUC ***16*** *20:27:33.0±0.2, 45°.65N×26°.55E, h140km±1km, ml4.1/60, Error ellipse: s-maj=1.4km s-min=1.1km az=0.0*
SOF ***16*** *20:27:33.5, 45°.70N×26°.47E, h100km, MD3.9*
IDC ***16*** *20:27:34.6±3.3, 46°.13N×26°.06E, h172km±37km, mb3.0/5, mb1 3.1/8, mb1mx2.9/32, mbtmp3.5/8, Error ellipse: s-maj=44.9km s-min=17.2km az=145.0*
BEO ***16*** *20:27:38.9±1.3, 45°.56N×26°.08E, h85km, ML3.2/12*
ISC 16 20:27:32.3±0.7**, 45°.70N**±0°.02×**26°.55E**±0°.02**, h149**km±4km**,**
n165, σ0ˢ95/249**, mb3.3**/6**, 69C-67D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.17**	**26**	⇑P	**Pn**	**20 27 52.4**	**-0.1**
PLOR				⇑S	**Sn**	**20 28 07.2**	**-0.7**
PLOR	**Plostina**	**0.17**	**26**		**Pn**	**20 27 52.4**	**-0.1**
PLOR					**Sn**	**20 28 07.2**	**-0.7**
BISRR	**Bisoca**	**0.19**	**142**	⇑P	**Pn**	**20 27 53.0**	**+0.4**
BISRR				⇓S	**Sn**	**20 28 07.4**	**-0.5**
VRI	**Vrincioaia**	**0.21**	**37**	⇑P	**Pn**	**20 27 52.7**	**+0.2**
VRI				⇓S	**Sn**	**20 28 07.8**	**-0.2**
VRI	**Vrincioaia**	**0.21**	**37**		**Pn**	**20 27 52.7**	**+0.2**
VRI					**Sn**	**20 28 07.8**	**-0.2**
COVR	**Voineasa-Covas**	**0.28**	**302**	⇓P	**Pn**	**20 27 52.6**	**-0.1**
COVR				⇑S	**Sn**	**20 28 07.6**	**-0.6**
COVR	**Voineasa-Covas**	**0.28**	**302**		**Pn**	**20 27 52.6**	**-0.1**
COVR					**Sn**	**20 28 07.6**	**-0.6**
NEHR	**Nehoiu**	**0.32**	**213**	⇑P	**Pn**	**20 27 53.2**	**+0.3**
NEHR				⇑S	**Sn**	**20 28 08.3**	**-0.1**
NEHR	**Nehoiu**	**0.32**	**213**		**Pn**	**20 27 53.2**	**+0.3**
NEHR					**Sn**	**20 28 08.3**	**-0.1**
GRER		**0.44**	**136**	⇓S	**Sn**	**20 28 08.9**	**-0.2**
MLR	**Muntele Rosu**	**0.47**	**244**	⇑P	**Pn**	**20 27 53.6**	**+0.1**
MLR				⇓S	**Sn**	**20 28 08.9**	**-0.7**
MLR	**Muntele Rosu**	**0.47**	**244**		**Pn**	**20 27 53.6**	**+0.1**
MLR					**Sn**	**20 28 08.9**	**-0.7**
ISR	**Istrita**	**0.58**	**180**	⇓P	**Pn**	**20 27 54.2**	**+0.1**
ISR				⇑S	**Sn**	**20 28 09.0**	**-1.6**
OZUR		**0.66**	**307**	⇓P	**Pn**	**20 27 54.2**	**-0.2**
OZUR				⇓S	**Sn**	**20 28 10.0**	**-1.5**
GHRR		**0.70**	**59**	⇓P	**Pn**	**20 27 55.2**	**+0.5**
GHRR				⇓S	**Sn**	**20 28 11.7**	**-0.1**
GHRR		**0.70**	**59**		**Pn**	**20 27 55.2**	**+0.5**
GHRR					**Sn**	**20 28 11.7**	**-0.1**
SECR		**0.74**	**207**	⇑P	**Pn**	**20 27 55.6**	**+0.6**

SECR				⇑S	Sn	20 28 11.1	-1.2
TUDR		0.80	97	⇑P	Pn	20 27 55.6	+0.3
TUDR				⇑S	Sn	20 28 12.0	-0.8
TUDR		0.80	97		Pn	20 27 55.6	+0.3
TUDR					Sn	20 28 12.0	-0.8
TESR	Tescani	0.82	5	⇑P	Pn	20 27 55.4	-0.1
TESR	Tescani	0.82	5		Pn	20 27 55.4	-0.1
PGOR	Pogoanele	0.85	158	⇓P	Pn	20 27 55.2	-0.5
DOPR	Dopca	0.85	289	⇑P	Pn	20 27 55.9	+0.1
DOPR				⇑S	Sn	20 28 13.5	-0.2
PLAR	PLOIESTI	0.86	205	⇓P	Pn	20 27 56.0	+0.1
PLAR	PLOIESTI	0.86	205		Pn	20 27 56.0	+0.1
SLCR	Slobozia Conac	0.87	97	⇑P	Pn	20 27 56.2	+0.3
SLCR				⇑S	Sn	20 28 13.2	-0.6
SLCR	Slobozia Conac	0.87	97		Pn	20 27 56.2	+0.3
SLCR					Sn	20 28 13.2	-0.6
IZVR	Izvoarele	0.87	100	⇑P	Pn	20 27 55.7	-0.1
IZVR	Izvoarele	0.87	100		Pn	20 27 55.8	-0.1
SCHL	Schela	0.92	102	⇓P	Pn	20 27 56.0	-0.3
SCHL				⇓S	Sn	20 28 14.1	-0.5
VARL	Varlezi	0.93	77	⇑P	Pn	20 27 56.6	+0.3
VARL				⇓S	Sn	20 28 13.9	-0.8
BIR	Birlad	0.94	53	⇓P	Pn	20 27 56.9	+0.5
BIR				⇑S	Sn	20 28 14.6	-0.3
BIR	Birlad	0.94	53		Pn	20 27 56.9	+0.5
BIR					Sn	20 28 14.6	-0.3
SCTR	Scanteiesti	1.02	91	⇓P	Pn	20 27 57.6	+0.6
SCTR				⇑S	Sn	20 28 15.6	-0.4
SULR		1.04	191	⇓P	Pn	20 27 57.6	+0.3
SULR				⇓S	Sn	20 28 15.8	-0.5
SULR		1.04	191		Pn	20 27 57.6	+0.3
SULR					Sn	20 28 16.8	+0.5
TATR	Tatarca	1.06	95	⇓P	Pn	20 27 57.7	+0.2
TATR				⇑S	Sn	20 28 16.3	-0.3
TATR	Tatarca	1.06	95		Pn	20 27 57.6	+0.2
TATR					Sn	20 28 16.3	-0.3
VOIR		1.08	257	⇑P	Pn	20 27 57.6	-0.1
VOIR				⇓S	Sn	20 28 16.8	-0.4
VOIR		1.08	257		Pn	20 27 57.6	-0.1
VOIR					Sn	20 28 16.8	-0.4
VLDR	Vladesti	1.08	82	⇑P	Pn	20 27 58.1	+0.5
VLDR				⇓S	Sn	20 28 16.4	-0.6
MTUR	Matau	1.15	246	⇓P	Pn	20 27 58.7	+0.3
GIUM	Giurgiulesti	1.19	100	⇓P	Pn	20 27 58.3	-0.3
GIUM				⇑S	Sn	20 28 18.1	-0.6
AMRR	Amara	1.22	152	⇑P	Pn	20 27 59.2	+0.2
AMRR				⇑S	Sn	20 28 19.0	-0.3
AMRR	Amara	1.22	152		Pn	20 27 59.2	+0.2
AMRR					Sn	20 28 19.0	-0.3
CFR	Carcaliu	1.23	114	⇓P	Pn	20 27 59.1	+0.1
CFR				⇑S	Sn	20 28 18.6	-0.9
CFR	Carcaliu	1.23	114		Pn	20 27 59.1	+0.1
CFR					Sn	20 28 18.6	-0.9
JOSR	Joseni	1.24	325	⇑P	Pn	20 27 59.2	+0.1
LEHL	Lehliu	1.24	171	⇓P	Pn	20 27 59.4	+0.3
LEHL				⇓S	Sn	20 28 19.7	+0.2
LEHL	Lehliu	1.24	171		Pn	20 27 59.4	+0.3
LEHL					Sn	20 28 19.8	+0.2
GIRR	Girov	1.26	359	⇓P	Pn	20 28 00.1	+0.8
VASR	Vaslui	1.28	42	⇓P	Pn	20 28 00.1	+0.6
VASR				⇓S	Sn	20 28 19.6	-0.8
INCR	INCERC-Sediu C	1.29	192	⇓P	Pn	20 27 59.7	+0.1
INCR				⇓S	Sn	20 28 19.9	-0.5
ARR	Arges	1.38	257	⇑P	Pn	20 28 00.8	+0.2
ARR				⇑S	Sn	20 28 22.2	0.0
STFAR	Stefanesti-Arg	1.40	234	⇓P	Pn	20 28 00.9	+0.2
STFAR				⇓S	Sn	20 28 22.1	-0.3
BUC1	Bucharest	1.40	195	⇓P	Pn	20 28 00.9	+0.2
BUC1				⇑S	Sn	20 28 21.9	-0.5
BUC1	Bucharest	1.40	195		Pn	20 28 00.9	+0.2
BUC1					Sn	20 28 21.9	-0.5
HARR	Harsova	1.41	135	⇓P	Pn	20 28 01.0	+0.2
HARR	Harsova	1.41	135		Pn	20 28 01.0	+0.2
LEOM	Leova	1.42	56	⇓P	Pn	20 28 01.4	+0.6
LEOM				⇓S	Sn	20 28 22.2	-0.5
LEOM	Leova	1.42	56	P	Pn	20 28 01.4	+0.6
LEOM				Pn	Pn	20 28 01.4	+0.6
LEOM				S	Sn	20 28 22.1	-0.5
LEOM				Sn	Sn	20 28 22.2	-0.5
LEOM	Leova	1.42	56		Pn	20 28 01.4	+0.6
LEOM					Sn	20 28 22.2	-0.5
SGRR	Singureni	1.53	196	⇓P	Pn	20 28 02.0	0.0
SGRR				⇓S	Sn	20 28 23.4	-1.4
SGRR	Singureni	1.53	196		Pn	20 28 02.0	0.0
SGRR					Sn	20 28 23.4	-1.4
RASA	Rasa	1.54	164	⇑P	Pn	20 28 02.2	0.0
RASA				⇑S	Sn	20 28 23.5	-1.6
TPGR	Topolog	1.57	122	⇓P	Pn	20 28 02.4	-0.1
TPGR				⇑S	Sn	20 28 24.0	-1.6
TPGR	Topolog	1.57	122		Pn	20 28 02.4	-0.1
TPGR					Sn	20 28 24.0	-1.6
TLBR	Topalu	1.57	137	⇓P	Pn	20 28 02.8	+0.3
TLBR				⇑S	Sn	20 28 24.0	-1.5
TLBR	Topalu	1.57	137		Pn	20 28 02.8	+0.3
TLBR					Sn	20 28 24.0	-1.5
MDB	Medias	1.57	287	⇑P	Pn	20 28 03.4	+0.8
HUMR	Humele	1.61	224	⇓P	Pn	20 28 02.8	-0.2
HUMR				⇓S	Sn	20 28 25.9	-0.5
HUMR	Humele	1.61	224		Pn	20 28 02.8	-0.2
HUMR					Sn	20 28 25.9	-0.5
IAS	Iasi	1.65	25	⇓P	Pn	20 28 03.8	+0.5
CVDA	Cernavoda	1.73	142	⇑P	Pn	20 28 04.6	+0.4
CVDA				⇑S	Sn	20 28 27.2	-1.4
CVDA	Cernavoda	1.73	142		Pn	20 28 04.6	+0.4
CVDA					Sn	20 28 27.2	-1.4
CVD1	Cernavoda-Powe	1.75	141	⇑P	Pn	20 28 04.7	+0.2
CVD1				⇓S	Sn	20 28 27.4	-1.7
TIRR	Tirgusor	1.81	132	⇑P	Pn	20 28 05.2	0.0
TIRR				⇑S	Sn	20 28 28.6	-1.7
TIRR	Tirgusor	1.81	132		Pn	20 28 04.9	-0.3
TIRR	Tirgusor	1.81	132		Pn	20 28 05.2	0.0
ICOR	Ion Corvin	1.82	150	⇑P	Pn	20 28 05.8	+0.5
ICOR				⇑S	Sn	20 28 29.3	-1.2
ICOR	Ion Corvin	1.82	150		Pn	20 28 05.8	+0.5
ICOR					Sn	20 28 29.3	-1.2
COPA	Copaceanca	1.83	212	⇓P	Pn	20 28 05.2	-0.1
COPA				⇑S	Sn	20 28 29.9	-0.7
COPA	Copaceanca	1.83	212		Pn	20 28 05.2	-0.1
COPA					Sn	20 28 29.9	-0.7
JURR	Jurilovca	1.89	119	⇓P	Pn	20 28 06.4	+0.4
LOT	Lotru	1.96	264	⇑P	Pn	20 28 07.8	+0.8
LOT				⇑S	Sn	20 28 33.9	+0.2
MILM	Milestii Mici	1.99	51	⇑P	Pn	20 28 07.6	+0.4
MILM	Milestii Mici	1.99	51	P	Pn	20 28 07.6	+0.4
MILM				Pm		20 28 07.7	
MILM				S	Sn	20 28 32.0	-2.0
MILM				Sm		20 28 32.2	
MILM				m		20 28 32.8	
MFTR	Murfatlar	2.02	138	⇓P	Pn	20 28 07.7	+0.1
MFTR				⇑S	Sn	20 28 33.2	-1.4
KIS	Kishinev	2.04	50	⇓iP	Pn	20 28 08.2	+0.4
	18nm,0.2s						
KIS				eS	Sn	20 28 33.7	-1.4
	520nm,0.4s						
KIS	Kishinev	2.04	50	⇑P	Pn	20 28 08.2	+0.4
KIS	Kishinev	2.04	50	P	Pn	20 28 08.2	+0.4
KIS				Pm		20 28 08.4	
KIS				S	Sn	20 28 33.7	-1.4
KIS				Sm		20 28 33.9	
KIS				m		20 28 34.0	
ARCR	ARCALIA	2.06	313	⇓P	Pn	20 28 08.8	+0.8
BURAR	Bucovina Array	2.12	335	⇑P	Pn	20 28 10.8	+2.0
BURAR				⇑S	Sn	20 28 38.8	+1.7
BURAR	Bucovina Array	2.12	335		Pn	20 28 10.4	+1.6
RAZG	Razgrad	2.13	181	⇑P	Pn	20 28 08.8	-0.1
RAZG				⇓S	Sn	20 28 35.4	-1.6
TSCT	Constanta Port	2.15	135	⇓P	Pn	20 28 09.1	0.0
TSCT				⇑S	Sn	20 28 36.1	-1.2
BUR08	Bucovina Ar. S	2.16	335		Pn	20 28 10.8	+1.6
EFOR	EFORIE	2.19	137	⇓P	Pn	20 28 09.9	+0.3
EFOR				⇑S	Sn	20 28 37.8	-0.5
ZIMR		2.21	203	⇑P	Pn	20 28 09.6	-0.2
ZIMR				⇓S	Sn	20 28 36.9	-1.7
VLAD	Vladila	2.28	223	⇑P	Pn	20 28 10.2	-0.5
CJR	Cluj-Napoca	2.28	297	⇑P	Pn	20 28 11.0	+0.3
PSN	Preselentsi	2.33	149	iP	Pn	20 28 11.7	+0.4
MANR	Mangalia	2.38	142	⇓P	Pn	20 28 12.1	+0.2
MANR				⇓S	Sn	20 28 41.7	-0.5
PURM	Purcari	2.46	69	⇑S	Sn	20 28 43.4	-0.6
SZH	Strazhica	2.47	190	iP	Pn	20 28 12.8	-0.2
DEV	Deva	2.55	275	⇑P	Pn	20 28 14.8	+0.8
PRD	Provadia	2.57	166	iP	Pn	20 28 14.9	+0.7
SRE	Strehaia	2.58	248	⇓P	Pn	20 28 14.4	+0.1
SRE				⇑S	Sn	20 28 45.5	-1.2
PVL	Pavlikeni	2.63	200	iP	Pn	20 28 16.3	+1.4
KALB	Balgarevo	2.65	149	⇑P	Pn	20 28 15.8	+0.6
GZR	Gura Zlata	2.67	265	⇓P	Pn	20 28 15.8	+0.4
GZR				⇑S	Sn	20 28 49.6	+0.9
ROIA	ROIAK	2.67	167	iP	Pn	20 28 15.8	+0.3
SORM	Soroca	2.73	26	⇓P	Pn	20 28 16.3	+0.1
KSV	Kosov	2.81	339	ePn	Pn	20 28 17.2	+0.1
KSV				Pm		20 28 17.5	
KSV				eSn	Sn	20 28 50.1	-1.7
KSV				Sm		20 29 13.0	
BAIL	Bailesti	2.83	235	⇑P	Pn	20 28 17.3	-0.1
BAIL				⇓S	Sn	20 28 51.6	-0.6
KMPD	K-Podol'skiy	2.87	359	ePn	Pn	20 28 17.7	-0.1
KMPD				eSn	Sn	20 28 51.4	-1.7
DRGR		2.88	294	⇓P	Pn	20 28 17.8	-0.3
DRGR		2.88	294	ePn	Pn	20 28 17.6	-0.5
MESR	Meseseni	2.88	302	⇑P	Pn	20 28 18.5	+0.5
RMGR	Halanga-Turnu	2.91	251	⇓S	Sn	20 28 52.5	-1.7
PUNG	Punghina	2.93	242	⇓P	Pn	20 28 18.0	-0.7
NDNU	Novodnistrovsk	2.95	11	ePn	Pn	20 28 19.1	+0.2
NDNU				Pm		20 28 19.4	
NDNU				eSn	Sn	20 28 53.3	-1.8
NDNU				Sm		20 28 53.5	
HERR	Herculane	3.03	256	⇓P	Pn	20 28 19.9	0.0
SIRR	Siria	3.45	281	⇑P	Pn	20 28 25.7	+0.3
BZS	Buzias	3.46	270	⇑P	Pn	20 28 25.7	+0.3
BZS	Buzias	3.46	270	ePn	Pn	20 28 25.0	-0.4
BZS				eSn	Sn	20 28 54.9	-12
HORU	Horodok	3.52	359	ePn	Pn	20 28 26.5	+0.3
HORU				Pm		20 28 26.8	
HORU				eSn	Sn	20 29 06.8	-1.2
HORU				Sm		20 29 08.7	
MDVR	Moldovita	3.53	257	⇓P	Pn	20 28 26.7	+0.2
PGB	Panagyurishte	3.58	209	iP	Pn	20 28 27.5	+0.3
ZAGS	Zajecar	3.60	240	ePn	Pn	20 28 25.7	-1.6
ZAGS				eSn	Sn	20 28 57.3	-13
TRPA	Tarpa	3.67	313	eP	Pn	20 28 32.7	+4.6
KUBS	Kucevo	3.68	251	ePn	Pn	20 28 27.1	-1.3
KUBS				eSn	Sn	20 28 58.9	-13
ZAPS	Zavoj	3.70	230	ePn	Pn	20 28 27.6	-1.1
ZAPS				eSn	Sn	20 29 00.5	-12
VTS	Vitosha	3.89	219	⇓P	Pn	20 28 31.6	+0.3
VTS	Vitosha	3.89	219	iP	Pn	20 28 31.4	+0.1
VTS	Vitosha	3.89	219		Pn	20 28 31.4	+0.1
VTS	Vitosha	3.89	219	ePn	Pn	20 28 31.0	-0.3
VTS				eSn	Sn	20 29 06.3	-11
BOVS	Bovan	4.02	241	⇑P	Pn	20 28 31.6	-1.2
STZU	Stuzhytsa	4.26	323	ePn	Pn	20 28 37.0	+1.2
BOSS	Bosilegrad	4.34	224	ePn	Pn	20 28 36.7	-0.3
BOSS				eSn	Sn	20 29 14.8	-12
KOLS	Kolonicke sedl	4.35	320	eP	Pn	20 28 35.8	-1.2
BARS	Barje	4.45	231	ePn	Pn	20 28 24.8	-14
BARS	Barje	4.45	231	ePn	Pn	20 28 38.4	-0.1
BARS				eSn	Sn	20 28 57.4	-33
BARS				eSn	Sn	20 29 16.4	-14
GRUS	Gruza	4.53	249	ePn	Pn	20 28 38.9	-0.5
GRUS				eSn	Sn	20 29 19.2	-12
TRUS	Trudelj	4.60	253	ePn	Pn	20 28 40.2	-0.2
SELS	Selova	4.61	239	ePn	Pn	20 28 39.8	-0.7
SELS				eSn	Sn	20 29 20.7	-13
CRVS	Cervenica-Dubn	4.71	315	eP	Pn	20 28 42.3	+0.5
ALN	Alexandroupoli	4.81	185	Pn	Pn	20 28 43.6	+0.4
DIVS	Divibare	4.92	253	Pn	Pn	20 28 44.5	-0.2
DIVS	Divibare	4.92	253	ePn	Pn	20 28 44.4	-0.3
DIVS				eSn	Sn	20 29 27.2	-14
IVAS	Ivanjica	5.03	247	ePn	Pn	20 28 45.5	-0.6
IVAS				eSn	Sn	20 29 30.4	-13
SJES	Sjenica	5.29	245	ePn	Pn	20 28 49.9	+0.2
AKASG	Malin Array Be	5.32	19	P	Pn	20 28 49.4	-0.3
	9.0nm,0.3s,baz=203,slow=12,SNR=27						
AKASG				S	Sn	20 29 46.6	-3.7
	3.1nm,0.3s,baz=202,slow=21,SNR=9.2						
AKASG	Malin Array Be	5.32	19		Pn	20 28 48.1	-1.7
AKBB	Malin Array Si	5.32	19		Pn	20 28 49.7	0.0
FINES	FINESS Array B	15.78	359	P	Pn	20 31 02.4	-3.6
	0.1nm,0.3s,baz=171,slow=12,SNR=1.7						
NOA	NORSAR Array B	17.81	335	P	P	20 31 24.2	-5.0
	0.0nm,0.3s,baz=141,slow=11,SNR=0.8						
MKAR	Makanchi Array	37.88	68	P	P	20 34 36.5	+1.9
	0.3nm,0.6s,baz=298,slow=7.7,SNR=5.2						
TORD	Torodi Ar. Bea	38.67	221	P	P	20 34 42.2	+0.7
	0.4nm,0.7s,baz=34,slow=8.8,SNR=3.3						
WMQ	Urumqi	42.53	70	eP	P	20 35 16.0	+3.0
DBIC	Dimbokro	47.43	225	P	P	20 35 52.4	+0.5
	0.8nm,0.3s,baz=44,slow=6.3,SNR=8.0						
SONM	Songino Array	52.39	57	P	P	20 36 29.0	-0.1
	0.1nm,0.4s,baz=293,slow=8.4,SNR=1.5						
LZH	Lanzhou	57.10	70	eP	P	20 37 13.8	+11
LZH				sP	PcP	20 38 04.9	+8.6
LZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HHC	Hu-ho-hao-te	59.27	62	eP	P	20 37 20.3	+2.1
CMAR	Chiang Mai Arr	64.81	89	P	P	20 37 56.8	+1.6
	comp=Z,0.1nm,0.4s,baz=321,slow=7.1,SNR=4.6						

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*RSPR **16** 20:35:03.8, 19°.46N×65°.45W, h71^{km}±8^{km}, MD3.4/13*

*NEIC **16** 20:35:04.0±1.2, 19°.47N±0°.09×65°.48W±0°.05, h38^{km}±46^{km}, Error ellipse: s-maj=13.5km s-min=5.5km az=194.0*

ISC 16 20:35:00.9±1.8**, 19°.50N**±0°.09×**65°.47W**±0°.04**, h16**^{km}**, n53, σ0^{s}.48**/59**, 14C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	1.20	171	⇑eP	Pb	20 35 23.1	-0.2
CUPR	Culebra, Puert	1.20	171	eS	Sn	20 35 39.3	+0.4
CUPR	Culebra, Puert	1.20	171		Pb	20 35 23.1	-0.2
CUPR					Sn	20 35 39.3	+0.4
CUPR	Culebra, Puert	1.20	171	IAML		20 35 42.3	
	comp=N,404nm,0.6s						
CUPR				IAML		20 35 48.5	
	comp=E,323nm,0.6s						
STVI	Saint Thomas	1.24	157	⇑eP	Pg	20 35 24.6	-0.3
STVI	Saint Thomas	1.24	157	eS	Sb	20 35 39.8	+0.1
STVI	Saint Thomas	1.24	157		Pg	20 35 24.6	-0.3
STVI					Sb	20 35 39.8	+0.1
CBYP	Canovanas	1.27	197	⇑eP	Pb	20 35 24.8	+0.2
CBYP	Canovanas	1.27	197	eS	Sn	20 35 41.4	+0.5
CBYP	Canovanas	1.27	197		Pb	20 35 24.8	+0.2
CBYP					Sn	20 35 41.4	+0.5
CBYP	Canovanas	1.27	197	IAML		20 35 44.8	
	comp=E,615nm,0.2s						
CBYP				IAML		20 35 57.0	
	comp=N,520nm,0.2s						
GCPR	Guaynabo City	1.32	206	⇑eP	Pn	20 35 24.9	+0.2
GCPR	Guaynabo City	1.32	206	eS	Sb	20 35 42.2	+0.3
GCPR	Guaynabo City	1.32	206		Pn	20 35 24.9	+0.2
GCPR					Sb	20 35 42.2	+0.3
TBVI	Tortola	1.34	143	⇑eP	Pb	20 35 25.5	-0.2
MTP	Monte Pirata	1.40	183	⇓eP	Pb	20 35 26.4	-0.2
MTP	Monte Pirata	1.40	183	eS	Sn	20 35 43.9	+0.1
MTP	Monte Pirata	1.40	183		Pb	20 35 26.4	-0.2
MTP					Sn	20 35 43.9	+0.1
HUMP	Col San Antoni	1.40	195	⇑eP	Pn	20 35 25.7	0.0
HUMP	Col San Antoni	1.40	195	eS	Sn	20 35 43.7	-0.2
HUMP	Col San Antoni	1.40	195		Pn	20 35 25.7	0.0
HUMP					Sn	20 35 43.7	-0.2
EMPR	Esperanza - Ma	1.43	225	⇑eP	Pb	20 35 27.3	+0.2
EMPR	Esperanza - Ma	1.43	225	eS	Sn	20 35 44.9	+0.3
EMPR	Esperanza - Ma	1.43	225		Pb	20 35 27.3	+0.2
EMPR					Sn	20 35 44.9	+0.3
EMPR	Esperanza - Ma	1.43	225	IAML		20 35 53.6	
	comp=N,276nm,0.9s						
SJG	San Juan	1.52	205		Pn	20 35 26.6	-0.9
SJG				IAML		20 35 57.1	
	comp=N,166nm,0.7s						
SJG				IAML		20 36 03.1	
	comp=N,163nm,0.5s						
PDPR	Patillas Dam,	1.56	200		Pn	20 35 27.6	-0.4
PDPR				IAML		20 35 49.7	
	comp=E,148nm,0.6s						
IGPR	InterUniversit	1.64	202	⇑eP	Pn	20 35 28.9	-0.1
IGPR	InterUniversit	1.64	202	eS	Sn	20 35 49.6	-0.3
AOPR	Arecibo Observ	1.67	227	⇑eP	Pn	20 35 29.6	0.0
AOPR	Arecibo Observ	1.67	227	eS	Sn	20 35 50.7	+0.1
AOPR	Arecibo Observ	1.67	227		Pn	20 35 29.6	0.0
AOPR					Sn	20 35 50.7	+0.1
UUPR	Utuado, UPR, P	1.71	224	⇑eP	Pn	20 35 30.8	+0.7
UUPR	Utuado, UPR, P	1.71	224	eS	Sn	20 35 51.6	-0.1
UUPR	Utuado, UPR, P	1.71	224		Pn	20 35 30.8	+0.7
UUPR					Sn	20 35 51.6	-0.1
CELP	Cerrillos	1.76	217	⇑eP	Pn	20 35 31.3	+0.5
CELP	Cerrillos	1.76	217		Pn	20 35 31.3	+0.5
CELP	Cerrillos	1.76	217	IAML		20 36 09.6	
	comp=N,119nm,0.6s						
OBIP	Obispado Ponce	1.80	217	⇓eP	Pb	20 35 32.5	-1.1
OBIP	Obispado Ponce	1.80	217	eS	Sn	20 35 53.6	-0.3
OBIP	Obispado Ponce	1.80	217		Pb	20 35 32.5	-1.1
OBIP					Sn	20 35 53.6	-0.3
AGPR	Aguadilla, PR	1.86	237	Pn	Pn	20 35 30.7	-1.4
CDVI	St. Croix	1.86	159		Pb	20 35 34.5	-0.1
GBPR	Guanica, Bosqu	2.02	222	⇑eP	Pn	20 35 35.2	+0.9
PRSN	Puerto Rico Se	2.03	231	Pn	Pn	20 35 34.4	-0.1
MLPR	Magueyes Islan	2.13	225	⇑eP	Pn	20 35 36.8	+1.0
MLPR	Magueyes Islan	2.13	225		Pn	20 35 36.8	+1.0
MLPR	Magueyes Islan	2.13	225	IAML		20 36 13.6	
	comp=E,84nm,0.7s						
CRPR	Cabo Rojo, PR	2.15	227	⇑eP	Pn	20 35 36.9	+0.8
CRPR	Cabo Rojo, PR	2.15	227	eS	Sn	20 36 02.3	-0.1
CRPR	Cabo Rojo, PR	2.15	227		Pn	20 35 36.9	+0.8
CRPR					Sn	20 36 02.3	-0.1
SMRT	St. Maarten	2.69	122		Pn	20 35 43.7	+0.2
SMRT				IAML		20 36 38.5	
	comp=N,122nm,0.6s						
SDDR	Presa de Saban	5.52	266		Pn	20 36 23.1	+0.5

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*MOS **16** 20:38:36.3±1.0, 19°.64S×174°.92W, h48^{km}, mb5.2/15, Error ellipse: s-maj=9.9km s-min=7.5km az=145.1*

*NEIC **16** 20:38:37.1±1.6, 19°.58S±0°.08×174°.91W±0°.10, h37^{km}±4^{km}, mb5.3/272, Error ellipse: s-maj=13.3km s-min=11.8km az=105.0*

*BJI **16** 20:38:38.5±0.0, 19°.47S×174°.50W, h73^{km}, mB5.5/31, mb5.1/49, Ms5.2/9, Ms7 4.9/9*

*BGR **16** 20:38:43.0±0.0, 20°.66S×172°.47W, h113^{km}*

*IDC **16** 20:38:42.9±0.5, 19°.58S×175°.03W, h92^{km}±3^{km}, mb4.7/32, mb1 4.8/34, mb1mx4.8/45, mbtmp5.1/34, MS3.8/23, Ms1 3.8/23, ms1mx3.8/24, Error ellipse: s-maj=13.3km s-min=9.5km az=143.0*

*NOU **16** 20:38:43.5, 19°.66S×174°.35W, h134^{km}, ML5.1/89, Tonga Islands*

*GCMT **16** 20:38:46.1±0.2, 19°.64S±0°.01×174°.44W±0°.01, h110^{km}±2^{km}, MW5.1/119, Moment Tensor Solution. s75,c100; s119,c186; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.28±.17; $M_{\theta\theta}$3.41±.18; $M_{\phi\phi}$-3.13±.18; $M_{r\theta}$0.94±.12; $M_{\theta\phi}$0.53±.16; $M_{\phi r}$-5.51±.10; Best double couple: $M_0$5.85400×10^{16} NP1:ϕ_s55.00000°, δ21.00000°, λ168.00000°. NP2:ϕ_s155.00000°, δ86.00000°, λ70.00000°. Principal axes: T 4.2220, Plg45.0000°, Azm45.0000°; N 3.2650, Plg20.0000°, Azm157.0000°; P -7.4870, Plg38.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 20:38:39.4±0.3**, 19°.74S**±0°.04×**174°.81W**±0°.05**, h68**^{km}±2^{km}**, h67**^{km}**:pP-P, n1042, σ1^{s}.44**/1036**, mb5.2**/219**, 104C-103D, Fault plane solution: NP1:**ϕ_s179.46388°**,** δ85.30584°**,** λ72.88731°. **NP2:**ϕ_s74.57854°**,** δ17.72625°**,** λ164.40801°. **Principal axes:** T Plg47.0041°**,** Azm71.6992°**;** N Plg17.0535°**,** Azm180.9072°**;** P Plg38.0004°**,** Azm284.7740°**; Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	4.07	291	P	Pn	20 39 47.8	+8.6
NIUE	Niue	4.66	83	P	Pn	20 39 45.7	-1.5
	baz=4.7,SNR=536						
NIUE				S	Sn	20 40 31.4	-8.6
	baz=4.7						
NIUE	Niue	4.66	83	Pn	Pn	20 39 45.6	-1.6
NIUE				Sn	Sn	20 40 30.4	-10
NIUE	Niue	4.66	83	P	Pn	20 39 45.8	-1.4
TAVE	Taveuni	5.70	301	P	Pn	20 40 09.9	+8.4
DGTI	Dogotuki	6.21	303	P	Pn	20 40 16.3	+7.8
AFI	Afiamalu	6.48	27	P	Pn	20 40 09.2	-3.1
	90nm,0.3s,baz=327,slow=1.4,SNR=35						
AFI				S	Sn	20 41 11.1	-14
	64nm,0.3s,baz=222,slow=21,SNR=2.2						
MSVF	Nonsavu	7.05	285	P	Pn	20 40 28.8	+8.8
	34nm,0.3s,baz=129,slow=15,SNR=449						
MSVF	Nonsavu	7.05	285		Pn	20 40 28.6	+8.6
MSVF	Nonsavu	7.05	285	P	Pn	20 40 29.5	+9.5
RAO	Raoul Island	9.88	196	P	Pn	20 41 02.2	+3.5
	30nm,0.3s,baz=90,slow=17,SNR=1.6						
RAO				S	Sn	20 42 47.0	-0.9
	72nm,0.3s,baz=70,slow=21,SNR=6.1						
GLKZ	Green Lake	9.89	196	P	Pn	20 41 00.7	+1.9
GLKZ				S	Sn	20 42 47.0	-1.2
RAR	Rarotonga	14.17	99	P	Pn	20 41 55.7	-1.1
	14nm,0.3s,baz=264,slow=7.8,SNR=41						
RAR				LR	LR	20 46 50.2	
	comp=Z,298nm,20.6s,baz=287,slow=34						
RAR	Rarotonga	14.17	99	P	Pn	20 41 55.5	-1.3
RAR	Rarotonga	14.17	99	Pn	Pn	20 41 55.5	-1.3
RAR	Rarotonga	14.17	99	P	Pn	20 41 56.0	-0.8
RTV	Rentapao	15.99	274	P	P	20 42 28.1	+5.6
MARNC	Mare, Loyalty	16.16	261		P	20 42 23.3	-1.1
MARNC	Mare, Loyalty	16.16	261	P	P	20 42 28.4	+4.1
DVP	Devils Point	16.23	274	P	P	20 42 30.4	+5.3
PINNC	Pines Island,	16.79	257		P	20 42 33.1	+1.7
PINNC				IAmb	IAmb	20 42 39.6	
	comp=Z,230nm,0.8s						
PINNC	Pines Island,	16.79	257	P	P	20 42 35.9	+4.6
LIFNC	LIFOU	16.87	263		P	20 42 32.6	+0.3
LIFNC				IAmb	IAmb	20 42 38.0	
	comp=Z,551nm,1.4s						
LIFNC	LIFOU	16.87	263	P	P	20 42 36.1	+3.8
KNTN	Kanton	17.13	11		Pn	20 42 32.8	-1.6
YATNC	Mamie plateau,	17.25	259	P	P	20 42 40.7	+4.2
OUENC	Ouen Island, N	17.33	258		P	20 42 36.9	-0.3
OUENC				IAmb	IAmb	20 42 47.1	
	comp=Z,344nm,0.9s						
OUENC	Ouen Island, N	17.33	258	P	P	20 42 42.2	+4.9
SANVU	Saraoutou	17.66	281	P	P	20 42 41.0	0.0
SANVU				IAmb	IAmb	20 42 47.6	
	comp=Z,384nm,1.0s						
SANVU	Saraoutou	17.66	281	P	P	20 42 46.1	+5.1
DZM	Mont Dzumac	17.66	259	ePn	P	20 42 45.5	+4.4
	comp=Z,674nm,0.9s						
DZM	Mont Dzumac	17.66	259	P	P	20 42 45.3	+4.1
	comp=Z,11nm,0.3s,baz=73,slow=19,SNR=152						
DZM				LR	LR	20 48 40.4	
	comp=Z,750nm,18.1s,baz=99,slow=34						
DZM	Mont Dzumac	17.66	259	P	P	20 42 44.5	+3.4
DZM				IAmb	IAmb	20 42 48.0	
	comp=Z,305nm,0.8s						
DZM	Mont Dzumac	17.66	259	P	P	20 42 46.0	+4.9
ONTNC	Ouen Toro	17.67	258	P	P	20 42 42.4	+1.3
ONTNC				IAmb	IAmb	20 42 51.6	
	comp=Z,220nm,0.8s						
ONTNC	Ouen Toro	17.67	258	P	P	20 42 45.3	+4.2
NOUC	Port Laguerre	17.80	259	P	P	20 42 46.6	+4.1
NFK	Norfolk Island	18.22	236	P	P	20 42 46.5	-0.5
	baz=18,SNR=3.0						
OUZ	Omahuta	18.51	211	P	Pn	20 42 53.0	+1.9
GRZ	Great Barrier	18.54	205	P	Pn	20 42 52.0	+0.6
MXZ	Matakaoa Point	18.75	197	P	Pn	20 42 56.6	+2.7
MXZ	Matakaoa Point	18.75	197	P	Pn	20 42 55.5	+1.6
KUZ	Kuaotunu	18.86	204	P	Pn	20 42 56.7	+1.4
WMGZ	Waiomatatini S	18.96	197	P	Pn	20 42 58.3	+1.9
TWGZ	Tauwhareparae	19.41	197	P	Pn	20 43 05.2	+3.4
TWGZ				S	S	20 46 23.5	-13
CNGZ	Carnagh Statio	19.64	196	P	Pn	20 43 07.4	+3.0
CNGZ				S	S	20 46 32.0	-8.5
KOUNC	Koumac, New Ca	19.64	264	P	Pn	20 43 09.8	+5.2
MWZ	Matawai	19.69	198	P	Pn	20 43 07.1	+2.0
MWZ				S	S	20 46 29.6	-12
URZ	Urewera	19.74	199	P	Pn	20 43 05.5	-0.1
	comp=Z,24nm,0.3s,baz=338,slow=3.1,SNR=117						
URZ				S	S	20 46 30.4	-12
	comp=Z,1.8nm,0.3s,baz=294,slow=24,SNR=2.7						
URZ	Urewera	19.74	199	P	Pn	20 43 05.6	-0.1
URZ				S	S	20 46 29.8	-13
URZ	Urewera	19.74	199	P	Pn	20 43 05.7	0.0
URZ				IAmb	IAmb	20 43 07.4	
	comp=Z,82nm,0.6s						

URZ	Urewera	19.74	199	P	Pn	20 43 05.9	+0.2
KARZ	Kaharoa	19.81	201	P	Pn	20 43 07.7	+1.2
TOZ	Tahuroa Road	19.82	203	P	Pn	20 43 08.9	+2.4
OMRZ	Omania	19.84	201	P	Pn	20 43 08.5	+1.6
RIGZ	Rimuhau	19.97	197	P	Pn	20 43 10.8	+2.5
RTZ	Ruatahuna	20.11	199	P	Pn	20 43 09.4	-0.7
RTZ				S	S	20 46 40.4	-10
PRGZ	Paritu Road	20.14	197	P	Pn	20 43 11.6	+1.3
PRGZ				S	S	20 46 42.1	-8.3
SNGZ	Shannon Statio	20.16	198	P	Pn	20 43 13.1	+2.5
SNGZ				S	S	20 46 39.8	-11
MHGZ	Mahia Peninsul	20.34	196	P	Pn	20 43 13.6	+0.9
MHGZ				S	S	20 46 43.3	-11
RAHZ	Arahi	20.36	198	P	Pn	20 43 12.9	0.0
RAHZ				S	S	20 46 47.3	-7.5
MTHZ	Maungataniwha	20.37	199	P	Pn	20 43 14.0	+0.8
MTHZ				S	S	20 46 46.6	-8.4
NMHZ	Naumai	20.61	199	P	Pn	20 43 15.1	-0.9
NMHZ				S	S	20 46 52.0	-7.8
RATZ	Rangitukua	20.73	201	P	P	20 43 15.9	+1.5
HIZ	Hauiti	20.74	203	P	Pn	20 43 18.1	+0.6
HIZ	Hauiti	20.74	203	P	Pn	20 43 17.6	+0.1
HIZ				IAmb	IAmb	20 43 19.7	
	comp=Z,138nm,0.6s						
BKZ	Black Stump Fm	20.77	199	P	P	20 43 15.5	+0.7
BKZ				S	S	20 46 56.2	-6.7
BKZ	Black Stump Fm	20.77	199	P	P	20 43 15.6	+0.7
BKZ	Black Stump Fm	20.77	199	P	P	20 43 15.4	+0.6
KATZ	Kakaramea	20.85	201	P	P	20 43 17.7	+1.8
MCHZ	McNeill Hill	20.96	199	P	P	20 43 21.2	+4.4
NTVZ	North Tongarir	20.97	201	P	P	20 43 17.8	+0.8
TMVZ	Te Maari	20.98	201	P	P	20 43 17.9	+0.8
KRVZ	Karewarewa	20.98	201	P	P	20 43 17.7	+0.6
ETVZ	East Tongariro	20.99	201	P	P	20 43 18.0	+0.7
WTVZ	West Tongariro	21.02	201	P	P	20 43 17.9	+0.3
NNVZ	North Ngauruho	21.02	201	P	P	20 43 18.2	+0.6
KWHZ	Kaweka Forest	21.02	199	P	P	20 43 21.0	+3.4
KWHZ				S	S	20 46 59.1	-8.9
TWVZ	Taurewa	21.03	202	P	P	20 43 18.5	+0.8
OTVZ	Oturere	21.03	201	P	P	20 43 17.9	+0.1
OTVZ				S	S	20 47 00.2	-8.1
SNVZ	South Ngauruho	21.06	201	P	P	20 43 18.6	+0.5
NGZ	Ngauruhoe	21.07	201	P	P	20 43 19.0	+0.9
NGZ				S	S	20 47 04.8	-4.2
TUVZ	Tukino	21.13	201	P	P	20 43 19.7	+0.8
FWVZ	Far West T-bar	21.15	201	P	P	20 43 19.3	+0.1
WHVZ	Whangaehu Hut	21.17	201	P	P	20 43 18.8	-0.5
TRVZ	Turoa	21.20	201	P	P	20 43 19.2	-0.4
BHHZ	Black Hill Sta	21.20	200	P	P	20 43 19.1	-0.3
BHHZ				S	S	20 47 01.9	-9.5
WNVZ	Wahianoa	21.20	201	P	P	20 43 19.6	0.0
MOVZ	Moawhango	21.22	201	P	P	20 43 21.4	+1.7
KAHZ	Kahuranaki	21.23	198	P	P	20 43 22.5	+2.7
KRHZ	Kereru	21.24	199	P	P	20 43 20.0	+0.1
VRZ	Vera Road	21.32	203	P	P	20 43 26.0	+5.4
MHEZ	Mangahewa	21.44	204	P	P	20 43 27.8	+5.9
PXZ	Pawanui	21.45	198	P	P	20 43 23.8	+1.8
PNHZ	Pukenui	21.54	199	P	P	20 43 23.8	+0.8
PKE	Pukeiti	21.67	204	P	P	20 43 27.8	+3.4
NEZ	North Egmont	21.69	204	P	P	20 43 28.4	+3.7
PRHZ	Porangahau	21.74	198	P	P	20 43 28.2	+3.1
KHEZ	Kahui Hut	21.74	204	P	P	20 43 29.5	+4.3
TSZ	Takapari Road	21.75	199	P	P	20 43 26.6	+1.4
DVHZ	Dannevirke	21.91	199	P	P	20 43 28.0	+1.1
POWZ	Post Office Ro	22.11	199	P	P	20 43 29.7	+0.6
BFZ	Birch Farm	22.23	198	P	P	20 43 31.2	+0.8
BFZ	Birch Farm	22.23	198	P	P	20 43 31.8	+1.3
MRZ	Mangatainoka R	22.42	199	P	P	20 43 32.8	+0.3
HOWZ	Holdsworth Sta	22.65	199	P	P	20 43 34.8	-0.1
MSWZ	Moikau Station	23.21	199	P	P	20 43 39.7	-0.8
SNZO	South Karori	23.29	200	P	P	20 43 41.4	+0.2
SNZO				IAmb	IAmb	20 43 45.5	
	comp=Z,243nm,1.4s						
BHW	Baring Head	23.32	200	P	P	20 43 40.6	-0.9
PLWZ	Palliser	23.34	199	P	P	20 43 41.5	-0.4
QRZ	Quartz Range	23.64	204	P	P	20 43 45.4	+0.9
QRZ				IAmb	IAmb	20 43 48.9	
	comp=Z,79nm,0.6s						
QRZ	Quartz Range	23.64	204	P	P	20 43 45.7	+1.2
TUWZ	Tuamarina	23.65	201	P	P	20 43 44.1	-0.5
NNZ	Nelson	23.66	203	P	P	20 43 43.7	-1.0
TBI	Tubuai	23.84	103	*e*LQ	LQ	20 48 39.8	
	comp=Z,942nm,33.0s						
TBI				*e*LR	LR	20 49 27.4	
	comp=Z,1µm,34.5s						
TBI	Tubuai	23.84	103	*e*T	T	21 08 04.8	
	comp=Z,66nm,0.3s						
BSWZ	Blackbirch Sta	23.92	201	P	P	20 43 47.8	+0.8
PAE	Paea	23.99	89	*e*P	P	20 43 48.0	+0.2
	comp=Z,38nm,1.1s						
PAE	Paea	23.99	89	*e*T	T	21 08 01.6	
	comp=Z,17nm,0.3s						
PPT2	Papeete2	24.00	89	*e*P	P	20 43 48.5	+0.4
	comp=Z,201nm,1.3s						
PPT2				*e*LQ	LQ	20 48 44.5	
	comp=Z,610nm,26.5s						
PPT2				*e*LR	LR	20 49 25.5	
	comp=Z,2µm,32.2s						
PPT2	Papeete2	24.00	89	*e*T	T	21 08 02.8	
	comp=Z,13nm,0.2s						
PPT	Papeete	24.00	89	P	P	20 43 47.1	-0.9
	comp=Z,117nm,0.9s,baz=268,slow=3.5,SNR=9.8						
PPT				LR	LR	20 51 00.9	
	comp=Z,257nm,20.4s,baz=232,slow=30						
PPTF	Pamatai, Papee	24.01	89	P	P	20 43 46.4	-1.7
TIAR	Tiarei	24.22	89	*e*P	P	20 43 50.4	+0.4
	comp=Z,1.2nm,0.9s						
TIAR	Tiarei	24.22	89	*e*T	T	21 08 03.7	
	comp=Z,0.9nm,0.2s						
THZ	Tophouse	24.31	203	P	P	20 43 51.7	+1.1
THZ				IAmb	IAmb	20 43 58.0	
	comp=Z,58nm,0.8s						
KHZ	Kahutara	24.66	201	P	P	20 43 54.3	+0.6
KHZ				IAmb	IAmb	20 44 00.2	
	comp=Z,86nm,1.1s						
KHZ	Kahutara	24.66	201	P	P	20 43 54.9	+1.2
MEH	Mehetia	25.38	90	*e*P	P	20 44 01.7	+1.2
	comp=Z,47nm,1.1s						
MEH	Mehetia	25.38	90	*e*T	T	21 09 49.3	
	comp=Z,114nm,0.2s						
LTZ	Lake Taylor	25.43	203	P	P	20 44 00.6	-0.2
OXZ	Oxford	25.98	202	P	P	20 44 05.5	-0.3
OXZ				IAmb	IAmb	20 44 07.2	
	comp=Z,104nm,0.8s						
PMOR	Pomariorio Ree	26.11	84	*e*T	T	21 10 58.2	
	comp=Z,7.4nm,0.4s						
HNR	Honiara	26.45	289	P	P	20 44 08.6	-1.6
	comp=Z,118nm,0.7s,baz=216,slow=4.9,SNR=8.6						
HNR				LR	LR	20 54 36.5	
	comp=Z,157nm,19.4s,baz=146,slow=36						
HNR	Honiara	26.45	289	P	P	20 44 11.8	+1.6
HNR				pmax	pmax		
	comp=Z,163nm,0.9s						
HNR	Honiara	26.45	289	P	P	20 44 11.8	+1.6
HNR	Honiara	26.45	289	P	P	20 44 12.9	+2.7
	comp=Z,188nm,0.9s						
RPZ	Rata Peaks	26.68	203	P	P	20 44 14.1	+2.1
FOZ	Fox Glacier	27.00	205	P	P	20 44 17.9	+3.1
LBZ	Lake Benmore	27.58	204	P	P	20 44 21.1	+1.0
LBZ				IAmb	IAmb	20 44 38.8	
	comp=Z,74nm,1.4s						
ODZ	Otahua Downs	27.97	202	P	P	20 44 24.5	+1.0
WKZ	Wanaka	28.40	205	P	P	20 44 28.8	+1.4
WKZ				IAmb	IAmb	20 44 54.2	
	comp=Z,47nm,0.8s						
MLZ	Mavora Lakes	29.20	205	P	P	20 44 34.6	+0.1
MLZ				IAmb	IAmb	20 44 42.7	
	comp=Z,30nm,0.6s						
DCZ	Deep Cove	29.68	206	P	P	20 44 39.8	+1.2
DCZ				IAmb	IAmb	20 44 47.0	
	comp=Z,34nm,0.8s						
WHZ	Wether Hill Ro	29.70	205	P	P	20 44 39.3	+0.4
WHZ				IAmb	IAmb	20 44 45.0	
	comp=Z,43nm,0.6s						
EIDS	Eidsvold	31.93	254	P	P	20 44 59.1	+0.2
	baz=32,SNR=25						
EIDS	Eidsvold	31.93	254	P	P	20 44 58.9	+0.1
EIDS				IAmb	IAmb	20 45 02.0	
	comp=Z,27nm,0.7s						
EIDS	Eidsvold	31.93	254	P	P	20 44 59.2	+0.4
ARMA	Armidale	32.09	244	P	P	20 45 01.2	+0.9
	baz=32,SNR=8.1						
ARMA	Armidale	32.09	244	P	P	20 45 00.8	+0.5
ARMA	Armidale	32.09	244	P	P	20 45 01.0	+0.7
RK1H	Rockhampton Ha	32.42	257	P	P	20 45 03.9	+0.8
NTLH	Newcastle Hard	32.60	239	P	P	20 45 06.4	+1.8
MGCD	Mangrove Creek	33.16	239	P	P	20 45 10.0	+0.5
	baz=33,SNR=16						
MGCD	Mangrove Creek	33.16	239	P	P	20 45 10.4	+0.9
SYDH	Sydney Hard Ro	33.61	238	P	P	20 45 14.0	+0.7
	comp=Z,79nm,0.8s						
RMQ	Roma	34.09	252	P	P	20 45 18.6	+0.9
	baz=34,SNR=14						
RMQ	Roma	34.09	252	P	P	20 45 19.0	+1.4
CNB	Canberra Magne	35.13	236	P	P	20 45 27.0	+0.4
	baz=35,SNR=28						
CNB	Canberra Magne	35.13	236	P	P	20 45 27.2	+0.6
TAOE	Nuku Hiva Isla	35.22	77	*e*LR	LR	20 54 31.6	
	comp=Z,818nm,32.2s						
TAOE	Nuku Hiva Isla	35.22	77	*e*T	T	21 21 34.8	
	comp=Z,74nm,0.2s						
CAN	Canberra	35.42	236	P	P	20 45 28.0	-1.1
CAN				pmax	pmax		
	comp=Z,32nm,0.8s						
CAN	Canberra	35.42	236	P	P	20 45 28.0	-1.1
CAN				IAmb	IAmb	20 45 30.1	
	comp=Z,32nm,0.8s						
CAN	Canberra	35.42	236	P	P	20 45 29.7	+0.6
MILA	Mila	35.82	234	P	P	20 45 32.9	+0.4
	baz=36,SNR=3.4						
CTA	Charters Tower	36.55	263	P	P	20 45 39.0	+0.1
	comp=Z,119nm,0.7s,baz=92,slow=12,SNR=106						
CTA	Charters Tower	36.55	263	P	P	20 45 39.0	+0.1
CTAO	Charters Tower	36.55	263	P	P	20 45 38.4	-0.5
CTAO				pmax	pmax		
	comp=Z,119nm,0.8s						
CTAO	Charters Tower	36.55	263	P	P	20 45 38.4	-0.5
CTAO	Charters Tower	36.55	263	P	P	20 45 39.1	+0.2
CMSA	Cobar Meteorol	37.31	244	P	P	20 45 44.9	-0.2
	baz=37,SNR=55						
CMSA	Cobar Meteorol	37.31	244	P	P	20 45 45.0	-0.2
PMG	Port Moresby	38.12	280	P	P	20 45 52.2	0.0
	comp=Z,108nm,0.9s,baz=86,slow=5.2,SNR=31						
PMG	Port Moresby	38.12	280	P	P	20 45 52.2	0.0
PMG				pmax	pmax		
	comp=Z,110nm,0.9s						
PMG	Port Moresby	38.12	280	P	P	20 45 52.2	0.0
PMG	Port Moresby	38.12	280	P	P	20 45 52.5	+0.3
	comp=Z,128nm,1.0s						
PMG	Port Moresby	38.12	280	P	P	20 45 52.5	+0.3
	comp=Z,128nm,1.0s						
QLP	Quilpie	38.14	252	P	P	20 45 52.7	+0.5
	baz=38,SNR=3.9						
QLP	Quilpie	38.14	252	P	P	20 45 52.8	+0.5
MTSU	Mount Surprise	38.63	265	P	P	20 45 56.3	-0.1
	baz=39,SNR=76						
MTSU	Mount Surprise	38.63	265	P	P	20 45 56.5	+0.1
TOO	Toolangi	38.76	234	P	P	20 45 57.2	-0.1
	baz=39,SNR=20						
TOO	Toolangi	38.76	234	P	P	20 45 57.0	-0.4
TOO				pmax	pmax		
	comp=Z,32nm,0.7s						
TOO	Toolangi	38.76	234	P	P	20 45 57.0	-0.4
TOO				IAmb	IAmb	20 45 58.4	
	comp=Z,32nm,0.7s						
TOO	Toolangi	38.76	234	P	P	20 45 57.7	+0.3
CORO	Coronation Par	38.83	228	P	P	20 45 59.3	+1.6
TAU	Tasmania Unive	39.28	225	P	P	20 46 01.4	-0.1
TAU				pmax	pmax		
	comp=Z,14nm,0.8s						
TAU	Tasmania Unive	39.28	225	P	P	20 46 01.4	-0.1
BRAT	Ballarat	39.95	235	P	P	20 46 08.7	+1.5
COEN	Coen	40.54	271	P	P	20 46 12.0	-0.3
COEN				IAmb	IAmb	20 46 15.2	
	comp=Z,62nm,0.9s						
COEN	Coen	40.54	271	P	P	20 46 12.4	0.0
STKA	Stephens Creek	40.81	244	P	P	20 46 14.1	-0.3
	comp=Z,19nm,0.8s,baz=92,slow=10.0,SNR=48						
STKA				PcP	PcP	20 48 14.2	-0.2
	comp=Z,5.3nm,0.8s,baz=78,slow=7.7,SNR=3.0						
STKA				LR	LR	21 00 34.8	
	comp=Z,188nm,21.7s,baz=54,slow=32						
STKA	Stephens Creek	40.81	244	P	P	20 46 14.1	-0.3
	baz=41,SNR=37						
STKA	Stephens Creek	40.81	244	P	P	20 46 13.9	-0.5
STKA	Stephens Creek	40.81	244	P	P	20 46 14.4	0.0
MANU	Manus Island	40.93	291	P	P	20 46 16.1	+0.6
MANU				IAmb	IAmb	20 46 18.2	
	comp=Z,55nm,1.0s						
INKA	Innaminka	41.27	250	P	P	20 46 19.7	+1.5
ARPS	Mount Arapiles	41.40	236	P	P	20 46 19.0	-0.2
	baz=41,SNR=7.4						
ARPS	Mount Arapiles	41.40	236	P	P	20 46 19.5	+0.3
QIS	Mount Isa	42.69	261	P	P	20 46 28.6	-1.3
	baz=43,SNR=9.6						
QIS	Mount Isa	42.69	261	P	P	20 46 29.2	-0.7
HTT	Hallett	43.23	242	P	P	20 46 33.2	-0.9
	baz=43,SNR=16						
HTT	Hallett	43.23	242	P	P	20 46 33.5	-0.6
KHLU	Kahalu`u	43.26	26	P	P	20 46 34.4	-0.1
SDHHI	Sand Hill	43.34	27	P	P	20 46 35.6	+0.4
KKO	Keanakako`i	43.36	27	P	P	20 46 32.3	-3.0
PUH	Pauahi	43.36	27	P	P	20 46 33.8	-1.5
MLH	Mauna Loa	43.39	27	P	P	20 46 36.0	+0.3
HMH	Humu‘ula Sheep	43.45	27	P	P	20 46 35.5	-0.7
POHA	Pohakuloa	43.56	27	P	P	20 46 36.8	-0.2
LCRK	Leigh Creek	43.58	246	P	P	20 46 36.7	-0.3
HPAH	Hawaii Prepara	43.74	26	P	P	20 46 38.2	-0.1
NAPP	Napperby	43.84	242	P	P	20 46 39.8	+0.8
WHYH	Whyalla	44.31	243	P	P	20 46 42.2	-0.5
	comp=Z,21nm,0.9s						
BBOO	Buckleboo	45.56	243	P	P	20 46 51.5	-1.2
	baz=46,SNR=32						
BBOO	Buckleboo	45.56	243	P	P	20 46 51.8	-0.9
BBOO	Buckleboo	45.56	243	P	P	20 46 51.6	-1.2
OOD	Oodnadatta	45.76	250	P	P	20 46 54.8	+0.5
JAY	Jayapura	46.68	286	P	P	20 47 01.8	0.0
	comp=Z,40nm,0.8s						
GENI	Genyem	47.13	285	P	P	20 47 05.7	+0.4
	comp=Z,2µmcomp=Z,112nm,0.9s						
GENI	Genyem	47.13	285	P	P	20 47 06.4	+1.1
	comp=Z,115nm,0.9s						
MULG	Mulgathing	47.17	247	P	P	20 47 04.4	-1.0
WR0	Warramunga Arr	47.48	261	P	P	20 47 06.6	-1.3
WR0				IAmb	IAmb	20 47 07.8	
	comp=Z,19nm,0.6s						
AS31	Alice Springs	47.60	256	P	P	20 47 07.8	-1.1
ASAR	Alice Springs	47.61	256	P	P	20 47 07.9	-1.0
	comp=Z,53nm,0.7s,baz=87,slow=8.6,SNR=313						
ASAR				PcP	PcP	20 48 37.9	+0.1
	comp=Z,16nm,0.8s,baz=105,slow=3.9,SNR=9.8						
ASAR				ScP	ScP	20 52 24.4	-1.8
	comp=Z,2.7nm,0.9s,baz=114,slow=3.6,SNR=6.2						
ASAR				S	S	20 53 53.0	-6.7
	comp=Z,2.3nm,1.0s,baz=94,slow=16,SNR=8.5						
ASAR				ScS	ScS	20 56 53.2	-3.5
	comp=Z,0.4nm,0.9s,baz=101,slow=4.8,SNR=4.7						
ASAR				LR	LR	21 05 45.8	
	comp=Z,275nm,19.5s,baz=96,slow=34						
WB2	Warramunga Arr	47.66	261	P	P	20 47 07.8	-1.6
WRAB	Tennant Creek	47.66	261	*i* P	P	20 47 07.9	-1.5
WRAB	Tennant Creek	47.66	261	P	P	20 47 07.4	-1.9
WRAB	Tennant Creek	47.66	261	P	P	20 47 08.0	-1.4
WRA	Warramunga Arr	47.67	261	P	P	20 47 07.9	-1.5
	comp=Z,25nm,0.6s,baz=93,slow=8.6,SNR=403						
WRA				PcP	PcP	20 48 38.1	0.0
	comp=Z,12nm,0.8s,baz=127,slow=4.1,SNR=6.9						
WRA				ScP	ScP	20 52 24.7	-1.8
	comp=Z,1.9nm,0.9s,baz=110,slow=4.5,SNR=2.4						
WRA				S	S	20 53 50.2	-11
	comp=Z,1.2nm,0.8s,baz=106,slow=12,SNR=2.7						
WRA				LR	LR	21 06 01.9	
	comp=Z,253nm,18.9s,baz=65,slow=34						
WRA	Warramunga Arr	47.67	261	P	P	20 47 07.4	-2.0
SMPI	Sarmi	48.71	285	P	P	20 47 17.0	-0.4
KDU	Kakadu	50.94	269	P	P	20 47 32.8	-1.5
	baz=51,SNR=49						
KDU	Kakadu	50.94	269	P	P	20 47 33.5	-0.8
SRPI	Serui, Papua	51.01	284	P	P	20 47 35.1	+0.2
BAKI	Biak	51.41	285	P	P	20 47 37.9	0.0
	comp=Z,70nm,1.1s						
MTN	Manton Dam	52.16	269	P	P	20 47 42.1	-1.4
	baz=52,SNR=36						
MTN	Manton Dam	52.16	269	P	P	20 47 41.9	-1.6
MTN	Manton Dam	52.16	269	P	P	20 47 42.6	-0.9
FORT	Forrest	52.34	246	P	P	20 47 43.4	-1.2
	baz=52,SNR=12						
FORT	Forrest	52.34	246	P	P	20 47 43.0	-1.6
FORT				IAmb	IAmb	20 47 51.4	
	comp=Z,28nm,0.7s						
FORT	Forrest	52.34	246	P	P	20 47 43.3	-1.3
DRS	Darwin Rock St	52.49	269	P	P	20 47 44.6	-1.3
WRKA	Warakurna	52.55	253	P	P	20 47 45.3	-1.1
	baz=52,SNR=79						
WRKA	Warakurna	52.55	253	P	P	20 47 45.4	-0.9
SAUI	Saumlaki	53.40	275	P	P	20 47 52.8	+0.1
	comp=Z,188nm,1.1s						
SAUI	Saumlaki	53.40	275	P	P	20 47 50.5	-2.2
SAUI	Saumlaki	53.40	275	P	P	20 47 54.7	+2.0
	comp=Z,188nm,1.2s						
KNRA	Kununurra	53.70	265	P	P	20 47 53.8	-1.0
	baz=54,SNR=54						
KNRA	Kununurra	53.70	265	P	P	20 47 53.5	-1.3
KNRA	Kununurra	53.70	265	P	P	20 47 54.0	-0.8
SWI	Sorong	55.97	283	P	P	20 48 10.9	-0.3
	comp=Z,2µmcomp=Z,239nm,0.9s						
FITZ	Fitzroy Crossi	56.10	261	P	P	20 48 11.6	-0.5
	baz=56,SNR=26						
MSAI	Masohi	57.19	279	P	P	20 48 20.2	+0.3
	comp=Z,10nm,0.5s						
AAI	Ambon	57.75	278	P	P	20 48 23.7	-0.2
	comp=Z,48nm,0.6s						
SBA	Scott Base	58.84	184	P	P	20 48 32.3	+1.8
SBA				pmax	pmax		
	comp=Z,20nm,1.0s						
SBA	Scott Base	58.84	184	P	P	20 48 32.3	+1.8
SBA				IAmb	IAmb	20 48 37.1	
	comp=Z,20nm,1.0s						
VNDA	Vanda	58.95	186	P	P	20 48 34.8	+3.5
	comp=Z,11nm,1.0s,baz=11,slow=6.7,SNR=22						
VNDA				LR	LR	21 08 27.2	
	comp=Z,28nm,20.9s,baz=5.5,slow=30						
VNDA	Vanda	58.95	186	P	P	20 48 34.5	+3.3
VNDA				IAmb	IAmb	20 48 36.2	
	comp=Z,20nm,1.1s						
SOEI	Soe	59.48	270	P	P	20 48 36.9	+0.9
	comp=Z,2µmcomp=Z,253nm,0.8s						
SOEI	Soe	59.48	270	P	P	20 48 36.5	+0.4
SOEI	Soe	59.48	270	P	P	20 48 37.0	+0.9
	comp=Z,254nm,0.8s						
LBMI	Labuha	59.52	281	P	P	20 48 35.7	-0.5
	comp=Z,564nmcomp=Z,60nm,1.1s						
TNTI	Ternate	60.19	283	P	P	20 48 40.5	-0.2
	comp=Z,79nm,0.8s						
TNTI	Ternate	60.19	283	P	P	20 48 40.3	-0.5
TNTI	Ternate	60.19	283	P	P	20 48 42.9	+2.2
	comp=Z,80nm,0.9s						
SANI	Sanana	60.40	279	P	P	20 48 41.2	-1.0
	comp=Z,580nmcomp=Z,86nm,0.8s						
SANI	Sanana	60.40	279	P	P	20 48 40.8	-1.4
PSA00	Pilbara Seismi	60.76	256	P	P	20 48 42.9	-1.7
PSA00	Pilbara Seismi	60.76	256	P	P	20 48 42.9	-1.7
PSA00				IAmb	IAmb	20 48 44.2	
	comp=Z,22nm,0.8s						
PSA00	Pilbara Seismi	60.76	256	P	P	20 48 43.6	-0.9
MBWA	Marble Bar	60.94	256	P	P	20 48 44.8	-1.0
	comp=Z,86nm,0.7s						
MEEK	Meekatharra	60.99	250	P	P	20 48 44.7	-1.4
	baz=61,SNR=9.9						
MEEK	Meekatharra	60.99	250	P	P	20 48 44.7	-1.4
KLBR	Kellerberrin	61.09	244	P	P	20 48 45.8	-0.8
	baz=61,SNR=12						
KLBR	Kellerberrin	61.09	244	P	P	20 48 45.8	-0.8
MMRI	Maumere	61.73	271	P	P	20 48 50.6	-0.6
	comp=Z,74nm,0.7s						
MMRI	Maumere	61.73	271	P	P	20 48 50.3	-0.8
MMRI	Maumere	61.73	271	P	P	20 48 51.3	+0.1
	comp=Z,75nm,0.8s						
BLDU	Ballidu	62.09	245	P	P	20 48 52.4	-1.0
	baz=62,SNR=20						
EDFI	Ende, Flores	62.21	270	P	P	20 48 53.4	-1.1
	comp=Z,24nm,0.9s						
MUN	Mundaring	62.35	244	P	P	20 48 54.7	-0.4
	baz=62,SNR=4.7						
BASI	Baing, Sumba	62.82	268	P	P	20 48 57.9	-0.6
	comp=Z,46nm,1.3s						
MORW	Morawa	62.88	247	P	P	20 48 57.8	-0.9
	baz=63,SNR=6.9						
MORW	Morawa	62.88	247	P	P	20 48 57.8	-0.9
MORW				IAmb	IAmb	20 48 59.3	
	comp=Z,25nm,1.0s						
KMSI	Cibinong	63.23	281	P	P	20 49 00.9	-0.3
	comp=Z,2µmcomp=Z,104nm,0.7s						
LUWI	Luwuk	63.76	279	P	P	20 49 04.7	0.0
	comp=Z,80nm,0.8s						
LUWI	Luwuk	63.76	279	P	P	20 49 04.9	+0.2
BKSI	Bulukumba	64.76	273	P	P	20 49 11.1	-0.2
	comp=Z,21nm,0.8s						
APSI	Ampana	64.85	279	P	P	20 49 12.4	+0.6
	comp=Z,32nm,1.0s						
MRSI	Marisa	65.09	280	P	P	20 49 12.3	-1.1
SPSI	Sidrap Palu	65.54	275	P	P	20 49 14.7	-1.6
	comp=Z,28nm,0.8s						
GIRL	Giralia	65.64	253	P	P	20 49 17.4	+0.6
	baz=66,SNR=5.2						
TTSI	Tana Toraja	65.81	276	P	P	20 49 18.1	+0.1
	comp=Z,14nm,1.3s						
PLAI	Plampang	65.87	269	P	P	20 49 17.4	-1.1
	comp=Z,561nmcomp=Z,61nm,0.7s						
PLAI	Plampang	65.87	269	P	P	20 49 17.6	-0.9
CASY	Casey	65.93	205	P	P	20 49 19.5	+1.6
TOLI2	Tolitoli	66.40	280	P	P	20 49 20.9	-0.9
TOLI2				IAmb	IAmb	20 49 21.8	
	comp=Z,16nm,0.8s						
TOLI2	Tolitoli	66.40	280	P	P	20 49 22.1	+0.3
TWSI	Taliwang, Sumb	66.74	269	P	P	20 49 23.1	-0.9
	comp=Z,26nm,0.7s						
MPSI	Mapaga	66.93	279	P	P	20 49 24.5	-0.7
	comp=Z,805nmcomp=Z,44nm,0.9s						
JAGI	Jajag, Banyuwa	69.39	268	P	P	20 49 38.7	-2.0
	comp=Z,45nm,0.9s						
JAGI	Jajag, Banyuwa	69.39	268	P	P	20 49 39.0	-1.6
JAGI				IAmb	IAmb	20 49 41.8	
	comp=Z,39nm,0.9s						
JAGI	Jajag, Banyuwa	69.39	268	P	P	20 49 39.2	-1.5
BLJI	Banyuglugur	70.14	269	P	P	20 49 44.5	-0.7
	comp=Z,30nm,0.8s						
QSPA	South Pole Qui	70.33	180	P	P	20 49 48.1	+2.4
QSPA				IAmb	IAmb	20 50 16.7	
	comp=Z,47nm,0.9s						
MTKI	Muara Teweh, K	71.15	276	P	P	20 49 51.4	0.0
MJAR	Matsushiro Arr	71.42	322	P	P	20 49 52.0	-0.6
	comp=Z,7.5nm,0.7s,baz=153,slow=5.6,SNR=7.7						
MJAR				LR	LR	21 21 53.8	
	comp=Z,16nm,18.0s,baz=125,slow=36						
MJAR	Matsushiro Arr	71.42	322	P	P	20 49 52.0	-0.6
MJAR	Matsushiro Arr	71.42	322	P	P	20 49 51.8	-0.8
MAJO	Matsushiro	71.42	322	P	P	20 49 52.0	-0.6
MAJO				pmax	pmax		
	comp=Z,21nm,1.0s						
MAJO	Matsushiro	71.42	322	P	P	20 49 52.0	-0.6
MAT	Matsushiro	71.42	322	P	P	20 49 52.0	-0.6
SPMM	Sapulut	71.74	282	P	P	20 49 55.0	0.0
PCJI	Pacitan	72.28	267	P	P	20 49 57.9	-0.2
	comp=Z,115nm,1.0s						
WOJI	Wonogiri, Jawa	72.62	268	P	P	20 49 59.8	-0.4
	comp=Z,26nm,0.9s						
H06S1	SOCORRO T	73.37	63	T	T	22 10 05.4	
	SNR=17						
H06E1	SOCORRO T-PHAS	73.42	63	T	T	22 10 00.1	
	SNR=4.4						
JHS	Saijyo	73.52	318	P	P	20 50 05.5	+0.4
SBUM	Sibu	74.84	278	P	P	20 50 14.0	+0.8
SCI2	San Clemente I	75.06	46	P	P	20 50 14.6	+0.5
	baz=234						
PKM	Mcpherson Peak	75.34	44	P	P	20 50 16.5	+0.6
	baz=233						
CIS	Catalina Islan	75.40	46	P	P	20 50 16.3	+0.3
	baz=234						
PAGB	Antelope Grade	75.57	43	P	P	20 50 18.2	+1.2
PAGB				IAmb	IAmb	20 50 45.7	
	comp=Z,38nm,1.3s						
FMP	Fort Macarthur	75.66	46	P	P	20 50 17.7	+0.2
	baz=234						
NACB	Ninganchiao	75.76	302	P	P	20 50 17.3	-1.0
OSI	Osito Audit: C	75.90	45	P	P	20 50 19.5	+0.6
	baz=234						
DECC	Green Verdugo	75.95	45	P	P	20 50 18.8	-0.4
	baz=234						
CBX	Cerro Bola	75.98	48	P	P	20 50 20.7	+1.2
PASC	Pasadena Art C	76.00	46	P	P	20 50 20.0	+0.6
LEM	Lembang	76.05	268	P	P	20 50 18.8	-1.6
	comp=Z,61nm,0.7s,baz=53,slow=6.8,SNR=12						
SSLB	Suanglung	76.08	302	P	P	20 50 18.0	-2.1

SSLB				IAmb	IAmb	20 50 22.0	
	comp=Z,46nm,1.0s						
TPUB	Ta-pu	76.11	301	P	P	20 50 18.5	-1.8
TPUB	Ta-pu	76.11	301	P	P	20 50 18.9	-1.4
MWC	Mount Wilson	76.12	46	P	P	20 50 20.6	+0.3
MWC				pmax	pmax		
	comp=Z,26nm,0.9s						
MWC	Mount Wilson	76.12	46	P	P	20 50 20.6	+0.3
MWC				IAmb	IAmb	20 50 21.9	
	comp=Z,26nm,0.9s						
ARVC	Arvin	76.13	44	P	P	20 50 19.1	-1.0
	baz=233						
KSM	Kuching	76.28	277	P	P	20 50 22.0	+0.5
KSM	Kuching	76.28	277	P	P	20 50 21.2	-0.3
KSM				IAmb	IAmb	20 50 23.1	
	comp=Z,40nm,0.8s						
KSM	Kuching	76.28	277	P	P	20 50 21.4	-0.1
KMRM	Mail Ridge	76.30	38	P	P	20 50 22.4	+1.4
MURC	Murrieta	76.34	46	P	P	20 50 21.2	-0.2
	baz=235						
PETK	Petropavlovsk-	76.35	343	P	P	20 50 20.5	-0.4
	comp=Z,7.2nm,0.8s,baz=99,slow=9.8,SNR=9.5						
PETK				LR	LR	21 17 05.5	
	comp=Z,57nm,21.7s,baz=140,slow=30						
VES	Vestal, Richgr	76.39	44	P	P	20 50 22.0	+0.4
	baz=233						
BFSC	Mount Baldy Ra	76.39	46	P	P	20 50 22.2	+0.4
	baz=234,SNR=5.5						
MONP2	Monument Peak	76.47	47	P	P	20 50 23.1	+0.7
	baz=236,SNR=10.0						
VOG	Valley Oaks Go	76.49	43	P	P	20 50 22.5	+0.5
	baz=233						
EDW2	Edwards Air Fo	76.54	45	P	P	20 50 23.3	+0.7
	baz=234,SNR=19						
RMX	La Rumorosa	76.55	48	P	P	20 50 23.8	+1.1
RMX				IAmb	IAmb	20 50 24.9	
	comp=Z,27nm,1.0s						
IKP	In-Ko-Pah, Jac	76.55	48	P	P	20 50 23.5	+0.8
	baz=236,SNR=8.5						
YSS	Yuzh-Sakhalins	76.60	332	*i* P	P	20 50 22.5	0.0
YSS				pmax	pmax		
	comp=Z,17nm,0.7s						
YSS	Yuzh-Sakhalins	76.60	332	P	P	20 50 22.4	0.0
YSS				IAmb	IAmb	20 50 25.5	
	comp=Z,28nm,0.9s						
ISA	Isabella, Lake	76.69	44	P	P	20 50 24.1	+0.8
ISA				pmax	pmax		
	comp=Z,36nm,1.1s						
ISA	Isabella, Lake	76.69	44	P	P	20 50 24.1	+0.8
ISA				IAmb	IAmb	20 50 25.5	
	comp=Z,36nm,1.1s						
ISA	Isabella, Lake	76.69	44	P	P	20 50 24.3	+1.0
	baz=234,SNR=21						
KHMM	Horse Mountain	76.71	37	P	P	20 50 24.5	+1.1
KHMM				IAmb	IAmb	20 50 25.7	
	comp=Z,44nm,1.1s						
O02D	Mt. Diablo Mer	76.80	38	P	P	20 50 25.0	+1.1
	baz=230						
PFO	Pinyon Flats O	76.85	47	P	P	20 50 25.2	+0.7
	comp=Z,14nm,1.0s,baz=234,slow=2.9,SNR=12						
PFO	Pinyon Flats O	76.85	47	P	P	20 50 24.9	+0.6
PFO	Pinyon Flats O	76.85	47	P	P	20 50 25.1	+0.7
	baz=235,SNR=6.3						
TPFO	Pinon Flats	76.85	47	P	P	20 50 25.1	+0.7
	baz=235,SNR=6.4						
CMB	Columbia Colle	76.90	41	P	P	20 50 24.4	-0.1
CMB				pmax	pmax		
	comp=Z,17nm,0.9s						
CMB	Columbia Colle	76.90	41	P	P	20 50 24.4	-0.1
CBJI	Citeko	76.91	268	P	P	20 50 27.9	+2.9
	comp=Z,77nm,0.7s						
BBRC	Big Bear Solar	76.91	46	P	P	20 50 25.5	+0.7
	baz=235						
SWSC	Sam W. Stewart	76.94	48	P	P	20 50 25.3	+0.6
	baz=236						
LRMC	Laurel Mtn Rad	77.10	45	P	P	20 50 26.4	+0.7
	baz=234,SNR=15						
ORV	Oroville	77.17	39	P	P	20 50 26.4	+0.5
ORV				pmax	pmax		
	comp=Z,12nm,1.0s						
ORV	Oroville	77.17	39	P	P	20 50 26.4	+0.5
WDC	Whiskeytown Da	77.20	38	P	P	20 50 26.6	+0.6
WDC				pmax	pmax		
	comp=Z,26nm,0.9s						
WDC	Whiskeytown Da	77.20	38	P	P	20 50 26.6	+0.6
WDC				IAmb	IAmb	20 50 28.1	
	comp=Z,26nm,0.9s						
RRX	Edison Barstow	77.21	46	P	P	20 50 26.5	+0.3
	baz=235						
BELC	Belle Mtn. Jos	77.39	47	P	P	20 50 28.3	+0.9
	baz=236,SNR=14						
CWC	Cottonwood Cre	77.40	44	P	P	20 50 28.3	+0.9
	baz=234						
O03E	Paynes Creek	77.45	39	P	P	20 50 29.4	+1.9
	baz=230						
M02C	Callahan	77.55	37	P	P	20 50 29.2	+1.1
	baz=229						
MPMC	Manual Prospec	77.56	44	P	P	20 50 29.5	+1.0
	baz=234,SNR=25						
BC3	Big Chuckawall	77.57	47	P	P	20 50 29.4	+1.0
	baz=236,SNR=10						
GSC	Goldstone, Bar	77.58	45	P	P	20 50 28.9	+0.5
GSC				pmax	pmax		
	comp=Z,20nm,1.0s						
GSC	Goldstone, Bar	77.58	45	P	P	20 50 28.9	+0.5
GSC				IAmb	IAmb	20 50 30.3	
	comp=Z,20nm,0.9s						
GSC	Goldstone, Bar	77.58	45	P	P	20 50 29.1	+0.7
	baz=235,SNR=11						
MLAC	Mammoth, Mammo	77.62	42	P	P	20 50 29.8	+1.1
	baz=233						
HEC	Hector,Ludlow	77.63	46	P	P	20 50 29.2	+0.6
	baz=235,SNR=8.2						
L02E	Cave Junction	77.63	36	P	P	20 50 29.2	+0.8
	baz=229						
TIN	Tinemaha, Big	77.67	43	P	P	20 50 30.0	+1.1
	baz=234,SNR=8.1						
GLA	Glamis	77.67	48	P	P	20 50 30.1	+1.2
GLA				pmax	pmax		
	comp=Z,28nm,1.1s						
GLA	Glamis	77.67	48	P	P	20 50 30.1	+1.2
GLA				IAmb	IAmb	20 50 31.4	
	comp=Z,28nm,1.1s						
GLA	Glamis	77.67	48	P	P	20 50 30.3	+1.4
	baz=236,SNR=9.2						
YBH	Yreka Blue Hor	77.85	37	P	P	20 50 30.9	+1.2
	comp=Z,13nm,0.8s,baz=51,slow=0.6,SNR=12						
YBH	Yreka Blue Hor	77.85	37	P	P	20 50 30.5	+0.8
YBH				IAmb	IAmb	20 50 32.0	
	comp=Z,20nm,0.9s						
MPK	Martis Peak	77.89	40	P	P	20 50 30.9	+0.6
MPK				IAmb	IAmb	20 50 32.2	
	comp=Z,37nm,1.1s						
QSM	Queen of Sheba	77.92	45	P	P	20 50 30.6	+0.5
QSM				IAmb	IAmb	20 50 32.1	
	comp=Z,34nm,1.1s						
PNTR	Pine Nut	78.03	41	P	P	20 50 31.8	+0.8
PNTR				IAmb	IAmb	20 50 33.0	
	comp=Z,30nm,1.0s						
GMRC	Granite Mounta	78.06	46	P	P	20 50 32.0	+0.8
	baz=236,SNR=10						
IRM	Iron Mountain	78.06	47	P	P	20 50 32.1	+1.0
	baz=236,SNR=17						
VCNR	Virginia City	78.12	41	P	P	20 50 32.2	+0.7
LCH	Last Change Ra	78.15	43	P	P	20 50 32.0	+0.5
LCH				IAmb	IAmb	20 50 33.5	
	comp=Z,21nm,0.9s						
GWY	Greenwater Val	78.18	45	P	P	20 50 30.4	-1.4
YERR	Yerington	78.19	41	P	P	20 50 32.4	+0.6
YERR				IAmb	IAmb	20 50 33.7	
	comp=Z,33nm,1.1s						
GRAC	Grapevine Rang	78.19	44	P	P	20 50 33.1	+1.4
	baz=234						
LHV	Little Huntoon	78.21	42	P	P	20 50 32.6	+1.0
LHV				IAmb	IAmb	20 50 34.1	
	comp=Z,36nm,1.1s						
SMAI	San Martin Ant	78.23	159	P	P	20 50 33.9	+2.5
SMAI				IAmb	IAmb	20 51 00.7	
	comp=Z,29nm,1.3s						
TUQ	Turquoise Moun	78.25	46	P	P	20 50 33.1	+0.9
	baz=235,SNR=9.9						
SHOC	Shoshone, Teco	78.28	45	P	P	20 50 32.8	+0.6
	baz=235,SNR=5.6						
HUMO	Hull Mountain	78.28	36	P	P	20 50 32.9	+0.9
KSRS	Korea Array	78.34	317	P	P	20 50 33.1	+0.7
	comp=Z,14nm,0.9s,baz=135,slow=6.0,SNR=22						
KSRS				LR	LR	21 17 16.6	
	comp=Z,38nm,21.8s,baz=126,slow=30						
HSIG		78.38	53	P	P	20 50 32.9	+0.1
HSIG				IAmb	IAmb	20 50 34.6	
	comp=Z,22nm,0.9s						
M04C	Macdoel	78.38	38	P	P	20 50 33.2	+0.5
	baz=230						
L04D	Klamath Falls	78.40	37	P	P	20 50 33.1	+0.3
	baz=230						
RYN	Ryan	78.42	42	P	P	20 50 33.7	+0.6
NVAR	Mina Array Bea	78.44	42	P	P	20 50 34.1	+0.9
	comp=Z,32nm,1.0s,baz=224,slow=8.9,SNR=51						
NVAR				pP	sP	20 50 58.1	-0.7
	comp=Z,20nm,1.1s,baz=224,slow=8.4,SNR=4.7						
NVAR				LR	LR	21 17 56.7	
	comp=Z,77nm,20.5s,baz=218,slow=30						
NVAR	Mina Array Bea	78.44	42	P	P	20 50 33.6	+0.4
214A	Organ Pipe Nat	78.52	50	P	P	20 50 33.5	-0.1
214A				IAmb	IAmb	20 50 36.0	
	comp=Z,22nm,0.9s						
214A	Organ Pipe Nat	78.52	50	P	P	20 50 34.8	+1.2
	baz=238,SNR=7.6						
NV11	Mina Array Sit	78.53	42	P	P	20 50 34.2	+0.5
NV11				IAmb	IAmb	20 50 35.6	
	comp=Z,38nm,1.1s						
PAHR	Pah Rah Range	78.54	40	P	P	20 50 33.6	0.0
NEE2	Needles Airpor	78.76	47	P	P	20 50 35.6	+0.7
	baz=236						
PDMCI	Parker Dam,Lak	78.84	47	P	P	20 50 36.4	+1.1
	baz=237,SNR=5.6						
TPNV	Topopah Spring	78.89	44	P	P	20 50 36.4	+0.7
TPNV				pmax	pmax		
	comp=Z,14nm,0.8s						
TPNV	Topopah Spring	78.89	44	P	P	20 50 36.4	+0.7
TPH	Tonopah	78.92	43	P	P	20 50 36.7	+0.8
TPH				pmax	pmax		
	comp=Z,119nm,0.9s						
TPH	Tonopah	78.92	43	P	P	20 50 36.7	+0.8
KVN	Kaiserville	78.94	42	P	P	20 50 36.4	+0.4
KVN				pmax	pmax		
	comp=Z,23nm,1.0s						
KVN	Kaiserville	78.94	42	P	P	20 50 36.4	+0.4
J04D	Umpqua Nationa	79.17	36	P	P	20 50 37.5	+0.4
	baz=230						
MOD	Modoc Plateau	79.35	38	P	P	20 50 38.1	0.0
MOD				IAmb	IAmb	20 50 39.9	
	comp=Z,22nm,0.9s						
I04A	Tendick Farm,	79.36	36	P	P	20 50 37.9	0.0
	baz=229						
SHPR	Sheep Range	79.36	45	P	P	20 50 38.6	+0.3
KASI	Kota Agung	79.41	268	P	P	20 50 37.9	-0.9
	comp=Z,48nm,0.8s						
K05A	Summer Lake	79.52	37	P	P	20 50 40.0	+0.9
K05A				IAmb	IAmb	20 50 41.3	
	comp=Z,43nm,1.0s						
H04D	Lebanon	79.66	35	P	P	20 50 39.6	+0.2
	baz=229						
J05D	Fort Rock, OR	79.69	37	P	P	20 50 40.9	+1.0
	baz=230						
BELA	Belgrano 2	79.91	172	P	P	20 50 42.2	+1.8
LWLI	Liwa	79.98	268	P	P	20 50 42.5	+0.4
	comp=Z,63nm,0.8s						
USRK	Ussuriysk Ar.	80.06	324	P	P	20 50 42.5	+0.9
	comp=Z,2.6nm,0.5s,baz=157,slow=5.2,SNR=6.0						
USRK				LR	LR	21 21 36.1	
	comp=Z,42nm,20.7s,baz=125,slow=32						
R11A	Troy Canyon, C	80.13	43	P	P	20 50 42.4	0.0
R11A	Troy Canyon, C	80.13	43	P	P	20 50 43.1	+0.7
	baz=235						
TUC	Tucson	80.17	51	P	P	20 50 43.8	+1.1
TUC				pmax	pmax		
	comp=Z,27nm,1.0s						
TUC	Tucson	80.17	51	P	P	20 50 43.8	+1.1
TUC				IAmb	IAmb	20 50 45.4	
	comp=Z,27nm,1.0s						
TUC	Tucson	80.17	51	P	P	20 50 43.6	+0.9
	baz=239						
PINE	Pine Mountain	80.17	36	P	P	20 50 43.2	+0.7
PINE				IAmb	IAmb	20 50 44.7	
	comp=Z,46nm,0.9s						
BMN	Battle Mountai	80.30	41	P	P	20 50 43.8	+0.5
BMN				pmax	pmax		
	comp=Z,20nm,0.9s						
BMN	Battle Mountai	80.30	41	P	P	20 50 43.8	+0.5
I05D	Terrebonne, OR	80.30	36	P	P	20 50 43.5	+0.5
	baz=230						
WVOR	Wild Horse Val	80.65	39	P	P	20 50 45.7	+0.6
WVOR				pmax	pmax		
	comp=Z,24nm,1.0s						
WVOR	Wild Horse Val	80.65	39	P	P	20 50 45.7	+0.6
WVOR				IAmb	IAmb	20 50 46.9	
	comp=Z,24nm,1.0s						
HOOD	Mount Hood Mea	80.76	35	P	P	20 50 45.6	0.0
HOOD				IAmb	IAmb	20 50 47.1	
	comp=Z,31nm,1.1s						
X16A	Lo Mia Camp, P	80.79	48	P	P	20 50 45.5	-0.6
X16A				IAmb	IAmb	20 50 48.9	
	comp=Z,26nm,1.1s						
319A	Douglas	80.81	52	P	P	20 50 46.7	+0.5
319A				IAmb	IAmb	20 50 49.0	
	comp=Z,42nm,1.0s						
G05D	Wamic, OR	80.89	35	P	P	20 50 46.6	+0.5
	baz=230						
E04D	Cinebar	81.08	34	P	P	20 50 47.9	+0.8
	baz=229						
CCUT	Cedar City	81.14	45	P	P	20 50 49.4	+1.5
KNB	Kanab	81.21	46	P	P	20 50 49.8	+1.6
KNB				pmax	pmax		
	comp=Z,17nm,1.0s						
KNB	Kanab	81.21	46	P	P	20 50 49.8	+1.6
F05D	White Salmon	81.23	35	P	P	20 50 48.2	+0.3
	baz=230						
U15A	North Rim	81.25	46	P	P	20 50 50.0	+1.4
U15A				IAmb	IAmb	20 50 51.3	
	comp=Z,26nm,0.9s						
SPR3	Spring Creek 3	81.30	43	P	P	20 50 49.1	+0.3
J08A	Circle Bar Ran	81.31	38	P	P	20 50 49.3	+0.8
J08A				IAmb	IAmb	20 50 50.9	
	comp=Z,28nm,1.1s						
O19K	Port Alsworth	81.38	10	P	P	20 50 48.1	-0.2
	baz=199						
WUAZ	Wupatki	81.41	48	P	P	20 50 50.2	+1.0
WUAZ	Wupatki	81.41	48	P	P	20 50 50.7	+1.4
	baz=238						
D03D	Eldon	81.46	33	P	P	20 50 49.8	+0.7
	baz=228						
BRSE	Bradley Lake S	81.60	12	P	P	20 50 49.6	0.0
	baz=203						
MDJ	Mudanjiang	81.65	323	P	P	20 50 50.9	+0.8
MDJ				sP	sP	20 51 18.9	+3.4
MDJ				pmax	pmax		
	comp=Z,15nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,450nm,4.2s						
MDJ	Mudanjiang	81.65	323	P	P	20 50 51.1	+0.9
MDJ				IAmb	IAmb	20 50 52.8	
	comp=Z,20nm,0.9s						
ELK	Elko	81.71	41	P	P	20 50 51.5	+0.6
	comp=Z,6.4nm,0.9s,baz=245,slow=5.3,SNR=14						
ELK				pP	sP	20 51 14.5	-2.0
	comp=Z,3.9nm,0.9s,baz=238,slow=8.6,SNR=2.9						
ELK	Elko	81.71	41	P	P	20 50 51.3	+0.5
NJ2	Nanjing	81.73	308	*e*P	P	20 50 52.1	+1.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
PKCU	Pink Cliffs	81.78	46	P	P	20 50 52.2	+0.8
PKCU				IAmb	IAmb	20 50 54.8	
	comp=Z,43nm,1.2s						
D05A	Enumclaw	81.80	33	P	P	20 50 51.8	+0.9
X18A	Snowflake	81.90	49	P	P	20 50 53.1	+1.2
N19K	Bonanza Creek	81.93	10	P	P	20 50 51.2	-0.1
	baz=199						
CBB	Campbell River	82.05	30	P	P	20 50 52.7	+0.6
CBB				IAmb	IAmb	20 50 54.0	
	comp=Z,22nm,1.0s						
F07A	Phinny Hill Vi	82.06	35	P	P	20 50 52.5	+0.2
F07A				IAmb	IAmb	20 50 54.0	
	comp=Z,19nm,0.8s						
MG05	Puerto Natales	82.09	142	P	P	20 50 53.7	+1.2
MG05				IAmb	IAmb	20 51 20.3	
	comp=Z,50nm,1.2s						
MTPU	Mount Pierson	82.19	45	P	P	20 50 55.5	+1.9
G08A	Pilot Rock	82.22	36	P	P	20 50 54.0	+0.7
G08A				IAmb	IAmb	20 50 55.1	
	comp=Z,35nm,0.9s						
BBB	Bella Bella	82.34	27	P	P	20 50 53.9	+0.4
	comp=Z,8.7nm,0.7s,baz=246,slow=4.5,SNR=4.2						
W18A	Petrified Fore	82.35	49	P	P	20 50 54.3	+0.1
	baz=240						
MVU	Marysvale	82.42	45	P	P	20 50 55.3	+0.7
A04D	Lummi Island	82.44	32	P	P	20 50 55.3	+1.2
	baz=228						
B05A	Bryant	82.44	32	P	P	20 50 54.9	+0.7
	baz=229						
MSU	Marysvale	82.44	45	P	P	20 50 55.7	+1.0
MSU	Marysvale	82.44	45	P	P	20 50 55.7	+1.0
MYKOM	Kota Tinggi	82.45	275	P	P	20 50 55.0	0.0
121A	Cookes Peak, D	82.48	52	P	P	20 50 55.7	+0.7
	baz=241						
E07A	Sunnyside	82.52	35	P	P	20 50 55.5	+0.9
E07A				IAmb	IAmb	20 50 56.6	
	comp=Z,37nm,0.9s						
LTY	Liberty	82.53	34	P	P	20 50 54.9	+0.1
LTY				IAmb	IAmb	20 50 56.3	
	comp=Z,24nm,1.1s						
HAWA	Hanford	82.59	35	P	P	20 50 55.5	+0.5
HAWA				IAmb	IAmb	20 50 56.9	
	comp=Z,34nm,1.0s						
C06D	Leavenworth	82.84	33	P	P	20 50 56.8	+0.5
	baz=230						
BMO	Blue Mountains	82.88	37	P	P	20 50 56.9	+0.2
BMO				pmax	pmax		
	comp=Z,19nm,1.1s						
BMO	Blue Mountains	82.88	37	P	P	20 50 56.9	+0.2
MFID	Camas Ranch	82.89	39	P	P	20 50 57.1	+0.3
MFID				IAmb	IAmb	20 50 58.5	
	comp=Z,21nm,1.1s						
E08A	Dider Farm, El	82.90	35	P	P	20 50 57.3	+0.7
E08A				IAmb	IAmb	20 50 58.4	
	comp=Z,19nm,0.8s						
DUG	Dugway, Tooele	82.94	43	P	P	20 50 57.3	+0.1
DUG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DUG	Dugway, Tooele	82.94	43	P	P	20 50 57.3	+0.1
DUG	Dugway, Tooele	82.94	43	P	P	20 50 57.6	+0.4
	baz=237						
M19K	Big River Lodg	82.98	10	P	P	20 50 56.6	0.0
	baz=199						
RC01	Rabbit Creek A	83.04	12	P	P	20 50 57.4	+0.4
	baz=204						
GAMB	Gambell	83.27	1	P	P	20 50 58.6	+0.5
	baz=183						
MAW	Mawson	83.27	199	P	P	20 51 00.2	+1.9
	comp=Z,15nm,0.6s,baz=121,slow=6.3,SNR=31						
MAW				LR	LR	21 26 28.8	
	comp=Z,31nm,20.3s,baz=123,slow=34						
MAW	Mawson	83.27	199	P	P	20 51 00.4	+2.1
	baz=83,SNR=12						
MAW	Mawson	83.27	199	P	P	20 50 59.4	+1.2
D08A	Wollman Farm,	83.33	35	P	P	20 50 59.6	+0.8
D08A				IAmb	IAmb	20 51 00.7	
	comp=Z,39nm,1.0s						
GLI	Glacier Island	83.39	13	P	P	20 50 58.5	-0.3
	baz=206						
KLR	Kul'dur	83.43	328	P	P	20 50 58.8	-0.5
	comp=Z,1.8nm,0.6s,baz=124,slow=11,SNR=3.2						
KLR	Kul'dur	83.43	328	*i* P	P	20 50 58.3	-1.0
KLR				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TMUT	Trail Mountain	83.50	44	P	P	20 51 01.7	+1.4
TMUT				IAmb	IAmb	20 51 03.0	
	comp=Z,29nm,0.8s						
CN2	Changchun	83.56	321	*e*P	P	20 51 00.3	+0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
M22K	Willow	83.58	12	P	P	20 50 59.6	-0.1
	baz=203						
KNK	Knik Glacier	83.59	12	P	P	20 50 59.4	-0.5
KNK				IAmb	IAmb	20 51 00.2	
	comp=Z,16nm,0.9s						
KNK	Knik Glacier	83.59	12	P	P	20 50 59.7	-0.1
	baz=205						
F10A	Beach Ranch, E	83.60	36	P	P	20 51 00.1	-0.2
L20K	Farewell, AK	83.60	10	P	P	20 50 59.3	-0.6
	baz=200						
PMR	Palmer	83.62	12	P	P	20 51 00.2	+0.3
	baz=204						
TTA	Tatalina	83.72	9	P	P	20 51 00.5	0.0
TTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TTA	Tatalina	83.72	9	P	P	20 51 00.5	0.0
TTA	Tatalina	83.72	9	P	P	20 51 01.1	+0.6
	baz=198						
PLID	Pearl Lake	83.77	38	P	P	20 51 01.4	0.0
HLID	Hailey	83.82	39	P	P	20 51 02.5	+0.9
HLID				IAmb	IAmb	20 51 03.8	
	comp=Z,30nm,0.8s						
HLID	Hailey	83.82	39	P	P	20 51 02.5	+0.9
	baz=235						
GHO	Glory Hole Cre	83.83	12	P	P	20 51 00.9	-0.2
GHO				IAmb	IAmb	20 51 02.2	
	comp=Z,16nm,0.7s						
HVU	Hansel Valley	83.83	42	P	P	20 51 02.2	+0.5
HVU				pmax	pmax		
	comp=Z,21nm,0.9s						
HVU	Hansel Valley	83.83	42	P	P	20 51 02.2	+0.5
HVU				IAmb	IAmb	20 51 03.5	
	comp=Z,21nm,0.9s						
SRU	San Rafael Swe	83.86	45	P	P	20 51 02.9	+0.9
SRU				pmax	pmax		
	comp=Z,23nm,0.8s						
SRU	San Rafael Swe	83.86	45	P	P	20 51 02.9	+0.9
SRU				IAmb	IAmb	20 51 04.1	
	comp=Z,23nm,0.8s						
MNTX	Cornudas Mount	83.88	53	P	P	20 51 03.2	+1.1
MNTX				IAmb	IAmb	20 51 04.8	
	comp=Z,41nm,1.2s						
MNTX	Cornudas Mount	83.88	53	P	P	20 51 03.6	+1.5
	baz=242,SNR=5.4						
MA2	Magadan	83.89	343	*ce*P	P	20 51 01.4	0.0
MA2				pmax	pmax		
	comp=Z,14nm,1.7s						
CTU	Camp Tracy	83.89	43	P	P	20 51 01.5	-0.6
CTU				IAmb	IAmb	20 51 03.8	
	comp=Z,16nm,1.0s						
P17A	Butcher Ranch,	83.90	44	P	P	20 51 01.2	-1.0
DIV	Divide	83.91	14	P	P	20 51 01.5	0.0
DIV				IAmb	IAmb	20 51 02.3	
	comp=Z,14nm,0.8s						
B08A	Colville Reser	83.92	34	P	P	20 51 01.6	-0.3
B08A				IAmb	IAmb	20 51 02.9	
	comp=Z,18nm,0.9s						
H03S2	Juan Fernandez	83.94	124	T	T	22 23 39.1	
	baz=251						
H03S1	Juan Fernandez	83.95	124	T	T	22 23 40.2	
	baz=251						
H03S3	Juan Fernandez	83.95	124	T	T	22 23 41.8	
	baz=251						
SML	Sawmill	83.97	12	P	P	20 51 02.8	+1.0
	baz=205						
BMRM	Bremner River	84.03	14	P	P	20 51 03.2	+1.0
	baz=208						
JLU	Jordanelle	84.04	43	P	P	20 51 03.5	+0.6
H03N2	Juan Fernandez	84.06	123	T	T	22 23 43.7	
	baz=257,slow=71,SNR=247						
H03N3	Juan Fernandez	84.07	123	T	T	22 23 46.3	
	baz=257,slow=71,SNR=166						
H03N1	Juan Fernandez	84.08	123	T	T	22 23 43.8	
	baz=257,slow=71,SNR=196						
C09A	Chrisman Ranch	84.13	34	P	P	20 51 03.2	+0.2
C09A				IAmb	IAmb	20 51 04.5	
	comp=Z,21nm,0.9s						
TX31	Lajitas Ar. Si	84.14	56	P	P	20 51 04.7	+1.2
TX32	Lajitas Array	84.14	56	P	P	20 51 04.7	+1.2
TX32				IAmb	IAmb	20 51 06.3	
	comp=Z,34nm,1.3s						
TXAR	Lajitas Array	84.14	56	P	P	20 51 05.0	+1.5
	comp=Z,8.5nm,0.9s,baz=216,slow=6.2,SNR=43						
TXAR				pP	sP	20 51 29.5	+0.3
	comp=Z,7.7nm,1.0s,baz=224,slow=8.5,SNR=5.7						
TXAR				LR	LR	21 19 54.0	
	comp=Z,54nm,21.8s,baz=0.0,slow=29						
TXAR	Lajitas Array	84.14	56	P	P	20 51 04.6	+1.1
CUT	Chulitna	84.15	11	P	P	20 51 02.6	0.0
	baz=203						
KLU	Klutina	84.20	13	P	P	20 51 01.5	-1.5
KLU	Klutina	84.20	13	P	P	20 51 02.4	-0.6
	baz=207						
SCM	Sheep Creek Mo	84.20	13	P	P	20 51 02.8	-0.2
	baz=206						
PNL	Peninsula	84.24	17	P	P	20 51 03.7	+0.5
	baz=213						

P18A	Preston Nutter	84.31	45	P	P	20 51 03.5	-0.9
JRMM	Jerantut	84.45	276	P	P	20 51 06.0	+0.7
N25K	Chitina, Valde	84.59	14	P	P	20 51 05.0	0.0
	baz=208						
ANMO	Albuquerque	84.61	50	P	P	20 51 07.1	+1.2
	comp=Z,29nm,1.0s,baz=201,slow=6.3,SNR=35						
ANMO				pP	sP	20 51 31.6	0.0
	comp=Z,24nm,1.1s,baz=209,slow=4.2,SNR=6.6						
ANMO	Albuquerque	84.61	50	P	P	20 51 07.2	+1.4
	baz=242						
M24K	Tolsona, Glenn	84.69	13	P	P	20 51 05.9	+0.5
	baz=207						
MCARA	McCarthy VSAT	84.77	15	P	P	20 51 04.5	-1.3
	baz=210						
CAST	Castle Rocks	84.78	10	P	P	20 51 03.5	-2.3
CAST	Castle Rocks	84.78	10	P	P	20 51 04.5	-1.3
	baz=201						
WAT6	Susitna Watana	84.80	12	P	P	20 51 05.9	-0.2
	baz=205						
CTG	Chitna Glacier	84.82	16	P	P	20 51 06.1	-0.1
	baz=211						
BARN	Barnard Glacie	84.82	15	P	P	20 51 06.4	+0.1
BARN				IAmb	IAmb	20 51 07.6	
	comp=Z,16nm,0.8s						
CTGM	Chitina Glacie	84.82	16	P	P	20 51 06.8	+0.6
CTGM				IAmb	IAmb	20 51 07.4	
	comp=Z,16nm,0.9s						
TIA	Tai'an	85.00	311	*e*P	P	20 51 07.8	+0.2
TIA				pmax	pmax		
	comp=Z,19nm,1.2s						
NEW	Newport	85.03	35	P	P	20 51 07.5	0.0
	comp=Z,7.4nm,0.8s,baz=251,slow=5.9,SNR=8.3						
NEW				pP	sP	20 51 32.7	-0.1
	comp=Z,4.4nm,0.8s,baz=221,slow=9.0,SNR=3.2						
NEW	Newport	85.03	35	P	P	20 51 07.4	0.0
NEW	Newport	85.03	35	P	P	20 51 07.3	-0.2
	baz=233						
TRF	Thorofare Moun	85.11	11	P	P	20 51 07.2	-0.4
TRF				IAmb	IAmb	20 51 08.7	
	comp=Z,18nm,0.8s						
TRF	Thorofare Moun	85.11	11	P	P	20 51 06.7	-1.0
	baz=203						
J20K	Nowinta River	85.17	9	P	P	20 51 07.7	0.0
HARP	HAARP	85.17	13	P	P	20 51 07.6	-0.2
	baz=208						
CHUM	Lake Minchumin	85.17	10	P	P	20 51 06.7	-1.1
	baz=201						
TNA	Tin City	85.19	3	P	P	20 51 07.5	-0.2
	baz=186						
RDMU	Red Mountain	85.24	44	P	P	20 51 09.3	+0.4
RDMU				IAmb	IAmb	20 51 10.7	
	comp=Z,14nm,0.9s						
SKAG	Skagway	85.26	19	P	P	20 51 09.7	+1.5
SKAG				IAmb	IAmb	20 51 10.7	
	comp=Z,16nm,1.1s						
SKAG	Skagway	85.26	19	P	P	20 51 09.0	+0.8
	baz=217						
DHY	Denali Highway	85.31	12	P	P	20 51 08.2	-0.4
DHY	Denali Highway	85.31	12	P	P	20 51 09.1	+0.4
	baz=206						
RND	Reindeer	85.33	11	P	P	20 51 08.6	-0.1
RND				pmax	pmax		
	comp=Z,21nm,0.7s						
RND	Reindeer	85.33	11	P	P	20 51 08.6	-0.1
RND				IAmb	IAmb	20 51 09.6	
	comp=Z,21nm,0.7s						
AHID	Auburn Hatcher	85.41	41	P	P	20 51 09.6	-0.1
AHID				IAmb	IAmb	20 51 11.6	
	comp=Z,24nm,1.1s						
MCMT	McKenzie Canyo	85.46	39	P	P	20 51 10.4	+0.4
PAX	Paxson	85.61	13	P	P	20 51 09.5	-0.6
	baz=208						
MCK	McKinley	85.61	11	P	P	20 51 09.7	-0.3
MCK				pmax	pmax		
	comp=Z,24nm,0.9s						
MCK	McKinley	85.61	11	P	P	20 51 09.7	-0.3
MCK				IAmb	IAmb	20 51 23.2	
	comp=Z,24nm,0.9s						
MCK	McKinley	85.61	11	P	P	20 51 09.7	-0.3
	baz=204,SNR=10						
M26K	Nabesna, AK	85.66	14	P	P	20 51 10.6	+0.3
M26K				IAmb	IAmb	20 51 11.7	
	comp=Z,17nm,1.1s						
S22A	4UR Ranch, Cre	85.68	47	P	P	20 51 12.6	+1.3
	baz=241,SNR=6.6						
LL02	Futaleuf	85.73	134	P	P	20 51 12.3	+1.0
LL02				IAmb	IAmb	20 51 14.8	
	comp=Z,20nm,1.3s						
YUK3	Moose Creek	85.74	16	P	P	20 51 10.6	-0.3
	baz=212						
REDW	Red Top Meadow	85.88	41	P	P	20 51 12.3	+0.3
REDW				IAmb	IAmb	20 51 13.9	
	comp=Z,15nm,1.1s						
M27K	Edge Creek, AK	85.89	15	P	P	20 51 12.2	+0.6
M27K				IAmb	IAmb	20 51 15.0	
	comp=Z,20nm,0.9s						
O20A	White River Ci	85.89	45	P	P	20 51 12.6	+0.4
	baz=240						
DLMT	Dillon	85.90	39	P	P	20 51 12.2	+0.2
DLMT				IAmb	IAmb	20 51 14.0	
	comp=Z,19nm,1.1s						
FXWY	Fox Creek	85.92	41	P	P	20 51 12.7	+0.4
MSO	Missoula	85.94	37	P	P	20 51 11.7	-0.4
MSO	Missoula	85.94	37	P	P	20 51 11.1	-1.0
	baz=236						
SNOW	Snow King Moun	85.99	41	P	P	20 51 12.2	-0.4
SNOW				IAmb	IAmb	20 51 14.6	
	comp=Z,16nm,0.8s						
IPM	Ipoh	86.01	276	P	P	20 51 14.0	+0.8
IPM	Ipoh	86.01	276	P	P	20 51 12.7	-0.4
IPM	Ipoh	86.01	276	P	P	20 51 13.6	+0.5
L26K	Log Cabin Wild	86.12	14	P	P	20 51 12.5	0.0
L26K	Log Cabin Wild	86.12	14	P	P	20 51 13.0	+0.5
	baz=209						
LOHW	Long Hollow	86.16	41	P	P	20 51 13.3	-0.1
BVCY	Beaver Creek	86.18	15	P	P	20 51 13.0	+0.2
	baz=212						
DLBC	Dease Lake	86.21	22	P	P	20 51 13.2	+0.1
	comp=Z,7.2nm,0.8s,baz=216,slow=7.0,SNR=8.6						
LRM	Limekiln Ridge	86.24	38	P	P	20 51 13.7	-0.1
SMCO	Snowmass	86.28	46	P	P	20 51 14.6	+0.2
SMCO				IAmb	IAmb	20 51 17.8	
	comp=Z,11nm,0.8s						
FLWY	Flagg Ranch	86.35	41	P	P	20 51 13.9	-0.4
WHY	Whitehorse	86.36	18	P	P	20 51 14.1	+0.2
	baz=217						
BW06	Boulder Array	86.38	42	P	P	20 51 14.2	-0.4
	baz=239						
PDAR	Pinedale Array	86.38	42	P	P	20 51 14.6	0.0
	comp=Z,1.3nm,0.5s,baz=48,slow=2.2,SNR=6.1						
PDAR				pP	sP	20 51 39.6	-0.5
	comp=Z,4.1nm,0.7s,baz=222,slow=3.0,SNR=5.7						
PDAR				PKKPbc	PKKPbc	21 09 12.2	-1.1
	comp=Z,0.5nm,0.7s,baz=79,slow=4.2,SNR=4.8						
PDAR				LR	LR	21 21 13.6	
	comp=Z,74nm,20.2s,baz=320,slow=30						
PDAR	Pinedale Array	86.38	42	P	P	20 51 12.4	-2.1
NEA2	Nenana	86.38	11	P	P	20 51 12.7	-1.0
NEA2	Nenana	86.38	11	P	P	20 51 13.6	-0.1
	baz=204						
RIDG	Independent Ri	86.43	13	P	P	20 51 13.9	-0.1
	baz=208						
I21K	Tanana	86.44	9	P	P	20 51 14.0	0.0
I21K				IAmb	IAmb	20 51 42.3	
	comp=Z,20nm,1.1s						
WRH	Wood River Hil	86.44	11	P	P	20 51 13.4	-0.6
YHL	Hebgen Lake	86.47	40	P	P	20 51 15.5	+0.5
YHL				IAmb	IAmb	20 51 17.6	
	comp=Z,32nm,1.3s						
MLY	Manley	86.50	10	P	P	20 51 13.3	-1.1
MLY	Manley	86.50	10	P	P	20 51 13.9	-0.5
	baz=202						
YMR	Madison River	86.50	40	P	P	20 51 15.7	+0.6
YMR				IAmb	IAmb	20 51 44.2	
	comp=Z,12nm,0.8s						
L27K	Beaver Creek,	86.50	14	P	P	20 51 13.2	-1.3
DOT	Dot Lake	86.51	13	P	P	20 51 14.2	-0.3
DOT				IAmb	IAmb	20 51 15.4	
	comp=Z,16nm,0.8s						
BOZ	Bozeman (W)	86.60	39	P	P	20 51 16.0	+0.6
BOZ				pmax	pmax		
	comp=Z,22nm,1.4s						
BOZ	Bozeman (W)	86.60	39	P	P	20 51 16.0	+0.6
BOZ				IAmb	IAmb	20 51 44.0	
	comp=Z,22nm,1.4s						
BOZ	Bozeman (W)	86.60	39	P	P	20 51 16.0	+0.6
	baz=237						
HDA	Harding Lake	86.60	12	P	P	20 51 14.3	-0.6
HDA				IAmb	IAmb	20 51 42.4	
	comp=Z,18nm,0.8s						
SDCO	Great Sand Dun	86.61	48	P	P	20 51 16.1	+0.3
	baz=242						
YHH	Holmes Hill	86.63	40	P	P	20 51 16.5	+0.6
P33M	Teslin, Yukon	86.64	20	P	P	20 51 15.4	+0.2
	baz=219						
KULM	Kulim	86.64	277	P	P	20 51 17.0	+0.8
KULM	Kulim	86.64	277	P	P	20 51 16.2	0.0
KULM				IAmb	IAmb	20 51 17.4	
	comp=Z,11nm,0.8s						
CCB	Clear Creek Bu	86.66	11	P	P	20 51 14.5	-0.6
CCB				IAmb	IAmb	20 51 15.5	
	comp=Z,15nm,0.7s						
N31M	Braeburn, Yuko	86.76	18	P	P	20 51 15.8	+0.1
	baz=216						
H21K	Melozitna Rive	86.76	9	P	P	20 51 16.0	+0.4
H21K				IAmb	IAmb	20 51 45.2	
	comp=Z,20nm,1.4s						
SCRK	Sand Creek	86.82	13	P	P	20 51 15.5	-0.5
SCRK	Sand Creek	86.82	13	P	P	20 51 16.1	+0.1
	baz=209,SNR=7.4						
I23K	Minto, Yukon-K	86.84	10	P	P	20 51 16.5	+0.6
I23K	Minto, Yukon-K	86.84	10	P	P	20 51 16.2	+0.3
	baz=204,SNR=5.2						
TCOL	CIGO, UAF Yank	86.85	11	P	P	20 51 15.4	-0.6
TCOL	CIGO, UAF Yank	86.85	11	P	P	20 51 15.7	-0.3
	baz=205,SNR=5.5						
COLA	College	86.85	11	*i* P	P	20 51 15.5	-0.5
COLA				pmax	pmax		
	comp=Z,21nm,0.8s						
COLA	College	86.85	11	P	P	20 51 15.4	-0.5
COLA	College	86.85	11	P	P	20 51 15.6	-0.5
	baz=205						
MDM	Murphy Dome	86.86	11	P	P	20 51 15.3	-0.8
MDM				IAmb	IAmb	20 51 44.7	
	comp=Z,27nm,1.2s						
MSTX	Muleshoe	86.87	52	P	P	20 51 17.6	+0.6
MSTX	Muleshoe	86.87	52	P	P	20 51 17.2	+0.2
	baz=244						
IMAR	Indian Mountai	86.94	8	P	P	20 51 16.3	-0.1
ILAR	Eielson Array	86.94	12	LR	LR	21 22 28.7	
	comp=Z,55nm,19.5s,baz=156,slow=30						
HRY	Holter Researc	87.09	38	P	P	20 51 17.3	-0.4
T25A	Trinidad	87.10	49	P	P	20 51 18.4	+0.2
	baz=243						
833A	Chaparral WMA,	87.10	59	P	P	20 51 18.4	+0.3
	baz=246						
POKR	Poker Plat Res	87.15	11	P	P	20 51 15.0	-2.5
WALA	Waterton Lakes	87.22	35	P	P	20 51 18.4	0.0
WALA				IAmb	IAmb	20 51 19.8	
	comp=Z,13nm,0.8s						
RPSI	Rantau Prapat	87.38	274	P	P	20 51 19.1	-0.7
LC01	Cunco	87.40	130	P	P	20 51 20.8	+1.3
LC01				IAmb	IAmb	20 51 21.7	
	comp=Z,12nm,0.8s						
PSI	Prapat	87.42	274	P	P	20 51 19.1	-1.1
	comp=Z,5.1nm,0.7s,baz=16,slow=8.3,SNR=7.5						
Q24A	Divide	87.42	47	P	P	20 51 20.3	+0.5
	baz=242						
BJI	Beijing	87.48	314	P	P	20 51 20.5	+0.9
BJI				S	S	21 01 58.4	+3.0
BJI				pmax	pmax		
	comp=Z,15nm,1.0s						
PLCA	Paso Flores	87.60	133	P	P	20 51 22.0	+1.5
	comp=Z,4.6nm,0.9s,baz=240,slow=5.9,SNR=4.5						
PLCA				LR	LR	21 22 46.4	
	comp=Z,50nm,19.6s,baz=230,slow=30						
JCT	Junction City	87.66	57	P	P	20 51 20.7	-0.1
JCT				pmax	pmax		
	comp=Z,11nm,0.9s						
JCT	Junction City	87.66	57	P	P	20 51 20.7	-0.1
JCT				IAmb	IAmb	20 51 22.3	
	comp=Z,11nm,0.9s						
JCT	Junction City	87.66	57	P	P	20 51 20.8	+0.1
	baz=246						
N23A	Red Feather La	87.80	45	P	P	20 51 21.6	+0.1
	baz=242						
PRP	Porcupine Dome	87.87	12	P	P	20 51 21.2	+0.1
	baz=207						
WTLY	Watson Lake, Y	87.88	21	P	P	20 51 21.5	+0.3
	baz=223						
DAWY	Dawson	87.94	15	P	P	20 51 21.7	+0.4
DAWY				IAmb	IAmb	20 51 22.9	
	comp=Z,11nm,0.8s						
DAWY	Dawson	87.94	15	P	P	20 51 21.8	+0.4
	baz=213						
FARO	Faro, Yukon	88.05	18	P	P	20 51 22.1	+0.2
	baz=218						
AMTX	Amarillo	88.08	52	P	P	20 51 22.2	-0.5
AMTX				IAmb	IAmb	20 51 50.5	
	comp=Z,22nm,1.1s						
AMTX	Amarillo	88.08	52	P	P	20 51 22.8	0.0
	baz=244						
SYO	Syowa Base	88.10	192	⇓*e*P	P	20 51 21.0	-1.2
ENH	Enshi	88.11	303	P	P	20 51 23.2	+0.2
EGAK	Eagle	88.13	14	P	P	20 51 22.1	0.0
GSI	Gunungsitoli	88.19	272	P	P	20 51 24.0	+0.3
	comp=Z,29nm,1.4s						
GSI	Gunungsitoli	88.19	272	P	P	20 51 23.9	+0.3
GSI				IAmb	IAmb	20 51 25.2	
	comp=Z,18nm,0.8s						
GSI	Gunungsitoli	88.19	272	P	P	20 51 23.3	-0.3
ZEA	Zeya	88.45	330	*e*P	P	20 51 24.0	+0.1
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
TROLL	Troll, Antarti	88.47	179	P	P	20 51 25.2	+1.1
COLD	Coldfoot	88.62	9	P	P	20 51 25.8	+1.4
	baz=203						
BILL	Bilibino	88.62	353	*i* P	P	20 51 23.5	-0.9
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BILL	Bilibino	88.62	353	P	P	20 51 23.8	-0.6
SNAA	Sanae	88.66	177	P	P	20 51 26.0	+1.1
SNAA	Sanae	88.66	177	P	P	20 51 25.4	+0.5
	comp=Z,4.1nm,0.7s,baz=188,slow=1.8,SNR=14						
SNAA	Sanae	88.66	177	*ce*P	P	20 51 24.6	-0.3
SNAA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SNAA	Sanae	88.66	177	P	P	20 51 26.1	+1.1
ABTX	Abilene, Hawle	88.66	55	P	P	20 51 25.8	+0.3
ABTX	Abilene, Hawle	88.66	55	P	P	20 51 26.3	+0.8
	baz=246						
VNA3	Neumayer Olymp	88.68	175	P	P	20 51 25.9	+1.0
SRIT	Nakonsritamara	88.75	280	P	P	20 51 26.8	+0.5
GYA	Guiyang	88.90	299	⇑P	P	20 51 29.8	+3.0
GYA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MMPY	Sheldon Lake,	88.97	19	P	P	20 51 26.7	+0.5
	baz=220						
EGMT	Eagleton	88.98	38	P	P	20 51 27.1	+0.4
	baz=239						
VNA2	Neumayer--Watz	89.15	176	P	P	20 51 28.5	+1.4
	baz=193,slow=3.6						
KSCO	Kaye Shedlock’	89.20	48	P	P	20 51 29.2	+1.2
	baz=244						
VNA1	Neumayer--Stat	89.36	176	P	P	20 51 29.7	+1.6
MT01	Popeta	89.86	126	P	P	20 51 32.5	+1.2
TOLK	Toolik Lake Re	90.01	9	P	P	20 51 27.6	-3.4
	baz=204						
XAN	Xi'an	90.08	306	P	P	20 51 33.1	+1.0
XAN				pmax	pmax		
	comp=Z,41nm,1.0s						
EPYK	Eagle Plains	90.48	14	P	P	20 51 33.7	+0.5
	baz=215						
RSSD	Black Hills	90.55	43	P	P	20 51 34.1	-0.2
	baz=243						
MTO3	Montecristo	90.61	75	P	P	20 51 35.9	+0.7
MTO3				IAmb	IAmb	20 51 37.2	
	comp=Z,12nm,1.1s						
U32A	Winter Ranch,	90.68	51		P	20 51 35.4	+0.5
X34A	Smith Ranch, M	90.84	53		P	20 51 35.0	-0.6
HHC	Hu-ho-hao-te	90.99	313	*e*P	P	20 51 37.6	+1.3
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				pmax	pmax		
	comp=Z,82nm,4.1s						
LOOK	Love County	91.10	54		P	20 51 37.6	+0.8
CBKS	Cedar Bluff	91.15	49	P	P	20 51 36.6	-0.4
	baz=246						
FNO	Franklin	91.43	53		P	20 51 38.8	+0.5
OK032	Salt Plains WL	91.44	51		P	20 51 37.8	-0.5
KAN14	Manchester OK	91.68	51		P	20 51 39.8	+0.4
KAN14				IAmb	IAmb	20 51 41.0	
	comp=Z,15nm,1.2s						
KMI	Kunming	91.69	296	⇑P	P	20 51 41.5	+1.5
KMI				pP	sP	20 52 00.5	-4.9
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
R32A	Long Quarter,	91.72	50	P	P	20 51 40.1	+0.5
W35A	Tecumseh	91.78	53		P	20 51 41.2	+1.3
KAN17	Caldwell West	91.86	51		P	20 51 41.7	+1.4
WRGLY	Wrigley	91.89	21	P	P	20 51 40.2	+0.5
	baz=227						
KAN13	South Haven SW	92.06	51		P	20 51 42.1	+0.9
OK030	Cody Creek RV	92.15	53	P	P	20 51 41.9	+0.2
BLOK	Blackwell	92.16	52		P	20 51 39.5	-2.1
NATX	Nacogdoches	92.21	57	P	P	20 51 42.5	+0.5
	baz=248						
OK034	N. Norfolk Rd.	92.24	53		P	20 51 42.7	+0.7
QUOK	Quay	92.30	52		P	20 51 41.2	-1.1
DGMT	Dagmar	92.44	39	P	P	20 51 42.5	-0.2
DGMT	Dagmar	92.44	39	P	P	20 51 43.3	+0.6
	baz=243						
YAK	Yakutsk	92.55	337	P	P	20 51 41.4	-1.4
	comp=Z,3.8nm,0.4s,baz=171,slow=2.1,SNR=4.2						
YAK	Yakutsk	92.55	337	*ce*P	P	20 51 41.4	-1.4
YAK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
YAK	Yakutsk	92.55	337	IAmb	IAmb	20 51 42.2	
	comp=Z,8.5nm,0.7s						
CM31	Chiang Mai Arr	92.70	289	P	P	20 51 44.5	-0.1
CM31				IAmb	IAmb	20 51 47.0	
	comp=Z,9.0nm,0.8s						
CMAR	Chiang Mai Arr	92.70	289	P	P	20 51 44.5	-0.1
	comp=Z,8.9nm,0.8s,baz=119,slow=2.7,SNR=74						
CMAR				PP	PP	20 55 30.8	+3.3
	comp=Z,1.0nm,0.7s,baz=123,slow=6.8,SNR=5.1						
CMAR				LR	LR	21 33 49.6	
	comp=Z,10.0nm,19.9s,baz=176,slow=36						
X37A	Clayton	92.71	54		P	20 51 44.5	+0.3
T35A	Sooner Cattle	92.73	52	P	P	20 51 44.1	-0.2
INK	Inuvik	92.78	14	P	P	20 51 43.4	-0.4
	comp=Z,6.4nm,0.9s,baz=205,slow=6.1,SNR=9.3						
INK	Inuvik	92.78	14	P	P	20 51 43.2	-0.5
INK				IAmb	IAmb	20 51 46.4	
	comp=Z,8.1nm,1.0s						
INK	Inuvik	92.78	14	P	P	20 51 43.7	-0.1
	baz=218						
CHTO	Chiang Mai	92.82	289	P	P	20 51 45.2	+0.1
CHTO				pmax	pmax		
	comp=Z,11nm,0.7s						
CHTO	Chiang Mai	92.82	289	P	P	20 51 45.2	+0.1
CHTO				IAmb	IAmb	20 51 47.1	
	comp=Z,11nm,0.7s						
CHTO	Chiang Mai	92.82	289	P	P	20 51 44.6	-0.5
TUL1	Leonard	92.89	53	P	P	20 51 45.4	+0.3
TUL1	Leonard	92.89	53	P	P	20 51 45.7	+0.6
	baz=248						
CD2	Chengdu	92.92	302	P	P	20 51 45.3	-0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BGNE	Belgrade	93.31	47	P	P	20 51 47.2	+0.3
	baz=247						
K31A	O'Neill	93.38	46	P	P	20 51 49.1	+1.9
KSU1	Kansas State U	93.50	50	P	P	20 51 48.3	+0.5
	baz=247						
N33A	J Bar K, Exete	93.53	48	P	P	20 51 48.5	+0.5
SUSD	Miller	93.98	44	P	P	20 51 50.9	+1.0
	baz=246						
MIAR	Mount Ida	94.07	55	P	P	20 51 50.2	-0.3
	baz=249						
U38A	Gravette	94.14	53	P	P	20 51 51.1	+0.3
U38A				IAmb	IAmb	20 51 52.2	
	comp=Z,12nm,0.9s						
W39A	Magazine	94.15	54	P	P	20 51 51.4	+0.6
W39A				IAmb	IAmb	20 51 53.5	
	comp=Z,16nm,1.1s						
W39A	Magazine	94.15	54	P	P	20 51 51.8	+0.9
	baz=249						
HHAR	Hobbs	94.42	53	P	P	20 51 52.7	+0.6
HHAR				IAmb	IAmb	20 51 54.7	
	comp=Z,9.9nm,1.0s						
YKA	Yellowknife Ar	94.59	24	P	P	20 51 51.6	-0.5
	comp=Z,2.7nm,0.7s,baz=239,slow=4.5,SNR=9.3						
YKA				pP	sP	20 52 17.6	-0.2
	comp=Z,2.8nm,0.9s,baz=241,slow=4.3,SNR=4.4						
YKA				LR	LR	21 29 58.8	
	comp=Z,37nm,18.1s,baz=0.0,slow=32						
LZH	Lanzhou	94.70	307	⇑P	P	20 51 54.8	+1.2
LZH				sP	sP	20 52 22.1	+3.0
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
MDND	Maddock	94.94	41	P	P	20 51 54.7	+0.5
	baz=246						
ECSD	EROS Data Cent	95.26	45	P	P	20 51 56.1	+0.3
ECSD	EROS Data Cent	95.26	45	P	P	20 51 55.9	+0.1
	baz=248						
U40A	Yellville	95.27	53	P	P	20 51 56.1	+0.2
U40A				IAmb	IAmb	20 51 57.9	
	comp=Z,15nm,1.1s						
U40A	Yellville	95.27	53	P	P	20 51 56.2	+0.2
	baz=250						
S39A	Bolivar	95.38	52	P	P	20 51 56.8	+0.3
S39A				IAmb	IAmb	20 51 57.7	
	comp=Z,11nm,0.9s						
MGMO	Mountain Grove	95.98	53	P	P	20 51 59.3	0.0
F33A	5 Mile Ranch,	96.26	44	P	P	20 52 00.1	-0.1
R40A	Maddies Statio	96.37	52	P	P	20 52 01.0	+0.1
R40A				IAmb	IAmb	20 52 02.8	
	comp=Z,18nm,1.1s						
ULN	Ulaanbaatar	96.76	318	*i* P	P	20 52 01.0	-1.7
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CCM	Cathedral Cave	97.05	52	P	P	20 52 04.3	+0.3
	baz=251						
SONM	Songino Array	97.16	318	P	P	20 52 04.3	-0.1
	comp=Z,0.9nm,0.7s,baz=126,slow=5.0,SNR=6.8						
SONM				LR	LR	21 30 27.6	
	comp=Z,28nm,20.2s,baz=150,slow=32						
SONM	Songino Array	97.16	318	IAmb	IAmb	20 52 07.1	
	comp=Z,1.5nm,0.9s						
A36M	Sachs Harbour	97.41	14	P	Pdif	20 52 05.5	+0.6
A36M				IAmb	IAmb	20 52 07.3	
	comp=Z,7.9nm,0.8s						
A36M	Sachs Harbour	97.41	14	P	Pdif	20 52 05.6	+0.7
	baz=226						
F36A	Milaca	98.07	44	P	Pdif	20 52 08.8	+0.4
F36A				IAmb	IAmb	20 52 09.9	
	comp=Z,13nm,0.9s						
ULM	Lac du Bonnet	98.13	40	LR	LR	21 29 33.5	
	comp=Z,98nm,18.2s,baz=276,slow=31						
TIXI	Tiksi	98.80	345	*ce*P	P	20 52 09.6	-1.4
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA	Gaotai	98.82	309	*e*P	P	20 52 11.8	-0.3
GTA				sP	sP	20 52 38.9	+1.2
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,52nm,4.7s						
GTA				LR	LR		
	comp=Z,100nm,14.5s						
GTA				LR	LR		
	comp=Z,92nm,13.4s						
GTA				LR	LR		
	comp=Z,89nm,14.9s						
LPAZ	La Paz	99.56	111	LR	LR	21 30 14.0	
	comp=Z,50nm,18.6s,baz=236,slow=31						
ZALV	Zalesovo Beam	111.78	321	PKiKP	PKiKP	20 57 04.9	-1.3
	comp=Z,1.8nm,0.6s,baz=160,slow=1.1,SNR=10.0						
MKAR	Makanchi Array	112.85	313	Pdiff	Pdif	20 53 13.6	-0.6
	comp=Z,0.4nm,0.6s,baz=73,slow=5.0,SNR=2.6						
MKAR				PKiKP	PKiKP	20 57 07.3	-1.2
	comp=Z,2.1nm,0.6s,baz=219,slow=1.5,SNR=25						
KURK	Kurchatov	115.46	318	*c i*PKIKP	PKiKP	20 57 13.1	-0.2
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURK	Kurchatov	115.46	318		PKiKP	20 57 12.1	-1.3
KSH	Kashi	116.91	305	PKP	PKiKP	20 57 17.3	+0.6
TKM2	Tokmak 2	117.37	309	P	PKPdf	20 57 17.0	-0.6
	SNR=6.7						
CHMS	Chumysh	118.00	309	P	PKPdf	20 57 18.1	-0.5
	SNR=6.1						
UCH	Uchtor	118.15	308	P	PKPdf	20 57 19.3	-0.1
	SNR=6.7						
AAK	Ala-Archa	118.17	308	PKIKP	PKPdf	20 57 18.0	-1.1
AAK	Ala-Archa	118.17	308		PKPdf	20 57 18.0	-1.1

USP	Ospenovka	118.19	309	P	PKPdf	20 57 18.4	-0.5
	SNR=6.4						
AML	Almayashu	118.76	308	P	PKPdf	20 57 20.2	-0.3
	SNR=5.6						
BRVK	Borovoye	120.47	321	c iPKIKP	PKPdf	20 57 22.7	-0.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRVK	Borovoye	120.47	321	PKPdf	PKPdf	20 57 22.0	-1.0
BTK	Batken	120.90	305	PKIKP	PKPdf	20 57 23.3	-1.0
BTK	Batken	120.90	305		PKPdf	20 57 23.3	-1.0
KKAR	Karatay Array	121.10	309	PKIKP	PKPdf	20 57 23.2	-1.3
KKAR	Karatay Array	121.10	309	PKPdf	PKPdf	20 57 23.2	-1.3
GAR	Garm	121.27	304		PKPdf	20 57 24.8	-0.3
VOI	Vohitsoka	121.97	227		PKPdf	20 57 27.1	+0.1
KBL	Kabul	122.15	299	PKIKP	PKPdf	20 57 26.8	-0.2
KBL	Kabul	122.15	299	PKPdf	PKPdf	20 57 26.8	-0.2
CHGR	Chuyangaron	122.17	304	PKPdf	PKPdf	20 57 26.3	-0.5
SVE	Sverdlovsk	125.04	326	ePKIKP	PKPdf	20 57 31.5	-0.1
SVE				pmax	pmax		
	comp=Z,14nm,1.1s						
ARU	Arti	126.25	326	c iPKIKP	PKPdf	20 57 34.0	+0.1
ARU				pmax	pmax		
	comp=Z,14nm,1.0s						
ARU	Arti	126.25	326	PKPdf	PKPdf	20 57 33.4	-0.5
ABKAR	Akbulak array	127.57	318	PKPdf	PKPdf	20 57 36.0	-0.7
HRA	Herat	127.76	299	PKPdf	PKPdf	20 57 37.0	-0.8
BOSA	Boshof	128.17	203	PKP	PKPdf	20 57 38.9	+0.2
	comp=Z,2.1nm,0.7s,baz=180,slow=1.2,SNR=7.2						
ARCES	ARCESS Array B	128.68	351	PKP	PKPdf	20 57 38.0	-0.2
	comp=Z,3.2nm,0.5s,baz=359,slow=1.2,SNR=32						
ARCES				pPKP	sPKPdf	20 58 03.1	-1.2
	comp=Z,3.5nm,0.7s,baz=26,slow=3.1,SNR=1.9						
KIRV	Kirov	129.75	332	c iPKIKP	PKiKP	20 57 41.5	+0.3
GEYT	Alibeck	130.88	303	PKP	PKPdf	20 57 43.1	-0.3
	comp=Z,3.5nm,0.7s,baz=58,slow=25,SNR=4.1						
FINES	FINESS Array B	135.83	346	PKhKP	PKPpre	20 57 47.4	
	comp=Z,3.2nm,0.5s,baz=40,slow=3.2,SNR=9.4						
FINES				PKP	PKPdf	20 57 50.8	-1.0
	comp=Z,3.2nm,0.5s,baz=31,slow=3.2,SNR=4.0						
OBN	Obninsk	137.46	334	i PKIKP	PKPdf	20 57 55.4	+0.4
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LSZ	Lusaka	138.50	215	PKHKP	PKPpre	20 57 49.4	
LSZ	Lusaka	138.50	215		PKPpre	20 57 49.4	
NOA	NORSAR Array B	138.52	356	PKP	PKPdf	20 57 57.8	+0.8
	comp=Z,0.6nm,0.7s,baz=339,slow=3.8,SNR=3.7						
KBZ	Khabaz	140.49	316	PKP	PKPdf	20 58 00.8	-0.1
	comp=Z,1.7nm,0.9s,baz=246,slow=16,SNR=2.6						
KIV	Kislovodsk	140.53	316	ePKIKP	PKPdf	20 58 02.4	+1.2
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIBK	Kibwezi	140.99	239		PKPpre	20 57 56.6	
NACGM	Naroch	141.25	340	i PKP	PKPdf	20 57 57.8	-4.2
KMBO	Kilima Mbogo	142.33	240	PKhKP	PKPpre	20 58 01.6	
	comp=Z,2.6nm,0.6s,baz=66,slow=12,SNR=5.8						
KMBO	Kilima Mbogo	142.33	240	PKIKP	PKPdf	20 58 03.5	-2.1
KMBO	Kilima Mbogo	142.33	240	PKPdf	PKPdf	20 58 03.5	-2.1
RAYN	Ar Rayn	142.42	283	PKHKP	PKPpre	20 58 00.0	
RAYN	Ar Rayn	142.42	283		PKPpre	20 58 00.0	
GURO	Guroymak-BITLI	143.07	308	PKPdf	PKPdf	20 58 02.9	-3.1
SIRT	Sirnak	143.11	307		PKPab	20 58 02.3	+0.7
KOPT	Kop Dagi	143.64	312		PKPbc	20 58 05.0	+0.2
AKASG	Malin Array Be	143.72	334	PKhKP	PKPpre	20 58 03.0	
	comp=Z,4.6nm,0.7s,baz=39,slow=4.8,SNR=13						
AKASG				SKPbc	SKPbc	21 01 36.7	-2.7
	comp=Z,0.6nm,0.6s,baz=45,slow=3.2,SNR=4.1						
AKASG	Malin Array Be	143.72	334		PKPpre	20 58 01.9	
MARD	Mardin	144.42	307	PKPdf	PKPbc	20 58 06.9	-0.1
RGN	Rugen	144.70	352	ePKPbc	PKPdf	20 58 09.9	+1.8
	baz=7.1,slow=2.5						
SIM	Simferopol'	145.26	323	c iPKIKP	PKPbc	20 58 08.6	-0.6
BSEG	Bad Segeberg	145.64	355	ePKPbc	PKPbc	20 58 10.2	+0.1
	baz=7.1,slow=2.5						
BEL	Belsk	145.71	343	ePKPab	PKPab	20 58 10.8	0.0
SORM	Soroca	146.03	332	⇑P	PKPbc	20 58 11.4	-0.1
SORM	Soroca	146.03	332	⇑PKP2	PKPbc	20 58 11.4	-0.1
LODK	Lodwar	146.39	245		PKPdf	20 58 12.7	+0.3
LVV	L'vov	146.43	338	ePKP2	PKPdf	20 58 11.9	+0.7
MILM	Milestii Mici	146.72	330	⇓P	PKPbc	20 58 12.9	-0.7
MILM	Milestii Mici	146.72	330	⇓PKP2	PKPbc	20 58 12.9	-0.7
KWP	Kalwaria Pacla	147.05	339	ePKPab	PKPbc	20 58 14.5	0.0
KWP	Kalwaria Pacla	147.05	339	PKP2	PKPbc	20 58 14.0	-0.5
KWP	Kalwaria Pacla	147.05	339		PKPbc	20 58 14.0	-0.5
GAZ	Gaziantep	147.13	309		PKPdf	20 58 13.3	+0.4
FLTG	Flechtingen	147.13	353	ePKPbc	PKPbc	20 58 14.5	0.0
	baz=7.1,slow=2.5						
BNN	Bunyan	147.40	312	PKPab	PKPbc	20 58 16.2	+0.3
VASR	Vaslui	147.40	331	⇓P	PKPbc	20 58 16.1	+0.6
OJC	Ojcow	147.44	342	ePKPab	PKPbc	20 58 15.3	-0.2
OJC	Ojcow	147.44	342	PKP2	PKPbc	20 58 14.8	-0.7
OJC	Ojcow	147.44	342		PKPbc	20 58 14.8	-0.7
CLZ	Clausthal	147.70	354	ePKPbc	PKPbc	20 58 16.5	+0.2
	baz=7.1,slow=2.5						
ILGA	Ilgaz	147.73	317		PKPbc	20 58 17.6	+0.7
KSP	Ksiaz	147.74	347	ePKPab	PKPbc	20 58 16.7	+0.4
BUR08	Bucovina Ar. S	147.76	334	PKPdf	PKPdf	20 58 14.0	+0.3
BURAR	Bucovina Array	147.78	334	⇓P	PKPbc	20 58 17.6	+0.9
BURAR	Bucovina Array	147.78	334	⇓PKP2	PKPbc	20 58 17.6	+0.9
BURAR	Bucovina Array	147.78	334	PKPdf	PKPdf	20 58 12.6	-1.1
KOLS	Kolonicke sedl	147.79	339	ePKP	PKPbc	20 58 17.1	+0.6
MBAR	Mbarara	147.81	234	c iPKP2	PKPbc	20 58 19.0	+1.2
MBAR	Mbarara	147.81	234		PKPbc	20 58 18.4	+0.6
VLDR	Vladesti	147.85	329	⇑P	PKPbc	20 58 17.6	+0.9
CLL	Collm	147.90	351	⇓iPKP2	PKPbc	20 58 16.8	+0.1
CLL				pmax	pmax		
	comp=Z,28nm,0.6s						
CLL				pmax	pmax		
	comp=Z,18nm,0.8s						
CLL	Collm	147.90	351	⇓iPKPbc	PKPbc	20 58 16.8	+0.1
	comp=Z,28nm,0.6s						
CLL				i PKPab	PKiKP	20 58 18.9	+0.4
	comp=Z,18nm,0.8s						
CLL				epPKPbc	pPKPdf	20 58 30.0	-2.9
CLL				i		20 58 43.8	
CLL	Collm	147.90	351	ePKPbc	PKPbc	20 58 16.8	+0.1
	baz=7.1,slow=2.5						
CLL	Collm	147.90	351		PKPbc	20 58 16.3	-0.4
VARL	Varlezi	147.92	330	⇑P	PKPbc	20 58 17.9	+1.0
NIE	Niedzica	148.01	341	ePKPab	PKiKP	20 58 18.3	-0.6
GHRR		148.01	330	⇓P	PKPbc	20 58 18.0	+0.9
SCTR	Scanteiesti	148.01	329	⇑P	PKiKP	20 58 18.2	-0.7
TESR	Tescani	148.02	332	⇑P	PKPbc	20 58 16.9	-0.3
OSTC	Ostas	148.03	347	⇑ePKP	PKPbc	20 58 17.6	+0.5
CHVC	Chvalec	148.03	347	⇑ePKP	PKPbc	20 58 17.6	+0.5
UZH	Uzhgorod	148.04	338	ePKP2	PKPbc	20 58 16.0	-1.1
CRVS	Cervenica-Dubn	148.09	340	ePKP	PKPbc	20 58 16.9	-0.4
BRG	Berggiesshubel	148.17	349	ePKPbc	PKPbc	20 58 17.7	+0.2
	baz=7.1,slow=2.5						
BRG	Berggiesshubel	148.17	349	ePKP	PKPbc	20 58 17.9	+0.5
BRG				Amp		20 58 18.5	
	comp=Z,12nm,0.6s						
BRG	Berggiesshubel	148.17	349	P	PKiKP	20 58 19.9	+0.7
BRG				Amp		20 58 20.6	
	comp=Z,12nm,0.7s						
BRG				pPKP	sPKPab	20 58 44.9	-1.1
BRG				Amp		20 58 49.0	
	comp=Z,7.2nm,0.7s						
SLCR	Slobozia Conac	148.18	329	⇑P	PKiKP	20 58 18.6	-0.7
DPC	Dobruska-Polom	148.20	346	ePKP2	PKPbc	20 58 18.1	+0.5
DPC	Dobruska-Polom	148.20	346	⇑ePKP	PKPbc	20 58 18.1	+0.5
DPC				ex	x	20 58 44.9	
IZVR	Izvoarele	148.22	329	⇓P	PKPbc	20 58 18.1	+0.4
FBE	Freiberg	148.22	350	ePKPbc	PKPbc	20 58 18.1	+0.6
	baz=7.1,slow=2.5						
OKC	Ostrava-Krasne	148.23	344	ePKP2	PKPbc	20 58 18.2	+0.6
OKC	Ostrava-Krasne	148.23	344	⇑ePKP	PKPbc	20 58 18.2	+0.6
CFR	Carcaliu	148.30	328	⇑P	PKPbc	20 58 17.8	-0.1
CFR	Carcaliu	148.30	328	⇑PKP2	PKPbc	20 58 17.8	-0.1
KRLC	Kraliky	148.35	346	ePKP2	PKPbc	20 58 18.2	+0.2
KRLC	Kraliky	148.35	346	⇑ePKP	PKPbc	20 58 18.2	+0.2
KRLC				ex	x	20 58 45.6	
TRPA	Tarpa	148.38	338	⇑P	PKPbc	20 58 18.6	+0.5
PVCC	Panska Ves	148.39	349	ePKP2	PKPbc	20 58 18.7	+0.7
PVCC	Panska Ves	148.39	349	⇑ePKP	PKPbc	20 58 18.7	+0.7
PVCC				ex	x	20 58 45.8	
TPGR	Topolog	148.39	328	⇓P	PKPbc	20 58 18.7	+0.5
BMR	Baia Mare	148.41	336	⇓P	PKPbc	20 58 17.6	-0.6
MORC	Moravsky Berou	148.44	345	⇑P	PKPbc	20 58 18.1	-0.2
MORC	Moravsky Berou	148.44	345	ePKP	PKPbc	20 58 18.4	+0.1
MORC	Moravsky Berou	148.44	345	⇑PKP2	PKPbc	20 58 18.1	-0.2
MORC	Moravsky Berou	148.44	345		PKPbc	20 58 17.5	-0.7
VRI	Vrincioaia	148.47	331	⇓P	PKPbc	20 58 18.9	+0.5
VRI	Vrincioaia	148.47	331	⇓PKP2	PKPbc	20 58 18.9	+0.5
BR131	Keskin Array S	148.47	315	PKIKP	PKPdf	20 58 16.6	+1.4
BR131	Keskin Array S	148.47	315		PKPdf	20 58 16.6	+1.4
BRTR	Keskin Array B	148.47	315	PKPbc	PKPbc	20 58 18.2	-0.5
	comp=Z,17nm,0.8s,baz=225,slow=0.2,SNR=25						
BRTR	Keskin Array B	148.47	315	PKPdf	PKPdf	20 58 14.1	-1.1
LANS	Liptovska Anna	148.49	342	ePKP	PKPbc	20 58 19.0	+0.6
PLOR	Plostina	148.52	331	⇑P	PKPbc	20 58 18.2	-0.3
PLOR				⇓P	PKPbc	20 58 19.0	+0.5
PLOR	Plostina	148.52	331	⇓PKP2	PKPbc	20 58 19.0	+0.5
ARCR	ARCALIA	148.55	335	⇑P	PKiKP	20 58 19.5	-0.6
TIRR	Tirgusor	148.67	327	⇑P	PKPbc	20 58 19.4	+0.5
COVR	Voineasa-Covas	148.73	331	⇓P	PKPbc	20 58 19.2	+0.1
MOX	Moxa	148.74	352	ePKPbc	PKPbc	20 58 19.0	0.0
	baz=7.1,slow=2.5						
HARR	Harsova	148.75	328	⇑P	PKPbc	20 58 19.7	+0.6
UBBA	Unterbreizbach	148.75	354	ePKPbc	PKPbc	20 58 18.8	0.0
	baz=7.1,slow=2.5						
TLBR	Topalu	148.80	328	⇑P	PKPbc	20 58 19.4	+0.1
PLN	Plauen	148.82	351	ePKPbc	PKPbc	20 58 19.4	+0.2
	baz=7.1,slow=2.5						
WERD	Werda	148.84	351	ePKPbc	PKPbc	20 58 19.6	+0.4
	baz=7.1,slow=2.5						
TANN	Tannenbergstha	148.85	351	ePKPbc	PKPbc	20 58 19.6	+0.3
	baz=7.1,slow=2.5						
PRU	Pruhonice	148.91	348	ePKP2	PKPbc	20 58 19.5	+0.1
PRU	Pruhonice	148.91	348	⇑ePKP	PKPbc	20 58 19.5	+0.1
GUNZ	Gunzen	148.92	351	ePKPbc	PKPbc	20 58 19.8	+0.4
	baz=7.1,slow=2.5						
WERN	Wernitzgruen	148.99	351	ePKPbc	PKPbc	20 58 20.0	+0.4
	baz=7.1,slow=2.5						
DOPR	Dopca	149.00	332	⇑P	PKPbc	20 58 20.2	+0.4
NEHR	Nehoiu	149.00	330	⇑P	PKPbc	20 58 19.7	-0.1
NKC	Novy Kostel	149.03	351	ePKP2	PKPbc	20 58 20.2	+0.5
NKC	Novy Kostel	149.03	351	⇑ePKP	PKPbc	20 58 20.2	+0.5
VRAC	Vranov	149.11	345	⇑P	PKPbc	20 58 19.5	-0.4
VRAC	Vranov	149.11	345	ePKP	PKPbc	20 58 20.1	+0.2
VRAC	Vranov	149.11	345	⇑PKP2	PKPbc	20 58 19.5	-0.4
MLR	Muntele Rosu	149.11	331	⇑P	PKPbc	20 58 20.5	+0.3
MLR	Muntele Rosu	149.11	331	⇑PKP2	PKPbc	20 58 20.5	+0.3
MLR	Muntele Rosu	149.11	331		PKPbc	20 58 19.8	-0.5
ISR	Istrita	149.12	330	⇑P	PKPbc	20 58 20.2	+0.1
ISR	Istrita	149.12	330	⇑PKP2	PKPbc	20 58 20.2	+0.1
CJR	Cluj-Napoca	149.16	335	⇓P	PKiKP	20 58 21.4	0.0
CJR	Cluj-Napoca	149.16	335	⇓PKP2	PKiKP	20 58 21.4	0.0
MEM	Membach	149.19	359	dPKPab	PKiKP	20 58 22.4	+1.1
BTNL	Ternell	149.21	359	dPKiKP	PKPbc	20 58 20.1	-0.1
BSTI	Sart Tilman	149.22	360	dPKiKP	PKPbc	20 58 20.2	+0.1
BSTI				dPKPab	PKiKP	20 58 22.9	+1.6
JAVC	Velka Javorina	149.26	344	ePKP	PKiKP	20 58 21.7	+0.2
VYHS	Vyhne	149.27	342	ePKP	PKPbc	20 58 20.9	+0.6
KOLL	Kolacno	149.31	343	ePKP	PKPbc	20 58 21.1	+0.7
MANZ	Manzenberg	149.32	351	ePKPbc	PKPbc	20 58 20.8	+0.4
	baz=7.1,slow=2.5						
BCLA	Clavier	149.38	360	dPKPab	PKPab	20 58 24.5	-0.9
KRUC	Moravsky	149.39	345	ePKP	PKPbc	20 58 20.8	+0.2
SECR		149.40	330	⇓P	PKPbc	20 58 21.0	+0.2
DRGR		149.44	336	⇑P	PKPbc	20 58 21.2	+0.3
DRGR		149.44	336	⇑PKP2	PKPbc	20 58 21.2	+0.3
BHOU	Houvegnez	149.44	359	dPKiKP	PKiKP	20 58 21.6	-0.3
PSZ	Piszkesteto	149.46	340	⇓P	PKPbc	20 58 20.8	-0.1
PSZ	Piszkesteto	149.46	340	⇓PKP2	PKPbc	20 58 20.8	-0.1
PSZ	Piszkesteto	149.46	340		PKPbc	20 58 20.3	-0.6
TNS	Taunus Mts	149.47	356	ePKPbc	PKPbc	20 58 21.1	+0.3
	baz=7.1,slow=2.5						
BMRD	Maredsous	149.50	1	dPKiKP	PKPbc	20 58 20.9	+0.1
ROTZ	Rotzenmuhle	149.52	351	ePKPbc	PKPbc	20 58 21.2	+0.3
	baz=7.1,slow=2.5						
VOIR		149.56	332	⇓P	PKiKP	20 58 22.0	-0.3
VOIR		149.56	332	⇓PKP2	PKiKP	20 58 22.0	-0.3
MDUB	Mudurnu	149.64	319		PKPbc	20 58 21.3	-0.4
RCHB	Rochefort	149.65	360	dPKiKP	PKPbc	20 58 20.9	-0.3
RCHB				dPKPab	PKPab	20 58 24.5	-2.0
DOU	Dourbes	149.71	1	dPKiKP	PKPbc	20 58 21.2	-0.1
GRA1	Grafenberg Arr	149.73	352		PKPdf	20 58 17.4	+0.7
GRF	Grafenberg Arr	149.73	352	PKHKP	PKPpre	20 58 17.4	
GRF	Grafenberg Arr	149.73	352	ePKPbc	PKPbc	20 58 21.8	+0.4
	baz=7.1,slow=2.5						
GRF				epPKPbc	sPKPab	20 58 52.2	-0.2
GRFO	Grafenberg	149.73	352	PKHKP	PKPpre	20 58 17.6	
GRFO	Grafenberg	149.73	352		PKPdf	20 58 17.6	+1.0
ARR	Arges	149.80	332	⇑P	PKiKP	20 58 23.1	+0.3
MODS	Modra-Piesok	149.81	344	ePKP	PKPbc	20 58 21.7	0.0
BSZH	Besenyszg	149.88	339	⇓P	PKPbc	20 58 22.4	+0.5
KHC	Kasperske Hory	149.91	349	ePKHKP	PKPpre	20 58 17.5	
KHC	Kasperske Hory	149.91	349	ePKPDF	PKPdf	20 58 17.5	+0.5
KHC				⇑ePKP	PKPbc	20 58 22.0	+0.1
KHC				ex	x	20 58 48.8	
KHC	Kasperske Hory	149.91	349		PKPbc	20 58 21.6	-0.3
CKRC	Cesky Krumlov	150.07	348	⇑ePKP	PKiKP	20 58 23.6	+0.4
WLF	Walferdange	150.13	359	dPKiKP	PKPbc	20 58 22.5	+0.1
WLF	Walferdange	150.13	359	PKIKP	PKPbc	20 58 21.9	-0.5
WLF	Walferdange	150.13	359	ePKPbc	PKPbc	20 58 22.2	-0.2
	baz=7.1,slow=2.5						
WLF	Walferdange	150.13	359		PKPbc	20 58 21.9	-0.5
GEC2	GERESS Array S	150.16	349	ePKPbc	PKPbc	20 58 22.7	+0.1
	baz=7.1,slow=2.5						
GEC2	GERESS Array S	150.16	349		PKPbc	20 58 21.9	-0.8
GERES	GERESS Array B	150.16	349	PKP	PKPdf	20 58 17.8	+0.2
	comp=Z,5.7nm,0.7s,baz=356,slow=2.0,SNR=13						
GERES				PKPbc	PKPbc	20 58 22.7	+0.1
	comp=Z,5.7nm,0.7s,baz=32,slow=2.6,SNR=38						
GERES				pPKPbc	sPKPbc	20 58 48.0	-0.4
	comp=Z,2.6nm,0.6s,baz=33,slow=2.5,SNR=4.2						
GERES	GERESS Array B	150.16	349		PKPdf	20 58 17.0	-0.6
GERES				PKPbc	PKPbc	20 58 22.0	-0.6
SIRR	Siria	150.28	337	⇓P	PKPbc	20 58 23.3	+0.4
HUMR	Humele	150.29	331	⇑P	PKPbc	20 58 22.1	-0.8
BORA	Eskisehir	150.45	318		PKPbc	20 58 23.5	0.0
GZR	Gura Zlata	150.56	334	⇓P	PKPbc	20 58 22.9	-0.7
GZR	Gura Zlata	150.56	334	⇓PKIKP	PKPbc	20 58 22.9	-0.7
CONA	Conrad Observa	150.57	345	eP	PKPbc	20 58 23.9	+0.3
	comp=Z,8.7nm,0.7s,SNR=8.1						
BZS	Buzias	150.84	336	⇑P	PKPbc	20 58 24.5	+0.3
BZS	Buzias	150.84	336	⇑PKIKP	PKPbc	20 58 24.5	+0.3
CSS	Mathiatis	150.89	307		PKPbc	20 58 24.6	-0.1
MOA	Molln	151.00	347	eP	PKPbc	20 58 24.0	-0.5
	comp=Z,6.9nm,0.6s,SNR=5.9						
HERR	Herculane	151.13	334	⇓P	PKPbc	20 58 24.6	-0.3
FUR	Furstenfeldbru	151.22	352	ePKPbc	PKPbc	20 58 25.3	+0.3
	baz=7.1,slow=2.5						
BANR	Banloc	151.22	336	⇑P	PKiKP	20 58 26.2	+0.6
BFO	Black Forest	151.36	356	PKIKP	PKPbc	20 58 25.4	0.0
BFO	Black Forest	151.36	356	ePKPbc	PKPbc	20 58 25.5	0.0
	baz=7.1,slow=2.5						
BFO	Black Forest	151.36	356		PKPbc	20 58 25.4	0.0
MORH	Mrgy, Hungar	151.37	340	⇓P	PKPbc	20 58 25.2	-0.2
RJOB	Jochberg	151.39	349	ePKPbc	PKPbc	20 58 25.4	-0.1
	baz=7.1,slow=2.5						
UBR	Ueberruh	151.84	353	ePKPbc	PKPbc	20 58 26.1	-0.4
	baz=7.1,slow=2.5						
FRGS	Fruska Gora	151.90	338	⇓P	PKPbc	20 58 26.7	0.0
FRGS	Fruska Gora	151.90	338	eP	PKPbc	20 58 26.8	+0.1
KBA	Koelnbreinsper	151.93	348	eP	PKPbc	20 58 26.2	-0.7
	comp=Z,8.2nm,0.6s						
SOKA	Soboth	151.94	346	eP	PKPbc	20 58 26.2	-0.6
	comp=Z,7.5nm,0.7s						
RETA	Reutte	151.95	352	i P	PKPbc	20 58 26.9	0.0
	comp=Z,5.1nm,0.7s						
PERS	Pernice	151.96	345	i PKPbc	PKPbc	20 58 26.2	-0.6
WATA	Walderalm	151.98	351	eP	PKPbc	20 58 26.4	-0.5
	comp=Z,9.2nm,0.6s						
MOTA	Moosalm	152.04	351	i P	PKPbc	20 58 26.7	-0.4
	comp=Z,12nm,1.0s,SNR=5.1						
WTTA	Wattenberg	152.04	351	i P	PKPbc	20 58 26.9	-0.3
	comp=Z,22nm,0.5s,SNR=18						
ZAGS	Zajecar	152.07	333	eP	PKPbc	20 58 25.8	-1.3
SVIS	Svilajnac	152.12	335	eP	PKPdf	20 58 22.7	+2.2
SQTA	Sankt Quirin	152.15	351	i P	PKPbc	20 58 26.9	-0.4
	comp=Z,12nm,0.7s						
OBKA	Obir	152.21	346	eP	PKPbc	20 58 26.5	-1.0
	comp=Z,3.5nm,0.6s						
DAVA	Damuels	152.25	353	i P	PKPbc	20 58 27.7	0.0
	comp=Z,10nm,0.9s						
MYKA	Terra Mystica	152.29	347	i P	PKPbc	20 58 26.6	-1.0
	comp=Z,10nm,0.6s,SNR=6.0						
ZAPS	Zavoj	152.33	332	eP	PKPbc	20 58 27.6	-0.2
ABTA	Abfaltersbach	152.40	349	i P	PKPbc	20 58 26.9	-1.0
	comp=Z,15nm,0.6s,SNR=7.1						
FETA	Feichten	152.41	352	i P	PKPbc	20 58 27.8	-0.2
	comp=Z,9.5nm,0.7s						
BOVS	Bovan	152.44	333	⇑P	PKPbc	20 58 27.4	-0.5
TRUS	Trudelj	152.48	336	eP	PKPbc	20 58 27.6	-0.4
ZOU	Zoufplan	152.50	348	PKPdf	PKPdf	20 58 19.4	-1.8
ELL	Elmali	152.53	313	PKIKP	PKPbc	20 58 28.1	-0.4
ELL	Elmali	152.53	313		PKPbc	20 58 28.1	-0.4
VTS	Vitosha	152.57	330	⇓P	PKPbc	20 58 28.5	0.0
VTS	Vitosha	152.57	330	⇓PKIKP	PKPbc	20 58 28.5	0.0
VTS	Vitosha	152.57	330		PKPbc	20 58 28.7	+0.2
GRUS	Gruza	152.64	335	eP	PKPbc	20 58 27.9	-0.5
LJU	Ljubljana	152.66	346	i PKPbc	PKPbc	20 58 28.1	-0.3
CRNS	Crni Vrh	152.68	346	i PKPbc	PKPbc	20 58 27.8	-0.7
DIVS	Divibare	152.74	336		PKPbc	20 58 27.5	-1.2
DIVS	Divibare	152.74	336	eP	PKPbc	20 58 28.0	-0.7
STAL	STALIGIAL	152.83	349		PKPbc	20 58 28.0	-0.7
AKAS	Kas	153.00	313		PKPbc	20 58 28.7	-0.9
BOSS	Bosilegrad	153.01	331	eP	PKPbc	20 58 28.5	-0.8
SELS	Selova	153.03	334	eP	PKPbc	20 58 28.6	-0.7
BARS	Barje	153.06	332	eP	PKPdf	20 58 25.5	+3.5
BARS	Barje	153.06	332	eP	PKPbc	20 58 28.7	-0.6
IVAS	Ivanjica	153.12	335	eP	PKPbc	20 58 28.9	-0.6
BBLS	Lazići	153.16	337	eP	PKPbc	20 58 26.7	-2.9
CTI	Castel Tesino	153.22	350	PKIKP	PKPbc	20 58 26.7	-3.1
CTI	Castel Tesino	153.22	350		PKPbc	20 58 26.7	-3.1
SENIN	Lac Senin/Sane	153.39	357		PKPbc	20 58 29.6	-0.6
FNA	Florina	154.87	330	PKIKP	PKPbc	20 58 32.2	-1.2
FNA	Florina	154.87	330		PKPbc	20 58 32.2	-1.2
DBIC	Dimbokro	163.75	142	PKP	PKPdf	20 58 35.2	-0.4
	comp=Z,3.5nm,1.0s,baz=176,slow=4.9,SNR=5.0						
DBIC				PKPab	PKPab	20 59 28.7	+0.9
	comp=Z,4.7nm,1.0s,baz=184,slow=6.0,SNR=5.3						
DBIC	Dimbokro	163.75	142		PKPab	20 59 28.5	+0.6
TORD	Torodi Ar. Bea	172.64	152	PKP	PKPdf	20 58 40.6	-1.0
	comp=Z,1.9nm,0.8s,baz=325,slow=1.4,SNR=10						
TORD				pPKP	sPKPdf	20 59 07.7	-0.3
	comp=Z,1.6nm,0.8s,baz=319,slow=1.3,SNR=5.3						
TORD				PKPab	PKPab	21 00 09.4	+2.4
	comp=Z,2.2nm,0.8s,baz=219,slow=3.5,SNR=7.9						
TORD				pPKPab	sPKPab	21 00 33.7	+0.6
	comp=Z,2.2nm,0.8s,baz=223,slow=3.0,SNR=5.0						
TORD				PP	PP	21 03 59.6	+2.2
	comp=Z,0.7nm,1.0s,baz=194,slow=4.6,SNR=2.4						
TORD	Torodi Ar. Bea	172.64	152		PKPdf	20 58 40.4	-1.2

SNET ***16*** *20:40:24.2±3.1, 11°.75N×86°.91W, h15^{km}, ML4.4*

UCR ***16*** *20:40:25.2±2.2, 11°.68N×86°.96W, h25^{km}±23^{km}, ML4.2, MW4.8, mb4.7(NEIC)*

INET ***16*** *20:40:25.3, 11°.59N×87°.00W, h26^{km}, MW4.6*

IDC ***16*** *20:40:26.4±3.0, 11°.90N×86°.62W, h52^{km}±27^{km}, mb4.2/23, mb1 4.4/24, mb1mx4.1/49, mbtmp4.4/24, ML4.2/1, MS3.6/15, Ms1 3.7/15, ms1mx3.5/33, Error ellipse: s-maj=22.5km s-min=10.4km az=53.0*

NEIC ***16*** *20:40:26.5±1.7, 11°.65N±0°.05×86°.90W±0°.06, h52^{km}±7^{km}, mb4.7/230, Error ellipse: s-maj=8.4km s-min=6.6km az=57.0*

ISC 16 20:40:26.2±0.9**, 11°.66N**±0°.05×**86°.93W**±0°.05**, h58**^{km}±8^{km}**, n452,** σ1§00/467**, mb4.7**/128**, MS3.6**/14**, 4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGN	Cerro Negro	0.86	15		Pn	20 40 41.8	-0.7
CRIN	San Cristobal	1.04	354		Pn	20 40 44.3	-0.5
BOAB	BOACO BROADBAN	1.47	58		Pn	20 40 49.9	-0.5
MATN	Matagalpa	1.60	38		Pn	20 40 51.3	-1.0
HZTE	Horizontes, Gu	1.62	126		Pn	20 40 52.0	-0.5
GBS3	Finca Las Img	1.69	121	i P	Pn	20 40 52.1	-1.4
LAPC	Finca la Perla	1.72	121	i P	Pn	20 40 52.3	-1.5
LAPC				i S	Sn	20 41 16.7	+1.9
ACON	Acoyapa	1.75	80		Pn	20 40 53.5	-0.8
BUAI	Buenos Aires	1.75	116	⇓iP	Pn	20 40 53.5	-0.8
BUAI				i S	Sn	20 41 17.9	+2.3
CNCH	Conchagua	1.83	331	eP	Pn	20 40 55.3	-0.2
CNCH				eS	Sn	20 41 19.2	+1.6
CNCH	Conchagua	1.83	331	eP	Pn	20 40 55.3	-0.2
CNCH				eS	Sn	20 41 19.2	+1.6
LCND	La Caada	1.89	330	eP	Pn	20 40 55.8	-0.3
LCND				eS	Sn	20 41 19.2	+0.4
LCND				IAML		20 41 25.5	
	comp=Z,5μm,0.3s						
LCND	La Caada	1.89	330	eP	Pn	20 40 55.8	-0.3
LCND				eS	Sn	20 41 19.2	+0.4
LCND				IAML		20 41 25.5	
	comp=Z,5μm,0.3s						
LIM1	Limonal	1.91	120	i P	Pn	20 40 55.7	-0.7
ORTG	Ortega, Santa	1.94	132		Pn	20 40 56.4	-0.5
HORNC	Hornillas	1.96	119	i P	Pn	20 40 56.8	-0.5
CUI	Cuipilapa	2.00	120	⇓iP	Pn	20 40 57.3	-0.4
JUCU	Jucuar¡n	2.04	321	eP	Pn	20 40 57.2	-1.0
JUCU				eS	Sn	20 41 21.3	-1.3
JUCU				IAML		20 41 26.6	
	comp=Z,3μm,0.4s						
JUCU	Jucuar¡n	2.04	321	eP	Pn	20 40 57.2	-1.0
JUCU				eS	Sn	20 41 21.3	-1.3
JUCU				IAML		20 41 26.6	
	comp=Z,3μm,0.4s						
DUNO	Dulce Nombre,	2.12	138		Pn	20 40 58.0	-1.2
ACAL	Aguas Claras	2.12	119	⇓iP	Pn	20 40 59.4	0.0
PTEN	Parque Tenorio	2.13	116	⇓iP	Pn	20 40 59.2	-0.2
PACA	Pacayal	2.25	323	eP	Pn	20 41 01.7	+0.5
PACA	Pacayal	2.25	323	eP	Pn	20 41 01.7	+0.5
JTS	Las Juntas de	2.37	125	Pn	Pn	20 41 02.5	-0.3
TGUH	Tegucigalpa,Un	2.40	352		Pn	20 41 03.9	+0.6
TGUH				Sn	Sn	20 41 32.4	+0.8
ESPN	Las Esperanzas	2.63	78		Pn	20 41 06.0	-0.2
COVE	Coope Vega, Sa	2.65	110		Pn	20 41 05.5	-1.1
CAO2	Cobano, Puntar	2.66	137		Pn	20 41 05.4	-1.2
SCLA	Alcaldia de Sa	2.68	319	eP	Pn	20 41 07.2	+0.3
SCLA				eS	Sn	20 41 38.6	+0.3
SCLA	Alcaldia de Sa	2.68	319	eP	Pn	20 41 07.2	+0.3
SCLA				eS	Sn	20 41 38.6	+0.3
SJTE	Alcalda de S	2.80	314	eP	Pn	20 41 08.2	-0.4
SJTE				IAML		20 41 44.4	
	comp=Z,1μm,0.8s						
SJTE	Alcalda de S	2.80	314	eP	Pn	20 41 08.2	-0.4
SJTE				eS	Sn	20 41 39.4	-2.0
SJTE				IAML		20 41 44.4	
	comp=Z,1μm,0.8s						
PAVA	Las Pavas	2.83	316	eP	Pn	20 41 09.2	+0.2
PAVA	Las Pavas	2.83	316	eP	Pn	20 41 09.2	+0.2
LFRS	El Faro	2.85	313	eP	Pn	20 41 08.9	-0.4
LFRS	El Faro	2.85	313	eP	Pn	20 41 08.9	-0.4
SNET	Serv Nac Est T	3.01	312	Pn	Pn	20 41 12.0	+0.4
JAYA	Jayaque - finc	3.15	309	eP	Pn	20 41 12.9	-0.6
JAYA				IAML		20 41 54.8	
	comp=Z,1μm,0.2s						
JAYA	Jayaque - finc	3.15	309	eP	Pn	20 41 12.9	-0.6
JAYA				eS	Sn	20 41 47.5	-2.6
JAYA				IAML		20 41 54.8	
	comp=Z,1μm,0.2s						
HDC	Heredia	3.22	121		Pn	20 41 13.0	-1.4
CVTR	Volcan Turrial	3.52	117		Pn	20 41 18.6	-0.2
RIMA	Rio Macho	3.56	122		Pn	20 41 19.3	+0.2
MTO3	Montecristo	3.60	319		Pn	20 41 20.0	+0.2
ESQI	Esquipulas	3.71	321		Pn	20 41 21.9	+0.7
EDDO	Dominical	3.85	128	eP	Pn	20 41 23.2	+0.2
PEZE	Perez Zeledon,	3.92	125		Pn	20 41 24.4	+0.4
SRBA	San Rafael, Bu	4.26	124	Pn	Pn	20 41 29.6	+0.9
EDBA	Buenos Aires	4.37	124	eP	Pn	20 41 31.5	+1.4
RIOS	Rincon, Osa	4.47	131		Pn	20 41 29.5	-2.0
CDITO	Canoas	5.04	127	Pn	Pn	20 41 38.6	-0.7
BRU2	Volcan	5.05	124		Pn	20 41 41.4	+1.8
RTAL	Retalhuleu	5.44	302	Pn	Pn	20 41 45.6	+0.9
PRVC	Isla de Provid	5.70	72	Pn	Pn	20 41 49.2	+0.9
PETF	Flores	5.95	332		Pn	20 41 53.3	+1.6
CCIG	Comitan	6.83	313	Pn	Pn	20 42 04.4	+0.5
BCIP	Isla Barro Col	7.41	109	Pn	Pn	20 42 10.7	-1.0
CMIG	Matias Romero	9.40	306	P	Pn	20 42 40.5	+1.4
	comp=Z,2.0nm,0.3s,baz=137,slow=9.3,SNR=18						
CMIG				S	Sn	20 44 22.2	-1.2
	comp=Z,0.1nm,0.3s,baz=309,slow=22,SNR=0.9						
SJCC	San Jacinto, C	11.68	98	Pn	Pn	20 43 10.4	+0.2
ZARC	Zaragoza, Cauc	12.61	108	Pn	Pn	20 43 22.9	+0.1
TLIG	Tlapa	12.69	299		Pn	20 43 24.7	+0.6
ROSC	El Rosal	14.20	117	LR	LR	20 49 19.7	
	comp=Z,229nm,21.2s,baz=270,slow=38						
SDV	Santo Domingo	16.27	98	Pn	Pn	20 44 08.1	-3.2
BAUV	El Baul	18.78	96	P	P	20 44 39.0	-1.8
352A	Blakely	19.81	5	P	P	20 44 52.4	+0.5
352A				IAmb	IAmb	20 44 56.0	
	comp=Z,43nm,0.7s						
TIGA	Tifton	19.92	8	P	P	20 44 53.3	+0.2
TIGA	Tifton	19.92	8	P	Pn	20 44 55.3	0.0
	baz=189						

HKT	Hockley	19.99	337		Pn	20 44 55.3	-0.7
344A	Westbrook Farm	20.01	350	P	P	20 44 53.8	-0.3
344A				IAmb	IAmb	20 45 01.8	
	comp=Z,40nm,0.6s						
833A	Chaparral WMA,	20.27	327	P	P	20 44 57.7	+0.8
	baz=142,SNR=14						
BIRV	Birongo	20.31	91	P	P	20 44 57.2	-0.4
BIRV				IAmb	IAmb	20 45 21.5	
	comp=Z,43nm,1.4s						
152A	Waverly Hall	21.01	5	P	P	20 45 06.3	+1.4
152A				IAmb	IAmb	20 45 11.6	
	comp=Z,23nm,0.8s						
154A	Montrose	21.15	9	P	P	20 45 07.7	+1.3
NATX	Nacogdoches	21.23	342	P	P	20 45 07.5	+0.2
NATX				IAmb	IAmb	20 45 12.0	
	comp=Z,40nm,0.7s						
NATX	Nacogdoches	21.23	342	P	P	20 45 09.3	+1.9
	baz=159						
435B	Jarrell	21.43	334	P	P	20 45 09.3	-0.2
435B				IAmb	IAmb	20 45 16.1	
	comp=Z,25nm,0.8s						
Z51A	Franklin	21.61	4	P	P	20 45 11.4	0.0
Z51A				IAmb	IAmb	20 45 15.9	
	comp=Z,18nm,0.7s						
GOGA	Godfrey	21.88	8	P	P	20 45 14.8	+0.6
GOGA				IAmb	IAmb	20 45 18.2	
	comp=Z,25nm,0.7s						
GOGA	Godfrey	21.88	8	P	P	20 45 17.0	+2.8
	baz=189,SNR=18						
PCRV	Puerto La Cruz	21.94	92	P	P	20 45 13.6	-1.5
	comp=Z,12nm,0.6s,baz=229,slow=5.1,SNR=6.3						
PLCV	Puerto La Cruz	21.99	92	P	P	20 45 13.6	-2.0
Y49A	Blount Mountai	22.10	1	P	P	20 45 18.3	+1.7
Y49A				IAmb	IAmb	20 45 19.9	
	comp=Z,23nm,0.8s						
JCT	Junction City	22.21	329	P	P	20 45 18.5	+0.7
JCT	Junction City	22.21	329	P	P	20 45 19.5	+1.6
	baz=145						
Y45A	Yeager Farm, C	22.23	354	P	P	20 45 20.1	+2.1
Y45A				IAmb	IAmb	20 45 22.6	
	comp=Z,18nm,0.7s						
Y52A	Lilburn	22.26	6	P	P	20 45 19.5	+1.2
Y52A				IAmb	IAmb	20 45 22.3	
	comp=Z,36nm,0.8s						
WHTX	Lake Whitney,	22.44	336	P	P	20 45 20.5	+0.3
WHTX	Lake Whitney,	22.44	336	P	P	20 45 20.7	+0.4
	baz=152,SNR=8.3						
CCAR	Cane Creek	22.59	349	P	P	20 45 19.8	-2.1
WLAR	White Oak Lake	22.64	347	P	P	20 45 21.3	-1.1
WLAR				IAmb	IAmb	20 45 26.1	
	comp=Z,19nm,0.7s						
X48A	Hartselle	22.69	360	P	P	20 45 23.6	+0.8
Z38A	Mt. Pleasant	22.73	342	P	P	20 45 23.2	-0.1
FPAL	Fort Paine	22.81	3	P	P	20 45 25.1	+0.9
HODGE	Hodges	22.87	10	P	P	20 45 25.4	+0.7
X51A	Calhoun	22.88	4	P	P	20 45 26.5	+1.6
X51A				IAmb	IAmb	20 45 28.8	
	comp=Z,32nm,1.4s						
JSC	Jenkinsville	23.10	12	P	P	20 45 28.4	+1.3
JSC				IAmb	IAmb	20 45 29.9	
	comp=Z,16nm,0.7s						
PLAL	Pickwick Lake	23.24	358	P	P	20 45 28.6	+0.2
HPIG		23.26	313	P	P	20 45 30.6	+1.6
X40A	Basin Creek Fa	23.35	348	P	P	20 45 30.5	+1.0
SWET	Sewanee	23.47	2	P	P	20 45 31.8	+1.1
SWET				IAmb	IAmb	20 45 32.7	
	comp=Z,15nm,0.5s						
W45A	Hickory Valley	23.48	355	P	P	20 45 30.1	-0.6
W50A	Signal Mountai	23.48	3	P	P	20 45 32.2	+1.4
W50A				IAmb	IAmb	20 45 33.4	
	comp=Z,30nm,0.7s						
W52A	Murphy	23.49	6	P	P	20 45 30.4	-0.4
W52A				IAmb	IAmb	20 45 47.4	
	comp=Z,16nm,0.8s						
TXAR	Lajitas Array	23.50	321	P	P	20 45 32.5	+1.4
	comp=Z,18nm,0.7s,baz=138,slow=9.8,SNR=181						
TXAR				PcP	PcP	20 49 16.7	+1.3
	comp=Z,1.5nm,0.9s,baz=144,slow=4.5,SNR=5.3						
TXAR				LR	LR	20 55 52.4	
	comp=Z,66nm,20.3s,baz=0.0,slow=39						
TXAR	Lajitas Array	23.50	321	P	P	20 45 31.9	+0.8
TX31	Lajitas Ar. Si	23.50	321	P	P	20 45 31.8	+0.7
TX32	Lajitas Array	23.50	321	P	P	20 45 31.9	+0.8
TX32				IAmb	IAmb	20 45 33.2	
	comp=Z,20nm,0.8s						
BG3	Lake Jocassee	23.51	8	P	P	20 45 32.6	+1.6
BG3				IAmb	IAmb	20 45 33.5	
	comp=Z,18nm,0.7s						
PAULI	Pauline	23.52	11	P	P	20 45 32.4	+1.3
PAULI				IAmb	IAmb	20 45 33.9	
	comp=Z,18nm,0.7s						
Z35A	Perchaven, San	23.55	338	P	P	20 45 31.4	0.0
MIAR	Mount Ida	23.57	346	P	P	20 45 31.8	+0.2
MIAR				IAmb	IAmb	20 45 33.4	
	comp=Z,32nm,0.7s						
MIAR	Mount Ida	23.57	346	P	P	20 45 31.9	+0.4
	baz=163,SNR=21						
BIRD	Birdtown, Kers	23.63	13	P	P	20 45 32.7	+0.6
BIRD				IAmb	IAmb	20 45 35.0	
	comp=Z,24nm,0.8s						
CPCT	Cooper Cave	23.78	5	P	P	20 45 34.5	+1.0
CPCT				IAmb	IAmb	20 45 36.6	
	comp=Z,31nm,1.2s						
W41B	Gary Mavity, V	23.90	349	P	P	20 45 35.3	+0.8
	baz=167,SNR=5.4						
CZSB	Cruzeiro do Su	23.90	143	P	P	20 45 35.3	+0.5
ABTX	Abilene, Hawle	23.91	333	P	P	20 45 35.2	+0.5
ABTX				IAmb	IAmb	20 45 37.6	
	comp=Z,38nm,1.1s						
ABTX	Abilene, Hawle	23.91	333	P	P	20 45 35.3	+0.5
	baz=148,SNR=6.2						
KMSC	Kings Mountain	23.92	11	P	P	20 45 35.9	+1.2
KMSC				IAmb	IAmb	20 45 37.0	
	comp=Z,15nm,0.8s						
KMSC	Kings Mountain	23.92	11	P	P	20 45 35.9	+1.2
	baz=193,SNR=6.2						
V48A	Smith Brothers	23.97	0	P	P	20 45 36.5	+1.3
V48A				IAmb	IAmb	20 45 38.7	
	comp=Z,17nm,0.8s						
WHAR	Wooly Hollow	24.02	349	P	P	20 45 36.3	+0.7
WHAR				IAmb	IAmb	20 45 36.9	
	comp=Z,12nm,0.7s						
TKL	Tuckaleechee C	24.06	6	P	P	20 45 36.1	+0.1
	comp=Z,13nm,0.7s,baz=182,slow=13,SNR=12						
TKL				LR	LR	20 55 29.1	
	comp=Z,128nm,18.6s,baz=196,slow=38						
TKL	Tuckaleechee C	24.06	6	P	P	20 45 36.6	+0.6
TKL				IAmb	IAmb	20 45 53.7	
	comp=Z,16nm,0.9s						
X37A	Clayton	24.08	343		P	20 45 36.6	+0.4
X37A				IAmb	IAmb	20 45 44.2	
	comp=Z,32nm,0.8s						
LOOK	Love County	24.12	339		P	20 45 37.2	+0.7
V51A	Loudon	24.15	5	P	P	20 45 38.1	+1.3
V51A				IAmb	IAmb	20 45 42.3	
	comp=Z,14nm,0.7s						
V53A	Saluda	24.19	8	P	P	20 45 38.8	+1.5
V53A				IAmb	IAmb	20 45 40.9	
	comp=Z,18nm,0.7s						
W57A	Gilead	24.22	14	P	P	20 45 37.8	+0.4
W57A				IAmb	IAmb	20 45 39.2	
	comp=Z,15nm,0.7s						
W39A	Magazine	24.24	346	P	P	20 45 38.1	+0.5
W39A				IAmb	IAmb	20 45 39.5	
	comp=Z,21nm,0.8s						
W39A	Magazine	24.24	346	P	P	20 45 38.1	+0.5
	baz=163,SNR=11						
V52A	Sevierville	24.26	7	P	P	20 45 38.6	+0.8
CLTN	Cedars of Leba	24.33	1	P	P	20 45 39.2	+0.8
WVT	Waverly	24.37	358	P	P	20 45 37.9	-0.9
WVT	Waverly	24.37	358	P	P	20 45 39.5	+0.6
	baz=178						
FCAR	Ozark Folk Cen	24.57	350	P	P	20 45 40.1	-0.5
FCAR				IAmb	IAmb	20 45 41.6	
	comp=Z,11nm,0.6s						
LCAR	Lake Charles	24.60	352	P	P	20 45 40.4	-0.5
LCAR				IAmb	IAmb	20 45 41.7	
	comp=Z,13nm,0.6s						
V55A	Taylorsville	24.63	11	P	P	20 45 42.7	+1.4
V55A					PcP	20 49 16.1	-1.5
X34A	Smith Ranch, M	24.90	338		P	20 45 44.2	+0.5
TZTN	Tazewell	24.96	6	P	P	20 45 45.5	+1.3
TZTN				IAmb	IAmb	20 45 48.4	
	comp=Z,15nm,0.8s						
TZTN	Tazewell	24.96	6	P	P	20 45 45.8	+1.5
	baz=188						
PARMO	Parma	25.02	355	P	P	20 45 45.0	+0.3
V58A	Windy Hill, Pi	25.05	15	P	P	20 45 45.2	+0.2
W35A	Tecumseh	25.07	340		P	20 45 44.9	-0.3
W35A				IAmb	IAmb	20 45 49.8	
	comp=Z,18nm,0.7s						
U40A	Yellville	25.16	349	P	P	20 45 46.1	+0.1
U40A				IAmb	IAmb	20 45 47.7	
	comp=Z,18nm,0.7s						
U40A	Yellville	25.16	349	P	P	20 45 46.0	0.0
	baz=166,SNR=12						
U54A	Nelsons Funny	25.18	10	P	P	20 45 47.1	+0.8
U54A				IAmb	IAmb	20 45 50.9	
	comp=Z,25nm,0.9s						
PBMO	Poplar Bluff	25.21	353	P	P	20 45 45.8	-0.6
PBMO				IAmb	IAmb	20 46 00.3	
	comp=Z,48nm,1.4s						
T47A	Sharon Grove	25.22	360	P	P	20 45 46.5	0.0
T47A				IAmb	IAmb	20 46 03.7	
	comp=Z,23nm,0.8s						
T45A	Paducah	25.30	357	P	P	20 45 47.2	0.0
HHAR	Hobbs	25.32	347	P	P	20 45 47.4	0.0
HHAR				IAmb	IAmb	20 45 48.4	
	comp=Z,15nm,0.8s						
T50A	Nancy	25.32	4	P	P	20 45 48.4	+0.9
FNO	Franklin	25.34	340		P	20 45 47.8	+0.1
WMOK	Wichita Mounta	25.38	337	P	P	20 45 47.5	-0.6
TUL1	Leonard	25.44	343		P	20 45 48.3	-0.3
TUL1				IAmb	IAmb	20 45 49.3	
	comp=Z,32nm,0.8s						
TUL1	Leonard	25.44	343	P	P	20 45 48.5	-0.1
	baz=159,SNR=5.7						
T42A	Van Buren	25.54	352	P	P	20 45 48.6	-0.8
U38A	Gravette	25.57	346		P	20 45 49.5	-0.3
U38A				IAmb	IAmb	20 45 50.6	
	comp=Z,18nm,0.8s						
OK025	Westminster Rd	25.61	340		P	20 45 49.5	-0.7
OK030	Cody Creek RV	25.75	341	P	P	20 45 51.0	-0.4
BCOK	Bluff Creek, N	25.77	340		P	20 45 50.9	-0.7
BCOK				IAmb	IAmb	20 45 55.1	
	comp=Z,29nm,0.8s						
OK031	S. Brethren Rd	25.79	341		P	20 45 51.1	-0.7
OK034	N. Norfolk Rd.	25.80	342		P	20 45 51.9	0.0
MGMO	Mountain Grove	25.83	350	P	P	20 45 51.1	-1.0
MGMO				IAmb	IAmb	20 45 53.0	
	comp=Z,22nm,1.3s						
OK029	Liberty Lake	25.85	340		P	20 45 51.9	-0.4
QUOK	Quay	25.95	342		P	20 45 53.2	0.0
SIUC	Southern Illin	26.02	356	P	P	20 45 53.9	+0.1
SIUC				IAmb	IAmb	20 45 55.2	
	comp=Z,15nm,0.7s						
S51A	Beattyville	26.04	6	P	P	20 45 54.4	+0.4
S51A				IAmb	IAmb	20 46 12.4	
	comp=Z,12nm,0.7s						
BLA	Blacksburg	26.11	12	P	P	20 45 54.4	-0.2
BLA				IAmb	IAmb	20 46 23.0	
	comp=Z,20nm,1.2s						
BLA	Blacksburg	26.11	12	P	P	20 45 55.7	+1.1
	baz=194						
T57A	Hurt	26.16	14	P	P	20 45 56.2	+1.2
MNTX	Cornudas Mount	26.22	322	P	P	20 45 56.7	+1.1
MNTX	Cornudas Mount	26.22	322	P	P	20 45 57.1	+1.4
	baz=135,SNR=11						
WCI	Wyandotte Cave	26.46	1	P	P	20 45 59.0	+1.3
	baz=181						
MSTX	Muleshoe	26.50	329	P	P	20 45 58.6	+0.2
MSTX				IAmb	IAmb	20 46 01.5	
	comp=Z,35nm,0.9s						
MSTX	Muleshoe	26.50	329	P	P	20 45 58.5	+0.2
	baz=143,SNR=5.6						
S39A	Bolivar	26.55	349	P	P	20 45 58.2	-0.3
S39A				IAmb	IAmb	20 45 59.7	
	comp=Z,17nm,0.7s						
CCM	Cathedral Cave	26.57	352	P	P	20 45 59.2	+0.6
CCM	Cathedral Cave	26.57	352	P	P	20 45 59.9	+1.2
	baz=170						
R49A	Shelbyville	26.57	3	P	P	20 45 59.6	+0.9
R49A				IAmb	IAmb	20 46 00.9	
	comp=Z,36nm,1.4s						
BLOK	Blackwell	26.65	341		P	20 45 59.4	-0.1
BLOK				IAmb	IAmb	20 46 03.5	
	comp=Z,14nm,0.8s						
CROK	Carrier	26.67	340		P	20 45 59.4	-0.3
CROK				IAmb	IAmb	20 46 00.3	
	comp=Z,25nm,1.0s						
AMTX	Amarillo	26.73	332	P	P	20 46 00.9	+0.6
AMTX	Amarillo	26.73	332	P	P	20 46 01.0	+0.7
	baz=146						
U32A	Winter Ranch,	26.91	338		P	20 46 02.4	+0.5
R53A	Hurricane	26.93	9	P	P	20 46 02.8	+0.8
R53A				IAmb	IAmb	20 46 09.6	
	comp=Z,27nm,1.5s						
R40A	Maddies Statio	26.94	351	P	P	20 46 01.1	-1.0
R40A				IAmb	IAmb	20 46 02.6	
	comp=Z,11nm,0.7s						
S57A	Dark Hollow, R	26.95	14	P	P	20 46 02.7	+0.5
OLIL	Olney	26.98	358	P	P	20 46 00.8	-1.6
OLIL				IAmb	IAmb	20 46 04.2	
	comp=Z,15nm,0.6s						
OK032	Salt Plains WL	27.02	340		P	20 46 02.6	-0.2
OK032				IAmb	IAmb	20 46 07.1	
	comp=Z,20nm,0.8s						
R55A	Marlinton	27.20	12	P	P	20 46 05.6	+1.1
Q51A	Peebles	27.44	6	P	P	20 46 07.1	+0.5
Q51A				IAmb	IAmb	20 46 09.4	
	comp=Z,21nm,0.7s						
P48A	Milroy	27.72	3	P	P	20 46 09.6	+0.5
P48A				IAmb	IAmb	20 46 10.3	
	comp=Z,14nm,0.5s						
Q54A	Coxs Mills	27.75	10	P	P	20 46 10.1	+0.8
P49A	Miami Univ. Ec	27.83	4	P	P	20 46 10.4	+0.4
P49A				IAmb	IAmb	20 46 11.8	
	comp=Z,11nm,0.7s						
P49A	Miami Univ. Ec	27.83	4	P	P	20 46 10.3	+0.4
	baz=184						
P53A	Whipple	28.15	9	P	P	20 46 14.3	+1.5
P53A				IAmb	IAmb	20 46 15.6	
	comp=Z,19nm,1.1s						
P52A	Corning	28.18	8	P	P	20 46 13.8	+0.7
P52A				IAmb	IAmb	20 46 15.8	
	comp=Z,19nm,1.1s						
P52A	Corning	28.18	8	P	P	20 46 14.6	+1.4
	baz=190						
121A	Cookes Peak, D	28.26	321	P	P	20 46 15.5	+1.3
O44A	Mansfield	28.41	358	P	P	20 46 15.1	0.0
O44A				IAmb	IAmb	20 46 15.8	
	comp=Z,17nm,0.6s						
P38A	Dawn	28.46	349	P	P	20 46 15.3	-0.3
SFIN	Lafayette	28.60	360	P	P	20 46 17.1	+0.2
	baz=180						
R32A	Long Quarter,	28.65	340	P	P	20 46 17.9	+0.6
R32A				IAmb	IAmb	20 46 18.6	
	comp=Z,16nm,0.8s						
KSU1	Kansas State U	28.65	344	P	P	20 46 17.7	+0.4
KSU1	Kansas State U	28.65	344	P	P	20 46 17.4	+0.1
	baz=160						
O52A	Adamsville	28.70	8	P	P	20 46 17.4	-0.3
O52A				IAmb	IAmb	20 46 19.6	
	comp=Z,12nm,0.8s						
P57A	Homestead Farm	28.82	14	P	P	20 46 20.0	+1.2
HDIL	Hopedale	28.86	356	P	P	20 46 20.3	+1.1
	baz=175						
O53A	New Philadelph	28.92	9	P	P	20 46 19.6	-0.2
O53A				IAmb	IAmb	20 46 22.1	
	comp=Z,27nm,1.2s						
O53A	New Philadelph	28.92	9	P	P	20 46 20.6	+0.8
	baz=192						
N47A	Urbana	29.12	2	P	P	20 46 21.5	0.0
N47A				IAmb	IAmb	20 46 35.9	
	comp=Z,21nm,1.1s						
ANMO	Albuquerque	29.19	326	P	P	20 46 23.5	+1.1
	comp=Z,3.0nm,1.0s,baz=163,slow=6.6,SNR=4.7						
ANMO				PcP	PcP	20 49 30.4	+1.7
	comp=Z,1.8nm,0.8s,baz=127,slow=1.9,SNR=3.6						
ANMO				LR	LR	20 59 00.1	
	comp=Z,75nm,20.3s,baz=136,slow=38						
ANMO	Albuquerque	29.19	326	P	P	20 46 23.0	+0.6
ANMO	Albuquerque	29.19	326	P	P	20 46 23.8	+1.3
	baz=138						
N49A	Columbus Grove	29.25	4	P	P	20 46 22.3	-0.3
PTGA	Pitinga	29.48	113	P	P	20 46 25.9	+0.9
	comp=Z,0.8nm,0.3s,baz=302,slow=13,SNR=4.4						
ETMB	Extrema	29.66	135	*e*P	P	20 46 27.7	+1.2
ETMB	Extrema	29.66	135	P	P	20 46 27.4	+0.9
MVL	Millersville	29.74	17	P	P	20 46 27.9	+1.0
T25A	Trinidad	29.84	331	P	P	20 46 29.6	+1.4
T25A	Trinidad	29.84	331	P	P	20 46 29.9	+1.8
	baz=144						
SSPA	Standing Stone	29.94	14	P	P	20 46 29.9	+1.1
	baz=198						
MACA	Manacapuru-AM	29.97	118	*e*P	P	20 46 30.1	+0.8
MACA	Manacapuru-AM	29.97	118	P	P	20 46 30.0	+0.7
N35A	Tabor	30.08	347	P	P	20 46 30.2	+0.2
M53A	WI Miller and	30.17	9	P	P	20 46 31.8	+1.1
	baz=192						
M54A	Oil Creek Stat	30.41	11	P	P	20 46 33.2	+0.3
M54A				IAmb	IAmb	20 46 35.6	
	comp=Z,34nm,1.4s						
M54A	Oil Creek Stat	30.41	11	P	P	20 46 33.3	+0.4
	baz=194						
N33A	J Bar K, Exete	30.41	344	P	P	20 46 33.5	+0.6
L40A	Anamosa	30.52	354		P	20 46 34.2	+0.4
L40A				IAmb	IAmb	20 46 35.3	
	comp=Z,22nm,1.1s						
N59A	State Game Lan	30.75	17	P	P	20 46 36.7	+0.8
N59A				IAmb	IAmb	20 46 38.6	
	comp=Z,20nm,0.8s						
N59A	State Game Lan	30.75	17	P	P	20 46 37.4	+1.4
	baz=202,SNR=6.3						
M57A	Sunshine Farm,	30.79	15	P	P	20 46 37.5	+1.2
M57A				IAmb	IAmb	20 46 39.0	
	comp=Z,25nm,1.1s						
SDCO	Great Sand Dun	30.84	331	P	P	20 46 38.3	+1.2
SDCO				IAmb	IAmb	20 46 40.0	
	comp=Z,7.2nm,0.6s						
SDCO	Great Sand Dun	30.84	331	P	P	20 46 38.6	+1.4
	baz=142,SNR=7.5						
ERPA	Erie	30.94	10	P	P	20 46 37.3	-0.3
ERPA	Erie	30.94	10	P	P	20 46 38.3	+0.7
	baz=193						
BGNE	Belgrade	31.22	344	P	P	20 46 40.1	0.0
BGNE	Belgrade	31.22	344	P	P	20 46 40.5	+0.4
	baz=158						
214A	Organ Pipe Nat	31.24	314	P	P	20 46 40.7	+0.3
	baz=124						
SAML	Samuel	31.26	130	P	P	20 46 40.4	-0.2
SAML				IAmb	IAmb	20 46 41.5	
	comp=Z,12nm,0.7s						
L56A	Greenwood	31.45	13	P	P	20 46 42.3	+0.2
S22A	4UR Ranch, Cre	31.50	329	P	P	20 46 44.4	+1.4
	baz=140						
BINY	Binghamton	31.89	15	P	P	20 46 46.6	+0.6
BINY				IAmb	IAmb	20 47 03.0	
	comp=Z,18nm,0.9s						
BINY	Binghamton	31.89	15	P	P	20 46 47.0	+1.0
	baz=200						
MVCO	Mesa Verde	31.97	326	P	P	20 46 48.1	+1.1
MVCO				IAmb	IAmb	20 46 57.1	
	comp=Z,6.3nm,0.7s						
MVCO	Mesa Verde	31.97	326	P	P	20 46 48.3	+1.3
	baz=137						
OGNE	Ogallala	32.05	338	P	P	20 46 49.0	+1.6
OGNE	Ogallala	32.05	338	P	P	20 46 49.1	+1.6
	baz=151						
L59A	Walton	32.14	17	P	P	20 46 49.3	+1.2
L59A				IAmb	IAmb	20 46 50.6	
	comp=Z,14nm,0.8s						
WUAZ	Wupatki	32.47	321	P	P	20 46 52.5	+1.2
K31A	O'Neill	32.52	344	P	P	20 46 51.8	+0.3
ISCO	Idaho Springs	32.54	333	P	P	20 46 52.9	+0.8
ISCO	Idaho Springs	32.54	333	P	P	20 46 52.8	+0.8
	baz=144						
SMCO	Snowmass	32.68	330	P	P	20 46 54.4	+1.0
SMCO				IAmb	IAmb	20 46 55.8	
	comp=Z,12nm,1.4s						
J56A	Wolcott	32.69	14	P	P	20 46 52.8	-0.1
I37A	Lemond, Waseca	32.72	351	P	P	20 46 53.2	0.0
J57A	Williamstown	33.02	15	P	P	20 46 55.2	-0.6
J57A				IAmb	IAmb	20 46 56.9	
	comp=Z,18nm,0.9s						
ECSD	EROS Data Cent	33.03	347	P	P	20 46 54.7	-1.2
ECSD	EROS Data Cent	33.03	347	P	P	20 46 55.7	-0.3
	baz=162,SNR=14						
TRY	Troy	33.04	18	P	P	20 46 56.4	+0.5
TRY				IAmb	IAmb	20 47 13.4	
	comp=Z,17nm,0.9s						
L61B	Northampton	33.09	19	P	P	20 46 57.1	+0.6
	baz=206						
J58A	Remsen	33.16	16	P	P	20 46 57.3	+0.3
J58A				IAmb	IAmb	20 47 16.7	
	comp=Z,15nm,1.1s						
LPAZ	La Paz	33.42	146	P	P	20 47 01.0	+0.7
	comp=Z,1.1nm,0.4s,baz=56,slow=3.9,SNR=5.9						
LPAZ				LR	LR	21 01 28.9	
	comp=Z,70nm,19.8s,baz=329,slow=38						
LPAZ	La Paz	33.42	146	*e*P	P	20 47 01.1	+0.8
LPAZ	La Paz	33.42	146	P	P	20 47 00.1	-0.2
N23A	Red Feather La	33.58	333	P	P	20 47 01.5	+0.5
	baz=145						
SADO	Sadowa	33.66	10	P	P	20 46 59.5	-1.9
	comp=Z,5.3nm,0.7s,baz=267,slow=8.4,SNR=3.8						
SADO				LR	LR	21 00 11.7	
	comp=Z,110nm,21.8s,baz=212,slow=36						
SPMN	Marine on St.	33.82	353	P	P	20 47 01.5	-1.3
SPMN	Marine on St.	33.82	353	P	P	20 47 01.5	-1.3
	baz=170,SNR=9.2						
BC3	Big Chuckawall	34.03	315	P	P	20 47 06.5	+1.6
	baz=123						
O20A	White River Ci	34.04	330	P	P	20 47 06.2	+1.2
O20A				IAmb	IAmb	20 47 15.8	
	comp=Z,12nm,0.8s						
O20A	White River Ci	34.04	330	P	P	20 47 06.6	+1.6
	baz=140,SNR=8.4						
SUSD	Miller	34.26	345	P	P	20 47 05.9	-0.8
SUSD	Miller	34.26	345	P	P	20 47 06.4	-0.2
	baz=159						
KNB	Kanab	34.33	322	P	P	20 47 05.6	-1.9
PB16	IPOC Station P	34.41	150	P	P	20 47 08.9	+0.2
PB16				IAmb	IAmb	20 47 24.6	
	comp=Z,8.1nm,0.9s						
SRU	San Rafael Swe	34.45	327	P	P	20 47 09.4	+0.8
SRU				IAmb	IAmb	20 47 10.9	
	comp=Z,9.7nm,0.6s						
LONY	Lake Ozonia	34.52	16	P	P	20 47 08.8	+0.1
LONY				IAmb	IAmb	20 47 10.0	
	comp=Z,11nm,0.8s						
LONY	Lake Ozonia	34.52	16	P	P	20 47 09.3	+0.5
	baz=202						
F36A	Milaca	34.54	352	P	P	20 47 08.2	-0.8
F36A				IAmb	IAmb	20 47 09.2	
	comp=Z,9.4nm,0.7s						
E43A	Lone Tree Farm	34.60	360	P	P	20 47 08.8	-0.6
MTPU	Mount Pierson	34.63	324	P	P	20 47 12.6	+2.3
MTPU				IAmb	IAmb	20 47 21.4	
	comp=Z,5.8nm,0.7s						
P18A	Preston Nutter	34.68	328	P	P	20 47 12.3	+1.7
P18A				IAmb	IAmb	20 47 13.5	
	comp=Z,7.6nm,0.8s						
PFO	Pinyon Flats O	34.72	314	LR	LR	21 01 23.3	
	comp=Z,136nm,18.6s,baz=114,slow=36						
P17A	Butcher Ranch,	34.83	327	P	P	20 47 12.9	+1.1
P17A				IAmb	IAmb	20 47 14.6	
	comp=Z,14nm,0.9s						
SZCU	Shurtz Canyon	34.87	322	P	P	20 47 14.9	+2.7
ITTB	Itaituba	34.88	115	*e*P	P	20 47 11.8	-0.5
MSU	Marysvale	34.95	324	P	P	20 47 15.1	+2.2
MVU	Marysvale	34.96	324	P	P	20 47 14.9	+1.9
F33A	5 Mile Ranch,	34.98	349	P	P	20 47 11.5	-1.3
RDMU	Red Mountain	35.03	329	P	P	20 47 14.5	+0.9
RDMU				IAmb	IAmb	20 47 15.5	
	comp=Z,7.2nm,0.8s						
E38A	The Farm, Brul	35.05	354	P	P	20 47 12.0	-1.3
TCRU	Three Creeks R	35.17	324	P	P	20 47 17.0	+2.1
TCRU				IAmb	IAmb	20 47 26.3	
	comp=Z,6.0nm,0.6s						
K22A	Casper	35.27	335	P	P	20 47 16.2	+0.7
	baz=145						
RSSD	Black Hills	35.55	339	P	P	20 47 18.7	+0.8
RSSD				IAmb	IAmb	20 47 20.5	
	comp=Z,6.8nm,0.6s						
RSSD	Black Hills	35.55	339	P	P	20 47 18.9	+1.0
	baz=150						
JLU	Jordanelle	36.02	328	P	P	20 47 23.4	+1.3
VILB	Vilhena	36.08	132	*e*P	P	20 47 23.5	+0.9
VILB	Vilhena	36.08	132	P	P	20 47 23.1	+0.5
TPNV	Topopah Spring	36.44	319	P	P	20 47 28.1	+2.4
	baz=126						
DUG	Dugway, Tooele	36.46	326	P	P	20 47 27.9	+2.1
DUG	Dugway, Tooele	36.46	326	P	P	20 47 26.8	+1.1
	baz=134						

NPGB	Novo Progresso	36.49	119	*e*P	P	20 47 25.5	-0.7
SPR3	Spring Creek 3	36.53	323	P	P	20 47 27.9	+1.4
BW06	Boulder Array	36.70	332	P	P	20 47 28.1	+0.3
BW06				IAmb	IAmb	20 47 29.1	
	comp=Z,5.7nm,0.6s						
BW06	Boulder Array	36.70	332	P	P	20 47 28.4	+0.5
	baz=141,SNR=8.4						
PD31	Pinedale Array	36.70	332	P	P	20 47 28.0	+0.1
PD31				IAmb	IAmb	20 47 29.5	
	comp=Z,4.9nm,0.7s						
PDAR	Pinedale Array	36.70	332	P	P	20 47 28.5	+0.6
	comp=Z,5.8nm,0.6s,baz=128,slow=10,SNR=62						
PDAR				PcP	PcP	20 49 50.0	+0.5
	comp=Z,0.6nm,0.5s,baz=104,slow=4.9,SNR=5.0						
PDAR				LR	LR	21 05 49.9	
	comp=Z,84nm,18.5s,baz=86,slow=42						
PDAR	Pinedale Array	36.70	332	P	P	20 47 28.3	+0.4
PKME	Peaks-Kenny Pk	36.73	21	P	P	20 47 28.4	+0.6
	baz=210						
MPMC	Manual Prospec	36.75	316	P	P	20 47 29.6	+1.3
	baz=124						
BGU	Big Grassy Mou	37.09	326	P	P	20 47 32.1	+1.0
AGMN	Agassiz Nation	37.28	350	P	P	20 47 31.4	-1.0
AGMN	Agassiz Nation	37.28	350	P	P	20 47 31.2	-1.1
	baz=165,SNR=9.5						
AHID	Auburn Hatcher	37.44	330	P	P	20 47 33.1	-0.9
AHID				IAmb	IAmb	20 47 39.2	
	comp=Z,10nm,0.7s						
HVU	Hansel Valley	37.56	328	P	P	20 47 36.4	+1.3
HVU				IAmb	IAmb	20 47 39.0	
	comp=Z,5.8nm,0.7s						
MDND	Maddock	37.61	346	P	P	20 47 34.7	-0.4
MDND	Maddock	37.61	346	P	P	20 47 34.8	-0.4
	baz=159,SNR=6.3						
REDW	Red Top Meadow	37.77	331	P	P	20 47 38.0	+1.1
ECR	Eagle Creek	37.78	330	P	P	20 47 37.9	+0.9
SNOW	Snow King Moun	37.80	331	P	P	20 47 38.8	+1.7
LOHW	Long Hollow	37.84	332	P	P	20 47 37.2	-0.3
LOHW				IAmb	IAmb	20 47 40.4	
	comp=Z,5.8nm,0.6s						
PDRB	Porto dos Gac	37.87	127	*e*P	P	20 47 37.9	0.0
MOOW	Moose Ponds	38.01	332	P	P	20 47 39.5	+0.6
MOOW				IAmb	IAmb	20 47 41.4	
	comp=Z,8.1nm,0.8s						
FXWY	Fox Creek	38.06	331	P	P	20 47 39.1	-0.3
ELK	Elko	38.20	324	P	P	20 47 41.6	+1.0
	comp=Z,2.7nm,0.8s,baz=107,slow=5.9,SNR=10.0						
ELK				PcP	PcP	20 49 56.6	+2.4
	comp=Z,2.7nm,0.7s,baz=100,slow=1.8,SNR=9.1						
ELK				LR	LR	21 04 31.5	
	comp=Z,75nm,19.3s,baz=220,slow=38						
ELK	Elko	38.20	324	P	P	20 47 41.1	+0.5
ELK					PcP	20 49 56.3	+2.2
FLWY	Flagg Ranch	38.25	332	P	P	20 47 41.7	+0.8
FLWY				IAmb	IAmb	20 47 42.9	
	comp=Z,9.0nm,0.8s						
RLMT	Red Lodge	38.43	334	P	P	20 47 42.7	+0.3
RLMT				IAmb	IAmb	20 47 43.7	
	comp=Z,7.1nm,0.7s						
RLMT	Red Lodge	38.43	334	P	P	20 47 42.7	+0.3
	baz=143,SNR=7.0						
PTLB	Pontes e Lacer	38.51	134	*e*P	P	20 47 43.3	+0.2
PTLB	Pontes e Lacer	38.51	134	P	P	20 47 43.2	+0.2
NV11	Mina Array Sit	38.53	319	P	P	20 47 43.8	+0.5
NVAR	Mina Array Bea	38.63	319	P	P	20 47 44.3	+0.2
	comp=Z,1.1nm,0.6s,baz=134,slow=8.1,SNR=9.6						
NVAR				PcP	PcP	20 49 57.6	+2.1
	comp=Z,4.3nm,0.7s,baz=136,slow=4.1,SNR=20						
NVAR	Mina Array Bea	38.63	319	P	P	20 47 46.0	+1.8
LHV	Little Huntoon	38.65	319	P	P	20 47 47.0	+2.9
YNR	Norris Junctio	38.73	333	P	P	20 47 45.9	+1.0
YMR	Madison River	38.82	332	P	P	20 47 46.4	+0.7
YMR				IAmb	IAmb	20 47 49.3	
	comp=Z,6.7nm,0.7s						
KVN	Kaiserville	38.86	320	P	P	20 47 47.6	+1.6
YHH	Holmes Hill	38.86	333	P	P	20 47 47.7	+1.6
LMN	Caledonia Moun	38.93	25	P	P	20 47 47.2	+0.9
LMN				IAmb	IAmb	20 48 05.2	
	comp=Z,27nm,1.4s						
GCMT	Greycliff	39.13	335	P	P	20 47 48.6	+0.4
BMN	Battle Mountai	39.16	322	P	P	20 47 49.7	+1.2
BMN				IAmb	IAmb	20 47 52.1	
	comp=Z,12nm,1.5s						
ULM	Lac du Bonnet	39.17	351	P	P	20 47 46.6	-1.7
	comp=Z,13nm,0.6s,baz=164,slow=8.9,SNR=14						
ULM	Lac du Bonnet	39.17	351	P	P	20 47 46.9	-1.4
DGMT	Dagmar	39.42	342	P	P	20 47 50.3	-0.2
DGMT	Dagmar	39.42	342	P	P	20 47 50.8	+0.4
	baz=153,SNR=6.5						
HLID	Hailey	39.67	328	P	P	20 47 52.6	-0.2
HLID	Hailey	39.67	328	P	P	20 47 54.3	+1.5
	baz=135,SNR=6.3						
MCMT	McKenzie Canyo	39.82	331	P	P	20 47 55.3	+1.2
BOZ	Bozeman (W)	39.84	333	P	P	20 47 54.6	+0.5
BOZ				IAmb	IAmb	20 47 56.0	
	comp=Z,7.1nm,0.6s						
BOZ	Bozeman (W)	39.84	333	P	P	20 47 55.1	+1.0
	baz=140,SNR=12						
DLMT	Dillon	40.10	332	P	P	20 47 57.0	+0.8
DLMT				IAmb	IAmb	20 47 59.0	
	comp=Z,15nm,1.4s						
LRM	Limekiln Ridge	40.38	332	P	P	20 47 59.2	+0.6
HRY	Holter Researc	40.78	334	P	P	20 48 02.4	+0.6
EGMT	Eagleton	40.98	337	P	P	20 48 03.4	+0.1
EGMT	Eagleton	40.98	337	P	P	20 48 03.8	+0.4
	baz=145						
WVOR	Wild Horse Val	41.23	324	P	P	20 48 07.2	+1.5
SALV	Santo Antonio	41.30	131	*e*P	P	20 48 06.8	+0.5
PLID	Pearl Lake	41.56	329	P	P	20 48 08.2	-0.1
MSO	Missoula	41.82	332	P	P	20 48 10.5	+0.2
	baz=138						
AC02	Maricunga	41.99	156	P	P	20 48 14.9	+2.6
BMO	Blue Mountains	42.07	328	P	P	20 48 12.7	+0.3
F10A	Beach Ranch, E	42.79	329	P	P	20 48 18.6	+0.4
F10A				IAmb	IAmb	20 48 19.8	
	comp=Z,7.4nm,0.7s						
YBH	Yreka Blue Hor	43.28	320	LR	LR	21 09 11.1	
	comp=Z,146nm,21.7s,baz=238,slow=40						
WALA	Waterton Lakes	43.49	334	P	P	20 48 24.3	+0.5
ARAG	Araguaiana, MT	44.13	127	*e*P	P	20 48 28.8	-0.5
AQDB	Aquidauana	44.31	136	*e*P	P	20 48 31.5	+0.9
AQDB	Aquidauana	44.31	136	P	P	20 48 31.5	+0.9
NEW	Newport	44.34	331	P	P	20 48 30.1	-0.5
	comp=Z,1.9nm,0.5s,baz=112,slow=9.0,SNR=3.0						
NEW				LR	LR	21 08 48.2	
	comp=Z,80nm,18.3s,baz=198,slow=38						
NEW	Newport	44.34	331	P	P	20 48 30.4	-0.2
	baz=135						
D08A	Wollman Farm,	44.39	329	P	P	20 48 31.6	+0.6
E07A	Sunnyside	44.54	328	P	P	20 48 33.0	+0.9
E07A				IAmb	IAmb	20 48 34.2	
	comp=Z,13nm,0.7s						
C09A	Chrisman Ranch	44.57	330	P	P	20 48 32.7	+0.4
C09A				IAmb	IAmb	20 48 33.6	
	comp=Z,7.1nm,0.7s						
HOOD	Mount Hood Mea	44.73	325	P	P	20 48 33.0	-0.9
HOOD				IAmb	IAmb	20 48 36.4	
	comp=Z,18nm,1.1s						
PEXB	Peixe	45.04	120	*e*P	P	20 48 36.0	-0.6
LTY	Liberty	45.42	328	P	P	20 48 39.6	+0.4
B08A	Colville Reser	45.47	330	P	P	20 48 39.3	-0.2
SCHQ	Schefferville	45.89	16	P	P	20 48 41.3	-1.4
	comp=Z,1.9nm,0.4s,baz=197,slow=6.2,SNR=8.5						
SCHQ				LR	LR	21 08 31.0	
	comp=Z,169nm,18.7s,baz=202,slow=37						
B06A	Marblemount	46.65	329	P	P	20 48 48.8	0.0
B05A	Bryant	46.80	328	P	P	20 48 49.9	-0.1
	baz=129						
VA03	San Esteban	46.87	161	P	P	20 48 51.8	+1.1
VA03				IAmb	IAmb	20 48 53.7	
	comp=Z,12nm,0.8s						
D03D	Eldon	46.87	327	P	P	20 48 50.9	+0.4
	baz=128						
BDFB	Brasilia	47.12	124	P	P	20 48 51.9	-1.1
	comp=Z,8.6nm,0.6s,baz=295,slow=9.8,SNR=13						
BDFB				LR	LR	21 09 51.6	
	comp=Z,150nm,18.4s,baz=16,slow=38						
BDFB	Brasilia	47.12	124	P	P	20 48 52.0	-1.0
BDFB				IAmb	IAmb	20 48 54.0	
	comp=Z,9.7nm,1.0s						
CPUP	Villa Florida	47.48	143	P	P	20 48 56.0	+0.5
	comp=Z,5.9nm,0.7s,baz=336,slow=7.0,SNR=9.9						
CPUP	Villa Florida	47.48	143	*e*P	P	20 48 56.3	+0.7
CPUP	Villa Florida	47.48	143	IAmb	IAmb	20 48 56.8	
	comp=Z,8.1nm,0.8s						
SDBA	SAO DESIDERIO	48.09	118	*e*P	P	20 49 00.3	-0.2
PCMB	Pacaembu	48.16	133	*e*P	P	20 49 00.8	0.0
IPMB	Ipameri, GO	48.26	127	*e*P	P	20 49 01.3	-0.5
BB19B	Bebedouro	49.82	131	*e*P	P	20 49 13.2	-0.4
NBPB	Pedra_Branca-C	50.10	107	*e*P	P	20 49 13.7	-2.2
ITQB	Itaqui	50.42	145	*e*P	P	20 49 19.9	+1.9
ITAB	Concordia	51.33	139	*e*P	P	20 49 25.3	+0.4
ITAB	Concordia	51.33	139	P	P	20 49 24.4	-0.4
NBPN	Ponto Novo - B	51.53	114	*e*P	P	20 49 26.3	-0.4
DIAM	Diamantina, MG	52.04	124	*e*P	P	20 49 30.4	-0.1
VAO	Valinhos	52.14	131	*e*P	P	20 49 30.8	-0.2
CPSB	Cacapava Do Su	52.80	143	*e*P	P	20 49 36.4	+0.7
GDU01	Guandu, BA	53.30	117	*e*P	P	20 49 40.0	+0.3
FRB	Frobisher Bay	53.61	10	P	P	20 49 39.1	-2.0
	comp=Z,1.4nm,0.3s,baz=76,slow=8.2,SNR=4.6						
PLTB	Pedras Altas	53.70	144	P	P	20 49 42.9	+0.6
PLCA	Paso Flores	54.29	165	P	P	20 49 48.2	+1.6
	comp=Z,2.5nm,0.8s,baz=333,slow=10,SNR=3.9						
YKA	Yellowknife Ar	54.50	345	P	P	20 49 47.2	-0.5
	comp=Z,6.6nm,0.7s,baz=141,slow=7.4,SNR=31						
YKA				PcP	PcP	20 50 49.9	-0.6
	comp=Z,1.0nm,0.7s,baz=148,slow=4.0,SNR=4.0						
DLBC	Dease Lake	56.83	335	P	P	20 50 05.4	+0.8
	comp=Z,6.5nm,0.7s,baz=130,slow=5.0,SNR=16						
P33M	Teslin, Yukon	59.04	335	P	P	20 50 20.2	+0.2
	baz=125						
MMPY	Sheldon Lake,	59.86	338	P	P	20 50 26.0	+0.4
	baz=128						
YUK3	Moose Creek	63.03	335	P	P	20 50 47.7	+0.5
	baz=118						
RES	Resolute Bay	63.16	358	P	P	20 50 46.2	-1.4
	comp=Z,1.8nm,0.7s,baz=168,slow=10.0,SNR=10.0						
RES	Resolute Bay	63.16	358	IAmb	IAmb	20 50 48.6	
	comp=Z,6.4nm,1.4s						
BVCY	Beaver Creek	63.50	335	P	P	20 50 50.8	+0.7
	baz=118						
DAWY	Dawson	63.71	337	P	P	20 50 51.9	+0.4
	baz=120						
MCARA	McCarthy VSAT	63.95	334	P	P	20 50 53.5	+0.5
	baz=115						
EPYK	Eagle Plains	63.98	340	P	P	20 50 53.2	0.0
	baz=124						
KAIM	Kayak Island	63.98	332	P	P	20 50 53.1	-0.1
	baz=113						
INK	Inuvik	64.11	343	P	P	20 50 53.4	-0.5
	comp=Z,4.4nm,0.9s,baz=112,slow=7.1,SNR=14						
INK	Inuvik	64.11	343	P	P	20 50 54.0	+0.1
INK				IAmb	IAmb	20 50 55.1	
	comp=Z,6.2nm,1.0s						
INK	Inuvik	64.11	343	P	P	20 50 54.4	+0.5
	baz=128,SNR=5.4						
L27K	Beaver Creek,	64.19	336	P	P	20 50 54.8	+0.2
	baz=117						
A36M	Sachs Harbour	64.53	348	P	P	20 50 56.2	-0.5
	baz=138						
N25K	Chitina, Valde	64.73	333	P	P	20 50 58.1	-0.1
	baz=114						
EGAK	Eagle	64.73	337	P	P	20 50 58.1	+0.1
	baz=118						
L26K	Log Cabin Wild	64.80	335	P	P	20 50 58.5	-0.1
	baz=116						
SCRK	Sand Creek	65.47	336	P	P	20 51 03.1	+0.1
	baz=115						
PAX	Paxson	65.65	335	P	P	20 51 04.5	+0.3
	baz=113						
RIDG	Independent Ri	65.71	336	P	P	20 51 04.9	+0.4
	baz=114						
J25K	Salcha River,	66.28	336	P	P	20 51 08.6	+0.4
	baz=114						
HDA	Harding Lake	66.83	336	P	P	20 51 11.3	-0.2
	baz=113						
ILAR	Eielson Array	66.94	336	P	P	20 51 11.8	-0.5
	comp=Z,2.7nm,0.8s,baz=218,slow=4.0,SNR=26						
BMAR	Burnt Mountain	67.19	339	P	P	20 51 13.6	-0.3
SUMG	Summit	67.22	14	P	P	20 51 13.9	-0.5
POKR	Poker Plat Res	67.29	336	P	P	20 51 14.4	-0.1
	baz=112						
HOM	Homer	67.33	330	P	P	20 51 15.1	+0.3
	baz=106						
MLY	Manley	68.57	336	P	P	20 51 22.2	-0.3
	baz=109						
L20K	Farewell, AK	69.14	333	P	P	20 51 25.9	-0.3
	baz=105						
M19K	Big River Lodg	69.23	332	P	P	20 51 26.7	0.0
	baz=104						
UNV	Unalaska Valle	74.52	323	P	P	20 51 59.6	+1.1
	baz=91						
ANM	Nome	74.58	334	P	P	20 51 59.0	+0.4
	baz=95						
ESDC	Sonseca Array	77.28	52	P	P	20 52 13.0	-1.7
	comp=Z,1.0nm,0.8s,baz=278,slow=10,SNR=5.0						
ESDC				LR	LR	21 22 24.8	
	comp=Z,46nm,19.6s,baz=280,slow=33						
TORD	Torodi Ar. Bea	86.09	77	LR	LR	21 30 13.6	
	comp=Z,33nm,18.7s,baz=275,slow=35						
SONM	Songino Array	119.59	350	PKP	PKPdf	20 59 10.1	+0.3
	comp=Z,0.9nm,0.4s,baz=300,slow=0.8,SNR=14						
MKAR	Makanchi Array	121.02	9	PKP	PKPdf	20 59 11.6	-0.8
	comp=Z,0.4nm,0.6s,baz=304,slow=2.0,SNR=1.8						
KSRS	Korea Array	121.21	328	PKP	PKPdf	20 59 12.8	-0.2
	comp=Z,3.4nm,0.7s,baz=29,slow=2.0,SNR=8.8						
STKA	Stephens Creek	131.11	238	PKP	PKPdf	20 59 32.6	+0.6
	comp=Z,1.4nm,0.6s,baz=116,slow=4.2,SNR=6.4						
STKA	Stephens Creek	131.11	238		PKPdf	20 59 31.6	-0.4
ASAR	Alice Springs	139.44	247	PKhKP	PKPpre	20 59 39.2	
	comp=Z,1.2nm,0.7s,baz=113,slow=3.2,SNR=11						
ASAR	Alice Springs	139.44	247	PKPdf	PKPdf	20 59 43.2	-4.6
WRA	Warramunga Arr	139.53	253	PKhKP	PKPpre	20 59 40.9	
	comp=Z,0.4nm,0.7s,baz=15,slow=0.2,SNR=5.2						
WRA				PKP	PKPdf	20 59 49.0	+0.9
	comp=Z,1.7nm,0.6s,baz=120,slow=2.9,SNR=24						
CMAR	Chiang Mai Arr	149.52	349	PKPbc	PKPbc	21 00 10.6	+0.8
	comp=Z,3.5nm,0.7s,baz=352,slow=3.6,SNR=6.9						

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*GCG **16** 20:46:01.5±0.4, 14°.45N×90°.51W, h6^{km}±11^{km}, MD3.5*
*SNET **16** 20:46:01.8±1.1, 14°.31N×90°.45W, h10^{km}, ML3.1*
ISC 16 20:46:01.0±1.1**, 14°.33N**±0°.06×**90°.48W**±0°.04**, h15**^{km}±10^{km}**,**
n10, σ0^s.98/15**, 1C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.14	294	*e*P	Pg	20 46 05.1	0.0
NBG	Las Nubes	0.28	26	⇑*e*P	Pg	20 46 07.1	-0.1
SLOZ	Alcaldia de Sa	0.74	114	*e*S	Sg	20 46 25.3	+0.2
NUBE	Las Nubes	0.80	122	*e*P	Pg	20 46 15.9	-0.7
NUBE				*e*S	Sg	20 46 27.3	+0.1
NUBE				IAML		20 46 28.9	
	comp=Z,395nm,0.4s						
CEVE	Cerro Verde	0.97	121	*e*P	Pg	20 46 19.4	-0.4
CEVE				*e*S	Sg	20 46 33.8	+1.2
CEVE				IAML		20 46 36.2	
	comp=Z,962nm,0.5s						
MRL	Marmol	1.07	46	*e*P	Pg	20 46 20.9	-0.8
STG3	Santiaguito 3,	1.12	290	*e*P	Pg	20 46 21.8	-1.0
STG3				*e*S	Sg	20 46 37.1	-0.4
TACO	Tacachico	1.15	108	*e*P	Pg	20 46 21.6	-1.5
TACO				*e*S	Sg	20 46 37.0	-1.1
TACO				IAML		20 46 39.8	
	comp=Z,250nm,0.6s						
JAYA	Jayaque - finc	1.20	124	*e*P	Pb	20 46 23.0	-0.5
JAYA				*e*S	Sg	20 46 40.1	0.0
JAYA				IAML		20 46 42.7	
	comp=Z,898nm,0.3s						
SCLA	Alcaldia de Sa	1.81	110	*e*P	Pn	20 46 33.3	+1.7

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*NEIC **16** 21:27:13.9±0.9, 23°.7S±0°.3×179°.9W±0°.4, h510^{km}±34^{km}, mb4.1/10, Error ellipse: s-maj=66.7km s-min=23.5km az=49.0*
*IDC **16** 21:27:16.3±31.0, 23°.41S×179°.95E, h537^{km}±277^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.0/22, mbtmp4.4/3, Error ellipse: s-maj=266.3km s-min=123.2km az=123.0*
ISC 16 21:27:14.8±1.3**, 23°.5S**±0°.1×**179°.8W**±0°.2**, h550**^{km}**, n19,**
σ0^s.73/21**, mb4.1**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.05	340	P	P	21 28 52.8	-1.4
MSVF				S	S	21 30 16.0	+0.7
THZ	Tophouse	19.22	197	P	P	21 31 02.3	-1.4
CTA	Charters Tower	31.64	270	P	P	21 32 54.8	+1.3
	3.8nm,0.3s,baz=95,slow=7.1,SNR=2.3						
CTAO	Charters Tower	31.64	270	P	P	21 32 54.4	+0.9
CTAO				IAmb	IAmb	21 32 55.5	
	comp=Z,3.9nm,0.7s						
BBOO	Buckleboo	39.76	246	P	P	21 33 59.7	-0.8
BBOO				IAmb	IAmb	21 34 22.7	
	comp=Z,11nm,1.4s						
AS31	Alice Springs	42.27	260	P	P	21 34 20.6	0.0
ASAR	Alice Springs	42.27	260	P	P	21 34 21.1	+0.4
	comp=Z,2.0nm,0.8s,baz=98,slow=7.4,SNR=21						
ASAR				PcP	pwP	21 36 02.9	-0.2
	comp=Z,0.3nm,0.8s,baz=96,slow=4.7,SNR=2.2						
ASAR	Alice Springs	42.27	260	P	P	21 34 20.9	+0.2
WR0	Warramunga Arr	42.41	266	P	P	21 34 21.8	0.0
WR0				IAmb	IAmb	21 34 36.7	
	comp=Z,4.1nm,1.1s						
WRA	Warramunga Arr	42.60	266	P	P	21 34 23.4	+0.1
	comp=Z,2.2nm,0.5s,baz=98,slow=7.9,SNR=54						
WRA	Warramunga Arr	42.60	266	P	P	21 34 22.9	-0.4
FORT	Forrest	46.61	249	P	P	21 34 53.6	-0.4
MTN	Manton Dam	47.59	274	P	P	21 35 01.1	-0.4
MTN				IAmb	IAmb	21 35 15.2	
	comp=Z,27nm,1.4s						
VNDA	Vanda	54.81	185	P	P	21 35 53.6	+0.9
VNDA				IAmb	IAmb	21 36 07.8	
	comp=Z,3.1nm,1.2s						
MORW	Morawa	57.17	250	P	P	21 36 10.0	+0.1
MORW				IAmb	IAmb	21 36 31.4	
	comp=Z,28nm,1.4s						
ARCES	ARCESS Array B	131.51	348	PKP	PKiKP	21 45 26.0	+0.6
	comp=Z,3.9nm,0.8s,baz=28,slow=2.3,SNR=1.4						
FINES	FINESS Array B	138.10	342	PKP	PKiKP	21 45 39.4	+0.4
	comp=Z,1.1nm,0.7s,baz=48,slow=2.1,SNR=3.4						
AKASG	Malin Array Be	144.71	328	PKP	PKPab	21 45 50.1	+0.1
	comp=Z,0.5nm,0.4s,baz=37,slow=4.0,SNR=5.9						
MMAI	Mount Meron Ar	147.68	295	PKPbc	PKiKP	21 46 00.2	+0.5
	comp=Z,2.4nm,0.5s,baz=69,slow=5.9,SNR=9.1						

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*NNC **16** 21:36:59.8±2.7, 39°.45N×75°.78E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=19.3km s-min=11.5km az=153.0*
ISC 16 21:37:04.9±3.8**, 39°.7N**±0°.2×**75°.73E**±0°.10**, h10**^{km}**, n17,**
σ2^s.06/18**, 5C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	2.53	9	P	Pb	21 37 51.0	+0.5
	SNR=5.3						
UCH	Uchtor	2.65	340	P	Pn	21 37 48.9	+0.9
	SNR=18						
AML	Almayashu	2.84	328	P	Pb	21 37 56.7	+0.8
	SNR=8.3						
KBK	Karagaybulak	2.97	349	P	Pn	21 37 54.2	+2.0
	SNR=7.1						
AAK	Ala-Archa	3.04	343	P	Pb	21 37 56.1	-3.0
	SNR=5.8						
AAK	Ala-Archa	3.04	343	⇓Pn	Pn	21 37 54.9	+1.8
	2.6nm,0.4s						
AAK				⇓Pg	Pg	21 38 01.7	-1.4
	7.4nm,0.5s						
AAK				⇑Lg	Lg	21 38 44.4	
	22nm,0.9s						
TKM2	Tokmak 2	3.18	358	⇑Pg	Pg	21 38 04.5	-1.2
	6.9nm,0.8s						
TKM2				⇑Lg	Lg	21 38 50.7	
	20nm,0.9s						
KST	Kastek	3.30	3	Pg	Pb	21 38 03.7	+0.1
	4.7nm,0.7s						
KST				Lg	Lg	21 38 54.7	
	12nm,0.4s						
MRKS	Merke	3.54	329	Pg	Pb	21 38 06.0	-1.7
	2.8nm,0.7s						
MRKS				Lg	Lg	21 38 58.5	
	5.4nm,0.7s						
MDOK	Medeo	3.56	16	Pg	Pg	21 38 10.6	-2.4
	7.2nm,1.1s						
MDOK				Lg	Lg	21 39 01.5	
	29nm,1.2s						
MDOK	Medeo	3.56	16	Pg	Pb	21 38 08.1	+0.1
	1.8nm,0.4s						
MDOK				Lg	Lg	21 39 02.3	
	13nm,0.6s						
KTBS	Karatobe	4.03	10	Pg	Pb	21 38 17.8	+1.8
	1.7nm,0.3s						
KTBS				Lg	Lg	21 39 18.7	
	28nm,0.7s						
KUU	Kurty	4.17	6	Pg	Pb	21 38 20.2	+1.8
	3.1nm,0.8s						
KUU				Lg	Lg	21 39 22.9	
	21nm,0.8s						
PDGK	Podgornoye	4.56	37	Lg	Lg	21 39 31.5	
	23nm,0.9s						
IUG	Iuzhnay	4.94	301	Pg	Pb	21 38 32.1	+0.7
	91nm,0.9s						
IUG				Lg	Lg	21 39 43.9	
	14nm,0.5s						
KK02	Karatay Array	5.16	312	⇑Pn	Pn	21 38 23.4	+1.2
	0.3nm,0.3s						
KK02				⇑Sn	Sn	21 39 26.1	+4.3
	1.6nm,0.5s						
AB31	Akbulak array	14.71	315	Pn	Pn	21 40 30.5	-2.4
	0.1nm,0.4s,baz=126,slow=13,SNR=4.3						

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*SNET **16** 21:44:12.3±1.1, 14°.37N×90°.43W, h13^{km}±999^{km}, ML2.7*
*GCG **16** 21:44:12.1±0.7, 14°.44N×90°.49W, h9^{km}±6^{km}, MD3.1*
ISC 16 21:44:11.9±1.0**, 14°.35N**±0°.06×**90°.45W**±0°.03**, h15**^{km}±9^{km}**,**
n20, σ0^s.68/27**, 2C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.16	285	⇑*i*P	Pg	21 44 16.1	-0.1
NBG	Las Nubes	0.26	23	*e*P	Pb	21 44 17.8	-0.7
FUG	Fuego 3	0.39	284	⇑*e*P	Pg	21 44 19.8	-0.1
SLOZ	Alcaldia de Sa	0.72	116	*e*S	Sg	21 44 36.0	+0.5
LOAL	Lomas de Alarc	0.74	118	*e*P	Pg	21 44 25.9	-0.4
LOAL				*e*S	Sg	21 44 36.8	+0.7
NUBE	Las Nubes	0.79	124	*e*P	Pg	21 44 26.9	-0.4
NUBE				*e*S	Sg	21 44 38.1	+0.4
NUBE				IAML		21 44 39.2	
	comp=Z,144nm,0.4s						
RTR	El Retiro	0.90	120	*e*P	Pg	21 44 29.2	-0.2
UNIC	Universidad Ca	0.95	113	*e*P	Pg	21 44 29.1	-1.2
UNIC				*e*S	Sg	21 44 42.5	-0.3
UNIC				IAML		21 44 43.4	
	comp=Z,206nm,0.2s						
SNJE	San Jose	0.95	120	*e*P	Pg	21 44 30.0	-0.3
SBLS	San Blas	0.95	122	*e*P	Pg	21 44 30.3	0.0
CEVE	Cerro Verde	0.95	123	*e*P	Pg	21 44 30.2	-0.3
CEVE				*e*S	Sg	21 44 44.5	+1.5
CEVE				IAML		21 44 45.2	
	comp=Z,391nm,0.2s						
MRL	Marmol	1.04	45	*e*P	Pb	21 44 32.0	+0.3
MRL				*e*S	Sb	21 44 45.8	+0.5
MTO3	Montecristo	1.06	87	*e*P	Pg	21 44 31.3	-1.1
ESQI	Esquipulas	1.09	79	*e*P	Pb	21 44 32.2	-0.5
TACO	Tacachico	1.13	109	*e*P	Pb	21 44 32.4	-0.8
TACO				*e*S	Sb	21 44 47.7	0.0
TACO				IAML		21 44 49.2	
	comp=Z,95nm,0.3s						
STG3	Santiaguito 3,	1.14	288	*e*P	Pb	21 44 32.7	-0.8
STG3				*e*S	Sb	21 44 48.0	-0.2
JAYA	Jayaque - finc	1.19	125	*e*P	Pn	21 44 34.0	-0.3
JAYA				IAML		21 44 53.6	
	comp=Z,238nm,0.3s						
RTAL	Retalhuleu	1.22	278	*e*S	Sb	21 44 50.8	+0.5
PMON	Piamonte	1.27	120	*e*P	Pn	21 44 35.5	+0.3
LLGN	La Laguna	1.47	97	*e*S	Sn	21 44 58.3	+1.2

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*SOME **16** 21:45:32.1, 37°.57N×71°.78E, h0^{km}*
*IDC **16** 21:45:32.2±6.8, 36°.12N×70°.16E, h158^{km}±59^{km}, mb3.1/4, mb1 3.1/9, mb1mx2.9/57, mbtmp3.6/9, Error ellipse: s-maj=53.6km s-min=40.1km az=51.0*
*NNC **16** 21:45:43.4±4.5, 37°.01N×70°.18E, h166^{km}±66^{km}, mb3.1, mpv4.0, Error ellipse: s-maj=40.5km s-min=27.1km az=20.0*
ISC 16 21:45:42.1±2.0**, 36°.8N**±0°.1×**70°.5E**±0°.1**, h200**^{km}**, n29,**
σ1^s.54/35**, mb3.0**/3**, 5C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.34	356	*e*P	Pn	21 47 01.2	+0.3
	473nm,0.3s						
IUG				*e*S	Sn	21 48 03.0	-0.2
	208nm,0.4s						
AML	Almayashu	5.86	24	P	Pn	21 47 08.1	+0.3
	SNR=145						

DZA	Taraz	6.11	6	*e*P	Pn	21 47 12.2	+1.6
	57nm,0.1s						
DZA				*e*S	Sn	21 48 21.5	+0.7
	138nm,0.5s						
UCH	Uchtor	6.23	29	P	Pn	21 47 13.2	+0.5
	SNR=47						
BRLS	Borolday	6.23	355	*e*P	Pn	21 47 16.0	+3.7
	2.0nm,0.2s						
BRLS				*e*S	Sn	21 48 28.8	+5.0
	9.5nm,0.6s						
KK02	Karatay Array	6.29	0	⇑P	Pn	21 47 12.6	-0.4
	4.0nm,0.5s						
KK02				⇑S	Sn	21 48 19.8	-5.2
	3.0nm,0.4s						
MRKS	Merke	6.29	19	*e*P	Pn	21 47 13.5	+0.5
	17nm,0.3s						
MRKS				*e*S	Sn	21 48 24.3	-0.8
	32nm,0.4s						
EKS2	Erkin-Say	6.36	22	P	Pn	21 47 14.7	+0.6
	SNR=6.7						
AAK	Ala-Archa	6.58	27	P	Pn	21 47 17.2	+0.3
	2.2nm,0.3s,baz=202,slow=8.6,SNR=41						
AAK				S	Sn	21 48 33.2	+1.0
	1.5nm,0.3s,baz=333,slow=20,SNR=20						
AAK	Ala-Archa	6.58	27	P	Pn	21 47 17.5	+0.6
	SNR=9.6						
AAK	Ala-Archa	6.58	27	⇓P	Pn	21 47 17.0	+0.1
	5.2nm,0.5s						
AAK				⇑S	Sn	21 48 33.1	+1.0
	20nm,0.6s						
KBK	Karagaybulak	6.76	29	P	Pn	21 47 20.3	+0.9
	SNR=6.9						
CHMS	Chumysh	6.99	26	P	Pn	21 47 22.6	+0.5
	SNR=9.8						
USP	Ospenovka	7.14	24	P	Pn	21 47 24.2	+0.2
	SNR=18						
TKM2	Tokmak 2	7.25	31	P	Pn	21 47 25.9	+0.3
	SNR=22						
TKM2	Tokmak 2	7.25	31	⇓P	Pn	21 47 25.8	+0.1
	16nm,0.5s						
TKM2				⇓S	Sn	21 48 48.3	+0.4
	5.3nm,0.9s						
KST	Kastek	7.50	32	*e*P	Pn	21 47 29.4	+0.5
	15nm,0.6s						
KST				*e*S	Sn	21 48 50.9	-2.9
	8.3nm,0.7s						
MDOK	Medeo	8.09	36	⇑P	Pn	21 47 37.0	+0.4
	7.5nm,1.0s						
MKAR	Makanchi Array	13.28	38	P	Pn	21 48 43.3	+0.4
	0.2nm,0.3s,baz=221,slow=12,SNR=6.3						
AB31	Akbulak array	14.62	332	⇑P	P	21 49 00.4	-0.2
	0.2nm,0.3s,baz=145,slow=12,SNR=17						
KURBB	Kurchatov Arra	14.96	20	P	Pn	21 49 03.0	-0.6
	0.1nm,0.3s,baz=209,slow=11,SNR=7.0						
BVAR	Borovoye Array	16.21	360	P	Pn	21 49 18.5	-0.2
	0.3nm,0.3s,baz=183,slow=13,SNR=6.6						
BRVK	Borovoye	16.25	360	⇓P	Pn	21 49 19.0	-0.2
	1.9nm,0.7s						
AKTO	Aktyubinsk	16.32	330	P	Pn	21 49 18.3	-1.7
	0.1nm,0.3s,baz=144,slow=10,SNR=7.0						
AKTO	Aktyubinsk	16.32	330	⇓P	Pn	21 49 18.6	-1.4
	5.5nm,1.1s						
ZALV	Zalesovo Beam	19.80	26	P	P	21 49 57.3	+0.2
	1.1nm,0.3s,baz=218,slow=11,SNR=9.4						
SONM	Songino Array	28.48	56	P	P	21 51 19.1	+0.5
	0.3nm,0.6s,baz=254,slow=10,SNR=2.3						
WRA	Warramunga Arr	82.49	122	P	P	21 57 36.5	-5.9
	0.2nm,0.9s,baz=311,slow=5.0,SNR=5.0						
ASAR	Alice Springs	84.75	125	P	P	21 57 47.9	-6.0
	0.2nm,0.6s,baz=312,slow=4.0,SNR=4.8						

IDC ***16*** *22:01:29.5±0.5, 3°.43N×127°.56E, h0^{km}, mb4.5/28, mb1 4.6/29, mb1mx4.4/55, mbtmp4.5/29, ML4.3/1, MS3.9/29, Ms1 3.9/29, ms1mx3.8/45, Error ellipse: s-maj=20.9km s-min=11.0km az=85.0*

NEIC ***16*** *22:01:32.0±1.4, 3°.43N±0°.06×127°.36E±0°.08, h10^{km}±1^{km}, mb4.8/71, Error ellipse: s-maj=13.8km s-min=9.0km az=72.0*

BJI ***16*** *22:01:33.4±0.0, 3°.15N×127°.45E, h56^{km}, mB5.0/36, mb4.6/63, Ms4.5/33, Ms7 4.3/34*

GCMT ***16*** *22:01:36.0±0.3, 3°.60N±0°.02×127°.53E±0°.02, h20^{km}±1^{km}, MW5.0/80, Moment Tensor Solution. s22,c23; s80,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.96±.14; $M_{\theta\theta}$1.70±.10; $M_{\phi\phi}$-0.73±.11; $M_{r\theta}$-2.40±.31; $M_{\theta\phi}$-1.80±.09; $M_{\phi r}$-0.82±.23; Best double couple: $M_0$3.44200×10^{16} NP1:ϕ_s337.00000°, δ40.00000°, λ-16.00000°. NP2: ϕ_s80.00000°, δ80.00000°, λ-129.00000°. Principal axes: T 3.4580, Plg25.0000°, Azm199.0000°; N -0.0350, Plg38.0000°, Azm88.0000°; P -3.4270, Plg42.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***16*** *22:01:37.3±0.3, 3°N±2°×12°7E±°, h59^{km}±3^{km}, M4.7/57, mb4.9/57, mB5.2/25, MLv5.0/17, Mw(mB)4.6/25, MwMwp4.6/1, Mwp5.0/1*

KLM ***16*** *22:01:37, 3°.52N×127°.62E, h65^{km}, mb4.8*

ISC 16 22:01:36.2±0.3, **3°.41N**±0°.04×**127°.41E**±0°.06, **h45**^{km}, **n208**, σ1^{s}**46**/197, **mb4.7**/72, **MS3.9**/33, **5C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.89	278	P	Pn	22 02 05.8	-0.3
TNTI	Ternate	2.62	181	P	Pn	22 02 18.1	+2.0
TNTI	Ternate	2.62	181		Pn	22 02 17.4	+1.2
TNTI	Ternate	2.62	181	P	Pn	22 02 18.2	+2.1
GSPH	General Santos	3.61	317	*e*P	Pn	22 02 28.8	-1.0
GSPH				*e*S	Sn	22 03 17.9	+6.6
LBMI	Labuha	4.03	179	P	Pn	22 02 38.0	+2.6
DAV	Davao City (W)	4.06	333	Pn	Pn	22 02 38.6	+2.7
	94nm,0.3s,baz=217,slow=1.0,SNR=7.4						
DAV				Sn	Sn	22 03 31.9	+10
	117nm,0.3s,baz=80,slow=23,SNR=5.8						
DAV	Davao City (W)	4.06	333	Pn	Pn	22 02 37.4	+1.5
KCP	Kidapawan	4.25	327	⇓*e*P	Pn	22 02 40.3	+1.7
KCP				*i* S	Sn	22 03 28.7	+1.7
KMSI	Cibinong	4.44	231	P	Pn	22 02 43.6	+2.6
SANI	Sanana	5.61	195	P	Pn	22 02 56.6	-0.5
	0.8nm7μm94nm,0.7s						
SWI	Sorong	5.73	138	P	Pn	22 03 01.1	+2.3
	0.8nm3μm3μm164nm,0.5s						
SIJI	Sorong	5.74	138	Pn	Pn	22 03 00.8	+1.8
	45nm,0.3s,baz=324,slow=14,SNR=80						
SIJI				Sn	Sn	22 04 06.4	+2.8
	0.5nm,0.3s,baz=114,slow=24,SNR=1.4						
PAGZ	Pagadian	5.95	318	⇑*e*P	Pn	22 03 02.8	+1.0
MRSI	Marisa	6.19	242	P	Pn	22 03 07.9	+2.8
	1.3nm4μm417nm,0.7s						
LUWI	Luwuk	6.41	226	P	Pn	22 03 09.8	+1.7
	1.7nm4μm417nm,0.6s						
LUWI	Luwuk	6.41	226		Pn	22 03 08.7	+0.6
LUWI	Luwuk	6.41	226	P	Pn	22 03 11.9	+3.8
MSAI	Masohi	6.88	167	P	Pn	22 03 17.2	+2.6
	0.1nm2μm19nm,0.9s						
TOLI2	Tolitoli	7.00	251	Pn	Pn	22 03 15.7	-0.6
AAI	Ambon	7.10	174	P	Pn	22 03 20.4	+2.8
	0.4nm137nm,0.9s						
TBP	Tagbilaran	7.16	331	*e*P	Pn	22 03 17.8	-0.6
LLP	Lapu-Lapu	7.66	334	*e*P	Pn	22 03 25.7	+0.4
FAKI	Fak Fak	7.94	142	Pn	Pn	22 03 30.6	+1.5
FAKI	Fak Fak	7.94	142	P	Pn	22 03 32.4	+3.3
MYLDM	Lahad Datu	9.05	281	Pn	Pn	22 03 44.3	-0.1
SPMM	Sapulut	10.99	277	P	Pn	22 04 16.0	+5.0
KAPI	Kappang	11.34	222	Pn	Pn	22 04 16.1	+0.5
	2.0nm,0.3s,baz=63,slow=3.3,SNR=9.0						
KAPI				Sn	Sn	22 06 24.0	+2.9
	0.7nm,0.3s,baz=62,slow=22,SNR=1.3						
KAPI	Kappang	11.34	222	Pn	Pn	22 04 14.9	-0.8
KKM	Kota Kinabalu	11.46	284	Pn	Pn	22 04 15.8	-1.5
SAUI	Saumlaki	11.97	161	Pn	Pn	22 04 22.5	-1.8
SOEI	Soe	13.45	193	Pn	Pn	22 04 44.2	-0.5
BATI	Baumata	14.04	195	Pn	P	22 04 58.8	-0.6
	5.8nm,0.3s,baz=13,slow=3.9,SNR=6.0						
BATI				LR	LR	22 11 48.1	
	comp=Z,337nm,19.6s,baz=1.0,slow=44						
SBUM	Sibu	15.20	267		Pn	22 05 07.2	-0.8
PLAI	Plampang	15.49	218	P	P	22 05 13.8	-1.7
DRS	Darwin Rock St	16.12	168	P	Pn	22 05 20.1	+0.3
MTN	Manton Dam	16.57	167	Pn	Pn	22 05 25.0	-0.5
MTN				IAmb	IAmb	22 05 35.8	
	comp=Z,28nm,0.4s						
MTN	Manton Dam	16.57	167	P	Pn	22 05 25.8	+0.3
KSM	Kuching	17.19	264	P	P	22 05 37.0	+2.6
JAGI	Jajag, Banyuwa	17.72	228	P	Pn	22 05 39.2	-0.6
JAGI				IAmb	IAmb	22 06 02.3	
	comp=Z,48nm,0.7s						
JAGI	Jajag, Banyuwa	17.72	228	P	P	22 05 42.6	+2.4
KNRA	Kununurra	19.02	176	P	P	22 05 53.8	-0.6
KNRA				IAmb	IAmb	22 05 54.9	
	comp=Z,42nm,0.8s						
KNRA	Kununurra	19.02	176	P	P	22 05 54.0	-0.4
GUMO	Guam	19.99	59	LR	LR	22 12 15.1	
	comp=Z,503nm,22.0s,baz=236,slow=32						
SSLB	Suanglung	21.19	343	P	P	22 06 15.4	-2.7
SSLB				IAmb	IAmb	22 06 22.8	
	comp=Z,54nm,0.8s						
FITZ	Fitzroy Crossi	21.45	185	P	P	22 06 19.2	-1.6
	comp=Z,3.5nm,0.4s,baz=16,slow=9.1,SNR=24						
YHNB	Yeheng	21.92	345	P	P	22 06 24.8	-1.1
YHNB				IAmb	IAmb	22 06 29.4	
	comp=Z,46nm,0.6s						
LEM	Lembang	22.22	243	P	P	22 06 31.4	+2.0
	comp=Z,7.4nm,0.4s,baz=35,slow=19,SNR=1.6						
LEM				LR	LR	22 15 36.3	
	comp=Z,74nm,19.9s,baz=100,slow=38						
COEN	Coen	23.29	138	P	P	22 06 39.2	-1.1
JOW	Kunigami	23.30	2	LR	LR	22 13 56.3	
	comp=Z,410nm,22.0s,baz=124,slow=32						
PMG	Port Moresby	23.45	123	LR	LR	22 16 50.4	
	comp=Z,180nm,20.1s,baz=284,slow=40						
WRAB	Tennant Creek	24.18	164	P	P	22 06 47.0	-1.5
WRAB				IAmb	IAmb	22 07 11.7	
	comp=Z,28nm,0.8s						
WRAB	Tennant Creek	24.18	164	P	P	22 06 47.4	-1.2
WRA	Warramunga Arr	24.19	164	P	P	22 06 47.0	-1.6
	comp=Z,9.7nm,0.5s,baz=339,slow=11,SNR=91						
WRA	Warramunga Arr	24.19	164	P	P	22 06 47.2	-1.4
UBPT	Khong Chiam	24.61	300	P	P	22 06 51.2	-1.4
UBPT				IAmb	IAmb	22 07 04.5	
	comp=Z,40nm,1.3s						
JRMM	Jerantut	24.88	272	P	P	22 06 55.0	0.0
MBWA	Marble Bar	25.55	197	P	P	22 07 01.3	+0.3
XMIS	Christmas Isla	25.68	237	P	P	22 07 00.9	-1.4
PSA00	Pilbara Seismi	25.91	196	P	P	22 07 04.4	+0.1
PSA00	Pilbara Seismi	25.91	196	P	P	22 07 03.7	-0.6
PSA00				IAmb	IAmb	22 07 06.3	
	comp=Z,28nm,0.8s						
PSA00	Pilbara Seismi	25.91	196	P	P	22 07 04.9	+0.6
QIS	Mount Isa	26.66	154	P	P	22 07 10.6	-0.5
KULM	Kulim	26.74	275	P	P	22 07 11.0	-0.9
JCJ	Chichijima	27.47	30	LR	LR	22 15 59.9	
	comp=Z,247nm,21.5s,baz=228,slow=32						
AS31	Alice Springs	27.65	167	P	P	22 07 19.2	-0.8
ASAR	Alice Springs	27.65	167	P	P	22 07 18.9	-1.0
	comp=Z,1.3nm,0.5s,baz=352,slow=7.3,SNR=36						
ASAR				PcP	PcP	22 10 37.2	+0.6
	comp=Z,0.9nm,0.6s,baz=341,slow=2.6,SNR=3.2						
ASAR				LR	LR	22 19 34.8	
	comp=Z,343nm,21.0s,baz=9.0,slow=39						
ASAR	Alice Springs	27.65	167	P	P	22 07 19.0	-1.0
WRKA	Warakurna	28.29	178	P	P	22 07 25.2	-0.5
PSI	Prapat	28.45	270	LR	LR	22 21 03.3	
	comp=Z,110nm,19.5s,baz=101,slow=41						
GIRL	Giralia	28.92	206	P	P	22 07 32.8	+1.6
NJ2	Nanjing	29.60	345	*e*P	P	22 07 39.1	+2.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
WHN	Wuhan	29.67	337	⇑P	P	22 07 39.3	+1.5
WHN				LR	LR		
	comp=Z,2μm,16.3s						
CTAO	Charters Tower	29.80	142	P	P	22 07 39.2	+0.1
GSI	Gunungsitoli	29.88	267	P	P	22 07 38.1	-1.7
MEEK	Meekatharra	31.06	195	P	P	22 07 49.8	-0.4
CMAR	Chiang Mai Arr	31.61	300	P	P	22 07 54.7	-0.4
	comp=Z,2.3nm,0.3s,baz=113,slow=6.8,SNR=18						
CMAR				LR	LR	22 22 17.1	
	comp=Z,146nm,18.6s,baz=148,slow=39						
CMAR	Chiang Mai Arr	31.61	300	P	P	22 07 53.9	-1.3
ENH	Enshi	31.64	330	P	P	22 07 53.9	-1.4
ENH				IAmb	IAmb	22 08 07.8	
	comp=Z,16nm,0.8s						
CHTO	Chiang Mai	31.76	301	P	P	22 07 54.4	-2.0
CHTO				IAmb	IAmb	22 08 09.0	
	comp=Z,8.3nm,1.0s						
OOD	Oodnadatta	32.04	166	P	P	22 07 58.5	-0.2
KMI	Kunming	32.08	315	⇑P	P	22 07 59.5	+0.1
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KSRS	Korea Array	33.88	1	P	P	22 08 14.1	-0.5
	comp=Z,3.2nm,0.7s,baz=179,slow=9.8,SNR=6.7						
KSRS				LR	LR	22 26 20.9	
	comp=Z,105nm,19.1s,baz=188,slow=44						
TIA	Tai'an	33.99	345	*e*P	P	22 08 15.3	-0.4
TIA				pmax	pmax		
	comp=Z,19nm,0.8s						
FORT	Forrest	34.01	179	P	P	22 08 14.7	-1.2
FORT				IAmb	IAmb	22 08 37.5	
	comp=Z,14nm,0.8s						
FORT	Forrest	34.01	179	P	P	22 08 15.1	-0.7
MORW	Morawa	34.09	198	P	P	22 08 16.1	-0.5
MORW				IAmb	IAmb	22 08 30.0	
	comp=Z,12nm,0.8s						
MORW	Morawa	34.09	198	P	P	22 08 16.7	+0.1
MULG	Mulgathing	34.10	170	P	P	22 08 16.3	-0.4
MAT	Matsushiro	34.44	15	P	P	22 08 17.0	-2.6
MJAR	Matsushiro Arr	34.44	15	P	P	22 08 17.2	-2.4
	comp=Z,2.9nm,0.5s,baz=193,slow=8.2,SNR=2.7						
MJAR				LR	LR	22 20 32.1	
	comp=Z,419nm,21.0s,baz=210,slow=33						
XAN	Xi'an	35.00	333	P	P	22 08 23.5	-1.0
XAN				pmax	pmax		
	comp=Z,14nm,1.0s						
LCRK	Leigh Creek	35.22	164	P	P	22 08 26.3	0.0
BLDU	Ballidu	35.35	196	P	P	22 08 27.3	-0.1
KLBR	Kellerberrin	36.00	194	P	P	22 08 33.0	-0.1
EIDS	Eidsvold	36.69	143	P	P	22 08 38.2	-0.8
MUN	Mundaring	36.77	196	P	P	22 08 39.7	+0.1
BBOO	Buckleboo	36.95	168	P	P	22 08 40.2	-0.9
BBOO				IAmb	IAmb	22 08 48.6	
	comp=Z,9.0nm,0.5s						
BBOO	Buckleboo	36.95	168	P	P	22 08 40.6	-0.5
NWAO	Narrogin (SRO)	37.41	194	P	P	22 08 45.3	+0.3
STKA	Stephens Creek	37.60	160	P	P	22 08 45.9	-0.8
	comp=Z,10nm,0.4s,baz=342,slow=7.8,SNR=49						
STKA				LR	LR	22 26 07.1	
	comp=Z,203nm,20.4s,baz=343,slow=39						
STKA	Stephens Creek	37.60	160	P	P	22 08 46.0	-0.6
STKA	Stephens Creek	37.60	160	P	P	22 08 46.3	-0.3
BJT	Baijiatuau	37.83	346	P	P	22 08 48.4	-0.1
BJI	Beijing	37.85	346	P	P	22 08 52.0	+3.4
BJI				S	S	22 14 43.5	+6.7
BJI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,130nm,4.5s						
BJI				LR	LR		
	comp=Z,170nm,18.2s						
BJI				LR	LR		
	comp=Z,180nm,15.7s						
BJI				LR	LR		
	comp=Z,220nm,19.3s						
CMSA	Cobar Meteorol	38.87	155	P	P	22 08 58.1	+0.7
LZH	Lanzhou	39.12	329	⇑P	P	22 08 59.6	0.0
LZH				pP	pP	22 09 10.8	-0.2
LZH				sP	sP	22 09 18.0	+1.9
LZH				pmax	pmax		
	comp=Z,12nm,1.5s						
LZH				pmax	pmax		
	comp=Z,85nm,5.4s						
LZH				LR	LR		
	comp=Z,390nm,18.4s						
LZH				LR	LR		
	comp=Z,470nm,17.9s						
LZH				LR	LR		
	comp=Z,280nm,17.3s						
JTM	Tenmabayashi	39.19	16	P	P	22 08 58.9	-1.0
HHC	Hu-ho-hao-te	39.91	341	*e*P	P	22 09 07.3	+1.3
HHC				S	S	22 15 11.3	+3.3
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.8s						
HHC				LR	LR		
	comp=Z,250nm,14.5s						
HHC				LR	LR		
	comp=Z,170nm,14.5s						
HHC				LR	LR		
	comp=Z,350nm,14.5s						
CN2	Changchun	40.26	358	*e*P	P	22 09 09.6	+0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USA0B	Ussuriysk Arra	40.82	5	P	P	22 09 14.2	+0.9
USA0B				IAmb	IAmb	22 09 27.5	
	comp=Z,35nm,1.5s						
USRK	Ussuriysk Ar.	40.82	5	P	P	22 09 14.3	+1.0
	comp=Z,6.4nm,0.9s,baz=192,slow=8.3,SNR=6.1						
USRK				LR	LR	22 24 12.8	
	comp=Z,168nm,21.9s,baz=180,slow=33						
USRK	Ussuriysk Ar.	40.82	5	P	P	22 09 13.8	+0.5
ARMA	Armidale	40.84	147	P	P	22 09 13.7	-0.1
ARMA				IAmb	IAmb	22 09 19.1	
	comp=Z,14nm,1.0s						
ARMA	Armidale	40.84	147	P	P	22 09 14.2	+0.4
MDJ	Mudanjiang	41.08	2	P	P	22 09 18.8	+3.3
MDJ				pmax	pmax		
	comp=Z,17nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,470nm,3.8s						
H11S3	WAKE ISLAND Hy	41.24	66	T	T	22 52 38.2	
	baz=253,slow=74,SNR=42						
H11S1	WAKE ISLAND Hy	41.26	66	T	T	22 52 37.0	
	baz=253,slow=74,SNR=18						
H11S2	WAKE ISLAND Hy	41.26	66	T	T	22 52 39.8	
	baz=253,slow=74,SNR=48						
H11N1	WAKE ISLAND Hy	41.78	64	T	T	22 54 24.7	
	baz=250						
H11N2	WAKE ISLAND Hy	41.79	64	T	T	22 54 13.1	
	baz=250						
H11N3	WAKE ISLAND Hy	41.80	64	T	T	22 53 49.2	
	baz=250						
ARPS	Mount Arapiles	42.18	163	P	P	22 09 24.6	0.0
LSA	Lhasa	43.15	311	P	P	22 09 32.4	-0.8
LSA				pmax	pmax		
	comp=Z,25nm,1.0s						
LSA	Lhasa	43.15	311	P	P	22 09 32.3	-0.9
GTA	Gaotai	43.71	329	⇓P	P	22 09 35.9	-1.3
GTA				PcP	PcP	22 11 24.3	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,47nm,5.8s						
GTA				LR	LR		
	comp=Z,270nm,17.4s						
GTA				LR	LR		
	comp=Z,200nm,18.2s						
GTA				LR	LR		
	comp=Z,330nm,18.2s						
KLR	Kul'dur	45.80	4	P	P	22 09 53.4	0.0
	comp=Z,2.9nm,0.5s,baz=189,slow=7.8,SNR=14						
GUN	Gumba	46.46	306	*e*P	P	22 09 58.0	-1.4
	comp=Z,21nm,0.7s						
PKI	Pulchoki	46.70	305	*e*P	P	22 09 59.3	-2.0
PKIN	Phulchoki	46.71	305	*e*P	P	22 09 59.4	-2.0
	comp=Z,2.2nm,0.3s						
KKN	Kakani	46.89	306	*e*P	P	22 10 01.0	-1.7
ULN	Ulaanbaatar	47.63	342	P	P	22 10 07.8	-0.2
ULN				IAmb	IAmb	22 10 21.6	
	comp=Z,16nm,1.0s						
SONM	Songino Array	47.81	341	P	P	22 10 09.3	-0.1
	comp=Z,2.5nm,0.5s,baz=154,slow=9.1,SNR=31						
SONM				LR	LR	22 31 26.0	
	comp=Z,220nm,20.5s,baz=164,slow=38						
SONM	Songino Array	47.81	341	P	P	22 10 09.1	-0.3
SONM				IAmb	IAmb	22 10 22.2	
	comp=Z,5.0nm,0.8s						
DANN	Dangsing	48.35	305	*e*P	P	22 10 12.4	-1.7
	comp=Z,66nm,0.7s						
HYB	Hyderabad	49.86	290	*i* P	P	22 10 24.0	-1.5
TLY	Talaya	52.04	341	P	P	22 10 41.4	+0.1
TLY				IAmb	IAmb	22 11 04.1	
	comp=Z,7.1nm,0.8s						
WMQ	Urumqi	53.37	325	*e*P	P	22 10 53.1	+1.8
WMQ				LR	LR		
	comp=Z,380nm,20.7s						
WMQ				LR	LR		
	comp=Z,360nm,21.7s						
MSVF	Nonsavu	54.17	115	LR	LR	22 31 06.3	
	comp=Z,95nm,21.0s,baz=288,slow=33						
PETK	Petropavlovsk-	55.47	22	P	P	22 11 06.4	+0.1
	comp=Z,5.2nm,0.8s,baz=206,slow=9.6,SNR=6.4						
PETK				LR	LR	22 34 46.3	
	comp=Z,72nm,19.9s,baz=220,slow=36						
PETK	Petropavlovsk-	55.47	22	P	P	22 11 05.7	-0.6
MK31	Makanchi Array	58.20	325	P	P	22 11 25.6	-0.2
MK31				IAmb	IAmb	22 11 45.6	
	comp=Z,6.8nm,1.1s						
MKAR	Makanchi Array	58.20	325	P	P	22 11 25.8	0.0
	comp=Z,2.1nm,0.5s,baz=118,slow=7.7,SNR=42						
MKAR				LR	LR	22 37 41.6	
	comp=Z,203nm,21.4s,baz=106,slow=37						
MKAR	Makanchi Array	58.20	325	P	P	22 11 25.6	-0.2
MAKZ	Makanchi	58.39	325	P	P	22 11 27.0	-0.1
MAKZ				IAmb	IAmb	22 11 56.6	
	comp=Z,5.8nm,0.8s						
YAK	Yakutsk	58.51	1	P	P	22 11 26.9	-0.7
	comp=Z,17nm,0.7s,baz=124,slow=1.0,SNR=13						
YAK	Yakutsk	58.51	1	P	P	22 11 26.9	-0.7
NIL	Nilore	58.65	308	P	P	22 11 29.1	-0.2
NIL				IAmb	IAmb	22 11 43.5	
	comp=Z,20nm,1.4s						
KDJ	Kajisay	59.03	318	P	P	22 11 31.9	0.0
BOOM	Boomskoye usch	60.01	318	P	P	22 11 39.2	+0.5
BOOM				IAmb	IAmb	22 11 42.7	
	comp=Z,15nm,1.2s						
AAK	Ala-Archa	61.04	318	P	P	22 11 45.3	-0.4
LBZ	Lake Benmore	61.05	146	P	P	22 11 45.2	-0.2
ZAA0	Zalesovo Array	61.17	333	P	P	22 11 45.3	-0.8
ZAA0				IAmb	IAmb	22 11 46.0	
	comp=Z,6.4nm,0.9s						
ZALV	Zalesovo Beam	61.17	333	P	P	22 11 45.5	-0.7
	comp=Z,4.8nm,0.7s,baz=111,slow=6.5,SNR=21						
ZALV	Zalesovo Beam	61.17	333	P	P	22 11 45.3	-0.8
SEY	Seymchan	62.19	13	P	P	22 11 54.0	+1.2
	comp=Z,2.0nm,0.7s,baz=200,slow=12,SNR=2.7						
KBL	Kabul	62.25	307	P	P	22 11 52.4	-1.6
KBL				IAmb	IAmb	22 12 10.3	
	comp=Z,5.0nm,0.8s						
KURK	Kurchatov	62.37	327	P	P	22 11 54.3	+0.1
BTK	Batken	62.62	314	P	P	22 11 56.0	-0.2
BTK				IAmb	IAmb	22 12 12.1	
	comp=Z,6.9nm,0.9s						
GAR	Garm	62.63	313	P	P	22 11 55.9	-0.5
CHGR	Chuyangaron	63.38	312	P	P	22 12 01.1	-0.2
CHGR				IAmb	IAmb	22 12 21.1	
	comp=Z,7.2nm,0.6s						
KKAR	Karatay Array	63.92	317	P	P	22 12 04.2	-0.5
BRVK	Borovoye	68.02	327	P	P	22 12 30.6	-0.3
TIXI	Tiksi	68.15	0	P	P	22 12 30.0	-1.2
TIXI				IAmb	IAmb	22 12 52.0	
	comp=Z,4.8nm,0.8s						
CASY	Casey	70.59	187	P	P	22 12 46.0	-0.3
CASY				IAmb	IAmb	22 12 48.3	
	comp=Z,11nm,1.0s						
NRIK	Noril'sk	70.90	346	P	P	22 12 48.0	-0.2
	comp=Z,5.4nm,0.8s,baz=135,slow=4.6,SNR=10						
NRIK				LR	LR	22 48 36.8	
	comp=Z,125nm,18.2s,baz=160,slow=40						
NRIK	Noril'sk	70.90	346	P	P	22 12 48.0	-0.2
NRIK				IAmb	IAmb	22 12 59.9	
	comp=Z,6.6nm,0.8s						
GEYT	Alibeck	71.62	309	P	P	22 12 54.6	+1.3
	comp=Z,1.3nm,0.5s,baz=149,slow=3.4,SNR=1.6						
GEYT	Alibeck	71.62	309	P	P	22 12 53.8	+0.4
ABKAR	Akbulak array	72.82	321	P	P	22 12 60.0	-0.2
ABKAR	Akbulak array	72.82	321	P	P	22 12 59.9	-0.3
ABKAR				IAmb	IAmb	22 13 01.2	
	comp=Z,13nm,0.8s						
AKTO	Aktyubinsk	74.33	322	P	P	22 13 09.1	0.0
	comp=Z,15nm,0.8s,baz=103,slow=6.3,SNR=51						
ARU	Arti	75.56	328	P	P	22 13 15.3	-0.7
BELG	Belogornoye	81.07	322	P	P	22 13 45.8	-0.7
	comp=Z,24nm,0.9s,baz=130,slow=2.3,SNR=4.1						
RAYN	Ar Rayn	81.23	293	P	P	22 13 47.5	-0.6
M19K	Big River Lodg	81.45	28	P	P	22 13 49.6	+1.2
ABPO	Ambohimpanom	81.84	250	P	P	22 13 51.1	-0.4
ABPO				IAmb	IAmb	22 14 05.2	
	comp=Z,5.3nm,0.8s						
J20K	Nowinta River	81.91	26	P	P	22 13 52.1	+1.3
IMAR	Indian Mountai	82.36	24	P	P	22 13 53.2	+0.1
VNDA	Vanda	83.03	173	P	P	22 13 56.5	+0.2
	comp=Z,1.8nm,0.7s,baz=313,slow=7.3,SNR=9.1						
VNDA				LR	LR	22 50 10.7	
	comp=Z,50nm,21.0s,baz=336,slow=35						

VNDA	**Vanda**	83.03	173	P	**P**	**22 13 56.7**	**+0.4**
ONI	**Oni**	83.25	312	P	**P**	**22 13 57.9**	**-0.4**
MLY	**Manley**	83.48	25	P	**P**	**22 13 58.9**	**-0.1**
MLY				IAmb	IAmb	22 14 17.2	
	comp=Z,4.3nm,1.0s						
KARS	**Kars**	83.48	310	P	**P**	**22 13 59.6**	**0.0**
KBZ	**Khabaz**	83.69	313	P	**P**	**22 14 02.5**	**+2.2**
	comp=Z,0.8nm,0.6s,baz=102,slow=4.7,SNR=2.1						
KBZ				LR	LR	22 56 55.7	
	comp=Z,50nm,18.8s,baz=57,slow=40						
COLD	**Coldfoot**	83.92	23	P	**P**	**22 14 01.6**	**+0.5**
COLD				IAmb	IAmb	22 14 03.9	
	comp=Z,8.4nm,1.0s						
SIRT	**Sirnak**	83.94	307	P	**P**	**22 14 01.5**	**-0.5**
I23K	**Minto, Yukon-K**	84.07	25	P	**P**	**22 14 02.4**	**+0.5**
I23K				IAmb	IAmb	22 14 03.2	
	comp=Z,14nm,1.2s						
GURO	**Guroymak-BITLI**	84.27	308	P	**P**	**22 14 04.2**	**+0.5**
GURO				IAmb	IAmb	22 14 20.3	
	comp=Z,6.4nm,0.8s						
TOLK	**Toolik Lake Re**	84.29	21	P	**P**	**22 14 03.9**	**+0.8**
SML	**Sawmill**	84.29	28	P	**P**	**22 14 04.8**	**+1.6**
ILAR	**Eielson Array**	85.10	25	P	**P**	**22 14 05.4**	**-1.7**
	comp=Z,0.8nm,1.0s,baz=249,slow=4.7,SNR=4.9						
ILAR				LR	LR	22 51 04.2	
	comp=Z,54nm,20.9s,baz=269,slow=35						
KLMR	**Klimovskoe**	86.01	331	*e*P	**P**	**22 14 10.8**	**-0.9**
KLMR				AMP		22 14 25.9	
	comp=Z,17nm,1.1s						
BMAR	**Burnt Mountain**	86.11	23	P	**P**	**22 14 13.5**	**+1.3**
ASF	**Jabal al Asfar**	88.64	302	P	**P**	**22 14 26.9**	**+1.7**
	comp=Z,2.9nm,0.7s,baz=100,slow=1.5,SNR=6.6						
MMAI	**Mount Meron Ar**	89.84	303	P	**P**	**22 14 33.0**	**+2.2**
	comp=Z,0.3nm,0.4s,baz=79,slow=11,SNR=2.5						
BRTR	**Keskin Array B**	90.74	310	LR	LR	23 03 33.0	
	comp=Z,38nm,18.1s,baz=66,slow=41						
ARCES	**ARCESS Array B**	90.98	340	P	**P**	**22 14 33.9**	**-1.3**
	comp=Z,7.5nm,1.0s,baz=76,slow=5.1,SNR=6.6						
ARCES				LR	LR	22 59 24.5	
	comp=Z,65nm,19.5s,baz=155,slow=38						
ARCES	**ARCESS Array B**	90.98	340	P	**P**	**22 14 35.5**	**+0.3**
SYO	**Syowa Base**	92.38	201	⇑*e*pP	P	22 14 47.4	+5.8
FINES	**FINESS Array B**	92.43	332	P	**P**	**22 14 41.9**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=82,slow=2.9,SNR=6.1						
FINES				LR	LR	22 59 35.5	
	comp=Z,155nm,20.3s,baz=76,slow=38						
AKASG	**Malin Array Be**	92.56	321	P	**P**	**22 14 41.4**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=72,slow=5.1,SNR=2.8						
AKASG				LR	LR	22 59 12.2	
	comp=Z,34nm,19.6s,baz=80,slow=37						
MLR	**Muntele Rosu**	95.59	316	LR	LR	23 03 18.6	
	comp=Z,152nm,21.5s,baz=64,slow=39						
IDI	**Anoyia**	98.22	306	LR	LR	23 07 07.3	
	comp=Z,20nm,18.5s,baz=88,slow=40						
NOA	**NORSAR Array B**	99.37	334	LR	LR	23 06 10.8	
	comp=Z,101nm,19.9s,baz=60,slow=39						
YKA	**Yellowknife Ar**	99.50	25	LR	LR	23 02 03.7	
	comp=Z,15nm,20.4s,baz=0.0,slow=37						
TORD	**Torodi Ar. Bea**	123.66	288	PKP	**PKiKP**	**22 20 30.2**	**0.0**
	comp=Z,1.1nm,0.8s,baz=48,slow=2.4,SNR=8.5						
TORD	**Torodi Ar. Bea**	123.66	288		**PKPdf**	**22 20 28.7**	**-1.3**

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*INET **16** 22:08:25.0, 11°.92N×89°.05W, h15^{km}, MW3.3*
*UCR **16** 22:08:28.4±1.4, 11°.87N×88°.89W, h34^{km}±23^{km}, ML3.6, MW3.2*
*SNET **16** 22:08:28.2±1.1, 11°.89N×88°.79W, h35^{km}±999^{km}, ML3.8*
ISC 16 22:08:28.7±2.3**, 11°.9N**±0°.2×**88°.9W**±0°.2**, h41**^{km}**, n27, σ0^{s}.66**/34**, 1C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LFRS	**El Faro**	1.77	355	*e*P	**Pn**	**22 08 55.9**	**-1.1**
LFRS	**El Faro**	1.77	355	*e*P	**Pn**	**22 08 55.9**	**-1.1**
PAVA	**Las Pavas**	1.85	359	*e*P	**Pn**	**22 08 57.3**	**-0.9**
PAVA	**Las Pavas**	1.85	359	*e*P	**Pn**	**22 08 57.3**	**-0.9**
JAYA	**Jayaque - finc**	1.88	343	*e*P	**Pn**	**22 08 57.9**	**-0.6**
JAYA				IAML		22 09 24.0	
	comp=Z,1µm,0.2s						
JAYA	**Jayaque - finc**	1.88	343	*e*P	**Pn**	**22 08 57.9**	**-0.6**
JAYA				IAML		22 09 24.0	
	comp=Z,1µm,0.2s						
BOQS	**Boqueron**	1.91	349	*e*P	**Pn**	**22 08 58.9**	**-0.2**
BOQS	**Boqueron**	1.91	349	*e*P	**Pn**	**22 08 58.9**	**-0.2**
SBLS	**San Blas**	2.10	340	*e*P	**Pn**	**22 09 01.5**	**-0.1**
SBLS	**San Blas**	2.10	340	*e*P	**Pn**	**22 09 01.5**	**-0.1**
SNJE	**San Jose**	2.12	341	*e*P	**Pn**	**22 09 02.0**	**0.0**
SNJE	**San Jose**	2.12	341	*e*P	**Pn**	**22 09 02.0**	**0.0**
TACO	**Tacachico**	2.16	348	*e*P	**Pn**	**22 09 01.9**	**-0.3**
TACO				*e*S	**Sn**	**22 09 27.8**	**0.0**
TACO	**Tacachico**	2.16	348	*e*P	**Pn**	**22 09 01.9**	**-0.3**
TACO				*e*S	**Sn**	**22 09 27.8**	**0.0**
RTR	**El Retiro**	2.17	340	*e*P	**Pn**	**22 09 02.8**	**+0.3**
RTR	**El Retiro**	2.17	340	*e*P	**Pn**	**22 09 02.8**	**+0.3**
NUBE	**Las Nubes**	2.22	337	*e*P	**Pn**	**22 09 02.7**	**-0.4**
NUBE				*e*S	**Sn**	**22 09 28.9**	**-0.5**
NUBE				IAML		22 09 32.2	
	comp=Z,348nm,0.3s						
NUBE	**Las Nubes**	2.22	337	*e*P	**Pn**	**22 09 02.7**	**-0.4**
NUBE				*e*S	**Sn**	**22 09 28.9**	**-0.5**
NUBE				IAML		22 09 32.2	
	comp=Z,348nm,0.3s						
SLOZ	**Alcaldia de Sa**	2.33	338	*e*P	**Pn**	**22 09 05.4**	**+0.7**
MTO3	**Montecristo**	2.58	350	*e*P	**Pn**	**22 09 08.2**	**0.0**
MTO3				*e*S	**Sn**	**22 09 40.0**	**+1.6**
MTO3	**Montecristo**	2.58	350	*e*P	**Pn**	**22 09 08.2**	**0.0**
MTO3				*e*S	**Sn**	**22 09 40.0**	**+1.6**
GBS3	**Finca Las Img**	3.54	107	⇑*i*P	**Pn**	**22 09 21.2**	**0.0**
LAPC	**Finca la Perla**	3.56	107	*i* P	**Pn**	**22 09 21.4**	**-0.1**
LAPC				*i* S	**Sn**	**22 10 02.1**	**-0.3**
BUEV	**Buena Vista**	3.58	107	*i* P	**Pn**	**22 09 22.2**	**+0.4**
GUAI	**GUAI**	3.67	115	*i* P	**Pn**	**22 09 22.0**	**-1.0**
CUI	**Cuipilapa**	3.85	108	*i* P	**Pn**	**22 09 25.9**	**+0.4**
ACAL	**Aguas Claras**	3.97	107	*i* P	**Pn**	**22 09 27.7**	**+0.5**

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*DDA **16** 22:15:09.1, 39°.94N×33°.23E, h7^{km}±2^{km}, MW3.6*
*CFUSG **16** 22:15:09.3, 39°.98N×33°.21E, h8^{km}, mb2.6/2, MD3.1/2, Central Turkey Magtype MSH 2.4 from 2 stations*
*IDC **16** 22:15:09.1±0.7, 40°.04N×33°.33E, h0^{km}, mb3.6/6, mb1 3.6/12, mb1mx3.5/41, mbtmp3.5/12, ML3.2/5, MS3.1/4, Ms1 3.2/4, ms1mx2.5/38, Error ellipse: s-maj=14.0km s-min=5.7km az=58.0*
ISC 16 22:15:09.7±1.1**, 39°.96N**±0°.03×**33°.24E**±0°.03**, h8**^{km}±9^{km}**, n37, σ1^{s}.30**/38**, mb3.5**/5**, 7C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	0.38	127	Pg	**Pg**	**22 15 17.0**	**-0.3**
	222nm,0.3s,baz=302,slow=15,SNR=1137						
BRTR				Lg	Lg	22 15 22.8	
	936nm,0.3s,baz=301,slow=26,SNR=27						
BBAL	**Bala**	0.42	192	*i* P	**Pg**	**22 15 17.4**	**-0.6**
BBAL				*i* S	**Sg**	**22 15 23.9**	**+0.4**
BBAL				IAML		22 15 24.0	
	comp=N,4µm,0.6s						
BBAL				IAML		22 15 24.0	
	comp=E,4µm,0.5s						
DELI	**KIRIKKALE**	0.53	85	*i* P	**Pg**	**22 15 19.7**	**-0.3**
DELI				IAML		22 15 27.0	
	comp=E,1µm,0.3s						
DELI				IAML		22 15 28.0	
	comp=N,2µm,0.3s						
ELDT	**Eldivan**	0.55	15	*i* P	**Pg**	**22 15 20.0**	**-0.5**
ELDT				IAML		22 15 29.0	
	comp=N,7µm,0.6s						
ELDT				*i* S	**Sb**	**22 15 29.1**	**-0.8**
CMDR	**Camlidere-ANKA**	0.80	313	*i* P	**Pg**	**22 15 24.4**	**-0.7**
CMDR				*i* S	**Sb**	**22 15 36.2**	**-0.6**
CMDR				IAML		22 15 37.0	
	comp=N,1µm,0.6s						
CMDR				IAML		22 15 43.0	
	comp=E,1µm,0.4s						
KKUL	**Konya-Kulu**	0.82	198	*i* P	**Pg**	**22 15 24.8**	**-0.8**
KKUL				*i* S	**Sg**	**22 15 36.7**	**+0.5**
KKUL				IAML		22 15 37.0	
	comp=N,1µm,0.5s						
KKUL				IAML		22 15 42.0	
	comp=E,1µm,0.6s						
CDAG	**Cicekdag**	0.93	110	*i* P	**Pg**	**22 15 26.8**	**-0.9**
CDAG				IAML		22 15 45.0	
	comp=N,2µm,0.5s						
CDAG				IAML		22 15 45.0	
	comp=E,2µm,0.3s						
KIRS	**Kırehir-Merke**	0.97	147	*i* P	**Pg**	**22 15 27.0**	**-1.5**
KIRS				IAML		22 15 45.0	
	comp=N,972nm,0.9s						
KIRS				IAML		22 15 45.0	
	comp=E,2µm,0.6s						
KIBS	**BOLU**	1.16	294	*i* P	**Pn**	**22 15 31.5**	**-0.8**
KIBS				IAML		22 15 50.0	
	comp=N,820nm,1.3s						
KIBS				IAML		22 15 51.0	
	comp=E,1µm,0.6s						
BCAM	**Yenicaga**	1.24	314	*i* P	**Pg**	**22 15 32.3**	**-1.3**
BCAM				IAML		22 15 52.0	
	comp=E,666nm,0.5s						
BCAM				IAML		22 15 53.0	
	comp=N,629nm,0.5s						
AKSY	**AKSARAY - Alti**	1.36	163	*i* P	**Pn**	**22 15 34.2**	**-1.0**
AKSY				IAML		22 15 57.0	
	comp=N,1µm,0.4s						
AKSY				IAML		22 15 57.0	
	comp=E,816nm,0.4s						
AUSIV	**SIVRIHISAR**	1.41	249	*i* P	**Pn**	**22 15 35.1**	**-0.6**
AUSIV				IAML		22 15 59.0	
	comp=N,766nm,0.7s						
AUSIV				IAML		22 15 59.0	
	comp=E,445nm,0.5s						
KDZE	**Karadeniz Ereo**	1.93	315	⇓P	**Pg**	**22 15 45.2**	**-1.5**
KDZE				⇑S	**Sg**	**22 16 11.9**	**+0.3**
BZK	**Bozkurt**	2.08	16	⇑P	**Pg**	**22 15 48.2**	**-1.5**
BZK				⇑S	**Sg**	**22 16 19.2**	**+2.5**
SEV	**Sevastopol'**	4.60	4	*e*P	**Pn**	**22 16 18.6**	**-0.9**
SEV				Pm		22 16 24.5	
	comp=Z,3.0nm,0.3s						
SEV				Sm		22 17 13.4	
	comp=N,4.0nm,0.4s,comp=E,2.0nm,0.4s						
SEV				*e*S	**Sn**	**22 17 13.0**	**0.0**
TIRR	**Tirgusor**	5.75	323	⇓P	Pn	22 16 40.3	+5.0
TPGR	**Topolog**	6.06	326	⇑P	Pn	22 16 45.2	+5.6
CFR	**Carcaliu**	6.44	326	⇑P	**Pn**	**22 16 45.8**	**+1.1**
MMAI	**Mount Meron Ar**	7.14	165	Pn	**Pn**	**22 16 55.0**	**+0.5**
	comp=E,0.9nm,0.3s,baz=349,slow=13,SNR=4.9						
MMAI				LR	LR	22 20 32.0	
	comp=E,43nm,18.7s,baz=205,slow=45						
MLR	**Muntele Rosu**	7.71	318	⇓P	Pn	22 17 07.4	+5.1
MLR	**Muntele Rosu**	7.71	318	Pn	**Pn**	**22 17 03.4**	**+1.1**
	baz=123,slow=17						
MLR				Sn	**Sn**	**22 18 28.5**	**-1.3**
	comp=E,0.0nm,0.3s,baz=217,slow=15,SNR=1.3						
COVR	**Voineasa-Covas**	7.83	321	⇑P	**Pn**	**22 17 07.5**	**+3.6**
IDI	**Anoyia**	8.10	238	Pn	**Pn**	**22 17 10.0**	**+2.3**
	comp=E,0.8nm,0.3s,baz=55,slow=12,SNR=1.8						
KVAR	**Kislovodsk Arr**	8.10	57	Pn	**Pn**	**22 17 09.0**	**+1.3**
	baz=266,slow=18,SNR=2.8						
KBZ	**Khabaz**	8.13	59	Pn	**Pn**	**22 17 09.1**	**+1.1**
	comp=E,0.1nm,0.3s,baz=253,slow=11,SNR=1.9						
GNI	**Garni**	8.82	85	LR	LR	22 20 19.9	
	comp=E,23nm,19.2s,baz=264,slow=36						
SORM	**Soroca**	8.90	338	⇑P	**Pn**	**22 17 18.6**	**+0.1**
BURAR	**Bucovina Array**	9.60	326	⇓P	**Pn**	**22 17 30.4**	**+2.1**
AKASG	**Malin Array Be**	11.11	347	Pn	**Pn**	**22 17 47.2**	**-1.6**
	comp=E,0.5nm,0.3s,baz=168,slow=13,SNR=2.5						
AKTO	**Aktyubinsk**	20.27	51	P	Pn	22 19 46.0	-1.5
	comp=E,4.0nm,0.8s,baz=263,slow=13,SNR=9.7						
FINES	**FINESS Array B**	21.96	351	P	**P**	**22 20 03.3**	**-0.3**
	comp=E,2.5nm,0.9s,baz=182,slow=12,SNR=1.5						
ARU	**Arti**	23.39	37	P	**P**	**22 20 17.5**	**-1.2**
	comp=E,0.6nm,0.6s,baz=259,slow=15,SNR=4.3						
MKAR	**Makanchi Array**	35.82	62	P	**P**	**22 22 09.5**	**0.0**
	comp=E,1.1nm,1.1s,baz=267,slow=9.6,SNR=1.7						
ZALV	**Zalesovo Beam**	37.03	50	P	**P**	**22 22 19.8**	**+0.1**
	comp=E,0.5nm,0.6s,baz=284,slow=7.3,SNR=2.1						
TORD	**Torodi Ar. Bea**	38.49	235	P	**P**	**22 22 34.1**	**+1.7**
	comp=E,0.7nm,0.7s,baz=36,slow=8.6,SNR=5.0						
BOSA	**Boshof**	68.62	188	LR	LR	23 00 14.3	
	comp=E,50nm,19.8s,baz=166,slow=39						
ULM	**Lac du Bonnet**	79.68	330	LR	LR	23 02 52.7	
	comp=E,72nm,21.1s,baz=308,slow=36						

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*TUL **16** 22:17:25.1±1.2, 36°.00N±0°.01×97°.30W±0°.02, h6^{km}±7^{km}, ML2.7, mb_Lg2.5/17(NEIC), Error ellipse: s-maj=1.8km s-min=1.6km az=113.0*
NEIC 16 22:17:25.4±0.8**, 36°.01N**±0°.01×**97°.30W**±0°.02**, h4**^{km}±7^{km}**, Error ellipse: s-maj=1.9km s-min=1.6km az=100.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK031	**S. Brethren Rd**	0.38	98	Pg	Pg	22 17 32.8	+0.1
OK031				Sg	Sg	22 17 38.2	+0.5
OK025	**Westminster Rd**	0.43	184	Pg	Pg	22 17 33.6	0.0
BCOK	**Bluff Creek, N**	0.43	215	Pg	Pg	22 17 33.6	0.0
BCOK				Sg	Sg	22 17 39.7	+0.5
OK001	**Jones High Sch**	0.45	179	Pg	Pg	22 17 34.0	0.0
OK034	**N. Norfolk Rd.**	0.48	90	Pg	Pg	22 17 34.6	0.0
OK034				Sg	Sg	22 17 41.4	+0.6
QUOK	**Quay**	0.51	71	Pg	Pg	22 17 35.2	+0.1
QUOK				Sg	Sg	22 17 42.2	+0.5
OKCFA	**Oklahoma City**	0.60	192		Pg	22 17 36.8	-0.2
OKCSW	**OKLAHOMA CITY**	0.61	190	Pg	Pg	22 17 36.9	-0.2
CROK	**Carrier**	0.74	312		Pg	22 17 39.5	0.0
CROK				Sg	Sg	22 17 49.8	+0.6
BLOK	**Blackwell**	0.75	5	Pg	Pg	22 17 39.8	0.0
FNO	**Franklin**	0.76	186	Pg	Pg	22 17 39.4	-0.5
FNO				IAmb_Lg		22 17 49.2	
	comp=Z,46nm,1.0s						
W35A	**Tecumseh**	0.92	158	Pg	Pg	22 17 42.4	-0.7
GC02	**Grant County #**	0.95	332		Pg	22 17 43.4	-0.2
GC02				Sg	Sg	22 17 56.4	+0.4
KAN13	**South Haven SW**	1.01	352	Pg	Pg	22 17 44.5	-0.3
OK032	**Salt Plains WL**	1.08	318	Pg	Pg	22 17 45.8	-0.3
KAN14	**Manchester OK**	1.08	331		Pg	22 17 45.7	-0.4
KAN17	**Caldwell West**	1.10	340		Pg	22 17 46.3	-0.2
T35A	**Sooner Cattle**	1.11	35		Pg	22 17 46.1	-0.5
KAN09	**Caldwell North**	1.15	347	Pg	Pg	22 17 47.0	-0.5
KAN01	**Argonia South**	1.20	342		Pg	22 17 48.0	-0.4
TUL1	**Leonard**	1.23	94		Pg	22 17 47.5	-1.5
KAN10	**Anthony SW Sta**	1.28	330		Pg	22 17 49.3	-0.7
KAN06	**Argonia West S**	1.31	340		Pn	22 17 49.9	-0.6
KAN16	**Harper SW Stat**	1.36	333	Pn	Pn	22 17 50.5	-0.6
KAN12	**Harper NE Stat**	1.40	337	Pn	Pn	22 17 51.7	0.0
U32A	**Winter Ranch,**	1.42	286		Pn	22 17 51.5	-0.5
X34A	**Smith Ranch, M**	1.47	197		Pn	22 17 52.6	-0.1
LOOK	**Love County**	2.02	177	Pn	Pn	22 18 00.8	+0.7
X37A	**Clayton**	2.12	131	Pn	Pn	22 18 01.9	+0.3
U38A	**Gravette**	2.40	79		Pn	22 18 05.6	+0.2
W39A	**Magazine**	2.98	105		Pn	22 18 13.5	+0.1
MIAR	**Mount Ida**	3.38	115		Pn	22 18 19.0	+0.1
CBKS	**Cedar Bluff**	3.40	326	IAmb_Lg		22 19 18.2	
	comp=Z,14nm,0.9s						
S39A	**Bolivar**	3.61	61	Pn	Pn	22 18 22.2	+0.2
S39A				IAmb_Lg		22 19 27.7	
	comp=Z,8.1nm,0.7s						
U40A	**Yellville**	3.62	83	Pn	Pn	22 18 22.2	+0.1
X40A	**Basin Creek Fa**	3.96	111		Pn	22 18 27.3	+0.4
X40A				IAmb_Lg		22 19 32.7	
	comp=Z,9.4nm,0.8s						
WHAR	**Wooly Hollow**	4.15	99	Pn	Pn	22 18 29.6	+0.2
R40A	**Maddies Statio**	4.62	59	Pn	Pn	22 18 36.0	+0.1
R40A				IAmb_Lg		22 19 57.3	
	comp=Z,11nm,0.9s						
P38A	**Dawn**	4.68	38	IAmb_Lg		22 20 02.6	
	comp=Z,10nm,1.0s						
CCM	**Cathedral Cave**	5.26	65	IAmb_Lg		22 20 10.7	
	comp=Z,8.7nm,0.8s						
PBMO	**Poplar Bluff**	5.60	80	IAmb_Lg		22 20 23.6	
	comp=Z,7.2nm,0.9s						

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*HVO **16** 22:23:28.4±0.3, 19°.33N±0°.06×155°.12W±0°.04, h7^{km}±4^{km}, ML3.9/38, ML3.8/46(NEIC), Error ellipse: s-maj=8.9km s-min=4.9km az=178.0*
NEIC 16 22:23:26.2±0.4**, 19°.3N**±0°.3×**155°.1W**±0°.4**, h21**^{km}±14^{km}**, Error ellipse: s-maj=62.6km s-min=22.5km az=60.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCUZ	**Jacuzzi**	0.11	331		Pb	22 23 30.5	-2.4
JCUZ				Sg	Sb	22 23 32.1	-5.5
NPOC	**North of Pu‘u**	0.12	330		Pb	22 23 30.6	-2.1
NPOC				Sg	Sb	22 23 32.2	-5.0
STCH	**Steam Cracks**	0.12	322	Pg	Pb	22 23 30.4	-2.2
PUH	**Pauahi**	0.18	298	Pg	Pb	22 23 31.1	-1.2
PUH				IAML		22 23 33.6	
	comp=N,43µm,0.6s						
KKO	**Keanakako`i**	0.23	298	Pg	Pb	22 23 31.9	-0.4
KKO				IAML		22 23 36.5	
	comp=E,20µm,0.3s						
KKO				IAML		22 23 36.7	
	comp=N,31µm,0.5s						
BYL	**Byron's Ledge**	0.24	301	Pg	Pb	22 23 32.0	-0.4
RIM	**Rim**	0.24	296	Pg	Pb	22 23 32.0	-0.4
RIM				IAML		22 23 36.8	
	comp=E,34µm,0.5s						
HATHI	**Halema‘uma‘u T**	0.24	303	Pg	Pb	22 23 32.0	-0.4
HATHI				IAML		22 23 36.9	
	comp=N,26µm,0.4s						
HATHI				IAML		22 23 37.1	
	comp=E,31µm,0.6s						
HLP	**Hilina Pali**	0.25	272	Pg	Pb	22 23 32.6	+0.2
HLP				IAML		22 23 37.6	
	comp=E,18µm,0.5s						
HLP				IAML		22 23 37.7	
	comp=N,31µm,0.2s						
SBLHI	**Steaming Bluff**	0.25	303	Pg	Pb	22 23 32.1	-0.4
SBLHI				IAML		22 23 37.5	
	comp=N,29µm,0.3s						
NPH	**North Pit**	0.25	299	Pg	Pb	22 23 32.1	-0.4
SDHHI	**Sand Hill**	0.26	293	Pg	Pb	22 23 32.2	-0.3
SDHHI				IAML		22 23 37.2	
	comp=E,32µm,0.4s						
SDHHI				IAML		22 23 37.2	
	comp=N,31µm,0.4s						
UWB	**Uwekahuna B**	0.26	302	Pg	Pb	22 23 32.2	-0.4
UWB				IAML		22 23 37.0	
	comp=N,16µm,0.9s						
OBL	**Observatory Le**	0.26	300	Pg	Pb	22 23 32.3	-0.2
OBL				IAML		22 23 37.7	
	comp=N,23µm,0.5s						
OBL				IAML		22 23 38.0	
	comp=E,29µm,0.5s						
WRMHI	**West Rim**	0.27	296	Pg	Pb	22 23 32.3	-0.3
WRMHI				IAML		22 23 37.7	
	comp=E,29µm,0.7s						
WRMHI				IAML		22 23 38.0	
	comp=N,18µm,0.6s						
UWE	**Uwekahuna**	0.27	299	Pg	Pb	22 23 32.5	-0.2
UWE				IAML		22 23 37.9	
	comp=E,26µm,0.6s						
UWE				IAML		22 23 37.9	
	comp=N,18µm,0.7s						
RSD	**Rainshed**	0.28	308		Pb	22 23 32.6	-0.1
MLH	**Mauna Loa**	0.38	302	Pg	Pb	22 23 34.5	+0.2
MLH				IAML		22 23 42.9	
	comp=E,16µm,0.3s						
MLH				IAML		22 23 44.4	
	comp=N,12µm,0.3s						
HMH	**Humu‘ula Sheep**	0.52	307	Pg	Pb	22 23 37.3	+0.5
MWH	**Moku‘aweowe**	0.56	291	Pg	Pb	22 23 37.7	0.0
MLOA	**Mauna Loa Obse**	0.56	296	Pg	Pb	22 23 37.7	0.0
POHA	**Pohakuloa**	0.66	316	IAML		22 23 49.4	
	comp=N,5µm,0.3s						
POHA				IAML		22 23 49.7	
	comp=N,6µm,0.3s						
POHA	**Pohakuloa**	0.66	316	Pg	Pb	22 23 39.0	-0.2
HUH	**Hualalai**	0.84	298	Pg	Pb	22 23 41.9	-0.4
KHLU	**Kahalu`u**	0.85	291		Pb	22 23 41.6	-0.8
HPAH	**Hawaii Prepara**	0.96	320	Pg	Pb	22 23 43.2	-1.0
HLK	**Haleakala**	1.85	322		Pn	22 23 55.4	-1.5
KHLH	**Kahului Airpor**	2.06	321		Pn	22 24 00.5	+1.0
WMR	**Waimanalo Ridg**	3.20	310	Pn	Pn	22 24 13.9	-1.3
HON	**Honolulu**	3.44	307	Pn	Pn	22 24 16.9	-1.5
KIP	**Kipapa**	3.50	308	IAML		22 24 59.9	
	comp=N,173nm,1.7s						
KIP				IAML		22 25 50.9	
	comp=N,203nm,4.5s						
KIP	**Kipapa**	3.50	308	Pn	Pn	22 24 20.1	+0.6
KEKH	**Kekaha**	5.13	302	Pn	Pn	22 24 41.5	-0.3

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*NEIC **16** 22:26:13.0±1.7, 20°.97S±0°.05×178°.6W±0°.2, h589^{km}±8^{km}, mb4.4/31, Error ellipse: s-maj=21.1km s-min=6.3km az=78.0*
*IDC **16** 22:26:14.3±1.6, 21°.08S×178°.77W, h605^{km}±14^{km}, mb3.4/6, mb1 3.6/9, mb1mx3.3/23, mbtmp4.4/9, Error ellipse: s-maj=28.6km s-min=16.9km az=141.0*
ISC 16 22:26:12.1±0.7**, 20°.9S**±0°.1×**178°.7W**±0°.1**, h579**^{km}**, n58, σ1^{s}.01**/57**, mb4.4**/21**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	4.42	316	P	P	22 27 43.8	+4.4
	28nm,0.3s,baz=132,slow=16,SNR=130						
MSVF	**Nonsavu**	4.42	316	P	P	22 27 44.1	+4.7
MARNC	**Mare, Loyalty**	12.38	265	P	**P**	**22 28 55.7**	**+1.1**
PINNC	**Pines Island,**	12.97	260	P	**P**	**22 29 01.9**	**+1.2**
DZM	**Mont Dzumac**	13.86	263	P	**P**	**22 29 13.0**	**+3.0**
	0.5nm,0.3s,baz=92,slow=18,SNR=5.6						
DZM	**Mont Dzumac**	13.86	263	P	**P**	**22 29 10.8**	**+0.7**
URZ	**Urewera**	17.63	191	P	**P**	**22 29 44.5**	**-0.6**
	1.4nm,0.3s,baz=299,slow=23,SNR=10						
URZ	**Urewera**	17.63	191	P	**P**	**22 29 44.2**	**-0.8**
URZ				IAmb	IAmb	22 29 53.9	
	comp=Z,19nm,1.2s						
BKZ	**Black Stump Fm**	18.62	192	P	**P**	**22 29 52.9**	**-1.3**
BKZ				IAmb	IAmb	22 30 01.0	
	comp=Z,11nm,1.3s						
WHZ	**Wether Hill Ro**	27.18	201	P	**P**	**22 31 11.6**	**+1.2**
EIDS	**Eidsvold**	28.09	255	P	**P**	**22 31 18.7**	**+0.2**
EIDS				IAmb	IAmb	22 31 18.9	
	comp=Z,22nm,1.5s						
ARMA	**Armidale**	28.27	244	P	**P**	**22 31 21.2**	**+1.0**
ARMA				IAmb	IAmb	22 31 48.1	
	comp=Z,20nm,1.4s						
CTAO	**Charters Tower**	32.78	265	P	**P**	**22 31 59.2**	**+0.4**
TOO	**Toolangi**	35.10	234	P	**P**	**22 32 18.7**	**+0.7**
TOO				IAmb	IAmb	22 32 20.2	
	comp=Z,13nm,1.4s						
COEN	**Coen**	36.95	275	P	**P**	**22 32 33.9**	**+0.4**
COEN				IAmb	IAmb	22 32 35.2	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	37.00	245	P	**P**	**22 32 34.3**	**+0.6**
	comp=Z,1.6nm,0.4s,baz=80,slow=12,SNR=6.2						
STKA	**Stephens Creek**	37.00	245	P	**P**	**22 32 34.2**	**+0.5**
BBOO	**Buckleboo**	41.75	244	P	**P**	**22 33 11.7**	**-0.1**
BBOO				IAmb	IAmb	22 33 12.5	
	comp=Z,4.8nm,0.7s						
WR0	**Warramunga Arr**	43.69	263	P	**P**	**22 33 26.6**	**-0.5**
WR0				IAmb	IAmb	22 33 27.7	
	comp=Z,6.2nm,0.3s						
AS31	**Alice Springs**	43.77	257	P	**P**	**22 33 27.7**	**0.0**
ASAR	**Alice Springs**	43.77	257	P	**P**	**22 33 27.8**	**+0.1**
	comp=Z,8.6nm,0.6s,baz=97,slow=7.7,SNR=136						
ASAR				PcP	**PcP**	**22 35 01.1**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=98,slow=3.8,SNR=6.1						
ASAR				ScP	**ScP**	**22 37 57.6**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=113,slow=4.7,SNR=6.0						
ASAR				S	**S**	**22 39 13.1**	**-4.0**
	comp=Z,0.8nm,0.7s,baz=90,slow=17,SNR=5.9						
ASAR	**Alice Springs**	43.77	257	P	**P**	**22 33 27.9**	**+0.2**
WRA	**Warramunga Arr**	43.88	263	P	**P**	**22 33 28.0**	**-0.5**
	comp=Z,2.7nm,0.3s,baz=100,slow=7.7,SNR=69						
WRA				ScP	**ScP**	**22 37 57.8**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=98,slow=3.7,SNR=2.1						
WRA	**Warramunga Arr**	43.88	263	P	**P**	**22 33 27.6**	**-0.9**
MTN	**Manton Dam**	48.50	271	P	**P**	**22 34 03.1**	**-0.4**
MTN				IAmb	IAmb	22 34 04.2	
	comp=Z,12nm,0.6s						
FORT	**Forrest**	48.51	247	P	**P**	**22 34 02.7**	**-0.6**
FORT				IAmb	IAmb	22 34 03.3	
	comp=Z,11nm,0.8s						
KNRA	**Kununurra**	49.97	267	P	**P**	**22 34 14.1**	**-0.2**
SOEI	**Soe**	55.85	272	P	**P**	**22 34 56.7**	**+0.4**
PSA00	**Pilbara Seismi**	56.92	257	P	**P**	**22 35 02.6**	**-0.8**
PSA00	**Pilbara Seismi**	56.92	257	P	**P**	**22 35 02.8**	**-0.6**
PSA00				IAmb	IAmb	22 35 03.5	
	comp=Z,8.4nm,0.8s						
MORW	**Morawa**	59.04	248	P	**P**	**22 35 17.2**	**-0.4**
MORW				IAmb	IAmb	22 35 42.5	
	comp=Z,21nm,1.4s						
TOLI2	**Tolitoli**	63.05	282	P	**P**	**22 35 44.5**	**+0.6**
TOLI2				IAmb	IAmb	22 35 59.2	
	comp=Z,10.0nm,1.0s						
TPUB	**Ta-pu**	73.66	303	P	**P**	**22 36 47.0**	**-0.9**
SSLB	**Suanglung**	73.67	304	P	**P**	**22 36 47.0**	**-0.9**
SMAI	**San Martin Ant**	78.43	159	P	**P**	**22 37 14.2**	**+0.9**
USRK	**Ussuriysk Ar.**	78.96	326	P	**P**	**22 37 17.9**	**+1.4**

	comp=Z,1.4nm,0.7s,baz=151,slow=3.3,SNR=4.1						
USRK	Ussuriysk Ar.	78.96	326	P	P	22 37 17.4	+1.0
GSI	Gunungsitoli	84.59	273		P	22 37 46.5	+0.6
GSI				IAmb	IAmb	22 37 47.4	
	comp=Z,14nm,1.3s						
SCM	Sheep Creek Mo	86.23	14	P	P	22 37 52.9	+0.3
CAST	Castle Rocks	86.64	12	P	P	22 37 54.0	-0.4
GLB	Gilahina Butte	86.75	16	P	P	22 37 55.3	+0.3
GLB				IAmb	IAmb	22 38 04.7	
	comp=Z,10nm,1.3s						
TRF	Thorofare Moun	87.02	12	P	P	22 37 56.1	-0.3
TRF				IAmb	IAmb	22 37 57.9	
	comp=Z,12nm,1.2s						
SNAA	Sanae	87.58	179	P	P	22 37 59.1	+0.1
SNAA				IAmb	IAmb	22 38 03.5	
	comp=Z,3.9nm,1.2s						
HDA	Harding Lake	88.56	13	P	P	22 38 03.2	-0.2
HDA				IAmb	IAmb	22 38 15.2	
	comp=Z,7.6nm,1.3s						
IMAR	Indian Mountai	88.71	10	P	P	22 38 04.2	+0.2
ILAR	Eielson Array	88.89	13	P	P	22 38 04.5	-0.4
	comp=Z,0.4nm,0.5s,baz=227,slow=5.2,SNR=6.7						
ILAR	Eielson Array	88.89	13	P	P	22 38 04.7	-0.2
CMAR	Chiang Mai Arr	89.64	290	P	P	22 38 10.8	+1.3
	comp=Z,0.8nm,0.5s,baz=121,slow=2.7,SNR=7.1						
ARCES	ARCESS Array B	129.23	349	PKP	PKPdf	22 44 13.7	-0.8
	comp=Z,5.9nm,0.9s,baz=25,slow=1.3,SNR=4.9						
FINES	FINESS Array B	136.01	343	PKP	PKPdf	22 44 27.3	-0.1
	comp=Z,3.2nm,1.1s,baz=73,slow=4.7,SNR=4.7						
AKASG	Malin Array Be	143.07	330	PKP	PKPab	22 44 37.5	-0.8
	comp=Z,4.9nm,0.4s,baz=44,slow=4.3,SNR=33						
AKASG	Malin Array Be	143.07	330		PKPbc	22 44 37.8	-1.0
AKBB	Malin Array Si	143.07	330		PKPab	22 44 37.6	-0.8
BRTR	Keskin Array B	146.64	311	PKPbc	PKPbc	22 44 48.7	-1.2
	comp=Z,1.9nm,0.6s,baz=140,slow=5.2,SNR=3.6						
BUR08	Bucovina Ar. S	147.10	330		PKPbc	22 44 50.6	-0.2
CLL	Collm	148.34	346	i PKPbc	PKiKP	22 44 53.4	-1.4
GERES	GERESS Array B	150.44	343	PKPbc	PKiKP	22 44 58.3	-1.1
	comp=Z,1.0nm,0.7s,baz=22,slow=3.2,SNR=8.8						
GERES	GERESS Array B	150.44	343		PKPbc	22 44 58.0	-1.0

ISK ***16*** *22:28:21.2, 35°.76N×31°.09E, h7^{km}, ML2.7/8*
NIC ***16*** *22:28:23.3±0.0, 35°.76N×31°.03E, h17^{km}±3^{km}, Ml2.8/5*
DDA ***16*** *22:28:23.8, 35°.91N×31°.17E, h7^{km}±4^{km}, ML2.4*
ISC 16 22:28:22.0±1.5**, 35°.78N**±0°.04×**31°.09E**±0°.03**, h3**^{km}±12^{km}**,**
n26, σ0^{s}80/39**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.81	312	i P	Pg	22 28 38.5	+1.0
AKUM				i S	Sb	22 28 51.5	+1.4
AKUM				IAML		22 28 54.0	
	comp=E,192nm,0.3s						
KEMT	Kemer-ANTALYA	0.93	332	PG	Pg	22 28 39.9	+0.1
KEMT				SG	Sg	22 28 53.4	+1.6
GAZI	Gazipasa	1.09	65	i P	Pg	22 28 43.1	+0.2
GAZI				i S	Sg	22 28 56.7	-0.4
GAZI				IAML		22 28 59.0	
	comp=E,93nm,0.2s						
GAZI	Gazipasa	1.09	65	PN	Pg	22 28 42.9	-0.1
ANTB	Antalya	1.17	343	PN	Pg	22 28 44.1	-0.3
KEPZ	Antalya-Kepez	1.19	20	i P	Pg	22 28 43.6	-1.3
KEPZ				i S	Sg	22 28 59.6	-0.8
KEPZ				IAML		22 29 02.0	
	comp=N,88nm,0.4s						
KEPZ				IAML		22 29 04.0	
	comp=E,90nm,0.8s						
AKMS	Akamas	1.27	127	P	Pn	22 28 47.1	+0.4
AKMS				S	Sn	22 29 05.3	+1.0
AKMS				AML	AML	22 29 12.2	
	comp=E,0.6nm,0.8s						
AKMS				AML	AML	22 29 12.2	
	comp=E,0.6nm,0.8s						
AKMS				AML	AML	22 29 14.4	
	comp=E,0.9nm,0.5s						
AKMS				AML	AML	22 29 14.4	
	comp=E,0.9nm,0.5s						
KSL	Kastellorizon	1.28	287	P	Pn	22 28 45.6	-1.1
KSL				S	Sb	22 29 02.5	-1.0
KSL				AML	AML	22 29 10.9	
	comp=E,0.2nm,0.5s						
KSL				AML	AML	22 29 10.9	
	comp=E,0.2nm,0.5s						
KSL				AML	AML	22 29 11.4	
	comp=E,0.3nm,0.5s						
KSL				AML	AML	22 29 11.4	
	comp=E,0.3nm,0.5s						
AKAS	Kas	1.28	291	PN	Pn	22 28 46.2	-0.8
AKAS				SN	Sb	22 29 04.6	+0.7
KORT	Korkueli	1.35	334	i P	Pn	22 28 47.9	-0.1
KORT				IAML		22 29 15.0	
	comp=N,92nm,0.8s						
KORT	Korkueli	1.35	334	PN	Pn	22 28 47.6	-0.4
ELL	Elmali	1.36	316	PN	Pn	22 28 47.5	-0.5
ELL				SN	Sb	22 29 06.7	+0.8
ELL	Elmali	1.36	316	P	Pn	22 28 47.6	-0.5
ELL				S	Sb	22 29 05.6	-0.3
ALFC	Alefka	1.38	116	P	Pn	22 28 47.7	-0.6
ALFC				S	Sb	22 29 07.1	+0.5
ALFC				AML	AML	22 29 14.9	
	comp=N,0.4nm,0.4s						
ALFC				AML	AML	22 29 14.9	
	comp=N,0.4nm,0.4s						
ALFC				AML	AML	22 29 16.8	
	comp=N,0.8nm,0.6s						
ALFC				AML	AML	22 29 16.8	
	comp=N,0.8nm,0.6s						
HDMB	Hadim	1.63	43	PN	Pn	22 28 51.1	-0.7
ERMK	Ermenek	1.71	59	i P	Pn	22 28 53.0	+0.1
ERMK				IAML		22 29 30.0	
	comp=N,63nm,0.7s						
ERMK				IAML		22 29 32.0	
	comp=E,63nm,0.7s						
SEYD	Seydisehir-KON	1.73	20	PN	Pn	22 28 52.5	-0.6
SEDI	Konya, Seydise	1.75	18	i P	Pn	22 28 52.5	-0.9
SEDI				i S	Sn	22 29 16.1	-0.2
SEDI				IAML		22 29 18.0	
	comp=E,44nm,0.5s						
SEDI				IAML		22 29 18.0	
	comp=N,45nm,0.5s						
FETY	Fethiye	1.83	298	PN	Pn	22 28 53.9	-0.5
CSS	Mathiatis	2.01	113	P	Pn	22 28 56.1	-0.7
ASGA	Asgata	2.03	119	P	Pn	22 28 57.2	+0.1
ASGA				AML	AML	22 29 35.0	
	comp=N,0.3nm,0.5s						
ASGA				AML	AML	22 29 38.0	
	comp=N,0.3nm,0.7s						
GULN	MERSIN_Gulnar	2.03	78	i P	Pn	22 28 58.0	+0.8
GULN				i S	Sn	22 29 22.2	-0.7
GULN				IAML		22 29 26.0	
	comp=N,28nm,0.6s						
GULN				IAML		22 29 29.0	
	comp=E,28nm,0.5s						
KKBE	Karaman, Kazim	2.07	46	i P	Pn	22 28 59.0	+1.2
KKBE				i S	Sn	22 29 25.2	+1.1
KKBE				IAML		22 29 32.0	
	comp=N,45nm,0.6s						
MVOU	Mavrovouni	2.21	109	P	Pn	22 28 58.6	-1.1
MVOU				AML	AML	22 29 31.0	
	comp=N,0.2nm,0.4s						
MVOU				AML	AML	22 29 33.4	
	comp=N,0.2nm,0.7s						
DALY	Dalyan (Mula)	2.22	298	PN	Pn	22 28 59.1	-0.6
OSC1	CSNet OBS 1	2.28	176	S	Sn	22 29 28.5	-0.7

JMA 16 23:39:38.9±0.1**, 38°.54N×141°.83E, h51**^{km}±1^{km}**, M3.5,**
5C-5D Broadband fault plane solution: P waves.
NP1:ϕ_s47.00000°**,**δ60.00000°**,**λ179.00000°. **NP2:**
ϕ_s137.00000°**,**δ89.00000°**,**λ30.00000°. **Principal axes:**
T Plg21.0000°, Azm6.0000°**;** N Plg60.0000°,
Azm138.0000°**;** P Plg20.0000°, Azm268.0000°**; Near**
east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.37	231	⇑P	Pn	23 39 48.7	0.0
JIKH				S	Sn	23 39 55.2	-0.6
JIO	Ouri	0.39	257	⇓P	Pn	23 39 49.0	+0.1
JIO				S	Sn	23 39 56.0	-0.1
JKMT	Kesennumamotoy	0.39	314	⇓P	Pn	23 39 49.1	+0.1
JKMT				S	Sn	23 39 56.0	-0.2
OFUJ	Ofunato	0.55	347	⇑P	Pn	23 39 50.8	-0.1
OFUJ				eS	Sn	23 39 59.3	-0.2
JMK	Ichinoseki	0.63	311	⇓P	Pn	23 39 52.0	+0.2
JMK				S	Sn	23 40 01.2	+0.1
JOU	Okura	0.93	260	⇓P	Pn	23 39 55.7	-0.1
JOU				S	Sn	23 40 08.1	0.0
JOM	Ohasama	1.02	336	⇑P	Pn	23 39 57.1	+0.2
JOM				eS	Sn	23 40 10.8	+0.5
JMM	Marumori	1.06	231	⇑P	Pn	23 39 57.0	-0.4
JMM				eS	Sn	23 40 10.4	-0.7
JYK	Kaneyama	1.21	289	⇓P	Pn	23 39 59.7	+0.2
JYK				S	Sn	23 40 15.5	+0.7
JRG	Rokugo	1.27	313	P	Pn	23 40 00.8	+0.6
JRG				eS	Sn	23 40 16.9	+0.8
JFK	Kawauchi	1.39	213	⇑P	Pn	23 40 01.6	-0.4
JFK				S	Sn	23 40 18.4	-0.9
JYS	Shirataka	1.42	258	P	Pn	23 40 02.7	+0.3
JYS				S	Sn	23 40 20.8	+0.8
MAT	Matsushiro	3.50	236	P	Pn	23 40 31.9	+1.0
MAT				eS	Sn	23 41 17.6	+6.5

NOU ***17*** *00:02:09.5, 41°.74S×174°.12E, h28^{km}, ML4.1/7, Cook Strait, New Zealand*
WEL 17 00:02:09.0, 42°S±3°×**17°4E**±°**, h39**^{km}±4^{km}**, M3.5**/25**,**
ML3.7/25**, MLv3.5**/25**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=110.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.13	237	P	Pn	00 02 15.7	-2.3
BSWZ				S	Sn	00 02 20.1	-5.5
CMWZ	Cape Campbell	0.18	126	P	Pn	00 02 16.7	-0.6
CMWZ				S	Sn	00 02 22.8	-1.5
TUWZ	Tuamarina	0.22	345	P	Pn	00 02 16.7	-0.4
TUWZ				S	Sn	00 02 21.8	-1.8
TCW	Tory Channel	0.47	24	P	Pn	00 02 19.7	+0.4
TCW				S	Sn	00 02 27.2	+0.6
SNZO	South Karori	0.61	57	P	Pn	00 02 22.3	+1.0
NNZ	Nelson	0.64	311	P	Pn	00 02 22.2	+0.5
NNZ				S	Sn	00 02 32.4	+1.8
WEL	Wellington	0.67	58	P	Pn	00 02 23.2	+1.2
BHW	Baring Head	0.68	70	P	Pn	00 02 23.2	+1.0
BHW				S	Sn	00 02 33.3	+1.8
THZ	Tophouse	0.84	262	P	Pn	00 02 25.0	+0.6
THZ				S	Sn	00 02 37.3	+1.7
DUWZ	D’Urville Isla	0.84	355	P	Pn	00 02 25.3	+0.9
DUWZ				S	Sn	00 02 37.5	+1.8
KHZ	Kahutara	0.85	205	P	Pn	00 02 25.2	+0.8
KHZ	Kahutara	0.85	205	P	Pn	00 02 25.2	+0.8
PLWZ	Palliser	0.93	86	P	Pn	00 02 25.9	+0.3
PLWZ				S	Sn	00 02 39.0	+1.3
MSWZ	Moikau Station	0.95	77	P	Pn	00 02 26.4	+0.6
MSWZ				S	Sn	00 02 39.4	+1.2
CAW	Cannon Point	0.95	56	P	Pn	00 02 27.0	+1.1
CAW				S	Sn	00 02 41.0	+2.7
KIW	Kapiti Island	1.03	41	P	Pn	00 02 28.4	+1.5
KIW				S	Sn	00 02 42.6	+2.5
PAWZ	Paruwai Farm	1.09	77	P	Pn	00 02 27.9	+0.2
OGWZ	Otaki Gorge	1.20	47	P	Pn	00 02 30.4	+1.2
MTW	Mount Morrison	1.22	67	P	Pn	00 02 29.7	+0.2
TRWZ	Traveller	1.28	79	P	Pn	00 02 30.3	0.0
HOWZ	Holdsworth Sta	1.35	57	P	Pn	00 02 31.7	+0.4
QRZ	Quartz Range	1.39	306	P	Pn	00 02 34.0	+2.2
QRZ	Quartz Range	1.39	306	P	Pn	00 02 34.2	+2.3
TMWZ	Te Maipa	1.51	70	P	Pn	00 02 33.3	-0.2
GVZ	Greta Valley S	1.51	209	P	Pn	00 02 33.9	+0.4
MRZ	Mangatainoka R	1.53	51	P	Pn	00 02 34.4	+0.6
TIWZ	Tintock	1.65	59	P	Pn	00 02 35.5	0.0
DSZ	Denniston Nort	1.66	266	P	Pn	00 02 37.7	+2.1
LTZ	Lake Taylor	1.73	228	P	Pn	00 02 37.1	+0.6
OHWZ	Ohakea	1.74	35	P	Pn	00 02 39.2	+2.6
CPWZ	Castlepoint	1.80	67	P	Pn	00 02 37.4	-0.1
POWZ	Post Office Ro	1.82	47	P	Pn	00 02 38.3	+0.5
PRWZ	Pori Road	1.83	54	P	Pn	00 02 38.2	+0.2
AMCZ	Amberley	1.84	213	P	Pn	00 02 38.1	+0.1
BFZ	Birch Farm	1.94	61	P	Pn	00 02 38.7	-0.7
WAZ	Wanganui	2.03	22	P	Pn	00 02 44.4	+3.8
DVHZ	Dannevirke	2.11	51	P	Pn	00 02 41.4	-0.4
TSZ	Takapari Road	2.16	44	P	Pn	00 02 41.7	-0.9
OKCZ	Okains Bay	2.19	198	P	Pn	00 02 42.3	-0.7
INZ	Inchbonnie	2.20	240	P	Pn	00 02 43.8	+0.8
LREZ	Lake Rotokare	2.20	8	P	Pn	00 02 48.4	+5.4
OXZ	Oxford	2.23	220	P	Pn	00 02 42.5	-0.9
NMEZ	Namu Road	2.23	357	P	Pn	00 02 48.9	+5.5
MQZ	McQueen’s Vall	2.29	206	P	Pn	00 02 42.7	-1.5
KHEZ	Kahui Hut	2.35	360	P	Pn	00 02 49.1	+4.0
AKCZ	Akaroa Harbour	2.37	200	P	Pn	00 02 44.5	-0.8
NEZ	North Egmont	2.37	1	P	Pn	00 02 50.2	+4.8
PNHZ	Pukenui	2.39	44	P	Pn	00 02 45.7	0.0
PRHZ	Porangahau	2.41	56	P	Pn	00 02 45.0	-0.9
WPHZ	Waipukurau	2.42	50	P	Pn	00 02 45.9	-0.1
PKE	Pukeiti	2.45	359	P	Pn	00 02 50.1	+3.6
DREZ	Durham Road	2.46	3	P	Pn	00 02 50.9	+4.4
RACZ	Rakaia	2.50	213	P	Pn	00 02 45.9	-1.1
VRZ	Vera Road	2.58	13	P	Pn	00 02 51.8	+3.6
MOVZ	Moawhango	2.60	31	P	Pn	00 02 50.8	+2.3
WNVZ	Wahianoa	2.61	28	P	Pn	00 02 51.4	+2.7
TRVZ	Turoa	2.62	27	P	Pn	00 02 52.3	+3.3
DRZ	Dome Shelter	2.64	27	P	Pn	00 02 54.7	+5.4
WHVZ	Whangaehu Hut	2.65	27	P	Pn	00 02 52.5	+3.2
BHHZ	Black Hill Sta	2.66	37	P	Pn	00 02 50.2	+0.9
FWVZ	Far West T-bar	2.66	27	P	Pn	00 02 52.3	+2.8
TUVZ	Tukino	2.68	28	P	Pn	00 02 53.1	+3.3
KRHZ	Kereru	2.68	43	P	Pn	00 02 49.5	-0.1
PXZ	Pawanui	2.69	54	P	Pn	00 02 48.7	-1.0
NGZ	Ngauruhoe	2.75	27	P	Pn	00 02 54.1	+3.4
SNVZ	South Ngauruho	2.75	27	P	Pn	00 02 53.3	+2.6
OTVZ	Oturere	2.78	27	P	Pn	00 02 53.4	+2.3
NNVZ	North Ngauruho	2.79	26	P	Pn	00 02 54.4	+3.1
TWVZ	Taurewa	2.79	23	P	Pn	00 02 54.8	+3.6
WTVZ	West Tongariro	2.80	26	P	Pn	00 02 54.3	+3.0
WACZ	Wakanui South	2.80	214	P	Pn	00 02 50.1	-1.2
ETVZ	East Tongariro	2.82	28	P	Pn	00 02 55.4	+3.8
WVZ	Waitaha Valley	2.82	238	P	Pn	00 02 55.7	+4.2
KRVZ	Karewarewa	2.83	26	P	Pn	00 02 56.1	+4.3
TMVZ	Te Maari	2.83	28	P	Pn	00 02 54.1	+2.3
KAHZ	Kahuranaki	2.85	51	P	Pn	00 02 51.1	-0.9
KWHZ	Kaweka Forest	2.88	40	P	Pn	00 02 52.8	+0.5
KATZ	Kakaramea	2.96	26	P	Pn	00 02 59.6	+6.1
RPZ	Rata Peaks	3.01	226	P	Pn	00 03 00.6	+6.5
ARCZ	Arundel	3.11	221	P	Pn	00 02 55.2	-0.3
BKZ	Black Stump Fm	3.11	38	P	Pn	00 02 55.2	-0.4
BKZ	Black Stump Fm	3.11	38	P	Pn	00 02 55.6	0.0
HIZ	Hauiti	3.19	12	P	Pn	00 03 00.6	+4.0
HIZ	Hauiti	3.19	12	P	Pn	00 03 00.0	+3.4
GCSZ	Gaunt Creek Bo	3.20	237	P	Pn	00 03 00.9	+4.1
TMZ	Timaru	3.52	218	P	Pn	00 03 00.2	-0.9
FOZ	Fox Glacier	3.63	237	P	Pn	00 03 06.3	+3.6
HLRZ	Highlands Stat	3.83	29	P	Pn	00 03 08.2	+2.7
TOZ	Tahuroa Road	4.07	17	P	Pn	00 03 12.9	+4.2
URZ	Urewera	4.13	36	P	Pn	00 03 10.2	+0.6
URZ	Urewera	4.13	36	P	Pn	00 03 12.2	+2.7
ODZ	Otahua Downs	4.20	215	P	Pn	00 03 08.9	-1.5
ODZ	Otahua Downs	4.20	215	P	Pn	00 03 11.1	+0.7
JCZ	Jackson Bay	4.55	236	P	Pn	00 03 18.1	+2.7
AWAZ	Awhitu Peninsu	4.60	6	P	Pn	00 03 18.0	+2.0
RUGZ	Raukumara Rang	4.63	39	P	Pn	00 03 15.5	-1.0
HAZ	Te Kaha	4.85	38	P	Pn	00 03 18.6	-0.8
CTZ	Chatham Island	7.21	110	P	Pn	00 03 50.8	-0.9

IDC 17 00:09:33.0±3.1**, 31°.85S×177°.84W, h0**^{km}**, mb3.8**/3**,**
mb1 4.0/4**, mb1mx3.5**/34**, mbtmp3.8**/4**, ML3.3**/1**, MS2.9**/1**,**
Ms1 2.9/1**, ms1mx2.3**/23**, Error ellipse: s-maj=71.0km**
s-min=37.2km az=115.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.62	211	Pn	Pn	00 11 25.7	+0.5
	0.5nm,0.3s,baz=128,slow=24,SNR=1.9						
URZ				Sn	Sn	00 12 51.5	-0.7
	3.8nm,0.3s,baz=300,slow=23,SNR=9.1						
AFI	Afiamalu	18.70	19	LR	LR	00 20 01.2	
	comp=Z,39nm,21.5s,baz=54,slow=34						
ASAR	Alice Springs	43.18	268	P	P	00 17 35.7	-0.1
	0.3nm,0.3s,baz=108,slow=7.5,SNR=6.5						
WRA	Warramunga Arr	44.30	274	P	P	00 17 44.5	-0.4
	0.5nm,0.3s,baz=114,slow=8.1,SNR=21						
FITZ	Fitzroy Crossi	52.50	271	P	P	00 18 48.5	+0.4
	3.3nm,1.0s,baz=20,slow=20,SNR=2.1						

FINES	FINESS Array B	146.54	339	PKPbc	PKPdf	00 29 14.5	+0.5
	1.3nm,0.6s,baz=64,slow=3.5,SNR=5.4						

SKHL ***17*** *00:24:18.1±0.2, 46°.60N×151°.70E, h154^{km}±4^{km}, mb5.2/5, msha5.4/4*
NEIC ***17*** *00:24:20.0±0.6, 46°.8N±0°.2×151°.4E±0°.2, h156^{km}±4^{km}, mb4.3/8, Error ellipse: s-maj=29.0km s-min=13.5km az=133.0*
MOS ***17*** *00:24:19.5±0.9, 46°.84N×151°.37E, h173^{km}, mb4.2/1, Error ellipse: s-maj=35.1km s-min=10.7km az=58.8*
IDC ***17*** *00:24:20.7±2.8, 46°.75N×151°.58E, h164^{km}±27^{km}, mb3.2/6, mb1 3.5/8, mb1mx3.2/39, mbtmp3.8/8, Error ellipse: s-maj=37.3km s-min=15.5km az=127.0*
ISC 17 00:24:18.7±0.6**, 46°.70N**±0°.10×**151°.62E**±0°.09**, h150**^{km}**, n68,**
σ1^{s}90/72**, mb3.6**/9**, 2C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.00	242	c iPN	Pn	00 25 09.3	+3.3
KUR				eS	Sn	00 25 49.4	+6.8
KUR				pmax	pmax		
	comp=N,82nm,0.4s						
KUR				pmax	pmax		
	comp=E,43nm,0.4s						
KUR				pmax	pmax		
	comp=Z,298nm,0.4s						
KUR				smax	smax		
	comp=N,97nm,0.4s						
KUR				smax	smax		
	comp=E,71nm,0.2s						
KUR	Kuril'sk	3.00	242	i P	Pn	00 25 08.0	+2.0
KUR				AMB	AMB	00 25 10.0	
	comp=E,210nm,0.4s						
KUR				eS	Sn	00 25 45.6	+3.0
KUR				A	A	00 25 54.2	
	comp=E,90nm,0.3s						
KUR				A	A	00 25 54.2	
	comp=E,80nm,0.3s						
SHO	Shikotan	4.41	232	c iPN	Pn	00 25 24.8	+0.6
SHO				eS	Sn	00 26 13.1	-2.1
SHO				smax	smax		
	comp=N,74nm,0.2s						
SHO				smax	smax		
	comp=E,52nm,0.2s						
SHO	Shikotan	4.41	232	i P	Pn	00 25 24.8	+0.6
SHO				AMB	AMB	00 25 25.6	
	comp=E,110nm,0.4s						
SHO				eS	Sn	00 26 15.4	+0.2
SHO				A	A	00 26 22.0	
	comp=E,40nm,0.3s						
SHO				A	A	00 26 22.0	
	comp=E,80nm,0.3s						
YUK	Yuzh-Kuril'sk	4.86	239	eP	Pn	00 25 31.9	+1.8
YUK				AMB	AMB	00 25 32.5	
	comp=E,130nm,0.4s						
YUK				eS	Sn	00 26 27.1	+1.3
YUK				A	A	00 26 48.8	
	comp=E,170nm,0.5s						
YUK				A	A	00 26 48.8	
	comp=E,140nm,0.5s						
SKR	Severo-Kuril’s	4.97	35	ePN	Pn	00 25 33.6	+2.0
SKR				eS	Sn	00 26 28.0	-0.5
SKR				pmax	pmax		
	comp=Z,105nm,0.4s						
SKR				smax	smax		
	comp=E,153nm,0.5s						
SKR				smax	smax		
	comp=N,142nm,0.6s						
SKR	Severo-Kuril’s	4.97	35	eP	Pn	00 25 33.2	+1.6
SKR				AMB	AMB	00 25 34.9	
	comp=N,100nm,0.4s						
SKR				eS	Sn	00 26 29.4	+0.9
SKR				A	A	00 26 31.0	
	comp=N,140nm,0.6s						
SKR				A	A	00 26 31.0	
	comp=N,150nm,0.6s						
NEM2	Nemuro 2	5.34	233	P	Pn	00 25 36.1	-0.4
NEM2				eS	Sn	00 26 32.5	-4.7
NMR	Nemuro--Hokkai	5.34	234	eP	Pn	00 25 36.6	+0.1
JRA	Rausu	5.35	241	P	Pn	00 25 38.0	+1.4
PAU	Pauzhetka	5.86	34	eP	Pn	00 25 44.7	+1.4
PAU				AMB	AMB	00 25 45.6	
	comp=N,90nm,0.6s						
AKK	Akkeshi	6.06	235	eP	Pn	00 25 45.8	-0.3
JTKR	Abashiri--Toko	6.08	246	P	Pn	00 25 47.3	+0.9
YSS	Yuzh-Sakhalins	6.09	276	eP	Pn	00 25 46.6	+0.2
YSS				AMB	AMB	00 25 47.3	
	comp=N,20nm,0.4s						
JAK	Akkeshi	6.16	236	P	Pn	00 25 46.8	-0.6
JAK				eS	Sn	00 26 51.9	-5.0
JAR	Ashorobuto	6.52	241	P	Pn	00 25 53.4	+1.1
JOB	Onbets	6.71	238	P	Pn	00 25 54.5	-0.3
JOB				eS	Sn	00 27 05.1	-5.1
JKA	Kamikawa-asahi	6.86	251	eP	Pn	00 25 57.0	+0.3
JKA	Kamikawa-asahi	6.86	251		Pn	00 25 57.0	+0.3
ASAJ	Asahikawa	6.86	251	P	Pn	00 25 58.5	+1.8
	comp=N,5.8nm,0.3s,baz=67,slow=16,SNR=26						
ASAJ	Asahikawa	6.86	251	P	Pn	00 25 57.7	+1.0
ASAJ	Asahikawa	6.86	251	PN	Pn	00 25 57.0	+0.3
JKK2	Kamakawa 2	6.87	249	P	Pn	00 25 57.9	+1.0
JCH	Churui	7.17	238	P	Pn	00 25 59.8	-1.0
JCH				eS	Sn	00 27 14.6	-6.4
PEA0B	Petropavlovsk-	7.52	29	PN	Pn	00 26 06.0	+0.6
PEA0B	Petropavlovsk-	7.52	29	Pn	Pn	00 26 06.0	+0.6
PETK	Petropavlovsk-	7.52	29	P	Pn	00 26 07.5	+2.0
	comp=N,0.9nm,0.3s,baz=198,slow=14,SNR=7.8						
PETK	Petropavlovsk-	7.52	29		Pn	00 26 05.8	+0.4
ERM	Erimo	7.66	235	PN	Pn	00 26 07.7	+0.2
ERM	Erimo	7.66	235	Pn	Pn	00 26 07.7	+0.2
JBT2	Biratori 2	7.67	243	P	Pn	00 26 07.8	+0.3
JNBK	Urakawa-nobuka	7.73	238	P	Pn	00 26 06.5	-1.8
PET	Petropavlovsk	7.79	33	Pn	Pn	00 26 10.2	+1.1
JNB	Noboribetsu	8.66	245	P	Pn	00 26 19.8	-0.9
JKB	Kayabe	8.99	241	P	Pn	00 26 22.8	-2.3
JKB				eS	Sn	00 27 54.3	-11
JYM2	Yakumo 2	9.26	244	P	Pn	00 26 26.9	-1.9
JTM	Tenmabayashi	9.65	236	eS	Sn	00 28 09.1	-12
JWT	Wachi	16.70	233		P	00 28 04.0	+0.4
JHS	Saijyo	18.19	237	P	P	00 28 20.8	+0.9
JHS				IAmb	IAmb	00 28 33.6	
	comp=Z,51nm,1.4s						
H11N2	WAKE ISLAND Hy	29.67	150	T	T	01 01 46.6	
	baz=337,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	29.68	150	T	T	01 01 36.5	
	baz=337,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	29.69	150	T	T	01 01 29.4	
	baz=337,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	30.74	151	T	T	01 02 55.6	
	baz=340,slow=75,SNR=19						
H11S3	WAKE ISLAND Hy	30.75	151	T	T	01 02 51.4	
	baz=340,slow=75,SNR=9.6						
H11S2	WAKE ISLAND Hy	30.76	151	T	T	01 02 54.5	
	baz=340,slow=75,SNR=12						
IMAR	Indian Mountai	34.41	36	P	P	00 30 51.0	-0.1
H21K	Melozitna Rive	34.76	37	P	P	00 30 54.1	-0.1
SML	Sawmill	36.71	43	P	P	00 31 11.2	+0.3
H24K	Noodor Dome	36.80	37	P	P	00 31 12.3	+0.7
BMAR	Burnt Mountain	38.13	34	P	P	00 31 23.1	+0.4
BCAR	Beaver Creek A	39.61	41	P	P	00 31 36.3	+1.2
INK	Inuvik	42.24	32	P	P	00 31 56.8	+0.4
	comp=Z,0.7nm,0.5s,baz=285,slow=7.1,SNR=4.4						
INK	Inuvik	42.24	32	P	P	00 31 56.6	+0.2
MKAR	Makanchi Array	46.05	297	P	P	00 32 27.4	+0.3
	comp=Z,0.1nm,0.4s,baz=68,slow=7.3,SNR=1.4						
RES	Resolute Bay	51.20	18	P	P	00 33 04.8	-1.2
RES	Resolute Bay	51.20	18	P	P	00 33 04.8	-1.2
YKA	Yellowknife Ar	51.57	36	P	P	00 33 09.1	+0.2
	comp=Z,0.8nm,0.6s,baz=297,slow=7.0,SNR=3.1						
ABKAR	Akbulak array	57.66	309	P	P	00 33 51.9	-1.0
ABKAR	Akbulak array	57.66	309	P	P	00 33 52.2	-0.7
ABKAR				IAmb	IAmb	00 34 02.1	
	comp=Z,2.0nm,1.2s						
PDAR	Pinedale Array	65.60	53	P	P	00 34 47.6	+1.1
WB0	Warramunga Arr	67.96	198	P	P	00 35 02.1	+0.8
WB0				IAmb	IAmb	00 35 08.2	
	comp=Z,6.0nm,1.2s						
WB2	Warramunga Arr	68.14	198	P	P	00 35 03.0	+0.6
WB2				IAmb	IAmb	00 35 09.2	
	comp=Z,8.8nm,1.4s						
WRA	Warramunga Arr	68.14	198	P	P	00 35 02.6	+0.2
	comp=Z,0.5nm,0.5s,baz=17,slow=6.7,SNR=12						
ASAR	Alice Springs	71.85	197	P	P	00 35 26.4	+1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,0.7nm,0.6s,baz=11,slow=5.6,SNR=11						
ASAR	Alice Springs	71.85	197	P	P	00 35 25.9	+0.9
TXAR	Lajitas Array	78.41	60	P	P	00 36 03.3	+0.6
	comp=Z,0.2nm,0.6s,baz=283,slow=3.6,SNR=3.8						
TXAR	Lajitas Array	78.41	60	P	P	00 36 03.5	+0.7
TXAR	Lajitas Array	78.41	60	P	P	00 36 03.5	+0.7

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*FUNV **17** 00:29:40.2, 8°.51N×71°.45W, h4^{km}, MW3.1*

ISC 17 00:29:40.4±1.1, **8°.52N**±0°.03×**71°.41W**±0°.03, **h11**^{km}±9^{km}, **n18**, σ0^{s}.92/30, **1C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIGV	El Vigia	0.32	7	⇑*e*P	Pg	00 29 46.8	-0.1
VIGV				*e*S	Sg	00 29 51.5	+0.2
SOCV	Socops	0.59	113	*e*P	Pg	00 29 51.3	-0.6
SOCV				*e*S	Sg	00 30 00.2	+0.5
SOCV	Socops	0.59	113	*e*P	Pg	00 29 51.5	-0.4
SOCV				*e*S	Sg	00 30 00.6	+0.9
SDV	Santo Domingo	0.85	64	*e*S	Sg	00 30 08.2	+0.3
CAPV	Capacho	1.11	234	*e*P	Pg	00 30 00.2	-1.6
CAPV				*e*S	Sb	00 30 15.4	-0.9
TORV	Torococo	1.56	48	*e*P	Pn	00 30 08.6	+0.4
PAMC	Pamplona, Colo	1.74	228	*e*P	Pg	00 30 12.9	-0.9
PAMC				*e*S	Sg	00 30 37.5	+1.0
OCAC	Ocana	1.92	262	*e*P	Pg	00 30 17.4	+0.2
OCAC				*e*S	Sb	00 30 38.9	-0.6
SANV	Sanarito	2.09	62	*e*P	Pn	00 30 16.7	+1.2
SANV				*e*S	Sn	00 30 43.3	+1.7
ELOV	Elorza	2.43	128	*e*P	Pn	00 30 21.2	+1.1
ELOV				*e*S	Sn	00 30 49.7	-0.1
SIQV	Siquisique	2.64	37	*e*P	Pn	00 30 23.4	+0.3
SIQV				*e*S	Sn	00 30 55.7	+0.6
RUSC	La Rusia	3.10	213	*e*P	Pn	00 30 30.9	+1.2
RUSC				*e*S	Sn	00 31 07.7	+0.7
MAPV	Macapo	3.19	66	*e*P	Pn	00 30 30.1	-0.5
MAPV				*e*S	Sn	00 31 07.7	-1.0
BAUV	El Baul	3.35	83	*e*P	Pn	00 30 33.8	+1.0
BAUV				*e*S	Sn	00 31 11.8	-0.8
MONV	Montecano	3.69	22	*e*P	Pn	00 30 37.0	-0.5
BENV	Beln	4.02	69	*e*P	Pn	00 30 42.9	+0.8
BENV				*e*S	Sn	00 31 27.6	-1.7
PAYV	Puerto Ayacuch	4.83	129	*e*P	Pn	00 30 52.9	-0.2
CACV	CAICARA DEL OR	4.91	101	*e*P	Pn	00 31 00.6	+6.3

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*KISR **17** 00:53:18.6±0.7, 32°.76N×47°.90E, h109^{km}±73^{km}*

*TEH **17** 00:53:18.8, 32°.72N×47°.68E, h8^{km}, ML3.4*

*ISN **17** 00:53:19.5±1.5, 32°.67N×47°.65E, h14^{km}±8^{km}, ML3.1*

*IDC **17** 00:53:28.2±26.0, 34°.07N×48°.14E, h0^{km}, mb3.8/5, mb1 3.9/5, mb1mx3.3/45, mbtmp3.8/5, Error ellipse: s-maj=516.0km s-min=35.5km az=14.0*

ISC 17 00:53:19.4±1.2, **32°.69N**±0°.03×**47°.64E**±0°.03, **h8**^{km}±9^{km}, **n67**, σ**1^{s}.32**/77, **mb3.9**/5, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHL1	Dehloran	0.31	268	*e*Pg	Pg	00 53 25.7	+0.2
DHL1				*e*Sg	Sb	00 53 31.6	-0.7
IKFM	Kafar-mosalman	0.85	12	*e*Pg	Pg	00 53 34.6	-1.1
IDOB	Doab	1.18	22	*e*Pg	Pg	00 53 40.6	-1.5
IBDR	Badra	1.50	287	*e*Pg	Pn	00 53 47.0	+0.4
IBDR				*e*Sg	Sb	00 54 07.0	+0.3
IBDR				AML	AML	00 54 12.8	
	comp=E,253nm,0.7s						
IBDR				AML	AML	00 54 13.0	
	comp=N,200nm,0.7s						
AHWZ	Ahwaz	1.60	148	*e*Pg	Pg	00 53 48.9	-1.3
AHWZ				*e*Sg	Sg	00 54 13.3	+2.3
RAFI	Al-Rafai	1.62	234	*e*Pn	Pg	00 53 50.0	-0.4
RAFI				*e*Sn	Sg	00 54 11.0	-0.4
RAFI				AML	AML	00 54 18.4	
	comp=E,254nm,0.8s						
KCHF	Cheshme Sefid,	1.66	342	*e*Pg	Pn	00 53 49.9	+0.9
KCHF				*e*		00 54 17.0	
	comp=Z,6µm,0.4s						
HSAM	Samen	1.71	28	*e*Pg	Pb	00 53 51.3	0.0
HSAM				*e*		00 54 18.6	
	comp=Z,2µm,0.7s						
AMIS	Naft Sefid	1.73	126	*e*Pg	Pg	00 53 52.0	-0.6
AMIS				*e*Sg	Sg	00 54 16.4	+1.4
KER	Kermanshah	1.74	346	*e*Pg	Pn	00 53 50.8	+0.7
IBZA	Bozab	1.78	6	*e*Pg	Pn	00 53 52.2	+1.4
IBZA				*e*		00 53 55.7	
	comp=Z,4µm,0.3s						
IGHG	Ghaleghazi	1.86	331	*e*Pn	Pn	00 53 52.8	+0.9
IGHG				*e*		00 54 23.0	
	comp=Z,3µm,0.6s						
KHMZ	Khomeyn	2.20	61	*e*Pn	Pn	00 53 58.2	+1.7
IALM	Almabolaq	2.21	11	*e*Pn	Pn	00 53 58.4	+1.8
IDHR	Dehrash	2.26	333	*e*Pn	Pn	00 53 58.9	+1.6
IDHR				*e*		00 54 02.7	
	comp=Z,2µm,0.4s						
ILIN	Lien	2.29	346	*e*Pn	Pn	00 53 58.8	+1.0
ILIN				*e*		00 54 38.0	
	comp=Z,909nm,0.5s						
SNGE	Sanandaj	2.41	354	*e*Pn	Pn	00 53 59.0	-0.3
HAGD	Aghdareh	2.46	30	*e*		00 54 08.7	
	comp=Z,2µm,0.2s						
HAGD				*e*Pn	Pn	00 54 01.6	+1.5
ASAO	Ashtian	2.71	46	*e*Pn	Pn	00 54 05.6	+2.0
IPIR	Pirpir	2.74	89	*e*		00 54 59.0	
	comp=Z,2µm,0.8s						
IPIR				*e*Pn	Pn	00 54 06.1	+2.1
SHK1	Shahrekord	2.76	97	*e*Pn	Pn	00 54 04.9	+0.7
SHK1				*e*		00 54 52.1	
	comp=Z,1µm,0.5s						
BHD	Baghdad	2.80	283	*e*Pn	Pn	00 54 05.0	+0.5
BHD				*e*Sn	Sn	00 54 40.0	+1.5
BHD				AML	AML	00 54 54.6	
	comp=E,168nm,0.4s						
MIB	Mutribah	2.89	185	*e*P	Pn	00 54 06.9	+1.1
MIB				*e*S	Sb	00 54 43.3	-3.5
UMR	Umm Al-Rimmam	3.13	179	*e*P	Pn	00 54 10.2	+1.1
IBRJ	Brojen	3.16	103	*e*Pn	Pn	00 54 10.2	+0.4
RST	Umm Al-Ruwaisa	3.23	190	*e*P	Pn	00 54 11.7	+1.3
IRAZ	Razeghan	3.30	34	*e*Pn	Pn	00 54 14.3	+2.6
QAMS	Qamsar	3.31	71	*e*Pn	Pn	00 54 14.0	+2.2
IKLH	Kolahrood	3.37	78	*e*Pn	Pn	00 54 14.1	+1.5
IKLH				*e*		00 55 11.9	
	comp=Z,536nm,0.6s						
QABG	Abgarm-Qazvin	3.41	28	*e*Pn	Pn	00 54 14.2	+1.1
KBD	Kabd	3.51	179	*e*P	Pn	00 54 14.7	+0.4
KBD				*e*S	Sn	00 54 57.5	+1.5
GHVR	GHOM	3.53	59	*e*Pn	Pn	00 54 16.5	+1.8
IQOM	Qom	3.57	52	*e*Pn	Pn	00 54 16.7	+1.3
IGAR	Gharneh	3.73	93	*e*Pn	Pn	00 54 18.2	+0.7
RDF	Al-Radifah	3.76	181	*e*P	Pn	00 54 19.3	+1.6
KLNJ	Kolanjah	3.76	116	*e*Pn	Pn	00 54 18.7	+0.7
IKRK	Kirkuk	3.85	315	*e*Pn	Pn	00 54 20.0	+1.0
IKRK				*e*Sn	Sn	00 55 06.0	+1.6
IMHD	Mahdasht	3.90	39	*e*Pn	Pn	00 54 21.5	+1.8
QRN	Al-Qurain	3.94	176	*e*P	Pn	00 54 21.2	+1.0
QRN				*e*S	Sn	00 55 08.0	+1.3
IZEF	Zefreh	3.95	86	*e*Pn	Pn	00 54 22.0	+1.4
KRSH	Karshahi	3.97	70	*e*Pn	Pn	00 54 22.1	+1.3
ZNJK	Zanjan	4.06	12	*e*Pn	Pn	00 54 22.6	+0.5
IVRN	Varamin	4.10	55	*e*Pn	Pn	00 54 23.7	+1.2
IRAM	Ramesheh	4.11	101	*e*Pn	Pn	00 54 22.9	+0.1
ISFB	Sefidab	4.18	65	*e*Pn	Pn	00 54 24.4	+0.8
IGZV	Ghazvin	4.25	29	*e*Pn	Pn	00 54 26.8	+2.1
CHTH	Charan	4.31	41	*e*Pn	Pn	00 54 26.6	+1.0
NASN	Na'in	4.35	87	*e*Pn	Pn	00 54 27.2	+1.0
MAHB	Mahabad	4.37	339	*e*Pn	Pn	00 54 27.3	+1.1
JIR1	Jirandeh	4.38	23	*e*Pn	Pn	00 54 28.3	+1.9
QALM	Alamut, Qazvin	4.48	33	*e*Pn	Pn	00 54 28.5	+0.7
DAMV	Damavand	4.63	50	*e*Pn	Pn	00 54 31.1	+1.1
IDMV	Damavand	4.64	50	*e*Pn	Pn	00 54 30.9	+0.8
AHBU	AHRAM	4.94	140	*e*Pn	Pn	00 54 36.8	+2.8
ANAR	Anarak	5.14	83	*e*Pn	Pn	00 54 37.0	+0.2
IFIR	Firoozkooh	5.16	54	*e*Pn	Pn	00 54 37.7	+0.5
ILAS	Lasjerd	5.16	57	*e*Pn	Pn	00 54 38.2	+0.9
ISAD	Sadrabad	5.17	97	*e*Pn	Pn	00 54 37.8	+0.3
ISHM	Shahmirzad	5.62	55	*e*Pn	Pn	00 54 44.7	+1.2
ISHB	Shabestar	5.82	344	*e*Pn	Pn	00 54 46.5	+0.3
YZKH	Yazd	5.88	91	*e*Pn	Pn	00 54 47.3	+0.4
IANJ	Anjilo	5.89	60	*e*Pn	Pn	00 54 47.2	-0.1
AKASG	Malin Array Be	22.54	328	P	P	00 58 19.9	+0.2
	comp=Z,0.1nm,0.2s,baz=131,slow=9.9,SNR=1.8						
MKAR	Makanchi Array	29.86	52	P	P	00 59 26.9	-0.4
	comp=Z,0.9nm,0.8s,baz=254,slow=8.6,SNR=4.8						
FINES	FINESS Array B	31.98	341	P	P	00 59 44.9	-0.8
	comp=Z,3.4nm,1.0s,baz=141,slow=9.0,SNR=1.9						
ZALV	Zalesovo Beam	33.83	40	P	P	01 00 00.3	-1.6
	comp=Z,0.7nm,0.5s,baz=248,slow=7.6,SNR=4.5						
ARCES	ARCESS Array B	38.93	348	P	P	01 00 45.0	-0.4
	comp=Z,2.3nm,0.9s,baz=153,slow=8.1,SNR=1.5						

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*ISK **17** 01:06:41.8, 38°.95N×43°.55E, h6^{km}, ML2.6/17*

*DDA **17** 01:06:42.2, 38°.98N×43°.51E, h7^{km}±6^{km}, ML2.3*

ISC 17 01:06:42.2±1.1, **38°.95N**±0°.02×**43°.52E**±0°.02, **h3**^{km}±11^{km}, **n27**, σ**1^{s}.01**/39, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERCV	ERCIS-VAN	0.15	295	PG	Pg	01 06 46.1	+0.9
CLDR	Caldiran	0.36	59	*i* P	Pg	01 06 48.8	-0.4
CLDR				IAML		01 06 55.0	
	comp=N,375nm,0.2s						
CLDR				*i* S	Sg	01 06 55.1	+1.1
CLDR				IAML		01 06 56.0	
	comp=E,610nm,1.0s						
CLDR	Caldiran	0.36	59	PG	Pg	01 06 48.9	-0.3
CLDR				SG	Sg	01 06 54.7	+0.7
VANB	Van	0.37	196	PG	Pb	01 06 50.9	-0.6
VANB				SG	Sb	01 06 58.3	+0.6
TVAN	Van	0.43	192	*i* P	Pg	01 06 50.7	+0.1
TVAN				*i* S	Sb	01 06 58.8	-0.8
TVAN				IAML		01 06 59.0	
	comp=N,443nm,0.4s						
OZAP	Van, Ozalp-Mer	0.47	128	*i* P	Pg	01 06 51.3	0.0
OZAP				*i* S	Sb	01 07 00.8	0.0
OZAP				IAML		01 07 01.0	
	comp=E,216nm,0.5s						
OZAP				IAML		01 07 06.0	
	comp=N,217nm,0.7s						
ADCV	BITLIS_Adilcev	0.64	257	*i* P	Pg	01 06 54.7	+0.4
ADCV				IAML		01 07 05.0	
	comp=E,365nm,0.7s						
ADCV				*i* S	Sb	01 07 05.4	0.0
ADCV				IAML		01 07 06.0	
	comp=N,227nm,0.2s						
AGRB	Hanur-Agry	0.74	327	PG	Pg	01 06 56.4	0.0
AGRB				SG	Sb	01 07 08.4	-0.1
AKDM	Akdamar-Van	0.75	214	PG	Pg	01 06 55.9	-0.7
AKDM				SG	Sb	01 07 08.4	-0.4
MLAZ	Malazgirt-MUS	0.78	284	PG	Pb	01 06 57.8	-0.6
MLAZ				SG	Sb	01 07 09.2	-0.3
KOTA	Agri, Merkez-K	0.88	344	*i* P	Pg	01 06 59.2	+0.1
TASB	TASBURUN-IGDIR	1.17	28	PN	Pg	01 07 04.2	-0.4
BLIS	Bitlis-Merkez	1.22	244	*i* P	Pg	01 07 04.4	-1.2
BLIS				*i* S	Sg	01 07 21.4	0.0
BLIS				IAML		01 07 29.0	
	comp=E,71nm,0.5s						
BLIS				IAML		01 07 30.0	
	comp=N,110nm,0.5s						
GURO	Guroymak-BITLI	1.23	251	PN	Pg	01 07 04.6	-1.1
HAKT	HAKKARI	1.40	174	*i* P	Pn	01 07 06.5	-2.3
HAKT				*i* S	Sn	01 07 30.9	+2.9
HAKT				IAML		01 07 33.0	
	comp=E,57nm,0.8s						
HAKT				IAML		01 07 34.0	
	comp=N,52nm,0.5s						
YOVA	Hakkari_Yksek	1.49	156	*i* P	Pn	01 07 09.1	-0.9
YOVA				*i* S	Sg	01 07 32.5	+2.3
YOVA				IAML		01 07 33.0	
	comp=E,31nm,0.6s						
YOVA				IAML		01 07 38.0	
	comp=N,24nm,0.7s						
GNI	Garni	1.52	38	PN	Pb	01 07 10.3	-0.8
MUSM	Mu-Merkez	1.58	262	*i* P	Pn	01 07 10.0	-1.3
VRTB	Varto-Mus	1.62	278	PN	Pb	01 07 12.1	-0.7
KOPR	Koprukoy-ERZUR	1.65	309	PN	Pb	01 07 12.4	-1.0
SIRT	Sirnak	1.68	211	PN	Pn	01 07 12.2	-0.4
KARS	Kars	1.71	349	PN	Pn	01 07 12.7	-0.2
CUKT	Cukurca	1.71	178	PN	Pn	01 07 12.7	-0.2
SENK	Senkaya-Erzuru	1.84	331	PN	Pb	01 07 15.2	-1.4
KARO	Karliova-Bingo	1.95	281	PN	Pn	01 07 16.7	+0.3
SVAN	Silvan-Diyarba	1.99	247	PN	Pn	01 07 17.3	+0.6
YEDI	Yedisu-Bingol	2.36	283	PN	Pn	01 07 22.7	+0.7

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*IDC **17** 01:06:35.5±1.9, 0°.10S×124°.28E, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.0/34, mbtmp3.5/3, Error ellipse: s-maj=224.9km s-min=25.8km az=63.0*

*DJA **17** 01:06:43.2±1.5, 0°S±5°×12°5E±°, h12^{km}±13^{km}, M4.1/10, mb4.4/1, mB5.4/1, MLv3.9/10, Mw(mB)4.9/1*

ISC 17 01:06:44.4±1.2, **0°.08S**±0°.10×**124°.63E**±0°.07, **h73**^{km}, **n10**, σ**1^{s}.03**/10, **mb3.3**/3, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.92	315	P	Pn	01 07 01.5	-0.5
LUWI	Luwuk	2.09	243	P	Pn	01 07 17.9	+0.5
MRSI	Marisa	2.75	282	P	Pn	01 07 27.8	+1.6
LBMI	Labuha	2.92	101	P	Pn	01 07 29.2	+0.6
APSI	Ampana	3.10	254	P	Pn	01 07 31.4	+0.4
MPSI	Mapaga	4.75	275	P	Pn	01 07 54.1	+0.5
SPSI	Sidrap Palu	6.21	231	P	Pn	01 08 12.6	-0.9
WRA	Warramunga Arr	21.91	155	P	P	01 11 31.0	-0.8
	0.9nm,0.7s,baz=333,slow=10,SNR=11						
ASAR	Alice Springs	25.12	160	P	P	01 12 04.0	+1.3
	0.9nm,0.7s,baz=329,slow=7.0,SNR=11						
MKAR	Makanchi Array	59.54	328	P	P	01 16 39.6	-0.7
	0.3nm,0.6s,baz=122,slow=7.7,SNR=5.2						

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*TUL **17** 01:11:10.8±1.5, 36°.84N±0°.01×97°.54W±0°.01, h5^{km}±6^{km}, ML2.5, ML2.4/50(NEIC), Error ellipse: s-maj=1.9km s-min=1.4km az=195.0*

NEIC 17 01:11:10.7±0.6, **36°.81N**±0°.01×**97°.52W**±0°.01, **h2**^{km}±7^{km}, **Error ellipse: s-maj=1.9km s-min=1.3km az=209.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN13	South Haven SW	0.20	8	Pg	Pg	01 11 14.8	+0.1
KAN13				Sg	Sg	01 11 17.6	+0.3
KAN13				IAML		01 11 20.5	
	comp=N,1µm,0.2s						
BLOK	Blackwell	0.25	102	Pg	Pg	01 11 15.9	+0.5
BLOK				Sg	Sg	01 11 19.4	+0.7
GC02	Grant County #	0.28	278	Pg	Pg	01 11 16.3	+0.2
GC02				Sg	Sg	01 11 20.2	+0.4
KAN17	Caldwell West	0.31	319	Pg	Pg	01 11 16.7	+0.1
KAN17				Sg	Sg	01 11 20.9	+0.3
KAN09	Caldwell North	0.33	346	Pg	Pg	01 11 17.1	0.0
KAN09				Sg	Sg	01 11 21.4	-0.1
KAN09				IAML		01 11 26.9	
	comp=N,615nm,0.2s						
KAN01	Argonia South	0.39	330		Pg	01 11 18.2	0.0
KAN01				Sg	Sg	01 11 23.5	+0.1
KAN05	Bluff City Nor	0.41	316		Pg	01 11 18.6	0.0
KAN05				Sg	Sg	01 11 24.2	+0.2
KAN05				IAML		01 11 25.9	
	comp=E,400nm,0.2s						
KAN05				IAML		01 11 26.1	
	comp=N,302nm,0.2s						
CROK	Carrier	0.49	231	Pg	Pg	01 11 20.4	+0.4
KAN06	Argonia West S	0.51	328		Pg	01 11 20.5	-0.1
KAN06				IAML		01 11 32.3	
	comp=N,223nm,0.1s						
KAN08	Anthony NE Sta	0.55	319		Pg	01 11 21.3	0.0
KAN08				IAML		01 11 30.5	
	comp=E,185nm,0.5s						
OK032	Salt Plains WL	0.56	269	Pg	Pg	01 11 21.5	+0.1
OK032				Sg	Sg	01 11 29.0	+0.4
OK032				IAML		01 11 33.7	
	comp=E,341nm,0.2s						
KAN10	Anthony SW Sta	0.56	304	Pg	Pg	01 11 21.3	-0.2
KAN10				Sg	Sg	01 11 29.0	+0.3
KAN10				IAML		01 11 32.7	
	comp=E,182nm,0.3s						
KAN10				IAML		01 11 34.5	
	comp=N,185nm,0.5s						
KAN16	Harper SW Stat	0.60	313	Pg	Pg	01 11 22.2	-0.1
KAN12	Harper NE Stat	0.62	322	Pg	Pg	01 11 22.5	-0.1
KAN12				IAML		01 11 38.4	
	comp=N,306nm,0.4s						
KAN12				IAML		01 11 40.8	
	comp=E,296nm,0.3s						
T35A	Sooner Cattle	0.81	82	Pg	Pg	01 11 26.1	-0.2
T35A				Sg	Sg	01 11 36.6	-0.2
T35A				IAML		01 11 39.0	
	comp=N,116nm,0.5s						
T35A				IAML		01 11 42.2	
	comp=E,95nm,0.4s						
QUOK	Quay	0.91	134	Pg	Pg	01 11 28.2	0.0
QUOK				IAML		01 11 46.9	
	comp=N,165nm,0.2s						
OK029	Liberty Lake	1.01	177	Pg	Pg	01 11 30.2	0.0
OK029				IAML		01 11 50.6	
	comp=N,101nm,0.5s						
OK029				IAML		01 11 52.1	
	comp=N,86nm,0.3s						
OK031	S. Brethren Rd	1.02	147	Pg	Pg	01 11 30.2	0.0
OK031				Sg	Sg	01 11 43.9	+0.5
OK031				IAML		01 11 49.3	
	comp=N,122nm,0.1s						
OK031				IAML		01 11 49.8	
	comp=N,105nm,0.2s						
OK034	N. Norfolk Rd.	1.03	141	Pg	Pg	01 11 30.4	-0.1
OK030	Cody Creek RV	1.06	146		Pg	01 11 31.0	-0.1
BCOK	Bluff Creek, N	1.16	184	Pg	Pg	01 11 32.7	-0.2
BCOK				IAML		01 11 52.9	
	comp=E,87nm,0.2s						
BCOK				IAML		01 11 55.2	
	comp=N,68nm,0.2s						
OK025	Westminster Rd	1.24	173	Pg	Pg	01 11 34.2	-0.2
U32A	Winter Ranch,	1.27	251		Pg	01 11 34.4	-0.7
U32A				IAML		01 11 52.5	
	comp=E,58nm,0.1s						
U32A				IAML		01 12 00.8	
	comp=N,47nm,0.3s						
OKCFA	Oklahoma City	1.40	178	Pn	Pn	01 11 37.0	-0.3
OKCSW	OKLAHOMA CITY	1.41	177	Pn	Pn	01 11 37.3	-0.2
FNO	Franklin	1.56	177	Pn	Pn	01 11 39.5	0.0
TUL1	Leonard	1.66	122		Pn	01 11 40.9	+0.1
W35A	Tecumseh	1.74	162	Pn	Pn	01 11 42.1	+0.2
X34A	Smith Ranch, M	2.22	187		Pn	01 11 48.3	-0.3
U38A	Gravette	2.54	97	Pn	Pn	01 11 52.8	-0.3
HHAR	Hobbs	2.93	99		Pn	01 11 59.0	+0.6
S39A	Bolivar	3.46	74		Pn	01 12 06.0	+0.3

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*NEIC **17** 01:20:47.1±0.8, 4°.6S±0°.1×152°.13E±0°.09, h148^{km}±7^{km}, mb4.2/7, Error ellipse: s-maj=21.5km s-min=9.0km az=210.0*

*IDC **17** 01:20:49.8±4.5, 4°.59S×152°.09E, h188^{km}±38^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.4/37, mbtmp4.1/7, Error ellipse: s-maj=32.4km s-min=22.6km az=28.0*

ISC 17 01:20:45.8±0.8, **4°.4S**±0°.1×**152°.20E**±0°.09, **h153**^{km}, **n22**, σ**1^{s}.08**/23, **mb4.2**/10, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	0.24	351		Pn	01 21 07.5	+0.9
PMG	Port Moresby	7.03	225	P	Pn	01 22 28.0	+1.7
	4.0nm,0.3s,baz=0.0,slow=11,SNR=4.3						
PMG				S	Sn	01 23 45.3	+0.2
	3.3nm,0.3s,baz=259,slow=19,SNR=2.2						
PMG	Port Moresby	7.03	225		Pn	01 22 25.5	-0.8
HNR	Honiara	9.15	123	Pn	Pn	01 22 53.7	-0.9
COEN	Coen	12.99	223	Pn	Pn	01 23 44.5	-0.3
DZM	Mont Dzumac	22.31	143	P	P	01 25 31.9	+0.8
	4.1nm,0.4s,baz=243,slow=3.8,SNR=11						
DZM	Mont Dzumac	22.31	143	P	P	01 25 31.8	+0.8
DZM				IAmb	IAmb	01 25 32.8	
	comp=Z,6.6nm,0.6s						
WB0	Warramunga Arr	23.10	227	P	P	01 25 38.0	-0.3
WB0				IAmb	IAmb	01 25 52.7	
	comp=Z,7.3nm,1.2s						
WB2	Warramunga Arr	23.24	227	P	P	01 25 38.9	-0.7
WB2				IAmb	IAmb	01 25 40.6	
	comp=Z,7.1nm,0.4s						
WRA	Warramunga Arr	23.25	227	P	P	01 25 39.5	-0.2
	comp=Z,3.3nm,0.3s,baz=53,slow=9.9,SNR=108						
WRA	Warramunga Arr	23.25	227	P	P	01 25 38.7	-1.0
KNRA	Kununurra	25.60	242	P	P	01 26 00.1	-1.0
KNRA				IAmb	IAmb	01 26 03.9	
	comp=Z,22nm,1.3s						
AS31	Alice Springs	26.02	221	P	P	01 26 04.7	-0.2
AS31				IAmb	IAmb	01 26 17.6	
	comp=Z,1.2nm,1.2s						
ASAR	Alice Springs	26.02	221	P	P	01 26 04.7	-0.2
	comp=Z,0.4nm,0.4s,baz=55,slow=8.4,SNR=8.9						
ASAR	Alice Springs	26.02	221	P	P	01 26 05.0	+0.1
FITZ	Fitzroy Crossi	29.31	240	P	P	01 26 32.6	-1.5
	comp=Z,2.0nm,0.4s,baz=59,slow=7.3,SNR=32						
RPZ	Rata Peaks	42.52	160	P	P	01 28 27.1	+1.1
CMAR	Chiang Mai Arr	57.18	295	P	P	01 30 18.2	+1.0
	comp=Z,1.3nm,0.4s,baz=123,slow=5.7,SNR=5.3						
MKAR	Makanchi Array	79.66	319	P	P	01 32 36.7	+0.3
	comp=Z,0.2nm,0.5s,baz=98,slow=8.7,SNR=4.3						
MKAR	Makanchi Array	79.66	319	P	P	01 32 36.5	+0.2
TORD	Torodi Ar. Bea	149.62	288	PKPbc	PKiKP	01 40 17.0	-2.3
	comp=Z,1.0nm,0.3s,baz=72,slow=2.1,SNR=28						
TORD	Torodi Ar. Bea	149.62	288		PKiKP	01 40 17.2	-2.1

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*IDC **17** 01:36:37.3±14.0, 10°.91N×61°.74W, h0^{km}, mb3.4/4, mb1 3.8/4, mb1mx3.5/30, mbtmp3.4/4, Error ellipse: s-maj=350.7km s-min=95.9km az=167.0*

*TRN **17** 01:36:54.4, 10°.69N×62°.60W, h85^{km}, MD3.8*

*FUNV **17** 01:36:54.8, 10°.67N×62°.55W, h91^{km}, MW3.7*

ISC 17 01:36:52.6±0.9, **10°.68N**±0°.05×**62°.60W**±0°.05, **h104**^{km}±8^{km}, **n40**, σ**1^{s}.53**/58, **mb3.4**/4, **1C-2D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	Carupano	0.63	270	⇓*i*P	Pn	01 37 10.2	+0.5
CRUV				*e*S	Sn	01 37 22.1	-0.5
TRN	Trinidad (W)	1.17	91	*e*P	Pn	01 37 15.8	+0.5
TRN				*e*S	Sn	01 37 31.1	-1.2
GRGR	Grenville	1.72	33	*e*P	Pn	01 37 22.4	+0.6
GRGR				*e*S	Sn	01 37 43.5	-0.5
GRHS	Sauteurs	1.80	31	*e*P	Pn	01 37 23.8	+1.0
GRHS				*e*S	Sn	01 37 45.9	+0.1
GRSS	Sisters	1.88	31	*e*S	Sn	01 37 48.0	+0.4
PCRV	Puerto La Cruz	2.07	256	⇑*e*P	Pn	01 37 27.5	+1.3
PCRV				*e*S	Sn	01 37 51.0	-0.9
TOSP	Speyside	2.12	73	*e*P	Pn	01 37 28.8	+1.9
TOSP				*e*S	Sn	01 37 52.7	-0.3
GCMP	Grenada, Carri	2.13	32	*e*P	Pn	01 37 27.8	+0.7
GCMP				*e*S	Sn	01 37 53.0	-0.4
PRGV	PARIAGUAN	2.78	227	⇓*e*P	Pn	01 37 36.8	+1.3
PRGV				*e*S	Sn	01 38 09.1	+0.5
SVB	Belmont	2.90	27	*e*P	Pn	01 37 39.2	+2.1
SVB				*e*S	Sn	01 38 11.0	-0.4
SVV	Soufriere Volc	2.95	27	*e*P	Pn	01 37 39.7	+1.8
SVV				*e*S	Sn	01 38 12.7	-0.1
SSV	Crater Summit	2.97	27	*e*P	Pn	01 37 40.0	+1.9
SSV				*e*S	Sn	01 38 14.3	+1.0
MCLT	Moule a Chique	3.42	28	*e*P	Pn	01 37 46.0	+1.9
MCLT				*e*S	Sn	01 38 24.2	+0.3
BIRV	Birongo	3.62	267	*e*P	Pn	01 37 49.1	+2.4
BIRV				*e*S	Sn	01 38 28.8	+0.1
SLBI	Saint Lucia, B	3.68	25	*e*P	Pn	01 37 49.2	+1.6
SLBI				*e*S	Sn	01 38 29.4	-0.8
MERV	Las Mercedes	3.91	249	*e*P	Pn	01 37 51.6	+0.8
MERV				*e*S	Sn	01 38 35.2	-0.5
BIM	Bigot	4.10	21	*e*P	Pn	01 37 55.5	+2.3
BIM				*e*S	Sn	01 38 39.7	-0.5
MPOM	Morne Pois Mar	4.11	24	*e*P	Pn	01 37 55.7	+2.3
MPOM				*e*S	Sn	01 38 39.5	-1.0
FDF	Fort de France	4.27	19	*e*P	Pn	01 37 58.2	+2.6
FDF				*e*S	Sn	01 38 41.4	-3.1
ILAM	Ilet Lapin Mar	4.41	22	*e*P	Pn	01 37 58.3	+0.9
DSLB	Salisbury	4.87	13	*e*P	Pn	01 38 04.4	+0.7
DSLB	Salisbury	4.87	13	*e*S	Sn	01 38 57.1	-1.7
CACV	CAICARA DEL OR	4.97	232	*e*P	Pn	01 38 00.4	-4.7
BENV	Beln	4.97	262	*e*P	Pn	01 38 05.8	+0.6
TDBA	Terre de Bas,	5.22	10	*e*S	Sn	01 39 04.7	-2.8
MAGL	Barre de l’ile	5.39	14	*e*P	Pn	01 38 12.6	+1.9
MAGL	Barre de l’ile	5.39	14	*e*S	Sn	01 39 09.1	-2.5
CBE	Ff, Capester	5.45	10	*e*P	Pn	01 38 14.0	+2.5
CBE	Ff, Capester	5.45	10	*e*S	Sn	01 39 11.3	-1.6
BAUV	El Baul	5.64	253	*e*P	Pn	01 38 14.4	+0.3
BAUV				*e*S	Sn	01 39 14.6	-2.9
MAPV	Macapo	5.83	262	*e*P	Pn	01 38 17.8	+1.1
ANBD	Bethesda, Anti	6.38	7	*e*P	Pn	01 38 27.1	+2.9
ANWB	Willy Bob	6.99	6	*e*P	Pn	01 38 34.3	+1.8
PAYV	Puerto Ayacuch	7.24	224	*e*P	Pn	01 38 36.3	+0.5
MONV	Montecano	7.34	281	*e*P	Pn	01 38 38.2	+1.0

SOCV	Socops	8.49	254	eP	Pn	01 38 51.9	-0.9
TXAR	Lajitas Array	42.54	302	P	P	01 44 39.6	+1.2
	0.1nm,0.4s,baz=117,slow=9.2,SNR=1.8						
PDAR	Pinedale Array	51.79	317	P	P	01 45 50.3	+0.1
	0.3nm,0.5s,baz=111,slow=9.9,SNR=5.5						
YKA	Yellowknife Ar	63.64	336	P	P	01 47 10.9	-1.6
	0.3nm,0.5s,baz=109,slow=7.2,SNR=4.5						
ILAR	Eielson Array	77.98	334	P	P	01 48 38.1	-1.1
	0.2nm,0.5s,baz=87,slow=4.6,SNR=5.7						

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*IDC **17** 01:54:18.7±2.1, 19°.16S×71°.61W, h0^{km}, mb4.0/4, mb1 4.1/5, mb1mx3.8/18, mbtmp4.0/5, ML3.4/1, MS2.9/1, Ms1 3.0/1, ms1mx2.5/21, Error ellipse: s-maj=79.9km s-min=36.6km az=5.0*

*GUC **17** 01:54:26.5±0.6, 18°.50S×71°.31W, h30^{km}±5^{km}, ML3.7*

ISC 17 01:54:21.5±2.5**, 18°.81S**±0°.06×**71°.46W**±0°.09**, h11**^{km}±14^{km}**, n29, σ1^{s}52**/30**, mb4.1**/4**, 3C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB12	IPOC Station P	1.09	80	⇓iP	Pb	01 54 42.3	-0.2
PB12				eS	Sb	01 54 55.3	-1.6
AP01	Chacalluta	1.15	68	eP	Pn	01 54 42.1	-1.4
AP01				eS	Sb	01 54 55.0	-3.4
AP01				IAML		01 55 01.2	
	comp=E,5µm,0.4s						
TA02	Huaiquique	1.92	139	eP	Pg	01 54 60.0	+1.6
TA02				eS	Sg	01 55 24.7	+1.5
TA02				IAML		01 55 31.1	
	comp=N,826nm,0.1s						
PB11	IPOC Station P	1.95	119	⇑iP	Pg	01 54 59.3	+0.3
PB11				eS	Sg	01 55 23.5	-0.8
PB11				IAML		01 55 32.0	
	comp=N,845nm,0.2s						
HMBC	Humberstone	2.08	135	⇑iP	Pg	01 55 02.2	+0.7
HMBC				i S	Sg	01 55 27.5	-0.9
HMBC				IAML		01 55 44.1	
	comp=E,414nm,0.4s						
TA01	Diego Aracena	2.12	145	⇑iP	Pg	01 55 02.7	+0.5
TA01				i S	Sg	01 55 28.8	-1.0
TA01				IAML		01 55 30.9	
	comp=E,274nm,0.2s						
PATCX	Punta Patache	2.35	149	eP	Pg	01 55 06.0	-0.6
PATCX				eS	Sb	01 55 34.7	+1.7
PATCX				IAML		01 55 35.8	
	comp=E,255nm,0.2s						
PB08	IPOC Station P	2.55	122	eP	Pb	01 55 07.8	+0.3
PB08				eS	Sb	01 55 39.4	+0.3
PB08				IAML		01 55 49.1	
	comp=N,285nm,0.5s						
PB01	IPOC Station P	2.89	140	eP	Pb	01 55 13.1	-0.1
PB01				eS	Sb	01 55 48.1	-0.6
PB01				IAML		01 55 51.2	
	comp=E,253nm,0.2s						
PB02	IPOC Station P	2.90	150	eP	Pb	01 55 13.7	+0.4
PB02				i S	Sb	01 55 48.1	-0.7
PB02				IAML		01 55 51.3	
	comp=E,326nm,0.3s						
PB07	IPOC Station P	3.25	153	eP	Pb	01 55 18.6	-0.9
PB07				IAML		01 56 02.9	
	comp=N,112nm,0.3s						
PB03	IPOC Station P	3.59	154	eP	Pb	01 55 23.3	-2.0
PB04	IPOC Station P	3.71	161	eP	Pb	01 55 24.5	-2.7
LPAZ	La Paz	4.05	52	Pn	Pn	01 55 27.6	+3.5
	comp=N,1.3nm,0.3s,baz=239,slow=5.9,SNR=37						
LPAZ				LR	LR	01 57 12.1	
	comp=N,142nm,19.3s,baz=257,slow=40						
H03N1	Juan Fernandez	16.02	203	T	T	02 15 16.1	
	baz=27,slow=73,SNR=109						
H03N2	Juan Fernandez	16.03	203	T	T	02 15 08.2	
	baz=27,slow=73,SNR=87						
H03N3	Juan Fernandez	16.04	203	T	T	02 15 15.2	
	baz=27,slow=73,SNR=89						
BDFB	Brasilia	22.61	86	P	P	01 59 23.1	+0.4
	comp=N,1.1nm,0.4s,baz=239,slow=5.9,SNR=4.3						
DBIC	Dimbokro	70.33	76	P	P	02 05 37.9	+2.0
	comp=N,1.4nm,0.5s,baz=232,slow=6.7,SNR=3.1						
TORD	Torodi Ar. Bea	78.76	72	P	P	02 06 23.4	-1.4
	comp=N,0.9nm,0.5s,baz=252,slow=5.8,SNR=12						
YKA	Yellowknife Ar	87.88	341	P	P	02 07 09.9	-0.8
	comp=N,0.7nm,0.7s,baz=141,slow=4.8,SNR=4.7						
H11S2	WAKE ISLAND Hy	125.11	280	T	T	04 31 02.2	
	baz=100,slow=74,SNR=25						
H11S1	WAKE ISLAND Hy	125.12	280	T	T	04 31 02.8	
	baz=100,slow=74,SNR=18						
H11S3	WAKE ISLAND Hy	125.13	280	T	T	04 30 57.3	
	baz=100,slow=74,SNR=20						
H11N3	WAKE ISLAND Hy	125.13	281	T	T	04 31 04.5	
	baz=100,slow=74,SNR=6.8						
H11N2	WAKE ISLAND Hy	125.15	281	T	T	04 31 00.5	
	baz=100,slow=74,SNR=7.0						
H11N1	WAKE ISLAND Hy	125.15	281	T	T	04 31 00.3	
	baz=100,slow=74,SNR=4.8						
MKAR	Makanchi Array	144.75	32	PKPbc	PKPab	02 13 57.7	+0.3
	comp=N,0.9nm,1.0s,baz=312,slow=4.6,SNR=4.3						
SONM	Songino Array	151.00	3	PKPbc	PKiKP	02 14 15.6	+0.3
	comp=N,0.5nm,0.6s,baz=300,slow=1.2,SNR=3.7						

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*TRN **17** 02:10:01.8, 10°.60N×62°.40W, h65^{km}, MD3.5*

*FUNV **17** 02:10:01.6, 10°.58N×62°.43W, h28^{km}, MW3.5*

ISC 17 02:10:00.4±1.3**, 10°.58N**±0°.05×**62°.48W**±0°.04**, h68**^{km}±17^{km}**, n17, σ1^{s}04**/27**, 1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	Carupano	0.75	277	⇓iP	Pn	02 10 16.0	+0.2
CRUV				eS	Sn	02 10 26.9	-0.2
TPP	Pointe-a-Pierr	1.05	105	eP	Pn	02 10 20.1	+0.7
TPP				eS	Sn	02 10 33.8	+0.2
TRN	Trinidad (W)	1.06	86	eP	Pn	02 10 20.0	+0.4
TRN				eS	Sn	02 10 32.8	-1.1
GRGR	Grenville	1.74	28	eP	Pn	02 10 29.4	+0.8
GRGR				eS	Sn	02 10 49.7	-0.3
TOSP	Speyside	2.04	69	eP	Pn	02 10 32.6	0.0
TOSP				eS	Sn	02 10 56.1	-1.0
GCMP	Grenada, Carri	2.16	29	eP	Pn	02 10 34.7	+0.5
GCMP				eS	Sn	02 10 59.0	-0.9
PCRV	Puerto La Cruz	2.16	259	eP	Pn	02 10 35.2	+0.9
PRGV	PARIAGUAN	2.80	230	eP	Pn	02 10 43.7	+0.8
PRGV				eS	Sn	02 11 16.3	+0.7
SVB	Belmont	2.93	24	eS	Sn	02 11 18.7	-0.1
BIRV	Birongo	3.73	269	eP	Pn	02 10 57.8	+2.2
BIRV				eS	Sn	02 11 37.8	-0.5
MERV	Las Mercedes	3.98	251	eP	Pn	02 11 00.1	+1.0
MERV				eS	Sn	02 11 43.4	-1.2
MPOM	Morne Pois Mar	4.15	22	eP	Pn	02 11 02.7	+1.3
MPOM				eS	Sn	02 11 47.4	-1.3
CACV	CAICARA DEL OR	5.00	234	eP	Pn	02 11 08.4	-4.7
BENV	Beln	5.07	263	eP	Pn	02 11 14.2	+0.1
BAUV	El Baul	5.72	254	eP	Pn	02 11 23.0	+0.2
BAUV				eS	Sn	02 12 24.9	-2.2
SANV	Sanarito	7.03	262	eP	Pn	02 11 42.0	+1.1
SOCV	Socops	8.57	255	eP	Pn	02 12 01.0	-0.9

WEL 17 02:17:38.4±1.1**, 44°S**±8°×**16°9E**±°**, h5**^{km}**, M3.4**/6**, ML3.6**/6**, MLv3.4**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=136.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCZ	Jackson Bay	0.14	68	P	Pg	02 17 41.9	+0.6
JCZ				S	Sg	02 17 43.9	+0.7
MSZ	Milford Sound	0.73	221	P	Pg	02 17 52.3	-0.2
WKZ	Wanaka	0.76	157	P	Pg	02 17 52.9	-0.2
FOZ	Fox Glacier	1.06	56	P	Pg	02 17 58.7	0.0
LBZ	Lake Benmore	1.16	103	P	Pg	02 18 00.8	+0.1
EAZ	Earnscleugh	1.21	156	P	Pg	02 18 01.1	-0.6
MLZ	Mavora Lakes	1.29	195	P	Pg	02 18 02.4	-0.7
GCSZ	Gaunt Creek Bo	1.49	58	P	Pn	02 18 05.2	-0.6
DCZ	Deep Cove	1.69	217	P	Pn	02 18 08.7	+0.1
ODZ	Otahua Downs	1.72	123	P	Pn	02 18 09.1	+0.1
TMZ	Timaru	1.74	99	P	Pn	02 18 09.1	-0.3
RPZ	Rata Peaks	1.82	78	P	Pb	02 18 11.7	-0.4
ARCZ	Arundel	1.86	85	P	Pn	02 18 11.0	-0.1
WVZ	Waitaha Valley	1.87	57	P	Pn	02 18 10.4	-0.7
TUZ	Tuapeka	1.97	159	P	Pb	02 18 14.5	-0.2
SYZ	Scrubby Hill	2.44	171	P	Pb	02 18 22.1	-0.6
PYZ	Puysegur Point	2.45	213	P	Pb	02 18 22.1	-0.9
INZ	Inchbonnie	2.50	57	P	Pn	02 18 19.1	-0.6
APZ	The Paps	2.74	189	P	Pn	02 18 24.7	+1.6
LTZ	Lake Taylor	2.99	65	P	Pn	02 18 28.6	+2.1
DSZ	Denniston Nort	3.34	46	P	Pn	02 18 30.9	-0.5
THZ	Tophouse	3.94	55	P	Pn	02 18 40.0	+0.4
QRZ	Quartz Range	4.39	43	P	Pn	02 18 45.8	+0.1
NNZ	Nelson	4.56	52	P	Pn	02 18 48.7	+0.6
TCW	Tory Channel	5.10	57	P	Pn	02 18 56.7	+1.3
DUWZ	D'Urville Isla	5.15	52	P	Pn	02 18 57.1	+0.9
KHEZ	Kahui Hut	6.30	42	P	Pn	02 19 12.7	+0.6
FWVZ	Far West T-bar	7.12	49	P	Pn	02 19 24.5	+1.1
NGZ	Ngauruhoe	7.20	49	P	Pn	02 19 26.6	+2.1
OTVZ	Oturere	7.25	49	P	Pn	02 19 26.3	+1.2

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*IDC **17** 02:34:57.4±5.4, 36°.10N×70°.50E, h174^{km}±54^{km}, mb3.3/6, mb1 3.2/10, mb1mx2.8/62, mbtmp3.8/10, Error ellipse: s-maj=52.7km s-min=38.8km az=124.0*

*NNC **17** 02:35:07.7±3.8, 37°.01N×70°.51E, h219^{km}±55^{km}, mb2.9, mpv3.9, Error ellipse: s-maj=38.1km s-min=23.4km az=14.0*

ISC 17 02:35:02.0±0.8**, 36°.54N**±0°.06×**70°.5E**±0°.1**, h204**^{km}**, n25, σ1^{s}49**/30**, mb3.5**/6**, 6C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.94	157	P	Pn	02 35 51.4	+0.1
CEP				S	S	02 36 28.0	-1.2
THW	Thamme Wali	3.87	165	P	Pn	02 36 02.0	-0.4
AML	Almayashu	6.09	23	P	Pn	02 36 31.2	+0.4
	SNR=60						
UCH	Uchtor	6.46	27	P	Pn	02 36 36.2	+0.6
	SNR=31						
KK08	Karatay Array	6.55	360	⇑P	Pn	02 36 36.7	+0.3
	2.8nm,0.5s						
KK08				⇑S	S	02 37 47.0	-4.2
	6.6nm,0.5s						
EKS2	Erkin-Say	6.60	21	P	Pn	02 36 37.8	+0.6
	SNR=6.0						
AAK	Ala-Archa	6.81	25	P	Pn	02 36 40.6	+0.8
	3.2nm,0.3s,baz=178,slow=6.2,SNR=42						
AAK				S	S	02 37 55.7	-1.6
	1.0nm,0.3s,baz=330,slow=20,SNR=20						
AAK	Ala-Archa	6.81	25	P	Pn	02 36 40.7	+0.8
	SNR=18						
AAK	Ala-Archa	6.81	25	⇑P	Pn	02 36 40.1	+0.3
	3.2nm,0.3s						
AAK				⇑S	S	02 37 55.7	-1.6
	18nm,0.6s						
KBK	Karagaybulak	6.99	28	P	Pn	02 36 43.0	+0.8
	SNR=6.0						
USP	Ospenovka	7.37	23	P	Pn	02 36 47.7	+0.7
	SNR=18						
TKM2	Tokmak 2	7.46	30	P	Pn	02 36 49.1	+0.7
	SNR=9.2						
TKM2	Tokmak 2	7.46	30	⇓P	Pn	02 36 49.1	+0.7
	12nm,0.5s						
TKM2				⇑S	S	02 38 09.7	-3.3
	4.4nm,0.6s						
MKAR	Makanchi Array	13.47	37	P	Pn	02 38 06.3	+1.1
	0.1nm,0.3s,baz=222,slow=18,SNR=1.9						
AB31	Akbulak array	14.87	332	P	Pn	02 38 21.1	-1.2
	0.3nm,0.3s,baz=148,slow=11,SNR=40						
BVAR	Borovoye Array	16.48	360	P	Pn	02 38 42.4	+0.7
	0.2nm,0.3s,baz=198,slow=14,SNR=4.7						
AKTO	Aktyubinsk	16.56	331	P	Pn	02 38 42.8	+0.2
	0.6nm,0.3s,baz=148,slow=10,SNR=23						
AKTO	Aktyubinsk	16.56	331	⇑P	Pn	02 38 42.9	+0.2
	8.1nm,0.9s						
ZALV	Zalesovo Beam	20.03	25	P	P	02 39 21.1	+1.9
	1.3nm,0.4s,baz=214,slow=11,SNR=5.4						
ARU	Arti	21.47	342	P	P	02 39 36.9	+2.6
	0.7nm,0.5s,baz=215,slow=3.6,SNR=4.7						
FINES	FINESS Array B	37.24	326	P	P	02 41 54.7	+1.0
	1.6nm,0.6s,baz=113,slow=8.6,SNR=8.4						
ARCES	ARCESS Array B	40.96	338	P	P	02 42 25.8	+1.4
	1.0nm,0.5s,baz=110,slow=7.8,SNR=8.8						
HFS	Hagfors	42.80	322	P	P	02 42 39.8	+0.4
	2.3nm,0.8s,baz=97,slow=9.3,SNR=5.7						
NB2	NORSAR Subarra	44.12	323	P	P	02 42 50.4	+0.5
	comp=Z,0.2nm,0.4s,baz=100,slow=7.9						
TORD	Torodi Ar. Bea	65.35	268	P	P	02 45 21.1	-1.7
	comp=Z,0.3nm,0.5s,baz=46,slow=6.6,SNR=5.7						

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*JMA **17** 02:43:58.1±0.1, 36°.20N×140°.97E, h44^{km}±1^{km}, M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s208.00000°, δ12.00000°, λ134.00000°. NP2: ϕ_s344.00000°, δ81.00000°, λ82.00000°. Principal axes: T Plg53.0000°, Azm244.0000°; N Plg8.0000°, Azm345.0000°; P Plg36.0000°, Azm81.0000°;*

JMA Felt I J1.

*NIED **17** 02:43:58.1, 36°.20N×140°.97E, h44^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.09; $M_{\theta\theta}$0.48; $M_{\phi\phi}$-0.57; $M_{r\theta}$-0.71; $M_{\theta\phi}$-0.86; $M_{\phi r}$2.18; Fault plane solution: $M_0$2.50000×10^{14} NP1: ϕ_s344.00000°, δ89.00000°, λ66.00000°. NP2: ϕ_s252.00000°, δ24.00000°, λ178.00000°.*

*IDC **17** 02:44:07.8±2.5, 35°.75N×139°.88E, h88^{km}±27^{km}, mb3.2/3, mb1 3.5/4, mb1mx2.8/44, mbtmp3.6/4, MS2.7/1, Ms1 2.7/1, ms1mx2.1/25 Error ellipse: s-maj=49.5km s-min=21.5km az=91.0*

ISC 17 02:43:58.5±1.8**, 36°.21N**±0°.04×**140°.98E**±0°.07**, h38**^{km}±2^{km}**, n22, σ0^{s}72**/21**, mb3.7**/3**, 7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	Hitachinakayam	0.35	293	⇓P	Pn	02 44 07.2	+0.2
JHYU				S	Sn	02 44 13.3	-0.4
JIHU	Itakohorinouch	0.44	237	⇓P	Pn	02 44 08.7	+0.5
CHOJ	Chosi	0.51	192	⇓P	Pn	02 44 08.8	-0.5
CHOJ				S	Sn	02 44 16.0	-0.8
JHO	Hitachi	0.53	321	⇓P	Pn	02 44 09.0	-0.6
JHO				eS	Sn	02 44 17.1	-0.2
JYT	Yasato	0.64	272	⇓P	Pn	02 44 10.6	-0.6
JYT				S	Sn	02 44 19.2	-0.8
JSMT	Sammumatsuo	0.71	218	⇓P	Pn	02 44 12.1	+0.1
JFK	Kawauchi	1.16	356	P	Pn	02 44 17.7	-0.6
JAG	Ashikaga	1.26	281	⇓P	Pn	02 44 19.4	-0.1
JAG				S	Sn	02 44 34.6	-0.6
JFT	Otama	1.41	339	P	Pn	02 44 22.6	+1.0
JFT				S	Sn	02 44 39.8	+0.8
MJAR	Matsushiro Arr	2.27	279	P	Pn	02 44 33.6	+0.2
	2.3nm,0.3s,baz=105,slow=8.9,SNR=26						
MAT	Matsushiro	2.27	279	P	Pn	02 44 34.5	+1.1
MAT				S	Sn	02 45 00.8	+0.7
JHJ	Hachijo jima 2	3.23	198	P	Pn	02 44 48.1	+1.4
	12nm,0.3s,baz=72,slow=20,SNR=1.6						
JCJ	Chichijima	9.14	173	LR	LR	02 49 56.6	
	comp=Z,40nm,18.2s,baz=303,slow=39						
H11N2	WAKE ISLAND Hy	28.04	119	T	T	03 19 02.5	
	baz=311,slow=74,SNR=11						
H11N1	WAKE ISLAND Hy	28.04	119	T	T	03 19 06.5	
	baz=311,slow=74,SNR=11						
H11N3	WAKE ISLAND Hy	28.05	119	T	T	03 19 06.5	
	baz=311,SNR=10.0						
H11S1	WAKE ISLAND Hy	28.71	121	T	T	03 19 57.5	
	baz=313,slow=76,SNR=39						
H11S3	WAKE ISLAND Hy	28.71	121	T	T	03 19 55.9	
	baz=313,slow=76,SNR=22						
H11S2	WAKE ISLAND Hy	28.73	121	T	T	03 19 59.2	
	baz=313,slow=76,SNR=27						
ILAR	Eielson Array	50.38	32	P	P	02 53 02.0	+11
	0.5nm,0.7s,baz=271,slow=5.7,SNR=4.9						
WRA	Warramunga Arr	56.20	188	P	P	02 53 34.6	0.0
	1.0nm,1.0s,baz=1.2,slow=7.5,SNR=8.0						
ASAR	Alice Springs	59.92	188	P	P	02 54 00.7	0.0
	0.2nm,0.6s,baz=20,slow=8.6,SNR=4.4						

MAN 17 02:45:39.9, 18°.31N×120°.89E, h16^{km}**, mb4.3, ML3.1, MS2.9, Luzon**

IDC 17 02:58:19.0±2.0**, 6°.51S×128°.69E, h0**^{km}**, mb3.6**/1**, mb1 3.4**/3**, mb1mx3.3**/33**, mbtmp3.2**/3**, ML3.0**/2**, Error ellipse: s-maj=115.6km s-min=32.0km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.44	158	Pn	Pn	03 01 43.0	-1.7
	0.1nm,0.3s,baz=337,slow=13,SNR=5.8						
WRA				Sn	Sn	03 04 11.9	-14
	0.1nm,0.3s,baz=342,slow=21,SNR=7.2						
ASAR	Alice Springs	17.78	164	P	P	03 02 29.3	+0.4
	0.1nm,0.3s,baz=344,slow=8.8,SNR=2.0						
MKAR	Makanchi Array	67.11	327	P	P	03 09 14.4	0.0
	0.3nm,0.4s,baz=110,slow=7.8,SNR=6.5						

KMA 17 02:59:18.3±0.7**, 34°.85N×128°.74E, h29**^{km}±3^{km}**, Error ellipse: s-maj=10.5km s-min=4.3km az=148.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUJA	Jangpyeong	0.12	288	P	Pb	02 59 22.4	-1.1
KUJA				S	Sb	02 59 27.7	+0.5
KSBSA	Busan_acc	0.35	43	P	Pn	02 59 27.5	+0.2
YKDB	Yokjido	0.45	239	P	Pb	02 59 28.2	+0.3
	SNR=22						
YKDB	Yokjido	0.45	239	P	Pb	02 59 28.2	+0.3
	SNR=22						
KSBUS	Busan	0.50	38	P	Pb	02 59 27.9	-0.7
EURB	Uiryeong-eup	0.60	322	P	Pn	02 59 30.6	-0.2
MIYA	Miryang-si	0.64	0	P	Pb	02 59 31.1	+0.2
KSUSN	Ulsan	0.90	20	P	Pb	02 59 35.3	-0.1
KSDAG	Daegu	0.92	8	P	Pn	02 59 34.7	-0.6
BOSB	Boseong-gun	1.26	266	P	Pn	02 59 40.1	+0.2
	SNR=15						
BOSB	Boseong-gun	1.26	266	P	Pn	02 59 40.1	+0.2
	SNR=15						
KSKWJ	Gwangju	1.47	283	P	Pn	02 59 43.0	+0.2
	SNR=8.7						
KSKWJ	Gwangju	1.47	283	P	Pn	02 59 43.0	+0.2
	SNR=8.8						
KSKWJ	Gwangju	1.47	283	P	Pn	02 59 43.0	+0.2
	SNR=8.7						
KSKWJ	Gwangju	1.47	283	P	Pn	02 59 43.0	+0.2
	SNR=8.8						
KSJEO	Jeonju	1.60	313	P	Pn	02 59 44.9	+0.3
	SNR=7.1						
KSJEU	Jeongeup	1.62	294	P	Pn	02 59 45.2	+0.3
	SNR=12						
KSBON	Boeun	1.81	335	P	Pb	02 59 49.5	-1.3
	SNR=6.7						

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*JMA **17** 03:03:13.1, 23°.21N×121°.61E, h38^{km}±2^{km}, M3.4*

*TAP **17** 03:03:14.5, 23°.22N×121°.53E, h38^{km}, ML3.7, C*

ISC 17 03:03:14.3±1.0**, 23°.22N**±0°.02×**121°.61E**±0°.02**, h33**^{km}±2^{km}**, n122, σ0^{s}81**/186**, 8C-14D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECBN	Changbin	0.18	304	⇑iP	Pb	03 03 21.1	+0.5
	baz=324						
ECBN				i S	Sb	03 03 25.9	+0.9
	baz=324						
CHKT	Chengkung	0.25	243	⇑iP	Pn	03 03 21.4	+0.1
	baz=229						
CHKT				i S	Sb	03 03 26.6	+0.3
	baz=229						
FULB	Fuli	0.29	267	⇑iP	Pn	03 03 21.8	-0.3
	baz=264						
FULB				S	Sb	03 03 27.8	+0.6
	baz=264						
EYUL	Yuli	0.30	296	P	Pn	03 03 22.3	+0.1
	baz=305						
EYUL				eS	Sb	03 03 28.6	+1.3
	baz=305						
TWF1	Yuli	0.32	295	⇓iP	Pb	03 03 22.3	0.0
	baz=304						
TWF1				S	Sn	03 03 28.1	+0.4
	baz=304						
HGSD	Ruisui	0.32	328	⇑iP	Pb	03 03 22.0	-0.3
	baz=343						
HGSD				eS	Sb	03 03 30.3	+2.4
	baz=343						
YULB	Yu-li	0.34	301	⇓iP	Pb	03 03 22.4	-0.1
	baz=310						
YULB				S	Sn	03 03 28.1	-0.1
	baz=310						
EDH	Donghe	0.37	229	⇑P	Pb	03 03 22.8	-0.2
	baz=215						
EDH				S	Sn	03 03 29.4	+0.2
	baz=215						
ECS	Chishang	0.38	251	eP	Pb	03 03 23.2	+0.1
	baz=247						
ECS				eS	Sb	03 03 29.9	+0.8
	baz=247						
EHY	Hungye	0.39	318	P	Pb	03 03 22.9	-0.4
	baz=315						
EHY				S	Sb	03 03 29.1	-0.3
	baz=315						
EGFH	Guangfu	0.48	340	P	Pb	03 03 24.4	-0.2
	baz=336						
EGFH				eS	Sb	03 03 32.0	+0.3
	baz=336						
TEGC	Jichi Village	0.49	353	P	Pb	03 03 24.6	-0.2
	baz=10.0						
TEGC				eS	Sb	03 03 32.4	+0.3
	baz=10.0						
LONT	Longtian	0.54	235	eP	Pn	03 03 24.9	-0.7
	baz=239						
ELDTW	Lidau	0.55	267	⇓iP	Pn	03 03 24.7	-1.0
	baz=260						
ELDTW				S	Sb	03 03 31.6	-1.9
	baz=260						
LDUT	Ludao	0.56	193	eP	Pn	03 03 24.9	-0.9
	baz=186						
ESL	Shilin	0.62	345	eP	Pn	03 03 25.6	-1.0
	baz=341						
TTN	Taitung	0.63	223	eP	Pn	03 03 26.8	+0.1
	baz=228						
TWGBT	Beinan	0.63	231	⇓iP	Pn	03 03 25.8	-1.0
	baz=236						
TWGBT				S	Sn	03 03 34.4	-1.3
	baz=236						
TEYL	Yanliau Villag	0.65	359	P	Pn	03 03 27.0	-0.1
	baz=17						
TEYL				eS	Sn	03 03 36.6	+0.4
	baz=17						
YUS	Yu-Shan	0.66	294	i P	Pn	03 03 27.3	-0.5
	baz=297						
YUS				eS	Sn	03 03 36.5	-0.8
	baz=297						
VWDT	VWDT	0.69	321	⇑iP	Pn	03 03 27.3	-0.3
	baz=327						
ETM	Tongmen	0.75	352	eP	Pn	03 03 27.9	-0.7
	baz=347						
HWA	Hwalien	0.76	360	eP	Pn	03 03 28.2	-0.4
	baz=16						
STYH	Taoyuan	0.77	267	⇓P	Pn	03 03 28.4	-0.4
	baz=265						
STYH				eS	Sn	03 03 38.1	-1.1
	baz=265						
STYT	Tauyuan	0.79	266	⇓iP	Pn	03 03 28.7	-0.4
	baz=265						
STYT				S	Sn	03 03 38.7	-1.0
	baz=265						
ALS	Alishan	0.80	292	⇓iP	Pn	03 03 29.4	+0.1
	baz=294						
ALS				i S	Sn	03 03 39.8	-0.4
	baz=294						
SSLB	Suanglung	0.83	314	⇓iP	Pn	03 03 29.2	-0.4
	baz=322						
SSLB				eS	Sn	03 03 38.7	-2.0
	baz=322						
OWD	Renai	0.83	332	eP	Pn	03 03 29.2	-0.6
	baz=346						
WHYT	Xinyi Township	0.84	305	eP	Pn	03 03 30.0	+0.2
	baz=310						
TWD	Chiawan	0.86	359	P	Pn	03 03 29.2	-0.8
	baz=354						
TWD				eS	Sn	03 03 40.2	-1.2
	baz=354						
ECL	Taimali	0.86	225	eP	Pn	03 03 29.0	-1.1
	baz=227						
TPUB	Ta-pu	0.91	275	⇓iP	Pn	03 03 31.1	+0.4
	baz=275						
TPUB				S	Sn	03 03 42.7	+0.1
	baz=275						
WTP	Ta-pu	0.92	272	⇓P	Pn	03 03 31.3	+0.4
	baz=271						
WTP				eS	Sn	03 03 43.2	+0.3
	baz=271						
SMLT	Sun Moon Lake	0.93	316	⇓iP	Pn	03 03 31.2	+0.2
	baz=324						

SMLT				S	Sn	03 03 42.6	-0.7
	baz=324						
CHGB	Renai	0.93	335	⇑*i*P	Pn	03 03 30.8	-0.4
	baz=347						
CHGB				*e*S	Sn	03 03 41.4	-2.1
	baz=347						
CHN5	Tsauling	0.94	294	*e*P	Pn	03 03 31.7	+0.5
	baz=296						
CHN5				*e*S	Sn	03 03 44.3	+0.8
	baz=296						
ETL	Fush Village	0.94	1	*e*P	Pn	03 03 30.5	-0.7
	baz=14						
NACB	Ninganchiao	0.95	359	⇑P	Pn	03 03 30.5	-0.9
	baz=355						
NACB				*e*S	Sn	03 03 42.2	-1.6
	baz=355						
SGST	Jiashian	0.95	262	P	Pn	03 03 31.0	-0.4
	baz=260						
SGST				*e*S	Sn	03 03 44.5	+0.8
	baz=260						
TYC	Yuchr	0.97	315	⇓P	Pn	03 03 31.8	+0.3
	baz=327						
TYC				S	Sn	03 03 44.3	+0.1
	baz=327						
WHF	Hehuan Shan	0.98	341	*e*P	Pn	03 03 31.2	-0.8
	baz=348						
WHF				*e*S	Sn	03 03 43.5	-1.5
	baz=348						
WPL	Puli Township	0.99	323	*e*P	Pn	03 03 32.0	+0.2
	baz=335						
ETLH	Xiulin Townshi	0.99	353	*e*P	Pn	03 03 31.1	-0.9
	baz=360						
ETLH				*e*S	Sn	03 03 42.9	-2.0
	baz=360						
CHN1	Nanshi	0.99	268	⇓P	Pn	03 03 32.6	+0.7
	baz=262						
CHN1				*e*S	Sb	03 03 46.0	+0.1
	baz=262						
WJS	Zhushan	1.01	307	*e*P	Pn	03 03 32.9	+0.8
	baz=310						
SSD	Sandimen	1.01	243	*e*P	Pn	03 03 32.4	+0.2
	baz=239						
SSD				*e*S	Sn	03 03 45.5	+0.2
	baz=239						
SNST	Tainan City	1.02	270	*e*P	Pn	03 03 32.9	+0.6
	baz=269						
SNST				*e*S	Sb	03 03 47.3	+0.6
	baz=269						
DPDB	Guoxing	1.03	323	*e*P	Pn	03 03 32.4	0.0
	baz=334						
WGK	Gukeng	1.07	296	*e*P	Pn	03 03 34.0	+1.1
	baz=310						
WGK				*e*S	Sb	03 03 48.4	+0.4
	baz=310						
WNT	Mingjian	1.07	308	*e*P	Pn	03 03 34.0	+1.0
	baz=312						
WNT				*e*S	Sn	03 03 48.0	+1.2
	baz=312						
FUSS	Fushou	1.08	342	*e*P	Pn	03 03 32.9	-0.4
	baz=356						
FUSS				*e*S	Sn	03 03 46.2	-1.0
	baz=356						
MASBT	Mashibuluo	1.08	236	*e*P	Pn	03 03 32.8	-0.3
	baz=228						
MASBT				*e*S	Sn	03 03 46.0	-1.0
	baz=228						
EAST	Anshuo	1.09	220	*e*P	Pn	03 03 33.1	-0.1
	baz=209						
CHN2	Minshiung	1.09	287	*e*P	Pn	03 03 34.0	+0.8
	baz=288						
WDLH	Douliu	1.09	296	*e*P	Pn	03 03 34.0	+0.8
	baz=297						
WNT1	Nantou City	1.09	309	*e*P	Pn	03 03 34.4	+1.1
	baz=312						
TWT	Tachien	1.11	339	P	Pn	03 03 33.7	+0.1
	baz=351						
TWT				S	Sn	03 03 46.8	-1.0
	baz=351						
TDCB	Techi	1.11	338	P	Pn	03 03 33.8	+0.2
	baz=344						
TDCB				*e*S	Sn	03 03 46.6	-1.3
	baz=344						
CHY	Chiayi	1.12	285	*e*P	Pn	03 03 31.9	-1.8
	baz=285						
SGLT	Jiouru	1.14	245	*e*P	Pb	03 03 36.0	+0.5
	baz=242						
CHN3	Shinhua	1.15	263	*e*P	Pb	03 03 36.1	+0.4
	baz=274						
TWM1	Shoushan	1.16	251	*e*P	Pb	03 03 36.5	+0.7
	baz=248						
WWF	Wufeng	1.17	315	*e*P	Pn	03 03 35.5	+1.2
	baz=318						
LAY	Lan-yu	1.17	183	*e*P	Pn	03 03 33.6	-0.8
	baz=170						
SSPT	Xinbi	1.21	233	*e*P	Pb	03 03 36.8	+0.3
	baz=222						
ENA	Nanau	1.21	6	*e*P	Pn	03 03 34.5	-0.4
	baz=22						
ENA				*e*S	Sn	03 03 49.4	-0.7
	baz=22						
WTK	Tuku	1.22	293	*e*P	Pn	03 03 35.3	+0.4
	baz=294						
SSHA	Shanhua	1.22	266	*e*P	Pb	03 03 36.6	-0.1
	baz=266						
WHP	Taichung City	1.22	330	*e*P	Pb	03 03 36.8	0.0
	baz=340						
NNSB	Datong	1.22	350	*e*P	Pn	03 03 35.3	+0.1
	baz=6.0						
NNSB				*e*S	Sn	03 03 49.3	-1.3
	baz=6.0						
ICHU	Yijhu	1.23	277	*e*P	Pn	03 03 35.8	+0.7
	baz=277						
EWUT	Wuta	1.23	7	*e*P	Pn	03 03 34.8	-0.4
	baz=22						
NNS	Nan Shan	1.24	350	*e*P	Pn	03 03 35.7	+0.3
	baz=6.0						
NNS				*e*S	Sn	03 03 49.9	-1.1
	baz=6.0						
SCZT	Fangliau	1.24	228	*e*P	Pn	03 03 36.2	+0.9
	baz=215						
SCZT				*e*S	Sn	03 03 50.8	0.0
	baz=215						
SLIU	Shizi	1.25	217	*e*P	Pn	03 03 34.5	-0.9
	baz=202						
TCU	Taichung	1.26	317	*e*P	Pb	03 03 37.2	-0.3
	baz=321						
CHN8	Yiju	1.29	276	P	Pn	03 03 36.6	+0.6
	baz=275						
CHN8				*e*S	Sn	03 03 53.6	+1.5
	baz=275						
SCLT	Jiali	1.30	268	*e*P	Pn	03 03 36.9	+0.8
	baz=267						
WRL	Guolierlin Hig	1.32	301	*e*P	Pn	03 03 36.9	+0.5
	baz=303						
WRL				*e*S	Sn	03 03 53.3	+0.5
	baz=303						
TWQ1	Liyutan	1.36	326	*e*P	Pn	03 03 38.4	+1.4
	baz=331						
TWQ1				*e*S	Sn	03 03 55.6	+1.7
	baz=331						
TWC	Suao	1.40	9	P	Pn	03 03 37.1	-0.4
	baz=15						
TWC				S	Sn	03 03 54.5	-0.4
	baz=15						
NDS	Dongshan	1.41	4	*e*P	Pn	03 03 38.3	+0.6
	baz=359						
ENTT	Nioudou	1.42	358	*e*P	Pn	03 03 38.3	+0.6
	baz=4.0						
NSY	Sanyi	1.42	327	*e*P	Pb	03 03 39.8	-0.4
	baz=330						
WLCH	Liuqiu	1.43	233	*e*P	Pb	03 03 40.4	+0.1
	baz=230						
WDJ	Dajia District	1.43	322	*e*P	Pn	03 03 38.7	+0.8
	baz=325						
HEN	Hengchun	1.45	214	*e*P	Pn	03 03 37.8	-0.4
	baz=200						
YHNB	Yeheng	1.46	352	*e*P	Pn	03 03 38.6	+0.2
	baz=357						
YHNB				*e*S	Sn	03 03 56.2	-0.2
	baz=357						
TWKBT	Hengchun	1.47	210	*e*P	Pn	03 03 37.9	-0.5
	baz=196						
TWKBT				*e*S	Sn	03 03 55.9	-0.5
	baz=196						
TWK1	Hengchun	1.47	211	*e*P	Pn	03 03 38.3	-0.1
	baz=200						
NSK	Sanguang	1.47	351	*e*P	Pn	03 03 39.0	+0.5
	baz=357						
NSK				*e*S	Sn	03 03 55.9	-0.7
	baz=357						
TWE	Neicheng	1.50	2	*e*P	Pn	03 03 38.9	+0.1
	baz=8.0						
NMLH	Miaoli	1.51	330	*e*P	Pn	03 03 40.2	+1.2
	baz=334						
NSTT	Nanjuang	1.51	339	*e*P	Pn	03 03 40.0	+1.0
	baz=343						
LIOB	Emei	1.52	339	*e*P	Pn	03 03 40.5	+1.4
	baz=345						
LIOB				*e*S	Sn	03 03 59.0	+1.1
	baz=345						
NWLT	Wulai	1.56	356	*e*P	Pn	03 03 39.9	+0.2
	baz=11						
NTC	Toucheng	1.64	7	*e*P	Pn	03 03 41.4	+0.6
	baz=2.0						
TATO	Taipei	1.75	356	*e*P	Pn	03 03 43.7	+1.3
	baz=2.0						
TWA	Mucha	1.76	359	*e*P	Pn	03 03 42.9	+0.5
	baz=5.0						
TIPB	Shuangxi	1.76	6	*e*P	Pn	03 03 42.9	+0.5
	baz=3.0						
YOJ	Yonaguni jima	1.78	46	*e*P	Pn	03 03 43.5	+0.8
	baz=48						
YOJ	Yonaguni jima	1.78	46	P	Pn	03 03 42.6	-0.1
YOJ				S	Sn	03 04 04.1	-0.2
TWB1	Santiao Chiao	1.82	11	*e*P	Pn	03 03 43.2	0.0
	baz=17						
NWF	Wu-fen Shan	1.85	5	*e*P	Pn	03 03 44.8	+1.0
	baz=10.0						
WFSB	Wu-fen Shan	1.85	5	*e*P	Pn	03 03 44.7	+1.0
	baz=10.0						
PNG	Penghu	1.92	281	⇓P	Pn	03 03 44.6	0.0
	baz=266						
PNG				*e*S	Sn	03 04 07.0	-0.6
	baz=266						
VCHM	Qimei	2.00	270	*e*P	Pn	03 03 45.1	-0.7
	baz=267						
VCHM				*e*S	Sn	03 04 08.0	-1.7
	baz=267						
HATJ	Hateruma jima	2.18	67	P	Pn	03 03 48.7	+0.5
HATJ				S	Sn	03 04 14.2	+0.2
IRIF	Iriomote-Funau	2.24	60	P	Pn	03 03 50.0	+1.0
IRIF				S	Sn	03 04 16.6	+1.1
JKRS	Kuro-shima	2.42	65	P	Pn	03 03 52.4	+0.9
JKRS				*e*S	Sn	03 04 20.7	+0.7
JIJ	Ishigaki jima	2.59	63	P	Pn	03 03 53.9	+0.1
JIJ				*e*S	Sn	03 04 22.7	-1.4
JISG	Ishigakijimahi	2.82	61	P	Pn	03 03 57.1	+0.1
JISG				S	Sn	03 04 29.1	-0.8
PTMZ	Houxiangcun	2.91	309	*e*P	Pn	03 03 57.9	-0.3
	baz=298						
KNM	Kinmen	3.14	293	*e*P	Pn	03 04 02.4	+1.0
	baz=291						
JTJ	Tarama	3.17	63	P	Pn	03 04 02.2	+0.5
JTJ				*e*S	Sn	03 04 38.5	+0.1
KNMB	Chin-men Tao	3.20	293	*e*P	Pn	03 04 01.2	-1.0
	baz=292						
MATB	Ma-tsu	3.29	333	*e*P	Pn	03 04 02.7	-0.7
	baz=334						
LYJJ	Jianjiangzhen	3.72	334	*e*P	Pn	03 04 09.4	0.0
	baz=337						
LYJJ				*e*S	Sn	03 04 50.4	-1.7
	baz=337						
JMJ2	Miyako jima3	3.72	65	P	Pn	03 04 10.2	+0.8
JMJ2				*e*S	Sn	03 04 52.4	+0.2
AXDP	Jialang	3.73	297	*e*P	Pn	03 04 08.7	-0.8
	baz=296						
JMJ	Miyako jima 2	3.73	64	P	Pn	03 04 10.0	+0.6
	baz=65						
JMJ				*e*S	Sn	03 04 51.0	-1.2
	baz=65						
XPSS	Dashiqiu	3.92	341	*e*P	Pn	03 04 11.6	-0.4
	baz=342						

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*NDI **17** 03:04:40.2±3.5, 9°.07N×93°.58E, h50^{km}, ML4.0, mb4.6(NEIC)*

*NEIC **17** 03:04:44.8±1.4, 9°.5N±0°.1×93°.79E±0°.10, h55^{km}±8^{km}, mb4.6/20, Error ellipse: s-maj=19.2km s-min=8.5km az=221.0*

*IDC **17** 03:04:45.7±3.9, 9°.55N×93°.92E, h69^{km}±35^{km}, mb3.7/12, mb1 3.8/13, mb1mx3.4/55, mbtmp4.0/13, ML3.8/1, MS3.1/6, Ms1 3.2/6, ms1mx2.8/48, Error ellipse: s-maj=29.8km s-min=13.5km az=58.0*

ISC 17 03:04:43.5±0.5**, 9°.35N**±0°.08×**93°.66E**±0°.08**, h50**^{km}**, n51, σ1**^{s}**48**/56**, mb4.2**/21**, MS3.2**/4**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	Port Blair	2.46	339	*e*P	Pn	03 05 19.9	-1.3
PBA				*e*S	Sn	03 05 51.8	+1.7
PBA				IAML		03 06 07.4	
	comp=E,2μm,0.5s						
PBA	Port Blair	2.46	339		Pn	03 05 19.9	-1.3
PBA				Sn	Sn	03 05 49.3	-0.9
DGPR	DIGLIPUR	3.87	349	*e*P	Pn	03 05 41.2	+0.6
DGPR				*e*S	Sn	03 06 29.9	+5.1
DGPR				IAML		03 06 41.6	
	comp=N,98nm,0.7s						
SRIT	Nakonsritamara	5.92	97		Pn	03 06 09.4	+0.7
SRIT					Sn	03 07 12.5	-2.7
PSI	Prapat	8.35	141	P	Pn	03 06 46.6	+4.5
	comp=N,1.2nm,0.3s,baz=327,slow=12,SNR=8.3						
PSI				LR	LR	03 10 11.9	
	comp=N,160nm,18.7s,baz=286,slow=39						
RPSI	Rantau Prapat	8.43	141		Pn	03 06 44.7	+1.6
CMAR	Chiang Mai Arr	10.40	29	P	Pn	03 07 13.5	+3.3
	comp=N,1.0nm,0.3s,baz=213,slow=14,SNR=5.9						
CMAR				LR	LR	03 10 50.6	
	comp=N,39nm,18.4s,baz=185,slow=36						
VIS	Vishakhapatnam	13.04	311	*e*P	Pn	03 07 42.9	-3.2
VIS				IAmb	IAmb	03 07 45.5	
	comp=Z,12nm,0.5s						
VIS				*e*S	Sn	03 09 57.4	-12
VIS				IAML		03 10 04.9	
	comp=E,84nm,0.3s						
JIRN	Jiri	19.53	340	*e*P	P	03 09 08.2	+0.8
	comp=E,12nm,0.4s						
GUN	Gumba	19.87	339	*e*P	P	03 09 11.0	0.0
	comp=E,15nm,0.5s						
GKN	Gorkha	20.41	337	*e*P	P	03 09 17.0	+0.3
	comp=E,19nm,0.4s						
KOLN	Koldanda	20.64	334	*e*P	P	03 09 19.6	+0.4
BHPL	Bhopal	20.79	314	*e*P	P	03 09 20.6	-0.1
DANN	Dangsing	21.07	335	*e*P	P	03 09 23.4	-0.6
	comp=E,30nm,0.6s						
PYUN	Piuthan	21.19	333	*e*P	P	03 09 25.4	+0.2
	comp=E,4.0nm,0.5s						
NIL	Nilore	30.62	325	P	P	03 10 53.0	-0.1
NIL				IAmb	IAmb	03 11 00.8	
	comp=Z,12nm,0.8s						
DAV	Davao City (W)	31.67	92	LR	LR	03 26 29.6	
	comp=Z,26nm,19.9s,baz=308,slow=42						
DRK	Karamyk	35.80	330	P	P	03 11 38.6	+0.2
GAR	Garm	36.18	328	P	P	03 11 41.1	-0.4
CHGR	Chuyangaron	36.54	327	P	P	03 11 43.5	-1.0
AAK	Ala-Archa	37.18	336	P	P	03 11 50.3	+0.3
	comp=Z,2.0nm,0.7s,baz=259,slow=10						
AAK	Ala-Archa	37.18	336	P	P	03 11 49.5	-0.5
AAK				IAmb	IAmb	03 12 00.3	
	comp=Z,8.6nm,1.4s						
MKAR	Makanchi Array	38.56	347	P	P	03 12 00.1	-1.2
	comp=Z,0.7nm,0.7s,baz=171,slow=8.6,SNR=6.4						
MKAR	Makanchi Array	38.56	347	P	P	03 12 01.2	-0.2
KKAR	Karatay Array	39.24	333	P	P	03 12 06.6	-0.6
SONM	Songino Array	39.84	13	P	P	03 12 10.4	-1.9
	comp=Z,0.4nm,0.8s,baz=191,slow=7.0,SNR=2.9						
SONM				PcP	PcP	03 14 17.8	+0.4
	comp=Z,0.4nm,0.5s,baz=185,slow=3.7,SNR=2.8						
GEYT	Alibeck	42.80	317	P	P	03 12 37.3	+0.7
	comp=Z,4.6nm,0.6s,baz=138,slow=11,SNR=7.0						
GEYT				LR	LR	03 31 27.7	
	comp=Z,27nm,21.4s,baz=210,slow=37						
GEYT	Alibeck	42.80	317	P	P	03 12 37.1	+0.6
GYA0B	ALIBECK ARRAY	42.80	317	P	P	03 12 36.3	-0.2
GYA0B				IAmb	IAmb	03 12 38.6	
	comp=Z,8.7nm,0.7s						
ZALV	Zalesovo Beam	45.04	353	P	P	03 12 52.7	-1.5
	comp=Z,0.7nm,0.4s,baz=205,slow=6.0,SNR=4.4						
RAYN	Ar Rayn	48.06	293	P	P	03 13 19.9	+1.5
RAYN				IAmb	IAmb	03 13 20.7	
	comp=Z,4.6nm,0.7s						
ABKAR	Akbulak array	48.72	331	P	P	03 13 22.5	-0.5
WB0	Warramunga Arr	49.45	126	P	P	03 13 28.1	-1.0
WB0				IAmb	IAmb	03 13 42.8	
	comp=Z,6.5nm,1.3s						
WRA	Warramunga Arr	49.50	126	P	P	03 13 28.4	-1.1
	comp=Z,1.5nm,0.6s,baz=301,slow=8.2,SNR=37						
WRA				PcP	PcP	03 14 51.0	+0.1
	comp=Z,0.4nm,0.5s,baz=301,slow=2.5,SNR=8.4						
WRA	Warramunga Arr	49.50	126	P	P	03 13 28.9	-0.5
WB2	Warramunga Arr	49.51	126	P	P	03 13 28.8	-0.7
WB2				IAmb	IAmb	03 13 35.4	
	comp=Z,5.5nm,1.1s						
WR0	Warramunga Arr	49.67	126	P	P	03 13 30.8	+0.1
WR0				IAmb	IAmb	03 13 31.7	
	comp=Z,3.9nm,0.6s						
ASAR	Alice Springs	51.22	131	P	P	03 13 40.8	-1.7
	comp=Z,0.9nm,0.6s,baz=304,slow=7.0,SNR=11						
ASAR				PcP	PcP	03 14 57.5	+0.3
	comp=Z,1.1nm,0.7s,baz=310,slow=4.1,SNR=8.6						
BBOO	Buckleboo	58.22	138	P	P	03 14 32.6	-0.3
BBOO				IAmb	IAmb	03 14 36.4	
	comp=Z,12nm,1.4s						
BURAR	Bucovina Array	68.64	317	P	P	03 15 41.2	-0.6
FINES	FINESS Array B	71.19	332	P	P	03 15 55.1	-1.8
	comp=Z,2.2nm,1.0s,baz=60,slow=8.2,SNR=1.6						
ARCES	ARCESS Array B	73.73	340	P	P	03 16 11.6	-0.4
	comp=Z,2.8nm,0.8s,baz=88,slow=4.0,SNR=4.0						
ARCES				LR	LR	03 51 26.3	
	comp=Z,35nm,18.7s,baz=310,slow=38						
ARCES	ARCESS Array B	73.73	340	P	P	03 16 11.8	-0.1
BOSA	Boshof	75.97	237	P	P	03 16 27.1	+1.3
	comp=Z,1.2nm,0.5s,baz=92,slow=9.0,SNR=6.3						
BOSA	Boshof	75.97	237	P	P	03 16 26.3	+0.5
GERES	GERESS Array B	76.42	318	P	P	03 16 27.6	-0.4
	comp=Z,0.8nm,0.6s,baz=90,slow=6.7,SNR=8.8						
GERES	GERESS Array B	76.42	318	P	P	03 16 27.0	-1.0
NOA	NORSAR Array B	78.22	330	LR	LR	03 53 49.4	
	comp=Z,12nm,18.8s,baz=295,slow=38						
TORD	Torodi Ar. Bea	89.80	283	P	P	03 17 38.6	+1.1
	comp=Z,0.4nm,0.5s,baz=77,slow=4.7,SNR=3.8						
TORD	Torodi Ar. Bea	89.80	283	P	P	03 17 38.2	+0.6
PLCA	Paso Flores	145.75	202	PKPbc	PKPdf	03 24 18.4	+1.4
	comp=Z,3.9nm,0.8s,baz=147,slow=6.9,SNR=7.4						

IDC 17 03:09:49.7±3.7**, 19°.27S**×**177°.71W, h595**^{km}±35^{km}**, mb3.0**/4**, mb1 3.2**/5**, mb1mx2.5**/39**, mbtmp3.9**/5**, Error ellipse: s-maj=123.6km s-min=27.2km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.31	290	P	P	03 11 17.0	-0.1
	3.5nm,0.3s,baz=156,slow=21,SNR=22						
STKA	Stephens Creek	38.58	243	P	P	03 16 23.8	+0.6
	0.6nm,0.4s,baz=72,slow=10,SNR=3.7						
WRA	Warramunga Arr	45.06	261	P	P	03 17 13.5	-0.7
	0.9nm,0.3s,baz=102,slow=7.8,SNR=39						
ASAR	Alice Springs	45.08	255	P	P	03 17 14.4	+0.1
	2.4nm,0.7s,baz=89,slow=8.0,SNR=22						
TXAR	Lajitas Array	86.16	57	P	P	03 21 29.2	-0.1
	0.5nm,0.8s,baz=216,slow=5.6,SNR=4.4						

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*NEIC **17** 03:13:24.7±1.1, 8°.0S±0°.1×158°.7E±0°.2, h40^{km}±7^{km}, mb4.3/9, Error ellipse: s-maj=25.5km s-min=13.0km az=58.0*

*IDC **17** 03:13:29.0±0.7, 8°.32S×158°.86E, h87^{km}±7^{km}, mb3.7/7, mb1 3.9/7, mb1mx3.5/41, mbtmp4.0/7, MS3.0/2, Ms1 3.0/2, ms1mx2.5/29, Error ellipse: s-maj=18.8km s-min=8.4km az=44.0*

ISC 17 03:13:26.0±0.7**, 8°.09S**±0°.09×**158°.8E**±0°.1**, h55**^{km}**, n28, σ1**^{s}**37**/26**, mb4.0**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.78	139	P	Pn	03 13 54.1	-0.3
	1μm,0.3s,baz=228,slow=4.7,SNR=120						
HNR				S	Sn	03 14 15.0	-0.8
	1μm,0.3s,baz=52,slow=19,SNR=32						
HNR	Honiara	1.78	139	Pn	Pn	03 13 53.5	-0.9
HNR				Sn	Sn	03 14 16.4	+0.5
PATS	Pohnpei	14.84	358	Pn	Pn	03 16 50.3	-2.4
LIFNC	LIFOU	15.04	148	Pn	Pn	03 16 56.0	+0.7
LIFNC				IAmb	IAmb	03 17 03.1	
	comp=Z,61nm,1.3s						
DZM	Mont Dzumac	15.75	153	LR	LR	03 21 13.6	
	comp=Z,36nm,19.2s,baz=7.0,slow=30						
DZM	Mont Dzumac	15.75	153		P	03 17 08.1	+0.5
DZM				IAmb	IAmb	03 17 19.1	
	comp=Z,15nm,1.1s						
WB0	Warramunga Arr	26.30	241	P	P	03 18 56.4	-0.4
WB0				IAmb	IAmb	03 19 00.1	
	comp=Z,8.4nm,1.2s						
WB2	Warramunga Arr	26.40	241	P	P	03 18 57.0	-0.7
WB2				IAmb	IAmb	03 19 05.8	
	comp=Z,4.8nm,1.1s						
WRA	Warramunga Arr	26.41	241	P	P	03 18 57.4	-0.4
	comp=Z,1.5nm,0.7s,baz=61,slow=9.2,SNR=12						
WRA				LR	LR	03 28 43.4	
	comp=Z,50nm,19.7s,baz=190,slow=35						
WRA	Warramunga Arr	26.41	241	P	P	03 18 56.9	-0.9
H11S3	WAKE ISLAND Hy	27.55	16	T	T	03 47 59.9	
	baz=195,slow=76,SNR=294						
H11S2	WAKE ISLAND Hy	27.55	16	T	T	03 47 59.9	
	baz=195,slow=76,SNR=329						
MTN	Manton Dam	27.56	258	P	P	03 19 04.8	-3.3
H11S1	WAKE ISLAND Hy	27.57	16	T	T	03 48 01.1	
	baz=195,slow=76,SNR=228						
ASAR	Alice Springs	28.41	234	P	P	03 19 14.5	-1.1
	comp=Z,0.5nm,0.5s,baz=65,slow=9.4,SNR=9.9						
STKA	Stephens Creek	28.55	212	P	P	03 19 15.9	-0.9
	comp=Z,1.6nm,0.5s,baz=47,slow=16,SNR=7.4						
STKA				pP	sP	03 19 36.9	+0.5
	comp=Z,0.9nm,0.4s,baz=26,slow=16,SNR=1.5						
STKA	Stephens Creek	28.55	212	P	P	03 19 16.0	-0.7
H11N1	WAKE ISLAND Hy	28.77	16	T	T	03 49 22.5	
	baz=195,slow=76,SNR=327						
H11N3	WAKE ISLAND Hy	28.78	16	T	T	03 49 21.4	
	baz=195,slow=76,SNR=244						
H11N2	WAKE ISLAND Hy	28.79	16	T	T	03 49 23.1	
	baz=195,slow=76,SNR=260						
KNRA	Kununurra	30.28	253	P	P	03 19 31.9	-0.4
BBOO	Buckleboo	32.36	217	P	P	03 19 49.5	-0.9
BBOO				IAmb	IAmb	03 19 49.7	
	comp=Z,4.7nm,0.8s						
FITZ	Fitzroy Crossi	33.70	249	P	P	03 20 01.2	-1.1
	comp=Z,2.0nm,0.9s,baz=69,slow=9.8,SNR=7.6						
SONM	Songino Array	72.30	326	P	P	03 24 48.1	+2.1
	comp=Z,0.5nm,0.6s,baz=137,slow=7.0,SNR=5.7						
SONM				pP	sP	03 25 08.7	+2.1
	comp=Z,2.9nm,0.9s,baz=142,slow=5.6,SNR=8.6						
ILAR	Eielson Array	83.05	21	P	P	03 25 44.8	-0.5
	comp=Z,0.5nm,0.5s,baz=246,slow=4.9,SNR=8.3						
ILAR	Eielson Array	83.05	21	P	P	03 25 45.2	-0.1
MKAR	Makanchi Array	86.70	318	P	P	03 26 04.8	+0.7
	comp=Z,0.7nm,0.5s,baz=96,slow=6.0,SNR=9.5						
MKAR				pP	sP	03 26 27.9	+2.7
	comp=Z,0.7nm,0.6s,baz=94,slow=6.4,SNR=4.6						
MKAR	Makanchi Array	86.70	318	P	P	03 26 03.6	-0.5

NNC 17 03:21:17.5±5.1**, 38°.17N**×**73°.25E, h0**^{km}**, mb3.5, mpv3.2, 5C-2D, Error ellipse: s-maj=40.8km s-min=30.8km az=166.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.57	12	⇓Pg	Pb	03 22 40.9	+2.3
	2.9nm,0.6s						
AAK				⇑Lg	Lg	03 23 28.5	
	12nm,1.2s						
TKM2	Tokmak 2	5.08	20	⇑Pg	Pb	03 22 51.0	+3.7
	3.1nm,0.8s						
TKM2				⇑Lg	Lg	03 23 56.2	
	2.1nm,0.7s						
KK08	Karatay Array	5.36	338	⇑Pn	Pn	03 22 39.0	+0.2
	1.5nm,0.5s						
KK08				⇓Sn	Sn	03 23 42.7	+1.5
	4.8nm,0.7s						
AB31	Akbulak array	14.65	323	P	Pn	03 24 41.5	-4.5
	0.3nm,0.5s,baz=135,slow=12,SNR=6.3						
AKTO	Aktyubinsk	16.37	323	⇑P	Pn	03 25 09.0	+0.5
	0.3nm,0.6s						

IDC ***17*** *03:25:25.8±1.0, 60°.84S×20°.13W, h0^{km}, mb4.1/5, mb1 4.3/6, mb1mx4.0/22, mbtmp4.2/6, ML4.7/1, MS3.6/8, Ms1 3.6/8, ms1mx3.4/17, Error ellipse: s-maj=50.9km s-min=24.1km az=51.0*

NEIC ***17*** *03:25:29.0±1.9, 60°.87S±0°.09×19°.7W±0°.2, h18^{km}±4^{km}, mb4.4/11, Error ellipse: s-maj=13.9km s-min=12.0km az=117.0*

ISC 17 03:25:27.3±0.7**, 60°.8S**±0°.1×**19°.7W**±0°.1**, h10**^{km}**, n29, σ1^{s}16**/26**, mb4.3**/10**, MS3.5**/7**, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	10.91	160	P	Pn	03 28 03.3	+0.1
HOPE	Hope Point	11.13	298	Pn	Pn	03 28 07.0	+0.6
VNA3	Neumayer Olymp	11.21	163	P	Pn	03 28 06.5	-0.9
VNA3				S	Sn	03 30 00.3	-12
VNA2	Neumayer--Watz	11.29	159	P	Pn	03 28 07.2	-1.3
	baz=323,slow=16						
VNA2				S	Sn	03 30 01.4	-13
	baz=324,slow=23						
SNAA	Sanae	12.77	156	P	Pn	03 28 27.0	-1.6
SNAA				S	Sn	03 30 37.1	-14
SNAA	Sanae	12.77	156	Pn	Pn	03 28 27.1	-1.6
	4.0nm,0.3s,baz=28,slow=18,SNR=81						
SNAA				Sn	Sn	03 30 34.2	-16
	0.3nm,0.3s,baz=313,slow=18,SNR=2.9						
SNAA				LR	LR	03 32 28.8	
	comp=Z,172nm,20.6s,baz=302,slow=33						
SNAA	Sanae	12.77	156		Pn	03 28 27.0	-1.6
BELA	Belgrano 2	17.82	190	P	P	03 29 35.9	+0.1
BELA				IAmb	IAmb	03 29 39.6	
	comp=Z,15nm,0.6s						
SMAI	San Martin Ant	21.20	230	P	P	03 30 13.2	+0.6
EFI	East Falkland	22.89	276	P	P	03 30 29.6	-1.2
QSPA	South Pole Qui	29.43	180	P	P	03 31 32.7	+2.0
	comp=Z,3.4nm,0.6s,baz=210,slow=6.2,SNR=8.8						
QSPA	South Pole Qui	29.43	180	P	P	03 31 29.3	-1.4
QSPA				IAmb	IAmb	03 31 33.3	
	comp=Z,4.3nm,0.9s						
MG05	Puerto Natales	29.96	264	P	P	03 31 35.4	+0.1
MG05				IAmb	IAmb	03 31 54.5	
	comp=Z,9.9nm,1.2s						
MAW	Mawson	33.95	137	P	P	03 32 11.7	+1.5
	comp=Z,4.5nm,0.8s,baz=246,slow=12,SNR=3.6						
MAW	Mawson	33.95	137	P	P	03 32 10.7	+0.5
LL02	Futaleuf	35.49	276	P	P	03 32 25.1	+1.4
LL02				IAmb	IAmb	03 32 42.1	
	comp=Z,8.0nm,1.4s						
PLCA	Paso Flores	36.72	280	LR	LR	03 46 13.8	
	comp=Z,65nm,18.4s,baz=136,slow=34						
VNDA	Vanda	41.92	180	LR	LR	03 49 45.3	
	comp=Z,59nm,18.4s,baz=168,slow=35						
CPUP	Villa Florida	42.88	306	P	P	03 33 23.3	-2.4
	comp=Z,3.6nm,0.9s,baz=151,slow=10,SNR=3.1						
CPUP				LR	LR	03 49 37.4	
	comp=Z,35nm,19.8s,baz=170,slow=34						
LPAZ	La Paz	56.28	300	P	P	03 35 08.2	-0.4
	comp=Z,1.5nm,0.8s,baz=111,slow=8.6,SNR=2.9						
LPAZ				LR	LR	04 00 37.0	
	comp=Z,31nm,20.0s,baz=160,slow=38						
LPAZ	La Paz	56.28	300	P	P	03 35 09.7	+1.0
LPAZ				IAmb	IAmb	03 35 18.4	
	comp=Z,4.2nm,1.1s						
SAML	Samuel	60.93	309	P	P	03 35 40.3	+0.1
SAML				IAmb	IAmb	03 35 43.6	
	comp=Z,4.6nm,1.1s						
ETMB	Extrema	61.32	305	P	P	03 35 42.3	-0.6
ETMB				IAmb	IAmb	03 35 46.2	
	comp=Z,5.7nm,1.2s						
TORD	Torodi Ar. Bea	75.66	21	P	P	03 37 12.8	+0.5
	comp=Z,0.5nm,0.6s,baz=208,slow=6.4,SNR=6.5						
TORD				LR	LR	04 02 57.7	
	comp=Z,30nm,21.9s,baz=350,slow=30						
TORD	Torodi Ar. Bea	75.66	21	P	P	03 37 12.7	+0.3
STKA	Stephens Creek	86.38	164	LR	LR	04 14 57.6	
	comp=Z,105nm,18.5s,baz=207,slow=34						
ASAR	Alice Springs	93.13	156	P	P	03 38 42.0	+0.5
	comp=Z,0.5nm,0.7s,baz=190,slow=4.3,SNR=5.2						
ASAR				LR	LR	04 19 04.3	
	comp=Z,36nm,18.9s,baz=171,slow=34						
SONM	Songino Array	146.98	88	PKPbc	PKPbc	03 45 09.8	+0.6
	comp=Z,0.8nm,0.7s,baz=207,slow=3.5,SNR=6.9						
SONM	Songino Array	146.98	88	PKPdf	PKPbc	03 45 08.7	-0.5

IDC ***17*** *03:29:32.2±6.4, 51°.87N×179°.20W, h0^{km}, mb3.4/5, mb1 4.0/6, mb1mx3.5/52, mbtmp3.7/6, ML4.6/1, Error ellipse: s-maj=122.0km s-min=58.0km az=93.0*

AEIC ***17*** *03:30:12.9±0.6, 52°.5N±0°.3×176°.1W±0°.1, h220^{km}±8^{km}, ML3.0/13, Error ellipse: s-maj=42.9km s-min=10.4km az=171.0*

NEIC ***17*** *03:30:13.7±0.4, 52°.8N±0°.4×176°.1W±0°.1, h212^{km}±18^{km}, Error ellipse: s-maj=59.6km s-min=8.2km az=174.0*

ISC 17 03:30:11.3±1.0**, 53°.2N**±0°.1×**176°.2W**±0°.1**, h200**^{km}**, n17, σ1^{s}18**/21**, mb3.3**/4**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	1.11	176	Pn	Pn	03 30 42.3	+0.5
GSTR				Sn	Sn	03 31 04.6	-0.9
GSTD	Great Sitkin T	1.15	179		Pn	03 30 43.3	+1.1
GSTD					Sn	03 31 07.0	+0.9
GSMY	Great Sitkin M	1.16	176		Pn	03 30 43.4	+1.2
ADK	Adak	1.35	193		Pn	03 30 44.4	+0.7
ADK					Sn	03 31 08.4	-0.3
KIKV	Kanaga Island	1.45	205		Pn	03 30 45.6	+1.0
KIWB	Kanaga Island	1.47	204	Pn	Pn	03 30 45.5	+0.8
ATKA	Atka Island	1.57	129		Pn	03 30 46.8	+1.3
ATKA					Sn	03 31 13.2	+1.1
KIMD	Kanaga Island	1.58	204		Pn	03 30 46.0	+0.3
TASE	Tanaga Southea	1.78	220		Pn	03 30 48.8	+1.2
GAEA	Gareloi East	2.12	229		Pn	03 30 52.1	+1.1
GALAA	Gareloi Lava P	2.14	229		Pn	03 30 52.3	+1.1
KDAK	Kodiak Island	14.11	62	Pn	Pn	03 33 23.6	+1.4
	2.4nm,0.3s,baz=241,slow=2.4,SNR=14						
ILAR	Eielson Array	18.81	41	P	P	03 34 15.8	+0.3
	0.4nm,0.5s,baz=238,slow=10,SNR=2.8						
YKA	Yellowknife Ar	32.81	49	P	P	03 36 26.0	+0.7
	0.5nm,0.4s,baz=275,slow=9.5,SNR=7.3						
NVAR	Mina Array Bea	41.78	87	P	P	03 37 39.5	-1.6
	0.2nm,0.3s,baz=286,slow=8.9,SNR=3.9						
PDAR	Pinedale Array	44.26	76	P	P	03 37 59.2	-1.7
	0.4nm,0.4s,baz=308,slow=3.6,SNR=3.7						
TXAR	Lajitas Array	56.83	84	P	P	03 39 33.0	-1.9
	0.3nm,0.4s,baz=302,slow=6.1,SNR=9.8						

JMA ***17*** *03:51:56.1±0.2, 23°.67N×121°.92E, h20^{km}±5^{km}, M2.9*

TAP ***17*** *03:51:57.4, 23°.67N×121°.86E, h22^{km}, ML3.4, C*

ISC 17 03:51:56.4±1.0**, 23°.64N**±0°.02×**121°.92E**±0°.03**, h25**^{km}±9^{km}**, n107, σ0^{s}67**/162**, 1C-6D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEGC	Jichi Village	0.35	281	P	Pb	03 52 04.5	+0.3
	baz=279						
TEYL	Yanliau Villag	0.37	308	P	Pb	03 52 04.7	+0.2
	baz=323						
TEYL				S	Sb	03 52 10.1	0.0
	baz=323						
HWA	Hwalien	0.44	319	P	Pb	03 52 05.5	-0.1
	baz=324						
HWA				*e*S	Sn	03 52 12.6	-1.7
	baz=324						
EGFH	Guangfu	0.45	274	P	Pb	03 52 05.8	0.0
	baz=280						
ESL	Shilin	0.48	291	⇓*i*P	Pb	03 52 05.7	-0.6
	baz=282						
ESL				S	Sb	03 52 11.7	-1.3
	baz=282						
HGSD	Ruisui	0.48	252	⇓*i*P	Pb	03 52 06.1	-0.1
	baz=247						
HGSD				*i* S	Sb	03 52 13.0	+0.1
	baz=247						
ETM	Tongmen	0.51	310	P	Pb	03 52 06.2	-0.5
	baz=318						
ETM				S	Sb	03 52 13.2	-0.6
	baz=318						
TWD	Chiawan	0.53	326	P	Pb	03 52 06.5	-0.5
	baz=331						
TWD				S	Sb	03 52 13.8	-0.5
	baz=331						
ECBN	Changbin	0.54	233	P	Pb	03 52 07.5	+0.3
	baz=214						
ECBN				S	Sb	03 52 15.2	+0.6
	baz=214						
EHY	Hungye	0.56	256	P	Pb	03 52 07.8	+0.2
	baz=252						
ETL	Fush Village	0.58	332	P	Pb	03 52 07.3	-0.7
	baz=336						
ETL				S	Sb	03 52 16.0	+0.1
	baz=336						
NACB	Ninganchiao	0.61	331	⇑*i*P	Pb	03 52 07.7	-0.8
	baz=342						
NACB				S	Sb	03 52 15.9	-0.7
	baz=342						
YULB	Yu-li	0.62	247	⇓P	Pb	03 52 08.4	-0.2
	baz=242						
YULB				S	Sb	03 52 17.6	+0.6
	baz=242						
EYUL	Yuli	0.62	242	*e*P	Pb	03 52 09.0	+0.3
	baz=228						
EYUL				*e*S	Sb	03 52 18.0	+0.9
	baz=228						
TWF1	Yuli	0.64	243	P	Pb	03 52 09.0	0.0
	baz=229						
TWF1				*i* S	Sb	03 52 18.2	+0.7
	baz=229						
ETLH	Xiulin Townshi	0.69	325	P	Pb	03 52 09.3	-0.6
	baz=327						
ETLH				S	Sb	03 52 18.9	-0.2
	baz=327						
VWDT	VWDT	0.72	279	⇓*i*P	Pb	03 52 10.3	0.0
	baz=278						
VWDT				S	Sb	03 52 18.7	-1.1
	baz=278						
FULB	Fuli	0.72	233	*e*P	Pb	03 52 10.0	-0.4
	baz=215						
FULB				*e*S	Sb	03 52 19.5	-0.4
	baz=215						
CHKT	Chengkung	0.74	224	P	Pb	03 52 09.7	-1.0
	baz=207						
CHKT				*e*S	Sb	03 52 18.8	-1.6
	baz=207						
OWD	Renai	0.75	295	*e*P	Pb	03 52 10.6	-0.3
	baz=301						
OWD				S	Sb	03 52 20.5	-0.3
	baz=301						
WHF	Hehuan Shan	0.78	310	P	Pb	03 52 11.0	-0.6
	baz=312						
WHF				*e*S	Sb	03 52 21.6	-0.4
	baz=312						
CHGB	Renai	0.80	302	P	Pb	03 52 11.7	-0.1
	baz=310						
CHGB				S	Sb	03 52 22.3	0.0
	baz=310						
ENA	Nanau	0.80	348	P	Pb	03 52 11.2	-0.5
	baz=352						
ENA				S	Sb	03 52 22.2	+0.1
	baz=352						
EWUT	Wuta	0.81	351	*e*P	Pb	03 52 11.6	-0.2
	baz=354						
EWUT				*e*S	Sb	03 52 22.5	+0.1
	baz=354						
ECS	Chishang	0.84	230	*e*P	Pn	03 52 13.0	+0.4
	baz=214						
ECS				*e*S	Sb	03 52 24.1	+0.8
	baz=214						
FUSS	Fushou	0.86	314	*e*P	Pb	03 52 12.4	-0.5
	baz=316						
EDH	Donghe	0.87	221	*e*P	Pb	03 52 12.1	-0.8
	baz=206						
EDH				S	Sb	03 52 22.9	-1.3
	baz=206						
SSLB	Suanglung	0.90	280	⇓P	Pb	03 52 12.7	-0.6
	baz=278						
SSLB				*e*S	Sb	03 52 24.4	-0.5
	baz=278						
YUS	Yu-Shan	0.90	261	P	Pb	03 52 13.4	-0.2
	baz=258						
YUS				S	Sb	03 52 24.9	-0.6
	baz=258						
TWT	Tachien	0.91	312	*e*P	Pn	03 52 13.7	-0.1
	baz=312						
TWT				*e*S	Sb	03 52 25.0	-0.5
	baz=312						
NNSB	Datong	0.93	328	P	Pb	03 52 13.4	-0.5
	baz=330						
NNSB				S	Sb	03 52 25.1	-0.7
	baz=330						
TDCB	Techi	0.93	311	P	Pb	03 52 13.7	-0.1
	baz=312						
TDCB				*e*S	Sb	03 52 24.5	-1.3
	baz=312						
NNS	Nan Shan	0.94	328	*e*P	Pb	03 52 13.7	-0.4
	baz=330						
ELDTW	Lidau	0.94	242	*i* P	Pb	03 52 13.2	-0.9
	baz=238						
ELDTW				*i* S	Sb	03 52 25.2	-1.1
	baz=238						
WPL	Puli Township	0.96	293	*e*P	Pb	03 52 14.2	-0.1
	baz=293						
SMLT	Sun Moon Lake	0.96	285	*e*P	Pb	03 52 14.1	-0.4
	baz=284						
TWC	Suao	0.97	356	P	Pb	03 52 14.4	-0.1
	baz=360						
TWC				*i* S	Sn	03 52 27.3	0.0
	baz=360						
WHYT	Xinyi Township	0.98	273	*e*P	Pb	03 52 14.7	0.0
	baz=272						
DPDB	Guoxing	0.99	293	*e*P	Pb	03 52 14.7	-0.2
	baz=294						
NDS	Dongshan	1.01	349	P	Pb	03 52 14.9	-0.2
	baz=352						
NDS				S	Sn	03 52 27.9	-0.4
	baz=352						
TYC	Yuchr	1.01	285	*e*P	Pb	03 52 14.4	-0.8
	baz=285						
TYC				*e*S	Sn	03 52 28.6	+0.3
	baz=285						
WCS	Beigang Elemen	1.01	294	*e*P	Pb	03 52 14.9	-0.3
	baz=295						
NDT	Datong Townshi	1.03	339	*e*P	Pb	03 52 15.1	-0.4
	baz=341						
LONT	Longtian	1.03	225	*e*P	Pb	03 52 14.5	-1.0
	baz=213						
LONT				*e*S	Sb	03 52 27.7	-1.0
	baz=213						
ALS	Alishan	1.03	263	⇓*i*P	Pb	03 52 15.7	0.0
	baz=261						
ENTT	Nioudou	1.05	342	*e*P	Pb	03 52 15.6	-0.2
	baz=345						
ENTT				*e*S	Sb	03 52 28.2	-0.9
	baz=345						
LDUT	Ludao	1.05	203	*e*P	Pb	03 52 17.1	+1.2
	baz=200						
LDUT				*e*S	Sb	03 52 27.1	-2.1
	baz=200						
WHP	Taichung City	1.09	306	*e*P	Pn	03 52 17.2	+1.0
	baz=306						
TWE	Neicheng	1.10	348	*e*P	Pn	03 52 16.1	0.0
	baz=351						
TWE				*e*S	Sb	03 52 30.2	-0.4
	baz=351						
WJS	Zhushan	1.11	280	*e*P	Pb	03 52 17.1	+0.2
	baz=279						
TWGBT	Beinan	1.13	223	*e*P	Pn	03 52 15.3	-1.2
	baz=233						
TWGBT				*e*S	Sb	03 52 29.9	-1.5
	baz=233						
YHNB	Yeheng	1.14	334	P	Pn	03 52 16.9	+0.2
	baz=336						
YHNB				S	Sb	03 52 30.6	-1.3
	baz=336						
NSK	Sanguang	1.15	334	P	Pn	03 52 17.0	+0.1
	baz=336						
NSK				S	Sb	03 52 31.2	-1.0
	baz=336						
STYH	Taoyuan	1.15	246	P	Pn	03 52 17.3	+0.4
	baz=233						
STYH				S	Sb	03 52 31.7	-0.4
	baz=233						
WNT	Mingjian	1.16	282	*e*P	Pb	03 52 17.7	0.0
	baz=282						
STYT	Tauyuan	1.17	246	P	Pn	03 52 17.6	+0.4
	baz=232						
STYT				S	Sb	03 52 32.2	-0.5
	baz=232						
WWF	Wufeng	1.19	290	*e*P	Pb	03 52 19.0	+0.8
	baz=290						
NWLT	Wulai	1.19	341	*e*P	Pn	03 52 17.8	+0.3
	baz=343						
NTC	Toucheng	1.21	356	*e*P	Pn	03 52 17.9	+0.2
	baz=358						
TPUB	Ta-pu	1.23	254	*e*P	Pb	03 52 19.2	+0.2
	baz=245						
TPUB				S	Sb	03 52 33.9	-0.6
	baz=245						
WGK	Gukeng	1.25	272	*e*P	Pn	03 52 18.2	0.0
	baz=271						
WTP	Ta-pu	1.26	252	P	Pb	03 52 19.5	-0.1
	baz=250						
TWQ1	Liyutan	1.26	304	*e*P	Pb	03 52 19.8	+0.2
	baz=304						
TWQ1				S	Sn	03 52 36.2	+1.6
	baz=304						
WDLH	Douliu	1.27	272	*e*P	Pb	03 52 19.3	-0.3
	baz=272						
YOJ	Yonaguni jima	1.29	50	P	Pn	03 52 19.3	+0.6
	baz=52						
YOJ	Yonaguni jima	1.29	50	P	Pn	03 52 19.6	+0.8
YOJ				*e*S	Sn	03 52 35.1	-0.1
NSTT	Nanjuang	1.29	320	*e*P	Pb	03 52 19.8	-0.3
	baz=321						
NSTT				*e*S	Sb	03 52 35.6	-0.7
	baz=321						
LIOB	Emei	1.30	321	*e*P	Pb	03 52 20.4	+0.3
	baz=322						
NSY	Sanyi	1.31	306	*e*P	Pb	03 52 20.6	+0.2
	baz=307						
WCHH	Zhanghua	1.32	290	*e*P	Pb	03 52 20.8	+0.3
	baz=289						
TIPB	Shuangxi	1.33	356	P	Pb	03 52 20.4	-0.2
	baz=358						
TIPB				*e*S	Sb	03 52 36.8	-0.5
	baz=358						
SGST	Jiashian	1.35	246	*e*P	Pn	03 52 19.8	+0.2
	baz=231						
SGST				*e*S	Sb	03 52 37.6	-0.3
	baz=231						
CHN1	Nanshi	1.36	251	P	Pb	03 52 21.2	+0.1
	baz=249						
TWB1	Santiao Chiao	1.36	3	*e*P	Pn	03 52 20.3	+0.5
	baz=5.0						
TWB1				*e*S	Sn	03 52 36.9	-0.2
	baz=5.0						
NMLH	Miaoli	1.36	311	*e*P	Pb	03 52 21.1	-0.2
	baz=312						
NHDH	Xindian Distri	1.36	345	*e*P	Pn	03 52 20.5	+0.7
	baz=346						
WDJ	Dajia District	1.37	301	*e*P	Pb	03 52 21.1	-0.1
	baz=302						
TWA	Mucha	1.37	347	*e*P	Pn	03 52 20.6	+0.7
	baz=336						
TWA				*e*S	Sn	03 52 37.5	+0.3
	baz=336						
SNST	Tainan City	1.37	253	*e*P	Pb	03 52 21.1	-0.3
	baz=251						
CHY	Chiayi	1.38	264	*e*P	Pb	03 52 21.1	-0.4
	baz=263						
TATO	Taipei	1.39	344	P	Pb	03 52 21.0	-0.6
	baz=345						
TATO				S	Sn	03 52 37.6	0.0
	baz=345						
NWF	Wu-fen Shan	1.43	355	*e*P	Pb	03 52 22.2	-0.2
	baz=341						
NWF				*e*S	Sb	03 52 39.9	-0.3
	baz=341						
WFSB	Wu-fen Shan	1.43	355	P	Pb	03 52 22.0	-0.4
	baz=11						
WFSB				S	Sb	03 52 40.6	+0.5
	baz=11						
WRL	Guolierlin Hig	1.44	281	*e*P	Pb	03 52 22.3	-0.2
	baz=280						
NCUH	Zhongli	1.48	333	*e*P	Pb	03 52 23.3	+0.1
	baz=334						
SSD	Sandimen	1.48	233	*e*P	Pb	03 52 23.0	-0.3
	baz=221						
TSMG	Majia	1.50	232	*e*P	Pb	03 52 23.1	-0.4
	baz=220						
TNOU	National Taiwa	1.51	355	*e*P	Pn	03 52 22.5	+0.7
	baz=14						
TWS1	Kuangyinshan	1.52	343	*e*P	Pn	03 52 22.7	+0.7
	baz=344						
ICHU	Yijhu	1.53	260	*e*P	Pn	03 52 23.0	+0.9
	baz=259						
MASBT	Mashibuluo	1.57	229	*e*P	Pn	03 52 22.5	-0.1
	baz=218						
YM08	YM08	1.57	349	*e*P	Pn	03 52 22.8	+0.1
	baz=333						
EAST	Anshuo	1.59	218	*e*P	Pn	03 52 22.0	-1.0
	baz=216						
SSPT	Xinbi	1.70	227	*e*P	Pb	03 52 27.4	+0.5
	baz=219						
SCZT	Fangliau	1.74	224	*e*P	Pn	03 52 26.4	+1.4
	baz=216						
SLIU	Shizi	1.75	216	*e*P	Pn	03 52 25.1	-0.1
	baz=215						
HATJ	Hateruma jima	1.77	76	P	Pn	03 52 25.7	+0.3
HATJ				*e*S	Sn	03 52 47.0	-0.2
IRIF	Iriomote-Funau	1.79	67	P	Pn	03 52 26.8	+1.1
IRIF				*e*S	Sn	03 52 48.2	+0.5
TWKBT	Hengchun	1.98	211	*e*P	Pn	03 52 29.9	+1.7
	baz=210						
JKRS	Kuro-shima	2.00	72	P	Pn	03 52 29.4	+0.8
JIJ	Ishigaki jima	2.16	70	P	Pn	03 52 31.1	+0.4
JIJ				*e*S	Sn	03 52 56.1	-0.5
PNG	Penghu	2.17	269	*e*P	Pn	03 52 31.5	+0.6
	baz=268						
VCHM	Qimei	2.33	260	*e*P	Pn	03 52 33.7	+0.7
	baz=259						
JISG	Ishigakijimahi	2.38	66	P	Pn	03 52 34.1	+0.4
JTJ	Tarama	2.73	68	S	Sn	03 53 11.0	+0.2
KNM	Kinmen	3.28	284	*e*P	Pn	03 52 48.5	+2.4
	baz=283						
KNMB	Chin-men Tao	3.33	285	*e*P	Pn	03 52 47.5	+0.6
	baz=284						

NNC 17 04:03:33.7±9.1**, 38°.15N**×**73°.16E, h0**^{km}**, mb3.6, mpv3.2, 6C-1D, Error ellipse: s-maj=72.2km s-min=50.7km az=160.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.59	12	⇑Pn	Pn	04 04 44.3	-0.3
	2.8nm,0.7s						
AAK				⇑Sn	Sn	04 05 41.7	+2.9
	4.2nm,0.6s						
TKM2	Tokmak 2	5.11	21	⇑Pg	Pb	04 05 05.7	+1.6
	2.3nm,0.7s						
TKM2				⇑Lg	Lg	04 06 07.5	
	4.0nm,0.8s						
KK08	Karatay Array	5.35	339	⇑Pn	Pn	04 04 55.9	+1.1
	1.4nm,0.5s,baz=156,slow=14						
KK08				⇓Sn	Sn	04 05 56.7	-0.4
	4.6nm,0.7s,baz=152,slow=23						
AB31	Akbulak array	14.62	324	⇑P	Pn	04 06 59.0	-2.8

SJA ***17*** *04:18:55.2±0.7, 30°.70S×71°.74W, h30^{km}±3^{km}, ML4.4, MW4.3*

IDC ***17*** *04:18:58.6±2.7, 30°.78S×71°.32W, h41^{km}±22^{km}, mb4.1/10, mb1 4.2/15, mb1mx4.1/24, mbtmp4.2/15, ML4.0/5, MS3.3/3, Ms1 3.3/3, ms1mx3.0/18, Error ellipse: s-maj=22.1km s-min=16.3km az=90.0*

GUC ***17*** *04:18:59.0±0.7, 30°.75S×71°.39W, h53^{km}±2^{km}, ML4.4*

NEIC ***17*** *04:18:59.3±1.1, 30°.78S±0°.03×71°.41W±0°.08, h47^{km}±4^{km}, mb4.3/14, Mwr4.2/31, ML4.4(GUC), Error ellipse: s-maj=9.6km s-min=4.7km az=81.0*

NEIC ***17*** *04:18:59.5, 30°.79S×71°.43W, h53^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.26; M$_{\theta\theta}$-0.21; M$_{\phi\phi}$-2.06; M$_{r\theta}$0.06; M$_{\theta\phi}$0.32; M$_{\phi r}$-1.35; Fault plane solution: M$_{0}$2.57000×10^{15} NP1:φ$_{s}$173.96000°, δ60.81000°, λ93.29000°. NP2:φ$_{s}$347.25000°, δ29.36000°, λ84.14000°. Principal axes: T 2.6503, Plg74.0000°, Azm92.0000°; N -0.1620, Plg3.0000°, Azm352.0000°; P -2.4883, Plg16.0000°, Azm262.0000°;*

VAO ***17*** *04:19:04.7±0.6, 30°.96S×71°.43W, h127^{km}, mb4.3*

ISC 17 04:18:58.8±0.6**, 30°.74S**±0°.03×**71°.43W**±0°.03**, h46**^{km}±5^{km}**, n174, σ2^{s}02**/208**, mb4.5**/17**, 11C-12D, Fault plane solution: NP1:**φ$_{s}$250.92860°**,** δ10.54223°**,** λ-15.06610°. **NP2:**φ$_{s}$355.75168°**,** δ87.27413°**,** λ-100.18758°. **Principal axes:** T Plg41.4176°, Azm95.3521°**;** N Plg10.1759°, Azm356.2413°**;** P Plg46.7858°, Azm255.2274°**; Fault**

plane solution: NP1:φs349.55820°,δ48.41441°, λ111.69468°. **NP2:**φs138.61997°,δ45.97403°,λ67.38488°. **Principal axes:** T Plg73.8964°, Azm330.0117°; N Plg16.0510°, Azm154.7662°; P Plg1.2660°, Azm64.4019°;

Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.19	292	⇑iP	Pn	04 19 07.3	+0.7
CO06				i S	Sn	04 19 13.7	+1.5
CO06				IAML		04 19 14.7	
	comp=N,34µm,0.4s						
CO06	Fray Jorge	0.19	292		Pn	04 19 07.4	+0.7
CO06					Sn	04 19 13.7	+1.5
CO03	El Pedregal	0.65	99	i P	Pn	04 19 11.8	-0.1
CO03				i S	Sn	04 19 21.1	-0.1
CO03				IAML		04 19 21.7	
	comp=E,30µm,0.6s						
CO03	El Pedregal	0.65	99		Pn	04 19 11.8	-0.1
CO03				Sn	Sn	04 19 20.7	-0.5
CO03	El Pedregal	0.65	99	eP	Pn	04 19 13.5	+1.6
CO03				eS	Sn	04 19 21.5	+0.3
CO03				IAML		04 19 21.6	
	comp=Z,9µm,0.3s						
GO04	Tololo Observa	0.79	44	⇓iP	Pn	04 19 14.3	+0.4
GO04				i S	Sn	04 19 25.5	+0.7
GO04	Tololo Observa	0.79	44		Pn	04 19 14.3	+0.4
GO04				Sn	Sn	04 19 25.5	+0.7
GO04	Tololo Observa	0.79	44	eP	Pn	04 19 14.0	+0.1
GO04				eS	Sn	04 19 26.2	+1.5
CO05	La Serena	0.84	12	⇑iP	Pn	04 19 15.1	+0.8
CO05				IAML		04 19 27.6	
	comp=N,12µm,0.5s						
CO05	La Serena	0.84	12		Pn	04 19 15.1	+0.8
CO05				Sn	Sn	04 19 26.7	+1.1
AROD	Rodeo	1.79	72	eP	Pn	04 19 30.5	+3.0
AROD				eS	Sn	04 19 53.6	+4.3
VA06	Catapilco	1.81	176	⇓iP	Pn	04 19 28.2	+0.6
VA06				i S	Sn	04 19 50.6	+1.2
VA06				IAML		04 19 55.5	
	comp=E,5µm,0.5s						
LCO	Las Campanas	1.84	20	eP	Pn	04 19 28.8	+0.5
LCO				i S	Sn	04 19 51.7	+1.2
LCO	Las Campanas	1.84	20	Pn	Pn	04 19 29.1	+0.9
LCO	Las Campanas	1.84	20	eP	Pn	04 19 29.0	+0.8
LCO				eS	Sn	04 19 52.5	+2.0
ACCO	Cerro Coronel	2.05	86	eP	Pn	04 19 34.3	+3.2
ACDV	Cuesta del Vie	2.08	75	eP	Pn	04 19 34.6	+3.2
ACDV				eS	Sn	04 19 48.2	-8.0
RTLS	Leoncito	2.11	120	eP	Pn	04 19 35.0	+3.1
RTLS				eS	Sn	04 19 50.5	-6.6
RTLS				IAML		04 20 09.8	
	comp=Z,1µm,0.7s						
VA03	San Esteban	2.15	160	⇑iP	Pn	04 19 33.5	+1.1
VA03				i S	Sn	04 19 59.3	+1.5
VA03				IAML		04 20 07.5	
	comp=E,5µm,0.4s						
VA03	San Esteban	2.15	160		Pn	04 19 32.4	+0.1
VA03	San Esteban	2.15	160	eP	Pn	04 19 33.5	+1.1
VA03				eS	Sn	04 20 02.8	+4.9
VA03				IAML		04 20 08.6	
	comp=Z,2µm,0.9s						
ROCH	El Roble	2.25	171	⇑iP	Pn	04 19 34.5	+0.7
ROCH				⇑iP	Pn	04 19 34.2	+0.4
ROCH				i S	Sn	04 20 02.1	+1.7
ROCH				i S	Sn	04 20 02.4	+2.0
ROCH				IAML		04 20 08.3	
	comp=N,2µm,0.5s						
ROCH				IAML		04 20 08.5	
	comp=N,4µm,0.1s						
ROC1	El Roble	2.25	171	eP	Pn	04 19 34.3	+0.4
ROC1				eS	Sn	04 20 03.7	+3.1
VA01	Torpederas	2.28	185	eP	Pn	04 19 34.0	0.0
VA01				IAML		04 20 14.4	
	comp=E,1µm,0.5s						
VA01	Torpederas	2.28	185	Pn	Pn	04 19 33.7	-0.3
AUSP	Uspallata	2.29	131	eP	Pn	04 19 37.1	+2.8
AUSP				eS	Sn	04 19 52.0	-9.5
AUSP				eS	Sn	04 20 08.1	+6.6
PEL	Peldehue	2.48	165	⇑iP	Pn	04 19 37.8	+1.1
PEL				IAML		04 20 17.4	
	comp=E,2µm,0.3s						
PEL	Peldehue	2.48	165		Pn	04 19 37.2	+0.4
PEL	Peldehue	2.48	165	eP	Pn	04 19 32.5	-4.3
PEL				eP	Pn	04 19 37.7	+1.0
PEL				eS	Sn	04 19 52.6	-13
ZON	Zonda	2.49	109	eP	Pn	04 19 34.5	-2.5
ZON				eP	Pn	04 19 39.9	+3.0
ZON				eS	Sn	04 19 58.2	-8.0
ZON				IAML		04 20 31.1	
	comp=Z,774nm,0.6s						
MT02	Curacav	2.52	174	eP	Pn	04 19 37.4	+0.1
MT02				i S	Sn	04 20 07.7	+0.9
MT02				IAML		04 20 16.9	
	comp=E,1µm,0.8s						
MT02	Curacav	2.52	174		Pn	04 19 37.7	+0.4
MT02	Curacav	2.52	174	eP	Pn	04 19 32.5	-4.8
MT02				eP	Pn	04 19 37.5	+0.1
MT02				eP	Pn	04 19 37.6	+0.4
MT02				eS	Sn	04 20 09.8	+3.0
MT02				IAML		04 20 18.6	
	comp=Z,1µm,0.7s						
AC04	Llanos de Chal	2.55	7	⇓iP	Pn	04 19 39.1	+1.4
AC04				IAML		04 20 29.8	
	comp=N,2µm,0.4s						
AC04	Llanos de Chal	2.55	7	Pn	Pn	04 19 39.0	+1.2
AC04	Llanos de Chal	2.55	7	eP	Pn	04 19 38.9	+1.2
AC04				eS	Sn	04 20 19.3	+12
AC04				IAML		04 20 21.7	
	comp=Z,1µm,0.6s						
MT05	Renca	2.71	168	eP	Pn	04 19 40.8	+0.9
MT05				i S	Sn	04 20 12.9	+1.5
MT05	Renca	2.71	168		Pn	04 19 40.5	+0.6
MT05	Renca	2.71	168	eP	Pn	04 19 40.7	+0.9
MT05				eS	Sn	04 20 17.7	+6.3
MT05				IAML		04 20 29.9	
	comp=Z,1µm,0.4s						
RTCV	Cerro Valdivia	2.72	115	eP	Pn	04 19 37.5	-2.5
RTCV				eP	Pn	04 19 43.1	+3.0
RTCV				eS	Sn	04 20 22.0	+10
FCH	Farellones	2.75	160	eP	Pn	04 19 42.3	+1.5
FCH				i S	Sn	04 20 15.2	+2.3
FCH				IAML		04 20 24.6	
	comp=N,1µm,0.3s						
ASAL	Salagasta	2.88	130	eP	Pn	04 19 45.6	+3.3
ASAL				eS	Sn	04 20 22.0	+6.2
VA05	Santo Domingo	2.91	183	Pn	Pn	04 19 42.1	-0.5
ARCO	CERRO ARCO	2.98	135	eP	Pn	04 19 47.9	+4.1
ARCO				eS	Sn	04 20 32.5	+14
ARCO				IAML		04 20 34.1	
	comp=Z,2µm,0.5s						
MT09	Talagante	3.05	173	⇑iP	Pn	04 19 45.5	+0.8
MT09				i S	Sn	04 20 20.8	+0.8
MT09				IAML		04 20 30.4	
	comp=E,2µm,0.7s						
MT09	Talagante	3.05	173		Pn	04 19 45.0	+0.4
MT01	Popeta	3.12	177	eP	Pn	04 19 45.9	+0.4
MT01				IAML		04 20 35.5	
	comp=E,1µm,0.4s						
MT01	Popeta	3.12	177		Pn	04 19 45.8	+0.4
MT01	Popeta	3.12	177	eP	Pn	04 19 46.0	+0.5
MT01				eS	Sn	04 20 23.0	+1.5
MT01				IAML		04 20 32.5	
	comp=Z,723nm,0.4s						
AAGR	Agrelo	3.22	137	eP	Pn	04 19 50.4	+3.5
AAGR				eP	Pn	04 19 50.5	+3.5
AAGR				eS	Sn	04 20 44.2	+20
LMEL	Las Melosas	3.27	162	eP	Pn	04 19 49.9	+2.3
LMEL				IAML		04 20 39.4	
	comp=E,1µm,0.5s						
GO03	Copiap	3.31	19	eP	Pn	04 19 49.7	+1.5
GO03	Copiap	3.31	19	Pn	Pn	04 19 49.5	+1.3
GO03	Copiap	3.31	19	eP	Pn	04 19 50.0	+1.8
GO03				eP	Pn	04 19 50.4	+2.2
GO03				eS	Sn	04 20 31.0	+4.6
BO04	La Punta	3.31	168	⇑iP	Pn	04 19 49.1	+1.0
BO04				IAML		04 20 45.3	
	comp=E,1µm,0.3s						
AVFE	Valle Fertil	3.43	90	eP	Pn	04 19 46.0	-3.8
AVFE				eP	Pn	04 19 51.6	+1.8
AVFE				eS	Sn	04 20 34.5	+5.2
AVFE				IAML		04 20 42.8	
	comp=Z,1µm,0.4s						
VCA	Vinchina	3.45	55	eP	Pn	04 19 54.4	+4.2
VCA				eS	Sn	04 20 40.9	+11
VCA				IAML		04 20 48.5	
	comp=Z,2µm,0.7s						
BO01	Tunca	3.65	175	eP	Pn	04 19 52.9	+0.1
BO01				IAML		04 20 53.2	
	comp=N,353nm,0.6s						
BO01	Tunca	3.65	175		Pn	04 19 52.3	-0.5
BO01	Tunca	3.65	175	eP	Pn	04 19 53.1	+0.3
BO01				IAML		04 20 54.9	
	comp=Z,338nm,0.6s						
BO02	Sierra Bellavi	4.08	172	eP	Pn	04 19 59.2	+0.5
BO02				i S	Sn	04 20 45.6	+0.4
BO02	Sierra Bellavi	4.08	172		Pn	04 19 59.0	+0.3
BO02	Sierra Bellavi	4.08	172	eP	Pn	04 19 59.7	+1.0
BO02				IAML		04 21 09.4	
	comp=Z,486nm,0.2s						
ACHE	Chepes	4.12	97	eS	Sn	04 20 47.6	+1.2
APLL	PUNTA DE LOS L	4.25	87	eP	Pn	04 20 02.8	+1.8
APLL				eP	Pn	04 20 02.8	+1.8
APLL				eS	Sn	04 20 57.1	+7.7
GO05	Huala	4.28	185	eP	Pn	04 20 00.2	-1.2
GO05	Huala	4.28	185	Pn	Pn	04 20 00.1	-1.2
AC02	Maricunga	4.39	28		Pn	04 20 05.0	+1.6
ML02	Panimavida	5.00	180	eP	Pn	04 20 11.4	0.0
ML02	Panimavida	5.00	180	Pn	Pn	04 20 10.7	-0.7
MRA	San Martin	5.16	110	eP	Pn	04 20 14.4	+0.8
PB14	IPOC Station P	6.16	9	Pn	Pn	04 20 26.9	-0.7
FSA	Cafayete	6.66	47	eP	Pn	04 20 36.8	+2.5
FSA				eP	Pn	04 20 36.8	+2.5
FSA				eS	Sn	04 22 04.4	+15
H03N1	Juan Fernandez	6.89	245	T	T	04 27 28.6	
	baz=72,slow=72,SNR=1836						
H03N3	Juan Fernandez	6.91	245	T	T	04 27 29.8	
	baz=72,slow=72,SNR=1607						
H03N2	Juan Fernandez	6.91	245	T	T	04 27 28.2	
	baz=72,slow=72,SNR=2521						
H03S3	Juan Fernandez	7.04	242	T	T	04 27 50.3	
	baz=84,SNR=12						
H03S1	Juan Fernandez	7.04	242	T	T	04 27 48.5	
	baz=84,SNR=11						
H03S2	Juan Fernandez	7.05	242	T	T	04 27 50.3	
	baz=84,SNR=14						
PB15	IPOC Station P	7.71	14		Pn	04 20 47.9	-0.8
LC01	Cunco	8.14	182	Pn	Pn	04 20 52.6	-1.8
LVC	Limon Verde	8.41	16	P	Pn	04 20 56.7	-1.7
	comp=Z,1.0nm,0.3s,baz=152,slow=6.1,SNR=12						
LVC				LR	LR	04 24 40.2	
	comp=Z,84nm,21.4s,baz=210,slow=41						
LVC	Limon Verde	8.41	16		Pn	04 20 56.4	-2.1
PB09	IPOC Station P	9.12	13	eP	Pn	04 21 07.0	-1.1
PLCA	Paso Flores	9.99	176	P	Pn	04 21 18.2	-1.6
	comp=Z,0.2nm,0.3s,baz=349,slow=12,SNR=5.0						
PLCA	Paso Flores	9.99	176	eP	Pn	04 21 20.7	+0.9
PLCA	Paso Flores	9.99	176		Pn	04 21 19.3	-0.5
ITQB	Itaqui	12.86	89		Pn	04 21 56.3	-2.6
CPUP	Villa Florida	13.15	74	P	Pn	04 22 00.8	-2.2
	comp=Z,0.3nm,0.3s,baz=251,slow=12,SNR=3.9						
CPUP				S	Sn	04 24 25.8	-2.0
	comp=Z,0.4nm,0.3s,baz=285,slow=20,SNR=1.4						
CPUP				LR	LR	04 27 36.4	
	comp=Z,121nm,19.3s,baz=230,slow=40						
LPAZ	La Paz	14.70	13	P	Pn	04 22 26.3	+1.7
	comp=Z,0.2nm,0.3s,baz=191,slow=6.3,SNR=12						
LPAZ	La Paz	14.70	13	Pn	Pn	04 22 24.8	+0.3
ITAB	Concordia	17.25	83	eP	P	04 22 57.9	+0.5
AQDB	Aquidauana	17.47	58	eP	P	04 22 59.6	-0.3
AQDB	Aquidauana	17.47	58	P	Pn	04 22 58.2	-1.0
SIV	San Ignacio	17.48	35	P	P	04 23 00.2	+0.1
	comp=Z,1.1nm,0.3s,baz=212,slow=9.0,SNR=38						
PTLB	Pontes e Lacer	18.94	39	eP	P	04 23 16.4	+0.3
PTLB	Pontes e Lacer	18.94	39	P	P	04 23 15.2	-0.9
TER01	Tubaro-SC	19.51	89	eP	P	04 23 22.4	+0.1
PP1B	Ponte de Pedra	19.95	53	eP	P	04 23 27.3	+0.2
PCMB	Pacaembu	20.24	68	eP	P	04 23 30.5	+0.2
VILB	Vilhena	20.52	33	eP	P	04 23 33.9	+0.6
VILB	Vilhena	20.52	33	P	P	04 23 33.5	+0.1
VILB				IAmb	IAmb	04 23 34.0	
	comp=Z,9.7nm,0.7s						
SALV	Santo Antonio	20.63	48	eP	P	04 23 34.8	+0.3
FRTB	Fartura	20.81	75	eP	P	04 23 36.3	-0.1
ETMB	Extrema	21.38	14	eP	P	04 23 44.0	+1.4
ETMB	Extrema	21.38	14	P	P	04 23 43.6	+1.0
ETMB				IAmb	IAmb	04 23 47.2	
	comp=Z,6.8nm,0.8s						
ITRB	Iturama	21.97	65	eP	P	04 23 48.3	-0.6
SPB	Sao Paulo	22.48	77	eP	P	04 23 54.8	+0.4
BB19B	Bebedouro	22.71	70	eP	P	04 23 56.3	-0.6
RCLB	Rio Claro- Sao	22.89	75	eP	P	04 23 57.9	-0.9
CZSB	Cruzeiro do Su	22.93	357	eP	P	04 24 01.2	+2.2
SAML	Samuel	23.01	21	P	P	04 23 59.5	-0.4
SAML				IAmb	IAmb	04 24 01.5	
	comp=Z,8.4nm,1.4s						
VAO	Valinhos	23.12	76	eP	P	04 24 00.1	-1.0
ARAG	Araguaiana, MT	23.38	55	eP	P	04 24 02.4	-1.1
PDRB	Porto dos Gac	23.41	39	eP	P	04 24 03.9	0.0
USHA	Ushuaia	24.17	176	P	P	04 24 11.0	+0.5
	comp=Z,11nm,0.7s,baz=8.3,slow=8.8,SNR=14						
IPMB	Ipameri, GO	24.61	64	eP	P	04 24 14.7	-0.4
BSCB	Bom Sucesso	25.82	74	eP	P	04 24 24.5	-1.5
BDFB	Brasilia	26.18	60	P	P	04 24 28.9	-0.3
	comp=Z,12nm,0.8s,baz=236,slow=8.8,SNR=18						
BDFB	Brasilia	26.18	60	P	P	04 24 28.8	-0.5
BDFB				IAmb	IAmb	04 24 29.4	
	comp=Z,11nm,0.8s						
SNDB	Serra Nova Dou	26.39	49	eP	P	04 24 31.5	+0.4
NPGB	Novo Progresso	27.98	36	eP	P	04 24 43.8	-1.6
DIAM	Diamantina, MG	28.05	70	eP	P	04 24 46.1	-0.1
CAM01	Campos-RJ	28.07	79	eP	P	04 24 44.9	-1.2
PEXB	Peixe	28.32	54	eP	P	04 24 48.0	-0.4
MC01	Montes Claros	28.69	67	eP	P	04 24 50.8	-1.0
MACA	Manacapuru-AM	29.25	22	eP	P	04 24 56.7	+0.1
MACA	Manacapuru-AM	29.25	22	P	P	04 24 56.0	-0.7
MACA				IAmb	IAmb	04 24 57.3	
	comp=Z,6.8nm,0.6s						
JANB	Januaria	29.35	64	eP	P	04 24 56.6	-1.0
SJMB	Sao Joao De Ma	29.88	73	eP	P	04 25 01.7	-0.5
BSFB	Barra de Sao F	30.10	74	eP	P	04 25 03.9	-0.3
SDBA	SAO DESIDERIO	30.55	59	eP	P	04 25 08.0	-0.2
SMTB	Santa Maria do	31.12	51	eP	P	04 25 14.0	+0.8
NAN01	Guarapari, ES	31.18	73	eP	P	04 25 13.1	-0.6
GUA01	Guaratinga, BA	32.09	71	eP	P	04 25 20.5	-1.2
CMC01	Camacan, BA	32.97	70	eP	P	04 25 28.1	-1.3
BOAV	Boa Vista	34.56	19	eP	P	04 25 43.6	+0.5
BOAV	Boa Vista	34.56	19	P	P	04 25 43.2	0.0
BOAV				IAmb	IAmb	04 25 44.1	
	comp=Z,3.0nm,0.7s						
MLPR	Magueyes Islan	48.62	6	P	P	04 27 38.2	+0.1
CELP	Cerrillos	48.76	6	P	P	04 27 38.9	-0.3
VNA3	Neumayer Olymp	52.19	159	P	P	04 28 04.4	-0.1
VNA2	Neumayer--Watz	52.82	158	P	P	04 28 09.1	-0.1
	baz=287,slow=8.9						
SNAA	Sanae	54.41	159	P	P	04 28 20.8	-0.1
SNAA	Sanae	54.41	159	P	P	04 28 20.8	-0.1
SNAA				IAmb	IAmb	04 28 21.6	
	comp=Z,5.1nm,0.7s						
QSPA	South Pole Qui	59.48	180	P	P	04 28 57.2	+0.2
TXAR	Lajitas Array	67.17	330	P	P	04 29 49.4	+1.3
	comp=Z,0.6nm,0.6s,baz=152,slow=8.9,SNR=5.0						
LIC	Lamto	73.27	72	eP	P	04 30 25.1	-0.7
	comp=Z,26nm,0.9s						
TIC	Toumodi	73.52	72	eP	P	04 30 26.9	-0.3
KIC	Kosan Boka	73.58	72	eP	P	04 30 26.8	-0.8
	comp=Z,20nm,0.8s						
DBIC	Dimbokro	73.66	72	P	P	04 30 28.0	0.0
	comp=Z,8.7nm,0.5s,baz=230,slow=5.3,SNR=35						
MAW	Mawson	76.15	164	P	P	04 30 41.8	+0.2
	comp=Z,2.4nm,0.5s,baz=179,slow=12,SNR=2.3						
MAW				LR	LR	05 04 59.9	
	comp=Z,41nm,18.7s,baz=241,slow=36						
MAW	Mawson	76.15	164	P	P	04 30 41.7	+0.2
PDAR	Pinedale Array	81.11	333	P	P	04 31 10.2	+0.9
	comp=Z,0.5nm,0.6s,baz=131,slow=4.5,SNR=4.8						
PDAR	Pinedale Array	81.11	333	P	P	04 31 09.5	+0.2
BOSA	Boshof	81.13	118	P	P	04 31 09.9	0.0
	comp=Z,0.8nm,0.3s,baz=232,slow=4.5,SNR=7.1						
BOSA	Boshof	81.13	118	P	P	04 31 09.6	-0.2
NVAR	Mina Array Bea	81.52	325	P	P	04 31 13.1	+1.4
	comp=Z,0.3nm,0.5s,baz=173,slow=7.1,SNR=4.3						
TORD	Torodi Ar. Bea	82.62	70	P	P	04 31 17.4	-0.2
	comp=Z,1.8nm,0.4s,baz=280,slow=6.0,SNR=68						
TORD	Torodi Ar. Bea	82.62	70	P	P	04 31 17.5	-0.2
TORD				IAmb	IAmb	04 31 18.9	
	comp=Z,3.5nm,0.9s						
ULM	Lac du Bonnet	83.50	344	P	P	04 31 21.4	+0.1
	comp=Z,5.5nm,0.9s,baz=179,slow=6.0,SNR=4.6						
WRA	Warramunga Arr	123.84	210	PKP	PKPdf	04 37 51.1	-1.3
	comp=Z,0.3nm,0.4s,baz=162,slow=2.2,SNR=11						
H11S2	WAKE ISLAND Hy	126.27	271	T	T	06 56 43.6	
	baz=116,slow=75,SNR=95						
H11S1	WAKE ISLAND Hy	126.29	271	T	T	06 56 46.3	
	baz=116,slow=75,SNR=186						
H11S3	WAKE ISLAND Hy	126.29	271	T	T	06 56 46.8	
	baz=116,slow=75,SNR=138						
H11N3	WAKE ISLAND Hy	126.60	273	T	T	06 57 11.3	
	baz=116,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	126.62	273	T	T	06 57 16.3	
	baz=116,slow=75,SNR=6.9						
H11N2	WAKE ISLAND Hy	126.62	273	T	T	06 57 13.1	
	baz=116,slow=75,SNR=14						
BVAR	Borovoye Array	144.51	40	PKP	PKPdf	04 38 29.1	-0.6
	comp=Z,2.5nm,0.5s,baz=258,slow=7.3,SNR=16						
KURBB	Kurchatov Arra	150.10	40	PKPbc	PKPbc	04 38 44.0	0.0
	comp=Z,1.9nm,0.7s,baz=303,slow=3.0,SNR=6.4						
AAK	Ala-Archa	150.41	57	PKPbc	PKPbc	04 38 45.3	0.0
	comp=Z,0.9nm,0.5s,baz=351,slow=6.3,SNR=4.2						
AAK	Ala-Archa	150.41	57		PKPbc	04 38 44.4	-0.9
ZALV	Zalesovo Beam	151.18	30	PKPbc	PKPbc	04 38 46.2	-0.3
	comp=Z,6.7nm,0.5s,baz=297,slow=3.2,SNR=25						
MKAR	Makanchi Array	154.16	44	PKPbc	PKPbc	04 38 52.7	-0.8
	comp=Z,0.7nm,0.8s,baz=306,slow=5.2,SNR=3.5						
MKAR				PKPab	pPKPbc	04 39 07.8	+0.1
	comp=Z,1.1nm,0.7s,baz=318,slow=1.6,SNR=6.3						
MKAR	Makanchi Array	154.16	44		PKPbc	04 38 52.3	-1.2

DJA 17 04:49:52.0±1.1,**12°S**±3°×**11°8E**±°,**h14**^{km}±9^{km},**M4.1**/10, **mb4.3**/6,**mB6.1**/1,**MLv4.0**/10,**Mw(mB)5.7**/1,**South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	2.64	44	P	Pn	04 50 33.7	-0.5
WBSI				S	Sn	04 51 00.3	-5.7
PLAI	Plampang	2.73	5	P	Pn	04 50 35.1	-0.3
TWSI	Taliwang, Sumb	2.88	347	P	Pn	04 50 37.0	-0.5
IGBI	Denpasar	3.60	319	P	Pn	04 50 46.8	-0.6
SRBI	Singaraja	4.14	326	P	Pn	04 50 56.0	+1.1
ABJI	Asem Bagus	4.96	319	P	Pn	04 51 05.9	-0.2
GMJI	Gumukmas	5.19	309	P	Pn	04 51 09.2	-0.1
	0.2nm28nm,1.8s						
BLJI	Banyuglugur	5.43	314	P	Pn	04 51 12.5	-0.1
	1.0nm17µm26nm,0.9s						
PCJI	Pacitan	7.11	298	P	Pn	04 51 35.3	-0.3
	0.2nm30nm,1.2s						
UGM	Wanagama	7.81	297	P	Pn	04 51 45.0	-0.3
	0.4nm76nm,2.0s						

NEIC ***17*** *05:11:45.0±1.6, 11°.61S±0°.06×121°.30E±0°.06, h11^{km}±4^{km}, mb4.3/14, Error ellipse: s-maj=9.4km s-min=8.1km az=183.0*

IDC ***17*** *05:11:48.3±5.7, 11°.44S×121°.78E, h33^{km}±44^{km}, mb3.9/6, mb1 4.0/10, mb1mx3.7/37, mbtmp4.1/10, ML4.0/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/29, Error ellipse: s-maj=43.9km s-min=17.4km az=72.0*

DJA ***17*** *05:11:48.1±0.4, 12°S±4°×12°1E±°, h56^{km}±24^{km}, M4.3/12, mb4.4/7, mB5.0/4, MLv4.3/12, Mw(mB)4.3/4*

ISC 17 05:11:47.7±0.5,**11°.65S**±0°.05×**121°.33E**±0°.05,**h35**^{km},**n66**, σ**1^{s}.49**/72,**mb4.2**/10,**South of Timor**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASI	Baing, Sumba	1.60	333	P	Pn	05 12 13.6	0.0
BASI				S	Sn	05 12 32.6	-0.5
BATI	Baumata	2.71	58	Pg	Pn	05 12 29.1	+0.3
	47nm,0.3s,baz=44,slow=1.3,SNR=12						
BATI				Lg	Lg	05 12 59.8	
	111nm,0.3s,baz=38,slow=24,SNR=20						
BATI	Baumata	2.71	58	P	Pn	05 12 28.9	+0.1
BATI				S	Sn	05 12 59.4	-0.9
WBSI	Waikabubak, Su	2.76	316	P	Pn	05 12 29.3	-0.2
WBSI				S	Sn	05 12 59.9	-1.8
EDFI	Ende, Flores	2.91	7	P	Pn	05 12 29.7	-1.9
EDFI				S	Sn	05 13 02.0	-3.4
MMRI	Maumere	3.13	17	P	Pn	05 12 34.3	-0.3
MMRI				S	Sn	05 13 08.5	-2.2
MMRI	Maumere	3.13	17	Pn	Pn	05 12 34.8	+0.2
MMRI	Maumere	3.13	17	P	Pn	05 12 35.1	+0.5
SOEI	Soe	3.45	57	P	Pn	05 12 39.0	-0.1
SOEI				S	Sn	05 13 18.0	-0.8
SOEI	Soe	3.45	57	Pn	Pn	05 12 40.1	+1.1
SOEI	Soe	3.45	57	P	Pn	05 12 40.5	+1.4
PLAI	Plampang	4.48	308	P	Pn	05 12 53.3	+0.1
PLAI	Plampang	4.48	308	P	Pn	05 12 54.0	+0.8
TWSI	Taliwang, Sumb	5.25	303	P	Pn	05 13 03.6	-0.1
	0.2nm689nm20nm,0.8s						
BSSI	Bau Bau, Buton	5.54	351	P	Pn	05 13 07.0	-0.7
	0.3nm46nm,0.7s						
BKSI	Bulukumba	6.40	349	P	Pn	05 13 18.9	-0.7
	0.1nm23nm,0.5s						
IGBI	Denpasar	6.71	294	P	Pn	05 13 23.3	-0.4
	0.4nm55nm,1.3s						
KAPI	Kappang	6.78	347	Pn	Pn	05 13 24.5	-0.3
	0.8nm,0.3s,baz=219,slow=17,SNR=2.1						
KAPI				LR	LR	05 17 03.6	
	comp=Z,109nm,19.3s,baz=197,slow=47						
FITZ	Fitzroy Crossi	7.64	147	Pn	Pn	05 13 37.0	+0.4
	1.9nm,0.3s,baz=331,slow=8.1,SNR=47						
FITZ				Sn	Sn	05 14 57.0	-5.1
	20nm,0.3s,baz=202,slow=20,SNR=25						
JAGI	Jajag, Banyuwa	7.74	293	P	Pn	05 13 37.9	-0.1
	0.2nm15nm,0.7s						
JAGI	Jajag, Banyuwa	7.74	293	Pn	Pn	05 13 36.3	-1.7
KNRA	Kununurra	8.26	120	Pn	Pn	05 13 45.0	-0.1
KNRA	Kununurra	8.26	120	P	Pn	05 13 45.5	+0.4
DRS	Darwin Rock St	9.39	96	P	Pn	05 14 01.4	+0.7
MBWA	Marble Bar	9.58	189	Pn	Pn	05 14 03.4	+0.3
MBWA	Marble Bar	9.58	189	P	Pn	05 14 03.7	+0.5
MTN	Manton Dam	9.66	98	Pn	Pn	05 14 04.2	0.0
PSA00	Pilbara Seismi	9.97	188		Pn	05 14 08.5	0.0
PSA00	Pilbara Seismi	9.97	188	Pn	Pn	05 14 07.3	-1.3
PSA00	Pilbara Seismi	9.97	188	P	Pn	05 14 08.8	+0.3
LUWI	Luwuk	10.64	8	P	Pn	05 14 17.3	-0.4
LUWI	Luwuk	10.64	8	Pn	Pn	05 14 16.1	-1.6
KDU	Kakadu	10.94	97	P	Pn	05 14 21.5	-0.4
GIRL	Giralia	12.86	211	Pn	Pn	05 14 49.0	+0.9
GIRL	Giralia	12.86	211	P	Pn	05 14 49.1	+1.0
WRA	Warramunga Arr	14.98	125	Pn	Pn	05 15 13.4	-3.5
	0.9nm,0.3s,baz=294,slow=13,SNR=38						
WRA				Sn	Sn	05 17 43.7	-18
	0.3nm,0.3s,baz=314,slow=16,SNR=2.9						
WRA	Warramunga Arr	14.98	125		Pn	05 15 13.5	-3.5
WRAB	Tennant Creek	14.99	125	P	Pn	05 15 13.8	-3.3
WB2	Warramunga Arr	14.99	125	Pn	Pn	05 15 13.8	-3.4
WB2				IAmb	IAmb	05 15 26.7	
	comp=Z,9.6nm,1.1s						
MEEK	Meekatharra	15.13	189	P	Pn	05 15 18.3	-0.6
WR0	Warramunga Arr	15.15	125		Pn	05 15 16.4	-2.9
WR0				IAmb	IAmb	05 15 28.8	
	comp=Z,8.3nm,0.7s						
AS31	Alice Springs	16.91	137	Pn	Pn	05 15 40.8	-0.9
ASAR	Alice Springs	16.91	137	Pn	Pn	05 15 40.7	-1.1
	comp=Z,0.9nm,0.3s,baz=316,slow=13,SNR=47						
ASAR				Sn	Sn	05 18 36.5	-12
	comp=Z,1.3nm,0.3s,baz=316,slow=25,SNR=17						
ASAR	Alice Springs	16.91	137	Pn	Pn	05 15 41.7	-0.1
MORW	Morawa	18.02	195	P	P	05 15 56.3	+0.6
MORW				IAmb	IAmb	05 15 57.3	
	comp=Z,20nm,0.8s						
FORT	Forrest	20.03	163	P	P	05 16 17.3	-0.4
FORT				IAmb	IAmb	05 16 21.9	
	comp=Z,14nm,0.8s						
BBOO	Buckleboo	25.03	150	P	P	05 17 10.8	+2.2
BBOO				IAmb	IAmb	05 17 11.3	
	comp=Z,6.4nm,0.6s						
GSI	Gunungsitoli	26.89	297	P	P	05 17 26.0	+0.4
STKA	Stephens Creek	27.46	140	P	P	05 17 30.4	-0.2
	comp=Z,3.3nm,0.8s,baz=311,slow=9.5,SNR=8.0						
STKA	Stephens Creek	27.46	140	P	P	05 17 30.5	-0.1
HHC	Hu-ho-hao-te	53.01	351	eP	P	05 21 03.3	+2.1
SONM	Songino Array	60.69	349	P	P	05 21 55.8	+0.2
	comp=Z,0.7nm,0.7s,baz=154,slow=6.5,SNR=6.1						
SONM	Songino Array	60.69	349	P	P	05 21 55.5	-0.1
SONM				IAmb	IAmb	05 22 06.8	
	comp=Z,1.3nm,0.8s						

WMQ	**Urumqi**	**63.13**	**333**	*e*P	**P**	**05 22 14.8**	**+2.8**
KSH	**Kashi**	**66.09**	**323**	P	P	05 22 39.3	+7.8
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MK31	**Makanchi Array**	**67.85**	**332**	P	**P**	**05 22 41.9**	**-0.5**
MK31				IAmb	IAmb	05 22 54.5	
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**67.85**	**332**	P	**P**	**05 22 43.4**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=140,slow=6.7,SNR=11						
MKAR	**Makanchi Array**	**67.85**	**332**	P	**P**	**05 22 42.5**	**0.0**
SBA	**Scott Base**	**70.02**	**171**	P	**P**	**05 22 56.7**	**+1.2**
ZALV	**Zalesovo Beam**	**72.33**	**338**	P	**P**	**05 23 09.6**	**0.0**
	comp=Z,0.7nm,0.4s,baz=158,slow=5.6,SNR=3.7						
ZALV	**Zalesovo Beam**	**72.33**	**338**	P	**P**	**05 23 09.4**	**-0.3**
KURBB	**Kurchatov Arra**	**72.35**	**333**	P	**P**	**05 23 10.8**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=146,slow=5.8,SNR=3.6						
ABKAR	**Akbulak array**	**81.04**	**324**	P	**P**	**05 23 59.5**	**+0.5**
ABKAR				IAmb	IAmb	05 24 01.9	
	comp=Z,3.5nm,1.1s						
AKTO	**Aktyubinsk**	**82.70**	**325**	P	**P**	**05 24 09.1**	**+1.3**
	comp=Z,2.5nm,0.9s,baz=159,slow=3.3,SNR=5.4						
KHLH	**Kahului Airpor**	**86.99**	**68**	P	**P**	**05 24 29.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**121.15**	**278**	PKP	**PKiKP**	**05 30 39.9**	**+1.9**
	comp=Z,0.6nm,0.7s,baz=93,slow=1.1,SNR=3.8						

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*IDC **17** 05:12:52.9±1.0, 37.°81N×72.°70E, h0^{km}, mb3.7/9, mb1 3.8/15, mb1mx3.7/45, mbtmp3.7/15, ML3.0/6, MS2.7/1, Ms1 2.7/1, ms1mx2.1/45, Error ellipse: s-maj=20.8km s-min=18.1km az=98.0*

*NNC **17** 05:12:56.7±5.8, 37.°94N×72.°29E, h0^{km}, mb4.2, mpv3.7, Error ellipse: s-maj=45.7km s-min=30.8km az=158.0*

ISC 17 05:13:07.3±1.0**, 38.°25N**±0.°10×**72.°5E**±0.°1**, h119**^{km}**, n21, σ3.^{s}13**/21**, mb3.4**/8**, 6C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**4.64**	**19**	Pn	**Pn**	**05 14 12.2**	**-3.3**
	1.0nm,0.3s,baz=224,slow=4.7,SNR=9.3						
AAK				Sn	**Sn**	**05 15 14.1**	**+5.6**
	2.9nm,0.3s,baz=31,slow=18,SNR=1.9						
AAK	**Ala-Archa**	**4.64**	**19**	⇑Pg	Pn	05 14 28.0	+13
	14nm,0.8s						
AAK				⇑Sn	**Sn**	**05 15 13.1**	**+4.6**
	14nm,0.8s						
KK08	**Karatay Array**	**5.08**	**343**	⇑Pn	**Pn**	**05 14 18.0**	**-3.2**
	3.8nm,0.5s						
KK08				⇑Sn	**Sn**	**05 15 20.6**	**+1.7**
	9.7nm,0.7s						
TKM2	**Tokmak 2**	**5.23**	**26**	⇓Pg	Pn	05 14 36.1	+13
	5.4nm,0.6s						
TKM2				⇑Lg	Lg	05 15 42.1	
	8.3nm,0.9s						
MKAR	**Makanchi Array**	**11.19**	**37**	Pn	**Pn**	**05 15 40.9**	**-2.7**
	0.2nm,0.3s,baz=201,slow=6.5,SNR=4.8						
GEYT	**Alibeck**	**11.33**	**273**	LR	LR	05 20 04.9	
	comp=Z,34nm,20.0s,baz=190,slow=38						
KURBB	**Kurchatov Arra**	**13.10**	**17**	Pn	**Pn**	**05 16 04.3**	**-4.3**
	0.0nm,0.3s,baz=206,slow=11,SNR=5.9						
AB31	**Akbulak array**	**14.23**	**325**	⇑P	**Pn**	**05 16 18.7**	**-4.5**
	1.6nm,0.6s,baz=141,slow=12,SNR=5.4						
BVAR	**Borovoye Array**	**14.85**	**355**	Pn	**Pn**	**05 16 27.2**	**-3.8**
	0.1nm,0.3s,baz=174,slow=14,SNR=2.7						
AKTO	**Aktyubinsk**	**15.95**	**324**	Pn	**Pn**	**05 16 43.1**	**-1.6**
	0.1nm,0.3s,baz=130,slow=15,SNR=8.4						
AKTO	**Aktyubinsk**	**15.95**	**324**	⇓P	**P**	**05 16 47.0**	**+1.0**
	11nm,0.9s						
ZALV	**Zalesovo Beam**	**17.84**	**24**	P	**P**	**05 17 05.0**	**-1.7**
	0.4nm,0.3s,baz=218,slow=11,SNR=3.2						
ARU	**Arti**	**20.41**	**337**	P	**P**	**05 17 35.3**	**+0.6**
	2.1nm,0.2s,baz=158,slow=9.4,SNR=3.5						
SONM	**Songino Array**	**26.39**	**58**	P	**P**	**05 18 32.7**	**+0.1**
	0.9nm,0.9s,baz=260,slow=8.6,SNR=6.6						
FINES	**FINESS Array B**	**36.72**	**324**	P	**P**	**05 20 06.5**	**+4.0**
	1.4nm,0.7s,baz=101,slow=9.9,SNR=5.5						
NOA	**NORSAR Array B**	**43.71**	**322**	P	**P**	**05 21 02.5**	**+2.3**
	0.5nm,0.6s,baz=93,slow=7.8,SNR=2.1						
TORD	**Torodi Ar. Bea**	**66.94**	**269**	P	**P**	**05 23 48.4**	**+1.1**
	0.5nm,0.6s,baz=54,slow=4.8,SNR=4.6						
ILAR	**Eielson Array**	**72.77**	**17**	P	**P**	**05 24 23.3**	**+1.1**
	0.6nm,0.9s,baz=316,slow=5.9,SNR=6.8						
YKA	**Yellowknife Ar**	**79.44**	**3**	P	**P**	**05 25 02.4**	**+2.5**
	0.4nm,0.7s,baz=347,slow=5.7,SNR=2.8						
WRA	**Warramunga Arr**	**81.93**	**123**	P	**P**	**05 25 12.7**	**-1.2**
	0.7nm,0.7s,baz=317,slow=4.0,SNR=3.8						
ASAR	**Alice Springs**	**84.31**	**126**	P	**P**	**05 25 25.4**	**-0.6**
	0.3nm,0.7s,baz=310,slow=5.7,SNR=2.5						

NOU 17 05:27:21.3, 13.°77S×167.°09E, h173^{km}**, MLv4.7**/8**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**1.67**	**176**	P	Pn	05 27 54.3	-0.1
DVP	**Devils Point**	**4.07**	**165**	P	Pn	05 28 23.5	+0.4
YATNC	**Mamie plateau,**	**8.25**	**181**	P	Pn	05 29 17.2	-0.7
DZM	**Mont Dzumac**	**8.28**	**184**	P	Pn	05 29 19.1	+0.7

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*MAN **17** 05:33:32.8, 5.°15N×126.°92E, h39^{km}, mb4.5, ML3.4, MS3.2*

*IDC **17** 05:33:40.5±7.8, 6.°17N×127.°33E, h284^{km}±76^{km}, mb3.5/11, mb1 3.5/11, mb1mx3.2/51, mbtmp4.1/11, Error ellipse: s-maj=100.9km s-min=14.9km az=69.0*

ISC 17 05:33:35.1±0.8**, 5.°37N**±0.°10×**125.°1E**±0.°3**, h200**^{km}**, n13, σ3.^{s}26**/16**, mb4.0**/11**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**1.63**	**1**	⇓*e*P	**Pn**	**05 34 12.8**	**+2.7**
KCP				*e*S	**Sn**	**05 34 44.0**	**+6.5**
DMPH	**Davao City--Mi**	**1.76**	**15**	⇑*i*P	**Pn**	**05 34 12.6**	**+1.4**
DMPH				*i* S	**Sn**	**05 34 39.2**	**-0.3**
FITZ	**Fitzroy Crossi**	**23.32**	**179**	P	**P**	**05 38 31.0**	**+5.6**
	1.6nm,1.0s,baz=3.5,slow=11,SNR=1.2						
WRA	**Warramunga Arr**	**26.76**	**160**	P	**P**	**05 38 55.0**	**-1.5**
	0.2nm,0.5s,baz=350,slow=14,SNR=1.6						
ASAR	**Alice Springs**	**30.12**	**164**	P	**P**	**05 39 26.9**	**+0.6**
	0.3nm,0.5s,baz=340,slow=7.4,SNR=5.3						
ASAR				PcP	**PcP**	**05 42 19.1**	**-3.8**
	0.3nm,0.5s,baz=352,slow=2.6,SNR=6.3						
SONM	**Songino Array**	**45.23**	**342**	P	**P**	**05 41 29.9**	**-2.7**
	0.4nm,0.5s,baz=157,slow=8.7,SNR=4.3						
MKAR	**Makanchi Array**	**55.27**	**325**	P	**P**	**05 42 49.7**	**+2.0**
	2.7nm,0.5s,baz=115,slow=7.7,SNR=46						
ZALV	**Zalesovo Beam**	**58.38**	**333**	P	**P**	**05 43 08.0**	**-1.4**
	0.9nm,0.3s,baz=135,slow=6.5,SNR=3.8						
KURBB	**Kurchatov Arra**	**59.47**	**328**	P	**P**	**05 43 17.7**	**+0.8**
	3.5nm,0.7s,baz=125,slow=6.3,SNR=33						
BVAR	**Borovoye Array**	**65.05**	**327**	P	**P**	**05 43 54.7**	**+0.8**
	2.0nm,0.5s,baz=161,slow=9.4,SNR=11						
ARU	**Arti**	**72.67**	**328**	P	**P**	**05 44 40.1**	**-0.8**
	2.8nm,0.2s,baz=111,slow=6.4,SNR=4.6						
ARCES	**ARCESS Array B**	**88.35**	**340**	P	**P**	**05 45 59.9**	**-3.9**
	7.0nm,1.0s,baz=62,slow=3.5,SNR=5.4						
FINES	**FINESS Array B**	**89.61**	**332**	P	**P**	**05 46 07.0**	**-2.8**
	2.1nm,0.9s,baz=38,slow=9.6,SNR=4.5						

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*DJA **17** 05:38:47.8±0.5, 8°S±4°×12°9E±°, h164^{km}±13^{km}, M4.2/7, mb4.4/5, mB4.8/5, MLv4.3/7, Mw(mB)4.0/5*

*IDC **17** 05:38:51.2±6.8, 7.°85S×129.°05E, h179^{km}±72^{km}, mb3.1/2, mb1 3.6/6, mb1mx3.3/32, mbtmp4.0/6, MS2.6/1, Ms1 2.6/1, ms1mx2.3/6, Error ellipse: s-maj=67.4km s-min=22.1km az=42.0*

ISC 17 05:38:48.1±0.8**, 7.°63S**±0.°07×**129.°20E**±0.°06**, h131**^{km}**, n22, σ2.^{s}93**/25**, mb3.5**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.10**	**100**	P	**Pn**	**05 39 24.2**	**+0.8**
SAUI				S	**Sn**	**05 39 53.9**	**+3.4**
MSAI	**Masohi**	**4.27**	**356**	P	**Pn**	**05 39 51.8**	**+0.3**
DRS	**Darwin Rock St**	**5.05**	**161**	P	**Pn**	**05 40 04.2**	**+2.3**
SOEI	**Soe**	**5.32**	**246**	P	**Pn**	**05 40 06.6**	**+1.0**
	0.6nm1µm85nm,0.6s						
MTN	**Manton Dam**	**5.51**	**160**	P	**Pn**	**05 40 10.2**	**+2.0**
FAKI	**Fak Fak**	**5.58**	**33**	P	**Pn**	**05 40 07.0**	**-2.0**
	0.1nm567nm30nm,0.7s						
BATI	**Baumata**	**6.04**	**245**	P	**Pn**	**05 40 16.9**	**+1.7**
	22nm,0.3s,baz=356,slow=22,SNR=6.6						
BATI				S	**Sn**	**05 41 22.5**	**-0.8**
	28nm,0.3s,baz=77,slow=18,SNR=10						
BATI	**Baumata**	**6.04**	**245**	P	**Pn**	**05 40 16.1**	**+0.8**
	0.3nm811nm36nm,0.4s						
EDFI	**Ende, Flores**	**7.52**	**261**	P	**Pn**	**05 40 35.7**	**+0.5**
	0.0nm4.7nm,1.0s						
KNRA	**Kununurra**	**8.01**	**183**	P	**Pn**	**05 40 42.5**	**+0.8**
FITZ	**Fitzroy Crossi**	**10.96**	**198**	P	**Pn**	**05 41 20.1**	**-1.3**
	baz=27,slow=14						
FITZ				S	**Sn**	**05 43 19.3**	**-3.0**
	baz=270,slow=20						
WRAB	**Tennant Creek**	**13.21**	**158**	P	**Pn**	**05 41 49.3**	**-1.4**
WRA	**Warramunga Arr**	**13.21**	**158**	P	**Pn**	**05 41 48.6**	**-2.1**
	0.9nm,0.3s,baz=328,slow=14,SNR=29						
WRA				S	**Sn**	**05 44 12.0**	**-4.6**
	3.3nm,0.3s,baz=326,slow=22,SNR=21						
MBWA	**Marble Bar**	**16.27**	**213**	P	**P**	**05 42 34.7**	**+5.0**
PSA00	**Pilbara Seismi**	**16.54**	**212**	P	**P**	**05 42 38.1**	**+5.3**
ASAR	**Alice Springs**	**16.57**	**165**	P	**P**	**05 42 33.0**	**-0.2**
	0.4nm,0.3s,baz=339,slow=14,SNR=25						
ASAR				S	**Sn**	**05 45 30.5**	**-7.0**
	0.6nm,0.3s,baz=349,slow=26,SNR=4.8						
WRKA	**Warakurna**	**17.33**	**183**	P	**Pn**	**05 42 43.1**	**+1.0**
OOD	**Oodnadatta**	**20.97**	**164**	P	Pn	05 43 21.9	-3.1
LCRK	**Leigh Creek**	**24.22**	**161**	P	**P**	**05 43 55.8**	**+3.1**
	6.7nm,1.2s						
KSRS	**Korea Array**	**44.87**	**359**	LR	LR	06 06 01.0	
	comp=Z,6.7nm,20.2s,baz=190,slow=36						
MKAR	**Makanchi Array**	**68.33**	**327**	P	**P**	**05 49 33.0**	**-2.2**
	0.3nm,0.4s,baz=121,slow=8.9,SNR=2.6						
KURBB	**Kurchatov Arra**	**72.64**	**329**	P	**P**	**05 50 00.1**	**-1.2**
	0.3nm,0.5s,baz=126,slow=4.8,SNR=4.3						

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*TUL **17** 05:56:11.4±1.5, 35.°99N±0.°01×97.°23W±0.°01, h6^{km}±6^{km}, ML3.1, mb_Lg2.7/41(NEIC), Error ellipse: s-maj=1.9km s-min=1.5km az=148.0*

*ANF **17** 05:56:11.6±0.3, 36.°01N×97.°22W, h6^{km}, ML3.2/8, Error ellipse: s-maj=3.4km s-min=2.9km az=146.0*

*NEIC **17** 05:56:11.6±0.9, 36.°01N±0.°01×97.°238W±0.°007, h5^{km}±7^{km}, Error ellipse: s-maj=1.7km s-min=0.8km az=190.0*

ISC 17 05:56:11.7±1.1**, 36.°01N**±0.°02×**97.°24W**±0.°02**, h5**^{km}±10^{km}**, n68, σ0.^{s}69**/69**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.27**	**219**	Pg	**Pg**	**05 56 16.9**	**-0.1**
OK029				Sg	**Sg**	**05 56 21.0**	**+0.3**
OK031	**S. Brethren Rd**	**0.33**	**100**	Pg	**Pg**	**05 56 18.2**	**0.0**
OK031				Sg	**Sg**	**05 56 22.9**	**+0.4**
OK030	**Cody Creek RV**	**0.38**	**102**		**Pg**	**05 56 19.1**	**0.0**
OK030				Sg	**Sg**	**05 56 24.3**	**+0.2**
OK034	**N. Norfolk Rd.**	**0.43**	**90**	Pg	**Pg**	**05 56 19.9**	**-0.1**
OK025	**Westminster Rd**	**0.43**	**190**	Pg	**Pg**	**05 56 19.9**	**-0.2**
OK025				Sg	**Sg**	**05 56 26.1**	**+0.3**
BCOK	**Bluff Creek, N**	**0.46**	**220**	Pg	**Pg**	**05 56 20.4**	**-0.2**
BCOK				Sg	**Sg**	**05 56 27.0**	**+0.4**
QUOK	**Quay**	**0.46**	**69**	Pg	**Pg**	**05 56 20.6**	**0.0**
QUOK				Sg	**Sg**	**05 56 27.0**	**+0.3**
OKCFA	**Oklahoma City**	**0.62**	**196**		**Pg**	**05 56 23.2**	**-0.3**
OKCFA				Sg	**Sg**	**05 56 31.9**	**+0.3**
OKCFA	**Oklahoma City**	**0.62**	**196**	P	**Pg**	**05 56 23.2**	**-0.3**
	baz=16						
OKCFA				S	**Sg**	**05 56 31.8**	**+0.3**
	baz=16						
OKCSW	**OKLAHOMA CITY**	**0.62**	**195**	Pg	**Pg**	**05 56 23.4**	**-0.3**
OKCSW				Sg	**Sg**	**05 56 32.2**	**+0.4**
BLOK	**Blackwell**	**0.75**	**2**	Pg	**Pg**	**05 56 26.0**	**-0.1**
FNO	**Franklin**	**0.76**	**190**	IAmb_Lg		05 56 35.5	
	comp=Z,64nm,0.9s						
CROK	**Carrier**	**0.78**	**310**	Pg	**Pg**	**05 56 26.6**	**-0.1**
CROK				Sg	**Sg**	**05 56 37.6**	**+0.8**
W35A	**Tecumseh**	**0.91**	**161**	Pg	**Pg**	**05 56 27.9**	**-1.1**
W35A				Sg	**Sg**	**05 56 40.5**	**-0.3**
GC02	**Grant County #**	**0.98**	**330**	Pg	**Pg**	**05 56 30.2**	**-0.3**
KAN13	**South Haven SW**	**1.02**	**349**	Pg	**Pg**	**05 56 30.9**	**-0.3**
T35A	**Sooner Cattle**	**1.08**	**33**		**Pg**	**05 56 31.9**	**-0.5**
T35A				Sg	**Sg**	**05 56 46.5**	**0.0**
T35B	**Sooner Cattle**	**1.08**	**33**	P	**Pg**	**05 56 31.9**	**-0.5**
	baz=213						
T35B				S	**Sg**	**05 56 46.4**	**-0.1**
	baz=213						
OK032	**Salt Plains WL**	**1.11**	**316**	Pg	**Pg**	**05 56 32.5**	**-0.5**
KAN17	**Caldwell West**	**1.11**	**338**		**Pg**	**05 56 32.7**	**-0.4**
KAN09	**Caldwell North**	**1.16**	**345**	Pg	**Pg**	**05 56 33.5**	**-0.5**
TUL1	**Leonard**	**1.18**	**94**	Pn	**Pg**	**05 56 32.9**	**-1.4**
TUL1	**Leonard**	**1.18**	**94**	P	**Pg**	**05 56 32.9**	**-1.4**
	baz=275						
TUL1				S	**Sg**	**05 56 48.7**	**-1.0**
	baz=275						
KAN05	**Bluff City Nor**	**1.21**	**335**		**Pg**	**05 56 33.9**	**-1.0**
KAN01	**Argonia South**	**1.22**	**340**		**Pg**	**05 56 34.5**	**-0.5**
KAN10	**Anthony SW Sta**	**1.31**	**329**		**Pn**	**05 56 36.3**	**-0.4**
KAN06	**Argonia West S**	**1.33**	**338**		**Pn**	**05 56 36.6**	**-0.4**
KAN08	**Anthony NE Sta**	**1.35**	**334**		**Pn**	**05 56 36.9**	**-0.3**
KAN16	**Harper SW Stat**	**1.38**	**332**		**Pn**	**05 56 37.5**	**-0.2**
KAN12	**Harper NE Stat**	**1.42**	**335**		**Pn**	**05 56 38.2**	**0.0**
U32A	**Winter Ranch,**	**1.47**	**285**		**Pn**	**05 56 38.7**	**-0.2**
U32A	**Winter Ranch,**	**1.47**	**285**	P	**Pn**	**05 56 38.5**	**-0.3**
	baz=104						
U32A				S	**Sg**	**05 56 59.1**	**+0.1**
	baz=104						
X34A	**Smith Ranch, M**	**1.49**	**199**		**Pn**	**05 56 39.0**	**0.0**
LOOK	**Love County**	**2.01**	**179**		**Pn**	**05 56 46.9**	**+0.5**
LOOK				IAmb_Lg		05 57 18.4	
	comp=Z,34nm,0.9s						
X37A	**Clayton**	**2.09**	**132**		**Pn**	**05 56 47.9**	**+0.5**
X37A				IAmb_Lg		05 57 20.3	
	comp=Z,39nm,0.7s						
X37A	**Clayton**	**2.09**	**132**	P	**Pn**	**05 56 47.8**	**+0.5**
	baz=313						
U38A	**Gravette**	**2.35**	**79**		**Pn**	**05 56 51.5**	**+0.6**
U38A	**Gravette**	**2.35**	**79**	P	**Pn**	**05 56 51.5**	**+0.6**
	baz=260						
Z35A	**Perchaven, San**	**2.67**	**180**	Pn	**Pn**	**05 56 55.6**	**+0.2**
R32A	**Long Quarter,**	**2.68**	**334**	IAmb_Lg		05 57 44.6	
	comp=Z,21nm,0.9s						
HHAR	**Hobbs**	**2.69**	**83**		**Pn**	**05 56 55.5**	**0.0**
HHAR	**Hobbs**	**2.69**	**83**	P	**Pn**	**05 56 56.0**	**+0.4**
	baz=265						
W39A	**Magazine**	**2.93**	**105**		**Pn**	**05 56 59.2**	**+0.3**
W39A				IAmb_Lg		05 57 48.4	
	comp=Z,16nm,0.8s						
KSU1	**Kansas State U**	**3.13**	**9**	IAmb_Lg		05 57 59.7	
	comp=Z,15nm,0.7s						
KSU1	**Kansas State U**	**3.13**	**9**	P	**Pn**	**05 57 02.2**	**+0.6**
	baz=189						
MIAR	**Mount Ida**	**3.34**	**115**	Pn	**Pn**	**05 57 04.0**	**-0.5**
MIAR				IAmb_Lg		05 57 57.4	
	comp=Z,14nm,1.3s						
MIAR	**Mount Ida**	**3.34**	**115**	P	**Pn**	**05 57 04.9**	**+0.5**
	baz=297						
MIAR				S	**Sn**	**05 57 45.5**	**+1.0**
	baz=297						
S39A	**Bolivar**	**3.56**	**61**	Pn	**Pn**	**05 57 07.2**	**-0.4**
U40A	**Yellville**	**3.57**	**83**		**Pn**	**05 57 06.9**	**-0.8**
AMTX	**Amarillo**	**3.79**	**254**	Pn	**Pn**	**05 57 10.5**	**-0.4**
X40A	**Basin Creek Fa**	**3.91**	**112**	IAmb_Lg		05 58 19.7	
	comp=Z,27nm,0.8s						
ABTX	**Abilene, Hawle**	**3.92**	**211**	IAmb_Lg		05 58 20.0	
	comp=Z,14nm,0.9s						
WHAR	**Wooly Hollow**	**4.10**	**99**	Pn	**Pn**	**05 57 16.5**	**+1.6**
FCAR	**Ozark Folk Cen**	**4.15**	**90**		**Pn**	**05 57 15.1**	**-0.6**
W41B	**Gary Mavity, V**	**4.16**	**100**	S	**Sn**	**05 58 04.6**	**-0.1**
	baz=283						
MGMO	**Mountain Grove**	**4.16**	**73**	Pn	**Pn**	**05 57 19.1**	**+3.3**
MGMO				IAmb_Lg		05 58 24.8	
	comp=Z,14nm,0.8s						
237A	**Washetta, Mont**	**4.17**	**163**	Pn	**Pn**	**05 57 15.2**	**-0.8**
R40A	**Maddies Statio**	**4.58**	**59**	Pn	**Pn**	**05 57 21.8**	**+0.2**
R40A				IAmb_Lg		05 58 48.4	
	comp=Z,17nm,0.7s						
P38A	**Dawn**	**4.65**	**38**	IAmb_Lg		05 58 52.1	
	comp=Z,12nm,0.8s						
CCM	**Cathedral Cave**	**5.21**	**65**	IAmb_Lg		05 58 56.7	
	comp=Z,8.6nm,0.8s						
435B	**Jarrell**	**5.22**	**183**	IAmb_Lg		05 59 04.7	
	comp=Z,18nm,1.0s						
KSCO	**Kaye Shedlock'**	**5.22**	**307**	IAmb_Lg		05 59 11.7	
	comp=Z,10nm,0.8s						
HBAR	**Harrisburg**	**5.37**	**93**	IAmb_Lg		05 59 12.0	
	comp=Z,16nm,0.8s						
P40A	**Paris**	**5.41**	**48**	IAmb_Lg		05 59 10.5	
	comp=Z,11nm,0.8s						
BGNE	**Belgrade**	**5.44**	**353**	IAmb_Lg		05 59 10.8	
	comp=Z,20nm,0.8s						
T25A	**Trinidad**	**5.88**	**283**	IAmb_Lg		05 59 22.8	
	comp=Z,14nm,1.0s						
JCT	**Junction City**	**5.92**	**202**	IAmb_Lg		05 59 28.6	
	comp=Z,9.9nm,0.8s						
ISCO	**Idaho Springs**	**7.62**	**302**	IAmb_Lg		06 00 21.2	
	comp=Z,5.8nm,1.0s						

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*IDC **17** 06:00:29.8±0.8, 40.°30N×116.°00W, h0^{km}, mb1 3.7/4, mb1mx3.1/44, mbtmp3.2/4, ML3.4/4, Error ellipse: s-maj=24.7km s-min=4.0km az=138.0*

*NEIC **17** 06:00:30.6±1.1, 40.°36N±0.°05×116.°15W±0.°02, h12^{km}±8^{km}, Error ellipse: s-maj=7.8km s-min=1.7km az=182.0*

*REN **17** 06:00:30.1±1.3, 40.°37N±0.°04×116.°10W±0.°06, h0^{km}±7^{km}, ML3.2/5, ML3.3/60(NEIC), Error ellipse: s-maj=7.2km s-min=5.3km az=49.0*

*ANF **17** 06:00:30.9±0.6, 40.°39N×116.°06W, h5^{km}, ML3.9/15, Error ellipse: s-maj=4.0km s-min=3.0km az=164.0*

ISC 17 06:00:28.4±0.7**, 40.°57N**±0.°03×**116.°08W**±0.°03**, h10**^{km}**, n57, σ2.^{s}29**/68**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELK	**Elko**	**0.66**	**74**	Pg	**Pn**	**06 00 43.4**	**-0.7**
	32nm,0.3s,baz=263,slow=15,SNR=218						
ELK				Lg	Lg	06 00 53.1	
	49nm,0.3s,baz=144,slow=17,SNR=14						
ELK	**Elko**	**0.66**	**74**		**Pn**	**06 00 43.1**	**-1.0**
BMN	**Battle Mountai**	**0.89**	**261**		**Pg**	**06 00 46.4**	**+0.9**
BMN				IAML		06 01 00.9	
	comp=N,1µm,0.6s						
BMN				IAML		06 01 01.1	
	comp=E,1µm,0.4s						
SPR3	**Spring Creek 3**	**2.07**	**139**		**Pn**	**06 01 03.2**	**-0.3**
SPR3				IAML		06 01 34.2	
	comp=N,253nm,0.3s						
SPR3				IAML		06 01 34.5	
	comp=E,231nm,0.5s						
KVN	**Kaiserville**	**2.18**	**226**	Pn	**Pn**	**06 01 03.6**	**-1.2**
R11A	**Troy Canyon, C**	**2.25**	**170**		**Pn**	**06 01 04.4**	**-1.5**
R11A				IAML		06 01 34.0	
	comp=E,276nm,0.2s						
R11A				IAML		06 01 36.9	
	comp=N,204nm,0.4s						
R11A	**Troy Canyon, C**	**2.25**	**170**	P	**Pn**	**06 01 04.0**	**-1.9**
	baz=349						
R11A				S	**Sn**	**06 01 33.0**	**-0.9**
	baz=349						
BGU	**Big Grassy Mou**	**2.34**	**80**		**Pb**	**06 01 10.0**	**-0.8**
BGU				IAML		06 01 46.6	
	comp=N,144nm,1.5s						
BGU				IAML		06 01 47.5	
	comp=E,151nm,0.9s						
DUG	**Dugway, Tooele**	**2.52**	**98**	Pn	**Pb**	**06 01 12.0**	**-1.9**
DUG				IAML		06 01 53.7	
	comp=E,197nm,0.7s						
DUG				IAML		06 01 59.8	
	comp=E,162nm,0.8s						
DUG	**Dugway, Tooele**	**2.52**	**98**	P	**Pb**	**06 01 11.6**	**-2.3**
	baz=275						
DUG				Sb	**Sg**	**06 01 48.9**	**-0.5**
	baz=275						
TPH	**Tonopah**	**2.65**	**200**		**Pn**	**06 01 10.0**	**-1.3**
PSUT	**Pine Spring**	**2.66**	**139**		**Pn**	**06 01 12.4**	**+0.8**
NV11	**Mina Array Sit**	**2.67**	**218**		**Pn**	**06 01 10.8**	**-0.9**
WVOR	**Wild Horse Val**	**2.68**	**315**		**Pb**	**06 01 16.2**	**-0.3**
WVOR				IAML		06 01 59.0	
	comp=E,132nm,0.9s						
WVOR				IAML		06 01 59.9	
	comp=E,116nm,0.8s						
PAHR	**Pah Rah Range**	**2.68**	**252**		**Pn**	**06 01 11.3**	**-0.5**
PAHR				IAML		06 01 54.7	
	comp=E,127nm,0.8s						
RYN	**Ryan**	**2.71**	**225**		**Pn**	**06 01 11.3**	**-0.9**
RYN				IAML		06 01 55.5	
	comp=E,121nm,0.7s						
RYN				IAML		06 01 57.7	
	comp=N,163nm,0.8s						
NVAR	**Mina Array Bea**	**2.75**	**220**	Pn	**Pn**	**06 01 11.8**	**-0.9**
	comp=N,12nm,0.3s,baz=40,slow=16,SNR=382						
NVAR				Pg	**Pb**	**06 01 18.1**	**+0.4**
	comp=N,32nm,0.3s,baz=43,slow=19,SNR=29						
NVAR				Sn	**Sn**	**06 01 43.5**	**-2.6**
	comp=N,24nm,0.3s,baz=42,slow=15,SNR=2.6						
NVAR				Lg	Lg	06 01 52.4	
	comp=N,31nm,0.3s,baz=22,slow=12,SNR=5.8						
NVAR	**Mina Array Bea**	**2.75**	**220**	Pn	**Pn**	**06 01 11.5**	**-1.2**
HVU	**Hansel Valley**	**2.77**	**63**		**Pb**	**06 01 16.9**	**-1.2**
HVU				IAML		06 02 03.8	
	comp=N,152nm,0.4s						
HVU				IAML		06 02 06.3	
	comp=E,142nm,0.7s						
SPUT	**South Promonto**	**2.84**	**74**	Pn	**Pb**	**06 01 17.7**	**-1.7**
SPUT				IAML		06 02 04.6	
	comp=E,94nm,0.6s						
SPUT				IAML		06 02 08.0	
	comp=N,98nm,0.6s						
YERR	**Yerington**	**2.91**	**238**		**Pn**	**06 01 13.9**	**-1.1**
YERR				IAML		06 02 01.5	
	comp=N,95nm,0.4s						
LHV	**Little Huntoon**	**2.98**	**220**		**Pn**	**06 01 15.2**	**-0.6**
VCNR	**Virginia City**	**3.03**	**246**		**Pn**	**06 01 16.6**	**0.0**
VCNR				IAML		06 02 05.5	
	comp=E,98nm,0.8s						
VCNR				IAML		06 02 08.2	
	comp=N,100nm,0.6s						
PNTR	**Pine Nut**	**3.09**	**243**		**Pn**	**06 01 17.4**	**0.0**
HLID	**Hailey**	**3.23**	**22**	P	**Pb**	**06 01 24.5**	**-1.6**
	baz=202						
HLID				Sb	**Sg**	**06 02 15.7**	**+3.3**
	baz=202						
PRN	**Pahroc Range**	**3.26**	**165**		**Pn**	**06 01 19.5**	**-0.2**
MPK	**Martis Peak**	**3.30**	**249**		**Pn**	**06 01 20.7**	**+0.4**
MPK				IAML		06 02 21.4	
	comp=E,68nm,0.9s						
TCRU	**Three Creeks R**	**3.42**	**124**		**Pn**	**06 01 23.2**	**+1.1**
TCRU				IAML		06 02 21.1	
	comp=E,89nm,0.8s						
EMB	**Emerald Bay**	**3.49**	**244**		**Pn**	**06 01 23.2**	**+0.2**
RUBR	**Rubicon Trail**	**3.49**	**246**		**Pn**	**06 01 23.5**	**+0.5**
LCH	**Last Change Ra**	**3.55**	**201**	Pn	**Pn**	**06 01 23.3**	**-0.4**
TPNV	**Topopah Spring**	**3.62**	**182**		**Pn**	**06 01 24.0**	**-0.7**
TPNV				IAML		06 02 22.4	
	comp=E,90nm,0.4s						
TPNV	**Topopah Spring**	**3.62**	**182**	P	**Pn**	**06 01 23.5**	**-1.2**
	baz=1.9						
TPNV				Sb	**Sb**	**06 02 17.1**	**+0.4**
	baz=1.9						
MLAC	**Mammoth, Mammo**	**3.64**	**217**	S	**Sn**	**06 02 07.9**	**-0.2**
	baz=37						
GRAC	**Grapevine Rang**	**3.71**	**196**	Pb	**Pb**	**06 01 34.6**	**+0.6**
	baz=16						
GRAC				Sb	**Sb**	**06 02 20.4**	**+1.3**
	baz=16						
TIN	**Tinemaha, Big**	**3.89**	**206**	Sb	**Sb**	**06 02 25.7**	**+1.2**
	baz=26						
FURC	**Furnace Creek,**	**4.14**	**189**	Sb	**Sb**	**06 02 32.9**	**+1.4**
	baz=8.4						
O03E	**Paynes Creek**	**4.38**	**268**	P	**Pn**	**06 01 36.7**	**+1.6**
	baz=87						
O03E				Sb	**Sg**	**06 02 46.3**	**-2.7**
	baz=87						
CWC	**Cottonwood Cre**	**4.41**	**201**	Sb	**Sb**	**06 02 41.2**	**+1.7**
	baz=21						
MPMC	**Manual Prospec**	**4.64**	**194**	P	**Pn**	**06 01 38.2**	**-0.6**
	baz=14						
MPMC				Sb	**Sb**	**06 02 47.4**	**+1.4**
	baz=14						
SHOC	**Shoshone, Teco**	**4.67**	**182**	Sb	**Sb**	**06 02 48.0**	**+1.4**
	baz=1.7						
TUQ	**Turquoise Moun**	**5.13**	**179**	Sb	**Sb**	**06 03 01.6**	**+1.5**
	baz=358						
YBH	**Yreka Blue Hor**	**5.14**	**285**	Lg	Lg	06 03 14.6	
	comp=E,0.4nm,0.3s,baz=114,slow=4.6,SNR=3.6						
LRMC	**Laurel Mtn Rad**	**5.24**	**195**	Sb	**Sb**	**06 03 07.1**	**+3.9**
	baz=14						
GSC	**Goldstone, Bar**	**5.29**	**186**	Sb	**Sb**	**06 03 07.8**	**+3.1**
	baz=6.0						
BW06	**Boulder Array**	**5.35**	**64**	Sb	**Sg**	**06 03 16.9**	**-3.3**
	baz=246						
PDAR	**Pinedale Array**	**5.35**	**64**	Pn	Pn	06 01 53.9	+5.3
	comp=E,0.3nm,0.3s,baz=242,slow=13,SNR=12						
PDAR				Sn	**Sn**	**06 02 53.2**	**+2.8**
	comp=E,0.2nm,0.3s,baz=234,slow=15,SNR=1.3						
PDAR				Lg	Lg	06 03 18.9	
	comp=E,0.9nm,0.3s,baz=232,slow=26,SNR=8.4						
HEC	**Hector,Ludlow**	**5.74**	**182**	Pb	**Pb**	**06 02 09.9**	**+1.2**

	baz=1.8						
HEC				Sb	**Sb**	**06 03 22.0**	**+4.5**
	baz=1.8						
GMRC	**Granite Mounta**	**5.79**	**177**	Pb	**Pb**	**06 02 10.6**	**+1.1**
	baz=356						
GMRC				Sb	**Sb**	**06 03 22.2**	**+3.3**
	baz=356						
EDW2	**Edwards Air Fo**	**5.88**	**196**	Sb	**Sb**	**06 03 26.6**	**+5.0**
	baz=15						
O20A	**White River Ci**	**6.00**	**92**	Sb	**Sg**	**06 03 33.8**	**-7.3**
	baz=275						
WUAZ	**Wupatki**	**6.26**	**142**	Pb	**Pb**	**06 02 17.6**	**0.0**
	baz=324						
WUAZ				Sb	**Sb**	**06 03 38.2**	**+5.6**
	baz=324						
MSO	**Missoula**	**6.44**	**13**	Sb	**Sg**	**06 03 54.3**	**-0.9**
	baz=194						
IRM	**Iron Mountain**	**6.45**	**173**	Sb	**Sb**	**06 03 41.4**	**+3.6**
	baz=353						
MVCO	**Mesa Verde**	**6.80**	**117**	Sb	**Sb**	**06 03 55.4**	**+7.3**
	baz=300						
PFO	**Pinyon Flats O**	**6.95**	**183**	Pn	**Pn**	**06 02 10.2**	**-0.3**
	comp=E,0.3nm,0.3s,baz=26,slow=12,SNR=4.1						
PFO				Lg	Lg	06 03 59.9	
	comp=E,0.4nm,0.3s,baz=140,slow=11,SNR=2.3						
TXAR	**Lajitas Array**	**15.12**	**134**	Pn	**P**	**06 04 06.2**	**-1.2**
	comp=E,0.0nm,0.3s,baz=326,slow=8.0,SNR=3.3						

IDC 17 06:10:43.8±0.7, 40°.48N×116°.18W, h0^{km}, mb1 3.5/5, mb1mx3.3/38, mbtmp3.1/5, ML3.6/4, Error ellipse: s-maj=12.6km s-min=4.3km az=150.0
REN 17 06:10:44.7±0.8, 40°.35N±0°.06×116°.07W±0°.05, h5^{km}±7^{km}, ML3.4/5, ML3.4/60(NEIC), Error ellipse: s-maj=9.1km s-min=5.4km az=175.0
ANF 17 06:10:45.3±1.2, 40°.32N×116°.01W, h5^{km}, ML3.8/12, Error ellipse: s-maj=17.4km s-min=9.6km az=113.0
NEIC 17 06:10:45.3±0.6, 40°.36N±0°.07×116°.10W±0°.05, h11^{km}±8^{km}, Error ellipse: s-maj=9.7km s-min=5.6km az=170.0
ISC 17 06:10:44.8±1.4, **40°.35N**±0°.04×**116°.08W**±0°.03, **h5**^{km}±12^{km}, **n45, σ0^{s}86**/56, **Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELK	**Elko**	**0.75**	**58**	Pg	**Pg**	**06 10 58.4**	**-0.8**
	58nm,0.3s,baz=234,slow=17,SNR=362						
ELK				Lg	Lg	06 11 08.5	
	80nm,0.3s,baz=158,slow=19,SNR=9.7						
ELK	**Elko**	**0.75**	**58**		**Pg**	**06 10 58.8**	**-0.4**
ELK				IAML		06 11 13.9	
	1μm,0.2s						
BMN	**Battle Mountai**	**0.88**	**276**		**Pg**	**06 11 01.4**	**-0.2**
BMN				Sg	**Sg**	**06 11 13.7**	**+0.6**
SPR3	**Spring Creek 3**	**1.91**	**135**		**Pn**	**06 11 18.3**	**0.0**
SPR3				IAML		06 11 51.0	
	comp=N,273nm,0.4s						
KVN	**Kaiserville**	**2.03**	**231**		**Pn**	**06 11 19.2**	**-0.7**
KVN				Sn	**Sn**	**06 11 46.1**	**+0.3**
KVN				IAML		06 11 46.4	
	comp=E,231nm,0.4s						
KVN				IAML		06 11 46.5	
	comp=N,364nm,0.2s						
R11A	**Troy Canyon, C**	**2.04**	**169**		**Pn**	**06 11 19.1**	**-0.8**
R11A				IAML		06 11 49.3	
	comp=E,358nm,0.2s						
R11A				IAML		06 11 53.2	
	comp=N,218nm,0.4s						
R11A	**Troy Canyon, C**	**2.04**	**169**	P	**Pn**	**06 11 19.7**	**-0.2**
	baz=350						
R11A				S	**Sn**	**06 11 46.4**	**+0.5**
	baz=350						
BGU	**Big Grassy Mou**	**2.39**	**75**		**Pn**	**06 11 25.2**	**+0.4**
BGU				IAML		06 12 02.5	
	comp=N,169nm,0.6s						
BGU				IAML		06 12 02.8	
	comp=E,184nm,0.7s						
TPH	**Tonopah**	**2.44**	**202**		**Pn**	**06 11 25.1**	**-0.5**
DUG	**Dugway, Tooele**	**2.50**	**93**		**Pn**	**06 11 26.4**	**+0.1**
DUG				IAML		06 12 09.0	
	comp=E,189nm,0.7s						
DUG				IAML		06 12 15.2	
	comp=E,165nm,0.8s						
DUG	**Dugway, Tooele**	**2.50**	**93**	P	**Pn**	**06 11 26.6**	**+0.3**
	baz=275						
DUG				S	**Sn**	**06 11 57.3**	**0.0**
	baz=275						
NV11	**Mina Array Sit**	**2.50**	**221**	Pn	**Pn**	**06 11 25.9**	**-0.4**
RYN	**Ryan**	**2.56**	**228**		**Pn**	**06 11 26.6**	**-0.5**
RYN				IAML		06 12 08.9	
	comp=N,217nm,0.3s						
RYN				IAML		06 12 10.7	
	comp=E,162nm,0.7s						
NVAR	**Mina Array Bea**	**2.58**	**223**	Pn	**Pn**	**06 11 26.9**	**-0.6**
	comp=E,18nm,0.3s,baz=40,slow=12,SNR=465						
NVAR				Pg	**Pb**	**06 11 33.1**	**+1.4**
	comp=E,40nm,0.3s,baz=40,slow=17,SNR=50						
NVAR				Sn	**Sn**	**06 11 58.3**	**-1.1**
	comp=E,23nm,0.3s,baz=42,slow=15,SNR=5.6						
NVAR				Lg	Lg	06 12 08.6	
	comp=E,42nm,0.3s,baz=33,slow=13,SNR=2.3						
NVAR	**Mina Array Bea**	**2.58**	**223**	Pn	**Pn**	**06 11 26.7**	**-0.8**
PAHR	**Pah Rah Range**	**2.62**	**257**		**Pn**	**06 11 27.1**	**-0.9**
PAHR				IAML		06 12 10.0	
	comp=E,146nm,0.7s						
YERR	**Yerington**	**2.80**	**242**		**Pn**	**06 11 29.7**	**-0.7**
YERR				IAML		06 12 16.7	
	comp=N,149nm,0.4s						
LHV	**Little Huntoon**	**2.82**	**223**		**Pn**	**06 11 30.4**	**-0.1**
HVU	**Hansel Valley**	**2.88**	**59**		**Pn**	**06 11 31.9**	**+0.5**
HVU				IAML		06 12 22.3	
	comp=E,174nm,0.6s						
SPUT	**South Promonto**	**2.91**	**70**		**Pn**	**06 11 31.7**	**-0.3**
SPUT				IAML		06 12 18.4	
	comp=N,160nm,0.3s						
SPUT				IAML		06 12 19.9	
	comp=E,107nm,0.6s						
VCNR	**Virginia City**	**2.95**	**250**		**Pn**	**06 11 31.9**	**-0.6**
VCNR				IAML		06 12 20.7	
	comp=E,134nm,0.8s						
VCNR				IAML		06 12 21.4	
	comp=N,156nm,0.4s						
PNTR	**Pine Nut**	**3.00**	**246**		**Pn**	**06 11 32.5**	**-0.6**
PNTR				IAML		06 12 22.9	
	comp=E,174nm,0.8s						
PRN	**Pahroc Range**	**3.05**	**164**		**Pn**	**06 11 33.8**	**0.0**
MPK	**Martis Peak**	**3.22**	**252**		**Pn**	**06 11 36.0**	**-0.3**
MPK				IAML		06 12 36.6	
	comp=E,76nm,1.0s						
LCH	**Last Change Ra**	**3.35**	**202**		**Pn**	**06 11 38.3**	**+0.4**
EMB	**Emerald Bay**	**3.40**	**247**		**Pn**	**06 11 38.3**	**-0.4**
TPNV	**Topopah Spring**	**3.40**	**182**	P	**Pn**	**06 11 38.8**	**+0.1**
	baz=2.3						
TPNV				S	**Sn**	**06 12 19.5**	**0.0**
	baz=2.3						
RUBR	**Rubicon Trail**	**3.40**	**249**		**Pn**	**06 11 38.4**	**-0.3**
HLID	**Hailey**	**3.44**	**21**	P	**Pn**	**06 11 39.6**	**+0.3**
	baz=202						
HLID				S	**Sn**	**06 12 22.1**	**+1.7**
	baz=202						
MLAC	**Mammoth, Mammo**	**3.47**	**219**	P	**Pn**	**06 11 39.9**	**+0.3**
	baz=38						
MLAC				S	**Sn**	**06 12 22.5**	**+1.3**
	baz=38						
GRAC	**Grapevine Rang**	**3.50**	**197**	P	**Pn**	**06 11 41.1**	**+1.2**
	baz=16						
GRAC				S	**Sn**	**06 12 23.2**	**+1.5**
	baz=16						
TIN	**Tinemaha, Big**	**3.70**	**208**	P	**Pn**	**06 11 43.3**	**+0.6**
	baz=26						
SHPR	**Sheep Range**	**3.91**	**169**	Pn	**Pn**	**06 11 45.3**	**-0.3**
FURC	**Furnace Creek,**	**3.93**	**189**	P	**Pn**	**06 11 46.7**	**+1.0**
	baz=8.9						
LCMT	**Little Creek M**	**4.00**	**145**		**Pn**	**06 11 46.6**	**-0.4**
LCMT				IAML		06 12 56.8	
	comp=E,46nm,0.4s						
LCMT				IAML		06 12 56.8	
	comp=N,46nm,0.5s						
CMB	**Columbia Colle**	**4.07**	**237**		**Pn**	**06 11 47.4**	**-0.4**
GWY	**Greenwater Val**	**4.19**	**187**		**Pn**	**06 11 49.9**	**+0.5**
CWC	**Cottonwood Cre**	**4.21**	**203**	P	**Pn**	**06 11 50.6**	**+0.8**
	baz=21						
CWC				S	**Sn**	**06 12 40.5**	**+1.0**
	baz=21						
MPMC	**Manual Prospec**	**4.43**	**195**	P	**Pn**	**06 11 53.4**	**+0.5**
	baz=14						
SHOC	**Shoshone, Teco**	**4.45**	**182**	P	**Pn**	**06 11 54.3**	**+1.3**
	baz=2.0						
M04C	**Macdoel**	**4.58**	**290**	P	**Pn**	**06 11 57.1**	**+2.2**
	baz=106						
YBH	**Yreka Blue Hor**	**5.20**	**288**	Pn	**Pn**	**06 12 02.4**	**-1.0**
	comp=N,0.1nm,0.3s,baz=194,slow=17,SNR=2.1						
YBH				Lg	Lg	06 13 26.0	
	comp=N,0.1nm,0.3s,baz=214,slow=12,SNR=1.7						
PDAR	**Pinedale Array**	**5.45**	**62**	Pn	**Pn**	**06 12 08.4**	**+1.5**
	comp=N,0.4nm,0.3s,baz=246,slow=13,SNR=13						
PDAR				Lg	Lg	06 13 33.9	
	comp=N,1.1nm,0.3s,baz=231,slow=28,SNR=7.6						
PFO	**Pinyon Flats O**	**6.74**	**183**	Pn	**Pn**	**06 12 25.6**	**+1.1**
	comp=N,0.3nm,0.3s,baz=3.3,slow=13,SNR=4.9						
PFO				Lg	Lg	06 14 16.4	
	comp=N,0.9nm,0.3s,baz=274,slow=22,SNR=6.9						
TXAR	**Lajitas Array**	**14.97**	**133**	Pn	**P**	**06 14 20.6**	**-2.2**
	comp=N,0.0nm,0.3s,baz=331,slow=7.2,SNR=3.8						

IDC 17 06:25:01.8±2.7, **15°.60S**×**177°.92W, h0**^{km}, **mb3.7**/3, **mb1 4.1**/3, **mb1mx3.5**/26, **mbtmp3.7**/3, **Error ellipse: s-maj=342.4km s-min=34.1km az=158.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.56**	**257**	P	P	06 33 22.7	-1.2
	0.4nm,0.8s,baz=93,slow=8.4,SNR=1.5						
ASAR	**Alice Springs**	**45.91**	**252**	P	P	06 33 27.1	+0.5
	1.9nm,0.3s,baz=84,slow=8.4,SNR=38						
TXAR	**Lajitas Array**	**84.37**	**58**	P	P	06 37 36.5	0.0
	0.2nm,0.8s,baz=218,slow=5.7,SNR=4.1						

IDC 17 06:36:17.8±0.9, 16°.81S×175°.08E, h0^{km}, mb4.0/8, mb1 4.3/9, mb1mx4.1/31, mbtmp4.0/9, ML5.1/1, MS3.8/24, Ms1 3.8/24, ms1mx3.7/36, Error ellipse: s-maj=42.9km s-min=20.1km az=159.0
NEIC 17 06:36:22.3±2.4, 16°.86S±0°.08×175°.29E±0°.06, h42^{km}±8^{km}, mb4.4/12, Error ellipse: s-maj=13.6km s-min=2.1km az=143.0
GCMT 17 06:36:22.3±0.3, 16°.74S±0°.02×175°.13E±0°.02, h20^{km}±1^{km}, MW4.8/73, Moment Tensor Solution. s21,c22; s73,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.27±.10; $M_{\theta\theta}$-0.05±.10; $M_{\phi\phi}$0.31±.08; $M_{r\theta}$0.15±.16; $M_{\theta\phi}$2.07±.08; $M_{\phi r}$-0.17±.15; Best double couple: $M_0$2.09300×10^{16} NP1:ϕ_s267.00000°,δ84.00000°,λ-5.00000°. NP2: ϕ_s358.00000°,δ85.00000°,λ-174.00000°. Principal axes: T 2.2110, Plg1.0000°, Azm132.0000°; N -0.2360, Plg82.0000°, Azm37.0000°; P -1.9750, Plg7.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 17 06:36:22.3±0.6, **16°.95S**±0°.10×**175°.16E**±0°.08, **h35**^{km}, **n58, σ1^{s}47**/33, **mb4.2**/15, **MS3.7**/23, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.87**	**106**	Pn	**Pn**	**06 37 04.9**	**-0.8**
	9.8nm,0.3s,baz=274,slow=16,SNR=48						
MSVF	**Nonsavu**	**2.87**	**106**		**Pn**	**06 37 04.4**	**-1.3**
SANVU	**Saraoutou**	**7.78**	**280**	Pn	**Pn**	**06 38 15.6**	**+2.5**
LIFNC	**LIFOU**	**8.40**	**242**	Pn	**Pn**	**06 38 23.4**	**+1.8**
PINNC	**Pines Island,**	**9.19**	**231**		**Pn**	**06 38 34.8**	**+2.4**
OUENC	**Ouen Island, N**	**9.53**	**234**	Pn	**Pn**	**06 38 38.7**	**+1.6**
DZM	**Mont Dzumac**	**9.66**	**237**	*e*Pn	**Pn**	**06 38 37.8**	**-1.2**
	95nm,1.6s						
DZM				*e*LR	LR	06 40 49.8	
	comp=Z,2μm,25.7s						
DZM	**Mont Dzumac**	**9.66**	**237**	LR	LR	06 41 46.0	
	comp=Z,1μm,21.5s,baz=38,slow=34						
DZM	**Mont Dzumac**	**9.66**	**237**	Pn	**Pn**	**06 38 40.4**	**+1.4**
ONTNC	**Ouen Toro**	**9.78**	**236**	Pn	**Pn**	**06 38 40.9**	**+0.5**
AFI	**Afiamalu**	**12.96**	**78**	LR	LR	06 43 17.9	
	comp=Z,535nm,20.8s,baz=237,slow=32						
RAO	**Raoul Island**	**13.80**	**154**	LR	LR	06 43 50.3	
	comp=Z,841nm,19.3s,baz=357,slow=32						
URZ	**Urewera**	**21.30**	**176**	LR	LR	06 47 24.3	
	comp=Z,242nm,19.3s,baz=31,slow=31						
RAR	**Rarotonga**	**24.06**	**104**	LR	LR	06 50 58.5	
	comp=Z,137nm,18.3s,baz=274,slow=36						
THZ	**Tophouse**	**24.80**	**184**	P	**P**	**06 41 41.5**	**+0.4**
ARMA	**Armidale**	**25.31**	**234**	P	**P**	**06 41 47.1**	**+1.2**
ARMA				IAmb	IAmb	06 41 53.6	
	comp=Z,12nm,1.1s						
LBZ	**Lake Benmore**	**27.67**	**188**	P	**P**	**06 42 08.5**	**+1.6**
LBZ				IAmb	IAmb	06 42 09.2	
	comp=Z,11nm,0.7s						
PPT2	**Papeete2**	**33.66**	**96**	*e*LQ	LQ	06 50 14.2	
	comp=Z,794nm,27.0s						
PPT2				*e*LR	LR	06 51 37.2	
	comp=Z,315nm,24.0s						
PPT	**Papeete**	**33.66**	**96**	LR	LR	06 53 29.6	
	comp=Z,129nm,19.9s,baz=255,slow=31						
TBI	**Tubuai**	**33.76**	**107**	*e*LQ	LQ	06 50 12.5	
	comp=Z,563nm,29.5s						
TBI				*e*LR	LR	06 51 35.6	
	comp=Z,334nm,31.8s						
STKA	**Stephens Creek**	**33.82**	**238**	P	**P**	**06 43 03.2**	**+2.0**
	comp=Z,2.0nm,0.7s,baz=34,slow=9.7,SNR=5.2						
STKA	**Stephens Creek**	**33.82**	**238**	P	**P**	**06 43 00.3**	**-1.0**
H11S2	**WAKE ISLAND Hy**	**36.19**	**346**	T	T	07 21 38.3	
	baz=166,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy**	**36.19**	**346**	T	T	07 21 40.9	
	baz=166,slow=76,SNR=9.9						
H11S1	**WAKE ISLAND Hy**	**36.20**	**346**	T	T	07 21 37.9	
	baz=166,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**37.33**	**347**	T	T	07 23 01.0	
	baz=164,slow=76,SNR=9.1						
H11N3	**WAKE ISLAND Hy**	**37.33**	**347**	T	T	07 23 01.0	
	baz=164,slow=76,SNR=8.5						
H11N2	**WAKE ISLAND Hy**	**37.34**	**347**	T	T	07 23 02.8	
	baz=164,slow=76,SNR=5.1						
BBOO	**Buckleboo**	**38.58**	**238**	P	**P**	**06 43 41.4**	**-0.6**
BBOO				IAmb	IAmb	06 43 51.9	
	comp=Z,6.7nm,1.1s						
WRA	**Warramunga Arr**	**38.77**	**259**	P	**P**	**06 43 43.2**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=92,slow=8.8,SNR=2.2						
WRA				LR	LR	06 57 26.5	
	comp=Z,100nm,20.8s,baz=145,slow=33						
WRA	**Warramunga Arr**	**38.77**	**259**	P	**P**	**06 43 43.9**	**+0.1**
AS31	**Alice Springs**	**39.16**	**253**	P	**P**	**06 43 46.2**	**-0.8**
AS31				IAmb	IAmb	06 43 53.4	
	comp=Z,1.6nm,0.7s						
ASAR	**Alice Springs**	**39.16**	**253**	P	**P**	**06 43 47.0**	**0.0**
	comp=Z,1.8nm,0.6s,baz=83,slow=9.2,SNR=14						
ASAR				LR	LR	06 58 45.0	
	comp=Z,111nm,19.0s,baz=94,slow=34						
ASAR	**Alice Springs**	**39.16**	**253**	P	**P**	**06 43 44.8**	**-2.2**
MORW	**Morawa**	**55.24**	**246**	P	**P**	**06 45 51.3**	**-0.9**
MORW				IAmb	IAmb	06 46 11.4	
	comp=Z,8.3nm,1.0s						
MYLDM	**Lahad Datu**	**60.13**	**286**	P	**P**	**06 46 25.3**	**-1.5**
JHJ2	**Mitsune**	**60.15**	**326**	P	**P**	**06 46 23.6**	**-2.9**
VNDA	**Vanda**	**60.96**	**183**	LR	LR	07 09 37.9	
	comp=Z,36nm,18.4s,baz=18,slow=33						
VNDA	**Vanda**	**60.96**	**183**	P	**P**	**06 46 30.2**	**-1.3**
VNDA				IAmb	IAmb	06 46 58.0	
	comp=Z,4.0nm,1.4s						
MJAR	**Matsushiro Arr**	**63.62**	**327**	LR	LR	07 09 41.4	
	comp=Z,40nm,21.6s,baz=75,slow=32						
ASAJ	**Asahikawa**	**67.66**	**335**	LR	LR	07 11 45.8	
	comp=Z,113nm,21.1s,baz=174,slow=32						
KSRS	**Korea Array**	**70.02**	**322**	LR	LR	07 16 25.2	
	comp=Z,31nm,19.1s,baz=142,slow=34						
USRK	**Ussuriysk Ar.**	**72.49**	**329**	LR	LR	07 15 32.3	
	comp=Z,26nm,20.2s,baz=98,slow=32						
QSPA	**South Pole Qui**	**73.09**	**180**	P	**P**	**06 47 49.6**	**+0.7**
QSPA				IAmb	IAmb	06 48 10.1	
	comp=Z,7.1nm,1.2s						
KLR	**Kul'dur**	**76.29**	**332**	LR	LR	07 15 16.1	
	comp=Z,68nm,21.9s,baz=147,slow=31						
MAW	**Mawson**	**82.61**	**201**	LR	LR	07 20 43.5	
	comp=Z,29nm,19.8s,baz=224,slow=32						
CMAR	**Chiang Mai Arr**	**82.80**	**292**	LR	LR	07 22 14.0	
	comp=Z,33nm,21.7s,baz=178,slow=33						
NVAR	**Mina Array Bea**	**83.11**	**47**	P	**P**	**06 48 46.4**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=225,slow=7.5,SNR=6.6						
NVAR				LR	LR	07 19 10.1	
	comp=Z,94nm,19.6s,baz=204,slow=31						
ILAR	**Eielson Array**	**86.47**	**15**	P	**P**	**06 49 00.5**	**-0.5**
	comp=Z,1.4nm,0.8s,baz=235,slow=5.2,SNR=11						
ILAR				LR	LR	07 21 40.9	
	comp=Z,50nm,20.9s,baz=248,slow=32						
ILAR	**Eielson Array**	**86.47**	**15**	P	**P**	**06 49 00.1**	**-0.8**
SONM	**Songino Array**	**88.88**	**321**	P	**P**	**06 49 12.6**	**-0.5**
	comp=Z,0.7nm,1.0s,baz=108,slow=4.7,SNR=2.5						
SONM				LR	LR	07 28 21.6	
	comp=Z,44nm,19.4s,baz=97,slow=35						
TXAR	**Lajitas Array**	**90.75**	**60**	P	**P**	**06 49 24.0**	**+1.8**
	comp=Z,0.8nm,1.0s,baz=213,slow=6.5,SNR=4.3						
TXAR				LR	LR	07 22 19.8	
	comp=Z,75nm,19.9s,baz=0.0,slow=30						
PDAR	**Pinedale Array**	**90.97**	**45**	LR	LR	07 27 41.4	
	comp=Z,37nm,19.2s,baz=228,slow=34						
TLY	**Talaya**	**92.16**	**324**	LR	LR	07 24 15.3	
	comp=Z,22nm,21.5s,baz=184,slow=31						
YKA	**Yellowknife Ar**	**96.11**	**26**	P	**P**	**06 49 48.3**	**+2.4**
	comp=Z,1.2nm,0.9s,baz=253,slow=5.0,SNR=2.4						
YKA				LR	LR	07 29 35.6	
	comp=Z,30nm,18.6s,baz=0.0,slow=33						
PLCA	**Paso Flores**	**96.37**	**136**	LR	LR	07 24 01.8	
	comp=Z,51nm,20.9s,baz=234,slow=30						
GERES	**GERESS Array B**	**144.78**	**339**	PKP	**PKPdf**	**06 55 55.7**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=52,slow=2.2,SNR=5.7						
GERES	**GERESS Array B**	**144.78**	**339**		**PKPab**	**06 55 54.1**	**-0.4**

ATH 17 06:37:44.1, 37°.48N×20°.88E, h27^{km}±2^{km}, ML3.4/3, Error ellipse: s-maj=4.1km s-min=1.3km az=224.0
THE 17 06:37:45.0, 37°.49N×20°.86E, h17^{km}, ML3.5/2, Error ellipse: s-maj=0.6km s-min=0.3km az=44.0
ISC 17 06:37:43.9±1.2, **37°.48N**±0°.05×**20°.81E**±0°.04, **h28**^{km}±7^{km}, **n46, σ1^{s}88**/61, **Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTHK	**Lithakia**	**0.23**	**6**	P	**Pb**	**06 37 50.1**	**-0.2**
LTHK				S	**Sb**	**06 37 54.0**	**-0.7**
LTHK	**Lithakia**	**0.23**	**6**	P	**Pb**	**06 37 50.2**	**-0.2**
LTHK				S	**Sb**	**06 37 54.3**	**-0.4**
LTHK				AML	AML	06 37 54.5	
	comp=E,82266μm,0.1s						
LTHK				AML	AML	06 37 55.4	
	comp=N,85086μm,0.1s						
VTN	**Vitineika**	**0.53**	**35**	P	**Pb**	**06 37 54.9**	**+0.2**
VTN				S	**Sb**	**06 38 02.3**	**+0.1**
VTN	**Vitineika**	**0.53**	**35**	P	**Pb**	**06 37 55.0**	**+0.2**
PSDA	**Pessada-Kefalo**	**0.66**	**345**	P	**Pb**	**06 37 57.5**	**+0.6**
PSDA				S	**Sb**	**06 38 07.4**	**+1.7**
PSDA	**Pessada-Kefalo**	**0.66**	**345**	P	**Pb**	**06 37 57.3**	**+0.4**
VLS	**Valsamata**	**0.72**	**346**	P	**Pb**	**06 37 58.3**	**+0.4**
VLS				S	**Sn**	**06 38 09.3**	**+1.0**
	comp=N,3μm,0.5s						
VLS	**Valsamata**	**0.72**	**346**	P	**Pb**	**06 37 58.0**	**+0.1**
VLS				S	**Sn**	**06 38 09.9**	**+1.7**
VLS				AML	AML	06 38 10.8	
	comp=E,3973μm,0.1s						
VLS				AML	AML	06 38 14.0	
	comp=N,7017μm,0.6s						
ARGA	**Argostoli. Kep**	**0.74**	**340**	P	**Pn**	**06 38 00.1**	**+1.6**
ARGA				S	**Sn**	**06 38 11.1**	**+2.3**
RLS	**Riolos of Patr**	**0.78**	**42**	P	**Pb**	**06 37 58.8**	**-0.2**
RLS				S	**Sn**	**06 38 09.9**	**+0.1**
RLS	**Riolos of Patr**	**0.78**	**42**	P	**Pb**	**06 37 58.7**	**-0.2**
RLS				AML	AML	06 38 17.4	
	comp=E,2082μm,0.4s						
RLS				AML	AML	06 38 18.7	
	comp=N,1927μm,0.5s						
KEF3	**Kipouria, Keph**	**0.81**	**333**	P	**Pb**	**06 38 00.2**	**+0.8**
KEF3				S	**Sn**	**06 38 12.3**	**+1.8**
KEF3	**Kipouria, Keph**	**0.81**	**333**	P	**Pn**	**06 38 00.7**	**+1.3**
KEF4	**Livadi, Kephal**	**0.83**	**339**	P	**Pb**	**06 38 00.6**	**+0.8**
KEF4				S	**Sn**	**06 38 12.6**	**+1.5**
KEF4	**Livadi, Kephal**	**0.83**	**339**	P	**Pb**	**06 38 00.7**	**+0.8**
DRO	**Drossia**	**0.86**	**56**	P	**Pb**	**06 38 00.2**	**-0.1**
DRO				S	**Sn**	**06 38 12.3**	**+0.5**
	comp=N,4μm,0.4s						
DRO	**Drossia**	**0.86**	**56**	P	**Pb**	**06 38 00.2**	**-0.1**
ITM	**Ithomi**	**0.94**	**108**	P	**Pb**	**06 38 01.6**	**-0.1**
ITM	**Ithomi**	**0.94**	**108**	P	**Pn**	**06 38 02.0**	**+0.7**
PYL	**PYLOS**	**0.95**	**128**	P	**Pn**	**06 38 02.0**	**+0.6**
PYL				S	**Sn**	**06 38 15.3**	**+1.3**
PYL	**PYLOS**	**0.95**	**128**	P	**Pb**	**06 38 01.6**	**-0.2**
FSK	**Fiskardo**	**1.00**	**349**	P	**Pn**	**06 38 03.3**	**+1.3**
FSK	**Fiskardo**	**1.00**	**349**	P	**Pb**	**06 38 03.1**	**+0.6**
LAKA	**Lakka**	**1.20**	**50**	P	**Pn**	**06 38 05.6**	**+0.8**
LAKA	**Lakka**	**1.20**	**50**	P	**Pb**	**06 38 06.0**	**-0.1**
KLV	**Kalavryta, Ach**	**1.21**	**62**	P	**Pb**	**06 38 05.8**	**-0.4**
KLV	**Kalavryta, Ach**	**1.21**	**62**	P	**Pb**	**06 38 05.9**	**-0.2**
EFP	**Efpalio**	**1.28**	**42**	P	**Pb**	**06 38 07.1**	**-0.3**
TRIZ	**Trizonia**	**1.34**	**48**	P	**Pb**	**06 38 07.9**	**-0.4**
ANX	**Ano Chora**	**1.42**	**38**	P	**Pb**	**06 38 09.9**	**+0.1**
OHR	**Ohrid**	**3.63**	**360**	*i* Pn	**Pb**	**06 38 47.6**	**+0.3**
VAY	**Valandovo**	**4.07**	**19**	*i* Pn	**Pb**	**06 38 52.2**	**-2.7**
BOSS	**Bosilegrad**	**5.17**	**14**	*e*Pn	**Pn**	**06 38 57.8**	**-1.6**
BARS	**Barje**	**5.38**	**8**	*e*Pn	**Pn**	**06 39 04.4**	**+2.0**
SELS	**Selova**	**5.74**	**2**	*e*Pn	**Pn**	**06 39 08.8**	**+1.6**
SJES	**Sjenica**	**5.81**	**354**	*e*Pn	**Pn**	**06 39 12.5**	**+4.2**
ZAPS	**Zavoj**	**5.95**	**13**	*e*Pn	**Pn**	**06 39 13.8**	**+3.6**
IVAS	**Ivanjica**	**6.11**	**356**	*e*Pn	**Pn**	**06 39 14.0**	**+1.6**
GRUS	**Gruza**	**6.40**	**359**	*e*Pn	Pn	06 39 12.1	-4.2
MAKA	**Makarska**	**6.48**	**335**	*e*Pn	**Pn**	**06 39 18.6**	**+1.2**
MAKA				Sn	**Sn**	**06 40 24.6**	**-5.7**
HVAR	**Hvar**	**6.59**	**331**	*e*Pn	**Pn**	**06 39 19.7**	**+0.8**
RICI	**Ricice**	**6.63**	**336**	*e*Pn	**Pn**	**06 39 19.3**	**-0.1**
RICI				Sn	**Sn**	**06 40 29.8**	**-4.2**
DIVS	**Divibare**	**6.64**	**355**	*e*Pn	**Pn**	**06 39 21.2**	**+1.5**
ZIRJ	**Zirje**	**7.31**	**329**	*e*Pn	**Pn**	**06 39 29.2**	**+0.4**
ZIRJ				Sn	**Sn**	**06 40 45.0**	**-5.7**
MORI	**Morici**	**7.46**	**330**	*e*Pn	**Pn**	**06 39 32.1**	**+1.3**
MORI				Sn	**Sn**	**06 40 48.9**	**-5.6**
DUGI	**Dugi Otok**	**7.83**	**328**	*e*Pn	**Pn**	**06 39 36.4**	**+0.5**

IDC 17 06:38:07.2±3.0, **5°.08S**×**133°.59E, h0**^{km}, **mb4.3**/1, **mb1 4.2**/4, **mb1mx3.7**/38, **mbtmp4.1**/4, **ML3.9**/3, **MS3.0**/1, **Ms1 3.0**/1, **ms1mx2.4**/39, **Error ellipse: s-maj=127.8km s-min=28.0km az=82.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.79**	**177**	Pn	Pn	06 41 36.3	-1.5
	0.3nm,0.3s,baz=353,slow=13,SNR=15						
WRA				Sn	Sn	06 44 12.1	-11
	0.2nm,0.3s,baz=358,slow=22,SNR=3.1						
FITZ	**Fitzroy Crossi**	**15.09**	**210**	Pn	Pn	06 41 42.0	+0.2
	0.9nm,0.3s,baz=34,slow=11,SNR=38						
FITZ				Sn	Sn	06 44 24.1	-5.8
	0.3nm,0.3s,baz=209,slow=13,SNR=2.9						
FITZ				LR	LR	06 48 06.9	
	comp=Z,57nm,18.3s,baz=142,slow=40						
ASAR	**Alice Springs**	**18.48**	**179**	P	Pn	06 42 25.2	+0.3
	0.5nm,0.3s,baz=8.1,slow=10,SNR=22						
MKAR	**Makanchi Array**	**68.65**	**325**	P	P	06 49 12.4	0.0
	2.8nm,0.8s,baz=120,slow=7.9,SNR=16						

IDC 17 06:40:33.3±3.5, **6°.23S**×**150°.07E, h0**^{km}, **mb3.5**/2, **mb1 4.0**/3, **mb1mx3.6**/33, **mbtmp3.8**/3, **ML2.0**/1, **MS3.3**/2, **Ms1 3.3**/2, **ms1mx2.6**/28, **Error ellipse: s-maj=153.8km s-min=35.9km az=122.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.28**	**222**	Pn	Pn	06 41 41.6	+1.9
	5.8nm,0.3s,baz=47,slow=9.0,SNR=10						
PMG				Sn	Sn	06 42 30.8	+0.4
	18nm,0.3s,baz=98,slow=18,SNR=7.6						
GUMO	**Guam**	**20.35**	**345**	LR	LR	06 51 50.3	
	comp=Z,44nm,18.6s,baz=78,slow=33						
WRA	**Warramunga Arr**	**20.48**	**227**	P	P	06 45 12.8	-0.1
	3.2nm,0.6s,baz=51,slow=11,SNR=9.0						
ASAR	**Alice Springs**	**23.29**	**220**	P	P	06 45 41.7	-1.3
	0.4nm,0.4s,baz=53,slow=9.4,SNR=3.3						
TIXI	**Tiksi**	**78.97**	**353**	LR	LR	07 27 01.4	
	comp=Z,35nm,20.1s,baz=190,slow=35						
TORD	**Torodi Ar. Bea**	**148.10**	**285**	PKPbc	PKPbc	07 00 21.7	-0.4
	1.0nm,0.6s,baz=70,slow=2.4,SNR=9.4						

ISK 17 06:43:48.9, 34°.94N×27°.08E, h5^{km}, ML3.6/21
ATH 17 06:43:51.2, 35°.06N×27°.00E, h10^{km}±5^{km}, ML3.4/7, Error ellipse: s-maj=5.9km s-min=1.9km az=152.0
IDC 17 06:43:57.3±2.4, 35°.17N×26°.90E, h66^{km}±21^{km}, mb3.7/12, mb1 3.7/15, mb1mx3.6/43, mbtmp3.9/15, MS3.1/3,

Ms1 3.1/3, ms1mx2.5/39, Error ellipse: s-maj=28.1km s-min=14.8km az=159.0

ISC 17 06:43:51.6±0.8**, 34°.94N**±0°.09×**26°.99E**±0°.04**, h23**^{km}**, n56, σ1**^{s}**37**/56**, mb3.9**/12**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.65	285	P	Pb	06 44 03.3	-1.1
ZKR				S	Sb	06 44 12.9	-0.1
ZKR				AML	AML	06 44 22.8	
	comp=E,6692µm,0.5s						
ZKR				AML	AML	06 44 23.7	
	comp=N,4856µm,0.5s						
ZKR	Zakros	0.65	285	PG	Pb	06 44 03.2	-1.1
ZKR				SG	Sn	06 44 15.4	+0.3
NPS	Neapolis	1.17	286	P	Pb	06 44 13.1	-0.1
NPS				AML	AML	06 44 43.0	
	comp=N,3048µm,0.5s						
NPS				AML	AML	06 44 43.2	
	comp=E,4823µm,0.4s						
ARG	Arkhangelos	1.57	36	P	Pn	06 44 18.1	-0.1
ARG				AML	AML	06 44 50.8	
	comp=N,1258µm,0.6s						
ARG				AML	AML	06 44 53.3	
	comp=E,1960µm,0.7s						
ARG	Arkhangelos	1.57	36	PN	Pn	06 44 18.3	+0.2
HRKL	Herakleio	1.59	284	PN	Pb	06 44 20.4	+0.2
NIS1	Nisyros Isl.	1.66	5	P	Pn	06 44 19.5	+0.1
NIS1				AML	AML	06 44 58.9	
	comp=E,2880µm,0.6s						
NIS1				AML	AML	06 45 06.6	
	comp=N,3053µm,0.6s						
NIS1	Nisyros Isl.	1.66	5	PN	Pn	06 44 20.3	+0.9
NISR	Nisiros	1.67	4	P	Pn	06 44 18.8	-0.6
NISR				AML	AML	06 44 57.6	
	comp=E,2596µm,0.7s						
NISR				AML	AML	06 45 08.7	
	comp=N,2763µm,0.7s						
IDI	Anoyia	1.75	282	P	Pb	06 44 24.0	+0.9
	comp=N,19nm,0.3s,baz=73,slow=15,SNR=49						
IDI	Anoyia	1.75	282	P	Pb	06 44 23.0	-0.1
IDI				AML	AML	06 45 04.2	
	comp=N,768µm,0.9s						
IDI				AML	AML	06 45 07.9	
	comp=E,838µm,0.6s						
SIVA	Sivas	1.79	273	P	Pb	06 44 22.7	-0.9
DAT	Datca	1.85	15	PN	Pn	06 44 22.7	+0.7
SANT	Santorini	1.89	319	P	Pn	06 44 23.7	+1.2
SANT				AML	AML	06 45 01.6	
	comp=E,2391µm,0.5s						
SANT				AML	AML	06 45 04.7	
	comp=N,1002µm,0.5s						
SANT	Santorini	1.89	319	PN	Pn	06 44 24.1	+1.6
SNT5	Nea Kammeni, S	1.95	319	P	Pn	06 44 25.1	+1.8
TURN	Turunc	2.10	29	PN	Pn	06 44 26.5	+1.2
BODT	Bodrum	2.13	7	PN	Pn	06 44 26.9	+1.1
DALY	Dalyan (Mula)	2.31	35	PN	Pn	06 44 29.0	+0.8
VAM	Vamos	2.33	282	P	Pb	06 44 32.6	-0.3
GVDS	Gavdos	2.38	268	PN	Pb	06 44 32.2	-1.6
GVD	Gavdhos	2.38	268	PN	Pb	06 44 31.4	-2.4
FETY	Fethiye	2.40	45	PN	Pn	06 44 29.8	+0.3
APE	Apeiranthos	2.43	331	P	Pn	06 44 31.7	+1.8
APE	Apeiranthos	2.43	331	PN	Pn	06 44 31.9	+2.0
MLSB	Milas	2.43	15	PN	Pn	06 44 31.2	+1.2
AKAS	Kas	2.49	58	PN	Pn	06 44 30.8	-0.1
IMMV	Iera Moni Meta	2.51	283	P	Pb	06 44 34.8	-1.3
IMMV	Iera Moni Meta	2.51	283	PN	Pb	06 44 33.9	-2.2
RODP	Rodopos	2.71	284	PN	Pb	06 44 36.5	-2.9
KNDR	Palaiochora Ch	2.72	277	PN	Pb	06 44 37.1	-2.5
MHLO	Agia Marina, M	2.73	310	P	Pb	06 44 37.5	-2.2
CAME	Cameli-Denizli	2.74	43	PN	Pn	06 44 35.2	+0.9
GCAM	G?zelcaml?	2.76	4	PN	Pn	06 44 35.9	+1.5
ELL	Elmali	2.98	52	PN	Pn	06 44 38.3	+0.7
AYDB	Zeytinkoy-Aydi	3.08	13	PN	Pn	06 44 40.4	+1.4
URLA	Izmir	3.42	355	PN	Pn	06 44 45.2	+1.6
CHOS	Chios island	3.52	348	PN	Pn	06 44 46.2	+1.3
BRTR	Keskin Array B	7.13	46	P	Pn	06 45 38.1	+3.5
	comp=N,0.3nm,0.3s,baz=250,slow=7.5,SNR=2.2						
BRTR				LR	LR	06 49 10.9	
	comp=N,188nm,18.3s,baz=250,slow=45						
MLR	Muntele Rosu	10.57	356	LR	LR	06 50 30.3	
	comp=N,46nm,19.3s,baz=338,slow=38						
KBZ	Khabaz	15.10	50	P	P	06 47 30.0	+1.6
	baz=208,slow=3.1,SNR=6.0						
AKASG	Malin Array Be	15.83	5	P	Pn	06 47 34.5	+1.5
	comp=N,0.8nm,0.3s,baz=193,slow=11,SNR=5.5						
GERES	GERESS Array B	17.01	329	P	P	06 47 49.5	-0.3
	comp=N,0.1nm,0.3s,baz=138,slow=12,SNR=4.9						
ESDC	Sonseca Array	25.00	290	P	P	06 49 13.7	0.0
	comp=N,0.8nm,0.7s,baz=84,slow=9.3,SNR=9.3						
FINES	FINESS Array B	26.52	359	P	P	06 49 25.4	-1.7
	comp=N,1.3nm,0.6s,baz=164,slow=9.1,SNR=4.8						
AKTO	Aktyubinsk	27.31	46	P	P	06 49 34.0	-0.5
	comp=N,0.8nm,0.6s,baz=238,slow=11,SNR=2.0						
EKA	Eskdalemuir Ar	29.09	324	P	P	06 49 48.3	-1.9
	comp=N,0.6nm,0.4s,baz=119,slow=11,SNR=3.8						
TORD	Torodi Ar. Bea	31.52	233	P	P	06 50 13.7	+1.6
	comp=N,1.2nm,0.9s,baz=35,slow=10.0,SNR=7.6						
ARCES	ARCESS Array B	34.66	359	P	P	06 50 37.2	-1.7
	comp=N,3.5nm,0.9s,baz=163,slow=8.5,SNR=9.8						
MKAR	Makanchi Array	42.65	56	P	P	06 51 46.4	+0.2
	comp=N,2.0nm,0.6s,baz=281,slow=6.6,SNR=17						
ZALV	Zalesovo Beam	44.08	46	P	P	06 51 57.5	-0.1
	comp=N,1.1nm,0.4s,baz=267,slow=10,SNR=1.7						
NRIK	Noril'sk	47.44	25	P	P	06 52 23.9	-0.1
	comp=N,1.1nm,0.4s,baz=281,slow=5.2,SNR=2.2						
SONM	Songino Array	58.46	51	P	P	06 53 46.4	+0.6
	comp=N,0.5nm,0.5s,baz=289,slow=8.4,SNR=5.8						
SCHQ	Schefferville	64.32	320	P	P	06 54 24.8	-0.3
	comp=N,2.4nm,0.3s,baz=69,slow=4.4,SNR=22						
YKA	Yellowknife Ar	78.11	343	P	P	06 55 48.4	+0.1
	comp=N,0.9nm,0.6s,baz=32,slow=5.3,SNR=4.4						
SIV	San Ignacio	97.43	256	LR	LR	07 43 59.2	
	comp=N,15nm,18.1s,baz=261,slow=37						

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*SJA **17** 06:55:49.9±0.7, 30°.29S×72°.23W, h9^{km}, ML4.3, MW3.9*
*VAO **17** 06:55:52.7±1.1, 30°.60S×71°.83W, h10^{km}, mb4.2*
*IDC **17** 06:55:53.4±1.1, 30°.31S×71°.59W, h0^{km}, mb4.1/5, mb1 4.1/10, mb1mx4.0/29, mbtmp4.0/10, ML3.9/5, MS3.3/4, Ms1 3.3/4, ms1mx3.0/24, Error ellipse: s-maj=32.4km s-min=22.3km az=102.0*
*GUC **17** 06:55:56.9±0.7, 30°.43S×71°.60W, h30^{km}±2^{km}, ML4.6*
*NEIC **17** 06:55:57.1±1.5, 30°.37S±0°.05×71°.70W±0°.07, h26^{km}±5^{km}, Error ellipse: s-maj=9.2km s-min=6.7km az=90.0*
*NEIC **17** 06:55:57.1, 30°.37S×71°.69W, h31^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.49; $M_{\theta\theta}$0.17; $M_{\phi\phi}$-0.66; $M_{r\theta}$0.38; $M_{\theta\phi}$0.03; $M_{\phi r}$-0.92; Fault plane solution: $M_0$1.16000×10^{15} NP1:ϕ_s22.47000°, δ18.78000°, λ131.50000°. NP2:ϕ_s159.41000°, δ76.05000°, λ77.30000°. Principal axes: T 1.1104, Plg57.0000°, Azm53.0000°; N 0.0956, Plg12.0000°, Azm163.0000°; P -1.2060, Plg30.0000°, Azm260.0000°;*

ISC 17 06:55:55.6±0.5**, 30°.37S**±0°.02×**71°.84W**±0°.04**, h21**^{km}±2^{km}**, n149, σ1**^{s}**80**/190**, mb4.5**/11**, 2C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.35	150	⇑iP	Pb	06 56 04.1	+0.9
CO06				i S	Sb	06 56 09.1	+0.8
CO06				IAML		06 56 09.6	
	comp=N,140µm,0.3s						
CO06	Fray Jorge	0.35	150		Pb	06 56 04.1	+0.9
CO06				Sg	Sb	06 56 09.0	+0.7
CO05	La Serena	0.69	50	⇓iP	Pb	06 56 09.3	+0.3
CO05				i S	Sb	06 56 18.1	0.0
CO05	La Serena	0.69	50		Pb	06 56 09.3	+0.3
GO04	Tololo Observa	0.92	78	⇓iP	Pb	06 56 12.6	-0.5
GO04				eS	Sb	06 56 23.7	-1.3
GO04	Tololo Observa	0.92	78		Pb	06 56 12.5	-0.6
GO04	Tololo Observa	0.92	78	eP	Pb	06 56 12.6	-0.5
GO04				eS	Sn	06 56 25.5	-0.9
CO03	El Pedregal	1.10	116	⇓iP	Pn	06 56 15.0	-0.9
CO03				eS	Sb	06 56 26.4	-3.6
CO03	El Pedregal	1.10	116		Pn	06 56 15.0	-0.9
LCO	Las Campanas	1.68	37	eP	Pn	06 56 24.3	+0.3
LCO				eS	Sb	06 56 46.7	-0.1
LCO	Las Campanas	1.68	37	Pn	Pn	06 56 24.7	+0.7
LCO	Las Campanas	1.68	37	eP	Pn	06 56 24.0	0.0
AROD	Rodeo	2.06	85	eP	Pb	06 56 31.8	-0.7
AROD				eS	Sn	06 56 53.3	-1.3
VA06	Catapilco	2.24	168	eP	Pn	06 56 31.9	+0.5
VA06				eS	Sb	06 57 01.1	-1.4
VA06				IAML		06 57 10.1	
	comp=N,6µm,0.4s						
AC04	Llanos de Chal	2.26	18	⇑iP	Pn	06 56 31.9	+0.2
AC04	Llanos de Chal	2.26	18	Pn	Pn	06 56 31.9	+0.2
AC04	Llanos de Chal	2.26	18	eP	Pn	06 56 32.0	+0.2
AC04				eS	Sn	06 57 01.8	+2.8
AC04				eS	Sn	06 57 02.3	+3.3
AC04				IAML		06 57 14.9	
	comp=Z,874nm,0.6s						
ACDV	Cuesta del Vie	2.37	86	eP	Pb	06 56 36.0	-1.6
ACDV				eS	Sb	06 57 09.5	+3.0
ACDV				IAML		06 57 11.2	
	comp=Z,968nm,0.7s						
ACCO	Cerro Coronel	2.41	96	eP	Pb	06 56 37.5	-1.0
ACCO				eS	Sb	06 57 13.1	+5.2
RTLS	Leoncito	2.61	124	eP	Pb	06 56 40.0	-1.9
RTLS				eS	Sb	06 57 18.5	+4.9
RTLS				IAML		06 57 22.1	
	comp=Z,1µm,0.8s						
VA03	San Esteban	2.63	156	eP	Pn	06 56 38.5	+1.5
VA03				eS	Sn	06 57 09.4	+1.1
VA03				IAML		06 57 22.4	
	comp=E,4µm,0.3s						
VA03	San Esteban	2.63	156		Pn	06 56 38.5	+1.5
VA03	San Esteban	2.63	156	eP	Pn	06 56 38.0	+1.0
VA03				IAML		06 57 20.9	
	comp=Z,2µm,0.5s						
ROCH	El Roble	2.69	165	eP	Pn	06 56 38.7	+0.8
ROCH				eS	Sb	06 57 13.4	-2.6
ROCH				IAML		06 57 21.5	
	comp=N,3µm,0.5s						
ROC1	El Roble	2.69	165	eP	Pn	06 56 38.0	0.0
ROC1				eP	Pn	06 56 38.5	+0.5
ROC1				eS	Sb	06 57 13.8	-2.3
AUSP	Uspallata	2.80	132	eP	Pn	06 56 37.3	-2.2
AUSP				eP	Pn	06 56 43.0	+3.5
AUSP				eS	Sb	06 57 21.7	+2.5
PEL	Peldehue	2.94	161	eP	Pn	06 56 42.5	+1.3
PEL				eS	Sn	06 57 17.9	+2.1
PEL				IAML		06 57 29.9	
	comp=E,1µm,0.4s						
PEL	Peldehue	2.94	161		Pn	06 56 42.3	+1.2
PEL	Peldehue	2.94	161	eP	Pn	06 56 42.5	+1.3
PEL				eP	Pn	06 56 43.0	+1.9
PEL				eS	Sb	06 57 20.3	-2.6
MT02	Curacav	2.94	168	eP	Pn	06 56 41.5	+0.3
MT02				i S	Sn	06 57 16.0	+0.1
MT02	Curacav	2.94	168		Pn	06 56 42.3	+1.1
MT02	Curacav	2.94	168	eP	Pn	06 56 42.0	+0.8
MT02				IAML		06 57 31.9	
	comp=Z,868nm,0.5s						
ZON	Zonda	2.96	114	eP	Pn	06 56 44.0	+2.5
ZON				eP	Pn	06 56 44.8	+3.3
ZON				eS	Sb	06 57 23.8	+0.2
ZON				IAML		06 57 32.1	
	comp=Z,626nm,0.6s						
GO03	Copiap	3.10	27	eP	Pn	06 56 43.4	0.0
GO03	Copiap	3.10	27	Pn	Pn	06 56 44.2	+0.8
GO03	Copiap	3.10	27	eP	Pn	06 56 44.0	+0.6
GO03				eS	Sb	06 57 27.3	-0.3
MT05	Renca	3.16	163	eP	Pn	06 56 46.1	+1.9
MT05				eS	Sn	06 57 24.3	+3.1
MT05				IAML		06 57 38.7	
	comp=E,3µm,0.3s						
MT05	Renca	3.16	163		Pn	06 56 45.8	+1.6
MT05	Renca	3.16	163	eP	Pn	06 56 46.0	+1.9
MT05				eS	Sb	06 57 27.8	-1.4
MT05				IAML		06 57 38.7	
	comp=Z,942nm,0.3s						
RTCV	Cerro Valdivia	3.20	119	eP	Pb	06 56 48.0	-3.8
VA05	Santo Domingo	3.29	177	eP	Pn	06 56 45.8	0.0
VA05				eS	Sn	06 57 27.3	+3.0
VA05				IAML		06 57 43.9	
	comp=N,1µm,0.4s						
VA05	Santo Domingo	3.29	177	Pn	Pn	06 56 45.9	0.0
ASAL	Salagasta	3.39	132	eP	Pb	06 56 51.0	-4.2
ASAL				eS	Sb	06 57 36.3	+0.2
MT09	Talagante	3.48	168	eP	Pn	06 56 49.8	+1.2
MT09				eS	Sn	06 57 28.4	-0.8
MT09				IAML		06 57 47.5	
	comp=N,1µm,0.4s						
MT09	Talagante	3.48	168		Pn	06 56 50.0	+1.3
ARCO	CERRO ARCO	3.50	136	eP	Pb	06 56 53.9	-3.1
ARCO				eP	Pb	06 56 54.0	-3.0
ARCO				eS	Sb	06 57 37.8	-1.4
ARCO				IAML		06 57 55.8	
	comp=Z,730nm,0.9s						
MT01	Popeta	3.52	172	eP	Pn	06 56 49.4	+0.3
MT01				eS	Sn	06 57 32.1	+1.9
MT01				IAML		06 57 53.4	
	comp=E,546nm,0.4s						
MT01	Popeta	3.52	172		Pn	06 56 49.6	+0.5
MT01	Popeta	3.52	172	eP	Pn	06 56 49.7	+0.5
MT01				eS	Sb	06 57 37.3	-2.4
MT01				IAML		06 57 56.6	
	comp=Z,531nm,0.6s						
VCA	Vinchina	3.56	64	eP	Pb	06 56 54.0	-4.1
VCA				eS	Sb	06 57 40.8	-0.2
AAGR	Agrelo	3.73	137	eP	Pn	06 56 56.0	+3.9
AAGR				eS	Sb	06 57 49.8	+4.0
AVFE	Valle Fertil	3.80	96	eP	Pn	06 56 49.8	-3.2
AVFE				eP	Pn	06 56 55.1	+2.1
AVFE				eS	Sb	06 57 49.8	+2.1
AVFE				IAML		06 58 03.8	
	comp=Z,320nm,0.6s						
BO01	Tunca	4.06	171		Pn	06 56 57.0	+0.5
BO01	Tunca	4.06	171	eP	Pn	06 56 57.3	+0.7
BO01				eS	Sb	06 57 53.8	-1.4
BO01				IAML		06 58 12.0	
	comp=Z,235nm,0.8s						
AC02	Maricunga	4.25	35	Pn	Pn	06 57 00.9	+1.3
AC02	Maricunga	4.25	35	eP	Pn	06 56 55.3	-4.4
AC02				eP	Pn	06 57 00.9	+1.3
AC02				eS	Sb	06 57 55.3	-5.8
AC02				eS	Sb	06 58 01.8	+0.7
AC02				IAML		06 58 18.2	
	comp=Z,310nm,0.8s						
ACLC	CERRO LA CRUZ	4.35	79	eP	Pn	06 57 03.3	+2.7
ACLC				eS	Sn	06 57 53.8	+2.9
BO02	Sierra Bellavi	4.50	169		Pn	06 57 04.2	+1.6
BO02	Sierra Bellavi	4.50	169	eP	Pn	06 57 04.0	+1.3
BO02				eS	Sn	06 57 56.1	+1.6
ACHE	Chepes	4.53	101	eP	Pn	06 57 05.4	+2.3
ACHE				eS	Sn	06 57 58.5	+3.3
APLL	PUNTA DE LOS L	4.59	92	eP	Pn	06 57 06.0	+2.1
APLL				eS	Sb	06 58 02.3	-8.2
GO05	Huala	4.63	181	Pn	Pn	06 57 03.6	-0.8
GO05	Huala	4.63	181	eP	Pn	06 57 03.7	-0.7
ML02	Panimavida	5.39	176	Pn	Pn	06 57 14.4	-0.4
PB14	IPOC Station P	5.86	13	Pn	Pn	06 57 19.0	-2.6
H03N1	Juan Fernandez	6.75	241	T	T	07 04 32.0	
	baz=70,slow=72,SNR=7589						
H03N2	Juan Fernandez	6.76	241	T	T	07 04 34.9	
	baz=70,slow=72,SNR=7051						
H03N3	Juan Fernandez	6.76	241	T	T	07 04 32.4	
	baz=70,slow=72,SNR=5146						
H03S3	Juan Fernandez	6.92	238	T	T	07 04 45.1	
	baz=104,SNR=17						
H03S1	Juan Fernandez	6.92	238	T	T	07 04 45.5	
	baz=104,SNR=18						
PB10	IPOC Station P	6.92	10	Pn	Pn	06 57 34.8	-1.1
H03S2	Juan Fernandez	6.93	238	T	T	07 04 41.4	
	baz=104,SNR=21						
PB15	IPOC Station P	7.44	17		Pn	06 57 41.5	-1.6
LVC	Limon Verde	8.16	19	Pn	Pn	06 57 51.2	-2.0
	comp=Z,0.7nm,0.3s,baz=152,slow=9.3,SNR=8.6						
LVC				LR	LR	07 00 55.4	
	comp=Z,166nm,19.4s,baz=210,slow=38						
LVC	Limon Verde	8.16	19	eP	Pn	06 57 53.9	+0.7
LVC	Limon Verde	8.16	19		Pn	06 57 52.7	-0.5
LC01	Cunco	8.51	180		Pn	06 57 56.5	-1.1
PLCA	Paso Flores	10.40	175	Pn	Pn	06 58 24.2	+0.6
	comp=Z,0.3nm,0.3s,baz=336,slow=12,SNR=8.6						
PLCA				LR	LR	07 02 35.6	
	comp=Z,99nm,18.0s,baz=352,slow=38						
PLCA	Paso Flores	10.40	175	Pn	Pn	06 58 23.9	+0.4
LL04	Puerto Octay	10.53	182	Pn	Pn	06 58 27.0	+1.7
ITQB	Itaqui	13.21	91	eP	Pn	06 58 59.5	-2.5
ITQB	Itaqui	13.21	91		Pn	06 59 00.4	-1.5
CPUP	Villa Florida	13.40	76	Pn	Pn	06 59 01.9	-2.7
	comp=Z,0.1nm,0.3s,baz=232,slow=17,SNR=1.8						
CPUP	Villa Florida	13.40	76	Pn	Pn	06 59 03.7	-0.8
LPAZ	La Paz	14.42	14	Pn	Pn	06 59 19.5	+0.4
	comp=Z,0.3nm,0.3s,baz=186,slow=7.2,SNR=13						
LPAZ	La Paz	14.42	14	eP	Pn	06 59 20.9	+1.7
CPSB	Cacapava Do Su	15.89	95	eP	Pn	06 59 36.7	-1.3
SIV	San Ignacio	17.38	37	P	Pn	06 59 57.2	+0.2
	comp=Z,0.8nm,0.3s,baz=212,slow=10,SNR=54						
SIV				LR	LR	07 07 44.9	
	comp=Z,110nm,20.2s,baz=220,slow=41						
AQDB	Aquidauana	17.58	60	eP	P	06 59 59.9	-0.4
CNLB	Canela	18.24	92	eP	Pn	07 00 06.7	-0.9
PTLB	Pontes e Lacer	18.88	41	eP	P	07 00 14.6	-0.1
TER01	Tubaro-SC	19.86	90	eP	P	07 00 22.9	-2.5
PP1B	Ponte de Pedra	20.01	54	eP	P	07 00 26.8	-0.3
VILB	Vilhena	20.40	34	eP	P	07 00 31.4	0.0
VILB	Vilhena	20.40	34	P	P	07 00 30.9	-0.5
VILB				IAmb	IAmb	07 00 47.4	
	comp=Z,12nm,0.8s						
PCMB	Pacaembu	20.43	70	eP	P	07 00 31.0	-0.6
SALV	Santo Antonio	20.65	49	eP	P	07 00 33.6	-0.4
TIJ01	Guaruva-PR	20.80	82	eP	P	07 00 35.0	-0.7
ETMB	Extrema	21.11	16	eP	P	07 00 40.8	+1.8
ETMB	Extrema	21.11	16	P	P	07 00 39.9	+0.9
CZSB	Cruzeiro do Su	22.54	358	eP	P	07 00 55.9	+1.6
CZSB	Cruzeiro do Su	22.54	358	P	P	07 00 54.0	-0.3
PET01	Itanhaem-SP	22.63	80	eP	P	07 00 53.4	-1.8
SAML	Samuel	22.80	23	P	P	07 00 55.6	-1.4
BB19B	Bebedouro	22.92	72	eP	P	07 00 57.6	-0.8
PDRB	Porto dos Gac	23.35	40	eP	P	07 01 02.7	0.0
VAO	Valinhos	23.38	78	eP	P	07 01 02.8	-0.2
ARAG	Araguaiana, MT	23.45	56	eP	P	07 01 04.2	+0.5
USHA	Ushuaia	24.57	175	P	P	07 01 16.4	+2.5
	comp=Z,1.5nm,0.6s,baz=355,slow=9.4,SNR=1.3						
IPMB	Ipameri, GO	24.78	66	eP	P	07 01 14.9	-1.3
TBTG	Tabatinga, AM	26.11	4	eP	P	07 01 28.7	+0.7
TBTG	Tabatinga, AM	26.11	4	P	P	07 01 29.0	+0.9
TBTG				IAmb	IAmb	07 01 30.2	
	comp=Z,20nm,0.9s						
BDFB	Brasilia	26.30	61	P	P	07 01 29.0	-1.0
	comp=Z,5.2nm,0.6s,baz=227,slow=10,SNR=11						
BDFB				LR	LR	07 12 55.8	
	comp=Z,132nm,18.7s,baz=133,slow=39						
BDFB	Brasilia	26.30	61	P	P	07 01 29.2	-0.9
BDFB				IAmb	IAmb	07 01 40.5	
	comp=Z,21nm,1.5s						
SNDB	Serra Nova Dou	26.41	51	eP	P	07 01 31.7	+0.8
DIAM	Diamantina, MG	28.26	71	eP	P	07 01 47.6	-0.1
PEXB	Peixe	28.39	55	eP	P	07 01 48.1	-0.5
MACA	Manacapuru-AM	29.05	23	eP	P	07 01 54.4	-0.1
MACA	Manacapuru-AM	29.05	23	P	P	07 01 54.4	-0.1
MACA				IAmb	IAmb	07 02 05.3	
	comp=Z,7.1nm,1.0s						
JANB	Januaria	29.51	65	eP	P	07 01 57.6	-1.1
ALF01	Guarapari-ES	29.64	78	eP	P	07 01 58.5	-1.2
ITTB	Itaituba	30.00	34	eP	P	07 02 02.9	-0.1
SJMB	Sao Joao De Ma	30.11	74	eP	P	07 02 03.7	-0.3
BSFB	Barra de Sao F	30.34	75	eP	P	07 02 04.7	-1.2
SMTB	Santa Maria do	31.16	52	eP	P	07 02 12.8	-0.4
NAN01	Guarapari, ES	31.41	74	eP	P	07 02 13.9	-1.5
BOAV	Boa Vista	34.33	20	eP	P	07 02 40.9	0.0
BOAV	Boa Vista	34.33	20	P	P	07 02 41.1	+0.3
BOAV				IAmb	IAmb	07 02 42.0	
	comp=Z,5.3nm,0.8s						
ZARC	Zaragoza, Cauc	37.75	355	P	P	07 03 10.4	+0.2
HUMP	Col San Antoni	48.57	8	P	P	07 04 37.3	-0.2
SDD	Santo Domingo	48.58	2	P	P	07 04 38.2	+0.7
VNA2	Neumayer--Watz	53.30	158	P	P	07 05 12.9	+0.3
	baz=292,slow=8.2						
SNAA	Sanae	54.89	159	P	P	07 05 24.4	+0.1
SNAA	Sanae	54.89	159	P	P	07 05 24.2	-0.1
SNAA				IAmb	IAmb	07 05 34.6	
	comp=Z,4.2nm,1.1s						
250A	Grady	63.50	346	P	P	07 06 25.4	+1.3
X48A	Hartselle	66.05	346	P	P	07 06 41.7	+1.0
X48A				IAmb	IAmb	07 06 42.8	
	comp=Z,6.1nm,0.8s						
TXAR	Lajitas Array	66.67	330	P	P	07 06 46.6	+1.6
	comp=Z,0.4nm,0.8s,baz=138,slow=9.6,SNR=5.2						
TXAR	Lajitas Array	66.67	330	P	P	07 06 45.4	+0.5
TX31	Lajitas Ar. Si	66.67	330	P	P	07 06 44.5	-0.4
HHAR	Hobbs	69.47	341	P	P	07 07 03.3	+1.0
HHAR				IAmb	IAmb	07 07 10.4	
	comp=Z,4.2nm,1.2s						
OLIL	Olney	70.40	347	P	P	07 07 09.0	+1.1
N58A	Sunbury	70.99	356	P	P	07 07 12.5	+1.1
DBIC	Dimbokro	73.89	72	P	P	07 07 29.0	-0.3
	comp=Z,2.4nm,0.5s,baz=234,slow=5.4,SNR=6.6						
DBIC	Dimbokro	73.89	72	P	P	07 07 29.1	-0.3
DBIC				IAmb	IAmb	07 07 29.5	
	comp=Z,2.7nm,0.6s						
ISCO	Idaho Springs	76.54	334	P	P	07 07 45.5	+1.0
TORD	Torodi Ar. Bea	82.83	70	P	P	07 08 18.6	-0.2
	comp=Z,2.0nm,0.7s,baz=245,slow=4.8,SNR=12						
TORD	Torodi Ar. Bea	82.83	70	P	P	07 08 18.5	-0.2
TORD				IAmb	IAmb	07 08 19.2	
	comp=Z,2.4nm,0.8s						
ZALV	Zalesovo Beam	151.02	29	PKPbc	PKPbc	07 15 47.0	+0.6
	comp=Z,9.3nm,0.7s,baz=298,slow=3.2,SNR=32						
MKAR	Makanchi Array	154.13	43	PKPbc	PKPbc	07 15 53.8	+0.1
	comp=Z,0.8nm,0.7s,baz=336,slow=2.7,SNR=5.0						

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*IDC **17** 07:06:00.5±3.5, 23°.48S×179°.93W, h522^{km}±28^{km}, mb3.3/5, mb1 3.6/6, mb1mx3.0/37, mbtmp4.2/6, Error ellipse: s-maj=73.6km s-min=20.2km az=148.0*
*NEIC **17** 07:06:01.7±1.1, 23°.5S±0°.1×179°.9W±0°.1, h539^{km}±8^{km}, mb4.2/11, Error ellipse: s-maj=23.0km s-min=16.0km az=144.0*

ISC 17 07:06:01.2±0.9**, 23°.5S**±0°.1×**179°.9W**±0°.1**, h532**^{km}**, n25, σ0**^{s}**91**/25**, mb4.1**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.02	341	P	P	07 07 39.2	-0.2
	0.8nm,0.3s,baz=336,slow=23,SNR=11						
MSVF	Nonsavu	6.02	341	P	P	07 07 40.1	+0.7
MARNC	Mare, Loyalty	11.35	278	P	P	07 08 33.0	+0.1
PINNC	Pines Island,	11.70	272	P	P	07 08 38.6	+2.1
LIFNC	LIFOU	12.23	280	P	P	07 08 42.0	-0.2
OUZ	Omahuta	13.02	204	P	P	07 08 50.2	+0.1
ARMA	Armidale	26.28	249	P	P	07 10 54.8	+0.5
ARMA				IAmb	IAmb	07 11 22.1	
	comp=Z,11nm,1.3s						
EIDS	Eidsvold	26.48	260	P	P	07 10 56.1	+0.1
EIDS				IAmb	IAmb	07 10 59.2	
	comp=Z,19nm,1.3s						
CTAO	Charters Tower	31.58	270	P	P	07 11 40.4	0.0
TOO	Toolangi	32.77	237	P	P	07 11 50.1	-0.3
TOO				IAmb	IAmb	07 12 07.5	
	comp=Z,17nm,1.5s						
TAU	Tasmania Unive	33.31	226	P	P	07 11 54.8	+0.1
STKA	Stephens Creek	34.98	248	P	P	07 12 08.8	-0.3
	comp=Z,1.7nm,0.5s,baz=93,slow=9.6,SNR=7.6						
STKA	Stephens Creek	34.98	248	P	P	07 12 08.7	-0.3
BBOO	Buckleboo	39.71	246	P	P	07 12 46.4	-1.2
BBOO				IAmb	IAmb	07 12 46.8	
	comp=Z,3.0nm,0.6s						
AS31	Alice Springs	42.21	260	P	P	07 13 07.2	-0.5
AS31				IAmb	IAmb	07 13 08.2	
	comp=Z,2.0nm,0.4s						
ASAR	Alice Springs	42.21	260	P	P	07 13 07.2	-0.5
	comp=Z,4.2nm,0.7s,baz=101,slow=7.2,SNR=56						
ASAR				ScP	ScP	07 17 52.1	+2.5
	comp=Z,0.8nm,0.8s,baz=110,slow=4.1,SNR=5.9						
WB2	Warramunga Arr	42.53	266	P	P	07 13 09.4	-0.9
WB2				IAmb	IAmb	07 13 09.9	
	comp=Z,6.6nm,0.7s						
WRA	Warramunga Arr	42.54	266	P	P	07 13 09.4	-1.0
	comp=Z,4.7nm,0.3s,baz=96,slow=8.4,SNR=142						
WRA	Warramunga Arr	42.54	266	P	P	07 13 09.3	-1.0
QSPA	South Pole Qui	66.62	180	P	P	07 15 58.5	-0.1
QSPA				IAmb	IAmb	07 16 00.4	
	comp=Z,3.3nm,0.9s						
TXAR	Lajitas Array	90.11	58	P	P	07 18 05.4	+0.6
	comp=Z,0.4nm,0.7s,baz=222,slow=7.9,SNR=5.6						
ILAR	Eielson Array	91.58	14	P	P	07 18 09.8	-0.9
	comp=Z,0.6nm,1.0s,baz=209,slow=6.9,SNR=2.6						
HFS	Hagfors	142.14	349	PKhKP	PKPpre	07 24 27.9	
	comp=Z,1.0nm,0.3s,baz=70,slow=4.9,SNR=9.2						
AKASG	Malin Array Be	144.66	328	PKP	PKPdf	07 24 36.5	-0.5
	comp=Z,0.3nm,0.4s,baz=46,slow=3.9,SNR=5.6						
CLL	Collm	150.47	343	i PKPbc	PKPbc	07 24 52.7	+0.3

*JMA **17** 07:07:21.6±0.1, 28°.07N×139°.91E, h533^{km}, M4.4*
*NEIC **17** 07:07:22.9±1.3, 28°.0N±0°.1×139°.6E±0°.1, h523^{km}±10^{km}, mb4.1/13, Error ellipse: s-maj=18.6km s-min=15.0km az=94.0*
*IDC **17** 07:07:22.6±0.8, 27°.93N×139°.47E, h522^{km}±9^{km}, mb3.1/18, mb1 3.4/25, mb1mx3.2/56, mbtmp4.1/25, Error ellipse: s-maj=15.8km s-min=8.5km az=83.0*
ISC 17 07:07:22.7±0.4**, 27°.99N**±0°.05×**139°.74E**±0°.08**, h533^{km}, n73, σ1^{s}.71**/86**, mb3.8**/27**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.35	112	P	P	07 08 31.5	-1.0
CBIJ				eS	S	07 09 26.3	-3.0
JCJ	Chichijima	2.35	112	P	P	07 08 31.5	-1.1
	76nm,0.3s,baz=42,slow=6.3,SNR=20						
JCJ				S	S	07 09 23.4	-6.0
	98nm,0.3s,baz=261,slow=2.1,SNR=16						
JCJ	Chichijima	2.35	112	P	P	07 08 31.8	-0.8
JHH2	Haha-jima-NKT2	2.56	122	P	P	07 08 32.6	-1.1
JHH2				eS	S	07 09 28.6	-2.8
JHJ	Hachijo jima 2	5.11	0	P	P	07 08 51.6	-0.7
	20nm,0.3s,baz=95,slow=22,SNR=1.9						
JHJ				S	S	07 10 01.9	-3.8
	164nm,0.3s,baz=85,slow=21,SNR=6.9						
BSO1	Boso 1	6.72	9	P	P	07 09 06.1	-0.4
JOD2	Odawara 2	7.27	356	P	P	07 09 12.1	-0.4
JNY	Yasuok	7.51	348	P	P	07 09 14.5	-0.5
JMN	Monobe	7.62	320	P	P	07 09 17.0	+1.0
INU	Inuyama	7.69	343	P	P	07 09 16.8	+0.1
JTO	Tosashimizu	7.71	311	P	P	07 09 17.1	+0.2
JHU	Hanno	7.84	357	P	P	07 09 16.3	-1.9
JHU				eS	S	07 10 48.7	-4.3
JGF	Kuroka	7.85	346	P	P	07 09 19.1	+0.8
JRY	Ryogami san	8.03	355	P	P	07 09 19.8	-0.3
JRY				eS	S	07 10 53.4	-3.1
JWT	Wachi	8.15	334	P	P	07 09 22.0	+0.7
JYT	Yasato	8.22	3	eS	S	07 10 55.8	-4.0
JYT	Yasato	8.22	3	P	P	07 09 21.9	-0.1
JAG	Ashikaga	8.41	358	P	P	07 09 22.3	-1.6
JAG				eS	S	07 10 59.6	-3.8
JHO	Hitachi	8.62	4	P	P	07 09 26.1	+0.1
MJAR	Matsushiro Arr	8.62	352	P	P	07 09 24.8	-1.2
	0.6nm,0.3s,baz=174,slow=8.9,SNR=14						
MJAR				S	S	07 11 08.4	+1.0
	0.3nm,0.3s,baz=12,slow=12,SNR=2.0						
MAJO	Matsushiro	8.62	352	P	P	07 09 25.9	-0.1
MAT	Matsushiro	8.62	352	P	P	07 09 25.2	-0.9
MAT				eS	S	07 11 02.5	-4.9
JHS	Saijyo	8.98	323	P	P	07 09 30.5	+0.7
JHS	Saijyo	8.98	323	P	P	07 09 31.2	+1.4
JNU	Nakatsue	9.19	306	P	P	07 09 29.7	-2.3
	0.9nm,0.3s,baz=93,slow=4.9,SNR=7.7						
JMM	Marumori	9.88	5	P	P	07 09 39.6	+0.7
KSRS	Korea Array	13.70	317	P	P	07 10 17.0	-1.7
	0.4nm,0.3s,baz=135,slow=10,SNR=3.6						
GUMO	Guam	15.11	161	P	P	07 10 33.8	+0.1
	7.8nm,0.3s,baz=164,slow=21,SNR=4.2						
GUMO	Guam	15.11	161	IAmb	IAmb	07 10 36.6	
	comp=Z,132nm,0.8s						
ASAJ	Asahikawa	16.25	7	P	P	07 10 45.6	+0.8
	comp=Z,0.6nm,0.3s,baz=220,slow=33,SNR=1.9						
USA0B	Ussuriysk Arra	17.33	341	P	P	07 10 56.9	+1.9
USRK	Ussuriysk Ar.	17.33	341	P	P	07 10 56.1	+1.1
	baz=167,slow=10,SNR=29						
SSLB	Suanglung	17.41	260	P	P	07 10 55.0	-1.2
KLR	Kul'dur	22.08	346	P	P	07 11 39.2	+1.2
	comp=Z,2.1nm,0.4s,baz=166,slow=8.9,SNR=9.3						
SONM	Songino Array	32.57	317	P	P	07 13 10.0	0.0
	comp=Z,0.4nm,0.5s,baz=144,slow=6.4,SNR=3.7						
SONM	Songino Array	32.57	317	IAmb	IAmb	07 13 13.4	
	comp=Z,0.7nm,0.8s						
SEY	Seymchan	35.91	10	P	P	07 13 38.1	+0.5
	comp=Z,2.4nm,0.8s,baz=28,slow=22,SNR=2.3						
CMAR	Chiang Mai Arr	38.52	265	P	P	07 13 59.1	-0.6
	comp=Z,1.8nm,0.3s,baz=56,slow=9.0,SNR=8.6						
JIRN	Jiri	47.03	283	eP	P	07 15 07.0	+0.4
	comp=Z,20nm,0.6s						
GUN	Gumba	47.24	283	eP	P	07 15 08.4	+0.3
	comp=Z,23nm,0.7s						
ZALV	Zalesovo Beam	47.39	319	P	P	07 15 08.0	-0.4
	comp=Z,0.9nm,0.3s,baz=107,slow=8.8,SNR=3.5						
ZALV				ScP	ScP	07 19 30.8	-0.8
	comp=Z,2.0nm,0.7s,baz=106,slow=5.2,SNR=5.0						
WRA	Warramunga Arr	47.94	187	P	P	07 15 12.8	-0.1
	comp=Z,3.6nm,0.6s,baz=2.2,slow=7.8,SNR=37						
WRA				PcP	PcP	07 16 32.4	+1.4
	comp=Z,0.9nm,0.6s,baz=359,slow=1.1,SNR=5.9						
WRA				ScP	ScP	07 19 35.5	+1.1
	comp=Z,0.7nm,0.9s,baz=2.3,slow=5.1,SNR=2.9						
WRA				S	S	07 21 27.3	-4.1
	comp=Z,0.5nm,0.6s,baz=1.7,slow=14,SNR=2.2						
WRA	Warramunga Arr	47.94	187	P	P	07 15 13.0	0.0
MKAR	Makanchi Array	48.23	309	P	P	07 15 14.9	0.0
	comp=Z,0.1nm,0.3s,baz=85,slow=7.7,SNR=2.5						
MKAR				ScP	ScP	07 19 35.1	-0.3
	comp=Z,1.3nm,0.9s,baz=92,slow=3.8,SNR=5.3						
GKN	Gorkha	48.29	284	eP	P	07 15 16.1	+0.4
	comp=Z,21nm,0.3s						
DANN	Dangsing	48.96	284	eP	P	07 15 21.0	+0.1
PYUN	Piuthan	49.68	284	eP	P	07 15 25.9	-0.2
	comp=Z,18nm,0.7s						
NRIK	Noril'sk	51.03	339	P	P	07 15 35.0	0.0
	comp=Z,2.6nm,0.5s,baz=117,slow=7.9,SNR=5.5						
NRIK	Noril'sk	51.03	339	IAmb	IAmb	07 15 36.2	
	comp=Z,2.9nm,0.7s						
AS31	Alice Springs	51.67	187	P	P	07 15 40.1	-0.2
AS31				IAmb	IAmb	07 15 42.0	
	comp=Z,1.6nm,0.5s						
ASAR	Alice Springs	51.67	187	P	P	07 15 40.2	-0.1
	comp=Z,1.8nm,0.6s,baz=16,slow=13,SNR=31						
ASAR				PcP	PcP	07 16 45.8	+1.1
	comp=Z,0.9nm,0.7s,baz=12,slow=4.3,SNR=6.7						
ASAR				ScP	ScP	07 19 52.0	+1.6
	comp=Z,0.2nm,0.5s,baz=358,slow=4.8,SNR=1.7						
ASAR				S	S	07 22 20.1	-1.9
	comp=Z,0.5nm,0.9s,baz=12,slow=14,SNR=4.5						
PSA00	Pilbara Seismi	52.90	203	P	P	07 15 49.4	+0.3
PSA00				IAmb	IAmb	07 15 49.8	
	comp=Z,3.5nm,0.7s						
PSA00	Pilbara Seismi	52.90	203	P	P	07 15 48.9	-0.1
PSA00				IAmb	IAmb	07 15 55.1	
	comp=Z,22nm,1.4s						
BOOM	Boomskoye usch	52.91	304	P	P	07 15 50.2	+1.0
BOOM				IAmb	IAmb	07 16 04.5	
	comp=Z,14nm,1.2s						
KSH	Kashi	53.26	300	PKPbc	P	07 15 50.3	-1.4
BVAR	Borovoye Array	55.91	317	ScP	ScP	07 20 07.8	-0.8
	comp=Z,0.7nm,0.5s,baz=240,slow=1.2,SNR=4.4						
ILAR	Eielson Array	57.97	29	P	P	07 16 25.0	+1.2
	comp=Z,0.4nm,0.6s,baz=245,slow=5.2,SNR=5.8						
CHGR	Chuyangaron	58.62	300	P	P	07 16 29.2	+0.3
CHGR				IAmb	IAmb	07 16 29.9	
	comp=Z,11nm,0.7s						
STKA	Stephens Creek	59.57	178	P	P	07 16 35.4	+0.4
	comp=Z,1.3nm,0.7s,baz=315,slow=9.9,SNR=4.3						
ABKAR	Akbulak array	62.91	314	P	P	07 16 57.2	+0.6
ABKAR	Akbulak array	62.91	314	P	P	07 16 57.3	+0.6
ABKAR				IAmb	IAmb	07 16 58.0	
	comp=Z,2.4nm,1.1s						
INK	Inuvik	63.12	25	P	P	07 16 59.7	+2.0
	comp=Z,2.3nm,1.3s,baz=157,slow=24,SNR=1.6						
KBZ	Khabaz	75.81	312	P	P	07 18 14.5	+0.5
	comp=Z,1.6nm,0.6s,baz=36,slow=7.2,SNR=3.6						
FINES	FINESS Array B	76.18	333	P	P	07 18 15.5	-0.2
	comp=Z,1.4nm,0.4s,baz=71,slow=6.1,SNR=14						
AKASG	Malin Array Be	80.60	323	P	P	07 18 38.9	-0.7
	comp=Z,0.2nm,0.4s,baz=50,slow=6.0,SNR=4.4						
NVAR	Mina Array Bea	81.65	51	P	P	07 18 48.5	+2.9
	comp=Z,0.5nm,0.6s,baz=289,slow=6.0,SNR=5.3						
NOA	NORSAR Array B	81.96	337	P	P	07 18 46.5	0.0
	comp=Z,0.7nm,0.6s,baz=44,slow=5.0,SNR=2.4						
RAYN	Ar Rayn	82.80	293	P	P	07 18 52.1	+0.7
RAYN				IAmb	IAmb	07 18 53.1	
	comp=Z,6.8nm,0.8s						
TXAR	Lajitas Array	96.78	52	P	P	07 19 59.4	+2.7
	comp=Z,0.2nm,0.7s,baz=248,slow=2.4,SNR=2.4						
TORD	Torodi Ar. Bea	122.35	310	PKP	PKiKP	07 25 18.5	+0.3
	comp=Z,0.4nm,0.7s,baz=69,slow=0.8,SNR=2.2						
DBIC	Dimbokro	131.46	310	SKPbc	SKPab	07 28 12.1	-0.1
	comp=Z,2.1nm,0.6s,baz=0.0,slow=2.0,SNR=4.6						
LPAZ	La Paz	151.75	72	PKPbc	PKiKP	07 26 20.6	+1.9
	comp=Z,1.4nm,0.7s,baz=252,slow=4.0,SNR=7.7						
PLCA	Paso Flores	152.10	125	PKPbc	PKiKP	07 26 20.1	+2.0
	comp=Z,2.5nm,0.6s,baz=238,slow=3.0,SNR=14						

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*IDC **17** 07:21:47.0±1.8, 53°.90N×161°.96E, h0^{km}, mb3.3/2, mb1 3.7/3, mb1mx3.3/45, mbtmp3.3/3, ML2.5/1, Error ellipse: s-maj=71.8km s-min=28.9km az=157.0*
*KRSC **17** 07:21:53.9±0.7, 54°.35N×160°.88E, h100^{km}±12^{km}, ML3.9*
ISC 17 07:21:56.0±1.0**, 54°.35N**±0°.03×**160°.88E**±0°.05**, h93^{km}**±8^{km}**, n43, σ0^{s}.73**/62**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.54	67	i P	Pn	07 22 12.0	+0.7
MKZ				eS	Sn	07 22 24.2	+1.4
KII	Karymskiy	0.90	250	eP	Pn	07 22 14.3	-0.6
TUMD	Tumrok D	0.90	342	eP	Pn	07 22 13.8	-1.0
TUMD				eS	Sn	07 22 27.9	-1.0
SPN	Mys Shipunski	1.35	202	i P	Pn	07 22 19.5	-0.6
SPN				eS	Sn	07 22 37.3	-0.9
KMNR	Kamenistaya	1.46	346	eP	Pn	07 22 21.4	0.0
KMNR				eS	Sn	07 22 40.5	-0.2
NLC	Nalytchevo	1.49	218	eP	Pn	07 22 21.7	-0.1
NLC				eS	Sn	07 22 41.2	0.0
BZGR	Bezymyannyi-Gr	1.60	356	eP	Pn	07 22 23.2	0.0
SDLR	Sedlovina	1.60	229	eP	Pn	07 22 23.2	-0.1
SDLR				eS	Sn	07 22 43.2	-0.7
BZWR	Bezymyannyi-We	1.63	352	eP	Pn	07 22 23.9	+0.2
KIRR	Kirishev	1.64	349	eP	Pn	07 22 23.6	-0.2
KIRR				eS	Sn	07 22 44.6	-0.2
KRER	Koryakskii	1.64	231	eP	Pn	07 22 24.0	+0.1
KRER				eS	Sn	07 22 45.3	+0.3
SMAR	Somma	1.64	229	eP	Pn	07 22 24.0	+0.1
SMAR				eS	Sn	07 22 45.3	+0.2
KPT	Kopyto	1.66	347	eP	Pn	07 22 23.6	-0.4
AVH	Avacha	1.67	230	eP	Pn	07 22 24.6	+0.5
AVH				eS	Sn	07 22 46.4	+0.9
ZLN	Zelenaya	1.67	359	eP	Pn	07 22 23.9	-0.3
UGLR	Uglovaya	1.67	228	eP	Pn	07 22 24.3	+0.1
UGLR				eS	Sn	07 22 45.3	-0.2
KOK	Koryaka	1.70	232	eP	Pn	07 22 24.8	+0.3
KOZ	Kozyrevsk	1.81	342	eP	Pn	07 22 25.4	-0.4
KOZ				eS	Sn	07 22 47.6	-0.8
DALK	Dalny	1.83	225	eP	Pn	07 22 25.9	-0.2
DALK				eS	Sn	07 22 48.4	-0.5
GNL	Ganaly	1.85	250	eP	Pn	07 22 26.4	-0.1
GNL				eS	Sn	07 22 49.8	+0.1
PET	Petropavlovsk	1.88	226	eP	Pn	07 22 26.6	-0.1
PET				eS	Sn	07 22 49.8	-0.2
KRSR	Krestovskiy	1.88	355	eP	Pn	07 22 26.4	-0.4
KLY	Klyuchi	1.97	356	eP	Pn	07 22 27.7	-0.2
KLY				eS	Sn	07 22 52.2	0.0
ESO	Esso	2.01	322	eP	Pn	07 22 29.2	+0.7
ESO				eS	Sn	07 22 53.3	0.0
KBTR	Krutoberegovo	2.17	30	eP	Pn	07 22 30.9	+0.4
KBTR				eS	Sn	07 22 56.7	-0.1
KRMR	Karymshinskiy	2.24	228	eP	Pn	07 22 31.0	-0.4
KRMR				eS	Sn	07 22 57.8	-0.6
PETK	Petropavlovsk-	2.26	238	Pn	Pn	07 22 31.2	-0.6
	4.5nm,0.3s,baz=78,slow=14,SNR=49						
PETK				Sn	Sn	07 23 01.2	+2.2
	3.4nm,0.3s,baz=49,slow=46,SNR=2.7						
SMKR	Semkarok	2.26	8	eP	Pn	07 22 31.7	-0.1
SMKR				eS	Sn	07 22 58.4	-0.8
SRKR	Sorokina	2.31	4	eP	Pn	07 22 32.7	+0.2
SRKR				eS	Sn	07 22 59.7	-0.7
RUS	Russkaya	2.39	217	eP	Pn	07 22 32.8	-0.6
RUS				eS	Sn	07 23 00.7	-1.3
APC	Apacha	2.63	239	eP	Pn	07 22 37.9	+1.2
ASAK	Asacha	2.66	223	eP	Pn	07 22 37.4	+0.3
ASAK				eS	Sn	07 23 10.2	+1.6
KDTR	Khodutka, Kamc	3.06	215	eP	Pn	07 22 41.6	-0.7
KDTR				eS	Sn	07 23 15.6	-2.4
BKI	Bering	3.07	72	eS	Sn	07 23 17.4	-0.9
MIPR	Malaya Ipel'ka	3.23	232	eP	Pn	07 22 45.0	+0.3
ILAR	Eielson Array	27.61	47	P	P	07 27 35.0	+0.8
	0.2nm,0.8s,baz=265,slow=11,SNR=1.7						
H11N2	WAKE ISLAND Hy	34.87	170	T	T	08 06 04.5	
	baz=354,slow=76,SNR=29						
H11N3	WAKE ISLAND Hy	34.88	170	T	T	08 06 05.6	
	baz=354,slow=76,SNR=29						
H11N1	WAKE ISLAND Hy	34.88	170	T	T	08 06 04.7	
	baz=354,slow=76,SNR=37						
H11S1	WAKE ISLAND Hy	36.05	171	T	T	08 07 21.4	
	baz=357						
H11S3	WAKE ISLAND Hy	36.07	171	T	T	08 07 05.8	
	baz=357						
H11S2	WAKE ISLAND Hy	36.07	171	T	T	08 07 21.8	
	baz=357						
TXAR	Lajitas Array	69.72	68	P	P	07 32 55.8	-0.1
	0.2nm,0.5s,baz=294,slow=5.2,SNR=7.4						

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*IDC **17** 07:24:25.7±2.9, 32°.02S×71°.95W, h0^{km}, mb4.1/1, mb1 3.7/4, mb1mx3.5/24, mbtmp3.6/4, ML3.5/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/21, Error ellipse: s-maj=118.4km s-min=33.5km az=98.0*
*GUC **17** 07:24:31.6±0.6, 32°.18S×71°.73W, h22^{km}±6^{km}, ML3.4*
ISC 17 07:24:29.3±0.9**, 32°.11S**±0°.03×**71°.80W**±0°.08**, h22^{km}**±5^{km}**, n30, σ0^{s}.63**/28**, 1C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.62	137	⇓iP	Pn	07 24 42.3	-0.5
VA06				i S	Sb	07 24 49.2	-0.6
VA06				IAML		07 24 51.9	
	comp=E,5µm,0.6s						
VA01	Torpederas	0.92	172	eP	Pn	07 24 47.0	0.0
VA01				i S	Sb	07 24 58.8	+0.4
VA01				IAML		07 25 02.7	
	comp=E,2µm,0.1s						
ROCH	El Roble	1.09	143	⇓iP	Pb	07 24 49.7	+0.2
ROCH				i S	Sb	07 25 03.7	+0.3
ROCH				IAML		07 25 07.4	
	comp=N,2µm,0.6s						
VA03	San Esteban	1.24	122	⇓iP	Pb	07 24 52.0	-0.1
VA03				i S	Sn	07 25 07.8	+0.2
VA03				IAML		07 25 11.6	
	comp=E,2µm,0.1s						
MT02	Curacav	1.28	154	⇓iP	Pb	07 24 52.5	-0.2
MT02				i S	Sn	07 25 08.5	+0.2
PEL	Peldehue	1.40	138	eP	Pb	07 24 54.5	-0.2
PEL				i S	Sn	07 25 11.9	+0.6
PEL				IAML		07 25 29.7	
	comp=N,880nm,0.3s						
CO06	Fray Jorge	1.43	6	eP	Pb	07 24 55.0	-0.2
CO06				i S	Sb	07 25 12.7	-0.4
CO06				IAML		07 25 19.6	
	comp=E,1µm,0.5s						
VA05	Santo Domingo	1.56	174	eP	Pn	07 24 56.1	+0.5
VA05				i S	Sb	07 25 16.6	0.0
VA05				IAML		07 25 24.0	
	comp=N,2µm,0.5s						
MT05	Renca	1.56	145	eP	Pb	07 24 57.0	-0.5
MT05				i S	Sb	07 25 16.7	-0.2
MT05				IAML		07 25 23.3	
	comp=E,959nm,0.6s						
CO03	El Pedregal	1.58	37	⇓iP	Pb	07 24 58.0	+0.2
CO03				i S	Sb	07 25 18.6	+1.2
CO03				IAML		07 25 20.9	
	comp=E,2µm,0.4s						
MT09	Talagante	1.80	158	⇑iP	Pb	07 25 00.8	-0.8
MT09				i S	Sn	07 25 23.0	+1.6
MT09				IAML		07 25 31.2	
	comp=E,867nm,0.5s						
H03N1	Juan Fernandez	6.14	256	T	T	07 32 35.9	
	baz=83,slow=73,SNR=1191						
H03N3	Juan Fernandez	6.15	255	T	T	07 32 34.7	
	baz=83,slow=73,SNR=1230						
H03N2	Juan Fernandez	6.16	256	T	T	07 32 32.1	
	baz=83,slow=73,SNR=1389						
H03S3	Juan Fernandez	6.22	252	T	T	07 32 40.9	
	baz=83						
H03S1	Juan Fernandez	6.22	252	T	T	07 32 36.6	
	baz=83						
H03S2	Juan Fernandez	6.24	252	T	T	07 32 36.5	
	baz=83						
PLCA	Paso Flores	8.67	174	Pn	Pn	07 26 34.4	+1.0
	comp=E,0.3nm,0.3s,baz=327,slow=8.0,SNR=7.9						
CPUP	Villa Florida	13.88	69	LR	LR	07 33 40.6	
	comp=E,77nm,19.4s,baz=228,slow=40						
LPAZ	La Paz	16.10	13	Pn	Pn	07 28 14.0	-0.8
	comp=E,0.0nm,0.3s,baz=168,slow=8.1,SNR=2.8						
SIV	San Ignacio	18.77	34	P	Pn	07 28 46.9	-0.7
	comp=E,0.1nm,0.3s,baz=223,slow=8.1,SNR=3.0						
TORD	Torodi Ar. Bea	83.38	70	P	P	07 36 55.3	+0.2
	comp=E,1.2nm,0.8s,baz=255,slow=4.5,SNR=7.9						
H11S2	WAKE ISLAND Hy	125.98	270	T	T	10 02 22.8	
	baz=117,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	125.99	270	T	T	10 02 31.0	
	baz=117,slow=75,SNR=16						
H11S3	WAKE ISLAND Hy	126.00	270	T	T	10 02 31.0	
	baz=117,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	126.35	272	T	T	10 02 58.1	
	baz=116,slow=74						
H11N1	WAKE ISLAND Hy	126.36	272	T	T	10 02 58.2	
	baz=116						
H11N2	WAKE ISLAND Hy	126.36	272	T	T	10 02 57.7	
	baz=116,slow=74						
ZALV	Zalesovo Beam	152.51	31	PKPbc	PKiKP	07 44 23.0	-0.5
	comp=E,0.7nm,0.5s,baz=298,slow=3.1,SNR=1.6						
MKAR	Makanchi Array	155.34	46	PKPab	PKPab	07 44 46.2	+0.1
	comp=E,0.6nm,0.7s,baz=316,slow=5.2,SNR=4.2						

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*MDD **17** 07:55:09.4±0.9, 37°.10N×9°.48W, h27^{km}±6^{km}, mbLg2.9/18, Error ellipse: s-maj=9.2km s-min=5.4km az=36.0, PRXIMO*
*CNRM **17** 07:55:10.6, 36°.87N×9°.26W, h37^{km}, ml2.8*
*INMG **17** 07:55:10.1±1.4, 37°.09N×9°.45W, h24^{km}±4^{km}, MD2.8, ML2.5, Error ellipse: s-maj=3.3km s-min=3.2km az=36.0*
*IGIL **17** 07:55:10.0, 37°.08N×9°.45W, h27^{km}, ML2.6*
ISC 17 07:55:07.6±1.4**, 37°.05N**±0°.04×**9°.47W**±0°.06**, h53^{km}**±8^{km}**, n92, σ1^{s}.46**/171**, 2C-5D, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSVI	Cabo S. Vicent	0.38	93	ePg	Pn	07 55 18.2	+0.4
PSVI				eSg	Sn	07 55 25.0	-0.1
PFVI	Vila Bisbo	0.52	80	⇓iPg	Pn	07 55 19.7	+0.3
PFVI				eSg	Sn	07 55 27.3	-0.5
PFVI				A	A	07 55 27.9	
	380nm,0.3s						
PFVI	Vila Bisbo	0.52	80	⇓P	Pn	07 55 19.7	+0.3
	97nm,0.1s,SNR=18						
PFVI				S	Sn	07 55 27.0	-0.8
	435nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	0.52	80	P	Pn	07 55 19.6	+0.2
PFVI				S	Sn	07 55 27.7	-0.1
PALJ	Aljezur	0.60	63	ePg	Pn	07 55 20.9	+0.6
PALJ				eSg	Sn	07 55 29.5	+0.1
PLAGO	Lagos	0.63	85	eSg	Sn	07 55 30.3	+0.3
MORF	Marmelete	0.71	68	eP	Pn	07 55 22.2	+0.6
MORF				eS	Sn	07 55 31.3	-0.5
MORF				IAML		07 55 32.1	
	comp=N,217nm,0.1s						
MORF	Marmelete	0.71	68	⇓iPg	Pn	07 55 22.2	+0.6
MORF				eSg	Sn	07 55 31.6	-0.2
MORF				A	A	07 55 33.5	
	comp=N,100nm,0.3s						
MORF	Marmelete	0.71	68	P	Pn	07 55 22.2	+0.6
MORF				S	Sn	07 55 31.3	-0.5
PPOR	Portimao	0.76	83	ePg	Pn	07 55 24.9	+2.7
PPOR				eSg	Sn	07 55 32.1	-0.7
PTEO	Sao Teotonio	0.78	50	eP	Pn	07 55 23.3	+0.8
PTEO				eS	Sn	07 55 33.4	+0.1
PTEO				A	A	07 55 37.5	
	comp=N,34nm,0.2s						
PTEO	Sao Teotonio	0.78	50	P	Pn	07 55 23.3	+0.8
PTEO				S	Sn	07 55 33.4	+0.1
	comp=N,17nm,0.2s						
PBDV	Barranco-do-Ve	1.25	80	⇓iP	Pn	07 55 29.9	+1.1
PBDV				eS	Sn	07 55 45.0	+0.4
PBDV				A	A	07 55 54.1	
	comp=N,35nm,0.2s						
PBDV	Barranco-do-Ve	1.25	80	P	Pn	07 55 29.9	+1.1
PBDV				S	Sn	07 55 45.0	+0.4
	comp=N,35nm,0.2s						
MESJ	Messejana	1.27	51	eP	Pn	07 55 30.2	+1.1
MESJ	Messejana	1.27	51	eP	Pn	07 55 30.5	+1.4
MESJ				eS	Sn	07 55 45.3	+0.2
MESJ				A	A	07 55 59.3	
	comp=N,24nm,0.5s						
MESJ	Messejana	1.27	51	P	Pn	07 55 30.2	+1.1
MESJ				S	Sn	07 55 45.3	+0.2
	comp=N,24nm,0.5s						
PCVE	Castro Verde	1.28	62	eP	Pn	07 55 30.3	+1.1
PCVE				eS	Sn	07 55 45.5	+0.1
PCVE				A	A	07 55 58.9	
	comp=N,36nm,0.5s						
PCVE	Castro Verde	1.28	62	P	Pn	07 55 30.3	+1.1
PCVE				S	Sn	07 55 45.5	+0.1
	comp=N,36nm,0.5s						
PNCL	Nicolau / Gran	1.30	35	eP	Pn	07 55 30.4	+0.9
PNCL				eS	Sn	07 55 46.0	+0.2
PNCL				A	A	07 55 58.8	
	comp=N,28nm,0.2s						
PNCL	Nicolau / Gran	1.30	35	P	Pn	07 55 30.4	+0.9
PNCL				S	Sn	07 55 46.0	+0.2
	comp=N,28nm,0.2s						
PVAQ	Vaqueiros	1.45	75	⇓iP	Pn	07 55 32.6	+1.2
PVAQ				eS	Sn	07 55 49.5	+0.2
PVAQ				A	A	07 56 01.7	
	comp=N,31nm,0.2s						
PVAQ	Vaqueiros	1.45	75	P	Pn	07 55 32.6	+1.2
PVAQ				S	Sn	07 55 49.5	+0.2
	comp=N,31nm,0.2s						
PVAQ	Vaqueiros	1.45	75	P	Pn	07 55 32.6	+1.2
PVAQ				S	Sn	07 55 50.6	+1.3
PBEJ	Beja	1.61	52	eP	Pn	07 55 34.9	+1.2
PBEJ				eS	Sn	07 55 53.6	+0.3
PBEJ	Beja	1.61	52	P	Pn	07 55 34.9	+1.2
PBEJ				S	Sn	07 55 53.6	+0.3
EGRO	El Granado	1.66	72	P	Pn	07 55 35.5	+1.2
	comp=N,2.5nm,0.1s,SNR=24						
EGRO				S	Sn	07 55 55.3	+0.8
	comp=N,20nm,0.1s,SNR=9.6						
PMST	Lisbon--Monsan	1.70	8	eS	Sn	07 55 55.8	+0.2
EVO	Evora	1.88	38	ePn	Pn	07 55 38.2	+0.8
EVO				eSn	Sn	07 55 59.6	-0.3
EVO	Evora	1.88	38	P	Pn	07 55 38.2	+0.8
EVO				S	Sn	07 55 59.6	-0.3
PMAFR	Mafra	1.91	4	ePn	Pn	07 55 38.7	+0.9
PMAFR				eSn	Sn	07 56 00.6	-0.1
PMAFR				A	A	07 56 03.2	
	comp=N,86nm,0.2s						
PMAFR	Mafra	1.91	4	P	Pn	07 55 38.7	+0.9
	comp=N,17nm,0.1s,SNR=7.9						
PMAFR				S	Sn	07 56 00.3	-0.4
	comp=N,100nm,0.1s,SNR=7.9						
PBAR	Barrancos	2.24	59	eSn	Sn	07 56 08.3	-0.4
PBAR	Barrancos	2.24	59	S	Sn	07 56 08.3	-0.4
PMTG	Montargil	2.25	26	ePn	Pn	07 55 43.4	+1.0
PMTG				eSn	Sn	07 56 08.5	-0.4
PMTG				A	A	07 56 10.2	
	comp=N,14nm,0.1s						
PMTG	Montargil	2.25	26	P	Pn	07 55 43.4	+1.0
PMTG				S	Sn	07 56 08.5	-0.4
	comp=N,14nm,0.1s						
EMIN	Mina Concepcio	2.34	71	P	Pn	07 55 44.5	+0.8
	comp=N,1.5nm,0.1s,SNR=7.8						
EMIN				S	Sn	07 56 11.7	+0.4
	comp=N,15nm,0.2s,SNR=12						
PESTR	Estremoz	2.35	39	ePn	Pn	07 55 44.5	+0.7
PESTR				eSn	Sn	07 56 11.1	-0.3
PESTR				A	A	07 56 24.8	
	comp=N,8.6nm,0.6s						
PESTR	Estremoz	2.35	39	P	Pn	07 55 47.0	+3.2
PESTR				S	Sn	07 56 15.1	+3.7
PSBE	So Bento	2.52	12	⇑ePn	Pn	07 55 47.3	+1.2
PSBE				eSn	Sn	07 56 15.3	-0.4
PSBE				A	A	07 56 19.1	
	comp=N,14nm,0.4s						
EBAD	Badajoz	2.59	48	P	Pn	07 55 47.7	+0.7
	comp=N,3.2nm,0.1s,SNR=16						
EBAD				S	Sn	07 56 17.4	+0.1
	comp=N,9.2nm,0.1s,SNR=5.7						
PMRV	Marv??o	2.89	34	ePn	Pn	07 55 52.4	+1.2
PMRV				eSn	Sn	07 56 23.7	-1.0
PMRV				A	A	07 56 26.0	
	comp=N,12nm,0.2s						
PMRV	Marv??o	2.89	34	P	Pn	07 55 52.4	+1.2
PMRV				S	Sn	07 56 23.7	-1.0
	comp=N,12nm,0.2s						
ESPR	Espera	2.90	92	P	Pn	07 55 52.8	+1.5
	comp=N,16nm,0.2s,SNR=11						
ESPR				S	Sn	07 56 25.0	0.0
	comp=N,41nm,0.3s,SNR=6.3						
PCAS	Casmilo, Conde	3.10	14	ePn	Pn	07 55 55.4	+1.4

PCAS				eSn	Sn	07 56 28.6	-1.2
PCAS				A	A	07 56 33.1	
	comp=N,7.0nm,0.3s						
PCAS	Casmilo, Conde	3.10	14	P	Pn	07 55 55.4	+1.4
PCAS				S	Sn	07 56 28.6	-1.2
	comp=N,7.0nm,0.3s						
PCBR	Castelo Branco	3.20	29	ePn	Pn	07 55 57.3	+1.9
PCBR				eSn	Sn	07 56 31.7	-0.6
PCBR	Castelo Branco	3.20	29	P	Pn	07 55 57.3	+1.9
PCBR				S	Sn	07 56 31.7	-0.6
EJIF	Jimena Fronter	3.27	99	P	Pn	07 55 58.4	+2.0
	comp=N,9µm,0.2s,SNR=7.9						
ECAB	El Cabril	3.38	71	⇑P	Pn	07 55 59.2	+1.2
	comp=N,1.6nm,0.1s,SNR=18						
ECAB				S	Sn	07 56 35.8	-1.0
	comp=N,12nm,0.2s,SNR=15						
ECEU	Ceuta	3.50	108	P	Pn	07 56 01.3	+1.8
	comp=N,4.4nm,0.1s,SNR=5.0						
MTE	Manteigas	3.67	24	ePn	Pn	07 56 03.1	+1.2
MTE				eSn	Sn	07 56 42.3	-1.7
MTE				A	A	07 56 44.7	
	comp=N,4.7nm,0.3s						
MTE	Manteigas	3.67	24	P	Pn	07 56 03.1	+1.2
MTE				S	Sn	07 56 42.3	-1.7
	comp=N,2.3nm,0.3s						
EMIJ	Mijas	3.80	96	P	Pn	07 56 05.7	+2.0
	comp=N,0.9nm,0.1s,SNR=7.9						
EMIJ				S	Sn	07 56 46.4	-0.8
	comp=N,3.5nm,0.2s,SNR=7.9						
PVIS	Viseu	3.87	18	ePn	Pn	07 56 05.8	+1.2
PVIS				eSn	Sn	07 56 47.5	-1.2
PVIS	Viseu	3.87	18	P	Pn	07 56 05.8	+1.2
PVIS				S	Sn	07 56 47.5	-1.2
CHEFC	Chefchaouen	3.87	119	P	Pn	07 56 06.3	+1.7
CHEFC				S	Sn	07 56 44.5	-4.3
EPLA	Plasencia	4.02	40	P	Pn	07 56 07.1	+0.4
	comp=N,0.7nm,0.1s,SNR=5.9						
EPLA				S	Sn	07 56 50.7	-1.8
	comp=N,4.5nm,0.1s,SNR=7.9						
EADA	Adamuz	4.05	72	P	Pn	07 56 08.5	+1.4
	comp=N,1.2nm,0.1s,SNR=5.4						
EADA				S	Sn	07 56 52.6	-0.6
	comp=N,4.6nm,0.1s,SNR=7.9						
ZHG	ZHG	4.27	146	P	Pn	07 56 11.2	+1.0
ZHG				S	Sn	07 56 58.3	-0.6
EGOR	Sierra Gorda,	4.29	88	S	Sn	07 56 59.4	+0.1
	comp=N,5.3nm,0.4s,SNR=7.9						
PVRL	Vila Real	4.44	17	ePn	Pn	07 56 13.5	+1.1
PVRL				eSn	Sn	07 57 01.6	-1.2
PVRL	Vila Real	4.44	17	P	Pn	07 56 13.5	+1.1
PVRL				S	Sn	07 57 01.6	-1.2
POLO	Lamas de Olo	4.51	16	ePn	Pn	07 56 14.5	+1.0
POLO				eSn	Sn	07 57 02.3	-2.4
POLO				A	A	07 57 04.9	
	comp=N,2.8nm,0.3s						
POLO	Lamas de Olo	4.51	16	P	Pn	07 56 14.5	+1.0
POLO				S	Sn	07 57 02.3	-2.4
	comp=N,2.8nm,0.3s						
MVO	Moncorvo	4.53	24	ePn	Pn	07 56 14.8	+1.1
MVO				eSn	Sn	07 57 03.2	-1.9
MVO				A	A	07 57 05.6	
	comp=N,4.5nm,0.2s						
MVO	Moncorvo	4.53	24	P	Pn	07 56 14.6	+0.9
	comp=N,0.9nm,0.1s,SNR=7.9						
MVO				S	Sn	07 57 02.2	-2.9
	comp=N,6.5nm,0.4s,SNR=7.9						
PAB	San Pablo	4.74	57	P	Pn	07 56 17.7	+1.1
	comp=N,0.8nm,0.1s,SNR=7.9						
PAB				S	Sn	07 57 08.0	-2.3
	comp=N,2.0nm,0.3s,SNR=7.9						
PCAB	Cabril	4.79	13	ePn	Pn	07 56 17.3	+0.1
PCAB				eSn	Sn	07 57 09.5	-1.9
PCAB	Cabril	4.79	13	P	Pn	07 56 17.3	+0.1
PCAB				S	Sn	07 57 09.5	-1.9
ELOB	Lobios	4.94	12	P	Pn	07 56 19.9	+0.6
	comp=N,0.6nm,0.1s,SNR=5.6						
ELOB				S	Sn	07 57 11.6	-3.5
	comp=N,6.2nm,0.3s,SNR=9.7						
PGAV	Gavieira, Arco	5.00	10	ePn	Pn	07 56 21.3	+1.1
PGAV				eSn	Sn	07 57 12.9	-3.8
PGAV				A	A	07 57 17.3	
	comp=N,5.5nm,0.1s						
PGAV	Gavieira, Arco	5.00	10	P	Pn	07 56 21.3	+1.1
PGAV				S	Sn	07 57 12.9	-3.8
	comp=N,5.5nm,0.1s						
LCRM	LCR	5.05	130	P	Pn	07 56 21.3	+0.5
LCRM				S	Sn	07 57 16.2	-1.7
ESDC	Sonseca Array	5.06	57	P	Pn	07 56 22.2	+1.2
	comp=N,1.5nm,0.2s,baz=240,slow=13,SNR=15						
ESDC				S	Sn	07 57 16.6	-1.6
	comp=N,0.8nm,0.3s,baz=243,slow=23,SNR=8.6						
PBRG	Braganca	5.20	23	eSn	Sn	07 57 19.4	-2.2
PBRG				A	A	07 57 20.5	
	comp=N,2.7nm,0.3s						
PBRG	Braganca	5.20	23	S	Sn	07 57 19.4	-2.2
	comp=N,1.4nm,0.3s						
EBER	Berja	5.27	90	P	Pn	07 56 25.8	+1.8
	comp=N,0.9nm,0.2s,SNR=7.9						
ECAL	Calabor	5.33	23	P	Pn	07 56 25.6	+1.0
	comp=N,1.3nm,0.1s,SNR=6.7						
ECAL				S	Sn	07 57 21.9	-2.8
	comp=N,7.5nm,0.3s,SNR=4.6						
SESP	Santiago Espad	5.61	77	P	Pn	07 56 29.6	+1.1
	comp=N,0.7nm,0.1s,SNR=7.9						
SESP				S	Sn	07 57 30.5	-1.2
	comp=N,2.4nm,0.2s,SNR=7.9						
MD31	MD31	5.69	136	P	Pn	07 56 29.8	+0.2
MD31				S	Sn	07 57 32.2	-1.4
MDT	Midelt	5.81	135	P	Pn	07 56 31.8	+0.4
MDT				S	Sn	07 57 34.9	-1.9
EAGO	Agolada(Pontev	5.85	10	P	Pn	07 56 32.2	+0.5
	comp=N,1.0nm,0.1s,SNR=7.9						
EAGO				S	Sn	07 57 32.7	-4.7
	comp=N,2.4nm,0.2s,SNR=7.9						
OUK	Oukaimeden	5.97	167	P	Pn	07 56 34.1	+0.3
OUK				S	Sn	07 57 39.4	-1.6
JBK	JBK	6.24	114	P	Pn	07 56 37.3	+0.1
JBK				S	Sn	07 57 43.0	-4.3
EZAR	Zarzadilla de	6.24	80	P	Pn	07 56 39.0	+1.7
	comp=N,3.6nm,0.3s,SNR=7.9						
ETOB	Tobarra	6.47	73	P	Pn	07 56 41.1	+0.8
	comp=N,0.2nm,0.2s,SNR=7.9						
ETOB				S	Sn	07 57 51.5	-1.4
	comp=N,0.6nm,0.2s,SNR=7.9						
EPON	Pontenova	6.52	15	P	Pn	07 56 40.9	0.0
	comp=N,0.7nm,0.1s,SNR=7.9						
OUZM	OUZ	6.52	159	P	Pn	07 56 41.6	+0.5
OUZM				S	Sn	07 57 50.9	-3.4
TTIG	Tnine Tigouga,	6.54	172	P	Pn	07 56 40.9	-0.4
TTIG				S	Sn	07 57 55.1	+0.5
ETOR	Torete	6.90	55	P	Pn	07 56 47.7	+1.5
	comp=N,2.2nm,0.2s,SNR=7.9						
ETOR				S	Sn	07 57 59.8	-3.6
	comp=N,4.9nm,0.3s,SNR=7.9						
TZRR	Tazzarine	7.04	151	P	Pn	07 56 49.8	+1.6
TZRR				S	Sn	07 58 07.9	+1.0

MEX 17 07:59:13.8±0.9, 20°.85N×103°.52W, h7km±14km, MD4.2
NEIC 17 07:59:14.3±3.9, 20°.82N±0°.02×103°.49W±0°.03, h22km±7km, Error ellipse: s-maj=4.8km s-min=1.2km az=134.0
ISC 17 07:59:10.8±2.5, 20°.84N±0°.03×103°.59W±0°.04, h2km±18km, n41, σ2s.06/63, Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JUBC	Volcan de Coli	1.32	179	eP	Pn	07 59 35.2	-1.3
JUBC				i S	Sg	07 59 51.8	-1.5
EZ5V		1.36	180		Pn	07 59 35.9	-1.2
EZ5V		1.36	180	eP	Pn	07 59 35.9	-1.2
EZ5V				eS	Sb	07 59 52.9	-2.1
MNGA	Volcan de Coli	1.37	181	eP	Pn	07 59 36.0	-1.2
MNGA				i S	Sb	07 59 52.2	-3.2
AAIG	Aguscalientes	1.59	45	eP	Pn	07 59 38.3	-1.9
AAIG				eS	Sn	07 59 58.1	-3.4
COIG	Colima	1.66	183	eP	Pn	07 59 39.6	-1.4
COIG				eS	Sn	08 00 00.6	-2.3
R15V		1.71	192		Pn	07 59 40.5	-1.1
R15V		1.71	192	eP	Pn	07 59 40.5	-1.1
R15V				i S	Sn	08 00 01.8	-2.3
CJM	Chamela	1.91	226	eP	Pn	07 59 42.1	-2.3
CJM				i S	Sn	08 00 04.6	-4.5
CDAR	Ciudad de Arme	1.93	192	eP	Pn	07 59 43.8	-1.0
CDAR				eS	Sn	08 00 07.4	-2.2
URUA	Uruapan	2.01	134		Pn	07 59 44.4	-1.6
URUA					Sn	08 00 10.5	-1.3
URUA	Uruapan	2.01	134	i P	Pn	07 59 44.4	-1.6
URUA				i S	Sn	08 00 10.5	-1.3
IGIG	Irapuato, Guan	2.12	92		Pn	07 59 46.7	-0.8
IGIG					Sn	08 00 12.3	-2.3
IGIG	Irapuato, Guan	2.12	92	eP	Pn	07 59 46.7	-0.8
IGIG				eS	Sn	08 00 12.3	-2.3
ZAIG	Zacatecas	2.14	26	Pn	Pn	07 59 46.5	-1.4
ZAIG	Zacatecas	2.14	26		Sn	08 00 11.0	-4.2
ZAIG	Zacatecas	2.14	26	eP	Pn	07 59 46.1	-1.7
ZAIG				eS	Sn	08 00 11.0	-4.2
MOIG	Morelia	2.54	117	Pn	Pn	07 59 50.6	-2.7
MOIG	Morelia	2.54	117		Sn	08 00 25.3	+0.4
MOIG	Morelia	2.54	117	eP	Pn	07 59 50.8	-2.5
MOIG				eS	Sn	08 00 25.3	+0.4
MMIG	Aquila	2.55	175		Pn	07 59 52.7	-0.5
MMIG					Sn	08 00 27.7	+2.8
MMIG	Aquila	2.55	175	eP	Pn	07 59 52.7	-0.5
MMIG				eS	Sn	08 00 27.7	+2.8
JRQG	Juriquilla Cam	2.95	92		Pn	08 00 00.6	+1.7
JRQG					Sb	08 00 38.6	-2.2
JRQG	Juriquilla Cam	2.95	92	eP	Pn	08 00 00.6	+1.7
JRQG				eS	Sb	08 00 38.6	-2.2
RPIG	Rio Verde	3.52	72	eP	Pn	08 00 04.9	-1.8
RPIG				eS	Sb	08 00 53.7	-3.6
ZIIG	Zihuatanejo	3.80	148		Pn	08 00 08.7	-1.6
ZIIG					Sb	08 01 03.7	-1.3
ZIIG	Zihuatanejo	3.80	148	eP	Pn	08 00 08.7	-1.6
ZIIG				eS	Sb	08 01 03.7	-1.3
ARIG	Puente Sto Nin	3.98	129		Pn	08 00 11.8	-1.2
ARIG					Sn	08 01 00.9	+0.6
ARIG	Puente Sto Nin	3.98	129	eP	Pn	08 00 11.8	-1.2
ARIG				eS	Sn	08 01 00.9	+0.6
CAIG	El Cayaco	4.92	140		Pn	08 00 25.4	-0.3
CAIG	El Cayaco	4.92	140	eP	Pn	08 00 25.4	-0.3
TLIG	Tlapa	5.76	124	Pn	Pn	08 00 39.1	+1.5
HPIG		6.35	343	Pn	Pn	08 00 47.9	+2.2
TXAR	Lajitas Array	8.45	360	Pn	Pn	08 01 16.6	+2.1
TX31	Lajitas Ar. Si	8.46	360	Pn	Pn	08 01 16.7	+2.2
TX32	Lajitas Array	8.46	360	Pn	Pn	08 01 16.6	+2.1
121A	Cookes Peak, D	12.23	343	Pn	Pn	08 02 09.1	+2.8
WMOK	Wichita Mounta	14.48	16	P	P	08 02 44.9	+1.1
MTPU	Mount Pierson	18.68	338		P	08 03 32.5	+1.7
MTPU				IAmb	IAmb	08 03 41.8	
	comp=Z,0.5nm,0.8s						
R40A	Maddies Statio	19.95	27	P	Pn	08 03 47.1	+1.3
R40A				IAmb	IAmb	08 03 52.2	
	comp=Z,5.7nm,1.1s						
Y49A	Blount Mountai	19.99	46	P	P	08 03 45.9	+1.2
Y49A				IAmb	IAmb	08 03 49.6	
	comp=Z,3.7nm,0.9s						

IDC 17 08:05:55.8±0.7, 14°.66S×66°.55E, h0km, mb4.1/12, mb1 4.2/12, mb1mx3.9/44, mbtmp4.1/12, MS3.6/11, Ms1 3.6/11, ms1mx3.2/36, Error ellipse: s-maj=25.4km s-min=19.3km az=179.0
NEIC 17 08:05:58.5±2.6, 14°.79S±0°.09×66°.46E±0°.09, h10km±1km, mb4.4/8, Error ellipse: s-maj=18.6km s-min=8.7km az=45.0
ISC 17 08:05:57.5±0.6, 14°.8S±0°.1×66°.5E±0°.1, h10km, n59, σ0s.90/41, mb4.5/26, MS3.6/10, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	9.20	40	T	T	08 17 29.8	
	baz=219,slow=76,SNR=1744						
H08S2	Diego Garcia H	9.21	40	T	T	08 17 30.7	
	baz=219,slow=76,SNR=2135						
H08S3	Diego Garcia H	9.21	40	T	T	08 17 31.4	
	baz=219,slow=76,SNR=1911						
RER	Riviere de l'E	12.04	237	Pn	Pn	08 08 49.0	-0.3
OPO	Ambohidratompo	18.88	256	LR	LR	08 15 37.4	
	comp=Z,70nm,18.3s,baz=224,slow=31						
LBTB	Lobatse	39.65	249	P	P	08 13 30.4	+0.5
	2.2nm,0.7s,baz=88,slow=6.9,SNR=5.9						
LBTB	Lobatse	39.65	249	IAmb	IAmb	08 13 33.2	
	comp=Z,5.6nm,0.8s						
BOSA	Boshof	40.51	243	P	P	08 13 37.6	+0.5
	comp=Z,4.1nm,0.8s,baz=81,slow=8.7,SNR=7.7						
BOSA				LR	LR	08 27 47.9	
	comp=Z,131nm,19.1s,baz=19,slow=32						
BOSA	Boshof	40.51	243	IAmb	IAmb	08 13 39.9	
	comp=Z,9.8nm,1.1s						
SUR	Sutherland	45.02	239	P	P	08 14 14.6	+0.8
CMAR	Chiang Mai Arr	45.96	45	LR	LR	08 31 01.3	
	comp=Z,52nm,20.4s,baz=202,slow=33						
CMAR	Chiang Mai Arr	45.96	45	P	P	08 14 22.2	+1.1
H01W3	Cape Leeuwin H	47.14	124	T	T	09 05 03.8	
	baz=282,slow=75,SNR=72						
H01W2	Cape Leeuwin H	47.14	124	T	T	09 04 53.4	
	baz=282,slow=75,SNR=70						
H01W1	Cape Leeuwin H	47.16	124	T	T	09 04 54.9	
	baz=282,slow=75,SNR=68						
MAW	Mawson	52.84	182	LR	LR	08 32 02.6	
	comp=Z,69nm,21.2s,baz=46,slow=30						
MAW	Mawson	52.84	182	P	P	08 15 12.6	-0.3
GEYT	Alibeck	53.01	352	LR	LR	08 35 46.7	
	comp=Z,26nm,18.8s,baz=90,slow=34						
GYA0B	ALIBECK ARRAY	53.01	352	P	P	08 15 14.1	-0.5
GYA0B				IAmb	IAmb	08 15 20.1	
	comp=Z,4.5nm,0.8s						
AAK	Ala-Archa	57.60	7	LR	LR	08 39 29.4	
	comp=Z,46nm,19.5s,baz=198,slow=35						
MKAR	Makanchi Array	62.91	12	P	P	08 16 22.7	-1.2
	comp=Z,0.5nm,0.8s,baz=205,slow=6.4,SNR=3.6						
MKAR	Makanchi Array	62.91	12	P	P	08 16 23.8	-0.1
ASAR	Alice Springs	63.77	109	P	P	08 16 29.9	-0.3
	comp=Z,0.4nm,0.6s,baz=269,slow=6.2,SNR=7.0						
ASAR				LR	LR	08 41 43.8	
	comp=Z,50nm,19.0s,baz=228,slow=34						
WRA	Warramunga Arr	64.58	105	P	P	08 16 35.7	+0.1
	comp=Z,1.4nm,0.8s,baz=248,slow=6.8,SNR=9.1						
WRA	Warramunga Arr	64.58	105	IAmb	IAmb	08 16 42.4	
	comp=Z,0.2nm,1.1s						
AKTO	Aktyubinsk	65.36	354	P	P	08 16 38.7	-1.1
	comp=Z,1.9nm,0.9s,baz=145,slow=10,SNR=3.9						
TORD	Torodi Ar. Bea	69.89	290	P	P	08 17 09.0	-0.3
	comp=Z,1.3nm,1.1s,baz=101,slow=7.5,SNR=5.8						
TORD	Torodi Ar. Bea	69.89	290	IAmb	IAmb	08 17 10.5	
	comp=Z,4.3nm,1.4s						
ZALV	Zalesovo Beam	70.22	11	LR	LR	08 45 36.4	
	comp=Z,33nm,21.2s,baz=79,slow=34						
VNA2	Neumayer--Watz	70.88	200	P	P	08 17 15.3	+1.0
	baz=75,slow=4.9						
VNA1	Neumayer--Stat	71.11	200	P	P	08 17 12.9	-2.8
VNA3	Neumayer Olymp	71.66	199	P	P	08 17 19.8	+0.7
SONM	Songino Array	71.78	27	P	P	08 17 19.1	-1.1
	comp=Z,0.6nm,0.6s,baz=209,slow=6.8,SNR=5.0						
SONM				LR	LR	08 47 33.7	
	comp=Z,65nm,19.8s,baz=133,slow=35						
SONM	Songino Array	71.78	27	P	P	08 17 21.0	+0.8
AKASG	Malin Array Be	72.91	336	P	P	08 17 26.5	-0.2
	comp=Z,1.5nm,0.5s,baz=136,slow=5.5,SNR=8.4						
KIC	Kosan Boka	73.66	281	eP	P	08 17 31.9	-0.1
	comp=Z,8.5nm,0.9s						
DBIC	Dimbokro	73.86	282	P	P	08 17 33.2	0.0
	comp=Z,2.9nm,0.7s,baz=124,slow=3.2,SNR=4.6						
LIC	Lamto	73.89	281	eP	P	08 17 33.9	+0.5
	comp=Z,38nm,1.4s						
TIC	Toumodi	74.01	281	eP	P	08 17 33.2	-0.9
SOKA	Soboth	76.64	326	eP	P	08 17 49.6	+1.1
	comp=Z,6.7nm,1.1s						
ARSA	Arzberg	76.74	327	eP	P	08 17 50.2	+1.2
	comp=Z,10nm,1.0s						
OBKA	Obir	76.79	326	eP	P	08 17 50.7	+1.3
	comp=Z,5.1nm,1.1s						
CONA	Conrad Observa	77.00	328	eP	P	08 17 51.6	+1.0
	comp=Z,12nm,1.2s						
MOA	Molln	77.78	327	eP	P	08 17 55.6	+0.7
	comp=Z,5.8nm,0.8s						
ABTA	Abfaltersbach	78.05	325	eP	P	08 17 57.5	+1.0
	comp=Z,6.3nm,0.7s						
GERES	GERESS Array B	78.69	328	P	P	08 17 59.4	-0.6
	comp=Z,1.0nm,0.7s,baz=142,slow=5.0,SNR=6.7						
WTTA	Wattenberg	78.84	325	eP	P	08 18 01.3	+0.4
	comp=Z,3.1nm,0.7s						
WATA	Walderalm	78.91	325	eP	P	08 18 01.6	+0.3
	comp=Z,3.5nm,0.5s						
MOTA	Moosalm	79.18	325	eP	P	08 18 02.7	-0.1
	comp=Z,3.0nm,0.6s						
FETA	Feichten	79.20	325	eP	P	08 18 03.1	+0.2
	comp=Z,4.1nm,0.8s						
DAVA	Damuels	79.82	325	eP	P	08 18 08.3	+2.0
	comp=Z,4.2nm,0.6s						
ESDC	Sonseca Array	84.92	313	P	P	08 18 33.4	+0.4
	comp=Z,2.2nm,0.8s,baz=106,slow=4.1,SNR=7.6						
ARCES	ARCESS Array B	88.88	347	LR	LR	08 58 13.6	
	comp=Z,21nm,20.0s,baz=260,slow=35						
YAK	Yakutsk	91.02	25	LR	LR	08 59 26.4	
	comp=Z,33nm,19.6s,baz=283,slow=35						
S51A	Beattyville	145.06	316		PKPbc	08 25 35.5	+0.6
R50A	Paris	145.20	318	PKPbc	PKPbc	08 25 34.8	-0.5
DGMT	Dagmar	145.54	349		PKPdf	08 25 36.9	+0.8
PDAR	Pinedale Array	151.90	354	PKPbc	PKPbc	08 25 53.1	-0.1
	comp=Z,1.0nm,0.7s,baz=87,slow=3.2,SNR=8.7						
TXAR	Lajitas Array	162.90	330	PKPab	PKPab	08 26 50.1	+0.2
	comp=Z,0.5nm,0.8s,baz=85,slow=3.6,SNR=5.8						

IDC 17 08:23:14.4±372.0, 54°.17N×43°.65E, h0km, Error ellipse: s-maj=155.7km s-min=92.4km az=132.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.46	308	i		08 51 17.1	
	baz=122,slow=337,SNR=1.5						
I31KZ	AKTYUBINSK INF	9.59	107	i		09 25 00.0	
	baz=298,slow=306,SNR=0.8						
I34MN	SONGINO INFRAS	38.84	73	i		12 19 50.0	
	baz=303,slow=329,SNR=0.4						

IDC 17 08:26:22.2±3.6, 55°.41S×143°.98E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.4/14, mbtmp3.2/3, Error ellipse: s-maj=823.1km s-min=28.4km az=77.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	23.10	170	P	P	08 31 29.1	0.0
	0.2nm,0.3s,baz=310,slow=7.9,SNR=1.1						
ASAR	Alice Springs	32.57	343	P	P	08 32 54.7	-0.4
	0.2nm,0.5s,baz=165,slow=10,SNR=6.2						
WRA	Warramunga Arr	36.15	345	P	P	08 33 26.4	+0.3
	0.5nm,0.8s,baz=171,slow=9.3,SNR=2.6						

IDC 17 08:49:21.6±0.9, 39°.34N×143°.78E, h0km, mb3.6/10, mb1 3.8/15, mb1mx3.5/43, mbtmp3.6/15, ML3.0/5, MS3.4/2, Ms1 3.4/2, ms1mx2.5/35, Error ellipse: s-maj=22.7km s-min=18.9km az=105.0
NIED 17 08:49:23.8, 39°.45N×143°.80E, h40km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.45; $M_{\theta\theta}$0.95; $M_{\phi\phi}$-5.40; $M_{r\theta}$-0.68; $M_{\theta\phi}$-1.51; $M_{\phi r}$0.95; Fault plane solution: $M_0$5.26000×10^{14} NP1: ϕ_s359.00000°, δ51.00000°, λ72.00000°. NP2: ϕ_s207.00000°, δ42.00000°, λ111.00000°.
JMA 17 08:49:23.7±0.2, 39°.45N×143°.80E, h40km, M3.8
ISC 17 08:49:23.7±0.7, 39°.48N±0°.05×143°.74E±0°.06, h11km, n35, σ1s.39/43, mb3.6/10, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.49	274	P	Pn	08 49 49.5	-0.9
JTH	Tanohata	1.52	288	P	Pn	08 49 50.0	-0.8
JTH				eS	Sn	08 50 09.5	-1.0
OFUJ	Ofunato	1.66	257	P	Pn	08 49 51.7	-1.0
OFUJ				eS	Sn	08 50 12.4	-1.5
JOM	Ohasama	1.90	271	P	Pn	08 49 55.6	-0.3
JOM				eS	Sn	08 50 19.3	-0.5
JANG	Nango	1.93	298	P	Pn	08 49 55.5	-0.9
JANG				eS	Sn	08 50 18.2	-2.5
JMK	Ichinoseki	2.03	256	P	Pn	08 49 57.1	-0.7
JMK				eS	Sn	08 50 21.9	-1.2
JYK	Kaneyama	2.69	259	P	Pn	08 50 06.8	0.0
JOT	Ohata	2.80	314	eS	Sn	08 50 40.7	-1.4
JNBK	Urakawa-nobuka	2.90	345	P	Pn	08 50 10.2	+0.5
JNBK				eS	Sn	08 50 44.7	+0.2
JCH	Churui	3.14	355	P	Pn	08 50 12.7	-0.4
JCH				eS	Sn	08 50 48.8	-1.8
JKB	Kayabe	3.17	320	S	Sn	08 50 50.4	-0.7
JFT	Otama	3.31	235	P	Pn	08 50 14.5	-1.0
JFT				eS	Sn	08 50 51.7	-3.1
JAK	Akkeshi	3.58	11	P	Pn	08 50 18.4	-0.7
JAK				S	Sn	08 50 59.0	-2.5
JEW	Eniwo	3.78	333	eS	Sn	08 51 04.7	-1.5
JAR	Ashorobuto	3.81	0	P	Pn	08 50 21.2	-1.1
JAR				S	Sn	08 51 03.7	-3.4
ASAJ	Asahikawa	4.71	350	Pn	Pn	08 50 36.0	+1.4
	1.5nm,0.3s,baz=202,slow=11,SNR=7.4						
ASAJ				Sn	Sn	08 51 28.1	-1.1
	0.5nm,0.3s,baz=67,slow=29,SNR=2.1						
MAT	Matsushiro	5.26	238	P	Pn	08 50 42.7	+0.4
MAT				eS	Sn	08 51 45.4	+2.5
MJAR	Matsushiro Arr	5.26	238	Pn	Pn	08 50 40.8	-1.5
	0.3nm,0.3s,baz=74,slow=14,SNR=8.8						
USRK	Ussuriysk Ar.	9.96	302	Pn	Pn	08 51 48.2	+1.6
	baz=96,slow=12,SNR=6.5						
JNU	Nakatsue	12.16	243	LR	LR	08 56 02.6	
	comp=Z,643nm,22.0s,baz=62,slow=33						
KLR	Kul'dur	12.97	323	Pn	Pn	08 52 29.5	+1.7
	0.1nm,0.3s,baz=143,slow=20,SNR=2.3						
PETK	Petropavlovsk-	16.65	30	Pn	Pn	08 53 16.9	0.0
	0.2nm,0.3s,baz=228,slow=7.6,SNR=1.6						
PETK				LR	LR	08 59 05.8	
	comp=Z,35nm,21.1s,baz=254,slow=35						
SEY	Seymchan	24.06	10	P	P	08 54 38.8	+0.3
	0.4nm,0.4s,baz=107,slow=1.1,SNR=15						
H11N2	WAKE ISLAND Hy	28.01	128	T	T	09 24 29.0	
	baz=320,slow=76,SNR=4.8						
H11N1	WAKE ISLAND Hy	28.02	128	T	T	09 24 24.1	
	baz=320,slow=76,SNR=4.7						
H11N3	WAKE ISLAND Hy	28.03	128	T	T	09 24 22.5	
	baz=320,slow=76,SNR=6.3						
SONM	Songino Array	28.06	300	P	P	08 55 15.4	+0.3
	0.6nm,0.6s,baz=82,slow=9.1,SNR=3.0						
ZALV	Zalesovo Beam	41.67	310	P	P	08 57 12.5	+0.6
	0.9nm,0.4s,baz=94,slow=12,SNR=3.7						
MKAR	Makanchi Array	44.42	300	P	P	08 57 34.7	+0.3
	1.0nm,0.8s,baz=82,slow=8.7,SNR=8.2						
ILAR	Eielson Array	46.45	34	P	P	08 57 50.7	+0.6
	0.4nm,0.8s,baz=270,slow=6.3,SNR=1.9						
WRA	Warramunga Arr	59.76	190	P	P	08 59 27.2	-1.4
	0.3nm,0.5s,baz=8.2,slow=7.5,SNR=4.9						
ASAR	Alice Springs	63.49	190	P	P	08 59 52.4	-1.3
	0.1nm,0.7s,baz=16,slow=6.9,SNR=1.4						
FINES	FINESS Array B	67.50	333	P	P	09 00 19.3	0.0
	1.5nm,0.8s,baz=30,slow=8.7,SNR=1.5						
PDAR	Pinedale Array	74.65	47	P	P	09 01 04.5	+1.2
	0.5nm,0.8s,baz=270,slow=5.4,SNR=2.4						
TXAR	Lajitas Array	87.19	54	P	P	09 02 10.3	0.0
	0.4nm,1.0s,baz=226,slow=2.4,SNR=1.8						

IDC 17 09:01:12.4±1.9, 31°.59S×178°.57W, h0km, mb4.1/4, mb1 4.3/5, mb1mx4.0/29, mbtmp4.1/5, ML4.1/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/22, Error ellipse: s-maj=44.0km s-min=30.8km az=54.0
ISC 17 09:01:15.0±1.7, 32°.14S±0°.09×177°.9W±0°.3, h35km, n49, σ1s.95/55, mb4.1/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.87	0	P	Pn	09 02 00.1	+1.8
GLKZ				S	Sn	09 02 30.6	-1.0
RAO	Raoul Island	2.88	0	LR	LR	09 02 46.5	
	comp=Z,122nm,18.6s,baz=12,slow=39						
MXZ	Matakaoa Point	6.23	209	P	Pn	09 02 45.9	+1.4
MXZ				S	Sn	09 03 56.4	+2.0
WMGZ	Waiomatatini S	6.41	207	P	Pn	09 02 49.1	+2.2
WMGZ				S	Sn	09 04 00.7	+1.8
HAZ	Te Kaha	6.62	211	P	Pn	09 02 51.4	+1.7
HAZ				S	Sn	09 04 04.2	+0.4
PUZ	Puketiti	6.69	207	P	Pn	09 02 51.8	+1.0
PUZ				S	Sn	09 04 05.0	-0.7
RUGZ	Raukumara Rang	6.84	211	P	Pn	09 02 54.8	+1.9
RUGZ				S	Sn	09 04 11.2	+1.7
TWGZ	Tauwhareparae	6.89	208	P	Pn	09 02 56.0	+2.4
TWGZ				S	Sn	09 04 11.9	+1.2
CNGZ	Carnagh Statio	7.07	205	P	Pn	09 02 57.8	+1.8
TKGZ	Te Karaka	7.17	208	P	Pn	09 02 59.5	+2.2
TKGZ				S	Sn	09 04 17.2	-0.3
MWZ	Matawai	7.21	210	P	Pn	09 02 59.3	+1.3
MWZ				S	Sn	09 04 19.9	+1.3

OPRZ	**Ohinepanea**	**7.27**	**217**	P	**Pn**	**09 03 02.2**	**+3.5**
URZ	**Urewera**	**7.33**	**212**	Pn	**Pn**	**09 03 02.1**	**+2.6**
	2.8nm,0.3s,baz=121,slow=23,SNR=46						
URZ				Sn	**Sn**	**09 04 18.9**	**-2.6**
	1.5nm,0.3s,baz=111,slow=23,SNR=1.8						
RAGZ	**Rawiri**	**7.39**	**210**	P	**Pn**	**09 03 03.6**	**+3.1**
RAGZ				S	**Sn**	**09 04 23.9**	**+0.7**
RIGZ	**Rimuhau**	**7.43**	**207**	P	**Pn**	**09 03 02.1**	**+1.1**
RIGZ				S	**Sn**	**09 04 21.3**	**-2.8**
PRGZ	**Paritu Road**	**7.58**	**206**	P	**Pn**	**09 03 05.0**	**+2.0**
PRGZ				S	**Sn**	**09 04 24.4**	**-3.3**
MUGZ	**Murupara**	**7.66**	**213**	P	**Pn**	**09 03 05.2**	**+1.1**
MUGZ				S	**Sn**	**09 04 28.6**	**-1.1**
RTZ	**Ruatahuna**	**7.68**	**211**	P	**Pn**	**09 03 04.7**	**+0.2**
RTZ				S	**Sn**	**09 04 27.2**	**-3.0**
MHGZ	**Mahia Peninsul**	**7.77**	**205**	P	**Pn**	**09 03 06.3**	**+0.7**
RAHZ	**Arahi**	**7.89**	**210**	P	**Pn**	**09 03 09.4**	**+2.3**
RAHZ				S	**Sn**	**09 04 34.3**	**-0.9**
MTHZ	**Maungataniwha**	**7.94**	**211**	P	**Pn**	**09 03 09.1**	**+1.2**
MTHZ				S	**Sn**	**09 04 33.8**	**-2.7**
WHHZ	**Waihua**	**7.96**	**208**	P	Pn	09 03 01.2	-7.0
MRHZ	**Matea Rd**	**8.11**	**213**	P	**Pn**	**09 03 11.7**	**+1.4**
MRHZ				S	**Sn**	**09 04 39.6**	**-1.3**
NMHZ	**Naumai**	**8.16**	**210**	P	**Pn**	**09 03 13.0**	**+2.0**
ARHZ	**Aropaoanui**	**8.22**	**209**	P	**Pn**	**09 03 13.7**	**+2.0**
BKZ	**Black Stump Fm**	**8.35**	**211**	P	**Pn**	**09 03 14.3**	**+0.7**
MCHZ	**McNeill Hill**	**8.49**	**209**	P	**Pn**	**09 03 18.3**	**+2.8**
KWHZ	**Kaweka Forest**	**8.59**	**211**	P	**Pn**	**09 03 16.6**	**-0.3**
HIZ	**Hauiti**	**8.67**	**221**	P	**Pn**	**09 03 22.2**	**+4.3**
TMVZ	**Te Maari**	**8.68**	**215**	P	**Pn**	**09 03 20.0**	**+1.9**
ETVZ	**East Tongariro**	**8.69**	**215**	P	**Pn**	**09 03 20.4**	**+2.1**
KAHZ	**Kahuranaki**	**8.72**	**207**	P	**Pn**	**09 03 19.5**	**+0.9**
OTVZ	**Oturere**	**8.73**	**215**	P	**Pn**	**09 03 20.7**	**+1.8**
SNVZ	**South Ngauruho**	**8.76**	**215**	P	**Pn**	**09 03 21.0**	**+1.7**
KRHZ	**Kereru**	**8.80**	**210**	P	**Pn**	**09 03 19.8**	**+0.1**
STKA	**Stephens Creek**	**34.18**	**259**	P	**P**	**09 07 56.6**	**-0.5**
	0.8nm,0.7s,baz=94,slow=14,SNR=3.1						
ASAR	**Alice Springs**	**43.11**	**269**	P	**P**	**09 09 10.2**	**-1.9**
	1.4nm,0.5s,baz=104,slow=7.5,SNR=31						
WRA	**Warramunga Arr**	**44.25**	**274**	P	**P**	**09 09 18.9**	**-2.4**
	2.0nm,0.4s,baz=112,slow=8.0,SNR=38						
QSPA	**South Pole Qui**	**57.97**	**180**	P	P	09 11 10.4	+6.6
	2.1nm,0.7s,baz=31,slow=7.1,SNR=14						
SNAA	**Sanae**	**76.42**	**178**	P	P	09 13 08.6	+8.0
VNA3	**Neumayer Olymp**	**76.57**	**176**	P	P	09 13 10.8	+9.4
VNA2	**Neumayer--Watz**	**77.00**	**177**	P	P	09 13 13.5	+10
	baz=176,slow=4.3						
H03S2	**Juan Fernandez**	**79.46**	**123**	T	T	10 42 01.8	
	baz=237						
H03S1	**Juan Fernandez**	**79.47**	**123**	T	T	10 42 03.0	
	baz=237						
H03S3	**Juan Fernandez**	**79.47**	**123**	T	T	10 42 01.9	
	baz=237						
H03N3	**Juan Fernandez**	**79.66**	**123**	T	T	10 42 13.3	
	baz=241,slow=72,SNR=48						
H03N2	**Juan Fernandez**	**79.66**	**123**	T	T	10 42 12.1	
	baz=241,slow=72,SNR=41						
H03N1	**Juan Fernandez**	**79.67**	**123**	T	T	10 42 12.5	
	baz=241,slow=72,SNR=84						
FINES	**FINESS Array B**	**146.79**	**339**	PKPbc	**PKPbc**	**09 20 52.8**	**+0.2**
	1.0nm,0.4s,baz=54,slow=4.5,SNR=9.2						

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*VAO **17** 09:01:23.0±1.0, 17.°60S×70.°41W, h10^{km}, mb4.1*
*GUC **17** 09:01:32.2±0.6, 17.°83S×70.°03W, h105^{km}±2^{km}, ML3.7*
ISC 17 09:01:31.1±1.2**, 17.°86S**±0.°07×**70.°2W**±0.°1**, h112**^{km}±8^{km}**,**
n21, σ1^{s}88/31**, 4C-2D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**0.53**	**195**	⇑*i*P	**Pn**	**09 01 48.9**	**+0.6**
AP01				*i* S	**Sn**	**09 02 02.2**	**+0.8**
AP01				IAML		09 02 03.2	
	comp=E,7µm,0.4s						
PB12	**IPOC Station P**	**0.76**	**189**	⇑*i*P	**Pn**	**09 01 50.8**	**+0.4**
PB12				*i* S	**Sn**	**09 02 04.9**	**+0.1**
PB12				IAML		09 02 07.3	
	comp=N,2µm,0.1s						
PB16	**IPOC Station P**	**0.81**	**126**	⇓*i*P	**Pn**	**09 01 51.2**	**0.0**
PB16				*i* S	**Sn**	**09 02 05.5**	**-0.9**
PB11	**IPOC Station P**	**1.96**	**165**	⇑*i*P	**Pn**	**09 02 04.3**	**+0.5**
PB11				*i* S	**Sn**	**09 02 28.9**	**+0.1**
PB11				IAML		09 02 33.2	
	comp=E,354nm,0.5s						
TA02	**Huaiquique**	**2.40**	**179**	*e*P	**Pn**	**09 02 09.7**	**+0.4**
TA02				*e*S	**Sn**	**09 02 36.7**	**-1.9**
TA02				IAML		09 02 40.8	
	comp=N,617nm,0.1s						
HMBC	**Humberstone**	**2.42**	**173**	*e*P	**Pn**	**09 02 09.8**	**+0.1**
HMBC				*i* S	**Sn**	**09 02 35.2**	**-4.1**
HMBC				IAML		09 02 49.4	
	comp=N,294nm,0.2s						
PB08	**IPOC Station P**	**2.47**	**157**	⇓*i*P	**Pn**	**09 02 11.9**	**+1.3**
PB08				*i* S	**Sn**	**09 02 41.8**	**+0.9**
PB08				IAML		09 02 44.1	
	comp=E,360nm,0.1s						
LPAZ	**La Paz**	**2.52**	**52**	⇑*i*P	**Pn**	**09 02 11.9**	**+0.5**
TA01	**Diego Aracena**	**2.69**	**180**	*e*P	**Pn**	**09 02 13.7**	**+0.6**
TA01				*i* S	**Sn**	**09 02 43.8**	**-1.6**
TA01				IAML		09 02 45.0	
	comp=N,173nm,0.2s						
PATCX	**Punta Patache**	**2.94**	**179**	*e*P	**Pn**	**09 02 17.0**	**+0.5**
PATCX				*e*S	**Sn**	**09 02 48.4**	**-3.1**
PATCX				IAML		09 02 55.4	
	comp=E,118nm,0.4s						
PB01	**IPOC Station P**	**3.24**	**168**	*e*P	**Pn**	**09 02 20.7**	**+0.3**
PB01				*e*S	**Sn**	**09 02 56.1**	**-2.3**
VILB	**Vilhena**	**10.80**	**65**	*e*P	**Pn**	**09 03 59.8**	**-2.9**
PTLB	**Pontes e Lacer**	**10.87**	**79**	*e*P	**Pn**	**09 03 59.8**	**-3.7**
SALV	**Santo Antonio**	**14.02**	**84**	*e*P	**Pn**	**09 04 45.0**	**+0.1**
PDRB	**Porto dos Gac**	**14.43**	**66**	*e*P	**Pn**	**09 04 49.3**	**-0.8**
CLDB	**Colider**	**15.58**	**65**	*e*P	**Pn**	**09 05 03.9**	**-0.8**
MACA	**Manacapuru-AM**	**17.33**	**34**	*e*P	**P**	**09 05 24.4**	**-1.4**
NPGB	**Novo Progresso**	**18.02**	**55**	*e*P	**P**	**09 05 32.1**	**-1.4**
PCMB	**Pacaembu**	**18.21**	**105**	*e*P	**Pn**	**09 05 39.3**	**+2.6**
SPB	**Sao Paulo**	**22.03**	**109**	*e*P	**P**	**09 06 20.8**	**+4.2**
BOAV	**Boa Vista**	**22.27**	**26**	*e*P	**P**	**09 06 19.3**	**+0.1**

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*IDC **17** 09:09:37.2±1.7, 12.°76N×89.°95W, h0^{km}, mb3.9/8, mb1 4.3/8, mb1mx4.0/30, mbtmp3.9/8, MS3.3/4, Ms1 3.2/4, ms1mx2.9/23, Error ellipse: s-maj=41.9km s-min=33.3km az=35.0*
*UCR **17** 09:09:39.6±1.4, 12.°59N×90.°48W, h23^{km}±39^{km}, ML3.7, mb4.5(NEIC)*
*SNET **17** 09:09:39.3±1.2, 12.°62N×90.°43W, h10^{km}±7^{km}, ML3.7*
*INET **17** 09:09:40.8, 12.°60N×90.°39W, h15^{km}, MW3.5*
*NEIC **17** 09:09:44.0±1.9, 12.°77N±0.°09×90.°33W±0.°09, h42^{km}±5^{km}, mb4.5/63, Error ellipse: s-maj=15.5km s-min=10.0km az=217.0*
*GCG **17** 09:09:51.1±0.5, 13.°33N×90.°82W, h53^{km}±999^{km}, MD3.7*
ISC 17 09:09:43.2±1.8**, 12.°64N**±0.°07×**90.°38W**±0.°08**, h46**^{km}±15^{km}**,**
n131, σ1^{s}31/128**, mb4.4**/35**, MS3.3**/4**, 2C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**1.33**	**50**	*e*P	**Pn**	**09 10 04.2**	**-1.1**
LALI				*e*S	**Sn**	**09 10 23.0**	**+1.1**
LALI	**Alcalda de L**	**1.33**	**50**	*e*P	**Pn**	**09 10 04.2**	**-1.1**
LALI				*e*S	**Sn**	**09 10 23.0**	**+1.1**
JAYA	**Jayaque - finc**	**1.35**	**42**	*e*P	**Pn**	**09 10 04.4**	**-1.5**
JAYA				*e*S	**Sn**	**09 10 23.1**	**+0.3**
JAYA				IAML		09 10 30.4	
	comp=Z,677nm,0.2s						
JAYA	**Jayaque - finc**	**1.35**	**42**	*e*P	**Pn**	**09 10 04.4**	**-1.5**
JAYA				*e*S	**Sn**	**09 10 23.1**	**+0.3**
JAYA				IAML		09 10 30.4	
	comp=Z,677nm,0.2s						
NUBE	**Las Nubes**	**1.38**	**25**	⇑*i*P	**Pn**	**09 10 04.6**	**-1.6**
NUBE				*e*S	**Sn**	**09 10 22.7**	**-0.7**
NUBE	**Las Nubes**	**1.38**	**25**	⇑*i*P	**Pn**	**09 10 04.6**	**-1.6**
NUBE				*e*S	**Sn**	**09 10 22.7**	**-0.7**
CEVE	**Cerro Verde**	**1.39**	**32**	*e*P	**Pn**	**09 10 05.0**	**-1.4**
CEVE				*e*S	**Sn**	**09 10 25.2**	**+1.5**
CEVE				IAML		09 10 29.8	
	comp=Z,2µm,0.6s						
CEVE	**Cerro Verde**	**1.39**	**32**	*e*P	**Pn**	**09 10 05.0**	**-1.4**
CEVE				*e*S	**Sn**	**09 10 25.2**	**+1.5**
CEVE				IAML		09 10 29.8	
	comp=Z,2µm,0.6s						
SBLS	**San Blas**	**1.40**	**31**	*e*P	**Pn**	**09 10 05.2**	**-1.3**
SBLS	**San Blas**	**1.40**	**31**	*e*P	**Pn**	**09 10 05.2**	**-1.3**
RTR	**El Retiro**	**1.44**	**29**	*e*P	**Pn**	**09 10 06.0**	**-1.0**
RTR				*e*S	**Sn**	**09 10 26.7**	**+1.9**
RTR	**El Retiro**	**1.44**	**29**	*e*P	**Pn**	**09 10 06.0**	**-1.0**
RTR				*e*S	**Sn**	**09 10 26.7**	**+1.9**
SLOZ	**Alcaldia de Sa**	**1.50**	**23**	*i* P	**Pn**	**09 10 06.3**	**-1.3**
SLOZ				*e*S	**Sn**	**09 10 27.2**	**+1.2**
CEDA	**San Andres**	**1.50**	**39**	*e*P	**Pn**	**09 10 07.0**	**-0.7**
CEDA				*e*S	**Sn**	**09 10 27.3**	**+1.1**
CEDA				IAML		09 10 34.8	
	comp=Z,847nm,0.5s						
CEDA	**San Andres**	**1.50**	**39**	*e*P	**Pn**	**09 10 07.0**	**-0.7**
CEDA				*e*S	**Sn**	**09 10 27.3**	**+1.1**
CEDA				IAML		09 10 34.8	
	comp=Z,847nm,0.5s						
BOQS	**Boqueron**	**1.53**	**44**	*e*P	**Pn**	**09 10 07.7**	**-0.6**
BOQS	**Boqueron**	**1.53**	**44**	*e*P	**Pn**	**09 10 07.7**	**-0.6**
SNET	**Serv Nac Est T**	**1.53**	**47**	*e*P	**Pn**	**09 10 07.0**	**-1.0**
SNET	**Serv Nac Est T**	**1.53**	**47**	*e*P	**Pn**	**09 10 07.0**	**-1.0**
SNET	**Serv Nac Est T**	**1.53**	**47**		**Pn**	**09 10 06.5**	**-1.6**
UEES	**Universidad Ev**	**1.54**	**46**	*e*P	**Pn**	**09 10 07.3**	**-1.0**
UEES	**Universidad Ev**	**1.54**	**46**	*e*P	**Pn**	**09 10 07.3**	**-1.0**
OPAM	**Oficina de Pla**	**1.57**	**47**	*e*P	**Pn**	**09 10 07.8**	**-0.8**
OPAM	**Oficina de Pla**	**1.57**	**47**	*e*P	**Pn**	**09 10 07.8**	**-0.8**
LFRS	**El Faro**	**1.61**	**52**	*e*P	**Pn**	**09 10 08.0**	**-1.3**
LFRS	**El Faro**	**1.61**	**52**	*e*P	**Pn**	**09 10 08.0**	**-1.3**
SJTE	**Alcalda de S**	**1.65**	**54**	*e*P	**Pn**	**09 10 08.3**	**-1.5**
SJTE	**Alcalda de S**	**1.65**	**54**	*e*P	**Pn**	**09 10 08.3**	**-1.5**
TACO	**Tacachico**	**1.66**	**37**	*e*S	**Sn**	**09 10 30.9**	**+0.9**
TACO	**Tacachico**	**1.66**	**37**	*e*S	**Sn**	**09 10 30.9**	**+0.9**
LBRS	**Las Brisas**	**1.70**	**50**	*e*P	**Pn**	**09 10 10.5**	**0.0**
LBRS	**Las Brisas**	**1.70**	**50**	*e*P	**Pn**	**09 10 10.5**	**0.0**
COEG	**Centro de Oper**	**1.75**	**56**	*e*P	**Pn**	**09 10 09.9**	**-1.3**
COEG	**Centro de Oper**	**1.75**	**56**	*e*P	**Pn**	**09 10 09.9**	**-1.3**
PAVA	**Las Pavas**	**1.76**	**52**	*e*P	**Pn**	**09 10 10.3**	**-1.0**
PAVA	**Las Pavas**	**1.76**	**52**	*e*P	**Pn**	**09 10 10.3**	**-1.0**
FUG	**Fuego 3**	**1.86**	**346**	*e*P	**Pn**	**09 10 11.2**	**-1.5**
ALJI	**Alcalda de J**	**1.89**	**69**	*e*P	**Pn**	**09 10 11.1**	**-1.9**
ALJI				*e*S	**Sn**	**09 10 37.5**	**+1.9**
ALJI	**Alcalda de J**	**1.89**	**69**	*e*P	**Pn**	**09 10 11.1**	**-1.9**
ALJI				*e*S	**Sn**	**09 10 37.5**	**+1.9**
SCLA	**Alcaldia de Sa**	**1.92**	**56**	*e*P	**Pn**	**09 10 12.9**	**-0.6**
SCLA	**Alcaldia de Sa**	**1.92**	**56**	*e*P	**Pn**	**09 10 12.9**	**-0.6**
NBG	**Las Nubes**	**1.94**	**1**	*e*P	**Pn**	**09 10 14.1**	**+0.2**
MTO3	**Montecristo**	**2.01**	**29**	*e*P	**Pn**	**09 10 14.1**	**-0.8**
MTO3				*e*S	**Sn**	**09 10 42.1**	**+3.2**
MTO3	**Montecristo**	**2.01**	**29**	*e*P	**Pn**	**09 10 14.1**	**-0.8**
MTO3				*e*S	**Sn**	**09 10 42.1**	**+3.2**
MTO3	**Montecristo**	**2.01**	**29**	Pn	**Pn**	**09 10 14.0**	**-0.8**
ESQI	**Esquipulas**	**2.16**	**28**	*e*P	**Pn**	**09 10 16.2**	**-0.6**
ESQI				*e*S	**Sn**	**09 10 45.0**	**+2.6**
ESQI	**Esquipulas**	**2.16**	**28**	Pn	**Pn**	**09 10 16.2**	**-0.6**
RTAL	**Retalhuleu**	**2.27**	**326**		**Pn**	**09 10 15.3**	**-3.0**
STG3	**Santiaguito 3,**	**2.37**	**331**	*e*P	**Pn**	**09 10 17.1**	**-2.6**
MRL	**Marmol**	**2.52**	**15**	*e*P	**Pn**	**09 10 24.4**	**+2.5**
HUEH	**Huehuetenango**	**2.88**	**338**	*e*P	**Pn**	**09 10 25.2**	**-1.6**
HUEH	**Huehuetenango**	**2.88**	**338**	Pn	**Pn**	**09 10 26.0**	**-0.8**
CRIN	**San Cristobal**	**3.25**	**89**	Pn	**Pn**	**09 10 31.6**	**-0.1**
TGUH	**Tegucigalpa,Un**	**3.33**	**65**		**Pn**	**09 10 31.7**	**-1.2**
CCIG	**Comitan**	**4.00**	**335**	Pn	**Pn**	**09 10 42.2**	**0.0**
PETF	**Flores**	**4.28**	**7**		**Pn**	**09 10 45.7**	**-0.2**
MATN	**Matagalpa**	**4.35**	**86**	Pn	**Pn**	**09 10 44.1**	**-2.8**
BOAB	**BOACO BROADBAN**	**4.60**	**92**	Pn	**Pn**	**09 10 48.6**	**-1.6**
HZTE	**Horizontes, Gu**	**5.06**	**112**		**Pn**	**09 10 56.6**	**+0.1**
ORTG	**Ortega, Santa**	**5.32**	**115**	Pn	**Pn**	**09 10 59.9**	**-0.4**
JTS	**Las Juntas de**	**5.80**	**113**		**Pn**	**09 11 06.8**	**0.0**
RIMA	**Rio Macho**	**7.00**	**113**		**Pn**	**09 11 24.7**	**+1.3**
SRBA	**San Rafael, Bu**	**7.67**	**115**	Pn	**Pn**	**09 11 34.1**	**+1.5**
RIOS	**Rincon, Osa**	**7.79**	**119**	Pn	**Pn**	**09 11 35.9**	**+1.8**
TXAR	**Lajitas Array**	**20.70**	**325**	P	**P**	**09 14 21.0**	**+1.2**
	comp=Z,1.6nm,0.5s,baz=152,slow=11,SNR=70						
TXAR	**Lajitas Array**	**20.70**	**325**	P	**P**	**09 14 21.2**	**+1.5**
TX31	**Lajitas Ar. Si**	**20.70**	**325**	P	**P**	**09 14 20.3**	**+0.6**
TX31				IAmb	IAmb	09 14 34.9	
	comp=Z,19nm,1.1s						
TX32	**Lajitas Array**	**20.70**	**325**	P	Pn	09 14 21.7	-0.8
Z38A	**Mt. Pleasant**	**20.96**	**349**	P	**P**	**09 14 21.9**	**-0.4**
WLAR	**White Oak Lake**	**21.10**	**354**		**P**	**09 14 23.4**	**-0.4**
WLAR				IAmb	IAmb	09 14 25.9	
	comp=Z,14nm,0.9s						
Z51A	**Franklin**	**21.13**	**12**	IAmb	IAmb	09 14 27.1	
	comp=Z,16nm,0.7s						
Y45A	**Yeager Farm, C**	**21.15**	**2**	P	**P**	**09 14 25.0**	**+0.7**
Y49A	**Blount Mountai**	**21.43**	**9**	P	**P**	**09 14 27.3**	**-0.1**
Y49A				IAmb	IAmb	09 14 28.5	
	comp=Z,12nm,0.8s						
GOGA	**Godfrey**	**21.62**	**16**	P	**P**	**09 14 29.1**	**-0.3**
ABTX	**Abilene, Hawle**	**21.63**	**338**	P	**P**	**09 14 28.6**	**-1.0**
ABTX				IAmb	IAmb	09 14 30.1	
	comp=Z,7.6nm,0.6s						
Y52A	**Lilburn**	**21.90**	**14**	P	**P**	**09 14 32.0**	**-0.4**
X48A	**Hartselle**	**21.93**	**7**	P	**P**	**09 14 32.6**	**0.0**
MIAR	**Mount Ida**	**22.00**	**353**	P	**P**	**09 14 31.9**	**-1.6**
MIAR				IAmb	IAmb	09 14 36.1	
	comp=Z,13nm,0.9s						
FPAL	**Fort Paine**	**22.23**	**10**	P	**P**	**09 14 34.9**	**-1.1**
FPAL				IAmb	IAmb	09 14 36.1	
	comp=Z,10nm,0.8s						
X37A	**Clayton**	**22.32**	**349**		**P**	**09 14 35.7**	**-1.2**
X37A				IAmb	IAmb	09 14 38.0	
	comp=Z,38nm,1.1s						
WHAR	**Wooly Hollow**	**22.62**	**356**	P	**P**	**09 14 39.4**	**-0.7**
HODGE	**Hodges**	**22.73**	**18**	P	**P**	**09 14 40.4**	**-0.9**
SWET	**Sewanee**	**22.84**	**9**	P	**P**	**09 14 41.1**	**-1.4**
SWET				IAmb	IAmb	09 14 42.2	
	comp=Z,13nm,0.6s						
W50A	**Signal Mountai**	**22.93**	**11**	P	**P**	**09 14 42.3**	**-1.1**
W35A	**Tecumseh**	**23.18**	**346**	P	**P**	**09 14 44.4**	**-1.4**
V48A	**Smith Brothers**	**23.23**	**7**	IAmb	IAmb	09 14 46.1	
	comp=Z,8.7nm,0.8s						
CPCT	**Cooper Cave**	**23.32**	**12**	P	**P**	**09 14 46.6**	**-0.6**
CPCT				IAmb	IAmb	09 14 47.2	
	comp=Z,10.0nm,1.0s						
FNO	**Franklin**	**23.40**	**345**		**P**	**09 14 46.9**	**-1.1**
MNTX	**Cornudas Mount**	**23.46**	**326**	P	**P**	**09 14 49.0**	**+0.3**
WVT	**Waverly**	**23.50**	**5**	P	**P**	**09 14 47.6**	**-1.3**
CLTN	**Cedars of Leba**	**23.64**	**8**	P	**P**	**09 14 50.2**	**0.0**
CLTN				IAmb	IAmb	09 14 50.6	
	comp=Z,15nm,0.7s						
TUL1	**Leonard**	**23.68**	**349**	P	**P**	**09 14 48.2**	**-2.5**
TUL1				IAmb	IAmb	09 14 49.6	
	comp=Z,12nm,0.8s						
TKL	**Tuckaleechee C**	**23.68**	**13**	P	**P**	**09 14 49.3**	**-1.4**
	comp=Z,8.9nm,0.6s,baz=181,slow=13,SNR=24						
TKL	**Tuckaleechee C**	**23.68**	**13**	IAmb	IAmb	09 14 51.1	
	comp=Z,8.9nm,0.7s						
OK025	**Westminster Rd**	**23.69**	**346**		**P**	**09 14 49.0**	**-1.8**
OK030	**Cody Creek RV**	**23.90**	**347**	IAmb	IAmb	09 14 51.6	
	comp=Z,15nm,0.9s						
OK031	**S. Brethren Rd**	**23.94**	**347**	IAmb	IAmb	09 14 51.6	
	comp=Z,16nm,0.6s						
U38A	**Gravette**	**23.97**	**352**	IAmb	IAmb	09 14 54.5	
	comp=Z,17nm,1.4s						
Y60A	**Bolivia**	**23.98**	**26**	P	**P**	**09 14 52.6**	**-0.8**
PBMO	**Poplar Bluff**	**24.04**	**360**	IAmb	IAmb	09 14 56.0	
	comp=Z,17nm,1.4s						
U49A	**Red Boiling Sp**	**24.13**	**9**	IAmb	IAmb	09 14 56.0	
	comp=Z,24nm,0.9s						
T45A	**Paducah**	**24.33**	**3**	P	**P**	**09 14 55.5**	**-1.1**
MGMO	**Mountain Grove**	**24.47**	**356**	P	**P**	**09 14 58.1**	**+0.2**
T35A	**Sooner Cattle**	**24.80**	**348**	IAmb	IAmb	09 15 00.9	
	comp=Z,16nm,0.8s						
S44A	**Carbondale**	**24.97**	**2**	P	**P**	**09 15 01.8**	**-0.6**
U54A	**Nelsons Funny**	**25.00**	**16**	IAmb	IAmb	09 15 04.7	
	comp=Z,17nm,1.2s						
S39A	**Bolivar**	**25.09**	**354**	IAmb	IAmb	09 15 05.0	
	comp=Z,9.1nm,0.8s						
KAN09	**Caldwell North**	**25.25**	**346**	IAmb	IAmb	09 15 05.3	
	comp=Z,16nm,0.8s						
CCM	**Cathedral Cave**	**25.32**	**358**	P	**P**	**09 15 04.3**	**-1.3**
CCM				IAmb	IAmb	09 15 06.5	
	comp=Z,6.6nm,0.7s						
R40A	**Maddies Statio**	**25.60**	**357**	IAmb	IAmb	09 15 09.2	
	comp=Z,6.3nm,0.8s						
WCI	**Wyandotte Cave**	**25.75**	**7**	P	**P**	**09 15 08.5**	**-0.9**
OLIL	**Olney**	**26.07**	**4**	IAmb	IAmb	09 15 14.4	
	comp=Z,14nm,0.6s						
Q44A	**Meyer Farm, Va**	**26.19**	**2**	IAmb	IAmb	09 15 16.9	
	comp=Z,14nm,0.8s						
P40A	**Paris**	**26.83**	**357**	IAmb	IAmb	09 15 19.8	
	comp=Z,8.8nm,0.8s						
Q51A	**Peebles**	**27.01**	**12**	P	**P**	**09 15 20.0**	**-0.8**
Q51A				IAmb	IAmb	09 15 20.5	
	comp=Z,9.3nm,0.5s						
SPMN	**Marine on St.**	**32.54**	**357**	P	**P**	**09 16 08.7**	**-1.1**
PDAR	**Pinedale Array**	**34.31**	**335**	P	**P**	**09 16 25.8**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=134,slow=8.9,SNR=2.1						
REDW	**Red Top Meadow**	**35.35**	**334**	IAmb	IAmb	09 16 37.9	
	comp=Z,6.9nm,1.1s						
NVAR	**Mina Array Bea**	**35.72**	**321**	P	**P**	**09 16 39.9**	**+2.2**
	comp=Z,1.7nm,0.7s,baz=130,slow=8.4,SNR=11						
AGMN	**Agassiz Nation**	**35.84**	**354**	P	**P**	**09 16 37.4**	**-1.0**
ULM	**Lac du Bonnet**	**37.77**	**354**	LR	LR	09 32 44.6	
	comp=Z,37nm,21.4s,baz=168,slow=37						
SCHQ	**Schefferville**	**45.97**	**19**	P	**P**	**09 17 59.5**	**-2.1**
	comp=Z,5.6nm,0.6s,baz=232,slow=9.0,SNR=13						
YKA	**Yellowknife Ar**	**52.71**	**346**	P	**P**	**09 18 53.2**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=146,slow=7.4,SNR=5.8						
YKA				LR	LR	09 42 45.6	
	comp=Z,22nm,18.6s,baz=0.0,slow=38						
PLCA	**Paso Flores**	**56.19**	**162**	LR	LR	09 37 48.9	
	comp=Z,35nm,20.2s,baz=208,slow=30						
ILAR	**Eielson Array**	**64.71**	**337**	P	**P**	**09 20 16.9**	**+0.6**
	comp=Z,0.9nm,1.1s,baz=115,slow=4.3,SNR=4.7						
TORD	**Torodi Ar. Bea**	**89.15**	**77**	P	**P**	**09 22 33.7**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=299,slow=6.3,SNR=1.9						
GERES	**GERESS Array B**	**89.64**	**40**	LR	LR	09 58 20.3	
	comp=Z,16nm,20.1s,baz=298,slow=33						
HHC	**Hu-ho-hao-te**	**123.04**	**340**	*e*P	**PKPdf**	**09 28 35.4**	**+0.3**
WRA	**Warramunga Arr**	**136.57**	**254**	PKP	**PKPdf**	**09 29 02.9**	**+1.8**
	comp=Z,0.8nm,0.9s,baz=114,slow=2.5,SNR=2.6						
ASAR	**Alice Springs**	**136.68**	**249**	PKP	**PKPdf**	**09 29 02.2**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=97,slow=3.7,SNR=4.5						
CMAR	**Chiang Mai Arr**	**147.76**	**343**	PKPbc	**PKPbc**	**09 29 24.6**	**+0.7**
	comp=Z,1.2nm,0.3s,baz=334,slow=3.9,SNR=8.2						

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*IDC **17** 09:18:21.4±1.3, 32.°90N×75.°64E, h0^{km}, mb3.4/4, mb1 3.5/6, mb1mx3.3/38, mbtmp3.4/6, ML2.6/2, Error ellipse: s-maj=42.4km s-min=27.4km az=69.0*
ISC 17 09:18:23.2±0.9**, 33.°00N**±0.°08×**75.°8E**±0.°2**, h10**^{km}**, n7,**
σ1^{s}05/8**, mb3.5**/3**, Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**0.57**	**186**	*e*PG	**Pb**	**09 18 36.0**	**+0.8**
THN				*e*SG	**Sn**	**09 18 46.0**	**-0.7**
MKAR	**Makanchi Array**	**14.64**	**18**	Pn	**Pn**	**09 21 49.5**	**-0.9**
	0.0nm,0.3s,baz=202,slow=12,SNR=2.0						
KURBB	**Kurchatov Arra**	**17.73**	**6**	P	**Pn**	**09 22 31.0**	**+1.0**
	0.0nm,0.3s,baz=193,slow=11,SNR=1.6						
BVAR	**Borovoye Array**	**20.39**	**351**	P	**P**	**09 23 01.3**	**+1.2**
	0.9nm,0.4s,baz=185,slow=13,SNR=6.0						
TORD	**Torodi Ar. Bea**	**69.70**	**273**	P	**P**	**09 29 32.6**	**-1.0**
	0.3nm,0.6s,baz=55,slow=6.5,SNR=2.0						
WRA	**Warramunga Arr**	**76.78**	**124**	P	**P**	**09 30 15.5**	**+0.2**
	0.4nm,0.9s,baz=310,slow=4.7,SNR=5.5						
ASAR	**Alice Springs**	**79.01**	**128**	P	**P**	**09 30 27.5**	**-0.1**
	0.2nm,0.7s,baz=332,slow=5.3,SNR=1.7						

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*TEH **17** 09:19:50.8, 27.°10N×53.°06E, h11^{km}, ML3.5*
*DSN **17** 09:19:55.3±1.0, 27.°21N×53.°43E, h10^{km}, ML2.9/6, Error ellipse: s-maj=24.8km s-min=8.2km az=51.0*
ISC 17 09:19:52.7±1.7**, 27.°12N**±0.°06×**53.°1E**±0.°1**, h10**^{km}**, n14,**
σ0^{s}93/18**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.22**	**12**	*e*Pg	**Pg**	**09 19 55.5**	**-1.9**
LMD1				*e*		09 20 01.8	
	comp=Z,97µm,0.5s						
LAR1	**LAR**	**1.25**	**64**	*e*Pg	**Pb**	**09 20 16.7**	**+0.3**
LAR1				*e*Sg	**Sn**	**09 20 34.5**	**+1.3**
LAR1				*e*		09 20 43.0	
	comp=Z,14µm,0.4s						
QIR1	**Qir**	**1.35**	**357**	*e*Pg	**Pn**	**09 20 17.4**	**-0.3**
QIR1				*e*Sg	**Sg**	**09 20 36.9**	**+0.6**
QIR1				*e*		09 20 46.9	
	comp=Z,8µm,0.4s						
GENO	**Geno**	**2.74**	**83**	*e*Pn	**Pn**	**09 20 37.1**	**+0.2**
SHME	**Shamm**	**2.91**	**111**	P	**Pn**	**09 20 38.4**	**-0.8**
NAZ	**Nazwa, Dubai**	**3.12**	**132**	P	**Pn**	**09 20 43.7**	**+1.7**
MSFE	**Esma-Masafi**	**3.25**	**122**	P	**Pn**	**09 20 44.6**	**+0.8**
UOSS	**Minazif**	**3.52**	**127**	P	**Pn**	**09 20 47.8**	**+0.2**
HATD	**Hatta, Dubai**	**3.55**	**129**	P	**Pn**	**09 20 48.2**	**+0.2**
HATD				S	**Sn**	**09 21 29.7**	**-0.3**
ASHO	**Ashiyiah**	**3.59**	**132**	P	**Pn**	**09 20 48.9**	**+0.3**
ASHO				S	**Sn**	**09 21 31.3**	**+0.2**
SOHO	**SOHO**	**4.29**	**133**	P	**Pn**	**09 20 58.1**	**+0.1**
IMEH	**Mehriz**	**4.45**	**17**	*e*Pn	**Pn**	**09 21 01.2**	**+0.7**
IRAM	**Ramesheh**	**4.71**	**352**	*e*Pn	**Pn**	**09 21 05.5**	**+1.4**
TPRV	**Parvadeh(Tabas**	**6.65**	**27**	*e*Pn	**Pn**	**09 21 31.3**	**+0.7**

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*IDC **17** 09:36:55.5±0.9, 16.°52S×175.°18E, h0^{km}, mb3.9/8, mb1 4.2/10, mb1mx4.0/27, mbtmp3.9/10, ML5.0/1, MS3.5/14, Ms1 3.5/14, ms1mx3.3/38, Error ellipse: s-maj=31.2km s-min=20.3km az=159.0*
ISC 17 09:36:57.4±0.7**, 16.°4S**±0.°1×**175.°19E**±0.°08**, h10**^{km}**, n26,**
σ1^{s}51/13**, mb3.9**/8**, MS3.5**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.04**	**116**	Pn	**Pn**	**09 37 44.5**	**-1.3**
	8.3nm,0.3s,baz=268,slow=17,SNR=37						
MSVF				Sn	**Sb**	**09 38 31.1**	**+2.1**
	4.0nm,0.3s,baz=239,slow=12,SNR=4.7						
DZM	**Mont Dzumac**	**10.01**	**234**	*e*Pn	**Pn**	**09 39 23.7**	**+2.3**
	76nm,1.4s						
DZM				*e*LR	LR	09 41 38.9	
	comp=Z,334nm,24.6s						
DZM	**Mont Dzumac**	**10.01**	**234**	Pn	Pn	09 39 18.3	-3.1
	0.1nm,0.3s,baz=7.2,slow=20,SNR=1.8						
DZM				LR	LR	09 42 25.2	
	comp=Z,286nm,20.4s,baz=56,slow=33						
HNR	**Honiara**	**16.38**	**293**	LR	LR	09 46 17.6	
	comp=Z,92nm,20.2s,baz=146,slow=34						
URZ	**Urewera**	**21.85**	**176**	P	**P**	**09 41 48.2**	**-2.0**
	20nm,1.1s,baz=319,slow=19,SNR=1.6						
URZ				LR	LR	09 48 34.4	
	comp=Z,100nm,20.9s,baz=31,slow=32						
RAR	**Rarotonga**	**24.17**	**105**	LR	LR	09 50 41.7	
	comp=Z,47nm,19.6s,baz=278,slow=34						
PMG	**Port Moresby**	**28.17**	**281**	LR	LR	09 53 18.5	
	comp=Z,141nm,18.7s,baz=90,slow=35						
PPT2	**Papeete2**	**33.69**	**97**	*e*LR	LR	09 52 57.6	
	comp=Z,191nm,26.8s						
PPT	**Papeete**	**33.69**	**97**	LR	LR	09 54 07.1	
	comp=Z,66nm,19.6s,baz=258,slow=31						
TBI	**Tubuai**	**33.89**	**108**	*e*LR	LR	09 52 51.5	
	comp=Z,154nm,32.0s						
STKA	**Stephens Creek**	**34.15**	**237**	P	**P**	**09 43 42.8**	**-0.1**
	2.1nm,0.8s,baz=51,slow=7.5,SNR=4.9						
STKA				LR	LR	09 56 31.7	
	comp=Z,85nm,19.1s,baz=31,slow=34						
H11S2	**WAKE ISLAND Hy**	**35.65**	**346**	T	T	10 22 13.0	
	baz=166,slow=76,SNR=8.0						
H11S3	**WAKE ISLAND Hy**	**35.66**	**346**	T	T	10 22 14.4	
	baz=166,slow=76,SNR=7.0						
H11S1	**WAKE ISLAND Hy**	**35.67**	**346**	T	T	10 22 18.4	
	baz=166,slow=76,SNR=6.4						
H11N1	**WAKE ISLAND Hy**	**36.79**	**347**	T	T	10 23 39.4	
	baz=164,slow=74						
H11N3	**WAKE ISLAND Hy**	**36.79**	**347**	T	T	10 23 41.7	
	baz=164,slow=74						
H11N2	**WAKE ISLAND Hy**	**36.81**	**347**	T	T	10 23 41.8	
	baz=164						
WRA	**Warramunga Arr**	**38.91**	**258**	P	**P**	**09 44 22.2**	**-1.5**
	1.0nm,1.0s,baz=95,slow=9.3,SNR=3.3						
ASAR	**Alice Springs**	**39.35**	**253**	P	**P**	**09 44 26.1**	**-1.3**
	1.6nm,0.7s,baz=84,slow=8.6,SNR=22						
ASAR				PcP	**PcP**	**09 46 35.4**	**-0.5**
	0.4nm,0.9s,baz=96,slow=3.3,SNR=1.4						
ASAR				LR	LR	09 59 40.7	
	comp=Z,58nm,19.1s,baz=90,slow=35						
VNDA	**Vanda**	**61.52**	**183**	LR	LR	10 09 31.1	
	comp=Z,35nm,20.1s,baz=358,slow=32						
CMAR	**Chiang Mai Arr**	**82.63**	**292**	P	**P**	**09 49 22.1**	**+0.5**
	1.5nm,0.3s,baz=104,slow=3.8,SNR=2.0						
CMAR				LR	LR	10 28 09.1	
	comp=Z,6.8nm,18.0s,baz=130,slow=37						
NVAR	**Mina Array Bea**	**82.71**	**47**	P	**P**	**09 49 22.7**	**+0.8**
	0.1nm,0.3s,baz=196,slow=5.6,SNR=1.5						
NVAR				LR	LR	10 18 37.8	
	comp=Z,46nm,20.7s,baz=194,slow=30						
ILAR	**Eielson Array**	**85.92**	**15**	P	**P**	**09 49 37.3**	**0.0**
	0.8nm,0.8s,baz=228,slow=5.2,SNR=4.3						

ILAR				LR	LR	10 20 45.7	
	comp=Z,34nm,19.8s,baz=176,slow=31						
TXAR	Lajitas Array	90.44	60	P	P	09 49 59.1	-0.7
	0.3nm,0.9s,baz=218,slow=5.7,SNR=1.9						
TXAR				LR	LR	10 23 44.7	
	comp=Z,51nm,19.2s,baz=0.0,slow=31						
PDAR	Pinedale Array	90.56	45	LR	LR	10 26 59.4	
	comp=Z,40nm,19.3s,baz=212,slow=33						
GERES	GERESS Array B	144.28	339	PKP	PKPab	09 56 33.2	+1.5
	0.7nm,0.7s,baz=36,slow=2.5,SNR=4.5						

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*TIR **17** 09:39:29.0,42°.45N×19°.37E,h6^{km}±18^{km},Md2.8,Ml2.6*
*PDG **17** 09:39:30.7±0.1,42°.39N×19°.40E,h15^{km},MD2.6/3,*
ML2.3/10,Error ellipse: s-maj=0.1km s-min=0.2km az=0.0
*RHSSO **17** 09:39:30.7±0.5,42°.41N×19°.48E,h7^{km}±3^{km},ML2.2/6*
*BEO **17** 09:39:31.5±0.2,42°.44N×19°.44E,h9^{km}±2^{km},ML2.0/13*
ISC 17 09:39:30.9±0.8,42°.41N±0°.02×19°.42E±0°.02,h16^{km}±5^{km},
n42,σ0^{s}.79/83,10C-6D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDG	Podgorica	0.12	280	⇑*i*Pg	Pg	09 39 34.2	-0.3
PDG				*e*Sg	Sg	09 39 37.5	+0.6
PDG	Podgorica	0.12	280	*e*Pg	Pg	09 39 34.3	-0.3
PDG				*e*Sg	Sg	09 39 37.6	+0.6
TTG	Podgorica	0.12	280	⇑*i*Pg	Pg	09 39 34.1	-0.4
TTG				*i* Sg	Sg	09 39 37.1	+0.1
DRME	Dracevica, Mon	0.28	218	⇓*i*Pg	Pg	09 39 36.1	-0.8
DRME				*e*Sg	Sb	09 39 42.2	+0.2
DRME	Dracevica, Mon	0.28	218	⇓*i*Pg	Pg	09 39 36.1	-0.8
DRME				*i* Sg	Sg	09 39 40.4	-0.7
CEME	Cevo	0.40	291	⇓*i*Pg	Pg	09 39 38.3	-0.7
CEME				*i* Sg	Sb	09 39 44.8	-0.5
BUM	Brajici-Budva	0.40	255	⇑*i*Pg	Pg	09 39 38.4	-0.7
BUM				*i* Sg	Sg	09 39 44.8	+0.1
PVY	Plav	0.44	65	⇓*i*Pg	Pb	09 39 39.4	-0.9
PVY				*i* Sg	Sb	09 39 47.1	+0.3
KOME	Kolasin	0.45	9	⇑*i*Pg	Pg	09 39 39.6	-0.3
KOME				*i* Sg	Sb	09 39 47.4	+0.5
ULC	Ulcinj	0.46	196	⇑*i*Pg	Pg	09 39 39.0	-1.2
ULC				*i* Sg	Sb	09 39 46.7	-0.5
BCI	Bajram Curri	0.48	95	P	Pg	09 39 39.8	-0.7
	baz=98						
BCI				S	Sb	09 39 47.4	-0.4
	baz=98						
BCI				AMP			
	comp=N,2.2nm,0.4s,baz=98						
NKME	Niksic	0.50	316	⇑*i*Pg	Pg	09 39 40.2	-0.6
NKME				*i* Sg	Sb	09 39 48.7	+0.4
IVA	Berane	0.58	37	⇓*i*Pg	Pb	09 39 42.1	-0.6
IVA				*i* Sg	Sb	09 39 52.0	+1.3
HCY	Herceg Novi	0.69	274	⇑*i*Pg	Pg	09 39 43.3	-1.0
HCY				*e*Sg	Sb	09 39 54.6	+1.0
HCY	Herceg Novi	0.69	274	⇑*i*Pg	Pg	09 39 43.4	-0.9
HCY				*i* Sg	Sb	09 39 54.1	+0.5
TREB	Trebinje	0.85	292	*e*Pg	Pg	09 39 46.5	-0.9
TREB				*e*Sg	Sb	09 39 59.3	+1.0
TREB	Trebinje	0.85	292	*e*Pg	Pg	09 39 46.4	-0.9
TREB				*e*Sg	Sb	09 39 59.5	+1.2
UPM	Unac-Piva	0.88	335	*e*Pg	Pg	09 39 46.9	-1.1
UPM				*e*Sg	Sb	09 39 59.6	+0.2
UPM	Unac-Piva	0.88	335	⇓*i*Pg	Pg	09 39 47.3	-0.7
UPM				*i* Sg	Sn	09 40 01.3	0.0
SJES	Sjenica	0.95	25	*e*Pg	Pg	09 39 48.2	-1.0
SJES				*e*Sg	Sb	09 40 01.3	0.0
PHP	Peshkopia	1.05	133	P	Pb	09 39 50.4	-0.3
	baz=133						
PHP				S	Sn	09 40 07.1	+1.8
	baz=133						
TIR	Tirane	1.11	162	P	Pn	09 39 51.7	0.0
	baz=161						
TIR	Tirane	1.11	162	*e*Pg	Pg	09 39 51.4	-0.9
TIR				*e*Sg	Sn	09 40 08.5	+1.8
RUDO	Rudo	1.21	358	*e*Pg	Pb	09 39 52.5	-0.9
RUDO				*e*Sg	Sb	09 40 08.9	+0.1
IVAS	Ivanjica	1.29	25	*e*Pg	Pb	09 39 54.5	-0.2
IVAS				*e*Sg	Sn	09 40 12.2	+1.1
STON	Ston	1.35	291	*e*Pg	Pb	09 39 55.5	-0.2
STON				*e*Sg	Sg	09 40 15.2	+0.8
STON	Ston	1.35	291	*e*Pn	Pn	09 39 54.3	-0.7
STON				Sg	Sg	09 40 14.6	+0.2
BBLS	Lazići	1.46	360	⇑*i*Pg	Pn	09 39 57.1	+0.5
BBLS				*e*Sg	Sg	09 40 17.0	-0.9
BBLS	Lazići	1.46	360	*e*Pg	Pb	09 39 57.7	+0.1
BBLS				*e*Sg	Sg	09 40 17.5	-0.4
SELS	Selova	1.49	56	*e*Pg	Pn	09 39 56.9	-0.1
SELS				*e*Sg	Sg	09 40 17.4	-1.6
OHR	Ohrid	1.66	141	*e*Pg	Pg	09 40 02.0	-0.7
OHR				*e*Sg	Sg	09 40 25.0	+0.7
DIVS	Divibare	1.74	14	⇑*i*Pn	Pn	09 40 00.9	+0.4
DIVS				*e*Sn	Sb	09 40 23.8	-0.3
DIVS	Divibare	1.74	14	*e*Pg	Pn	09 40 00.9	+0.4
DIVS				*e*Sg	Sb	09 40 24.7	+0.6
GRUS	Gruza	1.76	32	*e*Pn	Pn	09 40 01.0	+0.4
GRUS				*e*Sn	Sb	09 40 24.6	+0.1
BARS	Barje	1.82	76	*e*Pn	Pn	09 40 02.0	+0.6
BARS				*e*Sn	Sb	09 40 25.7	-0.5
TRUS	Trudelj	1.95	21	*e*Pn	Pn	09 40 03.8	+0.5
TRUS				*e*Sn	Sn	09 40 28.4	+0.9
MAKA	Makarska	1.97	297	*e*Pn	Pn	09 40 04.7	+1.2
MAKA				Sn	Sn	09 40 28.3	+0.5
RICI	Ricice	2.00	304	*e*Pn	Pb	09 40 06.1	-0.7
RICI				Sn	Sb	09 40 31.1	-0.4
HVAR	Hvar	2.32	290	*e*Pn	Pn	09 40 07.1	-1.1
HVAR				Sn	Sn	09 40 35.8	-0.6
ZAPS	Zavoj	2.52	69	*e*Pn	Pn	09 40 12.8	+1.7
ZAPS				*e*Sn	Sn	09 40 42.6	+1.1
ZIRJ	Zirje	3.03	296	*e*Pn	Pn	09 40 19.1	+0.9
ZIRJ				Sn	Sn	09 40 54.0	-0.1
DUGI	Dugi Otok	3.56	298	*e*Pn	Pn	09 40 26.1	+0.8
DUGI				Sn	Sn	09 41 08.0	+0.9

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*IDC **17** 10:12:40.5±7.4,27°.30N×93°.91E,h0^{km},mb3.7/2,*
mb1 4.0/3,mb1mx3.3/64,mbtmp3.7/3,ML4.5/1,Error
ellipse: s-maj=264.9km s-min=98.2km az=75.0
ISC 17 10:12:57.0±1.9,27°.2N±0°.2×96°.5E±0°.2,h35^{km},n14,
σ0^{s}.81/14,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	4.47	250	*e*PN	Pn	10 14 02.0	-0.5
SHL				*e*SN	Sn	10 14 44.5	-9.0
CMAR	Chiang Mai Arr	8.98	165	Pn	Pn	10 15 04.8	+0.5
	1.1nm,0.3s,baz=328,slow=13,SNR=4.6						
JIRN	Jiri	9.20	275	*e*P	Pn	10 15 08.9	+1.3
	23nm,0.4s						
GUN	Gumba	9.48	277	*e*P	Pn	10 15 12.7	+1.3
	15nm,0.3s						
PKI	Pulchoki	9.89	275	*e*P	Pn	10 15 17.5	+0.4
	17nm,0.4s						
PKIN	Phulchoki	9.90	275	*e*P	Pn	10 15 17.5	+0.3
	17nm,0.4s						
KKN	Kakani	10.01	276	*e*P	Pn	10 15 19.3	+0.8
DMN	Daman	10.16	275	*e*P	Pn	10 15 20.6	-0.1
GKN	Gorkha	10.58	277	*e*P	Pn	10 15 26.3	0.0
	9.7nm,0.3s						
DANN	Dangsing	11.37	279	*e*P	Pn	10 15 36.3	-0.9
	3.4nm,0.3s						
KOLN	Koldanda	11.50	276	*e*P	Pn	10 15 38.5	-0.4
	2.7nm,0.2s						
PYUN	Piuthan	12.04	277	*e*P	Pn	10 15 45.2	-1.1
	2.8nm,0.3s						
WRA	Warramunga Arr	59.48	138	P	P	10 22 56.5	-0.3
	0.6nm,0.7s,baz=316,slow=6.7,SNR=5.1						
ASAR	Alice Springs	62.13	141	P	P	10 23 14.4	-0.3
	0.4nm,0.4s,baz=322,slow=6.5,SNR=14						

IDC 17 10:25:31.6±1.9,1°.39N×127°.03E,h0^{km},mb3.3/3,
mb1 3.5/3,mb1mx3.3/45,mbtmp3.4/3,Error ellipse:
s-maj=171.0km s-min=27.9km az=69.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.38	162	P	P	10 30 31.4	-0.2
	0.3nm,0.3s,baz=340,slow=11,SNR=21						
ASAR	Alice Springs	25.79	165	P	P	10 31 04.7	+0.2
	0.2nm,0.3s,baz=344,slow=11,SNR=7.0						
ZALV	Zalesovo Beam	62.80	333	P	P	10 35 58.9	0.0
	0.4nm,0.5s,baz=126,slow=9.1,SNR=1.8						

IDC 17 10:42:22.5±3.8,17°.69S×178°.43W,h560^{km}±23^{km},
mb3.2/4,mb1 3.4/4,mb1mx2.6/40,mbtmp4.1/4,Error
ellipse: s-maj=115.1km s-min=31.9km az=139.0,Fiji
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.36	269	P	P	10 43 40.8	+0.1
	0.3nm,0.3s,baz=196,slow=22,SNR=6.1						
STKA	Stephens Creek	38.72	241	P	P	10 48 58.9	-0.4
	1.1nm,0.3s,baz=105,slow=10.0,SNR=7.0						
WRA	Warramunga Arr	44.65	259	P	P	10 49 45.8	-0.4
	0.6nm,0.4s,baz=93,slow=8.2,SNR=22						
ASAR	Alice Springs	44.83	254	P	P	10 49 47.8	+0.2
	6.4nm,0.6s,baz=88,slow=8.4,SNR=154						
ASAR				PcP	PcP	10 51 17.3	-0.1
	0.2nm,0.5s,baz=99,slow=3.7,SNR=2.7						
ILAR	Eielson Array	85.68	13	P	P	10 54 01.9	-0.2
	1.1nm,1.2s,baz=204,slow=4.4,SNR=2.1						

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*IASPEI **17** 10:50:27.8±0.9,48°.16N±0°.03×22°.93E±0°.02,h8^{km}±7^{km},*
Error ellipse: s-maj=4.8km s-min=3.2km az=22.4,GT5
selection from ISC bulletin GT5 identified by Bondr and
McLaughlin (2009) selection criteria Bondr and
McLaughlin, A new ground truth data set for seismic
studies, <i>Seism. Res. Let.</i>, 80, 465-472,
2009
*SIGU **17** 10:50:27.0,48°.18N×22°.92E,h2^{km}*
*KRSZO **17** 10:50:27.6±1.1,48°.09N×22°.86E,h15^{km}±10^{km},MLv2.5/4,*
Error ellipse: s-maj=10.7km s-min=4.9km az=36.0
ISC 17 10:50:27.6±0.8,48°.15N±0°.03×22°.92E±0°.02,h10^{km}±5^{km},
n24,σ0^{s}.64/41,6C-3D,Ukraine-Moldova-Southwestern
Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRSU	Trosnyk	0.06	154	⇓*i*Pg	Pg	10 50 29.4	-0.3
TRSU				Pm		10 50 30.8	
TRSU				*i* Sg	Sg	10 50 31.5	+0.3
TRSU				Sm		10 50 31.7	
TRSU				m		10 50 32.1	
KORU	Korolevo	0.15	88	*e*Pg	Pg	10 50 30.4	-0.4
KORU				Pm		10 50 32.0	
KORU				m		10 50 32.1	
KORU				*e*Sg	Sg	10 50 33.2	+0.1
KORU				Sm		10 50 33.7	
BERU	Beregovo	0.20	294	*e*Pg	Pg	10 50 30.8	-0.9
BERU				Pm		10 50 33.1	
BERU				*e*Sg	Sg	10 50 34.9	+0.4
BERU				m		10 50 39.4	
BERU				Sm		10 50 43.0	
BRIU	Brid	0.20	21	*e*Pg	Pg	10 50 31.5	-0.2
BRIU				m		10 50 37.1	
TRPA	Tarpa	0.25	265	⇓P	Pg	10 50 32.9	+0.1
TRPA				⇑S	Sg	10 50 37.4	+1.2
TRPA	Tarpa	0.25	265	*e*PG	Pg	10 50 32.8	+0.1
TRPA				*e*SG	Sg	10 50 37.0	+0.9
TRPA	Tarpa	0.25	265	Pg	Pg	10 50 32.8	+0.1
TRPA				Lg	Lg	10 50 37.0	
MUKU	Mukachevo	0.34	333	*e*Pg	Pg	10 50 34.8	+0.5
MUKU				Pm		10 50 38.2	
MUKU				*e*Sg	Sg	10 50 39.0	+0.2
MUKU				Sm		10 50 40.8	
MUKU				m		10 50 47.6	
HOLU	Holmets	0.52	317	*e*Pg	Pg	10 50 37.5	-0.1
HOLU				*e*Sg	Sg	10 50 45.3	+0.9
MEZ	Mezhgor'ye	0.54	48	*e*Pg	Pb	10 50 39.0	-0.2
MEZ				Pm		10 50 40.7	
MEZ				*e*Sg	Sg	10 50 46.0	+0.8
MEZ				Sm		10 50 47.4	
MEZ				m		10 50 47.8	
BMR	Baia Mare	0.62	141	⇑P	Pg	10 50 39.6	+0.1
BMR				⇑S	Sg	10 50 48.1	+0.5
BMR	Baia Mare	0.62	141	Pg	Pg	10 50 39.8	+0.3
BMR				Lg	Lg	10 50 48.0	
RAKU	Rahkiv	0.85	98	*e*Pg	Pg	10 50 43.8	-0.1
RAKU				Pm		10 50 47.8	
RAKU				*e*Sg	Sb	10 50 56.4	+0.5
RAKU				Sm		10 51 02.9	
RAKU				m		10 51 06.5	
STZU	Stuzhytsa	0.89	347	*e*Pg	Pg	10 50 43.9	-0.8
STZU				Pm		10 50 46.3	
STZU				*e*Sg	Sb	10 50 57.5	+0.5
STZU				Sm		10 51 00.2	
STZU				m		10 51 00.5	
KOLS	Kolonicke sedl	0.89	332	Pn	Pn	10 50 46.0	-0.3
KOLS				Lg	Lg	10 50 59.6	
KOLS	Kolonicke sedl	0.89	332	*e*PG	Pn	10 50 46.0	-0.3
KOLS				*e*SG	Sn	10 50 59.3	+0.1
KOLS				*e*LG	Lg	10 51 00.9	
CRVS	Cervenica-Dubn	1.22	308	*e*PG	Pb	10 50 50.9	+0.1
CRVS				*e*SG	Sn	10 51 08.7	+1.3
DRGR		1.37	186	⇓P	Pg	10 50 54.2	+0.4
DRGR				⇑S	Sb	10 51 10.6	-0.4
BURAR	Bucovina Array	1.64	108	⇑P	Pn	10 50 56.8	+0.2
BURAR				⇑S	Sg	10 51 20.0	-0.3
BURAR	Bucovina Array	1.64	108	Pn	Pn	10 50 56.9	+0.2
KECS	Kecovo	1.66	282	*e*PG	Pn	10 50 57.0	+0.3
KECS				*e*SG	Sn	10 51 18.2	+0.1
PSZ	Piszkesteto	2.04	265	*e*PN	Pn	10 51 01.0	-1.1
PSZ	Piszkesteto	2.04	265	*e*S	Sn	10 51 26.3	-1.4
PSZ	Piszkesteto	2.04	265	Pn	Pn	10 51 01.0	-1.1
PSZ				Sn	Sn	10 51 26.3	-1.4

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*EAF **17** 11:36:50.8±1.1,25°.66S×30°.19E,h10^{km},MD4.1*
*BUL **17** 11:36:51.9±0.9,25°.63S×30°.07E,h10^{km},MD4.5*
ISC 17 11:36:50.4±2.0,25°.57S±0°.09×30°.1E±0°.1,h10^{km},n14,
σ1^{s}.32/14,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	2.36	31	*i* P	Pn	11 37 29.3	0.0
MOPA	Mopani	2.36	31	*i* P	Pn	11 37 29.3	0.0
MSNA	Messina	3.21	359	*i* P	Pn	11 37 42.4	+1.4
MSNA	Messina	3.21	359	*i* P	Pn	11 37 42.4	+1.4
LBTB	Lobatse	4.11	277	*i* P	Pn	11 37 53.4	0.0
LBTB	Lobatse	4.11	277	*i* P	Pn	11 37 53.4	0.0
BOSA	Boshof	5.27	234	*i* P	Pn	11 38 10.1	+0.7
BOSA	Boshof	5.27	234	*i* P	Pn	11 38 10.1	+0.7
MATP	Matopo	5.32	344	*i* P	Pn	11 38 12.0	+1.8
MATP	Matopo	5.32	344	*i* P	Pn	11 38 12.0	+1.8
BLWY	Bulawayo	5.57	346	*i* P	Pn	11 38 14.5	+0.9
BLWY				*i* S	Sn	11 39 16.1	-1.7
BLWY	Bulawayo	5.57	346	*i* P	Pn	11 38 14.5	+0.9
BLWY				*i* S	Sn	11 39 16.1	-1.7
KRI	Karoi	8.71	357	*i* P	Pn	11 38 49.3	-7.4
KRI	Karoi	8.71	357	*i* P	Pn	11 38 49.3	-7.4

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*ROM **17** 11:38:40.0±0.3,42°.40N±0°.02×15°.22E±0°.03,h10^{km},*
ML2.7/8,Error ellipse: s-maj=2.8km s-min=1.2km az=43.0
ISC 17 11:38:39.9±1.2,42°.38N±0°.03×15°.18E±0°.03,h12^{km}±11^{km},
n38,σ0^{s}.41/43,Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TREM	Isole Tremiti	0.35	135	P	Pg	11 38 46.9	0.0
FRES	Fresagrandinar	0.55	224	P	Pg	11 38 50.5	-0.2
MELA	Melanico ??? S	0.67	183	P	Pg	11 38 52.3	-0.5
MELA				AML	AML		
	comp=E,750µm,0.4s						
MELA				AML	AML		
	comp=N,770µm,0.3s						
MELA				AML	AML		
	comp=N,784µm,0.3s						
MELA				AML	AML		
	comp=N,770µm,0.3s						
MELA				AML	AML		
	comp=N,784µm,0.3s						
MELA				AML	AML		
	comp=E,798µm,0.4s						
SGRT	San Giovanni R	0.75	146	P	Pg	11 38 54.2	-0.1
SGRT				AML	AML		
	comp=N,538µm,1.1s						
SGRT				AML	AML		
	comp=E,928µm,0.3s						
TRIV	Trivento	0.77	218	P	Pb	11 38 55.2	+0.1
LPEL	Lama dei Pelig	0.81	246	P	Pg	11 38 55.2	-0.3
LPEL				AML	AML		
	comp=E,654µm,0.3s						
LPEL				AML	AML		
	comp=N,452µm,0.9s						
LPEL				AML	AML		
	comp=E,655µm,0.3s						
MSAG	Monte S. Angel	0.86	140	P	Pb	11 38 56.7	-0.1
MSAG				AML	AML		
	comp=E,922µm,0.8s						
MSAG				AML	AML		
	comp=E,994µm,0.8s						
MSAG				AML	AML		
	comp=N,1905µm,1.3s						
MSAG				AML	AML		
	comp=N,1930µm,1.3s						
MSAG				AML	AML		
	comp=E,918µm,0.8s						
GATE	Gambatesa	0.88	193	P	Pn	11 38 58.6	+0.5
BSSO	Busso	0.94	208	P	Pg	11 38 57.4	-0.5
MOCO	Biccari - m.te	1.00	181	P	Pn	11 38 59.9	+0.1
MIDA	Miranda	1.01	224	P	Pg	11 38 58.5	-0.8
SACR	S. Croce Del S	1.04	200	P	Pb	11 38 59.3	-0.5
T0110	Collepietro	1.05	262	P	Pn	11 39 00.8	+0.3
T0110				AML	AML		
	comp=E,436µm,0.4s						
T0110				AML	AML		
	comp=N,250µm,1.1s						
CERA	Filignano	1.16	229	P	Pg	11 39 02.9	+0.7
PSB1	Pescosannita	1.18	194	P	Pn	11 39 02.2	-0.1
FAGN	Fagnano	1.19	265	P	Pg	11 39 03.9	+1.2
FAGN				AML	AML		
	comp=E,499µm,0.5s						
FAGN				AML	AML		
	comp=N,411µm,0.6s						
VAGA	Valle Agricola	1.19	217	P	Pg	11 39 03.1	+0.3
TERO	Teramo	1.19	283	P	Pn	11 39 02.2	-0.3
TERO				AML	AML		
	comp=E,75µm,0.4s						
TERO				AML	AML		
	comp=N,78µm,0.5s						
HVAR	Hvar	1.23	49	*e*Pg	Pb	11 39 03.1	+0.1
HVAR				Sg	Sn	11 39 20.0	+0.5
VITU	Vitulano (BN)	1.26	199	P	Pb	11 39 04.0	+0.4
CAMP	Campotosto	1.32	278	P	Pn	11 39 04.2	-0.1
ZIRJ	Zirje	1.32	15	*e*Pg	Pn	11 39 03.9	-0.2
ZIRJ				Sg	Sn	11 39 21.7	-0.1
LSTV	Lastovo	1.32	72	*e*Pg	Pb	11 39 04.3	-0.3
LSTV				Sg	Sg	11 39 22.6	+0.1
SMA1	SAN MARTINO	1.39	281	P	Pb	11 39 05.7	-0.1
RM33	Pellescritta (	1.46	276	P	Pb	11 39 07.0	-0.1
MRVN	Minervino Murg	1.52	150	P	Pb	11 39 08.5	+0.5
MORI	Morici	1.54	14	*e*Pg	Pn	11 39 07.1	-0.1
MORI				Sg	Sn	11 39 27.2	+0.1
NRCA	Norcia	1.59	287	P	Pb	11 39 08.9	-0.3
LNSS	Leonessa	1.60	279	P	Pb	11 39 09.2	-0.3
DUGI	Dugi Otok	1.62	357	*e*Pg	Pn	11 39 08.1	-0.2
DUGI				Sg	Sn	11 39 28.5	-0.6
CSP1	Cessapalombo	1.62	297	P	Pb	11 39 10.2	+0.3
CSP1				AML	AML		
	comp=E,120µm,1.5s						
CSP1				AML	AML		
	comp=N,135µm,1.6s						
MAKA	Makarska	1.63	55	*e*Pn	Pn	11 39 08.9	+0.5
FDMO	Fiordimonte	1.68	294	P	Pb	11 39 10.3	-0.4
EL6	Elcito	1.80	303	P	Pn	11 39 11.1	+0.2
RICI	Ricice	1.82	51	*e*Pn	Pn	11 39 11.2	+0.1
RICI				Sn	Sn	11 39 33.7	-0.3
VIVA	Pratoni del Vi	1.90	252	AML	AML		
	comp=N,776µm,0.7s						
VIVA				AML	AML		
	comp=E,1365µm,1.3s						
NVLJ	Novalja	2.20	354	*e*Pn	Pn	11 39 16.3	+0.1
NVLJ				Sn	Sn	11 39 42.9	-0.5
IST3	Stromboli F	3.57	179	AML	AML		
	comp=N,2010µm,0.6s						
IST3				AML	AML		
	comp=E,1185µm,1.0s						

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*KRNET **17** 11:45:12.5±0.1,39°.79N×74°.22E,h12^{km},mb2.9*
*NNC **17** 11:45:13.4±5.6,39°.70N×74°.11E,h0^{km},mb3.8,mpv3.4,*
Error ellipse: s-maj=42.1km s-min=22.7km az=162.0
*SOME **17** 11:45:18.4,39°.97N×73°.63E,h10^{km}*
ISC 17 11:45:16.3±1.5,39°.90N±0°.06×73°.99E±0°.03,h4^{km}±11^{km},
n28,σ1^{s}.66/49,23C-9D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.39	287	⇓*e*P	Pg	11 45 23.6	-0.3
	baz=92						
SFK				⇓*e*S	Sb	11 45 32.7	+0.3
	baz=92						
SALK	Salom-Alik	0.99	352	⇓*e*P	Pg	11 45 34.6	-0.7
	baz=44						
SALK				⇓*e*S	Sb	11 45 50.0	+0.5
	baz=44						
OHH	Osh	1.11	304	⇑*i*P	Pg	11 45 37.2	-0.5
	baz=4.0						
OHH				⇑*i*S	Sn	11 45 56.0	+1.4
	baz=4.0						
DRK	Karamyk	1.74	257	⇑*i*P	Pn	11 45 47.8	+0.2
	baz=61						
DRK				⇑*i*S	Sg	11 46 13.3	+1.0
	baz=61						
ARLS	Aral	1.97	7	⇑*i*P	Pn	11 45 50.4	-0.3
	baz=2.0						
ARLS				⇑*i*S	Sb	11 46 17.5	-0.4
	baz=2.0						
ARK	Arkit	2.44	322	⇑*i*P	Pn	11 45 57.9	+0.9
	baz=20						
ARK				⇑*i*S	Sb	11 46 31.6	+0.3
	baz=20						
BTK	Batken	2.44	275	⇑*i*P	Pn	11 45 57.9	+0.9
	baz=77						
BTK				⇑*i*S	Sb	11 46 31.5	+0.2
	baz=77						
TRKS	Terek-Say	2.71	308	⇑*i*P	Pn	11 46 01.3	+0.5
	baz=7.0						
TRKS				⇑*i*S	Sb	11 46 37.1	-2.0
	baz=7.0						
AAK	Ala-Archa	2.76	8	⇑Pg	Pg	11 46 11.0	+1.8
	10nm,0.6s						
AAK				Lg	Lg	11 46 49.0	
	13nm,0.6s						
MNAS	Manas	2.82	337	⇑*i*P	Pn	11 46 02.8	+0.6
	baz=35						
MNAS				⇑*i*S	Sb	11 46 40.1	-2.0
	baz=35						
MRKS	Merke	2.90	349	*e*P	Pg	11 46 10.7	-1.2
	7.5nm,0.4s						
MRKS				*e*S	Sg	11 46 48.4	-1.0
	10nm,0.3s						
MRKS	Merke	2.90	349	Pg	Pb	11 46 06.8	-1.8
	4.5nm,0.3s						
MRKS				Lg	Lg	11 46 49.4	
	10nm,0.3s						
FRU1	Bishkek	2.95	9	⇑*i*P	Pn	11 46 03.6	-0.3
	baz=5.0						
FRU1				⇑*i*S	Sn	11 46 41.2	+1.4
	baz=5.0						
BOOM	Boomskoye usch	2.98	29	⇑*i*P	Pn	11 46 02.8	-1.6
	baz=25						
BOOM				⇑*i*S	Sn	11 46 40.1	-0.5
	baz=25						
TKM2	Tokmak 2	3.25	21	⇓Pg	Pg	11 46 21.1	+2.6
	2.7nm,0.5s						
TKM2				⇑Lg	Lg	11 47 00.7	
	14nm,0.7s						
KDJ	Kajisay	3.28	46	⇓*i*P	Pn	11 46 07.0	-1.7
	baz=43						
KDJ				⇓*i*S	Sn	11 46 46.8	-1.4
	baz=43						
MTBS	Maitube	3.71	29	*e*P	Pb	11 46 23.6	+1.2
	4.0nm,0.4s						
MTBS				*e*S	Sb	11 47 10.2	+2.5
	8.7nm,0.7s						
MTBS	Maitube	3.71	29	Pg	Pb	11 46 18.8	-3.7
	4.0nm,0.4s						
MTBS				Lg	Lg	11 47 10.2	
	8.7nm,0.7s						
IUG	Iuzhnay	3.74	308	*e*P	Pb	11 46 21.3	-1.7
	183nm,0.3s						
IUG				*e*S	Sb	11 47 06.7	-2.1
	54nm,0.5s						
IUG	Iuzhnay	3.74	308	Pg	Pn	11 46 16.7	+1.7
	128nm,0.3s						

IUG				Lg	Lg	11 47 06.7	
	54nm,0.5s						
TNSS	Tian-Shan	3.84	34	*e*P	Pg	11 46 30.2	+0.3
	3.9nm,0.4s						
TNSS				*e*S	Sg	11 47 21.5	+1.8
	5.0nm,1.0s						
TNSS	Tian-Shan	3.84	34	Pg	Pb	11 46 25.1	+0.3
	2.5nm,0.8s						
TNSS				Lg	Lg	11 47 20.4	
	5.0nm,1.0s						
MDOK	Medeo	3.98	34	*e*P	Pg	11 46 33.5	+0.8
	6.0nm,0.7s						
MDOK				*e*S	Sg	11 47 27.6	+3.3
	7.9nm,0.8s						
MDOK	Medeo	3.98	34	Pg	Pb	11 46 27.6	+0.4
	6.0nm,0.7s						
MDOK				Lg	Lg	11 47 24.4	
	7.9nm,0.8s						
ANVS	Anan'yevo	3.99	43	⇓*i*P	Pn	11 46 17.1	-1.3
	baz=40						
ANVS				⇓*i*S	Sn	11 47 03.0	-2.8
	baz=40						
KK08	Karatay Array	4.14	322	⇑Pn	Pn	11 46 20.9	+0.6
	0.9nm,0.3s,baz=138,slow=13						
KK08				⇑Pg	Pg	11 46 34.5	-1.2
	1.9nm,0.5s,baz=134,slow=16						
KK08				⇑Sn	Sn	11 47 14.0	+4.8
	2.8nm,0.5s,baz=144,slow=29						
KUU	Kurty	4.36	23	*e*P	Pg	11 46 38.2	-1.6
	1.8nm,0.4s						
KUU				*e*S	Sg	11 47 36.0	-0.2
	10nm,0.7s						
KUU	Kurty	4.36	23	Pg	Pb	11 46 34.3	+0.9
	1.8nm,0.4s						
KUU				Lg	Lg	11 47 36.0	
	10nm,0.7s						

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*ISK **17** 11:52:14.8, 38°.84N×27°.16E, h13^{km}, ML3.8/49*
*DDA **17** 11:52:15.1, 38°.88N×27°.15E, h13^{km}, MW3.7*
*ATH **17** 11:52:16.6, 38°.87N×27°.12E, h33^{km}±9^{km}, ML3.9/1, Error ellipse: s-maj=10.2km s-min=1.6km az=226.0*
*THE **17** 11:52:16.5, 38°.82N×27°.15E, h13^{km}, ML3.4/6, Error ellipse: s-maj=0.7km s-min=0.3km az=218.0*
ISC 17 11:52:15.2±1.0**, 38°.84N**±0°.02×**27°.19E**±0°.02**, h6**^{km}±9^{km}**, n93, σ0^{s}.69**/117**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEDA	zmir-Bergama	0.15	324	*i* P	Pg	11 52 18.4	+0.1
ZEDA				*i* S	Sg	11 52 20.5	+0.1
DKL	Dikili	0.32	316	PG	Pg	11 52 21.8	+0.4
DKL				SG	Sg	11 52 26.4	+0.8
CAND	Candarli	0.32	290	PG	Pg	11 52 21.1	-0.4
CAND				SG	Sg	11 52 25.8	+0.1
FOCM	Foa	0.38	250	PG	Pg	11 52 22.8	+0.2
FOCM				SG	Sg	11 52 28.0	+0.4
BLCB	Balcova	0.47	194	P	Pb	11 52 25.1	-0.7
BLCB				S	Sb	11 52 31.8	-1.2
BLCB	Balcova	0.47	194	PG	Pg	11 52 24.9	+0.7
AKS	Akhisar	0.49	86	PG	Pb	11 52 25.6	-0.5
AKS				SG	Sb	11 52 33.1	-0.4
BUHA	Balikesir, Bur	0.66	352	*i* P	Pg	11 52 27.8	-0.2
BUHA				*i* S	Sg	11 52 36.2	-0.4
URLA	Izmir	0.67	224	PG	Pg	11 52 27.6	-0.5
STEP	BALIKESIR_Sava	0.67	37	*i* P	Pg	11 52 28.4	+0.3
STEP				*i* S	Sg	11 52 37.2	+0.3
ZEYE	Izmir, Urla-Ze	0.81	222	*i* P	Pg	11 52 30.8	+0.1
ZEYE				*i* S	Sb	11 52 43.7	+1.0
PRK	Paraskevi	0.82	300	P	Pb	11 52 31.7	-0.1
PRK				S	Sb	11 52 43.7	+0.6
	2µm,0.5s						
PRK	Paraskevi	0.82	300	P	Pb	11 52 32.4	+0.5
DGB	zmir	0.83	197	*i* P	Pb	11 52 31.4	-0.5
DGB				*i* S	Sb	11 52 43.5	+0.3
BALB	Balikesir	0.96	34	PG	Pg	11 52 33.3	-0.3
CHOS	Chios island	1.00	243	P	Pg	11 52 34.3	-0.1
CHOS				S	Sb	11 52 47.9	-0.4
	7µm,0.3s						
CHOS	Chios island	1.00	243	P	Pb	11 52 34.5	-0.4
CHOS				S	Sb	11 52 48.5	+0.1
CHOS				AML	AML	11 52 50.6	
	comp=N,11116µm,0.4s						
CHOS				AML	AML	11 52 51.9	
	comp=E,17745µm,0.3s						
CHOS	Chios island	1.00	243	PG	Pg	11 52 34.2	-0.1
BAYC	CANAKKALE_Bayr	1.03	331	*i* P	Pg	11 52 34.1	-0.7
BAYC				*i* S	Sg	11 52 47.1	-1.1
AYDB	Zeytinkoy-Aydi	1.05	148	PG	Pb	11 52 35.7	-0.1
KOCA	Canakkale, Ayv	1.05	309	*i* P	Pb	11 52 35.9	+0.1
KOCA				*i* S	Sb	11 52 49.8	0.0
SIGR	SIGRI	1.10	290	P	Pg	11 52 36.1	-0.2
SIGR				S	Sb	11 52 51.3	0.0
	comp=E,2µm,0.5s						
SIGR	SIGRI	1.10	290	P	Pg	11 52 36.3	0.0
SIGR	SIGRI	1.10	290	PN	Pg	11 52 36.2	-0.1
GCAM	G?zelcaml?	1.14	178	*i* P	Pg	11 52 37.0	0.0
GCAM				*i* S	Sn	11 52 54.6	+1.1
GCAM	G?zelcaml?	1.14	178	PN	Pg	11 52 37.0	0.0
SMG	Samos	1.17	194	P	Pg	11 52 36.9	-0.6
SMG				S	Sg	11 52 52.7	+0.1
	comp=E,2µm,0.4s						
SMG	Samos	1.17	194	P	Pb	11 52 37.9	+0.2
SMG				S	Sn	11 52 55.0	+0.8
EZN	Ezine	1.19	326	P	Pg	11 52 37.6	-0.4
EZN				S	Sg	11 52 53.7	+0.3
	comp=E,1µm,0.4s						
EZN	Ezine	1.19	326	PN	Pg	11 52 37.7	-0.3
KULA	Kula-Manisa	1.20	105	P	Pg	11 52 38.2	+0.1
KULA				S	Sb	11 52 54.7	+0.7
KULA	Kula-Manisa	1.20	105	PN	Pb	11 52 38.4	+0.1
DURS	Dursunbey	1.25	52	*i* P	Pg	11 52 38.7	-0.4
GONE	Gonen-Balikesi	1.26	18	PN	Pg	11 52 39.2	-0.2
BOZC	Bozcaada	1.33	319	PN	Pg	11 52 39.9	-0.8
DST	Dursunbey	1.34	55	PN	Pn	11 52 40.2	-0.3
DDIM	Aydin, Didim	1.38	178	*i* P	Pn	11 52 41.2	+0.3
DDIM				*i* S	Sn	11 53 01.6	+2.1
SIMA	Simav-Kutahya	1.42	80	PN	Pn	11 52 41.4	-0.1
USAK	Uak-Merkez	1.43	95	*i* P	Pn	11 52 41.4	-0.3
USAK				*i* S	Sg	11 53 00.4	-0.8
ECEA	Canakkale, Ece	1.44	327	*i* P	Pb	11 52 42.4	+0.1
KRBG	Karabiga-Canak	1.55	3	PN	Pn	11 52 42.5	-0.8
LPK	Lapseki	1.56	348	PN	Pn	11 52 43.0	-0.5
EDC	Edincik	1.59	19	PN	Pn	11 52 43.0	-0.8
SHAP	Saphane-Kutahy	1.59	83	PN	Pn	11 52 44.7	+0.7
MLSB	Milas	1.61	163	PN	Pn	11 52 43.7	-0.5
GELI	Tayfur-Gelibol	1.65	341	PN	Pn	11 52 44.4	-0.2
GOKA	anakkale-Gk	1.67	324	*i* P	Pn	11 52 44.2	-0.7
GADA	Gvkgeada	1.68	324	P	Pn	11 52 44.3	-0.7
GADA				S	Sn	11 53 05.8	-1.0
	comp=E,1µm,0.5s						
GADA	Gvkgeada	1.68	324	PN	Pn	11 52 44.5	-0.5
KCTX	Karacabey (Bur	1.68	32	PN	Pn	11 52 44.1	-1.0
GEDZ	Gediz	1.74	83	PN	Pn	11 52 46.7	+0.7
BODT	Bodrum	1.78	177	P	Pn	11 52 45.4	-1.1
BODT	Bodrum	1.78	177	PN	Pn	11 52 45.3	-1.2
ORLT	Orhaneli	1.79	47	PN	Pn	11 52 45.6	-1.0
MRMT	Marmara Adasi	1.79	10	PN	Pn	11 52 45.7	-0.9
RKY	Sarkoy-Tekirda	1.84	360	PN	Pn	11 52 46.2	-1.2
MAR6	Marsite Statio	1.86	2	PN	Pn	11 52 47.3	-0.3
TVSB	Tavsanli	1.87	70	PN	Pn	11 52 47.6	-0.1
MAR2	Marsite Statio	1.87	3	PN	Pn	11 52 47.6	-0.1
LIA	Limnos Island	1.88	305	P	Pn	11 52 47.1	-0.7
LIA	Limnos Island	1.88	305	P	Pn	11 52 47.7	-0.1
ERIK	Erikli-Kesan	1.90	344	PN	Pn	11 52 48.5	+0.4
MAR3	Marsite Statio	1.90	2	PN	Pn	11 52 47.5	-0.6
GZKV	Gazikoy-Tekird	1.91	3	PN	Pn	11 52 48.3	+0.2
CAVK	Edirne/Enez-Ca	2.01	337	*i* P	Pn	11 52 50.7	+1.1
MDNY	Mudanya-Bursa	2.01	40	PN	Pn	11 52 49.1	-0.5
ENEZ	Enez	2.05	337	PN	Pn	11 52 50.7	+0.5
SMTH	Samothraki Isl	2.07	322	P	Pn	11 52 50.5	+0.1
DAT	Datca	2.13	172	P	Pn	11 52 50.6	-0.8
DAT	Datca	2.13	172	PN	Pn	11 52 50.7	-0.7
APE	Apeiranthos	2.20	217	PN	Pn	11 52 50.9	-1.4
GEMT	Gemlik	2.21	43	PN	Pn	11 52 53.1	+0.7
TURN	Turunc	2.23	158	PN	Pn	11 52 52.3	-0.2
ALN	Alexandroupoli	2.23	337	P	Pn	11 52 52.5	-0.2
ALN	Alexandroupoli	2.23	337	PN	Pn	11 52 52.9	+0.2
NIS1	Nisyros Isl.	2.24	180	PN	Pn	11 52 51.9	-0.8
UKOP	Uzunkopru-Edir	2.32	350	PN	Pn	11 52 54.2	+0.3
TRML	Termal-Yalova	2.33	40	PN	Pn	11 52 53.9	-0.2
YLV	Yalova	2.41	44	PN	Pn	11 52 55.3	+0.2
CAVI	Cavuskoy	2.46	56	PN	Pn	11 52 55.3	-0.5
CTKS	Kestanelik-??a	2.59	22	PN	Pn	11 52 58.5	+0.9
KAVV	Kandilli-Istan	2.64	32	PN	Pn	11 52 58.9	+0.6
ISK	Istanbul-Kandi	2.64	32	PN	Pn	11 52 58.6	+0.3
CTYL	Yalikoy Yolu	2.76	17	PN	Pn	11 53 00.3	+0.4
OUR	Ouranopolis	2.89	302	PN	Pn	11 53 01.8	+0.1
BOSS	Bosilegrad	5.11	317	*e*Pn	Pn	11 53 33.8	+1.5
ZAPS	Zavoj	5.61	324	*e*Pn	Pn	11 53 40.2	+1.1
BARS	Barje	5.69	316	*e*Pn	Pn	11 53 40.9	+0.7
ZAGS	Zajecar	6.21	325	*e*Pn	Pn	11 53 44.1	-3.2
BOVS	Bovan	6.33	321	*e*Pn	Pn	11 53 48.6	-0.3
SELS	Selova	6.34	316	*e*Pn	Pn	11 53 49.4	+0.3
GRUS	Gruza	7.01	318	*e*Pn	Pn	11 53 59.0	+0.7
IVAS	Ivanjica	7.11	314	*e*Pn	Pn	11 54 00.3	+0.6

IDC 17 12:04:01.6±331.0**, 53°.89N×43°.55E, h0**^{km}**, Error ellipse: s-maj=151.0km s-min=102.5km az=143.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.59	311	*i*		12 31 50.0	
	baz=125,slow=336,SNR=1.0						
I31KZ	AKTYUBINSK INF	9.56	106	*i*		12 58 10.0	
	baz=301,slow=305,SNR=1.0						
I46RU	ZALESOVO INFRA	24.06	73	*i*		14 34 30.0	
	baz=282,slow=316,SNR=1.1						
I34MN	SONGINO INFRAS	38.98	72	*i*		16 02 20.0	
	baz=304,slow=318,SNR=0.3						

IDC 17 12:09:52.6±748.0**, 52°.72N×5°.00E, h0**^{km}**, Error ellipse: s-maj=318.2km s-min=126.9km az=119.0, The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	6.74	122	*i*		12 54 50.0	
	baz=307,slow=318,SNR=1.0						
I48TN	KESRA INFRASON	17.18	168	*i*		13 56 20.0	
	baz=353,slow=319,SNR=0.9						
I43RU	DUBNA INFRASON	18.93	65	*i*		14 04 40.0	
	baz=274,slow=326,SNR=1.5						
I31KZ	AKTYUBINSK INF	32.43	72	*i*		15 27 20.0	
	baz=292,slow=321,SNR=0.7						

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*IDC **17** 12:10:29.6±0.6, 9°.59N×57°.94E, h0^{km}, mb4.0/17, mb1 4.1/17, mb1mx3.8/77, mbtmp4.0/17, MS3.7/15, Ms1 3.6/15, ms1mx3.4/53, Error ellipse: s-maj=20.5km s-min=13.5km az=133.0*
*NEIC **17** 12:10:32.2±2.1, 9°.6N±0°.1×57°.9E±0°.1, h10^{km}±1^{km}, mb4.5/19, Error ellipse: s-maj=17.7km s-min=17.1km az=245.0*
ISC 17 12:10:32.6±0.5**, 9°.56N**±0°.09×**57°.98E**±0°.08**, h17**^{km}**, n60, σ1^{s}.10**/41**, mb4.2**/23**, MS3.7**/14**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	4.71	304	Pn	Pn	12 11 43.9	+1.0
WSAR	Wadi Sarin	13.61	3	LR	LR	12 18 11.5	
	comp=Z,449nm,18.3s,baz=209,slow=34						
RAYN	Ar Rayn	18.30	321		Pn	12 14 45.5	-0.4
HYB	Hyderabad	21.46	67	*i* P	P	12 15 21.0	+0.6
PALK	Pallekele	22.59	94	LR	LR	12 22 35.9	
	comp=Z,138nm,18.7s,baz=32,slow=32						
KIBK	Kibwezi	23.11	240	P	P	12 15 37.4	-0.7
KIBK				IAmb	IAmb	12 15 42.4	
	comp=Z,20nm,1.1s						
KMBO	Kilima Mbogo	23.21	244	P	P	12 15 38.1	-1.2
	comp=Z,4.0nm,0.7s,baz=43,slow=12,SNR=12						
KMBO	Kilima Mbogo	23.21	244	P	P	12 15 38.7	-0.6
KMBO				IAmb	IAmb	12 15 42.4	
	comp=Z,30nm,1.5s						
LODK	Lodwar	23.27	256	P	P	12 15 40.1	+0.3
LODK				IAmb	IAmb	12 15 44.2	
	comp=Z,25nm,1.5s						
MBAR	Mbarara	28.94	251	LR	LR	12 28 37.1	
	comp=Z,211nm,18.5s,baz=48,slow=38						
EIL	Elat	29.39	316	LR	LR	12 26 32.5	
	comp=Z,42nm,20.3s,baz=92,slow=33						
OPO	Ambohidratompo	29.91	201	P	P	12 16 40.7	+0.7
	comp=Z,3.0nm,0.8s,baz=358,slow=13,SNR=4.4						
ABPO	Ambohimpanom	30.31	200	P	P	12 16 45.5	+1.9
MMAI	Mount Meron Ar	31.27	322	LR	LR	12 29 33.4	
	comp=Z,46nm,20.6s,baz=145,slow=37						
BTK	Batken	32.45	19	P	P	12 17 02.9	+0.8
GNI	Garni	32.66	341	LR	LR	12 31 32.9	
	comp=Z,146nm,19.6s,baz=162,slow=39						
KKAR	Karatay Array	35.16	16	P	P	12 17 25.0	-0.6
AAK	Ala-Archa	35.99	21	P	P	12 17 33.2	+0.3
	comp=Z,1.8nm,1.0s,baz=207,slow=11,SNR=6.8						
AAK	Ala-Archa	35.99	21	P	P	12 17 33.9	+1.1
AAK				IAmb	IAmb	12 17 43.3	
	comp=Z,7.2nm,1.2s						
BOOM	Boomskoye usch	36.39	23	P	P	12 17 36.3	0.0
KBZ	Khabaz	36.48	342	LR	LR	12 34 01.3	
	comp=Z,111nm,18.2s,baz=162,slow=39						
LSZ	Lusaka	38.48	230	P	P	12 17 53.7	-0.5
	comp=Z,1.3nm,0.4s,baz=38,slow=1.5,SNR=3.5						
LSZ	Lusaka	38.48	230	IAmb	IAmb	12 17 54.7	
	comp=Z,6.1nm,1.3s						
ABKAR	Akbulak array	39.60	2	P	P	12 18 02.4	-0.6
ABKAR				IAmb	IAmb	12 18 06.5	
	comp=Z,16nm,1.4s						
CMAR	Chiang Mai Arr	40.64	73	P	P	12 18 12.7	+0.5
	comp=Z,4.9nm,1.1s,baz=266,slow=7.6,SNR=27						
CMAR	Chiang Mai Arr	40.64	73	P	P	12 18 13.3	+1.1
CHTO	Chiang Mai	40.68	72	P	P	12 18 13.0	+0.4
CHTO				IAmb	IAmb	12 18 15.3	
	comp=Z,11nm,1.2s						
AKTO	Aktyubinsk	40.74	0	P	P	12 18 11.8	-0.8
	comp=Z,3.7nm,0.7s,baz=172,slow=8.0,SNR=12						
MNSI	Mandailing Nat	42.29	99	P	P	12 18 25.6	-0.2
MKAR	Makanchi Array	42.48	25	P	P	12 18 26.9	0.0
	comp=Z,0.7nm,0.7s,baz=225,slow=15,SNR=5.1						
MKAR				LR	LR	12 37 42.5	
	comp=Z,68nm,20.3s,baz=207,slow=38						
KURBB	Kurchatov Arra	44.32	19	P	P	12 18 40.7	-0.9
	comp=Z,0.9nm,0.9s,baz=213,slow=8.8,SNR=6.1						
KURK	Kurchatov	44.43	19	P	P	12 18 40.7	-1.7
KURK	Kurchatov	44.43	19	IAmb	IAmb	12 18 44.1	
	comp=Z,4.5nm,1.2s						
BVAR	Borovoye Array	44.49	11	P	P	12 18 42.4	-0.5
	comp=Z,2.0nm,0.8s,baz=196,slow=15,SNR=7.7						
ZAA0	Zalesovo Array	49.21	21	P	P	12 19 18.6	-1.2
ZALV	Zalesovo Beam	49.21	21	P	P	12 19 18.8	-1.0
	comp=Z,2.0nm,0.7s,baz=224,slow=6.2,SNR=9.8						
ZALV				LR	LR	12 40 54.8	
	comp=Z,102nm,20.6s,baz=101,slow=37						
ZALV	Zalesovo Beam	49.21	21	P	P	12 19 18.1	-1.7
BOSA	Boshof	49.39	219	P	P	12 19 21.4	-0.4
	comp=Z,1.8nm,0.9s,baz=62,slow=5.1,SNR=4.1						
BOSA				LR	LR	12 37 32.3	
	comp=Z,120nm,21.1s,baz=7.5,slow=33						
XAN	Xi'an	52.55	54	P	P	12 19 45.0	-0.5
XAN				pP	pwP	12 19 57.6	+2.7
XAN				sP	sP	12 20 03.4	+12
XAN				pmax	pmax		
	comp=Z,12nm,1.2s						
TORD	Torodi Ar. Bea	55.21	279	P	P	12 20 04.8	-0.4
	comp=Z,0.9nm,0.7s,baz=99,slow=6.0,SNR=6.3						
SONM	Songino Array	55.74	38	P	P	12 20 07.7	-0.9
	comp=Z,0.4nm,0.4s,baz=242,slow=6.2,SNR=7.8						
SONM	Songino Array	55.74	38	P	P	12 20 08.6	0.0
SONM				IAmb	IAmb	12 20 11.9	
	comp=Z,5.3nm,1.4s						
FINES	FINESS Array B	56.83	342	LR	LR	12 46 42.0	
	comp=Z,65nm,18.8s,baz=154,slow=38						
NOA	NORSAR Array B	61.77	336	LR	LR	12 50 07.1	
	comp=Z,49nm,19.2s,baz=300,slow=38						
DBIC	Dimbokro	62.20	273	P	P	12 20 54.1	+0.2
	comp=Z,2.3nm,0.7s,baz=91,slow=5.5,SNR=3.1						
DBIC	Dimbokro	62.20	273	IAmb	IAmb	12 21 07.3	
	comp=Z,5.6nm,1.1s						
ESDC	Sonseca Array	62.42	310	P	P	12 20 53.4	-1.6
	comp=Z,1.3nm,0.8s,baz=87,slow=5.9,SNR=8.6						
ESDC	Sonseca Array	62.42	310	IAmb	IAmb	12 21 11.4	
	comp=Z,3.4nm,1.4s						
NRIK	Noril'sk	62.70	11	LR	LR	12 51 13.6	
	comp=Z,71nm,19.4s,baz=151,slow=39						
ARCES	ARCESS Array B	63.44	348	LR	LR	12 51 49.3	
	comp=Z,43nm,20.1s,baz=10.0,slow=39						
H01W3	Cape Leeuwin H	69.05	133	T	T	13 36 44.9	
	baz=299,slow=75,SNR=5.9						
H01W2	Cape Leeuwin H	69.05	133	T	T	13 36 44.1	
	baz=299,slow=75,SNR=5.1						
H01W1	Cape Leeuwin H	69.07	133	T	T	13 36 44.9	
	baz=299,slow=75,SNR=6.3						
WRA	Warramunga Arr	80.63	112	P	P	12 22 44.7	-0.4
	comp=Z,3.0nm,1.1s,baz=293,slow=4.3,SNR=7.4						
WRA	Warramunga Arr	80.63	112	P	P	12 22 44.6	-0.4
ASAR	Alice Springs	81.14	116	P	P	12 22 46.9	-0.9
	comp=Z,1.3nm,0.9s,baz=290,slow=5.5,SNR=8.4						
TULEG	Thule	88.74	349	*i* P	P	12 23 29.0	+4.1
RES	Resolute Bay	94.25	353	LR	LR	13 08 39.3	
	comp=Z,31nm,21.2s,baz=276,slow=37						
PDAR	Pinedale Array	126.69	349	PKP	PKPdf	12 29 34.9	-1.0
	comp=Z,0.5nm,0.8s,baz=75,slow=1.7,SNR=3.9						
NVAR	Mina Array Bea	132.13	356	PKP	PKiKP	12 29 47.0	-0.3
	comp=Z,0.1nm,0.3s,baz=27,slow=18,SNR=2.2						

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*IDC **17** 12:21:20.4±1.6, 47°.48N×146°.92E, h417^{km}±19^{km}, mb2.9/8, mb1 3.1/13, mb1mx3.0/50, mbtmp3.8/13, Error ellipse: s-maj=18.9km s-min=13.5km az=145.0*
ISC 17 12:21:19.6±0.8**, 47°.5N**±0°.1×**147°.0E**±0°.1**, h403**^{km}**, n13, σ1^{s}.12**/13**, mb3.2**/8**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	4.56	224	P	P	12 22 38.6	+1.5
	0.4nm,0.3s,baz=62,slow=15,SNR=2.1						
PETK	Petropavlovsk-	8.86	47	P	P	12 23 24.7	+0.5
	0.4nm,0.3s,baz=216,slow=7.3,SNR=7.6						
KLR	Kul'dur	10.27	285	P	P	12 23 40.7	+0.8
	0.4nm,0.3s,baz=73,slow=8.2,SNR=13						
USRK	Ussuriysk Ar.	10.96	258	P	P	12 23 47.5	-0.1
	baz=70,slow=11,SNR=8.7						
KSRS	Korea Array	17.23	241	P	P	12 24 56.5	+0.8
	0.6nm,0.3s,baz=44,slow=10,SNR=12						
SONM	Songino Array	27.10	286	P	P	12 26 29.0	+1.5
	0.5nm,0.3s,baz=96,slow=6.3,SNR=5.9						
ILAR	Eielson Array	38.58	39	P	P	12 28 05.2	0.0
	1.1nm,1.2s,baz=262,slow=5.0,SNR=4.6						
ZALV	Zalesovo Beam	38.72	303	P	P	12 28 04.7	-1.7
	0.7nm,0.4s,baz=65,slow=7.9,SNR=4.7						
MKAR	Makanchi Array	42.82	294	P	P	12 28 38.6	-1.1
	0.6nm,0.6s,baz=73,slow=9.6,SNR=6.9						
NVAR	Mina Array Bea	65.73	59	P	P	12 31 22.8	0.0
	0.1nm,0.4s,baz=273,slow=8.8,SNR=3.7						
PDAR	Pinedale Array	67.60	51	P	P	12 31 35.0	+0.5
	0.5nm,0.4s,baz=355,slow=0.8,SNR=6.8						
WRA	Warramunga Arr	68.10	193	P	P	12 31 35.9	-1.4
	0.3nm,0.5s,baz=9.3,slow=6.0,SNR=6.5						
ASAR	Alice Springs	71.82	193	P	P	12 31 59.3	-0.4
	0.2nm,0.5s,baz=8.9,slow=5.4,SNR=8.7						

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*VAO **17** 12:32:26.5±0.4, 31°.71S×69°.39W, h10^{km}, mb4.3*
*IDC **17** 12:32:36.4±1.9, 30°.98S×68°.38W, h48^{km}±19^{km}, mb3.8/9, mb1 4.0/14, mb1mx3.9/27, mbtmp4.0/14, ML4.0/5, MS3.3/3, Ms1 3.3/3, ms1mx3.0/24, Error ellipse: s-maj=22.4km s-min=13.2km az=89.0*
*NEIC **17** 12:32:36.8±2.7, 31°.11S±0°.05×68°.37W±0°.10, h46^{km}±8^{km}, mb4.4/24, Md3.9(SJA), Error ellipse: s-maj=12.0km s-min=7.8km az=98.0*
ISC 17 12:32:37.4±0.5**, 31°.03S**±0°.04×**68°.38W**±0°.05**, h50**^{km}**, n104, σ2^{s}.22**/103**, mb4.1**/17**, 6C-7D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	Zonda	0.57	206		Pn	12 32 44.5	-5.2
CO03	El Pedregal	1.99	275	⇓*i*P	Pn	12 33 08.8	+0.2
CO03				*i* S	Sn	12 33 34.8	+2.3
CO03				IAML		12 33 39.6	
	comp=N,6µm,0.4s						
CO03	El Pedregal	1.99	275		Pn	12 33 08.8	+0.1
GO04	Tololo Observa	2.25	292	⇑*i*P	Pn	12 33 13.8	+1.4
GO04				*i* S	Sn	12 33 44.1	+5.0
GO04	Tololo Observa	2.25	292		Pn	12 33 13.7	+1.4
VCA	Vinchina	2.29	4	⇑*i*P	Pn	12 33 14.2	+1.3
VCA				*i* S	Sn	12 33 45.1	+5.1
VA03	San Esteban	2.53	226	*e*P	Pn	12 33 17.1	+1.1
VA03				*i* S	Sn	12 33 51.0	+5.3
VA03				IAML		12 33 55.5	
	comp=E,4µm,0.6s						
VA03				IAML		12 33 59.2	
	comp=N,4µm,0.4s						
VA03	San Esteban	2.53	226		Pn	12 33 16.9	+0.9
CO05	La Serena	2.70	293	*e*P	Pn	12 33 18.4	+0.1
CO05				*i* S	Sn	12 33 52.6	+2.8
CO05				IAML		12 33 59.6	
	comp=N,4µm,0.6s						
CO05	La Serena	2.70	293		Pn	12 33 18.7	+0.4
FCH	Farellones	2.81	215	⇓*i*P	Pn	12 33 21.7	+1.6
FCH				*i* S	Sn	12 33 57.8	+5.0
CO06	Fray Jorge	2.82	276	⇑*i*P	Pn	12 33 19.0	-0.9
CO06				IAML		12 34 01.2	
	comp=N,3µm,0.5s						
CO06	Fray Jorge	2.82	276		Pn	12 33 19.1	-0.9
LCO	Las Campanas	2.84	314		Pn	12 33 21.7	+1.2
PEL	Peldehue	2.87	222	⇑*i*P	Pn	12 33 20.6	-0.2
PEL				*i* S	Sn	12 33 58.3	+4.2
PEL	Peldehue	2.87	222		Pn	12 33 21.1	+0.3
VA06	Catapilco	2.91	238	*e*P	Pn	12 33 20.1	-1.1
ROCH	El Roble	2.96	228	⇓*i*P		12 33 21.9	
ROCH				⇓*i*P	Pn	12 33 21.5	-0.5
ROCH				*i* S	Sn	12 34 00.5	+4.1
MT05	Renca	3.09	220	*e*P	Pn	12 33 23.4	-0.3
MT05				IAML		12 34 10.5	
	comp=N,2µm,0.6s						
MT05	Renca	3.09	220		Pn	12 33 24.3	+0.6
LMEL	Las Melosas	3.20	208	*e*P	Pn	12 33 27.0	+1.6
MT02	Curacav	3.23	226	⇑*i*P	Pn	12 33 25.0	-0.5
MT02				*i* S	Sn	12 34 04.3	+1.6
MT02	Curacav	3.23	226		Pn	12 33 25.3	-0.3
VA01	Torpederas	3.41	233		Pn	12 33 26.8	-1.3
MT09	Talagante	3.52	218	⇓*i*P	Pn	12 33 29.2	-0.5
MT09				*i* S	Sn	12 34 11.4	+1.4
MT09	Talagante	3.52	218		Pn	12 33 29.1	-0.6
AC04	Llanos de Chal	3.66	320	⇓*i*P	Pn	12 33 31.9	+0.3
AC04	Llanos de Chal	3.66	320		Pn	12 33 32.2	+0.7
MT01	Popeta	3.72	220	⇓*i*P	Pn	12 33 31.2	-1.2
MT01	Popeta	3.72	220		Pn	12 33 31.2	-1.2
GO03	Copiap	3.79	334	⇑*i*P	Pn	12 33 34.0	+0.7
GO03	Copiap	3.79	334		Pn	12 33 33.8	+0.4
VA05	Santo Domingo	3.79	225		Pn	12 33 32.7	-0.5
BO01	Tunca	4.05	213		Pn	12 33 36.2	-0.7
AC02	Maricunga	4.23	351		Pn	12 33 41.5	+1.7
GO05	Huala	4.96	216	Pn	Pn	12 33 47.7	-1.7
ML02	Panimavida	5.36	207		Pn	12 33 53.9	-0.9
LC01	Cunco	8.36	199		Pn	12 34 35.2	-0.7
PB06	IPOC Station P	8.36	352		Pn	12 34 34.8	-1.3
LVC	Limon Verde	8.40	357	P	Pn	12 34 35.0	-1.8
	comp=N,6.2nm,0.3s,baz=177,slow=9.4,SNR=21						
LVC				S	Sn	12 36 08.6	-1.9
	comp=N,1.6nm,0.3s,baz=349,slow=14,SNR=1.8						
LVC				LR	LR	12 38 18.9	
	comp=N,266nm,21.9s,baz=190,slow=41						
LVC	Limon Verde	8.40	357	*e*P	Pn	12 34 36.0	-0.9
LVC				*e*S	Sn	12 36 21.2	+11
LVC	Limon Verde	8.40	357		Pn	12 34 35.9	-0.9
PB04	IPOC Station P	8.80	349		Pn	12 34 39.3	-3.0
PB09	IPOC Station P	9.23	355		Pn	12 34 46.6	-1.4
H03N1	Juan Fernandez	9.24	252	T	T	12 42 00.8	
	baz=81,slow=73,SNR=203						
H03N3	Juan Fernandez	9.25	252	T	T	12 41 52.9	
	baz=81,slow=73,SNR=227						
H03N2	Juan Fernandez	9.25	252	T	T	12 42 04.1	
	baz=81,slow=73,SNR=176						
PLCA	Paso Flores	9.84	190	P	Pn	12 34 56.1	-0.2
	comp=N,0.1nm,0.3s,baz=10.0,slow=21,SNR=1.4						
PLCA				S	Sn	12 36 46.4	+1.0
	comp=N,0.3nm,0.3s,baz=6.6,slow=15,SNR=1.9						
PLCA				LR	LR	12 39 03.6	
	comp=N,250nm,20.0s,baz=354,slow=39						
PB01	IPOC Station P	9.99	354		Pn	12 34 55.3	-3.2
ITQB	Itaqui	10.25	85		Pn	12 35 00.4	-1.5
CPUP	Villa Florida	10.78	67	P	Pn	12 35 06.0	-3.0
	comp=N,0.4nm,0.3s,baz=244,slow=11,SNR=3.7						
CPUP				S	Sn	12 37 10.6	+2.4
	comp=N,0.8nm,0.3s,baz=219,slow=10,SNR=1.5						
CPUP	Villa Florida	10.78	67		Pn	12 35 07.5	-1.6
PB08	IPOC Station P	10.86	356	Pn	Pn	12 35 07.7	-2.9
PB11	IPOC Station P	11.28	354	Pn	Pn	12 35 11.4	-4.7
PLTB	Pedras Altas	12.65	97	*e*P	Pn	12 35 36.8	+2.1

CPSB	Cacapava Do Su	12.88	91	eS	S	12 38 15.2	-8.0
LPAZ	La Paz	14.68	1	P	Pn	12 36 01.1	-1.5
	comp=N,0.7nm,0.3s,baz=184,slow=7.5,SNR=12						
LPAZ				LR	LR	12 42 27.2	
	comp=N,72nm,19.2s,baz=162,slow=40						
LPAZ	La Paz	14.68	1	eP	Pn	12 36 04.1	+1.5
LPAZ	La Paz	14.68	1	Pn	Pn	12 36 02.3	-0.3
ITAB	Concordia	14.70	79	eP	P	12 36 07.5	+0.1
CNLB	Canela	15.26	88	eP	P	12 36 13.7	0.0
AQDB	Aquidauana	15.51	50	eP	P	12 36 19.6	+3.2
SIV	San Ignacio	16.39	26	P	Pn	12 36 21.9	-2.2
	comp=N,0.4nm,0.3s,baz=221,slow=10,SNR=7.2						
TER01	Tubaro-SC	16.90	86	eP	P	12 36 34.7	+2.8
PTLB	Pontes e Lacer	17.67	31	eP	P	12 36 44.8	+4.4
FRTB	Fartura	18.39	70	eP	Pn	12 36 53.2	+4.3
SALV	Santo Antonio	19.01	40	eP	Pn	12 37 00.3	+4.1
VILB	Vilhena	19.51	25	eP	Pn	12 37 04.6	+2.4
ITRB	Iturama	19.78	59	eP	Pn	12 37 08.9	+3.5
VAO	Valinhos	20.67	72	eP	Pn	12 37 17.9	+1.9
ETMB	Extrema	21.20	6	P	P	12 37 19.0	+0.1
ETMB				IAmb	IAmb	12 37 24.1	
	comp=Z,15nm,1.0s						
ARAG	Araguaiana, MT	21.50	49	eP	P	12 37 27.2	+5.1
SAML	Samuel	22.50	14	P	P	12 37 32.0	-0.8
CZSB	Cruzeiro do Su	23.53	349	eP	P	12 37 42.9	-0.3
CZSB	Cruzeiro do Su	23.53	349	P	P	12 37 42.5	-0.7
USHA	Ushuaia	23.79	180	P	P	12 37 46.1	+0.8
	comp=Z,4.0nm,0.8s,baz=359,slow=5.9,SNR=3.6						
BDFB	Brasilia	24.11	55	P	P	12 37 52.2	+3.5
	comp=Z,3.8nm,0.8s,baz=243,slow=13,SNR=4.7						
CAM01	Campos-RJ	25.58	75	eP	P	12 38 03.6	+1.8
DIAM	Diamantina, MG	25.72	66	eP	P	12 38 06.8	+3.4
ZARC	Zaragoza, Cauc	38.80	350	P	P	12 39 55.8	-1.7
ZARC				IAmb	IAmb	12 39 57.0	
	comp=Z,4.9nm,1.0s						
SJCC	San Jacinto, C	41.21	350	P	P	12 40 16.0	-1.5
VNA2	Neumayer--Watz	51.59	158	P	P	12 41 45.1	+6.9
	baz=286,slow=8.1						
SNAA	Sanae	53.20	159	P	P	12 41 57.1	+6.9
SNAA	Sanae	53.20	159	P	P	12 41 48.7	-1.5
	comp=Z,1.4nm,0.7s,baz=19,slow=21,SNR=4.3						
SNAA	Sanae	53.20	159	P	P	12 41 48.4	-1.8
QSPA	South Pole Qui	59.20	180	P	P	12 42 32.8	-0.4
VNDA	Vanda	67.59	190	P	P	12 43 28.4	+0.1
	comp=Z,0.7nm,0.7s,baz=131,slow=7.3,SNR=5.6						
VNDA	Vanda	67.59	190	IAmb	IAmb	12 43 48.9	
	comp=Z,3.6nm,1.4s						
TXAR	Lajitas Array	68.78	327	P	P	12 43 35.1	-1.3
	comp=Z,1.7nm,0.8s,baz=150,slow=8.2,SNR=20						
TX31	Lajitas Ar. Si	68.78	327	P	P	12 43 35.9	-0.5
TX31				IAmb	IAmb	12 43 37.6	
	comp=Z,5.9nm,0.8s						
TX32	Lajitas Array	68.78	327	P	P	12 43 35.4	-1.0
WVT	Waverly	69.25	343	P	P	12 43 37.5	-1.5
DBIC	Dimbokro	71.28	70	P	P	12 43 51.1	-0.8
	comp=Z,2.2nm,0.8s,baz=262,slow=7.2,SNR=3.5						
DBIC	Dimbokro	71.28	70	IAmb	IAmb	12 44 00.7	
	comp=Z,4.2nm,0.7s						
MNTX	Cornudas Mount	71.57	327	IAmb	IAmb	12 43 53.3	
	comp=Z,3.5nm,0.8s						
S39A	Bolivar	72.23	339	P	P	12 43 56.6	-0.5
T25A	Trinidad	75.73	331	IAmb	IAmb	12 44 19.6	
	comp=Z,5.1nm,0.8s						
X16A	Lo Mia Camp, P	76.71	325	IAmb	IAmb	12 44 25.9	
	comp=Z,4.7nm,1.1s						
TORD	Torodi Ar. Bea	80.27	68	P	P	12 44 42.5	-0.7
	comp=Z,1.3nm,0.9s,baz=262,slow=5.3,SNR=6.3						
PDAR	Pinedale Array	82.60	331	P	P	12 44 54.4	-0.9
	comp=Z,0.9nm,0.8s,baz=127,slow=6.7,SNR=7.4						
NVAR	Mina Array Bea	83.30	323	P	P	12 44 58.6	-0.4
	comp=Z,1.1nm,0.8s,baz=177,slow=5.0,SNR=8.3						
ELK	Elko	83.54	326	P	P	12 44 59.8	-0.4
	comp=Z,1.0nm,0.6s,baz=85,slow=4.4,SNR=5.6						
HLID	Hailey	85.35	328	IAmb	IAmb	12 45 10.8	
	comp=Z,4.2nm,1.1s						
ASAR	Alice Springs	121.57	204	PKP	PKPdf	12 51 24.2	-1.8
	comp=Z,0.3nm,0.4s,baz=126,slow=1.7,SNR=7.7						

MOS ***17*** *12:44:00.4±0.9, 17°.78N×120°.60E, h64^{km}, mb5.7/71, MS4.4/12, Error ellipse: s-maj=6.3km s-min=3.7km az=117.4*

MAN ***17*** *12:44:01.8, 17°.76N×120°.51E, h60^{km}, mb5.8, ML4.8, MS5.2*

IDC ***17*** *12:44:02.3±1.3, 17°.59N×120°.71E, h75^{km}±10^{km}, mb4.9/60, mb1 5.0/62, mb1mx4.8/76, mbtmp5.3/62, MS4.2/38, Ms1 4.2/38, ms1mx4.1/54, Error ellipse: s-maj=8.9km s-min=7.0km az=67.0*

BJI ***17*** *12:44:02.6±0.0, 17°.86N×120°.59E, h68^{km}, mB5.1/59, mb5.0/78, Ms4.8/83, Ms7 4.5/77*

GCMT ***17*** *12:44:03.1±0.1, 17°.72N±0°.01×120°.56E±0°.01, h80^{km}±1^{km}, MW5.3/130, Moment Tensor Solution. s112,c173; s130,c251; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.09±.02; $M_{\theta\theta}$0.23±.02; $M_{\phi\phi}$-0.13±.02; $M_{r\theta}$-0.10±.01; $M_{\theta\phi}$-0.33±.02; $M_{\phi r}$1.20±.01; Best double couple: $M_0$1.25700×10^{17} NP1:ϕ_s265.00000°,δ17.00000°, λ-177.00000°. NP2:ϕ_s172.00000°,δ89.00000°, λ-73.00000°. Principal axes: T 1.1840, Plg42.0000°, Azm246.0000°; N 0.1460, Plg17.0000°, Azm352.0000°; P -1.3300, Plg43.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***17*** *12:44:03.1±2.4, 17°.75N±0°.06×120°.58E±0°.08, h70^{km}±4^{km}, mb5.4/256, Mww5.3 Error ellipse: s-maj=10.7km s-min=8.4km az=88.0*

KLM ***17*** *12:44:07, 17°.62N×120°.74E, h118^{km}, mb5.5*

NEIC ***17*** *12:44:07, 17°.78N×120°.59E, h70^{km}, Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.11; $M_{\theta\theta}$0.08; $M_{\phi\phi}$0.03; $M_{r\theta}$-0.17; $M_{\theta\phi}$-0.20; $M_{\phi r}$1.30; Fault plane solution: $M_0$1.33000×10^{17} NP1: ϕ_s276.00000°,δ9.00000°,λ-165.00000°. NP2: ϕ_s172.00000°,δ88.00000°,λ-81.00000°. Principal axes: T 1.3196, Plg42.0000°, Azm254.0000°; N 0.0215, Plg8.0000°, Azm352.0000°; P -1.3411, Plg47.0000°, Azm91.0000°;*

BGR ***17*** *12:44:07.1±0.0, 18°.41N×120°.06E, h67^{km}±1^{km}, mb5.1*

ISC 17 12:44:03.3±0.3**, 17°.69N**±0°.03×**120°.57E**±0°.03**, h81**^{km}±1^{km}**, h80**^{km}**:pP-P, n1089,** σ**1^{s}50**/1132**, mb5.3**/320**, 51C-26D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.26	335	⇑iP	Pn	12 44 12.9	-2.5
SIPP				eS	Sn	12 44 25.6	+1.2
TGY	Tagaytay City	3.58	174	P	Pn	12 44 57.3	+0.7
	247nm,0.3s,baz=246,slow=0.5,SNR=16						
TGY				S	Sn	12 45 32.8	-5.0
	490nm,0.3s,baz=269,slow=15,SNR=4.2						
TGY	Tagaytay City	3.58	174	⇑eP	Pn	12 44 59.2	+2.6
TGY				i S	Sn	12 46 01.3	+23
LQP	Lukban	3.67	165	⇑iP	Pn	12 44 59.5	+1.5
LUBP	Lubang	3.94	185	⇑iP	Pn	12 45 04.0	+2.5
LUBP				i S	Sn	12 45 32.8	-14
JCNP	Jose Panganiba	3.95	149	⇓iP	Pn	12 45 02.4	+0.9
JCNP				i S	Sn	12 45 47.6	+0.9
PGP	Puerto Galera	4.18	175	⇓eP	Pn	12 45 05.2	+0.5
TWG	Pinlang	5.13	5		Pn	12 45 15.6	-2.0
TPUB	Ta-pu	5.59	1		Pn	12 45 22.8	-1.1
TPUB	Ta-pu	5.59	1	P	Pn	12 45 24.4	+0.5
YULB	Yu-li	5.72	7		Pn	12 45 24.5	-1.2
SSLB	Suanglung	6.08	3	Pn	Pn	12 45 28.9	-1.8
SSLB	Suanglung	6.08	3	P	Pn	12 45 29.7	-0.9
RCP	Roxas	6.44	161	⇓eP	Pn	12 45 41.0	+5.4
NACB	Ninganchiao	6.53	8		Pn	12 45 35.6	-1.1
YHNB	Yeheng	6.99	6	Pn	Pn	12 45 42.3	-0.7
YHNB	Yeheng	6.99	6	P	Pn	12 45 43.4	+0.3
KNMB	Chin-men Tao	7.04	344	Pn	Pn	12 45 41.0	-2.7
YOJ	Yonaguni jima	7.12	18	P	Pn	12 45 43.7	-1.0
YOJ	Yonaguni jima	7.12	18		Pn	12 45 43.7	-1.0
YOJ	Yonaguni jima	7.12	18	P	Pn	12 45 46.8	+2.1
TATO	Taipei	7.30	7	P	Pn	12 45 49.5	+2.2
TATO	Taipei	7.30	7		Pn	12 45 47.7	+0.5
QZH	Quanzhou	7.45	346	P	Pn	12 45 47.1	-2.2
QZH				S	Sn	12 47 04.8	-7.5
QZH				LR	LR		
	comp=N,2µm,15.1s						
QZH				LR	LR		
	comp=E,2µm,15.6s						
QZH				LR	LR		
	comp=Z,2µm,12.4s						
HKPS	Hong Kong Po S	7.58	308		Pn	12 45 48.0	-3.0
MCO	Taipa Grande	7.94	305	P	Pn	12 45 54.0	-1.9
CNOP	Candoni, Negro	8.06	165	eP	Pn	12 46 01.3	+3.6
CNOP				eS	Sn	12 47 34.0	+6.6
TBP	Tagbilaran	8.57	158	eP	Pn	12 46 05.9	+1.4
TBP				i S	Sn	12 47 46.0	+6.4
MSLP	Maasin	8.58	150	eP	Pn	12 46 07.3	+2.6
MSLP				eS	Sn	12 48 15.6	+36
QIZ	Qiongzhong	10.27	279	P	Pn	12 46 25.0	-2.9
QIZ				S	Sn	12 48 14.3	-7.0
QIZ				pmax	pmax		
	comp=Z,92nm,1.3s						
QIZ				LR	LR		
	comp=N,2µm,10.6s						
QIZ				LR	LR		
	comp=E,2µm,11.6s						
QIZ				LR	LR		
	comp=Z,2µm,10.5s						
QIZ	Qiongzhong	10.27	279	Pn	Pn	12 46 25.1	-2.7
KCP	Kidapawan	11.49	157	⇓eP	Pn	12 46 43.7	-0.8
JOW	Kunigami	11.56	37	P	Pn	12 46 43.3	-2.0
	9.5nm,0.3s,baz=252,slow=16,SNR=8.0						
JOW				LR	LR	12 51 43.0	
	comp=Z,763nm,18.0s,baz=198,slow=40						
JOW	Kunigami	11.56	37	Pn	Pn	12 46 43.5	-1.8
JOW	Kunigami	11.56	37	P	Pn	12 46 46.3	+1.0
KKM	Kota Kinabalu	12.33	201	P	Pn	12 46 58.4	+2.5
MYLDM	Lahad Datu	12.59	190	Pn	Pn	12 47 02.3	+2.9
DLV	T Lat	13.00	246	P	Pn	12 47 05.9	+0.8
SPMM	Sapulut	13.51	198	P	P	12 47 15.0	-3.0
WHN	Wuhan	14.00	337	⇑P	Pn	12 47 18.9	+1.0
WHN				pP	P	12 47 31.4	+8.2
WHN				S	Sn	12 49 40.6	-11
WHN				LR	LR		
	comp=N,3µm,11.0s						
WHN				LR	LR		
	comp=E,8µm,22.0s						
WHN				LR	LR		
	comp=Z,4µm,14.6s						
NJ2	Nanjing	14.39	354	eP	Pn	12 47 22.6	-0.3
NJ2				pP	P	12 47 34.4	+6.8
NJ2				PP		12 47 35.9	
NJ2				sP		12 47 43.3	
NJ2				S	Sn	12 50 01.3	0.0
NJ2				sS	S	12 50 17.8	+1.5
NJ2				pmax	pmax		
	comp=Z,35nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,560nm,4.4s						
NJ2				LR	LR		
	comp=N,1µm,14.2s						
NJ2				LR	LR		
	comp=E,940nm,11.4s						
NJ2				LR	LR		
	comp=Z,1µm,14.3s						
UBPT	Khong Chiam	14.68	263	Pn	Pn	12 47 28.4	+1.5
GYA	Guiyang	15.56	307	⇓iP	Pn	12 47 38.5	+0.4
GYA				pP	pP	12 47 49.8	-5.9
GYA				sP	sP	12 48 03.3	-2.2
GYA				S	Sn	12 50 27.5	-2.4
GYA				pmax	pmax		
	comp=Z,78nm,0.9s						
GYA				LR	LR		
	comp=N,1µm,13.5s						
GYA				LR	LR		
	comp=E,1µm,11.7s						
GYA				LR	LR		
	comp=Z,2µm,19.0s						
ENH	Enshi	16.10	323	Pn	Pn	12 47 43.4	-1.3
SLVN	Son La	16.12	286	P	Pn	12 47 45.4	+0.1
JSU	Suzuyama	16.42	31	Pn	Pn	12 47 47.4	-1.4
TOLI2	Tolitoli	16.47	179		P	12 47 51.4	+0.6
TOLI2	Tolitoli	16.47	179	P	P	12 47 50.6	-0.2
MRSI	Marisa	17.15	175	P	P	12 47 59.4	+1.0
	1µm117nm,0.6s						
SBUM	Sibu	17.22	209	P	P	12 48 00.0	+0.9
SBUM	Sibu	17.22	209	P	Pn	12 47 57.7	-1.0
MPSI	Mapaga	17.25	182	P	P	12 48 01.9	+2.5
	622nm33nm,1.4s						
KMSI	Cibinong	17.33	168	P	P	12 48 01.9	+1.6
	254nm,0.8s						
JNU	Nakatsue	17.95	29	P	Pn	12 48 07.6	0.0
	17nm,0.3s,baz=346,slow=0.2,SNR=32						
JNU				LR	LR	12 54 47.0	
	comp=Z,1µm,20.3s,baz=210,slow=36						
JNU	Nakatsue	17.95	29	P	P	12 48 06.8	-0.3
JNU				IAmb	IAmb	12 48 10.7	
	comp=Z,241nm,0.9s						
TNTI	Ternate	18.09	158	P	P	12 48 07.2	-1.5
	comp=Z,2µmcomp=Z,165nm,1.6s						
TNTI	Ternate	18.09	158		P	12 48 07.3	-1.4
TNTI				IAmb	IAmb	12 48 14.8	
	comp=Z,538nm,1.7s						
TNTI	Ternate	18.09	158	P	Pn	12 48 09.3	0.0
KMI	Kunming	18.17	297	⇑P	Pn	12 48 12.8	+2.4
KMI				pP	pP	12 48 24.9	+0.1
KMI				PP	pwP	12 48 28.4	-0.4
KMI				sP	sP	12 48 31.8	-2.8
KMI				S	S	12 51 29.8	-3.1
KMI				pmax	pmax		
	comp=Z,120nm,1.3s						
KMI				pmax	pmax		
	comp=Z,1µm,5.1s						
KMI				LR	LR		
	comp=Z,1µm,16.5s						
KMI				LR	LR		
	comp=Z,2µm,17.6s						
KMI				LR	LR		
	comp=Z,3µm,17.6s						
APSI	Ampana	18.51	177	P	Pn	12 48 15.0	+0.7
	comp=Z,2µmcomp=Z,182nm,1.3s						
JTU	Tsushima	18.53	23	P	P	12 48 13.1	-0.2
JTU				IAmb	IAmb	12 48 20.6	
	comp=Z,234nm,1.4s						
TIA	Tai'an	18.70	351	⇑P	Pn	12 48 16.9	+0.4
TIA				pmax	pmax		
	comp=Z,14nm,0.8s						
TIA				pmax	pmax		
	comp=Z,450nm,4.9s						
TIA				LR	LR		
	comp=Z,590nm,13.1s						
TIA				LR	LR		
	comp=Z,970nm,12.9s						
TIA				LR	LR		
	comp=Z,920nm,13.3s						
LUWI	Luwuk	18.73	173	P	P	12 48 15.8	0.0
	comp=Z,4µmcomp=Z,304nm,1.0s						
LUWI	Luwuk	18.73	173	P	P	12 48 15.2	-0.5
LUWI				IAmb	IAmb	12 49 01.3	
	comp=Z,284nm,1.0s						
LUWI	Luwuk	18.73	173	P	Pn	12 48 18.1	+1.1
KSM	Kuching	19.01	213	P	Pn	12 48 20.0	-0.3
KSM	Kuching	19.01	213	P	Pn	12 48 19.7	-0.6
KSM				IAmb	IAmb	12 48 21.3	
	comp=Z,286nm,1.2s						
KSM	Kuching	19.01	213	P	Pn	12 48 20.3	0.0
MTKI	Muara Teweh, K	19.34	197	P	Pn	12 48 23.7	-0.5
XAN	Xi'an	19.34	330	P	Pn	12 48 23.9	-0.3
XAN				S	S	12 51 57.1	+0.1
XAN				pmax	pmax		
	comp=Z,99nm,1.3s						
XAN				LR	LR		
	comp=Z,1µm,15.8s						
XAN				LR	LR		
	comp=Z,2µm,11.7s						
XAN				LR	LR		
	comp=Z,2µm,12.4s						
LBMI	Labuha	19.45	159	P	P	12 48 22.6	-0.9
	comp=Z,2µmcomp=Z,82nm,0.8s						
KSDAG	Daegu	19.47	21	P	Pn	12 48 25.0	-0.6
	SNR=35						
KSUSN	Ulsan	19.49	21	P	P	12 48 24.3	+0.5
	SNR=14						
TJN	Taejon	19.57	17	ceP	P	12 48 22.9	-1.7
TJN	Taejon	19.57	17	P	P	12 48 24.9	+0.3
KSCPR	CHUPUNGNYEONG	19.59	18	P	P	12 48 25.1	+0.2
	SNR=7.9						
STKI	Sintang	19.66	208	P	Pn	12 48 27.4	-0.6
	comp=Z,6µmcomp=Z,244nm,1.3s						
KSYOC	YEONGCHEON	19.67	21	P	P	12 48 26.5	+0.7
	SNR=7.9						
YOCB	Yeongcheon	19.68	21	P	Pn	12 48 27.2	-0.8
	SNR=29						
KSBON	Boeun	19.80	17	P	P	12 48 27.6	+0.4
	SNR=13						
KSSAJ	Sangju	19.82	18	P	P	12 48 27.4	0.0
	SNR=12						
KSEUS	ULSEONG	19.93	20	P	P	12 48 28.5	-0.2
	SNR=13						
EUSB	Uiseong	19.94	20	P	P	12 48 29.0	+0.4
	SNR=14						
JMN	Monobe	19.94	34	P	P	12 48 27.8	-1.0
JMN				IAmb	IAmb	12 48 55.7	
	comp=Z,197nm,1.1s						
KSCEA	Cheonan	19.96	16	P	P	12 48 29.1	+0.2
	SNR=16						
KSMGY	Mungyeong	20.02	18	P	P	12 48 29.4	-0.2
	SNR=13						
KSADO	Andong	20.07	20	P	P	12 48 31.0	+0.9
	SNR=16						
PYTK	Pyeongtaek	20.07	15	P	P	12 48 30.4	+0.3
	SNR=7.9						
HAWB	Hwaseong-si	20.08	15	P	P	12 48 31.0	+0.7
	SNR=9.2						
CD2	Chengdu	20.17	314	⇑P	P	12 48 32.4	+1.1
CD2				pP	pwP	12 48 49.0	-1.8
CD2				S	S	12 52 13.9	+0.5
CD2				pmax	pmax		
	comp=Z,400nm,1.2s						
CD2				pmax	pmax		
	comp=Z,700nm,6.5s						
CD2				LR	LR		
	comp=Z,4µm,13.3s						
CD2				LR	LR		
	comp=Z,5µm,14.6s						
CD2				LR	LR		
	comp=Z,2µm,20.9s						
KSCHJ	Chungju	20.20	17	P	P	12 48 32.0	+0.5
	SNR=19						
KSSWO	Suwon	20.30	15	P	P	12 48 33.1	+0.4
	SNR=18						
SHHB	Siheung-si	20.32	14	P	P	12 48 33.0	+0.2
	SNR=14						
SANI	Sanana	20.32	164	P	P	12 48 30.0	-3.0
YOJB	Youngju	20.36	19	P	P	12 48 34.0	+0.7
	SNR=8.2						
INCN	Inchon	20.43	14	P	P	12 48 33.7	-0.3
INCN				pmax	pmax		
	comp=Z,119nm,0.8s						
INCN	Inchon	20.43	14	P	P	12 48 34.2	+0.1
INCN	Inchon	20.43	14	P	P	12 48 33.7	-0.3
INCN				IAmb	IAmb	12 48 34.7	
	comp=Z,119nm,0.8s						
INCN	Inchon	20.43	14	P	P	12 48 34.5	+0.4
KSICN	Icheon	20.44	16	P	Pn	12 48 36.5	-0.5
	SNR=10.0						
KSULJ	Uljin	20.49	21	P	Pn	12 48 37.0	-0.5
	SNR=8.0						
KSSEO	Seoul	20.50	15	P	P	12 48 35.1	+0.4
	SNR=13						
JECH	Jecheon	20.53	18	P	P	12 48 36.0	+0.9
	SNR=7.5						
CHYB	Chungyang	20.55	19	P	P	12 48 36.0	+0.7
	SNR=11						
JHS	Saijyo	20.55	31	P	P	12 48 34.6	-0.7
CHTO	Chiang Mai	20.57	276	P	P	12 48 36.2	+0.5
CHTO				pmax	pmax		
	comp=Z,452nm,1.6s						
CHTO	Chiang Mai	20.57	276	P	Pn	12 48 37.5	-1.2
CHTO	Chiang Mai	20.57	276	P	P	12 48 36.2	+0.5
CHTO				IAmb	IAmb	12 48 38.7	
	comp=Z,452nm,1.6s						
CHTO	Chiang Mai	20.57	276	P	P	12 48 36.1	+0.4
CM31	Chiang Mai Arr	20.58	275	P	Pn	12 48 37.8	-0.9
	SNR=46						
CMAR	Chiang Mai Arr	20.58	275	P	Pn	12 48 37.6	-1.1
	comp=Z,107nm,1.0s,baz=87,slow=8.8,SNR=344						
CMAR				PcP	PcP	12 52 45.4	+1.4
	comp=Z,6.3nm,0.8s,baz=84,slow=0.5,SNR=11						
CMAR				LR	LR	12 56 08.3	
	comp=Z,1µm,21.5s,baz=139,slow=35						
CMAR				ScP	ScP	12 56 14.7	+1.2
	comp=Z,2.3nm,0.8s,baz=138,slow=0.9,SNR=7.3						
CMAR	Chiang Mai Arr	20.58	275	P	P	12 48 36.9	+1.1
TTSI	Tana Toraja	20.61	182	P	Pn	12 48 38.2	-0.9
	comp=Z,1µmcomp=Z,51nm,0.9s						
KSYOW	Yeongwol	20.62	18	P	P	12 48 36.8	+0.8
	SNR=7.8						
KSWJU	Wonju	20.72	17	P	Pn	12 48 39.0	-1.2
	SNR=7.0						
KSRS	Korea Array	20.73	17	P	P	12 48 36.5	-0.7
	comp=Z,64nm,0.7s,baz=198,slow=10,SNR=131						
KSRS				PcP	PcP	12 52 44.1	+0.3
	comp=Z,4.2nm,0.8s,baz=177,slow=1.2,SNR=5.5						
KSRS				LR	LR	12 57 21.6	
	comp=Z,446nm,19.0s,baz=194,slow=38						
KS19	Wonju Array Si	20.76	17	IAmb	IAmb	12 48 39.0	
	comp=Z,597nm,1.9s						
YNCB	YEONCHEON	21.03	14	P	P	12 48 43.3	+2.9
	SNR=7.9						
DL2	Dalian	21.16	2	⇓P	P	12 48 44.3	+2.4
DL2				sP	sP	12 49 11.5	+3.2
DL2				S	S	12 52 34.0	+1.2
DL2				SS	SnSn	12 53 00.1	-1.2
DL2				pmax	pmax		
	comp=Z,70nm,1.3s						
DL2				pmax	pmax		
	comp=Z,730nm,5.0s						
DL2				LR	LR		
	comp=Z,740nm,17.9s						
DL2				LR	LR		
	comp=Z,830nm,16.1s						
DL2				LR	LR		
	comp=Z,540nm,20.4s						
SWI	Sorong	21.23	149	P	P	12 48 43.0	+0.3
	comp=Z,1µmcomp=Z,66nm,0.7s						
SIJI	Sorong	21.23	149	P	P	12 48 42.1	-0.8
	comp=Z,53nm,0.8s,baz=347,slow=9.1,SNR=18						
SIJI				LR	LR	12 58 09.9	
	comp=Z,319nm,20.5s,baz=313,slow=40						
SPSI	Sidrap Palu	21.53	182	P	P	12 48 48.1	+2.2
	comp=Z,91nm,1.2s						
BBKI	Banjar Baru	21.76	196	P	P	12 48 49.0	+0.6
	comp=Z,117nm,1.4s						
JWT	Wachi	21.94	34	P	P	12 48 51.0	+0.8
JWT				IAmb	IAmb	12 49 07.5	
	comp=Z,202nm,1.0s						
JCJ	Chichijima	22.04	61	P	P	12 48 49.5	-1.9
	comp=Z,620nm,0.9s,baz=352,slow=5.0,SNR=13						
JCJ				LR	LR	12 55 49.6	
	comp=Z,528nm,21.4s,baz=244,slow=32						
JCJ	Chichijima	22.04	61	P	P	12 48 49.2	-2.1
JCJ	Chichijima	22.04	61	P	P	12 48 50.1	-1.3
PBKI	Pangkalan Bun	22.08	204	P	P	12 48 51.3	-0.6
	comp=Z,220nm,1.1s						
JRMM	Jerantut	22.41	234	P	P	12 48 56.0	+0.5
MSAI	Masohi	22.47	158	P	P	12 48 56.9	+0.9
	comp=Z,373nmcomp=Z,20nm,1.0s						
AAI	Ambon	22.53	160	P	P	12 48 56.7	0.0
	comp=Z,2µmcomp=Z,189nm,1.0s						
KAPI	Kappang	22.57	182	P	P	12 48 56.8	-0.3
	comp=Z,27nm,1.1s,baz=23,slow=8.1,SNR=5.0						
KAPI				LR	LR	12 57 53.1	
	comp=Z,216nm,19.9s,baz=28,slow=37						
KAPI	Kappang	22.57	182	P	P	12 48 58.2	+1.1
KAPI				pmax	pmax		
	comp=Z,114nm,1.2s						
KAPI	Kappang	22.57	182	P	P	12 48 58.2	+1.1
KAPI	Kappang	22.57	182	P	P	12 48 57.1	0.0
BJI	Beijing	22.60	351	P	P	12 48 57.4	+0.2
BJI				pP	pP	12 49 14.0	+0.6
BJI				sP	sP	12 49 24.3	+0.9
BJI				PP	PnPn	12 49 29.3	+4.7
BJI				S	S	12 52 58.3	-0.7
BJI				sS	sS	12 53 25.9	-2.3
BJI				SS	SnSn	12 53 39.9	+3.6
BJI				ScP	ScP	12 56 20.3	+2.2
BJI				pmax	pmax		
	comp=Z,53nm,0.8s						
BJI				pmax	pmax		
	comp=Z,670nm,3.5s						
BJI				LR	LR		
	comp=Z,600nm,12.4s						
BJI				LR	LR		
	comp=Z,490nm,12.7s						
BJI				LR	LR		
	comp=Z,670nm,16.4s						
MYKOM	Kota Tinggi	22.79	228	P	P	12 49 00.0	+0.6
BKSI	Bulukumba	22.86	181	P	P	12 49 00.9	+0.8
	comp=Z,43nm,0.9s						

INU	**Inuyama**	22.88	37	IAmb	IAmb	12 49 01.3	
	comp=Z,230nm,0.9s						
INU	**Inuyama**	22.88	37	P	P	12 48 59.2	-0.9
KULM	**Kulim**	23.05	240	P	P	12 49 03.0	+1.0
KULM	**Kulim**	23.05	240	P	P	12 49 02.0	0.0
JHJ	**Hachijo jima 2**	23.12	45	P	P	12 49 01.5	-1.0
	comp=Z,623nm,1.1s,baz=224,slow=12,SNR=4.8						
JHJ2	**Mitsune**	23.14	45	P	P	12 49 00.8	-1.9
JHJ2	**Mitsune**	23.14	45	P	P	12 49 03.2	+0.5
IPM	**Ipoh**	23.20	238	P	P	12 49 03.0	-0.5
IPM	**Ipoh**	23.20	238	P	P	12 49 02.4	-1.1
IPM	**Ipoh**	23.20	238	P	P	12 49 03.4	-0.1
FAKI	**Fak Fak**	23.49	150	P	P	12 49 04.3	-1.8
	comp=Z,970nmcomp=Z,104nm,1.0s						
FAKI	**Fak Fak**	23.49	150	P	P	12 49 04.7	-1.4
LZH	**Lanzhou**	23.57	324	⇑P	P	12 49 08.3	+1.5
LZH				pP	pP	12 49 24.3	+0.7
LZH				sP	sP	12 49 35.3	+1.4
LZH				PP	PnPn	12 49 38.6	+0.5
LZH				S	S	12 53 16.8	+1.7
LZH				ScS	ScS	13 00 08.3	+0.5
LZH				pmax	pmax		
	comp=Z,110nm,1.4s						
LZH				pmax	pmax		
	comp=Z,440nm,5.4s						
LZH				LR	LR		
	comp=Z,1µm,15.7s						
LZH				LR	LR		
	comp=Z,1µm,16.3s						
LZH				LR	LR		
	comp=Z,1µm,15.2s						
GUMO	**Guam**	23.74	96	P	P	12 49 07.0	-1.3
	comp=Z,203nm,0.8s,baz=207,slow=7.8,SNR=9.6						
GUMO				LR	LR	12 56 31.2	
	comp=Z,1µm,20.1s,baz=282,slow=32						
GUMO	**Guam**	23.74	96	P	P	12 49 08.3	-0.1
GUMO				pmax	pmax		
	comp=Z,334nm,1.0s						
GUMO	**Guam**	23.74	96	P	P	12 49 08.3	-0.1
GUMO	**Guam**	23.74	96	P	P	12 49 09.1	+0.7
BNDI	**Bandanaira**	23.91	156	P	P	12 49 10.0	+0.1
DSRI	**Dabo**	23.95	223	P	P	12 49 10.1	-0.1
	comp=Z,3µmcomp=Z,174nm,1.3s						
TPI	**Tanjungpandan**	23.98	213	P	P	12 49 11.4	+1.0
	comp=Z,3µmcomp=Z,204nm,1.5s						
SNY	**Shenyang**	24.20	5	⇑P	P	12 49 11.4	-0.8
SNY				S	S	12 53 21.8	-3.0
SNY				pmax	pmax		
	comp=Z,110nm,0.8s						
SNY				LR	LR		
	comp=Z,980nm,13.7s						
SNY				LR	LR		
	comp=Z,460nm,10.4s						
SNY				LR	LR		
	comp=Z,1µm,12.5s						
BAKI	**Biak**	24.21	139	P	P	12 49 11.1	-1.4
	comp=Z,147nm,1.0s						
PPBI	**Pangkal Pinang**	24.32	217	P	P	12 49 14.4	+0.9
HHC	**Hu-ho-hao-te**	24.36	343	eP	P	12 49 14.5	+0.7
HHC				pP	pP	12 49 31.3	-0.7
HHC				sP	sP	12 49 39.4	-2.2
HHC				PP	PnPn	12 49 53.1	+4.4
HHC				S	S	12 53 25.8	-1.8
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,280nm,4.6s						
HHC				LR	LR		
	comp=Z,840nm,14.5s						
HHC				LR	LR		
	comp=Z,690nm,12.8s						
HHC				LR	LR		
	comp=Z,1µm,14.5s						
MAJO	**Matsushiro**	24.40	36	i P	P	12 49 11.6	-2.6
MAJO				pmax	pmax		
	comp=Z,50nm,1.4s						
MAJO	**Matsushiro**	24.40	36	P	P	12 49 12.6	-1.5
MAJO	**Matsushiro**	24.40	36	P	P	12 49 14.2	0.0
MAT	**Matsushiro**	24.40	36	P	P	12 49 11.8	-2.4
MAT				eS	S	12 53 27.2	-1.1
MJAR	**Matsushiro Arr**	24.40	36	P	P	12 49 12.9	-1.2
	comp=Z,17nm,0.9s,baz=221,slow=8.7,SNR=14						
MJAR				LR	LR	12 58 09.0	
	comp=Z,508nm,21.8s,baz=235,slow=35						
BTO	**Baotou**	24.59	340	eP	P	12 49 17.3	+1.4
BTO				S	S	12 53 35.0	+3.7
BTO				LR	LR		
	comp=Z,2µm,9.8s						
BTO				LR	LR		
	comp=Z,3µm,17.6s						
SRPI	**Serui, Papua**	24.82	140	P	P	12 49 18.2	+0.1
	comp=Z,124nm,0.6s						
JMBI	**JAMBI**	25.43	223	P	P	12 49 26.3	+2.6
	comp=Z,3µmcomp=Z,305nm,1.3s						
PMBI	**Palembang**	25.73	219	P	P	12 49 28.1	+1.7
	comp=Z,11µmcomp=Z,534nm,1.2s						
PMBI	**Palembang**	25.73	219	P	P	12 49 27.2	+0.8
TSI	**Tuntungan**	25.77	239	P	P	12 49 27.5	+0.7
	comp=Z,210nm,1.6s						
BKNI	**Bangkinang**	25.82	230	P	P	12 49 27.3	+0.1
	comp=Z,2µmcomp=Z,4µmcomp=Z,416nm,1.1s						
BKNI	**Bangkinang**	25.82	230	P	P	12 49 27.7	+0.5
BKNI					pP	12 49 45.9	+0.3
BKNI	**Bangkinang**	25.82	230	P	P	12 49 26.7	-0.5
PSI	**Prapat**	25.88	238	P	P	12 49 28.2	+0.3
	comp=Z,59nm,1.0s,baz=40,slow=6.5,SNR=55						
PSI				LR	LR	12 59 06.4	
	comp=Z,738nm,19.6s,baz=8.5,slow=35						
RPSI	**Rantau Prapat**	25.94	237	IAmb	IAmb	12 49 29.6	
	comp=Z,223nm,1.3s						
BLJI	**Banyuglugur**	26.19	196	P	P	12 49 31.4	+0.9
	comp=Z,2µmcomp=Z,71nm,1.6s						
LHMI	**Lhok Sumawe**	26.21	245	P	P	12 49 32.2	+1.5
	comp=Z,5µmcomp=Z,533nm,1.0s						
LHMI	**Lhok Sumawe**	26.21	245	P	P	12 49 32.1	+1.3
LHMI	**Lhok Sumawe**	26.21	245	P	P	12 49 31.2	+0.5
EDFI	**Ende, Flores**	26.29	178	P	P	12 49 30.7	-0.8
	comp=Z,566nmcomp=Z,30nm,1.0s						
CN2	**Changchun**	26.36	8	eP	P	12 49 31.3	-0.5
CN2				eS	S	12 53 56.3	-2.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,7.6s						
CN2				LR	LR		
	comp=Z,600nm,14.0s						
CN2				LR	LR		
	comp=Z,500nm,14.0s						
CN2				LR	LR		
	comp=Z,800nm,15.1s						
KCSI	**Kotacane, Aceh**	26.41	240	P	P	12 49 31.9	-0.7
	comp=Z,1µmcomp=Z,117nm,1.2s						
PLAI	**Plampang**	26.49	186	P	P	12 49 33.2	0.0
	comp=Z,866nmcomp=Z,62nm,0.8s						
PLAI	**Plampang**	26.49	186	P	P	12 49 33.7	+0.5
TWSI	**Taliwang, Sumb**	26.51	188	P	P	12 49 34.3	+0.9
	comp=Z,519nmcomp=Z,34nm,1.3s						
MNSI	**Mandailing Nat**	26.60	233	P	P	12 49 34.5	+0.2
	comp=Z,3µmcomp=Z,143nm,1.7s						
JMM	**Marumori**	26.80	37	IAmb	IAmb	12 49 37.0	
	comp=Z,127nm,0.9s						
PPI	**Padang Panjang**	26.82	230	P	P	12 49 37.0	+0.8
PDSI	**Padang**	27.09	229	P	P	12 49 38.6	-0.1
	comp=Z,46nm,1.2s						
WOJI	**Wonogiri, Jawa**	27.09	201	P	P	12 49 38.8	+0.2
	comp=Z,89nm,1.3s						
VLA	**Vladivostok**	27.11	18	i P	P	12 49 35.9	-2.6
VLA				pmax	pmax		
	comp=Z,113nm,1.5s						
KLSI		27.18	217	P	P	12 49 40.3	+0.8
	comp=Z,914nmcomp=Z,90nm,1.1s						
LHSI	**Lahat**	27.20	220	P	P	12 49 40.8	+1.2
	comp=Z,2µmcomp=Z,94nm,1.3s						
KLI	**Kotabumi**	27.25	216	P	P	12 49 40.1	0.0
	comp=Z,141nm,1.2s						
MDSI	**Maura Dua**	27.33	218	P	P	12 49 41.4	+0.6
	comp=Z,473nmcomp=Z,30nm,1.0s						
PCJI	**Pacitan**	27.34	201	P	P	12 49 38.2	-2.6
	comp=Z,113nm,1.4s						
MASI	**Maura Aman, Be**	27.48	223	P	P	12 49 43.2	+1.0
	comp=Z,4µmcomp=Z,350nm,1.0s						
SOEI	**Soe**	27.51	172	P	P	12 49 43.2	+0.7
	comp=Z,47nm,0.9s						
SOEI	**Soe**	27.51	172	P	P	12 49 43.0	+0.5
LEM	**Lembang**	27.51	209	LR	LR	13 01 03.0	
	comp=Z,460nm,19.4s,baz=5.0,slow=37						
DBJI	**Dramaga**	27.68	211	P	P	12 49 45.5	+1.5
	comp=Z,85nm,1.2s						
SHL	**Shillong**	27.75	291	P	P	12 49 44.7	0.0
SHL				*PP	pP	12 49 59.8	-2.8
SHL				pmax	pmax		
	comp=Z,156nm,1.0s						
SHL	**Shillong**	27.75	291	eP	P	12 49 46.0	+1.2
SHL				eS	ScP	12 56 34.0	+0.7
SHL	**Shillong**	27.75	291	P	P	12 49 45.2	+0.4
	SNR=58						
SHL	**Shillong**	27.75	291	P	P	12 49 44.7	0.0
SHL				IAmb	IAmb	12 49 46.8	
	comp=Z,156nm,1.0s						
SHL				pP	pP	12 49 59.8	-2.8
LWLI	**Liwa**	27.83	217	P	P	12 49 46.0	+0.6
	comp=Z,116nm,0.8s						
GSI	**Gunungsitoli**	27.85	237	P	P	12 49 44.2	-1.3
	comp=Z,2µmcomp=Z,120nm,1.2s						
GSI	**Gunungsitoli**	27.85	237	P	P	12 49 43.7	-1.8
GSI				IAmb	IAmb	12 49 46.8	
	comp=Z,104nm,1.0s						
GSI	**Gunungsitoli**	27.85	237	P	P	12 49 44.6	-0.9
	comp=Z,121nm,1.0s						
BATI	**Baumata**	27.88	173	P	P	12 49 44.0	-1.7
	comp=Z,40nm,0.7s,baz=276,slow=1.8,SNR=5.6						
BATI				LR	LR	13 03 11.7	
	comp=Z,249nm,20.8s,baz=359,slow=41						
BATI	**Baumata**	27.88	173	P	P	12 49 43.6	-2.1
	comp=Z,561nmcomp=Z,29nm,0.8s						
MDJ	**Mudanjiang**	27.90	14	P	P	12 49 45.4	-0.2
MDJ				pP	pP	12 50 02.1	-2.2
MDJ				S	S	12 54 24.5	+1.2
MDJ				pmax	pmax		
	comp=Z,46nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,400nm,4.8s						
MDJ				LR	LR		
	comp=Z,410nm,20.7s						
MDJ				LR	LR		
	comp=Z,970nm,23.5s						
MDJ				LR	LR		
	comp=Z,1µm,18.5s						
GENI	**Genyem**	27.92	134	P	P	12 49 45.9	-0.1
	comp=Z,57nm,1.0s						
GENI	**Genyem**	27.92	134	P	P	12 49 47.9	+1.9
	comp=Z,57nm,0.8s						
KASI	**Kota Agung**	28.00	216	P	P	12 49 46.9	+0.2
	comp=Z,85nm,1.0s						
USRK	**Ussuriysk Ar.**	28.13	18	P	P	12 49 47.6	0.0
	comp=Z,33nm,0.9s,baz=209,slow=8.4,SNR=30						
USRK				LR	LR	13 01 05.8	
	comp=Z,302nm,20.5s,baz=185,slow=36						
GTA	**Gaotai**	28.17	324	⇑P	P	12 49 49.3	+1.1
GTA				pP	pP	12 50 05.3	-1.3
GTA				sP	sP	12 50 15.9	0.0
GTA				S	S	12 54 31.5	+3.5
GTA				ScP	ScP	12 56 35.0	+0.7
GTA				ScS	ScS	13 00 26.5	-0.7
GTA				pmax	pmax		
	comp=Z,31nm,1.2s						
GTA				pmax	pmax		
	comp=Z,260nm,4.7s						
GTA				LR	LR		
	comp=Z,700nm,18.5s						
GTA				LR	LR		
	comp=Z,670nm,18.5s						
GTA				LR	LR		
	comp=Z,710nm,18.9s						
CGJI	**Cibinong**	28.27	213	P	P	12 49 48.3	-0.8
	comp=Z,49nm,1.3s						
SISI	**Saibi**	28.37	230	P	P	12 49 49.7	-0.3
	comp=Z,1µmcomp=Z,74nm,0.9s						
PPSI	**Pulau Pagai**	28.70	227	P	P	12 49 53.1	+0.1
	comp=Z,2µmcomp=Z,110nm,1.2s						
JTM	**Tenmabayashi**	29.01	33	IAmb	IAmb	12 50 00.1	
	comp=Z,146nm,1.0s						
LSA	**Lhasa**	29.39	299	P	P	12 50 01.4	+1.8
LSA	**Lhasa**	29.39	299	P	P	12 50 01.0	+1.5
LSA	**Lhasa**	29.39	299	IAmb	IAmb	12 50 02.8	
	comp=Z,152nm,1.1s						
ULN	**Ulaanbaatar**	32.07	343c	eP	P	12 50 23.9	+1.3
ULN				pmax	pmax		
	comp=Z,24nm,0.8s						
ULN	**Ulaanbaatar**	32.07	343	P	P	12 50 24.4	+1.8
ULN	**Ulaanbaatar**	32.07	343	P	P	12 50 23.8	+1.2
MTN	**Manton Dam**	32.08	160	P	P	12 50 19.5	-3.2
	baz=32,SNR=6.1						
MTN	**Manton Dam**	32.08	160	IAmb	IAmb	12 51 04.9	
	comp=Z,114nm,1.9s						
ASAJ	**Asahikawa**	32.22	30	P	P	12 50 23.2	-0.5
	comp=Z,19nm,0.8s,baz=223,slow=12,SNR=15						
ASAJ				LR	LR	13 03 31.4	
	comp=Z,343nm,21.4s,baz=230,slow=36						
SONM	**Songino Array**	32.23	342	P	P	12 50 25.5	+1.5
	comp=Z,14nm,0.8s,baz=157,slow=10,SNR=93						
SONM				ScP	ScP	12 56 47.1	-0.3
	comp=Z,5.5nm,1.1s,baz=166,slow=5.1,SNR=9.9						
SONM				LR	LR	13 04 33.2	
	comp=Z,504nm,18.0s,baz=160,slow=38						
SONM	**Songino Array**	32.23	342	P	P	12 50 24.6	+0.6
KDU	**Kakadu**	32.39	158	P	P	12 50 22.2	-3.3
	baz=32,SNR=7.5						
KDU	**Kakadu**	32.39	158	P	P	12 50 22.3	-3.1
KLR	**Kul'dur**	32.74	14	P	P	12 50 28.5	+0.3
	comp=Z,93nm,0.9s						
KLR				PcP	PcP	12 53 12.3	+0.4
	comp=Z,5.3nm,0.7s,baz=190,slow=4.3,SNR=4.1						
KLR				LR	LR	13 03 36.5	
	comp=Z,422nm,21.1s,baz=200,slow=36						
JIRN	**Jiri**	33.14	294	eP	P	12 50 33.4	+0.9
	comp=Z,150nm,0.7s						
GUN	**Gumba**	33.46	294	eP	P	12 50 35.9	+0.7
	comp=Z,413nm,0.8s						
PKI	**Pulchoki**	33.81	293	eP	P	12 50 38.3	0.0
	comp=Z,170nm,1.0s						
YUK	**Yuzh-Kuril'sk**	33.82	34c	iP	P	12 50 33.6	-4.0
YUK				i		12 51 49.9	
YUK				i S	S	12 55 50.2	-5.6
YUK				i SS	SnSn	12 58 05.1	-3.6
YUK				pmax	pmax		
	comp=Z,371nm,1.2s						
YUK				pmax	pmax		
	comp=E,289nm,1.0s						
YUK				pmax	pmax		
	comp=N,181nm,0.9s						
PKIN	**Phulchoki**	33.82	293	eP	P	12 50 38.3	0.0
	comp=N,64nm,0.7s						
KKN	**Kakani**	33.96	294	eP	P	12 50 39.6	+0.2
	comp=N,212nm,1.0s						
DMN	**Daman**	34.08	293	eP	P	12 50 40.7	+0.2
	comp=N,396nm,1.2s						
KNRA	**Kununurra**	34.12	166	P	P	12 50 38.1	-2.4
	baz=34,SNR=11						
KNRA	**Kununurra**	34.12	166	P	P	12 50 37.4	-3.1
KNRA				IAmb	IAmb	12 50 39.8	
	comp=Z,33nm,1.0s						
KNRA	**Kununurra**	34.12	166	P	P	12 50 39.0	-1.5
YSS	**Yuzh-Sakhalins**	34.44	27κ	eP	P	12 50 43.0	0.0
YSS				e*PP	pP	12 51 01.2	-0.8
YSS				e		12 52 04.0	
YSS				eS	S	12 56 04.3	-1.1
YSS				pmax	pmax		
	comp=Z,160nm,1.1s						
YSS				MLR	MLR		
	comp=Z,900nm,19.0s						
YSS	**Yuzh-Sakhalins**	34.44	27	P	P	12 50 42.8	-0.2
YSS	**Yuzh-Sakhalins**	34.44	27	P	P	12 50 43.4	+0.4
	comp=Z,201nm,1.2s						
GKN	**Gorkha**	34.56	294	eP	P	12 50 44.4	-0.1
	comp=Z,378nm,0.9s						
GRNR	**Gornyy**	35.35	17⇑	iP	P	12 50 51.6	+0.7
GRNR				pmax	pmax		
	comp=E,5.0nm,0.7s						
GRNR				pmax	pmax		
	comp=N,9.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				MLR	MLR		
	comp=E,170nm,18.0s						
GRNR				MLR	MLR		
	comp=N,200nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,500nm,14.0s						
DANN	**Dangsing**	35.38	294	eP	P	12 50 51.7	0.0
	comp=Z,400nm,1.0s						
KOLN	**Koldanda**	35.43	293	eP	P	12 50 52.3	+0.2
	comp=Z,302nm,1.0s						
ZAK	**Zakamensk**	35.44	341	eP	P	12 50 52.7	+0.9
ZAK				pmax	pmax		
	comp=Z,28nm,1.1s						
FITZ	**Fitzroy Crossi**	35.91	172	P	P	12 50 53.6	-2.2
	baz=36,SNR=15						
PYUN	**Piuthan**	36.01	294	eP	P	12 50 57.3	+0.2
	comp=Z,448nm,1.1s						
ZEA	**Zeya**	36.35	7	eP	P	12 50 59.7	+0.4
ZEA				e*PP	pP	12 51 16.7	-1.7
ZEA				e*SP	sP	12 51 26.7	-1.1
ZEA				e		12 52 22.8	
ZEA				eS	S	12 56 31.2	-3.3
ZEA				pmax	pmax		
	comp=N,20nm,1.9s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.7s						
ZEA				pmax	pmax		
	comp=N,200nm,4.1s						
ZEA				pmax	pmax		
	comp=Z,200nm,3.6s						
ZEA				smax	smax		
	comp=E,200nm,7.5s						
ZEA				MLR	MLR		
	comp=E,100nm,15.0s						
ZEA				MLR	MLR		
	comp=N,300nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,13.0s						
TLY	**Talaya**	36.48	342	P	P	12 51 02.0	+1.5
	comp=Z,4.5nm,0.4s,baz=169,slow=8.8,SNR=7.3						
TLY				LR	LR	13 06 31.4	
	comp=Z,300nm,18.6s,baz=140,slow=37						
TLY	**Talaya**	36.48	342	eP	P	12 51 01.8	+1.3
TLY				eS	S	12 56 41.4	+4.9
TLY				e		13 01 11.7	
TLY				pmax	pmax		
	comp=Z,73nm,1.7s						
TLY				MLR	MLR		
	comp=Z,574nm,11.0s						
TLY	**Talaya**	36.48	342	P	P	12 51 02.4	+1.9
TLY	**Talaya**	36.48	342	P	P	12 51 01.8	+1.3
IRK	**Irkutsk**	36.80	343	eP	P	12 51 03.4	+0.2
IRK				pmax	pmax		
	comp=Z,49nm,1.7s						
MOY	**Mondy**	37.28	340	eP	P	12 51 09.0	+1.6
MOY				pmax	pmax		
	comp=Z,70nm,2.0s						
TYV	**Tymovskoe**	37.50	23	eP	P	12 51 09.7	+0.6
TYV				eS	S	12 56 53.8	+1.9
TYV				pmax	pmax		
	comp=Z,45nm,1.8s						
TYV				pmax	pmax		
	comp=Z,700nm,5.5s						
TYV				smax	smax		
	comp=N,600nm,7.3s						
TYV				smax	smax		
	comp=E,500nm,7.3s						
PMG	**Port Moresby**	37.61	134	P	P	12 51 09.9	-0.6
	comp=E,41nm,0.9s,baz=298,slow=5.2,SNR=11						
PMG	**Port Moresby**	37.61	134	P	P	12 51 09.5	-1.0
PMG				IAmb	IAmb	12 51 11.6	
	comp=Z,44nm,0.9s						
PMG	**Port Moresby**	37.61	134	P	P	12 51 10.7	+0.2
PMG	**Port Moresby**	37.61	134	P	P	12 51 10.7	+0.2
COCO	**West Island**	37.82	220	P	P	12 51 12.4	+0.2
COCO				pmax	pmax		
	comp=Z,371nm,1.3s						
COCO	**West Island**	37.82	220	P	P	12 51 12.4	+0.2
RABL	**Rabaul**	38.00	122	P	P	12 51 15.1	+1.3
WMQ	**Urumqi**	38.01	320	eP	P	12 51 15.1	+1.4
WMQ				sP	sP	12 51 39.8	-1.9
WMQ				PP	PnPn	12 52 44.9	+0.7
WMQ				S	S	12 57 04.3	+4.1
WMQ				ScS	ScS	13 01 19.0	+1.3
WMQ				pmax	pmax		
	comp=Z,88nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,420nm,3.9s						
WMQ				LR	LR		
	comp=Z,670nm,13.9s						
WMQ				LR	LR		
	comp=Z,710nm,16.9s						
WMQ				LR	LR		
	comp=Z,760nm,24.3s						
PATS	**Pohnpei**	38.34	102	P	P	12 51 18.9	+2.2
	baz=38,SNR=4.3						
PATS	**Pohnpei**	38.34	102	P	P	12 51 17.3	+0.6
PATS	**Pohnpei**	38.34	102	P	P	12 51 17.6	+0.9
COEN	**Coen**	38.55	143	P	P	12 51 15.9	-2.4
COEN				IAmb	IAmb	12 52 23.5	
	comp=Z,66nm,1.6s						
PSA00	**Pilbara Seismi**	39.02	181	P	P	12 51 20.9	-1.3
PSA00	**Pilbara Seismi**	39.02	181	IAmb	IAmb	12 51 23.2	
	comp=Z,16nm,1.2s						
WRAB	**Tennant Creek**	39.76	159	P	P	12 51 26.1	-2.2
WRAB				pmax	pmax		
	comp=Z,62nm,1.0s						
WRAB	**Tennant Creek**	39.76	159	P	P	12 51 26.1	-2.2
WRAB				IAmb	IAmb	12 51 27.8	
	comp=Z,62nm,0.9s						
WRAB	**Tennant Creek**	39.76	159	P	P	12 51 25.9	-2.4
WRA	**Warramunga Arr**	39.76	160	P	P	12 51 25.4	-3.0
	comp=Z,47nm,0.9s,baz=347,slow=7.9,SNR=165						
WRA				PcP	PcP	12 53 34.0	+0.6
	comp=Z,7.8nm,0.7s,baz=332,slow=2.3,SNR=5.6						
WRA				ScP	ScP	12 57 16.6	+1.4
	comp=Z,4.4nm,1.0s,baz=270,slow=11,SNR=9.1						
WRA				LR	LR	13 08 08.1	
	comp=Z,174nm,21.6s,baz=315,slow=36						
WB2	**Warramunga Arr**	39.77	159	P	P	12 51 26.0	-2.4
WB2				IAmb	IAmb	12 51 27.9	
	comp=Z,66nm,0.9s						
HYB	**Hyderabad**	40.00	276	i P	P	12 51 30.0	-0.6
PALK	**Pallekele**	40.20	260	P	P	12 51 32.7	+0.5
	comp=Z,41nm,1.0s,baz=169,slow=7.2,SNR=14						
PALK	**Pallekele**	40.20	260	P	P	12 51 33.0	+0.8
PALK				pmax	pmax		
	comp=Z,40nm,0.9s						
PALK	**Pallekele**	40.20	260	P	P	12 51 33.0	+0.8
PALK				IAmb	IAmb	12 51 33.9	
	comp=Z,40nm,0.9s						
BOD	**Bodaibo**	40.37	355	eP	P	12 51 33.6	+0.7
DGZ	**Jazzator, Alta**	41.59	328c	iP	P	12 51 44.8	+1.5
DGZ				pmax	pmax		
	comp=Z,64nm,1.4s						
ZSN	**Zaisan**	41.66	323	eP	P	12 51 43.8	+0.1
	baz=323						
ZSN				eS	S	12 57 54.7	+0.3
	baz=323						
ZSN				i S	S	12 57 54.7	+0.3
	baz=323						
ZSN	**Zaisan**	41.66	323	eP	P	12 51 43.8	+0.1
ZSN				eS	S	12 57 54.6	+0.3
ZSN				i S	S	12 57 54.7	+0.3
QIS	**Mount Isa**	42.34	153	P	P	12 51 47.6	-2.0
	baz=42,SNR=24						
QIS	**Mount Isa**	42.34	153	P	P	12 51 48.0	-1.6
MTSU	**Mount Surprise**	42.57	146	P	P	12 51 50.1	-1.4
	baz=43,SNR=26						
MTSU	**Mount Surprise**	42.57	146	P	P	12 51 50.3	-1.2
MK31	**Makanchi Array**	42.81	321	P	P	12 51 54.1	+0.9
MK31	**Makanchi Array**	42.81	321	IAmb	IAmb	12 51 55.8	
	comp=Z,55nm,0.9s						
MKAR	**Makanchi Array**	42.81	321	P	P	12 51 54.5	+1.3
	comp=Z,47nm,0.9s,baz=113,slow=9.3,SNR=206						
MKAR				PcP	PcP	12 53 44.6	+1.5
	comp=Z,6.3nm,0.8s,baz=99,slow=4.2,SNR=2.2						
MKAR				ScP	ScP	12 57 26.4	-0.6
	comp=Z,7.3nm,1.1s,baz=118,slow=4.4,SNR=7.4						
MKAR				LR	LR	13 10 19.3	
	comp=Z,522nm,18.2s,baz=114,slow=37						
MKAR	**Makanchi Array**	42.81	321	i P	P	12 51 54.5	+1.3
MKAR				pmax	pmax		
	comp=Z,48nm,0.9s						
SHLS	**Shalkode**	42.99	315	eP	P	12 51 51.9	-3.0
	comp=Z,29nm,0.9s,baz=315						
SHLS				eS	S	12 58 10.2	-4.2
	baz=315						
SHLS	**Shalkode**	42.99	315	eP	P	12 51 51.8	-3.0
SHLS				eS	S	12 58 10.2	-4.2
SHLS				pmax	pmax		
	comp=Z,29nm,0.9s						
MAKZ	**Makanchi**	43.01	321	P	P	12 51 56.1	+1.4
MAKZ				pmax	pmax		
	comp=Z,65nm,1.2s						

MAKZ	**Makanchi**	**43.01**	**321**	P	**P**	**12 51 56.1**	**+1.4**
MAKZ				IAmb	IAmb	12 51 57.4	
	comp=Z,65nm,1.1s						
AS31	**Alice Springs**	**43.11**	**162**	P	**P**	**12 51 54.4**	**-1.4**
ASAR	**Alice Springs**	**43.11**	**162**	P	**P**	**12 51 53.5**	**-2.2**
	comp=Z,39nm,0.7s,baz=339,slow=7.1,SNR=214						
ASAR				PcP	**PcP**	**12 53 44.4**	**0.0**
	comp=Z,0.6nm,0.6s,baz=62,slow=36,SNR=1.6						
ASAR				ScP	**ScP**	**12 57 29.2**	**+0.8**
	comp=Z,3.2nm,1.0s,baz=345,slow=3.7,SNR=6.4						
ASAR				S	**S**	**12 58 10.6**	**-5.7**
	comp=Z,2.9nm,0.8s,baz=351,slow=24,SNR=11						
ASAR	**Alice Springs**	**43.11**	**162**	P	**P**	**12 51 54.0**	**-1.8**
WRKA	**Warakurna**	**43.13**	**170**	P	**P**	**12 51 54.2**	**-1.7**
	baz=43,SNR=27						
WRKA	**Warakurna**	**43.13**	**170**	P	**P**	**12 51 54.2**	**-1.7**
UZB	**Uzynbulak**	**43.29**	**315**	*e*P	**P**	**12 51 56.6**	**-0.6**
	comp=Z,57nm,1.1s,baz=315						
UZB				*e*S	**S**	**12 58 18.8**	**0.0**
	baz=315						
UZB	**Uzynbulak**	**43.29**	**315**	*e*P	**P**	**12 51 56.6**	**-0.6**
UZB				*e*S	**S**	**12 58 18.8**	**0.0**
UZB				pmax	pmax		
	comp=Z,57nm,1.1s						
SKR	**Severo-Kuril's**	**43.41**	**33**	*e*P	**P**	**12 51 57.7**	**-0.1**
SKR				pmax	pmax		
	comp=Z,198nm,1.0s						
PRZ	**Przheval'sk**	**43.46**	**314**	P	**P**	**12 52 00.3**	**+1.6**
PRZ				*PP	**pP**	**12 52 17.7**	**-0.2**
PRZ				pmax	pmax		
	comp=Z,129nm,1.2s						
PRZ	**Przheval'sk**	**43.46**	**314**	P	**P**	**12 52 00.3**	**+1.6**
PRZ				IAmb	IAmb	12 52 02.5	
	comp=Z,129nm,1.2s						
PRZ					**pP**	**12 52 17.7**	**-0.2**
TARG	**Taragay, Kyrgy**	**43.61**	**313**	IAmb	IAmb	12 52 28.0	
	comp=Z,62nm,1.1s						
WAKE	**Wake Island**	**43.64**	**80**	P	**P**	**12 51 58.8**	**-1.3**
SATY	**Saty**	**43.67**	**315**	*e*P	**P**	**12 51 59.9**	**-0.4**
	comp=Z,33nm,1.1s,baz=314						
SATY	**Saty**	**43.67**	**315**	*e*P	**P**	**12 51 59.9**	**-0.4**
SATY				pmax	pmax		
	comp=Z,33nm,1.1s						
MEEK	**Meekatharra**	**44.10**	**183**	P	**P**	**12 52 02.7**	**-1.0**
	baz=44,SNR=8.1						
MEEK	**Meekatharra**	**44.10**	**183**	P	**P**	**12 52 02.1**	**-1.6**
KDJ	**Kajisay**	**44.18**	**313**	IAmb	IAmb	12 52 07.5	
	comp=Z,55nm,1.1s						
KSH	**Kashi**	**44.24**	**309**⇑	*i*P	**P**	**12 52 08.4**	**+3.5**
KSH				pP	pP	12 52 25.5	+1.4
KSH				S	**S**	**12 58 39.3**	**+6.6**
KSH				sS	sS	12 59 10.3	+4.0
KSH				SS	**SS**	**13 01 53.5**	**+0.1**
KSH				pmax	pmax		
	comp=Z,60nm,0.9s						
KSH				pmax	pmax		
	comp=Z,120nm,3.0s						
KSH				LR	LR		
	comp=Z,660nm,16.7s						
KSH				LR	LR		
	comp=Z,1µm,19.4s						
KSH				LR	LR		
	comp=Z,1µm,20.1s						
TDK	**Taldyqorghan**	**44.43**	**317**	*e*P	**P**	**12 52 06.5**	**+0.3**
	comp=Z,65nm,0.8s,baz=317						
TDK				*e*S	**S**	**12 58 36.0**	**+0.8**
	baz=317						
TDK	**Taldyqorghan**	**44.43**	**317**	*e*P	**P**	**12 52 06.4**	**+0.3**
TDK				*e*S	**S**	**12 58 35.9**	**+0.8**
TDK				pmax	pmax		
	comp=Z,65nm,0.8s						
ARXS	**Arharly**	**44.50**	**316**	*e*P	**P**	**12 52 08.1**	**+1.3**
MDOK	**Medeo**	**44.63**	**314**	*e*P	**P**	**12 52 07.6**	**-0.4**
	baz=314						
MDOK				*e*S	**S**	**12 58 38.6**	**+0.2**
	baz=314						
MDOK	**Medeo**	**44.63**	**314**	*e*P	**P**	**12 52 07.6**	**-0.4**
MDOK				*e*S	**S**	**12 58 38.6**	**+0.2**
YAK	**Yakutsk**	**44.76**	**6**	P	**P**	**12 52 08.1**	**-0.3**
	comp=Z,60nm,0.8s,baz=353,slow=1.2,SNR=52						
YAK	**Yakutsk**	**44.76**	**6**	*d i*P	**P**	**12 52 08.0**	**-0.4**
YAK				*e**PP	**pP**	**12 52 25.7**	**-2.3**
YAK				*e*		12 53 54.0	
YAK				*e*PPP	PPP	12 54 29.2	
YAK				*e*S	**S**	**12 58 39.3**	**0.0**
YAK				*e*		13 01 51.1	
YAK				pmax	pmax		
	comp=Z,149nm,1.0s						
YAK				pmax	pmax		
	comp=E,16nm,1.1s						
YAK				pmax	pmax		
	comp=N,53nm,1.3s						
YAK				pmax	pmax		
	comp=Z,153nm,4.6s						
YAK				pmax	pmax		
	comp=N,106nm,3.0s						
YAK				pmax	pmax		
	comp=E,94nm,4.4s						
YAK				smax	smax		
	comp=N,183nm,4.8s						
YAK				smax	smax		
	comp=E,131nm,3.6s						
YAK	**Yakutsk**	**44.76**	**6**	P	**P**	**12 52 07.6**	**-0.8**
ULHL	**Ulahol**	**44.88**	**313**	P	**P**	**12 52 11.7**	**+1.7**
	SNR=83						
ULHL	**Ulahol**	**44.88**	**313**	P	**ScP**	**12 57 36.2**	**+0.4**
	SNR=7.1						
NIL	**Nilore**	**45.12**	**300**	P	**P**	**12 52 11.9**	**0.0**
NIL				pmax	pmax		
	comp=Z,181nm,0.9s						
NIL	**Nilore**	**45.12**	**300**	P	**P**	**12 52 11.9**	**0.0**
CTA	**Charters Tower**	**45.22**	**145**	P	**P**	**12 52 13.0**	**+0.4**
	comp=Z,41nm,0.8s						
CTAO	**Charters Tower**	**45.22**	**145**	P	**P**	**12 52 11.4**	**-1.3**
CTAO				pmax	pmax		
	comp=Z,34nm,0.8s						
CTAO	**Charters Tower**	**45.22**	**145**	P	**P**	**12 52 11.4**	**-1.3**
CTAO				IAmb	IAmb	12 52 13.8	
	comp=Z,34nm,0.8s						
CTAO	**Charters Tower**	**45.22**	**145**	P	**P**	**12 52 11.7**	**-0.9**
KUU	**Kurty**	**45.38**	**315**	*e*P	**P**	**12 52 12.7**	**-1.0**
	comp=Z,115nm,1.0s,baz=315						
KUU	**Kurty**	**45.38**	**315**	*e*P	**P**	**12 52 12.6**	**-1.1**
KUU				pmax	pmax		
	comp=Z,115nm,1.0s						
ZALV	**Zalesovo Beam**	**45.50**	**331**	P	**P**	**12 52 15.1**	**+0.6**
	comp=Z,11nm,0.8s,baz=124,slow=7.5,SNR=47						
ZALV				PcP	**PcP**	**12 53 53.1**	**+1.1**
	comp=Z,3.4nm,0.7s,baz=55,slow=5.6,SNR=1.0						
ZALV				LR	LR	13 12 10.0	
	comp=Z,299nm,18.3s,baz=116,slow=37						
TKM2	**Tokmak 2**	**45.55**	**313**	P	**P**	**12 52 16.8**	**+1.5**
	SNR=28						
TKM2	**Tokmak 2**	**45.55**	**313**	P	**P**	**12 52 16.3**	**+1.0**
PEA0B	**Petropavlovsk-**	**45.64**	**31**	*ce*P	**P**	**12 52 15.2**	**-0.4**
PETK	**Petropavlovsk-**	**45.64**	**31**	P	**P**	**12 52 15.6**	**0.0**
	comp=Z,78nm,0.8s,baz=245,slow=6.3,SNR=56						
PETK				LR	LR	13 09 59.3	
	comp=Z,252nm,21.6s,baz=224,slow=34						
SEM	**Semipalatinsk**	**45.80**	**325**	*e*P	**P**	**12 52 15.8**	**-1.5**
	baz=325						
SEM	**Semipalatinsk**	**45.80**	**325**	*e*P	**P**	**12 52 15.7**	**-1.5**
KBK	**Karagaybulak**	**45.92**	**313**	P	**P**	**12 52 19.7**	**+1.5**
	SNR=49						
KBK	**Karagaybulak**	**45.92**	**313**	P	**ScP**	**12 57 40.5**	**+0.5**
	SNR=5.9						
PET	**Petropavlovsk**	**46.06**	**31**	*e*P	**P**	**12 52 17.7**	**-1.2**
PET				pmax	pmax		
	comp=Z,165nm,0.8s						
PET				MLR	MLR		
	comp=Z,300nm,21.0s						
PET	**Petropavlovsk**	**46.06**	**31**	P	**P**	**12 52 18.6**	**-0.2**
PET	**Petropavlovsk**	**46.06**	**31**	P	**P**	**12 52 18.8**	**-0.1**
UCH	**Uchtor**	**46.09**	**312**	P	**P**	**12 52 22.0**	**+2.1**
	SNR=86						
UCH	**Uchtor**	**46.09**	**312**	P	**ScP**	**12 57 41.6**	**+0.5**
	SNR=7.7						
CHMS	**Chumysh**	**46.16**	**313**	P	**P**	**12 52 21.0**	**+1.0**
	SNR=35						
CHMS	**Chumysh**	**46.16**	**313**	P	**ScP**	**12 57 41.2**	**+0.3**
	SNR=6.4						
FRU1	**Bishkek**	**46.19**	**313**	P	**P**	**12 52 20.6**	**+0.4**
FRU1				*PP	**pP**	**12 52 39.3**	**-0.2**
FRU1				pmax	pmax		
	comp=Z,45nm,0.9s						
FRU1	**Bishkek**	**46.19**	**313**	P	**P**	**12 52 20.6**	**+0.4**
FRU1				IAmb	IAmb	12 52 22.8	
	comp=Z,45nm,0.8s						
FRU1					**pP**	**12 52 39.3**	**-0.2**
AAK	**Ala-Archa**	**46.23**	**313**	P	**P**	**12 52 21.9**	**+1.3**
	comp=Z,16nm,0.9s,baz=115,slow=3.4,SNR=30						
AAK	**Ala-Archa**	**46.23**	**313**	P	**P**	**12 52 21.8**	**+1.2**
	SNR=14						
AAK	**Ala-Archa**	**46.23**	**313**	P	**ScP**	**12 57 41.4**	**+0.1**
	SNR=9.1						
AAK	**Ala-Archa**	**46.23**	**313**	*i* P	**P**	**12 52 21.6**	**+0.9**
	SNR=15						
AAK	**Ala-Archa**	**46.23**	**313**	P	**P**	**12 52 21.8**	**+1.2**
AAK	**Ala-Archa**	**46.23**	**313**	P	**P**	**12 52 18.4**	**-2.2**
SGDS	**Sogindy**	**46.39**	**314**	*e*P	**P**	**12 52 20.6**	**-1.2**
	baz=314						
SGDS	**Sogindy**	**46.39**	**314**	*e*P	**P**	**12 52 22.5**	**+0.7**
USP	**Ospenovka**	**46.42**	**313**	P	**P**	**12 52 23.2**	**+1.2**
	SNR=23						
USP	**Ospenovka**	**46.42**	**313**	P	**ScP**	**12 57 42.0**	**+0.1**
	SNR=9.9						
AML	**Almayashu**	**46.64**	**312**	P	**P**	**12 52 25.6**	**+1.4**
	SNR=67						
AML	**Almayashu**	**46.64**	**312**	P	**ScP**	**12 57 43.9**	**+0.6**
	SNR=10						
AML	**Almayashu**	**46.64**	**312**	*i* P	**P**	**12 52 25.5**	**+1.4**
	SNR=68						
AML	**Almayashu**	**46.64**	**312**	P	**P**	**12 52 26.2**	**+2.1**
MORW	**Morawa**	**46.69**	**185**	P	**P**	**12 52 23.3**	**-0.7**
	baz=47,SNR=6.0						
MORW	**Morawa**	**46.69**	**185**	P	**P**	**12 52 23.6**	**-0.4**
MORW	**Morawa**	**46.69**	**185**	P	**P**	**12 52 23.8**	**-0.2**
EKS2	**Erkin-Say**	**46.74**	**312**	P	**P**	**12 52 26.1**	**+1.5**
	SNR=29						
EKS2	**Erkin-Say**	**46.74**	**312**	P	**ScP**	**12 57 43.5**	**+0.1**
	SNR=9.3						
KURK	**Kurchatov**	**46.86**	**324**	P	**P**	**12 52 26.1**	**+0.9**
KURK	**Kurchatov**	**46.86**	**324**	P	**P**	**12 52 26.5**	**+1.3**
KURK	**Kurchatov**	**46.86**	**324**	P	**P**	**12 52 25.7**	**+0.5**
KURBB	**Kurchatov Arra**	**46.86**	**324**	P	**P**	**12 52 26.1**	**+0.9**
	comp=Z,93nm,0.9s,baz=121,slow=7.9,SNR=322						
KURBB	**Kurchatov Arra**	**46.86**	**324**	P	**P**	**12 52 25.9**	**+0.7**
MA2	**Magadan**	**47.21**	**20**	P	**P**	**12 52 27.1**	**-0.7**
MA2				pmax	pmax		
	comp=Z,54nm,0.9s						
MA2	**Magadan**	**47.21**	**20**	P	**P**	**12 52 27.1**	**-0.7**
MA2				IAmb	IAmb	12 52 28.9	
	comp=Z,54nm,0.9s						
MA2	**Magadan**	**47.21**	**20**	P	**P**	**12 52 28.5**	**+0.7**
BTLS	**Baital**	**47.31**	**316**	*e*P	**P**	**12 52 28.3**	**-0.5**
	baz=316						
BTLS	**Baital**	**47.31**	**316**	*e*P	**P**	**12 52 28.3**	**-0.5**
HNR	**Honiara**	**47.32**	**122**	LR	LR	13 09 24.0	
	comp=Z,487nm,21.5s,baz=326,slow=32						
DRK	**Karamyk**	**47.35**	**308**	IAmb	IAmb	12 52 32.1	
	comp=Z,55nm,0.9s						
OOD	**Oodnadatta**	**47.52**	**162**	P	**P**	**12 52 29.0**	**-1.6**
BTK	**Batken**	**48.22**	**308**	IAmb	IAmb	12 52 38.2	
	comp=Z,58nm,1.2s						
DZA	**Taraz**	**48.53**	**312**	*e*P	**P**	**12 52 38.9**	**+0.5**
	comp=Z,37nm,1.1s,baz=312						
DZA	**Taraz**	**48.53**	**312**	*e*P	**P**	**12 52 38.8**	**+0.5**
DZA				pmax	pmax		
	comp=Z,37nm,1.1s						
KBL	**Kabul**	**48.70**	**301**	P	**P**	**12 52 39.8**	**-0.1**
KBL				pmax	pmax		
	comp=Z,107nm,1.0s						
KBL	**Kabul**	**48.70**	**301**	P	**P**	**12 52 41.0**	**+1.1**
	SNR=52						
KBL	**Kabul**	**48.70**	**301**	P	**P**	**12 52 39.8**	**-0.1**
FORT	**Forrest**	**48.72**	**171**	P	**P**	**12 52 39.3**	**-0.4**
	baz=49,SNR=17						
FORT	**Forrest**	**48.72**	**171**	P	**P**	**12 52 39.0**	**-0.7**
KLBR	**Kellerberrin**	**49.07**	**183**	P	**P**	**12 52 44.7**	**+2.3**
	comp=Z,50nm,1.2s						
KK31	**Karatay Array**	**49.17**	**312**	P	**P**	**12 52 43.7**	**+0.5**
KKAR	**Karatay Array**	**49.17**	**312**	P	**P**	**12 52 43.7**	**+0.5**
KKAR	**Karatay Array**	**49.17**	**312**	P	**P**	**12 52 43.7**	**+0.5**
INKA	**Innaminka**	**49.21**	**156**	P	**P**	**12 52 42.6**	**-0.9**
IUG	**Iuzhnay**	**49.27**	**311**	*e*P	**P**	**12 52 43.6**	**-0.5**
	baz=311						
IUG	**Iuzhnay**	**49.27**	**311**	*e*P	**P**	**12 52 43.6**	**-0.5**
MULG	**Mulgathing**	**49.43**	**165**	P	**P**	**12 52 43.5**	**-1.6**
TAS	**Tashkent**	**49.62**	**310**	P	**P**	**12 52 47.4**	**+0.7**
TAS				pmax	pmax		
	comp=Z,113nm,0.9s						
TAS	**Tashkent**	**49.62**	**310**	P	**P**	**12 52 47.4**	**+0.7**
BRLS	**Borolday**	**49.63**	**312**	*e*P	**P**	**12 52 46.0**	**-0.8**
	baz=311						
BRLS	**Borolday**	**49.63**	**312**	*e*P	**P**	**12 52 45.9**	**-0.8**
QLP	**Quilpie**	**49.65**	**152**	P	**P**	**12 52 45.2**	**-1.7**
	baz=50,SNR=23						
QLP	**Quilpie**	**49.65**	**152**	P	**P**	**12 52 45.5**	**-1.4**
BRZS	**Berezniki**	**49.97**	**321**	*e*P	**P**	**12 52 48.4**	**-0.7**
	comp=Z,28nm,1.1s,baz=321						
BRZS	**Berezniki**	**49.97**	**321**	*e*P	**P**	**12 52 48.4**	**-0.7**
BRZS				pmax	pmax		
	comp=Z,28nm,1.1s						
SEY	**Seymchan**	**50.27**	**18**	P	**P**	**12 52 51.7**	**+0.5**
	comp=Z,23nm,0.8s,baz=225,slow=5.8,SNR=37						
NWAO	**Narrogin (SRO)**	**50.43**	**184**	P	**P**	**12 52 52.3**	**-0.3**
NWAO	**Narrogin (SRO)**	**50.43**	**184**	P	**P**	**12 52 52.4**	**-0.3**
LCRK	**Leigh Creek**	**50.78**	**160**	P	**P**	**12 52 54.2**	**-1.2**
RMQ	**Roma**	**51.75**	**147**	P	**P**	**12 53 01.9**	**-0.8**
	baz=52,SNR=11						
RMQ	**Roma**	**51.75**	**147**	P	**P**	**12 53 02.6**	**-0.1**
BBOO	**Buckleboo**	**52.35**	**164**	P	**P**	**12 53 05.6**	**-1.5**
	baz=52,SNR=64						
BBOO	**Buckleboo**	**52.35**	**164**	IAmb	IAmb	12 53 08.1	
	comp=Z,32nm,0.7s						
BBOO	**Buckleboo**	**52.35**	**164**	P	**P**	**12 53 05.6**	**-1.5**
	comp=Z,60nm,0.8s						
BVAR	**Borovoye Array**	**52.45**	**324**	P	**P**	**12 53 08.3**	**+0.6**
	comp=Z,16nm,0.8s,baz=152,slow=13,SNR=52						
BVAR				PcP	**PcP**	**12 54 17.3**	**0.0**
	comp=Z,9.6nm,0.8s,baz=186,slow=12,SNR=4.4						
BRVK	**Borovoye**	**52.53**	**324**	P	**P**	**12 53 09.2**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,65nm,1.0s						
BRVK	**Borovoye**	**52.53**	**324**	P	**P**	**12 53 09.3**	**+1.0**
BRVK	**Borovoye**	**52.53**	**324**	P	**P**	**12 53 09.2**	**+1.0**
STKA	**Stephens Creek**	**53.25**	**158**	P	**P**	**12 53 12.2**	**-1.5**
	comp=Z,18nm,0.7s,baz=343,slow=7.6,SNR=35						
STKA				LR	LR	13 17 35.4	
	comp=Z,110nm,20.1s,baz=343,slow=38						
STKA	**Stephens Creek**	**53.25**	**158**	P	**P**	**12 53 12.3**	**-1.3**
	baz=53,SNR=18						
STKA	**Stephens Creek**	**53.25**	**158**	P	**P**	**12 53 12.2**	**-1.5**
STKA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
STKA	**Stephens Creek**	**53.25**	**158**	P	**P**	**12 53 12.2**	**-1.5**
STKA	**Stephens Creek**	**53.25**	**158**	P	**P**	**12 53 12.4**	**-1.3**
HTT	**Hallett**	**53.77**	**161**	P	**P**	**12 53 16.5**	**-1.0**
	baz=54,SNR=9.5						
HTT	**Hallett**	**53.77**	**161**	P	**P**	**12 53 16.5**	**-1.0**
TIXI	**Tiksi**	**54.18**	**3**	*ce*P	**P**	**12 53 19.2**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,29nm,0.9s						
TIXI	**Tiksi**	**54.18**	**3**	P	**P**	**12 53 19.0**	**-1.0**
TIXI				IAmb	IAmb	12 53 38.9	
	comp=Z,79nm,1.4s						
HRA	**Herat**	**54.29**	**300**	IAmb	IAmb	12 53 23.3	
	comp=Z,79nm,1.2s						
CMSA	**Cobar Meteorol**	**54.56**	**154**	P	**P**	**12 53 22.4**	**-0.8**
	baz=55,SNR=20						
CMSA	**Cobar Meteorol**	**54.56**	**154**	P	**P**	**12 53 22.5**	**-0.8**
NRIK	**Noril'sk**	**55.53**	**346**	P	**P**	**12 53 30.4**	**+0.6**
	comp=Z,43nm,0.8s,baz=126,slow=7.0,SNR=69						
NRIK				ScP	**ScP**	**12 58 21.5**	**+1.0**
	comp=Z,6.5nm,0.8s,baz=153,slow=3.7,SNR=6.3						
NRIK				LR	LR	13 18 33.3	
	comp=Z,237nm,19.2s,baz=146,slow=37						
NRIK	**Noril'sk**	**55.53**	**346**	IAmb	IAmb	12 53 31.3	
	comp=Z,47nm,0.8s						
ARMA	**Armidale**	**56.40**	**148**	P	**P**	**12 53 38.6**	**+1.9**
	baz=56,SNR=6.2						
SANVU	**Saraoutou**	**56.54**	**123**	IAmb	IAmb	12 53 40.5	
	comp=Z,36nm,0.9s						
SANVU	**Saraoutou**	**56.54**	**123**	P	**P**	**12 53 38.4**	**+0.7**
AB31	**Akbulak array**	**57.69**	**318**	P	**P**	**12 53 45.4**	**0.0**
WBK	**Wadi Bani Khal**	**57.70**	**286**	P	**P**	**12 53 46.3**	**+0.4**
GEYT	**Alibeck**	**57.76**	**304**	P	**P**	**12 53 47.6**	**+1.4**
	comp=Z,67nm,0.9s,baz=120,slow=5.3,SNR=61						
GEYT	**Alibeck**	**57.76**	**304**	IAmb	IAmb	12 53 48.2	
	comp=Z,51nm,1.0s						
ARPS	**Mount Arapiles**	**57.77**	**160**	P	**P**	**12 53 45.2**	**-0.8**
	baz=58,SNR=6.7						
ARPS	**Mount Arapiles**	**57.77**	**160**	P	**P**	**12 53 45.2**	**-0.8**
WSAR	**Wadi Sarin**	**57.93**	**287**	P	**P**	**12 53 48.0**	**+0.5**
BILL	**Bilibino**	**57.98**	**19**	*c i*P	**P**	**12 53 47.0**	**-0.1**
BILL				*e*		12 54 37.3	
BILL				*e*		12 55 51.1	
BILL				*i* S	S	13 01 30.7	-10
BILL				pmax	pmax		
	comp=Z,79nm,1.7s						
BILL				MLR	MLR		
	comp=Z,109nm,18.0s						
BILL	**Bilibino**	**57.98**	**19**	P	**P**	**12 53 46.6**	**-0.5**
BIDO	**Bidbid**	**58.36**	**287**	P	**P**	**12 53 51.1**	**+0.6**
	SNR=6.1						
SMDO	**Samad**	**58.48**	**287**	P	**P**	**12 53 51.6**	**+0.1**
JMDO	**Jabal Madar**	**58.52**	**286**	P	**P**	**12 53 51.4**	**-0.3**
SVE	**Sverdlovsk**	**59.02**	**326**	*de*P	**P**	**12 53 55.1**	**+0.6**
SVE				pmax	pmax		
	comp=Z,104nm,1.0s						
HOQ	**Hoqain**	**59.09**	**287**	P	**P**	**12 53 56.0**	**+0.4**
	SNR=8.5						
AKTO	**Aktyubinsk**	**59.13**	**319**	P	**P**	**12 53 55.9**	**+0.4**
	comp=Z,29nm,1.0s,baz=97,slow=7.4,SNR=50						
CAN	**Canberra**	**59.22**	**153**	IAmb	IAmb	12 55 07.5	
	comp=Z,40nm,1.4s						
CAN	**Canberra**	**59.22**	**153**	P	**P**	**12 53 56.0**	**-0.2**
BSY	**Bisya**	**59.30**	**286**	P	**P**	**12 53 57.4**	**+0.3**
CNB	**Canberra Magne**	**59.37**	**153**	P	**P**	**12 53 58.0**	**+0.7**
	baz=60,SNR=11						
CNB	**Canberra Magne**	**59.37**	**153**	P	**P**	**12 53 57.0**	**-0.3**
DQM	**DQM**	**59.40**	**283**	P	**P**	**12 53 57.3**	**-0.4**
	SNR=6.2						
ADK	**Adak**	**59.50**	**40**	P	**P**	**12 53 57.8**	**-0.1**
ADK				pmax	pmax		
	comp=Z,89nm,0.9s						
ADK	**Adak**	**59.50**	**40**	P	**P**	**12 53 57.8**	**-0.1**
ADK	**Adak**	**59.50**	**40**	P	**P**	**12 53 57.5**	**-0.4**
SOHO	**SOHO**	**59.73**	**288**	*i* P	**P**	**12 53 59.6**	**-0.4**
	SNR=12						
SOHO	**SOHO**	**59.73**	**288**	P	**P**	**12 54 00.4**	**+0.4**
BANOM	**Banah**	**59.74**	**290**	*i* P	**P**	**12 54 00.9**	**+0.8**
	SNR=9.9						
BANOM	**Banah**	**59.74**	**290**	P	**P**	**12 54 01.3**	**+1.2**
TOO	**Toolangi**	**59.76**	**157**	P	**P**	**12 53 59.5**	**-0.4**
	baz=60,SNR=14						
TOO	**Toolangi**	**59.76**	**157**	P	**P**	**12 53 59.1**	**-0.8**
DZM	**Mont Dzumac**	**59.81**	**130**	*e*P	**P**	**12 54 01.4**	**+0.8**
	comp=Z,29nm,0.7s						
DZM				*e*S	**S**	**13 02 05.3**	**-0.9**
	comp=Z,148nm,29.0s						
DZM				*e*LQ	LQ	13 09 13.8	
	comp=Z,526nm,28.3s						
DZM				*e*LR	LR	13 11 47.0	
	comp=Z,530nm,23.9s						
DZM	**Mont Dzumac**	**59.81**	**130**	P	**P**	**12 54 01.8**	**+1.2**
DZM				IAmb	IAmb	12 54 03.3	
	comp=Z,22nm,0.7s						
DZM	**Mont Dzumac**	**59.81**	**130**	P	**P**	**12 54 01.0**	**+0.4**
ARQ	**Araqi**	**59.84**	**287**	P	**P**	**12 54 01.3**	**+0.5**
	SNR=5.3						
SHME	**Shamm**	**59.87**	**290**	P	**P**	**12 54 01.8**	**+0.9**
SHME	**Shamm**	**59.87**	**290**	P	**P**	**12 54 02.1**	**+1.1**
MASF	**Masafi**	**59.92**	**289**	P	**P**	**12 54 03.2**	**+1.8**
MSFE	**Esma-Masafi**	**59.92**	**289**	P	**P**	**12 54 02.0**	**+0.6**
UOSS	**Minazif**	**59.93**	**289**	P	**P**	**12 54 00.3**	**-1.1**
UOSS	**Minazif**	**59.93**	**289**	P	**P**	**12 54 01.6**	**+0.2**
UOSS	**Minazif**	**59.93**	**289**	P	**P**	**12 54 00.6**	**-0.8**
UOSS				IAmb	IAmb	12 54 09.0	
	comp=Z,54nm,1.4s						
HATD	**Hatta, Dubai**	**60.01**	**289**	*i* P	**P**	**12 54 02.1**	**+0.1**
	SNR=8.9						
HATD	**Hatta, Dubai**	**60.01**	**289**	P	**P**	**12 54 02.8**	**+0.8**
	SNR=5.4						
ARU	**Arti**	**60.02**	**326**	*c i*P	**P**	**12 54 01.3**	**-0.2**
ARU				*PP	**pP**	**12 54 24.0**	**+2.1**
ARU						12 54 44.5	
ARU						12 56 10.0	
ARU				S	**S**	**13 02 09.3**	**+1.4**
ARU				SS	**SS**	**13 06 01.4**	**-4.1**
ARU				pmax	pmax		
	comp=Z,75nm,1.0s						
ARU				MLR	MLR		
	comp=Z,234nm,15.0s						
ARU	**Arti**	**60.02**	**326**	P	**P**	**12 54 01.5**	**0.0**
ASHO	**Ashiyiah**	**60.09**	**289**	*i* P	**P**	**12 54 02.8**	**+0.3**
	SNR=19						
ASHO	**Ashiyiah**	**60.09**	**289**	P	**P**	**12 54 03.1**	**+0.5**
	SNR=9.0						
ALNE	**Al Ain**	**60.45**	**288**	*i* P	**P**	**12 54 05.3**	**+0.3**
	SNR=6.9						
ALNE	**Al Ain**	**60.45**	**288**	P	**P**	**12 54 05.6**	**+0.7**
	SNR=13						
FAQ	**Al Faqa, Dubai**	**60.51**	**289**	*i* P	**P**	**12 54 05.3**	**0.0**
	SNR=6.7						
FAQ	**Al Faqa, Dubai**	**60.51**	**289**	P	**P**	**12 54 05.6**	**+0.3**
ASUD	**Al Ashush, Dub**	**60.76**	**289**	*i* P	**P**	**12 54 07.4**	**+0.3**
	SNR=6.9						
ASUD	**Al Ashush, Dub**	**60.76**	**289**	P	**P**	**12 54 08.1**	**+1.0**
	SNR=5.2						
ATKA	**Atka Island**	**61.07**	**40**	P	**P**	**12 54 09.0**	**+0.4**
UMZA	**Um Al Zommool**	**61.17**	**287**	P	**P**	**12 54 09.4**	**-0.4**
SHAO	**Shalim**	**61.51**	**281**	P	**P**	**12 54 11.9**	**-0.3**
SHAO	**Shalim**	**61.51**	**281**	P	**P**	**12 54 12.4**	**+0.2**
DMTO	**DMTO**	**62.20**	**281**	P	**P**	**12 54 17.2**	**+0.3**
MZR	**Muzera**	**62.66**	**287**	*i* P	**P**	**12 54 19.5**	**-0.4**
	SNR=21						
MZR	**Muzera**	**62.66**	**287**	P	**P**	**12 54 19.8**	**0.0**
	SNR=12						
DOK	**Doka**	**62.80**	**282**	P	**P**	**12 54 20.6**	**-0.2**
RBK	**Rabkut**	**62.94**	**281**	P	**P**	**12 54 22.0**	**+0.2**
WHFO	**Wadi Hawf**	**63.26**	**282**	P	**P**	**12 54 23.3**	**-0.7**
ABTO	**Aybut**	**63.82**	**281**	P	**P**	**12 54 27.6**	**0.0**
SPIA	**Saint Paul Isl**	**64.04**	**34**	P	**P**	**12 54 28.9**	**+0.6**
	baz=262						
SOCY	**Socotra**	**64.29**	**275**	P	**P**	**12 54 29.7**	**-1.2**
SOCY	**Socotra**	**64.29**	**275**	P	**P**	**12 54 30.0**	**-0.8**
SOCY				IAmb	IAmb	12 54 30.3	
	comp=Z,73nm,1.1s						
NIKH	**Nikolski High**	**64.39**	**39**	P	**P**	**12 54 30.7**	**0.0**
	baz=266						
TRNA	**Turayna**	**64.45**	**289**	P	**P**	**12 54 31.7**	**+0.1**
GAMB	**Gambell**	**64.47**	**27**	IAmb	IAmb	12 54 32.7	
	comp=Z,47nm,0.9s						
GAMB	**Gambell**	**64.47**	**27**	P	**P**	**12 54 32.1**	**+1.1**
	baz=258						
LKRN	**Lenkeran, Azer**	**65.09**	**305**	P	**P**	**12 54 36.1**	**+0.6**
KIRV	**Kirov**	**65.26**	**327**	P	**P**	**12 54 35.8**	**-0.4**
	comp=Z,72nm,0.9s,baz=102,slow=1.6,SNR=25						
KIRV	**Kirov**	**65.26**	**327**	*ce*P	**P**	**12 54 36.1**	**-0.1**
BELG	**Belogornoye**	**65.80**	**320**	P	**P**	**12 54 39.8**	**0.0**
	comp=Z,89nm,0.9s,baz=124,slow=0.4,SNR=22						
BELG	**Belogornoye**	**65.80**	**320**	*c i*P	**P**	**12 54 39.5**	**-0.3**
BELG				pmax	pmax		
	comp=Z,22nm,1.0s						
MAK	**Makhachkala**	**65.87**	**310**	*e*P	**P**	**12 54 39.9**	**-0.5**
MAK				*e**PP	**pP**	**12 55 00.6**	**-0.4**
MAK				*e**SP	**sP**	**12 55 08.6**	**-1.2**
MAK				*e*		12 57 06.8	
MAK				*e*S	**S**	**13 03 20.8**	**-0.5**
MAK				*e**SS	**sS**	**13 03 56.8**	**+1.5**
MAK				pmax	pmax		
	comp=Z,106nm,1.1s						
MAK				MLR	MLR		
	comp=Z,358nm,19.0s						
SEKA	**Sheki**	**66.17**	**308**	P	**P**	**12 54 42.9**	**+0.3**
MNGR	**Mingechevir, A**	**66.28**	**307**	P	**P**	**12 54 43.8**	**+0.7**
TNA	**Tin City**	**66.40**	**26**	P	**P**	**12 54 44.4**	**+1.0**
	baz=261						
MSVF	**Nonsavu**	**66.61**	**119**	LR	LR	13 21 32.2	
	comp=Z,243nm,18.8s,baz=309,slow=34						
MSVF	**Nonsavu**	**66.61**	**119**	P	**P**	**12 54 47.2**	**+1.6**
MSVF				pmax	pmax		
	comp=Z,76nm,0.9s						
MSVF	**Nonsavu**	**66.61**	**119**	P	**P**	**12 54 47.2**	**+1.6**
MSVF	**Nonsavu**	**66.61**	**119**	P	**P**	**12 54 47.6**	**+2.0**
QRN	**Al-Qurain**	**66.79**	**294**	*e*P	**P**	**12 54 46.3**	**-0.4**
UMR	**Umm Al-Rimmam**	**66.86**	**295**	*e*P	**P**	**12 54 46.4**	**-0.6**
GANJ	**Ganja**	**66.87**	**307**	P	**P**	**12 54 47.5**	**+0.5**
KBD	**Kabd**	**66.93**	**295**	*e*P	**P**	**12 54 46.9**	**-0.6**
DDFL	**Dedoflistskaro**	**66.97**	**308**	P	**P**	**12 54 51.1**	**+3.5**
MIB	**Mutribah**	**67.15**	**295**	*e*P	**P**	**12 54 48.2**	**-0.7**
ANM	**Nome**	**67.33**	**27**	IAmb	IAmb	12 54 51.9	
	comp=Z,56nm,1.0s						
ANM	**Nome**	**67.33**	**27**	P	**P**	**12 54 50.7**	**+1.3**
	baz=263						

DGTI	Dogotuki	67.36	117	P	P	12 54 51.0	+0.7
PRGR	Permogore	67.45	330	eP	P	12 54 47.1	-3.0
PRGR				e*PP	pP	12 55 11.3	+0.4
PRGR				pmax	pmax		
	comp=Z,53nm,1.5s						
RST	Umm Al-Ruwaisa	67.48	295	eP	P	12 54 49.8	-1.2
NAX	Nakhchivan	67.62	306	P	P	12 54 52.5	+0.7
MSEY	Mahe Island	67.93	257	i P	P	12 54 54.0	-0.1
	SNR=13						
MSEY	Mahe Island	67.93	257	P	P	12 54 54.5	+0.4
MSEY				pmax	pmax		
	comp=Z,60nm,1.1s						
MSEY	Mahe Island	67.93	257	P	P	12 54 54.7	+0.6
MSEY	Mahe Island	67.93	257	P	P	12 54 54.5	+0.4
MSEY				IAmb	IAmb	12 54 55.7	
	comp=Z,60nm,1.1s						
GNI	Garni	68.11	307	P	P	12 54 55.9	+1.0
	comp=Z,40nm,1.1s,baz=186,slow=1.3,SNR=27						
GNI	Garni	68.11	307	P	P	12 54 56.0	+1.0
GNI	Garni	68.11	307	P	P	12 54 56.2	+1.2
GNI				pmax	pmax		
	comp=Z,125nm,1.4s						
GNI	Garni	68.11	307	P	P	12 54 56.9	+1.9
GNI	Garni	68.11	307	P	P	12 54 56.2	+1.2
ZEI	Tsey	68.52	310	eP	P	12 54 54.0	-3.5
ZEI				pmax	pmax		
	comp=Z,47nm,1.4s						
NCK	Nalchik	68.69	310	i P	P	12 54 58.5	+0.2
NCK				pmax	pmax		
	comp=Z,41nm,1.1s						
RDOG	Red Dog Mine	68.69	23	P	P	12 55 07.3	+9.4
	baz=264						
GOF	Gofitskoye	68.97	312	⇑eP	P	12 55 00.5	+0.5
GOF				pmax	pmax		
	comp=Z,79nm,1.1s						
PYA1	Pyatigorsk	69.00	311	i P	P	12 55 00.2	-0.1
PYA1				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBZ	Khabaz	69.17	311	P	P	12 55 01.8	+0.5
	comp=Z,59nm,0.9s,baz=88,slow=4.9,SNR=75						
KBZ				LR	LR	13 28 37.4	
	comp=Z,290nm,21.2s,baz=78,slow=39						
KBZ	Khabaz	69.17	311	ceP	P	12 55 01.5	+0.2
KBZ				pmax	pmax		
	comp=Z,103nm,1.1s						
KVAR	Kislovodsk Arr	69.30	311	P	P	12 55 03.9	+1.7
	comp=Z,30nm,1.0s,baz=93,slow=24,SNR=10						
KIV	Kislovodsk	69.31	311	i P	P	12 55 02.9	+0.7
	SNR=17						
KIV	Kislovodsk	69.31	311	eP	P	12 55 02.7	+0.4
KIV				eS	S	13 04 03.6	+0.9
KIV				pmax	pmax		
	comp=Z,135nm,1.0s						
KIV				pmax	pmax		
	comp=Z,37nm,3.1s						
KIV				MLR	MLR		
	comp=Z,205nm,17.0s						
KIV	Kislovodsk	69.31	311	P	P	12 55 03.4	+1.1
KIV	Kislovodsk	69.31	311	P	P	12 55 03.0	+0.7
SHA1	Shidzhatmaz	69.35	311	c iP	P	12 55 03.0	+0.3
SDPT	Sand Point	69.38	37	P	P	12 55 03.4	+1.1
	baz=271						
VRH	Novokhopyorsk	69.47	319	eP	P	12 55 02.5	-0.4
VRH				pmax	pmax		
	comp=Z,130nm,0.9s						
RAYN	Ar Rayn	69.80	289	i P	P	12 55 05.6	0.0
	SNR=45						
RAYN	Ar Rayn	69.80	289	P	P	12 55 05.8	+0.2
RAYN				pmax	pmax		
	comp=Z,73nm,1.0s						
RAYN	Ar Rayn	69.80	289	P	P	12 55 06.3	+0.7
RAYN	Ar Rayn	69.80	289	P	P	12 55 05.8	+0.2
RAYN				IAmb	IAmb	12 55 07.1	
	comp=Z,73nm,1.0s						
KLMR	Klimovskoe	70.37	329	eP	P	12 55 06.6	-1.7
KLMR				e*PP	pP	12 55 30.4	+1.2
KLMR				pmax	pmax		
	comp=Z,69nm,1.1s						
KLMR	Klimovskoe	70.37	329	LR	LR	13 23 04.2	
KLMR	Klimovskoe	70.37	329	eP	P	12 55 06.7	-1.6
KLMR	Klimovskoe	70.37	329	AMP		12 55 09.0	
	comp=Z,69nm,1.1s						
KLMR	Klimovskoe	70.37	329	epP	pP	12 55 30.4	+1.2
KLMR	Klimovskoe	70.37	329	LQ	LQ	13 21 09.1	
KLMR	Klimovskoe	70.37	329	LQ	LQ	13 21 09.1	
GCSA	Galena City Sc	70.99	27	P	P	12 55 13.0	+1.1
	baz=271,SNR=15						
VORR	Voronezh	71.01	319	eP	P	12 55 12.0	-0.3
VORR				pmax	pmax		
	comp=Z,300nm,1.4s						
VORD	Divnogorie	71.02	319	eP	P	12 55 12.2	-0.2
VORD				pmax	pmax		
	comp=Z,50nm,0.9s						
VSR	Storozhevoye	71.07	319	eP	P	12 55 12.3	-0.4
VSR				pmax	pmax		
	comp=Z,90nm,1.0s						
A21K	Barrow	71.08	20	P	P	12 55 13.1	+0.7
	baz=269						
LPSR	Galich'ya Gora	71.11	320	eP	P	12 55 12.7	-0.2
LPSR				pmax	pmax		
	comp=Z,120nm,1.0s						
KOPT	Kop Dagi	71.36	307	IAmb	IAmb	12 55 17.6	
	comp=Z,51nm,1.3s						
TTA	Tatalina	71.43	29	IAmb	IAmb	12 55 16.9	
	comp=Z,54nm,1.3s						
TTA	Tatalina	71.43	29	P	P	12 55 15.7	+0.9
	baz=272,SNR=8.5						
SOC	Sochi	71.49	311	eP	P	12 55 13.7	-1.7
SOC				e*PP	pP	12 55 37.0	+0.8
SOC				e		12 57 53.4	
SOC				ePPP	PPP	12 59 35.6	
SOC				eS	S	13 04 26.4	-1.5
SOC				e*SS	SKSac	13 05 07.4	-4.2
SOC				eSS	SS	13 09 02.7	-1.2
SOC				pmax	pmax		
	comp=Z,42nm,0.7s						
SOC				MLR	MLR		
	comp=Z,404nm,20.0s						
MOS	Moscow	71.62	324	eP	P	12 55 14.4	-1.6
MOS				e*PP	pP	12 55 36.5	-0.5
MOS				e		12 57 54.6	
MOS				pmax	pmax		
	comp=Z,58nm,0.7s						
P18K	Big Mountain,	72.02	32	P	P	12 55 18.7	+0.4
	baz=274						
CHIR	Chirikof Islan	72.10	36	P	P	12 55 19.5	+0.7
	baz=275						
J20K	Nowinta River	72.19	27	IAmb	IAmb	12 55 21.2	
	comp=Z,33nm,0.9s						
J20K	Nowinta River	72.19	27	P	P	12 55 20.5	+1.3
	baz=274						
M19K	Big River Lodg	72.24	30	IAmb	IAmb	12 55 22.3	
	comp=Z,81nm,1.6s						
M19K	Big River Lodg	72.24	30	P	P	12 55 20.7	+1.1
	baz=274						
N19K	Bonanza Creek	72.28	31	IAmb	IAmb	12 55 22.3	
	comp=Z,65nm,1.3s						
N19K	Bonanza Creek	72.28	31	P	P	12 55 21.0	+1.0
	baz=275						
OBN	Obninsk	72.28	323	P	P	12 55 19.6	-0.2
	comp=Z,4.3nm,0.4s,baz=268,slow=1.9,SNR=11						
OBN	Obninsk	72.28	323	c iP	P	12 55 19.2	-0.7
OBN				e		12 55 36.1	
OBN				e		12 58 03.1	
OBN				i S	S	13 04 28.3	-8.2
OBN				pmax	pmax		
	comp=Z,91nm,1.7s						
OBN				MLR	MLR		
	comp=Z,225nm,19.0s						
K20K	Telida	72.28	28	IAmb	IAmb	12 55 22.4	
	comp=Z,65nm,1.4s						
O19K	Port Alsworth	72.41	31	P	P	12 55 21.2	+0.7
	baz=275						
L20K	Farewell, AK	72.44	29	P	P	12 55 21.8	+1.0
	baz=274						
H21K	Melozitna Rive	72.66	26	IAmb	IAmb	12 55 24.5	
	comp=Z,77nm,1.1s						
H21K	Melozitna Rive	72.66	26	P	P	12 55 23.1	+1.0
	baz=274						
APA	Apatity	72.73	336	⇓iP	P	12 55 22.0	-0.3
APA				i		12 55 47.5	
APA				pmax	pmax		
	comp=Z,13nm,0.8s						
APA				MLR	MLR		
	comp=Z,800nm,16.0s						
CHUM	Lake Minchumin	73.02	28	P	P	12 55 25.0	+0.9
	baz=276,SNR=7.5						
I21K	Tanana	73.04	26	IAmb	IAmb	12 55 56.1	
	comp=Z,39nm,0.9s						
I21K	Tanana	73.04	26	P	P	12 55 25.6	+1.3
	baz=275						
CAST	Castle Rocks	73.17	28	IAmb	IAmb	12 55 27.0	
	comp=Z,59nm,0.8s						
CAST	Castle Rocks	73.17	28	P	P	12 55 26.0	+0.9
	baz=276,SNR=21						
PPLA	Purkeypile	73.17	29	P	P	12 55 26.0	+0.7
	baz=276						
SPCR	Spurr Chakacha	73.35	30	P	P	12 55 26.5	+0.3
	baz=276						
COLD	Coldfoot	73.55	24	P	P	12 55 27.9	+0.7
	baz=276,SNR=16						
KDAK	Kodiak Island	73.56	34	P	P	12 55 27.5	+0.1
	comp=Z,24nm,0.7s,baz=253,slow=7.7,SNR=7.6						
BPAW	Bear Paw Mtn.	73.58	27	IAmb	IAmb	12 55 29.5	
	comp=Z,56nm,1.0s						
BPAW	Bear Paw Mtn.	73.58	27	P	P	12 55 28.1	+0.6
	baz=277,SNR=13						
MLY	Manley	73.58	26	IAmb	IAmb	12 55 29.5	
	comp=Z,36nm,0.8s						
MLY	Manley	73.58	26	P	P	12 55 28.5	+1.0
	baz=276,SNR=28						
TOLK	Toolik Lake Re	73.63	22	IAmb	IAmb	12 55 29.7	
	comp=Z,32nm,0.8s						
TOLK	Toolik Lake Re	73.63	22	P	P	12 55 28.6	+0.8
	baz=276,SNR=26						
TRF	Thorofare Moun	73.97	28	IAmb	IAmb	12 55 31.5	
	comp=Z,38nm,1.2s						
TRF	Thorofare Moun	73.97	28	P	P	12 55 30.2	+0.3
	baz=277						
CUT	Chulitna	74.11	29	P	P	12 55 30.4	-0.2
	baz=278,SNR=5.3						
I23K	Minto, Yukon-K	74.15	26	IAmb	IAmb	12 55 32.8	
	comp=Z,118nm,1.8s						
I23K	Minto, Yukon-K	74.15	26	P	P	12 55 31.3	+0.6
	baz=278,SNR=15						
M22K	Willow	74.27	30	P	P	12 55 31.0	-0.5
	baz=278,SNR=8.0						
RER	Riviere de l'E	74.33	241	IAmb	IAmb	12 56 00.1	
	comp=Z,49nm,1.1s						
NEA2	Nenana	74.35	27	IAmb	IAmb	12 55 33.5	
	comp=Z,33nm,0.8s						
NEA2	Nenana	74.35	27	P	P	12 55 32.4	+0.4
	baz=278,SNR=20						
GAZ	Gaziantep	74.35	305	IAmb	IAmb	12 55 33.6	
	comp=Z,84nm,1.1s						
MCK	McKinley	74.53	27	IAmb	IAmb	12 55 34.2	
	comp=Z,45nm,0.8s						
MCK	McKinley	74.53	27	P	P	12 55 33.0	0.0
	baz=278,SNR=12						
RC01	Rabbit Creek A	74.55	30	P	P	12 55 32.7	-0.5
	baz=278						
RND	Reindeer	74.61	28	IAmb	IAmb	12 55 34.4	
	comp=Z,49nm,0.8s						
MDM	Murphy Dome	74.65	26	IAmb	IAmb	12 55 35.5	
	comp=Z,41nm,0.9s						
O22K	Cooper Landing	74.65	31	P	P	12 55 34.0	+0.3
	baz=279						
H24K	Noodor Dome	74.66	25	IAmb	IAmb	12 56 04.1	
	comp=Z,39nm,1.1s						
H24K	Noodor Dome	74.66	25	P	P	12 55 35.1	+1.3
	baz=279						
PMR	Palmer	74.76	30	IAmb	IAmb	12 55 35.0	
	comp=Z,26nm,0.8s						
PMR	Palmer	74.76	30	P	P	12 55 33.9	-0.4
	baz=279						
TCOL	CIGO, UAF Yank	74.82	26	P	P	12 55 34.9	+0.3
	baz=279						
COLA	College	74.82	26	P	P	12 55 34.8	+0.2
COLA				pmax	pmax		
	comp=Z,19nm,0.9s						
COLA	College	74.82	26	P	P	12 55 34.8	+0.2
COLA	College	74.82	26	P	P	12 55 34.5	-0.1
	baz=279						
WAT1	Susitna Watana	74.84	28	P	P	12 55 34.4	-0.5
	baz=279						
POKR	Poker Plat Res	74.96	26	P	P	12 55 36.3	+0.8
	baz=279,SNR=7.0						
ATD	Arta Tunnel	75.01	278	IAmb	IAmb	12 55 39.1	
	comp=Z,37nm,1.0s						
SML	Sawmill	75.11	29	P	P	12 55 36.4	0.0
	baz=280						
KNK	Knik Glacier	75.11	30	IAmb	IAmb	12 55 37.1	
	comp=Z,42nm,0.9s						
KNK	Knik Glacier	75.11	30	P	P	12 55 36.4	0.0
	baz=280,SNR=6.1						
ILAR	Eielson Array	75.25	26	P	P	12 55 35.9	-1.2
	comp=Z,5.7nm,0.9s,baz=256,slow=3.9,SNR=38						
ILAR				LR	LR	13 29 59.1	
	comp=Z,82nm,20.3s,baz=288,slow=37						
WAT6	Susitna Watana	75.25	29	P	P	12 55 37.6	+0.2
	baz=280,SNR=8.2						
PWL	Port Wells	75.26	30	IAmb	IAmb	12 55 38.2	
	comp=Z,54nm,0.8s						
PWL	Port Wells	75.26	30	P	P	12 55 36.9	-0.4
	baz=280						
HDA	Harding Lake	75.28	27	P	P	12 55 36.9	-0.5
	baz=280						
DHY	Denali Highway	75.33	28	P	P	12 55 38.0	+0.2
	baz=280,SNR=7.3						
ARA0	ARCESS Array S	75.34	339	eP	P	12 55 38.3	+0.7
ARCES	ARCESS Array B	75.34	339	P	P	12 55 37.1	-0.5
	comp=Z,8.9nm,0.8s,baz=82,slow=4.5,SNR=10						
ARCES				LR	LR	13 33 06.5	
	comp=Z,173nm,18.4s,baz=120,slow=39						
ARCES	ARCESS Array B	75.34	339	IAmb	IAmb	12 57 02.4	
	comp=Z,131nm,1.8s						
SCM	Sheep Creek Mo	75.57	29	IAmb	IAmb	12 55 40.6	
	comp=Z,69nm,0.9s						
SCM	Sheep Creek Mo	75.57	29	P	P	12 55 39.1	-0.1
	baz=280						
ASF	Jabal al Asfar	75.58	300	P	P	12 55 40.4	+0.6
	comp=Z,35nm,1.0s,baz=119,slow=1.5,SNR=18						
FYU	Fort Yukon	75.59	24	IAmb	IAmb	12 56 02.1	
	comp=Z,40nm,1.2s						
SPB2	Spitsbergen Ar	75.68	348	IAmb	IAmb	12 55 44.2	
	comp=Z,37nm,0.8s						
SPA0	Spitsbergen Ar	75.69	348	eP	P	12 55 41.1	+1.6
SPITS	Spitsbergen Ar	75.69	348	P	P	12 55 39.6	+0.1
	comp=Z,18nm,0.7s,baz=75,slow=9.8,SNR=14						
DCZ	Deep Cove	75.72	148	P	P	12 55 41.6	+1.6
GLI	Glacier Island	75.86	30	P	P	12 55 40.3	-0.3
	baz=281						
M24K	Tolsona, Glenn	76.05	29	P	P	12 55 42.3	+0.5
	baz=281						
PAX	Paxson	76.20	28	P	P	12 55 42.9	+0.2
	baz=282,SNR=6.4						
HSPB	Hornsund (broa	76.22	347	eP	P	12 55 43.0	+0.6
KTK1	Kautokeino	76.24	338	eP	P	12 55 45.5	+2.8
KLU	Klutina	76.29	30	P	P	12 55 43.3	0.0
	baz=282						
RIDG	Independent Ri	76.32	27	IAmb	IAmb	12 55 44.2	
	comp=Z,48nm,0.9s						
RIDG	Independent Ri	76.32	27	P	P	12 55 43.1	-0.2
	baz=282,SNR=7.4						
THZ	Tophouse	76.38	142	P	P	12 55 46.2	+2.3
THZ				IAmb	IAmb	12 55 48.3	
	comp=Z,27nm,0.7s						
HARP	HAARP	76.46	29	P	P	12 55 44.5	+0.4
	baz=282						
Q23K	Middleton Isla	76.51	32	P	P	12 55 44.4	+0.1
	baz=282						
LBZ	Lake Benmore	76.56	146	P	P	12 55 46.4	+1.6
LBZ				IAmb	IAmb	12 55 47.1	
	comp=Z,68nm,1.4s						
EYAK	Cordova Ski Ar	76.57	30	P	P	12 55 44.9	+0.2
	baz=282						
RPZ	Rata Peaks	76.59	145	IAmb	IAmb	12 55 46.6	
	comp=Z,31nm,1.0s						
BR131	Keskin Array S	76.61	308	P	P	12 55 45.7	+0.1
	SNR=5.1						
BRTR	Keskin Array B	76.61	308	P	P	12 55 45.8	+0.2
	comp=Z,9.1nm,0.9s,baz=132,slow=7.3,SNR=18						
BRTR				LR	LR	13 35 40.8	
	comp=Z,118nm,20.9s,baz=78,slow=40						
BRTR	Keskin Array B	76.61	308	P	P	12 55 44.2	-1.4
BRTR				pP	pP	12 56 06.8	+0.3
MMAI	Mount Meron Ar	76.63	301	P	P	12 55 47.2	+1.5
	comp=Z,22nm,1.0s,baz=89,slow=7.6,SNR=11						
SCRK	Sand Creek	76.64	27	P	P	12 55 44.8	-0.4
SCRK	Sand Creek	76.64	27	P	P	12 55 45.0	-0.2
	baz=283,SNR=7.9						
J26L	Joseph Creek	76.70	26	P	P	12 55 45.4	-0.1
	baz=283						
FIA1	FINESS Array S	76.77	331	IAmb	IAmb	12 55 46.9	
	comp=Z,34nm,1.0s						
FINES	FINESS Array B	76.77	331	P	P	12 55 45.8	+0.1
	comp=Z,22nm,0.9s,baz=90,slow=7.6,SNR=27						
FINES				LR	LR	13 31 02.3	
	comp=Z,222nm,19.8s,baz=76,slow=37						
FINES	FINESS Array B	76.77	331	i P	P	12 55 46.0	+0.2
FINES				pmax	pmax		
	comp=Z,22nm,0.9s						
FINES	FINESS Array B	76.77	331	P	P	12 55 45.0	-0.8
OXZ	Oxford	76.88	144	IAmb	IAmb	12 56 09.2	
	comp=Z,110nm,2.0s						
N25K	Chitina, Valde	76.89	29	IAmb	IAmb	12 55 48.5	
	comp=Z,66nm,1.4s						
N25K	Chitina, Valde	76.89	29	P	P	12 55 46.7	+0.1
	baz=283						
BKZ	Black Stump Fm	76.98	139	IAmb	IAmb	12 55 50.4	
	comp=Z,61nm,1.4s						
MENT	Mentasta	76.99	28	IAmb	IAmb	12 56 26.0	
	comp=Z,59nm,1.4s						
BMRM	Bremner River	77.03	30	P	P	12 55 47.8	+0.5
	baz=283						
JETT	Jettan, Norway	77.08	339	eP	P	12 55 50.6	+3.1
VSU	Vasula	77.09	327	eP	P	12 55 48.7	+1.0
VSU	Vasula	77.09	327	i P	P	12 55 47.8	+0.1
VSU				pmax	pmax		
	comp=Z,252nm,1.0s						
L26K	Log Cabin Wild	77.13	28	P	P	12 55 48.6	+0.7
	baz=284,SNR=7.7						
ANTO	Ankara	77.22	308	P	P	12 55 49.4	+0.5
ANTO				pmax	pmax		
	comp=Z,46nm,1.0s						
ANTO	Ankara	77.22	308	P	P	12 55 49.4	+0.5
ANTO				IAmb	IAmb	12 55 50.2	
	comp=Z,46nm,0.9s						
GLB	Gilahina Butte	77.29	29	IAmb	IAmb	12 55 50.6	
	comp=Z,131nm,1.8s						
MNK	Minsk	77.34	323	i P	P	12 55 48.4	-0.7
MNK				i *PP	pP	12 56 12.7	+2.4
MNK				i		12 58 42.9	
MNK				i PPP	PPP	13 00 30.6	
MNK				i S	S	13 05 32.5	-0.3
MNK				i *SS	sS	13 06 13.0	+5.6
MNK				i SS	SS	13 10 33.3	+1.1
MNK				i SSS	SSS	13 13 57.4	
MNK				pmax	pmax		
	comp=Z,87nm,1.0s						
MNK				pmax	pmax		
	comp=E,7.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,20nm,1.0s						
MNK				MLR	MLR		
	comp=Z,255nm,21.0s						
MNK				MLR	MLR		
	comp=N,152nm,21.0s						
MNK				MLR	MLR		
	comp=E,60nm,26.0s						
MNK	Minsk	77.34	323	i P	P	12 55 48.5	-0.7
	comp=E,7.0nm,1.0s						
MNK				i P	P	12 55 48.5	-0.7
	comp=N,20nm,1.0s						
MNK				i P	P	12 55 48.5	-0.7
	comp=Z,87nm,1.0s,baz=77						
MNK				i pP	pP	12 56 12.8	+2.4
MNK				i PP	PP	12 58 43.0	-1.1
MNK				i PPP	PPP	13 00 30.6	
MNK				i S	S	13 05 32.6	-0.3
MNK				i sS	sS	13 06 13.1	+5.6
MNK				i SS	SS	13 10 33.3	+1.1
MNK				i SSS	SSS	13 13 57.5	
MNK				i LR	LR	13 31 05.8	
MNK				i LRM	MLR	13 34 28.2	
	comp=Z,255nm,21.3s						
MNK				i LRM	MLR	13 34 30.1	
	comp=N,152nm,21.2s						
MNK				i LRM	MLR	13 34 34.6	
	comp=E,60nm,26.4s						
AKASG	Malin Array Be	77.36	319	P	P	12 55 48.7	-0.7
	comp=E,30nm,1.0s,baz=64,slow=6.2,SNR=71						
AKASG				PP	PP	12 58 50.1	+5.8
	comp=E,1.6nm,0.8s,baz=70,slow=8.5,SNR=5.2						
AKBB	Malin Array Si	77.36	319	IAmb	IAmb	12 55 49.9	
	comp=Z,52nm,1.1s						
M26K	Nabesna, AK	77.44	28	IAmb	IAmb	12 55 51.3	
	comp=Z,42nm,0.8s						
M26K	Nabesna, AK	77.44	28	P	P	12 55 50.1	+0.5
	baz=284						
EGAK	Eagle	77.64	26	P	P	12 55 50.7	+0.1
	baz=285,SNR=8.7						
MCARA	McCarthy VSAT	77.67	29	P	P	12 55 51.4	+0.5
	baz=284						
L27K	Beaver Creek,	77.80	28	IAmb	IAmb	12 55 53.9	
	comp=Z,30nm,0.8s						
L27K	Beaver Creek,	77.80	28	P	P	12 55 52.5	+1.0
	baz=285						
NACGM	Naroch	77.87	324	i P	P	12 55 49.1	-3.0
TGL	Tana Glacier	77.92	30	IAmb	IAmb	12 58 34.9	
	comp=Z,95nm,1.6s						
M27K	Edge Creek, AK	77.96	28	P	P	12 55 53.0	+0.4
	baz=285						
IIGN	Ignalina	78.08	324	eP	P	12 55 54.5	+1.2
ISAL	Salakas	78.08	325	eP	P	12 55 54.1	+0.9
LEF	Lefka	78.20	303	⇑P	P	12 55 54.1	-0.2
BARN	Barnard Glacie	78.40	29	IAmb	IAmb	12 55 57.1	
	comp=Z,44nm,0.7s						
BVCY	Beaver Creek	78.40	28	P	P	12 55 55.9	+1.0
	baz=286,SNR=7.4						
SORM	Soroca	78.50	317	⇑P	P	12 55 55.4	-0.2
SORM	Soroca	78.50	317	⇑P	P	12 55 55.4	-0.2
MTSE	Matsula	78.52	328	eP	P	12 55 56.5	+1.0
CTG	Chitna Glacier	78.57	30	P	P	12 55 57.2	+1.1
	baz=286,SNR=13						
DAWY	Dawson	78.57	26	P	P	12 55 56.3	+0.4
	baz=287,SNR=11						
I29M	Ogilvie Camp,	78.64	25	P	P	12 55 56.6	+0.5
	baz=288,SNR=5.5						
NOR	Nord	78.71	354	i P	S	13 05 48.0	+1.2
YUK3	Moose Creek	78.76	29	P	P	12 55 57.9	+0.7
	baz=286,SNR=6.9						
LOGN	Logan Glacier	78.77	30	IAmb	IAmb	12 56 26.5	
	comp=Z,40nm,0.9s						
TABL	Table Mountain	78.81	30	IAmb	IAmb	12 56 18.9	
	comp=Z,54nm,1.1s						
JURR	Jurilovca	78.94	313	⇓P	P	12 55 58.5	+0.3
J29M	Klondike Camp	78.95	26	P	P	12 55 58.9	+0.9
	baz=288						
BORA	Eskisehir	78.97	308	P	P	12 55 57.8	-0.7
BORA				IAmb	IAmb	12 55 59.4	
	comp=Z,48nm,1.0s						
BORA					pP	12 56 15.6	-4.4
VLDR	Vladesti	79.22	315	⇑P	P	12 56 00.4	+0.7
TPGR	Topolog	79.23	314	⇓P	P	12 56 00.2	+0.4
PABE	Paberze	79.28	325	eP	P	12 56 00.4	+0.6
PABE	Paberze	79.28	325	P	P	12 55 59.6	-0.2
PINM	Pinnacle	79.33	30	P	P	12 56 01.0	+0.9
	baz=287						
TIRR	Tirgusor	79.34	313	⇑P	P	12 55 59.0	-1.3
TIRR	Tirgusor	79.34	313	⇑P	P	12 55 59.0	-1.3
TIRR	Tirgusor	79.34	313	IAmb	IAmb	12 56 01.7	
	comp=Z,78nm,1.0s						
CFR	Carcaliu	79.35	314	⇑P	P	12 56 00.2	-0.2
STEI	Steigen	79.38	338	eP	P	12 56 00.3	+0.2
ISP	Isparta	79.41	306	IAmb	IAmb	12 56 02.1	
	comp=Z,71nm,1.0s						
INK	Inuvik	79.44	21	P	P	12 56 00.5	0.0
	comp=Z,22nm,0.7s,baz=291,slow=5.9,SNR=87						
INK	Inuvik	79.44	21	IAmb	IAmb	12 56 01.4	
	comp=Z,28nm,0.8s						
INK	Inuvik	79.44	21	P	P	12 56 00.1	-0.4
	baz=291,SNR=30						
FAUS	Fauske	79.56	338	eP	P	12 56 00.9	-0.1
HARR	Harsova	79.61	314	⇑P	P	12 56 02.8	+1.0
HARR	Harsova	79.61	314	⇑P	P	12 56 02.8	+1.0
PNL	Peninsula	79.87	31	P	P	12 56 02.5	-0.4
	baz=288						
LOF	Lofoten	79.90	339	eP	P	12 56 03.4	+0.5
TESR	Tescani	80.02	316	⇑P	P	12 56 04.2	+0.2
SUW	Suwalki	80.13	324	eP	P	12 56 04.3	-0.1
SUW	Suwalki	80.13	324	eP	P	12 56 05.0	+0.5
VRI	Vrincioaia	80.13	315	⇓P	P	12 56 06.0	+1.4
VRI	Vrincioaia	80.13	315	⇓P	P	12 56 06.1	+1.4
MAYO	Mayo, Yukon	80.19	26	P	P	12 56 05.1	+0.4
	baz=290						
PBUR	Paburge	80.24	326	eP	P	12 56 05.9	+0.9
ISR	Istrita	80.45	314	⇑P	P	12 56 08.3	+1.8

ISR	Istrita	80.45	314	⇑P	P	12 56 08.3	+1.8
A36M	Sachs Harbour	80.48	17	IAmb	IAmb	12 56 07.0	
	comp=Z,42nm,0.8s						
A36M	Sachs Harbour	80.48	17	P	P	12 56 05.9	0.0
	baz=298,SNR=15						
BURAR	Bucovina Array	80.67	317	⇑P	P	12 56 08.0	+0.4
BURAR	Bucovina Array	80.67	317	⇑P	P	12 56 08.0	+0.4
BURAR	Bucovina Array	80.67	317	IAmb	IAmb	12 56 09.5	
	comp=Z,40nm,1.1s						
BUR08	Bucovina Ar. S	80.67	317	IAmb	IAmb	12 56 09.2	
	comp=Z,39nm,1.1s						
OZUR		80.70	315	⇑P	P	12 56 09.0	+1.2
ABPO	Ambohimpanom	80.75	247	P	P	12 56 08.9	+0.3
ABPO				pmax	pmax		
	comp=Z,27nm,1.1s						
ABPO	Ambohimpanom	80.75	247	P	P	12 56 08.9	+0.3
MLR	Muntele Rosu	80.76	315	⇓P	P	12 56 08.5	+0.3
MLR	Muntele Rosu	80.76	315	P	P	12 56 08.5	+0.3
	comp=Z,27nm,1.0s,baz=101,slow=4.6,SNR=17						
MLR	Muntele Rosu	80.76	315	IAmb	IAmb	12 56 09.9	
	comp=Z,41nm,1.0s						
LVV	L'vov	80.81	319	eP	P	12 56 08.8	+0.6
N31M	Braeburn, Yuko	80.97	28	P	P	12 56 08.7	-0.2
	baz=290						
UPP	Uppsala	81.20	330	eP	P	12 56 09.9	-0.1
M31M	Drury Creek, Y	81.33	27	P	P	12 56 11.3	+0.5
	baz=291,SNR=6.9						
VOIR		81.38	315	⇑P	P	12 56 11.8	+0.4
VOIR		81.38	315	⇑P	P	12 56 11.8	+0.4
WHY	Whitehorse	81.67	29	P	P	12 56 13.1	+0.4
	baz=291						
KWP	Kalwaria Pacla	81.69	319	eP	P	12 56 13.6	+0.7
FARO	Faro, Yukon	81.77	27	P	P	12 56 13.6	+0.5
	baz=292,SNR=8.5						
SKAG	Skagway	81.89	30	P	P	12 56 14.7	+1.0
	baz=291						
NSS	Namsos	81.91	336	eP	P	12 56 15.9	+2.2
BEL	Belsk	82.17	322	eP	P	12 56 15.9	+0.6
KOLS	Kolonicke sedl	82.17	319	eP	P	12 56 15.8	+0.4
KOLS	Kolonicke sedl	82.17	319	eP	P	12 56 15.8	+0.4
VOI	Vohitsoka	82.22	244	P	P	12 56 16.8	+0.6
VOI	Vohitsoka	82.22	244	P	P	12 56 16.9	+0.6
TRPA	Tarpa	82.25	318	⇓P	P	12 56 16.1	+0.3
TRPA	Tarpa	82.25	318	eP	P	12 56 15.8	+0.1
UZH	Uzhgorod	82.25	319	eP	P	12 56 15.6	-0.2
UZH				e		12 56 33.6	
DRGR		82.54	317	⇓P	P	12 56 17.9	+0.4
DRGR		82.54	317	⇓P	P	12 56 17.9	+0.4
CRVS	Cervenica-Dubn	82.69	319	eP	P	12 56 19.0	+0.9
CRVS				pmax	pmax		
	comp=Z,88nm,1.3s						
CRVS	Cervenica-Dubn	82.69	319	eP	P	12 56 19.0	+0.9
P33M	Teslin, Yukon	82.79	29	P	P	12 56 19.2	+0.7
	baz=293						
HFS	Hagfors	82.94	331	P	P	12 56 19.1	0.0
	comp=Z,24nm,0.9s,baz=60,slow=7.0,SNR=21						
NIE	Niedzica	83.24	320	eP	P	12 56 22.6	+1.6
OJC	Ojcow	83.28	321	eP	P	12 56 21.4	+0.2
OJC	Ojcow	83.28	321	IAmb	IAmb	12 56 22.8	
	comp=Z,68nm,1.2s						
HERR	Herculane	83.33	315	⇓P	P	12 56 22.1	+0.6
KECS	Kecovo	83.43	319	eP	P	12 56 22.6	+0.6
KECS				pmax	pmax		
	comp=Z,17nm,1.1s						
KECS	Kecovo	83.43	319	eP	P	12 56 22.6	+0.6
NC405	NORSAR Array S	83.43	332	IAmb	IAmb	12 56 21.5	
	comp=Z,73nm,1.0s						
VTS	Vitosha	83.46	313	⇑P	P	12 56 22.9	+0.5
VTS	Vitosha	83.46	313	⇑P	P	12 56 22.9	+0.5
VTS	Vitosha	83.46	313	IAmb	IAmb	12 56 24.2	
	comp=Z,64nm,1.1s						
KIBK	Kibwezi	83.59	266	P	P	12 56 25.1	+1.6
	SNR=18						
KIBK	Kibwezi	83.59	266	IAmb	IAmb	12 56 26.2	
	comp=Z,44nm,1.1s						
ZAPS	Zavoj	83.68	313	eP	P	12 56 23.1	-0.3
NB2	NORSAR Subarra	83.69	332	P	P	12 56 22.0	-1.0
	comp=Z,29nm,1.2s,baz=64,slow=4.8						
NB2	NORSAR Subarra	83.69	332	P	P	12 56 22.0	-1.0
	baz=64,slow=4.8						
NOA	NORSAR Array B	83.69	332	P	P	12 56 22.4	-0.7
	comp=Z,5.6nm,0.8s,baz=65,slow=4.7,SNR=24						
NOA				LR	LR	13 37 10.0	
	comp=Z,304nm,18.1s,baz=70,slow=38						
ZAGS	Zajecar	83.79	314	eP	P	12 56 23.3	-0.5
LANS	Liptovska Anna	83.85	320	eP	P	12 56 25.5	+1.4
LANS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LANS	Liptovska Anna	83.85	320	eP	P	12 56 25.5	+1.4
IZAB	Izabela	83.89	319	eP	P	12 56 25.3	+1.0
KMBO	Kilima Mbogo	83.97	267	P	P	12 56 26.9	+1.2
	comp=Z,30nm,1.1s,baz=54,slow=6.6,SNR=55						
KMBO				LR	LR	13 29 47.9	
	comp=Z,222nm,21.6s,baz=96,slow=33						
KMBO	Kilima Mbogo	83.97	267	i P	P	12 56 26.9	+1.2
	SNR=23						
KMBO	Kilima Mbogo	83.97	267	i P	P	12 56 27.2	+1.6
KMBO				pmax	pmax		
	comp=Z,30nm,1.0s						
KMBO	Kilima Mbogo	83.97	267	P	P	12 56 27.4	+1.8
KMBO	Kilima Mbogo	83.97	267	P	P	12 56 27.0	+1.3
KMBO				IAmb	IAmb	12 56 28.5	
	comp=Z,80nm,1.3s						
KMBO				pP	pP	12 56 45.3	-1.7
KUBS	Kucevo	83.98	315	eP	P	12 56 24.1	-0.7
PSZ	Piszkesteto	84.00	318	⇓P	P	12 56 25.6	+0.7
PSZ	Piszkesteto	84.00	318	eP	P	12 56 25.1	+0.1
PSZ	Piszkesteto	84.00	318	⇓P	P	12 56 25.6	+0.7
PSZ	Piszkesteto	84.00	318	IAmb	IAmb	12 56 28.8	
	comp=Z,32nm,1.2s						
BOSS	Bosilegrad	84.03	313	eP	P	12 56 25.1	-0.1
DOMB	Dombas	84.17	334	eP	P	12 56 26.1	+0.6
BOVS	Bovan	84.21	314	eP	P	12 56 25.6	-0.4
BARS	Barje	84.39	313	eP	P	12 56 22.7	-4.3
BARS	Barje	84.39	313	eP	P	12 56 26.9	-0.1
LODK	Lodwar	84.41	272	P	P	12 56 29.4	+1.8
	SNR=23						
LODK	Lodwar	84.41	272	IAmb	IAmb	12 56 30.5	
	comp=Z,43nm,1.2s						
OKC	Ostrava-Krasne	84.42	321	eP	P	12 56 27.9	+1.0
OKC	Ostrava-Krasne	84.42	321	eP	P	12 56 27.9	+1.0
VYHS	Vyhne	84.46	319	eP	P	12 56 27.8	+0.6
VYHS				pmax	pmax		
	comp=Z,37nm,1.2s						
VYHS	Vyhne	84.46	319	eP	P	12 56 27.8	+0.6
WRAK	Wrangell Islan	84.52	32	P	P	12 56 28.0	+0.7
	baz=294						
WTLY	Watson Lake, Y	84.66	28	P	P	12 56 28.9	+0.9
	baz=296						
SELS	Selova	84.75	314	eP	P	12 56 28.7	-0.1
MORC	Moravsky Berou	84.80	321	⇓P	P	12 56 29.5	+0.5
MORC	Moravsky Berou	84.80	321	eP	P	12 56 29.2	+0.3
MORC	Moravsky Berou	84.80	321	⇓P	P	12 56 29.5	+0.5
MORC	Moravsky Berou	84.80	321	IAmb	IAmb	12 56 30.7	
	comp=Z,27nm,1.1s						
DLBC	Dease Lake	84.82	30	P	P	12 56 29.1	+0.2
	comp=Z,13nm,0.9s,baz=274,slow=6.1,SNR=12						
TRUS	Trudelj	84.90	315	eP	P	12 56 29.4	-0.1
AKN	Aaknes	84.97	334	eP	P	12 56 30.1	+0.7
FRGS	Fruska Gora	84.98	316	⇓P	P	12 56 30.3	+0.4
FRGS	Fruska Gora	84.98	316	eP	P	12 56 29.7	-0.2
KONO	Kongsberg	85.02	332	ceP	P	12 56 29.4	-0.3
KONO				pmax	pmax		
	comp=Z,61nm,1.7s						
KONO	Kongsberg	85.02	332	P	P	12 56 30.2	+0.5
KONO				IAmb	IAmb	12 56 30.5	
	comp=Z,41nm,1.1s						
SRO	Srobarova	85.03	319	eP	P	12 56 31.4	+1.4
SRO	Srobarova	85.03	319	eP	P	12 56 31.4	+1.4
JAVC	Velka Javorina	85.06	320	eP	P	12 56 32.0	+1.8
RES	Resolute Bay	85.14	9	P	P	12 56 30.2	+0.2
	comp=Z,25nm,0.8s,baz=312,slow=5.6,SNR=89						
RES	Resolute Bay	85.14	9	IAmb	IAmb	12 56 31.2	
	comp=Z,29nm,0.8s						
KRLC	Kraliky	85.15	321	eP	P	12 56 30.8	+0.1
KRLC				e		12 56 48.5	
KRLC	Kraliky	85.15	321	eP	P	12 56 30.8	+0.1
KRLC				epP	pP	12 56 48.5	-3.7
KSP	Ksiaz	85.16	322	eP	P	12 56 31.3	+0.7
DIVS	Divibare	85.22	315	eP	P	12 56 30.5	-0.7
CSKK	Cskako	85.22	318	eP	P	12 56 30.8	-0.2
IVAS	Ivanjica	85.29	314	eP	P	12 56 31.3	-0.2
OSTC	Ostas	85.31	322	eP	P	12 56 32.1	+0.7
OSTC				ex	x	12 56 51.2	
DPC	Dobruska-Polom	85.32	321	eP	P	12 56 31.7	+0.2
DPC				e		12 56 49.3	
DPC	Dobruska-Polom	85.32	321	eP	P	12 56 31.7	+0.2
DPC				epP	pP	12 56 49.3	-3.8
FNA	Florina	85.36	311	IAmb	IAmb	12 56 31.7	
	comp=Z,28nm,0.9s						
MORH	Mrgy, Hungar	85.38	317	⇑P	P	12 56 32.0	+0.2
MORH	Mrgy, Hungar	85.38	317	eP	P	12 56 32.1	+0.3
CHVC	Chvalec	85.39	322	eP	P	12 56 32.0	+0.2
WRGLY	Wrigley	85.40	24	P	P	12 56 31.9	+0.4
	baz=301						
UPC	Upice	85.45	322	eP	P	12 56 32.6	+0.5
UPC				e		12 56 50.5	
UPC	Upice	85.45	322	eP	P	12 56 32.6	+0.5
UPC				epP	pP	12 56 50.5	-3.2
SJES	Sjenica	85.52	314	eP	P	12 56 33.5	+0.8
VRAC	Vranov	85.55	320	⇑P	P	12 56 33.6	+0.9
VRAC	Vranov	85.55	320	P	P	12 56 33.7	+1.1
	comp=Z,39nm,1.0s,baz=64,slow=4.5,SNR=33						
VRAC	Vranov	85.55	320	eP	P	12 56 33.5	+0.9
VRAC	Vranov	85.55	320	⇑P	P	12 56 33.6	+0.9
ZST	Bratislava	85.65	319	eP	P	12 56 34.1	+1.0
ZST	Bratislava	85.65	319	eP	P	12 56 34.1	+1.0
BBLS	Lazići	85.70	315	eP	P	12 56 34.0	+0.4
MPLH	Magyarpolny	85.75	318	eP	P	12 56 33.6	-0.1
KRUC	Moravsky	85.76	320	eP	P	12 56 34.2	+0.5
KOVH	Kovagotottos	85.78	317	eP	P	12 56 33.4	-0.4
RUE	Ruedersdorf	85.96	324	eP	P	12 56 35.3	+0.8
	comp=Z,49nm,1.0s,baz=64,slow=4.7						
RUE				epP	pP	12 56 53.5	-2.8
	baz=64,slow=4.8						
SOP	Sopron	86.18	319	eP	P	12 56 36.4	+0.6
ODD1	Odda	86.22	333	eP	P	12 56 36.5	+0.7
PVCC	Panska Ves	86.29	322	eP	P	12 56 37.3	+1.1
PVCC				e		12 56 54.6	
PVCC	Panska Ves	86.29	322	eP	P	12 56 37.3	+1.1
PVCC				epP	pP	12 56 54.6	-3.2
PDG	Podgorica	86.30	313	⇓P	P	12 56 36.3	-0.2
PDG	Podgorica	86.30	313	pP	pP	12 56 54.8	-3.3
PDG				IAmb	IAmb	12 56 56.3	
	comp=Z,39nm,1.0s						
BRG	Berggiesshubel	86.52	323	eP	P	12 56 37.7	+0.4
	comp=Z,26nm,1.3s,baz=64,slow=4.7						
BRG				epP	pP	12 56 56.2	-2.7
	baz=64,slow=4.8						
BRG	Berggiesshubel	86.52	323	eP	P	12 56 38.0	+0.6
BRG				Amp		12 56 39.8	
	comp=Z,24nm,1.3s						
BRG				pP	pP	12 56 56.2	-2.7
BRG				Amp		12 56 57.9	
	comp=Z,30nm,1.0s						
BRG	Berggiesshubel	86.52	323	Amp		12 57 06.2	
	comp=Z,35nm,1.4s						
BRG				P	pP	12 57 04.1	+5.2
PRU	Pruhonice	86.52	322	eP	P	12 56 37.3	-0.1
PRU	Pruhonice	86.52	322	eP	P	12 56 37.3	-0.1
PRU				ex	x	12 56 46.7	
CONA	Conrad Observa	86.52	319	i P	P	12 56 38.0	+0.4
	comp=Z,30nm,1.6s,SNR=10						
FBE	Freiberg	86.84	323	eP	P	12 56 39.4	+0.5
	comp=Z,23nm,1.0s,baz=64,slow=4.7						
CLL	Collm	86.88	323	i P	P	12 56 38.5	-0.6
CLL				i *PP	pP	12 56 58.0	-2.7
CLL				eS	S	13 07 06.0	-4.7
CLL				pmax	pmax		
	comp=Z,18nm,1.1s						
CLL	Collm	86.88	323	i P	P	12 56 38.5	-0.6
	comp=Z,18nm,1.1s						
CLL				i pP	pP	12 56 58.0	-2.7
CLL				i sP	sP	12 57 08.9	-0.5
CLL				ePP	PP	13 00 01.0	-1.4
CLL				eS	S	13 07 06.0	-4.7
CLL				esS	pS	13 07 42.0	+4.2
CLL				ePS	PnS	13 08 26.0	+6.4
CLL				ePPS	PPS	13 08 53.0	
CLL				eSS	SS	13 12 42.0	-12
CLL				e(SSS)		13 16 00.0	
CLL				eSSSS		13 19 24.0	
CLL				LmV		13 40 00.0	
	comp=Z,200nm,19.9s						
CLL	Collm	86.88	323	eP	P	12 56 39.0	-0.1
	comp=Z,18nm,1.1s,baz=64,slow=4.7						
CLL	Collm	86.88	323		pP	12 56 57.9	-2.7
ARSA	Arzberg	87.00	319	i P	P	12 56 40.3	+0.5
	comp=Z,20nm,1.3s,SNR=5.9						
ARSA				eP	pP	12 56 59.0	-2.4
	comp=Z,17nm,0.9s						
RAR	Rarotonga	87.07	113	LR	LR	13 31 10.7	
	comp=Z,151nm,19.4s,baz=287,slow=32						
CKRC	Cesky Krumlov	87.12	321	eP	P	12 56 41.7	+1.3
BSEG	Bad Segeberg	87.23	326	eP	P	12 56 41.0	+0.4
	comp=Z,14nm,1.1s,baz=64,slow=4.7						
BSEG				epP	pP	12 56 59.4	-3.0
	baz=64,slow=4.8						
FLTG	Flechtingen	87.44	325	eP	P	12 56 41.6	-0.2
	comp=Z,7.2nm,0.8s,baz=64,slow=4.7						
KHC	Kasperske Hory	87.44	321	eP	P	12 56 41.7	-0.2
KHC				e		12 57 00.0	
KHC	Kasperske Hory	87.44	321	eP	P	12 56 41.7	-0.2
KHC				epP	pP	12 57 00.0	-3.6
KHC	Kasperske Hory	87.44	321		pP	12 57 01.0	-2.6
GEC2	GERESS Array S	87.48	321	eP	P	12 56 42.4	+0.2
	comp=Z,9.1nm,1.1s,baz=64,slow=4.7						
GEC2				epP	pP	12 57 00.8	-3.0
	baz=64,slow=4.8						
GERES	GERESS Array B	87.48	321	P	P	12 56 42.7	+0.5
	comp=Z,3.7nm,0.9s,baz=76,slow=5.6,SNR=16						
GERES				PP	PP	13 00 10.9	+3.5
	comp=Z,0.7nm,0.6s,baz=78,slow=9.1,SNR=3.7						
GERES				LR	LR	13 39 48.2	
	comp=Z,232nm,19.3s,baz=76,slow=38						
PERS	Pernice	87.49	318	i P	P	12 56 42.4	+0.1
SOKA	Soboth	87.53	318	i P	P	12 56 42.6	+0.2
	comp=Z,13nm,1.3s,SNR=7.7						
SOKA				eP	pP	12 57 01.1	-3.0
	comp=Z,15nm,0.9s						
MOA	Molln	87.54	320	i P	P	12 56 42.7	+0.3
	comp=Z,25nm,1.2s,SNR=11						
MOA				eP	pP	12 57 02.6	-1.5
	comp=Z,33nm,1.2s						
TANN	Tannenbergstha	87.56	323	eP	P	12 56 42.7	+0.2
	comp=Z,21nm,1.7s,baz=64,slow=4.7						
TANN				epP	pP	12 57 01.0	-3.1
	baz=64,slow=4.8						
NEUB	Neuenburg	87.62	323	eP	P	12 56 43.1	+0.5
	comp=Z,21nm,0.8s,baz=64,slow=4.7						
NKC	Novy Kostel	87.65	322	eP	P	12 56 43.5	+0.6
NKC	Novy Kostel	87.65	322	eP	P	12 56 43.5	+0.6
GUNZ	Gunzen	87.66	322	eP	P	12 56 43.1	+0.1
	comp=Z,28nm,1.4s,baz=64,slow=4.7						
GUNZ				epP	pP	12 57 01.6	-3.1
	baz=64,slow=4.8						
WERN	Wernitzgruen	87.67	322	eP	P	12 56 43.2	+0.2
	comp=Z,7.8nm,0.9s,baz=64,slow=4.7						
PLN	Plauen	87.71	323	eP	P	12 56 43.3	+0.1
	comp=Z,30nm,1.8s,baz=64,slow=4.7						
WET	Wettzell	87.85	321	eP	P	12 56 44.4	+0.5
	comp=Z,5.9nm,1.3s,baz=64,slow=4.7						
OBKA	Obir	87.90	318	eP	P	12 56 44.1	-0.1
	comp=Z,8.5nm,1.0s						
OBKA				eP	pP	12 57 03.5	-2.4
	comp=Z,18nm,1.0s						
MANZ	Manzenberg	87.95	322	eP	P	12 56 44.9	+0.5
	comp=Z,3.6nm,1.4s,baz=64,slow=4.7						
MOX	Moxa	87.95	323	eP	P	12 56 44.4	+0.1
	comp=Z,16nm,1.3s,baz=64,slow=4.7						
MOX				epP	pP	12 57 02.8	-3.2
	baz=64,slow=4.8						
NRDL	Niedersach Rie	87.98	325	eP	P	12 56 44.8	+0.6
	comp=Z,22nm,1.1s,baz=64,slow=4.7						
NRDL				epP	pP	12 57 03.4	-2.7
	baz=64,slow=4.8						
ROTZ	Rotzenmuhle	87.99	322	eP	P	12 56 44.8	+0.3
	comp=Z,3.0nm,1.1s,baz=64,slow=4.7						
ROTZ				epP	pP	12 57 03.4	-2.7
	baz=64,slow=4.8						
CLZ	Clausthal	88.13	324	eP	P	12 56 45.2	0.0
	comp=Z,13nm,1.1s,baz=64,slow=4.7						
CLZ				epP	pP	12 57 04.0	-3.0
	baz=64,slow=4.8						
CEY	Cerknica	88.29	318	eP	P	12 56 46.1	+0.1
MYKA	Terra Mystica	88.42	319	eP	P	12 56 47.1	+0.5
	comp=Z,7.8nm,1.4s						
KBA	Koelnbreinsper	88.43	319	eP	P	12 56 46.4	-0.4
	comp=Z,5.4nm,0.6s						
RJOB	Jochberg	88.49	320	eP	P	12 56 47.1	+0.1
	comp=Z,16nm,1.0s,baz=64,slow=4.7						
RJOB				epP	pP	12 57 05.8	-2.9
	baz=64,slow=4.8						
CADS	Cadrg	88.53	318	i P	P	12 56 46.5	-0.7
GRF	Grafenberg Arr	88.60	322	eP	P	12 56 47.6	+0.3
	comp=Z,22nm,1.5s,baz=64,slow=4.7						
GRF				epP	pP	12 57 06.3	-2.9
	baz=64,slow=4.8						
SUMG	Summit	88.87	354	pP	pP	12 57 07.8	-2.7
SUMG				IAmb	IAmb	12 57 12.6	
	comp=Z,35nm,1.2s						
ZOU	Zoufplan	88.88	319	IAmb	IAmb	12 57 13.1	
	comp=Z,49nm,1.9s						
ABTA	Abfaltersbach	89.08	319	i P	P	12 56 49.1	-0.7
	comp=Z,24nm,1.2s,SNR=6.0						
YKA	Yellowknife Ar	89.16	22	P	P	12 56 49.8	+0.1
	comp=Z,16nm,1.0s,baz=312,slow=4.7,SNR=43						
YKA				LR	LR	13 40 16.4	
	comp=Z,50nm,18.2s,baz=0.0,slow=38						
YKA	Yellowknife Ar	89.16	22	P	P	12 56 49.0	-0.7
STAL	STALIGIAL	89.16	319	IAmb	IAmb	12 56 50.5	
	comp=Z,22nm,1.0s						
FUR	Furstenfeldbru	89.23	321	eP	P	12 56 50.9	+0.5
	comp=Z,30nm,0.8s,baz=64,slow=4.7						
IBBN	Ibbenburen	89.35	326	eP	P	12 56 50.9	+0.2
	comp=Z,25nm,0.9s,baz=64,slow=4.7						
WTTA	Wattenberg	89.40	320	i P	P	12 56 51.5	+0.1
	comp=Z,38nm,1.0s,SNR=12						
WTTA				eP	pP	12 57 09.7	-3.4
	comp=Z,33nm,1.0s						
WATA	Walderalm	89.41	320	i P	P	12 56 51.1	-0.3
	comp=Z,22nm,0.9s,SNR=5.2						
WATA				eP	pP	12 57 09.7	-3.4
	comp=Z,9.1nm,0.7s						
SQTA	Sankt Quirin	89.69	320	i P	P	12 56 52.7	+0.1
	comp=Z,34nm,1.0s,SNR=6.8						
SQTA				eP	pP	12 57 11.1	-3.3
	comp=Z,29nm,1.0s						
MOTA	Moosalm	89.69	320	i P	P	12 56 52.6	-0.1
	comp=Z,23nm,1.0s,SNR=7.5						
MOTA				eP	pP	12 57 11.0	-3.5
	comp=Z,25nm,0.9s						
RETA	Reutte	89.84	320	eP	P	12 56 53.1	-0.2
	comp=Z,8.0nm,0.9s						
RETA				eP	pP	12 57 11.4	-3.6
	comp=Z,9.2nm,1.0s						
MBAR	Mbarara	90.02	269	ceP	P	12 56 56.3	+1.4
BUG	Bochum--Univer	90.03	325	eP	P	12 56 54.1	+0.2
	comp=Z,24nm,1.2s,baz=64,slow=4.7						
FETA	Feichten	90.07	320	i P	P	12 56 54.6	+0.1
	comp=Z,29nm,1.0s,SNR=9.8						
FETA				eP	pP	12 57 13.6	-2.6
	comp=Z,33nm,1.0s						
UBR	Ueberruh	90.15	321	eP	P	12 56 54.8	0.0
	comp=Z,28nm,1.0s,baz=64,slow=4.7						
UBR				epP	pP	12 57 13.4	-3.1
	baz=64,slow=4.8						
CEL	Celeste	90.23	310		pP	12 57 14.6	-2.4
DAVA	Damuels	90.47	320	i P	P	12 56 56.7	+0.3
	comp=Z,21nm,1.1s,SNR=6.9						
DAVA				eP	pP	12 57 15.7	-2.3
	comp=Z,19nm,0.9s						
MURB	Monte Urbino	90.55	316		pP	12 57 15.8	-2.6
DAVOX	Davos/Dischmat	90.70	320	P	P	12 56 57.9	+0.5
	comp=Z,20nm,0.9s,baz=61,slow=2.3,SNR=22						
BFO	Black Forest	90.91	322	eP	P	12 56 58.1	-0.1
	comp=Z,7.5nm,1.0s,baz=64,slow=4.7						
VLC	Villacollemand	91.55	317	IAmb	IAmb	12 57 27.8	
	comp=Z,18nm,0.9s						
MSSA	Maissana	92.04	318	IAmb	IAmb	12 57 31.2	
	comp=Z,24nm,1.1s						
SENIN	Lac Senin/Sane	92.47	320	IAmb	IAmb	12 57 28.5	
	comp=Z,18nm,1.0s						
LLLB	Lillooet	92.76	34	IAmb	IAmb	12 57 29.7	
	comp=Z,26nm,1.2s						
BNI	Bardonecchia	93.48	320	IAmb	IAmb	12 57 36.3	
	comp=Z,21nm,0.9s						
D03D	Eldon	93.70	37	P	P	12 57 12.1	+1.1
	baz=301						
MAW	Mawson	94.80	199	LR	LR	13 40 26.0	
	comp=Z,56nm,18.8s,baz=56,slow=36						
PPT	Papeete	95.06	107	LR	LR	13 33 59.0	
	comp=Z,82nm,20.0s,baz=266,slow=32						
PPT2	Papeete2	95.07	107	eS	S	13 08 21.3	-5.3
	comp=Z,286nm,36.0s						
PPT2	Papeete2	95.07	107	eLR	LR	13 28 04.3	
	comp=Z,1µm,31.5s,baz=291						
SFJD	Kangerlussuaq	95.31	357	P	P	12 57 17.8	-0.2
	comp=Z,15nm,0.9s,baz=113,slow=17,SNR=3.7						
B08A	Colville Reser	95.39	35	IAmb	IAmb	12 57 41.2	
	comp=Z,24nm,1.6s						
KEST	Kesra	96.04	310	LR	LR	13 47 58.0	
	comp=Z,45nm,20.7s,baz=236,slow=40						
I04A	Tendick Farm,	96.05	40	P	P	12 57 22.5	+0.6
	baz=302						
L02E	Cave Junction	96.14	42	P	P	12 57 23.1	+0.7
	baz=300						
NEW	Newport	96.65	35	P	P	12 57 25.0	+0.4
	comp=Z,1.8nm,0.7s,baz=1.7,slow=8.3,SNR=4.4						
NEW	Newport	96.65	35	P	P	12 57 25.0	+0.4
LSZ	Lusaka	96.74	256	P	P	12 57 25.4	-0.3
LSZ				pmax	pmax		
	comp=Z,13nm,1.2s						
LSZ	Lusaka	96.74	256	P	P	12 57 25.4	-0.3
LSZ				IAmb	IAmb	12 57 26.7	
	comp=Z,13nm,1.1s						
TBI	Tubuai	96.81	112	eS	S	13 08 37.0	-4.3
	comp=Z,142nm,35.2s						
TBI	Tubuai	96.81	112	eLR	LR	13 28 52.8	
	comp=Z,984nm,34.5s,baz=286						
YBH	Yreka Blue Hor	96.92	42	P	P	12 57 26.0	-0.1
	comp=Z,4.0nm,1.0s,baz=286,slow=4.8,SNR=4.3						
YBH	Yreka Blue Hor	96.92	42	P	P	12 57 26.0	-0.1
L04D	Klamath Falls	96.93	42	P	P	12 57 26.8	+0.7
	baz=301						
M04C	Macdoel	97.46	42	P	Pdif	12 57 29.3	+0.8
	baz=302						
O02D	Mt. Diablo Mer	97.67	44	P	Pdif	12 57 30.1	+0.6
	baz=301						
O03E	Paynes Creek	98.26	43	P	Pdif	12 57 32.2	+0.1
	baz=302						
EGMT	Eagleton	100.65	32	P	Pdif	12 57 42.0	-0.5
	baz=312						
HLID	Hailey	100.97	37	P	Pdif	12 57 45.0	+0.8
	baz=308						
TAOE	Nuku Hiva Isla	101.43	96	eLR	LR	13 30 58.4	
	comp=Z,1µm,34.7s						
NVAR	Mina Array Bea	101.55	43	P	Pdif	12 57 47.6	+0.6
	comp=Z,2.3nm,0.9s,baz=284,slow=5.7,SNR=13						
NVAR				PKKP	PKKPdf	13 14 15.1	+15
	comp=Z,0.7nm,0.8s,baz=149,slow=7.2,SNR=6.1						
ELK	Elko	102.16	40	P	Pdif	12 57 50.9	+1.2
	comp=Z,0.9nm,0.8s,baz=268,slow=7.8,SNR=3.1						
ISA	Isabella, Lake	102.95	46	P	Pdif	12 57 53.9	+0.8
	baz=303						
CIS	Catalina Islan	104.21	48	P	Pdif	12 57 58.4	-0.2
	baz=303						
PDAR	Pinedale Array	104.23	36	PKKPbc	PKKPbc	13 13 46.5	-0.7
	comp=Z,0.6nm,0.8s,baz=141,slow=5.2,SNR=4.6						
ECSD	EROS Data Cent	110.03	28	P	PKiKP	13 02 25.8	+0.1
	baz=322						
T25A	Trinidad	110.94	37	P	PKiKP	13 02 28.2	+0.3
	baz=314						
BGNE	Belgrade	111.13	30	P	PKiKP	13 02 27.7	-0.3
	baz=320						
ANMO	Albuquerque	111.20	40	PKiKP	PKiKP	13 02 28.4	-0.1
	comp=Z,1.3nm,0.7s,baz=229,slow=2.1,SNR=5.7						
TORD	Torodi Ar. Bea	112.35	293	PKiKP	PKiKP	13 02 30.4	-0.4
	comp=Z,1.6nm,0.8s,baz=16,slow=2.2,SNR=9.6						
TORD				PKKPbc	PKKPbc	13 13 21.1	+0.6
	comp=Z,2.5nm,0.7s,baz=280,slow=2.9,SNR=15						
MNTX	Cornudas Mount	114.02	42	P	PKiKP	13 02 34.0	+0.3
	baz=312						
AMTX	Amarillo	114.09	37	P	PKiKP	13 02 33.6	-0.2
	baz=316						
LPIG	La Paz	115.28	52	PKP	PKiKP	13 02 34.9	-1.3
	comp=Z,33nm,0.3s,baz=19,slow=3.3,SNR=5.7						
KOWA	Kowa	116.68	297	PKP	PKPdf	13 02 38.7	-0.4
	comp=Z,1.4nm,0.7s,baz=76,slow=8.0,SNR=5.1						
TXAR	Lajitas Array	116.69	43	PKP	PKiKP	13 02 39.4	+0.4
	comp=Z,3.5nm,0.7s,baz=243,slow=0.6,SNR=36						
TXAR				PKKPbc	PKKPbc	13 13 07.4	+1.0
	comp=Z,0.7nm,0.9s,baz=138,slow=7.7,SNR=5.4						
TXAR	Lajitas Array	116.69	43	PKPdf	PKPdf	13 02 38.8	-0.1
ABTX	Abilene, Hawle	116.89	38	P	PKPdf	13 02 39.1	-0.1
	baz=316						
CCM	Cathedral Cave	117.01	28	PKIKP	PKPdf	13 02 39.2	0.0

CCM	Cathedral Cave	117.01	28	PKPdf	PKPdf	13 02 39.2	0.0
CCM	Cathedral Cave	117.01	28	P	PKPdf	13 02 39.0	-0.2
	baz=326						
U40A	Yellville	117.65	30	P	PKPdf	13 02 40.1	-0.4
	baz=324						
W39A	Magazine	118.12	32	P	PKPdf	13 02 41.3	-0.1
	baz=323						
M54A	Oil Creek Stat	118.19	17	P	PKPdf	13 02 41.1	-0.3
	baz=338						
JCT	Junction City	118.33	39	P	PKiKP	13 02 42.6	+0.5
	baz=316						
ACSO	Alum Creek Sta	118.34	20	P	PKPdf	13 02 41.4	-0.3
	baz=334						
P49A	Miami Univ. Ec	118.37	22	P	PKPdf	13 02 41.5	-0.3
	baz=333						
BINY	Binghamton	118.48	14	P	PKiKP	13 02 42.3	+0.3
	baz=342						
VNA2	Neumayer--Watz	118.55	197	PKPdf	PKiKP	13 02 42.1	+1.0
	baz=55,slow=2.0						
WHTX	Lake Whitney,	118.61	37	P	PKiKP	13 02 42.8	+0.3
	baz=318						
MIAR	Mount Ida	118.74	32	P	PKiKP	13 02 42.7	0.0
	baz=323						
W41B	Gary Mavity, V	118.89	30	P	PKiKP	13 02 43.2	+0.3
	baz=324						
VNA3	Neumayer Olymp	119.01	196	PKPdf	PKiKP	13 02 42.8	+0.8
HRV	Adam Dziewonsk	119.07	10	P	PKiKP	13 02 43.2	+0.1
	baz=347						
P52A	Corning	119.16	20	P	PKPdf	13 02 43.2	-0.1
	baz=335						
SSPA	Standing Stone	119.49	16	P	PKiKP	13 02 44.0	0.0
	baz=340						
O56A	Blue Knob Stat	119.65	17	P	PKiKP	13 02 44.5	+0.1
	baz=339						
N59A	State Game Lan	119.75	14	P	PKiKP	13 02 44.6	0.0
	baz=342						
WVT	Waverly	120.11	26	PKIKP	PKPdf	13 02 45.1	-0.1
WVT	Waverly	120.11	26	PKPdf	PKPdf	13 02 45.1	-0.1
WVT	Waverly	120.11	26	P	PKiKP	13 02 45.4	+0.1
	baz=328						
833A	Chaparral WMA,	120.11	41	P	PKiKP	13 02 46.3	+0.8
	baz=315						
NATX	Nacogdoches	120.34	35	P	PKiKP	13 02 46.3	+0.4
	baz=321						
P60A	Greenville	120.83	14	P	PKiKP	13 02 46.7	+0.1
	baz=342						
DBIC	Dimbokro	120.94	289	PKP	PKPdf	13 02 47.0	-0.4
	comp=Z,3.4nm,0.8s,baz=69,slow=1.9,SNR=6.6						
DBIC				PKKPbc	PKKPab	13 12 52.0	-0.7
	comp=Z,2.6nm,0.9s,baz=262,slow=10.0,SNR=4.1						
DBIC	Dimbokro	120.94	289	PKIKP	PKPdf	13 02 47.0	-0.4
KIC	Kosan Boka	120.96	289	*e*PKIKP	PKPdf	13 02 46.6	-0.8
	comp=Z,10nm,0.8s						
KIC	Kosan Boka	120.96	289	*e*P	PP	13 04 16.2	-1.1
	comp=Z,22nm,1.3s						
TIC	Toumodi	121.09	289	*e*PKIKP	PKPdf	13 02 47.2	-0.5
TIC	Toumodi	121.09	289	*e*P	PP	13 04 15.9	-2.3
LIC	Lamto	121.28	289	*e*PKIKP	PKPdf	13 02 46.6	-1.4
	comp=Z,23nm,0.8s						
LIC	Lamto	121.28	289	*e*P	PP	13 04 18.0	-1.5
	comp=Z,46nm,1.3s						
TZTN	Tazewell	121.44	23	P	PKiKP	13 02 48.1	+0.2
	baz=333						
BLA	Blacksburg	121.92	20	P	PKPdf	13 02 48.1	-0.6
	baz=336						
KMSC	Kings Mountain	123.50	22	P	PKPdf	13 02 51.3	-0.5
	baz=335						
GOGA	Godfrey	124.25	24	P	PKPdf	13 02 53.1	-0.2
	baz=332						
BRAL	Brewton	124.65	29	P	PKiKP	13 02 54.6	+0.3
	baz=328						
MTP	Monte Pirata	143.94	10		PKPab	13 03 26.3	-1.3
GO09	Cerro Castillo	144.95	166		PKPdf	13 03 31.6	+0.5
BCIP	Isla Barro Col	146.56	39	*e*P	PKPdf	13 03 32.3	-2.6
SMRC	Santa Marta, M	147.82	28	*e*P	PKPab	13 03 49.1	+6.7
SJCC	San Jacinto, C	148.48	31	*e*P	PKPbc	13 03 41.5	-0.3
CRJC	Cerrejon, Guaj	148.53	26	*e*P	PKPbc	13 03 42.2	+0.3
LL6C	La Loma 6 Bece	149.51	28	*e*P	PKPbc	13 03 44.4	+0.1
UREC	San Jos de Ur	150.13	34	*e*P	PKPbc	13 03 45.6	-0.3
DBBC	Dabeiba	150.38	35	*e*P	PKPdf	13 03 42.7	+1.5
ZARC	Zaragoza, Cauc	150.71	33	*e*P	PKPbc	13 03 46.9	-0.3
OCAC	Ocana	150.81	29	*e*P	PKiKP	13 03 48.0	-0.3
SDV	Santo Domingo	151.37	24	*e*P	PKPbc	13 03 49.0	0.0
CBOC	Ciudad Bolivar	151.44	36	*e*P	PKPbc	13 03 48.9	-0.2
HELC	Santa Helena	151.44	35	*e*P	PKPbc	13 03 49.2	-0.1
BRRC	Barranca, Sant	151.61	31	*e*P	PKiKP	13 03 49.8	+0.1
PTBC	PUERTO BERRIO,	151.72	33	*e*P	PKPbc	13 03 49.1	-0.5
SOCV	Socops	151.83	25	*e*P	PKPbc	13 03 48.7	-1.1
PCRV	Puerto La Cruz	151.84	11	PKPbc	PKPbc	13 03 47.8	-2.0
	comp=Z,28nm,0.6s,baz=128,slow=2.5,SNR=11						
PLMC	San Jos del P	152.06	38	*e*P	PKiKP	13 03 51.0	+0.3
BARC	Barichara	152.31	31	*e*P	PKiKP	13 03 51.6	+0.2
NORC	Norcasia	152.32	35	*e*P	PKPbc	13 03 50.6	-0.4
GUY2C	Guyana, Caldas	152.33	36	*e*P	PKPbc	13 03 51.6	+0.1
SPBC	San Pablo de B	152.67	33	*e*P	PKiKP	13 03 52.0	0.0
YOTC	Yotoco, Valle	152.76	39	*e*P	PKPbc	13 03 52.0	-0.1
ANIL	Santa Ana	152.91	37	*e*P	PKPbc	13 03 50.6	-2.0
RUSC	La Rusia	152.97	31	*e*P	PKiKP	13 03 53.3	+0.2
ROSC	El Rosal	153.22	35	PKPbc	PKPbc	13 03 52.4	-1.0
	comp=Z,16nm,0.4s,baz=270,slow=24,SNR=6.1						
ORTC	Ortega, Tolima	153.47	38	*e*P	PKPbc	13 03 53.0	-0.5
ELOV	Elorza	153.54	23	*e*P	PKiKP	13 03 54.0	+0.4
POPC	Popayan, Colom	153.67	42	*e*P	PKPbc	13 03 53.4	-0.8
CHIC	Chingaza	153.71	34	*e*P	PKiKP	13 03 54.7	+0.1
SOTA	Rioblanco	154.03	42	*e*P	PKPbc	13 03 54.8	-0.5
OTAV	Otavalo	154.16	48	*e*P	PKPab	13 04 08.7	-0.7
VILC	Villavicencio,	154.17	34	*e*P	PKPbc	13 03 54.8	-0.3
TULM	Tulcn-Chalpat	154.29	47	*e*P	PKPab	13 04 09.7	-0.2
FLOC	Florencia	155.06	41	*e*P	PKPab	13 04 12.6	-0.1
PLCA	Paso Flores	155.11	160	PKPbc	PKPdf	13 03 56.7	+9.4
	comp=Z,2.3nm,0.7s,baz=237,slow=4.5,SNR=5.6						
LC01	Cunco	156.24	155		PKPdf	13 03 54.9	+6.1
CZSB	Cruzeiro do Su	163.71	54	PKPdf	PKPdf	13 03 58.4	+0.5
CZSB					pPKPdf	13 04 16.9	-3.9
CZSB				PKPab	PKPab	13 04 49.2	-1.0
BDFB	Brasilia	168.87	279	PKP	PKPdf	13 04 01.1	-0.9
	comp=Z,1.1nm,0.4s,baz=115,slow=4.9,SNR=3.5						
BDFB				PKPab	PKPab	13 05 12.1	-1.1
	comp=Z,5.3nm,1.0s,baz=68,slow=7.1,SNR=4.3						
SAML	Samuel	170.58	23	PKP2	PKPab	13 05 18.6	-1.7
SAML	Samuel	170.58	23		PKPab	13 05 18.6	-1.7
CPUP	Villa Florida	171.18	192	PKPab	PKPab	13 05 22.8	+0.1
	comp=Z,3.4nm,0.7s,baz=207,slow=4.4,SNR=4.3						
LPAZ	La Paz	171.56	82	PKP	PKPdf	13 04 05.5	+1.4
	comp=Z,3.6nm,1.0s,baz=358,slow=3.7,SNR=8.3						
LPAZ				PKPab	PKPab	13 05 27.0	+1.2
	comp=Z,12nm,0.8s,baz=303,slow=4.5,SNR=17						

HEL 17 12:53:22.5±0.7**,60°.31N×25°.24E,h0**^{km}**,ML1.1,
Explosion,Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUR	Nurmijrvi	0.36	304	PG	Pg	12 53 28.3	-1.0
NUR				SG	Sg	12 53 34.1	+0.2
PVF	Pernaja	0.39	52	PG	Pg	12 53 30.1	+0.2
MEF	Metsahovi	0.43	258	PG	Pg	12 53 30.0	-0.8
MEF				SG	Sg	12 53 37.9	+1.5
FIA0	FINESS Array S	1.21	19	PB	Pg	12 53 44.2	-1.4
FIA0				SN	Sb	12 54 03.0	+0.6
RAF	Rauma	1.86	294	PG	Pn	12 53 56.4	+0.9
RAF				MSG		12 54 17.7	
	comp=Z,0.8nm,0.2s						
KEF	Keuruu	1.87	355	MSG		12 54 18.2	
	comp=Z,1.1nm,0.2s						
KEF				SN	Sn	12 54 19.5	-0.6

KMA 17 13:00:20.3±0.1**,37°.99N×129°.03E,h1**^{km}**,Error ellipse:
s-maj=1.7km s-min=0.6km az=236.0,South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSJMJ	Jumunjin	0.24	243	P	Pg	13 00 24.9	0.0
	SNR=72						
KSDGY	Daegwallycong	0.41	223	P	Pg	13 00 28.1	-0.1
	SNR=46						
KSSKC	Sokcho	0.50	307	P	Pg	13 00 29.9	0.0
	SNR=6.6						
SEHB	SEOHWA	0.67	295	P	Pg	13 00 33.0	-0.2
	SNR=45						
IMWB	Imwonan-gil	0.79	162	P	Pg	13 00 35.4	-0.1
	SNR=30						
IMWB	Imwonan-gil	0.79	162	P	Pg	13 00 35.4	-0.1
	SNR=30						
KSTBA	Taebaek	0.87	184	P	Pg	13 00 36.8	-0.2
	SNR=12						
KSTBA	Taebaek	0.87	184	P	Pg	13 00 36.8	-0.2
	SNR=12						
KSYOW	Yeongwol	0.93	209	P	Pg	13 00 38.1	-0.1
	SNR=12						
KSYOW	Yeongwol	0.93	209	P	Pg	13 00 38.1	-0.1
	SNR=12						
KSWJU	Wonju	0.97	233	P	Pg	13 00 38.6	-0.4
	SNR=30						
KSWJU	Wonju	0.97	233	P	Pg	13 00 38.6	-0.4
	SNR=30						
KSCHC	Chuncheon	0.98	258	P	Pg	13 00 39.0	-0.2
	SNR=36						
KSCHC	Chuncheon	0.98	258	P	Pg	13 00 39.0	-0.2
	SNR=36						
CHYB	Chungyang	1.05	185	P	Pb	13 00 41.0	-0.3
	SNR=19						
CHYB	Chungyang	1.05	185	P	Pb	13 00 41.0	-0.3
	SNR=19						
JECH	Jecheon	1.06	219	P	Pb	13 00 41.4	-0.1
	SNR=8.1						
JECH	Jecheon	1.06	219	P	Pb	13 00 41.4	-0.1
	SNR=8.1						
YOJB	Youngju	1.19	200	P	Pg	13 00 43.2	+0.1
	SNR=18						
YOJB	Youngju	1.19	200	P	Pg	13 00 43.2	+0.1
	SNR=18						
KSCWO	Cheorwon	1.20	275	P	Pg	13 00 43.1	-0.1
	SNR=7.9						
KSCWO	Cheorwon	1.20	275	P	Pg	13 00 43.1	-0.1
	SNR=7.9						
KSULJ	Uljin	1.32	167	P	Pg	13 00 44.3	-1.3
	SNR=23						
KSULJ	Uljin	1.32	167	P	Pg	13 00 44.3	-1.3
	SNR=23						
KSCHJ	Chungju	1.40	217	P	Pn	13 00 47.0	0.0
	SNR=6.1						
KSCHJ	Chungju	1.40	217	P	Pn	13 00 47.0	0.0
	SNR=6.1						
KSICN	Icheon	1.46	242	P	Pn	13 00 47.7	-0.1
	SNR=7.2						
KSICN	Icheon	1.46	242	P	Pn	13 00 47.7	-0.1
	SNR=7.2						
KSMGY	Mungyeong	1.54	210	P	Pn	13 00 49.0	0.0
	SNR=7.5						
KSMGY	Mungyeong	1.54	210	P	Pn	13 00 49.0	0.0
	SNR=7.5						

IDC 17 13:08:28.9±13.0**,15°.73S×165°.32E,h0**^{km}**,mb3.8**/3**,
mb1 4.0**/4**,mb1mx3.7**/33**,mbtmp3.8**/4**,ML3.5**/1**,MS3.7**/1**,
Ms1 3.7**/1**,ms1mx2.7**/33**,Error ellipse: s-maj=224.4km
s-min=35.2km az=52.0,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.39	171	Pn	Pn	13 10 04.5	0.0
	1.0nm,0.3s,baz=115,slow=21,SNR=20						
DZM				Sn	Sn	13 11 19.6	+1.3
	1.3nm,0.3s,baz=141,slow=21,SNR=8.2						
AFI	Afiamalu	22.22	88	LR	LR	13 20 38.7	
	comp=Z,173nm,19.5s,baz=288,slow=33						
STKA	Stephens Creek	26.91	229	P	P	13 14 11.9	0.0
	0.7nm,0.3s,baz=76,slow=8.8,SNR=3.9						
WRA	Warramunga Arr	29.76	257	P	P	13 14 37.1	-0.3
	0.4nm,0.8s,baz=90,slow=7.5,SNR=2.0						
ASAR	Alice Springs	30.56	250	P	P	13 14 44.6	+0.1
	0.8nm,0.4s,baz=75,slow=9.1,SNR=23						

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*NIED **17** 13:24:33.0, 37°.71N×142°.31E, h32^{km}, MW3.9, Moment
Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm;
M_{rr}-1.70; $M_{\theta\theta}$1.65; $M_{\phi\phi}$0.05; $M_{r\theta}$4.51; $M_{\theta\phi}$0.21; $M_{\phi r}$6.07;
Fault plane solution: $M_0$7.72000×10^{14} NP1:
ϕ_s218.00000°, δ85.00000°, λ-96.00000°. NP2:ϕ_s91.00000°,
δ8.00000°, λ-38.00000°.*

*JMA **17** 13:24:33.0±0.1, 37°.71N×142°.30E, h32^{km}±3^{km}, M3.8*

*IDC **17** 13:24:34.5±2.0, 38°.20N×141°.93E, h0^{km}, mb3.8/7,
mb1 3.8/9, mb1mx3.4/48, mbtmp3.8/9, ML3.2/2, MS2.8/2,
Ms1 2.8/2, ms1mx2.5/47, Error ellipse: s-maj=42.6km
s-min=22.9km az=148.0*

ISC 17 13:24:33.0±2.2**,37°.81N**±0°.06×**142°.26E**±0°.06**,h10**^{km}±12^{km}**,
n32,**σ**1^{s}.62**/37**,mb4.0**/7**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.81	309	P	Pb	13 24 49.4	+0.2
JIKH				*e*S	Sb	13 25 00.5	+0.4
JIO	Ouri	0.97	312	P	Pg	13 24 51.8	+0.1
JIO				S	Sb	13 25 05.2	+0.4
JMST	Minamisoumatoc	1.09	266	P	Pb	13 24 52.6	-1.5
JMST				*e*S	Sb	13 25 07.0	-1.4
JMM	Marumori	1.17	273	P	Pn	13 24 54.0	-1.4
JMM				*e*S	Sb	13 25 09.6	-0.9
JFK	Kawauchi	1.19	249	P	Pn	13 24 53.5	-2.3
JFK				S	Sb	13 25 08.8	-2.4
JOU	Okura	1.38	294	P	Pn	13 24 58.4	0.0
JOU				*e*S	Sn	13 25 16.7	-0.1
JMK	Ichinoseki	1.41	325	P	Pn	13 24 58.7	-0.1
JMK				*e*S	Sn	13 25 16.9	-0.5
JFT	Otama	1.56	260	P	Pn	13 25 00.2	-0.6
JFT				*e*S	Sn	13 25 19.5	-1.6
JOM	Ohasama	1.83	336	P	Pn	13 25 04.6	0.0
JYK	Kaneyama	1.86	307	P	Pn	13 25 05.3	+0.2
JYK				*e*S	Sn	13 25 29.7	+1.0
JRG	Rokugo	2.04	322	P	Pn	13 25 08.4	+1.0
JFY	Yanaizu	2.07	260	P	Pn	13 25 08.3	+0.4
JYA	Atsumi	2.16	292	P	Pn	13 25 09.8	+0.7
MJAR	Matsushiro Arr	3.48	250	Pn	Pn	13 25 28.9	+1.7
	0.5nm,0.3s,baz=46,slow=9.3,SNR=9.9						
MJAR				LR	LR	13 26 55.7	
	comp=Z,94nm,20.6s,baz=100,slow=42						
MAT	Matsushiro	3.48	250	P	Pn	13 25 28.2	+0.9
MAT				*e*S	Sn	13 26 09.9	+1.4
ASAJ	Asahikawa	6.31	2	Pn	Pn	13 26 05.5	-0.6
	1.3nm,0.3s,baz=202,slow=14,SNR=12						
ASAJ				Sn	Sn	13 27 13.6	-4.6
	baz=188,slow=27,SNR=1.2						
USRK	Ussuriysk Ar.	10.05	313	Pn	Pn	13 26 59.3	+1.9
	baz=132,slow=13,SNR=18						
KSRS	Korea Array	11.38	273	Pn	Pn	13 27 19.4	+3.7
	0.2nm,0.3s,baz=82,slow=15,SNR=5.5						
KSRS				LR	LR	13 31 40.4	
	comp=Z,84nm,19.6s,baz=130,slow=38						
KLR	Kul'dur	13.71	330	Pn	Pn	13 27 47.1	-0.4
	0.2nm,0.3s,baz=155,slow=11,SNR=6.0						
SEY	Seymchan	25.90	11	P	P	13 30 05.1	+0.2
	2.1nm,0.6s,baz=178,slow=6.7,SNR=6.3						
SONM	Songino Array	27.93	303	P	P	13 30 22.6	-0.9
	2.9nm,0.7s,baz=102,slow=8.7,SNR=23						
H11N2	WAKE ISLAND Hy	27.98	123	T	T	13 59 35.8	
	baz=316,slow=75,SNR=95						
H11N1	WAKE ISLAND Hy	27.99	123	T	T	13 59 30.3	
	baz=316,slow=75,SNR=72						
H11N3	WAKE ISLAND Hy	28.00	123	T	T	13 59 34.3	
	baz=316,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	28.73	125	T	T	14 00 35.0	
	baz=317,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	28.73	125	T	T	14 00 34.1	
	baz=317,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	28.75	125	T	T	14 00 31.9	
	baz=317,slow=76,SNR=21						
ZALV	Zalesovo Beam	41.90	312	P	P	13 32 22.4	-1.0
	1.2nm,0.6s,baz=101,slow=6.8,SNR=5.1						
MKAR	Makanchi Array	44.29	302	P	P	13 32 43.0	+0.1
	1.0nm,0.5s,baz=87,slow=9.0,SNR=7.8						
ILAR	Eielson Array	48.48	33	P	P	13 33 15.9	+0.3
	0.2nm,0.9s,baz=257,slow=6.0,SNR=1.6						
FINES	FINESS Array B	68.44	332	P	P	13 35 33.4	-1.5
	1.2nm,0.6s,baz=57,slow=7.0,SNR=5.7						
PDAR	Pinedale Array	76.64	46	P	P	13 36 28.0	+3.7
	0.1nm,0.4s,baz=304,slow=2.1,SNR=1.9						

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*IDC **17** 13:30:01.2±1.3, 4°.19S×129°.50E, h0^{km}, mb3.9/3,
mb1 4.0/6, mb1mx3.6/33, mbtmp3.9/6, ML3.4/3, MS3.0/2,
Ms1 3.0/2, ms1mx2.5/30, Error ellipse: s-maj=44.4km
s-min=24.3km az=74.0*

*DJA **17** 13:30:03.9±0.4, 4°S±4°×12°9E±°, h10^{km}, M3.7/9, MLv3.7/9*

ISC 17 13:30:05.9±0.8**,4°.15S**±0°.06×**129°.46E**±0°.05**,h36**^{km}**,n14,**
σ**1^{s}.15**/17**,mb4.0**/3**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.96	326	P	Pn	13 30 21.8	-1.0
MSAI				S	Sn	13 30 35.1	-0.2
AAI	Ambon	1.34	290	P	Pn	13 30 27.8	-0.3
AAI				S	Sn	13 30 44.6	-0.2
FAKI	Fak Fak	3.04	66	P	Pn	13 30 52.1	+0.6
SIJI	Sorong	3.72	29	Pn	Pn	13 31 01.0	+0.1
	3.7nm,0.3s,baz=30,slow=19,SNR=35						
SIJI				Sn	Sn	13 31 41.2	-2.4
	3.2nm,0.3s,baz=268,slow=4.5,SNR=4.9						
SIJI				LR	LR	13 33 03.3	
	comp=Z,163nm,19.3s,baz=218,slow=49						
SWI	Sorong	3.73	29	P	Pn	13 31 02.1	+1.2
LBMI	Labuha	4.00	331	P	Pn	13 31 05.5	+0.8
SANI	Sanana	4.05	301	P	Pn	13 31 05.8	+0.5
SAUI	Saumlaki	4.22	154	P	Pn	13 31 08.5	+0.7
FITZ	Fitzroy Crossi	14.36	195	Pn	P	13 33 33.0	-0.3
	0.2nm,0.3s,baz=46,slow=7.4,SNR=5.8						
WRA	Warramunga Arr	16.40	164	Pn	Pn	13 33 51.1	-2.4
	0.1nm,0.3s,baz=344,slow=11,SNR=6.9						
ASAR	Alice Springs	19.87	168	P	P	13 34 34.3	+0.1
	0.1nm,0.3s,baz=346,slow=10,SNR=26						
ASAR				LR	LR	13 42 05.8	
	comp=Z,57nm,18.9s,baz=318,slow=37						
CMAR	Chiang Mai Arr	37.54	308	P	P	13 37 17.9	+1.0
	0.7nm,0.6s,baz=134,slow=7.1,SNR=5.9						
MKAR	Makanchi Array	65.56	326	P	P	13 40 47.2	+1.2
	1.0nm,0.5s,baz=116,slow=6.5,SNR=16						
ZALV	Zalesovo Beam	68.81	334	P	P	13 41 07.0	+0.6
	0.5nm,0.4s,baz=117,slow=8.5,SNR=4.4						

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*NOU **17** 13:42:32.9, 31°.10S×177°.20W, h45^{km}, mb5.0/52,
Kermadec Islands Region*

*BJI **17** 13:42:36.0±0.0, 30°.50S×178°.00W, h52^{km}, mb5.1/4,
Ms7 4.6/1*

*IDC **17** 13:42:37.6±1.6, 30°.53S×178°.04W, h48^{km}±13^{km}, mb4.3/16,
mb1 4.5/18, mb1mx4.1/32, mbtmp4.6/18, ML4.0/2, MS3.5/9,
Ms1 3.5/9, ms1mx3.4/23, Error ellipse: s-maj=15.9km
s-min=11.9km az=113.0*

*NEIC **17** 13:42:38.7±2.6, 30°.44S±0°.08×177°.9W±0°.1, h61^{km}±5^{km},
mb4.8/23, Error ellipse: s-maj=17.0km s-min=11.1km
az=84.0*

ISC 17 13:42:36.5±0.4**,30°.67S**±0°.04×**177°.85W**±0°.07**,h46**^{km}**,
n204,**σ**2^{s}.02**/173**,mb4.7**/27**,MS3.6**/8**,1C-1D,Kermadec
Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.40	358	P	Pn	13 42 58.0	-1.7
GLKZ				S	Sn	13 43 13.2	-3.8
RAO	Raoul Island	1.41	358	P	Pn	13 42 59.2	-0.6
	1µm,0.3s,baz=98,slow=8.1,SNR=72						
RAO				S	Sn	13 43 15.0	-2.3
	7µm,0.3s,baz=84,slow=22,SNR=15						
RAO				LR	LR	13 43 25.9	
	comp=Z,547nm,19.3s,baz=190,slow=38						
RIZ	Raoul Island	1.42	357	P	Pn	13 42 59.0	-0.9
RIZ				S	Sn	13 43 14.7	-2.8
MXZ	Matakaoa Point	7.58	204	P	Pn	13 44 18.8	-5.6
MXZ				S	Sn	13 45 41.5	-7.3
WMGZ	Waiomatatini S	7.77	202	P	Pn	13 44 22.7	-4.3
WMGZ				S	Sn	13 45 44.2	-9.5
HAZ	Te Kaha	7.94	206	P	Pn	13 44 25.5	-3.8
HAZ				S	Sn	13 45 56.3	-1.5
PKGZ	Pakihiroa	7.95	204	P	Pn	13 44 24.1	-5.4
RUGZ	Raukumara Rang	8.16	206	P	Pn	13 44 27.5	-5.1
RUGZ				S	Sn	13 45 58.7	-4.8
TWGZ	Tauwhareparae	8.24	204	P	Pn	13 44 28.5	-5.1
TWGZ				S	Sn	13 46 02.2	-3.1
WCZ	Waipu Caves	8.38	229	P	Pn	13 44 40.1	+4.7
CNGZ	Carnagh Statio	8.45	202	P	Pn	13 44 31.1	-5.1
CNGZ				S	Sn	13 46 02.7	-7.4
OUZ	Omahuta	8.50	235	P	Pn	13 44 41.6	+4.6
OUZ	Omahuta	8.50	235		Pn	13 44 41.3	+4.3
MWZ	Matawai	8.54	205	P	Pn	13 44 32.2	-5.4
MWZ				S	Sn	13 46 06.0	-6.7
URZ	Urewera	8.64	207	P	Pn	13 44 33.9	-4.9
	3.7nm,0.3s,baz=123,slow=23,SNR=16						
URZ				S	Sn	13 46 10.6	-4.3
	19nm,0.3s,baz=220,slow=22,SNR=15						
URZ				LR	LR	13 47 53.6	
	comp=Z,192nm,20.2s,baz=31,slow=36						
URZ	Urewera	8.64	207	P	Pn	13 44 33.0	-5.9
URZ				S	Sn	13 46 11.4	-3.5
URZ	Urewera	8.64	207	Pn	Pn	13 44 34.1	-4.8
URZ	Urewera	8.64	207	P	Pn	13 44 35.2	-3.7
MTHZ	Maungataniwha	9.26	207	P	Pn	13 44 41.6	-5.8
MTHZ				S	Sn	13 46 24.2	-5.9
BKZ	Black Stump Fm	9.66	207	P	Pn	13 44 46.9	-6.1
BKZ				S	Sn	13 46 32.5	-7.7
BKZ	Black Stump Fm	9.66	207	Pn	Pn	13 44 46.9	-6.1
CKHZ	Cape Kidnapper	9.88	203	S	Sn	13 46 38.4	-7.0
NFK	Norfolk Island	12.44	274	P	Pn	13 45 32.7	+1.7
TUWZ	Tuamarina	12.62	209	S	Sn	13 47 38.6	-14
MSVF	Nonsavu	13.41	343	P	Pn	13 45 46.5	+2.2
	0.6nm,0.3s,baz=152,slow=14,SNR=12						
MSVF				LR	LR	13 50 05.6	
	comp=Z,358nm,18.5s,baz=174,slow=34						
MSVF	Nonsavu	13.41	343	P	P	13 45 48.5	-4.1
NIUE	Niue	13.59	34	P	Pn	13 45 44.3	-2.4
GVZ	Greta Valley S	14.27	208	P	Pn	13 45 48.7	-7.1
DGTI	Dogotuki	14.47	351	P	P	13 46 02.0	-2.4
INZ	Inchbonnie	14.77	212	P	Pn	13 45 55.9	-6.5
INZ				S	Sn	13 48 27.4	-17
MHCZ	Mount Hutt	15.35	210	P	Pn	13 46 05.4	-4.6
RPZ	Rata Peaks	15.72	211	P	Pn	13 46 06.5	-8.2
RPZ				S	Sn	13 48 50.1	-18
RPZ	Rata Peaks	15.72	211	P	Pn	13 46 09.5	-5.3
OUENC	Ouen Island, N	15.96	297		Pn	13 46 13.2	-4.8
OUENC				IAmb	IAmb	13 46 33.6	
	comp=Z,36nm,0.8s						
YATNC	Mamie plateau,	16.13	298	P	P	13 46 25.4	+2.7
DZM	Mont Dzumac	16.46	298	*e*Pn	P	13 46 33.2	+6.7
	comp=Z,100nm,1.8s						
DZM				*e*LR	LR	13 50 25.7	
	comp=Z,662nm,25.0s						
DZM	Mont Dzumac	16.46	298	LR	LR	13 51 28.4	
	comp=Z,391nm,18.6s,baz=196,slow=33						
DZM	Mont Dzumac	16.46	298	Pn	Pn	13 46 22.8	-1.6
DZM	Mont Dzumac	16.46	298	P	P	13 46 29.5	+3.0
LIFNC	LIFOU	16.64	303	P	P	13 46 33.4	+5.0
ODZ	Otahua Downs	16.96	209	P	Pn	13 46 25.3	-5.1
AFI	Afiamalu	17.59	20	P	P	13 46 40.2	+1.2
	comp=Z,2.5nm,0.3s,baz=322,slow=9.5,SNR=5.0						
RAR	Rarotonga	18.77	64	P	Pn	13 46 53.4	+0.7
	comp=Z,1.1nm,0.3s,baz=190,slow=6.0,SNR=4.0						
KOUNC	Koumac, New Ca	18.98	298	P	Pn	13 46 58.9	+3.7
SANVU	Saraoutou	20.43	315	P	Pn	13 47 14.2	+1.8
ARMA	Armidale	26.25	263	P	P	13 48 07.8	+0.2
ARMA				IAmb	IAmb	13 48 11.4	
	comp=Z,12nm,0.8s						
ARMA	Armidale	26.25	263	P	P	13 48 10.6	+3.0
ARMA	Armidale	26.25	263	P	P	13 48 10.6	+3.0
TBI	Tubuai	26.28	81	*e*LR	LR	13 54 30.9	
	comp=Z,203nm,26.2s						
TBI	Tubuai	26.28	81	*e*T	T	14 15 12.2	
	comp=Z,98nm,0.4s						
MGCD	Mangrove Creek	26.42	256	P	P	13 48 11.9	+3.0
MGCD	Mangrove Creek	26.42	256	P	P	13 48 11.8	+2.9
CNB	Canberra Magne	27.81	252	P	P	13 48 23.5	+2.0
EIDS	Eidsvold	27.88	273	P	P	13 48 21.4	-0.6
EIDS				IAmb	IAmb	13 48 26.1	
	comp=Z,9.9nm,0.8s						
CAN	Canberra	28.11	252	P	P	13 48 25.9	+1.8
PAE	Paea	28.77	70	*e*T	T	14 18 13.7	
	comp=Z,37nm,0.3s						
PPT2	Papeete2	28.81	70	*e*LR	LR	13 55 44.8	
	comp=Z,190nm,26.0s						
PPT2	Papeete2	28.81	70	*e*T	T	14 18 17.1	
	comp=Z,24nm,0.3s						
PPT	Papeete	28.82	70	LR	LR	13 56 55.4	
	comp=Z,55nm,20.3s,baz=245,slow=30						
TVO	Taravao	28.97	70	*e*T	T	14 18 29.4	
	comp=Z,0.4nm,0.2s						
TIAR	Tiarei	29.01	70	*e*T	T	14 18 32.2	
	comp=Z,2.1nm,0.2s						
RK1H	Rockhampton Ha	29.05	277	P	P	13 48 34.5	+2.0
RK1H	Rockhampton Ha	29.05	277	P	P	13 48 34.2	+1.7
GLAD	Gladstone	29.37	240	P	P	13 48 36.1	+0.9
RMQ	Roma	29.55	270	P	P	13 48 39.4	+2.4

RMQ	Roma	29.55	270	P	P	13 48 38.7	+1.7
MEH	Mehetia	29.89	72	eT	T	14 19 38.7	
	comp=Z,50nm,0.2s						
TOO	Toolangi	30.98	247	P	P	13 48 50.5	+1.0
TOO	Toolangi	30.98	247	P	P	13 48 50.4	+0.9
CMSA	Cobar Meteorol	31.14	259	P	P	13 48 52.8	+1.8
CMSA	Cobar Meteorol	31.14	259	P	P	13 48 52.7	+1.8
PMOR	Pomariorio Ree	31.57	67	eT	T	14 21 43.8	
	comp=Z,5.2nm,0.2s						
VAH	Vaihoa	31.66	68	eT	T	14 21 49.0	
	comp=Z,187nm,0.2s						
BRAT	Ballarat	32.22	247	P	P	13 49 01.8	+1.5
QLP	Quilpie	33.42	267	P	P	13 49 11.7	+0.7
ARPS	Mount Arapiles	33.89	249	P	P	13 49 15.6	+0.6
CTA	Charters Tower	33.97	280	P	P	13 49 15.6	-0.2
	comp=Z,20nm,0.6s,baz=103,slow=12,SNR=26						
CTA	Charters Tower	33.97	280	P	P	13 49 17.5	+1.7
CTAO	Charters Tower	33.97	280	P	P	13 49 17.0	+1.1
CTAO	Charters Tower	33.97	280	P	P	13 49 17.3	+1.5
CTAO	Charters Tower	33.97	280	P	P	13 49 17.1	+1.3
STKA	Stephens Creek	34.54	257	P	P	13 49 21.8	+1.0
	comp=Z,79nm,0.7s,baz=98,slow=10,SNR=175						
STKA				LR	LR	14 01 28.8	
	comp=Z,112nm,20.5s,baz=29,slow=33						
STKA	Stephens Creek	34.54	257	P	P	13 49 21.7	+1.0
STKA				IAmb	IAmb	13 49 23.1	
	comp=Z,16nm,0.8s						
STKA	Stephens Creek	34.54	257	P	P	13 49 22.1	+1.4
STKA	Stephens Creek	34.54	257	P	P	13 49 21.7	+1.0
INKA	Innaminka	36.12	264	P	P	13 49 35.5	+1.3
INKA	Innaminka	36.12	264	P	P	13 49 35.5	+1.3
MTSU	Mount Surprise	36.47	281	P	P	13 49 38.6	+1.2
MTSU	Mount Surprise	36.47	281	P	P	13 49 38.5	+1.2
HTT	Hallett	36.55	254	P	P	13 49 38.5	+0.5
HTT	Hallett	36.55	254	P	P	13 49 38.5	+0.5
TWOA	Tennyson Woods	36.65	251	P	P	13 49 39.4	+0.7
NAPP	Napperby	37.23	254	P	P	13 49 44.5	+0.9
NAPP	Napperby	37.23	254	P	P	13 49 44.6	+0.9
LCRK	Leigh Creek	37.65	259	P	P	13 49 47.8	+0.5
LCRK	Leigh Creek	37.65	259	P	P	13 49 47.7	+0.5
WHYH	Whyalla	37.73	254	P	P	13 49 48.0	+0.2
BBOO	Buckleboo	39.02	255	P	P	13 49 57.8	-0.9
BBOO	Buckleboo	39.02	255	P	P	13 49 58.5	-0.3
QIS	Mount Isa	39.46	274	P	P	13 50 01.9	-0.6
QIS	Mount Isa	39.46	274	P	P	13 50 02.0	-0.6
COEN	Coen	39.47	286	P	P	13 50 01.5	-1.1
COEN				IAmb	IAmb	13 50 04.2	
	comp=Z,18nm,1.0s						
COEN	Coen	39.47	286	P	P	13 50 03.5	+0.8
OOD	Oodnadatta	40.43	262	P	P	13 50 11.1	+0.6
MULG	Mulgathing	41.19	258	P	P	13 50 16.3	-0.5
AS31	Alice Springs	43.22	267	P	P	13 50 32.4	-1.0
ASAR	Alice Springs	43.22	267	P	P	13 50 32.5	-0.9
	comp=Z,4.7nm,0.4s,baz=104,slow=7.4,SNR=279						
ASAR				ScP	ScP	13 56 10.0	+0.3
	comp=Z,0.8nm,0.8s,baz=121,slow=5.2,SNR=5.0						
ASAR				LR	LR	14 08 12.9	
	comp=Z,105nm,18.8s,baz=101,slow=36						
ASAR	Alice Springs	43.22	267	P	P	13 50 32.1	-1.4
WR0	Warramunga Arr	44.06	272	P	P	13 50 39.5	-0.7
WR0				IAmb	IAmb	13 50 41.1	
	comp=Z,17nm,0.9s						
WB2	Warramunga Arr	44.23	272	P	P	13 50 40.3	-1.2
WB2				IAmb	IAmb	13 50 42.5	
	comp=Z,29nm,1.0s						
WRAB	Tennant Creek	44.23	272	P	P	13 50 40.7	-0.9
WRA	Warramunga Arr	44.24	272	P	P	13 50 40.6	-1.0
	comp=Z,15nm,0.3s,baz=106,slow=7.7,SNR=416						
WRA	Warramunga Arr	44.24	272	P	P	13 50 39.9	-1.7
FORT	Forrest	46.10	255	P	P	13 50 54.9	-1.4
FORT	Forrest	46.10	255	P	P	13 50 55.9	-0.4
WRKA	Warakurna	47.57	263	P	P	13 51 06.2	-1.7
VNDA	Vanda	47.84	186	P	P	13 51 10.7	+1.6
	comp=Z,1.2nm,0.7s,baz=7.9,slow=7.1,SNR=14						
VNDA				LR	LR	14 08 51.1	
	comp=Z,30nm,19.2s,baz=331,slow=33						
VNDA	Vanda	47.84	186	P	P	13 51 12.3	+3.1
VNDA				IAmb	IAmb	13 51 24.8	
	comp=Z,6.5nm,1.5s						
KDU	Kakadu	49.09	280	P	P	13 51 18.9	-0.7
MTN	Manton Dam	50.15	279	P	P	13 51 26.5	-1.2
MTN				IAmb	IAmb	13 51 36.3	
	comp=Z,22nm,1.2s						
MTN	Manton Dam	50.15	279	P	P	13 51 27.2	-0.5
DRS	Darwin Rock St	50.55	279	P	P	13 51 30.1	-0.6
KNRA	Kununurra	50.85	274	P	P	13 51 32.3	-0.7
KNRA				IAmb	IAmb	13 51 34.8	
	comp=Z,23nm,1.1s						
KNRA	Kununurra	50.85	274	P	P	13 51 32.4	-0.6
FITZ	Fitzroy Crossi	52.49	270	P	P	13 51 44.5	-0.6
	comp=Z,8.4nm,0.8s,baz=172,slow=7.2,SNR=9.5						
KLBR	Kellerberrin	54.38	251	P	P	13 51 57.2	-1.8
MEEK	Meekatharra	55.25	257	P	P	13 52 03.4	-1.9
BLDU	Ballidu	55.53	252	P	P	13 52 04.9	-2.4
QSPA	South Pole Qui	59.44	180	P	P	13 52 36.5	+2.2
	comp=Z,8.9nm,0.7s,baz=355,slow=0.5,SNR=86						
QSPA	South Pole Qui	59.44	180		P	13 52 36.6	+2.2
MAW	Mawson	72.10	201	P	P	13 53 56.3	+0.7
	comp=Z,5.5nm,0.7s,baz=143,slow=11,SNR=4.3						
MAW	Mawson	72.10	201	P	P	13 53 54.9	-0.7
SYO	Syowa Base	76.88	193	⇓iP	P	13 54 24.2	+0.9
SYO	Syowa Base	76.88	193	⇑ePcp		13 54 36.0	
MDSI	Maura Dua	77.38	272	P	P	13 54 25.5	-1.6
SNAA	Sanae	77.88	178	P	P	13 54 30.0	+1.0
SNAA	Sanae	77.88	178		P	13 54 29.3	+0.2
SNAA				IAmb	IAmb	13 54 46.7	
	comp=Z,8.6nm,1.0s						
VNA3	Neumayer Olymp	78.03	176	P	P	13 54 30.7	+0.9
VNA2	Neumayer--Watz	78.47	177	P	P	13 54 33.5	+1.3
	baz=173,slow=5.0						
MJAR	Matsushiro Arr	78.53	325	LR	LR	14 24 21.4	
	comp=Z,13nm,20.7s,baz=125,slow=32						
VNA1	Neumayer--Stat	78.69	176	P	P	13 54 34.8	+1.4
H03S2	Juan Fernandez	80.21	123	T	T	15 23 44.4	
	baz=238,SNR=403						
H03S1	Juan Fernandez	80.22	123	T	T	15 23 47.9	
	baz=238,SNR=448						
H03S3	Juan Fernandez	80.23	123	T	T	15 23 44.5	
	baz=238						
H06E1	SOCORRO T-PHAS	80.94	62	T	T	15 24 19.1	
	SNR=6.9						
PLCA	Paso Flores	82.23	133	P	P	13 54 55.5	+2.4
	comp=Z,3.5nm,0.7s,baz=259,slow=4.6,SNR=7.9						
PLCA	Paso Flores	82.23	133	P	P	13 54 54.5	+1.4
PLCA				IAmb	IAmb	13 55 12.8	
	comp=Z,6.9nm,1.1s						
KSRS	Korea Array	84.64	320	P	P	13 55 05.3	+0.2
	comp=Z,1.2nm,0.8s,baz=176,slow=5.5,SNR=3.1						
MT01	Popeta	85.60	127	P	P	13 55 12.5	+2.1
MT02	Curacav	86.02	126	P	P	13 55 12.5	+0.1
MT02				IAmb	IAmb	13 55 16.2	
	comp=Z,14nm,1.1s						
PETK	Petropavlovsk-	86.10	346	P	P	13 55 12.5	+0.4
	comp=Z,8.4nm,0.6s,baz=120,slow=7.3,SNR=15						
PETK				LR	LR	14 25 57.6	
	comp=Z,32nm,22.0s,baz=150,slow=30						
NJ2	Nanjing	86.52	311	eP	P	13 55 14.9	+0.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USRK	Ussuriysk Ar.	87.45	326	P	P	13 55 20.2	+1.3
	comp=Z,1.3nm,0.6s,baz=197,slow=30,SNR=2.4						
NVAR	Mina Array Bea	88.35	43	P	P	13 55 25.0	+1.4
	comp=Z,3.1nm,0.7s,baz=222,slow=8.2,SNR=30						
KLR	Kul'dur	91.33	330	P	P	13 55 38.0	+1.0
	comp=Z,1.4nm,0.6s,baz=176,slow=5.2,SNR=4.1						
TXAR	Lajitas Array	92.42	57	P	P	13 55 44.6	+2.0
	comp=Z,0.7nm,0.9s,baz=220,slow=5.9,SNR=6.0						
PDAR	Pinedale Array	96.24	43	P	P	13 56 01.3	+1.3
	comp=Z,0.3nm,0.6s,baz=202,slow=3.2,SNR=3.5						
HHC	Hu-ho-hao-te	96.51	314	eP	P	13 55 58.8	-2.3
ILAR	Eielson Array	98.16	13	P	P	13 56 07.0	-0.8
	comp=Z,1.1nm,1.0s,baz=220,slow=4.2,SNR=4.8						
YKA	Yellowknife Ar	105.63	26	PKiKP	PKiKP	14 00 54.0	0.0
	comp=Z,0.3nm,0.5s,baz=254,slow=1.7,SNR=4.9						
YKA				PKKPbc	PKKPbc	14 12 16.0	-4.1
	comp=Z,0.6nm,0.8s,baz=40,slow=2.9,SNR=3.9						
WMQ	Urumqi	113.49	308	ePKP	PKiKP	14 01 09.9	+0.5
BOSA	Boshof	117.06	203	PKP	PKPdf	14 01 16.9	-0.2
	comp=Z,1.1nm,0.7s,baz=128,slow=2.4,SNR=3.7						
MKAR	Makanchi Array	118.04	310	PKP	PKPdf	14 01 16.6	-1.5
	comp=Z,0.9nm,0.7s,baz=225,slow=1.7,SNR=16						
KURBB	Kurchatov Arra	121.36	314	PKP	PKPdf	14 01 23.1	-1.2
	comp=Z,2.1nm,0.2s,baz=111,slow=2.0,SNR=11						
AAK	Ala-Archa	122.37	304	PKP	PKPdf	14 01 26.1	-0.6
	comp=Z,1.9nm,0.6s,baz=180,slow=2.8,SNR=7.7						
BVAR	Borovoye Array	126.69	316	PKP	PKPdf	14 01 34.0	-0.4
	comp=Z,2.4nm,0.6s,baz=193,slow=4.6,SNR=11						
SPA0	Spitsbergen Ar	131.98	356	ePKPdf	PKiKP	14 01 45.4	+0.6
AKTO	Aktyubinsk	134.38	312	PKP	PKPdf	14 01 49.1	0.0
	comp=Z,1.6nm,0.7s,baz=296,slow=1.9,SNR=5.5						
H10S2	ASCENSION HYDR	137.43	155	T	T	16 36 27.2	
	baz=16,slow=74,SNR=153						
H10S3	ASCENSION HYDR	137.43	155	T	T	16 36 27.1	
	baz=204,slow=74,SNR=262						
H10N3	ASCENSION HYDR	138.51	155	T	T	16 37 44.7	
	baz=203,slow=75,SNR=812						
H10N1	ASCENSION HYDR	138.52	155	T	T	16 37 25.5	
	baz=203,slow=75,SNR=1173						
H10N2	ASCENSION HYDR	138.53	155	T	T	16 37 46.0	
	baz=203,slow=75,SNR=868						
ARCES	ARCESS Array B	138.88	348	PKhKP	PKPpre	14 01 48.1	
	comp=Z,4.2nm,0.9s,baz=16,slow=1.6,SNR=13						
ARCES				PKP	PKiKP	14 01 58.6	-0.5
	comp=Z,2.8nm,0.5s,baz=38,slow=2.2,SNR=9.2						
KBZ	Khabaz	145.37	304	PKPbc	PKPbc	14 02 08.2	-0.8
	comp=Z,4.2nm,0.7s,baz=168,slow=2.1,SNR=5.4						
FIA1	FINESS Array S	145.44	340		PKPbc	14 02 07.9	-0.8
FINES	FINESS Array B	145.44	340	PKPbc	PKPbc	14 02 08.2	-0.5
	comp=Z,18nm,0.5s,baz=53,slow=4.2,SNR=188						
FINES	FINESS Array B	145.44	340		PKPbc	14 02 08.5	-0.3
OBN	Obninsk	145.47	325	PKPbc	PKPbc	14 02 08.4	-0.6
	comp=Z,4.1nm,0.3s,baz=57,slow=7.7,SNR=4.0						
MOL	Molde	147.90	355	ePKPbc	PKPbc	14 02 15.9	+0.1
DOMB	Dombas	148.29	354	ePKPbc	PKPbc	14 02 17.2	+0.2
AKN	Aaknes	148.32	356	ePKPbc	PKPbc	14 02 17.5	+0.5
FOO	Floro	149.00	357	ePKPbc	PKPbc	14 02 19.2	+0.5
NB2	NORSAR Subarra	149.04	351	PKP	PKPbc	14 02 19.0	+0.1
	comp=Z,3.4nm,0.6s,baz=17,slow=2.6						
NB2	NORSAR Subarra	149.04	351	PKPab	PKPbc	14 02 19.0	+0.1
	baz=17,slow=2.6						
NOA	NORSAR Array B	149.04	351	PKPbc	PKPbc	14 02 18.8	-0.1
	comp=Z,8.9nm,0.8s,baz=15,slow=4.2,SNR=20						
NC602	NORSAR Array S	149.29	351	ePKPbc	PKPbc	14 02 19.4	-0.1
SKAR	Skarslia	149.71	354	ePKPbc	PKPbc	14 02 21.0	+0.4
NACGM	Naroch	150.07	331	iPKP	PKPbc	14 02 20.9	-0.7
ASK	Askoy	150.11	357	ePKPdf	PKPdf	14 02 16.6	+0.2
KONO	Kongsberg	150.59	352	ePKPbc	PKPbc	14 02 23.0	+0.3
ODD1	Odda	150.60	355	ePKPbc	PKiKP	14 02 23.4	0.0
BLS5	Blasjo	151.10	355	ePKPbc	PKPbc	14 02 24.1	+0.1
AKASG	Malin Array Be	151.59	323	PKPbc	PKPbc	14 02 24.9	-0.4
	comp=Z,8.4nm,0.6s,baz=53,slow=2.9,SNR=28						
MMAI	Mount Meron Ar	151.72	284	PKPbc	PKPbc	14 02 26.2	-0.1
	comp=Z,4.9nm,0.4s,baz=82,slow=6.8,SNR=7.2						
HOMB	Homborsund	152.06	353	ePKPbc	PKPbc	14 02 25.7	-0.3
SNART	Snartemo	152.12	354	ePKPbc	PKiKP	14 02 27.1	+0.6
SUW	Suwalki	152.17	333	eP	PKiKP	14 02 27.5	+0.7
BRTR	Keskin Array B	152.84	298	PKPbc	PKPbc	14 02 27.9	-0.8
	comp=Z,2.8nm,0.7s,baz=144,slow=2.8,SNR=6.6						
DBIC	Dimbokro	155.24	163	PKP	PKPdf	14 02 26.3	+0.8
	comp=Z,1.9nm,0.7s,baz=228,slow=1.9,SNR=4.1						
CLL	Collm	157.86	342	ePKPab	PKPab	14 03 00.0	-0.6
GERES	GERESS Array B	159.83	337	PKPab	PKPab	14 03 09.2	-0.3
	comp=Z,0.3nm,0.4s,baz=256,slow=31,SNR=3.0						
TORD	Torodi Ar. Bea	162.56	179	PKP	PKPdf	14 02 33.4	-0.6
	comp=Z,1.9nm,1.0s,baz=236,slow=0.7,SNR=6.8						
TORD				PKPab	PKPab	14 03 22.7	+0.7
	comp=Z,4.5nm,0.7s,baz=179,slow=2.9,SNR=16						
DAVOX	Davos/Dischmat	162.83	342	PKPab	PKPab	14 03 23.1	+0.4
	comp=Z,2.6nm,0.5s,baz=29,slow=9.1,SNR=3.6						

WEL 17 13:42:53.6, 41°S±3°×17°5E±°, h26^{km}±6^{km}, M3.0/18, ML3.2/18, MLv3.0/18, Error ellipse: s-maj=0.0km s-min=0.0km az=84.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIW	Kapiti Island	0.30	181	P	Pn	13 43 01.8	-0.6
KIW				S	Sn	13 43 07.2	-0.8
OGWZ	Otaki Gorge	0.32	143	P	Pn	13 43 02.1	-0.5
OGWZ				S	Sn	13 43 07.7	-0.7
OHWZ	Ohakea	0.47	41	P	Pb	13 43 03.4	+0.2
OHWZ				S	Sb	13 43 10.4	+0.6
MRZ	Mangatainoka R	0.51	102	P	Pb	13 43 04.5	+0.4
CAW	Cannon Point	0.56	168	P	Pn	13 43 05.4	-0.4
HOWZ	Holdsworth Sta	0.57	127	P	Pn	13 43 05.6	-0.3
HOWZ				S	Sn	13 43 14.0	-0.5
POWZ	Post Office Ro	0.67	76	P	Pb	13 43 06.6	-0.1
MTW	Mount Morrison	0.74	144	P	Pn	13 43 08.7	+0.3
TIWZ	Tintock	0.77	107	P	Pn	13 43 08.8	0.0
DUWZ	D’Urville Isla	0.79	252	P	Pb	13 43 08.6	-0.2
PRWZ	Pori Road	0.80	90	P	Pn	13 43 09.3	+0.1
WAZ	Wanganui	0.81	4	P	Pb	13 43 08.8	-0.1
TCW	Tory Channel	0.81	216	P	Pb	13 43 08.9	-0.2
BHW	Baring Head	0.85	182	P	Pn	13 43 09.9	+0.1
MSWZ	Moikau Station	0.89	164	P	Pb	13 43 11.1	+0.6
PAWZ	Paruwai Farm	0.91	155	P	Pb	13 43 11.0	+0.3
TMWZ	Te Maipa	0.92	127	P	Pb	13 43 11.2	+0.3
TSZ	Takapari Road	0.94	58	P	Pn	13 43 10.8	-0.4
DVHZ	Dannevirke	0.99	75	P	Pn	13 43 11.5	-0.3
TRWZ	Traveller	1.02	145	P	Pb	13 43 12.9	+0.2
PLWZ	Palliser	1.04	166	P	Pb	13 43 13.2	+0.2
TUWZ	Tuamarina	1.14	220	P	Pb	13 43 14.4	-0.2
LREZ	Lake Rotokare	1.17	340	P	Pn	13 43 14.4	+0.2
PNHZ	Pukenui	1.18	57	P	Pn	13 43 14.2	-0.2
ANWZ	Angora Road	1.19	86	P	Pn	13 43 14.0	-0.6
MTVZ	Mangateitei	1.25	20	P	Pn	13 43 14.9	-0.5
WPHZ	Waipukurau	1.27	68	P	Pn	13 43 15.2	-0.3
PKVZ	Pokaka	1.31	15	P	Pn	13 43 15.6	-0.6
MOVZ	Moawhango	1.32	29	P	Pn	13 43 15.5	-0.8
WNVZ	Wahianoa	1.34	23	P	Pn	13 43 16.2	-0.5
NNZ	Nelson	1.34	240	P	Pn	13 43 16.7	+0.2
PRHZ	Porangahau	1.34	78	P	Pn	13 43 16.1	-0.6
PREZ	Palmer Road	1.35	334	P	Pn	13 43 17.4	+0.7
TRVZ	Turoa	1.35	21	P	Pn	13 43 16.5	-0.4
DRZ	Dome Shelter	1.38	21	P	Pn	13 43 17.1	-0.2
WHVZ	Whangaehu Hut	1.38	22	P	Pn	13 43 16.9	-0.3
BHHZ	Black Hill Sta	1.38	40	P	Pn	13 43 17.2	0.0
FWVZ	Far West T-bar	1.39	21	P	Pn	13 43 17.0	-0.5
BSWZ	Blackbirch Sta	1.40	214	P	Pb	13 43 18.3	-0.7
TUVZ	Tukino	1.41	24	P	Pn	13 43 17.5	-0.2
VRZ	Vera Road	1.44	355	P	Pn	13 43 18.0	+0.1
KHEZ	Kahui Hut	1.44	331	P	Pb	13 43 19.1	-0.7
KRHZ	Kereru	1.44	51	P	Pn	13 43 18.0	0.0
NGZ	Ngauruhoe	1.48	21	P	Pn	13 43 18.8	+0.1
SNVZ	South Ngauruho	1.48	22	P	Pn	13 43 18.6	0.0
OTVZ	Oturere	1.51	23	P	Pn	13 43 19.0	0.0
NBEZ	Newall Road No	1.52	328	P	Pb	13 43 20.5	-0.6
NNVZ	North Ngauruho	1.52	21	P	Pn	13 43 19.1	-0.1
WTVZ	West Tongariro	1.53	20	P	Pn	13 43 19.1	-0.3
PKE	Pukeiti	1.54	332	P	Pb	13 43 20.7	-0.7
TWVZ	Taurewa	1.54	15	P	Pn	13 43 18.8	-0.6
ETVZ	East Tongariro	1.55	24	P	Pn	13 43 19.9	+0.4
MHEZ	Mangahewa	1.55	343	P	Pn	13 43 20.5	+1.1
TMVZ	Te Maari	1.56	23	P	Pn	13 43 20.0	+0.2
KRVZ	Karewarewa	1.56	21	P	Pn	13 43 19.6	-0.2
NTVZ	North Tongarir	1.57	22	P	Pn	13 43 20.3	+0.5
PXZ	Pawanui	1.58	71	P	Pn	13 43 19.1	-0.7
KWHZ	Kaweka Forest	1.62	46	P	Pn	13 43 20.7	+0.2
KAHZ	Kahuranaki	1.69	64	P	Pn	13 43 20.7	-0.6
KATZ	Kakaramea	1.69	21	P	Pn	13 43 22.2	+0.7
RITZ	Rihia Road	1.74	25	P	Pn	13 43 22.9	+0.8
MCHZ	McNeill Hill	1.76	51	P	Pn	13 43 23.1	+0.7
RATZ	Rangitukua	1.81	22	P	Pn	13 43 23.9	+0.8
QRZ	Quartz Range	1.83	261	P	Pn	13 43 23.6	+0.3
BKZ	Black Stump Fm	1.85	42	P	Pn	13 43 23.6	0.0
THZ	Tophouse	1.94	231	P	Pn	13 43 25.7	+0.9
HIZ	Hauiti	2.04	359	P	Pn	13 43 26.1	-0.1
NMHZ	Naumai	2.06	46	P	Pn	13 43 26.8	+0.2
KHZ	Kahutara	2.12	209	P	Pn	13 43 27.6	+0.3
KUTZ	Kaahu Road	2.18	19	P	Pn	13 43 29.6	+1.4
MTHZ	Maungataniwha	2.26	42	P	Pn	13 43 30.2	+0.9
TLZ	Tolley Road	2.28	12	P	Pn	13 43 30.3	+0.8
PRRZ	Plateau Road	2.35	30	P	Pn	13 43 30.1	-0.4
MUGZ	Murupara	2.52	35	P	Pn	13 43 32.7	-0.2
DSZ	Denniston Nort	2.63	242	P	Pn	13 43 35.3	+0.9
GVZ	Greta Valley S	2.79	210	P	Pn	13 43 35.9	-0.6
URZ	Urewera	2.86	37	P	Pn	13 43 35.6	-1.8
TOZ	Tahuroa Road	2.86	9	P	Pn	13 43 37.2	-0.2
LTZ	Lake Taylor	2.98	221	P	Pn	13 43 38.7	-0.4
MWZ	Matawai	3.00	43	P	Pn	13 43 38.1	-1.4
TKGZ	Te Karaka	3.10	48	P	Pn	13 43 38.3	-2.5
INZ	Inchbonnie	3.38	229	P	Pn	13 43 44.1	-0.5
OKCZ	Okains Bay	3.45	203	P	Pn	13 43 44.3	-1.3
OXZ	Oxford	3.50	217	P	Pn	13 43 44.3	-2.0
MQZ	McQueen’s Vall	3.57	207	P	Pn	13 43 44.9	-2.3
TMZ	Timaru	4.79	216	P	Pn	13 44 02.4	-1.6
ODZ	Otahua Downs	5.47	214	P	Pn	13 44 10.8	-2.6

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*EAF **17** 13:50:25.3±0.8, 26°.15S×29°.67E, h10^{km}, MD3.7*
*BUL **17** 13:50:25.3±0.8, 26°.15S×29°.67E, h10^{km}, MD3.8*
ISC 17 13:50:23.1±1.2, **26°.12S**±0°.07×**29°.74E**±0°.08, **h10^{km}, n10, σ1^{s}.51**/12, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNG	Changalane	2.21	95	iP	Pb	13 51 02.8	-0.4
CNG	Changalane	2.21	95	iP	Pb	13 51 02.8	-0.4
MSNA	Messina	3.77	4	iP	Pn	13 51 22.7	+1.3
MSNA	Messina	3.77	4	iP	Pn	13 51 22.7	+1.3
LBTB	Lobatse	3.90	286	iP	Pn	13 51 24.3	+1.0
LBTB	Lobatse	3.90	286	iP	Pn	13 51 24.3	+1.0
BOSA	Boshof	4.70	237	iP	Pn	13 51 34.9	+0.7
BOSA	Boshof	4.70	237	iP	Pn	13 51 34.9	+0.7
MATP	Matopo	5.78	348	iP	Pn	13 51 50.8	+1.7
MATP				iS	Sn	13 52 53.6	-2.0
MATP	Matopo	5.78	348	iP	Pn	13 51 50.8	+1.7
MATP				iS	Sn	13 52 53.6	-2.0

MAN 17 14:02:46.4, 7°.32N×127°.01E, h32^{km}, mb4.4, ML3.3, MS3.0, 1C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	1.08	323	⇓iP	Pb	14 03 06.4	-0.1
BIPH				iS	Sn	14 03 17.0	-2.1
DMPH	Davao City--Mi	1.51	261	⇓iP	Pb	14 03 15.1	+1.3
DMPH				iS	Sb	14 03 33.3	+0.7
KCP	Kidapawan	1.93	261	⇓eP	Pn	14 03 17.8	+0.7
KCP				iS	Sn	14 03 31.4	-9.0
MSLP	Maasin	3.52	323	⇑eP	Pn	14 03 40.4	+1.5
MSLP				eS	Sn	14 04 20.9	+1.6

NNC 17 14:09:47.6±8.8, **37°.09N×71°.12E, h0^{km}, mb3.5, mpv3.2, 4C-2D, Error ellipse: s-maj=70.0km s-min=63.9km az=155.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK08	Karatay Array	6.03	356	⇑P	Pn	14 11 17.8	-0.2
	0.4nm,0.4s,baz=173,slow=13						
KK08				⇓S	Sn	14 12 28.2	+0.5
	0.3nm,0.3s						
AAK	Ala-Archa	6.12	24	⇓P	Pn	14 11 20.1	+0.8
	0.8nm,0.5s						
AAK				⇑S	Sn	14 12 34.1	+4.0
	1.2nm,0.5s						
TKM2	Tokmak 2	6.76	29	⇑P	Pn	14 11 27.7	-0.6
	2.2nm,0.5s						
TKM2				⇑S	Sn	14 12 44.7	-1.3
	0.8nm,0.6s						

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*NNC **17** 14:15:21.6±1.1, 50°.58N×85°.18E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=13.7km s-min=5.7km az=104.0*
ISC 17 14:15:16.2±0.9, **50°.44N**±0°.03×**85°.11E**±0°.03, **h10^{km}, n16, σ1^{s}.60**/32, **11C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UKR	Ust'-Kan	0.54	337	Pg	Pn	14 15 32.5	+2.3
UKR				Sg	Sn	14 15 40.5	+1.1
AKAR	Aktash	1.61	93	Pg	Pb	14 15 46.0	-0.1
AKAR				Sg	Sn	14 16 04.7	-1.0
DGZ	Jazzator, Alta	1.67	115	Pg	Pg	14 15 48.2	0.0
DGZ				Sg	Sb	14 16 08.2	0.0
ULGR	Ulagan, Altay	1.83	83	Pg	Pg	14 15 51.2	0.0
ULGR				Sg	Sb	14 16 12.2	-0.6
ARTR	Artybash	1.93	44	Pg	Pg	14 15 53.3	+0.1
ARTR				Sg	Sb	14 16 15.7	+0.1
CUR	Chagan-Uzun	2.10	98	Pg	Pg	14 15 56.1	-0.4
CUR				Sg	Sb	14 16 21.5	+0.8
TASR	Tashtagol	2.90	36	Pg	Pg	14 16 10.9	-0.7
TASR				Sg	Sb	14 16 46.1	+2.8
ELT	Eltsovka	2.91	13	Pg	Pg	14 16 11.4	-0.6
ELT				Sg	Sg	14 16 49.3	-0.4
ZAA0	Zalesovo Array	3.52	357	⇑Pn	Pb	14 16 15.7	-2.9
	0.1nm,0.3s						
ZAA0				⇑Pg	Pg	14 16 23.9	+0.3
	0.8nm,0.6s						
ZAA0				⇑Sn	Sn	14 16 56.4	+3.8
	1.7nm,0.4s						
ZAA0				⇑Lg	Lg	14 17 10.4	
	3.1nm,0.3s						
BJR1	Bachatsky 1, K	3.85	8	Pg	Pg	14 16 28.4	-1.5
BJR1				Sg	Sg	14 17 21.2	+1.5
LUZB	Luzhba, Kemero	3.98	34	Pg	Pg	14 16 31.3	-1.3
LUZB				Sg	Sg	14 17 20.5	-3.6
SALR	Pechorkino, Sa	4.00	5	Pg	Pg	14 16 33.6	+0.7
SALR				Sg	Sg	14 17 24.6	0.0
MK31	Makanchi Array	4.10	208	⇑Pn	Pb	14 16 28.5	0.0
	0.8nm,0.5s,baz=34,slow=9.9,SNR=34						
MK31				⇑Pg	Pg	14 16 40.4	+5.6
	0.6nm,0.3s,baz=31,slow=15,SNR=7.9						
MK31				⇑Sn	Sb	14 17 17.6	-0.5
	0.9nm,0.3s,baz=15,slow=81,SNR=4.2						
MK31				⇑Lg	Lg	14 17 33.5	
	3.5nm,0.4s,baz=29,slow=29,SNR=7.5						
KURK	Kurchatov	4.15	276	⇓Pn	Pb	14 16 27.6	-1.7
	2.8nm,0.6s						
KURK				⇑Sn	Sb	14 17 17.2	-2.2
	3.7nm,0.5s						
KURK				⇓Lg	Lg	14 17 34.2	
	12nm,0.5s						
MAKZ	Makanchi	4.19	211	⇑Pn	Pb	14 16 29.7	-0.3
	1.4nm,0.5s						
MAKZ				⇑Lg	Lg	14 17 34.9	
	3.7nm,0.3s						
TBTR	Tabat	4.29	52	Pg	Pg	14 16 37.4	-0.9
TBTR				Sg	Sg	14 17 31.6	-2.2

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*ATH **17** 14:42:28.1, 40°.27N×21°.93E, h20^{km}±1^{km}, ML3.0/18, Error ellipse: s-maj=1.4km s-min=0.8km az=316.0*
*SKO **17** 14:42:28.9, 40°.20N×21°.83E, h7^{km}*
*TIR **17** 14:42:29.0, 40°.33N×21°.88E, h31^{km}, Md3.3, Ml3.3*
*THE **17** 14:42:29.6, 40°.27N×21°.87E, h14^{km}±1^{km}, ML3.0/7, Error ellipse: s-maj=1.6km s-min=1.0km az=260.0*
ISC 17 14:42:29.1±0.8, **40°.27N**±0°.02×**21°.89E**±0°.02, **h16^{km}**±5^{km}, **n74, σ0^{s}.84**/106, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZN	Kozani	0.10	294	P	Pg	14 42 32.4	-0.2
KZN				S	Sg	14 42 35.1	+0.2
	48μm,0.4s						
KZN	Kozani	0.10	294	P	Pg	14 42 32.4	-0.2
KZN				S	Sg	14 42 35.2	+0.2
KZN				AML	AML	14 42 35.5	
	comp=N,68392μm,0.4s						
KZN				AML	AML	14 42 35.7	
KPRO	Kipourio	0.51	232	P	Pg	14 42 38.7	-0.6
KPRO				S	Sb	14 42 46.8	0.0
	comp=N,2μm,0.5s						
KPRO	Kipourio	0.51	232	P	Pg	14 42 38.7	-0.6
KPRO				S	Sb	14 42 46.9	0.0
KPRO				AML	AML	14 42 52.4	
	comp=E,3072μm,0.5s						
KPRO				AML	AML	14 42 55.6	
	comp=N,3169μm,0.6s						
PENT	Pentalofos	0.58	263	P	Pg	14 42 39.8	-0.8
PENT				S	Sg	14 42 48.4	+0.1
PENT				AML	AML	14 42 52.8	
	comp=N,3365μm,0.3s						
PENT				AML	AML	14 42 57.2	
	comp=E,1761μm,0.5s						
TYRN	Tyrnavos	0.62	154	P	Pg	14 42 40.7	-0.6
TYRN				S	Sb	14 42 51.3	+1.4
	comp=E,2μm,0.5s						
FNA	Florina	0.65	323	P	Pg	14 42 40.8	-1.0
FNA				S	Sb	14 42 50.7	-0.1
	comp=E,2μm,0.3s						
FNA	Florina	0.65	323	iPg	Pg	14 42 40.9	-1.0
FNA				iSg	Sb	14 42 51.5	+0.7
FNA	Florina	0.65	323	P	Pg	14 42 40.8	-1.0
	baz=321						
FNA				S	Sb	14 42 50.6	-0.1

	baz=321						
NEST	Nestorio	0.66	283	P	Pg	14 42 41.0	-1.0
NEST				S	Sb	14 42 52.0	+0.9
NEST				AML	AML	14 42 56.3	
	comp=E,4011µm,0.5s						
NEST				AML	AML	14 42 57.3	
	comp=N,3783µm,0.8s						
THL	Klokotos Trika	0.71	172	P	Pg	14 42 42.0	-1.0
THL				S	Sg	14 42 51.2	-1.2
THL				AML	AML	14 42 56.0	
	comp=N,2292µm,0.5s						
THL				AML	AML	14 42 56.4	
	comp=E,2406µm,0.6s						
LRSO	Larissa Observ	0.71	147	P	Pg	14 42 41.1	-1.9
GRG	Griva	0.79	30	P	Pb	14 42 44.0	-0.5
GRG				S	Sn	14 42 56.7	-0.4
	comp=E,848nm,0.6s						
GRG	Griva	0.79	30	*i* Pg	Pb	14 42 44.1	-0.5
GRG				*i* Sg	Sg	14 42 55.7	+0.6
THE	Thessaloniki	0.90	66	P	Pg	14 42 46.6	-0.1
THE				S	Sn	14 43 00.4	+0.7
	comp=E,268nm,0.5s						
THE	Thessaloniki	0.90	66	*i* Pg	Pb	14 42 46.3	0.0
THE				*i* Sg	Sn	14 43 00.5	+0.7
THE	Thessaloniki	0.90	66	P	Pg	14 42 46.5	-0.1
	baz=69						
THE				S	Sg	14 42 59.1	+0.7
	baz=69						
KBN	Korca	0.91	293	P	Pb	14 42 45.7	-0.8
KBN				S	Sn	14 43 00.5	+0.4
	comp=E,1µm,0.6s						
KBN	Korca	0.91	293	P	Pb	14 42 46.2	-0.4
	baz=290						
KBN				S	Sn	14 42 59.7	-0.4
	baz=290						
KBN				AMP			
	comp=N,4.0nm,0.6s,baz=290						
LSK	Leskovik	0.99	264	P	Pg	14 42 48.1	-0.2
	baz=260						
LSK				S	Sn	14 43 02.3	+0.2
	baz=260						
LSK				AMP			
	comp=E,5.2nm,0.7s,baz=260						
JAN	Janina	1.00	233	P	Pb	14 42 47.8	-0.3
JAN				AML	AML	14 43 07.6	
	comp=N,951µm,0.4s						
JAN				AML	AML	14 43 11.7	
	comp=E,830µm,0.8s						
VAY	Valandovo	1.17	26	*i* Pg	Pb	14 42 51.2	+0.2
VAY				*i* Sg	Sg	14 43 09.5	+2.3
VAY				*e*Lg	Lg	14 43 14.4	
	comp=E,207nm,0.6s						
KNT	Kendrikon	1.18	40	P	Pn	14 42 50.0	-0.9
KNT	Kendrikon	1.18	40	*i* Pg	Pb	14 42 51.2	+0.1
OHR	Ohrid	1.18	316	*i* Pg	Pn	14 42 50.7	-0.3
OHR				*i* Sg	Sg	14 43 09.1	+1.7
OHR				*e*Lg	Lg	14 43 14.5	
	comp=E,630nm,0.6s						
PLG	Polygyros	1.20	84	P	Pn	14 42 50.7	-0.5
PLG				AML	AML	14 43 11.4	
	comp=E,398µm,0.3s						
PLG				AML	AML	14 43 12.6	
	comp=N,455µm,0.6s						
SOH	Sokhos	1.25	63	P	Pn	14 42 52.0	0.0
SOH				AML	AML	14 43 14.0	
	comp=E,1981µm,0.5s						
SOH				AML	AML	14 43 16.3	
	comp=N,1066µm,0.5s						
SOH	Sokhos	1.25	63	*i* Pg	Pb	14 42 52.5	+0.2
SOH				*i* Sg	Sg	14 43 11.8	+2.2
MAKR	Makrakomi, Fth	1.27	171	P	Pn	14 42 52.3	+0.2
MAKR				AML	AML	14 43 14.1	
	comp=E,1182µm,1.3s						
MAKR				AML	AML	14 43 19.0	
	comp=N,1294µm,0.8s						
AGG	Agios Georgios	1.29	164	P	Pb	14 42 52.8	-0.2
EVR	Evrytania	1.35	183	P	Pn	14 42 53.3	-0.1
EVR				S	Sg	14 43 12.8	0.0
EVR				AML	AML	14 43 18.1	
	comp=N,1117µm,0.5s						
EVR				AML	AML	14 43 19.8	
	comp=E,1154µm,0.6s						
XOR	Xorichti	1.35	131	P	Pn	14 42 53.0	-0.3
XOR				AML	AML	14 43 19.7	
	comp=N,1844µm,0.6s						
XOR				AML	AML	14 43 21.0	
	comp=E,1145µm,0.5s						
IGT	Igoumenitsa	1.40	239	P	Pb	14 42 54.9	0.0
IGT				AML	AML	14 43 21.8	
	comp=N,336µm,0.3s						
IGT				AML	AML	14 43 23.1	
	comp=E,435µm,0.3s						
IGT	Igoumenitsa	1.40	239	*i* Pn	Pg	14 42 55.6	-0.5
IGT				*i* Sn	Sg	14 43 16.6	+2.2
IGT	Igoumenitsa	1.40	239	P	Pg	14 42 55.6	-0.5
	baz=237						
IGT				S	Sg	14 43 15.9	+1.5
	baz=237						
NEO	Neokhori	1.41	133	P	Pn	14 42 53.9	-0.2
NEO				AML	AML	14 43 21.1	
	comp=N,1763µm,0.7s						
NEO				AML	AML	14 43 21.9	
	comp=E,1468µm,0.6s						
SRN	Sarande	1.50	256	P	Pg	14 42 57.7	-0.2
	baz=254						
SRN				S	Sg	14 43 17.6	+0.2
	baz=254						
SRN				AMP			
	comp=N,1.0nm,0.8s,baz=254						
SRS	Serrai	1.55	56	*i* Pn	Pn	14 42 56.2	+0.2
SRS				*i* Sn	Sg	14 43 19.9	+0.8
ANX	Ano Chora	1.67	179	P	Pn	14 42 58.6	+0.8
ANX				S	Sb	14 43 20.7	+0.3
ANX				AML	AML	14 43 30.9	
	comp=E,1014µm,0.4s						
ANX				AML	AML	14 43 31.4	
	comp=N,963µm,0.4s						
KEK	Kerkira	1.70	252	P	Pb	14 42 60.0	+0.1
KEK				AML	AML	14 43 36.2	
	comp=E,387µm,0.7s						
KEK				AML	AML	14 43 37.1	
	comp=N,398µm,1.1s						
KOKK	Kokkinochori,	1.70	70	P	Pn	14 42 58.4	+0.3
SKO	Skopje	1.74	349	*i* Pn	Pg	14 43 01.8	-0.7
SKO				*i* Sn	Sg	14 43 24.6	-0.4
SKO				*e*Lg	Lg	14 43 29.1	
	comp=E,15nm,0.8s						
LKD2	Lefkada island	1.76	213	P	Pb	14 43 01.4	+0.5
	baz=212						
PHP	Peshkopia	1.79	323	P	Pn	14 43 00.0	+0.6
	baz=322						
PHP				S	Sb	14 43 23.9	+0.2
	baz=322						
PHP				AMP			
	comp=N,0.8nm,1.1s,baz=322						
NYDR	Nydri-Lefkada	1.80	211	P	Pb	14 43 01.5	-0.2
LKR	Lokris	1.83	152	P	Pn	14 43 00.0	+0.2
EFP	Efpalio	1.84	179	P	Pb	14 43 01.5	-0.8
EFP				AML	AML	14 43 32.9	
	comp=N,700µm,0.6s						
EFP				AML	AML	14 43 36.8	
	comp=E,644µm,0.9s						
NVR	Nevrokopi	1.85	54	P	Pn	14 43 00.5	+0.3
NVR				AML	AML	14 43 34.3	
	comp=N,172µm,0.7s						
NVR				AML	AML	14 43 36.0	
	comp=E,158µm,0.8s						
TIR	Tirane	1.88	306	P	Pb	14 43 02.0	-1.0
	baz=305						
DRAG	Dragano-Lefkad	1.88	213	P	Pb	14 43 02.4	-0.6
TRIZ	Trizonia	1.91	176	P	Pn	14 43 01.1	+0.2
LAKA	Lakka	2.03	178	P	Pn	14 43 03.5	+0.9
FSK	Fiskardo	2.08	210	P	Pb	14 43 04.8	-1.6
KAVA	Kavala	2.13	69	P	Pn	14 43 03.7	-0.3
KAVA				AML	AML	14 43 41.1	
	comp=N,371µm,0.6s						
KAVA				AML	AML	14 43 41.2	
	comp=E,271µm,0.7s						
KLV	Kalavryta, Ach	2.23	175	P	Pn	14 43 05.4	0.0
BOSS	Bosilegrad	2.27	11	*e*Pn	Pn	14 43 06.4	+0.5
DRO	Drossia	2.32	183	P	Pn	14 43 07.5	+0.9
VLS	Valsamata	2.32	206	P	Pn	14 43 08.4	+1.8
KEF3	Kipouria, Keph	2.38	211	P	Pn	14 43 08.0	+0.6
LTK	Loutraki	2.39	159	P	Pn	14 43 07.8	+0.2
BCI	Bajram Curri	2.50	327	P	Pn	14 43 10.2	+1.0
	baz=327						
BCI				S	Sb	14 43 42.1	-2.2
	baz=327						
BARS	Barje	2.55	359	*i* Pn	Pn	14 43 10.3	+0.5
BARS	Barje	2.55	359	*e*Pn	Pn	14 43 10.2	+0.5
VTS	Vitosha	2.56	23	*i* Pn	Pn	14 43 10.4	+0.4
VTS				*i* Sn	Sn	14 43 38.5	-2.4
SELS	Selova	3.00	349	*e*Pn	Pn	14 43 16.3	+0.3
ZAPS	Zavoj	3.06	10	*e*Pn	Pn	14 43 17.8	+1.1
SJES	Sjenica	3.31	335	*e*Pn	Pb	14 43 26.8	-0.8
BOVS	Bovan	3.37	358	*e*Pn	Pn	14 43 20.8	-0.2
IVAS	Ivanjica	3.55	339	*e*Pn	Pn	14 43 23.6	0.0
ZAGS	Zajecar	3.55	4	*e*Pn	Pn	14 43 23.6	+0.1
GRUS	Gruza	3.72	347	*e*Pn	Pn	14 43 26.3	+0.4
BBLS	Lazići	4.04	334	*e*Pn	Pn	14 43 31.7	+1.4
DIVS	Divibare	4.08	340	*e*Pn	Pn	14 43 31.8	+1.0
TRUS	Trudelj	4.10	345	*e*Pn	Pn	14 43 31.4	+0.3

IDC ***17*** *14:48:31.1±1.6, 4°.17S×129°.46E, h0km, mb3.5/1, mb1 3.6/4, mb1mx3.4/29, mbtmp3.5/4, ML3.3/3, Error ellipse: s-maj=57.2km s-min=26.6km az=83.0*
DJA ***17*** *14:48:33.4±1.0, 4°S±5°×12°9E±°, h12km±8km, M3.3/7, MLv3.3/7*
ISC 17 14:48:35.4±1.0**, 4°.11S**±0°.06×**129°.50E**±0°.05**, h36km, n10, σ1ˢ11**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.94	323	P	Pn	14 48 51.4	-0.7
MSAI				S	Sn	14 49 04.2	-0.2
AAI	Ambon	1.36	288	P	Pn	14 48 57.7	-0.2
AAI				S	Sn	14 49 15.0	+0.3
FAKI	Fak Fak	2.99	67	P	Pn	14 49 20.7	+0.4
SIJI	Sorong	3.67	29	Pn	Pn	14 49 29.9	+0.3
	2.9nm,0.3s,baz=199,slow=23,SNR=29						
SIJI				Sn	Sn	14 50 10.8	-0.9
	2.9nm,0.3s,baz=226,slow=22,SNR=6.4						
SWI	Sorong	3.67	29	P	Pn	14 49 29.9	+0.2
SANI	Sanana	4.05	300	P	Pn	14 49 35.4	+0.5
SAUI	Saumlaki	4.25	155	P	Pn	14 49 38.1	+0.5
WRA	Warramunga Arr	16.43	164	Pn	Pn	14 52 20.6	-2.7
	0.1nm,0.3s,baz=345,slow=13,SNR=2.4						
ASAR	Alice Springs	19.91	168	P	P	14 53 04.7	+0.6
	0.2nm,0.3s,baz=349,slow=10.0,SNR=27						
MKAR	Makanchi Array	65.55	326	P	P	14 59 16.9	+1.5
	0.3nm,0.5s,baz=107,slow=7.7,SNR=5.7						

BUL ***17*** *14:51:23.4±1.4, 21°.03S×25°.24E, h2km±15km, MD4.4*
EAF ***17*** *14:51:24.9, 20°.89S×25°.09E, h23km, MD4.5*
ISC 17 14:51:21.1±2.4**, 20°.83S**±0°.08×**25°.0E**±0°.1**, h10km, n14, σ1ˢ34**/14**, Botswana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATP	Matopo	3.35	84	*i* P	Pn	14 52 12.4	-1.2
MATP	Matopo	3.35	84	*i* P	Pn	14 52 12.4	-1.2
BLWY	Bulawayo	3.50	79	*i* P	Pn	14 52 16.9	+1.2
BLWY	Bulawayo	3.50	79	*i* P	Pn	14 52 16.9	+1.2
LBTB	Lobatse	4.21	172	*i* P	Pn	14 52 25.3	-0.1
LBTB	Lobatse	4.21	172	*i* P	Pn	14 52 25.3	-0.1
MSNA	Messina	4.96	109	*i* P	Pn	14 52 34.1	-1.6
MSNA				*i* Sg	Sb	14 53 47.4	-0.3
MSNA	Messina	4.96	109	*i* P	Pn	14 52 34.1	-1.6
MSNA				*i* Sg	Sb	14 53 47.4	-0.3
KRI	Karoi	5.94	49	*i* P	Pn	14 52 49.3	0.0
KRI	Karoi	5.94	49	*i* P	Pn	14 52 49.3	0.0
MOPA	Mopani	6.55	115	*i* P	Pn	14 52 59.6	+2.1
MOPA	Mopani	6.55	115	*i* P	Pn	14 52 59.6	+2.1
CNG	Changalane	8.58	131	*i* P	Pn	14 53 22.1	-3.2
CNG				*i* S	Sn	14 54 49.2	-13
CNG	Changalane	8.58	131	*i* P	Pn	14 53 22.1	-3.2
CNG				*i* S	Sn	14 54 49.2	-13

NEIC ***17*** *15:06:48.0±2.1, 15°.16S±0°.08×73°.39W±0°.09, h84km±8km, mb4.2/9, Error ellipse: s-maj=14.9km s-min=8.1km az=54.0*
IDC ***17*** *15:06:51.7±1.0, 14°.83S×73°.30W, h108km±6km, mb3.6/5, mb1 3.9/9, mb1mx3.7/26, mbtmp4.1/9, MS2.8/2, Ms1 2.9/2, ms1mx2.5/26, Error ellipse: s-maj=32.4km s-min=10.4km az=29.0*
VAO ***17*** *15:07:00.8±0.7, 14°.45S×72°.74W, h127km, mb4.0*
ISC 17 15:06:48.8±0.5**, 15°.13S**±0°.05×**73°.35W**±0°.06**, h98km, n80, σ2ˢ43**/93**, mb4.1**/9**, 1C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	4.33	139	*e*P	Pn	15 07 53.9	+1.5
AP01				*e*S	Sn	15 08 41.8	+0.1
AP01	Chacalluta	4.33	139	Pn	Pn	15 07 49.5	-2.8
PB12	IPOC Station P	4.52	141	*e*P	Pn	15 07 55.3	+0.3
PB12				*e*S	Sn	15 08 44.6	-1.9
PB12	IPOC Station P	4.52	141	Pn	Pn	15 07 53.3	-1.8
NNA	Nana	4.61	312	P	Pn	15 07 56.7	+0.4
	13nm,0.3s,baz=132,slow=10,SNR=12						
NNA				S	Sn	15 08 46.8	-1.9
	42nm,0.3s,baz=206,slow=22,SNR=3.5						
NNA	Nana	4.61	312	Pn	Pn	15 07 55.0	-1.3
PB16	IPOC Station P	4.87	131	*e*P	Pn	15 08 02.4	+2.1
PB16				*e*S	Sn	15 08 55.9	+0.1
PB16	IPOC Station P	4.87	131	Pn	Pn	15 08 01.6	+1.3
LPAZ	La Paz	5.16	104	P	Pn	15 08 08.7	+4.5
	14nm,0.3s,baz=308,slow=5.5,SNR=42						
LPAZ				S	Sn	15 09 05.7	+2.9
	1.6nm,0.3s,baz=301,slow=7.0,SNR=3.5						
LPAZ				LR	LR	15 10 08.1	
	comp=Z,118nm,18.6s,baz=3.5,slow=38						
LPAZ	La Paz	5.16	104	⇑*e*P	Pn	15 08 08.2	+4.0
LPAZ				*i* S	Sn	15 08 54.4	-8.5
LPAZ	La Paz	5.16	104		Pn	15 08 04.2	0.0
PB11	IPOC Station P	5.80	143	Pn	Pn	15 08 11.9	-0.7
TA02	Huaiquique	5.96	149		Pn	15 08 14.1	-0.4
TA01	Diego Aracena	6.19	151	Pn	Pn	15 08 16.4	-1.3
PB08	IPOC Station P	6.39	142	Pn	Pn	15 08 19.9	-0.9
PATCX	Punta Patache	6.43	152		Pn	15 08 20.8	-0.2
PB01	IPOC Station P	6.94	149	Pn	Pn	15 08 26.7	-1.2
PB07	IPOC Station P	7.34	154	Pn	Pn	15 08 33.8	+0.3
CZSB	Cruzeiro do Su	7.38	5	*e*S	Sn	15 09 51.5	-4.7
CZSB	Cruzeiro do Su	7.38	5		Pn	15 08 32.5	-1.4
PB09	IPOC Station P	7.69	150	Pn	Pn	15 08 39.2	+0.9
PB04	IPOC Station P	7.78	158	Pn	Pn	15 08 38.7	-0.8
PB06	IPOC Station P	8.34	155	Pn	Pn	15 08 47.0	-0.1
PB06					Sn	15 10 15.3	-4.4
LVC	Limon Verde	8.55	151	P	Pn	15 08 50.9	+0.9
	3.8nm,0.3s,baz=322,slow=12,SNR=1.9						
LVC				S	Sn	15 10 23.7	-1.3
	9.6nm,0.3s,baz=236,slow=22,SNR=7.0						
LVC				LR	LR	15 12 35.7	
	comp=Z,43nm,21.0s,baz=314,slow=39						
LVC	Limon Verde	8.55	151	*e*P	Pn	15 09 06.9	+17
LVC	Limon Verde	8.55	151		Sn	15 10 23.0	-2.0
ETMB	Extrema	8.74	54	*e*P	Pn	15 08 53.0	+0.5
ETMB	Extrema	8.74	54		Pn	15 08 52.5	+0.1
PB10	IPOC Station P	8.75	163	Pn	Pn	15 08 51.2	-1.3
PB10					Sn	15 10 24.5	-4.9
PB15	IPOC Station P	8.83	156	Pn	Pn	15 08 50.8	-3.1
ATAH	Atahualpa	9.36	328	P	Pn	15 09 00.4	-0.8
	0.6nm,0.3s,baz=32,slow=13,SNR=2.3						
ATAH				S	Sn	15 10 42.2	-2.6
	0.6nm,0.3s,baz=323,slow=23,SNR=1.5						
SAML	Samuel	11.69	59		Pn	15 09 30.6	-1.8
SIV	San Ignacio	11.87	96	P	Pn	15 09 33.9	-0.9
	1.4nm,0.3s,baz=283,slow=9.6,SNR=18						
AC02	Maricunga	12.30	162	Pn	Pn	15 09 38.2	-2.7
AC02					Sn	15 11 53.5	-2.9
VILB	Vilhena	12.94	82	Pn	Pn	15 09 46.5	-2.7
PTLB	Pontes e Lacer	13.72	93	*e*P	P	15 10 02.8	-1.7
PTLB	Pontes e Lacer	13.72	93		Pn	15 09 59.1	-0.1
GO04	Tololo Observa	15.16	172	Pn	Pn	15 10 16.5	-1.3
GO04				IAmb	IAmb	15 10 38.6	
	comp=Z,34nm,1.1s						
OTAV	Otavalo	16.08	341	*e*P	P	15 10 34.7	+3.5
PDRB	Porto dos Gac	16.55	80	*e*P	P	15 10 37.7	+1.8
SALV	Santo Antonio	17.04	95	*e*P	P	15 10 45.5	+4.2
MACC	Macarena, Meta	17.17	358	*e*P	Pn	15 10 42.5	-0.2
MACA	Manacapuru-AM	17.24	48	*e*P	P	15 10 44.7	+1.1
SOTA	Rioblanco	17.45	349	*e*P	Pn	15 10 50.1	+3.5
PCON	Cinco Dias	17.60	350	*e*P	Pn	15 10 50.1	+1.6
CLDB	Colider	17.62	78	*e*P	Pn	15 10 50.0	+1.9
VA03	San Esteban	17.74	172	P	P	15 10 48.8	-0.3
VA03				IAmb	IAmb	15 10 53.1	
	comp=Z,20nm,0.9s						
POPC	Popayan, Colom	17.86	349	*e*P	Pn	15 10 53.9	+2.6
ORTC	Ortega, Tolima	19.01	354	*e*P	P	15 11 03.5	+0.4
NPGB	Novo Progresso	19.39	67	*e*P	P	15 11 07.0	-0.1
PTGA	Pitinga	19.48	44	P	P	15 11 08.7	+0.5
	comp=Z,1.7nm,0.3s,baz=214,slow=14,SNR=22						
PTGA				S	S	15 14 34.0	-9.1
	comp=Z,0.6nm,0.3s,baz=314,slow=22,SNR=4.2						
ROSC	El Rosal	19.86	357	*e*P	Pn	15 11 15.8	+0.7
GUY2C	Guyana, Caldas	20.32	354	*e*P	Pn	15 11 20.6	0.0
ITTB	Itaituba	20.37	60	*e*P	P	15 11 18.2	+0.5
NORC	Norcasia	20.61	356	*e*P	P	15 11 21.5	+1.1
RUSC	La Rusia	20.89	1	*e*P	P	15 11 25.3	+1.5
BOAV	Boa Vista	21.55	37	P	P	15 11 28.6	-1.8
BOAV				IAmb	IAmb	15 12 04.0	
	comp=Z,13nm,1.4s						
SNDB	Serra Nova Dou	21.67	84	*e*P	P	15 11 34.5	+2.8
DBBC	Dabeiba	22.18	352	*e*P	P	15 11 37.7	+0.5
ZARC	Zaragoza, Cauc	22.52	356	*e*P	P	15 11 39.6	-1.1
ZARC	Zaragoza, Cauc	22.52	356	P	P	15 11 39.5	-1.1
ZARC				IAmb	IAmb	15 11 43.2	
	comp=Z,8.7nm,0.8s						
FRTB	Fartura	23.88	114	*e*P	P	15 11 59.9	+6.4
IPMB	Ipameri, GO	24.26	100	*e*P	P	15 12 01.1	+4.1
BAUV	El Baul	24.49	13	P	P	15 11 58.0	-1.0
SJCC	San Jacinto, C	24.93	356	P	P	15 12 01.9	-1.2
TXAR	Lajitas Array	53.02	327	P	P	15 15 56.6	+0.8
	comp=Z,0.3nm,0.7s,baz=150,slow=7.4,SNR=4.6						
TXAR				pP	pP	15 16 23.1	+2.1
	comp=Z,0.5nm,0.8s,baz=163,slow=8.9,SNR=3.2						
TXAR	Lajitas Array	53.02	327	P	P	15 15 55.1	-0.8
LIC	Lamto	70.93	78	*e*P	P	15 17 56.6	+0.5
	comp=Z,3.5nm,0.3s						
TIC	Toumodi	71.07	77	*e*P	P	15 17 58.1	+1.1
DBIC	Dimbokro	71.23	77	P	P	15 17 58.0	0.0
	comp=Z,1.5nm,0.7s,baz=257,slow=7.1,SNR=4.0						
DBIC	Dimbokro	71.23	77	IAmb	IAmb	15 17 58.7	
	comp=Z,2.6nm,0.8s						
KIC	Kosan Boka	71.24	78	*e*P	P	15 17 57.9	-0.1
	comp=Z,5.7nm,0.6s						
TORD	Torodi Ar. Bea	79.39	73	P	P	15 18 44.9	+0.2
	comp=Z,1.0nm,0.7s,baz=263,slow=4.5,SNR=7.2						
TORD				pP	pP	15 19 13.3	+1.7
	comp=Z,1.7nm,0.9s,baz=277,slow=4.5,SNR=5.3						
YKA	Yellowknife Ar	83.83	342	P	P	15 19 07.5	+0.5
	comp=Z,1.9nm,0.7s,baz=134,slow=4.7,SNR=19						
ESDC	Sonseca Array	84.41	47	P	P	15 19 10.7	+0.2
	comp=Z,0.7nm,0.6s,baz=251,slow=3.9,SNR=4.9						
ASAR	Alice Springs	133.13	215	PKP	PKiKP	15 25 54.7	-0.4
	comp=Z,0.2nm,0.6s,baz=153,slow=0.5,SNR=6.5						
ASAR				pPKP	pPKPdf	15 26 25.4	+3.2
	comp=Z,0.3nm,0.6s,baz=125,slow=2.1,SNR=2.9						
ASAR	Alice Springs	133.13	215		PKPdf	15 25 53.7	-0.2
WRA	Warramunga Arr	135.77	219	PKP	PKiKP	15 26 00.1	-0.4
	comp=Z,1.0nm,0.8s,baz=135,slow=2.0,SNR=5.8						
WRA				pPKP	pPKPdf	15 26 30.6	+3.4
	comp=Z,0.6nm,0.5s,baz=132,slow=2.4,SNR=3.3						
ZALV	Zalesovo Beam	137.66	19	PKP	PKiKP	15 26 03.0	-0.2
	comp=Z,1.5nm,0.6s,baz=326,slow=3.8,SNR=6.7						
SONM	Songino Array	147.39	0	PKPbc	PKPab	15 26 23.0	-0.5
	comp=Z,2.2nm,0.7s,baz=326,slow=1.7,SNR=17						

EAF ***17*** *15:33:24.4±4.8, 22°.24S×28°.01E, h10km, MD4.1*
BUL 17 15:33:05.8±25.0**, 21°.16S×26°.42E, h10km, MD4.5, Botswana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLWY	Bulawayo	2.29	64	*i* P	Pg	15 34 00.9	+11
BLWY	Bulawayo	2.29	64	*i* P	Pg	15 34 00.9	+11
MSNA	Messina	3.56	110	*i* P	Pn	15 33 56.4	-4.7
MSNA				*i* Sg	Sg	15 35 00.1	0.0
MSNA	Messina	3.56	110	*i* P	Pn	15 33 56.4	-4.7
MSNA				*i* Sg	Sg	15 35 00.1	0.0
LBTB	Lobatse	3.91	191	*i* P	Pn	15 34 09.6	+3.5
LBTB				*i* Sg	Sg	15 35 19.8	+8.3
LBTB	Lobatse	3.91	191	*i* P	Pn	15 34 09.6	+3.5
LBTB				*i* Sg	Sg	15 35 19.8	+8.3
MOPA	Mopani	5.17	118	*i* P	Pn	15 34 03.9	-20
MOPA	Mopani	5.17	118	*i* P	Pn	15 34 03.9	-20

IDC ***17*** *15:33:38.1±0.9, 27°.52N×90°.41E, h0km, mb3.7/9, mb1 3.9/10, mb1mx3.6/54, mbtmp3.8/10, ML3.8/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/42, Error ellipse: s-maj=45.5km s-min=16.4km az=54.0*
ISC 17 15:33:44.4±0.8**, 27°.7N**±0°.2×**90°.4E**±0°.2**, h35km, n12, σ1ˢ31**/12**, mb4.0**/8**, Bhutan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	2.52	148	*e*PN	Pn	15 34 25.0	+2.1
SHL				*e*SN	Sn	15 34 52.0	-0.5
AAK	Ala-Archa	19.72	323	P	P	15 38 11.8	+0.9
	0.3nm,0.3s,baz=324,slow=20,SNR=14						
MKAR	Makanchi Array	20.09	344	P	P	15 38 16.6	+1.8
	0.6nm,0.4s,baz=154,slow=10,SNR=15						
SONM	Songino Array	23.64	28	P	P	15 38 52.1	-0.3
	0.5nm,0.5s,baz=213,slow=12,SNR=4.9						
KURBB	Kurchatov Arra	24.60	342	P	P	15 39 01.3	+0.2
	0.2nm,0.3s,baz=158,slow=9.3,SNR=2.3						
WSAR	Wadi Sarin	28.98	268	LR	LR	15 51 57.9	
	comp=Z,10nm,19.9s,baz=335,slow=38						
AKASG	Malin Array Be	51.04	314	P	P	15 42 42.0	-0.9
	0.1nm,0.3s,baz=84,slow=6.8,SNR=3.7						
FINES	FINESS Array B	53.82	328	P	P	15 43 03.3	-0.1
	1.4nm,0.6s,baz=101,slow=9.9,SNR=6.8						
ARCES	ARCESS Array B	55.57	337	P	P	15 43 16.6	+0.6
	4.3nm,0.9s,baz=104,slow=7.5,SNR=1.8						
ARCES				LR	LR	16 08 47.2	
	comp=Z,31nm,18.6s,baz=335,slow=38						
GERES	GERESS Array B	61.18	313	P	P	15 43 55.5	0.0
	0.8nm,0.6s,baz=74,slow=6.1,SNR=6.1						
WRA	Warramunga Arr	63.66	133	P	P	15 44 10.7	-1.6
	0.9nm,0.4s,baz=324,slow=6.3,SNR=32						
ASAR	Alice Springs	66.11	136	P	P	15 44 26.5	-1.7
	0.6nm,0.6s,baz=318,slow=6.2,SNR=22						

SJA ***17*** *15:44:03.5±0.6, 30°.51S×72°.39W, h14km, ML4.1, MW4.2*
NEIC ***17*** *15:44:06.6±2.6, 30°.52S±0°.04×72°.10W±0°.04, h10km±1km, mb4.4/5, ML4.1(GUC), Error ellipse: s-maj=8.4km s-min=3.5km az=317.0*
IDC ***17*** *15:44:06.0±1.3, 30°.58S×71°.98W, h0km, mb4.0/4, mb1 4.0/8, mb1mx3.8/35, mbtmp3.9/8, ML3.6/4, MS3.2/4, Ms1 3.2/4, ms1mx2.9/24, Error ellipse: s-maj=42.0km s-min=23.6km az=95.0*
GUC ***17*** *15:44:08.3±0.8, 30°.65S×72°.05W, h23km±4km, ML4.1*
ISC 17 15:44:04.6±1.6**, 30°.55S**±0°.02×**72°.24W**±0°.05**, h0km**±10km**, n96, σ1ˢ86**/128**, mb4.2**/5**, 2C-6D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.54	104	⇓*i*P	Pg	15 44 16.3	+1.3
CO06				*i* S	Sg	15 44 21.2	-0.7
CO06				IAML		15 44 22.7	
	comp=N,12µm,0.2s						
CO06	Fray Jorge	0.54	104		Pg	15 44 16.3	+1.3
CO06				Sg	Sg	15 44 21.1	-0.8
CO05	La Serena	1.07	54	⇓*i*P	Pb	15 44 26.3	+0.3
CO05				*i* S	Sb	15 44 39.5	-1.1
CO05				IAML		15 44 41.6	
	comp=E,7µm,0.6s						
CO05	La Serena	1.07	54		Pb	15 44 26.1	+0.1
GO04	Tololo Observa	1.30	74	⇓*i*P	Pn	15 44 29.3	-1.0
GO04				*i* S	Sb	15 44 45.5	-1.9
GO04				IAML		15 44 49.9	
	comp=N,16µm,0.3s						
GO04	Tololo Observa	1.30	74		Pn	15 44 29.3	-1.0
GO04					Sb	15 44 45.7	-1.7
GO04	Tololo Observa	1.30	74	*e*P	Pn	15 44 29.3	-1.0
GO04				*e*S	Sg	15 44 46.3	-0.1
CO03	El Pedregal	1.37	103	⇓*i*P	Pn	15 44 29.4	-1.7
CO03				*i* S	Sb	15 44 45.1	-4.1
CO03				IAML		15 44 53.1	
	comp=E,3µm,0.4s						
CO03	El Pedregal	1.37	103		Pn	15 44 29.2	-1.8
CO03				Sg	Sb	15 44 46.4	-2.9
CO03	El Pedregal	1.37	103	*e*P	Pn	15 44 29.5	-1.5

CO03				*e*S	Sg	15 44 49.0	+0.4
CO03				IAML		15 44 51.7	
	comp=Z,1µm,0.3s						
LCO	Las Campanas	2.04	42	⇑*e*P	Pn	15 44 40.8	+0.4
LCO				*e*S	Sn	15 45 06.0	-0.6
LCO	Las Campanas	2.04	42		Pn	15 44 40.6	+0.2
LCO	Las Campanas	2.04	42	*e*P	Pn	15 44 40.8	+0.4
LCO				*e*S	Sg	15 45 09.5	-0.6
VA06	Catapilco	2.16	158	*e*P	Pn	15 44 42.3	+0.4
VA06				*e*S	Sn	15 45 07.9	-1.4
VA06				IAML		15 45 17.6	
	comp=N,2µm,0.5s						
AROD	Rodeo	2.42	82	*e*P	Pn	15 44 37.2	-8.6
AROD				*e*S	Sn	15 45 14.0	-2.3
VA01	Torpederas	2.52	169		Pn	15 44 49.2	+2.4
AC04	Llanos de Chal	2.55	24		Pn	15 44 47.1	-0.1
AC04	Llanos de Chal	2.55	24	*e*P	Pn	15 44 47.5	+0.3
AC04				*e*S	Sb	15 45 20.5	-2.7
ROCH	El Roble	2.63	157	⇑*e*P	Pn	15 44 49.2	+0.6
ROCH				⇓*e*P	Pn	15 44 49.1	+0.6
ROCH				*e*S	Sn	15 45 19.8	-1.5
ROCH				*e*S	Sn	15 45 20.3	-1.0
ROCH				IAML		15 45 37.7	
	comp=N,2µm,0.5s						
ROCH				IAML		15 45 37.9	
	comp=N,1µm,0.5s						
ROC1	El Roble	2.63	157	*e*P	Pn	15 44 49.0	+0.4
VA03	San Esteban	2.64	147	*e*P	Pn	15 44 49.3	+0.7
VA03				*e*S	Sn	15 45 19.9	-1.3
VA03				IAML		15 45 30.4	
	comp=E,2µm,0.5s						
VA03	San Esteban	2.64	147		Pn	15 44 49.5	+0.9
VA03	San Esteban	2.64	147	*e*P	Pn	15 44 49.8	+1.3
VA03				*e*S	Sn	15 45 19.5	-1.8
VA03				IAML		15 45 29.6	
	comp=Z,846nm,0.6s						
ACCO	Cerro Coronel	2.74	92	*e*P	Pn	15 44 40.1	-10
ACCO				*e*S	Sb	15 45 28.5	-0.4
RTLS	Leoncito	2.81	117	*e*P	Pb	15 44 54.5	-1.4
RTLS				IAML		15 45 37.7	
	comp=Z,273nm,1.3s						
MT02	Curacav	2.86	161	*e*P	Pn	15 44 52.5	+1.0
MT02				IAML		15 45 40.9	
	comp=E,299nm,0.4s						
MT02	Curacav	2.86	161		Pn	15 44 51.7	+0.2
MT02	Curacav	2.86	161	*e*P	Pn	15 44 52.4	+0.9
MT02				*e*S	Sb	15 45 29.5	-2.7
PEL	Peldehue	2.91	153	*e*P	Pn	15 44 53.8	+1.6
PEL				*e*S	Sn	15 45 27.2	-0.7
PEL				IAML		15 45 44.8	
	comp=E,466nm,0.5s						
PEL	Peldehue	2.91	153		Pn	15 44 52.1	0.0
PEL	Peldehue	2.91	153	*e*P	Pn	15 44 53.8	+1.6
PEL				*e*S	Sb	15 45 30.5	-3.0
AUSP	Uspallata	2.96	125	*e*P	Pb	15 44 56.3	-2.1
AUSP				*e*S	Sb	15 45 35.9	+0.7
MT05	Renca	3.11	156	IAML		15 45 49.5	
	comp=E,908nm,0.3s						
MT05	Renca	3.11	156		Pn	15 44 55.3	+0.3
VA05	Santo Domingo	3.14	170		Pn	15 44 56.1	+0.7
ZON	Zonda	3.21	109		Pn	15 44 56.4	0.0
MT09	Talagante	3.39	162	⇓*e*P	Pn	15 45 00.5	+1.6
MT09				*e*S	Sn	15 45 38.8	-1.1
MT09				IAML		15 45 59.5	
	comp=N,382nm,0.3s						
MT09	Talagante	3.39	162		Pn	15 44 59.8	+0.9
MT01	Popeta	3.41	166		Pn	15 44 59.5	+0.4
MT01	Popeta	3.41	166	*e*P	Pn	15 45 00.0	+0.9
MT01				*e*S	Sb	15 45 50.0	+2.0
GO03	Copiap	3.43	31	*e*P	Pn	15 44 59.8	+0.4
GO03				IAML		15 46 00.4	
	comp=E,420nm,0.7s						
GO03	Copiap	3.43	31		Pn	15 44 58.3	-1.0
GO03	Copiap	3.43	31	*e*P	Pn	15 45 00.0	+0.6
GO03				*e*S	Sg	15 45 54.0	-0.9
ASAL	Salagasta	3.55	126	*e*P	Pb	15 45 05.0	-3.4
ASAL				*e*S	Sb	15 45 53.5	+1.4
ASAL				*e*S	Sb	15 45 54.0	+1.9
LMEL	Las Melosas	3.71	153	*e*P	Pn	15 45 05.4	+2.0
LMEL				*e*S	Sn	15 45 46.4	-1.6
LMEL				IAML		15 46 02.7	
	comp=N,268nm,0.5s						
AAGR	Agrelo	3.85	132	*e*P	Pn	15 45 09.5	+4.2
AAGR				*e*S	Sg	15 46 07.2	-1.2
VCA	Vinchina	3.95	64	*e*P	Pn	15 45 05.0	-1.7
VCA				*e*P	Pn	15 45 10.4	+3.8
VCA				*e*S	Sn	15 45 53.5	-0.3
VCA				*e*S	Sb	15 46 05.0	+1.3
VCA				*e*S	Sb	15 46 09.5	+5.8
VCA				IAML		15 46 17.1	
	comp=Z,358nm,1.6s						
BO01	Tunca	3.95	166		Pn	15 45 07.9	+1.4
BO01	Tunca	3.95	166	*e*P	Pn	15 45 08.0	+1.4
BO01				*e*S	Sn	15 45 53.0	-0.7
BO01				*e*S	Sb	15 46 05.0	+1.4
AVFE	Valle Fertil	4.13	93	*e*P	Pn	15 45 05.0	-4.0
AVFE				*e*P	Pn	15 45 10.7	+1.7
AVFE				*e*S	Sb	15 46 07.0	-1.7
AVFE				IAML		15 46 22.2	
	comp=Z,207nm,1.2s						
BO02	Sierra Bellavi	4.41	164		Pn	15 45 14.2	+1.4
BO02	Sierra Bellavi	4.41	164	*e*P	Pn	15 45 15.0	+2.1
BO02				*e*S	Sn	15 46 05.6	+0.7
BO02				IAML		15 46 30.4	
	comp=Z,152nm,0.6s						
GO05	Huala	4.46	177	Pn	Pn	15 45 13.5	0.0
GO05	Huala	4.46	177	*e*P	Pn	15 45 14.2	+0.7
AC02	Maricunga	4.60	37		Pn	15 45 16.2	+0.4
AC02	Maricunga	4.60	37	*e*P	Pn	15 45 17.1	+1.2
AC02				*e*S	Sb	15 46 24.5	+1.8
AC02				IAML		15 46 32.5	
	comp=Z,151nm,0.5s						
ACLC	CERRO LA CRUZ	4.72	78	*e*P	Pn	15 45 19.3	+2.0
ACLC				*e*S	Sn	15 46 17.5	+4.6
ACLC				IAML		15 46 31.0	
	comp=Z,276nm,0.5s						
ACHE	Chepes	4.83	99	*e*P	Pn	15 45 21.1	+2.3
ACHE				*e*S	Sn	15 46 19.5	+3.9
APLL	PUNTA DE LOS L	4.93	90	*e*S	Sn	15 46 16.8	-1.1
ML02	Panimavida	5.25	173	Pn	Pn	15 45 26.0	+1.7
RFA	San Rafael	5.28	144	*e*P	Pn	15 45 18.6	-6.2
RFA				*e*S	Sb	15 46 47.5	+5.7
MRA	San Martin	5.88	110	*e*P	Pn	15 45 34.7	+1.7
MRA				*e*S	Sn	15 46 41.9	+0.7
MRA				IAML		15 47 20.0	
	comp=Z,101nm,0.8s						
H03N1	Juan Fernandez	6.36	241	T	T	15 52 39.7	
	baz=71,slow=72,SNR=2767						
H03N2	Juan Fernandez	6.37	241	T	T	15 52 40.6	
	baz=71,slow=72,SNR=2068						
H03N3	Juan Fernandez	6.37	241	T	T	15 52 39.0	
	baz=71,slow=72,SNR=1794						
PB10	IPOC Station P	7.17	13	Pn	Pn	15 45 49.9	-0.8
PB15	IPOC Station P	7.72	19	Pn	Pn	15 45 56.7	-1.8
PB05	IPOC Station P	7.88	14	*e*P	Pn	15 45 59.1	-1.5
PB05				*e*S	Sn	15 47 24.6	-6.0
PB06	IPOC Station P	8.17	18	Pn	Pn	15 46 03.9	-0.7
LC01	Cunco	8.33	178	Pn	Pn	15 46 06.5	-0.2
PB04	IPOC Station P	8.39	13	Pn	Pn	15 46 04.4	-3.3
LVC	Limon Verde	8.45	21	Pn	Pn	15 46 07.2	-1.4
	comp=Z,0.2nm,0.3s,baz=194,slow=8.3,SNR=1.7						
LVC				LR	LR	15 49 54.6	
	comp=Z,30nm,20.6s,baz=210,slow=42						
LVC	Limon Verde	8.45	21		Pn	15 46 06.4	-2.3
PB07	IPOC Station P	9.04	14	Pn	Pn	15 46 14.9	-1.7
PB09	IPOC Station P	9.12	18	Pn	Pn	15 46 15.5	-2.2
PB01	IPOC Station P	9.79	15	Pn	Pn	15 46 24.4	-2.3
TA01	Diego Aracena	10.11	11	Pn	Pn	15 46 29.7	-1.4
PLCA	Paso Flores	10.25	173	Pn	Pn	15 46 32.4	-0.7
	comp=Z,0.1nm,0.3s,baz=325,slow=16,SNR=2.1						
PLCA				LR	LR	15 51 03.8	
	comp=Z,130nm,19.6s,baz=356,slow=41						
CPUP	Villa Florida	13.78	76	LR	LR	15 52 54.8	
	comp=Z,178nm,18.6s,baz=222,slow=39						
LPAZ	La Paz	14.69	16	Pn	Pn	15 47 37.0	+2.7
	comp=Z,0.2nm,0.3s,baz=203,slow=8.7,SNR=4.9						
LPAZ	La Paz	14.69	16		Pn	15 47 32.8	-1.5
SIV	San Ignacio	17.74	38	P	P	15 48 13.9	-0.1
	comp=Z,0.3nm,0.3s,baz=220,slow=12,SNR=17						
SIV				LR	LR	15 56 16.2	
	comp=Z,169nm,18.6s,baz=271,slow=41						
ETMB	Extrema	21.38	16	P	P	15 48 54.4	+0.6
BDFB	Brasilia	26.69	62	P	P	15 49 44.7	-1.0
	comp=Z,4.1nm,0.6s,baz=218,slow=5.7,SNR=4.8						
BDFB	Brasilia	26.69	62	IAmb	IAmb	15 49 45.5	
	comp=Z,7.2nm,0.9s						
BOAV	Boa Vista	34.62	21	P	P	15 50 55.0	-0.6
BOAV				IAmb	IAmb	15 51 10.0	
	comp=Z,8.2nm,1.4s						
SNAA	Sanae	54.85	159	P	P	15 53 36.9	+0.7
	comp=Z,1.1nm,0.5s,baz=293,slow=13,SNR=4.7						
SNAA	Sanae	54.85	159	IAmb	IAmb	15 53 44.1	
	comp=Z,3.9nm,1.1s						
TXAR	Lajitas Array	66.65	330	P	P	15 54 58.9	+1.7
	comp=Z,0.2nm,0.7s,baz=134,slow=5.2,SNR=1.5						
TORD	Torodi Ar. Bea	83.21	71	P	P	15 56 33.9	+0.7
	comp=Z,1.1nm,0.7s,baz=261,slow=4.8,SNR=7.4						
TORD	Torodi Ar. Bea	83.21	71	P	P	15 56 32.3	-0.9
H11S2	WAKE ISLAND Hy	125.57	272	T	T	18 21 51.6	
	baz=114,slow=74,SNR=28						
H11S1	WAKE ISLAND Hy	125.58	272	T	T	18 21 53.0	
	baz=114,slow=74,SNR=18						
H11S3	WAKE ISLAND Hy	125.59	272	T	T	18 21 40.2	
	baz=114,slow=74,SNR=27						
ZALV	Zalesovo Beam	151.35	29	PKPbc	PKiKP	16 04 01.5	+1.3
	comp=Z,9.1nm,0.7s,baz=300,slow=3.4,SNR=28						
ZALV	Zalesovo Beam	151.35	29		PKiKP	16 04 01.0	+0.7

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*TUL **17** 15:56:06.3±1.2, 36°.21N±0°.01×97°.55W±0°.02, h6^{km}±6^{km}, ML3.4, mb_Lg3.3/86(NEIC), Error ellipse: s-maj=2.5km s-min=1.6km az=65.0*

*ANF **17** 15:56:06.2±0.3, 36°.22N×97°.57W, h6^{km}, ML3.8/12, Error ellipse: s-maj=3.1km s-min=2.9km az=143.0*

*NEIC **17** 15:56:06.4±1.3, 36°.22N±0°.01×97°.54W±0°.02, h7^{km}±6^{km}, Error ellipse: s-maj=2.6km s-min=1.6km az=66.0*

ISC 17 15:56:06.2±1.0**, 36°.21N**±0°.02×**97°.56W**±0°.02**, h11**^{km}±9^{km}**, n109, σ0^{s}.78**/124**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.42	168	Pg	Pg	15 56 14.7	+0.2
OK029				Sg	Sg	15 56 20.5	+0.4
CROK	Carrier	0.45	311	Pg	Pg	15 56 15.2	+0.2
CROK				Sg	Sg	15 56 21.6	+0.6
BLOK	Blackwell	0.62	27	Pg	Pg	15 56 18.3	+0.1
BLOK				Sg	Sg	15 56 26.6	+0.3
OK009	Oakdale Elemen	0.64	170		Pg	15 56 17.3	-1.3
OK031	S. Brethren Rd	0.64	114	Pg	Pg	15 56 18.6	0.0
OK031				Sg	Sg	15 56 27.0	0.0
OK025	Westminster Rd	0.65	164	Pg	Pg	15 56 19.0	+0.1
OK025				Sg	Sg	15 56 27.0	-0.5
GC02	Grant County #	0.68	340	Pg	Pg	15 56 19.3	-0.1
GC02				Sg	Sb	15 56 29.2	-0.4
OK001	Jones High Sch	0.69	161	Pg	Pg	15 56 19.3	-0.1
OK030	Cody Creek RV	0.69	114		Pg	15 56 19.6	0.0
OK030				Sg	Sg	15 56 28.9	+0.3
QUOK	Quay	0.69	93	Pg	Pg	15 56 19.5	-0.1
QUOK				Sg	Sg	15 56 28.8	+0.1
OK034	N. Norfolk Rd.	0.72	106	Pg	Pg	15 56 20.0	0.0
OK034				Sg	Sg	15 56 29.5	+0.1
OK032	Salt Plains WL	0.79	319	Pg	Pg	15 56 21.1	-0.3
OKCFA	Oklahoma City	0.80	174		Pg	15 56 21.4	-0.2
OKCFA	Oklahoma City	0.80	174	P	Pg	15 56 21.6	0.0
	baz=354,SNR=14						
OKCFA				S	Sg	15 56 32.5	+0.5
	baz=354						
KAN13	South Haven SW	0.80	5	Pg	Pg	15 56 21.4	-0.3
KAN13				Sg	Sg	15 56 32.4	+0.2
OKCSW	OKLAHOMA CITY	0.81	173	Pg	Pg	15 56 21.8	-0.1
OKCSW				Sg	Sg	15 56 32.4	0.0
KAN14	Manchester OK	0.81	337		Pg	15 56 21.7	-0.2
KAN14				Sg	Sg	15 56 32.8	+0.3
KAN17	Caldwell West	0.85	349	Pg	Pg	15 56 22.3	-0.2
KAN09	Caldwell North	0.92	357	Pg	Pg	15 56 23.8	-0.3
KAN09				Sg	Sg	15 56 36.2	+0.2
KAN05	Bluff City Nor	0.93	345	Pg	Pg	15 56 23.9	-0.3
KAN05				Sg	Sb	15 56 37.5	+0.8
KAN01	Argonia South	0.95	350		Pg	15 56 24.3	-0.3
KAN01				Sg	Sb	15 56 37.5	+0.1
FNO	Franklin	0.96	172	Pg	Pg	15 56 24.3	-0.4
FNO				Sg	Sg	15 56 37.6	+0.4
KAN10	Anthony SW Sta	1.01	335	Pg	Pg	15 56 25.2	-0.4
KAN10				Sg	Sb	15 56 39.2	+0.2
KAN06	Argonia West S	1.06	347		Pg	15 56 26.2	-0.4
KAN06				Sg	Sg	15 56 40.2	-0.3
KAN08	Anthony NE Sta	1.07	342		Pg	15 56 26.3	-0.4
KAN08				Sg	Sb	15 56 41.1	+0.5
KAN16	Harper SW Stat	1.09	338	Pg	Pg	15 56 26.7	-0.5
KAN16				Sg	Sb	15 56 41.7	+0.3
T35A	Sooner Cattle	1.10	50		Pg	15 56 26.9	-0.5
T35A				Sg	Sg	15 56 40.6	-1.1
T35B	Sooner Cattle	1.10	50	P	Pg	15 56 26.9	-0.5
	baz=230,SNR=211						
T35B				S	Sg	15 56 41.2	-0.5
	baz=230						
KAN12	Harper NE Stat	1.14	342	Pg	Pg	15 56 27.6	-0.5
KAN12				Sg	Sb	15 56 43.3	+0.5
U32A	Winter Ranch,	1.18	279	Pg	Pg	15 56 28.0	-0.8
U32A				Sg	Sg	15 56 44.4	+0.2
U32A	Winter Ranch,	1.18	279	P	Pg	15 56 28.2	-0.6
	baz=98,SNR=68						
U32A				S	Sg	15 56 44.3	+0.2
	baz=98						
W35A	Tecumseh	1.20	152	Pg	Pg	15 56 28.1	-1.0
W35A				Sg	Sg	15 56 44.9	+0.2
TUL1	Leonard	1.47	101	Pn	Pn	15 56 32.5	0.0
TUL1					Sb	15 56 52.7	+0.6
TUL1	Leonard	1.47	101	P	Pn	15 56 32.6	0.0
	baz=282,SNR=56						
TUL1				S	Sn	15 56 52.5	+0.7
	baz=282						
X34A	Smith Ranch, M	1.62	188		Pb	15 56 36.3	+0.1
X34A				Sg	Sg	15 56 59.0	+0.6
LOOK	Love County	2.24	172	Pn	Pn	15 56 44.4	+1.1
R32A	Long Quarter,	2.39	338		Pn	15 56 46.3	+0.9
R32A	Long Quarter,	2.39	338	P	Pn	15 56 46.5	+1.1
	baz=157						
X37A	Clayton	2.41	131	Pn	Pn	15 56 47.1	+1.5
X37A	Clayton	2.41	131	P	Pn	15 56 46.8	+1.1
	baz=313,SNR=14						
U38A	Gravette	2.58	84		Pn	15 56 49.4	+1.5
Z35A	Perchaven, San	2.88	175	Pn	Pn	15 56 53.7	+1.5
Z35A	Perchaven, San	2.88	175	P	Pn	15 56 53.6	+1.5
	baz=355						
HHAR	Hobbs	2.93	88		Pn	15 56 53.7	+1.0
KSU1	Kansas State U	2.98	14		Pn	15 56 54.0	+0.5
KSU1	Kansas State U	2.98	14	P	Pn	15 56 54.9	+1.4
	baz=195,SNR=8.5						
CBKS	Cedar Bluff	3.12	327		Pn	15 56 56.2	+0.8
W39A	Magazine	3.24	107		Pn	15 56 58.1	+1.2
W39A	Magazine	3.24	107	P	Pn	15 56 58.2	+1.3
	baz=290,SNR=12						
AMTX	Amarillo	3.61	250		Pn	15 57 04.0	+1.8
AMTX				IAmb_Lg		15 58 11.3	
	comp=Z,49nm,0.8s						
Z38A	Mt. Pleasant	3.63	143		Pn	15 57 03.2	+0.9
Z38A				IAmb_Lg		15 58 09.3	
	comp=Z,95nm,0.8s						
MIAR	Mount Ida	3.66	116		Pn	15 57 03.6	+0.8
MIAR				IAmb_Lg		15 58 11.9	
	comp=Z,65nm,0.8s						
MIAR	Mount Ida	3.66	116	P	Pn	15 57 04.3	+1.6
	baz=298,SNR=17						
S39A	Bolivar	3.70	65		Pn	15 57 03.6	+0.2
S39A				IAmb_Lg		15 58 07.9	
	comp=Z,57nm,0.8s						
S39A	Bolivar	3.70	65	P	Pn	15 57 04.5	+1.1
	baz=248,SNR=18						
U40A	Yellville	3.81	86		Pn	15 57 05.1	+0.3
U40A				IAmb_Lg		15 58 11.0	
	comp=Z,80nm,0.7s						
ABTX	Abilene, Hawle	3.97	206		Pn	15 57 07.9	+0.8
ABTX				IAmb_Lg		15 58 17.2	
	comp=Z,56nm,0.7s						
WHTX	Lake Whitney,	4.21	179		Pn	15 57 10.6	+0.2
X40A	Basin Creek Fa	4.23	113		Pn	15 57 11.2	+0.6
X40A				IAmb_Lg		15 58 25.2	
	comp=Z,90nm,0.7s						
MGMO	Mountain Grove	4.36	76		Pn	15 57 12.8	+0.5
MGMO				IAmb_Lg		15 58 25.9	
	comp=Z,52nm,0.8s						
WHAR	Wooly Hollow	4.39	101		Pn	15 57 13.8	+1.0
WHAR				IAmb_Lg		15 58 27.9	
	comp=Z,38nm,0.8s						
FCAR	Ozark Folk Cen	4.42	93	Pn	Pn	15 57 13.8	+0.6
FCAR				IAmb_Lg		15 58 28.9	
	comp=Z,42nm,0.8s						
WLAR	White Oak Lake	4.44	123	Pn	Pn	15 57 12.2	-1.3
WLAR				IAmb_Lg		15 58 30.9	
	comp=Z,49nm,0.9s						
237A	Washetta, Mont	4.44	160		Pn	15 57 13.8	+0.2
237A				IAmb_Lg		15 58 31.1	
	comp=Z,45nm,1.2s						
W41B	Gary Mavity, V	4.45	102	P	Pn	15 57 14.6	+1.0
	baz=285,SNR=6.7						
N33A	J Bar K, Exete	4.52	1	Pn	Pn	15 57 13.8	-0.8
N33A				IAmb_Lg		15 58 41.9	
	comp=Z,63nm,0.9s						
P38A	Dawn	4.67	42		Pn	15 57 16.4	-0.2
P38A				IAmb_Lg		15 58 36.4	
	comp=Z,56nm,0.8s						
R40A	Maddies Statio	4.71	62		Pn	15 57 17.8	+0.6
R40A				IAmb_Lg		15 58 37.7	
	comp=Z,32nm,0.7s						
R40A	Maddies Statio	4.71	62	P	Pn	15 57 18.0	+0.9
	baz=245,SNR=13						
MSTX	Muleshoe	4.82	244		Pn	15 57 19.2	+0.3
N35A	Tabor	4.88	17		Pn	15 57 20.5	+0.9
KSCO	Kaye Shedlock'	4.90	306		Pn	15 57 21.0	+1.1
KSCO				IAmb_Lg		15 58 53.4	
	comp=Z,55nm,0.8s						
LCAR	Lake Charles	5.19	90	Pn	Pn	15 57 23.1	-0.7
BGNE	Belgrade	5.21	355		Pn	15 57 24.5	+0.4
T42A	Van Buren	5.27	79		Pn	15 57 25.0	+0.2
T42A				IAmb_Lg		15 59 02.7	
	comp=Z,33nm,0.9s						
CCM	Cathedral Cave	5.37	68		Pn	15 57 25.8	-0.6
CCM				IAmb_Lg		15 59 01.5	
	comp=Z,46nm,0.9s						
435B	Jarrell	5.41	180	Pn	Pn	15 57 25.9	-1.0
435B				IAmb_Lg		15 59 01.6	
	comp=Z,44nm,0.7s						
P40A	Paris	5.48	51		Pn	15 57 28.4	+0.6
P40A				IAmb_Lg		15 59 06.3	
	comp=Z,59nm,0.8s						
T25A	Trinidad	5.58	282	Pn	Pn	15 57 30.2	+0.8
T25A				IAmb_Lg		15 59 09.3	
	comp=Z,53nm,0.9s						
N38A	Joes South For	5.70	35		Pn	15 57 30.3	-0.5
PBMO	Poplar Bluff	5.77	82	Pn	Pn	15 57 30.4	-1.5
PBMO				IAmb_Lg		15 59 10.6	
	comp=Z,36nm,0.7s						
L34A	Svendsen Farm,	5.82	9		Pn	15 57 30.9	-1.6
L34A				IAmb_Lg		15 59 14.6	
	comp=Z,62nm,0.8s						
OGNE	Ogallala	5.88	325		Pn	15 57 31.6	-1.8
OGNE				IAmb_Lg		15 59 19.0	
	comp=Z,35nm,0.7s						
FVM	French Village	5.97	71	Pn	Pn	15 57 32.9	-1.6
JCT	Junction City	6.02	199		Pn	15 57 33.5	-1.7
143A	Socs Landing,	6.17	123	IAmb_Lg		15 59 27.5	
	comp=Z,47nm,0.8s						
K31A	O'Neill	6.47	352	IAmb_Lg		15 59 45.9	
	comp=Z,52nm,0.8s						
SDCO	Great Sand Dun	6.54	286	Pn	Pn	15 57 41.8	-0.8
SDCO				IAmb_Lg		15 59 41.3	
	comp=Z,34nm,1.2s						
HALT	Halls	6.67	90	IAmb_Lg		15 59 55.3	
	comp=Z,51nm,0.8s						
S44A	Carbondale	6.81	75	Pn	Pn	15 57 47.1	+1.0
S44A				IAmb_Lg		15 59 44.0	
	comp=Z,43nm,0.7s						
SIUC	Southern Illin	6.85	75	Pn	Pn	15 57 46.7	+0.2
SIUC				IAmb_Lg		15 59 44.9	
	comp=Z,46nm,0.8s						
W45A	Hickory Valley	6.90	96	IAmb_Lg		15 59 46.0	
	comp=Z,43nm,0.8s						
N41A	Harden Midland	6.92	48	IAmb_Lg		15 59 46.0	
	comp=Z,50nm,0.7s						
Y45A	Yeager Farm, C	6.98	107	IAmb_Lg		15 59 53.4	
	comp=Z,28nm,0.7s						
P43A	Skaggs, Pawnee	7.22	59	IAmb_Lg		16 00 07.7	
	comp=Z,43nm,0.8s						
ISCO	Idaho Springs	7.30	302	Pn	Pn	15 57 52.3	-0.7
ECSD	EROS Data Cent	7.55	5	Pn	Pn	15 57 57.1	+0.9
L40A	Anamosa	7.64	38	Pn	Pn	15 57 58.0	+0.5
L40A				IAmb_Lg		16 00 25.5	
	comp=Z,29nm,0.8s						
PLAL	Pickwick Lake	7.82	96	IAmb_Lg		16 00 16.1	
	comp=Z,20nm,0.9s						
MNTX	Cornudas Mount	7.90	238	Pn	Pn	15 58 01.8	+0.7
OLIL	Olney	7.93	69	IAmb_Lg		16 00 23.2	
	comp=Z,23nm,0.8s						
O44A	Mansfield	8.17	58	IAmb_Lg		16 00 42.5	
	comp=Z,33nm,0.9s						
SUSD	Miller	8.29	353	IAmb_Lg		16 00 38.2	
	comp=Z,25nm,0.8s						
I37A	Lemond, Waseca	8.42	21	IAmb_Lg		16 00 46.7	
	comp=Z,28nm,0.7s						
TX32	Lajitas Array	8.57	219	Pn	Pn	15 58 10.3	-0.1
TXAR	Lajitas Array	8.57	219	Pn	Pn	15 58 09.0	-1.3
K22A	Casper	9.45	316	IAmb_Lg		16 01 20.4	
	comp=Z,28nm,1.0s						
F33A	5 Mile Ranch,	9.67	5	IAmb_Lg		16 01 25.4	
	comp=Z,14nm,0.9s						
SPMN	Marine on St.	9.70	20	IAmb_Lg		16 01 26.0	
	comp=Z,17nm,0.8s						

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*TUL **17** 16:01:57.1±1.7, 36°.75N±0°.01×98°.01W±0°.02, h7^{km}±3^{km}, ML2.8, mb_Lg2.4/16(NEIC), Error ellipse: s-maj=2.3km s-min=1.7km az=87.0*

NEIC 17 16:01:57.1±0.8**, 36°.73N**±0°.01×**97°.99W**±0°.02**, h10**^{km}±2^{km}**, Error ellipse: s-maj=2.4km s-min=1.8km az=108.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.16	42	Pg	Pg	16 02 00.8	+0.2
GC02				Sg	Sg	16 02 03.5	+0.4
OK032	Salt Plains WL	0.19	292	Pg	Pg	16 02 00.7	-0.5
OK032				Sg	Sg	16 02 03.2	-0.7
KAN14	Manchester OK	0.23	6		Pg	16 02 01.6	-0.1
KAN14				Sg	Sg	16 02 05.0	+0.1
CROK	Carrier	0.23	178		Pg	16 02 02.0	+0.2
CROK				Sg	Sg	16 02 05.5	+0.6
KAN17	Caldwell West	0.36	30	Pg	Pg	16 02 04.3	+0.1
KAN17				Sg	Sg	16 02 09.5	+0.4
KAN10	Anthony SW Sta	0.40	348	Pg	Pg	16 02 04.8	-0.1
KAN10				Sg	Sg	16 02 10.4	+0.1
KAN01	Argonia South	0.46	24		Pg	16 02 06.0	0.0
KAN01				Sg	Sg	16 02 12.6	+0.5
KAN08	Anthony NE Sta	0.49	2	Pg	Pg	16 02 06.7	-0.1
KAN08				Sg	Sg	16 02 13.4	+0.2
KAN16	Harper SW Stat	0.49	353	Pg	Pg	16 02 06.6	-0.1
KAN16				Sg	Sg	16 02 13.5	+0.2
KAN13	South Haven SW	0.50	56	Pg	Pg	16 02 05.8	-1.0
KAN13				Sg	Sg	16 02 13.8	+0.5
KAN09	Caldwell North	0.50	36	Pg	Pg	16 02 06.7	-0.2
KAN09				Sg	Sg	16 02 14.0	+0.5
KAN06	Argonia West S	0.53	12	Pg	Pg	16 02 07.3	0.0
KAN06				Sg	Sg	16 02 14.5	+0.2
KAN12	Harper NE Stat	0.56	359	Pg	Pg	16 02 07.9	-0.2
KAN12				Sg	Sg	16 02 15.6	+0.1
BLOK	Blackwell	0.62	87	Pg	Pg	16 02 09.4	+0.3
BLOK				Sg	Sg	16 02 17.8	+0.4
U32A	Winter Ranch,	0.89	247	Pg	Pg	16 02 13.2	-0.9
U32A				Sg	Sg	16 02 25.8	+0.1
OK029	Liberty Lake	1.03	155	Pg	Pg	16 02 16.9	0.0
OK029				Sg	Sb	16 02 30.6	+0.1
QUOK	Quay	1.18	118		Pb	16 02 19.5	0.0
QUOK				Sg	Sg	16 02 35.3	+0.3
T35A	Sooner Cattle	1.20	81		Pb	16 02 19.8	-0.1
T35A				Sg	Sb	16 02 35.6	+0.1
OK031	S. Brethren Rd	1.21	130		Pn	16 02 20.0	-0.1
OK031				Sg	Sn	16 02 36.5	-0.1
OK034	N. Norfolk Rd.	1.26	125		Pb	16 02 20.8	-0.1
OK034				Sg	Sn	16 02 37.7	0.0
OK030	Cody Creek RV	1.26	129		Pn	16 02 20.8	0.0
OK025	Westminster Rd	1.27	155	Pn	Pn	16 02 20.8	0.0
FNO	Franklin	1.55	162	Pn	Pn	16 02 23.3	-1.4
R32A	Long Quarter,	1.78	341		Pn	16 02 27.1	-0.9
W35A	Tecumseh	1.82	150		Pb	16 02 29.8	-0.6
TUL1	Leonard	1.96	114	Pn	Pn	16 02 29.1	-1.3
TUL1				IAmb_Lg		16 03 02.6	
	comp=Z,14nm,0.8s						
WMOK	Wichita Mounta	2.09	198	IAmb_Lg		16 03 06.4	

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              comp=Z,14nm,0.8s
X34A   Smith Ranch, M     2.13 176   Pn        Pn        16 02 31.8  -1.0
X34A                                 IAmb_Lg             16 03 06.1
              comp=Z,17nm,0.8s
CBKS   Cedar Bluff        2.50 327   Pn        Pn        16 02 37.9  +0.1
KSU1   Kansas State U     2.60  24   Pn        Pn        16 02 40.4  +1.2
LOOK   Love County        2.81 166   Pn        Pn        16 02 39.0  -3.1
U38A   Gravette           2.92  95   Pn        Pn        16 02 41.2  -2.3
U38A                                 IAmb_Lg             16 03 34.0
              comp=Z,6.0nm,0.8s
X37A   Clayton            3.02 134   Pn        Pn        16 02 43.1  -1.9
Z35A   Perchaven, San     3.45 170   Pn        Pn        16 02 50.5  -0.4
Z35A                                 IAmb_Lg             16 03 54.2
              comp=Z,15nm,1.1s
AMTX   Amarillo           3.52 239   Pn        Pn        16 02 52.1  +0.2
W39A   Magazine           3.74 113   IAmb_Lg             16 04 06.1
              comp=Z,14nm,0.8s
S39A   Bolivar            3.85  74             Pn        16 02 56.5  +0.1
U40A   Yellville          4.15  94             Pn        16 03 01.9  +1.4
MIAR   Mount Ida          4.21 120             Pn        16 02 60.0  -1.3
KSCO   Kaye Shedlock'     4.32 303   Pn        Pn        16 03 00.7  -2.2
P38A   Dawn               4.55  49             Pn        16 03 05.9  -0.1
MGMO   Mountain Grove     4.60  83   Pn        Pn        16 03 05.1  -1.7
X40A   Basin Creek Fa     4.76 117   Pn        Pn        16 03 05.3  -3.5
X40A                                 IAmb_Lg             16 04 31.0
              comp=Z,9.4nm,0.7s
R40A   Maddies Statio     4.81  69   Pn        Pn        16 03 06.5  -3.0
FCAR   Ozark Folk Cen     4.81  98   IAmb_Lg             16 04 31.5
              comp=Z,7.4nm,0.8s
WHAR   Wooly Hollow       4.84 106   Pn        Pn        16 03 09.8  -0.2
P40A   Paris              5.45  57   Pn        Pn        16 03 16.4  -2.0
CCM    Cathedral Cave     5.53  74   Pn        Pn        16 03 17.9  -1.6
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*NIC **17** 16:08:43.3±0.0, 36°.14N×30°.60E, h4^{km}±2^{km}, Ml3.6/5*
*ISK **17** 16:08:43.6, 36°.15N×30°.54E, h23^{km}, ML3.6/20*
*DDA **17** 16:08:44.2, 36°.15N×30°.49E, h34^{km}, MW3.8*
*IDC **17** 16:08:44.8±1.6, 36°.14N×30°.56E, h58^{km}±16^{km}, mb3.5/8, mb1 3.6/16, mb1mx3.4/59, mbtmp3.7/16, MS3.2/3, Ms1 3.2/3, ms1mx2.5/31, Error ellipse: s-maj=15.0km s-min=12.4km az=87.0*
ISC 17 16:08:44.3±0.8**, 36°.16N**±0°.03×**30°.52E**±0°.02**, h42**^{km}±9^{km}**, n100, σ2^s.18**/129**, mb3.8**/8**, 8C-3D, Turkey**

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Code   Station Name        Δ°  AZ°    Phase ID              Time       Res
                                     Op        ISC       h  m  s     ISC
AKUM   Antalya-Kumluc     0.21 319 i P         Pn        16 08 51.2  -0.7
AKUM                               i S         Sn        16 08 56.5  -0.8
AKUM                                 IAML                16 08 58.0
              comp=E,5µm,0.3s
AKUM                                 IAML                16 09 02.0
              comp=N,7µm,0.4s
KEMT   Kemer-ANTALYA      0.44   4   PG        Pn        16 08 53.5  -0.9
DEMR   Demre-Antalya      0.50 279   PG        Pn        16 08 54.9  -0.2
AKAS   Kas                0.74 276   PG        Pn        16 08 59.6  +1.1
AKAS                                 SG        Sn        16 09 10.5  +1.8
ANTB   Antalya            0.74   8   PG        Pn        16 08 58.0  -0.4
ANTB                                 SG        Sn        16 09 10.1  +1.5
KSL    Kastellorizon      0.76 269   P         Pn        16 08 59.6  +1.0
KSL                                  S         Sn        16 09 11.8  +2.9
KSL                                  AML       AML       16 09 17.4
              comp=N,4.5nm,0.5s
KSL                                  AML       AML       16 09 17.4
              comp=N,4.5nm,0.5s
KSL                                  AML       AML       16 09 18.5
              comp=N,2.4nm,0.5s
KSL                                  AML       AML       16 09 18.5
              comp=N,2.4nm,0.5s
ELL    Elmali             0.76 320   PG        Pn        16 08 59.6  +0.8
ELL                                  SG        Sn        16 09 11.3  +2.1
ELL    Elmali             0.76 320   P         Pn        16 08 59.3  +0.5
ELL                                  S         Sn        16 09 12.5  +3.2
KORT   Korkueli           0.85 351   PG        Pn        16 09 00.8  +0.8
KORT                                 SG        Sn        16 09 13.6  +2.3
FETY   Fethiye            1.25 293 i P         Pn        16 09 07.1  +1.8
FETY                               i S         Sn        16 09 22.8  +1.8
FETY                                 IAML                16 09 24.0
              comp=E,431nm,0.4s
FETY                                 IAML                16 09 26.0
              comp=N,404nm,0.5s
FETY   Fethiye            1.25 293   PN        Pn        16 09 07.1  +1.8
BCK    Bucak              1.30   3   PN        Pn        16 09 07.7  +1.6
CAEL   Denizli, Camel     1.36 315 i P         Pn        16 09 09.2  +2.3
CAEL                               i S         Sn        16 09 28.1  +4.2
CAEL                                 IAML                16 09 44.0
              comp=E,1µm,0.7s
CAEL                                 IAML                16 09 53.0
              comp=N,706nm,1.0s
GAZI   Gazipasa           1.46  87 i P         Pn        16 09 08.1  -0.1
GAZI   Gazipasa           1.46  87   PN        Pn        16 09 08.6  +0.5
BRDR   BURDUR-Merkez      1.57 347 i P         Pn        16 09 12.2  +2.3
BRDR                               i S         Sn        16 09 34.2  +5.1
BRDR                                 IAML                16 09 44.0
              comp=E,260nm,0.9s
BRDR                                 IAML                16 09 45.0
              comp=N,189nm,0.6s
SEDI   Konya, Seydise     1.63  37 i P         Pn        16 09 12.3  +1.7
SEDI                               i S         Sn        16 09 32.4  +2.0
SEDI                                 IAML                16 09 34.0
              comp=N,303nm,0.6s
SEDI                                 IAML                16 09 36.0
              comp=E,482nm,1.1s
SEYD   Seydisehir-KON     1.63  40   PN        Pn        16 09 12.2  +1.5
DALY   Dalyan (Mula)      1.64 294   PN        Pn        16 09 12.4  +1.8
ISP    Isparta            1.66   0   PN        Pn        16 09 12.6  +1.6
HDMB   Hadim              1.78  63   PN        Pn        16 09 14.3  +1.6
BASM   Basmaki-Afyon      1.79 348   PN        Pn        16 09 14.3  +1.4
TAVA   DENIZLI_Tavas      1.83 316 i P         Pn        16 09 15.1  +1.8
TAVA                               i S         Sn        16 09 36.6  +1.2
TAVA                                 IAML                16 09 43.0
              comp=N,168nm,0.5s
TAVA                                 IAML                16 09 48.0
              comp=E,217nm,0.9s
BAGO   Egridir - ISPA     1.84   7 i P         Pn        16 09 15.3  +1.8
BAGO                               i S         Sn        16 09 38.3  +2.7
AKMS   Akamas             1.87 127   P         Pn        16 09 14.7  +0.9
AKMS                                 S         Sn        16 09 39.6  +3.4
AKMS                                 AML       AML       16 09 50.9
              comp=E,1.9nm,1.0s
AKMS                                 AML       AML       16 09 50.9
              comp=E,1.9nm,1.0s
AKMS                                 AML       AML       16 09 51.5
              comp=E,1.6nm,0.7s
AKMS                                 AML       AML       16 09 51.5
              comp=E,1.6nm,0.7s
TURN   Turunc             1.93 289 i P         Pn        16 09 16.0  +1.4
TURN                               i S         Sn        16 09 38.2  +0.5
TURN   Turunc             1.93 289   PN        Pn        16 09 16.3  +1.7
ARG    Arkhangelos        1.94 272   PN        Pn        16 09 16.2  +1.5
ALFC   Alefka             1.97 120   P         Pn        16 09 16.0  +0.7
ALFC                                 AML       AML       16 09 53.1
              comp=E,1.9nm,0.4s
ALFC                                 AML       AML       16 09 54.2
              comp=E,1.4nm,0.7s
ERMK   Ermenek            1.99  75 i P         Pn        16 09 17.6  +1.9
ERMK                               i S         Sn        16 09 45.0  +5.5
ERMK                                 IAML                16 09 48.0
              comp=E,348nm,0.7s
ERMK                                 IAML                16 09 49.0
              comp=N,489nm,0.4s
MULA   Mugla, Merkez-     2.08 302 i P         Pn        16 09 19.7  +3.0
MULA                               i S         Sn        16 09 41.9  +0.5
MULA                                 IAML                16 09 52.0
              comp=E,302nm,0.9s
MULA                                 IAML                16 10 12.0
              comp=N,147nm,0.8s
KZIL   AFYON_Kizioren     2.11 352 i P         Pn        16 09 19.2  +2.0
KZIL                               i S         Sn        16 09 46.0  +3.6
KZIL                                 IAML                16 09 58.0
              comp=E,75nm,1.2s
KZIL                                 IAML                16 10 00.0
              comp=N,86nm,0.8s
DOGA   KONYA_Doganhis     2.15  25 i P         Pn        16 09 20.2  +2.4
DOGA                               i S         Sn        16 09 45.4  +2.1
DOGA                                 IAML                16 09 50.0
              comp=N,368nm,0.6s
DOGA                                 IAML                16 09 51.0
              comp=E,287nm,1.3s
NATA   Nata               2.17 129   P         Pn        16 09 19.8  +1.8
NATA                                 AML       AML       16 10 01.5
              comp=E,3.9nm,0.9s
NATA                                 AML       AML       16 10 03.6
              comp=E,3.1nm,1.6s
YVAC   Isparta, Yalva     2.18  15 i P         Pn        16 09 20.4  +2.1
YVAC                               i S         Sn        16 09 46.8  +2.7
KMER   Konya-Meram        2.18  42 i P         Pn        16 09 20.5  +2.3
KMER                               i S         Sn        16 09 46.8  +2.7
KMER                                 IAML                16 09 50.0
              comp=E,110nm,0.7s
KMER                                 IAML                16 09 57.0
              comp=N,91nm,0.5s
KKBE   Karaman, Kazim     2.21  61 i P         Pn        16 09 21.3  +2.6
KKBE                               i S         Sn        16 09 47.5  +2.7
KKBE                                 IAML                16 09 49.0
              comp=E,200nm,0.8s
KKBE                                 IAML                16 09 50.0
              comp=N,170nm,0.5s
KHL    Karahalli          2.30 340   PN        Pn        16 09 21.5  +1.7
KONT   Konya--Tatoy       2.31  39 i P         Pn        16 09 22.0  +2.1
KONT                                 IAML                16 09 57.0
              comp=E,93nm,1.3s
KONT                                 IAML                16 10 00.0
              comp=N,75nm,0.8s
SHUT   Suhut-Afyon        2.39   1   PN        Pn        16 09 22.9  +1.9
DAT    Datca              2.44 284 i P         Pn        16 09 23.6  +1.9
DAT                                i S         Sn        16 09 50.7  +0.4
DAT                                  IAML                16 09 54.0
              comp=N,183nm,0.2s
DAT                                  IAML                16 09 54.0
              comp=E,207nm,0.2s
DAT    Datca              2.44 284   PN        Pn        16 09 23.0  +1.3
GULN   MERSIN_Gulnar      2.45  89 i P         Pn        16 09 24.2  +2.5
GULN                                 IAML                16 10 04.0
              comp=E,109nm,0.7s
GULN                                 IAML                16 10 05.0
              comp=N,83nm,0.6s
MLSB   Milas              2.48 298   PN        Pn        16 09 24.2  +2.0
ATHAL  Athalassa          2.56 113   S         Sn        16 09 57.1  +4.0
CSS    Mathiatis          2.59 117   P         Pn        16 09 25.9  +2.2
AYDN   Tasoluk            2.59 306 i P         Pn        16 09 25.9  +2.1
AYDN                               i S         Sn        16 09 54.0   0.0
ASGA   Asgata             2.62 121   P         Pn        16 09 25.6  +1.5
ASGA                                 S         Sn        16 09 58.6  +4.0
ASGA                                 AML       AML       16 10 08.8
              comp=N,0.6nm,0.9s
ASGA                                 AML       AML       16 10 08.8
              comp=N,0.6nm,0.9s
ASGA                                 AML       AML       16 10 09.8
              comp=N,0.6nm,0.6s
ASGA                                 AML       AML       16 10 09.8
              comp=N,0.6nm,0.6s
KDHN   Kadinhani          2.68  28 i P         Pn        16 09 26.3  +1.3
KDHN                               i S         Sn        16 09 55.8  -0.5
OSC1   CSNet OBS 1        2.73 167   P         Pn        16 09 27.9  +2.3
NIS1   Nisyros Isl.       2.73 280   PN        Pn        16 09 27.9  +2.3
BODT   Bodrum             2.73 290   PN        Pn        16 09 27.7  +2.0
AYDB   Zeytinkoy-Aydi     2.75 311   PN        Pn        16 09 27.3  +1.2
YKAV   Yalikavak-Bodr     2.77 291   PN        Pn        16 09 27.8  +1.6
KULA   Kula-Manisa        2.78 328   PN        Pn        16 09 27.4  +1.1
MVOU   Mavrovouni         2.78 113   S         Sn        16 10 02.4  +3.7
USAK   Uak-Merkez         2.81 335 i P         Pn        16 09 28.1  +1.3
ALIN   Konya, Altinte     2.85  41 i P         Pn        16 09 25.3  -2.1
ALIN                                 IAML                16 10 14.0
              comp=E,39nm,0.9s
ALIN                                 IAML                16 10 29.0
              comp=N,24nm,0.8s
KOSK   Kos Island         2.91 283   PN        Pn        16 09 30.4  +2.3
DDIM   Aydin, Didim       2.93 297 i P         Pn        16 09 29.3  +1.0
GCAM   G?zelcaml?         3.05 301 i P         Pn        16 09 31.2  +1.3
GCAM   G?zelcaml?         3.05 301   PN        Pn        16 09 31.4  +1.5
AUKIR  Kırka- Seyitga     3.11   0 i P         Pn        16 09 33.1  +2.1
KERG   Konya-Eregli       3.15  66 i P         Pn        16 09 33.8  +2.2
DEMI   Demirci            3.21 334 i P         Pn        16 09 34.6  +2.3
SGAZ   Eskisehir, Sey     3.37   4 i P         Pn        16 09 36.4  +1.9
ANDZ   Kutahya, Merke     3.38 352 i P         Pn        16 09 36.2  +1.6
KKUL   Konya-Kulu         3.56  32 i P         Pn        16 09 39.2  +2.1
DURS   Dursunbey          3.79 335 i P         Pn        16 09 42.2  +1.9
STEP   BALIKESIR_Sava     3.90 326 i P         Pn        16 09 45.2  +3.5
ZEDA   zmir-Bergama       3.91 317 i P         Pn        16 09 42.6  +0.8
ULDT   Uludag             4.12 345 i P         Pn        16 09 45.7  +0.8
BRTR   Keskin Array B     4.33  34   P         Pn        16 09 48.8  +1.0
              comp=N,1.2nm,0.3s,baz=229,slow=15,SNR=26
BRTR                                 S         Sn        16 10 37.2  +0.2
              comp=N,1.2nm,0.3s,baz=203,slow=28,SNR=6.9
BRTR                                 LR        LR        16 11 58.6
              comp=N,116nm,19.7s,baz=219,slow=45
IDI    Anoyia             4.66 261   P         Pn        16 09 53.2  +1.0
              comp=N,4.5nm,0.3s,baz=91,slow=15,SNR=56
IDI                                  S         Sn        16 10 42.8  -2.3
              comp=N,6.7nm,0.3s,baz=7.3,slow=14,SNR=3.0
MMAI   Mount Meron Ar     5.11 127   P         Pn        16 09 59.5  +1.2
              comp=N,5.3nm,0.3s,baz=310,slow=12,SNR=21
MMAI                                 S         Sn        16 10 54.9  -1.3
              comp=N,6.8nm,0.3s,baz=197,slow=11,SNR=7.2
ASF    Jabal al Asfar     6.62 125   P         Pn        16 10 20.1  +1.0
              comp=N,0.2nm,0.3s,baz=304,slow=18,SNR=1.6
ASF                                  S         Sn        16 11 30.5  -2.8
              comp=N,0.2nm,0.3s,baz=62,slow=8.7,SNR=1.6
EIL    Elat               7.47 149   P         Pn        16 10 30.8  +0.1
              comp=N,1.3nm,0.3s,baz=345,slow=16,SNR=16
EIL                                  S         Sn        16 11 48.5  -5.6
              comp=N,0.9nm,0.3s,baz=297,slow=22,SNR=7.6
VTS    Vitosha            8.56 321 ⇑P          Pn        16 10 42.7  -3.1
HARR   Harsova            8.74 348 ⇑P          Pn        16 10 46.8  -1.3
TPGR   Topolog            8.83 350 ⇑P          Pn        16 10 52.3  +2.9
TSSL   Sulina             9.01 356 ⇓P          Pn        16 10 49.3  -2.4
VLAD   Vladila            9.12 331 ⇓P          Pn        16 10 55.7  +2.4
CFR    Carcaliu           9.19 349 ⇑P          Pn        16 10 57.4  +3.2
TUDR                      9.67 348 ⇑P          Pn        16 10 54.0  -6.7
BISRR  Bisoca             9.81 344 ⇑P          Pn        16 11 07.3  +4.6
MLR    Muntele Rosu       9.94 341 ⇑P          Pn        16 11 08.8  +4.2
VRI    Vrincioaia        10.11 345 ⇑P          Pn        16 11 09.5  +2.7
PLOR   Plostina          10.11 344 ⇓P          Pn        16 11 09.8  +3.0
KBZ    Khabaz            12.13  48   P         Pn        16 11 36.1  +1.7
              comp=N,0.1nm,0.3s,baz=270,slow=9.1,SNR=2.4
AKASG  Malin Array Be    14.56 357   P         Pn        16 12 07.5   0.0
              comp=N,0.3nm,0.3s,baz=166,slow=10,SNR=1.6
GERES  GERESS Array B    17.68 321   P         P         16 12 48.6  +0.7
              baz=146,slow=9.7,SNR=3.7
GERES                                S         Sn        16 16 01.3  -2.0
              comp=N,0.5nm,0.3s,baz=73,slow=28,SNR=2.5
AKTO   Aktyubinsk        24.40  46   P         P         16 13 57.2  -1.3
              comp=N,1.0nm,0.4s,baz=223,slow=7.2,SNR=6.5
FINES  FINESS Array B    25.46 355   P         P         16 14 06.8  -1.2
              comp=N,1.8nm,0.4s,baz=158,slow=11,SNR=17
ARCES  ARCESS Array B    33.54 357   P         P         16 15 18.1  -1.5
              comp=N,3.4nm,0.8s,baz=169,slow=9.8,SNR=5.6
TORD   Torodi Ar. Bea    34.57 236   P         P         16 15 27.2  -1.9
              comp=N,0.2nm,0.6s,baz=29,slow=6.6,SNR=1.6
KURBB  Kurchatov Arra    37.09  52   P         P         16 15 49.2  -1.1
              comp=N,1.3nm,0.6s,baz=276,slow=9.0,SNR=16
MKAR   Makanchi Array    39.56  58   P         P         16 16 10.2  -1.1
              comp=N,0.6nm,0.5s,baz=268,slow=8.4,SNR=9.4
MKAR                                 PcP       PcP       16 18 16.8  -1.2
              comp=N,0.4nm,0.9s,baz=274,slow=4.0,SNR=1.6
ZALV   Zalesovo Beam     41.15  47   P         P         16 16 22.9  -1.3
              comp=N,1.2nm,0.5s,baz=274,slow=9.4,SNR=6.5
SONM   Songino Array     55.45  52   P         P         16 18 13.8  -0.9
              comp=N,0.3nm,0.5s,baz=291,slow=8.2,SNR=2.6
SONM                                 LR        LR        16 42 55.4
              comp=N,63nm,19.9s,baz=132,slow=37
KSRS   Korea Array       74.17  55   LR        LR        16 54 08.8
              comp=N,11nm,19.4s,baz=315,slow=37
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*NNC **17** 16:25:37.7±8.6, 37°.60N×73°.88E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=70.0km s-min=46.3km az=142.0*
*IDC **17** 16:25:48.0±1.0, 38°.05N×72°.64E, h0^{km}, mb3.7/11, mb1 3.9/18, mb1mx3.7/53, mbtmp3.7/18, ML3.2/7, MS3.0/1, Ms1 3.0/1, ms1mx2.3/43, Error ellipse: s-maj=19.2km s-min=15.9km az=156.0*
ISC 17 16:25:59.2±0.7**, 38°.03N**±0°.07×**73°.07E**±0°.09**, h127**^{km}**, n33, σ3^s.36**/22**, mb3.5**/11**, 3C-4D, Tajikistan-Xinjiang border region**

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Code   Station Name        Δ°  AZ°    Phase ID              Time       Res
                                     Op        ISC       h  m  s     ISC
CEP    Cherat             4.30 193   P         Pn        16 27 01.3  -1.8
AAK    Ala-Archa          4.73  13   Pn        Pn        16 27 04.5  -4.2
              1.7nm,0.3s,baz=180,slow=5.7,SNR=24
AAK                                  Sn        Sn        16 27 59.2  -3.5
              0.7nm,0.3s,baz=157,slow=23,SNR=2.0
AAK    Ala-Archa          4.73  13 ⇓Pg         Pn        16 27 12.8  +4.1
              19nm,0.7s
AAK                                ⇑Lg         Lg        16 28 20.5
              51nm,0.8s
TKM2   Tokmak 2           5.25  21 ⇓Pg         Pn        16 27 12.1  -3.7
              8.1nm,0.7s
TKM2                               ⇓Lg         Lg        16 28 36.0
              15nm,0.8s
THW    Thamme Wali        5.34 192   P         Pn        16 27 12.5  -4.4
KK08   Karatay Array      5.43 340 ⇑Pn         Pn        16 27 10.0  -8.0
              17nm,0.7s,baz=149,slow=12
KK08                               ⇑Sn         Sn        16 28 18.8  -0.6
              22nm,0.8s,baz=152,slow=25
MKAR   Makanchi Array    11.09  35   Pn        Pn        16 28 33.0  -1.0
              0.1nm,0.3s,baz=223,slow=14,SNR=4.7
GEYT   Alibeck           11.80 274   Pn        Pn        16 28 33.7   -10
              0.3nm,0.3s,baz=191,slow=18,SNR=1.5
PYUN   Piuthan           12.93 137  eP         Pn        16 28 51.8  -6.7
DANN   Dangsing          13.16 134  eP         Pn        16 28 59.2  -2.4
KURBB  Kurchatov Arra    13.17  15   Pn        Pn        16 28 55.8  -5.5
              0.0nm,0.3s,baz=205,slow=12,SNR=7.8
KURBB                                Lg        Lg        16 32 45.4
              0.0nm,0.3s,baz=205,slow=29,SNR=4.4
KOLN   Koldanda          13.52 136  eP         Pn        16 28 54.5   -12
GKN    Gorkha            13.93 133  eP         Pn        16 29 07.7  -3.6
KKN    Kakani            14.46 131  eP         Pn        16 29 15.8  -2.4
AB31   Akbulak array     14.67 324   P         Pn        16 29 11.3  -9.1
              2.6nm,0.7s,baz=135,slow=13,SNR=23
PKIN   Phulchoki         14.69 132  eP         Pn        16 29 16.5  -4.6
PKI    Pulchoki          14.70 132  eP         Pn        16 29 17.0  -4.3
BVAR   Borovoye Array    15.11 354   Pn        Pn        16 29 20.6  -5.2
              0.1nm,0.3s,baz=181,slow=13,SNR=2.9
AKTO   Aktyubinsk        16.39 324   Pn        Pn        16 29 35.5  -6.2
              0.1nm,0.3s,baz=155,slow=10,SNR=6.1
AKTO   Aktyubinsk        16.39 324 ⇓P          Pn        16 29 40.0  -1.7
              17nm,1.2s
ZALV   Zalesovo Beam     17.85  23   P         P         16 29 58.2   0.0
              0.4nm,0.3s,baz=214,slow=10.0,SNR=14
KBZ    Khabaz            23.43 294   P         P         16 30 57.5  +0.7
              1.4nm,0.7s,baz=69,slow=15,SNR=2.3
SONM   Songino Array     26.11  57   P         P         16 31 26.9  +5.7
              1.2nm,0.8s,baz=253,slow=11,SNR=8.7
ASF    Jabal al Asfar    30.03 270   P         P         16 31 56.0  -0.2
              2.6nm,1.0s,baz=27,slow=6.8,SNR=1.4
AKASG  Malin Array Be    33.31 307   P         P         16 32 24.2  -0.4
              0.2nm,0.3s,baz=78,slow=5.8,SNR=2.6
FINES  FINESS Array B    37.16 324   P         P         16 32 58.4  +0.9
              1.5nm,0.8s,baz=107,slow=9.0,SNR=5.4
VRAC   Vranov            41.47 305   LR        LR        16 54 01.8
              comp=Z,22nm,21.5s,baz=102,slow=41
NOA    NORSAR Array B    44.17 322   P         P         16 33 56.1  +1.1
              0.8nm,0.7s,baz=94,slow=8.0,SNR=3.0
TORD   Torodi Ar. Bea    67.39 269   P         P         16 36 41.7  +0.5
              0.3nm,0.4s,baz=46,slow=6.3,SNR=2.3
ILAR   Eielson Array     72.85  17   P         P         16 37 18.3  +4.6
              0.3nm,0.8s,baz=330,slow=5.2,SNR=2.5
YKA    Yellowknife Ar    79.63   4   P         P         16 37 55.8  +3.8
              0.4nm,0.6s,baz=348,slow=5.2,SNR=2.2
WRA    Warramunga Arr    81.43 123   P         P         16 38 09.1  +6.8
              0.4nm,0.8s,baz=315,slow=3.8,SNR=5.5
ASAR   Alice Springs     83.81 126   P         P         16 38 21.4  +6.9
              0.6nm,1.1s,baz=306,slow=5.2,SNR=1.7
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*IDC **17** 16:42:51.5±1.2, 8°.29N×92°.07E, h0^{km}, mb3.8/7, mb1 3.9/9, mb1mx3.5/60, mbtmp3.8/9, ML3.7/2, MS2.8/2, Ms1 2.8/2, ms1mx2.4/31, Error ellipse: s-maj=37.6km s-min=18.8km az=59.0*
*NEIC **17** 16:42:57.0±0.9, 8°.3N±0°.1×92°.1E±0°.1, h31^{km}±6^{km}, mb4.2/14, Error ellipse: s-maj=16.6km s-min=15.0km az=119.0*
ISC 17 16:42:55.4±0.9**, 8°.3N**±0°.1×**92°.07E**±0°.10**, h24**^{km}**, n35, σ0^s.59**/29**, mb4.0**/14**, Nicobar Islands region**

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Code   Station Name        Δ°  AZ°    Phase ID              Time       Res
                                     Op        ISC       h  m  s     ISC
PBA    Port Blair         3.42  11   Pn        Pn        16 43 47.3  +0.1
DGPR   DIGLIPUR           4.94  10  eP         Pn        16 44 08.4  +0.2
DGPR                                eS         Sn        16 44 50.6   -14
DGPR                                 IAML                16 45 02.2
              comp=E,16nm,0.3s
PALK   Pallekele         11.31 266   Pn        Pn        16 45 36.3  +0.6
              comp=E,0.2nm,0.3s,baz=179,slow=23,SNR=1.2
PALK                                 Sn        Sn        16 47 31.2   -10
              comp=E,2.1nm,0.3s,baz=272,slow=23,SNR=12
PALK                                 LR        LR        16 49 34.3
              comp=E,39nm,20.0s,baz=186,slow=36
CMAR   Chiang Mai Arr    12.12  33   Pn        Pn        16 45 47.4  +0.7
              comp=E,0.3nm,0.3s,baz=230,slow=14,SNR=21
CHTO   Chiang Mai        12.42  32   Pn        Pn        16 45 50.8  +0.1
UBPT   Khong Chiam       14.84  61   P         P         16 46 29.9  +0.4
SLVN   Son La            17.29  40             P         16 46 57.4  +0.7
LSA    Lhasa             21.33 358   P         P         16 47 41.5  +0.3
LSA                                  IAmb      IAmb      16 47 45.0
              comp=Z,5.4nm,0.8s
LEM    Lembang           21.57 134   LR        LR        16 57 13.5
              comp=Z,24nm,18.9s,baz=295,slow=40
H08S3  Diego Garcia H    25.12 232   T         T         17 14 47.7
              baz=50,slow=76,SNR=129
H08S2  Diego Garcia H    25.12 231   T         T         17 14 49.2
              baz=50,slow=76,SNR=137
H08S1  Diego Carcia H    25.14 232   T         T         17 14 38.3
              baz=50,slow=76,SNR=97
LUWI   Luwuk             31.97 105   P         P         16 49 20.1  +0.2
BTK    Batken            36.90 332   P         P         16 50 02.2  -0.2
BTK                                  IAmb      IAmb      16 50 15.4
              comp=Z,6.0nm,1.0s
AAK    Ala-Archa         37.56 339   P         P         16 50 06.2  -1.8
              comp=Z,0.5nm,0.4s,baz=180,slow=7.1,SNR=2.9
AAK    Ala-Archa         37.56 339   IAmb      IAmb      16 50 20.0
              comp=Z,4.6nm,1.2s
MK31   Makanchi Array    39.28 349   P         P         16 50 21.9  -0.4
MK31                                 IAmb      IAmb      16 50 22.8
              comp=Z,2.1nm,0.7s
MKAR   Makanchi Array    39.28 349   P         P         16 50 22.1  -0.2
              comp=Z,1.8nm,0.5s,baz=166,slow=9.0,SNR=21
MKAR   Makanchi Array    39.28 349   P         P         16 50 21.6  -0.6
MAKZ   Makanchi          39.35 349   P         P         16 50 22.6  -0.3
MAKZ                                 IAmb      IAmb      16 50 28.4
              comp=Z,4.0nm,1.1s
KKAR   Karatay Array     39.51 335   P         P         16 50 24.7  +0.5
SONM   Songino Array     41.25  15   P         P         16 50 38.6  -0.1
              comp=Z,1.0nm,0.7s,baz=195,slow=7.6,SNR=9.1
SONM   Songino Array     41.25  15   P         P         16 50 38.3  -0.4
KURBB  Kurchatov Arra    43.68 348   P         P         16 50 58.0  -0.3
              comp=Z,1.3nm,0.7s,baz=174,slow=7.5,SNR=13
KURK   Kurchatov         43.75 348   P         P         16 50 58.0  -0.8
KURK   Kurchatov         43.75 348   IAmb      IAmb      16 51 22.8
              comp=Z,5.8nm,1.6s
ZALV   Zalesovo Beam     45.92 354   P         P         16 51 15.2  -0.8
              comp=Z,1.2nm,0.4s,baz=181,slow=8.9,SNR=7.9
ABKAR  Akbulak array     48.91 332   P         P         16 51 40.0  +0.7
ABKAR  Akbulak array     48.91 332   P         P         16 51 39.4   0.0
ABKAR                                IAmb      IAmb      16 51 50.5
              comp=Z,1.3nm,0.8s
WB0    Warramunga Arr    50.13 124   P         P         16 51 48.8  -0.3
WRA    Warramunga Arr    50.17 125   P         P         16 51 48.9  -0.6
              comp=Z,0.3nm,0.3s,baz=291,slow=9.0,SNR=7.0
WB2    Warramunga Arr    50.18 125   P         P         16 51 49.0  -0.5
WB2                                  IAmb      IAmb      16 51 57.1
              comp=Z,5.5nm,1.3s
WR0    Warramunga Arr    50.34 124   P         P         16 51 50.5  -0.3
WR0                                  IAmb      IAmb      16 51 50.7
              comp=Z,4.3nm,1.1s
ASAR   Alice Springs     51.75 129   P         P         16 52 01.4  +0.1
              comp=Z,0.2nm,0.3s,baz=303,slow=7.9,SNR=16
TIXI   Tiksi             67.25  12   P         P         16 53 46.6  -0.8
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*NEIC **17** 16:58:40.3±0.7, 24°.5S±0°.2×179°.9E±0°.2, h496^{km}±27^{km}, mb4.2/10, Error ellipse: s-maj=35.5km s-min=22.3km az=177.0*
*IDC **17** 16:58:47.4±26.0, 23°.83S×178°.85E, h507^{km}±351^{km}, mb3.0/3, mb1 3.1/4, mb1mx2.9/20, mbtmp3.8/4, MS3.1/1, Ms1 3.1/1, ms1mx2.3/9, Error ellipse: s-maj=848.3km s-min=90.7km az=94.0*
ISC 17 16:58:40.6±1.0**, 24°.4S**±0°.2×**179°.9E**±0°.1**, h500**^{km}**, n16, σ0^s.59**/14**, mb4.2**/8**, South of Fiji Islands**

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Code   Station Name        Δ°  AZ°    Phase ID              Time       Res
                                     Op        ISC       h  m  s     ISC
MSVF   Nonsavu            6.83 345   P         P         17 00 25.2   0.0
              1.1nm,0.3s,baz=225,slow=13,SNR=15
MSVF   Nonsavu            6.83 345   P         P         17 00 24.9  -0.3
NIUE   Niue              10.87  63             P         17 01 07.4  +0.2
RAR    Rarotonga         19.05  85   LR        LR        17 09 22.6
              comp=Z,58nm,20.0s,baz=87,slow=32
CTAO   Charters Tower    31.34 271   P         P         17 04 20.7  +1.0
CTAO                                 IAmb      IAmb      17 04 44.6
              comp=Z,9.3nm,1.2s
```

STKA	**Stephens Creek**	**34.42**	**249**	P	**P**	**17 04 46.0**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=95,slow=8.6,SNR=6.7						
STKA	**Stephens Creek**	**34.42**	**249**	IAmb	IAmb	17 04 59.6	
	comp=Z,4.1nm,1.9s						
BBOO	**Buckleboo**	**39.13**	**247**	P	**P**	**17 05 23.9**	**-0.6**
BBOO				IAmb	IAmb	17 06 17.6	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**41.82**	**261**	P	**P**	**17 05 46.2**	**0.0**
ASAR	**Alice Springs**	**41.82**	**261**	P	**P**	**17 05 46.0**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=93,slow=6.9,SNR=22						
WB2	**Warramunga Arr**	**42.23**	**267**	P	**P**	**17 05 49.0**	**-0.4**
WB2				IAmb	IAmb	17 05 49.5	
	comp=Z,10nm,1.3s						
WB0	**Warramunga Arr**	**42.23**	**267**	P	**P**	**17 05 48.6**	**-0.9**
WB0				IAmb	IAmb	17 05 50.5	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**42.24**	**267**	P	**P**	**17 05 49.0**	**-0.6**
	comp=Z,1.2nm,0.4s,baz=101,slow=8.3,SNR=38						
FORT	**Forrest**	**46.02**	**250**	P	**P**	**17 06 17.8**	**-0.9**
KNRA	**Kununurra**	**48.55**	**270**	P	**P**	**17 06 37.7**	**-0.2**
QSPA	**South Pole Qui**	**65.70**	**180**	P	**P**	**17 08 34.9**	**0.0**
QSPA				IAmb	IAmb	17 10 15.6	
	comp=Z,12nm,1.8s						

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*TUL **17** 17:11:29.1±1.3, 36°.50N±0°.02×98°.72W±0°.04, h5^{km}±7^{km}, ML2.9, mb_Lg2.6/18(NEIC), Error ellipse: s-maj=4.8km s-min=2.1km az=70.0*

NEIC 17 17:11:28.6±1.1**, 36°.49N**±0°.03×**98°.72W**±0°.03**, h5**^{km}±2^{km}**, Error ellipse: s-maj=4.5km s-min=4.2km az=105.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.25**	**245**	Pg	Pg	17 11 34.3	+0.8
OK032	**Salt Plains WL**	**0.52**	**52**	Pg	Pg	17 11 38.7	+0.1
OK032				Sg	Sg	17 11 46.6	+1.3
CROK	**Carrier**	**0.59**	**88**		Pg	17 11 40.7	+0.6
KAN14	**Manchester OK**	**0.77**	**52**		Pg	17 11 42.5	-0.9
KAN14				Sg	Sg	17 11 54.2	+0.8
GC02	**Grant County #**	**0.78**	**62**	Pg	Pg	17 11 44.1	+0.5
GC02				Sg	Sg	17 11 54.4	+0.5
KAN10	**Anthony SW Sta**	**0.81**	**38**	Pg	Pg	17 11 44.4	+0.2
KAN10				Sg	Sg	17 11 54.9	+0.2
KAN16	**Harper SW Stat**	**0.91**	**35**	Pg	Pg	17 11 46.1	+0.1
KAN05	**Bluff City Nor**	**0.92**	**47**	Pg	Pg	17 11 45.6	-0.7
KAN17	**Caldwell West**	**0.95**	**54**		Pg	17 11 46.5	-0.4
KAN08	**Anthony NE Sta**	**0.95**	**39**	Pg	Pg	17 11 47.0	+0.1
KAN12	**Harper NE Stat**	**1.00**	**35**	Pg	Pg	17 11 47.7	0.0
KAN01	**Argonia South**	**1.02**	**49**		Pg	17 11 48.0	-0.2
KAN06	**Argonia West S**	**1.03**	**42**	Pg	Pg	17 11 48.3	0.0
KAN09	**Caldwell North**	**1.10**	**53**	Pg	Pg	17 11 49.3	-0.3
KAN13	**South Haven SW**	**1.13**	**62**		Pg	17 11 50.3	0.0
BCOK	**Bluff Creek, N**	**1.22**	**132**	Pg	Pg	17 11 51.7	-0.3
OK029	**Liberty Lake**	**1.23**	**123**	Pg	Pg	17 11 51.9	-0.4
BLOK	**Blackwell**	**1.24**	**77**		Pg	17 11 52.0	-0.4
OK025	**Westminster Rd**	**1.44**	**128**	Pn	Pn	17 11 55.0	-0.4
OKCFA	**Oklahoma City**	**1.48**	**136**	Pn	Pn	17 11 55.9	-0.1
OK031	**S. Brethren Rd**	**1.61**	**109**	Pn	Pn	17 11 57.3	-0.4
FNO	**Franklin**	**1.63**	**138**	Pn	Pb	17 11 58.8	-0.4
QUOK	**Quay**	**1.66**	**100**		Pn	17 11 57.3	-1.1
OK030	**Cody Creek RV**	**1.66**	**109**		Pn	17 11 57.0	-1.4
OK034	**N. Norfolk Rd.**	**1.69**	**106**		Pn	17 11 58.3	-0.5
T35A	**Sooner Cattle**	**1.83**	**76**		Pb	17 12 02.1	-0.4
R32A	**Long Quarter,**	**1.93**	**0**	Pn	Pn	17 12 01.8	-0.3
X34A	**Smith Ranch, M**	**2.02**	**159**		Pb	17 12 05.3	-0.5
TUL1	**Leonard**	**2.44**	**103**	IAmb_Lg		17 12 49.8	
	comp=Z,18nm,0.8s						
CBKS	**Cedar Bluff**	**2.46**	**341**		Pb	17 12 12.7	-0.7
LOOK	**Love County**	**2.79**	**153**	IAmb_Lg		17 12 59.4	
	comp=Z,17nm,0.8s						
KSU1	**Kansas State U**	**3.10**	**32**	IAmb_Lg		17 13 14.6	
	comp=Z,17nm,1.0s						
X37A	**Clayton**	**3.32**	**124**	Pn	Pn	17 12 21.2	0.0
U38A	**Gravette**	**3.50**	**89**	IAmb_Lg		17 13 29.0	
	comp=Z,8.9nm,0.7s						
W39A	**Magazine**	**4.21**	**106**	IAmb_Lg		17 13 44.3	
	comp=Z,17nm,0.8s						
T25A	**Trinidad**	**4.61**	**280**		Pn	17 12 38.6	-0.6
T25A				IAmb_Lg		17 13 54.2	
	comp=Z,8.7nm,0.7s						
MIAR	**Mount Ida**	**4.62**	**113**	Pn	Pn	17 12 38.9	-0.2
U40A	**Yellville**	**4.73**	**90**	Pn	Pn	17 12 40.0	-0.7
U40A				IAmb_Lg		17 14 06.1	
	comp=Z,8.1nm,0.8s						
X40A	**Basin Creek Fa**	**5.20**	**111**	IAmb_Lg		17 14 18.7	
	comp=Z,10.0nm,0.8s						
FCAR	**Ozark Folk Cen**	**5.37**	**94**	IAmb_Lg		17 14 22.9	
	comp=Z,13nm,0.8s						
JCT	**Junction City**	**6.06**	**189**	IAmb_Lg		17 14 50.1	
	comp=Z,10.0nm,0.8s						

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*IDC **17** 17:45:10.8±1.2, 4°.14S×129°.37E, h0^{km}, mb3.8/2, mb1 3.8/7, mb1mx3.7/41, mbtmp3.7/7, ML3.2/5, MS3.1/2, Ms1 3.2/2, ms1mx2.5/41, Error ellipse: s-maj=37.9km s-min=21.5km az=84.0*

*DJA **17** 17:45:13.2±0.9, 4°S±4°×12°9E±°, h11^{km}±7^{km}, M3.8/9, mb4.8/1, mB5.4/1, MLv3.4/9, Mw(mB)4.8/1*

ISC 17 17:45:15.3±0.8**, 4°.10S**±0°.06×**129°.42E**±0°.06**, h36**^{km}**, n15, σ1^{s}.19**/18**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.89**	**327**	P	**Pn**	**17 45 30.3**	**-1.0**
MSAI				S	**Sn**	**17 45 41.9**	**-1.1**
AAI	**Ambon**	**1.29**	**288**	P	**Pn**	**17 45 36.6**	**-0.2**
AAI				S	**Sn**	**17 45 53.0**	**+0.2**
FAKI	**Fak Fak**	**3.06**	**68**	P	**Pn**	**17 46 00.7**	**-0.5**
SIJI	**Sorong**	**3.70**	**30**	Pn	**Pn**	**17 46 09.5**	**-0.5**
	2.8nm,0.3s,baz=127,slow=23,SNR=58						
SIJI				Sn	**Sn**	**17 46 51.9**	**-0.5**
	6.2nm,0.3s,baz=44,slow=22,SNR=6.8						
SWI	**Sorong**	**3.70**	**30**	P	**Pn**	**17 46 09.8**	**-0.2**
LBMI	**Labuha**	**3.93**	**331**	P	**Pn**	**17 46 13.4**	**+0.2**
SANI	**Sanana**	**3.98**	**301**	P	**Pn**	**17 46 14.5**	**+0.6**
SAUI	**Saumlaki**	**4.29**	**154**	P	**Pn**	**17 46 18.8**	**+0.6**
BATI	**Baumata**	**8.33**	**223**	Pn	**Pn**	**17 47 11.1**	**-2.6**
	0.9nm,0.3s,baz=269,slow=21,SNR=1.7						
BATI				LR	LR	17 50 26.8	
	comp=Z,54nm,20.5s,baz=5.5,slow=38						
FITZ	**Fitzroy Crossi**	**14.40**	**195**	Pn	**Pn**	**17 48 37.1**	**+0.4**
	0.0nm,0.3s,baz=11,slow=10,SNR=1.7						
WRA	**Warramunga Arr**	**16.47**	**163**	Pn	**Pn**	**17 49 01.1**	**-2.6**
	0.0nm,0.3s,baz=343,slow=13,SNR=2.2						
ASAR	**Alice Springs**	**19.93**	**168**	P	**P**	**17 49 45.1**	**+0.8**
	0.3nm,0.3s,baz=347,slow=10,SNR=42						
ASAR				PcP	**PcP**	**17 54 00.9**	**+0.5**
	0.1nm,0.3s,baz=5.0,slow=1.5,SNR=9.2						
CMAR	**Chiang Mai Arr**	**37.47**	**308**	P	**P**	**17 52 26.5**	**+0.7**
	0.4nm,0.3s,baz=129,slow=7.1,SNR=2.0						
MKAR	**Makanchi Array**	**65.50**	**326**	P	**P**	**17 55 56.2**	**+1.2**
	0.8nm,0.4s,baz=113,slow=7.8,SNR=20						
VNDA	**Vanda**	**75.38**	**173**	LR	LR	18 30 18.5	
	comp=Z,29nm,18.7s,baz=190,slow=36						

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*UPP **17** 18:00:16.6±0.1, 67°.06N×20°.93E, h0^{km}, ML2.0, Explosion*

*HEL **17** 18:00:17.3±0.1, 67°.08N×20°.96E, h0^{km}, ML2.1, ML2.0(UPP), Explosion*

*IDC **17** 18:00:17.5±0.9, 67°.06N×21°.06E, h0^{km}, mb1 3.0/4, mb1mx2.8/48, mbtmp2.9/4, ML1.9/4, Error ellipse: s-maj=17.7km s-min=8.6km az=115.0*

ISC 17 18:00:16.2±0.8**, 67°.05N**±0°.02×**20°.90E**±0°.03**, h0**^{km}**, n42, σ1^{s}.05**/53**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.59**	**46**	P	**Pg**	**18 00 27.6**	**0.0**
MASU	**Masugnsbyn**	**0.59**	**46**	*i* P	**Pg**	**18 00 27.6**	**0.0**
PAJU	**Pajala**	**0.87**	**91**	P	**Pg**	**18 00 32.5**	**-0.4**
PAJU	**Pajala**	**0.87**	**91**	*e*P	**Pg**	**18 00 32.4**	**-0.4**
PAJU				*e*S	**Sg**	**18 00 42.2**	**-1.9**
HARU	**Harads**	**0.89**	**178**	P	**Pg**	**18 00 33.5**	**+0.2**
HARU				S	**Sb**	**18 00 46.9**	**-0.1**
HARU	**Harads**	**0.89**	**178**	*e*P	**Pg**	**18 00 33.5**	**+0.2**
HARU				*e*S	**Sb**	**18 00 46.9**	**-0.1**
RATU	**Laukkuluspa**	**0.92**	**328**	P	**Pg**	**18 00 33.7**	**-0.2**
RATU	**Laukkuluspa**	**0.92**	**328**	*e*P	**Pg**	**18 00 33.7**	**-0.2**
KUA	**Kurravaara**	**0.93**	**347**	P	**Pg**	**18 00 33.7**	**-0.3**
KUA	**Kurravaara**	**0.93**	**347**	*e*P	**Pg**	**18 00 33.7**	**-0.3**
SALU	**Saltoluokta**	**0.99**	**291**	P	**Pg**	**18 00 35.3**	**+0.2**
SALU	**Saltoluokta**	**0.99**	**291**	*e*P	**Pg**	**18 00 35.3**	**+0.2**
LANU	**Lannavaara**	**1.08**	**22**	P	**Pg**	**18 00 36.2**	**-0.8**
LANU	**Lannavaara**	**1.08**	**22**	*e*P	**Pg**	**18 00 36.1**	**-0.8**
LANU				*e*SN	**Sn**	**18 00 57.6**	**+3.2**
NIKU	**Nikkaluokta**	**1.09**	**320**	P	**Pg**	**18 00 36.8**	**-0.3**
NIKU	**Nikkaluokta**	**1.09**	**320**	*e*P	**Pg**	**18 00 36.8**	**-0.3**
KOVU	**Salmi**	**1.21**	**347**	P	**Pg**	**18 00 38.9**	**-0.4**
KOVU	**Salmi**	**1.21**	**347**	*e*P	**Pg**	**18 00 38.9**	**-0.4**
KALU	**Kalix**	**1.55**	**139**	P	**Pn**	**18 00 44.9**	**-0.2**
KALU	**Kalix**	**1.55**	**139**	*e*P	**Pn**	**18 00 44.8**	**-0.2**
SJUU	**Sjulsmark**	**1.58**	**169**	P	**Pn**	**18 00 45.7**	**+0.3**
SJUU	**Sjulsmark**	**1.58**	**169**	*e*P	**Pn**	**18 00 45.7**	**+0.3**
TOF	**Tornio**	**1.68**	**124**	*e*P	**Pn**	**18 00 47.1**	**+0.3**
TOF				MSG		18 01 07.1	
	comp=Z,26nm,0.2s						
TOF				*e*SN	**Sg**	**18 01 10.2**	**0.0**
HEF	**Hetta**	**1.72**	**36**	*e*P	**Pn**	**18 00 47.3**	**-0.1**
HEF	**Hetta**	**1.72**	**36**	*e*P	**Pn**	**18 00 47.1**	**-0.3**
HEF				MSG		18 01 07.3	
	comp=Z,15nm,0.2s						
HEF				*e*SN	**Sn**	**18 01 09.8**	**-0.2**
KIF	**Kilpisjarvi**	**1.96**	**359**	*e*P	**Pb**	**18 00 52.7**	**0.0**
KIF	**Kilpisjarvi**	**1.96**	**359**	*e*PB	**Pb**	**18 00 52.3**	**-0.4**
KIF				*e*S	**Sn**	**18 01 15.2**	**-0.7**
KIF				MSG		18 01 15.9	
	comp=Z,18nm,0.2s						
RNF	**Rovaniemi**	**2.07**	**100**	*e*PB	**Pn**	**18 00 53.3**	**+1.1**
RNF				*e*SG	**Sb**	**18 01 21.6**	**+0.7**
BURU	**Burvik**	**2.49**	**175**	*e*P	**Pn**	**18 00 59.6**	**+1.7**
OUL	**Oulu**	**2.84**	**132**	*e*PB	**Pn**	**18 01 05.0**	**+2.3**
OBF0	**Syolatti, Pyha**	**2.91**	**150**	*e*PB	**Pb**	**18 01 07.7**	**-1.3**
ARA0	**ARCESS Array S**	**3.02**	**32**	*e*P	**Pn**	**18 01 05.8**	**+0.5**
	baz=214						
ARCES	**ARCESS Array B**	**3.02**	**32**	Pn	**Pn**	**18 01 06.0**	**+0.7**
	baz=220,slow=13,SNR=27						
ARCES				Sn	**Sn**	**18 01 43.7**	**+1.5**
	baz=211,slow=23,SNR=2.3						
OUF	**Merijarvi**	**3.13**	**148**	*e*P	**Pn**	**18 01 08.9**	**+2.2**
OUF				MSG		18 01 49.0	
	comp=Z,1.8nm,0.2s						
VRF	**Varrio**	**3.44**	**74**	*e*P	**Pn**	**18 01 12.7**	**+1.8**
MSF	**Maaselka**	**3.46**	**106**	*e*P	**Pn**	**18 01 12.4**	**+1.1**
KEV	**Kevo**	**3.53**	**37**	*e*P	**Pn**	**18 01 12.9**	**+0.7**
KU6	**Riekki**	**3.74**	**102**	*e*P	**Pn**	**18 01 16.9**	**+1.8**
HUSU	**Husum**	**3.79**	**192**	*e*P	**Pn**	**18 01 17.4**	**+1.6**
FINES	**FINESS Array B**	**6.07**	**156**	Pn	**Pn**	**18 01 48.6**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=348,slow=12,SNR=13						
FINES				Sn	**Sn**	**18 02 56.6**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=336,slow=17,SNR=1.1						
NOA	**NORSAR Array B**	**7.37**	**220**	Pn	**Pn**	**18 02 05.3**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=9.4,slow=13,SNR=5.3						
NOA				Sn	**Sn**	**18 03 27.2**	**-2.1**
	comp=Z,0.0nm,0.3s,baz=27,slow=16,SNR=1.4						
HFS	**Hagfors**	**7.65**	**208**	Pn	**Pn**	**18 02 09.0**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=27,slow=12,SNR=8.1						

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*PRE **17** 18:11:40.0±1.1, 28°.22S×26°.74E, h2^{km}, ML2.9*

*EAF **17** 18:11:45.5±1.5, 28°.21S×26°.69E, h10^{km}, MD4.2*

ISC 17 18:11:41.7±1.6**, 28°.23S**±0°.05×**26°.78E**±0°.04**, h12**^{km}±12^{km}**, n21, σ2^{s}.02**/36**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNKL	**Senekal, Frees**	**0.88**	**93**	*e*P	**Pg**	**18 11 57.7**	**-1.0**
SNKL				*e*S	**Sg**	**18 12 10.1**	**0.0**
SNKL				IAML		18 12 36.3	
	comp=Z,405nm,1.1s						
PRYS	**Parys**	**1.40**	**22**	*e*P	**Pb**	**18 12 07.8**	**0.0**
PRYS				*e*S	**Sb**	**18 12 25.9**	**+0.2**
PRYS				IAML		18 12 28.4	
	comp=Z,307nm,0.7s						
SWZ	**Schweizer**	**1.66**	**309**	*e*P	**Pn**	**18 12 11.2**	**+0.5**
SWZ				*e*S	**Sn**	**18 12 32.2**	**+0.2**
SWZ				IAML		18 12 36.2	
	comp=Z,182nm,0.5s						
KSR	**Koster**	**2.37**	**3**	*e*P	**Pn**	**18 12 21.2**	**+0.6**
KSR				*e*S	**Sn**	**18 12 49.8**	**0.0**
KSR				IAML		18 13 03.6	
	comp=Z,326nm,0.5s						
NWCL	**Newcastle**	**2.80**	**81**	*e*P	**Pn**	**18 12 27.0**	**+0.6**
NWCL				*e*S	**Sn**	**18 13 01.7**	**+1.5**
NWCL				IAML		18 13 15.3	
	comp=Z,68nm,0.4s						
SLR	**Silverton**	**2.83**	**29**	*e*P	**Pn**	**18 12 28.0**	**+1.2**
SLR				*e*S	**Sn**	**18 13 01.3**	**+0.5**
SLR				IAML		18 13 33.7	
	comp=Z,92nm,1.3s						
LBTB	**Lobatse**	**3.37**	**341**	*i* P	**Pn**	**18 12 36.8**	**+2.4**
LBTB	**Lobatse**	**3.37**	**341**	*i* P	**Pn**	**18 12 36.8**	**+2.4**
PKA	**Prieska**	**3.81**	**247**	*e*P	**Pn**	**18 12 40.1**	**-0.1**
PKA				*e*S	**Sn**	**18 13 24.1**	**-0.9**
PKA				IAML		18 13 41.7	
	comp=Z,6.8nm,0.5s						
POGA	**Pongola**	**4.45**	**80**	*e*P	**Pn**	**18 12 49.2**	**+0.2**
POGA				*e*S	**Sn**	**18 13 40.7**	**-0.2**
POGA				IAML		18 14 02.6	
	comp=Z,31nm,1.1s						
SOE	**Somerset East**	**4.59**	**193**	*e*P	**Pn**	**18 12 51.9**	**+0.9**
SOE				*e*S	**Sn**	**18 13 42.6**	**-1.6**
SOE				IAML		18 14 13.9	
	comp=Z,47nm,5.0s						
UPI	**Upington**	**4.87**	**267**	*e*P	**Pn**	**18 12 55.5**	**+0.5**
UPI				*e*S	**Sn**	**18 13 49.2**	**-2.2**
UPI				IAML		18 14 24.3	
	comp=Z,10nm,1.4s						
MOPA	**Mopani**	**6.27**	**43**	*e*P	**Pn**	**18 13 15.0**	**+0.9**
MOPA				*e*S	**Sn**	**18 14 23.9**	**-1.8**
MOPA				IAML		18 15 11.9	
	comp=Z,15nm,0.7s						
MOPA	**Mopani**	**6.27**	**43**	*i* P	**Pn**	**18 13 17.0**	**+3.0**
MOPA				*i* S	**Sn**	**18 14 24.6**	**-1.2**
MOPA	**Mopani**	**6.27**	**43**	*i* P	**Pn**	**18 13 17.0**	**+3.0**
MOPA				*i* S	**Sn**	**18 14 24.6**	**-1.2**
MSNA	**Messina**	**6.55**	**27**	*i* P	Pn	18 13 23.1	+5.1
MSNA				*i* S	**Sn**	**18 14 31.5**	**-1.3**
MSNA	**Messina**	**6.55**	**27**	*i* P	Pn	18 13 23.1	+5.1
MSNA				*i* S	**Sn**	**18 14 31.5**	**-1.3**
MATP	**Matopo**	**7.93**	**12**	*i* P	**Pn**	**18 13 39.9**	**+3.0**
MATP	**Matopo**	**7.93**	**12**	*i* P	**Pn**	**18 13 39.9**	**+3.0**
BLWY	**Bulawayo**	**8.23**	**12**	*i* P	**Pn**	**18 13 43.9**	**+2.8**
BLWY				*i* S	**Sn**	**18 15 09.5**	**-4.6**
BLWY	**Bulawayo**	**8.23**	**12**	*i* P	**Pn**	**18 13 43.9**	**+2.8**
BLWY				*i* S	**Sn**	**18 15 09.5**	**-4.6**

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*IDC **17** 18:11:54.6±3.4, 7°.00S×155°.37E, h68^{km}±35^{km}, mb3.4/6, mb1 3.7/8, mb1mx3.2/40, mbtmp3.8/8, ML1.8/1, Error ellipse: s-maj=39.9km s-min=20.4km az=164.0*

ISC 17 18:11:53.2±0.9**, 6°.9S**±0°.2×**155°.40E**±0°.09**, h50**^{km}**, n11, σ1^{s}.37**/9**, mb3.5**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.18**	**120**	P	**Pn**	**18 13 09.0**	**+0.8**
	6.0nm,0.3s,baz=244,slow=4.8,SNR=2.1						
PMG	**Port Moresby**	**8.54**	**252**	P	**Pn**	**18 13 54.7**	**+0.4**
	0.6nm,0.3s,baz=61,slow=23,SNR=2.0						
PMG				S	**Sn**	**18 15 30.5**	**+1.2**
	0.4nm,0.3s,baz=284,slow=14,SNR=1.8						
WRA	**Warramunga Arr**	**24.23**	**235**	P	**P**	**18 17 03.9**	**-1.6**
	0.9nm,0.7s,baz=54,slow=9.3,SNR=7.2						
ASAR	**Alice Springs**	**26.57**	**229**	P	**P**	**18 17 24.4**	**-2.4**
	0.2nm,0.4s,baz=57,slow=9.9,SNR=6.8						
H11S3	**WAKE ISLAND Hy**	**27.54**	**24**	T	T	18 46 04.2	
	baz=203,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	**27.54**	**24**	T	T	18 45 58.5	
	baz=203,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**27.56**	**24**	T	T	18 45 58.5	
	baz=203,slow=75,SNR=4.7						
CMAR	**Chiang Mai Arr**	**61.08**	**295**	P	**P**	**18 22 02.8**	**+0.2**
	0.9nm,0.7s,baz=115,slow=4.6,SNR=7.2						
ILAR	**Eielson Array**	**83.10**	**21**	P	**P**	**18 24 12.6**	**-0.7**
	0.2nm,0.4s,baz=258,slow=4.5,SNR=1.9						
MKAR	**Makanchi Array**	**83.56**	**319**	P	**P**	**18 24 16.6**	**+0.5**
	0.4nm,0.7s,baz=116,slow=3.4,SNR=1.7						
INK	**Inuvik**	**89.44**	**21**	P	**P**	**18 24 44.2**	**-0.1**
	0.9nm,0.5s,baz=288,slow=4.3,SNR=4.4						

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*NIED **17** 18:11:58.5, 42°.85N×146°.56E, h44^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.91; M$_{\theta\theta}$-1.48; M$_{\phi\phi}$-2.44; M$_{r\theta}$0.95; M$_{\theta\phi}$-1.70; M$_{\phi r}$1.09; Fault plane solution: M$_0$4.08000×10^{15} NP1:ϕ_s38.00000°, δ55.00000°, λ91.00000°. NP2:ϕ_s216.00000°, δ35.00000°, λ88.00000°.*

*JMA **17** 18:11:58.4±0.2, 42°.85N×146°.56E, h44^{km}±3^{km}, M4.5*

JMA Felt II J1.

*BJI **17** 18:11:58.9±0.0, 42°.92N×146°.39E, h38^{km}, mB5.0/27, mb4.5/47, Ms4.1/12, Ms7 4.0/14*

*SKHL **17** 18:11:59.4±0.2, 42°.80N×146°.60E, h53^{km}±6^{km}, mb5.5/3, msh5.1/2*

*MOS **17** 18:12:00.5±0.8, 42°.97N×146°.34E, h52^{km}, mb5.0/17, Error ellipse: s-maj=9.0km s-min=5.8km az=115.2*

*NEIC **17** 18:12:00.4±1.6, 42°.86N±0°.08×146°.4E±0°.1, h33^{km}±5^{km}, mb4.8/36, Error ellipse: s-maj=13.7km s-min=10.2km az=123.0*

*IDC **17** 18:12:03.4±2.3, 42°.94N×146°.33E, h58^{km}±19^{km}, mb4.0/19, mb1 4.1/25, mb1mx3.9/50, mbtmp4.2/25, ML3.5/5, MS3.5/18, Ms1 3.6/18, ms1mx3.3/40, Error ellipse: s-maj=18.1km s-min=13.3km az=155.0*

ISC 17 18:12:01.1±0.9**, 42°.92N**±0°.05×**146°.40E**±0°.04**, h41**^{km}±7^{km}**, n199, σ1^{s}.14**/209**, mb4.6**/66**, MS3.8**/18**, 15C-6D, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.66**	**313**	⇓P	**Pn**	**18 12 13.2**	**-0.8**
NEM2				*e*S	**Sn**	**18 12 24.0**	**+0.8**
NMR	**Nemuro--Hokkai**	**0.67**	**313**	⇓*i*PN	**Pn**	**18 12 13.3**	**-0.8**
NMR				*i* S	**Sn**	**18 12 23.9**	**+0.4**
NMR	**Nemuro--Hokkai**	**0.67**	**313**	*i* P	**Pn**	**18 12 13.3**	**-0.8**
NMR				*i* S	**Sn**	**18 12 23.9**	**+0.4**
JKHN	**Kushirohamanak**	**0.93**	**281**	⇑P	**Pn**	**18 12 17.0**	**-0.6**
JKHN				*e*S	**Sn**	**18 12 30.9**	**+1.2**
SHO	**Shikotan**	**1.00**	**18**	*d* *i*PN	**Pn**	**18 12 17.4**	**-1.2**
SHO				*i* S	**Sn**	**18 12 31.5**	**-0.1**
SHO				pmax	pmax		
	comp=N,398nm,0.4s						
SHO				pmax	pmax		
	comp=Z,897nm,0.4s						
SHO				pmax	pmax		
	comp=E,470nm,0.5s						
SHO				smax	smax		
	comp=E,8μm,0.4s						
SHO				smax	smax		
	comp=N,14μm,0.5s						
SHO	**Shikotan**	**1.00**	**18**	*i* P	**Pn**	**18 12 17.5**	**-1.2**
SHO				AMB	AMB	18 12 18.0	
	comp=N,900nm,0.3s						
SHO				*i* S	**Sn**	**18 12 30.9**	**-0.7**
SHO				A	A	18 12 33.0	
	comp=N,14μm,0.5s						
SHO				A	A	18 12 33.0	
	comp=N,8μm,0.5s						
GLVR	**Golovnino**	**1.04**	**322**	⇑*i*PN	**Pn**	**18 12 18.7**	**-0.5**
GLVR				*i* S	**Sn**	**18 12 33.3**	**+0.7**
GLVR				pmax	pmax		
	comp=N,570nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,2μm,0.3s						
GLVR				pmax	pmax		
	comp=E,520nm,0.2s						
GLVR				smax	smax		
	comp=N,11μm,0.3s						
GLVR				smax	smax		
	comp=E,12μm,0.3s						
GLVR				smax	smax		
	comp=E,16μm,1.4s						
GLVR				smax	smax		
	comp=N,25μm,1.6s						
GLVR	**Golovnino**	**1.04**	**322**	*i* P	**Pn**	**18 12 18.7**	**-0.5**
GLVR				AMB	AMB	18 12 20.0	
	comp=N,2μm,0.3s						
GLVR				*i* S	**Sn**	**18 12 33.3**	**+0.7**
GLVR				A	A	18 12 34.0	
	comp=N,11μm,0.3s						
GLVR				A	A	18 12 34.0	
	comp=N,12μm,0.3s						
GLVR				A	A	18 12 34.0	
	comp=N,25μm,2.0s						
GLVR				A	A	18 12 34.0	
	comp=N,16μm,2.0s						
AKK	**Akkeshi**	**1.15**	**276**	*e*P	**Pn**	**18 12 20.1**	**-0.6**
AKK				*e*S	**Sn**	**18 12 35.6**	**+0.4**
YUK	**Yuzh-Kuril'sk**	**1.19**	**341**	*i* PN	**Pn**	**18 12 20.2**	**-1.0**
YUK	**Yuzh-Kuril'sk**	**1.19**	**341**	*i* P	**Pn**	**18 12 20.4**	**-0.8**
YUK				AMB	AMB	18 12 21.3	
	comp=N,4μm,1.0s						
YUK				AMB	AMB	18 12 24.8	
	comp=N,4μm,0.5s						
YUK				*i* S	**Sn**	**18 12 36.2**	**+0.1**
YUK				A	A	18 12 39.0	
	comp=N,12μm,0.6s						
YUK				A	A	18 12 39.0	
	comp=N,6μm,0.6s						
JAK	**Akkeshi**	**1.25**	**274**	⇑P	**Pn**	**18 12 21.5**	**-0.6**
JAK				*e*S	**Sn**	**18 12 38.5**	**+0.7**
JNSB	**Nemuroshibetsu**	**1.33**	**311**	⇑P	**Pn**	**18 12 22.8**	**-0.4**
JRA	**Rausu**	**1.38**	**318**	⇑P	**Pn**	**18 12 23.7**	**-0.2**
JRA				*e*S	**Sn**	**18 12 42.5**	**+1.6**
JNK	**Nakash**	**1.40**	**299**	⇑P	**Pn**	**18 12 23.7**	**-0.4**
JNK				*e*S	**Sn**	**18 12 41.9**	**+0.5**
RUSJ	**Misakicho**	**1.46**	**325**	⇑*i*PN	**Pn**	**18 12 25.0**	**+0.1**
RUSJ				*i* S	**Sn**	**18 12 45.8**	**+3.1**
JOB	**Onbets**	**1.89**	**271**	⇑P	**Pn**	**18 12 30.2**	**-0.6**
JAR	**Ashorobuto**	**1.96**	**282**	⇑P	**Pn**	**18 12 31.8**	**-0.1**
JTKR	**Abashiri--Toko**	**2.10**	**301**	⇑P	**Pn**	**18 12 34.4**	**+0.7**
JTKR				*e*S	**Sn**	**18 13 01.1**	**+2.5**
JCH	**Churui**	**2.26**	**263**	⇓P	**Pn**	**18 12 35.5**	**-0.4**
JMP	**Maruseppu**	**2.47**	**297**	⇑P	**Pn**	**18 12 39.6**	**+0.8**
KUR	**Kuril'sk**	**2.55**	**24**	*e*PN	**Pn**	**18 12 40.8**	**+1.0**
KUR				*e*S	**Sn**	**18 13 09.0**	**-0.6**
KUR				pmax	pmax		
	comp=Z,294nm,0.5s						
KUR				smax	smax		
	comp=N,401nm,0.5s						
KUR				smax	smax		
	comp=E,719nm,0.5s						
KUR	**Kuril'sk**	**2.55**	**24**	*e*P	**Pn**	**18 12 39.8**	**0.0**
KUR				AMB	AMB	18 12 49.0	
	comp=E,290nm,0.5s						
KUR				*e*S	**Sn**	**18 13 09.0**	**-0.6**
KUR				A	A	18 13 14.0	
	comp=E,830nm,0.5s						
KUR				A	A	18 13 14.0	
	comp=E,870nm,0.5s						
KUR				A	A	18 13 20.4	
	comp=E,4μm,5.0s						
KUR				A	A	18 13 20.4	
	comp=E,1μm,5.0s						
JEM	**Erimo**	**2.56**	**251**	⇑P	**Pn**	**18 12 41.0**	**+0.9**
ERM	**Erimo**	**2.56**	**251**	PN	**Pn**	**18 12 41.1**	**+1.0**
ERM	**Erimo**	**2.56**	**251**	Pn	**Pn**	**18 12 41.1**	**+1.0**
JKA	**Kamikawa-asahi**	**3.01**	**295**	*e*P	**Pn**	**18 12 48.2**	**+1.9**
JKA	**Kamikawa-asahi**	**3.01**	**295**		**Pn**	**18 12 47.9**	**+1.6**
ASAJ	**Asahikawa**	**3.02**	**295**	P	**Pn**	**18 12 48.1**	**+1.8**
	comp=E,22nm,0.3s,baz=114,slow=12,SNR=152						
ASAJ				S	**Sn**	**18 13 28.1**	**+6.9**
	comp=E,48nm,0.3s,baz=341,slow=29,SNR=7.6						
ASAJ				LR	LR	18 13 53.5	
	comp=E,370nm,19.8s,baz=152,slow=37						
JEW	**Eniwo**	**3.64**	**270**		**Pn**	**18 12 55.3**	**+0.4**
YSS	**Yuzh-Sakhalins**	**4.80**	**329**	*e*PN	**Pn**	**18 13 11.7**	**+1.0**
YSS				*e*S	**Sn**	**18 14 06.0**	**+1.0**
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				MLR	MLR		
	comp=Z,1μm,16.0s						
YSS	**Yuzh-Sakhalins**	**4.80**	**329**	*e*P	**Pn**	**18 13 11.7**	**+1.0**
YSS				AMB	AMB	18 13 12.0	
	comp=Z,40nm,0.7s						
YSS				*e*S	**Sn**	**18 14 06.0**	**+1.0**
YSS				A	A	18 14 11.5	
	comp=Z,1μm,0.5s						
YSS				A	A	18 14 11.5	
	comp=Z,50nm,0.5s						
YSS				AMS	AMS	18 15 15.0	
	comp=Z,1μm,15.0s						
YSS				AMS	AMS	18 15 15.0	
	comp=Z,400nm,15.0s						
YSS				AMS	AMS	18 15 15.0	
	comp=Z,1μm,15.0s						
YSS	**Yuzh-Sakhalins**	**4.80**	**329**		**Pn**	**18 13 11.9**	**+1.2**
JMM	**Marumori**	**6.61**	**222**		Pn	18 13 33.1	-2.7
UGL	**Uglegorsk**	**6.86**	**335**	*e*P	**Pn**	**18 13 40.6**	**+1.6**

UGL				AMB	AMB	18 13 43.5	
	comp=Z,50nm,0.7s						
TYV	**Tymovskoe**	**8.35**	**343**	*e*PN	Pn	18 14 06.4	+6.9
TYV				*e*S	Sn	18 15 40.7	+8.3
TYV				pmax	pmax		
	comp=Z,400nm,3.6s						
TYV				pmax	pmax		
	comp=Z,15nm,1.2s						
TYV				smax	smax		
	comp=N,9.0nm,1.5s						
TYV				smax	smax		
	comp=E,21nm,1.5s						
TYV				smax	smax		
	comp=N,800nm,4.0s						
TYV				smax	smax		
	comp=E,900nm,4.0s						
TYV	**Tymovskoe**	**8.35**	**343**	*e*P	**Pn**	**18 14 02.0**	**+2.5**
TYV				AMB	AMB	18 14 07.0	
	comp=E,400nm,4.0s						
TYV				AMB	AMB	18 14 08.7	
	comp=E,6.0nm,0.5s						
TYV				*e*S	**Sn**	**18 15 31.9**	**-0.5**
TYV				A	A	18 15 41.0	
	comp=E,800nm,4.0s						
TYV				A	A	18 15 41.0	
	comp=E,900nm,4.0s						
TYV				A	A	18 15 41.8	
	comp=E,5.0nm,0.8s						
TYV				A	A	18 15 41.8	
	comp=E,6.0nm,0.8s						
MJAR	**Matsushiro Arr**	**8.96**	**227**	P	**Pn**	**18 14 09.7**	**+1.7**
	comp=E,0.1nm,0.3s,baz=94,slow=40,SNR=1.9						
MJAR				LR	LR	18 17 57.2	
	comp=E,136nm,19.2s,baz=50,slow=40						
MJAR	**Matsushiro Arr**	**8.96**	**227**		**Pn**	**18 14 06.9**	**-1.1**
MAJO	**Matsushiro**	**8.96**	**227**	*i* PN	**Pn**	**18 14 06.7**	**-1.2**
MAJO	**Matsushiro**	**8.96**	**227**	Pn	**Pn**	**18 14 06.8**	**-1.1**
MAT	**Matsushiro**	**8.96**	**227**	P	**Pn**	**18 14 06.5**	**-1.4**
MAT				*e*S	**Sn**	**18 15 44.8**	**-2.7**
GRNR	**Gornyy**	**10.40**	**322**	*e*PN	**Pn**	**18 14 23.8**	**-3.8**
GRNR				MLR	MLR		
	comp=E,290nm,17.0s						
GRNR				MLR	MLR		
	comp=N,210nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,460nm,14.0s						
GRNR	**Gornyy**	**10.40**	**322**	*e*rx	rx	18 14 23.8	
USRK	**Ussuriysk Ar.**	**10.54**	**282**	P	**Pn**	**18 14 31.3**	**+1.8**
	baz=91,slow=12,SNR=2.3						
USRK				LR	LR	18 18 43.7	
	comp=Z,247nm,19.5s,baz=76,slow=38						
NKL	**Nikolayevsk**	**10.93**	**342**	*e*P	**Pn**	**18 14 34.8**	**+0.1**
NKL				AMB	AMB	18 14 38.6	
	comp=Z,40nm,0.9s						
KLR	**Kul'dur**	**11.97**	**307**	P	**Pn**	**18 14 50.4**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=112,slow=13,SNR=7.2						
KLR				LR	LR	18 19 56.4	
	comp=Z,315nm,18.1s,baz=106,slow=40						
KLR	**Kul'dur**	**11.97**	**307**	*i* PN	**Pn**	**18 14 48.7**	**-0.2**
KLR	**Kul'dur**	**11.97**	**307**	*e*P	**Pn**	**18 14 48.7**	**-0.2**
MDJ	**Mudanjiang**	**12.27**	**284**	P	**Pn**	**18 14 53.3**	**+0.1**
MDJ				pmax	pmax		
	comp=Z,11nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,360nm,4.4s						
MDJ				LR	LR		
	comp=Z,300nm,10.7s						
MDJ				LR	LR		
	comp=Z,390nm,13.5s						
MDJ				LR	LR		
	comp=Z,420nm,12.8s						
PETK	**Petropavlovsk-**	**12.68**	**33**	P	**Pn**	**18 15 00.9**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=199,slow=13,SNR=4.1						
PETK				LR	LR	18 20 16.1	
	comp=Z,92nm,20.9s,baz=219,slow=39						
KSRS	**Korea Array**	**15.13**	**255**	P	**Pn**	**18 15 33.6**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=64,slow=12,SNR=4.6						
KSRS				LR	LR	18 21 00.9	
	comp=Z,158nm,19.9s,baz=76,slow=36						
CN2	**Changchun**	**15.27**	**280**	*e*P	**Pn**	**18 15 32.3**	**-1.3**
CN2				*e*S	**Sn**	**18 18 18.3**	**-3.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,14.4s						
ZEA	**Zeya**	**16.66**	**317**	*e*P	**P**	**18 15 53.4**	**+0.2**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEA				MLR	MLR		
	comp=E,200nm,15.0s						
ZEA				MLR	MLR		
	comp=N,100nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,12.0s						
ZEA	**Zeya**	**16.66**	**317**	*e*P	**Pn**	**18 15 49.5**	**-1.8**
ZEA				AMB	AMB	18 15 55.2	
	comp=Z,10.0nm,0.6s						
SEY	**Seymchan**	**20.36**	**8**	LR	LR	18 24 46.7	
	comp=Z,133nm,19.0s,baz=114,slow=38						
YAK	**Yakutsk**	**21.56**	**338**	*i* P	**P**	**18 16 45.5**	**-1.1**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
YAK	**Yakutsk**	**21.56**	**338**	*e*P	**P**	**18 16 45.5**	**-1.1**
BJI	**Beijing**	**22.77**	**273**	P	**P**	**18 16 58.9**	**-0.9**
BJI				pmax	pmax		
	comp=Z,20nm,0.9s						
TIA	**Tai'an**	**23.47**	**263**	⇓P	**P**	**18 17 06.3**	**-0.5**
TIA				pmax	pmax		
	comp=Z,17nm,0.7s						
NJ2	**Nanjing**	**24.30**	**253**	*e*P	**P**	**18 17 13.3**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**25.91**	**277**	*e*P	**P**	**18 17 28.3**	**-1.0**
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,4.5s						
ULN	**Ulaanbaatar**	**27.86**	**294***c*	*i*P	**P**	**18 17 46.9**	**+0.2**
ULN				pmax	pmax		
	comp=Z,14nm,1.1s						
ULN	**Ulaanbaatar**	**27.86**	**294**	*e*P	**P**	**18 17 46.9**	**+0.2**
ULN	**Ulaanbaatar**	**27.86**	**294**	P	**P**	**18 17 47.3**	**+0.6**
ULN				IAmb	IAmb	18 17 48.1	
	comp=Z,16nm,1.1s						
SONM	**Songino Array**	**28.30**	**294**	P	**P**	**18 17 51.2**	**+0.5**
	comp=Z,19nm,0.8s,baz=92,slow=8.5,SNR=116						
SONM				LR	LR	18 30 14.3	
	comp=Z,264nm,18.4s,baz=76,slow=39						
SONM	**Songino Array**	**28.30**	**294**	P	**P**	**18 17 51.1**	**+0.5**
SONM				pmax	pmax		
	comp=Z,18nm,0.9s						
SONM	**Songino Array**	**28.30**	**294**	P	**P**	**18 17 51.1**	**+0.5**
SONM				IAmb	IAmb	18 17 52.1	
	comp=Z,18nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.85**	**137**	T	T	18 48 52.2	
	baz=328,slow=75,SNR=600						
H11N1	**WAKE ISLAND Hy**	**28.86**	**137**	T	T	18 48 52.2	
	baz=328,slow=75,SNR=474						
H11N3	**WAKE ISLAND Hy**	**28.86**	**137**	T	T	18 48 50.1	
	baz=328,slow=75,SNR=476						
GUMO	**Guam**	**29.25**	**183**	LR	LR	18 27 17.9	
	comp=Z,40nm,21.0s,baz=348,slow=31						
H11S1	**WAKE ISLAND Hy**	**29.79**	**138**	T	T	18 50 01.0	
	baz=329,slow=76,SNR=1334						
H11S3	**WAKE ISLAND Hy**	**29.79**	**139**	T	T	18 50 01.6	
	baz=329,slow=76,SNR=814						
H11S2	**WAKE ISLAND Hy**	**29.80**	**139**	T	T	18 50 04.8	
	baz=329,slow=76,SNR=668						
ZAK	**Zakamensk**	**30.18**	**299**	*e*P	**P**	**18 18 07.2**	**0.0**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
LZH	**Lanzhou**	**33.26**	**273**	*e*P	**P**	**18 18 35.6**	**+1.0**
LZH				pP	pP	18 18 40.6	-4.7
LZH				pmax	pmax		
	comp=Z,12nm,1.2s						
GTA	**Gaotai**	**34.90**	**280**	*e*P	**P**	**18 18 48.8**	**+0.1**
GTA				pP	pP	18 18 59.3	-0.2
GTA				sP	sP	18 19 03.5	-0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,71nm,6.2s						
GTA				LR	LR		
	comp=Z,100nm,15.3s						
GTA				LR	LR		
	comp=Z,110nm,16.7s						
GTA				LR	LR		
	comp=Z,130nm,15.3s						
CD2	**Chengdu**	**35.78**	**265**	P	**P**	**18 18 57.8**	**+1.5**
IMAR	**Indian Mountai**	**39.64**	**34**	P	**P**	**18 19 29.6**	**+1.2**
NRIK	**Noril'sk**	**39.72**	**332**	LR	LR	18 37 05.6	
	comp=Z,51nm,19.4s,baz=53,slow=38						
KMI	**Kunming**	**39.80**	**258**	⇑P	**P**	**18 19 30.1**	**-0.4**
KMI				pP	pP	18 19 41.3	0.0
KMI				sP	sP	18 19 47.8	+1.9
KMI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DGZ	**Jazzator, Alta**	**40.37**	**301**	*i* P	**P**	**18 19 34.6**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ZALV	**Zalesovo Beam**	**41.07**	**308**	P	**P**	**18 19 39.8**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=103,slow=7.6,SNR=5.5						
ZALV				PcP	**PcP**	**18 21 40.0**	**+0.6**
	comp=Z,2.5nm,0.5s,baz=89,slow=2.8,SNR=9.9						
ZALV				LR	LR	18 38 00.2	
	comp=Z,100nm,19.8s,baz=65,slow=38						
ZALV	**Zalesovo Beam**	**41.07**	**308**	P	**P**	**18 19 38.7**	**-1.7**
ZALV					**PcP**	**18 21 39.6**	**+0.3**
O22K	**Cooper Landing**	**41.44**	**42**	P	**P**	**18 19 44.0**	**+0.7**
WMQ	**Urumqi**	**41.90**	**292**	*e*P	**P**	**18 19 48.4**	**+1.0**
WMQ				pP	pP	18 19 59.1	+0.8
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,85nm,4.1s						
WMQ				LR	LR		
	comp=Z,310nm,14.9s						
WMQ				LR	LR		
	comp=Z,200nm,16.9s						
COLA	**College**	**42.07**	**36**	*i* P	**P**	**18 19 48.4**	**+0.1**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
POKR	**Poker Plat Res**	**42.24**	**35**	P	**P**	**18 19 49.3**	**-0.4**
ILAR	**Eielson Array**	**42.48**	**36**	P	**P**	**18 19 51.9**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=252,slow=6.9,SNR=15						
ILAR	**Eielson Array**	**42.48**	**36**	P	**P**	**18 19 51.3**	**-0.5**
ILAR	**Eielson Array**	**42.48**	**36**	P	**P**	**18 19 51.3**	**-0.5**
RAGM	**Ragged Mountai**	**43.94**	**42**	P	**P**	**18 20 03.9**	**+0.2**
MK31	**Makanchi Array**	**44.49**	**298**	P	**P**	**18 20 08.3**	**+0.1**
MK31				pmax	pmax		
	comp=Z,17nm,0.7s						
MK31	**Makanchi Array**	**44.49**	**298**		**P**	**18 20 08.3**	**+0.1**
MK31				IAmb	IAmb	18 20 09.4	
	comp=Z,18nm,0.7s						
MKAR	**Makanchi Array**	**44.49**	**298**	P	**P**	**18 20 08.5**	**+0.3**
	comp=Z,16nm,0.6s,baz=82,slow=9.2,SNR=151						
MAKZ	**Makanchi**	**44.69**	**298**	P	**P**	**18 20 10.3**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,19nm,0.9s						
MAKZ	**Makanchi**	**44.69**	**298**		**P**	**18 20 10.3**	**+0.5**
MAKZ				IAmb	IAmb	18 20 11.0	
	comp=Z,19nm,0.8s						
KURK	**Kurchatov**	**45.55**	**304**	*i* P	**P**	**18 20 16.4**	**0.0**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KURK	**Kurchatov**	**45.55**	**304**	*e*P	**P**	**18 20 16.4**	**0.0**
KURK	**Kurchatov**	**45.55**	**304**		**P**	**18 20 16.5**	**0.0**
KURK				IAmb	IAmb	18 20 18.2	
	comp=Z,21nm,1.4s						
CMAR	**Chiang Mai Arr**	**46.77**	**254**	P	**P**	**18 20 26.6**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=42,slow=7.5,SNR=6.4						
CMAR				LR	LR	18 41 20.4	
	comp=Z,59nm,18.8s,baz=66,slow=38						
INK	**Inuvik**	**47.40**	**30**	P	**P**	**18 20 31.4**	**+0.7**
	comp=Z,5.2nm,0.6s,baz=301,slow=5.7,SNR=22						
INK	**Inuvik**	**47.40**	**30**	P	**P**	**18 20 31.2**	**+0.5**
INK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
INK	**Inuvik**	**47.40**	**30**	P	**P**	**18 20 31.2**	**+0.5**
INK				IAmb	IAmb	18 20 31.8	
	comp=Z,5.2nm,0.7s						
BRVK	**Borovoye**	**49.66**	**310**	*i* P	**P**	**18 20 46.8**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	**Borovoye**	**49.66**	**310**	*e*P	**P**	**18 20 46.8**	**-1.5**
AAK	**Ala-Archa**	**51.23**	**296**	*i* P	**P**	**18 20 59.1**	**-1.4**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	**Ala-Archa**	**51.23**	**296**	*e*P	**P**	**18 20 59.1**	**-1.4**
AAK	**Ala-Archa**	**51.23**	**296**	P	**P**	**18 21 00.7**	**+0.2**
KSH	**Kashi**	**51.66**	**292**	P	**P**	**18 21 08.0**	**+4.2**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SVE	**Sverdlovsk**	**53.38**	**317**	*e*P	**P**	**18 21 16.0**	**0.0**
SVE				pmax	pmax		
	comp=Z,15nm,1.1s						
SVE	**Sverdlovsk**	**53.38**	**317**	*e*P	**P**	**18 21 16.0**	**0.0**
KKAR	**Karatay Array**	**53.62**	**298**	P	**P**	**18 21 18.1**	**0.0**
KKAR	**Karatay Array**	**53.62**	**298**	P	**P**	**18 21 18.1**	**0.0**
ARU	**Arti**	**54.58**	**317***d*	*i*P	**P**	**18 21 24.2**	**-0.7**
ARU				*PP	**pP**	**18 21 37.1**	**+0.8**
ARU						18 23 24.1	
ARU				S	**S**	**18 29 03.1**	**+2.0**
ARU				SS	**SS**	**18 32 43.0**	**-0.5**
ARU				pmax	pmax		
	comp=Z,16nm,0.9s						
ARU	**Arti**	**54.58**	**317**	*e*P	**P**	**18 21 24.2**	**-0.7**
ARU	**Arti**	**54.58**	**317**	P	**P**	**18 21 25.1**	**+0.2**
GAR	**Garm**	**55.74**	**294**	P	**P**	**18 21 33.4**	**-0.3**
GAR				IAmb	IAmb	18 21 34.7	
	comp=Z,11nm,1.2s						
RES	**Resolute Bay**	**55.92**	**16**	LR	LR	18 47 18.5	
	comp=Z,30nm,18.1s,baz=265,slow=38						
NIL	**Nilore**	**56.51**	**287**	P	**P**	**18 21 37.6**	**-1.5**
NIL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NIL	**Nilore**	**56.51**	**287**	P	**P**	**18 21 37.6**	**-1.5**
NIL				IAmb	IAmb	18 21 41.5	
	comp=Z,9.6nm,1.2s						
CHGR	**Chuyangaron**	**56.70**	**294**	P	**P**	**18 21 40.0**	**-0.5**
YKA	**Yellowknife Ar**	**56.80**	**33**	P	**P**	**18 21 40.7**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=297,slow=6.7,SNR=7.8						
ABKAR	**Akbulak array**	**57.16**	**309**	P	**P**	**18 21 43.6**	**+0.2**
KIRV	**Kirov**	**57.92**	**322**	*i* P	**P**	**18 21 48.1**	**-0.4**
TULEG	**Thule**	**58.74**	**9**	P	**P**	**18 21 52.6**	**-1.4**
TULEG				IAmb	IAmb	18 21 54.4	
	comp=Z,7.7nm,0.9s						
KBL	**Kabul**	**58.96**	**290**	P	**P**	**18 21 55.3**	**-1.2**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KBL	**Kabul**	**58.96**	**290**	P	**P**	**18 21 55.2**	**-1.2**
KBL				IAmb	IAmb	18 22 07.9	
	comp=Z,6.0nm,0.6s						
ARCES	**ARCESS Array B**	**59.84**	**340**	P	**P**	**18 22 01.6**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=49,slow=6.1,SNR=14						
ARCES	**ARCESS Array B**	**59.84**	**340**	P	**P**	**18 22 01.6**	**-0.2**
ARCES				pmax	pmax		
	comp=Z,19nm,1.4s						
KLMR	**Klimovskoe**	**60.85**	**328**	*e*P	**P**	**18 22 07.2**	**-1.5**
KLMR				pmax	pmax		
	comp=Z,18nm,1.2s						
KLMR	**Klimovskoe**	**60.85**	**328**	*e*P	**P**	**18 22 07.3**	**-1.5**
KLMR				AMP		18 22 09.3	
	comp=Z,18nm,1.2s						
BELG	**Belogornoye**	**62.13**	**317**	*i* P	**P**	**18 22 17.1**	**-0.4**
BELG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WRA	**Warramunga Arr**	**63.52**	**193**	P	**P**	**18 22 26.0**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=12,slow=5.7,SNR=1.7						
WRA	**Warramunga Arr**	**63.52**	**193**	P	**P**	**18 22 26.0**	**-1.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.5s						
GEYT	**Alibeck**	**64.36**	**299**	P	**P**	**18 22 31.7**	**-0.9**
	comp=Z,1.5nm,0.5s,baz=81,slow=19,SNR=2.9						
FINES	**FINESS Array B**	**65.37**	**333**	P	**P**	**18 22 38.7**	**0.0**
	comp=Z,13nm,0.6s,baz=44,slow=8.2,SNR=68						
FINES				LR	LR	18 53 37.8	
	comp=Z,65nm,18.5s,baz=22,slow=38						
FINES	**FINESS Array B**	**65.37**	**333**	P	**P**	**18 22 38.5**	**-0.2**
OBN	**Obninsk**	**65.66**	**324**	⇑*e*P	**P**	**18 22 39.9**	**-0.8**
OBN				*e*		18 23 07.0	
OBN				*e*		18 25 09.0	
OBN				pmax	pmax		
	comp=Z,18nm,1.0s						
OBN				MLR	MLR		
	comp=Z,75nm,15.0s						
OBN	**Obninsk**	**65.66**	**324**	*e*P	**P**	**18 22 39.9**	**-0.8**
VRH	**Novokhopyorsk**	**65.78**	**318**	*e*P	**P**	**18 22 41.0**	**-0.5**
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
LPSR	**Galich'ya Gora**	**66.23**	**321**	*e*P	**P**	**18 22 44.3**	**-0.1**
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR	**Storozhevoye**	**67.01**	**319**	*e*P	**P**	**18 22 49.3**	**-0.1**
VSR				pmax	pmax		
	comp=Z,20nm,0.6s						
VORD	**Divnogorie**	**67.11**	**319**	*e*P	**P**	**18 22 50.0**	**0.0**
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
ASAR	**Alice Springs**	**67.24**	**192**	P	**P**	**18 22 52.2**	**+1.1**
	comp=Z,0.4nm,0.9s,baz=7.9,slow=5.7,SNR=4.7						
ASAR	**Alice Springs**	**67.24**	**192**	P	**P**	**18 22 52.0**	**+0.9**
ASAR	**Alice Springs**	**67.24**	**192**	P	**P**	**18 22 52.0**	**+0.9**
DZM	**Mont Dzumac**	**67.25**	**160**	*e*LR	LR	18 43 13.7	
	comp=Z,66nm,24.4s						
VSU	**Vasula**	**67.29**	**330**	*i* P	**P**	**18 22 50.2**	**-0.8**
BOZ	**Bozeman (W)**	**67.90**	**48**	P	**P**	**18 22 56.3**	**+0.9**
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOZ	**Bozeman (W)**	**67.90**	**48**	P	**P**	**18 22 56.3**	**+0.9**
KVN	**Kaiserville**	**68.23**	**57**	P	**P**	**18 22 57.9**	**+0.3**
KVN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KVN	**Kaiserville**	**68.23**	**57**	P	**P**	**18 22 57.9**	**+0.3**
NVAR	**Mina Array Bea**	**68.49**	**57**	P	**P**	**18 23 00.2**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=284,slow=6.6,SNR=7.4						
NVAR	**Mina Array Bea**	**68.49**	**57**	P	**P**	**18 22 59.8**	**+0.6**
NCK	**Nalchik**	**69.71**	**311**	*i* P	**P**	**18 23 06.1**	**-0.4**
NCK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
IIGN	**Ignalina**	**69.76**	**328**	*e*P	**P**	**18 23 07.0**	**+0.5**
NACGM	**Naroch**	**69.87**	**328**	*i* P	**P**	**18 23 07.8**	**+0.6**
KIV	**Kislovodsk**	**69.91**	**312**	*e*P	**P**	**18 23 07.5**	**-0.3**
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV				MLR	MLR		
	comp=Z,86nm,17.0s						
KIV	**Kislovodsk**	**69.91**	**312**	*e*P	**P**	**18 23 07.5**	**-0.3**
KIV	**Kislovodsk**	**69.91**	**312**	P	**P**	**18 23 08.0**	**+0.2**
KIV				IAmb	IAmb	18 23 10.8	
	comp=Z,11nm,0.9s						
KBZ	**Khabaz**	**69.94**	**311**	P	**P**	**18 23 08.2**	**+0.4**
	comp=Z,6.6nm,0.9s,baz=167,slow=3.4,SNR=13						
KBZ				LR	LR	18 59 02.4	
	comp=Z,55nm,19.2s,baz=42,slow=40						
KBZ	**Khabaz**	**69.94**	**311**	*i* P	**P**	**18 23 08.4**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBZ	**Khabaz**	**69.94**	**311**	*e*P	**P**	**18 23 08.4**	**+0.6**
NC405	**NORSAR Array S**	**69.99**	**338**	P	**P**	**18 23 06.2**	**-1.6**
ZEI	**Tsey**	**69.99**	**310**	*e*P	**P**	**18 23 07.7**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SHA1	**Shidzhatmaz**	**70.07**	**312**	*i* P	**P**	**18 23 08.1**	**-0.8**
NB2	**NORSAR Subarra**	**70.18**	**339**	P	**P**	**18 23 09.2**	**+0.1**
	comp=Z,2.8nm,0.6s,baz=33,slow=6.5						
NOA	**NORSAR Array B**	**70.18**	**339**	P	**P**	**18 23 08.9**	**-0.2**
	comp=Z,7.3nm,0.9s,baz=34,slow=6.1,SNR=18						
ONI	**Oni**	**70.37**	**310**	P	**P**	**18 23 11.6**	**+1.0**
ONI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ONI	**Oni**	**70.37**	**310**	P	**P**	**18 23 11.6**	**+1.0**
ONI				IAmb	IAmb	18 23 24.4	
	comp=Z,4.3nm,0.8s						
PABE	**Paberze**	**70.50**	**329**	*e*P	**P**	**18 23 11.4**	**+0.4**
PABE	**Paberze**	**70.50**	**329**	P	**P**	**18 23 11.4**	**+0.4**
PDAR	**Pinedale Array**	**70.87**	**49**	P	**P**	**18 23 14.4**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=276,slow=2.1,SNR=9.1						
AKASG	**Malin Array Be**	**71.93**	**323**	P	**P**	**18 23 20.0**	**+0.3**
	comp=Z,2.8nm,0.5s,baz=42,slow=6.2,SNR=26						
AKASG	**Malin Array Be**	**71.93**	**323**	P	**P**	**18 23 19.7**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AKASG	**Malin Array Be**	**71.93**	**323**	P	**P**	**18 23 19.7**	**-0.1**
AKBB	**Malin Array Si**	**71.93**	**323**	P	**P**	**18 23 18.7**	**-1.0**
AKBB				pmax	pmax		
	comp=Z,13nm,1.0s						
AKBB	**Malin Array Si**	**71.93**	**323**	P	**P**	**18 23 18.7**	**-1.0**
AKBB				IAmb	IAmb	18 23 21.2	
	comp=Z,13nm,1.0s						
GURO	**Guroymak-BITLI**	**73.85**	**308**	P	**P**	**18 23 32.5**	**+1.0**
GURO				IAmb	IAmb	18 23 34.2	
	comp=Z,5.9nm,0.9s						
MARD	**Mardin**	**75.42**	**307**	P	**P**	**18 23 41.6**	**+1.0**
MARD				IAmb	IAmb	18 23 43.0	
	comp=Z,10.0nm,0.9s						
BUR08	**Bucovina Ar. S**	**75.97**	**323**	P	**P**	**18 23 44.1**	**+0.5**
BURAR	**Bucovina Array**	**75.98**	**323**	P	**P**	**18 23 43.6**	**0.0**
OGNE	**Ogallala**	**76.21**	**47**	P	**P**	**18 23 45.6**	**+0.5**
OGNE				IAmb	IAmb	18 23 46.9	
	comp=Z,9.7nm,0.8s						
BRTR	**Keskin Array B**	**77.72**	**313**	P	**P**	**18 23 54.4**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=8.2,slow=4.9,SNR=4.3						
BRTR				LR	LR	19 04 22.2	
	comp=Z,58nm,19.4s,baz=87,slow=40						
BRTR	**Keskin Array B**	**77.72**	**313**	*i* P	**P**	**18 23 54.0**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**79.62**	**330**	LR	LR	19 02 39.7	
	comp=Z,63nm,18.4s,baz=34,slow=38						
WATA	**Walderalm**	**81.66**	**331**	*e*P	**P**	**18 24 15.3**	**+0.4**
	comp=Z,4.6nm,0.6s						
WTTA	**Wattenberg**	**81.70**	**331**	*e*P	**P**	**18 24 16.7**	**+1.6**
	comp=Z,3.8nm,0.6s						
MOTA	**Moosalm**	**81.82**	**331**	*i* P	**P**	**18 24 16.3**	**+0.6**
	comp=Z,3.8nm,0.8s						
SQTA	**Sankt Quirin**	**81.89**	**331**	*e*P	**P**	**18 24 16.1**	**+0.1**
	comp=Z,1.9nm,0.5s						
PMOR	**Pomariorio Ree**	**83.25**	**118**	*e*T	T	19 56 02.3	
	comp=Z,9.7nm,0.2s						
TX31	**Lajitas Ar. Si**	**83.57**	**56**	P	**P**	**18 24 25.4**	**+0.4**
TX31				IAmb	IAmb	18 24 43.2	
	comp=Z,13nm,1.0s						
TX32	**Lajitas Array**	**83.57**	**56**	P	**P**	**18 24 25.8**	**+0.8**
TXAR	**Lajitas Array**	**83.57**	**56**	P	**P**	**18 24 26.1**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=316,slow=3.5,SNR=9.5						
PPT	**Papeete**	**84.06**	**120**	LR	LR	18 54 40.3	
	comp=Z,46nm,21.2s,baz=356,slow=30						
PPT2	**Papeete2**	**84.08**	**120**	*e*LR	LR	18 50 53.7	
	comp=Z,48nm,21.5s						
BDFB	**Brasilia**	**150.14**	**29**	PKPbc	**PKiKP**	**18 31 48.5**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=138,slow=4.8,SNR=4.2						

IDC 17 18:40:10.1±13.0, 46.°70N×154.°85E, h0^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.4/32, mbtmp3.7/4, ML2.5/1, Error ellipse: s-maj=305.2km s-min=52.3km az=138.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.67**	**15**	Pn	Pn	18 41 49.1	-0.2
	0.5nm,0.3s,baz=186,slow=14,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**28.66**	**156**	T	T	19 17 33.3	
	baz=341,slow=76,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**28.67**	**156**	T	T	19 17 31.0	
	baz=341,slow=76,SNR=10						
H11N3	**WAKE ISLAND Hy**	**28.67**	**156**	T	T	19 17 33.3	
	baz=341,slow=76,SNR=5.8						
H11S1	**WAKE ISLAND Hy**	**29.77**	**157**	T	T	19 18 56.3	
	baz=343,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy**	**29.77**	**157**	T	T	19 18 59.4	
	baz=343,slow=76,SNR=26						
H11S2	**WAKE ISLAND Hy**	**29.78**	**157**	T	T	19 18 56.7	
	baz=343,slow=76,SNR=20						
MKAR	**Makanchi Array**	**48.02**	**298**	P	P	18 48 50.6	-0.2
	0.3nm,0.7s,baz=64,slow=8.3,SNR=5.2						
FINES	**FINESS Array B**	**64.58**	**335**	P	P	18 50 48.9	+0.2
	1.9nm,0.6s,baz=32,slow=7.3,SNR=13						
AKASG	**Malin Array Be**	**72.24**	**327**	P	P	18 51 36.5	-0.3
	0.3nm,0.4s,baz=31,slow=6.1,SNR=3.4						

NOU 17 18:49:17.8, 15.°89S×166.°56E, h13^{km}, MLv4.7/13, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.76**	**55**	P	Pg	18 49 32.3	-0.3
DVP	**Devils Point**	**2.40**	**140**	P	Pn	18 49 56.4	-0.4
DVP	**Devils Point**	**2.40**	**140**	P	Pn	18 49 56.4	-0.4

RTV	Rentapao	2.60	137	P	Pn	18 49 59.4	-0.2
LIFNC	LIFOU	4.90	173	P	Pn	18 50 31.2	-0.1
KOUNC	Koumac, New Ca	5.11	205	P	Pn	18 50 33.9	-0.3
	28nm,2.2s						
YATNC	Mamie plateau,	6.14	177	P	Pn	18 50 48.1	-0.2
DZM	Mont Dzumac	6.15	181	P	Pn	18 50 48.2	-0.3
	16nm,1.9s						
NOUC	Port Laguerre	6.18	182	P	Pn	18 50 48.9	+0.1
	24nm,2.6s						
OUENC	Ouen Island, N	6.50	178	P	Pn	18 50 54.0	+0.8

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*IDC **17** 19:11:10.2±14.0, 29.°53N×137.°99E, h583km±232km, mb2.8/5, mb1 3.1/6, mb1mx2.6/33, mbtmp3.8/6, Error ellipse: s-maj=247.9km s-min=15.1km az=102.0*

ISC 17 19:11:04.7±1.2**, 29.°4N**±0.°2×**138.°8E**±0.°4**, h500km, n6,** σ**0.s83**/6**, mb3.2**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USRK	Ussuriysk Ar.	15.76	342	P	P	19 14 22.8	+0.3
	baz=152,slow=8.6,SNR=3.2						
WRA	Warramunga Arr	49.21	186	P	P	19 19 06.6	-0.2
	1.2nm,0.3s,baz=1.3,slow=7.6,SNR=41						
ASAR	Alice Springs	52.94	186	P	P	19 19 34.0	+0.1
	0.3nm,0.5s,baz=8.6,slow=8.1,SNR=16						
ILAR	Eielson Array	57.19	29	P	P	19 20 03.1	-0.1
	0.3nm,0.7s,baz=265,slow=5.5,SNR=4.7						
YKA	Yellowknife Ar	71.57	28	P	P	19 21 33.4	-1.0
	0.3nm,0.4s,baz=300,slow=6.1,SNR=2.7						
NVAR	Mina Array Bea	81.45	51	P	P	19 22 30.5	+0.9
	0.6nm,0.6s,baz=297,slow=6.0,SNR=5.4						

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*IDC **17** 19:48:09.7±3.3, 9.°55S×112.°85E, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.2/34, mbtmp3.6/7, ML3.6/1, Error ellipse: s-maj=173.0km s-min=19.9km az=49.0*

ISC 17 19:48:14.9±3.1**, 9.°6S**±0.°7×**113.°0E**±0.°8**, h35km, n7,** σ**1.s13**/7**, mb3.5**/6**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.92	126	Pn	Pn	19 51 42.4	-1.0
	0.2nm,0.3s,baz=145,slow=21,SNR=2.1						
FITZ				Sn	Sn	19 54 17.0	-11
	0.1nm,0.3s,baz=207,slow=23,SNR=1.7						
WRA	Warramunga Arr	23.05	119	P	P	19 53 18.7	+1.3
	0.3nm,0.4s,baz=289,slow=12,SNR=1.5						
ASAR	Alice Springs	24.41	128	P	P	19 53 31.4	+1.1
	0.5nm,0.7s,baz=306,slow=8.8,SNR=7.7						
CMAR	Chiang Mai Arr	31.09	333	P	P	19 54 30.6	+0.5
	0.4nm,0.9s,baz=171,slow=8.0,SNR=5.7						
SONM	Songino Array	57.43	355	P	P	19 58 00.2	+0.1
	0.6nm,0.6s,baz=171,slow=9.4,SNR=4.9						
MKAR	Makanchi Array	62.42	337	P	P	19 58 34.0	-0.4
	0.6nm,0.5s,baz=148,slow=7.8,SNR=11						
ZALV	Zalesovo Beam	67.60	342	P	P	19 59 06.9	-0.9
	0.5nm,0.3s,baz=153,slow=8.1,SNR=2.1						

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*GCG **17** 19:49:15.5±3.1, 17.°08N×96.°00W, h0km±999km, MD5.8*
*UCR **17** 19:49:28.4±1.7, 15.°67N×95.°46W, h6km±24km, mb6.6(NEIC)*
*MOS **17** 19:49:51.8±1.0, 15.°89N×93.°32W, h86km, mb6.5/24, Error ellipse: s-maj=6.6km s-min=4.2km az=90.8*
*NEIC **17** 19:49:53.0±2.8, 15.°80N±0.°05×93.°63W±0.°04, h85km±1km, mb6.4/833, Mwb6.5/60, Mww6.6, Md6.6(SNET), Md6.4/81(MEX), Error ellipse: s-maj=8.5km s-min=6.4km az=38.0*
*IDC **17** 19:49:53.2±0.3, 15.°94N×93.°19W, h87km±2km, mb5.5/46, mb1 5.6/48, mb1mx5.5/51, mbtmp5.9/48, MS5.9/32, Ms1 5.9/32, ms1mx5.7/39, Error ellipse: s-maj=9.4km s-min=4.6km az=56.0*
*BJI **17** 19:49:53.0±0.0, 15.°85N×93.°35W, h100km, mB6.2/68*
*INET **17** 19:49:53.5, 15.°48N×93.°72W, h15km, ML6.2*
*NEIC **17** 19:49:54.5, 15.°89N×93.°45W, h88km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-1.45; $M_{\theta\theta}$0.17; $M_{\phi\phi}$1.28; $M_{r\theta}$5.05; $M_{\theta\phi}$-0.69; $M_{\phi r}$-4.31; Fault plane solution: $M_0$6.82000×10^{18} NP1:ϕ_s311.17000°, δ84.08000°, λ-95.43000°. NP2:ϕ_s173.84000°, δ8.03000°, λ-47.61000°. Principal axes: T 6.7562, Plg39.0000°, Azm46.0000°; N 0.1169, Plg5.0000°, Azm312.0000°; P -6.8731, Plg51.0000°, Azm215.0000°;*
*MEX **17** 19:49:54.3±1.2, 15.°76N×93.°70W, h91km±9km, MD6.6*
*SNET **17** 19:49:54.1±0.8, 15.°80N×93.°50W, h117km, MW6.4(NEIC)*
*GCMT **17** 19:49:55.0±0.1, 15.°84N×93.°60W, h73km, MW6.6/164, Moment Tensor Solution. s164,c434; s156,c667; Duration: 4.s7 Moment tensor: Scale 10^{18}Nm; M_{rr}-3.29±.03; $M_{\theta\theta}$0.48±.03; $M_{\phi\phi}$2.81±.03; $M_{r\theta}$5.79±.03; $M_{\theta\phi}$-2.38±.03; $M_{\phi r}$-5.22±.03; Best double couple: $M_0$8.69300×10^{18} NP1:ϕ_s169.00000°, δ15.00000°, λ-55.00000°. NP2:ϕ_s313.00000°, δ78.00000°, λ-99.00000°. Principal axes: T 9.0290, Plg32.0000°, Azm50.0000°; N -0.6730, Plg9.0000°, Azm315.0000°; P -8.3570, Plg57.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **17** 19:49:58, 15.°79N×93.°33W, h90km, Moment Tensor Solution. Duration: 8.s2 Moment tensor: Scale 10^{18}Nm; M_{rr}-2.76; $M_{\theta\theta}$0.16; $M_{\phi\phi}$2.59; $M_{r\theta}$6.05; $M_{\theta\phi}$-1.49; $M_{\phi r}$-5.66; Fault plane solution: $M_0$8.84000×10^{18} NP1: ϕ_s176.00000°, δ12.00000°, λ-49.00000°. NP2: ϕ_s314.00000°, δ81.00000°, λ-98.00000°. Principal axes: T 8.8795, Plg35.0000°, Azm51.0000°; N -0.0872, Plg8.0000°, Azm316.0000°; P -8.7923, Plg54.0000°, Azm215.0000°;*
*BGR **17** 19:49:59.1±0.0, 15.°71N×91.°59W, h104km, mb6.3, mB_BB7.0*

ISC 17 19:49:52.7±0.2**, 15.°75N**±0.°02×**93.°46W**±0.°03**, h92km**±1km**, h92km:pP-P, n2222,** σ**2.s14**/2539**, mb6.3**/546**, 646C-202D, Fault plane solution: NP1:**ϕ_s320.06137°**,** δ86.79294°**,** λ-97.05087°. **NP2:**ϕ_s205.72359°**,** δ7.74261°**,** λ-24.53541°. **Principal axes:** T Plg41.3839°**,** Azm56.7045°**;** N Plg7.0398°**,** Azm320.4578°**;** P Plg47.7501°**,** Azm222.6442°**; Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.24	101		Pn	19 50 07.3	+1.3
PCIG					Sn	19 50 18.0	+2.1
PCIG		0.24	101	⇓iP	Pn	19 50 07.3	+1.3
PCIG				iS	Sn	19 50 18.2	+2.2
TGIG		1.07	18		Pn	19 50 15.2	+1.8
TGIG					Sn	19 50 30.6	+1.7
TGIG		1.07	18	⇓iP	Pn	19 50 15.2	+1.8
TGIG				iS	Sn	19 50 30.6	+1.7
PATR	El Naranjo	1.34	118	⇓iP	Pn	19 50 19.5	+2.7
PATR				iS	Sn	19 50 39.4	+4.3
PAVE	Pavencul	1.36	114	⇓iP	Pn	19 50 20.2	+3.1
PAVE				⇓iS	Sn	19 50 40.1	+4.8
CCIG	Comitan	1.38	67		Sn	19 50 38.9	+3.1
CCIG	Comitan	1.38	67		Pn	19 50 20.4	+3.1
CCIG	Comitan	1.38	67	⇑eP	Pn	19 50 20.6	+3.4
CCIG				eS	Sn	19 50 40.5	+4.7
THIG		1.43	126		Pn	19 50 20.0	+2.3
THIG					Sn	19 50 40.4	+3.9
THIG		1.43	126	eP	Pn	19 50 19.9	+2.3
THIG				iS	Sn	19 50 40.8	+4.3
CMIG	Matias Romero	1.91	315		Pn	19 50 22.4	-1.4
CMIG					Sn	19 50 43.9	-3.5
CMIG	Matias Romero	1.91	315	iP	Pn	19 50 22.4	-1.4
CMIG				eS	Sn	19 50 43.9	-3.5
HUEH	Huehuetenango	1.94	103	⇑iP	Pn	19 50 28.3	+3.9
HUEH	Huehuetenango	1.94	103		Pn	19 50 28.1	+3.7
RTAL	Retalhuleu	2.10	125		Pn	19 50 29.1	+2.8
STG3	Santiaguito 3,	2.10	119	⇑iP	Pn	19 50 30.5	+4.0
TUIG	Tuzandepetl	2.45	338		Pn	19 50 30.4	-0.5
TUIG					Sn	19 50 57.4	-2.8
TUIG	Tuzandepetl	2.45	338	⇑iP	Pn	19 50 30.4	-0.5
TUIG				iS	Sn	19 50 57.7	-2.5
FUG	Fuego 3	2.84	117	⇑iP	Pn	19 50 40.6	+4.2
PCG	Pacaya	3.07	116	⇑eP	Pn	19 50 44.1	+4.6
NBG	Las Nubes	3.22	111	⇑eP	Pn	19 50 45.9	+4.3
PETF	Flores	3.64	71		Pn	19 50 50.1	+3.2
MRL	Marmol	3.71	100	⇓iP	Pn	19 50 51.5	+3.4
SCIG	Sabancuy	3.87	34		Pn	19 50 52.4	+2.4
SCIG					Sn	19 51 24.4	-10
SCIG	Sabancuy	3.87	34	⇑eP	Pn	19 50 52.4	+2.4
SCIG				iS	Sn	19 51 38.2	+3.8
ESQI	Esquipulas	4.15	106	⇑iP	Pn	19 50 56.8	+2.8
ESQI	Esquipulas	4.15	106		Pn	19 50 56.7	+2.7
TOIG	Toxpalan	4.16	305	eP	Pn	19 50 53.0	-1.1
TOIG				eS	Sn	19 51 37.3	-4.4
CEVE	Cerro Verde	4.18	117	eP	Pn	19 50 58.9	+4.4
CEVE	Cerro Verde	4.18	117	eP	Pn	19 50 58.9	+4.4
MTO3	Montecristo	4.18	108		Pn	19 50 57.1	+2.6
CEDA	San Andres	4.39	116	⇑iP	Pn	19 51 00.5	+3.4
CEDA	San Andres	4.39	116	⇑iP	Pn	19 51 00.5	+3.4
TXIG	Tlaxiaco	4.39	290	⇑eP	Pn	19 50 56.1	-1.3
TXIG				iS	Sn	19 51 43.0	-4.5
JAYA	Jayaque - finc	4.41	118	⇑iP	Pn	19 51 01.1	+3.6
JAYA	Jayaque - finc	4.41	118	⇑iP	Pn	19 51 01.1	+3.6
BOQS	Boqueron	4.52	116	eP	Pn	19 51 02.0	+3.0
BOQS	Boqueron	4.52	116	eP	Pn	19 51 02.0	+3.0
PNIG	Pinotepa	4.53	279		Pn	19 50 55.4	-3.6
PNIG					Sn	19 51 38.6	-12
PNIG	Pinotepa	4.53	279	⇑eP	Pn	19 50 55.4	-3.6
PNIG				eS	Sn	19 51 38.6	-12
TPIG	Tehuac#an	4.58	306		Pn	19 50 59.0	-0.8
TPIG					Sn	19 51 47.2	-4.7
TPIG	Tehuac#an	4.58	306	⇓eP	Pn	19 50 59.0	-0.8
TPIG				eS	Sn	19 51 47.2	-4.7
SNET	Serv Nac Est T	4.58	116		Pn	19 51 03.0	+3.2
LALI	Alcalda de L	4.60	119	eP	Pn	19 51 03.5	+3.6
LALI	Alcalda de L	4.60	119	eP	Pn	19 51 03.5	+3.6
COEG	Centro de Oper	4.92	115	eP	Pn	19 51 08.1	+3.8
COEG	Centro de Oper	4.92	115	eP	Pn	19 51 08.1	+3.8
TLIG	Tlapa	5.21	291		Sn	19 52 00.4	-6.9
TLIG	Tlapa	5.21	291		Pn	19 51 07.1	-1.2
TLIG	Tlapa	5.21	291	⇑eP	Pn	19 51 07.3	-1.0
TLIG				eS	Sn	19 52 00.4	-6.9
COEB	Comit de Eme	5.27	115	eP	Pn	19 51 12.8	+3.6
COEB	Comit de Eme	5.27	115	eP	Pn	19 51 12.8	+3.6
ALJI	Alcalda de J	5.32	116	eP	Pn	19 51 13.2	+3.6
ALJI	Alcalda de J	5.32	116	eP	Pn	19 51 13.2	+3.6
CRIG	Cruz Grande	5.53	281		Pn	19 51 09.3	-3.3
CRIG					Sn	19 52 02.3	-13
CRIG	Cruz Grande	5.53	281	⇑eP	Pn	19 51 09.3	-3.3
CRIG				eS	Sn	19 52 02.3	-13
JUCU	Jucuar¡n	5.63	116	eP	Pn	19 51 17.5	+3.5
JUCU	Jucuar¡n	5.63	116	eP	Pn	19 51 17.5	+3.5
PPM	Popocatepetl	5.93	305	⇓eP	Pn	19 51 19.8	+1.3
PPM				eS	Sn	19 52 28.9	+3.6
CNCH	Conchagua	5.98	114	⇑iP	Pn	19 51 22.6	+3.7
CNCH	Conchagua	5.98	114	⇑iP	Pn	19 51 22.6	+3.7
DAIG	Los Arroyos	6.07	283		Pn	19 51 17.3	-2.7
DAIG					Sn	19 52 17.2	-11
DAIG	Los Arroyos	6.07	283	⇑eP	Pn	19 51 17.3	-2.7
DAIG				eS	Sn	19 52 17.2	-11
YAIG	Yautepec	6.18	301		Pn	19 51 21.8	+0.2
YAIG					Sn	19 52 23.4	-7.6
YAIG	Yautepec	6.18	301	⇑eP	Pn	19 51 21.8	+0.2
YAIG				eP	Pn	19 51 23.4	+1.8
TGUH	Tegucigalpa,Un	6.22	105	⇑eP	Pn	19 51 26.0	+3.9
TGUH	Tegucigalpa,Un	6.22	105	⇑P	Pn	19 51 24.9	+2.8
TGUH	Tegucigalpa,Un	6.22	105	Pn	Pn	19 51 23.9	+1.8
MEIG	Mezcala	6.28	291		Pn	19 51 21.4	-1.5
MEIG					Sn	19 52 26.8	-6.5
MEIG	Mezcala	6.28	291	⇑eP	Pn	19 51 21.4	-1.5
MEIG				eS	Sn	19 52 26.8	-6.5
UNM	Universidad Na	6.51	304	P	Pn	19 51 26.5	+0.3
UNM	Universidad Na	6.51	304		Pn	19 51 26.5	+0.3
CAIG	El Cayaco	6.66	282		Pn	19 51 25.3	-2.6
CAIG					Sn	19 52 31.6	-11
CAIG	El Cayaco	6.66	282	⇑eP	Pn	19 51 25.3	-2.6
CAIG				eS	Sn	19 52 31.6	-11
CRIN	San Cristobal	6.92	115		Pn	19 51 34.7	+3.1
DEIG	Demacu	6.97	311	⇓eP	Pn	19 51 33.6	+1.2
DEIG				eS	Sn	19 52 50.1	-0.2
ARIG	Puente Sto Nin	7.05	292		Pn	19 51 33.1	-0.2
ARIG					Sn	19 52 41.6	-10
ARIG	Puente Sto Nin	7.05	292	⇑eP	Pn	19 51 33.1	-0.2
ARIG				eS	Sn	19 52 41.6	-10
CNGN	Cerro Negro	7.32	115		Pn	19 51 39.0	+2.1
MATN	Matagalpa	7.83	110		Pn	19 51 46.1	+2.1
ZIIG	Zihuatanejo	7.89	285		Pn	19 51 43.2	-1.5
ZIIG					Sn	19 53 02.6	-10
ZIIG	Zihuatanejo	7.89	285	⇑eP	Pn	19 51 43.2	-1.5
ZIIG				eS	Sn	19 53 02.6	-10
MOIG	Morelia	8.33	299	Pn	Pn	19 51 52.5	+1.5
MOIG	Morelia	8.33	299		Sn	19 53 24.8	+1.2
MOIG	Morelia	8.33	299	⇓eP	Pn	19 51 52.5	+1.5
MOIG				eS	Sn	19 53 24.8	+1.2
RPIG	Rio Verde	8.68	316	⇑eP	Pn	19 51 56.5	+0.9
RPIG				e		19 53 58.3	
ACON	Acoyapa	8.88	114		Pn	19 52 00.3	+2.0
IGIG	Irapuato, Guan	8.97	305		Pn	19 52 01.3	+1.6
IGIG					Sn	19 53 42.0	+2.8
IGIG	Irapuato, Guan	8.97	305	⇓eP	Pn	19 52 01.3	+1.6
IGIG				eS	Sn	19 53 42.0	+2.8
GTIG	Gomez Farias	9.05	324	⇑eP	Pn	19 52 00.0	-0.5
GTIG				i		19 53 48.4	
HZTE	Horizontes, Gu	9.15	122		Pn	19 52 05.7	+3.8
GBS3	Finca Las Img	9.23	121	eP	Pn	19 52 06.1	+3.0
GB1A	Borinquen Arri	9.26	121	eP	Pn	19 52 06.7	+3.2
BUEV	Buena Vista	9.26	121	eP	Pn	19 52 06.7	+3.2
BUAI	Buenos Aires	9.28	120	⇑iP	Pn	19 52 05.6	+1.9
LIM1	Limonal	9.44	121	eP	Pn	19 52 09.5	+3.5
GUAB	Guayabo de Bag	9.45	121	eP	Pn	19 52 09.8	+3.7
ORTG	Ortega, Santa	9.46	124		Pn	19 52 10.0	+3.7
CUI	Cuipilapa	9.54	121	eP	Pn	19 52 10.8	+3.6
PLVR	Palo Verde	9.55	123	eP	Pn	19 52 11.3	+3.7
ESPN	Las Esperanzas	9.57	111		Pn	19 52 10.1	+2.5
DUNO	Dulce Nombre,	9.60	125		Pn	19 52 11.6	+3.5
PTEN	Parque Tenorio	9.65	120	⇑iP	Pn	19 52 11.0	+2.2
ACAL	Aguas Claras	9.65	121	⇑eP	Pn	19 52 12.0	+3.1
MMIG	Aquila	9.78	286		Pn	19 52 09.3	-1.2
MMIG					Sn	19 54 02.7	+4.0
MMIG	Aquila	9.78	286	⇑eP	Pn	19 52 09.3	-1.2
MMIG				eS	Sn	19 53 52.7	-6.0
JTS	Las Juntas de	9.91	122	P	Pn	19 52 14.7	+2.4
JTS	Las Juntas de	9.91	122	⇑eP	Pn	19 52 15.4	+3.0
JTS	Las Juntas de	9.91	122		Pn	19 52 14.7	+2.4
CEDE	Laguna Cedeo	10.01	120	eP	Pn	19 52 16.0	+2.2
ARE1	Arenal 1	10.01	121	eP	Pn	19 52 15.8	+2.1
CASO	Castillo	10.01	121	eP	Pn	19 52 17.6	+3.8
CAO2	Cobano, Puntar	10.14	125		Pn	19 52 18.6	+3.2
COVE	Coope Vega, Sa	10.14	118	eP	Pn	19 52 17.0	+1.6
COVE	Coope Vega, Sa	10.14	118		Pn	19 52 17.2	+1.7
LAFE	Finca La Fe, P	10.22	124	eP	Pn	19 52 19.2	+2.6
AAIG	Aguscalientes	10.46	308	⇓eP	Pn	19 52 21.1	+1.1
AAIG				eS	Sn	19 54 19.1	+3.6
CRPO	Crater poas	10.56	120	eP	Pn	19 52 23.5	+2.0
LNIG	Linares	10.70	329	eP	Pn	19 52 23.0	0.0
LNIG				iS	Sn	19 54 20.8	-0.1
RIFO	Rio Frio, Sara	10.75	119	eP	Pn	19 52 25.5	+1.7
HDC	Heredia	10.76	121		Pn	19 52 26.5	+2.5
HDC3	Heredia 3	10.76	121	eP	Pn	19 52 26.7	+2.7
SJS	Escuela Geolog	10.84	121	eP	Pn	19 52 27.4	+2.3
OCM	Ochomogo	10.94	121	eP	Pn	19 52 28.7	+2.1
LCR2	La Lucha 2	10.99	122	eP	Pn	19 52 29.5	+2.3
VTRT	Volcan Turrial	11.02	120	eP	Pn	19 52 30.0	+2.2
RAFA	San Farael, Vo	11.03	120	eP	Pn	19 52 31.2	+3.3
CVTR	Volcan Turrial	11.04	120	eP	Pn	19 52 30.2	+2.1
CVTR	Volcan Turrial	11.04	120		Pn	19 52 29.9	+1.8
VTCV	VTCV, Calle Va	11.09	120	eP	Pn	19 52 30.0	+1.5
RIMA	Rio Macho	11.09	121	eP	Pn	19 52 30.9	+2.3
RIMA	Rio Macho	11.09	121		Pn	19 52 31.0	+2.5
CDM	Cerro de Muert	11.29	122	eP	Pn	19 52 33.6	+2.1
EDDO	Dominical	11.38	123	eP	Pn	19 52 34.8	+2.5
MRVA	Moravia de Chi	11.41	120	eP	Pn	19 52 34.2	+1.4
PEZE	Perez Zeledon,	11.46	122	eP	Pn	19 52 35.5	+2.1
PEZE	Perez Zeledon,	11.46	122		Pn	19 52 36.3	+2.8
CJM	Chamela	11.65	290	⇓eP	Pn	19 52 31.8	-4.1
CJM				eS	Sn	19 54 44.1	0.0
MNIG	Monterrey	11.70	328	⇑eP	Pn	19 52 36.8	+0.1
MNIG				e		19 54 30.2	
SRBA	San Rafael, Bu	11.80	122	Pn	Pn	19 52 40.1	+2.1
EDPN	Palmar Norte	11.87	123	eP	Pn	19 52 41.6	+2.7
EDBA	Buenos Aires	11.91	122	eP	Pn	19 52 41.4	+1.9
PRVC	Isla de Provid	11.95	100	⇑eP	Pn	19 52 40.8	+0.9
PRVC	Isla de Provid	11.95	100	⇑eP	Pn	19 52 40.8	+0.9
PRVC	Isla de Provid	11.95	100	Pn	Pn	19 52 40.7	+0.7
RIOS	Rincon, Osa	11.98	125	eP	Pn	19 52 41.9	+1.5
RIOS	Rincon, Osa	11.98	125		Pn	19 52 42.2	+1.8
POTG	Potrero Grande	12.10	122	eP	Pn	19 52 43.6	+1.6
SOR	Soroa	12.10	53	P	Pn	19 52 41.5	-0.5
SOR	Soroa	12.10	53	Pn	Pn	19 52 41.5	-0.5
PIRO	Carate, Puerto	12.30	125	eP	Pn	19 52 45.8	+1.1
KVTX	Kingsville	12.44	341	⇑P	Pn	19 52 46.8	+0.4
KVTX	Kingsville	12.44	341		Pn	19 52 44.1	-2.3
CDITO	Canoas	12.57	123		Pn	19 52 49.3	+1.0
CCOL	Caracol de Cor	12.59	124	eP	Pn	19 52 50.1	+1.6
BRU2	Volcan	12.59	122	⇑eP	Pn	19 52 50.2	+1.5
BRU2	Volcan	12.59	122		Pn	19 52 49.7	+1.0
LCCY	Blossom Villag	13.33	71	Pn	Pn	19 52 59.1	+0.8
735A	Kenedy	13.64	344		Pn	19 53 02.3	-0.1
833A	Chaparral WMA,	13.66	337	P	Pn	19 53 02.6	0.0
	baz=155,SNR=422						
MAIG	Mazatlaan	14.28	303	P	Pn	19 53 10.9	+0.3
MAIG					Sn	19 55 44.9	-2.9
MAIG	Mazatlaan	14.28	303	⇓eP	Pn	19 53 10.9	+0.3
MAIG				eS	Sn	19 55 44.9	-2.9
HKT	Hockley	14.30	352	cP	Pn	19 53 08.4	-2.4
HKT	Hockley	14.30	352	⇑P	Pn	19 53 08.9	-1.9
HKT	Hockley	14.30	352		Pn	19 53 10.6	-0.1
545A	Edgard	14.49	10	Pn	Pn	19 53 12.1	-1.2
PDIG	Papasquiaro	14.50	311	⇓eP	Pn	19 53 14.9	+1.3
PDIG				e		19 55 58.5	
BCIP	Isla Barro Col	14.82	115	P	Pn	19 53 17.3	-0.4
BCIP	Isla Barro Col	14.82	115	eP	Pn	19 53 16.8	-0.9
BCIP				⇑eP	P	19 53 17.5	-3.7
BCIP	Isla Barro Col	14.82	115	⇑P	Pn	19 53 17.3	-0.4
BCIP	Isla Barro Col	14.82	115	Pn	Pn	19 53 17.3	-0.4
441A	DeRidder	14.93	1		Pn	19 53 17.4	-1.6
AZU	Azuero	15.13	120	eP	Pn	19 53 23.0	+1.4
MCJ	Malvern	15.26	80	iP	P	19 53 26.0	-0.1
435B	Jarrell	15.43	347	P	Pn	19 53 25.3	+0.1
435B				IAmb	IAmb	19 54 01.2	
	comp=Z,2μm,0.8s						
435B	Jarrell	15.43	347	P	Pn	19 53 25.4	+0.1
	baz=165,SNR=79						
CVJ	Coleyville	15.43	79	iP	P	19 53 29.5	+1.4
MTDJ	Mount Denham	15.43	79	⇑eP	P	19 53 27.1	-0.9
MTDJ	Mount Denham	15.43	79	⇑P	Pn	19 53 26.7	+1.2
MTDJ	Mount Denham	15.43	79	Pn	Pn	19 53 26.5	+1.0
MTDJ				IAmb	IAmb	19 54 04.6	
	comp=Z,6μm,1.1s						
061Z	Ochoppi	15.45	47	P	Pn	19 53 25.9	+0.4
342A	Flagon Creek P	15.59	4		Pn	19 53 27.9	+0.7
342A				IAmb	IAmb	19 53 34.9	
	comp=Z,9μm,1.9s						
SSIG	Sanalona	15.67	307	⇓eP	Pn	19 53 28.7	+0.3
SSIG				eS	Sn	19 56 17.8	-3.8
BBJ	Bamboo Saint A	15.71	78	iP	P	19 53 33.1	+2.1
JCT	Junction City	15.77	339	P	Pn	19 53 29.2	-0.4
JCT				pmax	pmax		
	comp=Z,2μm,0.8s						
JCT	Junction City	15.77	339	⇑P	Pn	19 53 29.2	-0.4
JCT	Junction City	15.77	339	Pn	Pn	19 53 29.2	-0.4
JCT				IAmb	IAmb	19 54 06.4	
	comp=Z,2μm,0.8s						
JCT	Junction City	15.77	339	P	Pn	19 53 29.4	-0.1
	baz=157,SNR=381						
344A	Westbrook Farm	15.83	9	P	Pn	19 53 31.1	+0.9
344A				IAmb	IAmb	19 54 02.8	
	comp=Z,3μm,1.2s						
HPIG		15.89	316	P	Pn	19 53 31.7	+0.4
HPIG		15.89	316		Sn	19 56 27.6	+0.4
HPIG		15.89	316	⇓eP	Pn	19 53 31.9	+0.5
HPIG				eS	Sn	19 56 27.6	+0.4
NATX	Nacogdoches	15.97	356	Pn	Pn	19 53 31.4	-0.7
NATX				IAmb	IAmb	19 53 37.1	
	comp=Z,4μm,1.4s						
NATX	Nacogdoches	15.97	356	P	Pn	19 53 32.5	+0.5
	baz=176,SNR=78						
346A	Big Creek Wild	15.99	13	P	Pn	19 53 32.8	+0.5
346A				IAmb	IAmb	19 54 07.3	
	comp=Z,4μm,1.1s						
STH	Stony Hill	16.10	79	iP	P	19 53 36.5	+1.0
HOJ	Hope	16.15	80	iP	P	19 53 36.2	+0.3
GWJ	Greenwich	16.18	79	iP	P	19 53 37.3	+0.9
237A	Washetta, Mont	16.32	353	P	Pn	19 53 36.5	+0.2
451A	Vernon	16.40	24	P	P	19 53 38.5	0.0
BRAL	Brewton	16.43	20	⇑P	P	19 53 38.4	-0.4
BRAL	Brewton	16.43	20	P	P	19 53 40.3	+1.4
BRAL	Brewton	16.43	20	P	P	19 53 39.6	+0.7
	baz=202,SNR=39						
TXAR	Lajitas Array	16.46	327	P	P	19 53 39.8	+0.4
	comp=Z,8.8nm,0.3s,baz=148,slow=14,SNR=344						
TXAR				S	Sn	19 56 41.0	+0.2
	comp=Z,2.1nm,0.3s,baz=63,slow=33,SNR=1.6						
TXAR				P3KPbc		20 28 51.1	
	comp=Z,0.0nm,0.3s,baz=325,slow=1.4,SNR=7.8						
TXAR	Lajitas Array	16.46	327		P	19 53 39.2	-0.2
TX31	Lajitas Ar. Si	16.46	327	⇑P	P	19 53 39.7	+0.3
TX31	Lajitas Ar. Si	16.46	327	P	P	19 53 39.5	+0.1
TX31				IAmb	IAmb	19 53 43.8	
	comp=Z,8μm,1.6s						
TX32	Lajitas Array	16.46	327	P	P	19 53 39.7	+0.2
CMJ	Castle Mountai	16.52	79	iP	P	19 53 41.4	+1.3
060A	Indiantown	16.56	45	P	P	19 53 41.6	+1.2
WHTX	Lake Whitney,	16.57	348	P	Pn	19 53 39.9	+0.4
WHTX				IAmb	IAmb	19 54 11.2	
	comp=Z,3μm,1.1s						
WHTX	Lake Whitney,	16.57	348	P	Pn	19 53 39.9	+0.4
	baz=166,SNR=145						
553A	Crawfordville	16.59	28	P	P	19 53 40.7	+0.1
553A				IAmb	IAmb	19 53 46.9	
	comp=Z,4μm,0.8s						
DWPF	Disney Wildern	16.59	40	⇑P	Pn	19 53 40.0	+0.3
DWPF				⇓S	Sn	19 56 44.4	+0.7
DWPF	Disney Wildern	16.59	40	P	P	19 53 40.7	0.0
DWPF	Disney Wildern	16.59	40	P	P	19 53 40.3	-0.4
	baz=225						
VBMS	Vicksburg	16.61	9	P	P	19 53 41.1	+0.2
VBMS				IAmb	IAmb	19 54 16.2	
	comp=Z,4μm,0.9s						
VBMS	Vicksburg	16.61	9	P	P	19 53 41.6	+0.7
	baz=190,SNR=91						
PAYG	Puerto Ayora	16.62	169	⇓eP	P	19 53 43.8	+2.7
PAYG	Puerto Ayora	16.62	169	⇓P	P	19 53 44.0	+2.8
PAYG	Puerto Ayora	16.62	169	P	P	19 53 43.7	+2.5
656A	Willston	16.88	35	P	P	19 53 44.3	+0.4
656A				IAmb	IAmb	19 54 08.4	
	comp=Z,5μm,1.1s						
143A	Socs Landing,	16.98	6	P	P	19 53 45.0	0.0
143A				IAmb	IAmb	19 53 50.3	
	comp=Z,4μm,1.1s						
CAPC	Capurgana	17.25	112	⇑eP	Pn	19 53 46.6	-1.5
146A	Union	17.28	13	P	P	19 53 49.3	+1.0
146A				IAmb	IAmb	19 54 11.9	
	comp=Z,5μm,1.1s						
SLBS	Sierra La Lagu	17.40	300	⇓P	Pn	19 53 51.5	+1.8
SLBS	Sierra La Lagu	17.40	300		P	19 53 49.4	-0.3
SLBS				IAmb	IAmb	19 54 28.5	
	comp=Z,3μm,1.6s						
250A	Grady	17.43	21	P	Pn	19 53 51.9	+1.9
Z41A	Richland Creek	17.44	2	P	Pn	19 53 51.5	+1.4
	baz=182,SNR=128						
Z38A	Mt. Pleasant	17.49	356	P	Pn	19 53 50.6	0.0
Z38A				IAmb	IAmb	19 54 13.4	
	comp=Z,7μm,1.4s						
352A	Blakely	17.49	25	P	Pn	19 53 52.2	+1.5
TSIG	Topolobambo	17.55	306	⇓eP	Pn	19 53 52.7	+1.2
TSIG				eS	Sn	19 56 53.4	-13
PTAC	Punta Ardita,	17.55	117	⇑eP	P	19 53 49.9	-1.5
ABTX	Abilene, Hawle	17.71	343		Pn	19 53 53.9	+0.4
ABTX				IAmb	IAmb	19 54 16.6	
	comp=Z,4μm,1.2s						
ABTX	Abilene, Hawle	17.71	343	P	Pn	19 53 54.1	+0.7
	baz=160,SNR=157						
CSIG	Choix	17.71	311	⇓eP	Pn	19 53 54.9	+1.4
CSIG				eS	Sn	19 56 57.6	-13
Z35A	Perchaven, San	17.84	350	P	Pn	19 53 55.1	+0.2
Z35A				IAmb	IAmb	19 54 16.3	
	comp=Z,3μm,1.1s						
WLAR	White Oak Lake	17.86	1		Pn	19 53 55.0	-0.2
WLAR				IAmb	IAmb	19 54 42.8	
	comp=Z,6μm,1.3s						
LPIG	La Paz	17.87	300	P	Pn	19 53 56.7	+1.3
	comp=Z,7.2nm,0.3s,baz=148,slow=1.0,SNR=22						
LPIG				S	S	19 57 18.3	+3.2
	comp=Z,9.6nm,0.3s,baz=73,slow=19,SNR=1.0						
LPIG				LR	LR	20 00 04.4	
	comp=Z,64μm,21.3s,baz=126,slow=34						
LPIG				ScS	ScS	20 05 37.0	+2.1
	baz=67,slow=5.5,SNR=0.8						

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LPIG  La Paz            17.87 300 i P    Pn    19 53 56.9 +1.5
LPIG                              i            19 57 21.9
GTBY  Guantanamo Bay    17.95  74⇑eP     Pn    19 53 57.6 +1.1
GTBY  Guantanamo Bay    17.95  74 ⇑P     Pn    19 53 56.8 +0.4
GTBY  Guantanamo Bay    17.95  74        Pn    19 53 57.8 +1.3
TIGA  Tifton            18.03  28  P     Pn    19 53 57.8 +0.6
TIGA  Tifton            18.03  28  P     Pn    19 53 58.2 +0.9
      baz=212,SNR=284
LCBC  Los crdobas,      18.05 110 eP     Pn    19 53 57.7 +0.1
Z47A  Carrollton        18.05  15        Pn    19 53 57.8 +0.4
CCAR  Cane Creek        18.15   5  P     Pn    19 53 59.2 +0.5
456A  Hilliard          18.22  33  P     Pn    19 54 00.7 +1.1
456A                               IAmb  IAmb  19 54 24.0
      comp=Z,5µm,1.3s
Y45A  Yeager Farm, C    18.38  10        Pn    19 54 01.8 +0.3
LOOK  Love County       18.47 350        Pn    19 54 02.7 +0.2
LOOK                               IAmb  IAmb  19 54 45.8
      comp=Z,3µm,1.0s
152A  Waverly Hall      18.62  24  P     Pn    19 54 03.7 -0.6
152A                               IAmb  IAmb  19 54 31.3
      comp=Z,2µm,1.1s
X40A  Basin Creek Fa    18.66   2  P     P     19 54 04.0 +0.6
X40A                               IAmb  IAmb  19 54 40.8
      comp=Z,4µm,2.0s
X40A  Basin Creek Fa    18.66   2  P     Pn    19 54 04.3 -0.5
      baz=182,SNR=101
MIAR  Mount Ida         18.71 360  P     P     19 54 04.7 +0.7
MIAR                               pmax  pmax
      comp=Z,2µm,0.9s
MIAR  Mount Ida         18.71 360 ⇑P     P     19 54 04.8 +0.7
MIAR  Mount Ida         18.71 360  P     P     19 54 04.7 +0.7
MIAR                               IAmb  IAmb  19 54 37.6
      comp=Z,2µm,0.8s
MIAR  Mount Ida         18.71 360  P     Pn    19 54 05.0 -0.4
      baz=180,SNR=416
SJCC  San Jacinto, C    18.75 106⇑eP     P     19 54 04.6  0.0
SJCC  San Jacinto, C    18.75 106  P     P     19 54 04.4 -0.3
X37A  Clayton           18.84 355        Pn    19 54 06.4 -0.5
255A  Hazlehurst        18.96  30  P     Pn    19 54 08.3  0.0
255A                               IAmb  IAmb  19 54 13.2
      comp=Z,4µm,0.9s
DBBC  Dabeiba           19.00 115⇑eP     P     19 54 08.2 +0.8
Z51A  Franklin          19.03  22  P     Pn    19 54 09.0 -0.1
PIZC  Pizarro, Choco    19.11 122⇑eP     Pn    19 54 11.6 +1.4
Y49A  Blount Mountai    19.12  18  P     P     19 54 08.7 +0.2
Y49A                               IAmb  IAmb  19 54 34.3
      comp=Z,3µm,1.2s
X34A  Smith Ranch, M    19.18 349        Pn    19 54 10.3 -0.6
X34A                               IAmb  IAmb  19 54 47.1
      comp=Z,3µm,0.9s
MNTX  Cornudas Mount    19.24 328  P     P     19 54 10.6 +0.8
MNTX  Cornudas Mount    19.24 328  P     Pn    19 54 11.4 -0.3
      baz=143,SNR=526
MNTX                               S     S     19 57 42.0 -0.9
      baz=143
154A  Montrose          19.24  27  P     P     19 54 10.2 +0.4
UREC  San Jos de Ur     19.26 112⇑eP     P     19 54 09.6 -0.5
W39A  Magazine          19.36 359  P     P     19 54 12.0 +0.9
W39A                               IAmb  IAmb  19 54 41.9
      comp=Z,2µm,1.1s
W39A  Magazine          19.36 359  P     Pn    19 54 12.3 -0.8
      baz=179,SNR=152
W41B  Gary Mavity, V    19.37   3  P     P     19 54 11.9 +0.8
      baz=184,SNR=122
W41B                               S     S     19 57 43.9 -1.5
      baz=184
WHAR  Wooly Hollow      19.49   3  P     P     19 54 12.9 +0.5
WHAR                               IAmb  IAmb  19 54 22.0
      comp=Z,2µm,1.0s
X48A  Hartselle         19.50  16  P     P     19 54 12.4 -0.1
X48A                               IAmb  IAmb  19 54 38.9
      comp=Z,4µm,1.1s
WMOK  Wichita Mounta    19.50 347  P     P     19 54 12.8 +0.2
WMOK                               pmax  pmax
      comp=Z,3µm,1.4s
WMOK  Wichita Mounta    19.50 347        P     19 54 12.8 +0.2
WMOK                               IAmb  IAmb  19 54 49.8
      comp=Z,3µm,1.4s
MET   Memphis--Engin    19.55   9  P     P     19 54 14.0 +0.9
MET                                IAmb  IAmb  19 55 01.8
      comp=Z,5µm,1.4s
W35A  Tecumseh          19.56 352        P     19 54 13.6 +0.4
ARGC  Ariguani, Magd    19.63 105 eP     P     19 54 14.2  0.0
W45A  Hickory Valley    19.70  10  P     P     19 54 15.1 +0.3
257A  Skidaway Islan    19.72  33  P     Pn    19 54 16.6 -0.8
257A                               IAmb  IAmb  19 54 21.6
      comp=Z,3µm,0.9s
CBOC  Ciudad Bolivar    19.74 118⇑eP     Pn    19 54 17.2 -0.7
FNO   Franklin          19.74 350        P     19 54 15.9 +0.7
PLAL  Pickwick Lake     19.75  13  P     P     19 54 14.8 -0.5
PLAL                               IAmb  IAmb  19 54 38.1
      comp=Z,2µm,1.1s
GOGA  Godfrey           19.77  25  P     P     19 54 15.8 +0.3
GOGA                               pmax  pmax
      comp=Z,2µm,0.9s
GOGA  Godfrey           19.77  25  P     P     19 54 15.8 +0.3
GOGA                               IAmb  IAmb  19 54 22.2
      comp=Z,2µm,0.9s
GOGA  Godfrey           19.77  25  P     P     19 54 16.2 +0.6
      baz=210,SNR=662
GOGA                               S     S     19 57 53.2 -0.2
      baz=210
HBAR  Harrisburg        19.88   7  P     P     19 54 17.2 +0.5
OKCSW OKLAHOMA CITY     19.89 350        P     19 54 17.4 +0.5
OKCFA Oklahoma City     19.91 350  P     P     19 54 17.4 +0.4
Y52A  Lilburn           19.93  23  P     P     19 54 17.6 +0.3
Y52A                               IAmb  IAmb  19 54 26.8
      comp=Z,2µm,1.1s
LPAR  Lepanto           19.97   8  P     P     19 54 18.1 +0.4
ZARC  Zaragoza, Cauc    19.97 112 eP     P     19 54 17.4 -0.5
ZARC  Zaragoza, Cauc    19.97 112  P     P     19 54 17.2 -0.7
HELC  Santa Helena      19.99 116⇑eP     P     19 54 19.1 +0.6
MSTX  Muleshoe          19.99 337  P     P     19 54 18.6 +0.5
MSTX                               IAmb  IAmb  19 54 25.0
      comp=Z,2µm,1.1s
MSTX  Muleshoe          19.99 337  P     P     19 54 18.8 +0.8
      baz=153,SNR=324
MSTX                               S     S     19 57 53.6 -4.3
      baz=153
FPAL  Fort Paine        20.00  19  P     P     19 54 17.9 -0.1
FPAL                               IAmb  IAmb  19 54 52.0
      comp=Z,4µm,1.1s
PLMC  San Jos del P     20.02 121⇑eP     P     19 54 19.4 +0.8
OK025 Westminster Rd    20.05 351        P     19 54 18.6 +0.1
TUMC  Tumaco            20.06 132⇑eP     Pn    19 54 23.4 +1.9
TUMC  Tumaco            20.06 132        Pn    19 54 21.2 -0.2
TUMC                               IAmb  IAmb  19 54 28.4
      comp=Z,2µm,0.9s
CTUM2 Tumaco            20.07 132 eP     Pn    19 54 23.3 +1.9
FCAR  Ozark Folk Cen    20.09   3  P     P     19 54 19.2 +0.2
FCAR                               IAmb  IAmb  19 54 43.8
      comp=Z,3µm,1.2s
LL5C  La Loma 5 El P    20.15 105 eP     P     19 54 19.7 -0.1
GUYB  Guaymas           20.15 310 i      P     19 54 21.0 +1.3
GUYB                              i            19 58 08.9
SMLC  San Martn de      20.16 108⇑eP     P     19 54 19.1 -0.7
TUL1  Leonard           20.18 355  P     P     19 54 18.6 -1.3
TUL1  Leonard           20.18 355  P     P     19 54 19.5 -0.4
      baz=173,SNR=118
TUL1                               S     S     19 57 56.7 -4.8
      baz=173
X51A  Calhoun           20.27  21  P     P     19 54 21.7 +0.8
X51A                               IAmb  IAmb  19 54 57.0
      comp=Z,3µm,1.3s
OK029 Liberty Lake      20.28 351        P     19 54 21.0  0.0
OK030 Cody Creek RV     20.31 352  P     P     19 54 20.8 -0.6
LCAR  Lake Charles      20.34   5  P     P     19 54 21.3 -0.3
LCAR                               IAmb  IAmb  19 54 44.6
      comp=Z,3µm,1.2s
OK031 S. Brethren Rd    20.34 352        P     19 54 21.2 -0.5
CVALL Valledupar, Ce    20.35 102 eP     P     19 54 22.1 +0.1
GNAR  Gosnell           20.36   8  P     P     19 54 22.9 +1.0
LL1C  La Loma 1 Cana    20.37 105⇑eP     P     19 54 22.3 +0.1
OK034 N. Norfolk Rd.    20.38 352        P     19 54 21.5 -0.6
HALT  Halls             20.41  10  P     P     19 54 23.4 +1.0
AMTX  Amarillo          20.43 340  P     P     19 54 23.1 +0.3
AMTX                               IAmb  IAmb  19 54 27.7
      comp=Z,3µm,0.8s
AMTX  Amarillo          20.43 340  P     P     19 54 23.4 +0.6
      baz=157
AMTX                               S     S     19 58 03.6 -2.9
      baz=157
HHAR  Hobbs             20.45 359  P     P     19 54 22.6 -0.3
HHAR                               IAmb  IAmb  19 54 46.2
      comp=Z,3µm,1.4s
YOTC  Yotoco, Valle     20.50 123 eP     Pn    19 54 26.1 -0.5
YOTC  Yotoco, Valle     20.50 123 eP     Pn    19 54 25.9 -0.8
SWET  Sewanee           20.52  18  P     P     19 54 23.3 -0.4
SWET                               IAmb  IAmb  19 54 57.5
      comp=Z,4µm,1.1s
U40A  Yellville         20.53   1  P     P     19 54 23.8 +0.1
U40A                               IAmb  IAmb  19 54 46.7
      comp=Z,5µm,1.2s
U40A  Yellville         20.53   1  P     P     19 54 24.2 +0.5
      baz=182,SNR=226
PEBM  Pemiscott Bayo    20.53   8  P     P     19 54 24.4 +0.7
QUOK  Quay              20.54 352        P     19 54 23.2 -0.7
QUOK                               IAmb  IAmb  19 54 57.8
      comp=Z,3µm,1.0s
CRJC  Cerrejon, Guaj    20.56 101⇑eP     P     19 54 23.8 -0.6
LL6C  La Loma 6 Bece    20.57 104⇑eP     P     19 54 23.9 -0.5
LNXT  Lenox             20.57   9  P     P     19 54 25.3 +1.1
U38A  Gravette          20.62 358  P     P     19 54 24.2 -0.5
GUY2C Guyana, Caldas    20.62 119⇑eP     Pn    19 54 26.9 -1.5
W50A  Signal Mountai    20.70  19  P     P     19 54 25.0 -0.6
W50A                               IAmb  IAmb  19 54 59.3
      comp=Z,3µm,1.1s
PTBC  PUERTO BERRIO,    20.76 114⇑eP     P     19 54 25.6 -0.7
GLAT  Glass             20.77  10  P     P     19 54 26.3 +0.1
V48A  Smith Brothers    20.77  15  P     P     19 54 25.5 -0.8
HSIG                    20.84 312⇓e      P     19 54 28.6 +1.5
HSIG                              e            19 58 09.3
CNOCA NORCASIA, CALD    20.86 117 eP     Pn    19 54 29.8 -1.1
NORC  Norcasia          20.87 117⇑eP     P     19 54 28.4 +0.8
SRIG  Santa Rosalia     20.89 307⇓e      P     19 54 29.0 +1.4
SRIG                              e            19 57 49.9
RGRS  Roger Stewart     20.89  33  P     P     19 54 28.8 +1.2
PENMO Penman            20.90   9  P     P     19 54 27.9 +0.3
WVT   Waverly           20.91  13  P     P     19 54 25.8 -2.0
WVT                                pmax  pmax
      comp=Z,3µm,1.2s
WVT   Waverly           20.91  13 ⇑P     P     19 54 26.4 -1.3
WVT   Waverly           20.91  13  P     P     19 54 25.8 -2.0
WVT                                IAmb  IAmb  19 54 50.9
      comp=Z,3µm,1.2s
WVT   Waverly           20.91  13  P     P     19 54 26.8 -0.9
      baz=195
WVT                                S     S     19 58 16.1 +0.4
      baz=195
UTMT  University of     20.91  10  P     P     19 54 28.4 +0.6
ANIL  Santa Ana         20.98 120 eP     Pn    19 54 31.1 -1.4
HODGE Hodges            20.99  27  P     P     19 54 28.3 -0.4
HODGE                              IAmb  IAmb  19 54 54.6
      comp=Z,1µm,1.1s
HICK  Hickman           21.05  10  P     P     19 54 29.2 -0.1
NHSC  New Hope          21.05  32  P     P     19 54 30.2 +0.8
NHSC  New Hope          21.05  32  P     P     19 54 30.7 +1.4
      baz=218,SNR=96
CROK  Carrier           21.06 350        P     19 54 28.3 -1.1
CROK                               IAmb  IAmb  19 54 52.8
      comp=Z,4µm,1.2s
OCAC  Ocana             21.06 108⇑eP     P     19 54 27.9 -1.9
OCAC  Ocana             21.06 108  P     P     19 54 28.2 -1.5
W52A  Murphy            21.07  22  P     P     19 54 29.0 -0.6
W52A                               IAmb  IAmb  19 55 13.9
      comp=Z,3µm,1.5s
PARMO Parma             21.09   8  P     P     19 54 29.4 -0.2
POPC  Popayan, Colom    21.11 127⇑eP     P     19 54 33.9 +3.5
PBMO  Poplar Bluff      21.11   7  P     P     19 54 29.2 -0.7
U32A  Winter Ranch,     21.13 348  P     P     19 54 30.0 -0.2
U32A                               IAmb  IAmb  19 55 06.0
      comp=Z,4µm,1.0s
PAC1  Pacto, Paraso     21.13 135⇑eP     P     19 54 33.7 +3.2
BRRC  Barranca, Sant    21.16 112⇑eP     P     19 54 29.4 -1.3
121A  Cookes Peak, D    21.17 325  P     P     19 54 32.8 +2.0
121A                               IAmb  IAmb  19 54 36.6
      comp=Z,1µm,0.8s
121A  Cookes Peak, D    21.17 325  P     P     19 54 33.2 +2.4
      baz=139,SNR=559
121A                               S     S     19 58 23.9 +2.6
      baz=139
HENM  Henderson Moun    21.18   9  P     P     19 54 30.2 -0.5
319A  Douglas           21.22 320  P     P     19 54 33.4 +2.0
319A                               IAmb  IAmb  19 55 11.4
      comp=Z,4µm,1.4s
CLTN  Cedars of Leba    21.23  16  P     P     19 54 30.2 -1.1
CLTN                               IAmb  IAmb  19 54 55.0
      comp=Z,2µm,1.0s
URIC  Uribia, Colomb    21.24  98 eP     P     19 54 33.5 +2.0
URIC  Uribia, Colomb    21.24  98⇑eP     P     19 54 31.1 -0.5
URIC  Uribia, Colomb    21.24  98  P     P     19 54 31.0 -0.5
URIC                               IAmb  IAmb  19 55 17.2
      comp=Z,2µm,1.0s
T35A  Sooner Cattle     21.25 353  P     P     19 54 30.3 -1.2
T42A  Van Buren         21.30   5  P     P     19 54 31.1 -0.8
T42A                               IAmb  IAmb  19 54 57.1
      comp=Z,4µm,1.4s
CMBC  Cumbal            21.32 132 eP     P     19 54 37.0 +4.1
MGMO  Mountain Grove    21.34   3  P     P     19 54 31.5 -0.9
MGMO                               IAmb  IAmb  19 54 58.8
      comp=Z,3µm,1.2s
BG3   Lake Jocassee     21.36  24  P     P     19 54 32.2 -0.5
BG3                                IAmb  IAmb  19 54 57.2
      comp=Z,3µm,1.2s
CUSE  Cuicocha Este     21.37 135⇑eP     P     19 54 37.1 +3.7
GC02  Grant County #    21.38 350        P     19 54 32.6 -0.2
OTAV  Otavalo           21.38 135  P     P     19 54 37.0 +3.5
OTAV                               pmax  pmax
      comp=Z,963nm,1.2s
OTAV  Otavalo           21.38 135⇑eP     P     19 54 37.2 +3.6
OTAV  Otavalo           21.38 135 ⇑P     P     19 54 37.0 +3.5
OTAV  Otavalo           21.38 135  P     P     19 54 37.0 +3.5
OK032 Salt Plains WL    21.39 350        P     19 54 31.6 -1.3
OK032                              IAmb  IAmb  19 55 11.4
      comp=Z,4µm,1.3s
SDDR  Presa de Saban    21.40  78⇑eP     P     19 54 35.1 +1.8
SDDR  Presa de Saban    21.40  78 ⇑P     P     19 54 35.1 +1.8
SDDR  Presa de Saban    21.40  78  P     P     19 54 34.5 +1.2
SDDR                               IAmb  IAmb  19 55 26.2
      comp=Z,1µm,0.9s
SOTA  Rioblanco         21.42 128 eP     P     19 54 37.1 +3.1
ORTC  Ortega, Tolima    21.44 121⇑eP     P     19 54 35.9 +2.2
PCON  Cinco Dias        21.46 127⇑eP     P     19 54 38.0 +3.5
GCUF  Volcan Galeras    21.47 131⇑eP     P     19 54 38.6 +4.0
KAN13 South Haven SW    21.47 351        P     19 54 32.7 -1.1
JSC   Jenkinsville      21.48  29  P     P     19 54 33.0 -0.8
JSC                                pmax  pmax
      comp=Z,2µm,1.2s
JSC   Jenkinsville      21.48  29  P     P     19 54 33.0 -0.8
JSC                                IAmb  IAmb  19 55 11.2
      comp=Z,2µm,1.2s
MARP  Paez Belalcaza    21.49 125⇑eP     P     19 54 38.3 +3.8
KAN14 Manchester OK     21.50 350  P     P     19 54 31.8 -2.3
KAN14                              IAmb  IAmb  19 54 57.2
      comp=Z,3µm,1.6s
TULM  Tulcn-Chalpat     21.51 133⇑eP     P     19 54 39.3 +4.4
SPBC  San Pablo de B    21.51 116 eP     P     19 54 34.2 -0.4
CPAS1 Pasto             21.51 131 eP     P     19 54 38.8 +3.9
KAN17 Caldwell West     21.55 351        P     19 54 33.3 -1.4
KAN17                              IAmb  IAmb  19 54 55.4
      comp=Z,3µm,1.3s
V51A  Loudon            21.57  21  P     P     19 54 33.9 -0.9
V51A                               IAmb  IAmb  19 55 09.1
      comp=Z,4µm,1.1s
T45A  Paducah           21.61  11  P     P     19 54 34.8 -0.5
KAN09 Caldwell North    21.62 351        P     19 54 33.9 -1.4
KAN09                              IAmb  IAmb  19 54 56.2
      comp=Z,4µm,1.3s
KAN05 Bluff City Nor    21.63 350  P     P     19 54 34.1 -1.4
KAN05                              IAmb  IAmb  19 55 13.0
      comp=Z,2µm,1.0s
TKL   Tuckaleechee C    21.64  22  P     P     19 54 34.8 -0.8
      comp=Z,163nm,0.6s,baz=189,slow=15,SNR=92
TKL                                S     S     19 58 25.3 -4.7
      comp=Z,156nm,0.9s,baz=29,slow=22,SNR=1.8
TKL   Tuckaleechee C    21.64  22  P     P     19 54 34.9 -0.7
TKL                                IAmb  IAmb  19 55 14.7
      comp=Z,3µm,1.2s
KAN01 Argonia South     21.66 351  P     P     19 54 34.0 -1.8
KAN01                              IAmb  IAmb  19 54 56.6
      comp=Z,3µm,1.3s
Y57A  Sumter            21.67  31  P     P     19 54 35.8 -0.1
Y57A                               IAmb  IAmb  19 55 01.7
      comp=Z,4µm,1.2s
KAN10 Anthony SW Sta    21.68 350        P     19 54 34.8 -1.2
PAULI Pauline           21.68  27  P     P     19 54 35.0 -1.0
PAULI                              IAmb  IAmb  19 55 10.0
      comp=Z,2µm,1.2s
CROSA EL ROSAL, CUND    21.70 118 eP     P     19 54 42.9 +6.0
ROSC  El Rosal          21.71 118  ScS   ScS   20 05 50.5 +1.5
      comp=Z,10nm,0.4s,baz=58,slow=23,SNR=1.8
KAN08 Anthony NE Sta    21.76 350  P     P     19 54 34.9 -2.0
KAN06 Argonia West S    21.76 351  P     P     19 54 35.4 -1.5
KAN06                              IAmb  IAmb  19 55 14.7
      comp=Z,2µm,1.1s
KAN16 Harper SW Stat    21.77 350        P     19 54 35.9 -1.2
KAN16                              IAmb  IAmb  19 55 32.1
      comp=Z,2µm,1.4s
U49A  Red Boiling Sp    21.78  17  P     P     19 54 35.6 -1.5
U49A                               IAmb  IAmb  19 55 11.2
      comp=Z,3µm,1.1s
KAN12 Harper NE Stat    21.83 350        P     19 54 36.2 -1.5
KAN12                              IAmb  IAmb  19 54 44.3
      comp=Z,1µm,0.8s
PRAC  Prado             21.84 121⇑eP     P     19 54 39.7 +1.7
S39A  Bolivar           21.85   0  P     P     19 54 37.1 -0.8
S39A                               IAmb  IAmb  19 55 00.3
      comp=Z,4µm,1.4s
BARC  Barichara         21.86 112 eP     P     19 54 39.4 +1.0
V52A  Sevierville       21.86  22  P     P     19 54 37.2 -0.8
V52A                               IAmb  IAmb  19 55 03.0
      comp=Z,2µm,1.1s
T47A  Sharon Grove      21.89  14  P     P     19 54 36.6 -1.7
Y22D  IRIS PASSCAL I    21.91 329  P     P     19 54 38.3 -0.4
Y22D                               IAmb  IAmb  19 55 16.8
      comp=Z,3µm,1.1s
Y22D  IRIS PASSCAL I    21.91 329  P     P     19 54 41.2 +2.6
      baz=143,SNR=23
Y22D                               S     S     19 58 38.6 +3.2
      baz=143
GRTK  Grand Turk        21.91  71 ⇑P     P     19 54 39.9 +1.3
GRTK  Grand Turk        21.91  71  P     P     19 54 39.5 +0.9
Y58A  Scranton          21.95  32  P     P     19 54 39.2 +0.3
SC01  Santiago de lo    21.97  77  P     P     19 54 41.1 +1.8
PAMC  Pamplona, Colo    21.98 110⇑eP     P     19 54 38.6 -1.3
BETC  Betania           21.99 124 eP     P     19 54 42.5 +2.9
V53A  Saluda            22.00  24  P     P     19 54 39.0 -0.5
V53A                               IAmb  IAmb  19 55 14.0
      comp=Z,4µm,1.2s
BIRD  Birdtown, Kers    22.15  29  P     P     19 54 41.1 +0.1
BIRD                               IAmb  IAmb  19 55 15.2
      comp=Z,4µm,1.4s
KMSC  Kings Mountain    22.16  27  P     P     19 54 40.8 -0.4
KMSC                               IAmb  IAmb  19 55 15.4
      comp=Z,3µm,1.3s
KMSC  Kings Mountain    22.16  27  P     P     19 54 41.2 +0.1
      baz=212,SNR=86
S44A  Carbondale        22.17   9  P     P     19 54 40.1 -1.1
SIUC  Southern Illin    22.20   9  P     P     19 54 40.5 -1.0
GARC  Garzon, Huila     22.25 126⇑eP     P     19 54 45.1 +2.5
RUSC  La Rusia          22.26 114⇑eP     P     19 54 42.1 -0.8
CCM   Cathedral Cave    22.30   5  P     P     19 54 41.2 -1.4
CCM                                pmax  pmax
      comp=Z,4µm,1.3s
CCM   Cathedral Cave    22.30   5 ⇑P     P     19 54 41.4 -1.2
CCM   Cathedral Cave    22.30   5  P     P     19 54 41.2 -1.4
CCM   Cathedral Cave    22.30   5  P     P     19 54 41.8 -0.9
      baz=186
CCM                                S     S     19 58 40.3 -1.6
      baz=186
FVM   French Village    22.31   6  P     P     19 54 40.6 -2.1
FVM                                pmax  pmax
      comp=Z,3µm,1.6s
FVM   French Village    22.31   6  P     P     19 54 40.6 -2.1
FVM                                IAmb  IAmb  19 55 32.4
      comp=Z,3µm,1.6s
CHIC  Chingaza          22.32 118⇑eP     P     19 54 43.9 +0.4
ANMO  Albuquerque       22.39 331  P     P     19 54 45.2 +1.4
      comp=Z,308nm,0.8s,baz=147,slow=11,SNR=250
ANMO                               pP    pP    19 55 02.4 +0.2
      comp=Z,545nm,1.0s,baz=142,slow=12,SNR=6.8
ANMO                               S     S     19 58 43.8  0.0
      comp=Z,16nm,0.5s,baz=310,slow=1.0,SNR=1.0
ANMO                               LR    LR    20 05 23.9
      comp=Z,24µm,19.1s,baz=168,slow=42
ANMO  Albuquerque       22.39 331 ⇑P     P     19 54 45.2 +1.4
ANMO  Albuquerque       22.39 331  P     P     19 54 44.8 +1.0
ANMO  Albuquerque       22.39 331  P     P     19 54 45.1 +1.3
      baz=145
ANMO                               S     S     19 58 46.5 +2.7
      baz=145
Y59A  Loris             22.42  33  P     P     19 54 44.0 +0.1
R40A  Maddies Statio    22.48   2  P     P     19 54 43.1 -1.3
R40A                               IAmb  IAmb  19 55 08.3
      comp=Z,4µm,1.3s
CFLOR Florencia         22.50 127 eP     P     19 54 47.9 +2.9
FLOC  Florencia         22.51 127⇑eP     P     19 54 48.1 +3.0
TZTN  Tazewell          22.51  21  P     P     19 54 43.7 -1.2
TZTN  Tazewell          22.51  21  P     P     19 54 44.3 -0.6
      baz=206,SNR=68
TZTN                               S     S     19 58 44.6 -0.7
      baz=206
T50A  Nancy             22.52  18  P     P     19 54 43.2 -1.8
T50A                               IAmb  IAmb  19 55 07.5
      comp=Z,2µm,1.1s
VILC  Villavicencio,    22.62 119 eP     P     19 54 49.7 +3.4
X58A  Rowland           22.62  32  P     P     19 54 45.2 -0.8
X58A                               IAmb  IAmb  19 55 26.4
      comp=Z,4µm,1.4s
SDD   Santo Domingo     22.66  80  P     P     19 54 48.0 +1.4
SDD                                IAmb  IAmb  19 54 53.6
      comp=Z,3µm,0.9s
DABV  Dabajuro          22.72  99⇑eP     P     19 54 45.8 -1.4
W57A  Gilead            22.78  30  P     P     19 54 46.3 -1.4
W57A                               IAmb  IAmb  19 55 23.5
      comp=Z,4µm,1.4s
Y60A  Bolivia           22.79  34  P     P     19 54 47.8 +0.2
TUC   Tucson            22.79 319  P     P     19 54 49.1 +1.3
TUC                                pmax  pmax
      comp=Z,2µm,1.5s
TUC   Tucson            22.79 319 ⇓P     P     19 54 49.4 +1.6
TUC   Tucson            22.79 319  P     P     19 54 49.1 +1.3
TUC                                IAmb  IAmb  19 55 12.2
      comp=Z,3µm,1.4s
TUC   Tucson            22.79 319  P     P     19 54 49.6 +1.7
      baz=132
TUC                                S     S     19 58 53.0 +2.9
      baz=132
V55A  Taylorsville      22.81  26  P     P     19 54 47.0 -1.0
V55A                               IAmb  IAmb  19 55 22.1
      comp=Z,4µm,1.4s
SLM   Saint Louis       22.97   6  P     P     19 54 48.3 -1.2
SLM                                pmax  pmax
      comp=Z,6µm,1.1s
SLM   Saint Louis       22.97   6  P     P     19 54 48.3 -1.2
R32A  Long Quarter,     23.05 349  P     P     19 54 49.4 -0.9
R32A                               IAmb  IAmb  19 55 40.9
      comp=Z,2µm,1.1s
U54A  Nelsons Funny     23.14  24  P     P     19 54 49.9 -1.3
TAMC  Tame, Arauca      23.17 111 eP     P     19 54 52.9 +1.2
TAMC  Tame, Arauca      23.17 111 eP     P     19 54 50.7 -0.9
WCI   Wyandotte Cave    23.27  14  P     P     19 54 50.7 -1.6
WCI                                pmax  pmax
      comp=Z,4µm,0.9s
WCI   Wyandotte Cave    23.27  14 ⇑P     P     19 54 50.9 -1.4
WCI   Wyandotte Cave    23.27  14  P     P     19 54 50.6 -1.6
WCI   Wyandotte Cave    23.27  14  P     P     19 54 50.9 -1.4
      baz=198
WCI                                S     S     19 59 01.5 +4.1
      baz=198
SOCV  Socops            23.31 106⇑eP     P     19 54 51.1 -1.8
SDV   Santo Domingo     23.31 104⇑eP     P     19 54 52.0 -1.1
SDV   Santo Domingo     23.31 104 eP     P     19 54 51.9 -1.3
SDV   Santo Domingo     23.31 104  P     P     19 54 51.8 -1.3
SDV                                IAmb  IAmb  19 55 50.1
      comp=Z,2µm,1.0s
OLIL  Olney             23.38  11  P     P     19 54 51.9 -1.4
Q44A  Meyer Farm, Va    23.39   9  P     P     19 54 52.0 -1.5
T25A  Trinidad          23.41 338  P     P     19 54 55.7 +1.8
T25A                               IAmb  IAmb  19 54 59.3
      comp=Z,1µm,0.8s
T25A  Trinidad          23.41 338  P     P     19 54 56.3 +2.4
      baz=152,SNR=679
T25A                               S     S     19 59 04.8 +4.6
      baz=152
KSU1  Kansas State U    23.42 354 ⇑P     P     19 54 52.6 -1.1
KSU1  Kansas State U    23.42 354  P     P     19 54 52.3 -1.5
KSU1                               IAmb  IAmb  19 55 34.3
      comp=Z,2µm,1.2s
KSU1  Kansas State U    23.42 354  P     P     19 54 52.9 -0.8
      baz=172,SNR=99
KSU1                               S     S     19 58 58.8 -1.2
      baz=172
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S51A	**Beattyville**	23.48	20	P	P	19 54 52.6	-1.6
S51A				IAmb	IAmb	19 55 17.2	
	comp=Z,4µm,1.1s						
MACC	**Macarena, Meta**	23.59	123	*e*P	P	19 54 58.6	+3.2
MACC	**Macarena, Meta**	23.59	123	⇑*e*P	P	19 54 57.8	+2.3
U56A	**King**	23.59	27	P	P	19 54 55.1	-0.2
R49A	**Shelbyville**	23.61	16	P	P	19 54 53.4	-2.0
CBKS	**Cedar Bluff**	23.63	348	P	P	19 54 55.6	0.0
CBKS				pmax	pmax		
	comp=Z,2µm,1.1s						
CBKS	**Cedar Bluff**	23.63	348	⇑P	P	19 54 55.8	+0.2
CBKS	**Cedar Bluff**	23.63	348	P	P	19 54 55.5	0.0
CBKS				IAmb	IAmb	19 55 37.2	
	comp=Z,2µm,1.1s						
CBKS	**Cedar Bluff**	23.63	348	P	P	19 54 56.0	+0.4
	baz=165,SNR=283						
CBKS				S	S	19 59 03.3	0.0
	baz=165						
V58A	**Windy Hill, Pi**	23.72	30	P	P	19 54 55.5	-0.9
P40A	**Paris**	23.72	3	P	P	19 54 55.0	-1.3
P40A				IAmb	IAmb	19 55 21.4	
	comp=Z,1µm,0.8s						
P38A	**Dawn**	23.78	360	P	P	19 54 55.8	-1.2
P38A				IAmb	IAmb	19 55 35.7	
	comp=Z,1µm,1.1s						
R50A	**Paris**	23.84	18	P	P	19 54 55.6	-1.9
X18A	**Snowflake**	23.86	325	P	P	19 54 59.5	+1.6
X18A				IAmb	IAmb	19 55 33.0	
	comp=Z,2µm,1.6s						
214A	**Organ Pipe Nat**	23.88	316	P	P	19 54 58.8	+0.9
214A				IAmb	IAmb	19 55 34.1	
	comp=Z,3µm,1.8s						
214A	**Organ Pipe Nat**	23.88	316	P	P	19 54 59.3	+1.4
	baz=128,SNR=125						
214A				S	S	19 59 11.1	+3.6
	baz=128						
CNNC	**Cliffs of the**	23.90	33	⇑P	P	19 54 57.1	-0.8
CNNC	**Cliffs of the**	23.90	33	P	P	19 54 58.0	0.0
CNNC				IAmb	IAmb	19 55 21.9	
	comp=Z,4µm,1.3s						
CNNC	**Cliffs of the**	23.90	33	P	P	19 54 57.4	-0.6
	baz=220,SNR=14						
CNNC				S	S	19 59 13.0	+5.3
	baz=220						
PTGC	**Puerto Gaitan,**	23.91	116	⇑*e*P	P	19 54 57.9	-0.4
HATO	**Hato, Curacao**	24.04	95	P	P	19 54 59.1	-0.3
HATO				IAmb	IAmb	19 55 48.7	
	comp=Z,3µm,1.7s						
P43A	**Skaggs, Pawnee**	24.05	7	P	P	19 54 58.3	-1.0
PTLC	**Puerto Leguiza**	24.07	128	⇑*e*P	P	19 55 05.3	+5.5
BLO	**Bloomington**	24.11	13	P	P	19 54 58.4	-1.5
BLO				pmax	pmax		
	comp=Z,13µm,1.4s						
BLO	**Bloomington**	24.11	13	P	P	19 54 58.4	-1.5
PCDR	**Punta Cana, DR**	24.12	80	P	P	19 54 59.7	-0.5
W18A	**Petrified Fore**	24.18	326	P	P	19 55 03.0	+2.3
W18A				IAmb	IAmb	19 55 35.9	
	comp=Z,1µm,1.2s						
W18A	**Petrified Fore**	24.18	326	P	P	19 55 02.5	+1.7
	baz=139,SNR=20						
W18A				S	S	19 59 17.6	+5.0
	baz=139						
BLA	**Blacksburg**	24.30	26	P	P	19 55 01.5	-0.2
BLA				pmax	pmax		
	comp=Z,5µm,1.1s						
BLA	**Blacksburg**	24.30	26	P	P	19 55 01.5	-0.2
BLA	**Blacksburg**	24.30	26	P	P	19 55 01.1	-0.5
	baz=212,SNR=21						
SDCO	**Great Sand Dun**	24.36	336	P	P	19 55 04.3	+1.8
SDCO	**Great Sand Dun**	24.36	336	P	P	19 55 04.7	+2.2
	baz=151,SNR=233						
SDCO				S	S	19 59 19.6	+4.1
	baz=151						
GUVC	**San Jose del G**	24.36	121	*e*P	P	19 55 05.9	+3.5
P46A	**Rosedale**	24.40	12	P	P	19 55 01.2	-1.2
S54A	**Dingess, Beckl**	24.45	24	P	P	19 55 03.0	+0.1
S54A				IAmb	IAmb	19 55 27.1	
	comp=Z,2µm,1.1s						
KSCO	**Kaye Shedlock’**	24.53	343	P	P	19 55 04.7	+0.9
KSCO				IAmb	IAmb	19 55 08.6	
	comp=Z,2µm,0.8s						
KSCO	**Kaye Shedlock’**	24.53	343	P	P	19 55 05.0	+1.2
	baz=158,SNR=504						
T57A	**Hurt**	24.64	28	P	P	19 55 03.7	-1.0
T57A				IAmb	IAmb	19 55 29.6	
	comp=Z,3µm,1.1s						
X16A	**Lo Mia Camp, P**	24.64	322	P	P	19 55 06.5	+1.6
P48A	**Milroy**	24.65	15	P	P	19 55 02.5	-2.2
R53A	**Hurricane**	24.67	22	P	P	19 55 03.3	-1.7
O44A	**Mansfield**	24.70	9	P	P	19 55 03.6	-1.6
SFX	**San Felipe**	24.77	312	P	P	19 55 06.4	+0.5
U59A	**Littleton**	24.81	31	P	P	19 55 05.2	-1.0
U59A				IAmb	IAmb	19 55 31.2	
	comp=Z,4µm,1.1s						
Q51A	**Peebles**	24.83	19	P	P	19 55 05.3	-1.2
S22A	**4UR Ranch, Cre**	24.89	334	P	P	19 55 09.6	+2.3
	baz=148,SNR=245						
S22A				S	S	19 59 28.3	+4.2
	baz=148						
P49A	**Miami Univ. Ec**	24.90	16	P	P	19 55 04.8	-2.2
P49A	**Miami Univ. Ec**	24.90	16	P	P	19 55 05.4	-1.7
	baz=200,SNR=45						
N38A	**Joes South For**	24.95	0	P	P	19 55 07.0	-0.6
N41A	**Harden Midland**	24.97	5	P	P	19 55 06.4	-1.2
HDIL	**Hopedale**	24.98	8	P	P	19 55 06.4	-1.4
HDIL	**Hopedale**	24.98	8	P	P	19 55 06.9	-0.9
	baz=190,SNR=52						
V61A	**Roper**	25.02	34	P	P	19 55 09.5	+1.4
ELOV	**Elorza**	25.04	108	⇑*e*P	P	19 55 07.6	-1.0
N35A	**Tabor**	25.09	356	P	P	19 55 08.1	-0.7
N35A				IAmb	IAmb	19 55 43.8	
	comp=Z,3µm,1.1s						
Q52A	**Bidwell**	25.12	21	P	P	19 55 07.9	-1.2
N33A	**J Bar K, Exete**	25.14	353	P	P	19 55 09.2	0.0
N33A				IAmb	IAmb	19 55 55.1	
	comp=Z,2µm,1.0s						
SFIN	**Lafayette**	25.16	11	P	P	19 55 07.5	-1.8
SFIN	**Lafayette**	25.16	11	P	P	19 55 08.2	-1.2
	baz=194,SNR=14						
MVCO	**Mesa Verde**	25.19	331	P	P	19 55 11.5	+1.5
MVCO				IAmb	IAmb	19 55 38.5	
	comp=Z,3µm,1.5s						
MVCO	**Mesa Verde**	25.19	331	P	P	19 55 12.3	+2.3
	baz=144,SNR=194						
MVCO				S	S	19 59 33.7	+4.9
	baz=144						
Q24A	**Divide**	25.30	338	P	P	19 55 12.6	+1.5
	baz=153,SNR=166						
Q24A				S	S	19 59 35.6	+5.0
	baz=153						
WUAZ	**Wupatki**	25.38	324	⇓P	P	19 55 13.4	+1.8
WUAZ	**Wupatki**	25.38	324	P	P	19 55 12.9	+1.3
WUAZ				IAmb	IAmb	19 55 39.6	
	comp=Z,2µm,1.3s						
WUAZ	**Wupatki**	25.38	324	P	P	19 55 13.2	+1.5
	baz=136,SNR=139						
WUAZ				S	S	19 59 38.0	+6.4
	baz=136						
S57A	**Dark Hollow, R**	25.40	28	IAmb	IAmb	19 55 37.6	
	comp=Z,2µm,1.2s						
AOPR	**Arecibo Observ**	25.66	80	*e*P	P	19 55 09.4	-4.8
Q54A	**Coxs Mills**	25.66	23	IAmb	IAmb	19 55 39.9	
	comp=Z,2µm,1.2s						
BAUV	**El Baul**	25.72	102	*e*P	P	19 55 06.3	-8.5
P52A	**Corning**	25.77	20	IAmb	IAmb	19 55 53.2	
	comp=Z,1µm,0.9s						
P52A	**Corning**	25.77	20	P	P	19 55 13.7	-1.3
	baz=206,SNR=14						
CPBX	**Cerro Prieto**	25.86	314	P	P	19 55 15.1	-0.7
BGNE	**Belgrade**	25.89	352	IAmb	IAmb	19 55 54.5	
	comp=Z,2µm,1.2s						
BGNE	**Belgrade**	25.89	352	P	P	19 55 16.1	+0.1
	baz=170,SNR=37						
GLA	**Glamis**	25.90	316	IAmb	IAmb	19 55 41.9	
	comp=Z,1µm,1.1s						
GLA	**Glamis**	25.90	316	P	P	19 55 17.6	+1.4
	baz=126,SNR=68						
GLA				S	S	19 59 43.9	+4.3
	baz=126						
P53A	**Whipple**	25.90	22	IAmb	IAmb	19 55 55.0	
	comp=Z,2µm,1.1s						
ACSO	**Alum Creek Sta**	26.05	18	IAmb	IAmb	19 55 43.1	
	comp=Z,3µm,1.1s						
ACSO	**Alum Creek Sta**	26.05	18	P	P	19 55 16.2	-1.2
	baz=204,SNR=16						
R58B	**Mineral**	26.05	29	IAmb	IAmb	19 55 44.2	
	comp=Z,1µm,1.1s						
SCIA	**State Center**	26.07	0	P	P	19 55 17.0	-0.6
	baz=180,SNR=56						
SMCO	**Snowmass**	26.17	336	⇑P	P	19 55 20.8	+1.8
SMCO	**Snowmass**	26.17	336	IAmb	IAmb	19 55 54.7	
	comp=Z,924nm,1.1s						
OGNE	**Ogallala**	26.18	345	P	P	19 55 20.1	+1.3
	baz=161,SNR=101						
ISCO	**Idaho Springs**	26.20	338	P	P	19 55 20.9	+1.7
	baz=153,SNR=110						
ISCO				S	S	19 59 48.5	+3.6
	baz=153						
PDMCI	**Parker Dam,Lak**	26.22	319	P	P	19 55 20.7	+1.6
	baz=130,SNR=44						
PDMCI				S	S	19 59 49.3	+4.8
	baz=130						
SJG	**San Juan**	26.23	81	P	P	19 55 17.7	-1.6
	comp=Z,142nm,0.7s,baz=272,slow=5.6,SNR=31						
SJG				PcP	PcP	19 58 45.3	+1.3
	comp=Z,161nm,0.7s,baz=54,slow=3.2,SNR=7.2						
SJG				ScP	ScP	20 02 16.3	+0.7
	comp=Z,12nm,0.3s,baz=316,slow=5.4,SNR=2.3						
SJG				LR	LR	20 05 35.4	
	comp=Z,15µm,21.1s,baz=256,slow=36						
SJG				ScS	ScS	20 06 06.2	+0.3
	comp=Z,8.3nm,0.3s,baz=228,slow=21,SNR=12						
SJG	**San Juan**	26.23	81	P	P	19 55 17.2	-2.1
SJG						20 06 06.2	
SJG						20 58 45.3	
SJG				pmax	pmax		
	comp=Z,1µm,1.4s						
SJG	**San Juan**	26.23	81	⇑*e*P	P	19 55 17.4	-1.9
SJG	**San Juan**	26.23	81	*e*P	P	19 55 16.1	-3.1
SJG	**San Juan**	26.23	81	⇑P	P	19 55 17.6	-1.6
SJG	**San Juan**	26.23	81	P	P	19 55 17.1	-2.1
SJG				IAmb	IAmb	19 55 57.3	
	comp=Z,1µm,1.4s						
PDPR	**Patillas Dam,**	26.35	81		PcP	19 58 45.3	+1.1
CBN	**Corbin Frederi**	26.48	29	IAmb	IAmb	19 56 02.7	
	comp=Z,2µm,1.4s						
CBN	**Corbin Frederi**	26.48	29	P	P	19 55 20.9	-0.5
	baz=217						
SWSC	**Sam W. Stewart**	26.50	314	P	P	19 55 23.0	+1.4
	baz=125,SNR=19						
SWSC				S	S	19 59 55.4	+6.3
	baz=125						
CBYP	**Canovanas**	26.51	81	IAmb	IAmb	19 56 14.0	
	comp=Z,2µm,1.6s						
IKP	**In-Ko-Pah, Jac**	26.55	313	P	P	19 55 23.5	+1.4
	baz=124,SNR=19						
IKP				S	S	19 59 55.5	+5.5
	baz=124						
U15A	**North Rim**	26.55	324	IAmb	IAmb	19 55 56.8	
	comp=Z,1µm,1.6s						
MCWV	**Mont Chateau**	26.63	24	P	P	19 55 21.7	-0.9
	baz=210,SNR=12						
O53A	**New Philadelph**	26.64	21	IAmb	IAmb	19 55 59.6	
	comp=Z,3µm,1.3s						
O53A	**New Philadelph**	26.64	21	P	P	19 55 21.6	-1.2
	baz=207,SNR=16						
BC3	**Big Chuckawall**	26.68	316	P	P	19 55 24.9	+1.5
	baz=126,SNR=121						
BC3				S	S	19 59 57.3	+5.2
	baz=126						
L44A	**Lake County Fo**	26.77	9	IAmb	IAmb	19 56 16.6	
	comp=Z,3µm,1.2s						
L44A	**Lake County Fo**	26.77	9	P	P	19 55 22.7	-1.2
	baz=192,SNR=6.3						
L44A				S	S	19 59 59.5	+6.5
	baz=192						
IRM	**Iron Mountain**	26.77	317	P	P	19 55 25.8	+1.6
	baz=128,SNR=48						
IRM				S	S	19 59 57.9	+4.4
	baz=128						
MTP	**Monte Pirata**	26.79	81	P	P	19 55 22.9	-1.5
MTP				IAmb	IAmb	19 56 19.2	
	comp=Z,896nm,0.9s						
K38A	**Parkersburg**	26.81	1	IAmb	IAmb	19 55 49.4	
	comp=Z,2µm,1.2s						
NEE2	**Needles Airpor**	26.82	319	P	P	19 55 25.9	+1.5
	baz=130						
NEE2				S	S	19 59 59.4	+5.3
	baz=130						
TJIG	**Tijuana**	26.83	312	P	P	19 55 26.2	+1.6
TJIG					S	19 59 47.6	-6.7
TJIG	**Tijuana**	26.83	312	⇓*e*	P	19 55 26.2	+1.6
TJIG				*e*		19 59 47.6	
O54A	**Avella**	26.88	23	IAmb	IAmb	19 55 58.4	
	comp=Z,1µm,1.2s						
L46A	**Eue Claire**	26.89	12	IAmb	IAmb	19 55 49.2	
	comp=Z,1µm,1.1s						
MONP2	**Monument Peak**	26.90	314	P	P	19 55 26.7	+1.2
	baz=124,SNR=15						
MONP2				S	S	20 00 01.7	+5.8
	baz=124						
BIRV	**Birongo**	26.98	98	IAmb	IAmb	19 56 10.2	
	comp=Z,989nm,1.0s						
M50A	**Fremont**	27.10	17	IAmb	IAmb	19 56 21.5	
	comp=Z,1µm,1.2s						
TJX	**Tijuana**	27.14	312	P	P	19 55 29.2	+1.8
TJX					pP	19 55 49.6	+1.6
TJX				IAmb	IAmb	19 55 53.3	
	comp=Z,2µm,1.3s						
K31A	**O'Neill**	27.16	351	IAmb	IAmb	19 56 12.4	
	comp=Z,1µm,1.0s						
ATAH	**Atahualpa**	27.20	146	P	P	19 55 31.2	+2.7
	comp=Z,338nm,0.8s,baz=334,slow=6.9,SNR=106						
ATAH				PcP	PcP	19 58 48.7	+1.9
	comp=Z,64nm,0.9s,baz=61,slow=0.4,SNR=3.6						
ATAH				pPcP		19 59 13.8	
	comp=Z,165nm,0.9s,baz=135,slow=1.1,SNR=5.4						
ATAH				S	S	20 00 02.6	+1.5
	comp=Z,44nm,1.1s,baz=273,slow=22,SNR=0.9						
JFWS	**Jewell Farm**	27.21	5	P	P	19 55 27.0	-0.9
	baz=187,SNR=51						
BELC	**Belle Mtn. Jos**	27.25	316	P	P	19 55 29.9	+1.5
	baz=126,SNR=59						
BELC				S	S	20 00 05.9	+4.8
	baz=126						
N53A	**Lisbon**	27.27	21	IAmb	IAmb	19 56 19.9	
	comp=Z,1µm,1.2s						
N23A	**Red Feather La**	27.29	339	P	P	19 55 30.4	+1.5
	baz=153,SNR=46						
N23A				S	S	20 00 04.5	+2.6
	baz=153						
TPFO	**Pinon Flats**	27.32	315	P	P	19 55 30.6	+1.4
	baz=125,SNR=25						
TPFO				S	S	20 00 09.3	+7.0
	baz=125						
PFO	**Pinyon Flats O**	27.33	315	P	P	19 55 30.8	+1.6
	comp=Z,52nm,1.1s,baz=108,slow=7.8,SNR=26						
PFO				pP	pP	19 55 50.7	+0.7
	comp=Z,245nm,1.1s,baz=114,slow=9.6,SNR=18						
PFO				S	S	20 00 04.1	+1.7
	comp=Z,6.6nm,0.8s,baz=344,slow=7.7,SNR=0.8						
PFO				ScS	ScS	20 06 11.9	+1.3
	comp=Z,2.9nm,0.9s,baz=223,slow=20,SNR=1.6						
PFO				LR	LR	20 07 18.2	
	comp=Z,31µm,18.4s,baz=137,slow=38						
PFO	**Pinyon Flats O**	27.33	315	P	P	19 55 27.9	-1.3
PFO	**Pinyon Flats O**	27.33	315	P	P	19 55 30.9	+1.6
	baz=125,SNR=29						
PFO				S	S	20 00 08.8	+6.4
	baz=125						
109C	**Camp Elliot, M**	27.38	313	P	P	19 55 30.4	+0.9
	baz=123,SNR=9.7						
109C				S	S	20 00 07.0	+4.1
	baz=123						
GMRC	**Granite Mounta**	27.50	318	P	P	19 55 32.1	+1.4
	baz=128,SNR=85						
GMRC				S	S	20 00 08.7	+3.7
	baz=128						
O20A	**White River Ci**	27.50	335	IAmb	IAmb	19 56 24.0	
	comp=Z,2µm,1.5s						
O20A	**White River Ci**	27.50	335	P	P	19 55 32.8	+2.0
	baz=148,SNR=44						
O20A				S	S	20 00 10.1	+5.1
	baz=148						
LCMT	**Little Creek M**	27.50	324	P	P	19 55 31.6	+0.9
CDVI	**St. Croix**	27.54	82	*e*P	P	19 55 26.0	-5.1
R61A	**Willards**	27.58	32	P	P	19 55 26.7	-4.5
R61A				IAmb	IAmb	19 56 09.7	
	comp=Z,3µm,1.2s						
O56A	**Blue Knob Stat**	27.66	25	P	P	19 55 31.2	-0.8
	baz=212,SNR=8.2						
N54A	**Moraine State**	27.70	22	IAmb	IAmb	19 56 15.5	
	comp=Z,1µm,1.2s						
N54A	**Moraine State**	27.70	22	P	P	19 55 31.1	-1.2
	baz=209,SNR=17						
M52A	**Chesterland**	27.75	20	IAmb	IAmb	19 56 09.2	
	comp=Z,2µm,1.1s						
AAM	**Ann Arbor**	27.77	16	IAmb	IAmb	19 56 09.1	
	comp=Z,3µm,1.3s						
AAM	**Ann Arbor**	27.77	16	P	P	19 55 31.2	-1.7
	baz=201,SNR=7.4						
AAM				S	S	20 00 14.0	+5.1
	baz=201						
MURC	**Murrieta**	27.83	314	P	P	19 55 35.0	+1.4
	baz=124,SNR=8.4						
MURC				S	S	20 00 16.3	+6.1
	baz=124						
M53A	**WI Miller and**	27.88	21	IAmb	IAmb	19 56 11.4	
	comp=Z,2µm,1.4s						
M53A	**WI Miller and**	27.88	21	P	P	19 55 32.8	-1.0
	baz=207,SNR=11						
M53A				S	S	20 00 16.6	+5.9
	baz=207						
P18A	**Preston Nutter**	27.95	332	IAmb	IAmb	19 56 15.0	
	comp=Z,1µm,1.5s						
HEC	**Hector,Ludlow**	27.96	317	P	P	19 55 36.2	+1.5
	baz=127,SNR=24						
HEC				S	S	20 00 18.6	+6.3
	baz=127						
Q61A	**Milford**	28.01	31	P	P	19 55 35.0	0.0
	baz=220,SNR=7.4						
BBRC	**Big Bear Solar**	28.02	315	P	P	19 55 37.2	+1.7
	baz=125,SNR=8.1						
BBRC				S	S	20 00 18.8	+5.3
	baz=125						
ECSD	**EROS Data Cent**	28.02	355	IAmb	IAmb	19 55 37.3	
	comp=Z,657nm,0.8s						
ECSD	**EROS Data Cent**	28.02	355	P	P	19 55 34.6	-0.5
	baz=174,SNR=579						
MVU	**Marysvale**	28.03	328	IAmb	IAmb	19 56 15.9	
	comp=Z,809nm,0.9s						
P17A	**Butcher Ranch,**	28.05	331	IAmb	IAmb	19 56 04.8	
	comp=Z,833nm,1.2s						
TUQ	**Turquoise Moun**	28.07	318	P	P	19 55 35.7	-0.1
	baz=128,SNR=66						
TUQ				S	S	20 00 18.7	+4.7
	baz=128						
I40A	**Norwalk**	28.15	4	IAmb	IAmb	19 56 02.7	
	comp=Z,634nm,1.0s						
I37A	**Lemond, Waseca**	28.17	0	IAmb	IAmb	19 56 38.2	
	comp=Z,718nm,1.1s						
SSPA	**Standing Stone**	28.25	26	⇑P	P	19 55 35.9	-1.2
SSPA	**Standing Stone**	28.25	26	P	P	19 55 35.3	-1.8
SSPA				IAmb	IAmb	19 56 20.8	
	comp=Z,939nm,1.4s						
SSPA	**Standing Stone**	28.25	26	P	P	19 55 35.9	-1.2
	baz=213						
ALLY	**Alegheny Colle**	28.25	21	IAmb	IAmb	19 56 25.3	
	comp=Z,1µm,1.2s						
M54A	**Oil Creek Stat**	28.30	22	IAmb	IAmb	19 56 26.0	
	comp=Z,894nm,1.1s						
M54A	**Oil Creek Stat**	28.30	22	P	P	19 55 36.1	-1.5
	baz=209						
I42A	**Draeger Farm,**	28.31	7	IAmb	IAmb	19 56 01.4	
	comp=Z,2µm,1.1s						
RRX	**Edison Barstow**	28.43	316	P	P	19 55 40.4	+1.5
	baz=126,SNR=6.8						
RRX				S	S	20 00 24.1	+4.6
	baz=126						
RWWY	**Rawlins**	28.44	338	IAmb	IAmb	19 56 22.5	
	comp=Z,2µm,1.6s						
SCI2	**San Clemente I**	28.45	312	P	P	19 55 40.3	+1.2
	baz=121						
SCI2				S	S	20 00 24.3	+4.4
	baz=121						
K50A	**Casco**	28.49	17	IAmb	IAmb	19 56 15.1	
	comp=Z,2µm,1.1s						
BFSC	**Mount Baldy Ra**	28.51	315	P	P	19 55 41.0	+1.3
	baz=124,SNR=15						
BFSC				S	S	20 00 25.6	+4.6
	baz=124						
CIS	**Catalina Islan**	28.58	312	P	P	19 55 41.3	+1.1
	baz=122,SNR=7.4						
CIS				S	S	20 00 26.2	+4.3
	baz=122						
SHOC	**Shoshone, Teco**	28.58	319	P	P	19 55 41.9	+1.7
	baz=129,SNR=5.8						
SHOC				S	S	20 00 27.7	+5.8
	baz=129						
P60A	**Greenville**	28.58	30	P	P	19 55 39.3	-0.8
	baz=218,SNR=10						
M55A	**Ridgway**	28.60	23	IAmb	IAmb	19 56 28.2	
	comp=Z,818nm,1.2s						
PCRV	**Puerto La Cruz**	28.62	98	P	P	19 55 39.4	-1.4
	comp=Z,47nm,0.6s,baz=276,slow=3.3,SNR=22						
PCRV				ScP	ScP	20 02 23.9	+0.9
	comp=Z,75nm,1.2s,baz=276,slow=6.7,SNR=2.1						
PCRV				LR	LR	20 08 13.0	
	comp=Z,17µm,20.8s,slow=39						
FMP	**Fort Macarthur**	28.66	313	P	P	19 55 42.4	+1.5
	baz=122,SNR=5.9						
FMP				S	S	20 00 27.5	+4.4
	baz=122						
ERPA	**Erie**	28.72	21	IAmb	IAmb	19 56 19.2	
	comp=Z,1µm,1.3s						
ERPA	**Erie**	28.72	21	P	P	19 55 39.8	-1.5
	baz=208						
MWC	**Mount Wilson**	28.77	314	IAmb	IAmb	19 56 07.6	
	comp=Z,925nm,1.4s						
PRN	**Pahroc Range**	28.81	323	⇓P	P	19 55 44.4	+2.1
I45A	**Fountain**	28.85	11	P	P	19 55 41.5	-0.9
I45A					pP	19 56 01.8	-1.7
I45A				IAmb	IAmb	19 56 18.9	
	comp=Z,3µm,1.4s						
P61A	**Hammonton**	28.88	31	P	P	19 55 42.7	0.0
P61A					pP	19 56 04.2	+0.4
P61A				IAmb	IAmb	19 56 07.5	
	comp=Z,2µm,1.2s						
SUSD	**Miller**	28.98	352	IAmb	IAmb	19 55 45.6	
	comp=Z,549nm,0.8s						
SUSD	**Miller**	28.98	352	P	P	19 55 43.5	-0.1
	baz=169,SNR=28						
DECC	**Green Verdugo**	28.98	314	P	P	19 55 45.4	+1.7
	baz=123,SNR=6.4						
DECC				S	S	20 00 34.2	+5.9
	baz=123						
SABA	**Saba**	28.99	82	*e*P	P	19 55 37.8	-6.2
H43A	**Windswept, Lux**	29.03	8	IAmb	IAmb	19 56 08.4	
	comp=Z,1µm,1.4s						
K22A	**Casper**	29.05	340	P	P	19 55 45.9	+1.4
	baz=153,SNR=107						
K22A				S	S	20 00 31.2	+1.7
	baz=153						
EDW2	**Edwards Air Fo**	29.10	315	P	P	19 55 45.9	+1.1
	baz=125,SNR=17						
EDW2				S	S	20 00 33.9	+3.7
	baz=125						
SMRT	**St. Maarten**	29.15	81	*e*P	P	19 55 32.4	-13
TPNV	**Topopah Spring**	29.23	321	⇑P	P	19 55 48.4	+2.3
TPNV	**Topopah Spring**	29.23	321	P	P	19 55 48.1	+2.0
	baz=130,SNR=89						
TPNV				S	S	20 00 38.7	+6.3
	baz=130						
LRMC	**Laurel Mtn Rad**	29.24	317	P	P	19 55 47.6	+1.5
	baz=126,SNR=31						
LRMC				S	S	20 00 38.4	+6.0
	baz=126						
SEUS	**St. Eustatius**	29.25	82	*e*P	P	19 55 37.8	-8.4
SEUS	**St. Eustatius**	29.25	82	IAmb	IAmb	19 55 48.3	
	comp=Z,1µm,1.0s						
SNCC	**San Nicolas Is**	29.30	311	P	P	19 55 47.4	+0.8
SNCC	**San Nicolas Is**	29.30	311	P	P	19 55 47.6	+1.1
	baz=120						
SNCC				S	S	20 00 39.7	+6.5
	baz=120						
FURC	**Furnace Creek,**	29.30	319	P	P	19 55 48.4	+1.9
	baz=128,SNR=18						
FURC				S	S	20 00 39.9	+6.7
	baz=128						
SPMN	**Marine on St.**	29.39	1	IAmb	IAmb	19 56 12.0	
	comp=Z,1µm,1.2s						
SPMN	**Marine on St.**	29.39	1	P	P	19 55 46.4	-0.8
	baz=181,SNR=92						
N59A	**State Game Lan**	29.40	28	P	P	19 55 46.7	-0.7
	baz=217,SNR=17						
OSI	**Osito Audit: C**	29.45	314	P	P	19 55 46.9	-1.1
OSI				IAmb	IAmb	19 56 13.3	
	comp=Z,1µm,1.7s						
OSI	**Osito Audit: C**	29.45	314	P	P	19 55 48.9	+1.0
	baz=123						

OSI				S	S	20 00 41.9	+6.3
	baz=123						
MPMC	Manual Prospec	29.45	318	P	P	19 55 49.6	+1.4
	baz=127,SNR=97						
MPMC				S	S	20 00 42.5	+6.6
	baz=127						
SKI	Saint Kitts	29.48	83	eP	P	19 55 42.3	-6.0
I49A	Point Hope	29.52	16	P	P	19 55 46.7	-1.6
I49A					pP	19 56 07.5	-2.0
I49A				IAmb	IAmb	19 56 23.3	
	comp=Z,911nm,1.2s						
DUG	Dugway, Tooele	29.62	329	P	P	19 55 50.9	+1.4
	baz=140,SNR=53						
DUG				S	S	20 00 42.5	+4.2
	baz=140						
RSSD	Black Hills	29.67	345	P	P	19 55 50.7	+0.8
RSSD				pmax	pmax		
	comp=Z,176nm,0.8s						
RSSD	Black Hills	29.67	345	⇑P	P	19 55 51.1	+1.1
RSSD	Black Hills	29.67	345	P	P	19 55 50.7	+0.8
RSSD	Black Hills	29.67	345	P	P	19 55 50.9	+0.9
	baz=159						
RSSD				S	S	20 00 42.1	+3.0
	baz=159						
R11A	Troy Canyon, C	29.76	323	P	P	19 55 52.1	+1.2
	baz=133,SNR=53						
R11A				S	S	20 00 46.7	+6.0
	baz=133						
BRNJ	Basking Ridge	29.77	30	IAmb	IAmb	19 56 15.1	
	comp=Z,750nm,1.2s						
ARVC	Arvin	29.80	315	P	P	19 55 52.6	+1.6
	baz=124,SNR=9.4						
ARVC				S	S	20 00 46.7	+5.6
	baz=124						
ISA	Isabella, Lake	29.87	316	P	P	19 55 52.8	+1.2
ISA				pmax	pmax		
	comp=Z,547nm,1.5s						
ISA	Isabella, Lake	29.87	316	P	P	19 55 52.8	+1.2
ISA	Isabella, Lake	29.87	316	P	P	19 55 53.4	+1.8
	baz=125,SNR=20						
ISA				S	S	20 00 48.1	+5.9
	baz=125						
GLMI	Grayling	29.93	13	P	P	19 55 50.2	-1.8
	baz=197,SNR=14						
G45A	Suttons Bay	29.93	11	IAmb	IAmb	19 56 29.3	
	comp=Z,2µm,1.6s						
GRAC	Grapevine Rang	29.95	319	P	P	19 55 54.2	+1.9
	baz=128,SNR=30						
GRAC				S	S	20 00 51.0	+7.6
	baz=128						
MMNY	Mt. Morris Dam	30.02	23	IAmb	IAmb	19 56 16.3	
	comp=Z,772nm,1.3s						
CWC	Cottonwood Cre	30.07	318	P	P	19 55 54.9	+1.3
	baz=127						
CWC				S	S	20 00 50.6	+5.2
	baz=127						
CPNY	Central Park	30.15	30	P	P	19 55 53.7	-0.3
CPNY				pP	pP	19 56 14.6	-0.4
J54A	Appleton	30.21	22	P	P	19 55 53.2	-1.2
J54A					pP	19 56 14.2	-1.3
J54A				IAmb	IAmb	19 56 57.9	
	comp=Z,1µm,1.8s						
BW06	Boulder Array	30.25	336	P	P	19 55 56.1	+1.0
	baz=148,SNR=10						
BW06				S	S	20 00 50.4	+2.1
	baz=148						
PD31	Pinedale Array	30.25	336	⇑P	P	19 55 55.9	+0.8
PD31				⇑S	S	20 00 52.9	+4.5
PDAR	Pinedale Array	30.25	336	P	P	19 55 56.0	+0.8
	comp=Z,46nm,0.9s,baz=134,slow=8.6,SNR=153						
PDAR				PcP	PcP	19 58 55.2	+1.4
	comp=Z,38nm,1.0s,baz=125,slow=4.6,SNR=3.8						
PDAR				pPcP		19 59 18.4	
	comp=Z,136nm,1.2s,baz=174,slow=1.5,SNR=4.7						
PDAR				S	S	20 00 49.2	+0.8
	comp=Z,3.3nm,0.6s,baz=110,slow=34,SNR=1.5						
PDAR				PKiKP	PKiKP	20 06 26.6	+1.2
	comp=Z,5.1nm,0.8s,baz=132,slow=2.2,SNR=4.1						
PDAR				LR	LR	20 11 15.3	
	comp=Z,14µm,18.5s,baz=152,slow=42						
PDAR				P3KPbc		20 27 48.1	
	comp=Z,1.6nm,0.9s,baz=44,slow=4.5,SNR=6.8						
LCH	Last Change Ra	30.27	320	IAmb	IAmb	19 56 21.0	
	comp=Z,897nm,1.7s						
TRNY	Table Rock, Ra	30.29	30	IAmb	IAmb	19 56 19.5	
	comp=Z,868nm,1.2s						
PAL	Palisades	30.34	30	IAmb	IAmb	19 56 19.7	
	comp=Z,836nm,1.2s						
PAL	Palisades	30.34	30	P	P	19 55 54.4	-1.2
	baz=220,SNR=11						
BINY	Binghamton	30.34	26	IAmb	IAmb	19 56 19.7	
	comp=Z,728nm,1.2s						
BINY	Binghamton	30.34	26	P	P	19 55 54.7	-1.0
	baz=215,SNR=12						
BINY				S	S	20 00 53.1	+3.7
	baz=215						
PKM	Mcpherson Peak	30.35	314	P	P	19 55 56.6	+0.5
	baz=122,SNR=16						
PKM				S	S	20 00 56.1	+6.1
	baz=122						
VES	Vestal, Richgr	30.38	316	P	P	19 55 58.0	+2.0
	baz=124,SNR=10						
VES				S	S	20 00 56.9	+6.9
	baz=124						
ANWB	Willy Bob	30.38	82	eP	P	19 55 47.6	-8.7
ANWB	Willy Bob	30.38	82	⇑P	P	19 55 53.3	-3.0
ANBD	Bethesda, Anti	30.42	83	eP	P	19 55 51.7	-4.9
N62A	Caumsett State	30.50	31	P	P	19 55 57.7	+0.7
N62A					pP	19 56 18.0	-0.1
N62A				IAmb	IAmb	19 56 21.1	
	comp=Z,848nm,1.1s						
J55A	Hilton	30.51	23		P	19 55 55.5	-1.6
TIN	Tinemaha, Big	30.53	319	P	P	19 55 59.7	+2.1
	baz=127,SNR=22						
TIN				S	S	20 00 59.1	+6.5
	baz=127						
K57A	Scipio Center	30.56	25	IAmb	IAmb	19 56 21.2	
	comp=Z,732nm,1.1s						
TBTG	Tabatinga, AM	30.59	128	⇑eP	P	19 55 59.8	+1.7
TBTG	Tabatinga, AM	30.59	128	eP	P	19 55 59.8	+1.7
TBTG	Tabatinga, AM	30.59	128	P	P	19 55 59.9	+1.7
TBTG				IAmb	IAmb	19 56 02.9	
	comp=Z,1µm,1.5s						
TDBA	Terre de Bas,	30.61	85	eP	P	19 55 51.7	-6.6
CBE	Ff, Capester	30.62	85	eP	P	19 55 55.1	-3.4
L59A	Walton	30.74	27	IAmb	IAmb	19 56 23.4	
	comp=Z,687nm,1.1s						
WSPT	Westport, CT	30.74	31	IAmb	IAmb	19 56 23.2	
	comp=Z,1µm,1.2s						
VOG	Valley Oaks Go	30.85	316	P	P	19 56 01.1	+1.0
	baz=125						
VOG				S	S	20 01 02.4	+5.1
	baz=125						
DSLB	Salisbury	30.85	86	eP	P	19 55 55.0	-5.4
MDVC	Dominica, Viel	30.85	86	e	P	19 55 57.4	-3.1
AHID	Auburn Hatcher	30.88	334	IAmb	IAmb	19 56 32.8	
	comp=Z,888nm,1.2s						
J56A	Wolcott	30.88	24	IAmb	IAmb	19 56 24.1	
	comp=Z,889nm,1.1s						
BBSR	BB Station	30.90	52	⇑P	P	19 56 00.5	-0.2
BBSR	BB Station	30.90	52	P	P	19 56 00.3	-0.5
MAGL	Barre de l'ile	30.94	85	eP	P	19 55 58.7	-2.5
DLPL	La Plaine	31.03	86	eP	P	19 55 55.7	-6.3
DLPL	La Plaine	31.03	86	IAmb	IAmb	19 56 47.2	
	comp=Z,454nm,0.9s						
YLE	Yale	31.05	31		pP	19 56 23.6	+0.6
YLE				IAmb	IAmb	19 56 26.1	
	comp=Z,799nm,1.2s						
GRHS	Sauteurs	31.06	92	eP	P	19 56 00.6	-1.7
GRGR	Grenville	31.06	93	eP	P	19 55 56.9	-5.5
GRGR	Grenville	31.06	93	⇑P	P	19 56 01.2	-1.2
GRGR	Grenville	31.06	93	IAmb	IAmb	19 56 43.0	
	comp=Z,1µm,1.0s						
KSCT	Kent School, K	31.10	30	IAmb	IAmb	19 56 26.6	
	comp=Z,1µm,1.2s						
CZSB	Cruzeiro do Su	31.10	137	IAmb	IAmb	19 56 10.3	
	comp=Z,607nm,0.6s						
PAGB	Antelope Grade	31.10	315	IAmb	IAmb	19 56 28.6	
	comp=Z,857nm,1.3s						
SVN	Savane Anatole	31.15	87	IAmb	IAmb	19 56 53.0	
	comp=Z,521nm,0.8s						
FDF	Fort de France	31.18	87	eP	P	19 56 00.5	-2.9
FDF	Fort de France	31.18	87	IAmb	IAmb	19 56 44.8	
	comp=Z,706nm,0.9s						
GCMP	Grenada, Carri	31.22	92	eP	P	19 55 55.7	-8.0
ELK	Elko	31.26	327	P	P	19 56 06.2	+2.1
	comp=Z,42nm,0.7s,baz=137,slow=6.5,SNR=140						
ELK				pP	pP	19 56 25.3	+0.1
	comp=Z,132nm,1.0s,baz=152,slow=4.9,SNR=11						
ELK				PcP	PcP	19 58 58.1	+1.6
	comp=Z,43nm,1.0s,baz=273,slow=2.4,SNR=3.2						
ELK				pPcP		19 59 21.0	
	comp=Z,79nm,1.0s,baz=67,slow=1.3,SNR=4.0						
ELK				S	S	20 01 05.8	+1.6
	comp=Z,14nm,1.1s,baz=157,slow=10,SNR=2.0						
ELK				LR	LR	20 09 52.7	
	comp=Z,19µm,20.6s,baz=142,slow=38						
MLAC	Mammoth, Mammo	31.26	319	P	P	19 56 05.7	+1.6
	baz=127,SNR=8.9						
MLAC				S	S	20 01 10.0	+5.6
	baz=127						
SVB	Belmont	31.27	90	eP	P	19 55 58.3	-5.8
SVB	Belmont	31.27	90	IAmb	IAmb	19 56 41.5	
	comp=Z,1µm,1.1s						
REDW	Red Top Meadow	31.27	335	IAmb	IAmb	19 56 37.3	
	comp=Z,1µm,1.2s						
BIM	Bigot	31.28	88	eP	P	19 56 00.5	-3.8
BIM	Bigot	31.28	88	P	P	19 56 02.4	-1.8
BIM				IAmb	IAmb	19 56 43.2	
	comp=Z,729nm,0.9s						
BIM					PcP	19 58 58.4	+1.7
SNOW	Snow King Moun	31.31	335	IAmb	IAmb	19 56 08.7	
	comp=Z,949nm,0.8s						
J57A	Williamstown	31.34	25	IAmb	IAmb	19 56 27.9	
	comp=Z,819nm,1.2s						
NV11	Mina Array Sit	31.34	321	IAmb	IAmb	19 56 31.8	
	comp=Z,740nm,1.3s						
SADO	Sadowa	31.36	20	P	P	19 56 02.7	-1.9
	comp=Z,16nm,0.4s,baz=259,slow=7.7,SNR=20						
SADO				PcP	PcP	19 58 56.9	+0.5
	comp=Z,70nm,0.7s,baz=212,slow=5.3,SNR=1.7						
SADO	Sadowa	31.36	20	⇑P	P	19 56 02.4	-2.2
SADO	Sadowa	31.36	20	IAmb	IAmb	19 56 40.1	
	comp=Z,737nm,1.2s						
LOHW	Long Hollow	31.38	336	IAmb	IAmb	19 56 55.2	
	comp=Z,799nm,1.2s						
NVAR	Mina Array Bea	31.43	321	P	P	19 56 08.1	+2.5
	comp=Z,164nm,0.8s,baz=135,slow=9.0,SNR=570						
NVAR				pP	pP	19 56 28.5	+2.0
	comp=Z,260nm,0.9s,baz=133,slow=3.5,SNR=12						
NVAR				PcP	PcP	19 58 57.4	+0.4
	comp=Z,82nm,1.2s,baz=114,slow=2.3,SNR=2.8						
NVAR				pPcP		19 59 21.6	
	comp=Z,66nm,1.0s,baz=146,slow=2.7,SNR=4.6						
NVAR				S	S	20 01 09.6	+2.7
	comp=Z,1.4nm,0.7s,baz=222,slow=48,SNR=1.0						
NVAR				ScS	ScS	20 06 30.9	+1.0
	comp=Z,1.1nm,0.7s,baz=170,slow=2.1,SNR=5.1						
NVAR				LR	LR	20 10 09.3	
	comp=Z,22µm,18.6s,baz=132,slow=39						
NVAR				P3KPbc		20 27 45.6	
	comp=Z,3.9nm,0.8s,baz=293,slow=5.3,SNR=12						
NVAR				P3KP		20 29 03.4	
	comp=Z,2.2nm,0.9s,baz=326,slow=0.3,SNR=3.7						
SLBI	Saint Lucia, B	31.43	89	eP	P	19 55 56.8	-8.8
D32A	Dogwood Acres,	31.43	355	IAmb	IAmb	19 56 07.4	
	comp=Z,576nm,0.6s						
LHV	Little Huntoon	31.44	320	IAmb	IAmb	19 56 40.5	
	comp=Z,572nm,1.0s						
ILAM	Ilet Lapin Mar	31.44	87	eP	P	19 55 59.6	-6.0
ILAM	Ilet Lapin Mar	31.44	87	IAmb	IAmb	19 56 41.7	
	comp=Z,806nm,1.1s						
E46A	Sault Ste Mari	31.47	12	IAmb	IAmb	19 56 42.8	
	comp=Z,1µm,1.8s						
D41A	Chassel	31.48	6	IAmb	IAmb	19 56 29.1	
	comp=Z,906nm,1.3s						
MPOM	Morne Pois Mar	31.49	88	eP	P	19 56 01.8	-4.3
MPOM	Morne Pois Mar	31.49	88	IAmb	IAmb	19 56 43.0	
	comp=Z,2µm,1.1s						
MCLT	Moule a Chique	31.50	89	eP	P	19 55 59.6	-6.6
TRN	Trinidad (W)	31.60	95	eP	P	19 55 58.9	-8.1
DELO	Deloro Mine	31.66	22	IAmb	IAmb	19 56 31.2	
	comp=Z,536nm,1.0s						
PMPB	Monarch Peak	31.74	315	IAmb	IAmb	19 56 33.7	
	comp=Z,2µm,1.5s						
H17A	Grant Village	32.02	337	IAmb	IAmb	19 56 48.9	
	comp=Z,940nm,1.6s						
H17A	Grant Village	32.02	337	P	P	19 56 12.9	+2.2
	baz=148,SNR=32						
H17A				S	S	20 01 19.9	+3.9
	baz=148						
L61B	Northampton	32.03	30	P	P	19 56 09.1	-1.4
	baz=220,SNR=11						
QUA2	Belchertown	32.06	30	IAmb	IAmb	19 56 34.1	
	comp=Z,544nm,1.1s						
NNA	Nana	32.10	148	P	P	19 56 13.1	+1.7
	comp=Z,125nm,1.1s,baz=318,slow=9.2,SNR=22						
NNA				S	S	20 01 18.4	+1.2
	comp=Z,4.7nm,0.3s,baz=222,slow=10,SNR=1.2						
NNA				ScS	ScS	20 06 34.6	+1.1
	comp=Z,4.5nm,0.3s,baz=205,slow=20,SNR=1.6						
NNA				LR	LR	20 07 17.9	
	comp=Z,11µm,18.5s,baz=328,slow=32						
NNA	Nana	32.10	148	ceP	P	19 56 14.3	+2.9
NNA				pmax	pmax		
	comp=Z,449nm,1.3s						
NNA	Nana	32.10	148	⇓P	P	19 56 13.4	+2.0
NNA	Nana	32.10	148	P	P	19 56 13.2	+1.7
LKWY	Lake	32.10	337	IAmb	IAmb	19 56 51.0	
	comp=Z,1µm,1.6s						
YMP	Mirror Lake Pl	32.16	337	IAmb	IAmb	19 56 56.6	
	comp=Z,493nm,1.1s						
RLMT	Red Lodge	32.17	339	P	P	19 56 13.1	+1.1
	baz=150,SNR=135						
RLMT				S	S	20 01 19.6	+1.4
	baz=150						
TOSP	Speyside	32.30	94	eP	P	19 56 05.1	-8.1
YNR	Norris Junctio	32.33	337	IAmb	IAmb	19 57 08.3	
	comp=Z,668nm,1.3s						
YERR	Yerington	32.35	321	IAmb	IAmb	19 56 45.6	
	comp=Z,679nm,1.4s						
M65A	Busby, Falmout	32.39	33	P	P	19 56 12.3	-1.3
	baz=224						
YMR	Madison River	32.40	336	IAmb	IAmb	19 56 47.6	
	comp=Z,1µm,1.3s						
MDND	Maddock	32.41	352	P	P	19 56 13.8	+0.1
	baz=169,SNR=250						
MDND				S	S	20 01 17.4	-4.0
	baz=169						
SAO	San Andreas Ge	32.48	315	⇓P	P	19 56 15.5	+1.0
SAO	San Andreas Ge	32.48	315	IAmb	IAmb	19 56 39.7	
	comp=Z,793nm,1.7s						
AGMN	Agassiz Nation	32.52	357	IAmb	IAmb	19 56 16.3	
	comp=Z,531nm,0.8s						
AGMN	Agassiz Nation	32.52	357	P	P	19 56 14.0	-0.6
	baz=176,SNR=128						
B35A	Bob, Littlefor	32.52	360	IAmb	IAmb	19 56 38.4	
	comp=Z,581nm,1.1s						
NCB	Newcomb	32.53	26	IAmb	IAmb	19 56 38.7	
	comp=Z,730nm,1.1s						
LAO	LASA Array	32.63	344	P	P	19 56 16.7	+0.9
	baz=157,SNR=40						
LAO				S	S	20 01 27.5	+2.5
	baz=157						
PNTR	Pine Nut	32.63	321	IAmb	IAmb	19 56 45.5	
	comp=Z,1µm,1.7s						
WES	Weston	32.65	31	IAmb	IAmb	19 56 40.1	
	comp=Z,715nm,1.3s						
BCX	Boston College	32.69	31	pP	pP	19 56 37.4	-0.1
BCX				IAmb	IAmb	19 56 40.7	
	comp=Z,718nm,1.2s						
J61A	Chester	32.78	29	IAmb	IAmb	19 56 41.8	
	comp=Z,662nm,1.2s						
PAHR	Pah Rah Range	32.88	322	IAmb	IAmb	19 56 44.4	
	comp=Z,770nm,1.7s						
LONY	Lake Ozonia	32.91	25	IAmb	IAmb	19 56 42.0	
	comp=Z,953nm,1.2s						
LONY	Lake Ozonia	32.91	25	P	P	19 56 16.9	-1.3
	baz=215,SNR=18						
BBGH	Gun Hill	32.91	90	eP	P	19 56 15.5	-3.0
BBGH	Gun Hill	32.91	90	e		20 03 59.5	
HLID	Hailey	32.97	331	P	P	19 56 20.8	+1.9
	baz=141,SNR=242						
HLID				S	S	20 01 36.6	+6.0
	baz=141						
MPK	Martis Peak	33.02	320	IAmb	IAmb	19 56 45.1	
	comp=Z,672nm,1.1s						
BOZ	Bozeman (W)	33.44	337	P	P	19 56 24.9	+1.9
	baz=147,SNR=110						
BOZ				S	S	20 01 39.9	+2.1
	baz=147						
DLMT	Dillon	33.62	335	IAmb	IAmb	19 57 06.4	
	comp=Z,1µm,1.1s						
I62A	Tamworth	33.76	29	IAmb	IAmb	19 56 50.1	
	comp=Z,745nm,1.2s						
LBNH	Lisbon	33.76	28	IAmb	IAmb	19 56 50.2	
	comp=Z,527nm,1.1s						
LBNH	Lisbon	33.76	28	P	P	19 56 24.9	-0.7
	baz=220,SNR=12						
LBNH				S	S	20 01 38.5	-4.0
	baz=220						
DGMT	Dagmar	33.80	347	IAmb	IAmb	19 56 30.7	
	comp=Z,750nm,0.8s						
DGMT	Dagmar	33.80	347	P	P	19 56 26.7	+0.8
	baz=161,SNR=171						
DGMT				S	S	20 01 43.4	+0.4
	baz=161						
MNTQ	Montreal, Queb	34.02	25	⇑P	P	19 56 26.5	-1.3
MNTQ	Montreal, Queb	34.02	25	IAmb	IAmb	19 56 51.9	
	comp=Z,869nm,1.2s						
MCCM	Marconi Confer	34.18	316	⇓P	P	19 56 31.1	+1.9
MCCM	Marconi Confer	34.18	316	pP	pP	19 56 51.9	+1.5
I63A	Otisfield	34.25	30	IAmb	IAmb	19 56 54.2	
	comp=Z,815nm,1.1s						
WVOR	Wild Horse Val	34.26	326	⇑P	P	19 56 31.2	+1.1
ULM	Lac du Bonnet	34.46	357	P	P	19 56 30.3	-1.3
	comp=Z,444nm,0.8s,baz=179,slow=8.8,SNR=166						
ULM				pP	pP	19 56 51.6	-1.3
	comp=Z,275nm,0.9s,baz=186,slow=9.6,SNR=6.2						
ULM				PcP	PcP	19 59 04.5	-0.4
	comp=Z,163nm,0.9s,baz=304,slow=2.9,SNR=3.8						
ULM				S	S	20 01 49.4	-3.8
	comp=Z,65nm,1.2s,baz=60,slow=17,SNR=2.0						
ULM				LR	LR	20 14 00.4	
	comp=Z,13µm,20.3s,baz=174,slow=42						
ULM				P3KPbc		20 27 27.8	
	comp=Z,7.6nm,0.9s,baz=4.6,slow=3.5,SNR=7.2						
ULM	Lac du Bonnet	34.46	357	⇑P	P	19 56 30.2	-1.3
ULM	Lac du Bonnet	34.46	357	IAmb	IAmb	19 56 32.5	
	comp=Z,389nm,0.8s						
O03E	Paynes Creek	34.71	320	P	P	19 56 34.1	+0.1
	baz=126,SNR=28						
O03E				S	S	20 02 00.7	+3.3
	baz=126						
KAPO	Kapuskasing	34.78	13	⇑P	P	19 56 32.5	-1.7
MOD	Modoc Plateau	34.83	324	IAmb	IAmb	19 57 00.4	
	comp=Z,903nm,1.4s						
EGMT	Eagleton	34.87	341	IAmb	IAmb	19 56 40.7	
	comp=Z,498nm,0.9s						
EGMT	Eagleton	34.87	341	P	P	19 56 36.5	+1.2
	baz=152,SNR=162						
EGMT				S	S	20 02 01.4	+1.6
	baz=152						
BOAV	Boa Vista	35.05	109	eP	P	19 56 35.0	-2.1
WVL	Waterville	35.07	30		pP	19 56 58.9	+0.6
WVL				IAmb	IAmb	19 57 01.4	
	comp=Z,460nm,1.1s						
O02D	Mt. Diablo Mer	35.25	319	P	P	19 56 39.3	+0.6
	baz=125,SNR=15						
O02D				S	S	20 02 07.5	+1.8
	baz=125						
BMO	Blue Mountains	35.30	330	IAmb	IAmb	19 57 04.1	
	comp=Z,561nm,1.2s						
WDC	Whiskeytown Da	35.33	320	⇑P	P	19 56 38.9	-0.4
KCPM	Cahto Peak	35.48	318	IAmb	IAmb	19 57 20.2	
	comp=Z,1µm,1.6s						
M04C	Macdoel	35.64	322	P	P	19 56 43.8	+1.9
	baz=128,SNR=18						
M04C				S	S	20 02 14.7	+3.0
	baz=128						
N02D	Trinity Center	35.67	321	P	P	19 56 42.6	+0.4
	baz=126						
N02D				S	S	20 02 13.5	+1.5
	baz=126						
K05A	Summer Lake	35.69	324	IAmb	IAmb	19 57 40.5	
	comp=Z,570nm,1.3s						
PKME	Peaks-Kenny Pk	35.77	30	IAmb	IAmb	19 57 19.9	
	comp=Z,503nm,1.4s						
PKME	Peaks-Kenny Pk	35.77	30	P	P	19 56 41.7	-1.1
	baz=222,SNR=13						
KMRM	Mail Ridge	35.86	319	IAmb	IAmb	19 57 09.0	
	comp=Z,695nm,1.2s						
F62A	Pittston Farm,	35.92	28	IAmb	IAmb	19 57 08.4	
	comp=Z,480nm,1.1s						
M02C	Callahan	36.01	321	P	P	19 56 45.2	+0.2
	baz=126,SNR=7.5						
M02C				S	S	20 02 18.9	+1.7
	baz=126						
F10A	Beach Ranch, E	36.10	332	⇓P	P	19 56 47.0	+1.1
F10A	Beach Ranch, E	36.10	332	IAmb	IAmb	19 57 19.8	
	comp=Z,737nm,0.8s						
K04D	Chiloquin, OR	36.11	324	P	P	19 56 46.4	+0.4
	baz=129						
K04D				S	S	20 02 22.9	+3.9
	baz=129						
YBH	Yreka Blue Hor	36.12	322	P	P	19 56 46.0	0.0
	comp=Z,25nm,0.7s,baz=172,slow=9.5,SNR=20						
YBH				S	S	20 02 18.7	-0.4
	comp=Z,6.2nm,1.1s,baz=205,slow=21,SNR=1.7						
YBH				LR	LR	20 12 11.8	
	comp=Z,11µm,19.7s,baz=157,slow=37						
L04D	Klamath Falls	36.18	323	P	P	19 56 47.0	+0.4
	baz=128,SNR=10						
L04D				S	S	20 02 23.7	+3.7
	baz=128						
KHMM	Horse Mountain	36.24	320	IAmb	IAmb	19 57 25.9	
	comp=Z,534nm,1.2s						
J05D	Fort Rock, OR	36.25	325	P	P	19 56 48.2	+1.0
	baz=131,SNR=9.4						
J05D				S	S	20 02 24.0	+3.0
	baz=131						
F64A	Sherman	36.65	30	IAmb	IAmb	19 57 14.8	
	comp=Z,528nm,1.2s						
E62A	Clayton Lake	36.67	28	IAmb	IAmb	19 57 15.2	
	comp=Z,588nm,1.2s						
J04D	Umpqua Nationa	36.71	324	P	P	19 56 52.8	+1.7
	baz=129,SNR=5.3						
J04D				S	S	20 02 31.7	+3.6
	baz=129						
KRMB	Red Mountain	36.72	320	IAmb	IAmb	19 57 17.8	
	comp=Z,866nm,1.5s						
HUMO	Hull Mountain	36.80	323	⇓P	P	19 56 55.9	+4.2
L02E	Cave Junction	36.91	322	P	P	19 56 54.5	+1.9
	baz=126						
L02E				S	S	20 02 32.9	+2.0
	baz=126						
PTGA	Pitinga	36.92	113	P	P	19 56 51.9	-1.2
	comp=Z,453nm,0.7s,baz=299,slow=12,SNR=126						
PTGA				PcP	PcP	19 59 12.9	+0.1
	comp=Z,82nm,0.9s,baz=199,slow=2.7,SNR=2.8						
PTGA				S	S	20 02 28.6	-2.9
	comp=Z,12nm,0.8s,baz=324,slow=23,SNR=1.1						
PTGA				ScS	ScS	20 06 59.0	-0.3
	comp=Z,3.1nm,0.6s,baz=324,slow=22,SNR=1.8						
PTGA				LR	LR	20 15 00.1	
	comp=Z,18µm,18.6s,baz=304,slow=41						
E09A	Wood Farm, Sta	36.93	331	IAmb	IAmb	19 57 16.9	
	comp=Z,456nm,1.2s						
I05D	Terrebonne, OR	36.99	326	P	P	19 56 55.0	+1.6
	baz=132,SNR=14						
I05D				S	S	20 02 36.1	+3.9
	baz=132						
LMQ	La Malbaie	37.03	26	IAmb	IAmb	19 57 17.9	
	comp=Z,337nm,1.0s						
ETMB	Extrema	37.06	132	eP	P	19 56 55.1	+0.9
ETMB	Extrema	37.06	132	IAmb	IAmb	19 57 21.1	
	comp=Z,388nm,1.0s						
WALA	Waterton Lakes	37.18	338	⇑P	P	19 56 56.4	+1.3
I04A	Tendick Farm,	37.23	325	P	P	19 56 56.7	+1.3
	baz=130,SNR=14						
I04A				S	S	20 02 37.8	+2.1
	baz=130						
K02D	Willamette Mer	37.27	322	P	P	19 56 57.3	+1.6
	baz=127						
K02D				S	S	20 02 38.6	+2.2
	baz=127						
PQI	Presque Isle	37.40	29	IAmb	IAmb	19 57 21.2	
	comp=Z,586nm,1.2s						
MACA	Manacapuru-AM	37.48	117	eP	P	19 56 57.1	-0.6
HAWA	Hanford	37.50	330	⇑P	P	19 56 58.0	+0.4
G05D	Wamic, OR	37.59	327	P	P	19 57 00.1	+1.7
	baz=132,SNR=24						
G05D				S	S	20 02 45.0	+3.9
	baz=132						
D08A	Wollman Farm,	37.69	331	IAmb	IAmb	19 57 25.6	
	comp=Z,453nm,1.1s						
I03D	Drain, OR	37.70	324	P	P	19 57 00.8	+1.6
	baz=128,SNR=11						
I03D				S	S	20 02 43.9	+1.2
	baz=128						
NEW	Newport	37.81	334	P	P	19 57 00.9	+0.7

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      comp=Z,57nm,0.7s,baz=141,slow=8.8,SNR=24
NEW                                pP      pP      19 57 20.5  -1.4
      comp=Z,193nm,0.9s,baz=150,slow=8.9,SNR=15
NEW                                PcP     PcP     19 59 15.4  +0.3
      comp=Z,118nm,1.1s,baz=186,slow=4.1,SNR=2.5
NEW                                S       S       20 02 44.7  +0.3
      comp=Z,7.9nm,0.9s,baz=340,slow=13,SNR=1.5
NEW                                LR      LR      20 15 29.9
      comp=Z,22µm,20.6s,baz=142,slow=41
NEW   Newport          37.81 334   IAmb    IAmb    19 57 24.0
      comp=Z,762nm,1.4s
NEW   Newport          37.81 334   P       P       19 57 00.8  +0.7
      baz=141,SNR=54
NEW                                S       S       20 02 45.3  +0.9
      baz=141
H04D  Lebanon          37.88 325   P       P       19 57 01.7  +0.9
      baz=130,SNR=19
H04D                               S       S       20 02 45.2  -0.2
      baz=130
F05D  White Salmon     38.10 328   P       P       19 57 05.1  +2.4
      baz=133,SNR=40
F05D                               S       S       20 02 54.7  +6.0
      baz=133
COR   Corvallis        38.23 325  ⇓P       P       19 57 05.7  +2.0
COR   Corvallis        38.23 325   P       P       19 57 04.2  +0.6
COR                                pP      pP      19 57 24.5  -0.7
I02E  Swisshome, OR    38.23 324   P       P       19 57 05.9  +2.2
      baz=128,SNR=5.5
I02E                               S       S       20 02 53.6  +2.9
      baz=128
HAL   Halifax          38.28  35           pP      19 57 26.2  +0.6
G03D  McMinnville, O   38.60 326   P       P       19 57 08.6  +1.7
      baz=130,SNR=15
G03D                               S       S       20 02 58.4  +2.0
      baz=130
LTY   Liberty          38.66 330   IAmb    IAmb    19 57 33.1
      comp=Z,832nm,1.2s
SAML  Samuel           38.75 127   P       P       19 57 07.9  -0.5
SAML                               pmax    pmax
      comp=Z,964nm,1.0s
SAML  Samuel           38.75 127   P       P       19 57 07.9  -0.5
SAML                               IAmb    IAmb    19 57 12.3
      comp=Z,964nm,1.0s
F04D  Rainier, OR      39.03 327   P       P       19 57 12.4  +2.0
      baz=131,SNR=5.3
F04D                               S       S       20 03 05.8  +3.0
      baz=131
E04D  Cinebar          39.12 328   P       P       19 57 12.6  +1.4
      baz=132,SNR=7.7
E04D                               S       S       20 03 06.5  +2.5
      baz=132
C06D  Leavenworth      39.24 331   P       P       19 57 14.1  +1.9
      baz=135,SNR=6.9
C06D                               S       S       20 03 09.8  +3.9
      baz=135
D05A  Enumclaw         39.26 329   IAmb    IAmb    19 57 38.7
      comp=Z,1µm,1.2s
E03A  Lebam            39.63 327   IAmb    IAmb    19 57 39.9
      comp=Z,957nm,1.2s
D04E  Lakebay          39.64 328   P       P       19 57 17.2  +1.8
      baz=132
D04E                               S       S       20 03 15.0  +3.2
      baz=132
RADR  Rader Ridge      39.67 327   IAmb    IAmb    19 57 49.3
      comp=Z,970nm,1.1s
PNT   Penticton        39.68 333  ⇑P       P       19 57 17.6  +1.8
ICQ   Pointe Anglais   39.85  27  ⇑P       P       19 57 16.1  -1.0
GBN   Guysborough      39.91  36   P       P       19 57 17.8  +0.1
GBN                                pP      pP      19 57 39.1  -0.3
GBN                                IAmb    IAmb    19 57 56.0
      comp=Z,486nm,1.3s
B06A  Marblemount      39.94 331   IAmb    IAmb    19 57 43.0
      comp=Z,459nm,1.0s
D03D  Eldon            40.04 329   P       P       19 57 20.0  +1.2
      baz=132,SNR=21
D03D                               S       S       20 03 19.1  +1.3
      baz=132
B05A  Bryant           40.05 330   P       P       19 57 19.1  +0.2
      baz=134,SNR=14
B05A                               S       S       20 03 18.7  +0.7
      baz=134
NLWA  Neilton Lookou   40.34 328  ⇓P       P       19 57 22.9  +1.6
NLWA  Neilton Lookou   40.34 328   P       P       19 57 21.9  +0.6
LPAZ  La Paz           40.48 141   P       P       19 57 24.7  +1.3
      comp=Z,101nm,0.8s,baz=334,slow=6.0,SNR=226
LPAZ                               PcP     PcP     19 59 26.1  +1.4
      comp=Z,113nm,1.0s,baz=350,slow=6.1,SNR=4.0
LPAZ                               S       S       20 03 25.4  -0.7
      comp=Z,15nm,1.0s,baz=287,slow=20,SNR=2.3
LPAZ                               ScS     ScS     20 07 21.7  +0.7
      comp=Z,3.8nm,0.9s,baz=194,slow=23,SNR=1.4
LPAZ                               LR      LR      20 14 01.5
      comp=Z,13µm,21.8s,baz=319,slow=36
LPAZ  La Paz           40.48 141 ⇓iP       P       19 57 24.7  +1.3
LPAZ  La Paz           40.48 141  ⇓P       P       19 57 24.6  +1.3
LPAZ  La Paz           40.48 141  eP       P       19 57 24.0  +0.6
EDM   Edmonton         40.53 342   IAmb    IAmb    19 57 24.9
      comp=Z,629nm,0.9s
B04A  Port Angeles     40.60 329   P       P       19 57 24.2  +0.9
B04A                               IAmb    IAmb    19 57 49.4
      comp=Z,744nm,1.4s
A04D  Lummi Island     40.66 330   P       P       19 57 25.1  +1.3
      baz=134,SNR=7.9
A04D                               S       S       20 03 27.5  +0.5
      baz=134
AP01  Chacalluta       40.84 145   P       P       19 57 26.1  +0.4
AP01                               IAmb    IAmb    19 57 29.4
      comp=Z,2µm,2.0s
PGC   Sidney           40.97 330   IAmb    IAmb    19 57 50.7
      comp=Z,726nm,1.1s
PB12  IPOC Station P   41.05 145  i P      P       19 57 28.5  +1.0
PB16  IPOC Station P   41.28 144   IAmb    IAmb    19 57 34.7
      comp=Z,2µm,2.0s
PB16  IPOC Station P   41.28 144  i P      P       19 57 31.8  +1.8
MDP   Montagnes des    41.44 100   P       P       19 57 28.7  -2.0
      comp=Z,67nm,0.9s,baz=295,slow=9.4,SNR=8.6
MDP                                PcP     PcP     19 59 28.6  +1.5
      comp=Z,201nm,0.9s,baz=268,slow=3.1,SNR=13
MDP                                pPcP            19 59 51.8
      comp=Z,173nm,1.0s,baz=288,slow=2.1,SNR=5.7
MDP                                ScP     ScP     20 03 10.0  +1.0
      comp=Z,32nm,1.0s,baz=201,slow=21,SNR=2.7
MDP                                S       S       20 03 36.8  -2.6
      comp=Z,35nm,1.1s,baz=299,slow=23,SNR=1.5
MDP                                ScS     ScS     20 07 26.0  +0.1
      comp=Z,27nm,1.1s,baz=65,slow=7.6,SNR=1.8
PB11  IPOC Station P   42.35 146   IAmb    IAmb    19 57 42.8
      comp=Z,572nm,0.8s
PB11  IPOC Station P   42.35 146  i P      P       19 57 39.5  +1.3
ITTB  Itaituba         42.35 115  eP       P       19 57 36.2  -2.0
MALB  Monte Alegre     42.51 111  eP       P       19 57 38.0  -1.4
TA01  Diego Aracena    42.73 147   P       P       19 57 42.5  +1.5
TA01                               IAmb    IAmb    19 57 44.7
      comp=Z,403nm,0.8s
CBB   Campbell River   42.83 330   IAmb    IAmb    19 58 08.1
      comp=Z,586nm,1.3s
PB08  IPOC Station P   42.93 145  i P      P       19 57 45.1  +2.0
FCC   Fort Churchill   42.94 360   P       P       19 57 41.7  -0.6
FCC                                pmax    pmax
      comp=Z,215nm,0.8s
FCC   Fort Churchill   42.94 360   P       P       19 57 41.7  -0.6
PB01  IPOC Station P   43.48 147  i P      P       19 57 48.9  +1.7
PB02  IPOC Station P   43.50 147  i P      P       19 57 49.2  +1.9
VILB  Vilhena          43.54 129  eP       P       19 57 49.0  +1.3
VILB  Vilhena          43.54 129   IAmb    IAmb    19 57 52.2
      comp=Z,1µm,0.9s
PB07  IPOC Station P   43.84 148   IAmb    IAmb    19 57 53.8
      comp=Z,364nm,0.7s
PB07  IPOC Station P   43.84 148  i P      P       19 57 51.9  +1.7
MCPB  Macapa, AP       43.90 107  eP       P       19 57 48.8  -1.9
SCHQ  Schefferville    44.10  22   P       P       19 57 49.3  -2.4
      comp=Z,30nm,0.5s,baz=202,slow=7.8,SNR=45
SCHQ                               PcP     PcP     19 59 35.4  +0.1
      comp=Z,148nm,0.8s,baz=194,slow=2.1,SNR=6.1
SCHQ                               pPcP            20 00 00.9
      comp=Z,281nm,1.2s,baz=230,slow=7.7,SNR=5.2
SCHQ                               ScS     ScS     20 07 40.1  -0.9
      comp=Z,12nm,1.0s,baz=107,slow=19,SNR=1.0
SCHQ                               LR      LR      20 17 47.2
      comp=Z,39µm,18.9s,baz=218,slow=38
SCHQ  Schefferville    44.10  22  ⇑P       P       19 57 49.8  -1.9
SCHQ  Schefferville    44.10  22   P       P       19 57 49.8  -1.9
PB04  IPOC Station P   44.21 148   IAmb    IAmb    19 57 57.1
      comp=Z,1µm,1.9s
PB04  IPOC Station P   44.21 148  i P      P       19 57 54.5  +1.4
PB09  IPOC Station P   44.23 147   IAmb    IAmb    19 58 01.2
      comp=Z,429nm,1.0s
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PB09  IPOC Station P   44.23 147  i P      P       19 57 54.5  +1.2
DRLN  Deer Lake        44.40  33  ⇑P       P       19 57 52.9  -1.2
DRLN  Deer Lake        44.40  33   P       P       19 57 56.1  +1.9
DRLN                               IAmb    IAmb    19 58 31.8
      comp=Z,681nm,1.4s
PB06  IPOC Station P   44.81 148   IAmb    IAmb    19 58 01.6
      comp=Z,359nm,0.8s
PB06  IPOC Station P   44.81 148  i P      P       19 57 59.5  +1.7
SIV   San Ignacio      44.91 133   P       P       19 57 59.7  +1.0
      comp=Z,514nm,0.8s,baz=304,slow=7.9,SNR=1392
SIV                                PcP     PcP     19 59 39.8  +1.0
      comp=Z,121nm,0.9s,baz=149,slow=1.8,SNR=2.5
SIV                                pPcP            20 00 05.2
      comp=Z,213nm,0.9s,baz=285,slow=3.2,SNR=4.4
SIV                                S       S       20 04 30.2   0.0
      comp=Z,6.4nm,0.9s,baz=262,slow=21,SNR=0.6
SIV                                ScS     ScS     20 07 47.7  +0.3
      comp=Z,6.8nm,1.0s,baz=16,slow=8.6,SNR=1.4
PB10  IPOC Station P   45.00 150  i P      P       19 58 01.0  +1.9
LVC   Limon Verde      45.07 147   P       P       19 58 02.6  +2.4
      comp=Z,174nm,0.8s,baz=301,slow=6.7,SNR=95
LVC                                PcP     PcP     19 59 41.9  +2.3
      comp=Z,52nm,0.8s,baz=182,slow=4.4,SNR=1.9
LVC                                S       S       20 04 35.3  +2.5
      comp=Z,4.3nm,0.8s,baz=206,slow=17,SNR=3.1
LVC                                ScS     ScS     20 07 51.0  +2.2
      comp=Z,1.7nm,0.4s,baz=268,slow=12,SNR=1.4
LVC   Limon Verde      45.07 147  ⇓P       P       19 58 02.6  +2.4
LVC   Limon Verde      45.07 147  eP       P       19 58 02.0  +1.8
LVC   Limon Verde      45.07 147   P       P       19 58 01.5  +1.3
LVC   Limon Verde      45.07 147  i P      P       19 58 02.8  +2.6
PB15  IPOC Station P   45.28 148  i P      P       19 58 03.1  +1.4
RPN   Rapa Nui         45.32 200   P       P       19 58 02.9  +1.2
      comp=Z,275nm,0.9s,baz=355,slow=6.0,SNR=25
RPN                                pP      pP      19 58 25.3  +1.7
      comp=Z,1µm,1.2s,baz=1.4,slow=2.1,SNR=6.4
RPN   Rapa Nui         45.32 200  ⇓P       P       19 58 02.9  +1.2
RPN   Rapa Nui         45.32 200   P       P       19 58 02.4  +0.8
VA02  Isla de Pascua   45.39 200   P       P       19 58 03.2  +1.1
VA02                               IAmb    IAmb    19 58 29.3
      comp=Z,2µm,1.6s
PDRB  Porto dos Gac    45.40 125  eP       P       19 58 01.8  -0.7
BBB   Bella Bella      45.55 331   P       P       19 58 04.8  +1.6
      comp=Z,64nm,0.9s,baz=118,slow=6.6,SNR=9.2
BBB                                pP      pP      19 58 25.1  -0.2
      comp=Z,557nm,1.2s,baz=137,slow=20,SNR=12
BBB                                S       S       20 04 40.0  +1.6
      comp=Z,29nm,1.0s,baz=347,slow=9.1,SNR=2.0
BBB   Bella Bella      45.55 331  ⇓P       P       19 58 05.7  +2.5
BBB   Bella Bella      45.55 331   IAmb    IAmb    19 58 29.7
      comp=Z,823nm,1.4s
CLDB  Colider          45.72 123  eP       P       19 58 04.2  -0.8
PTLB  Pontes e Lacer   45.94 131  eP       P       19 58 07.3  +0.6
PTLB  Pontes e Lacer   45.94 131   P       P       19 58 06.9  +0.2
PTLB                               IAmb    IAmb    19 58 10.6
      comp=Z,419nm,1.2s
PB14  IPOC Station P   46.01 150   P       P       19 58 08.6  +1.1
PB14                               IAmb    IAmb    19 58 10.9
      comp=Z,252nm,0.7s
PB14  IPOC Station P   46.01 150  i P      P       19 58 08.4  +0.9
TMAB  Tom-Au,PA,Br     48.33 108  eP       P       19 58 24.2  -1.2
PRPB  Parauapebas      48.40 113  eP       P       19 58 24.6  -1.4
AZAP  Zapla            48.45 145  i P      P       19 58 27.6  +1.2
AC02  Maricunga        48.48 151   IAmb    IAmb    19 58 33.8
      comp=Z,500nm,0.9s
ASTB  Santa Barbara    48.58 144  i P      P       19 58 29.1  +1.8
GO03  Copiap           48.62 152  ⇓P       P       19 58 28.9  +1.5
GO03  Copiap           48.62 152  i P      P       19 58 29.1  +1.7
SALV  Santo Antonio    48.78 128  eP       P       19 58 29.3  +0.5
YKA   Yellowknife Ar   49.01 347   P       P       19 58 30.2  +0.3
      comp=Z,520nm,0.6s,baz=152,slow=7.4,SNR=896
YKA                                pP      pP      19 58 51.0  -1.4
      comp=Z,751nm,1.1s,baz=150,slow=7.2,SNR=5.0
YKA                                LR      LR      20 22 32.6
      comp=Z,4µm,20.0s,baz=0.0,slow=40
YKA                                P3KP            20 28 29.3
      comp=Z,1.4nm,1.1s,baz=32,slow=2.4,SNR=3.2
YKA                                PKPPKP  P'P'df  20 29 23.4  -7.6
      comp=Z,4.0nm,0.9s,baz=5.8,slow=2.1,SNR=7.7
YKA                                P4KPbc          20 36 05.0
      comp=Z,3.0nm,0.9s,baz=149,slow=4.3,SNR=13
LCO   Las Campanas     49.64 154   P       P       19 58 36.7  +1.3
LCO                                pmax    pmax
      comp=Z,346nm,0.7s
LCO   Las Campanas     49.64 154   P       P       19 58 36.7  +1.3
LCO                                IAmb    IAmb    19 58 38.9
      comp=Z,346nm,0.7s
SNDB  Serra Nova Dou   50.00 121  eP       P       19 58 38.0  -0.1
WRAK  Wrangell Islan   50.15 333   P       P       19 58 41.6  +3.0
      baz=128
WRAK                               S       S       20 05 50.9  +7.6
      baz=128
CO05  La Serena        50.21 155   IAmb    IAmb    19 58 44.0
      comp=Z,278nm,0.8s
AHML  Horco Molle      50.34 147  i P      P       19 58 41.5  +1.0
AHML                              i P      P       19 58 42.1  +1.5
PP1B  Ponte de Pedra   50.44 130  eP       P       19 58 42.5  +1.1
DLBC  Dease Lake       50.49 336   P       P       19 58 43.6  +2.3
      comp=Z,450nm,0.7s,baz=141,slow=5.1,SNR=267
DLBC                               S       S       20 05 49.8  +1.6
      comp=Z,3.6nm,0.9s,baz=130,slow=22,SNR=1.0
VCA   Vinchina         50.52 151  i P      P       19 58 44.3  +2.3
GO04  Tololo Observa   50.61 154   IAmb    IAmb    19 58 47.2
      comp=Z,325nm,0.8s
GO04  Tololo Observa   50.61 154  i P      P       19 58 44.2  +1.4
FRB   Frobisher Bay    50.95  14   P       P       19 58 43.5  -1.0
      comp=Z,213nm,0.6s,baz=221,slow=8.9,SNR=192
FRB   Frobisher Bay    50.95  14  ⇑P       P       19 58 43.4  -1.1
AROD  Rodeo            51.17 153  i P      P       19 58 49.7  +2.7
WTLY  Watson Lake, Y   51.18 338   P       P       19 58 48.3  +2.0
      baz=134,SNR=24
WTLY                               S       S       20 06 00.6  +3.0
      baz=134
ACDV  Cuesta del Vie   51.33 153  i P      P       19 58 51.8  +3.7
SMTB  Santa Maria do   51.59 115  eP       P       19 58 49.4  -0.7
ARAG  Araguaiana, MT   51.66 125  eP       P       19 58 51.0  +0.5
AQDB  Aquidauana       51.69 133  eP       P       19 58 51.2  +0.5
AQDB  Aquidauana       51.69 133   IAmb    IAmb    19 58 55.1
      comp=Z,443nm,1.0s
ACLC  CERRO LA CRUZ    51.70 150  i P      P       19 58 52.3  +1.5
ACCO  Cerro Coronel    51.71 153  i P      P       19 58 53.1  +2.0
SIT   Sitka            51.84 332   P       P       19 58 53.9  +2.6
      baz=125,SNR=5.7
SIT                                S       S       20 06 14.8  +8.1
      baz=125
ROSB  Rosrio           52.19 106  eP       P       19 58 52.8  -1.7
TAOE  Nuku Hiva Isla   52.30 245⇓eP        P       19 58 55.1  -0.3
      comp=Z,322nm,1.0s
TAOE                              epP      pP      19 59 17.8   0.0
      comp=Z,2µm,1.4s
TAOE                              eS       S       20 06 11.0  -3.2
      comp=Z,10µm,30.0s
TAOE                              eLQ      LQ      20 11 51.0
      comp=Z,18µm,27.1s
TAOE                              eLR      LR      20 14 01.8
      comp=Z,58µm,28.4s,baz=62
TAOE  Nuku Hiva Isla   52.30 245  eT       T       20 53 49.6
      comp=Z,197nm,0.2s
TAOE  Nuku Hiva Isla   52.30 245   P       P       19 58 54.8  -0.6
TAOE                               pP      pP      19 59 15.0  -2.8
TAOE                               IAmb    IAmb    19 59 20.4
      comp=Z,1µm,1.5s
BESE  Bessie Mountai   52.54 334   IAmb    IAmb    19 59 22.9
      comp=Z,802nm,1.5s
PEXB  Peixe            52.57 119  eP       P       19 58 57.3   0.0
RTLS  Leoncito         52.66 154  i P      P       19 59 00.4  +2.4
ZON   Zonda            52.70 153   IAmb    IAmb    19 59 05.6
      comp=Z,620nm,1.3s
ZON   Zonda            52.70 153  i P      P       19 59 00.4  +2.3
APLL  PUNTA DE LOS L   52.70 151  i P      P       19 58 59.3  +1.2
P33M  Teslin, Yukon    52.73 337   P       P       19 59 00.1  +2.1
      baz=130,SNR=53
P33M                               S       S       20 06 26.0  +7.1
      baz=130
SJA   San Juan         52.74 153  i P      P       19 59 01.4  +3.1
VA01  Torpederas       52.79 157   IAmb    IAmb    19 59 02.9
      comp=Z,462nm,1.1s
AUSP  Uspallata        52.99 154  i P      P       19 59 02.9  +2.5
ROC1  El Roble         52.99 156  i P      P       19 59 01.3  +0.9
RTCV  Cerro Valdivia   53.03 153  i P      P       19 59 02.6  +2.1
SKAG  Skagway          53.26 335  ⇑P       P       19 59 04.4  +2.7
SKAG  Skagway          53.26 335   IAmb    IAmb    19 59 28.9
      comp=Z,520nm,1.3s
SKAG  Skagway          53.26 335   P       P       19 59 04.0  +2.3
      baz=127
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SKAG                               S       S       20 06 33.1  +7.2
      baz=127
PEL   Peldehue         53.27 156   IAmb    IAmb    19 59 05.5
      comp=Z,234nm,0.8s
PEL   Peldehue         53.27 156  i P      P       19 59 03.1  +0.9
ASAL  Salagasta        53.54 154  i P      P       19 59 06.4  +2.2
MT01  Popeta           53.69 157   IAmb    IAmb    19 59 08.6
      comp=Z,266nm,0.8s
MT09  Talagante        53.71 157   IAmb    IAmb    19 59 09.2
      comp=Z,463nm,0.8s
ARCO  CERRO ARCO       53.71 154  i P      P       19 59 07.8  +2.2
MMPY  Sheldon Lake,    53.77 339   P       P       19 59 08.0  +2.5
      baz=133,SNR=122
MMPY                               S       S       20 06 38.3  +5.4
      baz=133
WHY   Whitehorse       53.81 336   IAmb    IAmb    19 59 32.6
      comp=Z,590nm,1.1s
WHY   Whitehorse       53.81 336   P       P       19 59 07.7  +1.8
      baz=128,SNR=26
WHY                                S       S       20 06 40.7  +7.1
      baz=128
AAGR  Agrelo           53.97 154  i P      P       19 59 09.6  +2.2
BO01  Tunca            54.22 157   IAmb    IAmb    19 59 13.6
      comp=Z,574nm,0.9s
FARO  Faro, Yukon      54.24 338   P       P       19 59 10.7  +1.8
      baz=130,SNR=54
FARO                               S       S       20 06 44.1  +5.0
      baz=130
TCA   Tanti            54.41 149  i P      P       19 59 11.2  +0.5
GO05  Huala            54.47 158   IAmb    IAmb    19 59 13.9
      comp=Z,452nm,0.8s
GO05  Huala            54.47 158  i P      P       19 59 11.9  +1.1
M31M  Drury Creek, Y   54.59 338   P       P       19 59 13.5  +2.0
      baz=129,SNR=42
M31M                               S       S       20 06 49.7  +5.8
      baz=129
CPUP  Villa Florida    54.63 140   P       P       19 59 12.1  -0.1
      comp=Z,126nm,0.8s,baz=326,slow=7.8,SNR=98
CPUP                               pP      pP      19 59 34.2  -0.5
      comp=Z,146nm,1.0s,baz=334,slow=8.3,SNR=6.2
CPUP                               S       S       20 06 42.0  -3.2
      comp=Z,11nm,1.1s,baz=345,slow=4.0,SNR=2.4
CPUP                               ScS     ScS     20 08 54.4  +1.5
      comp=Z,8.3nm,1.0s,baz=25,slow=7.6,SNR=2.0
CPUP                               LR      LR      20 22 10.9
      comp=Z,7µm,19.1s,baz=329,slow=36
CPUP  Villa Florida    54.63 140  ⇓P       P       19 59 12.0  -0.1
CPUP  Villa Florida    54.63 140  eP       P       19 59 12.6  +0.4
CPUP  Villa Florida    54.63 140   IAmb    IAmb    19 59 15.7
      comp=Z,410nm,1.3s
BDFB  Brasilia         54.65 123   P       P       19 59 13.2  +0.6
      comp=Z,793nm,0.9s,baz=293,slow=8.3,SNR=437
BDFB                               S       S       20 06 40.8  -5.2
      comp=Z,11nm,1.0s,baz=83,slow=8.1,SNR=1.3
BDFB                               ScS     ScS     20 08 54.0  +0.3
      comp=Z,6.6nm,0.9s,baz=56,slow=26,SNR=1.6
BDFB                               LR      LR      20 24 30.9
      comp=Z,11µm,19.5s,baz=305,slow=38
N31M  Braeburn, Yuko   54.66 337   P       P       19 59 14.1  +2.1
      baz=127,SNR=43
N31M                               S       S       20 06 51.5  +6.6
      baz=127
BO02  Sierra Bellavi   54.69 157   IAmb    IAmb    19 59 17.2
      comp=Z,479nm,1.1s
MRA   San Martin       54.77 151  i P      P       19 59 14.2  +1.0
PNL   Peninsula        55.09 334   P       P       19 59 15.5  +0.5
      baz=122,SNR=9.1
PNL                                S       S       20 06 56.5  +5.9
      baz=122
ITRB  Iturama          55.11 128  eP       P       19 59 16.8  +1.0
ML02  Panimavida       55.33 158   IAmb    IAmb    19 59 43.4
      comp=Z,740nm,1.1s
RFA   San Rafael       55.58 155  i P      P       19 59 20.5  +1.6
PCMB  Pacaembu         55.60 131  eP       P       19 59 19.7  +0.4
SDBA  SAO DESIDERIO    55.60 117  eP       P       19 59 19.1  -0.3
IVI   Ivigtut          55.66  25  i P      P       19 59 19.2  +0.1
IVI                                IAmb    IAmb    19 59 35.0
      comp=Z,22nm,0.8s
PINM  Pinnacle         55.68 334   P       P       19 59 21.9  +2.5
      baz=122,SNR=7.1
PINM                               S       S       20 07 06.7  +8.2
      baz=122
PCA   Pinnacle         55.68 334   IAmb    IAmb    19 59 44.7
      comp=Z,798nm,1.0s
IPMB  Ipameri, GO      55.78 125  eP       P       19 59 21.1  +0.5
MAYO  Mayo, Yukon      56.01 339   P       P       19 59 23.5  +1.9
      baz=128,SNR=26
MAYO                               S       S       20 07 07.2  +4.5
      baz=128
EDS3  Malargue         56.08 156  i P      P       19 59 25.3  +2.7
NUUK  Nuuk             56.14  21  i P      P       19 59 23.2  +0.8
NUUK                               IAmb    IAmb    19 59 30.7
      comp=Z,38nm,0.8s
NUUK  Nuuk             56.14  21  ⇑P       P       19 59 22.9  +0.6
LOGN  Logan Glacier    56.38 334   IAmb    IAmb    19 59 56.1
      comp=Z,930nm,1.4s
MESA  MESA             56.45 333   IAmb    IAmb    19 59 51.1
      comp=Z,926nm,1.3s
MESA  MESA             56.45 333   P       P       19 59 27.6  +2.6
      baz=120,SNR=8.0
MESA                               S       S       20 07 14.6  +5.6
      baz=120
CTG   Chitna Glacier   56.59 334   P       P       19 59 28.7  +2.8
      baz=121,SNR=6.5
CTG                                S       S       20 07 18.9  +8.2
      baz=121
YUK3  Moose Creek      56.66 335   P       P       19 59 28.4  +1.9
      baz=122,SNR=17
YUK3                               S       S       20 07 15.9  +4.1
      baz=122
NRS   Narsarsuaq       56.76  26   P       P       19 59 27.1  +0.2
NRS                                pmax    pmax
      comp=Z,263nm,1.0s
NRS   Narsarsuaq       56.76  26  i P      P       19 59 26.5  -0.4
NRS                                IAmb    IAmb    19 59 30.1
      comp=Z,69nm,0.7s
NRS   Narsarsuaq       56.76  26  ⇑P       P       19 59 29.1  +2.1
NRS   Narsarsuaq       56.76  26   P       P       19 59 27.1  +0.2
NRS                                IAmb    IAmb    20 00 20.5
      comp=Z,263nm,1.0s
PTGB  Pitanga          56.99 134  eP       P       19 59 30.3  +1.1
BVCY  Beaver Creek     57.17 336   P       P       19 59 31.6  +1.8
      baz=122,SNR=22
BVCY                               S       S       20 07 24.9  +6.9
      baz=122
BB19B Bebedouro        57.30 128  eP       P       19 59 32.4  +1.1
J29M  Klondike Camp    57.34 339   P       P       19 59 32.2  +1.1
      baz=126,SNR=8.3
J29M                               S       S       20 07 23.2  +2.8
      baz=126
JANB  Januaria         57.40 120  eP       P       19 59 32.4  +0.3
KAIM  Kayak Island     57.41 332   P       P       19 59 34.5  +2.9
      baz=117,SNR=6.5
ITQB  Itaqui           57.47 142  eP       P       19 59 33.0  +0.8
ITQB  Itaqui           57.47 142   IAmb    IAmb    19 59 38.3
      comp=Z,765nm,1.2s
MCARA McCarthy VSAT    57.51 334   P       P       19 59 34.8  +2.6
      baz=120,SNR=30
MCARA                              S       S       20 07 28.9  +6.4
      baz=120
DAWY  Dawson           57.53 338   P       P       19 59 33.1  +0.7
      baz=125,SNR=47
DAWY                               S       S       20 07 24.8  +1.9
      baz=125
M27K  Edge Creek, AK   57.54 336   IAmb    IAmb    20 00 00.6
      comp=Z,520nm,1.2s
M27K  Edge Creek, AK   57.54 336   P       P       19 59 34.8  +2.2
      baz=121
M27K                               S       S       20 07 28.6  +5.4
      baz=121
VRDI  Verde Repeater   57.61 334   IAmb    IAmb    20 00 01.0
      comp=Z,848nm,1.2s
L27K  Beaver Creek,    57.89 336   P       P       19 59 35.9  +1.0
      baz=122
L27K                               S       S       20 07 33.3  +5.7
      baz=122
FRTB  Fartura          57.90 131  eP       P       19 59 36.4  +0.8
I29M  Ogilvie Camp,    57.92 340   P       P       19 59 35.8  +0.7
      baz=127,SNR=70
I29M                               S       S       20 07 29.4  +1.6
      baz=127
BMRM  Bremner River    57.98 333   P       P       19 59 37.7  +2.1
      baz=118,SNR=14
BMRM                               S       S       20 07 35.0  +6.2
      baz=118
LC01  Cunco            58.00 160   P       P       19 59 36.4  +0.5
LC01                               IAmb    IAmb    20 00 01.9
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	comp=Z,721nm,1.1s						
M26K	Nabesna, AK	58.01	335	IAmb	IAmb	20 00 02.8	
	comp=Z,616nm,1.1s						
M26K	Nabesna, AK	58.01	335	P	P	19 59 38.0	+2.3
	baz=120						
M26K				S	S	20 07 36.3	+7.1
	baz=120						
Q23K	Middleton Isla	58.07	331	P	P	19 59 38.9	+2.8
	baz=115						
N25K	Chitina, Valde	58.28	334	IAmb	IAmb	20 00 03.0	
	comp=Z,489nm,1.0s						
N25K	Chitina, Valde	58.28	334	P	P	19 59 40.1	+2.5
	baz=118,SNR=20						
N25K				S	S	20 07 39.0	+6.2
	baz=118						
EYAK	Cordova Ski Ar	58.29	333	P	P	19 59 39.9	+2.2
	baz=116,SNR=7.6						
SFJD	Kangerlussuaq	58.29	18	P	P	19 59 37.4	-0.1
	comp=Z,36nm,0.7s,baz=215,slow=4.3,SNR=16						
SFJD				pP	pP	19 59 58.8	-1.7
	comp=Z,67nm,0.8s,baz=192,slow=5.5,SNR=6.3						
SFJD	Kangerlussuaq	58.29	18	*i* P	P	19 59 36.8	-0.8
SFJD				IAmb	IAmb	19 59 39.3	
	comp=Z,18nm,0.7s						
SFJD	Kangerlussuaq	58.29	18	⇑P	P	19 59 36.7	-0.8
SFJD	Kangerlussuaq	58.29	18	P	P	19 59 36.1	-1.4
INK	Inuvik	58.37	344	P	P	19 59 39.0	+0.9
	comp=Z,485nm,0.8s,baz=120,slow=7.6,SNR=632						
INK				pP	pP	19 59 59.6	-1.6
	comp=Z,594nm,1.0s,baz=131,slow=8.9,SNR=9.9						
INK				S	S	20 07 32.9	-0.5
	comp=Z,6.4nm,1.2s,baz=313,slow=29,SNR=1.0						
INK				LR	LR	20 29 10.9	
	comp=Z,17µm,18.1s,baz=128,slow=40						
INK				P4KPbc		20 36 45.2	
	comp=Z,3.8nm,1.1s,baz=127,slow=5.1,SNR=3.5						
INK	Inuvik	58.37	344	⇑P	P	19 59 38.9	+0.9
INK	Inuvik	58.37	344	P	P	19 59 39.0	+0.9
	baz=133,SNR=563						
INK				S	S	20 07 34.7	+1.3
	baz=133						
L26K	Log Cabin Wild	58.46	336	IAmb	IAmb	20 00 06.5	
	comp=Z,547nm,1.1s						
L26K	Log Cabin Wild	58.46	336	P	P	19 59 40.4	+1.5
	baz=120,SNR=29						
L26K				S	S	20 07 41.3	+6.4
	baz=120						
LR03	Panguipulli	58.52	161	IAmb	IAmb	19 59 43.4	
	comp=Z,283nm,0.8s						
MC01	Montes Claros	58.54	121	*e*P	P	19 59 41.0	+0.9
ITAB	Concordia	58.60	136	*e*P	P	19 59 41.2	+0.9
KLU	Klutina	58.79	334	P	P	19 59 43.1	+1.9
	baz=117,SNR=35						
KLU				S	S	20 07 44.1	+4.8
	baz=117						
RCLB	Rio Claro- Sao	58.84	129	*e*P	P	19 59 43.3	+1.2
HARP	HAARP	58.89	335	P	P	19 59 43.4	+1.6
	baz=118,SNR=21						
HARP				S	S	20 07 46.7	+6.3
	baz=118						
RES	Resolute Bay	58.94	360	P	P	19 59 41.7	-0.3
	comp=Z,342nm,0.7s,baz=184,slow=10.0,SNR=364						
RES				S	S	20 07 38.7	-2.0
	comp=Z,9.3nm,1.0s,baz=47,slow=21,SNR=1.7						
RES				ScS	ScS	20 09 21.9	-0.9
	comp=Z,5.8nm,0.9s,baz=74,slow=21,SNR=1.3						
RES				LR	LR	20 28 16.4	
	comp=Z,5µm,18.7s,baz=185,slow=39						
RES				PKP2bc		20 29 29.2	
	comp=Z,6.4nm,1.0s,baz=349,slow=6.8,SNR=4.1						
RES	Resolute Bay	58.94	360	⇑P	P	19 59 41.6	-0.3
RES	Resolute Bay	58.94	360	IAmb	IAmb	19 59 44.1	
	comp=Z,319nm,0.7s						
POHA	Pohakuloa	58.97	284	⇓P	P	19 59 43.8	+0.4
POHA	Pohakuloa	58.97	284	P	P	19 59 43.4	0.0
POHA	Pohakuloa	58.97	284	P	P	19 59 43.8	+0.4
GLI	Glacier Island	59.03	333	IAmb	IAmb	20 00 11.0	
	comp=Z,646nm,1.4s						
GLI	Glacier Island	59.03	333	P	P	19 59 44.2	+1.4
	baz=115,SNR=7.1						
GLI				S	S	20 07 48.0	+5.7
	baz=115						
MLOA	Mauna Loa Obse	59.04	284	IAmb	IAmb	20 00 11.9	
	comp=Z,643nm,1.1s						
M24K	Tolsona, Glenn	59.17	334	P	P	19 59 46.2	+2.4
	baz=117,SNR=14						
M24K				S	S	20 07 48.7	+4.4
	baz=117						
SCRK	Sand Creek	59.19	337	IAmb	IAmb	20 00 11.0	
	comp=Z,568nm,1.3s						
SCRK	Sand Creek	59.19	337	P	P	19 59 45.8	+1.8
	baz=120,SNR=36						
SCRK				S	S	20 07 49.1	+4.6
	baz=120						
A36M	Sachs Harbour	59.27	349	IAmb	IAmb	19 59 46.5	
	comp=Z,225nm,0.8s						
A36M	Sachs Harbour	59.27	349	P	P	19 59 44.5	+0.2
	baz=144,SNR=104						
A36M				S	S	20 07 45.3	+0.4
	baz=144						
PAX	Paxson	59.28	335	IAmb	IAmb	20 00 11.2	
	comp=Z,445nm,1.0s						
PAX	Paxson	59.28	335	P	P	19 59 46.0	+1.3
	baz=118,SNR=62						
PAX				S	S	20 07 50.3	+4.6
	baz=118						
J26L	Joseph Creek	59.30	337	P	P	19 59 46.0	+1.3
	baz=121						
J26L				S	S	20 07 51.2	+5.4
	baz=121						
DY2G	Dye2	59.35	20	*i* P	P	19 59 45.3	+0.1
DY2G				IAmb	IAmb	19 59 47.0	
	comp=Z,49nm,0.5s						
RIDG	Independent Ri	59.41	336	P	P	19 59 46.9	+1.5
	baz=119,SNR=43						
RIDG				S	S	20 07 52.5	+5.3
	baz=119						
SCM	Sheep Creek Mo	59.54	334	P	P	19 59 47.8	+1.4
	baz=116,SNR=13						
SCM				S	S	20 07 53.9	+4.9
	baz=116						
PWL	Port Wells	59.57	332	IAmb	IAmb	20 00 16.0	
	comp=Z,714nm,1.4s						
PWL	Port Wells	59.57	332	P	P	19 59 47.3	+0.8
	baz=114,SNR=11						
PWL				S	S	20 07 53.6	+4.3
	baz=114						
DIAM	Diamantina, MG	59.58	123	*e*P	P	19 59 48.4	+1.0
ILULI	Ilulissat	59.60	16	*i* P	P	19 59 46.1	-0.5
ILULI				IAmb	IAmb	20 00 12.2	
	comp=Z,55nm,0.8s						
VAO	Valinhos	59.60	129	*e*P	P	19 59 48.6	+1.1
SPB	Sao Paulo	59.61	130	*e*P	P	19 59 48.4	+1.1
SPB	Sao Paulo	59.61	130	IAmb	IAmb	20 00 12.8	
	comp=Z,398nm,1.0s						
LL04	Puerto Octay	59.66	162	IAmb	IAmb	19 59 50.9	
	comp=Z,343nm,0.9s						
KHLH	Kahului Airpor	59.67	285	IAmb	IAmb	20 00 14.1	
	comp=Z,708nm,1.3s						
SEW	Seward	59.78	331	IAmb	IAmb	20 00 12.9	
	comp=Z,571nm,1.0s						
SEW	Seward	59.78	331	P	P	19 59 49.2	+1.3
	baz=112,SNR=11						
SEW				S	S	20 07 55.0	+3.1
	baz=112						
LL05	Los Muermos	59.80	163	IAmb	IAmb	19 59 56.0	
	comp=Z,381nm,1.0s						
KNK	Knik Glacier	59.85	333	P	P	19 59 49.3	+0.8
	baz=114,SNR=14						
KNK				S	S	20 07 56.9	+4.0
	baz=114						
LL03	Petrohue	59.87	162	IAmb	IAmb	19 59 54.1	
	comp=Z,411nm,0.8s						
CPSB	Cacapava Do Su	59.92	140	*e*P	P	19 59 50.3	+1.0
SML	Sawmill	59.96	333	P	P	19 59 50.3	+1.1
	baz=114,SNR=16						
SML				S	S	20 07 57.9	+3.5
	baz=114						
WAT6	Susitna Watana	60.04	334	P	P	19 59 51.0	+1.1
	baz=116,SNR=46						
WAT6				S	S	20 07 58.7	+3.1
	baz=116						
O22K	Cooper Landing	60.05	332	P	P	19 59 50.9	+1.1
	baz=112						
O22K				S	S	20 07 59.3	+3.9
	baz=112						
PLCA	Paso Flores	60.09	160	P	P	19 59 51.5	+1.1
	comp=Z,332nm,0.9s,baz=335,slow=8.2,SNR=216						
PLCA				pP	pP	20 00 14.0	+0.7
	comp=Z,342nm,1.0s,baz=335,slow=7.1,SNR=6.5						
PLCA				S	S	20 07 57.6	+1.1
	comp=Z,3.1nm,0.9s,baz=309,slow=21,SNR=1.6						
PLCA				LR	LR	20 21 47.5	
	comp=Z,8µm,18.1s,baz=340,slow=32						
PLCA				PKPPKP	P'P'df	20 29 13.3	+0.6
	comp=Z,1.9nm,0.9s,baz=117,slow=11,SNR=2.8						
PLCA				PKP2bc		20 29 25.9	
	comp=Z,11nm,1.0s,baz=86,slow=3.3,SNR=6.6						
PLCA	Paso Flores	60.09	160	⇓P	P	19 59 51.5	+1.1
PLCA	Paso Flores	60.09	160	*e*P	P	19 59 51.8	+1.4
PLCA	Paso Flores	60.09	160	IAmb	IAmb	19 59 54.7	
	comp=Z,513nm,1.0s						
DHY	Denali Highway	60.10	335	IAmb	IAmb	20 00 17.7	
	comp=Z,324nm,1.2s						
DHY	Denali Highway	60.10	335	P	P	19 59 51.3	+1.0
	baz=116,SNR=21						
DHY				S	S	20 07 58.3	+2.0
	baz=116						
PET01	Itanhaem-SP	60.14	131	*e*P	P	19 59 52.2	+1.2
BSCB	Bom Sucesso	60.14	126	*e*P	P	19 59 52.5	+1.4
PMR	Palmer	60.22	333	P	P	19 59 52.3	+1.4
	baz=114,SNR=25						
PMR				S	S	20 08 01.3	+3.8
	baz=114						
BRSE	Bradley Lake S	60.25	331	P	P	19 59 52.8	+1.6
	baz=111,SNR=7.2						
BRSE				S	S	20 08 02.9	+4.8
	baz=111						
RC01	Rabbit Creek A	60.29	332	P	P	19 59 52.6	+1.2
	baz=113,SNR=24						
RC01				S	S	20 08 02.6	+4.1
	baz=113						
WAT1	Susitna Watana	60.48	334	P	P	19 59 53.7	+0.9
	baz=115						
WAT1				S	S	20 08 04.5	+3.5
	baz=115						
KDAK	Kodiak Island	60.49	328	P	P	19 59 52.6	-0.2
	comp=Z,78nm,0.8s,baz=115,slow=2.3,SNR=18						
KDAK				pP	pP	20 00 16.1	+0.2
	comp=Z,610nm,1.2s,baz=147,slow=2.7,SNR=15						
KDAK	Kodiak Island	60.49	328	P	P	19 59 53.2	+0.4
KDAK				pmax	pmax		
	comp=Z,1µm,1.4s						
KDAK	Kodiak Island	60.49	328	⇑P	P	19 59 54.2	+1.4
KDAK				⇓p	pP	20 00 16.6	+0.6
KDAK				⇑p	sP	20 00 17.1	-9.1
KDAK	Kodiak Island	60.49	328	P	P	19 59 53.2	+0.4
KDAK	Kodiak Island	60.49	328	P	P	19 59 53.7	+0.8
	baz=108						
PRP	Porcupine Dome	60.53	338	P	P	19 59 54.1	+0.9
	baz=119,SNR=54						
PRP				S	S	20 08 05.4	+3.6
	baz=119						
HDA	Harding Lake	60.54	336	P	P	19 59 53.9	+0.8
	baz=117						
HDA				S	S	20 08 04.9	+3.3
	baz=117						
HDA				S	S	20 08 04.9	+3.3
	baz=117						
HOM	Homer	60.65	330	P	P	19 59 55.1	+1.3
	baz=110						
HOM				S	S	20 08 08.9	+5.8
	baz=110						
NUUG	Nuugaatsiaq	60.67	14	*i* P	P	19 59 53.9	0.0
NUUG				IAmb	IAmb	19 59 56.9	
	comp=Z,88nm,0.7s						
ILAR	Eielson Array	60.68	337	P	P	19 59 54.8	+0.7
	comp=Z,68nm,0.7s,baz=127,slow=5.3,SNR=320						
ILAR				pP	pP	20 00 16.2	-1.2
	comp=Z,241nm,1.1s,baz=127,slow=2.1,SNR=15						
ILAR				S	S	20 08 04.0	+0.6
	comp=Z,1.4nm,0.9s,baz=339,slow=2.0,SNR=2.1						
ILAR				LR	LR	20 27 32.3	
	comp=Z,8µm,21.3s,baz=126,slow=37						
ILAR				PKPPKP	P'P'df	20 29 07.0	-7.2
	comp=Z,4.4nm,0.8s,baz=313,slow=3.4,SNR=9.9						
OHAK	Old Harbor	60.68	327	P	P	19 59 55.7	+1.5
	baz=107,SNR=9.8						
M22K	Willow	60.72	333	P	P	19 59 55.4	+1.1
	baz=113,SNR=13						
M22K				S	S	20 08 07.2	+3.3
	baz=113						
PLTB	Pedras Altas	60.77	141	*e*P	P	19 59 56.2	+1.1
PLTB	Pedras Altas	60.77	141	IAmb	IAmb	20 00 00.9	
	comp=Z,492nm,1.1s						
GDU01	Guandu, BA	60.79	116	*e*P	P	19 59 55.7	+0.1
PARB	Paraibuna	60.81	129	*e*P	P	19 59 57.0	+1.4
CAPN	Captain Cook N	60.81	332	P	P	19 59 55.6	+0.7
	baz=111,SNR=5.9						
CNLB	Canela	60.82	137	*e*P	P	19 59 56.5	+0.9
UPNV	Upernavik	60.95	12	*i* P	P	19 59 54.1	-1.6
UPNV				IAmb	IAmb	20 00 00.8	
	comp=Z,30nm,0.8s						
SII	Sitkinak Islan	60.96	326	P	P	19 59 57.2	+1.1
	baz=106,SNR=7.9						
SII	Sitkinak Islan	60.96	326	P	P	19 59 59.7	+3.6
CCB	Clear Creek Bu	60.98	336	IAmb	IAmb	20 00 23.3	
	comp=Z,406nm,1.3s						
MCK	McKinley	61.02	335	P	P	19 59 57.6	+1.1
	baz=115,SNR=44						
MCK				S	S	20 08 10.9	+3.1
	baz=115						
CUT	Chulitna	61.04	334	P	P	19 59 57.7	+1.3
	baz=113,SNR=28						
CUT				S	S	20 08 09.8	+1.9
	baz=113						
POKR	Poker Plat Res	61.05	337	IAmb	IAmb	20 00 24.2	
	comp=Z,434nm,1.1s						
POKR	Poker Plat Res	61.05	337	P	P	19 59 57.7	+1.2
	baz=117,SNR=52						
POKR				S	S	20 08 11.0	+3.0
	baz=117						
KIP	Kipapa	61.09	286	P	P	19 59 57.8	+0.2
KIP				pmax	pmax		
	comp=Z,1µm,1.4s						
KIP	Kipapa	61.09	286	P	P	19 59 57.8	+0.2
KIP	Kipapa	61.09	286	P	P	19 59 58.5	+1.0
KIP	Kipapa	61.09	286	P	P	19 59 58.7	+1.2
COLA	College	61.09	337*c*	*i*P	P	19 59 57.5	+0.7
COLA				pmax	pmax		
	comp=Z,149nm,0.9s						
COLA	College	61.09	337	⇑P	P	19 59 57.4	+0.7
COLA	College	61.09	337	P	P	19 59 57.2	+0.4
COLA				IAmb	IAmb	20 00 23.4	
	comp=Z,456nm,1.1s						
COLA	College	61.09	337	P	P	19 59 57.5	+0.7
	baz=116						
COLA				S	S	20 08 10.3	+1.7
	baz=116						
TCOL	CIGO, UAF Yank	61.10	337	IAmb	IAmb	20 00 23.4	
	comp=Z,459nm,1.1s						
TCOL	CIGO, UAF Yank	61.10	337	P	P	19 59 57.5	+0.7
	baz=116,SNR=36						
TCOL				S	S	20 08 10.8	+2.2
	baz=116						
O20K	Slope Mountain	61.26	331	P	P	19 59 58.7	+0.6
	baz=109,SNR=9.2						
O20K				S	S	20 08 15.7	+4.7
	baz=109						
MDM	Murphy Dome	61.28	337	IAmb	IAmb	20 00 24.1	
	comp=Z,439nm,1.4s						
Q19K	Cape Douglas,	61.38	329	P	P	20 00 00.1	+1.2
	baz=108						
Q19K				S	S	20 08 17.3	+4.8
	baz=108						
P19K	Oil Pt	61.41	330	P	P	20 00 00.0	+0.9
	baz=109						
P19K				S	S	20 08 17.5	+4.7
	baz=109						
ISOG	Isortoq, Green	61.44	23	*i* P	P	19 59 59.1	0.0
ISOG				IAmb	IAmb	20 00 00.7	
	comp=Z,55nm,0.5s						
ISOG	Isortoq, Green	61.44	23	⇑P	P	19 59 59.1	0.0
NEA2	Nenana	61.44	336	IAmb	IAmb	20 00 26.1	
	comp=Z,533nm,1.2s						
NEA2	Nenana	61.44	336	P	P	20 00 00.0	+0.8
	baz=115,SNR=40						
NEA2				S	S	20 08 15.1	+2.0
	baz=115						
SPCR	Spurr Chakacha	61.45	332	P	P	19 59 59.5	+0.1
	baz=110						
TER01	Tubaro-SC	61.46	136	*e*P	P	20 00 00.9	+1.1
TRF	Thorofare Moun	61.46	335	P	P	20 00 00.7	+1.1
	baz=113,SNR=83						
TRF				S	S	20 08 17.4	+3.7
	baz=113						
ILSW	Iliamna Southw	61.47	330	IAmb	IAmb	20 00 24.9	
	comp=Z,812nm,1.2s						
CHIR	Chirikof Islan	61.54	325	P	P	20 00 00.7	+0.7
	baz=104,SNR=6.8						
H24K	Noodor Dome	61.54	338	IAmb	IAmb	20 00 27.0	
	comp=Z,669nm,1.1s						
H24K	Noodor Dome	61.54	338	P	P	20 00 01.2	+1.3
	baz=117						
H24K				S	S	20 08 17.7	+3.3
	baz=117						
CMC01	Camacan, BA	61.59	118	*e*P	P	20 00 01.6	+0.6
VAH	Vaihoa	61.72	243	⇓*e*P	P	20 00 02.4	+0.6
	comp=Z,263nm,1.3s						
VAH				*e*pP	pP	20 00 25.8	+1.0
	comp=Z,2µm,1.4s						
KTH	Kantishna Hill	61.76	335	IAmb	IAmb	20 00 26.0	
	comp=Z,814nm,1.2s						
I23K	Minto, Yukon-K	61.79	337	P	P	20 00 02.6	+1.1
	baz=115,SNR=99						
I23K				S	S	20 08 20.1	+2.8
	baz=115						
MAN01	Angra dos Reis	61.80	127	*e*P	P	20 00 02.9	+0.7
SJMB	Sao Joao De Ma	61.81	122	*e*P	P	20 00 03.4	+1.0
PMOR	Pomariorio Ree	61.84	243	⇓*e*P	P	20 00 02.8	+0.2
	comp=Z,180nm,1.0s						
PMOR				*e*pP	pP	20 00 26.8	+1.2
	comp=Z,1µm,1.2s						
PMOR	Pomariorio Ree	61.84	243	*e*T	T	21 05 56.2	
	comp=Z,18nm,0.2s						
VAS01	Vassouras-RJ	61.88	126	*e*P	P	20 00 04.2	+1.4
GUA01	Guaratinga, BA	61.92	119	*e*P	P	20 00 04.0	+0.9
ANGG	Ammassalik, Gr	61.97	23	*i* P	P	20 00 02.9	+0.3
ANGG				IAmb	IAmb	20 00 05.1	
	comp=Z,37nm,0.5s						
ANGG	Ammassalik, Gr	61.97	23	⇓P	P	20 00 02.5	-0.1
ANGG	Ammassalik, Gr	61.97	23	IAmb	IAmb	20 00 42.1	
	comp=Z,327nm,1.2s						
BPAW	Bear Paw Mtn.	62.00	335	P	P	20 00 03.9	+0.9
	baz=113,SNR=44						
BPAW				S	S	20 08 22.6	+2.5
	baz=113						
PPLA	Purkeypile	62.05	334	P	P	20 00 04.2	+0.7
	baz=111,SNR=15						
PPLA				S	S	20 08 23.2	+2.2
	baz=111						
O19K	Port Alsworth	62.10	330	P	P	20 00 04.4	+0.7
	baz=108,SNR=23						
O19K				S	S	20 08 25.1	+3.8
	baz=108						
TULEG	Thule	62.14	6	*i* P	P	20 00 03.4	-0.2
TULEG				IAmb	IAmb	20 00 06.0	
	comp=Z,38nm,0.9s						
TULEG	Thule	62.14	6	⇑P	P	20 00 03.7	0.0
TULEG	Thule	62.14	6	IAmb	IAmb	20 00 56.0	
	comp=Z,331nm,1.3s						
BSFB	Barra de Sao F	62.15	122	*e*P	P	20 00 05.4	+0.8
CAST	Castle Rocks	62.19	334	P	P	20 00 04.9	+0.6
	baz=112,SNR=70						
CAST				S	S	20 08 23.9	+1.3
	baz=112						
MLY	Manley	62.27	336	IAmb	IAmb	20 00 29.0	
	comp=Z,572nm,1.0s						
MLY	Manley	62.27	336	P	P	20 00 05.9	+1.1
	baz=114,SNR=141						
MLY				S	S	20 08 25.6	+1.9
	baz=114						
P18K	Big Mountain,	62.30	329	IAmb	IAmb	20 00 31.0	
	comp=Z,925nm,1.3s						
P18K	Big Mountain,	62.30	329	P	P	20 00 05.8	+0.7
	baz=107,SNR=8.5						
P18K				S	S	20 08 27.3	+3.2
	baz=107						
N19K	Bonanza Creek	62.37	331	P	P	20 00 06.4	+0.9
	baz=108						
N19K				S	S	20 08 28.3	+3.3
	baz=108						
CHUM	Lake Minchumin	62.46	335	P	P	20 00 06.5	+0.5
	baz=112,SNR=23						
CHUM				S	S	20 08 26.8	+0.9
	baz=112						
KEKH	Kekaha	62.59	287	IAmb	IAmb	20 00 36.6	
	comp=Z,723nm,1.1s						
DUB01	Friburgo-RJ	62.60	126	*e*P	P	20 00 08.9	+1.2
L20K	Farewell, AK	62.63	333	P	P	20 00 07.2	0.0
	baz=109						
L20K				S	S	20 08 30.3	+2.2
	baz=109						
M19K	Big River Lodg	62.67	332	IAmb	IAmb	20 00 32.5	
	comp=Z,624nm,1.1s						
M19K	Big River Lodg	62.67	332	P	P	20 00 08.1	+0.6
	baz=109,SNR=40						
M19K				S	S	20 08 31.1	+2.6
	baz=109						
RIB01	Linhares ES	62.76	122	*e*P	P	20 00 09.9	+1.2
I21K	Tanana	62.82	336	P	P	20 00 09.3	+0.9
	baz=112,SNR=33						
I21K				S	S	20 08 30.5	+0.2
	baz=112						
ICESG	Greenland Ices	62.88	19	*i* P	P	20 00 09.5	+0.3
ICESG				IAmb	IAmb	20 00 13.4	
	comp=Z,74nm,0.6s						
ICESG	Greenland Ices	62.88	19	⇑P	P	20 00 08.5	-0.6
SVW2	Sparrevohn	62.96	331	IAmb	IAmb	20 00 33.8	
	comp=Z,365nm,1.0s						
COLD	Coldfoot	62.99	339	IAmb	IAmb	20 00 34.5	
	comp=Z,288nm,1.0s						
COLD	Coldfoot	62.99	339	P	P	20 00 11.2	+1.6
	baz=115,SNR=62						
COLD				S	S	20 08 35.0	+2.5
	baz=115						
K20K	Telida	63.01	334	P	P	20 00 10.0	+0.3
	baz=110						
K20K				S	S	20 08 34.2	+1.4
	baz=110						
CAM01	Campos-RJ	63.03	125	*e*P	P	20 00 11.9	+1.5
ALF01	Guarapari-ES	63.15	123	*e*P	P	20 00 12.8	+1.5
CHGN	Chignik	63.18	326	IAmb	IAmb	20 00 35.9	
	comp=Z,801nm,1.1s						
CHGN	Chignik	63.18	326	P	P	20 00 11.6	+0.7
	baz=102,SNR=8.3						
CHGN				S	S	20 08 36.9	+1.9
	baz=102						
H21K	Melozitna Rive	63.32	336	IAmb	IAmb	20 00 35.9	
	comp=Z,553nm,1.4s						
H21K	Melozitna Rive	63.32	336	P	P	20 00 11.7	0.0
	baz=112						
H21K				S	S	20 08 37.4	+0.8
	baz=112						
J20K	Nowinta River	63.32	335	IAmb	IAmb	20 00 36.2	
	comp=Z,661nm,1.2s						
J20K	Nowinta River	63.32	335	P	P	20 00 12.1	+0.4
	baz=110						
J20K				S	S	20 08 38.2	+1.6
	baz=110						
MEH	Mehetia	63.33	240	⇓*e*P	P	20 00 12.9	+0.4
MEH				*e*pP	pP	20 00 36.5	+0.9
	comp=Z,395nm,1.1s						
MEH	Mehetia	63.33	240	*e*T	T	21 07 53.5	
	comp=Z,25nm,0.2s						
TOLK	Toolik Lake Re	63.40	340	IAmb	IAmb	20 00 39.2	
	comp=Z,456nm,1.1s						
TOLK	Toolik Lake Re	63.40	340	P	P	20 00 13.5	+1.3
	baz=117,SNR=94						
TOLK				S	S	20 08 41.0	+3.4
	baz=117						
CHNA	Chernabura Isl	63.54	324	P	P	20 00 14.1	+0.8
	baz=100						
TTA	Tatalina	63.70	333	⇑P	P	20 00 14.6	+0.3
TTA	Tatalina	63.70	333	IAmb	IAmb	20 00 39.2	
	comp=Z,727nm,1.1s						
TTA	Tatalina	63.70	333	P	P	20 00 14.9	+0.5
	baz=108,SNR=69						
TTA				S	S	20 08 42.4	+0.8
	baz=108						
COYC	Coyhaique	64.04	163	IAmb	IAmb	20 00 21.1	
	comp=Z,676nm,1.1s						
SDPT	Sand Point	64.14	324	IAmb	IAmb	20 00 45.5	
	comp=Z,977nm,1.4s						
SDPT	Sand Point	64.14	324	P	P	20 00 18.6	+1.4
	baz=100						
SDPT				S	S	20 08 47.3	+0.4
	baz=100						
TIAR	Tiarei	64.26	241	*e*T	T	21 09 06.0	
	comp=Z,1.9nm,0.2s						
XMAS	Kiritimati	64.43	265	⇑P	P	20 00 20.8	+0.9
XMAS	Kiritimati	64.43	265	P	P	20 00 20.4	+0.5

XMAS				IAmb	IAmb	20 00 44.9	
	comp=Z,886nm,1.2s						
XMAS	**Kiritimati**	64.43	265	P	P	20 00 20.9	+1.1
PPT	**Papeete**	64.45	241	P	P	20 00 20.4	+0.5
	comp=Z,32nm,0.6s,baz=71,slow=9.3,SNR=5.9						
PPT				pP	pP	20 00 44.7	+1.6
	comp=Z,154nm,0.9s,baz=141,slow=4.8,SNR=5.9						
PPTF	**Pamatai, Papee**	64.46	241	P	P	20 00 19.6	-0.4
PPTF				IAmb	IAmb	20 00 47.1	
	comp=Z,751nm,1.5s						
PPTF	**Pamatai, Papee**	64.46	241	P	P	20 00 20.5	+0.5
PPT2	**Papeete2**	64.47	241	eP	P	20 00 20.2	+0.2
	comp=Z,755nm,2.6s						
PPT2				epP	pP	20 00 44.2	+1.0
	comp=Z,314nm,1.4s						
PPT2				eS	S	20 08 49.0	-3.2
	comp=Z,10µm,23.8s						
PPT2	**Papeete2**	64.47	241	eLR	LR	20 19 26.8	
	comp=Z,72µm,29.5s,baz=54						
PAE	**Paea**	64.50	241	⇓eP	P	20 00 20.5	+0.3
PAE				epP	pP	20 00 44.1	+0.8
	comp=Z,302nm,1.3s						
GCSA	**Galena City Sc**	64.62	335	P	P	20 00 21.1	+0.9
	baz=108						
GCSA				S	S	20 08 53.6	+0.9
	baz=108						
SUMG	**Summit**	64.94	16	i P	P	20 00 22.8	+0.1
SUMG				IAmb	IAmb	20 00 25.1	
	comp=Z,61nm,0.5s						
SUMG	**Summit**	64.94	16	⇑P	P	20 00 22.2	-0.5
SUMG	**Summit**	64.94	16	IAmb	IAmb	20 01 24.0	
	comp=Z,447nm,1.4s						
NEEM	**North Greenlan**	65.24	9	i P	P	20 00 25.5	+1.1
NEEM				IAmb	IAmb	20 00 27.7	
	comp=Z,219nm,0.8s						
SOEG	**Soedalen**	65.25	21	i P	P	20 00 24.8	+0.6
SOEG				IAmb	IAmb	20 00 40.1	
	comp=Z,24nm,0.7s						
FALS	**False Pass**	65.73	323	IAmb	IAmb	20 00 30.8	
	comp=Z,673nm,0.8s						
FALS	**False Pass**	65.73	323	P	P	20 00 28.0	+0.5
	baz=97,SNR=9.3						
FALS				S	S	20 09 08.1	+1.5
	baz=97						
FALS	**False Pass**	65.73	323	P	P	20 00 28.1	+0.5
A21K	**Barrow**	66.70	342	IAmb	IAmb	20 01 24.2	
	comp=Z,684nm,1.3s						
A21K	**Barrow**	66.70	342	P	P	20 00 34.6	+1.1
	baz=111,SNR=19						
A21K				S	S	20 09 20.0	+2.3
	baz=111						
AKUT	**Akutan**	67.03	322	⇑P	P	20 00 37.5	+1.7
TBI	**Tubuai**	67.13	236	⇓eP	P	20 00 36.9	-0.1
	comp=Z,119nm,0.9s						
TBI				epP	pP	20 01 02.0	+1.7
	comp=Z,953nm,1.2s						
TBI				eS	S	20 09 22.6	-1.8
	comp=Z,10µm,29.8s						
TBI	**Tubuai**	67.13	236	eLR	LR	20 20 52.4	
	comp=Z,50µm,31.5s,baz=55						
TBI	**Tubuai**	67.13	236	eT	T	21 12 37.3	
	comp=Z,26nm,0.3s						
UNV	**Unalaska Valle**	67.43	322	IAmb	IAmb	20 01 04.9	
	comp=Z,1µm,1.2s						
UNV	**Unalaska Valle**	67.43	322	P	P	20 00 39.2	+0.8
	baz=94,SNR=23						
UNV				S	S	20 09 28.4	+1.3
	baz=94						
RDOG	**Red Dog Mine**	67.85	338	P	P	20 00 50.0	+9.2
	baz=103,SNR=18						
RDOG				S	S	20 09 41.5	+10
	baz=103						
BORG	**Borgarnes**	68.26	26	P	P	20 00 44.5	+1.1
	comp=Z,18nm,0.6s,baz=309,slow=4.2,SNR=9.5						
NIKH	**Nikolski High**	68.79	321	IAmb	IAmb	20 00 49.9	
	comp=Z,338nm,0.8s						
NIKH	**Nikolski High**	68.79	321	P	P	20 00 47.5	+0.5
	baz=92,SNR=6.6						
NIKH				S	S	20 09 44.3	+0.9
	baz=92						
SCO	**Scoresbysund**	69.10	20	i P	P	20 00 49.0	+0.5
SCO				IAmb	IAmb	20 00 50.9	
	comp=Z,35nm,0.7s						
SCO	**Scoresbysund**	69.10	20	⇓P	P	20 00 49.7	+1.2
SCO				⇓P	P	20 00 49.7	+1.2
TNA	**Tin City**	69.35	335	⇑P	P	20 00 51.5	+1.4
TNA				⇑P	pP	20 01 14.2	+0.2
TNA				⇓p	PcP	20 01 15.4	+2.3
TNA	**Tin City**	69.35	335	IAmb	IAmb	20 01 16.4	
	comp=Z,690nm,1.2s						
TNA	**Tin City**	69.35	335	P	P	20 00 51.6	+1.5
	baz=97,SNR=76						
TNA				S	S	20 09 54.6	+5.1
	baz=97						
SPIA	**Saint Paul Isl**	69.75	326	IAmb	IAmb	20 01 18.2	
	comp=Z,659nm,1.0s						
SPIA	**Saint Paul Isl**	69.75	326	P	P	20 00 54.0	+1.3
	baz=92						
SPIA				S	S	20 09 58.4	+4.0
	baz=92						
SPIA	**Saint Paul Isl**	69.75	326	P	P	20 00 55.6	+2.9
PMOZ	**Porto Moniz, M**	70.24	60	eP	P	20 00 55.5	-0.9
	comp=Z,150nm,2.1s						
PMOZ				epP	pP	20 01 21.8	+1.5
PMOZ				eS	S	20 10 05.9	+4.6
PMOZ	**Porto Moniz, M**	70.24	60	eLR	LR	20 22 14.9	
	comp=Z,10µm,24.0s						
DBG	**Daneborg**	70.42	16	i P	P	20 00 56.7	+0.1
DBG				IAmb	IAmb	20 00 59.4	
	comp=Z,55nm,0.8s						
PMAR	**Madeira**	70.49	60	eP	P	20 00 57.7	-0.3
	comp=Z,132nm,1.5s						
GAMB	**Gambell**	70.80	333	IAmb	IAmb	20 01 25.4	
	comp=Z,477nm,1.3s						
GAMB	**Gambell**	70.80	333	P	P	20 01 00.4	+1.4
	baz=93,SNR=20						
GAMB				S	S	20 10 11.3	+4.9
	baz=93						
MG04	**Isla Riesco**	70.90	166	P	P	20 01 00.3	+0.6
MG04				IAmb	IAmb	20 01 05.3	
	comp=Z,479nm,1.1s						
PMPST	**Porto Santo, M**	70.94	60	eP	P	20 00 59.3	-1.2
	comp=Z,218nm,1.7s						
PMPST				epP	pP	20 01 26.1	+1.7
GO10	**Punta Arenas**	71.29	166	⇓P	P	20 01 04.5	+2.3
GO10				⇑P	P	20 01 04.9	+2.8
GO10	**Punta Arenas**	71.29	166	IAmb	IAmb	20 01 07.7	
	comp=Z,480nm,0.9s						
DAG	**Danmarks Havn**	71.30	14	i P	P	20 01 01.2	-0.6
DAG				IAmb	IAmb	20 01 03.7	
	comp=Z,208nm,0.8s						
DAG	**Danmarks Havn**	71.30	14	⇑P	P	20 01 01.4	-0.5
MG02	**Cerro Sombrero**	71.39	165	IAmb	IAmb	20 01 07.4	
	comp=Z,599nm,1.0s						
MACI	**Morro de la Ar**	71.41	65	P	P	20 01 02.6	-1.1
ATKA	**Atka Island**	72.06	320	IAmb	IAmb	20 01 50.6	
	comp=Z,417nm,1.2s						
ATKA	**Atka Island**	72.06	320	P	P	20 01 08.1	+1.3
NOR	**Nord**	72.59	9	i P	P	20 01 09.3	-0.3
NOR				IAmb	IAmb	20 01 11.8	
	comp=Z,260nm,0.7s						
JMIC	**Jan Mayen**	73.58	20	eP	P	20 01 17.7	+2.1
JMIC				eS	S	20 10 38.3	+0.3
JMIC				IVMs_BB	IVMs_BB	20 32 58.9	
	comp=Z,11µm,4.9s						
ADK	**Adak**	73.61	320	P	P	20 01 16.1	+0.1
ADK				pmax	pmax		
	comp=Z,404nm,0.9s						
ADK	**Adak**	73.61	320	⇑P	P	20 01 16.2	+0.1
ADK	**Adak**	73.61	320	P	P	20 01 16.1	+0.1
ADK				IAmb	IAmb	20 01 19.0	
	comp=Z,404nm,0.8s						
ADK	**Adak**	73.61	320	P	P	20 01 16.3	+0.3
EFI	**East Falkland**	73.88	158	ceP	P	20 01 18.5	+1.1
EFI				pmax	pmax		
	comp=Z,292nm,1.0s						
EFI	**East Falkland**	73.88	158	P	P	20 01 18.1	+0.7
RAR	**Rarotonga**	74.70	242	P	P	20 01 23.4	+0.5
RAR				pmax	pmax		
	comp=Z,1µm,1.4s						
RAR	**Rarotonga**	74.70	242	⇓P	P	20 01 23.7	+0.9
RAR				⇓P	P	20 01 23.8	+0.9
RAR	**Rarotonga**	74.70	242	P	P	20 01 23.4	+0.5
RAR				IAmb	IAmb	20 01 51.0	
	comp=Z,1µm,1.4s						
RAR	**Rarotonga**	74.70	242	P	P	20 01 24.5	+1.7
KPL	**Plockton**	75.72	34	eP	P	20 01 26.8	-1.3
KPL				IAmb	IAmb	20 01 32.1	
	comp=Z,198nm,1.1s						
KPL				IAMs_20	IAMs_20	20 26 29.7	
	comp=Z,54µm,42.6s						
CLGH	**Cloghs, Cushen**	75.74	36	eP	P	20 01 27.0	-1.3
CLGH				IAMs_20	IAMs_20	20 29 23.8	
	comp=Z,25µm,27.4s						
PMAFR	**Mafra**	75.81	53	eP	P	20 01 27.4	-1.7
	comp=Z,138nm,2.0s						
PMAFR				epP	pP	20 01 53.6	+0.4
PMAFR	**Mafra**	75.81	53	ePP	PP	20 03 49.5	-31
DSB	**Dublin**	75.82	38	⇑P	P	20 01 30.3	+1.5
KAC	**Achnashellach**	75.89	34	eP	P	20 01 29.4	+0.3
PMST	**Lisbon--Monsan**	75.92	53	eP	P	20 01 26.3	-3.4
	comp=Z,134nm,1.2s						
PMST				epP	pP	20 01 55.3	+1.5
PMST	**Lisbon--Monsan**	75.92	53	ePP	PP	20 04 40.3	+19
LIS	**Lisbon**	75.95	53	eP	P	20 01 28.5	-1.3
LIS				eS	S	20 11 03.6	-2.0
LIS				IAMs_20	IAMs_20	20 27 37.5	
	comp=Z,29µm,23.4s						
LIS	**Lisbon**	75.95	53	eP	P	20 01 28.5	-1.3
LIS				eS	S	20 11 03.6	-2.0
LIS	**Lisbon**	75.95	53	eP	P	20 01 26.1	-3.7
LIS				epP	pP	20 01 55.6	+1.6
LAWE	**Loch Awe, Argy**	75.99	35	eP	P	20 01 31.0	+1.3
LAWE				IAmb	IAmb	20 01 33.7	
	comp=Z,114nm,1.2s						
LAWE				IAMs_20	IAMs_20	20 26 33.9	
	comp=Z,44µm,42.7s						
PSBE	**So Bento**	76.10	53	eP	P	20 01 28.9	-1.8
	comp=Z,99nm,2.6s						
PSBE				epP	pP	20 01 55.7	+0.8
PSBE	**So Bento**	76.10	53	ePP	PP	20 04 17.8	-4.7
PGAV	**Gavieira, Arco**	76.12	50	eP	P	20 01 29.1	-1.8
	comp=Z,106nm,1.9s						
PGAV				epP	pP	20 01 56.1	+1.1
PGAV				eS	S	20 11 02.3	-5.2
PGAV	**Gavieira, Arco**	76.12	50	eLQ	LQ	20 21 58.5	
PGAV				eLR	LR	20 25 23.7	
	comp=Z,17µm,22.0s						
PCAS	**Casmilo, Conde**	76.24	52	eP	P	20 01 29.9	-1.6
	comp=Z,97nm,1.0s						
PCAS				epP	pP	20 01 57.2	+1.5
COI	**Coimbra**	76.28	52	eP	P	20 01 30.0	-1.7
	comp=Z,106nm,1.5s						
COI				epP	pP	20 01 57.5	+1.6
COI	**Coimbra**	76.28	52	ePP	PP	20 04 23.0	-1.0
PCAB	**Cabril**	76.34	50	eP	P	20 01 30.9	-1.1
	comp=Z,89nm,1.5s						
PCAB				epP	pP	20 01 57.8	+1.6
PFVI	**Vila Bisbo**	76.46	55	eP	P	20 01 28.6	-4.2
	comp=Z,141nm,1.1s						
PFVI				epP	pP	20 01 58.7	+1.8
PTEO	**Sao Teotonio**	76.47	54	eP	P	20 01 29.4	-3.4
	comp=Z,106nm,2.0s						
PTEO				epP	pP	20 01 58.7	+1.7
PNCL	**Nicolau / Gran**	76.53	54	eP	P	20 01 30.9	-2.2
	comp=Z,43nm,2.5s						
PNCL				epP	pP	20 01 58.7	+1.4
PNCL	**Nicolau / Gran**	76.53	54	ePP	PP	20 04 44.9	+19
PGBU	**Glenifferbraes**	76.56	35	eP	P	20 01 31.9	-1.0
PGBU				IAmb	IAmb	20 01 35.5	
	comp=Z,104nm,0.9s						
PGBU				IAMs_20	IAMs_20	20 30 16.8	
	comp=Z,26µm,24.8s						
POLO	**Lamas de Olo**	76.56	50	eP	P	20 01 31.4	-2.0
	comp=Z,33nm,1.8s						
POLO				epP	pP	20 01 58.8	+1.2
GAL1	**Galloway**	76.57	36	eP	P	20 01 32.3	-0.7
GAL1				IAmb	IAmb	20 01 35.1	
	comp=Z,88nm,0.8s						
GAL1				IAMs_20	IAMs_20	20 29 33.3	
	comp=Z,26µm,27.5s						
MORF	**Marmelete**	76.57	55	eP	P	20 01 31.9	-1.5
MORF				eS	S	20 11 10.2	-2.3
MORF				IAMs_20	IAMs_20	20 27 12.3	
	comp=Z,35µm,36.3s						
MORF	**Marmelete**	76.57	55	eP	P	20 01 31.9	-1.5
MORF				eS	S	20 11 10.2	-2.3
MORF	**Marmelete**	76.57	55	eP	P	20 01 31.5	-1.9
	comp=Z,68nm,1.4s						
MORF				epP	pP	20 01 59.4	+1.8
MORF	**Marmelete**	76.57	55	ePP	PP	20 04 00.7	-26
PVIS	**Viseu**	76.59	51	eP	P	20 01 32.3	-1.2
	comp=Z,82nm,1.3s						
PVIS				epP	pP	20 01 59.0	+1.3
PVIS	**Viseu**	76.59	51	ePP	PP	20 04 46.3	+20
PMTG	**Montargil**	76.61	53	eP	P	20 01 31.3	-2.3
	comp=Z,64nm,2.0s						
PMTG				epP	pP	20 01 58.9	+1.2
PMTG	**Montargil**	76.61	53	ePP	PP	20 04 55.1	+28
PVRL	**Vila Real**	76.64	51	eP	P	20 01 32.4	-1.3
	comp=Z,73nm,1.5s						
PVRL				epP	pP	20 01 58.3	+0.4
PVRL	**Vila Real**	76.64	51	ePP	PP	20 04 46.4	+19
WIM	**Isle of Man**	76.69	37	eP	P	20 01 32.7	-1.0
SFNM	**Sidi Ifni**	76.72	63	P	P	20 01 34.0	-0.4
IOMK	**Kirk Michael**	76.74	37	eP	P	20 01 32.8	-1.2
IOMK				IAMs_20	IAMs_20	20 29 36.7	
	comp=Z,53µm,27.1s						
EAH	**EAH**	76.79	61	P	P	20 01 34.1	-0.6
NEWG	**New Galloway**	76.81	36	eP	P	20 01 32.9	-1.4
NEWG				IAmb	IAmb	20 01 38.4	
	comp=Z,118nm,1.0s						
NEWG				IAMs_20	IAMs_20	20 29 54.6	
	comp=Z,27µm,27.2s						
MESJ	**Messejana**	76.82	54	eP	P	20 01 33.2	-1.5
MESJ				eS	S	20 11 13.1	-2.0
MESJ				IAMs_20	IAMs_20	20 26 33.1	
	comp=Z,38µm,45.5s						
MESJ	**Messejana**	76.82	54	eP	P	20 01 33.2	-1.5
MESJ				eS	S	20 11 13.1	-2.0
MESJ	**Messejana**	76.82	54	eP	P	20 01 21.1	-14
MESJ				epP	pP	20 02 00.3	+1.4
MESJ	**Messejana**	76.82	54	ePP	PP	20 04 50.5	+22
EVO	**Evora**	76.86	53	eP	P	20 01 32.0	-3.0
	comp=Z,60nm,1.9s						
EVO				epP	pP	20 02 00.2	+1.0
EVO	**Evora**	76.86	53	ePP	PP	20 04 48.4	+20
YRC	**Rhoscolyn**	76.89	38	eP	P	20 01 34.7	-0.1
MTE	**Manteigas**	76.91	51	eP	P	20 01 31.3	-4.0
	comp=Z,110nm,1.0s						
MTE				epP	pP	20 02 00.4	+0.9
MTE	**Manteigas**	76.91	51	ePP	PP	20 04 48.0	+19
MTE				eS	S	20 11 20.3	+4.2
MTE	**Manteigas**	76.91	51	eLQ	LQ	20 22 28.2	
MTE				eLR	LR	20 25 49.0	
	comp=Z,14µm,22.0s						
WLF1	**Llynfaes**	76.99	38	eP	P	20 01 34.3	-1.0
WLF1				IAMs_20	IAMs_20	20 29 27.7	
	comp=Z,57µm,29.4s						
PCVE	**Castro Verde**	77.00	54	eP	P	20 01 34.3	-1.5
	comp=Z,64nm,1.3s						
PCVE				epP	pP	20 02 01.4	+1.5
WME	**Myndd Eilian**	77.03	38	eP	P	20 01 34.1	-1.5
PCBR	**Castelo Branco**	77.05	52	eP	P	20 01 34.1	-1.9
	comp=Z,87nm,1.1s						
PCBR				epP	pP	20 02 01.7	+1.5
PBEJ	**Beja**	77.06	54	eP	P	20 01 34.5	-1.6
	comp=Z,46nm,2.1s						
PBEJ				epP	pP	20 02 00.9	+0.6
PESTR	**Estremoz**	77.13	53	eP	P	20 01 34.8	-1.7
	comp=Z,54nm,1.7s						
PESTR				epP	pP	20 02 01.6	+0.9
PESTR	**Estremoz**	77.13	53	ePP	PP	20 04 26.1	-5.1
PBDV	**Barranco-do-Ve**	77.15	55	eP	P	20 01 35.5	-1.2
	comp=Z,109nm,1.8s						
PBDV				epP	pP	20 02 03.0	+2.2
MVO	**Moncorvo**	77.17	51	eP	P	20 01 34.9	-1.8
	comp=Z,89nm,1.1s						
MVO				epP	pP	20 02 02.3	+1.3
MVO	**Moncorvo**	77.17	51	ePP	PP	20 04 28.9	-2.6
MVO				eS	S	20 11 15.0	-3.9
MVO	**Moncorvo**	77.17	51	eLQ	LQ	20 22 24.6	
MVO				eLR	LR	20 25 56.8	
	comp=Z,12µm,22.0s						
PMRV	**Marv??o**	77.19	52	eP	P	20 01 35.1	-1.7
	comp=Z,79nm,2.1s						
PMRV				epP	pP	20 02 02.2	+1.2
PMRV				eS	S	20 11 23.0	+3.9
PMRV	**Marv??o**	77.19	52	eLQ	LQ	20 22 35.5	
PMRV				eLR	LR	20 26 01.1	
	comp=Z,15µm,22.0s						
EDU	**Dundee**	77.26	35	eP	P	20 01 35.6	-1.2
EDI	**Edinburgh**	77.27	35	eP	P	20 01 36.2	-0.6
EDI				IAmb	IAmb	20 01 40.9	
	comp=Z,188nm,1.1s						
EDI				IAMs_20	IAMs_20	20 30 51.2	
	comp=Z,28µm,23.8s						
PBRG	**Braganca**	77.27	50	eP	P	20 01 35.8	-1.5
	comp=Z,59nm,1.6s						
PBRG				epP	pP	20 02 03.0	+1.5
PBRG	**Braganca**	77.27	50	ePP	PP	20 04 34.7	+2.4
PVAQ	**Vaqueiros**	77.29	54	eP	P	20 01 36.2	-1.2
	comp=Z,79nm,1.6s						
PVAQ				epP	pP	20 02 02.9	+1.3
PVAQ				eS	S	20 11 17.4	-2.8
PVAQ	**Vaqueiros**	77.29	54	eLR	LR	20 25 42.7	
	comp=Z,12µm,24.0s						
PVAQ	**Vaqueiros**	77.29	54	P	P	20 01 36.2	-1.2
ESK	**Eskdalemuir**	77.36	36	eP	P	20 01 35.6	-1.8
ESK				IAmb	IAmb	20 01 41.4	
	comp=Z,160nm,1.0s						
ESK				IAMs_20	IAMs_20	20 30 24.5	
	comp=Z,26µm,27.5s						
ESK	**Eskdalemuir**	77.36	36	P	P	20 01 35.8	-1.6
ESK				pmax	pmax		
	comp=Z,326nm,1.1s						
ESK	**Eskdalemuir**	77.36	36	P	P	20 01 35.8	-1.6
MIDW	**Midway**	77.46	296	⇓P	P	20 01 39.4	+0.9
MIDW	**Midway**	77.46	296	P	P	20 01 38.8	+0.3
MIDW				IAmb	IAmb	20 01 40.9	
	comp=Z,424nm,1.1s						
MIDW	**Midway**	77.46	296	P	P	20 01 39.6	+1.1
KESW	**Keswick, Cumbr**	77.53	37	eP	P	20 01 36.4	-2.0
KESW				IAmb	IAmb	20 01 40.6	
	comp=Z,705nm,2.1s						
KESW				IAMs_20	IAMs_20	20 30 01.5	
	comp=Z,26µm,27.0s						
KBS	**Kingsbay**	77.57	11	P	P	20 01 39.9	+1.7
KBS				pmax	pmax		
	comp=Z,428nm,1.0s						
KBS	**Kingsbay**	77.57	11	⇑iP	P	20 01 40.5	+2.4
KBS				IVmB_BB		20 01 43.0	
	comp=Z,7µm,2.5s						
KBS				eS	S	20 11 27.8	+6.0
KBS				IVMs_BB	IVMs_BB	20 40 08.8	
	comp=Z,7µm,16.1s						
KBS	**Kingsbay**	77.57	11	⇑P	P	20 01 40.3	+2.1
KBS				⇑P	P	20 01 40.4	+2.2
KBS	**Kingsbay**	77.57	11	P	P	20 01 39.9	+1.7
KBS				IAmb	IAmb	20 01 41.9	
	comp=Z,428nm,0.9s						
ESY	**Stoneypath**	77.59	35	eP	P	20 01 38.5	-0.2
LRW	**Lerwick**	77.62	31	eP	P	20 01 36.8	-1.9
LRW				IAMs_20	IAMs_20	20 27 28.5	
	comp=Z,74µm,49.1s						
TTIG	**Tnine Tigouga,**	77.96	61	P	P	20 01 40.0	-1.5
HLM1	**Long Mynd**	78.02	39	eP	P	20 01 40.4	-0.8
HLM1				IAmb	IAmb	20 01 45.0	
	comp=Z,98nm,0.9s						
HLM1				IAMs_20	IAMs_20	20 26 58.5	
	comp=Z,36µm,45.3s						
MCH1	**Michaelchurch**	78.04	39	eP	P	20 01 39.9	-1.4
MCH1				IAMs_20	IAMs_20	20 26 56.6	
	comp=Z,33µm,44.4s						
EDMD	**Edmundbyers**	78.14	36	eP	P	20 01 40.7	-1.1
EDMD				IAmb	IAmb	20 01 46.1	
	comp=Z,220nm,0.9s						
EDMD				IAMs_20	IAMs_20	20 30 32.9	
	comp=Z,22µm,25.1s						
AVE	**Averroes**	78.29	59	⇑P	P	20 01 42.1	-0.9
AVE				⇑P	P	20 01 42.3	-0.7
AVE	**Averroes**	78.29	59	P	P	20 01 42.2	-0.9
STNC	**Stoke**	78.32	38	eP	P	20 01 41.8	-1.0
STNC				IAMs_20	IAMs_20	20 30 06.8	
	comp=Z,22µm,27.5s						
OUK	**Oukaimeden**	78.32	61	P	P	20 01 43.0	-0.7
OLDB	**Oldbury-Upon-S**	78.37	39	eP	P	20 01 40.4	-2.7
OLDB				IAMs_20	IAMs_20	20 29 36.5	
	comp=Z,23µm,30.7s						
HPK	**Haverah Park**	78.50	37	eP	P	20 01 43.8	0.0
HPK				IAmb	IAmb	20 01 47.1	
	comp=Z,86nm,0.8s						
HPK				IAMs_20	IAMs_20	20 30 26.9	
	comp=Z,28µm,29.3s						
SFS	**San Fernando**	78.65	55	P	P	20 01 45.4	+0.5
SFS				S	S	20 11 36.0	+1.1
SFS	**San Fernando**	78.65	55	⇑P	P	20 01 44.5	-0.4
SPA0	**Spitsbergen Ar**	78.66	11	⇑iP	P	20 01 45.5	+1.3
SPA0				eS	S	20 11 35.4	+1.8
ZHG	**ZHG**	78.89	58	P	P	20 01 45.0	-1.5
OUZM	**OUZ**	79.31	61	P	P	20 01 48.0	-0.9
BILL	**Bilibino**	79.31	338	d iP	P	20 01 49.1	+1.1
BILL				e*PP	pP	20 02 11.2	-0.8
BILL				e		20 04 48.6	
BILL				ePPP	PPP	20 06 43.4	
BILL				i S	S	20 11 39.7	-1.1
BILL				i SS	SS	20 16 50.2	+1.4
BILL				pmax	pmax		
	comp=Z,511nm,1.3s						
BILL	**Bilibino**	79.31	338	P	P	20 01 48.7	+0.8
BILL				IAmb	IAmb	20 02 14.5	
	comp=Z,1µm,1.2s						
SMIR	**Smir Dam**	79.46	56	P	P	20 01 49.0	-0.4
KNTN	**Kanton**	79.47	264	P	P	20 01 50.1	+0.3
KNTN				IAmb	IAmb	20 02 15.7	
	comp=Z,1µm,1.9s						
PAB	**San Pablo**	79.48	52	P	P	20 01 48.2	-1.4
PAB				pmax	pmax		
	comp=Z,192nm,1.3s						
PAB	**San Pablo**	79.48	52	P	P	20 01 48.2	-1.4
PAB	**San Pablo**	79.48	52	P	P	20 01 48.4	-1.2
CHEFC	**Chefchaouen**	79.61	56	P	P	20 01 51.0	+0.6
ESDC	**Sonseca Array**	79.74	52	P	P	20 01 49.2	-1.8
	comp=Z,22nm,0.9s,baz=292,slow=5.6,SNR=43						
ESDC				pP	pP	20 02 13.8	-1.5
	comp=Z,31nm,1.0s,baz=299,slow=4.8,SNR=1.9						
ESDC				PP	PP	20 04 52.7	-0.3
	comp=Z,16nm,1.2s,baz=297,slow=6.9,SNR=1.2						
ESDC				PKKPbc	PKKPbc	20 20 37.8	0.0
	comp=Z,2.6nm,0.8s,baz=87,slow=1.4,SNR=11						
ESDC				PKPPKP	P'P'df	20 28 35.1	-7.6
	comp=Z,0.9nm,0.9s,baz=76,slow=3.8,SNR=4.0						
ESDC				LR	LR	20 31 31.7	
	comp=Z,12µm,21.9s,baz=275,slow=32						
SICH	**Sidi Chahed**	79.84	57	P	P	20 01 51.0	-0.5
WACR	**West Acre**	80.07	38	eP	P	20 01 51.0	-1.3
WACR				IAmb	IAmb	20 01 59.2	
	comp=Z,296nm,0.9s						
WACR				IAMs_20	IAMs_20	20 30 57.7	
	comp=Z,23µm,29.1s						
FOO	**Floro**	80.28	29	⇑iP	P	20 01 53.5	+0.2
FOO				IVmB_BB		20 01 55.1	
	comp=Z,7µm,3.9s						
FOO				eS	S	20 11 53.4	+2.3
FOO				IVMs_BB	IVMs_BB	20 29 19.5	
	comp=Z,10µm,39.2s						
SUE	**Sulen**	80.29	29	⇑iP	P	20 01 53.3	+0.1
SUE				eS	S	20 11 53.4	+2.2
SUE				IVMs_BB	IVMs_BB	20 29 17.1	
	comp=Z,9µm,46.2s						
LCRM	**LCR**	80.30	58	P	P	20 01 53.2	-1.0
TZRR	**Tazzarine**	80.34	61	P	P	20 01 54.0	-0.4
ELMS	**Elmsett, Ipswi**	80.43	39	eP	P	20 01 55.1	+0.8
ELMS				IAmb	IAmb	20 01 58.1	
	comp=Z,158nm,0.9s						
ELMS				IAMs_20	IAMs_20	20 30 52.7	
	comp=Z,23µm,28.8s						
ZGR	**Zagora**	80.44	61	P	P	20 01 54.0	-1.0
ASK	**Askoy**	80.64	30	eP	P	20 01 57.9	+2.7
GOLM	**Goulmima**	80.65	60	P	P	20 01 56.0	-0.1
MDT	**Midelt**	80.69	59	P	P	20 01 55.3	-0.9
PALE	**Palemas**	80.71	56	P	P	20 01 55.0	-1.2
BER	**Bergen**	80.73	30	⇑iP	P	20 01 56.8	+1.1
BER				IVmB_BB		20 01 57.8	
	comp=Z,6µm,4.2s						
BER				eS	S	20 11 57.8	+2.0
BER				IVMs_BB	IVMs_BB	20 29 28.1	
	comp=Z,9µm,37.9s						
BJO1	**Bjornoya**	80.74	15	⇑iP	P	20 01 57.5	+2.0
BJO1				IVmB_BB		20 01 58.0	
	comp=Z,18µm,4.0s						
BJO1				eS	S	20 11 58.8	+3.3
HYA	**Hoyanger**	80.92	29	eP	P	20 01 59.9	+3.2
HYA				eS	S	20 11 57.9	+0.1

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KMY   Karmoy         81.00  31⇑iP       P         20 01 59.8 +2.6
AKN   Aaknes         81.01  28⇑iP       P         20 01 57.6 +0.4
AKN                           IVmB_BB             20 01 59.3
      comp=Z,5µm,2.3s
AKN                          eS         S         20 12 03.1 +4.2
AKN                           IVMs_BB   IVMs_BB   20 30 00.5
      comp=Z,12µm,42.4s
HOPEN Hopen          81.11  12⇑iP       P         20 01 59.0 +1.5
HOPEN                         IVmB_BB             20 01 59.5
      comp=Z,17µm,4.0s
HOPEN                        eS         S         20 12 02.9 +3.5
HOPEN                         IVMs_BB   IVMs_BB   20 38 17.2
      comp=Z,6µm,21.1s
MOL   Molde          81.14  27⇑iP       P         20 01 58.7 +0.9
MOL                           IVmBBB              20 02 02.3
      comp=Z,6µm,4.6s
MOL                          eS         S         20 12 07.7 +7.6
MOL                           IVMs_BB   IVMs_BB   20 30 07.7
      comp=Z,10µm,39.5s
ODD1  Odda           81.49  30 eP       P         20 02 01.9 +2.1
ODD1                          IVmB_BB             20 02 04.1
      comp=Z,7µm,3.5s
ODD1                         eS         S         20 12 05.8 +1.9
BLS5  Blasjo         81.54  31⇑iP       P         20 02 01.0 +0.9
BLS5                          IVmB_BB             20 02 04.4
      comp=Z,9µm,8.6s
BLS5                         eS         S         20 12 05.9 +1.5
BLS5                          IVMs_BB   IVMs_BB   20 29 47.1
      comp=Z,10µm,39.4s
H10N3 ASCENSION HYDR 81.60 101  P       P         20 02 02.3 +1.5
      baz=265,slow=5.5,SNR=4.5
H10N2 ASCENSION HYDR 81.61 101  P       P         20 02 02.3 +1.5
      baz=265,slow=5.5,SNR=7.3
H10N1 ASCENSION HYDR 81.62 101  P       P         20 02 02.4 +1.5
      baz=265,slow=5.5,SNR=6.2
LOF   Lofoten        81.68  21⇑iP       P         20 02 01.4 +0.8
LOF                           IVmB_BB             20 02 02.6
      comp=Z,15µm,3.8s
LOF                          eS         S         20 12 10.9 +5.4
LOF                           IVMs_BB   IVMs_BB   20 31 30.4
      comp=Z,7µm,37.1s
DOMB  Dombas         81.98  28⇑iP       P         20 02 03.2 +0.9
DOMB                          IVmB_BB             20 02 04.6
      comp=Z,9µm,4.3s
DOMB                         eS         S         20 12 10.3 +1.5
DOMB                          IVMs_BB   IVMs_BB   20 30 31.6
      comp=Z,10µm,32.6s
JBK   JBK            82.01  57  P       P         20 02 02.0 -1.3
SKAR  Skarslia       82.06  29⇑iP       P         20 02 03.4 +0.6
SKAR                          IVmB_BB             20 02 06.8
      comp=Z,7µm,5.0s
SKAR                         eS         S         20 12 11.9 +2.2
SKAR                          IVMs_BB   IVMs_BB   20 30 07.6
      comp=Z,10µm,37.7s
TBLU  Trondheim      82.11  26⇑iP       P         20 02 04.2 +1.2
TBLU                          IVmB_BB             20 02 05.5
      comp=Z,7µm,2.3s
TBLU                         eS         S         20 12 11.2 +1.1
TBLU                          IVMs_BB   IVMs_BB   20 30 32.3
      comp=Z,8µm,41.7s
KONS  Konsvik        82.13  23⇑iP       P         20 02 04.7 +1.7
STOK  Stokkvaagen    82.15  23 eP       P         20 02 06.5 +3.4
CLF   Chambon-Foret  82.21  42  IAmb    IAmb      20 03 10.9
      comp=Z,483nm,1.2s
SNART Snartemo       82.23  32 i P      P         20 02 04.5 +0.8
SNART Snartemo       82.23  32 eP       P         20 02 05.7 +2.0
SNART                        eS         S         20 12 11.2 -0.2
STEI  Steigen        82.35  21⇑iP       P         20 02 05.3 +1.3
STEI                          IVmB_BB             20 02 06.4
      comp=Z,16µm,4.1s
STEI                         eS         S         20 12 16.4 +4.1
STEI                          IVMs_BB   IVMs_BB   20 32 58.8
      comp=Z,8µm,28.6s
NSS   Namsos         82.39  25⇑iP       P         20 02 05.4 +1.0
NSS                          eS         S         20 12 18.3 +5.5
NSS                           IVMs_BB   IVMs_BB   20 31 10.6
      comp=Z,4µm,21.3s
CART  Cartagena      82.47  53  P       P         20 02 03.2 -2.1
FAUS  Fauske         82.58  22⇑iP       P         20 02 06.4 +1.1
FAUS                          IVmB_BB             20 02 07.5
      comp=Z,11µm,3.3s
FAUS                         eS         S         20 12 16.4 +1.7
FAUS                          IVMs_BB   IVMs_BB   20 31 56.5
      comp=Z,9µm,32.1s
MOR8  Moi Rana       82.75  23⇑iP       P         20 02 07.3 +1.1
MOR8                          IVmB_BB             20 02 08.8
      comp=Z,13µm,3.7s
MOR8                         eS         S         20 12 19.2 +2.8
MOR8                          IVMs_BB   IVMs_BB   20 34 48.8
      comp=Z,8µm,26.4s
TDRA  Tendrara       82.75  58  P       P         20 02 07.0 -0.2
UCC   Uccle          82.80  39 dP       P         20 02 05.3 -1.5
      comp=Z,25nm,0.9s
SNF   Seneffe        82.83  40 dP       P         20 02 06.0 -0.9
      comp=Z,49nm,1.1s
TRO   Tromso         82.86  19⇑iP       P         20 02 08.4 +1.7
TRO                           IVmB_BB             20 02 09.2
      comp=Z,18µm,2.3s
TRO                          eS         S         20 12 18.8 +1.4
TRO                           IVMs_BB   IVMs_BB   20 36 27.6
      comp=Z,7µm,21.2s
HOMB  Homborsund     82.91  31 i P      P         20 02 09.0 +1.9
HOMB  Homborsund     82.91  31⇑iP       P         20 02 08.0 +0.9
HOMB                          IVmB_BB             20 02 09.4
      comp=Z,8µm,3.3s
HOMB                         eS         S         20 12 20.5 +2.2
HOMB                          IVMs_BB   IVMs_BB   20 30 21.8
      comp=Z,9µm,44.0s
KONO  Kongsberg      83.00  30ceP       P         20 02 08.1 +0.5
KONO                          pmax      pmax
      comp=Z,544nm,2.5s
KONO  Kongsberg      83.00  30⇑iP       P         20 02 08.7 +1.1
KONO                          IVmB_BB             20 02 10.0
      comp=Z,9µm,3.2s
KONO                         eS         S         20 12 22.2 +3.0
KONO                          IVMs_BB   IVMs_BB   20 30 30.6
      comp=Z,9µm,39.4s
KONO  Kongsberg      83.00  30  P       P         20 02 07.5 -0.1
KONO                          IAmb      IAmb      20 02 11.3
      comp=Z,979nm,2.0s
NC204 NORSAR Array S 83.00  28  IAmb    IAmb      20 03 02.8
      comp=Z,806nm,1.9s
NBO00 NORSAR Array S 83.09  28  IAmb    IAmb      20 03 00.1
      comp=Z,434nm,1.2s
DOU   Dourbes        83.14  40 bP       P         20 02 07.7 -0.8
      comp=Z,62nm,1.0s
BMRD  Maredsous      83.19  40 dP       P         20 02 08.5 -0.3
      comp=Z,59nm,0.9s
NAO01 NORSAR Array S 83.20  29  IAmb    IAmb      20 03 04.1
      comp=Z,890nm,1.6s
NB2   NORSAR Subarra 83.28  28  P       P         20 02 09.5 +0.3
      comp=Z,3µm,2.5s,baz=292,slow=5.3
NB2   NORSAR Subarra 83.28  28  P       P         20 02 09.5 +0.3
      baz=292,slow=5.3
NOA   NORSAR Array B 83.28  28  P       P         20 02 08.3 -0.8
      comp=Z,18nm,0.6s,baz=296,slow=4.2,SNR=123
NOA                           PKKPbc    PKKPbc    20 20 29.2 -1.3
      comp=Z,2.7nm,0.8s,baz=100,slow=3.8,SNR=6.0
NOA                           PKPPKP    P'P'df    20 28 31.2 -4.0
      comp=Z,0.7nm,0.9s,baz=105,slow=2.6,SNR=2.3
NOA                           LR        LR        20 36 40.9
      comp=Z,9µm,21.4s,baz=290,slow=34
NC303 NORSAR Array S 83.29  28  IAmb    IAmb      20 02 12.6
      comp=Z,464nm,1.4s
NB201 NORSAR Array S 83.32  28  IAmb    IAmb      20 02 14.9
      comp=Z,552nm,1.1s
PMSA  Palmer Station 83.36 168 eP       P         20 02 10.6 +1.5
PMSA  Palmer Station 83.36 168  P       P         20 02 10.2 +1.0
JETT  Jettan, Norway 83.36  19 eP       P         20 02 12.5 +3.1
JETT                         eS         S         20 12 23.7 +1.1
BGES  Gesves         83.36  40 dP       P         20 02 09.0 -0.7
      comp=Z,117nm,0.9s
OSL   Oslo           83.44  29⇑iP       P         20 02 11.0 +1.1
OSL                          eS         S         20 12 23.4 -0.2
OSL                           IVMs_BB   IVMs_BB   20 30 43.2
      comp=Z,10µm,41.6s
BCLA  Clavier        83.48  40 κP       P         20 02 09.9 -0.4
      comp=Z,58nm,0.8s
NC405 NORSAR Array S 83.49  28  IAmb    IAmb      20 02 14.6
      comp=Z,543nm,1.0s
RCHB  Rochefort      83.51  40 dP       P         20 02 09.6 -0.9
      comp=Z,60nm,1.0s
NC602 NORSAR Array S 83.54  29⇑iP       P         20 02 11.4 +1.0
NC602                         IVmB_BB             20 02 14.4
      comp=Z,13µm,4.1s
NC602                        eS         S         20 12 24.6  0.0
NC602                         IVMs_BB   IVMs_BB   20 30 46.2
      comp=Z,9µm,50.6s
BSTI  Sart Tilman    83.60  39 dP       P         20 02 10.6 -0.3
      comp=Z,18nm,1.0s
BEBN  Eben Emael     83.60  39 dP       P         20 02 10.3 -0.6
      comp=Z,74nm,0.0s
GOET  G??ttrup       83.67  32 i P      P         20 02 12.8 +1.7
GOET                          IAmb      IAmb      20 02 16.2
      comp=Z,100nm,0.9s
ODJA  Bouhanifia     83.69  55  P       P         20 02 14.0 +2.2
HAMF  Hammerfest     83.81  17⇑iP       P         20 02 12.4 +0.9
HAMF                         eS         S         20 12 24.7 -2.3
HAMF                          IVMs_BB   IVMs_BB   20 31 11.5
      comp=Z,3µm,15.0s
ESPZ  Base Esperanza 83.82 164  IAmb    IAmb      20 02 15.7
      comp=Z,695nm,1.0s
MUD   Monsted U'grnd 83.83  33 i P      P         20 02 13.5 +1.6
MUD                           IAmb      IAmb      20 02 15.6
      comp=Z,41nm,0.7s
MEM   Membach        83.86  39 dP       P         20 02 11.8 -0.4
      comp=Z,49nm,1.1s
BHOU  Houvegnez      83.93  39 dP       P         20 02 12.2 -0.4
      comp=Z,70nm,1.2s
BTNL  Ternell        83.94  39 dP       P         20 02 12.0 -0.7
      comp=Z,35nm,1.2s
STRU  Stroemstad     83.97  30 i P      P         20 02 14.2 +1.6
OJBR  Djebel Berber  84.02  55  P       P         20 02 15.0 +1.5
OKGL  Djebel Kef Gue 84.14  54  P       P         20 02 17.0 +3.0
WLF   Walferdange    84.23  40 dP       P         20 02 14.0 -0.1
      comp=Z,88nm,1.0s
WLF   Walferdange    84.23  40 eP       P         20 02 13.9 -0.2
      comp=Z,504nm,1.6s,baz=290,slow=4.9
OJGS  Djebel Guires  84.36  55  P       P         20 02 11.0 -4.2
BUG   Bochum--Univer 84.37  38 eP       P         20 02 14.4 -0.3
      comp=Z,420nm,1.4s,baz=290,slow=4.9
IBBN  Ibbenburen     84.38  37 eP       P         20 02 14.7 -0.2
      comp=Z,437nm,1.2s,baz=290,slow=4.9
KTK1  Kautokeino     84.50  19⇑iP       P         20 02 16.0 +0.8
KTK1                          IVmB_BB             20 02 16.8
      comp=Z,10µm,3.9s
KTK1                         eS         S         20 12 29.0 -5.1
KTK1                          IVMs_BB   IVMs_BB   20 37 14.4
      comp=Z,6µm,28.4s
AHRW  Bad Neuenahr-A 84.53  39 eP       P         20 02 15.6  0.0
      comp=Z,436nm,1.1s,baz=290,slow=4.9
TJOU  Tjoern         84.54  31 i P      P         20 02 16.8 +1.3
HOPE  Hope Point     84.88 150  P       P         20 02 18.1 +1.0
HOPE                          pmax      pmax
      comp=Z,399nm,1.0s
HOPE  Hope Point     84.88 150  P       P         20 02 18.1 +1.0
HOPE                          IAmb      IAmb      20 02 47.6
      comp=Z,399nm,1.0s
ONAU  Onsala         84.92  32 i P      P         20 02 18.7 +1.3
ARA0  ARCESS Array S 84.92  18⇑iP       P         20 02 18.0 +0.7
ARCES ARCESS Array B 84.92  18  P       P         20 02 17.7 +0.4
      comp=Z,224nm,0.7s,baz=289,slow=4.2,SNR=480
ARCES                         pP        pP        20 02 40.0 -1.8
      comp=Z,88nm,1.1s,baz=321,slow=13,SNR=1.9
ARCES                         PKKPbc    PKKPbc    20 20 26.1 -0.9
      comp=Z,6.4nm,0.9s,baz=106,slow=2.6,SNR=9.9
ARCES                         LR        LR        20 40 48.1
      comp=Z,9µm,20.1s,baz=285,slow=36
ARCES ARCESS Array B 84.92  18  IAmb    IAmb      20 02 22.0
      comp=Z,224nm,0.7s
RETH  Rethem/Aller,  85.17  37 eP       P         20 02 19.3 +0.6
      comp=Z,1µm,1.8s,baz=290,slow=4.9
RETH                         eX                   20 49 02.3
      baz=295,slow=2.7
KEV   Kevo           85.24  18  P       P         20 02 19.2 +0.4
KEV                           pmax      pmax
      comp=Z,203nm,0.6s
KEV   Kevo           85.24  18  P       P         20 02 19.1 +0.4
KEV                           IAmb      IAmb      20 02 21.8
      comp=Z,203nm,0.6s
BORU  Boraas         85.26  31 i P      P         20 02 19.0 -0.1
BSEG  Bad Segeberg   85.30  35 eP       P         20 02 19.7 +0.4
      comp=Z,1µm,1.8s,baz=290,slow=4.9
TNS   Taunus Mts     85.46  39 eP       P         20 02 20.2 -0.2
      comp=Z,430nm,1.1s,baz=290,slow=4.9
FABU  Falkenberg     85.47  32 i P      P         20 02 20.4 +0.2
ORCD  Orcadas        85.58 158  P       P         20 02 20.8 +0.4
ORCD                          IAmb      IAmb      20 02 48.2
      comp=Z,506nm,1.6s
KOWA  Kowa           85.63  76  P       P         20 02 20.6 -1.2
KOWA  Kowa           85.63  76  P       P         20 02 21.7 -0.1
NRDL  Niedersach Rie 85.68  37 eP       P         20 02 21.5 +0.3
      comp=Z,822nm,1.9s,baz=290,slow=4.9
NRDL                         eX                   20 49 03.5
      baz=295,slow=2.7
SMAI  San Martin Ant 85.81 170  P       P         20 02 21.6 +0.2
COP   Copenhagen     85.81  33 i P      P         20 02 22.9 +1.0
COP                           IAmb      IAmb      20 02 24.9
      comp=Z,416nm,0.8s
GTTG  Gottingen      85.92  38 eP       P         20 02 22.8 +0.2
      comp=Z,556nm,1.7s,baz=290,slow=4.9
BFO   Black Forest   86.01  41  P       P         20 02 21.9 -1.2
BFO                           pmax      pmax
      comp=Z,133nm,1.1s
BFO   Black Forest   86.01  41 eP       P         20 02 22.2 -0.9
      comp=Z,268nm,1.8s,baz=290,slow=4.9
BFO   Black Forest   86.01  41  P       P         20 02 21.9 -1.2
CLZ   Clausthal      86.06  37 eP       P         20 02 23.6 +0.3
      comp=Z,706nm,1.9s,baz=290,slow=4.9
CLZ                          eX                   20 49 04.7
      baz=295,slow=2.7
ASSE  Asse, Remlinge 86.13  37 eP       P         20 02 23.8 +0.4
      comp=Z,591nm,1.8s,baz=290,slow=4.9
UBBA  Unterbreizbach 86.20  38 eP       P         20 02 23.9 +0.1
      comp=Z,714nm,2.0s,baz=290,slow=4.9
UBBA                         eX                   20 49 05.6
      baz=295,slow=2.7
DEL   Delary         86.26  32 i P      P         20 02 23.6 -0.5
LUNU  Lund           86.37  33 i P      P         20 02 25.2 +0.6
FLTG  Flechtingen    86.38  36 eP       P         20 02 24.5 -0.3
      comp=Z,650nm,1.8s,baz=290,slow=4.9
STU   Stuttgart      86.40  40 eP       P         20 02 24.5 -0.5
      comp=Z,430nm,1.0s,baz=290,slow=4.9
SEY   Seymchan       86.58 335  P       P         20 02 26.0 +0.5
      comp=Z,77nm,0.9s,baz=120,slow=0.2,SNR=23
SEY                           pP        pP        20 02 48.9 -1.1
      comp=Z,305nm,1.1s,baz=117,slow=3.7,SNR=13
SEY                           PKKPbc    PKKPbc    20 20 21.8 -1.0
      comp=Z,9.9nm,1.0s,baz=262,slow=3.8,SNR=5.6
UPP   Uppsala        86.67  28 eP       P         20 02 27.0 +1.0
RGN   Rugen          86.72  34 eP       P         20 02 27.1 +0.8
RGN   Rugen          86.72  34  IAmb    IAmb      20 02 29.6
      comp=Z,972nm,1.8s
TIC   Toumodi        86.73  84 eP       P         20 02 25.7 -1.6
TIC   Toumodi        86.73  84 ePKP1    PKKPbc    20 20 22.4 +1.4
LIC   Lamto          86.84  84 eP       P         20 02 26.4 -1.4
      comp=Z,673nm,1.0s
LIC   Lamto          86.84  84 ePKP1    PKKPbc    20 20 22.1 +1.4
      comp=Z,36nm,1.0s
DBIC  Dimbokro       86.88  84  P       P         20 02 26.5 -1.5
      comp=Z,96nm,0.8s,baz=300,slow=3.9,SNR=55
DBIC                          PKKPbc    PKKPbc    20 20 22.0 +1.4
      comp=Z,4.8nm,0.7s,baz=142,slow=3.1,SNR=7.2
DBIC                          PKPPKP    P'P'df    20 28 29.6 -0.5
      comp=Z,4.4nm,1.0s,baz=85,slow=4.9,SNR=4.7
DBIC                          LR        LR        20 38 10.6
      comp=Z,7µm,21.1s,baz=295,slow=34
KIC   Kosan Boka     87.07  84 eP       P         20 02 27.5 -1.4
      comp=Z,274nm,0.8s
KIC   Kosan Boka     87.07  84 ePKP1    PKKPbc    20 20 21.7 +1.6
      comp=Z,7.7nm,0.9s
NEUB  Neuenburg      87.10  37 eP       P         20 02 28.5 +0.2
      comp=Z,623nm,2.0s,baz=290,slow=4.9
MOX   Moxa           87.22  38 eP       P         20 02 28.8 -0.1
      comp=Z,564nm,2.4s,baz=290,slow=4.9
MOX                          eX                   20 49 07.6
      baz=295,slow=2.7
BLEU  Blekinge       87.32  32 i P      P         20 02 29.0 -0.2
GRA1  Grafenberg Arr 87.33  39  IAmb    IAmb      20 03 26.9
      comp=Z,330nm,1.3s
GRF   Grafenberg Arr 87.33  39 eP       P         20 02 29.6 +0.1
      comp=Z,779nm,2.0s,baz=290,slow=4.9
GRF                          epP        pP        20 02 56.6 +2.4
      baz=284,slow=5.0
GRF                          ePKKPbc    PKKPbc    20 20 19.7 -1.0
      baz=118,slow=2.0
GRF                          epPKKPbc             20 20 45.5
      baz=118,slow=2.0
GRF                          ePxPxdf              20 28 24.6
GRFO  Grafenberg     87.33  39  P       P         20 02 29.2 -0.2
GRFO                          pmax      pmax
      comp=Z,333nm,1.3s
GRFO  Grafenberg     87.33  39  P       P         20 02 29.2 -0.2
GRFO                          IAmb      IAmb      20 03 26.9
      comp=Z,333nm,1.3s
BSD   Bornholm Skovb 87.34  33 eP       P         20 02 30.2 +0.8
BSD   Bornholm Skovb 87.34  33 i P      P         20 02 29.0 -0.4
BSD                           IAmb      IAmb      20 02 36.4
      comp=Z,16nm,0.6s
DAVA  Damuels        87.34  42 i P      P         20 02 29.6 -0.3
      comp=Z,152nm,0.9s,SNR=57
UBR   Ueberruh       87.35  41 eP       P         20 02 29.3 -0.4
      comp=Z,172nm,1.2s,baz=290,slow=4.9
AAL   Aland          87.59  27 eP       P         20 02 30.7 +0.3
PLN   Plauen         87.60  38 eP       P         20 02 30.8 +0.1
      comp=Z,488nm,2.3s,baz=290,slow=4.9
WERD  Werda          87.70  38 eP       P         20 02 31.1 -0.2
      comp=Z,346nm,2.1s,baz=290,slow=4.9
GUNZ  Gunzen         87.75  38 eP       P         20 02 31.5  0.0
      comp=Z,1µm,2.5s,baz=290,slow=4.9
MANZ  Manzenberg     87.75  38 eP       P         20 02 31.5 -0.1
      comp=Z,138nm,2.5s,baz=290,slow=4.9
MANZ                         ePKKPbc    PKKPbc    20 20 20.1 +0.4
      baz=118,slow=2.0
MANZ                         eX                   20 49 09.3
      baz=295,slow=2.7
RUE   Ruedersdorf    87.77  36 eP       P         20 02 32.6 +1.2
CLL   Collm          87.78  37 i P      P         20 02 30.9 -0.7
CLL                          e*PP       pP        20 02 59.0 +2.7
CLL                          e                    20 12 48.0
CLL                          eS         SKKSac    20 13 02.0 +0.4
CLL                           pmax      pmax
      comp=Z,775nm,2.3s
CLL   Collm          87.78  37 i P      P         20 02 31.2 -0.4
      comp=Z,775nm,2.3s
CLL                          ePmax                20 02 34.0
CLL                          epP        pP        20 02 59.0 +2.7
CLL                          e(sP)      sP        20 03 10.0 +3.7
CLL                          ePP        PP        20 05 56.0 -2.0
CLL                          epPP                 20 06 23.0
CLL                          esPP                 20 06 34.0
CLL                          esPPP                20 08 22.0
CLL                          ePPPP                20 09 21.0
CLL                          eSKSac     SKSac     20 12 48.0 -3.5
CLL                          eS         SKKSac    20 13 02.0 +0.4
      comp=N,5µm,24.1s
CLL                          eS         SKKSac    20 13 02.0 +0.4
      comp=E,15µm,24.0s
CLL                          e(ScS)               20 13 14.0
CLL                          eSP        SP        20 14 04.0 -4.4
CLL                          ePS        PS        20 14 22.0 +1.6
CLL                          eSS        SS        20 18 48.0 -6.5
CLL                          ePKKPbc    PKKPbc    20 20 19.0 -0.6
CLL                          epPKKPbc             20 20 43.0
CLL                          eSSS       SSS       20 22 18.0
CLL                          eSKKPdf    SKKPdf    20 23 41.0 +2.3
CLL                          eSSSS                20 25 18.0
CLL                          ePKPPKPdf            20 28 26.0
CLL                          eSKPPKPdf            20 31 49.0
CLL   Collm          87.78  37 eP       P         20 02 31.3 -0.2
      comp=E,208nm,1.6s,baz=290,slow=4.9
CLL                          ePKKPbc    PKKPbc    20 20 19.4 -0.2
      baz=118,slow=2.0
SET   Setif          87.78  53  P       P         20 02 36.0 +3.9
WERN  Wernitzgruen   87.80  38 eP       P         20 02 31.9 +0.1
      comp=E,218nm,1.8s,baz=290,slow=4.9
WERN                         eX                   20 49 09.7
      baz=295,slow=2.7
TANN  Tannenbergstha 87.80  38 eP       P         20 02 31.7 -0.1
      comp=E,1µm,2.7s,baz=290,slow=4.9
TANN                         eX                   20 49 09.5
      baz=295,slow=2.7
RETA  Reutte         87.83  41 i P      P         20 02 31.6 -0.4
      comp=E,131nm,1.7s,SNR=42
RETA  Reutte         87.83  41 eP       PKKPbc    20 20 17.9 -1.5
      comp=E,7.3nm,0.9s
NKC   Novy Kostel    87.86  38 eP       P         20 02 32.3 +0.3
NKC                          e                    20 02 58.3
NKC                          e                    20 05 58.6
NKC                          e                    20 12 52.9
NKC                           MLR       MLR
      comp=Z,17µm,25.2s
NKC   Novy Kostel    87.86  38 eP       P         20 02 32.3 +0.3
NKC                          epP        pP        20 02 58.3 +1.5
NKC                          ePP        PP        20 05 58.6 -0.2
NKC                          eSKS       SKSac     20 12 52.9 +0.8
NKC                           AMS       AMS       20 35 00.0
      comp=Z,17µm,25.2s
ROTZ  Rotzenmuhle    87.89  39 eP       P         20 02 32.2  0.0
      comp=Z,588nm,3.9s,baz=290,slow=4.9
FUR   Furstenfeldbru 87.91  40 eP       P         20 02 32.1 -0.2
      comp=Z,322nm,2.0s,baz=290,slow=4.9
PET   Petropavlovsk  87.92 325 eP       P         20 02 32.0 -0.1
PET                          e*PP       pP        20 02 58.6 +2.0
PET                          e*SP       sP        20 03 08.1 +1.6
PET                          e                    20 12 51.2
PET                          eS         S         20 13 02.9 -4.8
PET                          ePS        PnS       20 14 15.9 -4.7
PET                          eSS        SS        20 18 57.9 +1.6
PET                           pmax      pmax
      comp=Z,99nm,1.5s
PET                           MLR       MLR
      comp=Z,4µm,20.0s
PET                           MLR       MLR
      comp=Z,3µm,18.0s
CKHR  Kef el Ahmar   87.93  53  P       P         20 02 34.8 +2.0
FETA  Feichten       87.98  42 i P      P         20 02 32.5 -0.3
      comp=Z,53nm,0.9s,SNR=25
FETA  Feichten       87.98  42 eP       PKKPbc    20 20 19.2  0.0
      comp=Z,16nm,1.0s
DFRA  Djebel Bou Aff 88.05  53  P       P         20 02 32.6 -0.7
MOTA  Moosalm        88.10  41 i P      P         20 02 32.9 -0.5
      comp=Z,57nm,1.1s,SNR=30
MOTA  Moosalm        88.10  41 i P      PKKPbc    20 20 16.8 -2.1
      comp=Z,9.0nm,0.8s,SNR=5.8
MSSA  Maissana       88.13  44  IAmb    IAmb      20 03 29.2
      comp=Z,311nm,1.2s
FBE   Freiberg       88.14  37 eP       P         20 02 33.4 +0.2
      comp=Z,1µm,2.3s,baz=290,slow=4.9
FBE                          eX                   20 49 10.6
      baz=295,slow=2.7
SQTA  Sankt Quirin   88.21  41 i P      P         20 02 33.4 -0.5
      comp=Z,79nm,1.5s,SNR=29
SQTA  Sankt Quirin   88.21  41 i P      PKKPbc    20 20 18.8 +0.2
      comp=Z,13nm,0.8s,SNR=5.6
TIXI  Tiksi          88.26 348  PKKP    PKKPdf    20 20 14.7 +2.5
      comp=Z,2.5nm,0.4s,baz=254,slow=0.8,SNR=6.2
TIXI  Tiksi          88.26 348ceP       P         20 02 33.2 -0.2
TIXI                          pmax      pmax
      comp=Z,211nm,1.1s
TIXI  Tiksi          88.26 348  P       P         20 02 32.9 -0.5
TIXI                          IAmb      IAmb      20 02 59.8
      comp=Z,409nm,1.4s
SALO  Salr           88.35  43  IAmb    IAmb      20 03 31.6
      comp=Z,298nm,1.2s
WATA  Walderalm      88.41  41 i P      P         20 02 34.2 -0.6
      comp=Z,59nm,1.4s,SNR=13
WATA  Walderalm      88.41  41 eP       PKKPbc    20 20 16.4 -1.7
      comp=Z,10nm,0.8s
PEA0B Petropavlovsk- 88.41 325ceP       P         20 02 36.6 +2.1
PEA0B Petropavlovsk- 88.41 325  IAmb    IAmb      20 03 05.6
      comp=Z,646nm,1.4s
PETK  Petropavlovsk- 88.41 325  P       P         20 02 35.5 +0.9
      comp=Z,52nm,1.1s,baz=72,slow=9.5,SNR=13
PETK                          PP        PP        20 06 05.5 +2.5
      comp=Z,9.8nm,1.1s,baz=6.6,slow=6.2,SNR=1.9
APA   Apatity        88.43  18⇓iP       P         20 02 33.1 -1.2
APA                          i *PP      pP        20 02 58.0 -1.0
APA                          i                    20 06 00.0
APA                          i S        S         20 13 06.0 -6.1
APA                          i PS       PS        20 14 30.0 +3.0
APA                           pmax      pmax
      comp=Z,50nm,0.8s
WTTA  Wattenberg     88.47  41 i P      P         20 02 34.7 -0.4
      comp=Z,46nm,1.5s,SNR=14
WTTA  Wattenberg     88.47  41 eP       PKKPbc    20 20 18.6 +0.6
      comp=Z,12nm,1.2s
BRG   Berggiesshubel 88.50  37 eP       P         20 02 34.9 -0.1
      comp=Z,175nm,1.7s,baz=290,slow=4.9
BRG                          eX                   20 49 11.2
      baz=295,slow=2.7
BRG   Berggiesshubel 88.50  37 eP       P         20 02 35.3 +0.3
BRG                           Amp                 20 02 38.6
      comp=Z,58nm,0.9s
BRG                           pP        pP        20 03 03.6 +3.8
BRG                           Amp                 20 03 05.0
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	comp=Z,29nm,1.0s						
BRG				sP	sP	20 03 10.9	+1.2
BRG				Amp		20 03 12.4	
	comp=Z,46nm,1.0s						
BRG	Berggiesshubel	88.50	37	PP	PP	20 06 05.0	+1.2
BRG				pPP		20 06 26.1	
BRG				Amp		20 06 41.9	
	comp=Z,41nm,1.1s						
BRG	Berggiesshubel	88.50	37	SKS	SKSac	20 12 59.0	+3.2
BRG				PKKP		20 20 18.1	
BRG				Amp		20 20 19.6	
	comp=Z,4.2nm,0.9s						
BRG				Amp		20 37 56.0	
	comp=N,3.9nm,18.2s						
BRG				Amp		20 37 59.0	
	comp=E,10nm,23.2s						
BRG				Amp		20 38 05.0	
	comp=Z,15nm,22.3s						
PRMA	PARMA	88.51	44	IAmb	IAmb	20 03 27.8	
	comp=Z,358nm,1.4s						
WET	Wettzell	88.53	39	eP	P	20 02 35.4	+0.1
	comp=Z,118nm,1.2s,baz=290,slow=4.9						
WET				eX		20 49 11.7	
	baz=295,slow=2.7						
LVZ	Lovozero	88.58	17c	eP	P	20 02 34.9	-0.2
LVZ				pmax	pmax		
	comp=Z,217nm,0.8s						
LVZ	Lovozero	88.58	17	P	P	20 02 33.6	-1.5
LVZ				IAmb	IAmb	20 02 39.8	
	comp=Z,219nm,0.9s						
CTEI	Djebel Teioual	88.60	53	P	P	20 02 37.6	+1.6
CASM	Ain Smara	88.60	53	P	P	20 02 37.0	+1.1
CKFL	Kef-Lekhel	88.74	53	P	P	20 02 35.4	-1.2
MA2	Magadan	88.90	333c	eP	P	20 02 37.9	+1.2
MA2				pmax	pmax		
	comp=Z,294nm,1.3s						
MA2	Magadan	88.90	333	P	P	20 02 37.0	+0.3
MA2	Magadan	88.90	333	P	P	20 02 38.3	+1.6
KHC	Kasperske Hory	88.97	39	eP	P	20 02 36.6	-0.7
KHC				e		20 06 05.1	
KHC				e		20 13 01.7	
KHC				MLR	MLR		
	comp=Z,22µm,21.0s						
KHC	Kasperske Hory	88.97	39	eP	P	20 02 36.6	-0.7
KHC				ex	x	20 02 52.0	
KHC				ex	x	20 03 24.5	
KHC				ePP	PP	20 06 05.1	-2.5
KHC				eSKS	SKSac	20 13 01.7	+2.9
KHC				ePKKP	PKKPbc	20 20 14.5	-2.2
KHC				AMS	AMS	20 39 00.0	
	comp=Z,22µm,21.0s						
PVCC	Panska Ves	89.00	37	eP	P	20 02 38.9	+1.5
PVCC				e		20 06 05.9	
PVCC				e		20 13 00.9	
PVCC	Panska Ves	89.00	37	eP	P	20 02 38.9	+1.5
PVCC				ePP	PP	20 06 05.9	-1.9
PVCC				eSKS	SKSac	20 13 00.9	+2.1
PVCC				AMS	AMS	20 35 50.0	
	comp=Z,18µm,28.1s						
RJOB	Jochberg	89.02	40	eP	P	20 02 37.4	-0.3
	comp=Z,108nm,1.6s,baz=290,slow=4.9						
RJOB				ePKKPbc	PKKPbc	20 20 16.3	-0.3
	baz=118,slow=2.0						
ZCCA	Zocca	89.10	44	IAmb	IAmb	20 03 29.9	
	comp=Z,627nm,1.4s						
PRA	Prague	89.10	38	eP	P	20 02 39.3	+1.5
PRA				e		20 06 04.9	
PRA				e		20 12 59.8	
PRA	Prague	89.10	38	eP	P	20 02 39.3	+1.5
PRA				ePP	PP	20 06 04.9	-3.7
PRA				eSKS	SKSac	20 12 59.8	+0.4
PRA				AMS	AMS	20 35 50.0	
	comp=Z,22µm,28.5s						
GEC2	GERESS Array S	89.15	39	eP	P	20 02 37.9	-0.4
	comp=Z,130nm,1.5s,baz=290,slow=4.9						
GEC2				ePKKPbc	PKKPbc	20 20 16.3	0.0
	baz=118,slow=2.0						
GERES	GERESS Array B	89.15	39	P	P	20 02 37.4	-0.9
	comp=Z,37nm,0.9s,baz=306,slow=3.1,SNR=101						
GERES				PKKPbc	PKKPbc	20 20 15.9	-0.4
	comp=Z,5.7nm,0.8s,baz=126,slow=2.3,SNR=21						
GERES				PKPPKP		20 28 19.2	
	comp=Z,0.3nm,0.6s,baz=90,slow=2.7,SNR=3.5						
GERES				LR	LR	20 39 51.2	
	comp=Z,16µm,21.8s,baz=286,slow=34						
CMAH	Djebel Manchou	89.20	52	P	P	20 02 37.8	-0.9
PRU	Pruhonice	89.20	38	eP	P	20 02 38.2	-0.1
PRU				e		20 03 07.2	
PRU				e		20 06 08.5	
PRU				e		20 13 00.5	
PRU	Pruhonice	89.20	38	eP	P	20 02 38.2	-0.1
PRU				ex	x	20 03 07.2	
PRU				ePP	PP	20 06 08.5	-0.9
PRU				eSKS	SKSac	20 13 00.5	+0.5
PRU				AMS	AMS	20 35 40.0	
	comp=Z,24µm,28.4s						
ABTA	Abfaltersbach	89.22	41	i P	P	20 02 38.1	-0.5
	comp=Z,64nm,0.9s,SNR=33						
GKP	Gorka Klasztor	89.35	34	eP	P	20 02 38.9	-0.1
GKP				ePP	PP	20 06 09.8	-0.7
GKP				eS	SKSac	20 13 00.8	0.0
GKP				eL	L	20 33 06.8	
	comp=Z,33µm,41.4s						
GKP	Gorka Klasztor	89.35	34	eP	P	20 02 39.7	+0.8
ABSA	Djebel Ababsia	89.36	53	P	P	20 02 38.6	-0.9
FINES	FINESS Array B	89.51	25	P	P	20 02 38.6	-0.9
	comp=Z,82nm,0.8s,baz=297,slow=2.3,SNR=76						
FINES				pP	pP	20 03 03.5	-0.8
	comp=Z,46nm,0.9s,baz=316,slow=5.3,SNR=2.5						
FINES				PKKPbc	PKKPbc	20 20 13.8	-1.9
	comp=Z,5.9nm,0.9s,baz=125,slow=3.8,SNR=9.3						
FINES				LR	LR	20 42 33.2	
	comp=Z,9µm,21.5s,baz=301,slow=35						
CKRC	Cesky Krumlov	89.53	39	eP	P	20 02 40.7	+0.8
CKRC				ePP	PP	20 06 12.7	+0.6
CKRC				eSKS	SKSac	20 13 01.2	-0.9
CKRC				ePKKP	PKKPbc	20 20 14.8	-0.5
KBA	Koelnbreinsper	89.62	41	i P	P	20 02 40.1	-0.5
	comp=Z,82nm,1.9s,SNR=24						
VSL	Villasalto	89.69	49	IAmb	IAmb	20 03 34.1	
	comp=Z,313nm,1.4s						
CHVC	Chvalec	89.84	37	eP	P	20 02 40.2	-1.1
CHVC				eSKS	SKSac	20 13 04.5	+0.7
CHVC				AMS	AMS	20 36 30.0	
	comp=Z,18µm,29.3s						
UPC	Upice	89.85	37	eP	P	20 02 41.5	+0.2
UPC				e		20 06 12.3	
UPC				e		20 12 57.9	
UPC	Upice	89.85	37	eP	P	20 02 41.5	+0.2
UPC				ePP	PP	20 06 12.3	-2.3
UPC				eSKS	SKSac	20 12 57.9	-5.9
UPC				AMS	AMS	20 36 40.0	
	comp=Z,19µm,27.9s						
KSP	Ksiaz	89.87	37	eP	P	20 02 41.3	-0.1
KSP				ePP	PP	20 06 12.7	-2.0
KSP				eS	SKSac	20 13 06.1	+2.2
KSP				eL	L	20 37 28.9	
	comp=Z,19µm,27.0s						
MOA	Molln	89.89	40	eP	P	20 02 42.2	+0.6
	comp=Z,46nm,0.8s,SNR=16						
OSTC	Ostas	89.95	37	eP	P	20 02 41.2	-0.6
OSTC				ePP	PP	20 06 14.2	-1.1
OSTC				eSKS	SKSac	20 13 01.1	-3.3
OSTC				AMS	AMS	20 38 20.0	
	comp=Z,15µm,21.8s						
MYKA	Terra Mystica	89.98	41	i P	P	20 02 41.7	-0.4
	comp=Z,35nm,1.1s,SNR=13						
MTSE	Matsula	90.01	28	eP	P	20 02 42.5	+0.6
TREC	Trest	90.05	38	eP	P	20 02 43.4	+1.1
TREC				e		20 06 17.1	
TREC				e		20 13 06.1	
TREC				MLR	MLR		
	comp=Z,18µm,20.6s						
TREC	Trest	90.05	38	eP	P	20 02 43.4	+1.1
TREC				ePP	PP	20 06 17.1	+0.9
TREC				eSKS	SKSac	20 13 06.1	+1.0
TREC				AMS	AMS	20 40 00.0	
	comp=Z,18µm,20.6s						
ROBS	Robic	90.05	42	eP	P	20 02 41.8	-0.5
DPC	Dobruska-Polom	90.09	37	eP	P	20 02 41.6	-1.0
DPC				e		20 06 14.9	
DPC				e		20 13 02.4	
DPC	Dobruska-Polom	90.09	37	eP	P	20 02 41.6	-1.0
DPC				ePP	PP	20 06 14.9	-1.7
DPC				eSKS	SKSac	20 13 02.4	-3.0
DPC				ePKKP	PKKPbc	20 20 38.9	+25
DPC				AMS	AMS	20 36 40.0	
	comp=Z,18µm,28.6s						
CADS	Cadrg	90.20	42	i P	P	20 02 42.2	-0.9
	comp=Z,3µm,3.9s						
CADS				i SKSac	SKSac	20 13 06.7	+0.5
CADS				e		20 14 46.9	
KLNR	Kaliningrad	90.32	32c	iP	P	20 02 43.3	-0.1
KLNR				pmax	pmax		
	comp=Z,171nm,1.3s						
SKR	Severo-Kuril's	90.32	323	eP	P	20 02 40.3	-3.2
SKR				eS	S	20 13 22.8	-7.5
SKR				pmax	pmax		
	comp=Z,107nm,1.4s						
SKR				pmax	pmax		
	comp=Z,800nm,4.3s						
SKR				pmax	pmax		
	comp=Z,2µm,3.8s						
SKR				MLR	MLR		
	comp=Z,2µm,19.0s						
SKR				MLR	MLR		
	comp=Z,3µm,18.0s						
KRLC	Kraliky	90.48	37	eP	P	20 02 43.9	-0.5
KRLC				e		20 03 14.2	
KRLC				e		20 06 18.7	
KRLC				e		20 13 07.4	
KRLC				MLR	MLR		
	comp=Z,12µm,24.6s						
KRLC	Kraliky	90.48	37	eP	P	20 02 43.9	-0.5
KRLC				ex	x	20 03 14.2	
KRLC				ePP	PP	20 06 18.7	-0.9
KRLC				eSKS	SKSac	20 13 07.4	-0.2
KRLC				AMS	AMS	20 36 50.0	
	comp=Z,12µm,24.6s						
PBUR	Paburge	90.49	30	eP	P	20 02 44.9	+0.7
LKBA	Tubou, Lakemba	90.56	251	P	P	20 02 47.2	+2.0
OBKA	Obir	90.60	41	P	P	20 02 44.6	-0.5
	comp=Z,38nm,0.8s,SNR=16						
OBKA	Obir	90.60	41	eP	PKKPbc	20 20 13.1	+0.5
	comp=Z,5.5nm,1.0s						
KRUC	Moravsky	90.68	38	eP	P	20 02 44.6	-0.7
KRUC				ePP	PP	20 06 19.5	-1.7
KRUC				eSKS	SKSac	20 13 11.3	+2.6
VRAC	Vranov	90.70	38	⇑P	P	20 02 45.5	+0.2
VRAC	Vranov	90.70	38	eP	P	20 02 44.9	-0.4
VRAC				ePP	PP	20 06 19.5	-1.8
VRAC				eSKS	SKSac	20 13 11.3	+2.5
VRAC	Vranov	90.70	38	⇑P	P	20 02 45.5	+0.2
LJU	Ljubljana	90.78	41	i P	P	20 02 45.4	-0.4
	comp=Z,3µm,3.7s						
LJU				e		20 03 06.7	
LJU				ePP	PP	20 06 15.3	-6.8
LJU				eSKSac	SKSac	20 13 10.7	+1.3
LJU				e		20 14 53.7	
LJU	Ljubljana	90.78	41	⇑iP	P	20 02 45.4	-0.4
CEY	Cerknica	90.83	42	⇑iP	P	20 02 45.8	-0.3
CONA	Conrad Observa	90.84	39	i P	P	20 02 46.0	-0.2
	comp=Z,52nm,1.0s,SNR=41						
SOKA	Soboth	90.84	41	i P	P	20 02 45.7	-0.5
	comp=Z,65nm,1.4s,SNR=26						
SOKA	Soboth	90.84	41	eP	PKKPbc	20 20 11.7	-0.3
	comp=Z,8.9nm,0.9s						
PERS	Pernice	90.91	41	eP	P	20 02 45.1	-1.3
	comp=Z,2µm,4.2s						
PERS				eSKSac	SKSac	20 13 09.5	-0.8
ARSA	Arzberg	90.91	40	i P	P	20 02 46.1	-0.3
	comp=Z,26nm,0.9s,SNR=15						
KEST	Kesra	90.97	53	P	P	20 02 46.0	-0.9
	comp=Z,57nm,1.0s,baz=209,slow=1.5,SNR=16						
KEST				PKKPbc	PKKPbc	20 20 12.8	+1.5
	comp=Z,8.5nm,0.8s,baz=182,slow=1.6,SNR=9.8						
KEST				LR	LR	20 40 10.1	
	comp=Z,5µm,20.7s,baz=244,slow=33						
KEST	Kesra	90.97	53	IAmb	IAmb	20 03 44.2	
	comp=Z,170nm,1.2s						
RIY	Rijeka	91.04	42	⇑iP	P	20 02 46.4	-0.6
MORC	Moravsky Berou	91.05	37	⇓P	P	20 02 47.3	+0.3
MORC	Moravsky Berou	91.05	37	⇑P	PKKPbc	20 20 10.4	-1.2
MORC	Moravsky Berou	91.05	37	eP	P	20 02 46.9	-0.1
MORC				ePP	PP	20 06 22.2	-1.9
MORC				eSKS	SKSac	20 13 13.2	+2.3
MORC	Moravsky Berou	91.05	37	⇓P	P	20 02 47.3	+0.3
MORC	Moravsky Berou	91.05	37	IAmb	IAmb	20 02 50.1	
	comp=Z,320nm,1.8s						
TAVE	Taveuni	91.14	253	P	P	20 02 50.8	+2.9
TORD	Torodi Ar. Bea	91.34	76	P	P	20 02 46.6	-2.4
	comp=Z,6.3nm,0.6s,baz=298,slow=4.8,SNR=31						
TORD				PP	PP	20 06 24.8	-2.7
	comp=Z,6.9nm,1.0s,baz=292,slow=3.9,SNR=2.5						
TORD				PKKPbc	PKKPbc	20 20 11.2	+1.5
	comp=Z,4.7nm,0.7s,baz=91,slow=1.8,SNR=13						
TORD				PKPPKP		20 28 20.0	
	comp=Z,4.3nm,0.9s,baz=65,slow=1.7,SNR=9.6						
TORD				LR	LR	20 41 00.8	
	comp=Z,7µm,19.9s,baz=285,slow=34						
DGTI	Dogotuki	91.36	254	P	P	20 02 51.0	+2.1
SOP	Sopron	91.37	39	eP	P	20 02 47.5	-0.9
OKC	Ostrava-Krasne	91.38	37	eP	P	20 02 49.2	+0.8
OKC				e		20 06 21.6	
OKC				e		20 13 15.6	
OKC	Ostrava-Krasne	91.38	37	eP	P	20 02 49.2	+0.8
OKC				ePP	PP	20 06 21.6	-5.0
OKC				eSKS	SKSac	20 13 15.6	+3.0
OKC				AMS	AMS	20 37 20.0	
	comp=Z,15µm,27.2s						
VSU	Vasula	91.44	27	eP	P	20 02 49.2	+0.7
VSU	Vasula	91.44	27c	iP	P	20 02 48.6	+0.1
CRES	Cresnjev	91.46	41	⇑iP	P	20 02 48.6	-0.3
ZST	Bratislava	91.48	39	eP	P	20 02 49.8	+0.8
ZST				pmax	pmax		
	comp=Z,1µm,1.9s						
ZST	Bratislava	91.48	39	eP	P	20 02 49.8	+0.8
AQU	L'Aquila	91.49	45	⇑iP	P	20 02 48.3	-0.9
MODS	Modra-Piesok	91.51	39	eP	P	20 02 48.6	-0.5
MODS				pmax	pmax		
	comp=Z,453nm,1.9s						
MODS	Modra-Piesok	91.51	39	eP	P	20 02 48.6	-0.5
JAVC	Velka Javorina	91.53	38	eP	P	20 02 50.1	+0.8
JAVC				eSKS	SKSac	20 13 17.7	+4.0
NVLJ	Novalja	91.60	43	P	P	20 02 49.1	-0.4
KOGS	Kog	91.70	41	eP	P	20 02 49.2	-0.8
	comp=Z,3µm,4.0s						
KOGS				ePP	PP	20 06 20.7	-8.6
KOGS				i SKSac	SKSac	20 13 15.3	+0.8
PABE	Paberze	91.75	30	eP	P	20 02 50.4	+0.4
PABE	Paberze	91.75	30	IAmb	IAmb	20 02 51.7	
	comp=Z,264nm,1.0s						
BEL	Belsk	91.94	34	eP	P	20 02 51.2	+0.2
BEL				ePP	PP	20 06 30.1	-0.9
BEL				eS	SKSac	20 13 17.2	+1.5
BEL				eL	L	20 34 20.0	
	comp=Z,43µm,50.8s						
DUGI	Dugi Otok	91.95	43	P	P	20 02 50.3	-0.9
KOLL	Kolacno	92.09	38	eP	P	20 02 53.1	+1.3
SHEL	Horse Pasture	92.11	106	P	P	20 02 53.8	+1.3
SHEL				pmax	pmax		
	comp=Z,206nm,1.0s						
SHEL	Horse Pasture	92.11	106	P	P	20 02 53.8	+1.3
SHEL				IAmb	IAmb	20 02 57.2	
	comp=Z,206nm,0.9s						
SUW	Suwalki	92.12	32	eP	P	20 02 50.8	-1.0
SUW				ePP	PP	20 06 31.7	-0.6
SUW				eS	SKSac	20 13 16.5	-0.1
SUW				eSP	SPn	20 14 57.5	0.0
SUW				eL	L	20 34 29.2	
	comp=Z,39µm,45.3s						
SUW	Suwalki	92.12	32	eP	P	20 02 51.8	0.0
SUW	Suwalki	92.12	32	IAmb	IAmb	20 02 53.4	
	comp=Z,394nm,1.2s						
OJC	Ojcow	92.15	36	eP	P	20 02 51.8	-0.2
OJC				ePP	PP	20 06 32.4	-0.3
OJC				eS	SKSac	20 13 17.4	+0.4
OJC				eL	L	20 35 31.0	
	comp=Z,18µm,31.4s						
OJC	Ojcow	92.15	36	IAmb	IAmb	20 02 54.6	
	comp=Z,446nm,1.8s						
PUL	Pulkovo	92.19	25c	eP	P	20 02 52.1	+0.1
PUL				pmax	pmax		
	comp=Z,179nm,1.0s						
MPLH	Magyarpolny	92.19	40	eP	P	20 02 51.2	-1.0
SRO	Srobarova	92.38	39	eP	P	20 02 54.9	+1.8
SRO	Srobarova	92.38	39	eP	P	20 02 54.9	+1.8
VYHS	Vyhne	92.38	38	eP	P	20 02 53.7	+0.5
VYHS				pmax	pmax		
	comp=Z,285nm,1.8s						
VYHS	Vyhne	92.38	38	eP	P	20 02 53.7	+0.5
LANS	Liptovska Anna	92.46	37	eP	P	20 02 55.3	+1.8
LANS				pmax	pmax		
	comp=Z,39nm,1.1s						
LANS	Liptovska Anna	92.46	37	eP	P	20 02 55.3	+1.8
ZIRJ	Zirje	92.48	43	P	P	20 02 53.4	-0.3
TIH	Tihany	92.53	40	eP	P	20 02 54.5	+0.7
CSKK	Cskako	92.55	39	eP	P	20 02 54.1	+0.2
MRAK	Mrakovica	92.72	42	⇑iP	P	20 02 54.7	-0.2
NIE	Niedzica	92.81	37	eP	P	20 02 56.4	+1.2
NIE				eS	SKSac	20 13 24.4	+3.6
NIE				eSP	SPn	20 15 05.9	+0.1
NIE				eL	L	20 38 57.0	
	comp=Z,12µm,27.5s						
KIJV	Kijevo	92.83	43	P	P	20 02 55.5	+0.1
IZAB	Izabela	92.87	38	eP	P	20 02 57.3	+1.9
BUD	Budapest	92.95	39	eP	P	20 02 55.9	+0.1
KOVH	Kovagotottos	93.01	40	eP	P	20 02 54.3	-1.8
BLY	Banja Luka	93.02	42	⇑iP	P	20 02 56.1	0.0
MGRS	Mrkonjic Grad	93.10	42	eP	P	20 02 56.9	+0.3
TARA	Tarawa	93.11	272	P	P	20 02 57.1	-0.1
TARA				IAmb	IAmb	20 03 25.5	
	comp=Z,410nm,1.2s						
TARA	Tarawa	93.11	272	P	P	20 02 58.8	+1.6
CORL	Corleone	93.14	49	IAmb	IAmb	20 03 51.2	
	comp=Z,208nm,1.3s						
HVAR	Hvar	93.21	44	P	P	20 02 56.3	-0.8
PSZ	Piszkesteto	93.28	38	⇓P	P	20 02 57.6	+0.2
PSZ	Piszkesteto	93.28	38	⇓P	PKKPbc	20 19 52.3	-14
PSZ	Piszkesteto	93.28	38	eP	P	20 02 57.0	-0.3
PSZ	Piszkesteto	93.28	38	⇓P	P	20 02 57.6	+0.2
MSVF	Nonsavu	93.29	253	i P	P	20 02 59.9	+1.9
MSVF				pmax	pmax		
	comp=Z,130nm,1.3s						
MSVF	Nonsavu	93.29	253	P	P	20 02 59.4	+1.5
MSVF				IAmb	IAmb	20 03 27.8	
	comp=Z,335nm,1.1s						
MSVF	Nonsavu	93.29	253	P	P	20 03 00.5	+2.5
MORH	Mrgy, Hungar	93.30	40	⇓P	P	20 02 56.8	-0.6
MORH	Mrgy, Hungar	93.30	40	⇓P	PKKPbc	20 20 04.0	-1.6
MORH	Mrgy, Hungar	93.30	40	eP	P	20 02 55.4	-2.0
MORH	Mrgy, Hungar	93.30	40	⇑iP	P	20 02 56.6	-0.8
KECS	Kecovo	93.36	38	eP	P	20 02 59.4	+1.7
KECS	Kecovo	93.36	38	eP	P	20 02 59.4	+1.7
NACGM	Naroch	93.43	30	i P	P	20 02 57.6	-0.2
RICI	Ricice	93.53	43	P	P	20 02 57.7	-0.8
LSTV	Lastovo	93.67	44	P	P	20 02 58.3	-0.9
CRVS	Cervenica-Dubn	93.73	37	eP	P	20 02 59.6	+0.2
CRVS				pmax	pmax		
	comp=Z,495nm,1.8s						
CRVS	Cervenica-Dubn	93.73	37	eP	P	20 02 59.6	+0.2
BSZH	Besenyszg	93.79	39	eP	P	20 02 59.5	-0.1
KWP	Kalwaria Pacla	94.08	36	eP	P	20 03 00.9	-0.1
KWP				eS	SKSac	20 13 28.9	+1.3
KWP				eL	L	20 35 20.7	
	comp=Z,20µm,45.0s						
STON	Ston	94.17	43	⇑iP	P	20 03 01.7	+0.3
RAFF	Raffo Rosso	94.17	50	IAmb	IAmb	20 03 54.9	
	comp=Z,300nm,1.3s						
KOLS	Kolonicke sedl	94.18	37	eP	P	20 03 01.9	+0.5
KOLS				pmax	pmax		
	comp=Z,297nm,1.8s						
KOLS	Kolonicke sedl	94.18	37	eP	P	20 03 01.9	+0.5
MNK	Minsk	94.19	30	i P	P	20 02 59.3	-2.0
MNK				i *PP	pP	20 03 25.9	-0.2
MNK				i		20 06 46.8	
MNK				i S	SKSac	20 13 24.2	-3.8
MNK				i SS	SS	20 20 21.7	-4.7
MNK				i SSS	SSS	20 24 05.0	
MNK				pmax	pmax		
	comp=Z,258nm,0.9s						
MNK				pmax	pmax		
	comp=N,74nm,0.9s						
MNK				pmax	pmax		
	comp=E,13nm,0.9s						
MNK				MLR	MLR		
	comp=E,1µm,24.0s						
MNK	Minsk	94.19	30	i P	P	20 02 59.4	-1.9
	comp=E,13nm,0.8s						
MNK				i P	P	20 02 59.4	-1.9
	comp=N,74nm,0.8s						
MNK				i P	P	20 02 59.4	-1.9
	comp=Z,258nm,0.8s,baz=304						
MNK				i pP	pP	20 03 26.0	-0.1
MNK				i PP	PP	20 06 46.8	-1.6
MNK				i PPP	PPP	20 08 46.2	
MNK				i S	SKSac	20 13 24.3	-3.7
MNK				i sS	ScS	20 14 12.2	+6.3
MNK				i SS	SS	20 20 21.7	-4.6
MNK				i SSS	SSS	20 24 05.1	
MNK				i LR	LR	20 34 40.3	
MNK				i LRM	MLR	20 39 39.7	
	comp=Z,12µm,21.2s						
MNK				i LRM	MLR	20 42 41.2	
	comp=N,5µm,24.6s						
MNK				i LRM	MLR	20 43 26.1	
	comp=E,1µm,23.8s						
UZH	Uzhgorod	94.34	37	eP	P	20 03 02.2	+0.1
UZH				e*PP	pP	20 03 27.2	+0.2
UZH				e		20 03 32.8	
UZH				e		20 06 44.6	
UZH				e		20 13 23.2	
UZH				eS	S	20 14 01.0	-5.3
UZH				MLR	MLR		
	comp=N,2µm,20.0s						
UZH				MLR	MLR		
	comp=E,2µm,20.0s						
UZH				MLR	MLR		
	comp=Z,1µm,20.0s						
FRGS	Fruska Gora	94.50	41	⇓P	P	20 03 03.5	+0.5
FRGS	Fruska Gora	94.50	41	⇓P	PKKPbc	20 20 01.8	-0.7
FRGS	Fruska Gora	94.50	41	⇑iP	P	20 03 02.7	-0.3
FRGS	Fruska Gora	94.50	41	eP	P	20 03 02.3	-0.7
AMBH	Ambrzfalva	94.51	39	eP	P	20 03 03.3	+0.4
TEKS	Tekeris	94.61	41	eP	P	20 03 03.0	-0.5
TREB	Trebinje	94.67	43	eP	P	20 03 04.3	+0.5
BRY	Bratogost	94.71	43	eP	P	20 03 05.0	+0.9
LTVH	Ltavrtes, Hu	94.72	38	eP	P	20 03 04.8	+0.9
LVV	L'vov	94.73	35	eP	P	20 03 03.7	-0.2
LVV				e		20 03 27.1	
LVV				e		20 06 54.3	
LVV				i		20 13 30.4	
LVV				eS	S	20 14 11.9	+2.3
LVV				e		20 15 36.6	
LVV				pmax	pmax		
	comp=Z,300nm,1.4s						
TRPA	Tarpa	94.73	37	⇓P	P	20 03 03.9	0.0
TRPA	Tarpa	94.73	37	eP	P	20 03 03.7	-0.3
BORR	Bors	94.80	38	⇓P	P	20 03 06.1	+1.9
UPM	Unac-Piva	94.81	43	eP	P	20 03 04.6	-0.1
BBLS	Lazići	94.84	42	⇑iP	P	20 03 04.5	-0.1
BBLS	Lazići	94.84	42	eP	P	20 03 04.7	+0.1
HCY	Herceg Novi	94.88	44	eP	P	20 03 05.6	+0.8
RUDO	Rudo	94.93	42	eP	P	20 03 05.5	+0.5
KLMR	Klimovskoe	94.94	21c	iP	P	20 03 03.7	-0.9
KLMR				e*PP	pP	20 03 27.9	-1.5
KLMR				e		20 06 50.9	
KLMR				eS	SKSac	20 13 29.0	-2.7
KLMR				pmax	pmax		
	comp=Z,224nm,1.3s						
KLMR	Klimovskoe	94.94	21	⇑iP	P	20 03 03.7	-0.9
KLMR				⇑iP	P	20 03 03.7	-0.9
KLMR				i P	P	20 03 03.7	-0.9
KLMR				AMP		20 03 05.9	
	comp=Z,224nm,1.3s						
KLMR				epP	pP	20 03 28.0	-1.5
KLMR				ePP	PP	20 06 51.0	-3.0
KLMR				eS	SKSac	20 13 29.1	-2.7
KLMR				eS	SKSac	20 13 29.1	-2.7
KLMR				LQ	LQ	20 39 39.9	
KLMR				LQ	LQ	20 39 39.9	
KLMR				LR	LR	20 40 54.7	
KLMR				AMP		20 42 51.0	
	comp=Z,20µm,23.4s						
DIVS	Divibare	95.11	42	⇑iP	P	20 03 05.6	-0.3
DIVS	Divibare	95.11	42	eP	P	20 03 05.3	-0.6
SIRR	Siria	95.12	39	⇑P	P	20 03 06.3	+0.5
NRIK	Noril'sk	95.13	360	P	P	20 03 05.6	+0.2
	comp=Z,60nm,1.1s,baz=54,slow=2.2,SNR=38						
NRIK				pP	pP	20 03 27.6	-2.6

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      comp=Z,79nm,1.1s,baz=340,slow=2.6,SNR=8.5
NRIK                                PP       PP       20 06 56.2 +0.9
      comp=Z,16nm,0.9s,baz=165,slow=3.2,SNR=4.0
NRIK                                PKKPbc   PKKPdf   20 19 59.5 -0.7
      comp=Z,7.8nm,0.8s,baz=167,slow=2.6,SNR=9.7
NRIK                                LR       LR       20 50 46.8
      comp=Z,5µm,18.2s,baz=3.5,slow=38
NRIK  Noril'sk           95.13 360 ceP      P        20 03 05.5 +0.2
NRIK                                pmax     pmax
      comp=Z,65nm,1.0s
TRUS  Trudelj            95.31  41 eP       P        20 03 06.1 -0.6
YAK   Yakutsk            95.35 341  PKKPbc  PKKPbc   20 19 59.3 -1.5
      comp=Z,4.3nm,0.3s,baz=153,slow=1.2,SNR=4.7
YAK   Yakutsk            95.35 341 c iP     P        20 03 05.1 -1.3
YAK                                e                 20 03 23.9
YAK                                e*PP     sP       20 03 37.1 -4.2
YAK                                e                 20 06 56.0
YAK                                eS       SKSac    20 13 29.2 -4.7
YAK                                e                 20 14 06.9
YAK                                eSS      SS       20 20 45.8 +3.4
YAK                                eSSS     SSS      20 24 23.5
YAK                                 pmax    pmax
      comp=Z,131nm,1.5s
YAK                                 pmax    pmax
      comp=N,31nm,1.6s
YAK                                 pmax    pmax
      comp=E,18nm,1.4s
YAK                                 pmax    pmax
      comp=Z,1µm,6.6s
YAK                                 pmax    pmax
      comp=N,710nm,5.8s
YAK                                 pmax    pmax
      comp=E,193nm,2.9s
YAK                                 smax    smax
      comp=N,2µm,4.3s
YAK                                 smax    smax
      comp=E,475nm,4.1s
YAK   Yakutsk            95.35 341  P       P        20 03 06.3 -0.2
YAK                                 IAmb    IAmb     20 03 33.0
      comp=Z,138nm,1.1s
PDG   Podgorica          95.39  43⇑iP       P        20 03 07.5 +0.4
BZS   Buzias             95.41  40 ⇓P       P        20 03 07.0 -0.1
BZS   Buzias             95.41  40 ⇓P       P        20 03 07.0 -0.1
IVAS  Ivanjica           95.45  42 eP       P        20 03 06.6 -0.8
DRME  Dracevica, Mon     95.45  44⇑iP       P        20 03 07.1 -0.3
SJES  Sjenica            95.48  42 eP       P        20 03 07.4 -0.2
DRGR                     95.50  38 ⇓P       P        20 03 07.3 -0.3
DRGR                     95.50  38 ⇓P       PKKPbc   20 19 58.6 -1.4
DRGR                     95.50  38 ⇓P       P        20 03 07.3 -0.3
BMR   Baia Mare          95.52  37 ⇓P       P        20 03 08.7 +1.1
BMR   Baia Mare          95.52  37 ⇓P       P        20 03 08.7 +1.1
GRUS  Gruza              95.67  42 eP       P        20 03 07.8 -0.5
SVIS  Svilajnac          95.81  41 eP       P        20 03 09.7 +0.8
MDVR  Moldovita          95.87  40 ⇑P       P        20 03 10.7 +1.4
MDVR  Moldovita          95.87  40 ⇑P       PKKPbc   20 19 56.8 -2.1
CJR   Cluj-Napoca        96.06  38 ⇓P       P        20 03 11.2 +1.1
CJR   Cluj-Napoca        96.06  38 ⇓P       P        20 03 11.2 +1.1
GZR   Gura Zlata         96.23  39 ⇑P       P        20 03 11.0 +0.1
GZR   Gura Zlata         96.23  39 ⇑P       P        20 03 11.0 +0.1
HERR  Herculane          96.26  40 ⇓P       P        20 03 12.7 +1.7
BOVS  Bovan              96.42  41 ⇑P       PKKPbc   20 19 56.1 -1.2
BOVS  Bovan              96.42  41 eP       P        20 03 10.4 -1.3
DJES  Djerdap            96.43  40 eP       P        20 03 13.4 +1.6
BURAR Bucovina Array     96.55  37 ⇑P       P        20 03 12.6 +0.2
BURAR Bucovina Array     96.55  37 ⇑P       PKKPbc   20 19 53.6 -3.6
BURAR Bucovina Array     96.55  37 ⇑P       P        20 03 12.6 +0.2
ZAGS  Zajecar            96.67  41 eP       P        20 03 11.9 -0.9
LOT   Lotru              96.81  39 ⇑P       PKKPbc   20 19 55.5 -1.0
SRE   Strehaia           96.86  40 ⇑P       P        20 03 15.8 +2.1
SRE   Strehaia           96.86  40 ⇑P       P        20 03 15.8 +2.1
PUNG  Punghina           96.88  40 ⇑P       PKKPbc   20 19 51.0 -5.0
BARS  Barje              96.88  42 eP       P        20 03 09.7 -4.2
BARS  Barje              96.88  42 eP       P        20 03 13.1 -0.8
OHR   Ohrid              97.02  44 i P      Pdif     20 03 16.7 +2.0
AKASG Malin Array Be     97.03  33  P       P        20 03 12.7 -1.7
      comp=Z,15nm,0.7s,baz=320,slow=6.5,SNR=35
AKASG                               PP      PP       20 07 11.8 +1.2
      comp=Z,8.8nm,1.0s,baz=299,slow=7.0,SNR=3.5
AKASG                               PKKPbc  PKKPbc   20 19 53.7 -2.1
      comp=Z,9.5nm,0.8s,baz=94,slow=2.6,SNR=20
AKASG                               LR      LR       20 47 03.2
      comp=Z,7µm,21.1s,baz=315,slow=36
AKBB  Malin Array Si     97.03  33ceP       P        20 03 12.9 -1.4
SKO   Skopje             97.04  43 i P      Pdif     20 03 16.3 +1.6
NKL   Nikolayevsk        97.14 331 eP       P        20 03 13.7 -1.0
NKL                                eSSS     SSS      20 25 00.0
NKL                                 pmax    pmax
      comp=N,3.0nm,0.8s
NKL                                 pmax    pmax
      comp=E,3.0nm,0.8s
NKL                                 pmax    pmax
      comp=Z,99nm,1.4s
NKL                                 MLR     MLR
      comp=E,54nm,19.0s
NKL                                 MLR     MLR
      comp=N,52nm,18.0s
NKL                                 MLR     MLR
      comp=Z,3µm,21.0s
ZAPS  Zavoj              97.19  41 eP       Pdif     20 03 16.8 +1.5
KBN   Korca              97.24  44  IAmb    IAmb     20 04 36.1
      comp=Z,119nm,1.3s
ARR   Arges              97.37  39 ⇓P       Pdif     20 03 16.9 +0.7
ARR   Arges              97.37  39 ⇓P       PKKPbc   20 19 54.1 -0.7
BOSS  Bosilegrad         97.47  42 eP       Pdif     20 03 16.6  0.0
DOPR  Dopca              97.51  38 ⇑P       Pdif     20 03 17.0 +0.2
DOPR  Dopca              97.51  38 ⇑P       PKKPbc   20 19 51.6 -2.9
TYV   Tymovskoe          97.56 328 eP       Pdif     20 03 17.6 +0.9
TYV                                eS       S        20 14 32.0 -1.9
TYV                                 pmax    pmax
      comp=Z,30nm,1.4s
TYV                                 pmax    pmax
      comp=Z,200nm,4.0s
TYV                                 smax    smax
      comp=N,2µm,4.8s
TYV                                 smax    smax
      comp=E,1µm,4.8s
VOIR                     97.59  39 ⇓P       Pdif     20 03 17.3 +0.1
VOIR                     97.59  39 ⇓P       PKKPbc   20 19 50.1 -4.2
VOIR                     97.59  39 ⇓P       Pdif     20 03 17.3 +0.2
OZUR                     97.68  38 ⇑P       Pdif     20 03 17.8 +0.3
OBN   Obninsk            97.76  26c iP      P        20 03 16.7 -0.8
OBN                                e*PP     pP       20 03 43.1 +0.8
OBN                                ePPP     PPP      20 09 24.2
OBN                                 pmax    pmax
      comp=Z,115nm,0.8s
OBN   Obninsk            97.76  26  P       P        20 03 16.7 -0.8
OBN                                 IAmb    IAmb     20 03 20.1
      comp=Z,154nm,0.8s
MOS   Moscow             97.78  25 eP       P        20 03 15.0 -2.6
MOS                                e*PP     pP       20 03 41.7 -0.7
MOS                                e*SP     sP       20 03 50.8 -1.5
MOS                                e                 20 07 13.6
MOS                                ePPP     PPP      20 09 20.3
MOS                                i S      SKSac    20 13 47.5 +0.7
MOS                                e*SS     S        20 14 30.1 -5.5
MOS                                ePS      PS       20 15 54.0  -16
MOS                                ePPS     PPS      20 16 39.1
MOS                                eSS      SS       20 21 13.0 -4.0
MOS                                 pmax    pmax
      comp=Z,294nm,1.6s
MOS                                 pmax    pmax
      comp=N,128nm,1.4s
MOS                                 pmax    pmax
      comp=Z,2µm,3.6s
MOS                                 pmax    pmax
      comp=N,1µm,4.0s
MOS                                 pmax    pmax
      comp=E,1µm,4.0s
MOS                                 smax    smax
      comp=N,8µm,4.6s
MOS                                 smax    smax
      comp=E,8µm,4.6s
MOS                                 MLR     MLR
      comp=N,8µm,21.0s
MOS                                 MLR     MLR
      comp=E,8µm,21.0s
MOS                                 MLR     MLR
      comp=Z,11µm,21.0s
VTS   Vitosha            97.89  42 ⇑P       P        20 03 18.1 -0.5
VTS   Vitosha            97.89  42 ⇓P       PKKPbc   20 19 53.0 -0.5
VTS   Vitosha            97.89  42 ⇑P       P        20 03 18.1 -0.5
TESR  Tescani            97.96  37 ⇓P       P        20 03 17.7 -1.0
TESR  Tescani            97.96  37 ⇑P       PKKPbc   20 19 51.2 -2.0
HUMR  Humele             98.02  39 ⇑P       Pdif     20 03 19.0 +0.1
SORM  Soroca             98.03  35 ⇓P       P        20 03 17.8 -1.1
SORM  Soroca             98.03  35 ⇑P       PKKPbc   20 19 51.5 -1.5
SORM  Soroca             98.03  35 ⇓P       P        20 03 17.8 -1.1
COVR  Voineasa-Covas     98.06  38 ⇑P       Pdif     20 03 20.1 +1.0
COVR  Voineasa-Covas     98.06  38 ⇓P       PKKPbc   20 19 50.1 -2.9
MLR   Muntele Rosu       98.10  38 ⇓P       P        20 03 19.3 -0.1
MLR   Muntele Rosu       98.10  38 ⇑P       PKKPbc   20 19 52.1 -0.9
MLR   Muntele Rosu       98.10  38 ⇓P       P        20 03 19.3 -0.1
MLR   Muntele Rosu       98.10  38  IAmb    IAmb     20 03 21.8
      comp=Z,435nm,2.0s
VAY   Valandovo          98.10  43 i P      Pdif     20 03 20.6 +1.3
PLOR  Plostina           98.32  38 ⇑P       PKKPbc   20 20 00.2 +8.0
NEHR  Nehoiu             98.34  38 ⇓P       PKKPbc   20 19 50.8 -1.3
VRI   Vrincioaia         98.36  38 ⇑P       Pdif     20 03 21.5 +1.1
VRI   Vrincioaia         98.36  38 ⇑P       PKKPbc   20 19 51.1 -1.0
VRI   Vrincioaia         98.36  38 ⇑P       Pdif     20 03 21.5 +1.0
VRI   Vrincioaia         98.36  38 ⇓P       Pdif     20 03 21.0 +0.6
SECR                     98.41  39 ⇓P       PKKPbc   20 19 52.3 +0.4
BISRR Bisoca             98.52  38 ⇑P       PKKPbc   20 19 51.5 -0.3
GHRR                     98.65  37 ⇑P       P        20 03 21.0 -0.7
MILM  Milestii Mici      98.98  36 ⇑P       PKKPbc   20 19 49.7 -0.7
AGG   Agios Georgios     99.05  45  IAmb    IAmb     20 06 06.1
      comp=Z,247nm,2.0s
TUDR                     99.06  37 ⇓P       PKKPbc   20 19 46.7 -3.4
URZ   Urewera            99.14 233  PP      PP       20 07 26.8 -0.9
      comp=Z,4.6nm,0.8s,baz=119,slow=23,SNR=1.3
VLDR  Vladesti           99.16  37 ⇑P       PKKPbc   20 19 49.3 -0.6
CFR   Carcaliu           99.56  38 ⇑P       Pdif     20 03 24.5 -1.3
CFR   Carcaliu           99.56  38 ⇓P       PKKPbc   20 19 48.2 -0.5
CFR   Carcaliu           99.56  38 ⇑P       Pdif     20 03 24.5 -1.3
YUK   Yuzh-Kuril'sk      99.64 321c iP      Pdif     20 03 31.7 +5.6
YUK                                i                 20 07 28.6
YUK                                i PPP    PPP      20 09 38.3
YUK                                i S      SKSac    20 13 54.2 -2.3
YUK                                i *SS    ScS      20 14 43.3 -8.4
YUK                                i SS     SS       20 21 39.4 -4.3
YUK                                i SSS    SSS      20 25 29.5
YUK                                 pmax    pmax
      comp=N,109nm,1.4s
YUK                                 pmax    pmax
      comp=Z,213nm,1.4s
YUK                                 pmax    pmax
      comp=Z,325nm,4.7s
YSS   Yuzh-Sakhalins     99.80 325 eP       Pdif     20 03 24.0 -2.8
YSS                                e*PP     pP       20 03 49.6 -1.8
YSS                                e*SP     sP       20 03 59.1 -2.2
YSS                                e                 20 13 53.3
YSS                                eS       S        20 14 42.8  -10
YSS                                ePS      SP       20 16 21.3 +0.9
YSS                                ePPS     PPS      20 17 23.9
YSS                                eSS      SS       20 21 44.6 -1.1
YSS                                eSSS     SSS      20 25 42.9
YSS                                 pmax    pmax
      comp=Z,40nm,1.1s
YSS                                 smax    smax
      comp=N,3µm,9.5s
YSS                                 smax    smax
      comp=E,2µm,9.2s
YSS                                 MLR     MLR
      comp=Z,2µm,20.0s
YSS                                 MLR     MLR
      comp=E,1µm,19.0s
YSS   Yuzh-Sakhalins     99.80 325  P       Pdif     20 03 29.0 +2.2
TPGR  Topolog            99.91  38 ⇑P       PKKPbc   20 19 47.1 -0.7
KIRV  Kirov              99.92  19ceP       Pdif     20 03 26.7 -0.4
TIRR  Tirgusor          100.13  38 ⇓P       Pdif     20 03 28.9 +0.6
TIRR  Tirgusor          100.13  38 ⇓P       Pdif     20 03 28.9 +0.6
MFTR  Murfatlar         100.29  38 ⇑P       PKKPbc   20 20 10.2  +24
LPSR  Galich'ya Gora    100.50  27 eP       Pdif     20 03 29.7 -0.1
LPSR                               e                 20 14 02.4
LPSR                                pmax    pmax
      comp=Z,100nm,1.0s
GRNR  Gornyy            100.69 330⇑iP       Pdif     20 03 32.3 +1.6
GRNR                                pmax    pmax
      comp=N,3.0nm,1.2s
GRNR                                pmax    pmax
      comp=Z,8.0nm,1.0s
GRNR                                MLR     MLR
      comp=N,1µm,19.0s
GRNR                                MLR     MLR
      comp=E,680nm,19.0s
GRNR                                MLR     MLR
      comp=Z,1µm,17.0s
VORR  Voronezh          101.26  28 eP       Pdif     20 03 31.0 -2.2
VORR                                pmax    pmax
      comp=Z,250nm,1.4s
VSR   Storozhevoye      101.56  28 eP       Pdif     20 03 34.6 +0.1
VSR                                e                 20 07 43.3
VSR                                e                 20 14 05.8
VSR                                 pmax    pmax
      comp=Z,60nm,1.5s
VORD  Divnogorie        101.79  28 eP       Pdif     20 03 35.5 -0.1
VORD                               e                 20 14 06.2
VORD                                pmax    pmax
      comp=Z,10.0nm,1.0s
ZEA   Zeya              102.51 337 eP       Pdif     20 03 40.0 +1.3
ZEA                                e                 20 07 51.7
ZEA                                e                 20 14 11.2
ZEA                                e                 20 15 12.9
ZEA                                e                 20 17 02.5
ZEA                                 pmax    pmax
      comp=Z,10.0nm,1.0s
ZEA                                 pmax    pmax
      comp=Z,200nm,3.5s
ZEA                                 pmax    pmax
      comp=N,400nm,8.0s
ZEA                                 pmax    pmax
      comp=Z,1µm,7.4s
ZEA                                 pmax    pmax
      comp=E,500nm,7.2s
VRH   Novokhopyorsk     102.71  27 eP       Pdif     20 03 40.6 +1.0
VRH                                e                 20 14 11.0
VRH                                 pmax    pmax
      comp=Z,70nm,1.2s
VNA3  Neumayer Olymp    102.80 161  Pdiff   Pdif     20 03 40.4 +0.9
BOD   Bodaibo           103.26 345 eP       Pdif     20 03 41.5 -0.4
BOD                                 pmax    pmax
      comp=Z,39nm,1.6s
VNA2  Neumayer--Watz    103.48 160  Pdiff   Pdif     20 03 43.2 +0.7
      baz=290,slow=4.7
KLR   Kul'dur           103.94 331  PKKPbc  PKKPbc   20 19 35.7 -0.5
      comp=Z,3.7nm,0.9s,baz=256,slow=3.5,SNR=5.6
ARU   Arti              104.37  16  P       Pdif     20 03 47.1 +0.2
ARU                                                  20 08 01.6
ARU                                 S       SKSac    20 14 17.2 -1.3
ARU                                 SP      SP       20 17 01.5 -6.5
ARU                                 MLR     MLR
      comp=Z,19µm,24.0s
SVE   Sverdlovsk        104.53  14 eP       Pdif     20 03 47.4 -0.2
DZM   Mont Dzumac       104.91 251 ePP      PKiKP    20 08 07.4 +2.5
      comp=Z,3µm,26.4s
DZM                                eSKSac   SKSac    20 14 18.2 -4.2
      comp=Z,7µm,27.1s
DZM   Mont Dzumac       104.91 251 ePS      PS       20 17 25.8 -2.0
      comp=Z,6µm,28.9s
DZM                                eSS      SS       20 22 56.9 -2.2
      comp=Z,10µm,32.3s
DZM   Mont Dzumac       104.91 251 eLQ      LQ       20 33 59.5
      comp=Z,5µm,31.1s
DZM                                eLR      LR       20 38 25.3
      comp=Z,25µm,27.9s
DZM   Mont Dzumac       104.91 251  PP      PKiKP    20 08 11.0 +6.1
      comp=Z,13nm,1.0s,baz=86,slow=13,SNR=2.5
ANTO  Ankara            105.43  40  PKiKP   PKiKP    20 08 05.2 -0.2
BR131 Keskin Array S    106.04  40  PKiKP   PKiKP    20 08 06.9 +0.3
BR131                               SKSac   SKSac    20 14 27.8 +0.8
BRTR  Keskin Array B    106.04  40  Pdiff   Pdif     20 03 53.4 -1.5
      comp=Z,0.6nm,0.4s,baz=29,slow=3.3,SNR=3.8
BRTR                                PKiKP   PKiKP    20 08 07.0 +0.4
      comp=Z,3.7nm,0.7s,baz=234,slow=1.1,SNR=6.1
BRTR                                PKKPbc  PKKPbc   20 19 29.9 +0.1
      comp=Z,6.2nm,0.8s,baz=146,slow=4.4,SNR=9.3
BRTR                                PKKPab  PKKPab   20 19 45.9 -1.7
      comp=Z,4.2nm,0.9s,baz=127,slow=5.4,SNR=4.8
SOC   Sochi             107.07  34c iP      Pdif     20 03 59.1 -0.1
SOC                                i                 20 14 33.9
SOC                                e                 20 17 47.8
SOC                                 pmax    pmax
      comp=Z,13nm,0.8s
USRK  Ussuriysk Ar.     107.36 328  PKiKP   PKiKP    20 08 10.1 +1.4
      comp=Z,10nm,1.1s,baz=50,slow=4.5,SNR=4.1
USRK                                PP      PP       20 08 29.1 +1.1
      comp=Z,1.0nm,0.6s,baz=66,slow=3.5,SNR=2.7
KIV   Kislovodsk        108.36  32 i P      Pdif     20 04 04.2 -0.9
KIV                                e                 20 08 33.6
KIV                                ePPP     PPP      20 10 50.4
KIV                                e                 20 14 34.2
KIV                                ePS      PS       20 17 59.4 -2.4
KIV                                eSS      SS       20 23 41.7 -1.4
KIV                                eSSS     SSS      20 27 44.9
KIV                                 pmax    pmax
      comp=Z,21nm,1.0s
KIV                                 MLR     MLR
      comp=Z,6µm,21.0s
KIV   Kislovodsk        108.36  32  PP      PP       20 08 31.9 -3.4
KIV                                 SKSac   SKSac    20 14 40.9 +4.0
VNDA  Vanda             108.45 193  Pdiff   Pdif     20 04 07.1 +2.6
      comp=Z,1.0nm,0.9s,baz=12,slow=3.8,SNR=3.4
VNDA                                PKiKP   PKiKP    20 08 11.3 +1.6
      comp=Z,4.3nm,1.0s,baz=298,slow=2.6,SNR=7.4
VNDA                                PP      PP       20 08 34.8 -1.1
      comp=Z,2.1nm,0.9s,baz=111,slow=10,SNR=7.4
VNDA                                PKKPbc  PKKPbc   20 19 22.1 -1.2
      comp=Z,2.2nm,0.7s,baz=307,slow=5.8,SNR=11
VNDA                                PKKP    PKKPab   20 19 33.3 +0.6
      comp=Z,5.8nm,0.9s,baz=282,slow=6.2,SNR=8.6
KBZ   Khabaz            108.62  32  Pdiff   Pdif     20 04 06.3 +0.3
      comp=Z,3.2nm,1.1s,baz=284,slow=8.4,SNR=2.7
KBZ                                 PKKPbc  PKKPbc   20 19 22.0 +0.4
      comp=Z,13nm,0.9s,baz=172,slow=4.7,SNR=13
KBZ                                 PKKP    PKKPdf   20 19 35.2 -0.1
      comp=Z,17nm,0.9s,baz=146,slow=1.7,SNR=12
MJAR  Matsushiro Arr    108.72 318  pPdiff  pPdif    20 04 31.4  0.0
      comp=Z,3.5nm,0.7s,baz=50,slow=3.8,SNR=4.5
MJAR                                PKKPbc  PKKPbc   20 19 21.4 +0.2
      comp=Z,8.0nm,0.8s,baz=185,slow=2.1,SNR=6.2
MJAR                                PKKPab  PKKPab   20 19 35.8 +0.4
      comp=Z,7.0nm,1.0s,baz=224,slow=5.0,SNR=5.5
BCA   Borcka            109.56  34 ⇑P       PKKPbc   20 19 22.3 +3.6
BRVK  Borovoye          110.05  10  pPKiKP  pPKiKP   20 08 42.2 +3.1
BRVK                                SKSac   SKSac    20 14 45.8 +2.4
ZALV  Zalesovo Beam     110.57   1  Pdiff   Pdif     20 04 15.8 +1.2
      comp=Z,1.0nm,0.5s,baz=328,slow=5.1,SNR=3.2
ZALV                                PKiKP   PKiKP    20 08 14.7 +0.2
      comp=Z,8.9nm,0.6s,baz=338,slow=3.2,SNR=6.7
ZALV                                PP      PP       20 08 50.8 +0.1
      comp=Z,18nm,0.8s,baz=345,slow=8.0,SNR=6.3
ZALV                                PKKPbc  PKKPab   20 19 21.9 -5.7
      comp=Z,6.6nm,0.8s,baz=184,slow=4.1,SNR=8.9
CN2   Changchun         110.88 331 ePKP     PKiKP    20 08 15.3 -0.1
CN2                                 PP      PP       20 08 56.8 +3.4
CN2                                 SS      SS       20 24 19.3 +2.7
CN2                                 AMB     AMB
      comp=Z,300nm,7.0s
CN2                                 LR      LR
      comp=Z,2µm,21.0s
CN2                                 LR      LR
      comp=Z,2µm,21.0s
CN2                                 LR      LR
      comp=Z,3µm,21.0s
TLY   Talaya            111.22 349 eP       Pdif     20 04 18.3 +0.8
TLY                                e                 20 14 50.4
TLY                                ePS      SP       20 18 14.5 -2.5
TLY                                 pmax    pmax
      comp=Z,63nm,1.5s
TLY                                 MLR     MLR
      comp=Z,9µm,18.0s
TLY   Talaya            111.22 349  pPKiKP  pPKiKP   20 08 39.2 -2.3
MAK   Makhachkala       111.46  30 i P      Pdif     20 04 17.3 -1.5
MAK                                i                 20 08 15.1
MAK                                e                 20 08 42.3
MAK                                e                 20 08 55.7
MAK                                ePPP     PPP      20 11 16.6
MAK                                e                 20 14 49.9
MAK                                ePS      PS       20 18 27.9 -3.2
MAK                                eSS      SS       20 24 21.4 -2.9
MAK                                eSSS     SSS      20 28 29.8
MAK                                 pmax    pmax
      comp=Z,97nm,1.2s
MAK                                 MLR     MLR
      comp=Z,10µm,22.0s
GNI   Garni             112.15  33⇑pPKiKP   pPKiKP   20 08 45.6 +1.6
BRZS  Berezniki         113.42  10 ePKiKP   PKiKP    20 08 20.2  0.0
      baz=9.9
BRZS  Berezniki         113.42  10 i PKIKP  PKiKP    20 08 20.1  0.0
KURK  Kurchatov         113.46   5 i PKIKP  PKiKP    20 08 20.8 +0.7
KURK  Kurchatov         113.46   5  pPKiKP  pPKiKP   20 08 51.9 +6.2
SEM   Semipalatinsk     113.90   4 ePKiKP   PKiKP    20 08 21.1 -0.1
      baz=4.6
SEM   Semipalatinsk     113.90   4 i PKIKP  PKiKP    20 08 21.1 -0.1
ULN   Ulaanbaatar       114.07 345 i PKIKP  PKPdf    20 08 21.7 +0.1
ULN   Ulaanbaatar       114.07 345  pPKiKP  pPKiKP   20 08 46.3 -1.0
SONM  Songino Array     114.26 345  Pdiff   Pdif     20 04 32.1 +0.8
      comp=Z,0.2nm,0.6s,baz=16,slow=5.3,SNR=2.6
SONM                                PKP     PKPdf    20 08 22.3 +0.4
      comp=Z,9.1nm,0.8s,baz=322,slow=0.5,SNR=15
SONM                                PP      PP       20 09 18.6 +1.3
      comp=Z,12nm,0.9s,baz=43,slow=1.9,SNR=5.3
SONM                                PKKPbc  PKKPbc   20 19 02.6 -1.1
      comp=Z,11nm,0.8s,baz=183,slow=2.4,SNR=22
KSRS  Korea Array       114.30 325  PKP     PKiKP    20 08 21.9 -0.2
      comp=Z,27nm,1.2s,baz=42,slow=0.5,SNR=18
KSRS                                pPKP    pPKiKP   20 08 46.8 -0.8
      comp=Z,24nm,1.1s,baz=33,slow=0.8,SNR=5.5
KSRS                                PKKPbc  PKKPbc   20 19 03.2 +0.4
      comp=Z,3.9nm,0.9s,baz=272,slow=3.1,SNR=7.3
KSRS                                PKKPab  PKKPab   20 19 09.7 -1.0
      comp=Z,11nm,1.0s,baz=211,slow=4.3,SNR=6.0
DGZ   Jazzator, Alta    114.83 359 i PKIKP  PKiKP    20 08 22.8 -0.2
DL2   Dalian            116.49 330  Pdif    Pdif     20 04 47.4 +6.2
DL2                                 pP      sPdif    20 05 15.6 +0.1
DL2                                 PP      PP       20 09 32.3 -0.9
DL2   Dalian            116.49 330  SS      SS       20 25 33.4 +2.8
DL2                                 AMB     AMB
      comp=Z,810nm,7.8s
DL2                                 LR      LR
      comp=N,3µm,25.3s
DL2                                 LR      LR
      comp=E,2µm,24.9s
DL2                                 LR      LR
      comp=Z,6µm,33.3s
ZSN   Zaisan            117.07   1 ePKP     PKPdf    20 08 26.8 -0.4
      baz=1.5
ZSN   Zaisan            117.07   1 ePKIKP   PKPdf    20 08 26.8 -0.4
MAKZ  Makanchi          117.60   4  PKIKP   PKPdf    20 08 27.5 -0.7
MAKZ  Makanchi          117.60   4  PKPdf   PKPdf    20 08 27.5 -0.7
MK31  Makanchi Array    117.63   3 i PKIKP  PKPdf    20 08 27.7 -0.6
MKAR  Makanchi Array    117.63   3  Pdiff   Pdif     20 04 46.5 +0.3
      comp=Z,0.9nm,0.8s,baz=32,slow=4.8,SNR=5.2
MKAR                                PKP     PKPdf    20 08 27.6 -0.6
      comp=Z,31nm,0.9s,baz=354,slow=1.4,SNR=38
MKAR                                pPKP    pPKPdf   20 08 52.1 -1.8
      comp=Z,14nm,0.9s,baz=37,slow=6.2,SNR=3.9
MKAR                                PKKPbc  PKKPbc   20 18 44.3 -7.5
      comp=Z,3.6nm,0.9s,baz=188,slow=4.0,SNR=6.6
MKAR                                PKKP    PKKPdf   20 19 19.6 +1.0
      comp=Z,8.2nm,0.9s,baz=121,slow=4.7,SNR=5.3
BJI   Beijing           118.01 335  PKP     PKiKP    20 08 29.6 +0.4
BJI                                 PP      PP       20 09 48.3 +4.7
BJI                                 SKKS             20 16 30.4
BJI                                 SS      SS       20 25 50.8 +0.7
BJI                                 AMB     AMB
      comp=Z,2µm,8.3s
BJI                                 LR      LR
      comp=Z,5µm,20.7s
BJI                                 LR      LR
      comp=Z,2µm,19.0s
BJI                                 LR      LR
      comp=Z,8µm,20.3s
BJT   Baijiatuau        118.03 335  PKIKP   PKPdf    20 08 29.1 -0.1
BJT   Baijiatuau        118.03 335  PKPdf   PKPdf    20 08 29.1 -0.1
BTLS  Baital            118.44  10 ePKP     PKiKP    20 08 30.0 +0.1
      baz=10
BTLS  Baital            118.44  10 ePKIKP   PKiKP    20 08 30.0 +0.1
SUR   Sutherland        118.60 119  PKPdf   PKiKP    20 08 31.4 +0.6
HHC   Hu-ho-hao-te      119.08 338 ePKP     PKiKP    20 08 32.1 +0.7
HHC                                 SS      SS       20 26 01.6 -2.5
HHC                                 AMB     AMB
      comp=Z,200nm,4.2s
HHC                                 LR      LR
      comp=Z,4µm,19.6s
HHC                                 LR      LR
      comp=Z,3µm,17.9s
HHC                                 LR      LR
      comp=Z,7µm,19.6s
TDK   Taldyqorghan      119.09   7 ePKP     PKPdf    20 08 30.7 -0.5
      baz=6.8
TDK   Taldyqorghan      119.09   7 ePKIKP   PKPdf    20 08 30.6 -0.5
SYO   Syowa Base        119.25 162⇓ePdiff   Pdif     20 04 52.0 -0.6
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SYO	**Syowa Base**	**119.25**	**162**	⇑*e*pPdiff	pPdif	20 05 16.1	-1.0
BRLS	**Borolday**	**119.53**	**14**	*e*PKP	**PKiKP**	**20 08 32.3**	**+0.2**
	baz=14						
BRLS	**Borolday**	**119.53**	**14**	*e*PKIKP	**PKiKP**	**20 08 32.3**	**+0.2**
ARXS	**Arharly**	**119.80**	**7**	*e*PKIKP	**PKPdf**	**20 08 31.5**	**-1.1**
BTO	**Baotou**	**119.83**	**340**	*e*PKP	**PKPdf**	**20 08 30.0**	**-2.8**
BTO				LR	LR		
	comp=Z,8µm,22.1s						
BTO				LR	LR		
	comp=Z,12µm,23.5s						
KUU	**Kurty**	**119.92**	**8**	*e*PKP	**PKPdf**	**20 08 32.2**	**-0.6**
	baz=8.7						
KUU	**Kurty**	**119.92**	**8**	*e*PKIKP	**PKPdf**	**20 08 32.2**	**-0.6**
DZA	**Taraz**	**120.00**	**13**	*e*PKP	**PKiKP**	**20 08 33.2**	**+0.2**
	baz=13						
DZA	**Taraz**	**120.00**	**13**	*e*PKIKP	**PKiKP**	**20 08 33.2**	**+0.2**
SGDS	**Sogindy**	**120.08**	**10**	*e*PKP	**PKiKP**	**20 08 33.2**	**0.0**
	baz=10						
SGDS	**Sogindy**	**120.08**	**10**	*e*PKIKP	**PKiKP**	**20 08 33.9**	**+0.6**
USP	**Ospenovka**	**120.24**	**10**	P	**PKiKP**	**20 08 34.5**	**+1.0**
	SNR=61						
USP	**Ospenovka**	**120.24**	**10**	P	**PKKPbc**	**20 18 42.3**	**0.0**
	SNR=6.7						
GEYT	**Alibeck**	**120.30**	**26**	PKP	**PKiKP**	**20 08 34.2**	**+0.4**
	comp=Z,60nm,0.8s,baz=236,slow=9.9,SNR=34						
GEYT				pPKP	**pPKPdf**	**20 08 57.5**	**-2.0**
	comp=Z,48nm,1.0s,baz=252,slow=3.8,SNR=5.1						
GEYT				PKKPbc	**PKKPbc**	**20 18 41.6**	**-0.2**
	comp=Z,6.8nm,0.8s,baz=143,slow=4.3,SNR=6.8						
IUG	**Iuzhnay**	**120.41**	**14**	*e*PKP	**PKPdf**	**20 08 33.7**	**-0.2**
	baz=14						
IUG	**Iuzhnay**	**120.41**	**14**	*e*PKIKP	**PKPdf**	**20 08 33.7**	**-0.2**
CHMS	**Chumysh**	**120.55**	**10**	P	**PKiKP**	**20 08 34.7**	**+0.6**
	SNR=24						
EKS2	**Erkin-Say**	**120.70**	**11**	P	**PKiKP**	**20 08 35.7**	**+1.2**
	SNR=52						
EKS2	**Erkin-Say**	**120.70**	**11**	P	**PKKPbc**	**20 18 40.4**	**-0.2**
	SNR=6.6						
WMQ	**Urumqi**	**120.71**	**359**	PKP	**PKiKP**	**20 08 34.9**	**+0.4**
WMQ				PP	**PP**	**20 10 03.9**	**+2.0**
WMQ				SKS	**SKSac**	**20 15 28.9**	**+4.5**
WMQ				SS	**SS**	**20 26 28.8**	**+4.5**
WMQ				AMB	AMB		
	comp=Z,4µm,8.3s						
WMQ				LR	LR		
	comp=Z,9µm,21.3s						
WMQ				LR	LR		
	comp=Z,6µm,23.7s						
WMQ				LR	LR		
	comp=Z,12µm,22.7s						
MDOK	**Medeo**	**120.73**	**8**	*e*PKP	**PKiKP**	**20 08 34.6**	**0.0**
	baz=8.3						
MDOK	**Medeo**	**120.73**	**8**	*e*PKIKP	**PKiKP**	**20 08 34.6**	**0.0**
TKM2	**Tokmak 2**	**120.76**	**9**	P	**PKiKP**	**20 08 35.9**	**+1.1**
	SNR=28						
TIA	**Tai'an**	**120.78**	**331**	PKP	**PKiKP**	**20 08 35.1**	**+0.4**
TIA				PP	**PP**	**20 10 07.1**	**+4.3**
TIA				SKS	**SKSac**	**20 15 28.8**	**+4.1**
TIA				AMB	AMB		
	comp=Z,1µm,8.7s						
TIA				LR	LR		
	comp=Z,3µm,19.1s						
TIA				LR	LR		
	comp=Z,1µm,15.7s						
TIA				LR	LR		
	comp=Z,4µm,17.9s						
TNSS	**Tian-Shan**	**120.84**	**8**	*e*PKP	**PKiKP**	**20 08 35.5**	**+0.2**
	baz=8.4						
AAK	**Ala-Archa**	**120.85**	**10**	P	**PKiKP**	**20 08 36.0**	**+1.1**
	SNR=36						
AAK	**Ala-Archa**	**120.85**	**10**	*i* PKiKP	**PKiKP**	**20 08 35.6**	**+0.7**
	SNR=42						
AAK	**Ala-Archa**	**120.85**	**10**	PKIKP	**PKiKP**	**20 08 35.5**	**+0.6**
AAK	**Ala-Archa**	**120.85**	**10**	PKiKP	**PKiKP**	**20 08 36.1**	**+1.1**
AAK	**Ala-Archa**	**120.85**	**10**	PKPdf	**PKiKP**	**20 08 35.5**	**+0.6**
KBK	**Karagaybulak**	**120.91**	**10**	P	**PKiKP**	**20 08 36.0**	**+1.0**
	SNR=43						
UZB	**Uzynbulak**	**120.99**	**6**	*e*PKP	**PKPdf**	**20 08 35.0**	**0.0**
	baz=6.6						
UZB	**Uzynbulak**	**120.99**	**6**	*e*PKIKP	**PKPdf**	**20 08 35.0**	**0.0**
SATY	**Saty**	**121.01**	**7**	*e*PKP	**PKPdf**	**20 08 34.9**	**-0.2**
	baz=7.1						
SATY	**Saty**	**121.01**	**7**	*e*PKIKP	**PKPdf**	**20 08 34.8**	**-0.2**
MIB	**Mutribah**	**121.01**	**40**	*e*P	**PKiKP**	**20 08 35.4**	**0.0**
RST	**Umm Al-Ruwaisa**	**121.01**	**40**	*e*P	**PKPdf**	**20 08 35.1**	**-0.1**
SHLS	**Shalkode**	**121.02**	**6**	*e*PKP	**PKPdf**	**20 08 35.0**	**-0.1**
	baz=5.9						
SHLS	**Shalkode**	**121.02**	**6**	*e*PKIKP	**PKPdf**	**20 08 35.0**	**-0.1**
AML	**Almayashu**	**121.20**	**11**	P	**PKiKP**	**20 08 37.2**	**+1.3**
	SNR=37						
AML	**Almayashu**	**121.20**	**11**	*i* PKiKP	**PKiKP**	**20 08 36.9**	**+0.9**
	SNR=8.3						
AML	**Almayashu**	**121.20**	**11**	PKiKP	**PKiKP**	**20 08 37.1**	**+1.1**
UCH	**Uchtor**	**121.25**	**10**	P	**PKiKP**	**20 08 37.5**	**+1.4**
	SNR=45						
UCH	**Uchtor**	**121.25**	**10**	P	**PKKPbc**	**20 18 37.9**	**-1.1**
	SNR=7.6						
UMR	**Umm Al-Rimmam**	**121.42**	**40**	*e*P	**PKiKP**	**20 08 36.1**	**-0.1**
TIY	**Taiyuan**	**121.51**	**336**	*e*PKP	**PKiKP**	**20 08 36.8**	**+0.6**
TIY				PP	**PP**	**20 10 12.8**	**+5.1**
TIY				SKS	**SKSac**	**20 15 29.6**	**+2.3**
TIY				SS	**SS**	**20 26 38.1**	**+2.9**
TIY				AMB	AMB		
	comp=Z,1µm,7.9s						
TIY				LR	LR		
	comp=Z,770nm,14.8s						
TIY				LR	LR		
	comp=Z,660nm,14.4s						
TIY				LR	LR		
	comp=Z,3µm,23.9s						
ULHL	**Ulahol**	**121.52**	**9**	P	**PKiKP**	**20 08 38.0**	**+1.7**
	SNR=29						
ULHL	**Ulahol**	**121.52**	**9**	P	**PKKPbc**	**20 18 37.5**	**-0.2**
	SNR=7.2						
KBD	**Kabd**	**121.67**	**40**	*e*P	**PKiKP**	**20 08 36.7**	**0.0**
QRN	**Al-Qurain**	**122.11**	**40**	*e*P	**PKiKP**	**20 08 37.6**	**+0.1**
BOSA	**Boshof**	**122.37**	**114**	PKP	**PKiKP**	**20 08 38.8**	**+0.6**
	comp=Z,194nm,0.8s,baz=276,slow=1.6,SNR=81						
BOSA				pPKP	**pPKPdf**	**20 09 02.2**	**-1.3**
	comp=Z,193nm,0.9s,baz=276,slow=1.5,SNR=8.5						
BOSA				PP	**PP**	**20 10 12.6**	**-2.7**
	comp=Z,45nm,0.9s,baz=275,slow=6.5,SNR=2.1						
BOSA	**Boshof**	**122.37**	**114**	*i* P	**PKiKP**	**20 08 38.4**	**+0.2**
BOSA	**Boshof**	**122.37**	**114**	*i* P	**PKiKP**	**20 08 38.4**	**+0.2**
SSE	**Sheshan**	**122.74**	**325**	PKP	**PKiKP**	**20 08 39.3**	**+0.6**
SSE				PP	**PP**	**20 10 15.5**	**-0.8**
SSE				SS	SS	20 26 52.1	+0.7
SSE				AMB	AMB		
	comp=Z,240nm,4.7s						
SSE				LR	LR		
	comp=Z,1µm,19.8s						
SSE				LR	LR		
	comp=Z,700nm,15.8s						
MBAR	**Mbarara**	**122.96**	**80***c*	*i*PKIKP	**PKiKP**	**20 08 41.3**	**+1.5**
MBAR	**Mbarara**	**122.96**	**80**	PKiKP	**PKiKP**	**20 08 41.6**	**+1.8**
CTA	**Charters Tower**	**123.27**	**256**	PKP	**PKiKP**	**20 08 40.0**	**+0.1**
	comp=Z,20nm,0.8s,baz=56,slow=3.6,SNR=10						
CTA				pPKP	**pPKPdf**	**20 09 05.0**	**-0.3**
	comp=Z,30nm,1.0s,baz=352,slow=1.9,SNR=5.1						
CTA				PP	**PP**	**20 10 19.9**	**-1.6**
	comp=Z,2.9nm,0.4s,baz=36,slow=6.2,SNR=1.1						
CTAO	**Charters Tower**	**123.27**	**256**	PKIKP	**PKiKP**	**20 08 40.2**	**+0.2**
CTAO	**Charters Tower**	**123.27**	**256**	PKPdf	**PKiKP**	**20 08 40.2**	**+0.2**
CTAO	**Charters Tower**	**123.27**	**256**	P	**PKiKP**	**20 08 40.1**	**+0.1**
CTAO	**Charters Tower**	**123.27**	**256**	P	**PKiKP**	**20 08 40.5**	**+0.5**
NJ2	**Nanjing**	**123.27**	**327**	⇓PKP	**PKPdf**	**20 08 39.0**	**-0.5**
NJ2				sPKP		20 09 12.8	
NJ2				PP	**PP**	**20 10 25.3**	**+5.5**
NJ2				SKKS		20 17 10.1	
NJ2				SS	**SS**	**20 27 01.8**	**+3.9**
NJ2				AMB	AMB		
	comp=Z,610nm,4.5s						
NJ2				LR	LR		
	comp=Z,2µm,24.6s						
NJ2				LR	LR		
	comp=Z,2µm,23.7s						
NJ2				LR	LR		
	comp=Z,2µm,22.5s						
GTA	**Gaotai**	**123.74**	**348**	⇑PKP	**PKiKP**	**20 08 40.8**	**+0.1**
GTA				PP	**PP**	**20 10 25.6**	**+3.0**
GTA				SKS	**SKSdf**	**20 15 38.8**	**-5.6**
GTA				SKKS	**SKKSac**	**20 17 12.6**	**-1.6**
GTA				SS	**SS**	**20 27 01.3**	**-1.9**
GTA				AMB	AMB		
	comp=Z,2µm,8.0s						
GTA				LR	LR		
	comp=Z,2µm,23.3s						
GTA				LR	LR		
	comp=Z,3µm,22.5s						
GTA				LR	LR		
	comp=Z,3µm,22.5s						
TOO	**Toolangi**	**123.94**	**235**	PKIKP	**PKPdf**	**20 08 40.5**	**-0.1**
TOO	**Toolangi**	**123.94**	**235**	PKPdf	**PKPdf**	**20 08 40.5**	**-0.1**
RAYN	**Ar Rayn**	**124.03**	**47**	*i* PKiKP	**PKiKP**	**20 08 41.6**	**+0.1**
	SNR=8.7						
RAYN	**Ar Rayn**	**124.03**	**47**	PKIKP	**PKPdf**	**20 08 40.6**	**-0.6**
RAYN	**Ar Rayn**	**124.03**	**47**	PKiKP	**PKiKP**	**20 08 41.5**	**0.0**
RAYN	**Ar Rayn**	**124.03**	**47**	PKPdf	**PKPdf**	**20 08 40.6**	**-0.6**
KSH	**Kashi**	**124.14**	**10**	PKP	**PKiKP**	**20 08 43.4**	**+1.9**
KSH				SKS	**SKSdf**	**20 15 40.3**	**-4.8**
KSH				SKKS	**SKKSac**	**20 17 11.3**	**-5.5**
KSH				SS	**SS**	**20 27 10.8**	**+2.6**
KSH				AMB	AMB		
	comp=Z,4µm,6.9s						
KSH				LR	LR		
	comp=Z,6µm,20.6s						
KSH				LR	LR		
	comp=Z,5µm,19.6s						
KSH				LR	LR		
	comp=Z,10µm,19.6s						
MATP	**Matopo**	**124.87**	**104**	*i* P	**PKiKP**	**20 08 44.9**	**+1.6**
MATP	**Matopo**	**124.87**	**104**	*i* P	**PKiKP**	**20 08 44.9**	**+1.6**
BLWY	**Bulawayo**	**124.94**	**104**	*i* P	**PKiKP**	**20 08 43.8**	**+0.3**
BLWY	**Bulawayo**	**124.94**	**104**	*i* P	**PKiKP**	**20 08 43.8**	**+0.3**
KRI	**Karoi**	**125.52**	**100**	*i* P	**PKiKP**	**20 08 46.1**	**+1.4**
KRI	**Karoi**	**125.52**	**100**	*i* P	**PKiKP**	**20 08 46.1**	**+1.4**
GENI	**Genyem**	**125.63**	**278**	P	**PKiKP**	**20 08 47.5**	**+2.6**
GENI	**Genyem**	**125.63**	**278**	P	**PKiKP**	**20 08 46.8**	**+1.9**
SAKB	**Bahrain**	**125.71**	**41**	PKiKP	**PKiKP**	**20 08 45.0**	**+0.3**
LZH	**Lanzhou**	**125.91**	**343**	Pdif	**Pdif**	**20 05 24.6**	**+1.2**
LZH				⇑PKP	**PKiKP**	**20 08 45.8**	**+0.7**
LZH				SKS	**SKSdf**	**20 15 43.3**	**-5.4**
LZH				AMB	AMB		
	comp=Z,1µm,4.9s						
LZH				LR	LR		
	comp=Z,3µm,21.1s						
LZH				LR	LR		
	comp=Z,2µm,21.7s						
LZH				LR	LR		
	comp=Z,5µm,21.7s						
LODK	**Lodwar**	**125.92**	**74**	PKiKP	**PKiKP**	**20 08 46.0**	**+0.5**
	SNR=32						
MAW	**Mawson**	**125.95**	**169**	PKP	**PKiKP**	**20 08 43.9**	**0.0**
	comp=Z,42nm,0.8s,baz=271,slow=4.7,SNR=28						
MAW				pPKP	**pPKPdf**	**20 09 07.7**	**-1.2**
	comp=Z,86nm,1.0s,baz=265,slow=4.6,SNR=8.0						
SHMA	**Al-Shehemyia**	**126.06**	**40**	PKiKP	**PKiKP**	**20 08 45.6**	**+0.2**
XAN	**Xi'an**	**126.09**	**337**	PKP	**PKiKP**	**20 08 45.6**	**+0.2**
XAN				PP	**PP**	**20 10 40.1**	**+1.7**
XAN				SS	SS	20 27 35.5	+2.5
XAN				AMB	AMB		
	comp=Z,2µm,7.3s						
XAN				LR	LR		
	comp=Z,4µm,19.5s						
XAN				LR	LR		
	comp=Z,3µm,19.4s						
XAN				LR	LR		
	comp=Z,7µm,19.6s						
MSNA	**Messina**	**126.43**	**106**	*i* P	**PKiKP**	**20 08 47.7**	**+1.5**
MSNA	**Messina**	**126.43**	**106**	*i* P	**PKiKP**	**20 08 47.7**	**+1.5**
WHN	**Wuhan**	**126.75**	**330**	⇑PKP	**PKiKP**	**20 08 46.6**	**-0.1**
WHN				PP	**PP**	**20 10 45.5**	**+2.6**
WHN				SKKS		20 17 31.5	
WHN				SS	**SS**	**20 27 45.9**	**+4.4**
WHN				AMB	AMB		
	comp=Z,4µm,7.4s						
WHN				LR	LR		
	comp=Z,14µm,25.4s						
WHN				LR	LR		
	comp=Z,4µm,17.3s						
WHN				LR	LR		
	comp=Z,10µm,22.0s						
TRNA	**Turayna**	**127.02**	**41**	PKiKP	**PKiKP**	**20 08 47.5**	**+0.1**
CASY	**Casey**	**127.06**	**192**	PKPdf	**PKiKP**	**20 08 46.3**	**+0.2**
KBL	**Kabul**	**127.29**	**18**	PKiKP	**PKiKP**	**20 08 48.5**	**+0.5**
	SNR=24						
STKA	**Stephens Creek**	**127.66**	**242**	PKP	**PKiKP**	**20 08 48.2**	**-0.2**
	comp=Z,81nm,0.8s,baz=79,slow=2.2,SNR=91						
STKA				pPKP	**pPKPdf**	**20 09 13.6**	**+0.2**
	comp=Z,55nm,0.9s,baz=63,slow=2.9,SNR=6.3						
STKA				PP	**PP**	**20 10 50.1**	**-0.2**
	comp=Z,4.8nm,0.8s,baz=100,slow=12,SNR=0.8						
SLWR	**Sila**	**127.80**	**41**	PKiKP	**PKiKP**	**20 08 51.0**	**+2.1**
SSLB	**Suanglung**	**128.28**	**319**	PKPdf	**PKPdf**	**20 08 49.1**	**-0.2**
GHWR	**Ruwais**	**128.62**	**40**	PKiKP	**PKiKP**	**20 08 50.8**	**+0.2**
ATD	**Arta Tunnel**	**128.96**	**61**	PKiKP	**PKiKP**	**20 08 53.1**	**+1.5**
	SNR=11						
SHME	**Shamm**	**129.00**	**36**	*i* PKiKP	**PKPdf**	**20 08 50.6**	**0.0**
	SNR=16						
SHME	**Shamm**	**129.00**	**36**	PKiKP	**PKiKP**	**20 08 52.2**	**+0.9**
	SNR=13						
UMQ	**Umm Al-Quwin**	**129.13**	**37**	PKiKP	**PKiKP**	**20 08 51.6**	**+0.1**
BANOM	**Banah**	**129.19**	**36**	*i* PKiKP	**PKPdf**	**20 08 50.3**	**-0.8**
	SNR=12						
BANOM	**Banah**	**129.19**	**36**	PKiKP	**PKPdf**	**20 08 51.3**	**+0.2**
	SNR=11						
TETE	**Tete**	**129.20**	**98**	*i* P	**PKiKP**	**20 08 53.6**	**+1.8**
TETE	**Tete**	**129.20**	**98**	*i* P	**PKiKP**	**20 08 53.6**	**+1.8**
NIL	**Nilore**	**129.27**	**14**	PKIKP	**PKPdf**	**20 08 49.9**	**-1.1**
NIL	**Nilore**	**129.27**	**14**	PKPdf	**PKPdf**	**20 08 49.9**	**-1.1**
KMBO	**Kilima Mbogo**	**129.29**	**78**	PKP	**PKPdf**	**20 08 52.0**	**+0.2**
	comp=Z,26nm,0.9s,baz=296,slow=2.0,SNR=20						
KMBO				pPKP	**pPKPdf**	**20 09 16.4**	**-0.9**
	comp=Z,21nm,1.0s,baz=332,slow=5.2,SNR=3.1						
KMBO	**Kilima Mbogo**	**129.29**	**78**	*i* PKiKP	**PKiKP**	**20 08 53.7**	**+1.2**
	SNR=39						
KMBO	**Kilima Mbogo**	**129.29**	**78**	PKiKP	**PKiKP**	**20 08 54.2**	**+1.6**
KMBO	**Kilima Mbogo**	**129.29**	**78**	PKPdf	**PKPdf**	**20 08 51.8**	**0.0**
MZWR	**Madinat Zayed**	**129.40**	**40**	PKiKP	**PKPdf**	**20 08 51.6**	**+0.2**
AJN	**Ajban**	**129.47**	**38**	*i* PKiKP	**PKPdf**	**20 08 51.6**	**+0.1**
	SNR=6.8						
AJN	**Ajban**	**129.47**	**38**	PKiKP	**PKPdf**	**20 08 51.7**	**+0.2**
	SNR=7.9						
MASF	**Masafi**	**129.53**	**36**	PKiKP	**PKPdf**	**20 08 52.0**	**+0.2**
	SNR=28						
NAZ	**Nazwa, Dubai**	**129.54**	**37**	*i* PKiKP	**PKPdf**	**20 08 51.7**	**0.0**
	SNR=25						
NAZ	**Nazwa, Dubai**	**129.54**	**37**	PKiKP	**PKPdf**	**20 08 51.9**	**+0.2**
	SNR=13						
MSFE	**Esma-Masafi**	**129.54**	**36**	*i* PKiKP	**PKPdf**	**20 08 51.5**	**-0.2**
	SNR=48						
ASUD	**Al Ashush, Dub**	**129.62**	**38**	*i* PKiKP	**PKiKP**	**20 08 52.4**	**-0.2**
	SNR=23						
ASUD	**Al Ashush, Dub**	**129.62**	**38**	PKiKP	**PKiKP**	**20 08 52.5**	**-0.2**
	SNR=18						
FAQ	**Al Faqa, Dubai**	**129.69**	**37**	*i* PKiKP	**PKPdf**	**20 08 52.0**	**0.0**
	SNR=13						
FAQ	**Al Faqa, Dubai**	**129.69**	**37**	PKiKP	**PKPdf**	**20 08 52.0**	**0.0**
	SNR=8.9						
MZR	**Muzera**	**129.70**	**41**	*i* PKiKP	**PKiKP**	**20 08 52.9**	**0.0**
	SNR=38						
MZR	**Muzera**	**129.70**	**41**	PKiKP	**PKiKP**	**20 08 52.5**	**-0.3**
	SNR=28						
UOSS	**Minazif**	**129.89**	**37**	*i* PKiKP	**PKPdf**	**20 08 52.2**	**-0.2**
	SNR=10						
UOSS	**Minazif**	**129.89**	**37**	PKiKP	**PKPdf**	**20 08 52.1**	**-0.2**
UOSS	**Minazif**	**129.89**	**37**	PKPdf	**PKPdf**	**20 08 51.5**	**-0.8**
HATD	**Hatta, Dubai**	**129.94**	**37**	*i* PKiKP	**PKPdf**	**20 08 52.6**	**+0.1**
	SNR=20						
HATD	**Hatta, Dubai**	**129.94**	**37**	PKiKP	**PKPdf**	**20 08 52.3**	**-0.2**
	SNR=24						
ASHO	**Ashiyiah**	**130.01**	**37**	*i* PKiKP	**PKPdf**	**20 08 52.4**	**-0.3**
	SNR=29						
ASHO	**Ashiyiah**	**130.01**	**37**	PKiKP	**PKPdf**	**20 08 52.3**	**-0.3**
	SNR=20						
ALNE	**Al Ain**	**130.31**	**38**	*i* PKiKP	**PKPdf**	**20 08 53.3**	**+0.2**
	SNR=18						
ALNE	**Al Ain**	**130.31**	**38**	PKiKP	**PKPdf**	**20 08 53.4**	**+0.2**
	SNR=23						
KIBK	**Kibwezi**	**130.44**	**79**	PKiKP	**PKiKP**	**20 08 56.2**	**+1.6**
	SNR=38						
SOHO	**SOHO**	**130.70**	**37**	*i* PKiKP	**PKPdf**	**20 08 53.3**	**-0.6**
	SNR=25						
SOHO	**SOHO**	**130.70**	**37**	PKiKP	**PKPdf**	**20 08 53.6**	**-0.3**
CD2	**Chengdu**	**130.74**	**340**	PKP	**PKiKP**	**20 08 55.0**	**+0.2**
CD2				PP	**PP**	**20 11 10.8**	**+2.0**
CD2				SKS	**SKSdf**	**20 15 56.1**	**-1.4**
CD2				SKKS	**SKKSac**	**20 17 52.8**	**-5.6**
CD2				SS	**SS**	**20 28 31.1**	**+0.8**
CD2				AMB	AMB		
	comp=Z,3µm,6.9s						
CD2				LR	LR		
	comp=Z,5µm,23.5s						
CD2				LR	LR		
	comp=Z,4µm,20.3s						
CD2				LR	LR		
	comp=Z,8µm,22.9s						
UMZA	**Um Al Zommool**	**130.96**	**40**	PKiKP	**PKiKP**	**20 08 55.0**	**-0.3**
DHRM	**DHARAMSHALA**	**131.27**	**12**	*e*P	**PKPdf**	**20 08 53.5**	**-1.6**
DHRM				IAmb	IAmb	20 09 08.0	
	comp=Z,129nm,1.0s						
ARQ	**Araqi**	**131.31**	**38**	PKiKP	**PKPdf**	**20 08 54.6**	**-0.5**
	SNR=19						
HOQ	**Hoqain**	**131.58**	**37**	PKiKP	**PKPdf**	**20 08 54.7**	**-0.9**
	SNR=11						
BIDO	**Bidbid**	**132.09**	**36**	PKiKP	**PKPdf**	**20 08 56.6**	**0.0**
	SNR=14						
BSY	**Bisya**	**132.16**	**38**	PKiKP	**PKPdf**	**20 08 56.2**	**-0.5**
	SNR=16						
SMDO	**Samad**	**132.41**	**37**	PKiKP	**PKPdf**	**20 08 57.5**	**+0.2**
	SNR=26						
WSAR	**Wadi Sarin**	**132.60**	**36**	PKiKP	**PKiKP**	**20 08 58.4**	**-0.3**
	SNR=9.2						
JMDO	**Jabal Madar**	**132.98**	**37**	PKPdf	**PKPdf**	**20 08 57.4**	**-0.9**
	SNR=7.6						
FAKI	**Fak Fak**	**133.25**	**281**	P	**PKiKP**	**20 09 03.7**	**+3.5**
FAKI	**Fak Fak**	**133.25**	**281**	P	**PKiKP**	**20 09 01.0**	**+0.8**
DOK	**Doka**	**133.26**	**44**	PKiKP	**PKPdf**	**20 08 58.1**	**-0.8**
	SNR=5.9						
WBK	**Wadi Bani Khal**	**133.29**	**36**	PKiKP	**PKPdf**	**20 08 58.2**	**-0.6**
	SNR=6.9						
SIJI	**Sorong**	**133.48**	**284**	PKP	**PKiKP**	**20 09 00.8**	**+0.1**
	comp=Z,52nm,1.0s,baz=43,slow=5.4,SNR=21						
SIJI				pPKP	**pPKPdf**	**20 09 24.2**	**-0.7**
	comp=Z,66nm,1.1s,baz=38,slow=4.0,SNR=7.2						
SIJI				PP	**PP**	**20 11 25.0**	**-3.3**
	comp=Z,2.4nm,0.6s,baz=74,slow=8.9,SNR=1.1						
WHFO	**Wadi Hawf**	**133.50**	**45**	PKiKP	**PKPdf**	**20 08 59.0**	**-0.4**
	SNR=6.2						
ABTO	**Aybut**	**133.57**	**46**	PKiKP	**PKPdf**	**20 08 59.6**	**+0.1**
	SNR=11						
GYA	**Guiyang**	**133.70**	**335**	⇑*i*PKP	**PKPdf**	**20 08 55.3**	**-4.4**
GYA				PP	**PP**	**20 11 28.6**	**+0.5**
GYA				SKS	**SKSdf**	**20 16 02.8**	**-0.3**
GYA				SKKS	**SKKSac**	**20 18 14.6**	**-2.2**
GYA				SS	**SS**	**20 29 09.5**	**+2.7**
GYA				AMB	AMB		
	comp=Z,2µm,12.8s						
GYA				LR	LR		
	comp=Z,2µm,22.3s						
GYA				LR	LR		
	comp=Z,3µm,24.8s						
GYA				LR	LR		
	comp=Z,5µm,27.6s						
JLN	**Jalan Bani Buh**	**133.90**	**36**	PKiKP	**PKPdf**	**20 08 59.9**	**-0.1**
	SNR=8.8						
RBK	**Rabkut**	**134.09**	**45**	PKiKP	**PKPdf**	**20 09 00.0**	**-0.5**
WRAB	**Tennant Creek**	**134.41**	**257**	PKHKP	PKPpre	20 08 48.1	
WRAB	**Tennant Creek**	**134.41**	**257**		PKPpre	20 08 48.1	
WRA	**Warramunga Arr**	**134.42**	**257**	PKhKP	PKPpre	20 08 42.4	
	comp=Z,1.8nm,0.8s,baz=96,slow=3.3,SNR=13						
WRA				PKP	**PKPdf**	**20 09 01.1**	**+0.1**
	comp=Z,47nm,0.8s,baz=180,slow=1.1,SNR=30						
WRA				pPKP	pPKPdf	20 09 26.3	-0.2
	comp=Z,62nm,1.1s,baz=51,slow=1.7,SNR=5.4						
WRA				PKKP	**PKKPdf**	**20 18 47.8**	**+0.9**
	comp=Z,3.2nm,0.9s,baz=249,slow=1.8,SNR=5.2						
DMTO	**DMTO**	**134.44**	**44**	PKiKP	**PKPdf**	**20 09 00.9**	**-0.1**
LSA	**Lhasa**	**134.59**	**354**	PKP	PKPdf	20 08 53.5	-8.2
LSA				PP	**PP**	**20 11 33.3**	**-0.5**
LSA				LR	LR		
	comp=N,15µm,28.5s						
LSA				LR	LR		
	comp=E,19µm,32.8s						
LSA				LR	LR		
	comp=Z,17µm,32.7s						
LSA	**Lhasa**	**134.59**	**354**	PKiKP	**PKiKP**	**20 09 02.7**	**-0.5**
SHAO	**Shalim**	**134.68**	**43**	*i* PKiKP	**PKPdf**	**20 09 01.8**	**+0.3**
	SNR=6.1						
SHAO	**Shalim**	**134.68**	**43**	PKiKP	**PKPdf**	**20 09 01.3**	**-0.2**
ASAR	**Alice Springs**	**134.88**	**252**	PKhKP	PKPpre	20 08 44.5	
	comp=Z,3.4nm,0.8s,baz=97,slow=3.4,SNR=17						
ASAR				PKP	**PKPdf**	**20 09 01.4**	**-0.4**
	comp=Z,25nm,0.8s,baz=94,slow=2.5,SNR=17						
ASAR				pPKP	pPKPdf	20 09 27.9	+0.6
	comp=Z,16nm,0.7s,baz=80,slow=1.6,SNR=3.7						
ASAR				PP	**PP**	**20 11 35.1**	**-2.2**
	comp=Z,2.7nm,0.7s,baz=63,slow=2.5,SNR=1.2						
ASAR				PKKP	**PKKPdf**	**20 18 44.7**	**-1.4**
	comp=Z,3.6nm,0.9s,baz=278,slow=1.6,SNR=6.1						
DANN	**Dangsing**	**136.08**	**4**	*e*P	PKPdf	20 08 56.5	-7.8
	comp=Z,657nm,0.7s						
LKP	**Lekhapani**	**136.23**	**348**	*e*P	**PKPdf**	**20 09 01.3**	**-2.9**
LKP				IAmb	IAmb	20 09 10.8	
	comp=Z,295nm,1.5s						
DIBR	**DIBRUGARH**	**136.28**	**349**	*e*P	**PKPdf**	**20 09 02.7**	**-1.6**
KMI	**Kunming**	**136.41**	**338**	⇓PKP	**PKPdf**	**20 09 05.3**	**+0.4**
KMI				sPKP		20 09 43.5	
KMI				PP	**PP**	**20 11 47.6**	**+2.4**
KMI				SKKS		20 18 29.8	
KMI				SS	**SS**	**20 29 36.3**	**-3.0**
KMI				AMB	AMB		
	comp=Z,2µm,7.2s						
KMI				LR	LR		
	comp=Z,2µm,24.8s						
KMI				LR	LR		
	comp=Z,3µm,31.4s						
KMI				LR	LR		
	comp=Z,4µm,24.8s						
GKN	**Gorkha**	**136.47**	**2**	*e*P	PKPpre	20 08 56.2	
	comp=Z,648nm,1.0s						
GUN	**Gumba**	**136.59**	**1**	*e*P	PKPpre	20 08 52.8	
	comp=Z,385nm,1.0s						
KKN	**Kakani**	**136.70**	**2**	*e*P	PKPpre	20 08 55.0	
	comp=Z,484nm,1.0s						
ITAN	**ITANAGAR**	**136.79**	**351**	*e*P	**PKPdf**	**20 09 03.6**	**-1.7**
ITAN				IAmb	IAmb	20 09 10.7	
	comp=Z,78nm,0.7s						
DMN	**Daman**	**136.88**	**2**	*e*P	PKPpre	20 08 56.4	
	comp=Z,436nm,1.0s						
PKIN	**Phulchoki**	**136.91**	**1**	*e*P	PKPpre	20 08 55.6	
	comp=Z,261nm,0.8s						
PKI	**Pulchoki**	**136.92**	**1**	*e*P	PKPpre	20 08 55.8	
	comp=Z,346nm,0.9s						
GTK	**Tadong**	**137.14**	**357**	*e*P	**PKPdf**	**20 09 03.5**	**-2.6**
GTK				IAmb	IAmb	20 09 10.6	
	comp=Z,198nm,1.1s						
SOCY	**Socotra**	**137.48**	**51**	PKiKP	**PKPdf**	**20 09 06.4**	**-0.5**
KOHI	**KOHIMA**	**138.12**	**350**	*e*P	**PKPdf**	**20 09 05.4**	**-2.6**
KOHI				IAmb	IAmb	20 09 12.6	
	comp=Z,105nm,0.9s						
QIZ	**Qiongzhong**	**138.52**	**326**	PKP	**PKPdf**	**20 09 08.3**	**-0.3**
QIZ				PP	**PP**	**20 11 58.4**	**-0.1**
QIZ				SS	SS	20 30 04.9	+0.2
QIZ				AMB	AMB		
	comp=Z,1µm,5.6s						
QIZ				LR	LR		
	comp=Z,2µm,21.6s						
QIZ				LR	LR		
	comp=Z,2µm,21.5s						
QIZ				LR	LR		
	comp=Z,4µm,36.5s						
BHPL	**Bhopal**	**140.23**	**13**	*e*P	**PKPdf**	**20 09 09.4**	**-2.3**
BHPL				IAmb	IAmb	20 09 18.3	
	comp=Z,79nm,0.8s						
BOK	**Bokaro**	**140.69**	**1**	*e*P	**PKPdf**	**20 09 09.6**	**-2.9**
JBP	**Jabalpur**	**140.79**	**10**	*e*P	PKPdf	20 09 02.2	-10
JBP				*e*S	**SKKSac**	**20 18 53.1**	**-5.5**
BELO	**BELONIA**	**140.94**	**353**	*e*P	**PKPdf**	**20 09 06.7**	**-6.3**
VOI	**Vohitsoka**	**141.97**	**105**	PKP	**PKPdf**	**20 09 11.5**	**-3.4**
MYLDM	**Lahad Datu**	**142.13**	**301**	PKPdf	**PKPdf**	**20 09 12.4**	**-2.9**
ABPO	**Ambohimpanom**	**142.40**	**101**	PKIKP	**PKPdf**	**20 09 12.2**	**-3.6**
ABPO	**Ambohimpanom**	**142.40**	**101**		**PKPdf**	**20 09 12.2**	**-3.6**
FITZ	**Fitzroy Crossi**	**142.56**	**261**	PKhKP	PKPpre	20 09 13.3	
	comp=Z,70nm,0.8s,baz=130,slow=1.4,SNR=148						
FITZ				PP	**PP**	**20 12 22.9**	**-1.9**
	comp=Z,6.6nm,0.7s,baz=89,slow=10,SNR=0.8						
SOEI	**Soe**	**142.76**	**275**	P	**PKPdf**	**20 09 15.3**	**-1.2**
SOEI	**Soe**	**142.76**	**275**	P	**PKPdf**	**20 09 14.4**	**-2.1**
SOEI	**Soe**	**142.76**	**275**	P	**PKPdf**	**20 09 13.5**	**-3.0**
BATI	**Baumata**	**143.44**	**274**	PKhKP	PKPpre	20 09 15.3	
	comp=Z,179nm,0.9s,baz=163,slow=2.8,SNR=21						
BATI				pPKP	pPKPdf	20 09 43.1	0.0
	comp=Z,310nm,1.1s,baz=338,slow=16,SNR=3.9						
KKM	**Kota Kinabalu**	**143.49**	**304**	P	**PKPdf**	**20 09 17.7**	**-0.1**
CHTO	**Chiang Mai**	**143.54**	**340**	PKHKP	PKPpre	20 09 12.1	

CHTO	Chiang Mai	143.54	340	PKPdf	PKPbc	20 09 14.7	-0.5
CHTO	Chiang Mai	143.54	340		PKPpre	20 09 12.1	
CHTO	Chiang Mai	143.54	340	P	PKPbc	20 09 15.8	+0.6
POO	Poona	143.72	21	*e*P	PKPbc	20 09 15.9	+0.2
CMAR	Chiang Mai Arr	143.88	340	PKP	PKPbc	20 09 16.2	+0.1
	comp=Z,113nm,1.0s,baz=345,slow=3.5,SNR=162						
CMAR				pPKP	pPKPdf	20 09 42.8	-1.3
	comp=Z,58nm,1.0s,baz=355,slow=2.5,SNR=3.0						
CMAR				SKPbc	SKiKP	20 12 50.0	+0.1
	comp=Z,18nm,1.1s,baz=10,slow=5.5,SNR=3.1						
CMAR	Chiang Mai Arr	143.88	340	PKPdf	PKPbc	20 09 16.0	-0.1
KAPI	Kappang	145.69	285	PKPbc	PKPbc	20 09 22.0	0.0
	comp=Z,734nm,1.1s,baz=152,slow=2.9,SNR=54						
KAPI	Kappang	145.69	285	PKP2	PKPbc	20 09 22.0	0.0
KAPI	Kappang	145.69	285		PKPdf	20 09 21.6	+0.1
KAPI	Kappang	145.69	285	P	PKPab	20 09 22.8	+0.4
KAPI	Kappang	145.69	285	P	PKPab	20 09 22.8	+0.4
HYB	Hyderabad	146.11	14	*i* PKP	PKPdf	20 09 22.0	-0.2
	comp=Z,1µm,1.0s						
HYB				*e*pPKP	pPKPdf	20 09 45.5	-2.3
HYB				*e*sPKP		20 09 55.0	
HYB				*e*PP	PP	20 12 40.0	-3.9
HYB				*e*PPP	PPP	20 15 58.0	
HYB	Hyderabad	146.11	14	*e*P	PKPdf	20 09 22.4	+0.2
HYB				IAmb	IAmb	20 09 25.3	
	comp=Z,636nm,0.8s						
GOA	Goa	146.51	23	*e*P	PKPdf	20 09 20.9	-2.0
GOA				IAmb	IAmb	20 09 25.8	
	comp=Z,654nm,1.3s						
VIS	Vishakhapatnam	146.59	6	*e*P	PKPdf	20 09 21.0	-2.0
VIS				IAmb	IAmb	20 09 29.4	
	comp=Z,621nm,1.0s						
BKB	Balikpapan	146.78	293	P	PKiKP	20 09 27.4	-0.4
BKB	Balikpapan	146.78	293	P	PKPab	20 09 26.8	+0.2
NWAO	Narrogin (SRO)	147.39	233	P	PKPbc	20 09 25.8	-0.6
NWAO	Narrogin (SRO)	147.39	233	P	PKPbc	20 09 25.9	-0.5
MSEY	Mahe Island	147.57	73	*i* PKPbc	PKPdf	20 09 25.9	+1.1
	SNR=603						
MSEY	Mahe Island	147.57	73	PKIKP	PKPdf	20 09 25.6	+0.9
MSEY	Mahe Island	147.57	73		PKPdf	20 09 25.6	+0.9
PSA00	Pilbara Seismi	147.96	254	P	PKPdf	20 09 26.5	+1.4
PSA00	Pilbara Seismi	147.96	254	P	PKPdf	20 09 26.4	+1.4
MBWA	Marble Bar	148.10	255		PKPdf	20 09 24.9	-0.4
MBWA	Marble Bar	148.10	255	P	PKPbc	20 09 27.0	-1.6
MBWA	Marble Bar	148.10	255	P	PKPdf	20 09 26.7	+1.4
PLAI	Plampang	148.74	279	P	PKPdf	20 09 27.8	+1.2
PLAI	Plampang	148.74	279	P	PKPdf	20 09 27.7	+1.2
H01W1	Cape Leeuwin H	148.76	227	PKPbc	PKiKP	20 09 31.2	+0.2
	baz=144,slow=4.6,SNR=20						
H01W2	Cape Leeuwin H	148.77	227	PKPbc	PKiKP	20 09 30.6	-0.4
	baz=144,slow=4.6,SNR=30						
H01W3	Cape Leeuwin H	148.78	227	PKPbc	PKiKP	20 09 31.2	+0.1
	baz=144,slow=4.6,SNR=16						
MTKN	Mount Kenneth	148.92	234	P	PKiKP	20 09 31.1	-0.6
MORW	Morawa	149.78	239	PKPdf	PKPdf	20 09 27.6	-0.2
MORW	Morawa	149.78	239	P	PKPbc	20 09 31.3	-1.4
MORW	Morawa	149.78	239	P	PKPdf	20 09 30.1	+2.3
RER	Riviere de l'E	150.33	105		PKPdf	20 09 31.3	+2.3
DGPR	DIGLIPUR	150.57	347	*e*P	PKPdf	20 09 27.0	-2.4
DGPR				IAmb	IAmb	20 09 40.1	
	comp=Z,1µm,0.6s						
KSM	Kuching	150.93	304	P	PKPbc	20 09 33.4	-2.4
KSM	Kuching	150.93	304	P	PKPbc	20 09 33.0	-2.8
JAGI	Jajag, Banyuwa	152.07	282	P	PKPbc	20 09 36.9	-1.5
JAGI	Jajag, Banyuwa	152.07	282	P	PKPdf	20 09 32.3	+0.5
PBA	Port Blair	152.08	347	*e*P	PKPdf	20 09 30.5	-1.2
PBA				IAmb	IAmb	20 09 43.5	
	comp=Z,1µm,0.7s						
GIRL	Giralia	152.99	251	P	PKPdf	20 09 33.9	+1.0
KULM	Kulim	154.85	325	P	PKPdf	20 09 37.0	+1.2
JRMM	Jerantut	154.91	320	P	PKPdf	20 09 38.0	+2.1
SMRI	Semarang	155.05	288	P	PKPdf	20 09 38.3	+2.3
IPM	Ipoh	155.31	323	P	PKPdf	20 09 37.0	+0.6
IPM	Ipoh	155.31	323	P	PKPdf	20 09 37.8	+1.4
IPM	Ipoh	155.31	323	P	PKPdf	20 09 37.8	+1.4
MYKOM	Kota Tinggi	155.57	314	P	PKPdf	20 09 40.0	+3.2
PALK	Pallekele	156.41	15	PKP	PKPdf	20 09 38.0	+0.1
	comp=Z,51nm,1.0s,baz=38,slow=1.8,SNR=14						
PALK				PKPab	PKPab	20 10 05.8	-0.6
	comp=Z,54nm,0.7s,baz=86,slow=5.4,SNR=12						
PALK				PP	PP	20 13 37.5	-5.3
	comp=Z,7.5nm,1.0s,baz=338,slow=11,SNR=1.2						
LHMI	Lhok Sumawe	156.75	333	P	PKPdf	20 09 41.6	+3.3
LHMI	Lhok Sumawe	156.75	333	P	PKPdf	20 09 39.2	+0.9
LEM	Lembang	157.53	291	PKP	PKPdf	20 09 40.0	+0.5
	comp=Z,66nm,1.2s,baz=116,slow=10,SNR=5.6						
LEM				PKPab	PKPab	20 10 12.1	+0.5
	comp=Z,166nm,1.1s,baz=143,slow=8.6,SNR=7.9						
PSI	Prapat	157.87	325	PKP	PKPdf	20 09 40.2	+0.3
	comp=Z,41nm,1.1s,baz=213,slow=4.7,SNR=19						
PSI				pPKP	pPKPdf	20 10 03.8	-1.7
	comp=Z,90nm,1.2s,baz=250,slow=4.6,SNR=8.5						
PSI				PKPab	PKPab	20 10 13.4	+0.5
	comp=Z,254nm,1.1s,baz=352,slow=2.4,SNR=15						
PSI				pPKPab	pPKPab	20 10 35.5	-2.1
	comp=Z,210nm,0.9s,baz=299,slow=3.5,SNR=7.9						
BKNI	Bangkinang	158.54	317	P	PKPdf	20 09 39.8	-0.7
GSI	Gunungsitoli	159.84	326	P	PKPdf	20 09 44.2	+2.1
GSI	Gunungsitoli	159.84	326	P	PKPdf	20 09 43.6	+1.5

*ATH **17** 19:52:19.0, 38°.69N×23°.67E, h12km±2km, ML2.9/12 Error ellipse: s-maj=2.2km s-min=0.7km az=96.0*

*THE **17** 19:52:19.3, 38°.67N×23°.63E, h8km±1km, ML2.8/12, Error ellipse: s-maj=1.9km s-min=0.4km az=103.0*

ISC 17 19:52:19.0±1.0, **38°.67N**±0°.02×**23°.64E**±0°.02, **h12**km±8km, **n37, σ0s.42**/67, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KYMI	Kymi, Euboea I	0.36	96	P	Pg	19 52 26.6	+0.4
KYMI				S	Sb	19 52 32.5	-0.4
	1µm,0.3s						
ATAL	Atalanti	0.49	272	P	Pg	19 52 28.2	-0.4
ATAL				S	Sg	19 52 35.1	0.0
ATAL	Atalanti	0.49	272	P	Pg	19 52 28.0	-0.6
ATAL				S	Sg	19 52 35.9	+0.8
ATAL				AML	AML	19 52 36.5	
	comp=N,885µm,0.4s						
ATAL				AML	AML	19 52 37.8	
	comp=E,655µm,0.3s						
ALNA	Alonissos	0.50	20	P	Pg	19 52 28.6	-0.3
ALNA				S	Sg	19 52 34.4	-1.2
ALNA				AML	AML	19 52 40.7	
	comp=E,2211µm,0.6s						
ALNA				AML	AML	19 52 44.0	
	comp=N,2017µm,0.6s						
LKR	Lokris	0.51	268	P	Pg	19 52 28.4	-0.5
LKR				S	Sg	19 52 36.3	+0.7
	comp=N,990nm,0.1s						
LKR	Lokris	0.51	268	P	Pg	19 52 28.5	-0.5
LKR				S	Sg	19 52 36.2	+0.6
LKR				AML	AML	19 52 37.2	
	comp=N,2022µm,0.1s						
LKR				AML	AML	19 52 37.4	
	comp=E,1864µm,0.1s						
VIL2	Platees	0.55	213	P	Pg	19 52 29.7	0.0
VIL2				S	Sb	19 52 39.2	+0.8
VIL2				AML	AML	19 52 42.9	
	comp=E,2669µm,0.4s						
VIL2				AML	AML	19 52 44.8	
	comp=N,1333µm,0.4s						
VILL	Villia	0.57	207	P	Pg	19 52 29.6	-0.6
VILL				S	Sb	19 52 38.8	-0.3
	comp=N,668nm,0.4s						
DION	Dionisos Attik	0.64	159	P	Pg	19 52 31.5	+0.1
DION				S	Sb	19 52 41.2	+0.3
	comp=N,4µm,0.5s						
DION	Dionisos Attik	0.64	159	P	Pg	19 52 31.6	+0.2
DION				S	Sb	19 52 41.0	0.0
DION				AML	AML	19 52 41.8	
	comp=N,6126µm,0.5s						
DION				AML	AML	19 52 43.0	
	comp=E,4954µm,0.5s						
PTL	Penteli	0.65	164	P	Pg	19 52 31.6	0.0
PTL				S	Sb	19 52 41.1	-0.1
	comp=E,1µm,0.5s						
PTL	Penteli	0.65	164	P	Pg	19 52 31.6	0.0
PTL				S	Sg	19 52 40.5	+0.3
PTL				AML	AML	19 52 42.1	
	comp=E,2158µm,0.5s						
PTL				AML	AML	19 52 43.6	
	comp=N,3614µm,0.5s						
ATH	Athens Observa	0.70	175	P	Pg	19 52 32.6	0.0
ATH				S	Sb	19 52 42.9	+0.1
ATH				AML	AML	19 52 45.7	
	comp=E,6928µm,0.3s						
ATH				AML	AML	19 52 45.9	
	comp=N,3046µm,0.5s						
NEO	Neokhori	0.71	333	P	Pg	19 52 33.0	+0.1
NEO				S	Sg	19 52 42.4	+0.2
	comp=N,3µm,0.5s						
NEO	Neokhori	0.71	333	P	Pg	19 52 32.9	+0.1
NEO				S	Sg	19 52 42.4	+0.2
NEO				AML	AML	19 52 45.8	
	comp=E,3744µm,0.7s						
NEO				AML	AML	19 52 46.3	
	comp=N,9294µm,0.5s						
ATHU	Athens Univers	0.71	171	P	Pg	19 52 32.8	-0.1
ATHU				S	Sb	19 52 43.2	0.0
	comp=N,775nm,0.4s						
ATHU	Athens Univers	0.71	171	P	Pg	19 52 32.7	-0.1
ATHU				S	Sg	19 52 42.7	+0.4
ATHU				AML	AML	19 52 45.5	
	comp=N,1838µm,0.4s						
ATHU				AML	AML	19 52 45.6	
	comp=E,1254µm,0.4s						
VLY	Voula,Athens	0.83	172	P	Pg	19 52 34.8	-0.2
VLY				S	Sg	19 52 46.1	+0.2
	comp=E,2µm,0.4s						
VLY	Voula,Athens	0.83	172	P	Pg	19 52 35.0	0.0
VLY				S	Sg	19 52 46.1	+0.2
VLY				AML	AML	19 52 48.3	
	comp=E,3335µm,0.4s						
VLY				AML	AML	19 52 49.4	
	comp=N,2800µm,0.4s						
LTK	Loutraki	0.84	220	P	Pg	19 52 34.5	-0.8
LTK				S	Sb	19 52 47.1	+0.3
	comp=N,1µm,0.4s						
LTK	Loutraki	0.84	220	P	Pg	19 52 34.5	-0.8
LTK				S	Sn	19 52 48.2	-0.8
KARY	Karystos	0.89	136	P	Pg	19 52 36.1	-0.2
KARY				S	Sb	19 52 48.6	+0.3
KARY	Karystos	0.89	136	P	Pg	19 52 36.0	-0.3
KARY				S	Sb	19 52 48.5	+0.1
THAL	Thalero	1.00	231	P	Pb	19 52 37.4	-0.9
THAL				S	Sn	19 52 52.8	0.0
	comp=N,998nm,0.5s						
THAL	Thalero	1.00	231	P	Pb	19 52 37.3	-0.9
THAL				S	Sb	19 52 51.6	+0.2
THAL				AML	AML	19 52 54.2	
	comp=E,3556µm,0.5s						
THAL				AML	AML	19 52 55.7	
	comp=N,2429µm,0.4s						
AGG	Agios Georgios	1.08	289	P	Pb	19 52 39.7	0.0
AGG				S	Sn	19 52 55.1	+0.1
	comp=N,178nm,0.9s						
AGG	Agios Georgios	1.08	289	P	Pb	19 52 39.8	+0.1
MAKR	Makrakomi, Fth	1.23	286	P	Pb	19 52 42.2	0.0
MAKR				S	Sn	19 52 58.7	+0.1
TRIZ	Trizonia	1.27	256	P	Pb	19 52 43.0	+0.2
TRIZ				S	Sn	19 52 59.6	0.0
KLV	Kalavryta, Ach	1.33	242	P	Pn	19 52 42.9	-0.6
KLV				S	Sn	19 53 01.7	+0.5
KLV				AML	AML	19 53 05.6	
	comp=E,244µm,0.7s						
KLV				AML	AML	19 53 09.4	
	comp=N,198µm,0.6s						
ANX	Ano Chora	1.35	267	P	Pn	19 52 43.9	+0.1
ANX				S	Sn	19 53 02.1	+0.4
	comp=N,248nm,0.8s						
ANX	Ano Chora	1.35	267	P	Pb	19 52 44.2	-0.1
LAKA	Lakka	1.38	252	P	Pn	19 52 44.5	+0.4
EFP	Efpalio	1.39	260	P	Pn	19 52 44.5	+0.4
OUR	Ouranopolis	1.68	9	P	Pn	19 52 48.2	+0.1
DRO	Drossia	1.68	245	P	Pn	19 52 48.7	+0.4
PLG	Polygyros	1.71	355	P	Pn	19 52 48.6	0.0

ATH 17 20:01:14.3, 38°.44N×20°.44E, h17km±2km, **ML1.4**/1, **Error ellipse: s-maj=3.7km s-min=0.9km az=281.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.18	183	P	Pg	20 01 18.8	0.0
KEF4				S	Sb	20 01 22.5	+0.1
DMLN	Damoulianata-K	0.20	194	P	Pg	20 01 18.1	-1.1
KEF3	Kipouria, Keph	0.24	197	P	Pg	20 01 19.4	-0.5
KEF3				S	Sg	20 01 23.8	+0.3
EVGI	Lefkada island	0.25	43	P	Pg	20 01 19.2	-0.8
EVGI				S	Sg	20 01 23.4	-0.5
DRAG	Dragano-Lefkad	0.27	24	P	Pg	20 01 19.8	-0.5
DRAG				S	Sb	20 01 25.0	-0.1
VLS	Valsamata	0.29	155	P	Pg	20 01 20.1	-0.5
VLS				S	Sg	20 01 24.2	-0.6
VLS				AML	AML	20 01 25.1	
	comp=E,249µm,0.2s						
VLS				AML	AML	20 01 26.7	
	comp=N,149µm,0.2s						
PSDA	Pessada-Kefalo	0.34	160	P	Pg	20 01 21.3	-0.3
PSDA				S	Sb	20 01 27.2	0.0
NYDR	Nydri-Lefkada	0.34	37	P	Pg	20 01 21.2	-0.4
NYDR				S	Sg	20 01 26.5	0.0
TSLK	Tsoukalades, L	0.42	24	P	Pg	20 01 22.8	-0.1
TSLK				S	Sb	20 01 29.8	+0.2
KLV	Kalavryta, Ach	1.41	106	P	Pn	20 01 39.6	+0.4
KLV				S	Sb	20 01 58.3	+0.4

ATH 17 20:01:16.5, 38°.68N×23°.62E, h10km±4km, **ML2.2**/2, **Error ellipse: s-maj=4.6km s-min=0.9km az=117.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KYMI	Kymi, Euboea I	0.38	97	P	Pg	20 01 24.0	0.0
KYMI				S	Sg	20 01 29.4	+0.4
ATAL	Atalanti	0.47	272	P	Pg	20 01 25.1	-0.5
ATAL				S	Sg	20 01 32.2	+0.3
LKR	Lokris	0.49	267	P	Pg	20 01 25.1	-0.9
LKR				S	Sg	20 01 33.2	+0.8
LKR				AML	AML	20 01 33.8	
	comp=N,379µm,0.1s						
LKR				AML	AML	20 01 34.1	
	comp=E,328µm,0.1s						
VIL2	Platees	0.54	211	P	Pg	20 01 26.6	-0.5
DION	Dionisos Attik	0.65	157	P	Pg	20 01 28.5	-0.5
DION				S	Sb	20 01 38.6	-0.5
PTL	Penteli	0.66	163	P	Pg	20 01 28.7	-0.6
PTL				S	Sg	20 01 37.8	0.0
NEO	Neokhori	0.70	334	P	Pg	20 01 29.8	-0.3
NEO				S	Sg	20 01 39.3	0.0
NEO				AML	AML	20 01 41.4	
	comp=E,606µm,0.2s						
NEO				AML	AML	20 01 43.2	
	comp=N,931µm,0.4s						
ATH	Athens Observa	0.71	174	P	Pb	20 01 30.8	-0.2
ATH				S	Sg	20 01 39.3	-0.2
ATHU	Athens Univers	0.72	170	P	Pg	20 01 29.8	-0.7
ATHU				S	Sg	20 01 40.3	+0.5
LTK	Loutraki	0.83	218	P	Pg	20 01 31.2	-1.3
LTK				S	Sb	20 01 44.4	+0.1
VLY	Voula,Athens	0.83	170	P	Pg	20 01 31.9	-0.7
VLY				S	Sg	20 01 42.9	-0.6
AGG	Agios Georgios	1.06	289	P	Pg	20 01 36.9	-0.1
AGG				S	Sg	20 01 50.7	-0.1

JMA 17 20:21:04.4±0.1, **31°.66N×131°.05E, h1**km±1km, **M0.2, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNAR	Kushima--Naru	0.23	125	P	Pg	20 21 09.2	+0.4
JNAR				S	Sg	20 21 12.9	+1.1
JTZ	Takazaki	0.24	8	P	Pg	20 21 09.5	+0.4

JMA 17 20:23:13.6±0.1, **36°.60N×137°.92E, h11**km±1km, **M0.3, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAT	Matsushiro	0.24	104	P	Pg	20 23 18.3	-0.3
MAT				S	Sg	20 23 21.7	-0.2
MAT	Matsushiro	0.24	104	P	Pg	20 23 18.3	-0.3
MAT				S	Sg	20 23 21.6	-0.3
JNG	Nsakai	0.24	143	P	Pg	20 23 18.5	-0.2
JNG				S	Sg	20 23 22.0	-0.1

*NOU **17** 20:26:40.2, 39°.22S×174°.56E, h10km, MLv3.7/7, North Island, New Zealand*

WEL 17 20:26:40.2±0.3, **39°S**±3°×**17°5E**±°, **h18**km±4km, **M3.5**/25, **ML3.7**/25, **MLv3.5**/25, **Error ellipse: s-maj=0.0km s-min=0.0km az=169.7, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRZ	Vera Road	0.14	9	P	Pg	20 26 45.6	+1.4
VRZ				S	Sg	20 26 49.6	+2.6
LREZ	Lake Rotokare	0.33	232	P	Pb	20 26 48.1	+0.6
LREZ				S	Sb	20 26 54.2	+1.8
DREZ	Durham Road	0.42	279	P	Pb	20 26 49.9	+0.8
PREZ	Palmer Road	0.45	259	P	Pb	20 26 50.4	+0.7
PREZ				S	Sn	20 26 58.0	-1.6
PKVZ	Pokaka	0.48	94	P	Pb	20 26 50.7	+0.5
PKVZ				S	Sb	20 26 58.2	+1.3
NEZ	North Egmont	0.49	268	P	Pb	20 26 50.9	+0.5
WAZ	Wanganui	0.53	159	P	Pb	20 26 51.8	+0.8
KHEZ	Kahui Hut	0.56	266	P	Pb	20 26 51.9	+0.5
KHEZ				S	Sn	20 27 01.0	-1.2
TWVZ	Taurewa	0.58	71	P	Pb	20 26 52.1	+0.3
PKE	Pukeiti	0.58	276	P	Pb	20 26 52.4	+0.5
PKE				S	Sb	20 27 01.2	+1.4
MTVZ	Mangateitei	0.59	103	P	Pb	20 26 52.3	+0.4
MTVZ				S	Sn	20 27 02.1	-0.8
TRVZ	Turoa	0.63	94	P	Pg	20 26 53.3	+0.4
FWVZ	Far West T-bar	0.64	90	P	Pg	20 26 53.2	+0.3
FWVZ				S	Sn	20 27 03.8	-0.5
DRZ	Dome Shelter	0.65	92	P	Pg	20 26 53.6	+0.5
DRZ				S	Sn	20 27 03.9	-0.8
WHVZ	Whangaehu Hut	0.67	92	P	Pg	20 26 53.7	+0.3
WHVZ				S	Sn	20 27 03.8	-1.2
NBEZ	Newall Road No	0.67	269	P	Pg	20 26 54.0	+0.5
WNVZ	Wahianoa	0.68	96	P	Pg	20 26 54.0	+0.4
NGZ	Ngauruhoe	0.68	83	P	Pg	20 26 54.0	+0.3
NGZ				S	Sn	20 27 04.7	-0.6
NMEZ	Namu Road	0.68	257	P	Pg	20 26 53.9	+0.3
NMEZ				S	Sn	20 27 04.4	-0.7
WTVZ	West Tongariro	0.68	78	P	Pg	20 26 53.9	+0.2
NNVZ	North Ngauruho	0.70	80	P	Pg	20 26 54.3	+0.3
NNVZ				S	Sn	20 27 05.3	-0.4
SNVZ	South Ngauruho	0.71	84	P	Pg	20 26 54.5	+0.4
SNVZ				S	Sg	20 27 04.8	+1.1
TUVZ	Tukino	0.71	91	P	Pg	20 26 54.9	+0.6
KRVZ	Karewarewa	0.72	77	P	Pg	20 26 54.7	+0.2
OTVZ	Oturere	0.73	83	P	Pg	20 26 55.0	+0.5
OTVZ				S	Sn	20 27 05.7	-0.8
HIZ	Hauiti	0.75	7	P	Pg	20 26 55.0	+0.1
HIZ				S	Sg	20 27 05.7	+0.9
HIZ	Hauiti	0.75	7	P	Pg	20 26 54.9	0.0
NTVZ	North Tongarir	0.75	78	P	Pg	20 26 55.2	+0.2
TMVZ	Te Maari	0.77	80	P	Pg	20 26 55.7	+0.4
ETVZ	East Tongariro	0.77	81	P	Pn	20 26 56.0	-0.3
KATZ	Kakaramea	0.80	70	P	Pg	20 26 56.2	+0.3
KATZ				S	Sn	20 27 07.5	-0.7
MOVZ	Moawhango	0.81	101	P	Pg	20 26 56.2	+0.3
MOVZ				S	Sg	20 27 06.8	+0.2
RATZ	Rangitukua	0.90	65	P	Pn	20 26 58.0	0.0
RATZ				S	Sn	20 27 10.8	+0.3
RITZ	Rihia Road	0.92	73	P	Pn	20 26 58.5	+0.2
WATZ	Wairara	0.95	55	P	Pg	20 26 58.8	0.0
WATZ				S	Sg	20 27 11.3	0.0
OHWZ	Ohakea	1.05	155	P	Pg	20 27 00.7	+0.1
BHHZ	Black Hill Sta	1.06	103	P	Pb	20 27 00.1	+0.1
BHHZ				S	Sn	20 27 14.5	0.0
TLZ	Tolley Road	1.12	34	P	Pn	20 27 00.6	-0.4
TLZ				S	Sb	20 27 15.6	+0.3
WHTZ	Whakaora	1.12	59	P	Pg	20 27 01.9	0.0
KUTZ	Kaahu Road	1.15	48	P	Pb	20 27 01.6	+0.1
TSZ	Takapari Road	1.24	131	P	Pb	20 27 03.3	+0.2
PNHZ	Pukenui	1.31	120	P	Pb	20 27 04.2	-0.1
KWHZ	Kaweka Forest	1.32	98	P	Pb	20 27 04.5	0.0
KRHZ	Kereru	1.32	107	P	Pb	20 27 05.0	+0.4
KRHZ				S	Sg	20 27 23.3	+0.2
WPRZ	Whakapapatarin	1.34	57	P	Pn	20 27 04.0	+0.1
BKZ	Black Stump Fm	1.37	87	P	Pb	20 27 05.1	-0.3
BKZ	Black Stump Fm	1.37	87	P	Pg	20 27 06.6	-0.1
MRHZ	Matea Rd	1.38	73	P	Pn	20 27 04.9	+0.3
POWZ	Post Office Ro	1.39	145	P	Pg	20 27 06.3	-0.6
DVHZ	Dannevirke	1.52	134	P	Pg	20 27 08.8	-0.7
DVHZ				S	Sg	20 27 29.6	+0.4
MCHZ	McNeill Hill	1.53	98	P	Pb	20 27 08.9	+0.8
MRZ	Mangatainoka R	1.54	155	P	Pb	20 27 08.2	-0.1
WPHZ	Waipukurau	1.54	122	P	Pg	20 27 09.4	-0.6
WPHZ				S	Sg	20 27 31.9	+1.8
OGWZ	Otaki Gorge	1.59	168	P	Pb	20 27 08.9	-0.2
KIW	Kapiti Island	1.61	175	P	Pb	20 27 08.5	-0.8
PRWZ	Pori Road	1.61	144	P	Pg	20 27 10.3	-0.9
NGRZ	Ngongotaha	1.62	45	P	Pb	20 27 10.1	+0.5
TOZ	Tahuroa Road	1.64	22	P	Pn	20 27 08.4	+0.3
TOZ				S	Sn	20 27 28.9	+0.2
DUWZ	D'Urville Isla	1.66	202	P	Pn	20 27 08.8	+0.4
MTHZ	Maungataniwha	1.69	77	P	Pn	20 27 09.7	+0.9
KARZ	Kaharoa	1.71	44	P	Pg	20 27 12.6	-0.6
OMRZ	Omania	1.72	49	P	Pg	20 27 12.6	-0.7
KAHZ	Kahuranaki	1.74	109	P	Pb	20 27 12.6	+0.9
HOWZ	Holdsworth Sta	1.74	160	P	Pb	20 27 12.0	+0.3
TIWZ	Tintock	1.76	150	P	Pb	20 27 12.1	+0.2
ARHZ	Aropaoanui	1.76	91	P	Pb	20 27 12.2	+0.3
MUGZ	Murupara	1.77	65	P	Pb	20 27 13.0	+0.8
PRHZ	Porangahau	1.78	125	P	Pg	20 27 13.4	-1.1
ANWZ	Angora Road	1.80	132	P	Pg	20 27 14.5	-0.3
BFZ	Birch Farm	1.84	141	P	Pb	20 27 13.2	0.0
RAHZ	Arahi	1.86	80	P	Pb	20 27 14.8	+1.1
CAW	Cannon Point	1.86	172	P	Pb	20 27 12.6	-1.1
RTZ	Ruatahuna	1.87	71	P	Pn	20 27 12.4	+1.1
TCW	Tory Channel	1.98	190	P	Pn	20 27 13.5	+0.7
MTW	Mount Morrison	1.99	163	P	Pb	20 27 15.3	-0.6
WEL	Wellington	2.02	179	P	Pb	20 27 16.4	0.0
TMWZ	Te Maipa	2.05	155	P	Pb	20 27 16.7	-0.2
SNZO	South Karori	2.05	181	P	Pn	20 27 15.2	+1.5
URZ	Urewera	2.11	63	P	Pb	20 27 16.9	-0.9
URZ	Urewera	2.11	63	P	Pb	20 27 17.0	-0.9
BHW	Baring Head	2.15	177	P	Pb	20 27 17.8	-0.8
PAWZ	Paruwai Farm	2.19	166	P	Pb	20 27 18.5	-0.7
AWAZ	Awhitu Peninsu	2.19	358	P	Pn	20 27 15.9	+0.2
MSWZ	Moikau Station	2.19	170	P	Pb	20 27 18.9	-0.4
NNZ	Nelson	2.21	207	P	Pn	20 27 17.2	+1.2
RAGZ	Rawiri	2.23	71	P	Pb	20 27 19.1	-0.8
TUWZ	Tuamarina	2.25	195	P	Pn	20 27 17.6	+1.1
TRWZ	Traveller	2.26	161	P	Pb	20 27 21.3	+0.9
QRZ	Quartz Range	2.31	227	P	Pn	20 27 16.8	-0.5
QRZ	Quartz Range	2.31	227	P	Pn	20 27 16.8	-0.5
ETAZ	East Tamaki Re	2.31	4	P	Pn	20 27 17.7	+0.5
WTAZ	Waiatarua	2.33	357	P	Pn	20 27 18.0	+0.5
PLWZ	Palliser	2.34	170	P	Pb	20 27 21.7	-0.2
MWZ	Matawai	2.37	68	P	Pn	20 27 19.5	+1.3
PRGZ	Paritu Road	2.47	83	P	Pn	20 27 21.4	+1.7
WIAZ	Waiheke Island	2.48	7	P	Pn	20 27 20.1	+0.4
MBAZ	Motutapu North	2.49	3	P	Pn	20 27 20.1	+0.4
BSWZ	Blackbirch Sta	2.54	195	P	Pn	20 27 22.3	+1.8
TKGZ	Te Karaka	2.57	72	P	Pb	20 27 23.8	-1.9
KUZ	Kuaotunu	2.63	18	P	Pn	20 27 21.6	-0.1
RUGZ	Raukumara Rang	2.64	62	P	Pn	20 27 23.3	+1.2
ABAZ	Army Bay	2.65	2	P	Pn	20 27 22.5	+0.5
TWGZ	Tauwhareparae	2.76	68	P	Pb	20 27 27.1	-1.9
HAZ	Te Kaha	2.82	59	P	Pn	20 27 25.6	+1.3
THZ	Tophouse	2.86	209	P	Pn	20 27 26.1	+1.1
PUZ	Puketiti	3.00	68	P	Pn	20 27 29.3	+2.4
GRZ	Great Barrier	3.06	11	P	Pn	20 27 27.6	0.0
WMGZ	Waiomatatini S	3.23	65	P	Pn	20 27 32.2	+2.3
KHZ	Kahutara	3.28	196	P	Pn	20 27 32.1	+1.4
KHZ	Kahutara	3.28	196	P	Pn	20 27 32.0	+1.3
WCZ	Waipu Caves	3.33	355	P	Pn	20 27 31.4	+0.1
GVZ	Greta Valley S	3.92	199	P	Pn	20 27 39.4	-0.1
LTZ	Lake Taylor	3.98	207	P	Pn	20 27 41.3	+0.9
OUZ	Omahuta	4.13	347	P	Pn	20 27 42.5	+0.2
OUZ	Omahuta	4.13	347	P	Pn	20 27 42.4	0.0
INZ	Inchbonnie	4.26	215	P	Pn	20 27 44.8	+0.6
MHCZ	Mount Hutt	4.89	208	P	Pn	20 27 53.3	+0.5
FOZ	Fox Glacier	5.65	219	P	Pn	20 28 02.8	-0.4
TMZ	Timaru	5.83	207	P	Pn	20 28 05.1	-0.6
JCZ	Jackson Bay	6.55	221	P	Pn	20 28 15.0	-0.7

*IDC **17** 20:39:53.2±1.2, 5°.63N×124°.31E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.7/43, mbtmp3.9/6, ML3.8/1, Error*

ellipse: s-maj=33.0km s-min=18.5km az=93.0
*MAN **17** 20:39:56.1, 5°.79N×124°.59E, h5^{km}, mb4.8, ML3.7, MS3.7*
ISC 17 20:39:55.1±1.8, **5°.73N**±0°.06×**124°.37E**±0°.05, **h15**^{km}±12^{km}, **n12**, σ**1^{s}.32**/19, **mb3.8**/5, **1C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	0.68	59	⇓iP	Pn	20 40 10.1	-0.2
GSPH				iS	Sn	20 40 20.7	0.0
KCP	Kidapawan	1.46	30	⇓iP	Pb	20 40 21.2	-0.8
KCP				iS	Sb	20 40 39.6	-0.9
DMPH	Davao City--Mi	1.76	40	⇑iP	Pg	20 40 28.4	-0.5
DMPH				iS	Sg	20 40 55.5	+3.7
DAV	Davao City (W)	1.79	42	Pn	Pb	20 40 27.2	-0.5
	150nm,0.3s,baz=264,slow=18,SNR=25						
DAV				Sn	Sg	20 40 51.8	-1.1
	206nm,0.3s,baz=233,slow=20,SNR=7.3						
PAGZ	Pagadian	2.32	335	eP	Pb	20 40 35.9	-0.7
PAGZ				eS	Sn	20 41 00.5	-0.6
ZCP	Zamboanga City	2.57	298	⇓iP	Pb	20 40 39.7	-1.2
ZCP				iS	Sn	20 41 09.1	+1.8
SIJI	Sorong	9.51	133	Pn	Pn	20 42 12.3	+0.6
	0.9nm,0.3s,baz=327,slow=15,SNR=4.5						
FITZ	Fitzroy Crossi	23.71	177	P	P	20 45 06.9	+0.2
	1.6nm,0.4s,baz=12,slow=8.1,SNR=5.8						
WRA	Warramunga Arr	27.34	159	P	P	20 45 38.7	-1.1
	1.2nm,0.5s,baz=334,slow=11,SNR=16						
ASAR	Alice Springs	30.67	163	P	P	20 46 09.1	-0.3
	1.0nm,0.7s,baz=336,slow=6.3,SNR=13						
ASAR				PcP	PcP	20 49 06.9	-0.6
	0.2nm,0.4s,baz=354,slow=3.7,SNR=1.2						
STKA	Stephens Creek	40.85	157	P	P	20 47 36.4	-0.2
	2.2nm,0.7s,baz=307,slow=9.7,SNR=4.7						
MKAR	Makanchi Array	54.58	326	P	P	20 49 24.1	+1.2
	0.6nm,0.6s,baz=122,slow=7.5,SNR=5.0						

*IDC **17** 20:47:02.1±0.9, 4°.06S×129°.34E, h0^{km}, mb4.1/6, mb1 4.1/11, mb1mx3.7/59, mbtmp4.1/11, ML3.4/5, Error ellipse: s-maj=30.6km s-min=20.0km az=86.0*
ISC 17 20:47:06.3±0.7, **4°.19S**±0°.07×**129°.5E**±0°.1, **h36**^{km}, **n13**, σ**1^{s}.81**/16, **mb4.3**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.73	28	Pn	Pn	20 48 00.7	-0.7
	4.4nm,0.3s,baz=228,slow=22,SNR=20						
SIJI				Sn	Sn	20 48 41.1	-3.0
	6.0nm,0.3s,baz=309,slow=12,SNR=4.0						
BATI	Baumata	8.33	224	Pn	Pn	20 49 04.0	-0.7
	1.0nm,0.3s,baz=319,slow=22,SNR=1.5						
FITZ	Fitzroy Crossi	14.34	195	Pn	Pn	20 50 25.9	-1.0
	0.1nm,0.3s,baz=23,slow=10.0,SNR=1.7						
WRA	Warramunga Arr	16.35	164	Pn	Pn	20 50 51.4	-1.9
	0.3nm,0.3s,baz=344,slow=11,SNR=10						
WRA				Sn	Sn	20 53 51.0	-2.8
	0.1nm,0.3s,baz=355,slow=24,SNR=3.9						
PMG	Port Moresby	18.27	107	P	Pn	20 51 21.2	+4.1
	0.5nm,0.3s,baz=299,slow=19,SNR=1.8						
ASAR	Alice Springs	19.83	168	P	Pn	20 51 36.5	+0.7
	0.5nm,0.3s,baz=347,slow=10.0,SNR=44						
ASAR				PcP	PcP	20 55 51.9	+0.8
	0.1nm,0.3s,baz=6.4,slow=1.3,SNR=4.5						
SONM	Songino Array	55.64	341	P	P	20 56 38.4	-0.3
	0.6nm,1.0s,baz=161,slow=5.5,SNR=3.6						
MKAR	Makanchi Array	65.62	326	P	P	20 57 47.1	+0.3
	1.4nm,0.4s,baz=114,slow=7.9,SNR=43						
ZALV	Zalesovo Beam	68.86	334	P	P	20 58 07.4	+0.3
	0.3nm,0.3s,baz=113,slow=9.7,SNR=1.5						
SEY	Seymchan	69.15	11	P	P	20 58 08.8	+0.2
	7.6nm,0.3s,baz=136,slow=10,SNR=31						
KURBB	Kurchatov Arra	69.88	328	P	P	20 58 14.1	+0.7
	2.6nm,0.6s,baz=131,slow=5.7,SNR=6.7						
AKTO	Aktyubinsk	81.57	322	P	P	20 59 21.2	+0.9
	1.0nm,0.5s,baz=130,slow=11,SNR=2.6						
TORD	Torodi Ar. Bea	127.74	283	PKP	PKiKP	21 06 10.4	+0.8
	0.9nm,0.8s,baz=56,slow=2.0,SNR=3.5						

*PRE **17** 20:56:12.6±0.9, 26°.92S×26°.76E, h2^{km}, ML3.0*
ISC 17 20:56:13.2±1.2, **26°.90S**±0°.03×**26°.76E**±0°.03, **h13**^{km}±9^{km}, **n27**, σ**1^{s}.68**/44, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	Parys	0.54	92	eP	Pg	20 56 23.1	-0.7
PRYS				eS	Sg	20 56 30.2	-0.8
PRYS				IAML		20 56 34.8	
	comp=Z,692nm,0.9s						
KSR	Koster	1.05	7	eP	Pb	20 56 33.6	+0.1
KSR				eS	Sb	20 56 47.8	+0.5
KSR				IAML		20 56 55.1	
	comp=Z,608nm,0.2s						
SWZ	Schweizer	1.30	257	eP	Pn	20 56 38.0	+0.7
SWZ				eS	Sn	20 56 56.0	+1.3
SWZ				IAML		20 57 05.5	
	comp=Z,374nm,1.1s						
HRAO	HartRAO	1.31	40	eP	Pg	20 56 37.7	-0.7
HRAO				eS	Sb	20 56 55.9	+1.3
HRAO				IAML		20 57 03.5	
	comp=Z,134nm,0.1s						
SNKL	Senekal, Frees	1.64	147	eP	Pb	20 56 43.1	-0.3
SNKL				eS	Sg	20 57 05.4	-0.6
SNKL				IAML		20 57 10.2	
	comp=Z,257nm,0.4s						
SLR	Silverton	1.80	50	eP	Pb	20 56 46.0	-0.1
SLR				eS	Sb	20 57 09.7	+1.1
SLR				IAML		20 57 12.0	
	comp=Z,399nm,0.4s						
LBTB	Lobatse	2.15	331	iP	Pg	20 56 53.5	-1.0
LBTB	Lobatse	2.15	331	iP	Pg	20 56 53.5	-1.0
BOSA	Boshof	2.16	218	iP	Pb	20 56 52.8	+0.4
BOSA	Boshof	2.16	218	iP	Pb	20 56 52.8	+0.4
NWCL	Newcastle	2.91	107	eP	Pn	20 57 01.0	+1.6
NWCL				eS	Sn	20 57 36.7	+2.4
NWCL				IAML		20 57 50.1	
	comp=Z,46nm,0.4s						
POGA	Pongola	4.43	97	eP	Pn	20 57 21.4	+1.2
POGA				eS	Sn	20 58 12.1	+0.3
POGA				IAML		20 58 38.3	
	comp=Z,28nm,0.7s						
PKA	Prieska	4.48	231	eP	Pn	20 57 23.1	+2.1
PKA				eS	Sn	20 58 13.2	+0.3
PKA				IAML		20 58 42.1	
	comp=Z,9.7nm,0.3s						
UPI	Upington	5.09	252	eP	Pn	20 57 31.3	+1.9
UPI				eS	Sn	20 58 27.9	-0.3
UPI				IAML		20 58 57.0	
	comp=Z,13nm,3.3s						
MOPA	Mopani	5.39	52	eP	Pn	20 57 34.3	+0.9
MOPA				eS	Sn	20 58 34.9	-0.4
MOPA				IAML		20 59 12.4	
	comp=Z,14nm,0.4s						
MOPA	Mopani	5.39	52	iP	Pn	20 57 35.6	+2.2
MOPA	Mopani	5.39	52	iP	Pn	20 57 35.6	+2.2
MSNA	Messina	5.42	34	eP	Pn	20 57 35.5	+1.5
MSNA				eS	Sn	20 58 34.8	-1.6
MSNA				IAML		20 59 10.4	
	comp=Z,16nm,0.9s						
MSNA	Messina	5.42	34	iP	Pn	20 57 25.6	-8.4
MSNA	Messina	5.42	34	iP	Pn	20 57 25.6	-8.4
KEIM	Keimoes	5.43	249	eP	Pn	20 57 35.4	+1.3
KEIM				eS	Sn	20 58 35.7	-0.9
KEIM				IAML		20 59 17.1	
	comp=Z,26nm,2.7s						
SOE	Somerset East	5.88	190	eP	Pn	20 57 41.9	+1.7
SOE				eS	Sn	20 58 46.1	-1.4
SOE				IAML		20 59 39.1	
	comp=Z,54nm,2.9s						
ARMS	Ukamas	6.34	258	eP	Pn	20 57 48.2	+1.7
ARMS				eS	Sn	20 58 57.7	-1.1
ARMS				IAML		20 59 43.2	
	comp=Z,32nm,2.7s						
GRAN	Grantham	6.70	215	eP	Pn	20 57 53.1	+1.6
GRAN				eS	Sn	20 59 06.2	-1.5
GRAN				IAML		20 59 19.2	
	comp=Z,6.2nm,0.5s						
CVNA	Calvinia	7.63	232	eP	Pn	20 58 06.0	+1.7
CVNA				eS	Sn	20 59 27.8	-2.9
CVNA				IAML		21 00 24.3	
	comp=Z,41nm,2.7s						
AUSN	Aus	9.38	269	eP	Pn	20 58 30.2	+1.8
AUSN				eS	Sn	21 00 10.3	-3.6
AUSN				IAML		21 00 16.6	
	comp=Z,20nm,3.0s						
ELIM	Elim	9.75	216	eP	Pn	20 58 35.9	+2.6
ELIM				eS	Sn	21 00 18.4	-4.3
ELIM				IAML		21 01 07.2	
	comp=Z,30nm,4.2s						

NNC 17 20:57:13.8±9.3, **38°.53N×72°.22E, h0^{km}, mb3.9, mpv3.5, 2C, Error ellipse: s-maj=67.0km s-min=44.8km az=176.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	3.98	336	Pg	Pb	20 58 25.6	+0.6
	19nm,0.3s						
IUG				Lg	Lg	20 59 20.6	
	5.9nm,0.5s						
MRKS	Merke	4.28	10	Pg	Pg	20 58 33.5	-2.4
MRKS				Lg	Lg	20 59 34.8	
AAK	Ala-Archa	4.46	22	⇑Pg	Pb	20 58 34.3	+1.2
	2.0nm,0.7s						
AAK				⇑Lg	Lg	20 59 29.3	
	3.7nm,0.8s						
KST	Kastek	5.33	31	Pg	Pg	20 58 52.1	-3.9
	2.1nm,0.6s						
KST				Lg	Lg	21 00 03.0	
	3.3nm,0.6s						

*IDC **17** 21:00:24.5±4.0, 37°.92N×73°.09E, h122^{km}±29^{km}, mb3.3/6, mb1 3.4/13, mb1mx3.2/60, mbtmp3.8/13, Error ellipse: s-maj=41.8km s-min=21.9km az=164.0*
*NEIC **17** 21:00:28.6±1.6, 38°.21N±0°.06×73°.2E±0°.1, h155^{km}±11^{km}, mb4.0/3, Error ellipse: s-maj=12.1km s-min=8.2km az=103.0*
*NNC **17** 21:00:33.1±2.7, 38°.61N×73°.07E, h179^{km}±42^{km}, mb2.9, mpv3.8, Error ellipse: s-maj=32.2km s-min=14.6km az=8.0*
ISC 17 21:00:26.5±0.6, **38°.12N**±0°.05×**73°.23E**±0°.05, **h150**^{km}, **n67**, σ**1^{s}.82**/67, **mb3.7**/6, **5C-3D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.77	321		Pn	21 01 00.7	+1.5
DRK				Sn	Sn	21 01 24.4	0.0
GAR	Garm	2.45	292		Pn	21 01 08.0	+0.9
GAR				Sn	Sn	21 01 37.6	-0.8
BTK	Batken	2.70	317		Pn	21 01 11.8	+1.6
BTK				Sn	Sn	21 01 44.1	+0.2
CHGR	Chuyangaron	3.25	281	Pn	Pn	21 01 17.6	+0.5
CHGR				Sn	Sn	21 01 54.5	-1.7
AML	Almayashu	4.03	5	P	Pn	21 01 28.6	+1.1
	SNR=68						
UCH	Uchtor	4.22	13	P	Pn	21 01 30.9	+0.9
	SNR=23						
CEP	Cherat	4.42	194	P	Pn	21 01 34.7	+2.3
TAS	Tashkent	4.42	318	Sn	Sn	21 02 22.6	-0.7
NIL	Nilore	4.46	180	Pn	Pn	21 01 35.9	+3.2
EKS2	Erkin-Say	4.56	5	P	Pn	21 01 35.7	+1.5
	SNR=22						
AAK	Ala-Archa	4.62	12	P	Pn	21 01 36.0	+1.0
	1.5nm,0.3s,baz=182,slow=4.1,SNR=18						
AAK				S	Sn	21 02 18.4	-10
	2.6nm,0.3s,baz=183,slow=7.0,SNR=6.1						
AAK	Ala-Archa	4.62	12	P	Pn	21 01 37.2	+2.2
	SNR=7.4						
AAK	Ala-Archa	4.62	12	⇓P	Pn	21 01 36.6	+1.7
	1.7nm,0.3s						
AAK				⇑S	Sn	21 02 27.1	-1.3
	18nm,0.6s						
AAK	Ala-Archa	4.62	12	Pn	Pn	21 01 36.4	+1.4
ULHL	Ulahol	4.73	28	P	Pn	21 01 37.1	+0.6
	SNR=29						
FRU1	Bishkek	4.81	12	Pn	Pn	21 01 38.7	+1.3
KBL	Kabul	4.92	225	Pn	Pn	21 01 41.6	+2.6
CHMS	Chumysh	5.01	13	P	Pn	21 01 41.5	+1.5
	SNR=6.6						
KDJ	Kajisay	5.02	36	Pn	Pn	21 01 40.6	+0.3
TARG	Taragay, Kyrgy	5.04	43		Pn	21 01 41.5	+0.7
TKM2	Tokmak 2	5.13	20	P	Pn	21 01 42.9	+1.1
	SNR=9.2						
TKM2	Tokmak 2	5.13	20	⇑P	Pn	21 01 42.8	+1.1
	2.3nm,0.3s						
TKM2				⇓S	Sn	21 02 38.6	-1.9
	12nm,0.7s						
KKAR	Karatay Array	5.40	338	Pn	Pn	21 01 46.0	+0.9
KK08	Karatay Array	5.41	338	⇑P	Pn	21 01 45.8	+0.6
	43nm,0.4s						
KK08				⇑S	Sn	21 02 42.6	-4.1
	57nm,0.7s						
THW	Thamme Wali	5.45	193	⇑P	Pn	21 01 47.5	+1.6
PRZ	Przheval'sk	5.88	41		Pn	21 01 53.4	+1.6
DHRM	DHARAMSHALA	6.37	156	eP	Pn	21 01 59.0	+0.7
DHRM				eS	Sn	21 03 06.3	-3.9
SMLA	Simla	7.69	154	eP	Pn	21 02 15.8	+0.1
SMLA				IAML		21 03 35.1	
	comp=N,90nm,0.6s						
SMLA				IAML		21 03 35.2	
	comp=E,67nm,0.5s						
MAKZ	Makanchi	10.82	34	Pn	Pn	21 02 58.0	+0.8
MK31	Makanchi Array	10.95	35	Pn	Pn	21 02 59.4	+0.5
MKAR	Makanchi Array	10.95	35	P	Pn	21 02 59.2	+0.3
	comp=E,0.2nm,0.3s,baz=217,slow=15,SNR=14						
MKAR	Makanchi Array	10.95	35		Pn	21 02 59.6	+0.8
GEYT	Alibeck	11.93	274	P	Pn	21 03 09.4	-2.4
	comp=E,1.2nm,0.3s,baz=127,slow=9.5,SNR=7.0						
GEYT				S	Sn	21 05 10.4	-13
	comp=E,0.4nm,0.3s,baz=108,slow=16,SNR=2.6						
PYUN	Piuthan	12.90	138	eP	Pn	21 03 22.9	-1.7
	comp=E,131nm,0.4s						
KURBB	Kurchatov Arra	13.06	15	P	P	21 03 30.0	-0.9
	comp=E,0.1nm,0.3s,baz=205,slow=10,SNR=8.5						
DANN	Dangsing	13.12	135	eP	Pn	21 03 25.2	-2.3
	comp=E,100nm,0.6s						
KURK	Kurchatov	13.17	15	P	P	21 03 33.0	+0.9
JHNI	Jhansi	13.39	159	eP	Pn	21 03 30.0	-0.7
JHNI				eS	Sn	21 05 48.3	-11
KOLN	Koldanda	13.49	137	eP	Pn	21 03 30.5	-1.6
GKN	Gorkha	13.88	133	eP	Pn	21 03 35.5	-1.6
	comp=E,64nm,0.5s						
KKN	Kakani	14.42	132	eP	Pn	21 03 42.0	-1.9
DMN	Daman	14.45	133	eP	Pn	21 03 43.0	-1.4
PKIN	Phulchoki	14.64	132	eP	Pn	21 03 45.2	-1.6
	comp=E,15nm,0.4s						
PKI	Pulchoki	14.66	132	eP	Pn	21 03 45.3	-1.7
	comp=E,9.0nm,0.3s						
GUN	Gumba	14.69	130	eP	Pn	21 03 45.5	-1.8
	comp=E,25nm,0.3s						
AB31	Akbulak array	14.69	324	P	Pn	21 03 46.1	-0.7
	comp=E,1.3nm,0.3s,baz=133,slow=12,SNR=99						
ABKAR	Akbulak array	14.69	324	Pn	Pn	21 03 46.2	-0.7
ABKAR	Akbulak array	14.69	324	Pn	Pn	21 03 46.1	-0.7
BVAR	Borovoye Array	15.04	353	P	P	21 03 53.5	+0.5
	comp=E,0.4nm,0.3s,baz=183,slow=15,SNR=6.1						
JIRN	Jiri	15.05	130	eP	Pn	21 03 51.1	-0.9
	comp=E,29nm,0.4s						
BRVK	Borovoye	15.09	353		P	21 03 54.0	+0.6
BHPL	Bhopal	15.25	165	eS	Sn	21 06 35.2	-8.6
AKTO	Aktyubinsk	16.40	324	P	Pn	21 04 07.3	-0.7
	comp=E,1.1nm,0.3s,baz=136,slow=9.4,SNR=24						
AKTO				S	S	21 07 01.5	-8.5
	comp=E,0.1nm,0.3s,baz=45,slow=20,SNR=2.0						
AKTO	Aktyubinsk	16.40	324	⇓P	Pn	21 04 07.9	-0.1
	comp=E,2.1nm,0.4s						
ZAA0	Zalesovo Array	17.72	23	P	P	21 04 23.5	+1.1
ZAA0				IAmb	IAmb	21 04 24.2	
	comp=Z,3.5nm,0.6s						
ZALV	Zalesovo Beam	17.72	23	P	P	21 04 23.8	+1.3
	comp=Z,0.6nm,0.3s,baz=213,slow=12,SNR=14						
ZALV	Zalesovo Beam	17.72	23	P	P	21 04 23.3	+0.9
ARU	Arti	20.77	337	P	P	21 04 56.5	+1.1
	comp=Z,0.4nm,0.3s,baz=116,slow=8.2,SNR=4.0						
ARU	Arti	20.77	337	P	P	21 04 56.4	+1.1
ARU				IAmb	IAmb	21 05 02.1	
	comp=Z,7.2nm,1.5s						
SONM	Songino Array	25.96	57	P	P	21 05 47.6	+2.6
	comp=Z,0.3nm,0.8s,baz=256,slow=11,SNR=2.3						
FIA1	FINESS Array S	37.17	324	P	P	21 07 23.2	+0.6
FIA1				IAmb	IAmb	21 07 26.1	
	comp=Z,18nm,1.2s						
FINES	FINESS Array B	37.17	324	P	P	21 07 24.2	+1.6
	comp=Z,3.2nm,0.9s,baz=118,slow=9.9,SNR=9.8						
FINES	FINESS Array B	37.17	324	P	P	21 07 24.0	+1.4
ARCES	ARCESS Array B	40.36	336	P	P	21 07 50.8	+1.7
	comp=Z,3.0nm,0.9s,baz=114,slow=9.1,SNR=7.4						
NB2	NORSAR Subarra	44.19	322	P	P	21 08 21.8	+1.7
	comp=Z,0.5nm,0.5s,baz=93,slow=7.9						
NOA	NORSAR Array B	44.19	322	P	P	21 08 21.5	+1.4
	comp=Z,0.2nm,0.5s,baz=106,slow=7.0,SNR=4.1						
TORD	Torodi Ar. Bea	67.53	269	P	P	21 11 07.1	+0.3
	comp=Z,0.4nm,0.6s,baz=51,slow=6.2,SNR=2.4						

*CRAAG **17** 21:20:46.4, 36°.70N×3°.23E, Ml3.1*
*MDD **17** 21:20:47.7±0.4, 36°.76N×3°.22E, h13^{km}±4^{km}, mb3.9/10, Error ellipse: s-maj=6.5km s-min=4.2km az=33.0, PRXIMO*
ISC 17 21:20:46.7±1.1, **36°.80N**±0°.05×**3°.23E**±0°.04, **h25**^{km}±8^{km}, **n32**, σ**1^{s}.77**/45, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABA	Alger-Bouzarea	0.16	270	P	Pb	21 20 51.3	-0.5
ABA	Alger-Bouzarea	0.16	270	P	Pb	21 20 51.3	-0.5
ABMS	Boumerdes	0.21	104	P	Pb	21 20 52.0	-0.4
ABMS	Boumerdes	0.21	104	P	Pb	21 20 52.0	-0.4
EMHD	Djebel Mahouad	0.64	200	P	Pb	21 20 58.3	-1.0
EMHD	Djebel Mahouad	0.64	200	P	Pb	21 20 58.3	-1.0
ADJB	Djebel Djouab	0.66	165	P	Pb	21 20 59.0	-0.7
ADJB	Djebel Djouab	0.66	165	P	Pb	21 20 59.0	-0.7
AKET	Djebel Ketaf	0.92	145	P	Pb	21 21 03.5	-0.5
AKET	Djebel Ketaf	0.92	145	P	Pb	21 21 03.5	-0.5
ATAF	Djebel Tarf	1.25	137	P	Pb	21 21 10.2	+0.5
ATAF	Djebel Tarf	1.25	137	P	Pb	21 21 10.2	+0.5
DFRA	Djebel Bou Aff	2.14	96	P	Pn	21 21 22.0	+1.0
DFRA	Djebel Bou Aff	2.14	96	P	Pn	21 21 22.0	+1.0
EIBI	Ibiza	2.67	327	P	Pn	21 21 29.8	+1.6
	4.4nm,0.1s,SNR=6.6						
EIBI				S	Sn	21 21 58.8	-1.0
	5.6nm,0.2s						
ETOS	Mallorca	2.98	354	P	Pn	21 21 33.9	+1.5
	1.7nm,0.1s,SNR=7.9						
ETOS				S	Sn	21 22 06.0	-1.3
	2.9nm,0.2s,SNR=7.9						
CMAH	Djebel Manchou	3.37	92	P	Pn	21 21 39.0	+1.2
CMAH	Djebel Manchou	3.37	92	P	Pn	21 21 39.0	+1.2
EZAR	Zarzadilla de	4.07	287	P	Pn	21 21 48.3	+0.9
	0.7nm,0.2s,SNR=7.9						
EZAR				S	Sn	21 22 32.4	-1.9
	4.2nm,0.4s,SNR=7.9						
ETOB	Tobarra	4.21	297	P	Pn	21 21 51.7	+2.3
	6.2nm,0.3s,SNR=22						
ETOB				S	Sn	21 22 37.4	-0.4
	2.9nm,0.2s						
ECHE	Chera	4.32	311	P	Pn	21 21 52.8	+1.9
	1.2nm,0.2s,SNR=7.9						
ECHE				S	Sn	21 22 38.6	-1.9
	1.5nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	4.59	322	P	Pn	21 21 56.5	+1.9
	1.1nm,0.1s,SNR=15						
EMOS				S	Sn	21 22 45.0	-2.2
	1.7nm,0.2s						
ERTA	Horta de San J	4.72	332	P	Pn	21 21 59.1	+2.7
	0.1nm,0.1s,SNR=7.9						
ERTA				S	Sn	21 22 48.4	-1.9
	1.2nm,0.3s,SNR=7.9						
SESP	Santiago Espad	4.78	288	P	Pn	21 21 59.7	+2.5
	1.8nm,0.3s,SNR=7.9						
SESP				S	Sn	21 22 52.1	+0.2
	3.2nm,0.4s,SNR=7.9						
EPOB	Poblet	4.84	340	S	Sn	21 22 51.0	-2.3
	1.3nm,0.4s,SNR=7.9						
CFON	Fontmartina	4.99	353	P	Pn	21 22 01.6	+1.5
	1.7nm,0.2s,SNR=7.9						
CFON				S	Sn	21 22 53.9	-3.1
	3.3nm,0.3s,SNR=7.9						
EQES	Quesada	5.12	283	P	Pn	21 22 03.7	+1.8
	2.1nm,0.3s,SNR=7.9						
EQES				S	Sn	21 23 00.1	-0.2
	3.2nm,0.4s,SNR=7.9						
SJAF	Saint Jean de	5.68	357	P	Pn	21 22 12.5	+3.0
	0.2nm,0.1s,SNR=7.9						
CLLI	Llivia	5.75	351	P	Pn	21 22 13.3	+2.7
	0.3nm,0.2s,SNR=7.9						
CLLI				S	Sn	21 23 13.8	-2.0
	0.7nm,0.5s,SNR=7.9						
ETOR	Torete	5.75	316	P	Pn	21 22 12.6	+2.0
	2.4nm,0.3s,SNR=7.9						
ETOR				S	Sn	21 23 12.5	-3.3
	2.9nm,0.7s,SNR=7.9						
CSOR	Sort	5.80	344	P	Pn	21 22 13.6	+2.5
	1.0nm,0.3s,SNR=7.9						
CSOR				S	Sn	21 23 14.7	-2.2
	0.9nm,0.2s,SNR=7.9						
PAB	San Pablo	6.57	297	P	Pn	21 22 22.6	+0.9
	0.2nm,0.2s,SNR=7.9						

*ISK **17** 21:29:52.9, 37°.38N×26°.98E, h5^{km}, ML2.5/14*
*DDA **17** 21:29:52.7, 37°.37N×26°.96E, h7^{km}±2^{km}, ML2.3*
ISC 17 21:29:53.3±1.0, **37°.38N**±0°.02×**26°.97E**±0°.03, **h13**^{km}±9^{km}, **n26**, σ**0^{s}.45**/41, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDIM	Aydin, Didim	0.23	69	iP	Pg	21 29 58.2	0.0
DDIM				iS	Sg	21 30 01.8	+0.3
DDIM				IAML		21 30 02.0	
	comp=N,442nm,0.4s						
DDIM				IAML		21 30 02.0	
	comp=E,483nm,0.3s						
YKAV	Yalikavak-Bodr	0.35	136	PG	Pg	21 30 00.2	-0.2
YKAV				SG	Sg	21 30 05.0	-0.1
GCAM	G?zelcaml?	0.38	32	iP	Pg	21 30 01.0	0.0
GCAM				iS	Sg	21 30 06.4	+0.2
GCAM				IAML		21 30 08.0	
	comp=E,594nm,0.1s						
GCAM				IAML		21 30 09.0	
	comp=N,725nm,0.1s						
GCAM	G?zelcaml?	0.38	32	PG	Pg	21 30 01.1	0.0
GCAM				SG	Sb	21 30 07.4	-0.5
BODT	Bodrum	0.41	139	PG	Pg	21 30 01.5	-0.1
BODT				SG	Sg	21 30 07.5	+0.4
BDRM	Kayabasi	0.49	129	iP	Pg	21 30 02.1	-0.8
BDRM				iS	Sg	21 30 09.4	0.0
BDRM				IAML		21 30 11.0	
	comp=N,261nm,0.5s						
BDRM				IAML		21 30 11.0	
	comp=E,220nm,0.4s						
KOSK	Kos Island	0.62	180	PG	Pb	21 30 05.4	-0.7
KOSK				SG	Sb	21 30 14.9	+0.2
MLSB	Milas	0.65	97	PG	Pg	21 30 05.5	-0.4
MLSB				SG	Sb	21 30 14.9	-0.6
DGB	zmir	0.68	354	iP	Pg	21 30 05.8	-0.7
DGB				iS	Sb	21 30 16.2	-0.2
AYDN	Tasoluk	0.77	68	iP	Pg	21 30 07.6	-0.8
AYDN				iS	Sg	21 30 18.1	-0.4
AYDN				IAML		21 30 20.0	
	comp=N,86nm,0.2s						
AYDN				IAML		21 30 22.0	
	comp=E,178nm,0.4s						
DAT	Datca	0.81	143	iP	Pg	21 30 08.6	-0.4
DAT				iS	Sb	21 30 20.3	+0.1
DAT	Datca	0.81	143	PG	Pb	21 30 08.9	-0.4
DAT				SG	Sb	21 30 20.4	+0.2
AYDB	Zeytinkoy-Aydi	0.92	52	PG	Pb	21 30 11.2	-0.2
AYDB				SG	Sb	21 30 24.3	+0.7
ZEYE	Izmir, Urla-Ze	0.94	337	iP	Pb	21 30 11.9	+0.4
ZEYE				iS	Sb	21 30 24.4	+0.5
ZEYE				IAML		21 30 26.0	
	comp=E,69nm,0.6s						
BLCB	Balcova	1.01	3	PG	Pb	21 30 12.6	-0.1
URLA	Izmir	1.03	343	iP	Pn	21 30 13.6	0.0
URLA				IAML		21 30 51.0	
	comp=E,76nm,2.2s						
URLA	Izmir	1.03	343	PG	Pb	21 30 12.9	-0.2
MULA	Mugla, Merkez-	1.08	96	iP	Pb	21 30 14.2	+0.2
TURN	Turunc	1.18	120	iP	Pb	21 30 15.6	0.0
TURN	Turunc	1.18	120	PN	Pn	21 30 15.9	+0.3
APE	Apeiranthos	1.19	256	PN	Pb	21 30 15.8	-0.1
DALY	Dalyan (Mula)	1.45	112	PN	Pb	21 30 20.4	+0.1
ARG	Arkhangelos	1.48	141	PN	Pb	21 30 20.8	0.0
TAVA	DENIZLI_Tavas	1.55	86	iP	Pg	21 30 22.5	-0.6
TAVA				iS	Sg	21 30 43.4	+0.2
KULA	Kula-Manisa	1.75	49	PN	Pb	21 30 24.7	-0.7
FETY	Fethiye	1.84	113	PN	Pn	21 30 25.9	+1.1

*BJI **17** 21:31:37.4±0.0, 47°.97N×146°.79E, h429^{km}, mB5.0/26, mb5.4/73*

JMA **17** *21:31:37.3±0.3, 47°.32N×147°.37E, h501^{km}, M5.3*
JMA Felt II J1.
SKHL **17** *21:31:38.7±0.4, 47°.70N×147°.20E, h471^{km}±10^{km}, mb6.0/18, mbv5.7/5, msh5.9/6, msha6.2/15*
MOS **17** *21:31:38.4±0.9, 47°.96N×146°.90E, h450^{km}, mb5.3/47, Error ellipse: s-maj=6.0km s-min=4.2km az=101.8*
IDC **17** *21:31:39.4±0.5, 47°.94N×146°.91E, h450^{km}±4^{km}, mb4.7/65, mb1 4.7/75, mb1mx4.7/83, mbtmp5.5/75, Error ellipse: s-maj=5.4km s-min=5.0km az=142.0*
NEIC **17** *21:31:39.6±1.7, 47°.97N±0°.08×146°.9E±0°.1, h443^{km}±4^{km}, mb5.4/752, Error ellipse: s-maj=12.6km s-min=10.8km az=128.0*
BGR **17** *21:31:51.0±0.0, 49°.23N×145°.96E, h469^{km}, mb5.7, mB_BB5.9*
ISC 17 21:31:39.3±0.3**, 47°.90N**±0°.03×**146°.97E**±0°.03**, h450**^{km}±2^{km}**, h449**^{km}**:pP-P, n1762,** σ1^{s}**29**/1699**, mb5.3**/610**, 632C-187D, Fault plane solution: NP1:**ϕ_s144.24944°, δ59.68125°, λ86.62464°. **NP2:**ϕ_s330.91336°**,** δ30.48828°**,** λ95.74918°. **Principal axes:** T Plg75.0812°**,** Azm44.9432°**;** N Plg2.9133°**,** Azm145.9548°**;** P Plg14.6185°**,** Azm236.7154°**; Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.74**	**167**	*c* *i*PN	**P**	**21 32 43.3**	**-1.2**
KUR				*i*S	**S**	**21 33 35.2**	**-2.1**
KUR				pmax	pmax		
	comp=E,511nm,0.5s						
KUR				pmax	pmax		
	comp=Z,5µm,0.5s						
KUR				pmax	pmax		
	comp=N,294nm,0.4s						
KUR				pmax	pmax		
	comp=Z,14µm,1.4s						
KUR				smax	smax		
	comp=E,11µm,3.2s						
KUR				smax	smax		
	comp=N,8µm,2.1s						
KUR				smax	smax		
	comp=N,721nm,0.6s						
KUR				smax	smax		
	comp=E,182nm,0.3s						
KUR	**Kuril'sk**	**2.74**	**167**	*i*P	**P**	**21 32 43.4**	**-1.1**
KUR				AMB	AMB	21 32 44.0	
	comp=E,5µm,0.5s						
KUR				AMB	AMB	21 32 44.0	
	comp=E,14µm,2.0s						
KUR				*i*S	**S**	**21 33 34.1**	**-3.2**
KUR				A	A	21 33 37.0	
	comp=E,8µm,3.0s						
KUR				A	A	21 33 37.0	
	comp=E,11µm,3.0s						
KUR				A	A	21 34 04.0	
	comp=E,720nm,0.6s						
KUR				A	A	21 34 04.0	
	comp=E,180nm,0.6s						
YSS	**Yuzh-Sakhalins**	**3.02**	**253**	⇑*e*PN	**P**	**21 32 47.6**	**+1.2**
YSS				*e*S	**S**	**21 33 41.4**	**+0.4**
YSS				pmax	pmax		
	comp=Z,3µm,0.9s						
YSS				smax	smax		
	comp=N,3µm,1.2s						
YSS				smax	smax		
	comp=E,2µm,1.4s						
YSS				MLR	MLR		
	comp=Z,2µm,10.0s						
YSS	**Yuzh-Sakhalins**	**3.02**	**253**	*e*P	**P**	**21 32 47.6**	**+1.2**
YSS				AMB	AMB	21 32 48.0	
	comp=Z,3µm,0.9s						
YSS				AMB	AMB	21 32 48.1	
	comp=Z,6µm,4.0s						
YSS				*e*S	**S**	**21 33 41.6**	**+0.6**
YSS				A	A	21 33 42.0	
	comp=Z,3µm,1.0s						
YSS				A	A	21 33 42.0	
	comp=Z,2µm,1.0s						
YSS				A	A	21 33 43.4	
	comp=Z,19µm,5.0s						
YSS				AMS	AMS	21 34 49.0	
	comp=Z,2µm,10.0s						
YSS	**Yuzh-Sakhalins**	**3.02**	**253**		**P**	**21 32 47.2**	**+0.8**
YSS				S	**S**	**21 33 40.6**	**-0.4**
YSS	**Yuzh-Sakhalins**	**3.02**	**253**	P	**P**	**21 32 47.7**	**+1.3**
UGL	**Uglegorsk**	**3.47**	**292**	⇑*i*PN	**P**	**21 32 51.1**	**+1.3**
UGL				*e*S	**S**	**21 33 47.4**	**+0.1**
UGL				pmax	pmax		
	comp=Z,2µm,1.2s						
UGL				pmax	pmax		
	comp=Z,2µm,1.0s						
UGL				smax	smax		
	comp=N,2µm,0.8s						
UGL				smax	smax		
	comp=E,19µm,4.9s						
UGL				smax	smax		
	comp=E,4µm,1.5s						
UGL				smax	smax		
	comp=N,5µm,4.0s						
UGL	**Uglegorsk**	**3.47**	**292**	*i*P	**P**	**21 32 51.1**	**+1.3**
UGL				AMB	AMB	21 32 51.8	
	comp=N,2µm,2.0s						
UGL				AMB	AMB	21 32 52.0	
	comp=N,2µm,1.0s						
UGL				*e*S	**S**	**21 33 48.7**	**+1.4**
UGL				A	A	21 33 49.0	
	comp=N,2µm,0.8s						
UGL				A	A	21 33 49.0	
	comp=N,4µm,0.8s						
UGL				A	A	21 33 50.0	
	comp=N,5µm,5.0s						
UGL				A	A	21 33 50.0	
	comp=N,19µm,5.0s						
YUK	**Yuzh-Kuril'sk**	**3.94**	**192**	*c* *i*PN	**P**	**21 32 52.0**	**-1.9**
YUK				*i*S	**S**	**21 33 50.0**	**-4.7**
YUK				pmax	pmax		
	comp=Z,6µm,1.2s						
YUK				pmax	pmax		
	comp=N,849nm,0.6s						
YUK				pmax	pmax		
	comp=Z,2µm,0.6s						
YUK				pmax	pmax		
	comp=E,881nm,0.3s						
YUK				smax	smax		
	comp=N,10µm,1.9s						
YUK				smax	smax		
	comp=E,8µm,1.5s						
YUK				smax	smax		
	comp=N,3µm,0.6s						
YUK				smax	smax		
	comp=E,4µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.94**	**192**	*i*P	**P**	**21 32 52.1**	**-1.9**
YUK				AMB	AMB	21 32 53.0	
	comp=E,6µm,2.0s						
YUK				AMB	AMB	21 32 55.0	
	comp=E,850nm,0.6s						
YUK				AMB	AMB	21 32 55.0	
	comp=E,880nm,0.6s						
YUK				AMB	AMB	21 32 55.0	
	comp=E,2µm,0.6s						
YUK				*i*S	**S**	**21 33 50.6**	**-4.1**
YUK				A	A	21 33 57.0	
	comp=E,10µm,2.0s						
YUK				A	A	21 33 57.0	
	comp=E,8µm,2.0s						
YUK				A	A	21 33 58.0	
	comp=E,3µm,0.6s						
YUK				A	A	21 33 58.0	
	comp=E,4µm,0.6s						
SHO	**Shikotan**	**4.03**	**181**	*c* *i*PN	**P**	**21 32 50.6**	**-4.2**
SHO				pmax	pmax		
	comp=N,2µm,0.4s						
SHO				pmax	pmax		
	comp=Z,5µm,0.4s						
SHO				pmax	pmax		
	comp=E,540nm,0.2s						
SHO	**Shikotan**	**4.03**	**181**	*i*P	**P**	**21 32 50.7**	**-4.1**
SHO				AMB	AMB	21 32 53.0	
	comp=E,5µm,0.4s						
SHO				*i*S	**S**	**21 33 48.9**	**-7.2**
SHO				A	A	21 33 49.0	
	comp=E,2µm,0.5s						
SHO				A	A	21 33 49.0	
	comp=E,4µm,0.5s						
TYV	**Tymovskoe**	**4.09**	**318**	*e*PN	**P**	**21 32 56.8**	**+1.7**
TYV				*e*S	**S**	**21 33 57.6**	**+0.6**
TYV				pmax	pmax		
	comp=Z,200nm,2.4s						
TYV				pmax	pmax		
	comp=Z,239nm,0.8s						
TYV				smax	smax		
	comp=N,1µm,1.1s						
TYV				smax	smax		
	comp=E,1µm,1.1s						
TYV				smax	smax		
	comp=N,6µm,2.8s						
TYV				smax	smax		
	comp=E,3µm,2.8s						
TYV	**Tymovskoe**	**4.09**	**318**	*e*P	**P**	**21 32 56.8**	**+1.7**
TYV				AMB	AMB	21 32 57.0	
	comp=E,200nm,2.0s						
TYV				AMB	AMB	21 32 57.1	
	comp=E,240nm,0.8s						
TYV				*e*S	**S**	**21 33 57.9**	**+0.9**
TYV				A	A	21 33 58.0	
	comp=E,1µm,1.0s						
TYV				A	A	21 33 58.0	
	comp=E,1µm,1.0s						
TYV				A	A	21 33 59.0	
	comp=E,6µm,3.0s						
TYV				A	A	21 33 59.0	
	comp=E,3µm,3.0s						
JRA	**Rausu**	**4.17**	**199**	P	**P**	**21 32 53.9**	**-2.1**
JRA				*e*S	**S**	**21 33 55.9**	**-2.4**
JSE	**Soyaes**	**4.22**	**228**	⇑P	**P**	**21 32 56.8**	**+0.4**
JSE				*e*S	**S**	**21 33 58.8**	**-0.4**
GLVR	**Golovnino**	**4.28**	**194**	*c* *i*PN	**P**	**21 32 54.9**	**-2.1**
GLVR				*i*S	**S**	**21 33 56.7**	**-3.5**
GLVR				pmax	pmax		
	comp=Z,6µm,0.5s						
GLVR				pmax	pmax		
	comp=E,414nm,0.6s						
GLVR				smax	smax		
	comp=E,12µm,1.9s						
GLVR				smax	smax		
	comp=N,12µm,1.6s						
GLVR				smax	smax		
	comp=N,8µm,0.4s						
GLVR				smax	smax		
	comp=E,4µm,0.3s						
GLVR	**Golovnino**	**4.28**	**194**	*i*P	**P**	**21 32 54.9**	**-2.1**
GLVR				AMB	AMB	21 32 56.0	
	comp=E,6µm,0.5s						
GLVR				*i*S	**S**	**21 33 56.7**	**-3.5**
GLVR				A	A	21 33 58.0	
	comp=E,12µm,2.0s						
GLVR				A	A	21 33 58.0	
	comp=E,12µm,2.0s						
GLVR				A	A	21 34 02.0	
	comp=E,8µm,0.4s						
GLVR				A	A	21 34 02.0	
	comp=E,4µm,0.4s						
JNSB	**Nemuroshibetsu**	**4.35**	**199**	P	**P**	**21 32 55.9**	**-1.7**
JWK2	**Keihoku**	**4.35**	**235**	P	**P**	**21 32 58.7**	**+1.2**
JWK2				*e*S	**S**	**21 34 02.0**	**+0.8**
JTKR	**Abashiri--Toko**	**4.47**	**210**	⇑P	**P**	**21 32 57.6**	**-1.1**
JTKR				*e*S	**S**	**21 34 01.3**	**-2.1**
NMR	**Nemuro--Hokkai**	**4.61**	**191**	⇑*i*PN	**P**	**21 32 55.7**	**-4.3**
NMR				*i*S	**S**	**21 33 58.7**	**-7.0**
NMR	**Nemuro--Hokkai**	**4.61**	**191**	*i*P	**P**	**21 32 56.3**	**-3.7**
NMR				*i*S	**S**	**21 33 59.6**	**-6.1**
NEM2	**Nemuro 2**	**4.62**	**191**	⇑P	**P**	**21 32 55.7**	**-4.4**
NEM2				*e*S	**S**	**21 33 58.6**	**-7.2**
JRBN	**Rebuntou**	**4.76**	**241**	⇓P	**P**	**21 33 01.3**	**-0.1**
JKA	**Kamikawa-asahi**	**4.86**	**220**	*e*P	**P**	**21 33 01.6**	**-0.7**
JKA	**Kamikawa-asahi**	**4.86**	**220**	P	**P**	**21 33 01.6**	**-0.7**
JKA				S	**S**	**21 34 08.9**	**-1.0**
ASAJ	**Asahikawa**	**4.86**	**220**	P	**P**	**21 33 02.1**	**-0.2**
	comp=E,53nm,0.3s,baz=29,slow=2.3,SNR=376						
ASAJ				S	**S**	**21 34 08.3**	**-1.7**
	comp=E,22nm,0.3s,baz=53,slow=20,SNR=2.9						
ASAJ	**Asahikawa**	**4.86**	**220**	PN	**P**	**21 33 01.6**	**-0.7**
ASAJ				S	**S**	**21 34 08.9**	**-1.1**
JKHN	**Kushirohamanak**	**4.98**	**195**	P	**P**	**21 32 59.9**	**-3.6**
JKK2	**Kamakawa 2**	**4.99**	**218**	⇑P	**P**	**21 33 03.1**	**-0.5**
JKK2				*e*S	**S**	**21 34 10.3**	**-2.1**
AKK	**Akkeshi**	**5.11**	**198**	*e*P	**P**	**21 33 01.3**	**-3.4**
JAR	**Ashorobuto**	**5.12**	**207**	⇑P	**P**	**21 33 03.0**	**-1.9**
JAR				*e*S	**S**	**21 34 10.7**	**-3.9**
JAK	**Akkeshi**	**5.16**	**199**	⇑P	**P**	**21 33 01.4**	**-3.8**
JAK				*e*S	**S**	**21 34 07.9**	**-7.4**
JYG	**Yagishiri**	**5.19**	**230**	P	**P**	**21 33 05.7**	**+0.2**
JYG				*e*S	**S**	**21 34 13.7**	**-2.0**
JOB	**Onbets**	**5.46**	**205**	⇑P	**P**	**21 33 05.4**	**-2.8**
JHR	**Hokuryu**	**5.54**	**223**	P	**P**	**21 33 08.7**	**-0.3**
JHR				*e*S	**S**	**21 34 20.2**	**-2.0**
JFR	**Furan**	**5.65**	**215**	P	**P**	**21 33 09.1**	**-1.0**
JFR				*e*S	**S**	**21 34 20.6**	**-3.6**
JCH	**Churui**	**5.87**	**207**	P	**P**	**21 33 08.7**	**-3.6**
JCH				*e*S	**S**	**21 34 20.2**	**-8.0**
JNBK	**Urakawa-nobuka**	**6.36**	**210**	P	**P**	**21 33 14.1**	**-3.3**
JEW	**Eniwo**	**6.38**	**220**	*e*S	**S**	**21 34 33.4**	**-4.5**
JEW	**Eniwo**	**6.38**	**220**	P	**P**	**21 33 16.6**	**-1.0**
JSK	**Shakotan**	**6.43**	**227**	P	**P**	**21 33 17.8**	**-0.3**
JSK				*e*S	**S**	**21 34 35.2**	**-3.6**
ERM	**Erimo**	**6.47**	**206**	P	**P**	**21 33 16.5**	**-2.0**
ERM	**Erimo**	**6.47**	**206**	P	**P**	**21 33 16.7**	**-1.8**
SKR	**Severo-Kuril's**	**6.60**	**62**	⇑*i*PN	**P**	**21 33 20.1**	**+0.5**
SKR				*e**SP		21 34 34.5	
SKR				pmax	pmax		
	comp=Z,7µm,1.0s						
SKR				pmax	pmax		
	comp=E,415nm,0.6s						
SKR				pmax	pmax		
	comp=N,1µm,0.8s						
SKR				MLR	MLR		
	comp=Z,2µm,17.0s						
SKR	**Severo-Kuril's**	**6.60**	**62**	*e*P	**P**	**21 33 20.0**	**+0.5**
SKR				AMB	AMB	21 33 21.2	
	comp=Z,2µm,0.5s						
SKR				*e*S	**S**	**21 34 39.9**	**-1.8**
SKR				A	A	21 34 43.6	
	comp=Z,210nm,0.7s						
SKR				A	A	21 34 43.6	
	comp=Z,180nm,0.7s						
SKR				AMS	AMS	21 36 05.8	
	comp=Z,2µm,17.0s						
NKL	**Nikolayevsk**	**6.61**	**325**	*e*P	**P**	**21 33 21.6**	**+1.9**
NKL				AMB	AMB	21 33 22.5	
	comp=Z,760nm,0.9s						
PAU	**Pauzhetka**	**7.31**	**57**	*e*P	**P**	**21 33 27.2**	**+0.1**
PAU				AMB	AMB	21 33 28.6	
	comp=Z,6µm,0.9s						
PAU				*e*S	**S**	**21 34 53.9**	**-1.7**
PAU				A	A	21 34 57.1	
	comp=Z,320nm,0.8s						
PAU				A	A	21 34 57.1	
	comp=Z,530nm,0.8s						
JKB	**Kayabe**	**7.34**	**217**	P	**P**	**21 33 24.6**	**-3.0**
JKB				*e*S	**S**	**21 34 48.1**	**-8.3**
GRNR	**Gornyy**	**7.47**	**297**	⇓*i*PN	**P**	**21 33 30.4**	**+1.6**
GRNR				pmax	pmax		
	comp=E,220nm,0.7s						
GRNR				pmax	pmax		
	comp=N,110nm,0.6s						
GRNR				pmax	pmax		
	comp=Z,440nm,1.0s						
GRNR				MLR	MLR		
	comp=E,550nm,11.0s						
GRNR				MLR	MLR		
	comp=N,470nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,840nm,11.0s						
GRNR	**Gornyy**	**7.47**	**297**	*e*P	**P**	**21 33 30.4**	**+1.6**
GRNR				AMB	AMB	21 33 31.6	
	comp=Z,440nm,1.0s						
GRNR				AMS	AMS	21 36 18.0	
	comp=Z,500nm,14.0s						
GRNR				AMS	AMS	21 36 18.0	
	comp=Z,600nm,14.0s						
GRNR				AMS	AMS	21 36 18.0	
	comp=Z,800nm,14.0s						
TEY	**Ternei**	**7.71**	**252**	⇑*i*PN	**P**	**21 33 31.7**	**+0.2**
TEY				pmax	pmax		
	comp=E,2µm,1.6s						
TEY				pmax	pmax		
	comp=Z,2µm,1.5s						
TEY				pmax	pmax		
	comp=N,600nm,1.6s						
TEY				pmax	pmax		
	comp=N,240nm,1.2s						
TEY				pmax	pmax		
	comp=E,580nm,1.2s						
TEY				pmax	pmax		
	comp=Z,810nm,1.3s						
TEY	**Ternei**	**7.71**	**252**	*e*P	**P**	**21 33 31.7**	**+0.2**
TEY				AMB	AMB	21 33 32.7	
	comp=Z,2µm,1.0s						
JOT	**Ohata**	**7.76**	**215**	P	**P**	**21 33 29.0**	**-3.2**
JOT				*e*S	**S**	**21 34 55.8**	**-8.9**
JOSM	**Okushiri--Mats**	**7.88**	**225**	P	**P**	**21 33 31.3**	**-2.1**
JOSM				*e*S	**S**	**21 35 02.2**	**-4.7**
JTM	**Tenmabayashi**	**8.27**	**213**		**P**	**21 33 35.4**	**-2.3**
JANG	**Nango**	**8.48**	**210**	P	**P**	**21 33 36.9**	**-3.1**
JANG				*e*S	**S**	**21 35 10.8**	**-8.2**
PEA0B	**Petropavlovsk-**	**8.59**	**49**	*c* *e*PN	**P**	**21 33 41.1**	**+0.2**
PEA0B	**Petropavlovsk-**	**8.59**	**49**	P	**P**	**21 33 40.7**	**-0.2**
PETK	**Petropavlovsk-**	**8.59**	**49**	P	**P**	**21 33 40.6**	**-0.3**
	comp=Z,7.7nm,0.3s,baz=230,slow=3.7,SNR=74						
PETK	**Petropavlovsk-**	**8.59**	**49**	PN	**P**	**21 33 40.9**	**0.0**
PETK	**Petropavlovsk-**	**8.59**	**49**	P	**P**	**21 33 40.9**	**0.0**
PET	**Petropavlovsk**	**9.04**	**51**	*e*PN	**P**	**21 33 46.3**	**+0.6**
PET				*e*S	**S**	**21 35 27.9**	**-1.8**
PET				pmax	pmax		
	comp=Z,290nm,1.3s						
PET	**Petropavlovsk**	**9.04**	**51**	*e*P	**P**	**21 33 46.5**	**+0.8**
PET				AMB	AMB	21 33 52.6	
	comp=Z,580nm,0.8s						
PET				*e*S	**S**	**21 35 28.9**	**-0.8**
PET	**Petropavlovsk**	**9.04**	**51**	P	**P**	**21 33 45.1**	**-0.6**
PET	**Petropavlovsk**	**9.04**	**51**	P	**P**	**21 33 47.5**	**+1.8**
JOM	**Ohasama**	**9.37**	**208**	P	**P**	**21 33 47.5**	**-2.1**
JOM				*e*S	**S**	**21 35 30.8**	**-5.9**
JMK	**Ichinoseki**	**9.87**	**207**	P	**P**	**21 33 54.7**	**-0.3**
JYK	**Kaneyama**	**10.18**	**211**	P	**P**	**21 33 58.2**	**-0.2**
KLR	**Kul'dur**	**10.18**	**283**	P	**P**	**21 33 59.5**	**+1.2**
	comp=Z,31nm,0.3s,baz=91,slow=9.5,SNR=584						
KLR				PcP	**PcP**	**21 39 20.9**	**-0.1**
	comp=Z,1.4nm,0.3s,baz=172,slow=1.2,SNR=6.7						
KLR				ScP	**ScP**	**21 42 10.2**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=82,slow=1.7,SNR=11						
KLR	**Kul'dur**	**10.18**	**283**	*c* *e*PN	**P**	**21 33 59.6**	**+1.4**
KLR	**Kul'dur**	**10.18**	**283**	*e*P	**P**	**21 34 00.2**	**+2.0**
JIO	**Ouri**	**10.29**	**206**	P	**P**	**21 33 59.5**	**-0.1**
JMM	**Marumori**	**11.00**	**207**	P	**P**	**21 34 07.0**	**-0.3**
USA0B	**Ussuriysk Arra**	**11.05**	**256**	PN	**P**	**21 34 06.6**	**-1.1**
USA0B	**Ussuriysk Arra**	**11.05**	**256**	P	**P**	**21 34 06.6**	**-1.1**
USRK	**Ussuriysk Ar.**	**11.05**	**256**	P	**P**	**21 34 07.2**	**-0.6**
	baz=64,slow=13,SNR=384						
USRK	**Ussuriysk Ar.**	**11.05**	**256**	P	**P**	**21 34 06.6**	**-1.1**
VLA	**Vladivostok**	**11.61**	**251**	*i* PN	**P**	**21 34 10.9**	**-2.9**
JSD	**Sado**	**11.73**	**216**	P	**P**	**21 34 15.5**	**+0.2**
MA2	**Magadan**	**11.91**	**9**	*c* *e*PN	**P**	**21 34 17.6**	**+0.8**
MA2				pmax	pmax		
	comp=Z,171nm,1.3s						
MA2	**Magadan**	**11.91**	**9**	*e*P	**P**	**21 34 17.6**	**+0.8**
MA2	**Magadan**	**11.91**	**9**	P	**P**	**21 34 18.0**	**+1.2**
MA2	**Magadan**	**11.91**	**9**	P	**P**	**21 34 18.4**	**+1.6**
MDJ	**Mudanjiang**	**12.47**	**261**	P	**P**	**21 34 22.5**	**-0.6**
MDJ				ScP	**ScP**	**21 42 13.8**	**+0.5**
MDJ	**Mudanjiang**	**12.47**	**261**	P	**P**	**21 34 22.2**	**-0.9**
MDJ	**Mudanjiang**	**12.47**	**261**	P	**P**	**21 34 23.2**	**+0.1**
JSZ	**Suzu**	**12.60**	**218**	P	**P**	**21 34 24.5**	**-0.1**
JYT	**Yasato**	**12.70**	**206**	P	**P**	**21 34 25.0**	**-0.7**
MJB9	**Matsu-Tunnel**	**13.06**	**213**	P	**P**	**21 34 29.6**	**-0.1**
MAJO	**Matsushiro**	**13.06**	**213**	*d* *i*PN	**P**	**21 34 29.5**	**-0.2**
MAJO	**Matsushiro**	**13.06**	**213**	P	**P**	**21 34 29.7**	**0.0**
MAJO	**Matsushiro**	**13.06**	**213**	P	**P**	**21 34 30.1**	**+0.4**
MAT	**Matsushiro**	**13.06**	**213**	P	**P**	**21 34 29.7**	**0.0**
MAT				S	**S**	**21 36 50.1**	**-0.3**
MAT	**Matsushiro**	**13.06**	**213**	P	**P**	**21 34 29.4**	**-0.3**
MJAR	**Matsushiro Arr**	**13.06**	**213**	P	**P**	**21 34 29.3**	**-0.4**
	comp=Z,12nm,0.3s,baz=20,slow=11,SNR=217						
MJAR				S	**S**	**21 36 51.8**	**+1.4**
	baz=106,slow=9.2,SNR=4.0						
MJAR	**Matsushiro Arr**	**13.06**	**213**	P	**P**	**21 34 29.1**	**-0.6**
JNG	**Nsakai**	**13.22**	**213**	P	**P**	**21 34 31.6**	**+0.1**
JGN	**Niukaw**	**13.68**	**215**	P	**P**	**21 34 36.3**	**-0.1**
ZEA	**Zeya**	**13.75**	**302**	*e*P	**P**	**21 34 36.7**	**-0.1**
ZEA				*e*S	**S**	**21 36 57.4**	**-6.0**
ZEA				pmax	pmax		
	comp=N,50nm,0.7s						
ZEA				pmax	pmax		
	comp=E,40nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,70nm,0.6s						
ZEA				smax	smax		
	comp=E,500nm,6.0s						
ZEA				smax	smax		
	comp=N,1µm,6.4s						
ZEA				MLR	MLR		
	comp=Z,400nm,15.0s						
ZEA	**Zeya**	**13.75**	**302**	*e*P	**P**	**21 34 38.3**	**+1.5**
ZEA				AMB	AMB	21 34 42.3	
	comp=Z,50nm,0.6s						
ZEA				AMB	AMB	21 34 42.3	
	comp=Z,40nm,0.6s						
ZEA				AMB	AMB	21 34 42.3	
	comp=Z,70nm,0.6s						
ZEA				AMS	AMS	21 41 40.0	
	comp=Z,400nm,15.0s						
JYN	**Shimob**	**13.89**	**210**	P	**P**	**21 34 38.2**	**-0.4**
KROS	**Kirovskiy**	**14.12**	**305**	*e*P	**P**	**21 34 41.6**	**+0.8**
KROS				AMB	AMB	21 34 43.0	
	comp=Z,100nm,0.7s						
KROS				AMB	AMB	21 34 43.0	
	comp=Z,210nm,0.7s						
KROS				AMB	AMB	21 34 43.0	
	comp=Z,270nm,0.7s						
JYTA	**Yamagatataniai**	**14.46**	**215**	P	**P**	**21 34 44.7**	**+0.1**
JIZS	**Izushimoda**	**14.49**	**208**	P	**P**	**21 34 45.0**	**0.0**
INU	**Inuyama**	**14.56**	**214**	P	**P**	**21 34 45.4**	**-0.4**
INU	**Inuyama**	**14.56**	**214**	P	**P**	**21 34 45.7**	**-0.1**
JYZW	**Yoshizawa**	**14.62**	**211**	P	**P**	**21 34 45.8**	**-0.6**
HMMJ	**Hamamatsu 2**	**14.75**	**211**	P	**P**	**21 34 47.3**	**-0.5**
JSG	**Sagara**	**14.76**	**210**	P	**P**	**21 34 49.0**	**+1.2**
JFM	**Mihama**	**14.82**	**217**	P	**P**	**21 34 48.4**	**-0.1**
JAA	**Atsumi**	**15.16**	**213**	P	**P**	**21 34 51.5**	**-0.6**
SEY	**Seymchan**	**15.37**	**9**	P	**P**	**21 34 54.0**	**+0.1**
	comp=Z,8.8nm,0.3s,baz=187,slow=8.7,SNR=89						
SEY				S	**S**	**21 37 36.0**	**+1.3**
	baz=353,slow=21,SNR=2.1						
CN2	**Changchun**	**15.54**	**263**	*e*P	**P**	**21 34 53.8**	**-2.2**
CN2				*e*S	**S**	**21 37 35.3**	**-3.2**
CN2				pmax	pmax		
	comp=Z,500nm,1.1s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
JHJ2	**Mitsune**	**15.73**	**203**	P	**P**	**21 34 59.9**	**+1.7**
JHJ	**Hachijo jima 2**	**15.73**	**203**	P	**P**	**21 34 58.9**	**+0.7**
	comp=Z,45nm,0.3s,baz=223,slow=18,SNR=8.8						
JHJ				S	S	21 37 55.7	+13
	comp=Z,12nm,0.3s,baz=75,slow=18,SNR=1.3						
YAK	**Yakutsk**	**17.20**	**332**	P	**P**	**21 35 12.4**	**-0.9**
	comp=Z,4.1nm,0.3s,baz=128,slow=2.5,SNR=127						
YAK				S	**S**	**21 38 06.6**	**-3.3**
	comp=Z,0.2nm,0.3s,baz=188,slow=18,SNR=7.5						
YAK				ScP	**ScP**	**21 42 21.0**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=55,slow=0.6,SNR=5.1						
YAK	**Yakutsk**	**17.20**	**332**	*c* *e*P	**P**	**21 35 11.8**	**-1.5**
YAK				pmax	pmax		
	comp=Z,387nm,0.8s						
YAK	**Yakutsk**	**17.20**	**332**	*e*P	**P**	**21 35 11.8**	**-1.5**
YAK	**Yakutsk**	**17.20**	**332**	P	**P**	**21 35 11.7**	**-1.5**
JMN	**Monobe**	**17.24**	**220**	P	**P**	**21 35 14.0**	**-0.2**
JMN				IAmb	IAmb	21 35 17.9	
	comp=Z,115nm,0.8s						
KSRS	**Korea Array**	**17.42**	**240**	P	**P**	**21 35 16.8**	**+0.8**
	comp=Z,16nm,0.3s,baz=45,slow=9.8,SNR=408						
KSRS				S	**S**	**21 38 18.5**	**+4.0**
	baz=51,slow=18,SNR=6.5						
KSRS				PcP	**PcP**	**21 39 31.6**	**+0.7**
	comp=Z,1.6nm,0.3s,baz=24,slow=1.2,SNR=15						
KSRS				ScP	**ScP**	**21 42 23.2**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=0.9,SNR=19						
KS19	**Wonju Array Si**	**17.42**	**240**	P	**P**	**21 35 16.2**	**+0.2**
KS19				IAmb	IAmb	21 35 17.6	
	comp=Z,147nm,0.8s						
KSAR	**Wonju Array Be**	**17.45**	**240**	P	**P**	**21 35 16.4**	**+0.1**
KSAR	**Wonju Array Be**	**17.45**	**240**	P	**P**	**21 35 16.4**	**+0.1**
KSAR					**PcP**	**21 39 31.4**	**+0.5**
HIA	**Hailar**	**18.04**	**285**	P	**P**	**21 35 20.0**	**-2.2**
HIA				pmax	pmax		
	comp=Z,91nm,1.0s						
HIA	**Hailar**	**18.04**	**285**	P	**P**	**21 35 20.0**	**-2.2**

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HIA                                IAmb   IAmb    21 35 27.3
      comp=Z,91nm,1.0s
INCN  Inchon           18.16 242   P      P       21 35 23.6  0.0
INCN                               pmax   pmax
      comp=Z,191nm,1.1s
INCN  Inchon           18.16 242   P      P       21 35 23.7 +0.1
INCN  Inchon           18.16 242   P      P       21 35 23.6  0.0
INCN                               IAmb   IAmb    21 35 25.5
      comp=Z,191nm,1.1s
TJN   Taejon           18.49 239ceP     P       21 35 27.1 +0.4
TJN   Taejon           18.49 239   P      P       21 35 27.3 +0.6
JTU   Tsushima         18.74 231   P      P       21 35 29.6 +0.6
JTU                                IAmb   IAmb    21 35 34.8
      comp=Z,308nm,2.0s
JNU   Nakatsue         19.11 225   P      P       21 35 33.1 +0.5
      comp=Z,21nm,0.3s,baz=15,slow=3.2,SNR=64
DL2   Dalian           20.42 253   P      P       21 35 44.4 +0.1
DL2                                pmax   pmax
      comp=Z,400nm,0.6s
JSU   Suzuyama         20.65 224   P      P       21 35 47.0 +0.3
JSU                                IAmb   IAmb    21 35 48.9
      comp=Z,124nm,0.8s
CIT   Chita            21.77 293  eP      P       21 35 56.2 -0.4
CIT                               eS      S       21 39 24.4 -1.0
CIT                                pmax   pmax
      comp=Z,144nm,1.0s
BILL  Bilibino         22.44  19deP     P       21 36 01.4 -0.9
BILL                              i S     S       21 39 34.6 -0.8
BILL                               pmax   pmax
      comp=Z,166nm,1.0s
BILL  Bilibino         22.44  19  eP      P       21 36 01.4 -0.9
BILL  Bilibino         22.44  19   P      P       21 36 02.4 +0.1
BILL                               IAmb   IAmb    21 36 04.2
      comp=Z,117nm,0.8s
BJI   Beijing          23.40 262   P      P       21 36 11.4 +0.1
BJI                                PcP    PcP     21 39 42.8 +0.6
BJI                                S      S       21 39 52.8 +1.6
BJI                                ScP    ScP     21 42 36.9  0.0
BJI                                pmax   pmax
      comp=Z,240nm,0.7s
BJT   Baijiatuau       23.41 262   P      P       21 36 11.9 +0.5
BJT                                pmax   pmax
      comp=Z,147nm,0.7s
BJT   Baijiatuau       23.41 262   P      P       21 36 11.9 +0.5
ADK   Adak             23.59  67   P      P       21 36 10.6 -2.2
ADK                                pmax   pmax
      comp=Z,129nm,0.9s
ADK   Adak             23.59  67   P      P       21 36 10.6 -2.2
ADK                                IAmb   IAmb    21 36 14.0
      comp=Z,129nm,0.9s
TIXI  Tiksi            25.28 347   P      P       21 36 26.5 -1.1
      comp=Z,16nm,0.3s,baz=142,slow=8.3,SNR=60
TIXI                               PcP    PcP     21 39 45.1 -0.7
      comp=Z,14nm,0.4s,baz=103,slow=2.9,SNR=9.7
TIXI                               PKiKP  PKiKP   21 47 23.5 -1.8
      comp=Z,2.2nm,0.5s,baz=125,slow=1.2,SNR=5.8
TIXI  Tiksi            25.28 347ceP     P       21 36 26.2 -1.4
TIXI                               pmax   pmax
      comp=Z,45nm,0.9s
TIXI  Tiksi            25.28 347   P      P       21 36 26.5 -1.1
JOW   Kunigami         25.62 221   P      P       21 36 30.9 -0.4
      comp=Z,73nm,0.6s,baz=27,slow=7.3,SNR=13
JOW   Kunigami         25.62 221   P      P       21 36 31.2  0.0
JOW                                IAmb   IAmb    21 36 32.5
      comp=Z,272nm,1.5s
JOW   Kunigami         25.62 221   P      P       21 36 31.5 +0.3
HHC   Hu-ho-hao-te     26.10 268  eP      P       21 36 35.9 +0.5
HHC                                pmax   pmax
      comp=Z,430nm,0.8s
HHC                                pmax   pmax
      comp=Z,290nm,4.6s
NJ2   Nanjing          26.54 244 ⇓P      P       21 36 38.8 -0.4
NJ2                                PcP    PcP     21 39 49.0 -0.5
NJ2                                ScP    ScP     21 42 45.3 -0.7
NJ2                                pmax   pmax
      comp=Z,62nm,0.9s
ULN   Ulaanbaatar      26.57 285ceP     P       21 36 39.3 -0.3
ULN                                pmax   pmax
      comp=Z,57nm,1.7s
ULN   Ulaanbaatar      26.57 285   P      P       21 36 39.9 +0.4
ULN   Ulaanbaatar      26.57 285  eP      P       21 36 39.3 -0.3
ULN   Ulaanbaatar      26.57 285   P      P       21 36 39.5 -0.1
ULN                                IAmb   IAmb    21 36 45.7
      comp=Z,87nm,0.8s
SONM  Songino Array    27.00 285   P      P       21 36 43.4  0.0
      comp=Z,8.3nm,0.5s,baz=75,slow=8.8,SNR=83
SONM                               PcP    PcP     21 39 50.7 +0.1
      comp=Z,13nm,0.6s,baz=123,slow=2.3,SNR=9.2
SONM                               S      S       21 40 43.2 -4.7
      comp=Z,1.0nm,0.8s,baz=36,slow=30,SNR=1.5
SONM                               ScP    ScP     21 42 46.7 -0.7
      comp=Z,4.7nm,0.7s,baz=118,slow=1.8,SNR=8.3
SONM                               PKiKP  PKiKP   21 47 25.5 -1.6
      comp=Z,1.4nm,1.1s,baz=218,slow=1.5,SNR=6.2
SONM  Songino Array    27.00 285   P      P       21 36 43.1 -0.2
TIY   Taiyuan          27.10 261  eP      P       21 36 45.3 +1.0
TIY                                pmax   pmax
      comp=Z,47nm,0.5s
SPIA  Saint Paul Isl   27.20  54   P      P       21 36 44.9 +0.2
      baz=269
BTO   Baotou           27.25 268  eP      P       21 36 45.8 +0.2
GAMB  Gambell          27.47  39   P      P       21 36 47.0 -0.1
GAMB  Gambell          27.47  39   P      P       21 36 46.4 -0.6
      baz=255
TLY   Talaya           27.92 294   P      P       21 36 51.4 +0.2
      comp=Z,30nm,0.7s,baz=242,slow=21,SNR=19
TLY                                PcP    PcP     21 39 53.0 +0.4
      comp=Z,9.6nm,0.5s,baz=163,slow=3.2,SNR=5.7
TLY                                S      S       21 41 01.1 -0.8
      comp=Z,3.1nm,0.7s,baz=247,slow=18,SNR=1.1
TLY                                ScP    ScP     21 42 49.8 -0.2
      comp=Z,12nm,0.8s,baz=284,slow=2.1,SNR=6.6
TLY   Talaya           27.92 294d iP      P       21 36 51.4 +0.2
TLY                                pmax   pmax
      comp=Z,123nm,0.9s
TLY   Talaya           27.92 294   P      P       21 36 52.0 +0.7
TLY   Talaya           27.92 294   P      P       21 36 51.3 +0.2
TLY                                       PcP     21 39 53.3 +0.7
NIKH  Nikolski High    28.24  63   P      P       21 36 53.8 -0.1
      baz=278
ZAK   Zakamensk        28.39 292  eP      P       21 36 56.0 +0.5
ZAK                                pmax   pmax
      comp=Z,53nm,1.0s
ZAK   Zakamensk        28.39 292  eP      P       21 36 56.0 +0.5
JMJ   Miyako jima 2    28.72 224   P      P       21 36 59.8 +1.3
TNA   Tin City         29.51  37   P      P       21 37 05.2 +0.3
TNA   Tin City         29.51  37   P      P       21 37 05.1 +0.3
      baz=256,SNR=39
UNV   Unalaska Valle   29.52  61   P      P       21 37 03.7 -1.4
UNV                                IAmb   IAmb    21 37 25.0
      comp=Z,180nm,1.7s
UNV   Unalaska Valle   29.52  61   P      P       21 37 05.7 +0.7
      baz=278
MOY   Mondy            29.55 295  eP      P       21 37 05.7 +0.1
AKUT  Akutan           29.91  60   P      P       21 37 07.6 -0.8
WHN   Wuhan            30.34 247⇓iP      P       21 37 12.8 +0.2
WHN                                PcP    PcP     21 40 00.0 +0.8
WHN                                ScP    ScP     21 43 00.0 +1.9
WHN                                ScS    ScS     21 46 55.9 +0.7
WHN                                pmax   pmax
      comp=Z,170nm,0.9s
ANM   Nome             30.35  39          PcP     21 40 00.1 +1.5
TATO  Taipei           30.47 230   P      P       21 37 14.3 +0.6
TATO                               IAmb   IAmb    21 37 17.3
      comp=Z,353nm,1.6s
YHNB  Yeheng           30.78 230   P      P       21 37 16.1 -0.4
YHNB  Yeheng           30.78 230   P      P       21 37 18.1 +1.6
NACB  Ninganchiao      31.07 229   P      P       21 37 16.9 -2.0
XAN   Xi'an            31.55 258   P      P       21 37 23.3 +0.2
XAN                                pmax   pmax
      comp=Z,98nm,1.0s
SSLB  Suanglung        31.72 230   P      P       21 37 24.3 -0.3
SSLB  Suanglung        31.72 230   P      P       21 37 25.2 +0.6
RDOG  Red Dog Mine     32.04  33   P      P       21 37 34.8 +8.0
      baz=257,SNR=19
TPUB  Ta-pu            32.29 230   IAmb   IAmb    21 37 30.9
      comp=Z,88nm,0.6s
TPUB  Ta-pu            32.29 230   P      P       21 37 29.5  0.0
TWG   Pinlang          32.46 229   IAmb   IAmb    21 37 34.6
      comp=Z,165nm,1.4s
KNMB  Chin-men Tao     32.53 234   P      P       21 37 32.2 +0.7
SDPT  Sand Point       32.77  57   P      P       21 37 32.6 -0.5
SDPT                               IAmb   IAmb    21 37 39.1
      comp=Z,226nm,1.3s
SDPT  Sand Point       32.77  57   P      P       21 37 32.9 -0.2
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      baz=279
CHNA  Chernabura Isl   33.36  58   P      P       21 37 37.7 -0.5
      baz=281
CNBA  Chernabura Isl   33.36  58   P      P       21 37 37.8 -0.4
CNBA                               IAmb   IAmb    21 37 40.7
      comp=Z,90nm,0.7s
ENH   Enshi            33.60 252          PcP     21 40 08.7 +0.4
LZH   Lanzhou          33.74 266 ⇓P      P       21 37 43.3 +1.4
LZH                                PcP    PcP     21 40 10.0 +1.2
LZH                                S      S       21 42 32.9 +0.6
LZH                                ScP    ScP     21 43 10.9 +1.0
LZH                                ScS    ScS     21 47 13.0  0.0
LZH                                pmax   pmax
      comp=Z,120nm,1.4s
LZH                                pmax   pmax
      comp=Z,270nm,6.0s
GCSA  Galena City Sc   34.00  40   P      P       21 37 43.1 -0.4
      baz=268,SNR=9.0
TTA   Tatalina         34.37  43   P      P       21 37 47.4 +0.6
TTA                                pmax   pmax
      comp=Z,83nm,1.1s
TTA   Tatalina         34.37  43   P      P       21 37 47.4 +0.6
TTA   Tatalina         34.37  43   P      P       21 37 47.2 +0.5
      baz=272,SNR=30
SVW2  Sparrevohn       34.67  46   P      P       21 37 50.4 +1.2
SVW2                               IAmb   IAmb    21 37 51.5
      comp=Z,151nm,1.4s
SVW2                                      PcP     21 40 12.3 +1.5
GTA   Gaotai           34.69 274 ⇓P      P       21 37 50.6 +0.8
GTA                                PP     PP      21 39 22.6 +1.3
GTA                                sP     sP      21 39 54.8 -7.5
GTA                                PcP    PcP     21 40 12.5 +1.0
GTA                                S      S       21 42 46.0 -0.6
GTA                                ScP    ScP     21 43 13.1 -0.2
GTA                                PcS    PcS     21 44 00.1 +1.2
GTA                                ScS    ScS     21 47 18.3 +0.3
GTA                                pmax   pmax
      comp=Z,75nm,0.9s
GTA                                pmax   pmax
      comp=Z,290nm,5.5s
A21K  Barrow           34.89  28   P      P       21 37 50.4 -0.5
      baz=259,SNR=20
P18K  Big Mountain,    35.01  49   IAmb   IAmb    21 37 54.2
      comp=Z,98nm,0.9s
P18K  Big Mountain,    35.01  49   P      P       21 37 53.3 +1.2
      baz=277,SNR=7.7
M19K  Big River Lodg   35.18  45          PcP     21 40 13.8 +1.5
J20K  Nowinta River    35.18  41   IAmb   IAmb    21 37 55.2
      comp=Z,129nm,0.8s
J20K  Nowinta River    35.18  41   P      P       21 37 54.0 +0.5
      baz=271
N19K  Bonanza Creek    35.23  46          PcP     21 40 13.7 +1.1
N19K  Bonanza Creek    35.23  46   P      P       21 37 55.1 +1.1
      baz=276
K20K  Telida           35.24  42   IAmb   IAmb    21 37 55.8
      comp=Z,127nm,1.2s
K20K  Telida           35.24  42   P      P       21 37 54.4 +0.5
      baz=273
O19K  Port Alsworth    35.37  48   P      P       21 37 56.2 +1.1
      baz=277
L20K  Farewell, AK     35.38  44   P      P       21 37 55.8 +0.7
      baz=274
CHIR  Chirikof Islan   35.39  55   P      P       21 37 55.9 +0.6
CHIR  Chirikof Islan   35.39  55   P      P       21 37 56.1 +0.8
      baz=282
NRIK  Noril'sk         35.60 328   P      P       21 37 56.4 -0.5
      comp=Z,31nm,0.8s,baz=102,slow=9.2,SNR=43
NRIK                               PcP    PcP     21 40 13.6 +0.1
      comp=Z,18nm,0.5s,baz=97,slow=3.4,SNR=9.2
NRIK                               S      S       21 42 57.4 -1.9
      comp=Z,5.5nm,0.9s,baz=287,slow=19,SNR=8.2
NRIK  Noril'sk         35.60 328ceP     P       21 37 56.3 -0.6
NRIK                               pmax   pmax
      comp=Z,101nm,1.4s
NRIK  Noril'sk         35.60 328   P      P       21 37 56.5 -0.4
NRIK                                      PcP     21 40 13.5 +0.1
H21K  Melozitna Rive   35.74  38   IAmb   IAmb    21 37 59.3
      comp=Z,84nm,0.8s
H21K  Melozitna Rive   35.74  38   P      P       21 37 58.1  0.0
      baz=270
Q19K  Cape Douglas,    35.88  50   P      P       21 37 59.8 +0.4
      baz=279,SNR=7.1
P19K  Oil Pt           35.99  48   P      P       21 38 01.5 +1.3
      baz=278
CHUM  Lake Minchumin   36.00  41   P      P       21 38 01.4 +1.1
      baz=273,SNR=32
SII   Sitkinak Islan   36.02  54   P      P       21 38 01.2 +0.6
SII   Sitkinak Islan   36.02  54   P      P       21 38 01.4 +0.8
      baz=282
I21K  Tanana           36.09  39   P      P       21 38 01.4 +0.4
      baz=272
PPLA  Purkeypile       36.12  43   IAmb   IAmb    21 38 04.0
      comp=Z,194nm,1.2s
PPLA  Purkeypile       36.12  43   P      P       21 38 02.8 +1.3
      baz=275,SNR=17
CAST  Castle Rocks     36.13  42   IAmb   IAmb    21 38 03.4
      comp=Z,148nm,1.0s
CAST  Castle Rocks     36.13  42   P      P       21 38 02.3 +0.9
      baz=274,SNR=60
O20K  Slope Mountain   36.23  48   P      P       21 38 02.9 +0.5
      baz=278
OHAK  Old Harbor       36.37  52   IAmb   IAmb    21 38 04.4
      comp=Z,128nm,0.8s
OHAK  Old Harbor       36.37  52   P      P       21 38 03.6 +0.2
      baz=282,SNR=6.7
BPAW  Bear Paw Mtn.    36.57  41   P      P       21 38 05.6 +0.5
      baz=274,SNR=14
MLY   Manley           36.62  39   P      P       21 38 06.0 +0.5
      baz=273,SNR=33
KDAK  Kodiak Island    36.64  51   P      P       21 38 05.3 -0.3
      comp=Z,69nm,0.6s,baz=237,slow=1.7,SNR=45
KDAK                               PcP    PcP     21 40 16.9 +0.1
      comp=Z,44nm,0.5s,baz=265,slow=2.5,SNR=17
KDAK                               S      S       21 43 14.5 -0.5
      comp=Z,12nm,1.1s,baz=151,slow=19,SNR=1.4
KDAK  Kodiak Island    36.64  51   P      P       21 38 05.7 +0.1
KDAK                                              21 40 17.4
KDAK                               pmax   pmax
      comp=Z,94nm,0.7s
KDAK  Kodiak Island    36.64  51   P      P       21 38 05.7 +0.1
KDAK                               IAmb   IAmb    21 38 06.4
      comp=Z,94nm,0.7s
KDAK                                      PcP     21 40 17.4 +0.7
KDAK  Kodiak Island    36.64  51   P      P       21 38 06.0 +0.4
      baz=281
KTH   Kantishna Hill   36.64  42   IAmb   IAmb    21 38 08.2
      comp=Z,243nm,1.1s
COLD  Coldfoot         36.77  35   IAmb   IAmb    21 38 08.3
      comp=Z,125nm,0.9s
COLD  Coldfoot         36.77  35   P      P       21 38 06.7 +0.1
      baz=271,SNR=114
HOM   Homer            36.78  48   P      P       21 38 07.0 +0.2
      baz=280
CAPN  Captain Cook N   36.85  46   P      P       21 38 07.8 +0.5
      baz=278
CD2   Chengdu          36.91 259   P      P       21 38 08.8 +0.5
CD2                                pmax   pmax
      comp=Z,200nm,0.8s
TRF   Thorofare Moun   36.93  42   P      P       21 38 08.6 +0.4
      baz=276,SNR=8.2
TOLK  Toolik Lake Re   37.02  33   IAmb   IAmb    21 38 09.7
      comp=Z,108nm,0.8s
TOLK  Toolik Lake Re   37.02  33   P      P       21 38 08.4 -0.3
      baz=269,SNR=83
CUT   Chulitna         37.05  43   IAmb   IAmb    21 38 10.1
      comp=Z,271nm,1.3s
CUT   Chulitna         37.05  43   P      P       21 38 09.2 +0.2
      baz=277,SNR=13
BRLK  Bradley Lake     37.14  48   IAmb   IAmb    21 38 11.8
      comp=Z,83nm,0.6s
I23K  Minto, Yukon-K   37.20  39   P      P       21 38 10.8 +0.6
I23K                               IAmb   IAmb    21 38 11.7
      comp=Z,82nm,0.8s
I23K  Minto, Yukon-K   37.20  39   P      P       21 38 10.8 +0.6
      baz=274,SNR=48
M22K  Willow           37.21  44   P      P       21 38 10.7 +0.4
      baz=278
BRSE  Bradley Lake S   37.22  48   P      P       21 38 10.4 -0.1
      baz=280,SNR=6.4
BWN   Browne           37.23  40   P      P       21 38 10.4 -0.1
NEA2  Nenana           37.36  40   IAmb   IAmb    21 38 13.4
      comp=Z,176nm,0.8s
NEA2  Nenana           37.36  40   P      P       21 38 12.1 +0.5
      baz=275,SNR=106
RC01  Rabbit Creek A   37.49  46   P      P       21 38 12.9 +0.2
      baz=279,SNR=11
MCK   McKinley         37.51  41   IAmb   IAmb    21 38 14.0
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      comp=Z,103nm,1.0s
MCK   McKinley         37.51  41   P      P       21 38 12.7 -0.1
      baz=276,SNR=32
RND   Reindeer         37.58  42   IAmb   IAmb    21 38 14.8
      comp=Z,74nm,0.7s
O22K  Cooper Landing   37.59  46   IAmb   IAmb    21 38 26.5
      comp=Z,115nm,0.6s
O22K  Cooper Landing   37.59  46   P      P       21 38 13.5 +0.1
      baz=280,SNR=6.0
MDM   Murphy Dome      37.69  39   IAmb   IAmb    21 38 15.7
      comp=Z,102nm,0.9s
PMR   Palmer           37.70  45   P      P       21 38 14.4 +0.1
      baz=279,SNR=7.4
H24K  Noodor Dome      37.76  38   IAmb   IAmb    21 38 16.7
      comp=Z,127nm,0.8s
H24K  Noodor Dome      37.76  38   P      P       21 38 15.5 +0.6
      baz=275
GHO   Glory Hole Cre   37.77  44   P      P       21 38 15.8 +0.8
GHO                                IAmb   IAmb    21 38 16.3
      comp=Z,262nm,1.2s
SEW   Seward           37.79  47   IAmb   IAmb    21 38 16.1
      comp=Z,132nm,0.7s
SEW   Seward           37.79  47   P      P       21 38 15.2 +0.1
      baz=281,SNR=8.4
WRH   Wood River Hil   37.80  40   P      P       21 38 15.4 +0.3
WRH                                IAmb   IAmb    21 38 17.1
      comp=Z,116nm,0.9s
TCOL  CIGO, UAF Yank   37.85  39   P      P       21 38 16.2 +0.6
      baz=276,SNR=39
COLA  College          37.86  39c iP      P       21 38 16.0 +0.4
COLA                               pmax   pmax
      comp=Z,260nm,0.9s
COLA  College          37.86  39   P      P       21 38 16.3 +0.8
COLA  College          37.86  39   P      P       21 38 16.0 +0.4
      baz=276
POKR  Poker Plat Res   38.01  39   IAmb   IAmb    21 38 18.8
      comp=Z,322nm,1.6s
POKR  Poker Plat Res   38.01  39   P      P       21 38 17.5 +0.6
      baz=276,SNR=24
GYA   Guiyang          38.02 250⇓iP      P       21 38 17.8 +0.2
GYA                                pP     pP      21 39 42.1 +2.0
GYA                                PcP    PcP     21 40 22.3 +0.5
GYA                                S      S       21 43 34.5 -2.2
GYA                                pmax   pmax
      comp=Z,180nm,0.8s
SML   Sawmill          38.04  44   P      P       21 38 17.4 +0.1
SML   Sawmill          38.04  44   P      P       21 38 17.5 +0.2
      baz=279,SNR=18
KNK   Knik Glacier     38.05  45   P      P       21 38 17.8 +0.6
KNK                                IAmb   IAmb    21 38 18.7
      comp=Z,268nm,1.1s
KNK   Knik Glacier     38.05  45   P      P       21 38 17.6 +0.4
      baz=280,SNR=8.0
WAT6  Susitna Watana   38.19  43   P      P       21 38 18.4 -0.3
      baz=279,SNR=10
PWL   Port Wells       38.20  46          P       21 38 18.2 -0.2
PWL                                IAmb   IAmb    21 38 19.6
      comp=Z,320nm,1.9s
PWL                                       PcP     21 40 21.9 +0.2
PWL   Port Wells       38.20  46   P      P       21 38 18.3 -0.2
      baz=281
IL31                   38.28  39   IAmb   IAmb    21 38 20.5
      comp=Z,119nm,0.8s
ILAR  Eielson Array    38.28  39   P      P       21 38 18.9 -0.2
      comp=Z,98nm,0.8s,baz=272,slow=7.2,SNR=491
ILAR                               PcP    PcP     21 40 20.8 -1.0
      comp=Z,10nm,0.5s,baz=289,slow=3.8,SNR=11
ILAR                               ScP    ScP     21 43 25.4 -0.6
      comp=Z,2.1nm,0.6s,baz=274,slow=3.6,SNR=7.0
ILAR                               PKiKP  PKiKP   21 47 32.5 -2.1
      comp=Z,0.5nm,0.5s,baz=309,slow=2.9,SNR=5.9
DHY   Denali Highway   38.29  42   P      P       21 38 19.1 -0.2
DHY                                IAmb   IAmb    21 38 20.2
      comp=Z,203nm,1.2s
DHY                                       PcP     21 40 23.3 +1.3
DHY   Denali Highway   38.29  42   P      P       21 38 19.2 -0.2
      baz=278,SNR=46
HDA   Harding Lake     38.30  40   P      P       21 38 18.8 -0.4
      baz=277
DGZ   Jazzator, Alta   38.37 296c iP      P       21 38 21.0 +0.8
DGZ                                pmax   pmax
      comp=Z,27nm,0.7s
SCM   Sheep Creek Mo   38.51  44   P      P       21 38 21.6 +0.5
SCM                                pmax   pmax
      comp=Z,126nm,0.9s
SCM   Sheep Creek Mo   38.51  44   P      P       21 38 21.6 +0.5
SCM                                IAmb   IAmb    21 38 22.6
      comp=Z,126nm,0.9s
SCM   Sheep Creek Mo   38.51  44   P      P       21 38 20.5 -0.6
      baz=280
ZAA0  Zalesovo Array   38.52 303   P      P       21 38 19.9 -1.2
ZAA0                               PcP    PcP     21 40 22.8 +0.1
ZALV  Zalesovo Beam    38.52 303   P      P       21 38 20.2 -0.9
      comp=Z,5.2nm,0.3s,baz=62,slow=8.1,SNR=25
ZALV                               PcP    PcP     21 40 22.4 -0.3
      comp=Z,31nm,0.4s,baz=79,slow=2.6,SNR=64
ZALV                               ScP    ScP     21 43 25.9 -1.2
      comp=Z,16nm,0.7s,baz=72,slow=4.8,SNR=15
ZALV                               PKiKP  PKiKP   21 47 33.0 -2.0
      comp=Z,3.0nm,0.5s,baz=97,slow=0.5,SNR=8.0
PRP   Porcupine Dome   38.76  38   IAmb   IAmb    21 38 25.3
      comp=Z,186nm,0.8s
PRP   Porcupine Dome   38.76  38   P      P       21 38 23.8 +0.6
      baz=277,SNR=34
FYU   Fort Yukon       38.77  36   P      P       21 38 23.8 +0.8
GLI   Glacier Island   38.79  45   P      P       21 38 23.0 -0.3
GLI   Glacier Island   38.79  45   P      P       21 38 23.4 +0.1
      baz=282
BMAR  Burnt Mountain   38.94  35   P      P       21 38 25.4 +0.9
BMAR                               PcP    PcP     21 40 25.3 +1.4
M24K  Tolsona, Glenn   38.99  43   P      P       21 38 26.0 +1.0
      baz=281
PAX   Paxson           39.16  42   P      P       21 38 26.0 -0.4
PAX                                       PcP     21 40 25.8 +1.0
PAX   Paxson           39.16  42   P      P       21 38 26.5 +0.1
      baz=280,SNR=6.3
KLU   Klutina          39.23  44   P      P       21 38 27.8 +0.9
      baz=282,SNR=7.2
RIDG  Independent Ri   39.31  41   P      P       21 38 27.4 -0.1
RIDG                               IAmb   IAmb    21 38 28.7
      comp=Z,84nm,0.8s
RIDG  Independent Ri   39.31  41   P      P       21 38 26.9 -0.6
      baz=280,SNR=27
DIV   Divide           39.37  45   P      P       21 38 28.8 +0.7
HARP  HAARP            39.41  43   P      P       21 38 29.3 +1.0
      baz=281,SNR=18
EYAK  Cordova Ski Ar   39.51  46   IAmb   IAmb    21 38 31.1
      comp=Z,117nm,1.0s
EYAK  Cordova Ski Ar   39.51  46   P      P       21 38 30.1 +1.0
      baz=283,SNR=6.0
SCRK  Sand Creek       39.64  40   IAmb   IAmb    21 38 30.8
      comp=Z,133nm,0.9s
SCRK  Sand Creek       39.64  40   P      P       21 38 29.9 -0.4
      baz=280,SNR=96
J26L  Joseph Creek     39.73  39   P      P       21 38 30.8 -0.2
      baz=280
N25K  Chitina, Valde   39.83  44   P      P       21 38 32.3 +0.5
N25K                               PcP    PcP     21 40 28.2 +1.2
N25K  Chitina, Valde   39.83  44   P      P       21 38 32.6 +0.8
      baz=282,SNR=9.0
BMRM  Bremner River    39.96  45   P      P       21 38 33.5 +0.7
BMRM                               IAmb   IAmb    21 38 34.7
      comp=Z,116nm,1.2s
BMRM                                      PcP     21 40 28.5 +1.1
BMRM  Bremner River    39.96  45   P      P       21 38 33.6 +0.7
      baz=283,SNR=9.8
RAGM  Ragged Mountai   40.06  46          P       21 38 35.0 +1.4
RAGM                               IAmb   IAmb    21 39 45.8
      comp=Z,130nm,0.8s
L26K  Log Cabin Wild   40.10  42   P      P       21 38 34.4 +0.4
      baz=282,SNR=31
GLB   Gilahina Butte   40.23  44   IAmb   IAmb    21 38 37.1
      comp=Z,193nm,1.8s
M26K  Nabesna, AK      40.39  42   IAmb   IAmb    21 38 39.3
      comp=Z,196nm,1.1s
M26K  Nabesna, AK      40.39  42   P      P       21 38 37.7 +1.4
      baz=283
VRDI  Verde Repeater   40.45  44   IAmb   IAmb    21 38 38.9
      comp=Z,114nm,1.2s
BERG  Berg Lake        40.53  46   IAmb   IAmb    21 38 40.4
      comp=Z,327nm,1.4s
SUCK  Suckling Hills   40.58  46   P      P       21 38 39.3 +1.6
WMQ   Urumqi           40.60 287   P      P       21 38 39.3 +1.0
WMQ                                PcP    PcP     21 40 30.6 +0.8
WMQ                                ScP    ScP     21 43 35.8 +0.2
WMQ                                S      S       21 44 15.1 +0.9
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WMQ                                   pmax    pmax
      comp=Z,94nm,0.7s
WMQ                                   pmax    pmax
      comp=Z,520nm,7.9s
MCARA McCarthy VSAT    40.61  44      P       P         21 38 39.6 +1.6
MCARA                                 IAmb    IAmb      21 38 41.1
      comp=Z,105nm,0.7s
MCARA McCarthy VSAT    40.61  44      P       P         21 38 39.3 +1.3
      baz=284,SNR=19
EGAK  Eagle            40.70  39      IAmb    IAmb      21 38 40.0
      comp=Z,201nm,0.8s
L27K  Beaver Creek,    40.77  41      IAmb    IAmb      21 38 42.1
      comp=Z,216nm,1.1s
L27K  Beaver Creek,    40.77  41      P       P         21 38 40.4 +1.1
      baz=283,SNR=95
BCAR  Beaver Creek A   40.79  41      P       P         21 38 40.7 +1.2
ZSN   Zaisan           40.81 293     eP       P         21 38 39.4 -0.4
      baz=293
ZSN                                  eS       S         21 44 16.9 -0.1
      baz=293
ZSN   Zaisan           40.81 293     eP       P         21 38 39.4 -0.4
ZSN                                  eS       S         21 44 16.8 -0.2
TGL   Tana Glacier     40.86  45      IAmb    IAmb      21 38 42.3
      comp=Z,133nm,1.1s
M27K  Edge Creek, AK   40.91  42      IAmb    IAmb      21 38 43.4
      comp=Z,183nm,1.1s
M27K  Edge Creek, AK   40.91  42      P       P         21 38 41.7 +1.2
      baz=284
WAX   Waxell Ridge     40.92  45      IAmb    IAmb      21 38 43.0
      comp=Z,134nm,0.9s
SNH   Sunshine Point   41.00  46      P       P         21 38 42.5 +1.3
ISLE  Juniper Island   41.13  45      IAmb    IAmb      21 38 44.2
      comp=Z,160nm,1.0s
BARN  Barnard Glacie   41.33  44      IAmb    IAmb      21 38 46.1
      comp=Z,361nm,1.6s
BVCY  Beaver Creek     41.36  42      P       P         21 38 45.1 +1.1
      baz=284,SNR=20
MESA  MESA             41.43  46      P       P         21 38 46.4 +1.6
MESA                                  IAmb    IAmb      21 38 47.2
      comp=Z,146nm,1.0s
MESA  MESA             41.43  46      P       P         21 38 46.1 +1.3
      baz=286
KMI   Kunming          41.46 253    ⇓P       P         21 38 46.0 +0.4
KMI                                   pP      pP        21 40 07.8 -2.0
KMI                                   PP      PcP       21 40 31.3 -1.8
KMI                                   sP      sP        21 40 57.9 -2.7
KMI                                   ScP     ScP       21 43 44.9 +5.4
KMI                                   PcS     PcS       21 44 26.8 +1.2
KMI                                   pmax    pmax
      comp=Z,54nm,1.3s
YAH   Yahtse           41.48  45      IAmb    IAmb      21 38 47.4
      comp=Z,119nm,0.7s
CTG   Chitna Glacier   41.51  44      P       P         21 38 46.5 +1.2
      baz=286,SNR=21
CTGM  Chitina Glacie   41.51  44      IAmb    IAmb      21 38 47.4
      comp=Z,125nm,0.7s
DAWY  Dawson           41.61  39      P       P         21 38 45.9  0.0
      baz=284,SNR=15
QIZ   Qiongzhong       41.65 239      P       P         21 38 48.1 +1.3
QIZ                                   IAmb    IAmb      21 40 19.7
      comp=Z,241nm,1.7s
YUK3  Moose Creek      41.70  43      P       P         21 38 47.6 +0.6
      baz=285,SNR=20
I29M  Ogilvie Camp,    41.76  37      P       P         21 38 47.6 +0.4
      baz=283,SNR=83
PINM  Pinnacle         42.27  45      P       P         21 38 52.0 +0.7
      baz=287
SEM   Semipalatinsk    42.39 299     eP       P         21 38 51.1 -1.5
      baz=299
SEM   Semipalatinsk    42.39 299     eP       P         21 38 51.0 -1.5
BCPM  Bancas Point     42.61  45      P       P         21 38 54.6 +0.7
BCPM                                  IAmb    IAmb      21 40 29.1
      comp=Z,263nm,1.8s
MK31  Makanchi Array   42.68 294      P       P         21 38 54.8 +0.1
MK31                                  pmax    pmax
      comp=Z,22nm,0.7s
MK31  Makanchi Array   42.68 294      P       P         21 38 54.8 +0.1
MKAR  Makanchi Array   42.68 294      P       P         21 38 54.6 -0.1
      comp=Z,22nm,0.6s,baz=69,slow=7.7,SNR=162
MKAR                                  PcP     PcP       21 40 36.5 -0.1
      comp=Z,19nm,0.7s,baz=56,slow=4.8,SNR=12
MKAR                                  ScP     ScP       21 43 43.0 -0.8
      comp=Z,8.2nm,0.7s,baz=59,slow=4.7,SNR=7.8
MKAR                                  S       S         21 44 43.1 -1.0
      comp=Z,3.1nm,0.8s,baz=65,slow=19,SNR=5.8
MKAR                                  PKiKP   PKiKP     21 47 37.1 -1.9
      comp=Z,0.5nm,0.5s,baz=347,slow=0.7,SNR=5.3
MKAR  Makanchi Array   42.68 294      P       P         21 38 54.9 +0.2
PNL   Peninsula        42.81  46      P       P         21 38 56.3 +0.8
      baz=288
MAKZ  Makanchi         42.86 294      P       P         21 38 56.2  0.0
MAKZ                                  pmax    pmax
      comp=Z,15nm,0.8s
MAKZ  Makanchi         42.86 294      P       P         21 38 56.2  0.0
INK   Inuvik           42.92  32      P       P         21 38 56.0 -0.2
      comp=Z,135nm,0.4s,baz=291,slow=7.2,SNR=594
INK                                   PcP     PcP       21 40 36.3 -0.6
      comp=Z,30nm,0.6s,baz=300,slow=2.7,SNR=6.8
INK                                   S       S         21 44 45.5 -1.4
      comp=Z,7.9nm,0.8s,baz=62,slow=29,SNR=18
INK   Inuvik           42.92  32      P       P         21 38 56.4 +0.2
      baz=284,SNR=139
KURK  Kurchatov        43.21 300   ceP       P         21 38 58.5 -0.3
KURK                                  pmax    pmax
      comp=Z,62nm,1.3s
KURK  Kurchatov        43.21 300      P       P         21 38 58.5 -0.3
KURK  Kurchatov        43.21 300     eP       P         21 38 58.5 -0.3
KURK  Kurchatov        43.21 300      P       P         21 38 58.6 -0.3
MAYO  Mayo, Yukon      43.23  40      P       P         21 38 59.8 +1.1
      baz=287
KURBB Kurchatov Arra   43.30 300      P       P         21 38 59.0 -0.6
      comp=Z,9.7nm,0.3s,baz=73,slow=8.6,SNR=66
KURBB                                 PcP     PcP       21 40 38.2 -0.4
      comp=Z,42nm,0.6s,baz=71,slow=3.3,SNR=4.2
KURBB                                 ScP     ScP       21 43 45.2 -1.0
      comp=Z,7.8nm,0.8s,baz=71,slow=3.1,SNR=7.3
KURBB                                 S       S         21 44 49.2 -3.6
      comp=Z,4.6nm,0.6s,baz=65,slow=15,SNR=5.0
KURBB                                 PKiKP   PKiKP     21 47 37.9 -1.5
      comp=Z,0.8nm,0.3s,baz=69,slow=0.7,SNR=2.1
SLVN  Son La           43.46 248      P       P         21 39 02.0 +0.8
N31M  Braeburn, Yuko   43.92  42      P       P         21 39 06.0 +1.7
      baz=289,SNR=34
M31M  Drury Creek, Y   44.31  41      P       P         21 39 08.4 +1.2
      baz=289,SNR=12
WHY   Whitehorse       44.61  43      P       P         21 39 11.2 +1.5
      baz=290,SNR=19
A36M  Sachs Harbour    44.67  26      P       P         21 39 10.0 +0.1
A36M                                  IAmb    IAmb      21 39 11.0
      comp=Z,152nm,0.9s
A36M  Sachs Harbour    44.67  26      P       P         21 39 09.9 +0.1
      baz=287,SNR=64
FARO  Faro, Yukon      44.76  41      P       P         21 39 11.7 +0.9
      baz=290,SNR=13
SKAG  Skagway          44.83  45      P       P         21 39 12.9 +1.6
      baz=291,SNR=8.4
MMPY  Sheldon Lake,    45.53  40      P       P         21 39 18.2 +1.4
      baz=291,SNR=18
JIS   Juneau Island    45.73  46      IAmb    IAmb      21 39 21.1
      comp=Z,83nm,0.8s
P33M  Teslin, Yukon    45.73  43      P       P         21 39 19.8 +1.5
      baz=292,SNR=38
SIT   Sitka            45.74  48      P       P         21 39 20.7 +2.4
SIT                                   pmax    pmax
      comp=Z,77nm,0.8s
SIT   Sitka            45.74  48      P       P         21 39 20.7 +2.4
SIT   Sitka            45.74  48      P       P         21 39 20.6 +2.2
      baz=294
TDK   Taldyqorghan     45.91 293     eP       P         21 39 19.9 +0.1
      comp=Z,37nm,0.7s,baz=293
TDK                                  eS       S         21 45 30.3 +0.1
      baz=293
TDK   Taldyqorghan     45.91 293     eP       P         21 39 19.9 +0.1
TDK                                  eS       S         21 45 30.2 +0.1
TDK                                   pmax    pmax
      comp=Z,37nm,0.7s
LSA   Lhasa            46.09 268      P       P         21 39 23.9 +1.9
LSA   Lhasa            46.09 268      P       P         21 39 23.9 +1.9
LSA                                   pmax    pmax
      comp=Z,87nm,0.6s
LSA   Lhasa            46.09 268      P       P         21 39 23.9 +1.9
LSA                                   IAmb    IAmb      21 39 24.6
      comp=Z,86nm,0.6s
SHLS  Shalkode         46.17 290     eP       P         21 39 19.9 -2.1
      baz=290
SHLS                                 eS       S         21 45 30.5 -3.6
      baz=290
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SHLS  Shalkode         46.17 290     eP       P         21 39 19.9 -2.1
SHLS                                 eS       S         21 45 30.4 -3.6
UZB   Uzynbulak        46.45 291     eP       P         21 39 23.9 -0.3
      baz=290
UZB                                  eS       S         21 45 37.8 -0.3
      baz=290
UZB   Uzynbulak        46.45 291     eP       P         21 39 23.9 -0.3
UZB                                  eS       S         21 45 37.7 -0.3
BVAR  Borovoye Array   46.86 306      P       P         21 39 26.5 -0.5
      comp=Z,9.0nm,0.5s,baz=58,slow=3.7,SNR=88
BVAR                                  PcP     PcP       21 40 50.7 -0.3
      comp=Z,16nm,0.4s,baz=195,slow=4.6,SNR=19
BVAR                                  ScP     ScP       21 43 59.9 -1.1
      comp=Z,5.7nm,0.7s,baz=187,slow=2.4,SNR=5.1
BVAR                                  S       S         21 45 35.3 -7.8
      comp=Z,1.2nm,0.7s,baz=103,slow=6.7,SNR=2.3
SATY  Saty             46.89 291     eP       P         21 39 27.6 +0.1
      baz=291
SATY                                 eS       S         21 45 44.4 +0.3
      baz=291
SATY  Saty             46.89 291     eP       P         21 39 27.5 +0.1
SATY                                 eS       S         21 45 44.3 +0.3
BRVK  Borovoye         46.90 306    i P       P         21 39 26.6 -0.6
BRVK                                  pmax    pmax
      comp=Z,32nm,0.8s
BRVK  Borovoye         46.90 306      P       P         21 39 27.1 -0.1
BRVK  Borovoye         46.90 306      P       P         21 39 26.8 -0.4
BRZS  Berezniki        46.96 302     eP       P         21 39 27.1 -0.7
      baz=302
BRZS  Berezniki        46.96 302     eP       P         21 39 27.0 -0.7
UBPT  Khong Chiam      47.15 241      P       P         21 39 29.9 +0.4
WRAK  Wrangell Islan   47.50  48      P       P         21 39 33.8 +2.1
      baz=296
WTLY  Watson Lake, Y   47.61  42      P       P         21 39 33.7 +1.1
      baz=295
MDOK  Medeo            47.68 292     eP       P         21 39 33.4 -0.2
      baz=292
MDOK  Medeo            47.68 292     eP       P         21 39 33.3 -0.2
KUU   Kurty            47.75 293     eP       P         21 39 32.9 -1.0
      comp=Z,16nm,0.6s,baz=293
KUU   Kurty            47.75 293     eP       P         21 39 32.8 -1.0
KUU                                   pmax    pmax
      comp=Z,16nm,0.6s
DLBC  Dease Lake       47.76  45      P       P         21 39 35.0 +1.2
      comp=Z,50nm,0.9s,baz=285,slow=4.1,SNR=48
DLBC                                  PcP     PcP       21 40 54.9 +0.6
      comp=Z,5.6nm,0.6s,baz=311,slow=11,SNR=1.7
SHL   Shillong         48.29 263      P       P         21 39 38.5 +0.1
SHL                                   pmax    pmax
      comp=Z,93nm,1.0s
SHL   Shillong         48.29 263     eP       P         21 39 41.0 +2.6
SHL                                  eS       S         21 46 05.0 +0.9
SHL   Shillong         48.29 263      P       P         21 39 38.6 +0.1
SHL   Shillong         48.29 263      P       P         21 39 38.5 +0.1
CHTO  Chiang Mai       48.44 250      P       P         21 39 39.8 +0.5
CHTO                                  pmax    pmax
      comp=Z,40nm,0.7s
CHTO  Chiang Mai       48.44 250      P       P         21 39 40.0 +0.7
CHTO  Chiang Mai       48.44 250      P       P         21 39 39.8 +0.5
CHTO  Chiang Mai       48.44 250      P       P         21 39 40.1 +0.7
BTLS  Baital           48.57 295     eP       P         21 39 39.0 -0.9
      baz=295
BTLS  Baital           48.57 295     eP       P         21 39 39.0 -0.9
ULHL  Ulahol           48.67 291      P       P         21 39 41.8 +0.8
      SNR=11
CMAR  Chiang Mai Arr   48.71 250      P       P         21 39 42.2 +0.9
      comp=Z,11nm,0.6s,baz=30,slow=7.3,SNR=71
CMAR                                  PcP     PcP       21 40 58.8 +0.5
      comp=Z,8.9nm,0.8s,baz=11,slow=3.3,SNR=18
CMAR                                  ScP     ScP       21 44 10.0 +0.7
      comp=Z,6.1nm,0.8s,baz=15,slow=3.5,SNR=12
TKM2  Tokmak 2         48.72 292      P       P         21 39 42.0 +0.6
      SNR=11
TKM2  Tokmak 2         48.72 292    i P       P         21 39 41.6 +0.2
TKM2                                  pmax    pmax
      comp=Z,8.0nm,0.7s
EUNU  Eureka           48.80  11      IAmb    IAmb      21 39 42.0
      comp=Z,161nm,0.7s
SGDS  Sogindy          49.04 293     eP       P         21 39 43.4 -0.2
      baz=293
SGDS                                 eS       S         21 46 13.7  0.0
      baz=293
MOBC  Moresby Island   49.20  52      P       P         21 39 45.9 +1.3
MOBC                                  IAmb    IAmb      21 40 27.8
      comp=Z,219nm,1.3s
CHMS  Chumysh          49.20 293      P       P         21 39 46.2 +1.4
      SNR=7.0
USP   Ospenovka        49.22 293      P       P         21 39 45.3 +0.5
      SNR=15
KBK   Karagaybulak     49.26 292      P       P         21 39 46.0 +0.6
      SNR=13
KKM   Kota Kinabalu    49.27 222      P       P         21 39 46.6 +1.0
KKM   Kota Kinabalu    49.27 222      P       P         21 39 47.4 +1.7
AAK   Ala-Archa        49.55 292      P       P         21 39 48.4 +0.8
      comp=Z,9.4nm,0.6s,baz=119,slow=4.8,SNR=26
AAK                                   PcP     PcP       21 41 01.5 +0.2
      comp=Z,9.5nm,0.9s,baz=170,slow=1.1,SNR=7.2
AAK                                   ScP     ScP       21 44 12.5 -0.3
      comp=Z,4.9nm,0.8s,baz=111,slow=3.4,SNR=4.3
AAK   Ala-Archa        49.55 292      P       P         21 39 48.0 +0.4
      SNR=14
AAK   Ala-Archa        49.55 292    i P       P         21 39 47.7 +0.2
      SNR=17
AAK   Ala-Archa        49.55 292      P       P         21 39 48.0 +0.4
AAK   Ala-Archa        49.55 292      P       P         21 39 47.9 +0.4
UCH   Uchtor           49.76 292      P       PcP       21 41 03.0 +0.5
      SNR=10.0
EKS2  Erkin-Say        49.99 293      P       P         21 39 51.1 +0.4
      SNR=7.8
SVE   Sverdlovsk       50.09 314   deP       P         21 39 51.1  0.0
SVE                                  eS       S         21 46 26.4 -1.1
SVE                                   pmax    pmax
      comp=Z,151nm,0.8s
SVE   Sverdlovsk       50.09 314     eP       P         21 39 51.1  0.0
AML   Almayashu        50.33 292      P       P         21 39 54.3 +0.8
      SNR=9.0
AML   Almayashu        50.33 292    i P       P         21 39 54.0 +0.5
      SNR=9.1
AML   Almayashu        50.33 292      P       P         21 39 54.5 +0.9
KSH   Kashi            50.34 288      P       P         21 39 57.6 +4.3
KSH                                   S       S         21 46 36.5 +4.8
KSH                                   pmax    pmax
      comp=Z,19nm,0.9s
KSH                                   pmax    pmax
      comp=Z,300nm,6.4s
SPMM  Sapulut          50.35 221      P       P         21 39 55.0 +1.5
NOR   Nord             50.45 357    i P       P         21 39 51.2 -2.1
NOR                                   IAmb    IAmb      21 39 52.8
      comp=Z,21nm,0.6s
HOPEN Hopen            50.55 345     eP       P         21 39 53.6 -0.5
KBS   Kingsbay         50.67 350      P       P         21 39 54.8 -0.2
KBS                                   pmax    pmax
      comp=Z,89nm,0.8s
KBS   Kingsbay         50.67 350     eP       P         21 39 54.8 -0.2
KBS   Kingsbay         50.67 350      P       P         21 39 54.8 -0.2
SPA0  Spitsbergen Ar   50.69 348  ⇑iP       P         21 39 54.3 -0.9
SPITS Spitsbergen Ar   50.69 348      P       P         21 39 54.4 -0.8
      comp=Z,15nm,0.5s,baz=57,slow=9.1,SNR=120
SPITS                                 PcP     PcP       21 41 04.2 -0.5
      comp=Z,18nm,0.7s,baz=92,slow=4.2,SNR=6.0
SPB2  Spitsbergen Ar   50.69 348      IAmb    IAmb      21 39 55.6
      comp=Z,251nm,2.0s
JIRN  Jiri             50.73 269     eP       P         21 39 57.0 +0.3
      comp=Z,130nm,0.7s
JIRN  Jiri             50.73 269     eP       S         21 46 38.1 +0.3
      comp=Z,258nm,1.9s
GUN   Gumba            50.78 270     eP       P         21 39 57.1 +0.1
      comp=Z,38nm,0.5s
GUN   Gumba            50.78 270     eP       S         21 46 38.4  0.0
      comp=Z,150nm,1.1s
RES   Resolute Bay     51.04  18      P       P         21 39 57.6 -0.1
RES                                   pmax    pmax
      comp=Z,399nm,0.6s
RES   Resolute Bay     51.04  18      P       P         21 39 57.6 -0.1
KKN   Kakani           51.26 270     eP       P         21 40 00.7 +0.3
      comp=Z,36nm,0.4s
KKN   Kakani           51.26 270     eP       S         21 46 44.6  0.0
      comp=Z,73nm,1.0s
ARU   Arti             51.29 315      P       P         21 39 59.3 -0.5
      comp=Z,44nm,0.4s,baz=74,slow=4.9,SNR=235
ARU                                   PcP     PcP       21 41 06.8 -0.4
      comp=Z,10nm,0.5s,baz=51,slow=1.6,SNR=7.8
ARU                                   ScP     ScP       21 44 18.5 -1.3
      comp=Z,4.3nm,0.6s,baz=256,slow=1.1,SNR=4.5
ARU                                   S       S         21 46 40.5 -3.2
      comp=Z,1.8nm,0.8s,baz=264,slow=19,SNR=13
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ARU   Arti             51.29 315  d iP       P         21 39 59.2 -0.6
ARU                                                     21 41 06.8
ARU                                   *PP     pP        21 41 28.0 -0.7
ARU                                                     21 41 58.1
ARU                                   S       S         21 46 42.3 -1.4
ARU                                                     21 48 57.4
ARU                                   pmax    pmax
      comp=Z,155nm,0.7s
ARU   Arti             51.29 315     eP       P         21 39 59.2 -0.6
ARU   Arti             51.29 315      P       P         21 39 59.5 -0.3
ARU                                   IAmb    IAmb      21 40 00.5
      comp=Z,152nm,0.7s
PKI   Pulchoki         51.32 270     eP       P         21 40 01.2 +0.3
      comp=Z,30nm,0.5s
PKI   Pulchoki         51.32 270     eP       S         21 46 45.1 -0.5
PKIN  Phulchoki        51.32 270     eP       P         21 40 00.9  0.0
      comp=Z,33nm,0.5s
PKIN  Phulchoki        51.32 270     eP       S         21 46 45.0 -0.5
      comp=Z,78nm,1.2s
DZA   Taraz            51.37 294     eP       P         21 40 00.4 -0.4
      baz=294
DZA   Taraz            51.37 294     eP       P         21 40 00.3 -0.4
DMN   Daman            51.50 270     eP       P         21 40 02.8 +0.7
      comp=Z,136nm,0.9s
DMN   Daman            51.50 270     eP       S         21 46 47.7 -0.2
      comp=Z,91nm,1.0s
GKN   Gorkha           51.56 271     eP       P         21 40 02.7 +0.3
      comp=Z,80nm,0.4s
GKN   Gorkha           51.56 271     eP       S         21 46 48.1 -0.4
      comp=Z,122nm,1.2s
BBB   Bella Bella      51.71  51      P       P         21 40 03.2 +0.3
      comp=Z,60nm,0.8s,baz=306,slow=7.5,SNR=9.5
BBB   Bella Bella      51.71  51      P       P         21 40 04.2 +1.2
BBB                                   IAmb    IAmb      21 40 08.8
      comp=Z,462nm,1.9s
KKAR  Karatay Array    51.76 295      P       P         21 40 03.2 -0.3
KKAR  Karatay Array    51.76 295      P       P         21 40 03.2 -0.3
DANN  Dangsing         51.92 272     eP       P         21 40 06.1 +0.9
      comp=Z,122nm,0.4s
DANN  Dangsing         51.92 272     eP       S         21 46 53.4 -0.3
      comp=Z,156nm,1.0s
RABL  Rabaul           52.07 173      P       P         21 40 07.3 +1.2
RABL                                  IAmb    IAmb      21 40 07.9
      comp=Z,100nm,0.8s
BRLS  Borolday         52.21 295     eP       P         21 40 08.0 +1.1
      baz=295
BRLS  Borolday         52.21 295     eP       P         21 40 07.9 +1.1
FAKI  Fak Fak          52.23 199      P       P         21 40 06.9 -0.2
FAKI  Fak Fak          52.23 199      P       P         21 40 07.7 +0.6
KOLN  Koldanda         52.41 271     eP       P         21 40 09.3 +0.7
KOLN  Koldanda         52.41 271     eP       S         21 46 59.9 -0.1
      comp=Z,63nm,0.9s
YKA   Yellowknife Ar   52.45  35      P       P         21 40 08.0 -0.2
      comp=Z,84nm,0.8s,baz=303,slow=7.0,SNR=378
YKA                                   PcP     PcP       21 41 11.8 +0.3
      comp=Z,20nm,0.5s,baz=307,slow=3.7,SNR=21
YKA                                   ScP     ScP       21 44 24.3 -0.5
      comp=Z,1.6nm,0.7s,baz=304,slow=4.2,SNR=4.8
YKA   Yellowknife Ar   52.45  35      P       P         21 40 08.4 +0.3
IUG   Iuzhnay          52.58 294     eP       P         21 40 09.6  0.0
      baz=294
IUG                                  eS       S         21 47 02.0 +0.2
      baz=294
IUG   Iuzhnay          52.58 294     eP       P         21 40 09.6  0.0
IUG                                  eS       S         21 47 02.0 +0.2
PYUN  Piuthan          52.60 272     eP       P         21 40 10.7 +0.6
PYUN  Piuthan          52.60 272     eP       S         21 47 02.1 -0.5
      comp=Z,105nm,1.1s
BJO1  Bjornoya         53.05 345  ⇑iP       P         21 40 11.5 -0.8
TULEG Thule            53.75  10    i P       P         21 40 15.0 -2.3
TULEG                                 IAmb    IAmb      21 40 16.8
      comp=Z,87nm,0.6s
TULEG Thule            53.75  10      IAmb    IAmb      21 40 17.3
      comp=Z,130nm,0.7s
POHA  Pohakuloa        53.90 101      P       P         21 40 21.0 +1.5
POHA                                  IAmb    IAmb      21 40 21.4
      comp=Z,148nm,0.7s
POHA  Pohakuloa        53.90 101      P       P         21 40 20.8 +1.3
      comp=Z,198nm,0.8s
LVZ   Lovozero         53.99 334   ceP       P         21 40 17.8 -1.3
LVZ                                   pmax    pmax
      comp=Z,86nm,1.0s
LVZ   Lovozero         53.99 334      P       P         21 40 18.5 -0.6
PRGR  Permogore        54.08 325     eP       P         21 40 19.2 -0.6
PRGR                                 e                  21 41 16.7
PRGR                                 eS       S         21 47 19.2 -1.5
PRGR                                  pmax    pmax
      comp=Z,329nm,0.9s
MLH   Mauna Loa        54.19 101      P       P         21 40 22.8 +1.3
MLH                                   IAmb    IAmb      21 40 23.5
      comp=Z,125nm,0.7s
KHU   Kahuku           54.21 101      P       P         21 40 22.6 +0.9
KHU   Kahuku           54.21 101      P       P         21 40 22.6 +0.9
GAR   Garm             54.22 291      IAmb    IAmb      21 40 23.1
      comp=Z,75nm,0.6s
AIN   Ainahou          54.23 101      P       P         21 40 22.9 +1.3
AIN                                   IAmb    IAmb      21 42 14.7
      comp=Z,246nm,1.2s
SBUM  Sibu             54.28 225      P       P         21 40 24.0 +2.1
SBUM  Sibu             54.28 225      P       P         21 40 22.3 +0.4
KIRV  Kirov            54.28 320      P       P         21 40 20.8 -0.5
      comp=Z,77nm,0.5s,baz=13,slow=1.0,SNR=25
KIRV                                  PcP     PcP       21 41 18.2 -0.4
      comp=Z,82nm,0.5s,baz=48,slow=0.7,SNR=15
KIRV  Kirov            54.28 320   ceP       P         21 40 20.6 -0.7
NEEM  North Greenlan   54.42   5    i P       P         21 40 20.6 -1.8
NEEM                                  IAmb    IAmb      21 40 22.1
      comp=Z,101nm,0.8s
ABKAR Akbulak array    54.43 306      P       P         21 40 22.2 -0.3
APA   Apatity          54.56 334  ⇓iP       P         21 40 21.9 -1.2
APA                                   pmax    pmax
      comp=Z,57nm,0.8s
APA                                   MLR     MLR
      comp=Z,700nm,16.0s
AKTO  Aktyubinsk       54.79 309      P       P         21 40 24.5 -0.5
      comp=Z,19nm,0.5s,baz=60,slow=7.7,SNR=61
AKTO                                  PcP     PcP       21 41 20.4 -0.5
      comp=Z,9.2nm,0.7s,baz=32,slow=4.2,SNR=5.4
AKTO                                  ScP     ScP       21 44 34.0 -1.3
      comp=Z,5.3nm,0.7s,baz=50,slow=2.9,SNR=4.3
AKTO                                  S       S         21 47 28.2 -2.4
      comp=Z,3.5nm,0.8s,baz=142,slow=23,SNR=7.0
KEV   Kevo             54.80 338      P       P         21 40 24.4 -0.3
KEV                                   pmax    pmax
      comp=Z,79nm,0.9s
KEV   Kevo             54.80 338      P       P         21 40 24.4 -0.3
OZB   Mount Ozzard     54.87  54      P       P         21 40 27.3 +1.6
OZB                                   IAmb    IAmb      21 41 23.6
      comp=Z,184nm,1.6s
HAMF  Hammerfest       54.95 340  ⇑iP       P         21 40 25.1 -0.7
CHGR  Chuyangaron      55.15 291      IAmb    IAmb      21 40 28.9
      comp=Z,158nm,1.0s
DAG   Danmarks Havn    55.27 356    i P       P         21 40 26.1 -1.9
DAG                                   IAmb    IAmb      21 40 27.5
      comp=Z,40nm,0.5s
ARA0  ARCESS Array S   55.33 339  ⇑iP       P         21 40 28.1 -0.4
ARCES ARCESS Array B   55.33 339      P       P         21 40 28.0 -0.5
      comp=Z,21nm,0.4s,baz=46,slow=8.3,SNR=269
ARCES                                 PcP     PcP       21 41 22.1 -0.4
      comp=Z,9.0nm,0.5s,baz=43,slow=5.5,SNR=6.3
NIL   Nilore           55.58 284      P       P         21 40 31.9 +1.0
NIL   Nilore           55.58 284      P       P         21 40 31.5 +0.7
NIL                                   PcP     PcP       21 41 24.7 +0.5
C03A  Quillayute Air   55.96  54      P       P         21 40 34.9 +1.7
C03A                                  IAmb    IAmb      21 40 53.5
      comp=Z,441nm,1.5s
KSM   Kuching          56.05 226      P       P         21 40 35.0 +0.7
KTK1  Kautokeino       56.26 339  ⇑iP       P         21 40 34.9 -0.1
B04A  Port Angeles     56.47  54      P       P         21 40 37.9 +1.1
A04D  Lummi Island     56.51  53      P       P         21 40 38.5 +1.4
      baz=306
JETT  Jettan, Norway   56.52 340  ⇑iP       P         21 40 37.8 +0.9
TRO   Tromso           56.79 341  ⇑iP       P         21 40 38.3 -0.3
WISH  Wishkah          56.89  55      P       P         21 40 41.9 +2.2
WISH                                  IAmb    IAmb      21 40 42.3
      comp=Z,75nm,0.8s
KLMR  Klimovskoe       56.89 326     eP       P         21 40 36.7 -2.8
KLMR                                 e                  21 41 27.0
KLMR                                 e*PP     pP        21 42 11.4 +0.8
KLMR                                  pmax    pmax
      comp=Z,162nm,0.9s
KLMR  Klimovskoe       56.89 326     eP       P         21 40 36.7 -2.8
KLMR                                  AMP               21 40 40.1
      comp=Z,162nm,0.9s
KLMR                                 ePcP     PcP       21 41 27.1 -1.7
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KLMR				epP	pP	21 42 11.4	+0.8
KLMR				ePP	PP	21 42 47.4	-4.3
D03D	Eldon	57.01	54	P	P	21 40 41.9	+1.4
	baz=307,SNR=18						
PMG	Port Moresby	57.05	180	P	P	21 40 41.2	+0.1
	comp=Z,9.8nm,0.5s,baz=2.8,slow=7.3,SNR=5.1						
B05A	Bryant	57.11	53	P	P	21 40 42.4	+1.2
	baz=307,SNR=14						
B06A	Marblemount	57.28	52	IAmb	IAmb	21 40 44.3	
	comp=Z,100nm,1.0s						
RADR	Rader Ridge	57.29	55	P	P	21 40 44.6	+2.1
RADR				IAmb	IAmb	21 42 27.7	
	comp=Z,252nm,1.4s						
E03A	Lebam	57.34	55	P	P	21 40 44.6	+1.8
E03A				IAmb	IAmb	21 40 45.6	
	comp=Z,81nm,0.8s						
D04E	Lakebay	57.40	54	P	P	21 40 45.2	+2.1
	baz=307						
PBA	Port Blair	57.74	250	P	P	21 40 45.2	-0.8
PBA				IAmb	IAmb	21 42 29.8	
	comp=Z,95nm,1.0s						
KBL	Kabul	57.75	287	P	P	21 40 45.4	-0.7
KBL				pmax	pmax		
	comp=Z,45nm,1.1s						
KBL	Kabul	57.75	287	P	P	21 40 45.4	-0.7
	SNR=9.1						
KBL	Kabul	57.75	287	P	P	21 40 45.4	-0.7
DBG	Daneborg	57.78	356	i P	P	21 40 43.6	-1.8
DBG				IAmb	IAmb	21 40 45.1	
	comp=Z,17nm,0.6s						
D05A	Enumclaw	57.81	54	P	P	21 40 48.1	+2.0
D05A				IAmb	IAmb	21 40 49.0	
	comp=Z,100nm,0.9s						
E04D	Cinebar	57.88	55	P	P	21 40 48.0	+1.5
	baz=308,SNR=12						
F04D	Rainier, OR	57.93	55	P	P	21 40 48.3	+1.4
	baz=308						
C06D	Leavenworth	57.96	52	P	P	21 40 48.2	+1.1
	baz=308,SNR=8.0						
KULM	Kulim	57.96	238	P	P	21 40 49.0	+1.5
KULM	Kulim	57.96	238	P	P	21 40 48.6	+1.1
HEBO	Mount Hebo	58.04	56	P	P	21 40 49.5	+1.8
HEBO				IAmb	IAmb	21 40 50.4	
	comp=Z,116nm,0.7s						
HNR	Honiara	58.23	165	P	P	21 40 49.7	+0.5
	comp=Z,61nm,0.4s,baz=199,slow=4.8,SNR=2.3						
G03D	McMinnville, O	58.32	56	P	P	21 40 51.3	+1.7
	baz=308						
IPM	Ipoh	58.41	237	P	P	21 40 50.8	+0.3
EDM	Edmonton	58.46	44	IAmb	IAmb	21 40 52.0	
	comp=Z,159nm,0.8s						
B08A	Colville Reser	58.52	51	IAmb	IAmb	21 40 52.9	
	comp=Z,216nm,1.6s						
UPNV	Upernavik	58.55	8	i P	P	21 40 49.0	-1.6
UPNV				IAmb	IAmb	21 40 49.7	
	comp=Z,79nm,0.6s						
I02E	Swisshome, OR	58.67	57	P	P	21 40 54.0	+2.1
	baz=308						
COR	Corvallis	58.68	57	P	P	21 40 54.2	+2.2
COR				pmax	pmax		
	comp=Z,181nm,0.8s						
COR	Corvallis	58.68	57	P	P	21 40 54.2	+2.2
COR				IAmb	IAmb	21 40 55.4	
	comp=Z,181nm,0.8s						
BELG	Belogornoye	58.83	315	P	P	21 40 52.5	-0.3
	comp=Z,125nm,0.4s,baz=304,slow=0.6,SNR=126						
BELG				PcP	PcP	21 41 36.3	-0.3
	comp=Z,59nm,0.9s,baz=322,slow=3.9,SNR=4.4						
BELG				S	S	21 48 20.2	-2.3
	comp=Z,8.6nm,0.8s,baz=130,slow=23,SNR=16						
BELG	Belogornoye	58.83	315c	i P	P	21 40 52.3	-0.5
BELG				pmax	pmax		
	comp=Z,39nm,0.9s						
F05D	White Salmon	58.90	55	P	P	21 40 55.1	+1.6
	baz=308,SNR=8.3						
STEI	Steigen	58.96	341	eP	P	21 40 53.0	-0.4
H04D	Lebanon	59.04	57	P	P	21 40 56.6	+2.1
	baz=308,SNR=9.3						
MYKOM	Kota Tinggi	59.08	233	P	P	21 40 57.0	+1.9
BUCK	Buck Mountain	59.10	57	IAmb	IAmb	21 40 58.4	
	comp=Z,164nm,1.1s						
KEBM	Edson Butte	59.15	59	P	P	21 40 57.5	+2.2
KEBM				IAmb	IAmb	21 40 58.9	
	comp=Z,171nm,1.2s						
LOF	Lofoten	59.17	342⇑	i P	P	21 40 54.1	-0.8
I03D	Drain, OR	59.20	58	P	P	21 40 57.4	+1.9
	baz=309,SNR=9.9						
H04A	Detroit Lake	59.25	56	IAmb	IAmb	21 40 58.5	
	comp=Z,130nm,0.8s						
E07A	Sunnyside	59.36	53	IAmb	IAmb	21 40 59.1	
	comp=Z,83nm,0.9s						
G05D	Wamic, OR	59.38	55	P	P	21 40 58.8	+2.0
	baz=309,SNR=18						
FAUS	Fauske	59.40	340	eP	P	21 40 56.0	-0.5
C09A	Chrisman Ranch	59.42	51	IAmb	IAmb	21 40 58.8	
	comp=Z,92nm,0.8s						
K02D	Willamette Mer	59.65	59	P	P	21 41 00.4	+1.8
	baz=309						
I04A	Tendick Farm,	59.67	57	P	P	21 41 00.5	+1.7
	baz=309						
NEW	Newport	59.73	50	P	P	21 41 00.0	+0.9
	comp=Z,58nm,0.7s,baz=315,slow=7.4,SNR=58						
NEW	Newport	59.73	50	P	P	21 40 60.0	+0.9
	baz=309						
F07A	Phinny Hill Vi	59.73	54	IAmb	IAmb	21 41 01.8	
	comp=Z,180nm,0.8s						
SUMG	Summit	59.77	2	P	P	21 40 59.6	+0.3
SUMG				pmax	pmax		
	comp=Z,185nm,1.0s						
SUMG	Summit	59.77	2	i P	P	21 40 59.0	-0.3
SUMG				i P	P	21 40 59.4	0.0
SUMG				IAmb	IAmb	21 40 59.9	
	comp=Z,103nm,0.5s						
SUMG				IAmb	IAmb	21 41 03.8	
	comp=N,21nm,0.6s						
SUMG	Summit	59.77	2	P	P	21 40 59.6	+0.3
SUMG				IAmb	IAmb	21 41 00.7	
	comp=Z,185nm,1.0s						
E08A	Dider Farm, El	59.83	53	IAmb	IAmb	21 41 01.9	
	comp=Z,96nm,0.9s						
I05D	Terrebonne, OR	59.93	56	P	P	21 41 02.3	+1.7
	baz=309,SNR=17						
NUUG	Nuugaatsiaq	60.00	7	i P	P	21 40 58.8	-1.7
NUUG				IAmb	IAmb	21 41 03.1	
	comp=Z,14nm,0.7s						
L02E	Cave Junction	60.02	59	P	P	21 41 03.0	+1.9
	baz=309						
J04D	Umpqua Nationa	60.19	57	P	P	21 41 04.4	+1.9
	baz=309,SNR=12						
KRMB	Red Mountain	60.24	60	P	P	21 41 04.4	+1.7
KRMB				IAmb	IAmb	21 42 28.7	
	comp=Z,245nm,2.0s						
E09A	Wood Farm, Sta	60.30	52	IAmb	IAmb	21 41 05.2	
	comp=Z,149nm,1.0s						
MOR8	Moi Rana	60.59	340⇑	i P	P	21 41 02.8	-1.6
KONS	Konsvik	60.62	341	eP	P	21 41 04.3	-0.3
JCC	Jacoby Creek,	60.62	61	P	P	21 41 06.9	+1.9
JCC				IAmb	IAmb	21 41 08.0	
	comp=Z,93nm,1.1s						
J05D	Fort Rock, OR	60.66	57	P	P	21 41 07.6	+2.1
	baz=310,SNR=26						
L04D	Klamath Falls	60.73	58	P	P	21 41 07.6	+1.7
	baz=310,SNR=29						
STOK	Stokkvaagen	60.78	341	eP	P	21 41 04.9	-0.7
K04D	Chiloquin, OR	60.79	58	P	P	21 41 08.2	+1.9
	baz=310,SNR=7.9						
YBH	Yreka Blue Hor	60.81	59	P	P	21 41 08.2	+1.8
	comp=Z,46nm,0.7s,baz=358,slow=5.9,SNR=90						
YBH	Yreka Blue Hor	60.81	59	P	P	21 41 07.9	+1.5
YBH				pmax	pmax		
	comp=Z,54nm,0.8s						
YBH	Yreka Blue Hor	60.81	59	P	P	21 41 07.9	+1.5
M02C	Callahan	60.94	59	P	P	21 41 09.2	+1.9
	baz=310,SNR=14						
PUL	Pulkovo	60.97	329	eP	P	21 41 06.3	-0.7
PUL	Pulkovo	60.97	329c	eP	P	21 41 06.5	-0.5
PUL				pmax	pmax		
	comp=Z,142nm,0.7s						
MOS	Moscow	61.06	322	eP	P	21 41 05.5	-2.2
MOS				e		21 41 44.3	
MOS				e*PP	pP	21 42 39.7	-0.7
MOS				eS	S	21 48 47.2	-3.2
MOS				e		21 49 01.6	
MOS				e		21 49 14.7	
MOS				e		21 50 08.5	
MOS				pmax	pmax		
	comp=Z,114nm,0.7s						
MOS				smax	smax		
	comp=N,200nm,1.5s						
MOS				smax	smax		
	comp=E,400nm,1.5s						
FIA1	FINESS Array S	61.14	332	P	P	21 41 07.4	-0.7
FINES	FINESS Array B	61.14	332	P	P	21 41 07.3	-0.8
	comp=E,182nm,0.6s,baz=38,slow=8.1,SNR=1097						
FINES				S	S	21 48 49.6	-1.6
	comp=E,6.1nm,1.0s,baz=27,slow=9.0,SNR=5.3						
FINES	FINESS Array B	61.14	332	i P	P	21 41 07.3	-0.8
FINES				pmax	pmax		
	comp=Z,183nm,0.6s						
KMRM	Mail Ridge	61.19	61	P	P	21 41 10.7	+1.7
KMRM				IAmb	IAmb	21 41 11.9	
	comp=Z,63nm,0.8s						
K05A	Summer Lake	61.21	57	IAmb	IAmb	21 41 12.3	
	comp=Z,172nm,0.9s						
M04C	Macdoel	61.27	59	P	P	21 41 11.3	+1.7
	baz=310,SNR=27						
N02D	Trinity Center	61.29	60	P	P	21 41 11.3	+1.7
	baz=310,SNR=20						
JTMT	Jette	61.52	49	IAmb	IAmb	21 41 13.6	
	comp=Z,176nm,1.4s						
WDC	Whiskeytown Da	61.64	60	P	P	21 41 13.1	+1.3
WDC				pmax	pmax		
	comp=Z,40nm,0.8s						
WDC	Whiskeytown Da	61.64	60	P	P	21 41 13.1	+1.3
SCO	Scoresbysund	61.66	356	P	P	21 41 11.4	0.0
SCO				pmax	pmax		
	comp=Z,61nm,1.0s						
SCO	Scoresbysund	61.66	356	i P	P	21 41 10.3	-1.0
SCO				IAmb	IAmb	21 41 11.7	
	comp=Z,22nm,0.7s						
SCO	Scoresbysund	61.66	356	P	P	21 41 11.4	0.0
COEN	Coen	61.67	184	P	P	21 41 12.7	+0.5
KDU	Kakadu	61.68	196	P	P	21 41 12.3	0.0
O02D	Mt. Diablo Mer	61.76	60	P	P	21 41 14.2	+1.5
	baz=310,SNR=16						
BMO	Blue Mountains	61.82	53	IAmb	IAmb	21 41 15.6	
	comp=Z,118nm,1.3s						
OBN	Obninsk	61.92	322	P	P	21 41 12.8	-0.6
	comp=Z,23nm,0.4s,baz=56,slow=2.7,SNR=28						
OBN				S	S	21 48 58.9	-2.2
	comp=Z,2.5nm,0.5s,baz=18,slow=24,SNR=8.3						
OBN	Obninsk	61.92	322c	eP	P	21 41 12.4	-1.0
OBN				e*PP	pP	21 42 46.0	-0.5
OBN				e		21 43 40.5	
OBN				i S	S	21 49 34.9	+34
OBN				pmax	pmax		
	comp=Z,264nm,1.3s						
OBN	Obninsk	61.92	322	eP	P	21 41 12.4	-1.0
OBN	Obninsk	61.92	322	P	P	21 41 12.8	-0.6
MOD	Modoc Plateau	62.08	58	IAmb	IAmb	21 41 17.2	
	comp=Z,66nm,0.7s						
MTN	Manton Dam	62.10	198	P	P	21 41 15.5	+0.5
PLAI	Plampang	62.11	213	P	P	21 41 14.1	-1.0
J08A	Circle Bar Ran	62.15	55	IAmb	IAmb	21 41 18.1	
	comp=Z,108nm,1.0s						
HRA	Herat	62.16	291	P	P	21 41 15.6	0.0
O03E	Paynes Creek	62.26	60	P	P	21 41 16.5	+0.5
	baz=311,SNR=37						
MSO	Missoula	62.30	50	IAmb	IAmb	21 41 18.2	
	comp=Z,113nm,1.1s						
HOPS	Hopland Field	62.36	62	P	P	21 41 17.8	+1.3
PLID	Pearl Lake	62.37	53	P	P	21 41 17.7	+0.9
PLID				IAmb	IAmb	21 41 18.8	
	comp=Z,97nm,0.8s						
VRH	Novokhopyorsk	62.38	317	eP	P	21 41 15.3	-1.1
VRH				eS	S	21 49 03.7	-3.2
VRH				pmax	pmax		
	comp=Z,150nm,0.6s						
VRH				pmax	pmax		
	comp=Z,150nm,0.6s						
VRH				smax	smax		
	comp=E,230nm,1.1s						
GEYT	Alibeck	62.39	297	P	P	21 41 16.8	0.0
	comp=E,27nm,0.5s,baz=191,slow=0.7,SNR=37						
GEYT				S	S	21 49 06.9	-0.7
	comp=E,1.1nm,0.4s,baz=204,slow=41,SNR=1.9						
GYA0B	ALIBECK ARRAY	62.39	297	P	P	21 41 17.4	+0.6
ILULI	Ilulissat	62.45	7	P	P	21 41 15.8	-0.8
ILULI				pmax	pmax		
	comp=Z,108nm,0.9s						
ILULI	Ilulissat	62.45	7	i P	P	21 41 14.9	-1.6
ILULI				IAmb	IAmb	21 41 16.2	
	comp=Z,72nm,0.8s						
ILULI	Ilulissat	62.45	7	P	P	21 41 15.8	-0.8
ILULI				IAmb	IAmb	21 41 16.8	
	comp=Z,108nm,0.9s						
FCC	Fort Churchill	62.51	31	P	P	21 41 17.2	+0.1
FCC				pmax	pmax		
	comp=Z,128nm,0.5s						
FCC	Fort Churchill	62.51	31	P	P	21 41 17.2	+0.1
NSS	Namsos	62.53	340⇑	i P	P	21 41 16.7	-0.5
WVOR	Wild Horse Val	62.67	56	IAmb	IAmb	21 41 21.2	
	comp=Z,118nm,1.0s						
LPSR	Galich'ya Gora	62.67	319	eP	P	21 41 17.8	-0.5
LPSR				eS	S	21 49 07.8	-2.7
LPSR				pmax	pmax		
	comp=Z,160nm,0.7s						
LPSR				pmax	pmax		
	comp=Z,140nm,0.7s						
LPSR				smax	smax		
	comp=N,20nm,1.0s						
HYB	Hyderabad	62.85	266	i P	P	21 41 20.0	0.0
GSI	Gunungsitoli	62.96	238	P	P	21 41 21.6	+0.9
GSI	Gunungsitoli	62.96	238	P	P	21 41 22.1	+1.3
MCCM	Marconi Confer	63.02	62	P	P	21 41 21.3	+0.5
VSU	Vasula	63.18	329	eP	P	21 41 20.7	-0.8
VSU	Vasula	63.18	329c	i P	P	21 41 20.8	-0.7
ICESG	Greenland Ices	63.23	3	i P	P	21 41 21.4	-0.7
ICESG				IAmb	IAmb	21 41 22.8	
	comp=Z,154nm,0.7s						
VSR	Storozhevoye	63.53	318	eP	P	21 41 23.3	-0.6
VSR				eS	S	21 49 18.1	-2.9
VSR				pmax	pmax		
	comp=Z,90nm,0.5s						
VSR				pmax	pmax		
	comp=Z,120nm,0.5s						
VSR				smax	smax		
	comp=E,60nm,1.0s						
MFID	Camas Ranch	63.57	54	IAmb	IAmb	21 41 26.9	
	comp=Z,142nm,1.4s						
EGMT	Eagleton	63.60	47	P	P	21 41 25.5	+0.9
	baz=313,SNR=45						
VORD	Divnogorie	63.65	318	eP	P	21 41 24.4	-0.3
VORD				pmax	pmax		
	comp=Z,120nm,0.7s						
MTSE	Matsula	63.97	331	eP	P	21 41 25.9	-0.7
DLMT	Dillon	63.98	50	IAmb	IAmb	21 41 29.4	
	comp=Z,122nm,0.8s						
AAL	Aland	64.00	334	eP	P	21 41 25.2	-1.5
TBLU	Trondheim	64.02	340⇑	i P	P	21 41 25.3	-1.6
RUBR	Rubicon Trail	64.03	60	IAmb	IAmb	21 41 29.8	
	comp=Z,93nm,0.9s						
PAHR	Pah Rah Range	64.04	59	IAmb	IAmb	21 41 29.8	
	comp=Z,104nm,0.9s						
EMB	Emerald Bay	64.11	60	IAmb	IAmb	21 41 30.4	
	comp=Z,76nm,0.7s						
VCNR	Virginia City	64.16	59	IAmb	IAmb	21 41 30.8	
	comp=Z,54nm,0.8s						
SOEG	Soedalen	64.22	359	i P	P	21 41 27.1	-0.8
SOEG				IAmb	IAmb	21 41 28.1	
	comp=Z,31nm,1.0s						
HLID	Hailey	64.23	53	P	P	21 41 30.0	+1.2
	baz=313,SNR=26						
BOZ	Bozeman (W)	64.32	50	IAmb	IAmb	21 41 31.4	
	comp=Z,99nm,0.7s						
BOZ	Bozeman (W)	64.32	50	P	P	21 41 30.1	+0.9
	baz=313,SNR=58						
PNTR	Pine Nut	64.33	60	IAmb	IAmb	21 41 32.0	
	comp=Z,78nm,0.8s						
CMB	Columbia Colle	64.57	61	IAmb	IAmb	21 41 33.0	
	comp=Z,59nm,0.8s						
YERR	Yerington	64.61	59	P	P	21 41 32.9	+1.7
SFJD	Kangerlussuaq	64.65	8	P	P	21 41 30.0	-0.8
SFJD				pmax	pmax		
	comp=Z,69nm,0.9s						
SFJD	Kangerlussuaq	64.65	8	i P	P	21 41 29.0	-1.8
SFJD				IAmb	IAmb	21 41 30.5	
	comp=Z,30nm,0.8s						
SFJD	Kangerlussuaq	64.65	8	P	P	21 41 30.0	-0.8
SFJD				IAmb	IAmb	21 41 31.1	
	comp=Z,69nm,0.8s						
SAO	San Andreas Ge	64.79	63	P	P	21 41 33.3	+1.1
SAO				pmax	pmax		
	comp=Z,19nm,0.8s						
SAO	San Andreas Ge	64.79	63	P	P	21 41 33.3	+1.1
BMN	Battle Mountai	64.79	57	IAmb	IAmb	21 41 34.9	
	comp=Z,99nm,0.8s						
UPP	Uppsala	64.96	334	eP	P	21 41 31.7	-1.1
KVN	Kaiserville	65.22	59	P	P	21 41 36.7	+1.5
KVN				pmax	pmax		
	comp=Z,149nm,0.7s						
KVN	Kaiserville	65.22	59	P	P	21 41 36.7	+1.5
FRB	Frobisher Bay	65.23	17	P	P	21 41 33.4	-1.1
	comp=Z,87nm,0.6s,baz=335,slow=9.1,SNR=108						
MOL	Molde	65.23	341	eP	P	21 41 34.4	-0.2
RYN	Ryan	65.26	59	IAmb	IAmb	21 41 37.7	
	comp=Z,69nm,0.8s						
YHH	Holmes Hill	65.27	50	IAmb	IAmb	21 41 37.7	
	comp=Z,82nm,1.0s						
YMR	Madison River	65.30	50	IAmb	IAmb	21 41 37.9	
	comp=Z,146nm,1.2s						
SLIT	Slitere, Latvi	65.32	331	eP	P	21 41 34.0	-1.2
KNRA	Kununurra	65.35	199	P	P	21 41 36.6	+0.8
DOMB	Dombas	65.35	340⇑	i P	P	21 41 34.6	-0.8
YNR	Norris Junctio	65.41	50	IAmb	IAmb	21 41 40.6	
	comp=Z,100nm,1.4s						
NC303	NORSAR Array S	65.50	338	IAmb	IAmb	21 41 36.8	
	comp=Z,187nm,1.2s						
YUF	Upper Falls	65.50	50	IAmb	IAmb	21 41 39.3	
	comp=Z,43nm,0.7s						
DY2G	Dye2	65.51	6	i P	P	21 41 35.4	-1.1
DY2G				IAmb	IAmb	21 41 36.3	
	comp=Z,57nm,0.8s						
NVAR	Mina Array Bea	65.52	59	P	P	21 41 38.0	+0.9
	comp=Z,75nm,0.7s,baz=294,slow=6.1,SNR=373						
LHV	Little Huntoon	65.53	60	P	P	21 41 38.7	+1.9
SANVU	Saraoutou	65.60	159	IAmb	IAmb	21 41 38.2	
	comp=Z,50nm,0.7s						
NV11	Mina Array Sit	65.61	59	IAmb	IAmb	21 41 39.8	
	comp=Z,62nm,0.8s						
ISAL	Salakas	65.62	328	eP	P	21 41 37.2	+0.1
LKWY	Lake	65.66	50	IAmb	IAmb	21 41 41.5	
	comp=Z,64nm,0.9s						
YMP	Mirror Lake Pl	65.66	50	IAmb	IAmb	21 41 40.5	
	comp=Z,47nm,0.7s						
H17A	Grant Village	65.69	50	IAmb	IAmb	21 41 41.9	
	comp=Z,114nm,0.9s						
H17A	Grant Village	65.69	50	P	P	21 41 40.5	+2.4
	baz=314,SNR=46						
ELK	Elko	65.69	56	P	P	21 41 39.4	+1.2
	comp=Z,36nm,0.6s,baz=311,slow=6.5,SNR=44						
NB2	NORSAR Subarra	65.70	338	P	P	21 41 36.4	-1.2
	comp=Z,86nm,0.5s,baz=31,slow=6.5						
NB2	NORSAR Subarra	65.70	338	P	P	21 41 36.4	-1.2
	baz=31,slow=6.5						
NOA	NORSAR Array B	65.70	338	P	P	21 41 36.9	-0.6
	comp=Z,74nm,0.6s,baz=32,slow=6.6,SNR=544						
AKN	Aaknes	65.70	341	eP	P	21 41 37.5	-0.1
MLAC	Mammoth, Mammo	65.75	60	P	P	21 41 39.8	+1.2
	baz=313						
MNK	Minsk	65.79	326	i P	P	21 41 38.3	+0.1
MNK				i *PP	pP	21 43 11.9	-0.8
MNK				i		21 44 09.6	
MNK				i PPP	PPP	21 45 53.2	
MNK				i S	S	21 49 46.3	-1.8
MNK				i SS	SS	21 54 14.5	+2.4
MNK				pmax	pmax		
	comp=N,102nm,1.2s						
MNK				pmax	pmax		
	comp=E,15nm,1.2s						
MNK				pmax	pmax		
	comp=Z,259nm,1.2s						
MNK				MLR	MLR		
	comp=Z,259nm,21.0s						
MNK				MLR	MLR		
	comp=N,194nm,23.0s						
MNK				MLR	MLR		
	comp=E,30nm,22.0s						
MNK	Minsk	65.79	326	i P	P	21 41 38.3	+0.1
	comp=E,15nm,1.2s						
MNK				i P	P	21 41 38.3	+0.1
	comp=N,102nm,1.2s						
MNK				i P	P	21 41 38.3	+0.1
	comp=Z,259nm,1.2s,baz=40						
MNK				i pP	pP	21 43 11.9	-0.8
MNK				i PP	PP	21 44 09.6	+0.1
MNK				i PPP	PPP	21 45 53.3	
MNK				i S	S	21 49 46.3	-1.8
MNK				i sS	sS	21 52 35.6	+0.1
MNK				i SS	SS	21 54 14.5	+2.5
MNK				i SSS	SSS	21 57 32.2	
MNK				i SSS	SSS	22 04 15.9	
MNK				i LRM	MLR	22 13 34.1	
	comp=Z,259nm,21.1s						
MNK				i LRM	MLR	22 13 57.2	
	comp=N,194nm,23.2s						
MNK				i LRM	MLR	22 14 20.9	
	comp=E,30nm,21.9s						
HFS	Hagfors	65.83	336	P	P	21 41 37.4	-0.9
	comp=E,119nm,0.5s,baz=44,slow=4.9,SNR=556						
GROC	Groznyy	65.84	308	eP	P	21 41 38.9	+0.2
GROC				e*PP	pP	21 43 14.4	+1.0
GROC				eS	S	21 49 48.5	-0.7
GROC				pmax	pmax		
	comp=Z,40nm,0.6s						
RLMT	Red Lodge	65.85	49	P	P	21 41 40.4	+1.4
	baz=314						
NC602	NORSAR Array S	65.88	338⇑	i P	P	21 41 37.9	-0.8
NC602	NORSAR Array S	65.88	338	IAmb	IAmb	21 41 38.9	
	comp=Z,96nm,0.7s						
NACGM	Naroch	65.89	327	i P	P	21 41 38.4	-0.5
DGMT	Dagmar	65.95	44	P	P	21 41 40.0	+0.7
	baz=316						
FXWY	Fox Creek	65.98	51	IAmb	IAmb	21 41 42.6	
	comp=Z,175nm,1.6s						
GOF	Gofitskoye	65.98	311⇑	i P	P	21 41 40.0	+0.4
GOF				eS	S	21 49 51.8	+1.0
GOF				pmax	pmax		
	comp=Z,310nm,0.7s						
GOF				smax	smax		
	comp=N,58nm,1.3s						
GOF				smax	smax		
	comp=E,156nm,1.3s						
MOOW	Moose Ponds	66.05	51	IAmb	IAmb	21 41 43.1	
	comp=Z,102nm,1.1s						
PAGB	Antelope Grade	66.20	63	IAmb	IAmb	21 41 43.4	
	comp=Z,76nm,0.8s						
LOHW	Long Hollow	66.22	51	IAmb	IAmb	21 41 44.2	
	comp=Z,134nm,1.4s						
SNOW	Snow King Moun	66.24	51	IAmb	IAmb	21 41 44.4	
	comp=Z,52nm,0.8s						
LAO	LASA Array	66.26	46	IAmb	IAmb	21 41 43.5	
	comp=Z,155nm,1.1s						
LAO	LASA Array	66.26	46	P	P	21 41 42.2	+0.8
	baz=316						
REDW	Red Top Meadow	66.26	51	IAmb	IAmb	21 41 44.3	
	comp=Z,70nm,0.8s						
VOG	Valley Oaks Go	66.32	62	P	P	21 41 42.3	+0.5
	baz=313						
PABE	Paberze	66.43	329	eP	P	21 41 41.5	-0.7
TIN	Tinemaha, Big	66.50	60	P	P	21 41 44.5	+1.4
	baz=313,SNR=19						
AHID	Auburn Hatcher	66.54	52	IAmb	IAmb	21 41 45.5	
	comp=Z,48nm,0.8s						
FOO	Floro	66.65	341	eP	P	21 41 43.3	-0.1
SKAR	Skarslia	66.72	339⇑	i P	P	21 41 44.0	0.0
PBUR	Paburge	66.72	330	eP	P	21 41 43.3	-0.6
ANGG	Ammassalik, Gr	66.77	2	i P	P	21 41 41.8	-2.2
ANGG				IAmb	IAmb	21 41 43.3	
	comp=Z,29nm,0.7s						
ANGG	Ammassalik, Gr	66.77	2	IAmb	IAmb	21 41 44.6	
	comp=Z,87nm,1.2s						
OSL	Oslo	66.77	338	eP	P	21 41 44.4	+0.2
HYA	Hoyanger	66.78	341	eP	P	21 41 44.1	-0.1
NCK	Nalchik	66.79	310	i P	P	21 41 45.3	+0.6
NCK				pmax	pmax		
	comp=Z,96nm,0.9s						
ISOG	Isortoq, Green	66.80	3	i P	P	21 41 43.0	-1.2
VES	Vestal, Richgr	66.82	62	P	P	21 41 45.1	+0.2
	baz=313,SNR=5.4						
SPUT	South Promonto	66.83	54	IAmb	IAmb	21 41 47.6	
	comp=Z,80nm,1.1s						
KVAR	Kislovodsk Arr	66.93	310	P	P	21 41 46.3	+0.6
	comp=Z,52nm,0.9s,baz=90,slow=20,SNR=29						
KIV	Kislovodsk	66.94	310	⇓P	P	21 41 46.6	+0.9
KIV	Kislovodsk	66.94	310	i P	P	21 41 46.2	+0.5
	SNR=78						
KIV	Kislovodsk	66.94	310	eP	P	21 41 45.8	+0.1

KIV				*e**PP	pP	21 43 19.9	-0.8
KIV				*e**SP	sP	21 44 07.8	-0.9
KIV				*e*PPP	PPP	21 46 01.3	
KIV				*e*S	S	21 50 02.7	+0.4
KIV				*e*SS	SS	21 54 32.3	+1.9
KIV				pmax	pmax		
	comp=Z,29nm,2.7s						
KIV				pmax	pmax		
	comp=Z,187nm,1.1s						
KIV	**Kislovodsk**	66.94	310	P	P	21 41 46.4	+0.7
KIV	**Kislovodsk**	66.94	310	*e*P	P	21 41 45.8	+0.1
KIV	**Kislovodsk**	66.94	310	P	P	21 41 46.5	+0.7
KBZ	**Khabaz**	66.99	310	P	P	21 41 46.5	+0.6
	comp=Z,94nm,0.9s,baz=57,slow=2.4,SNR=152						
KBZ	**Khabaz**	66.99	310	*ce*P	P	21 41 46.4	+0.6
KBZ				pmax	pmax		
	comp=Z,86nm,0.9s						
CWC	**Cottonwood Cre**	67.00	61	P	P	21 41 47.1	+0.8
	baz=314						
PKM	**Mcpherson Peak**	67.03	63	P	P	21 41 47.4	+0.8
	baz=313,SNR=11						
HWUT	**Hardware Ranch**	67.10	53	IAmb	IAmb	21 41 49.3	
	comp=Z,119nm,1.1s						
SHA1	**Shidzhatmaz**	67.11	310	*c i*P	P	21 41 47.1	+0.2
ZEI	**Tsey**	67.13	309	*e*P	P	21 41 46.2	-0.8
ZEI				pmax	pmax		
	comp=Z,22nm,0.9s						
R11A	**Troy Canyon, C**	67.14	58	IAmb	IAmb	21 41 48.8	
	comp=Z,43nm,0.6s						
R11A	**Troy Canyon, C**	67.14	58	P	P	21 41 47.7	+0.6
	baz=314,SNR=102						
SUE	**Sulen**	67.19	341	*e*P	P	21 41 44.7	-2.1
NUUK	**Nuuk**	67.30	9	*i* P	P	21 41 46.4	-1.0
NUUK				IAmb	IAmb	21 41 47.8	
	comp=Z,74nm,0.8s						
ISA	**Isabella, Lake**	67.30	62	P	P	21 41 48.2	+0.1
	baz=314,SNR=35						
KONO	**Kongsberg**	67.31	338	*ce*P	P	21 41 47.0	-0.5
KONO				pmax	pmax		
	comp=Z,51nm,1.7s						
KONO	**Kongsberg**	67.31	338	⇑*i*P	P	21 41 47.0	-0.5
KONO	**Kongsberg**	67.31	338	P	P	21 41 47.1	-0.5
BORG	**Borgarnes**	67.32	355	P	P	21 41 48.5	+1.0
	comp=Z,70nm,0.7s,baz=350,slow=2.8,SNR=16						
BORG	**Borgarnes**	67.32	355	P	P	21 41 48.5	+1.0
BORG				pmax	pmax		
	comp=Z,760nm,1.9s						
BW06	**Boulder Array**	67.35	51	IAmb	IAmb	21 41 50.2	
	comp=Z,126nm,0.9s						
BW06	**Boulder Array**	67.35	51	P	P	21 41 48.8	+0.4
	baz=315						
PD31	**Pinedale Array**	67.35	51	IAmb	IAmb	21 41 50.2	
	comp=Z,112nm,0.9s						
PDAR	**Pinedale Array**	67.35	51	P	P	21 41 48.9	+0.4
	comp=Z,73nm,0.6s,baz=305,slow=1.1,SNR=655						
PDAR				S	S	21 50 06.5	-1.1
	comp=Z,0.2nm,0.5s,baz=119,slow=28,SNR=1.3						
PDAR				PKPPKP		22 10 05.5	
	comp=Z,1.1nm,0.7s,baz=113,slow=11,SNR=7.0						
SPR3	**Spring Creek 3**	67.40	57	IAmb	IAmb	21 41 51.7	
	comp=Z,84nm,0.7s						
DUG	**Dugway, Tooele**	67.41	55	IAmb	IAmb	21 41 51.2	
	comp=Z,106nm,0.8s						
DUG	**Dugway, Tooele**	67.41	55	P	P	21 41 49.9	+1.2
	baz=314						
STRU	**Stroemstad**	67.43	337	*i* P	P	21 41 48.0	-0.3
ARVC	**Arvin**	67.46	62	P	P	21 41 49.3	+0.3
	baz=314						
ONI	**Oni**	67.51	309	IAmb	IAmb	21 41 51.4	
	comp=Z,58nm,0.9s						
MPMC	**Manual Prospec**	67.61	61	P	P	21 41 51.1	+1.0
	baz=314						
ASK	**Askoy**	67.61	341	*e*P	P	21 41 49.3	-0.1
BER	**Bergen**	67.67	341	*e*P	P	21 41 50.1	+0.3
CTA	**Charters Tower**	67.67	181	P	P	21 41 50.7	+0.4
	comp=Z,6.8nm,0.5s,baz=8.0,slow=6.2,SNR=6.8						
CTAO	**Charters Tower**	67.67	181	P	P	21 41 52.0	+1.7
	comp=Z,18nm,0.9s						
FURC	**Furnace Creek,**	67.70	60	P	P	21 41 51.7	+1.4
	baz=314,SNR=98						
TPNV	**Topopah Spring**	67.72	59	IAmb	IAmb	21 41 52.9	
	comp=Z,63nm,0.8s						
TPNV	**Topopah Spring**	67.72	59	P	P	21 41 52.0	+1.2
	baz=314						
ODD1	**Odda**	67.80	340	*e*P	P	21 41 50.8	+0.2
OSI	**Osito Audit: C**	67.87	63	P	P	21 41 52.7	+1.1
	baz=314						
LRMC	**Laurel Mtn Rad**	67.90	61	P	P	21 41 52.5	+0.7
	baz=314,SNR=42						
SUW	**Suwalki**	67.90	328	*e*P	P	21 41 50.4	-0.9
SUW	**Suwalki**	67.90	328	*e*P	P	21 41 49.8	-1.5
SUW	**Suwalki**	67.90	328	IAmb	IAmb	21 41 52.0	
	comp=Z,132nm,1.0s						
NLU	**North Lily Min**	67.98	54	IAmb	IAmb	21 41 54.6	
	comp=Z,86nm,0.8s						
PSUT	**Pine Spring**	67.99	57	IAmb	IAmb	21 41 54.5	
	comp=Z,83nm,0.7s						
GWY	**Greenwater Val**	68.00	60	IAmb	IAmb	21 41 54.5	
	comp=Z,96nm,0.7s						
QSM	**Queen of Sheba**	68.04	60	IAmb	IAmb	21 41 54.7	
	comp=Z,118nm,0.9s						
PRN	**Pahroc Range**	68.09	58	IAmb	IAmb	21 41 55.4	
	comp=Z,100nm,1.0s						
EDW2	**Edwards Air Fo**	68.12	62	P	P	21 41 54.1	+1.0
	baz=314						
CHVG	**Ch'k'valeri**	68.13	310	⇓P	P	21 41 54.3	+1.4
MPU	**Maple Canyon**	68.18	54	IAmb	IAmb	21 41 55.8	
	comp=Z,99nm,0.7s						
TJOU	**Tjoern**	68.18	336	*i* P	P	21 41 51.9	-1.0
AKASG	**Malin Array Be**	68.18	323	P	P	21 41 52.2	-0.9
	comp=Z,57nm,0.4s,baz=37,slow=6.2,SNR=322						
AKASG				pP	pP	21 43 29.1	+0.7
	comp=Z,1.8nm,0.6s,baz=37,slow=6.6,SNR=2.1						
AKASG	**Malin Array Be**	68.18	323	IAmb	IAmb	21 41 53.4	
	comp=Z,100nm,0.8s						
BORU	**Boraas**	68.21	335	*i* P	P	21 41 51.8	-1.3
BLS5	**Blasjo**	68.27	340	*e*P	P	21 41 53.5	0.0
ULM	**Lac du Bonnet**	68.28	38	P	P	21 41 53.5	-0.3
	comp=Z,65nm,0.7s,baz=317,slow=7.0,SNR=54						
ULM	**Lac du Bonnet**	68.28	38	IAmb	IAmb	21 41 54.4	
	comp=Z,81nm,0.8s						
SNCC	**San Nicolas Is**	68.33	64	P	P	21 41 55.0	+0.7
	baz=314						
DECC	**Green Verdugo**	68.36	63	P	P	21 41 55.0	+0.5
	baz=314,SNR=5.9						
FITZ	**Fitzroy Crossi**	68.42	202	P	P	21 41 54.8	0.0
	comp=Z,16nm,0.7s,baz=6.6,slow=7.3,SNR=29						
SHOC	**Shoshone, Teco**	68.43	60	P	P	21 41 55.6	+0.7
	baz=314						
BLEU	**Blekinge**	68.45	333	*i* P	P	21 41 53.1	-1.5
QIS	**Mount Isa**	68.46	187	P	P	21 41 55.2	+0.1
WRAB	**Tennant Creek**	68.46	193	*ce*P	P	21 41 54.7	-0.4
WRAB				pmax	pmax		
	comp=Z,32nm,1.3s						
WRAB	**Tennant Creek**	68.46	193	P	P	21 41 55.0	-0.1
WRAB	**Tennant Creek**	68.46	193	P	P	21 41 55.3	+0.2
WRA	**Warramunga Arr**	68.47	193	P	P	21 41 54.8	-0.3
	comp=Z,16nm,0.5s,baz=10,slow=6.0,SNR=223						
WRA				pP	pP	21 43 29.7	-0.1
	comp=Z,6.8nm,1.0s,baz=6.7,slow=8.4,SNR=4.1						
WRA				PKPPKP	P'P'df	22 10 04.7	+2.7
	comp=Z,8.0nm,0.8s,baz=195,slow=2.8,SNR=17						
WRA	**Warramunga Arr**	68.47	193	*i* P	P	21 41 54.7	-0.5
WRA				pmax	pmax		
	comp=Z,16nm,0.5s						
WRA	**Warramunga Arr**	68.47	193	P	P	21 41 54.9	-0.3
MDND	**Maddock**	68.50	42	P	P	21 41 55.6	+0.5
	baz=319,SNR=12						
MWC	**Mount Wilson**	68.54	62	IAmb	IAmb	21 41 57.5	
	comp=Z,99nm,1.2s						
GNI	**Garni**	68.54	306	P	P	21 41 55.9	+0.2
	comp=Z,30nm,0.8s,baz=37,slow=1.5,SNR=23						
GNI				S	S	21 50 22.7	+1.3
	comp=Z,2.2nm,0.7s,baz=342,slow=20,SNR=1.5						
GNI	**Garni**	68.54	306	P	P	21 41 57.5	+1.8
GNI	**Garni**	68.54	306	P	P	21 41 57.2	+1.5
GNI				pmax	pmax		
	comp=Z,90nm,1.3s						
GNI	**Garni**	68.54	306	P	P	21 41 57.1	+1.5
GNI	**Garni**	68.54	306	P	P	21 41 57.2	+1.5
GNI				IAmb	IAmb	21 41 58.5	
	comp=Z,90nm,1.2s						
ONAU	**Onsala**	68.65	336	*i* P	P	21 41 54.4	-1.3
SHPR	**Sheep Range**	68.66	59	IAmb	IAmb	21 41 58.9	
	comp=Z,84nm,0.8s						
SOC	**Sochi**	68.71	312	*c i*P	P	21 41 55.5	-0.9

SOC				*e**PP	pP	21 43 33.4	+1.4
SOC				*e**SP	sP	21 44 16.4	-3.5
SOC				*e*		21 44 32.5	
SOC				*i* S	S	21 50 21.6	-1.2
SOC				*e*		21 51 12.0	
SOC				*e*SS	SS	21 55 02.4	+5.1
SOC				pmax	pmax		
	comp=Z,63nm,0.7s						
RRX	**Edison Barstow**	68.72	61	P	P	21 41 57.7	+1.0
	baz=314						
TCRU	**Three Creeks R**	68.72	56	IAmb	IAmb	21 41 59.5	
	comp=Z,59nm,0.8s						
FABU	**Falkenberg**	68.77	335	*i* P	P	21 41 55.2	-1.2
BFSC	**Mount Baldy Ra**	68.77	62	P	P	21 41 57.6	+0.4
	baz=314						
HOMB	**Homborsund**	68.79	338	⇑*i*P	P	21 41 56.1	-0.5
DEL	**Delary**	68.89	334	*i* P	P	21 41 55.8	-1.5
CIS	**Catalina Islan**	68.90	63	P	P	21 41 58.3	+0.5
	baz=314,SNR=5.7						
MSU	**Marysvale**	68.94	56	P	P	21 41 59.9	+1.7
MSU	**Marysvale**	68.94	56	P	P	21 41 59.9	+1.7
TUQ	**Turquoise Moun**	68.96	60	P	P	21 41 59.1	+0.8
	baz=315						
K22A	**Casper**	69.00	49	IAmb	IAmb	21 43 11.4	
	comp=Z,70nm,0.8s						
K22A	**Casper**	69.00	49	P	P	21 41 58.6	+0.1
	baz=316						
P17A	**Butcher Ranch,**	69.05	54	IAmb	IAmb	21 42 01.1	
	comp=Z,100nm,0.9s						
SNART	**Snartemo**	69.05	339	*i* P	P	21 41 57.9	-0.3
SNART	**Snartemo**	69.05	339	⇑*i*P	P	21 41 58.3	+0.1
SZCU	**Shurtz Canyon**	69.08	57	IAmb	IAmb	21 42 01.1	
	comp=Z,48nm,0.8s						
HEC	**Hector,Ludlow**	69.14	61	P	P	21 42 00.1	+0.8
	baz=315						
RSSD	**Black Hills**	69.18	47	P	P	21 42 00.0	+0.4
RSSD				pmax	pmax		
	comp=Z,400nm,1.4s						
RSSD	**Black Hills**	69.18	47	P	P	21 41 60.0	+0.4
RSSD	**Black Hills**	69.18	47	P	P	21 41 59.7	+0.2
	baz=317						
BBRC	**Big Bear Solar**	69.19	62	P	P	21 42 00.5	+0.7
	baz=314,SNR=8.1						
Q16A	**Castle Valley**	69.21	55	IAmb	IAmb	21 42 02.9	
	comp=Z,71nm,1.1s						
P18A	**Preston Nutter**	69.21	54	IAmb	IAmb	21 42 02.2	
	comp=Z,75nm,0.9s						
LRW	**Lerwick**	69.25	344	*e*P	P	21 41 58.9	-0.4
MTPU	**Mount Pierson**	69.27	56	IAmb	IAmb	21 42 03.1	
	comp=Z,88nm,0.7s						
RWWY	**Rawlins**	69.34	50	IAmb	IAmb	21 42 02.2	
	comp=Z,99nm,0.8s						
LCMT	**Little Creek M**	69.40	57	IAmb	IAmb	21 42 03.3	
	comp=Z,58nm,0.8s						
MURC	**Murrieta**	69.49	62	P	P	21 42 01.7	+0.3
	baz=315						
GMRC	**Granite Mounta**	69.57	61	P	P	21 42 02.7	+0.7
	baz=315						
PKCU	**Pink Cliffs**	69.62	57	IAmb	IAmb	21 42 05.3	
	comp=Z,98nm,0.9s						
KNB	**Kanab**	69.63	57	IAmb	IAmb	21 42 05.0	
	comp=Z,100nm,1.1s						
BSD	**Bornholm Skovb**	69.73	333	*e*P	P	21 42 01.1	-1.2
BSD	**Bornholm Skovb**	69.73	333	*i* P	P	21 42 01.6	-0.7
BSD				IAmb	IAmb	21 42 02.1	
	comp=Z,69nm,0.6s						
AGMN	**Agassiz Nation**	69.79	39	IAmb	IAmb	21 42 03.4	
	comp=Z,71nm,0.9s						
AGMN	**Agassiz Nation**	69.79	39	P	P	21 42 02.5	-0.4
	baz=321,SNR=19						
PFO	**Pinyon Flats O**	69.92	62	P	P	21 42 04.2	+0.2
	comp=Z,28nm,0.9s,baz=323,slow=5.7,SNR=26						
PFO	**Pinyon Flats O**	69.92	62	P	P	21 42 04.8	+0.7
PFO	**Pinyon Flats O**	69.92	62	P	P	21 42 04.7	+0.6
	baz=315,SNR=20						
BELC	**Belle Mtn. Jos**	69.92	61	P	P	21 42 04.2	+0.1
	baz=315						
O20A	**White River Ci**	69.92	52	IAmb	IAmb	21 42 05.8	
	comp=Z,143nm,1.2s						
O20A	**White River Ci**	69.92	52	P	P	21 42 04.7	+0.6
	baz=316,SNR=34						
TPFO	**Pinon Flats**	69.93	62	P	P	21 42 04.6	+0.5
	baz=315,SNR=22						
COP	**Copenhagen**	69.98	335	*i* P	P	21 42 03.5	-0.3
COP				IAmb	IAmb	21 42 04.0	
	comp=Z,474nm,0.7s						
109C	**Camp Elliot, M**	70.04	63	P	P	21 42 05.2	+0.6
	baz=315						
NEE2	**Needles Airpor**	70.19	60	P	P	21 42 06.2	+0.7
	baz=315						
MUD	**Monsted U'grnd**	70.22	337	*i* P	P	21 42 05.0	-0.2
MUD				IAmb	IAmb	21 42 05.6	
	comp=Z,31nm,0.6s						
IRM	**Iron Mountain**	70.31	61	P	P	21 42 07.1	+0.8
	baz=315,SNR=78						
U15A	**North Rim**	70.35	57	IAmb	IAmb	21 42 09.4	
	comp=Z,101nm,0.8s						
MONP2	**Monument Peak**	70.45	62	P	P	21 42 07.8	+0.4
	baz=315,SNR=16						
BC3	**Big Chuckawall**	70.48	61	P	P	21 42 08.0	+0.6
	baz=315,SNR=40						
BEL	**Belsk**	70.51	328	*e*P	P	21 42 07.6	+0.5
SORM	**Soroca**	70.53	321	⇓P	P	21 42 06.3	-1.0
GKP	**Gorka Klasztor**	70.55	331	*e*P	P	21 42 07.0	-0.2
GKP	**Gorka Klasztor**	70.55	331	*e*P	P	21 42 06.4	-0.8
IVI	**Ivigtut**	70.56	8	*i* P	P	21 42 04.4	-2.8
IVI				IAmb	IAmb	21 42 07.1	
	comp=Z,39nm,0.9s						
IVI	**Ivigtut**	70.56	8	P	P	21 42 06.3	-0.8
IVI				IAmb	IAmb	21 42 08.2	
	comp=Z,123nm,1.2s						
KTUT	**Trabzon**	70.57	310	⇑P	P	21 42 07.9	+0.2
N23A	**Red Feather La**	70.58	50	P	P	21 42 08.7	+0.7
	baz=317,SNR=16						
RGN	**Rugen**	70.70	333	*e*P	P	21 42 08.5	+0.4
	comp=Z,158nm,1.1s,baz=29,slow=5.7						
SWSC	**Sam W. Stewart**	70.78	62	P	P	21 42 09.6	+0.6
	baz=315,SNR=13						
PDMCI	**Parker Dam,Lak**	70.80	60	P	P	21 42 10.2	+1.1
	baz=316,SNR=38						
IKP	**In-Ko-Pah, Jac**	70.80	62	P	P	21 42 10.0	+0.7
	baz=315,SNR=18						
LVV	**L'vov**	70.94	325	*e*P	P	21 42 09.4	-0.3
MSVF	**Nonsavu**	71.01	149	*i* P	P	21 42 10.5	0.0
MSVF				pmax	pmax		
	comp=Z,17nm,0.9s						
MSVF	**Nonsavu**	71.01	149	P	P	21 42 12.6	+2.0
MSVF	**Nonsavu**	71.01	149	P	P	21 42 12.3	+1.8
PURM	**Purcari**	71.13	319	⇓P	P	21 42 10.6	-0.3
GURO	**Guroymak-BITLI**	71.15	307	P	P	21 42 13.1	+1.8
GURO				IAmb	IAmb	21 42 13.7	
	comp=Z,50nm,0.8s						
KIS	**Kishinev**	71.22	320	⇑*i*P	P	21 42 11.0	-0.4
	comp=Z,100nm,1.2s						
KIS	**Kishinev**	71.22	320	⇓P	P	21 42 10.9	-0.5
KIS	**Kishinev**	71.22	320	*c i*P	P	21 42 11.0	-0.4
KIS				pmax	pmax		
	comp=Z,100nm,1.2s						
GLA	**Glamis**	71.28	61	IAmb	IAmb	21 42 14.2	
	comp=Z,95nm,0.9s						
GLA	**Glamis**	71.28	61	P	P	21 42 12.9	+0.8
	baz=316,SNR=33						
MILM	**Milestii Mici**	71.28	320	⇑P	P	21 42 11.0	-0.7
BIGH	**Upper Bighouse**	71.29	344	*e*P	P	21 42 11.4	-0.1
BIGH				IAmb	IAmb	21 42 12.4	
	comp=Z,45nm,0.8s						
SMCO	**Snowmass**	71.29	52	IAmb	IAmb	21 42 14.3	
	comp=Z,68nm,0.7s						
SUSD	**Miller**	71.36	44	P	P	21 42 12.6	+0.3
	baz=320,SNR=21						
F33A	**5 Mile Ranch,**	71.50	41	IAmb	IAmb	21 42 14.0	
	comp=Z,115nm,0.9s						
WUAZ	**Wupatki**	71.52	57	IAmb	IAmb	21 42 16.1	
	comp=Z,70nm,0.9s						
WUAZ	**Wupatki**	71.52	57	P	P	21 42 15.1	+1.5
	baz=316,SNR=41						
ISCO	**Idaho Springs**	71.55	51	IAmb	IAmb	21 44 45.4	
	comp=Z,54nm,0.8s						
ISCO	**Idaho Springs**	71.55	51	P	P	21 42 14.8	+1.0
	baz=318,SNR=25						
IAS	**Iasi**	71.60	321	⇓P	P	21 42 13.4	-0.2
KWP	**Kalwaria Pacla**	71.60	326	*e*P	P	21 42 13.9	+0.3
AFI	**Afiamalu**	71.66	138	P	P	21 42 14.4	0.0
	comp=Z,15nm,0.4s,baz=327,slow=18,SNR=2.4						
BANOM	**Banah**	71.67	288	*i* P	P	21 42 14.5	+0.1
	SNR=9.2						

BANOM	**Banah**	71.67	288	P	P	21 42 14.5	+0.1
SHME	**Shamm**	71.68	289	P	P	21 42 14.2	-0.2
SHME	**Shamm**	71.68	289	P	P	21 42 14.3	-0.2
SIRT	**Sirnak**	71.69	306	IAmb	IAmb	21 42 22.6	
	comp=Z,134nm,0.9s						
DZM	**Mont Dzumac**	71.81	161	P	P	21 42 16.0	+0.9
	comp=Z,16nm,0.8s,baz=150,slow=18,SNR=12						
DZM	**Mont Dzumac**	71.81	161	P	P	21 42 17.5	+2.3
LEOM	**Leova**	71.88	320	⇓P	P	21 42 15.2	0.0
YATNC	**Mamie plateau,**	71.90	161	P	P	21 42 18.1	+2.5
MVCO	**Mesa Verde**	71.90	54	IAmb	IAmb	21 42 17.9	
	comp=Z,116nm,0.8s						
MVCO	**Mesa Verde**	71.90	54	P	P	21 42 16.8	+0.9
	baz=317,SNR=53						
VASR	**Vaslui**	71.94	321	⇑P	P	21 42 16.1	+0.5
WSAR	**Wadi Sarin**	72.05	285	P	P	21 42 17.4	+0.7
BSEG	**Bad Segeberg**	72.11	335	*e*P	P	21 42 16.4	-0.1
	comp=Z,78nm,0.9s,baz=29,slow=5.7						
MASF	**Masafi**	72.15	288	P	P	21 42 16.9	-0.4
MSFE	**Esma-Masafi**	72.16	288	P	P	21 42 17.0	-0.3
BIDO	**Bidbid**	72.18	285	P	P	21 42 18.1	+0.7
AS31	**Alice Springs**	72.19	193	P	P	21 42 18.4	+1.1
ASAR	**Alice Springs**	72.20	193	P	P	21 42 18.1	+0.8
	comp=Z,26nm,0.5s,baz=3.1,slow=5.3,SNR=388						
ASAR				pP	pP	21 43 53.9	+0.6
	comp=Z,3.9nm,0.9s,baz=13,slow=6.2,SNR=3.8						
ASAR				S	S	21 51 03.3	+0.4
	comp=Z,0.3nm,0.8s,baz=185,slow=37,SNR=1.8						
ASAR				PKPPKP	P'P'df	22 09 55.1	-0.5
	comp=Z,1.2nm,0.8s,baz=186,slow=3.1,SNR=8.0						
ASAR	**Alice Springs**	72.20	193	P	P	21 42 18.3	+1.0
OJC	**Ojcow**	72.20	327	*e*P	P	21 42 17.3	+0.1
OJC	**Ojcow**	72.20	327	P	P	21 42 17.2	+0.1
OJC				pmax	pmax		
	comp=Z,112nm,1.1s						
OJC	**Ojcow**	72.20	327	P	P	21 42 17.2	+0.1
OJC				IAmb	IAmb	21 42 18.3	
	comp=Z,112nm,1.1s						
BUR08	**Bucovina Ar. S**	72.22	323	IAmb	IAmb	21 42 18.4	
	comp=Z,70nm,0.7s						
BURAR	**Bucovina Array**	72.24	323	⇑P	P	21 42 17.3	-0.2
BURAR	**Bucovina Array**	72.24	323	P	P	21 42 18.0	+0.5
BURAR				IAmb	IAmb	21 42 18.8	
	comp=Z,96nm,0.7s						
X16A	**Lo Mia Camp, P**	72.27	58	IAmb	IAmb	21 42 20.6	
	comp=Z,97nm,0.8s						
WBK	**Wadi Bani Khal**	72.28	284	P	P	21 42 19.4	+1.3
BIR	**Birlad**	72.30	321	⇓P	P	21 42 18.0	+0.3
JLN	**Jalan Bani Buh**	72.31	284	P	P	21 42 19.1	+0.9
	SNR=7.8						
STHS	**Stebnicka Huta**	72.33	326	*e*P	P	21 42 18.1	+0.2
STHS	**Stebnicka Huta**	72.33	326	*e*P	P	21 42 18.1	+0.2
RUE	**Ruedersdorf**	72.33	332	*e*P	P	21 42 17.1	-0.7
RUE	**Ruedersdorf**	72.33	332	*e*P	P	21 42 17.6	-0.1
	comp=Z,133nm,0.9s,baz=29,slow=5.7						
KOLS	**Kolonicke sedl**	72.33	325	*e*P	P	21 42 18.3	+0.4
KOLS				pmax	pmax		
	comp=Z,76nm,1.0s						
KOLS	**Kolonicke sedl**	72.33	325	*e*P	P	21 42 18.3	+0.4
Q24A	**Divide**	72.41	51	P	P	21 42 19.4	+0.4
	baz=318						
S22A	**4UR Ranch, Cre**	72.42	53	P	P	21 42 19.9	+1.0
	baz=318,SNR=51						
UOSS	**Minazif**	72.42	288	*i* P	P	21 42 18.5	-0.2
	SNR=9.1						
UOSS	**Minazif**	72.42	288	P	P	21 42 18.3	-0.5
UOSS	**Minazif**	72.42	288	P	P	21 42 18.4	-0.4
VLDR	**Vladesti**	72.44	320	⇑P	P	21 42 18.2	-0.4
KAC	**Achnashellach**	72.48	345	*e*P	P	21 42 18.3	-0.2
VARL	**Varlezi**	72.50	320	⇑P	P	21 42 19.5	+0.7
TESR	**Tescani**	72.52	321	⇑P	P	21 42 18.9	-0.2
OGNE	**Ogallala**	72.53	48	P	P	21 42 19.5	+0.2
	baz=319,SNR=21						
HATD	**Hatta, Dubai**	72.55	288	*i* P	P	21 42 19.9	+0.3
	SNR=9.8						
HATD	**Hatta, Dubai**	72.55	288	P	P	21 42 20.0	+0.5
GHRR		72.56	321	⇓P	P	21 42 19.7	+0.5
UZH	**Uzhgorod**	72.57	325	*e*P	P	21 42 18.0	-1.2
UZH				*e*		21 42 38.0	
UZH				*e**PP	pP	21 43 59.8	+3.8
SCTR	**Scanteiesti**	72.61	320	⇑P	P	21 42 20.3	+0.8
TLCR		72.64	319	⇓P	P	21 42 19.9	+0.2
TATR	**Tatarca**	72.65	320	⇑P	P	21 42 20.0	+0.3
GIUM	**Giurgiulesti**	72.67	320	⇑P	P	21 42 20.0	+0.2
HOQ	**Hoqain**	72.67	286	P	P	21 42 20.6	+0.3
CRVS	**Cervenica-Dubn**	72.67	326	*e*P	P	21 42 20.2	+0.4
CRVS				pmax	pmax		
	comp=Z,89nm,1.3s						
CRVS	**Cervenica-Dubn**	72.67	326	*e*P	P	21 42 20.2	+0.4
NIE	**Niedzica**	72.68	327	*e*P	P	21 42 21.1	+1.1
F36A	**Milaca**	72.69	40	IAmb	IAmb	21 42 19.9	
	comp=Z,39nm,0.6s						
KPL	**Plockton**	72.69	345	*e*P	P	21 42 19.4	-0.3
KPL				IAmb	IAmb	21 42 20.3	
	comp=Z,109nm,0.7s						
ASHO	**Ashiyiah**	72.70	288	*i* P	P	21 42 20.7	+0.2
	SNR=7.2						
ASHO	**Ashiyiah**	72.70	288	P	P	21 42 20.8	+0.4
BZK	**Bozkurt**	72.73	314	⇓P	P	21 42 21.7	+1.4
MARD	**Mardin**	72.73	307	IAmb	IAmb	21 42 22.7	
	comp=Z,108nm,0.8s						
W18A	**Petrified Fore**	72.73	57	P	P	21 42 22.0	+1.3
	baz=317,SNR=6.8						
SLCR	**Slobozia Conac**	72.78	320	⇑P	P	21 42 20.9	+0.4
SOHO	**SOHO**	72.78	287	*i* P	P	21 42 21.0	+0.2
	SNR=7.1						
SOHO	**SOHO**	72.78	287	P	P	21 42 21.1	+0.2
IZVR	**Izvoarele**	72.81	320	⇓P	P	21 42 21.0	+0.4
SCHL	**Schela**	72.82	320	⇑P	P	21 42 20.7	0.0
BMR	**Baia Mare**	72.88	324	⇓P	P	21 42 21.7	+0.7
TRPA	**Tarpa**	72.89	325	⇓P	P	21 42 21.3	+0.1
TRPA	**Tarpa**	72.89	325	*e*P	P	21 42 21.2	+0.1
TRPA	**Tarpa**	72.89	325	*e*P	P	21 42 21.2	+0.1
KSP	**Ksiaz**	72.91	330	*e*P	P	21 42 21.3	+0.1
JURR	**Jurilovca**	72.94	319	⇓P	P	21 42 21.1	-0.4
CFR	**Carcaliu**	72.94	320	⇑P	P	21 42 21.0	-0.4
ODBI	**Odobesti**	72.94	321	⇓P	P	21 42 22.6	+1.1
FAQ	**Al Faqa, Dubai**	72.95	288	*i* P	P	21 42 21.4	-0.5
	SNR=7.0						
FAQ	**Al Faqa, Dubai**	72.95	288	P	P	21 42 21.2	-0.6
MBWA	**Marble Bar**	72.96	207	P	P	21 42 20.2	-1.6
MBWA	**Marble Bar**	72.96	207	P	P	21 42 21.8	+0.1
MBWA	**Marble Bar**	72.96	207	P	P	21 42 22.0	+0.2
ECSD	**EROS Data Cent**	72.99	43	P	P	21 42 21.8	0.0
	baz=321,SNR=93						
VRI	**Vrincioaia**	73.00	321	⇑P	P	21 42 22.5	+0.6
JMDO	**Jabal Madar**	73.01	285	P	P	21 42 22.4	+0.1
	SNR=22						
ARCR	**ARCALIA**	73.01	323	⇑P	P	21 42 22.0	+0.2
EIDS	**Eidsvold**	73.02	176	P	P	21 42 23.4	+1.4
X18A	**Snowflake**	73.04	57	IAmb	IAmb	21 42 24.8	
	comp=Z,57nm,0.8s						
PLOR	**Plostina**	73.05	321	⇑P	P	21 42 22.6	+0.4
TPGR	**Topolog**	73.07	319	⇑P	P	21 42 21.8	-0.4
OKC	**Ostrava-Krasne**	73.11	328	*e*P	P	21 42 22.8	+0.5
OKC	**Ostrava-Krasne**	73.11	328	*e*P	P	21 42 22.8	+0.5
SDCO	**Great Sand Dun**	73.12	52	P	P	21 42 23.8	+0.7
	baz=318,SNR=33						
OSTC	**Ostas**	73.17	330	*e*P	P	21 42 22.5	-0.2
CHVC	**Chvalec**	73.20	330	*e*P	P	21 42 22.7	-0.2
ASUD	**Al Ashush, Dub**	73.20	288	P	P	21 42 23.3	0.0
ASUD	**Al Ashush, Dub**	73.20	288	P	P	21 42 23.3	0.0
LANS	**Liptovska Anna**	73.21	327	*e*P	P	21 42 24.2	+1.2
LANS				pmax	pmax		
	comp=Z,57nm,0.9s						
LANS	**Liptovska Anna**	73.21	327	*e*P	P	21 42 24.2	+1.2
OZUR		73.22	322	⇓P	P	21 42 24.1	+1.0
COVR	**Voineasa-Covas**	73.24	321	⇑P	P	21 42 23.7	+0.5
FLTG	**Flechtingen**	73.24	333	*e*P	P	21 42 22.4	-0.6
	comp=Z,112nm,0.8s,baz=29,slow=5.7						
214A	**Organ Pipe Nat**	73.25	61	IAmb	IAmb	21 42 25.6	
	comp=Z,112nm,1.2s						
214A	**Organ Pipe Nat**	73.25	61	P	P	21 42 24.4	+0.9
	baz=316,SNR=33						
INVG	**Invergeldie, C**	73.26	344	*e*P	P	21 42 22.5	-0.6
INVG				IAmb	IAmb	21 42 23.3	
	comp=Z,44nm,1.0s						
BISRR	**Bisoca**	73.26	321	⇓P	P	21 42 24.5	+1.1
GRER		73.28	320	⇓P	P	21 42 24.9	+1.5
UPC	**Upice**	73.28	330	*e*P	P	21 42 23.2	-0.2
UPC	**Upice**	73.28	330	*e*P	P	21 42 23.2	-0.2
DPC	**Dobruska-Polom**	73.31	330	*e*P	P	21 42 23.6	0.0
DPC	**Dobruska-Polom**	73.31	330	*e*P	P	21 42 23.6	0.0

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PSA00 Pilbara Seismi   73.32 206  P      P     21 42 23.8  0.0
BSY   Bisya            73.33 285  P      P     21 42 24.7 +0.6
      SNR=11
ALNE  Al Ain           73.34 287 i P     P     21 42 23.9 -0.2
      SNR=10
ALNE  Al Ain           73.34 287  P      P     21 42 24.3 +0.1
      SNR=10
ARQ   Araqi            73.35 286  P      P     21 42 24.1 -0.1
MORC  Moravsky Berou   73.37 328 ⇑P      P     21 42 24.1 +0.1
MORC  Moravsky Berou   73.37 328 eP      P     21 42 23.9  0.0
MORC  Moravsky Berou   73.37 328  IAmb   IAmb  21 42 25.3
      comp=Z,78nm,0.8s
KECS  Kecovo           73.38 326 eP      P     21 42 24.3 +0.4
KECS                              pmax   pmax
      comp=Z,23nm,1.0s
KECS  Kecovo           73.38 326 eP      P     21 42 24.3 +0.4
TIRR  Tirgusor         73.39 319 ⇑P      P     21 42 24.5 +0.5
TIRR  Tirgusor         73.39 319  IAmb   IAmb  21 42 25.1
      comp=Z,106nm,0.9s
KRLC  Kraliky          73.39 329 eP      P     21 42 24.0  0.0
KRLC  Kraliky          73.39 329 eP      P     21 42 24.0  0.0
TGMR  Targu Mures      73.39 323 ⇓P      P     21 42 25.3 +1.2
HARR  Harsova          73.42 319 ⇓P      P     21 42 23.7 -0.4
NRDL  Niedersach Rie   73.44 334 eP      P     21 42 24.2 +0.1
      comp=Z,61nm,1.0s,baz=29,slow=5.7
RETH  Rethem/Aller,    73.44 335 eP      P     21 42 24.0 -0.1
      comp=Z,137nm,1.1s,baz=29,slow=5.7
ESY   Stoneypath       73.46 343 eP      P     21 42 23.6 -0.7
AJN   Ajban            73.47 288  P      P     21 42 24.5 -0.3
TLBR  Topalu           73.48 319 ⇑P      P     21 42 24.8 +0.2
DOPR  Dopca            73.49 322 ⇓P      P     21 42 25.5 +0.9
SPMN  Marine on St.    73.50  40  P      P     21 42 24.2 -0.5
      baz=323
MESR  Meseseni         73.52 324 ⇓P      P     21 42 25.2 +0.4
NEHR  Nehoiu           73.54 321 ⇑P      P     21 42 25.4 +0.5
CLL   Collm            73.59 332 i P     P     21 42 24.6 -0.4
CLL                              e*PP    pP    21 44 06.0 +3.8
CLL                               pmax   pmax
      comp=Z,155nm,0.9s
CLL   Collm            73.59 332 i P     P     21 42 24.6 -0.4
      comp=Z,155nm,0.9s
CLL                              e(PcP)  PcP   21 42 36.0 -2.3
CLL                              epP     pP    21 44 06.0 +3.8
CLL                              esP     sP    21 44 51.0 +1.5
CLL   Collm            73.59 332 eP      P     21 42 24.5 -0.6
      comp=Z,155nm,0.8s,baz=29,slow=5.7
EFOR  EFORIE           73.59 319 ⇓P      P     21 42 25.8 +0.6
ASSE  Asse, Remlinge   73.59 334 eP      P     21 42 24.7 -0.3
      comp=Z,41nm,1.0s,baz=29,slow=5.7
CBBR  Cluj-Babes-Bol   73.59 323 ⇑P      P     21 42 25.8 +0.6
IZAB  Izabela          73.60 327 eP      P     21 42 25.8 +0.6
MFTR  Murfatlar        73.60 319 ⇓P      P     21 42 25.1 -0.2
CJR   Cluj-Napoca      73.62 323 ⇑P      P     21 42 26.4 +1.0
MLR   Muntele Rosu     73.63 321 ⇓P      P     21 42 26.0 +0.4
MLR   Muntele Rosu     73.63 321  P      P     21 42 25.5 -0.1
      comp=Z,36nm,0.6s,baz=211,slow=1.1,SNR=57
MLR   Muntele Rosu     73.63 321  IAmb   IAmb  21 42 27.6
      comp=Z,48nm,0.8s
CVDA  Cernavoda        73.65 319 ⇑P      P     21 42 25.8 +0.2
BRG   Berggiesshubel   73.66 331 eP      P     21 42 24.9 -0.6
      comp=Z,40nm,1.0s,baz=29,slow=5.7
BRG   Berggiesshubel   73.66 331 i P     P     21 42 25.3 -0.2
BRG                               Amp          21 42 26.3
      comp=Z,31nm,0.9s
BRG   Berggiesshubel   73.66 331  P      PcP   21 42 38.6  0.0
BRG                               Amp          21 42 40.5
      comp=Z,6.7nm,0.8s
LAWE  Loch Awe, Argy   73.67 344 eP      P     21 42 24.5 -0.9
LAWE                              IAmb   IAmb  21 42 25.8
      comp=Z,63nm,0.8s
ISR   Istrita          73.68 320 ⇑P      P     21 42 26.8 +1.0
KSCO  Kaye Shedlock'   73.68  50  P      P     21 42 26.1 +0.1
      baz=319
AMRR  Amara            73.74 320 ⇓P      P     21 42 27.0 +1.0
LTVH  Ltavrtes, Hu     73.74 325 ⇓P      P     21 42 26.1 +0.1
LTVH  Ltavrtes, Hu     73.74 325 eP      P     21 42 25.6 -0.4
LTVH  Ltavrtes, Hu     73.74 325 eP      P     21 42 26.2 +0.1
SCHQ  Schefferville    73.75  20  P      P     21 42 25.5 -0.4
      comp=Z,26nm,0.5s,baz=338,slow=5.4,SNR=80
SCHQ  Schefferville    73.75  20  P      P     21 42 25.7 -0.3
SCHQ                              IAmb   IAmb  21 42 26.4
      comp=Z,95nm,1.2s
PVCC  Panska Ves       73.75 331 eP      P     21 42 26.0  0.0
PVCC  Panska Ves       73.75 331 eP      P     21 42 26.0  0.0
MDB   Medias           73.76 322 ⇓P      P     21 42 27.8 +1.6
FBE   Freiberg         73.81 332 eP      P     21 42 26.5 +0.2
      comp=Z,90nm,0.8s,baz=29,slow=5.7
MANR  Mangalia         73.81 318 ⇑P      P     21 42 26.8 +0.3
DRGR                   73.91 324 ⇓P      P     21 42 26.6 -0.5
ICOR  Ion Corvin       73.92 319 ⇓P      P     21 42 27.3 +0.2
PGBU  Glenifferbraes   73.92 344 eP      P     21 42 26.8 -0.1
PGBU                              IAmb   IAmb  21 42 27.6
      comp=Z,150nm,1.1s
CLZ   Clausthal        73.93 334 eP      P     21 42 27.2 +0.1
      comp=Z,150nm,1.2s,baz=29,slow=5.7
SECR                   73.94 321 ⇑P      P     21 42 27.3  0.0
VYHS  Vyhne            73.98 327 eP      P     21 42 28.0 +0.6
VYHS                              pmax   pmax
      comp=Z,84nm,1.3s
VYHS  Vyhne            73.98 327 eP      P     21 42 28.0 +0.6
BORR  Bors             74.03 324 ⇑P      P     21 42 28.3 +0.6
VOIR                   74.05 322 ⇓P      P     21 42 28.5 +0.5
NEUB  Neuenburg        74.06 333 eP      P     21 42 27.4 -0.4
      comp=Z,135nm,1.1s,baz=29,slow=5.7
RMQ   Roma             74.06 178  P      P     21 42 29.8 +1.9
      comp=Z,29nm,0.6s
BGNE  Belgrade         74.07  45  P      P     21 42 28.2 +0.1
      baz=321,SNR=15
LEHL  Lehliu           74.07 320 ⇑P      P     21 42 27.7 -0.2
PSZ   Piszkesteto      74.07 326 ⇓P      P     21 42 28.5 +0.5
PSZ   Piszkesteto      74.07 326 eP      P     21 42 28.3 +0.3
PSZ   Piszkesteto      74.07 326 eP      P     21 42 28.2 +0.2
PSZ   Piszkesteto      74.07 326  IAmb   IAmb  21 42 29.6
      comp=Z,57nm,0.9s
JAVC  Velka Javorina   74.10 328 eP      P     21 42 29.0 +0.9
VRAC  Vranov           74.10 329 ⇑P      P     21 42 28.3 +0.2
VRAC  Vranov           74.10 329  P      P     21 42 28.1  0.0
      comp=Z,34nm,0.6s,baz=36,slow=5.3,SNR=61
VRAC  Vranov           74.10 329 eP      P     21 42 28.1  0.0
EKA   Eskdalemuir Ar   74.12 343  P      P     21 42 27.6 -0.4
      comp=Z,26nm,0.6s,baz=25,slow=5.3,SNR=74
RASA  Rasa             74.13 320 ⇓P      P     21 42 28.3  0.0
ESK   Eskdalemuir      74.14 343 eP      P     21 42 27.9 -0.2
ESK                               IAmb   IAmb  21 42 28.7
      comp=Z,45nm,0.8s
ESK   Eskdalemuir      74.14 343  P      P     21 42 28.3 +0.2
ESK                               pmax   pmax
      comp=Z,45nm,0.8s
ESK   Eskdalemuir      74.14 343  P      P     21 42 28.3 +0.2
SULR                   74.15 320 ⇑P      P     21 42 29.0 +0.6
T25A  Trinidad         74.16  52  IAmb   IAmb  21 42 30.5
      comp=Z,94nm,0.9s
T25A  Trinidad         74.16  52  P      P     21 42 29.3 +0.4
      baz=319,SNR=45
QLP   Quilpie          74.18 183  P      P     21 42 30.0 +1.4
TUC   Tucson           74.18  59  P      P     21 42 30.1 +1.2
TUC                               pmax   pmax
      comp=Z,54nm,1.0s
TUC   Tucson           74.18  59  P      P     21 42 30.1 +1.2
TUC   Tucson           74.18  59  P      P     21 42 29.5 +0.6
      baz=317
PRA   Prague           74.19 330 eP      P     21 42 28.6 +0.1
PRA   Prague           74.19 330 eP      P     21 42 28.6 +0.1
PRU   Pruhonice        74.22 330 eP      P     21 42 28.3 -0.4
PRU   Pruhonice        74.22 330 eP      P     21 42 28.3 -0.4
IBBN  Ibbenburen       74.28 335 eP      P     21 42 28.6 -0.4
      comp=Z,114nm,0.9s,baz=29,slow=5.7
ARR   Arges            74.28 322 ⇓P      P     21 42 30.3 +1.1
GTTG  Gottingen        74.31 334 eP      P     21 42 29.1 -0.1
      comp=Z,99nm,1.2s,baz=29,slow=5.7
KRUC  Moravsky         74.38 329 eP      P     21 42 29.7 +0.1
UMR   Umm Al-Rimmam    74.42 297 eP      P     21 42 29.6 -0.5
BSZH  Besenyszg        74.44 326 ⇑P      P     21 42 31.2 +1.2
BSZH  Besenyszg        74.44 326 eP      P     21 42 30.2 +0.2
BSZH  Besenyszg        74.44 326 eP      P     21 42 30.8 +0.9
MIB   Mutribah         74.46 297 eP      P     21 42 29.8 -0.6
TREC  Trest            74.50 329 eP      P     21 42 30.4 +0.1
TREC  Trest            74.50 329 eP      P     21 42 30.4 +0.1
WRKA  Warakurna        74.52 198  P      P     21 42 31.3 +0.7
TANN  Tannenbergstha   74.53 332 eP      P     21 42 30.1 -0.4
      comp=Z,28nm,1.0s,baz=29,slow=5.7
NEWG  New Galloway     74.53 343 eP      P     21 42 29.9 -0.5
NEWG                              IAmb   IAmb  21 42 30.6
      comp=Z,74nm,1.3s
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WERD  Werda            74.55 332 eP      P     21 42 30.4 -0.3
      comp=Z,53nm,1.1s,baz=29,slow=5.7
STFAR Stefanesti-Arg   74.55 321 ⇑P      P     21 42 31.5 +0.8
G40A  Rib Lake         74.56  38  P      P     21 42 30.7  0.0
G40A                              IAmb   IAmb  21 42 31.6
      comp=Z,92nm,0.9s
PLN   Plauen           74.57 332 eP      P     21 42 30.3 -0.4
      comp=Z,50nm,1.1s,baz=29,slow=5.7
DEV   Deva             74.57 323 ⇓P      P     21 42 31.6 +0.8
MOX   Moxa             74.60 332 eP      P     21 42 30.5 -0.4
      comp=Z,73nm,1.2s,baz=29,slow=5.7
BR131 Keskin Array S   74.61 313  P      P     21 42 31.9 +0.6
      SNR=20
BRTR  Keskin Array B   74.61 313  P      P     21 42 31.6 +0.3
      comp=Z,22nm,0.8s,baz=72,slow=3.9,SNR=72
BRTR  Keskin Array B   74.61 313 i P     P     21 42 32.0 +0.6
BRTR                              pmax   pmax
      comp=Z,23nm,0.8s
GUNZ  Gunzen           74.62 332 eP      P     21 42 30.8 -0.2
      comp=Z,50nm,0.8s,baz=29,slow=5.7
SGRR  Singureni        74.64 320 ⇑P      P     21 42 30.7 -0.5
MODS  Modra-Piesok     74.65 328 eP      P     21 42 31.2  0.0
MODS                              pmax   pmax
      comp=Z,76nm,1.1s
MODS  Modra-Piesok     74.65 328 eP      P     21 42 31.2  0.0
WERN  Wernitzgruen     74.67 332 eP      P     21 42 31.2 -0.1
      comp=Z,62nm,0.9s,baz=29,slow=5.7
UMZA  Um Al Zommool    74.67 287  P      P     21 42 31.2 -0.5
ANMO  Albuquerque      74.68  55  P      P     21 42 32.9 +1.0
      comp=Z,20nm,0.6s,baz=318,slow=6.6,SNR=54
ANMO  Albuquerque      74.68  55  P      P     21 42 33.3 +1.4
ANMO                              IAmb   IAmb  21 42 34.2
      comp=Z,88nm,1.4s
ANMO  Albuquerque      74.68  55  P      P     21 42 32.9 +1.0
      baz=318
NKC   Novy Kostel      74.69 332 eP      P     21 42 31.3 -0.1
NKC   Novy Kostel      74.69 332 eP      P     21 42 31.3 -0.1
KBD   Kabd             74.70 297 eP      P     21 42 31.2 -0.6
MZWR  Madinat Zayed    74.75 289  P      P     21 42 31.4 -0.7
SRO   Srobarova        74.75 327 eP      P     21 42 32.9 +1.2
SRO                               pmax   pmax
      comp=Z,124nm,1.5s
SRO   Srobarova        74.75 327 eP      P     21 42 32.9 +1.2
SIRR  Siria            74.76 324 ⇑P      P     21 42 32.2 +0.4
BUD   Budapest         74.76 326 eP      P     21 42 32.1 +0.4
BUD   Budapest         74.76 326 eP      P     21 42 32.2 +0.4
KESW  Keswick, Cumbr   74.81 342 eP      P     21 42 32.0 +0.1
KESW                              IAmb   IAmb  21 42 32.7
      comp=Z,168nm,1.1s
GAL1  Galloway         74.86 343 eP      P     21 42 31.3 -0.9
GAL1                              IAmb   IAmb  21 42 32.6
      comp=Z,53nm,0.8s
ZST   Bratislava       74.86 328 eP      P     21 42 33.4 +1.0
ZST                               pmax   pmax
      comp=Z,158nm,1.1s
ZST   Bratislava       74.86 328 eP      P     21 42 33.4 +1.0
QRN   Al-Qurain        74.88 296 eP      P     21 42 32.0 -0.7
RST   Umm Al-Ruwaisa   74.88 297 eP      P     21 42 32.0 -0.8
CLGH  Cloghs, Cushen   74.92 344 eP      P     21 42 32.4 -0.1
CLGH                              IAmb   IAmb  21 42 33.1
      comp=Z,67nm,0.7s
ANTO  Ankara           74.92 313  P      P     21 42 33.6 +0.6
ANTO                              pmax   pmax
      comp=Z,71nm,0.7s
ANTO  Ankara           74.92 313  P      P     21 42 33.6 +0.6
ANTO                              IAmb   IAmb  21 42 34.7
      comp=Z,71nm,0.7s
RAZG  Razgrad          74.93 320 ⇑P      P     21 42 33.2 +0.4
UBBA  Unterbreizbach   74.94 333 eP      P     21 42 32.6  0.0
      comp=Z,32nm,0.8s,baz=29,slow=5.7
E43A  Lone Tree Farm   74.95  35  IAmb   IAmb  21 42 33.4
      comp=Z,122nm,1.1s
BR231 Keskin MP Arra   74.95 313  IAmb   IAmb  21 42 34.9
      comp=Z,67nm,0.8s
MANZ  Manzenberg       75.02 332 eP      P     21 42 33.3  0.0
      comp=Z,11nm,1.0s,baz=29,slow=5.7
GZR   Gura Zlata       75.03 323 ⇑P      P     21 42 33.2 -0.2
COPA  Copaceanca       75.03 321 ⇑P      P     21 42 32.9 -0.5
AMBH  Ambrzfalva       75.05 325 ⇓P      P     21 42 33.5 +0.1
AMBH  Ambrzfalva       75.05 325 eP      P     21 42 33.3 -0.1
AMBH  Ambrzfalva       75.05 325 eP      P     21 42 33.4  0.0
Y22D  IRIS PASSCAL I   75.07  56  P      P     21 42 35.5 +1.4
      baz=318
SHMA  Al-Shehemyia     75.09 292  P      P     21 42 33.3 -0.7
HPK   Haverah Park     75.09 341 eP      P     21 42 33.2 -0.3
HPK                               IAmb   IAmb  21 42 34.3
      comp=Z,134nm,0.6s
ROTZ  Rotzenmuhle      75.18 332 eP      P     21 42 34.1  0.0
      comp=Z,14nm,1.0s,baz=29,slow=5.7
BUG   Bochum--Univer   75.19 335 eP      P     21 42 34.0 -0.1
      comp=Z,101nm,1.1s,baz=29,slow=5.7
GHWR  Ruwais           75.24 289  P      P     21 42 34.6 -0.3
KHC   Kasperske Hory   75.28 330c iP     P     21 42 34.7 -0.1
KHC                               pmax   pmax
      comp=Z,167nm,0.9s
KHC   Kasperske Hory   75.28 330 eP      P     21 42 34.9 +0.1
KHC                              ex      x     21 43 13.0
KHC   Kasperske Hory   75.28 330  IAmb   IAmb  21 42 36.1
      comp=Z,79nm,0.8s
CBKS  Cedar Bluff      75.29  48  IAmb   IAmb  21 42 35.4
      comp=Z,87nm,0.7s
CBKS  Cedar Bluff      75.29  48  P      P     21 42 34.6 -0.4
      baz=320,SNR=17
CKRC  Cesky Krumlov    75.30 330 eP      P     21 42 35.6 +0.7
BZS   Buzias           75.31 324 ⇓P      P     21 42 34.4 -0.5
ZIMR                   75.35 320 ⇓P      P     21 42 34.6 -0.6
SRE   Strehaia         75.45 322 ⇓P      P     21 42 36.4 +0.7
GEC2  GERESS Array S   75.49 330 eP      P     21 42 35.7 -0.3
      comp=Z,36nm,0.7s,baz=29,slow=5.7
GERES GERESS Array B   75.49 330  P      P     21 42 35.5 -0.4
      comp=Z,21nm,0.5s,baz=39,slow=5.8,SNR=224
VLAD  Vladila          75.49 321 ⇑P      P     21 42 35.2 -0.7
SOP   Sopron           75.49 328 eP      P     21 42 36.1 +0.2
SOP   Sopron           75.49 328 eP      P     21 42 36.3 +0.4
INKA  Innaminka        75.50 186  P      P     21 42 37.2 +1.2
WET   Wettzell         75.50 331 eP      P     21 42 36.1 +0.2
      comp=Z,98nm,1.1s,baz=29,slow=5.7
I40A  Norwalk          75.50  39  P      P     21 42 36.2 +0.1
CONA  Conrad Observa   75.53 328 i P     P     21 42 36.6 +0.4
      comp=Z,38nm,0.7s,SNR=44
WIM   Isle of Man      75.53 343⇑eP      P     21 42 35.8 -0.2
MZR   Muzera           75.55 288 i P     P     21 42 36.4 -0.3
      SNR=9.9
GRF   Grafenberg Arr   75.56 332 eP      P     21 42 36.4 +0.2
      comp=Z,167nm,0.8s,baz=29,slow=5.7
GRF                              epP     pP    21 44 17.0 +3.1
GRFO  Grafenberg       75.56 332  P      P     21 42 36.5 +0.2
GRFO                              pmax   pmax
      comp=Z,136nm,0.7s
GRFO  Grafenberg       75.56 332  P      P     21 42 36.5 +0.2
MPLH  Magyarpolny      75.57 327 eP      P     21 42 36.4 +0.1
MPLH  Magyarpolny      75.57 327 eP      P     21 42 36.5 +0.1
HERR  Herculane        75.59 323 ⇓P      P     21 42 35.6 -0.9
LBWR  Ladybower, Pea   75.63 341 eP      P     21 42 36.4 -0.2
LBWR                              IAmb   IAmb  21 42 37.3
      comp=Z,143nm,0.9s
TIH   Tihany           75.67 327 eP      P     21 42 35.4 -1.4
TIH   Tihany           75.67 327 eP      P     21 42 35.7 -1.2
BANR  Banloc           75.69 324 ⇑P      P     21 42 36.3 -0.7
DJES  Djerdap          75.72 323 ⇓P      P     21 42 37.4 +0.1
121A  Cookes Peak, D   75.73  57  IAmb   IAmb  21 42 40.3
      comp=Z,86nm,0.8s
121A  Cookes Peak, D   75.73  57  P      P     21 42 39.2 +1.5
      baz=318
WACR  West Acre        75.73 340⇑eP      P     21 42 37.1  0.0
WACR                              IAmb   IAmb  21 42 38.3
      comp=Z,241nm,1.0s
TRNA  Turayna          75.74 291  P      P     21 42 36.9 -0.8
PUNG  Punghina         75.87 322 ⇓P      P     21 42 37.8 -0.3
SLWR  Sila             75.91 290  P      P     21 42 37.8 -0.8
TNS   Taunus Mts       75.93 334 eP      P     21 42 38.1 -0.3
      comp=Z,66nm,0.8s,baz=29,slow=5.7
MDVR  Moldovita        75.96 323 ⇑P      P     21 42 38.5 -0.1
MORH  Mrgy, Hungar     75.97 326 ⇑P      P     21 42 37.9 -0.6
MORH  Mrgy, Hungar     75.97 326 eP      P     21 42 37.4 -1.2
MORH  Mrgy, Hungar     75.97 326⇑iP      P     21 42 37.9 -0.6
SCIA  State Center     75.97  42  P      P     21 42 38.7 +0.1
      baz=323,SNR=14
E46A  Sault Ste Mari   75.98  34  IAmb   IAmb  21 42 38.9
      comp=Z,58nm,0.8s
OOD   Oodnadatta       76.03 190  P      P     21 42 40.0 +1.1
AHRW  Bad Neuenahr-A   76.05 335 eP      P     21 42 38.9  0.0
      comp=Z,83nm,1.0s,baz=29,slow=5.7
R32A  Long Quarter,    76.10  48  IAmb   IAmb  21 42 39.3
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      comp=Z,50nm,0.5s
MOA   Molln            76.15 329 i P     P     21 42 39.4 -0.3
      comp=Z,22nm,0.7s,SNR=16
CWF   Charnwood Fore   76.16 341 eP      P     21 42 39.2 -0.3
CWF                               IAmb   IAmb  21 42 39.9
      comp=Z,164nm,1.7s
WME   Myndd Eilian     76.17 343 eP      P     21 42 39.1 -0.5
BEBN  Eben Emael       76.21 336 dP      P     21 42 39.5 -0.3
      comp=Z,122nm,0.8s
I42A  Draeger Farm,    76.22  38  IAmb   IAmb  21 42 40.8
      comp=Z,86nm,0.9s
ARSA  Arzberg          76.23 328 eP      P     21 42 40.0 -0.1
      comp=Z,9.8nm,0.4s,SNR=18
ELMS  Elmsett, Ipswi   76.23 339 eP      P     21 42 40.0 +0.2
ELMS                              IAmb   IAmb  21 42 40.8
      comp=Z,183nm,0.7s
BTNL  Ternell          76.27 336 dP      P     21 42 38.6 -1.6
      comp=Z,45nm,1.0s
KOVH  Kovagotottos     76.28 326 eP      P     21 42 39.6 -0.7
KOVH  Kovagotottos     76.28 326 eP      P     21 42 39.2 -1.1
KUBS  Kucevo           76.28 323 eP      P     21 42 39.2 -1.2
MEM   Membach          76.29 336 dP      P     21 42 39.1 -1.2
      comp=Z,60nm,0.9s
FRGS  Fruska Gora      76.40 325 ⇑P      P     21 42 40.6 -0.4
FRGS  Fruska Gora      76.40 325⇑iP      P     21 42 40.3 -0.7
FRGS  Fruska Gora      76.40 325 eP      P     21 42 40.4 -0.6
FOEL  Foel Wylfa       76.42 342 eP      P     21 42 41.1 +0.1
FOEL                              IAmb   IAmb  21 42 41.8
      comp=Z,66nm,0.9s
BSTI  Sart Tilman      76.43 336 dP      P     21 42 41.1  0.0
      comp=Z,18nm,0.9s
JFWS  Jewell Farm      76.45  39  P      P     21 42 40.4 -0.9
      baz=325,SNR=16
ZAGS  Zajecar          76.54 322 eP      P     21 42 40.8 -1.0
UCC   Uccle            76.56 337 dP      P     21 42 41.4 -0.4
      comp=Z,9.6nm,0.6s
KSU1  Kansas State U   76.60  46  IAmb   IAmb  21 42 42.5
      comp=Z,92nm,0.7s
KSU1  Kansas State U   76.60  46  P      P     21 42 41.5 -0.7
      baz=322,SNR=11
BCLA  Clavier          76.65 336 dP      P     21 42 41.9 -0.4
      comp=Z,41nm,1.0s
KOGS  Kog              76.65 327 i P     P     21 42 41.8 -0.6
HLM1  Long Mynd        76.71 342 eP      P     21 42 42.1 -0.4
HLM1                              IAmb   IAmb  21 42 43.2
      comp=Z,58nm,1.1s
L40A  Anamosa          76.72  41  P      P     21 42 42.4 -0.4
L40A                              IAmb   IAmb  21 42 43.1
      comp=Z,92nm,0.9s
BGES  Gesves           76.74 336 dP      P     21 42 42.4 -0.3
      comp=Z,44nm,0.9s
RJOB  Jochberg         76.75 330 eP      P     21 42 43.2 +0.2
      comp=Z,57nm,0.9s,baz=29,slow=5.7
ZAPS  Zavoj            76.82 322 eP      P     21 42 43.2 -0.2
SNF   Seneffe          76.85 337 dP      P     21 42 43.3  0.0
      comp=Z,36nm,1.0s
KALN  Kalnik           76.85 327  P      P     21 42 42.3 -1.2
FUR   Furstenfeldbru   76.87 331 eP      P     21 42 43.6  0.0
      comp=Z,143nm,0.9s,baz=29,slow=5.7
SOKA  Soboth           76.89 328 i P     P     21 42 43.7 -0.1
      comp=Z,31nm,0.7s,SNR=44
PERS  Pernice          76.90 328 eP      P     21 42 43.8  0.0
BMRD  Maredsous        76.90 336 dP      P     21 42 42.9 -0.8
      comp=Z,58nm,1.0s
BOVS  Bovan            76.91 323 ⇑P      P     21 42 42.7 -1.1
BOVS  Bovan            76.91 323 eP      P     21 42 42.7 -1.1
RCHB  Rochefort        76.91 336 dP      P     21 42 41.4 -2.3
      comp=Z,33nm,1.1s
TRUS  Trudelj          76.94 324 eP      P     21 42 43.7 -0.3
LOBO  Lobor            76.97 327  P      P     21 42 43.4 -0.7
STU   Stuttgart        77.00 333 eP      P     21 42 44.2  0.0
      comp=Z,199nm,1.1s,baz=29,slow=5.7
TEKS  Tekeris          77.02 324⇑iP      P     21 42 42.9 -1.6
WLF   Walferdange      77.10 335 dP      P     21 42 44.2 -0.5
      comp=Z,17nm,0.9s
GRUS  Gruza            77.10 323 eP      P     21 42 44.3 -0.6
VTS   Vitosha          77.11 321 ⇑P      P     21 42 45.2 +0.1
VTS   Vitosha          77.11 321  IAmb   IAmb  21 42 46.6
      comp=Z,101nm,0.9s
KBA   Koelnbreinsper   77.13 330 i P     P     21 42 45.5 +0.2
      comp=Z,71nm,0.8s,SNR=60
DOU   Dourbes          77.14 336 dP      P     21 42 44.6 -0.4
      comp=Z,25nm,1.1s
GLMI  Grayling         77.16  35  P      P     21 42 44.9 -0.3
      baz=328,SNR=6.0
OBKA  Obir             77.21 328 i P     P     21 42 45.7 +0.1
      comp=Z,22nm,0.6s,SNR=17
DIVS  Divibare         77.21 324⇑iP      P     21 42 44.8 -0.8
DIVS  Divibare         77.21 324  IAmb   IAmb  21 42 46.3
      comp=Z,54nm,0.9s
DIVS  Divibare         77.21 324 eP      P     21 42 45.2 -0.4
PTJ   Puntijarka       77.22 327  P      P     21 42 44.7 -0.9
MCH1  Michaelchurch    77.22 342 eP      P     21 42 45.3 -0.1
MCH1                              IAmb   IAmb  21 42 46.0
      comp=Z,89nm,0.9s
STRD  Stroud           77.25 341 eP      P     21 42 45.6  0.0
STRD                              IAmb   IAmb  21 42 46.2
      comp=Z,134nm,1.0s
ZAG   Zagreb           77.28 327⇑iP      P     21 42 45.8  0.0
AMTX  Amarillo         77.30  52  P      P     21 42 47.0 +0.7
      baz=320
KAN16 Harper SW Stat   77.36  48  IAmb   IAmb  21 42 47.2
      comp=Z,118nm,0.8s
SWN1  Swindon          77.41 341 eP      P     21 42 46.3 -0.2
SWN1                              IAmb   IAmb  21 42 47.4
      comp=Z,220nm,0.7s
KAN10 Anthony SW Sta   77.42  48  IAmb   IAmb  21 42 47.6
      comp=Z,106nm,0.8s
MSTX  Muleshoe         77.42  53  IAmb   IAmb  21 42 48.3
      comp=Z,62nm,0.9s
MSTX  Muleshoe         77.42  53  P      P     21 42 47.1 +0.1
      baz=320,SNR=11
MYKA  Terra Mystica    77.42 329 i P     P     21 42 46.6 -0.1
      comp=Z,23nm,0.9s,SNR=20
K43A  Burlington       77.44  38  IAmb   IAmb  21 42 47.1
      comp=Z,123nm,0.9s
KAN06 Argonia West S   77.44  48  IAmb   IAmb  21 42 47.6
      comp=Z,61nm,0.7s
BALB  Balikesir        77.44 316  IAmb   IAmb  21 42 48.0
      comp=Z,46nm,0.8s
L42A  Oliver, Polo     77.44  40  IAmb   IAmb  21 42 46.9
      comp=Z,88nm,0.8s
WOL   Wolverton        77.47 340 eP      P     21 42 46.3 -0.4
WOL                               IAmb   IAmb  21 42 47.1
      comp=Z,149nm,0.7s
CRES  Cresnjev         77.47 328⇑iP      P     21 42 46.2 -0.7
SELS  Selova           77.49 323 eP      P     21 42 45.8 -1.3
WATA  Walderalm        77.50 331 i P     P     21 42 47.1 -0.1
      comp=Z,53nm,0.5s,SNR=68
HMNX  Herstmonceux     77.52 339 eP      P     21 42 47.6 +0.6
HMNX                              IAmb   IAmb  21 42 48.4
      comp=Z,284nm,1.0s
BOSS  Bosilegrad       77.52 321 eP      P     21 42 47.1 -0.1
BARS  Barje            77.54 322 eP      P     21 42 39.1 -8.2
BARS  Barje            77.54 322 eP      P     21 42 46.3 -1.0
KAN05 Bluff City Nor   77.54  48  IAmb   IAmb  21 42 48.3
      comp=Z,160nm,1.1s
WTTA  Wattenberg       77.55 331 i P     P     21 42 47.7 +0.2
      comp=Z,67nm,0.5s,SNR=74
IVAS  Ivanjica         77.58 323 eP      P     21 42 46.7 -0.9
OK032 Salt Plains WL   77.61  48  IAmb   IAmb  21 42 48.9
      comp=Z,73nm,0.8s
KAN14 Manchester OK    77.61  48  IAmb   IAmb  21 42 48.7
      comp=Z,51nm,0.8s
LJU   Ljubljana        77.62 328 i P     P     21 42 46.6 -1.1
LJU   Ljubljana        77.62 328⇑iP      P     21 42 46.6 -1.1
MRAK  Mrakovica        77.64 326⇑iP      P     21 42 46.4 -1.5
RETA  Reutte           77.64 331 i P     P     21 42 48.1 +0.2
      comp=Z,34nm,1.0s,SNR=24
BBLS  Lazi&#263;i      77.64 324⇑iP      P     21 42 47.7 -0.2
BBLS  Lazi&#263;i      77.64 324 eP      P     21 42 48.2 +0.3
P38A  Dawn             77.64  43  P      P     21 42 48.1 +0.2
KAN17 Caldwell West    77.65  48  IAmb   IAmb  21 42 49.0
      comp=Z,78nm,0.9s
KAN09 Caldwell North   77.65  48  IAmb   IAmb  21 42 49.0
      comp=Z,140nm,1.2s
MOTA  Moosalm          77.65 331 i P     P     21 42 47.9 -0.1
      comp=Z,38nm,0.5s,SNR=53
BFO   Black Forest     77.65 333  P      P     21 42 47.4 -0.5
BFO                               pmax   pmax
      comp=Z,55nm,1.0s
BFO   Black Forest     77.65 333 eP      P     21 42 47.7 -0.1
      comp=Z,64nm,1.1s,baz=29,slow=5.7
BFO   Black Forest     77.65 333  P      P     21 42 47.4 -0.5
UBR   Ueberruh         77.67 332 eP      P     21 42 48.0  0.0
      comp=Z,25nm,0.8s,baz=29,slow=5.7
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ABTA  Abfaltersbach    77.70 330  i P      P       21 42 48.3  0.0
      comp=Z,9.5nm,0.7s,SNR=15
MNTX  Cornudas Mount   77.71  56   IAmb    IAmb    21 42 50.5
      comp=Z,58nm,0.9s
MNTX  Cornudas Mount   77.71  56   P       P       21 42 49.4 +0.9
      baz=319,SNR=45
SQTA  Sankt Quirin     77.72 331  i P      P       21 42 48.5 +0.1
      comp=Z,32nm,0.6s,SNR=44
SHAO  Shalim           77.74 283   P       P       21 42 49.0 +0.2
BLY   Banja Luka       77.75 326⇑i P       P       21 42 47.5 -0.9
KAN13 South Haven SW   77.81  48   IAmb    IAmb    21 42 49.9
      comp=Z,93nm,0.9s
BOJS  Bojanci          77.82 328  i P      P       21 42 48.5 -0.3
RUDO  Rudo             77.86 324⇑i P       P       21 42 48.4 -0.7
CEY   Cerknica         77.92 328⇑i P       P       21 42 47.9 -1.4
SJES  Sjenica          77.92 323  eP       P       21 42 49.2 -0.3
N41A  Harden Midland   77.98  41   IAmb    IAmb    21 42 50.4
      comp=Z,110nm,0.8s
L44A  Lake County Fo   78.05  38   P       P       21 42 49.5 -0.6
      baz=326
FETA  Feichten         78.06 331  i P      P       21 42 50.1 -0.2
      comp=Z,26nm,1.1s,SNR=17
ARMA  Armidale         78.07 176   P       P       21 42 52.0 +1.7
MGRS  Mrkonjic Grad    78.07 326⇓i P       P       21 42 51.0 +0.8
DAVA  Damuels          78.10 332  i P      P       21 42 50.1 -0.3
      comp=Z,45nm,0.8s,SNR=23
PLIT  Plitvice         78.22 327   P       P       21 42 50.4 -0.6
RIY   Rijeka           78.25 328⇑i P       P       21 42 49.9 -1.2
DOK   Doka             78.28 285   P       P       21 42 51.3 -0.4
LCRK  Leigh Creek      78.38 188   P       P       21 42 53.1 +1.3
SKO   Skopje           78.39 322  i P      P       21 42 52.7 +0.7
UPM   Unac-Piva        78.39 324⇑i P       P       21 42 51.4 -0.8
DMTO  DMTO             78.40 283   P       P       21 42 52.2 -0.2
CSS   Mathiatis        78.44 310   IAmb    IAmb    21 42 53.5
      comp=Z,42nm,0.6s
VAY   Valandovo        78.45 321  i P      P       21 42 53.0 +0.7
MEEK  Meekatharra      78.45 206   P       P       21 42 52.5 +0.2
DAVOX Davos/Dischmat   78.54 331   P       P       21 42 52.8 -0.1
      comp=Z,41nm,0.7s,baz=15,slow=3.2,SNR=85
I49A  Point Hope       78.60  34   IAmb    IAmb    21 42 53.8
      comp=Z,85nm,0.8s
SMRN  Sveta Marina     78.62 328   P       P       21 42 51.4 -1.7
RABC  Rab              78.64 327   P       P       21 42 51.1 -2.0
KIJV  Kijevo           78.68 326   P       P       21 42 52.4 -1.1
MULG  Mulgathing       78.68 191   P       P       21 42 54.5 +1.1
BRY   Bratogost        78.79 324⇑i P       P       21 42 52.8 -1.5
HDIL  Hopedale         78.79  40   P       P       21 42 53.9 -0.2
      baz=325,SNR=17
RICI  Ricice           78.84 325   P       P       21 42 52.6 -1.7
DYA   Yadsworthy       78.89 342  eP       P       21 42 54.1 -0.3
DYA                                IAmb    IAmb    21 42 55.4
      comp=Z,67nm,1.1s
PDG   Podgorica        78.90 323⇑i P       P       21 42 54.2 -0.4
PDG   Podgorica        78.90 323   IAmb    IAmb    21 42 55.1
      comp=Z,81nm,0.7s
OK034 N. Norfolk Rd.   78.98  48   IAmb    IAmb    21 42 56.6
      comp=Z,116nm,1.0s
OK030 Cody Creek RV    79.01  48   IAmb    IAmb    21 42 56.9
      comp=Z,149nm,1.2s
TREB  Trebinje         79.02 324⇑i P       P       21 42 53.7 -1.6
WHFO  Wadi Hawf        79.02 284   P       P       21 42 55.0 -0.7
      SNR=27
MAKA  Makarska         79.06 325   P       P       21 42 53.5 -1.9
MORI  Morici           79.06 326   P       P       21 42 53.8 -1.6
CMSA  Cobar Meteorol   79.08 181   P       P       21 42 56.9 +1.4
DRME  Dracevica, Mon   79.14 323⇑i P       P       21 42 55.3 -0.6
STON  Ston             79.15 325⇑i P       P       21 42 53.5 -2.4
STON  Ston             79.15 325   P       P       21 42 53.8 -2.2
DUGI  Dugi Otok        79.19 327   P       P       21 42 54.7 -1.4
HCY   Herceg Novi      79.19 324⇑i P       P       21 42 55.1 -1.1
TEOL  Teolo            79.20 330   IAmb    IAmb    21 42 57.1
      comp=Z,57nm,0.7s
SADO  Sadowa           79.23  32   P       P       21 42 55.4 -0.9
      comp=Z,13nm,0.5s,baz=309,slow=3.1,SNR=14
ZIRJ  Zirje            79.26 326   P       P       21 42 55.1 -1.4
S39A  Bolivar          79.29  45   IAmb    IAmb    21 42 57.2
      comp=Z,88nm,0.8s
R40A  Maddies Statio   79.30  43   IAmb    IAmb    21 42 57.6
      comp=Z,113nm,0.8s
SALO  Salr             79.36 331   IAmb    IAmb    21 42 57.4
      comp=Z,77nm,0.8s
HVAR  Hvar             79.37 326   P       P       21 42 55.4 -1.8
OHR   Ohrid            79.37 322  i P      P       21 42 57.0 -0.3
CCA1  Carnmenellis     79.40 342  eP       P       21 42 57.0 -0.1
CCA1                               IAmb    IAmb    21 42 58.3
      comp=Z,77nm,1.0s
FNA   Florina          79.40 321   IAmb    IAmb    21 42 57.9
      comp=Z,54nm,0.8s
P43A  Skaggs, Pawnee   79.44  41   IAmb    IAmb    21 42 58.3
      comp=Z,117nm,0.8s
TUL1  Leonard          79.52  47   P       P       21 42 58.5 +0.4
      baz=323
X34A  Smith Ranch, M   79.52  49   IAmb    IAmb    21 43 00.1
      comp=Z,111nm,0.9s
LMQ   La Malbaie       79.54  25   IAmb    IAmb    21 42 58.5
      comp=Z,78nm,0.9s
LSTV  Lastovo          79.55 325   P       P       21 42 56.1 -2.0
STKA  Stephens Creek   79.56 185   P       P       21 42 58.7 +0.6
      comp=Z,11nm,0.7s,baz=344,slow=6.4,SNR=24
STKA  Stephens Creek   79.56 185   P       P       21 42 59.4 +1.3
TIR   Tirane           79.56 322  ⇑P       P       21 42 58.4 +0.2
W35A  Tecumseh         79.58  48   IAmb    IAmb    21 42 59.9
      comp=Z,88nm,0.9s
CLF   Chambon-Foret    79.66 337   IAmb    IAmb    21 43 00.7
      comp=Z,89nm,1.2s
AAM   Ann Arbor        79.67  36   P       P       21 42 58.4 -0.3
AAM                                pmax    pmax
      comp=Z,174nm,1.2s
AAM   Ann Arbor        79.67  36   P       P       21 42 58.4 -0.3
AAM   Ann Arbor        79.67  36   P       P       21 42 58.5 -0.2
      baz=328,SNR=5.4
JSA   Saint Aubin      79.67 340  eP       P       21 42 58.4 -0.2
JSA                                IAmb    IAmb    21 42 59.7
      comp=Z,72nm,0.8s
ABTO  Aybut            79.74 284   P       P       21 42 59.1 -0.4
KBN   Korca            79.78 321   IAmb    IAmb    21 42 60.0
      comp=Z,54nm,0.8s
SFIN  Lafayette        79.88  39   P       P       21 42 59.7 -0.2
      baz=327,SNR=13
CCM   Cathedral Cave   79.96  43   P       P       21 43 00.0 -0.3
CCM                                pmax    pmax
      comp=Z,120nm,0.9s
CCM   Cathedral Cave   79.96  43   P       P       21 43 00.0 -0.3
CCM                                IAmb    IAmb    21 43 01.3
      comp=Z,120nm,0.8s
CCM   Cathedral Cave   79.96  43   P       P       21 43 00.1 -0.3
      baz=325
DELO  Deloro Mine      79.98  31   IAmb    IAmb    21 43 00.7
      comp=Z,54nm,0.9s
GHAJ  Ghor Haditha     80.08 306   IAmb    IAmb    21 43 03.0
      comp=Z,76nm,1.1s
ABTX  Abilene, Hawle   80.12  52   IAmb    IAmb    21 43 02.9
      comp=Z,82nm,1.0s
ABTX  Abilene, Hawle   80.12  52   P       P       21 43 01.5 +0.2
      baz=321,SNR=13
HHAR  Hobbs            80.12  46   IAmb    IAmb    21 43 02.0
      comp=Z,76nm,0.7s
FORT  Forrest          80.14 196   P       P       21 43 01.6 +0.5
RAYN  Ar Rayn          80.17 294  i P      P       21 43 02.0 +0.2
      SNR=36
RAYN  Ar Rayn          80.17 294   P       P       21 43 01.9 +0.2
RAYN                               pmax    pmax
      comp=Z,40nm,1.0s
RAYN  Ar Rayn          80.17 294   P       P       21 43 02.0 +0.2
RAYN  Ar Rayn          80.17 294   P       P       21 43 01.9 +0.1
PRMA  PARMA            80.18 330   IAmb    IAmb    21 43 02.7
      comp=Z,70nm,1.1s
MGMO  Mountain Grove   80.22  44   IAmb    IAmb    21 43 02.4
      comp=Z,159nm,1.4s
Q44A  Meyer Farm, Va   80.27  41   IAmb    IAmb    21 43 02.8
      comp=Z,111nm,0.8s
D62A  Allapoint, All   80.32  24   IAmb    IAmb    21 43 02.7
      comp=Z,54nm,0.7s
LOOK  Love County      80.33  49   IAmb    IAmb    21 43 03.9
      comp=Z,116nm,0.9s
FVM   French Village   80.39  42   IAmb    IAmb    21 43 03.5
      comp=Z,65nm,0.8s
MNTQ  Montreal, Queb   80.42  28   IAmb    IAmb    21 43 03.1
      comp=Z,74nm,0.9s
TXAR  Lajitas Array    80.46  57   P       P       21 43 03.9 +0.6
      comp=Z,86nm,0.5s,baz=286,slow=3.5,SNR=580
TXAR                               PKiKP   PKiKP   21 48 26.9 -0.4
      comp=Z,0.4nm,0.5s,baz=109,slow=0.6,SNR=3.9
TXAR                               PKKPbc  PKKPbc  22 01 39.8 +1.6
      comp=Z,1.6nm,0.8s,baz=138,slow=4.5,SNR=11
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TXAR  Lajitas Array    80.46  57   P       P       21 43 04.3 +1.0
U40A  Yellville        80.59  45   P       P       21 43 03.4 -0.3
      baz=324,SNR=113
M50A  Fremont          80.67  36   IAmb    IAmb    21 43 04.8
      comp=Z,110nm,0.8s
VLC   Villacollemand   80.69 330   IAmb    IAmb    21 43 06.0
      comp=Z,67nm,1.0s
J54A  Appleton         80.71  32   IAmb    IAmb    21 43 04.8
      comp=Z,95nm,1.1s
MURB  Monte Urbino     80.74 328   IAmb    IAmb    21 43 06.8
      comp=Z,126nm,1.1s
OLIL  Olney            80.81  41   IAmb    IAmb    21 43 35.6
      comp=Z,96nm,0.7s
MGCD  Mangrove Creek   80.83 176   P       P       21 43 06.4 +1.7
T42A  Van Buren        80.87  43   IAmb    IAmb    21 43 06.1
      comp=Z,97nm,0.8s
MEDO  Medina           80.87  32   IAmb    IAmb    21 43 04.7
      comp=Z,82nm,1.1s
LONY  Lake Ozonia      80.90  29   P       P       21 43 04.3 -0.9
      baz=333,SNR=6.3
BATG  Bathurst New B   80.93  22   IAmb    IAmb    21 43 06.2
      comp=Z,76nm,0.6s
BBOO  Buckleboo        80.94 189   P       P       21 43 06.0 +0.7
SLBS  Sierra La Lagu   81.03  65   P       P       21 43 07.2 +0.9
SLBS                               IAmb    IAmb    21 43 08.7
      comp=Z,87nm,1.4s
W39A  Magazine         81.07  46   IAmb    IAmb    21 43 07.4
      comp=Z,121nm,1.4s
W39A  Magazine         81.07  46   P       P       21 43 06.2  0.0
      baz=324
NAPP  Napperby         81.10 187   P       P       21 43 07.4 +1.3
F62A  Pittston Farm,   81.15  25   IAmb    IAmb    21 43 07.3
      comp=Z,86nm,0.9s
O49A  Covington        81.19  37   IAmb    IAmb    21 43 07.5
      comp=Z,87nm,0.9s
AQU   L'Aquila         81.22 327⇑i P       P       21 43 06.8 -0.1
AQU   L'Aquila         81.22 327   IAmb    IAmb    21 43 08.2
      comp=Z,81nm,1.1s
ERPA  Erie             81.22  33   P       P       21 43 06.5 -0.4
      baz=330,SNR=5.8
HTT   Hallett          81.28 187   P       P       21 43 08.2 +1.1
FCAR  Ozark Folk Cen   81.31  45   IAmb    IAmb    21 43 08.1
      comp=Z,102nm,0.7s
J56A  Wolcott          81.33  31   IAmb    IAmb    21 43 07.6
      comp=Z,98nm,1.1s
P48A  Milroy           81.35  38   IAmb    IAmb    21 43 08.3
      comp=Z,79nm,1.0s
WVNY  West Valley, N   81.48  32   IAmb    IAmb    21 43 08.9
      comp=Z,63nm,0.9s
MORW  Morawa           81.50 207   P       P       21 43 08.8 +0.5
J57A  Williamstown     81.51  30   IAmb    IAmb    21 43 09.0
      comp=Z,164nm,1.6s
M53A  WI Miller and    81.55  34   P       P       21 43 08.7  0.0
      baz=330,SNR=12
P49A  Miami Univ. Ec   81.58  38   P       P       21 43 08.4 -0.4
      baz=328,SNR=24
LCAR  Lake Charles     81.62  44   IAmb    IAmb    21 43 10.7
      comp=Z,72nm,1.2s
F64A  Sherman          81.63  24   IAmb    IAmb    21 43 09.5
      comp=Z,50nm,0.8s
ACSO  Alum Creek Sta   81.69  36   IAmb    IAmb    21 43 10.3
      comp=Z,111nm,0.8s
ACSO  Alum Creek Sta   81.69  36   P       P       21 43 09.1 -0.2
      baz=329,SNR=16
MIAR  Mount Ida        81.69  47   IAmb    IAmb    21 43 10.9
      comp=Z,79nm,0.8s
MIAR  Mount Ida        81.69  47   P       P       21 43 09.7 +0.2
      baz=324
JCT   Junction City    81.71  53   IAmb    IAmb    21 43 11.0
      comp=Z,55nm,0.8s
JCT   Junction City    81.71  53   P       P       21 43 09.8 +0.2
      baz=322,SNR=15
VT1   Waterbury        81.74  28   IAmb    IAmb    21 43 10.5
      comp=Z,144nm,1.1s
WHTX  Lake Whitney,    81.77  51   IAmb    IAmb    21 43 11.4
      comp=Z,122nm,0.8s
WHTX  Lake Whitney,    81.77  51   P       P       21 43 10.1 +0.2
      baz=322,SNR=9.9
J58A  Remsen           81.79  30   IAmb    IAmb    21 43 10.2
      comp=Z,116nm,1.2s
W41B  Gary Mavity, V   81.83  45   P       P       21 43 10.2 +0.1
      baz=324,SNR=30
M54A  Oil Creek Stat   81.87  33   IAmb    IAmb    21 43 11.2
      comp=Z,113nm,1.0s
M54A  Oil Creek Stat   81.87  33   P       P       21 43 09.9 -0.4
      baz=331,SNR=11
PKME  Peaks-Kenny Pk   81.92  25   P       P       21 43 10.2 -0.2
      baz=336
J59A  Piesco           81.95  29   IAmb    IAmb    21 43 11.1
      comp=Z,62nm,0.9s
WCI   Wyandotte Cave   82.02  40   P       P       21 43 11.1  0.0
      baz=327
Z38A  Mt. Pleasant     82.03  48   IAmb    IAmb    21 43 12.7
      comp=Z,128nm,0.9s
LBNH  Lisbon           82.08  27   P       P       21 43 11.3 +0.1
      baz=335,SNR=6.2
L56A  Greenwood        82.09  32   IAmb    IAmb    21 43 11.9
      comp=Z,71nm,0.9s
X40A  Basin Creek Fa   82.10  46   IAmb    IAmb    21 43 13.0
      comp=Z,79nm,0.9s
X40A  Basin Creek Fa   82.10  46   P       P       21 43 11.6  0.0
      baz=324,SNR=26
ITM   Ithomi           82.16 319   IAmb    IAmb    21 43 11.7
      comp=Z,96nm,0.7s
N54A  Moraine State    82.23  34   IAmb    IAmb    21 43 13.1
      comp=Z,105nm,0.8s
N54A  Moraine State    82.23  34   P       P       21 43 12.0 -0.1
      baz=330,SNR=12
GNAR  Gosnell          82.23  43   P       P       21 43 13.0 +0.9
M55A  Ridgway          82.24  33   IAmb    IAmb    21 43 13.1
      comp=Z,92nm,0.9s
ACCN  Adirondack Com   82.30  29   IAmb    IAmb    21 43 13.1
      comp=Z,86nm,1.1s
P51A  Williamsport     82.30  37   IAmb    IAmb    21 43 13.1
      comp=Z,100nm,0.8s
IDI   Anoyia           82.36 316   P       P       21 43 11.7 -1.2
      comp=Z,31nm,0.6s,baz=1.3,slow=6.4,SNR=12
O53A  New Philadelph   82.38  35   P       P       21 43 12.3 -0.5
      baz=330,SNR=18
R49A  Shelbyville      82.44  39   IAmb    IAmb    21 43 47.6
      comp=Z,44nm,0.6s
HNH   Hanover          82.45  28   IAmb    IAmb    21 43 14.3
      comp=Z,51nm,0.8s
UTMT  University of    82.45  42   P       P       21 43 13.8 +0.6
G65A  Princeton        82.46  24   IAmb    IAmb    21 43 14.1
      comp=Z,65nm,1.1s
P52A  Corning          82.54  36   IAmb    IAmb    21 43 14.2
      comp=Z,54nm,0.8s
P52A  Corning          82.54  36   P       P       21 43 13.0 -0.7
      baz=329,SNR=7.5
BINY  Binghamton       82.58  31   IAmb    IAmb    21 43 14.5
      comp=Z,61nm,1.0s
BINY  Binghamton       82.58  31   P       P       21 43 12.9 -1.0
      baz=333,SNR=9.9
I62A  Tamworth         82.59  27   IAmb    IAmb    21 43 15.1
      comp=Z,164nm,1.6s
237A  Washetta, Mont   82.61  50   IAmb    IAmb    21 43 15.7
      comp=Z,64nm,0.9s
435B  Jarrell          82.65  52   P       P       21 43 14.4  0.0
      baz=322
TIP   Timpagrande      82.66 323  ⇑P       P       21 43 13.9 -0.5
TIP   Timpagrande      82.66 323   IAmb    IAmb    21 43 15.2
      comp=Z,92nm,1.2s
J61A  Chester          82.69  28   IAmb    IAmb    21 43 15.5
      comp=Z,78nm,0.8s
BLDU  Ballidu          82.75 206   P       P       21 43 14.5 -0.1
O54A  Avella           82.75  35   IAmb    IAmb    21 43 15.9
      comp=Z,90nm,0.8s
R50A  Paris            82.80  38   IAmb    IAmb    21 43 16.2
      comp=Z,86nm,1.1s
FFD   Franklin Falls   82.86  27   IAmb    IAmb    21 43 16.5
      comp=Z,86nm,0.7s
Q52A  Bidwell          83.07  37   IAmb    IAmb    21 43 17.1
      comp=Z,80nm,1.1s
WVT   Waverly          83.09  42   P       P       21 43 16.4 -0.1
WVT                                pmax    pmax
      comp=Z,102nm,0.7s
WVT   Waverly          83.09  42   P       P       21 43 16.4 -0.1
WVT   Waverly          83.09  42   P       P       21 43 16.5  0.0
      baz=327
Z41A  Richland Creek   83.11  47   P       P       21 43 17.2 +0.5
      baz=324
KSPA  Keystone Colle   83.23  31   IAmb    IAmb    21 43 17.6
      comp=Z,60nm,0.9s
SSPA  Standing Stone   83.29  33   P       P       21 43 17.3 -0.1
SSPA                               IAmb    IAmb    21 43 18.3
      comp=Z,82nm,0.9s
SSPA  Standing Stone   83.29  33   P       P       21 43 17.3 -0.1
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      baz=332
O56A  Blue Knob Stat   83.36  33   P       P       21 43 17.7 -0.2
      baz=331
KLBR  Kellerberrin     83.36 205   P       P       21 43 17.8 +0.1
NATX  Nacogdoches      83.39  49   P       P       21 43 19.0 +0.9
      baz=324,SNR=17
K62A  Royalston        83.40  28   IAmb    IAmb    21 43 19.2
      comp=Z,67nm,0.8s
MCWV  Mont Chateau     83.41  35   IAmb    IAmb    21 43 19.6
      comp=Z,107nm,0.9s
MCWV  Mont Chateau     83.41  35   P       P       21 43 18.3 +0.2
      baz=331,SNR=9.9
L61B  Northampton      83.45  28   P       P       21 43 17.8 -0.5
      baz=335,SNR=5.9
N58A  Sunbury          83.53  32   IAmb    IAmb    21 43 19.4
      comp=Z,89nm,0.8s
833A  Chaparral WMA,   83.61  54   P       P       21 43 19.6 +0.3
      baz=322,SNR=13
S51A  Beattyville      83.66  38   IAmb    IAmb    21 43 20.2
      comp=Z,78nm,0.8s
R53A  Hurricane        83.73  37   IAmb    IAmb    21 43 20.9
      comp=Z,69nm,1.1s
HRV   Adam Dziewonsk   83.76  28   P       P       21 43 20.2 +0.5
HRV                                pmax    pmax
      comp=Z,124nm,1.2s
HRV   Adam Dziewonsk   83.76  28   P       P       21 43 20.2 +0.5
HRV                                IAmb    IAmb    21 43 21.0
      comp=Z,124nm,1.1s
GBN   Guysborough      83.78  20   IAmb    IAmb    21 43 21.4
      comp=Z,70nm,0.8s
N59A  State Game Lan   83.79  31   IAmb    IAmb    21 43 21.0
      comp=Z,139nm,1.2s
N59A  State Game Lan   83.79  31   P       P       21 43 19.9 -0.1
      baz=333,SNR=22
CEL   Celeste          83.80 323   IAmb    IAmb    21 43 20.6
      comp=Z,58nm,0.9s
HAL   Halifax          84.01  21   IAmb    IAmb    21 43 22.0
      comp=Z,76nm,1.0s
BCX   Boston College   84.03  27   P       P       21 43 21.4 +0.3
BCX                                IAmb    IAmb    21 43 22.0
      comp=Z,52nm,0.8s
735A  Kenedy           84.05  53   P       P       21 43 22.5 +1.1
MUN   Mundaring        84.17 206   P       P       21 43 22.2 +0.5
UCCT  U. Connecticut   84.19  28   IAmb    IAmb    21 43 23.1
      comp=Z,98nm,1.0s
Q56A  Snyder Ridge,    84.20  34   IAmb    IAmb    21 43 23.2
      comp=Z,71nm,1.1s
LUPA  Lehigh Univers   84.22  31   IAmb    IAmb    21 43 22.8
      comp=Z,163nm,1.5s
HKT   Hockley          84.23  51  i P      P       21 43 22.1 -0.1
HKT                                pmax    pmax
      comp=Z,43nm,1.4s
HKT   Hockley          84.23  51   P       P       21 43 23.3 +1.0
143A  Socs Landing,    84.25  46   IAmb    IAmb    21 43 24.4
      comp=Z,111nm,1.0s
P57A  Homestead Farm   84.25  33   IAmb    IAmb    21 43 23.3
      comp=Z,182nm,1.8s
BRYW  Bryant College   84.30  28   P       P       21 43 22.4  0.0
BRYW                               IAmb    IAmb    21 43 23.4
      comp=Z,61nm,0.7s
PAL   Palisades        84.35  30   P       P       21 43 22.6 -0.1
      baz=334,SNR=11
WSPT  Westport, CT     84.39  29   IAmb    IAmb    21 43 23.4
      comp=Z,55nm,1.1s
MVL   Millersville     84.40  32   IAmb    IAmb    21 43 23.9
      comp=Z,53nm,0.8s
ARPS  Mount Arapiles   84.42 184   P       P       21 43 23.7 +0.9
BRNJ  Basking Ridge    84.42  30   IAmb    IAmb    21 43 24.1
      comp=Z,81nm,0.7s
S54A  Dingess, Beckl   84.45  36   IAmb    IAmb    21 43 24.4
      comp=Z,71nm,0.9s
L64A  Middleborough    84.50  27   IAmb    IAmb    21 43 24.5
      comp=Z,97nm,0.8s
CPNY  Central Park     84.53  30   IAmb    IAmb    21 43 24.5
      comp=Z,83nm,1.0s
N62A  Caumsett State   84.56  30   P       P       21 43 23.5 -0.2
M63A  Gales Ferry      84.60  28   IAmb    IAmb    21 43 24.5
      comp=Z,75nm,0.8s
TZTN  Tazewell         84.61  39   IAmb    IAmb    21 43 25.2
      comp=Z,76nm,0.7s
TZTN  Tazewell         84.61  39   P       P       21 43 24.3 +0.3
      baz=329,SNR=14
NWAO  Narrogin (SRO)   84.77 205   P       P       21 43 24.7 +0.1
NWAO  Narrogin (SRO)   84.77 205   P       P       21 43 25.0 +0.4
P60A  Greenville       84.82  32   P       P       21 43 24.8 -0.3
      baz=333,SNR=11
342A  Flagon Creek P   84.87  48   P       P       21 43 26.7 +1.2
V51A  Loudon           84.89  40   IAmb    IAmb    21 43 26.4
      comp=Z,110nm,1.2s
441A  DeRidder         84.95  49   P       P       21 43 26.8 +1.0
W50A  Signal Mountai   84.99  41   IAmb    IAmb    21 43 26.9
      comp=Z,80nm,0.8s
KVTX  Kingsville       85.04  54   P       P       21 43 27.7 +1.4
VBMS  Vicksburg        85.07  46   P       P       21 43 27.4 +1.1
      baz=326,SNR=7.5
TOO   Toolangi         85.10 181   P       P       21 43 27.4 +1.2
TOO                                pmax    pmax
      comp=Z,23nm,0.9s
TOO   Toolangi         85.10 181   P       P       21 43 27.4 +1.2
TOO   Toolangi         85.10 181   P       P       21 43 27.9 +1.7
TKL   Tuckaleechee C   85.26  39   P       P       21 43 27.2 -0.1
      comp=Z,57nm,0.5s,baz=159,slow=3.0,SNR=56
TKL   Tuckaleechee C   85.26  39   IAmb    IAmb    21 43 28.3
      comp=Z,62nm,0.6s
BLA   Blacksburg       85.31  36   IAmb    IAmb    21 43 28.7
      comp=Z,88nm,1.1s
BLA   Blacksburg       85.31  36   P       P       21 43 27.5 -0.1
      baz=330,SNR=8.7
S57A  Dark Hollow, R   85.41  35   IAmb    IAmb    21 43 29.3
      comp=Z,41nm,0.8s
FPAL  Fort Paine       85.41  41   P       P       21 43 28.2 +0.1
FPAL                               IAmb    IAmb    21 43 29.0
      comp=Z,63nm,0.9s
Z47A  Carrollton       85.42  44   IAmb    IAmb    21 43 29.4
      comp=Z,84nm,0.8s
344A  Westbrook Farm   85.59  46   P       P       21 43 29.9 +1.0
CBN   Corbin Frederi   85.61  34   P       P       21 43 29.0  0.0
      baz=332,SNR=5.6
Y49A  Blount Mountai   85.63  42   IAmb    IAmb    21 43 30.0
      comp=Z,81nm,1.1s
V53A  Saluda           85.66  39   IAmb    IAmb    21 43 30.5
      comp=Z,101nm,1.5s
X51A  Calhoun          85.72  41   IAmb    IAmb    21 43 30.6
      comp=Z,138nm,1.3s
Q61A  Milford          85.76  32   P       P       21 43 29.9 +0.3
      baz=333
U56A  King             86.07  37   IAmb    IAmb    21 43 32.4
      comp=Z,60nm,0.8s
OUZ   Omahuta          86.11 158   P       P       21 43 33.9 +2.9
ZAIG  Zacatecas        86.13  60   P       P       21 43 32.4 +0.3
V55A  Taylorsville     86.17  37   IAmb    IAmb    21 43 32.8
      comp=Z,60nm,1.2s
BG3   Lake Jocassee    86.19  39   IAmb    IAmb    21 43 33.2
      comp=Z,117nm,1.1s
346A  Big Creek Wild   86.26  46   P       P       21 43 33.3 +1.1
PPT   Papeete          86.27 121   P       P       21 43 32.7 +0.5
      comp=Z,31nm,0.7s,baz=2.0,slow=19,SNR=3.0
T59A  Double "B" Far   86.63  34   IAmb    IAmb    21 43 35.2
      comp=Z,55nm,1.2s
Y52A  Lilburn          86.67  40   IAmb    IAmb    21 43 35.6
      comp=Z,74nm,0.8s
KMSC  Kings Mountain   86.73  38   IAmb    IAmb    21 43 35.4
      comp=Z,60nm,0.9s
KMSC  Kings Mountain   86.73  38   P       P       21 43 34.0 -0.4
      baz=330,SNR=9.8
PAULI Pauline          86.81  38   IAmb    IAmb    21 43 35.7
      comp=Z,62nm,0.9s
V58A  Windy Hill, Pi   87.06  36   IAmb    IAmb    21 43 37.1
      comp=Z,55nm,1.0s
HODGE Hodges           87.13  39   IAmb    IAmb    21 43 37.5
      comp=Z,66nm,1.0s
GOGA  Godfrey          87.31  40   IAmb    IAmb    21 43 38.6
      comp=Z,46nm,0.7s
GOGA  Godfrey          87.31  40   P       P       21 43 37.2 +0.1
      baz=329,SNR=14
152A  Waverly Hall     87.39  41   IAmb    IAmb    21 43 38.5
      comp=Z,44nm,0.8s
JSC   Jenkinsville     87.50  38   IAmb    IAmb    21 43 39.2
      comp=Z,53nm,0.9s
BIRD  Birdtown, Kers   87.52  37   IAmb    IAmb    21 43 39.3
      comp=Z,70nm,0.9s
BRAL  Brewton          87.59  44   P       P       21 43 39.3 +0.8
BRAL  Brewton          87.59  44   P       P       21 43 39.7 +1.3
      baz=327,SNR=9.7
PBRG  Braganca         87.70 341  eP       P       21 43 37.4 -1.4
      comp=Z,32nm,2.0s
CNNC  Cliffs of the    88.02  35   P       P       21 43 40.8 +0.4
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	baz=332						
POLO	Lamas de Olo	88.34	341	eP	P	21 43 40.8	-1.1
	comp=Z,24nm,1.5s						
MVO	Moncorvo	88.37	341	eP	P	21 43 40.9	-1.1
	comp=Z,40nm,1.9s						
PVRL	Vila Real	88.42	341	eP	P	21 43 41.2	-1.0
	comp=Z,36nm,2.1s						
KEST	Kesra	88.53	327	P	P	21 43 42.0	-0.8
	comp=Z,17nm,0.7s,baz=338,slow=0.5,SNR=41						
KEST	Kesra	88.53	327	P	P	21 43 42.7	-0.2
TIGA	Tifton	88.94	41	P	P	21 43 45.7	+1.0
TIGA	Tifton	88.94	41	P	P	21 43 45.5	+0.8
	baz=329						
NHSC	New Hope	88.97	38	P	P	21 43 45.4	+0.5
	baz=331						
PVIS	Viseu	88.99	341	eP	P	21 43 43.6	-1.3
	comp=Z,44nm,1.6s						
ESDC	Sonseca Array	89.06	338	P	P	21 43 44.1	-1.1
	comp=Z,2.8nm,0.5s,baz=9.0,slow=4.5,SNR=28						
ESDC				pP	pP	21 45 27.6	+0.9
	comp=Z,1.7nm,0.9s,baz=4.0,slow=5.5,SNR=5.7						
ESDC				PKKPbc	PKKPbc	22 01 19.3	+0.5
	comp=Z,0.6nm,0.6s,baz=227,slow=2.2,SNR=5.7						
MTE	Manteigas	89.22	341	eP	P	21 43 43.9	-2.1
	comp=Z,40nm,1.9s						
PAB	San Pablo	89.28	338	P	P	21 43 45.4	-0.9
PAB				pmax	pmax		
	comp=Z,19nm,1.5s						
PAB	San Pablo	89.28	338	P	P	21 43 45.4	-0.9
HIZ	Hauiti	89.55	158	P	P	21 43 49.5	+2.3
HIZ				IAmb	IAmb	21 43 50.1	
	comp=Z,40nm,0.7s						
PCBR	Castelo Branco	89.74	341	eP	P	21 43 46.8	-1.5
	comp=Z,24nm,1.6s						
PCAS	Casmilo, Conde	89.76	341	eP	P	21 43 46.9	-1.5
	comp=Z,59nm,2.3s						
URZ	Urewera	89.89	157	P	P	21 43 47.4	-1.2
	comp=Z,8.7nm,0.6s,baz=118,slow=23,SNR=5.2						
PMRV	Marv??o	90.11	340	eP	P	21 43 48.9	-1.2
	comp=Z,38nm,1.6s						
PSBE	So Bento	90.34	341	eP	P	21 43 50.0	-1.1
	comp=Z,54nm,1.7s						
BKZ	Black Stump Fm	90.58	157	P	P	21 43 52.9	+1.0
ATD	Arta Tunnel	90.81	288	P	P	21 43 55.3	+1.6
ATD	Arta Tunnel	90.81	288	IAmb	IAmb	21 43 56.1	
	comp=Z,36nm,1.0s						
EVO	Evora	91.11	341	eP	P	21 43 53.2	-1.5
	comp=Z,20nm,1.7s						
PVAQ	Vaqueiros	92.12	340	eP	P	21 43 57.8	-1.6
	comp=Z,38nm,1.9s						
TORD	Torodi Ar. Bea	111.81	323	Pdiff	Pdif	21 45 27.2	-0.6
	comp=Z,0.9nm,0.8s,baz=2.6,slow=4.8,SNR=5.2						
TORD				PKiKP	PKiKP	21 49 21.0	-1.3
	comp=Z,2.6nm,0.4s,baz=20,slow=2.1,SNR=50						
TORD				PP	PP	21 50 09.5	-2.8
	comp=Z,7.8nm,0.9s,baz=5.5,slow=7.8,SNR=13						
TORD				PKKPab	PKKPab	22 00 27.0	-1.8
	comp=Z,1.4nm,0.5s,baz=218,slow=4.1,SNR=12						
BAUV	El Baul	115.48	39		PKPdf	21 49 28.4	-1.0
DBIC	Dimbokro	120.26	327	PKP	PKPdf	21 49 37.7	-0.9
	comp=Z,15nm,0.6s,baz=23,slow=2.1,SNR=39						
DBIC				PKKPab	PKKPab	21 59 49.7	-1.8
	comp=Z,3.6nm,0.7s,baz=187,slow=4.3,SNR=7.1						
DBIC	Dimbokro	120.26	327	PKIKP	PKPdf	21 49 37.5	-1.0
DBIC	Dimbokro	120.26	327	PKPdf	PKPdf	21 49 37.5	-1.0
LSZ	Lusaka	120.42	281	PKIKP	PKPdf	21 49 38.7	-0.2
LSZ	Lusaka	120.42	281		PKPdf	21 49 38.7	-0.2
VNDA	Vanda	125.49	176	PKP	PKPdf	21 49 46.2	-0.4
	comp=Z,9.7nm,0.7s,baz=319,slow=4.5,SNR=55						
VNDA	Vanda	125.49	176	PKPdf	PKPdf	21 49 46.6	-0.1
TBTG	Tabatinga, AM	126.19	48	eP	PKPdf	21 49 49.6	-0.4
NNA	Nana	128.88	60	PKIKP	PKPdf	21 49 55.1	+0.1
NNA	Nana	128.88	60	PKPdf	PKPdf	21 49 55.1	+0.1
LBTB	Lobatse	128.97	275	PKIKP	PKPdf	21 49 55.2	+0.2
LBTB	Lobatse	128.97	275	PKPdf	PKPdf	21 49 55.1	+0.2
MACA	Manacapuru-AM	129.47	37	eP	PKPdf	21 49 56.4	+0.2
MCPB	Macapa, AP	129.85	25	eP	PKPdf	21 49 57.3	+0.3
TSUM	Tsumeb	130.20	287	PKPdf	PKiKP	21 49 58.8	+0.4
MALB	Monte Alegre	130.59	28	eP	PKiKP	21 49 59.0	-0.2
MAW	Mawson	131.05	210	PKP	PKPdf	21 49 57.3	-0.1
	comp=Z,8.4nm,0.6s,baz=72,slow=3.0,SNR=10						
BOSA	Boshof	131.56	272	PKhKP	PKPpre	21 49 53.3	
	comp=Z,2.3nm,0.7s,baz=314,slow=2.1,SNR=6.4						
BOSA				PKP	PKPdf	21 49 58.9	-1.0
	comp=Z,4.6nm,0.5s,baz=39,slow=1.1,SNR=18						
ITTB	Itaituba	132.45	31	eP	PKPdf	21 50 02.0	+0.2
TMAB	Tom-Au,PA,Br	132.81	21	eP	PKiKP	21 50 03.5	-0.2
ETMB	Extrema	132.87	47	eP	PKPdf	21 50 02.3	-0.2
SAML	Samuel	133.56	43	PKIKP	PKPdf	21 50 04.4	+0.5
SAML	Samuel	133.56	43		PKPpre	21 49 53.8	
SAML				PKPdf	PKPdf	21 50 04.4	+0.5
ROSB	Rosrio	134.16	16	eP	PKiKP	21 50 06.8	+0.3
NPGB	Novo Progresso	135.07	32	eP	PKPdf	21 50 07.0	+0.3
PRPB	Parauapebas	136.02	24	eP	PKPdf	21 50 09.0	+0.5
LPAZ	La Paz	137.30	55	PKhKP	PKPpre	21 50 04.0	
	comp=Z,1.9nm,0.5s,baz=349,slow=5.9,SNR=8.0						
LPAZ				PKP	PKPdf	21 50 10.3	-1.1
	comp=Z,16nm,0.7s,baz=348,slow=3.4,SNR=22						
LPAZ	La Paz	137.30	55	eP	PKPdf	21 50 12.4	+1.0
LPAZ	La Paz	137.30	55	PKPdf	PKPdf	21 50 10.7	-0.8
PB16	IPOC Station P	138.18	58	PKPdf	PKPdf	21 50 13.9	+0.9
CLDB	Colider	138.43	35	eP	PKPdf	21 50 13.6	+0.8
VILB	Vilhena	138.45	42	eP	PKiKP	21 50 14.7	-0.5
VILB	Vilhena	138.45	42	PKPdf	PKPdf	21 50 13.8	+0.9
PDRB	Porto dos Gac	138.73	37	eP	PKPdf	21 50 14.5	+1.1
SMTB	Santa Maria do	139.19	22	eP	PKPdf	21 50 15.1	+0.8
PB08	IPOC Station P	139.81	59	PKPdf	PKPdf	21 50 16.5	+0.8
PB01	IPOC Station P	140.32	60	PKPdf	PKPdf	21 50 17.1	+0.9
PB09	IPOC Station P	141.04	61	PKPpre	PKPpre	21 50 13.9	
PB09					PKiKP	21 50 19.2	-1.3
SNDB	Serra Nova Dou	141.06	29	eP	PKPdf	21 50 18.5	+0.9
PTLB	Pontes e Lacer	141.12	43	PKPdf	PKPdf	21 50 18.1	+0.5
LVC	Limon Verde	141.87	61	PKIKP	PKPdf	21 50 15.3	-4.0
LVC	Limon Verde	141.87	61	eP	PKPdf	21 50 20.7	+1.4
LVC	Limon Verde	141.87	61		PKPpre	21 50 15.3	
ARAG	Araguaiana, MT	144.35	32	eP	PKPab	21 50 23.1	0.0
HJA	Humahuaca	144.36	58	iP	PKPdf	21 50 24.1	+0.4
PP1B	Ponte de Pedra	144.88	38	eP	PKPab	21 50 25.0	-0.1
AZAP	Zapla	145.35	58	iP	PKPbc	21 50 25.7	-0.4
LCO	Las Campanas	145.43	71	PKP2	PKPbc	21 50 26.3	0.0
LCO	Las Campanas	145.43	71		PKPbc	21 50 26.3	0.0
ASTB	Santa Barbara	145.48	57	iP	PKPbc	21 50 26.1	-0.3
GDU01	Guandu, BA	145.49	11	eP	PKPbc	21 50 26.5	+0.1
BDFB	Brasilia	145.53	26	PKPbc	PKPdf	21 50 25.9	+0.4
	comp=Z,88nm,0.7s,baz=329,slow=3.3,SNR=97						
BDFB	Brasilia	145.53	26	PKP2	PKPbc	21 50 26.4	-0.3
BDFB	Brasilia	145.53	26		PKPbc	21 50 26.4	-0.3
JANB	Januaria	145.95	20	eP	PKPdf	21 50 27.0	+0.8
CO06	Fray Jorge	145.95	74		PKPbc	21 50 26.6	-0.7
GO04	Tololo Observa	146.15	72	iP	PKPdf	21 50 27.0	+0.7
FSA	Cafayete	146.25	62	iP	PKPdf	21 50 27.4	+0.8
CO03	El Pedregal	146.67	73		PKPdf	21 50 27.6	+0.6
VCA	Vinchina	146.81	68	iP	PKPbc	21 50 28.7	-1.3
AROD	Rodeo	147.00	71	iP	PKPbc	21 50 31.5	+0.8
AQDB	Aquidauana	147.08	42	eP	PKPdf	21 50 28.7	+0.9
AHML	Horco Molle	147.14	62	iP	PKPdf	21 50 28.8	+0.9
ACCO	Cerro Coronel	147.54	71	iP	PKPdf	21 50 29.9	+1.1
MC01	Montes Claros	147.62	20	eP	PKPdf	21 50 29.9	+1.0
IPMB	Ipameri, GO	147.68	28	eP	PKPdf	21 50 29.9	+0.9
ROC1	El Roble	147.83	76	iP	PKPdf	21 50 28.9	-0.2
VA03	San Esteban	148.00	76	PKPbc	PKPbc	21 50 33.2	+0.2
VA03				PKPab	PKPab	21 50 38.1	+0.8
ACLC	CERRO LA CRUZ	148.07	67	iP	PKPdf	21 50 30.4	+0.9
RTLS	Leoncito	148.19	73	iP	PKPdf	21 50 30.9	+1.2
AUSP	Uspallata	148.41	74	iP	PKPdf	21 50 31.6	+1.5
GO05	Huala	148.47	80	PKPab	PKPab	21 50 39.2	+0.1
ITRB	Iturama	148.55	33	eP	PKPdf	21 50 32.1	+1.8
AVFE	Valle Fertil	148.61	69	iP	PKPdf	21 50 30.5	+0.3
BO01	Tunca	148.66	79	PKPab	PKPab	21 50 40.3	+0.5
RTCV	Cerro Valdivia	148.72	72	iP	PKPbc	21 50 34.8	+0.1
NVL	N'lazarevskaya	148.87	207	ePKP2	PKPab	21 50 38.3	-1.3
NVL				pmax	pmax		
	comp=Z,81nm,0.8s						
ASAL	Salagasta	149.01	74	iP	PKPdf	21 50 30.4	-0.4
APLL	PUNTA DE LOS L	149.01	68	iP	PKPbc	21 50 35.3	-0.2
ARCO	CERRO ARCO	149.10	74	iP	PKPbc	21 50 35.5	-0.3
DIAM	Diamantina, MG	149.22	20	eP	PKPbc	21 50 34.1	-2.3
ML02	Panimavida	149.24	81	PKPab	PKPab	21 50 42.5	+0.3
ACHE	Chepes	149.45	69	iP	PKPdf	21 50 31.7	+0.1
AVIZ	Vizcacheras	149.77	75	iP	PKPbc	21 50 37.5	+0.2
BELA	Belgrano 2	149.91	179	PKPbc	PKPbc	21 50 35.7	-0.4
BELA				PKPab	PKPab	21 50 43.9	+0.2
PCMB	Pacaembu	149.95	36	eP	PKPdf	21 50 34.1	+1.6
SJMB	Sao Joao De Ma	150.13	16	eP	PKPdf	21 50 35.0	+2.1
BSFB	Barra de Sao F	150.31	15	eP	PKPdf	21 50 35.5	+2.4
BB19B	Bebedouro	150.45	30	eP	PKPdf	21 50 35.4	+2.1
RFA	San Rafael	150.61	77	iP	PKPdf	21 50 32.0	-1.1
LC01	Cunco	150.64	87	PKPbc	PKPbc	21 50 39.1	+0.1
TCA	Tanti	150.86	67	iP	PKPdf	21 50 35.0	+1.2
RIB01	Linhares ES	150.86	14	eP	PKPbc	21 50 37.0	-3.0
MRA	San Martin	150.89	70	iP	PKPdf	21 50 33.9	+0.2
CPUP	Villa Florida	151.25	50	PKP	PKPdf	21 50 33.9	-0.5
	comp=Z,11nm,1.0s,baz=323,slow=2.4,SNR=6.2						
CPUP				PKPbc	PKPbc	21 50 40.6	-0.1
	comp=Z,43nm,0.7s,baz=330,slow=1.6,SNR=51						
CPUP				PKPab	PKPab	21 50 51.0	+0.3
	comp=Z,23nm,0.8s,baz=8.1,slow=7.1,SNR=7.2						
CPUP	Villa Florida	151.25	50	eP	PKPdf	21 50 34.7	+0.3
CPUP	Villa Florida	151.25	50	PKPdf	PKPdf	21 50 34.6	+0.3
CPUP				PKPab	PKPab	21 50 51.7	+1.0
LL03	Petrohue	151.36	91	PKPab	PKPab	21 50 52.6	+1.7
BSCB	Bom Sucesso	151.54	24	eP	PKPdf	21 50 36.4	+1.4
RCLB	Rio Claro- Sao	152.04	30	eP	PKPdf	21 50 37.3	+1.6
ALF01	Guarapari-ES	152.08	16	eP	PKPdf	21 50 37.0	+1.3
FRTB	Fartura	152.17	34	eP	PKPdf	21 50 37.6	+1.8
SNAA	Sanae	152.34	200	PKP	PKPdf	21 50 34.0	-0.7
	comp=Z,2.6nm,0.7s						
SNAA				PKPbc	PKPbc	21 50 41.2	-0.7
SNAA				PKPab	PKPab	21 50 54.4	+0.1
	baz=161,slow=5.6						
SNAA	Sanae	152.34	200	PKPbc	PKPbc	21 50 41.4	-0.5
SNAA				PKPab	PKPab	21 50 54.5	+0.3
PLCA	Paso Flores	152.42	89	PKP	PKPdf	21 50 35.0	-0.7
	comp=Z,10.0nm,1.0s,baz=292,slow=2.8,SNR=7.7						
PLCA				PKPbc	PKPbc	21 50 42.8	-0.2
	comp=Z,36nm,0.6s,baz=297,slow=2.4,SNR=100						
PLCA				PKPab	PKPab	21 50 55.8	+0.3
	comp=Z,18nm,0.7s,baz=296,slow=6.0,SNR=10						
PLCA	Paso Flores	152.42	89	eP	PKPdf	21 50 38.4	+2.6
PLCA	Paso Flores	152.42	89	PKPbc	PKiKP	21 50 43.8	+0.6
PLCA				PKPab	PKPab	21 50 56.7	+1.2
LL02	Futaleuf	152.61	95	PKPab	PKPab	21 50 56.7	+0.6
VAO	Valinhos	152.77	29	eP	PKPdf	21 50 39.7	+2.9
VAS01	Vassouras-RJ	153.11	22	eP	PKPdf	21 50 37.9	+0.7
SPB	Sao Paulo	153.16	30	eP	PKPdf	21 50 37.8	+0.6
SPB	Sao Paulo	153.16	30	PKPab	PKPab	21 50 59.3	+0.4
DUB01	Friburgo-RJ	153.17	19	eP	PKPdf	21 50 40.3	+2.9
COYC	Coyhaique	153.32	100	PKPab	PKPab	21 50 59.5	+0.4
SMAI	San Martin Ant	153.46	152		PKPab	21 50 59.3	+0.3
PARB	Paraibuna	153.51	27	eP	PKPdf	21 50 40.1	+2.3
MAN01	Angra dos Reis	153.53	23	eP	PKPdf	21 50 37.8	-0.1
PET01	Itanhaem-SP	153.86	31	eP	PKPdf	21 50 39.0	+0.8
VNA2	Neumayer--Watz	153.90	199	PKPbc	PKPbc	21 50 45.1	-0.1
	baz=106,slow=1.0						
VNA3	Neumayer Olymp	154.13	197	PKPbc	PKPbc	21 50 45.3	-0.4
ITQB	Itaqui	154.29	53	eP	PKPdf	21 50 40.1	+1.5
MG05	Puerto Natales	154.45	113	PKPbc	PKiKP	21 50 46.8	-0.1
GO09	Cerro Castillo	154.50	112		PKPab	21 51 05.4	+1.4
ITAB	Concordia	154.54	43	eP	PKPdf	21 50 42.6	+3.6
PMSA	Palmer Station	156.27	147	eP	PKPdf	21 50 42.1	+2.0
CPSB	Cacapava Do Su	156.54	49	eP	PKPdf	21 50 43.3	+1.7

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*IDC **17** 21:32:19.2±1.2, 43°.51N×105°.34W, h0^{km}, mb1 3.6/6, mb1mx3.5/69, mbtmp3.3/6, ML2.8/5 Error ellipse: s-maj=22.7km s-min=9.9km az=153.0*

*NEIC **17** 21:32:28.1±1.9, 43°.54N±0°.04×105°.88W±0°.08, h0^{km}±2^{km}, ML3.7/76, Error ellipse: s-maj=9.8km s-min=6.0km az=68.0*

ISC 17 21:32:26.8±1.2**, 43°.50N**±0°.06×**105°.78W**±0°.08**, h0^{km}, n76, σ1^{s}47**/71**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
K22A	Casper	1.01	213		Pg	21 32 44.2	-1.8
RWWY	Rawlins	2.10	211		Pn	21 33 01.9	-1.4
RWWY				IAML		21 33 43.5	
	469nm,1.1s						
RWWY				IAML		21 33 46.4	
	483nm,1.1s						
PD31	Pinedale Array	2.86	256		Pn	21 33 13.3	-0.5
PDAR	Pinedale Array	2.86	256	Pn	Pn	21 33 13.2	-0.7
	3.1nm,0.3s,baz=71,slow=17,SNR=42						
PDAR				Lg	Lg	21 33 59.8	
	22nm,0.3s,baz=67,slow=36,SNR=5.4						
BW06	Boulder Array	2.86	256		Pn	21 33 14.2	+0.3
RLMT	Red Lodge	2.98	304		Pn	21 33 13.2	-2.3
RLMT				IAML		21 34 09.7	
	128nm,1.0s						
LAO	LASA Array	3.20	355	Pn	Pn	21 33 17.2	-1.2
YMP	Mirror Lake Pl	3.38	293		Pn	21 33 21.9	+0.8
YMP				IAML		21 34 22.5	
	comp=N,236nm,1.1s						
LKWY	Lake	3.50	289		Pg	21 33 33.7	-0.1
LKWY				IAML		21 33 49.9	
	comp=N,127nm,1.2s						
LKWY				IAML		21 35 04.4	
	comp=N,104nm,1.6s						
LOHW	Long Hollow	3.51	273		Pn	21 33 24.4	+1.6
H17A	Grant Village	3.58	286		Pn	21 33 23.8	0.0
H17A				IAML		21 34 29.3	
	comp=N,102nm,1.1s						
GCMT	Greycliff	3.60	311		Pn	21 33 21.5	-2.4
FLWY	Flagg Ranch	3.61	281		Pn	21 33 25.4	+1.3
FLWY				IAML		21 34 33.5	
	comp=N,160nm,1.6s						
FLWY				IAML		21 34 58.5	
	comp=N,100nm,1.8s						
MOOW	Moose Ponds	3.61	276	Pn	Pn	21 33 24.6	+0.4
YUF	Upper Falls	3.62	291		Pn	21 33 24.8	+0.5
SNOW	Snow King Moun	3.62	271		Pn	21 33 25.5	+1.2
SNOW				IAML		21 34 36.1	
	comp=N,167nm,1.1s						
SNOW				IAML		21 34 39.9	
	comp=N,168nm,0.8s						
REDW	Red Top Meadow	3.70	270		Pn	21 33 27.0	+1.6
REDW				IAML		21 34 37.2	
	comp=N,173nm,1.2s						
REDW				IAML		21 35 01.6	
	comp=N,132nm,1.2s						
ISCO	Idaho Springs	3.70	178	Pn	Pn	21 33 25.4	-0.1
ISCO				IAML		21 34 26.7	
	comp=N,66nm,0.9s						
YNR	Norris Junctio	3.73	291		Pn	21 33 26.9	+1.1
OGNE	Ogallala	3.78	131	Pn	Pn	21 33 26.1	-0.3
FXWY	Fox Creek	3.81	274		Pn	21 33 27.3	+0.3
O20A	White River Ci	3.83	209	Pn	Pn	21 33 28.7	+1.5
O20A				IAML		21 34 54.7	
	comp=E,134nm,1.7s						
O20A				IAML		21 35 18.0	
	comp=N,151nm,2.1s						
YHH	Holmes Hill	3.87	291		Pn	21 33 28.3	+0.5
YMR	Madison River	3.91	289		Pn	21 33 28.7	+0.3
YMR				IAML		21 34 46.0	
	comp=N,140nm,1.0s						
YMR				IAML		21 34 54.5	
	comp=E,119nm,1.2s						
AHID	Auburn Hatcher	3.96	261		Pn	21 33 30.2	+1.2
AHID				IAML		21 34 48.4	
	comp=E,116nm,1.0s						
AHID				IAML		21 34 57.1	
	comp=E,79nm,1.1s						
RDMU	Red Mountain	4.07	225		Pn	21 33 31.7	+1.2
RDMU				IAML		21 34 49.4	
	comp=E,86nm,1.0s						
RDMU				IAML		21 34 54.3	
	comp=N,81nm,1.4s						
ECR	Eagle Creek	4.11	266		Pg	21 33 45.7	+0.2
QLMT	Earthquake Lak	4.28	290		Pn	21 33 33.5	+0.2
SMCO	Snowmass	4.41	192		Pb	21 33 42.5	-2.9
SMCO				IAML		21 34 55.7	
	comp=N,71nm,1.1s						
SMCO				IAML		21 35 02.3	
	comp=N,66nm,1.4s						
HWUT	Hardware Ranch	4.67	248	IAML		21 35 14.7	
	comp=N,76nm,1.3s						
HWUT				IAML		21 35 18.1	
	comp=N,77nm,1.1s						
BOZ	Bozeman (W)	4.68	299		Pn	21 33 38.7	0.0
BOZ				IAML		21 35 05.0	
	comp=N,37nm,2.0s						
BOZ				IAML		21 35 06.0	
	comp=N,41nm,1.1s						
E28A	Huff	4.74	48	Pn	Pn	21 33 41.5	+2.0
SUSD	Miller	5.02	77		Pn	21 33 45.1	+1.8
KSCO	Kaye Shedlock'	5.08	151		Pn	21 33 46.6	+2.4
DGMT	Dagmar	5.09	12		Pn	21 33 45.7	+1.4
P18A	Preston Nutter	5.12	222		Pn	21 33 47.0	+2.0
P18A				IAML		21 35 32.9	
	comp=E,60nm,1.1s						
JLU	Jordanelle	5.12	237		Pn	21 33 48.2	+3.3
JLU				IAML		21 35 39.4	
	comp=N,52nm,1.2s						
JLU				IAML		21 35 46.2	
	comp=E,48nm,1.0s						
DLMT	Dillon	5.22	293		Pn	21 33 46.1	-0.1
DLMT				IAML		21 35 32.4	
	comp=E,40nm,1.5s						
DLMT				IAML		21 35 44.8	
	comp=E,41nm,1.5s						
K31A	O'Neill	5.22	97		Pn	21 33 49.8	+3.7
CTU	Camp Tracy	5.25	240	Pg	Pg	21 34 11.1	+3.7
CTU				IAML		21 35 33.3	
	comp=N,36nm,1.3s						
CTU				IAML		21 35 49.0	
	comp=E,53nm,1.1s						
MCMT	McKenzie Canyo	5.25	287		Pn	21 33 46.9	+0.1
LRM	Limekiln Ridge	5.29	298	Pn	Pn	21 33 47.4	+0.1
EGMT	Eagleton	5.31	330	Pn	Pn	21 33 46.7	-0.7
SPUT	South Promonto	5.40	248		Pn	21 33 48.4	-0.3
SPUT				IAML		21 35 48.3	
	comp=E,44nm,1.4s						
SPUT				IAML		21 36 18.1	
	comp=N,38nm,1.9s						
HVU	Hansel Valley	5.44	254		Pn	21 33 49.4	+0.2
HVU				IAML		21 36 10.7	
	comp=E,35nm,1.4s						
P17A	Butcher Ranch,	5.48	224		Pn	21 33 49.9	+0.1
BCYI	Bear Canyon	5.57	281		Pn	21 33 51.6	+0.6
MPU	Maple Canyon	5.59	233		Pn	21 33 53.7	+2.3
SRU	San Rafael Swe	5.65	221		Pn	21 33 52.5	+0.3
SDCO	Great Sand Dun	5.75	178		Pn	21 33 52.0	-1.7
TMUT	Trail Mountain	5.85	226		Pn	21 33 55.2	+0.1
NLU	North Lily Min	5.89	235		Pn	21 33 54.5	-1.1
BGU	Big Grassy Mou	5.96	247		Pn	21 33 56.5	0.0
BGNE	Belgrade	6.02	108	Pn	Pn	21 34 00.8	+3.7
Q16A	Castle Valley	6.12	223	Pn	Pn	21 33 57.9	-0.8
MDND	Maddock	6.13	43	Pn	Pn	21 33 59.2	+0.5
DUG	Dugway, Tooele	6.20	240	Pn	Pn	21 33 59.8	+0.1
HLID	Hailey	6.28	274	Pn	Pn	21 34 01.0	+0.2
MVCO	Mesa Verde	6.62	199	Pn	Pn	21 34 06.4	+0.9
MVU	Marysvale	6.97	226		Pn	21 34 10.8	+0.5
MTPU	Mount Pierson	7.30	224	Pn	Pn	21 34 15.3	+0.3
JTMT	Jette	7.32	308	Pn	Pn	21 34 13.6	-1.4
R32A	Long Quarter,	7.37	131	Pn	Pn	21 34 17.6	+2.0
PLID	Pearl Lake	7.50	286	Pn	Pn	21 34 18.2	+0.6
ELK	Elko	7.55	252	Pn	Pn	21 34 17.0	-1.3
	comp=E,0.2nm,0.3s,baz=111,slow=8.6,SNR=3.0						
ELK				Lg	Lg	21 36 26.8	
	comp=E,0.1nm,0.3s,baz=171,slow=19,SNR=1.1						
PKCU	Pink Cliffs	7.83	222	Pn	Pn	21 34 20.3	-1.9
SPR3	Spring Creek 3	7.85	238	Pn	Pn	21 34 23.4	+0.8
PSUT	Pine Spring	7.86	234	Pn	Pn	21 34 22.9	+0.3
CCUT	Cedar City	8.28	227	Pn	Pn	21 34 29.1	+0.7
U15A	North Rim	8.65	217		Pn	21 34 34.7	+1.3
WUAZ	Wupatki	9.06	210		Pn	21 34 40.6	+1.6
I10CA	LAC DU BONNET	9.46	41	i		22 28 30.0	
	baz=215,slow=258,SNR=5.2						
ULM	Lac du Bonnet	9.56	42	Pn	Pn	21 34 32.9	-13
	comp=E,0.4nm,0.3s,baz=233,slow=12,SNR=2.1						
ULM				Lg	Lg	21 37 10.5	
	comp=E,0.3nm,0.3s,baz=308,slow=21,SNR=2.2						
NVAR	Mina Array Bea	10.73	246	Pn	Pn	21 35 00.7	-1.2
	comp=E,0.0nm,0.3s,baz=54,slow=13,SNR=1.9						
TXAR	Lajitas Array	14.24	172	Pn	Pn	21 35 43.8	-5.9
	comp=E,0.0nm,0.3s,baz=19,slow=11,SNR=2.0						
TXAR				Lg	Lg	21 39 51.1	
	comp=E,0.0nm,0.3s,baz=11,slow=24,SNR=3.6						
YKA	Yellowknife Ar	19.72	348	P	P	21 36 50.5	-7.1
	comp=E,0.1nm,0.3s,baz=160,slow=12,SNR=2.5						

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*MEX **17** 21:50:15.4±0.5, 15°.63N×93°.91W, h20^{km}±24^{km}, MD4.3*

*IDC **17** 21:50:25.3±15.0, 16°.34N×93°.49W, h171^{km}±101^{km}, mb3.5/4, mb1 3.9/6, mb1mx3.3/41, mbtmp4.2/6, Error ellipse: s-maj=127.5km s-min=37.3km az=168.0*

ISC 17 21:50:13.6±1.6**, 15°.6N**±0°.1×**93°.85W**±0°.09**, h100^{km}, n13, σ2^{s}77**/20**, mb4.0**/4**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UXUV	UXUV	1.72	351	iP	Pn	21 50 41.0	-1.6
UXUV				iS	Sn	21 51 00.6	-4.1
HUIG	Huatulco	2.18	275	iP	Pn	21 50 47.3	-1.2
HUIG				iS	Sn	21 51 11.9	-3.3
VHO	Vista Hermosa	3.13	298	iP	Pn	21 51 02.1	+0.9
VHO				iS	Sn	21 51 36.7	-1.2
PEIG	Puerto Escondi	3.20	277	iP	Pn	21 51 01.0	-1.0
PEIG				iS	Sn	21 51 35.3	-4.0
YOIG	Yosondua	3.76	290	iP	Pn	21 51 10.8	+1.0
YOIG				iS	Sn	21 51 49.3	-3.9
TOIG	Toxpalan	3.95	309	iP	Pn	21 51 12.7	+0.6
TOIG				iS	Sn	21 51 57.3	-0.3
PNIG	Pinotepa	4.18	281	iP	Pn	21 51 15.1	-0.2
PNIG				iS	Sn	21 51 58.8	-4.4
TXAR	Lajitas Array	16.38	328	P	P	21 53 59.3	+0.5
	0.1nm,0.3s,baz=140,slow=12,SNR=5.1						
LPIG	La Paz	17.62	301	P	Pn	21 54 18.6	+5.9
	14nm,0.3s,baz=110,slow=1.4,SNR=2.1						
TKL	Tuckaleechee C	21.91	22	P	P	21 54 56.9	-1.8
	3.1nm,0.8s,baz=200,slow=15,SNR=2.3						
NVAR	Mina Array Bea	31.30	321	P	P	21 56 26.8	+2.3
	1.7nm,0.7s,baz=134,slow=9.0,SNR=6.8						
YKA	Yellowknife Ar	49.07	347	P	P	21 58 50.0	-0.3
	1.5nm,0.5s,baz=152,slow=7.3,SNR=18						
ARCES	ARCESS Array B	85.17	18	P	P	22 02 37.9	-0.5
	2.0nm,0.9s,baz=302,slow=5.1,SNR=6.8						

NOU 17 22:00:40.9, 20°.34S×169°.65E, h4^{km}, MLv3.8/10**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIFNC	LIFOU	2.30	259	P	Pn	22 01 19.2	-0.4
RTV	Rentapao	2.79	335	P	Pn	22 01 27.1	+0.8
PINNC	Pines Island,	3.05	222	P	Pn	22 01 29.9	-0.1
YATNC	Mamie plateau,	3.09	236	P	Pn	22 01 29.5	-1.0
OUENC	Ouen Island, N	3.34	231	P	Pn	22 01 33.9	0.0
DZM	Mont Dzumac	3.45	239	P	Pn	22 01 35.4	-0.2
ONTNC	Ouen Toro	3.56	236	P	Pn	22 01 37.1	+0.1
NOUC	Port Laguerre	3.58	240	P	Pn	22 01 38.0	+0.8
KOUNC	Koumac, New Ca	5.03	267	P	Pn	22 01 57.4	+0.2

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*IDC **17** 22:02:30.0±1.4, 31°.37S×71°.71W, h0^{km}, mb4.3/2, mb1 3.9/6, mb1mx3.7/35, mbtmp3.9/6, ML3.7/4, Error ellipse: s-maj=55.1km s-min=33.0km az=106.0*

*NEIC **17** 22:02:34.5±1.1, 31°.47S±0°.02×71°.9W±0°.1, h28^{km}±12^{km}, ML4.0(GUC), Error ellipse: s-maj=13.8km s-min=2.9km az=88.0*

*GUC **17** 22:02:34.1±0.8, 31°.48S×71°.76W, h37^{km}±3^{km}, ML4.0*

ISC 17 22:02:33.9±1.6**, 31°.46S**±0°.03×**71°.81W**±0°.07**, h29^{km}**±12^{km}**, n58, σ1^{s}15**/76**, 3C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.80	11	⇓iP	Pn	22 02 49.4	+0.3
CO06				iS	Sb	22 03 00.6	+0.9
CO06				IAML		22 03 02.8	
	comp=E,7µm,0.4s						
CO06	Fray Jorge	0.80	11		Pn	22 02 49.5	+0.3
CO06				Sn	Sb	22 03 01.4	+1.7
CO03	El Pedregal	1.14	57	⇓iP	Pn	22 02 54.3	+0.4
CO03				iS	Sn	22 03 08.8	+0.1
CO03				IAML		22 03 16.1	
	comp=E,3µm,0.3s						
CO03	El Pedregal	1.14	57		Pn	22 02 54.4	+0.5
CO03				Sn	Sn	22 03 08.7	+0.1
VA06	Catapilco	1.18	159	⇓iP	Pn	22 02 54.4	+0.1
VA06				iS	Sn	22 03 09.5	+0.1
VA06				IAML		22 03 11.8	
	comp=N,8µm,0.6s						
GO04	Tololo Observa	1.55	34	⇑iP	Pn	22 03 00.8	+1.1
GO04				iS	Sb	22 03 21.6	+0.2
GO04	Tololo Observa	1.55	34		Pn	22 03 00.9	+1.2
GO04				Sn	Sb	22 03 22.3	+0.9
VA01	Torpederas	1.56	175		Pn	22 03 00.1	+0.5
VA01				Sn	Sn	22 03 18.5	-0.4

CO05	La Serena	1.61	18	eP	Pn	22 03 01.5	+1.2
CO05				iS	Sb	22 03 23.1	+0.2
CO05	La Serena	1.61	18		Pn	22 03 01.3	+0.9
CO05				Sn	Sb	22 03 22.6	-0.4
ROCH	El Roble	1.65	156	eP	Pn	22 03 01.6	+0.6
ROCH				⇓iP	Pn	22 03 01.3	+0.2
ROCH				iS	Sn	22 03 22.6	+1.2
ROCH				iS	Sn	22 03 22.9	+1.5
ROCH				IAML		22 03 30.7	
	comp=N,3μm,0.4s						
ROCH				IAML		22 03 31.1	
	comp=N,3μm,0.4s						
VA03	San Esteban	1.68	141	⇑iP	Pn	22 03 02.6	+1.3
VA03				iS	Sb	22 03 23.8	-1.2
VA03				IAML		22 03 27.4	
	comp=E,6μm,0.3s						
VA03	San Esteban	1.68	141		Pn	22 03 02.7	+1.3
VA03				Sn	Sb	22 03 24.7	-0.2
MT02	Curacav	1.88	163	eP	Pn	22 03 04.3	+0.3
MT02	Curacav	1.88	163		Pn	22 03 05.0	+1.0
PEL	Peldehue	1.93	151	⇑eP	Pn	22 03 05.8	+1.1
PEL				eS	Sn	22 03 30.0	+2.0
PEL				IAML		22 03 34.1	
	comp=N,1μm,0.5s						
PEL	Peldehue	1.93	151		Pn	22 03 04.9	+0.2
PEL				Sn	Sn	22 03 27.8	-0.2
MT05	Renca	2.13	155	eP	Pn	22 03 09.2	+1.8
MT05				eS	Sn	22 03 34.8	+1.9
MT05				IAML		22 03 41.6	
	comp=E,2μm,0.2s						
MT05	Renca	2.13	155		Pn	22 03 08.1	+0.7
MT05				Sn	Sn	22 03 35.2	+2.3
VA05	Santo Domingo	2.19	176		Pn	22 03 09.2	+0.8
VA05					Sb	22 03 40.0	+0.3
MT09	Talagante	2.41	164	eP	Pn	22 03 12.6	+1.2
MT09				eS	Sn	22 03 40.7	+0.7
MT09				IAML		22 03 50.0	
	comp=E,902nm,0.5s						
MT09	Talagante	2.41	164		Pn	22 03 12.3	+0.8
MT09						22 03 12.5	
MT09					Sn	22 03 41.2	+1.2
MT01	Popeta	2.44	169	eP	Pn	22 03 12.2	+0.4
MT01				IAML		22 03 55.4	
	comp=E,617nm,0.2s						
MT01	Popeta	2.44	169		Pn	22 03 12.2	+0.4
LCO	Las Campanas	2.62	22	eP	Pn	22 03 15.3	+0.9
LCO				eS	Sn	22 03 48.1	+2.7
LCO	Las Campanas	2.62	22		Pn	22 03 14.7	+0.2
ZON	Zonda	2.67	93	Pn	Pn	22 03 17.7	+2.7
BO04	La Punta	2.71	159	eP	Pn	22 03 16.8	+1.3
BO04				eS	Sn	22 03 49.2	+1.8
BO04				IAML		22 04 00.4	
	comp=N,651nm,0.3s						
LMEL	Las Melosas	2.74	151	eP	Pn	22 03 17.2	+1.3
LMEL				eS	Sn	22 03 50.0	+1.8
LMEL				IAML		22 03 59.9	
	comp=N,867nm,0.2s						
BO01	Tunca	2.98	168	eP	Pn	22 03 19.7	+0.5
BO01				IAML		22 04 07.6	
	comp=E,276nm,0.6s						
BO01	Tunca	2.98	168		Pn	22 03 20.7	+1.5
AC04	Llanos de Chal	3.31	11		Pn	22 03 25.7	+2.0
BO02	Sierra Bellavi	3.43	166	eP	Pn	22 03 26.4	+1.0
BO02				eS	Sn	22 04 05.0	-0.2
BO02				IAML		22 04 21.9	
	comp=N,571nm,0.3s						
BO02	Sierra Bellavi	3.43	166		Pn	22 03 26.6	+1.2
GO03	Copiap	4.09	20		Pn	22 03 35.6	+1.1
AC02	Maricunga	5.17	28		Pn	22 03 50.7	+1.0
H03N1	Juan Fernandez	6.32	250	T	T	22 10 47.3	
	baz=80,slow=72						
H03N3	Juan Fernandez	6.34	250	T	T	22 10 46.0	
	baz=80,slow=72						
H03N2	Juan Fernandez	6.34	250	T	T	22 10 47.4	
	baz=80,slow=72						
LC01	Cunco	7.42	180	Pn	Pn	22 04 20.2	+0.1
PB06	IPOC Station P	8.95	13	Pn	Pn	22 04 41.7	+0.5
PLCA	Paso Flores	9.31	174	Pn	Pn	22 04 46.2	+0.2
	comp=N,0.2nm,0.3s,baz=337,slow=11,SNR=7.8						
PLCA	Paso Flores	9.31	174		Pn	22 04 46.8	+0.7
CPUP	Villa Florida	13.67	72	Pn	Pn	22 05 43.2	-2.6
	comp=N,0.1nm,0.3s,baz=267,slow=18,SNR=2.0						
LPAZ	La Paz	15.47	13	Pn	Pn	22 06 08.8	-1.8
	comp=N,0.1nm,0.3s,baz=207,slow=3.8,SNR=3.7						
SIV	San Ignacio	18.25	35	P	P	22 06 42.9	-2.1
	comp=N,0.1nm,0.3s,baz=259,slow=18,SNR=2.5						
DBIC	Dimbokro	74.19	72	P	P	22 14 08.5	+0.3
	comp=N,1.2nm,0.5s,baz=200,slow=6.5,SNR=4.3						
TORD	Torodi Ar. Bea	83.16	70	P	P	22 14 58.0	+0.5
	comp=N,2.4nm,0.7s,baz=263,slow=4.7,SNR=15						
H11S2	WAKE ISLAND Hy	125.97	271	T	T	00 40 31.5	
	baz=117,slow=74,SNR=30						
H11S1	WAKE ISLAND Hy	125.98	271	T	T	00 40 27.5	
	baz=117,slow=74,SNR=21						
H11S3	WAKE ISLAND Hy	125.98	271	T	T	00 40 30.6	
	baz=117,slow=74,SNR=20						
H11N3	WAKE ISLAND Hy	126.32	272	T	T	00 40 55.2	
	baz=116,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	126.33	272	T	T	00 40 57.1	
	baz=116,slow=75,SNR=4.0						
H11N2	WAKE ISLAND Hy	126.33	272	T	T	00 40 56.9	
	baz=116,slow=75,SNR=21						
KURBB	Kurchatov Arra	150.85	40	PKPbc	PKiKP	22 22 23.9	+0.2
	comp=N,1.8nm,0.8s,baz=297,slow=3.0,SNR=12						
AAK	Ala-Archa	151.06	58	PKPbc	PKiKP	22 22 24.9	+0.3
	comp=N,0.6nm,0.5s,baz=220,slow=3.6,SNR=4.5						
ZALV	Zalesovo Beam	151.96	30	PKPbc	PKPbc	22 22 25.7	+0.2
	comp=N,5.9nm,0.5s,baz=299,slow=3.3,SNR=26						
ZALV				PKPab	PKPab	22 22 34.6	-0.2
	comp=N,2.0nm,0.6s,baz=295,slow=4.5,SNR=4.9						
MKAR	Makanchi Array	154.89	45	PKPbc	PKPbc	22 22 32.3	+0.1
	comp=N,0.4nm,0.7s,baz=301,slow=1.3,SNR=3.0						

IDC 17 22:27:46.8±47.0**, 27°.37S**×**177°.60W, h0^{km}, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.3**/23**, mbtmp3.8**/3**, Error ellipse: s-maj=865.9km s-min=170.1km az=93.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.61	253	P	P	22 34 44.5	-1.9
	2.5nm,0.9s,baz=54,slow=8.7,SNR=3.9						
ASAR	Alice Springs	43.71	264	P	P	22 35 54.0	0.0
	0.3nm,0.5s,baz=96,slow=7.0,SNR=2.3						
WRA	Warramunga Arr	44.42	269	P	P	22 36 00.7	+1.0
	0.6nm,0.5s,baz=106,slow=7.8,SNR=14						
H03S2	Juan Fernandez	81.85	124	T	T	00 09 09.1	
	baz=238						
H03S1	Juan Fernandez	81.86	124	T	T	00 09 07.1	
	baz=238						
H03S3	Juan Fernandez	81.86	124	T	T	00 09 07.4	
	baz=238						
H03N3	Juan Fernandez	82.02	123	T	T	00 09 29.7	
	baz=236						
H03N2	Juan Fernandez	82.02	123	T	T	00 09 23.3	
	baz=236						
H03N1	Juan Fernandez	82.04	123	T	T	00 09 31.0	
	baz=236						
H10N3	ASCENSION HYDR	141.36	153	T	T	01 23 12.3	
	baz=204,slow=75						
H10N1	ASCENSION HYDR	141.37	153	T	T	01 23 12.3	
	baz=204,slow=75						
H10N2	ASCENSION HYDR	141.38	153	T	T	01 23 12.3	
	baz=204,slow=75						

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*ANF **17** 22:29:55.8±0.3, 32°.97N×97°.31W, h5^{km}, ML3.5/9, Error ellipse: s-maj=3.6km s-min=2.5km az=109.0*

*NEIC **17** 22:29:55.7±1.1, 32°.97N±0°.02×97°.34W±0°.02, h5^{km}±1^{km}, mb_Lg3.0/57, Error ellipse: s-maj=4.3km s-min=2.8km az=22.0*

ISC 17 22:29:55.2±1.3**, 32°.96N**±0°.02×**97°.32W**±0°.03**, h0^{km}**±13^{km}**, n69, σ0^{s}.77**/69**, Central Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Z35A	Perchaven, San	0.37	9	Pg	Pg	22 30 01.8	-0.5
Z35A				Sg	Sg	22 30 07.1	0.0
Z35A	Perchaven, San	0.37	9	P	Pg	22 30 01.9	-0.5
	baz=192						
WHTX	Lake Whitney,	0.98	187	Pg	Pb	22 30 15.2	+0.3
WHTX	Lake Whitney,	0.98	187	P	Pg	22 30 14.3	+0.4
	baz=5.6,SNR=38						
WHTX				S	Sg	22 30 27.6	+1.1
	baz=5.6						
LOOK	Love County	1.03	7	Pg	Pn	22 30 16.5	-0.5
LOOK					Sn	22 30 33.2	+1.1
237A	Washetta, Mont	1.60	126		Pn	22 30 24.6	-0.1
237A					Sg	22 30 47.1	+0.5
237A	Washetta, Mont	1.60	126	P	Pb	22 30 24.7	-0.9
	baz=307,SNR=22						
237A				S	Sg	22 30 47.1	+0.5
	baz=307						
X34A	Smith Ranch, M	1.69	346		Pn	22 30 25.5	-0.4
ABTX	Abilene, Hawle	1.98	261	Pn	Pn	22 30 29.8	-0.2
ABTX	Abilene, Hawle	1.98	261	P	Pn	22 30 29.9	-0.2
	baz=79						
ABTX				S	Sb	22 30 57.8	+0.4
	baz=79						
Z38A	Mt. Pleasant	1.98	81		Pn	22 30 29.7	-0.3
Z38A	Mt. Pleasant	1.98	81	P	Pn	22 30 29.9	-0.2
	baz=262,SNR=6.0						
WMOK	Wichita Mounta	2.15	326	Pn	Pn	22 30 32.0	-0.3
435B	Jarrell	2.19	186	Pn	Pn	22 30 32.8	0.0
435B	Jarrell	2.19	186	P	Pn	22 30 32.9	+0.1
	baz=5.3,SNR=5.8						
435B				S	Sb	22 31 01.8	-1.5
	baz=5.3						
W35A	Tecumseh	2.21	10	Pn	Pn	22 30 33.4	+0.2
W35A				IAmb_Lg		22 31 10.9	
	comp=Z,42nm,0.8s						
FNO	Franklin	2.29	358		Pn	22 30 34.0	-0.2
X37A	Clayton	2.30	45	Pn	Pn	22 30 34.1	-0.2
X37A				IAmb_Lg		22 31 14.6	
	comp=Z,86nm,0.8s						
X37A	Clayton	2.30	45	P	Pn	22 30 34.3	0.0
	baz=226,SNR=7.6						
OKCFA	Oklahoma City	2.45	358	IAmb_Lg		22 31 13.6	
	comp=Z,80nm,0.8s						
NATX	Nacogdoches	2.55	117	Pn	Pn	22 30 39.1	+1.3
NATX				IAmb_Lg		22 31 23.1	
	comp=Z,84nm,0.8s						
OK025	Westminster Rd	2.61	360	Pn	Pn	22 30 39.7	+1.0
OK025				IAmb_Lg		22 31 23.7	
	comp=Z,59nm,0.8s						
BCOK	Bluff Creek, N	2.70	355	Pn	Pn	22 30 40.8	+1.0
OK029	Liberty Lake	2.83	358	Pn	Pn	22 30 42.6	+1.0
OK030	Cody Creek RV	2.99	8	Pn	Pn	22 30 43.5	-0.4
OK031	S. Brethren Rd	3.01	8	Pn	Pn	22 30 43.7	-0.4
OK034	N. Norfolk Rd.	3.08	9	Pn	Pn	22 30 45.5	+0.4
TUL1	Leonard	3.20	23	Pn	Pn	22 30 46.9	+0.1
TUL1				IAmb_Lg		22 31 42.9	
	comp=Z,29nm,1.0s						
QUOK	Quay	3.24	9	Pn	Pn	22 30 47.0	-0.3
JCT	Junction City	3.25	221		Pg	22 30 56.8	-0.8
MIAR	Mount Ida	3.50	62	Pn	Pn	22 30 50.6	-0.2
MIAR				IAmb_Lg		22 31 51.9	
	comp=Z,40nm,1.1s						
CROK	Carrier	3.57	351	Pn	Pn	22 30 51.2	-0.7
CROK				IAmb_Lg		22 31 54.2	
	comp=Z,36nm,0.7s						
WLAR	White Oak Lake	3.60	77	Pn	Pn	22 30 52.0	-0.2
WLAR				IAmb_Lg		22 31 58.2	
	comp=Z,39nm,0.8s						
U32A	Winter Ranch,	3.68	338	Pn	Pn	22 30 51.8	-1.5
U32A				IAmb_Lg		22 31 49.6	
	comp=Z,53nm,0.9s						
W39A	Magazine	3.69	52	Pn	Pn	22 30 53.7	+0.3
W39A				IAmb_Lg		22 31 55.4	
	comp=Z,42nm,0.9s						
W39A	Magazine	3.69	52	P	Pn	22 30 53.8	+0.4
	baz=234,SNR=33						
BLOK	Blackwell	3.79	1	Pg	Pb	22 31 03.5	+0.6
BLOK				IAmb_Lg		22 31 56.5	
	comp=Z,38nm,1.1s						
OK032	Salt Plains WL	3.90	349	Pn	Pn	22 30 55.7	-0.7
OK032				Pg	Pb	22 31 06.2	+1.4
GC02	Grant County #	3.90	354	Pn	Pn	22 30 54.4	-2.0
T35A	Sooner Cattle	4.00	9	Pn	Pn	22 30 57.3	-0.4
T35A				Pg	Pb	22 31 07.8	+1.3
KAN14	Manchester OK	4.02	353	Pn	Pn	22 30 57.2	-0.8
X40A	Basin Creek Fa	4.04	67	Pn	Pn	22 30 58.2	-0.1
KAN13	South Haven SW	4.04	358	Pn	Pn	22 30 56.7	-1.6
KAN13				Pg	Pb	22 31 07.0	-0.2
KAN13				IAmb_Lg		22 32 10.1	
	comp=Z,26nm,0.7s						
KAN17	Caldwell West	4.09	355	IAmb_Lg		22 32 06.4	
	comp=Z,45nm,0.8s						
AMTX	Amarillo	4.10	299		Pn	22 30 59.3	+0.2
735A	Kenedy	4.12	186	IAmb_Lg		22 32 07.4	
	comp=Z,38nm,1.0s						
441A	DeRidder	4.15	121	Pn	Pn	22 30 59.4	-0.4
KAN09	Caldwell North	4.17	357	Pn	Pn	22 30 59.9	-0.2
KAN09				IAmb_Lg		22 32 07.9	
	comp=Z,55nm,1.2s						
KAN10	Anthony SW Sta	4.20	352	IAmb_Lg		22 32 09.3	
	comp=Z,22nm,0.8s						
HHAR	Hobbs	4.33	39	Pn	Pn	22 31 02.1	-0.2
KAN12	Harper NE Stat	4.36	353	Pn	Pn	22 31 01.9	-0.8
MSTX	Muleshoe	4.66	284	Pn	Pn	22 31 06.8	-0.2
MSTX				IAmb_Lg		22 32 29.3	
	comp=Z,33nm,0.9s						
CCAR	Cane Creek	4.74	77	Pn	Pn	22 31 07.3	-0.6
WHAR	Wooly Hollow	4.78	60	Pn	Pn	22 31 07.7	-0.8
U40A	Yellville	5.00	46	Pn	Pn	22 31 11.5	0.0
U40A	Yellville	5.00	46	P	Pn	22 31 11.6	+0.1
	baz=229,SNR=8.3						
U40A				P	Pn	22 31 11.6	+0.1
	baz=229,SNR=8.3						
FCAR	Ozark Folk Cen	5.20	54		Pn	22 31 13.2	-0.9
R32A	Long Quarter,	5.56	349	IAmb_Lg		22 32 55.3	
	comp=Z,16nm,0.8s						
S39A	Bolivar	5.74	34	IAmb_Lg		22 33 05.0	
	comp=Z,16nm,1.0s						
MGMO	Mountain Grove	5.89	43	IAmb_Lg		22 33 05.1	
	comp=Z,21nm,0.9s						
LCAR	Lake Charles	5.96	57	Pn	Pn	22 31 23.0	-1.7
KSU1	Kansas State U	6.15	5	IAmb_Lg		22 33 11.4	
	comp=Z,34nm,0.9s						
CBKS	Cedar Bluff	6.16	342	Pn	Pn	22 31 26.8	-0.6
TX31	Lajitas Ar. Si	6.53	238		Pn	22 31 31.4	-1.2
TX32	Lajitas Array	6.53	238		Pn	22 31 31.2	-1.4
TXAR	Lajitas Array	6.53	238	Pn	Pn	22 31 31.8	-0.8
R40A	Maddies Statio	6.72	36	IAmb_Lg		22 33 41.7	
	comp=Z,14nm,0.8s						
MNTX	Cornudas Mount	6.94	262	IAmb_Lg		22 33 43.5	
	comp=Z,31nm,1.2s						
ANMO	Albuquerque	7.84	287	IAmb_Lg		22 34 11.2	
	comp=Z,11nm,0.8s						

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*VIE **17** 22:30:02.7±0.9, 50°.22N×18°.89E, h0^{km}, mb2.2/3, ml2.2/2, ms3.5/1, Error ellipse: s-maj=7.7km s-min=5.3km az=174.0 7 km WSW of Katowice Suspected Mining induced.*

*PRU **17** 22:30:03.6±0.0, 50°.22N×18°.90E, h0^{km}*

ISC 17 22:30:02.7±0.9**, 50°.21N**±0°.04×**18°.94E**±0°.02**, h0^{km}, n23, σ0^{s}.92**/38**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.55	89	ePg	Pg	22 30 12.9	-0.4
OJC				eSg	Sg	22 30 20.9	+0.5
OKC	Ostrava-Krasne	0.64	234	ePG	Pg	22 30 15.3	+0.4
OKC				eSG	Sg	22 30 23.5	+0.4
	comp=Z,23nm,0.7s						
MORC	Moravsky Berou	1.00	245	ePG	Pg	22 30 22.3	+0.4
MORC				eSG	Sb	22 30 36.2	-0.6
LANS	Liptovska Anna	1.12	162	ePG	Pb	22 30 24.9	0.0
LANS				eSG	Sb	22 30 39.8	-0.2
LANS				eLG	Lg	22 30 43.4	
NIE	Niedzica	1.19	132	ePg	Pn	22 30 26.3	-0.3
NIE				eSg	Sn	22 30 43.7	+0.3
KRLC	Kraliky	1.40	265	ePG	Pn	22 30 28.6	-0.9
KRLC				eSG	Sb	22 30 48.1	0.0
	comp=Z,21nm,0.8s						
JAVC	Velka Javorina	1.59	212	ePN	Pn	22 30 32.5	+0.3
DPC	Dobruska-Polom	1.69	276	ePG	Pn	22 30 33.6	+0.1
DPC				eSG	Sg	22 30 57.4	+0.5
	comp=Z,16nm,0.6s						
VYHS	Vyhne	1.72	182	ePN	Pn	22 30 33.8	-0.2
VYHS				eSN	Sn	22 30 56.7	0.0
VRAC	Vranov	1.77	240	ePN	Pn	22 30 34.9	+0.3
VRAC				eSG	Sb	22 30 59.1	+0.2
OSTC	Ostas	1.78	282	ePG	Pn	22 30 34.6	-0.1
OSTC				eSG	Sg	22 31 00.7	+0.9
	comp=Z,9.5nm,0.6s						
KSP	Ksiaz	1.80	291	ePg	Pg	22 30 37.2	-0.1
KSP				eSg	Sg	22 31 01.6	+1.0
CHVC	Chvalec	1.89	283	ePG	Pn	22 30 36.4	+0.2
CHVC				eSG	Sg	22 31 03.3	0.0
	comp=Z,5.8nm,0.4s						
UPC	Upice	1.90	280	eSG	Sg	22 31 04.4	+0.7
	comp=Z,18nm,1.3s						
KRUC	Moravsky	2.02	236	ePN	Pn	22 30 37.6	-0.4
KRUC				eSG	Sb	22 31 06.3	+0.4
CRVS	Cervenica-Dubn	2.10	128	ePN	Pg	22 30 43.3	+0.3
TREC	Trest	2.42	249	eSG	Sg	22 31 19.5	-1.0
	comp=Z,6.0nm,0.6s						
PRU	Pruhonice	2.84	267	ePG	Pb	22 30 54.0	-0.3
PRU				eSG	Sg	22 31 32.7	-1.3
	comp=Z,6.6nm,0.8s						
CONA	Conrad Observa	3.06	223	ePg	Pg	22 31 00.5	-0.8
	0.7nm,0.3s						
CKRC	Cesky Krumlov	3.33	247	eSG	Sg	22 31 48.3	-1.2
KHC	Kasperske Hory	3.65	255	ePN	Pn	22 31 00.0	-0.5
KHC				eSG	Sg	22 31 58.6	-1.3
	comp=Z,6.0nm,0.6s						
MOA	Molln	3.88	234	eSg	Sg	22 32 07.0	-0.4
RETA	Reutte	6.05	246	Sg	Sg	22 33 21.1	+4.2
	2.9nm,0.7s						

IDC 17 22:55:13.8±1.4**, 11°.22N**×**145°.52E, h0^{km}, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.3**/45**, mbtmp3.7**/5**, ML3.9**/1**, Error ellipse: s-maj=56.4km s-min=29.1km az=98.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.44	345	Pn	Pn	22 55 53.6	-1.3
	29nm,0.3s,baz=194,slow=16,SNR=4.9						
GUMO				Sn	Sn	22 56 20.4	-5.0
	24nm,0.3s,baz=163,slow=19,SNR=2.3						
WRA	Warramunga Arr	32.87	200	P	P	23 01 49.1	-0.6
	0.4nm,0.9s,baz=20,slow=9.4,SNR=1.9						
ZALV	Zalesovo Beam	63.91	325	P	P	23 05 49.5	+1.1
	0.6nm,0.5s,baz=91,slow=7.8,SNR=2.2						
ILAR	Eielson Array	70.43	25	P	P	23 06 29.2	-0.5
	0.6nm,0.4s,baz=248,slow=5.9,SNR=13						
YKA	Yellowknife Ar	84.66	27	P	P	23 07 50.2	+0.9
	0.1nm,0.4s,baz=283,slow=5.3,SNR=1.7						

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*IDC **17** 22:56:11.6±0.8, 30°.78S×71°.60W, h0^{km}, mb4.2/7, mb1 4.3/12, mb1mx4.1/27, mbtmp4.1/12, ML3.9/5, Error ellipse: s-maj=25.1km s-min=23.7km az=50.0*

*SJA **17** 22:56:13.4±0.8, 30°.56S×71°.82W, h13^{km}±3^{km}, ML4.3, MW4.1*

*GUC **17** 22:56:16.9±0.6, 30°.63S×71°.66W, h41^{km}±1^{km}, ML4.3*

*NEIC **17** 22:56:17.9±1.4, 30°.60S±0°.04×71°.66W±0°.08, h33^{km}±7^{km}, mb4.1/5, Mwr4.1/28, ML4.3(GUC), Error ellipse: s-maj=10.8km s-min=4.7km az=78.0*

*NEIC **17** 22:56:18, 30°.60S×71°.62W, h38^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.28; M$_{\theta\theta}$0.32; M$_{\phi\phi}$-1.60; M$_{r\theta}$0.56; M$_{\theta\phi}$0.20; M$_{\phi r}$-0.30; Fault plane solution: M$_0$1.61000×10^{15} NP1:ϕ_s152.77000°, δ56.24000°, λ62.17000°. NP2:ϕ_s16.30000°, δ42.68000°, λ124.93000°. Principal axes: T 1.5488, Plg66.0000°, Azm9.0000°; N 0.1204, Plg23.0000°, Azm169.0000°; P -1.6692, Plg7.0000°, Azm262.0000°;*

ISC 17 22:56:16.8±0.7**, 30°.57S**±0°.03×**71°.79W**±0°.04**, h32^{km}**±4^{km}**, n111, σ1^{s}.94**/143**, mb4.3**/10**, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.17	129	⇑iP	Pb	22 56 23.0	+0.1
CO06				iS	Sb	22 56 26.9	-0.3
CO06	Fray Jorge	0.17	129		Pb	22 56 23.1	+0.2
CO06					Sb	22 56 26.7	-0.4
CO05	La Serena	0.80	36	⇓iP	Pn	22 56 31.9	0.0
CO05				iS	Sn	22 56 43.3	+0.6
CO05				IAML		22 56 46.9	
	comp=N,20μm,0.5s						
CO05	La Serena	0.80	36		Pn	22 56 31.7	-0.2
CO05					Sn	22 56 42.4	-0.4
GO04	Tololo Observa	0.94	65	⇓iP	Pn	22 56 33.4	-0.7
GO04				iS	Sn	22 56 45.4	-1.1
GO04	Tololo Observa	0.94	65		Pn	22 56 33.4	-0.7
GO04					Sn	22 56 45.4	-1.1
GO04	Tololo Observa	0.94	65	eP	Pn	22 56 33.3	-0.7
GO04				eS	Sn	22 56 45.5	-1.1
CO03	El Pedregal	0.98	106	⇓iP	Pn	22 56 33.2	-1.3
CO03				iS	Sn	22 56 45.0	-2.4
CO03				IAML		22 56 48.1	
	comp=E,14μm,0.3s						
CO03	El Pedregal	0.98	106		Pn	22 56 33.2	-1.3
CO03					Sn	22 56 45.0	-2.4
CO03	El Pedregal	0.98	106	eP	Pn	22 56 33.2	-1.3
CO03				eS	Sn	22 56 46.0	-1.4
CO03				IAML		22 56 47.7	
	comp=Z,8μm,0.3s						
LCO	Las Campanas	1.81	32	⇑iP	Pn	22 56 47.1	+0.9
LCO				iS	Sn	22 57 10.6	+2.4
LCO	Las Campanas	1.81	32	Pn	Pn	22 56 47.0	+0.9
LCO					Sn	22 57 10.1	+1.8
LCO	Las Campanas	1.81	32	eP	Pn	22 56 47.0	+0.9
LCO				eS	Sb	22 57 11.7	-0.4
VA06	Catapilco	2.03	168	eP	Pn	22 56 49.2	+0.3
VA06				eS	Sn	22 57 12.0	-1.1
VA06				IAML		22 57 21.4	
	comp=N,3μm,0.5s						
AROD	Rodeo	2.04	79	eP	Pn	22 56 51.6	+2.3
AROD				eS	Sb	22 57 18.8	+0.3
ACDV	Cuesta del Vie	2.34	81	eP	Pn	22 56 56.6	+3.4
ACDV				eS	Sn	22 57 23.1	+2.1
ACDV				eS		22 57 26.0	
ACDV				IAML		22 57 30.0	
	comp=Z,1μm,0.5s						
ACCO	Cerro Coronel	2.35	91	eP	Pn	22 56 56.3	+2.8
ACCO				eS	Sb	22 57 27.5	+0.2
VA03	San Esteban	2.43	155	eP	Pn	22 56 55.6	+1.2
VA03				iS	Sn	22 57 23.8	+0.7
VA03				IAML		22 57 34.0	
	comp=E,2μm,0.5s						
VA03	San Esteban	2.43	155		Pn	22 56 55.0	+0.6
VA03	San Esteban	2.43	155	eP	Pn	22 56 56.0	+1.6
VA03				IAML		22 57 35.4	
	comp=Z,2μm,0.7s						
AC04	Llanos de Chal	2.44	15	Pn	Pn	22 56 55.2	+0.8
AC04	Llanos de Chal	2.44	15	eP	Pn	22 56 55.2	+0.8
AC04				eS	Sn	22 57 23.6	+0.4
AC04				IAML		22 57 40.0	
	comp=Z,1μm,0.8s						
VA01	Torpederas	2.45	177	IAML		22 57 36.4	
	comp=N,649nm,0.6s						
VA01	Torpederas	2.45	177		Pn	22 56 56.0	+1.4
RTLS	Leoncito	2.46	121	eP	Pn	22 56 57.6	+2.5
RTLS				eS	Sn	22 57 23.6	-0.6
RTLS				eS		22 57 32.9	
RTLS				IAML		22 57 39.7	
	comp=Z,1μm,0.5s						
ROCH	El Roble	2.48	165	⇑eP	Pn	22 56 55.8	+0.5
ROCH				eP	Pn	22 56 55.5	+0.2
ROCH				eS	Sn	22 57 25.0	+0.3
ROCH				IAML		22 57 33.1	
	comp=E,1μm,0.6s						
ROCH				IAML		22 57 33.8	
	comp=N,2μm,0.4s						
ROC1	El Roble	2.49	165	eP	Pn	22 56 55.6	+0.3
ROC1				eS	Sn	22 57 25.8	+1.0
AUSP	Uspallata	2.63	129	eP	Pn	22 57 00.0	+2.6
AUSP				eS	Sn	22 57 32.6	+4.2
PEL	Peldehue	2.73	160	eP	Pn	22 56 58.8	+0.2
PEL				eS	Sn	22 57 30.8	+0.2
PEL				IAML		22 57 43.8	
	comp=N,995nm,0.6s						
PEL	Peldehue	2.73	160		Pn	22 56 59.4	+0.8
PEL	Peldehue	2.73	160	eP	Pn	22 56 59.6	+1.0
PEL				eS	Sn	22 57 32.1	+1.5
PEL				eS		22 57 32.6	
MT02	Curacav	2.74	169	eP	Pn	22 56 58.9	+0.3
MT02				eS	Sn	22 57 30.7	+0.1
MT02	Curacav	2.74	169		Pn	22 56 59.6	+1.0
MT02	Curacav	2.74	169	eP	Pn	22 56 59.2	+0.6
MT02				eS	Sn	22 57 32.1	+1.5
MT02				IAML		22 57 47.2	
	comp=Z,606nm,0.6s						

ZON	**Zonda**	**2.84**	**111**	*e*P	**Pn**	**22 57 03.0**	**+3.0**
ZON				IAML		22 57 50.3	
	comp=Z,743nm,0.6s						
MT05	**Renca**	**2.95**	**163**	*e*P	**Pn**	**22 57 02.6**	**+1.0**
MT05				IAML		22 57 49.4	
	comp=E,1µm,0.2s						
MT05	**Renca**	**2.95**	**163**		**Pn**	**22 57 02.1**	**+0.5**
MT05	**Renca**	**2.95**	**163**	*e*P	**Pn**	**22 56 59.6**	**-2.0**
MT05				*e*P		22 57 02.8	
MT05				*e*S	**Sn**	**22 57 38.6**	**+2.6**
MT05				IAML		22 57 51.3	
	comp=Z,780nm,0.9s						
RTCV	**Cerro Valdivia**	**3.06**	**116**	*e*P	**Pn**	**22 57 06.1**	**+3.0**
RTCV				*e*S	**Sn**	**22 57 41.1**	**+2.4**
VA05	**Santo Domingo**	**3.08**	**177**	Pn	**Pn**	**22 57 03.9**	**+0.5**
ASAL	**Salagasta**	**3.23**	**129**	*e*P	**Pn**	**22 57 08.7**	**+3.3**
ASAL				*e*S	**Sn**	**22 57 47.1**	**+4.3**
ASAL				*e*S		22 57 48.6	
GO03	**Copiap**	**3.26**	**25**	*e*P	**Pn**	**22 57 06.8**	**+0.9**
GO03				*e*S	**Sn**	**22 57 45.6**	**+2.0**
GO03				IAML		22 58 02.6	
	comp=N,1µm,0.5s						
GO03	**Copiap**	**3.26**	**25**	Pn	**Pn**	**22 57 06.8**	**+0.9**
GO03	**Copiap**	**3.26**	**25**	*e*P	**Pn**	**22 57 07.2**	**+1.4**
GO03				*e*S	**Sn**	**22 57 48.6**	**+5.0**
MT09	**Talagante**	**3.27**	**168**	*e*P	**Pn**	**22 57 06.8**	**+0.8**
MT09				*e*S	**Sn**	**22 57 43.7**	**-0.2**
MT09				IAML		22 57 57.1	
	comp=N,757nm,0.4s						
MT09	**Talagante**	**3.27**	**168**		**Pn**	**22 57 06.6**	**+0.6**
MT01	**Popeta**	**3.32**	**172**	*e*P	**Pn**	**22 57 06.8**	**+0.2**
MT01				*e*S	**Sn**	**22 57 45.1**	**+0.2**
MT01	**Popeta**	**3.32**	**172**		**Pn**	**22 57 07.2**	**+0.7**
MT01	**Popeta**	**3.32**	**172**	*e*P	**Pn**	**22 57 08.3**	**+1.8**
MT01				*e*S	**Sn**	**22 57 48.6**	**+3.7**
MT01				IAML		22 57 56.6	
	comp=Z,502nm,0.8s						
ARCO	**CERRO ARCO**	**3.32**	**134**	*e*P	**Pn**	**22 57 10.3**	**+3.6**
ARCO				*e*S	**Sn**	**22 57 51.1**	**+5.8**
ARCO				IAML		22 58 00.9	
	comp=Z,893nm,0.8s						
LMEL	**Las Melosas**	**3.53**	**158**	*e*P	**Pn**	**22 57 10.9**	**+1.2**
LMEL				IAML		22 58 08.1	
	comp=N,574nm,0.1s						
AAGR	**Agrelo**	**3.55**	**136**	*e*P	**Pn**	**22 57 13.0**	**+3.1**
VCA	**Vinchina**	**3.61**	**61**	*e*P	Pn	22 57 15.0	+4.3
VCA				*e*P	Pn	22 57 15.1	+4.3
VCA				*e*S	**Sb**	**22 58 02.2**	**-1.3**
VCA				IAML		22 58 15.0	
	comp=Z,2µm,0.6s						
AVFE	**Valle Fertil**	**3.73**	**92**	*e*P	Pn	22 57 08.1	-4.3
AVFE				*e*P	**Pn**	**22 57 13.9**	**+1.5**
AVFE				*e*S	**Sn**	**22 58 02.6**	**+7.3**
AVFE				IAML		22 58 12.7	
	comp=Z,751nm,0.9s						
BO01	**Tunca**	**3.86**	**171**		**Pn**	**22 57 14.7**	**+0.7**
BO01	**Tunca**	**3.86**	**171**	*e*P	**Pn**	**22 57 16.0**	**+2.0**
BO01				*e*S	**Sn**	**22 58 02.1**	**+3.9**
BO01				IAML		22 58 17.2	
	comp=Z,294nm,0.7s						
BO02	**Sierra Bellavi**	**4.30**	**169**		**Pn**	**22 57 22.3**	**+2.3**
BO02	**Sierra Bellavi**	**4.30**	**169**	*e*P	**Pn**	**22 57 21.6**	**+1.5**
BO02				*e*S	**Sn**	**22 58 15.1**	**+5.9**
BO02				IAML		22 58 29.6	
	comp=Z,321nm,0.9s						
ACLC	**CERRO LA CRUZ**	**4.34**	**76**	*e*P	**Pn**	**22 57 23.0**	**+2.2**
ACLC				*e*P	**Pn**	**22 57 23.1**	**+2.2**
ACLC				IAML		22 58 37.9	
	comp=Z,680nm,0.7s						
AC02	**Maricunga**	**4.39**	**33**	Pn	**Pn**	**22 57 22.8**	**+1.0**
AC02	**Maricunga**	**4.39**	**33**	*e*P	**Pn**	**22 57 23.0**	**+1.2**
AC02				*e*S	**Sn**	**22 58 18.1**	**+6.0**
AC02				*e*S		22 58 21.6	
AC02				IAML		22 58 40.4	
	comp=Z,359nm,0.8s						
GO05	**Huala**	**4.43**	**182**	Pn	**Pn**	**22 57 21.1**	**-0.8**
PB14	**IPOC Station P**	**6.04**	**12**	Pn	**Pn**	**22 57 42.5**	**-1.8**
H03N1	**Juan Fernandez**	**6.70**	**243**	T	T	23 04 46.8	
	baz=71,slow=72						
H03N2	**Juan Fernandez**	**6.71**	**243**	T	T	23 04 45.4	
	baz=71,slow=72						
H03N3	**Juan Fernandez**	**6.71**	**243**	T	T	23 04 43.0	
	baz=71,slow=72						
H03S3	**Juan Fernandez**	**6.86**	**240**	T	T	23 04 57.2	
	baz=67						
H03S1	**Juan Fernandez**	**6.86**	**240**	T	T	23 04 58.1	
	baz=67						
H03S2	**Juan Fernandez**	**6.87**	**240**	T	T	23 04 54.5	
	baz=67						
PB06	**IPOC Station P**	**8.08**	**15**	Pn	**Pn**	**22 58 12.6**	**+0.5**
LC01	**Cunco**	**8.31**	**180**	Pn	**Pn**	**22 58 15.1**	**-0.1**
PB04	**IPOC Station P**	**8.33**	**11**	Pn	**Pn**	**22 58 17.1**	**+1.4**
LVC	**Limon Verde**	**8.33**	**19**	Pn	**Pn**	**22 58 15.1**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=142,slow=5.8,SNR=21						
LVC				Sn	**Sn**	**22 59 47.2**	**-1.8**
	comp=Z,1.3nm,0.3s,baz=185,slow=12,SNR=2.3						
LVC	**Limon Verde**	**8.33**	**19**	Pn	**Pn**	**22 58 14.8**	**-1.0**
PLCA	**Paso Flores**	**10.19**	**175**	Pn	Pn	22 58 36.0	-4.9
	comp=Z,0.1nm,0.3s,baz=341,slow=18,SNR=1.5						
PLCA	**Paso Flores**	**10.19**	**175**	Pn	**Pn**	**22 58 41.0**	**0.0**
ITQB	**Itaqui**	**13.16**	**90**		**Pn**	**22 59 19.5**	**-1.9**
CPUP	**Villa Florida**	**13.40**	**75**	Pn	**Pn**	**22 59 22.2**	**-2.6**
	comp=Z,0.4nm,0.3s,baz=228,slow=15,SNR=3.6						
CPUP				Sn	**Sn**	**23 01 47.9**	**-4.7**
	comp=Z,0.2nm,0.3s,baz=342,slow=20,SNR=1.3						
CPUP	**Villa Florida**	**13.40**	**75**	Pn	**Pn**	**22 59 25.1**	**+0.3**
LPAZ	**La Paz**	**14.60**	**14**	Pn	**Pn**	**22 59 43.1**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=173,slow=6.9,SNR=16						
LPAZ	**La Paz**	**14.60**	**14**	Pn	**Pn**	**22 59 43.8**	**+1.9**
SIV	**San Ignacio**	**17.51**	**36**	P	**Pn**	**23 00 18.8**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=221,slow=11,SNR=25						
ITAB	**Concordia**	**17.53**	**84**		**Pn**	**23 00 18.4**	**-0.3**
ITAB				IAmb	IAmb	23 00 23.1	
	comp=Z,13nm,0.9s						
PTLB	**Pontes e Lacer**	**19.00**	**40**	P	**P**	**23 00 35.7**	**-0.2**
VILB	**Vilhena**	**20.54**	**34**	P	**P**	**23 00 52.5**	**-0.3**
VILB				IAmb	IAmb	23 00 53.8	
	comp=Z,12nm,0.8s						
ETMB	**Extrema**	**21.29**	**15**	P	**P**	**23 01 01.9**	**+1.0**
ETMB				IAmb	IAmb	23 01 05.7	
	comp=Z,7.2nm,1.0s						
BDFB	**Brasilia**	**26.35**	**61**	P	**P**	**23 01 48.7**	**-1.6**
	comp=Z,7.4nm,0.7s,baz=233,slow=9.3,SNR=12						
BDFB	**Brasilia**	**26.35**	**61**	P	**P**	**23 01 49.3**	**-1.0**
VNA3	**Neumayer Olymp**	**52.46**	**159**	P	**P**	**23 05 26.0**	**-0.2**
VNA2	**Neumayer--Watz**	**53.10**	**158**	P	**P**	**23 05 30.9**	**+0.1**
	baz=289,slow=8.9						
SNAA	**Sanae**	**54.69**	**159**	P	**P**	**23 05 42.2**	**-0.3**
TXAR	**Lajitas Array**	**66.87**	**330**	P	**P**	**23 07 07.5**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=153,slow=7.6,SNR=6.7						
LIC	**Lamto**	**73.51**	**72**	*e*P	**P**	**23 07 45.9**	**-0.9**
	comp=Z,21nm,1.2s						
TIC	**Toumodi**	**73.75**	**72**	*e*P	**P**	**23 07 47.5**	**-0.8**
KIC	**Kosan Boka**	**73.82**	**72**	*e*P	**P**	**23 07 47.8**	**-0.9**
	comp=Z,8.0nm,0.7s						
DBIC	**Dimbokro**	**73.90**	**72**	P	**P**	**23 07 48.6**	**-0.5**
	comp=Z,5.2nm,0.6s,baz=227,slow=4.5,SNR=12						
PDAR	**Pinedale Array**	**80.81**	**333**	P	**P**	**23 08 26.9**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=146,slow=5.2,SNR=2.6						
NVAR	**Mina Array Bea**	**81.20**	**325**	P	**P**	**23 08 32.0**	**+2.3**
	comp=Z,0.8nm,0.8s,baz=158,slow=5.9,SNR=5.4						
BOSA	**Boshof**	**81.48**	**118**	P	**P**	**23 08 30.2**	**-1.2**
	comp=Z,2.9nm,0.8s,baz=171,slow=3.4,SNR=5.4						
TORD	**Torodi Ar. Bea**	**82.85**	**70**	P	**P**	**23 08 37.9**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=276,slow=6.6,SNR=10						
WRA	**Warramunga Arr**	**123.85**	**210**	PKP	**PKPdf**	**23 15 11.1**	**-1.1**
	comp=Z,0.5nm,0.9s,baz=166,slow=2.9,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	**125.97**	**271**	T	T	01 33 59.1	
	baz=115,slow=75						
H11S1	**WAKE ISLAND Hy**	**125.98**	**271**	T	T	01 33 59.6	
	baz=115,slow=75						
H11S3	**WAKE ISLAND Hy**	**125.98**	**271**	T	T	01 34 03.9	
	baz=115,slow=75						
H11N3	**WAKE ISLAND Hy**	**126.29**	**273**	T	T	01 34 27.6	
	baz=116,slow=74						
H11N1	**WAKE ISLAND Hy**	**126.31**	**273**	T	T	01 34 28.1	
	baz=116						
H11N2	**WAKE ISLAND Hy**	**126.31**	**273**	T	T	01 34 27.9	
	baz=116,slow=74						
ZALV	**Zalesovo Beam**	**151.17**	**29**	PKPbc	**PKPbc**	**23 16 06.9**	**+0.6**
	comp=Z,7.0nm,0.7s,baz=296,slow=3.4,SNR=28						
ZALV				PKPab	**PKPab**	**23 16 14.8**	**+0.6**
	comp=Z,5.6nm,0.6s,baz=300,slow=4.4,SNR=12						
KSH	**Kashi**	**152.25**	**62**	PKPbc	**PKPab**	**23 16 19.0**	**-0.5**
MKAR	**Makanchi Array**	**154.24**	**44**	PKPbc	**PKPbc**	**23 16 13.4**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=316,slow=3.3,SNR=5.0						
MKAR				PKPab	**sPKPbc**	**23 16 26.9**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=310,slow=2.2,SNR=6.5						
SONM	**Songino Array**	**162.70**	**4**	PKPab	**PKPab**	**23 17 04.1**	**0.0**
	comp=Z,0.3nm,0.4s,baz=347,slow=5.9,SNR=2.6						

TRN 17 23:11:15.3, 9°.69N×62°.36W, h44^{km}, MD3.6, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPP	**Pointe-a-Pierr**	**1.09**	**55**	*e*P	Pn	23 11 33.9	-0.3
TRN	**Trinidad (W)**	**1.34**	**45**	*e*P	Pn	23 11 38.4	+0.8
TRN				*e*S	Sn	23 11 54.3	+0.1
TOSP	**Speyside**	**2.40**	**48**	*e*P	Pn	23 11 52.8	+0.6
TOSP				*e*S	Sn	23 12 19.9	-0.5
GRFF	**Grenada Fort F**	**2.42**	**15**	*e*P	Pn	23 11 53.4	+0.9
GRFF				*e*S	Sn	23 12 20.4	-0.5
GRGR	**Grenville**	**2.53**	**16**	*e*P	Pn	23 11 54.1	+0.2
GRGR				*e*S	Sn	23 12 22.9	-0.6
GCMP	**Grenada, Carri**	**2.93**	**18**	*e*P	Pn	23 12 00.1	+0.7
GCMP				*e*S	Sn	23 12 32.1	-1.3
SVB	**Belmont**	**3.72**	**17**	*e*P	Pn	23 12 11.5	+1.2
SVB				*e*S	Sn	23 12 52.6	-0.4
MCLT	**Moule a Chique**	**4.23**	**19**	*e*S	Sn	23 13 03.1	-2.4
SLBI	**Saint Lucia, B**	**4.52**	**17**	*e*S	Sn	23 13 11.2	-1.3
BAUV	**El Baul**	**5.66**	**263**	*e*P	Pn	23 12 37.5	+0.6

IDC 17 23:13:40.9±46.0, 15°.43S×174°.59W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.7/24, mbtmp3.9/3, Error ellipse: s-maj=881.5km s-min=182.6km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.03**	**240**	P	P	23 21 42.4	-0.1
	0.8nm,0.4s,baz=51,slow=10.0,SNR=3.5						
WRA	**Warramunga Arr**	**48.72**	**257**	P	P	23 22 27.5	-0.2
	0.3nm,0.6s,baz=90,slow=8.3,SNR=7.5						
ASAR	**Alice Springs**	**49.01**	**252**	P	P	23 22 29.9	-0.1
	2.9nm,0.5s,baz=89,slow=8.0,SNR=43						

JMA ***17*** *23:35:19.7±0.2, 40°.86N×143°.21E, h20^{km}, M4.0*

NEIC ***17*** *23:35:23.9±0.6, 40°.94N±0°.07×142°.79E±0°.09, h34^{km}±9^{km}, mb4.1/4, Error ellipse: s-maj=12.4km s-min=5.1km az=134.0*

IDC ***17*** *23:35:24.0±2.7, 40°.90N×143°.11E, h59^{km}±21^{km}, mb3.5/7, mb1 3.6/10, mb1mx3.4/53, mbtmp3.8/10, ML2.9/3, MS3.1/2, Ms1 3.1/2, ms1mx2.5/44, Error ellipse: s-maj=37.3km s-min=15.9km az=91.0*

ISC 17 23:35:17.4±2.1, 40°.87N±0°.03×143°.23E±0°.05, h5^{km}±14^{km}, n44, σ1^{s}.28/53, mb3.8/9, 2C, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	**Erimo**	**1.15**	**357**		**Pn**	**23 35 40.7**	**+0.6**
ERM				Sn	**Sn**	**23 35 57.0**	**+0.9**
JEM	**Erimo**	**1.15**	**357**	P	**Pn**	**23 35 40.4**	**+0.3**
JEM				*e*S	**Sn**	**23 35 55.4**	**-0.7**
JKEN	**Kujiedanarisaw**	**1.33**	**241**	P	**Pb**	**23 35 43.0**	**+0.2**
JKEN				*e*S	**Sb**	**23 35 58.9**	**-1.3**
JANG	**Nango**	**1.39**	**250**	P	**Pb**	**23 35 43.8**	**-0.1**
JANG				*e*S	**Sb**	**23 36 01.4**	**-0.5**
JTH	**Tanohata**	**1.40**	**229**	P	**Pb**	**23 35 44.2**	**+0.3**
JTH				S	**Sg**	**23 36 02.3**	**+0.1**
JARK	**Aomorirokkasho**	**1.42**	**276**	P	**Pb**	**23 35 44.1**	**-0.2**
JARK				*e*S	**Sb**	**23 36 02.1**	**-0.5**
JTHR	**Tokachihiroo**	**1.42**	**2**	P	**Pb**	**23 35 44.5**	**+0.1**
JTHR				*e*S	**Sn**	**23 36 01.7**	**-1.2**
JNBK	**Urakawa-nobuka**	**1.45**	**346**	⇑P	**Pb**	**23 35 45.0**	**+0.1**
JTM	**Tenmabayashi**	**1.64**	**268**	P	**Pb**	**23 35 48.0**	**-0.1**
JTM				S	**Sb**	**23 36 08.9**	**-0.1**
JTM	**Tenmabayashi**	**1.64**	**268**	Pn	**Pb**	**23 35 48.4**	**+0.3**
JTM				Sn	**Sg**	**23 36 09.3**	**-0.8**
JOT	**Ohata**	**1.72**	**288**	P	**Pb**	**23 35 48.6**	**-0.9**
JOT				*e*S	**Sn**	**23 36 09.8**	**-0.5**
JCH	**Churui**	**1.75**	**3**	P	**Pb**	**23 35 49.1**	**-0.8**
JCH				*e*S	**Sn**	**23 36 09.8**	**-1.1**
JKB	**Kayabe**	**1.94**	**302**	P	**Pb**	**23 35 51.9**	**-1.3**
JKB				*e*S	**Sn**	**23 36 15.2**	**-0.5**
JIAM	**Iburiatsuma**	**2.01**	**331**	P	**Pb**	**23 35 54.9**	**+0.6**
JOM	**Ohasama**	**2.03**	**227**	P	**Pb**	**23 35 54.4**	**-0.4**
JOM				*e*S	**Sb**	**23 36 19.6**	**-0.8**
JEW	**Eniwo**	**2.38**	**327**	P	**Pb**	**23 36 00.5**	**-0.1**
JEW				*e*S	**Sb**	**23 36 29.9**	**-0.3**
JEW	**Eniwo**	**2.38**	**327**	Pn	**Pb**	**23 35 58.9**	**-1.8**
JAK	**Akkeshi**	**2.39**	**27**	P	**Pn**	**23 35 57.6**	**+0.4**
JAK				S	**Sn**	**23 36 24.5**	**-2.3**
JMK	**Ichinoseki**	**2.46**	**220**	⇑P	**Pb**	**23 36 00.4**	**-1.7**
JMK				*e*S	**Sb**	**23 36 30.6**	**-2.0**
JKA	**Kamikawa-asahi**	**3.28**	**352**		**Pn**	**23 36 10.8**	**+1.4**
ASAJ	**Asahikawa**	**3.28**	**352**	P	**Pn**	**23 36 11.2**	**+1.8**
	2.5nm,0.3s,baz=238,slow=8.4,SNR=6.6						
ASAJ				S	**Sn**	**23 36 50.8**	**+2.1**
	6.5nm,0.3s,baz=312,slow=16,SNR=2.0						
JMM	**Marumori**	**3.54**	**213**		**Pn**	**23 36 14.9**	**+1.9**
MJAR	**Matsushiro Arr**	**5.83**	**224**	P	**Pn**	**23 36 47.3**	**+2.7**
	0.1nm,0.3s,baz=31,slow=13,SNR=3.4						
MAJO	**Matsushiro**	**5.84**	**224**	Pn	**Pn**	**23 36 45.4**	**+0.9**
USRK	**Ussuriysk Ar.**	**8.94**	**296**	P	**Pn**	**23 37 29.7**	**+2.6**
	baz=94,slow=15,SNR=4.6						
KSRS	**Korea Array**	**12.36**	**259**	LR	LR	23 42 11.1	
	comp=Z,50nm,18.5s,baz=54,slow=33						
SONM	**Songino Array**	**27.05**	**297**	P	**P**	**23 40 59.7**	**-1.0**
	0.8nm,0.6s,baz=85,slow=8.4,SNR=9.3						
H11N2	**WAKE ISLAND Hy**	**29.19**	**129**	T	T	00 12 05.1	
	baz=322,slow=75						
H11N1	**WAKE ISLAND Hy**	**29.20**	**129**	T	T	00 12 05.9	
	baz=322,slow=75						
H11N3	**WAKE ISLAND Hy**	**29.20**	**129**	T	T	00 12 03.5	
	baz=322,slow=75						
H11S1	**WAKE ISLAND Hy**	**30.03**	**131**	T	T	00 13 12.1	
	baz=324,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.04**	**131**	T	T	00 13 12.2	
	baz=324,slow=76						
H11S2	**WAKE ISLAND Hy**	**30.05**	**131**	T	T	00 13 11.5	
	baz=324,slow=76						
ZALV	**Zalesovo Beam**	**40.48**	**309**	P	**P**	**23 42 55.8**	**-1.0**
	1.1nm,0.5s,baz=78,slow=8.3,SNR=4.9						
IMAR	**Indian Mountai**	**42.65**	**33**	P	**P**	**23 43 17.4**	**+3.0**
PPLA	**Purkeypile**	**43.24**	**37**	P	**P**	**23 43 22.2**	**+2.9**
KDAK	**Kodiak Island**	**43.34**	**45**	LR	LR	00 03 23.5	
	comp=Z,32nm,18.0s,baz=74,slow=39						
MK31	**Makanchi Array**	**43.39**	**299**	P	**P**	**23 43 20.4**	**-0.3**
MK31				IAmb	IAmb	23 43 25.2	
	comp=Z,5.8nm,1.8s						
MKAR	**Makanchi Array**	**43.39**	**299**	P	**P**	**23 43 19.9**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=85,slow=11,SNR=10						
MAKZ	**Makanchi**	**43.59**	**299**	P	**P**	**23 43 22.2**	**-0.1**
MAKZ				IAmb	IAmb	23 43 54.9	
	comp=Z,6.2nm,1.4s						
WRA	**Warramunga Arr**	**61.06**	**190**	P	**P**	**23 45 31.4**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=7.5,slow=6.2,SNR=4.7						
ASAR	**Alice Springs**	**64.79**	**189**	P	**P**	**23 45 57.3**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=17,slow=6.8,SNR=2.4						
FINES	**FINESS Array B**	**66.09**	**332**	P	**P**	**23 46 04.1**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=40,slow=11,SNR=8.9						
AKASG	**Malin Array Be**	**72.13**	**322**	P	**P**	**23 46 41.1**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=46,slow=6.7,SNR=4.0						

IDC 17 23:42:15.9±1.1, 56°.25S×118°.31W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.8/27, mbtmp4.0/3, MS3.9/5, Ms1 3.9/5, ms1mx3.6/16, Error ellipse: s-maj=267.2km s-min=32.9km az=156.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**34.46**	**84**	LR	LR	23 59 43.0	
	comp=Z,104nm,19.7s,baz=251,slow=30						
H03S2	**Juan Fernandez**	**35.02**	**67**	T	T	00 26 06.7	
	baz=217						
H03S1	**Juan Fernandez**	**35.02**	**67**	T	T	00 26 12.9	
	baz=217						
H03S3	**Juan Fernandez**	**35.04**	**67**	T	T	00 26 08.2	
	baz=217						
H03N3	**Juan Fernandez**	**35.32**	**67**	T	T	00 26 28.2	
	baz=222,slow=72						
H03N2	**Juan Fernandez**	**35.33**	**67**	T	T	00 26 23.4	
	baz=222,slow=72						
H03N1	**Juan Fernandez**	**35.34**	**67**	T	T	00 26 27.1	
	baz=222,slow=72						
PPT	**Papeete**	**45.25**	**316**	LR	LR	00 03 51.7	
	comp=Z,160nm,20.0s,baz=131,slow=29						
CPUP	**Villa Florida**	**52.48**	**82**	LR	LR	00 10 57.1	
	comp=Z,186nm,18.9s,baz=226,slow=33						
LPAZ	**La Paz**	**54.93**	**64**	P	P	23 51 48.6	-0.6
	1.6nm,1.0s,baz=214,slow=3.6,SNR=4.2						
LPAZ				LR	LR	00 09 29.0	
	comp=Z,60nm,19.7s,baz=198,slow=30						
STKA	**Stephens Creek**	**69.34**	**244**	LR	LR	00 18 40.1	
	comp=Z,91nm,20.4s,baz=229,slow=32						
H01W1	**Cape Leeuwin H**	**78.87**	**222**	T	T	01 23 07.2	
	baz=151,slow=76						
H01W2	**Cape Leeuwin H**	**78.88**	**222**	T	T	01 23 04.2	
	baz=151,slow=76						
H01W3	**Cape Leeuwin H**	**78.89**	**222**	T	T	01 23 08.3	
	baz=151,slow=76						
ASAR	**Alice Springs**	**79.93**	**242**	P	P	23 54 27.1	+0.4
	0.3nm,0.3s,baz=160,slow=5.6,SNR=2.6						
WRA	**Warramunga Arr**	**82.83**	**245**	P	P	23 54 41.5	-0.7
	2.5nm,1.0s,baz=148,slow=5.6,SNR=5.9						
H11S2	**WAKE ISLAND Hy**	**97.14**	**293**	T	T	01 42 25.3	
	baz=147,slow=75						
H11S3	**WAKE ISLAND Hy**	**97.16**	**293**	T	T	01 42 22.9	
	baz=147,slow=75						
H11S1	**WAKE ISLAND Hy**	**97.16**	**293**	T	T	01 42 20.0	
	baz=147,slow=75						
H11N3	**WAKE ISLAND Hy**	**98.06**	**293**	T	T	01 43 34.7	
	baz=145,slow=75						
H11N1	**WAKE ISLAND Hy**	**98.07**	**293**	T	T	01 43 33.7	
	baz=145,slow=75						
H11N2	**WAKE ISLAND Hy**	**98.08**	**293**	T	T	01 43 34.3	
	baz=145,slow=75						
GERES	**GERESS Array B**	**150.42**	**84**	PKPbc	PKPbc	00 02 08.6	+0.2
	0.8nm,0.8s,baz=193,slow=4.0,SNR=5.7						
SONM	**Songino Array**	**151.69**	**272**	PKPbc	PKiKP	00 02 11.8	0.0
	0.2nm,0.7s,baz=137,slow=2.9,SNR=1.8						

NEIC ***17*** *23:44:36.5±1.1, 17°.7S±0°.2×178°.5W±0°.1, h585^{km}±8^{km}, mb4.5/27, Error ellipse: s-maj=24.9km s-min=15.3km az=166.0*

IDC ***17*** *23:44:36.4±1.8, 17°.57S×178°.62W, h585^{km}±18^{km}, mb3.8/10, mb1 4.0/12, mb1mx3.5/42, mbtmp4.7/12, Error ellipse: s-maj=45.5km s-min=17.0km az=154.0*

ISC 17 23:44:36.4±0.7, 17°.6S±0°.1×178°.5W±0°.1, h600^{km}, n48, σ0^{s}.96/46, mb4.5/24, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.27**	**267**	P	**P**	**23 45 55.7**	**-1.6**
	45nm,0.3s,baz=58,slow=2.9,SNR=637						
MSVF				S	**S**	**23 47 02.7**	**-0.4**
	baz=18,slow=20,SNR=0.5						
NIUE	**Niue**	**8.30**	**102**	P	**P**	**23 46 38.9**	**+0.4**
SANVU	**Saraoutou**	**13.85**	**277**	P	**P**	**23 47 34.0**	**+0.1**
PINNC	**Pines Island,**	**14.10**	**247**	P	**P**	**23 47 35.6**	**-0.6**
DZM	**Mont Dzumac**	**14.84**	**250**	P	**P**	**23 47 41.4**	**-1.8**
	1.6nm,0.3s,baz=104,slow=16,SNR=12						
DZM	**Mont Dzumac**	**14.84**	**250**	P	**P**	**23 47 42.8**	**-0.4**
OUZ	**Omahuta**	**18.92**	**200**	P	**P**	**23 48 21.6**	**+1.4**
OUZ				IAmb	IAmb	23 48 23.0	
	comp=Z,10nm,0.7s						
QRZ	**Quartz Range**	**24.42**	**197**	P	**P**	**23 49 08.7**	**-0.6**
LTZ	**Lake Taylor**	**26.32**	**195**	P	**P**	**23 49 25.7**	**-0.3**
LTZ				IAmb	IAmb	23 49 38.2	
	comp=Z,8.6nm,1.0s						
EIDS	**Eidsvold**	**29.28**	**249**	P	**P**	**23 49 51.8**	**-0.2**
EIDS				IAmb	IAmb	23 49 52.3	
	comp=Z,10nm,0.8s						
ARMA	**Armidale**	**30.02**	**239**	P	**P**	**23 49 58.8**	**+0.4**
ARMA				IAmb	IAmb	23 49 59.3	
	comp=Z,7.5nm,0.7s						
DCZ	**Deep Cove**	**30.27**	**200**	P	**P**	**23 49 59.4**	**-0.7**
DCZ				IAmb	IAmb	23 50 13.9	
	comp=Z,8.7nm,1.1s						
CTAO	**Charters Tower**	**33.40**	**260**	P	**P**	**23 50 27.0**	**-0.1**
CTAO				IAmb	IAmb	23 50 27.7	
	comp=Z,8.4nm,0.8s						
PMG	**Port Moresby**	**34.30**	**279**	P	**P**	**23 50 35.1**	**+0.4**
	comp=Z,11nm,0.3s,baz=65,slow=6.5,SNR=11						
PMG	**Port Moresby**	**34.30**	**279**	P	**P**	**23 50 35.3**	**+0.6**
COEN	**Coen**	**37.00**	**270**	P	**P**	**23 50 57.6**	**+0.7**
TOO	**Toolangi**	**37.30**	**230**	P	**P**	**23 50 59.9**	**+0.8**
TOO				IAmb	IAmb	23 51 00.6	
	comp=Z,20nm,1.0s						
STKA	**Stephens Creek**	**38.70**	**241**	P	**P**	**23 51 11.2**	**+0.7**
	comp=Z,9.3nm,0.5s,baz=89,slow=10,SNR=32						
STKA	**Stephens Creek**	**38.70**	**241**	P	**P**	**23 51 11.0**	**+0.6**
BBOO	**Buckleboo**	**43.47**	**241**	P	**P**	**23 51 48.5**	**+0.3**
WR0	**Warramunga Arr**	**44.40**	**259**	P	**P**	**23 51 55.7**	**+0.3**
WB0	**Warramunga Arr**	**44.55**	**259**	P	**P**	**23 51 56.2**	**-0.4**
WB0				IAmb	IAmb	23 51 56.9	
	comp=Z,13nm,0.8s						
WB2	**Warramunga Arr**	**44.58**	**259**	P	**P**	**23 51 56.2**	**-0.6**
WB2				IAmb	IAmb	23 51 57.1	
	comp=Z,14nm,0.6s						
WRAB	**Tennant Creek**	**44.58**	**259**	P	**P**	**23 51 56.1**	**-0.7**
WRAB				IAmb	IAmb	23 51 57.1	
	comp=Z,13nm,0.6s						
WRA	**Warramunga Arr**	**44.59**	**259**	P	**P**	**23 51 56.3**	**-0.6**
	comp=Z,9.4nm,0.5s,baz=94,slow=6.8,SNR=209						
WRA	**Warramunga Arr**	**44.59**	**259**	P	**P**	**23 51 56.5**	**-0.4**
AS31	**Alice Springs**	**44.78**	**254**	P	**P**	**23 51 58.6**	**+0.3**
ASAR	**Alice Springs**	**44.78**	**254**	P	**P**	**23 51 58.5**	**+0.1**
	comp=Z,81nm,0.6s,baz=88,slow=8.2,SNR=1174						
ASAR				PcP	**PcP**	**23 53 28.0**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=96,slow=4.1,SNR=4.2						
ASAR	**Alice Springs**	**44.78**	**254**	P	**P**	**23 51 58.7**	**+0.4**
MTN	**Manton Dam**	**48.70**	**268**	P	**P**	**23 52 27.8**	**-0.1**
MTN				IAmb	IAmb	23 52 28.6	
	comp=Z,19nm,0.8s						
FORT	**Forrest**	**50.05**	**244**	P	**P**	**23 52 37.3**	**-0.2**
FAKI	**Fak Fak**	**50.41**	**281**	P	**P**	**23 52 40.4**	**0.0**
FAKI				IAmb	IAmb	23 52 55.3	
	comp=Z,14nm,1.0s						
KNRA	**Kununurra**	**50.42**	**264**	P	**P**	**23 52 40.6**	**+0.3**
KNRA				IAmb	IAmb	23 52 41.0	
	comp=Z,14nm,0.7s						
FITZ	**Fitzroy Crossi**	**52.98**	**260**	P	**P**	**23 52 59.0**	**+0.3**
	comp=Z,2.6nm,0.3s,baz=103,slow=6.3,SNR=36						
SOEI	**Soe**	**55.96**	**270**	IAmb	IAmb	23 53 31.3	
	comp=Z,22nm,0.7s						
PSA00	**Pilbara Seismi**	**57.89**	**255**	P	**P**	**23 53 32.5**	**-0.1**
PSA00				IAmb	IAmb	23 53 33.7	
	comp=Z,22nm,1.1s						
PSA00	**Pilbara Seismi**	**57.89**	**255**	P	**P**	**23 53 32.6**	**-0.1**
PSA00				IAmb	IAmb	23 53 33.8	
	comp=Z,7.3nm,0.9s						
MORW	**Morawa**	**60.52**	**246**	P	**P**	**23 53 50.0**	**0.0**
TOLI2	**Tolitoli**	**62.55**	**281**	P	P	23 54 05.3	+1.9
GIRL	**Giralia**	**62.89**	**253**	P	**P**	**23 54 06.2**	**+0.7**
LEM	**Lembang**	**72.62**	**268**	P	**P**	**23 55 05.7**	**+0.8**
	comp=Z,32nm,0.7s,baz=169,slow=20,SNR=4.6						
TXAR	**Lajitas Array**	**85.91**	**58**	P	P	23 56 16.6	+2.2
	comp=Z,1.7nm,0.8s,baz=217,slow=5.7,SNR=16						
PDAR	**Pinedale Array**	**87.19**	**43**	P	**P**	**23 56 20.9**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=215,slow=2.9,SNR=6.5						
PDAR	**Pinedale Array**	**87.19**	**43**	P	P	23 56 21.4	+1.1
CMAR	**Chiang Mai Arr**	**88.67**	**290**	P	**P**	**23 56 28.5**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=106,slow=1.3,SNR=4.7						
SONM	**Songino Array**	**93.23**	**319**	P	**P**	**23 56 49.3**	**+1.4**
	comp=Z,0.1nm,0.4s,baz=144,slow=5.2,SNR=1.9						
BRTR	**Keskin Array B**	**144.47**	**315**	PKP	**PKiKP**	**00 03 06.5**	**-3.2**
	comp=Z,1.4nm,0.7s,baz=149,slow=2.9,SNR=5.1						
GERES	**GERESS Array B**	**147.26**	**345**	PKPbc	**PKPab**	**00 03 14.2**	**-3.1**
	comp=Z,0.7nm,0.5s,baz=20,slow=4.7,SNR=5.2						

ANF ***18*** *00:20:59.9±0.2, 33°.28N×115°.75W, h5^{km}, ML3.7/31, Error ellipse: s-maj=2.4km s-min=1.9km az=126.0*

PAS ***18*** *00:21:00.9±4.0, 33°.26N±0°.04×115°.72W±0°.05, h3^{km}±7^{km}, ML3.5/17, ML3.5/76(NEIC), Error ellipse: s-maj=7.0km s-min=5.8km az=143.0*

NEIC ***18*** *00:21:01.8±3.9, 33°.22N±0°.04×115°.79W±0°.06, h10^{km}±7^{km}, Error ellipse: s-maj=7.3km s-min=6.1km az=126.0*

ISC 18 00:20:59.5±1.2, 33°.26N±0°.02×115°.73W±0°.02, h7^{km}±11^{km}, n84, σ1^{s}.37/101, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUP	**Superstition M**	**0.32**	**195**		**Pb**	**00 21 07.3**	**-0.2**
SUP	**Superstition M**	**0.32**	**195**		**Sb**	**00 21 12.0**	**-0.9**
SWSC	**Sam W. Stewart**	**0.32**	**191**	P	**Pb**	**00 21 07.4**	**-0.1**
	baz=12,SNR=1000						

SWSC				S	Sb	00 21 11.5	-1.5
	baz=12						
BC3	Big Chuckawall	0.45	30	P	Pb	00 21 09.9	0.0
	baz=209,SNR=857						
BC3				S	Sb	00 21 16.3	-0.7
	baz=209						
UABX	UABC, Campus M	0.67	159		Pb	00 21 13.7	+0.2
IKP	In-Ko-Pah, Jac	0.69	208	P	Pb	00 21 13.9	0.0
	baz=28,SNR=266						
IKP				S	Sb	00 21 23.1	-0.6
	baz=28						
MONP2	Monument Peak	0.69	238	P	Pb	00 21 14.0	0.0
	baz=58,SNR=292						
MONP2				S	Sb	00 21 23.1	-0.8
	baz=58						
PFO	Pinyon Flats O	0.70	300	Pg	Pb	00 21 14.0	-0.2
PFO				IAML		00 21 25.1	
	2µm,0.4s						
PFO	Pinyon Flats O	0.70	300	P	Pb	00 21 14.1	-0.2
	baz=120,SNR=272						
PFO				S	Sb	00 21 23.7	-0.4
	baz=120						
RMX	La Rumorosa	0.72	204		Pb	00 21 14.9	+0.5
RMX				IAML		00 21 26.5	
	comp=E,1µm,0.4s						
BELC	Belle Mtn. Jos	0.77	343	P	Pb	00 21 15.7	+0.4
	baz=162,SNR=766						
BELC				S	Sb	00 21 26.2	+0.1
	baz=162						
GLA	Glamis	0.79	105	Pg	Pb	00 21 15.8	+0.3
GLA				IAML		00 21 33.2	
	comp=N,1µm,0.8s						
GLA	Glamis	0.79	105	P	Pb	00 21 15.3	-0.2
	baz=286,SNR=635						
GLA				S	Sb	00 21 26.0	-0.4
	baz=286						
GVDA	Garner Valley	0.89	297		Pb	00 21 17.6	+0.3
GVDA					Sb	00 21 29.7	+0.3
CPBX	Cerro Prieto	0.91	157		Pb	00 21 17.6	0.0
CPBX				IAML		00 21 48.5	
	comp=E,2µm,0.8s						
BAR	Barrett	0.98	234		Pb	00 21 18.7	-0.2
BAR				IAML		00 21 38.0	
	comp=E,868nm,0.2s						
BAR				IAML		00 21 38.9	
	comp=N,1µm,0.7s						
TKX	Tecate	1.01	227		Pb	00 21 19.3	-0.1
IRM	Iron Mountain	1.02	28	P	Pg	00 21 19.4	+0.4
	baz=208,SNR=753						
IRM				S	Sb	00 21 34.0	+0.9
	baz=208						
GUVIX	Guadalupe Vict	1.10	150		Pn	00 21 21.7	+0.4
109C	Camp Elliot, M	1.22	253		Pn	00 21 23.4	+0.5
109C	Camp Elliot, M	1.22	253	P	Pg	00 21 22.0	-0.8
	baz=72,SNR=279						
109C				S	Sb	00 21 38.9	+0.2
	baz=72						
CBX	Cerro Bola	1.23	220		Pg	00 21 22.7	-0.4
CBX				IAML		00 21 52.4	
	comp=N,716nm,0.9s						
CBX				IAML		00 21 58.3	
	comp=E,845nm,0.7s						
MURC	Murrieta	1.27	286	P	Pg	00 21 22.9	-1.0
	baz=105,SNR=264						
MURC				S	Sb	00 21 41.4	+0.9
	baz=105						
TJX	Tijuana	1.34	236		Pb	00 21 26.2	+1.2
BBRC	Big Bear Solar	1.41	315	P	Pn	00 21 25.2	-0.6
	baz=135,SNR=22						
BBRC				S	Sg	00 21 44.1	-0.6
	baz=135						
GMRC	Granite Mounta	1.52	2	P	Pn	00 21 26.4	-0.8
	baz=182,SNR=686						
GMRC				S	Sn	00 21 46.4	-1.0
	baz=182						
CCX	Cicese	1.60	210		Pb	00 21 29.2	-0.2
CCX				IAML		00 21 57.9	
	comp=N,430nm,0.6s						
CCX				IAML		00 22 03.5	
	comp=E,685nm,0.8s						
HEC	Hector,Ludlow	1.64	342	P	Pn	00 21 28.0	-0.9
	baz=162,SNR=104						
HEC				Sb	Sg	00 21 52.2	-0.1
	baz=162						
PDMCI	Parker Dam,Lak	1.68	51	Sb	Sg	00 21 53.0	-0.4
	baz=232						
NEE2	Needles Airpor	1.76	31	Sb	Sb	00 21 55.5	+1.0
	baz=211						
BFSC	Mount Baldy Ra	1.88	302	P	Pn	00 21 31.7	-0.5
	baz=121,SNR=53						
BFSC				S	Sn	00 21 54.6	-1.7
	baz=121						
MWC	Mount Wilson	2.17	297		Pn	00 21 37.3	+1.1
MWC				IAML		00 22 14.1	
	comp=N,369nm,1.1s						
MWC				IAML		00 22 15.8	
	comp=E,395nm,0.5s						
TUQ	Turquoise Moun	2.17	356	P	Pn	00 21 35.6	-0.7
	baz=176						
FMP	Fort Macarthur	2.19	283	Sb	Sg	00 22 08.9	-1.0
	baz=101						
PASC	Pasadena Art C	2.24	295		Pg	00 21 43.2	+0.8
PASC				IAML		00 22 14.7	
	comp=N,279nm,0.6s						
PASC				IAML		00 22 18.1	
	comp=E,194nm,0.5s						
CIS	Catalina Islan	2.25	274	Sb	Sb	00 22 10.0	+1.3
	baz=93						
SFX	San Felipe	2.34	161	Pg	Pg	00 21 47.4	+3.0
EDW2	Edwards Air Fo	2.48	311	P	Pn	00 21 39.8	-0.5
	baz=130						
EDW2				Sb	Sb	00 22 17.3	+2.1
	baz=130						
SHOC	Shoshone, Teco	2.67	350	Pg	Pg	00 21 50.7	+0.1
	baz=170						
LRMC	Laurel Mtn Rad	2.74	324	Pg	Pg	00 21 53.4	+1.5
	baz=143						
LRMC				Sb	Sb	00 22 25.4	+2.7
	baz=143						
214A	Organ Pipe Nat	2.79	117	Pg	Pg	00 21 55.2	+2.4
214A	Organ Pipe Nat	2.79	117	P	Pn	00 21 43.7	-0.8
	baz=299						
QSM	Queen of Sheba	2.85	341		Pg	00 21 53.8	-0.4
QSM				IAML		00 22 40.0	
	comp=N,97nm,0.8s						
GWY	Greenwater Val	3.02	345		Pg	00 21 56.8	-0.5
GWY				IAML		00 22 39.5	
	comp=E,126nm,1.0s						
GWY				IAML		00 22 52.4	
	comp=N,106nm,1.1s						
MPMC	Manual Prospec	3.14	333	P	Pn	00 21 48.7	-0.9
	baz=152						
ARVC	Arvin	3.17	307	Pg	Pg	00 22 01.9	+1.6
	baz=125						
SHPR	Sheep Range	3.27	8		Pg	00 22 03.2	+1.1
ISA	Isabella, Lake	3.30	317	Pn	Pn	00 21 51.4	-0.3
ISA				IAML		00 22 54.0	
	comp=E,67nm,1.0s						
TPNV	Topopah Spring	3.70	354		Pn	00 21 58.5	+1.2
TPNV	Topopah Spring	3.70	354	P	Pn	00 21 57.6	+0.3
	baz=173						
PKM	Mcpherson Peak	3.76	297	Pg	Pg	00 22 12.2	+0.7
	baz=114						
PRN	Pahroc Range	4.17	7		Pn	00 22 05.3	+1.6
PRN				IAML		00 23 27.1	
	comp=E,81nm,1.0s						
PRN				IAML		00 23 36.4	
	comp=N,67nm,1.0s						
U15A	North Rim	4.24	41	IAML		00 23 22.7	
	comp=N,46nm,1.4s						
U15A				IAML		00 23 31.6	
	comp=E,56nm,1.5s						
WUAZ	Wupatki	4.24	57		Pn	00 22 06.5	+1.8
WUAZ				IAML		00 23 30.5	
	comp=E,46nm,1.0s						
WUAZ				IAML		00 23 37.5	
	comp=E,60nm,1.1s						
WUAZ	Wupatki	4.24	57	P	Pn	00 22 06.4	+1.6
	baz=239						
LCMT	Little Creek M	4.26	28		Pn	00 22 06.4	+1.5
LCMT				IAML		00 23 31.5	
	comp=E,29nm,1.4s						
TUC	Tucson	4.27	102	Pn	Pn	00 22 05.0	0.0
TUC	Tucson	4.27	102	Pg	Pg	00 22 21.3	0.0
	baz=284						
KNB	Kanab	4.44	32	Pn	Pn	00 22 09.3	+1.9
KNB				IAML		00 23 32.4	
	comp=E,44nm,1.3s						
KNB				IAML		00 23 33.3	
	comp=N,46nm,1.3s						
PAGB	Antelope Grade	4.47	305		Pg	00 22 24.4	-0.8
PAGB				IAML		00 23 59.6	
	comp=N,43nm,2.6s						
PAGB				IAML		00 24 07.9	
	comp=E,48nm,3.3s						
CCUT	Cedar City	4.69	24	IAML		00 23 43.4	
	comp=E,23nm,2.0s						
CCUT				IAML		00 23 46.2	
	comp=N,27nm,1.5s						
SZCU	Shurtz Canyon	4.83	26		Pn	00 22 13.8	+1.0
SZCU				IAML		00 23 51.3	
	comp=N,24nm,1.2s						
SZCU				IAML		00 23 51.7	
	comp=E,23nm,1.3s						
TPH	Tonopah	4.95	346		Pg	00 22 33.1	-1.3
X18A	Snowflake	4.97	74		Pn	00 22 17.4	+2.7
R11A	Troy Canyon, C	5.08	1		Pg	00 22 36.1	-0.6
R11A	Troy Canyon, C	5.08	1	Pg	Pg	00 22 36.7	0.0
	baz=181						
PMPB	Monarch Peak	5.11	307	Pn	Pn	00 22 19.1	+2.6
PMPB				IAML		00 24 18.8	
	comp=E,38nm,2.5s						
PMPB				IAML		00 24 27.3	
	comp=N,42nm,1.4s						
W18A	Petrified Fore	5.30	68		Pg	00 22 39.6	-1.4
W18A	Petrified Fore	5.30	68	Pg	Pg	00 22 40.9	-0.1
	baz=251						
PSUT	Pine Spring	5.47	16		Pg	00 22 43.2	-1.2
MTPU	Mount Pierson	5.57	30		Pn	00 22 27.1	+4.0
319A	Douglas	5.77	107		Pg	00 22 52.1	+2.1
SPR3	Spring Creek 3	5.83	11	Pn	Pn	00 22 27.4	+0.7
SPR3				Pg	Pg	00 22 50.2	-1.1
MVU	Marysvale	5.96	28	Pg	Pg	00 22 50.5	-3.1
MSU	Marysvale	5.98	28	Pg	Pg	00 22 51.2	-2.8
KVN	Kaiserville	6.09	342	Pn	Pn	00 22 32.9	+2.8
YERR	Yerington	6.38	335		Pg	00 23 01.5	-0.2
121A	Cookes Peak, D	6.72	94	Pn	Pn	00 22 40.2	+1.4
121A	Cookes Peak, D	6.72	94	P	Pn	00 22 38.9	+0.1
	baz=278						
TMUT	Trail Mountain	7.04	30		Pg	00 23 11.5	-2.8
MVCO	Mesa Verde	7.11	54	Pg	Pg	00 23 13.6	-2.0
SRU	San Rafael Swe	7.19	34	Pg	Pg	00 23 13.0	-4.3
NLU	North Lily Min	7.29	23		Pg	00 23 16.9	-2.2
ELK	Elko	7.48	3	Pn	Pn	00 22 50.7	+1.5
ELK					Pg	00 23 21.5	-1.2

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*ISK **18** 00:24:57.9, 36°.08N×35°.94E, h8^{km}, ML2.5/16*
*DDA **18** 00:24:58.8, 36°.12N×35°.85E, h8^{km}±2^{km}, ML2.1*
ISC 18 00:24:58.0±1.6**, 36°.09N**±0°.07×**35°.92E**±0°.03**, h10**^{km}±9^{km}**,**
n26, σ0^{s}.80/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASUZ	Hatay-Arsuz	0.23	331	*i* P	Pg	00 25 02.5	-0.4
ASUZ				*i* S	Sg	00 25 06.2	+0.2
TAHT	Tahtakopru-Hat	0.36	36	PG	Pg	00 25 05.1	0.0
KRTS	Karatas	0.66	318	PG	Pb	00 25 11.4	-0.2
YURE	YUREGIR	0.77	342	*i* P	Pn	00 25 16.2	+1.2
YURE				*i* S	Sg	00 25 22.9	-0.2
YURE				IAML		00 25 36.0	
	comp=N,72nm,1.6s						
YURE				IAML		00 25 41.0	
	comp=E,63nm,1.5s						
CEYT	Ceyhan	0.93	351	PG	Pb	00 25 16.3	0.0
KUZU	Kuzuini	1.15	53	*i* P	Pg	00 25 19.9	-0.3
KUZU				*i* S	Sg	00 25 35.2	0.0
KUZU				IAML		00 25 40.0	
	comp=E,162nm,0.3s						
KAMA	Osmaniye	1.25	28	*i* P	Pn	00 25 21.8	+0.1
KAMA				*i* S	Sb	00 25 37.7	-0.3
DED	Mersin	1.26	314	*i* P	Pg	00 25 22.4	+0.2
DED				*i* S	Sg	00 25 38.3	-0.3
DED				IAML		00 25 43.0	
	comp=N,43nm,0.8s						
DED				IAML		00 25 43.0	
	comp=E,43nm,0.3s						
KARA	Karaisali	1.36	329	PN	Pg	00 25 24.4	+0.2
MERS	Mersin	1.37	305	PN	Pg	00 25 24.3	-0.1
KOZT	Kozan	1.39	357	PN	Pn	00 25 24.1	+0.5
KOZT				SN	Sg	00 25 43.4	+0.5
AKO	Adana	1.42	345	*i* P	Pg	00 25 26.4	+1.1
AKO				*i* S	Sb	00 25 42.2	-0.7
GAZ	Gaziantep	1.50	43	PN	Pn	00 25 25.8	+0.7
ANDN	Andirin	1.53	13	*i* P	Pb	00 25 27.1	+0.6
ANDN				*i* S	Sn	00 25 44.9	-0.6
CMRD	Camardi-Nigde	1.74	335	PN	Pb	00 25 29.5	-0.7
KEBE	Keben-Mersin	1.82	282	PN	Pn	00 25 30.4	+0.9
GZT	Gaziantep	1.83	46	*i* P	Pb	00 25 31.5	-0.2
GZT				*i* S	Sn	00 25 51.4	-1.5
GZT				IAML		00 26 05.0	
	comp=N,20nm,0.3s						
GZT				IAML		00 26 10.0	
	comp=E,14nm,0.8s						
AKKU	Akkuyu-Mersin	1.92	273	PN	Pn	00 25 31.3	+0.5
KERG	Konya-Eregli	1.96	313	*i* P	Pb	00 25 33.1	-0.8
KERG				*i* S	Sg	00 26 00.1	-0.9
TEVE	Tevekalti-Mers	2.04	281	PN	Pn	00 25 33.2	+0.7
BERE	Bereket-Mersin	2.20	278	PN	Pn	00 25 35.8	+1.0
TEKE	Tekeli-Mersin	2.28	272	PN	Pn	00 25 37.0	+1.3
SARI	SarD1z-Kayseri	2.35	10	PN	Pn	00 25 38.0	+1.1
KRMN	Karaman	2.40	298	PN	Pn	00 25 38.6	+1.1
YESY	Yesilyurt	2.43	315	PN	Pn	00 25 39.5	+1.5
URFA	Urfa	2.69	59	PN	Pn	00 25 42.6	+1.1

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*ECGS **18** 00:41:44.2, 2°.13S±0°.02×28°.86E±0°.02, h0^{km}±3^{km}, ML2.2, Error ellipse: s-maj=3.5km s-min=2.6km az=141.6, smi:local/395e302c-3336-4bfd-89e0-ff0d4a743097 Note: Depth/Latitude/Longitude errors are calculated from covariance matrix as 1D marginal (Lon/Lat errors as great circle degrees) while OriginUncertainty min/max horizontal errors are calculated from 2D error ellipsoid and are therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX -15.4553 Y -74.2997 Z 6.02413 CovXX 3.88899 XY -1.08935 XZ 3.34181 YY 4.39722 YZ -4.73764 ZZ 15.8335 EllAz1 163.553 Dip1 -22.6237 Len1 3.06438 Az2 250.6 Dip2 7.04825 Len2 3.29053 Len3 8.057576e+00*
*EAF **18** 00:42:25.2±16.0, 0°.48N×29°.81E, h10^{km}±316^{km}, MD3.2*
ISC 18 00:41:43.7±2.2**, 2°.14S**±0°.06×**28°.8E**±0°.1**, h10**^{km}**, n14,**
σ0^{s}.50/16**, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDJ	Idjwi	0.23	72	*i* P	Pg	00 41 48.8	+0.2
IDJ				*i* S	Sg	00 41 52.2	+0.4
BOBN	Bobandana	0.46	22	*i* P	Pg	00 41 52.9	+0.1
BOBN	Bobandana	0.46	22	*i* S	Sg	00 41 59.3	+0.4
GOM	Goma	0.59	40	*e*P	Pg	00 41 55.4	+0.2
GOM	Goma	0.59	40	*i* S	Sg	00 42 03.6	+0.5
KBTI	Kibati	0.71	38	*i* S	Sg	00 42 07.3	+0.4
SAHA	Sahara	0.90	51	*i* S	Sg	00 42 12.4	-0.7
SAHA	Sahara	0.90	51	*i* P	Pg	00 42 00.6	-0.6
KTSH	Kitshanga	0.91	13	*i* S	Sg	00 42 13.4	+0.1
RGB	Rumangabo	0.94	34	*i* P	Pg	00 42 01.5	-0.4
TGO	Tongo	1.02	25	*i* S	Sg	00 42 16.7	+0.1
BUJA	Bujumbura/Buru	1.37	156	*i* S	Sb	00 42 27.3	+0.2
MBAR	Mbarara	2.43	51	*e*P	Pg	00 42 29.5	-0.9
MBAR				*e*S	Sb	00 42 58.3	+0.5
KIL	Kilembe	2.59	27	*e*P	Pg	00 42 33.0	-0.5
KIL				*e*S	Sn	00 42 36.2	-21

JMA 18 00:47:31.1±0.1**, 36°.77N×140°.98E, h51**^{km}±1^{km}**, M3.7, 8D,**
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.36	336	⇓P	Pn	00 47 40.7	-0.3
ONAJ				*i* S	Sn	00 47 47.4	-0.7
JHO	Hitachi	0.37	244	⇓P	Pn	00 47 40.9	-0.1
JHO				S	Sn	00 47 47.7	-0.3
JFFD	Fukushimafurud	0.46	314	⇓P	Pn	00 47 42.0	0.0
JFFD				S	Sn	00 47 49.3	-0.6
JHYU	Hitachinakayam	0.53	217	⇓P	Pn	00 47 42.7	-0.1
JHYU				S	Sn	00 47 50.7	-0.5
JFK	Kawauchi	0.60	352	⇓P	Pn	00 47 43.2	-0.5
JFK				S	Sn	00 47 51.7	-1.1
JYT	Yasato	0.83	230	⇓P	Pn	00 47 46.5	-0.1
JYT				S	Sn	00 47 57.4	-0.5
JFT	Otama	0.91	326	⇓P	Pn	00 47 48.1	+0.5
JFT				S	Sn	00 48 00.1	+0.4
JMM	Marumori	1.10	352	P	Pn	00 47 50.2	0.0
JMM				S	Sn	00 48 03.7	-0.7
JFY	Yanaizu	1.20	302	P	Pn	00 47 51.6	0.0
JAG	Ashikaga	1.28	255	P	Pn	00 47 52.5	-0.1
JAG				S	Sn	00 48 08.2	-0.4
JKT	Katashina	1.39	270	⇓P	Pn	00 47 54.6	+0.4
JKT				S	Sn	00 48 12.4	+0.9
MAT	Matsushiro	2.24	265	P	Pn	00 48 07.0	+1.2
MAT				S	Sn	00 48 33.8	+1.5

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*IDC **18** 01:05:32.5±1.4, 6°.65S×129°.35E, h0^{km}, mb4.0/3, mb1 4.0/6, mb1mx3.6/28, mbtmp3.9/6, ML3.9/3, MS3.3/2, Ms1 3.4/2, ms1mx2.6/32, Error ellipse: s-maj=70.5km s-min=22.4km az=72.0*
*NEIC **18** 01:05:35.7±2.1, 6°.35S±0°.08×129°.47E±0°.08, h29^{km}±7^{km}, mb4.1/6, Error ellipse: s-maj=12.2km s-min=10.5km az=210.0*
ISC 18 01:05:36.9±0.8**, 6°.55S**±0°.07×**129°.61E**±0°.09**, h50**^{km}**, n21,**
σ2^{s}.20/22**, mb4.0**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.20	131		Pn	01 06 14.0	+3.0
FAKI	Fak Fak	4.46	36	Pn	Pn	01 06 39.6	-2.4
SOEI	Soe	6.18	239	Pn	Pn	01 07 04.7	-1.0
MTN	Manton Dam	6.44	167		Pn	01 07 11.3	+2.2
KNRA	Kununurra	9.11	185		Pn	01 07 47.6	+1.7
FITZ	Fitzroy Crossi	12.12	198	Pn	Pn	01 08 25.8	-1.2
	0.7nm,0.3s,baz=19,slow=11,SNR=24						
FITZ				Sn	Sn	01 10 40.4	-0.4
	0.7nm,0.3s,baz=160,slow=15,SNR=5.9						
WB0	Warramunga Arr	13.94	161	Pn	Pn	01 08 49.8	-2.1
WRA	Warramunga Arr	14.09	161	Pn	Pn	01 08 51.4	-2.5
	0.6nm,0.3s,baz=338,slow=13,SNR=23						
WRA				Sn	Sn	01 11 25.5	-3.2
	1.2nm,0.3s,baz=341,slow=20,SNR=14						
WRA				LR	LR	01 14 11.4	
	comp=Z,48nm,19.7s,baz=265,slow=37						
WB2	Warramunga Arr	14.09	161	Pn	Pn	01 08 52.2	-1.6
COEN	Coen	15.24	120	Pn	Pn	01 09 09.0	0.0
COEN				IAmb	IAmb	01 09 10.6	
	comp=Z,8.9nm,1.0s						
AS31	Alice Springs	17.52	167	Pn	P	01 09 38.9	+0.6
AS31				IAmb	IAmb	01 09 54.4	
	comp=Z,1.6nm,0.5s						
ASAR	Alice Springs	17.52	167	P	Pn	01 09 37.5	-0.2
	comp=Z,0.4nm,0.3s,baz=342,slow=8.7,SNR=14						
ASAR				S	Sn	01 12 48.5	-3.5
	comp=Z,0.2nm,0.3s,baz=352,slow=25,SNR=6.5						
STKA	Stephens Creek	27.58	158	P	P	01 11 21.8	+2.3
	comp=Z,1.4nm,0.3s,baz=355,slow=8.4,SNR=5.1						
STKA	Stephens Creek	27.58	158	IAmb	IAmb	01 11 23.4	
	comp=Z,0.6nm,0.8s						
CASY	Casey	61.09	189	P	P	01 15 47.5	+2.0
CASY				IAmb	IAmb	01 15 50.2	
	comp=Z,7.4nm,0.7s						
NIL	Nilore	66.63	311	P	P	01 16 21.2	-1.4
MKAR	Makanchi Array	67.64	327	P	P	01 16 29.8	+1.1
	comp=Z,0.2nm,0.4s,baz=122,slow=6.9,SNR=4.3						
ZAA0	Zalesovo Array	71.01	334	P	P	01 16 50.5	+1.2
ZAA0				IAmb	IAmb	01 16 58.7	
	comp=Z,1.8nm,0.9s						
ZALV	Zalesovo Beam	71.01	334	P	P	01 16 53.4	+4.1
	comp=Z,0.4nm,0.3s,baz=134,slow=4.2,SNR=2.0						
ZALV	Zalesovo Beam	71.01	334	P	P	01 16 49.9	+0.7
ILAR	Eielson Array	93.10	25	LR	LR	02 04 24.6	
	comp=Z,36nm,18.4s,baz=80,slow=38						

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*NIC **18** 01:06:07.3±0.0, 37°.05N×30°.85E, h143^{km}±3^{km}, Ml3.7/3*
*ISK **18** 01:06:07.7, 37°.33N×30°.70E, h112^{km}±1^{km}, ML3.0/34*
*DDA **18** 01:06:08.8, 37°.41N×30°.68E, h109^{km}±1^{km}, ML3.0*
ISC 18 01:06:06.7±1.4**, 37°.31N**±0°.04×**30°.73E**±0°.03**, h128**^{km}±8^{km}**,**
n72, σ1^{s}.06/83**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUCA	Burdur, Bucak-	0.14	277	*i* P	Pn	01 06 24.6	+0.4
BUCA				*i* S	Sn	01 06 36.0	-1.5
BCK	Bucak	0.19	322	PG	Pn	01 06 24.2	-0.1
ANTB	Antalya	0.41	189	PG	Pn	01 06 24.8	-0.2
KORT	Korkueli	0.44	225	*i* P	Pn	01 06 26.2	+0.9
KORT				*i* S	Sn	01 06 39.5	+0.1
KORT	Korkueli	0.44	225	PG	Pn	01 06 25.4	+0.1
ISP	Isparta	0.54	342	PG	Pn	01 06 26.2	+0.3
BRDR	BURDUR-Merkez	0.66	306	*i* P	Pn	01 06 26.8	+0.2
BRDR				*i* S	Sn	01 06 40.1	-1.6
BAGO	Egridir - ISPA	0.68	4	*i* P	Pn	01 06 27.5	+0.7
BAGO				*i* S	Sn	01 06 40.5	-1.6
KEMT	Kemer-ANTALYA	0.72	192	PG	Pn	01 06 27.4	+0.4
KEPZ	Antalya-Kepez	0.81	120	*i* P	Pn	01 06 28.4	+0.7
KEPZ				IAML		01 06 45.0	
	comp=N,255nm,0.5s						
KEPZ				IAML		01 06 45.0	
	comp=E,227nm,0.5s						
BASM	Basmaki-Afyon	0.81	318	PG	Pn	01 06 28.3	+0.5
SEDI	Konya, Seydise	0.82	80	*i* P	Pn	01 06 28.6	+0.7
ELL	Elmali	0.87	230	PG	Pn	01 06 28.3	0.0
ELL	Elmali	0.87	230	P	Pn	01 06 30.1	+1.8
ELL				S	Sn	01 06 48.2	+3.4
SEYD	Seydisehir-KON	0.88	84	PG	Pn	01 06 29.3	+0.9
SEYD				SG	Sn	01 06 44.3	-0.6
GOLH	Golhisar	0.94	266	*i* P	Pn	01 06 29.7	+0.8
GOLH				*i* S	Sn	01 06 45.0	-0.8
GOLH				IAML		01 06 47.0	
	comp=E,230nm,0.6s						
AKUM	Antalya-Kumluc	1.03	198	*i* P	Pn	01 06 30.5	+0.8
AKUM				IAML		01 06 49.0	
	comp=N,184nm,0.5s						
AKUM				IAML		01 07 02.0	
	comp=E,226nm,0.6s						
YVAC	Isparta, Yalva	1.04	23	*i* P	Pn	01 06 30.8	+0.9
KZIL	AFYON_Kizioren	1.06	334	*i* P	Pn	01 06 30.1	0.0
KZIL				*i* S	Sn	01 06 45.5	-2.3
DOGA	KONYA_Doganhis	1.08	43	*i* P	Pn	01 06 31.2	+0.8
CAEL	Denizli, Camel	1.15	261	*i* P	Pn	01 06 32.2	+1.2
CAEL				IAML		01 06 55.0	
	comp=N,418nm,0.6s						
CAEL				IAML		01 06 57.0	
	comp=E,501nm,0.6s						
CAME	Cameli-Denizli	1.20	253	PN	Pn	01 06 31.8	+0.3
SHUT	Suhut-Afyon	1.25	353	PN	Pn	01 06 32.0	0.0
DEMR	Demre-Antalya	1.26	212	PN	Pn	01 06 32.9	+0.9
KMER	Konya-Meram	1.38	70	*i* P	Pn	01 06 34.6	+1.2
AKAS	Kas	1.41	220	*i* P	Pn	01 06 34.2	+0.5
AKAS				IAML		01 07 05.0	
	comp=N,193nm,0.5s						
AKAS				IAML		01 07 05.0	
	comp=E,154nm,0.4s						
AKAS	Kas	1.41	220	PN	Pn	01 06 34.3	+0.5
PASA	Karahalli, USA	1.43	317	*i* P	Pn	01 06 34.0	+0.1
KONT	Konya--Tatoy	1.44	63	*i* P	Pn	01 06 35.4	+1.5
KONT	Konya--Tatoy	1.44	63	PN	Pn	01 06 35.3	+1.4
HDMB	Hadim	1.44	103	PN	Pn	01 06 35.5	+1.3
TAVA	DENIZLI_Tavas	1.46	277	*i* P	Pn	01 06 34.7	+0.5
KSL	Kastellorizon	1.48	219	P	Pn	01 06 35.0	+0.6
KSL				S	Sn	01 06 57.0	+1.5
KSL				AML	AML	01 06 58.4	
	comp=E,0.5nm,0.7s						
KSL				AML	AML	01 06 58.4	
	comp=E,0.5nm,0.7s						
KSL				AML	AML	01 07 05.8	
	comp=E,0.3nm,2.4s						
KSL				AML	AML	01 07 05.8	
	comp=E,0.3nm,2.4s						
FETY	Fethiye	1.48	243	*i* P	Pn	01 06 34.9	+0.4
FETY				IAML		01 06 56.0	
	comp=E,130nm,0.5s						
FETY	Fethiye	1.48	243	PN	Pn	01 06 34.9	+0.4
LADK	Ladik-KONYA	1.57	55	PN	Pn	01 06 36.5	+1.0
KDHN	Kadinhani	1.63	42	*i* P	Pn	01 06 37.1	+0.9
GAZI	Gazipasa	1.66	130	*i* P	Pn	01 06 37.6	+1.1
GAZI				IAML		01 07 03.0	
	comp=N,300nm,0.4s						
GAZI				IAML		01 07 03.0	
	comp=E,215nm,0.5s						

GAZI	Gazipasa	1.66	130	PN	Pn	01 06 37.6	+1.1
DALY	Dalyan (Mula)	1.74	254	PN	Pn	01 06 37.7	+0.4
KKBE	Karaman, Kazim	1.76	92	i P	Pn	01 06 38.6	+0.9
KIZT	Kizilcal	1.81	30	PN	Pn	01 06 39.1	+0.8
GEDZ	Gediz	2.02	329	PN	Pn	01 06 41.4	+0.6
KRMN	Karaman	2.02	93	PN	Pn	01 06 41.9	+1.0
GDZ	Gediz	2.03	331	i P	Pn	01 06 41.7	+0.7
KULA	Kula-Manisa	2.03	307	PN	Pn	01 06 41.4	+0.4
TURN	Turunc	2.06	256	i P	Pn	01 06 42.0	+0.8
TURN	Turunc	2.06	256	PN	Pn	01 06 41.7	+0.5
TURN				SN	Sn	01 07 07.7	0.0
BERE	Bereket-Mersin	2.22	115	PN	Pn	01 06 44.7	+1.4
TEKE	Tekeli-Mersin	2.24	121	PN	Pn	01 06 44.5	+1.0
SIMA	Simav-Kutahya	2.24	323	PN	Pn	01 06 44.2	+0.6
AYDN	Tasoluk	2.30	280	i P	Pn	01 06 44.5	+0.2
TEVE	Tevekalti-Mers	2.34	111	PN	Pn	01 06 46.3	+1.5
AYDB	Zeytinkoy-Aydi	2.34	287	PN	Pn	01 06 45.2	+0.3
TVSB	Tavsanli	2.36	335	PN	Pn	01 06 45.6	+0.6
MLSB	Milas	2.36	271	PN	Pn	01 06 45.6	+0.6
ARG	Arkhangelos	2.36	243	PN	Pn	01 06 45.4	+0.4
SULT	Sultanhani-AKS	2.38	67	PN	Pn	01 06 46.7	+1.4
YESY	Yesilyurt	2.44	78	PN	Pn	01 06 47.2	+1.1
AKKU	Akkuyu-Mersin	2.54	116	PN	Pn	01 06 48.6	+1.4
KEBE	Keben-Mersin	2.54	109	PN	Pn	01 06 48.9	+1.6
BORA	Eskisehir	2.58	355	PN	Pn	01 06 48.5	+0.7
DAT	Datca	2.59	258	PN	Pn	01 06 48.9	+0.9
IKL	Isikli	2.60	113	PN	Pn	01 06 49.4	+1.4
ALFC	Alefka	2.63	144	P	Pn	01 06 47.0	-1.4
ALFC				AML	AML	01 07 20.8	
	comp=E,1.1nm,0.2s						
ALFC				AML	AML	01 07 23.1	
	comp=E,0.8nm,0.2s						
AKMS	Akamas	2.63	150	P	Pn	01 06 47.5	-0.9
AKMS				AML	AML	01 07 19.0	
	comp=E,0.7nm,0.3s						
AKMS				AML	AML	01 07 19.6	
	comp=E,1.1nm,0.4s						
BODT	Bodrum	2.75	266	PN	Pn	01 06 50.2	+0.3
NATA	Nata	2.93	149	P	Pn	01 06 51.4	-1.0
ATHAL	Athalassa	3.05	134	P	Pn	01 06 53.3	-0.6
ATHAL				S	Sn	01 07 28.2	-2.1
CSS	Mathiatis	3.15	137	P	Pn	01 06 53.5	-1.7
ASGA	Asgata	3.24	140	P	Pn	01 06 56.1	-0.2
MVOU	Mavrovouni	3.28	133	⇑eP	Pn	01 06 55.4	-1.4

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*IDC **18** 01:17:25.2±3.1, 5°.30S×130°.55E, h52^{km}±39^{km}, mb3.5/2, mb1 3.8/6, mb1mx3.4/32, mbtmp3.9/6, ML3.8/4, Error ellipse: s-maj=76.1km s-min=22.4km az=88.0*

ISC 18 01:17:26.7±0.8**, 5°.28S**±0°.06×**130°.8E**±0°.1**, h100**^{km}**, n14, σ3^{s}60**/17**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	1.16	311	P	Pn	01 17 47.8	-1.1
SAUI	Saumlaki	2.73	169	P	Pn	01 18 14.6	+5.7
FAKI	Fak Fak	2.77	32	P	Pn	01 18 09.5	+0.1
SIJI	Sorong	4.41	6	P	Pn	01 18 30.4	-1.1
	5.6nm,0.3s,baz=196,slow=18,SNR=14						
SIJI				S	Sn	01 19 15.1	-6.8
	40nm,0.3s,baz=85,slow=24,SNR=27						
MTN	Manton Dam	7.52	177	P	Pn	01 19 17.3	+3.6
KDU	Kakadu	7.54	167	P	Pn	01 19 16.7	+2.7
KNRA	Kununurra	10.52	191	P	Pn	01 19 55.6	+1.1
FITZ	Fitzroy Crossi	13.69	201	P	Pn	01 20 36.1	-0.6
	0.4nm,0.3s,baz=24,slow=12,SNR=20						
FITZ				S	Sn	01 22 60.0	-7.5
	0.8nm,0.3s,baz=130,slow=18,SNR=9.6						
COEN	Coen	14.94	126	P	P	01 20 57.7	+1.7
WRAB	Tennant Creek	14.97	167	P	Pn	01 20 55.5	+2.3
WRA	Warramunga Arr	14.98	167	P	Pn	01 20 52.5	-0.8
	0.4nm,0.3s,baz=348,slow=13,SNR=20						
WRA				S	Sn	01 23 34.1	-4.5
	1.2nm,0.3s,baz=331,slow=23,SNR=10						
ASAR	Alice Springs	18.52	171	P	Pn	01 21 38.4	+1.5
	0.3nm,0.3s,baz=348,slow=11,SNR=21						
ASAR				S	S	01 24 59.4	-2.2
	0.3nm,0.3s,baz=344,slow=26,SNR=6.0						
SONM	Songino Array	57.08	341	P	P	01 27 05.5	+2.8
	0.3nm,0.5s,baz=159,slow=7.1,SNR=2.4						
MKAR	Makanchi Array	67.23	326	P	P	01 28 13.6	+3.2
	0.8nm,0.4s,baz=123,slow=8.2,SNR=8.0						

IDC 18 01:23:33.8±1.7**, 4°.19S**×**129°.33E, h0**^{km}**, mb3.5**/1**, mb1 3.9**/4**, mb1mx3.4**/43**, mbtmp3.7**/4**, ML3.4**/3**, Error ellipse: s-maj=58.9km s-min=27.4km az=84.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.82	30	Pn	Pn	01 24 32.9	-1.1
	5.3nm,0.3s,baz=253,slow=22,SNR=14						
SIJI				Sn	Sn	01 25 12.4	-7.4
	6.2nm,0.3s,baz=239,slow=23,SNR=2.0						
WRA	Warramunga Arr	16.40	163	Pn	Pn	01 27 24.3	-1.4
	0.1nm,0.3s,baz=340,slow=12,SNR=1.6						
ASAR	Alice Springs	19.86	168	P	P	01 28 07.2	+0.4
	0.5nm,0.3s,baz=348,slow=10,SNR=21						
MKAR	Makanchi Array	65.52	326	P	P	01 34 19.6	+0.4
	0.4nm,0.7s,baz=108,slow=8.4,SNR=3.4						

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*IDC **18** 01:33:25.7±1.0, 73°.00N×54°.32W, h0^{km}, mb3.5/9, mb1 3.9/12, mb1mx3.6/55, mbtmp3.6/12, ML3.3/3, MS3.3/18, Ms1 3.3/18, ms1mx3.2/37, Error ellipse: s-maj=25.8km s-min=18.3km az=158.0*

*DNK **18** 01:33:27.1±3.8, 73°.06N×54°.58W, h22^{km}±26^{km}, ML2.8*

ISC 18 01:33:25.7±0.6**, 73°.07N**±0°.05×**54°.25W**±0°.05**, h10**^{km}**, n35, σ2^{s}49**/25**, mb3.5**/9**, MS3.3**/15**, Western Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPNV	Upernavik	0.63	243	i P	Pg	01 33 37.0	-0.8
UPNV				i S	Sg	01 33 45.7	-0.4
UPNV				IAML		01 33 46.3	
	comp=Z,640nm,0.5s						
NEEM	North Greenlan	4.47	9	i P	Pn	01 34 34.5	+0.8
NEEM				i S	Sn	01 35 23.0	-2.8
NEEM				IAML		01 35 59.4	
	comp=Z,98nm,0.8s						
SUMG	Summit	4.71	88	i P	Pn	01 34 37.0	0.0
SUMG				i S	Sn	01 35 27.1	-4.6
SUMG				IAML		01 35 56.4	
	comp=Z,46nm,0.7s						
TULEG	Thule	5.16	319	i P	Pn	01 34 41.0	-1.8
TULEG				i S	Sn	01 35 35.5	-6.8
TULEG				IAML		01 35 58.5	
	comp=Z,25nm,0.6s						
I18DK	QAANAAQ INFRAS	5.83	326	i		02 14 10.0	
	baz=129,slow=339,SNR=1.4						
ICESG	Greenland Ices	6.19	123	i P	Pn	01 34 56.8	-0.6
ICESG				i S	Sn	01 36 07.1	-1.2
ICESG				IAML		01 36 40.4	
	comp=Z,30nm,0.9s						
SFJD	Kangerlussuaq	6.23	167	Pn	Pn	01 34 54.2	-3.3
	comp=Z,0.4nm,0.3s,baz=353,slow=17,SNR=1.1						
SFJD				Sn	Sn	01 36 07.1	-1.6
	comp=Z,1.0nm,0.3s,baz=43,slow=18,SNR=3.0						
SFJD				Lg	Lg	01 36 38.3	
	comp=Z,1.3nm,0.3s,baz=212,slow=9.3,SNR=5.5						
FRB	Frobisher Bay	10.70	216	Pn	Pn	01 35 56.5	-2.2
	comp=Z,0.1nm,0.3s,baz=21,slow=15,SNR=1.7						
FRB				LR	LR	01 40 03.9	
	comp=Z,125nm,22.0s,baz=3.0,slow=38						
RES	Resolute Bay	11.24	297	Pn	Pn	01 36 07.1	+1.0
	comp=Z,0.1nm,0.3s,baz=59,slow=16,SNR=5.2						
NOR	Nord	11.51	27	i P	Pn	01 36 06.8	-2.9
NOR				IAML		01 36 18.3	
	comp=Z,7.6nm,0.6s						
NOR				i S	Sn	01 38 06.7	-11
JMIC	Jan Mayen	13.99	76	LR	LR	01 41 07.0	
	comp=Z,345nm,21.1s,baz=334,slow=33						
SPITS	Spitsbergen Ar	17.13	41	P	P	01 37 27.0	+0.6
	baz=278,slow=10.0,SNR=2.1						
SCHQ	Schefferville	19.04	203	LR	LR	01 45 33.7	
	comp=Z,73nm,20.3s,baz=45,slow=38						
YKA	Yellowknife Ar	23.92	276	P	P	01 38 39.3	0.0
	comp=Z,0.3nm,0.8s,baz=35,slow=9.8,SNR=2.8						
ARCES	ARCESS Array B	24.02	58	LR	LR	01 47 00.3	
	comp=Z,79nm,19.8s,baz=265,slow=34						
INK	Inuvik	24.79	299	P	P	01 38 48.2	+1.1
	comp=Z,2.4nm,0.8s,baz=30,slow=9.4,SNR=4.8						
NOA	NORSAR Array B	26.56	82	LR	LR	01 49 18.0	
	comp=Z,40nm,21.1s,baz=355,slow=36						
HFS	Hagfors	28.02	81	LR	LR	01 49 58.4	
	comp=Z,69nm,18.8s,baz=300,slow=35						
ULM	Lac du Bonnet	29.11	241	LR	LR	01 50 59.7	
	comp=Z,72nm,19.6s,baz=102,slow=36						
FINES	FINESS Array B	30.44	69	LR	LR	01 52 01.8	
	comp=Z,38nm,18.2s,baz=147,slow=37						
ILAR	Eielson Array	30.90	304	P	P	01 39 44.7	+2.9
	comp=Z,0.3nm,0.8s,baz=38,slow=6.3,SNR=4.5						
PDAR	Pinedale Array	39.68	252	P	P	01 40 59.8	+2.0
	comp=Z,0.9nm,0.8s,baz=32,slow=5.5,SNR=6.4						
AKASG	Malin Array Be	40.62	76	LR	LR	01 57 27.2	
	comp=Z,40nm,19.9s,baz=115,slow=36						
ESDC	Sonseca Array	41.20	116	P	P	01 41 11.3	+1.2
	comp=Z,0.7nm,0.9s,baz=339,slow=9.1,SNR=5.6						
ESDC				LR	LR	01 56 40.6	
	comp=Z,38nm,20.1s,baz=160,slow=34						
NVAR	Mina Array Bea	46.17	258	P	P	01 41 51.4	+1.1
	comp=Z,0.9nm,0.8s,baz=16,slow=4.2,SNR=6.5						
ZALV	Zalesovo Beam	50.18	30	P	P	01 42 22.9	+2.1
	comp=Z,0.4nm,0.3s,baz=354,slow=11,SNR=3.7						
ZALV				LR	LR	02 05 51.6	
	comp=Z,40nm,20.0s,baz=330,slow=39						
TXAR	Lajitas Array	50.77	239	P	P	01 42 26.8	+1.1
	comp=Z,0.6nm,0.9s,baz=46,slow=7.3,SNR=4.6						
KBZ	Khabaz	50.79	68	LR	LR	02 02 36.6	
	comp=Z,46nm,21.6s,baz=341,slow=34						
BRTR	Keskin Array B	51.91	78	LR	LR	02 04 14.3	
	comp=Z,26nm,18.9s,baz=338,slow=36						
PETK	Petropavlovsk-	52.20	336	LR	LR	02 05 37.7	
	comp=Z,28nm,19.4s,baz=4.6,slow=37						
MKAR	Makanchi Array	56.73	34	LR	LR	02 10 02.2	
	comp=Z,31nm,18.3s,baz=5.5,slow=39						
SONM	Songino Array	58.65	15	P	P	01 43 24.7	+2.1
	comp=Z,0.6nm,0.8s,baz=335,slow=2.9,SNR=4.3						
GEYT	Alibeck	60.19	57	LR	LR	02 11 18.8	
	comp=Z,35nm,19.9s,baz=225,slow=38						
KSRS	Korea Array	69.75	358	LR	LR	02 14 50.1	
	comp=Z,16nm,21.0s,baz=40,slow=36						
CMAR	Chiang Mai Arr	86.98	25	LR	LR	02 29 17.6	
	comp=Z,12nm,18.5s,baz=355,slow=38						

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*THE **18** 01:34:48.4, 38°.55N×20°.45E, h11^{km}±1^{km}, ML3.3/7, Error ellipse: s-maj=1.6km s-min=0.8km az=272.0*

*IDC **18** 01:34:49.0±3.3, 38°.94N×20°.83E, h0^{km}, mb3.4/5, mb1 3.5/7, mb1mx3.3/43, mbtmp3.5/7, ML3.2/2, Error ellipse: s-maj=72.3km s-min=22.8km az=47.0*

*ATH **18** 01:34:48.4, 38°.55N×20°.54E, h16^{km}±2^{km}, ML3.1/7, Error ellipse: s-maj=2.6km s-min=0.9km az=265.0*

*BEO **18** 01:34:57.4±0.7, 39°.01N×20°.04E, h40^{km}±5^{km}, ML2.9/11*

ISC 18 01:34:47.7±0.8**, 38°.58N**±0°.02×**20°.43E**±0°.03**, h14**^{km}±6^{km}**, n98, σ2^{s}64**/135**, mb3.6**/5**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.16	141	P	Pg	01 34 51.6	0.0
FSK				S	Sg	01 34 53.5	-0.8
	27μm,0.2s						
FSK	Fiskardo	0.16	141	P	Pg	01 34 51.6	0.0
FSK				S	Sg	01 34 53.4	-0.8
FSK				AML	AML	01 34 53.9	
	comp=E,73579μm,0.2s						
FSK				AML	AML	01 34 54.3	
	comp=N,35324μm,0.3s						
LKD2	Lefkada island	0.27	40	P	Pb	01 34 54.4	+0.1
LKD2				S	Sb	01 34 59.0	+0.2
	comp=N,5μm,0.3s						
LKD2	Lefkada island	0.27	40	P	Pb	01 34 54.3	+0.1
LKD2				S	Sb	01 34 58.5	-0.3
LKD2				AML	AML	01 35 00.4	
	comp=E,10301μm,0.2s						
LKD2				AML	AML	01 35 00.6	
	comp=N,10292μm,0.3s						
KEF4	Livadi, Kephal	0.33	181	P	Pb	01 34 54.9	-0.3
LXRA	Lixouri, Kepha	0.38	180	P	Pb	01 34 55.9	-0.3
KEF3	Kipouria, Keph	0.39	190	P	Pg	01 34 55.5	+0.1
KEF3				S	Sb	01 35 01.2	-0.8
	comp=N,12μm,0.3s						
KEF3	Kipouria, Keph	0.39	190	P	Pg	01 34 55.5	+0.1
KEF3				S	Sg	01 35 00.9	+0.2
VLS	Valsamata	0.42	163	P	Pg	01 34 56.0	-0.1
VLS				S	Sg	01 35 02.2	+0.3
	comp=N,8μm,0.2s						
VLS	Valsamata	0.42	163	P	Pg	01 34 56.0	-0.1
VLS				S	Sg	01 35 01.9	0.0
VLS				AML	AML	01 35 02.4	
	comp=N,18349μm,0.2s						
VLS				AML	AML	01 35 02.8	
	comp=E,13346μm,0.2s						
VTN	Vitineika	0.89	138	P	Pb	01 35 04.6	-0.3
LTHK	Lithakia	0.93	160	P	Pb	01 35 04.4	-1.1
LTHK				S	Sn	01 35 18.5	-0.8
	comp=E,2μm,0.2s						
LTHK	Lithakia	0.93	160	P	Pb	01 35 04.4	-1.1
IGT	Igoumenitsa	0.95	355	P	Pn	01 35 07.3	+0.7
IGT	Igoumenitsa	0.95	355	P	Pn	01 35 06.9	+0.3
IGT				AML	AML	01 35 27.0	
	comp=E,975μm,0.5s						
IGT				AML	AML	01 35 27.6	
	comp=N,791μm,0.3s						
RLS	Riolos of Patr	0.97	123	P	Pb	01 35 05.8	-0.3
RLS				S	Sn	01 35 20.6	+0.4
	comp=N,665nm,0.3s						
RLS	Riolos of Patr	0.97	123	P	Pb	01 35 05.5	-0.6
EVR	Evrytania	1.13	72	P	Pb	01 35 08.9	-0.1
EVR	Evrytania	1.13	72	P	Pb	01 35 08.9	-0.1
ANX	Ano Chora	1.17	89	P	Pn	01 35 09.1	-0.5
ANX	Ano Chora	1.17	89	P	Pn	01 35 08.9	-0.7
ANX				AML	AML	01 35 33.3	
	comp=E,2025μm,1.1s						
ANX				AML	AML	01 35 33.6	
	comp=N,2344μm,0.8s						
EFP	Efpalio	1.17	97	P	Pn	01 35 08.7	-0.8
EFP	Efpalio	1.17	97	P	Pn	01 35 08.7	-0.8
EFP				AML	AML	01 35 31.1	
	comp=N,1205μm,0.6s						
EFP				AML	AML	01 35 31.6	
	comp=E,1591μm,0.6s						
DRO	Drossia	1.19	122	P	Pn	01 35 09.6	-0.2
DRO				S	Sg	01 35 27.6	+1.6
	comp=E,1μm,0.4s						
DRO	Drossia	1.19	122	P	Pn	01 35 09.5	-0.3
DRO				AML	AML	01 35 27.9	
	comp=N,1989μm,0.6s						
DRO				AML	AML	01 35 28.0	
	comp=E,2518μm,0.6s						
KEK	Kerkira	1.23	337	P	Pg	01 35 13.0	+1.6
LAKA	Lakka	1.26	105	P	Pn	01 35 10.2	-0.6
TRIZ	Trizonia	1.30	99	P	Pn	01 35 11.1	-0.3
TRIZ	Trizonia	1.30	99	P	Pn	01 35 11.0	-0.3
ALIK	Aliki, Aigiali	1.36	103	P	Pn	01 35 11.9	-0.2
MAKR	Makrakomi, Fth	1.40	72	P	Pg	01 35 14.1	-0.4
KLV	Kalavryta, Ach	1.45	111	P	Pn	01 35 13.3	-0.2
AGG	Agios Georgios	1.55	73	P	Pb	01 35 16.0	0.0
OHR	Ohrid	2.54	6	i Pn	Pb	01 35 32.9	-0.1
OHR	Ohrid	2.54	6	ePn	Pb	01 35 31.7	-1.3
OHR				eSn	Sn	01 35 56.5	-2.7
TIR	Tirane	2.79	351	ePn	Pn	01 35 34.2	+2.3
TIR				eSn	Sn	01 36 00.5	-4.9
VAY	Valandovo	3.19	30	i Pn	Pb	01 35 42.7	-1.3
VAY	Valandovo	3.19	30	ePn	Pn	01 35 40.3	+3.0
VAY				eSn	Sn	01 36 17.6	+2.5
DRME	Dracevica, Mon	3.72	346	ePn	Pn	01 35 47.0	+2.3
PDG	Podgorica	3.95	347	ePn	Pn	01 35 49.6	+1.9
PDG	Podgorica	3.95	347	ePn	Pn	01 35 48.9	+1.2
PDG				eSn	Sn	01 36 27.3	-6.4
HCY	Herceg Novi	4.13	340	ePn	Pn	01 35 51.1	+0.8
BOSS	Bosilegrad	4.21	21	ePn	Pn	01 35 54.8	+3.5
BOSS				eSn	Sn	01 36 38.7	-1.6
BARS	Barje	4.36	14	ePn	Pn	01 35 56.3	+2.9
BARS				eSn	Sn	01 36 41.3	-2.6
TREB	Trebinje	4.42	340	ePn	Pn	01 35 55.6	+1.3
BRY	Bratogost	4.55	342	ePn	Pn	01 35 57.7	+1.6
VTS	Vitosha	4.56	27	ePn	Pn	01 35 59.7	+3.4
VTS				eSn	Sn	01 36 47.2	-1.9
SELS	Selova	4.66	6	ePn	Pn	01 35 59.3	+1.7
SJES	Sjenica	4.69	356	ePn	Pn	01 35 59.5	+1.5
SJES				eSn	Sn	01 36 45.3	-6.9
UPM	Unac-Piva	4.76	346	ePn	Pn	01 36 01.3	+2.2
STON	Ston	4.76	335	ePn	Pn	01 36 00.3	+1.4
STON	Ston	4.76	335	ePn	Pn	01 35 59.3	+0.5
STON				Sn	Sn	01 36 48.2	-5.6
IDI	Anoyia	4.85	131	Pn	Pn	01 36 04.2	+4.0
	comp=E,0.2nm,0.3s,baz=81,slow=21,SNR=2.2						
IDI				Sn	Sn	01 36 55.4	-0.9
	comp=E,0.5nm,0.3s,baz=306,slow=19,SNR=1.5						
LSTV	Lastovo	4.97	328	ePn	Pn	01 36 02.5	+0.7
LSTV				Sn	Sn	01 36 52.1	-6.9
ZAPS	Zavoj	4.97	19	ePn	Pn	01 36 05.7	+3.8
IVAS	Ivanjica	4.99	358	ePn	Pn	01 36 03.8	+1.6
IVAS				eSn	Sn	01 36 53.7	-6.0
RUDO	Rudo	5.09	351	ePn	Pn	01 36 02.6	-0.9
GRUS	Gruza	5.30	2	ePn	Pn	01 36 08.5	+2.1
BBLS	Lazići	5.33	352	ePn	Pn	01 36 08.6	+1.7
BBLS	Lazići	5.33	352	ePn	Pn	01 36 06.8	-0.1
BBLS				eSn	Sn	01 37 00.6	-7.5
MAKA	Makarska	5.36	332	ePn	Pn	01 36 08.7	+1.6
MAKA				Sn	Sn	01 37 02.4	-6.2
HVAR	Hvar	5.49	328	ePn	Pn	01 36 09.8	+0.8
HVAR				Sn	Sn	01 37 05.4	-6.5
RICI	Ricice	5.50	334	ePn	Pn	01 36 10.4	+1.3
RICI				Sn	Sn	01 37 07.5	-4.7
DIVS	Divibare	5.52	357	ePn	Pn	01 36 10.7	+1.3
DIVS	Divibare	5.52	357	ePn	Pn	01 36 10.7	+1.3
DIVS				eSn	Sn	01 37 05.1	-7.6
TRUS	Trudelj	5.63	360	ePn	Pn	01 36 12.9	+2.0
KIJV	Kijevo	6.21	332	ePn	Pn	01 36 20.6	+1.8
KIJV				Sn	Sn	01 37 25.3	-4.2
ZIRJ	Zirje	6.22	326	ePn	Pn	01 36 20.3	+1.3
ZIRJ				Sn	Sn	01 37 23.5	-6.4
MGRS	Mrkonjic Grad	6.35	338	ePn	Pn	01 36 22.4	+1.7
MORI	Morici	6.37	327	i Pn	Pn	01 36 22.9	+2.0
MORI				Sn	Sn	01 37 28.1	-5.3
FRGS	Fruska Gora	6.59	356	ePn	Pn	01 36 19.7	-4.3
FRGS	Fruska Gora	6.59	356	ePn	Pn	01 36 24.6	+0.6
BLY	Banja Luka	6.62	340	ePn	Pn	01 36 22.7	-1.8
DUGI	Dugi Otok	6.75	325	ePn	Pn	01 36 27.6	+1.4
DUGI				Sn	Sn	01 37 36.1	-6.7
UDBI	Udbina	6.89	331	ePn	Pn	01 36 30.9	+2.7
MRAK	Mrakovica	6.95	339	ePn	Pn	01 36 30.3	+1.3
PLIT	Plitvice	7.24	332	ePn	Pn	01 36 34.4	+1.4
NVLJ	Novalja	7.28	327	ePn	Pn	01 36 34.9	+1.4
MORH	Mrgy, Hungar	7.74	351	ePn	Pn	01 36 40.5	+0.7
BRJN	Brijuni	8.05	324	ePn	Pn	01 36 45.4	+1.3
RIY	Rijeka	8.06	329	ePn	Pn	01 36 46.1	+1.9
CRES	Cresnjev	8.12	335	ePn	Pn	01 36 46.4	+1.3
CEY	Cerknica	8.43	330	ePn	Pn	01 36 50.7	+1.5
OBKA	Obir	9.03	333	i Pn	Pn	01 37 00.3	+2.7
	comp=E,1.0nm,0.3s,SNR=4.3						
OBKA				eSn	Sn	01 38 39.9	+0.8
	comp=E,1.2nm,0.3s						
KBA	Koelnbreinsper	9.95	331	ePn	Pn	01 37 12.2	+1.8
	comp=E,0.9nm,0.5s						
KBA				eSn	Sn	01 39 01.0	-0.9
	comp=E,0.8nm,0.4s						
ABTA	Abfaltersbach	10.02	327	ePn	Pn	01 37 13.4	+2.2
	comp=E,1.4nm,0.5s						
ABTA				eSn	Sn	01 39 04.1	+0.7
	comp=E,1.1nm,0.4s						
MOA	Molln	10.29	336	i Pn	Pn	01 37 16.3	+1.5
	comp=E,1.4nm,0.4s,SNR=4.4						
WTTA	Wattenberg	10.80	326	ePn	Pn	01 37 25.0	+3.1
	comp=E,1.5nm,0.5s						
WATA	Walderalm	10.88	326	ePn	Pn	01 37 26.0	+3.0
	comp=E,0.6nm,0.2s						
SQTA	Sankt Quirin	10.96	325	ePn	Pn	01 37 27.6	+3.6
	comp=E,1.0nm,0.3s						
MOTA	Moosalm	11.10	325	Pn	Pn	01 37 28.9	+2.9
	comp=E,1.0nm,0.4s,SNR=4.2						
MOTA				eSn	Sn	01 39 33.3	+3.4
	comp=E,1.6nm,0.6s						
GERES	GERESS Array B	11.35	337	Pn	Pn	01 37 29.8	+0.5
	comp=E,0.2nm,0.3s,baz=153,slow=15,SNR=5.1						
DAVA	Damuels	11.63	322	ePn	Pn	01 37 36.2	+3.0
	comp=E,0.6nm,0.2s						
DAVA				eSn	Sn	01 39 47.0	+4.2
	comp=E,1.3nm,0.3s						
HFS	Hagfors	21.99	351	P	P	01 39 41.8	+0.8
	comp=E,1.3nm,0.5s,baz=166,slow=13,SNR=4.7						
FINES	FINESS Array B	23.15	7	P	P	01 39 54.1	+0.9
	comp=E,3.0nm,0.9s,baz=170,slow=12,SNR=5.7						
NOA	NORSAR Array B	23.21	349	P	P	01 39 55.7	+1.9
	comp=E,0.2nm,0.5s,baz=166,slow=11,SNR=1.5						
MKAR	Makanchi Array	45.15	59	P	P	01 43 03.9	+0.2
	comp=E,0.1nm,0.4s,baz=270,slow=8.6,SNR=1.9						
ZALV	Zalesovo Beam	45.47	48	P	P	01 43 03.8	-2.2
	comp=E,0.6nm,0.4s,baz=291,slow=8.0,SNR=1.8						

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*IDC **18** 02:00:19.1±3.5, 16°.20S×132°.02E, h0^{km}, mb1 3.5/4, mb1mx3.1/29, mbtmp3.3/4, ML3.4/3, Error ellipse: s-maj=32.4km s-min=18.6km az=11.0*

*AUST **18** 02:00:20.9±3.7, 16°.29S×132°.06E, h8^{km}±26^{km}, Error ellipse: s-maj=11.3km s-min=9.5km az=64.0*

ISC 18 02:00:20.7±0.8**, 16°.25S**±0°.05×**131°.99E**±0°.05**, h10**^{km}**, n18, σ2^{s}20**/25**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUKAT	Katherine High	1.80	9	P	Pg	02 01 06.4	+11
	baz=1.8						
AUKAT				S	Sg	02 01 31.8	+13
	baz=1.8						
KNRA	Kununurra	3.16	280	P	Pn	02 01 12.2	+1.7
	baz=3.2,SNR=7.9						
KNRA				S	Sn	02 01 52.0	+3.7
	baz=3.2						
MTN	Manton Dam	3.49	346	P	Pn	02 01 16.6	+1.6
	baz=3.6						
KDU	Kakadu	3.58	8	P	Pn	02 01 18.0	+1.8
	baz=3.6,SNR=12						
KDU				S	Sn	02 02 00.1	+1.5
	baz=3.6						
WRA	Warramunga Arr	4.29	149	Pn	Pn	02 01 27.4	+1.3
	1.9nm,0.3s,baz=327,slow=15,SNR=71						
WRA				Pg	Pb	02 01 38.9	+2.5
	3.2nm,0.3s,baz=328,slow=17,SNR=19						
WRA				Sn	Sn	02 02 19.7	+3.3
	4.3nm,0.3s,baz=333,slow=28,SNR=6.5						
WRA				Lg	Lg	02 02 34.6	
	13nm,0.3s,baz=330,slow=30,SNR=14						
WB2	Warramunga Arr	4.30	149	P	Pn	02 01 27.1	+0.9
	baz=4.3						
WB2				S	Sn	02 02 17.1	+0.6
	baz=4.3						
AUNHS	Nhulunbuy High	6.15	50	P	Pn	02 01 53.1	+1.5
	baz=6.1						
FITZ	Fitzroy Crossi	6.34	252	Pn	Pn	02 01 54.4	+0.1
	baz=68,slow=11						
FITZ				Sn	Sn	02 03 04.0	-2.8
	3.5nm,0.3s,baz=226,slow=6.0,SNR=12						
FITZ				Lg	Lg	02 03 37.8	
	3.3nm,0.3s,baz=133,slow=16,SNR=6.5						
FITZ	Fitzroy Crossi	6.34	252	P	Pn	02 01 54.7	+0.4
	baz=6.4						
ASAR	Alice Springs	7.59	167	Pn	Pn	02 02 12.9	+1.5
	0.2nm,0.3s,baz=342,slow=8.7,SNR=8.9						
ASAR				Sn	Sn	02 03 36.2	-1.4
	0.6nm,0.3s,baz=347,slow=25,SNR=4.9						
ASAR				Lg	Lg	02 04 18.2	
	2.6nm,0.3s,baz=348,slow=29,SNR=8.7						
QIS	Mount Isa	8.40	122	P	Pn	02 02 23.5	+0.9
	baz=8.3						
QIS				S	Sn	02 03 51.8	-5.8
	baz=8.3						
WRKA	Warakurna	9.40	201	P	Pn	02 02 36.6	+0.3
	baz=9.4						
COEN	Coen	11.04	80	P	Pn	02 02 56.6	-2.2
	baz=11						
MTSU	Mount Surprise	11.93	101	P	Pn	02 03 09.3	-1.6
	baz=12						
OOD	Oodnadatta	11.98	164	P	Pn	02 03 11.5	-0.1
	baz=12						
MULG	Mulgathing	14.09	173	P	Pn	02 03 38.5	-2.0
	baz=14						
FORT	Forrest	14.90	193	P	Pn	02 03 50.4	-1.1
	baz=15						
STKA	Stephens Creek	17.84	152	P	Pn	02 04 30.0	+0.9
	0.2nm,0.3s,baz=327,slow=12,SNR=2.8						

RSPR 18 02:00:53.9, 19°.70N×65°.58W, h33^{km}±13^{km}**, MD3.3**/7**, 7C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUPR	Culebra, Puert	1.42	168	⇑eP	Pn	02 01 15.8	-1.4

CUPR	**Culebra, Puert**	**1.42**	**168**	*e*S	Sn	02 01 32.9	-1.9
CUPR	**Culebra, Puert**	**1.42**	**168**		Pn	02 01 15.8	-1.4
CUPR					Sn	02 01 32.9	-1.9
CBYP	**Canovanas**	**1.45**	**190**	Pn	Pn	02 01 15.9	-1.9
CBYP				IAML		02 01 40.9	
	comp=N,223nm,0.2s						
GCPR	**Guaynabo City**	**1.46**	**199**	⇑*e*P	Pn	02 01 16.6	-1.4
GCPR	**Guaynabo City**	**1.46**	**199**	*e*S	Sn	02 01 34.2	-1.8
GCPR	**Guaynabo City**	**1.46**	**199**		Pn	02 01 16.6	-1.4
GCPR					Sn	02 01 34.2	-1.8
STVI	**Saint Thomas**	**1.47**	**156**	⇓*e*P	Pn	02 01 16.6	-1.5
STVI	**Saint Thomas**	**1.47**	**156**	*e*S	Sn	02 01 34.5	-1.5
STVI	**Saint Thomas**	**1.47**	**156**		Pn	02 01 16.6	-1.5
STVI					Sn	02 01 34.5	-1.5
STVI	**Saint Thomas**	**1.47**	**156**	IAML		02 01 43.9	
	comp=N,64nm,0.3s						
EMPR	**Esperanza - Ma**	**1.51**	**217**	Pn	Pn	02 01 17.9	-0.7
EMPR				IAML		02 01 31.7	
	comp=N,177nm,2.2s						
EMPR				IAML		02 01 49.4	
	comp=E,198nm,2.3s						
TBVI	**Tortola**	**1.57**	**144**	⇑*e*P	Pn	02 01 18.2	-1.2
TBVI	**Tortola**	**1.57**	**144**	*e*S	Sn	02 01 36.7	-1.9
HUMP	**Col San Antoni**	**1.57**	**189**	⇑*e*P	Pn	02 01 18.1	-1.3
HUMP	**Col San Antoni**	**1.57**	**189**	*e*S	Sn	02 01 37.3	-1.3
HUMP	**Col San Antoni**	**1.57**	**189**		Pn	02 01 18.1	-1.3
HUMP					Sn	02 01 37.3	-1.3
HUMP	**Col San Antoni**	**1.57**	**189**	IAML		02 01 37.8	
	comp=N,60nm,0.2s						
MTP	**Monte Pirata**	**1.60**	**179**	⇑*e*P	Pn	02 01 18.4	-1.4
MTP	**Monte Pirata**	**1.60**	**179**	*e*S	Sn	02 01 38.0	-1.3
MTP	**Monte Pirata**	**1.60**	**179**		Pn	02 01 18.4	-1.4
MTP					Sn	02 01 38.0	-1.3
MTP	**Monte Pirata**	**1.60**	**179**	IAML		02 01 38.7	
	comp=E,96nm,0.3s						
MTP				IAML		02 01 40.0	
	comp=N,68nm,0.2s						
CDVI	**St. Croix**	**2.09**	**158**	⇑*e*P	Pn	02 01 25.5	-1.0
CDVI	**St. Croix**	**2.09**	**158**	*e*S	Sn	02 01 50.0	-1.4
CDVI	**St. Croix**	**2.09**	**158**		Pn	02 01 25.5	-1.0
CDVI					Sn	02 01 50.0	-1.4
CRPR	**Cabo Rojo, PR**	**2.22**	**221**	⇑*e*P	Pn	02 01 27.4	-1.0
CRPR	**Cabo Rojo, PR**	**2.22**	**221**	*e*S	Sn	02 01 53.2	-1.5
CRPR	**Cabo Rojo, PR**	**2.22**	**221**		Pn	02 01 27.4	-1.0
CRPR					Sn	02 01 53.2	-1.5
CRPR	**Cabo Rojo, PR**	**2.22**	**221**	IAML		02 02 03.7	
	comp=E,53nm,2.9s						
CRPR				IAML		02 02 23.2	
	comp=N,56nm,2.8s						

IASPEI ***18*** *02:03:25.0±0.9, 35°.99N±0°.02×96°.80W±0°.03, h8^{km}±5^{km}, Error ellipse: s-maj=4.2km s-min=2.8km az=120.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

TUL ***18*** *02:03:25.1±1.1, 35°.99N±0°.01×96°.80W±0°.02, h6^{km}, ML3.7, mb_Lg3.4/95(NEIC), Error ellipse: s-maj=2.7km s-min=2.0km az=111.0*

ANF ***18*** *02:03:25.3±0.2, 36°.00N×96°.80W, h3^{km}, ML4.0/14, Error ellipse: s-maj=2.0km s-min=1.6km az=146.0*

NEIC ***18*** *02:03:25.3±1.1, 36°.00N±0°.01×96°.80W±0°.03, h5^{km}±4^{km}, Error ellipse: s-maj=4.1km s-min=2.0km az=100.0*

ISC 18 02:03:25.1±0.9**, 36°.00N**±0°.02×**96°.80W**±0°.02**, h8**^{km}±5^{km}**, n124, σ0^{s}75**/130**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK031	**S. Brethren Rd**	**0.05**	**216**		**Pg**	**02 03 26.5**	**-0.3**
OK031				Sg	**Sg**	**02 03 27.4**	**-0.6**
OK030	**Cody Creek RV**	**0.07**	**167**	Pg	**Pg**	**02 03 26.9**	**-0.1**
OK030				Sg	**Sg**	**02 03 28.2**	**-0.2**
OK034	**N. Norfolk Rd.**	**0.07**	**78**	Pg	**Pg**	**02 03 27.3**	**+0.2**
OK034				Sg	**Sg**	**02 03 28.7**	**+0.1**
QUOK	**Quay**	**0.19**	**23**	Pg	**Pg**	**02 03 29.5**	**+0.5**
QUOK				Sg	**Sg**	**02 03 32.2**	**+0.5**
OK005	**Luther M Schoo**	**0.46**	**223**	Pg	**Pg**	**02 03 33.7**	**-0.4**
OK005				Sg	**Sg**	**02 03 40.3**	**+0.1**
OK029	**Liberty Lake**	**0.56**	**250**	Pg	**Pg**	**02 03 36.2**	**+0.2**
OK029				Sg	**Sg**	**02 03 43.9**	**+0.5**
OK025	**Westminster Rd**	**0.60**	**227**	Pg	**Pg**	**02 03 36.6**	**0.0**
OK025				Sg	**Sg**	**02 03 45.0**	**+0.5**
OK009	**Oakdale Elemen**	**0.65**	**231**		**Sg**	**02 03 47.3**	**+1.1**
BCOK	**Bluff Creek, N**	**0.74**	**243**	Pg	**Pg**	**02 03 39.2**	**0.0**
BCOK				Sg	**Sg**	**02 03 49.4**	**+0.5**
OKCFA	**Oklahoma City**	**0.78**	**223**		**Pg**	**02 03 39.7**	**-0.5**
OKCFA				Sg	**Sg**	**02 03 50.6**	**+0.3**
OKCFA	**Oklahoma City**	**0.78**	**223**	P	**Pg**	**02 03 39.8**	**-0.4**
	baz=41						
OKCFA				S	**Sg**	**02 03 50.9**	**+0.5**
	baz=41						
OKCSW	**OKLAHOMA CITY**	**0.78**	**222**	Pg	**Pg**	**02 03 39.8**	**-0.4**
OKCSW				Sg	**Sg**	**02 03 50.7**	**+0.4**
TUL1	**Leonard**	**0.82**	**96**		**Pg**	**02 03 40.6**	**-0.3**
TUL1	**Leonard**	**0.82**	**96**	P	**Pg**	**02 03 40.7**	**-0.3**
	baz=276,SNR=640						
TUL1				S	**Sg**	**02 03 51.8**	**+0.2**
	baz=276						
BLOK	**Blackwell**	**0.83**	**337**	Pg	**Pg**	**02 03 41.2**	**+0.1**
BLOK				Sg	**Sg**	**02 03 52.3**	**+0.3**
W35A	**Tecumseh**	**0.84**	**184**	Pg	**Pg**	**02 03 40.8**	**-0.5**
W35A				Sg	**Sg**	**02 03 52.4**	**+0.1**
FNO	**Franklin**	**0.88**	**214**	Pg	**Pg**	**02 03 41.5**	**-0.6**
T35A	**Sooner Cattle**	**0.95**	**14**	Pg	**Pg**	**02 03 43.2**	**-0.1**
T35A				Sg	**Sg**	**02 03 55.5**	**-0.2**
T35B	**Sooner Cattle**	**0.95**	**14**	P	**Pg**	**02 03 43.2**	**-0.1**
	baz=195						
T35B				S	**Sg**	**02 03 55.9**	**+0.2**
	baz=195						
CROK	**Carrier**	**1.08**	**298**	Pg	**Pg**	**02 03 45.6**	**-0.2**
CROK				Sg	**Sg**	**02 04 00.0**	**+0.1**
KAN13	**South Haven SW**	**1.15**	**332**	Pg	**Pg**	**02 03 47.0**	**-0.3**
KAN13				Sg	**Sg**	**02 04 02.0**	**-0.2**
GC02	**Grant County #**	**1.21**	**315**		**Pg**	**02 03 47.9**	**-0.4**
GC02				Sg	**Sg**	**02 04 04.0**	**+0.1**
KAN17	**Caldwell West**	**1.30**	**324**		**Pn**	**02 03 49.5**	**-0.1**
KAN09	**Caldwell North**	**1.31**	**330**		**Pn**	**02 03 49.8**	**0.0**
KAN14	**Manchester OK**	**1.34**	**316**		**Pn**	**02 03 50.2**	**+0.1**
KAN01	**Argonia South**	**1.39**	**327**		**Pn**	**02 03 51.0**	**+0.2**
KAN05	**Bluff City Nor**	**1.41**	**323**		**Pn**	**02 03 51.7**	**+0.6**
KAN06	**Argonia West S**	**1.51**	**326**		**Pn**	**02 03 53.1**	**+0.6**
KAN10	**Anthony SW Sta**	**1.53**	**318**		**Pn**	**02 03 53.6**	**+0.8**
KAN08	**Anthony NE Sta**	**1.55**	**323**		**Pn**	**02 03 53.7**	**+0.7**
KAN16	**Harper SW Stat**	**1.59**	**321**		**Pn**	**02 03 54.6**	**+1.0**
KAN12	**Harper NE Stat**	**1.62**	**324**		**Pn**	**02 03 54.9**	**+0.9**
X34A	**Smith Ranch, M**	**1.63**	**212**		**Pn**	**02 03 54.9**	**+0.8**
X34A				IAmb_Lg		02 04 19.1	
	comp=Z,168nm,0.7s						
U32A	**Winter Ranch,**	**1.82**	**283**		**Pn**	**02 03 57.4**	**+0.7**
U32A				IAmb_Lg		02 04 24.0	
	comp=Z,202nm,0.9s						
U32A	**Winter Ranch,**	**1.82**	**283**	P	**Pn**	**02 03 57.5**	**+0.8**
	baz=102						
U32A				S	**Sb**	**02 04 22.8**	**+1.2**
	baz=102						
X37A	**Clayton**	**1.83**	**140**		**Pn**	**02 03 57.9**	**+1.1**
X37A	**Clayton**	**1.83**	**140**	P	**Pn**	**02 03 57.8**	**+1.1**
	baz=320,SNR=52						
X37A				S	**Sb**	**02 04 22.8**	**+1.0**
	baz=320						
U38A	**Gravette**	**2.00**	**76**		**Pn**	**02 04 00.4**	**+1.2**
U38A	**Gravette**	**2.00**	**76**	P	**Pn**	**02 04 00.5**	**+1.2**
	baz=258,SNR=260						
LOOK	**Love County**	**2.02**	**189**		**Pn**	**02 04 00.6**	**+1.2**
LOOK				IAmb_Lg		02 04 32.9	
	comp=Z,177nm,1.1s						
HHAR	**Hobbs**	**2.33**	**82**		**Pn**	**02 04 05.1**	**+1.3**
W39A	**Magazine**	**2.59**	**107**		**Pn**	**02 04 08.1**	**+0.8**
W39A	**Magazine**	**2.59**	**107**	P	**Pn**	**02 04 08.0**	**+0.8**
	baz=289,SNR=79						
Z35A	**Perchaven, San**	**2.68**	**188**		**Pn**	**02 04 09.5**	**+1.0**
Z35A	**Perchaven, San**	**2.68**	**188**	P	**Pn**	**02 04 09.6**	**+1.0**
	baz=7.4						
R32A	**Long Quarter,**	**2.86**	**328**		**Pn**	**02 04 11.7**	**+0.7**
R32A				IAmb_Lg		02 04 56.6	
	comp=Z,83nm,0.7s						
MIAR	**Mount Ida**	**3.01**	**118**	Pn	**Pn**	**02 04 14.3**	**+1.3**
MIAR				IAmb_Lg		02 05 08.5	
	comp=Z,83nm,0.8s						
MIAR	**Mount Ida**	**3.01**	**118**	P	**Pn**	**02 04 14.3**	**+1.3**
	baz=300,SNR=54						
KSU1	**Kansas State U**	**3.10**	**3**	Pn	**Pn**	**02 04 15.1**	**+0.7**
KSU1				IAmb_Lg		02 05 10.1	
	comp=Z,88nm,0.8s						
Z38A	**Mt. Pleasant**	**3.11**	**151**		**Pn**	**02 04 15.6**	**+1.1**
Z38A				IAmb_Lg		02 05 11.3	
	comp=Z,116nm,0.8s						
U40A	**Yellville**	**3.21**	**82**		**Pn**	**02 04 16.7**	**+0.8**
U40A	**Yellville**	**3.21**	**82**	P	**Pn**	**02 04 16.7**	**+0.8**
	baz=265,SNR=54						
U40A				P	**Pn**	**02 04 16.7**	**+0.8**
	baz=265,SNR=54						
S39A	**Bolivar**	**3.26**	**58**		**Pn**	**02 04 17.9**	**+1.3**
S39A	**Bolivar**	**3.26**	**58**	P	**Pn**	**02 04 17.7**	**+1.1**
	baz=240,SNR=38						
X40A	**Basin Creek Fa**	**3.58**	**114**		**Pn**	**02 04 22.4**	**+1.5**
X40A				IAmb_Lg		02 05 25.9	
	comp=Z,61nm,0.8s						
X40A	**Basin Creek Fa**	**3.58**	**114**	P	**Pn**	**02 04 22.4**	**+1.5**
	baz=296,SNR=31						
X40A				P	**Pn**	**02 04 22.4**	**+1.5**
	baz=296,SNR=31						
CBKS	**Cedar Bluff**	**3.66**	**321**	Pn	**Pn**	**02 04 22.8**	**+0.8**
WHAR	**Wooly Hollow**	**3.74**	**100**	Pn	**Pn**	**02 04 24.0**	**+0.8**
WHAR				IAmb_Lg		02 05 27.2	
	comp=Z,90nm,0.7s						
FCAR	**Ozark Folk Cen**	**3.80**	**90**		**Pn**	**02 04 24.8**	**+0.9**
FCAR				IAmb_Lg		02 05 27.6	
	comp=Z,91nm,0.8s						
W41B	**Gary Mavity, V**	**3.80**	**101**	P	**Pn**	**02 04 24.6**	**+0.6**
	baz=284,SNR=142						
WLAR	**White Oak Lake**	**3.81**	**126**		**Pn**	**02 04 25.3**	**+1.2**
WLAR				IAmb_Lg		02 05 30.3	
	comp=Z,73nm,0.8s						
MGMO	**Mountain Grove**	**3.83**	**71**		**Pn**	**02 04 25.6**	**+1.3**
MGMO				IAmb_Lg		02 05 30.1	
	comp=Z,111nm,0.7s						
ABTX	**Abilene, Hawle**	**4.10**	**216**		**Pn**	**02 04 28.3**	**+0.2**
ABTX				IAmb_Lg		02 05 37.3	
	comp=Z,49nm,1.0s						
AMTX	**Amarillo**	**4.13**	**256**	Pn	**Pn**	**02 04 30.1**	**+1.5**
R40A	**Maddies Statio**	**4.29**	**56**		**Pn**	**02 04 31.0**	**+0.4**
R40A				IAmb_Lg		02 05 46.5	
	comp=Z,91nm,0.8s						
R40A	**Maddies Statio**	**4.29**	**56**	P	**Pn**	**02 04 31.5**	**+0.9**
	baz=239,SNR=21						
P38A	**Dawn**	**4.45**	**35**		**Pn**	**02 04 33.6**	**+0.7**
P38A				IAmb_Lg		02 05 47.8	
	comp=Z,86nm,0.8s						
LCAR	**Lake Charles**	**4.58**	**87**	Pn	**Pn**	**02 04 34.3**	**-0.3**
LCAR				IAmb_Lg		02 05 59.2	
	comp=Z,42nm,0.8s						
CCAR	**Cane Creek**	**4.62**	**115**	Pn	**Pn**	**02 04 35.1**	**-0.1**
CCAR	**Cane Creek**	**4.62**	**115**	P	**Pn**	**02 04 36.3**	**+1.1**
	baz=298,SNR=8.5						
T42A	**Van Buren**	**4.71**	**76**	Pn	**Pn**	**02 04 36.6**	**+0.2**
T42A				IAmb_Lg		02 05 51.6	
	comp=Z,94nm,0.8s						
T42A	**Van Buren**	**4.71**	**76**	P	**Pn**	**02 04 37.1**	**+0.6**
	baz=259,SNR=13						
N33A	**J Bar K, Exete**	**4.76**	**354**	Pn	**Pn**	**02 04 37.9**	**+0.7**
N33A				IAmb_Lg		02 06 08.9	
	comp=Z,88nm,0.9s						
CCM	**Cathedral Cave**	**4.90**	**64**	Pn	**Pn**	**02 04 39.5**	**+0.4**
CCM				IAmb_Lg		02 06 09.4	
	comp=Z,97nm,0.8s						
N35A	**Tabor**	**4.94**	**10**		**Pn**	**02 04 39.0**	**-0.6**
N35A				IAmb_Lg		02 06 06.6	
	comp=Z,79nm,0.7s						
HBAR	**Harrisburg**	**5.02**	**93**	IAmb_Lg		02 06 05.4	
	comp=Z,92nm,0.9s						
P40A	**Paris**	**5.16**	**45**	Pn	**Pn**	**02 04 43.3**	**+0.7**
P40A				IAmb_Lg		02 06 10.3	
	comp=Z,115nm,0.8s						
PBMO	**Poplar Bluff**	**5.20**	**79**	Pn	**Pn**	**02 04 43.3**	**+0.2**
435B	**Jarrell**	**5.24**	**187**	Pn	**Pn**	**02 04 42.6**	**-1.1**
435B					LR	02 06 10.6	
LPAR	**Lepanto**	**5.30**	**92**	Pn	**Pn**	**02 04 45.0**	**+0.5**
LPAR				IAmb_Lg		02 06 24.2	
	comp=Z,79nm,1.0s						
MSTX	**Muleshoe**	**5.30**	**249**	Pn	**Pn**	**02 04 44.9**	**+0.2**
FVM	**French Village**	**5.48**	**67**	Pn	**Pn**	**02 04 45.8**	**-1.2**
FVM				IAmb_Lg		02 06 28.0	
	comp=Z,74nm,0.8s						
FVM	**French Village**	**5.48**	**67**	P	**Pn**	**02 04 47.5**	**+0.5**
	baz=251,SNR=6.4						
GNAR	**Gosnell**	**5.50**	**88**	IAmb_Lg		02 06 34.3	
	comp=Z,84nm,0.7s						
BGNE	**Belgrade**	**5.51**	**349**	Pn	**Pn**	**02 04 48.1**	**+0.7**
BGNE				IAmb_Lg		02 06 34.4	
	comp=Z,77nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.52**	**305**	Pn	**Pn**	**02 04 48.1**	**+0.4**
KSCO				IAmb_Lg		02 06 27.0	
	comp=Z,73nm,0.8s						
143A	**Socs Landing,**	**5.54**	**125**	IAmb_Lg		02 06 26.1	
	comp=Z,39nm,0.8s						
N38A	**Joes South For**	**5.55**	**29**	Pn	**Pn**	**02 04 48.1**	**+0.2**
N38A				IAmb_Lg		02 06 32.8	
	comp=Z,86nm,0.7s						
PEBM	**Pemiscott Bayo**	**5.62**	**87**	IAmb_Lg		02 06 32.5	
	comp=Z,103nm,0.8s						
LNXT	**Lenox**	**5.92**	**87**		Lg	02 06 32.0	
L34A	**Svendsen Farm,**	**5.97**	**3**	Pn	**Pn**	**02 04 54.8**	**+1.0**
L34A				IAmb_Lg		02 06 39.3	
	comp=Z,108nm,0.9s						
JCT	**Junction City**	**6.05**	**205**	Pn	**Pn**	**02 04 55.1**	**+0.2**
JCT				IAmb_Lg		02 06 45.9	
	comp=Z,33nm,0.7s						
GLAT	**Glass**	**6.09**	**85**		Lg	02 06 38.0	
GLAT				IAmb_Lg		02 06 45.4	
	comp=Z,106nm,0.9s						
HICK	**Hickman**	**6.14**	**83**		Lg	02 06 38.1	
T25A	**Trinidad**	**6.23**	**283**	Pn	**Pn**	**02 04 57.9**	**+0.3**
W45A	**Hickory Valley**	**6.26**	**95**	Pn	**Pn**	**02 04 56.6**	**-1.2**
W45A				IAmb_Lg		02 07 01.0	
	comp=Z,48nm,0.8s						
S44A	**Carbondale**	**6.29**	**72**	Pn	**Pn**	**02 04 58.2**	**+0.2**
SIUC	**Southern Illin**	**6.32**	**72**	Pn	**Pn**	**02 04 59.0**	**+0.4**
SIUC					**Sn**	**02 06 09.0**	**-1.9**
OGNE	**Ogallala**	**6.42**	**322**	Pn	**Pn**	**02 05 01.3**	**+1.2**
OGNE					LR	02 06 47.9	
OGNE				IAmb_Lg		02 07 00.5	
	comp=Z,80nm,0.8s						
SCIA	**State Center**	**6.53**	**24**	Pn	**Pn**	**02 05 01.4**	**-0.1**
SCIA					LR	02 06 51.5	
SCIA				IAmb_Lg		02 07 02.1	
	comp=Z,42nm,0.8s						
N41A	**Harden Midland**	**6.63**	**43**	Pn	**Pn**	**02 05 03.2**	**+0.4**
T45A	**Paducah**	**6.65**	**79**	Pn	**Pn**	**02 05 03.8**	**+0.7**
K31A	**O'Neill**	**6.79**	**348**	Pn	**Pn**	**02 05 05.5**	**+0.5**
K31A				IAmb_Lg		02 07 18.7	
	comp=Z,86nm,0.8s						
P43A	**Skaggs, Pawnee**	**6.82**	**56**	Pn	**Pn**	**02 05 05.0**	**-0.4**
Q44A	**Meyer Farm, Va**	**6.84**	**63**	Pn	**Pn**	**02 05 05.6**	**-0.1**
Q44A					LR	02 07 00.1	
PLAL	**Pickwick Lake**	**7.19**	**96**	Pn	**Pn**	**02 05 09.6**	**-0.9**
K38A	**Parkersburg**	**7.34**	**24**	IAmb_Lg		02 07 15.4	
	comp=Z,44nm,0.7s						
L40A	**Anamosa**	**7.45**	**34**	Pn	**Pn**	**02 05 13.8**	**-0.3**
L40A					Pg	02 05 42.7	-5.1
L40A				IAmb_Lg		02 07 27.3	
	comp=Z,47nm,0.8s						
HDIL	**Hopedale**	**7.46**	**50**	Pn	**Pn**	**02 05 14.8**	**+0.7**
ECSD	**EROS Data Cent**	**7.73**	**1**	Pn	**Pn**	**02 05 18.1**	**+0.2**
O44A	**Mansfield**	**7.77**	**55**	IAmb_Lg		02 07 50.5	
	comp=Z,55nm,0.8s						
T47A	**Sharon Grove**	**7.87**	**80**	Pn	**Pn**	**02 05 19.5**	**-0.4**
ISCO	**Idaho Springs**	**7.93**	**301**		Lg	02 07 36.4	
X48A	**Hartselle**	**8.13**	**98**	IAmb_Lg		02 07 43.9	
	comp=Z,22nm,1.0s						
L42A	**Oliver, Polo**	**8.18**	**41**	IAmb_Lg		02 07 48.8	
	comp=Z,46nm,0.8s						
MNTX	**Cornudas Mount**	**8.32**	**241**	Pn	**Pn**	**02 05 26.3**	**+0.3**
P46A	**Rosedale**	**8.41**	**62**	IAmb_Lg		02 07 56.6	
	comp=Z,70nm,0.8s						
I37A	**Lemond, Waseca**	**8.42**	**17**	IAmb_Lg		02 08 06.0	
	comp=Z,28nm,0.9s						
JFWS	**Jewell Farm**	**8.57**	**34**	IAmb_Lg		02 08 03.7	
	comp=Z,45nm,0.7s						
SFIN	**Lafayette**	**8.80**	**57**	Pn	**Pn**	**02 05 31.7**	**-0.9**
SFIN				IAmb_Lg		02 08 07.4	
	comp=Z,56nm,0.8s						
TX31	**Lajitas Ar. Si**	**8.81**	**223**	Pn	**Pn**	**02 05 32.2**	**-0.6**
I40A	**Norwalk**	**9.20**	**29**	IAmb_Lg		02 08 17.1	
	comp=Z,27nm,0.9s						
K43A	**Burlington**	**9.37**	**42**	IAmb_Lg		02 08 29.6	
	comp=Z,54nm,0.8s						
RSSD	**Black Hills**	**9.82**	**328**	IAmb_Lg		02 08 49.2	
	comp=Z,20nm,0.8s						

NNC ***18*** *02:04:47.3±0.4, 44°.75N×80°.53E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=4.0km s-min=2.6km az=119.0*

SOME ***18*** *02:04:47.5, 44°.68N×80°.45E, h10^{km}*

ISC 18 02:04:47.1±1.4**, 44°.73N**±0°.03×**80°.54E**±0°.04**, h4**^{km}±12^{km}**, n44, σ1^{s}36**/66**, 11C-4D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPS	**Kapalarasan**	**1.01**	**304**	⇑*e*P	**Pb**	**02 05 06.5**	**-0.6**
	18nm,0.1s						
KAPS				*e*S	**Sb**	**02 05 19.5**	**-1.3**
	24nm,0.1s						
KAPS	**Kapalarasan**	**1.01**	**304**	P	**Pb**	**02 05 06.5**	**-0.6**
	18nm,0.2s						
KAPS				S	**Sb**	**02 05 19.5**	**-1.3**
	27nm,0.3s						
KTMS	**Ketmen**	**1.29**	**186**	*e*P	**Pn**	**02 05 11.5**	**-0.5**
	14nm,0.2s						
KTMS				*e*S	**Sb**	**02 05 29.1**	**+0.2**
	18nm,0.1s						
KTMS	**Ketmen**	**1.29**	**186**	P	**Pn**	**02 05 11.5**	**-0.5**
	14nm,0.2s						
KTMS				S	**Sb**	**02 05 29.1**	**+0.2**
	18nm,0.3s						
TDK	**Taldyqorghan**	**1.54**	**281**	*e*P	**Pg**	**02 05 16.8**	**+0.2**
	62nm,0.2s						
TDK				*e*S	**Sg**	**02 05 37.8**	**+1.2**
	80nm,0.1s						
TDK	**Taldyqorghan**	**1.54**	**281**	P	**Pg**	**02 05 16.8**	**+0.2**
	62nm,0.2s						
TDK				S	**Sg**	**02 05 37.8**	**+1.2**
	79nm,0.2s						
PDGK	**Podgornoye**	**1.59**	**209**	P	**Pb**	**02 05 17.1**	**0.0**
	9.7nm,0.3s						
PDGK				S	**Sg**	**02 05 38.7**	**+0.6**
	24nm,0.3s						
BLB	**Baldybastay**	**1.60**	**248**	P	**Pg**	**02 05 18.1**	**+0.3**
	55nm,0.2s						
BLB				S	**Sg**	**02 05 40.0**	**+1.4**
	90nm,0.2s						
SHLS	**Shalkode**	**1.75**	**207**	*e*P	**Pn**	**02 05 17.8**	**-0.5**
	21nm,0.1s						
SHLS				*e*S	**Sn**	**02 05 40.0**	**-1.2**
	18nm,0.4s						
SHLS	**Shalkode**	**1.75**	**207**	P	**Pn**	**02 05 17.8**	**-0.5**
	20nm,0.4s						
SHLS				S	**Sn**	**02 05 40.0**	**-1.2**
	18nm,0.4s						
UZB	**Uzynbulak**	**1.92**	**215**	*e*P	**Pb**	**02 05 22.7**	**0.0**
	11nm,0.3s						
UZB				*e*S	**Sb**	**02 05 48.3**	**+1.2**
	57nm,0.1s						
UZB	**Uzynbulak**	**1.92**	**215**	Pg	**Pb**	**02 05 22.7**	**0.0**
	11nm,0.3s						
UZB				Lg	Lg	02 05 48.3	
	57nm,0.4s						
ARXS	**Arharly**	**2.01**	**256**	*e*P	**Pb**	**02 05 24.8**	**+0.6**
	21nm,0.2s						
ARXS				*e*S	**Sg**	**02 05 51.9**	**+0.4**
	86nm,0.4s						
ARXS	**Arharly**	**2.01**	**256**	Pg	**Pb**	**02 05 24.8**	**+0.6**
	21nm,0.2s						
ARXS				Lg	Lg	02 05 51.9	
	86nm,0.4s						
ZHN	**Zhinishke**	**2.17**	**225**	*e*P	**Pg**	**02 05 28.2**	**-0.6**
	16nm,0.2s						
ZHN				*e*S	**Sg**	**02 05 57.3**	**+0.3**
	177nm,0.2s						
ZHN	**Zhinishke**	**2.17**	**225**	Pg	**Pg**	**02 05 28.2**	**-0.6**
	16nm,0.2s						
ZHN				Lg	Lg	02 05 57.3	
	177nm,0.2s						
MAKZ	**Makanchi**	**2.31**	**25**	⇓Pn	**Pn**	**02 05 26.7**	**+0.7**
	1.6nm,0.3s						
MAKZ				⇓Sn	**Sb**	**02 05 55.9**	**-2.4**
	3.3nm,0.3s						
MK31	**Makanchi Array**	**2.41**	**30**	⇑Pn	**Pn**	**02 05 28.0**	**+0.7**
	0.6nm,0.2s,baz=208,slow=14,SNR=128						
MK31				⇑Lg	Lg	02 05 57.7	
	2.9nm,0.2s,baz=208,slow=26,SNR=19						
KOTS	**Kotyrbulak**	**2.89**	**240**	*e*P	**Pb**	**02 05 40.6**	**+1.4**
	3.3nm,0.3s						
KOTS				*e*S	**Sg**	**02 06 18.7**	**-1.1**
	74nm,0.4s						
KOTS	**Kotyrbulak**	**2.89**	**240**	Pg	**Pb**	**02 05 40.6**	**+1.4**
	3.3nm,0.3s						
KOTS				Lg	Lg	02 06 18.7	
	74nm,0.4s						
KTBS	**Karatobe**	**2.95**	**251**	*e*P	**Pb**	**02 05 41.4**	**+1.1**
	2.4nm,0.1s						
KTBS				*e*S	**Sg**	**02 06 20.2**	**-1.6**
	51nm,0.1s						
KTBS	**Karatobe**	**2.95**	**251**	Pg	**Pb**	**02 05 41.4**	**+1.1**
	2.4nm,0.3s						
KTBS				Lg	Lg	02 06 20.2	
	47nm,0.7s						
MDOK	**Medeo**	**2.96**	**239**	*e*P	**Pb**	**02 05 41.5**	**+1.0**
	2.2nm,0.1s						
MDOK				*e*S	**Sg**	**02 06 20.4**	**-1.9**
	26nm,0.2s						
MDOK	**Medeo**	**2.96**	**239**	⇑Pg	**Pb**	**02 05 40.6**	**+0.1**
	3.9nm,0.8s						
MDOK				⇑Lg	Lg	02 06 20.1	
	23nm,0.6s						
MDOK	**Medeo**	**2.96**	**239**	Pg	**Pb**	**02 05 41.6**	**+1.0**
	1.9nm,0.2s						
MDOK				Lg	Lg	02 06 20.4	
	30nm,0.5s						
KNDC	**Almaty**	**2.99**	**241**	⇑Pg	**Pb**	**02 05 41.8**	**+0.9**
	11nm,0.3s						
KNDC				⇑Lg	Lg	02 06 20.7	
	55nm,0.6s						
TNSS	**Tian-Shan**	**3.10**	**238**	*e*P	**Pb**	**02 05 44.0**	**+1.0**
	1.7nm,0.1s						
TNSS				*e*S	**Sg**	**02 06 24.7**	**-1.9**
	8.4nm,0.1s						
TNSS	**Tian-Shan**	**3.10**	**238**	Pg	**Pb**	**02 05 44.0**	**+1.0**
	2.7nm,0.3s						
TNSS				Lg	Lg	02 06 24.7	
	8.5nm,0.2s						
KUU	**Kurty**	**3.13**	**256**	*e*P	**Pb**	**02 05 44.3**	**+1.0**
	0.9nm,0.0s						
KUU				*e*S	**Sg**	**02 06 24.9**	**-2.6**
	35nm,0.1s						
KUU	**Kurty**	**3.13**	**256**	Pg	**Pb**	**02 05 44.3**	**+1.0**
	0.8nm,0.2s						
KUU				Lg	Lg	02 06 24.9	
	35nm,0.3s						
MTBS	**Maitube**	**3.37**	**243**	*e*P	**Pb**	**02 05 48.6**	**+1.1**
	2.1nm,0.2s						
MTBS				*e*S	**Sg**	**02 06 32.5**	**-2.8**
	50nm,0.2s						
MTBS	**Maitube**	**3.37**	**243**	Pg	**Pb**	**02 05 48.6**	**+1.1**
	2.1nm,0.2s						
MTBS				Lg	Lg	02 06 32.5	
	51nm,0.5s						
KRBS	**Karabastau**	**3.64**	**255**	*e*P	**Pb**	**02 05 53.8**	**+1.7**
	1.8nm,0.2s						
KRBS				*e*S	**Sg**	**02 06 40.9**	**-3.2**
	12nm,0.1s						
KRBS	**Karabastau**	**3.64**	**255**	Pg	**Pb**	**02 05 53.8**	**+1.7**
	1.8nm,0.2s						
KRBS				Lg	Lg	02 06 40.9	
	12nm,0.5s						
KST	**Kastek**	**3.71**	**245**	*e*P	**Pb**	**02 05 53.9**	**+0.7**
	1.7nm,0.0s						
KST				*e*S	**Sb**	**02 06 41.6**	**+3.0**
	8.4nm,0.1s						
KST	**Kastek**	**3.71**	**245**	Pg	**Pb**	**02 05 53.9**	**+0.7**
	1.7nm,0.3s						
KST				Lg	Lg	02 06 41.6	
	6.1nm,0.4s						
DGS	**Degeres**	**3.74**	**248**	*e*P	**Pb**	**02 05 54.5**	**+0.7**
	5.7nm,0.6s						
DGS				*e*S	**Sb**	**02 06 42.4**	**+2.8**
	11nm,0.7s						
DGS	**Degeres**	**3.74**	**248**	Pg	**Pb**	**02 05 54.5**	**+0.7**
	5.7nm,0.6s						
DGS				Lg	Lg	02 06 42.4	
	11nm,0.7s						

TKM2	Tokmak 2	4.00	245	⇓Pg	Pb	02 06 00.7	+2.4
	2.5nm,0.7s						
TKM2				⇑Lg	Lg	02 06 51.2	
	9.0nm,0.8s						
ZSN	Zaisan	4.06	46	*e*P	Pb	02 05 59.7	+0.5
	1.8nm,0.1s						
ZSN				*e*S	Sb	02 06 51.4	+2.8
	12nm,0.6s						
ZSN	Zaisan	4.06	46	Pg	Pb	02 05 59.7	+0.5
	1.8nm,0.3s						
ZSN				Lg	Lg	02 06 51.4	
	12nm,0.6s						
AAK	Ala-Archa	4.85	247	⇑Pg	Pb	02 06 14.2	+1.4
	2.1nm,0.8s						
AAK				⇓Lg	Lg	02 07 18.5	
	5.7nm,0.7s						
KURBB	Kurchatov Arra	6.05	348	⇑Lg	Lg	02 07 54.2	
	13nm,0.2s						
KURK	Kurchatov	6.13	349	⇑Lg	Lg	02 07 56.5	
	4.7nm,0.7s						

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*TUL **18** 02:06:59.8±0.8, 35°.986N±0°.010×96°.80W±0°.02, h4^{km}±6^{km}, ML2.8, mb_Lg2.0/3(NEIC), Error ellipse: s-maj=2.6km s-min=0.9km az=66.0*

NEIC 18 02:06:59.7±0.9, 35°.99N±0°.02×96°.79W±0°.03, h9^{km}±7^{km}, Error ellipse: s-maj=3.1km s-min=2.5km az=64.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK031	S. Brethren Rd	0.05	232	Pg	Pg	02 07 01.3	-0.3
OK030	Cody Creek RV	0.06	177	Pg	Pg	02 07 01.6	0.0
OK034	N. Norfolk Rd.	0.07	68	Pg	Pg	02 07 01.8	+0.2
QUOK	Quay	0.20	19	Pg	Pg	02 07 04.1	+0.3
OK029	Liberty Lake	0.57	251	Pg	Pg	02 07 10.7	-0.1
OK025	Westminster Rd	0.60	228	Pg	Pg	02 07 10.8	-0.6
BCOK	Bluff Creek, N	0.74	244	Pg	Pg	02 07 14.0	-0.1
BCOK				IAmb_Lg		02 07 22.6	
	comp=Z,10nm,1.1s						
OKCFA	Oklahoma City	0.78	224	Pg	Pg	02 07 14.3	-0.5
TUL1	Leonard	0.81	95	Pg	Pg	02 07 15.2	-0.2
W35A	Tecumseh	0.83	185	Pg	Pg	02 07 15.4	-0.4
W35A				IAmb_Lg		02 07 26.6	
	comp=Z,17nm,0.8s						
BLOK	Blackwell	0.85	336	Pg	Pg	02 07 15.8	-0.2
FNO	Franklin	0.88	215	Pg	Pg	02 07 16.4	-0.2
T35A	Sooner Cattle	0.95	13	Pg	Pg	02 07 18.0	-0.1
CROK	Carrier	1.10	299	Pg	Pg	02 07 20.4	-0.3
KAN13	South Haven SW	1.17	332	Pg	Pb	02 07 21.9	-0.2
GC02	Grant County #	1.22	315	Pg	Pb	02 07 22.6	-0.4
KAN17	Caldwell West	1.32	324	Pn	Pn	02 07 24.1	-0.3
KAN09	Caldwell North	1.33	330	Pn	Pn	02 07 24.5	0.0
KAN14	Manchester OK	1.36	316	Pn	Pb	02 07 25.4	+0.1
KAN01	Argonia South	1.40	326	Pn	Pn	02 07 25.5	0.0
KAN06	Argonia West S	1.53	326	Pn	Pn	02 07 27.5	+0.2
KAN08	Anthony NE Sta	1.56	323	Pn	Pn	02 07 28.2	+0.5
X34A	Smith Ranch, M	1.62	212	Pn	Pn	02 07 28.6	0.0
KAN12	Harper NE Stat	1.63	324	Pn	Pb	02 07 29.7	-0.3
X37A	Clayton	1.81	140	IAmb_Lg		02 07 57.0	
	comp=Z,12nm,0.8s						
U32A	Winter Ranch,	1.83	283	Pn	Pn	02 07 32.5	+1.0
LOOK	Love County	2.01	189	Pn	Pn	02 07 35.1	+1.2

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*IDC **18** 02:08:55.3±2.1, 4°.78N×127°.90E, h150^{km}±20^{km}, mb3.5/9, mb1 3.7/10, mb1mx3.4/37, mbtmp4.0/10, Error ellipse: s-maj=38.8km s-min=11.7km az=70.0*
*DJA **18** 02:09:01.0±0.8, 4°N±6°×12°7E±°, h154^{km}±14^{km}, M4.4/5, mb4.3/1, mB4.5/1, MLv4.4/5, Mw(mB)3.6/1*
*MAN **18** 02:09:03.3, 5°.31N×126°.26E, h285^{km}, mb4.7, ML3.6, MS3.5*

ISC 18 02:08:55.5±0.8, 4°.53N±0°.08×127°.6E±0°.1, h150^{km}, n16, σ2^{s}.26/22, mb3.8/9, 3C-2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	2.19	247	P	Pn	02 09 33.4	+0.5
MATI	Mati	2.72	332	⇓*i*P	Pn	02 09 46.6	+7.2
MATI				*i* S	Sn	02 10 20.0	+6.6
GSPH	General Santos	3.02	301	⇑*i*P	Pn	02 09 44.6	+1.3
GSPH				*i* S	Sn	02 10 16.6	-3.7
DAV	Davao City (W)	3.20	322	P	Pn	02 09 47.2	+1.8
	45nm,0.3s,baz=82,slow=14,SNR=3.9						
DAV				S	Sn	02 10 25.0	+0.9
	87nm,0.3s,baz=139,slow=24,SNR=12						
DMPH	Davao City--Mi	3.25	321	⇑*e*P	Pn	02 09 47.9	+1.8
DMPH				*e*S	Sn	02 10 27.1	+1.8
KCP	Kidapawan	3.48	315	⇓*e*P	Pn	02 09 48.8	-0.2
KCP				*e*S	Sn	02 10 30.1	-0.5
BUKP	Musuan	4.15	323	⇑*e*P	Pn	02 09 57.3	-0.5
BUKP				*e*S	Sn	02 10 44.9	-1.3
WRA	Warramunga Arr	25.22	165	P	P	02 14 08.1	+0.5
	1.2nm,0.4s,baz=346,slow=11,SNR=22						
ASAR	Alice Springs	28.70	168	P	P	02 14 40.5	+1.8
	0.3nm,0.4s,baz=355,slow=8.3,SNR=6.5						
CMAR	Chiang Mai Arr	31.20	299	P	P	02 15 02.1	+1.3
	1.0nm,0.3s,baz=115,slow=6.3,SNR=5.4						
KSRS	Korea Array	32.77	1	P	P	02 15 12.3	-1.9
	4.5nm,0.8s,baz=174,slow=9.6,SNR=11						
STKA	Stephens Creek	38.60	161	P	P	02 16 05.0	+1.0
	1.5nm,0.4s,baz=341,slow=8.0,SNR=9.1						
SONM	Songino Array	46.81	341	P	P	02 17 09.7	-0.5
	1.2nm,0.8s,baz=151,slow=8.3,SNR=6.1						
MKAR	Makanchi Array	57.38	325	P	P	02 18 28.3	+0.1
	0.6nm,0.5s,baz=119,slow=7.8,SNR=10.0						
MKAR				pP	pP	02 19 03.3	+1.3
	0.9nm,0.6s,baz=119,slow=9.5,SNR=2.4						
ZALV	Zalesovo Beam	60.26	332	P	P	02 18 46.3	-1.5
	0.4nm,0.3s,baz=131,slow=6.3,SNR=2.2						
ILAR	Eielson Array	84.03	25	P	P	02 21 05.6	-3.3
	0.4nm,0.8s,baz=248,slow=4.7,SNR=4.4						

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*IDC **18** 02:10:20.1±1.0, 13°.66N×146°.44E, h0^{km}, mb3.7/8, mb1 4.0/8, mb1mx3.8/38, mbtmp3.7/8, Error ellipse: s-maj=24.7km s-min=19.9km az=138.0*

ISC 18 02:10:24.2±1.0, 13°.7N±0°.2×146°.40E±0°.10, h26^{km}, n9, σ0^{s}.57/10, mb3.8/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.49	268	Pn	Pn	02 10 49.3	0.0
	42nm,0.3s,baz=135,slow=8.8,SNR=11						
GUMO				Sn	Sb	02 11 10.1	+0.4
	60nm,0.3s,baz=330,slow=23,SNR=11						
KSRS	Korea Array	28.87	329	P	P	02 16 20.3	-0.4
	0.7nm,0.4s,baz=142,slow=11,SNR=2.0						
WRA	Warramunga Arr	35.42	200	P	P	02 17 18.0	-0.3
	1.2nm,0.7s,baz=17,slow=11,SNR=4.9						
ASAR	Alice Springs	39.05	198	P	P	02 17 49.0	-0.1
	0.2nm,0.4s,baz=15,slow=9.9,SNR=4.8						
SONM	Songino Array	47.55	324	P	P	02 18 58.1	+0.5
	0.4nm,0.7s,baz=134,slow=8.3,SNR=2.1						
MKAR	Makanchi Array	62.49	316	P	P	02 20 45.0	-0.5
	0.6nm,0.6s,baz=94,slow=9.4,SNR=3.0						
ILAR	Eielson Array	67.88	25	P	P	02 21 19.5	-0.6
	0.4nm,0.5s,baz=253,slow=5.7,SNR=5.3						
YKA	Yellowknife Ar	82.12	28	P	P	02 22 42.5	+0.2
	0.4nm,0.8s,baz=280,slow=5.6,SNR=2.7						
NVAR	Mina Array Bea	85.72	52	P	P	02 23 02.5	+1.0
	0.5nm,0.7s,baz=268,slow=5.6,SNR=4.3						

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*SJA **18** 02:34:31.0±0.8, 30°.56S×72°.04W, h12^{km}, ML4.3, MW4.1*
*GUC **18** 02:34:35.4±0.8, 30°.65S×71°.61W, h37^{km}±3^{km}, ML4.3*
*IDC **18** 02:34:36.6±0.9, 30°.74S×71°.50W, h34^{km}±5^{km}, mb3.8/7, mb1 3.9/11, mb1mx3.8/25, mbtmp3.9/11, ML3.7/4, MS3.3/3, Ms1 3.3/3, ms1mx3.0/18, Error ellipse: s-maj=26.3km s-min=20.9km az=86.0*
*NEIC **18** 02:34:36.8, 30°.57S×71°.66W, h39^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.48; $M_{\theta\theta}$0.20; $M_{\phi\phi}$-1.68; $M_{r\theta}$0.45; $M_{\theta\phi}$-0.21; $M_{\phi r}$-1.10; Fault plane solution: $M_0$2.00000×10^{15} NP1:ϕ_s169.26000°, δ63.87000°, λ72.89000°. NP2:ϕ_s24.22000°, δ30.90000°, λ120.96000°. Principal axes: T 1.9649, Plg67.0000°, Azm48.0000°; N 0.0655, Plg15.0000°, Azm177.0000°; P -2.0304, Plg17.0000°, Azm272.0000°;*
*NEIC **18** 02:34:37.0±1.7, 30°.57S±0°.03×71°.65W±0°.09, h30^{km}±4^{km}, mb4.4/11, Mwr4.1/46, ML4.2(GUC) Error ellipse: s-maj=11.9km s-min=3.9km az=105.0*

ISC 18 02:34:35.8±0.6, 30°.63S±0°.02×71°.68W±0°.03, h32^{km}±3^{km}, n107, σ2^{s}.33/149, mb4.4/12, 5C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.05	140	⇑*i*P	Pb	02 34 42.1	+0.9
CO06				*e*S	Sb	02 34 46.2	+1.1
CO06				IAML		02 34 46.5	
	comp=N,106μm,0.2s						
CO06	Fray Jorge	0.05	140		Pb	02 34 42.0	+0.7
CO06				Sg	Sb	02 34 46.1	+1.1
CO05	La Serena	0.81	28	*e*P	Pn	02 34 50.9	0.0
CO05				*i* S	Sn	02 35 01.5	-0.3
CO05				IAML		02 35 06.6	
	comp=N,13μm,0.4s						
CO05	La Serena	0.81	28		Pn	02 34 50.9	0.0
CO03	El Pedregal	0.87	104	⇓*i*P	Pn	02 34 52.2	+0.3
CO03				*i* S	Sn	02 35 04.2	+0.5
CO03				IAML		02 35 05.8	
	comp=E,11μm,0.3s						
CO03	El Pedregal	0.87	104		Pn	02 34 52.3	+0.3
CO03	El Pedregal	0.87	104	*e*P	Pn	02 34 52.3	+0.3
CO03				*e*S	Sb	02 35 04.7	+0.7
CO03				IAML		02 35 05.5	
	comp=Z,6μm,0.6s						
GO04	Tololo Observa	0.89	59	⇓*i*P	Pn	02 34 52.5	+0.2
GO04				*i* S	Sb	02 35 05.0	+0.5
GO04	Tololo Observa	0.89	59		Pn	02 34 52.5	+0.2
GO04	Tololo Observa	0.89	59	*e*P	Pn	02 34 52.2	0.0
LCO	Las Campanas	1.82	28	*e*P	Pn	02 35 06.1	+0.9
LCO				*e*S	Sn	02 35 28.9	+1.6
LCO	Las Campanas	1.82	28	Pn	Pn	02 35 06.0	+0.9
LCO	Las Campanas	1.82	28	*e*P	Pn	02 35 06.0	+0.8
VA06	Catapilco	1.95	171	⇑*i*P	Pn	02 35 08.0	+1.3
VA06				*i* S	Sn	02 35 31.5	+1.5
VA06				IAML		02 35 48.9	
	comp=N,3μm,0.7s						
AROD	Rodeo	1.96	77	*e*P	Pb	02 35 10.8	-0.3
AROD				*e*S	Sn	02 35 31.0	+0.2
ACCO	Cerro Coronel	2.25	90	*e*P	Pb	02 35 15.6	-0.5
ACCO				*e*S	Sb	02 35 48.7	+5.1
ACDV	Cuesta del Vie	2.26	79	*e*P	Pb	02 35 16.0	0.0
ACDV				*e*S	Sb	02 35 48.4	+4.8
ACDV				IAML		02 35 49.1	
	comp=Z,883nm,0.7s						
VA03	San Esteban	2.33	156	*e*P	Pn	02 35 14.2	+2.1
VA03				*e*S	Sb	02 35 44.5	-1.2
VA03				IAML		02 35 57.0	
	comp=N,2μm,0.6s						
VA03	San Esteban	2.33	156		Pb	02 35 14.8	-2.5
VA03	San Esteban	2.33	156	*e*P	Pn	02 35 10.0	-2.1
VA03				*e*P	Pb	02 35 14.8	-2.5
VA03				*e*S	Sb	02 35 50.0	+4.3
VA03				IAML		02 35 55.5	
	comp=Z,1μm,0.6s						
RTLS	Leoncito	2.35	120	*e*P	Pb	02 35 16.9	-0.7
RTLS				*e*S	Sb	02 35 50.9	+4.6
RTLS				IAML		02 36 03.4	
	comp=Z,933nm,0.9s						
VA01	Torpederas	2.38	179	*e*P	Pn	02 35 14.8	+2.2
VA01	Torpederas	2.38	179		Pn	02 35 13.9	+1.2
ROCH	El Roble	2.40	167	⇑*e*P	Pb	02 35 14.9	-3.6
ROCH				*e*P	Pn	02 35 14.7	+1.6
ROCH				*i* S	Sb	02 35 45.0	-2.8
ROCH				*e*S	Sn	02 35 45.8	+4.3
ROCH				IAML		02 35 55.5	
	comp=N,2μm,0.4s						
ROCH				IAML		02 35 55.8	
	comp=N,2μm,0.5s						
ROC1	El Roble	2.40	167	*e*P	Pn	02 35 10.0	-3.2
ROC1				*e*P	Pb	02 35 14.0	-4.6
ROC1				*e*P	Pn	02 35 14.5	+1.3
ROC1				*e*S	Sb	02 35 49.0	+1.1
AC04	Llanos de Chal	2.48	12	⇑*e*P	Pn	02 35 14.2	+0.3
AC04	Llanos de Chal	2.48	12	Pn	Pn	02 35 14.4	+0.5
AC04	Llanos de Chal	2.48	12	*e*P	Pn	02 35 14.0	+0.1
AC04				*e*S	Sn	02 35 46.0	+2.9
AC04				IAML		02 35 59.2	
	comp=Z,891nm,0.8s						
AUSP	Uspallata	2.52	130	*e*P	Pb	02 35 19.0	-1.5
AUSP				*e*S	Sb	02 35 56.5	+5.2
PEL	Peldehue	2.64	162	⇑*e*P	Pn	02 35 18.6	+2.4
PEL				*e*S	Sb	02 35 51.2	-3.4
PEL				IAML		02 36 02.8	
	comp=N,1μm,0.5s						
PEL	Peldehue	2.64	162		Pn	02 35 18.4	+2.1
PEL	Peldehue	2.64	162	*e*P	Pn	02 35 18.0	+1.7
PEL				*e*P	Pb	02 35 18.5	-4.0
PEL				*e*S	Sb	02 35 52.5	-2.1
MT02	Curacav	2.66	170	*e*P	Pn	02 35 17.8	+1.4
MT02				*e*S	Sn	02 35 50.9	+3.3
MT02	Curacav	2.66	170		Pn	02 35 19.3	+2.8
MT02	Curacav	2.66	170	*e*P	Pn	02 35 18.0	+1.6
MT02				*e*S	Sb	02 35 57.1	+2.1
ZON	Zonda	2.73	110		Pn	02 35 20.8	+3.4
ZON	Zonda	2.73	110	*e*P	Pb	02 35 21.9	-2.1
ZON				*e*S	Sb	02 36 01.5	+4.4
ZON				IAML		02 36 14.0	
	comp=Z,514nm,1.5s						
MT05	Renca	2.86	164	*e*P	Pn	02 35 21.5	+2.2
MT05				*e*S	Sn	02 35 56.6	+3.9
MT05				IAML		02 36 10.5	
	comp=E,1μm,0.3s						
MT05	Renca	2.86	164		Pn	02 35 21.3	+2.0
MT05	Renca	2.86	164	*e*P	Pn	02 35 22.0	+2.6
MT05				*e*S	Sb	02 35 59.0	-2.0
MT05				IAML		02 36 14.5	
	comp=Z,842nm,0.5s						
RTCV	Cerro Valdivia	2.95	115	*e*P	Pb	02 35 25.0	-2.8
RTCV				*e*S	Sb	02 36 06.5	+3.0
VA05	Santo Domingo	3.02	179	*e*P	Pn	02 35 22.6	+1.2
VA05				*e*S	Sn	02 35 57.2	+0.8
VA05				IAML		02 36 14.4	
	comp=E,839nm,0.6s						
VA05	Santo Domingo	3.02	179	Pn	Pn	02 35 22.8	+1.5
ASAL	Salagasta	3.11	130	*e*P	Pb	02 35 27.9	-2.7
ASAL				*e*S	Sb	02 36 13.0	+4.9
MT09	Talagante	3.19	170	*e*P	Pn	02 35 26.1	+2.2
MT09				*e*S	Sn	02 36 03.0	+2.2
MT09				IAML		02 36 20.8	
	comp=N,811nm,0.5s						
MT09	Talagante	3.19	170		Pn	02 35 26.2	+2.3
ARCO	CERRO ARCO	3.21	134	*e*P	Pb	02 35 30.0	-2.3
ARCO				*e*S	Sb	02 36 12.5	+1.4
ARCO				IAML		02 36 24.6	
	comp=Z,550nm,0.8s						
MT01	Popeta	3.24	174	*e*P	Pn	02 35 26.0	+1.6
MT01				*e*S	Sn	02 36 04.2	+2.2
MT01				IAML		02 36 17.5	
	comp=N,414nm,0.4s						
MT01	Popeta	3.24	174		Pn	02 35 27.2	+2.7
MT01	Popeta	3.24	174	*e*P	Pn	02 35 26.1	+1.6
MT01				*e*S	Sb	02 36 10.0	-1.8
MT01				IAML		02 36 18.7	
	comp=Z,360nm,0.9s						
GO03	Copiap	3.28	23	Pn	Pn	02 35 26.2	+1.1
GO03	Copiap	3.28	23	*e*P	Pn	02 35 26.0	+0.9
GO03				*e*S	Sb	02 36 10.0	-2.9
VCA	Vinchina	3.56	59	*e*P	Pb	02 35 34.0	-4.2
VCA				*e*P	Pn	02 35 34.5	+5.4
VCA				*e*S	Sb	02 36 21.0	-0.1
VCA				IAML		02 36 28.6	
	comp=Z,1μm,0.4s						
AVFE	Valle Fertil	3.64	91	*e*P	Pn	02 35 33.0	+3.1
AVFE				*e*S	Sb	02 36 22.0	-1.2
AVFE				IAML		02 36 32.4	
	comp=Z,652nm,0.8s						
BO01	Tunca	3.78	173	*e*P	Pn	02 35 34.0	+2.1
BO01				*e*P	Pb	02 35 34.0	-7.9
BO01				*e*S	Sb	02 36 21.5	-5.8
BO01				IAML		02 36 40.4	
	comp=Z,332nm,0.7s						
BO02	Sierra Bellavi	4.22	170	*e*P	Pn	02 35 40.2	+2.3
BO02				*e*S	Sb	02 36 34.5	-5.3
BO02				IAML		02 36 49.5	
	comp=Z,305nm,0.6s						
ACLC	CERRO LA CRUZ	4.27	75	*e*S	Sb	02 36 35.9	-5.6
ACLC				IAML		02 36 57.1	
	comp=Z,575nm,0.6s						
ACHE	Chepes	4.34	98	*e*P	Pn	02 35 43.6	+3.9
ACHE				*e*S	Sn	02 36 34.0	+4.7
GO05	Huala	4.37	183	Pn	Pn	02 35 40.6	+0.6
GO05	Huala	4.37	183	*e*P	Pn	02 35 40.3	+0.3
GO05				*e*S	Sb	02 36 48.0	+3.8
GO05				*e*S	Sb	02 36 49.0	+4.8
AC02	Maricunga	4.39	31	Pn	Pn	02 35 42.4	+1.6
AC02	Maricunga	4.39	31	*e*P	Pn	02 35 42.0	+1.3
AC02				*e*S	Sn	02 36 37.0	+5.8
AC02				IAML		02 36 59.1	
	comp=Z,384nm,1.8s						
RFA	San Rafael	4.93	148	*e*P	Pn	02 35 46.0	-1.8
RFA				*e*S	Sn	02 36 37.5	-6.3
RFA				*e*S	Sb	02 37 12.5	+12
ML02	Panimavida	5.12	178	Pn	Pn	02 35 53.6	+3.4
PB14	IPOC Station P	6.09	11	Pn	Pn	02 36 04.2	+0.3
H03N1	Juan Fernandez	6.75	244	T	T	02 43 08.3	
	baz=70,slow=72,SNR=4206						
H03N3	Juan Fernandez	6.77	244	T	T	02 43 05.4	
	baz=70,slow=72,SNR=2593						
H03N2	Juan Fernandez	6.77	244	T	T	02 43 09.0	
	baz=70,slow=72,SNR=3481						
LC01	Cunco	8.25	181	Pn	Pn	02 36 34.1	+0.9
LVC	Limon Verde	8.36	18	Pn	Pn	02 36 35.0	-0.2
	comp=Z,0.4nm,0.3s,baz=231,slow=21,SNR=1.2						
LVC				LR	LR	02 40 01.4	
	comp=Z,168nm,20.3s,baz=210,slow=39						
PLCA	Paso Flores	10.12	175	Pn	Pn	02 36 58.0	-1.0
	comp=Z,0.1nm,0.3s,baz=215,slow=17,SNR=1.4						
PLCA				LR	LR	02 41 12.2	
	comp=Z,148nm,20.3s,baz=356,slow=40						
ITQB	Itaqui	13.06	90	Pn	Pn	02 37 39.6	+0.5
CPUP	Villa Florida	13.32	75	LR	LR	02 43 11.5	
	comp=Z,145nm,21.4s,baz=216,slow=39						
LPAZ	La Paz	14.64	14	Pn	Pn	02 38 03.5	+2.2
	comp=Z,0.2nm,0.3s,baz=173,slow=7.2,SNR=13						
LPAZ	La Paz	14.64	14	Pn	Pn	02 38 00.8	-0.6
SIV	San Ignacio	17.51	36	P	P	02 38 38.8	+0.3
	comp=Z,0.2nm,0.3s,baz=222,slow=12,SNR=26						
PTLB	Pontes e Lacer	18.99	40	P	P	02 38 54.6	-0.1
VILB	Vilhena	20.54	34	P	P	02 39 12.4	+0.6
VILB				IAmb	IAmb	02 39 12.5	
	comp=Z,11nm,0.9s						
ETMB	Extrema	21.33	15	P	P	02 39 20.7	+0.5
ETMB				IAmb	IAmb	02 39 37.2	
	comp=Z,8.1nm,1.0s						
CZSB	Cruzeiro do Su	22.81	357	P	P	02 39 35.3	-0.7
CZSB				IAmb	IAmb	02 40 07.2	
	comp=Z,20nm,1.3s						
SAML	Samuel	22.98	22	P	P	02 39 37.6	-0.2
BDFB	Brasilia	26.30	61	P	P	02 40 08.0	-0.9
	comp=Z,4.4nm,0.7s,baz=234,slow=9.1,SNR=8.8						
BDFB	Brasilia	26.30	61	P	P	02 40 08.3	-0.5
BDFB				IAmb	IAmb	02 40 21.6	
	comp=Z,6.3nm,0.7s						
TBTG	Tabatinga, AM	26.36	4	P	P	02 40 09.2	+0.1
SNAA	Sanae	54.59	159	P	P	02 44 00.4	-0.3
	comp=Z,1.3nm,0.7s,baz=253,slow=11,SNR=8.3						
SNAA	Sanae	54.59	159	P	P	02 44 03.3	+2.5
SNAA				IAmb	IAmb	02 44 19.9	
	comp=Z,2.2nm,0.8s						
QSPA	South Pole Qui	59.59	180	P	P	02 44 37.3	+1.0
QSPA				IAmb	IAmb	02 44 40.4	
	comp=Z,3.8nm,0.9s						
TXAR	Lajitas Array	66.97	330	P	P	02 45 27.7	+2.3
	comp=Z,0.5nm,0.8s,baz=152,slow=5.7,SNR=4.3						
LIC	Lamto	73.44	72	*e*P	P	02 46 05.3	0.0
	comp=Z,24nm,1.2s						
TIC	Toumodi	73.68	72	*e*P	P	02 46 06.6	-0.2
KIC	Kosan Boka	73.75	72	*e*P	P	02 46 06.8	-0.4
	comp=Z,7.1nm,0.7s						
DBIC	Dimbokro	73.83	72	P	P	02 46 08.2	+0.6
	comp=Z,4.6nm,0.8s,baz=221,slow=5.8,SNR=6.8						
DBIC				pP	pP	02 46 18.1	+0.4
	comp=Z,4.1nm,0.7s,baz=222,slow=3.9,SNR=4.5						
DBIC	Dimbokro	73.83	72	P	P	02 46 07.5	-0.1
PDAR	Pinedale Array	80.91	333	P	P	02 46 49.0	+2.0
	comp=Z,0.3nm,0.6s,baz=138,slow=6.9,SNR=2.7						
PDAR	Pinedale Array	80.91	333	P	P	02 46 47.5	+0.5
NVAR	Mina Array Bea	81.31	325	P	P	02 46 50.4	+1.3
	comp=Z,0.6nm,0.8s,baz=158,slow=4.6,SNR=3.9						
TORD	Torodi Ar. Bea	82.78	70	P	P	02 46 56.8	-0.3
	comp=Z,1.9nm,1.0s,baz=265,slow=5.1,SNR=9.3						
TORD				pP	pP	02 47 08.7	+1.3
	comp=Z,4.4nm,0.8s,baz=268,slow=4.9,SNR=16						
TORD	Torodi Ar. Bea	82.78	70	P	P	02 46 57.5	+0.4
TORD				IAmb	IAmb	02 47 11.9	
	comp=Z,4.9nm,0.8s						
WRA	Warramunga Arr	123.84	210	PKP	PKPdf	02 53 29.8	-1.4
	comp=Z,0.9nm,0.9s,baz=163,slow=2.4,SNR=3.3						
H11S2	WAKE ISLAND Hy	126.06	271	T	T	05 12 19.9	
	baz=115,slow=74,SNR=39						
H11S1	WAKE ISLAND Hy	126.08	271	T	T	05 12 20.9	
	baz=115,slow=74,SNR=52						
H11S3	WAKE ISLAND Hy	126.08	271	T	T	05 12 22.0	
	baz=115,slow=74,SNR=40						
GAR	Garm	147.88	64	PKPbc	PKiKP	02 54 19.6	-0.1
ZALV	Zalesovo Beam	151.18	29	PKPbc	PKiKP	02 54 26.2	+0.3
	comp=Z,6.3nm,0.8s,baz=300,slow=3.3,SNR=26						
ZALV				pPKPbc	pPKPbc	02 54 36.3	+0.4
	comp=Z,8.8nm,0.8s,baz=298,slow=3.2,SNR=10						
ZALV	Zalesovo Beam	151.18	29		PKiKP	02 54 26.1	+0.2
KSH	Kashi	152.20	63	PKPbc	PKiKP	02 54 29.4	+0.8
MKAR	Makanchi Array	154.22	44	PKPbc	PKPbc	02 54 31.2	-1.2
	comp=Z,0.5nm,0.8s,baz=297,slow=5.3,SNR=3.6						

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*ANF **18** 02:35:03.4±0.4, 36°.31N×97°.53W, h3^{km}±3^{km}, ML3.7/10, Error ellipse: s-maj=3.5km s-min=2.7km az=99.0*
*NEIC **18** 02:35:04.0±0.9, 36°.29N±0°.01×97°.52W±0°.03, h4^{km}±7^{km}, Error ellipse: s-maj=3.1km s-min=1.7km az=72.0*
*TUL **18** 02:35:04.1±1.0, 36°.293N±0°.009×97°.52W±0°.02, h7^{km}±7^{km}, ML3.4, mb_Lg3.2/69(NEIC), Error ellipse: s-maj=3.0km s-min=0.4km az=64.0*

ISC 18 02:35:04.1±1.1, 36°.29N±0°.02×97°.51W±0°.02, h8^{km}±9^{km}, n98, σ0^{s}.69/106, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.43	300	Pg	Pg	02 35 12.6	0.0
CROK				Sg	Sg	02 35 18.5	+0.2
OK029	Liberty Lake	0.49	174	Pg	Pg	02 35 13.6	-0.1
OK029				Sg	Sg	02 35 20.6	+0.4
BLOK	Blackwell	0.53	27		Pg	02 35 14.4	+0.1
BLOK				Sg	Sg	02 35 21.9	+0.7
GC02	Grant County #	0.62	334	Pg	Pg	02 35 16.1	-0.1
GC02				Sg	Sg	02 35 24.5	+0.1
BCOK	Bluff Creek, N	0.64	187		Pg	02 35 16.2	-0.3
OK031	S. Brethren Rd	0.64	121		Pg	02 35 16.3	-0.2
OK031				Sg	Sg	02 35 25.2	+0.3
QUOK	Quay	0.66	100		Pg	02 35 17.1	+0.2
OK030	Cody Creek RV	0.69	121	Pg	Pg	02 35 17.0	-0.5
OK030				Sg	Sg	02 35 26.6	+0.1
OK034	N. Norfolk Rd.	0.71	113		Pg	02 35 17.3	-0.4
OK034				Sg	Sg	02 35 27.1	+0.2
KAN13	South Haven SW	0.72	2	Pg	Pg	02 35 17.6	-0.4
OK025	Westminster Rd	0.72	169		Pg	02 35 18.1	+0.1
OK025				Sg	Sg	02 35 27.6	+0.2
KAN14	Manchester OK	0.76	332		Pg	02 35 18.4	-0.3
KAN14				Sg	Sg	02 35 28.5	0.0
KAN17	Caldwell West	0.78	345		Pg	02 35 18.7	-0.4
KAN09	Caldwell North	0.85	354		Pg	02 35 20.3	-0.2
KAN09				Sg	Sg	02 35 31.5	+0.1
KAN05	Bluff City Nor	0.87	341		Pg	02 35 20.5	-0.3
KAN05				Sg	Sg	02 35 32.1	0.0
OKCFA	Oklahoma City	0.88	177		Pg	02 35 20.7	-0.3
OKCFA	Oklahoma City	0.88	177	P	Pg	02 35 20.6	-0.3
	baz=357,SNR=23						
OKCFA				S	Sg	02 35 32.4	+0.1
	baz=357						
KAN01	Argonia South	0.88	347		Pg	02 35 20.9	-0.2
KAN01				Sg	Sg	02 35 32.7	+0.1
OKCSW	OKLAHOMA CITY	0.89	176		Pg	02 35 20.4	-0.7
OKCSW				Sg	Sg	02 35 32.9	+0.2
KAN10	Anthony SW Sta	0.95	331	Pg	Pg	02 35 22.3	-0.2
KAN10				Sg	Sg	02 35 34.6	-0.2
KAN06	Argonia West S	0.99	344		Pg	02 35 22.9	-0.4
KAN06				Sg	Sg	02 35 36.2	0.0
KAN08	Anthony NE Sta	1.00	339		Pg	02 35 23.0	-0.4
T35A	Sooner Cattle	1.02	52		Pg	02 35 23.5	-0.2
T35A				Sg	Sg	02 35 36.4	-0.5
T35B	Sooner Cattle	1.02	52	P	Pg	02 35 23.4	-0.3
	baz=232,SNR=114						
T35B				S	Sg	02 35 36.8	-0.2
	baz=232						
KAN16	Harper SW Stat	1.03	335		Pg	02 35 23.2	-0.7

FNO	Franklin	1.04	175		Pg	02 35 23.5	-0.5
KAN12	Harper NE Stat	1.08	339		Pg	02 35 24.1	-0.7
U32A	Winter Ranch,	1.20	275		Pg	02 35 25.6	-1.6
U32A	Winter Ranch,	1.20	275	P	Pg	02 35 26.2	-1.1
	baz=94						
W35A	Tecumseh	1.25	155	Pn	Pg	02 35 26.7	-1.4
TUL1	Leonard	1.45	105	Pn	Pn	02 35 30.3	-0.4
TUL1	Leonard	1.45	105	P	Pn	02 35 30.2	-0.4
	baz=286						
TUL1				S	Sb	02 35 50.0	+0.1
	baz=286						
X34A	Smith Ranch, M	1.71	189		Pn	02 35 34.9	+0.7
LOOK	Love County	2.31	173		Pn	02 35 43.2	+0.7
R32A	Long Quarter,	2.33	336		Pn	02 35 44.2	+1.3
R32A	Long Quarter,	2.33	336	S	Sn	02 36 12.6	+0.8
	baz=156						
X37A	Clayton	2.44	134	Pn	Pn	02 35 45.1	+0.8
X37A	Clayton	2.44	134	P	Pn	02 35 45.2	+0.9
	baz=315,SNR=11						
U38A	Gravette	2.53	86	Pn	Pn	02 35 47.2	+1.6
HHAR	Hobbs	2.89	89		Pn	02 35 51.5	+1.0
KSU1	Kansas State U	2.90	14		Pn	02 35 52.0	+1.4
Z35A	Perchaven, San	2.96	176	Pn	Pn	02 35 51.9	+0.4
Z35A	Perchaven, San	2.96	176	S	Sn	02 36 29.3	+2.0
	baz=356						
CBKS	Cedar Bluff	3.08	326	Pn	Pn	02 35 53.6	+0.5
W39A	Magazine	3.23	109		Pn	02 35 55.4	+0.3
W39A				IAmb_Lg		02 36 50.9	
	comp=Z,64nm,0.8s						
W39A	Magazine	3.23	109	P	Pn	02 35 55.8	+0.7
	baz=291						
S39A	Bolivar	3.63	66	Pn	Pn	02 36 01.2	+0.5
S39A				IAmb_Lg		02 36 59.2	
	comp=Z,51nm,0.8s						
S39A	Bolivar	3.63	66	P	Pn	02 36 00.9	+0.1
	baz=248,SNR=11						
MIAR	Mount Ida	3.66	117	Pn	Pn	02 36 01.4	+0.4
MIAR	Mount Ida	3.66	117	P	Pn	02 36 01.8	+0.7
	baz=300,SNR=35						
Z38A	Mt. Pleasant	3.67	145	Pn	Pn	02 36 01.2	0.0
Z38A				IAmb_Lg		02 37 08.2	
	comp=Z,81nm,0.7s						
AMTX	Amarillo	3.67	249	Pn	Pn	02 36 02.0	+0.6
AMTX				IAmb_Lg		02 37 00.9	
	comp=Z,47nm,0.8s						
U40A	Yellville	3.76	88		Pn	02 36 03.6	+1.0
ABTX	Abilene, Hawle	4.06	206	Pn	Pn	02 36 06.7	+0.1
X40A	Basin Creek Fa	4.22	114		Pn	02 36 08.5	-0.3
X40A				IAmb_Lg		02 37 22.9	
	comp=Z,34nm,0.7s						
MGMO	Mountain Grove	4.30	77		Pn	02 36 09.7	-0.3
MGMO				IAmb_Lg		02 37 24.1	
	comp=Z,30nm,0.8s						
WHAR	Wooly Hollow	4.36	102	Pn	Pn	02 36 10.9	+0.2
FCAR	Ozark Folk Cen	4.38	94	Pn	Pn	02 36 12.3	+1.3
WLAR	White Oak Lake	4.45	124		Pn	02 36 13.1	+1.2
WLAR				IAmb_Lg		02 37 36.6	
	comp=Z,33nm,0.8s						
237A	Washetta, Mont	4.51	161		Pn	02 36 11.3	-1.4
P38A	Dawn	4.58	42	Pn	Pn	02 36 14.1	+0.4
P38A				IAmb_Lg		02 37 29.1	
	comp=Z,34nm,0.7s						
R40A	Maddies Statio	4.63	63	Pn	Pn	02 36 14.3	-0.2
R40A	Maddies Statio	4.63	63	P	Pn	02 36 14.9	+0.4
	baz=246						
N35A	Tabor	4.79	17	Pn	Pn	02 36 16.8	+0.2
KSCO	Kaye Shedlock'	4.88	305	Pn	Pn	02 36 18.5	+0.5
KSCO				IAmb_Lg		02 37 48.7	
	comp=Z,29nm,0.8s						
MSTX	Muleshoe	4.89	243	Pn	Pn	02 36 19.2	+1.0
NATX	Nacogdoches	5.10	152	IAmb_Lg		02 37 57.2	
	comp=Z,25nm,0.8s						
BGNE	Belgrade	5.13	355	Pn	Pn	02 36 21.3	-0.1
BGNE				IAmb_Lg		02 37 59.7	
	comp=Z,51nm,0.8s						
LCAR	Lake Charles	5.15	91	Pn	Pn	02 36 21.4	-0.2
LCAR				IAmb_Lg		02 37 51.6	
	comp=Z,27nm,0.9s						
T42A	Van Buren	5.21	80	Pn	Pn	02 36 22.8	+0.3
T42A				IAmb_Lg		02 37 53.9	
	comp=Z,31nm,0.9s						
CCAR	Cane Creek	5.27	115	IAmb_Lg		02 37 58.2	
	comp=Z,38nm,1.0s						
CCM	Cathedral Cave	5.31	69	Pn	Pn	02 36 24.4	+0.6
CCM				IAmb_Lg		02 37 51.6	
	comp=Z,47nm,0.7s						
P40A	Paris	5.40	52	Pn	Pn	02 36 25.4	+0.4
P40A				IAmb_Lg		02 38 02.5	
	comp=Z,48nm,0.7s						
T25A	Trinidad	5.61	281	Pn	Pn	02 36 26.6	-1.4
T25A				IAmb_Lg		02 38 04.3	
	comp=Z,24nm,0.9s						
N38A	Joes South For	5.61	35	Pn	Pn	02 36 28.5	+0.7
N38A					Lg	02 38 04.7	
N38A				IAmb_Lg		02 38 12.7	
	comp=Z,50nm,0.8s						
HBAR	Harrisburg	5.61	96	IAmb_Lg		02 38 05.9	
	comp=Z,55nm,1.0s						
PBMO	Poplar Bluff	5.72	83	IAmb_Lg		02 38 09.5	
	comp=Z,42nm,0.8s						
L34A	Svendsen Farm,	5.74	9	Pn	Pn	02 36 29.5	-0.1
L34A				IAmb_Lg		02 38 06.3	
	comp=Z,30nm,0.7s						
OGNE	Ogallala	5.84	324	Pn	Pn	02 36 31.5	+0.4
OGNE				IAmb_Lg		02 38 18.1	
	comp=Z,37nm,0.8s						
LPAR	Lepanto	5.89	95	IAmb_Lg		02 38 11.8	
	comp=Z,33nm,0.7s						
FVM	French Village	5.91	71	Pn	Pn	02 36 32.9	+0.9
FVM					Sn	02 37 37.5	-2.4
FVM				IAmb_Lg		02 38 15.5	
	comp=Z,45nm,0.9s						
JCT	Junction City	6.10	199	Pn	Pn	02 36 33.9	-0.8
JCT				IAmb_Lg		02 38 19.8	
	comp=Z,43nm,1.1s						
143A	Socs Landing,	6.18	124	IAmb_Lg		02 38 25.6	
	comp=Z,29nm,0.8s						
K31A	O'Neill	6.40	352	Pn	Pn	02 36 38.9	+0.2
SCIA	State Center	6.53	29	IAmb_Lg		02 38 35.7	
	comp=Z,33nm,0.7s						
SDCO	Great Sand Dun	6.55	285		Pn	02 36 41.3	+0.1
S44A	Carbondale	6.76	76	Pn	Pn	02 36 44.2	+0.6
S44A				IAmb_Lg		02 38 38.1	
	comp=Z,45nm,0.7s						
N41A	Harden Midland	6.83	48	Pn	Pn	02 36 45.1	+0.4
W45A	Hickory Valley	6.87	97	IAmb_Lg		02 38 40.7	
	comp=Z,28nm,0.7s						
Q44A	Meyer Farm, Va	7.23	66	Pn	Pn	02 36 50.5	+0.4
ANMO	Albuquerque	7.41	262	Pn	Pn	02 36 52.4	-0.3
ECSD	EROS Data Cent	7.47	5	Pn	Pn	02 36 53.3	-0.1
ECSD	EROS Data Cent	7.47	5	P	Pn	02 36 52.2	-1.1
	baz=186,SNR=13						
HDIL	Hopedale	7.73	54	Pn	Pn	02 36 56.6	-0.4
O44A	Mansfield	8.10	59	IAmb_Lg		02 39 30.1	
	comp=Z,37nm,0.9s						
L42A	Oliver, Polo	8.35	45	IAmb_Lg		02 39 29.7	
	comp=Z,28nm,1.0s						
JFWS	Jewell Farm	8.67	38	IAmb_Lg		02 40 00.4	
	comp=Z,20nm,0.8s						
K22A	Casper	9.42	315	IAmb_Lg		02 40 23.0	
	comp=Z,29nm,1.2s						

IDC 18 02:37:38.8±4.1, 5°.01S×133°.16E, h0km, mb4.2/1, mb1 4.3/3, mb1mx3.8/20, mbtmp4.1/3, ML4.1/2, Error ellipse: s-maj=260.7km s-min=3.6km az=76.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.89	176	Pn	Pn	02 41 10.6	-0.2
	0.8nm,0.3s,baz=348,slow=15,SNR=35						
WRA				Sn	Sn	02 43 40.5	-16
	1.6nm,0.3s,baz=345,slow=22,SNR=8.5						
ASAR	Alice Springs	18.57	178	P	P	02 41 57.5	0.0
	0.8nm,0.3s,baz=351,slow=8.9,SNR=54						
ASAR				S	Sn	02 45 10.1	-16
	0.3nm,0.3s,baz=359,slow=28,SNR=5.2						
MKAR	Makanchi Array	68.35	325	P	P	02 48 42.1	-0.1
	1.7nm,0.6s,baz=119,slow=8.2,SNR=14						

IDC 18 02:43:42.3±1.5, 6°.91S×129°.36E, h0km, mb3.7/1, mb1 3.8/3, mb1mx3.5/24, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=132.3km s-min=13.1km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.82	160	Pn	Pn	02 46 59.2	-0.5
	0.4nm,0.3s,baz=341,slow=13,SNR=2.6						
WRA				Sn	Sn	02 49 20.6	-13
	1.2nm,0.3s,baz=332,slow=23,SNR=9.2						
ASAR	Alice Springs	17.22	166	P	Pn	02 47 44.7	+0.2
	0.3nm,0.3s,baz=351,slow=11,SNR=5.6						
MKAR	Makanchi Array	67.81	327	P	P	02 54 42.2	0.0
	0.5nm,0.7s,baz=123,slow=9.0,SNR=4.5						

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*ISK **18** 02:47:20.1, 34°.90N×24°.84E, h23km, ML3.5/21*
*ATH **18** 02:47:21.0, 34°.93N×24°.79E, h32km±1km, ML3.2/6, Error ellipse: s-maj=3.7km s-min=1.2km az=6.0*
*THE **18** 02:47:21.7, 34°.89N×24°.83E, h28km±1km, ML3.2/7, Error ellipse: s-maj=2.3km s-min=0.9km az=338.0*
*DDA **18** 02:47:24.0, 34°.89N×25°.24E, h47km±465km, ML3.2*
ISC 18 02:47:21.5±1.0, 34°.90N±0°.05×24°.82E±0°.03, h31km±6km, n60, σ1s.06/77, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	Sivas	0.12	356	P	Pb	02 47 26.5	-0.5
SIVA				S	Sb	02 47 31.4	+0.6
	19μm,0.3s						
SIVA	Sivas	0.12	356	P	Pb	02 47 26.6	-0.5
SIVA				S	Sn	02 47 30.9	+0.2
SIVA				AML	AML	02 47 31.7	
	comp=E,51410μm,0.3s						
SIVA				AML	AML	02 47 34.8	
	comp=N,26316μm,0.5s						
TMBK	Timbaki Herakl	0.18	346	P	Pb	02 47 27.0	-0.6
TMBK				S	Sb	02 47 32.2	+0.5
	comp=N,4μm,0.3s						
IDI	Anoyia	0.39	8	P	Pb	02 47 29.5	-0.9
IDI				S	Sb	02 47 36.2	-0.2
	comp=N,3μm,0.4s						
IDI	Anoyia	0.39	8	P	Pb	02 47 29.5	-0.9
IDI				S	Sb	02 47 36.3	-0.1
IDI				AML	AML	02 47 37.3	
	comp=N,6926μm,0.6s						
IDI				AML	AML	02 47 37.6	
	comp=E,6578μm,0.3s						
KSTL	Kastelli Herak	0.45	27	P	Pn	02 47 32.2	+0.3
KSTL				S	Sn	02 47 40.5	+1.5
	comp=E,3μm,0.6s						
HRKL	Herakleio	0.47	29	P	Pb	02 47 31.2	-0.3
HRKL				S	Sn	02 47 39.4	-0.1
HRKL	Herakleio	0.47	29	PG	Pb	02 47 30.4	-1.1
PRNS	Prines Rethymn	0.53	331	P	Pb	02 47 32.3	-0.2
PRNS				S	Sn	02 47 41.4	+0.4
	comp=E,750nm,0.6s						
GVDS	Gavdos	0.60	265	P	Pb	02 47 32.9	-0.7
GVDS				S	Sn	02 47 43.7	+1.0
	comp=E,3μm,0.6s						
GVDS	Gavdos	0.60	265	PG	Pb	02 47 32.9	-0.7
GVDS				SG	Sn	02 47 43.4	+0.7
GVD	Gavdhos	0.60	264	P	Pb	02 47 32.6	-1.1
GVD				S	Sn	02 47 43.0	+0.2
	comp=E,4μm,0.4s						
GVD	Gavdhos	0.60	264	PG	Pb	02 47 32.6	-1.1
GVD				SG	Sn	02 47 43.0	+0.2
VAM	Vamos	0.72	315	P	Pn	02 47 34.8	-0.8
VAM	Vamos	0.72	315	P	Pn	02 47 34.7	-0.9
VAM				AML	AML	02 47 49.3	
	comp=N,4197μm,0.3s						
VAM				AML	AML	02 47 51.7	
	comp=E,3898μm,0.6s						
NPS	Neapolis	0.74	61	P	Pn	02 47 35.8	-0.2
NPS	Neapolis	0.74	61	P	Pn	02 47 35.7	-0.2
NPS				S	Sn	02 47 46.8	+0.6
NPS				AML	AML	02 47 48.8	
	comp=E,4835μm,0.7s						
NPS				AML	AML	02 47 51.8	
	comp=N,3950μm,0.4s						
IMMV	Iera Moni Meta	0.89	309	P	Pn	02 47 37.7	-0.2
IMMV	Iera Moni Meta	0.89	309	P	Pn	02 47 37.4	-0.5
IMMV				AML	AML	02 47 55.1	
	comp=E,4140μm,0.4s						
IMMV				AML	AML	02 47 55.9	
	comp=N,2950μm,0.4s						
IMMV	Iera Moni Meta	0.89	309	PG	Pn	02 47 37.9	0.0
KNDR	Palaiochora Ch	0.99	290	P	Pn	02 47 39.8	+0.5
KNDR	Palaiochora Ch	0.99	290	PG	Pn	02 47 39.5	+0.2
RODP	Rodopos	1.09	307	PN	Pn	02 47 40.7	0.0
ZKR	Zakros	1.17	79	P	Pb	02 47 43.3	+0.2
ZKR				AML	AML	02 48 07.7	
	comp=E,2213μm,0.5s						
ZKR				AML	AML	02 48 16.1	
	comp=N,706μm,1.0s						
ZKR	Zakros	1.17	79	PN	Pn	02 47 41.9	+0.1
SANT	Santorini	1.56	19	PN	Pn	02 47 47.4	+0.2
ANKY	Antikythira Is	1.57	308	P	Pb	02 47 49.0	-0.9
SNT5	Nea Kammeni, S	1.57	17	P	Pb	02 47 49.1	-0.9
MHLO	Agia Marina, M	1.82	349	P	Pn	02 47 51.7	+1.0
KTHA	Kythira Island	1.97	314	P	Pn	02 47 53.7	+0.9
APE	Apeiranthos	2.24	15	P	Pn	02 47 57.3	+0.8
APE	Apeiranthos	2.24	15	PN	Pn	02 47 56.9	+0.3
VLI	Veliai	2.37	320	P	Pn	02 47 58.7	+0.3
KOSK	Kos Island	2.55	43	PN	Pn	02 48 01.4	+0.7
NIS1	Nisyros Isl.	2.56	48	PN	Pn	02 48 01.1	+0.1
DAT	Datca	2.89	50	*i* P	Pn	02 48 02.6	-3.0
DAT				*i* S	Sn	02 48 35.6	-3.8
BODT	Bodrum	2.96	42	PN	Pn	02 48 07.1	+0.7
ARG	Arkhangelos	3.00	63	P	Pn	02 48 08.6	+1.7
ARG	Arkhangelos	3.00	63	PN	Pn	02 48 07.4	+0.5
BDRM	Kayabasi	3.03	44	*i* P	Pn	02 48 08.6	+1.1
SMG	Samos	3.24	30	P	Pn	02 48 11.6	+1.3
DION	Dionisos Attik	3.25	348	P	Pn	02 48 11.2	+0.8
ITM	Ithomi	3.27	315	P	Pn	02 48 11.0	+0.3
ITM	Ithomi	3.27	315	PN	Pn	02 48 10.9	+0.3
TURN	Turunc	3.35	55	*i* P	Pn	02 48 13.0	+1.2
TURN				*i* S	Sn	02 48 50.0	-0.5
TURN	Turunc	3.35	55	PN	Pn	02 48 12.7	+0.9
DALY	Dalyan (Mula)	3.65	57	PN	Pn	02 48 16.7	+0.8
MULA	Mugla, Merkez-	3.68	49	*i* P	Pn	02 48 18.6	+2.2
AYDN	Tasoluk	3.70	41	*i* P	Pn	02 48 17.9	+1.3
FETY	Fethiye	3.88	62	*i* P	Pn	02 48 18.5	-0.6
FETY				*i* S	Sn	02 49 00.6	-2.9
FETY	Fethiye	3.88	62	PN	Pn	02 48 19.4	+0.4
AKAS	Kas	4.12	70	*i* P	Pn	02 48 22.9	+0.3
AKAS				IAML		02 49 12.0	
	comp=E,38nm,0.6s						
AKAS				IAML		02 49 18.0	
	comp=N,74nm,1.1s						
AKAS	Kas	4.12	70	PN	Pn	02 48 23.1	+0.6
CAME	Cameli-Denizli	4.17	59	PN	Pn	02 48 24.4	+1.2
TAVA	DENIZLI_Tavas	4.18	51	*i* P	Pn	02 48 24.3	+0.9
CAEL	Denizli, Camel	4.27	57	*i* P	Pn	02 48 26.1	+1.5
CAEL				*i* S	Sn	02 49 15.0	+1.6
CAEL				IAML		02 49 52.0	
	comp=N,54nm,2.4s						
CAEL				IAML		02 50 34.0	
	comp=E,57nm,2.1s						
GOLH	Golhisar	4.49	57	*i* P	Pn	02 48 29.0	+1.4
GOLH				IAML		02 49 25.0	
	comp=E,30nm,2.1s						
GOLH				IAML		02 49 38.0	
	comp=N,24nm,1.2s						
ELL	Elmali	4.53	65	PN	Pn	02 48 28.7	+0.6
AGG	Agios Georgios	4.57	335	PN	Pn	02 48 30.1	+1.5
KORT	Korkueli	4.95	63	PN	Pn	02 48 35.2	+1.3

IDC 18 02:58:39.0±1.7, 4°.12N×126°.67E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/38, mbtmp3.4/4, Error ellipse: s-maj=179.7km s-min=24.4km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.07	163	P	P	03 04 04.5	-0.9
	0.7nm,0.7s,baz=346,slow=12,SNR=2.4						
ASAR	Alice Springs	28.50	166	P	P	03 04 37.2	+0.9
	0.1nm,0.3s,baz=343,slow=12,SNR=1.5						
SONM	Songino Array	46.92	341	P	P	03 07 13.0	+1.6
	0.3nm,0.6s,baz=156,slow=9.5,SNR=2.5						
MKAR	Makanchi Array	57.21	325	P	P	03 08 26.8	-1.3
	0.3nm,0.5s,baz=117,slow=8.1,SNR=4.7						

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*IDC **18** 03:31:59.3±1.4, 27°.42N×142°.90E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.4/52, mbtmp3.9/7, Error ellipse: s-maj=57.9km s-min=11.6km az=79.0*
ISC 18 03:32:03.7±2.7, 27°.4N±0°.2×142°.8E±0°.8, h27km, n7, σ0s.74/7, mb4.0/7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLR	Kul'dur	23.41	342	P	P	03 37 10.3	0.0
	0.7nm,0.4s,baz=187,slow=8.1,SNR=4.6						
WRA	Warramunga Arr	47.75	191	P	P	03 40 38.5	0.0
	0.9nm,0.6s,baz=14,slow=7.4,SNR=7.1						
ZALV	Zalesovo Beam	49.60	319	P	P	03 40 52.2	-0.2
	0.4nm,0.5s,baz=92,slow=8.9,SNR=4.2						
MKAR	Makanchi Array	50.68	309	P	P	03 41 00.5	-0.2
	0.3nm,0.5s,baz=96,slow=8.3,SNR=2.8						
KURBB	Kurchatov Arra	53.20	314	P	P	03 41 19.3	-0.1
	0.8nm,0.2s,baz=89,slow=7.3,SNR=7.5						
BVAR	Borovoye Array	58.17	317	P	P	03 41 56.5	+1.4
	1.5nm,0.5s,baz=64,slow=3.4,SNR=5.4						
FINES	FINESS Array B	77.91	334	P	P	03 43 58.5	-0.3
	1.5nm,0.8s,baz=46,slow=5.5,SNR=5.1						

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*BJI **18** 03:39:05.0±0.0, 3°.71N×126°.21E, h159km, mB5.1/7, mb4.5/11*
*MAN **18** 03:39:06.8, 4°.11N×125°.73E, h15km, mb4.7, ML3.6, MS3.5*
*IDC **18** 03:39:10.0±0.7, 4°.43N×125°.78E, h142km±6km, mb3.8/22, mb1 4.0/26, mb1mx3.7/62, mbtmp4.3/26, MS3.6/2, Ms1 3.6/2, ms1mx2.6/47, Error ellipse: s-maj=17.5km s-min=8.9km az=73.0*
*NEIC **18** 03:39:10.4±2.1, 4°.42N±0°.06×125°.97E±0°.09, h139km±5km, mb4.5/29, Error ellipse: s-maj=13.6km s-min=8.3km az=78.0*
*DJA **18** 03:39:14.5±0.4, 4°N±4°×12°6E±°, h113km±6km, M4.6/15, mB5.1/10, mb4.6/15, MLv4.8/15, Mw(mB)4.4/10*
ISC 18 03:39:11.0±0.4, 4°.41N±0°.04×125°.93E±0°.07, h150km, n105, σ1s.37/117, mb4.2/35, 2C-2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	0.82	209	P	Pn	03 39 33.7	-0.7
MATI	Mati	2.54	7	⇑*e*P	Pn	03 39 52.0	-0.6
MATI				*e*S	Sn	03 40 28.2	+3.4
DAV	Davao City (W)	2.67	353	P	Pn	03 39 52.1	-2.1
	22nm,0.3s,baz=12,slow=5.4,SNR=4.9						
DAV				S	Sn	03 40 29.7	+2.1
	148nm,0.3s,baz=106,slow=23,SNR=8.7						
DAV	Davao City (W)	2.67	353	Pn	Pn	03 39 52.8	-1.4
KCP	Kidapawan	2.71	342	⇓*i*P	Pn	03 39 54.8	-0.1
KCP				*i* S	Sn	03 40 29.5	+0.8
BUKP	Musuan	3.55	346	⇑*e*P	Pn	03 40 05.5	0.0
BUKP				*e*S	Sn	03 40 49.0	+1.2
TNTI	Ternate	3.89	158	P	Pn	03 40 08.8	-1.0
TNTI	Ternate	3.89	158	Pn	Pn	03 40 08.9	-1.0
PAGZ	Pagadian	4.25	324	⇓*e*P	Pn	03 40 14.3	-0.2
KMSI	Cibinong	4.28	207	P	Pn	03 40 15.9	+1.0
LBMI	Labuha	5.25	163	P	Pn	03 40 27.3	-0.5
MRSI	Marisa	5.58	226	P	Pn	03 40 35.9	+3.8
	1.7nm2μm117nm,0.7s						
TOLI2	Tolitoli	6.10	238	Pn	Pn	03 40 39.7	+0.7
LUWI	Luwuk	6.27	210	P	Pn	03 40 42.8	+1.5
	1.3nm10μm293nm,0.9s						
LUWI	Luwuk	6.27	210	Pn	Pn	03 40 42.6	+1.4
SANI	Sanana	6.42	179	P	Pn	03 40 41.6	-1.7
APSI	Ampana	6.80	219	P	Pn	03 40 51.0	+2.6
	0.5nm2μm134nm,1.2s						
MPSI	Mapaga	7.26	236	P	Pn	03 40 58.3	+3.8
	0.2nm25nm,1.2s						
MYLDM	Lahad Datu	7.44	276	Pn	Pn	03 40 58.5	+1.5
SWI	Sorong	7.47	134	P	Pn	03 40 58.3	+0.9
	0.2nm2μm56nm,0.5s						
SIJI	Sorong	7.48	134	P	Pn	03 40 57.2	-0.3
MSAI	Masohi	8.27	159	P	Pn	03 41 07.9	-0.1
TTSI	Tana Toraja	9.60	220	P	Pn	03 41 28.4	+2.7
	2μm196nm,1.2s						
SPSI	Sidrap Palu	10.35	217	P	Pn	03 41 37.5	+1.8
	39nm,0.9s						
BNSI	Bone	10.51	214	P	Pn	03 41 41.8	+4.0
	45nm,1.1s						
BKB	Balikpapan	10.64	238	Pn	Pn	03 41 38.9	-0.6
KAPI	Kappang	11.21	213	P	Pn	03 41 46.2	-0.8
	1.2nm,0.3s,baz=45,slow=10,SNR=9.0						
KAPI	Kappang	11.21	213	Pn	Pn	03 41 45.9	-1.1
BBKI	Banjar Baru	13.56	235	P	P	03 42 22.4	+1.1
	64nm,1.0s						
SBUM	Sibu	13.82	262		P	03 42 25.0	+0.8
SOEI	Soe	14.17	187	P	P	03 42 27.9	-0.3
	87nm,0.9s						
SOEI	Soe	14.17	187		Pn	03 42 26.2	+1.0
BATI	Baumata	14.70	189	P	Pn	03 42 32.8	+1.1
	7.8nm,0.3s,baz=288,slow=2.5,SNR=5.9						
BATI	Baumata	14.70	189	P	P	03 42 34.3	+0.4
	41nm,1.1s						
PLAI	Plampang	15.46	212	P	Pn	03 42 42.5	+1.3
	1μm62nm,1.2s						
GENI	Genyem	15.84	116	P	P	03 42 48.6	+2.0
	160nm,1.1s						
KSM	Kuching	15.87	260		Pn	03 42 47.1	+0.8
KSM				IAmb	IAmb	03 42 50.8	
	comp=Z,41nm,0.8s						
TWSI	Taliwang, Sumb	15.87	215	P	P	03 42 48.2	+1.2
MTN	Manton Dam	17.90	163	P	P	03 43 07.5	-1.8
MTN				IAmb	IAmb	03 43 10.4	
	comp=Z,20nm,1.1s						
KNRA	Kununurra	20.15	172	P	P	03 43 32.1	-1.6
GUMO	Guam	20.79	63	LR	LR	03 50 49.6	
	comp=Z,120nm,21.3s,baz=104,slow=33						
FITZ	Fitzroy Crossi	22.37	181	P	P	03 43 56.1	-0.8
	comp=Z,34nm,1.0s,baz=6.5,slow=8.6,SNR=48						
BKNI	Bangkinang	25.19	261	P	P	03 44 23.2	+0.3
PMG	Port Moresby	25.22	123	P	P	03 44 23.8	+0.7
	comp=Z,7.6nm,0.3s,baz=86,slow=9.3,SNR=3.2						
PMG	Port Moresby	25.22	123	P	P	03 44 22.5	-0.7
PMG				IAmb	IAmb	03 44 31.3	
	comp=Z,19nm,1.2s						
WRA	Warramunga Arr	25.57	161	P	P	03 44 26.2	-0.1
	comp=Z,3.0nm,0.5s,baz=341,slow=11,SNR=47						
WRA				S	S	03 48 44.1	+1.0
	comp=Z,1.0nm,1.1s,baz=344,slow=21,SNR=2.0						
WRA				ScP	ScP	03 51 19.4	+0.3
	comp=Z,1.6nm,0.9s,baz=276,slow=1.3,SNR=5.3						
WB2	Warramunga Arr	25.58	161	P	P	03 44 27.1	+0.8
WB2				IAmb	IAmb	03 44 39.7	
	comp=Z,8.8nm,1.1s						
WR0	Warramunga Arr	25.65	161	P	P	03 44 27.5	+0.5
WR0				IAmb	IAmb	03 44 43.9	
	comp=Z,10.0nm,1.2s						
MBWA	Marble Bar	26.13	193	P	P	03 44 30.7	-0.5
MBWA				IAmb	IAmb	03 44 35.5	
	comp=Z,30nm,1.1s						
PSA00	Pilbara Seismi	26.50	193	P	P	03 44 34.0	-0.6
PSI	Prapat	27.00	268	P	P	03 44 38.5	-0.8
	comp=Z,6.9nm,1.1s,baz=9.5,slow=5.2,SNR=4.3						
RPSI	Rantau Prapat	27.00	267	P	P	03 44 38.5	-0.7
NJ2	Nanjing	28.29	347	*e*P	P	03 44 52.1	+1.7
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
GSI	Gunungsitoli	28.48	265	P	P	03 44 51.3	-1.1
JNU	Nakatsue	28.94	9	P	P	03 44 56.6	+0.4
AS31	Alice Springs	28.97	165	P	P	03 44 56.9	+0.3
ASAR	Alice Springs	28.97	165	P	P	03 44 56.9	+0.3
	comp=Z,1.3nm,0.5s,baz=343,slow=7.4,SNR=15						
ASAR				S	S	03 49 34.5	-2.1
	comp=Z,1.0nm,0.8s,baz=341,slow=17,SNR=4.6						
ASAR				ScP	ScP	03 51 30.1	+0.7
	comp=Z,2.4nm,0.9s,baz=344,slow=3.2,SNR=9.3						
ASAR	Alice Springs	28.97	165	P	P	03 44 56.4	-0.2
CMAR	Chiang Mai Arr	29.84	300	P	P	03 45 04.0	-0.4
	comp=Z,2.6nm,0.5s,baz=117,slow=7.5,SNR=10						
CMAR	Chiang Mai Arr	29.84	300	P	P	03 45 04.0	-0.4
KSRS	Korea Array	32.94	3	P	P	03 45 31.1	-0.1
	comp=Z,0.8nm,0.4s,baz=188,slow=9.4,SNR=4.2						
MAT	Matsushiro	33.91	18	P	P	03 45 38.7	-1.0
FORT	Forrest	35.05	177	P	P	03 45 48.0	-1.5
JMM	Marumori	35.96	20	P	P	03 45 57.5	+0.2
LZH	Lanzhou	37.52	330	*e*P	P	03 46 11.4	+0.7
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
HHC	Hu-ho-hao-te	38.51	342	*e*P	P	03 46 20.3	+1.5
SHL	Shillong	38.83	306	P	P	03 46 21.5	-0.4
SHL				IAmb	IAmb	03 46 23.0	
	comp=Z,13nm,0.6s						
STKA	Stephens Creek	39.05	159	P	P	03 46 24.1	+0.9

	comp=Z,1.9nm,0.4s,baz=345,slow=7.6,SNR=5.8						
USRK	Ussuriysk Ar.	39.99	7	P	P	03 46 31.0	+0.2
	comp=Z,4.6nm,0.7s,baz=203,slow=7.8,SNR=7.7						
USRK	Ussuriysk Ar.	39.99	7	P	P	03 46 31.6	+0.7
KLR	Kul'dur	44.93	5	P	P	03 47 10.8	0.0
	comp=Z,2.8nm,0.6s,baz=199,slow=4.8,SNR=9.4						
SONM	Songino Array	46.41	342	P	P	03 47 21.5	-1.0
	comp=Z,0.5nm,0.8s,baz=134,slow=4.2,SNR=2.0						
SONM				PcP	PcP	03 48 55.1	+0.2
	comp=Z,1.0nm,0.7s,baz=161,slow=5.1,SNR=2.7						
SONM				ScP	ScP	03 52 34.2	-0.2
	comp=Z,0.4nm,0.6s,baz=160,slow=4.6,SNR=2.9						
WMQ	Urumqi	51.71	325	*e*P	P	03 48 04.6	+1.7
PETK	Petropavlovsk-	55.11	23	P	P	03 48 29.0	+1.6
	comp=Z,2.1nm,0.6s,baz=193,slow=5.9,SNR=1.7						
MK31	Makanchi Array	56.55	325	P	P	03 48 36.8	-1.0
MKAR	Makanchi Array	56.55	325	P	P	03 48 37.4	-0.4
	comp=Z,1.4nm,0.5s,baz=120,slow=8.6,SNR=11						
MKAR				pP	pP	03 49 10.2	-2.1
	comp=Z,1.3nm,0.5s,baz=118,slow=8.0,SNR=4.4						
MKAR				PcP	PcP	03 49 32.7	0.0
	comp=Z,2.0nm,0.6s,baz=120,slow=5.2,SNR=6.5						
MKAR				ScP	ScP	03 53 17.1	-1.0
	comp=Z,2.3nm,0.9s,baz=122,slow=4.6,SNR=7.2						
MKAR	Makanchi Array	56.55	325	P	P	03 48 37.1	-0.7
KSH	Kashi	57.00	315	P	P	03 48 43.1	+1.8
KSH				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ZALV	Zalesovo Beam	59.62	333	P	P	03 48 58.0	-1.0
	comp=Z,0.4nm,0.4s,baz=136,slow=11,SNR=1.8						
ZALV	Zalesovo Beam	59.62	333	P	P	03 48 59.8	+0.8
KBL	Kabul	60.48	307	P	P	03 49 04.6	-0.9
KBL				IAmb	IAmb	03 49 06.2	
	comp=Z,4.2nm,0.8s						
KURBB	Kurchatov Arra	60.74	327	P	P	03 49 04.3	-2.4
	comp=Z,1.2nm,0.6s,baz=127,slow=6.3,SNR=11						
KURBB				pP	pP	03 49 39.8	-2.0
	comp=Z,2.3nm,0.7s,baz=128,slow=6.4,SNR=4.1						
KURK	Kurchatov	60.74	328	P	P	03 49 06.4	-0.3
KURK				IAmb	IAmb	03 49 15.9	
	comp=Z,4.5nm,0.5s						
GAR	Garm	60.88	313	P	P	03 49 08.1	+0.1
GAR				IAmb	IAmb	03 49 08.9	
	comp=Z,14nm,1.1s						
BVAR	Borovoye Array	66.32	327	P	P	03 49 41.2	-2.1
	comp=Z,0.4nm,0.4s,baz=196,slow=10,SNR=3.7						
BVAR				pP	PcP	03 50 16.4	+4.3
	comp=Z,1.4nm,0.6s,baz=183,slow=7.4,SNR=4.0						
TIXI	Tiksi	67.18	1	P	P	03 49 47.1	-1.3
	comp=Z,2.5nm,0.4s,baz=209,slow=2.1,SNR=5.4						
TIXI	Tiksi	67.18	1	P	P	03 49 47.9	-0.5
TIXI				IAmb	IAmb	03 49 53.8	
	comp=Z,5.0nm,0.6s						
ABKAR	Akbulak array	71.12	321	P	P	03 50 12.0	-1.1
AKTO	Aktyubinsk	72.63	322	P	P	03 50 20.8	-1.4
	comp=Z,1.2nm,0.7s,baz=114,slow=11,SNR=4.1						
RAYN	Ar Rayn	79.48	293	P	P	03 51 00.6	-0.9
RAYN				IAmb	IAmb	03 51 01.3	
	comp=Z,9.0nm,1.5s						
A21K	Barrow	81.83	19	P	P	03 51 13.0	+0.1
GURO	Guroymak-BITLI	82.50	308	P	P	03 51 17.9	+0.6
COLD	Coldfoot	83.58	23	P	P	03 51 22.3	+0.2
COLD				IAmb	IAmb	03 51 24.7	
	comp=Z,14nm,1.3s						
I23K	Minto, Yukon-K	83.80	25	IAmb	IAmb	03 51 25.4	
	comp=Z,9.5nm,1.2s						
TOLK	Toolik Lake Re	83.91	22	P	P	03 51 24.5	+0.7
ILAR	Eielson Array	84.84	25	P	P	03 51 29.2	+0.7
	comp=Z,0.7nm,0.9s,baz=282,slow=11,SNR=5.0						
BRTR	Keskin Array B	88.97	310	P	P	03 51 48.0	-1.2
	comp=Z,1.7nm,0.9s,baz=108,slow=4.0,SNR=4.6						
BRTR	Keskin Array B	88.97	310	P	P	03 51 48.7	-0.5
ARCES	ARCESS Array B	89.54	340	P	P	03 51 50.1	-0.9
	comp=Z,5.6nm,0.9s,baz=48,slow=3.6,SNR=4.6						
NOA	NORSAR Array B	97.83	333	P	P	03 52 27.0	-2.2
	comp=Z,0.4nm,0.6s,baz=58,slow=2.1,SNR=2.0						
LSZ	Lusaka	98.60	255	LR	LR	04 37 44.1	
	comp=Z,30nm,18.4s,baz=139,slow=36						
TXAR	Lajitas Array	121.81	51	PKP	PKPdf	03 57 48.5	+0.4
	comp=Z,0.4nm,0.8s,baz=95,slow=1.1,SNR=4.1						
TORD	Torodi Ar. Bea	121.95	288	PKP	PKPdf	03 57 48.2	-0.3
	comp=Z,0.8nm,0.6s,baz=38,slow=2.6,SNR=7.1						
ACON	Acoyapa	145.05	62	PKPdf	PKPbc	03 58 31.7	+0.4
CDITO	Canoas	148.52	66	PKPbc	PKPdf	03 58 39.2	+1.8

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*IDC **18** 03:49:31.5±1.1, 12°.76N×144°.46E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.2/51, mbtmp3.5/5, MS3.0/2, Ms1 3.0/2, ms1mx2.5/35, Error ellipse: s-maj=44.3km s-min=15.5km az=111.0*

ISC 18 03:49:32.9±1.2**, 12°.7N**±0°.1×**144°.5E**±0°.3**, h10^{km}, n11,** σ1^s.**21**/7**, mb3.5**/5**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.93	25	Pn	Pn	03 49 52.0	-0.1
	239nm,0.3s,baz=337,slow=1.0,SNR=67						
GUMO				Sn	Sn	03 50 05.8	+0.4
	568nm,0.3s,baz=353,slow=23,SNR=11						
H11S3	WAKE ISLAND Hy	22.14	72	T	T	04 17 31.0	
	baz=259,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	22.15	72	T	T	04 17 30.3	
	baz=259,slow=75,SNR=23						
H11S2	WAKE ISLAND Hy	22.15	72	T	T	04 17 36.9	
	baz=259,slow=75,SNR=11						
MJAR	Matsushiro Arr	24.36	348	LR	LR	04 03 11.1	
	comp=Z,29nm,18.1s,baz=240,slow=34						
WRA	Warramunga Arr	33.97	197	P	P	03 56 16.4	-0.4
	0.4nm,0.5s,baz=18,slow=9.6,SNR=6.6						
ASAR	Alice Springs	37.63	196	P	P	03 56 48.8	+0.5
	0.4nm,0.5s,baz=22,slow=12,SNR=5.9						
SONM	Songino Array	47.20	326	P	P	03 58 04.5	-1.5
	0.3nm,0.8s,baz=134,slow=4.3,SNR=3.5						
MKAR	Makanchi Array	61.83	316	P	P	03 59 54.0	+1.7
	0.2nm,0.7s,baz=91,slow=5.2,SNR=2.2						
ZALV	Zalesovo Beam	62.09	325	LR	LR	04 27 30.1	
	comp=Z,13nm,19.3s,baz=47,slow=37						
ILAR	Eielson Array	69.50	25	P	P	04 00 41.2	-0.3
	1.1nm,1.2s,baz=249,slow=5.5,SNR=2.7						

NNC 18 03:57:41.2±6.1**, 36°.75N×70°.89E, h135^{km}**±136^{km}**, mb2.9, mpv3.6, 1C-1D, Error ellipse: s-maj=50.9km s-min=36.8km az=15.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	Karatay Array	6.35	357	⇑P	Pn	03 59 13.6	+1.2
	4.0nm,0.4s,baz=179,slow=12						
KK02				S	Sn	04 00 25.3	+1.5
	1.2nm,0.4s,baz=181,slow=22						
AAK	Ala-Archa	6.50	24	P	Pn	03 59 14.3	-0.3
	2.1nm,0.6s						
AAK				S	Sn	04 00 28.3	+0.7
	5.1nm,0.9s						
TKM2	Tokmak 2	7.15	29	⇓P	Pn	03 59 22.2	-1.0
	1.8nm,0.7s						
TKM2				S	Sn	04 00 42.3	-0.8
	3.1nm,0.9s						
AB31	Akbulak array	14.82	331	P	P	04 01 05.4	-0.8
	0.3nm,0.3s						
AB31				S	Sn	04 03 45.9	-2.1
	0.2nm,0.5s,baz=145,slow=24,SNR=4.3						

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*KRSC **18** 04:04:27.3±0.6, 54°.83N×162°.01E, h61^{km}±11^{km}, ML4.9*

*MOS **18** 04:04:28.9±0.9, 54°.88N×161°.88E, h67^{km}, mb4.3/10, Error ellipse: s-maj=8.6km s-min=4.1km az=81.1*

*IDC **18** 04:04:29.0±0.6, 54°.99N×161°.44E, h50^{km}±6^{km}, mb3.8/23, mb1 4.1/25, mb1mx3.9/62, mbtmp4.1/25, MS3.1/12, Ms1 3.1/12, ms1mx2.9/44, Error ellipse: s-maj=16.0km s-min=11.5km az=159.0*

*NEIC **18** 04:04:30.5±1.0, 55°.1N±0°.1×161°.5E±0°.2, h65^{km}±6^{km}, mb4.4/30, Error ellipse: s-maj=19.2km s-min=13.2km az=131.0*

ISC 18 04:04:28.9±0.6**, 54°.87N**±0°.03×**161°.92E**±0°.03**, h53^{km}**±5^{km}**, n162,** σ1^s.**72**/190**, mb4.2**/47**, MS3.1**/8**, 2D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.33	200	PN	Pn	04 04 38.7	+0.2
MKZ	Mys Kozlova	0.33	200	*e*P	Pn	04 04 38.7	+0.2
TUMD	Tumrok D	0.94	292	*e*P	Pn	04 04 46.0	+0.2
TUMD				*e*S	Sn	04 04 58.3	-0.1
TUMR	Tumrok	1.10	293	PN	Pn	04 04 46.0	-2.1
TUMR				S	Sn	04 04 58.3	-4.1
BZGR	Bezymyannyi-Gr	1.28	328	PN	Pn	04 04 51.6	+1.1
BZGR				S	Sn	04 05 08.4	+1.7
BZGR	Bezymyannyi-Gr	1.28	328	*e*P	Pn	04 04 51.6	+1.1
BZGR				*e*S	Sn	04 05 08.4	+1.7
KMNR	Kamenistaya	1.31	314	PN	Pn	04 04 52.0	+1.1
KMNR				S	Sn	04 05 09.3	+1.9
KMNR	Kamenistaya	1.31	314	*e*P	Pn	04 04 52.0	+1.1
KMNR				*e*S	Sn	04 05 09.3	+1.9
ZLN	Zelenaya	1.32	332	PN	Pn	04 04 52.4	+1.4
ZLN	Zelenaya	1.32	332	*e*P	Pn	04 04 52.4	+1.4
BZWR	Bezymyannyi-We	1.37	324	PN	Pn	04 04 52.8	+1.1
BZWR	Bezymyannyi-We	1.37	324	*e*P	Pn	04 04 52.8	+1.1
LGNR	Loginova	1.41	331	PN	Pn	04 04 54.1	+1.7
LGNR				S	Sn	04 05 12.8	+2.8
LGNR	Loginova	1.41	331	*e*P	Pn	04 04 54.1	+1.7
LGNR				*e*S	Sn	04 05 12.8	+2.8
KIRR	Kirishev	1.41	321	PN	Pn	04 04 53.8	+1.5
KIRR				S	Sn	04 05 12.2	+2.3
KIRR	Kirishev	1.41	321	*e*P	Pn	04 04 53.8	+1.5
KIRR				*e*S	Sn	04 05 12.2	+2.3
CIRR	Tsirk	1.42	332	PN	Pn	04 04 53.9	+1.5
CIRR	Tsirk	1.42	332	*e*P	Pn	04 04 53.9	+1.5
KBTR	Krutoberegovo	1.44	20	PN	Pn	04 04 53.2	+0.7
KBTR				S	Sn	04 05 11.6	+1.3
KBTR	Krutoberegovo	1.44	20	*e*P	Pn	04 04 53.2	+0.7
KBTR				*e*S	Sn	04 05 11.6	+1.3
KBG	Krutoberegovo	1.46	17	PN	Pn	04 04 53.9	+1.1
KBG				S	Sn	04 05 13.6	+2.7
KBG	Krutoberegovo	1.46	17	*e*P	Pn	04 04 53.9	+1.1
KBG				*e*S	Sn	04 05 13.6	+2.7
KPT	Kopyto	1.47	319	PN	Pn	04 04 54.3	+1.3
KPT	Kopyto	1.47	319	*e*P	Pn	04 04 54.3	+1.3
KRSR	Krestovskiy	1.56	331	PN	Pn	04 04 55.2	+0.9
KRSR				S	Sn	04 05 15.1	+1.7
KRSR	Krestovskiy	1.56	331	*e*P	Pn	04 04 55.2	+0.9
KRSR				*e*S	Sn	04 05 15.1	+1.7
KLY	Klyuchi	1.62	334	PN	Pn	04 04 55.4	+0.4
KLY				S	Sn	04 05 15.5	+0.8
KLY	Klyuchi	1.62	334	*e*P	Pn	04 04 55.4	+0.4
KLY				*e*S	Sn	04 05 15.5	+0.8
KII	Karymskiy	1.67	241	PN	Pn	04 04 56.7	+1.0
KII	Karymskiy	1.67	241	*e*P	Pn	04 04 56.7	+1.0
SMKR	Semkarok	1.74	352	PN	Pn	04 04 58.0	+1.3
SMKR	Semkarok	1.74	352	*e*P	Pn	04 04 58.0	+1.3
BDR	Baidarnaya	1.75	347	PN	Pn	04 04 58.4	+1.5
BDR	Baidarnaya	1.75	347	*e*P	Pn	04 04 58.4	+1.5
SRKR	Sorokina	1.84	347	PN	Pn	04 04 59.5	+1.4
SRKR	Sorokina	1.84	347	*e*P	Pn	04 04 59.5	+1.4
ESO	Esso	2.12	301	PN	Pn	04 05 05.3	+3.4
ESO	Esso	2.12	301	*e*P	Pn	04 05 05.3	+3.4
NLC	Nalytchevo	2.28	223	PN	Pn	04 05 05.0	+1.0
NLC				S	Sn	04 05 31.9	+1.1
NLC	Nalytchevo	2.28	223	*e*P	Pn	04 05 05.0	+1.0
NLC				*e*S	Sn	04 05 31.9	+1.1
BKI	Bering	2.36	80	PN	Pn	04 05 05.3	+0.3
BKI				S	Sn	04 05 32.5	-0.2
BKI	Bering	2.36	80	*e*P	Pn	04 05 05.3	+0.3
BKI				*e*S	Sn	04 05 32.5	-0.2
SDLR	Sedlovina	2.39	230	PN	Pn	04 05 07.3	+1.6
SDLR				S	Sn	04 05 35.2	+1.3
SDLR	Sedlovina	2.39	230	*e*P	Pn	04 05 07.3	+1.6
SDLR				*e*S	Sn	04 05 35.2	+1.3
KRER	Koryakskii	2.44	231	PN	Pn	04 05 08.1	+1.8
KRER	Koryakskii	2.44	231	*e*P	Pn	04 05 08.1	+1.8
SMAR	Somma	2.44	230	PN	Pn	04 05 07.8	+1.4
SMAR				S	Sn	04 05 36.8	+1.7
SMAR	Somma	2.44	230	*e*P	Pn	04 05 07.8	+1.4
SMAR				*e*S	Sn	04 05 36.8	+1.7
AVH	Avacha	2.47	231	PN	Pn	04 05 08.4	+1.7
AVH				S	Sn	04 05 38.9	+3.3
AVH	Avacha	2.47	231	*e*P	Pn	04 05 08.4	+1.7
AVH				*e*S	Sn	04 05 38.9	+3.3
UGLR	Uglovaya	2.47	229	PN	Pn	04 05 08.3	+1.6
UGLR	Uglovaya	2.47	229	*e*P	Pn	04 05 08.3	+1.6
KOK	Koryaka	2.50	232	PN	Pn	04 05 08.4	+1.3
KOK	Koryaka	2.50	232	*e*P	Pn	04 05 08.4	+1.3
GNL	Ganaly	2.61	245	PN	Pn	04 05 10.2	+1.6
GNL	Ganaly	2.61	245	*e*P	Pn	04 05 10.2	+1.6
DALK	Dalny	2.62	227	PN	Pn	04 05 10.0	+1.3
DALK				S	Sn	04 05 40.6	+1.3
DALK	Dalny	2.62	227	*e*P	Pn	04 05 10.0	+1.3
DALK				*e*S	Sn	04 05 40.6	+1.3
PET	Petropavlovsk	2.67	228	*e*PN	Pn	04 05 10.7	+1.4
PET				*e*S	Sn	04 05 42.0	+1.6
PET				pmax	pmax		
	comp=Z,364nm,0.3s						
PET				smax	smax		
	comp=E,3μm,0.5s						
PET				smax	smax		
	comp=E,4μm,0.5s						
PET				smax	smax		
	comp=N,3μm,0.5s						
PET				MLR	MLR		
	comp=Z,300nm,17.0s						
PET	Petropavlovsk	2.67	228	*e*P	Pn	04 05 10.8	+1.4
PET				*e*S	Sn	04 05 42.5	+2.1
PET	Petropavlovsk	2.67	228		Pn	04 05 10.8	+1.4
KRMR	Karymshinskiy	3.03	229	PN	Pn	04 05 16.5	+2.2
KRMR				S	Sn	04 05 51.9	+2.6
KRMR	Karymshinskiy	3.03	229	*e*P	Pn	04 05 16.5	+2.2
KRMR				*e*S	Sn	04 05 51.9	+2.6
PEA0B	Petropavlovsk-	3.05	236	*d i*PN	Pn	04 05 16.1	+1.5
PEA0B				*i* S	Sn	04 05 49.8	0.0
PEA0B	Petropavlovsk-	3.05	236	Pn	Pn	04 05 16.4	+1.9
PETK	Petropavlovsk-	3.05	236	P	Pn	04 05 14.7	+0.1
	comp=Z,32nm,0.3s,baz=265,slow=12,SNR=112						
PETK				S	Sn	04 05 57.8	+8.0
	comp=Z,90nm,0.3s,baz=61,slow=27,SNR=5.2						
PETK				LR	LR	04 06 47.3	
	comp=Z,263nm,20.9s,baz=61,slow=48						
PETK	Petropavlovsk-	3.05	236	PN	Pn	04 05 15.9	+1.3
PETK	Petropavlovsk-	3.05	236	Pn	Pn	04 05 15.8	+1.3
RUS	Russkaya	3.17	221	PN	Pn	04 05 16.9	+0.7
RUS				S	Sn	04 05 53.1	+0.4
RUS	Russkaya	3.17	221	*e*P	Pn	04 05 16.9	+0.7
RUS				*e*S	Sn	04 05 53.1	+0.4
ASAK	Asacha	3.45	226	PN	Pn	04 05 23.1	+3.0
ASAK	Asacha	3.45	226	*e*P	Pn	04 05 23.1	+3.0
KDTR	Khodutka, Kamc	3.83	219	PN	Pn	04 05 26.0	+0.8
KDTR	Khodutka, Kamc	3.83	219	*e*P	Pn	04 05 26.0	+0.8
PALN	Palana	4.37	347	PN	Pn	04 05 35.1	+2.6
PALN	Palana	4.37	347	*e*P	Pn	04 05 35.1	+2.6
OSSR	Ossora	4.44	8	PN	Pn	04 05 34.7	+1.2
OSSR	Ossora	4.44	8	*e*P	Pn	04 05 34.7	+1.2
SKR	Severo-Kuril’s	5.47	222	*e*PN	Pn	04 05 49.0	+1.3
SKR				*e*S	Sn	04 06 50.5	+1.2
SKR				pmax	pmax		
	comp=Z,581nm,0.9s						
SKR				smax	smax		
	comp=N,552nm,0.6s						
SKR				smax	smax		
	comp=E,571nm,0.6s						
SKR				MLR	MLR		
	comp=Z,6μm,14.0s						
SKR	Severo-Kuril’s	5.47	222	*e*P	Pn	04 05 49.1	+1.3
BILL	Bilibino	13.38	7	*e*PN	Pn	04 07 37.4	+1.8
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,39nm,10.0s						
BILL	Bilibino	13.38	7	Pn	Pn	04 07 34.7	-0.9
ASAJ	Asahikawa	16.47	237	P	Pn	04 08 15.5	-0.6
	comp=Z,1.1nm,0.3s,baz=58,slow=13,SNR=1.6						
ASAJ				LR	LR	04 14 25.5	
	comp=Z,51nm,20.6s,baz=156,slow=37						
YAK	Yakutsk	18.17	306	LR	LR	04 16 09.1	
	comp=Z,43nm,18.8s,baz=164,slow=39						
KLR	Kul'dur	19.30	266	LR	LR	04 16 13.6	
	comp=Z,40nm,18.6s,baz=320,slow=37						
TIXI	Tiksi	21.96	332	P	P	04 09 16.7	-0.9
	comp=Z,5.1nm,0.4s,baz=127,slow=10,SNR=13						
TIXI	Tiksi	21.96	332	*e*P	P	04 09 16.5	-1.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIXI	Tiksi	21.96	332	P	P	04 09 15.4	-2.2
J20K	Nowinta River	23.67	49	P	P	04 09 36.4	+1.3
J20K				IAmb	IAmb	04 09 38.1	
	comp=Z,22nm,1.2s						
IMAR	Indian Mountai	23.97	45	P	P	04 09 37.8	-0.1
A21K	Barrow	24.21	31	P	P	04 09 39.4	-0.6
A21K				IAmb	IAmb	04 09 41.2	
	comp=Z,6.0nm,0.6s						
MAJO	Matsushiro	24.50	231	*e*P	P	04 09 43.2	+0.3
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MJAR	Matsushiro Arr	24.50	231	LR	LR	04 19 12.4	
	comp=Z,34nm,21.9s,baz=20,slow=36						
CAST	Castle Rocks	24.57	51	P	P	04 09 44.7	+1.3
COLD	Coldfoot	25.50	42	P	P	04 09 52.5	+0.7
COLA	College	26.39	48	*i* P	P	04 09 59.1	-0.7
COLA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
IL31		26.81	48	P	P	04 10 04.2	+0.6
ILAR	Eielson Array	26.81	48	P	P	04 10 04.1	+0.5
	comp=Z,1.5nm,0.7s,baz=250,slow=6.5,SNR=26						
ILAR				PcP	PcP	04 13 24.5	-0.3
	comp=Z,0.4nm,0.6s,baz=296,slow=4.1,SNR=5.5						
ILAR				LR	LR	04 20 35.2	
	comp=Z,46nm,19.6s,baz=292,slow=36						
KSRS	Korea Array	28.89	247	LR	LR	04 23 04.6	
	comp=Z,21nm,19.8s,baz=76,slow=39						
INK	Inuvik	31.81	40	P	P	04 10 48.5	+0.8
	comp=Z,1.3nm,0.5s,baz=290,slow=7.1,SNR=6.3						
INK	Inuvik	31.81	40	IAmb	IAmb	04 11 01.6	
	comp=Z,6.7nm,1.5s						
A36M	Sachs Harbour	34.05	32	P	P	04 11 07.1	-0.2
A36M				IAmb	IAmb	04 11 09.8	
	comp=Z,5.6nm,0.8s						
SONM	Songino Array	34.57	282	P	P	04 11 09.1	-3.2
	comp=Z,0.2nm,0.4s,baz=66,slow=8.1,SNR=1.9						
SONM				PcP	PcP	04 13 45.4	-0.3
	comp=Z,1.1nm,0.7s,baz=64,slow=0.8,SNR=7.7						
H11N2	WAKE ISLAND Hy	35.28	172	T	T	04 48 36.4	
	baz=355,slow=76,SNR=256						
H11N3	WAKE ISLAND Hy	35.29	172	T	T	04 48 37.6	
	baz=355,slow=76,SNR=261						
H11N1	WAKE ISLAND Hy	35.30	172	T	T	04 48 37.8	
	baz=355,slow=76,SNR=419						
H11S1	WAKE ISLAND Hy	36.48	172	T	T	04 50 05.3	
	baz=352,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	36.49	172	T	T	04 50 04.3	
	baz=352,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	36.49	172	T	T	04 50 05.0	
	baz=352,slow=76,SNR=8.6						
EUNU	Eureka	39.96	15	P	P	04 11 57.3	-0.1
YKA	Yellowknife Ar	41.13	45	P	P	04 12 08.2	+1.1
	comp=Z,1.9nm,0.7s,baz=299,slow=8.0,SNR=12						
YKA				pP	pP	04 12 22.2	+1.5
	comp=Z,0.8nm,0.6s,baz=299,slow=7.9,SNR=5.4						
YKA				PcP	PcP	04 14 06.1	+0.7
	comp=Z,0.8nm,0.7s,baz=309,slow=3.6,SNR=7.3						
RES	Resolute Bay	41.27	23	P	P	04 12 09.1	+1.0
	baz=313,slow=11						
RES	Resolute Bay	41.27	23	IAmb	IAmb	04 12 09.6	
	comp=Z,2.6nm,0.8s						
DGZ	Jazzator, Alta	43.87	295	*i* P	P	04 12 28.0	-1.7
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
B08A	Colville Reser	46.90	64	P	P	04 12 54.4	+0.8
B08A				IAmb	IAmb	04 12 56.0	
	comp=Z,5.8nm,0.8s						
KURK	Kurchatov	47.72	301	*i* P	P	04 12 57.0	-2.8
KURK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KURK	Kurchatov	47.72	301	P	P	04 12 57.7	-2.1
KURK				IAmb	IAmb	04 13 03.6	
	comp=Z,7.6nm,1.5s						
NEW	Newport	48.10	62	P	P	04 13 04.2	+1.2
	comp=Z,1.0nm,0.7s,baz=300,slow=7.2,SNR=4.3						
NEW	Newport	48.10	62	IAmb	IAmb	04 13 04.9	
	comp=Z,6.2nm,1.1s						
E08A	Dider Farm, El	48.24	65	P	P	04 13 05.1	+1.1
E08A				IAmb	IAmb	04 13 09.9	
	comp=Z,2.1nm,0.6s						
MK31	Makanchi Array	48.37	295	P	P	04 13 02.3	-2.7
MK31				pmax	pmax		
	comp=Z,3.0nm,1.4s						
MK31	Makanchi Array	48.37	295	P	P	04 13 02.3	-2.7
MKAR	Makanchi Array	48.37	295	P	P	04 13 02.5	-2.4
	comp=Z,0.5nm,0.4s,baz=48,slow=6.9,SNR=7.2						
E09A	Wood Farm, Sta	48.71	65	P	P	04 13 08.4	+0.8
YBH	Yreka Blue Hor	49.43	72	P	P	04 13 15.6	+2.3
	comp=Z,2.8nm,0.6s,baz=355,slow=8.1,SNR=9.3						
JTMT	Jette	49.89	61	P	P	04 13 17.6	+0.9
BRVK	Borovoye	50.16	308	⇓*i*P	P	04 13 16.4	-2.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
PLID	Pearl Lake	50.78	65	P	P	04 13 24.4	+0.8
PLID				IAmb	IAmb	04 13 26.4	
	comp=Z,3.3nm,0.7s						
HRY	Holter Researc	51.82	61	P	P	04 13 32.8	+1.6
BCYI	Bear Canyon	52.66	64	P	P	04 13 37.5	-0.1
ARU	Arti	52.82	317	*i* P	P	04 13 35.7	-2.6
ARU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PNTR	Pine Nut	52.97	73	P	P	04 13 42.3	+2.3
YERR	Yerington	53.24	73	IAmb	IAmb	04 13 45.2	
	comp=Z,6.8nm,1.2s						
YHH	Holmes Hill	53.64	62	P	P	04 13 46.0	+1.1
YHH				IAmb	IAmb	04 13 48.2	
	comp=Z,4.5nm,1.1s						
KVN	Kaiserville	53.82	72	P	P	04 13 47.7	+1.5
KVN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KVN	Kaiserville	53.82	72	P	P	04 13 47.7	+1.5
KVN				IAmb	IAmb	04 13 49.6	
	comp=Z,3.8nm,0.9s						
RYN	Ryan	53.89	72	IAmb	IAmb	04 13 49.6	
	comp=Z,3.6nm,0.8s						
NVAR	Mina Array Bea	54.15	72	P	P	04 13 51.4	+2.7
	comp=Z,3.7nm,0.8s,baz=294,slow=7.5,SNR=32						
ELK	Elko	54.18	68	P	P	04 13 51.9	+3.0
	comp=Z,2.0nm,0.9s,baz=302,slow=7.6,SNR=9.5						
NV11	Mina Array Sit	54.23	72	IAmb	IAmb	04 13 52.5	
	comp=Z,3.9nm,0.9s						
LCH	Last Change Ra	55.37	73	IAmb	IAmb	04 14 00.9	
	comp=Z,5.2nm,1.1s						
PDAR	Pinedale Array	55.73	63	P	P	04 14 02.0	+2.0
	comp=Z,1.5nm,0.9s,baz=329,slow=1.7,SNR=6.3						
ABKAR	Akbulak array	57.46	311	P	P	04 14 10.4	-1.5
ABKAR				IAmb	IAmb	04 14 11.8	
	comp=Z,1.5nm,0.5s						
FINES	FINESS Array B	58.91	337	P	P	04 14 20.1	-1.7
	comp=Z,3.8nm,0.5s,baz=32,slow=7.6,SNR=49						
FINES				pP	pP	04 14 35.7	-0.6
	comp=Z,1.2nm,0.5s,baz=29,slow=8.1,SNR=2.0						
FINES				LR	LR	04 46 16.4	
	comp=Z,15nm,19.4s,baz=326,slow=43						
CMAR	Chiang Mai Arr	59.60	259	LR	LR	04 43 31.3	
	comp=Z,8.8nm,20.6s,baz=215,slow=40						
OBN	Obninsk	61.59	328	*e*P	P	04 14 40.0	-0.2
OBN				*e*		04 15 22.1	
OBN				*e*		04 16 57.6	
OBN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NB2	NORSAR Subarra	62.13	344	P	P	04 14 42.6	-1.2
	comp=Z,0.6nm,0.4s,baz=20,slow=6.9						
NOA	NORSAR Array B	62.13	344	P	P	04 14 43.1	-0.7
	comp=Z,0.2nm,0.3s,baz=19,slow=6.1,SNR=8.8						
SCHQ	Schefferville	63.57	29	P	P	04 14 53.1	-0.3
	comp=Z,5.7nm,0.9s,baz=15,slow=6.2,SNR=5.6						
SCHQ				LR	LR	04 44 02.3	
	comp=Z,46nm,20.0s,baz=86,slow=37						
AKASG	Malin Array Be	67.64	330	P	P	04 15 18.1	-1.5
	comp=Z,0.5nm,0.3s,baz=28,slow=6.1,SNR=4.8						
TXAR	Lajitas Array	68.97	69	P	P	04 15 29.9	+1.5
	comp=Z,2.4nm,0.6s,baz=299,slow=4.2,SNR=4.4						
KBZ	Khabaz	68.98	317	P	P	04 15 27.3	-0.8
	comp=Z,1.2nm,0.6s,baz=90,slow=3.0,SNR=4.5						
KBZ				LR	LR	04 48 37.1	
	comp=Z,29nm,19.1s,baz=13,slow=38						
GRA1	Grafenberg Arr	72.95	341	P	P	04 15 52.0	-0.2
GRF	Grafenberg Arr	72.95	341	P	P	04 15 52.0	-0.2
GRF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GERES	GERESS Array B	73.26	339	P	P	04 15 53.4	-0.7
	comp=Z,0.5nm,0.4s,baz=34,slow=5.6,SNR=6.7						
GERES				LR	LR	04 53 09.6	
	comp=Z,29nm,20.0s,baz=270,slow=40						
KBA	Koelnbreinsper	75.02	338	*e*P	P	04 16 04.9	+0.5
	comp=Z,0.9nm,0.3s						
ABTA	Abfaltersbach	75.51	339	*i* P	P	04 16 06.2	-0.9
	comp=Z,0.9nm,0.4s						
BRTR	Keskin Array B	75.92	321	P	P	04 16 09.1	-0.6
	comp=Z,0.6nm,0.5s,baz=47,slow=2.4,SNR=2.7						
WRA	Warramunga Arr	78.15	206	P	P	04 16 22.4	+0.3

	comp=Z,1.1nm,0.8s,baz=28,slow=6.5,SNR=3.0						
WRA				pP	PcP	04 16 36.0	+4.6
	comp=Z,2.1nm,0.8s,baz=50,slow=2.4,SNR=6.6						
ASAR	Alice Springs	81.82	206	P	P	04 16 43.1	+1.2
	comp=Z,1.3nm,0.6s,baz=15,slow=5.3,SNR=10						
ASAR				pP	pP	04 16 56.4	-1.0
	comp=Z,1.8nm,0.8s,baz=9.3,slow=4.4,SNR=8.9						
ESDC	Sonseca Array	85.06	349	P	P	04 16 58.4	-0.2
	comp=Z,2.0nm,0.8s,baz=0.4,slow=4.9,SNR=19						
KEST	Kesra	86.73	338	P	P	04 17 06.4	-0.5
	comp=Z,1.3nm,0.4s,baz=316,slow=5.5,SNR=5.2						

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*TUL **18** 04:09:24.3±1.6, 36°.50N±0°.02×98°.73W±0°.04, h7^{km}±5^{km}, ML3.6, mb_Lg3.2/71(NEIC), Error ellipse: s-maj=5.1km s-min=2.2km az=104.0*

*NEIC **18** 04:09:25.0±1.1, 36°.49N±0°.02×98°.67W±0°.04, h5^{km}±1^{km}, Error ellipse: s-maj=5.7km s-min=3.4km az=279.0*

*ANF **18** 04:09:25.0±0.2, 36°.46N×98°.68W, h5^{km}, ML3.9/15, Error ellipse: s-maj=2.3km s-min=1.8km az=4.0*

ISC 18 04:09:24.6±1.1, 36°.49N±0°.03×98°.68W±0°.02, h3^{km}±10^{km}, n112, σ0^s.69/112, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.28	248		Pg	04 09 29.6	-0.5
U32A				Sg	Sg	04 09 33.8	0.0
U32A	Winter Ranch,	0.28	248	P	Pg	04 09 29.6	-0.5
	baz=69,SNR=381						
U32A				S	Sg	04 09 33.8	0.0
	baz=69						
KAN14	Manchester OK	0.74	51		Pg	04 09 38.7	-0.2
GC02	Grant County #	0.75	61	Pg	Pg	04 09 38.9	-0.2
GC02				Sg	Sg	04 09 49.7	+0.8
KAN10	Anthony SW Sta	0.79	36	Pg	Pg	04 09 40.0	+0.2
KAN16	Harper SW Stat	0.89	34	Pg	Pg	04 09 41.1	-0.5
KAN05	Bluff City Nor	0.90	46		Pg	04 09 42.1	+0.3
KAN05				Sg	Sg	04 09 53.9	+0.4
KAN17	Caldwell West	0.92	53	Pg	Pg	04 09 42.4	0.0
KAN17				Sg	Sg	04 09 54.5	+0.2
KAN08	Anthony NE Sta	0.93	37		Pg	04 09 42.7	+0.2
KAN12	Harper NE Stat	0.98	34	Pg	Pg	04 09 43.4	+0.1
KAN01	Argonia South	0.99	48		Pg	04 09 43.2	-0.5
KAN01				Sg	Sg	04 09 56.9	+0.3
KAN06	Argonia West S	1.00	41	Pg	Pg	04 09 43.7	-0.2
KAN09	Caldwell North	1.07	52	Pg	Pg	04 09 45.0	-0.1
KAN09				Sg	Sg	04 09 58.5	-0.5
KAN13	South Haven SW	1.10	61		Pg	04 09 45.5	-0.2
BCOK	Bluff Creek, N	1.20	133		Pg	04 09 47.6	0.0
BCOK				Sg	Sg	04 10 03.3	+0.2
BLOK	Blackwell	1.21	77	Pn	Pg	04 09 47.5	-0.3
OK009	Oakdale Elemen	1.36	131		Sn	04 10 10.1	+1.1
OK025	Westminster Rd	1.41	129		Pn	04 09 51.1	-0.1
OKCFA	Oklahoma City	1.46	137		Pn	04 09 51.9	0.0
OKCFA	Oklahoma City	1.46	137	P	Pn	04 09 51.7	-0.2
	baz=318,SNR=9.1						
OKCFA				S	Sg	04 10 11.9	+0.3
	baz=318						
OKCSW	OKLAHOMA CITY	1.48	137		Pn	04 09 51.3	-0.8
OK031	S. Brethren Rd	1.58	109		Pn	04 09 53.5	0.0
FNO	Franklin	1.61	139		Pn	04 09 54.4	+0.5
QUOK	Quay	1.62	101		Pn	04 09 54.5	+0.4
OK030	Cody Creek RV	1.63	109		Pn	04 09 54.3	+0.1
OK034	N. Norfolk Rd.	1.66	106		Pn	04 09 54.8	+0.2
T35A	Sooner Cattle	1.79	76		Pn	04 09 57.1	+0.6
T35B	Sooner Cattle	1.79	76	P	Pn	04 09 57.4	+0.9
	baz=257,SNR=123						
T35B				Sb	Sg	04 10 21.9	-0.4
	baz=257						
R32A	Long Quarter,	1.93	359		Pn	04 09 58.6	+0.3
R32A	Long Quarter,	1.93	359	P	Pn	04 09 59.2	+0.8
	baz=179,SNR=23						
R32A				S	Sb	04 10 25.1	0.0
	baz=179						
W35A	Tecumseh	1.98	132		Pn	04 09 59.5	+0.5
X34A	Smith Ranch, M	2.00	160		Pn	04 10 00.5	+1.1
TUL1	Leonard	2.41	103	Pn	Pn	04 10 05.3	+0.5
TUL1				IAmb_Lg		04 10 42.5	
	comp=Z,121nm,1.1s						
TUL1	Leonard	2.41	103	P	Pn	04 10 05.1	+0.2
	baz=285,SNR=55						
TUL1				Sb	Sb	04 10 39.3	+0.8
	baz=285						
CBKS	Cedar Bluff	2.47	340		Pn	04 10 06.5	+0.7
CBKS	Cedar Bluff	2.47	340	P	Pn	04 10 06.2	+0.4
	baz=159,SNR=22						
CBKS				S	Sb	04 10 39.5	-1.0
	baz=159						
LOOK	Love County	2.77	153		Pn	04 10 10.3	+0.4
LOOK				IAmb_Lg		04 10 54.7	
	comp=Z,78nm,0.8s						
AMTX	Amarillo	2.92	238		Pn	04 10 12.9	+0.9
AMTX	Amarillo	2.92	238	P	Pn	04 10 13.0	+1.0
	baz=56,SNR=7.0						
KSU1	Kansas State U	3.08	32	Pn	Pn	04 10 14.3	+0.1
KSU1	Kansas State U	3.08	32	P	Pn	04 10 15.4	+1.2
	baz=212,SNR=5.5						
X37A	Clayton	3.30	124	Pn	Pn	04 10 17.1	0.0
Z35A	Perchaven, San	3.36	159	Pn	Pn	04 10 18.0	+0.1
Z35A	Perchaven, San	3.36	159	P	Pn	04 10 18.1	+0.1
	baz=340,SNR=6.7						
U38A	Gravette	3.46	90	Pn	Pn	04 10 19.5	+0.1
U38A				IAmb_Lg		04 11 21.7	
	comp=Z,47nm,0.7s						
U38A	Gravette	3.46	90	P	Pn	04 10 19.8	+0.4
	baz=272,SNR=18						
HHAR	Hobbs	3.83	92		Pn	04 10 24.0	-0.5
HHAR				IAmb_Lg		04 11 30.9	
	comp=Z,52nm,0.8s						
ABTX	Abilene, Hawle	3.94	192		Pn	04 10 25.7	-0.2
ABTX	Abilene, Hawle	3.94	192	P	Pn	04 10 25.7	-0.2
	baz=12,SNR=6.2						
KSCO	Kaye Shedlock'	4.02	310	Pn	Pn	04 10 28.0	+0.8
KSCO				IAmb_Lg		04 11 39.0	
	comp=Z,70nm,0.7s						
KSCO	Kaye Shedlock'	4.02	310	Sb	Sb	04 11 29.0	+3.9
	baz=128						
W39A	Magazine	4.18	107	Pn	Pn	04 10 29.0	-0.2
W39A				IAmb_Lg		04 11 44.3	
	comp=Z,84nm,1.0s						
MSTX	Muleshoe	4.19	234	Pn	Pn	04 10 29.4	-0.1
MSTX				IAmb_Lg		04 11 41.9	
	comp=Z,47nm,0.8s						
N33A	J Bar K, Exete	4.35	12	Pn	Pn	04 10 31.4	-0.3
N33A				IAmb_Lg		04 11 49.2	
	comp=Z,39nm,0.8s						
Z38A	Mt. Pleasant	4.42	136	Pn	Pn	04 10 32.2	-0.4
Z38A				IAmb_Lg		04 11 47.3	
	comp=Z,67nm,0.9s						
S39A	Bolivar	4.45	73	Pn	Pn	04 10 33.3	+0.4
S39A	Bolivar	4.45	73	P	Pn	04 10 33.1	+0.2
	baz=256,SNR=8.3						
MIAR	Mount Ida	4.59	113		Pn	04 10 34.4	-0.5
MIAR				IAmb_Lg		04 11 57.5	
	comp=Z,39nm,0.8s						
MIAR	Mount Ida	4.59	113	P	Pn	04 10 35.6	+0.7
	baz=297,SNR=11						
WHTX	Lake Whitney,	4.60	167	Pn	Pn	04 10 34.7	-0.3
WHTX	Lake Whitney,	4.60	167	P	Pn	04 10 35.1	+0.1
	baz=348,SNR=5.9						
T25A	Trinidad	4.64	280	Pn	Pn	04 10 35.7	-0.1
T25A				IAmb_Lg		04 11 59.8	
	comp=Z,57nm,0.8s						
U40A	Yellville	4.70	90	Pn	Pn	04 10 35.6	-0.8
U40A				IAmb_Lg		04 11 53.3	
	comp=Z,42nm,0.8s						
BGNE	Belgrade	4.93	5	Pn	Pn	04 10 38.9	-0.8
BGNE				IAmb_Lg		04 12 14.4	
	comp=Z,54nm,0.7s						
N35A	Tabor	4.97	28	Pn	Pn	04 10 40.4	+0.2
P38A	Dawn	5.13	51	Pn	Pn	04 10 42.1	-0.1
P38A				IAmb_Lg		04 12 14.1	
	comp=Z,28nm,0.7s						
P38A	Dawn	5.13	51	P	Pn	04 10 42.4	+0.1
	baz=234,SNR=7.0						
OGNE	Ogallala	5.17	331	Pn	Pn	04 10 43.9	+1.0
OGNE					LR	04 12 07.2	
OGNE				IAmb_Lg		04 12 17.3	
	comp=Z,64nm,0.8s						
X40A	Basin Creek Fa	5.17	111	Pn	Pn	04 10 42.4	-0.5
MGMO	Mountain Grove	5.19	81	Pn	Pn	04 10 42.3	-0.8
WHAR	Wooly Hollow	5.32	101	Pn	Pn	04 10 46.3	+1.3
WHAR				IAmb_Lg		04 12 28.3	
	comp=Z,40nm,1.0s						
FCAR	Ozark Folk Cen	5.33	94	Pn	Pn	04 10 44.9	-0.2
FCAR				IAmb_Lg		04 12 16.0	
	comp=Z,38nm,0.7s						
WLAR	White Oak Lake	5.35	120	Pn	Pn	04 10 46.2	+0.9
WLAR				IAmb_Lg		04 12 28.2	
	comp=Z,35nm,0.8s						
R40A	Maddies Statio	5.41	69		Pn	04 10 46.8	+0.6
R40A				IAmb_Lg		04 12 20.9	
	comp=Z,38nm,0.7s						
SDCO	Great Sand Dun	5.59	285		Pn	04 10 49.3	+0.4
L34A	Svendsen Farm,	5.76	17	Pn	Pn	04 10 50.9	0.0
L34A					LR	04 12 28.8	
435B	Jarrell	5.76	171	Pn	Pn	04 10 50.5	-0.6
435B					Lg	04 12 32.5	
435B				IAmb_Lg		04 12 36.6	
	comp=Z,28nm,1.0s						
NATX	Nacogdoches	5.77	144	IAmb_Lg		04 12 44.1	
	comp=Z,26nm,0.9s						
N38A	Joes South For	6.05	43	Pn	Pn	04 10 53.5	-1.4
N38A					Sn	04 12 04.3	-0.4
N38A					LR	04 12 37.0	
P40A	Paris	6.05	58	Pn	Pn	04 10 54.3	-0.7
P40A				IAmb_Lg		04 12 38.8	
	comp=Z,53nm,0.7s						
JCT	Junction City	6.07	189	Pn	Pn	04 10 55.2	0.0
JCT				IAmb_Lg		04 12 54.5	
	comp=Z,40nm,0.8s						
T42A	Van Buren	6.12	83	Pn	Pn	04 10 56.4	+0.6
K31A	O'Neill	6.13	359	Pn	Pn	04 10 55.6	-0.5
K31A					Lg	04 12 42.2	
CCM	Cathedral Cave	6.13	73	Pn	Pn	04 10 55.3	-0.7
CCM				IAmb_Lg		04 12 39.3	
	comp=Z,39nm,1.0s						
ISCO	Idaho Springs	6.39	303	Pn	Pn	04 11 00.2	+0.3
ISCO				IAmb_Lg		04 12 50.7	
	comp=Z,30nm,1.1s						
ANMO	Albuquerque	6.51	259	Pn	Pn	04 11 01.1	-0.4
ANMO					LR	04 12 48.8	
HBAR	Harrisburg	6.57	96		Lg	04 12 52.6	
PBMO	Poplar Bluff	6.64	85	IAmb_Lg		04 13 04.1	
	comp=Z,27nm,0.8s						
FVM	French Village	6.75	75	Pn	Pn	04 11 04.9	+0.3
FVM				IAmb_Lg		04 12 57.7	
	comp=Z,39nm,0.9s						
SCIA	State Center	6.88	36		Lg	04 13 01.6	
SCIA				IAmb_Lg		04 13 02.5	
	comp=Z,37nm,0.7s						
HKT	Hockley	6.94	159	Pg	Pg	04 11 32.1	-5.5
HKT					Sb	04 12 48.1	-1.0
GNAR	Gosnell	7.02	92		Lg	04 13 07.3	
SLM	Saint Louis	7.04	70	IAmb_Lg		04 13 11.5	
	comp=Z,30nm,0.8s						
143A	Socs Landing,	7.09	120	IAmb_Lg		04 13 21.2	
	comp=Z,23nm,0.8s						
SMCO	Snowmass	7.09	295	Pn	Pn	04 11 09.6	0.0
Y22D	IRIS PASSCAL I	7.16	253	IAmb_Lg		04 13 27.5	
	comp=Z,30nm,0.9s						
MNTX	Cornudas Mount	7.33	231	Pn	Pn	04 11 12.8	+0.3
ECSD	EROS Data Cent	7.41	12	Pn	Pn	04 11 12.8	-0.8
ECSD					Sn	04 12 35.8	-2.4
N41A	Harden Midland	7.43	53	Pn	Pn	04 11 13.8	-0.1
N41A					LR	04 13 19.7	
S44A	Carbondale	7.63	78	Pn	Pn	04 11 15.3	-1.3
S44A				IAmb_Lg		04 13 35.7	
	comp=Z,30nm,0.7s						
K38A	Parkersburg	7.66	35		Lg	04 13 29.6	
SIUC	Southern Illin	7.66	78	IAmb_Lg		04 13 38.7	
	comp=Z,30nm,0.7s						
W45A	Hickory Valley	7.83	97		Lg	04 13 32.6	
W45A				IAmb_Lg		04 13 46.6	
	comp=Z,31nm,0.9s						
P43A	Skaggs, Pawnee	7.88	64	Pn	Pn	04 11 19.9	-0.2
P43A					LR	04 13 34.0	
MVCO	Mesa Verde	7.91	278	Pg	Pb	04 11 49.5	+7.0
L40A	Anamosa	8.03	44	Pn	Pn	04 11 22.7	+0.7
L40A					LR	04 13 37.7	
TX31	Lajitas Ar. Si	8.27	212	Pn	Pn	04 11 25.1	-0.5
TX32	Lajitas Array	8.27	212	Pn	Pn	04 11 25.1	-0.5
HDIL	Hopedale	8.40	58	Pn	Pn	04 11 27.3	+0.1
I37A	Lemond, Waseca	8.53	27	IAmb_Lg		04 14 02.5	
	comp=Z,18nm,0.7s						
K22A	Casper	8.63	318	IAmb_Lg		04 14 11.3	
	comp=Z,35nm,1.0s						
JFWS	Jewell Farm	9.13	43	IAmb_Lg		04 14 39.5	
	comp=Z,26nm,0.9s						

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*IDC **18** 04:30:41.1±2.7, 5°.22S×68°.89E, h0^{km}, mb3.8/5, mb1 4.0/5, mb1mx3.3/41, mbtmp3.8/5, MS3.2/6, Ms1 3.3/6, ms1mx2.9/41, Error ellipse: s-maj=93.1km s-min=28.0km az=60.0*

ISC 18 04:30:42.0±2.7, 5°.3S±0°.4×68°.8E±0°.6, h10^{km}, n16, σ0^s.71/7, mb4.0/5, MS3.3/5, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S3	Diego Garcia H	4.38	122	T	T	04 36 22.4	
	baz=298,slow=74,SNR=11						
H08S1	Diego Carcia H	4.38	123	T	T	04 36 20.8	
	baz=298,slow=74,SNR=14						
H08S2	Diego Garcia H	4.40	122	T	T	04 36 21.4	
	baz=298,slow=74,SNR=17						
PALK	Pallekele	17.25	44	LR	LR	04 39 51.6	
	comp=Z,92nm,20.3s,baz=324,slow=32						
CMAR	Chiang Mai Arr	37.98	51	LR	LR	04 52 11.6	
	comp=Z,15nm,18.1s,baz=220,slow=34						
GEYT	Alibeck	44.11	348	LR	LR	04 56 01.0	
	comp=Z,28nm,20.4s,baz=10.0,slow=34						
BOSA	Boshof	47.26	235	LR	LR	04 56 09.3	
	comp=Z,53nm,19.3s,baz=16,slow=32						
MKAR	Makanchi Array	53.22	12	P	P	04 39 59.9	-0.8
	0.3nm,0.6s,baz=194,slow=7.6,SNR=4.2						
ZALV	Zalesovo Beam	60.53	11	P	P	04 40 51.7	-0.6
	0.9nm,0.6s,baz=198,slow=9.2,SNR=4.2						
SONM	Songino Array	62.37	28	P	P	04 41 05.9	+0.8
	0.6nm,0.6s,baz=205,slow=6.6,SNR=5.1						
ASAR	Alice Springs	65.16	114	P	P	04 41 23.4	-0.5
	0.7nm,0.7s,baz=280,slow=5.5,SNR=7.0						
WRA	Warramunga Arr	65.28	109	P	P	04 41 24.9	+0.2
	1.6nm,0.8s,baz=287,slow=6.2,SNR=8.4						
KSRS	Korea Array	69.47	47	LR	LR	05 12 04.2	
	comp=Z,19nm,20.4s,baz=10.0,slow=36						
YAK	Yakutsk	81.52	25	LR	LR	05 19 22.8	
	comp=Z,21nm,20.4s,baz=84,slow=36						
NVAR	Mina Array Bea	146.38	10	PKPbc	PKPbc	04 50 24.3	+0.3
	0.6nm,0.8s,baz=34,slow=3.7,SNR=4.9						
TXAR	Lajitas Array	155.02	344	PKPab	PKPab	04 51 00.5	+0.2
	0.4nm,0.9s,baz=57,slow=4.6,SNR=3.7						

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*NNC **18** 04:47:55.2±12.0, 36°.98N×70°.79E, h274^{km}±147^{km}, mb2.5, mpv3.8, Error ellipse: s-maj=114.0km s-min=79.9km az=14.0*

ISC 18 04:47:55.7±3.3, 37°.0N±0°.2×70°.4E±0°.1, h250^{km}, n10, σ1^s.17/14, 4C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.70	25	P	Pn	04 49 19.2	-1.1
	SNR=34						
UCH	Uchtor	6.08	30	P	Pn	04 49 24.1	-1.1
	SNR=22						
KK02	Karatay Array	6.09	0	⇓P	Pn	04 49 23.4	-1.4
	1.2nm,0.3s,baz=172,slow=13						
KK02				⇑S	S	04 50 35.7	-0.5
	2.7nm,0.6s,baz=170,slow=25						
EKS2	Erkin-Say	6.20	23	P	Pn	04 49 26.4	+0.1
	SNR=18						
AAK	Ala-Archa	6.43	28	P	Pn	04 49 28.6	-0.7
	SNR=8.1						
AAK	Ala-Archa	6.43	28	P	Pn	04 49 28.2	-1.1
	4.1nm,0.5s						
AAK				⇓S	S	04 50 43.8	-0.3
	1.3nm,0.5s						
USP	Ospenovka	6.98	25	P	Pn	04 49 35.4	-0.7
	SNR=7.9						
TKM2	Tokmak 2	7.11	32	P	Pn	04 49 37.4	-0.5
	SNR=10						
TKM2	Tokmak 2	7.11	32	⇑P	Pn	04 49 36.1	-1.7
	7.3nm,0.5s						
TKM2				⇑S	S	04 51 01.7	+1.9
	5.0nm,1.2s						
AB31	Akbulak array	14.42	331	⇑P	P	04 51 10.1	+1.1
	1.0nm,0.9s,baz=141,slow=11,SNR=4.0						
AB31				⇓S	S	04 53 48.3	+0.1
	0.3nm,0.6s						

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*NOU **18** 05:06:43.6, 15°.71S×167°.21E, h16^{km}, MLv4.9/14, Vanuatu Islands*

*IDC **18** 05:06:48.0±7.8, 16°.00S×167°.32E, h78^{km}±78^{km}, mb3.3/4, mb1 3.6/5, mb1mx3.0/44, mbtmp3.7/5, ML4.1/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/21, Error ellipse: s-maj=58.9km s-min=35.7km az=158.0*

ISC 18 05:06:44.0±1.0, 15°.66S±0°.06×167°.2E±0°.1, h35^{km}, n15, σ1^s.47/16, mb3.7/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.22	8	P	Pn	05 06 50.7	-0.3
DVP	Devils Point	2.27	155	P	Pn	05 07 20.1	+1.1
RTV	Rentapao	2.44	151	P	Pn	05 07 22.5	+1.2
KOUNC	Koumac, New Ca	5.58	209	P	Pn	05 08 05.9	+1.3
YATNC	Mamie plateau,	6.37	182	P	Pn	05 08 15.3	-0.1
DZM	Mont Dzumac	6.41	186	P	Pn	05 08 16.4	+0.4
	4.5nm,0.3s,baz=325,slow=0.6,SNR=58						
DZM				S	Sn	05 09 24.4	-3.8
	2.9nm,0.3s,baz=322,slow=23,SNR=8.6						
DZM				LR	LR	05 10 25.6	
	comp=Z,97nm,19.7s,baz=220,slow=36						
DZM	Mont Dzumac	6.41	186	P	Pn	05 08 16.6	+0.5
NOUC	Port Laguerre	6.46	187	P	Pn	05 08 17.0	+0.4
ONTNC	Ouen Toro	6.64	186	P	Pn	05 08 20.6	+1.4
OUENC	Ouen Island, N	6.73	183	P	Pn	05 08 21.4	+1.1
WRA	Warramunga Arr	31.52	257	P	P	05 13 02.9	-0.1
	0.3nm,0.7s,baz=95,slow=9.3,SNR=1.3						
ASAR	Alice Springs	32.26	250	P	P	05 13 09.2	-0.3
	0.4nm,0.5s,baz=75,slow=9.6,SNR=8.3						
SONM	Songino Array	83.19	324	P	P	05 19 08.8	+2.1
	0.5nm,0.5s,baz=132,slow=6.0,SNR=5.3						
ILAR	Eielson Array	87.44	18	P	P	05 19 26.2	-1.2
	0.4nm,0.6s,baz=240,slow=5.6,SNR=7.2						
ARCES	ARCESS Array B	121.12	345	PKP	PKiKP	05 25 32.9	+0.3
	2.3nm,0.8s,baz=35,slow=3.3,SNR=3.6						

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*IDC **18** 05:20:18.9±0.7, 6°.24S×128°.40E, h0^{km}, mb3.6/1, mb1 3.8/4, mb1mx3.2/54, mbtmp3.7/4, ML3.7/2, MS3.3/2, Ms1 3.3/2, ms1mx2.5/37, Error ellipse: s-maj=20.5km s-min=5.3km az=88.0*

ISC 18 05:20:15.8±1.3, 5°.82S±0°.06×130°.5E±0°.3, h10^{km}, n6, σ3^s.49/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.98	9	Pn	Pg	05 21 50.1	-1.2
	baz=210,slow=20						
SIJI				Sn	Sb	05 22 44.5	+1.3
	5.4nm,0.3s,baz=53,slow=24,SNR=6.2						
WRA	Warramunga Arr	14.54	165	Pn	P	05 23 49.1	+0.8
	0.3nm,0.3s,baz=344,slow=13,SNR=13						
WRA				Sn	Sn	05 26 22.0	-1.0
	0.3nm,0.3s,baz=340,slow=24,SNR=4.9						
ASAR	Alice Springs	18.05	170	P	P	05 24 32.8	+5.4
	0.3nm,0.3s,baz=348,slow=10,SNR=12						
ASAR				S	Sn	05 27 44.8	-3.7
	0.1nm,0.3s,baz=350,slow=24,SNR=4.9						
JCJ	Chichijima	34.63	19	LR	LR	05 40 34.0	
	comp=Z,124nm,19.2s,baz=297,slow=34						
KSRS	Korea Array	43.11	357	LR	LR	05 48 17.6	
	comp=Z,13nm,18.4s,baz=144,slow=39						
MKAR	Makanchi Array	67.50	326	P	P	05 31 11.3	-0.8
	0.4nm,0.6s,baz=119,slow=8.4,SNR=5.2						

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*IDC **18** 05:39:12.0±16.0, 21°.69N×143°.11E, h260^{km}±159^{km}, mb3.3/6, mb1 3.5/6, mb1mx3.0/50, mbtmp3.9/6, Error ellipse: s-maj=65.7km s-min=21.1km az=70.0*

ISC 18 05:39:16.7±1.0, 21°.6N±0°.2×143°.1E±0°.3, h311^{km}, n8, σ0^s.55/8, mb3.5/6, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	42.17	192	P	P	05 46 39.9	+0.1
	0.4nm,0.5s,baz=9.5,slow=8.2,SNR=6.1						
MKAR	Makanchi Array	54.72	313	P	P	05 48 14.7	+0.1
	0.2nm,0.5s,baz=92,slow=8.2,SNR=2.0						
BVAR	Borovoye Array	62.70	320	P	P	05 49 09.2	+0.2
	1.0nm,0.4s,baz=111,slow=3.2,SNR=6.8						
YKA	Yellowknife Ar	76.57	28	P	P	05 50 33.0	+0.1
	0.2nm,0.5s,baz=286,slow=6.1,SNR=2.7						
ARCES	ARCESS Array B	78.99	341	P	P	05 50 46.4	+0.3
	6.9nm,1.0s,baz=69,slow=8.2,SNR=2.8						
FINES	FINESS Array B	83.24	334	P	P	05 51 07.4	-1.0
	0.8nm,0.5s,baz=72,slow=6.2,SNR=7.6						
PLCA	Paso Flores	145.74	132	PKPbc	PKPab	05 58 20.3	-0.3
	1.0nm,0.8s,baz=255,slow=6.6,SNR=3.7						
LPAZ	La Paz	150.01	85	PKPbc	PKiKP	05 58 33.3	+0.3
	0.6nm,0.5s,baz=290,slow=2.1,SNR=5.2						

IDC 18 05:53:07.2±4.1, 41°.69N×127°.03E, h0^{km}, mb1 2.7/2, mb1mx2.7/45, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=50.4km s-min=17.1km az=113.0, North Korea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	Korea Array	4.29	170	Pn	Pn	05 54 13.0	-0.7
	0.6nm,0.3s,baz=346,slow=15,SNR=4.2						
KSRS				Pg	Pb	05 54 25.9	+2.5
	0.9nm,0.3s,baz=350,slow=18,SNR=4.3						
KSRS				Lg	Lg	05 55 24.0	
	2.9nm,0.3s,baz=350,slow=29,SNR=12						
I45RU	USSURIYSK INFR	4.41	54	*i*		06 19 10.0	
	baz=234,slow=316,SNR=0.6						
USRK	Ussuriysk Ar.	4.42	54	Pn	Pn	05 54 16.6	+1.1
	baz=238,slow=15,SNR=1.4						
USRK				Pg	Pb	05 54 26.7	+1.0
	baz=244,slow=14,SNR=5.8						
USRK				Lg	Lg	05 55 27.5	
	baz=245,slow=29,SNR=5.7						
I30JP	ISUMI INFRASON	12.20	117	*i*		07 05 30.0	
	baz=307,slow=322,SNR=1.2						

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*OMAN **18** 06:01:13.4±1.6, 14°.26N×56°.72E, h10^{km}, mb5.4/3, ml3.9/6, ms3.3/3, Error ellipse: s-maj=16.7km s-min=11.0km az=60.0*

*IDC **18** 06:01:16.2±4.3, 14°.75N×56°.12E, h0^{km}, mb3.6/6, mb1 3.7/6, mb1mx3.2/68, mbtmp3.6/6, MS3.5/12, Ms1 3.5/12, ms1mx3.2/38, Error ellipse: s-maj=100.8km s-min=32.5km az=152.0*

ISC 18 06:01:10.9±1.2, 14°.05N±0°.07×56°.79E±0°.09, h10^{km}, n26, σ2^s.59/25, mb3.8/6, MS3.5/11, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	Socotra	3.29	236	P	Pn	06 02 00.7	-2.1
SOCY				S	Sn	06 02 36.7	-5.3
DMTO	DMTO	4.05	334	P	Pn	06 02 13.4	+0.4
	SNR=24						
DMTO				S	Sn	06 02 56.8	-3.8
SHAO	Shalim	4.10	344	P	Pn	06 02 13.8	0.0
	SNR=20						
SHAO				S	Sn	06 02 56.0	-5.9
RBK	Rabkut	4.24	324	P	Pn	06 02 16.7	+1.1
RBK				S	Sn	06 03 02.9	-2.4
ABTO	Aybut	4.70	315	P	Pn	06 02 23.9	+1.9
ABTO				S	Sn	06 03 15.5	-1.1
WHFO	Wadi Hawf	4.82	323	P	Pn	06 02 25.6	+2.0
	SNR=11						
WHFO				S	Sn	06 03 18.6	-0.9
DOK	Doka	5.21	331	P	Pn	06 02 30.4	+1.5
DOK				S	Sn	06 03 26.7	-2.4
DQM	DQM	5.89	7	P	Pn	06 02 38.3	0.0
DQM				S	Sn	06 03 40.9	-5.0
JLN	Jalan Bani Buh	8.43	17	P	Pn	06 03 13.8	+0.5
WBK	Wadi Bani Khal	8.76	13	P	Pn	06 03 18.5	+0.7
ARQ	Araqi	9.24	358	P	Pn	06 03 26.2	+1.8
WSAR	Wadi Sarin	9.30	11	LR	LR	06 06 45.8	
	comp=Z,576nm,20.3s,baz=212,slow=38						
HOQ	Hoqain	9.49	3	P	Pn	06 03 30.3	+2.4
GEYT	Alibeck	23.81	3	LR	LR	06 16 49.2	
	comp=Z,68nm,18.3s,baz=240,slow=40						
KBZ	Khabaz	31.88	341	LR	LR	06 22 22.9	
	comp=Z,72nm,20.9s,baz=164,slow=41						
BRTR	Keskin Array B	32.67	326	LR	LR	06 22 47.6	
	comp=Z,94nm,18.1s,baz=144,slow=41						
MKAR	Makanchi Array	39.01	28	P	P	06 08 43.5	+5.9

	0.6nm,1.0s,baz=229,slow=11,SNR=2.0						
MKAR				LR	LR	06 26 51.2	
	comp=Z,53nm,18.6s,baz=238,slow=40						
CMAR	Chiang Mai Arr	40.64	78	LR	LR	06 25 54.4	
	comp=Z,30nm,18.6s,baz=202,slow=36						
AKASG	Malin Array Be	42.84	334	P	P	06 09 09.0	-0.1
	0.1nm,0.3s,baz=144,slow=6.8,SNR=1.3						
ZALV	Zalesovo Beam	45.50	23	P	P	06 09 32.3	+1.9
	0.4nm,0.3s,baz=224,slow=6.0,SNR=2.2						
ZALV				LR	LR	06 29 39.2	
	comp=Z,59nm,18.8s,baz=148,slow=38						
GERES	GERESS Array B	49.51	324	LR	LR	06 33 02.0	
	comp=Z,25nm,19.6s,baz=292,slow=39						
FINES	FINESS Array B	52.23	342	P	P	06 10 21.8	-0.2
	1.9nm,0.8s,baz=138,slow=8.7,SNR=7.8						
FINES				LR	LR	06 34 54.1	
	comp=Z,50nm,18.4s,baz=339,slow=39						
BOSA	Boshof	52.24	216	LR	LR	06 32 17.3	
	comp=Z,49nm,18.6s,baz=8.5,slow=36						
TORD	Torodi Ar. Bea	53.45	276	P	P	06 10 33.1	+1.4
	1.3nm,1.1s,baz=82,slow=5.2,SNR=5.5						
TORD				LR	LR	06 30 55.6	
	comp=Z,45nm,20.4s,baz=35,slow=34						
ESDC	Sonseca Array	58.71	308	P	P	06 11 09.7	+0.6
	0.9nm,0.9s,baz=87,slow=6.8,SNR=5.1						
ARCES	ARCESS Array B	58.83	348	LR	LR	06 39 53.2	
	comp=Z,45nm,18.9s,baz=215,slow=40						

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*IDC **18** 06:10:20.5±3.0, 9°.49S×112°.93E, h0^{km}, mb3.9/6, mb1 4.0/7, mb1mx3.5/46, mbtmp3.9/7, ML3.8/1, Error ellipse: s-maj=155.6km s-min=18.4km az=49.0*

*DJA **18** 06:10:25.1±0.4, 10°S±5°×11°3E±°, h10^{km}, M4.3/16, mb4.6/3, MLv4.1/16*

*NEIC **18** 06:10:26.2±2.5, 9°.63S±0°.09×112°.97E±0°.07, h41^{km}±10^{km}, mb4.2/9, Error ellipse: s-maj=13.1km s-min=10.0km az=168.0*

ISC 18 06:10:25.6±0.7**, 9°.66S**±0°.09×**112°.88E**±0°.07**, h36**^{km}**, n40, σ1^{s}.46**/40**, mb4.1**/7**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.49	22	P	Pn	06 10 48.9	-0.9
JAGI	Jajag, Banyuwa	1.73	47	P	Pn	06 10 52.9	-0.2
JAGI	Jajag, Banyuwa	1.73	47		Pn	06 10 52.8	-0.3
BLJI	Banyuglugur	2.03	20	P	Pn	06 10 58.7	+1.4
PCJI	Pacitan	2.23	311	P	Pn	06 11 01.0	+1.1
ABJI	Asem Bagus	2.29	36	P	Pn	06 11 02.9	+2.1
IGBI	Denpasar	2.39	70	P	Pn	06 11 04.3	+2.1
DNP	Denpasar	2.50	67	P	Pn	06 11 06.0	+2.3
WOJI	Wonogiri, Jawa	2.65	313	P	Pn	06 11 07.5	+1.8
SRBI	Singaraja	2.79	56	P	Pn	06 11 09.5	+1.8
UGM	Wanagama	2.91	307	P	Pn	06 11 11.2	+1.9
UGM	Wanagama	2.91	307		Pn	06 11 11.7	+2.4
SMRI	Semarang	3.54	317	P	Pn	06 11 18.9	+0.9
SMRI	Semarang	3.54	317	Pn	Pn	06 11 19.0	+0.9
UWJI	Ujung Watu	3.75	329	P	Pn	06 11 22.6	+1.7
TWSI	Taliwang, Sumb	4.06	77	P	Pn	06 11 27.3	+2.1
CMJI	Cimerak	4.76	293	P	Pn	06 11 36.7	+1.9
PLAI	Plampang	4.91	81	P	Pn	06 11 39.1	+2.3
WBSI	Waikabubak, Su	6.42	90	P	Pn	06 12 00.0	+2.3
	0.3nm35nm,1.0s						
XMIS	Christmas Isla	7.16	263	Pn	Pn	06 12 08.6	+0.8
BASI	Baing, Sumba	7.61	95	P	Pn	06 12 16.3	+2.4
GIRL	Giralia	12.97	174	Pn	Pn	06 13 27.0	-0.4
PSA00	Pilbara Seismi	13.61	151	Pn	Pn	06 13 35.1	-1.0
PSA00	Pilbara Seismi	13.61	151	Pn	Pn	06 13 35.6	-0.4
FITZ	Fitzroy Crossi	14.95	125	Pn	Pn	06 13 52.4	-2.0
	0.3nm,0.3s,baz=306,slow=11,SNR=11						
FITZ				Sn	Sn	06 16 27.9	-11
	0.6nm,0.3s,baz=171,slow=22,SNR=8.5						
KNRA	Kununurra	16.61	113	P	P	06 14 18.0	+0.1
KNRA				IAmb	IAmb	06 14 43.8	
	comp=Z,17nm,1.2s						
MTN	Manton Dam	18.18	102	P	Pn	06 14 35.3	0.0
MTN				IAmb	IAmb	06 14 55.3	
	comp=Z,29nm,1.2s						
FAKI	Fak Fak	20.38	72	P	P	06 14 57.8	-1.6
FAKI				IAmb	IAmb	06 15 08.7	
	comp=Z,35nm,1.4s						
WRA	Warramunga Arr	23.10	119	P	P	06 15 28.7	+0.2
	comp=Z,0.4nm,0.5s,baz=292,slow=12,SNR=8.9						
WB2	Warramunga Arr	23.11	119	P	P	06 15 29.0	+0.5
WB2				IAmb	IAmb	06 15 41.9	
	comp=Z,12nm,1.4s						
ASAR	Alice Springs	24.44	127	P	P	06 15 42.4	+1.2
	comp=Z,1.5nm,0.7s,baz=304,slow=8.8,SNR=17						
AS31	Alice Springs	24.44	127	P	P	06 15 41.9	+0.8
CMAR	Chiang Mai Arr	31.14	334	P	P	06 16 41.8	+0.7
	comp=Z,0.5nm,0.3s,baz=172,slow=7.8,SNR=5.9						
CASY	Casey	56.56	181	P	P	06 20 04.8	+0.7
SONM	Songino Array	57.53	355	P	P	06 20 10.9	-0.5
	comp=Z,1.2nm,0.6s,baz=176,slow=8.7,SNR=10.0						
SONM	Songino Array	57.53	355	P	P	06 20 11.1	-0.4
SONM				IAmb	IAmb	06 20 23.2	
	comp=Z,1.9nm,1.4s						
MKAR	Makanchi Array	62.48	337	P	P	06 20 44.4	-0.9
	comp=Z,1.5nm,0.5s,baz=149,slow=7.5,SNR=18						
ZALV	Zalesovo Beam	67.68	343	P	P	06 21 17.2	-1.6
	comp=Z,0.9nm,0.6s,baz=149,slow=3.1,SNR=4.4						
ABKAR	Akbulak array	74.73	327	P	P	06 22 01.1	-0.5
ABKAR	Akbulak array	74.73	327	P	P	06 22 01.4	-0.2

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*SOME **18** 06:14:25.6, 46°.85N×84°.60E, h0^{km}*

*NNC **18** 06:14:27.6±2.7, 46°.32N×84°.82E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=21.1km s-min=17.8km az=169.0*

ISC 18 06:14:14.6±3.8**, 46°.5N**±0°.1×**85°.4E**±0°.2**, h10**^{km}**, n6, σ2^{s}.78**/10**, 4C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	1.03	340	*e*P	Pg	06 14 37.8	+3.3
	5.5nm,0.1s						
ZSN				*e*S	Sg	06 14 46.4	-1.5
	78nm,0.0s						
MK31	Makanchi Array	2.16	279	⇑Pn	Pg	06 14 59.3	+3.3
	1.1nm,0.3s,baz=107,slow=12,SNR=214						
MK31				⇑Sn	Sg	06 15 24.3	+0.2
	7.2nm,0.6s,baz=103,slow=22,SNR=16						
MAKZ	Makanchi	2.38	279	⇓Pn	Pg	06 15 03.1	+3.0
	3.3nm,0.5s						
MAKZ				⇓Sn	Sg	06 15 30.7	-0.2
	2.9nm,0.5s						
KAPS	Kapalarasan	4.38	256	*e*P	Pg	06 15 40.3	+1.8
	0.3nm,0.1s						
KAPS				*e*S	Sg	06 16 33.5	-1.8
	1.7nm,0.2s						
KURBB	Kurchatov Arra	6.16	315	⇓Pn	Pb	06 15 59.2	-2.6
	1.3nm,0.9s						
KURBB				⇑Lg	Lg	06 17 35.7	
	6.6nm,0.7s						
KURK	Kurchatov	6.17	316	⇓Pn	Pb	06 15 59.2	-2.9
	0.5nm,0.8s						
KURK				⇑Lg	Lg	06 17 36.0	
	3.4nm,0.7s						

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*IDC **18** 06:16:13.4±1.6, 4°.68S×152°.72E, h57^{km}±12^{km}, mb4.0/17, mb1 4.2/18, mb1mx3.9/41, mbtmp4.3/18, MS3.3/12, Ms1 3.3/12, ms1mx3.1/40, Error ellipse: s-maj=20.0km s-min=12.2km az=97.0*

*NEIC **18** 06:16:14.8±1.3, 4°.65S±0°.07×152°.70E±0°.08, h62^{km}±7^{km}, mb4.4/22, Error ellipse: s-maj=12.4km s-min=10.4km az=65.0*

ISC 18 06:16:13.8±0.5**, 4°.68S**±0°.06×**152°.74E**±0°.09**, h58**^{km}**, n52, σ0^{s}.87**/46**, mb4.4**/26**, MS3.3**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.75	310		Pn	06 16 29.4	+0.8
KRVT	Keravat (AS076	0.80	297	P	Pn	06 16 29.5	+0.3
	8.5nm,0.3s,baz=21,slow=1.9,SNR=103						
KRVT				S	Sn	06 16 40.4	0.0
	11nm,0.3s,baz=198,slow=24,SNR=1.6						
PMG	Port Moresby	7.26	229	P	Pn	06 17 58.2	+1.0
	3.1nm,0.3s,baz=1.9,slow=8.9,SNR=4.3						
PMG				S	Sn	06 19 19.6	+1.2
	5.5nm,0.3s,baz=86,slow=14,SNR=3.1						
PMG				LR	LR	06 20 46.2	
	comp=Z,110nm,20.6s,baz=28,slow=38						
PMG	Port Moresby	7.26	229	Pn	Pn	06 17 59.0	+1.8
PATS	Pohnpei	12.72	26	Pn	Pn	06 19 13.3	+1.3
COEN	Coen	13.19	225	Pn	Pn	06 19 18.6	+0.3
CTAO	Charters Tower	16.57	202	P	P	06 20 04.2	+0.2
GUMO	Guam	19.76	337	LR	LR	06 27 39.3	
	comp=Z,39nm,20.5s,baz=190,slow=35						
DZM	Mont Dzumac	21.80	144	P	P	06 21 01.9	+0.7
	8.5nm,0.5s,baz=268,slow=12,SNR=14						
DZM				LR	LR	06 28 10.0	
	comp=Z,104nm,18.5s,baz=17,slow=33						
DZM	Mont Dzumac	21.80	144	IAmb	IAmb	06 21 25.8	
	comp=Z,30nm,1.3s						
MTN	Manton Dam	22.82	248	P	P	06 21 12.0	-0.1
MTN				IAmb	IAmb	06 21 15.7	
	comp=Z,26nm,1.4s						
WB0	Warramunga Arr	23.33	228	P	P	06 21 15.9	-1.2
WB0				IAmb	IAmb	06 21 44.3	
	comp=Z,9.7nm,1.1s						
WRAB	Tennant Creek	23.46	228	P	P	06 21 17.1	-1.3
WRAB				IAmb	IAmb	06 21 19.9	
	comp=Z,11nm,0.7s						
WRA	Warramunga Arr	23.48	228	P	P	06 21 17.6	-0.9
	comp=Z,4.0nm,0.5s,baz=55,slow=9.3,SNR=45						
WRA				LR	LR	06 30 37.4	
	comp=Z,31nm,19.8s,baz=90,slow=37						
WRA	Warramunga Arr	23.48	228	IAmb	IAmb	06 21 19.8	
	comp=Z,0.6nm,1.4s						
KNRA	Kununurra	25.97	243	P	P	06 21 42.0	+0.8
KNRA				IAmb	IAmb	06 21 43.8	
	comp=Z,11nm,0.9s						
AS31	Alice Springs	26.19	222	P	P	06 21 43.3	0.0
ASAR	Alice Springs	26.20	222	P	P	06 21 42.8	-0.5
	comp=Z,3.6nm,0.7s,baz=57,slow=9.1,SNR=26						
ASAR				LR	LR	06 31 23.5	
	comp=Z,37nm,19.5s,baz=26,slow=35						
MSVF	Nonsavu	27.96	120	LR	LR	06 32 03.1	
	comp=Z,80nm,18.4s,baz=260,slow=34						
STKA	Stephens Creek	29.01	200	P	P	06 22 06.7	-1.5
	comp=Z,2.2nm,0.7s,baz=16,slow=12,SNR=5.9						
STKA				LR	LR	06 34 02.6	
	comp=Z,33nm,20.4s,baz=27,slow=37						
FITZ	Fitzroy Crossi	29.66	241	P	P	06 22 12.9	-1.3
	comp=Z,3.7nm,0.5s						
FORT	Forrest	34.84	219	P	P	06 22 59.0	-0.4
MJAR	Matsushiro Arr	43.20	343	LR	LR	06 40 14.8	
	comp=Z,26nm,20.9s,baz=195,slow=33						
PETK	Petropavlovsk-	57.72	4	P	P	06 25 58.0	-0.5
	comp=Z,3.5nm,0.4s,baz=176,slow=8.2,SNR=16						
CMAR	Chiang Mai Arr	57.77	295	P	P	06 26 00.2	+0.8
	comp=Z,2.8nm,0.5s,baz=115,slow=5.3,SNR=12						
SONM	Songino Array	66.19	328	P	P	06 26 56.5	+0.9
	comp=Z,0.6nm,0.6s,baz=144,slow=6.5,SNR=4.8						
SONM				PcP	PcP	06 27 25.3	-0.1
	comp=Z,0.7nm,0.4s,baz=143,slow=4.3,SNR=7.5						
SONM	Songino Array	66.19	328	P	P	06 26 57.2	+1.6
VNDA	Vanda	72.95	178	P	P	06 27 36.6	0.0
	comp=Z,0.6nm,0.6s,baz=313,slow=3.7,SNR=6.2						
VNDA				LR	LR	06 57 16.2	
	comp=Z,43nm,18.6s,baz=265,slow=34						
CNPM	China Poot	77.63	26	P	P	06 28 04.3	+0.6
TTA	Tatalina	77.68	21	P	P	06 28 04.8	+0.7
TTA				IAmb	IAmb	06 28 23.9	
	comp=Z,4.8nm,1.3s						
J20K	Nowinta River	79.10	21	P	P	06 28 12.3	+0.6
J20K				IAmb	IAmb	06 28 13.2	
	comp=Z,5.0nm,0.8s						
MKAR	Makanchi Array	80.19	319	P	P	06 28 17.9	-0.2
	comp=Z,0.6nm,0.4s,baz=98,slow=7.2,SNR=5.2						
IMAR	Indian Mountai	80.29	20	P	P	06 28 18.7	+0.6
I21K	Tanana	80.44	21	P	P	06 28 20.4	+1.5
MLY	Manley	80.79	21	P	P	06 28 20.7	-0.2
ZALV	Zalesovo Beam	81.02	326	P	P	06 28 21.4	-0.9
	comp=Z,2.0nm,0.5s,baz=105,slow=6.2,SNR=6.3						
M24K	Tolsona, Glenn	81.08	25	P	P	06 28 23.2	+0.7
IL31		82.07	22	P	P	06 28 26.8	-0.7
IL31				IAmb	IAmb	06 28 27.0	
	comp=Z,4.7nm,0.8s						
ILAR	Eielson Array	82.07	22	P	P	06 28 26.6	-1.0
	comp=Z,3.6nm,0.8s,baz=241,slow=5.3,SNR=27						
ILAR				LR	LR	07 06 08.5	
	comp=Z,29nm,18.1s,baz=198,slow=36						
DOT	Dot Lake	82.64	24	P	P	06 28 30.8	+0.1
DOT				IAmb	IAmb	06 28 31.6	
	comp=Z,7.9nm,0.9s						
TOLK	Toolik Lake Re	83.12	18	P	P	06 28 33.8	+0.7
TOLK				IAmb	IAmb	06 28 34.6	
	comp=Z,4.6nm,0.9s						
AAK	Ala-Archa	84.54	313	P	P	06 28 41.4	+0.4
	comp=Z,1.8nm,0.6s,baz=145,slow=2.9,SNR=6.3						
AAK	Ala-Archa	84.54	313	IAmb	IAmb	06 28 52.5	
	comp=Z,2.5nm,1.0s						
NRIK	Noril'sk	85.83	341	P	P	06 28 45.5	-1.1
	comp=Z,1.2nm,0.4s,baz=73,slow=7.2,SNR=3.6						
NRIK	Noril'sk	85.83	341	IAmb	IAmb	06 28 46.8	
	comp=Z,2.7nm,0.6s						
DLBC	Dease Lake	87.31	31	LR	LR	07 10 09.0	
	comp=Z,110nm,18.3s,baz=272,slow=37						
BVAR	Borovoye Array	89.11	323	P	P	06 29 01.6	-1.2
	comp=Z,1.3nm,0.5s,baz=175,slow=6.9,SNR=11						
NVAR	Mina Array Bea	92.06	52	P	P	06 29 16.6	-0.6
	comp=Z,0.3nm,0.5s,baz=250,slow=4.7,SNR=3.0						
YKA	Yellowknife Ar	95.35	28	P	P	06 29 31.6	+0.2
	comp=Z,0.6nm,0.8s,baz=271,slow=5.2,SNR=6.4						
AKTO	Aktyubinsk	96.59	320	LR	LR	07 16 16.0	
	comp=Z,13nm,19.5s,baz=68,slow=37						
GERES	GERESS Array B	123.92	329	PKP	PKPdf	06 35 05.7	0.0
	comp=Z,0.6nm,0.5s,baz=79,slow=2.9,SNR=5.9						
TORD	Torodi Ar. Bea	150.21	288	PKPbc	PKPbc	06 35 58.7	-0.7
	comp=Z,1.5nm,0.4s,baz=73,slow=2.3,SNR=26						

TAP 18 06:17:29.6, 21°.21N×121°.77E, h168^{km}**, ML3.5, C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.85	346	P	Pn	06 17 54.6	-0.4
	baz=347						
LAY				S	Sn	06 18 13.2	-1.5
	baz=347						
TSEB	Hengchuen, Pin	1.06	310	*e*P	Pn	06 17 56.5	0.0
	baz=305						
TSEB				*e*S	Sn	06 18 17.9	+0.5
	baz=305						
TWKBT	Hengchun	1.15	309	*i* P	Pn	06 17 57.7	+0.4
	baz=307						
TWKBT				*i* S	Sn	06 18 18.2	-0.5
	baz=307						
TWK1	Hengchun	1.16	309	P	Pn	06 17 57.8	+0.4
	baz=307						
TWK1				S	Sn	06 18 18.2	-0.6
	baz=307						
HEN	Hengchun	1.24	310	*e*P	Pn	06 17 58.4	+0.3
	baz=301						
HEN				*e*S	Sn	06 18 20.7	+0.5
	baz=301						
SLIU	Shizi	1.35	318	P	Pn	06 17 59.3	+0.2
	baz=318						
SLIU				*e*S	Sn	06 18 21.1	-0.9
	baz=318						
TAW	Tawu	1.40	325	*e*P	Pn	06 17 59.1	-0.4
	baz=327						
EAST	Anshuo	1.45	324	*e*P	Pn	06 17 59.5	-0.5
	baz=324						
EAST				*e*S	Sn	06 18 22.3	-1.4
	baz=324						
ECL	Taimali	1.57	331	*e*P	Pn	06 18 01.0	-0.3
	baz=332						
ECL				*e*S	Sn	06 18 23.7	-2.2
	baz=332						
SCZT	Fangliau	1.57	317	*e*P	Pn	06 18 00.7	-0.5
	baz=322						
SCZT				S	Sn	06 18 25.2	-0.7
	baz=322						
SSPT	Xinbi	1.69	319	*e*P	Pn	06 18 03.1	+0.6
	baz=322						
WLCH	Liuqiu	1.72	312	*e*P	Pn	06 18 04.2	+1.4
	baz=312						
TWGBT	Beinan	1.72	338	*e*P	Pn	06 18 01.2	-1.6
	baz=338						
TWGBT				*e*S	Sn	06 18 26.4	-2.2
	baz=338						
TWG	Pinlang	1.73	338	*e*P	Pn	06 18 01.2	-1.6
	baz=338						
TWG				*e*S	Sn	06 18 26.8	-1.9
	baz=338						
MASBT	Mashibuluo	1.75	323	P	Pn	06 18 03.1	0.0
	baz=326						
MASBT				S	Sn	06 18 27.8	-1.3
	baz=326						
TSMG	Majia	1.82	325	*e*P	Pn	06 18 03.7	-0.1
	baz=329						
TSMG				*e*S	Sn	06 18 29.8	-0.6
	baz=329						
SSD	Sandimen	1.86	326	*e*P	Pn	06 18 04.4	+0.1
	baz=330						
SSD				*e*S	Sn	06 18 30.0	-1.1
	baz=330						
CHKT	Chengkung	1.92	349	*e*P	Pn	06 18 03.5	-1.4
	baz=344						
FULB	Fuli	2.03	348	*e*P	Pn	06 18 05.2	-1.0
	baz=342						
TWM1	Shoushan	2.03	322	*e*P	Pn	06 18 06.4	+0.1
	baz=315						
SLGT	Liugui	2.06	330	*e*P	Pn	06 18 06.5	0.0
	baz=336						
STYT	Tauyuan	2.16	334	*e*P	Pn	06 18 07.8	+0.2
	baz=335						
TWF1	Yuli	2.18	348	*e*P	Pn	06 18 08.0	+0.1
	baz=344						
YULB	Yu-li	2.21	349	*e*P	Pn	06 18 07.8	-0.5
	baz=340						
YULB				*e*S	Sn	06 18 36.3	-2.1
	baz=340						
CHN1	Nanshi	2.28	330	*e*P	Pn	06 18 09.3	+0.3
	baz=330						
HGSD	Ruisui	2.29	352	*e*P	Pn	06 18 08.2	-0.9
	baz=353						
EHY	Hungye	2.32	350	*e*P	Pn	06 18 09.4	-0.1
	baz=342						
EHY				*e*S	Sn	06 18 38.2	-2.4
	baz=342						
TPUB	Ta-pu	2.33	333	*e*P	Pn	06 18 09.7	+0.1
	baz=333						
TPUB				*e*S	Sn	06 18 40.3	-0.5
	baz=333						
TWK	Hsinying	2.37	330	*e*P	Pn	06 18 09.9	-0.1
	baz=330						
TWK				*e*S	Sn	06 18 40.6	-0.9
	baz=330						
CHN4	Tsaushan	2.39	333	*e*P	Pn	06 18 10.2	-0.1
	baz=333						
ALS	Alishan	2.46	339	*e*P	Pn	06 18 10.4	-1.0
	baz=332						
CHN5	Tsauling	2.58	337	*e*P	Pn	06 18 12.6	-0.1
	baz=337						
VWDT	VWDT	2.60	347	*e*P	Pn	06 18 13.2	+0.4
	baz=341						
VWDT				*e*S	Sn	06 18 44.4	-1.9
	baz=341						
SSLB	Suanglung	2.67	344	*e*P	Pn	06 18 12.4	-1.3
	baz=336						
SSLB				*e*S	Sn	06 18 46.9	-1.2
	baz=336						
TYC	Yuchr	2.81	343	*e*P	Pn	06 18 14.8	-0.5
	baz=343						
VCHM	Qimei	2.94	313	*e*P	Pn	06 18 16.5	-0.4
	baz=318						
WHF	Hehuan Shan	2.96	351	*e*P	Pn	06 18 17.7	+0.1
	baz=358						
WHF				*e*S	Sn	06 18 54.4	-0.5
	baz=358						
PHUB	P'eng-hu	3.06	319	*e*P	Pn	06 18 16.6	-1.8
	baz=319						

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*NEIC **18** 06:47:31.9±1.5, 13°.14N±0°.08×144°.10E±0°.10, h125^{km}±4^{km}, mb4.6/36, Error ellipse: s-maj=13.9km s-min=12.2km az=82.0*

*IDC **18** 06:47:31.2±0.6, 13°.17N×144°.18E, h130^{km}±6^{km}, mb3.9/17, mb1 4.0/17, mb1mx3.6/57, mbtmp4.3/17, Error ellipse: s-maj=20.4km s-min=11.7km az=82.0*

ISC 18 06:47:32.2±0.4**, 13°.18N**±0°.07×**144°.18E**±0°.08**, h138**^{km}**, n68, σ0^{s}.86**/65**, mb4.4**/36**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.78	58	P	Pn	06 47 53.3	-0.7
	806nm,0.3s,baz=20,slow=22,SNR=1076						
GUMO				LR	LR	06 47 59.0	
	comp=Z,84nm,20.4s,baz=20,slow=35						
GUMO				S	Sn	06 48 09.0	-1.6
	877nm,0.3s,baz=29,slow=22,SNR=46						
GUMO	Guam	0.78	58	Pn	Pn	06 47 53.2	-0.8
GUMO				Sn	Sn	06 48 09.2	-1.4
PATS	Pohnpei	15.27	113	P	P	06 51 02.4	0.0
JOW	Kunigami	20.17	315	P	P	06 51 56.9	+1.0
	21nm,0.6s,baz=132,slow=6.6,SNR=3.5						
JOW	Kunigami	20.17	315	P	P	06 51 56.6	+0.7
H11S3	WAKE ISLAND Hy	22.28	73	T	T	07 15 13.6	
	baz=259,slow=75,SNR=6.7						
H11S1	WAKE ISLAND Hy	22.29	73	T	T	07 15 32.9	
	baz=259,slow=75,SNR=9.3						
H11S2	WAKE ISLAND Hy	22.30	73	T	T	07 15 14.9	
	baz=259,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	22.72	70	T	T	07 15 47.8	
	baz=256,slow=75,SNR=31						
H11N2	WAKE ISLAND Hy	22.73	70	T	T	07 15 59.5	
	baz=256,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	22.73	70	T	T	07 15 49.3	
	baz=256,slow=75,SNR=24						
MJAR	Matsushiro Arr	23.88	348	P	P	06 52 32.8	-0.2
	3.9nm,0.6s,baz=169,slow=9.3,SNR=3.1						
MAT	Matsushiro	23.88	348	P	P	06 52 33.0	0.0
YULB	Yu-li	23.95	298	P	P	06 52 33.8	-0.1
YULB				IAmb	IAmb	06 52 41.3	
	comp=Z,34nm,1.2s						
SSLB	Suanglung	24.39	299	P	P	06 52 40.0	+2.2
SSLB				IAmb	IAmb	06 52 56.0	
	comp=Z,50nm,1.3s						
JSD	Sado	25.31	349	P	P	06 52 48.1	+2.1
COEN	Coen	26.98	182	P	P	06 53 00.3	-0.9
COEN				IAmb	IAmb	06 53 24.1	
	comp=Z,17nm,1.3s						
KSRS	Korea Array	28.20	332	P	P	06 53 11.6	-0.3
	comp=Z,4.6nm,0.9s,baz=141,slow=10,SNR=9.2						
KNRA	Kununurra	32.47	208	P	P	06 53 49.2	-0.6
KNRA				IAmb	IAmb	06 53 50.1	
	comp=Z,9.5nm,0.9s						
WB0	Warramunga Arr	34.13	197	P	P	06 54 03.3	-0.8
WB0				IAmb	IAmb	06 54 04.4	
	comp=Z,11nm,0.8s						
WR0	Warramunga Arr	34.27	196	P	P	06 54 04.8	-0.5
WR0				IAmb	IAmb	06 54 05.3	
	comp=Z,7.4nm,0.8s						
WRAB	Tennant Creek	34.30	197	P	P	06 54 04.9	-0.6
WRAB				IAmb	IAmb	06 54 06.0	
	comp=Z,14nm,0.8s						
WB2	Warramunga Arr	34.30	197	P	P	06 54 05.1	-0.5
WRA	Warramunga Arr	34.31	197	P	P	06 54 05.1	-0.5
	comp=Z,12nm,0.8s,baz=19,slow=8.8,SNR=58						
WRA	Warramunga Arr	34.31	197	P	P	06 54 04.8	-0.8
BJT	Baijiatuau	36.35	323	P	P	06 54 23.4	+0.6
BJT				IAmb	IAmb	06 54 23.6	
	comp=Z,9.7nm,0.6s						
JAGI	Jajag, Banyuwa	36.77	236	P	P	06 54 25.5	-1.3
AS31	Alice Springs	37.97	195	P	P	06 54 36.6	-0.2
ASAR	Alice Springs	37.97	195	P	P	06 54 36.5	-0.3
	comp=Z,1.9nm,0.7s,baz=16,slow=11,SNR=27						
ASAR				PcP	PcP	06 56 50.5	+0.7
	comp=Z,0.4nm,0.7s,baz=21,slow=3.2,SNR=4.3						
ASAR				ScP	ScP	07 00 24.9	+0.2
	comp=Z,0.4nm,0.7s,baz=12,slow=4.2,SNR=4.1						
EIDS	Eidsvold	38.90	170	P	P	06 54 44.8	+0.4
EIDS				IAmb	IAmb	06 54 50.5	
	comp=Z,11nm,1.1s						
DZM	Mont Dzumac	41.28	148	P	P	06 55 06.1	+1.9
PSA00	Pilbara Seismi	41.99	215	P	P	06 55 10.0	0.0
PSA00				IAmb	IAmb	06 55 10.6	
	comp=Z,16nm,0.9s						
LZH	Lanzhou	42.76	309	*e*P	P	06 55 21.8	+5.5
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
CMAR	Chiang Mai Arr	43.76	283	P	P	06 55 23.3	-1.0
	comp=Z,1.7nm,0.3s,baz=80,slow=6.2,SNR=5.1						
STKA	Stephens Creek	44.87	183	P	P	06 55 31.9	-0.9
	comp=Z,8.6nm,1.0s,baz=343,slow=9.4,SNR=9.8						
STKA	Stephens Creek	44.87	183	P	P	06 55 32.6	-0.2
FORT	Forrest	46.37	199	P	P	06 55 44.9	+0.2
FORT				IAmb	IAmb	06 55 45.4	
	comp=Z,13nm,0.8s						
BBOO	Buckleboo	46.38	189	P	P	06 55 44.1	-0.6
BBOO				IAmb	IAmb	06 56 05.8	
	comp=Z,22nm,1.4s						
SONM	Songino Array	46.68	325	P	P	06 55 47.4	+0.3
	comp=Z,1.6nm,0.8s,baz=144,slow=8.5,SNR=11						
SONM	Songino Array	46.68	325	P	P	06 55 48.0	+0.8

GTA	Gaotai	46.95	312	*e*P	P	06 55 49.8	+0.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MORW	Morawa	50.03	213	P	P	06 56 12.7	-0.1
MORW				IAmb	IAmb	06 56 13.0	
	comp=Z,9.5nm,0.8s						
TOO	Toolangi	50.49	179	P	P	06 56 17.6	+1.4
URZ	Urewera	59.74	150	P	P	06 57 23.0	+0.5
BKZ	Black Stump Fm	60.17	151	P	P	06 57 25.6	+0.1
BKZ				IAmb	IAmb	06 57 25.9	
	comp=Z,8.1nm,0.9s						
MK31	Makanchi Array	61.32	316	P	P	06 57 33.3	+0.1
MKAR	Makanchi Array	61.32	316	P	P	06 57 33.3	0.0
	comp=Z,1.1nm,0.5s,baz=91,slow=8.6,SNR=20						
MKAR	Makanchi Array	61.32	316	P	P	06 57 33.5	+0.2
MAKZ	Makanchi	61.54	316	P	P	06 57 35.4	+0.7
MAKZ				IAmb	IAmb	06 57 35.8	
	comp=Z,9.8nm,1.5s						
OXZ	Oxford	61.73	157	P	P	06 57 35.7	-0.2
OXZ				IAmb	IAmb	06 57 36.2	
	comp=Z,8.1nm,0.7s						
KURK	Kurchatov	64.47	320	P	P	06 57 53.5	-0.4
KURBB	Kurchatov Arra	64.51	320	P	P	06 57 53.6	-0.6
	comp=Z,2.4nm,0.7s,baz=102,slow=6.8,SNR=17						
KKAR	Karatay Array	69.22	311	P	P	06 58 24.3	+0.1
BVAR	Borovoye Array	69.83	322	P	P	06 58 27.3	-0.5
	comp=Z,0.9nm,0.3s,baz=150,slow=6.5,SNR=7.3						
ABKAR	Akbulak array	76.40	318	P	P	06 59 05.6	-0.9
YKA	Yellowknife Ar	83.53	27	P	P	06 59 43.8	-0.7
	comp=Z,0.4nm,0.6s,baz=290,slow=5.0,SNR=6.1						
YBH	Yreka Blue Hor	83.64	49	P	P	06 59 47.3	+1.6
YBH				IAmb	IAmb	07 00 11.3	
	comp=Z,6.8nm,1.4s						
RES	Resolute Bay	85.10	13	P	P	06 59 52.0	-0.2
	comp=Z,1.3nm,0.7s,baz=312,slow=6.0,SNR=5.7						
NVAR	Mina Array Bea	87.70	51	P	P	07 00 07.0	+1.1
	comp=Z,1.3nm,0.7s,baz=263,slow=6.5,SNR=10						
HLID	Hailey	89.11	45	P	P	07 00 13.9	+1.5
ELK	Elko	89.35	48	P	P	07 00 14.7	+1.0
ELK				IAmb	IAmb	07 00 15.7	
	comp=Z,2.9nm,1.0s						
VNDA	Vanda	91.10	176	P	P	07 00 20.5	-0.1
	comp=Z,1.1nm,0.9s,baz=307,slow=6.3,SNR=4.1						
FINES	FINESS Array B	91.25	335	P	P	07 00 20.5	-1.2
	comp=Z,1.4nm,0.8s,baz=102,slow=8.0,SNR=4.2						
PDAR	Pinedale Array	92.73	45	P	P	07 00 28.0	-1.3
	comp=Z,0.2nm,0.4s,baz=270,slow=3.0,SNR=3.5						
P18A	Preston Nutter	93.33	48	P	P	07 00 32.2	0.0
TORD	Torodi Ar. Bea	134.54	304	PKPdf	PKPdf	07 06 36.1	+0.9
PB12	IPOC Station P	146.41	104	PKPbc	PKPab	07 06 59.5	+0.3
BOAV	Boa Vista	151.01	59	PKPbc	PKPbc	07 07 09.8	-0.1

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*AEIC **18** 06:52:32.9±1.6, 51°.31N±0°.05×173°.8W±0°.1, h12^{km}±5^{km}, ML3.1/15, mb3.8/9(NEIC), Error ellipse: s-maj=9.8km s-min=7.8km az=84.0*

*NEIC **18** 06:52:40.1±3.7, 52°.78N±0°.05×174°.8W±0°.1, h10^{km}±2^{km}, Error ellipse: s-maj=12.0km s-min=6.4km az=56.0*

*IDC **18** 06:52:40.7±1.6, 53°.09N×175°.09W, h0^{km}, mb3.7/7, mb1 3.9/9, mb1mx3.7/58, mbtmp3.8/9, ML4.1/2, Error ellipse: s-maj=54.4km s-min=18.2km az=173.0*

ISC 18 06:52:30.3±2.7**, 51°.2N**±0°.1×**173°.84W**±0°.07**, h7**^{km}±14^{km}**, n35, σ0^{s}.83**/33**, mb3.7**/9**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	1.03	348		Pg	06 52 50.2	+0.2
ATKA					Sg	06 53 03.6	+0.3
KOFP	Korovin Flat P	1.09	352		Pg	06 52 51.4	+0.3
KOFP					Sg	06 53 05.2	-0.1
KOKL	Mount Kliuchef	1.15	349		Pb	06 52 52.4	0.0
KOSE	Korovin Southe	1.15	353		Pn	06 52 52.9	+0.1
GSMY	Great Sitkin M	1.62	302		Pb	06 53 00.1	-0.4
GSMY					Sb	06 53 21.4	+0.3
GSTR	Great Sitkin T	1.65	304		Pg	06 53 01.7	-0.1
GSTD	Great Sitkin T	1.67	302		Pb	06 53 01.1	-0.4
GSTD					Sb	06 53 22.2	-0.5
ADK	Adak	1.91	292		Pb	06 53 04.4	-0.9
ADK					Sb	06 53 28.5	-0.8
KIWB	Kanaga Island	2.17	289		Pg	06 53 13.5	+1.6
KIMD	Kanaga Island	2.20	286		Pb	06 53 08.8	-1.5
TAFP	Tanaga Falls P	2.68	287		Pb	06 53 16.7	-1.9
KDAK	Kodiak Island	13.96	54	Pn	P	06 55 56.2	-0.2
	2.2nm,0.3s,baz=274,slow=6.6,SNR=18						
KTH	Kantishna Hill	17.35	36	P	Pn	06 56 32.7	0.0
KTH				IAmb	IAmb	06 56 36.5	
	comp=Z,14nm,1.5s						
WRH	Wood River Hil	18.90	36	P	P	06 56 50.1	-0.9
CCB	Clear Creek Bu	19.10	35	P	P	06 56 51.7	-1.5
IL31		19.50	36	P	Pn	06 56 58.0	-0.7
IL31				IAmb	IAmb	06 57 17.5	
	comp=Z,6.7nm,1.4s						
ILAR	Eielson Array	19.50	36	P	P	06 56 56.8	-0.8
	comp=Z,0.3nm,0.3s,baz=234,slow=9.3,SNR=17						
ILAR	Eielson Array	19.50	36	P	Pn	06 56 58.3	-0.6
RIDG	Independent Ri	19.79	40	P	P	06 57 00.7	-0.1
DOT	Dot Lake	20.07	40	P	P	06 57 03.5	-0.4
DOT				IAmb	IAmb	06 57 30.7	
	comp=Z,5.0nm,1.0s						
TOLK	Toolik Lake Re	21.03	25	P	P	06 57 14.6	+0.4
TOLK				IAmb	IAmb	06 57 16.0	
	comp=Z,4.7nm,1.1s						
A21K	Barrow	21.65	15	P	P	06 57 20.1	-0.7
A21K				IAmb	IAmb	06 57 36.0	
	comp=Z,10nm,1.4s						
EGAK	Eagle	21.68	39	P	P	06 57 21.0	-0.2
INK	Inuvik	25.85	33	P	P	06 58 02.5	+0.6
	comp=Z,0.7nm,0.6s,baz=229,slow=9.3,SNR=1.8						
KLR	Kul'dur	34.21	289	P	P	06 59 16.4	+0.3
	comp=Z,0.8nm,0.6s,baz=86,slow=8.3,SNR=4.3						
H11N2	WAKE ISLAND Hy	34.88	213	T	T	07 37 35.1	
	baz=21,slow=75,SNR=6.5						
H11N3	WAKE ISLAND Hy	34.89	213	T	T	07 37 35.1	
	baz=21,slow=75,SNR=5.9						
H11N1	WAKE ISLAND Hy	34.90	213	T	T	07 37 24.1	
	baz=21,slow=75,SNR=5.4						
H11S1	WAKE ISLAND Hy	36.09	212	T	T	07 38 47.5	
	baz=17,slow=74,SNR=3.4						
H11S2	WAKE ISLAND Hy	36.10	212	T	T	07 38 47.3	
	baz=312,slow=74,SNR=4.2						
USRK	Ussuriysk Ar.	36.40	281	P	P	06 59 36.4	+1.4
	comp=Z,3.3nm,0.7s,baz=47,slow=8.7,SNR=4.6						
PDAR	Pinedale Array	43.37	75	P	P	07 00 46.8	+14
	comp=Z,0.6nm,0.6s,baz=301,slow=3.9,SNR=3.3						
SONM	Songino Array	49.48	299	P	P	07 01 22.4	+1.3
	comp=Z,0.5nm,0.7s,baz=50,slow=6.4,SNR=3.0						
TXAR	Lajitas Array	55.58	85	P	P	07 02 22.2	+16
	comp=Z,0.5nm,0.8s,baz=300,slow=3.8,SNR=4.6						
AKASG	Malin Array Be	76.60	345	P	P	07 04 20.6	-0.4
	comp=Z,0.2nm,0.3s,baz=17,slow=5.8,SNR=2.7						

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*IDC **18** 06:57:25.1±1.2, 37°.81N×144°.47E, h0^{km}, mb3.8/4, mb1 4.0/6, mb1mx3.4/47, mbtmp3.8/6, ML3.4/2, MS3.4/2, Ms1 3.4/2, ms1mx2.5/46, Error ellipse: s-maj=39.9km s-min=23.6km az=94.0*

*NIED **18** 06:57:29.6, 38°.02N×144°.06E, h41^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-3.66; M$_{\theta\theta}$-0.84; M$_{\phi\phi}$4.49; M$_{r\theta}$-1.40; M$_{\theta\phi}$0.65; M$_{\phi r}$4.10; Fault plane solution: M$_{0}$6.02000×10^{14} NP1: ϕ_s168.00000°, δ69.00000°, λ-107.00000°. NP2: ϕ_s29.00000°, δ27.00000°, λ-52.00000°.*

*JMA **18** 06:57:29.6±0.2, 38°.02N×144°.06E, h41^{km}, M3.9*

ISC 18 06:57:30.1±1.1**, 38°.01N**±0°.05×**144°.16E**±0°.08**, h35**^{km}**, n25, σ1^{s}.83**/33**, mb4.0**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.14	279	P	Pn	06 58 02.9	-0.5
JIKH				S	Sn	06 58 27.9	-0.8
OFUJ	Ofunato	2.22	299	P	Pn	06 58 04.2	-0.3
OFUJ				*e*S	Sn	06 58 29.8	-0.9
JKMT	Kesennumamotoy	2.25	292	P	Pn	06 58 04.5	-0.4
JIO	Ouri	2.25	282	P	Pn	06 58 04.7	-0.2
JIO				*e*S	Sn	06 58 30.4	-1.1
JMK	Ichinoseki	2.49	293	P	Pn	06 58 08.3	+0.2
JMK				*e*S	Sn	06 58 36.8	-0.4
JOM	Ohasama	2.67	304	P	Pn	06 58 11.2	+0.5
JFT	Otama	3.07	262	P	Pn	06 58 16.7	+0.6
JFT				S	Sn	06 58 51.6	0.0
JYK	Kaneyama	3.11	288	P	Pn	06 58 17.6	+0.9
JYK				*e*S	Sn	06 58 53.7	+1.0
JANG	Nango	3.12	320	P	Pn	06 58 17.2	+0.3
JANG				*e*S	Sn	06 58 51.5	-1.5
BSO1	Boso 1	4.22	218	P	Pn	06 58 29.7	-1.8
BSO1				*e*S	Sn	06 59 17.5	-1.8
JKB	Kayabe	4.55	329	P	Pn	06 58 38.1	+1.6
JCH	Churui	4.63	353	*e*S	Sn	06 59 27.0	-3.2
JRY	Ryogami san	4.65	246	P	Pn	06 58 37.4	-0.5
JRY				*e*S	Sn	06 59 27.1	-3.6
JOD2	Odawara 2	4.91	238	*e*S	Sn	06 59 32.8	-4.3
MJAR	Matsushiro Arr	4.96	255	Pn	Pn	06 58 42.6	+0.4
	0.6nm,0.3s,baz=85,slow=16,SNR=9.3						
MAT	Matsushiro	4.97	255	P	Pn	06 58 43.4	+1.2
MAT				*e*S	Sn	06 59 38.7	+0.3
NEM2	Nemuro 2	5.48	12	P	Pn	06 58 46.0	-3.2
JTKR	Abashiri--Toko	5.95	358	*e*S	Sn	06 59 58.6	-4.1
ASAJ	Asahikawa	6.21	350	Pn	Pn	06 58 60.0	+0.7
	1.1nm,0.3s,baz=234,slow=19,SNR=1.7						
KSRS	Korea Array	12.87	272	LR	LR	07 05 01.1	
	comp=Z,44nm,19.9s,baz=85,slow=35						
WRA	Warramunga Arr	58.38	191	P	P	07 07 21.1	-1.0
	2.7nm,0.7s,baz=13,slow=7.0,SNR=18						
AKTO	Aktyubinsk	59.64	312	P	P	07 07 33.7	+3.2
	1.4nm,0.7s,baz=60,slow=7.7,SNR=3.6						
YKA	Yellowknife Ar	61.85	31	P	P	07 07 45.9	+0.5
	0.3nm,0.7s,baz=300,slow=4.9,SNR=3.1						
ASAR	Alice Springs	62.10	191	P	P	07 07 46.7	-0.8
	0.6nm,0.9s,baz=10,slow=7.5,SNR=6.8						
SCHQ	Schefferville	83.77	17	LR	LR	07 51 57.0	
	comp=Z,55nm,18.0s,baz=68,slow=39						

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*TUL **18** 06:59:14.7±0.7, 36°.84N±0°.01×97°.52W±0°.02, h5^{km}±7^{km}, ML2.7, mb_Lg2.5/18(NEIC), Error ellipse: s-maj=1.9km s-min=1.5km az=69.0*

NEIC 18 06:59:14.8±0.4**, 36°.82N**±0°.01×**97°.51W**±0°.02**, h5**^{km}±7^{km}**, Error ellipse: s-maj=2.2km s-min=1.7km az=47.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN13	South Haven SW	0.20	7	Pg	Pg	06 59 18.8	+0.1
BLOK	Blackwell	0.24	104	Pg	Pg	06 59 20.1	+0.6
GC02	Grant County #	0.28	277	Pg	Pg	06 59 20.3	0.0
KAN17	Caldwell West	0.30	318	Pg	Pg	06 59 20.7	-0.1
KAN09	Caldwell North	0.33	344	Pg	Pg	06 59 21.1	-0.1
KAN09				Sg	Sg	06 59 25.9	+0.4
KAN01	Argonia South	0.39	329		Pg	06 59 22.3	0.0
KAN01				Sg	Sg	06 59 27.6	+0.1
KAN14	Manchester OK	0.39	291		Pg	06 59 22.5	+0.1
KAN14				Sg	Sg	06 59 27.3	-0.1
KAN05	Bluff City Nor	0.41	315		Pg	06 59 22.8	0.0
KAN05				Sg	Sg	06 59 28.0	-0.2
CROK	Carrier	0.49	231	Pg	Pg	06 59 24.6	+0.3
CROK				Sg	Sg	06 59 31.3	+0.6
KAN06	Argonia West S	0.51	327		Pg	06 59 24.6	-0.1
KAN06				Sg	Sg	06 59 31.2	-0.1
KAN08	Anthony NE Sta	0.55	318		Pg	06 59 25.4	-0.1
KAN08				Sg	Sg	06 59 32.7	+0.2
KAN10	Anthony SW Sta	0.56	303	Pg	Pg	06 59 25.7	+0.1
KAN10				Sg	Sg	06 59 32.8	-0.1
KAN16	Harper SW Stat	0.60	312	Pg	Pg	06 59 26.2	-0.2
KAN16				Sg	Sg	06 59 34.2	-0.1
KAN12	Harper NE Stat	0.62	321	Pg	Pg	06 59 26.6	-0.1
KAN12				Sg	Sb	06 59 36.6	-0.5
T35A	Sooner Cattle	0.80	83	Pg	Pg	06 59 30.1	-0.1
T35A				Sg	Sg	06 59 40.7	+0.1
QUOK	Quay	0.91	135		Pg	06 59 32.4	+0.1
QUOK				Sg	Sg	06 59 44.7	+0.6
OK031	S. Brethren Rd	1.02	148	Pg	Pg	06 59 34.3	0.0
OK031				Sg	Sg	06 59 47.5	-0.1
OK034	N. Norfolk Rd.	1.03	141	Pg	Pg	06 59 34.4	-0.2
OK034				Sg	Sg	06 59 47.8	-0.1
OK030	Cody Creek RV	1.06	146		Pg	06 59 35.2	0.0
OK030				Sg	Sg	06 59 48.9	0.0
BCOK	Bluff Creek, N	1.16	184	Pg	Pg	06 59 36.8	-0.3
BCOK				Sg	Sb	06 59 52.7	-0.1
OK025	Westminster Rd	1.24	174	Pg	Pg	06 59 38.4	-0.2
OK025				Sg	Sb	06 59 55.5	+0.4
U32A	Winter Ranch,	1.28	250		Pg	06 59 38.7	-0.7
OKCFA	Oklahoma City	1.40	178		Pn	06 59 41.1	+0.1
OKCSW	OKLAHOMA CITY	1.41	178		Pn	06 59 41.2	0.0
FNO	Franklin	1.56	177		Pn	06 59 43.4	+0.2
TUL1	Leonard	1.66	123		Pn	06 59 45.0	+0.6
TUL1				IAmb_Lg		07 00 08.2	
	comp=Z,23nm,0.8s						
W35A	Tecumseh	1.74	163	Pn	Pn	06 59 46.3	+0.6
KSU1	Kansas State U	2.39	17	IAmb_Lg		07 00 34.4	
	comp=Z,11nm,0.8s						
U38A	Gravette	2.54	98		Pn	06 59 58.1	+1.4
U38A				IAmb_Lg		07 00 34.9	
	comp=Z,9.5nm,0.8s						
CBKS	Cedar Bluff	2.66	319	IAmb_Lg		07 00 42.2	
	comp=Z,13nm,0.7s						
U40A	Yellville	3.77	96	IAmb_Lg		07 01 23.8	
	comp=Z,12nm,1.0s						
AMTX	Amarillo	3.90	242	IAmb_Lg		07 01 23.0	
	comp=Z,6.6nm,0.7s						
MIAR	Mount Ida	3.92	124	IAmb_Lg		07 01 23.6	
	comp=Z,19nm,1.0s						
MGMO	Mountain Grove	4.21	84	IAmb_Lg		07 01 29.4	
	comp=Z,10nm,0.8s						
FCAR	Ozark Folk Cen	4.44	100	IAmb_Lg		07 01 34.8	
	comp=Z,18nm,1.0s						
KSCO	Kaye Shedlock'	4.60	300	IAmb_Lg		07 01 43.1	
	comp=Z,11nm,1.0s						

NNC 18 06:59:30.8±2.9**, 53°.78N**×**90°.63E, h6**^{km}±14^{km}**, mb4.0, mpv3.8, 10C-4D, Error ellipse: s-maj=24.3km s-min=18.2km az=23.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.44	275	⇑Pg	Pb	07 00 32.1	0.0
	7.3nm,0.9s						
ZAA0				⇑Lg	Lg	07 01 24.1	
	41nm,0.8s						
KURK	Kurchatov	7.98	252	⇑Pn	Pn	07 01 28.2	+1.0
	7.6nm,0.9s						
KURK				⇑Sn	Sn	07 02 58.1	+0.3
	33nm,1.0s						
KURK				⇓Lg	Lg	07 03 45.8	
	37nm,0.7s						
KURBB	Kurchatov Arra	8.07	252	⇑Pn	Pn	07 01 28.8	+0.3
	8.6nm,0.8s						
KURBB				⇑Sn	Sn	07 03 00.2	+0.1
	74nm,0.7s						
KURBB				⇑Lg	Lg	07 03 47.3	
	238nm,1.3s						
MK31	Makanchi Array	8.79	221	⇑Pn	Pn	07 01 39.2	+0.8
	2.7nm,0.7s,baz=34,slow=12,SNR=51						
MK31				⇓Sn	Sn	07 03 19.4	+1.7
	5.9nm,0.7s,baz=39,slow=24,SNR=4.6						
MK31				⇓Lg	Lg	07 04 07.6	
	18nm,0.8s,baz=51,slow=28,SNR=4.0						
MAKZ	Makanchi	8.90	222	⇑Pn	Pn	07 01 40.1	+0.3
	1.5nm,0.5s						
MAKZ				⇑Sn	Sn	07 03 21.4	+1.0
	8.4nm,0.8s						
MAKZ				⇓Lg	Lg	07 04 11.7	
	21nm,1.1s						

NOU 18 07:29:08.9, 15°.74S×**166°.28E, h0**^{km}**, MLv4.5**/10**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.94	72	P	Pg	07 29 25.8	-1.1
DVP	Devils Point	2.69	137	P	Pn	07 29 53.1	-0.4
RTV	Rentapao	2.90	135	P	Pn	07 29 56.3	0.0
KOUNC	Koumac, New Ca	5.15	201	P	Pn	07 30 27.2	-0.1
DZM	Mont Dzumac	6.30	179	P	Pn	07 30 42.4	-0.8
NOUC	Port Laguerre	6.33	180	P	Pn	07 30 44.0	+0.5

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*IDC **18** 07:43:33.8±2.4, 5°.17S×131°.95E, h0^{km}, mb3.6/1, mb1 3.9/5, mb1mx3.5/37, mbtmp3.8/5, ML3.7/4, Error ellipse: s-maj=113.1km s-min=25.0km az=83.0*

ISC 18 07:43:32.6±1.0**, 5°.30S**±0°.06×**131°.5E**±0°.2**, h10**^{km}**, n5, σ4^{s}.46**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.40	357	Pn	Pn	07 44 40.9	+1.3
	3.9nm,0.3s,baz=62,slow=5.6,SNR=22						
SIJI				Sn	Sn	07 45 24.4	-6.6
	5.0nm,0.3s,baz=175,slow=23,SNR=8.7						
FITZ	Fitzroy Crossi	13.94	204	Pn	P	07 46 56.0	-2.5
	0.3nm,0.3s,baz=37,slow=13,SNR=8.1						
FITZ				Sn	Sn	07 49 24.8	-0.6
	0.2nm,0.3s,baz=305,slow=23,SNR=1.5						
WRA	Warramunga Arr	14.82	169	Pn	Pn	07 47 05.7	+3.2
	0.4nm,0.3s,baz=357,slow=14,SNR=8.7						
WRA				Sn	Sn	07 49 41.8	-5.1
	0.2nm,0.3s,baz=356,slow=23,SNR=3.1						
ASAR	Alice Springs	18.41	173	P	Pn	07 47 51.7	+3.5
	0.3nm,0.3s,baz=349,slow=8.9,SNR=20						
ASAR				S	Sn	07 51 12.4	-1.7
	0.1nm,0.3s,baz=0.8,slow=28,SNR=4.2						
MKAR	Makanchi Array	67.63	326	P	P	07 54 33.7	+3.9
	0.6nm,1.0s,baz=124,slow=6.8,SNR=2.4						

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*IDC **18** 07:56:36.8±0.2, 60°.64S×25°.38W, h0^{km}, mb4.1/5, mb1 4.3/6, mb1mx4.0/21, mbtmp4.2/6, ML4.5/1, MS3.3/3, Ms1 3.2/3, ms1mx3.0/21, Error ellipse: s-maj=12.0km s-min=1.9km az=53.0*

*NEIC **18** 07:56:40.0±1.3, 60°.3S±0°.1×25°.4W±0°.3, h10^{km}±1^{km}, mb4.6/19, Error ellipse: s-maj=30.2km s-min=14.7km az=50.0*

ISC 18 07:56:41.6±0.8**, 60°.6S**±0°.1×**25°.0W**±0°.1**, h35**^{km}**, n39, σ1^{s}.36**/32**, mb4.5**/12**, MS3.1**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	8.83	310	Pn	Pn	07 58 49.6	+3.0
VNA1	Neumayer--Stat	12.19	153	P	Pn	07 59 32.5	+0.1
VNA3	Neumayer Olymp	12.35	156	P	Pn	07 59 34.3	-0.4
VNA2	Neumayer--Watz	12.59	153	P	Pn	07 59 37.8	-0.1
	baz=316,slow=14						
SNAA	Sanae	14.17	151	P	Pn	07 59 58.8	-0.7
SNAA	Sanae	14.17	151	Pn	Pn	07 59 58.8	-0.7
	2.1nm,0.3s,baz=355,slow=12,SNR=43						
SNAA				Sn	Sn	08 02 24.9	-10
	0.8nm,0.3s,baz=316,slow=23,SNR=7.9						
SNAA	Sanae	14.17	151		Pn	07 59 58.6	-0.9
PMSA	Palmer Station	18.20	240		P	08 00 53.5	+2.5
PMSA				IAmb	IAmb	08 00 54.9	
	comp=Z,43nm,1.5s						
EFI	East Falkland	20.26	281	P	P	08 01 11.3	-2.4
EFI				IAmb	IAmb	08 01 36.2	
	comp=Z,70nm,1.5s						
QSPA	South Pole Qui	29.67	180	P	P	08 02 43.2	-0.5
	comp=Z,3.5nm,0.6s,baz=201,slow=17,SNR=8.7						
QSPA	South Pole Qui	29.67	180	P	P	08 02 47.8	+4.1
QSPA				IAmb	IAmb	08 02 48.7	
	comp=Z,22nm,1.4s						
PLCA	Paso Flores	34.10	285	P	P	08 03 21.3	-1.5
	comp=Z,1.7nm,1.0s,baz=137,slow=5.5,SNR=6.1						
PLCA				LR	LR	08 17 00.1	
	comp=Z,36nm,19.1s,baz=190,slow=36						
PLCA	Paso Flores	34.10	285	IAmb	IAmb	08 03 44.6	
	comp=Z,9.6nm,1.5s						
BO01	Tunca	39.45	290	P	P	08 04 07.5	-0.6
BO01				IAmb	IAmb	08 04 34.4	
	comp=Z,13nm,1.3s						
MT09	Talagante	39.92	291	P	P	08 04 11.2	-1.0
MT09				IAmb	IAmb	08 04 31.6	
	comp=Z,13nm,1.1s						
MT01	Popeta	39.97	291	P	P	08 04 11.2	-1.2
MT01				IAmb	IAmb	08 04 19.8	
	comp=Z,14nm,1.1s						
MT02	Curacav	40.42	291	P	P	08 04 15.1	-1.1
CPUP	Villa Florida	40.70	313	LR	LR	08 22 01.1	
	comp=Z,24nm,19.0s,baz=218,slow=38						
VNDA	Vanda	42.10	182	P	P	08 04 30.7	+1.3
	comp=Z,0.6nm,0.8s,baz=186,slow=9.2,SNR=3.7						
VNDA	Vanda	42.10	182	P	P	08 04 33.7	+4.3
AC04	Llanos de Chal	44.67	295	P	P	08 04 50.4	-0.3
LVC	Limon Verde	48.61	301	P	P	08 05 21.6	-0.4
LVC				IAmb	IAmb	08 05 22.6	
	comp=Z,14nm,1.4s						
CASY	Casey	49.26	158	P	P	08 05 32.0	+5.9
CASY				IAmb	IAmb	08 05 55.6	
	comp=Z,8.4nm,1.1s						
PB07	IPOC Station P	49.81	301	P	P	08 05 29.9	-1.1
PB01	IPOC Station P	50.24	302	P	P	08 05 33.3	-0.9
PB01				IAmb	IAmb	08 05 34.0	
	comp=Z,6.1nm,0.9s						
PB16	IPOC Station P	52.67	303	P	P	08 05 52.2	-0.8
PB16				IAmb	IAmb	08 06 07.2	
	comp=Z,7.3nm,1.4s						
LPAZ	La Paz	53.95	306	P	P	08 06 01.8	-0.6
	comp=Z,1.5nm,0.3s,baz=105,slow=4.4,SNR=18						
LPAZ	La Paz	53.95	306	P	P	08 06 01.6	-0.8
ETMB	Extrema	59.11	311	P	P	08 06 36.6	-1.8
BOAV	Boa Vista	68.56	321	P	P	08 07 38.3	-2.2
TORD	Torodi Ar. Bea	76.51	27	P	P	08 08 29.2	+1.4
	comp=Z,1.6nm,0.7s,baz=197,slow=6.2,SNR=10						
TORD	Torodi Ar. Bea	76.51	27	IAmb	IAmb	08 08 31.9	
	comp=Z,1.4nm,0.8s						
WRA	Warramunga Arr	98.04	160	LR	LR	08 53 37.4	
	comp=Z,20nm,19.4s,baz=190,slow=35						
YKA	Yellowknife Ar	140.22	313	PKP	PKiKP	08 16 06.8	-0.6
	comp=Z,0.2nm,0.6s,baz=143,slow=2.2,SNR=4.3						
A36M	Sachs Harbour	148.62	324	PKPbc	PKiKP	08 16 24.2	-0.1
EPYK	Eagle Plains	150.39	311	PKPbc	PKiKP	08 16 28.4	+0.1
BCAR	Beaver Creek A	151.10	303	PKPbc	PKiKP	08 16 31.2	+1.4
L27K	Beaver Creek,	151.12	303	PKPbc	PKiKP	08 16 31.3	+1.4
ILAR	Eielson Array	153.82	304	PKPbc	PKiKP	08 16 37.4	+2.0
	comp=Z,0.1nm,0.3s,baz=108,slow=1.1,SNR=4.7						

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*IDC **18** 08:01:54.3±1.0, 34°.43N×105°.19E, h0^{km}, mb3.8/9, mb1 3.9/12, mb1mx3.7/54, mbtmp3.8/12, ML4.0/3, MS3.2/9, Ms1 3.2/9, ms1mx2.9/58, Error ellipse: s-maj=26.9km s-min=18.5km az=62.0*

*BJI **18** 08:01:55.5±0.0, 34°.10N×105°.12E, h21^{km}, mB4.4/1, mb4.0/4, ML4.3/22, Ms3.7/5, Ms7 3.5/7*

ISC 18 08:01:56.2±0.6**, 34°.47N**±0°.05×**105°.42E**±0°.04**, h10**^{km}**, n23, σ2^{s}.16**/28**, mb3.8**/9**, MS3.1**/6**, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZH	Lanzhou	2.06	322	*e*Pn	Pb	08 02 33.4	-0.5
LZH				Pg	Pg	08 02 36.5	+0.7
LZH				Sn	Sg	08 03 02.4	-0.2
LZH				Sg	Sb	08 03 06.3	+6.6
LZH				smax	smax		
	comp=N,3μm,0.9s						
LZH				smax	smax		
	comp=E,6μm,1.1s						
XAN	Xi'an	2.93	97	Pg	Pg	08 02 51.9	-0.5
XAN				Sg	Sg	08 03 34.8	+4.3
XAN				smax	smax		
	comp=N,2μm,0.5s						
XAN				smax	smax		
	comp=E,2μm,0.8s						
CD2	Chengdu	3.81	202	Pg	Pn	08 02 56.8	+1.7
CD2				Sg	Sn	08 03 38.3	-1.7
CD2				smax	smax		
	comp=N,800nm,1.0s						
CD2				smax	smax		
	comp=E,800nm,0.8s						
TIY	Taiyuan	6.54	58	Pn	Pb	08 03 43.6	-6.5
TIY				Pg	Pg	08 04 01.3	-0.1
TIY				Sg	Sg	08 05 23.0	-3.0
TIY				smax	smax		
	comp=N,140nm,0.7s						
TIY				smax	smax		
	comp=E,99nm,0.6s						
GTA	Gaotai	6.67	319	Pn	Pn	08 03 33.9	-0.4
GTA				Pg	Pg	08 03 59.3	-4.6
GTA				Sn	Sn	08 04 48.5	-1.9
GTA				Sg	Sg	08 05 29.8	-0.4
GTA				smax	smax		
	comp=E,62nm,0.9s						
GTA				smax	smax		
	comp=E,50nm,1.0s						
GTA				LR	LR		
	comp=E,330nm,8.4s						
GTA				LR	LR		
	comp=E,370nm,8.4s						
GTA				LR	LR		

	comp=E,190nm,13.5s						
BTO	**Baotou**	**7.13**	**29**	*e*Pn	Pn	08 03 45.6	+4.9
BTO				Pg	**Pg**	**08 04 10.8**	**-2.0**
BTO				Sg	**Sg**	**08 05 44.5**	**-0.6**
BTO				smax	smax		
	comp=E,290nm,0.6s						
BTO				smax	smax		
	comp=E,360nm,0.9s						
SONM	**Songino Array**	**13.37**	**3**	Pn	**Pn**	**08 05 07.3**	**+1.2**
	comp=E,0.3nm,0.3s,baz=179,slow=14,SNR=9.2						
SONM				LR	LR	08 10 57.8	
	comp=E,173nm,18.1s,baz=140,slow=40						
WMQ	**Urumqi**	**16.59**	**309**	*e*P	**Pn**	**08 05 47.8**	**-1.1**
CMAR	**Chiang Mai Arr**	**16.96**	**202**	Pn	**Pn**	**08 05 49.5**	**-4.1**
	comp=E,0.6nm,0.3s,baz=13,slow=11,SNR=7.3						
CMAR				LR	LR	08 13 20.5	
	comp=E,54nm,19.4s,baz=31,slow=41						
TLY	**Talaya**	**17.25**	**356**	LR	LR	08 13 36.1	
	comp=E,81nm,19.4s,baz=167,slow=41						
KSRS	**Korea Array**	**18.45**	**74**	P	**Pn**	**08 06 13.5**	**+1.4**
	comp=E,0.4nm,0.3s,baz=267,slow=10.0,SNR=1.7						
MKAR	**Makanchi Array**	**21.35**	**312**	P	**P**	**08 06 42.2**	**-1.2**
	comp=E,1.3nm,0.7s,baz=115,slow=12,SNR=12						
MKAR				LR	LR	08 14 33.5	
	comp=E,57nm,19.0s,baz=12,slow=36						
USRK	**Ussuriysk Ar.**	**22.65**	**57**	LR	LR	08 16 54.7	
	comp=E,54nm,18.7s,baz=236,slow=39						
ZALV	**Zalesovo Beam**	**24.28**	**330**	P	**P**	**08 07 12.3**	**-1.1**
	comp=E,0.9nm,0.3s,baz=138,slow=9.1,SNR=3.9						
ZALV				LR	LR	08 17 12.1	
	comp=E,32nm,20.1s,baz=76,slow=38						
KLR	**Kul'dur**	**24.38**	**45**	P	**P**	**08 07 15.6**	**+1.2**
	comp=E,2.8nm,0.6s,baz=266,slow=9.9,SNR=7.8						
KLR				LR	LR	08 17 57.6	
	comp=E,98nm,20.7s,baz=239,slow=39						
KURBB	**Kurchatov Arra**	**25.36**	**318**	P	**P**	**08 07 22.1**	**-1.1**
	comp=E,2.0nm,0.6s,baz=123,slow=10,SNR=12						
ASAJ	**Asahikawa**	**30.12**	**60**	LR	LR	08 21 23.5	
	comp=E,44nm,18.2s,baz=119,slow=39						
NRIK	**Noril'sk**	**36.31**	**349**	P	**P**	**08 08 59.5**	**-0.1**
	comp=E,2.5nm,0.6s,baz=145,slow=9.5,SNR=5.3						
GEYT	**Alibeck**	**38.01**	**289**	LR	LR	08 26 58.1	
	comp=E,37nm,18.5s,baz=120,slow=40						
WRA	**Warramunga Arr**	**60.70**	**149**	P	**P**	**08 12 09.3**	**+1.4**
	comp=E,0.5nm,0.7s,baz=338,slow=6.2,SNR=1.9						
ASAR	**Alice Springs**	**63.84**	**151**	P	**P**	**08 12 28.9**	**0.0**
	comp=E,0.2nm,0.7s,baz=350,slow=7.8,SNR=4.6						
ILAR	**Eielson Array**	**66.33**	**26**	P	**P**	**08 12 44.3**	**-0.3**
	comp=E,0.4nm,0.8s,baz=289,slow=4.5,SNR=6.9						
YKA	**Yellowknife Ar**	**78.16**	**18**	P	**P**	**08 13 55.3**	**0.0**
	comp=E,0.6nm,0.6s,baz=330,slow=5.4,SNR=8.8						

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*ANF **18** 08:06:06.9±0.5, 36°.15N×97°.65W, h2^{km}±5^{km}, ML3.6/11, Error ellipse: s-maj=4.8km s-min=4.0km az=63.0*

*TUL **18** 08:06:07.1±1.1, 36°.12N±0°.01×97°.64W±0°.01, h5^{km}±7^{km}, ML3.3, mb_Lg2.9/59(NEIC), Error ellipse: s-maj=1.9km s-min=1.3km az=217.0*

*NEIC **18** 08:06:07.2±1.1, 36°.122N±0°.010×97°.63W±0°.02, h4^{km}±7^{km}, Error ellipse: s-maj=2.2km s-min=0.9km az=58.0*

ISC 18 08:06:07.3±1.1**, 36°.13N**±0°.02×**97°.64W**±0°.03**, h8**^{km}±13^{km}**, n71, σ0^{s}.58**/48**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.47**	**324**		**Pg**	**08 06 16.4**	**+0.1**
CROK				Sg	**Sg**	**08 06 23.2**	**+0.7**
BCOK	**Bluff Creek, N**	**0.47**	**177**		**Pg**	**08 06 16.4**	**0.0**
BCOK				Sg	**Sg**	**08 06 22.8**	**+0.3**
OK025	**Westminster Rd**	**0.60**	**156**		**Pg**	**08 06 18.7**	**-0.1**
OK025				IAmb_Lg		08 06 26.6	
	comp=Z,146nm,0.9s						
OK025				Sg	**Sg**	**08 06 26.9**	**+0.3**
OK031	**S. Brethren Rd**	**0.67**	**105**		**Pg**	**08 06 20.1**	**-0.1**
OK031				Sg	**Sg**	**08 06 28.9**	**0.0**
BLOK	**Blackwell**	**0.72**	**28**		**Pg**	**08 06 21.0**	**-0.1**
BLOK				Sg	**Sg**	**08 06 30.9**	**+0.4**
OK030	**Cody Creek RV**	**0.72**	**106**		**Pg**	**08 06 21.0**	**-0.2**
OK030				Sg	**Sg**	**08 06 30.4**	**-0.1**
OKCFA	**Oklahoma City**	**0.73**	**168**		**Pg**	**08 06 21.0**	**-0.3**
OKCFA	**Oklahoma City**	**0.73**	**168**	P	**Pg**	**08 06 21.0**	**-0.3**
	baz=348,SNR=59						
OKCSW	**OKLAHOMA CITY**	**0.74**	**167**		**Pg**	**08 06 21.2**	**-0.3**
GC02	**Grant County #**	**0.74**	**346**		**Pg**	**08 06 21.5**	**-0.1**
QUOK	**Quay**	**0.76**	**86**		**Pg**	**08 06 21.6**	**-0.2**
OK034	**N. Norfolk Rd.**	**0.76**	**99**		**Pg**	**08 06 21.8**	**-0.1**
KAN14	**Manchester OK**	**0.87**	**343**		**Pg**	**08 06 23.6**	**-0.3**
FNO	**Franklin**	**0.89**	**167**		**Pg**	**08 06 23.9**	**-0.4**
KAN13	**South Haven SW**	**0.89**	**8**		**Pg**	**08 06 24.2**	**-0.2**
KAN17	**Caldwell West**	**0.92**	**354**		**Pg**	**08 06 24.6**	**-0.3**
KAN05	**Bluff City Nor**	**1.00**	**349**		**Pg**	**08 06 26.1**	**-0.3**
KAN09	**Caldwell North**	**1.01**	**1**		**Pg**	**08 06 26.2**	**-0.4**
KAN01	**Argonia South**	**1.03**	**355**		**Pg**	**08 06 26.6**	**-0.5**
KAN10	**Anthony SW Sta**	**1.06**	**340**		**Pg**	**08 06 27.0**	**-0.6**
KAN08	**Anthony NE Sta**	**1.13**	**346**		**Pg**	**08 06 28.0**	**-1.0**
U32A	**Winter Ranch,**	**1.13**	**283**	Pg	**Pg**	**08 06 28.3**	**-0.6**
U32A	**Winter Ranch,**	**1.13**	**283**	P	**Pg**	**08 06 28.2**	**-0.7**
	baz=103						
KAN06	**Argonia West S**	**1.13**	**351**		**Pg**	**08 06 28.5**	**-0.5**
KAN16	**Harper SW Stat**	**1.15**	**343**		**Pg**	**08 06 28.8**	**-0.6**
W35A	**Tecumseh**	**1.16**	**147**		**Pg**	**08 06 28.2**	**-1.2**
T35A	**Sooner Cattle**	**1.20**	**49**	Pg	**Pg**	**08 06 29.8**	**-0.6**
T35B	**Sooner Cattle**	**1.20**	**49**	P	**Pg**	**08 06 29.7**	**-0.6**
	baz=229,SNR=168						
KAN12	**Harper NE Stat**	**1.20**	**346**		**Pg**	**08 06 29.8**	**-0.6**
TUL1	**Leonard**	**1.51**	**98**	Pn	**Pn**	**08 06 34.5**	**-0.2**
TUL1	**Leonard**	**1.51**	**98**	S	**Sg**	**08 06 55.4**	**-0.5**
	baz=278						
X34A	**Smith Ranch, M**	**1.53**	**186**	Pn	**Pb**	**08 06 35.5**	**-0.3**
WMOK	**Wichita Mounta**	**1.67**	**214**	IAmb_Lg		08 07 02.2	
	comp=Z,54nm,0.7s						
LOOK	**Love County**	**2.16**	**170**	IAmb_Lg		08 07 15.9	
	comp=Z,45nm,0.8s						
X37A	**Clayton**	**2.41**	**129**		**Pn**	**08 06 47.6**	**+0.7**
X37A				IAmb_Lg		08 07 25.6	
	comp=Z,65nm,0.7s						
X37A	**Clayton**	**2.41**	**129**	P	**Pn**	**08 06 47.5**	**+0.5**
	baz=310,SNR=34						
R32A	**Long Quarter,**	**2.44**	**340**	P	**Pn**	**08 06 48.4**	**+0.9**
	baz=159,SNR=25						
U38A	**Gravette**	**2.65**	**82**	P	**Pn**	**08 06 51.5**	**+1.2**
	baz=264,SNR=49						
W39A	**Magazine**	**3.27**	**105**	P	**Pn**	**08 06 59.8**	**+0.9**
	baz=288,SNR=16						
AMTX	**Amarillo**	**3.52**	**251**	IAmb_Lg		08 08 07.3	
	comp=Z,29nm,0.7s						
Z38A	**Mt. Pleasant**	**3.60**	**142**	IAmb_Lg		08 08 10.6	
	comp=Z,45nm,0.8s						
MIAR	**Mount Ida**	**3.68**	**114**	IAmb_Lg		08 08 09.2	
	comp=Z,35nm,0.8s						
MIAR	**Mount Ida**	**3.68**	**114**	P	**Pn**	**08 07 05.3**	**+0.9**
	baz=297,SNR=32						
S39A	**Bolivar**	**3.79**	**64**	IAmb_Lg		08 08 06.3	
	comp=Z,38nm,1.1s						
S39A	**Bolivar**	**3.79**	**64**	P	**Pn**	**08 07 06.9**	**+0.9**
	baz=247,SNR=34						
WHTX	**Lake Whitney,**	**4.13**	**178**	P	**Pn**	**08 07 11.3**	**+0.7**
	baz=358,SNR=9.9						
X40A	**Basin Creek Fa**	**4.26**	**111**	IAmb_Lg		08 08 31.4	
	comp=Z,25nm,0.8s						
WHAR	**Wooly Hollow**	**4.43**	**99**	IAmb_Lg		08 08 35.5	
	comp=Z,28nm,0.8s						
MGMO	**Mountain Grove**	**4.44**	**75**	IAmb_Lg		08 08 26.3	
	comp=Z,23nm,0.7s						
WLAR	**White Oak Lake**	**4.45**	**122**	IAmb_Lg		08 08 38.9	
	comp=Z,21nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.48**	**91**	IAmb_Lg		08 08 30.9	
	comp=Z,19nm,0.7s						
N33A	**J Bar K, Exete**	**4.61**	**2**	IAmb_Lg		08 08 37.8	
	comp=Z,18nm,0.8s						
P38A	**Dawn**	**4.77**	**42**	IAmb_Lg		08 08 43.7	
	comp=Z,23nm,0.8s						
R40A	**Maddies Statio**	**4.80**	**62**	IAmb_Lg		08 08 46.5	
	comp=Z,17nm,0.8s						
R40A	**Maddies Statio**	**4.80**	**62**	P	**Pn**	**08 07 20.2**	**+0.3**
	baz=245,SNR=12						
KSCO	**Kaye Shedlock'**	**4.90**	**307**	IAmb_Lg		08 08 55.4	
	comp=Z,23nm,1.0s						
LCAR	**Lake Charles**	**5.25**	**89**	IAmb_Lg		08 08 56.2	
	comp=Z,21nm,0.9s						
435B	**Jarrell**	**5.33**	**179**	IAmb_Lg		08 09 06.2	
	comp=Z,24nm,0.8s						
T25A	**Trinidad**	**5.54**	**283**	IAmb_Lg		08 09 10.4	
	comp=Z,22nm,0.7s						
N38A	**Joes South For**	**5.80**	**35**	IAmb_Lg		08 09 27.0	
	comp=Z,35nm,0.7s						
PBMO	**Poplar Bluff**	**5.85**	**81**	IAmb_Lg		08 09 23.7	
	comp=Z,17nm,0.8s						
OGNE	**Ogallala**	**5.92**	**326**	IAmb_Lg		08 09 18.0	
	comp=Z,19nm,0.8s						
143A	**Socs Landing,**	**6.18**	**122**	IAmb_Lg		08 09 36.7	
	comp=Z,15nm,0.8s						
PARMO	**Parma**	**6.38**	**83**	IAmb_Lg		08 09 34.2	
	comp=Z,27nm,0.8s						
S44A	**Carbondale**	**6.90**	**74**	IAmb_Lg		08 09 41.6	
	comp=Z,16nm,0.9s						
SIUC	**Southern Illin**	**6.93**	**74**	IAmb_Lg		08 09 42.5	
	comp=Z,25nm,1.0s						
W45A	**Hickory Valley**	**6.95**	**96**	IAmb_Lg		08 09 55.0	
	comp=Z,25nm,0.9s						
T45A	**Paducah**	**7.29**	**80**	IAmb_Lg		08 09 59.9	
	comp=Z,22nm,0.8s						
P43A	**Skaggs, Pawnee**	**7.32**	**59**	IAmb_Lg		08 10 08.3	
	comp=Z,19nm,0.8s						
ECSD	**EROS Data Cent**	**7.64**	**6**	P	**Pn**	**08 07 57.7**	**-1.1**
	baz=186,SNR=6.3						
HDIL	**Hopedale**	**7.91**	**54**	IAmb_Lg		08 10 33.7	
	comp=Z,24nm,0.8s						

IDC 18 08:12:02.8±8.7**, 55°.93S**×**27°.02W, h75**^{km}±79^{km}**, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.3**/21**, mbtmp3.8**/4**, Error ellipse: s-maj=27.7km s-min=11.9km az=64.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**34.33**	**180**	P	P	08 18 41.4	-0.4
	0.6nm,0.5s,baz=193,slow=6.6,SNR=2.1						
VNDA	**Vanda**	**46.70**	**183**	P	P	08 20 23.3	0.0
	0.6nm,0.8s,baz=199,slow=6.9,SNR=7.6						
LPAZ	**La Paz**	**50.38**	**305**	P	P	08 20 52.9	-0.1
	0.9nm,0.4s,baz=123,slow=3.6,SNR=9.7						
TORD	**Torodi Ar. Bea**	**72.90**	**29**	P	P	08 23 23.7	+0.1
	0.5nm,0.5s,baz=190,slow=6.7,SNR=5.4						
ILAR	**Eielson Array**	**150.10**	**312**	PKPbc	PKPbc	08 31 42.8	-0.5
	0.6nm,0.8s,baz=126,slow=1.6,SNR=5.5						

WEL 18 08:15:35.6±1.0**, 37°S**±6°×**17°8E**±°**, h63**^{km}±24^{km}**, M3.6**/18**, ML3.9**/18**, MLv3.6**/18**, Error ellipse: s-maj=0.0km s-min=0.0km az=71.5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.00**	**175**	P	Pn	08 15 52.9	-0.8
MXZ				S	Sn	08 16 07.7	+0.5
HAZ	**Te Kaha**	**1.23**	**196**	P	Pn	08 15 55.8	-1.0
HAZ				S	Sn	08 16 13.8	+1.1
WMGZ	**Waiomatatini S**	**1.26**	**172**	P	Pn	08 15 57.8	+0.7
PKGZ	**Pakihiroa**	**1.32**	**184**	P	Pn	08 15 58.5	+0.5
RUGZ	**Raukumara Rang**	**1.46**	**197**	P	Pn	08 15 59.4	-0.5
RUGZ				S	Sn	08 16 18.2	+0.1
PUZ	**Puketiti**	**1.50**	**178**	P	Pn	08 16 00.1	-0.2
TWGZ	**Tauwhareparae**	**1.62**	**186**	P	Pn	08 16 02.4	+0.5
WHRZ	**Whale Island**	**1.62**	**217**	P	Pn	08 16 03.6	+1.7
MYRZ	**Mayor Island**	**1.73**	**245**	P	Pn	08 16 03.3	-0.1
OPRZ	**Ohinepanea**	**1.83**	**225**	P	Pn	08 16 04.2	-0.6
MWZ	**Matawai**	**1.84**	**197**	P	Pn	08 16 04.9	-0.2
MWZ				S	Sn	08 16 28.0	+0.6
MARZ	**Manawahe**	**1.87**	**220**	P	Pn	08 16 04.9	-0.4
TKGZ	**Te Karaka**	**1.89**	**189**	P	Pn	08 16 05.4	-0.1
TKGZ				S	Sn	08 16 29.0	+0.6
URZ	**Urewera**	**1.90**	**207**	P	Pn	08 16 05.2	-0.5
URZ				S	Sn	08 16 28.1	-0.6
CNGZ	**Carnagh Statio**	**1.91**	**180**	P	Pn	08 16 05.7	-0.2
EDRZ	**Edgecumbe**	**1.93**	**217**	P	Pn	08 16 07.1	+0.9
TGRZ	**Tauranga**	**1.94**	**233**	P	Pn	08 16 06.0	-0.2
KUZ	**Kuaotunu**	**2.01**	**264**	P	Pn	08 16 06.6	-0.6
RAGZ	**Rawiri**	**2.02**	**198**	P	Pn	08 16 08.0	+0.5
OMRZ	**Omania**	**2.12**	**223**	P	Pn	08 16 10.7	+1.9
KARZ	**Kaharoa**	**2.13**	**227**	P	Pn	08 16 08.7	-0.2
TARZ	**Mount Tarawera**	**2.15**	**219**	P	Pn	08 16 11.1	+2.0
RIGZ	**Rimuhau**	**2.16**	**189**	P	Pn	08 16 08.5	-0.8
RIGZ				S	Sn	08 16 35.2	+0.1
KMRZ	**Kaimai**	**2.21**	**234**	P	Pn	08 16 09.8	-0.2
MUGZ	**Murupara**	**2.22**	**210**	P	Pn	08 16 10.5	+0.4
RRRZ	**Republican Roa**	**2.22**	**217**	P	Pn	08 16 11.7	+1.6
GRZ	**Great Barrier**	**2.24**	**277**	P	Pn	08 16 09.8	-0.5
SNGZ	**Shannon Statio**	**2.31**	**197**	P	Pn	08 16 11.0	-0.3
SNGZ				S	Sn	08 16 39.8	+1.0
PRGZ	**Paritu Road**	**2.37**	**186**	P	Pn	08 16 11.1	-1.0
PRGZ				S	Sn	08 16 38.9	-1.1
PRRZ	**Plateau Road**	**2.41**	**216**	P	Pn	08 16 13.3	+0.7
TOZ	**Tahuroa Road**	**2.45**	**241**	P	Pn	08 16 13.0	-0.2
WIAZ	**Waiheke Island**	**2.48**	**264**	P	Pn	08 16 13.4	-0.2
ALRZ	**Allen Road**	**2.48**	**216**	P	Pn	08 16 13.8	+0.2
RAHZ	**Arahi**	**2.51**	**200**	P	Pn	08 16 13.4	-0.6
RAHZ				S	Sn	08 16 43.7	+0.3
MTHZ	**Maungataniwha**	**2.52**	**205**	P	Pn	08 16 13.9	-0.4
MHGZ	**Mahia Peninsul**	**2.59**	**185**	P	Pn	08 16 13.6	-1.5
ETAZ	**East Tamaki Re**	**2.66**	**261**	P	Pn	08 16 16.1	+0.1
MBAZ	**Motutapu North**	**2.67**	**265**	P	Pn	08 16 16.0	-0.1
MRHZ	**Matea Rd**	**2.67**	**212**	P	Pn	08 16 16.0	-0.2
NMHZ	**Naumai**	**2.76**	**203**	P	Pn	08 16 17.0	-0.4
ARHZ	**Aropaoanui**	**2.86**	**199**	P	Pn	08 16 17.4	-1.4
ARHZ				S	Sn	08 16 51.3	-0.6
AWAZ	**Awhitu Peninsu**	**2.90**	**259**	P	Pn	08 16 19.8	+0.5
RVAZ	**Riverhead Bore**	**2.92**	**265**	P	Pn	08 16 20.0	+0.4
BKZ	**Black Stump Fm**	**2.93**	**207**	P	Pn	08 16 18.7	-1.1
MCHZ	**McNeill Hill**	**3.11**	**202**	P	Pn	08 16 20.4	-1.8
NTVZ	**North Tongarir**	**3.22**	**218**	P	Pn	08 16 26.7	+2.8
TMVZ	**Te Maari**	**3.22**	**217**	P	Pn	08 16 26.8	+2.9
KRVZ	**Karewarewa**	**3.24**	**218**	P	Pn	08 16 24.1	0.0
OTVZ	**Oturere**	**3.28**	**217**	P	Pn	08 16 25.0	+0.4
WTVZ	**West Tongariro**	**3.28**	**218**	P	Pn	08 16 25.9	+1.3
HIZ	**Hauiti**	**3.30**	**233**	P	Pn	08 16 25.2	+0.5
SNVZ	**South Ngauruho**	**3.31**	**217**	P	Pn	08 16 25.4	+0.3
NGZ	**Ngauruhoe**	**3.32**	**218**	P	Pn	08 16 28.0	+2.7
TWVZ	**Taurewa**	**3.32**	**220**	P	Pn	08 16 26.4	+1.1
TUVZ	**Tukino**	**3.37**	**216**	P	Pn	08 16 26.8	+0.9
BHHZ	**Black Hill Sta**	**3.37**	**209**	P	Pn	08 16 24.2	-1.6
KAHZ	**Kahuranaki**	**3.39**	**198**	P	Pn	08 16 23.6	-2.5
KRHZ	**Kereru**	**3.40**	**205**	P	Pn	08 16 23.5	-2.6
FWVZ	**Far West T-bar**	**3.41**	**217**	P	Pn	08 16 26.8	+0.3
MOVZ	**Moawhango**	**3.43**	**214**	P	Pn	08 16 25.6	-1.1
WNVZ	**Wahianoa**	**3.44**	**216**	P	Pn	08 16 26.4	-0.4
PKVZ	**Pokaka**	**3.54**	**219**	P	Pn	08 16 30.3	+2.2
MTVZ	**Mangateitei**	**3.55**	**217**	P	Pn	08 16 30.3	+2.1
PXZ	**Pawanui**	**3.62**	**197**	P	Pn	08 16 25.4	-3.7
PNHZ	**Pukenui**	**3.69**	**205**	P	Pn	08 16 27.0	-3.2
PRHZ	**Porangahau**	**3.89**	**198**	P	Pn	08 16 29.3	-3.6
OUZ	**Omahuta**	**3.98**	**288**	P	Pn	08 16 33.8	-0.2
WAZ	**Wanganui**	**4.07**	**218**	P	Pn	08 16 35.8	+0.5
NEZ	**North Egmont**	**4.22**	**229**	P	Pn	08 16 40.0	+2.5
PKE	**Pukeiti**	**4.24**	**231**	P	Pn	08 16 40.9	+3.2
MRZ	**Mangatainoka R**	**4.58**	**206**	P	Pn	08 16 38.9	-3.3
OGWZ	**Otaki Gorge**	**4.86**	**208**	P	Pn	08 16 43.2	-2.9
DUWZ	**D'Urville Isla**	**5.39**	**217**	P	Pn	08 16 51.7	-1.8
NNZ	**Nelson**	**5.98**	**218**	P	Pn	08 16 59.8	-1.6
THZ	**Tophouse**	**6.62**	**217**	P	Pn	08 17 07.2	-3.1
KHZ	**Kahutara**	**6.86**	**210**	P	Pn	08 17 11.9	-1.6
CTZ	**Chatham Island**	**8.18**	**153**	P	Pn	08 17 28.3	-3.3
CTZ				S	Sn	08 18 50.5	-12

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*IDC **18** 08:18:18.1±2.9, 6°.54S×130°.07E, h96^{km}±37^{km}, mb3.4/2, mb1 3.7/6, mb1mx3.3/46, mbtmp4.0/6, Error ellipse: s-maj=73.1km s-min=21.6km az=90.0*

ISC 18 08:18:17.6±0.7**, 6°.47S**±0°.06×**129°.9E**±0°.1**, h100**^{km}**, n15, σ2^{s}.45**/17**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**4.22**	**33**	P	**Pn**	**08 19 20.1**	**+0.3**
SIJI	**Sorong**	**5.72**	**14**	P	**Pn**	**08 19 41.1**	**+0.9**
	7.0nm,0.3s,baz=212,slow=15,SNR=7.4						
SIJI				S	**Sn**	**08 20 40.5**	**-4.2**
	4.2nm,0.3s,baz=240,slow=22,SNR=7.7						
DRS	**Darwin Rock St**	**6.00**	**171**	P	**Pn**	**08 19 47.6**	**+3.7**
MTN	**Manton Dam**	**6.45**	**169**	P	**Pn**	**08 19 52.5**	**+2.5**
KDU	**Kakadu**	**6.67**	**158**	P	**Pn**	**08 19 54.3**	**+1.3**
KNRA	**Kununurra**	**9.22**	**187**	P	**Pn**	**08 20 30.4**	**+2.7**
PLAI	**Plampang**	**12.26**	**258**	P	**P**	**08 21 15.3**	**-1.7**
FITZ	**Fitzroy Crossi**	**12.29**	**199**	P	**Pn**	**08 21 10.0**	**+0.9**
	0.7nm,0.3s,baz=32,slow=9.2,SNR=48						
FITZ				S	**Sn**	**08 23 20.2**	**-4.1**
	1.2nm,0.3s,baz=316,slow=23,SNR=7.5						
WRA	**Warramunga Arr**	**14.06**	**163**	P	**Pn**	**08 21 29.7**	**-2.7**
	0.6nm,0.3s,baz=345,slow=13,SNR=31						
WRA				S	Sn	08 23 55.9	-11
	1.9nm,0.3s,baz=336,slow=16,SNR=9.2						
COEN	**Coen**	**15.01**	**121**	P	**Pn**	**08 21 43.3**	**-1.3**
QIS	**Mount Isa**	**16.86**	**147**	P	**Pn**	**08 22 08.2**	**+0.6**
ASAR	**Alice Springs**	**17.52**	**168**	P	**P**	**08 22 15.9**	**+0.6**
	0.7nm,0.3s,baz=352,slow=12,SNR=42						
ASAR				S	Sn	08 25 20.1	-11
	0.4nm,0.3s,baz=356,slow=28,SNR=7.7						
WRKA	**Warakurna**	**18.53**	**185**	P	**Pn**	**08 22 29.0**	**+1.3**
SONM	**Songino Array**	**57.92**	**341**	P	**P**	**08 28 01.0**	**+1.6**
	0.2nm,0.4s,baz=157,slow=7.1,SNR=2.0						
MKAR	**Makanchi Array**	**67.74**	**327**	P	**P**	**08 29 06.1**	**+1.6**
	0.6nm,0.4s,baz=119,slow=8.1,SNR=4.9						

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*EAF **18** 08:22:31.2±1.4, 26°.13S×29°.28E, h5^{km}±28^{km}, MD3.9*

BUL 18 08:22:30.7±0.9**, 26°.16S**×**29°.11E, h4**^{km}±19^{km}**, MD4.2, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	**Mopani**	**3.35**	**39**	*i* P	Pn	08 23 21.9	-2.0
MOPA				*i* Sg	Sb	08 24 11.7	-0.3
MOPA	**Mopani**	**3.35**	**39**	*i* P	Pn	08 23 21.9	-2.0
MOPA				*i* Sg	Sb	08 24 11.7	-0.3
MSNA	**Messina**	**3.89**	**13**	*i* P	Pn	08 23 31.6	+0.2
MSNA	**Messina**	**3.89**	**13**	*i* P	Pn	08 23 31.6	+0.2
MATP	**Matopo**	**5.74**	**354**	*i* P	Pn	08 23 55.5	-1.4
MATP				*i* S	Sn	08 24 58.2	-5.1
MATP	**Matopo**	**5.74**	**354**	*i* P	Pn	08 23 55.5	-1.4
MATP				*i* S	Sn	08 24 58.2	-5.1

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*NEIC **18** 08:24:33.8±2.6, 54°.93N±0°.02×134°.66W±0°.08, h14^{km}±5^{km}, Error ellipse: s-maj=6.6km s-min=3.5km az=96.0*

*PGC **18** 08:24:36.0±1.4, 54°.88N×134°.45W, h20^{km}, ML2.9/4, 176km Wnw of Masset, Bc Haida Gwaii Region*

ISC 18 08:24:34.0±1.5**, 55°.00N**±0°.04×**134°.57W**±0°.09**, h25**^{km}**, n16, σ1^{s}.42**/20**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDB	**Naden**	**1.42**	**137**	P	**Pb**	**08 24 58.9**	**-0.9**
NDB				S	**Sb**	**08 25 16.3**	**-1.1**
WRAK	**Wrangell Islan**	**1.90**	**41**	Pn	**Pb**	**08 25 06.9**	**-1.1**
WRAK				Sn	**Sb**	**08 25 31.7**	**+0.5**
SIT	**Sitka**	**2.10**	**349**	Pn	**Pb**	**08 25 12.0**	**+0.5**
SIT				IAML		08 25 33.1	
	comp=N,46nm,5.0s						
SIT				IAML		08 25 44.2	
	comp=E,49nm,2.2s						
DIB	**Dawson Inlet,**	**2.18**	**145**	Pn	**Pn**	**08 25 08.4**	**-0.3**
DIB				IAML		08 26 11.6	
	comp=N,49nm,4.2s						
DIB	**Dawson Inlet,**	**2.18**	**145**	Pn	**Pn**	**08 25 08.4**	**-0.3**
DIB				Sg	**Sb**	**08 25 40.0**	**+0.6**
MOBC	**Moresby Island**	**2.41**	**139**	Pn	**Pn**	**08 25 12.2**	**+0.3**
MOBC				IAML		08 25 30.1	
	comp=E,95nm,4.7s						
MOBC	**Moresby Island**	**2.41**	**139**	Sg	**Sb**	**08 25 46.6**	**+0.7**
MOBC	**Moresby Island**	**2.41**	**139**	Sg	**Sb**	**08 25 46.6**	**+0.7**
RUBB	**Prince Rupert**	**2.60**	**103**	Pn	**Pn**	**08 25 13.2**	**-1.2**
RUBB				IAML		08 25 43.8	
	comp=N,41nm,4.1s						
RUBB				IAML		08 26 43.6	
	comp=E,46nm,3.3s						
RUBB	**Prince Rupert**	**2.60**	**103**	Sg	**Sb**	**08 25 53.6**	**+2.4**
RUBB	**Prince Rupert**	**2.60**	**103**	Sg	**Sb**	**08 25 53.6**	**+2.4**
GRNB	**Grenville Isla**	**2.93**	**111**	Pn	**Pn**	**08 25 18.1**	**-0.9**
GRNB				IAML		08 25 55.7	
	comp=N,50nm,4.0s						
GRNB				IAML		08 26 50.1	
	comp=E,39nm,4.4s						
GRNB	**Grenville Isla**	**2.93**	**111**	Pn	**Pn**	**08 25 17.7**	**-1.3**
GRNB				Sg	**Sb**	**08 26 03.4**	**+2.4**
BNB	**Barry Inlet**	**2.95**	**144**	Sg	**Sb**	**08 26 03.1**	**+1.6**
HG4B	**Hotspring**	**3.38**	**142**	Pn	**Pn**	**08 25 24.4**	**-0.7**
HG4B	**Hotspring**	**3.38**	**142**	Sg	**Sb**	**08 26 15.9**	**+2.2**

NNC 18 08:28:55.4±3.4**, 53°.54N**×**90°.33E, h0**^{km}**, mb3.7, mpv3.4, 10C-4D, Error ellipse: s-maj=27.0km s-min=21.7km az=80.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.30**	**279**	⇑Pn	Pn	08 29 49.6	+1.4
	1.8nm,0.6s						
ZAA0				⇑Lg	Lg	08 30 40.4	
	18nm,0.8s						
KURK	**Kurchatov**	**7.74**	**253**	⇑Pn	Pn	08 30 46.4	-2.8
	2.4nm,0.9s						
KURK				⇓Sn	Sn	08 32 20.8	+3.3
	7.9nm,0.8s						
KURK				⇑Lg	Lg	08 33 00.5	
	14nm,0.8s						
KURBB	**Kurchatov Arra**	**7.83**	**253**	⇑Pn	Pn	08 30 48.1	-2.3
	3.2nm,0.7s						
KURBB				⇑Sn	Sn	08 32 17.5	-2.3
	12nm,0.7s						
KURBB				⇑Lg	Lg	08 33 04.3	
	84nm,1.1s						
MK31	**Makanchi Array**	**8.49**	**221**	⇓Pn	Pn	08 30 59.6	0.0
	1.6nm,0.7s,baz=38,slow=13,SNR=5.6						
MK31				⇓Sn	Sn	08 32 38.4	+2.4
	2.7nm,0.7s,baz=38,slow=17,SNR=4.2						
MK31				⇑Lg	Lg	08 33 23.0	
	14nm,0.9s,baz=39,slow=32,SNR=5.0						
MAKZ	**Makanchi**	**8.60**	**222**	⇓Pn	Pn	08 31 01.2	+0.1
	2.2nm,1.0s						
MAKZ				⇑Sn	Sn	08 32 42.0	+3.2
	3.5nm,1.0s						
MAKZ				⇑Lg	Lg	08 33 31.2	
	16nm,0.9s						

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*ATH **18** 09:18:46.3, 36°.58N×25°.60E, h19^{km}±3^{km}, ML2.6/4, Error ellipse: s-maj=4.9km s-min=1.1km az=268.0*

*ISK **18** 09:18:46.1, 36°.58N×25°.42E, h15^{km}, ML2.8/10*

*THE **18** 09:18:46.5, 36°.61N×25°.62E, h4^{km}±1^{km}, ML2.6/8, Error ellipse: s-maj=1.9km s-min=0.6km az=277.0*

ISC 18 09:18:46.6±0.8**, 36°.60N**±0°.02×**25°.57E**±0°.03**, h15**^{km}±6^{km}**, n43, σ0^{s}.74**/61**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBO	**Columbo, Santo**	**0.18**	**226**	P	**Pg**	**09 18 51.0**	**+0.1**
CMBO				S	**Sg**	**09 18 54.2**	**+0.5**
CMBO				AML	AML	09 18 59.5	
	comp=N,6649μm,0.6s						
CMBO				AML	AML	09 18 59.7	
	comp=E,4856μm,0.3s						
THR2	**Thira island,**	**0.18**	**216**	P	**Pb**	**09 18 51.5**	**-0.1**
THR2	**Thira island,**	**0.18**	**216**	P	**Pg**	**09 18 51.1**	**+0.1**
THT2	**Imerovigli**	**0.20**	**216**	P	**Pb**	**09 18 51.8**	**-0.1**
THT2				S	**Sb**	**09 18 54.8**	**-0.7**
	comp=E,945nm,0.3s						
THT2	**Imerovigli**	**0.20**	**216**	P	**Pb**	**09 18 51.5**	**-0.4**
THT2				S	**Sb**	**09 18 54.8**	**-0.7**
THR8	**Santorini-Mono**	**0.20**	**201**	P	**Pg**	**09 18 51.0**	**-0.2**
THR8	**Santorini-Mono**	**0.20**	**201**	P	**Pg**	**09 18 51.0**	**-0.2**
SFIR	**Foira Santorin**	**0.21**	**213**	P	**Pb**	**09 18 51.7**	**-0.3**
SFIR				S	**Sb**	**09 18 55.0**	**-0.7**
	comp=E,5μm,0.1s						
THR3	**Thira Island,**	**0.23**	**216**	P	**Pg**	**09 18 51.7**	**+0.1**
THR3	**Thira Island,**	**0.23**	**216**	P	**Pg**	**09 18 51.8**	**+0.1**
STAX	**Taxiarchis Har**	**0.24**	**214**	P	**Pb**	**09 18 52.0**	**-0.5**
STAX				S	**Sb**	**09 18 55.8**	**-0.7**
STAX	**Taxiarchis Har**	**0.24**	**214**	P	**Pb**	**09 18 52.0**	**-0.5**
STAX				S	**Sg**	**09 18 55.6**	**+0.4**
SNT5	**Nea Kammeni, S**	**0.24**	**216**	P	**Pb**	**09 18 52.9**	**+0.3**
SNT5				S	**Sb**	**09 18 56.5**	**-0.1**
	comp=E,2μm,0.1s						
SNT5	**Nea Kammeni, S**	**0.24**	**216**	P	**Pb**	**09 18 53.0**	**+0.4**
SNT5				AML	AML	09 19 00.2	
	comp=N,3195μm,0.2s						
SNT5				AML	AML	09 19 00.3	
	comp=E,4942μm,0.1s						
SANT	**Santorini**	**0.24**	**201**	P	**Pg**	**09 18 52.0**	**+0.1**
SANT				S	**Sg**	**09 18 55.8**	**+0.3**

	comp=E,1µm,0.1s						
SANT	**Santorini**	**0.24**	**201**	P	**Pg**	**09 18 51.9**	**+0.1**
SANT				S	**Sg**	**09 18 55.7**	**+0.3**
SANT				AML	AML	09 18 57.6	
	comp=N,1080µm,0.1s						
SANT				AML	AML	09 18 57.8	
	comp=E,3652µm,0.1s						
SANT	**Santorini**	**0.24**	**201**	PG	**Pg**	**09 18 51.5**	**-0.4**
THR5	**Thira Island,**	**0.25**	**225**	P	**Pb**	**09 18 52.3**	**-0.5**
THR5	**Thira Island,**	**0.25**	**225**	P	**Pb**	**09 18 52.3**	**-0.5**
THR6	**Thira Island,**	**0.28**	**210**	P	**Pb**	**09 18 52.9**	**-0.4**
THR6	**Thira Island,**	**0.28**	**210**	P	**Pb**	**09 18 52.8**	**-0.4**
THR9	**Santorini-Faro**	**0.29**	**216**	P	**Pb**	**09 18 53.1**	**-0.4**
APE	**Apeiranthos**	**0.47**	**356**	P	**Pg**	**09 18 55.5**	**-0.5**
APE				S	**Sg**	**09 19 02.1**	**-0.3**
	comp=E,788nm,0.1s						
APE	**Apeiranthos**	**0.47**	**356**	P	**Pg**	**09 18 55.5**	**-0.5**
APE				S	**Sb**	**09 19 03.6**	**+0.1**
APE				AML	AML	09 19 04.5	
	comp=N,1927µm,0.1s						
APE				AML	AML	09 19 05.5	
	comp=E,1170µm,0.2s						
APE	**Apeiranthos**	**0.47**	**356**	PG	**Pg**	**09 18 55.5**	**-0.5**
APE				SG	**Sb**	**09 19 03.9**	**+0.4**
MHLO	**Agia Marina, M**	**0.94**	**276**	P	**Pn**	**09 19 05.4**	**+0.1**
MHLO				S	**Sn**	**09 19 19.4**	**+0.9**
	comp=E,902nm,0.3s						
MHLO	**Agia Marina, M**	**0.94**	**276**	P	**Pg**	**09 19 04.9**	**+0.1**
TNSA	**Tinos**	**1.00**	**341**	P	**Pb**	**09 19 05.3**	**-0.2**
KOSK	**Kos Island**	**1.15**	**82**	PN	**Pg**	**09 19 09.6**	**+1.0**
KOSK				SN	**Sg**	**09 19 26.7**	**+3.1**
NIS1	**Nisyros Isl.**	**1.30**	**89**	PN	**Pg**	**09 19 12.1**	**+0.6**
NPS	**Neapolis**	**1.33**	**178**	P	**Pn**	**09 19 10.4**	**-0.2**
NPS				S	**Sg**	**09 19 29.9**	**+0.4**
	comp=E,185nm,0.4s						
NPS	**Neapolis**	**1.33**	**178**	P	**Pb**	**09 19 10.5**	**-0.7**
IDI	**Anoyia**	**1.42**	**203**	P	**Pb**	**09 19 12.0**	**-0.7**
BODT	**Bodrum**	**1.47**	**71**	PN	**Pg**	**09 19 14.5**	**-0.4**
BODT				SN	**Sg**	**09 19 35.1**	**+1.0**
SMG	**Samos**	**1.50**	**42**	P	**Pg**	**09 19 15.3**	**-0.2**
ZKR	**Zakros**	**1.57**	**160**	P	**Pb**	**09 19 14.2**	**-1.1**
ZKR				S	**Sb**	**09 19 35.1**	**+0.1**
	comp=E,82nm,0.5s						
ZKR	**Zakros**	**1.57**	**160**	P	**Pb**	**09 19 14.2**	**-1.1**
ZKR	**Zakros**	**1.57**	**160**	PN	**Pb**	**09 19 14.2**	**-1.1**
ZKR				SN	**Sb**	**09 19 34.8**	**-0.2**
DAT	**Datca**	**1.62**	**85**	PN	**Pg**	**09 19 16.7**	**-1.0**
CHOS	**Chios island**	**1.83**	**12**	PN	**Pn**	**09 19 18.5**	**+0.9**
URLA	**Izmir**	**1.94**	**25**	PN	**Pb**	**09 19 20.4**	**-1.3**
TURN	**Turunc**	**2.16**	**84**	PN	**Pb**	**09 19 24.2**	**-1.1**
AYDB	**Zeytinkoy-Aydi**	**2.29**	**53**	PN	**Pb**	**09 19 26.2**	**-1.5**

EAF 18 09:35:23.1±1.4, 25°.99S×29°.56E, h11^{km}±22^{km}, MD3.8

BUL 18 09:35:23.4±1.2, 26°.00S×29°.56E, h13^{km}±19^{km}, MD4.1, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNG	**Changalane**	**2.38**	**98**	*i* P	Pn	09 36 01.8	-0.4
CNG				*i* Sg	Sb	09 36 37.3	+1.7
CNG	**Changalane**	**2.38**	**98**	*i* P	Pn	09 36 01.8	-0.4
CNG				*i* Sg	Sb	09 36 37.3	+1.7
MOPA	**Mopani**	**2.99**	**34**	*i* P	Pn	09 36 09.1	-1.5
MOPA	**Mopani**	**2.99**	**34**	*i* P	Pn	09 36 09.1	-1.5
MSNA	**Messina**	**3.67**	**7**	*i* P	Pn	09 36 20.3	+0.4
MSNA				*i* S	Sn	09 37 00.1	-3.0
MSNA	**Messina**	**3.67**	**7**	*i* P	Pn	09 36 20.3	+0.4
MSNA				*i* S	Sn	09 37 00.1	-3.0
MATP	**Matopo**	**5.64**	**350**	*i* P	Pn	09 36 45.3	-1.8
MATP				*i* S	Sn	09 37 47.1	-4.7
MATP	**Matopo**	**5.64**	**350**	*i* P	Pn	09 36 45.3	-1.8
MATP				*i* S	Sn	09 37 47.1	-4.7

SOME 18 09:35:46.8, 39°.65N×74°.08E, h0^{km}

IDC 18 09:35:48.1±2.0, 39°.60N×73°.44E, h0^{km}, mb3.7/6, mb1 3.7/9, mb1mx3.5/46, mbtmp3.6/9, ML2.9/4, MS3.1/3, Ms1 3.1/3, ms1mx2.5/48, Error ellipse: s-maj=39.7km s-min=15.8km az=132.0

KRNET 18 09:35:48.6±0.1, 39°.66N×74°.09E, h11^{km}, mb3.5

NNC 18 09:35:51.3±1.4, 39°.74N×74°.11E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=10.9km s-min=6.0km az=172.0

ISC 18 09:35:46.8±1.4, 39°.68N±0°.04×74°.10E±0°.02, h6^{km}±10^{km}, n76, σ1^{s}.68/106, mb3.8/6, MS3.1/3, 26C-15D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.57**	**306**	⇓*e*P	**Pb**	**09 35 59.2**	**-0.2**
	baz=9.0						
SFK				⇓*e*S	**Sb**	**09 36 08.0**	**+0.2**
	baz=9.0						
OHH	**Osh**	**1.32**	**310**	⇑*i*P	**Pg**	**09 36 13.4**	**+1.3**
	baz=11						
OHH				⇑*i*S	**Sg**	**09 36 31.8**	**+2.6**
	baz=11						
DRK	**Karamyk**	**1.79**	**264**	⇑*i*P	**Pg**	**09 36 21.5**	**+0.4**
	baz=65						
DRK				⇑*i*S	**Sg**	**09 36 45.8**	**+1.5**
	baz=65						
ARLS	**Aral**	**2.19**	**4**	⇑*i*P	**Pg**	**09 36 28.5**	**-0.3**
	baz=5.0						
ARLS				⇑*i*S	**Sg**	**09 36 57.3**	**+0.1**
	baz=5.0						
AML	**Almayashu**	**2.47**	**353**	P	**Pg**	**09 36 34.8**	**+0.5**
	SNR=16						
AML	**Almayashu**	**2.47**	**353**	⇑*e*P	**Pb**	**09 36 32.3**	**+0.4**
	baz=53						
AML				⇑*i*S	**Sg**	**09 37 04.5**	**-1.8**
	baz=53						
BTK	**Batken**	**2.56**	**280**	⇑*e*P	**Pb**	**09 36 33.1**	**0.0**
	baz=80						
BTK				⇑*i*S	**Sb**	**09 37 05.5**	**+0.7**
	baz=80						
UCH	**Uchtor**	**2.57**	**7**	P	**Pg**	**09 36 35.7**	**-0.4**
	SNR=49						
UCH	**Uchtor**	**2.57**	**7**	⇑*i*P	**Pb**	**09 36 33.7**	**+0.1**
	baz=7.0						
UCH				⇑*i*S	**Sb**	**09 37 06.8**	**+1.2**
	baz=7.0						
ARK	**Arkit**	**2.67**	**323**	⇑*e*P	**Pb**	**09 36 35.0**	**-0.1**
	baz=24						
ARK				⇑*i*S	**Sb**	**09 37 08.7**	**+0.5**
	baz=24						
TRKS	**Terek-Say**	**2.92**	**310**	⇓*i*P	**Pb**	**09 36 37.7**	**-1.6**
	baz=10.0						
TRKS				⇓*i*S	**Sb**	**09 37 13.1**	**-2.2**
	baz=10.0						
AAK	**Ala-Archa**	**2.97**	**6**	Pn	**Pb**	**09 36 40.8**	**+0.5**
	3.9nm,0.3s,baz=164,slow=6.2,SNR=18						
AAK				Sn	**Sg**	**09 37 22.5**	**+0.1**
	4.3nm,0.3s,baz=0.8,slow=19,SNR=12						
AAK	**Ala-Archa**	**2.97**	**6**	P	**Pb**	**09 36 41.1**	**+0.8**
	SNR=18						
AAK	**Ala-Archa**	**2.97**	**6**	Pn	**Pb**	**09 36 41.1**	**+0.8**
	16nm,0.8s						
AAK				Lg	Lg	09 37 25.6	
	17nm,0.5s						
AAK	**Ala-Archa**	**2.97**	**6**	⇑*e*P	**Pb**	**09 36 39.4**	**-0.9**
	baz=6.0						
AAK				⇑*i*S	**Sb**	**09 37 16.2**	**-0.8**
	baz=6.0						
EKS2	**Erkin-Say**	**2.99**	**355**	P	**Pb**	**09 36 41.9**	**+1.3**
	SNR=13						
EKS2	**Erkin-Say**	**2.99**	**355**	⇓*e*P	**Pb**	**09 36 39.6**	**-1.0**
	baz=56						
EKS2				⇓*i*S	**Sb**	**09 37 16.6**	**-0.9**
	baz=56						
GAR	**Garm**	**3.01**	**258**	⇓*i*P	**Pb**	**09 36 39.4**	**-1.5**
	baz=58						
GAR				⇓*i*S	**Sb**	**09 37 16.3**	**-1.7**
	baz=58						
KBK	**Karagaybulak**	**3.05**	**12**	P	**Pb**	**09 36 42.6**	**+1.0**
	SNR=13						
KBK	**Karagaybulak**	**3.05**	**12**	⇑*e*P	**Pb**	**09 36 40.4**	**-1.1**
	baz=12						
KBK				⇑*i*S	**Sb**	**09 37 17.9**	**-1.1**
	baz=12						
BOOM	**Boomskoye usch**	**3.14**	**26**	⇓*i*P	**Pb**	**09 36 41.2**	**-1.9**
	baz=26						
BOOM				⇓*i*S	**Sb**	**09 37 20.1**	**-1.5**
	baz=26						
MRKS	**Merke**	**3.14**	**348**	*e*P	**Pg**	**09 36 46.4**	**-0.5**
	11nm,0.2s						
MRKS				*e*S	**Sg**	**09 37 28.9**	**+1.3**
	66nm,0.6s						
MRKS	**Merke**	**3.14**	**348**	Pg	**Pg**	**09 36 46.4**	**-0.5**
	24nm,0.4s						
MRKS				Lg	Lg	09 37 28.9	
	66nm,0.6s						
KDJ	**Kajisay**	**3.38**	**43**	⇑*i*P	**Pb**	**09 36 45.2**	**-2.1**
	baz=43						
KDJ				⇑*i*S	**Sb**	**09 37 26.1**	**-2.7**
	baz=43						
TKM2	**Tokmak 2**	**3.43**	**19**	⇓Pn	**Pb**	**09 36 47.4**	**-0.7**
	4.0nm,0.3s						
TKM2				⇓Lg	Lg	09 37 39.7	
	17nm,0.7s						
TKM2	**Tokmak 2**	**3.43**	**19**	⇑*i*P	**Pb**	**09 36 45.8**	**-2.4**
	baz=19						
TKM2				⇑*i*S	**Sb**	**09 37 27.2**	**-3.0**
	baz=19						
TARG	**Taragay, Kyrgy**	**3.48**	**53**	⇑*e*P	**Pb**	**09 36 46.5**	**-2.6**
	baz=53						
TARG				⇑*i*S	**Sb**	**09 37 28.5**	**-3.4**
	baz=53						
USP	**Ospenovka**	**3.60**	**5**	P	**Pg**	**09 36 57.0**	**+1.2**
	SNR=7.9						
KST	**Kastek**	**3.65**	**22**	*e*P	**Pg**	**09 36 54.9**	**-1.8**
	4.6nm,0.1s						
KST				*e*S	**Sg**	**09 37 43.1**	**-0.8**
	33nm,0.3s						
KST	**Kastek**	**3.65**	**22**	Pg	**Pg**	**09 36 54.8**	**-1.8**
	8.5nm,0.7s						
KST				Lg	Lg	09 37 43.1	
	34nm,0.7s						
DGS	**Degeres**	**3.78**	**19**	*e*P	**Pg**	**09 36 58.6**	**-0.6**
	10nm,0.2s						
DGS				*e*S	**Sg**	**09 37 49.6**	**+1.5**
	13nm,0.3s						
DGS	**Degeres**	**3.78**	**19**	Pg	**Pg**	**09 36 58.6**	**-0.6**
	10nm,0.7s						
DGS				Lg	Lg	09 37 49.7	
	13nm,0.8s						
SGDS	**Sogindy**	**3.79**	**6**	Pg	**Pg**	**09 36 59.3**	**-0.2**
	7.0nm,0.8s						
SGDS				Lg	Lg	09 37 50.9	
	16nm,0.7s						
MTBS	**Maitube**	**3.87**	**26**	*e*P	**Pg**	**09 37 00.5**	**-0.5**
	4.2nm,0.1s						
MTBS				*e*S	**Sg**	**09 37 53.1**	**+2.0**
	22nm,0.2s						
MTBS	**Maitube**	**3.87**	**26**	Pg	**Pg**	**09 37 00.5**	**-0.5**
	8.9nm,0.5s						
MTBS				Lg	Lg	09 37 53.1	
	23nm,0.6s						
IUG	**Iuzhnay**	**3.95**	**310**	*e*P	**Pg**	**09 37 00.9**	**-1.6**
	117nm,0.1s						
IUG				*e*S	**Sg**	**09 37 53.6**	**-0.1**
	89nm,0.1s						
IUG	**Iuzhnay**	**3.95**	**310**	Pg	**Pg**	**09 37 00.9**	**-1.6**
	270nm,0.5s						
IUG				Lg	Lg	09 37 53.6	
	71nm,0.5s						
TNSS	**Tian-Shan**	**3.98**	**32**	*e*P	**Pg**	**09 37 03.3**	**+0.1**
	4.0nm,0.1s						
TNSS				*e*S	**Sg**	**09 37 57.9**	**+3.2**
	6.0nm,0.2s						
TNSS	**Tian-Shan**	**3.98**	**32**	Pg	**Pg**	**09 37 03.3**	**+0.1**
	7.1nm,0.5s						
TNSS				Lg	Lg	09 37 57.9	
	6.1nm,0.6s						
MDOK	**Medeo**	**4.13**	**32**	*e*P	**Pg**	**09 37 06.0**	**+0.1**
	5.4nm,0.2s						
MDOK				*e*S	**Sg**	**09 38 02.4**	**+2.9**
	15nm,0.4s						
MDOK	**Medeo**	**4.13**	**32**	Pg	**Pg**	**09 37 04.2**	**-1.8**
	7.6nm,0.5s						
MDOK				Lg	Lg	09 38 01.2	
	11nm,0.7s						
MDOK	**Medeo**	**4.13**	**32**	Pg	**Pg**	**09 37 06.0**	**+0.1**
	10nm,0.7s						
MDOK				Lg	Lg	09 38 02.4	
	15nm,0.9s						
KNDC	**Almaty**	**4.14**	**30**	⇑Pg	**Pb**	**09 37 02.7**	**+2.6**
	53nm,0.6s						
KNDC				⇓Lg	Lg	09 38 02.1	
	50nm,0.4s						
KRBS	**Karabastau**	**4.19**	**16**	*e*P	**Pg**	**09 37 05.5**	**-1.5**
	2.7nm,0.1s						
KRBS				*e*S	**Sg**	**09 38 01.4**	**+0.1**
	12nm,0.2s						
KRBS	**Karabastau**	**4.19**	**16**	Pg	**Pg**	**09 37 05.5**	**-1.5**
	2.8nm,0.4s						
KRBS				Lg	Lg	09 38 01.4	
	12nm,0.6s						
KOTS	**Kotyrbulak**	**4.21**	**32**	*e*P	**Pg**	**09 37 07.5**	**-0.1**
	8.0nm,0.1s						
KOTS				*e*S	**Sg**	**09 38 05.0**	**+2.8**
	41nm,0.6s						
KOTS	**Kotyrbulak**	**4.21**	**32**	Pg	**Pg**	**09 37 07.5**	**-0.1**
	9.5nm,0.5s						
KOTS				Lg	Lg	09 38 05.0	
	41nm,0.6s						
KK02	**Karatay Array**	**4.36**	**323**	⇓Pn	Pn	09 36 58.3	+4.7
	4.5nm,0.5s						
KK02				⇑Sn	**Sb**	**09 37 51.6**	**-5.1**
	8.2nm,0.7s						
KK02				⇓Lg	Lg	09 38 05.5	
	11nm,0.6s						
KTBS	**Karatobe**	**4.47**	**25**	*e*P	**Pg**	**09 37 11.4**	**-1.1**
	3.2nm,0.1s						
KTBS				*e*S	**Sg**	**09 38 11.7**	**+1.3**
	32nm,0.3s						
KTBS	**Karatobe**	**4.47**	**25**	Pg	**Pg**	**09 37 11.4**	**-1.1**
	7.7nm,0.5s						
KTBS				Lg	Lg	09 38 11.7	
	32nm,0.7s						
KUU	**Kurty**	**4.53**	**21**	*e*P	**Pg**	**09 37 12.4**	**-1.3**
	2.0nm,0.1s						
KUU				*e*S	**Sg**	**09 38 12.8**	**+0.4**
	9.3nm,0.2s						
KUU	**Kurty**	**4.53**	**21**	Pg	**Pg**	**09 37 12.4**	**-1.3**
	2.0nm,0.1s						
KUU				Lg	Lg	09 38 12.8	
BRLS	**Borolday**	**4.64**	**318**	*e*P	**Pg**	**09 37 13.1**	**-2.6**
	4.9nm,0.1s						
BRLS				*e*S	**Sg**	**09 38 14.0**	**-1.8**
	16nm,0.2s						
BRLS	**Borolday**	**4.64**	**318**	Pg	**Pg**	**09 37 13.1**	**-2.6**
	4.9nm,0.1s						
BRLS				Lg	Lg	09 38 14.0	
	16nm,0.6s						
SATY	**Saty**	**4.68**	**42**	*e*P	**Pg**	**09 37 16.8**	**+0.3**
	4.3nm,0.2s						
SATY				*e*S	**Sg**	**09 38 20.4**	**+3.3**
	9.5nm,0.5s						
SATY	**Saty**	**4.68**	**42**	Pg	**Pg**	**09 37 16.8**	**+0.3**
	6.8nm,0.8s						
SATY				Lg	Lg	09 38 20.4	
	8.7nm,0.8s						
UZB	**Uzynbulak**	**5.07**	**45**	*e*P	**Pg**	**09 37 22.8**	**-1.2**
	3.0nm,0.1s						
UZB				*e*S	**Sg**	**09 38 30.7**	**+1.1**
	5.8nm,0.2s						
UZB	**Uzynbulak**	**5.07**	**45**	Pg	**Pg**	**09 37 22.8**	**-1.2**
	3.0nm,0.3s						
UZB				Lg	Lg	09 38 30.7	
	5.9nm,0.4s						
ARXS	**Arharly**	**5.32**	**30**	*e*P	**Pg**	**09 37 27.8**	**-0.9**
	2.8nm,0.2s						
ARXS				*e*S	**Sg**	**09 38 40.1**	**+2.6**
	9.5nm,0.1s						
ARXS	**Arharly**	**5.32**	**30**	Pg	**Pg**	**09 37 27.8**	**-0.9**
	2.9nm,0.4s						
ARXS				Lg	Lg	09 38 40.1	
	9.3nm,0.7s						
BTLS	**Baital**	**5.36**	**360**	*e*P	**Pg**	**09 37 26.9**	**-2.6**
	1.2nm,0.3s						
BTLS				*e*S	**Sg**	**09 38 37.9**	**-1.1**
	3.0nm,0.5s						
BTLS	**Baital**	**5.36**	**360**	Pg	**Pg**	**09 37 26.9**	**-2.6**
	1.2nm,0.3s						
BTLS				Lg	Lg	09 38 37.9	
	3.0nm,0.5s						
PDGK	**Podgornoye**	**5.45**	**46**	Pg	**Pg**	**09 37 27.7**	**-3.4**
	1.1nm,0.8s						
PDGK				Lg	Lg	09 38 39.6	
	5.9nm,0.8s						
PDGK	**Podgornoye**	**5.45**	**46**	Pg	**Pg**	**09 37 28.3**	**-2.9**
	2.2nm,0.6s						
PDGK				Lg	Lg	09 38 41.0	
	14nm,1.1s						
MKAR	**Makanchi Array**	**9.29**	**37**	Pn	Pn	09 38 11.1	+10
	0.1nm,0.3s,baz=216,slow=14,SNR=1.6						
KURBB	**Kurchatov Arra**	**11.38**	**14**	Pn	**Pn**	**09 38 34.2**	**+4.4**
	0.0nm,0.3s,baz=196,slow=8.9,SNR=1.5						
BVAR	**Borovoye Array**	**13.59**	**350**	Pn	**Pn**	**09 39 00.6**	**+0.6**
	0.2nm,0.3s,baz=170,slow=18,SNR=2.0						
WSAR	**Wadi Sarin**	**20.99**	**223**	LR	LR	09 49 26.4	
	comp=Z,24nm,20.1s,baz=176,slow=40						
KVAR	**Kislovodsk Arr**	**23.71**	**291**	LR	LR	09 52 43.6	
	comp=Z,75nm,18.1s,baz=85,slow=44						
KIRV	**Kirov**	**24.63**	**328**	LR	LR	09 50 25.4	
	comp=Z,54nm,18.1s,baz=323,slow=36						
AKASG	**Malin Array Be**	**33.01**	**305**	P	**P**	**09 42 21.1**	**-1.4**
	0.2nm,0.3s,baz=84,slow=7.0,SNR=2.4						
FINES	**FINESS Array B**	**36.32**	**323**	P	**P**	**09 42 51.5**	**+0.5**
	3.3nm,0.8s,baz=125,slow=10.0,SNR=6.5						
ARCES	**ARCESS Array B**	**39.21**	**335**	P	**P**	**09 43 16.1**	**+0.7**
	2.2nm,0.7s,baz=91,slow=9.9,SNR=1.2						
NOA	**NORSAR Array B**	**43.39**	**321**	P	**P**	**09 43 50.8**	**+1.0**
	0.8nm,0.7s,baz=91,slow=8.1,SNR=3.5						
TORD	**Torodi Ar. Bea**	**68.22**	**269**	P	**P**	**09 46 47.9**	**-0.6**
	0.5nm,0.6s,baz=49,slow=5.3,SNR=5.8						
YKA	**Yellowknife Ar**	**77.94**	**4**	P	**P**	**09 47 46.2**	**+1.0**
	0.1nm,0.4s,baz=348,slow=5.5,SNR=2.2						

IDC 18 09:57:03.3±0.8, 31°.20S×59°.00E, h0^{km}, mb4.0/7, mb1 4.1/8, mb1mx3.7/43, mbtmp4.0/8, ML4.1/1, MS3.6/4, Ms1 3.6/4, ms1mx3.0/42, Error ellipse: s-maj=30.4km s-min=20.6km az=20.0

NEIC 18 09:57:05.6±1.5, 31°.1S±0°.1×59°.0E±0°.2, h10^{km}±1^{km}, mb4.0/7, Error ellipse: s-maj=25.8km s-min=19.0km az=228.0

ISC 18 09:57:04.8±0.8, 31°.1S±0°.1×59°.1E±0°.1, h10^{km}, n26, σ0^{s}.82/15, mb4.1/8, MS3.4/4, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**10.29**	**342**	Pn	**Pn**	**09 59 31.5**	**-1.2**
VOI	**Vohitsoka**	**14.26**	**307**		**Pn**	**10 00 28.2**	**+1.2**
ABPO	**Ambohimpanom**	**16.07**	**315**	Pn	**Pn**	**10 00 51.4**	**+0.3**
ABPO				IAmb	IAmb	10 01 04.6	
	comp=Z,16nm,1.4s						
OPO	**Ambohidratompo**	**16.43**	**316**	Pn	**P**	**10 00 58.6**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=122,slow=14,SNR=2.5						
H08S1	**Diego Carcia H**	**26.45**	**31**	T	T	10 30 12.2	
	baz=206,slow=76,SNR=6.0						
H08S2	**Diego Garcia H**	**26.45**	**31**	T	T	10 30 09.3	
	baz=206,slow=76,SNR=7.5						
H08S3	**Diego Garcia H**	**26.46**	**31**	T	T	10 30 10.8	
	baz=206,slow=76,SNR=6.1						
BOSA	**Boshof**	**29.37**	**266**	LR	LR	10 12 57.3	
	comp=Z,44nm,19.0s,baz=253,slow=33						
TSUM	**Tsumeb**	**39.16**	**278**	P	**P**	**10 04 31.8**	**-1.3**
	comp=Z,2.6nm,0.6s,baz=96,slow=7.8,SNR=5.3						
TSUM	**Tsumeb**	**39.16**	**278**	IAmb	IAmb	10 04 35.2	
	comp=Z,4.8nm,0.9s						
ATD	**Arta Tunnel**	**45.11**	**337**	LR	LR	10 22 21.8	
	comp=Z,28nm,18.8s,baz=58,slow=34						
QSPA	**South Pole Qui**	**59.12**	**180**	P	**P**	**10 07 04.6**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=261,slow=2.1,SNR=11						
QSPA	**South Pole Qui**	**59.12**	**180**	P	**P**	**10 07 04.7**	**-0.7**
CMAR	**Chiang Mai Arr**	**62.38**	**43**	P	**P**	**10 07 28.9**	**+1.0**
	comp=Z,1.9nm,0.6s,baz=233,slow=6.5,SNR=9.3						
CMAR	**Chiang Mai Arr**	**62.38**	**43**	P	**P**	**10 07 28.7**	**+0.8**
VNDA	**Vanda**	**62.64**	**166**	LR	LR	10 32 38.5	
	comp=Z,41nm,18.2s,baz=248,slow=34						
ASAR	**Alice Springs**	**65.75**	**104**	P	**P**	**10 07 49.9**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=239,slow=6.2,SNR=12						
WRA	**Warramunga Arr**	**67.71**	**100**	P	**P**	**10 08 03.0**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=231,slow=6.0,SNR=12						
WRA	**Warramunga Arr**	**67.71**	**100**	IAmb	IAmb	10 08 08.4	
	comp=Z,0.2nm,1.2s						
WB0	**Warramunga Arr**	**67.83**	**100**	P	**P**	**10 08 03.3**	**-0.3**
WB0				IAmb	IAmb	10 08 19.7	
	comp=Z,2.8nm,0.9s						
STKA	**Stephens Creek**	**68.61**	**115**	P	**P**	**10 08 09.0**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=258,slow=13,SNR=3.0						
STKA	**Stephens Creek**	**68.61**	**115**	IAmb	IAmb	10 08 33.1	
	comp=Z,0.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**70.44**	**299**	P	**P**	**10 08 20.1**	**+0.5**
	comp=Z,0.6nm,1.0s,baz=126,slow=5.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**70.44**	**299**	IAmb	IAmb	10 08 31.3	
	comp=Z,0.9nm,1.2s						
KRVT	**Keravat (AS076**	**90.34**	**95**	LR	LR	10 46 21.3	
	comp=Z,216nm,21.3s,baz=261,slow=33						
YKA	**Yellowknife Ar**	**148.28**	**354**	PKPbc	**PKPbc**	**10 16 50.4**	**0.0**
	comp=Z,1.2nm,0.7s,baz=353,slow=2.6,SNR=15						

MIRAS 18 10:07:46.0±0.0, 56°.80N×62°.03E, h0^{km}, ML2.5/4

NNC 18 10:07:53.2±9.5, 55°.51N×62°.81E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=90.7km s-min=34.3km az=165.0, Suspected Mining explosion.

ISC 18 10:07:41.6±1.1, 56°.27N±0°.06×62°.17E±0°.06, h0^{km}, n7, σ1^{s}.53/13, 2C-6D, Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAUR	**Kamensk Uralsk**	**0.41**	**294**	*i* P	**Pb**	**10 07 50.5**	**-1.2**
	462nm,0.6s,baz=312						
KAUR				*e*S	**Sb**	**10 07 57.0**	**-1.3**
	baz=312						
SVE	**Sverdlovsk**	**1.02**	**304**	*i* P	**Pn**	**10 08 04.8**	**+1.7**
	119nm,0.5s,baz=310						
SVE				*e*S	**Sb**	**10 08 15.4**	**-0.5**
	baz=310						
ARU	**Arti**	**2.01**	**276**	*i* P	**Pb**	**10 08 18.6**	**-0.4**
	44nm,0.5s,baz=277						
ARU				*e*S	**Sb**	**10 08 44.7**	**+0.1**
	baz=277						
PR7R	**Sarany**	**2.94**	**323**	P	**Pb**	**10 08 33.9**	**-0.9**
	50nm,3.1s,baz=325						
PR7R				S	**Sn**	**10 09 05.8**	**+0.3**
	baz=325						
BRVK	**Borovoye**	**5.70**	**121**	⇑Pn	**Pn**	**10 09 09.6**	**+2.2**
	1.6nm,0.6s						
BRVK				⇓Sn	**Sn**	**10 10 11.4**	**-2.1**
	3.0nm,1.0s						
BRVK				⇑Lg	Lg	10 10 34.4	
	2.2nm,0.8s						
AKTO	**Aktyubinsk**	**6.35**	**205**	⇓Pn	**Pn**	**10 09 18.8**	**+2.6**
	1.2nm,0.8s						
AKTO				⇓Lg	Lg	10 10 59.0	
	2.5nm,0.9s						
AB31	**Akbulak array**	**7.15**	**192**	⇓Pn	**Pn**	**10 09 27.0**	**-0.3**
	0.5nm,0.6s,baz=15,slow=13,SNR=6.4						
AB31				⇓Sn	**Sn**	**10 10 48.5**	**-0.7**
	0.8nm,0.7s,baz=17,slow=23						
AB31				⇓Lg	Lg	10 11 21.0	
	3.9nm,0.9s,baz=24,slow=29,SNR=5.4						

IDC 18 10:14:30.7±1.9, 39°.83N×49°.46E, h0^{km}, mb3.8/2, mb1 3.7/5, mb1mx3.3/45, mbtmp3.6/5, ML3.7/2, MS3.2/2, Ms1 3.3/2, ms1mx2.3/43, Error ellipse: s-maj=51.6km s-min=17.4km az=176.0

AZER 18 10:14:32.6±0.0, 40°.06N×49°.07E, h16^{km}, ml3.0/32, Error ellipse: s-maj=0.9km s-min=0.5km az=277.0

TEH 18 10:14:33.3, 40°.03N×49°.05E, h18^{km}, ML3.2

ISC 18 10:14:34.1±0.9, 40°.06N±0°.02×49°.14E±0°.02, h18^{km}±2^{km}, n60, σ1^{s}.46/90, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALIB	**Äli-Bayra**	**0.14**	**225**	P	**Pb**	**10 14 37.5**	**+0.5**
	SNR=86						
ALIB				S	**Sg**	**10 14 45.0**	**+3.8**
ALIB	**Äli-Bayra**	**0.14**	**225**	*e*Pg	**Pb**	**10 14 37.5**	**+0.5**
GBS	**Qobustan**	**0.50**	**342**	P	**Pb**	**10 14 44.2**	**-0.2**
	SNR=9.8						
GBS				S	**Sn**	**10 14 54.3**	**-0.3**
GBS	**Qobustan**	**0.50**	**342**	*e*Pg	**Pb**	**10 14 44.2**	**-0.2**
GOBA	**Gobu**	**0.57**	**53**	P	**Pg**	**10 14 46.5**	**+1.0**
	SNR=13						
GOBA				S	**Sn**	**10 14 56.4**	**+0.3**
GOBA	**Gobu**	**0.57**	**53**	*e*Pg	**Pg**	**10 14 46.5**	**+1.0**
SAAT	**Saatly**	**0.58**	**250**	P	**Pg**	**10 14 46.2**	**+0.5**
	SNR=4.7						
SAAT				S	**Sn**	**10 14 58.6**	**+2.1**
SAAT	**Saatly**	**0.58**	**250**	*e*Pg	**Pg**	**10 14 46.2**	**+0.5**
KDMR	**Kurdemir**	**0.80**	**294**	P	**Pb**	**10 14 48.9**	**-0.5**
	SNR=6.3						

KDMR				S	Sn	10 15 02.9	+1.1
KDMR	Kurdemir	0.80	294	*e*Pg	Pb	10 14 48.9	-0.5
ATGJ	Altiaghaj	0.82	349	P	Pb	10 14 49.2	-0.6
	SNR=98						
ATGJ				S	Sn	10 15 04.8	+2.3
ATGJ	Altiaghaj	0.82	349	*e*Pg	Pb	10 14 49.2	-0.6
NDR	Nardaran	0.83	51	P	Pb	10 14 50.1	+0.1
NDR				S	Sn	10 15 06.1	+3.5
NDR	Nardaran	0.83	51	*e*Pg	Pb	10 14 50.1	+0.1
PQL	Pirkuli	0.84	330	P	Pb	10 14 48.8	-1.4
	SNR=52						
PQL				S	Sn	10 15 03.4	+0.3
PQL	Pirkuli	0.84	330	*e*Pg	Pb	10 14 48.8	-1.4
GLBA	Clilabad	1.00	215	P	Pb	10 14 51.3	-1.5
	SNR=34						
GLBA				S	Sg	10 15 08.5	+1.8
GLBA	Clilabad	1.00	215	*e*Pg	Pb	10 14 51.3	-1.5
SIZA	Siyzn	1.03	350	P	Pb	10 14 52.7	-0.8
	SNR=54						
SIZA				S	Sg	10 15 09.1	+1.3
SIZA	Siyzn	1.03	350	*e*Pg	Pb	10 14 52.6	-0.8
IML	Ismayilli	1.03	315	P	Pb	10 14 52.0	-1.5
	SNR=7.9						
IML				S	Sg	10 15 09.3	+1.4
IML	Ismayilli	1.03	315	*e*Pg	Pb	10 14 52.0	-1.5
ZRD	Zardab	1.14	282	P	Pn	10 14 53.2	-1.9
	SNR=6.4						
ZRD				S	Sb	10 15 10.2	+0.6
ZRD	Zardab	1.14	282	*e*Pn	Pn	10 14 53.1	-1.9
BLQ	Beylaqan	1.26	255	P	Pn	10 14 55.1	-1.7
	SNR=16						
BLQ				S	Sg	10 15 14.6	-0.4
BLQ	Beylaqan	1.26	255	*e*Pg	Pn	10 14 55.1	-1.7
QBL	Gabala	1.33	312	P	Pn	10 14 56.2	-1.7
	SNR=7.0						
QBL				S	Sb	10 15 16.5	+1.3
QBL	Gabala	1.33	312	*e*Pn	Pn	10 14 56.1	-1.7
YRD	Yardimli	1.34	212	Pn	Pn	10 14 55.1	-3.0
	SNR=11						
YRD				Sn	Sb	10 15 16.1	+0.6
YRD	Yardimli	1.34	212	*e*Pn	Pn	10 14 55.0	-3.0
XNQ	Khinaliq	1.35	326	Pn	Pn	10 14 56.6	-1.5
	SNR=65						
XNQ				Sn	Sg	10 15 17.5	-0.3
XNQ	Khinaliq	1.35	326	*e*Pn	Pn	10 14 56.6	-1.5
LKRN	Lenkeran, Azer	1.38	192	Pn	Pb	10 14 58.9	-0.4
	SNR=5.1						
LKRN				Sn	Sb	10 15 17.4	+1.0
QUBA	Quba, Azerbaij	1.39	339	Pn	Pn	10 14 57.9	-0.6
	SNR=9.5						
QUBA				Sn	Sg	10 15 18.7	-0.2
BRDA	Brd	1.52	278	Pn	Pn	10 15 00.5	+0.2
	SNR=10						
BRDA				Sg	Sg	10 15 23.8	+0.7
ASTR	Astara	1.52	190	Pn	Pn	10 14 58.8	-1.5
	SNR=3.3						
ASTR				Sn	Sb	10 15 21.3	+0.7
QRD	Qoradiz	1.52	248	Pn	Pn	10 14 59.1	-1.3
	SNR=7.0						
QRD				Sn	Sb	10 15 20.9	+0.2
LRK	Lerik	1.54	204	Pn	Pn	10 14 58.1	-2.7
	SNR=33						
LRK				Sn	Sb	10 15 21.2	-0.3
AGDM	Agdam	1.56	272	Pn	Pn	10 15 00.5	-0.4
	SNR=6.9						
AGDM				Sn	Sn	10 15 21.0	+0.4
QSAR	Qusar	1.60	336	Pn	Pn	10 15 00.7	-0.8
	SNR=9.0						
QSAR				Sn	Sb	10 15 23.1	+0.1
MNGR	Mingechevir, A	1.72	295	Pn	Pn	10 15 03.8	+0.7
	SNR=6.0						
MNGR				Sn	Sn	10 15 23.7	-0.9
SEKA	Sheki	1.87	309	Pg	Pn	10 15 04.2	-1.0
	SNR=15						
SEKA				Sg	Sb	10 15 30.6	-0.2
GANJ	Ganja	2.23	286	Pn	Pn	10 15 09.0	-1.2
	SNR=9.6						
GANJ				Sn	Sn	10 15 37.7	+0.5
IHRS	Heris	2.38	224	*e*Pn	Pn	10 15 10.6	-1.8
IHRS				*e*		10 15 48.0	
	comp=Z,921nm,0.3s						
ZKTA	Zakatala	2.48	310	Pn	Pn	10 15 14.5	+0.9
	SNR=10						
ZKTA				Sn	Sn	10 15 44.2	+0.9
GDB	GEDABAY	2.67	285	Pn	Pn	10 15 15.9	-0.4
GDB				Sn	Sn	10 15 49.7	+1.4
ORD	Ordubad	2.68	246	Pn	Pn	10 15 15.3	-1.1
	SNR=3.6						
ORD				Sn	Sn	10 15 50.5	+2.1
SBZ	Shahbuz	2.84	258	Pn	Pn	10 15 18.0	-0.7
	SNR=6.9						
SBZ				Sn	Sn	10 15 54.5	+2.0
IBST	Bostanabad	2.94	217	*e*Pn	Pn	10 15 21.3	+1.3
IMRD	Marand	2.98	244	*e*Pn	Pn	10 15 19.4	-1.2
IMRD				*e*		10 15 33.5	
	comp=Z,645nm,0.4s						
QZX	Qazax, Azerbai	3.04	290	Pn	Pn	10 15 21.4	+0.2
	SNR=4.5						
QZX				Sn	Sn	10 15 57.2	+0.1
GNI	Garni	3.37	273	Pn	Pb	10 15 32.0	-1.5
	comp=Z,1.6nm,0.3s,baz=360,slow=4.0,SNR=8.0						
IAZR	Azarshahr	3.42	227	*e*Pn	Pn	10 15 28.4	+1.6
IAZR				*e*		10 15 50.0	
	comp=Z,572nm,0.2s						
IDMV	Damavand	5.03	152	*e*Pn	Pn	10 15 47.4	-1.4
GEYT	Alibeck	7.31	104	Pn	Pn	10 16 15.9	-4.0
	comp=Z,1.2nm,0.3s,baz=288,slow=11,SNR=9.4						
MMAI	Mount Meron Ar	13.08	242	LR	LR	10 23 23.8	
	comp=Z,26nm,18.9s,baz=60,slow=40						
BVAR	Borovoye Array	19.44	41	P	Pn	10 19 00.4	-0.2
	comp=Z,0.2nm,0.3s,baz=236,slow=10,SNR=2.2						
MKAR	Makanchi Array	24.87	63	P	P	10 19 52.6	-2.9
	comp=Z,0.7nm,0.7s,baz=262,slow=7.6,SNR=5.2						
FINES	FINESS Array B	25.64	334	P	P	10 20 04.5	+2.2
	comp=Z,4.4nm,1.0s,baz=128,slow=11,SNR=4.1						
PDAR	Pinedale Array	95.33	344	LR	LR	11 13 35.5	
	comp=Z,39nm,18.7s,baz=46,slow=37						

NNC 18 10:26:00.5±12.0, 36°.98N×70°.22E, h0km, mb3.9, mpv3.5, 5C-1D, Error ellipse: s-maj=98.2km s-min=82.9km az=172.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK02	Karatay Array	6.12	2	⇑P	Pn	10 27 34.0	+1.8
	0.9nm,0.3s,baz=179,slow=13						
KK02				⇑S	Sn	10 28 46.1	+3.1
	1.7nm,0.5s,baz=190,slow=26						
AAK	Ala-Archa	6.54	29	⇑P	Pn	10 27 38.2	+0.1
	2.3nm,0.8s						
AAK				⇓S	Sn	10 28 53.2	-0.3
	4.4nm,0.6s						
TKM2	Tokmak 2	7.23	33	⇑P	Pn	10 27 46.7	-0.9
	3.4nm,0.5s						
TKM2				⇑S	Sn	10 29 09.6	-0.9
	1.6nm,0.6s						

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*ISK **18** 10:38:02.4, 37°.36N×26°.93E, h18km, ML2.5/11*
*DDA **18** 10:38:02.1, 37°.34N×26°.88E, h7km±3km, ML2.3*
ISC 18 10:38:02.3±1.4, 37°.35N±0°.03×26°.91E±0°.04, h14km±11km, n19, σ0s.40/29, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDIM	Aydin, Didim	0.29	69	*i* P	Pb	10 38 08.8	-0.4
DDIM				*i* S	Sb	10 38 13.9	0.0
DDIM				IAML		10 38 14.0	
	comp=E,375nm,0.5s						
YKAV	Yalikavak-Bodr	0.38	127	PG	Pb	10 38 10.3	-0.4
YKAV				SG	Sb	10 38 16.1	-0.3
GCAM	G?zelcaml?	0.43	37	*i* P	Pg	10 38 11.4	+0.4
GCAM				*i* S	Sb	10 38 17.9	-0.2
GCAM				IAML		10 38 18.0	
	comp=E,358nm,0.5s						
GCAM	G?zelcaml?	0.43	37	PG	Pb	10 38 11.5	-0.2
GCAM				SG	Sb	10 38 18.2	+0.1
BODT	Bodrum	0.44	132	PG	Pb	10 38 11.4	-0.4
BODT				SG	Sb	10 38 18.1	-0.1
BDRM	Kayabasi	0.52	124	*i* P	Pg	10 38 12.2	-0.2
BDRM				*i* S	Sb	10 38 20.3	-0.3
DGB	zmir	0.70	359	*i* P	Pg	10 38 15.8	-0.1
DGB				*i* S	Sn	10 38 27.6	-0.8
MLSB	Milas	0.70	95	PG	Pb	10 38 16.2	0.0
NIS1	Nisyros Isl.	0.78	164	PG	Pb	10 38 18.2	+0.5
DAT	Datca	0.82	139	*i* P	Pb	10 38 19.0	+0.5
DAT				*i* S	Sn	10 38 31.6	0.0
DAT	Datca	0.82	139	PG	Pb	10 38 18.8	+0.4
AYDN	Tasoluk	0.83	68	*i* P	Pg	10 38 18.3	-0.1
AYDN				*i* S	Sb	10 38 30.3	+0.6
ZEYE	Izmir, Urla-Ze	0.94	340	*i* P	Pg	10 38 19.6	-0.8
ZEYE				*i* S	Sn	10 38 34.5	+0.2
ZEYE				IAML		10 38 35.0	
	comp=N,83nm,0.3s						
AYDB	Zeytinkoy-Aydi	0.98	53	PG	Pb	10 38 21.5	+0.4
URLA	Izmir	1.03	346	PG	Pn	10 38 22.8	+0.4
BLCB	Balcova	1.03	6	PG	Pn	10 38 22.7	+0.3
APE	Apeiranthos	1.13	256	PN	Pn	10 38 23.9	+0.1
TURN	Turunc	1.22	118	PN	Pg	10 38 25.4	-0.3
CHOS	Chios island	1.23	327	PN	Pb	10 38 25.6	+0.2

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*DDA **18** 10:40:44.1, 35°.59N×29°.41E, h40km, ML2.8*
*ISK **18** 10:40:44.7, 35°.59N×29°.53E, h27km, ML2.9/14*
*NIC **18** 10:40:47.9±0.0, 35°.74N×29°.89E, h9km±1km, Ml3.1/3*
*HLW **18** 10:40:48.5, 35°.41N×29°.39E, h26km±14km, Md4.1*
ISC 18 10:40:45.2±1.3, 35°.60N±0°.04×29°.48E±0°.03, h26km±14km, n46, σ1s.35/67, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.56	9	P	Pb	10 40 56.3	-0.1
KSL				S	Sn	10 41 05.3	-0.5
KSL				AML	AML	10 41 05.7	
	5.2nm,0.4s						
KSL				AML	AML	10 41 05.7	
	5.2nm,0.4s						
KSL				AML	AML	10 41 06.0	
	11nm,0.5s						
KSL				AML	AML	10 41 06.0	
	11nm,0.5s						
AKAS	Kas	0.64	9	*i* P	Pn	10 40 58.1	-0.7
AKAS				*i* S	Sn	10 41 08.2	+0.1
AKAS	Kas	0.64	9	PG	Pn	10 40 58.3	-0.4
AKAS				SG	Sn	10 41 08.0	-0.1
DEMR	Demre-Antalya	0.72	29	PG	Pn	10 40 58.9	-0.8
AKUM	Antalya-Kumluc	1.01	44	*i* P	Pb	10 41 03.5	-0.5
AKUM				*i* S	Sb	10 41 18.6	+1.8
FETY	Fethiye	1.08	343	*i* P	Pn	10 41 04.5	-0.1
FETY				*i* S	Sb	10 41 19.2	+0.2
FETY				IAML		10 41 24.0	
	comp=N,180nm,0.3s						
FETY	Fethiye	1.08	343	PN	Pb	10 41 05.1	-0.1
FETY				SN	Sb	10 41 19.3	+0.3
ELL	Elmali	1.20	17	PN	Pb	10 41 06.5	-0.8
ELL				SN	Sb	10 41 21.8	-0.6
ELL	Elmali	1.20	17	P	Pb	10 41 06.6	-0.6
ELL				S	Sb	10 41 20.7	-1.7
CAME	Cameli-Denizli	1.35	354	PN	Pn	10 41 08.9	+0.4
DALY	Dalyan (Mula)	1.39	331	PN	Pb	10 41 10.0	-0.4
CAEL	Denizli, Camel	1.52	355	*e*P	Pb	10 41 11.9	-1.0
CAEL				*i* S	Sb	10 41 34.8	+3.0
TURN	Turunc	1.54	320	PN	Pn	10 41 11.8	+0.9
KORT	Korkueli	1.56	26	*i* P	Pb	10 41 12.1	-1.5
KORT				*i* S	Sb	10 41 34.0	+1.1
KORT	Korkueli	1.56	26	PN	Pn	10 41 11.4	0.0
ANTB	Antalya	1.61	36	PN	Pn	10 41 11.9	0.0
GOLH	Golhisar	1.64	2	*i* P	Pb	10 41 13.2	-1.5
GOLH				*i* S	Sb	10 41 34.7	-0.2
MULA	Mugla, Merkez-	1.90	331	*e*P	Pn	10 41 15.3	-0.7
MULA				*i* S	Sn	10 41 39.9	+0.8
DAT	Datca	1.91	307	*i* P	Pn	10 41 16.5	+0.4
DAT				*i* S	Sn	10 41 38.6	-0.7
DAT	Datca	1.91	307	PN	Pn	10 41 16.5	+0.4
TAVA	DENIZLI_Tavas	1.92	346	*i* P	Pn	10 41 15.6	-0.7
TAVA				*i* S	Sn	10 41 40.1	+0.5
BUCA	Burdur, Bucak-	1.93	27	*i* P	Pb	10 41 17.9	-1.8
BUCA				*i* S	Sb	10 41 44.1	+0.7
NIS1	Nisyros Isl.	2.11	299	PN	Pn	10 41 19.6	+0.7
BRDR	BURDUR-Merkez	2.14	12	*i* P	Pn	10 41 20.2	+0.9
BRDR				*i* S	Sb	10 41 45.8	-3.8
MLSB	Milas	2.18	321	PN	Pn	10 41 20.7	+0.9
BODT	Bodrum	2.28	310	PN	Pn	10 41 21.6	+0.5
ISP	Isparta	2.37	20	PN	Pn	10 41 22.9	+0.4
GAZI	Gazipasa	2.39	74	PN	Pn	10 41 22.2	-0.4
AKMS	Akamas	2.41	103	P	Pn	10 41 23.7	+0.8
AKMS				S	Sn	10 41 51.1	-0.5
AKMS				AML	AML	10 41 51.5	
	comp=N,0.3nm,0.5s						
AKMS				AML	AML	10 41 51.5	
	comp=N,0.3nm,0.5s						
AKMS				AML	AML	10 41 54.3	
	comp=N,0.4nm,0.3s						
AKMS				AML	AML	10 41 54.3	
	comp=N,0.4nm,0.3s						
OSC1	CSNet OBS 1	2.57	144	P	Pn	10 41 28.6	+3.6
ALFC	Alefka	2.59	99	P	Pn	10 41 25.8	+0.3
ALFC				S	Sn	10 41 55.5	-0.6
ALFC				AML	AML	10 41 58.3	
	comp=N,0.3nm,0.3s						
ALFC				AML	AML	10 41 58.3	
	comp=N,0.3nm,0.3s						
ALFC				AML	AML	10 41 58.9	
	comp=N,0.4nm,0.2s						
ALFC				AML	AML	10 41 58.9	
	comp=N,0.4nm,0.2s						
SEYD	Seydisehir-KON	2.62	46	PN	Pn	10 41 26.1	+0.2
NATA	Nata	2.66	107	P	Pn	10 41 27.4	+1.0
NATA				S	Sn	10 41 57.6	-0.2
AYDB	Zeytinkoy-Aydi	2.67	332	PN	Pn	10 41 27.6	+1.0
DOGA	KONYA_Doganhis	3.06	34	*i* P	Pn	10 41 34.4	+2.5
DOGA				*i* S	Sn	10 42 09.5	+1.8
DOGA				IAML		10 42 13.0	
	comp=N,38nm,0.6s						
ASGA	Asgata	3.19	104	P	Pn	10 41 34.5	+0.9
CSS	Mathiatis	3.21	100	P	Pn	10 41 34.6	+0.6
SLUM	Salum	5.43	222	P	Pn	10 42 05.6	+1.2
	baz=223						
SLUM				S	Sn	10 43 01.1	-4.9
	baz=223						
KOT	Kottamia	5.99	160	P	Pn	10 42 13.9	+1.6
	baz=158						
HSAF	As Saff	6.22	163	P	Pn	10 42 17.0	+1.7
	baz=161						
GLL	Jalalah	6.29	162	P	Pn	10 42 17.6	+1.2
	baz=160						
SUZ	Suez	6.40	153	P	Pn	10 42 19.3	+1.5
	baz=151						
RYAN	Fayoum	6.54	174	P	Pn	10 42 20.9	+1.3
	baz=172						
ZNM	Zenema	6.84	154	P	Pn	10 42 25.2	+1.4
	baz=152						
SWA2		7.19	209	P	Pn	10 42 28.9	+0.3
	baz=210						
HFRF	Wahat Farafira	8.48	187	P	Pn	10 42 47.0	+0.6
	baz=187						

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*IDC **18** 10:48:20.0±0.5, 55°.60S×26°.16W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.8/16, mbtmp3.9/3, Error ellipse: s-maj=29.2km s-min=12.9km az=92.0*
*NEIC **18** 10:48:22.1±0.9, 55°.53S±0°.08×26°.4W±0°.2, h10km±1km, mb4.3/8, Error ellipse: s-maj=22.5km s-min=13.7km az=91.0*
ISC 18 10:48:25.8±1.0, 55°.6S±0°.1×26°.5W±0°.2, h38km, n16, σ0s.58/15, mb4.0/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	5.88	278		Pn	10 49 49.6	-0.6
VNA1	Neumayer--Stat	17.12	159	P	Pn	10 52 21.5	-0.2
VNA3	Neumayer Olymp	17.34	162	P	P	10 52 25.4	-0.1
VNA2	Neumayer--Watz	17.51	159	P	P	10 52 27.0	-0.4
	baz=328,slow=15						
SNAA	Sanae	19.05	157	P	P	10 52 44.2	-0.1
QSPA	South Pole Qui	34.69	180	P	P	10 55 11.6	0.0
QSPA				IAmb	IAmb	10 55 33.6	
	comp=Z,4.8nm,1.3s						
BO02	Sierra Bellavi	36.64	286	P	P	10 55 28.7	+0.2
SBA	Scott Base	46.60	184	P	P	10 56 50.5	+1.2
SBA				IAmb	IAmb	10 57 06.3	
	comp=Z,7.8nm,1.4s						
PB01	IPOC Station P	46.99	299	P	P	10 56 53.1	+0.1
VNDA	Vanda	47.08	182	P	P	10 56 52.4	-0.7
	comp=Z,0.9nm,0.7s,baz=163,slow=6.4,SNR=9.0						
VNDA	Vanda	47.08	182	P	P	10 56 53.1	0.0
VNDA				IAmb	IAmb	10 57 01.4	
	comp=Z,3.2nm,1.4s						
LPAZ	La Paz	50.40	304	P	P	10 57 20.8	+0.9
	comp=Z,1.1nm,0.7s,baz=140,slow=7.2,SNR=3.5						
LPAZ	La Paz	50.40	304	P	P	10 57 20.1	+0.2
TORD	Torodi Ar. Bea	72.44	29	P	P	10 59 47.5	-0.5
	comp=Z,1.1nm,0.8s,baz=201,slow=6.2,SNR=6.8						
TORD	Torodi Ar. Bea	72.44	29	IAmb	IAmb	10 59 54.3	
	comp=Z,3.0nm,1.4s						
ILAR	Eielson Array	150.06	312	PKPbc	PKPbc	11 08 11.2	+0.6
	comp=Z,0.5nm,0.7s,baz=111,slow=2.3,SNR=6.2						

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*DNK **18** 11:09:53.9±2.2, 59°.65N×22°.92E, h15km*
*HEL **18** 11:09:56.5±0.0, 59°.71N×22°.29E, h0km, ML2.2, ML1.9(UPP), Explosion*
*UPP **18** 11:09:56.9±1.2, 59°.79N×22°.21E, h0km, ML1.9, Suspected explosion*
*IDC **18** 11:09:58.3±0.5, 59°.98N×21°.89E, h0km, mb1 3.0/4, mb1mx2.6/53, mbtmp2.9/4, ML1.8/4, Error ellipse: s-maj=9.5km s-min=2.0km az=159.0*
ISC 18 11:09:54.4±0.8, 59°.70N±0°.04×22°.34E±0°.03, h0km, n38, σ1s.52/39, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	Metsahovi	1.16	63	*e*P	Pn	11 10 17.6	-0.1
MEF				MSG		11 10 50.0	
	comp=Z,35nm,0.1s						
MTSE	Matsula	1.25	142	*e*P	Pn	11 10 19.5	+0.4
AAL	Aland	1.27	293	P	Pg	11 10 18.8	+0.1
AAL				S	Sg	11 10 35.4	+0.2
AAL	Aland	1.27	293	*e*P	Pg	11 10 18.8	+0.1
RAF	Rauma	1.35	348	*e*P	Pn	11 10 20.5	+0.1
RAF				MSG		11 10 59.6	
	comp=Z,22nm,0.1s						
NUR	Nurmijrvi	1.41	54	*e*P	Pb	11 10 22.1	+0.6
ARBE	Arbavere	1.88	97	*e*PG	Pg	11 10 30.3	+0.1
NRTU	Norrtaelje	1.88	271	P	Pb	11 10 29.2	-0.3
NRTU	Norrtaelje	1.88	271	*e*P	Pb	11 10 29.1	-0.3
PVF	Pernaja	1.96	63	MSG		11 11 15.3	
	comp=Z,17nm,0.1s						
GRAU	Graesoe	2.01	290	P	Pn	11 10 30.7	+1.2
GRAU	Graesoe	2.01	290	*e*P	Pn	11 10 30.7	+1.2
SLIT	Slitere, Latvi	2.08	181	*e*P	Pn	11 10 32.0	+1.5
FORU	Forsmark	2.19	290	P	Pb	11 10 33.7	-1.1
FORU	Forsmark	2.19	290	*e*P	Pb	11 10 33.7	-1.1
FLYU	Flymyra	2.28	283	P	Pn	11 10 34.9	+1.7
FLYU	Flymyra	2.28	283	*e*P	Pn	11 10 34.9	+1.7
NYNU	Nynaeshamn	2.33	254	P	Pb	11 10 36.4	-0.7
NYNU	Nynaeshamn	2.33	254	*e*P	Pb	11 10 36.4	-0.7
FIBU	Brunna	2.53	277	P	Pb	11 10 39.0	-1.6
FIA0	FINESS Array S	2.54	45	MSG		11 11 33.8	
	comp=Z,12nm,0.1s						
FINES	FINESS Array B	2.54	45	Pn	Pb	11 10 40.3	-0.5
	comp=Z,0.3nm,0.3s,baz=232,slow=13,SNR=18						
FINES				Sn	Sb	11 11 13.0	+0.5
	comp=Z,2.6nm,0.3s,baz=236,slow=25,SNR=36						
VSU	Vasula	2.59	117	*e*PB	Pb	11 10 41.5	-0.1
OSTU	Oestervaala	2.67	284	P	Pn	11 10 40.5	+2.0
OSTU	Oestervaala	2.67	284	*e*P	Pn	11 10 40.5	+2.0
IGGU	Iggoen	2.76	297	P	Pn	11 10 41.6	+1.8
IGGU	Iggoen	2.76	297	*e*P	Pn	11 10 41.6	+1.8
KEF	Keuruu	2.77	25	MSG		11 11 40.5	
	comp=Z,7.7nm,0.1s						
GOTU	Gotland	2.82	226	*e*P	Pn	11 10 43.0	+2.4
ARNU	Arnoeviken	3.15	311	*e*P	Pn	11 10 46.8	+1.6
HFS	Hagfors	4.37	279	Pn	Pn	11 11 03.5	+1.6
	comp=Z,0.2nm,0.3s,baz=95,slow=9.5,SNR=9.3						
HFS				Lg	Lg	11 12 07.2	
	comp=Z,0.5nm,0.3s,baz=87,slow=28,SNR=5.4						
BLEU	Blekinge	4.86	228	*i* P	Pn	11 11 10.8	+2.2
BLEU				*i* S	Sn	11 12 05.7	+0.1
DEL	Delary	5.54	238	*i* P	Pn	11 11 18.4	+0.5
NOA	NORSAR Array B	5.68	288	Pn	Pn	11 11 20.9	+1.0
	comp=Z,0.0nm,0.3s,baz=100,slow=11,SNR=6.6						
STRU	Stroemstad	5.74	268	*i* P	Pn	11 11 21.5	+0.8
TJOU	Tjoern	5.80	258	*i* P	Pn	11 11 23.4	+1.8
TJOU				*i* S	Sn	11 12 29.1	+0.3
LUNU	Lund	6.28	233	*i* S	Sn	11 12 34.9	-5.5
ARCES	ARCESS Array B	9.96	6	Pn	Pn	11 12 18.4	-0.1
	baz=195,slow=13,SNR=7.6						

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*UPP **18** 11:10:09.2±1.4, 59°.76N×22°.88E, h0km, ML2.3, Suspected explosion*
*IDC **18** 11:10:12.5±2.2, 59°.64N×22°.31E, h0km, mb1 3.0/4, mb1mx2.6/53, mbtmp2.9/4, ML2.0/4, Error ellipse: s-maj=34.0km s-min=9.1km az=163.0*
ISC 18 11:10:13.6±2.0, 59°.9N±0°.2×22°.30E±0°.09, h0km, n10, σ1s.19/14, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAL	Aland	1.21	287	P	Pn	11 10 37.6	0.0
AAL				S	Sn	11 10 56.1	+1.4
NRTU	Norrtaelje	1.87	266	P	Pn	11 10 45.6	-1.1
NRTU				S	Sn	11 11 11.1	+0.2
GRAU	Graesoe	1.95	286	P	Pn	11 10 47.2	-0.6
GRAU				S	Sn	11 11 13.5	+0.5
FORU	Forsmark	2.13	286	P	Pn	11 10 50.7	+0.3
FLYU	Flymyra	2.24	279	P	Pn	11 10 51.5	-0.3
NYNU	Nynaeshamn	2.36	251	P	Pn	11 10 53.6	+0.1
FINES	FINESS Array B	2.45	48	Pn	Pn	11 10 56.0	+1.3
	0.4nm,0.3s,baz=227,slow=14,SNR=14						
FINES				Sn	Sb	11 11 29.2	0.0
	3.3nm,0.3s,baz=232,slow=26,SNR=16						
HFS	Hagfors	4.33	277	Pn	Pn	11 11 20.2	-0.4
	0.2nm,0.3s,baz=94,slow=15,SNR=9.1						
HFS				Lg	Lg	11 12 28.0	
	1.0nm,0.3s,baz=99,slow=27,SNR=6.1						
NOA	NORSAR Array B	5.62	287	Pn	Pn	11 11 35.3	-3.0
	0.0nm,0.3s,baz=98,slow=12,SNR=7.4						
ARCES	ARCESS Array B	9.82	7	Pn	Pn	11 12 35.2	-0.6
	baz=191,slow=14,SNR=6.8						

BER 18 11:11:01.5±1.1, 60°.16N×11°.90E, h0km, ML0.8, Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NC303	NORSAR Array S	1.10	346	*e*P	Pg	11 11 20.2	-2.3
NC303				*e*S	Sg	11 11 36.7	-0.1
NC303				IAML		11 11 37.8	
	comp=Z,2.8nm,0.3s						
STRU	Stroemstad	1.19	198	*e*P	Pg	11 11 22.8	-1.4
STRU				*e*S	Sg	11 11 38.9	-0.7
NC204	NORSAR Array S	1.25	334	*e*P	Pg	11 11 24.0	-1.4
NC204				*e*S	Sg	11 11 40.4	-1.2
SKAR	Skarslia	1.86	288	*e*S	Sn	11 11 55.6	-3.3
SKAR				IAML		11 11 57.0	
	comp=Z,1.3nm,0.5s						

IDC 18 11:19:12.3±1.5, 2°.19N×126°.00E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.2/34, mbtmp3.6/4, Error ellipse: s-maj=148.4km s-min=15.1km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.46	160	P	P	11 24 23.7	0.0
	0.7nm,0.4s,baz=339,slow=12,SNR=17						
ASAR	Alice Springs	26.82	164	P	P	11 24 55.0	+0.4
	0.3nm,0.5s,baz=346,slow=7.4,SNR=8.1						
STKA	Stephens Creek	36.97	158	P	P	11 26 24.9	+1.3
	1.2nm,0.6s,baz=333,slow=14,SNR=2.9						
MKAR	Makanchi Array	58.41	326	P	P	11 29 09.4	-0.5
	0.4nm,0.8s,baz=113,slow=8.2,SNR=1.6						

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*MOS **18** 11:46:45.8±0.9, 1°.32S×15°.88W, h11km, mb5.6/80, MS5.0/18, Error ellipse: s-maj=7.5km s-min=4.5km az=59.7*
*IDC **18** 11:46:45.9±0.3, 1°.27S×15°.85W, h0km, mb4.8/51, mb1 4.8/53, mb1mx4.8/60, mbtmp4.8/53, ML4.5/2, MS5.1/33, Ms1 5.0/33, ms1mx5.0/33, Error ellipse: s-maj=11.6km s-min=8.9km az=141.0*
*NEIC **18** 11:46:48.3±1.4, 1°.34S±0°.07×15°.83W±0°.08, h10km±1km, mb5.6/400, Ms_20 5.3/159, Mwb5.6/28, Mww5.4, Error*

ellipse: s-maj=14.2km s-min=11.8km az=85.0

BGR **18** *11:46:49.0±0.0, 1°.68S×14°.37W, h10^{km}, mb5.6, Ms4.9*

NEIC **18** *11:46:48.6, 1°.36S×15°.83W, h1^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.22; M$_{\theta\theta}$-0.24; M$_{\phi\phi}$1.46; M$_{r\theta}$0.10; M$_{\theta\phi}$-0.43; M$_{\phi r}$2.79; Fault plane solution: M$_0$3.13000×10^{17} NP1:ϕ_s326.89000°, δ15.27000°, λ-123.13000°. NP2:ϕ_s180.97000°, δ77.26000°, λ-81.52000°. Principal axes: T 3.2397, Plg32.0000°, Azm264.0000°; N -0.2296, Plg8.0000°, Azm359.0000°; P -3.0101, Plg57.0000°, Azm102.0000°;*

GCMT **18** *11:46:50.3±0.1, 1°.15S±0°.01×15°.94W, h12^{km}, MW5.5/152, Moment Tensor Solution. s112,c181; s152,c314; Duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.08±.02; M$_{\theta\theta}$-0.05±.02; M$_{\phi\phi}$2.13±.02; M$_{r\theta}$0.45±.06; M$_{\theta\phi}$-0.31±.02; M$_{\phi r}$-0.38±.05; Best double couple: M$_0$2.20600×10^{17} NP1:ϕ_s183.00000°, δ40.00000°, λ-74.00000°. NP2:ϕ_s342.00000°, δ52.00000°, λ-103.00000°. Principal axes: T 2.2160, Plg6.0000°, Azm81.0000°; N -0.0210, Plg10.0000°, Azm350.0000°; P -2.1950, Plg78.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **18** *11:46:51, 0°.95S×15°.93W, h12^{km}, Moment Tensor Solution. Duration: 6^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.69; M$_{\theta\theta}$0.00; M$_{\phi\phi}$1.69; M$_{r\theta}$0.43; M$_{\theta\phi}$-0.11; M$_{\phi r}$-0.29; Fault plane solution: M$_0$1.77000×10^{17} NP1: ϕ_s188.00000°, δ41.00000°, λ-70.00000°. NP2: ϕ_s344.00000°, δ52.00000°, λ-105.00000°. Principal axes: T 1.7307, Plg6.0000°, Azm85.0000°; N 0.0827, Plg12.0000°, Azm354.0000°; P -1.8135, Plg76.0000°, Azm198.0000°;*

ISC 18 11:46:47.9±0.6, **1°.34S**±0°.04×**15°.86W**±0°.05, **h10**^{km}±3^{km}, **h10**^{km}**:pP-P, n1035,** σ**1^{s}33**/997, **mb5.5**/333, **MS5.2**/139, **49C-30D, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	6.59	168	Pn	Pn	11 48 23.4	-1.3
	baz=348,slow=12,SNR=44						
H10N2				T	T	11 55 05.5	
	baz=348,slow=74,SNR=3674						
H10N3	ASCENSION HYDR	6.60	168	Pn	Pn	11 48 23.7	-1.2
	baz=348,slow=12,SNR=45						
H10N3				T	T	11 55 03.0	
	baz=348,slow=74,SNR=3026						
H10N1	ASCENSION HYDR	6.61	168	Pn	Pn	11 48 24.0	-1.0
	baz=348,slow=12,SNR=42						
H10N1				T	T	11 55 09.0	
	baz=348,slow=74,SNR=5901						
ASCN	Ascension	6.72	167	Pn	Pn	11 48 24.5	-2.2
H10S3	ASCENSION HYDR	7.66	171	Pn	Pn	11 48 38.6	-0.8
H10S3				T	T	11 56 22.7	
	baz=351,slow=74,SNR=2259						
H10S2	ASCENSION HYDR	7.67	171	Pn	Pn	11 48 38.6	-0.9
H10S2				T	T	11 56 28.0	
	baz=229,slow=74,SNR=505						
LIC	Lamto	13.17	55	*e*P	Pn	11 49 54.2	-0.9
	1μm,1.6s						
TIC	Toumodi	13.41	54	*e*P	Pn	11 49 56.4	-2.1
KIC	Kosan Boka	13.48	55	*e*P	Pn	11 49 57.3	-2.0
	1μm,1.6s						
DBIC	Dimbokro	13.56	54	Pn	Pn	11 49 58.2	-2.3
	0.9nm,0.3s,baz=241,slow=14,SNR=31						
DBIC				LR	LR	11 54 12.3	
	comp=Z,15μm,21.0s,baz=240,slow=33						
DBIC	Dimbokro	13.56	54	Pn	Pn	11 49 57.8	-2.7
MBO	M'Bour	15.66	356		Pn	11 50 28.7	-0.1
MBO				IAmb	IAmb	11 50 36.2	
	comp=Z,751nm,1.5s						
SHEL	Horse Pasture	17.62	146	P	Pn	11 50 52.9	-0.9
SHEL				pmax	pmax		
	comp=Z,182nm,1.2s						
SHEL	Horse Pasture	17.62	146	Pn	Pn	11 50 52.9	-0.9
SACV	Santiago Islan	17.92	335	Pn	Pn	11 50 55.9	-1.6
KOWA	Kowa	19.62	36	P	P	11 51 14.5	-2.2
	comp=Z,2.9nm,0.3s,baz=212,slow=8.4,SNR=76						
KOWA				LR	LR	11 58 01.5	
	comp=Z,11μm,19.6s,baz=212,slow=34						
KOWA	Kowa	19.62	36	P	P	11 51 14.6	-2.2
TORD	Torodi Ar. Bea	22.59	50	P	P	11 51 46.8	-2.1
	comp=Z,48nm,0.9s,baz=231,slow=6.7,SNR=57						
TORD				LR	LR	11 59 45.4	
	comp=Z,11μm,19.2s,baz=230,slow=35						
TORD	Torodi Ar. Bea	22.59	50	P	P	11 51 46.6	-2.2
TORD				IAmb	IAmb	11 51 53.6	
	comp=Z,238nm,1.3s						
GDU01	Guandu, BA	26.49	241	*e*P	P	11 52 24.4	-1.3
CMC01	Camacan, BA	27.19	238	*e*P	P	11 52 33.4	+1.4
GUA01	Guaratinga, BA	28.03	236	*e*P	P	11 52 40.6	+1.2
ROSB	Rosrio	28.29	266	*e*P	P	11 52 41.7	-0.2
RIB01	Linhares ES	29.94	232	*e*P	P	11 52 58.5	+2.0
BSFB	Barra de Sao F	30.04	233	*e*P	P	11 52 58.2	+0.8
SJMB	Sao Joao De Ma	30.24	234	*e*P	P	11 53 00.3	+1.1
SDBA	SAO DESIDERIO	30.82	248	*e*P	P	11 53 04.2	-0.2
ALF01	Guarapari-ES	30.93	230	*e*P	P	11 53 06.7	+1.4
JANB	Januaria	31.22	243	*e*P	P	11 53 08.4	+0.5
MC01	Montes Claros	31.58	239	*e*P	P	11 53 10.9	-0.2
DIAM	Diamantina, MG	32.08	237	*e*P	P	11 53 15.8	+0.3
TMAB	Tom-Au,PA,Br	32.23	268	*e*P	P	11 53 17.2	+0.4
CAM01	Campos-RJ	32.34	229	*e*P	P	11 53 19.0	+1.4
SMTB	Santa Maria do	32.45	256	*e*P	P	11 53 18.3	-0.4
DUB01	Friburgo-RJ	33.03	229	*e*P	P	11 53 24.6	+0.9
PEXB	Peixe	33.90	250	*e*P	P	11 53 32.4	+1.0
VAS01	Vassouras-RJ	33.96	230	*e*P	P	11 53 32.8	+1.0
PMOZ	Porto Moniz, M	34.00	358	*e*LR	LR	12 02 52.9	
	comp=Z,738nm,20.0s						
PRPB	Parauapebas	34.21	261	*e*P	P	11 53 34.5	+0.4
BSCB	Bom Sucesso	34.32	233	*e*P	P	11 53 34.9	-0.1
MAN01	Angra dos Reis	34.68	230	*e*P	P	11 53 38.0	-0.1
BDFB	Brasilia	34.75	244	P	P	11 53 39.0	+0.2
	comp=Z,76nm,1.4s,baz=72,slow=10,SNR=15						
BDFB				LR	LR	12 05 31.9	
	comp=Z,2μm,21.4s,baz=75,slow=32						
BDFB	Brasilia	34.75	244	P	P	11 53 38.0	-0.8
BDFB				IAmb	IAmb	11 53 47.1	
	comp=Z,128nm,1.3s						
MDT	Midelt	35.59	16	P	P	11 53 44.5	-1.3
	comp=Z,10nm,1.1s,baz=200,slow=8.1,SNR=22						
IPMB	Ipameri, GO	35.81	240	*e*P	P	11 53 48.3	+0.3
MCPB	Macapa, AP	36.20	271	*e*P	P	11 53 51.5	+0.2
PARB	Paraibuna	36.22	231	*e*P	P	11 53 53.6	+2.3
SNDB	Serra Nova Dou	36.69	252	*e*P	P	11 53 56.0	+0.6
VAO	Valinhos	37.09	232	*e*P	P	11 53 59.9	+1.1
RCLB	Rio Claro- Sao	37.24	233	*e*P	P	11 54 02.4	+2.3
TSUM	Tsumeb	37.26	121	P	P	11 53 59.5	-0.8
	comp=Z,16nm,1.0s,baz=303,slow=8.3,SNR=14						
TSUM	Tsumeb	37.26	121	P	P	11 53 59.2	-1.1
MDP	Montagnes des	37.29	280	P	P	11 54 00.5	0.0
	comp=Z,28nm,1.0s,baz=130,slow=7.9,SNR=2.6						
BB19B	Bebedouro	37.41	236	*e*P	P	11 54 03.4	+1.9
SPB	Sao Paulo	37.76	232	*e*P	P	11 54 04.2	-0.2
SPB	Sao Paulo	37.76	232	P	P	11 54 02.8	-1.5
SPB				IAmb	IAmb	11 54 12.9	
	comp=Z,197nm,1.5s						
SPB				IAMs_20	IAMs_20	12 06 20.1	
	comp=Z,5μm,21.0s						
PET01	Itanhaem-SP	38.00	231	*e*P	P	11 54 08.0	+1.6
ARAG	Araguaiana, MT	38.22	246	*e*P	P	11 54 09.4	+1.1
ITRB	Iturama	38.37	239	*e*P	P	11 54 10.5	+0.9
MALB	Monte Alegre	38.39	269	*e*P	P	11 54 10.1	+0.3
SFS	San Fernando	38.67	12	IAMs_20	IAMs_20	12 10 24.5	
	comp=Z,4μm,20.0s						
MORF	Marmelete	39.02	9	*e*P	P	11 54 19.0	+4.2
	comp=Z,62nm,1.6s						
OTSS	Djebel Tessala	39.06	20	P	P	11 54 17.8	+2.6
PBDV	Barranco-do-Ve	39.08	10	*e*P	P	11 54 14.6	-0.7
	comp=Z,77nm,1.2s						
PBDV				*e*pP	pwP	11 54 23.8	+1.5
PTEO	Sao Teotonio	39.25	9	*e*P	P	11 54 16.1	-0.5
	comp=Z,99nm,1.5s						
PTEO				*e*pP	pwP	11 54 25.7	+2.1
PVAQ	Vaqueiros	39.28	10	*e*P	P	11 54 19.3	+2.4
	comp=Z,69nm,1.5s						
PVAQ				*e*pP	pwP	11 54 25.3	+1.4
PVAQ				*e*S	S	12 00 33.6	+16
PVAQ				*e*LQ	LQ	12 02 58.4	
PVAQ				*e*LR	LR	12 05 49.3	
	comp=Z,858nm,18.0s						
PVAQ	Vaqueiros	39.28	10	P	P	11 54 16.0	-0.9
FRTB	Fartura	39.33	234	*e*P	P	11 54 18.3	+0.7
PCVE	Castro Verde	39.44	10	*e*P	P	11 54 21.1	+2.8
	comp=Z,53nm,1.7s						
PCVE				*e*pP	pwP	11 54 27.4	+2.1
MESJ	Messejana	39.62	10	*e*P	P	11 54 20.8	+1.1
	comp=Z,44nm,1.6s						
NPGB	Novo Progresso	39.78	261	*e*P	P	11 54 21.8	+0.3
PNCL	Nicolau / Gran	39.83	9	*e*P	P	11 54 23.6	+2.1
	comp=Z,62nm,2.4s						
ITTB	Itaituba	39.93	265	*e*P	P	11 54 22.1	-0.6
PCMB	Pacaembu	39.93	237	*e*P	P	11 54 23.9	+1.2
EVO	Evora	40.33	10	*e*P	P	11 54 27.1	+1.5
	comp=Z,59nm,1.5s						
EVO				*e*pP	pwP	11 54 34.9	+2.3
EANR	'Ain N'Sour	40.33	21	P	P	11 54 28.9	+3.2
PESTR	Estremoz	40.72	10	P	P	11 54 29.7	+0.8
CLDB	Colider	40.77	255	*e*P	P	11 54 31.0	+1.2
PMTG	Montargil	40.81	9	*e*P	P	11 54 30.2	+0.6
	comp=Z,34nm,1.5s						
PMTG				*e*pP	pwP	11 54 38.6	+1.9
CART	Cartagena	41.10	18	P	P	11 54 32.3	+0.4
EMHD	Djebel Mahouad	41.25	23	P	P	11 54 35.0	+1.5
PMRV	Marv??o	41.30	10	*e*P	P	11 54 37.3	+3.6
	comp=Z,63nm,1.6s						
PMRV				*e*S	S	12 00 50.4	+2.4
PMRV				*e*LQ	LQ	12 03 56.3	
PMRV				*e*LR	LR	12 06 48.7	
	comp=Z,1μm,20.0s						
ADJB	Djebel Djouab	41.41	24	P	P	11 54 37.0	+2.3
ROSA	Rosais	41.46	345	P	P	11 54 35.8	+0.8
AKET	Djebel Ketaf	41.49	24	P	P	11 54 38.5	+3.0
ATAF	Djebel Tarf	41.51	25	P	P	11 54 36.4	+0.8
PP1B	Ponte de Pedra	41.60	245	*e*P	P	11 54 37.3	+0.8
PCAS	Casmilo, Conde	41.74	8	*e*P	P	11 54 38.9	+1.7
	comp=Z,89nm,1.8s						
PCAS				*e*pP	pwP	11 54 45.9	+1.7
ABA	Alger-Bouzarea	41.81	23	P	P	11 54 39.0	+1.1
PDRB	Porto dos Gac	41.81	254	*e*P	P	11 54 38.4	+0.1
SALV	Santo Antonio	41.84	248	*e*P	P	11 54 39.8	+1.3
PAB	San Pablo	42.03	13	P	P	11 54 39.5	-0.2
PAB				pmax	pmax		
	comp=Z,41nm,1.4s						
PAB	San Pablo	42.03	13	P	P	11 54 39.5	-0.2
CKHR	Kef el Ahmar	42.16	26	P	P	11 54 43.6	+2.7
MTE	Manteigas	42.23	9	*e*P	P	11 54 42.4	+1.1
	comp=Z,47nm,1.5s						
MTE				*e*pP	pwP	11 54 49.7	+1.4
MTE				*e*S	S	12 01 11.6	+10
MTE				*e*LQ	LQ	12 04 08.2	
MTE				*e*LR	LR	12 09 30.9	
	comp=Z,1μm,18.0s						
MTE	Manteigas	42.23	9	P	P	11 54 41.2	0.0
ESDC	Sonseca Array	42.24	14	P	P	11 54 40.7	-0.8
	comp=Z,1.7nm,0.9s,baz=243,slow=8.9,SNR=13						
ESDC				PP	PP	11 56 17.2	-2.1
	comp=Z,3.9nm,0.9s,baz=194,slow=11,SNR=6.9						
ESDC				LR	LR	12 12 37.5	
	comp=Z,2μm,19.6s,baz=225,slow=37						
ESDC	Sonseca Array	42.24	14	P	P	11 54 40.3	-1.2
ESBB	Sonseca Array	42.24	14	P	P	11 54 41.2	-0.2
PVIS	Viseu	42.48	9	*e*P	P	11 54 44.0	+0.7
	comp=Z,57nm,1.9s						
PVIS				*e*pP	pwP	11 54 52.3	+1.9
CTEI	Djebel Teioual	42.60	27	P	P	11 54 45.9	+1.4
MVO	Moncorvo	43.06	10	*e*P	P	11 54 49.8	+1.8
	comp=Z,60nm,1.6s						
MVO				*e*pP	pwP	11 54 56.5	+1.4
MVO				*e*S	S	12 01 16.9	+2.9
MVO				*e*LQ	LQ	12 04 21.6	
MVO				*e*LR	LR	12 07 56.5	
	comp=Z,763nm,22.0s						
POLO	Lamas de Olo	43.14	9	*e*P	P	11 54 46.4	-2.3
	comp=Z,21nm,1.5s						
POLO				*e*pP	pwP	11 54 56.6	+0.9
ITAB	Concordia	43.27	230	*e*P	P	11 54 52.6	+2.7
ITAB	Concordia	43.27	230	P	P	11 54 50.0	+0.1
AQDB	Aquidauana	43.30	241	*e*P	P	11 54 50.5	+0.2
AQDB	Aquidauana	43.30	241	P	P	11 54 50.0	-0.2
CAEH	'Ain El Ouahch	43.40	27	P	P	11 54 54.0	+3.2
CMAH	Djebel Manchou	43.53	27	P	P	11 54 54.1	+2.2
PGAV	Gavieira, Arco	43.65	8	*e*P	P	11 54 54.6	+1.8
	comp=Z,39nm,1.5s						
PGAV	Gavieira, Arco	43.65	8	*e*LR	LR	12 08 07.4	
	comp=Z,984nm,20.0s						
PBRG	Braganca	43.73	10	*e*P	P	11 54 53.8	+0.4
	comp=Z,37nm,2.4s						
KEST	Kesra	43.74	30	P	P	11 54 53.5	-0.2
	comp=Z,17nm,1.1s,baz=174,slow=6.2,SNR=14						
KEST				PcP	PcP	11 56 39.0	-1.5
	comp=Z,20nm,1.1s,baz=200,slow=1.1,SNR=3.5						
KEST				LR	LR	12 13 54.3	
	comp=Z,5μm,20.7s,baz=165,slow=37						
KEST	Kesra	43.74	30	P	P	11 54 56.4	+2.7
	SNR=8.5						
KEST	Kesra	43.74	30	P	P	11 54 54.4	+0.7
PTGA	Pitinga	44.10	270	P	P	11 54 56.7	-0.1
	comp=Z,4.6nm,0.8s,baz=87,slow=10.0,SNR=6.7						
BOAV	Boa Vista	44.81	275	*e*P	P	11 55 04.0	+1.5
BOAV	Boa Vista	44.81	275	P	P	11 55 02.5	0.0
BOAV				IAmb	IAmb	11 55 11.1	
	comp=Z,218nm,1.8s						
MACA	Manacapuru-AM	44.82	267	*e*P	P	11 55 04.2	+1.6
MACA	Manacapuru-AM	44.82	267	P	P	11 55 01.9	-0.8
PTLB	Pontes e Lacer	44.93	249	*e*P	P	11 55 05.1	+1.7
PTLB	Pontes e Lacer	44.93	249	P	P	11 55 03.2	-0.2
VILB	Vilhena	45.40	253	*e*P	P	11 55 08.3	+1.1
VILB	Vilhena	45.40	253	P	P	11 55 06.2	-0.9
VILB				IAmb	IAmb	11 55 16.6	
	comp=Z,126nm,1.8s						
LSZ	Lusaka	45.61	110	P	P	11 55 08.6	-0.3
	comp=Z,3.7nm,0.5s,baz=303,slow=4.3,SNR=10						
LSZ	Lusaka	45.61	110	P	P	11 55 09.2	+0.3
LSZ	Lusaka	45.61	110	IAMs_20	IAMs_20	12 10 42.5	
	comp=Z,3μm,22.0s						
CPSB	Cacapava Do Su	45.88	227	*e*P	P	11 55 12.1	+1.4
SUR	Sutherland	46.31	136	P	P	11 55 14.3	0.0
	comp=Z,16nm,0.8s,baz=303,slow=9.3,SNR=13						
SUR	Sutherland	46.31	136	P	P	11 55 15.5	+1.2
SUR				P	P	11 55 15.5	+1.2
SUR	Sutherland	46.31	136	P	P	11 55 13.8	-0.5
SUR				IAmb	IAmb	11 55 24.3	
	comp=Z,78nm,1.1s						
LBTB	Lobatse	46.41	124	P	P	11 55 14.8	-0.2
	comp=Z,12nm,0.7s,baz=292,slow=7.8,SNR=19						
LBTB	Lobatse	46.41	124	P	P	11 55 14.9	-0.2
LBTB				IAmb	IAmb	11 55 18.5	
	comp=Z,133nm,1.7s						
MBAR	Mbarara	46.60	90	*d i*P	P	11 55 18.8	+1.9
MBAR	Mbarara	46.60	90	P	P	11 55 20.1	+3.2
MBAR				P	P	11 55 20.1	+3.2
PLTB	Pedras Altas	46.72	226	*e*P	P	11 55 19.4	+2.0
PLTB	Pedras Altas	46.72	226	P	P	11 55 17.2	-0.2
VSL	Villasalto	46.76	27	P	P	11 55 16.9	-0.7
VSL				IAmb	IAmb	11 55 25.9	
	comp=Z,143nm,1.9s						
VSL				IAMs_20	IAMs_20	12 14 59.6	
	comp=Z,2μm,19.0s						
SIV	San Ignacio	46.87	249	P	P	11 55 18.6	-0.1
	comp=Z,2.1nm,0.7s,baz=84,slow=9.2,SNR=13						
CPUP	Villa Florida	46.96	234	P	P	11 55 18.6	-0.7
	comp=Z,17nm,1.2s,baz=65,slow=8.1,SNR=7.9						
CPUP				LR	LR	12 12 27.3	
	comp=Z,3μm,21.9s,baz=66,slow=33						
CPUP	Villa Florida	46.96	234	P	P	11 55 18.5	-0.8
CPUP				IAmb	IAmb	11 55 28.1	
	comp=Z,167nm,1.9s						
CLTB	Caltabellotta	47.15	32	P	P	11 55 20.4	-0.2
CLTB				IAmb	IAmb	11 55 40.0	
	comp=Z,107nm,1.6s						
CORL	Corleone	47.43	32	P	P	11 55 24.4	+1.6
CORL				IAmb	IAmb	11 55 58.6	
	comp=Z,127nm,1.6s						
RAFF	Raffo Rosso	47.50	33	P	P	11 55 25.1	+1.8
RAFF				IAmb	IAmb	11 55 31.9	
	comp=Z,64nm,1.1s						
BOSA	Boshof	47.68	129	P	P	11 55 24.4	-0.7
	comp=Z,23nm,0.7s,baz=302,slow=7.9,SNR=48						
BOSA				LR	LR	12 11 57.7	
	comp=Z,1μm,20.7s,baz=293,slow=32						
BOSA	Boshof	47.68	129	P	P	11 55 25.1	0.0
BOSA				pmax	pmax		
	comp=Z,36nm,0.9s						
BOSA	Boshof	47.68	129	P	P	11 55 25.1	0.0
BOSA				IAmb	IAmb	11 55 34.2	
	comp=Z,36nm,0.8s						
SAML	Samuel	47.69	259	P	P	11 55 24.9	-0.3
SAML				pmax	pmax		
	comp=Z,82nm,1.7s						
SAML	Samuel	47.69	259	P	P	11 55 24.9	-0.3
SAML				IAmb	IAmb	11 55 35.0	
	comp=Z,82nm,1.7s						
ITQB	Itaqui	47.90	230	*e*P	P	11 55 28.5	+2.0
ITQB	Itaqui	47.90	230	P	P	11 55 26.1	-0.5
CEL	Celeste	49.08	33	P	P	11 55 35.9	+0.3
CEL				IAmb	IAmb	11 55 45.4	
	comp=Z,99nm,1.3s						
SSB	Saint Sauveur	49.82	19	P	P	11 55 40.4	-0.7
SSB				pmax	pmax		
	comp=Z,42nm,1.6s						
SSB	Saint Sauveur	49.82	19	P	P	11 55 40.4	-0.7
SEUS	St. Eustatius	50.04	294	IAMs_20	IAMs_20	12 11 42.3	
	comp=Z,3μm,21.0s						
CASP	Castiglione de	50.09	26	P	P	11 55 43.1	0.0
TIP	Timpagrande	50.21	33	⇑P	P	11 55 45.5	+1.3
TIP	Timpagrande	50.21	33	P	P	11 55 44.7	+0.5
TIP				IAmb	IAmb	11 55 52.4	
	comp=Z,63nm,1.2s						
TIP				IAMs_20	IAMs_20	12 18 59.9	
	comp=Z,2μm,18.0s						
SMRT	St. Maarten	50.29	295	IAMs_20	IAMs_20	12 11 58.1	
	comp=Z,2μm,21.0s						
SABA	Saba	50.31	294	IAMs_20	IAMs_20	12 12 13.6	
	comp=Z,3μm,20.0s						
BNI	Bardonecchia	50.34	21	P	P	11 55 45.9	+0.7
BNI				pmax	pmax		
	comp=Z,114nm,1.9s						
BNI				MLR	MLR		
	comp=Z,2μm,18.0s						
BNI	Bardonecchia	50.34	21	P	P	11 55 45.9	+0.7
BNI				IAmb	IAmb	11 55 49.6	
	comp=Z,114nm,1.9s						
BNI				IAMs_20	IAMs_20	12 18 08.4	
	comp=Z,2μm,18.0s						
ETMB	Extrema	50.76	258	*e*P	P	11 55 48.6	0.0
ETMB	Extrema	50.76	258	P	P	11 55 48.1	-0.5
ETMB				IAmb	IAmb	11 55 58.0	
	comp=Z,111nm,1.8s						
MSSA	Maissana	50.78	23		P	11 55 50.9	+2.5
MSSA				IAmb	IAmb	11 55 57.4	
	comp=Z,98nm,1.4s						
OSSC	Osservatorio P	50.84	25	P	P	11 55 50.5	+1.7
AQU	L'Aquila	50.88	28	P	P	11 55 49.1	-0.1
AQU				pmax	pmax		
	comp=Z,93nm,1.3s						
AQU				MLR	MLR		
	comp=Z,3μm,21.0s						
AQU	L'Aquila	50.88	28	P	P	11 55 49.0	-0.1
AQU				IAmb	IAmb	11 55 58.2	
	comp=Z,93nm,1.3s						
AQU				IAMs_20	IAMs_20	12 17 19.6	
	comp=Z,3μm,21.0s						
NRCA	Norcia	51.12	27	P	P	11 55 50.5	-0.6
MURB	Monte Urbino	51.19	26	P	P	11 55 51.8	+0.3
MURB				IAmb	IAmb	11 55 54.8	
	comp=Z,136nm,1.7s						
ZCCA	Zocca	51.40	24	P	P	11 55 52.3	-0.7
ZCCA				IAmb	IAmb	11 56 11.8	
	comp=Z,168nm,1.9s						
LODK	Lodwar	51.41	85	P	P	11 55 56.5	+2.8
	SNR=19						
CLF	Chambon-Foret	51.63	15	P	P	11 55 55.6	+1.0
CLF				IAmb	IAmb	11 55 58.4	
	comp=Z,208nm,1.8s						
SENIN	Lac Senin/Sane	51.70	20	P	P	11 55 55.4	0.0
SENIN				IAMs_20	IAMs_20	12 18 44.2	
	comp=Z,2μm,18.0s						
ITM	Ithomi	51.89	38	P	P	11 55 56.5	-0.3
STVI	Saint Thomas	52.08	295	P	P	11 55 59.9	+1.4
STVI				IAmb	IAmb	11 56 06.8	
	comp=Z,65nm,1.1s						
TEOL	Teolo	52.51	24	P	P	11 56 01.0	-0.3
MTP	Monte Pirata	52.56	294	P	P	11 56 01.4	-0.7
IDI	Anoyia	52.68	42	P	P	11 56 02.6	-0.2
	comp=Z,61nm,1.0s,baz=233,slow=9.6,SNR=6.4						
HUMP	Col San Antoni	52.84	294	P	P	11 56 03.1	-1.1
HUMP				IAmb	IAmb	11 56 11.7	
	comp=Z,124nm,1.5s						
PDPR	Patillas Dam,	52.96	294	P	P	11 56 05.0	-0.1
PDPR				IAmb	IAmb	11 56 13.2	
	comp=Z,168nm,1.9s						
BAUV	El Baul	52.98	282	P	P	11 56 05.7	+0.5
DAVOX	Davos/Dischmat	52.98	22	P	P	11 56 04.2	-0.7
	comp=Z,8.5nm,0.9s,baz=208,slow=8.5,SNR=9.4						
CTI	Castel Tesino	53.06	24	P	P	11 56 04.8	-0.7
CTI				pmax	pmax		
	comp=Z,93nm,1.7s						
CTI	Castel Tesino	53.06	24	P	P	11 56 04.8	-0.7
CTI				IAmb	IAmb	11 56 08.4	
	comp=Z,93nm,1.7s						
KMBO	Kilima Mbogo	53.10	90	P	P	11 56 07.1	+0.7
	comp=Z,3.5nm,0.7s,baz=251,slow=8.6,SNR=15						
KMBO				LR	LR	12 17 09.9	
	comp=Z,7μm,18.8s,baz=266,slow=34						
KMBO	Kilima Mbogo	53.10	90	*i* P	P	11 56 09.5	+3.0
	SNR=15						
KMBO	Kilima Mbogo	53.10	90	P	P	11 56 06.4	-0.1
KMBO				pmax	pmax		
	comp=Z,55nm,1.5s						
KMBO	Kilima Mbogo	53.10	90	P	P	11 56 09.6	+3.2
KMBO				P	P	11 56 09.6	+3.2
KMBO				S	S	12 03 47.7	+10
KMBO				S	S	12 03 47.7	+10
KMBO	Kilima Mbogo	53.10	90	P	P	11 56 06.4	-0.1
SJG	San Juan	53.11	294	IAMs_20	IAMs_20	12 13 34.8	
	comp=Z,2μm,20.0s						
ECH	Echery	53.26	19	P	P	11 56 08.2	+1.4
ECH				pmax	pmax		
	comp=Z,123nm,2.0s						
ECH				MLR	MLR		
	comp=Z,1μm,20.0s						
ECH	Echery	53.26	19	P	P	11 56 08.2	+1.4
ECH				IAmb	IAmb	11 56 09.9	
	comp=Z,123nm,2.0s						
DAVA	Damuels	53.41	22	*i* P	P	11 56 08.2	+0.1
	comp=Z,22nm,0.8s,SNR=8.7						
FETA	Feichten	53.50	22	*i* P	P	11 56 08.7	0.0
	comp=Z,9.6nm,0.8s,SNR=6.3						
LPAZ	La Paz	53.56	251	P	P	11 56 09.6	-0.7
	comp=Z,1.8nm,0.5s,baz=67,slow=5.8,SNR=12						
LPAZ				PcP	PcP	11 57 16.0	-1.0
	comp=Z,3.5nm,0.9s,baz=270,slow=1.0,SNR=4.2						
LPAZ				LR	LR	12 18 19.6	
	comp=Z,4μm,19.0s,baz=86,slow=35						
LPAZ	La Paz	53.56	251	P	P	11 56 09.9	-0.3
LPAZ				pmax	pmax		
	comp=Z,28nm,1.4s						
LPAZ	La Paz	53.56	251	*e*P	P	11 56 10.0	-0.3
LPAZ	La Paz	53.56	251	P	P	11 56 09.9	-0.3
STAL	STALIGIAL	53.67	24	P	P	11 56 10.2	+0.4
AOPR	Arecibo Observ	53.72	294	P	P	11 56 10.7	0.0
BFO	Black Forest	53.75	20	P	P	11 56 09.6	-0.8
BFO				pmax	pmax		
	comp=Z,109nm,1.9s						
BFO	Black Forest	53.75	20	*e*P	P	11 56 10.3	0.0
	comp=Z,166nm,2.2s,baz=212,slow=7.2						
BFO	Black Forest	53.75	20	P	P	11 56 09.6	-0.8
BFO				IAmb	IAmb	11 56 13.3	
	comp=Z,109nm,1.9s						
OHR	Ohrid	53.78	34	*i* P	P	11 56 14.4	+3.6
UBR	Ueberruh	53.82	22	*e*P	P	11 56 10.8	-0.2
	comp=Z,421nm,2.7s,baz=212,slow=7.2						
PDG	Podgorica	53.85	32	⇑P	P	11 56 12.4	+1.2
PDG	Podgorica	53.85	32	P	P	11 56 12.3	+1.2
PDG				IAmb	IAmb	11 56 21.2	
	comp=Z,60nm,1.3s						
SQTA	Sankt Quirin	53.85	23	*i* P	P	11 56 12.0	+0.8
	comp=Z,8.8nm,0.6s,SNR=8.1						
KIBK	Kibwezi	53.88	92	P	P	11 56 15.0	+2.9
	SNR=7.8						
KIBK	Kibwezi	53.88	92	P	P	11 56 12.3	+0.2
RETA	Reutte	53.90	22	*e*P	P	11 56 12.9	+1.4
	comp=Z,11nm,1.2s						
MOTA	Moosalm	53.91	22	*i* P	P	11 56 12.7	+1.0
	comp=Z,38nm,1.8s,SNR=11						
CRPR	Cabo Rojo, PR	53.96	293	P	P	11 56 12.8	+0.4
ABTA	Abfaltersbach	53.98	24	*i* P	P	11 56 12.9	+0.8
	comp=Z,48nm,2.4s,SNR=10						
ZOU	Zoufplan	54.01	24	IAmb	IAmb	11 56 17.2	
	comp=Z,173nm,2.0s						
PRSN	Puerto Rico Se	54.05	294	P	P	11 56 14.4	+1.4

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WTTA  Wattenberg       54.05  23 i P      P        11 56 12.6 -0.2
      comp=Z,39nm,1.5s,SNR=9.6
DOU   Dourbes          54.16  16 dP       P        11 56 14.0 +0.8
      comp=Z,10nm,1.7s
DOU                              dPcP     PcP      11 57 20.1 +2.4
WLF   Walferdange      54.22  17 dP       P        11 56 14.6 +0.9
WLF   Walferdange      54.22  17  P       P        11 56 15.6 +1.9
WLF                               pmax    pmax
      comp=Z,122nm,2.0s
WLF   Walferdange      54.22  17  P       P        11 56 15.6 +1.9
WLF                               IAmb    IAmb     11 56 17.3
      comp=Z,122nm,2.0s
GORS  Gorjuse          54.25  25 eP       P        11 56 14.8 +0.7
LJU   Ljubljana        54.26  26 eP       P        11 56 15.1 +1.0
MYKA  Terra Mystica    54.35  25 i P      P        11 56 16.2 +1.3
      comp=Z,35nm,1.6s,SNR=12
RCHB  Rochefort        54.39  17 dP       P        11 56 15.7 +0.8
BMRD  Maredsous        54.39  16 dP       P        11 56 15.9 +1.0
BGES  Gesves           54.55  16 dP       P        11 56 15.9 -0.3
BGES                             dPcP     PcP      11 57 19.9 +0.6
KBA   Koelnbreinsper   54.58  24 eP       P        11 56 19.2 +2.6
      comp=Z,16nm,1.3s
OBKA  Obir             54.64  25 i P      P        11 56 19.1 +2.1
      comp=Z,12nm,1.4s,SNR=6.9
BCLA  Clavier          54.65  16 dP       P        11 56 16.4 -0.5
      comp=Z,7.0nm,1.1s
FUR   Furstenfeldbru   54.66  22 eP       P        11 56 17.0  0.0
      baz=212,slow=7.2
SKO   Skopje           54.72  34 i P      P        11 56 18.4 +0.9
SJES  Sjenica          54.81  32 eP       P        11 56 19.4 +1.1
RJOB  Jochberg         54.89  23 eP       P        11 56 18.3 -0.5
      baz=212,slow=7.2
VAY   Valandovo        54.92  35 i P      P        11 56 18.9 -0.1
BBLS  Lazi&#263;i      54.94  31 eP       P        11 56 20.1 +0.9
SOKA  Soboth           54.98  26 i P      P        11 56 20.4 +1.0
      comp=Z,27nm,1.6s,SNR=13
GROS  Grobnik          55.01  26 eP       P        11 56 20.6 +1.0
MEM   Membach          55.02  17 dP       P        11 56 20.0 +0.5
      comp=Z,33nm,2.5s
BTNL  Ternell          55.03  17 dP       P        11 56 21.0 +1.4
      comp=Z,10nm,2.2s
IVAS  Ivanjica         55.12  31 eP       P        11 56 20.2 -0.3
PB16  IPOC Station P   55.24 249  P       P        11 56 22.0 -0.4
AHRW  Bad Neuenahr-A   55.27  18 eP       P        11 56 22.2 +0.9
      comp=Z,171nm,1.9s,baz=212,slow=7.2
FURI  Furi             55.28  78  IAMs_20 IAMs_20  12 17 20.1
      comp=Z,2µm,21.0s
BODT  Bodrum           55.29  42 eP       P        11 56 21.0 -0.8
DIVS  Divibare         55.41  31  P       P        11 56 23.5 +0.9
DIVS                              IAmb    IAmb     11 56 26.4
      comp=Z,68nm,1.5s
DIVS                              IAMs_20 IAMs_20  12 21 29.3
      comp=Z,2µm,20.0s
DIVS  Divibare         55.41  31 eP       P        11 56 23.3 +0.8
TNS   Taunus Mts       55.42  19 eP       P        11 56 22.9 +0.4
      comp=Z,178nm,2.3s,baz=212,slow=7.2
PRVS  Prvonek          55.43  34 eP       P        11 56 23.5 +0.8
BARS  Barje            55.49  33 eP       P        11 56 24.2 +1.1
SDV   Santo Domingo    55.51 282 eP       P        11 56 24.0 +0.1
MOA   Molln            55.58  24 eP       P        11 56 23.7 +0.1
      comp=Z,25nm,1.5s
GCAM  G?zelcaml?       55.60  41 eP       P        11 56 15.9 -8.0
ARSA  Arzberg          55.63  25 i P      P        11 56 26.2 +2.2
      comp=Z,23nm,1.5s,SNR=5.7
GRUS  Gruza            55.63  31 eP       P        11 56 25.1 +1.0
BOSS  Bosilegrad       55.64  34 eP       P        11 56 23.9 -0.3
LVC   Limon Verde      55.66 243  LR      LR       12 21 28.0
      comp=Z,870nm,18.8s,baz=72,slow=37
LVC   Limon Verde      55.66 243  P       P        11 56 24.2 -0.9
LVC                               pmax    pmax
      comp=Z,11nm,1.0s
LVC   Limon Verde      55.66 243 eP       P        11 56 25.2 +0.2
LVC   Limon Verde      55.66 243  P       P        11 56 24.1 -0.9
TRUS  Trudelj          55.71  31 eP       P        11 56 25.4 +0.8
PB09  IPOC Station P   55.76 244  IAmb    IAmb     11 56 27.4
      comp=Z,104nm,1.5s
PB09                              IAMs_20 IAMs_20  12 19 07.3
      comp=Z,2µm,22.0s
BLCB  Balcova          55.86  40 eP       P        11 56 27.1 +1.3
GRFO  Grafenberg       55.91  21  P       P        11 56 25.6 -0.4
GRFO                              pmax    pmax
      comp=Z,56nm,1.5s
GRFO  Grafenberg       55.91  21  P       P        11 56 25.6 -0.4
KOVH  Kovagotottos     55.91  28 eP       P        11 56 26.3 +0.2
GRF   Grafenberg Arr   55.91  21 eP       P        11 56 25.7 -0.3
      comp=Z,239nm,2.6s,baz=212,slow=7.2
GRF                              eL       L        12 18 20.8
      comp=Z,806nm,21.8s
BOVS  Bovan            55.98  32 ⇑P       P        11 56 27.8 +1.3
BOVS  Bovan            55.98  32 eP       P        11 56 26.8 +0.2
PB12  IPOC Station P   56.06 248  P       P        11 56 25.8 -1.9
PB12                              IAmb    IAmb     11 56 28.6
      comp=Z,80nm,1.6s
FRGS  Fruska Gora      56.06  30 eP       P        11 56 27.5 +0.3
WET   Wettzell         56.07  22 eP       P        11 56 27.1  0.0
      comp=Z,294nm,2.4s,baz=212,slow=7.2
BOZC  Bozcaada         56.08  38 eP       P        11 56 29.3 +1.9
VTS   Vitosha          56.14  34 ⇑P       P        11 56 30.1 +2.1
VTS   Vitosha          56.14  34 ⇑P       P        11 56 30.1 +2.1
VTS   Vitosha          56.14  34  P       P        11 56 27.8 -0.2
GEC2  GERESS Array S   56.15  23 eP       P        11 56 27.7 -0.1
      comp=Z,177nm,2.0s,baz=212,slow=7.2
GEC2  GERESS Array S   56.15  23  P       P        11 56 26.6 -1.2
GEC2                              IAmb    IAmb     11 56 30.6
      comp=Z,147nm,1.9s
GERES GERESS Array B   56.15  23  P       P        11 56 26.5 -1.2
      comp=Z,20nm,1.2s,baz=197,slow=4.2,SNR=42
GERES                             PP      PP       11 58 33.2 +0.2
      comp=Z,5.1nm,1.1s,baz=197,slow=7.0,SNR=4.5
GERES                             LR      LR       12 22 46.9
      comp=Z,1µm,18.2s,baz=230,slow=38
GERES GERESS Array B   56.15  23  P       P        11 56 27.0 -0.8
GERES GERESS Array B   56.15  23  P       P        11 56 27.0 -0.8
SVIS  Svilajnac        56.15  31 eP       P        11 56 28.6 +0.8
DKL   Dikili           56.16  40 eP       P        11 56 30.6 +2.6
AYDB  Zeytinkoy-Aydi   56.17  41 eP       P        11 56 29.1 +0.9
EZN   Ezine            56.24  38 eP       P        11 56 29.7 +1.2
ZAPS  Zavoj            56.24  33 eP       P        11 56 30.3 +1.8
MORH  Mrgy, Hungar     56.26  28 eP       P        11 56 28.5  0.0
CONA  Conrad Observa   56.30  25 i P      P        11 56 29.4 +0.5
      comp=Z,34nm,1.4s,SNR=15
PB15  IPOC Station P   56.31 243  P       P        11 56 29.4 -0.2
PB15                              IAmb    IAmb     11 56 37.8
      comp=Z,143nm,1.7s
PB07  IPOC Station P   56.32 245  P       P        11 56 29.3 -0.3
PB07                              IAmb    IAmb     11 56 31.8
      comp=Z,191nm,1.9s
PB07                              IAMs_20 IAMs_20  12 19 33.3
      comp=Z,2µm,21.0s
KHC   Kasperske Hory   56.33  23 eP       P        11 56 29.8 +0.8
KHC                              e                 11 56 36.1
KHC                              eS       S        12 04 19.6 +0.2
KHC                              eS       S        12 04 20.0 +0.6
KHC                               MLR     MLR
      comp=Z,1µm,18.5s
KHC   Kasperske Hory   56.33  23 eP       P        11 56 29.8 +0.8
KHC                              epP      pwP      11 56 36.1 -0.1
KHC                              eS       S        12 04 19.6 +0.2
KHC                               AMS     AMS      12 21 10.0
      comp=Z,1µm,18.5s
KHC   Kasperske Hory   56.33  23  P       P        11 56 28.9 -0.1
ROTZ  Rotzenmuhle      56.33  22 eP       P        11 56 28.8 -0.2
      comp=Z,37nm,2.2s,baz=212,slow=7.2
PATCX Punta Patache    56.36 246  P       P        11 56 29.3 -0.5
PATCX                             IAmb    IAmb     11 56 37.5
      comp=Z,185nm,1.8s
PATCX                             IAMs_20 IAMs_20  12 22 42.3
      comp=Z,2µm,18.0s
CKRC  Cesky Krumlov    56.37  24 eP       P        11 56 30.7 +1.4
CKRC                             ex       x        11 56 37.7
CKRC                              AMS     AMS      12 23 10.0
      comp=Z,1µm,15.8s
ZAGS  Zajecar          56.38  32 eP       P        11 56 28.8 -0.7
SOP   Sopron           56.41  26 eP       P        11 56 30.2 +0.6
UBBA  Unterbreizbach   56.44  19 eP       P        11 56 30.1 +0.5
      comp=Z,158nm,2.1s,baz=212,slow=7.2
MPLH  Magyarpolny      56.46  27 eP       P        11 56 30.2 +0.2
MANZ  Manzenberg       56.48  21 eP       P        11 56 30.1  0.0
      comp=Z,63nm,2.5s,baz=212,slow=7.2
GELI  Tayfur-Gelibol   56.67  38 eP       P        11 56 34.1 +2.6
ENEZ  Enez             56.67  37 eP       P        11 56 29.7 -1.9
PB04  IPOC Station P   56.70 244  IAmb    IAmb     11 56 39.5
      comp=Z,93nm,1.6s
ALN   Alexandroupoli   56.71  37  P       P        11 56 32.6 +0.8
ALN                               pmax    pmax
      comp=Z,35nm,1.2s
ALN   Alexandroupoli   56.71  37  P       P        11 56 32.6 +0.8
NKC   Novy Kostel      56.80  21 eS       S        12 04 28.6 +3.0
WERN  Wernitzgruen     56.82  21 eP       P        11 56 32.5 -0.1
      comp=Z,114nm,1.9s,baz=212,slow=7.2
MOX   Moxa             56.85  21 eP       P        11 56 32.7 +0.1
      comp=Z,206nm,2.5s,baz=212,slow=7.2
MOX                              eL       L        12 20 44.5
      comp=Z,981nm,18.1s
GUNZ  Gunzen           56.87  21 eP       P        11 56 32.7 -0.1
      comp=Z,30nm,1.4s,baz=212,slow=7.2
ELL   Elmali           56.88  43 eP       P        11 56 35.1 +1.8
ELL   Elmali           56.88  43  P       P        11 56 34.0 +0.7
ELL                               pmax    pmax
      comp=Z,176nm,1.3s
ELL   Elmali           56.88  43  P       P        11 56 34.0 +0.7
PLN   Plauen           56.91  21 eP       P        11 56 33.2 +0.1
      comp=Z,55nm,1.7s,baz=212,slow=7.2
WERD  Werda            56.93  21 eP       P        11 56 33.2 -0.1
      comp=Z,70nm,1.7s,baz=212,slow=7.2
TANN  Tannenbergstha   56.96  21 eP       P        11 56 33.4 -0.1
      comp=Z,163nm,2.2s,baz=212,slow=7.2
CZSB  Cruzeiro do Su   56.98 262 eP       P        11 56 34.9 +0.7
KULA  Kula-Manisa      56.99  41 eP       P        11 56 27.7 -6.3
AC02  Maricunga        57.00 239  P       P        11 56 36.0 +1.3
AC02                              IAmb    IAmb     11 56 44.1
      comp=Z,162nm,1.9s
BBSR  BB Station       57.01 311  IAMs_20 IAMs_20  12 16 38.0
      comp=Z,1µm,19.0s
ZST   Bratislava       57.04  26 eP       P        11 56 34.8 +0.8
ZST   Bratislava       57.04  26 eP       P        11 56 34.8 +0.8
GTTG  Gottingen        57.05  19 eP       P        11 56 35.0 +0.9
      baz=212,slow=7.2
DJES  Djerdap          57.11  32 eP       P        11 56 36.5 +1.9
KRBG  Karabiga-Canak   57.18  38 eP       P        11 56 34.0 -1.1
HERR  Herculane        57.20  32 ⇑P       P        11 56 36.3 +1.0
MODS  Modra-Piesok     57.25  26 eP       P        11 56 34.9 -0.7
MODS                              pmax    pmax
      comp=Z,206nm,2.2s
MODS  Modra-Piesok     57.25  26 eP       P        11 56 34.9 -0.7
SRO   Srobarova        57.29  27 eP       P        11 56 37.9 +2.1
SRO   Srobarova        57.29  27 eP       P        11 56 37.9 +2.1
PB10  IPOC Station P   57.35 243  IAMs_20 IAMs_20  12 22 12.4
      comp=Z,2µm,19.0s
BUD   Budapest         57.37  27 eP       P        11 56 36.9 +0.5
PRU   Pruhonice        57.39  23  AMS     AMS      12 22 00.0
      comp=Z,1µm,19.1s
KRUC  Moravsky         57.41  25 eP       P        11 56 35.8 -0.8
EIL   Elat             57.43  53  P       P        11 56 36.6 -0.5
      comp=Z,7.5nm,0.9s,baz=164,slow=2.7,SNR=10
EKA   Eskdalemuir Ar   57.43   9  P       P        11 56 36.1 -0.6
      comp=Z,1.5nm,0.5s,baz=190,slow=6.3,SNR=8.2
CLZ   Clausthal        57.44  19 eP       P        11 56 37.1 +0.2
      comp=Z,134nm,2.4s,baz=212,slow=7.2
VRAC  Vranov           57.68  25  P       P        11 56 38.1 -0.4
      comp=Z,6.9nm,0.9s,baz=216,slow=7.6,SNR=12
VRAC  Vranov           57.68  25 eP       P        11 56 37.8 -0.8
EDRB  Edirne           57.70  37 eP       P        11 56 39.6 +0.8
GZR   Gura Zlata       57.73  31 ⇑P       P        11 56 39.7 +0.6
GZR   Gura Zlata       57.73  31 ⇑P       P        11 56 39.7 +0.6
SIRR  Siria            57.76  30 ⇑P       P        11 56 40.2 +0.9
JAVC  Velka Javorina   57.79  26 eP       P        11 56 40.1 +0.7
BRG   Berggiesshubel   57.88  22 eP       P        11 56 40.9 +1.0
BRG                               Amp              11 56 43.5
      comp=Z,23nm,1.3s
BRG   Berggiesshubel   57.88  22  P       P        11 56 48.1 +8.2
BRG                               Amp              11 56 49.9
      comp=Z,37nm,1.4s
BRG                               PP      PP       11 58 53.4 +5.2
BRG                               Amp              11 58 55.2
      comp=Z,7.0nm,1.1s
BRG   Berggiesshubel   57.88  22  S       S        12 04 44.0 +4.4
BRG                               Amp              12 23 02.0
      comp=N,1.0nm,13.4s
BRG                               Amp              12 23 06.0
      comp=Z,1.4nm,14.2s
BRG                               Amp              12 23 10.0
      comp=E,0.6nm,17.1s
CLL   Collm            57.89  21 eP       P        11 56 40.0 +0.1
CLL                              eS       S        12 04 35.0 -4.7
CLL                               pmax    pmax
      comp=Z,81nm,1.8s
CLL                               MLR     MLR
      comp=Z,1µm,19.8s
CLL   Collm            57.89  21 eP       P        11 56 40.0 +0.1
      comp=Z,81nm,1.8s
CLL                              ePPP     PPP      12 00 03.0
CLL                              eS       S        12 04 35.0 -4.7
      comp=N,600nm,25.3s
CLL                              eS       S        12 04 35.0 -4.7
      comp=E,300nm,23.4s
CLL                              eSS      SS       12 08 36.0 +5.2
CLL                              eSSS     SSS      12 10 54.0
CLL                               LV               12 21 00.0
      comp=Z,1µm,19.8s
CLL   Collm            57.89  21 eP       P        11 56 39.7 -0.2
      comp=Z,81nm,1.8s,baz=212,slow=7.2
CLL   Collm            57.89  21  P       P        11 56 40.6 +0.6
RETH  Rethem/Aller,    57.89  18 eP       P        11 56 40.7 +0.8
      comp=Z,164nm,2.0s,baz=212,slow=7.2
NRDL  Niedersach Rie   57.91  18 eP       P        11 56 41.1 +1.2
      comp=Z,104nm,2.0s,baz=212,slow=7.2
TVSB  Tavsanli         58.02  40 eP       P        11 56 43.3 +2.0
VYHS  Vyhne            58.03  27 eP       P        11 56 41.5 +0.5
VYHS                              pmax    pmax
      comp=Z,155nm,1.9s
VYHS  Vyhne            58.03  27 eP       P        11 56 41.5 +0.5
SDDR  Presa de Saban   58.04 293  P       P        11 56 41.4 -0.2
SDDR                              IAmb    IAmb     11 56 44.5
      comp=Z,46nm,1.0s
PSZ   Piszkesteto      58.09  28 ⇓P       P        11 56 42.6 +1.1
PSZ   Piszkesteto      58.09  28 eP       P        11 56 41.3 -0.2
PSZ   Piszkesteto      58.09  28 ⇓P       P        11 56 42.6 +1.1
PSZ   Piszkesteto      58.09  28  P       P        11 56 41.0 -0.5
PSZ                               IAmb    IAmb     11 56 51.3
      comp=Z,66nm,1.3s
PSZ                               IAMs_20 IAMs_20  12 22 25.3
      comp=Z,2µm,20.0s
MDNY  Mudanya-Bursa    58.16  39 eP       P        11 56 44.4 +2.4
SHUT  Suhut-Afyon      58.26  42 eP       P        11 56 44.4 +1.4
LOT   Lotru            58.29  32 ⇓P       P        11 56 44.4 +1.3
KRLC  Kraliky          58.35  24 eP       P        11 56 43.7 +0.4
KRLC                              MLR     MLR
      comp=Z,1µm,15.0s
KRLC  Kraliky          58.35  24 eP       P        11 56 43.7 +0.4
KRLC                              AMS     AMS      12 24 20.0
      comp=Z,1µm,15.0s
DPC   Dobruska-Polom   58.38  24 eP       P        11 56 42.8 -0.7
DPC                               MLR     MLR
      comp=Z,900nm,17.2s
DPC   Dobruska-Polom   58.38  24 eP       P        11 56 42.8 -0.7
DPC                               AMS     AMS      12 21 20.0
      comp=Z,900nm,17.2s
GEMT  Gemlik           58.39  39 eP       P        11 56 46.1 +2.4
CTKS  Kestanelik-??a   58.41  38 eP       P        11 56 44.4 +0.6
CTYL  Yalikoy Yolu     58.41  38 eP       P        11 56 43.8  0.0
MORC  Moravsky Berou   58.44  25 ⇑P       P        11 56 43.9  0.0
MORC  Moravsky Berou   58.44  25 eP       P        11 56 43.7 -0.2
MORC  Moravsky Berou   58.44  25 ⇑P       P        11 56 43.9  0.0
MORC  Moravsky Berou   58.44  25  P       P        11 56 43.8  0.0
CHVC  Chvalec          58.46  23 eP       P        11 56 44.4 +0.4
IZAB  Izabela          58.48  27 eP       P        11 56 45.8 +1.6
OSTC  Ostas            58.50  23 eP       P        11 56 45.2 +0.9
OSTC                              AMS     AMS      12 21 30.0
      comp=Z,1µm,18.2s
GHAJ  Ghor Haditha     58.56  52  IAMs_20 IAMs_20  12 23 42.9
      comp=Z,1µm,18.0s
YLV   Yalova           58.58  39 eP       P        11 56 45.5 +0.4
DRGR                   58.65  30 ⇓P       P        11 56 46.6 +1.1
DRGR                   58.65  30 ⇓P       P        11 56 46.6 +1.1
ISK   Istanbul-Kandi   58.66  39 eP       P        11 56 45.7 +0.2
CAVI  Cavuskoy         58.68  40 eP       P        11 56 45.1 -0.6
ARR   Arges            58.70  32 ⇑P       P        11 56 46.8 +1.0
ROSC  El Rosal         58.72 276  P       P        11 56 48.0 +1.0
      comp=Z,9.2nm,0.5s,baz=52,slow=2.7,SNR=17
ROSC                              LR      LR       12 19 11.0
      comp=Z,3µm,21.4s,baz=88,slow=33
ROSC  El Rosal         58.72 276  P       P        11 56 46.9 -0.1
ADVT  Abdulvahap       58.74  40 eP       P        11 56 46.6 +0.5
KECS  Kecovo           58.77  27 eP       P        11 56 48.3 +2.1
KECS                              pmax    pmax
      comp=Z,32nm,1.7s
KECS  Kecovo           58.77  27 eP       P        11 56 48.3 +2.1
HDMB  Hadim            58.78  44 eP       P        11 56 48.7 +1.9
LANS  Liptovska Anna   58.80  26 eP       P        11 56 48.1 +1.7
LANS  Liptovska Anna   58.80  26 eP       P        11 56 48.1 +1.7
BORA  Eskisehir        58.90  41  P       P        11 56 47.0 -0.3
HRT   Hereke           58.91  39 eP       P        11 56 48.6 +1.3
VOIR                   58.97  33 ⇑P       P        11 56 47.8 +0.1
VOIR                   58.97  33 ⇑P       P        11 56 47.8 +0.1
LCO   Las Campanas     58.98 237  IAMs_20 IAMs_20  12 19 14.3
      comp=Z,2µm,22.0s
CIFT  Cifteler, Eski   59.02  41 eP       P        11 56 50.4 +2.2
SRCK  Saricakaya, Es   59.09  40 eP       P        11 56 49.5 +0.9
KONT  Konya--Tatoy     59.17  43 eP       P        11 56 49.9 +0.6
GULT  Gulveren         59.23  40 eP       P        11 56 50.8 +1.1
LADK  Ladik-KONYA      59.30  43 eP       P        11 56 52.3 +2.1
KIZT  Kizilcal         59.32  42 eP       P        11 56 52.6 +2.3
SVRH  Sivrihisar-ESK   59.37  41 eP       P        11 56 52.6 +1.9
GO04  Tololo Observa   59.41 235  P       P        11 56 50.8 -0.5
MLR   Muntele Rosu     59.49  33 ⇑P       P        11 56 51.5 +0.1
MLR   Muntele Rosu     59.49  33  P       P        11 56 50.8 -0.6
      comp=Z,68nm,1.2s,baz=241,slow=2.7,SNR=21
MLR   Muntele Rosu     59.49  33 ⇑P       P        11 56 51.5 +0.1
MLR   Muntele Rosu     59.49  33  P       P        11 56 51.4 +0.1
MLR                               IAMs_20 IAMs_20  12 24 43.3
      comp=Z,2µm,19.0s
TRPA  Tarpa            59.49  29 ⇑P       P        11 56 51.3 +0.1
TRPA  Tarpa            59.49  29 eP       P        11 56 48.8 -2.3
DOPR  Dopca            59.49  32 ⇑P       P        11 56 50.5 -0.8
ZARC  Zaragoza, Cauc   59.50 279  P       P        11 56 51.5 -0.3
ZARC                              IAmb    IAmb     11 56 58.9
      comp=Z,137nm,1.7s
MDUB  Mudurnu          59.69  40 eP       P        11 56 53.8 +0.9
MDUB  Mudurnu          59.69  40  P       P        11 56 53.1 +0.2
UZH   Uzhgorod         59.72  28⇑iP       P        11 56 53.0 +0.3
UZH                              i                 11 56 57.3
OJC   Ojcow            59.73  26 eP       P        11 56 53.3 +0.5
OJC   Ojcow            59.73  26  P       P        11 56 52.7 -0.1
OJC                               pmax    pmax
      comp=Z,84nm,1.7s
OJC   Ojcow            59.73  26  P       P        11 56 52.7 -0.1
OJC                               IAmb    IAmb     11 56 55.7
      comp=Z,84nm,1.7s
CHBY  Cihanbeyli       59.85  43 eP       P        11 56 54.9 +0.9
COVR  Voineasa-Covas   59.85  33 ⇑P       P        11 56 53.4 -0.3
KOLS  Kolonicke sedl   59.92  28 eP       P        11 56 56.1 +1.9
KOLS                              pmax    pmax
      comp=Z,153nm,2.2s
KOLS  Kolonicke sedl   59.92  28 eP       P        11 56 56.1 +1.9
BISRR Bisoca           59.94  33 ⇑P       P        11 56 55.3 +0.8
ASF   Jabal al Asfar   59.94  51  P       P        11 56 54.8  0.0
      comp=Z,12nm,0.8s,baz=243,slow=5.3,SNR=7.3
VA03  San Esteban      60.05 233  P       P        11 56 55.2 -0.3
VA03                              IAmb    IAmb     11 57 03.0
      comp=Z,118nm,1.8s
YESY  Yesilyurt        60.05  44 eP       P        11 56 56.6 +1.2
SULT  Sultanhani-AKS   60.09  44 eP       P        11 56 56.9 +1.2
PLOR  Plostina         60.10  33 ⇑P       P        11 56 53.2 -2.3
PLOR  Plostina         60.10  33 ⇑P       P        11 56 53.2 -2.3
VRI   Vrincioaia       60.15  33 ⇑P       P        11 56 55.1 -0.7
VRI   Vrincioaia       60.15  33 ⇑P       P        11 56 55.1 -0.7
KULU  Kulu             60.16  43 eP       P        11 56 58.2 +2.1
TIRR  Tirgusor         60.23  35 ⇑P       P        11 57 03.6 +7.3
TIRR  Tirgusor         60.23  35 ⇑P       P        11 57 03.6 +7.3
TIRR  Tirgusor         60.23  35  IAMs_20 IAMs_20  12 22 59.1
      comp=Z,2µm,20.0s
CO06  Fray Jorge       60.25 235  P       P        11 56 55.9 -0.8
PEL   Peldehue         60.28 232  IAMs_20 IAMs_20  12 20 07.4
      comp=Z,2µm,22.0s
LOD   Lodumlu          60.42  42 eP       P        11 57 00.1 +2.3
ANTO  Ankara           60.43  42  P       P        11 56 57.6 -0.3
ANTO                              pmax    pmax
      comp=Z,59nm,1.1s
ANTO  Ankara           60.43  42  P       P        11 56 57.6 -0.3
ANTO                              IAmb    IAmb     11 57 08.0
      comp=Z,59nm,1.1s
BURAR Bucovina Array   60.47  31 ⇓P       P        11 57 00.5 +2.4
BURAR Bucovina Array   60.47  31 ⇓P       P        11 57 00.5 +2.4
BURAR Bucovina Array   60.47  31  P       P        11 56 58.7 +0.7
TPGR  Topolog          60.48  35 ⇑P       P        11 56 58.4 +0.3
BUR08 Bucovina Ar. S   60.48  31  P       P        11 56 58.4 +0.2
BUR08                             IAmb    IAmb     11 57 18.1
      comp=Z,56nm,1.4s
SERE  Sereflikochisa   60.49  43 eP       P        11 56 59.6 +1.2
CFR   Carcaliu         60.51  34 ⇑P       P        11 56 56.7 -1.5
CFR   Carcaliu         60.51  34 ⇑P       P        11 56 56.7 -1.5
TESR  Tescani          60.51  32 ⇑P       P        11 57 00.5 +2.3
MT09  Talagante        60.73 232  P       P        11 56 59.1 -1.1
MT09                              IAmb    IAmb     11 57 08.0
      comp=Z,80nm,1.3s
KAMT  Kaman            60.80  43 eP       P        11 57 02.7 +2.2
BR131 Keskin Array S   60.92  42  P       P        11 57 01.4  0.0
BR131                             pmax    pmax
      comp=Z,80nm,1.1s
BR131 Keskin Array S   60.92  42  P       P        11 57 03.7 +2.4
      SNR=28
BR131                             P       P        11 57 03.7 +2.4
      SNR=28
BR131 Keskin Array S   60.92  42  P       P        11 57 01.4  0.0
BR131                             IAmb    IAmb     11 57 11.3
      comp=Z,80nm,1.1s
BRTR  Keskin Array B   60.92  42  P       P        11 57 01.1 -0.3
      comp=Z,24nm,1.1s,baz=232,slow=6.1,SNR=49
BRTR                              LR      LR       12 25 31.2
      comp=Z,1µm,20.5s,baz=228,slow=38
BRTR  Keskin Array B   60.92  42ceP       P        11 57 02.0 +0.6
BRTR                              pmax    pmax
      comp=Z,23nm,1.1s
BO02  Sierra Bellavi   60.92 230  P       P        11 57 01.6 +0.2
BO02                              IAmb    IAmb     11 57 09.6
      comp=Z,65nm,1.4s
BO01  Tunca            61.02 231  P       P        11 57 01.7 -0.2
BO01                              IAmb    IAmb     11 57 10.0
      comp=Z,48nm,1.1s
TAHT  Tahtakopru-Hat   61.15  47 eP       P        11 57 03.2 +0.4
CANT  Cankiri          61.34  41 eP       P        11 57 02.9 -1.2
NNA   Nana             61.36 257  LR      LR       12 23 19.1
      comp=Z,2µm,18.4s,baz=90,slow=36
EFI   East Falkland    61.36 208⇑eP       P        11 57 03.8 -0.1
EFI                               pmax    pmax
      comp=Z,54nm,1.4s
EFI   East Falkland    61.36 208  IAMs_20 IAMs_20  12 17 42.4
      comp=Z,2µm,21.0s
LVV   L'vov            61.37  28 eP       P        11 57 04.6 +0.6
KOZT  Kozan            61.38  45 eP       P        11 57 03.8 -0.5
KURC  Kurucasile-Bar   61.41  40 eP       P        11 57 02.9 -1.5
ILGA  Ilgaz            61.63  41  P       P        11 57 05.5 -0.8
ML02  Panimavida       61.75 230  P       P        11 57 06.5 -0.4
GO05  Huala            61.88 231  P       P        11 57 08.1 +0.3
MILM  Milestii Mici    61.93  33 eP       P        11 57 03.0 -4.8
MILM                              pmax    pmax
      comp=Z,470nm,3.8s
MILM                              MLR     MLR
      comp=Z,1µm,19.5s
KIS   Kishinev         61.98  33⇑eP       P        11 57 08.0 -0.2
KIS                              eLR      LR       13 22 24.0
      baz=0.0
KIS   Kishinev         61.98  33ceP       P        11 57 08.0 -0.2
KIS                               MLR     MLR
      comp=Z,250nm,18.5s
BNN   Bunyan           62.01  44 eP       P        11 57 09.0 +0.3
BNN   Bunyan           62.01  44  P       P        11 57 08.7  0.0
YOZ   Yozgat           62.02  43 eP       P        11 57 08.7 -0.1
SARI  SarD1z-Kayseri   62.21  45 eP       P        11 57 11.1 +1.0
GAZ   Gaziantep        62.23  46 eP       P        11 57 10.3 +0.1
GAZ   Gaziantep        62.23  46  P       P        11 57 10.3 +0.1
GAZ                               IAmb    IAmb     11 57 25.0
      comp=Z,70nm,1.4s
SORM  Soroca           62.43  32 ⇓P       P        11 57 10.2 -0.9
SORM  Soroca           62.43  32 ⇓P       P        11 57 10.2 -0.9
ATAH  Atahualpa        62.59 263  LR      LR       12 23 22.7
      comp=Z,5µm,20.5s,baz=93,slow=35
OTAV  Otavalo          62.60 271  P       P        11 57 13.0 -0.6
OTAV                              pmax    pmax
      comp=Z,72nm,1.7s
OTAV  Otavalo          62.60 271 eP       P        11 57 14.4 +0.9
OTAV  Otavalo          62.60 271  P       P        11 57 13.0 -0.6
OTAV                              IAmb    IAmb     11 57 21.9
      comp=Z,72nm,1.7s
OTAV  Otavalo          62.60 271  IAMs_20 IAMs_20  12 21 11.5
      comp=Z,1µm,21.0s
PLCA  Paso Flores      62.99 224  P       P        11 57 15.2  0.0
      comp=Z,1.9nm,0.8s,baz=60,slow=7.9,SNR=4.0
PLCA                              LR      LR       12 20 23.7
      comp=Z,1µm,21.8s,baz=64,slow=32
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PLCA	Paso Flores	62.99	224	eP	P	11 57 16.4	+1.2
PLCA	Paso Flores	62.99	224	P	P	11 57 14.6	-0.6
DARE	Darende-Malaty	63.03	45	eP	P	11 57 17.8	+2.3
SNOP	Sinop	63.08	41	eP	P	11 57 15.4	-0.2
TOKT	Tokat	63.17	43	eP	P	11 57 16.3	0.0
KVT	Kavak	63.18	42	eP	P	11 57 17.2	+0.8
LC01	Cunco	63.22	226	P	P	11 57 15.9	-0.8
ORCD	Orcadas	63.24	195	P	P	11 57 16.2	-0.1
ORCD				IAmb	IAmb	11 57 23.9	
	comp=Z,50nm,1.2s						
SVSK	Karacayir	63.29	43	eP	P	11 57 16.8	-0.2
URFA	Urfa	63.51	47	eP	P	11 57 20.9	+2.2
MALT	Malatya	63.59	45	eP	P	11 57 20.7	+1.5
RSDY	Resadiye-TOKAT	63.73	43	eP	P	11 57 20.5	+0.5
LMN	Caledonia Moun	63.75	324	P	P	11 57 19.6	-0.4
LMN				IAmb	IAmb	11 57 21.9	
	comp=Z,49nm,1.0s						
SUW	Suwalki	63.92	24	eP	P	11 57 20.7	-0.2
SUW	Suwalki	63.92	24	eP	P	11 57 21.4	+0.5
SUW	Suwalki	63.92	24	P	P	11 57 20.7	-0.2
SUW				pmax	pmax		
	comp=Z,241nm,1.2s						
SUW	Suwalki	63.92	24	P	P	11 57 20.7	-0.2
KONO	Kongsberg	63.99	14	ceP	P	11 57 22.6	+1.3
KONO				pmax	pmax		
	comp=Z,54nm,1.7s						
KONO	Kongsberg	63.99	14	P	P	11 57 22.4	+1.1
KONO				IAmb	IAmb	11 58 33.3	
	comp=Z,57nm,1.4s						
ILIC	ilic-Erzincan	64.17	44	eP	P	11 57 23.5	+0.4
ABPO	Ambohimpanom	64.18	110	P	P	11 57 23.1	-0.4
ABPO	Ambohimpanom	64.18	110	P	P	11 57 23.1	-0.4
VOI	Vohitsoka	64.21	114	P	P	11 57 26.1	+2.5
VOI	Vohitsoka	64.21	114	P	P	11 57 24.0	+0.3
VOI				IAmb	IAmb	11 57 34.4	
	comp=Z,43nm,1.3s						
VOI				IAMs_20	IAMs_20	12 22 24.7	
	comp=Z,2µm,19.0s						
VOI	Vohitsoka	64.21	114	P	P	11 57 27.1	+3.5
SVRC	Sivrice-ELAZID	64.25	46	eP	P	11 57 24.2	+0.5
LL04	Puerto Octay	64.36	225	P	P	11 57 23.2	-0.9
LL03	Petrohue	64.44	224	P	P	11 57 23.9	-0.7
AKASG	Malin Array Be	64.47	30	P	P	11 57 22.6	-2.0
	comp=Z,16nm,1.0s,baz=231,slow=6.6,SNR=46						
AKASG				LR	LR	12 27 05.3	
	comp=Z,1µm,20.3s,baz=240,slow=38						
AKASG	Malin Array Be	64.47	30	P	P	11 57 23.2	-1.4
AKASG				pmax	pmax		
	comp=Z,81nm,1.7s						
AKASG	Malin Array Be	64.47	30	P	P	11 57 23.2	-1.4
AKASG				IAmb	IAmb	11 57 26.1	
	comp=Z,81nm,1.6s						
AKBB	Malin Array Si	64.47	30	deP	P	11 57 23.2	-1.4
AKBB	Malin Array Si	64.47	30	P	P	11 57 23.5	-1.1
AKBB				IAmb	IAmb	11 57 32.9	
	comp=Z,84nm,1.2s						
RAYN	Ar Rayn	64.49	63	i P	P	11 57 26.6	+1.2
	SNR=10						
RAYN	Ar Rayn	64.49	63	P	P	11 57 25.5	+0.1
RAYN				pmax	pmax		
	comp=Z,31nm,1.3s						
RAYN				MLR	MLR		
	comp=Z,1µm,19.0s						
RAYN	Ar Rayn	64.49	63	P	P	11 57 28.5	+3.1
RAYN	Ar Rayn	64.49	63	P	P	11 57 25.5	+0.1
DYBB	Diyarbakir	64.67	46	eP	P	11 57 27.0	+0.7
MAZI	Mazidag	64.70	47	eP	P	11 57 26.5	-0.1
LL02	Futaleuf	64.86	222	P	P	11 57 26.9	-0.5
MARD	Mardin	64.89	47	P	P	11 57 27.9	+0.1
MARD				IAmb	IAmb	11 57 36.7	
	comp=Z,42nm,1.2s						
BATG	Bathurst New B	65.24	325	P	P	11 57 29.4	-0.4
BATG				IAmb	IAmb	11 57 32.0	
	comp=Z,54nm,1.0s						
PABE	Paberze	65.31	24	eP	P	11 57 31.1	+1.1
PABE	Paberze	65.31	24	P	P	11 57 29.7	-0.2
HFS	Hagfors	65.47	16	P	P	11 57 29.9	-1.0
	comp=Z,13nm,1.0s,baz=224,slow=6.2,SNR=6.6						
BNGB	Bingl	65.48	46	eP	P	11 57 33.5	+1.9
NBO00	NORSAR Array S	65.49	14	P	P	11 57 30.5	-0.6
YEDI	Yedisu-Bingol	65.56	45	eP	P	11 57 32.3	+0.1
NB2	NORSAR Subarra	65.61	14	P	P	11 57 31.1	-0.8
	comp=Z,101nm,2.0s,baz=208,slow=6.9						
NB2	NORSAR Subarra	65.61	14	P	P	11 57 31.1	-0.8
	baz=208,slow=6.9						
NOA	NORSAR Array B	65.61	14	P	P	11 57 30.9	-1.0
	comp=Z,9.6nm,1.1s,baz=209,slow=6.5,SNR=10.0						
NOA				LR	LR	12 26 53.7	
	comp=Z,712nm,21.1s,baz=210,slow=37						
NC204	NORSAR Array S	65.70	14	P	P	11 57 32.4	-0.1
NC204				IAmb	IAmb	11 57 41.5	
	comp=Z,71nm,1.1s						
KOPT	Kop Dagi	65.76	45	P	P	11 57 33.5	-0.1
KOPT				IAmb	IAmb	11 57 46.3	
	comp=Z,54nm,1.2s						
NC303	NORSAR Array S	65.80	14	P	P	11 57 33.3	+0.2
NC303				IAmb	IAmb	11 57 35.5	
	comp=Z,71nm,1.5s						
F64A	Sherman	65.87	323	P	P	11 57 34.1	+0.3
F64A				IAmb	IAmb	11 57 39.2	
	comp=Z,110nm,1.6s						
NACGM	Naroch	66.06	25	i P	P	11 57 34.8	0.0
IIGN	Ignalina	66.12	25	eP	P	11 57 36.2	+1.0
SBV	Sambava	66.15	104	P	P	11 57 49.3	+13
SIRT	Sirnak	66.19	48	eP	P	11 57 37.2	+1.0
SIRT	Sirnak	66.19	48	P	P	11 57 36.1	0.0
ISAL	Salakas	66.23	25	eP	P	11 57 37.2	+1.2
MNK	Minsk	66.27	26	i P	P	11 57 35.4	-0.8
MNK				i		11 58 08.7	
MNK				i		12 00 01.1	
MNK				i PPP	PPP	12 01 35.6	
MNK				i S	S	12 06 25.8	+0.3
MNK				i		12 07 31.9	
MNK				i SS	SS	12 10 42.5	+0.7
MNK				pmax	pmax		
	comp=Z,53nm,1.0s						
MNK				pmax	pmax		
	comp=E,6.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,37nm,0.9s						
MNK				MLR	MLR		
	comp=E,157nm,18.0s						
MNK				MLR	MLR		
	comp=Z,1µm,20.0s						
MNK				MLR	MLR		
	comp=N,678nm,17.0s						
MNK	Minsk	66.27	26	i P	P	11 57 35.5	-0.7
	comp=E,6.0nm,0.9s						
MNK				i P	P	11 57 35.5	-0.7
	comp=N,37nm,0.9s						
MNK				i P	P	11 57 35.5	-0.7
	comp=Z,53nm,1.1s,baz=229						
MNK				i PcP	PcP	11 58 08.8	+2.6
MNK				i PP	PP	12 00 01.2	-1.0
MNK				i PPP	PPP	12 01 35.6	
MNK				i S	S	12 06 25.9	+0.4
MNK				i SS	SS	12 10 42.5	+0.8
MNK				i SSS	SSS	12 14 00.4	
MNK				i LQ	LQ	12 21 51.8	
MNK				i LR	LR	12 25 23.2	
MNK				i LRM	MLR	12 29 00.3	
	comp=E,157nm,18.1s						
MNK				i LRM	MLR	12 29 03.5	
	comp=Z,1µm,19.6s						
MNK				i LRM	MLR	12 29 25.6	
	comp=N,678nm,17.4s						
GURO	Guroymak-BITLI	66.28	47	eP	P	11 57 38.9	+2.1
GURO	Guroymak-BITLI	66.28	47	P	P	11 57 36.4	-0.4
GURO				IAmb	IAmb	11 57 46.0	
	comp=Z,46nm,1.2s						
UPP	Uppsala	66.37	18	eP	P	11 57 38.0	+1.3
KOPR	Koprukoy-ERZUR	66.71	45	eP	P	11 57 42.1	+2.6
SOC	Sochi	66.75	41	eP	P	11 57 38.3	-1.2
SOC				e		12 00 02.7	
SOC				eS	S	12 06 31.5	-0.2
SOC				e		12 07 33.4	
SOC				eSS	SS	12 10 48.0	-1.7
SOC				pmax	pmax		
	comp=Z,27nm,0.9s						
SOC				MLR	MLR		
	comp=Z,293nm,18.0s						
I62A	Tamworth	66.81	320	P	P	11 57 40.6	+0.7
I62A				IAmb	IAmb	11 57 48.1	
	comp=Z,85nm,1.2s						
MLAZ	Malazgirt-MUS	66.88	46	eP	P	11 57 42.8	+2.2
AKDM	Akdamar-Van	66.89	47	eP	P	11 57 41.2	+0.5
D62A	Allapoint, All	66.89	323	P	P	11 57 40.4	0.0
D62A				IAmb	IAmb	11 57 47.9	
	comp=Z,94nm,1.6s						
WSPT	Westport, CT	67.00	316	IAMs_20	IAMs_20	12 19 10.4	
	comp=Z,1µm,20.0s						
H62A	Milan	67.01	320	P	P	11 57 41.6	+0.4
BCA	Borcka	67.12	43	eP	P	11 57 46.5	+4.5
BRU2	Volcan	67.34	280	P	P	11 57 43.4	-0.6
LBNH	Lisbon	67.35	320	IAMs_20	IAMs_20	12 19 32.6	
	comp=Z,2µm,21.0s						
AGRB	Hanur-Agry	67.36	46	eP	P	11 57 41.8	-1.9
J61A	Chester	67.38	319	P	P	11 57 43.5	0.0
MTSE	Matsula	67.55	21	eP	P	11 57 45.4	+1.1
CLDR	Caldiran	67.86	47	eP	P	11 57 47.3	+0.3
LMQ	La Malbaie	67.88	323	P	P	11 57 46.7	+0.1
VT1	Waterbury	67.93	320	P	P	11 57 47.5	+0.5
MOQ	Mont Orford	68.03	321	P	P	11 57 47.7	-0.1
SRBA	San Rafael, Bu	68.04	280	P	P	11 57 47.4	-1.0
SRBA				IAmb	IAmb	11 57 57.0	
	comp=Z,112nm,1.8s						
RIOS	Rincon, Osa	68.14	280	P	P	11 57 48.3	-0.6
CNNC	Cliffs of the	68.25	309	IAMs_20	IAMs_20	12 20 53.7	
	comp=Z,2µm,20.0s						
PEZE	Perez Zeledon,	68.36	281	P	P	11 57 48.6	-1.8
PEZE				IAmb	IAmb	11 57 59.1	
	comp=Z,126nm,1.7s						
VSU	Vasula	68.46	22	eP	P	11 57 51.1	+1.2
VSU	Vasula	68.46	22	⇑iP	P	11 57 50.3	+0.3
VSU				pmax	pmax		
	comp=Z,71nm,1.1s						
VSU				MLR	MLR		
	comp=Z,2µm,16.0s						
CVTR	Volcan Turrial	68.50	281	P	P	11 57 51.4	-0.2
U59A	Littleton	68.53	310	P	P	11 57 50.5	-0.4
U59A				IAmb	IAmb	11 58 00.9	
	comp=Z,55nm,1.4s						
T59A	Double "B" Far	68.54	311	P	P	11 57 51.0	+0.1
T59A				IAmb	IAmb	11 57 54.2	
	comp=Z,143nm,1.9s						
RIMA	Rio Macho	68.58	281	P	P	11 57 50.8	-1.1
RIMA				IAmb	IAmb	11 58 00.6	
	comp=Z,118nm,1.5s						
NEY	Neytrino	68.59	42	⇓iP	P	11 57 49.8	-1.6
NEY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GO09	Cerro Castillo	68.60	214	P	P	11 57 52.6	+1.5
N59A	State Game Lan	68.61	315	P	P	11 57 51.8	+0.4
N59A				IAmb	IAmb	11 58 00.3	
	comp=Z,82nm,1.6s						
N59A	State Game Lan	68.61	315	P	P	11 57 51.7	+0.4
	baz=112						
CBN	Corbin Frederi	68.81	312	IAMs_20	IAMs_20	12 19 21.5	
	comp=Z,2µm,20.0s						
GNI	Garni	68.82	46	P	P	11 57 51.7	-1.2
	comp=Z,16nm,0.9s,baz=162,slow=6.6,SNR=10						
GNI	Garni	68.82	46	P	P	11 57 51.8	-1.1
GNI				pmax	pmax		
	comp=Z,48nm,1.1s						
GNI	Garni	68.82	46	P	P	11 57 54.6	+1.8
GNI				P	P	11 57 54.6	+1.8
GNI	Garni	68.82	46	P	P	11 57 51.8	-1.1
GNI				IAmb	IAmb	11 58 02.0	
	comp=Z,48nm,1.1s						
ONI	Oni	68.83	43	P	P	11 57 51.0	-1.7
ONI				pmax	pmax		
	comp=Z,29nm,1.1s						
ONI	Oni	68.83	43	P	P	11 57 51.0	-1.7
SDMD	Soldier's Deli	68.83	313	P	P	11 57 52.4	-0.3
KSPA	Keystone Colle	68.84	316	P	P	11 57 53.0	+0.3
KSPA				IAmb	IAmb	12 00 18.8	
	comp=Z,80nm,1.6s						
KIV	Kislovodsk	68.85	41	i P	P	11 57 52.7	-0.2
	SNR=8.2						
KIV	Kislovodsk	68.85	41	eP	P	11 57 52.5	-0.4
KIV				eS	S	12 06 56.7	-0.5
KIV				pmax	pmax		
	comp=Z,41nm,1.1s						
KIV				pmax	pmax		
	comp=Z,43nm,2.8s						
KIV				MLR	MLR		
	comp=Z,245nm,17.0s						
KIV	Kislovodsk	68.85	41	P	P	11 57 54.2	+1.2
KIV	Kislovodsk	68.85	41	P	P	11 57 52.3	-0.6
KIV				IAmb	IAmb	11 58 02.3	
	comp=Z,49nm,1.2s						
KBZ	Khabaz	68.90	42	P	P	11 57 53.1	+0.1
	comp=Z,20nm,0.9s,baz=252,slow=5.0,SNR=30						
KBZ				LR	LR	12 32 44.2	
	comp=Z,394nm,18.8s,baz=254,slow=40						
KBZ	Khabaz	68.90	42	ceP	P	11 57 53.4	+0.4
KBZ				pmax	pmax		
	comp=Z,31nm,1.0s						
R58B	Mineral	69.11	312	P	P	11 57 54.0	-0.5
R58B				IAmb	IAmb	11 58 02.6	
	comp=Z,98nm,1.7s						
COVE	Coope Vega, Sa	69.20	282	P	P	11 57 54.6	-0.8
J58A	Remsen	69.20	318	P	P	11 57 55.3	+0.3
J58A				IAmb	IAmb	11 57 57.9	
	comp=Z,82nm,1.5s						
ZEI	Tsey	69.21	43	eP	P	11 57 55.8	+0.5
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.5s						
BINY	Binghamton	69.24	316	P	P	11 57 55.7	+0.5
LONY	Lake Ozonia	69.24	319	IAMs_20	IAMs_20	12 22 32.5	
	comp=Z,1µm,19.0s						
DWPF	Disney Wildern	69.25	301	IAMs_20	IAMs_20	12 21 16.3	
	comp=Z,2µm,20.0s						
ESPN	Las Esperanzas	69.25	283	P	P	11 57 55.9	+0.2
N58A	Sunbury	69.25	315	P	P	11 57 54.7	-0.6
N58A				IAmb	IAmb	11 57 57.3	
	comp=Z,57nm,1.3s						
LATQ	La Tuque	69.28	322	P	P	11 57 55.2	-0.1
V58A	Windy Hill, Pi	69.37	309	P	P	11 57 56.0	-0.1
V58A				IAmb	IAmb	11 57 59.3	
	comp=Z,108nm,1.8s						
VNA1	Neumayer--Stat	69.38	177	P	P	11 57 56.7	+1.2
GOF	Gofitskoye	69.53	40	⇑eP	P	11 57 57.9	+0.9
GOF				pmax	pmax		
	comp=Z,107nm,1.1s						
SOR	Soroa	69.55	295	P	P	11 57 57.3	-0.2
SOR				pmax	pmax		
	comp=Z,151nm,1.9s						
SOR	Soroa	69.55	295	P	P	11 57 57.3	-0.2
SOR				IAmb	IAmb	11 58 05.5	
	comp=Z,150nm,1.9s						
JTS	Las Juntas de	69.70	281	⇑eP	P	11 57 58.2	-0.4
JTS				pmax	pmax		
	comp=Z,15nm,1.5s						
VNA2	Neumayer--Watz	69.70	177	P	P	11 57 57.7	+0.2
	baz=347,slow=7.6						
P57A	Homestead Farm	69.71	313	P	P	11 57 58.9	+0.7
P57A				IAmb	IAmb	11 58 00.8	
	comp=Z,48nm,1.2s						
CAO2	Cobano, Puntar	69.79	281	P	P	11 57 59.1	0.0
SCHQ	Schefferville	69.80	331	P	P	11 57 58.0	-0.4
	comp=Z,4.3nm,0.7s,baz=112,slow=1.4,SNR=6.7						
SCHQ				LR	LR	12 24 13.8	
	comp=Z,724nm,19.2s,baz=130,slow=32						
SCHQ	Schefferville	69.80	331	P	P	11 57 58.7	+0.3
SCHQ				IAmb	IAmb	11 58 06.7	
	comp=Z,107nm,1.8s						
TRNA	Turayna	69.85	63	P	P	11 58 00.8	+1.5
TRQ	Mont Tremblant	69.88	321	P	P	11 57 59.1	-0.1
TRQ				IAmb	IAmb	11 58 07.6	
	comp=Z,110nm,1.5s						
VNA3	Neumayer Olymp	69.92	178	P	P	11 57 59.0	+0.1
VORD	Divnogorie	69.92	34	eP	P	11 57 57.8	-1.4
VORD				pmax	pmax		
	comp=Z,20nm,0.6s						
VSR	Storozhevoye	69.98	33	eP	P	11 57 59.9	+0.4
VSR				pmax	pmax		
	comp=Z,120nm,1.2s						
SSPA	Standing Stone	70.01	314	P	P	11 58 00.4	+0.4
SLWR	Sila	70.15	64	P	P	11 58 02.0	+0.8
SLWR				P	P	11 58 02.0	+0.8
VORR	Voronezh	70.22	33	eP	P	11 58 02.0	+1.0
VORR				pmax	pmax		
	comp=Z,250nm,1.4s						
L56A	Greenwood	70.30	316	P	P	11 58 01.3	-0.5
L56A				IAmb	IAmb	11 58 04.5	
	comp=Z,132nm,1.8s						
FINES	FINESS Array B	70.30	20	P	P	11 58 00.4	-0.9
	comp=Z,4.3nm,0.5s,baz=229,slow=3.0,SNR=17						
FINES				LR	LR	12 30 58.8	
	comp=Z,500nm,18.1s,baz=222,slow=38						
FINES	FINESS Array B	70.30	20	P	P	11 58 01.4	+0.1
FINES	FINESS Array B	70.30	20	P	P	11 58 01.4	+0.1
FIA1	FINESS Array S	70.30	20	P	P	11 58 01.3	0.0
FIA1				IAmb	IAmb	11 58 04.2	
	comp=Z,124nm,1.6s						
O56A	Blue Knob Stat	70.37	314	P	P	11 58 01.9	-0.4
O56A				IAmb	IAmb	11 58 10.6	
	comp=Z,151nm,1.8s						
O56A	Blue Knob Stat	70.37	314	P	P	11 58 02.6	+0.2
	baz=110						
Q56A	Snyder Ridge,	70.43	312	P	P	11 58 02.5	-0.1
LPSR	Galich'ya Gora	70.53	32	eP	P	11 58 01.5	-1.4
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
ABTO	Aybut	70.56	71	P	P	11 58 05.2	+1.3
ABTO				P	pP	11 58 05.6	-0.2
GROC	Groznyy	70.65	43	eP	P	11 58 04.7	+0.8
GROC				e		12 00 41.5	
GROC				pmax	pmax		
	comp=Z,19nm,0.5s						
OBN	Obninsk	70.65	29	eP	P	11 58 02.8	-0.8
OBN				e		12 00 38.8	
OBN				ePPP	PPP	12 02 23.4	
OBN				eS	S	12 07 14.2	-3.4
OBN				eSS	SS	12 11 50.6	+1.1
OBN				pmax	pmax		
	comp=Z,76nm,1.7s						
OBN				MLR	MLR		
	comp=Z,1µm,17.0s						
OBN	Obninsk	70.65	29	IAMs_20	IAMs_20	12 31 43.7	
	comp=Z,1µm,18.0s						
SNAA	Sanae	70.72	176	P	P	11 58 04.2	+0.3
SNAA	Sanae	70.72	176	P	P	11 58 03.6	-0.2
	comp=Z,12nm,0.9s,baz=348,slow=7.4,SNR=14						
SNAA	Sanae	70.72	176	deP	P	11 58 03.4	-0.5
SNAA				pmax	pmax		
	comp=Z,35nm,1.3s						
SNAA	Sanae	70.72	176	P	P	11 58 03.7	-0.2
SNAA				IAmb	IAmb	11 58 13.4	
	comp=Z,46nm,1.3s						
BLA	Blacksburg	70.80	310	P	P	11 58 04.2	-0.7
BLA				pmax	pmax		
	comp=Z,110nm,1.7s						
BLA	Blacksburg	70.80	310	P	P	11 58 04.2	-0.7
BLA				IAmb	IAmb	11 58 13.3	
	comp=Z,110nm,1.6s						
BLA				IAMs_20	IAMs_20	12 22 25.0	
	comp=Z,2µm,21.0s						
MATN	Matagalpa	70.90	284	P	P	11 58 04.9	-1.1
MATN				IAmb	IAmb	11 58 13.3	
	comp=Z,134nm,1.9s						
M55A	Ridgway	70.92	315	P	P	11 58 05.9	+0.3
KMSC	Kings Mountain	70.92	308	P	P	11 58 05.7	0.0
KMSC				IAmb	IAmb	11 58 09.0	
	comp=Z,111nm,1.8s						
KMSC	Kings Mountain	70.92	308	P	P	11 58 05.8	+0.1
	baz=106						
V55A	Taylorsville	71.02	309	P	P	11 58 06.8	+0.5
V55A				IAmb	IAmb	11 58 17.0	
	comp=Z,51nm,1.3s						
WHFO	Wadi Hawf	71.08	71	P	P	11 58 07.6	+0.5
MCWV	Mont Chateau	71.11	313	IAMs_20	IAMs_20	12 21 35.2	
	comp=Z,2µm,21.0s						
WVNY	West Valley, N	71.12	316	P	P	11 58 07.1	+0.3
WVNY				IAmb	IAmb	11 58 14.9	
	comp=Z,116nm,1.4s						
MSEY	Mahe Island	71.29	94	IAMs_20	IAMs_20	12 26 10.4	
	comp=Z,1µm,21.0s						
VRH	Novokhopyorsk	71.39	34	eP	P	11 58 05.8	-2.3
VRH				pmax	pmax		
	comp=Z,40nm,0.9s						
HODGE	Hodges	71.42	307	P	P	11 58 08.9	+0.2
HODGE				IAmb	IAmb	11 58 17.1	
	comp=Z,92nm,1.8s						
MOS	Moscow	71.50	29	eP	P	11 58 06.5	-2.2
MOS				e		11 58 14.3	
MOS				e		12 00 47.3	
MOS				pmax	pmax		
	comp=Z,132nm,1.4s						
MOS				MLR	MLR		
	comp=Z,900nm,18.0s						
DOK	Doka	71.51	70	P	P	11 58 11.3	+1.7
M54A	Oil Creek Stat	71.57	315	P	P	11 58 08.7	-0.8
	baz=109						
MZR	Muzera	71.58	65	i P	P	11 58 11.7	+1.8
	SNR=8.4						
MZR	Muzera	71.58	65	P	P	11 58 12.3	+2.4
	SNR=5.9						
MZR				P	P	11 58 12.3	+2.4
	SNR=5.9						
N54A	Moraine State	71.62	314	P	P	11 58 08.7	-1.1
	baz=109						
NVL	N'lazarevskaya	71.63	171	eP	P	11 58 16.3	+7.1
NVL				pmax	pmax		
	comp=Z,75nm,1.8s						
Q54A	Coxs Mills	71.63	312	P	P	11 58 10.5	+0.6
S54A	Dingess, Beckl	71.64	311	P	P	11 58 09.9	-0.2
S54A				IAmb	IAmb	11 58 13.2	
	comp=Z,121nm,1.8s						
O54A	Avella	71.66	313	P	P	11 58 10.5	+0.4
O54A				IAmb	IAmb	11 58 13.2	
	comp=Z,148nm,1.9s						
MAK	Makhachkala	71.74	44	eP	P	11 58 05.1	-5.4
MAK				eS	S	12 07 22.8	-7.9
MAK				pmax	pmax		
	comp=Z,164nm,1.6s						
MAK				MLR	MLR		
	comp=Z,349nm,15.0s						
TIGA	Tifton	71.83	304	P	P	11 58 10.6	-0.6
	baz=103						
BG3	Lake Jocassee	72.15	307	P	P	11 58 13.8	+0.6
BG3				IAmb	IAmb	11 58 16.6	
	comp=Z,111nm,1.6s						
PMSA	Palmer Station	72.15	200	eP	P	11 58 13.0	+0.5
PMSA	Palmer Station	72.15	200	P	P	11 58 12.9	+0.5
PMSA				IAmb	IAmb	11 58 22.4	
	comp=Z,58nm,1.2s						
N53A	Lisbon	72.19	314	P	P	11 58 13.3	+0.1
N53A				IAmb	IAmb	11 58 21.4	
	comp=Z,119nm,1.6s						
GOGA	Godfrey	72.19	306	P	P	11 58 13.7	+0.3
GOGA				pmax	pmax		
	comp=Z,51nm,1.6s						
GOGA	Godfrey	72.19	306	P	P	11 58 13.7	+0.3
GOGA	Godfrey	72.19	306	IAMs_20	IAMs_20	12 22 32.0	
	comp=Z,2µm,22.0s						
P53A	Whipple	72.19	312	P	P	11 58 12.0	-1.3
P53A				IAmb	IAmb	11 58 21.2	
	comp=Z,66nm,1.6s						
V53A	Saluda	72.23	308	P	P	11 58 14.1	+0.4
V53A				IAmb	IAmb	11 58 16.8	
	comp=Z,89nm,1.6s						
M53A	WI Miller and	72.27	314	P	P	11 58 13.8	0.0
M53A	WI Miller and	72.27	314	P	P	11 58 13.7	0.0
	baz=108						
R53A	Hurricane	72.28	311	P	P	11 58 14.0	+0.2
O53A	New Philadelph	72.29	313	P	P	11 58 13.4	-0.5
O53A				IAmb	IAmb	11 58 16.8	
	comp=Z,85nm,1.4s						
O53A				IAMs_20	IAMs_20	12 22 21.4	
	comp=Z,2µm,22.0s						
O53A	New Philadelph	72.29	313	P	P	11 58 14.2	+0.3
	baz=108						
SADO	Sadowa	72.31	318	P	P	11 58 14.6	+0.7
SADO				IAmb	IAmb	11 58 21.3	
	comp=Z,110nm,1.6s						
TGUH	Tegucigalpa,Un	72.32	285	P	P	11 58 13.3	-1.4
TGUH				IAmb	IAmb	11 58 23.1	
	comp=Z,91nm,1.1s						
TGUH				IAMs_20	IAMs_20	12 25 53.1	
	comp=Z,1µm,22.0s						
VLDQ	Val d'Or	72.45	322	P	P	11 58 15.6	+1.0
VLDQ				IAmb	IAmb	11 58 23.5	
	comp=Z,68nm,1.6s						
Q52A	Bidwell	72.69	312	P	P	11 58 16.3	0.0
O52A	Adamsville	72.71	313	P	P	11 58 16.8	+0.5
O52A				IAmb	IAmb	11 58 18.8	
	comp=Z,72nm,1.2s						
Y52A	Lilburn	72.78	306	P	P	11 58 16.8	-0.1
Y52A				IAmb	IAmb	11 58 20.3	
	comp=Z,105nm,1.6s						
P52A	Corning	72.78	312	P	P	11 58 16.9	0.0
P52A				IAmb	IAmb	11 58 19.7	

	comp=Z,126nm,1.7s						
P52A	Corning	72.78	312	P	P	11 58 17.9	+1.0
	baz=107						
V52A	Sevierville	72.89	308	P	P	11 58 17.5	0.0
V52A				IAmb	IAmb	11 58 20.4	
	comp=Z,138nm,1.8s						
352A	Blakely	72.95	303	P	P	11 58 17.7	-0.2
W52A	Murphy	72.97	307	P	P	11 58 18.4	+0.4
W52A				IAmb	IAmb	11 58 20.3	
	comp=Z,55nm,1.3s						
TKL	Tuckaleechee C	72.98	308	LR	LR	12 25 26.5	
	comp=Z,850nm,19.1s,baz=113,slow=32						
TKL	Tuckaleechee C	72.98	308	P	P	11 58 17.8	-0.3
TKL				pmax	pmax		
	comp=Z,90nm,1.7s						
TKL	Tuckaleechee C	72.98	308	P	P	11 58 17.8	-0.3
TKL				IAmb	IAmb	11 58 20.8	
	comp=Z,90nm,1.7s						
TZTN	Tazewell	73.03	309	IAMs_20	IAMs_20	12 24 09.1	
	comp=Z,2µm,22.0s						
152A	Waverly Hall	73.04	305	P	P	11 58 18.9	+0.4
152A				IAmb	IAmb	11 58 26.8	
	comp=Z,146nm,1.9s						
UMZA	Um Al Zommool	73.06	66	P	P	11 58 21.1	+2.4
UMZA				P	P	11 58 21.1	+2.4
AJN	Ajban	73.19	64	*i* P	P	11 58 20.5	+1.0
	SNR=5.6						
N51A	Ashland	73.33	313	P	P	11 58 20.0	-0.1
S51A	Beattyville	73.34	310	P	P	11 58 20.4	+0.3
P51A	Williamsport	73.43	312	IAmb	IAmb	11 58 23.6	
	comp=Z,81nm,1.5s						
V51A	Loudon	73.47	308	P	P	11 58 19.8	-1.1
V51A				IAmb	IAmb	11 58 24.2	
	comp=Z,106nm,1.5s						
ASUD	Al Ashush, Dub	73.51	64	P	P	11 58 21.2	-0.2
ASUD	Al Ashush, Dub	73.51	64	P	P	11 58 23.6	+2.2
ASUD				P	P	11 58 23.6	+2.2
Q51A	Peebles	73.52	311	P	P	11 58 20.5	-0.7
Z51A	Franklin	73.56	305	IAmb	IAmb	11 58 24.8	
	comp=Z,87nm,1.6s						
ACSO	Alum Creek Sta	73.58	313	P	P	11 58 21.6	+0.1
ACSO				IAMs_20	IAMs_20	12 22 47.6	
	comp=Z,1µm,20.0s						
X51A	Calhoun	73.58	307	P	P	11 58 22.2	+0.6
FAQ	Al Faqa, Dubai	73.77	64	*i* P	P	11 58 23.1	+0.2
	SNR=5.0						
ALNE	Al Ain	73.80	65	*i* P	P	11 58 23.2	0.0
	SNR=8.1						
ALNE	Al Ain	73.80	65	P	P	11 58 24.5	+1.3
	SNR=7.1						
NAZ	Nazwa, Dubai	73.87	64	*i* P	P	11 58 23.7	+0.1
	SNR=5.6						
M50A	Fremont	73.95	314	P	P	11 58 23.4	-0.3
K50A	Casco	74.05	315	P	P	11 58 24.2	0.0
R50A	Paris	74.07	310	IAmb	IAmb	11 58 27.5	
	comp=Z,144nm,1.6s						
W50A	Signal Mountai	74.09	307	P	P	11 58 24.9	+0.2
W50A				IAmb	IAmb	11 58 32.5	
	comp=Z,121nm,1.9s						
T50A	Nancy	74.15	309	P	P	11 58 24.9	0.0
250A	Grady	74.17	304	P	P	11 58 25.6	+0.5
ASHO	Ashiyiah	74.18	64	*i* P	P	11 58 25.7	+0.3
	SNR=11						
ASHO	Ashiyiah	74.18	64	P	P	11 58 26.2	+0.8
	SNR=7.2						
FPAL	Fort Paine	74.18	306	P	P	11 58 23.4	-1.8
HATD	Hatta, Dubai	74.27	64	*i* P	P	11 58 26.0	+0.1
	SNR=11						
HATD	Hatta, Dubai	74.27	64	P	P	11 58 26.5	+0.7
	SNR=9.3						
HATD				P	P	11 58 26.5	+0.7
	SNR=9.3						
UOSS	Minazif	74.35	64	*i* P	P	11 58 25.5	-0.8
	SNR=10						
UOSS	Minazif	74.35	64	P	P	11 58 27.7	+1.4
UOSS				P	P	11 58 27.7	+1.4
UOSS	Minazif	74.35	64	P	P	11 58 25.4	-1.0
UOSS	Minazif	74.35	64	IAMs_20	IAMs_20	12 31 52.3	
	comp=Z,1µm,20.0s						
MSFE	Esma-Masafi	74.37	63	*i* P	P	11 58 26.2	-0.3
	SNR=6.4						
ARQ	Araqi	74.39	65	P	P	11 58 28.3	+1.6
	SNR=10.0						
ARQ				P	P	11 58 28.3	+1.6
	SNR=10.0						
SHME	Shamm	74.47	63	P	P	11 58 27.0	+0.1
SOHO	SOHO	74.52	65	*i* P	P	11 58 27.2	-0.1
	SNR=10.0						
SOHO	SOHO	74.52	65	P	P	11 58 28.4	+1.1
SOHO				P	P	11 58 28.4	+1.1
O49A	Covington	74.57	312	P	P	11 58 27.4	+0.1
O49A				IAmb	IAmb	11 58 29.9	
	comp=Z,141nm,1.6s						
BANOM	Banah	74.59	63	*i* P	P	11 58 27.7	0.0
	SNR=7.3						
SWET	Sewanee	74.59	307	P	P	11 58 27.5	-0.1
SWET				IAmb	IAmb	11 58 30.0	
	comp=Z,164nm,1.8s						
AAM	Ann Arbor	74.65	315	IAmb	IAmb	11 58 35.7	
	comp=Z,149nm,1.6s						
P49A	Miami Univ. Ec	74.68	312	P	P	11 58 27.3	-0.7
P49A				IAmb	IAmb	11 58 30.6	
	comp=Z,150nm,1.9s						
P49A	Miami Univ. Ec	74.68	312	P	P	11 58 27.2	-0.7
	baz=105						
R49A	Shelbyville	74.71	310	P	P	11 58 28.0	-0.1
R49A				IAmb	IAmb	11 58 36.0	
	comp=Z,141nm,1.8s						
U49A	Red Boiling Sp	74.76	308	P	P	11 58 28.6	+0.2
U49A				IAmb	IAmb	11 58 31.2	
	comp=Z,180nm,1.8s						
BSY	Bisya	74.93	66	P	P	11 58 31.1	+1.4
BSY				P	P	11 58 31.1	+1.4
KLMR	Klimovskoe	75.06	25	*e*P	P	11 58 27.1	-2.5
KLMR				*e*		12 01 13.2	
KLMR				*e*S	SKiKP	12 08 00.7	+6.8
KLMR				pmax	pmax		
	comp=Z,62nm,1.3s						
KLMR	Klimovskoe	75.06	25	*e*P	P	11 58 27.2	-2.4
KLMR				AMP		11 58 37.5	
	comp=Z,62nm,1.3s						
KLMR				*e*PP	PP	12 01 13.2	-4.4
KLMR				*e*S	SKiKP	12 08 00.8	+6.8
KLMR				*e*S	SKiKP	12 08 00.8	+6.8
KLMR				LQ	LQ	12 24 30.5	
KLMR				LQ	LQ	12 24 30.5	
KLMR				LR	LR	12 28 09.2	
CLTN	Cedars of Leba	75.10	308	P	P	11 58 30.1	-0.3
L48A	N Adams	75.11	314	P	P	11 58 29.9	-0.5
HOQ	Hoqain	75.15	65	P	P	11 58 31.6	+0.6
HOQ				P	P	11 58 31.6	+0.6
SUMG	Summit	75.17	353	P	P	11 58 30.5	-0.1
SUMG				pmax	pmax		
	comp=Z,57nm,2.0s						
SUMG	Summit	75.17	353	*i* P	P	11 58 30.0	-0.6
SUMG				IAmb	IAmb	11 58 43.2	
	comp=Z,3.6nm,0.7s						
SUMG	Summit	75.17	353	P	P	11 58 30.5	-0.1
SMAI	San Martin Ant	75.17	198	P	P	11 58 30.6	+0.5
P48A	Milroy	75.19	311	P	P	11 58 30.5	-0.4
P48A				IAmb	IAmb	11 58 33.3	
	comp=Z,179nm,1.9s						
BELG	Belogornoye	75.21	35	P	P	11 58 29.9	-0.8
	comp=Z,51nm,1.0s,baz=30,slow=2.7,SNR=8.9						
BELG	Belogornoye	75.21	35	*de*P	P	11 58 29.8	-0.8
BELG				pmax	pmax		
	comp=Z,20nm,1.0s						
X48A	Hartselle	75.32	306	P	P	11 58 31.3	-0.5
X48A				IAmb	IAmb	11 58 34.1	
	comp=Z,141nm,1.8s						
V48A	Smith Brothers	75.41	307	IAmb	IAmb	11 58 34.6	
	comp=Z,134nm,1.7s						
WCI	Wyandotte Cave	75.56	310	P	P	11 58 32.5	-0.5
WCI				pmax	pmax		
	comp=Z,34nm,1.0s						
WCI	Wyandotte Cave	75.56	310	P	P	11 58 32.5	-0.5
JMDO	Jabal Madar	75.71	67	P	P	11 58 34.3	+0.1
JMDO				P	P	11 58 34.3	+0.1
N47A	Urbana	75.75	313	IAmb	IAmb	11 58 35.6	
	comp=Z,63nm,1.2s						
SMDO	Samad	75.75	66	P	P	11 58 34.9	+0.4
	SNR=9.3						
SMDO				P	P	11 58 34.9	+0.4
	SNR=9.3						
T47A	Sharon Grove	75.91	309	IAmb	IAmb	11 58 37.5	
	comp=Z,111nm,1.6s						
Z47A	Carrollton	75.91	305	P	P	11 58 34.9	-0.2
BLO	Bloomington	75.95	311	P	P	11 58 34.9	-0.4
BLO				pmax	pmax		
	comp=Z,87nm,1.4s						
BLO	Bloomington	75.95	311	P	P	11 58 34.9	-0.4
BLO				IAmb	IAmb	11 58 37.8	
	comp=Z,87nm,1.4s						
ARCES	ARCESS Array B	75.98	14	P	P	11 58 34.2	-0.6
	comp=Z,9.6nm,1.1s,baz=233,slow=2.4,SNR=10						
ARCES				LR	LR	12 32 54.8	
	comp=Z,678nm,20.4s,baz=240,slow=36						
ARCES	ARCESS Array B	75.98	14	IAmb	IAmb	11 59 22.2	
	comp=Z,131nm,1.8s						
PLAL	Pickwick Lake	76.26	306	P	P	11 58 36.4	-0.7
PLAL				IAMs_20	IAMs_20	12 25 00.7	
	comp=Z,2µm,22.0s						
WVT	Waverly	76.30	308	P	P	11 58 36.5	-0.8
WVT				pmax	pmax		
	comp=Z,45nm,1.2s						
WVT	Waverly	76.30	308	P	P	11 58 36.5	-0.8
WSAR	Wadi Sarin	76.30	66	P	P	11 58 38.3	+0.7
WBK	Wadi Bani Khal	76.53	67	P	P	11 58 39.4	+0.4
WBK				P	P	11 58 39.4	+0.4
P46A	Rosedale	76.57	311	P	P	11 58 38.0	-0.8
SFIN	Lafayette	76.66	312	P	P	11 58 38.5	-0.8
SFIN				IAmb	IAmb	11 58 46.1	
	comp=Z,109nm,1.6s						
SFIN	Lafayette	76.66	312	P	P	11 58 38.5	-0.8
	baz=103						
APA	Apatity	76.76	17	⇓*i*P	P	11 58 36.8	-2.4
APA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
JLN	Jalan Bani Buh	76.88	67	P	P	11 58 41.2	+0.3
JLN				P	P	11 58 41.2	+0.3
SYO	Syowa Base	76.95	162	⇑*e*P	P	11 58 40.6	+0.4
SYO	Syowa Base	76.95	162	⇑*e*sP	sP	11 58 46.8	+4.1
SYO	Syowa Base	76.95	162	⇑*e*PcP	PcP	11 58 52.6	+1.3
OLIL	Olney	77.05	310	P	P	11 58 40.6	-0.9
W45A	Hickory Valley	77.19	306	P	P	11 58 41.3	-1.0
W45A				IAmb	IAmb	11 58 48.8	
	comp=Z,85nm,1.1s						
CCIG	Comitan	77.21	287	P	P	11 58 41.5	-1.6
Y45A	Yeager Farm, C	77.24	305	P	P	11 58 41.9	-0.8
Y45A				IAmb	IAmb	11 58 51.0	
	comp=Z,76nm,1.3s						
O44A	Mansfield	77.63	312	IAmb	IAmb	11 58 46.0	
	comp=Z,126nm,1.7s						
L44A	Lake County Fo	77.67	314	P	P	11 58 44.6	-0.3
	baz=103						
SIUC	Southern Illin	77.70	309	P	P	11 58 44.0	-1.2
SIUC				IAmb	IAmb	11 58 46.6	
	comp=Z,104nm,1.5s						
S44A	Carbondale	77.73	309	P	P	11 58 43.9	-1.4
S44A				IAmb	IAmb	11 58 46.7	
	comp=Z,84nm,1.4s						
Q44A	Meyer Farm, Va	77.79	310	P	P	11 58 44.0	-1.6
GNAR	Gosnell	78.00	307	P	P	11 58 46.0	-0.9
PRGR	Permogore	78.02	25	*e*P	P	11 58 45.3	-1.1
PRGR				*e*		11 58 53.7	
PRGR				*e*		12 01 42.4	
PRGR				pmax	pmax		
	comp=Z,152nm,1.4s						
LPAR	Lepanto	78.16	307	P	P	11 58 46.8	-1.0
UPNV	Upernavik	78.17	349	*i* P	P	11 58 43.5	-3.5
UPNV				IAmb	IAmb	11 58 58.8	
	comp=Z,6.1nm,0.8s						
GEYT	Alibeck	78.23	51	P	P	11 58 46.3	-1.9
	comp=Z,1.7nm,0.4s,baz=65,slow=39,SNR=1.9						
GEYT				LR	LR	12 36 04.6	
	comp=Z,2µm,19.5s,baz=235,slow=38						
HDIL	Hopedale	78.33	312	P	P	11 58 47.3	-1.3
HDIL				IAmb	IAmb	11 58 55.9	
	comp=Z,54nm,1.2s						
HDIL				IAMs_20	IAMs_20	12 26 19.4	
	comp=Z,2µm,21.0s						
HBAR	Harrisburg	78.44	307	P	P	11 58 48.6	-0.7
PBMO	Poplar Bluff	78.48	308	IAmb	IAmb	11 58 55.5	
	comp=Z,86nm,1.8s						
KIRV	Kirov	78.50	29	P	P	11 58 47.6	-1.5
	comp=Z,16nm,0.7s,baz=315,slow=2.8,SNR=6.9						
KIRV	Kirov	78.50	29	⇑*e*P	P	11 58 48.1	-1.0
143A	Socs Landing,	78.58	304	P	P	11 58 49.2	-0.9
FVM	French Village	78.69	309	P	P	11 58 49.7	-1.0
FVM				pmax	pmax		
	comp=Z,58nm,1.2s						
FVM	French Village	78.69	309	P	P	11 58 49.7	-1.0
FVM				IAmb	IAmb	11 58 51.6	
	comp=Z,58nm,1.1s						
LCAR	Lake Charles	78.93	307	P	P	11 58 51.0	-1.0
LCAR				IAmb	IAmb	11 58 53.7	
	comp=Z,87nm,1.8s						
T42A	Van Buren	79.04	308	P	P	11 58 51.4	-1.3
342A	Flagon Creek P	79.16	302	P	P	11 58 53.0	-0.3
342A				IAmb	IAmb	11 59 02.2	
	comp=Z,167nm,1.5s						
CCM	Cathedral Cave	79.34	309	P	P	11 58 53.4	-0.8
CCM				pmax	pmax		
	comp=Z,194nm,1.8s						
CCM	Cathedral Cave	79.34	309	P	P	11 58 53.4	-0.8
CCM				IAmb	IAmb	11 58 55.8	
	comp=Z,194nm,1.8s						
CCM	Cathedral Cave	79.34	309	IAMs_20	IAMs_20	12 28 26.2	
	comp=Z,1µm,21.0s						
JFWS	Jewell Farm	79.52	314	P	P	11 58 54.3	-0.8
JFWS				pmax	pmax		
	comp=Z,114nm,1.7s						
JFWS	Jewell Farm	79.52	314	P	P	11 58 54.3	-0.8
JFWS				IAmb	IAmb	11 58 56.9	
	comp=Z,114nm,1.6s						
W41B	Gary Mavity, V	79.66	306	P	P	11 58 54.9	-1.1
	baz=99						
WHAR	Wooly Hollow	79.71	306	P	P	11 58 55.3	-1.0
Z41A	Richland Creek	79.83	304	P	P	11 58 57.0	+0.1
	baz=98						
MGMO	Mountain Grove	79.99	308	P	P	11 58 56.6	-1.2
MGMO				IAmb	IAmb	11 59 00.1	
	comp=Z,197nm,1.6s						
X40A	Basin Creek Fa	80.03	305	P	P	11 58 57.4	-0.6
X40A				IAMs_20	IAMs_20	12 27 44.7	
	comp=Z,1µm,21.0s						
X40A	Basin Creek Fa	80.03	305	P	P	11 58 57.4	-0.6
	baz=99						
WLAR	White Oak Lake	80.14	304	P	P	11 58 58.4	-0.2
WLAR				IAmb	IAmb	11 59 01.2	
	comp=Z,131nm,1.3s						
U40A	Yellville	80.33	307	P	P	11 58 58.3	-1.3
U40A				IAmb	IAmb	11 59 01.4	
	comp=Z,96nm,1.6s						
U40A				IAMs_20	IAMs_20	12 27 37.5	
	comp=Z,1µm,21.0s						
U40A	Yellville	80.33	307	P	P	11 58 58.4	-1.2
	baz=99						
MIAR	Mount Ida	80.65	305	P	P	11 59 00.0	-1.4
MIAR				pmax	pmax		
	comp=Z,75nm,1.7s						
MIAR	Mount Ida	80.65	305	P	P	11 59 00.0	-1.4
MIAR				IAmb	IAmb	11 59 03.7	
	comp=Z,74nm,1.6s						
MIAR				IAMs_20	IAMs_20	12 28 26.0	
	comp=Z,2µm,19.0s						
AKTO	Aktyubinsk	80.81	38	P	P	11 59 02.0	+0.1
	comp=Z,9.0nm,0.9s,baz=248,slow=7.1,SNR=21						
AKTO	Aktyubinsk	80.81	38	P	P	11 59 02.0	+0.1
S39A	Bolivar	80.91	308	P	P	11 59 01.8	-0.9
S39A				IAmb	IAmb	11 59 04.3	
	comp=Z,180nm,1.8s						
W39A	Magazine	80.91	306	P	P	11 59 02.5	-0.2
W39A				IAmb	IAmb	11 59 05.3	
	comp=Z,116nm,1.7s						
W39A	Magazine	80.91	306	P	P	11 59 02.3	-0.4
	baz=98						
NEEM	North Greenlan	81.02	353	*i* P	P	11 58 59.4	-3.4
NEEM				IAmb	IAmb	11 59 08.4	
	comp=Z,24nm,0.7s						
NATX	Nacogdoches	81.18	302	P	P	11 59 03.4	-0.8
HHAR	Hobbs	81.19	307	P	P	11 59 03.2	-1.0
HHAR				IAmb	IAmb	11 59 05.8	
	comp=Z,66nm,1.5s						
P38A	Dawn	81.36	310	P	P	11 59 03.6	-1.5
P38A				IAmb	IAmb	11 59 06.7	
	comp=Z,164nm,1.8s						
U38A	Gravette	81.56	307	P	P	11 59 04.5	-1.7
U38A				IAmb	IAmb	11 59 08.0	
	comp=Z,127nm,1.8s						
SPMN	Marine on St.	81.77	316	P	P	11 59 06.5	-0.6
	baz=100						
ABKAR	Akbulak array	81.77	40	P	P	11 59 06.5	-0.5
ABKAR	Akbulak array	81.77	40	P	P	11 59 06.3	-0.7
ABKAR				IAmb	IAmb	11 59 11.1	
	comp=Z,82nm,1.9s						
I37A	Lemond, Waseca	81.97	315	IAmb	IAmb	11 59 14.9	
	comp=Z,78nm,1.4s						
HKT	Hockley	81.98	300	⇑*e*P	P	11 59 07.8	-0.6
HKT				pmax	pmax		
	comp=Z,23nm,1.7s						
HKT	Hockley	81.98	300	P	P	11 59 07.9	-0.5
X37A	Clayton	82.12	305	P	P	11 59 08.4	-0.8
X37A				IAmb	IAmb	11 59 10.9	
	comp=Z,76nm,1.6s						
F36A	Milaca	82.37	316	P	P	11 59 10.0	-0.3
ARU	Arti	82.53	33	P	P	11 59 10.6	-0.3
	comp=Z,5.1nm,0.6s,baz=258,slow=5.2,SNR=12						
ARU	Arti	82.53	33	*d i*P	P	11 59 10.5	-0.3
ARU						12 02 17.4	
ARU				S	S	12 09 29.6	+1.9
ARU				SS	SS	12 14 47.1	-2.0
ARU				pmax	pmax		
	comp=Z,30nm,0.9s						
ARU				MLR	MLR		
	comp=Z,687nm,17.0s						
ARU	Arti	82.53	33	P	P	11 59 10.2	-0.6
ARU				IAmb	IAmb	11 59 20.1	
	comp=Z,39nm,0.9s						
TUL1	Leonard	82.62	306	P	P	11 59 10.6	-1.2
TUL1				IAmb	IAmb	11 59 13.6	
	comp=Z,118nm,1.8s						
TUL1	Leonard	82.62	306	P	P	11 59 10.9	-0.9
	baz=97						
NOR	Nord	82.87	360	*i* P	P	11 59 09.4	-2.8
NOR				IAmb	IAmb	11 59 26.4	
	comp=Z,1.9nm,0.9s						
B35A	Bob, Littlefor	82.94	319	P	P	11 59 12.4	-0.8
N35A	Tabor	83.14	311	P	P	11 59 13.0	-1.4
TULEG	Thule	83.19	349	*i* P	P	11 59 12.4	-1.5
TULEG				IAmb	IAmb	11 59 17.2	
	comp=Z,8.1nm,0.9s						
TULEG	Thule	83.19	349	P	P	11 59 13.1	-0.7
T35A	Sooner Cattle	83.32	307		P	11 59 14.4	-1.1
OK034	N. Norfolk Rd.	83.38	306		P	11 59 15.3	-0.4
OK034				IAMs_20	IAMs_20	12 29 30.2	
	comp=Z,1µm,21.0s						
QUOK	Quay	83.39	306		P	11 59 15.1	-0.6
W35A	Tecumseh	83.42	305		P	11 59 15.2	-0.7
OK031	S. Brethren Rd	83.47	306		P	11 59 15.8	-0.4
LOOK	Love County	83.54	304		P	11 59 16.0	-0.6
LOOK				IAmb	IAmb	11 59 23.9	
	comp=Z,52nm,1.2s						
435B	Jarrell	83.57	301	P	P	11 59 16.5	-0.3
	baz=95						
WHTX	Lake Whitney,	83.57	302	P	P	11 59 16.3	-0.5
WHTX				IAmb	IAmb	11 59 18.9	
	comp=Z,44nm,1.2s						
WHTX	Lake Whitney,	83.57	302	P	P	11 59 16.4	-0.4
	baz=96						
SVE	Sverdlovsk	83.74	33	*e*P	P	11 59 17.1	0.0
SVE				pmax	pmax		
	comp=Z,27nm,1.2s						
SVE				MLR	MLR		
	comp=Z,844nm,18.0s						
OK025	Westminster Rd	83.84	306		P	11 59 17.4	-0.6
BLOK	Blackwell	83.86	307		P	11 59 17.3	-0.9
UNM	Universidad Na	84.13	289	IAMs_20	IAMs_20	12 29 21.9	
	comp=Z,917nm,21.0s						
X34A	Smith Ranch, M	84.14	305		P	11 59 19.4	-0.3
ECSD	EROS Data Cent	84.23	314	P	P	11 59 18.7	-1.2
ECSD				IAmb	IAmb	11 59 22.0	
	comp=Z,112nm,1.8s						
KAN17	Caldwell West	84.33	307		P	11 59 19.7	-0.9
MAW	Mawson	84.48	158	P	P	11 59 21.2	+0.6
	comp=Z,10nm,0.9s,baz=37,slow=2.2,SNR=6.6						
MAW				LR	LR	12 28 47.5	
	comp=Z,162nm,19.5s,baz=251,slow=30						
MAW	Mawson	84.48	158	P	P	11 59 20.9	+0.3
MAW				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MAW	Mawson	84.48	158	P	P	11 59 20.9	+0.3
KAN14	Manchester OK	84.48	307	P	P	11 59 20.8	-0.5
ULM	Lac du Bonnet	84.63	321	P	P	11 59 20.6	-1.2
	comp=Z,10nm,0.9s,baz=85,slow=4.4,SNR=6.7						
ULM				LR	LR	12 32 06.3	
	comp=Z,994nm,19.9s,baz=108,slow=32						
ULM	Lac du Bonnet	84.63	321	IAmb	IAmb	11 59 28.5	
	comp=Z,46nm,1.3s						
833A	Chaparral WMA,	84.93	298	P	P	11 59 23.4	-0.4
	baz=94						
WMOK	Wichita Mounta	84.93	305	IAMs_20	IAMs_20	12 31 25.2	
	comp=Z,1µm,20.0s						
BGNE	Belgrade	85.09	312	P	P	11 59 23.6	-0.7
BGNE	Belgrade	85.09	312	P	P	11 59 24.1	-0.2
	baz=96						
R32A	Long Quarter,	85.22	309	IAmb	IAmb	11 59 27.2	
	comp=Z,116nm,1.7s						
JCT	Junction City	85.45	301	P	P	11 59 24.9	-1.5
JCT				pmax	pmax		
	comp=Z,123nm,1.7s						
JCT	Junction City	85.45	301	P	P	11 59 24.9	-1.5
JCT				IAmb	IAmb	11 59 28.9	
	comp=Z,122nm,1.6s						
ABTX	Abilene, Hawle	85.47	303	P	P	11 59 26.4	0.0
ABTX	Abilene, Hawle	85.47	303	P	P	11 59 26.3	-0.2
	baz=94						
K31A	O'Neill	85.66	313	IAmb	IAmb	11 59 34.4	
	comp=Z,68nm,1.2s						
SUSD	Miller	85.99	315	P	P	11 59 28.8	0.0
	baz=96						
CBKS	Cedar Bluff	86.05	309	P	P	11 59 27.5	-1.7
CBKS				pmax	pmax		
	comp=Z,135nm,1.4s						
CBKS				MLR	MLR		
	comp=Z,1µm,19.0s						
CBKS	Cedar Bluff	86.05	309	P	P	11 59 27.4	-1.7
CBKS				IAMs_20	IAMs_20	12 37 23.8	
	comp=Z,1µm,19.0s						
MDND	Maddock	86.77	318	P	P	11 59 32.2	-0.3
	baz=96						
CHGR	Chuyangaron	86.93	51	IAmb	IAmb	12 02 52.7	
	comp=Z,26nm,0.6s						
AMTX	Amarillo	87.32	305	P	P	11 59 33.8	-1.8
AMTX				IAmb	IAmb	11 59 37.1	
	comp=Z,46nm,1.6s						
ZAIG	Zacatecas	87.47	293	IAmb	IAmb	11 59 45.5	
	comp=Z,68nm,1.8s						
GAR	Garm	87.85	51	P	P	11 59 37.8	-0.3
MSTX	Muleshoe	88.17	304	P	P	11 59 39.3	-0.4
MSTX	Muleshoe	88.17	304	P	P	11 59 39.5	-0.2
	baz=93						
BTK	Batken	88.30	50	P	P	11 59 39.5	-0.7
BTK				pmax	pmax		
	comp=Z,19nm,1.0s						
BTK	Batken	88.30	50	P	P	11 59 39.5	-0.7
KSCO	Kaye Shedlock'	88.31	309	P	P	11 59 40.1	-0.1
KSCO	Kaye Shedlock'	88.31	309	P	P	11 59 40.6	+0.4
	baz=93						
RES	Resolute Bay	88.38	345	IAmb	IAmb	11 59 43.5	
	comp=Z,45nm,1.8s						
BRVK	Borovoye	88.73	37	*d i*P	P	11 59 41.2	-0.5
BRVK				pmax	pmax		
	comp=Z,30nm,1.7s						
BRVK	Borovoye	88.73	37	P	P	11 59 42.5	+0.7
BRVK				P	P	11 59 42.5	+0.7
BRVK	Borovoye	88.73	37	P	P	11 59 41.2	-0.5
TXAR	Lajitas Array	88.73	299	P	P	11 59 42.0	-0.4
	comp=Z,5.7nm,1.1s,baz=106,slow=5.1,SNR=22						
TXAR				LR	LR	12 36 34.4	
	comp=Z,320nm,20.5s,baz=0.0,slow=34						
TXAR	Lajitas Array	88.73	299	P	P	11 59 42.0	-0.4
TX31	Lajitas Ar. Si	88.73	299	P	P	11 59 41.6	-0.8
TX32	Lajitas Array	88.73	299	P	P	11 59 41.9	-0.6
TX32				IAmb	IAmb	11 59 51.4	
	comp=Z,106nm,2.0s						
QSPA	South Pole Qui	88.74	180	P	P	11 59 41.6	-0.1
QSPA				IAmb	IAmb	11 59 51.6	
	comp=Z,40nm,0.9s						
BVAR	Borovoye Array	88.79	37	P	P	11 59 41.1	-0.9
	comp=Z,4.8nm,0.7s,baz=231,slow=9.4,SNR=25						
BVAR				PP	PP	12 03 17.4	+6.4
	comp=Z,2.1nm,1.0s,baz=260,slow=5.9,SNR=3.8						
KAAM	Kaadhehdhoo	88.87	89	IAMs_20	IAMs_20	12 37 11.2	
	comp=Z,976nm,18.0s						

RSSD	**Black Hills**	**89.61**	**314**	P	**P**	**11 59 45.4**	**-1.0**
RSSD				pmax	pmax		
	comp=Z,41nm,1.5s						
RSSD	**Black Hills**	**89.61**	**314**	P	**P**	**11 59 45.4**	**-1.0**
RSSD				IAmb	IAmb	11 59 56.2	
	comp=Z,41nm,1.5s						
T25A	**Trinidad**	**89.64**	**307**	P	**P**	**11 59 47.1**	**+0.4**
T25A				IAmb	IAmb	11 59 56.1	
	comp=Z,102nm,1.9s						
T25A	**Trinidad**	**89.64**	**307**	P	**P**	**11 59 47.0**	**+0.3**
	baz=92						
DGMT	**Dagmar**	**89.88**	**318**	P	**P**	**11 59 46.7**	**-0.6**
NIL	**Nilore**	**89.99**	**57**	P	**P**	**11 59 47.6**	**-0.6**
NIL				pmax	pmax		
	comp=Z,55nm,1.9s						
NIL				MLR	MLR		
	comp=Z,1µm,22.0s						
NIL	**Nilore**	**89.99**	**57**	P	**P**	**11 59 47.6**	**-0.6**
NIL				IAmb	IAmb	12 00 08.5	
	comp=Z,56nm,1.9s						
NIL	**Nilore**	**89.99**	**57**	IAMs_20	IAMs_20	12 41 29.6	
	comp=Z,1µm,22.0s						
Q24A	**Divide**	**90.28**	**309**	P	**P**	**11 59 50.1**	**+0.4**
	baz=92						
MNTX	**Cornudas Mount**	**90.29**	**302**	P	**P**	**11 59 49.4**	**-0.2**
MNTX				IAMs_20	IAMs_20	12 36 48.3	
	comp=Z,789nm,20.0s						
HPIG		**90.42**	**297**	P	**P**	**11 59 49.8**	**-0.8**
HPIG				IAmb	IAmb	11 59 58.5	
	comp=Z,52nm,1.7s						
SDCO	**Great Sand Dun**	**90.52**	**308**	P	**P**	**11 59 49.7**	**-1.2**
SDCO				IAmb	IAmb	12 00 00.1	
	comp=Z,78nm,1.6s						
SDCO				IAMs_20	IAMs_20	12 33 25.3	
	comp=Z,1µm,22.0s						
AML	**Almayashu**	**90.55**	**48**	*i* P	**P**	**11 59 50.8**	**-0.2**
	SNR=6.8						
ISCO	**Idaho Springs**	**90.66**	**310**	P	**P**	**11 59 49.9**	**-1.6**
ISCO				pmax	pmax		
	comp=Z,66nm,1.8s						
ISCO	**Idaho Springs**	**90.66**	**310**	P	**P**	**11 59 49.9**	**-1.6**
ISCO				IAmb	IAmb	11 59 55.1	
	comp=Z,66nm,1.8s						
ISCO				IAMs_20	IAMs_20	12 33 47.6	
	comp=Z,1µm,21.0s						
N23A	**Red Feather La**	**90.93**	**311**	P	**P**	**11 59 52.7**	**+0.1**
	baz=91						
AAK	**Ala-Archa**	**91.16**	**48**	P	**P**	**11 59 53.0**	**-0.6**
	comp=Z,4.7nm,0.9s,baz=262,slow=4.0,SNR=9.6						
AAK	**Ala-Archa**	**91.16**	**48**	*i* P	**P**	**11 59 53.9**	**+0.4**
	SNR=7.4						
AAK	**Ala-Archa**	**91.16**	**48**	*de*P	**P**	**11 59 53.7**	**+0.2**
AAK				pmax	pmax		
	comp=Z,66nm,1.7s						
AAK	**Ala-Archa**	**91.16**	**48**	P	**P**	**11 59 52.8**	**-0.7**
LAO	**LASA Array**	**91.21**	**316**	P	**P**	**11 59 53.0**	**-0.5**
LAO				IAmb	IAmb	11 59 56.3	
	comp=Z,96nm,1.9s						
EPT	**El Paso**	**91.25**	**302**	IAMs_20	IAMs_20	12 34 05.7	
	comp=Z,701nm,18.0s						
ANMO	**Albuquerque**	**91.25**	**305**	P	**P**	**11 59 53.5**	**-0.7**
	comp=Z,3.6nm,1.0s,baz=100,slow=5.1,SNR=8.2						
ANMO	**Albuquerque**	**91.25**	**305**	P	**P**	**11 59 54.3**	**+0.1**
ANMO				IAmb	IAmb	11 59 57.3	
	comp=Z,41nm,1.9s						
K22A	**Casper**	**91.39**	**312**	P	**P**	**11 59 53.4**	**-1.2**
K22A				IAmb	IAmb	12 00 03.9	
	comp=Z,58nm,1.7s						
K22A	**Casper**	**91.39**	**312**	P	**P**	**11 59 54.7**	**+0.1**
	baz=90						
S22A	**4UR Ranch, Cre**	**91.58**	**308**	P	**P**	**11 59 55.6**	**-0.2**
	baz=90						
Y22D	**IRIS PASSCAL I**	**91.62**	**304**	IAMs_20	IAMs_20	12 34 47.5	
	comp=Z,1µm,22.0s						
SMCO	**Snowmass**	**91.70**	**309**	IAmb	IAmb	12 00 05.9	
	comp=Z,51nm,1.6s						
SMCO				IAMs_20	IAMs_20	12 34 31.3	
	comp=Z,1µm,22.0s						
121A	**Cookes Peak, D**	**92.34**	**302**	P	**P**	**11 59 56.9**	**-2.4**
121A				IAmb	IAmb	12 00 08.7	
	comp=Z,27nm,1.4s						
121A	**Cookes Peak, D**	**92.34**	**302**	P	**P**	**11 59 59.0**	**-0.2**
	baz=90						
O20A	**White River Ci**	**92.68**	**310**	P	**P**	**12 00 00.5**	**-0.3**
O20A				IAmb	IAmb	12 00 03.6	
	comp=Z,36nm,1.6s						
O20A	**White River Ci**	**92.68**	**310**	P	**P**	**12 00 00.4**	**-0.3**
	baz=90						
MVCO	**Mesa Verde**	**92.91**	**307**	P	**P**	**12 00 01.6**	**-0.2**
MVCO				IAmb	IAmb	12 00 05.1	
	comp=Z,51nm,1.5s						
MVCO				IAMs_20	IAMs_20	12 36 05.3	
	comp=Z,813nm,18.0s						
RLMT	**Red Lodge**	**93.35**	**315**	P	**P**	**12 00 03.2**	**-0.5**
BW06	**Boulder Array**	**93.62**	**313**	P	**P**	**12 00 05.0**	**-0.1**
PDAR	**Pinedale Array**	**93.62**	**313**	P	**P**	**12 00 03.2**	**-1.8**
	comp=Z,1.4nm,1.1s,baz=146,slow=3.2,SNR=5.5						
PDAR				LR	LR	12 36 38.0	
	comp=Z,1µm,21.5s,baz=106,slow=32						
PDAR	**Pinedale Array**	**93.62**	**313**	P	**P**	**12 00 03.7**	**-1.3**
RDMU	**Red Mountain**	**93.69**	**310**	P	**P**	**12 00 04.6**	**-0.8**
KURBB	**Kurchatov Arra**	**93.82**	**40**	P	**P**	**12 00 04.3**	**-1.1**
	comp=Z,1.4nm,0.9s,baz=278,slow=5.5,SNR=11						
KURBB				PP	**PP**	**12 03 52.4**	**+1.6**
	comp=Z,2.6nm,1.1s,baz=278,slow=8.3,SNR=6.0						
KURK	**Kurchatov**	**93.87**	**39**	⇑*e*P	**P**	**12 00 03.8**	**-1.9**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURK	**Kurchatov**	**93.87**	**39**	P	**P**	**12 00 04.2**	**-1.5**
X18A	**Snowflake**	**94.12**	**304**	P	**P**	**12 00 06.9**	**-0.6**
X18A				IAmb	IAmb	12 00 16.4	
	comp=Z,45nm,1.9s						
P18A	**Preston Nutter**	**94.23**	**309**	P	**P**	**12 00 08.3**	**+0.3**
LOHW	**Long Hollow**	**94.36**	**313**	P	**P**	**12 00 07.1**	**-1.3**
SRU	**San Rafael Swe**	**94.46**	**309**	P	**P**	**12 00 08.7**	**-0.2**
SRU				pmax	pmax		
	comp=Z,13nm,1.4s						
SRU	**San Rafael Swe**	**94.46**	**309**	P	**P**	**12 00 08.7**	**-0.2**
REDW	**Red Top Meadow**	**94.55**	**313**	IAmb	IAmb	12 00 16.4	
	comp=Z,29nm,1.5s						
TUC	**Tucson**	**94.88**	**302**	P	**P**	**12 00 09.5**	**-1.3**
TUC				pmax	pmax		
	comp=Z,29nm,2.0s						
TUC	**Tucson**	**94.88**	**302**	P	**P**	**12 00 09.5**	**-1.3**
TMUT	**Trail Mountain**	**94.99**	**309**	P	**P**	**12 00 10.2**	**-1.3**
YKA	**Yellowknife Ar**	**95.22**	**333**	P	**P**	**12 00 10.3**	**-1.2**
	comp=Z,5.1nm,1.0s,baz=85,slow=5.1,SNR=29						
YKA				LR	LR	12 38 27.4	
	comp=Z,764nm,21.2s,baz=0.0,slow=33						
YKA	**Yellowknife Ar**	**95.22**	**333**	P	**P**	**12 00 11.0**	**-0.6**
YKA	**Yellowknife Ar**	**95.22**	**333**	P	**P**	**12 00 11.0**	**-0.6**
WUAZ	**Wupatki**	**95.26**	**305**	IAMs_20	IAMs_20	12 37 44.9	
	comp=Z,1µm,21.0s						
MPU	**Maple Canyon**	**95.28**	**310**	P	**P**	**12 00 11.5**	**-1.2**
MPU				IAmb	IAmb	12 00 20.1	
	comp=Z,41nm,1.9s						
EDM	**Edmonton**	**95.56**	**323**	P	**P**	**12 00 12.0**	**-1.4**
EDM				pmax	pmax		
	comp=Z,27nm,1.2s						
EDM	**Edmonton**	**95.56**	**323**	P	**P**	**12 00 12.0**	**-1.4**
EDM				IAmb	IAmb	12 00 15.5	
	comp=Z,27nm,1.2s						
NLU	**North Lily Min**	**95.62**	**310**	P	**P**	**12 00 13.4**	**-0.9**
NRIK	**Noril'sk**	**95.97**	**20**	LR	LR	12 46 24.3	
	comp=Z,509nm,20.7s,baz=288,slow=37						
NRIK	**Noril'sk**	**95.97**	**20**	⇓*e*P	**P**	**12 00 17.4**	**+2.5**
NRIK				pmax	pmax		
	comp=Z,9.0nm,2.0s						
U15A	**North Rim**	**95.97**	**306**	P	**P**	**12 00 14.9**	**-1.1**
HVU	**Hansel Valley**	**96.05**	**312**	P	**P**	**12 00 13.9**	**-2.2**
HVU				pmax	pmax		
	comp=Z,13nm,1.5s						
HVU	**Hansel Valley**	**96.05**	**312**	P	**P**	**12 00 13.9**	**-2.2**
MAKZ	**Makanchi**	**96.34**	**43**	IAMs_20	IAMs_20	12 50 11.6	
	comp=Z,614nm,19.0s						
SZCU	**Shurtz Canyon**	**96.54**	**308**	P	**P**	**12 00 17.5**	**-1.0**
MK31	**Makanchi Array**	**96.56**	**43**	⇑*e*P	**P**	**12 00 17.4**	**-0.6**
MK31	**Makanchi Array**	**96.56**	**43**	P	**P**	**12 00 17.5**	**-0.6**
MKAR	**Makanchi Array**	**96.56**	**43**	P	**P**	**12 00 16.9**	**-1.1**
	comp=Z,1.8nm,0.8s,baz=272,slow=3.0,SNR=11						
MKAR				PP	**PP**	**12 04 13.7**	**+1.4**
	comp=Z,1.1nm,0.9s,baz=289,slow=7.6,SNR=3.7						
MKAR				LR	LR	12 50 29.0	
	comp=Z,447nm,18.2s,baz=272,slow=40						
MKAR	**Makanchi Array**	**96.56**	**43**	P	**P**	**12 00 17.0**	**-1.1**
MKAR	**Makanchi Array**	**96.56**	**43**	P	**P**	**12 00 17.5**	**-0.6**
PALK	**Pallekele**	**96.68**	**83**	IAMs_20	IAMs_20	12 39 05.2	
	comp=Z,1µm,21.0s						
HLID	**Hailey**	**97.12**	**314**	P	**P**	**12 00 20.8**	**-0.1**
A36M	**Sachs Harbour**	**97.19**	**343**	P	Pdif	12 00 20.5	+0.1
A36M				IAmb	IAmb	12 00 23.6	
	comp=Z,52nm,1.9s						
A36M	**Sachs Harbour**	**97.19**	**343**	P	Pdif	12 00 21.8	+1.3
	baz=72						
ZALV	**Zalesovo Beam**	**97.36**	**36**	P	**P**	**12 00 20.3**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=224,slow=6.0,SNR=2.0						
ZALV				LR	LR	12 47 15.7	
	comp=Z,421nm,21.3s,baz=262,slow=37						
PRN	**Pahroc Range**	**98.11**	**307**	P	Pdif	12 00 26.1	+0.6
PRN				IAmb	IAmb	12 00 28.7	
	comp=Z,22nm,1.6s						
BMO	**Blue Mountains**	**99.06**	**315**	P	**Pdif**	**12 00 28.0**	**-1.5**
BMO				pmax	pmax		
	comp=Z,15nm,1.3s						
BMO	**Blue Mountains**	**99.06**	**315**	P	**Pdif**	**12 00 28.0**	**-1.5**
BMO				IAmb	IAmb	12 00 36.8	
	comp=Z,15nm,1.3s						
DGZ	**Jazzator, Alta**	**99.60**	**40**	⇓*e*P	**Pdif**	**12 00 31.2**	**-0.7**
DGZ				pmax	pmax		
	comp=Z,9.0nm,2.1s						
NVAR	**Mina Array Bea**	**100.58**	**309**	P	**Pdif**	**12 00 36.6**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=180,slow=1.5,SNR=4.4						
WMQ	**Urumqi**	**100.69**	**46**	*e*P	**Pdif**	**12 00 37.0**	**+0.2**
WMQ				pP	pwP	12 00 44.8	+0.7
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.7s						
WMQ				LR	LR		
	comp=Z,1µm,23.9s						
WMQ				LR	LR		
	comp=Z,1µm,23.9s						
WMQ				LR	LR		
	comp=Z,530nm,25.9s						
PASC	**Pasadena Art C**	**100.94**	**304**	IAMs_20	IAMs_20	12 39 17.4	
	comp=Z,1µm,22.0s						
INK	**Inuvik**	**101.19**	**340**	P	**Pdif**	**12 00 38.0**	**-0.2**
	comp=Z,3.3nm,1.2s,baz=2.4,slow=4.0,SNR=3.2						
ORV	**Oroville**	**102.89**	**310**	IAMs_20	IAMs_20	12 41 11.4	
	comp=Z,1µm,20.0s						
ILAR	**Eielson Array**	**107.59**	**340**	PKKPbc	PKKPbc	12 16 39.9	+8.0
	comp=Z,1.1nm,0.8s,baz=242,slow=4.8,SNR=8.8						
TLY	**Talaya**	**108.94**	**35**	IAMs_20	IAMs_20	12 57 14.5	
	comp=Z,551nm,19.0s						
SONM	**Songino Array**	**112.12**	**38**	PKiKP	**PKiKP**	**12 05 24.6**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=246,slow=3.5,SNR=4.6						
SONM				PP	**PP**	**12 06 08.7**	**+0.8**
	comp=Z,1.2nm,1.0s,baz=283,slow=8.5,SNR=4.8						
ULN	**Ulaanbaatar**	**112.51**	**38**	IAMs_20	IAMs_20	12 57 21.1	
	comp=Z,797nm,21.0s						
BILL	**Bilibino**	**113.41**	**359**	*i* PKIKP	**PKiKP**	**12 05 25.4**	**-0.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,102nm,15.0s						
KULM	**Kulim**	**116.52**	**85**	IAMs_20	IAMs_20	12 48 03.1	
	comp=Z,855nm,20.0s						
IPM	**Ipoh**	**116.91**	**86**	IAMs_20	IAMs_20	12 52 46.4	
	comp=Z,782nm,20.0s						
HHC	**Hu-ho-hao-te**	**118.42**	**43**	*e*P	**PKPdf**	**12 05 30.3**	**-6.1**
HIA	**Hailar**	**119.04**	**32**	IAMs_20	IAMs_20	13 01 32.1	
	comp=Z,722nm,19.0s						
MYKOM	**Kota Tinggi**	**119.73**	**89**	IAMs_20	IAMs_20	12 53 01.5	
	comp=Z,676nm,18.0s						
TAOE	**Nuku Hiva Isla**	**123.58**	**259**	*e*SS	SS	12 24 12.5	-4.9
	comp=Z,298nm,26.8s						
TAOE	**Nuku Hiva Isla**	**123.58**	**259**	*e*LR	LR	12 44 07.1	
	comp=Z,1µm,24.8s						
QIZ	**Qiongzhong**	**124.02**	**68**	PKP	**PKPdf**	**12 05 46.3**	**-1.2**
QIZ				SS	SS	12 24 21.6	-0.8
QIZ				LR	LR		
	comp=Z,470nm,11.6s						
QIZ				LR	LR		
	comp=Z,490nm,15.7s						
QIZ				LR	LR		
	comp=Z,350nm,7.4s						
KLR	**Kul'dur**	**124.81**	**25**	⇑*i*PKIKP	**PKPdf**	**12 05 46.9**	**-1.3**
NJ2	**Nanjing**	**127.55**	**50**	*e*PKP	**PKPdf**	**12 05 54.1**	**+0.1**
TBI	**Tubuai**	**128.65**	**238**	*e*SS	SS	12 25 22.4	+2.7
	comp=Z,344nm,31.0s						
TBI	**Tubuai**	**128.65**	**238**	*e*LR	LR	12 46 28.4	
	comp=Z,942nm,27.0s						
INCN	**Inchon**	**130.16**	**39**	IAMs_20	IAMs_20	13 09 24.1	
	comp=Z,633nm,20.0s						
PPT2	**Papeete2**	**130.70**	**245**	*e*SS	SS	12 25 46.8	+1.2
	comp=Z,491nm,28.0s						
PPT2	**Papeete2**	**130.70**	**245**	*e*LR	LR	12 47 24.2	
	comp=Z,988nm,23.0s						
YUK	**Yuzh-Kuril'sk**	**134.48**	**18**	*e*PKIKP	**PKPdf**	**12 06 06.0**	**-0.7**
YUK				*e*		12 08 35.3	
YUK				*e*SS	SS	12 26 23.2	-5.0
TOLI2	**Tolitoli**	**136.65**	**90**	IAMs_20	IAMs_20	13 02 39.7	
	comp=Z,532nm,21.0s						
MMRI	**Maumere**	**137.08**	**104**	IAMs_20	IAMs_20	12 58 01.6	
	comp=Z,508nm,21.0s						
MAT	**Matsushiro**	**137.54**	**31**	PKP	**PKPdf**	**12 06 12.7**	**0.0**
LUWI	**Luwuk**	**138.57**	**93**	IAMs_20	IAMs_20	13 01 01.5	
	comp=Z,667nm,22.0s						
SOEI	**Soe**	**138.80**	**106**	IAMs_20	IAMs_20	13 00 48.0	
	comp=Z,574nm,20.0s						
MXZ	**Matakaoa Point**	**139.13**	**197**	IAMs_20	IAMs_20	13 07 47.0	
	comp=Z,370nm,20.0s						
ASAR	**Alice Springs**	**141.51**	**132**	PKhKP	PKPpre	12 06 12.9	
	comp=Z,8.1nm,0.8s,baz=222,slow=2.3,SNR=48						
WRA	**Warramunga Arr**	**143.93**	**127**	PKhKP	PKPpre	12 06 20.9	
	comp=Z,7.0nm,0.7s,baz=225,slow=3.1,SNR=60						
WRA	**Warramunga Arr**	**143.93**	**127**	PKIKP	PKPab	12 06 21.6	-0.2
WRA	**Warramunga Arr**	**143.93**	**127**		PKPab	12 06 21.6	-0.2
WB2	**Warramunga Arr**	**143.94**	**127**		PKPab	12 06 22.1	+0.2
WRAB	**Tennant Creek**	**143.94**	**127**	⇑*e*PKIKP	PKPab	12 06 21.4	-0.5
WRAB	**Tennant Creek**	**143.94**	**127**		PKPbc	12 06 22.9	+0.5
WB0	**Warramunga Arr**	**144.07**	**127**	PKPdf	**PKPab**	**12 06 21.9**	**-0.5**
WR0	**Warramunga Arr**	**144.08**	**128**		**PKPab**	**12 06 22.1**	**-0.3**
CTAO	**Charters Tower**	**152.42**	**141**	IAMs_20	IAMs_20	13 13 22.7	
	comp=Z,507nm,20.0s						
DZM	**Mont Dzumac**	**156.63**	**185**	*e*LR	LR	12 59 13.1	
	comp=Z,422nm,21.4s						

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*JMA **18** 11:50:59.8±0.1, 24°.10N×122°.80E, h23^{km}±3^{km}, M2.5*
*TAP **18** 11:50:59.9, 24°.13N×122°.79E, h22^{km}±1^{km}, ML2.5, D*
ISC 18 11:50:59.5±1.2**, 24°.08N**±0°.05×**122°.80E**±0°.02**, h20**^{km}±6^{km}**,**
n38, σ0^{s}.70/56**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.39**	**20**	P	**Pg**	**11 51 07.8**	**+0.1**
JYNG				*e*S	**Sg**	**11 51 13.2**	**-0.1**
YOJ	**Yonaguni jima**	**0.42**	**27**	*e*P	**Pg**	**11 51 08.3**	**0.0**
	baz=31						
YOJ				*e*S	**Sg**	**11 51 14.2**	**0.0**
	baz=31						
YOJ	**Yonaguni jima**	**0.42**	**27**	P	**Pg**	**11 51 08.4**	**0.0**
YOJ				*e*S	**Sb**	**11 51 14.4**	**+0.1**
IRIF	**Iriomote-Funau**	**0.88**	**73**	P	**Pb**	**11 51 16.2**	**0.0**
IRIF				S	**Sg**	**11 51 28.3**	**-0.2**
HATJ	**Hateruma jima**	**0.92**	**92**	P	**Pb**	**11 51 16.5**	**-0.3**
HATJ				*e*S	**Sb**	**11 51 28.7**	**+0.1**
EWUT	**Wuta**	**1.00**	**291**	*e*P	**Pb**	**11 51 17.8**	**-0.4**
	baz=289						
TWC	**Suao**	**1.01**	**301**	P	**Pb**	**11 51 17.9**	**-0.6**
	baz=299						
TWC				*e*S	**Sb**	**11 51 30.9**	**-0.4**
	baz=299						
ENA	**Nanau**	**1.03**	**290**	*e*P	**Pb**	**11 51 18.1**	**-0.6**
	baz=295						
ENA				*e*S	**Sb**	**11 51 31.6**	**-0.1**
	baz=295						
NACB	**Ninganchiao**	**1.11**	**275**	*e*P	**Pn**	**11 51 19.5**	**-0.4**
	baz=273						
JKRS	**Kuro-shima**	**1.11**	**82**	P	**Pb**	**11 51 20.5**	**+0.4**
JKRS				*e*S	**Sb**	**11 51 34.5**	**+0.3**
NDS	**Dongshan**	**1.13**	**299**	*e*P	**Pn**	**11 51 20.2**	**-0.1**
	baz=297						
ETLH	**Xiulin Townshi**	**1.21**	**276**	*e*P	**Pn**	**11 51 21.2**	**-0.3**
	baz=274						
TWE	**Neicheng**	**1.21**	**302**	*e*P	**Pb**	**11 51 21.7**	**-0.1**
	baz=308						
TIPB	**Shuangxi**	**1.25**	**315**	*e*P	**Pb**	**11 51 22.8**	**+0.2**
	baz=314						
JIJ	**Ishigaki jima**	**1.25**	**77**	P	**Pn**	**11 51 22.0**	**0.0**
JIJ				S	**Sn**	**11 51 38.1**	**-0.2**
ENTT	**Nioudou**	**1.26**	**296**	*e*P	**Pb**	**11 51 22.9**	**+0.3**
	baz=295						
NDT	**Datong Townshi**	**1.28**	**294**	*e*P	**Pb**	**11 51 23.2**	**+0.1**
	baz=292						
NNSB	**Datong**	**1.34**	**285**	*e*P	**Pb**	**11 51 23.8**	**-0.3**
	baz=284						
NNS	**Nan Shan**	**1.35**	**285**	*e*P	**Pb**	**11 51 23.9**	**-0.4**
	baz=284						
NWF	**Wu-fen Shan**	**1.35**	**317**	*e*P	**Pn**	**11 51 23.3**	**-0.1**
	baz=316						
HGSD	**Ruisui**	**1.39**	**245**	*e*P	**Pn**	**11 51 22.8**	**-1.1**
	baz=243						
WHF	**Hehuan Shan**	**1.41**	**273**	P	**Pn**	**11 51 24.3**	**-0.2**
	baz=270						
WHF				*e*S	**Sn**	**11 51 42.7**	**+0.1**
	baz=270						
YHNB	**Yeheng**	**1.43**	**294**	*e*P	**Pb**	**11 51 25.6**	**+0.1**
	baz=278						
FUSS	**Fushou**	**1.43**	**277**	*e*P	**Pb**	**11 51 25.3**	**-0.4**
	baz=275						
NSK	**Sanguang**	**1.44**	**294**	*e*P	**Pb**	**11 51 26.1**	**+0.3**
	baz=278						
JISG	**Ishigakijimahi**	**1.46**	**70**	P	**Pn**	**11 51 24.9**	**0.0**
JISG				*e*S	**Sn**	**11 51 43.6**	**+0.1**
CHGB	**Renai**	**1.49**	**269**	P	**Pn**	**11 51 25.5**	**+0.1**
	baz=267						
CHGB				*e*S	**Sb**	**11 51 45.4**	**+0.1**
	baz=267						
YULB	**Yu-li**	**1.54**	**244**	*e*P	**Pn**	**11 51 25.2**	**-0.8**
	baz=229						
YULB				*e*S	**Sn**	**11 51 44.3**	**-1.1**
	baz=229						
VWDT	**VWDT**	**1.56**	**258**	*e*P	**Pn**	**11 51 26.0**	**-0.1**
	baz=256						
VWDT				*e*S	**Sn**	**11 51 45.6**	**-0.1**
	baz=256						
SSLB	**Suanglung**	**1.72**	**260**	*e*P	**Pn**	**11 51 29.1**	**+0.7**
	baz=258						
SSLB				*e*S	**Sn**	**11 51 50.2**	**+0.4**
	baz=258						
SMLT	**Sun Moon Lake**	**1.75**	**264**	*e*P	**Pn**	**11 51 29.6**	**+0.6**
	baz=262						
JTJ	**Tarama**	**1.82**	**72**	*e*S	**Sb**	**11 51 53.5**	**-1.0**
ELDTW	**Lidau**	**1.86**	**242**	*e*P	**Pn**	**11 51 29.0**	**-1.5**
	baz=240						
ELDTW				*e*S	**Sn**	**11 51 52.2**	**-1.3**
	baz=240						
TPUB	**Ta-pu**	**2.14**	**249**	*e*P	**Pn**	**11 51 35.6**	**+1.4**
	baz=236						
TPUB				*e*S	**Sn**	**11 52 01.9**	**+1.7**
	baz=236						
WTP	**Ta-pu**	**2.17**	**248**	*e*P	**Pn**	**11 51 35.9**	**+1.2**
	baz=246						
WTP				*e*S	**Sn**	**11 52 02.5**	**+1.4**
	baz=246						
CHN1	**Nanshi**	**2.27**	**247**	*e*P	**Pn**	**11 51 37.7**	**+1.8**
	baz=246						
TWK	**Hsinying**	**2.27**	**249**	*e*P	**Pn**	**11 51 37.5**	**+1.5**
	baz=248						
MASBT	**Mashibuluo**	**2.47**	**234**	*e*P	**Pn**	**11 51 39.0**	**+0.2**
	baz=225						

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*SSNC **18** 12:10:03.8±1.3, 19°.64N×75°.59W, h13^{km}±7^{km}, MD3.2, ML3.1, MW3.2*
*JSN **18** 12:10:04.6±0.5, 17°.84N×74°.82W, h43^{km}±15^{km}, MD4.0*
ISC 18 12:09:58.8±1.2**, 19°.51N**±0°.04×**75°.54W**±0°.04**, h15**^{km}±10^{km}**,**
n13, σ1^{s}.51/22**, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCC	**Rio Carpintero**	**0.51**	**343**	*e*P	**Pb**	**12 10 10.2**	**+0.8**
RCC				*e*S	**Sg**	**12 10 14.9**	**-0.8**
RCC				IAML		12 10 15.3	
	comp=E,2µm,0.3s						
RCC				IAML		12 10 15.4	
	comp=N,5µm,0.2s						
GTBY	**Guantanamo Bay**	**0.58**	**44**	*i* P	**Pn**	**12 10 13.5**	**+1.0**
GTBY				*e*S	**Sn**	**12 10 21.0**	**-0.7**
MOAC	**Moa**	**1.27**	**25**	*e*P	**Pb**	**12 10 22.8**	**+0.4**
MOAC				*e*S	**Sb**	**12 10 37.5**	**-1.0**
MOAC				IAML		12 10 42.2	
	comp=E,484nm,0.3s						
MOAC				IAML		12 10 43.3	
	comp=N,655nm,0.6s						
MASC	**Masc**	**1.40**	**62**	*e*P	**Pg**	**12 10 25.7**	**0.0**
MASC				*e*S	**Sg**	**12 10 42.8**	**-1.2**
MASC				IAML		12 10 49.7	
	comp=N,185nm,0.1s						
MASC				IAML		12 10 50.8	
	comp=E,237nm,0.3s						
HLGC	**Holguin**	**1.46**	**341**	*e*P	**Pb**	**12 10 27.1**	**+1.5**
HLGC				*e*S	**Sb**	**12 10 46.6**	**+2.6**
HLGC				IAML		12 10 48.7	
	comp=N,413nm,0.3s						
HLGC				IAML		12 10 49.0	
	comp=E,590nm,0.6s						
LMGC	**Las Mercedes**	**1.49**	**292**	*e*P	**Pn**	**12 10 26.4**	**+1.5**
LMGC				*e*S	**Sn**	**12 10 43.3**	**-0.8**
LMGC				IAML		12 10 44.1	
	comp=N,429nm,0.1s						
LMGC				IAML		12 10 44.3	
	comp=E,315nm,0.1s						
CMJ	**Castle Mountai**	**1.58**	**210**	*i* P	**Pg**	**12 10 28.7**	**-0.4**
GWJ	**Greenwich**	**1.82**	**218**	*i* P	**Pg**	**12 10 34.0**	**+0.2**
STH	**Stony Hill**	**1.86**	**220**	*i* P	**Pg**	**12 10 34.4**	**-0.2**
HOJ	**Hope**	**1.88**	**218**	*i* P	**Pb**	**12 10 33.5**	**+0.6**
MTDJ	**Mount Denham**	**2.28**	**236**	*e*P	**Pb**	**12 10 39.1**	**-0.6**
MTDJ				*e*S	**Sn**	**12 11 04.1**	**+0.3**
MCJ	**Malvern**	**2.57**	**233**	*i* P	**Pb**	**12 10 45.6**	**+1.0**
MCJ				*i* S	**Sb**	**12 11 16.5**	**+0.3**
CCCC	**Cccc**	**2.68**	**309**	*e*P	**Pn**	**12 10 41.0**	**-0.4**
CCCC				*e*S	**Sn**	**12 11 08.9**	**-4.7**
CCCC				IAML		12 11 16.1	
	comp=N,53nm,0.4s						
CCCC				IAML		12 11 16.9	
	comp=E,45nm,0.3s						

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*IDC **18** 12:12:46.4±3.3, 14°.69N×91°.93W, h0^{km}, mb3.9/7, mb1 4.2/9, mb1mx3.9/41, mbtmp3.9/9, ML3.9/2, Error ellipse: s-maj=109.3km s-min=25.7km az=33.0*
*GCG **18** 12:12:50.7±0.6, 13°.95N×92°.29W, h38^{km}±573^{km}, MD4.1*
*MEX **18** 12:12:51.0±0.8, 14°.37N×92°.19W, h89^{km}±11^{km}, MD4.4*
*NEIC **18** 12:12:52.0±3.0, 14°.25N±0°.06×92°.38W±0°.06, h48^{km}±9^{km}, mb4.5/40, Md4.4/19(MEX), Error ellipse: s-maj=8.8km s-min=8.3km az=58.0*
*SNET **18** 12:12:53.5±0.8, 14°.01N×91°.88W, h10^{km}±284^{km}, ML3.9*
*UCR **18** 12:12:53.5±0.6, 14°.02N×91°.99W, h10^{km}, ML3.8, mb4.5(NEIC)*
ISC 18 12:12:49.3±1.0**, 14°.09N**±0°.06×**92°.46W**±0°.05**, h37**^{km}±2^{km}**,**
n108, σ1^{s}.62/127**, mb4.3**/25**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.84**	**13**		**Pn**	**12 13 04.4**	**-0.2**
THIG					**Sn**	**12 13 14.6**	**-1.2**
THIG		**0.84**	**13**	*e*P	**Pn**	**12 13 04.3**	**-0.3**
THIG				*i* S	**Sn**	**12 13 15.1**	**-0.6**
RTAL	**Retalhuleu**	**0.86**	**59**	Pn	**Pn**	**12 13 04.4**	**-0.5**
PATR	**El Naranjo**	**1.05**	**12**	*e*P	**Pn**	**12 13 06.4**	**-1.3**
PATR				*e*S	**Sn**	**12 13 18.7**	**-2.4**
PAVE	**Pavencul**	**1.13**	**14**	*e*P	**Pn**	**12 13 07.8**	**-1.1**
PAVE				*i* S	**Sn**	**12 13 20.1**	**-3.2**
HUEH	**Huehuetenango**	**1.53**	**37**		**Pn**	**12 13 14.7**	**+0.4**
FUG	**Fuego 3**	**1.61**	**77**	*e*P	**Pn**	**12 13 15.4**	**+0.1**
PCIG		**1.77**	**335**		**Pn**	**12 13 17.9**	**+0.5**
PCIG					**Sn**	**12 13 37.9**	**-0.8**
PCIG		**1.77**	**335**	*i* P	**Pn**	**12 13 17.9**	**+0.5**
PCIG				*i* S	**Sn**	**12 13 37.9**	**-0.8**
PCG	**Pacaya**	**1.82**	**80**	*e*P	**Pn**	**12 13 18.8**	**+0.5**
PCG				*e*S	**Sn**	**12 13 40.2**	**0.0**
NBG	**Las Nubes**	**2.10**	**76**	*e*P	**Pn**	**12 13 23.9**	**+1.6**
NBG				*e*S	**Sn**	**12 13 48.0**	**+0.7**
CCIG	**Comitan**	**2.21**	**8**		**Pn**	**12 13 25.2**	**+1.7**
CCIG	**Comitan**	**2.21**	**8**	*i* P	**Pn**	**12 13 25.5**	**+1.9**
CCIG				*i* S	**Sn**	**12 13 51.2**	**+1.6**
SLOZ	**Alcaldia de Sa**	**2.59**	**91**	*e*P	**Pn**	**12 13 29.2**	**+0.5**
SLOZ				*e*S	**Sn**	**12 13 57.4**	**-1.7**
SLOZ				IAML		12 14 09.0	
	comp=Z,349nm,0.6s						
NUBE	**Las Nubes**	**2.60**	**94**	*e*P	**Pn**	**12 13 28.7**	**-0.3**
NUBE	**Las Nubes**	**2.60**	**94**	*e*P	**Pn**	**12 13 28.7**	**-0.3**

TGIG		2.75	347		Pn	12 13 31.6	+0.6
TGIG					Sn	12 14 05.0	+2.0
TGIG		2.75	347	*i* P	Pn	12 13 31.6	+0.6
TGIG				*i* S	Sn	12 14 01.5	-1.5
CEVE	Cerro Verde	2.76	95	*e*P	Pn	12 13 32.3	+1.0
CEVE				IAML		12 14 11.0	
	comp=Z,2μm,0.4s						
CEVE	Cerro Verde	2.76	95	*e*P	Pn	12 13 32.3	+1.0
CEVE				IAML		12 14 11.0	
	comp=Z,2μm,0.4s						
MRL	Marmol	2.86	69	*e*P	Pn	12 13 33.3	+0.7
JAYA	Jayaque - finc	2.95	98	*e*P	Pn	12 13 34.0	+0.2
JAYA				IAML		12 14 09.7	
	comp=Z,640nm,0.2s						
JAYA	Jayaque - finc	2.95	98	*e*P	Pn	12 13 34.0	+0.2
JAYA				IAML		12 14 09.7	
	comp=Z,640nm,0.2s						
TACO	Tacachico	3.01	92	*e*P	Pn	12 13 34.6	0.0
TACO	Tacachico	3.01	92	*e*P	Pn	12 13 34.6	0.0
MTO3	Montecristo	3.02	84	Pn	Pn	12 13 34.7	-0.1
ESQI	Esquipulas	3.06	81		Pn	12 13 35.4	+0.2
LALI	Alcalda de L	3.10	101	*e*P	Pn	12 13 36.2	+0.5
LALI				*e*S	Sn	12 14 09.1	-2.5
LALI	Alcalda de L	3.10	101	*e*P	Pn	12 13 36.2	+0.5
LALI				*e*S	Sn	12 14 09.1	-2.5
SNET	Serv Nac Est T	3.16	97	Pn	Pn	12 13 37.5	+1.0
COEG	Centro de Oper	3.50	97	*e*P	Pn	12 13 42.0	+0.6
COEG	Centro de Oper	3.50	97	*e*P	Pn	12 13 42.0	+0.6
UXUV	UXUV	3.60	333	*i* P	Pn	12 13 44.9	+2.3
UXUV				*i* S	Sn	12 14 28.2	+4.3
SCLA	Alcaldia de Sa	3.64	96	*e*P	Pn	12 13 43.8	+0.6
SCLA	Alcaldia de Sa	3.64	96	*e*P	Pn	12 13 43.8	+0.6
PETF	Flores	3.76	41		Pn	12 13 45.9	+1.1
CMIG	Matias Romero	3.79	322	Pn	Pn	12 13 46.0	+0.8
	comp=Z,4.2nm,0.3s,baz=144,slow=12,SNR=34						
CMIG				Sn	Sn	12 14 29.1	+0.5
	comp=Z,22nm,0.3s,baz=276,slow=23,SNR=8.7						
CMIG				Lg	Lg	12 14 41.3	
	comp=Z,14nm,0.3s,baz=50,slow=21,SNR=5.8						
CMIG	Matias Romero	3.79	322		Pn	12 13 47.0	+1.8
CMIG					Sn	12 14 28.1	-0.6
CMIG	Matias Romero	3.79	322	*i* P	Pn	12 13 47.0	+1.8
CMIG				*i* S	Sn	12 14 28.1	-0.6
HUIG	Huatulco	3.91	296		Pn	12 13 48.4	+1.7
HUIG					Sn	12 14 28.2	-3.2
HUIG	Huatulco	3.91	296	*i* P	Pn	12 13 48.4	+1.7
HUIG				*i* S	Sn	12 14 28.2	-3.2
NEUV	Arroyo Zacate	4.83	319	*i* P	Pn	12 14 01.8	+2.2
TGUH	Tegucigalpa,Un	5.03	90	Pn	Pn	12 14 02.6	+0.3
CRIN	San Cristobal	5.44	104		Pn	12 14 09.7	+1.7
MATN	Matagalpa	6.46	99		Pn	12 14 22.2	+0.3
TLIG	Tlapa	6.82	301	Pn	Pn	12 14 26.6	-0.4
ACON	Acoyapa	7.40	106	Pn	Pn	12 14 38.9	+4.1
HZTE	Horizontes, Gu	7.49	116	Pn	Pn	12 14 39.4	+3.3
ORTG	Ortega, Santa	7.78	118		Pn	12 14 43.5	+3.4
DUNO	Dulce Nombre,	7.89	120	Pn	Pn	12 14 45.1	+3.6
CAO2	Cobano, Puntar	8.42	120	Pn	Pn	12 14 52.0	+3.2
RIMA	Rio Macho	9.44	116		Pn	12 15 06.3	+3.3
PEZE	Perez Zeledon,	9.78	118	Pn	Pn	12 15 11.9	+4.3
SRBA	San Rafael, Bu	10.13	117		Pn	12 15 15.0	+2.6
TXAR	Lajitas Array	18.38	327	P	P	12 17 02.0	+0.8
	comp=Z,0.2nm,0.3s,baz=150,slow=11,SNR=17						
TX31	Lajitas Ar. Si	18.38	327	P	Pn	12 17 02.7	+1.2
TX32	Lajitas Array	18.38	327	P	Pn	12 17 02.9	+1.4
X34A	Smith Ranch, M	21.00	348	P	P	12 17 29.2	-0.4
X34A				IAmb	IAmb	12 17 47.6	
	comp=Z,20nm,1.3s						
MNTX	Cornudas Mount	21.16	328	P	P	12 17 32.5	+1.1
FPAL	Fort Paine	21.29	16	P	P	12 17 31.4	-1.4
W35A	Tecumseh	21.35	350	P	P	12 17 32.0	-1.3
W35A				IAmb	IAmb	12 18 13.2	
	comp=Z,30nm,1.7s						
BCOK	Bluff Creek, N	21.97	349	P	P	12 17 37.8	-2.3
BCOK				IAmb	IAmb	12 17 48.9	
	comp=Z,11nm,0.9s						
W50A	Signal Mountai	21.99	16	P	P	12 17 38.2	-2.1
W50A				IAmb	IAmb	12 18 34.8	
	comp=Z,41nm,1.8s						
OK031	S. Brethren Rd	22.13	351	P	P	12 17 39.6	-2.1
OK031				IAmb	IAmb	12 18 04.1	
	comp=Z,31nm,1.6s						
AMTX	Amarillo	22.32	340	P	P	12 17 44.1	+0.3
AMTX				IAmb	IAmb	12 17 45.4	
	comp=Z,13nm,1.1s						
WVT	Waverly	22.34	10	P	P	12 17 41.8	-2.2
BLOK	Blackwell	22.98	350	P	P	12 17 49.5	-1.2
BLOK				IAmb	IAmb	12 17 57.5	
	comp=Z,40nm,1.7s						
121A	Cookes Peak, D	23.09	325	P	P	12 17 52.8	+0.8
U49A	Red Boiling Sp	23.12	14	P	P	12 17 49.3	-2.8
SIUC	Southern Illin	23.71	6	P	P	12 17 55.1	-2.7
SIUC				IAmb	IAmb	12 18 42.1	
	comp=Z,35nm,1.8s						
TZTN	Tazewell	23.74	18	P	P	12 17 56.0	-2.2
TZTN				IAmb	IAmb	12 18 09.9	
	comp=Z,24nm,1.4s						
ANMO	Albuquerque	24.31	331	P	P	12 18 04.3	+0.6
	comp=Z,3.3nm,0.6s,baz=146,slow=11,SNR=18						
ANMO	Albuquerque	24.31	331	P	P	12 18 04.6	+0.9
T25A	Trinidad	25.32	337	P	P	12 18 13.6	+0.7
T25A				IAmb	IAmb	12 18 17.6	
	comp=Z,26nm,1.9s						
MVCO	Mesa Verde	27.11	331	P	P	12 18 30.8	+1.7
KNB	Kanab	29.18	325	P	P	12 18 49.3	+1.8
KNB				IAmb	IAmb	12 19 22.6	
	comp=Z,23nm,2.0s						
HWUT	Hardware Ranch	32.05	332	P	P	12 19 14.3	+1.4
HWUT				IAmb	IAmb	12 19 18.1	
	comp=Z,5.4nm,1.2s						
PDAR	Pinedale Array	32.16	336	P	P	12 19 13.6	-0.2
	comp=Z,0.2nm,0.4s,baz=138,slow=11,SNR=2.2						
BGU	Big Grassy Mou	32.20	330	P	P	12 19 15.7	+1.6
REDW	Red Top Meadow	33.18	335	P	P	12 19 23.4	+0.7
REDW				IAmb	IAmb	12 19 24.0	
	comp=Z,3.4nm,0.7s						
NVAR	Mina Array Bea	33.33	321	P	P	12 19 25.8	+1.7
	comp=Z,1.3nm,0.6s,baz=131,slow=8.3,SNR=16						
NVAR	Mina Array Bea	33.33	321	P	P	12 19 22.8	-1.3
LHV	Little Huntoon	33.34	321	P	P	12 19 26.6	+2.8
LHV				IAmb	IAmb	12 20 13.1	
	comp=Z,4.8nm,1.2s						
HLID	Hailey	34.89	332	P	P	12 19 38.6	+1.1
HLID				IAmb	IAmb	12 19 40.0	
	comp=Z,4.4nm,1.1s						
MCMT	McKenzie Canyo	35.20	335	P	P	12 19 41.8	+1.6
J08A	Circle Bar Ran	36.73	328	P	P	12 19 53.1	-0.1
J08A				IAmb	IAmb	12 19 56.0	
	comp=Z,7.3nm,0.6s						
PLID	Pearl Lake	36.79	332	P	P	12 19 55.0	+1.2
PLID				IAmb	IAmb	12 20 29.2	
	comp=Z,5.6nm,1.4s						
F10A	Beach Ranch, E	38.02	332	P	P	12 20 04.9	+0.8
F10A				IAmb	IAmb	12 20 05.4	
	comp=Z,7.1nm,0.8s						
YKA	Yellowknife Ar	50.84	347	P	P	12 21 44.1	-2.0
	comp=Z,1.4nm,0.6s,baz=153,slow=7.3,SNR=21						
YKA	Yellowknife Ar	50.84	347	P	P	12 21 45.4	-0.7
DLBC	Dease Lake	52.40	336	P	P	12 21 59.5	+1.6
	comp=Z,1.1nm,0.6s,baz=134,slow=4.4,SNR=4.1						
DLBC	Dease Lake	52.40	336	IAmb	IAmb	12 23 25.6	
	comp=Z,16nm,1.4s						
M27K	Edge Creek, AK	59.45	336	P	P	12 22 49.5	+1.2
BCAR	Beaver Creek A	59.78	336	P	P	12 22 51.0	+0.4
INK	Inuvik	60.23	344	P	P	12 22 52.6	-0.8
	comp=Z,1.7nm,0.6s,baz=133,slow=5.9,SNR=11						
INK	Inuvik	60.23	344	P	P	12 22 53.3	-0.1
ILAR	Eielson Array	62.59	337	P	P	12 23 09.2	-0.3
	comp=Z,1.3nm,1.0s,baz=129,slow=3.9,SNR=6.5						
BMAR	Burnt Mountain	63.06	340	P	P	12 23 13.1	+0.5
I23K	Minto, Yukon-K	63.70	337	P	P	12 23 17.4	+0.6
PPLA	Purkeypile	63.96	334	P	P	12 23 18.1	-0.6
N19K	Bonanza Creek	64.29	331	P	P	12 23 21.1	+0.2
K20K	Telida	64.92	334	P	P	12 23 24.4	-0.5
J20K	Nowinta River	65.23	335	P	P	12 23 27.1	+0.2
TOLK	Toolik Lake Re	65.29	340	P	P	12 23 27.3	+0.1
TOLK				IAmb	IAmb	12 24 38.2	
	comp=Z,18nm,1.6s						
TTA	Tatalina	65.62	333	P	P	12 23 29.7	+0.2
IMAR	Indian Mountai	65.71	337	P	P	12 23 28.2	-1.6
A21K	Barrow	68.58	342	P	P	12 23 47.1	-0.9
CMAR	Chiang Mai Arr	145.77	341	PKPbc	PKPdf	12 32 24.9	-0.1
	comp=Z,1.5nm,0.6s,baz=340,slow=3.5,SNR=8.0						

*IDC **18** 12:15:28.3±2.6, 34°.63N×141°.92E, h0km, mb3.6/2, mb1 3.6/4, mb1mx3.0/44, mbtmp3.5/4, ML2.7/2, MS3.5/2, Ms1 3.6/2, ms1mx2.6/49, Error ellipse: s-maj=44.3km s-min=27.4km az=69.0*

*JMA **18** 12:15:31.0±0.3, 34°.78N×142°.03E, h35km, M3.2*

ISC 18 12:15:29.9±2.3**, 34°.69N**±0°.06×**142°.00E**±0°.09**, h17**km±13km**, n18, σ0s.88**/24**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.84	268	P	Pn	12 15 47.0	+0.5
BSO3	Boso 3	1.23	276	P	Pg	12 15 53.3	-0.4
CHOJ	Chosi	1.38	318	P	Pn	12 15 53.8	-0.6
CHOJ				*e*S	Sn	12 16 11.0	-1.2
BSO4	Boso 4	1.40	283	P	Pb	12 15 55.7	+0.1
BSO4				S	Sb	12 16 13.4	+0.3
KTR	Katsuura	1.46	289	*e*S	Sn	12 16 14.2	0.0
JKUC	kamogawauchiur	1.56	288	P	Pn	12 15 57.2	+0.4
JKUC				*e*S	Sn	12 16 15.8	-0.8
JMKN	Mikurajimanish	2.15	249	P	Pn	12 16 05.3	+0.4
JMKN				S	Sn	12 16 29.5	-1.7
JHJ	Hachijo jima 2	2.42	230	Pn	Pn	12 16 08.3	-0.3
	9.4nm,0.3s,baz=31,slow=12,SNR=1.5						
JHJ				Sn	Sn	12 16 36.9	-1.0
	30nm,0.3s,baz=78,slow=22,SNR=6.4						
JOD2	Odawara 2	2.46	284	P	Pn	12 16 09.4	+0.1
JOD2				S	Sn	12 16 37.1	-1.9
JAG	Ashikaga	2.71	311	P	Pn	12 16 13.0	+0.4
JFK	Kawauchi	2.83	341	P	Pn	12 16 13.6	-0.7
JRY	Ryogami san	2.86	299	P	Pn	12 16 15.4	+0.6
MJAR	Matsushiro Arr	3.60	302	Pn	Pn	12 16 25.0	+0.1
	0.3nm,0.3s,baz=100,slow=14,SNR=4.0						
MJAR				Sn	Sn	12 17 07.0	-0.1
	0.3nm,0.3s,baz=99,slow=15,SNR=4.5						
MAT	Matsushiro	3.60	302	P	Pn	12 16 26.5	+1.5
MAT				*e*S	Sn	12 17 06.5	-0.7
KSRS	Korea Array	11.72	288	LR	LR	12 23 10.6	
	comp=Z,34nm,18.1s,baz=355,slow=40						
SONM	Songino Array	29.54	307	P	P	12 21 34.4	+0.8
	0.3nm,0.6s,baz=99,slow=7.4,SNR=2.3						
ILAR	Eielson Array	51.23	31	LR	LR	12 46 44.5	
	comp=Z,306nm,21.1s,baz=75,slow=37						
WRA	Warramunga Arr	54.81	189	P	P	12 24 59.4	+0.4
	0.6nm,0.7s,baz=6.3,slow=7.3,SNR=4.5						

*IDC **18** 12:34:16.5±3.3, 36°.82N×72°.35E, h0km, mb3.6/1, mb1 3.7/7, mb1mx3.2/59, mbtmp3.6/7, ML3.2/6, Error ellipse: s-maj=60.0km s-min=39.3km az=123.0*

*NNC **18** 12:34:20.4±4.4, 37°.20N×71°.16E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=33.7km s-min=23.8km az=168.0*

ISC 18 12:34:18.5±2.1**, 37°.0N**±0°.1×**71°.2E**±0°.1**, h10**km**, n12, σ1s.83**/17**, 5C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	Karatay Array	6.13	355	⇓Pn	Pn	12 35 50.9	+1.7
	2.0nm,0.4s,baz=182,slow=14						
KK02				⇑Sn	Sn	12 36 59.1	-0.3
	7.3nm,0.8s,baz=175,slow=23						
KK02				⇑Lg	Lg	12 37 28.0	
	6.4nm,0.7s						
AAK	Ala-Archa	6.17	23	Pn	Pn	12 35 50.8	+0.9
	0.8nm,0.3s,baz=176,slow=5.8,SNR=6.9						
AAK				Sn	Sn	12 37 02.1	+1.5
	0.2nm,0.3s,baz=187,slow=14,SNR=1.9						
AAK	Ala-Archa	6.17	23	⇓Pn	Pn	12 35 50.1	+0.2
	3.3nm,0.6s						
AAK				⇑Sn	Sn	12 37 00.9	+0.3
	8.0nm,1.0s						
AAK				⇓Lg	Lg	12 37 28.0	
	8.5nm,1.1s						
TKM2	Tokmak 2	6.80	28	⇑Pn	Pn	12 35 57.2	-1.4
	4.5nm,0.6s						
TKM2				⇓Sn	Sn	12 37 19.0	+2.8
	2.7nm,0.8s						
MKAR	Makanchi Array	12.78	37	Pn	Pn	12 37 14.2	-6.2
	0.1nm,0.3s,baz=225,slow=16,SNR=2.9						
KURBB	Kurchatov Arra	14.60	19	Pn	Pn	12 37 41.8	-3.2
	0.1nm,0.3s,baz=207,slow=12,SNR=2.2						
AB31	Akbulak array	14.75	330	⇓P	Pn	12 37 46.1	-1.1
	0.4nm,0.5s,baz=340,slow=38,SNR=9.6						
AB31				⇓S	Sn	12 40 29.1	-1.5
	1.5nm,0.6s,baz=152,slow=22,SNR=5.5						
BVAR	Borovoye Array	16.05	358	Pn	Pn	12 38 02.5	-1.6
	0.2nm,0.3s,baz=196,slow=15,SNR=4.5						
AKTO	Aktyubinsk	16.46	329	P	P	12 38 15.0	+2.9
	0.2nm,0.3s,baz=131,slow=12,SNR=15						
AKTO	Aktyubinsk	16.46	329	⇓P	P	12 38 14.1	+1.9
	4.2nm,0.8s						
AKTO				⇑S	Sn	12 41 11.6	-0.4
	2.6nm,0.7s						
ZALV	Zalesovo Beam	19.39	25	P	P	12 38 42.9	-1.6
	0.4nm,0.3s,baz=216,slow=11,SNR=9.3						
YKA	Yellowknife Ar	80.75	3	P	P	12 46 31.9	+0.2
	0.3nm,0.6s,baz=347,slow=5.5,SNR=6.7						

*IDC **18** 12:34:56.1±1.3, 37°.42N×144°.86E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.2/56, mbtmp3.6/5, ML2.6/1, Error ellipse: s-maj=44.8km s-min=25.3km az=101.0*

*JMA **18** 12:35:01.3±0.2, 37°.60N×144°.43E, h44km, M3.8*

ISC 18 12:35:00.7±1.2**, 37°.60N**±0°.06×**144°.60E**±0°.08**, h35**km**, n19, σ1s.48**/32**, mb3.8**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.58	287	P	Pn	12 35 40.1	+0.2
JIKH				S	Sn	12 36 08.8	-1.3
JIO	Ouri	2.71	289	P	Pn	12 35 42.0	+0.3
JIO				*e*S	Sn	12 36 12.3	-0.9
OFUJ	Ofunato	2.74	304	P	Pn	12 35 42.6	+0.4
OFUJ				*e*S	Sn	12 36 13.0	-1.0
JKMT	Kesennumamotoy	2.75	297	P	Pn	12 35 42.5	+0.3
JKMT				*e*S	Sn	12 36 13.4	-0.8
JMK	Ichinoseki	2.98	298	P	Pn	12 35 46.2	+0.7
JMK				*e*S	Sn	12 36 19.6	-0.5
JOM	Ohasama	3.20	307	P	Pn	12 35 49.6	+1.1
JOM				*e*S	Sn	12 36 25.5	+0.1
JFT	Otama	3.39	270	P	Pn	12 35 52.0	+0.9
JFT				*e*S	Sn	12 36 29.1	-1.1
JYK	Kaneyama	3.59	293	P	Pn	12 35 55.2	+1.3
JYK				*e*S	Sn	12 36 35.5	+0.5
BSO1	Boso 1	4.15	226	P	Pn	12 35 59.4	-1.7
JRY	Ryogami san	4.84	253	P	Pn	12 36 10.6	-0.5
JRY				*e*S	Sn	12 37 01.4	-4.5
JCH	Churui	5.10	350	P	Pn	12 36 14.6	0.0
JCH				*e*S	Sn	12 37 10.1	-2.1
MJAR	Matsushiro Arr	5.22	260	Pn	Pn	12 36 17.7	+1.4
	0.2nm,0.3s,baz=91,slow=16,SNR=5.5						
MAT	Matsushiro	5.22	260	P	Pn	12 36 18.2	+1.9
MAT				*e*S	Sn	12 37 14.5	-0.8
NEM2	Nemuro 2	5.82	8	P	Pn	12 36 22.7	-1.8
JTKR	Abashiri--Toko	6.39	355	P	Pn	12 36 32.3	+0.1
JTKR				*e*S	Sn	12 37 40.5	-3.4
ASAJ	Asahikawa	6.69	347	Pn	Pn	12 36 36.8	+0.4
	baz=205,slow=13						
ASAJ				Sn	Sn	12 37 51.5	+0.2
	0.2nm,0.3s,baz=134,slow=31,SNR=1.4						
WRA	Warramunga Arr	58.05	191	P	P	12 44 49.6	-0.7
	1.0nm,0.5s,baz=12,slow=5.7,SNR=16						
ASAR	Alice Springs	61.77	191	P	P	12 45 15.7	-0.1
	0.4nm,0.5s,baz=7.5,slow=7.1,SNR=11						
YKA	Yellowknife Ar	62.03	31	P	P	12 45 19.1	+2.0
	0.2nm,0.4s,baz=286,slow=7.7,SNR=2.5						

IDC 18 12:49:09.2±2.4**, 5°.82N**×**123°.09E, h0**km**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.4**/40**, mbtmp3.6**/3**, Error ellipse: s-maj=311.0km s-min=25.0km az=63.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.89	157	P	P	12 55 00.5	-0.5
	0.3nm,0.4s,baz=334,slow=9.6,SNR=11						
ASAR	Alice Springs	31.15	161	P	P	12 55 30.4	+0.5
	0.2nm,0.3s,baz=338,slow=7.4,SNR=12						
MKAR	Makanchi Array	53.80	326	P	P	12 58 33.6	-0.1
	0.4nm,0.4s,baz=117,slow=7.7,SNR=8.4						

*LJU **18** 12:59:32.2, 46°.05N×13°.62E, h0km, ML0.7, Explosion*

ROM 18 12:58:45.8±0.0**, 42°.912N**±0°.002×**12°.823E**±0°.004**, h9**km**, ML1.4**/7**, 7C-2D, Error ellipse: s-maj=0.2km s-min=0.1km az=54.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASSB	Assisi San Ben	0.18	317	⇑P	Pg	12 58 50.3	+0.7
ASSB				S	Sg	12 58 53.5	+1.3
ASSB				AML	AML		
	comp=E,162μm,0.4s						
ASSB				AML	AML		
	comp=N,192μm,1.1s						
MOMA	Monte Martano	0.21	240	P	Pg	12 58 50.9	+0.7
MOMA				S	Sg	12 58 54.6	+1.4
MOMA				AML	AML		
	comp=N,90μm,0.3s						
MOMA				AML	AML		
	comp=E,109μm,0.2s						
NRCA	Norcia	0.23	110	⇑P	Pg	12 58 51.3	+0.8
NRCA				S	Sg	12 58 55.1	+1.5
NRCA				AML	AML		
	comp=E,386μm,0.2s						
NRCA				AML	AML		
	comp=N,274μm,0.3s						
NRCA				AML	AML		
	comp=E,387μm,0.2s						
FDMO	Fiordimonte	0.23	57	⇑P	Pg	12 58 51.3	+0.8
FDMO				S	Sg	12 58 55.0	+1.3
FDMO				AML	AML		
	comp=E,98μm,0.3s						
FDMO				AML	AML		
	comp=N,87μm,1.1s						
FDMO				AML	AML		
	comp=E,98μm,0.3s						
ATCC	AVT- Casa Cast	0.30	334	⇑P	Pg	12 58 52.6	+0.7
ATCC				S	Sb	12 58 57.7	-0.9
ATCC				AML	AML		
	comp=E,114μm,1.5s						
ATCC				AML	AML		
	comp=N,89μm,0.6s						
ATCC				AML	AML		
	comp=N,89μm,0.6s						
ATCC				AML	AML		
	comp=E,114μm,1.5s						
ARRO	Arrone	0.34	187	P	Pb	12 58 53.3	-0.6
LNSS	Leonessa	0.35	153	⇓P	Pg	12 58 53.4	+0.7
LNSS				S	Sb	12 58 58.9	-1.0
LNSS				AML	AML		
	comp=E,150μm,1.2s						
LNSS				AML	AML		
	comp=N,230μm,0.1s						
LNSS				AML	AML		
	comp=N,230μm,0.1s						
SNTG	Esanatoglia	0.35	14	⇓P	Pg	12 58 53.3	+0.5
SNTG				S	Sb	12 58 59.4	-0.6
SNTG				AML	AML		
	comp=E,29μm,1.2s						
SNTG				AML	AML		
	comp=N,30μm,1.5s						
EL6	Elcito	0.46	26	⇑P	Pg	12 58 55.4	+0.5
EL6				S	Sb	12 59 02.6	-0.7
RM33	Pellescritta (	0.49	144	P	Pg	12 58 56.0	+0.6
RM33				S	Sb	12 59 03.7	-0.4
JAVS	Javornik	3.11	16	*i* Pg	Pb	12 59 38.9	-2.5
JAVS				IAML		12 59 45.6	
	comp=Z,2.2nm,0.1s						
SABO	M.te Sabotino	3.12	10	⇑*e*Pg	Pn	12 59 34.0	-1.2
VOJS	Vojsko	3.21	13	*i* Pg	Pn	12 59 36.0	-0.5
COLI	Coloredo	3.25	7	*e*Pg	Pn	12 59 36.5	-0.4
DRE	Drenchia	3.31	10	⇑*e*Pg	Pn	12 59 34.7	-3.2
CADS	Cadrg	3.38	11	*i* Pg	Pn	12 59 36.1	-2.7
CADS				IAML		12 59 40.6	
	comp=Z,7.2nm,0.1s						

KMA 18 13:00:19.7±0.8**, 38°.30N**×**128°.96E, h18**km**, Error ellipse: s-maj=13.2km s-min=1.4km az=231.0, North Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSSKC	Sokcho	0.34	269	P	Pg	13 00 27.0	+0.1
	SNR=42						
KSSKC	Sokcho	0.34	269	P	Pg	13 00 27.0	+0.1
	SNR=42						
KSJMJ	Jumunjin	0.45	201	P	Pg	13 00 28.8	0.0
	SNR=26						
KSJMJ	Jumunjin	0.45	201	P	Pg	13 00 28.8	0.0
	SNR=26						
SEHB	SEOHWA	0.55	267	P	Pg	13 00 30.6	-0.1
	SNR=81						
SEHB	SEOHWA	0.55	267	P	Pg	13 00 30.6	-0.1
	SNR=81						
KSDGY	Daegwallycong	0.65	200	P	Pb	13 00 32.4	0.0
	SNR=16						
KSDGY	Daegwallycong	0.65	200	P	Pb	13 00 32.4	0.0
	SNR=16						
KSCHC	Chuncheon	1.04	240	P	Pb	13 00 39.1	-0.1
	SNR=46						
KSCHC	Chuncheon	1.04	240	P	Pb	13 00 39.1	-0.1
	SNR=46						
KSWJU	Wonju	1.15	219	P	Pb	13 00 41.1	+0.2
	SNR=23						
KSCWO	Cheorwon	1.15	260	P	Pb	13 00 41.5	+0.4
	SNR=16						
GAPB	Gapyeong	1.24	249	P	Pb	13 00 43.0	+0.5
	SNR=18						
JECH	Jecheon	1.29	208	P	Pg	13 00 45.0	+0.4
	SNR=8.8						
CHYB	Chungyang	1.35	181	P	Pg	13 00 46.4	+0.6
	SNR=11						
KSMGY	Mungyeong	1.79	204	P	Pg	13 00 53.3	-0.8
	SNR=7.0						

*IDC **18** 13:03:23.2±0.8, 3°.77S×103°.32W, h0km, mb4.1/10, mb1 4.4/10, mb1mx4.2/29, mbtmp4.1/10, MS3.9/15, Ms1 3.9/15, ms1mx3.8/27, Error ellipse: s-maj=35.3km s-min=17.6km az=51.0*

*GCMT **18** 13:03:27.3±0.5, 3°.58S±0°.04×103°.06W±0°.04, h24km±1km, MW5.0/58, Moment Tensor Solution. s35,c38; s58,c71; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}-3.83±.28; $M_{\theta\theta}$1.16±.16; $M_{\phi\phi}$2.67±.20; $M_{r\theta}$0.70±.22; $M_{\theta\phi}$0.54±.09; $M_{\phi r}$0.20±.23; Best double couple: $M_0$3.39800×10¹⁶ NP1:ϕ_s12.00000°,δ42.00000°,λ-100.00000°. NP2: ϕ_s205.00000°,δ49.00000°,λ-81.00000°. Principal axes: T 2.8670, Plg4.0000°, Azm289.0000°; N 1.0610, Plg7.0000°, Azm19.0000°; P -3.9280, Plg82.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **18** 13:03:27.3±1.4, 3°.5S±0°.1×103°.1W±0°.2, h10km±1km, mb4.6/53 Error ellipse: s-maj=28.3km s-min=20.4km az=240.0*

ISC 18 13:03:25.3±0.7**, 3°.6S**±0°.1×**103°.2W**±0°.1**, h10**km**, n99, σ0s.89**/84**, mb4.5**/35**, MS3.9**/15**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	21.52	12	P	P	13 08 13.3	-1.5
ORTG	Ortega, Santa	22.43	52	P	P	13 08 25.8	+1.2
ORTG				IAmb	IAmb	13 08 39.1	
	comp=Z,25nm,1.3s						
CCIG	Comitan	22.56	29	P	P	13 08 24.9	-1.3
CCIG				IAmb	IAmb	13 08 31.2	
	comp=Z,26nm,1.2s						
COVE	Coope Vega, Sa	23.47	52	P	P	13 08 34.0	-1.3
COVE				IAmb	IAmb	13 08 38.3	
	comp=Z,21nm,1.1s						
TGUH	Tegucigalpa,Un	23.58	42	P	P	13 08 36.7	+0.1
CVTR	Volcan Turrial	23.59	55	P	P	13 08 37.0	0.0
CVTR				IAmb	IAmb	13 08 41.0	
	comp=Z,18nm,0.8s						
ACON	Acoyapa	23.64	49	P	P	13 08 35.4	-1.7
ACON				IAmb	IAmb	13 08 44.3	
	comp=Z,30nm,1.5s						
RPN	Rapa Nui	24.12	194	LR	LR	13 14 40.0	
	comp=Z,63nm,20.8s,baz=39,slow=28						
ATAH	Atahualpa	24.89	99	P	P	13 08 49.5	+0.4
	comp=Z,1.4nm,0.3s,baz=260,slow=16,SNR=3.7						
ATAH				LR	LR	13 16 07.9	
	comp=Z,407nm,19.3s,baz=274,slow=30						
OTAV	Otavalo	24.98	82	P	P	13 08 48.8	-1.2
OTAV				IAmb	IAmb	13 08 59.1	
	comp=Z,19nm,1.1s						

NNA	Nana	27.34	109	LR	LR	13 17 09.8	
	comp=Z,337nm,19.0s,baz=274,slow=30						
ROSC	El Rosal	30.00	74	LR	LR	13 20 01.4	
	comp=Z,115nm,18.6s,baz=280,slow=33						
CZSB	Cruzeiro do Su	30.56	99	P	P	13 09 40.2	+0.7
TX31	Lajitas Ar. Si	32.76	359	P	P	13 09 58.5	-0.2
TX32	Lajitas Array	32.76	359	P	P	13 09 58.5	-0.2
TXAR	Lajitas Array	32.76	359	P	P	13 10 00.0	+1.3
	comp=Z,1.5nm,1.0s,baz=178,slow=7.5,SNR=8.1						
TXAR				LR	LR	13 21 30.7	
	comp=Z,229nm,21.5s,baz=0.0,slow=33						
TXAR	Lajitas Array	32.76	359	P	P	13 09 58.5	-0.2
SDV	Santo Domingo	34.71	69	P	P	13 10 16.7	+0.6
319A	Douglas	35.28	351	P	P	13 10 21.4	+0.7
319A				IAmb	IAmb	13 10 25.3	
	comp=Z,14nm,1.2s						
PB16	IPOC Station P	36.02	117	P	P	13 10 29.3	+1.5
LPAZ	La Paz	36.64	113	P	P	13 10 33.8	+0.6
	comp=Z,1.7nm,1.0s,baz=278,slow=8.5,SNR=2.6						
LPAZ				LR	LR	13 23 35.0	
	comp=Z,154nm,18.6s,baz=322,slow=33						
LPAZ	La Paz	36.64	113	P	P	13 10 33.9	+0.8
LPAZ				IAmb	IAmb	13 10 39.8	
	comp=Z,8.5nm,1.3s						
PB01	IPOC Station P	37.03	121	P	P	13 10 36.5	+0.6
PB01				IAmb	IAmb	13 10 42.8	
	comp=Z,16nm,1.1s						
H03N2	Juan Fernandez	37.31	146	T	T	13 50 09.1	
	baz=322,slow=77,SNR=22						
H03N1	Juan Fernandez	37.32	146	T	T	13 50 12.2	
	baz=322,slow=77,SNR=41						
H03N3	Juan Fernandez	37.33	146	T	T	13 50 07.9	
	baz=322,slow=77,SNR=27						
MSTX	Muleshoe	37.38	1	P	P	13 10 38.8	+0.3
MSTX				IAmb	IAmb	13 10 43.8	
	comp=Z,8.4nm,1.1s						
LVC	Limon Verde	38.16	123	P	P	13 10 46.3	+0.7
	comp=Z,1.8nm,0.4s,baz=270,slow=12,SNR=2.1						
MIAR	Mount Ida	39.01	13	P	P	13 10 51.0	-1.2
PFO	Pinyon Flats O	39.10	342	P	P	13 10 54.5	+1.4
WUAZ	Wupatki	39.68	349	P	P	13 10 57.4	-0.5
SAML	Samuel	40.06	100	P	P	13 11 00.9	-0.4
SAML				IAmb	IAmb	13 11 07.4	
	comp=Z,18nm,1.4s						
U15A	North Rim	40.73	349	P	P	13 11 07.8	+0.9
GSC	Goldstone, Bar	40.77	343	P	P	13 11 07.7	+0.8
MVCO	Mesa Verde	40.91	353	P	P	13 11 09.0	+0.8
MVCO				IAmb	IAmb	13 11 19.7	
	comp=Z,12nm,1.3s						
QSM	Queen of Sheba	41.41	343	P	P	13 11 12.8	+0.8
KNB	Kanab	41.41	348	P	P	13 11 13.7	+1.5
GWY	Greenwater Val	41.56	343	P	P	13 11 14.9	+1.5
ISA	Isabella, Lake	41.62	341	P	P	13 11 15.2	+1.3
ISA				IAmb	IAmb	13 11 19.0	
	comp=Z,14nm,1.4s						
PBMO	Poplar Bluff	41.90	15	P	P	13 11 16.2	+0.2
PBMO				IAmb	IAmb	13 11 26.4	
	comp=Z,11nm,1.0s						
T42A	Van Buren	41.96	14	P	P	13 11 16.8	+0.2
T42A				IAmb	IAmb	13 11 20.6	
	comp=Z,14nm,1.3s						
CCUT	Cedar City	42.04	348	P	P	13 11 18.8	+1.3
CCUT				IAmb	IAmb	13 11 22.9	
	comp=Z,16nm,1.5s						
WVT	Waverly	42.05	19	P	P	13 11 17.4	+0.1
WVT				IAmb	IAmb	13 11 20.9	
	comp=Z,22nm,1.5s						
S39A	Bolivar	42.09	12	P	P	13 11 17.9	+0.2
S39A				IAmb	IAmb	13 11 21.5	
	comp=Z,10nm,1.1s						
MTPU	Mount Pierson	42.28	349	P	P	13 11 20.7	+1.1
MTPU				IAmb	IAmb	13 11 24.9	
	comp=Z,14nm,1.4s						
MVU	Marysvale	42.73	350	P	P	13 11 24.2	+1.1
SIV	San Ignacio	43.15	110	P	P	13 11 26.5	-0.1
	comp=Z,0.8nm,0.5s,baz=272,slow=12,SNR=2.3						
R11A	Troy Canyon, C	43.31	346	P	P	13 11 28.7	+1.0
NV11	Mina Array Sit	44.08	343	P	P	13 11 35.3	+1.4
MPU	Maple Canyon	44.10	351	P	P	13 11 34.4	+0.3
MPU				IAmb	IAmb	13 11 39.2	
	comp=Z,9.6nm,1.1s						
NVAR	Mina Array Bea	44.12	343	P	P	13 11 35.0	+0.8
	comp=Z,1.4nm,0.9s,baz=165,slow=8.7,SNR=7.4						
NVAR				LR	LR	13 26 26.8	
	comp=Z,91nm,19.6s,baz=122,slow=31						
NVAR	Mina Array Bea	44.12	343	P	P	13 11 34.4	+0.1
DUG	Dugway, Tooele	44.48	349	P	P	13 11 37.9	+0.8
DUG				IAmb	IAmb	13 11 40.7	
	comp=Z,9.6nm,1.3s						
PTLB	Pontes e Lacer	44.87	108	P	P	13 11 41.0	+0.7
PTLB				IAmb	IAmb	13 11 46.0	
	comp=Z,11nm,1.0s						
ELK	Elko	45.51	347	P	P	13 11 46.6	+1.3
HWUT	Hardware Ranch	45.65	351	P	P	13 11 47.4	+1.0
HVU	Hansel Valley	46.02	350	P	P	13 11 50.4	+1.1
HVU				IAmb	IAmb	13 11 54.4	
	comp=Z,10nm,1.1s						
ORV	Oroville	46.16	340	P	P	13 11 51.0	+0.8
BW06	Boulder Array	46.52	353	P	P	13 11 53.2	-0.2
BW06				IAmb	IAmb	13 11 57.8	
	comp=Z,11nm,1.4s						
PD31	Pinedale Array	46.52	353	P	P	13 11 53.8	+0.5
PD31				IAmb	IAmb	13 11 57.8	
	comp=Z,9.7nm,1.4s						
PDAR	Pinedale Array	46.52	353	P	P	13 11 54.1	+0.8
	comp=Z,6.3nm,1.2s,baz=161,slow=6.3,SNR=13						
PDAR	Pinedale Array	46.52	353	P	P	13 11 53.2	-0.1
PLCA	Paso Flores	47.19	146	LR	LR	13 26 32.4	
	comp=Z,200nm,21.8s,baz=336,slow=30						
LOHW	Long Hollow	47.48	353	P	P	13 12 01.2	+0.4
FXWY	Fox Creek	47.56	352	P	P	13 12 02.2	+0.7
FXWY				IAmb	IAmb	13 12 12.8	
	comp=Z,5.5nm,1.1s						
HLID	Hailey	48.04	349	P	P	13 12 06.3	+1.3
YHH	Holmes Hill	48.67	353	P	P	13 12 10.6	+0.5
YHH				IAmb	IAmb	13 12 27.4	
	comp=Z,5.0nm,1.1s						
YHL	Hebgen Lake	48.78	352	P	P	13 12 11.1	+0.2
MCMT	McKenzie Canyo	48.99	351	P	P	13 12 13.8	+1.3
CPUP	Villa Florida	49.32	122	LR	LR	13 30 32.4	
	comp=Z,93nm,18.0s,baz=336,slow=33						
ULM	Lac du Bonnet	54.01	6	P	P	13 12 49.9	+0.3
	comp=Z,4.6nm,0.9s,baz=192,slow=12,SNR=3.2						
ULM				LR	LR	13 35 07.5	
	comp=Z,134nm,18.0s,baz=67,slow=35						
ULM	Lac du Bonnet	54.01	6	P	P	13 12 49.9	+0.3
BDFB	Brasilia	55.50	106	LR	LR	13 34 49.1	
	comp=Z,144nm,20.0s,baz=325,slow=34						
YKA	Yellowknife Ar	66.50	354	P	P	13 14 14.6	-0.4
	comp=Z,5.2nm,1.1s,baz=165,slow=6.2,SNR=18						
YKA	Yellowknife Ar	66.50	354	P	P	13 14 15.0	+0.1
KDAK	Kodiak Island	72.85	335	LR	LR	13 38 46.6	
	comp=Z,234nm,18.4s,baz=254,slow=29						
INK	Inuvik	74.81	349	LR	LR	13 46 37.6	
	comp=Z,123nm,19.2s,baz=240,slow=35						
ILAR	Eielson Array	75.37	342	P	P	13 15 08.8	0.0
	comp=Z,3.1nm,1.0s,baz=150,slow=4.0,SNR=15						
ILAR	Eielson Array	75.37	342	P	P	13 15 09.7	+0.8
QSPA	South Pole Qui	86.44	180	P	P	13 16 07.4	-0.7
H11N3	WAKE ISLAND Hy	91.15	290	T	T	14 57 40.0	
	baz=93,slow=74,SNR=15						
H11N2	WAKE ISLAND Hy	91.16	290	T	T	14 57 39.7	
	baz=93,slow=74,SNR=17						
H11N1	WAKE ISLAND Hy	91.16	290	T	T	14 57 41.9	
	baz=93,slow=74,SNR=14						
H11S2	WAKE ISLAND Hy	91.27	288	T	T	14 57 53.5	
	baz=94,slow=74,SNR=53						
H11S1	WAKE ISLAND Hy	91.27	288	T	T	14 57 50.3	
	baz=94,slow=74,SNR=24						
H11S3	WAKE ISLAND Hy	91.28	288	T	T	14 57 54.9	
	baz=94,slow=74,SNR=22						
PETK	Petropavlovsk-	98.37	323	LR	LR	13 52 47.0	
	comp=Z,72nm,19.9s,baz=102,slow=30						
DBIC	Dimbokro	98.64	84	LR	LR	13 59 06.3	
	comp=Z,29nm,18.8s,baz=309,slow=34						
ASAR	Alice Springs	118.21	241	PKP	PKPdf	13 22 11.9	-1.9
	comp=Z,0.3nm,0.8s,baz=80,slow=2.1,SNR=6.5						
ASAR	Alice Springs	118.21	241		PKPdf	13 22 13.4	-0.4
WRA	Warramunga Arr	118.91	245	PKP	PKPdf	13 22 13.5	-1.7
	comp=Z,0.5nm,0.8s,baz=120,slow=2.8,SNR=7.7						
WRA	Warramunga Arr	118.91	245		PKPdf	13 22 15.5	+0.3
BRTR	Keskin Array B	126.93	41	PKP	PKPdf	13 22 29.3	-0.9
	comp=Z,1.2nm,0.7s,baz=130,slow=1.3,SNR=5.3						
SONM	Songino Array	129.14	335	PKP	PKPdf	13 22 32.8	-1.3
	comp=Z,1.6nm,1.1s,baz=131,slow=1.8,SNR=5.1						
SONM	Songino Array	129.14	335		PKPdf	13 22 34.0	-0.2
MKAR	Makanchi Array	136.72	355	PKP	PKPdf	13 22 47.7	-0.6
	comp=Z,1.3nm,0.8s,baz=22,slow=1.3,SNR=7.8						
KSH	Kashi	144.25	1	PKP	PKPdf	13 23 02.4	+0.1
CMAR	Chiang Mai Arr	153.83	306	PKP	PKPdf	13 23 17.6	-0.4
	comp=Z,0.4nm,0.3s,baz=102,slow=1.1,SNR=6.2						
CMAR				PKPbc	PKPbc	13 23 26.1	+0.1
	comp=Z,1.4nm,0.7s,baz=34,slow=1.6,SNR=9.3						
CMAR				PKPab	PKPab	13 23 39.3	+0.5
	comp=Z,0.5nm,0.4s,baz=31,slow=3.7,SNR=4.3						
CMAR	Chiang Mai Arr	153.83	306		PKPdf	13 23 17.3	-0.7
CMAR				PKPbc	PKPbc	13 23 26.8	+0.8
CMAR					PKPab	13 23 40.2	+1.4

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*IDC **18** 13:37:07.6±1.2, 45°.23N×111°.46W, h0^{km}, mb1 3.4/4, mb1mx3.2/42, mbtmp3.0/4, ML3.4/4, Error ellipse: s-maj=26.0km s-min=7.1km az=51.0*

*BUT **18** 13:37:09.8±1.7, 45°.04N±0°.03×111°.86W±0°.03, h5^{km}±7^{km}, ML3.5/24, ML3.1/54(NEIC), Error ellipse: s-maj=5.2km s-min=2.0km az=212.0*

*NEIC **18** 13:37:09.9±1.8, 45°.02N±0°.03×111°.87W±0°.02, h3^{km}±8^{km}, Error ellipse: s-maj=4.4km s-min=1.0km az=197.0*

ISC 18 13:37:09.7±1.2**, 45°.03N**±0°.03×**111°.86W**±0°.02**, h3**^{km}±13^{km}**, n73, σ0ˢ.91**/80**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YHL	Hebgen Lake	0.51	110		Pg	13 37 19.9	+0.4
YHL				Sg	Sg	13 37 25.9	-0.2
YHL				IAML		13 37 28.5	
	comp=E,1μm,0.7s						
YHL				IAML		13 37 34.8	
	comp=N,849nm,0.6s						
CMI	Centennial Mou	0.53	161		Pg	13 37 20.0	+0.1
YPDC	Denny Creek	0.54	126		Pg	13 37 20.4	+0.2
YHB	Horse Butte	0.55	120		Pg	13 37 20.4	+0.3
GCR	Grayling Creek	0.58	113		Pg	13 37 21.4	+0.6
BOZ	Bozeman (W)	0.59	16	Pg	Pg	13 37 20.7	-0.3
BOZ				Sg	Sg	13 37 28.6	-0.1
BOZ				IAML		13 37 30.5	
	comp=N,1μm,0.5s						
BOZ				IAML		13 37 35.4	
	comp=N,715nm,0.5s						
DLMT	Dillon	0.62	303	Pg	Pg	13 37 21.8	+0.2
DLMT				Sg	Sg	13 37 30.3	+0.6
DLMT				IAML		13 37 31.1	
	comp=N,709nm,0.3s						
DLMT				IAML		13 37 33.8	
	comp=N,695nm,0.3s						
YMC	Maple Creek	0.66	114		Pg	13 37 22.5	+0.1
YPWB	West Boundary	0.69	128		Pg	13 37 23.2	+0.4
YMR	Madison River	0.73	119		Pg	13 37 23.7	0.0
YMR	Madison River	0.73	119	Sg	Sg	13 37 33.6	+0.4
YMR				IAML		13 37 36.9	
	comp=N,1μm,0.8s						
YMR				IAML		13 37 38.7	
	comp=E,782nm,0.4s						
MCMT	McKenzie Canyo	0.73	254		Pg	13 37 23.8	0.0
YHH	Holmes Hill	0.76	108		Pg	13 37 24.1	0.0
YHH				Sg	Sg	13 37 32.9	-1.1
YMV	Mammoth Vault	0.83	93		Pg	13 37 25.5	-0.1
YNR	Norris Junctio	0.90	110	Pg	Pg	13 37 26.9	+0.1
YNR				Sg	Sg	13 37 37.7	-0.7
YNR				IAML		13 37 40.6	
	comp=E,284nm,0.4s						
LRM	Limekiln Ridge	0.90	332	Pg	Pg	13 37 26.7	-0.2
YML	Mary Lake	0.96	116		Pg	13 37 28.6	+0.4
MCID	Moose Creek	0.97	150		Pg	13 37 28.3	+0.1
YUF	Upper Falls	1.01	108	Pg	Pg	13 37 29.6	+0.5
YUF				Sg	Sg	13 37 41.5	-0.5
YPP	Pitchstone Pla	1.07	135		Pg	13 37 30.4	+0.3
YLT	Little Thumb C	1.08	123		Pn	13 37 32.2	+0.3
YJC	Joseph's Coat	1.11	104		Pb	13 37 31.8	+0.1
H17A	Grant Village	1.11	124		Pb	13 37 31.8	+0.1
H17A				Sg	Sb	13 37 47.1	+0.4
LKWY	Lake	1.14	114		Pn	13 37 33.0	+0.3
LKWY				Sg	Sg	13 37 46.4	+0.2
YPSB	Soda Butte	1.22	96		Pg	13 37 32.5	-0.5
YMP	Mirror Lake Pl	1.24	103		Pb	13 37 34.1	+0.2
YMP				Sg	Sb	13 37 51.2	+0.6
YMP				IAML		13 37 55.0	
	comp=N,256nm,0.8s						
YMP				IAML		13 38 00.1	
	comp=E,297nm,0.5s						
YPLA	Lake Butte	1.24	114		Pn	13 37 34.4	+0.1
YPPC	Pelican Cone	1.24	107		Pb	13 37 34.0	0.0
FLWY	Flagg Ranch	1.26	138	Pn	Pg	13 37 33.3	-0.5
FLWY				IAML		13 37 51.7	
	comp=E,194nm,0.7s						
FLWY				IAML		13 37 51.8	
	comp=E,203nm,0.7s						
YTP	The Promontory	1.29	119		Pg	13 37 34.0	-0.4
BCYI	Bear Canyon	1.32	238	Pn	Pg	13 37 34.2	-0.7
YPK	Parker Peak, Y	1.41	101		Pn	13 37 36.4	-0.2
MOOW	Moose Ponds	1.51	148		Pn	13 37 37.1	-0.7
FXWY	Fox Creek	1.51	156	Pn	Pn	13 37 37.1	-0.7
FXWY				IAML		13 38 02.1	
	comp=E,177nm,0.8s						
YHR	Hawk`s Rest	1.57	125		Pg	13 37 40.3	+0.5
LOHW	Long Hollow	1.68	147		Pn	13 37 39.8	-0.3
LOHW				IAML		13 38 03.6	
	comp=E,188nm,0.4s						
LOHW				IAML		13 38 04.5	
	comp=E,161nm,0.3s						
HRY	Holter Researc	1.68	1		Pn	13 37 39.9	-0.2
GCMT	Greycliff	1.72	63		Pn	13 37 41.2	+0.5
REDW	Red Top Meadow	1.82	156		Pn	13 37 42.9	+0.8
REDW	Red Top Meadow	1.82	156	IAML		13 38 08.9	
	comp=E,277nm,0.4s						
RLMT	Red Lodge	1.84	86		Pb	13 37 43.9	-0.2
RLMT				IAML		13 38 09.9	
	comp=E,264nm,0.5s						
RLMT				IAML		13 38 11.7	
	comp=E,380nm,0.5s						
ECR	Eagle Creek	2.00	170		Pn	13 37 45.7	+1.1
AHID	Auburn Hatcher	2.33	166		Pn	13 37 48.8	-0.3
AHID				IAML		13 38 22.8	
	comp=E,118nm,0.5s						
AHID				IAML		13 38 27.6	
	comp=E,141nm,0.9s						
PDAR	Pinedale Array	2.81	143	Pn	Pn	13 37 57.5	+1.8
	comp=E,2.0nm,0.3s,baz=344,slow=15,SNR=48						
PDAR				Pg	Pb	13 37 59.2	-1.4
	comp=E,3.0nm,0.3s,baz=335,slow=15,SNR=62						
PDAR				Lg	Lg	13 38 36.1	
	comp=E,2.3nm,0.3s,baz=336,slow=26,SNR=9.2						
PLID	Pearl Lake	2.94	273		Pn	13 37 58.4	+1.0
PLID				IAML		13 38 48.3	
	comp=E,111nm,0.3s						
JTMT	Jette	3.19	329		Pn	13 38 01.3	+0.4
MFID	Camas Ranch	3.28	242		Pn	13 38 03.5	+1.5
HVU	Hansel Valley	3.32	192		Pn	13 38 00.9	-1.7
EGMT	Eagleton	3.33	25	Pn	Pn	13 38 02.9	+0.1
HWUT	Hardware Ranch	3.43	176		Pb	13 38 09.9	-1.3
HWUT				IAML		13 39 09.8	
	comp=E,20nm,0.8s						
BMO	Blue Mountains	3.87	269		Pn	13 38 10.8	+0.6
BMO	Blue Mountains	3.87	269	IAML		13 39 14.1	
	comp=E,38nm,0.3s						
BMO				IAML		13 39 15.6	
	comp=E,34nm,1.0s						
F10A	Beach Ranch, E	3.89	286		Pn	13 38 12.1	+1.7
BGU	Big Grassy Mou	4.19	192		Pn	13 38 18.2	+3.6
WALA	Waterton Lakes	4.27	342		Pn	13 38 16.5	+0.8
WALA	Waterton Lakes	4.27	342		Pb	13 38 25.5	+0.1
WALA	Waterton Lakes	4.27	342	IAML		13 39 26.8	
	comp=N,41nm,0.7s						
LAO	LASA Array	4.27	65	Pn	Pn	13 38 15.8	+0.2
LAO	LASA Array	4.27	65		Pb	13 38 27.8	+2.3
E09A	Wood Farm, Sta	4.64	291		Pn	13 38 21.6	+0.9
RDMU	Red Mountain	4.76	159		Pn	13 38 23.4	+0.9
NEW	Newport	4.86	314	Pn	Pn	13 38 23.8	+0.1
	comp=N,1.2nm,0.3s,baz=130,slow=12,SNR=11						
NEW				Lg	Lg	13 39 42.3	
	comp=N,3.9nm,0.3s,baz=67,slow=22,SNR=9.5						
NEW	Newport	4.86	314		Pn	13 38 23.3	-0.4
NEW				IAML		13 39 54.9	
	comp=N,24nm,1.5s						
NEW				IAML		13 39 55.4	
	comp=N,21nm,0.8s						
J08A	Circle Bar Ran	5.04	253		Pn	13 38 27.0	+0.7
NLU	North Lily Min	5.07	182		Pn	13 38 26.1	-0.8
C09A	Chrisman Ranch	5.23	304		Pn	13 38 28.1	-0.7
D08A	Wollman Farm,	5.32	295		Pn	13 38 31.2	+1.3
HAWA	Hanford	5.54	287	Pn	Pn	13 38 34.1	+1.1
O20A	White River Ci	5.57	150		Pn	13 38 31.7	-1.9
B08A	Colville Reser	6.12	306	Pn	Pn	13 38 39.9	-1.2
DGMT	Dagmar	6.29	54		Pn	13 38 44.3	+1.0
NVAR	Mina Array Bea	8.16	218	Pn	Pn	13 39 14.4	+5.1
	comp=N,0.1nm,0.3s,baz=43,slow=16,SNR=2.0						
NVAR				Pg	Pb	13 39 33.4	+1.6
	comp=N,0.1nm,0.3s,baz=32,slow=16,SNR=6.8						
YKA	Yellowknife Ar	17.57	356	P	Pn	13 41 13.3	-2.0
	comp=N,0.1nm,0.3s,baz=182,slow=13,SNR=4.5						

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*KRNET **18** 13:46:36.2±0.1, 43°.94N×69°.09E, mb3.0*

*SOME **18** 13:46:38.4, 43°.63N×69°.67E*

*NNC **18** 13:46:40.6±1.8, 43°.61N×69°.76E, h0^{km}, mb3.8, mpv3.3, Error ellipse: s-maj=10.1km s-min=8.4km az=158.0, Suspected Mining explosion.*

ISC 18 13:46:40.4±2.0**, 43°.61N**±0°.07×**69°.77E**±0°.09**, h0**^{km}**, n12, σ1ˢ.79**/19**, 6C-8D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday	0.58	175	P	Pn	13 46 55.2	-0.7
	3.2nm,0.1s						
BRLS				S	Sn	13 47 07.8	+1.6
	15nm,0.3s						
KK02	Karatay Array	0.74	133	⇓P	Pb	13 46 54.8	-1.4
	3.1nm,0.5s						
KK02				⇑S	Sg	13 47 05.5	+1.3
	94nm,0.8s						
IUG	Iuzhnay	1.48	172	P	Pb	13 47 08.8	0.0
	346nm,0.5s						
IUG				S	Sn	13 47 30.9	+2.6
	50nm,0.6s						
MNAS	Manas	2.30	118	⇑eP	Pb	13 47 22.0	-0.8
	baz=19						
MNAS				⇑iS	Sg	13 47 56.0	+1.8
	baz=19						
TRKS	Terek-Say	2.31	153	⇓iP	Pg	13 47 23.0	-1.7
	baz=48						
TRKS				⇓iS	Sg	13 47 56.3	+1.6
	baz=48						
ARK	Arkit	2.43	137	⇑eP	Pb	13 47 23.9	-1.1
	baz=34						
ARK				⇑iS	Sg	13 47 58.9	+0.5
	baz=34						
MRKS	Merke	2.67	108	Pg	Pg	13 47 30.9	-0.7
	4.8nm,0.5s						
MRKS				Lg	Lg	13 48 08.5	
	9.1nm,0.6s						
BTLS	Baital	3.39	64	Pg	Pg	13 47 44.3	-1.0
	10nm,0.5s						
BTLS				Lg	Lg	13 48 31.6	
	5.5nm,0.6s						
SGDS	Sogindy	3.54	91	Pg	Pg	13 47 45.8	-2.4
	3.1nm,0.7s						
SGDS				Lg	Lg	13 48 33.6	
	4.6nm,0.7s						
AAK	Ala-Archa	3.60	104	⇓Pg	Pb	13 47 44.6	-0.3
	5.1nm,0.7s						
AAK				⇓Lg	Lg	13 48 35.1	
	3.3nm,0.6s						
ARLS	Aral	3.79	116	⇓iP	Pn	13 47 43.1	+3.0
	baz=17						
ARLS				⇓iS	Sb	13 48 31.4	-3.2
	baz=17						
TKM2	Tokmak 2	4.31	97	⇑Pg	Pb	13 47 58.0	+0.8
	3.1nm,0.7s						
TKM2				⇓Lg	Lg	13 48 58.9	
	2.7nm,0.5s						

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*IDC **18** 13:53:34.3±2.7, 10°.11N×126°.55E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.4/45, mbtmp3.7/4, Error ellipse: s-maj=167.4km s-min=26.6km az=68.0*

*MAN **18** 13:53:41.1, 10°.01N×126°.25E, h9^{km}, mb5.0, ML3.9, MS4.0*

ISC 18 13:53:40.8±1.7**, 10°.03N**±0°.04×**126°.26E**±0°.07**, h16**^{km}±10^{km}**, n17, σ2ˢ.15**/26**, mb3.6**/4**, 6C-5D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.28	209	⇑eP	Pb	13 53 47.2	-0.2
GLSP				eS	Sb	13 53 52.5	+0.6
SCPH	Surigao	0.80	252	eP	Pg	13 53 55.4	-1.0
SCPH				i S	Sg	13 54 06.9	-0.1
MSLP	Maasin	1.39	275	⇑eP	Pn	13 54 05.9	+0.3
MSLP				eS	Sb	13 54 24.6	+0.7
BESP	Borongan	1.76	333	⇓iP	Pn	13 54 12.2	+1.5
BESP				i S	Sg	13 54 41.7	+4.1
LLP	Lapu-Lapu	2.28	277	⇑eP	Pn	13 54 19.4	+1.6
LLP				i S	Sn	13 54 48.3	+2.7
TBP	Tagbilaran	2.39	262	eP	Pn	13 54 20.3	+1.0
TBP				i S	Sn	13 54 49.9	+1.6
BUKP	Musuan	2.44	209	⇓iP	Pn	13 54 21.6	+1.5
BUKP				eS	Sn	13 54 52.4	+2.7
DMPH	Davao City--Mi	3.02	194	⇑eP	Pn	13 54 29.4	+1.3
MATI	Mati	3.06	180	⇓iP	Pn	13 54 30.4	+1.8
MATI				i S	Sb	13 55 13.6	+1.5
KCP	Kidapawan	3.21	201	⇑eP	Pn	13 54 33.0	+2.2
KCP				i S	Sn	13 55 11.8	+3.0
CNOP	Candoni, Negro	3.58	267	⇓eP	Pn	13 54 37.3	+1.6
CNOP				eS	Sn	13 55 18.7	+1.1
PAGZ	Pagadian	3.58	233	⇓iP	Pn	13 54 37.3	+1.6
PAGZ				i S	Pb	13 54 41.1	-2.6
RCP	Roxas	3.78	294	⇑eP	Pn	13 54 40.2	+1.7
FITZ	Fitzroy Crossi	27.95	181	P	P	13 59 27.7	-3.0
	2.7nm,0.9s,baz=356,slow=14,SNR=2.7						
WRA	Warramunga Arr	30.82	165	P	P	13 59 51.8	-4.5
	0.2nm,0.4s,baz=345,slow=8.9,SNR=5.1						
ASAR	Alice Springs	34.31	168	P	P	14 00 22.9	-3.9
	0.2nm,0.3s,baz=353,slow=6.9,SNR=16						
MKAR	Makanchi Array	52.22	323	P	P	14 02 47.9	-3.2
	0.7nm,0.7s,baz=113,slow=9.1,SNR=4.9						

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*IDC **18** 14:09:41.5±3.5, 43°.10N×82°.93E, h14^{km}±22^{km}, mb4.2/23, mb1 4.3/29, mb1mx4.1/54, mbtmp4.3/29, ML3.9/6, MS3.4/13, Ms1 3.4/13, ms1mx3.1/60, Error ellipse: s-maj=14.9km s-min=10.3km az=53.0*

*MOS **18** 14:09:41.5±1.1, 43°.12N×82°.99E, h24^{km}, mb4.5/18, Error ellipse: s-maj=6.1km s-min=4.7km az=122.7*

*SOME **18** 14:09:41.8, 43°.48N×82°.93E, h25^{km}, MS3.8*

*NEIC **18** 14:09:42.5±1.9, 43°.06N±0°.06×83°.0E±0°.1, h19^{km}±4^{km}, mb4.6/25, Error ellipse: s-maj=11.5km s-min=7.7km az=121.0*

*BJI **18** 14:09:44.7±0.0, 43°.07N×82°.86E, h5^{km}, mb4.3/5, ML4.3/10, Ms3.9/2, Ms7 3.5/2*

*NNC **18** 14:09:48.3±2.2, 43°.36N×82°.43E, h6^{km}±9^{km}, mb4.7, mpv4.5, Error ellipse: s-maj=16.9km s-min=8.2km az=135.0*

ISC 18 14:09:42.4±0.4**, 43°.02N**±0°.04×**82°.94E**±0°.03**, h20**^{km}±3^{km}**, n218, σ1ˢ.93**/244**, mb4.4**/43**, MS3.5**/10**, 25C-21D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.94	283	eP	Pb	14 10 16.2	-0.8
	290nm,0.0s						
KTMS				eS	Sb	14 10 41.2	+0.4
	2μm,0.3s						
KTMS	Ketmen	1.94	283	P	Pb	14 10 16.2	-0.8
	500nm,0.4s						
KTMS				S	Sb	14 10 41.2	+0.4
	2μm,0.3s						
PDGK	Podgornoye	2.54	278	PN	Pb	14 10 25.6	-1.8
PDGK	Podgornoye	2.54	278	Pg	Pb	14 10 26.0	-1.3
	73nm,0.2s						
PDGK				Lg	Lg	14 10 58.0	
	861nm,0.5s						
PDGK	Podgornoye	2.54	278	⇑Pn	Pb	14 10 25.6	-1.8
	326nm,0.8s						
SHLS	Shalkode	2.55	274	eP	Pn	14 10 22.9	+0.2
	261nm,0.2s						
SHLS				eS	Sn	14 10 52.2	-0.9
	3μm,0.1s						
SHLS	Shalkode	2.55	274	ePn	Pn	14 10 20.3	-2.3
	baz=272						
SHLS				eSn	Sn	14 10 47.3	-5.9
	baz=272						
SHLS	Shalkode	2.55	274	ePN	Pn	14 10 20.3	-2.3
SHLS				e		14 10 47.2	

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SHLS  Shalkode           2.55 274   Pg     Pn     14 10 22.9 +0.2
            261nm,0.2s
SHLS                                Lg     Lg     14 10 52.2
            3μm,0.7s
UZB   Uzynbulak          2.87 274  ePg    Pb     14 10 31.3  -1.7
            66nm,0.2s
UZB                                eS     Sb     14 11 07.2  -0.5
            504nm,0.3s
UZB   Uzynbulak          2.87 274  ePn    Pn     14 10 28.5 +1.4
            baz=272
UZB                                eSn    Sn     14 11 01.9 +0.8
            baz=272
UZB   Uzynbulak          2.87 274  ePN    Pn     14 10 28.5 +1.4
UZB                                e             14 11 01.9
UZB   Uzynbulak          2.87 274   Pg     Pb     14 10 31.3  -1.7
            66nm,0.2s
UZB                                 Lg     Lg     14 11 07.2
            504nm,0.3s
ZHN   Zhinishke          3.30 274  eP     Pb     14 10 41.3 +1.0
            124nm,0.1s
ZHN                                eS     Sb     14 11 23.9 +3.9
            802nm,0.2s
ZHN   Zhinishke          3.30 274   Pg     Pb     14 10 41.3 +1.0
            168nm,0.2s
ZHN                                 Lg     Lg     14 11 23.9
            802nm,0.2s
PRZ   Przheval'sk        3.39 262   PN     Pn     14 10 38.5 +4.3
PRZ   Przheval'sk        3.39 262          Pn     14 10 38.5 +4.3
BLB   Baldybastay        3.42 290   Pg     Pb     14 10 41.5  -0.7
            180nm,0.4s
BLB                                 Lg     Lg     14 11 24.4
            683nm,0.5s
KAPS  Kapalarasan        3.43 312  eP     Pn     14 10 37.5 +2.8
            323nm,0.1s
KAPS                               eS     Sn     14 11 17.3 +2.6
            683nm,0.4s
KAPS  Kapalarasan        3.43 312   Pg     Pn     14 10 37.5 +2.8
            424nm,0.5s
KAPS                                Lg     Lg     14 11 17.3
            683nm,0.4s
WMQ   Urumqi             3.55  75  ePn    Pb     14 10 41.0  -3.5
WMQ                                 Sn     Sb     14 11 24.3  -3.0
WMQ                                 smax   smax
            comp=N,650nm,0.7s
WMQ                                 smax   smax
            comp=E,370nm,0.7s
MK31  Makanchi Array     3.80 353c iPN    Pn     14 10 41.7 +2.0
MK31                                pmax   pmax
            comp=Z,8.0nm,0.3s
MK31  Makanchi Array     3.80 353 ⇑Pn     Pn     14 10 42.0 +2.3
            comp=Z,8.4nm,0.3s,baz=170,slow=12,SNR=377
MK31                              ⇓Pg     Pb     14 10 53.2 +4.5
            comp=Z,83nm,0.6s,baz=172,slow=16,SNR=11
MK31                              ⇑Sn     Sn     14 11 26.8 +3.1
            comp=Z,176nm,0.6s,baz=172,slow=25,SNR=13
MK31                              ⇑Lg     Lg     14 11 39.9
            comp=Z,679nm,0.8s,baz=169,slow=24,SNR=6.8
MK31  Makanchi Array     3.80 353          Pn     14 10 42.0 +2.3
MKAR  Makanchi Array     3.80 353   Pn     Pn     14 10 41.8 +2.1
            comp=Z,10nm,0.3s,baz=182,slow=14,SNR=355
MKAR                                Sn     Sn     14 11 26.9 +3.1
            comp=Z,74nm,0.3s,baz=177,slow=27,SNR=17
MKAR                                Lg     Lg     14 11 38.9
            comp=Z,91nm,0.3s,baz=171,slow=26,SNR=8.7
MKAR                                LR     LR     14 12 22.9
            comp=Z,443nm,20.9s,baz=150,slow=43
MKAR  Makanchi Array     3.80 353  i PN   Pn     14 10 41.7 +2.1
MKAR                                pmax   pmax
            comp=Z,39nm,0.5s
MKAR  Makanchi Array     3.80 353          Pn     14 10 42.0 +2.3
TDK   Taldyqorghan       3.82 303  eP     Pb     14 10 47.1  -1.9
            comp=Z,3μm,0.2s
TDK                                eS     Sb     14 11 33.9  -1.0
            comp=Z,1μm,0.5s
TDK   Taldyqorghan       3.82 303  ePn    Pn     14 10 40.9 +0.9
            baz=302
TDK                                ePg    Pb     14 10 52.6 +3.5
            baz=302
TDK                                eSn    Sn     14 11 25.9 +1.6
            baz=302
TDK   Taldyqorghan       3.82 303  ePN    Pn     14 10 40.9 +0.9
TDK                                e             14 10 52.5
TDK                                e             14 11 25.9
TDK   Taldyqorghan       3.82 303   Pg     Pb     14 10 47.1  -1.9
            comp=Z,3μm,0.6s
TDK                                 Lg     Lg     14 11 33.9
            comp=Z,319nm,1.0s
MAKZ  Makanchi           3.84 350   PN     Pn     14 10 42.5 +2.2
MAKZ  Makanchi           3.84 350 ⇑Pn     Pn     14 10 42.1 +1.8
            comp=Z,17nm,0.3s
MAKZ                              ⇓Pg     Pb     14 10 52.4 +2.9
            comp=Z,44nm,0.6s
MAKZ                              ⇑Sn     Sn     14 11 26.3 +1.4
            comp=Z,82nm,0.4s
MAKZ                              ⇓Lg     Lg     14 11 41.8
            comp=Z,176nm,0.6s
MAKZ  Makanchi           3.84 350          Pn     14 10 42.5 +2.2
ARXS  Arharly            3.90 289  eP     Pb     14 10 50.1  -0.3
            comp=Z,88nm,0.2s
ARXS                               eS     Sb     14 11 39.5 +2.4
            comp=Z,839nm,0.5s
ARXS  Arharly            3.90 289  ePN    Pn     14 10 42.8 +1.7
ARXS  Arharly            3.90 289   Pg     Pb     14 10 50.1  -0.3
            comp=Z,88nm,0.2s
ARXS                                Lg     Lg     14 11 39.5
            comp=Z,839nm,0.5s
TARG  Taragay, Kyrgy     4.02 253          Pn     14 10 46.0 +2.9
MDOK  Medeo              4.32 274  ePn    Pn     14 10 48.7 +1.7
            baz=273
MDOK  Medeo              4.32 274  ePN    Pn     14 10 48.6 +1.7
MDOK  Medeo              4.32 274   Pn     Pn     14 10 48.7 +1.7
            comp=Z,12nm,0.5s
MDOK                                Lg     Lg     14 11 54.8
            comp=Z,190nm,0.5s
KDJ   Kajisay            4.35 260   PN     Pn     14 10 49.9 +2.5
KDJ   Kajisay            4.35 260   Pn     Pn     14 10 49.9 +2.5
KNDC  Almaty             4.38 275   PN     Pn     14 10 49.8 +2.1
KNDC  Almaty             4.38 275 ⇑Pn     Pn     14 10 49.5 +1.8
            comp=Z,36nm,0.4s
KNDC                              ⇑Lg     Lg     14 11 55.7
            comp=Z,755nm,0.8s
TNSS  Tian-Shan          4.39 272  ePn    Pn     14 10 49.9 +1.6
            baz=271
ZSN   Zaisan             4.63  16  eP     Pn     14 10 55.3 +4.2
            comp=Z,33nm,0.0s
ZSN                                eS     Sn     14 11 48.0 +3.8
            comp=Z,189nm,0.2s
ZSN   Zaisan             4.63  16  ePn    Pn     14 10 53.3 +2.2
            baz=18
ZSN   Zaisan             4.63  16  ePN    Pn     14 10 53.3 +2.2
ZSN   Zaisan             4.63  16   Pg     Pn     14 10 55.3 +4.2
            comp=Z,33nm,0.2s
ZSN                                 Lg     Lg     14 11 48.0
            comp=Z,188nm,0.8s
KUU   Kurty              4.88 282  ePn    Pn     14 10 54.9 +0.3
            baz=282
KUU   Kurty              4.88 282  ePN    Pn     14 10 54.9 +0.3
ULHL  Ulahol             5.00 263   P      Pn     14 10 58.3 +1.9
            SNR=18
BOOM  Boomskoye usch     5.18 266   PN     Pn     14 11 01.7 +2.8
BOOM  Boomskoye usch     5.18 266   Pn     Pn     14 11 01.7 +2.8
TKM2  Tokmak 2           5.39 271   P      Pn     14 11 04.2 +2.5
            SNR=16
TKM2  Tokmak 2           5.39 271   PN     Pn     14 11 03.8 +2.1
TKM2  Tokmak 2           5.39 271 ⇓Pn     Pn     14 11 03.9 +2.1
            comp=Z,7.4nm,0.5s
TKM2                              ⇓Lg     Lg     14 12 27.4
            comp=Z,86nm,0.6s
KBK   Karagaybulak       5.89 269   P      Pn     14 11 11.6 +3.1
            SNR=12
CHMS  Chumysh            6.00 273   P      Pn     14 11 11.9 +1.9
            SNR=10
SGDS  Sogindy            6.09 277  ePn    Pn     14 11 11.7 +0.5
            baz=276
FRU1  Bishkek            6.11 271   PN     Pn     14 11 13.4 +2.0
FRU1  Bishkek            6.11 271          Pn     14 11 13.4 +2.0
USP   Ospenovka          6.18 275   P      Pn     14 11 13.6 +1.2
            SNR=14
AAK   Ala-Archa          6.22 269   LR     LR     14 13 51.3
            comp=Z,146nm,19.2s,baz=99,slow=40
AAK   Ala-Archa          6.22 269   P      Pn     14 11 15.5 +2.4
            SNR=6.9
AAK   Ala-Archa          6.22 269dePN    Pn     14 11 14.9 +1.8
AAK   Ala-Archa          6.22 269 ⇓Pg     Pb     14 11 36.3 +6.2
            comp=Z,10nm,0.6s
AAK                               ⇑Lg     Lg     14 12 54.9
            comp=Z,112nm,0.9s
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AAK   Ala-Archa          6.22 269   Pn     Pn     14 11 15.2 +2.0
UCH   Uchtor             6.27 266   P      Pn     14 11 17.0 +3.0
            SNR=19
KSH   Kashi              6.31 239   Pn     Pb     14 11 24.6  -6.9
KSH                                 Sn     Sb     14 12 47.9 +1.3
KSH                                 LR     LR
            comp=Z,300nm,7.6s
BTLS  Baital             6.72 291  ePn    Pn     14 11 20.9 +1.0
            baz=290
BTLS  Baital             6.72 291  ePN    Pn     14 11 20.8 +1.0
EKS2  Erkin-Say          6.75 270   P      Pn     14 11 23.2 +2.9
            SNR=9.4
DGZ   Jazzator, Alta     7.36  23c iP     Pn     14 11 31.0 +2.2
SEM   Semipalatinsk      7.61 347  ePn    Pn     14 11 32.2   0.0
            baz=347
SEM   Semipalatinsk      7.61 347  eP     Pn     14 11 32.2   0.0
KURBB Kurchatov Arra     8.18 340   Pn     Pn     14 11 39.4  -0.3
            comp=Z,2.1nm,0.3s,baz=156,slow=13,SNR=135
KURBB                               Sn     Sn     14 13 08.2  -3.3
            comp=Z,2.9nm,0.3s,baz=153,slow=23,SNR=16
KURBB                               Lg     Lg     14 13 55.3
            comp=Z,1.3nm,0.3s,baz=160,slow=30,SNR=1.9
KURBB Kurchatov Arra     8.18 340   P      Pn     14 11 39.5  -0.3
KURBB                                             14 13 08.9
KURBB Kurchatov Arra     8.18 340 ⇑Pn     Pn     14 11 39.5  -0.3
            comp=Z,37nm,0.5s
KURBB                             ⇑Sn     Sn     14 13 09.0  -2.6
            comp=Z,174nm,0.6s
KURBB                             ⇑Lg     Lg     14 13 54.1
            comp=Z,181nm,0.7s
KURK  Kurchatov          8.24 340deP     Pn     14 11 40.9 +0.3
KURK                                pmax   pmax
            comp=Z,11nm,0.5s
KURK  Kurchatov          8.24 340 ⇓Pn     Pn     14 11 40.6   0.0
            comp=Z,12nm,0.5s
KURK                              ⇑Sn     Sn     14 13 09.1  -3.9
            comp=Z,173nm,0.8s
KURK                              ⇓Lg     Lg     14 13 59.8
            comp=Z,255nm,1.0s
KURK  Kurchatov          8.24 340   Pn     Pn     14 11 41.0 +0.3
OTUK  Ortayu             9.07 309   P      Pn     14 11 50.4  -1.7
OTUK  Ortayu             9.07 309 ⇓Pn     Pn     14 11 50.4  -1.7
            comp=Z,6.3nm,0.6s
OTUK                              ⇑Lg     Lg     14 14 21.9
            comp=Z,53nm,0.7s
KK02  Karatay Array      9.10 275 ⇓Pn     Pn     14 11 55.7 +3.2
            comp=Z,5.3nm,0.6s
KK02                              ⇓Lg     Lg     14 14 23.5
            comp=Z,42nm,0.8s
KKAR  Karatay Array      9.10 275   P      Pn     14 11 54.6 +2.1
KKAR  Karatay Array      9.10 275   Pn     Pn     14 11 54.6 +2.1
BTK   Batken             9.56 256   P      Pn     14 12 01.7 +2.8
BTK   Batken             9.56 256   Pn     Pn     14 12 01.7 +2.8
BRLS  Borolday           9.60 275  ePn    Pn     14 12 03.3 +4.0
            baz=273
BRZS  Berezniki          9.92 318  ePn    Pn     14 12 02.8  -0.8
            baz=318
BRZS  Berezniki          9.92 318  eP     Pn     14 12 02.8  -0.8
GAR   Garm              10.35 251          Pn     14 12 11.9 +2.2
ZAA0  Zalesovo Array    11.00   6 ⇓Pn     Pn     14 12 25.7 +7.3
            comp=Z,1.9nm,0.7s
ZAA0                              ⇑Sn     Sn     14 14 25.0 +4.2
            comp=Z,6.0nm,1.0s
ZAA0                              ⇓Lg     Lg     14 15 30.1
            comp=Z,13nm,0.9s
ZAA0  Zalesovo Array    11.00   6   Pn     Pn     14 12 17.6  -0.8
ZALV  Zalesovo Beam     11.00   6   Pn     Pn     14 12 17.5  -0.9
            comp=Z,2.7nm,0.3s,baz=192,slow=14,SNR=32
ZALV                                Sn     Sn     14 14 15.3  -5.5
            comp=Z,2.3nm,0.3s,baz=186,slow=23,SNR=6.9
ZALV                                Lg     Lg     14 15 27.1
            comp=Z,0.6nm,0.3s,baz=191,slow=23,SNR=5.0
ZALV                                LR     LR     14 16 43.3
            comp=Z,166nm,19.3s,baz=20,slow=39
ZALV  Zalesovo Beam     11.00   6  i P    Pn     14 12 18.3  -0.1
ZALV                                pmax   pmax
            comp=Z,6.0nm,0.3s
ZALV  Zalesovo Beam     11.00   6   Pn     Pn     14 12 18.4   0.0
CHGR  Chuyangaron       11.31 252   Pn     Pn     14 12 23.3 +0.5
NIL   Nilore            12.05 222   P      Pn     14 12 33.5 +0.6
NIL   Nilore            12.05 222   Pn     Pn     14 12 33.5 +0.6
CEP   Cherat            12.61 227   P      Pn     14 12 41.4 +0.8
CEP                                 S      Sn     14 14 59.0  -1.4
BVAR  Borovoye Array    13.04 324   Pn     Pn     14 12 44.8  -1.5
            comp=Z,0.6nm,0.3s,baz=163,slow=14,SNR=11
BVAR                                Lg     Lg     14 16 32.1
            comp=Z,0.9nm,0.3s,baz=144,slow=26,SNR=4.1
BRVK  Borovoye          13.11 324⇑eP     Pn     14 12 46.3  -1.0
BRVK                                pmax   pmax
            comp=Z,9.0nm,1.3s
BRVK  Borovoye          13.11 324 ⇓Pn     Pn     14 12 44.6  -2.6
            comp=Z,21nm,1.2s
BRVK                              ⇓Sn     Sn     14 15 05.1  -7.3
            comp=Z,15nm,0.9s
BRVK                              ⇓Lg     Lg     14 16 30.3
            comp=Z,38nm,1.0s
BRVK  Borovoye          13.11 324   Pn     Pn     14 12 47.0  -0.3
GTA   Gaotai            13.21 100  eP     Pn     14 12 49.4 +0.7
GTA                                 pP     P      14 12 56.3  -2.3
GTA                                 sP            14 12 59.8
GTA                                 pmax   pmax
            comp=Z,3.0nm,1.4s
GTA                                 pmax   pmax
            comp=Z,230nm,4.7s
GTA                                 LR     LR
            comp=N,150nm,11.3s
GTA                                 LR     LR
            comp=E,190nm,10.2s
GTA                                 LR     LR
            comp=Z,140nm,11.3s
THW   Thamme Wali       13.49 225   P      Pn     14 12 54.9 +2.3
LSA   Lhasa             14.84 151   P      Pn     14 13 14.6 +3.2
LSA                                 pmax   pmax
            comp=Z,27nm,1.0s
LSA   Lhasa             14.84 151   P      Pn     14 13 13.1 +1.7
LSA   Lhasa             14.84 151          Pn     14 13 13.1 +1.7
ZAK   Zakamensk         15.74  55  eP     Pn     14 13 21.2  -1.6
ZAK                                 pmax   pmax
            comp=Z,6.0nm,1.2s
TLY   Talaya            16.44  51   LR     LR     14 20 28.7
            comp=Z,94nm,21.8s,baz=158,slow=40
AB31  Akbulak array     17.08 299  eP     Pn     14 13 37.6  -2.1
AB31  Akbulak array     17.08 299 ⇓P      Pn     14 13 39.1  -0.6
            comp=Z,6.2nm,0.9s,baz=99,slow=14,SNR=32
AB31                              ⇑S      Sn     14 16 42.7  -6.2
            comp=Z,1.3nm,0.6s,baz=102,slow=26,SNR=4.9
ABKAR Akbulak array     17.08 299          Pn     14 13 38.4  -1.3
SONM  Songino Array     17.13  66   P      Pn     14 13 40.9 +0.4
            comp=Z,0.5nm,0.3s,baz=270,slow=10,SNR=27
SONM  Songino Array     17.13  66   P      P      14 13 41.5  -0.5
LZH   Lanzhou           17.52 106  eP     P      14 13 55.3 +8.8
LZH                                 pP     sP     14 14 01.3 +5.1
LZH                                 pmax   pmax
            comp=Z,19nm,1.3s
ULN   Ulaanbaatar       17.57  66deP     P      14 13 49.3 +2.3
ULN                                 pmax   pmax
            comp=Z,6.0nm,0.7s
ULN   Ulaanbaatar       17.57  66          P      14 13 47.3 +0.3
HRA   Herat             18.28 249   P      Pn     14 13 55.6 +0.8
AKTO  Aktyubinsk        18.57 302   P      P      14 13 57.5  -0.3
            comp=Z,0.4nm,0.3s,baz=98,slow=14,SNR=18
AKTO                                LR     LR     14 21 32.3
            comp=Z,152nm,18.3s,baz=70,slow=38
AKTO  Aktyubinsk        18.57 302 ⇑P      Pn     14 13 60.0 +2.0
            comp=Z,9.1nm,1.1s
AKTO                              ⇑S      Sn     14 17 16.9  -7.9
            comp=Z,2.2nm,0.6s
SVE   Sverdlovsk        19.80 322  eP     P      14 14 11.4 +0.2
SVE                                 pmax   pmax
            comp=Z,18nm,0.8s
ARU   Arti              20.55 319   P      P      14 14 19.7 +0.4
            comp=Z,12nm,0.7s,baz=121,slow=5.6,SNR=58
ARU                                 LR     LR     14 22 45.1
            comp=Z,154nm,18.1s,baz=94,slow=38
ARU   Arti              20.55 319c iP     P      14 14 19.5 +0.2
ARU                                 pmax   pmax
            comp=Z,39nm,0.8s
ARU   Arti              20.55 319   P      P      14 14 18.6  -0.7
BOD   Bodaibo           24.43  42  eP     P      14 14 59.2  -0.1
BOD                                 pmax   pmax
            comp=Z,9.0nm,1.8s
BELG  Belogornoye       25.32 304   P      P      14 15 07.3  -0.1
            comp=Z,20nm,0.6s,baz=350,slow=1.5,SNR=8.6
BELG  Belogornoye       25.32 304⇑eP     P      14 15 07.0  -0.4
BELG                                pmax   pmax
            comp=Z,4.0nm,0.7s
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KIRV  Kirov             25.93 319   P      P      14 15 12.8   0.0
            comp=Z,13nm,0.5s,baz=86,slow=1.6,SNR=4.6
NRIK  Noril'sk          26.49   4   P      P      14 15 17.8   0.0
            comp=Z,5.8nm,0.8s,baz=191,slow=12,SNR=5.5
NRIK  Noril'sk          26.49   4deP     P      14 15 17.6  -0.2
NRIK                                pmax   pmax
            comp=Z,14nm,1.1s
NRIK  Noril'sk          26.49   4   P      P      14 15 17.1  -0.7
NRIK                                IAmb   IAmb   14 15 18.3
            comp=Z,14nm,1.1s
CMAR  Chiang Mai Arr    27.99 146   P      P      14 15 32.8 +1.0
            comp=Z,1.7nm,0.5s,baz=323,slow=8.7,SNR=9.7
CMAR                                LR     LR     14 28 22.5
            comp=Z,66nm,18.6s,baz=10.0,slow=40
CMAR  Chiang Mai Arr    27.99 146   P      P      14 15 31.4  -0.3
NCK   Nalchik           28.48 285⇑eP     P      14 15 35.6  -0.4
NCK                                 pmax   pmax
            comp=Z,9.0nm,0.6s
ONI   Oni               28.79 283   P      P      14 15 40.1 +1.3
ONI                                 pmax   pmax
            comp=Z,6.0nm,0.8s
ONI   Oni               28.79 283   P      P      14 15 40.1 +1.3
ONI                                 IAmb   IAmb   14 15 40.9
            comp=Z,5.9nm,0.8s
KBZ   Khabaz            28.92 285   LR     LR     14 29 35.3
            comp=Z,117nm,18.3s,baz=40,slow=41
KLMR  Klimovskoe        31.40 320  eP     P      14 15 59.1  -2.4
KLMR                                pmax   pmax
            comp=Z,8.0nm,0.8s
KLMR  Klimovskoe        31.40 320  eP     P      14 15 59.1  -2.4
KLMR                                AMP           14 16 04.5
            comp=Z,8.0nm,0.8s
OBN   Obninsk           32.10 308   LR     LR     14 29 37.8
            comp=Z,29nm,19.9s,baz=202,slow=37
OBN   Obninsk           32.10 308  eP     P      14 16 06.5  -1.2
OBN                                e             14 17 13.0
OBN                                 pmax   pmax
            comp=Z,11nm,0.5s
MARD  Mardin            32.46 274   P      P      14 16 12.8 +1.4
KLR   Kul'dur           33.90  62⇑eP     P      14 16 24.6 +1.0
KLR                                 pmax   pmax
            comp=Z,2.0nm,0.9s
KSRS  Korea Array       34.46  84   P      P      14 16 28.6   0.0
            comp=Z,1.2nm,0.7s,baz=292,slow=9.3,SNR=4.9
KSRS                                LR     LR     14 31 17.6
            comp=Z,20nm,20.8s,baz=215,slow=38
TIXI  Tiksi             36.25  23   P      P      14 16 43.4  -0.2
            comp=Z,1.9nm,0.4s,baz=208,slow=5.3,SNR=6.5
RAYN  Ar Rayn           36.46 250   P      P      14 16 45.8  -0.2
RAYN                                pmax   pmax
            comp=Z,3.0nm,0.9s
RAYN  Ar Rayn           36.46 250   P      P      14 16 45.8  -0.2
BR131 Keskin Array S    36.72 282   P      P      14 16 48.2 +0.1
BR131                               pmax   pmax
            comp=Z,6.0nm,0.9s
BR131 Keskin Array S    36.72 282   P      P      14 16 48.2 +0.1
BR131                               IAmb   IAmb   14 16 49.5
            comp=Z,6.0nm,0.9s
BRTR  Keskin Array B    36.72 282   P      P      14 16 48.5 +0.4
            comp=Z,3.2nm,0.9s,baz=104,slow=9.0,SNR=14
BRTR  Keskin Array B    36.72 282   P      P      14 16 48.0  -0.2
AKASG Malin Array Be    36.81 301   P      P      14 16 48.0  -0.5
            comp=Z,1.5nm,0.5s,baz=67,slow=8.7,SNR=4.6
MNK   Minsk             37.13 308  i P    P      14 16 52.6 +1.3
MNK                                i             14 18 17.7
MNK                                i PPP  PPP    14 18 34.6
MNK                                i             14 19 12.1
MNK                                i S    S      14 22 36.7 +0.4
MNK                                i SSS  SSS    14 25 32.6
MNK                                i             14 27 04.2
MNK                                 pmax   pmax
            comp=E,2.0nm,1.0s
MNK                                 pmax   pmax
            comp=N,13nm,0.8s
MNK                                 pmax   pmax
            comp=Z,11nm,0.7s
MNK                                 MLR    MLR
            comp=Z,151nm,19.0s
MNK                                 MLR    MLR
            comp=N,40nm,15.0s
MNK                                 MLR    MLR
            comp=E,9.0nm,14.0s
MNK   Minsk             37.13 308  i P    P      14 16 52.7 +1.4
            comp=E,2.0nm,1.0s
MNK                                i P    P      14 16 52.7 +1.4
            comp=N,13nm,0.8s
MNK                                i P    P      14 16 52.7 +1.4
            comp=Z,11nm,0.7s,baz=83
MNK                                i PP   PnPn   14 18 17.8 +1.5
MNK                                i PPP  PPP    14 18 34.7
MNK                                i S    S      14 22 36.8 +0.4
MNK                                i SS   SS     14 25 15.0  -3.9
MNK                                i SSS  SSS    14 25 32.6
MNK                                i LQ   LQ     14 29 25.4
MNK                                i LR   LR     14 31 17.4
MNK                                i LRM  MLR    14 32 35.2
            comp=Z,151nm,18.8s
MNK                                i LRM  MLR    14 32 36.0
            comp=N,40nm,14.8s
MNK                                i LRM  MLR    14 32 42.5
            comp=E,9.0nm,14.5s
FIA1  FINESS Array S    37.92 319   P      P      14 16 58.6 +0.7
FIA1                                IAmb   IAmb   14 17 01.8
            comp=Z,19nm,1.2s
FINES FINESS Array B    37.92 319   P      P      14 16 57.7  -0.2
            comp=Z,2.9nm,0.7s,baz=105,slow=12,SNR=20
FINES                               LR     LR     14 33 07.2
            comp=Z,71nm,20.2s,baz=22,slow=37
FINES FINESS Array B    37.92 319   P      P      14 16 57.9 +0.1
KEV   Kevo              38.71 333   P      P      14 17 04.5 +0.1
KEV                                 pmax   pmax
            comp=Z,56nm,1.5s
KEV   Kevo              38.71 333   P      P      14 17 04.5 +0.1
ARA0  ARCESS Array S    39.17 332  eP     P      14 17 09.1 +0.8
ARCES ARCESS Array B    39.17 332   P      P      14 17 08.6 +0.3
            comp=Z,6.4nm,0.4s,baz=88,slow=7.9,SNR=63
ARCES                               LR     LR     14 34 16.7
            comp=Z,89nm,18.7s,baz=320,slow=38
ARCES ARCESS Array B    39.17 332   P      P      14 17 09.0 +0.7
KTK1  Kautokeino        39.87 331  eP     P      14 17 14.2   0.0
BUR08 Bucovina Ar. S    40.04 297   P      P      14 17 15.6  -0.3
JETT  Jettan, Norway    40.94 332  eP     P      14 17 23.2 +0.2
FAUS  Fauske            42.71 328  eP     P      14 17 38.0 +0.5
STEI  Steigen           42.73 329  eP     P      14 17 37.8 +0.3
MOR8  Moi Rana          43.08 326  eP     P      14 17 39.9  -0.6
HFS   Hagfors           44.06 318   P      P      14 17 48.1  -0.3
            comp=Z,2.7nm,0.5s,baz=95,slow=8.9,SNR=19
NC405 NORSAR Array S    44.85 319   P      P      14 17 53.9  -0.8
NC602 NORSAR Array S    45.00 319  eP     P      14 17 56.3 +0.3
NC602 NORSAR Array S    45.00 319   P      P      14 17 55.3  -0.6
NB2   NORSAR Subarra    45.10 319   P      P      14 17 56.2  -0.6
            comp=Z,2.7nm,0.6s,baz=78,slow=7.9
NB2   NORSAR Subarra    45.10 319   P      P      14 17 56.2  -0.6
            baz=78,slow=7.9
NOA   NORSAR Array B    45.10 319   P      P      14 17 56.4  -0.4
            comp=Z,3.6nm,0.6s,baz=83,slow=7.2,SNR=13
NOA                                 LR     LR     14 37 38.6
            comp=Z,53nm,20.2s,baz=265,slow=37
DOMB  Dombas            45.92 321  eP     P      14 18 03.5 +0.3
SKAR  Skarslia          46.57 319  eP     P      14 18 09.0 +0.6
CLL   Collm             46.59 306  eP     P      14 18 09.0 +0.4
CLL                                 pmax   pmax
            comp=Z,6.0nm,0.9s
CLL   Collm             46.59 306  eP     P      14 18 09.0 +0.4
            comp=Z,6.0nm,0.9s
FOO   Floro             47.88 321  eP     P      14 18 19.1 +0.7
SUE   Sulen             48.16 320  eP     P      14 18 21.5 +0.9
BILL  Bilibino          48.55  30  eP     P      14 18 23.1  -0.5
BILL                               e             14 20 16.3
BILL                               ePPP   PPP    14 21 07.4
BILL                                pmax   pmax
            comp=Z,1.0nm,0.9s
MYLDM Lahad Datu        49.07 130   P      P      14 18 27.5  -0.7
MYLDM                               IAmb   IAmb   14 18 27.6
            comp=Z,11nm,1.1s
EKA   Eskdalemuir Ar    54.09 315   P      P      14 19 05.2  -0.1
            comp=Z,1.0nm,0.4s,baz=67,slow=5.8,SNR=9.0
SUMG  Summit            57.78 342  i P    P      14 19 31.0  -0.9
TOLK  Toolik Lake Re    62.02  19   P      P      14 20 00.6  -0.1
TOLK                                IAmb   IAmb   14 20 01.4
            comp=Z,4.8nm,0.7s
ESDC  Sonseca Array     62.43 300   P      P      14 20 03.6  -0.3
            comp=Z,1.1nm,0.6s,baz=54,slow=6.1,SNR=8.4
IMAR  Indian Mountai    62.91  23   P      P      14 20 05.8  -0.7
COLD  Coldfoot          62.94  20   P      P      14 20 06.5  -0.3
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COLD				IAmb	IAmb	14 20 08.0	
	comp=Z,5.7nm,0.8s						
A36M	**Sachs Harbour**	**63.58**	**9**	P	**P**	**14 20 10.5**	**-0.4**
A36M				IAmb	IAmb	14 20 12.6	
	comp=Z,5.9nm,0.8s						
BMAR	**Burnt Mountain**	**64.15**	**18**	P	**P**	**14 20 15.8**	**+1.0**
CAST	**Castle Rocks**	**65.29**	**24**	P	**P**	**14 20 22.7**	**+0.4**
CAST				IAmb	IAmb	14 20 24.1	
	comp=Z,7.6nm,1.0s						
INK	**Inuvik**	**65.68**	**14**	P	**P**	**14 20 24.6**	**0.0**
INK				pmax	pmax		
	comp=Z,11nm,1.3s						
INK	**Inuvik**	**65.68**	**14**	P	**P**	**14 20 24.6**	**0.0**
ILAR	**Eielson Array**	**65.70**	**21**	P	**P**	**14 20 23.8**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=316,slow=5.2,SNR=23						
ILAR	**Eielson Array**	**65.70**	**21**	P	**P**	**14 20 24.8**	**-0.1**
SCRK	**Sand Creek**	**67.09**	**20**	P	**P**	**14 20 33.9**	**-0.1**
SCRK				IAmb	IAmb	14 20 34.1	
	comp=Z,3.4nm,0.8s						
EGAK	**Eagle**	**67.13**	**19**	P	**P**	**14 20 33.7**	**-0.3**
EGAK				IAmb	IAmb	14 20 52.2	
	comp=Z,6.1nm,1.3s						
BCAR	**Beaver Creek A**	**68.41**	**20**	P	**P**	**14 20 42.0**	**-0.2**
YKA	**Yellowknife Ar**	**73.89**	**8**	P	**P**	**14 21 14.4**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=339,slow=5.9,SNR=20						
YKA	**Yellowknife Ar**	**73.89**	**8**	P	**P**	**14 21 14.1**	**-1.1**
TORD	**Torodi Ar. Bea**	**74.79**	**274**	P	**P**	**14 21 20.2**	**-1.1**
	comp=Z,3.2nm,0.6s,baz=42,slow=5.1,SNR=21						
TORD	**Torodi Ar. Bea**	**74.79**	**274**	P	**P**	**14 21 19.9**	**-1.3**
TORD				IAmb	IAmb	14 21 21.1	
	comp=Z,2.4nm,0.8s						
KOWA	**Kowa**	**78.06**	**279**	P	**P**	**14 21 39.5**	**-0.3**
KOWA				IAmb	IAmb	14 21 40.1	
	comp=Z,3.4nm,0.6s						
WRA	**Warramunga Arr**	**78.47**	**131**	P	**P**	**14 21 42.6**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=315,slow=3.3,SNR=12						
WRA	**Warramunga Arr**	**78.47**	**131**	*i* P	**P**	**14 21 42.5**	**+0.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**81.25**	**134**	P	**P**	**14 21 57.3**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=330,slow=5.5,SNR=15						
ASAR	**Alice Springs**	**81.25**	**134**	P	**P**	**14 21 56.8**	**-0.1**
ASAR	**Alice Springs**	**81.25**	**134**	P	**P**	**14 21 56.8**	**-0.1**
DBIC	**Dimbokro**	**83.89**	**273**	P	**P**	**14 22 10.2**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=38,slow=4.6,SNR=4.6						
PDAR	**Pinedale Array**	**93.86**	**9**	P	**P**	**14 22 57.4**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=51,slow=2.5,SNR=8.2						
PDAR	**Pinedale Array**	**93.86**	**9**	P	**P**	**14 22 57.0**	**-1.4**
NVAR	**Mina Array Bea**	**96.66**	**17**	P	**P**	**14 23 11.2**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=334,slow=3.1,SNR=5.6						

SIGU ***18*** *14:17:59.4, $45\overset{\circ}{.}65$N×$26\overset{\circ}{.}58$E, h150^{km}, mb3.6*
BUC ***18*** *14:18:00.6±0.2, $45\overset{\circ}{.}65$N×$26\overset{\circ}{.}55$E, h143^{km}±1^{km}, ml4.2/43,*
Error ellipse: s-maj=1.7km s-min=1.3km az=160.0
IDC ***18*** *14:18:00.4±0.6, $45\overset{\circ}{.}75$N×$26\overset{\circ}{.}31$E, h146^{km}±5^{km}, mb3.3/6,*
mb1 3.4/9, mb1mx3.0/51, mbtmp3.8/9, Error ellipse:
s-maj=35.9km s-min=15.5km az=130.0
CFUSG ***18*** *14:18:00.1, $45\overset{\circ}{.}64$N×$26\overset{\circ}{.}65$E, h149^{km}, mb2.7/2, MD3.4/2,*
Romania Magtype MSH 2.7 from 2 stations
SOF ***18*** *14:18:02.8, $45\overset{\circ}{.}64$N×$26\overset{\circ}{.}35$E, h50^{km}, MD3.2*
BEO ***18*** *14:18:07.6±1.6, $45\overset{\circ}{.}47$N×$25\overset{\circ}{.}88$E, h58^{km}±1^{km}, ML3.1/14*
ISC 18 14:18:00.2±0.7**, $45\overset{\circ}{.}67$N**±$0\overset{\circ}{.}03$×**$26\overset{\circ}{.}52$E**±$0\overset{\circ}{.}03$**, h153**^{km}±4^{km}**,**
n103, σ$1\overset{s}{.}$31/154**, mb3.6**/6**, 63C-39D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BISRR	**Bisoca**	**0.18**	**133**	⇑P	**Pn**	**14 18 20.9**	**-0.1**
BISRR				⇓S	**Sn**	**14 18 35.5**	**-1.2**
PLOR	**Plostina**	**0.20**	**27**	⇑P	**Pn**	**14 18 20.4**	**-0.6**
PLOR				⇑S	**Sn**	**14 18 34.6**	**-2.2**
VRI	**Vrincioaia**	**0.24**	**37**	⇑P	**Pn**	**14 18 20.6**	**-0.4**
VRI				⇑S	**Sn**	**14 18 35.9**	**-1.0**
COVR	**Voineasa-Covas**	**0.28**	**308**	⇑P	**Pn**	**14 18 20.4**	**-0.7**
COVR				⇓S	**Sn**	**14 18 35.6**	**-1.5**
NEHR	**Nehoiu**	**0.29**	**213**	⇑P	**Pn**	**14 18 21.0**	**-0.2**
NEHR				⇑S	**Sn**	**14 18 36.5**	**-0.6**
MLR	**Muntele Rosu**	**0.44**	**246**	⇓P	**Pn**	**14 18 21.4**	**-0.5**
MLR				⇑S	**Sn**	**14 18 37.7**	**-0.6**
MLR	**Muntele Rosu**	**0.44**	**246**	P	**Pn**	**14 18 21.4**	**-0.5**
	201nm,0.3s,baz=134,slow=5.1,SNR=784						
MLR				S	**Sn**	**14 18 37.7**	**-0.6**
	57nm,0.3s,baz=236,slow=22,SNR=12						
ISR	**Istrita**	**0.56**	**178**	⇑P	**Pn**	**14 18 22.1**	**-0.2**
ISR				⇑S	**Sn**	**14 18 37.8**	**-1.3**
OZUR		**0.66**	**310**	⇑P	**Pn**	**14 18 22.1**	**-0.8**
OZUR				⇑S	**Sn**	**14 18 38.8**	**-1.4**
SECR		**0.71**	**207**	⇑P	**Pn**	**14 18 23.2**	**0.0**
SECR				⇑S	**Sn**	**14 18 40.1**	**-0.6**
GHRR		**0.73**	**58**	⇑P	**Pn**	**14 18 23.4**	**+0.2**
GHRR				⇑S	**Sn**	**14 18 40.2**	**-0.6**
TUDR		**0.81**	**95**	⇑P	**Pn**	**14 18 23.5**	**-0.3**
TUDR				⇑S	**Sn**	**14 18 40.5**	**-1.2**
PGOR	**Pogoanele**	**0.83**	**157**	⇓P	**Pn**	**14 18 24.0**	**0.0**
PGOR				⇑S	**Sn**	**14 18 41.0**	**-1.1**
PLAR	**PLOIESTI**	**0.84**	**205**	⇑P	**Pn**	**14 18 23.9**	**-0.1**
TESR	**Tescani**	**0.84**	**6**	⇓P	**Pn**	**14 18 23.3**	**-0.7**
TESR				⇓S	**Sn**	**14 18 40.1**	**-2.3**
DOPR	**Dopca**	**0.84**	**291**	⇑P	**Pn**	**14 18 23.7**	**-0.4**
DOPR				⇑S	**Sn**	**14 18 41.4**	**-0.9**
SLCR	**Slobozia Conac**	**0.88**	**95**	⇑P	**Pn**	**14 18 24.0**	**-0.3**
SLCR				⇓S	**Sn**	**14 18 41.5**	**-1.1**
IZVR	**Izvoarele**	**0.89**	**98**	⇑P	**Pn**	**14 18 24.1**	**-0.2**
IZVR				⇓S	**Sn**	**14 18 41.0**	**-1.7**
SCHL	**Schela**	**0.94**	**100**	⇑P	**Pn**	**14 18 24.4**	**-0.3**
SCHL				⇑S	**Sn**	**14 18 42.0**	**-1.4**
VARL	**Varlezi**	**0.96**	**76**	⇓S	**Sn**	**14 18 42.6**	**-1.1**
BIR	**Birlad**	**0.97**	**52**	⇓P	**Pn**	**14 18 24.8**	**-0.2**
BIR				⇑S	**Sn**	**14 18 42.7**	**-1.4**
SULR		**1.01**	**191**	⇑P	**Pn**	**14 18 25.4**	**+0.1**
SULR				⇓S	**Sn**	**14 18 44.4**	**-0.2**
SCTR	**Scanteiesti**	**1.03**	**89**	⇑P	**Pn**	**14 18 25.6**	**+0.1**
SCTR				⇓S	**Sn**	**14 18 43.9**	**-1.0**
VOIR		**1.06**	**258**	⇓P	**Pn**	**14 18 25.1**	**-0.7**
VOIR				⇑S	**Sn**	**14 18 44.2**	**-1.3**
TATR	**Tatarca**	**1.07**	**94**	⇑S	**Sn**	**14 18 44.4**	**-1.1**
VLDR	**Vladesti**	**1.10**	**81**	⇓P	**Pn**	**14 18 26.0**	**-0.1**
VLDR				⇓S	**Sn**	**14 18 44.6**	**-1.4**
MTUR	**Matau**	**1.12**	**247**	⇑P	**Pn**	**14 18 26.3**	**-0.1**
GIUM	**Giurgiulesti**	**1.20**	**98**	⇑P	**Pn**	**14 18 27.0**	**0.0**
GIUM				⇑S	**Sn**	**14 18 46.3**	**-1.2**
AMRR	**Amara**	**1.21**	**151**	⇑P	**Pn**	**14 18 27.1**	**-0.1**
AMRR				⇓S	**Sn**	**14 18 46.7**	**-0.9**
LEHL	**Lehliu**	**1.22**	**170**	⇑P	**Pn**	**14 18 27.2**	**-0.1**
CFR	**Carcaliu**	**1.24**	**113**	⇓P	**Pn**	**14 18 26.8**	**-0.6**
CFR				⇓S	**Sn**	**14 18 46.3**	**-1.8**
GIRR	**Girov**	**1.28**	**359**	⇓P	**Pn**	**14 18 27.8**	**0.0**
VASR	**Vaslui**	**1.31**	**42**	⇓P	**Pn**	**14 18 27.8**	**-0.3**
VASR				⇑S	**Sn**	**14 18 47.9**	**-1.5**
ARR	**Arges**	**1.36**	**258**	⇓P	**Pn**	**14 18 28.3**	**-0.4**
ARR				⇑S	**Sn**	**14 18 50.1**	**-0.4**
STFAR	**Stefanesti-Arg**	**1.37**	**234**	⇓P	**Pn**	**14 18 28.7**	**0.0**
STFAR				⇓S	**Sn**	**14 18 50.1**	**-0.4**
BUC1	**Bucharest**	**1.37**	**195**	⇑P	**Pn**	**14 18 28.5**	**-0.2**
BUC1				⇑S	**Sn**	**14 18 49.5**	**-1.0**
HARR	**Harsova**	**1.40**	**134**	⇓P	**Pn**	**14 18 28.7**	**-0.3**
LEOM	**Leova**	**1.44**	**56**	⇑P	**Pn**	**14 18 29.3**	**-0.1**
LEOM				⇑S	**Sn**	**14 18 50.4**	**-1.3**
LEOM	**Leova**	**1.44**	**56**	P	**Pn**	**14 18 28.9**	**-0.5**
SGRR	**Singureni**	**1.50**	**195**	⇑P	**Pn**	**14 18 29.5**	**-0.5**
SGRR				⇑S	**Sn**	**14 18 51.1**	**-1.7**
TLBR	**Topalu**	**1.56**	**136**	⇑P	**Pn**	**14 18 30.4**	**-0.2**
TLBR				⇓S	**Sn**	**14 18 52.0**	**-2.0**
TPGR	**Topolog**	**1.57**	**121**	⇑P	**Pn**	**14 18 30.2**	**-0.6**
TPGR				⇓S	**Sn**	**14 18 52.2**	**-1.9**
HUMR	**Humele**	**1.58**	**224**	⇑P	**Pn**	**14 18 30.2**	**-0.6**
HUMR				⇓S	**Sn**	**14 18 52.7**	**-1.6**
TLCR		**1.69**	**106**	⇓P	**Pn**	**14 18 31.9**	**-0.1**
TLCR				⇑S	**Sn**	**14 18 54.8**	**-1.5**
CVDA	**Cernavoda**	**1.72**	**141**	⇑P	**Pn**	**14 18 32.1**	**-0.3**
CVDA				⇑S	**Sn**	**14 18 54.9**	**-2.0**
COPA	**Copaceanca**	**1.80**	**212**	⇑P	**Pn**	**14 18 32.6**	**-0.6**
COPA				⇑S	**Sn**	**14 18 56.8**	**-1.8**
TIRR	**Tirgusor**	**1.81**	**132**	⇑P	**Pn**	**14 18 33.0**	**-0.3**
TIRR				⇑S	**Sn**	**14 18 56.7**	**-2.0**
LOT	**Lotru**	**1.95**	**264**	⇑P	**Pn**	**14 18 34.9**	**-0.1**
LOT				⇑S	**Sn**	**14 19 01.5**	**-0.2**
MFTR	**Murfatlar**	**2.02**	**137**	⇑P	**Pn**	**14 18 35.4**	**-0.3**
MFTR				⇑S	**Sn**	**14 19 01.1**	**-1.8**
MILM	**Milestii Mici**	**2.02**	**51**	⇑P	**Pn**	**14 18 35.4**	**-0.3**
MILM	**Milestii Mici**	**2.02**	**51**	P	**Pn**	**14 18 35.4**	**-0.3**
MILM				Pm		14 18 35.6	
MILM				S	**Sn**	**14 19 00.4**	**-2.6**
MILM				Sm		14 19 00.5	
MILM				m		14 19 01.0	
KIS	**Kishinev**	**2.07**	**49**	*e*P	**Pn**	**14 18 35.5**	**-0.8**
	280nm,0.5s						
KIS				*e*S	**Sn**	**14 19 01.0**	**-3.1**
	370nm,0.5s						
KIS	**Kishinev**	**2.07**	**49**	⇑P	**Pn**	**14 18 35.6**	**-0.8**
KIS				⇓S	**Sn**	**14 19 02.2**	**-1.9**
KIS	**Kishinev**	**2.07**	**49**	P	**Pn**	**14 18 35.5**	**-0.8**
KIS				Pm		14 18 36.0	
KIS				S	**Sn**	**14 19 01.0**	**-3.1**
KIS				Sm		14 19 01.2	
KIS				m		14 19 02.0	
RAZG	**Razgrad**	**2.11**	**180**	⇓P	**Pn**	**14 18 35.9**	**-0.9**
RAZG				⇓S	**Sn**	**14 19 03.1**	**-1.9**
BUR01	**Bucovina Ar. S**	**2.14**	**336**	⇓P	**Pn**	**14 18 37.9**	**+0.6**
BURAR	**Bucovina Array**	**2.14**	**336**	⇓P	**Pn**	**14 18 37.9**	**+0.6**
ZIMR		**2.18**	**203**	⇓S	**Sn**	**14 19 05.8**	**-0.5**
PSN	**Preselentsi**	**2.32**	**149**	*i* P	**Pn**	**14 18 41.2**	**+1.9**
SZH	**Strazhica**	**2.44**	**190**	*i* P	**Pn**	**14 18 40.1**	**-0.7**
PURM	**Purcari**	**2.48**	**69**	⇓P	**Pn**	**14 18 41.2**	**0.0**
PRD	**Provadia**	**2.55**	**165**	*i* P	**Pn**	**14 18 42.5**	**+0.4**
SRE	**Strehaia**	**2.55**	**248**	⇓P	**Pn**	**14 18 41.7**	**-0.4**
GZR	**Gura Zlata**	**2.65**	**265**	⇓P	**Pn**	**14 18 43.3**	**-0.1**
GZR				⇑S	**Sn**	**14 19 16.2**	**-0.4**
ROIA	**ROIAK**	**2.65**	**166**	*i* P	**Pn**	**14 18 43.6**	**+0.2**
SORM	**Soroca**	**2.76**	**26**	⇓P	**Pn**	**14 18 44.0**	**-0.7**
SORM	**Soroca**	**2.76**	**26**	P	**Pn**	**14 18 43.5**	**-1.1**
KSV	**Kosov**	**2.82**	**340**	*e*Pn	**Pn**	**14 18 45.1**	**-0.3**
DRGR		**2.87**	**294**	*e*Pn	**Pn**	**14 18 45.4**	**-0.7**
KMPD	**K-Podol'skiy**	**2.89**	**359**	*e*Pn	**Pn**	**14 18 45.4**	**-0.8**
KMPD				*e*Sn	**Sn**	**14 19 19.6**	**-2.3**
NDNU	**Novodnistrovsk**	**2.98**	**11**	*e*Pn	**Pn**	**14 18 46.6**	**-0.7**
NDNU				Pm		14 18 47.1	
MPEP	**Malo Peshtene**	**3.05**	**222**	*i* P	**Pn**	**14 18 47.7**	**-0.7**
BZS	**Buzias**	**3.44**	**271**	*e*Pn	**Pn**	**14 18 53.1**	**-0.1**
BZS				*e*Sn	Sn	14 19 24.2	-10
MDVR	**Moldovita**	**3.51**	**257**	⇓P	**Pn**	**14 18 54.2**	**-0.1**
HORU	**Horodok**	**3.54**	**359**	*e*Pn	**Pn**	**14 18 54.1**	**-0.4**
ZAGS	**Zajecar**	**3.58**	**240**	*e*Pn	**Pn**	**14 18 52.8**	**-2.2**
ZAGS				*e*Sn	Sn	14 19 25.1	-12
KUBS	**Kucevo**	**3.66**	**252**	*e*Pn	**Pn**	**14 18 54.8**	**-1.3**
KUBS				*e*Sn	Sn	14 19 27.3	-12
ZAPS	**Zavoj**	**3.67**	**231**	*e*Pn	**Pn**	**14 18 55.2**	**-1.1**
ZAPS				*e*Sn	Sn	14 19 28.3	-12
VTS	**Vitosha**	**3.86**	**219**	⇑P	**Pn**	**14 18 59.1**	**+0.2**
VTS	**Vitosha**	**3.86**	**219**	*e*Pn	**Pn**	**14 18 58.4**	**-0.5**
VTS				*e*Sn	**Sn**	**14 19 36.3**	**-8.2**
BOVS	**Bovan**	**4.00**	**241**	*e*Pn	**Pn**	**14 18 59.1**	**-1.3**
BOVS				*e*Sn	Sn	14 19 36.9	-10
BOSS	**Bosilegrad**	**4.31**	**224**	*e*Pn	**Pn**	**14 19 04.5**	**-0.1**
BOSS				*e*Sn	Sn	14 19 43.8	-11
BARS	**Barje**	**4.43**	**231**	*e*Pn	Pn	14 18 51.7	-14
BARS	**Barje**	**4.43**	**231**	*e*Pn	**Pn**	**14 19 05.7**	**-0.4**
BARS				*e*Sn	Sn	14 19 25.6	-32
BARS				*e*Sn	Sn	14 19 45.6	-12
GRUS	**Gruza**	**4.50**	**249**	*e*Pn	**Pn**	**14 19 06.6**	**-0.5**
GRUS				*e*Sn	Sn	14 19 47.5	-12
PRVS	**Prvonek**	**4.50**	**227**	*e*Pn	**Pn**	**14 19 06.7**	**-0.4**
PRVS				*e*Sn	Sn	14 19 47.5	-12
TRUS	**Trudelj**	**4.58**	**254**	*e*Pn	**Pn**	**14 19 07.6**	**-0.5**
TRUS				*e*Sn	Sn	14 19 49.4	-12
SELS	**Selova**	**4.58**	**240**	*e*Pn	**Pn**	**14 19 06.5**	**-1.6**
DIVS	**Divibare**	**4.90**	**254**	*e*Pn	**Pn**	**14 19 10.8**	**-1.6**
DIVS				*e*Sn	Sn	14 19 58.3	-10
IVAS	**Ivanjica**	**5.01**	**247**	*e*Pn	**Pn**	**14 19 11.9**	**-1.9**
IVAS				*e*Sn	Sn	14 20 00.1	-11
SEV	**Sevastopol'**	**5.18**	**100**	P	**Pn**	**14 19 15.4**	**-0.6**
SEV				Pm		14 19 16.7	
SEV				S	**Sn**	**14 20 13.1**	**-2.1**
SEV				Sm		14 20 14.4	
SEV	**Sevastopol'**	**5.18**	**100**	*e*P	**Pn**	**14 19 15.4**	**-0.6**
SEV				Pm		14 19 16.7	
	comp=Z,2.0nm,0.3s						
SEV				*e*x	x	14 19 25.5	
SEV				*e*S	**Sn**	**14 20 13.1**	**-2.1**
SEV				Sm		14 20 14.4	
	comp=N,4.0nm,0.4s,comp=E,1.0nm,0.4s						
AKASG	**Malin Array Be**	**5.34**	**19**	P	**Pn**	**14 19 17.0**	**-1.1**
	comp=E,10.0nm,0.3s,baz=204,slow=13,SNR=45						
SUDU	**Sudak**	**6.03**	**94**	P	**Pn**	**14 19 25.2**	**-2.1**
SUDU				Pm		14 19 26.2	
SUDU				S	**Sn**	**14 20 33.7**	**-1.8**
SUDU				Sm		14 20 34.4	
NACGM	**Naroch**	**9.24**	**1**	*i* P	**Pn**	**14 20 08.0**	**-2.0**
BELG	**Belogornoye**	**15.36**	**56**	P	**P**	**14 21 31.2**	**+1.4**
	comp=E,0.9nm,0.3s,baz=252,slow=1.5,SNR=3.9						
FINES	**FINESS Array B**	**15.80**	**359**	P	**Pn**	**14 21 34.4**	**+0.4**
	comp=E,0.2nm,0.3s,baz=172,slow=11,SNR=1.8						
ARCES	**ARCESS Array B**	**23.93**	**359**	P	**P**	**14 23 00.0**	**+0.3**
	comp=E,4.0nm,1.0s,baz=188,slow=11,SNR=1.4						
KURBB	**Kurchatov Arra**	**34.46**	**63**	P	**P**	**14 24 34.4**	**+1.5**
	comp=E,0.5nm,0.4s,baz=286,slow=9.7,SNR=3.5						
ZALV	**Zalesovo Beam**	**37.54**	**56**	P	**P**	**14 25 00.8**	**+1.7**
	comp=E,1.1nm,0.5s,baz=286,slow=9.3,SNR=5.6						
MKAR	**Makanchi Array**	**37.90**	**68**	P	**P**	**14 25 03.7**	**+1.3**
	comp=E,0.3nm,0.5s,baz=273,slow=9.0,SNR=2.2						
TORD	**Torodi Ar. Bea**	**38.65**	**221**	P	**P**	**14 25 09.6**	**+0.8**
	comp=E,0.3nm,0.3s,baz=16,slow=9.7,SNR=3.9						
DBIC	**Dimbokro**	**47.40**	**225**	P	**P**	**14 26 18.8**	**-0.2**
	comp=E,0.6nm,0.3s,baz=50,slow=7.2,SNR=1.4						

PRU ***18*** *14:23:07.9±0.0, $51\overset{\circ}{.}45$N×$16\overset{\circ}{.}07$E, h0^{km}*
VIE ***18*** *14:23:08.6±0.9, $51\overset{\circ}{.}33$N×$16\overset{\circ}{.}00$E, h0^{km}, mb2.3/2, ml2.6/3,*
Error ellipse: s-maj=7.8km s-min=5.7km az=77.0 75 km
WNW of Wroclaw Suspected Mining induced.
ISC 18 14:23:07.0±1.2**, $51\overset{\circ}{.}47$N**±$0\overset{\circ}{.}05$×**$16\overset{\circ}{.}07$E**±$0\overset{\circ}{.}03$**, h0**^{km}**, n24,**
σ$0\overset{s}{.}$73/48**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64**	**167**	*e*Pg	**Pg**	**14 23 19.3**	**+0.1**
KSP				*e*Sg	**Sg**	**14 23 27.4**	**-0.1**
CHVC	**Chvalec**	**0.88**	**181**	*e*PG	**Pg**	**14 23 24.1**	**+0.3**
CHVC				*e*SG	**Sg**	**14 23 36.0**	**+0.8**
	comp=Z,27nm,0.3s						
OSTC	**Ostas**	**0.91**	**174**	*e*PG	**Pg**	**14 23 24.7**	**+0.2**
OSTC				*e*SG	**Sg**	**14 23 37.1**	**+0.8**
	comp=Z,24nm,0.4s						
UPC	**Upice**	**0.96**	**182**	*e*PG	**Pg**	**14 23 25.6**	**+0.2**
UPC				*e*SG	**Sg**	**14 23 38.1**	**+0.3**
DPC	**Dobruska-Polom**	**1.13**	**172**	*e*PG	**Pg**	**14 23 28.3**	**-0.3**
DPC				*e*SG	**Sg**	**14 23 42.8**	**-0.4**
	comp=Z,18nm,0.4s						
PVCC	**Panska Ves**	**1.34**	**226**	*e*PG	**Pb**	**14 23 33.0**	**+0.1**
PVCC				*e*SG	**Sn**	**14 23 51.2**	**-0.2**
	comp=Z,71nm,0.3s						
KRLC	**Kraliky**	**1.46**	**162**	*e*PG	**Pn**	**14 23 34.1**	**-0.6**
KRLC				*e*SG	**Sg**	**14 23 53.2**	**-0.7**
	comp=Z,28nm,0.7s						
BRG	**Berggiesshubel**	**1.47**	**247**	Pg	**Pg**	**14 23 35.1**	**+0.1**
BRG				Sg	**Sn**	**14 23 55.2**	**+0.7**
BRG				Amp		14 23 55.9	
	comp=Z,25nm,0.3s						
PRU	**Pruhonice**	**1.77**	**214**	*e*PN	**Pn**	**14 23 38.3**	**-0.6**
PRU				*e*PG	**Pb**	**14 23 39.4**	**-0.9**
PRU				*e*SG	**Sg**	**14 24 03.8**	**0.0**
	comp=Z,16nm,0.6s						
CLL	**Collm**	**1.93**	**267**	*e*Pn	**Pn**	**14 23 41.0**	**-0.1**
CLL				*e*Pg	**Pb**	**14 23 43.0**	**-0.1**
CLL				*i*		14 23 58.0	
CLL				*e*Sg	**Sg**	**14 24 09.0**	**0.0**
	comp=Z,13nm,1.0s						
MORC	**Moravsky Berou**	**1.93**	**150**	*e*PN	**Pn**	**14 23 40.3**	**-0.8**
MORC				*e*SG	**Sn**	**14 24 06.4**	**+0.3**
VRAC	**Vranov**	**2.18**	**171**	*e*PN	**Pn**	**14 23 44.8**	**+0.2**
VRAC				*e*SG	**Sg**	**14 24 16.5**	**-0.6**
KRUC	**Moravsky**	**2.41**	**175**	*e*PN	**Pn**	**14 23 47.7**	**0.0**
KRUC				*e*SG	**Sg**	**14 24 24.1**	**-0.4**
NKC	**Novy Kostel**	**2.61**	**243**	*e*PN	**Pn**	**14 23 50.5**	**+0.1**
NKC				*e*PG	**Pg**	**14 23 56.5**	**-0.5**
OJC	**Ojcow**	**2.67**	**116**	*e*Pg	**Pg**	**14 23 58.3**	**+0.1**
OJC				*e*Sg	**Sg**	**14 24 33.2**	**+0.5**
JAVC	**Velka Javorina**	**2.80**	**158**	*e*PN	**Pn**	**14 23 54.7**	**+1.6**
KHC	**Kasperske Hory**	**2.83**	**215**	*e*PN	**Pn**	**14 23 52.9**	**-0.6**
KHC				*e*PG	**Pb**	**14 23 59.3**	**+0.9**
KHC				*e*SN	**Sn**	**14 24 28.0**	**-0.3**
KHC				*e*SG	**Sg**	**14 24 38.5**	**+0.6**
	comp=Z,7.0nm,0.4s						
CKRC	**Cesky Krumlov**	**2.88**	**204**	*e*PN	**Pn**	**14 23 55.7**	**+1.5**
CKRC				*e*PG	**Pg**	**14 24 01.0**	**-1.2**
LANS	**Liptovska Anna**	**3.18**	**135**	*e*PG	**Pg**	**14 24 06.9**	**-1.0**
LANS				*e*SG	**Sg**	**14 24 48.6**	**-0.4**
MODS	**Modra-Piesok**	**3.19**	**165**	*e*SG	**Sg**	**14 24 50.8**	**+1.4**
VYHS	**Vyhne**	**3.47**	**148**	*e*PG	**Pg**	**14 24 12.7**	**-0.7**
CONA	**Conrad Observa**	**3.54**	**182**	*e*Pn	**Pn**	**14 24 03.7**	**+0.4**
	comp=Z,1.1nm,0.3s						
CONA				*e*Sg	**Sg**	**14 24 58.7**	**-2.0**
	comp=Z,7.5nm,0.4s						
MOA	**Molln**	**3.81**	**199**	*e*Sg	**Sg**	**14 25 09.4**	**+0.2**
	comp=Z,3.4nm,0.4s						
ARSA	**Arzberg**	**4.23**	**185**	*i* Pn	**Pn**	**14 24 14.2**	**+1.4**
	comp=Z,0.9nm,0.2s						
ARSA				*e*Sg	**Sg**	**14 25 23.1**	**+0.2**
	comp=Z,2.8nm,0.6s						

JMA ***18*** *14:29:20.4±0.1, $24\overset{\circ}{.}00$N×$122\overset{\circ}{.}65$E, h29^{km}±3^{km}, M3.1*
TAP ***18*** *14:29:20.1, $23\overset{\circ}{.}97$N×$122\overset{\circ}{.}68$E, h26^{km}±1^{km}, ML3.4, D*
ISC 18 14:29:19.0±1.1**, $23\overset{\circ}{.}90$N**±$0\overset{\circ}{.}03$×**$122\overset{\circ}{.}67$E**±$0\overset{\circ}{.}02$**, h14**^{km}±9^{km}**,**
n99, σ$0\overset{s}{.}$70/174**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.60**	**25**	P	**Pg**	**14 29 30.9**	**0.0**
JYNG				S	**Sg**	**14 29 38.2**	**-0.7**
YOJ	**Yonaguni jima**	**0.64**	**29**	*i* P	**Pg**	**14 29 31.6**	**0.0**
	baz=38						
YOJ				S	**Sg**	**14 29 39.3**	**-0.8**
	baz=38						
YOJ	**Yonaguni jima**	**0.64**	**29**	P	**Pg**	**14 29 31.6**	**0.0**
YOJ				S	**Sg**	**14 29 39.2**	**-0.8**
HWA	**Hwalien**	**0.98**	**275**	P	**Pb**	**14 29 37.9**	**+0.2**
	baz=270						
EWUT	**Wuta**	**0.98**	**304**	P	**Pb**	**14 29 37.7**	**-0.1**
	baz=300						
EWUT				S	**Sb**	**14 29 50.9**	**+0.4**
	baz=300						
TEYL	**Yanliau Villag**	**0.98**	**268**	P	**Pb**	**14 29 38.2**	**+0.4**
	baz=253						
TEYL				*e*S	**Sb**	**14 29 50.5**	**-0.1**
	baz=253						
ETL	**Fush Village**	**0.99**	**285**	P	**Pb**	**14 29 38.4**	**+0.4**
	baz=265						
ETL				*e*S	**Sn**	**14 29 52.6**	**+0.2**
	baz=265						
ENA	**Nanau**	**1.00**	**302**	P	**Pb**	**14 29 38.0**	**-0.1**
	baz=298						
ENA				S	**Sg**	**14 29 51.8**	**+0.4**
	baz=298						
TWD	**Chiawan**	**1.00**	**281**	P	**Pb**	**14 29 37.5**	**-0.6**
	baz=276						
TWD				S	**Sb**	**14 29 51.0**	**-0.1**
	baz=276						
NACB	**Ninganchiao**	**1.02**	**286**	P	**Pb**	**14 29 38.0**	**-0.5**
	baz=266						
NACB				S	**Sb**	**14 29 51.1**	**-0.6**
	baz=266						
TWC	**Suao**	**1.03**	**313**	P	**Pb**	**14 29 38.4**	**-0.2**
	baz=310						
TWC				S	**Sb**	**14 29 51.3**	**-0.7**
	baz=310						
HATJ	**Hateruma jima**	**1.05**	**81**	P	**Pn**	**14 29 39.6**	**+0.3**
HATJ				S	**Sn**	**14 29 53.6**	**-0.2**
IRIF	**Iriomote-Funau**	**1.06**	**66**	P	**Pb**	**14 29 39.1**	**-0.1**
IRIF				S	**Sb**	**14 29 53.2**	**+0.3**
ETM	**Tongmen**	**1.08**	**274**	P	**Pb**	**14 29 38.9**	**-0.6**
	baz=260						
ETM				*e*S	**Sb**	**14 29 53.4**	**0.0**
	baz=260						
ETLH	**Xiulin Townshi**	**1.13**	**286**	P	**Pn**	**14 29 39.7**	**-0.7**
	baz=268						
ETLH				S	**Sb**	**14 29 54.8**	**-0.2**
	baz=268						
ESL	**Shilin**	**1.14**	**266**	P	**Pn**	**14 29 39.6**	**-0.9**
	baz=262						
ESL				*e*S	**Sb**	**14 29 54.4**	**-0.6**
	baz=262						
NDS	**Dongshan**	**1.14**	**310**	P	**Pb**	**14 29 40.8**	**+0.3**
	baz=307						
EGFH	**Guangfu**	**1.16**	**259**	*e*S	**Sn**	**14 29 56.3**	**-0.2**
	baz=255						
ILA	**Ilan**	**1.20**	**316**	*e*P	**Pn**	**14 29 41.7**	**+0.2**
	baz=313						
ILA				*e*S	**Sg**	**14 29 58.7**	**+0.8**
	baz=313						
HGSD	**Ruisui**	**1.21**	**251**	P	**Pn**	**14 29 41.1**	**-0.5**
	baz=247						
HGSD				*e*S	**Sb**	**14 29 56.2**	**-1.1**
	baz=247						
NTC	**Toucheng**	**1.22**	**321**	P	**Pb**	**14 29 42.0**	**+0.2**
	baz=332						
TWE	**Neicheng**	**1.23**	**312**	P	**Pb**	**14 29 42.1**	**+0.1**
	baz=309						
TWE				*e*S	**Sg**	**14 29 59.3**	**+0.6**
	baz=309						
ENTT	**Nioudou**	**1.25**	**306**	P	**Pn**	**14 29 42.2**	**+0.2**
	baz=303						
ENTT				*e*S	**Sg**	**14 29 59.7**	**+0.3**
	baz=303						
ECBN	**Changbin**	**1.26**	**243**	P	**Pn**	**14 29 42.0**	**-0.2**
	baz=226						
ECBN				S	**Sb**	**14 29 57.8**	**-0.8**
	baz=226						
TWB1	**Santiao Chiao**	**1.27**	**331**	P	**Pn**	**14 29 41.5**	**-0.8**
	baz=328						
TWB1				*e*S	**Sb**	**14 29 58.6**	**-0.2**
	baz=328						
NDT	**Datong Townshi**	**1.27**	**304**	P	**Pn**	**14 29 42.6**	**+0.3**
	baz=286						
NDT				*e*S	**Sg**	**14 29 59.9**	**0.0**
	baz=286						
JKRS	**Kuro-shima**	**1.27**	**74**	P	**Pn**	**14 29 42.8**	**+0.5**
JKRS				*e*S	**Sn**	**14 29 59.9**	**+0.7**
NNSB	**Datong**	**1.29**	**294**	*e*P	**Pn**	**14 29 42.3**	**-0.4**
	baz=277						
NNSB				*e*S	**Sb**	**14 29 59.0**	**-0.5**
	baz=277						
EHY	**Hungye**	**1.29**	**253**	*e*P	**Pn**	**14 29 43.0**	**+0.2**
	baz=249						
EHY				*e*S	**Sn**	**14 29 59.2**	**-0.7**
	baz=249						
NNS	**Nan Shan**	**1.30**	**295**	*e*P	**Pn**	**14 29 42.6**	**-0.3**
	baz=278						
NNS				*e*S	**Sg**	**14 30 01.6**	**+0.5**
	baz=278						
WHF	**Hehuan Shan**	**1.31**	**281**	*e*P	**Pn**	**14 29 42.9**	**-0.4**
	baz=278						
WHF				*e*S	**Sb**	**14 29 59.3**	**-1.1**
	baz=278						
TIPB	**Shuangxi**	**1.31**	**324**	P	**Pn**	**14 29 42.6**	**-0.4**
	baz=337						
TIPB				*e*S	**Sn**	**14 29 60.0**	**-0.4**
	baz=337						
FUSS	**Fushou**	**1.35**	**285**	*e*P	**Pn**	**14 29 43.6**	**0.0**
	baz=282						
FUSS				*e*S	**Sn**	**14 30 00.8**	**-0.6**
	baz=282						
EYUL	**Yuli**	**1.35**	**246**	*e*S	**Sn**	**14 30 01.2**	**-0.1**
	baz=244						
YULB	**Yu-li**	**1.36**	**248**	P	**Pn**	**14 29 43.7**	**+0.1**
	baz=246						
YULB				S	**Sn**	**14 30 00.8**	**-0.6**
	baz=246						
OWD	**Renai**	**1.37**	**273**	*e*P	**Pn**	**14 29 43.7**	**-0.2**
	baz=269						
OWD				*e*S	**Sn**	**14 30 00.2**	**-1.6**
	baz=269						
TWF1	**Yuli**	**1.37**	**247**	P	**Pn**	**14 29 43.9**	**+0.2**
	baz=244						
TWF1				S	**Sn**	**14 30 01.9**	**+0.2**
	baz=244						
CHGB	**Renai**	**1.38**	**277**	P	**Pn**	**14 29 43.8**	**-0.2**
	baz=274						
CHGB				*e*S	**Sn**	**14 30 01.1**	**-1.0**
	baz=274						
NWLT	**Wulai**	**1.38**	**310**	*e*P	**Pn**	**14 29 44.1**	**+0.2**
	baz=292						
NWLT				*e*S	**Sb**	**14 30 02.7**	**+0.7**
	baz=292						
VWDT	**VWDT**	**1.41**	**264**	*e*P	**Pn**	**14 29 44.5**	**+0.2**
	baz=261						
VWDT				*e*S	**Sn**	**14 30 01.2**	**-1.4**
	baz=261						
YHNB	**Yeheng**	**1.41**	**303**	P	**Pn**	**14 29 44.2**	**-0.1**
	baz=300						

YHNB	 baz=300			*e*S	Sg	14 30 04.7	+0.3
WFSB	Wu-fen Shan baz=323	1.42	325	P	Pn	14 29 43.9	-0.5
WFSB	 baz=323			*e*S	Sb	14 30 03.2	-0.1
JIJ	Ishigaki jima	1.42	71	P	Pn	14 29 44.3	-0.2
JIJ				S	Sn	14 30 02.0	-1.0
NSK	Sanguang baz=285	1.42	303	P	Pn	14 29 44.4	-0.1
NSK	 baz=285			*e*S	Sg	14 30 05.2	+0.1
TDCB	Techi baz=282	1.43	285	*e*P	Pn	14 29 44.7	+0.1
CHKT	Chengkung baz=221	1.44	237	S	Sn	14 30 01.3	-2.0
FULB	Fuli baz=226	1.44	241	*e*S	Sn	14 30 02.9	-0.6
TWA	Mucha baz=315	1.46	318	*e*P	Pn	14 29 45.6	+0.6
TWA	 baz=315			*e*S	Sg	14 30 05.6	-0.6
NHDH	Xindian Distri baz=330	1.48	316	*e*P	Pg	14 29 47.8	+0.2
NHDH	 baz=330			S	Sb	14 30 05.3	+0.2
TATO	Taipei baz=329	1.52	315	*e*P	Pn	14 29 45.8	0.0
TATO	 baz=329			*e*S	Sb	14 30 06.1	+0.1
ECS	Chishang baz=225	1.55	239	*e*S	Sn	14 30 06.2	0.0
EDH	Donghe baz=221	1.56	234	*e*P	Pn	14 29 46.3	0.0
EDH	 baz=221			*e*S	Sn	14 30 04.2	-2.0
WPL	Puli Township baz=272	1.57	274	*e*P	Pn	14 29 47.0	+0.5
SSLB	Suanglung baz=263	1.57	266	*e*P	Pn	14 29 47.2	+0.6
SSLB	 baz=263			*e*S	Sn	14 30 06.5	-0.3
DPDB	Guoxing baz=263	1.60	275	P	Pn	14 29 47.6	+0.6
DPDB	 baz=263			*e*S	Sn	14 30 07.3	-0.1
SMLT	Sun Moon Lake baz=256	1.62	270	*e*P	Pn	14 29 47.6	+0.4
WHP	Taichung City baz=269	1.62	284	*e*P	Pb	14 29 49.0	+0.2
WHP	 baz=269			*e*S	Sb	14 30 10.3	+1.2
LDUT	Ludao baz=221	1.65	222	*e*S	Sn	14 30 05.7	-2.8
JISG	Ishigakijimahi	1.65	65	P	Pn	14 29 47.2	-0.3
JISG				S	Sn	14 30 07.3	-1.2
TYC	Yuchr baz=268	1.66	270	*e*P	Pn	14 29 48.4	+0.7
TYC	 baz=268			*e*S	Sn	14 30 09.0	+0.2
ELDTW	Lidau baz=243	1.67	245	*e*P	Pn	14 29 47.8	-0.3
LIOB	Emei baz=294	1.68	297	*e*P	Pn	14 29 49.1	+1.1
NSTT	Nanjuang baz=293	1.69	296	*e*P	Pn	14 29 49.0	+0.9
LONT	Longtian baz=223	1.73	235	*e*P	Pn	14 29 49.2	+0.5
LONT	 baz=223			*e*S	Sn	14 30 10.3	-0.2
ALS	Alishan baz=255	1.75	258	*e*P	Pb	14 29 50.7	-0.5
ALS	 baz=255			*e*S	Sn	14 30 11.9	+0.4
WJS	Zhushan baz=265	1.78	268	*e*P	Pb	14 29 51.4	0.0
WJS	 baz=265			*e*S	Sb	14 30 15.0	+1.4
TWQ1	Liyutan baz=282	1.79	285	*e*P	Pb	14 29 52.1	+0.5
TWQ1	 baz=282			*e*S	Sb	14 30 14.2	+0.3
WWF	Wufeng baz=272	1.81	275	*e*P	Pb	14 29 51.9	0.0
WWF	 baz=272			*e*S	Sb	14 30 15.9	+1.5
TWGBT	Beinan baz=222	1.81	234	*e*P	Pn	14 29 50.1	+0.3
TWGBT	 baz=222			*e*S	Sn	14 30 11.6	-1.1
WNT	Mingjian baz=267	1.82	270	*e*P	Pb	14 29 51.9	-0.2
WNT	 baz=267			*e*S	Sb	14 30 15.0	+0.3
TWG	Pinlang baz=222	1.82	234	*e*S	Sn	14 30 11.5	-1.3
WNT1	Nantou City baz=268	1.82	271	*e*S	Sg	14 30 16.9	-0.8
TCU	Taichung baz=275	1.84	278	*e*P	Pb	14 29 51.8	-0.7
TCU	 baz=275			*e*S	Sb	14 30 15.7	+0.4
CHN5	Tsauling baz=259	1.85	261	*e*P	Pn	14 29 51.8	+1.4
CHN5	 baz=259			*e*S	Sb	14 30 16.2	+0.5
STYH	Taoyuan baz=246	1.88	248	*e*P	Pn	14 29 52.0	+1.2
STYH	 baz=246			*e*S	Sb	14 30 17.6	+1.0
STYT	Tauyuan baz=246	1.90	248	*e*P	Pb	14 29 53.2	-0.3
STYT	 baz=246			*e*S	Sn	14 30 15.2	+0.3
WGK	Gukeng baz=261	1.94	264	*e*S	Sb	14 30 19.5	+1.2
WDLH	Douliu baz=262	1.96	264	*e*P	Pb	14 29 54.0	-0.5
WDLH	 baz=262			*e*S	Sb	14 30 20.0	+1.1
TPUB	Ta-pu baz=240	1.96	253	*e*P	Pb	14 29 53.8	-0.8
TPUB	 baz=240			*e*S	Sb	14 30 18.6	-0.3
WTP	Ta-pu baz=249	2.00	251	*e*P	Pb	14 29 54.9	-0.2
WTP	 baz=249			*e*S	Sb	14 30 20.6	+0.7
JTJ	Tarama	2.00	68	P	Pn	14 29 52.7	+0.4
JTJ				*e*S	Sn	14 30 16.6	-0.5
ECL	Taimali baz=229	2.04	231	*e*S	Sn	14 30 17.4	-0.8
SLGT	Liugui baz=233	2.06	244	*e*P	Pb	14 29 57.3	+1.0
SLGT	 baz=233			*e*S	Sb	14 30 23.0	+1.1
SGST	Jiashian baz=246	2.08	247	*e*P	Pb	14 29 55.9	-0.7
SGST	 baz=246			*e*S	Sb	14 30 22.2	-0.1
CHN1	Nanshi baz=249	2.09	250	*e*P	Pb	14 29 56.5	-0.2
CHN1	 baz=249			*e*S	Sb	14 30 23.2	+0.6
CHY	Chiayi baz=257	2.10	259	*e*S	Sb	14 30 22.2	-0.5
WRL	Guolierlin Hig baz=282	2.10	270	*e*P	Pn	14 29 55.5	+1.8
WRL	 baz=282			*e*S	Sb	14 30 21.5	-1.2
TWK	Hsinying baz=251	2.10	253	*e*P	Pb	14 29 56.5	-0.4
TWK	 baz=251			*e*S	Sb	14 30 22.4	-0.4
WTK	Tuku baz=262	2.10	265	*e*P	Pb	14 29 56.0	-0.9
WTK	 baz=262			*e*S	Sb	14 30 22.9	+0.1
SNST	Tainan City baz=250	2.10	252	*e*S	Sb	14 30 23.3	+0.3
SSD	Sandimen baz=232	2.20	239	*e*P	Pb	14 29 58.4	-0.2
SSD	 baz=232			*e*S	Sb	14 30 25.0	-0.7
TSMG	Majia baz=230	2.21	238	*e*P	Pb	14 29 58.6	-0.2
TSMG	 baz=230			*e*S	Sn	14 30 22.8	+0.5
MASBT	Mashibuluo baz=227	2.27	236	*e*P	Pn	14 29 57.5	+1.4
MASBT	 baz=227			*e*S	Sb	14 30 27.6	-0.1
SCZT	Fangliau baz=223	2.42	232	*e*P	Pn	14 29 59.0	+0.8
SCZT	 baz=223			*e*S	Sn	14 30 28.1	+0.5
JIRB	Irabujima	2.46	67	P	Pn	14 29 59.9	+1.1
JIRB				*e*S	Sn	14 30 28.9	+0.3
JMJ2	Miyako jima3	2.57	70	P	Pn	14 30 01.3	+1.1
JMJ2				*e*S	Sn	14 30 31.0	-0.2
TWKBT	Hengchun baz=221	2.59	222	*e*S	Sn	14 30 33.2	+1.3
JOGS	Gusukube	2.64	71	S	Sn	14 30 33.0	0.0
PHUB	P'eng-hu baz=250	2.87	263	*e*S	Sn	14 30 38.6	+0.1

IDC 18 14:42:48.5±19.0,**6°.76S×129°.45E,h111^{km}**±197^{km}**,mb3.1**/1**,mb1 3.3**/4**,mb1mx2.9**/36**,mbtmp3.5**/4**,ML3.3**/3**,MS3.4**/1**,Ms1 3.4**/1**,ms1mx2.4**/15**,Error ellipse: s-maj=165.2km s-min=61.8km az=41.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=20,slow=10,SNR=6.0	11.87	198	P	Pn	14 45 34.3	0.0
FITZ	 0.1nm,0.3s,baz=161,slow=11,SNR=3.7			S	Sn	14 47 39.1	-5.8
FITZ	 comp=Z,190nm,21.1s,baz=308,slow=38			LR	LR	14 50 13.3	
WRA	Warramunga Arr 0.1nm,0.3s,baz=335,slow=13,SNR=7.4	13.94	161	P	Pn	14 46 00.6	-0.8
WRA	 0.3nm,0.3s,baz=348,slow=19,SNR=7.3			S	Sn	14 48 25.2	-10
ASAR	Alice Springs 0.1nm,0.3s,baz=343,slow=9.4,SNR=18	17.35	166	P	Pn	14 46 43.9	-0.1
MKAR	Makanchi Array 0.4nm,0.9s,baz=114,slow=8.8,SNR=2.0	67.72	327	P	P	14 53 34.2	+0.1

NOU 18 14:43:35.0,16°.23S×166°.68E,h21^{km},MLv4.5/14**, Vanuatu Islands,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.93	33	P	Pb	14 43 51.6	-0.8
DVP	Devils Point	2.07	136	P	Pn	14 44 07.9	-0.6
RTV	Rentapao	2.28	133	P	Pn	14 44 11.4	0.0
KOUNC	Koumac, New Ca	4.86	208	P	Pn	14 44 47.1	+0.2
YATNC	Mamie plateau,	5.80	178	P	Pn	14 44 59.8	-0.1
DZM	Mont Dzumac	5.81	182	P	Pn	14 44 59.2	-0.9
NOUC	Port Laguerre	5.85	183	P	Pn	14 45 01.7	+1.2
OUENC	Ouen Island, N	6.16	179	P	Pn	14 45 05.4	+0.6
PINNC	Pines Island,	6.39	174	P	Pn	14 45 08.2	+0.3

IDC 18 14:56:52.6±5.9**,17°.10S×174°.32W,h328^{km}**±287^{km}**, mb3.6**/3**,mb1 3.8**/4**,mb1mx3.2**/34**,mbtmp4.3**/4**,Error ellipse: s-maj=390.0km s-min=103.9km az=88.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu 14nm,0.3s,baz=206,slow=4.4,SNR=49	4.01	38	P	Pn	14 58 02.1	+1.5
AFI	 26nm,0.3s,baz=226,slow=8.2,SNR=12			S	S	14 58 55.0	-0.2
STKA	Stephens Creek 0.9nm,0.5s,baz=75,slow=9.2,SNR=5.7	42.44	241	P	P	15 04 15.9	-0.5
WRA	Warramunga Arr 1.0nm,0.3s,baz=97,slow=6.7,SNR=50	48.62	258	P	P	15 05 04.4	-0.2
ASAR	Alice Springs 8.7nm,0.6s,baz=89,slow=8.4,SNR=199	48.77	253	P	P	15 05 05.8	+0.1

*DJA **18** 15:10:09.9±0.9,4°S±4°×12°9E±°,h11^{km}±7^{km},M3.7/7, mb4.0/1,MLv3.5/7*

ISC 18 15:10:11.8±1.0,**4°.01S**±0°.08×**129°.39E**±0°.06,**h36^{km},n13,** σ**$0^s.71$**/13**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.80	325	P	Pn	15 10 25.8	-0.8
MSAI				S	Sn	15 10 37.0	-0.3
AAI	Ambon	1.23	285	P	Pn	15 10 32.0	-0.5
FAKI	Fak Fak	3.06	69	P	Pn	15 10 57.6	0.0
FAKI	Fak Fak	3.06	69	P	Pn	15 10 57.6	0.0
SWI	Sorong	3.64	31	P	Pn	15 11 06.0	+0.3
LBMI	Labuha	3.84	331	P	Pn	15 11 09.4	+1.0
SANI	Sanana	3.91	300	P	Pn	15 11 09.6	+0.2
SANI	Sanana	3.91	300	P	Pn	15 11 19.3	+10
KDU	Kakadu	9.15	161	P	Pn	15 12 21.3	0.0
KNRA	Kununurra	11.61	183	P	Pn	15 12 56.5	+1.4
COEN	Coen	16.82	127	P	Pn	15 14 03.7	-0.9
QIS	Mount Isa	19.22	150	P	P	15 14 32.7	-0.3
MTSU	Mount Surprise	20.27	135	P	P	15 14 44.2	-0.2

*NIED **18** 15:43:15.8,37°.30N×144°.37E,h54^{km},MW3.4,Moment Tensor Solution.   s2   Moment tensor: Scale 10^{14}Nm; M_{rr}-1.27; $M_{\theta\theta}$-0.00; $M_{\phi\phi}$1.27; $M_{r\theta}$0.27; $M_{\theta\phi}$0.06; $M_{\phi r}$0.48; Fault plane solution: $M_0$1.38000×10^{14} NP1: ϕ_s193.00000°,δ57.00000°,λ-79.00000°.   NP2: ϕ_s353.00000°,δ35.00000°,λ-106.00000°.*

JMA 18 15:43:15.8±0.2,**37°.30N×144°.37E,h54^{km},M3.9,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	2.51	295	P	Pn	15 43 55.3	+1.2
JIKH				S	Sn	15 44 24.7	+1.1
JIO	Ouri	2.65	297	P	Pn	15 43 57.3	+1.2
JIO				S	Sn	15 44 28.8	+1.8
JKMT	Kesennumamotoy	2.74	304	P	Pn	15 43 58.3	+1.0
JKMT				S	Sn	15 44 30.1	+1.0
OFUJ	Ofunato	2.77	311	P	Pn	15 43 58.7	+1.0
OFUJ				S	Sn	15 44 30.8	+0.8
JFK	Kawauchi	2.79	272	P	Pn	15 43 58.9	+0.9
JFK				S	Sn	15 44 31.0	+0.6
JMK	Ichinoseki	2.98	305	P	Pn	15 44 02.1	+1.5
JMK				S	Sn	15 44 36.6	+1.5
JFT	Otama	3.22	275	P	Pn	15 44 06.1	+2.2
JFT				S	Sn	15 44 43.2	+2.2
BSO1	Boso 1	3.81	227	*e*S	Sn	15 44 55.1	+0.3
JRY	Ryogami san	4.58	255	P	Pn	15 44 23.1	+0.6
JRY				S	Sn	15 45 13.5	-1.0
JCH	Churui	5.36	352	P	Pn	15 44 32.2	-1.0
JCH				*e*S	Sn	15 45 31.0	-2.6
NEM2	Nemuro 2	6.15	9	P	Pn	15 44 40.5	-3.4
NEM2				*e*S	Sn	15 45 46.5	-6.4
JTKR	Abashiri--Toko	6.67	357	P	Pn	15 44 50.1	-1.0
JTKR				*e*S	Sn	15 46 02.2	-3.5

*IDC **18** 16:28:56.0±1.3,28°.32N×86°.56E,h0^{km},mb3.8/8, mb1 3.9/9,mb1mx3.5/51,mbtmp3.8/9,ML4.0/1,MS3.3/2, Ms1 3.3/2,ms1mx2.6/54,Error ellipse: s-maj=35.8km s-min=27.3km az=55.0*

ISC 18 16:29:03.5±1.0,**28°.4N**±0°.2×**86°.8E**±0°.2,**h57^{km},n12,** σ**$0^s.99$**/11,**mb3.6**/8,**Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	Shillong	5.38	120	*e*P	Pn	16 30 22.0	+0.7
SHL				*i* S	Sn	16 31 20.0	-2.0
AAK	Ala-Archa comp=Z,25nm,18.7s,baz=296,slow=37	17.34	328	LR	LR	16 39 37.6	
MKAR	Makanchi Array 0.5nm,0.3s,baz=172,slow=11,SNR=25	18.70	350	P	P	16 33 16.7	-0.5
KURBB	Kurchatov Arra 0.7nm,0.7s,baz=159,slow=9.9,SNR=5.2	23.06	347	P	P	16 34 04.5	+0.6
SONM	Songino Array 0.8nm,0.6s,baz=230,slow=8.9,SNR=6.0	24.69	33	P	P	16 34 19.8	+0.6
MMAI	Mount Meron Ar comp=Z,135nm,20.2s,baz=40,slow=42	44.04	289	LR	LR	16 59 22.4	
AKASG	Malin Array Be 0.3nm,0.4s,baz=84,slow=6.9,SNR=5.0	48.25	314	P	P	16 37 37.6	-0.9
FINES	FINESS Array B 2.1nm,0.9s,baz=108,slow=8.9,SNR=1.3	51.52	328	P	P	16 38 02.8	-0.3
ARCES	ARCESS Array B 3.9nm,0.8s,baz=101,slow=8.3,SNR=1.8	53.71	338	P	P	16 38 19.3	0.0
HFS	Hagfors 2.5nm,0.9s,baz=115,slow=7.0,SNR=6.7	57.45	325	P	P	16 38 45.8	-0.4
WRA	Warramunga Arr 0.5nm,0.9s,baz=324,slow=6.1,SNR=1.7	66.51	131	P	P	16 39 48.6	+1.1
TORD	Torodi Ar. Bea 0.6nm,1.0s,baz=47,slow=4.5,SNR=5.7	79.58	279	P	P	16 41 05.0	0.0

IDC 18 16:47:10.1±4.0**,21°.79N×139°.40E,h0^{km},mb3.9**/4**, mb1 4.1**/4**,mb1mx3.5**/36**,mbtmp3.9**/4**,Error ellipse: s-maj=331.4km s-min=26.6km az=85.0,West of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 0.2nm,0.4s,baz=8.0,slow=8.7,SNR=5.2	41.77	187	P	P	16 55 01.8	+0.3
ASAR	Alice Springs 0.4nm,0.9s,baz=12,slow=6.8,SNR=2.3	45.50	187	P	P	16 55 30.7	-0.7
ARCES	ARCESS Array B 5.9nm,1.0s,baz=60,slow=7.2,SNR=5.3	77.70	341	P	P	16 59 08.5	+0.1
FINES	FINESS Array B 3.8nm,1.0s,baz=53,slow=4.1,SNR=8.9	81.56	334	P	P	16 59 29.4	0.0

*SOME **18** 16:58:29.5,39°.85N×74°.18E,h10^{km}*

*KRNET **18** 16:58:32.9±0.1,39°.89N×74°.49E,h16^{km},mb3.1*

*NNC **18** 16:58:34.0±2.2,39°.96N×74°.64E,h0^{km},mb3.9,mpv3.5, Error ellipse: s-maj=16.0km s-min=9.1km az=169.0*

ISC 18 16:58:30.9±1.4,**39°.91N**±0°.04×**74°.45E**±0°.03,**h11^{km}**±11^{km}**, n57,**σ**$1^s.70$**/90**,34C-16D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan baz=80	0.73	279	⇑*e*P	Pn	16 58 47.5	0.0
SFK	 baz=80			⇑*e*S	Sn	16 58 58.6	-0.2
OHH	Osh baz=96	1.41	296	⇑*i*P	Pg	16 59 00.1	+2.0
OHH	 baz=96			⇑*i*S	Sg	16 59 19.9	+3.4
ARLS	Aral baz=56	1.95	357	⇓*i*P	Pg	16 59 09.0	+0.6
ARLS	 baz=56			⇓*i*S	Sg	16 59 35.7	+2.0
DRK	Karamyk baz=60	2.09	259	⇑*i*P	Pg	16 59 11.4	+0.4
DRK	 baz=60			⇑*i*S	Sg	16 59 39.2	+1.2
AML	Almayashu SNR=7.3	2.29	346	P	Pg	16 59 16.5	+1.6
AML	Almayashu baz=45	2.29	346	⇑*i*P	Pg	16 59 14.1	-0.8
AML	 baz=45			⇑*i*S	Sg	16 59 44.3	-0.4
UCH	Uchtor SNR=34	2.32	1	P	Pg	16 59 14.9	-0.5
UCH	Uchtor baz=0.0	2.32	1	⇓*i*P	Pg	16 59 14.3	-1.1
UCH	 baz=0.0			⇓*i*S	Sg	16 59 44.6	-0.9
ULHL	Ulahol SNR=18	2.70	30	P	Pg	16 59 21.4	-1.3
ULHL	Ulahol baz=29	2.70	30	⇑*i*P	Pb	16 59 19.4	0.0
ULHL	 baz=29			⇑*i*S	Sb	16 59 53.4	+0.8
AAK	Ala-Archa SNR=17	2.73	1	P	Pg	16 59 22.9	-0.2
AAK	Ala-Archa 6.4nm,0.5s	2.73	1	⇑Pg	Pg	16 59 22.5	-0.7
AAK	 16nm,0.8s			⇑Lg	Lg	17 00 01.1	
AAK	Ala-Archa baz=60	2.73	1	⇓*i*P	Pb	16 59 20.0	+0.2
AAK	 baz=60			⇓*i*S	Sb	16 59 54.2	+0.9
KBK	Karagaybulak SNR=28	2.77	8	P	Pg	16 59 22.2	-1.8
KBK	Karagaybulak baz=7.0	2.77	8	⇑*i*P	Pb	16 59 20.5	-0.1
KBK	 baz=7.0			⇑*i*S	Sb	16 59 55.3	+0.7
BTK	Batken baz=75	2.79	274	⇑*i*P	Pb	16 59 21.2	+0.3
BTK	 baz=75			⇑*i*S	Sb	16 59 56.3	+1.2
EKS2	Erkin-Say baz=49	2.80	350	⇓*i*P	Pb	16 59 21.1	+0.1
EKS2	 baz=49			⇓*i*S	Sb	16 59 56.2	+0.9
BOOM	Boomskoye usch baz=22	2.81	23	⇑*i*P	Pb	16 59 21.1	-0.2
BOOM	 baz=22			⇑*i*S	Sb	16 59 56.2	+0.4
MNAS	Manas baz=31	2.96	331	⇑*i*P	Pb	16 59 23.5	-0.3
MNAS	 baz=31			⇑*i*S	Sb	17 00 00.4	+0.3
MRKS	Merke 5.5nm,0.3s	2.98	342	*e*P	Pb	16 59 25.8	+1.8
MRKS	 9.8nm,0.4s			*e*S	Sg	17 00 06.4	-0.2
MRKS	Merke 5.5nm,0.3s	2.98	342	Pg	Pb	16 59 25.8	+1.8
MRKS	 9.8nm,0.4s			Lg	Lg	17 00 06.4	
TRKS	Terek-Say baz=3.0	2.99	304	⇓*i*P	Pb	16 59 23.2	-1.1
TRKS	 baz=3.0			⇓*i*S	Sb	16 59 59.9	-1.0
KDJ	Kajisay baz=42	3.03	42	⇑*i*P	Pb	16 59 23.9	-1.1
KDJ	 baz=42			⇑*i*S	Sb	17 00 00.8	-1.3
TARG	Taragay, Kyrgy baz=53	3.13	53	⇑*i*P	Pb	16 59 25.1	-1.7
TARG	 baz=53			⇑*i*S	Sb	17 00 03.1	-2.0
TKM2	Tokmak 2 SNR=18	3.13	16	P	Pb	16 59 27.5	+0.8
TKM2	Tokmak 2 6.2nm,0.3s	3.13	16	⇑Pg	Pb	16 59 26.9	+0.1
TKM2	 12nm,0.6s			⇓Lg	Lg	17 00 07.8	
TKM2	Tokmak 2 baz=15	3.13	16	⇓*i*P	Pb	16 59 25.5	-1.2
TKM2	 baz=15			⇓*i*S	Sb	17 00 03.9	-1.1
GAR	Garm baz=56	3.32	255	⇑*i*P	Pb	16 59 28.5	-1.5
GAR	 baz=56			⇑*i*S	Sb	17 00 08.9	-1.6
KST	Kastek 4.5nm,0.1s	3.33	19	*e*P	Pb	16 59 30.6	+0.5
KST	 18nm,0.7s			*e*S	Sg	17 00 14.8	-3.1
KST	Kastek 7.3nm,0.4s	3.33	19	Pg	Pb	16 59 31.6	+1.5
KST	 18nm,0.7s			Lg	Lg	17 00 14.8	
USP	Ospenovka SNR=6.1	3.36	1	P	Pg	16 59 34.7	-0.5
USP	Ospenovka baz=0.0	3.36	1	⇑*i*P	Pb	16 59 28.7	-1.8
USP	 baz=0.0			⇑*i*S	Sb	17 00 09.2	-2.1
DGS	Degeres 16nm,0.5s	3.48	16	*e*P	Pg	16 59 36.3	-1.2
DGS	 12nm,0.6s			*e*S	Sg	17 00 24.2	+1.7
DGS	Degeres 16nm,0.5s	3.48	16	Pg	Pg	16 59 36.3	-1.2
DGS	 12nm,0.6s			Lg	Lg	17 00 25.3	
SGDS	Sogindy 1.7nm,0.2s	3.54	2	Pg	Pg	16 59 36.9	-1.9
SGDS	 3.5nm,0.8s			Lg	Lg	17 00 25.3	
MTBS	Maitube 7.5nm,0.4s	3.55	24	*e*P	Pg	16 59 37.0	-1.8
MTBS	 6.5nm,0.5s			*e*S	Sg	17 00 25.9	+1.1
MTBS	Maitube 7.5nm,0.4s	3.55	24	Pg	Pg	16 59 37.1	-1.8
MTBS	 6.5nm,0.5s			Lg	Lg	17 00 25.9	
TNSS	Tian-Shan	3.65	30	*e*P	Pg	16 59 39.3	-1.5

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      6.7nm,0.4s
TNSS                                eS    Sg    17 00 29.5 +1.5
      3.7nm,0.6s
TNSS  Tian-Shan           3.65  30  Pg    Pg    16 59 39.3 -1.5
      6.7nm,0.4s
TNSS                                Lg    Lg    17 00 29.5
      3.7nm,0.6s
MDOK  Medeo               3.79  30  eP    Pg    16 59 40.9 -2.7
      5.8nm,0.6s
MDOK                                eS    Sg    17 00 32.6 -0.1
      6.0nm,0.5s
MDOK  Medeo               3.79  30  Pg    Pb    16 59 40.1 +2.2
      3.4nm,0.6s
MDOK                                Lg    Lg    17 00 31.1
      4.9nm,0.6s
MDOK  Medeo               3.79  30  Pg    Pg    16 59 40.7 -2.8
      5.8nm,0.6s
MDOK                                Lg    Lg    17 00 32.5
      6.0nm,0.5s
KNDC  Almaty              3.81  29 ⇓Pg    Pb    16 59 40.0 +1.8
      16nm,0.4s
KNDC                               ⇑Lg    Lg    17 00 32.3
      20nm,0.6s
KOTS  Kotyrbulak          3.88  30  eP    Pg    16 59 43.8 -1.4
      4.7nm,0.5s
KOTS                                eS    Sg    17 00 37.2 +1.7
      20nm,0.6s
KOTS  Kotyrbulak          3.88  30  Pg    Pg    16 59 44.2 -1.0
      4.7nm,0.5s
KOTS                                Lg    Lg    17 00 37.1
      20nm,0.6s
KRBS  Karabastau          3.90  13  eP    Pg    16 59 45.0 -0.5
      5.5nm,0.3s
KRBS                                eS    Sg    17 00 39.2 +3.2
      5.2nm,0.4s
KRBS  Karabastau          3.90  13  Pg    Pg    16 59 45.0 -0.5
      5.5nm,0.3s
KRBS                                Lg    Lg    17 00 39.2
      5.2nm,0.4s
IUG   Iuzhnay             4.02 305  eP    Pb    16 59 39.8 -2.0
      31nm,0.0s
IUG                                 eS    Sb    17 00 29.9 -0.6
      28nm,0.4s
IUG   Iuzhnay             4.02 305  Pg    Pb    16 59 39.8 -2.0
      42nm,0.2s
IUG                                 Lg    Lg    17 00 29.9
      28nm,0.4s
KTBS  Karatobe            4.15  23  eP    Pg    16 59 48.6 -1.9
      3.7nm,0.3s
KTBS                                eS    Sg    17 00 45.0 +0.8
      8.7nm,0.5s
KTBS  Karatobe            4.15  23  Pg    Pg    16 59 48.6 -1.9
      3.7nm,0.3s
KTBS                                Lg    Lg    17 00 44.9
      8.7nm,0.5s
KUU   Kurty               4.22  19  eP    Pg    16 59 49.4 -2.4
      4.3nm,0.3s
KUU                                 eS    Sg    17 00 47.0 +0.5
      8.5nm,0.7s
KUU   Kurty               4.22  19  Pg    Pg    16 59 49.4 -2.4
      4.3nm,0.3s
KUU                                 Lg    Lg    17 00 47.0
      8.5nm,0.7s
KK02  Karatay Array       4.35 318 ⇑Pn    Pb    16 59 44.4 -3.0
      0.7nm,0.5s,baz=135,slow=14
KK02                               ⇓Sn    Sb    17 00 36.3 -3.5
      1.3nm,0.4s
KK02                               ⇑Lg    Lg    17 00 54.3
      1.2nm,0.3s,baz=129,slow=27
BRLS  Borolday            4.66 313  eP    Pb    16 59 50.0 -2.7
      1.3nm,0.2s
BRLS                                eS    Sb    17 00 47.4 -1.4
      1.7nm,0.6s
BRLS  Borolday            4.66 313  Pg    Pb    16 59 49.0 -3.7
      1.3nm,0.2s
BRLS                                Lg    Lg    17 00 47.4
      1.7nm,0.6s
PDGK  Podgornoye          5.09  46 ⇓Pg    Pb    17 00 03.4 +3.3
      4.2nm,0.8s
PDGK                               ⇑Sn    Sn    17 00 50.3 +4.2
      2.7nm,0.5s
PDGK                               ⇑Lg    Lg    17 01 13.7
      3.2nm,0.7s
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*ISK **18** 17:03:19.7, 36˚.09N×29˚.69E, h5km, ML3.5/11*
*NIC **18** 17:03:20.3±0.0, 36˚.17N×29˚.71E, h0km±1km, Ml3.4/3*
*IDC **18** 17:03:20.1±1.1, 35˚.98N×29˚.74E, h0km, mb3.8/4, mb1 3.8/9, mb1mx3.3/49, mbtmp3.7/9, ML3.6/4, MS2.8/4, Ms1 2.9/4, ms1mx2.5/51, Error ellipse: s-maj=23.4km s-min=16.8km az=154.0*
*DDA **18** 17:03:20.4, 36˚.09N×29˚.68E, h3km±1km, MW3.6*
*ATH **18** 17:03:20.2, 36˚.09N×29˚.58E, h12km±2km, ML3.4/3, Error ellipse: s-maj=9.0km s-min=1.3km az=340.0*
ISC 18 17:03:20.1±1.2**, 36˚.06N**±0˚.03×**29˚.62E**±0˚.02**, h3**km±8km**,**
n53, σ1ˢ59/71**, mb3.7**/4**, Turkey**

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Code  Station Name         Δ°  AZ°  Phase ID      Time       Res
                                    Op    ISC     h  m  s    ISC
KSL   Kastellorizon       0.10 341  P     Pg    17 03 22.6 +0.6
KSL                                 S     Sg    17 03 24.0 +0.8
KSL                                 AML   AML   17 03 24.2
      comp=N,93984μm,0.5s
KSL                                 AML   AML   17 03 24.4
KSL   Kastellorizon       0.10 341  P     Pg    17 03 22.3 +0.3
KSL                                 S     Sg    17 03 24.1 +0.8
KSL                                 AML   AML   17 03 24.4
      comp=N,180nm,0.7s
KSL                                 AML   AML   17 03 24.4
      comp=N,180nm,0.7s
KSL                                 AML   AML   17 03 24.5
      comp=N,97nm,0.5s
KSL                                 AML   AML   17 03 24.5
      comp=N,97nm,0.5s
AKAS  Kas                 0.17 356 i P    Pg    17 03 23.6  0.0
AKAS                                IAML        17 03 26.0
      comp=E,27μm,0.6s
AKAS                               i S    Sg    17 03 26.1 +0.3
AKAS                                IAML        17 03 27.0
      comp=N,28μm,0.4s
AKAS  Kas                 0.17 356  PG    Pg    17 03 23.2 -0.3
AKAS                                SG    Sg    17 03 26.6 +0.8
DEMR  Demre-Antalya       0.29  52  PG    Pg    17 03 25.3 -0.4
DEMR                                SG    Sg    17 03 29.4 -0.1
AKUM  Antalya-Kumluc      0.64  66 i P    Pg    17 03 32.0 -0.3
FETY  Fethiye             0.72 323 i P    Pb    17 03 34.7 -0.7
FETY                               i S    Sn    17 03 46.9 -2.0
FETY                                IAML        17 03 48.0
      comp=N,1μm,0.5s
FETY                                IAML        17 03 50.0
      comp=E,2μm,0.9s
FETY  Fethiye             0.72 323  PG    Pn    17 03 35.3 -2.0
FETY                                SG    Sn    17 03 46.6 -2.3
ELL   Elmali              0.72  19  PG    Pg    17 03 33.1 -0.9
ELL   Elmali              0.72  19  P     Pg    17 03 32.7 -1.4
ELL                                 S     Sg    17 03 41.6 -1.9
CAME  Cameli-Denizli      0.92 344  PG    Pn    17 03 38.5 -1.6
KEMT  Kemer-ANTALYA       0.93  54  PG    Pg    17 03 37.6 -0.3
CAEL  Denizli, Camel      1.09 347 i P    Pn    17 03 41.6 -0.9
KORT  Korkueli            1.11  32 i P    Pb    17 03 40.6 -1.4
KORT                               i S    Sn    17 04 01.9 +3.3
KORT                                IAML        17 04 05.0
      comp=E,883nm,0.5s
KORT  Korkueli            1.11  32  PG    Pb    17 03 41.2 -0.8
ANTB  Antalya             1.18  44  PN    Pn    17 03 42.3 -1.3
ARG   Arkhangelos         1.22 278  P     Pb    17 03 41.7 -2.2
ARG                                 S     Sg    17 03 58.2 -1.1
ARG                                 AML   AML   17 04 10.4
      comp=N,1453μm,1.4s
ARG                                 AML   AML   17 04 15.8
      comp=E,1463μm,0.9s
ARG   Arkhangelos         1.22 278  PN    Pg    17 03 45.3 +1.8
ARG   Arkhangelos         1.22 278  P     Pg    17 03 45.3 +1.8
ARG                                 S     Sn    17 04 04.7 +3.5
TURN  Turunc              1.32 303  PN    Pg    17 03 46.5 +1.1
TAVA  DENIZLI_Tavas       1.51 338 i P    Pg    17 03 49.4 +0.2
TAVA                               i S    Sg    17 04 10.9 +2.1
TAVA                                IAML        17 04 14.0
      comp=N,312nm,0.6s
TAVA                                IAML        17 04 15.0
      comp=E,443nm,0.7s
MULA  Mugla, Merkez-      1.59 319 i P    Pg    17 03 50.6 +0.1
MULA                               i S    Sg    17 04 14.1 +2.9
MULA                                IAML        17 04 16.0
      comp=N,515nm,0.6s
MULA                                IAML        17 04 18.0
      comp=E,968nm,0.8s
BCK   Bucak               1.60  29  PN    Pb    17 03 49.5 -0.9
BRDR  BURDUR-Merkez       1.67  12 i P    Pg    17 03 52.5 +0.4
BRDR                               i S    Sg    17 04 14.4 +0.6
BRDR                                IAML        17 04 23.0
      comp=E,418nm,0.5s
DAT   Datca               1.78 293 i P    Pg    17 03 53.3 -1.0
DAT   Datca               1.78 293  PN    Pg    17 03 53.2 -1.0
BASM  Basmaki-Afyon       1.89  10  PN    Pb    17 03 54.4 -0.9
ISP   Isparta             1.90  22  P     Pb    17 03 53.9 -1.6
ISP                                 AML   AML   17 04 28.6
      comp=N,1755μm,0.7s
ISP                                 AML   AML   17 04 28.9
      comp=E,2216μm,0.9s
ISP   Isparta             1.90  22  PN    Pb    17 03 54.1 -1.4
NIS1  Nisyros Isl.        2.05 286  P     Pb    17 03 55.9 -2.0
AYDN  Tasoluk             2.12 319 i P    Pg    17 03 59.5 -1.3
AYDN                               i S    Sg    17 04 28.4 +0.1
AYDN                                IAML        17 04 33.0
      comp=E,276nm,0.4s
AYDN                                IAML        17 04 36.0
      comp=N,394nm,0.7s
SEDI  Konya, Seydise      2.21  50 i P    Pb    17 04 00.6 -0.1
SEDI                               i S    Sg    17 04 32.5 +1.5
SEDI                                IAML        17 04 35.0
      comp=E,576nm,0.8s
SEDI                                IAML        17 04 37.0
      comp=N,299nm,0.6s
KZIL  AFYON_Kizioren      2.23  11 i P    Pb    17 03 59.7 -1.5
KZIL                               i S    Sb    17 04 28.8 -0.6
AKMS  Akamas              2.44 114  P     Pn    17 04 01.1 +0.1
AKMS                                AML   AML   17 04 32.0
      comp=N,0.6nm,1.2s
AKMS                                AML   AML   17 04 32.7
      comp=N,0.4nm,0.9s
ALFC  Alefka              2.59 110  P     Pn    17 04 02.7 -0.2
ALFC                                AML   AML   17 04 37.6
      comp=N,0.4nm,0.7s
ALFC                                AML   AML   17 04 37.8
      comp=N,0.3nm,0.5s
DOGA  KONYA_Doganhis      2.62  38 i P    Pb    17 04 07.1 -0.7
NATA  Nata                2.73 117  P     Pn    17 04 05.1 +0.3
DGB   zmir                2.96 313 i P    Pb    17 04 10.6 -2.9
CSS   Mathiatis           3.22 109  P     Pn    17 04 12.6 +1.0
ASGA  Asgata              3.22 112  P     Pn    17 04 12.5 +0.9
MVOU  Mavrovouni          3.43 106  P     Pn    17 04 14.6 +0.1
IDI   Anoyia              3.93 260  Pn    Pn    17 04 23.2 +1.8
      comp=N,4.3nm,0.3s,baz=77,slow=12,SNR=12
IDI                                 Sn    Sn    17 05 09.9 +1.8
      comp=N,1.1nm,0.3s,baz=336,slow=22,SNR=1.8
BRTR  Keskin Array B      4.85  40  Pn    Pn    17 04 36.6 +2.5
      comp=N,1.0nm,0.3s,baz=210,slow=16,SNR=27
BRTR                                Sn    Sn    17 05 34.4 +3.5
      comp=N,2.4nm,0.3s,baz=210,slow=24,SNR=38
BRTR                                LR    LR    17 06 36.2
      comp=N,77nm,18.6s,baz=154,slow=40
MMAI  Mount Meron Ar      5.66 121  Pn    Pn    17 04 44.5 -0.7
      comp=N,8.8nm,0.3s,baz=300,slow=11,SNR=98
MMAI                                Sn    Sn    17 05 50.4 -0.3
      comp=N,5.0nm,0.3s,baz=300,slow=29,SNR=7.0
EIL   Elat                7.79 143  Pn    Pn    17 05 13.5 -0.9
      comp=N,0.6nm,0.3s,baz=352,slow=7.1,SNR=7.3
EIL                                 Sn    Sn    17 06 38.6 -4.5
      comp=N,0.4nm,0.3s,baz=98,slow=20,SNR=2.0
GNI   Garni              12.59  67  LR    LR    17 12 04.9
      comp=N,33nm,20.9s,baz=276,slow=42
GERES GERESS Array B     17.31 322  Pn    P     17 07 27.5 +3.2
      baz=132,slow=9.6,SNR=2.6
AKTO  Aktyubinsk         24.99  46  P     P     17 08 44.7 -0.3
      comp=N,1.3nm,0.7s,baz=238,slow=9.5,SNR=3.1
ATD   Arta Tunnel        27.19 151  LR    LR    17 20 06.5
      comp=N,64nm,18.3s,baz=58,slow=37
NOA   NORSAR Array B     27.61 341  LR    LR    17 22 24.8
      comp=N,13nm,18.7s,baz=255,slow=41
TORD  Torodi Ar. Bea     33.92 235  P     P     17 10 05.2 +0.6
      comp=N,1.0nm,0.9s,baz=26,slow=9.5,SNR=4.9
KURBB Kurchatov Arra     37.72  52  P     P     17 10 36.6 -0.3
      comp=N,1.7nm,0.2s,baz=274,slow=8.9,SNR=6.6
MKAR  Makanchi Array     40.23  58  P     P     17 10 57.6 -0.4
      comp=N,0.3nm,0.5s,baz=271,slow=6.0,SNR=2.8
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*OMAN **18** 17:12:47.5±0.7, 14˚.06N×56˚.84E, h0km±8km, Error ellipse: s-maj=11.2km s-min=4.2km az=307.0*
*IDC **18** 17:12:49.2±1.4, 14˚.05N×56˚.59E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.5/48, mbtmp3.9/8, MS3.3/14, Ms1 3.3/14, ms1mx3.1/48, Error ellipse: s-maj=43.3km s-min=23.8km az=36.0*
*NEIC **18** 17:12:51.2±2.0, 14˚.14N±0˚.09×56˚.50E±0˚.07, h10km±1km, mb4.3/18, Error ellipse: s-maj=17.8km s-min=6.0km az=147.0*
ISC 18 17:12:51.8±0.6**, 14˚.10N**±0˚.06×**56˚.52E**±0˚.08**, h20**km**, n55,**
σ1ˢ66/46**, mb4.1**/15**, MS3.3**/13**, Owen Fracture Zone region**

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Code  Station Name         Δ°  AZ°  Phase ID      Time       Res
                                    Op    ISC     h  m  s    ISC
SOCY  Socotra             3.11 233  P     Pn    17 13 38.7 -1.1
      SNR=9.3
SOCY  Socotra             3.11 233        Pn    17 13 38.5 -1.4
SOCY                                Sn    Sn    17 14 11.3 -5.2
DMTO  DMTO                3.90 337  P     Pn    17 13 51.0 +0.3
      SNR=7.4
DMTO                                S     Sn    17 14 32.9 -3.0
SHAO  Shalim              4.00 348  P     Pn    17 13 52.0  0.0
      SNR=9.5
SHAO                                S     Sn    17 14 32.4 -5.9
RBK   Rabkut              4.05 327  P     Pn    17 13 53.1 +0.3
RBK                                 S     Sn    17 14 40.3 +0.6
ABTO  Aybut               4.48 317  P     Pn    17 14 00.3 +1.6
WHFO  Wadi Hawf           4.63 326  P     Pn    17 14 02.0 +1.3
      SNR=9.4
WHFO                                S     Sn    17 14 54.3 +0.4
DOK   Doka                5.05 333  P     Pn    17 14 07.2 +0.8
DOK                                 S     Sn    17 15 02.1 -2.0
JLN   Jalan Bani Buh      8.47  19  P     Pn    17 14 50.7 -2.7
BSY   Bisya               8.63   4  P     Pn    17 14 55.2 -0.4
WBK   Wadi Bani Khal      8.78  15  P     Pn    17 14 57.3 -0.4
SMDO  Samad               9.03   9  P     Pn    17 14 60.0 -1.2
ARQ   Araqi               9.19   0  P     Pn    17 15 03.2 -0.1
WSAR  Wadi Sarin          9.31  12  LR    LR    17 18 21.6
      comp=Z,375nm,19.9s,baz=210,slow=36
HOQ   Hoqain              9.46   4  P     Pn    17 15 05.6 -1.4
UOSS  Minazif            10.80 358  Pn    Pn    17 15 26.3 +1.0
RAYN  Ar Rayn            14.02 314        Pn    17 16 08.8 -0.6
HRA   Herat              20.86  13  P     P     17 17 32.2 -0.5
HRA                                 IAmb  IAmb  17 17 39.3
      comp=Z,13nm,1.6s
KMBO  Kilima Mbogo       24.35 233  P     P     17 18 07.2 -1.7
KMBO                                IAmb  IAmb  17 18 15.8
      comp=Z,8.9nm,1.6s
KIBK  Kibwezi            24.54 230  P     P     17 18 10.5  0.0
PALK  Pallekele          24.70 103  LR    LR    17 26 08.5
      comp=Z,30nm,18.2s,baz=356,slow=32
EIL   Elat               25.24 311  LR    LR    17 28 58.0
      comp=Z,55nm,18.6s,baz=108,slow=38
SIRT  Sirnak             26.46 334  P     P     17 18 26.6 -1.1
CHGR  Chuyangaron        26.90  22  P     P     17 18 29.2 -2.4
CHGR                                IAmb  IAmb  17 18 40.7
      comp=Z,14nm,1.6s
MMAI  Mount Meron Ar     26.91 318  LR    LR    17 30 26.9
      comp=Z,33nm,21.3s,baz=120,slow=39
GNI   Garni              27.93 340  LR    LR    17 31 38.4
      comp=Z,38nm,18.9s,baz=156,slow=40
BTK   Batken             28.74  23  P     P     17 18 47.6 -0.5
BTK                                 IAmb  IAmb  17 18 56.4
      comp=Z,7.0nm,1.4s
MBAR  Mbarara            29.41 242  LR    LR    17 29 20.4
      comp=Z,86nm,19.4s,baz=68,slow=34
KBZ   Khabaz             31.75 341  LR    LR    17 33 35.7
      comp=Z,58nm,19.4s,baz=183,slow=39
BRTR  Keskin Array B     32.49 326  LR    LR    17 34 21.5
      comp=Z,67nm,19.2s,baz=154,slow=40
BR131 Keskin Array S     32.49 326  P     P     17 19 20.2 -1.1
BR131                               IAmb  IAmb  17 19 41.6
      comp=Z,12nm,1.8s
MK31  Makanchi Array     39.09  28  P     P     17 20 17.4 -0.3
MKAR  Makanchi Array     39.09  28  P     P     17 20 18.1 +0.4
      comp=Z,0.5nm,0.7s,baz=214,slow=9.8,SNR=2.9
MKAR                                LR    LR    17 37 57.7
      comp=Z,33nm,18.6s,baz=251,slow=39
KURK  Kurchatov          40.68  22  P     P     17 20 31.0 +0.2
KURK                                IAmb  IAmb  17 20 32.6
      comp=Z,4.4nm,1.3s
CMAR  Chiang Mai Arr     40.89  78  P     P     17 20 33.6 +0.6
      comp=Z,1.0nm,0.7s,baz=278,slow=9.0,SNR=7.3
CMAR                                LR    LR    17 37 49.5
      comp=Z,9.7nm,19.5s,baz=105,slow=37
AKASG Malin Array Be     42.69 335  P     P     17 20 48.3 +1.1
      comp=Z,0.3nm,0.6s,baz=127,slow=7.1,SNR=3.2
ZALV  Zalesovo Beam      45.56  23  P     P     17 21 10.4 +0.2
      comp=Z,1.1nm,0.7s,baz=223,slow=8.8,SNR=5.0
GRA1  Grafenberg Arr     51.15 324  P     P     17 21 54.3 +0.9
GRA1                                IAmb  IAmb  17 21 58.5
      comp=Z,12nm,1.2s
GRFO  Grafenberg         51.15 324  P     P     17 21 54.0 +0.6
FIA1  FINESS Array S     52.11 342  P     P     17 22 01.7 +1.4
FINES FINESS Array B     52.11 342  P     P     17 22 01.3 +1.1
      comp=Z,4.1nm,0.9s,baz=140,slow=10.0,SNR=8.5
FINES                               LR    LR    17 49 00.4
      comp=Z,31nm,19.9s,baz=216,slow=42
BOSA  Boshof             52.13 215  P     P     17 22 02.5 +1.5
SENIN Lac Senin/Sane     52.16 318  P     P     17 22 01.7 +0.4
SENIN                               IAmb  IAmb  17 22 26.6
      comp=Z,5.9nm,1.4s
ESDC  Sonseca Array      58.48 308  P     P     17 22 48.1 +1.4
      comp=Z,1.4nm,1.0s,baz=87,slow=7.0,SNR=6.0
ESDC  Sonseca Array      58.48 308  IAmb  IAmb  17 22 50.2
      comp=Z,1.3nm,1.1s
DBIC  Dimbokro           60.68 270  LR    LR    17 48 59.2
      comp=Z,32nm,18.6s,baz=332,slow=36
KSRS  Korea Array        66.87  55  LR    LR    17 54 20.0
      comp=Z,23nm,18.7s,baz=35,slow=37
USA0B Ussuriysk Arra     69.93  48  P     P     17 24 02.4 +0.7
H01W3 Cape Leeuwin H     73.18 134  T     T     18 44 06.0
      baz=301,slow=75,SNR=8.1
H01W2 Cape Leeuwin H     73.18 134  T     T     18 44 06.6
      baz=301,slow=75,SNR=7.9
H01W1 Cape Leeuwin H     73.19 134  T     T     18 44 06.8
      baz=301,slow=75,SNR=9.2
JHJ   Hachijo jima 2     76.87  59  LR    LR    17 58 11.5
      comp=Z,65nm,21.9s,baz=348,slow=35
WRA   Warramunga Arr     83.66 112  P     P     17 25 19.4 -0.2
      comp=Z,1.7nm,1.1s,baz=307,slow=4.9,SNR=4.3
ASAR  Alice Springs      84.39 116  P     P     17 25 23.9 +0.5
      comp=Z,1.5nm,1.1s,baz=290,slow=3.2,SNR=5.3
ASAR  Alice Springs      84.39 116  P     P     17 25 23.1 -0.3
```

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*VIE **18** 17:37:15.5±1.3, 51˚.40N×16˚.34E, h0km, mb2.2/2, ml2.5/1, Error ellipse: s-maj=13.8km s-min=6.2km az=55.0   58 km NW of Wroclaw Suspected Mining induced.*
*PRU **18** 17:37:16.5±0.0, 51˚.42N×16˚.19E, h0km*
ISC 18 17:37:15.5±1.3**, 51˚.43N**±0˚.05×**16˚.22E**±0˚.03**, h0**km**, n21,**
σ0ˢ71/43**, Poland**

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Code  Station Name         Δ°  AZ°  Phase ID      Time       Res
                                    Op    ISC     h  m  s    ISC
KSP   Ksiaz               0.59 175  ePg   Pg    17 37 27.4 +0.7
KSP                                 eSg   Sg    17 37 35.5 +1.2
CHVC  Chvalec             0.85 187  ePG   Pg    17 37 32.3 +0.6
CHVC                                eSG   Sb    17 37 43.9 -1.1
      comp=Z,15nm,0.4s
OSTC  Ostas               0.87 180  ePG   Pb    17 37 33.0 -0.5
OSTC                                eSG   Sb    17 37 45.0 -0.7
      comp=Z,16nm,0.2s
UPC   Upice               0.93 188  ePG   Pg    17 37 33.8 +0.5
UPC                                 eSG   Sb    17 37 46.7 -0.7
      comp=Z,51nm,0.3s
DPC   Dobruska-Polom      1.08 176  ePG   Pg    17 37 36.3 +0.1
DPC                                 eSG   Sg    17 37 50.0 -0.1
      comp=Z,17nm,0.5s
PVCC  Panska Ves          1.38 230  ePG   Pg    17 37 41.6 -0.2
PVCC                                eSG   Sn    17 38 00.6 -0.2
      comp=Z,46nm,0.2s
KRLC  Kraliky             1.40 165  ePG   Pg    17 37 41.9 -0.4
KRLC                                eSG   Sb    17 38 01.0 +0.1
      comp=Z,10nm,0.4s
BRG   Berggiesshubel      1.54 250  Pg    Pn    17 37 44.2  0.0
BRG                                 Sg    Sg    17 38 04.7 -0.1
BRG                                 Amp         17 38 06.6
      comp=Z,16nm,0.4s
PRU   Pruhonice           1.79 217  ePG   Pb    17 37 48.7 -0.4
PRU                                 eSG   Sb    17 38 12.1  0.0
      comp=Z,8.7nm,0.3s
MORC  Moravsky Berou      1.86 152  ePN   Pn    17 37 48.0 -0.6
MORC                                eSG   Sg    17 38 15.0 -0.1
CLL   Collm               2.02 268 i Pg   Pb    17 37 53.3 +0.3
CLL                                 eSg   Sg    17 38 20.0 -0.3
VRAC  Vranov              2.13 173  ePN   Pn    17 37 53.1 +0.7
VRAC                                eSG   Sg    17 38 23.6 -0.4
KRUC  Moravsky            2.37 177  eSG   Sg    17 38 32.1 +0.5
OJC   Ojcow               2.57 117  ePg   Pg    17 38 04.1 -0.7
OJC                                 eSg   Sg    17 38 39.6 +1.5
NKC   Novy Kostel         2.67 245  ePG   Pb    17 38 05.2 +1.0
NKC                                 eSG   Sg    17 38 41.5 +0.3
      comp=Z,8.2nm,0.5s
JAVC  Velka Javorina      2.74 159  ePN   Pn    17 38 01.6 +0.9
KHC   Kasperske Hory      2.85 217  ePN   Pn    17 38 02.4 +0.1
KHC                                 ePG   Pb    17 38 07.6 +0.3
KHC                                 eSN   Sn    17 38 37.1 -0.3
KHC                                 eSG   Sg    17 38 46.7 -0.4
CKRC  Cesky Krumlov       2.88 206  ePN   Pn    17 38 04.2 +1.5
CKRC                                ePG   Pg    17 38 09.8 -0.9
CKRC                                eSG   Sg    17 38 47.3 -0.8
LANS  Liptovska Anna      3.09 136  ePG   Pg    17 38 14.7  0.0
LANS                                eSG   Sg    17 38 53.7 -1.0
MODS  Modra-Piesok        3.13 167  ePG   Pg    17 38 15.7 +0.2
MODS                                eSG   Sg    17 38 56.1  0.0
CONA  Conrad Observa      3.51 184 i Pn   Pn    17 38 10.6 -0.7
      comp=Z,0.2nm,0.1s
CONA                                Sg    Sg    17 39 10.0 +1.8
      comp=Z,3.4nm,0.4s
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*IDC **18** 17:42:01.7±4.5, 40˚.50S×175˚.63E, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.6/25, mbtmp3.9/2, ML2.7/1, MS2.4/1, Ms1 2.4/1, ms1mx2.3/23, Error ellipse: s-maj=106.3km s-min=26.4km az=143.0*
*NOU **18** 17:42:02.7, 40˚.83S×176˚.11E, h108km, MLv4.0/6, North Island, New Zealand*
*WEL **18** 17:42:07.6, 41˚S±2˚×17˚6E±˚, h35km±4km, M3.7/24, ML4.0/24, MLv3.7/24, Error ellipse: s-maj=0.0km s-min=0.0km az=92.6*
ISC 18 17:42:07.5±1.0**, 40˚.58S**±0˚.03×**175˚.69E**±0˚.03**, h35**km**, n120,**
σ1ˢ33/132**, North Island**

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Code  Station Name         Δ°  AZ°  Phase ID      Time       Res
                                    Op    ISC     h  m  s    ISC
MRZ   Mangatainoka R      0.12 226  P     Pn    17 42 14.1 +0.4
MRZ                                 S     Sn    17 42 19.0 +1.1
POWZ  Post Office Ro      0.20  18  P     Pn    17 42 13.9 -0.3
POWZ                                S     Sn    17 42 18.9  0.0
PRWZ  Pori Road           0.21  84  P     Pn    17 42 15.2 +0.7
PRWZ                                S     Sn    17 42 21.2 +2.0
TIWZ  Tintock             0.25 143  P     Pn    17 42 16.0 +1.2
TIWZ                                S     Sn    17 42 22.5 +2.6
HOWZ  Holdsworth Sta      0.35 203  P     Pn    17 42 16.9 +0.9
HOWZ                                S     Sn    17 42 23.9 +2.0
BFZ   Birch Farm          0.43 104  P     Pn    17 42 18.0 +0.8
BFZ                                 S     Sn    17 42 26.7 +2.7
BFZ   Birch Farm          0.43 104  P     Pn    17 42 18.2 +1.0
DVHZ  Dannevirke          0.46  53  P     Pn    17 42 17.5  0.0
DVHZ                                S     Sn    17 42 25.2 +0.7
OGWZ  Otaki Gorge         0.46 239  P     Pn    17 42 18.0 +0.4
OGWZ                                S     Sn    17 42 25.6 +1.0
OHWZ  Ohakea              0.47 322  P     Pn    17 42 17.6  0.0
CPWZ  Castlepoint         0.51 131  P     Pn    17 42 19.8 +1.5
TMWZ  Te Maipa            0.55 164  P     Pn    17 42 19.9 +1.0
TSZ   Takapari Road       0.56  22  P     Pn    17 42 18.4 -0.6
TSZ                                 S     Sn    17 42 26.2 -0.9
MTW   Mount Morrison      0.60 194  P     Pn    17 42 20.3 +0.8
ANWZ  Angora Road         0.61  79  P     Pn    17 42 20.2 +0.6
ANWZ                                S     Sn    17 42 30.1 +1.9
KIW   Kapiti Island       0.66 244  P     Pn    17 42 21.0 +0.7
KIW                                 S     Sn    17 42 30.6 +1.1
CAW   Cannon Point        0.71 222  P     Pn    17 42 21.8 +0.7
WPHZ  Waipukurau          0.77  48  P     Pn    17 42 22.2 +0.4
PNHZ  Pukenui             0.77  31  P     Pn    17 42 21.8 -0.1
PRHZ  Porangahau          0.79  67  P     Pn    17 42 22.5 +0.5
PRHZ                                S     Sn    17 42 34.2 +1.6
TRWZ  Traveller           0.82 180  P     Pn    17 42 23.1 +0.6
PAWZ  Paruwai Farm        0.83 194  P     Pn    17 42 23.2 +0.5
MSWZ  Moikau Station      0.90 202  P     Pn    17 42 24.0 +0.3
WAZ   Wanganui            0.98 326  P     Pn    17 42 25.8 +1.0
```

WEL	**Wellington**	**0.99**	**224**	P	**Pn**	**17 42 25.5**	**+0.7**
BHW	**Baring Head**	**1.04**	**217**	P	**Pn**	**17 42 25.9**	**+0.4**
PLWZ	**Palliser**	**1.04**	**198**	P	**Pn**	**17 42 25.9**	**+0.2**
SNZO	**South Karori**	**1.04**	**225**	P	**Pn**	**17 42 26.3**	**+0.7**
PXZ	**Pawanui**	**1.05**	**59**	P	**Pn**	**17 42 25.5**	**-0.1**
KRHZ	**Kereru**	**1.07**	**29**	P	**Pn**	**17 42 26.1**	**+0.1**
BHHZ	**Black Hill Sta**	**1.12**	**15**	P	**Pn**	**17 42 27.0**	**+0.2**
MOVZ	**Moawhango**	**1.17**	**2**	P	**Pn**	**17 42 27.6**	**+0.2**
KAHZ	**Kahuranaki**	**1.20**	**50**	P	**Pn**	**17 42 27.8**	**0.0**
MTVZ	**Mangateitei**	**1.20**	**352**	P	**Pn**	**17 42 28.6**	**+0.8**
TCW	**Tory Channel**	**1.25**	**239**	P	**Pn**	**17 42 28.6**	**+0.3**
WNVZ	**Wahianoa**	**1.25**	**357**	P	**Pn**	**17 42 29.1**	**+0.5**
KWHZ	**Kaweka Forest**	**1.28**	**26**	P	**Pn**	**17 42 28.8**	**-0.1**
TRVZ	**Turoa**	**1.28**	**355**	P	**Pn**	**17 42 29.7**	**+0.6**
WHVZ	**Whangaehu Hut**	**1.30**	**356**	P	**Pn**	**17 42 29.9**	**+0.6**
DRZ	**Dome Shelter**	**1.30**	**356**	P	**Pn**	**17 42 30.4**	**+0.9**
TUVZ	**Tukino**	**1.31**	**359**	P	**Pn**	**17 42 30.3**	**+0.9**
PKVZ	**Pokaka**	**1.31**	**348**	P	**Pn**	**17 42 30.0**	**+0.6**
FWVZ	**Far West T-bar**	**1.33**	**355**	P	**Pn**	**17 42 30.3**	**+0.6**
DUWZ	**D'Urville Isla**	**1.36**	**260**	P	**Pn**	**17 42 30.1**	**+0.1**
MCHZ	**McNeill Hill**	**1.37**	**35**	P	**Pn**	**17 42 30.1**	**0.0**
SNVZ	**South Ngauruho**	**1.39**	**358**	P	**Pn**	**17 42 31.2**	**+0.7**
NGZ	**Ngauruhoe**	**1.40**	**357**	P	**Pn**	**17 42 31.7**	**+1.0**
CKHZ	**Cape Kidnapper**	**1.41**	**50**	P	**Pn**	**17 42 30.9**	**+0.3**
OTVZ	**Oturere**	**1.41**	**359**	P	**Pn**	**17 42 31.7**	**+0.9**
ETVZ	**East Tongariro**	**1.44**	**1**	P	**Pn**	**17 42 32.0**	**+0.8**
NNVZ	**North Ngauruho**	**1.45**	**358**	P	**Pn**	**17 42 32.2**	**+0.9**
TMVZ	**Te Maari**	**1.46**	**0**	P	**Pn**	**17 42 32.3**	**+0.9**
WTVZ	**West Tongariro**	**1.46**	**357**	P	**Pn**	**17 42 32.2**	**+0.7**
NTVZ	**North Tongarir**	**1.48**	**360**	P	**Pn**	**17 42 32.6**	**+0.9**
KRVZ	**Karewarewa**	**1.48**	**358**	P	**Pn**	**17 42 33.1**	**+1.3**
LREZ	**Lake Rotokare**	**1.49**	**318**	P	**Pn**	**17 42 33.5**	**+1.8**
TWVZ	**Taurewa**	**1.52**	**353**	P	**Pn**	**17 42 32.9**	**+0.7**
BKZ	**Black Stump Fm**	**1.54**	**24**	P	**Pn**	**17 42 32.1**	**-0.4**
BKZ	**Black Stump Fm**	**1.54**	**24**	P	**Pn**	**17 42 32.2**	**-0.3**
TUWZ	**Tuamarina**	**1.57**	**237**	P	**Pn**	**17 42 32.7**	**-0.2**
KATZ	**Kakaramea**	**1.60**	**0**	P	**Pn**	**17 42 34.3**	**+0.9**
RITZ	**Rihia Road**	**1.60**	**5**	P	**Pn**	**17 42 35.4**	**+2.0**
VRZ	**Vera Road**	**1.62**	**333**	P	**Pn**	**17 42 34.4**	**+0.9**
ARHZ	**Aropaoanui**	**1.65**	**38**	P	**Pn**	**17 42 33.6**	**-0.4**
PREZ	**Palmer Road**	**1.71**	**316**	P	**Pn**	**17 42 36.5**	**+1.7**
NMHZ	**Naumai**	**1.71**	**30**	P	**Pn**	**17 42 35.2**	**+0.4**
RATZ	**Rangitukua**	**1.71**	**2**	P	**Pn**	**17 42 36.0**	**+1.1**
HATZ	**Hinemaiaia**	**1.71**	**11**	P	**Pn**	**17 42 34.9**	**+0.1**
BSWZ	**Blackbirch Sta**	**1.78**	**230**	P	**Pn**	**17 42 35.7**	**0.0**
NEZ	**North Egmont**	**1.79**	**316**	P	**Pn**	**17 42 37.5**	**+1.5**
DREZ	**Durham Road**	**1.80**	**320**	P	**Pn**	**17 42 38.0**	**+2.0**
NMEZ	**Namu Road**	**1.81**	**309**	P	**Pn**	**17 42 36.8**	**+0.6**
KHEZ	**Kahui Hut**	**1.82**	**314**	P	**Pn**	**17 42 38.0**	**+1.7**
MRHZ	**Matea Rd**	**1.83**	**18**	P	**Pn**	**17 42 35.9**	**-0.6**
MHEZ	**Mangahewa**	**1.83**	**324**	P	**Pn**	**17 42 39.2**	**+2.8**
NNZ	**Nelson**	**1.86**	**249**	P	**Pn**	**17 42 37.1**	**+0.2**
WATZ	**Wairara**	**1.87**	**1**	P	**Pn**	**17 42 37.2**	**+0.2**
PKE	**Pukeiti**	**1.91**	**316**	P	**Pn**	**17 42 40.0**	**+2.5**
NBEZ	**Newall Road No**	**1.92**	**312**	P	**Pn**	**17 42 40.4**	**+2.8**
MTHZ	**Maungataniwha**	**1.94**	**28**	P	**Pn**	**17 42 37.4**	**-0.5**
RAHZ	**Arahi**	**1.98**	**33**	P	**Pn**	**17 42 37.8**	**-0.7**
ALRZ	**Allen Road**	**2.08**	**14**	P	**Pn**	**17 42 39.6**	**-0.2**
KUTZ	**Kaahu Road**	**2.09**	**3**	P	**Pn**	**17 42 42.1**	**+2.1**
PRRZ	**Plateau Road**	**2.15**	**15**	P	**Pn**	**17 42 45.2**	**+4.4**
HIZ	**Hauiti**	**2.16**	**342**	P	**Pn**	**17 42 42.5**	**+1.5**
HIZ	**Hauiti**	**2.16**	**342**	P	**Pn**	**17 42 42.3**	**+1.3**
RTZ	**Ruatahuna**	**2.20**	**27**	P	**Pn**	**17 42 40.7**	**-0.8**
MHGZ	**Mahia Peninsul**	**2.22**	**51**	P	**Pn**	**17 42 42.0**	**+0.2**
MUGZ	**Murupara**	**2.26**	**22**	P	**Pn**	**17 42 46.9**	**+4.6**
HSRZ	**Hossack Road**	**2.30**	**11**	P	Pn	17 42 47.9	+5.0
THZ	**Tophouse**	**2.41**	**240**	P	**Pn**	**17 42 43.8**	**-0.6**
QRZ	**Quartz Range**	**2.42**	**263**	P	**Pn**	**17 42 44.0**	**-0.4**
QRZ	**Quartz Range**	**2.42**	**263**	P	**Pn**	**17 42 44.1**	**-0.4**
KHZ	**Kahutara**	**2.45**	**221**	P	**Pn**	**17 42 43.9**	**-1.0**
URZ	**Urewera**	**2.56**	**26**	Pn	**Pn**	**17 42 44.5**	**-1.9**
	1.6nm,0.3s,baz=121,slow=23,SNR=11						
URZ				Sn	**Sn**	**17 43 15.0**	**-1.4**
	13nm,0.3s,baz=41,slow=13,SNR=7.0						
URZ				LR	LR	17 44 05.8	
	comp=Z,65nm,18.9s,baz=210,slow=49						
URZ	**Urewera**	**2.56**	**26**	P	**Pn**	**17 42 44.6**	**-1.9**
URZ	**Urewera**	**2.56**	**26**	P	**Pn**	**17 42 44.4**	**-2.1**
MWZ	**Matawai**	**2.65**	**33**	P	**Pn**	**17 42 45.9**	**-1.9**
TOZ	**Tahuroa Road**	**2.85**	**357**	P	**Pn**	**17 42 51.7**	**+1.3**
TWGZ	**Tauwhareparae**	**2.98**	**37**	P	**Pn**	**17 42 51.4**	**-0.9**
RUGZ	**Raukumara Rang**	**3.03**	**31**	P	**Pn**	**17 42 51.4**	**-1.6**
GVZ	**Greta Valley S**	**3.11**	**219**	P	**Pn**	**17 42 52.6**	**-1.4**
DSZ	**Denniston Nort**	**3.16**	**247**	P	**Pn**	**17 42 53.7**	**-1.0**
HAZ	**Te Kaha**	**3.25**	**31**	P	**Pn**	**17 42 54.7**	**-1.3**
WMGZ	**Waiomatatini S**	**3.47**	**38**	P	**Pn**	**17 42 57.0**	**-2.0**
AWAZ	**Awhitu Peninsu**	**3.60**	**347**	P	**Pn**	**17 43 03.8**	**+3.1**
OKCZ	**Okains Bay**	**3.70**	**211**	P	**Pn**	**17 43 00.2**	**-1.9**
INZ	**Inchbonnie**	**3.84**	**235**	P	**Pn**	**17 43 02.5**	**-1.5**
MQZ	**McQueen's Vall**	**3.86**	**215**	P	**Pn**	**17 43 01.7**	**-2.6**
OXZ	**Oxford**	**3.87**	**224**	P	**Pn**	**17 43 03.8**	**-0.7**
AKCZ	**Akaroa Harbour**	**3.89**	**211**	P	**Pn**	**17 43 02.6**	**-2.0**
RPZ	**Rata Peaks**	**4.66**	**226**	P	**Pn**	**17 43 15.5**	**+0.2**
ARCZ	**Arundel**	**4.75**	**223**	P	**Pn**	**17 43 16.1**	**-0.4**
TMZ	**Timaru**	**5.14**	**221**	P	**Pn**	**17 43 20.5**	**-1.4**
ODZ	**Otahua Downs**	**5.80**	**218**	P	**Pn**	**17 43 29.3**	**-1.7**
CTZ	**Chatham Island**	**6.53**	**121**	P	**Pn**	**17 43 40.7**	**-0.2**
EAZ	**Earnscleugh**	**6.60**	**223**	P	**Pn**	**17 43 40.0**	**-2.0**
ASAR	**Alice Springs**	**38.80**	**283**	P	**P**	**17 49 27.7**	**-1.2**
	0.8nm,0.4s,baz=124,slow=6.7,SNR=44						
WRA	**Warramunga Arr**	**40.75**	**288**	P	**P**	**17 49 43.9**	**-1.3**
	0.6nm,0.3s,baz=126,slow=8.2,SNR=19						
ARCES	**ARCESS Array B**	**147.03**	**341**	PKPbc	**PKPdf**	**18 01 43.9**	**+0.8**
	10nm,1.2s,baz=72,slow=2.9,SNR=1.5						

NNC 18 18:03:17.0±3.2**,39°.18N×73°.37E,h0^{km},mb4.1,mpv3.7,**
5C-6D,Error ellipse: s-maj=25.0km s-min=14.4km
az=4.0,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**3.56**	**14**	⇑Pn	Pn	18 04 15.5	+1.9
	8.4nm,0.6s						
AAK				⇓Lg	Lg	18 05 10.0	
	19nm,0.7s						
MRKS	**Merke**	**3.56**	**358**	Pg	Pb	18 04 20.2	-0.8
	10nm,0.4s						
MRKS				Lg	Lg	18 05 12.6	
	17nm,0.7s						
IUG	**Iuzhnay**	**3.90**	**321**	Pg	Pb	18 04 27.5	+0.8
	352nm,0.5s						
IUG				Lg	Lg	18 05 26.0	
	29nm,0.7s						
TKM2	**Tokmak 2**	**4.10**	**24**	⇑Pn	Pn	18 04 24.0	+2.9
	4.3nm,0.6s						
TKM2				⇓Lg	Lg	18 05 26.1	
	13nm,0.7s						
KST	**Kastek**	**4.33**	**26**	Pg	Pb	18 04 34.9	+0.9
	4.6nm,0.5s						
KST				Lg	Lg	18 05 37.6	
	15nm,0.6s						
KK02	**Karatay Array**	**4.47**	**332**	⇑Pn	Pn	18 04 25.4	-0.7
	3.5nm,0.5s						
KK02				⇓Sn	Sn	18 05 18.8	0.0
	6.5nm,0.5s						
KK02				⇓Lg	Lg	18 05 41.7	
	7.3nm,0.6s						
BRLS	**Borolday**	**4.68**	**326**	Pg	Pb	18 04 38.2	-1.7
	3.1nm,0.4s						
BRLS				Lg	Lg	18 05 43.9	
	8.2nm,0.4s						
MDOK	**Medeo**	**4.85**	**34**	Pg	Pb	18 04 43.2	+0.3
	5.0nm,0.8s						
MDOK				Lg	Lg	18 05 50.7	
	9.6nm,0.6s						
KNDC	**Almaty**	**4.86**	**33**	⇑Pg	Pb	18 04 42.2	-0.8
	16nm,0.6s						
KNDC				⇑Lg	Lg	18 05 50.9	
	30nm,0.6s						
PDGK	**Podgornoye**	**6.20**	**46**	⇓Pg	Pb	18 05 09.1	+3.1
	3.4nm,0.8s						
PDGK				⇓Lg	Lg	18 06 34.5	
	7.5nm,0.9s						

BEO ***18*** *18:22:14.7±0.7,40°.27N×20°.72E,h9^{km}±2^{km},ML3.0/10*
TIR ***18*** *18:22:15.5,40°.67N×21°.26E,h3^{km},Md3.1*
ATH ***18*** *18:22:15.8,40°.46N×20°.68E,h17^{km}±1^{km},ML3.2/6,Error*
ellipse: s-maj=2.0km s-min=1.1km az=92.0
THE ***18*** *18:22:16.0,40°.44N×20°.67E,h12^{km}±1^{km},ML3.1/9,Error*
ellipse: s-maj=1.8km s-min=0.5km az=76.0
PDG ***18*** *18:22:16.5±1.6,40°.45N×20°.56E,h11^{km}±5^{km},ML3.1/13,*
Error ellipse: s-maj=7.0km s-min=5.1km az=90.0
SKO ***18*** *18:22:16.2,40°.38N×20°.72E,h10^{km}*
ISC 18 18:22:16.2±0.9**,40°.41N**±0°.02×**20°.68E**±0°.02**,h11^{km}**±7^{km}**,**
n119,σ**1^{s}.31**/173**,7C-8D,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBN	**Korca**	**0.23**	**22**	P	**Pg**	**18 22 20.2**	**-0.8**
KBN				S	**Sg**	**18 22 24.4**	**+0.1**
	9µm,0.6s						
KBN	**Korca**	**0.23**	**22**	P	**Pg**	**18 22 20.4**	**-0.6**
	baz=5.0						
KBN				S	**Sg**	**18 22 24.7**	**+0.4**
	baz=5.0						
LSK	**Leskovik**	**0.27**	**193**	P	**Pg**	**18 22 21.7**	**-0.1**
NEST	**Nestorio**	**0.28**	**90**	P	**Pg**	**18 22 22.0**	**-0.1**
NEST				S	**Sb**	**18 22 26.4**	**-1.8**
	6µm,0.3s						
NEST	**Nestorio**	**0.28**	**90**	P	**Pg**	**18 22 22.0**	**-0.1**
NEST				S	**Sb**	**18 22 26.4**	**-1.8**
NEST				AML	AML	18 22 27.8	
	comp=N,9645µm,0.4s						
NEST				AML	AML	18 22 28.0	
	comp=E,16010µm,0.2s						
PENT	**Pentalofos**	**0.41**	**121**	P	**Pg**	**18 22 24.3**	**-0.2**
PENT				S	**Sb**	**18 22 31.0**	**-1.0**
	comp=E,4µm,0.4s						
PENT	**Pentalofos**	**0.41**	**121**	P	**Pg**	**18 22 24.3**	**-0.2**
PENT				S	**Sb**	**18 22 31.0**	**-1.0**
PENT				AML	AML	18 22 33.5	
	comp=N,7348µm,0.5s						
PENT				AML	AML	18 22 35.0	
	comp=E,8399µm,0.3s						
FNA	**Florina**	**0.65**	**55**	P	**Pg**	**18 22 28.1**	**-0.7**
FNA				S	**Sg**	**18 22 37.4**	**0.0**
	comp=E,3µm,0.2s						
FNA	**Florina**	**0.65**	**55**	P	**Pg**	**18 22 28.2**	**-0.7**
FNA				S	**Sg**	**18 22 37.4**	**0.0**
FNA				AML	AML	18 22 39.9	
	comp=N,6750µm,0.3s						
FNA				AML	AML	18 22 40.2	
	comp=E,5204µm,0.4s						
FNA	**Florina**	**0.65**	**55**	⇑*i*Pg	**Pg**	**18 22 28.0**	**-0.9**
FNA				*i* Sg	**Sb**	**18 22 38.3**	**-0.5**
KPRO	**Kipourio**	**0.70**	**131**	P	**Pg**	**18 22 29.3**	**-0.5**
KPRO				S	**Sb**	**18 22 40.7**	**+0.6**
	comp=E,2µm,0.3s						
KPRO	**Kipourio**	**0.70**	**131**	P	**Pg**	**18 22 29.3**	**-0.5**
KPRO				S	**Sb**	**18 22 40.7**	**+0.6**
KPRO				AML	AML	18 22 42.1	
	comp=E,5006µm,0.2s						
KPRO				AML	AML	18 22 42.9	
	comp=N,3080µm,0.4s						
OHR	**Ohrid**	**0.70**	**8**	*i* Pg	**Pg**	**18 22 29.0**	**-0.8**
OHR				*i* Sg	**Sb**	**18 22 40.6**	**+0.2**
OHR				*e*Lg	Lg	18 22 41.8	
	comp=E,828nm,0.7s						
OHR				*e*Lg	Lg	18 22 42.3	
	comp=N,472nm,0.4s						
OHR	**Ohrid**	**0.70**	**8**	*e*Pg	**Pg**	**18 22 29.1**	**-0.8**
OHR				*e*Sg	**Sb**	**18 22 41.0**	**+0.7**
JAN	**Janina**	**0.77**	**170**	P	**Pg**	**18 22 30.3**	**-0.7**
JAN				S	**Sb**	**18 22 42.3**	**+0.2**
	comp=N,2µm,0.4s						
JAN	**Janina**	**0.77**	**170**	P	**Pg**	**18 22 30.3**	**-0.7**
JAN				AML	AML	18 22 45.5	
	comp=N,2354µm,0.4s						
JAN				AML	AML	18 22 48.8	
	comp=E,3946µm,0.4s						
KZN	**Kozani**	**0.84**	**97**	P	**Pg**	**18 22 31.9**	**-0.6**
KZN				S	**Sb**	**18 22 44.5**	**+0.2**
	comp=E,1µm,0.4s						
KZN	**Kozani**	**0.84**	**97**	P	**Pg**	**18 22 31.9**	**-0.6**
KZN				S	**Sb**	**18 22 44.5**	**+0.2**
KZN				AML	AML	18 22 46.1	
	comp=N,2349µm,0.6s						
KZN				AML	AML	18 22 48.5	
	comp=E,2705µm,0.2s						
KASA	**Kassiopi**	**0.88**	**221**	P	**Pb**	**18 22 33.7**	**+0.3**
IGT	**Igoumenitsa**	**0.92**	**197**	P	**Pg**	**18 22 33.8**	**-0.2**
IGT				S	**Sb**	**18 22 47.2**	**+0.8**
	comp=E,680nm,0.5s						
IGT	**Igoumenitsa**	**0.92**	**197**	P	**Pb**	**18 22 34.5**	**+0.3**
IGT	**Igoumenitsa**	**0.92**	**197**	*i* Pg	**Pg**	**18 22 33.7**	**-0.2**
KEK	**Kerkira**	**0.97**	**224**	P	**Pg**	**18 22 35.1**	**+0.2**
KEK				S	**Sb**	**18 22 48.8**	**+0.9**
	comp=E,555nm,0.6s						
KEK	**Kerkira**	**0.97**	**224**	P	**Pg**	**18 22 35.1**	**+0.2**
TIR	**Tirane**	**1.12**	**327**	P	**Pg**	**18 22 36.1**	**-1.6**
TIR	**Tirane**	**1.12**	**327**	P	**Pg**	**18 22 36.1**	**-1.6**
TIR	**Tirane**	**1.12**	**327**	*i* Pg	**Pg**	**18 22 36.3**	**-1.4**
TIR	**Tirane**	**1.12**	**327**	P	**Pn**	**18 22 38.9**	**+1.0**
	baz=325						
TIR				S	**Sn**	**18 22 56.6**	**+3.4**
	baz=325						
TIR	**Tirane**	**1.12**	**327**	*e*Pg	**Pg**	**18 22 36.8**	**-0.9**
TIR				*e*Sg	**Sn**	**18 22 56.1**	**+2.9**
PHP	**Peshkopia**	**1.28**	**352**	P	**Pb**	**18 22 41.0**	**+0.6**
	baz=350						
PHP				S	**Sn**	**18 23 01.6**	**+4.2**
	baz=350						
THL	**Klokotos Trika**	**1.33**	**129**	P	**Pn**	**18 22 40.7**	**-0.1**
THL	**Klokotos Trika**	**1.33**	**129**	P	**Pn**	**18 22 40.7**	**-0.1**
GRG	**Griva**	**1.42**	**67**	*i* Pg	**Pn**	**18 22 41.9**	**-0.1**
LKD2	**Lefkada island**	**1.62**	**181**	P	**Pn**	**18 22 44.6**	**-0.2**
LKD2	**Lefkada island**	**1.62**	**181**	P	**Pb**	**18 22 45.8**	**-0.4**
SKO	**Skopje**	**1.66**	**20**	*i* Pg	**Pn**	**18 22 46.0**	**+0.7**
SKO				*i* Sg	**Sg**	**18 23 11.2**	**+1.5**
NYDR	**Nydri-Lefkada**	**1.70**	**179**	P	**Pg**	**18 22 48.4**	**-0.3**
VAY	**Valandovo**	**1.70**	**57**	*i* Pg	**Pn**	**18 22 46.6**	**+0.8**
VAY				*i* Sg	**Sg**	**18 23 10.7**	**-0.2**
VAY				*e*Lg	Lg	18 23 15.6	
	comp=N,192nm,0.7s						
VAY				*e*Lg	Lg	18 23 18.7	
	comp=E,86nm,0.6s						
VAY	**Valandovo**	**1.70**	**57**	*e*Pg	**Pn**	**18 22 46.2**	**+0.4**
VAY				*e*Sg	**Sg**	**18 23 10.5**	**-0.4**
EVR	**Evrytania**	**1.73**	**149**	P	**Pb**	**18 22 48.3**	**+0.2**
THE	**Thessaloniki**	**1.76**	**82**	*i* Pg	**Pn**	**18 22 46.6**	**0.0**
MAKR	**Makrakomi, Fth**	**1.79**	**141**	P	**Pb**	**18 22 49.0**	**-0.1**
KNT	**Kendrikon**	**1.85**	**65**	P	**Pn**	**18 22 48.4**	**+0.5**
KNT	**Kendrikon**	**1.85**	**65**	*i* Pg	**Pn**	**18 22 48.1**	**+0.3**
AGG	**Agios Georgios**	**1.89**	**137**	P	**Pb**	**18 22 49.9**	**-0.8**
ULC	**Ulcinj**	**1.89**	**326**	⇑*i*Pn	**Pn**	**18 22 48.3**	**-0.2**
ULC				*i* Sn	**Sn**	**18 23 10.7**	**-1.6**
BCI	**Bajram Curri**	**2.00**	**347**	P	**Pg**	**18 22 54.3**	**-0.4**
	baz=346						
BCI				S	**Sg**	**18 23 23.8**	**+3.1**
	baz=346						
SOH	**Sokhos**	**2.08**	**78**	P	**Pn**	**18 22 51.9**	**+0.8**
SOH	**Sokhos**	**2.08**	**78**	*i* Pg	**Pn**	**18 22 51.9**	**+0.8**
DRME	**Dracevica, Mon**	**2.10**	**328**	*e*Pn	**Pn**	**18 22 53.0**	**+1.7**
DRME	**Dracevica, Mon**	**2.10**	**328**	⇓*i*Pn	**Pn**	**18 22 52.7**	**+1.4**
DRME				*i* Sn	**Sn**	**18 23 15.3**	**-2.1**
PLG	**Polygyros**	**2.12**	**90**	P	**Pn**	**18 22 52.3**	**+0.7**
VLS	**Valsamata**	**2.23**	**182**	P	**Pn**	**18 22 55.1**	**+1.9**
PVY	**Plav**	**2.25**	**346**	⇓*i*Pn	**Pb**	**18 22 58.0**	**+1.1**
PVY				*i* Sn	**Sb**	**18 23 25.0**	**+0.3**
NEO	**Neokhori**	**2.25**	**119**	P	**Pn**	**18 22 53.9**	**+0.5**
NEO	**Neokhori**	**2.25**	**119**	P	**Pn**	**18 22 53.9**	**+0.5**
PDG	**Podgorica**	**2.28**	**333**	*e*Pn	**Pn**	**18 22 55.5**	**+1.7**
PDG	**Podgorica**	**2.28**	**333**	*e*Pn	**Pn**	**18 22 55.5**	**+1.7**
PDG				*e*Sn	**Sn**	**18 23 24.6**	**+2.7**
TTG	**Podgorica**	**2.28**	**333**	⇓*i*Pn	**Pn**	**18 22 54.9**	**+1.1**
TTG				*i* Sn	**Sn**	**18 23 22.6**	**+0.7**
BUM	**Brajici-Budva**	**2.31**	**325**	⇑*i*Pn	**Pb**	**18 22 58.2**	**+0.2**
BUM				*i* Sn	**Sn**	**18 23 23.0**	**+0.1**
SRS	**Serrai**	**2.32**	**71**	*i* Pn	**Pn**	**18 22 54.8**	**+0.4**
PRVS	**Prvonek**	**2.34**	**26**	*e*Pn	**Pn**	**18 22 54.9**	**+0.2**
PRVS				*e*Sn	**Sb**	**18 23 26.7**	**-0.7**
BOSS	**Bosilegrad**	**2.48**	**32**	*e*Pn	**Pn**	**18 22 56.9**	**+0.3**
BOSS				*e*Sn	**Sn**	**18 23 29.0**	**+2.0**
CEME	**Cevo**	**2.51**	**329**	⇑*i*Pn	**Pn**	**18 22 58.7**	**+1.7**
CEME				*i* Sn	**Sn**	**18 23 29.1**	**+1.5**
IVA	**Berane**	**2.53**	**347**	⇓*i*Pn	**Pb**	**18 23 00.4**	**-1.2**
IVA				*i* Sn	**Sn**	**18 23 30.7**	**+2.6**
BARS	**Barje**	**2.55**	**19**	⇓*i*Pn	**Pn**	**18 22 58.1**	**+0.6**
BARS	**Barje**	**2.55**	**19**	*e*Pn	**Pn**	**18 22 58.1**	**+0.6**
BARS	**Barje**	**2.55**	**19**	*e*Pn	Pg	18 23 15.8	+11
BARS				*e*Sn	**Sn**	**18 23 29.8**	**+1.2**
KOME	**Kolasin**	**2.59**	**341**	⇓*i*Pn	**Pb**	**18 23 01.5**	**-1.2**
KOME				*i* Sn	**Sn**	**18 23 31.8**	**+2.2**
NVR	**Nevrokopi**	**2.59**	**68**	P	**Pn**	**18 22 58.9**	**+0.7**
HCY	**Herceg Novi**	**2.61**	**322**	*e*Pn	**Pn**	**18 22 58.4**	**0.0**
HCY	**Herceg Novi**	**2.61**	**322**	⇑*i*Pn	**Pn**	**18 22 56.9**	**-1.5**
HCY				*i* Sn	**Sn**	**18 23 27.4**	**-2.7**
NKME	**Niksic**	**2.68**	**332**	⇑*i*Pn	**Pn**	**18 23 01.3**	**+1.9**
NKME				*i* Sn	**Sn**	**18 23 30.7**	**-1.2**
SELS	**Selova**	**2.82**	**7**	*e*Pn	**Pn**	**18 23 01.1**	**-0.2**
TREB	**Trebinje**	**2.89**	**324**	*e*Pn	**Pn**	**18 23 02.4**	**+0.2**
TREB	**Trebinje**	**2.89**	**324**	*e*Pn	**Pn**	**18 23 02.2**	**0.0**
TREB				*e*Sn	**Sn**	**18 23 38.0**	**+1.1**
SJES	**Sjenica**	**2.89**	**350**	*e*Pn	**Pn**	**18 23 04.2**	**+1.8**
SJES				*e*Sn	**Sn**	**18 23 38.2**	**+1.0**
BRY	**Bratogost**	**2.96**	**328**	*e*Pn	**Pn**	**18 23 04.5**	**+1.2**
BRY	**Bratogost**	**2.96**	**328**	⇑*i*Pn	**Pn**	**18 23 03.5**	**+0.2**
BRY				*i* Sn	**Sn**	**18 23 37.9**	**-0.9**
PLE	**Pljevlja**	**3.07**	**342**	⇓*i*Pn	**Pn**	**18 23 05.2**	**+0.4**
PLE				*i* Sn	**Sn**	**18 23 42.1**	**+0.6**
UPM	**Unac-Piva**	**3.09**	**335**	*e*Pn	**Pn**	**18 23 07.2**	**+2.1**
UPM	**Unac-Piva**	**3.09**	**335**	⇓*i*Pn	**Pn**	**18 23 07.6**	**+2.5**
UPM				*i* Sn	**Sn**	**18 23 41.0**	**-1.1**
IVAS	**Ivanjica**	**3.19**	**353**	*e*Pn	**Pn**	**18 23 06.3**	**0.0**
ZAPS	**Zavoj**	**3.21**	**26**	*e*Pn	**Pn**	**18 23 07.8**	**+1.1**
BOVS	**Bovan**	**3.31**	**13**	*e*Pn	**Pn**	**18 23 07.9**	**-0.1**
BOVS				*e*Sn	**Sn**	**18 23 48.0**	**+0.7**
STON	**Ston**	**3.32**	**319**	*e*Pn	**Pn**	**18 23 07.9**	**-0.1**
STON	**Ston**	**3.32**	**319**	*e*Pn	**Pn**	**18 23 08.4**	**+0.3**
STON				Sn	**Sn**	**18 23 44.1**	**-3.3**
RUDO	**Rudo**	**3.35**	**344**	*e*Pn	**Pn**	**18 23 06.4**	**-2.1**
GRUS	**Gruza**	**3.47**	**0**	*e*Pn	**Pn**	**18 23 10.8**	**+0.6**
BBLS	**Lazići**	**3.58**	**345**	*e*Pn	**Pn**	**18 23 13.1**	**+1.3**
BBLS	**Lazići**	**3.58**	**345**	*e*Pn	**Pn**	**18 23 13.0**	**+1.3**
ZAGS	**Zajecar**	**3.59**	**18**	*e*Pn	**Pn**	**18 23 11.7**	**-0.1**
LSTV	**Lastovo**	**3.69**	**311**	*e*Pn	**Pn**	**18 23 12.6**	**-0.6**
LSTV				Sn	**Sn**	**18 23 52.7**	**-3.8**
DIVS	**Divibare**	**3.72**	**352**	*e*Pn	**Pn**	**18 23 14.4**	**+0.7**
DIVS	**Divibare**	**3.72**	**352**	*e*Pn	**Pn**	**18 23 14.2**	**+0.5**
TRUS	**Trudelj**	**3.81**	**357**	*e*Pn	**Pn**	**18 23 14.5**	**-0.4**
MAKA	**Makarska**	**3.96**	**318**	*e*Pn	**Pn**	**18 23 17.1**	**+0.1**
RICI	**Ricice**	**4.06**	**321**	*e*Pn	**Pn**	**18 23 18.2**	**-0.1**
HVAR	**Hvar**	**4.20**	**313**	*e*Pn	**Pn**	**18 23 19.2**	**-0.9**
FRGS	**Fruska Gora**	**4.79**	**353**	*e*Pn	**Pn**	**18 23 29.1**	**+0.8**
KIJV	**Kijevo**	**4.79**	**320**	*e*Pn	**Pn**	**18 23 28.8**	**+0.4**
KIJV				Sn	**Sn**	**18 24 19.3**	**-4.5**
ZIRJ	**Zirje**	**4.95**	**312**	*e*Pn	**Pn**	**18 23 29.8**	**-0.7**
ZIRJ				Sn	**Sn**	**18 24 21.4**	**-6.3**
BLY	**Banja Luka**	**5.04**	**330**	*e*Pn	**Pn**	**18 23 33.4**	**+1.6**
MORI	**Morici**	**5.05**	**315**	*e*Pn	**Pn**	**18 23 32.0**	**+0.1**
MRAK	**Mrakovica**	**5.37**	**330**	*e*Pn	**Pn**	**18 23 37.0**	**+0.6**
UDBI	**Udbina**	**5.49**	**320**	*e*Pn	**Pn**	**18 23 39.3**	**+1.4**
DUGI	**Dugi Otok**	**5.50**	**312**	*e*Pn	**Pn**	**18 23 37.4**	**-0.6**
NVLJ	**Novalja**	**5.97**	**316**	*e*Pn	**Pn**	**18 23 44.1**	**-0.3**
MORH	**Mrgy, Hungar**	**5.99**	**346**	*e*Pn	**Pn**	**18 23 45.0**	**+0.3**
RABC	**Rab**	**6.14**	**317**	*e*Pn	**Pn**	**18 23 46.5**	**-0.3**
CRES	**Cresnjev**	**6.62**	**327**	*e*Pn	**Pn**	**18 23 53.5**	**0.0**
BRJN	**Brijuni**	**6.80**	**314**	*e*Pn	**Pn**	**18 23 55.3**	**-0.6**
CEY	**Cerknica**	**7.02**	**321**	*e*Pn	**Pn**	**18 23 59.0**	**+0.1**
SOKA	**Soboth**	**7.48**	**329**	*i* Pn	**Pn**	**18 24 05.8**	**+0.4**
	comp=E,1.9nm,0.6s						
SOKA				*i* Sn	**Sn**	**18 25 30.5**	**+0.3**
	comp=E,0.8nm,0.3s						
OBKA	**Obir**	**7.55**	**326**	*i* Pn	**Pn**	**18 24 06.9**	**+0.7**
	comp=E,0.6nm,0.1s						
OBKA				*e*Sn	**Sn**	**18 25 32.2**	**+0.4**
	comp=E,2.5nm,0.4s						
ABTA	**Abfaltersbach**	**8.67**	**320**	*i* Pn	**Pn**	**18 24 21.7**	**+0.1**
	comp=E,1.2nm,0.5s						
ABTA				*e*Sn	**Sn**	**18 25 57.8**	**-1.5**
	comp=E,3.9nm,0.7s						
WTTA	**Wattenberg**	**9.46**	**319**	*i* Pn	**Pn**	**18 24 33.5**	**+1.0**
	comp=E,1.8nm,0.4s						
WTTA				*e*Sn	**Sn**	**18 26 18.5**	**-0.4**
	comp=E,4.5nm,0.5s						
FETA	**Feichten**	**9.77**	**316**	*e*Pn	**Pn**	**18 24 38.4**	**+1.6**
	comp=E,0.6nm,0.4s						
FETA				*e*Sn	**Sn**	**18 26 27.6**	**+1.2**
	comp=E,1.0nm,0.6s						
MOTA	**Moosalm**	**9.78**	**318**	*i* Pn	**Pn**	**18 24 37.4**	**+0.5**
	comp=E,2.0nm,0.6s						
MOTA				*e*Sn	**Sn**	**18 26 26.6**	**-0.2**
	comp=E,6.1nm,0.9s						

MDD ***18*** *18:29:29.5±1.4,39°.53N×12°.23W,h0^{km},mb4.2/9,Error*
ellipse: s-maj=13.4km s-min=7.8km az=79.0,PRXIMO
INMG ***18*** *18:29:30.6±1.4,39°.47N×12°.74W,h10^{km},ML2.3,Error*
ellipse: s-maj=7.2km s-min=4.1km az=76.0
IGIL ***18*** *18:29:30.4,39°.58N×12°.22W,h24^{km},ML2.8*
CNRM ***18*** *18:29:35.2,38°.81N×11°.74W,h0^{km},ml2.7*
ISC 18 18:29:24.8±2.5**,39°.47N**±0°.04×**12°.7W**±0°.1**,h35^{km},n65,**
σ**2^{s}.61**/119**,North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.73**	**100**	*e*Pn	**Pn**	**18 30 09.0**	**+2.9**
PMAFR				*e*Sn	**Sn**	**18 30 37.6**	**-0.2**
PMAFR				A	A	18 30 39.7	
	17nm,0.4s						
PMAFR	**Mafra**	**2.73**	**100**	P	**Pn**	**18 30 09.1**	**+3.1**
	4.0nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**18 30 38.1**	**+0.3**
	58nm,0.5s,SNR=7.9						
PSBE	**So Bento**	**3.04**	**88**	*e*Pn	**Pn**	**18 30 13.5**	**+3.1**
PSBE				*e*Sn	**Sn**	**18 30 46.0**	**+0.3**
PSBE				A	A	18 30 47.0	
	5.4nm,0.5s						
PCAS	**Casmilo, Conde**	**3.31**	**79**	*e*Pn	**Pn**	**18 30 15.8**	**+1.7**
PCAS				*e*Sn	**Sn**	**18 30 49.5**	**-2.8**
PCAS				A	A	18 30 54.0	
	5.5nm,0.4s						
PCAS	**Casmilo, Conde**	**3.31**	**79**	P	**Pn**	**18 30 15.8**	**+1.7**
PCAS				S	**Sn**	**18 30 49.5**	**-2.8**
	5.5nm,0.4s						
PMTG	**Montargil**	**3.52**	**95**	*e*Pn	**Pn**	**18 30 19.8**	**+2.9**
PMTG				*e*Sn	**Sn**	**18 30 56.5**	**-0.8**
PMTG				A	A	18 31 00.6	
	3.6nm,0.2s						
PMTG	**Montargil**	**3.52**	**95**	P	**Pn**	**18 30 19.8**	**+2.9**
PMTG				S	**Sn**	**18 30 56.5**	**-0.8**
	3.6nm,0.2s						
PNCL	**Nicolau / Gran**	**3.55**	**111**	*e*Pn	**Pn**	**18 30 19.8**	**+2.4**
PNCL				*e*Sn	**Sn**	**18 30 55.6**	**-2.5**
PNCL				A	A	18 30 59.3	
	4.6nm,0.3s						
PNCL	**Nicolau / Gran**	**3.55**	**111**	P	**Pn**	**18 30 19.8**	**+2.4**
PNCL				S	**Sn**	**18 30 55.6**	**-2.5**
	4.6nm,0.3s						
PTEO	**Sao Teotonio**	**3.68**	**120**	*e*Pn	**Pn**	**18 30 21.3**	**+2.1**
PTEO				*e*Sn	**Sn**	**18 30 58.4**	**-2.9**
PTEO				A	A	18 31 04.3	
	9.7nm,0.6s						
PTEO	**Sao Teotonio**	**3.68**	**120**	P	**Pn**	**18 30 21.3**	**+2.1**
PTEO				S	**Sn**	**18 30 58.4**	**-2.9**
	4.8nm,0.6s						
EVO	**Evora**	**3.79**	**103**	P	**Pn**	**18 30 23.6**	**+2.9**
EVO				S	**Sn**	**18 31 02.8**	**-1.3**
EVO	**Evora**	**3.79**	**103**	*e*Pn	**Pn**	**18 30 23.3**	**+2.6**
EVO				*e*Sn	**Sn**	**18 31 03.1**	**-1.0**
EVO				A	A	18 31 05.5	
	5.5nm,0.3s						
EVO	**Evora**	**3.79**	**103**	P	**Pn**	**18 30 23.6**	**+2.9**
EVO				S	**Sn**	**18 31 02.8**	**-1.3**
PFVI	**Vila Bisbo**	**3.85**	**126**	*e*Pn	**Pn**	**18 30 23.3**	**+1.7**
PFVI				*e*Sn	**Sn**	**18 31 01.6**	**-4.0**
PFVI				A	A	18 31 05.5	
	9.5nm,0.4s						
PFVI	**Vila Bisbo**	**3.85**	**126**	S	**Sn**	**18 31 01.3**	**-4.3**
	4.4nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.85**	**126**	P	**Pn**	**18 30 22.2**	**+0.6**
PFVI				S	Sn	18 30 56.4	-9.2
MORF	**Marmelete**	**3.86**	**123**	*e*P	**Pn**	**18 30 23.4**	**+1.7**
MORF				*e*S	**Sn**	**18 31 02.2**	**-3.7**
MORF				IAML		18 31 06.2	
	comp=N,24nm,0.2s						
MORF	**Marmelete**	**3.86**	**123**	*e*Pn	**Pn**	**18 30 23.5**	**+1.7**
MORF				*e*Sn	**Sn**	**18 31 02.2**	**-3.7**
MORF				A	A	18 31 05.6	
	comp=N,12nm,0.2s						
MORF	**Marmelete**	**3.86**	**123**	P	**Pn**	**18 30 23.4**	**+1.7**
MORF				S	**Sn**	**18 31 02.2**	**-3.7**
MESJ	**Messejana**	**3.89**	**113**	*e*Pn	**Pn**	**18 30 24.4**	**+2.4**
MESJ				*e*Sn	**Sn**	**18 31 04.8**	**-1.6**
MESJ				A	A	18 31 07.8	

	comp=N,3.7nm,0.3s						
MESJ	**Messejana**	**3.89**	**113**	P	**Pn**	**18 30 24.4**	**+2.4**
MESJ				S	**Sn**	**18 31 04.8**	**-1.6**
	comp=N,3.7nm,0.3s						
PVIS	**Viseu**	**3.91**	**70**	*e*Pn	**Pn**	**18 30 24.5**	**+2.1**
PVIS				*e*Sn	**Sn**	**18 31 05.4**	**-1.7**
PVIS				A	A	18 31 07.5	
	comp=N,7.1nm,0.2s						
PVIS	**Viseu**	**3.91**	**70**	P	**Pn**	**18 30 24.5**	**+2.1**
PVIS				S	**Sn**	**18 31 05.4**	**-1.7**
	comp=N,3.6nm,0.2s						
PESTR	**Estremoz**	**4.04**	**97**	*e*Pn	**Pn**	**18 30 26.7**	**+2.6**
PESTR				*e*Sn	**Sn**	**18 31 08.9**	**-1.3**
PESTR				A	A	18 31 13.4	
	comp=N,4.2nm,0.5s						
PESTR	**Estremoz**	**4.04**	**97**	P	**Pn**	**18 30 25.6**	**+1.5**
PESTR				S	**Sn**	**18 31 07.8**	**-2.4**
PBEJ	**Beja**	**4.07**	**109**	*e*Sn	**Sn**	**18 31 09.8**	**-1.0**
PBEJ				A	A	18 31 12.0	
	comp=N,3.8nm,0.2s						
PBEJ	**Beja**	**4.07**	**109**	S	**Sn**	**18 31 09.8**	**-1.0**
	comp=N,1.9nm,0.2s						
EZAM	**Zamans**	**4.07**	**48**	S	**Sn**	**18 31 07.1**	**-3.8**
	comp=N,3.9nm,0.3s,SNR=7.9						
PCBR	**Castelo Branco**	**4.07**	**83**	*e*Pn	**Pn**	**18 30 27.1**	**+2.6**
PCBR				*e*Sn	**Sn**	**18 31 08.8**	**-2.1**
PCBR				A	A	18 31 13.3	
	comp=N,3.2nm,0.6s						
PCBR	**Castelo Branco**	**4.07**	**83**	P	**Pn**	**18 30 27.1**	**+2.6**
PCBR				S	**Sn**	**18 31 08.8**	**-2.1**
	comp=N,1.6nm,0.6s						
MTE	**Manteigas**	**4.09**	**75**	*e*Pn	**Pn**	**18 30 27.7**	**+2.8**
MTE	**Manteigas**	**4.09**	**75**	P	**Pn**	**18 30 27.7**	**+2.8**
PCVE	**Castro Verde**	**4.11**	**115**	*e*Pn	**Pn**	**18 30 27.8**	**+2.7**
PCVE				*e*Sn	**Sn**	**18 31 09.8**	**-2.1**
PCVE				A	A	18 31 13.3	
	comp=N,3.5nm,0.4s						
PCVE	**Castro Verde**	**4.11**	**115**	P	**Pn**	**18 30 27.8**	**+2.7**
PCVE				S	**Sn**	**18 31 09.8**	**-2.1**
	comp=N,3.5nm,0.4s						
PMRV	**Marv??o**	**4.13**	**89**	*e*Pn	**Pn**	**18 30 28.0**	**+2.6**
PMRV				*e*Sn	**Sn**	**18 31 10.8**	**-1.7**
PMRV				A	A	18 31 14.2	
	comp=N,4.9nm,0.4s						
PMRV	**Marv??o**	**4.13**	**89**	P	**Pn**	**18 30 28.0**	**+2.6**
PMRV				S	**Sn**	**18 31 10.8**	**-1.7**
	comp=N,4.9nm,0.4s						
PGAV	**Gavieira, Arco**	**4.21**	**52**	*e*Pn	**Pn**	**18 30 29.0**	**+2.5**
PGAV				*e*Sn	**Sn**	**18 31 12.3**	**-2.2**
PGAV				A	A	18 31 14.6	
	comp=N,3.4nm,0.2s						
PGAV	**Gavieira, Arco**	**4.21**	**52**	P	**Pn**	**18 30 29.0**	**+2.5**
PGAV				S	**Sn**	**18 31 12.3**	**-2.2**
	comp=N,3.4nm,0.2s						
POLO	**Lamas de Olo**	**4.22**	**62**	*e*Pn	**Pn**	**18 30 29.6**	**+2.9**
POLO				*e*Sn	**Sn**	**18 31 11.9**	**-2.9**
POLO				A	A	18 31 29.1	
	comp=N,1.7nm,0.7s						
POLO	**Lamas de Olo**	**4.22**	**62**	P	**Pn**	**18 30 29.6**	**+2.9**
POLO				S	**Sn**	**18 31 11.9**	**-2.9**
	comp=N,1.7nm,0.7s						
ELOB	**Lobios**	**4.28**	**54**	P	**Pn**	**18 30 29.7**	**+2.2**
	comp=N,1.1nm,0.1s,SNR=13						
ELOB				S	**Sn**	**18 31 12.7**	**-3.6**
	comp=N,2.3nm,0.2s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**4.38**	**119**	*e*Pn	**Pn**	**18 30 31.3**	**+2.5**
PBDV				*e*Sn	**Sn**	**18 31 16.4**	**-2.1**
PBDV				A	A	18 31 19.2	
	comp=N,4.4nm,0.1s						
PBDV	**Barranco-do-Ve**	**4.38**	**119**	P	**Pn**	**18 30 31.3**	**+2.5**
PBDV				S	**Sn**	**18 31 16.4**	**-2.1**
	comp=N,4.4nm,0.1s						
PVAQ	**Vaqueiros**	**4.44**	**116**	*e*Pn	**Pn**	**18 30 33.0**	**+3.4**
PVAQ				*e*Sn	**Sn**	**18 31 17.4**	**-2.7**
PVAQ				A	A	18 31 19.8	
	comp=N,3.8nm,0.2s						
PVAQ	**Vaqueiros**	**4.44**	**116**	P	**Pn**	**18 30 33.0**	**+3.4**
PVAQ				S	**Sn**	**18 31 17.4**	**-2.7**
	comp=N,3.8nm,0.2s						
PVAQ	**Vaqueiros**	**4.44**	**116**	P	**Pn**	**18 30 31.6**	**+2.0**
PVAQ				S	Sn	18 31 13.8	-6.3
EMAZ	**Mazaricos**	**4.48**	**38**	P	**Pn**	**18 30 33.1**	**+2.8**
	comp=N,2.1nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**18 31 16.6**	**-4.5**
	comp=N,6.5nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**4.50**	**97**	P	**Pn**	**18 30 32.4**	**+1.9**
	comp=N,1.5nm,0.1s,SNR=16						
EBAD				S	**Sn**	**18 31 19.4**	**-2.2**
	comp=N,6.8nm,0.1s,SNR=10						
EGRO	**El Granado**	**4.54**	**113**	P	**Pn**	**18 30 33.5**	**+2.4**
	comp=N,0.6nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**18 31 20.2**	**-2.5**
	comp=N,3.0nm,0.3s,SNR=5.4						
MVO	**Moncorvo**	**4.67**	**67**	*e*Pn	**Pn**	**18 30 35.2**	**+2.3**
MVO				*e*Sn	**Sn**	**18 31 22.6**	**-3.3**
MVO				A	A	18 31 24.8	
	comp=N,2.4nm,0.3s						
MVO	**Moncorvo**	**4.67**	**67**	P	**Pn**	**18 30 34.8**	**+1.9**
	comp=N,1.8nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**18 31 22.6**	**-3.3**
	comp=N,2.9nm,0.2s,SNR=7.9						
EAGO	**Agolada(Pontev**	**4.83**	**45**	P	**Pn**	**18 30 37.4**	**+2.4**
	comp=N,6.4nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**18 31 26.4**	**-3.3**
	comp=N,2.3nm,0.0s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.04**	**108**	P	**Pn**	**18 30 40.9**	**+3.1**
	comp=N,0.9nm,0.3s,SNR=7.9						
EMIN				S	**Sn**	**18 31 31.5**	**-3.3**
	comp=N,1.1nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**5.12**	**61**	*e*Pn	**Pn**	**18 30 42.1**	**+3.1**
PBRG				*e*Sn	**Sn**	**18 31 36.6**	**-0.2**
PBRG	**Braganca**	**5.12**	**61**	P	**Pn**	**18 30 42.1**	**+3.1**
PBRG				S	**Sn**	**18 31 36.6**	**-0.2**
EPLA	**Plasencia**	**5.16**	**81**	P	**Pn**	**18 30 41.4**	**+1.9**
	comp=N,0.5nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**18 31 35.0**	**-2.8**
	comp=N,1.9nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**5.18**	**60**	P	**Pn**	**18 30 42.4**	**+2.5**
	comp=N,1.4nm,0.1s,SNR=8.4						
ECAL				S	**Sn**	**18 31 34.8**	**-3.6**
	comp=N,1.5nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**5.70**	**46**	P	**Pn**	**18 30 49.5**	**+2.7**
	comp=N,1.1nm,0.1s,SNR=7.9						
EPON				S	**Sn**	**18 31 46.5**	**-4.6**
	comp=N,0.7nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.88**	**101**	P	**Pn**	**18 30 52.2**	**+2.8**
	comp=N,0.4nm,0.3s,SNR=7.9						
ECAB				S	**Sn**	**18 31 52.3**	**-3.3**
	comp=N,1.1nm,0.3s,SNR=7.9						
ESPR	**Espera**	**6.00**	**113**	S	**Sn**	**18 31 56.3**	**-2.3**
	comp=N,3.1nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**6.48**	**87**	P	**Pn**	**18 30 59.5**	**+1.8**
	comp=N,0.5nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**18 32 05.6**	**-4.8**
	comp=N,1.1nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**6.50**	**99**	P	**Pn**	**18 31 00.1**	**+2.2**
	comp=N,0.4nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**18 32 07.9**	**-2.9**
	comp=N,3.0nm,0.4s,SNR=7.9						
ESDC	**Sonseca Array**	**6.78**	**85**	P	**Pn**	**18 31 04.1**	**+2.4**
	comp=N,0.5nm,0.3s,baz=268,slow=13,SNR=7.4						
EARI	**Arriondas**	**6.83**	**53**	P	**Pn**	**18 31 05.9**	**+3.5**
	comp=N,1.6nm,0.2s,SNR=14						

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*GCG **18** 18:38:04.1±0.8, 13.°80N×92.°56W, h22^{km}±999^{km}, MD4.1*

*IDC **18** 18:38:04.1±3.1, 14.°07N×91.°84W, h0^{km}, mb3.9/5, mb1 4.2/7, mb1mx3.8/44, mbtmp3.8/7, ML3.8/1, MS3.6/7, Ms1 3.6/7, ms1mx3.1/42, Error ellipse: s-maj=115.9km s-min=48.9km az=43.0*

*NEIC **18** 18:38:09.0±2.0, 13.°94N±0.°08×92.°29W±0.°07, h37^{km}±8^{km}, mb4.2/8, Error ellipse: s-maj=12.9km s-min=9.2km az=211.0*

ISC 18 18:38:09.3±1.0, **13.°8N**±0.°1×**92.°36W**±0.°08, **h46**^{km}, **n49**, σ**1.^{s}62**/44, **mb4.2**/9, **MS3.6**/7, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.94**	**43**		**Pn**	**18 38 24.4**	**-1.7**
THIG		**1.06**	**5**		**Pn**	**18 38 26.0**	**-1.8**
FUG	**Fuego 3**	**1.59**	**68**	*e*P	**Pn**	**18 38 33.9**	**-1.3**
HUEH	**Huehuetenango**	**1.69**	**29**		**Pn**	**18 38 35.1**	**-1.4**
PCG	**Pacaya**	**1.78**	**72**	*e*P	**Pn**	**18 38 37.0**	**-0.9**
PCIG		**2.03**	**336**		**Pn**	**18 38 38.8**	**-2.3**
NBG	**Las Nubes**	**2.09**	**69**	*e*P	**Pn**	**18 38 42.2**	**+0.1**
NBG				*e*S	**Sn**	**18 39 10.5**	**+3.4**
CCIG	**Comitan**	**2.44**	**5**		**Pn**	**18 38 47.5**	**+0.7**
MTO3	**Montecristo**	**2.96**	**79**		**Pn**	**18 38 52.0**	**-2.0**
ESQI	**Esquipulas**	**3.01**	**76**		**Pn**	**18 38 53.0**	**-1.7**
TGIG		**3.01**	**346**		**Pn**	**18 38 53.6**	**-1.0**
SNET	**Serv Nac Est T**	**3.04**	**93**	Pn	**Pn**	**18 38 53.5**	**-1.6**
PETF	**Flores**	**3.89**	**38**		**Pn**	**18 39 04.5**	**-2.1**
CMIG	**Matias Romero**	**4.05**	**323**	Pn	**Pn**	**18 39 07.6**	**-1.2**
	baz=171,slow=7.1,SNR=0.6						
CMIG	**Matias Romero**	**4.05**	**323**		**Pn**	**18 39 07.1**	**-1.6**
TGUH	**Tegucigalpa,Un**	**4.94**	**87**	Pn	**Pn**	**18 39 19.9**	**-1.3**
CRIN	**San Cristobal**	**5.29**	**102**	Pn	**Pn**	**18 39 24.6**	**-1.3**
BOAB	**BOACO BROADBAN**	**6.66**	**101**	Pn	**Pn**	**18 39 41.4**	**-3.3**
TLIG	**Tlapa**	**7.03**	**303**	Pn	**Pn**	**18 39 49.2**	**-0.7**
HZTE	**Horizontes, Gu**	**7.30**	**114**	Pn	**Pn**	**18 39 52.3**	**-1.2**
ORTG	**Ortega, Santa**	**7.58**	**116**		**Pn**	**18 39 56.9**	**-0.5**
RIMA	**Rio Macho**	**9.25**	**115**		**Pn**	**18 40 20.4**	**0.0**
SRBA	**San Rafael, Bu**	**9.94**	**117**		**Pn**	**18 40 29.1**	**-0.6**
RIOS	**Rincon, Osa**	**10.06**	**120**		**Pn**	**18 40 29.8**	**-1.6**
H06E1	**SOCORRO T-PHAS**	**18.48**	**288**	T	T	19 01 27.2	
	SNR=4.2						
TX31	**Lajitas Ar. Si**	**18.64**	**328**	P	**Pn**	**18 42 24.6**	**+0.5**
TX31				IAmb	IAmb	18 42 47.1	
	comp=Z,15nm,1.1s						
TX32	**Lajitas Array**	**18.64**	**328**	P	**P**	**18 42 21.6**	**-1.8**
TXAR	**Lajitas Array**	**18.64**	**328**	Pn	**Pn**	**18 42 25.9**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=148,slow=9.7,SNR=9.6						
TXAR	**Lajitas Array**	**18.64**	**328**		**Pn**	**18 42 24.0**	**-0.1**
MNTX	**Cornudas Mount**	**21.41**	**328**	P	**P**	**18 42 51.7**	**-1.8**
MNTX				IAmb	IAmb	18 42 55.7	
	comp=Z,3.9nm,1.0s						
W35A	**Tecumseh**	**21.61**	**350**	P	**P**	**18 42 53.6**	**-1.8**
W35A				IAmb	IAmb	18 42 56.0	
	comp=Z,9.9nm,0.6s						
AMTX	**Amarillo**	**22.58**	**340**	P	**P**	**18 43 02.5**	**-3.5**
AMTX				IAmb	IAmb	18 43 08.0	
	comp=Z,14nm,0.8s						
TKL	**Tuckaleechee C**	**23.06**	**18**	LR	LR	18 53 39.7	
	comp=Z,198nm,18.8s,baz=222,slow=41						
MVCO	**Mesa Verde**	**27.37**	**331**	P	**P**	**18 43 51.6**	**+1.0**
MVCO				IAmb	IAmb	18 44 02.6	
	comp=Z,8.0nm,1.1s						
PDAR	**Pinedale Array**	**32.42**	**336**	P	**P**	**18 44 36.5**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=145,slow=5.4,SNR=3.7						
PDAR	**Pinedale Array**	**32.42**	**336**	P	**P**	**18 44 35.6**	**+0.4**
REDW	**Red Top Meadow**	**33.44**	**335**	P	**P**	**18 44 45.4**	**+1.3**
NVAR	**Mina Array Bea**	**33.58**	**322**	P	**P**	**18 44 48.2**	**+2.8**
	comp=Z,1.3nm,0.7s,baz=134,slow=8.9,SNR=8.2						
NVAR				LR	LR	19 00 18.7	
	comp=Z,66nm,20.0s,baz=90,slow=40						
NVAR	**Mina Array Bea**	**33.58**	**322**	P	**P**	**18 44 44.8**	**-0.6**
SCHQ	**Schefferville**	**45.49**	**20**	LR	LR	19 06 05.1	
	comp=Z,183nm,18.8s,baz=220,slow=37						
YKA	**Yellowknife Ar**	**51.10**	**347**	P	**P**	**18 47 07.1**	**0.0**
	comp=Z,3.2nm,0.7s,baz=150,slow=7.6,SNR=30						
YKA				PcP	**PcP**	**18 48 22.8**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=146,slow=3.8,SNR=4.3						
YKA	**Yellowknife Ar**	**51.10**	**347**	P	**P**	**18 47 06.5**	**-0.6**
INK	**Inuvik**	**60.49**	**344**	P	**P**	**18 48 15.1**	**+0.9**
	comp=Z,2.9nm,0.9s,baz=115,slow=11,SNR=6.5						
ILAR	**Eielson Array**	**62.85**	**337**	P	**P**	**18 48 31.2**	**+1.0**
	comp=Z,1.3nm,0.9s,baz=132,slow=5.3,SNR=12						
NOA	**NORSAR Array B**	**84.45**	**28**	LR	LR	19 26 46.5	
	comp=Z,17nm,21.6s,baz=305,slow=35						
ARCES	**ARCESS Array B**	**86.39**	**18**	LR	LR	19 31 53.9	
	comp=Z,24nm,21.3s,baz=320,slow=38						
FINES	**FINESS Array B**	**90.79**	**25**	LR	LR	19 32 14.7	
	comp=Z,21nm,19.6s,baz=352,slow=36						
NRIK	**Noril'sk**	**97.03**	**0**	LR	LR	19 40 22.3	
	comp=Z,57nm,18.7s,baz=336,slow=39						
CMAR	**Chiang Mai Arr**	**146.03**	**341**	PKPbc	**PKPab**	**18 57 45.8**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=334,slow=3.3,SNR=18						

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*BJI **18** 18:41:03.3±0.0, 38.°86N×141.°87E, h73^{km}, mB5.0/15, mb4.5/29, Ms4.1/4, Ms7 3.9/3*

*MOS **18** 18:41:04.4±1.2, 38.°88N×141.°69E, h66^{km}, mb4.7/10, Error ellipse: s-maj=8.2km s-min=5.4km az=92.4*

*NEIC **18** 18:41:05.3±2.0, 38.°81N±0.°05×141.°8E±0.°1, h60^{km}±7^{km}, mb4.6/23, Error ellipse: s-maj=13.2km s-min=6.0km az=112.0*

*IDC **18** 18:41:06.9±0.7, 38.°71N×141.°48E, h73^{km}±6^{km}, mb3.8/19, mb1 4.0/21, mb1mx3.7/50, mbtmp4.1/21, MS2.2/2, Ms1 2.2/2, ms1mx2.1/49, Error ellipse: s-maj=15.1km s-min=12.3km az=101.0*

*NIED **18** 18:41:07.1, 38.°80N×141.°59E, h71^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.59; $M_{\theta\theta}$-0.65; $M_{\phi\phi}$0.06; $M_{r\theta}$-0.33; $M_{\theta\phi}$-0.70; $M_{\phi r}$-0.90; Fault plane solution: $M_0$1.34000×10^{15} NP1: ϕ_s207.00000°, δ74.00000°, λ58.00000°. NP2:ϕ_s93.00000°, δ35.00000°, λ151.00000°.*

*JMA **18** 18:41:07.0, 38.°80N×141.°59E, h71^{km}±1^{km}, M4.1 Broadband fault plane solution: P waves. NP1: ϕ_s76.00000°, δ36.00000°, λ120.00000°. NP2: ϕ_s221.00000°, δ59.00000°, λ70.00000°. Principal axes: T Plg69.0000°, Azm89.0000°; N Plg17.0000°, Azm231.0000°; P Plg12.0000°, Azm325.0000°;*

JMA Felt II J1.

ISC 18 18:41:06.6±0.5, **38.°83N**±0.°04×**141.°67E**±0.°05, **h74**^{km}±4^{km}, **n157**, σ**1.^{s}64**/175, **mb4.4**/52, **20C-10D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKMT	**Kesennumamotoy**	**0.15**	**261**	⇑P	**Pn**	**18 41 17.5**	**+0.1**
JKMT				S	**Sn**	**18 41 25.0**	**-0.4**
OFUJ	**Ofunato**	**0.24**	**0**	⇑P	**Pn**	**18 41 18.3**	**+0.4**
OFUJ				S	**Sn**	**18 41 26.5**	**+0.3**
JMK	**Ichinoseki**	**0.37**	**289**	P	**Pn**	**18 41 18.5**	**-0.1**
JMK				S	**Sn**	**18 41 26.8**	**-0.7**
JIO	**Ouri**	**0.45**	**213**	⇑P	**Pn**	**18 41 19.0**	**-0.3**
JIO				S	**Sn**	**18 41 27.7**	**-1.0**
JOM	**Ohasama**	**0.70**	**336**	⇓P	**Pn**	**18 41 22.3**	**+0.5**
JOM				S	**Sn**	**18 41 33.3**	**+0.2**
JOU	**Okura**	**0.91**	**240**	⇑P	**Pn**	**18 41 23.9**	**-0.4**
JOU				S	**Sn**	**18 41 36.8**	**-0.6**
JRG	**Rokugo**	**0.98**	**305**	⇑P	**Pn**	**18 41 25.3**	**+0.3**
JRG				S	**Sn**	**18 41 39.2**	**+0.4**
JYK	**Kaneyama**	**1.02**	**275**	⇑P	**Pn**	**18 41 25.4**	**-0.2**
JYK				*e*S	**Sn**	**18 41 39.4**	**-0.3**
JMM	**Marumori**	**1.19**	**216**	⇑P	**Pn**	**18 41 26.8**	**-0.8**
JMM				S	**Sn**	**18 41 41.4**	**-1.9**
JMM	**Marumori**	**1.19**	**216**		**Pn**	**18 41 26.7**	**-0.8**
JMM				Sn	**Sn**	**18 41 40.8**	**-2.5**
JYS	**Shirataka**	**1.40**	**244**	⇑P	**Pn**	**18 41 30.3**	**0.0**
JANG	**Nango**	**1.54**	**356**	⇓P	**Pn**	**18 41 32.7**	**+0.5**
JANG				*e*S	**Sn**	**18 41 52.2**	**+0.6**
JYA	**Atsumi**	**1.55**	**262**	⇑P	**Pn**	**18 41 32.2**	**0.0**
JYA				S	**Sn**	**18 41 51.5**	**-0.2**
JAH	**Hinai**	**1.57**	**330**	⇓P	**Pn**	**18 41 33.6**	**+1.0**
JFK	**Kawauchi**	**1.59**	**203**	⇓P	**Pn**	**18 41 32.5**	**-0.4**
JFK				S	**Sn**	**18 41 51.3**	**-1.5**
JTM	**Tenmabayashi**	**2.00**	**347**	Pn	**Pn**	**18 41 39.5**	**+1.2**
JTM				Sn	**Sn**	**18 41 56.9**	**-5.7**
JSD	**Sado**	**2.79**	**254**		**Pn**	**18 41 49.1**	**+0.2**
JYT	**Yasato**	**2.85**	**205**		**Pn**	**18 41 48.8**	**-1.0**
ERM	**Erimo**	**3.38**	**19**	*de*P	**Pn**	**18 41 57.1**	**+0.3**
ERM	**Erimo**	**3.38**	**19**	Pn	**Pn**	**18 41 56.4**	**-0.4**
ERM				Sn	**Sn**	**18 42 33.2**	**-2.5**
JEM	**Erimo**	**3.38**	**19**	Pn	**Pn**	**18 41 56.6**	**-0.3**
MJAR	**Matsushiro Arr**	**3.57**	**231**	P	**Pn**	**18 42 00.0**	**+0.4**
	1.8nm,0.3s,baz=41,slow=12,SNR=38						
MJAR				LR	LR	18 43 14.5	
	comp=Z,30nm,20.9s,baz=80,slow=38						
MJB9	**Matsu-Tunnel**	**3.57**	**231**	Pn	**Pn**	**18 41 56.3**	**-3.3**
MAJO	**Matsushiro**	**3.57**	**231**	*c i*P	**Pn**	**18 42 01.0**	**+1.4**
MAJO	**Matsushiro**	**3.57**	**231**		**Pn**	**18 42 00.6**	**+1.0**
MAT	**Matsushiro**	**3.57**	**231**	P	**Pn**	**18 42 01.1**	**+1.5**
MAT				*e*S	**Sn**	**18 42 44.2**	**+3.5**
JEW	**Eniwo**	**4.00**	**358**	Pn	**Pn**	**18 42 01.6**	**-3.8**
JGF	**Kuroka**	**4.72**	**228**	Pn	**Pn**	**18 42 16.7**	**+1.5**
JSG	**Sagara**	**5.00**	**215**	Pn	**Pn**	**18 42 20.7**	**+1.6**
INU	**Inuyama**	**5.09**	**228**		**Pn**	**18 42 19.8**	**-0.5**
JKA	**Kamikawa-asahi**	**5.32**	**7**		**Pn**	**18 42 20.6**	**-2.8**
ASAJ	**Asahikawa**	**5.32**	**7**	P	**Pn**	**18 42 23.5**	**0.0**
	7.8nm,0.3s,baz=221,slow=9.4,SNR=30						
ASAJ	**Asahikawa**	**5.32**	**7**	P	**Pn**	**18 42 20.6**	**-2.8**
NMR	**Nemuro--Hokkai**	**5.47**	**33**	*e*P	**Pn**	**18 42 24.3**	**-1.1**
NMR				*e*S	**Sn**	**18 43 21.3**	**-5.6**
GLVR	**Golovnino**	**5.69**	**29**	*e*P	**Pn**	**18 42 27.8**	**-0.7**
GLVR				*e*S	**Sn**	**18 43 28.7**	**-3.7**
GLVR				smax	smax		
	comp=N,461nm,0.9s						
GLVR				smax	smax		
	comp=E,369nm,0.7s						
JHJ	**Hachijo jima 2**	**5.90**	**196**	P	**Pn**	**18 42 30.2**	**-1.2**
	comp=E,35nm,0.3s,baz=299,slow=22,SNR=15						
JHJ				S	**Sn**	**18 43 32.1**	**-5.5**
	comp=E,48nm,0.3s,baz=281,slow=23,SNR=6.1						
JHJ2	**Mitsune**	**5.90**	**195**	Pn	**Pn**	**18 42 29.6**	**-1.8**
RUSJ	**Misakicho**	**5.91**	**26**	⇓*i*P	**Pn**	**18 42 31.2**	**-0.2**
RUSJ				*e*S	**Sn**	**18 43 35.2**	**-2.5**
YUK	**Yuzh-Kuril'sk**	**6.08**	**30**	*e*P	**Pn**	**18 42 31.8**	**-1.9**
YUK				*e*S	**Sn**	**18 43 36.8**	**-4.9**
YUK				pmax	pmax		
	comp=Z,112nm,0.1s						
YUK				smax	smax		
	comp=E,425nm,0.6s						
YUK				smax	smax		
	comp=N,167nm,0.2s						
JWT	**Wachi**	**6.14**	**237**	Pn	**Pn**	**18 42 36.1**	**+1.5**
SHO	**Shikotan**	**6.36**	**36**	*e*P	**Pn**	**18 42 34.4**	**-3.1**
SHO				*e*S	Sn	18 43 41.2	-7.4
SHO				smax	smax		
	comp=N,79nm,0.5s						
SHO				smax	smax		
	comp=E,145nm,0.5s						
JHS	**Saijyo**	**7.84**	**243**	Pn	**Pn**	**18 43 00.9**	**+3.0**
YSS	**Yuzh-Sakhalins**	**8.15**	**5**	*e*P	**Pn**	**18 43 00.4**	**-1.7**
YSS	**Yuzh-Sakhalins**	**8.15**	**5**	Pn	**Pn**	**18 42 59.2**	**-2.8**
USA0B	**Ussuriysk Arra**	**9.02**	**310**	P	**Pn**	**18 43 15.3**	**+1.4**
USA0B	**Ussuriysk Arra**	**9.02**	**310**	Pn	**Pn**	**18 43 15.3**	**+1.4**
USRK	**Ussuriysk Ar.**	**9.02**	**310**	P	**Pn**	**18 43 15.4**	**+1.5**
	baz=97,slow=14,SNR=20						
JNU	**Nakatsue**	**10.43**	**240**	Pn	**Pn**	**18 43 32.7**	**-0.6**
KSRS	**Korea Array**	**10.91**	**267**	P	**Pn**	**18 43 43.4**	**+3.7**
	comp=E,0.9nm,0.3s,baz=75,slow=14,SNR=14						
KSRS				LR	LR	18 46 42.6	
	comp=E,16nm,19.6s,baz=80,slow=31						
KSAR	**Wonju Array Be**	**10.95**	**267**	P	**Pn**	**18 43 40.7**	**+0.5**
KSAR	**Wonju Array Be**	**10.95**	**267**	Pn	**Pn**	**18 43 40.7**	**+0.5**
KS19	**Wonju Array Si**	**10.95**	**267**	Pn	**Pn**	**18 43 41.2**	**+1.0**
KLR	**Kul'dur**	**12.59**	**329**	P	**P**	**18 44 08.1**	**-3.1**
	comp=E,0.5nm,0.3s,baz=153,slow=15,SNR=9.8						
KLR	**Kul'dur**	**12.59**	**329**	⇑*e*P	**Pn**	**18 43 59.6**	**-3.0**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.3s						
SKR	**Severo-Kuril's**	**15.64**	**36**	⇑*e*P	**Pn**	**18 44 43.1**	**+0.8**
ZEA	**Zeya**	**17.87**	**331**	*e*P	**P**	**18 45 08.8**	**-0.9**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2	**Nanjing**	**19.75**	**257**	*e*P	**Pn**	**18 45 31.8**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MA2	**Magadan**	**21.55**	**13**	P	**P**	**18 45 50.2**	**+0.6**
MA2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MA2	**Magadan**	**21.55**	**13**	P	**P**	**18 45 50.2**	**+0.6**
HHC	**Hu-ho-hao-te**	**23.15**	**285**	*e*P	**P**	**18 46 05.1**	**-1.6**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,6.0s						
YAK	**Yakutsk**	**24.36**	**346**	P	**P**	**18 46 17.1**	**-0.1**
	comp=Z,9.1nm,0.3s,baz=144,slow=4.4,SNR=16						
YAK	**Yakutsk**	**24.36**	**346**	*e*P	**P**	**18 46 16.8**	**-0.5**
YAK				pmax	pmax		
	comp=Z,19nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK	**Yakutsk**	**24.36**	**346**	P	**P**	**18 46 15.9**	**-1.4**
SEY	**Seymchan**	**24.99**	**12**	P	**P**	**18 46 24.8**	**+1.9**
	comp=E,2.4nm,0.4s,baz=215,slow=8.0,SNR=4.3						
ULN	**Ulaanbaatar**	**26.55**	**301**	*ce*P	**P**	**18 46 39.0**	**+1.5**
ULN				pmax	pmax		
	comp=Z,7.0nm,2.5s						
SONM	**Songino Array**	**26.99**	**301**	P	**P**	**18 46 41.1**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=104,slow=8.4,SNR=9.0						
SONM	**Songino Array**	**26.99**	**301**	P	**P**	**18 46 41.7**	**+0.3**
SONM				pmax	pmax		
	comp=Z,3.0nm,1.4s						
SONM	**Songino Array**	**26.99**	**301**	P	**P**	**18 46 41.7**	**+0.3**
ENH	**Enshi**	**27.73**	**262**	P	**P**	**18 46 47.5**	**-0.6**
ENH				IAmb	IAmb	18 46 52.3	
	comp=Z,5.7nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.94**	**124**	T	T	19 17 37.2	
	baz=317,slow=75,SNR=1599						
H11N1	**WAKE ISLAND Hy**	**28.95**	**124**	T	T	19 17 34.8	
	baz=317,slow=75,SNR=1457						
H11N3	**WAKE ISLAND Hy**	**28.96**	**124**	T	T	19 17 38.5	
	baz=317,slow=75,SNR=1788						
ZAK	**Zakamensk**	**29.34**	**306**	*e*P	**P**	**18 47 01.5**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
H11S1	**WAKE ISLAND Hy**	**29.71**	**126**	T	T	19 18 20.5	
	baz=318,slow=76,SNR=362						
H11S3	**WAKE ISLAND Hy**	**29.71**	**126**	T	T	19 18 24.9	
	baz=318,slow=76,SNR=559						
H11S2	**WAKE ISLAND Hy**	**29.73**	**126**	T	T	19 18 23.4	
	baz=318,slow=76,SNR=268						
LZH	**Lanzhou**	**30.01**	**277**	*e*P	**P**	**18 47 05.6**	**-2.8**
LZH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BILL	**Bilibino**	**32.25**	**17**	*e*P	**P**	**18 47 31.2**	**+3.7**
BILL				*e*		18 48 34.7	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.9s						
GTA	**Gaotai**	**32.27**	**284**	*e*P	**P**	**18 47 30.1**	**+1.9**
GTA				pP	pP	18 47 45.3	-0.5
GTA				sP	sP	18 47 52.8	-1.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DGZ	**Jazzator, Alta**	**39.52**	**304**	*d i*P	**P**	**18 48 31.0**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,17nm,0.8s						
WMQ	**Urumqi**	**40.23**	**295**	*e*P	**P**	**18 48 38.3**	**+2.4**
WMQ				sP	sP	18 49 03.3	+0.8
WMQ				pmax	pmax		
	comp=Z,12nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.9s						
ZAA0	**Zalesovo Array**	**40.87**	**311**	P	**P**	**18 48 40.6**	**-0.3**
ZAA0				IAmb	IAmb	18 48 41.9	
	comp=Z,9.6nm,0.7s						
ZALV	**Zalesovo Beam**	**40.87**	**311**	P	**P**	**18 48 41.3**	**+0.4**
	comp=Z,8.7nm,0.6s,baz=85,slow=7.8,SNR=48						
ZALV	**Zalesovo Beam**	**40.87**	**311**	P	**P**	**18 48 40.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**42.17**	**254**	P	**P**	**18 48 52.2**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=86,slow=8.3,SNR=4.8						
CMAR	**Chiang Mai Arr**	**42.17**	**254**	*ce*P	**P**	**18 48 54.0**	**+2.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LSA	**Lhasa**	**42.27**	**273**	P	**P**	**18 48 54.8**	**+1.5**
LSA				pmax	pmax		
	comp=Z,13nm,1.8s						
LSA	**Lhasa**	**42.27**	**273**	P	**P**	**18 48 54.8**	**+1.5**
LSA				IAmb	IAmb	18 49 30.1	
	comp=Z,12nm,1.8s						
MK31	**Makanchi Array**	**43.35**	**301**	*d i*P	**P**	**18 49 01.5**	**+0.2**
MK31	**Makanchi Array**	**43.35**	**301**	P	**P**	**18 49 01.8**	**+0.5**
MK31				IAmb	IAmb	18 49 02.4	
	comp=Z,11nm,0.7s						
MKAR	**Makanchi Array**	**43.35**	**301**	P	**P**	**18 49 01.6**	**+0.3**
	comp=Z,13nm,0.7s,baz=85,slow=11,SNR=74						
MAKZ	**Makanchi**	**43.56**	**301**	P	**P**	**18 49 03.3**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,12nm,0.9s						
MAKZ	**Makanchi**	**43.56**	**301**	P	**P**	**18 49 03.3**	**+0.3**
MAKZ				IAmb	IAmb	18 49 04.2	
	comp=Z,12nm,0.8s						
KURK	**Kurchatov**	**45.00**	**307**	*d i*P	**P**	**18 49 14.2**	**-0.1**
KURK				pmax	pmax		
	comp=Z,31nm,0.8s						
KURK	**Kurchatov**	**45.00**	**307**	P	**P**	**18 49 14.5**	**+0.2**
KURBB	**Kurchatov Arra**	**45.07**	**307**	P	**P**	**18 49 14.0**	**-0.9**
JIRN	**Jiri**	**47.08**	**274**	*e*P	**P**	**18 49 30.7**	**-0.7**
	comp=Z,4.1nm,0.3s						
GUN	**Gumba**	**47.20**	**274**	*e*P	**P**	**18 49 32.6**	**+0.2**
	comp=Z,4.7nm,0.3s						

PKI	Pulchoki	47.73	274	eP	P	18 49 35.5	-0.9
	comp=Z,0.3nm,0.2s						
PKIN	Phulchoki	47.74	274	eP	P	18 49 35.4	-1.0
	comp=Z,0.9nm,0.2s						
ILAR	Eielson Array	47.88	33	P	P	18 49 38.4	+1.7
	comp=Z,0.7nm,0.7s,baz=261,slow=5.7,SNR=5.1						
GKN	Gorkha	48.12	275	eP	P	18 49 39.3	0.0
	comp=Z,4.6nm,0.3s						
DANN	Dangsing	48.64	276	eP	P	18 49 44.1	+0.7
	comp=Z,4.7nm,0.2s						
BOOM	Boomskoye usch	48.87	296	P	P	18 49 46.1	+1.2
BOOM				pmax	pmax		
	comp=Z,13nm,1.4s						
BOOM	Boomskoye usch	48.87	296	P	P	18 49 46.0	+1.2
BOOM				IAmb	IAmb	18 49 48.6	
	comp=Z,13nm,1.4s						
KOLN	Koldanda	49.04	275	eP	P	18 49 45.8	-0.6
	comp=Z,2.5nm,0.3s						
PYUN	Piuthan	49.36	276	eP	P	18 49 48.1	-0.7
	comp=Z,5.9nm,0.3s						
BRVK	Borovoye	49.58	311	⇑eP	P	18 49 50.4	+0.5
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
BRVK	Borovoye	49.58	311	P	P	18 49 49.8	-0.1
BRVK				IAmb	IAmb	18 49 51.8	
	comp=Z,3.8nm,0.6s						
AAK	Ala-Archa	49.83	297	⇑eP	P	18 49 51.1	-1.0
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AAK	Ala-Archa	49.83	297	P	P	18 49 52.5	+0.4
KKAR	Karatay Array	52.41	299	P	P	18 50 11.0	-0.3
KKAR	Karatay Array	52.41	299	P	P	18 50 11.0	-0.3
INK	Inuvik	52.70	28	P	P	18 50 15.1	+2.2
	comp=Z,0.7nm,0.5s,baz=321,slow=5.8,SNR=6.3						
INK	Inuvik	52.70	28	P	P	18 50 13.1	+0.2
INK				IAmb	IAmb	18 50 21.1	
	comp=Z,7.6nm,1.5s						
SVE	Sverdlovsk	53.94	318	eP	P	18 50 23.2	+0.9
SVE				pmax	pmax		
	comp=Z,12nm,0.7s						
ARU	Arti	55.16	318	c iP	P	18 50 31.6	+0.6
ARU				S	S	18 58 08.6	+0.3
ARU				SS	SS	19 01 45.7	-6.9
ARU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ARU	Arti	55.16	318	P	P	18 50 31.3	+0.2
AB31	Akbulak array	56.94	309	i P	P	18 50 43.7	-0.2
ABKAR	Akbulak array	56.94	309	P	P	18 50 43.9	0.0
ABKAR				IAmb	IAmb	18 50 44.7	
	comp=Z,6.0nm,0.6s						
ABKAR	Akbulak array	56.94	309	P	P	18 50 44.0	+0.1
AKTO	Aktyubinsk	57.63	311	P	P	18 50 47.8	-1.0
WB0	Warramunga Arr	58.69	188	P	P	18 50 55.8	-0.6
WRAB	Tennant Creek	58.86	188	P	P	18 50 56.9	-0.7
WRAB				pmax	pmax		
	comp=Z,21nm,1.7s						
WRAB	Tennant Creek	58.86	188	P	P	18 50 56.9	-0.7
WRA	Warramunga Arr	58.87	188	P	P	18 50 57.2	-0.4
	comp=Z,1.1nm,0.3s,baz=25,slow=6.6,SNR=40						
WRA				pP	pP	18 51 15.2	-1.4
	comp=Z,0.8nm,0.5s,baz=5.5,slow=6.6,SNR=4.3						
WRA	Warramunga Arr	58.87	188	P	P	18 50 57.1	-0.6
KIRV	Kirov	58.94	322	c eP	P	18 50 57.5	-0.2
YKA	Yellowknife Ar	62.16	31	P	P	18 51 20.9	+1.4
	comp=Z,0.4nm,0.7s,baz=304,slow=7.0,SNR=4.0						
ARCES	ARCESS Array B	62.39	339	P	P	18 51 21.7	+0.7
	comp=Z,2.6nm,0.8s,baz=56,slow=6.5,SNR=6.0						
ASAR	Alice Springs	62.60	188	P	P	18 51 21.6	-1.3
	comp=Z,0.6nm,0.4s,baz=358,slow=5.1,SNR=22						
ASAR				pP	pP	18 51 41.1	-1.0
	comp=Z,0.5nm,0.7s,baz=2.2,slow=5.0,SNR=2.7						
ASAR	Alice Springs	62.60	188	P	P	18 51 22.2	-0.7
OBN	Obninsk	66.78	323	eP	P	18 51 50.3	+0.5
OBN				e		18 52 14.9	
OBN				e		18 54 19.4	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	FINESS Array B	67.32	332	P	P	18 51 53.3	+0.2
	comp=Z,3.6nm,0.8s,baz=43,slow=9.2,SNR=5.5						
FINES	FINESS Array B	67.32	332	P	P	18 51 52.9	-0.2
KIV	Kislovodsk	69.88	311	eP	P	18 52 10.4	+0.9
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV	Kislovodsk	69.88	311	P	P	18 52 09.7	+0.1
KIV				IAmb	IAmb	18 52 12.0	
	comp=Z,6.3nm,0.7s						
KBZ	Khabaz	69.89	310	P	P	18 52 09.4	0.0
	comp=Z,3.1nm,0.8s,baz=24,slow=1.2,SNR=11						
KBZ	Khabaz	69.89	310	⇑eP	P	18 52 09.9	+0.5
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NEY	Neytrino	70.27	310	⇓eP	P	18 52 13.0	+1.0
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NC204	NORSAR Array S	72.56	337	P	P	18 52 25.7	+0.4
NB201	NORSAR Array S	72.58	337	P	P	18 52 25.6	+0.2
AKASG	Malin Array Be	73.00	322	P	P	18 52 28.1	0.0
	comp=Z,0.8nm,0.5s,baz=46,slow=5.8,SNR=10						
AKBB	Malin Array Si	73.00	322	⇑eP	P	18 52 27.8	-0.2
NVAR	Mina Array Bea	73.76	54	P	P	18 52 35.3	+2.3
	comp=Z,1.1nm,0.7s,baz=292,slow=6.5,SNR=6.2						
NVAR	Mina Array Bea	73.76	54	P	P	18 52 32.9	-0.1
PDAR	Pinedale Array	76.27	46	P	P	18 52 49.1	+1.7
	comp=Z,0.6nm,0.6s,baz=276,slow=1.6,SNR=6.1						
PDAR				pP	pP	18 53 08.8	+1.6
	comp=Z,0.4nm,0.6s,baz=20,slow=1.4,SNR=3.9						
PDAR	Pinedale Array	76.27	46	P	P	18 52 47.8	+0.4
BRTR	Keskin Array B	77.81	311	P	P	18 52 56.6	+0.6
	comp=Z,0.3nm,0.3s,baz=328,slow=26,SNR=5.4						
TXAR	Lajitas Array	88.87	53	P	P	18 53 54.3	+1.4
	comp=Z,0.4nm,0.6s,baz=316,slow=3.5,SNR=4.9						
TXAR				pP	pP	18 54 14.5	+1.4
	comp=Z,0.3nm,0.6s,baz=306,slow=2.6,SNR=2.6						
TXAR	Lajitas Array	88.87	53	P	P	18 53 52.7	-0.1
LPAZ	La Paz	145.59	58	PKPbc	PKPab	19 00 39.1	+1.1
	comp=Z,1.9nm,0.8s,baz=348,slow=7.3,SNR=5.4						
LPAZ	La Paz	145.59	58	PKP2	PKPab	19 00 38.2	+0.2
LPAZ	La Paz	145.59	58		PKPab	19 00 38.2	+0.2
H03N2	Juan Fernandez	146.97	93	T	T	21 45 23.2	
	baz=291,slow=76,SNR=12						
H03N3	Juan Fernandez	146.98	93	T	T	21 45 26.3	
	baz=291,slow=76,SNR=12						
H03N1	Juan Fernandez	146.99	93	T	T	21 45 21.0	
	baz=291,slow=76,SNR=15						

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*TUL **18** 18:45:00.9±1.9, 35°.894N±0°.010×96°.74W±0°.01, h5^{km}±4^{km}, ML3.2, mb_Lg2.7/37(NEIC), Error ellipse: s-maj=1.7km s-min=0.9km az=219.0*

*NEIC **18** 18:45:00.7±1.4, 35°.90N±0°.01×96°.74W±0°.02, h10^{km}±3^{km}, Error ellipse: s-maj=2.4km s-min=1.8km az=126.0*

*ANF **18** 18:45:01.4±0.5, 35°.92N×96°.72W, h10^{km}, ML3.1/6, Error ellipse: s-maj=4.9km s-min=3.6km az=168.0*

ISC 18 18:45:00.3±0.8**, 35°.90N**±0°.02×**96°.73W**±0°.02**, h10**^{km}±5^{km}**, n67, σ0^{s}.93**/85**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK030	Cody Creek RV	0.05	308		Pg	18 45 02.4	0.0
OK030				Sg	Sg	18 45 03.5	-0.5
OK031	S. Brethren Rd	0.10	304	Pg	Pg	18 45 03.3	+0.3
OK031				Sg	Sg	18 45 04.5	-0.4
OK034	N. Norfolk Rd.	0.12	8	Pg	Pg	18 45 03.7	+0.5
OK034				Sg	Sg	18 45 05.6	+0.4
OK033	Mehan	0.22	312	Pg	Pg	18 45 05.4	+0.4
OK033				Sg	Sg	18 45 08.7	+0.6
QUOK	Quay	0.28	4		Pg	18 45 06.6	+0.7
QUOK				Sg	Sg	18 45 10.6	+0.9
OK025	Westminster Rd	0.58	238	Pg	Pg	18 45 12.0	+0.3
OK025				Sg	Sg	18 45 20.2	+0.8
OK029	Liberty Lake	0.59	261	Pg	Pg	18 45 12.4	+0.5
OK029				Sg	Sg	18 45 20.7	+1.0
OK029				IAmb_Lg		18 45 20.8	
	comp=Z,67nm,0.7s						
BCOK	Bluff Creek, N	0.75	252	Pg	Pg	18 45 14.9	0.0
BCOK				IAmb_Lg		18 45 24.9	
	comp=Z,65nm,0.8s						
BCOK				Sg	Sg	18 45 25.3	+0.7
W35A	Tecumseh	0.75	189	Pg	Pg	18 45 15.1	+0.2
W35A				IAmb_Lg		18 45 24.5	
	comp=Z,73nm,0.9s						
W35A				Sg	Sg	18 45 25.1	+0.5
OKCSW	OKLAHOMA CITY	0.75	230	Pg	Pg	18 45 14.2	-0.7
OKCSW				Sg	Sg	18 45 25.5	+0.8
OKCFA	Oklahoma City	0.76	231	Pg	Pg	18 45 15.1	+0.2
OKCFA				Sg	Sb	18 45 25.8	-0.2
OKCFA	Oklahoma City	0.76	231	S	Sb	18 45 25.8	-0.2
	baz=50						
TUL1	Leonard	0.77	89	Pg	Pg	18 45 15.6	+0.5
TUL1				Sg	Sg	18 45 25.6	+0.5
TUL1	Leonard	0.77	89	P	Pg	18 45 15.6	+0.5
	baz=270						
TUL1				S	Sg	18 45 26.0	+0.9
	baz=270						
FNO	Franklin	0.84	221		Pg	18 45 16.5	0.0
FNO				Sg	Sg	18 45 28.2	+0.8
BLOK	Blackwell	0.95	336	Pg	Pg	18 45 18.8	+0.2
BLOK				Sg	Sg	18 45 31.3	+0.4
T35A	Sooner Cattle	1.03	10	Pg	Pg	18 45 20.1	-0.1
T35A					Sg	18 45 33.8	+0.1
T35B	Sooner Cattle	1.03	10	P	Pg	18 45 20.5	+0.2
	baz=190						
T35B				S	Sb	18 45 34.5	+0.5
	baz=190						
CROK	Carrier	1.18	301	Pg	Pb	18 45 22.7	-0.1
CROK				Sg	Sg	18 45 38.7	+0.4
KAN13	South Haven SW	1.27	332		Pn	18 45 23.2	-0.9
KAN13				Sg	Sn	18 45 41.4	+0.2
GC02	Grant County #	1.32	317		Pn	18 45 24.8	0.0
KAN17	Caldwell West	1.42	324		Pn	18 45 25.4	-0.8
KAN09	Caldwell North	1.43	330	Pn	Pn	18 45 26.4	+0.1
KAN14	Manchester OK	1.45	317		Pn	18 45 25.6	-1.0
OK032	Salt Plains WL	1.50	308		Pn	18 45 27.2	-0.1
KAN01	Argonia South	1.50	327		Pn	18 45 27.9	+0.5
KAN01				IAmb_Lg		18 45 50.5	
	comp=Z,44nm,0.9s						
KAN05	Bluff City Nor	1.52	323	Pn	Pn	18 45 27.5	-0.1
X34A	Smith Ranch, M	1.57	215	Pn	Pb	18 45 29.9	+0.4
KAN06	Argonia West S	1.62	326		Pb	18 45 30.5	+0.1
KAN10	Anthony SW Sta	1.64	319	Pn	Pn	18 45 30.0	+0.7
KAN08	Anthony NE Sta	1.66	323	Pn	Pn	18 45 29.4	-0.1
KAN16	Harper SW Stat	1.71	321	Pn	Pn	18 45 29.8	-0.3
X37A	Clayton	1.72	139		Pb	18 45 32.2	+0.3
X37A	Clayton	1.72	139	Pb	Pb	18 45 32.3	+0.3
	baz=320						
X37A				S	Sg	18 45 56.5	+1.0
	baz=320						
KAN12	Harper NE Stat	1.73	324	Pn	Pb	18 45 32.2	0.0
U32A	Winter Ranch,	1.90	285		Pn	18 45 33.9	+1.1
U32A	Winter Ranch,	1.90	285	P	Pn	18 45 33.6	+0.8
	baz=104						
U32A				S	Sg	18 46 01.0	-0.4
	baz=104						
LOOK	Love County	1.93	191	Pn	Pb	18 45 35.0	-0.7
LOOK				IAmb_Lg		18 46 05.2	
	comp=Z,28nm,0.7s						
U38A	Gravette	1.98	73		Pn	18 45 35.3	+1.4
U38A	Gravette	1.98	73	P	Pb	18 45 35.9	-0.5
	baz=255						
U38A				Sb	Sg	18 46 03.0	-0.9
	baz=255						
HHAR	Hobbs	2.29	80		Pn	18 45 38.4	+0.1
HHAR	Hobbs	2.29	80	Sb	Sb	18 46 12.3	+2.0
	baz=261						
W39A	Magazine	2.50	105		Pb	18 45 43.8	-1.6
W39A				IAmb_Lg		18 46 23.8	
	comp=Z,23nm,0.7s						
Z35A	Perchaven, San	2.59	190	Pn	Pn	18 45 41.8	-0.6
MIAR	Mount Ida	2.92	117	Pn	Pn	18 45 48.2	+1.4
MIAR	Mount Ida	2.92	117	P	Pn	18 45 49.0	+2.3
	baz=299						
R32A	Long Quarter,	2.98	329		Pn	18 45 47.6	-0.1
Z38A	Mt. Pleasant	3.00	151	Pn	Pn	18 45 47.3	-0.6
U40A	Yellville	3.17	81		Pn	18 45 51.4	+1.0
KSU1	Kansas State U	3.20	2		Pn	18 45 50.2	-0.5
S39A	Bolivar	3.27	56		Pn	18 45 52.8	+1.1
S39A				IAmb_Lg		18 46 53.9	
	comp=Z,14nm,0.7s						
X40A	Basin Creek Fa	3.49	113		Pn	18 45 53.3	-1.4
X40A				IAmb_Lg		18 46 54.5	
	comp=Z,20nm,0.8s						
WHAR	Wooly Hollow	3.67	98		Pn	18 45 57.2	0.0
WHAR				IAmb_Lg		18 46 57.6	
	comp=Z,12nm,1.1s						
FCAR	Ozark Folk Cen	3.74	89		Pn	18 45 57.2	-0.9
CBKS	Cedar Bluff	3.77	321	Pn	Pn	18 45 57.7	-0.9
CBKS				IAmb_Lg		18 47 09.7	
	comp=Z,22nm,0.8s						
MGMO	Mountain Grove	3.81	69	Pn	Pn	18 45 57.5	-1.6
MGMO				IAmb_Lg		18 47 01.3	
	comp=Z,24nm,1.0s						
WHTX	Lake Whitney,	3.94	189	Pn	Pn	18 45 58.6	-2.2
237A	Washetta, Mont	3.96	169	Pn	Pn	18 46 00.2	-0.9
ABTX	Abilene, Hawle	4.06	217	IAmb_Lg		18 47 13.6	
	comp=Z,14nm,1.1s						
AMTX	Amarillo	4.17	257	Pn	Pn	18 46 03.6	-0.5
AMTX				IAmb_Lg		18 47 18.3	
	comp=Z,15nm,0.8s						
R40A	Maddies Statio	4.30	55	Pn	Pn	18 46 03.8	-2.0
R40A				IAmb_Lg		18 47 16.9	
	comp=Z,22nm,0.8s						
P38A	Dawn	4.50	33	Pn	Pn	18 46 05.7	-2.9
LCAR	Lake Charles	4.53	86	Pn	Pn	18 46 06.8	-2.1
T42A	Van Buren	4.69	74	IAmb_Lg		18 47 35.9	
	comp=Z,10nm,0.7s						
CCM	Cathedral Cave	4.89	62	Pn	Pn	18 46 12.0	-2.0
CCM				IAmb_Lg		18 47 37.4	
	comp=Z,16nm,0.8s						
P40A	Paris	5.19	44	IAmb_Lg		18 47 45.2	
	comp=Z,15nm,0.7s						
JCT	Junction City	5.98	206	IAmb_Lg		18 48 19.6	
	comp=Z,9.1nm,0.8s						

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*NEIC **18** 18:47:26.5±1.6, 6°.59S±0°.10×155°.02E±0°.05, h56^{km}±10^{km}, mb4.3/9, Error ellipse: s-maj=14.5km s-min=6.2km az=169.0*

*IDC **18** 18:47:27.4±7.0, 6°.78S×155°.15E, h75^{km}±54^{km}, mb3.9/7, mb1 4.0/8, mb1mx3.7/35, mbtmp4.1/8, ML2.3/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/44, Error ellipse: s-maj=48.3km s-min=29.8km az=105.0*

ISC 18 18:47:26.2±0.8**, 6°.6S**±0°.1×**155°.04E**±0°.08**, h56**^{km}**, n27, σ1^{s}.26**/25**, mb4.2**/12**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.70	309		Pn	18 48 21.2	+0.2
HNR	Honiara	5.64	121	Pn	Pn	18 48 48.0	+0.6
PMG	Port Moresby	8.30	250	P	Pn	18 49 25.0	+1.0
	2.0nm,0.3s,baz=88,slow=4.7,SNR=9.0						
PMG				S	Sn	18 51 00.1	+3.7
	2.1nm,0.3s,baz=273,slow=22,SNR=7.2						
PMG				LR	LR	18 52 21.7	
	comp=Z,113nm,19.4s,baz=66,slow=35						
PMG	Port Moresby	8.30	250		Sn	18 50 55.3	-1.1
COEN	Coen	13.79	237	P	P	18 50 44.8	-1.0
DZM	Mont Dzumac	18.95	146	LR	LR	18 58 13.8	
	comp=Z,91nm,19.1s,baz=29,slow=35						
FAKI	Fak Fak	23.00	278	P	P	18 52 26.7	+0.2
FAKI				IAmb	IAmb	18 52 49.9	
	comp=Z,32nm,1.3s						
WR0	Warramunga Arr	23.95	234	P	P	18 52 34.7	-0.8
WR0				IAmb	IAmb	18 52 46.4	
	comp=Z,5.5nm,1.1s						
WB0	Warramunga Arr	23.97	235	P	P	18 52 34.8	-0.9
WB0				IAmb	IAmb	18 53 06.2	
	comp=Z,10nm,1.3s						
WB2	Warramunga Arr	24.10	234	P	P	18 52 35.6	-1.2
WB2				IAmb	IAmb	18 52 47.2	
	comp=Z,9.9nm,1.2s						
WRA	Warramunga Arr	24.11	235	P	P	18 52 36.2	-0.7
	comp=Z,1.7nm,0.5s,baz=57,slow=10,SNR=12						
WRA	Warramunga Arr	24.11	235	P	P	18 52 36.1	-0.7
MTN	Manton Dam	24.37	253	P	P	18 52 38.3	-1.0
MTN				IAmb	IAmb	18 53 16.0	
	comp=Z,19nm,1.1s						
SIJI	Sorong	24.38	282	P	P	18 52 40.1	+0.7
	comp=Z,11nm,0.6s,baz=62,slow=9.0,SNR=7.2						
AS31	Alice Springs	26.50	228	P	P	18 52 57.1	-1.4
ASAR	Alice Springs	26.50	228	P	P	18 52 57.5	-1.1
	comp=Z,1.1nm,0.6s,baz=62,slow=8.7,SNR=21						
ASAR	Alice Springs	26.50	228	P	P	18 52 56.9	-1.7
FITZ	Fitzroy Crossi	30.87	245	P	P	18 53 36.6	-0.9
	comp=Z,3.2nm,0.7s,baz=66,slow=9.9,SNR=9.3						
BATI	Baumata	31.24	261	LR	LR	19 07 14.6	
	comp=Z,170nm,20.0s,baz=24,slow=38						
KAPI	Kappang	35.14	271	LR	LR	19 08 52.0	
	comp=Z,12nm,20.6s,baz=133,slow=36						
KKM	Kota Kinabalu	40.72	287	P	P	18 55 00.6	-1.4
CMAR	Chiang Mai Arr	60.64	295	P	P	18 57 32.7	+0.9
	comp=Z,3.1nm,0.7s,baz=123,slow=5.4,SNR=31						
SONM	Songino Array	68.99	327	P	P	18 58 26.2	+0.3
	comp=Z,0.6nm,0.6s,baz=103,slow=3.7,SNR=5.4						
HIN	Hinchinbrook I	80.81	25	P	P	18 59 34.8	+1.1
IMAR	Indian Mountai	81.30	19	P	P	18 59 35.8	-0.3
YKA	Yellowknife Ar	95.93	28	P	P	19 00 47.0	+0.4
	comp=Z,0.4nm,0.8s,baz=274,slow=4.4,SNR=2.8						
TORD	Torodi Ar. Bea	152.95	286	PKPbc	PKPbc	19 07 17.2	-1.1
	comp=Z,0.5nm,0.6s,baz=73,slow=2.4,SNR=3.9						

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*NEIC **18** 18:50:35.7±2.2, 14°.9S±0°.2×166°.04E±0°.06, h11^{km}±10^{km}, mb4.3/11, Error ellipse: s-maj=25.1km s-min=8.8km az=179.0*

*IDC **18** 18:50:40.2±9.9, 14°.79S×166°.47E, h86^{km}±133^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.5/41, mbtmp4.1/5, ML4.0/1, Error ellipse: s-maj=285.8km s-min=56.6km az=80.0*

*NOU **18** 18:50:47.0, 15°.59S×167°.21E, h0^{km}, MLv4.8/8, Vanuatu Islands*

ISC 18 18:50:39.6±1.5**, 14°.9S**±0°.1×**166°.9E**±0°.1**, h100**^{km}**, n31, σ2^{s}.42**/34**, mb4.2**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.64	151	Pn	Pn	18 50 59.2	+2.7
SANVU				Sn	Sn	18 51 16.1	+7.0
DVP	Devils Point	3.09	156	P	Pn	18 51 25.6	-1.0
LIFNC	LIFOU	5.87	177	Pn	Pn	18 52 01.6	-2.5
LIFNC				Sn	Sn	18 53 05.6	-4.5
KOUNC	Koumac, New Ca	6.15	203	P	Pn	18 52 11.6	+3.6
MARNC	Mare, Loyalty	6.65	171	Pn	Pn	18 52 13.1	-1.6
YATNC	Mamie plateau,	7.13	180	P	Pn	18 52 23.0	+1.7
	26nm,0.8s						
DZM	Mont Dzumac	7.16	183	P	Pn	18 52 23.6	+1.8
	2.3nm,0.3s,baz=57,slow=12,SNR=14						
DZM				S	Sn	18 53 44.7	+3.1
	1.0nm,0.3s,baz=285,slow=23,SNR=1.8						
DZM	Mont Dzumac	7.16	183	Pn	Pn	18 52 22.5	+0.7
DZM	Mont Dzumac	7.16	183	P	Pn	18 52 23.5	+1.8
NOUC	Port Laguerre	7.20	184	P	Pn	18 52 25.1	+2.9
ONTNC	Ouen Toro	7.39	183	Pn	Pn	18 52 24.9	0.0
ONTNC	Ouen Toro	7.39	183	P	Pn	18 52 27.8	+3.0
OUENC	Ouen Island, N	7.49	180	Pn	Pn	18 52 27.6	+1.4
OUENC	Ouen Island, N	7.49	180	P	Pn	18 52 28.1	+1.9
PINNC	Pines Island,	7.70	176	Pn	Pn	18 52 29.6	+0.5
EIDS	Eidsvold	18.11	232	P	Pn	18 54 47.0	+2.2
EIDS				IAmb	IAmb	18 55 08.6	
	comp=Z,25nm,1.4s						
ARMA	Armidale	20.87	220		P	18 55 13.3	-0.5
ARMA				IAmb	IAmb	18 55 25.8	
	comp=Z,16nm,1.5s						
STKA	Stephens Creek	28.60	229	P	P	18 56 26.5	-0.1
	comp=Z,2.4nm,0.4s,baz=52,slow=9.3,SNR=20						
STKA	Stephens Creek	28.60	229	P	P	18 56 25.7	-0.9
WB0	Warramunga Arr	31.36	256	P	P	18 56 49.4	-1.7
WB0				IAmb	IAmb	18 57 19.7	
	comp=Z,10nm,1.4s						
WB2	Warramunga Arr	31.41	256	P	P	18 56 49.3	-2.2
WB2				IAmb	IAmb	18 57 15.3	
	comp=Z,8.6nm,1.2s						
WRAB	Tennant Creek	31.41	256	P	P	18 56 48.3	-3.2
WRAB				IAmb	IAmb	18 57 08.1	
	comp=Z,9.3nm,1.4s						
WRA	Warramunga Arr	31.42	256	P	P	18 56 50.3	-1.3
	comp=Z,0.5nm,0.6s,baz=85,slow=8.3,SNR=5.8						
AS31	Alice Springs	32.26	249	P	P	18 56 57.5	-1.5
ASAR	Alice Springs	32.26	249	P	P	18 56 57.5	-1.5
	comp=Z,1.8nm,0.5s,baz=80,slow=9.3,SNR=18						
ASAR	Alice Springs	32.26	249	P	P	18 56 56.9	-2.1
BBOO	Buckleboo	33.18	232	P	P	18 57 06.3	-0.6
KNRA	Kununurra	36.74	264	P	P	18 57 36.3	-1.4
FORT	Forrest	38.89	239	P	P	18 57 54.0	-1.6
FITZ	Fitzroy Crossi	39.61	260	P	P	18 58 00.9	-0.8
	comp=Z,1.3nm,0.4s,baz=73,slow=7.2,SNR=12						
PSA00	Pilbara Seismi	45.03	254	P	P	18 58 44.6	-1.0

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*IDC **18** 19:00:41.3±2.2, 7°.33S×128°.96E, h128^{km}±21^{km}, mb3.9/7, mb1 4.0/10, mb1mx3.6/34, mbtmp4.4/10, MS3.2/4, Ms1 3.2/4, ms1mx2.7/44, Error ellipse: s-maj=21.1km s-min=17.0km az=105.0*

*DJA **18** 19:00:41.0±0.3, 7°S±3°×12°9E±°, h172^{km}±9^{km}, M4.6/13, mb4.7/13, mB5.0/8, MLv4.8/13, Mw(mB)4.4/8*

*NEIC **18** 19:00:42.4±2.4, 7°.42S±0°.06×129°.02E±0°.07, h146^{km}±8^{km}, mb4.6/38, Error ellipse: s-maj=9.8km s-min=9.1km az=95.0*

ISC 18 19:00:40.6±0.3**, 7°.41S**±0°.04×**128°.99E**±0°.05**, h131**^{km}**, n140, σ1^{s}.81**/143**, mb4.6**/31**, 2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.36	104	P	Pn	19 01 21.3	+2.2
SAUI				S	Sn	19 01 51.0	+2.4
SAUI	Saumlaki	2.36	104		Pn	19 01 20.9	+1.8
SAUI	Saumlaki	2.36	104	P	Pn	19 01 21.2	+2.2
BNDI	Bandanaira	3.00	18	P	Pn	19 01 29.3	+1.9
AAI	Ambon	3.78	348	P	Pn	19 01 39.6	+2.1
MSAI	Masohi	4.03	359	P	Pn	19 01 42.4	+1.5
SOEI	Soe	5.22	243	P	Pn	19 01 58.7	+1.9
	3.8nm5µm653nm,0.9s						
SOEI	Soe	5.22	243		Pn	19 01 58.7	+1.9
SOEI	Soe	5.22	243	P	Pn	19 01 59.4	+2.5
DRS	Darwin Rock St	5.33	160	P	Pn	19 01 59.5	+1.3
FAKI	Fak Fak	5.51	36	P	Pn	19 01 59.5	-1.1
FAKI	Fak Fak	5.51	36	Pn	Pn	19 01 59.3	-1.4
MTN	Manton Dam	5.80	159		Pn	19 02 05.4	+0.9
MTN	Manton Dam	5.80	159	P	Pn	19 02 05.8	+1.3
BATI	Baumata	5.96	242	P	Pn	19 02 08.4	+1.8
	65nm,0.3s,baz=258,slow=0.5,SNR=112						
BATI				S	Sn	19 03 14.3	+0.5
	111nm,0.3s,baz=263,slow=13,SNR=20						
BATI	Baumata	5.96	242	P	Pn	19 02 08.4	+1.8
	1.6nm3µm396nm,0.9s						
SANI	Sanana	6.11	330	P	Pn	19 02 11.0	+2.4
	0.2nm46nm,1.1s						
SANI	Sanana	6.11	330	P	Pn	19 02 11.8	+3.2
KDU	Kakadu	6.27	147	P	Pn	19 02 11.4	+0.6
MMRI	Maumere	6.80	259	Pn	Pn	19 02 18.2	+0.2
SIJI	Sorong	6.88	19	P	Pn	19 02 18.6	-0.5
	9.8nm,0.3s,baz=211,slow=12,SNR=43						
SIJI				S	Sn	19 03 31.9	-4.1
	15nm,0.3s,baz=56,slow=23,SNR=12						
SWI	Sorong	6.88	19	P	Pn	19 02 18.8	-0.3
	0.7nm2µm95nm,0.9s						
LBMI	Labuha	6.89	347	P	Pn	19 02 21.1	+2.0
	0.3nm756nm87nm,1.1s						
EDFI	Ende, Flores	7.35	259	P	Pn	19 02 27.4	+1.9
	0.1nm20nm,1.0s						
KNRA	Kununurra	8.22	182		Pn	19 02 37.1	0.0
KNRA	Kununurra	8.22	182	P	Pn	19 02 37.5	+0.4
TNTI	Ternate	8.28	349	P	Pn	19 02 38.5	+0.5
	27nm,1.7s						
TNTI	Ternate	8.28	349	Pn	Pn	19 02 39.6	+1.7
BASI	Baing, Sumba	8.77	251	P	Pn	19 02 45.4	+0.9
	206nm,0.8s						
LUWI	Luwuk	8.86	315	P	Pn	19 02 46.8	+1.2
	804nm40nm,0.8s						
LUWI	Luwuk	8.86	315		Pn	19 02 46.3	+0.6
BKSI	Bulukumba	9.06	283	P	Pn	19 02 49.7	+1.4
	30nm,0.9s						
SRPI	Serui, Papua	9.08	53	P	Pn	19 02 46.9	-1.7
	2µm50nm,0.5s						
KMSI	Cibinong	9.37	328	P	Pn	19 02 57.9	+5.3
BAKI	Biak	9.40	49	P	Pn	19 02 52.2	-0.8
KAPI	Kappang	9.49	284	Pn	Pn	19 02 53.6	-0.5
WBSI	Waikabubak, Su	9.75	256	P	Pn	19 02 59.0	+1.3
	117nm,0.8s						
MRSI	Marisa	10.53	318	P	Pn	19 03 12.4	+4.3
FITZ	Fitzroy Crossi	11.12	197	P	Pn	19 03 13.8	-2.1
	3.3nm,0.3s,baz=28,slow=10,SNR=124						
FITZ				S	Sn	19 05 11.6	-6.9
	3.5nm,0.3s,baz=103,slow=22,SNR=12						
PLAI	Plampang	11.19	262	P	Pn	19 03 17.3	+0.3
TOLI2	Tolitoli	11.78	316		Pn	19 03 23.2	-1.5
GENI	Genyem	12.11	67	P	Pn	19 03 28.5	-0.6
WB0	Warramunga Arr	13.36	157	Pn	Pn	19 03 43.3	-1.8
WRAB	Tennant Creek	13.49	158		Pn	19 03 44.9	-2.0
WRA	Warramunga Arr	13.50	158	P	Pn	19 03 44.6	-2.4

	4.0nm,0.3s,baz=342,slow=13,SNR=215						
WRA				S	Sn	19 06 08.0	-8.0
	6.9nm,0.3s,baz=345,slow=20,SNR=16						
WRA				LR	LR	19 09 52.4	
	comp=Z,143nm,20.2s,baz=325,slow=41						
WRA	Warramunga Arr	13.50	158		Pn	19 03 43.3	-3.7
WB2	Warramunga Arr	13.50	158		Pn	19 03 44.8	-2.2
WR0	Warramunga Arr	13.59	157		Pn	19 03 45.6	-2.5
DAV	Davao City (W)	14.78	347	LR	LR	19 10 11.4	
	comp=Z,53nm,18.1s,baz=90,slow=39						
COEN	Coen	15.38	116		Pn	19 04 09.5	-1.2
COEN				IAmb	IAmb	19 04 27.9	
	comp=Z,28nm,1.2s						
COEN	Coen	15.38	116	P	P	19 04 11.5	-0.9
MYLDM	Lahad Datu	16.31	320	P	P	19 04 23.2	+0.5
MYLDM				IAmb	IAmb	19 04 35.5	
	comp=Z,37nm,1.0s						
MBWA	Marble Bar	16.34	212	P	P	19 04 23.7	+0.6
PSA00	Pilbara Seismi	16.62	211	P	P	19 04 26.3	+0.1
PSA00				IAmb	IAmb	19 04 33.2	
	comp=Z,38nm,0.8s						
PSA00	Pilbara Seismi	16.62	211	P	Pn	19 04 25.1	-1.0
PSA00				IAmb	IAmb	19 04 33.2	
	comp=Z,14nm,0.9s						
PSA00	Pilbara Seismi	16.62	211	P	P	19 04 27.5	+1.3
QIS	Mount Isa	16.63	143	P	P	19 04 26.6	+0.3
AS31	Alice Springs	16.84	164	P	Pn	19 04 28.5	-0.2
ASAR	Alice Springs	16.84	164	P	Pn	19 04 28.9	+0.2
	comp=Z,1.6nm,0.3s,baz=340,slow=9.7,SNR=64						
ASAR	Alice Springs	16.84	164		Pn	19 04 28.5	-0.2
WRKA	Warakurna	17.55	182	P	Pn	19 04 38.7	+1.5
PMG	Port Moresby	18.08	98	P	Pn	19 04 47.0	+3.4
	comp=Z,1.0nm,0.3s,baz=287,slow=7.5,SNR=6.5						
PMG	Port Moresby	18.08	98	P	Pn	19 04 43.4	-0.2
PMG				IAmb	IAmb	19 04 50.7	
	comp=Z,16nm,0.8s						
MTSU	Mount Surprise	18.34	127	P	Pn	19 04 48.2	+1.5
KKM	Kota Kinabalu	18.47	316	P	P	19 04 46.6	+0.1
KKM	Kota Kinabalu	18.47	316	P	Pn	19 04 49.4	+1.1
MANU	Manus Island	19.06	75	P	Pn	19 04 54.7	-0.5
MANU				IAmb	IAmb	19 04 57.7	
	comp=Z,25nm,0.8s						
SBUM	Sibu	19.39	300	P	Pn	19 04 58.5	-0.5
SBUM				IAmb	IAmb	19 05 04.1	
	comp=Z,13nm,0.8s						
KSM	Kuching	20.62	295	P	P	19 05 10.8	+1.0
KSM				IAmb	IAmb	19 05 47.5	
	comp=Z,47nm,1.3s						
KSM	Kuching	20.62	295	P	Pn	19 05 13.8	+0.3
GIRL	Giralia	20.77	222	P	P	19 05 11.0	-0.3
GIRL	Giralia	20.77	222	P	Pn	19 05 13.1	-2.0
OOD	Oodnadatta	21.25	163	P	P	19 05 18.6	+2.2
MEEK	Meekatharra	21.52	206	P	P	19 05 21.3	+1.9
MULG	Mulgathing	23.25	169	P	P	19 05 38.6	+2.2
FORT	Forrest	23.27	182	P	P	19 05 37.0	+0.4
FORT	Forrest	23.27	182	P	P	19 05 38.9	+2.3
QLP	Quilpie	23.95	145	P	P	19 05 44.9	+2.0
LCRK	Leigh Creek	24.50	161	P	P	19 05 50.5	+2.7
MORW	Morawa	24.77	208	P	P	19 05 51.1	+0.9
MORW				IAmb	IAmb	19 05 54.7	
	comp=Z,23nm,0.9s						
MORW	Morawa	24.77	208	P	P	19 05 53.9	+3.7
BLDU	Ballidu	25.80	205	P	P	19 06 01.3	+1.7
BBOO	Buckleboo	26.12	166	P	P	19 06 03.3	+0.9
BBOO				IAmb	IAmb	19 06 36.8	
	comp=Z,12nm,1.1s						
BBOO	Buckleboo	26.12	166	P	P	19 06 04.5	+2.1
STKA	Stephens Creek	27.03	156	P	P	19 06 13.0	+2.3
	comp=Z,2.1nm,0.9s,baz=322,slow=12,SNR=4.4						
STKA				LR	LR	19 17 46.5	
	comp=Z,64nm,20.5s,baz=19,slow=38						
STKA	Stephens Creek	27.03	156	P	P	19 06 10.8	+0.2
NWAO	Narrogin (SRO)	27.64	202	P	P	19 06 17.9	+1.9
	comp=Z,45nm,2.5s						
CMSA	Cobar Meteorol	28.63	149	P	P	19 06 28.2	+3.4
KULM	Kulim	30.96	293	P	P	19 06 45.6	-0.1
KULM				IAmb	IAmb	19 07 25.2	
	comp=Z,20nm,1.2s						
ARPS	Mount Arapiles	31.49	160	P	P	19 06 53.4	+3.4
TPUB	Ta-pu	31.59	345	P	P	19 06 49.2	-1.9
UBPT	Khong Chiam	32.43	314	P	P	19 06 58.9	+0.5
GSI	Gunungsitoli	32.51	284	P	P	19 06 59.3	0.0
GSI				IAmb	IAmb	19 07 28.5	
	comp=Z,17nm,1.1s						
YHNB	Yeheng	32.73	347	P	P	19 07 00.8	-0.3
NTLS	Newcastle Soft	33.03	143	P	P	19 07 05.7	+2.1
SLVN	Son La	37.71	320	P	P	19 07 44.3	+0.5
SLVN				IAmb	IAmb	19 08 04.9	
	comp=Z,18nm,1.6s						
SANVU	Saraoutou	38.24	106	P	P	19 07 48.1	-0.2
SANVU				IAmb	IAmb	19 08 22.5	
	comp=Z,15nm,0.8s						
CMAR	Chiang Mai Arr	39.24	311	P	P	19 07 57.5	+1.0
	comp=Z,1.5nm,0.7s,baz=142,slow=7.8,SNR=11						
CMAR	Chiang Mai Arr	39.24	311	P	P	19 07 56.2	-0.3
LIFNC	LIFOU	39.29	114	P	P	19 07 56.8	-0.1
CHTO	Chiang Mai	39.45	312	P	P	19 07 58.2	-0.2
NJ2	Nanjing	40.41	347	*e*P	P	19 08 08.1	+2.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI	Kunming	41.22	323	⇓P	P	19 08 14.3	+1.3
KMI				pmax	pmax		
	comp=Z,12nm,1.3s						
KSRS	Korea Array	44.64	359	P	P	19 08 40.1	+0.1
	comp=Z,1.7nm,0.5s,baz=175,slow=8.8,SNR=13						
HHC	Hu-ho-hao-te	50.63	343	*e*P	P	19 09 27.8	+1.4
FOZ	Fox Glacier	50.67	142	P	P	19 09 26.4	-0.2
USRK	Ussuriysk Ar.	51.44	3	P	P	19 09 32.3	+0.1
LSA	Lhasa	51.81	317	P	P	19 09 36.6	+0.7
LSA				pmax	pmax		
	comp=Z,55nm,0.6s						
LSA	Lhasa	51.81	317	P	P	19 09 35.8	-0.1
LSA				IAmb	IAmb	19 09 37.9	
	comp=Z,10nm,0.7s						
OXZ	Oxford	51.94	141	P	P	19 09 35.7	-0.4
GTA	Gaotai	53.85	332	⇓P	P	19 09 50.9	+0.6
GTA				pP	sP	19 10 34.4	+0.5
GTA				sP	PcP	19 11 00.4	+6.1
GTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
JIRN	Jiri	54.11	312	*e*P	P	19 09 52.8	+0.1
	comp=Z,12nm,0.6s						
GUN	Gumba	54.47	312	*e*P	P	19 09 55.4	+0.1
	comp=Z,28nm,0.5s						
PKI	Pulchoki	54.64	311	*e*P	P	19 09 55.9	-0.6
	comp=Z,8.5nm,0.5s						
PKIN	Phulchoki	54.65	311	*e*P	P	19 09 55.9	-0.6
	comp=Z,8.0nm,0.5s						
KKN	Kakani	54.85	312	*e*P	P	19 09 57.9	0.0
	comp=Z,8.1nm,0.5s						
DMN	Daman	54.88	311	*e*P	P	19 09 58.0	-0.1
	comp=Z,6.9nm,0.5s						
GKN	Gorkha	55.44	311	*e*P	P	19 10 02.1	0.0
	comp=Z,19nm,0.4s						
DANN	Dangsing	56.28	311	*e*P	P	19 10 08.2	0.0
	comp=Z,7.1nm,0.6s						
PYUN	Piuthan	56.73	311	*e*P	P	19 10 10.9	-0.4
	comp=Z,17nm,0.7s						
SONM	Songino Array	58.52	342	P	P	19 10 24.3	+1.0
	comp=Z,1.2nm,0.6s,baz=161,slow=7.5,SNR=13						
SONM				PcP	PcP	19 11 12.7	+0.4
	comp=Z,0.8nm,0.9s,baz=162,slow=5.9,SNR=3.6						
SONM	Songino Array	58.52	342	P	P	19 10 23.1	-0.2
TLY	Talaya	62.75	343	LR	LR	19 42 41.3	
	comp=Z,20nm,19.3s,baz=176,slow=40						
WMQ	Urumqi	63.19	328	*e*P	P	19 10 56.6	+1.7
PETK	Petropavlovsk-	65.02	19	P	P	19 11 07.2	+0.7
	comp=Z,4.6nm,0.8s,baz=208,slow=9.2,SNR=3.8						
NIL	Nilore	66.73	311	P	P	19 11 17.1	-0.8
NIL				IAmb	IAmb	19 11 19.8	
	comp=Z,8.4nm,0.6s						
MK31	Makanchi Array	68.02	327	P	P	19 11 26.4	+0.6
MK31				PcP	PcP	19 11 47.1	-4.1
MKAR	Makanchi Array	68.02	327	P	P	19 11 26.2	+0.3
	comp=Z,4.4nm,0.4s,baz=114,slow=8.1,SNR=84						
MKAR	Makanchi Array	68.02	327	P	P	19 11 26.1	+0.3
MKAR				PcP	PcP	19 11 46.8	-4.3
MAKZ	Makanchi	68.20	327	P	P	19 11 27.3	+0.4
MAKZ				IAmb	IAmb	19 11 51.0	
	comp=Z,12nm,1.5s						
KDJ	Kajisay	68.25	321	P	P	19 11 28.1	+0.5
KDJ				IAmb	IAmb	19 11 50.3	
	comp=Z,12nm,1.1s						
ZAA0	Zalesovo Array	71.51	334	P	P	19 11 46.5	-0.5
ZALV	Zalesovo Beam	71.51	334	P	P	19 11 46.4	-0.6
	comp=Z,1.4nm,0.3s,baz=130,slow=4.9,SNR=11						
ZALV	Zalesovo Beam	71.51	334	P	P	19 11 46.1	-0.9
KURK	Kurchatov	72.35	329	P	P	19 11 50.9	-1.1
KURK				IAmb	IAmb	19 11 53.5	
	comp=Z,4.0nm,0.6s						
KKAR	Karatay Array	72.99	319	P	P	19 11 56.1	+0.1
HRA	Herat	75.42	308	P	P	19 12 10.3	-0.3
TIXI	Tiksi	78.89	360	P	P	19 12 28.3	-0.6
ABKAR	Akbulak array	82.21	322	P	P	19 12 46.8	-0.3
ABKAR	Akbulak array	82.21	322	P	P	19 12 46.8	-0.3
ABKAR				IAmb	IAmb	19 12 48.9	
	comp=Z,2.6nm,0.6s						

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*NEIC **18** 19:01:21.5±2.0, 15°.1S±0°.1×177°.06W±0°.09, h357km±6km, mb4.6/137, Error ellipse: s-maj=17.8km s-min=11.7km az=153.0*

*IDC **18** 19:01:22.6±1.4, 14°.94S×177°.13W, h368km±15km, mb3.9/14, mb1 4.2/17, mb1mx3.8/37, mbtmp4.7/17, Error ellipse: s-maj=23.0km s-min=10.9km az=146.0*

*NOU **18** 19:01:22.8, 15°.49S×176°.82W, h368km, MLv4.7/39, Fiji Islands Region*

ISC 18 19:01:20.5±0.4**, 15°.09S**±0°.08×**177°.02W**±0°.07**, h350**km**, n273, σ1s.19**/241**, mb4.6**/81**, 5C-22D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVE	Taveuni	3.21	240	P	Pn	19 02 25.7	+4.0
DGTI	Dogotuki	3.35	249	P	Pn	19 02 26.1	+3.0
AFI	Afiamalu	5.21	78	P	Pn	19 02 44.5	+2.0
	114nm,0.3s,baz=67,slow=0.4,SNR=115						
MSVF	Nonsavu	5.41	240	P	Pn	19 02 48.0	+3.2
	18nm,0.3s,baz=76,slow=11,SNR=143						
MSVF	Nonsavu	5.41	240	P	Pn	19 02 48.2	+3.4
NIUE	Niue	7.85	121		Pn	19 03 14.5	+1.7
RTV	Rentapao	14.22	257	P	Pn	19 04 30.6	+2.2
DVP	Devils Point	14.44	258	P	Pn	19 04 32.7	+1.8
SANVU	Saraoutou	15.23	267	P	P	19 04 37.9	+0.2
MARNC	Mare, Loyalty	15.55	244	P	P	19 04 41.1	0.0
LIFNC	LIFOU	16.01	247	P	P	19 04 47.2	+1.1
PINNC	Pines Island,	16.49	241	P	P	19 04 51.2	-0.1
YATNC	Mamie plateau,	16.75	243	P	Pn	19 04 56.4	-1.3
OUENC	Ouen Island, N	16.92	242	P	P	19 04 56.8	+0.8
OUENC				IAmb	IAmb	19 05 19.3	
	comp=Z,46nm,1.2s						
OUENC	Ouen Island, N	16.92	242	P	P	19 04 57.3	+1.3
DZM	Mont Dzumac	17.14	244	P	P	19 05 00.0	+1.6
	comp=Z,3.7nm,0.3s,baz=51,slow=19,SNR=27						
DZM	Mont Dzumac	17.14	244	P	P	19 04 59.4	+1.0
DZM				IAmb	IAmb	19 05 05.4	
	comp=Z,19nm,0.7s						
DZM	Mont Dzumac	17.14	244	P	P	19 05 00.3	+1.9
ONTNC	Ouen Toro	17.21	243	P	P	19 04 58.6	-0.5
ONTNC	Ouen Toro	17.21	243	P	P	19 05 01.1	+2.0
NOUC	Port Laguerre	17.27	244	P	P	19 05 01.6	+1.9
KOUNC	Koumac, New Ca	18.60	250	P	P	19 05 15.6	+1.7
URZ	Urewera	23.65	192	P	P	19 05 58.0	-3.6
URZ	Urewera	23.65	192	P	P	19 05 59.6	-2.0
QRZ	Quartz Range	27.20	198	P	P	19 06 32.0	-1.3
QRZ				IAmb	IAmb	19 06 37.3	
	comp=Z,36nm,1.3s						
QRZ	Quartz Range	27.20	198	P	P	19 06 32.6	-0.7
THZ	Tophouse	27.97	196	P	P	19 06 37.1	-2.9
KHZ	Kahutara	28.42	195	P	P	19 06 41.0	-2.9
LTZ	Lake Taylor	29.09	196	P	P	19 06 46.9	-3.0
EIDS	Eidsvold	31.55	246	P	P	19 07 09.6	-2.1
WKZ	Wanaka	31.91	199	P	P	19 07 13.2	-1.4
WKZ				IAmb	IAmb	19 07 35.3	
	comp=Z,30nm,1.1s						
RMQ	Roma	33.84	245	P	P	19 07 32.5	+1.1
MGCD	Mangrove Creek	34.03	232	P	P	19 07 32.7	-0.1
CTA	Charters Tower	35.31	257	P	P	19 07 44.4	+0.5
	comp=Z,10nm,0.5s,baz=81,slow=10,SNR=7.8						
CTAO	Charters Tower	35.31	257	P	P	19 07 43.4	-0.5
CTAO				IAmb	IAmb	19 07 47.4	
	comp=Z,12nm,0.5s						
PMG	Port Moresby	35.43	275	P	P	19 07 44.0	-0.9
MTSU	Mount Surprise	37.13	260	P	P	19 07 59.6	+0.4
CMSA	Cobar Meteorol	37.73	238	P	P	19 08 04.9	+0.9
QLP	Quilpie	37.84	246	P	P	19 08 07.4	+2.5
STKA	Stephens Creek	41.19	239	P	P	19 08 32.4	+0.1
	comp=Z,2.2nm,0.4s,baz=86,slow=12,SNR=4.4						
STKA	Stephens Creek	41.19	239	P	P	19 08 29.8	-2.5
LCRK	Leigh Creek	43.72	242	P	P	19 08 52.4	-0.1
HTT	Hallett	43.75	237	P	P	19 08 53.4	+0.6
TWOA	Tennyson Woods	44.42	235	P	P	19 08 57.7	-0.2
OOD	Oodnadatta	45.54	246	P	P	19 09 08.4	+1.6
BBOO	Buckleboo	45.97	239	P	P	19 09 08.5	-1.5
BBOO	Buckleboo	45.97	239	P	P	19 09 10.2	+0.2
WR0	Warramunga Arr	46.33	257	P	P	19 09 12.9	-0.1
WB0	Warramunga Arr	46.47	257	P	P	19 09 13.1	-1.0
WB0				IAmb	IAmb	19 09 14.6	
	comp=Z,41nm,1.1s						
WB2	Warramunga Arr	46.50	257	P	P	19 09 14.2	-0.1
WRA	Warramunga Arr	46.52	257	P	P	19 09 13.9	-0.6
	comp=Z,2.6nm,0.4s,baz=84,slow=8.5,SNR=1.7						
AS31	Alice Springs	46.89	252	P	P	19 09 16.4	-0.9
AS31				IAmb	IAmb	19 09 17.9	
	comp=Z,13nm,0.5s						
ASAR	Alice Springs	46.89	252	P	P	19 09 17.1	-0.2
	comp=Z,24nm,0.3s,baz=85,slow=8.3,SNR=25						
ASAR				S	S	19 15 35.2	-6.0
	comp=Z,1.4nm,0.9s,baz=80,slow=14,SNR=5.2						
ASAR	Alice Springs	46.89	252	P	P	19 09 16.6	-0.7
MULG	Mulgathing	47.25	243	P	P	19 09 19.3	-0.6
MTN	Manton Dam	50.28	266	P	P	19 09 42.3	-0.6
MTN				IAmb	IAmb	19 10 18.5	
	comp=Z,46nm,1.6s						
WRKA	Warakurna	52.02	250	P	P	19 09 56.1	+0.4
KNRA	Kununurra	52.16	262	P	P	19 09 56.9	+0.2
KNRA				IAmb	IAmb	19 10 25.5	
	comp=Z,52nm,1.5s						
FORT	Forrest	52.45	243	P	P	19 09 57.6	-1.0
FORT	Forrest	52.45	243	P	P	19 09 58.3	-0.3
SOEI	Soe	57.45	268	P	P	19 10 34.5	0.0
SOEI	Soe	57.45	268	P	P	19 10 37.5	+3.0
PSA00	Pilbara Seismi	59.94	254	P	P	19 10 49.6	-1.7
PSA00	Pilbara Seismi	59.94	254	P	P	19 10 50.6	-0.7
PSA00				IAmb	IAmb	19 10 51.8	
	comp=Z,12nm,0.8s						
PSA00	Pilbara Seismi	59.94	254	P	P	19 10 51.7	+0.4
KLBR	Kellerberrin	61.30	242	P	P	19 10 58.9	-1.3
BLDU	Ballidu	62.21	243	P	P	19 11 06.4	+0.1
VNDA	Vanda	63.35	185	P	P	19 11 14.2	+1.4
	comp=Z,1.3nm,0.5s,baz=6.7,slow=7.7,SNR=6.0						
VNDA	Vanda	63.35	185	P	P	19 11 14.2	+1.4
PEA0B	Petropavlovsk-	71.33	344	P	P	19 12 01.9	-0.8
PETK	Petropavlovsk-	71.33	344	P	P	19 12 02.1	-0.7
	comp=Z,5.1nm,0.7s,baz=108,slow=8.2,SNR=9.9						
PETK	Petropavlovsk-	71.33	344	P	P	19 12 01.8	-0.9
PMPB	Monarch Peak	73.61	44	P	P	19 12 17.7	+1.1
KMRM	Mail Ridge	74.01	40	P	P	19 12 20.0	+1.3
MWC	Mount Wilson	74.46	47	P	P	19 12 21.6	0.0
MWC				IAmb	IAmb	19 12 23.1	
	comp=Z,6.0nm,0.6s						
CBX	Cerro Bola	74.52	50	P	P	19 12 21.2	-0.7
CMB	Columbia Colle	74.88	43	P	P	19 12 23.9	+0.2
ISA	Isabella, Lake	74.91	46	P	P	19 12 24.7	+0.7
QSPA	South Pole Qui	74.95	180	P	P	19 12 24.3	+0.5
QSPA				IAmb	IAmb	19 12 25.6	
	comp=Z,9.4nm,0.8s						
KDAK	Kodiak Island	75.37	13	P	P	19 12 25.9	0.0
YBH	Yreka Blue Hor	75.51	39	P	P	19 12 28.0	+0.8
YBH				IAmb	IAmb	19 12 29.1	
	comp=Z,9.7nm,0.7s						
HUMO	Hull Mountain	75.88	38	P	P	19 12 29.2	0.0
PNTR	Pine Nut	75.98	43	P	P	19 12 30.8	+0.6
PNTR				IAmb	IAmb	19 12 38.8	
	comp=Z,9.9nm,0.9s						
SLBS	Sierra La Lagu	76.02	60	P	P	19 12 29.7	-0.8
SLBS				IAmb	IAmb	19 12 51.7	
	comp=Z,19nm,1.2s						
YERR	Yerington	76.16	43	P	P	19 12 31.7	+0.6
YERR				IAmb	IAmb	19 12 32.4	
	comp=Z,6.0nm,0.7s						
QSM	Queen of Sheba	76.19	46	P	P	19 12 31.0	-0.1
LHV	Little Huntoon	76.25	44	P	P	19 12 32.5	+1.2
LHV				IAmb	IAmb	19 12 34.3	
	comp=Z,8.9nm,1.2s						
LCH	Last Change Ra	76.30	45	P	P	19 12 30.9	-0.9
GWY	Greenwater Val	76.44	46	P	P	19 12 31.2	-1.5
NVAR	Mina Array Bea	76.48	44	P	P	19 12 33.8	+0.8
	comp=Z,3.0nm,0.7s,baz=228,slow=8.7,SNR=18						
NVAR	Mina Array Bea	76.48	44	P	P	19 12 33.2	+0.3
NV11	Mina Array Sit	76.58	44	P	P	19 12 33.9	+0.5
NV11				IAmb	IAmb	19 12 35.3	
	comp=Z,16nm,1.4s						
KVN	Kaiserville	76.94	43	P	P	19 12 35.9	+0.5
KVN				IAmb	IAmb	19 12 37.3	
	comp=Z,9.2nm,1.3s						
TPH	Tonopah	77.02	44	P	P	19 12 36.1	+0.2
MOD	Modoc Plateau	77.08	40	P	P	19 12 36.1	0.0
TPNV	Topopah Spring	77.11	46	P	P	19 12 36.6	+0.1
K05A	Summer Lake	77.18	39	P	P	19 12 37.3	+0.6
K05A				IAmb	IAmb	19 12 38.8	
	comp=Z,13nm,1.0s						
NJ2	Nanjing	77.22	308	*e*P	P	19 12 39.8	+3.0
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
CNPM	China Poot	77.25	13	P	P	19 12 36.1	-0.3
ILSW	Iliamna Southw	77.27	12	P	P	19 12 36.1	-0.6
PINE	Pine Mountain	77.76	38	P	P	19 12 40.5	+0.7
PINE				IAmb	IAmb	19 12 41.5	
	comp=Z,8.2nm,0.8s						
SVW2	Sparrevohn	77.84	10	P	P	19 12 39.1	-0.6
SVW2				IAmb	IAmb	19 12 39.9	
	comp=Z,8.6nm,1.0s						
PRN	Pahroc Range	78.17	46	P	P	19 12 42.7	+0.6
PRN				IAmb	IAmb	19 12 44.4	
	comp=Z,8.5nm,1.2s						
HOOD	Mount Hood Mea	78.23	36	P	P	19 12 42.0	-0.3
BMN	Battle Mountai	78.24	42	P	P	19 12 43.0	+0.5
BMN				IAmb	IAmb	19 12 44.2	
	comp=Z,11nm,1.1s						
R11A	Troy Canyon, C	78.27	45	P	P	19 12 43.1	+0.4
MA2	Magadan	78.86	344	P	P	19 12 47.9	+2.7
TUC	Tucson	78.93	52	P	P	19 12 47.7	+1.4
TUC				IAmb	IAmb	19 12 48.9	
	comp=Z,5.9nm,0.8s						
J08A	Circle Bar Ran	79.01	39	P	P	19 12 46.7	+0.2
J08A				IAmb	IAmb	19 12 47.8	
	comp=Z,4.3nm,0.7s						
PWL	Port Wells	79.10	14	P	P	19 12 45.8	-0.6
X16A	Lo Mia Camp, P	79.36	50	P	P	19 12 49.2	+0.5
CCUT	Cedar City	79.42	46	P	P	19 12 50.2	+1.2
SPR3	Spring Creek 3	79.44	45	P	P	19 12 49.3	+0.1
SPR3				IAmb	IAmb	19 12 50.6	
	comp=Z,9.4nm,1.5s						
TTA	Tatalina	79.49	10	P	P	19 12 48.9	+0.3
TTA				IAmb	IAmb	19 12 49.8	
	comp=Z,7.2nm,0.8s						
PSUT	Pine Spring	79.55	45	P	P	19 12 48.9	-0.8
PSUT				IAmb	IAmb	19 12 53.1	
	comp=Z,8.5nm,0.8s						
GRNB	Grenville Isla	79.55	26	P	P	19 12 49.0	0.0
KNB	Kanab	79.55	47	P	P	19 12 49.7	0.0
KNK	Knik Glacier	79.56	14	P	P	19 12 48.6	-0.4
U15A	North Rim	79.65	48	P	P	19 12 51.3	+1.0
U15A				IAmb	IAmb	19 12 52.8	
	comp=Z,10nm,1.2s						
319A	Douglas	79.69	54	P	P	19 12 51.6	+1.1
319A				IAmb	IAmb	19 12 53.1	
	comp=Z,10nm,1.0s						
ELK	Elko	79.70	43	P	P	19 12 50.6	+0.1
G08A	Pilot Rock	79.78	37	P	P	19 12 50.9	+0.3
G08A				IAmb	IAmb	19 12 52.2	
	comp=Z,7.7nm,1.1s						
DIV	Divide	79.95	15	P	P	19 12 50.1	-0.9
DIV				IAmb	IAmb	19 12 51.2	
	comp=Z,9.0nm,0.8s						
E07A	Sunnyside	79.97	36	P	P	19 12 51.1	-0.3
E07A				IAmb	IAmb	19 12 53.1	
	comp=Z,7.0nm,0.8s						
CUT	Chulitna	80.06	12	P	P	19 12 50.8	-0.7
BMRM	Bremner River	80.10	15	P	P	19 12 51.3	-0.6
SCM	Sheep Creek Mo	80.19	14	P	P	19 12 51.4	-0.9
SCM				IAmb	IAmb	19 12 53.0	
	comp=Z,7.3nm,0.7s						
K20K	Telida	80.21	10	P	P	19 12 52.2	-0.1
TGL	Tana Glacier	80.39	16	P	P	19 12 52.6	-0.9
ISLE	Juniper Island	80.40	17	P	P	19 12 53.4	-0.2
MTPU	Mount Pierson	80.47	46	P	P	19 12 56.1	+1.3
N25K	Chitina, Valde	80.65	15	P	P	19 12 54.6	-0.2
N25K				IAmb	IAmb	19 12 55.2	
	comp=Z,6.2nm,0.7s						
TNA	Tin City	80.71	4	P	P	19 12 54.5	-0.3
GLB	Gilahina Butte	80.71	15	P	P	19 12 54.6	-0.5
GLB				IAmb	IAmb	19 12 55.1	
	comp=Z,5.2nm,0.6s						
J20K	Nowinta River	80.96	10	P	P	19 12 56.1	-0.1
J20K				IAmb	IAmb	19 12 57.1	
	comp=Z,7.8nm,0.8s						
CTGM	Chitina Glacie	80.97	17	P	P	19 12 56.0	-0.6
CTGM				IAmb	IAmb	19 12 57.2	
	comp=Z,10nm,0.8s						
TRF	Thorofare Moun	81.00	12		P	19 12 55.5	-1.1
F10A	Beach Ranch, E	81.17	38	P	P	19 12 57.5	-0.4
F10A				IAmb	IAmb	19 12 58.9	
	comp=Z,6.3nm,0.8s						
RND	Reindeer	81.25	12		P	19 12 57.9	0.0
121A	Cookes Peak, D	81.33	53	P	P	19 13 00.4	+1.3
121A				IAmb	IAmb	19 13 01.8	
	comp=Z,7.0nm,0.8s						
PLID	Pearl Lake	81.44	39	P	P	19 12 59.4	-0.1
MCK	McKinley	81.52	12	IAmb	IAmb	19 12 59.3	
	comp=Z,12nm,0.9s						
HLID	Hailey	81.64	41	P	P	19 13 01.2	+0.7
HLID				IAmb	IAmb	19 13 02.5	
	comp=Z,5.7nm,0.8s						
TMUT	Trail Mountain	81.72	46	IAmb	IAmb	19 13 03.5	
	comp=Z,10nm,0.8s						
M26K	Nabesna, AK	81.73	15	IAmb	IAmb	19 13 01.1	
	comp=Z,11nm,0.8s						
SPUT	South Promonto	81.82	43	IAmb	IAmb	19 13 03.3	
	comp=Z,7.0nm,1.0s						
HVU	Hansel Valley	81.83	43	P	P	19 13 02.4	+0.9
HVU				IAmb	IAmb	19 13 03.1	
	comp=Z,6.5nm,0.8s						
SRU	San Rafael Swe	82.12	46	IAmb	IAmb	19 13 04.8	
	comp=Z,9.2nm,0.8s						
MLY	Manley	82.34	11	IAmb	IAmb	19 13 03.7	
	comp=Z,13nm,1.3s						
DOT	Dot Lake	82.52	14	P	P	19 13 04.0	-0.4
DOT				IAmb	IAmb	19 13 04.8	
	comp=Z,6.5nm,0.7s						
P18A	Preston Nutter	82.54	46	IAmb	IAmb	19 13 07.1	
	comp=Z,4.9nm,0.7s						
HWUT	Hardware Ranch	82.54	43	IAmb	IAmb	19 13 06.5	
	comp=Z,5.1nm,0.7s						
CCB	Clear Creek Bu	82.56	12	P	P	19 13 03.7	-0.8
MDM	Murphy Dome	82.75	12	IAmb	IAmb	19 13 06.2	
	comp=Z,8.9nm,0.9s						
COLA	College	82.75	12	P	P	19 13 04.6	-0.8
SCRK	Sand Creek	82.82	14	IAmb	IAmb	19 13 06.5	
	comp=Z,9.5nm,1.0s						
IL31		82.86	13	P	P	19 13 05.0	-1.0
IL31				IAmb	IAmb	19 13 06.3	
	comp=Z,8.7nm,0.8s						
ILAR	Eielson Array	82.86	13	P	P	19 13 05.2	-0.9
	comp=Z,5.3nm,0.6s,baz=217,slow=5.8,SNR=50						
MNTX	Cornudas Mount	82.87	55	P	P	19 13 06.6	-0.3
MNTX				IAmb	IAmb	19 13 09.2	
	comp=Z,7.4nm,1.1s						
MCMT	McKenzie Canyo	83.24	40	P	P	19 13 09.4	+0.7
ANMO	Albuquerque	83.31	51	P	P	19 13 10.4	+1.1
	comp=Z,5.6nm,1.0s,baz=196,slow=7.1,SNR=8.2						
ANMO	Albuquerque	83.31	51		P	19 13 09.8	+0.5
ANMO				IAmb	IAmb	19 13 11.1	
	comp=Z,7.2nm,1.1s						
TX32	Lajitas Array	83.36	57	IAmb	IAmb	19 13 12.3	
	comp=Z,6.1nm,0.8s						
TXAR	Lajitas Array	83.36	57	P	P	19 13 11.2	+1.7
	comp=Z,5.8nm,0.8s,baz=221,slow=6.4,SNR=35						
TXAR	Lajitas Array	83.36	57	P	P	19 13 10.8	+1.2
RDMU	Red Mountain	83.42	45		P	19 13 10.3	+0.5
RDMU				IAmb	IAmb	19 13 11.1	
	comp=Z,7.6nm,0.7s						
DLMT	Dillon	83.66	40	IAmb	IAmb	19 13 12.4	
	comp=Z,9.1nm,1.0s						
BILL	Bilibino	83.79	354	P	P	19 13 10.0	-0.7
PRP	Porcupine Dome	83.80	13	P	P	19 13 10.7	-0.3
PRP				IAmb	IAmb	19 13 11.8	
	comp=Z,8.5nm,0.8s						
REDW	Red Top Meadow	83.82	42	IAmb	IAmb	19 13 13.0	
	comp=Z,8.3nm,0.9s						
FXWY	Fox Creek	83.83	42	IAmb	IAmb	19 13 14.5	

	comp=Z,5.5nm,0.8s						
DAWY	Dawson	84.03	16		P	19 13 11.7	-0.3
DAWY				IAmb	IAmb	19 13 12.9	
	comp=Z,7.8nm,0.7s						
MOOW	Moose Ponds	84.07	42	P	P	19 13 12.7	-0.2
FLWY	Flagg Ranch	84.25	42	P	P	19 13 14.8	+1.0
FLWY				IAmb	IAmb	19 13 16.0	
	comp=Z,7.6nm,0.8s						
YMR	Madison River	84.35	41	IAmb	IAmb	19 13 16.7	
	comp=Z,9.4nm,0.7s						
PDAR	Pinedale Array	84.40	43	P	P	19 13 14.7	+0.1
	comp=Z,2.2nm,0.6s,baz=216,slow=3.7,SNR=22						
COLD	Coldfoot	84.42	10	P	P	19 13 14.0	+0.2
COLD				IAmb	IAmb	19 13 15.6	
	comp=Z,12nm,1.2s						
BELA	Belgrano 2	84.77	173	P	P	19 13 15.2	-0.4
BELA				IAmb	IAmb	19 13 16.7	
	comp=Z,9.5nm,0.9s						
HHC	Hu-ho-hao-te	86.28	314	*e*P	P	19 13 23.3	-0.4
MAW	Mawson	86.94	199	P	P	19 13 26.9	+0.7
	comp=Z,6.8nm,0.6s,baz=132,slow=4.8,SNR=10						
RSSD	Black Hills	88.62	44	P	P	19 13 34.1	-0.7
RSSD				IAmb	IAmb	19 13 35.7	
	comp=Z,5.6nm,0.8s						
CMAR	Chiang Mai Arr	89.21	289	P	P	19 13 38.4	+0.5
	comp=Z,0.6nm,0.4s,baz=111,slow=2.2,SNR=7.6						
LZH	Lanzhou	90.25	307	*e*P	P	19 13 42.8	+0.3
LZH				pP	PcP	19 13 50.8	+7.3
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
YKA	Yellowknife Ar	91.23	24	P	P	19 13 45.3	-0.9
	comp=Z,0.6nm,0.5s,baz=237,slow=4.6,SNR=10.0						
VNA3	Neumayer Olymp	93.44	176	P	P	19 13 56.8	+0.4
VNA2	Neumayer--Watz	93.90	177	P	P	19 13 58.6	+0.1
	baz=194,slow=3.9						
VNA1	Neumayer--Stat	94.12	176	P	P	19 14 00.2	+0.7
LSA	Lhasa	98.89	298	P	P	19 14 28.3	+5.9
MKAR	Makanchi Array	108.13	315	PKiKP	PKiKP	19 19 05.7	-1.6
	comp=Z,0.8nm,0.8s,baz=99,slow=1.1,SNR=5.1						
KURBB	Kurchatov Arra	110.67	319	PKiKP	PKiKP	19 19 10.6	-1.3
	comp=Z,0.3nm,0.5s,baz=96,slow=1.7,SNR=7.2						
BVAR	Borovoye Array	115.49	322	PKP	PKPdf	19 19 19.6	-1.4
	comp=Z,1.2nm,0.6s,baz=202,slow=6.4,SNR=5.3						
ARU	Arti	121.23	328	PKP	PKPdf	19 19 31.0	-0.9
	comp=Z,0.7nm,0.4s,baz=113,slow=5.6,SNR=4.8						
AKTO	Aktyubinsk	123.57	321	PKP	PKPdf	19 19 35.8	-0.8
	comp=Z,1.1nm,0.7s,baz=80,slow=6.1,SNR=4.0						
ARCES	ARCESS Array B	123.78	351	PKP	PKPdf	19 19 35.4	-1.0
	comp=Z,1.5nm,0.5s,baz=27,slow=3.0,SNR=10						
FINES	FINESS Array B	130.84	346	PKP	PKPdf	19 19 50.0	-0.1
	comp=Z,3.0nm,1.1s,baz=15,slow=6.0,SNR=3.8						
CLL	Collm	142.99	350	*e*PKPdf	PKPdf	19 20 12.0	-0.8
DPC	Dobruska-Polom	143.21	346	*e*PKP	PKPab	19 20 10.4	+0.4
TRPA	Tarpa	143.31	338	⇓P	PKPab	19 20 10.4	0.0
MORC	Moravsky Berou	143.43	344	*e*PKP	PKPab	19 20 10.9	0.0
TIRR	Tirgusor	143.64	329	⇓P	PKPab	19 20 11.8	0.0
BR131	Keskin Array S	143.66	318		PKPab	19 20 12.0	-0.3
BRTR	Keskin Array B	143.66	318	PKP	PKPab	19 20 12.3	0.0
	comp=Z,6.4nm,0.7s,baz=79,slow=2.0,SNR=35						
BRTR	Keskin Array B	143.66	318	PKPdf	PKPab	19 20 11.9	-0.4
TLBR	Topalu	143.76	329	⇑P	PKPbc	19 20 13.3	+0.3
DOPR	Dopca	143.93	333	⇓P	PKPbc	19 20 13.3	-0.2
PRU	Pruhonice	143.95	347	*e*PKP	PKPab	19 20 12.5	-0.4
MLR	Muntele Rosu	144.05	332	⇓P	PKPab	19 20 13.7	+0.1
VRAC	Vranov	144.11	345	⇑P	PKPab	19 20 12.7	-0.9
VRAC	Vranov	144.11	345	*e*PKP	PKPab	19 20 13.2	-0.3
VYHS	Vyhne	144.22	342	*e*PKP	PKPab	19 20 14.0	0.0
JAVC	Velka Javorina	144.23	343	*e*PKP	PKPbc	19 20 14.7	+0.4
DRGR		144.37	337	⇓P	PKPab	19 20 14.2	-0.5
KRUC	Moravsky	144.38	345	*e*PKP	PKPab	19 20 14.0	-0.6
PSZ	Piszkesteto	144.40	340	⇑P	PKPab	19 20 14.6	-0.2
MEM	Membach	144.49	357	*d*PKP	PKPab	19 20 14.7	-0.3
VOIR		144.49	333	⇑P	PKPab	19 20 14.8	-0.4
BTNL	Ternell	144.51	357	*d*PKP	PKPab	19 20 14.2	-0.8
BSTI	Sart Tilman	144.54	357	*d*PKP	PKPbc	19 20 14.8	-0.3
SNF	Seneffe	144.66	359	*d*PKP	PKPbc	19 20 15.3	-0.2
BCLA	Clavier	144.72	357	*d*PKP	PKPbc	19 20 14.7	-0.9
ARR	Arges	144.73	333	⇓P	PKPdf	19 20 16.4	+0.3
BHOU	Houvegnez	144.75	357	*d*PKP	PKPbc	19 20 15.7	-0.1
BGES	Gesves	144.76	358	*d*PKP	PKPbc	19 20 14.7	-1.0
MODS	Modra-Piesok	144.78	343	*e*PKP	PKPbc	19 20 15.2	-0.8
BMRD	Maredsous	144.85	358	*d*PKP	PKPab	19 20 16.3	-0.1
KHC	Kasperske Hory	144.96	348	*e*PKP	PKPdf	19 20 16.1	-0.3
KHC	Kasperske Hory	144.96	348	PKPdf	PKPdf	19 20 15.2	-1.2
RCHB	Rochefort	144.98	357	*d*PKP	PKPdf	19 20 15.6	-0.7
DOU	Dourbes	145.07	358	*d*PKP	PKPdf	19 20 16.1	-0.3
CKRC	Cesky Krumlov	145.10	347	*e*PKP	PKPab	19 20 17.4	0.0
SIRR	Siria	145.20	337	⇓P	PKPdf	19 20 16.8	0.0
GERES	GERESS Array B	145.21	348	PKPbc	PKPdf	19 20 16.6	-0.3
	comp=Z,3.5nm,0.6s,baz=35,slow=3.5,SNR=34						
WLF	Walferdange	145.43	356	*d*PKP	PKPbc	19 20 17.9	0.0
GZR	Gura Zlata	145.49	335	⇓P	PKPdf	19 20 17.3	-0.2
CONA	Conrad Observa	145.57	345	*e*P	PKPbc	19 20 18.5	+0.1
	comp=Z,7.1nm,0.6s						
BZS	Buzias	145.76	337	⇑P	PKPdf	19 20 17.4	-0.4
MOA	Molln	146.03	346	*i* P	PKPbc	19 20 19.6	-0.1
	comp=Z,4.9nm,0.6s						
HERR	Herculane	146.06	335	⇓P	PKPdf	19 20 18.6	+0.3
ARSA	Arzberg	146.28	345	*i* P	PKPbc	19 20 20.0	-0.5
	comp=Z,1.6nm,0.5s						
MORH	Mrgy, Hungar	146.31	340	⇓P	PKPdf	19 20 19.4	+0.7
ECH	Echery	146.79	355		PKPdf	19 20 19.8	+0.3
FRGS	Fruska Gora	146.83	338	*e*P	PKPbc	19 20 21.6	-0.5
SOKA	Soboth	146.94	345	*e*P	PKPbc	19 20 21.5	-0.8
	comp=Z,5.2nm,0.8s,SNR=6.8						
KBA	Koelnbreinsper	146.96	347	*e*P	PKPbc	19 20 21.5	-1.0
	comp=Z,7.7nm,0.7s						
RETA	Reutte	147.06	350	*e*P	PKPbc	19 20 22.3	-0.4
	comp=Z,3.9nm,0.8s						
WATA	Walderalm	147.07	349	*e*P	PKPbc	19 20 22.2	-0.6
	comp=Z,3.7nm,0.5s						
WTTA	Wattenberg	147.13	349	*e*P	PKPbc	19 20 22.7	-0.3
	comp=Z,7.9nm,0.6s,SNR=7.4						
MOTA	Moosalm	147.14	350	*i* P	PKPbc	19 20 22.4	-0.6
	comp=Z,11nm,1.4s						
OBKA	Obir	147.22	345	*i* P	PKPbc	19 20 23.2	+0.1
	comp=Z,5.8nm,1.0s						
SQTA	Sankt Quirin	147.24	350	*e*P	PKPbc	19 20 22.8	-0.4
	comp=Z,3.4nm,0.6s						
ZAPS	Zavoj	147.26	333	*e*P	PKPdf	19 20 21.8	+1.3
MYKA	Terra Mystica	147.32	346	*i* P	PKPbc	19 20 22.2	-1.2
	comp=Z,4.2nm,0.6s						
BOVS	Bovan	147.37	334	⇓P	PKPdf	19 20 21.8	+1.3
DAVA	Damuels	147.39	351	*i* P	PKPbc	19 20 23.4	-0.3
	comp=Z,4.5nm,0.6s						
TRUS	Trudelj	147.40	336	*e*P	PKPbc	19 20 22.9	-0.7
ABTA	Abfaltersbach	147.45	348	*e*P	PKPbc	19 20 22.7	-1.1
	comp=Z,7.1nm,0.7s,SNR=5.5						
FETA	Feichten	147.52	350	*e*P	PKPbc	19 20 23.8	-0.2
	comp=Z,7.0nm,1.4s						
GRUS	Gruza	147.56	336	*e*P	PKPbc	19 20 23.6	-0.4
DIVS	Divibare	147.67	337	*e*P	PKPbc	19 20 23.9	-0.5
STAL	STALIGIAL	147.88	347		PKPdf	19 20 22.9	+1.5
SELS	Selova	147.95	335	*e*P	PKPbc	19 20 24.0	-1.1
BARS	Barje	147.99	333	*e*P	PKPbc	19 20 24.8	-0.4
IVAS	Ivanjica	148.05	336	*e*P	PKPbc	19 20 24.3	-1.1
PRVS	Prvonek	148.12	333	*e*P	PKPbc	19 20 24.8	-0.8
SJES	Sjenica	148.38	336	*e*P	PKPbc	19 20 26.7	+0.4
NVLJ	Novalja	148.94	343	P	PKPbc	19 20 25.4	-2.0
RICI	Ricice	149.22	340	P	PKPbc	19 20 26.9	-1.4
MORI	Morici	149.34	342	P	PKPbc	19 20 26.8	-1.7
DUGI	Dugi Otok	149.41	343	P	PKPdf	19 20 25.9	+2.1
ZIRJ	Zirje	149.55	342	P	PKPbc	19 20 26.7	-2.3
CASP	Castiglione de	151.58	348		PKPbc	19 20 32.0	-1.8
ESDC	Sonseca Array	154.77	13	PKPbc	PKPbc	19 20 40.3	-0.6
	comp=Z,0.4nm,0.7s,baz=322,slow=1.9,SNR=4.5						
TORD	Torodi Ar. Bea	177.70	147	PKP	PKPdf	19 20 49.0	-1.3
	comp=Z,0.5nm,0.6s,baz=273,slow=0.8,SNR=3.6						
TORD				PKPab	PKPab	19 22 39.9	+1.0
	comp=Z,2.0nm,0.7s,baz=229,slow=3.6,SNR=11						

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*IDC **18** 19:03:21.2±1.4, 15°.75N×90°.76W, h0^{km}, mb3.9/10, mb1 4.2/12, mb1mx4.0/38, mbtmp3.9/12, ML4.0/2, Error ellipse: s-maj=41.6km s-min=21.5km az=38.0*

*GCG **18** 19:03:24.4±0.4, 15°.82N×90°.99W, h77^{km}±129^{km}, MD4.2*

*NEIC **18** 19:03:24.3±2.6, 15°.80N±0°.04×91°.01W±0°.03, h10^{km}±5^{km}, mb4.3/25, Error ellipse: s-maj=6.0km s-min=3.9km az=205.0*

*UCR **18** 19:03:25.0±2.2, 15°.84N×91°.03W, h15^{km}±97^{km}, ML4.1, mb4.3(NEIC)*

*SNET **18** 19:03:25.0±2.1, 15°.84N×91°.03W, h15^{km}±91^{km}, ML4.3*

*INET **18** 19:03:26.7, 15°.77N×91°.00W, h15^{km}, MW4.0*

ISC 18 19:03:23.7±1.3**, 15°.80N**±0°.04×**90°.97W**±0°.04**, h13**^{km}±9^{km}**, n78, σ1^{s}72**/86**, mb4.2**/16**, 1C-3D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUEH	Huehuetenango	0.70	227	*e*P	Pg	19 03 36.7	-0.7
HUEH	Huehuetenango	0.70	227		Pg	19 03 36.6	-0.7
HUEH					Sg	19 03 45.2	-1.5
CCIG	Comitan	1.22	293		Pg	19 03 48.5	+1.2
CCIG				Sn	Sg	19 04 04.4	+1.1
STG3	Santiaguito 3,	1.23	208	*e*P	Pn	19 03 46.9	+0.1
NBG	Las Nubes	1.34	153	⇓*e*P	Pn	19 03 48.8	+0.4
FUG	Fuego 3	1.35	175	⇓*e*P	Pn	19 03 48.7	+0.3
MRL	Marmol	1.43	120	⇑*e*P	Pn	19 03 49.9	+0.3
PCG	Pacaya	1.44	166	*e*P	Pn	19 03 50.0	+0.3
RTAL	Retalhuleu	1.45	209	⇓*i*P	Pn	19 03 50.6	+0.9
RTAL				*e*S	Sg	19 04 11.3	+0.9
RTAL	Retalhuleu	1.45	209		Pn	19 03 50.5	+0.9
RTAL				Sn	Sb	19 04 10.5	+1.6
PETF	Flores	1.53	43	*e*P	Pn	19 03 52.2	+1.4
PETF	Flores	1.53	43		Pn	19 03 52.0	+1.2
PETF				Sn	Sn	19 04 11.7	+1.0
ESQI	Esquipulas	1.99	128	*e*P	Pn	19 03 59.1	+1.8
ESQI				IAML		19 04 30.1	
	comp=Z,2μm,0.6s						
ESQI	Esquipulas	1.99	128		Pn	19 03 58.5	+1.3
ESQI				Sn	Sn	19 04 23.6	+1.4
MTO3	Montecristo	2.08	132	*e*P	Pn	19 04 00.4	+1.9
MTO3				*e*S	Sb	19 04 27.8	+0.4
MTO3				IAML		19 04 29.9	
	comp=Z,3μm,0.5s						
MTO3	Montecristo	2.08	132	*e*P	Pn	19 04 00.4	+1.9
MTO3				*e*S	Sb	19 04 27.8	+0.4
MTO3				IAML		19 04 29.9	
	comp=Z,3μm,0.5s						
MTO3	Montecristo	2.08	132		Pn	19 04 00.3	+1.7
MTO3				Sn	Sn	19 04 27.0	+2.5
SLOZ	Alcaldia de Sa	2.10	147	*e*P	Pn	19 04 00.8	+2.2
SLOZ				IAML		19 04 35.0	
	comp=Z,1μm,0.5s						
RTR	El Retiro	2.28	146	*e*P	Pn	19 04 04.0	+2.7
RTR	El Retiro	2.28	146	*e*P	Pn	19 04 04.0	+2.7
SNJE	San Jose	2.33	145	*e*P	Pn	19 04 05.0	+3.1
SNJE	San Jose	2.33	145	*e*P	Pn	19 04 05.0	+3.1
CEVE	Cerro Verde	2.35	146	*e*P	Pn	19 04 05.3	+3.0
CEVE				IAML		19 04 43.5	
	comp=Z,2μm,0.3s						
CEVE	Cerro Verde	2.35	146	*e*P	Pn	19 04 05.3	+3.0
CEVE				IAML		19 04 43.5	
	comp=Z,2μm,0.3s						
SNET	Serv Nac Est T	2.69	141		Pn	19 04 10.8	+4.0
TGUH	Tegucigalpa,Un	3.97	115		Pb	19 04 32.1	-1.5
CMIG	Matias Romero	3.97	289	Pn	Pn	19 04 24.4	0.0
	comp=Z,7.6nm,0.3s,baz=122,slow=11,SNR=39						
CMIG				Sn	Sn	19 05 11.1	+0.2
	comp=Z,8.6nm,0.3s,baz=286,slow=19,SNR=10						
CRIN	San Cristobal	4.89	129		Pn	19 04 38.5	+1.5
CNGN	Cerro Negro	5.28	128		Pn	19 04 44.4	+2.0
MATN	Matagalpa	5.66	120		Pn	19 04 51.0	+3.3
BOAB	BOACO BROADBAN	6.12	122		Pn	19 04 52.6	-1.4
HZTE	Horizontes, Gu	7.27	133	Pn	Pn	19 05 11.8	+2.1
TLIG	Tlapa	7.49	285	Pn	Pn	19 05 13.2	+0.3
ORTG	Ortega, Santa	7.61	135		Pn	19 05 15.8	+1.3
JTS	Las Juntas de	8.02	132	Pn	Pn	19 05 21.1	+1.1
RIMA	Rio Macho	9.16	130		Pn	19 05 40.6	+4.8
PEZE	Perez Zeledon,	9.55	131	Pn	Pn	19 05 45.3	+4.1
SRBA	San Rafael, Bu	9.88	130		Pn	19 05 49.7	+4.0
RIOS	Rincon, Osa	10.14	133	Pn	Pn	19 05 53.9	+4.9
SOR	Soroa	10.24	46		Pn	19 05 50.5	+0.1
LGNH	Logne	17.75	79	P	Pn	19 07 29.9	-0.8
ZARC	Zaragoza, Cauc	17.79	116	P	Pn	19 07 30.9	-0.4
TXAR	Lajitas Array	17.84	321	Pn	P	19 07 35.6	+3.0
	comp=Z,0.1nm,0.3s,baz=146,slow=11,SNR=23						
TXAR	Lajitas Array	17.84	321	P	Pn	19 07 31.1	-0.7
TX31	Lajitas Ar. Si	17.84	321	P	Pn	19 07 31.3	-0.6
TX31				IAmb	IAmb	19 08 03.6	
	comp=Z,34nm,1.6s						
TX32	Lajitas Array	17.84	321	P	Pn	19 07 31.6	-0.3
GOGA	Godfrey	18.80	20	P	P	19 07 43.3	+0.3
GOGA				IAmb	IAmb	19 07 51.5	
	comp=Z,40nm,1.6s						
MIAR	Mount Ida	18.82	353	P	P	19 07 43.7	+0.6
WHAR	Wooly Hollow	19.45	357	P	P	19 07 50.4	+0.4
WHAR				IAmb	IAmb	19 08 24.1	
	comp=Z,20nm,1.4s						
W39A	Magazine	19.48	353	P	Pn	19 07 52.3	+0.6
W39A				IAmb	IAmb	19 08 16.9	
	comp=Z,38nm,1.4s						
GNAR	Gosnell	20.10	2	P	P	19 07 56.7	-0.5
LCAR	Lake Charles	20.19	360	P	P	19 07 58.9	+0.8
LCAR				IAmb	IAmb	19 08 04.1	
	comp=Z,8.7nm,1.0s						
FNO	Franklin	20.22	345	P	P	19 07 59.0	+0.6
U40A	Yellville	20.55	356	P	P	19 08 00.3	-1.7
U40A				IAmb	IAmb	19 08 10.9	
	comp=Z,14nm,1.1s						
MNTX	Cornudas Mount	20.57	323	P	P	19 08 01.0	-1.3
PBMO	Poplar Bluff	20.90	1	P	P	19 08 05.8	-0.1
PBMO				IAmb	IAmb	19 08 12.7	
	comp=Z,16nm,0.9s						
T42A	Van Buren	21.15	360	P	P	19 08 09.6	+1.1
T42A				IAmb	IAmb	19 08 17.6	
	comp=Z,9.6nm,0.8s						
R40A	Maddies Statio	22.44	357	P	P	19 08 22.3	0.0
R40A				IAmb	IAmb	19 08 32.7	
	comp=Z,17nm,1.3s						
121A	Cookes Peak, D	22.60	320	P	P	19 08 23.3	-1.1
121A				IAmb	IAmb	19 08 30.9	
	comp=Z,10nm,1.2s						
BAUV	El Baul	23.39	104	P	P	19 08 30.4	-2.1
BAUV				IAmb	IAmb	19 08 44.8	
	comp=Z,13nm,0.8s						
P40A	Paris	23.66	358	P	P	19 08 34.0	-0.9
P40A				IAmb	IAmb	19 08 36.1	
	comp=Z,15nm,0.9s						
P46A	Rosedale	23.96	7	P	P	19 08 38.8	+1.1
Q52A	Bidwell	24.31	17	P	P	19 08 41.6	+0.5
Q52A				IAmb	IAmb	19 09 11.6	
	comp=Z,16nm,1.1s						
X18A	Snowflake	25.28	321	P	P	19 08 49.2	-0.9
PDAR	Pinedale Array	31.24	333	P	P	19 09 43.5	+0.2
	comp=Z,0.3nm,0.7s,baz=135,slow=12,SNR=2.8						
ECR	Eagle Creek	32.28	331	P	P	19 09 53.4	+0.9
REDW	Red Top Meadow	32.29	332	P	P	19 09 52.6	0.0
NVAR	Mina Array Bea	32.95	318	P	P	19 10 00.8	+2.4
	comp=Z,2.1nm,0.8s,baz=132,slow=8.2,SNR=9.5						
NVAR	Mina Array Bea	32.95	318	P	P	19 10 00.1	+1.7
SCHQ	Schefferville	43.20	20	P	P	19 11 24.0	-0.3
	comp=Z,2.2nm,0.6s,baz=204,slow=4.7,SNR=5.6						
SIV	San Ignacio	43.23	136	P	P	19 11 23.4	-1.6
	comp=Z,1.3nm,0.7s,baz=288,slow=7.6,SNR=5.7						
YKA	Yellowknife Ar	49.53	346	P	P	19 12 13.8	-0.1
	comp=Z,2.4nm,0.8s,baz=148,slow=7.6,SNR=20						
ILAR	Eielson Array	61.60	336	P	P	19 13 40.8	+0.1
	comp=Z,0.5nm,0.6s,baz=134,slow=3.9,SNR=2.2						
ESDC	Sonseca Array	77.83	52	P	P	19 15 19.4	-1.8
	comp=Z,0.3nm,0.8s,baz=297,slow=5.6,SNR=1.6						
ESDC	Sonseca Array	77.83	52	IAmb	IAmb	19 15 26.5	
	comp=Z,0.8nm,0.9s						
ARCES	ARCESS Array B	84.13	18	P	P	19 15 54.0	-0.2
	comp=Z,3.1nm,0.7s,baz=300,slow=4.1,SNR=13						
GERES	GERESS Array B	87.59	40	P	P	19 16 11.5	-0.4
	comp=Z,0.2nm,0.5s,baz=333,slow=1.1,SNR=3.7						
FINES	FINESS Array B	88.46	25	P	P	19 16 14.2	-1.4
	comp=Z,2.9nm,0.9s,baz=318,slow=3.9,SNR=3.5						

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*IDC **18** 19:17:50.7±4.7, 5°.40S×150°.46E, h113^{km}±40^{km}, mb3.6/6, mb1 3.9/7, mb1mx3.4/40, mbtmp4.1/7, Error ellipse: s-maj=51.1km s-min=27.3km az=114.0*

*NEIC **18** 19:17:53.9±1.3, 5°.53S±0°.10×150°.24E±0°.10, h118^{km}±7^{km}, mb4.2/20, Error ellipse: s-maj=14.6km s-min=13.4km az=145.0*

ISC 18 19:17:56.3±0.7**, 5°.60S**±0°.09×**150°.1E**±0°.1**, h150**^{km}**, n37, σ1^{s}21**/36**, mb4.1**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.79	218	P	Pn	19 19 05.9	-1.0
	23nm,0.3s,baz=47,slow=6.9,SNR=55						
PMG				S	Sn	19 20 00.6	-1.4
	38nm,0.3s,baz=353,slow=14,SNR=15						
PMG	Port Moresby	4.79	218		Pn	19 19 05.6	-1.4
COEN	Coen	10.76	219	Pn	Pn	19 20 26.2	-0.2
CTAO	Charters Tower	14.88	194		P	19 21 22.2	+0.9
EIDS	Eidsvold	19.68	177	P	P	19 22 13.8	-0.1
EIDS				IAmb	IAmb	19 22 15.2	
	comp=Z,19nm,1.1s						
MTN	Manton Dam	20.06	248	P	P	19 22 19.8	+1.7
MTN				IAmb	IAmb	19 22 28.6	
	comp=Z,33nm,1.3s						
WB0	Warramunga Arr	20.79	226		P	19 22 26.9	+0.9
WR0	Warramunga Arr	20.81	225	P	P	19 22 25.9	-0.2
WR0				IAmb	IAmb	19 23 03.5	
	comp=Z,9.7nm,1.2s						
WRAB	Tennant Creek	20.93	226	P	P	19 22 25.4	-1.9
WRAB				IAmb	IAmb	19 22 51.4	
	comp=Z,7.6nm,0.9s						
WB2	Warramunga Arr	20.94	226	P	P	19 22 28.1	+0.7
WB2				IAmb	IAmb	19 22 55.9	
	comp=Z,13nm,1.2s						
WRA	Warramunga Arr	20.95	226	P	P	19 22 28.2	+0.7
	comp=Z,3.5nm,0.4s,baz=52,slow=11,SNR=75						
WRA	Warramunga Arr	20.95	226	P	P	19 22 27.2	-0.3
KNRA	Kununurra	23.23	243	P	P	19 22 51.4	+1.1
OUENC	Ouen Island, N	23.26	138	P	P	19 22 49.9	-0.6
OUENC				IAmb	IAmb	19 23 04.3	
	comp=Z,28nm,1.0s						
AS31	Alice Springs	23.80	219	P	P	19 22 55.5	-0.1
ASAR	Alice Springs	23.80	219	P	P	19 22 56.9	+1.3
	comp=Z,1.0nm,0.3s,baz=51,slow=9.0,SNR=86						
ASAR	Alice Springs	23.80	219	P	P	19 22 56.5	+1.0
ARMA	Armidale	24.73	177	P	P	19 23 03.9	-0.1
ARMA				IAmb	IAmb	19 23 18.5	
	comp=Z,14nm,1.4s						
FITZ	Fitzroy Crossi	26.94	240	P	P	19 23 25.2	+1.4
	comp=Z,1.6nm,0.4s,baz=56,slow=9.7,SNR=14						
STKA	Stephens Creek	27.33	196	P	P	19 23 27.5	+0.3
	comp=Z,2.4nm,0.5s,baz=29,slow=13,SNR=9.4						
STKA	Stephens Creek	27.33	196	IAmb	IAmb	19 23 27.8	
	comp=Z,0.6nm,0.8s						
BBOO	Buckleboo	30.08	204	P	P	19 23 52.2	+0.6
TOO	Toolangi	32.10	187	P	P	19 24 11.1	+1.8
FORT	Forrest	32.52	217	P	P	19 24 14.0	+1.0
PSA00	Pilbara Seismi	33.33	239	P	P	19 24 20.2	0.0
PSA00				IAmb	IAmb	19 24 35.9	
	comp=Z,4.6nm,1.1s						
KKM	Kota Kinabalu	35.77	288	P	P	19 24 39.5	-1.8
TAU	Tasmania Unive	37.24	183	P	P	19 24 54.1	+0.8
TUWZ	Tuamarina	41.54	153	P	P	19 25 28.6	-0.3
SONM	Songino Array	65.61	329	P	P	19 28 26.4	+2.1
	comp=Z,0.2nm,0.3s,baz=144,slow=4.4,SNR=2.4						
SONM	Songino Array	65.61	329	IAmb	IAmb	19 28 32.6	
	comp=Z,3.2nm,1.5s						
MKAR	Makanchi Array	79.18	320	P	P	19 29 43.7	-0.9
	comp=Z,0.2nm,0.7s,baz=113,slow=5.5,SNR=1.2						
RDOG	Red Dog Mine	80.47	16	P	P	19 29 52.5	+1.3
RDOG				IAmb	IAmb	19 29 53.9	
	comp=Z,4.0nm,0.8s						
IMAR	Indian Mountai	82.03	20	P	P	19 29 58.5	-0.9
ILAR	Eielson Array	83.91	23	P	P	19 30 06.0	-3.1
	comp=Z,0.5nm,0.7s,baz=252,slow=5.1,SNR=6.0						
ILAR	Eielson Array	83.91	23	P	P	19 30 08.0	-1.0
TORD	Torodi Ar. Bea	147.98	286	PKPbc	PKPbc	19 37 24.2	-0.9
	comp=Z,0.4nm,0.8s,baz=26,slow=3.3,SNR=2.2						
TORD	Torodi Ar. Bea	147.98	286		PKPdf	19 37 22.3	+0.5

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*NEIC **18** 19:25:07.2±2.1, 6°.53S±0°.07×152°.5E±0°.2, h10^{km}±2^{km}, mb4.2/6, Error ellipse: s-maj=30.6km s-min=10.4km az=102.0*

*IDC **18** 19:25:26.1±8.0, 5°.83S×150°.56E, h114^{km}±54^{km}, mb3.1/2, mb1 3.4/3, mb1mx3.0/40, mbtmp3.6/3, Error ellipse: s-maj=118.1km s-min=54.8km az=120.0*

ISC 18 19:25:13.9±2.2**, 6°.1S**±0°.3×**151°.7E**±0°.4**, h41**^{km}**, n13, σ1^{s}56**/14**, mb4.0**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.95	14		Pn	19 25 45.0	+0.4
PMG	Port Moresby	5.57	234	P	Pn	19 26 36.9	+2.6
	3.2nm,0.3s,baz=112,slow=3.0,SNR=9.4						
PMG				S	Sn	19 27 34.2	-2.9
	3.8nm,0.3s,baz=98,slow=17,SNR=8.1						
PMG	Port Moresby	5.57	234		Pn	19 26 34.7	+0.4
MTN	Manton Dam	21.35	250	P	P	19 29 59.7	+1.8
MTN				IAmb	IAmb	19 30 43.0	
	comp=Z,40nm,1.4s						
WB0	Warramunga Arr	21.62	229	P	P	19 30 01.0	+0.2
WB0				IAmb	IAmb	19 30 49.1	
	comp=Z,8.1nm,1.2s						
WR0	Warramunga Arr	21.63	229	P	P	19 30 00.9	+0.1
WR0				IAmb	IAmb	19 30 02.4	
	comp=Z,19nm,1.6s						
WB2	Warramunga Arr	21.76	229	P	P	19 30 01.1	-1.2
WB2				IAmb	IAmb	19 30 05.8	
	comp=Z,12nm,1.5s						
WRA	Warramunga Arr	21.77	229	P	P	19 30 02.4	0.0
	comp=Z,1.2nm,0.9s,baz=52,slow=11,SNR=4.8						
KNRA	Kununurra	24.42	245	P	P	19 30 30.6	+1.7
AS31	Alice Springs	24.45	223	P	P	19 30 28.2	-1.0
ASAR	Alice Springs	24.46	223	P	P	19 30 29.1	-0.1
	comp=Z,1.3nm,0.8s,baz=57,slow=8.7,SNR=18						
ASAR	Alice Springs	24.46	223	P	P	19 30 27.5	-1.7
TORD	Torodi Ar. Bea	149.63	286	PKPbc	PKPbc	19 45 00.1	-0.1
	comp=Z,0.5nm,0.5s,baz=102,slow=3.6,SNR=6.2						

IDC 18 19:25:58.5±5.2**, 4°.11S**×**150°.64E, h0**^{km}**, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.6**/39**, mbtmp3.8**/4**, MS3.2**/7**, Ms1 3.2**/7**, ms1mx2.9**/33**, Error ellipse: s-maj=118.5km s-min=35.6km az=80.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.29	213	LR	LR	19 29 13.5	
	comp=Z,71nm,18.9s,baz=30,slow=31						
HNR	Honiara	10.64	120	LR	LR	19 32 31.4	
	comp=Z,117nm,18.0s,baz=346,slow=37						
GUMO	Guam	18.50	342	LR	LR	19 35 37.2	
	comp=Z,37nm,21.4s,baz=107,slow=31						
SIJI	Sorong	19.62	279	LR	LR	19 36 49.7	
	comp=Z,115nm,20.1s,baz=158,slow=33						
WRA	Warramunga Arr	22.36	224	P	P	19 30 58.5	+0.2
	1.6nm,0.9s,baz=46,slow=11,SNR=2.3						
DZM	Mont Dzumac	23.53	141	LR	LR	19 38 29.4	
	comp=Z,95nm,20.6s,baz=206,slow=32						
ASAR	Alice Springs	25.27	218	P	P	19 31 26.9	+0.2
	1.2nm,0.7s,baz=53,slow=8.1,SNR=5.8						
ASAR				LR	LR	19 43 03.3	
	comp=Z,51nm,18.4s,baz=43,slow=41						
STKA	Stephens Creek	28.89	196	P	P	19 31 58.8	-0.4
	1.6nm,0.7s,baz=18,slow=13,SNR=3.6						
STKA				LR	LR	19 43 05.5	
	comp=Z,84nm,19.8s,baz=25,slow=36						
CMAR	Chiang Mai Arr	55.64	296	P	P	19 35 36.7	-0.1
	1.1nm,0.8s,baz=112,slow=5.8,SNR=8.2						

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*SJA **18** 19:27:25.8±0.6, 22°.83S×66°.83W, h228^{km}±3^{km}, ML4.4, MW4.2*

*IDC **18** 19:27:26.4±0.8, 22°.82S×66°.67W, h199^{km}±7^{km}, mb4.0/12, mb1 4.1/20, mb1mx4.0/30, mbtmp4.5/20, MS3.2/3, Ms1 3.2/3, ms1mx2.8/22, Error ellipse: s-maj=12.5km s-min=10.7km az=40.0*

*NEIC **18** 19:27:26.1±1.8, 22°.83S±0°.06×66°.71W±0°.08, h198^{km}±6^{km}, mb4.7/159, Md4.4(SJA), Error ellipse: s-maj=10.6km s-min=8.7km az=79.0*

*GUC **18** 19:27:28.1±0.6, 22°.81S×67°.15W, h245^{km}±6^{km}, ML4.7*

*VAO **18** 19:27:28.0±0.3, 22°.76S×66°.67W, h208^{km}, mb4.4*

ISC 18 19:27:27.0±0.5**, 22°.84S**±0°.03×**66°.85W**±0°.03**, h209**^{km}±5^{km}**, n431, σ1^{s}25**/460**, mb4.6**/89**, 15C-3D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HJA	Humahuaca	1.38	106	*e*P	Pn	19 28 02.2	+1.3
HJA				*e*S	Sn	19 28 29.0	+1.8
YJA	Yavi	1.40	62	*e*P	Pn	19 28 02.6	+1.4
YJA				*e*S	Sn	19 28 28.9	+1.3
LVC	Limon Verde	1.92	276	P	Pn	19 28 06.9	+1.1
	41nm,0.3s,baz=101,slow=6.8,SNR=281						
LVC				S	Sn	19 28 36.1	+0.3
	27nm,0.3s,baz=130,slow=10,SNR=4.0						
LVC				LR	LR	19 28 54.1	
	comp=Z,300nm,18.3s,baz=141,slow=42						
LVC	Limon Verde	1.92	276	⇑*i*P	Pn	19 28 06.8	+1.0

LVC				eS	Sn	19 28 36.5	+0.6
LVC	Limon Verde	1.92	276	eP	Pn	19 28 07.1	+1.3
LVC	Limon Verde	1.92	276	eP	Pn	19 28 06.9	+1.1
LVC				eS	Sn	19 28 36.3	+0.4
AZAP	Zapla	2.14	131	eP	Pn	19 28 08.3	+0.5
AZAP				eS	Sn	19 28 40.6	+0.9
AZAP				IAML		19 28 49.5	
	comp=Z,609nm,1.0s						
SLA	San Lorenzo	2.24	147	⇓iP	Pn	19 28 10.3	+1.4
SLA	San Lorenzo	2.24	147	eP	Pn	19 28 10.2	+1.4
SLA				eS	Sn	19 28 42.9	+1.2
SLA				eS	S	19 28 44.7	+3.5
PB15	IPOC Station P	2.44	261	⇑iP	Pn	19 28 11.9	+0.9
PB15				i S	Sn	19 28 45.7	+0.2
PB15	IPOC Station P	2.44	261		Pn	19 28 11.9	+0.9
PB15				Sn	Sn	19 28 45.0	-0.5
PB15	IPOC Station P	2.44	261	eP	Pn	19 28 11.9	+0.9
PB15				eP	Pn	19 28 12.2	+1.2
PB15				eS	Sn	19 28 45.9	+0.5
PB09	IPOC Station P	2.45	295	⇑iP	Pn	19 28 12.6	+1.5
PB09				eS	Sn	19 28 45.8	+0.4
PB09				IAML		19 28 47.5	
	comp=N,1µm,0.6s						
PB09	IPOC Station P	2.45	295		Pn	19 28 12.0	+1.0
PB09				Sn	Sn	19 28 45.3	-0.1
PB09	IPOC Station P	2.45	295	eP	Pn	19 28 12.5	+1.5
PB09				eP	Pn	19 28 12.8	+1.8
PB09				eS	Sn	19 28 46.1	+0.7
PB09				IAML		19 28 47.9	
	comp=Z,1µm,0.9s						
ASTB	Santa Barbara	2.46	117	eP	Pn	19 28 11.8	+0.7
ASTB				eS	Sn	19 28 45.5	-0.2
PB06	IPOC Station P	2.52	272	⇑iP	Pn	19 28 12.4	+0.7
PB06				eS	Sn	19 28 46.1	-0.6
PB06				IAML		19 28 49.6	
	comp=E,2µm,0.4s						
PB06	IPOC Station P	2.52	272		Pn	19 28 12.1	+0.3
PB06				Sn	Sn	19 28 45.8	-1.0
PB06	IPOC Station P	2.52	272	eP	Pn	19 28 12.6	+0.7
PB06				eS	Sn	19 28 47.2	+0.4
PB06				IAML		19 28 50.3	
	comp=Z,910nm,0.4s						
PB03	IPOC Station P	2.80	286	⇑iP	Pn	19 28 15.6	+0.6
PB03				eS	Sn	19 28 51.4	-1.0
PB03				IAML		19 28 53.6	
	comp=N,1µm,0.6s						
PB03	IPOC Station P	2.80	286	eP	Pn	19 28 15.6	+0.6
PB03				eS	Sn	19 28 52.6	+0.2
PB03				IAML		19 28 54.1	
	comp=Z,675nm,0.4s						
ALOL	LOMAS DE OLMED	2.81	111	eP	Pn	19 28 09.6	-5.3
ALOL				eP	Pn	19 28 15.1	+0.2
ALOL				eS	S	19 29 02.2	+10
PB07	IPOC Station P	3.02	291	⇑iP	Pn	19 28 18.2	+0.7
PB07				eS	Sn	19 28 55.5	-1.6
PB07				IAML		19 28 57.3	
	comp=N,3µm,0.6s						
PB07	IPOC Station P	3.02	291	Pn	Pn	19 28 17.6	+0.1
PB07				Sn	Sn	19 28 55.3	-1.7
PB07	IPOC Station P	3.02	291	eP	Pn	19 28 18.1	+0.5
PB07				eS	Sn	19 28 56.6	-0.4
PB07				eS	S	19 28 56.7	+0.1
PB07				IAML		19 29 00.0	
	comp=Z,911nm,0.6s						
PB01	IPOC Station P	3.03	306	⇑iP	Pn	19 28 18.1	+0.6
PB01				eS	Sn	19 28 56.4	-0.8
PB01				IAML		19 28 58.3	
	comp=N,527nm,0.6s						
PB01	IPOC Station P	3.03	306		Pn	19 28 17.9	+0.4
PB01				Sn	Sn	19 28 55.6	-1.6
PB01	IPOC Station P	3.03	306	eP	Pn	19 28 18.1	+0.6
PB01				eS	Sn	19 28 56.6	-0.5
PB04	IPOC Station P	3.09	279	⇑iP	Pn	19 28 18.8	+0.5
PB04				eS	Sn	19 28 57.4	-1.1
PB04				IAML		19 29 01.5	
	comp=N,2µm,0.3s						
PB04	IPOC Station P	3.09	279		Pn	19 28 18.6	+0.3
PB04				Sn	Sn	19 28 56.4	-2.1
PB04	IPOC Station P	3.09	279	eP	Pn	19 28 08.3	-10
PB04				eP	Pn	19 28 18.8	+0.5
PB04				eS	Sn	19 28 58.2	-0.3
PB04				IAML		19 29 06.1	
	comp=Z,1µm,0.4s						
PB05	IPOC Station P	3.09	269	⇑iP	Pn	19 28 18.8	+0.5
PB05				eS	Sn	19 28 56.6	-1.8
PB05				IAML		19 28 59.3	
	comp=E,1µm,0.5s						
PB05	IPOC Station P	3.09	269	eP	Pn	19 28 18.8	+0.5
PB05				eP	Pn	19 28 18.8	+0.5
PB05				eS	Sn	19 28 57.8	-0.7
PB05				IAML		19 28 58.7	
	comp=Z,672nm,0.5s						
PB02	IPOC Station P	3.20	298	⇑iP	Pn	19 28 19.9	+0.4
PB02				⇓eS	Sn	19 28 59.2	-1.6
PB02				IAML		19 29 00.5	
	comp=N,1µm,0.7s						
PB02	IPOC Station P	3.20	298	eP	Pn	19 28 20.0	+0.4
PB02				eS	Sn	19 29 00.2	-0.6
PB02				IAML		19 29 09.9	
	comp=Z,568nm,0.5s						
FSA	Cafayete	3.36	167	eP	Pn	19 28 22.2	+0.8
PB08	IPOC Station P	3.44	321	⇑iP	Pn	19 28 24.3	+1.6
PB08				eS	Sn	19 29 06.8	+0.6
PB08	IPOC Station P	3.44	321		Pn	19 28 23.9	+1.3
PB08				Sn	Sn	19 29 06.3	0.0
PB08	IPOC Station P	3.44	321	eP	Pn	19 28 24.2	+1.6
PB08				eS	Sn	19 29 07.3	+1.0
PB08				IAML		19 29 08.8	
	comp=Z,257nm,0.7s						
PB10	IPOC Station P	3.48	258	⇑iP	Pn	19 28 23.1	+0.4
PB10				i S	Sn	19 29 04.1	-2.4
PB10	IPOC Station P	3.48	258	Pn	Pn	19 28 23.0	+0.3
PB10				Sn	Sn	19 29 03.3	-3.1
PB10	IPOC Station P	3.48	258	eP	Pn	19 28 17.6	-5.1
PB10				eP	Pn	19 28 23.0	+0.3
PB10				eS	Sn	19 29 04.0	-2.4
PB10				eS	S	19 29 05.4	-0.5
PB10				IAML		19 29 09.7	
	comp=Z,571nm,1.4s						
PATCX	Punta Patache	3.67	303	⇑iP	Pn	19 28 25.0	-0.2
PATCX				eS	Sn	19 29 08.6	-2.2
PATCX	Punta Patache	3.67	303		Pn	19 28 24.7	-0.4
PATCX				Sn	Sn	19 29 08.1	-2.7
PATCX	Punta Patache	3.67	303	eP	Pn	19 28 25.3	+0.2
PATCX				eP	Pn	19 28 25.4	+0.3
PATCX				eP	Pn	19 28 25.5	+0.3
PATCX				eS	Sn	19 29 09.4	-1.4
PATCX				IAML		19 29 14.4	
	comp=Z,472nm,0.7s						
PB14	IPOC Station P	3.71	241	Pn	Pn	19 28 25.9	0.0
PB14				Sn	Sn	19 29 09.1	-3.1
PB14	IPOC Station P	3.71	241	eP	Pn	19 28 25.3	-0.6
PB14				eP	Pn	19 28 26.2	+0.3
PB14				eS	Sn	19 29 10.6	-1.5
PB14				IAML		19 29 10.8	
	comp=Z,733nm,1.4s						
HMBC	Humberstone	3.81	311	⇑eP	Pn	19 28 26.3	-0.6
HMBC				eS	Sn	19 29 11.8	-2.2
TA01	Diego Aracena	3.83	305	⇑eP	Pn	19 28 26.4	-0.7
TA01				eS	Sn	19 29 11.8	-2.5
TA01	Diego Aracena	3.83	305		Pn	19 28 26.3	-0.7
TA01				Sn	Sn	19 29 11.1	-3.2
TA02	Huaiquique	3.98	309		Pn	19 28 29.4	+0.5
PB11	IPOC Station P	4.03	319	eP	Pn	19 28 29.2	-0.4
PB11				eS	Sn	19 29 16.9	-2.0
PB11	IPOC Station P	4.03	319	Pn	Pn	19 28 29.5	-0.2
PB11	IPOC Station P	4.03	319	eP	Pn	19 28 29.7	+0.1
PB11				eS	Sn	19 29 17.3	-1.6
PB11				eS	Sn	19 29 17.3	-1.6
PB11				IAML		19 29 21.4	
	comp=Z,187nm,0.4s						
AHML	Horco Molle	4.17	161	eS	Sn	19 29 17.6	-4.2
AC02	Maricunga	4.49	207		Pn	19 28 35.9	+0.3
PB16	IPOC Station P	5.12	330		Pn	19 28 44.6	+0.8
PB12	IPOC Station P	5.32	322	Pn	Pn	19 28 44.2	-1.5
PB12	IPOC Station P	5.32	322	eP	Pn	19 28 44.9	-0.8
PB12				eS	Sn	19 29 44.7	-3.3
AP01	Chacalluta	5.52	323	Pn	Pn	19 28 44.6	-3.6
GO03	Copiap	5.64	212	Pn	Pn	19 28 48.1	-1.7
AC04	Llanos de Chal	6.57	215	Pn	Pn	19 28 59.6	-2.0
LPAZ	La Paz	6.62	349	P	Pn	19 29 04.1	+1.1
	comp=Z,3.5nm,0.3s,baz=162,slow=8.6,SNR=47						
LPAZ				S	Sn	19 30 19.5	+0.2
	comp=Z,1.2nm,0.3s,baz=57,slow=24,SNR=5.0						
LPAZ	La Paz	6.62	349	eP	Pn	19 29 04.2	+1.1
LPAZ	La Paz	6.62	349	Pn	Pn	19 29 04.3	+1.2
LCO	Las Campanas	7.06	209	Pn	Pn	19 29 05.6	-2.6
CO05	La Serena	8.08	208	Pn	Pn	19 29 19.7	-1.5
GO04	Tololo Observa	8.12	205		Pn	19 29 19.1	-2.9
CO03	El Pedregal	8.68	202	Pn	Pn	19 29 26.3	-2.7
SIV	San Ignacio	8.72	40	P	Pn	19 29 27.5	-2.1
	comp=Z,31nm,0.3s,baz=217,slow=12,SNR=311						
ZON	Zonda	8.83	190	Pn	Pn	19 29 30.4	-0.5
CO06	Fray Jorge	8.90	208	Pn	Pn	19 29 28.6	-3.2
CPUP	Villa Florida	9.34	114	P	Pn	19 29 36.5	-1.0
	comp=Z,0.3nm,0.3s,baz=290,slow=11,SNR=6.4						
CPUP	Villa Florida	9.34	114	eP	Pn	19 29 36.7	-0.8
CPUP	Villa Florida	9.34	114	Pn	Pn	19 29 36.0	-1.5
PTLB	Pontes e Lacer	10.35	46	eP	Pn	19 29 49.0	-1.6
PTLB	Pontes e Lacer	10.35	46	Pn	Pn	19 29 48.9	-1.8
VA03	San Esteban	10.42	198		Pn	19 29 49.8	-1.7
AQDB	Aquidauana	10.63	79	eP	Pn	19 29 53.6	-0.6
AQDB	Aquidauana	10.63	79	Pn	Pn	19 29 52.3	-2.0
PEL	Peldehue	10.81	197	Pn	Pn	19 29 55.2	-1.3
MT02	Curacav	11.05	199	Pn	Pn	19 29 56.6	-2.9
MT09	Talagante	11.49	198	Pn	Pn	19 30 03.9	-1.3
MT01	Popeta	11.65	198	Pn	Pn	19 30 04.6	-2.5
VILB	Vilhena	11.69	34	eP	Pn	19 30 08.2	+0.4
VILB	Vilhena	11.69	34	Pn	Pn	19 30 06.6	-1.2
BO01	Tunca	12.10	197		Pn	19 30 11.0	-1.8
PP1B	Ponte de Pedra	12.38	67	eP	Pn	19 30 14.3	-2.2
BO02	Sierra Bellavi	12.40	195	P	Pn	19 30 15.7	-1.0
SALV	Santo Antonio	12.58	59	eP	Pn	19 30 18.0	-1.0
GO05	Huala	12.92	199	Pn	Pn	19 30 22.1	-1.0
ETMB	Extrema	12.96	3	eP	Pn	19 30 23.2	-0.6
ETMB	Extrema	12.96	3	Pn	Pn	19 30 22.6	-1.2
ML02	Panimavida	13.48	196	P	Pn	19 30 30.0	-0.1
PTGB	Pitanga	13.66	101	eP	P	19 30 32.9	-1.7
CPSB	Cacapava Do Su	14.16	125	eP	P	19 30 38.2	-1.8
SAML	Samuel	14.25	15		Pn	19 30 38.4	-1.4
NNA	Nana	14.39	317	P	P	19 30 44.5	+1.8
	comp=Z,2.1nm,0.3s,baz=167,slow=8.9,SNR=7.4						
NNA	Nana	14.39	317		P	19 30 42.9	+0.2
PCMB	Pacaembu	14.49	88	eP	P	19 30 41.7	-2.0
PLTB	Pedras Altas	14.74	130	eP	P	19 30 46.4	0.0
PLTB	Pedras Altas	14.74	130		P	19 30 44.6	-1.8
PDRB	Porto dos Gac	14.76	43	eP	P	19 30 45.1	-1.6
H03N1	Juan Fernandez	14.98	223	P	P	19 30 51.5	+2.7
	baz=104,slow=74,SNR=7.8						
H03N3	Juan Fernandez	15.00	223	P	P	19 30 51.5	+2.5
	baz=285,slow=74,SNR=12						
ITRB	Iturama	15.68	82	eP	P	19 30 56.7	-0.3
CNLB	Canela	15.75	118	eP	P	19 30 56.5	-1.1
ARAG	Araguaiana, MT	15.86	66	eP	Pn	19 30 58.5	-0.9
CLDB	Colider	15.90	43	eP	Pn	19 30 58.8	-1.1
CZSB	Cruzeiro do Su	16.04	339	eP	Pn	19 31 02.7	+1.2
CZSB	Cruzeiro do Su	16.04	339	P	P	19 30 58.4	-2.5
CZSB				IAmb	IAmb	19 31 11.0	
	comp=Z,14nm,0.6s						
TIJ01	Guaruva-PR	16.48	102	eP	Pn	19 31 06.3	-0.5
LC01	Cunco	16.58	194	P	P	19 31 06.7	+0.1
TER01	Tubaro-SC	16.94	113	eP	Pn	19 31 11.3	-0.9
BB19B	Bebedouro	17.09	88	eP	Pn	19 31 12.5	-1.5
RCLB	Rio Claro- Sao	17.84	92	eP	Pn	19 31 20.0	-2.8
SPB	Sao Paulo	17.86	96	eP	Pn	19 31 20.6	-2.4
SPB	Sao Paulo	17.86	96		P	19 31 20.2	-0.6
PET01	Itanhaem-SP	18.00	98	eP	P	19 31 21.8	-0.6
PLCA	Paso Flores	18.12	189	P	P	19 31 24.1	+0.6
	comp=Z,0.4nm,0.3s,baz=8.7,slow=12,SNR=12						
PLCA				PcP	PcP	19 35 48.2	+0.9
	comp=Z,0.2nm,0.3s,baz=26,slow=1.3,SNR=5.3						
PLCA	Paso Flores	18.12	189	eP	P	19 31 24.7	+1.2
PLCA	Paso Flores	18.12	189	P	P	19 31 23.4	0.0
IPMB	Ipameri, GO	18.12	78	eP	Pn	19 31 23.5	-2.7
VAO	Valinhos	18.32	94	eP	P	19 31 25.2	-0.7
SNDB	Serra Nova Dou	18.34	57	eP	P	19 31 25.1	-0.9
LL04	Puerto Octay	18.62	193	P	P	19 31 28.3	-0.5
LL04				IAmb	IAmb	19 31 32.7	
	comp=Z,19nm,0.8s						
TBTG	Tabatinga, AM	18.77	350	eP	P	19 31 31.9	+1.2
TBTG	Tabatinga, AM	18.77	350	P	P	19 31 30.7	0.0
BDFB	Brasilia	19.16	71	P	P	19 31 34.2	-0.8
	comp=Z,1.6nm,0.3s,baz=267,slow=12,SNR=9.3						
BDFB				LR	LR	19 40 14.3	
	comp=Z,51nm,19.5s,baz=217,slow=40						
BDFB	Brasilia	19.16	71	P	P	19 31 33.7	-1.3
BDFB				IAmb	IAmb	19 31 36.8	
	comp=Z,14nm,0.8s						
ATAH	Atahualpa	19.16	323	P	Pn	19 31 38.4	-0.4
	comp=Z,0.6nm,0.3s,baz=182,slow=12,SNR=5.4						
NPGB	Novo Progresso	19.21	37	eP	P	19 31 33.4	-2.0
PARB	Paraibuna	19.54	96	eP	P	19 31 38.1	-0.8
MACA	Manacapuru-AM	20.45	18	eP	P	19 31 47.2	-1.5
MACA	Manacapuru-AM	20.45	18	P	P	19 31 46.7	-2.0
BSCB	Bom Sucesso	20.56	89	eP	P	19 31 49.5	-0.4
PEXB	Peixe	20.64	62	eP	P	19 31 49.2	-1.5
ITTB	Itaituba	21.28	32	eP	P	19 31 55.5	-1.9
VAS01	Vassouras-RJ	21.62	93	eP	P	19 32 00.3	-0.6
DIAM	Diamantina, MG	22.16	83	eP	P	19 32 06.1	-0.2
MC01	Montes Claros	22.39	78	eP	P	19 32 06.5	-1.8
JANB	Januaria	22.66	74	eP	P	19 32 09.0	-1.7
PTGA	Pitinga	22.97	18	P	P	19 32 12.3	-1.1
	comp=Z,3.5nm,0.3s,baz=322,slow=22,SNR=8.8						
SMTB	Santa Maria do	23.12	56	eP	P	19 32 14.1	-0.7
SDBA	SAO DESIDERIO	23.31	67	eP	P	19 32 15.6	-1.0
PRPB	Parauapebas	23.33	47	eP	P	19 32 15.5	-1.2
MALB	Monte Alegre	24.17	32	eP	P	19 32 24.3	0.0
SJMB	Sao Joao De Ma	24.33	85	eP	P	19 32 24.6	-1.2
BSFB	Barra de Sao F	24.61	86	eP	P	19 32 27.4	-1.0
OTAV	Otavalo	25.57	332	eP	P	19 32 38.1	+0.7
FLOC	Florencia	25.74	339	eP	P	19 32 36.0	-2.5
FLOC	Florencia	25.74	339	P	P	19 32 36.6	-2.0
BOAV	Boa Vista	25.83	15	eP	P	19 32 39.5	+0.2
BOAV	Boa Vista	25.83	15	P	P	19 32 38.7	-0.6
GUA01	Guaratinga, BA	26.18	81	eP	P	19 32 41.4	-1.1
MCPB	Macapa, AP	26.57	35	eP	P	19 32 45.8	-0.2
SOTA	Rioblanco	26.58	338	eP	P	19 32 47.5	+0.9
PCON	Cinco Dias	26.69	338	eP	P	19 32 47.5	-0.1
CMC01	Camacan, BA	26.84	79	eP	P	19 32 48.0	-0.4
POPC	Popayan, Colom	26.98	338	eP	P	19 32 52.4	+2.5
GDU01	Guandu, BA	27.40	75	eP	P	19 32 51.6	-1.7
ORTC	Ortega, Tolima	27.82	342	eP	P	19 32 56.1	-1.0
YOTC	Yotoco, Valle	28.22	340	eP	P	19 32 59.0	-1.8
RUSC	La Rusia	29.20	347	eP	P	19 33 09.8	+0.1
NORC	Norcasia	29.30	344	eP	P	19 33 07.6	-2.5
EFI	East Falkland	29.58	169	P	P	19 33 11.8	-0.4
HELC	Santa Helena	30.07	343	eP	P	19 33 14.3	-3.1
PTBC	PUERTO BERRIO,	30.13	345	eP	P	19 33 14.8	-2.7
ZARC	Zaragoza, Cauc	31.14	345	eP	P	19 33 23.9	-2.5
ZARC	Zaragoza, Cauc	31.14	345	P	P	19 33 23.6	-2.8
BAUV	El Baul	31.60	358	P	P	19 33 28.6	-1.8
BAUV				IAmb	IAmb	19 33 36.7	
	comp=Z,12nm,0.7s						
SMLC	San Martn de	32.23	347	eP	P	19 33 31.5	-4.3
BIRV	Birongo	33.11	1	P	P	19 33 43.1	-0.4
BIRV				IAmb	IAmb	19 33 47.2	
	comp=Z,33nm,1.3s						
SJCC	San Jacinto, C	33.54	345	eP	P	19 33 42.1	-5.2
SJCC	San Jacinto, C	33.54	345	P	P	19 33 44.6	-2.6
BCIP	Isla Barro Col	34.26	337	P	P	19 33 51.2	-2.1
GRGR	Grenville	35.12	9	P	P	19 33 59.4	-1.4
RIOS	Rincon, Osa	35.34	331	P	P	19 34 02.6	0.0
SRBA	San Rafael, Bu	35.74	331	P	P	19 34 07.6	+1.4
SRBA				IAmb	IAmb	19 34 09.6	
	comp=Z,13nm,0.7s						
PEZE	Perez Zeledon,	36.01	331	P	P	19 34 10.0	+1.5
PEZE				IAmb	IAmb	19 34 12.0	
	comp=Z,13nm,0.7s						
RIMA	Rio Macho	36.44	331	P	P	19 34 13.0	+0.8
RIMA				IAmb	IAmb	19 34 15.6	
	comp=Z,8.8nm,0.7s						
CAO2	Cobano, Puntar	36.94	329	P	P	19 34 15.4	-0.8
JTS	Las Juntas de	37.40	330	P	P	19 34 21.8	+1.7
COVE	Coope Vega, Sa	37.52	331	P	P	19 34 22.6	+1.5
COVE				IAmb	IAmb	19 34 25.0	
	comp=Z,33nm,1.0s						
ORTG	Ortega, Santa	37.70	329	P	P	19 34 23.9	+1.2
ORTG				IAmb	IAmb	19 34 26.3	
	comp=Z,13nm,0.9s						
CELP	Cerrillos	40.66	0	P	P	19 34 45.3	-1.7
CELP				IAmb	IAmb	19 35 14.8	
	comp=Z,52nm,1.5s						
SMAI	San Martin Ant	45.30	180	P	P	19 35 24.3	+0.8
SOR	Soroa	48.00	340	P	P	19 35 45.5	+0.4
SOR				IAmb	IAmb	19 35 46.4	
	comp=Z,19nm,0.9s						
553A	Crawfordville	55.36	341	P	P	19 36 40.1	+0.8
NHSC	New Hope	57.06	347	P	P	19 36 51.7	+0.4
	baz=165						
BELA	Belgrano 2	57.17	172	P	P	19 36 51.8	+0.2
346A	Big Creek Wild	58.11	337	P	P	19 36 58.1	-0.5
GOGA	Godfrey	58.13	344	P	P	19 36 57.7	-1.1
GOGA				IAmb	IAmb	19 36 59.2	
	comp=Z,24nm,1.3s						
GOGA	Godfrey	58.13	344	P	P	19 36 58.9	+0.1
	baz=162						
VNA3	Neumayer Olymp	58.20	161	P	P	19 36 59.6	+0.7
VNA1	Neumayer--Stat	58.39	160	P	P	19 37 01.2	+1.1
BIRD	Birdtown, Kers	58.61	347	P	P	19 37 01.8	-0.2
BIRD				IAmb	IAmb	19 37 18.9	
	comp=Z,30nm,1.3s						
VNA2	Neumayer--Watz	58.76	161	P	P	19 37 03.4	+0.7
	baz=279,slow=8.3						
W57A	Gilead	59.00	347	P	P	19 37 04.4	-0.4
KMSC	Kings Mountain	59.27	346	P	P	19 37 06.9	+0.2
	baz=164						
Y49A	Blount Mountai	59.38	341	P	P	19 37 07.0	-0.4
BG3	Lake Jocassee	59.50	345	P	P	19 37 07.9	-0.3
BG3				IAmb	IAmb	19 37 09.3	
	comp=Z,11nm,0.9s						
X51A	Calhoun	59.60	343	P	P	19 37 08.6	-0.3
833A	Chaparral WMA,	59.77	327	P	P	19 37 10.3	+0.2
	baz=145						
FPAL	Fort Paine	59.78	342	P	P	19 37 09.6	-0.6
FPAL				IAmb	IAmb	19 37 10.4	
	comp=Z,10nm,0.7s						
V55A	Taylorsville	59.93	347	P	P	19 37 11.8	+0.6
V53A	Saluda	60.12	345	P	P	19 37 12.6	+0.2
V53A				IAmb	IAmb	19 37 13.2	
	comp=Z,9.5nm,0.7s						
X48A	Hartselle	60.12	341	P	P	19 37 12.1	-0.3
W50A	Signal Mountai	60.32	343	P	P	19 37 13.6	-0.2
W50A				IAmb	IAmb	19 37 14.4	
	comp=Z,15nm,0.8s						
T59A	Double "B" Far	60.34	350	P	P	19 37 13.6	-0.2
T59A				IAmb	IAmb	19 37 44.4	
	comp=Z,44nm,1.6s						
CPCT	Cooper Cave	60.34	343	P	P	19 37 13.4	-0.5
CPCT				IAmb	IAmb	19 37 43.0	
	comp=Z,25nm,1.6s						
TKL	Tuckaleechee C	60.34	344	P	P	19 37 13.6	-0.3
TKL				IAmb	IAmb	19 37 14.3	
	comp=Z,14nm,0.8s						
SNAA	Sanae	60.40	161	P	P	19 37 14.5	+0.6
SNAA	Sanae	60.40	161	P	P	19 37 14.5	+0.6
SNAA				IAmb	IAmb	19 37 15.4	
	comp=Z,7.9nm,0.7s						
V52A	Sevierville	60.47	344	P	P	19 37 14.6	-0.2
V52A				IAmb	IAmb	19 37 15.3	
	comp=Z,16nm,0.9s						
SWET	Sewanee	60.51	342	P	P	19 37 14.4	-0.6
U54A	Nelsons Funny	60.71	346	P	P	19 37 16.7	+0.3
BLA	Blacksburg	61.08	348	P	P	19 37 19.5	+0.6
	baz=166						
TZTN	Tazewell	61.13	345	P	P	19 37 18.7	-0.5
TZTN				IAmb	IAmb	19 37 32.6	
	comp=Z,24nm,1.3s						
TZTN	Tazewell	61.13	345	P	P	19 37 18.9	-0.2
	baz=162						
V48A	Smith Brothers	61.25	342	P	P	19 37 19.8	-0.2
V48A				IAmb	IAmb	19 37 20.5	
	comp=Z,19nm,0.7s						
R58B	Mineral	61.36	350	P	P	19 37 20.9	+0.3
R58B				IAmb	IAmb	19 37 21.0	
	comp=Z,8.2nm,1.0s						
CLTN	Cedars of Leba	61.44	342	P	P	19 37 21.4	+0.2
CLTN				IAmb	IAmb	19 37 21.6	
	comp=Z,11nm,0.6s						
U49A	Red Boiling Sp	61.68	343	P	P	19 37 22.2	-0.6
U49A				IAmb	IAmb	19 37 22.5	
	comp=Z,8.7nm,0.6s						
JCT	Junction City	61.74	328	P	P	19 37 23.1	-0.3
JCT	Junction City	61.74	328	P	P	19 37 23.6	+0.2
	baz=145						
S54A	Dingess, Beckl	61.83	347	P	P	19 37 24.0	+0.1
WHTX	Lake Whitney,	61.88	331	P	P	19 37 24.1	-0.3
WHTX				IAmb	IAmb	19 37 25.6	
	comp=Z,11nm,0.7s						
WHTX	Lake Whitney,	61.88	331	P	P	19 37 24.7	+0.4
	baz=148						
WVT	Waverly	61.91	341	P	P	19 37 23.5	-0.9
WVT	Waverly	61.91	341	P	P	19 37 23.4	-1.0
	baz=158						
R55A	Marlinton	62.06	348	P	P	19 37 26.2	+0.7
MIAR	Mount Ida	62.46	335	P	P	19 37 27.9	-0.1
MIAR				IAmb	IAmb	19 37 28.6	
	comp=Z,7.8nm,0.6s						
MIAR	Mount Ida	62.46	335	P	P	19 37 28.1	0.0
	baz=152						
T47A	Sharon Grove	62.49	342	IAmb	IAmb	19 37 28.9	
	comp=Z,17nm,0.8s						
TX31	Lajitas Ar. Si	62.82	324	P	P	19 37 30.7	0.0
TX31				IAmb	IAmb	19 37 31.7	
	comp=Z,5.3nm,0.7s						
TXAR	Lajitas Array	62.82	324	P	P	19 37 31.2	+0.5
	comp=Z,1.8nm,0.7s,baz=149,slow=8.6,SNR=22						
W39A	Magazine	63.12	335	P	P	19 37 32.6	+0.2
W39A				IAmb	IAmb	19 37 33.9	
	comp=Z,12nm,0.7s						
W39A	Magazine	63.12	335	P	P	19 37 32.7	+0.4
	baz=152,SNR=5.5						
MCWV	Mont Chateau	63.34	349	P	P	19 37 34.7	+0.9
	baz=167						
ABTX	Abilene, Hawle	63.42	329	P	P	19 37 34.7	+0.2
	baz=146						
WCI	Wyandotte Cave	63.43	343	P	P	19 37 33.2	-1.2
	baz=160						
LOOK	Love County	63.46	332	IAmb	IAmb	19 37 36.0	
	comp=Z,16nm,0.8s						
P53A	Whipple	63.47	347	P	P	19 37 34.4	-0.2
O56A	Blue Knob Stat	63.72	350	P	P	19 37 36.2	-0.2
	baz=168						
P52A	Corning	63.76	347	P	P	19 37 36.0	-0.6
	baz=164						
U40A	Yellville	63.80	337	P	P	19 37 36.9	+0.1
U40A				IAmb	IAmb	19 37 37.4	
	comp=Z,12nm,1.1s						
U40A	Yellville	63.80	337	P	P	19 37 36.4	-0.4
	baz=153						
PAL	Palisades	63.85	354	P	P	19 37 36.8	-0.2
	baz=173						
HHAR	Hobbs	64.13	336	IAmb	IAmb	19 37 39.8	
	comp=Z,9.9nm,0.7s						
O53A	New Philadelph	64.17	348	P	P	19 37 39.0	-0.2
	baz=165						
P49A	Miami Univ. Ec	64.25	345	P	P	19 37 39.0	-0.8
P49A	Miami Univ. Ec	64.25	345	P	P	19 37 38.7	-1.0
	baz=162						
X34A	Smith Ranch, M	64.26	332	P	P	19 37 39.9	0.0
X34A				IAmb	IAmb	19 37 41.2	
	comp=Z,16nm,0.7s						
FVM	French Village	64.43	339	P	P	19 37 40.4	-0.5
U38A	Gravette	64.44	336	IAmb	IAmb	19 37 42.5	
	comp=Z,6.1nm,0.6s						
ACSO	Alum Creek Sta	64.52	346	P	P	19 37 41.0	-0.5
	baz=164						
TUL1	Leonard	64.53	334	P	P	19 37 41.1	-0.5
	baz=150						
N54A	Moraine State	64.64	349	P	P	19 37 42.1	-0.1
	baz=167						
CCM	Cathedral Cave	64.76	339	P	P	19 37 42.4	-0.7
CCM	Cathedral Cave	64.76	339	P	P	19 37 42.7	-0.4
	baz=155						
M54A	Oil Creek Stat	65.11	349	P	P	19 37 45.3	0.0
	baz=167						
OK033	Mehan	65.11	333	P	P	19 37 45.0	-0.3
S39A	Bolivar	65.15	337	P	P	19 37 45.4	-0.2
L61B	Northampton	65.18	355	P	P	19 37 46.4	+0.7
	baz=174						
M53A	WI Miller and	65.22	349	P	P	19 37 46.5	+0.5
	baz=166						
BINY	Binghamton	65.26	353	P	P	19 37 46.4	+0.2
	baz=171						
R40A	Maddies Statio	65.32	338	IAmb	IAmb	19 37 47.0	
	comp=Z,12nm,0.6s						
MNTX	Cornudas Mount	65.58	324	P	P	19 37 48.2	-0.3
	baz=141						
SFIN	Lafayette	65.66	343	P	P	19 37 47.8	-0.9
	baz=160						
ERPA	Erie	65.76	349	P	P	19 37 49.1	-0.3

	baz=167						
MSTX	Muleshoe	66.03	328	P	P	19 37 51.8	+0.4
	baz=144						
AMTX	Amarillo	66.24	329	P	P	19 37 52.9	+0.1
	baz=145						
J59A	Piesco	66.35	354	P	P	19 37 53.8	+0.7
LBNH	Lisbon	66.91	356	P	P	19 37 57.9	+1.3
	baz=175						
LIC	Lamto	66.95	72	ePKP2	P	19 37 57.6	+0.1
	comp=Z,22nm,1.2s						
TIC	Toumodi	67.15	72	ePKP2	P	19 37 59.3	+0.5
KIC	Kosan Boka	67.26	72	ePKP2	P	19 37 58.5	-1.0
	comp=Z,4.9nm,0.6s						
DBIC	Dimbokro	67.31	72	P	P	19 37 58.0	-1.7
	comp=Z,3.1nm,0.7s,baz=215,slow=3.4,SNR=6.4						
QSPA	South Pole Qui	67.36	180	P	P	19 38 00.3	+0.8
QSPA				IAmb	IAmb	19 38 01.1	
	comp=Z,12nm,0.6s						
LONY	Lake Ozonia	67.50	354	P	P	19 38 00.7	+0.4
	baz=172						
121A	Cookes Peak, D	67.53	323	IAmb	IAmb	19 38 03.9	
	comp=Z,9.0nm,0.9s						
121A	Cookes Peak, D	67.53	323	P	P	19 38 02.8	+1.8
	baz=139						
KSU1	Kansas State U	67.62	335	P	P	19 38 01.1	-0.1
	baz=150						
CBKS	Cedar Bluff	68.63	333	P	P	19 38 08.5	+0.9
	baz=148						
ANMO	Albuquerque	68.66	326	P	P	19 38 08.6	+0.5
ANMO				IAmb	IAmb	19 38 10.4	
	comp=Z,9.8nm,0.9s						
ANMO	Albuquerque	68.66	326	P	P	19 38 09.5	+1.5
	baz=141						
SCIA	State Center	68.89	339	P	P	19 38 08.1	-0.9
	baz=154						
JFWS	Jewell Farm	68.89	342	P	P	19 38 08.5	-0.5
	baz=157						
TUC	Tucson	69.07	321	P	P	19 38 11.1	+0.7
TUC	Tucson	69.07	321	P	P	19 38 11.9	+1.5
	baz=137						
T25A	Trinidad	69.36	329	IAmb	IAmb	19 38 14.6	
	comp=Z,7.4nm,0.8s						
T25A	Trinidad	69.36	329	P	P	19 38 13.6	+1.2
	baz=143,SNR=6.8						
214A	Organ Pipe Nat	70.01	319	P	P	19 38 17.2	+1.1
	baz=135						
BGNE	Belgrade	70.20	335	P	P	19 38 17.1	0.0
BGNE	Belgrade	70.20	335	P	P	19 38 17.2	0.0
	baz=149						
SDCO	Great Sand Dun	70.37	328	IAmb	IAmb	19 38 20.9	
	comp=Z,7.5nm,0.8s						
SDCO	Great Sand Dun	70.37	328	P	P	19 38 19.6	+1.0
	baz=142,SNR=15						
W18A	Petrified Fore	70.54	324	IAmb	IAmb	19 38 22.1	
	comp=Z,8.9nm,1.0s						
W18A	Petrified Fore	70.54	324	P	P	19 38 20.2	+0.7
	baz=138						
I37A	Lemond, Waseca	70.84	340	P	P	19 38 20.7	-0.2
I37A				IAmb	IAmb	19 38 21.4	
	comp=Z,19nm,0.8s						
X16A	Lo Mia Camp, P	70.97	322	P	P	19 38 22.2	+0.1
S22A	4UR Ranch, Cre	71.03	327	P	P	19 38 23.7	+1.2
	baz=141,SNR=5.0						
Q24A	Divide	71.17	329	P	P	19 38 24.5	+1.2
	baz=143,SNR=6.5						
OGNE	Ogallala	71.38	333	P	P	19 38 24.9	+0.6
	baz=146						
MVCO	Mesa Verde	71.46	326	IAmb	IAmb	19 38 27.0	
	comp=Z,7.0nm,0.8s						
MVCO	Mesa Verde	71.46	326	P	P	19 38 26.3	+1.3
	baz=140,SNR=6.7						
ECSD	EROS Data Cent	71.66	338	IAmb	IAmb	19 38 26.5	
	comp=Z,22nm,1.4s						
ECSD	EROS Data Cent	71.66	338	P	P	19 38 25.6	-0.2
	baz=151						
WUAZ	Wupatki	71.74	323	IAmb	IAmb	19 38 29.6	
	comp=Z,11nm,0.9s						
WUAZ	Wupatki	71.74	323	P	P	19 38 28.1	+1.5
	baz=137,SNR=5.9						
GLA	Glamis	71.99	319	P	P	19 38 29.2	+1.1
	baz=134						
ISCO	Idaho Springs	72.05	330	P	P	19 38 29.4	+0.8
	baz=143						
SWSC	Sam W. Stewart	72.51	318	P	P	19 38 32.6	+1.5
	baz=133						
BC3	Big Chuckawall	72.78	319	P	P	19 38 34.5	+1.7
	baz=134						
MONP2	Monument Peak	72.86	318	P	P	19 38 35.1	+1.7
	baz=133						
BAR	Barrett	72.87	318	P	P	19 38 33.3	+0.1
BAR				IAmb	IAmb	19 38 35.7	
	comp=Z,15nm,1.3s						
U15A	North Rim	72.91	323	P	P	19 38 35.0	+1.3
IRM	Iron Mountain	72.95	320	P	P	19 38 35.5	+1.9
	baz=134						
SUSD	Miller	73.11	337	P	P	19 38 34.9	+0.5
	baz=149						
BELC	Belle Mtn. Jos	73.35	319	P	P	19 38 37.5	+1.4
	baz=133						
TPFO	Pinon Flats	73.36	318	P	P	19 38 36.9	+0.7
	baz=133						
PFO	Pinyon Flats O	73.37	318	P	P	19 38 38.1	+1.8
	baz=133						
O20A	White River Ci	73.57	328	P	P	19 38 37.8	+0.4
O20A				IAmb	IAmb	19 38 39.9	
	comp=Z,13nm,0.8s						
O20A	White River Ci	73.57	328	P	P	19 38 38.8	+1.4
	baz=141,SNR=5.7						
KNB	Kanab	73.63	323	P	P	19 38 38.0	+0.2
KNB				IAmb	IAmb	19 38 41.1	
	comp=Z,18nm,0.9s						
GMRC	Granite Mounta	73.69	320	P	P	19 38 40.0	+1.9
	baz=134,SNR=7.5						
SRU	San Rafael Swe	73.94	326	IAmb	IAmb	19 38 41.8	
	comp=Z,13nm,0.7s						
HEC	Hector,Ludlow	74.12	319	P	P	19 38 42.1	+1.6
	baz=133						
Q16A	Castle Valley	74.13	325	IAmb	IAmb	19 38 44.1	
	comp=Z,22nm,1.6s						
P18A	Preston Nutter	74.18	327	P	P	19 38 42.7	+1.6
P18A				IAmb	IAmb	19 38 43.7	
	comp=Z,13nm,0.6s						
TUQ	Turquoise Moun	74.29	320	P	P	19 38 43.2	+1.7
	baz=134						
CCUT	Cedar City	74.31	323	IAmb	IAmb	19 38 45.2	
	comp=Z,11nm,0.8s						
P17A	Butcher Ranch,	74.32	326	IAmb	IAmb	19 38 44.2	
	comp=Z,9.5nm,1.0s						
TMUT	Trail Mountain	74.43	326	P	P	19 38 43.8	+1.3
BFSC	Mount Baldy Ra	74.52	318	P	P	19 38 44.8	+1.8
	baz=132						
RDMU	Red Mountain	74.56	328	IAmb	IAmb	19 38 45.2	
	comp=Z,8.7nm,0.7s						
SYO	Syowa Base	74.58	159	⇓eP	P	19 38 43.2	+0.6
GSC	Goldstone, Bar	74.72	320	P	P	19 38 45.7	+1.7
	baz=133						
RSSD	Black Hills	74.83	333	P	P	19 38 45.4	+0.8
RSSD	Black Hills	74.83	333	P	P	19 38 45.6	+0.9
	baz=145						
EDW2	Edwards Air Fo	75.16	319	P	P	19 38 47.7	+1.2
	baz=132						
QSM	Queen of Sheba	75.21	320	P	P	19 38 47.6	+0.9
LRMC	Laurel Mtn Rad	75.37	319	P	P	19 38 49.5	+1.7
	baz=132						
AGMN	Agassiz Nation	75.44	340	P	P	19 38 47.5	-0.2
	baz=152						
TPNV	Topopah Spring	75.52	321	P	P	19 38 50.4	+1.7
TPNV	Topopah Spring	75.52	321	P	P	19 38 50.6	+2.0
	baz=134,SNR=7.6						
FURC	Furnace Creek,	75.55	320	P	P	19 38 50.8	+2.2
	baz=133						
E28A	Huff	75.57	337	IAmb	IAmb	19 38 50.2	
	comp=Z,20nm,0.8s						
MPMC	Manual Prospec	75.64	320	P	P	19 38 50.8	+1.4
	baz=133						
SPR3	Spring Creek 3	75.88	324	P	P	19 38 52.1	+1.3
DUG	Dugway, Tooele	75.93	325	P	P	19 38 52.4	+1.6
	baz=137						
ISA	Isabella, Lake	75.97	319	P	P	19 38 52.6	+1.5
ISA	Isabella, Lake	75.97	319	P	P	19 38 52.7	+1.6
	baz=132,SNR=5.1						
TORD	Torodi Ar. Bea	76.02	69	P	P	19 38 50.4	-1.3
	comp=Z,4.4nm,0.5s,baz=256,slow=4.9,SNR=51						
TORD	Torodi Ar. Bea	76.02	69	P	P	19 38 50.4	-1.3
R11A	Troy Canyon, C	76.12	322	IAmb	IAmb	19 38 55.1	
	comp=Z,15nm,1.5s						
R11A	Troy Canyon, C	76.12	322	P	P	19 38 53.9	+1.9
	baz=134,SNR=8.6						
BW06	Boulder Array	76.22	329	P	P	19 38 53.4	+0.8
	baz=140						
PD31	Pinedale Array	76.22	329	P	P	19 38 53.1	+0.5
PDAR	Pinedale Array	76.22	329	P	P	19 38 53.1	+0.5
	comp=Z,2.8nm,0.7s,baz=129,slow=8.0,SNR=25						
PDAR	Pinedale Array	76.22	329	P	P	19 38 52.8	+0.2
CWC	Cottonwood Cre	76.25	320	P	P	19 38 54.5	+1.7
	baz=132						
MDND	Maddock	76.27	338	P	P	19 38 53.3	+0.9
	baz=149						
PKM	Mcpherson Peak	76.29	318	P	P	19 38 54.9	+1.9
	baz=131						
SPUT	South Promonto	76.56	326	P	P	19 38 55.2	+0.9
SPUT				IAmb	IAmb	19 38 56.2	
	comp=Z,8.3nm,0.7s						
BGU	Big Grassy Mou	76.57	326	P	P	19 38 55.4	+1.0
AHID	Auburn Hatcher	76.96	328	IAmb	IAmb	19 38 58.7	
	comp=Z,16nm,0.8s						
ULM	Lac du Bonnet	77.17	341	P	P	19 38 57.3	0.0
	comp=Z,5.5nm,0.5s,baz=151,slow=6.5,SNR=6.9						
REDW	Red Top Meadow	77.29	329	P	P	19 38 59.5	+0.9
SCHQ	Schefferville	77.35	0	P	P	19 38 58.2	0.0
	comp=Z,4.7nm,0.7s,baz=175,slow=3.1,SNR=8.4						
LOHW	Long Hollow	77.36	329	P	P	19 38 59.3	+0.4
LOHW				IAmb	IAmb	19 39 01.1	
	comp=Z,6.8nm,0.7s						
NVAR	Mina Array Bea	77.72	321	P	P	19 39 02.6	+1.6
	comp=Z,1.7nm,0.7s,baz=156,slow=5.4,SNR=14						
FLWY	Flagg Ranch	77.77	329	IAmb	IAmb	19 39 03.8	
	comp=Z,21nm,1.2s						
LAO	LASA Array	77.82	333	IAmb	IAmb	19 39 03.0	
	comp=Z,12nm,1.0s						
LAO	LASA Array	77.82	333	P	P	19 39 02.0	+0.8
	baz=143						
RLMT	Red Lodge	77.90	331	P	P	19 39 03.1	+1.3
	baz=140						
H17A	Grant Village	77.94	330	P	P	19 39 03.8	+1.7
	baz=139						
KVN	Kaiserville	78.03	322	P	P	19 39 03.8	+1.2
KVN				IAmb	IAmb	19 39 04.9	
	comp=Z,8.4nm,0.8s						
YMR	Madison River	78.33	330	P	P	19 39 06.1	+1.9
YMR				IAmb	IAmb	19 39 07.2	
	comp=Z,12nm,0.8s						
YHH	Holmes Hill	78.37	330	IAmb	IAmb	19 39 07.4	
	comp=Z,12nm,0.7s						
DGMT	Dagmar	78.46	336	IAmb	IAmb	19 39 06.7	
	comp=Z,18nm,0.8s						
DGMT	Dagmar	78.46	336	P	P	19 39 05.9	+1.4
	baz=145						
GCMT	Greycliff	78.59	331	P	P	19 39 06.2	+0.7
HLID	Hailey	79.19	327	P	P	19 39 10.7	+1.8
HLID				IAmb	IAmb	19 39 11.8	
	comp=Z,12nm,0.8s						
HLID	Hailey	79.19	327	P	P	19 39 10.8	+1.9
	baz=136						
PAHR	Pah Rah Range	79.20	321	IAmb	IAmb	19 39 11.8	
	comp=Z,15nm,0.9s						
BOZ	Bozeman (W)	79.34	330	P	P	19 39 10.7	+1.2
	baz=139						
MCMT	McKenzie Canyo	79.34	329	P	P	19 39 10.5	+0.8
DLMT	Dillon	79.62	329	IAmb	IAmb	19 39 13.7	
	comp=Z,20nm,1.4s						
LRM	Limekiln Ridge	79.89	330	P	P	19 39 13.9	+1.2
EGMT	Eagleton	80.35	332	P	P	19 39 15.5	+0.6
	baz=140						
O03E	Paynes Creek	80.99	321	P	P	19 39 19.4	+1.0
	baz=130						
PLID	Pearl Lake	81.08	327	P	P	19 39 19.5	+0.6
PLID				IAmb	IAmb	19 39 21.1	
	comp=Z,15nm,0.8s						
BOSA	Boshof	81.14	117	P	P	19 39 19.2	-0.5
	comp=Z,3.1nm,0.6s,baz=270,slow=3.6,SNR=15						
J08A	Circle Bar Ran	81.16	325	P	P	19 39 20.3	+1.1
J08A				IAmb	IAmb	19 39 22.5	
	comp=Z,11nm,1.0s						
M04C	Macdoel	81.97	322	P	P	19 39 24.6	+1.0
	baz=130						
K05A	Summer Lake	82.05	323	P	P	19 39 25.8	+1.8
K05A				IAmb	IAmb	19 39 26.7	
	comp=Z,20nm,0.9s						
JTMT	Jette	82.16	330	IAmb	IAmb	19 39 26.4	
	comp=Z,7.3nm,0.8s						
F10A	Beach Ranch, E	82.31	327	IAmb	IAmb	19 39 28.1	
	comp=Z,9.2nm,0.8s						
MAW	Mawson	82.50	163	P	P	19 39 26.7	+0.9
	comp=Z,4.6nm,0.7s,baz=219,slow=3.6,SNR=4.9						
J05D	Fort Rock, OR	82.61	323	P	P	19 39 28.0	+1.2
	baz=131						
J04D	Umpqua Nationa	83.06	323	P	P	19 39 30.5	+1.2
	baz=130						
L02E	Cave Junction	83.22	321	P	P	19 39 31.1	+1.2
	baz=129						
I05D	Terrebonne, OR	83.35	324	P	P	19 39 32.0	+1.4
	baz=131						
C09A	Chrisman Ranch	84.10	328	IAmb	IAmb	19 39 36.0	
	comp=Z,15nm,0.7s						
ESDC	Sonseca Array	85.46	44	P	P	19 39 41.7	+0.5
	comp=Z,1.6nm,0.8s,baz=248,slow=4.9,SNR=10.0						
ESDC	Sonseca Array	85.46	44	P	P	19 39 41.0	-0.3
KEST	Kesra	92.59	52	LR	LR	20 24 39.4	
	comp=Z,33nm,18.1s,baz=212,slow=37						
YKA	Yellowknife Ar	93.08	340	P	P	19 40 16.7	+0.2
	comp=Z,3.0nm,0.6s,baz=133,slow=4.5,SNR=47						
ARCES	ARCESS Array B	112.00	22	PKKPbc	PKKPbc	19 56 29.1	-2.4
	comp=Z,6.2nm,1.0s,baz=94,slow=2.7,SNR=4.5						
STKA	Stephens Creek	119.17	208	PKP	PKPdf	19 45 51.8	+0.2
	comp=Z,1.4nm,0.8s,baz=303,slow=14,SNR=3.6						
KBZ	Khabaz	119.46	52	PKP	PKPdf	19 45 51.8	+0.3
	comp=Z,1.7nm,0.9s,baz=242,slow=3.7,SNR=5.2						
BELG	Belogornoye	122.62	41	PKP	PKPdf	19 45 57.4	+0.1
	comp=Z,6.2nm,0.8s,baz=300,slow=1.4,SNR=6.4						
ARU	Arti	128.16	35	PKP	PKiKP	19 46 08.8	+0.3
	comp=Z,1.3nm,0.4s,baz=216,slow=3.4,SNR=7.4						
AKTO	Aktyubinsk	129.34	43	PKP	PKiKP	19 46 11.1	0.0
	comp=Z,0.7nm,0.4s,baz=230,slow=1.9,SNR=5.0						
ASAR	Alice Springs	129.57	205	PKP	PKPdf	19 46 11.6	-0.1
	comp=Z,3.0nm,0.7s,baz=130,slow=1.7,SNR=33						
WRA	Warramunga Arr	132.72	208	PKP	PKPdf	19 46 17.9	+0.2
	comp=Z,1.8nm,0.4s,baz=163,slow=2.2,SNR=18						
BVAR	Borovoye Array	135.78	36	PKP	PKPdf	19 46 23.4	+1.0
	comp=Z,0.9nm,0.5s,baz=254,slow=10.0,SNR=7.2						
KURK	Kurchatov	141.35	35		PKPdf	19 46 33.4	+0.8
KURBB	Kurchatov Arra	141.36	35	PKP	PKPdf	19 46 33.4	+0.8
	comp=Z,1.8nm,0.7s,baz=300,slow=2.4,SNR=14						
ZALV	Zalesovo Beam	142.30	27	PKhKP	PKPpre	19 46 30.2	
	comp=Z,3.7nm,0.6s,baz=312,slow=3.7,SNR=11						
ZALV				PKP	PKPdf	19 46 34.9	+0.7
	comp=Z,5.6nm,0.6s,baz=295,slow=2.8,SNR=14						
AAK	Ala-Archa	142.38	49	PKP	PKPdf	19 46 34.3	-0.6
	comp=Z,2.8nm,0.7s,baz=290,slow=1.8,SNR=8.3						
AAK	Ala-Archa	142.38	49		PKPdf	19 46 36.7	+1.7
KSH	Kashi	144.40	53	PKP	PKPab	19 46 37.5	+0.1
MKAR	Makanchi Array	145.54	39	PKPbc	PKPdf	19 46 40.5	+0.4
	comp=Z,8.9nm,0.6s,baz=311,slow=3.0,SNR=66						
HYB	Hyderabad	147.12	93	i PKP	PKPbc	19 46 46.0	-0.1
TLY	Talaya	150.28	12	PKPbc	PKiKP	19 46 54.2	+0.3
	comp=Z,4.7nm,0.7s,baz=234,slow=14,SNR=3.3						
MAT	Matsushiro	154.40	308	ePKP	PKPbc	19 47 02.8	0.0
SONM	Songino Array	154.47	11	PKP	PKPdf	19 46 55.1	+0.9
	comp=Z,1.3nm,0.8s,baz=318,slow=1.0,SNR=8.0						
SONM				PKPbc	PKPbc	19 47 03.1	+0.4
	comp=Z,1.7nm,0.7s,baz=321,slow=1.3,SNR=9.4						
SONM				PKPab	PKPab	19 47 18.6	+0.6
	comp=Z,2.7nm,0.6s,baz=323,slow=4.5,SNR=14						
CMAR	Chiang Mai Arr	166.01	106	PKP	PKPdf	19 47 07.9	+0.3
	comp=Z,0.4nm,0.3s,baz=237,slow=1.7,SNR=4.3						
CMAR				PKPab	PKPab	19 48 08.7	-0.4
	comp=Z,1.5nm,0.6s,baz=251,slow=6.0,SNR=14						

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*NNC **18** 19:36:57.6±2.5, 36.°93N×70.°97E, h121^{km}±44^{km}, mb3.3, mpv4.0, Error ellipse: s-maj=19.3km s-min=14.2km az=14.0*

ISC 18 19:36:56.0±3.4**, 36.°8N**±0.°2×**70.°9E**±0.°1**, h88**^{km}**, n10,** σ**1.^{s}04**/15**, 7C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.72	22	P	Pn	19 38 18.7	0.0
	SNR=24						
UCH	Uchtor	6.07	26	P	Pn	19 38 24.7	+1.1
	SNR=7.5						
EKS2	Erkin-Say	6.23	20	P	Pn	19 38 25.8	+0.4
	SNR=19						
KK02	Karatay Array	6.27	358	⇑P	Pn	19 38 26.2	+0.3
	11nm,0.5s,baz=180,slow=13						
KK02				⇓S	Sn	19 39 36.7	+0.7
	6.0nm,0.6s,baz=177,slow=24						
AAK	Ala-Archa	6.43	25	⇑P	Pn	19 38 27.9	-0.3
	3.0nm,0.5s						
AAK				⇓S	Sn	19 39 39.3	-0.8
	8.1nm,0.7s						
USP	Ospenovka	7.00	22	P	Pn	19 38 35.9	+0.1
	SNR=6.7						
TKM2	Tokmak 2	7.08	29	P	Pn	19 38 39.5	+2.4
	SNR=7.2						
TKM2	Tokmak 2	7.08	29	⇓P	Pn	19 38 38.0	+0.9
	4.6nm,0.5s						
TKM2				⇑S	Sn	19 39 54.8	-1.2
	3.1nm,0.8s						
AB31	Akbulak array	14.74	331	⇑P	Pn	19 40 18.9	-0.9
	0.7nm,0.4s,baz=67,slow=42,SNR=34						
AB31				⇑S	Sn	19 43 02.8	+0.7
	0.9nm,0.6s,baz=157,slow=24,SNR=2.9						
AKTO	Aktyubinsk	16.44	330	⇑P	Pn	19 40 40.5	-0.6
	3.9nm,0.9s						
AKTO				⇑S	Sn	19 43 43.6	+0.5
	0.7nm,0.6s						

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*BJI **18** 19:59:14.5±0.0, 55.°27N×163.°34E, h42^{km}, mB4.9/4, mb4.4/10*

*IDC **18** 19:59:15.1±0.6, 55.°55N×162.°52E, h0^{km}, mb4.1/21, mb1 4.3/21, mb1mx4.2/33, mbtmp4.1/21, MS3.4/8, Ms1 3.4/8, ms1mx3.1/44, Error ellipse: s-maj=20.3km s-min=13.4km az=163.0*

*KRSC **18** 19:59:18.1±0.9, 55.°40N×163.°06E, h66^{km}±18^{km}, ML4.8*

*MOS **18** 19:59:20.6±0.9, 55.°45N×162.°87E, h61^{km}, mb4.5/7, Error ellipse: s-maj=7.0km s-min=4.3km az=74.8*

*NEIC **18** 19:59:22.2±1.9, 55.°60N±0.°09×162.°6E±0.°2, h51^{km}±7^{km}, mb4.5/84, Error ellipse: s-maj=13.2km s-min=12.1km az=119.0*

ISC 18 19:59:20.9±0.9**, 55.°40N**±0.°03×**162.°99E**±0.°03**, h47**^{km}±9^{km}**, n251,** σ**1.^{s}38**/297**, mb4.4**/73**, MS3.5**/6**, 4C-5D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.81	353	PN	Pn	19 59 34.9	-1.1
KBTR	Krutoberegovo	0.81	353	eP	Pn	19 59 34.9	-1.1
KBG	Krutoberegovo	0.87	349	PN	Pn	19 59 35.8	-0.9
KBG				S	Sn	19 59 48.3	0.0
KBG	Krutoberegovo	0.87	349	i P	Pn	19 59 35.8	-0.9
KBG				S	Sn	19 59 48.3	0.0
MKZ	Mys Kozlova	1.12	221	PN	Pn	19 59 39.1	-1.0
MKZ				S	Sn	19 59 54.4	+0.1
MKZ	Mys Kozlova	1.12	221	eP	Pn	19 59 39.1	-1.0
MKZ				S	Sn	19 59 54.4	+0.1
ZLN	Zelenaya	1.38	297	PN	Pn	19 59 44.2	+0.4
ZLN	Zelenaya	1.38	297	eP	Pn	19 59 44.2	+0.4
BZGR	Bezymyannyi-Gr	1.41	293	PN	Pn	19 59 44.5	+0.3
BZGR				S	Sn	20 00 02.5	+0.9
BZGR	Bezymyannyi-Gr	1.41	293	eP	Pn	19 59 44.5	+0.3
BZGR				eS	Sn	20 00 02.5	+0.9
CIRR	Tsirk	1.45	300	PN	Pn	19 59 45.2	+0.4
CIRR				S	Sn	20 00 03.4	+0.6
CIRR	Tsirk	1.45	300	eP	Pn	19 59 45.2	+0.4
CIRR				eS	Sn	20 00 03.4	+0.6
SMKR	Semkarok	1.46	325	PN	Pn	19 59 44.3	-0.5
SMKR				S	Sn	20 00 03.4	+0.6
SMKR	Semkarok	1.46	325	eP	Pn	19 59 44.3	-0.5
SMKR				eS	Sn	20 00 03.4	+0.6
TUMD	Tumrok D	1.50	263	eP	Pn	19 59 45.6	+0.3
TUMD				eS	Sn	20 00 04.4	+0.8
BZWR	Bezymyannyi-We	1.52	293	PN	Pn	19 59 46.2	+0.4
BZWR				S	Sn	20 00 05.9	+1.5
BZWR	Bezymyannyi-We	1.52	293	eP	Pn	19 59 46.2	+0.4
BZWR				eS	Sn	20 00 05.9	+1.5
BDR	Baidarnaya	1.54	320	PN	Pn	19 59 46.2	+0.3
BDR				S	Sn	20 00 06.1	+1.3
BDR	Baidarnaya	1.54	320	eP	Pn	19 59 46.2	+0.3
BDR				eS	Sn	20 00 06.1	+1.3
KRSR	Krestovskiy	1.59	302	PN	Pn	19 59 46.6	-0.1
KRSR				S	Sn	20 00 06.0	-0.1
KRSR	Krestovskiy	1.59	302	eP	Pn	19 59 46.6	-0.1
KRSR				eS	Sn	20 00 06.0	-0.1
KIRR	Kirishev	1.60	291	PN	Pn	19 59 47.7	+0.9
KIRR				S	Sn	20 00 08.2	+1.9
KIRR	Kirishev	1.60	291	eP	Pn	19 59 47.7	+0.9
KIRR				eS	Sn	20 00 08.2	+1.9
KLY	Klyuchi	1.60	306	PN	Pn	19 59 45.5	-1.2
KLY				S	Sn	20 00 04.3	-1.9
KLY	Klyuchi	1.60	306	eP	Pn	19 59 45.5	-1.2
KLY				eS	Sn	20 00 04.3	-1.9
KMNR	Kamenistaya	1.60	284	PN	Pn	19 59 47.6	+0.8
KMNR				S	Sn	20 00 08.2	+1.8
KMNR	Kamenistaya	1.60	284	i P	Pn	19 59 47.6	+0.8
KMNR				eS	Sn	20 00 08.2	+1.8
SRKR	Sorokina	1.62	322	PN	Pn	19 59 47.0	0.0
SRKR	Sorokina	1.62	322	eP	Pn	19 59 47.0	0.0
TUMR	Tumrok	1.63	267	PN	Pn	19 59 45.6	-1.6
TUMR				S	Sn	20 00 04.4	-2.6
KPT	Kopyto	1.67	291	PN	Pn	19 59 48.3	+0.6
KPT				S	Sn	20 00 09.9	+2.0
KPT	Kopyto	1.67	291	eP	Pn	19 59 48.3	+0.6
KPT				eS	Sn	20 00 09.9	+2.0
BKI	Bering	1.72	95	PN	Pn	19 59 49.0	+0.7
BKI				S	Sn	20 00 09.0	0.0
BKI	Bering	1.72	95	eP	Pn	19 59 49.0	+0.7
BKI				eS	Sn	20 00 09.0	0.0
KOZ	Kozyrevsk	1.88	292	PN	Pn	19 59 51.7	+1.1
KOZ				S	Sn	20 00 16.1	+3.0
KOZ	Kozyrevsk	1.88	292	eP	Pn	19 59 51.7	+1.1
KOZ				eS	Sn	20 00 16.1	+3.0
KII	Karymskiy	2.47	238	PN	Pn	19 59 59.6	+0.9
KII				S	Sn	20 00 28.6	+1.0
KII	Karymskiy	2.47	238	eP	Pn	19 59 59.6	+0.9
KII				eS	Sn	20 00 28.6	+1.0
ESO	Esso	2.49	284	PN	Pn	20 00 01.8	+3.0
ESO	Esso	2.49	284	eP	Pn	20 00 01.8	+3.0
SPN	Mys Shipunski	2.89	218	PN	Pn	20 00 04.0	-0.4
SPN				S	Sn	20 00 35.0	-2.9
SPN	Mys Shipunski	2.89	218	eP	Pn	20 00 04.0	-0.4
SPN				eS	Sn	20 00 35.0	-2.9
NLC	Nalytchevo	3.09	225	PN	Pn	20 00 07.6	+0.5
NLC				S	Sn	20 00 42.7	-0.1
NLC	Nalytchevo	3.09	225	eP	Pn	20 00 07.6	+0.5
NLC				eS	Sn	20 00 42.7	-0.1
SDLR	Sedlovina	3.21	230	PN	Pn	20 00 09.9	+1.0
SDLR				S	Sn	20 00 46.4	+0.5
SDLR	Sedlovina	3.21	230	i P	Pn	20 00 09.9	+1.0
SDLR				eS	Sn	20 00 46.4	+0.5
SMAR	Somma	3.26	231	PN	Pn	20 00 10.9	+1.3
SMAR				S	Sn	20 00 47.3	+0.1
SMAR	Somma	3.26	231	i P	Pn	20 00 10.9	+1.3
SMAR				eS	Sn	20 00 47.3	+0.1
AVH	Avacha	3.28	231	PN	Pn	20 00 11.0	+1.1
AVH				S	Sn	20 00 48.3	+0.6
AVH	Avacha	3.28	231	eP	Pn	20 00 11.0	+1.1
AVH				eS	Sn	20 00 48.3	+0.6
UGLR	Uglovaya	3.29	230	PN	Pn	20 00 11.3	+1.4
UGLR				S	Sn	20 00 49.4	+1.7
UGLR	Uglovaya	3.29	230	i P	Pn	20 00 11.3	+1.4
UGLR				eS	Sn	20 00 49.4	+1.7
KOK	Koryaka	3.31	232	PN	Pn	20 00 11.5	+1.3
KOK	Koryaka	3.31	232	eP	Pn	20 00 11.5	+1.3
GNL	Ganaly	3.40	242	PN	Pn	20 00 13.0	+1.5
GNL	Ganaly	3.40	242	eP	Pn	20 00 13.0	+1.5
DALK	Dalny	3.44	228	PN	Pn	20 00 12.3	+0.4
DALK				S	Sn	20 00 50.5	-0.8
DALK	Dalny	3.44	228	eP	Pn	20 00 12.3	+0.4
DALK				eS	Sn	20 00 50.5	-0.8
PET	Petropavlovsk	3.49	229	ePN	Pn	20 00 13.6	+1.0
PET				eS	Sn	20 00 51.8	-0.7
PET				pmax	pmax		
	comp=Z,286nm,0.4s						
PET				smax	smax		
	comp=E,1µm,0.5s						
PET				smax	smax		
	comp=N,1µm,0.6s						
PET				MLR	MLR		
	comp=Z,800nm,14.0s						
PET	Petropavlovsk	3.49	229	eP	Pn	20 00 13.6	+1.0
PET				eS	Sn	20 00 52.6	+0.1
PET	Petropavlovsk	3.49	229		Pn	20 00 13.5	+1.0

KRMR	Karymshinskiy	3.85	230	PN	Pn	20 00 19.0	+1.5
KRMR	Karymshinskiy	3.85	230	eP	Pn	20 00 19.0	+1.5
OSSR	Ossora	3.86	1	PN	Pn	20 00 17.5	-0.1
OSSR				S	Sn	20 00 58.5	-3.1
OSSR	Ossora	3.86	1	eP	Pn	20 00 17.5	-0.1
OSSR				eS	Sn	20 00 58.5	-3.1
PEA0B	Petropavlovsk-	3.86	236	cePN	Pn	20 00 18.9	+1.2
PEA0B	Petropavlovsk-	3.86	236		Pn	20 00 18.8	+1.0
PETK	Petropavlovsk-	3.86	236	Pn	Pn	20 00 17.7	-0.1
	comp=Z,6.9nm,0.3s,baz=66,slow=18,SNR=68						
PETK				LR	LR	20 01 55.8	
	comp=Z,313nm,20.2s,baz=52,slow=43						
PETK	Petropavlovsk-	3.86	236	PN	Pn	20 00 18.0	+0.3
PETK	Petropavlovsk-	3.86	236		Pn	20 00 18.0	+0.3
RUS	Russkaya	3.98	223	PN	Pn	20 00 19.6	+0.3
RUS				S	Sn	20 01 03.6	-1.1
RUS	Russkaya	3.98	223	iP	Pn	20 00 19.6	+0.3
RUS				eS	Sn	20 01 03.6	-1.1
APC	Apacha	4.23	236	PN	Pn	20 00 24.6	+1.8
APC	Apacha	4.23	236	eP	Pn	20 00 24.6	+1.8
ASAK	Asacha	4.27	227	PN	Pn	20 00 25.0	+1.6
ASAK				S	Sn	20 01 13.5	+1.6
ASAK	Asacha	4.27	227	iP	Pn	20 00 25.0	+1.6
ASAK				eS	Sn	20 01 13.5	+1.6
KDTR	Khodutka, Kamc	4.64	221	PN	Pn	20 00 28.5	+0.2
KDTR				S	Sn	20 01 19.0	-1.8
KDTR	Khodutka, Kamc	4.64	221	eP	Pn	20 00 28.5	+0.2
KDTR				eS	Sn	20 01 19.0	-1.8
MIPR	Malaya Ipel'ka	4.84	232	PN	Pn	20 00 33.1	+2.0
MIPR	Malaya Ipel'ka	4.84	232	eP	Pn	20 00 33.1	+2.0
TILK	Tilichiki	5.33	17	PN	Pn	20 00 39.2	+1.5
TILK				S	Sn	20 01 37.4	-0.3
TILK	Tilichiki	5.33	17	eP	Pn	20 00 39.2	+1.5
TILK				eS	Sn	20 01 37.4	-0.3
PAU	Pauzhetka	5.40	226	PN	Pn	20 00 40.1	+1.3
PAU	Pauzhetka	5.40	226	eP	Pn	20 00 40.1	+1.3
SKR	Severo-Kuril's	6.29	224	ePN	Pn	20 00 52.5	+1.6
SKR				eS	Sn	20 02 02.3	+1.0
SKR				smax	smax		
	comp=E,276nm,0.7s						
SKR				smax	smax		
	comp=N,300nm,0.9s						
SKR				MLR	MLR		
	comp=Z,1μm,20.0s						
SKR	Severo-Kuril's	6.29	224	eP	Pn	20 00 52.0	+1.1
MA2	Magadan	7.80	307	⇓ePN	Pn	20 01 11.8	+0.2
MA2	Magadan	7.80	307	Pn	Pn	20 01 09.7	-1.9
SEY	Seymchan	9.30	329	LR	LR	20 04 53.5	
	comp=Z,99nm,21.9s,baz=132,slow=37						
BILL	Bilibino	12.77	6	ePN	Pn	20 02 21.3	+1.8
BILL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JKA	Kamikawa-asahi	17.28	238		Pn	20 03 18.5	0.0
ASAJ	Asahikawa	17.28	238	P	Pn	20 03 18.5	0.0
ASAJ				pmax	pmax		
	comp=Z,76nm,1.4s						
YAK	Yakutsk	18.36	305	P	P	20 03 29.8	-1.4
	comp=Z,0.1nm,0.3s,baz=75,slow=1.3,SNR=9.2						
YAK	Yakutsk	18.36	305	eP	P	20 03 29.7	-1.5
YAK				pmax	pmax		
	comp=Z,19nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.2s						
YAK	Yakutsk	18.36	305	P	P	20 03 29.1	-2.2
YAK				IAmb	IAmb	20 03 32.2	
	comp=Z,20nm,0.7s						
ERM	Erimo	18.64	232	iP	Pn	20 03 35.4	+0.3
ERM	Erimo	18.64	232	P	P	20 03 33.7	-0.7
TIXI	Tiksi	21.77	331	P	P	20 04 08.3	+0.1
	comp=Z,5.8nm,0.5s,baz=119,slow=13,SNR=18						
TIXI	Tiksi	21.77	331	⇓eP	P	20 04 08.4	+0.2
TIXI				pmax	pmax		
	comp=Z,17nm,1.2s						
TIXI	Tiksi	21.77	331	P	P	20 04 08.0	-0.1
TTA	Tatalina	21.98	53	P	P	20 04 12.2	+1.7
TTA				pmax	pmax		
	comp=Z,18nm,1.3s						
TTA	Tatalina	21.98	53	P	P	20 04 12.2	+1.7
TTA				IAmb	IAmb	20 04 14.2	
	comp=Z,18nm,1.3s						
L19K	White Mountain	22.52	55	P	P	20 04 17.6	+1.3
M19K	Big River Lodg	22.75	56	P	P	20 04 17.8	-0.9
M19K				IAmb	IAmb	20 04 47.9	
	comp=Z,27nm,1.6s						
J20K	Nowinta River	22.85	50	P	P	20 04 21.2	+1.5
J20K				IAmb	IAmb	20 04 28.8	
	comp=Z,23nm,1.5s						
K20K	Telida	22.86	52	P	P	20 04 20.9	+0.9
IMAR	Indian Mountai	23.16	46	P	P	20 04 24.3	+1.5
H21K	Melozitna Rive	23.51	46	P	P	20 04 27.9	+1.6
PPLA	Purkeypile	23.73	53	P	P	20 04 29.4	+1.0
PPLA				IAmb	IAmb	20 04 31.6	
	comp=Z,26nm,1.4s						
I21K	Tanana	23.82	48	P	P	20 04 30.7	+1.6
OHAK	Old Harbor	24.01	68	P	P	20 04 31.9	+1.0
KDAK	Kodiak Island	24.25	66	P	P	20 04 33.6	+0.6
	comp=Z,7.8nm,0.8s,baz=48,slow=3.9,SNR=5.8						
KTH	Kantishna Hill	24.28	52	P	P	20 04 35.0	+1.6
TRF	Thorofare Moun	24.57	52	P	P	20 04 37.7	+1.6
TRF				IAmb	IAmb	20 04 39.0	
	comp=Z,24nm,1.3s						
COLD	Coldfoot	24.69	43	P	P	20 04 38.3	+1.2
COLD				IAmb	IAmb	20 04 40.6	
	comp=Z,12nm,1.0s						
BWN	Browne	24.90	50	P	P	20 04 41.8	+2.9
BWN				IAmb	IAmb	20 04 42.8	
	comp=Z,19nm,1.0s						
I23K	Minto, Yukon-K	24.93	48	P	P	20 04 40.9	+1.7
I23K				IAmb	IAmb	20 04 51.7	
	comp=Z,27nm,1.6s						
TOLK	Toolik Lake Re	25.09	40		P	20 04 41.5	+0.8
TOLK	Toolik Lake Re	25.09	40	P	P	20 04 40.3	-0.4
TOLK				IAmb	IAmb	20 04 44.1	
	comp=Z,14nm,0.8s						
MCK	McKinley	25.16	51	P	P	20 04 42.2	+0.9
MCK				pmax	pmax		
	comp=Z,31nm,1.7s						
MCK	McKinley	25.16	51	P	P	20 04 42.2	+0.9
MCK				IAmb	IAmb	20 05 01.2	
	comp=Z,31nm,1.7s						
RND	Reindeer	25.21	52	P	P	20 04 42.8	+0.9
RND				pmax	pmax		
	comp=Z,15nm,1.4s						
RND	Reindeer	25.21	52	P	P	20 04 42.8	+0.9
RND				IAmb	IAmb	20 04 48.4	
	comp=Z,15nm,1.4s						
MAJO	Matsushiro	25.31	232	⇑eP	P	20 04 42.5	-0.5
MAJO	Matsushiro	25.31	232	P	P	20 04 43.2	+0.3
MAJO				IAmb	IAmb	20 04 44.6	
	comp=Z,18nm,1.0s						
MAT	Matsushiro	25.31	232	P	P	20 04 43.0	+0.1
GHO	Glory Hole Cre	25.34	56	P	P	20 04 43.2	+0.1
GHO				IAmb	IAmb	20 05 10.9	
	comp=Z,12nm,1.2s						
MDM	Murphy Dome	25.41	48	P	P	20 04 44.2	+0.6
WRH	Wood River Hil	25.49	49	P	P	20 04 45.4	+1.1
WRH				IAmb	IAmb	20 04 46.6	
	comp=Z,11nm,0.8s						
H24K	Noodor Dome	25.55	46	P	P	20 04 45.5	+0.6
COLA	College	25.58	48	⇑eP	P	20 04 44.7	-0.3
COLA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CCB	Clear Creek Bu	25.60	49	P	P	20 04 45.9	+0.6
KNK	Knik Glacier	25.61	57	P	P	20 04 45.2	-0.3
KNK				IAmb	IAmb	20 05 17.7	
	comp=Z,27nm,1.4s						
SML	Sawmill	25.62	56	P	P	20 04 45.8	+0.3
SML				IAmb	IAmb	20 04 52.5	
	comp=Z,27nm,1.3s						
POKR	Poker Plat Res	25.75	48	P	P	20 04 45.8	-0.8
PWL	Port Wells	25.76	58	P	P	20 04 47.5	+0.7
PWL				IAmb	IAmb	20 04 58.9	
	comp=Z,11nm,0.8s						
DHY	Denali Highway	25.91	53	P	P	20 04 48.1	-0.1
DHY				IAmb	IAmb	20 04 50.2	
	comp=Z,26nm,1.6s						
HDA	Harding Lake	25.99	49	P	P	20 04 48.9	+0.1
IL31		25.99	49	P	P	20 04 49.5	+0.7
ILAR	Eielson Array	25.99	49	P	P	20 04 49.3	+0.4
	comp=Z,3.5nm,0.8s,baz=267,slow=8.2,SNR=28						
ILAR	Eielson Array	25.99	49	P	P	20 04 49.2	+0.3
SCM	Sheep Creek Mo	26.09	55	P	P	20 04 51.2	+1.4
SCM				pmax	pmax		
	comp=Z,17nm,1.0s						
SCM	Sheep Creek Mo	26.09	55	P	P	20 04 51.2	+1.4
SCM				IAmb	IAmb	20 04 53.9	
	comp=Z,17nm,1.0s						
JGF	Kuroka	26.48	232	P	P	20 04 54.0	+0.5
JGF				IAmb	IAmb	20 05 20.9	
	comp=Z,12nm,1.0s						
PRP	Porcupine Dome	26.53	47	P	P	20 04 55.3	+1.4
PRP				IAmb	IAmb	20 04 56.7	
	comp=Z,11nm,1.1s						
M24K	Tolsona, Glenn	26.58	55	P	P	20 04 56.1	+1.8
BMAR	Burnt Mountain	26.88	43	P	P	20 04 58.4	+1.6
SCRK	Sand Creek	27.32	50	P	P	20 05 01.5	+0.6
SCRK				IAmb	IAmb	20 05 05.6	
	comp=Z,21nm,1.5s						
N25K	Chitina, Valde	27.41	55	P	P	20 05 02.4	+0.7
N25K				IAmb	IAmb	20 05 23.6	
	comp=Z,13nm,1.3s						
BMRM	Bremner River	27.53	57	P	P	20 05 03.6	+0.9
JWT	Wachi	27.64	235	P	P	20 05 03.0	-0.9
GLB	Gilahina Butte	27.81	56	P	P	20 05 06.0	+0.7
GLB				IAmb	IAmb	20 05 37.1	
	comp=Z,19nm,1.6s						
VRDI	Verde Repeater	28.02	56	P	P	20 05 08.7	+1.4
VRDI				IAmb	IAmb	20 05 24.9	
	comp=Z,16nm,1.3s						
CRQM	Cirque	28.28	57	P	P	20 05 11.6	+2.0
L27K	Beaver Creek,	28.41	52	P	P	20 05 12.7	+2.1
BCAR	Beaver Creek A	28.43	52	P	P	20 05 12.8	+2.0
EGAK	Eagle	28.44	48	P	P	20 05 11.1	+0.4
WAX	Waxell Ridge	28.49	57	P	P	20 05 12.8	+1.5
M27K	Edge Creek, AK	28.52	53	P	P	20 05 13.9	+2.2
M27K				IAmb	IAmb	20 05 18.7	
	comp=Z,17nm,1.4s						
ISLE	Juniper Island	28.70	57	P	P	20 05 13.8	+0.5
BARN	Barnard Glacie	28.91	56	P	P	20 05 17.5	+2.3
BARN				IAmb	IAmb	20 05 49.1	
	comp=Z,22nm,1.6s						
CTGM	Chitina Glacie	29.08	56	P	P	20 05 18.9	+2.2
CTGM				IAmb	IAmb	20 05 32.4	
	comp=Z,26nm,1.7s						
KSRS	Korea Array	29.67	247	LR	LR	20 16 59.6	
	comp=Z,39nm,19.8s,baz=64,slow=36						
PCA	Pinnacle	29.83	57	P	P	20 05 24.8	+1.6
INK	Inuvik	31.00	40	P	P	20 05 34.4	+1.0
	comp=Z,1.6nm,0.8s,baz=293,slow=10,SNR=5.4						
INK	Inuvik	31.00	40	P	P	20 05 34.2	+0.9
INK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
INK	Inuvik	31.00	40	P	P	20 05 34.2	+0.9
WHY	Whitehorse	32.20	55	P	P	20 05 47.1	+2.9
WHY				IAmb	IAmb	20 05 47.6	
	comp=Z,8.5nm,1.0s						
TLY	Talaya	34.53	289	LR	LR	20 19 36.5	
	comp=Z,87nm,19.2s,baz=7.0,slow=36						
SONM	Songino Array	35.06	282	P	P	20 06 05.8	-3.3
	comp=Z,1.4nm,0.6s,baz=62,slow=7.7,SNR=12						
SONM				PcP	PcP	20 08 40.7	+0.7
	comp=Z,1.2nm,0.7s,baz=77,slow=2.3,SNR=7.0						
SONM	Songino Array	35.06	282	IAmb	IAmb	20 06 10.5	
	comp=Z,1.5nm,1.0s						
H11N2	WAKE ISLAND Hy	35.74	174	T	T	20 45 19.1	
	baz=357,slow=76,SNR=106						
H11N3	WAKE ISLAND Hy	35.75	174	T	T	20 45 20.5	
	baz=357,slow=76,SNR=67						
H11N1	WAKE ISLAND Hy	35.75	174	T	T	20 45 20.8	
	baz=357,slow=76,SNR=98						
EUNU	Eureka	39.29	15	P	P	20 06 46.0	+1.5
YKA	Yellowknife Ar	40.32	45	P	P	20 06 54.5	+1.4
	comp=Z,1.9nm,0.8s,baz=299,slow=8.2,SNR=9.6						
ZALV	Zalesovo Beam	42.98	302	LR	LR	20 25 01.3	
	comp=Z,40nm,18.4s,baz=302,slow=36						
DGZ	Jazzator, Alta	44.19	296	d iP	P	20 07 23.8	-1.2
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SPITS	Spitsbergen Ar	45.13	351	P	P	20 07 32.3	+0.3
SPITS				pmax	pmax		
	comp=Z,185nm,1.5s						
SPB2	Spitsbergen Ar	45.13	351	P	P	20 07 32.4	+0.4
MLH	Mauna Loa	47.57	122	P	P	20 07 57.5	+5.5
AIN	Ainahou	47.64	122	P	P	20 07 59.0	+6.5
KURK	Kurchatov	47.96	302	P	P	20 07 52.3	-2.1
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KURK	Kurchatov	47.96	302	P	P	20 07 52.3	-2.1
KURK				IAmb	IAmb	20 07 54.8	
	comp=Z,4.2nm,0.6s						
KURBB	Kurchatov Arra	48.07	302	P	P	20 07 52.8	-2.4
	comp=Z,1.7nm,0.3s,baz=56,slow=8.2,SNR=4.4						
MK31	Makanchi Array	48.69	295	P	P	20 07 58.0	-2.1
MK31				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MK31	Makanchi Array	48.69	295	P	P	20 07 58.0	-2.1
MK31				IAmb	IAmb	20 08 24.3	
	comp=Z,3.6nm,1.1s						
MKAR	Makanchi Array	48.69	295	P	P	20 07 57.5	-2.7
	comp=Z,3.2nm,0.8s,baz=68,slow=7.2,SNR=11						
MAKZ	Makanchi	48.84	296	P	P	20 07 58.4	-2.9
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	Makanchi	48.84	296	P	P	20 07 58.4	-2.9
BRVK	Borovoye	50.31	308	⇓eP	P	20 08 10.6	-1.8
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	Borovoye	50.31	308	P	P	20 08 10.4	-2.0
BRVK				IAmb	IAmb	20 08 11.6	
	comp=Z,3.9nm,0.7s						
SUMG	Summit	51.44	8	P	P	20 08 20.9	-0.2
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.5s						
SUMG	Summit	51.44	8	P	P	20 08 20.9	-0.2
SUMG				IAmb	IAmb	20 08 55.0	
	comp=Z,10.0nm,1.5s						
ARCES	ARCESS Array B	51.61	342	P	P	20 08 21.3	-0.6
	comp=Z,3.6nm,0.8s,baz=10,slow=7.4,SNR=3.7						
NVAR	Mina Array Bea	53.41	74	P	P	20 08 38.9	+3.0
	comp=Z,0.8nm,0.7s,baz=306,slow=6.3,SNR=5.0						
NVAR	Mina Array Bea	53.41	74	P	P	20 08 38.6	+2.7
KIRV	Kirov	54.53	324	LR	LR	20 33 59.9	
	comp=Z,58nm,18.0s,baz=32,slow=38						
BW06	Boulder Array	54.94	64	P	P	20 08 50.0	+3.0
PDAR	Pinedale Array	54.94	64	P	P	20 08 48.9	+1.9
	comp=Z,0.3nm,0.5s,baz=349,slow=4.7,SNR=4.0						
SPR3	Spring Creek 3	55.15	70	P	P	20 08 52.6	+3.9
SPR3				IAmb	IAmb	20 09 02.1	
	comp=Z,3.4nm,1.0s						
AAK	Ala-Archa	55.57	297	⇓eP	P	20 08 50.0	-1.5
AAK				pmax	pmax		
	comp=Z,11nm,1.3s						
AAK	Ala-Archa	55.57	297	P	P	20 08 50.9	-0.6
AAK				IAmb	IAmb	20 09 10.8	
	comp=Z,9.8nm,1.6s						
LSA	Lhasa	55.97	274	P	P	20 08 54.0	-0.9
LSA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LSA	Lhasa	55.97	274	P	P	20 08 54.0	-0.9
LSA				IAmb	IAmb	20 08 56.7	
	comp=Z,3.8nm,0.7s						
SRU	San Rafael Swe	57.09	68	P	P	20 09 04.6	+2.2
SRU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SRU	San Rafael Swe	57.09	68	P	P	20 09 04.6	+2.2
SRU				IAmb	IAmb	20 09 06.7	
	comp=Z,5.2nm,0.9s						
KKAR	Karatay Array	57.24	300	P	P	20 09 02.0	-1.1
KKAR	Karatay Array	57.24	300	P	P	20 09 02.0	-1.1
ABKAR	Akbulak array	57.58	311	P	P	20 09 03.6	-1.8
ABKAR	Akbulak array	57.58	311	P	P	20 09 03.8	-1.6
ABKAR				IAmb	IAmb	20 09 05.6	
	comp=Z,5.8nm,1.4s						
FIA1	FINESS Array S	58.65	337	P	P	20 09 11.8	-0.9
FINES	FINESS Array B	58.66	337	P	P	20 09 12.3	-0.4
	comp=Z,3.3nm,0.8s,baz=23,slow=7.3,SNR=16						
FINES	FINESS Array B	58.66	337	P	P	20 09 13.0	+0.2
BTK	Batken	59.34	297	P	P	20 09 16.1	-1.8
BTK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BTK	Batken	59.34	297	P	P	20 09 16.1	-1.8
BTK				IAmb	IAmb	20 09 18.1	
	comp=Z,3.1nm,0.9s						
CHTO	Chiang Mai	60.02	260	P	P	20 09 22.4	-0.3
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CHTO	Chiang Mai	60.02	260	P	P	20 09 22.4	-0.3
CHTO				IAmb	IAmb	20 09 50.6	
	comp=Z,5.6nm,1.2s						
CMAR	Chiang Mai Arr	60.30	259	P	P	20 09 24.4	-0.3
	comp=Z,1.3nm,0.5s,baz=22,slow=7.2,SNR=7.6						
CMAR				LR	LR	20 36 40.1	
	comp=Z,29nm,18.0s,baz=30,slow=37						
CMAR	Chiang Mai Arr	60.30	259	ceP	P	20 09 23.6	-1.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GUN	Gumba	60.33	277	eP	P	20 09 23.8	-1.4
	comp=Z,23nm,0.3s						
GAR	Garm	60.39	296	P	P	20 09 23.6	-1.6
KKN	Kakani	60.76	277	eP	P	20 09 26.8	-1.2
	comp=Z,9.2nm,0.2s						
PKI	Pulchoki	60.85	277	eP	P	20 09 27.4	-1.3
PKIN	Phulchoki	60.85	277	eP	P	20 09 27.1	-1.6
GKN	Gorkha	60.96	278	eP	P	20 09 27.6	-1.6
	comp=Z,8.9nm,0.3s						
DMN	Daman	60.99	277	eP	P	20 09 28.2	-1.4
	comp=Z,9.0nm,0.3s						
DANN	Dangsing	61.19	279	eP	P	20 09 30.0	-1.0
	comp=Z,18nm,0.3s						
CHGR	Chuyangaron	61.24	297	P	P	20 09 27.8	-3.1
OBN	Obninsk	61.46	328	eP	P	20 09 33.0	+1.0
OBN				e		20 10 13.0	
OBN				e		20 11 47.1	
OBN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NOA	NORSAR Array B	61.77	345	P	P	20 09 34.0	-0.1
	comp=Z,0.6nm,0.5s,baz=18,slow=6.8,SNR=4.9						
NOA	NORSAR Array B	61.77	345	P	P	20 09 34.0	-0.1
PYUN	Piuthan	61.81	279	eP	P	20 09 33.3	-1.8
	comp=Z,5.4nm,0.2s						
SCHQ	Schefferville	62.80	30	P	P	20 09 41.7	+0.6
	comp=Z,1.9nm,0.6s,baz=327,slow=7.1,SNR=3.5						
AKASG	Malin Array Be	67.48	330	P	P	20 10 10.1	-1.3
	comp=Z,0.5nm,0.3s,baz=27,slow=6.5,SNR=6.5						
AKASG	Malin Array Be	67.48	330	IAmb	IAmb	20 10 16.8	
	comp=Z,0.9nm,1.0s						
TX31	Lajitas Ar. Si	68.20	70	P	P	20 10 18.7	+2.3
TX32	Lajitas Array	68.20	70	P	P	20 10 18.6	+2.2
TX32				IAmb	IAmb	20 10 19.6	
	comp=Z,3.2nm,0.8s						
TXAR	Lajitas Array	68.20	70	P	P	20 10 18.7	+2.3
	comp=Z,2.3nm,0.7s,baz=296,slow=4.2,SNR=24						
KBZ	Khabaz	68.99	318	P	P	20 10 21.2	+0.2
	comp=Z,2.8nm,0.9s,baz=154,slow=1.9,SNR=7.4						
GNI	Garni	71.30	315	LR	LR	20 44 03.6	
	comp=Z,35nm,20.6s,baz=20,slow=38						
GERES	GERESS Array B	72.98	339	P	P	20 10 45.0	-0.2
	comp=Z,0.3nm,0.7s,baz=40,slow=5.2,SNR=3.7						
GERES	GERESS Array B	72.98	339	P	P	20 10 44.6	-0.6
GERES	GERESS Array B	72.98	339	P	P	20 10 44.6	-0.6
WRA	Warramunga Arr	78.91	207	P	P	20 11 20.0	+0.9
	comp=Z,1.6nm,0.7s,baz=16,slow=5.4,SNR=12						
WRA	Warramunga Arr	78.91	207	P	P	20 11 20.0	+0.9
ASAR	Alice Springs	82.58	207	P	P	20 11 40.0	+1.4
	comp=Z,3.1nm,0.8s,baz=16,slow=5.5,SNR=38						
ASAR	Alice Springs	82.58	207	P	P	20 11 39.5	+0.9
ASAR	Alice Springs	82.58	207	P	P	20 11 39.5	+0.9
ESDC	Sonseca Array	84.64	350	P	P	20 11 50.3	+1.0
	comp=Z,1.5nm,0.8s,baz=358,slow=4.9,SNR=7.8						
ESDC	Sonseca Array	84.64	350	IAmb	IAmb	20 11 51.0	
	comp=Z,10nm,1.4s						

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*IDC **18** 20:11:48.0±8.0, 37°.75N×72°.31E, h202^{km}±50^{km}, mb3.9/1, mb1 3.3/5, mb1mx2.8/41, mbtmp3.8/5, MS3.3/2, Ms1 3.3/2, ms1mx2.5/48, Error ellipse: s-maj=76.1km s-min=46.4km az=177.0*

*NNC **18** 20:11:50.3±7.9, 38°.07N×72°.28E, h246^{km}±76^{km}, mb2.4, mpv3.4, Error ellipse: s-maj=76.5km s-min=48.7km az=12.0*

ISC 18 20:11:44.6±1.2**, 37°.60N**±0°.09×**72°.10E**±0°.10**, h200^{km}, n23, σ1°.90**/27**, 5C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.69	15	P	Pn	20 12 55.8	+0.5
	SNR=20						
UCH	Uchtor	4.98	21	P	Pn	20 12 59.5	+0.4
	SNR=9.9						
EKS2	Erkin-Say	5.21	14	P	Pn	20 13 03.3	+1.5
	SNR=7.3						
AAK	Ala-Archa	5.35	19	P	Pn	20 13 04.4	+0.8
	1.1nm,0.3s,baz=183,slow=6.1,SNR=24						
AAK				S	Sn	20 14 05.6	-0.5
	0.8nm,0.3s,baz=221,slow=4.3,SNR=20						
AAK	Ala-Archa	5.35	19	P	Pn	20 13 04.3	+0.7
	SNR=7.0						
AAK	Ala-Archa	5.35	19	P	Pn	20 13 03.5	-0.2
	3.0nm,0.5s						
AAK				⇑S	Sn	20 14 05.4	-0.7
	6.5nm,0.5s						
KK02	Karatay Array	5.63	348	⇑P	Pn	20 13 07.5	+0.5
	1.7nm,0.4s,baz=154,slow=10						
KK02				⇑S	Sn	20 14 09.3	-2.8
	6.6nm,0.4s,baz=155,slow=19						
ULHL	Ulahol	5.63	33	P	Pn	20 13 06.9	-0.3
	SNR=7.8						
TKM2	Tokmak 2	5.95	26	⇓P	Pn	20 13 11.4	+0.1
	4.0nm,0.8s						
TKM2				⇓S	Sn	20 14 18.8	-1.1
	1.8nm,0.6s						
MKAR	Makanchi Array	11.88	36	P	Pn	20 14 28.8	+0.9
	0.1nm,0.3s,baz=204,slow=9.9,SNR=1.8						
KURBB	Kurchatov Arra	13.80	17	P	P	20 14 55.6	+1.6
	0.1nm,0.3s,baz=201,slow=10,SNR=7.4						
GKN	Gorkha	14.23	129	eP	Pn	20 14 55.6	-2.0
	6.1nm,0.3s						
AB31	Akbulak array	14.59	327	⇑P	Pn	20 15 01.9	+0.2
	0.7nm,0.3s,baz=132,slow=12,SNR=32						
AB31				⇓S	S	20 17 39.6	-4.1
	0.4nm,0.5s,baz=143,slow=23,SNR=4.0						
DMN	Daman	14.80	129	eP	Pn	20 15 02.7	-2.0
	1.4nm,0.3s						
PKIN	Phulchoki	15.00	128	eP	Pn	20 15 05.5	-1.7
	2.0nm,0.4s						
PKI	Pulchoki	15.02	128	eP	Pn	20 15 05.7	-1.7
	2.4nm,0.3s						
GUN	Gumba	15.08	126	eP	Pn	20 15 06.0	-2.2
	5.1nm,0.4s						
AKTO	Aktyubinsk	16.31	326	P	Pn	20 15 25.0	+2.6
	0.5nm,0.3s,baz=121,slow=11,SNR=7.0						
AKTO	Aktyubinsk	16.31	326	⇓P	P	20 15 23.4	+1.7
	1.0nm,0.4s						
AKTO				⇑S	S	20 18 18.0	-4.1
	1.9nm,0.9s						
ZALV	Zalesovo Beam	18.55	24	P	P	20 15 47.4	+1.3
	0.4nm,0.3s,baz=220,slow=11,SNR=9.7						
BRTR	Keskin Array B	29.95	286	LR	LR	20 31 32.2	
	comp=Z,42nm,20.5s,baz=266,slow=39						
FINES	FINESS Array B	37.07	325	LR	LR	20 34 24.6	
	comp=Z,62nm,21.8s,baz=305,slow=37						
ARCES	ARCESS Array B	40.47	337	P	P	20 19 05.6	+2.4
	7.2nm,1.0s,baz=110,slow=9.7,SNR=3.6						

IDC 18 20:59:14.2±5.9**, 32°.37S**×**178°.47W, h0^{km}, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.7**/19**, mbtmp3.7**/2**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.7**/41**, Error ellipse: s-maj=249.6km s-min=60.9km az=159.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.64	269	P	P	21 07 12.5	-0.1
	0.6nm,0.6s,baz=112,slow=7.4,SNR=9.6						
WRA	Warramunga Arr	43.80	274	P	P	21 07 21.9	-0.2
	1.1nm,0.7s,baz=116,slow=8.0,SNR=10						
WRA				LR	LR	21 26 15.5	
	comp=Z,27nm,18.4s,baz=295,slow=37						
PETK	Petropavlovsk-	87.61	346	LR	LR	21 45 52.6	
	comp=Z,23nm,19.9s,baz=62,slow=32						
FINES	FINESS Array B	146.84	339	PKPbc	PKPbc	21 18 56.9	-0.7
	1.9nm,0.9s,baz=28,slow=3.3,SNR=3.7						

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*IDC **18** 21:15:42.6±1.6, 38°.36N×72°.37E, h0^{km}, mb3.8/11, mb1 3.9/16, mb1mx3.7/55, mbtmp3.8/16, ML3.3/5, MS3.9/1, Ms1 3.9/1, ms1mx2.6/49, Error ellipse: s-maj=32.8km s-min=14.9km az=147.0*

*NEIC **18** 21:15:45.8±2.5, 38°.31N±0°.04×72°.35E±0°.07, h10^{km}±2^{km}, mb4.0/6, Error ellipse: s-maj=10.5km s-min=3.2km az=121.0*

SOME ***18*** *21:15:49.2, 38°.73N×72°.53E, h0^{km}*
NNC ***18*** *21:15:51.4±5.1, 38°.74N×72°.74E, h0^{km}, mb4.5, mpv4.1, Error ellipse: s-maj=42.8km s-min=23.1km az=14.0*
ISC 18 21:15:44.3±0.5**, 38°.26N**±0°.04×**72°.22E**±0°.04**, h10**^{km}**, n87, σ2^s.10**/102**, mb3.7**/13**, 14C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.27	345	Pn	Pn	21 16 03.5	-4.8
GAR	Garm	1.66	297		Pb	21 16 14.8	-0.4
BTK	Batken	2.10	329	Pn	Pn	21 16 19.9	+0.2
CHGR	Chuyangaron	2.43	280		Pb	21 16 28.2	0.0
TAS	Tashkent	3.80	325		Pn	21 16 45.4	+2.4
AML	Almayashu	4.03	16	P	Pn	21 16 46.6	+0.1
	SNR=68						
IUG	Iuzhnay	4.23	337	eP	Pg	21 17 02.9	-2.5
	902nm,0.1s						
IUG				eS	Sg	21 17 56.5	-3.7
	93nm,0.1s						
IUG	Iuzhnay	4.23	337	ePn	Pn	21 16 49.9	+0.9
	baz=330						
IUG				ePg	Pg	21 17 04.0	-1.4
	baz=330						
IUG	Iuzhnay	4.23	337	Pg	Pb	21 16 59.8	+0.9
	3µm,0.7s						
IUG				Lg	Lg	21 17 56.5	
	168nm,0.7s						
UCH	Uchtor	4.34	23	P	Pn	21 16 50.2	-0.5
	SNR=13						
KBL	Kabul	4.50	216	Pn	Pn	21 16 56.8	+3.9
CHM	Chimkent	4.52	335	eP	Pg	21 17 07.5	-3.5
	3.9nm,0.1s						
CHM				eS	Sg	21 18 04.3	-5.2
	182nm,0.5s						
MRKS	Merke	4.55	9	eP	Pb	21 17 03.3	-1.1
	52nm,0.0s						
MRKS				eS	Sb	21 17 57.1	-2.2
	33nm,0.3s						
MRKS	Merke	4.55	9	Pg	Pn	21 16 55.2	+1.8
	28nm,0.4s						
MRKS				Lg	Lg	21 17 49.2	
	51nm,0.8s						
EKS2	Erkin-Say	4.56	15	P	Pn	21 16 53.9	+0.4
	SNR=14						
NIL	Nilore	4.67	169	Pn	Pn	21 16 58.3	+3.3
DZA	Taraz	4.68	352	eP	Pb	21 17 07.3	+0.8
	9.7nm,0.1s						
DZA				eS	Sb	21 18 04.0	+1.1
	94nm,0.1s						
DZA	Taraz	4.68	352	ePn	Pn	21 16 54.4	-0.7
	baz=346						
DZA				ePg	Pb	21 17 09.7	+3.2
	baz=346						
DZA	Taraz	4.68	352	Pg	Pb	21 17 03.7	-2.8
	40nm,0.4s						
DZA				Lg	Lg	21 18 04.1	
	173nm,0.7s						
AAK	Ala-Archa	4.71	21	Pn	Pn	21 16 56.1	+0.5
	1.0nm,0.3s,baz=207,slow=10,SNR=20						
AAK				Sn	Sn	21 17 53.9	+3.6
	3.1nm,0.3s,baz=349,slow=17,SNR=6.5						
AAK	Ala-Archa	4.71	21	P	Pn	21 16 55.9	+0.2
	SNR=10						
AAK	Ala-Archa	4.71	21	⇓Pn	Pn	21 16 55.2	-0.4
	5.7nm,0.8s						
AAK				⇑Pg	Pb	21 17 07.6	+0.5
	37nm,0.7s						
AAK				⇑Lg	Lg	21 18 02.9	
	68nm,0.8s						
AAK	Ala-Archa	4.71	21	Pn	Pn	21 16 55.8	+0.2
FRU1	Bishkek	4.91	21		Pn	21 17 00.9	+2.6
KK02	Karatay Array	5.01	346	⇓Pn	Pn	21 17 00.9	+1.3
	14nm,0.5s,baz=147,slow=12						
KK02				⇑Sn	Sn	21 18 01.9	+4.3
	26nm,0.5s,baz=137,slow=20						
KK02				⇑Lg	Lg	21 18 20.0	
	27nm,0.6s						
KKAR	Karatay Array	5.01	346	Pn	Pn	21 16 59.9	+0.2
BOOM	Boomskoye usch	5.10	33	Pn	Pn	21 17 00.9	-0.1
BRLS	Borolday	5.10	340	eP	Pb	21 17 15.7	+2.1
	21nm,0.2s						
BRLS				eS	Sb	21 18 18.5	+3.5
	31nm,0.7s						
BRLS	Borolday	5.10	340	ePn	Pn	21 16 58.2	-2.6
	baz=332						
BRLS				ePg	Pb	21 17 15.3	+1.7
	baz=332						
BRLS				eLg	Lg	21 18 19.3	
	baz=332						
BRLS	Borolday	5.10	340	Pg	Pb	21 17 12.0	-1.7
	22nm,0.7s						
BRLS				Lg	Lg	21 18 18.5	
	31nm,0.7s						
CHMS	Chumysh	5.12	21	P	Pn	21 17 01.1	0.0
	SNR=16						
TKM2	Tokmak 2	5.32	28	P	Pn	21 17 07.6	+3.5
	SNR=5.1						
TKM2	Tokmak 2	5.32	28	⇑Pn	Pn	21 17 05.6	+1.5
	4.6nm,0.6s						
TKM2				⇑Pg	Pb	21 17 18.8	+1.3
	25nm,1.0s						
TKM2				⇓Lg	Lg	21 18 22.1	
	73nm,1.1s						
KDJ	Kajisay	5.42	43		Pn	21 17 06.4	+1.0
SGDS	Sogindy	5.50	19	eP	Pn	21 17 02.8	-3.6
	baz=16						
SGDS				ePg	Pb	21 17 21.3	+0.7
	baz=16						
TARG	Taragay, Kyrgy	5.52	49		Pn	21 17 07.5	+0.5
TNSS	Tian-Shan	5.98	35	ePg	Pb	21 17 29.2	+0.3
	baz=35						
MDOK	Medeo	6.12	35	Pn	Pn	21 17 16.5	+1.5
	4.8nm,0.6s						
MDOK				Pg	Pb	21 17 31.1	0.0
	18nm,0.7s						
MDOK				Lg	Lg	21 18 46.0	
	54nm,1.1s						
KNDC	Almaty	6.13	35	⇑Pg	Pb	21 17 32.2	+1.0
	31nm,0.7s						
KNDC				⇑Lg	Lg	21 18 45.7	
	181nm,1.0s						
PRZ	Przheval'sk	6.33	46		Pn	21 17 17.9	-0.1
KUU	Kurty	6.43	28	ePg	Pb	21 17 37.1	+0.7
	baz=27						
SATY	Saty	6.72	42	ePg	Pb	21 17 41.9	+0.6
	baz=43						
DHRM	DHARAMSHALA	6.86	150	eP	Pn	21 17 26.8	+1.6
DHRM				eS	Sn	21 18 44.2	+0.7
DHRM				IAML		21 18 52.8	
	comp=E,92nm,0.4s						
DHRM				IAML		21 18 53.0	
	comp=N,72nm,0.6s						
UZB	Uzynbulak	7.11	44	ePg	Pb	21 17 49.8	+1.8
	baz=45						
PDGK	Podgornoye	7.49	45	⇑Pn	Pn	21 17 33.3	-0.4
	comp=N,6.7nm,0.8s						
PDGK				⇑Pg	Pb	21 17 57.8	+3.4
	comp=N,8.7nm,0.8s						
PDGK				⇓Lg	Lg	21 19 29.7	
	comp=N,19nm,0.9s						
TDK	Taldyqorghan	8.18	33	ePg	Pb	21 18 09.1	+3.1
	baz=32						
SMLA	Simla	8.20	149	eP	Pn	21 17 43.4	+0.1
SMLA				eS	Sn	21 19 13.6	-2.3
SMLA				IAML		21 19 21.0	
	comp=N,62nm,0.7s						
SMLA				IAML		21 19 22.6	
	comp=E,44nm,0.6s						
HRA	Herat	8.92	247	Pn	Pn	21 17 56.6	+3.1
GEYT	Alibeck	11.12	273	Pn	Pn	21 18 24.1	+0.7
	comp=E,1.1nm,0.3s,baz=104,slow=11,SNR=5.6						
GYA0B	ALIBECK ARRAY	11.12	273	Pn	Pn	21 18 25.0	+1.6
MAKZ	Makanchi	11.17	37	Pn	Pn	21 18 24.6	+0.5
MK31	Makanchi Array	11.31	38	Pn	Pn	21 18 25.2	-0.7
MKAR	Makanchi Array	11.31	38	Pn	Pn	21 18 26.0	+0.1
	comp=E,0.1nm,0.3s,baz=232,slow=13,SNR=8.8						
MKAR	Makanchi Array	11.31	38	Pn	Pn	21 18 25.9	0.0
KURBB	Kurchatov Arra	13.15	18	Pn	Pn	21 18 46.6	-4.5
	comp=E,0.1nm,0.3s,baz=205,slow=12,SNR=6.9						
KURK	Kurchatov	13.26	18		Pn	21 18 50.9	-1.6
JHNI	Jhansi	13.83	155	eP	Pn	21 18 57.3	-3.1
JHNI				eS	Sn	21 21 24.2	-10
AB31	Akbulak array	14.10	325	⇑P	P	21 19 09.4	-2.4
	comp=E,3.0nm,0.6s,baz=124,slow=11,SNR=59						
AB31				⇑S	Sn	21 21 46.8	+6.2
	comp=E,1.5nm,0.5s,baz=138,slow=24,SNR=4.9						
ABKAR	Akbulak array	14.10	325	Pn	Pn	21 19 00.7	-3.4
ABKAR	Akbulak array	14.10	325		Pn	21 19 01.2	-2.8
BVAR	Borovoye Array	14.82	356	Pn	Pn	21 19 12.4	-1.6
	comp=E,0.3nm,0.3s,baz=173,slow=27,SNR=6.8						
BRVK	Borovoye	14.87	355		Pn	21 19 15.4	+1.0
BHPL	Bhopal	15.62	162	eS	Sn	21 22 07.4	-10
AKTO	Aktyubinsk	15.82	325	Pn	Pn	21 19 26.4	-0.7
	comp=E,0.4nm,0.3s,baz=128,slow=13,SNR=4.9						
AKTO	Aktyubinsk	15.82	325	⇑P	P	21 19 32.6	+1.7
	comp=E,13nm,1.0s						
AKTO				⇑S	Sn	21 22 28.3	+5.9
	comp=E,2.9nm,0.8s						
ZAA0	Zalesovo Array	17.92	25		Pn	21 19 53.6	+0.1
ZALV	Zalesovo Beam	17.92	25	P	Pn	21 19 52.3	-1.2
	comp=E,0.4nm,0.3s,baz=216,slow=9.0,SNR=7.8						
ZALV	Zalesovo Beam	17.92	25		Pn	21 19 53.1	-0.3
ARU	Arti	20.33	338	P	P	21 20 20.4	-0.1
	comp=E,0.9nm,0.6s,baz=157,slow=11,SNR=5.3						
ARU	Arti	20.33	338	IAmb	IAmb	21 20 34.8	
	comp=Z,3.9nm,0.8s						
BELG	Belogornoye	22.19	318	P	P	21 20 39.8	-0.7
	comp=Z,21nm,0.8s,baz=322,slow=1.1,SNR=9.7						
ONI	Oni	22.27	290	P	P	21 20 43.3	+1.8
ONI				IAmb	IAmb	21 20 54.3	
	comp=Z,6.1nm,0.7s						
TLY	Talaya	25.74	48	P	P	21 21 15.3	+0.4
TLY				IAmb	IAmb	21 21 19.6	
	comp=Z,5.4nm,0.9s						
SONM	Songino Array	26.56	58	P	P	21 21 20.6	-1.9
	comp=Z,0.3nm,0.7s,baz=256,slow=8.3,SNR=1.9						
BURAR	Bucovina Array	35.18	301	P	P	21 22 40.2	+1.7
BURAR				IAmb	IAmb	21 22 46.3	
	comp=Z,1.0nm,1.0s						
FINES	FINESS Array B	36.59	324	P	P	21 22 49.8	-0.4
	comp=Z,2.7nm,0.7s,baz=115,slow=8.4,SNR=9.6						
ARCES	ARCESS Array B	39.91	336	P	P	21 23 17.5	-0.6
	comp=Z,2.4nm,0.6s,baz=74,slow=6.4,SNR=11						
GERES	GERESS Array B	42.73	304	P	P	21 23 43.3	+1.6
	comp=Z,0.2nm,0.5s,baz=62,slow=9.5,SNR=4.0						
GERES	GERESS Array B	42.73	304	P	P	21 23 41.8	+0.1
SGRT	San Giovanni R	42.74	293	P	P	21 23 42.8	+1.0
NB2	NORSAR Subarra	43.58	322	P	P	21 23 47.2	-1.1
	comp=Z,0.5nm,0.5s,baz=89,slow=7.9						
NOA	NORSAR Array B	43.58	322	P	P	21 23 47.8	-0.5
	comp=Z,1.2nm,0.8s,baz=91,slow=7.7,SNR=3.4						
SEY	Seymchan	52.42	35	LR	LR	21 49 21.5	
	comp=Z,121nm,19.7s,baz=154,slow=39						
ESDC	Sonseca Array	57.50	297	P	P	21 25 34.3	+0.5
	comp=Z,0.3nm,0.5s,baz=39,slow=7.6,SNR=4.1						
TORD	Torodi Ar. Bea	66.73	269	P	P	21 26 35.8	-0.2
	comp=Z,0.7nm,0.6s,baz=49,slow=5.7,SNR=7.1						
ILAR	Eielson Array	72.83	16	P	P	21 27 13.4	+0.6
	comp=Z,0.6nm,0.9s,baz=296,slow=3.4,SNR=4.7						
YKA	Yellowknife Ar	79.44	3	P	P	21 27 48.7	-1.7
	comp=Z,0.4nm,0.5s,baz=350,slow=5.4,SNR=10						

IDC ***18*** *21:25:56.8±3.2, 15°.73N×93°.49W, h63^{km}±34^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.5/39, mbtmp4.0/5, ML3.8/1, Error ellipse: s-maj=69.2km s-min=22.0km az=54.0*
NEIC ***18*** *21:25:58.7±1.3, 15°.71N±0°.06×93°.77W±0°.02, h88^{km}±11^{km}, Error ellipse: s-maj=9.0km s-min=1.9km az=186.0*
MEX ***18*** *21:25:58.9±1.9, 15°.61N×93°.82W, h89^{km}±21^{km}, MD4.4*
GCG ***18*** *21:26:00.9±0.7, 15°.79N×93°.55W, h30^{km}±616^{km}, MD4.3*
ISC 18 21:25:55.3±1.3**, 15°.60N**±0°.04×**93°.89W**±0°.02**, h28**^{km}±12^{km}**, n50, σ2^s.23**/65**, mb4.2**/6**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.65	80		Pn	21 26 13.2	+4.5
PCIG					Sn	21 26 24.1	+6.1
PCIG		0.65	80	i P	Pn	21 26 13.2	+4.5
PCIG				eS	Sn	21 26 24.1	+6.1
TGIG		1.39	32		Pb	21 26 21.0	+0.3
TGIG					Sn	21 26 36.4	+0.1
TGIG		1.39	32	eP	Pb	21 26 21.0	+0.3
TGIG				eS	Sn	21 26 36.4	+0.1
UXUV	UXUV	1.73	352	eP	Pb	21 26 26.2	-0.2
UXUV				eS	Sb	21 26 46.4	-1.4
CMIG	Matias Romero	1.77	327	P	Pb	21 26 28.1	+1.0
	65nm,0.3s,baz=153,slow=13,SNR=583						
CMIG				S	Sb	21 26 50.0	+1.1
	212nm,0.3s,baz=352,slow=13,SNR=61						
CMIG	Matias Romero	1.77	327		Pb	21 26 28.0	+0.9
CMIG					Sb	21 26 49.7	+0.8
CMIG	Matias Romero	1.77	327	eP	Pb	21 26 28.0	+0.9
CMIG				eS	Sb	21 26 49.7	+0.8
CCIG	Comitan	1.81	68		Pb	21 26 27.0	-1.0
CCIG	Comitan	1.81	68		Sn	21 26 47.7	+0.7
CCIG	Comitan	1.81	68	eP	Pb	21 26 26.6	-1.4
CCIG				eS	Sn	21 26 47.7	+0.7
HUIG	Huatulco	2.15	275		Pb	21 26 33.3	-0.3
HUIG					Sn	21 26 58.2	+3.1
HUIG	Huatulco	2.15	275	eP	Pb	21 26 33.3	-0.3
HUIG				eS	Sn	21 26 58.2	+3.1
HUEH	Huehuetenango	2.31	97		Pb	21 26 34.9	-1.7
RTAL	Retalhuleu	2.37	116	Pn	Pb	21 26 35.4	-1.9
RTAL					Sn	21 27 01.3	+0.8
STG3	Santiaguito 3,	2.40	111	eP	Pb	21 26 36.6	-1.4
STG3				eS	Sn	21 27 03.3	+1.8
VHO	Vista Hermosa	3.10	299	eP	Pb	21 26 47.4	-2.6
VHO				eS	Sn	21 27 20.4	+1.5
FUG	Fuego 3	3.15	111	eP	Pn	21 26 46.2	+2.9
FUG				eS	Sn	21 27 21.7	+1.6
PEIG	Puerto Escondi	3.17	278	eP	Pn	21 26 46.9	+3.5
PEIG				eS	Sn	21 27 19.3	-0.9
NBG	Las Nubes	3.56	106	eS	Sn	21 27 32.2	+1.9
YOIG	Yosondua	3.73	290	eP	Pb	21 26 57.0	-3.7
YOIG				eS	Sn	21 27 35.8	+1.2
TOIG	Toxpalan	3.93	310	eP	Pn	21 26 57.1	+3.2
TOIG				eS	Sn	21 27 38.1	-1.1
PETF	Flores	4.08	71		Pn	21 26 57.0	+1.2
PETF				Sn	Sn	21 27 39.3	-3.4
MRL	Marmol	4.08	97	eP	Pn	21 26 58.3	+2.2
MRL				eS	Sn	21 27 41.6	-1.6
PNIG	Pinotepa	4.16	282		Sn	21 27 44.5	-0.1
PNIG	Pinotepa	4.16	282	eP	Pn	21 26 51.8	-5.1
PNIG				eS	Sn	21 27 44.5	-0.1
SCIG	Sabancuy	4.23	37		Sn	21 27 37.5	-8.9
SCIG	Sabancuy	4.23	37	eP	Pn	21 26 58.0	+0.1
SCIG				eS	Sn	21 27 37.5	-8.9
ESQI	Esquipulas	4.51	103	Pn	Pn	21 27 03.6	+1.7
MTO3	Montecristo	4.53	105		Pn	21 27 03.9	+1.6
FTIG	Fresnillo de T	4.67	300	eP	Pn	21 27 10.3	+6.1
FTIG				eS	Sn	21 27 55.2	-2.3
HZTE	Horizontes, Gu	9.42	120	Pn	Pn	21 28 11.2	+1.9
ORTG	Ortega, Santa	9.72	121		Pn	21 28 14.9	+1.5
RIMA	Rio Macho	11.36	119		Pn	21 28 37.7	+1.6
PEZE	Perez Zeledon,	11.72	121	Pn	Pn	21 28 42.2	+1.3
SRBA	San Rafael, Bu	12.07	120	Pn	Pn	21 28 47.0	+1.4
RIOS	Rincon, Osa	12.23	123	Pn	Pn	21 28 49.0	+1.2
LCCY	Blossom Villag	13.77	71	Pn	Pn	21 29 08.6	-0.1
TXAR	Lajitas Array	16.38	328	P	Pn	21 29 45.1	+1.8
	0.1nm,0.3s,baz=152,slow=14,SNR=10						
TXAR	Lajitas Array	16.38	328	P	Pn	21 29 43.5	+0.1
TX31	Lajitas Ar. Si	16.38	328		Pn	21 29 44.4	+1.0
PAYG	Puerto Ayora	16.55	167	Pn	Pn	21 29 44.5	-1.2
GTBY	Guantanamo Bay	18.39	74	P	P	21 30 03.7	-4.5
GTBY				IAmb	IAmb	21 30 32.0	
	comp=Z,42nm,1.2s						
121A	Cookes Peak, D	21.07	326	P	P	21 30 36.4	-1.2
121A				IAmb	IAmb	21 30 40.0	
	comp=Z,6.9nm,0.9s						
WCI	Wyandotte Cave	23.52	15	P	P	21 31 00.4	-2.7
WCI				IAmb	IAmb	21 31 22.6	
	comp=Z,11nm,1.1s						
CRPR	Cabo Rojo, PR	25.74	81	P	P	21 31 18.0	-5.6
NVAR	Mina Array Bea	31.29	321	P	P	21 32 14.2	+0.9
	comp=Z,0.6nm,0.4s,baz=120,slow=8.9,SNR=7.3						
SIV	San Ignacio	45.11	133	P	P	21 34 05.4	-4.1
	comp=Z,2.0nm,0.5s,baz=302,slow=10,SNR=7.5						
YKA	Yellowknife Ar	49.07	347	P	P	21 34 36.1	-3.6
	comp=Z,0.7nm,0.5s,baz=152,slow=7.4,SNR=9.8						
ARCES	ARCESS Array B	85.19	18	P	P	21 38 23.9	-4.9
	comp=Z,1.2nm,0.5s,baz=287,slow=4.2,SNR=7.1						

IDC ***18*** *21:37:17.7±4.5, 52°.34N×175°.08E, h41^{km}±39^{km}, mb3.9/12, mb1 4.0/14, mb1mx3.7/42, mbtmp4.1/14, ML3.7/2, MS3.3/2, Ms1 3.3/2, ms1mx2.6/58, Error ellipse: s-maj=52.9km s-min=18.4km az=177.0*
NEIC ***18*** *21:37:20.1±1.5, 52°.3N±0°.2×175°.0E±0°.2, h58^{km}±8^{km}, mb4.3/22, Error ellipse: s-maj=23.7km s-min=9.7km az=205.0*
ISC 18 21:37:16.6±0.9**, 52°.1N**±0°.2×**175°.02E**±0°.07**, h35**^{km}**, n58, σ1^s.02**/51**, mb4.4**/27**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	0.83	318		Pn	21 37 32.3	+0.5
SMY				Sn	Sn	21 37 44.4	+1.6
PEA0B	Petropavlovsk-	10.58	282	Pn	Pn	21 39 48.0	+2.4
PETK	Petropavlovsk-	10.58	282	P	Pn	21 39 47.7	+2.1
	0.4nm,0.3s,baz=96,slow=18,SNR=2.9						
UNV	Unalaska Valle	11.27	74	Pn	Pn	21 39 57.5	+2.6
Q19K	Cape Douglas,	18.87	57	P	P	21 41 34.4	+0.9
OHAK	Old Harbor	18.91	62	P	P	21 41 33.5	-0.5
OHAK				IAmb	IAmb	21 41 42.9	
	comp=Z,15nm,1.2s						
ILSW	Iliamna Southw	19.28	53	P	P	21 41 37.8	-0.4
KDAK	Kodiak Island	19.32	60	P	P	21 41 36.9	-1.6
	comp=Z,1.7nm,0.3s,baz=252,slow=2.8,SNR=12						
KDAK	Kodiak Island	19.32	60	P	P	21 41 37.8	-0.6
KDAK				IAmb	IAmb	21 41 48.5	
	comp=Z,13nm,0.9s						
RSO	Redoubt South	19.56	52	P	Pn	21 41 43.6	+0.8
J20K	Nowinta River	20.01	41	P	P	21 41 46.1	+0.2
J20K				IAmb	IAmb	21 41 57.6	
	comp=Z,24nm,1.4s						
CNPM	China Poot	20.17	55	P	P	21 41 47.8	+0.1
IMAR	Indian Mountai	20.91	36	P	P	21 41 56.0	+0.3
H21K	Melozitna Rive	21.12	38	P	P	21 41 58.3	+0.3
MLY	Manley	21.69	40	P	P	21 42 05.0	+0.9
A21K	Barrow	23.06	23	P	P	21 42 17.8	-0.6
A21K				IAmb	IAmb	21 42 19.1	
	comp=Z,9.6nm,0.8s						
H24K	Noodor Dome	23.09	39	P	P	21 42 18.2	-0.7
ILAR	Eielson Array	23.18	42	P	P	21 42 18.1	-1.6
	comp=Z,0.5nm,0.5s,baz=253,slow=7.3,SNR=5.6						
TOLK	Toolik Lake Re	23.56	32	P	P	21 42 23.5	0.0
TOLK				IAmb	IAmb	21 42 24.4	
	comp=Z,6.8nm,0.6s						
FYU	Fort Yukon	24.33	38	P	P	21 42 31.1	+0.5
FYU				IAmb	IAmb	21 42 48.0	
	comp=Z,13nm,1.2s						
WAX	Waxell Ridge	24.43	53	P	P	21 42 31.6	-0.1
WAX				IAmb	IAmb	21 42 47.0	
	comp=Z,25nm,1.3s						
BMAR	Burnt Mountain	24.84	37	P	P	21 42 36.6	+1.3
BARN	Barnard Glacie	25.03	52	P	P	21 42 37.3	+0.1
BARN				IAmb	IAmb	21 42 49.3	
	comp=Z,9.3nm,1.2s						
LOGN	Logan Glacier	25.35	53	P	P	21 42 41.6	+1.5
LOGN				IAmb	IAmb	21 42 44.3	
	comp=Z,9.8nm,1.2s						
YAK	Yakutsk	26.02	310	P	P	21 42 44.9	-1.0
	comp=Z,9.1nm,0.6s,baz=128,slow=1.7,SNR=12						
YAK	Yakutsk	26.02	310	P	P	21 42 44.9	-1.0
DLBC	Dease Lake	31.15	56	LR	LR	21 55 22.2	
	comp=Z,95nm,18.6s,baz=220,slow=35						
H11N2	WAKE ISLAND Hy	32.94	194	T	T	22 18 27.6	
	baz=9.4,slow=76,SNR=73						
H11N3	WAKE ISLAND Hy	32.95	194	T	T	22 18 35.7	
	baz=9.4,slow=76,SNR=86						
H11N1	WAKE ISLAND Hy	32.96	194	T	T	22 18 29.1	
	baz=9.4,slow=76,SNR=85						
H11S1	WAKE ISLAND Hy	34.17	194	T	T	22 20 08.6	
	baz=9.2,slow=76,SNR=35						
H11S3	WAKE ISLAND Hy	34.19	194	T	T	22 20 06.6	
	baz=9.2,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	34.19	194	T	T	22 20 10.4	
	baz=9.2,slow=76,SNR=26						
SONM	Songino Array	42.84	293	P	P	21 45 11.2	+0.1
	comp=Z,1.5nm,0.6s,baz=65,slow=8.0,SNR=13						
SONM				LR	LR	22 04 48.5	
	comp=Z,24nm,19.4s,baz=222,slow=39						
SONM	Songino Array	42.84	293	IAmb	IAmb	21 45 11.7	
	comp=Z,1.1nm,0.6s						
VCNR	Virginia City	45.87	79	P	P	21 45 36.7	+1.2
LOHW	Long Hollow	48.57	69	P	P	21 45 55.0	-1.5
LOHW				IAmb	IAmb	21 45 55.6	
	comp=Z,5.0nm,0.8s						
SPITS	Spitsbergen Ar	49.31	354	P	P	21 46 00.7	-0.7
	comp=Z,4.3nm,0.4s,baz=57,slow=9.2,SNR=9.6						
ZALV	Zalesovo Beam	50.67	310	P	P	21 46 10.9	-1.2
	comp=Z,0.6nm,0.4s,baz=51,slow=5.7,SNR=2.3						
KURK	Kurchatov	55.66	310	P	P	21 46 48.2	-0.6
MKAR	Makanchi Array	56.51	305	P	P	21 46 53.7	-1.2
	comp=Z,1.4nm,0.4s,baz=55,slow=6.5,SNR=43						
ARCES	ARCESS Array B	56.62	348	P	P	21 46 54.2	-1.3
	comp=Z,10nm,1.2s,baz=27,slow=8.3,SNR=4.5						
MAKZ	Makanchi	56.65	305	P	P	21 46 55.1	-0.9
MAKZ				IAmb	IAmb	21 47 10.1	
	comp=Z,6.3nm,1.3s						
TXAR	Lajitas Array	62.29	77	P	P	21 47 35.0	-0.1
	comp=Z,0.2nm,0.4s,baz=297,slow=4.4,SNR=3.8						
FINES	FINESS Array B	64.11	344	P	P	21 47 45.5	-1.0
	comp=Z,3.1nm,0.9s,baz=68,slow=8.0,SNR=2.0						
ABKAR	Akbulak array	64.94	319	P	P	21 47 52.1	-0.1
ABKAR				IAmb	IAmb	21 47 52.7	
	comp=Z,1.8nm,0.8s						
ABKAR	Akbulak array	64.94	319	P	P	21 47 51.8	-0.4
KKAR	Karatay Array	64.98	309	P	P	21 47 52.3	-0.3
NB2	NORSAR Subarra	66.45	351	P	P	21 48 01.1	-0.7
	comp=Z,0.7nm,0.5s,baz=8.3,slow=6.2						
NOA	NORSAR Array B	66.45	351	P	P	21 48 00.8	-1.0
	comp=Z,0.9nm,0.5s,baz=3.5,slow=5.0,SNR=8.0						
GUN	Gumba	67.99	287	eP	P	21 48 12.6	+0.1
	comp=Z,7.3nm,0.4s						
JIRN	Jiri	67.99	287	eP	P	21 48 12.6	+0.1
	comp=Z,2.8nm,0.3s						
KKN	Kakani	68.43	288	eP	P	21 48 14.8	-0.3
	comp=Z,5.7nm,0.5s						
PKI	Pulchoki	68.52	287	eP	P	21 48 15.1	-0.7
	comp=Z,5.0nm,0.4s						
PKIN	Phulchoki	68.52	287	eP	P	21 48 15.2	-0.5
	comp=Z,5.7nm,0.5s						
AKASG	Malin Array Be	73.54	338	P	P	21 48 44.5	-0.9
	comp=Z,0.9nm,0.5s,baz=26,slow=6.6,SNR=6.4						
KBZ	Khabaz	75.97	326	P	P	21 49 00.2	+0.6
	comp=Z,1.6nm,0.9s,baz=0.0,slow=7.1,SNR=4.6						
BRTR	Keskin Array B	82.55	331	P	P	21 49 35.7	-0.1
	comp=Z,1.0nm,0.7s,baz=58,slow=2.0,SNR=8.3						

TUL ***18*** *22:01:29.5±0.5, 36°.84N±0°.02×98°.27W±0°.05, h4^{km}±3^{km}, ML2.8, mb_Lg2.5/19(NEIC), Error ellipse: s-maj=5.5km s-min=2.7km az=111.0*
NEIC 18 22:01:30.1±0.8**, 36°.82N**±0°.02×**98°.25W**±0°.04**, h5**^{km}±2^{km}**, Error ellipse: s-maj=6.3km s-min=3.2km az=290.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.03	111	Pg	Pg	22 01 31.4	+0.2
KAN14	Manchester OK	0.27	58		Pg	22 01 35.4	+0.1
GC02	Grant County #	0.31	83	Pg	Pg	22 01 36.3	+0.1
KAN10	Anthony SW Sta	0.33	22	Pg	Pg	22 01 36.0	-0.5
CROK	Carrier	0.38	145	Pg	Pg	22 01 37.7	+0.3
OK035	E0210 Rd and N	0.39	254	Pg	Pg	22 01 37.2	-0.3
KAN05	Bluff City Nor	0.42	46		Pg	22 01 38.0	-0.2
KAN16	Harper SW Stat	0.43	20	Pg	Pg	22 01 38.1	-0.4
KAN17	Caldwell West	0.45	59	Pg	Pg	22 01 38.6	-0.1
KAN08	Anthony NE Sta	0.47	28		Pg	22 01 38.7	-0.4
KAN01	Argonia South	0.52	49		Pg	22 01 39.8	-0.2
KAN12	Harper NE Stat	0.52	23	Pg	Pg	22 01 39.7	-0.4
KAN06	Argonia West S	0.53	36		Pg	22 01 40.0	-0.3
KAN09	Caldwell North	0.60	57	Pg	Pg	22 01 41.3	-0.3
KAN13	South Haven SW	0.65	72	Pg	Pg	22 01 42.4	-0.2
U32A	Winter Ranch,	0.75	235	Pg	Pg	22 01 44.0	-0.4
BLOK	Blackwell	0.83	93	Pg	Pg	22 01 45.8	-0.2
OK029	Liberty Lake	1.20	148	Pg	Pg	22 01 52.3	-0.8
BCOK	Bluff Creek, N	1.27	156	Pn	Pg	22 01 53.4	-0.9
T35A	Sooner Cattle	1.40	85		Pn	22 01 55.9	-0.3
QUOK	Quay	1.40	117		Pn	22 01 56.2	-0.1
OK031	S. Brethren Rd	1.43	127		Sg	22 02 16.6	+0.7
OK025	Westminster Rd	1.44	149		Pn	22 01 56.6	-0.2
OK034	N. Norfolk Rd.	1.48	123	Pn	Pn	22 01 57.2	-0.1
OK030	Cody Creek RV	1.48	126	Pn	Pn	22 01 57.3	0.0
R32A	Long Quarter,	1.65	347	Pn	Pn	22 01 59.5	-0.2
FNO	Franklin	1.70	156	Pn	Pn	22 02 01.0	+0.6
W35A	Tecumseh	2.00	146		Pn	22 02 04.5	0.0
WMOK	Wichita Mounta	2.12	192	Pn	Pn	22 02 06.3	+0.1
TUL1	Leonard	2.18	114	Pn	Pn	22 02 07.0	+0.1
X34A	Smith Ranch, M	2.24	171		Pn	22 02 08.8	+1.1
CBKS	Cedar Bluff	2.32	330	Pn	Pn	22 02 09.0	+0.1
CBKS				IAmb_Lg		22 02 45.6	
	comp=Z,19nm,0.7s						

KSU1	Kansas State U	2.62	29	Pn	Pn	22 02 13.5	+0.4
KSU1				IAmb_Lg		22 02 57.9	
	comp=Z,16nm,0.8s						
LOOK	Love County	2.95	162	Pn	Pn	22 02 17.9	+0.3
U38A	Gravette	3.13	96	Pn	Pn	22 02 20.0	-0.1
U38A				IAmb_Lg		22 03 17.2	
	comp=Z,8.0nm,0.8s						
X37A	Clayton	3.23	133	Pn	Pn	22 02 21.3	-0.1
AMTX	Amarillo	3.39	236	Pn	Pn	22 02 24.0	+0.3
AMTX				IAmb_Lg		22 03 20.9	
	comp=Z,13nm,0.7s						
HHAR	Hobbs	3.51	97	Pn	Pn	22 02 25.2	-0.1
HHAR				IAmb_Lg		22 03 25.2	
	comp=Z,12nm,0.7s						
W39A	Magazine	3.96	113	Pn	Pn	22 02 30.9	-0.6
S39A	Bolivar	4.03	76	Pn	Pn	22 02 31.9	-0.5
S39A				IAmb_Lg		22 03 42.4	
	comp=Z,8.4nm,0.8s						
KSCO	Kaye Shedlock'	4.10	304	IAmb_Lg		22 03 37.6	
	comp=Z,10nm,0.8s						
MSTX	Muleshoe	4.66	234	IAmb_Lg		22 03 57.7	
	comp=Z,12nm,1.2s						
T25A	Trinidad	4.94	276	IAmb_Lg		22 04 09.4	
	comp=Z,13nm,0.8s						
X40A	Basin Creek Fa	4.98	116	IAmb_Lg		22 04 18.9	
	comp=Z,7.2nm,1.0s						
OGNE	Ogallala	5.07	326	IAmb_Lg		22 04 10.7	
	comp=Z,12nm,0.8s						

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*NEIC **18** 22:08:22.6±1.7, 23°.4S±0°.1×179°.7W±0°.1, h538^{km}±12^{km}, mb4.4/29, Error ellipse: s-maj=20.2km s-min=18.5km az=172.0*

*IDC **18** 22:08:22.6±1.8, 23°.46S×179°.95W, h522^{km}±19^{km}, mb3.6/9, mb1 3.8/11, mb1mx3.3/45, mbtmp4.5/11, Error ellipse: s-maj=20.9km s-min=18.4km az=21.0*

ISC 18 22:08:22.5±0.6**, 23°.42S**±0°.09×**179°.85W**±0°.08**, h532**^{km}**, n50, σ1^{s}04**/51**, mb4.2**/20**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.99	340	P	P	22 10 00.8	+0.4
	4.7nm,0.3s,baz=134,slow=16,SNR=48						
NIUE	Niue	10.21	67	P	P	22 10 41.8	-0.7
MARNC	Mare, Loyalty	11.37	277	P	P	22 10 55.4	+0.9
PINNC	Pines Island,	11.72	271	P	P	22 10 59.5	+1.3
OUZ	Omahuta	13.07	204	P	P	22 11 10.8	-1.1
URZ	Urewera	15.02	189	P	P	22 11 31.6	-0.7
	2.3nm,0.3s,baz=121,slow=22,SNR=11						
URZ	Urewera	15.02	189	IAmb	IAmb	22 11 33.0	
	comp=Z,12nm,0.6s						
BKZ	Black Stump Fm	16.00	190	P	P	22 11 39.8	-2.6
BKZ				IAmb	IAmb	22 11 45.9	
	comp=Z,9.7nm,0.7s						
BFZ	Birch Farm	17.52	190	P	P	22 11 54.8	-1.9
QRZ	Quartz Range	18.50	198	P	P	22 12 06.3	+0.7
NNZ	Nelson	18.63	196	P	P	22 12 06.5	-0.3
NNZ				IAmb	IAmb	22 12 18.4	
	comp=Z,16nm,1.1s						
LTZ	Lake Taylor	20.39	197	P	P	22 12 23.3	+0.5
LTZ				IAmb	IAmb	22 12 25.2	
	comp=Z,12nm,0.7s						
MLZ	Mavora Lakes	23.98	201	P	P	22 12 54.8	-0.2
MLZ				IAmb	IAmb	22 13 00.2	
	comp=Z,6.7nm,0.9s						
WHZ	Wether Hill Ro	24.50	201	P	P	22 13 00.6	+1.0
ARMA	Armidale	26.32	248	P	P	22 13 16.9	+0.9
EIDS	Eidsvold	26.52	260	P	P	22 13 18.5	+0.7
EIDS				IAmb	IAmb	22 13 18.5	
	comp=Z,5.0nm,0.7s						
CAN	Canberra	29.50	239	P	P	22 13 44.4	+0.7
CAN				IAmb	IAmb	22 13 45.8	
	comp=Z,7.7nm,1.0s						
CTA	Charters Tower	31.61	269	P	P	22 14 02.0	0.0
	comp=Z,14nm,0.4s,baz=95,slow=10,SNR=16						
CTAO	Charters Tower	31.61	269	P	P	22 14 02.5	+0.5
TOO	Toolangi	32.82	236	P	P	22 14 12.1	0.0
PMG	Port Moresby	34.47	288	P	P	22 14 26.3	+0.1
	comp=Z,4.8nm,0.4s,baz=116,slow=7.5,SNR=4.0						
MCQ	Macquarie Isla	34.85	202	P	P	22 14 29.6	+0.8
STKA	Stephens Creek	35.03	247	P	P	22 14 31.0	+0.4
	comp=Z,3.7nm,0.5s,baz=96,slow=9.8,SNR=14						
STKA	Stephens Creek	35.03	247	IAmb	IAmb	22 14 31.7	
	comp=Z,0.7nm,0.7s						
COEN	Coen	36.17	278	P	P	22 14 40.2	-0.2
COEN				IAmb	IAmb	22 14 42.7	
	comp=Z,8.2nm,1.1s						
BBOO	Buckleboo	39.76	246	P	P	22 15 08.6	-0.7
AS31	Alice Springs	42.25	260	P	P	22 15 29.2	-0.1
ASAR	Alice Springs	42.25	260	P	P	22 15 29.1	-0.3
	comp=Z,6.1nm,0.8s,baz=100,slow=7.0,SNR=55						
ASAR				ScP	ScP	22 20 13.1	+2.0
	comp=Z,1.3nm,0.9s,baz=103,slow=3.3,SNR=7.1						
ASAR				S	S	22 21 08.1	-3.4
	comp=Z,0.6nm,0.6s,baz=97,slow=14,SNR=8.0						
ASAR	Alice Springs	42.25	260	P	P	22 15 28.8	-0.5
WR0	Warramunga Arr	42.39	266	P	P	22 15 29.7	-0.8
WR0				IAmb	IAmb	22 15 30.3	
	comp=Z,6.5nm,0.9s						
WB2	Warramunga Arr	42.56	266	P	P	22 15 31.0	-0.8
WB2				IAmb	IAmb	22 15 31.6	
	comp=Z,9.5nm,0.8s						
WB0	Warramunga Arr	42.57	266	P	P	22 15 31.1	-0.7
WB0				IAmb	IAmb	22 15 31.6	
	comp=Z,7.9nm,0.7s						
WRAB	Tennant Creek	42.57	266	P	P	22 15 31.1	-0.8
WRAB				IAmb	IAmb	22 15 31.6	
	comp=Z,7.3nm,0.9s						
WRA	Warramunga Arr	42.58	266	P	P	22 15 31.0	-0.9
	comp=Z,6.1nm,0.5s,baz=92,slow=8.4,SNR=80						
WRA	Warramunga Arr	42.58	266	P	P	22 15 31.2	-0.8
FORT	Forrest	46.60	249	P	P	22 16 02.0	-0.8
MTN	Manton Dam	47.55	274	P	P	22 16 09.1	-1.0
MTN				IAmb	IAmb	22 16 26.2	
	comp=Z,18nm,1.1s						
FITZ	Fitzroy Crossi	51.00	265	P	P	22 16 35.7	+0.1
	comp=Z,2.1nm,0.5s,baz=84,slow=4.4,SNR=6.5						
VNDA	Vanda	54.87	185	P	P	22 17 02.6	+0.4
	comp=Z,1.4nm,0.7s,baz=0.4,slow=5.6,SNR=11						
VNDA				PcP	PcP	22 17 57.0	+0.8
	comp=Z,0.8nm,0.7s,baz=339,slow=3.3,SNR=1.9						
VNDA	Vanda	54.87	185	P	P	22 17 03.3	+1.1
QSPA	South Pole Qui	66.66	180	P	P	22 18 21.3	+1.1
QSPA				IAmb	IAmb	22 18 21.9	
	comp=Z,11nm,0.8s						
BELA	Belgrano 2	76.89	173	P	P	22 19 19.1	-0.2
BELA				IAmb	IAmb	22 19 19.9	
	comp=Z,7.1nm,0.7s						
SNAA	Sanae	85.14	179	P	P	22 20 01.1	-1.0
VNA3	Neumayer Olymp	85.34	177	P	P	22 20 02.1	-0.9
VNA2	Neumayer--Watz	85.76	178	P	P	22 20 04.4	-0.6
	baz=194,slow=3.9						
CMAR	Chiang Mai Arr	89.49	290	P	P	22 20 23.8	+0.4
	comp=Z,1.1nm,0.3s,baz=90,slow=5.4,SNR=0.8						
SRU	San Rafael Swe	89.77	47	P	P	22 20 23.1	-1.4
TXAR	Lajitas Array	90.06	58	P	P	22 20 27.0	+1.1
	comp=Z,0.6nm,0.7s,baz=212,slow=6.8,SNR=9.5						
MMAI	Mount Meron Ar	147.62	295	PKPbc	PKPbc	22 27 08.2	+0.6
	comp=Z,0.9nm,0.5s,baz=68,slow=7.7,SNR=4.2						
CLL	Collm	150.44	344	i PKPbc	PKPbc	22 27 12.9	-0.8
	comp=Z,9.0nm,0.9s						

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*BGR **18** 22:13:11.6±0.0, 17°.47S×177°.61W, h33^{km}*

*BJI **18** 22:14:08.8±0.0, 16°.78S×178°.43W, h554^{km}, mB5.2/13, mb5.0/33*

*NEIC **18** 22:14:09.2±1.8, 17°.07S±0°.09×178°.96W±0°.09, h530^{km}±5^{km}, mb5.1/347, Error ellipse: s-maj=13.5km s-min=11.0km az=135.0*

*MOS **18** 22:14:09.8±0.9, 16°.95S×179°.06W, h552^{km}, mb5.1/12, Error ellipse: s-maj=9.1km s-min=8.7km az=25.2*

*NOU **18** 22:14:10.0, 17°.10S×178°.89W, h549^{km}, mb4.9/76, Fiji Islands Region*

*IDC **18** 22:14:11.8±0.6, 17°.02S×179°.05W, h565^{km}±6^{km}, mb4.5/33, mb1 4.5/36, mb1mx4.2/53, mbtmp5.3/36, Error ellipse: s-maj=11.2km s-min=7.2km az=157.0*

*GCMT **18** 22:14:12.2±0.4, 16°.95S±0°.05×178°.82W±0°.03, h558^{km}±2^{km}, MW5.5/61, Moment Tensor Solution. s61,c82; Duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.40±.06; $M_{\theta\theta}$-0.53±.11; $M_{\phi\phi}$0.93±.08; $M_{r\theta}$-1.41±.10; $M_{\theta\phi}$1.10±.09; $M_{\phi r}$-0.37±.09; Best double couple: $M_0$1.99800×10^{17} NP1:ϕ_s167.00000°, δ42.00000°, λ-168.00000°. NP2:ϕ_s69.00000°, δ82.00000°, λ-49.00000°. Principal axes: T 2.0040, Plg26.0000°, Azm128.0000°; N -0.0120, Plg41.0000°, Azm242.0000°; P -1.9920, Plg38.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 18 22:14:09.0±0.2**, 16°.93S**±0°.04×**178°.96W**±0°.05**, h533**^{km}**, n1053, σ1^{s}16**/918**, mb5.1**/221**, 77C-119D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAVE	Taveuni	0.94	283	P	P	22 15 16.7	+3.2
DGTI	Dogotuki	1.40	296	P	P	22 15 17.4	+2.6
MSVF	Nonsavu	2.97	254	P	P	22 15 26.0	+3.4
	baz=116,slow=9.9						
MSVF				S	S	22 16 29.0	+6.6
	4.7nm,0.3s,baz=303,slow=23,SNR=28						
MSVF	Nonsavu	2.97	254	P	P	22 15 25.3	+2.8
MSVF				S	S	22 16 28.3	+5.9
MSVF	Nonsavu	2.97	254	P	P	22 15 26.0	+3.4
AFI	Afiamalu	7.54	68	P	P	22 16 00.6	-1.3
	19nm,0.3s,baz=7.4,slow=2.8,SNR=12						
FUNA	Funafuti	8.54	348		P	22 16 12.6	+0.7
NIUE	Niue	8.85	105	P	P	22 16 15.1	+0.2
RTV	Rentapao	12.08	264	P	P	22 16 49.8	+1.4
DVP	Devils Point	12.30	264	P	P	22 16 51.7	+1.0
RAO	Raoul Island	12.30	176	P	P	22 16 48.9	-1.7
RAO	Raoul Island	12.30	176	P	P	22 16 48.9	-1.7
GLKZ	Green Lake	12.31	176	P	P	22 16 49.9	-0.8
GLKZ				S	S	22 18 49.5	-14
MARNC	Mare, Loyalty	13.10	248	P	P	22 16 58.1	-0.9
MARNC	Mare, Loyalty	13.10	248	P	P	22 16 58.7	-0.3
SANVU	Saraoutou	13.38	274	P	P	22 17 01.4	-0.6
LIFNC	LIFOU	13.62	252	P	P	22 17 03.0	-1.3
LIFNC	LIFOU	13.62	252	P	P	22 17 03.1	-1.3
PINNC	Pines Island,	13.99	244	P	P	22 17 07.5	-0.7
YATNC	Mamie plateau,	14.29	247	P	P	22 17 13.6	+2.2
OUENC	Ouen Island, N	14.45	246	P	P	22 17 12.8	-0.2
DZM	Mont Dzumac	14.68	247	eP	P	22 17 13.0	-2.6
	92nm,1.2s						
DZM	Mont Dzumac	14.68	247	P	P	22 17 14.8	-0.8
	2.3nm,0.3s,baz=66,slow=20,SNR=21						
DZM	Mont Dzumac	14.68	247	P	P	22 17 14.2	-1.4
DZM	Mont Dzumac	14.68	247	P	P	22 17 15.8	+0.2
ONTNC	Ouen Toro	14.75	246	P	P	22 17 13.4	-2.8
NOUC	Port Laguerre	14.82	247	P	P	22 17 18.7	+1.8
KNTN	Kanton	15.76	28	P	P	22 17 26.4	-0.4
KNTN	Kanton	15.76	28	P	P	22 17 26.7	0.0
RAR	Rarotonga	18.62	106	P	P	22 17 53.7	+0.3
	3.1nm,0.3s,baz=268,slow=2.9,SNR=9.7						
RAR	Rarotonga	18.62	106	P	P	22 17 52.9	-0.5
RAR	Rarotonga	18.62	106	P	P	22 17 53.8	+0.3
OUZ	Omahuta	19.39	199	P	P	22 18 02.7	+2.4
OUZ	Omahuta	19.39	199	P	P	22 18 02.4	+2.1
OUZ				IAmb	IAmb	22 18 03.1	
	comp=Z,48nm,1.1s						
WCZ	Waipu Caves	19.85	196	P	P	22 18 07.3	+2.8
TARA	Tarawa	19.85	335	P	P	22 18 04.4	-0.4
KUZ	Kuaotunu	20.30	192	P	P	22 18 08.5	+0.1
MXZ	Matakaoa Point	20.70	186	P	P	22 18 08.1	-4.0
MXZ	Matakaoa Point	20.70	186	P	P	22 18 09.6	-2.5
HAZ	Te Kaha	20.95	187	P	P	22 18 11.4	-2.9
HAZ				S	S	22 21 33.6	+0.7
PKGZ	Pakihiroa	21.04	187	P	P	22 18 13.9	-1.4
RUGZ	Raukumara Rang	21.17	187	P	P	22 18 15.2	-1.3
PUZ	Puketiti	21.21	186	P	P	22 18 15.6	-1.1
OPRZ	Ohinepanea	21.21	190	P	P	22 18 17.1	+0.4
TWGZ	Tauwhareparae	21.34	187	P	P	22 18 17.3	-0.7
TWGZ				S	S	22 21 40.2	+1.0
KARZ	Kaharoa	21.43	190	P	P	22 18 18.7	-0.1
URZ	Urewera	21.53	188	P	P	22 18 16.1	-3.5
	comp=Z,14nm,0.4s,baz=120,slow=23,SNR=19						
URZ	Urewera	21.53	188	P	P	22 18 16.3	-3.3
URZ	Urewera	21.53	188	P	P	22 18 16.7	-2.9
URZ				IAmb	IAmb	22 18 25.9	
	comp=Z,31nm,0.6s						
URZ	Urewera	21.53	188	P	P	22 18 16.3	-3.3
MWZ	Matawai	21.55	188	P	P	22 18 17.4	-2.4
MWZ				S	S	22 21 45.3	+2.8
CNGZ	Carnagh Statio	21.62	186	P	P	22 18 18.4	-2.0
HNR	Honiara	21.84	287	P	P	22 18 21.3	-1.4
HNR				pmax	pmax		
	comp=Z,100nm,0.7s						
HNR	Honiara	21.84	287	P	P	22 18 21.2	-1.4
RAHZ	Arahi	22.18	188	P	P	22 18 23.8	-1.7
BKZ	Black Stump Fm	22.51	189	P	P	22 18 25.6	-2.8
BKZ				IAmb	IAmb	22 19 20.7	
	comp=Z,61nm,1.7s						
BKZ	Black Stump Fm	22.51	189	P	P	22 18 26.3	-2.2
BFZ	Birch Farm	24.03	189	P	P	22 18 39.8	-2.1
BFZ	Birch Farm	24.03	189	P	P	22 18 39.9	-2.1
SNZO	South Karori	24.91	191	P	P	22 18 47.9	-1.8
SNZO				IAmb	IAmb	22 19 45.9	
	comp=Z,63nm,1.1s						
MSWZ	Moikau Station	24.91	190	P	P	22 18 47.2	-2.5
QRZ	Quartz Range	24.93	195	P	P	22 18 49.1	-0.7
QRZ				IAmb	IAmb	22 19 07.2	
	comp=Z,57nm,1.4s						
QRZ	Quartz Range	24.93	195	P	P	22 18 49.2	-0.7
BHW	Baring Head	24.97	191	P	P	22 18 47.8	-2.4
PLWZ	Palliser	25.06	190	P	P	22 18 48.7	-2.4
NNZ	Nelson	25.09	194	P	P	22 18 49.5	-1.8
TUWZ	Tuamarina	25.17	193	P	P	22 18 51.7	-0.3
BSWZ	Blackbirch Sta	25.46	193	P	P	22 18 54.4	-0.2
THZ	Tophouse	25.72	194	P	P	22 18 55.0	-1.9
THZ				IAmb	IAmb	22 19 16.7	
	comp=Z,90nm,1.9s						
KHZ	Kahutara	26.20	193	P	P	22 18 58.4	-2.7
KHZ	Kahutara	26.20	193	P	P	22 18 58.5	-2.6
LTZ	Lake Taylor	26.84	194	P	P	22 19 04.2	-2.5
LTZ				IAmb	IAmb	22 19 04.6	
	comp=Z,20nm,0.5s						
OXZ	Oxford	27.41	194	P	P	22 19 09.1	-2.6
OXZ				IAmb	IAmb	22 19 09.3	
	comp=Z,34nm,0.8s						
MQZ	McQueen's Vall	27.63	193	P	P	22 19 10.6	-3.0
MQZ				IAmb	IAmb	22 20 07.6	
	comp=Z,99nm,1.6s						
RPZ	Rata Peaks	28.02	196	P	P	22 19 15.1	-1.9
RPZ				IAmb	IAmb	22 20 10.9	
	comp=Z,51nm,1.4s						
PAE	Paea	28.05	96	eP	P	22 19 16.8	-0.8
	comp=Z,16nm,0.9s						
PPT2	Papeete2	28.05	96	eP	P	22 19 17.3	-0.5
	comp=Z,96nm,1.0s						
PPT	Papeete	28.05	96	P	P	22 19 18.1	+0.3
	comp=Z,105nm,0.8s,baz=102,slow=6.1,SNR=10						
PPTF	Pamatai, Papee	28.06	96	P	P	22 19 17.9	0.0
PPTF	Pamatai, Papee	28.06	96	P	P	22 19 18.1	+0.2
TIAR	Tiarei	28.27	96	eP	P	22 19 18.7	-0.9
	comp=Z,0.4nm,0.9s						
XMAS	Kiritimati	28.39	50	P	P	22 19 21.6	+0.9
KWAJ	Kwajalein Atol	28.81	332	P	P	22 19 24.6	+0.3
KWAJ				pmax	pmax		
	comp=Z,207nm,1.0s						
KWAJ	Kwajalein Atol	28.81	332	P	P	22 19 24.6	+0.3
EIDS	Eidsvold	29.13	248	P	P	22 19 26.1	-0.9
ODZ	Otahua Downs	29.36	195	P	P	22 19 26.2	-2.5
WKZ	Wanaka	29.60	197	P	P	22 19 28.5	-2.3
PMOR	Pomariorio Ree	29.91	91	eP	P	22 19 33.5	-0.3
	comp=Z,204nm,1.2s						
ARMA	Armidale	30.00	238	P	P	22 19 34.2	-0.4
ARMA	Armidale	30.00	238	P	P	22 19 34.8	+0.2
VAH	Vaihoa	30.13	91	eP	P	22 19 35.0	-0.8
	comp=Z,89nm,1.0s						
MLZ	Mavora Lakes	30.35	198	P	P	22 19 36.3	-1.0
MLZ				IAmb	IAmb	22 19 36.9	
	comp=Z,36nm,0.7s						
DCZ	Deep Cove	30.74	199	P	P	22 19 39.2	-1.3
RMQ	Roma	31.39	247	P	P	22 19 46.8	+0.3
MGCD	Mangrove Creek	31.44	233	P	P	22 19 47.2	+0.4
PATS	Pohnpei	32.60	315	P	P	22 19 57.8	+0.9
CTA	Charters Tower	33.11	259	P	P	22 20 00.9	-0.2
	comp=Z,4.6nm,0.5s,baz=82,slow=7.6,SNR=6.0						
CTAO	Charters Tower	33.11	259	P	P	22 20 00.6	-0.6
CTAO				pmax	pmax		
	comp=Z,23nm,1.2s						
CTAO	Charters Tower	33.11	259	P	P	22 20 00.6	-0.6
CTAO	Charters Tower	33.11	259	P	P	22 20 00.7	-0.5
CNB	Canberra Magne	33.62	231	P	P	22 20 05.4	0.0
PMG	Port Moresby	33.79	278	P	P	22 20 08.2	+1.2
	comp=Z,16nm,0.5s,baz=82,slow=9.5,SNR=7.6						
PMG	Port Moresby	33.79	278	P	P	22 20 07.3	+0.3
CMSA	Cobar Meteorol	35.19	239	P	P	22 20 18.2	-0.3
QLP	Quilpie	35.41	248	P	P	22 20 19.8	-0.5
COEN	Coen	36.59	269	P	P	22 20 30.9	+0.6
COEN	Coen	36.59	269	P	P	22 20 31.1	+0.8
TOO	Toolangi	37.39	230	P	P	22 20 36.3	-0.3
TOO				pmax	pmax		
	comp=Z,18nm,1.2s						
TOO	Toolangi	37.39	230	P	P	22 20 36.3	-0.3
INKA	Innaminka	38.64	247	P	P	22 20 47.5	+0.6
STKA	Stephens Creek	38.66	240	P	P	22 20 46.9	0.0
	comp=Z,7.9nm,0.4s,baz=91,slow=10,SNR=34						
STKA				PcP	PcP	22 22 45.5	+0.1
	comp=Z,5.8nm,0.6s,baz=64,slow=5.5,SNR=4.3						
STKA	Stephens Creek	38.66	240	P	P	22 20 47.0	0.0
STKA	Stephens Creek	38.66	240	P	P	22 20 47.0	0.0
WAKE	Wake Island	38.66	338	P	P	22 20 47.8	+0.8
QIS	Mount Isa	39.34	258	P	P	22 20 53.6	+1.0
HTT	Hallett	41.20	238	P	P	22 21 07.5	+0.1
LCRK	Leigh Creek	41.22	243	P	P	22 21 07.5	0.0
NAPP	Napperby	41.78	239	P	P	22 21 12.5	+0.6
TWOA	Tennyson Woods	41.86	236	P	P	22 21 12.3	-0.2
KHLU	Kahalu`u	42.79	33	P	P	22 21 21.1	+1.1
AIN	Ainahou	42.83	34	P	P	22 21 21.8	+1.3
HLP	Hilina Pali	42.85	34	P	P	22 21 22.0	+1.5
MWH	Moku'aweowe	42.85	33	P	P	22 21 22.0	+0.9
MLOA	Mauna Loa Obse	42.91	33	P	P	22 21 21.8	+0.5
PUH	Pauahi	42.96	34	P	P	22 21 22.8	+1.4
MLH	Mauna Loa	42.97	34	P	P	22 21 22.8	+1.1
HMH	Humu'ula Sheep	43.01	33	P	P	22 21 23.8	+1.7
OOD	Oodnadatta	43.10	247	P	P	22 21 22.7	+0.3
BBOO	Buckleboo	43.43	240	P	P	22 21 24.0	-0.9
BBOO	Buckleboo	43.43	240	P	P	22 21 24.5	-0.4
OPA	Opana	43.52	29	P	P	22 21 27.1	+1.5
OPA				pmax	pmax		
	comp=Z,131nm,1.1s						
OPA	Opana	43.52	29	P	P	22 21 27.1	+1.5
HLK	Haleakala	43.58	32	P	P	22 21 27.6	+1.2
WRAB	Tennant Creek	44.30	259	⇑eP	P	22 21 30.7	-1.1
WRAB				pmax	pmax		
	comp=Z,39nm,1.7s						
WRAB	Tennant Creek	44.30	259	P	P	22 21 30.6	-1.1
WRAB	Tennant Creek	44.30	259	P	P	22 21 30.9	-0.9
WRA	Warramunga Arr	44.30	259	P	P	22 21 30.5	-1.4
	comp=Z,6.7nm,0.4s,baz=84,slow=5.7,SNR=109						
WRA				PcP	PcP	22 23 04.4	-0.2
	comp=Z,8.7nm,0.8s,baz=84,slow=3.8,SNR=12						
WRA				S	S	22 27 23.0	-4.3
	comp=Z,2.5nm,0.8s,baz=98,slow=14,SNR=6.8						
WRA	Warramunga Arr	44.30	259	IAmb	IAmb	22 23 05.4	
	comp=Z,1.4nm,1.1s						
ASAR	Alice Springs	44.56	253	P	P	22 21 33.2	-0.6
	comp=Z,42nm,0.5s,baz=88,slow=8.3,SNR=636						
ASAR				PcP	PcP	22 23 05.1	-0.4
	comp=Z,11nm,0.6s,baz=97,slow=4.1,SNR=13						
ASAR				ScP	ScP	22 26 08.0	+1.0
	comp=Z,2.2nm,0.7s,baz=101,slow=4.8,SNR=4.5						
ASAR				S	S	22 27 26.6	-4.3
	comp=Z,5.3nm,0.8s,baz=83,slow=16,SNR=20						
MULG	Mulgathing	44.76	244	P	P	22 21 34.5	-0.7
GUMO	Guam	46.86	308	P	P	22 21 51.8	+0.4
	comp=Z,119nm,0.5s,baz=180,slow=21,SNR=8.8						
GUMO	Guam	46.86	308	P	P	22 21 51.7	+0.4
GUMO	Guam	46.86	308	P	P	22 21 52.4	+1.1
MTN	Manton Dam	48.31	268	IAmb	IAmb	22 22 02.8	
	comp=Z,34nm,0.6s						
DRS	Darwin Rock St	48.62	268	P	P	22 22 04.2	-0.3
WRKA	Warakurna	49.66	251	P	P	22 22 11.7	-0.5
FAKI	Fak Fak	49.88	281	P	P	22 22 13.8	-0.1
FAKI	Fak Fak	49.88	281	P	P	22 22 14.0	+0.1
FORT	Forrest	49.96	244	P	P	22 22 13.3	-0.9
FORT				IAmb	IAmb	22 22 14.0	
	comp=Z,65nm,0.7s						
FORT	Forrest	49.96	244	P	P	22 22 13.2	-1.1
KNRA	Kununurra	50.07	264	IAmb	IAmb	22 22 15.6	
	comp=Z,52nm,0.7s						
SWI	Sorong	51.52	283	P	P	22 22 26.2	+0.4
	comp=Z,2µmcomp=Z,210nm,0.7s						
FITZ	Fitzroy Crossi	52.68	260	P	P	22 22 34.1	0.0
	comp=Z,11nm,0.5s,baz=66,slow=7.6,SNR=44						
LBMI	Labuha	55.11	281	P	P	22 22 52.1	+0.7
	comp=Z,69nm,1.0s						
SOEI	Soe	55.55	270	P	P	22 22 55.8	+1.2
	comp=Z,2µmcomp=Z,255nm,0.9s						
SOEI	Soe	55.55	270	P	P	22 22 56.3	+1.7
SOEI	Soe	55.55	270	P	P	22 22 56.4	+1.8
TNTI	Ternate	55.73	283	P	P	22 22 56.6	+0.9
	comp=Z,65nm,1.1s						
TNTI	Ternate	55.73	283	P	P	22 22 55.9	+0.2
SANI	Sanana	56.07	279	P	P	22 22 57.6	-0.4
PSA00	Pilbara Seismi	57.66	255	IAmb	IAmb	22 23 09.1	
	comp=Z,34nm,1.1s						
PSA00	Pilbara Seismi	57.66	255	P	P	22 23 08.2	-0.6
MMRI	Maumere	57.77	270	P	P	22 23 08.9	-0.8
MMRI				IAmb	IAmb	22 23 09.6	
	comp=Z,81nm,0.6s						
MBWA	Marble Bar	57.81	255	P	P	22 23 09.3	-0.6
MEEK	Meekatharra	58.29	249	P	P	22 23 12.2	-0.9
KLBR	Kellerberrin	58.80	243	P	P	22 23 15.3	-1.1
NWAO	Narrogin (SRO)	59.21	241	P	P	22 23 18.4	-0.7
BLDU	Ballidu	59.73	244	P	P	22 23 21.6	-1.1
MUN	Mundaring	60.11	243	P	P	22 23 25.0	-0.1
MORW	Morawa	60.40	246	P	P	22 23 26.3	-0.8
MORW	Morawa	60.40	246	P	P	22 23 26.1	-1.0
KAPI	Kappang	61.11	274	P	P	22 23 31.8	-0.2
KAPI				pmax	pmax		
	comp=Z,52nm,1.1s						
KAPI	Kappang	61.11	274	P	P	22 23 31.8	-0.2
KAPI	Kappang	61.11	274	P	P	22 23 32.3	+0.3
VNDA	Vanda	61.37	185	P	P	22 23 32.8	+0.2
	comp=Z,2.3nm,0.6s,baz=6.0,slow=9.1,SNR=6.2						
PLAI	Plampang	61.99	269	P	P	22 23 37.3	-0.4
TOLI2	Tolitoli	62.02	281	P	P	22 23 37.8	-0.2
TOLI2	Tolitoli	62.02	281	P	P	22 23 38.8	+0.8
GIRL	Giralia	62.68	253	P	P	22 23 42.5	+0.4
GIRL	Giralia	62.68	253	P	P	22 23 42.5	+0.4
JHJ2	Mitsune	63.46	322	P	P	22 23 47.2	+0.4
JHJ2	Mitsune	63.46	322	P	P	22 23 47.2	+0.4
JHJ	Hachijo jima 2	63.48	322	P	P	22 23 47.3	+0.3
	comp=Z,143nm,0.4s,baz=179,slow=5.0,SNR=9.4						
JAGI	Jajag, Banyuwa	65.55	268	P	P	22 23 59.1	-1.4
JAGI				IAmb	IAmb	22 23 59.8	
	comp=Z,105nm,1.0s						
JAGI	Jajag, Banyuwa	65.55	268	P	P	22 23 59.0	-1.5
MYLDM	Lahad Datu	65.57	284	P	P	22 24 02.5	+1.9
MYLDM				IAmb	IAmb	22 24 04.4	
	comp=Z,91nm,1.4s						
JGF	Kuroka	66.65	322	P	P	22 24 07.0	+0.1
INU	Inuyama	66.67	322	P	P	22 24 07.9	+0.9
INU				IAmb	IAmb	22 24 08.4	
	comp=Z,78nm,1.4s						
MJAR	Matsushiro Arr	66.81	323	P	P	22 24 06.9	-1.0
	comp=Z,48nm,0.7s,baz=154,slow=6.5,SNR=31						
MJAR	Matsushiro Arr	66.81	323	IAmb	IAmb	22 24 08.6	
	comp=Z,33nm,0.7s						
MAJO	Matsushiro	66.81	323	d iP	P	22 24 07.9	0.0
MAJO				pmax	pmax		
	comp=Z,48nm,0.9s						
MAJO	Matsushiro	66.81	323	P	P	22 24 08.0	+0.2
MAJO	Matsushiro	66.81	323	P	P	22 24 08.2	+0.3
MAT	Matsushiro	66.81	323	P	P	22 24 07.7	-0.2
KKM	Kota Kinabalu	68.00	284	P	P	22 24 16.2	+0.5
JSU	Suzuyama	68.37	315	IAmb	IAmb	22 24 19.2	
	comp=Z,58nm,1.1s						
JHS	Saijyo	68.82	319	P	P	22 24 20.9	+0.8
ATKA	Atka Island	68.96	3	P	P	22 24 20.7	+0.2
JNU	Nakatsue	69.07	316	P	P	22 24 22.1	+0.4
	comp=Z,23nm,0.7s,baz=84,slow=5.4,SNR=7.3						
UGM	Wanagama	69.16	268	P	P	22 24 22.5	-0.2
NIKH	Nikolski High	70.15	6	P	P	22 24 27.0	-0.6
	baz=190						
JKA	Kamikawa-asahi	70.17	332	P	P	22 24 29.0	+1.1
JKA				IAmb	IAmb	22 24 30.2	
	comp=Z,72nm,0.6s						
ASAJ	Asahikawa	70.17	332	P	P	22 24 29.9	+1.9
	comp=Z,63nm,0.5s,baz=189,slow=5.7,SNR=18						
STKI	Sintang	70.50	276	P	P	22 24 32.5	+1.9
SKR	Severo-Kuril's	70.80	344	⇑eP	P	22 24 30.2	-1.3
SSLB	Suanglung	71.27	303	P	P	22 24 34.3	-0.6
UNV	Unalaska Valle	71.29	8	P	P	22 24 33.5	-0.8
	baz=192						
TPUB	Ta-pu	71.30	302	P	P	22 24 34.4	-0.7
YHNB	Yeheng	71.36	304	P	P	22 24 36.1	+0.6

LEM	Lembang	72.22	268	P	P	22 24 41.1	+0.2
	comp=Z,75nm,0.8s,baz=170,slow=24,SNR=13						
PET	Petropavlovsk	72.30	346	*e*P	P	22 24 39.8	-0.4
PET				*e*S	S	22 33 21.7	+1.3
PET				pmax	pmax		
	comp=Z,115nm,0.5s						
PET	Petropavlovsk	72.30	346	P	P	22 24 40.1	-0.1
PET	Petropavlovsk	72.30	346	P	P	22 24 40.4	+0.2
YSS	Yuzh-Sakhalins	72.31	334	*e*P	P	22 24 40.9	+0.5
YSS				*e*		22 24 53.4	
YSS				pmax	pmax		
	comp=Z,60nm,1.1s						
YSS	Yuzh-Sakhalins	72.31	334	P	P	22 24 41.2	+0.8
YSS				IAmb	IAmb	22 24 42.7	
	comp=Z,75nm,1.1s						
PEA0B	Petropavlovsk-	72.60	346	*ce*P	P	22 24 42.7	+0.7
PETK	Petropavlovsk-	72.60	346	P	P	22 24 40.5	-1.5
	comp=Z,77nm,0.8s,baz=134,slow=8.2,SNR=57						
FALS	False Pass	72.71	9	P	P	22 24 41.6	-0.9
	baz=196						
QSPA	South Pole Qui	73.12	180	P	P	22 24 44.9	-0.1
QSPA					pP	22 26 40.0	+3.7
KSRS	Korea Array	73.62	318	P	P	22 24 49.3	+1.1
	comp=Z,20nm,0.9s,baz=142,slow=6.1,SNR=17						
SDPT	Sand Point	73.68	11	P	P	22 24 47.4	-0.6
	baz=198						
VLA	Vladivostok	74.86	325	*de*P	P	22 24 55.5	+0.5
VLA				pmax	pmax		
	comp=Z,48nm,1.1s						
CHGN	Chignik	74.97	12	P	P	22 24 54.7	-0.6
	baz=200						
CHIR	Chirikof Islan	75.10	13	P	P	22 24 55.8	-0.3
	baz=203						
TYV	Tymovskoe	75.43	336	*e*P	P	22 24 58.8	+0.8
TYV				*e*S	S	22 33 50.1	-4.7
TYV				pmax	pmax		
	comp=Z,500nm,3.3s						
TYV				pmax	pmax		
	comp=Z,104nm,0.9s						
TYV				smax	smax		
	comp=N,300nm,6.8s						
TYV				smax	smax		
	comp=E,1µm,6.8s						
SNCC	San Nicolas Is	75.52	48	P	P	22 24 59.9	+0.9
	baz=238						
SCI2	San Clemente I	76.08	49	P	P	22 25 03.1	+1.0
	baz=239						
SAO	San Andreas Ge	76.08	44	P	P	22 25 03.2	+1.1
SAO				pmax	pmax		
	comp=Z,55nm,1.1s						
SAO	San Andreas Ge	76.08	44	P	P	22 25 03.2	+1.1
SAO				IAmb	IAmb	22 25 04.2	
	comp=Z,55nm,1.1s						
SII	Sitkinak Islan	76.10	14	P	P	22 25 01.8	+0.1
	baz=204						
PKM	Mcpherson Peak	76.18	47	P	P	22 25 04.1	+1.2
	baz=238						
PMPB	Monarch Peak	76.22	45	P	P	22 25 03.5	+0.7
PMPB				IAmb	IAmb	22 25 05.3	
	comp=Z,141nm,1.5s						
PAGB	Antelope Grade	76.33	46	P	P	22 25 04.4	+1.0
CIS	Catalina Islan	76.39	49	P	P	22 25 04.5	+0.7
	baz=239						
KMRM	Mail Ridge	76.60	40	P	P	22 25 05.5	+0.6
KMRM				IAmb	IAmb	22 25 07.5	
	comp=Z,121nm,0.9s						
DECC	Green Verdugo	76.89	48	P	P	22 25 07.2	+0.6
	baz=239						
OHAK	Old Harbor	76.91	14	P	P	22 25 06.4	+0.4
	baz=205						
NJ2	Nanjing	76.92	310	⇓*i*P	P	22 25 06.8	+0.1
NJ2				pmax	pmax		
	comp=Z,30nm,0.7s						
KHMM	Horse Mountain	76.97	40	P	P	22 25 07.6	+0.6
KHMM				IAmb	IAmb	22 25 09.7	
	comp=Z,110nm,1.3s						
ARVC	Arvin	76.99	47	P	P	22 25 08.0	+0.9
	baz=238						
MWC	Mount Wilson	77.07	48	IAmb	IAmb	22 25 08.9	
	comp=Z,52nm,0.6s						
109C	Camp Elliot, M	77.08	50	P	P	22 25 08.5	+0.9
	baz=240						
O02D	Mt. Diablo Mer	77.15	41	P	P	22 25 09.4	+1.5
	baz=234,SNR=8.0						
VES	Vestal, Richgr	77.19	46	P	P	22 25 08.8	+0.7
	baz=238						
BFSC	Mount Baldy Ra	77.36	48	P	P	22 25 09.8	+0.6
	baz=239,SNR=19						
MURC	Murrieta	77.37	49	P	P	22 25 10.1	+0.9
	baz=240,SNR=7.8						
EDW2	Edwards Air Fo	77.45	47	P	P	22 25 10.6	+1.0
	baz=239,SNR=49						
ISA	Isabella, Lake	77.52	47	IAmb	IAmb	22 25 12.2	
	comp=Z,63nm,1.0s						
ISA	Isabella, Lake	77.52	47	P	P	22 25 11.0	+1.0
	baz=238,SNR=34						
WDC	Whiskeytown Da	77.54	41	P	P	22 25 10.8	+0.9
WDC				pmax	pmax		
	comp=Z,82nm,1.6s						
WDC	Whiskeytown Da	77.54	41	P	P	22 25 10.8	+0.9
KDAK	Kodiak Island	77.58	14	P	P	22 25 10.0	+0.3
	comp=Z,66nm,0.8s,baz=209,slow=4.0,SNR=18						
KDAK	Kodiak Island	77.58	14	P	P	22 25 10.0	+0.3
KDAK	Kodiak Island	77.58	14	P	P	22 25 09.9	+0.3
KDAK				IAmb	IAmb	22 25 11.2	
	comp=Z,129nm,1.2s						
KDAK	Kodiak Island	77.58	14	P	P	22 25 10.1	+0.3
	baz=206						
MONP2	Monument Peak	77.58	50	P	P	22 25 11.6	+1.1
	baz=240,SNR=34						
N02D	Trinity Center	77.66	40	P	P	22 25 12.1	+1.4
	baz=234,SNR=9.4						
IKP	In-Ko-Pah, Jac	77.69	50	P	P	22 25 12.1	+1.1
	baz=240,SNR=21						
RMX	La Rumorosa	77.69	50	IAmb	IAmb	22 25 13.4	
	comp=Z,59nm,1.0s						
L02E	Cave Junction	77.81	39	P	P	22 25 12.4	+1.0
	baz=234						
M02C	Callahan	77.81	40	P	P	22 25 13.0	+1.5
	baz=234,SNR=10						
O03E	Paynes Creek	77.84	41	P	P	22 25 12.1	+0.5
	baz=235,SNR=8.8						
BBRC	Big Bear Solar	77.90	48	P	P	22 25 13.0	+0.7
	baz=240						
PFO	Pinyon Flats O	77.91	49	P	P	22 25 13.1	+0.9
	comp=Z,12nm,0.8s,baz=253,slow=4.8,SNR=10						
PFO	Pinyon Flats O	77.91	49	P	P	22 25 13.1	+0.9
PFO	Pinyon Flats O	77.91	49	P	P	22 25 12.9	+0.7
	baz=240,SNR=8.1						
TPFO	Pinon Flats	77.91	49	P	P	22 25 12.9	+0.7
	baz=240,SNR=7.4						
LRMC	Laurel Mtn Rad	77.98	47	P	P	22 25 13.5	+0.9
	baz=239,SNR=25						
SWSC	Sam W. Stewart	78.06	50	P	P	22 25 13.9	+1.0
	baz=241,SNR=12						
K02D	Willamette Mer	78.09	38	P	P	22 25 14.2	+1.3
	baz=233,SNR=5.2						
YBH	Yreka Blue Hor	78.10	39	P	P	22 25 14.3	+1.3
	comp=Z,23nm,0.6s,baz=212,slow=2.1,SNR=60						
YBH	Yreka Blue Hor	78.10	39	P	P	22 25 14.4	+1.3
YBH				pmax	pmax		
	comp=Z,31nm,0.8s						
YBH	Yreka Blue Hor	78.10	39	P	P	22 25 14.4	+1.3
RRX	Edison Barstow	78.15	48	P	P	22 25 14.2	+0.8
	baz=240						
CWC	Cottonwood Cre	78.20	46	P	P	22 25 14.7	+0.9
	baz=238						
MLAC	Mammoth, Mammo	78.31	45	P	P	22 25 15.6	+1.2
	baz=238						
Q19K	Cape Douglas,	78.38	13	IAmb	IAmb	22 25 15.0	
	comp=Z,119nm,0.9s						
Q19K	Cape Douglas,	78.38	13	P	P	22 25 13.7	-0.3
	baz=205,SNR=6.0						
MPMC	Manual Prospec	78.41	47	P	P	22 25 15.9	+0.9
	baz=239,SNR=24						
TIN	Tinemaha, Big	78.41	45	P	P	22 25 16.0	+1.2
	baz=238						
BELC	Belle Mtn. Jos	78.43	49	P	P	22 25 15.9	+0.9
	baz=240,SNR=20						
HUMO	Hull Mountain	78.46	39	P	P	22 25 16.0	+1.2
P18K	Big Mountain,	78.47	12	P	P	22 25 14.2	-0.4
	baz=203,SNR=14						
GSC	Goldstone, Bar	78.50	48	P	P	22 25 16.0	+0.7
	baz=240,SNR=13						
SLBS	Sierra La Lagu	78.54	61	P	P	22 25 17.9	+2.1
PNTR	Pine Nut	78.58	43	IAmb	IAmb	22 25 17.9	
	comp=Z,96nm,0.8s						
HEC	Hector,Ludlow	78.60	48	P	P	22 25 16.5	+0.6
	baz=240,SNR=21						
L04D	Klamath Falls	78.63	39	P	P	22 25 16.9	+1.0
	baz=234						
BC3	Big Chuckawall	78.66	50	P	P	22 25 17.3	+1.1
	baz=241,SNR=12						
M04C	Macdoel	78.66	40	P	P	22 25 17.0	+0.9
	baz=235,SNR=8.2						
YERR	Yerington	78.76	43	IAmb	IAmb	22 25 18.6	
	comp=Z,60nm,0.7s						
I02E	Swisshome, OR	78.83	37	P	P	22 25 17.7	+1.0
	baz=233						
GLA	Glamis	78.83	50	P	P	22 25 18.3	+1.2
	baz=241,SNR=15						
LHV	Little Huntoon	78.86	44	IAmb	IAmb	22 25 19.5	
	comp=Z,82nm,1.0s						
I03D	Drain, OR	78.87	38	P	P	22 25 17.9	+0.9
	baz=233						
CN2	Changchun	78.93	323	*e*P	P	22 25 18.3	+1.0
CN2				pmax	pmax		
	comp=Z,80nm,1.0s						
KLR	Kul'dur	79.01	330	⇑*e*P	P	22 25 17.9	+0.4
KLR				pmax	pmax		
	comp=Z,20nm,1.1s						
FURC	Furnace Creek,	79.05	47	P	P	22 25 18.9	+0.9
	baz=239,SNR=13						
GMRC	Granite Mounta	79.06	48	P	P	22 25 19.2	+0.8
	baz=240,SNR=19						
NVAR	Mina Array Bea	79.08	44	P	P	22 25 19.5	+1.0
	comp=Z,36nm,0.8s,baz=227,slow=9.1,SNR=153						
IRM	Iron Mountain	79.13	49	P	P	22 25 19.7	+1.1
	baz=241,SNR=19						
SHOC	Shoshone, Teco	79.18	47	P	P	22 25 19.6	+0.8
	baz=240,SNR=6.1						
NV11	Mina Array Sit	79.19	44	IAmb	IAmb	22 25 21.0	
	comp=Z,64nm,1.1s						
TUQ	Turquoise Moun	79.19	48	P	P	22 25 19.8	+0.8
	baz=240,SNR=26						
K04D	Chiloquin, OR	79.20	39	P	P	22 25 19.5	+0.6
	baz=235						
J04D	Umpqua Nationa	79.34	39	P	P	22 25 20.9	+1.2
	baz=234,SNR=15						
O19K	Port Alsworth	79.40	12	P	P	22 25 19.2	-0.1
	baz=204,SNR=32						
CNPM	China Poot	79.46	14	IAmb	IAmb	22 25 20.8	
	comp=Z,69nm,1.0s						
I04A	Tendick Farm,	79.48	38	P	P	22 25 20.8	+0.6
	baz=234,SNR=6.1						
KVN	Kaiserville	79.55	44	IAmb	IAmb	22 25 22.8	
	comp=Z,106nm,1.4s						
O20K	Slope Mountain	79.65	13	P	P	22 25 20.5	-0.2
	baz=206,SNR=6.1						
MOD	Modoc Plateau	79.68	40	IAmb	IAmb	22 25 22.9	
	comp=Z,43nm,0.7s						
H04D	Lebanon	79.72	37	P	P	22 25 22.2	+0.8
	baz=234						
TPNV	Topopah Spring	79.72	46	P	P	22 25 22.8	+0.9
	baz=240,SNR=25						
BRLK	Bradley Lake	79.75	14	IAmb	IAmb	22 25 22.2	
	comp=Z,126nm,1.2s						
BRSE	Bradley Lake S	79.77	14	P	P	22 25 21.4	0.0
	baz=207,SNR=10						
K05A	Summer Lake	79.78	39	IAmb	IAmb	22 25 24.3	
	comp=Z,111nm,1.2s						
NEE2	Needles Airpor	79.80	49	P	P	22 25 23.2	+1.1
	baz=241						
G03D	McMinnville, O	79.82	36	P	P	22 25 23.0	+1.1
	baz=233						
214A	Organ Pipe Nat	79.82	52	P	P	22 25 23.7	+1.4
	baz=243,SNR=11						
J05D	Fort Rock, OR	79.89	39	P	P	22 25 23.7	+1.2
	baz=235,SNR=50						
PDMCI	Parker Dam,Lak	79.93	50	P	P	22 25 24.0	+1.2
	baz=241,SNR=11						
N19K	Bonanza Creek	79.93	12	IAmb	IAmb	22 25 22.7	
	comp=Z,38nm,0.7s						
N19K	Bonanza Creek	79.93	12	P	P	22 25 21.9	-0.4
	baz=204						
MA2	Magadan	80.12	345	*d i*P	P	22 25 22.3	-0.9
MA2				pmax	pmax		
	comp=Z,34nm,1.0s						
MA2	Magadan	80.12	345	P	P	22 25 22.7	-0.4
H04A	Detroit Lake	80.13	37	P	P	22 25 24.1	+0.5
H04A				IAmb	IAmb	22 25 25.1	
	comp=Z,168nm,1.6s						
PINE	Pine Mountain	80.35	39	IAmb	IAmb	22 25 27.3	
	comp=Z,122nm,1.2s						
SEW	Seward	80.39	14	P	P	22 25 24.2	-0.3
	baz=208						
I05D	Terrebonne, OR	80.42	38	P	P	22 25 26.0	+0.8
	baz=235,SNR=8.6						
F04D	Rainier, OR	80.48	36	P	P	22 25 26.7	+1.3
	baz=233						
Q23K	Middleton Isla	80.59	16	P	P	22 25 25.6	+0.1
	baz=211						
O22K	Cooper Landing	80.66	14	P	P	22 25 25.7	-0.2
	baz=208,SNR=5.1						
SPU	Mount Spurr	80.77	13		pP	22 27 20.5	+0.1
PRN	Pahroc Range	80.78	46	IAmb	IAmb	22 25 29.8	
	comp=Z,62nm,0.9s						
NLWA	Neilton Lookou	80.80	34	IAmb	IAmb	22 25 29.7	
	comp=Z,138nm,1.4s						
HOOD	Mount Hood Mea	80.81	37	IAmb	IAmb	22 25 29.0	
	comp=Z,90nm,1.3s						
BMN	Battle Mountai	80.85	43	IAmb	IAmb	22 25 29.7	
	comp=Z,78nm,1.1s						
R11A	Troy Canyon, C	80.88	45	P	P	22 25 28.4	+0.6
	baz=240,SNR=28						
M19K	Big River Lodg	80.95	11	IAmb	IAmb	22 25 28.1	
	comp=Z,35nm,0.7s						
M19K	Big River Lodg	80.95	11	P	P	22 25 27.3	-0.2
	baz=204						
G05D	Wamic, OR	80.96	37	P	P	22 25 28.6	+0.7
	baz=235						
WVOR	Wild Horse Val	81.00	41	IAmb	IAmb	22 25 30.5	
	comp=Z,75nm,1.0s						
E04D	Cinebar	81.01	36	P	P	22 25 29.2	+1.1
	baz=234,SNR=6.9						
L19K	White Mountain	81.12	11	IAmb	IAmb	22 25 30.1	
	comp=Z,106nm,1.4s						
RC01	Rabbit Creek A	81.20	14	IAmb	IAmb	22 25 29.6	
	comp=Z,62nm,1.0s						
RC01	Rabbit Creek A	81.20	14	P	P	22 25 28.5	-0.2
	baz=208,SNR=13						
F05D	White Salmon	81.24	37	P	P	22 25 30.1	+0.8
	baz=235,SNR=6.5						
D04E	Lakebay	81.27	35	P	P	22 25 30.7	+1.3
	baz=233						
D03D	Eldon	81.31	35	P	P	22 25 30.6	+1.0
	baz=233,SNR=7.8						
PWL	Port Wells	81.32	15	IAmb	IAmb	22 25 29.5	
	comp=Z,69nm,0.6s						
PWL	Port Wells	81.32	15	P	P	22 25 29.0	-0.4
	baz=210,SNR=12						
TUC	Tucson	81.52	53	P	P	22 25 32.9	+1.8
TUC				pmax	pmax		
	comp=Z,66nm,1.1s						
TUC	Tucson	81.52	53	P	P	22 25 32.9	+1.8
TUC				IAmb	IAmb	22 25 34.1	
	comp=Z,66nm,1.1s						
TUC	Tucson	81.52	53	P	P	22 25 32.9	+1.8
	baz=244						
CLRS	Cowichan Lake	81.53	33	IAmb	IAmb	22 25 32.4	
	comp=Z,60nm,1.0s						
KAIM	Kayak Island	81.54	17	P	P	22 25 30.6	+0.1
	baz=213						
L20K	Farewell, AK	81.58	11	P	P	22 25 30.5	-0.2
	baz=204						
J08A	Circle Bar Ran	81.60	40	IAmb	IAmb	22 25 33.4	
	comp=Z,111nm,1.2s						
TTA	Tatalina	81.61	10	IAmb	IAmb	22 25 32.6	
	comp=Z,122nm,1.4s						
TTA	Tatalina	81.61	10	P	P	22 25 31.4	+0.5
	baz=202,SNR=18						
GLI	Glacier Island	81.64	15	P	P	22 25 30.7	-0.3
	baz=211,SNR=8.1						
CBB	Campbell River	81.65	32	IAmb	IAmb	22 25 33.2	
	comp=Z,71nm,1.0s						
M22K	Willow	81.70	13	P	P	22 25 30.9	-0.3
	baz=208,SNR=17						
EYAK	Cordova Ski Ar	81.71	16	P	P	22 25 31.1	-0.2
	baz=212						
KNK	Knik Glacier	81.78	14	P	P	22 25 31.5	-0.3
	baz=209,SNR=11						
PMR	Palmer	81.78	14	IAmb	IAmb	22 25 32.5	
	comp=Z,42nm,0.7s						
PMR	Palmer	81.78	14	P	P	22 25 31.2	-0.4
	baz=209,SNR=14						
IPM	Ipoh	81.78	277	IAmb	IAmb	22 25 34.2	
	comp=Z,80nm,0.8s						
IPM	Ipoh	81.78	277	P	P	22 25 33.4	+0.6
RAGM	Ragged Mountai	81.86	16	IAmb	IAmb	22 25 33.3	
	comp=Z,51nm,0.8s						
HMT	Hamilton	81.93	17	IAmb	IAmb	22 25 33.5	
	comp=Z,77nm,1.1s						
X16A	Lo Mia Camp, P	81.96	50	IAmb	IAmb	22 25 36.1	
	comp=Z,59nm,1.0s						
BGLC	Bering Glacier	82.02	17	P	P	22 25 33.3	+0.4
	baz=214						
SPR3	Spring Creek 3	82.05	45	IAmb	IAmb	22 25 35.6	
	comp=Z,66nm,1.2s						
BERG	Berg Lake	82.13	17	IAmb	IAmb	22 25 34.2	
	comp=Z,44nm,0.7s						
F07A	Phinny Hill Vi	82.13	37	IAmb	IAmb	22 25 35.5	
	comp=Z,35nm,0.8s						
PSUT	Pine Spring	82.15	46	IAmb	IAmb	22 25 36.2	
	comp=Z,44nm,0.7s						
SML	Sawmill	82.15	14	IAmb	IAmb	22 25 34.6	
	comp=Z,135nm,1.8s						
SML	Sawmill	82.15	14	P	P	22 25 33.4	-0.3
	baz=209						
KNB	Kanab	82.15	48	IAmb	IAmb	22 25 36.3	
	comp=Z,37nm,0.7s						
A04D	Lummi Island	82.22	34	P	P	22 25 35.2	+1.1
	baz=233,SNR=5.6						
SZCU	Shurtz Canyon	82.24	47	IAmb	IAmb	22 25 37.3	
	comp=Z,51nm,1.2s						
U15A	North Rim	82.26	48	IAmb	IAmb	22 25 37.6	
	comp=Z,108nm,1.1s						
319A	Douglas	82.27	54	IAmb	IAmb	22 25 38.0	
	comp=Z,109nm,1.1s						
B05A	Bryant	82.28	34	P	P	22 25 35.3	+0.7
	baz=234,SNR=8.2						
PPLA	Purkeypile	82.29	12	P	P	22 25 32.9	-1.6
	baz=206						
ELK	Elko	82.30	43	IAmb	IAmb	22 25 37.0	
	comp=Z,45nm,1.0s						
K20K	Telida	82.35	11	P	P	22 25 34.8	+0.2
	baz=204						
G08A	Pilot Rock	82.36	38	IAmb	IAmb	22 25 37.0	
	comp=Z,69nm,1.1s						
BMRM	Bremner River	82.36	16	P	P	22 25 34.6	-0.2
	baz=213,SNR=20						
SCM	Sheep Creek Mo	82.41	15	P	P	22 25 34.9	-0.1
	baz=210,SNR=24						
MESA	MESA	82.45	18	P	P	22 25 35.9	+0.6
	baz=215,SNR=14						
KLU	Klutina	82.47	15	P	P	22 25 35.1	-0.2
	baz=212,SNR=6.8						
WUAZ	Wupatki	82.50	50	IAmb	IAmb	22 25 38.7	
	comp=Z,71nm,1.1s						
WUAZ	Wupatki	82.50	50	P	P	22 25 37.4	+1.2
	baz=243,SNR=35						
E07A	Sunnyside	82.54	37	IAmb	IAmb	22 25 37.9	
	comp=Z,98nm,1.2s						
HAWA	Hanford	82.64	37	IAmb	IAmb	22 25 38.3	
	comp=Z,99nm,1.1s						
YAH	Yahtse	82.66	18	IAmb	IAmb	22 25 37.8	
	comp=Z,100nm,0.9s						
TNA	Tin City	82.66	5	P	P	22 25 36.6	+0.6
	baz=191,SNR=22						
TGL	Tana Glacier	82.67	17	IAmb	IAmb	22 25 37.5	
	comp=Z,89nm,1.0s						
ISLE	Juniper Island	82.68	17	IAmb	IAmb	22 25 37.5	
	comp=Z,91nm,0.9s						
SEY	Seymchan	82.71	347	P	P	22 25 36.4	0.0
	comp=Z,101nm,0.7s,baz=150,slow=5.8,SNR=183						
PKCU	Pink Cliffs	82.71	47	IAmb	IAmb	22 25 40.5	
	comp=Z,137nm,1.2s						
BJT	Baijiatuau	82.72	315	IAmb	IAmb	22 25 38.8	
	comp=Z,46nm,0.8s						
BJI	Beijing	82.72	316	P	P	22 25 37.8	+0.8
BJI				pmax	pmax		
	comp=Z,74nm,0.8s						
C06D	Leavenworth	82.73	35	P	P	22 25 37.2	+0.3
	baz=235						
CAST	Castle Rocks	82.78	12	P	P	22 25 35.4	-1.4
	baz=206,SNR=79						
PNL	Peninsula	82.81	19	P	P	22 25 37.1	+0.1
	baz=218,SNR=5.1						
WRAK	Wrangell Islan	82.83	24	IAmb	IAmb	22 25 39.0	
	comp=Z,44nm,0.9s						
WRAK	Wrangell Islan	82.83	24	P	P	22 25 38.0	+0.9
	baz=224						
PCA	Pinnacle	82.88	18	IAmb	IAmb	22 25 38.5	
	comp=Z,66nm,1.1s						
PINM	Pinnacle	82.88	18	P	P	22 25 37.4	-0.1
	baz=217						
VRDI	Verde Repeater	82.89	16	IAmb	IAmb	22 25 38.6	
	comp=Z,123nm,1.4s						
N25K	Chitina, Valde	82.90	16	IAmb	IAmb	22 25 38.5	
	comp=Z,95nm,0.8s						
N25K	Chitina, Valde	82.90	16	P	P	22 25 37.6	+0.1
	baz=213,SNR=38						
M24K	Tolsona, Glenn	82.93	15	P	P	22 25 37.9	+0.3
	baz=211,SNR=21						
E08A	Dider Farm, El	82.96	37	IAmb	IAmb	22 25 39.9	
	comp=Z,161nm,1.6s						
WAT6	Susitna Watana	82.96	14	P	P	22 25 37.6	-0.3
	baz=210,SNR=32						
MTPU	Mount Pierson	83.08	47	IAmb	IAmb	22 25 42.1	
	comp=Z,57nm,0.9s						
J20K	Nowinta River	83.08	11	IAmb	IAmb	22 25 39.4	
	comp=Z,60nm,0.8s						
J20K	Nowinta River	83.08	11	P	P	22 25 38.2	0.0
	baz=204						
X18A	Snowflake	83.11	51	IAmb	IAmb	22 25 41.7	
	comp=Z,44nm,1.1s						
KTH	Kantishna Hill	83.13	12	IAmb	IAmb	22 25 38.4	
	comp=Z,65nm,0.8s						
MCARA	McCarthy VSAT	83.14	17	P	P	22 25 38.6	+0.1
	baz=214,SNR=16						
CHUM	Lake Minchumin	83.15	12	P	P	22 25 37.8	-0.8
	baz=206,SNR=11						
GCSA	Galena City Sc	83.16	9	P	P	22 25 38.8	+0.2
	baz=201,SNR=11						
TCRU	Three Creeks R	83.16	46	IAmb	IAmb	22 25 42.1	
	comp=Z,47nm,0.9s						
TRF	Thorofare Moun	83.17	13	P	P	22 25 38.1	-0.8
	baz=208,SNR=38						
BELA	Belgrano 2	83.20	173	P	P	22 25 37.8	-1.0
BELA					pP	22 27 35.7	+2.0
LOGN	Logan Glacier	83.25	18	IAmb	IAmb	22 25 40.4	
	comp=Z,125nm,1.2s						
BARN	Barnard Glacie	83.25	17	IAmb	IAmb	22 25 40.6	
	comp=Z,82nm,0.8s						
CTG	Chitna Glacier	83.26	17	P	P	22 25 39.6	+0.2
	baz=216,SNR=21						
CTGM	Chitina Glacie	83.27	17	IAmb	IAmb	22 25 40.5	
	comp=Z,79nm,1.0s						
MFID	Camas Ranch	83.27	41	IAmb	IAmb	22 25 41.7	
	comp=Z,59nm,1.1s						
PSI	Prapat	83.28	275	P	P	22 25 39.7	-0.9
	comp=Z,10nm,0.5s,baz=172,slow=3.7,SNR=8.1						
D08A	Wollman Farm,	83.35	37	IAmb	IAmb	22 25 41.8	
	comp=Z,58nm,1.0s						
JIS	Juneau Island	83.42	22	IAmb	IAmb	22 25 41.7	
	comp=Z,58nm,1.2s						
HARP	HAARP	83.43	15	P	P	22 25 40.1	+0.1
	baz=212,SNR=18						
DHY	Denali Highway	83.48	14	IAmb	IAmb	22 25 41.1	
	comp=Z,79nm,1.3s						
DHY	Denali Highway	83.48	14	P	P	22 25 40.1	-0.4
	baz=210,SNR=20						
E09A	Wood Farm, Sta	83.50	37	IAmb	IAmb	22 25 42.3	
	comp=Z,114nm,1.7s						
W18A	Petrified Fore	83.53	50	P	P	22 25 42.3	+0.9
	baz=244,SNR=6.7						
BPAW	Bear Paw Mtn.	83.61	12	P	P	22 25 39.2	-1.7
	baz=207,SNR=17						
DUG	Dugway, Tooele	83.65	45	P	P	22 25 42.3	+0.4
	baz=242,SNR=11						
MCK	McKinley	83.70	13	P	P	22 25 40.8	-0.6
	baz=209,SNR=26						
F10A	Beach Ranch, E	83.75	38	IAmb	IAmb	22 25 43.5	
	comp=Z,64nm,0.9s						
LLLB	Lillooet	83.77	33	IAmb	IAmb	22 25 43.5	
	comp=Z,40nm,1.2s						
PAX	Paxson	83.84	15	IAmb	IAmb	22 25 42.5	
	comp=Z,33nm,0.8s						
PAX	Paxson	83.84	15	P	P	22 25 41.5	-0.7
	baz=212,SNR=18						
B08A	Colville Reser	83.84	35	IAmb	IAmb	22 25 43.5	
	comp=Z,40nm,1.0s						
121A	Cookes Peak, D	83.91	54	P	P	22 25 44.6	+1.3
	baz=245						

SKAG	**Skagway**	**83.97**	**21**	IAmb	IAmb	22 25 44.4	
	comp=Z,34nm,0.9s						
SKAG	**Skagway**	**83.97**	**21**	P	**P**	**22 25 43.7**	**+1.0**
	baz=222,SNR=11						
M26K	**Nabesna, AK**	**83.99**	**16**	P	**P**	**22 25 42.8**	**0.0**
	baz=214						
ZEA	**Zeya**	**84.08**	**331**	*e*P	**P**	**22 25 44.2**	**+0.8**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=N,20nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.3s						
GSI	**Gunungsitoli**	**84.13**	**273**	P	**P**	**22 25 45.6**	**+1.0**
GSI	**Gunungsitoli**	**84.13**	**273**	P	**P**	**22 25 45.9**	**+1.3**
C09A	**Chrisman Ranch**	**84.13**	**36**	IAmb	IAmb	22 25 44.7	
	comp=Z,23nm,0.6s						
YUK3	**Moose Creek**	**84.17**	**17**	P	**P**	**22 25 44.1**	**+0.1**
	baz=217,SNR=49						
Q16A	**Castle Valley**	**84.19**	**47**	IAmb	IAmb	22 25 47.3	
	comp=Z,52nm,1.4s						
HLID	**Hailey**	**84.24**	**41**	IAmb	IAmb	22 25 46.9	
	comp=Z,36nm,0.8s						
HLID	**Hailey**	**84.24**	**41**	P	**P**	**22 25 45.8**	**+1.1**
	baz=240,SNR=63						
TMUT	**Trail Mountain**	**84.33**	**46**	IAmb	IAmb	22 25 47.8	
	comp=Z,49nm,1.2s						
I21K	**Tanana**	**84.39**	**11**	IAmb	IAmb	22 25 45.6	
	comp=Z,69nm,1.1s						
I21K	**Tanana**	**84.39**	**11**	P	**P**	**22 25 44.4**	**-0.3**
	baz=206						
L26K	**Log Cabin Wild**	**84.41**	**15**	IAmb	IAmb	22 25 46.0	
	comp=Z,83nm,1.2s						
L26K	**Log Cabin Wild**	**84.41**	**15**	P	**P**	**22 25 44.9**	**0.0**
	baz=214,SNR=24						
HVU	**Hansel Valley**	**84.43**	**43**	IAmb	IAmb	22 25 47.6	
	comp=Z,76nm,1.4s						
NEA2	**Nenana**	**84.44**	**12**	P	**P**	**22 25 43.6**	**-1.3**
	baz=209,SNR=8.4						
MLY	**Manley**	**84.49**	**12**	IAmb	IAmb	22 25 45.4	
	comp=Z,45nm,1.0s						
MLY	**Manley**	**84.49**	**12**	P	**P**	**22 25 44.2**	**-1.0**
	baz=207						
BVCY	**Beaver Creek**	**84.57**	**17**	P	**P**	**22 25 46.0**	**+0.3**
	baz=216,SNR=39						
MAW	**Mawson**	**84.60**	**200**	P	**P**	**22 25 46.0**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=131,slow=7.3,SNR=6.2						
MAW	**Mawson**	**84.60**	**200**	P	**P**	**22 25 46.0**	**+0.2**
RIDG	**Independent Ri**	**84.64**	**15**	P	**P**	**22 25 45.7**	**-0.3**
	baz=213,SNR=7.4						
H21K	**Melozitna Rive**	**84.67**	**11**	P	**P**	**22 25 46.1**	**0.0**
	baz=205						
SRU	**San Rafael Swe**	**84.72**	**47**	IAmb	IAmb	22 25 48.5	
	comp=Z,23nm,0.7s						
HDA	**Harding Lake**	**84.73**	**13**	IAmb	IAmb	22 25 46.9	
	comp=Z,55nm,0.6s						
HDA	**Harding Lake**	**84.73**	**13**	P	**P**	**22 25 45.6**	**-0.7**
	baz=211						
CCB	**Clear Creek Bu**	**84.75**	**13**	IAmb	IAmb	22 25 46.7	
	comp=Z,114nm,1.2s						
DOT	**Dot Lake**	**84.75**	**15**	IAmb	IAmb	22 25 47.3	
	comp=Z,70nm,0.8s						
L27K	**Beaver Creek,**	**84.84**	**16**	IAmb	IAmb	22 25 48.1	
	comp=Z,68nm,1.6s						
L27K	**Beaver Creek,**	**84.84**	**16**	P	**P**	**22 25 47.0**	**0.0**
	baz=215						
I23K	**Minto, Yukon-K**	**84.86**	**12**	P	**P**	**22 25 45.9**	**-1.0**
	baz=208,SNR=10						
PMSA	**Palmer Station**	**84.91**	**157**	P	**P**	**22 25 47.4**	**0.0**
	comp=Z,4.6nm,0.5s,baz=225,slow=4.3,SNR=4.1						
MDM	**Murphy Dome**	**84.93**	**13**	IAmb	IAmb	22 25 47.6	
	comp=Z,87nm,1.1s						
TCOL	**CIGO, UAF Yank**	**84.93**	**13**	IAmb	IAmb	22 25 47.7	
	comp=Z,72nm,0.8s						
TCOL	**CIGO, UAF Yank**	**84.93**	**13**	P	**P**	**22 25 46.3**	**-1.0**
	baz=210,SNR=14						
COLA	**College**	**84.94**	**13**	P	**P**	**22 25 46.5**	**-0.8**
COLA				pmax	pmax		
	comp=Z,71nm,0.8s						
COLA	**College**	**84.94**	**13**	P	**P**	**22 25 46.5**	**-0.8**
COLA				IAmb	IAmb	22 25 47.7	
	comp=Z,71nm,0.8s						
COLA	**College**	**84.94**	**13**	P	**P**	**22 25 46.4**	**-0.8**
	baz=210						
WHY	**Whitehorse**	**85.02**	**20**	IAmb	IAmb	22 25 49.0	
	comp=Z,32nm,0.8s						
WHY	**Whitehorse**	**85.02**	**20**	P	**P**	**22 25 48.4**	**+0.4**
	baz=222,SNR=18						
SCRK	**Sand Creek**	**85.05**	**15**	P	**P**	**22 25 47.7**	**-0.3**
	baz=213,SNR=32						
IL31		**85.06**	**13**	IAmb	IAmb	22 25 48.3	
	comp=Z,91nm,1.3s						
ILAR	**Eielson Array**	**85.06**	**13**	P	**P**	**22 25 47.0**	**-0.9**
	comp=Z,14nm,0.4s,baz=217,slow=5.2,SNR=226						
DLBC	**Dease Lake**	**85.14**	**23**	IAmb	IAmb	22 25 50.4	
	comp=Z,80nm,1.2s						
POKR	**Poker Plat Res**	**85.24**	**13**	P	**P**	**22 25 47.8**	**-1.0**
	baz=210,SNR=7.8						
XAN	**Xi'an**	**85.25**	**308**	P	**P**	**22 25 51.1**	**+1.4**
XAN				pmax	pmax		
	comp=Z,110nm,1.3s						
J25K	**Salcha River,**	**85.26**	**14**	P	**P**	**22 25 48.6**	**-0.4**
	baz=212,SNR=29						
HIA	**Hailar**	**85.27**	**325**	*ce*P	**P**	**22 25 50.3**	**+0.9**
HIA				pmax	pmax		
	comp=Z,18nm,1.8s						
MVCO	**Mesa Verde**	**85.33**	**49**	P	**P**	**22 25 50.7**	**+0.5**
	baz=245						
N31M	**Braeburn, Yuko**	**85.35**	**19**	P	**P**	**22 25 49.7**	**+0.3**
	baz=221,SNR=13						
P33M	**Teslin, Yukon**	**85.38**	**21**	P	**P**	**22 25 50.0**	**+0.2**
	baz=224						
BILL	**Bilibino**	**85.41**	**354**	*c i*P	**P**	**22 25 49.4**	**-0.2**
BILL				*e**PP	**pP**	**22 27 44.7**	**-0.4**
BILL				*e*		22 29 17.2	
BILL				pmax	pmax		
	comp=Z,77nm,0.9s						
BILL	**Bilibino**	**85.41**	**354**	P	**P**	**22 25 49.4**	**-0.2**
MNTX	**Cornudas Mount**	**85.44**	**55**	P	**P**	**22 25 51.7**	**+1.1**
	baz=247						
RDOG	**Red Dog Mine**	**85.55**	**6**	P	P	22 25 58.7	+8.5
	baz=195,SNR=7.7						
J26L	**Joseph Creek**	**85.59**	**15**	P	**P**	**22 25 51.0**	**+0.3**
	baz=214						
M30M	**Minto, Yukon**	**85.87**	**18**	P	**P**	**22 25 52.0**	**0.0**
	baz=220						
ANMO	**Albuquerque**	**85.90**	**52**	P	**P**	**22 25 53.7**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,32nm,1.1s						
ANMO	**Albuquerque**	**85.90**	**52**	P	**P**	**22 25 53.7**	**+0.7**
ANMO				IAmb	IAmb	22 25 54.8	
	comp=Z,32nm,1.1s						
ANMO	**Albuquerque**	**85.90**	**52**	P	**P**	**22 25 53.7**	**+0.7**
	baz=246						
TX32	**Lajitas Array**	**85.92**	**58**	IAmb	IAmb	22 25 56.1	
	comp=Z,69nm,1.3s						
TXAR	**Lajitas Array**	**85.92**	**58**	P	**P**	**22 25 54.7**	**+1.7**
	comp=Z,18nm,0.8s,baz=219,slow=6.3,SNR=124						
PRP	**Porcupine Dome**	**85.99**	**13**	P	**P**	**22 25 52.0**	**-0.6**
	baz=212,SNR=7.3						
HHC	**Hu-ho-hao-te**	**86.22**	**315**	*e*P	**P**	**22 25 55.3**	**+1.1**
HHC				pmax	pmax		
	comp=Z,58nm,1.1s						
HHC				pmax	pmax		
	comp=Z,260nm,5.3s						
DLMT	**Dillon**	**86.25**	**40**	IAmb	IAmb	22 25 56.3	
	comp=Z,56nm,1.2s						
DAWY	**Dawson**	**86.30**	**16**	IAmb	IAmb	22 25 55.1	
	comp=Z,28nm,0.8s						
DAWY	**Dawson**	**86.30**	**16**	P	**P**	**22 25 53.9**	**-0.1**
	baz=218,SNR=31						
M31M	**Drury Creek, Y**	**86.32**	**19**	P	**P**	**22 25 53.6**	**-0.5**
	baz=222,SNR=8.1						
EGAK	**Eagle**	**86.41**	**15**	IAmb	IAmb	22 25 54.8	
	comp=Z,25nm,0.8s						
EGAK	**Eagle**	**86.41**	**15**	P	**P**	**22 25 54.3**	**-0.1**
	baz=216,SNR=20						
REDW	**Red Top Meadow**	**86.42**	**43**	IAmb	IAmb	22 25 57.3	
	comp=Z,70nm,1.1s						
FXWY	**Fox Creek**	**86.44**	**42**	IAmb	IAmb	22 25 58.4	
	comp=Z,29nm,0.9s						
COLD	**Coldfoot**	**86.55**	**11**	IAmb	IAmb	22 25 57.3	
	comp=Z,38nm,0.9s						
COLD	**Coldfoot**	**86.55**	**11**	P	**P**	**22 25 55.3**	**+0.3**
	baz=207,SNR=35						
FARO	**Faro, Yukon**	**86.68**	**20**	P	**P**	**22 25 55.7**	**-0.1**
	baz=223						
LOHW	**Long Hollow**	**86.70**	**43**	P	**P**	**22 25 56.7**	**+0.1**
LOHW				IAmb	IAmb	22 25 57.9	
	comp=Z,24nm,0.7s						
WTLY	**Watson Lake, Y**	**86.75**	**23**	P	**P**	**22 25 56.7**	**+0.5**
	baz=227						
O20A	**White River Ci**	**86.75**	**46**	IAmb	IAmb	22 25 58.9	
	comp=Z,66nm,1.4s						
O20A	**White River Ci**	**86.75**	**46**	P	**P**	**22 25 57.6**	**+0.7**
	baz=245,SNR=14						
S22A	**4UR Ranch, Cre**	**86.76**	**49**	P	**P**	**22 25 58.1**	**+0.9**
	baz=246,SNR=26						
FLWY	**Flagg Ranch**	**86.85**	**42**	IAmb	IAmb	22 25 59.6	
	comp=Z,83nm,1.2s						
J29M	**Klondike Camp**	**86.92**	**16**	P	**P**	**22 25 57.5**	**+0.6**
	baz=219						
YMR	**Madison River**	**86.95**	**41**	IAmb	IAmb	22 25 59.8	
	comp=Z,36nm,0.8s						
BOZ	**Bozeman (W)**	**86.96**	**40**	IAmb	IAmb	22 25 59.7	
	comp=Z,34nm,1.1s						
BOZ	**Bozeman (W)**	**86.96**	**40**	P	**P**	**22 25 58.4**	**+0.7**
	baz=242,SNR=13						
BW06	**Boulder Array**	**87.00**	**44**	IAmb	IAmb	22 25 59.3	
	comp=Z,83nm,1.4s						
BW06	**Boulder Array**	**87.00**	**44**	P	**P**	**22 25 58.3**	**+0.2**
	baz=244,SNR=48						
PD31	**Pinedale Array**	**87.00**	**44**	IAmb	IAmb	22 25 59.3	
	comp=Z,74nm,1.4s						
PDAR	**Pinedale Array**	**87.00**	**44**	P	**P**	**22 25 58.2**	**+0.2**
	comp=Z,19nm,0.5s,baz=207,slow=3.0,SNR=235						
PDAR				PP	**PP**	**22 29 29.0**	**-2.4**
	comp=Z,2.1nm,1.0s,baz=246,slow=7.4,SNR=5.7						
H17A	**Grant Village**	**87.07**	**42**	IAmb	IAmb	22 26 01.5	
	comp=Z,42nm,0.9s						
H17A	**Grant Village**	**87.07**	**42**	P	**P**	**22 26 00.3**	**+1.9**
	baz=243,SNR=17						
YHH	**Holmes Hill**	**87.08**	**41**	IAmb	IAmb	22 26 01.9	
	comp=Z,57nm,1.5s						
YNR	**Norris Junctio**	**87.15**	**42**	IAmb	IAmb	22 26 02.5	
	comp=Z,38nm,1.2s						
YUF	**Upper Falls**	**87.26**	**42**	IAmb	IAmb	22 26 01.9	
	comp=Z,41nm,1.6s						
WALA	**Waterton Lakes**	**87.27**	**37**	IAmb	IAmb	22 26 00.5	
	comp=Z,33nm,1.0s						
I29M	**Ogilvie Camp,**	**87.61**	**16**	P	**P**	**22 25 59.6**	**-0.4**
	baz=219						
SDCO	**Great Sand Dun**	**87.72**	**50**	P	**P**	**22 26 02.2**	**+0.5**
	baz=246						
TOLK	**Toolik Lake Re**	**87.92**	**10**	P	**P**	**22 26 01.2**	**-0.3**
	baz=208,SNR=11						
CMAR	**Chiang Mai Arr**	**88.06**	**290**	P	**P**	**22 26 04.5**	**+1.3**
	comp=Z,3.9nm,0.5s,baz=114,slow=3.7,SNR=7.5						
CMAR	**Chiang Mai Arr**	**88.06**	**290**	*i* P	**P**	**22 26 04.5**	**+1.3**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
RWWY	**Rawlins**	**88.12**	**45**	IAmb	IAmb	22 26 04.9	
	comp=Z,51nm,1.2s						
CHTO	**Chiang Mai**	**88.17**	**290**	P	**P**	**22 26 05.1**	**+1.3**
RLMT	**Red Lodge**	**88.23**	**42**	P	**P**	**22 26 04.3**	**+0.5**
RLMT				IAmb	IAmb	22 26 05.9	
	comp=Z,49nm,1.2s						
RLMT	**Red Lodge**	**88.23**	**42**	P	**P**	**22 26 04.7**	**+1.0**
	baz=244,SNR=9.0						
T25A	**Trinidad**	**88.29**	**50**	P	**P**	**22 26 04.2**	**0.0**
T25A	**Trinidad**	**88.29**	**50**	P	**P**	**22 26 04.5**	**+0.3**
	baz=247						
MSTX	**Muleshoe**	**88.33**	**54**	IAmb	IAmb	22 26 05.8	
	comp=Z,43nm,1.1s						
MSTX	**Muleshoe**	**88.33**	**54**	P	**P**	**22 26 04.8**	**+0.5**
	baz=248						
ISCO	**Idaho Springs**	**88.46**	**48**	P	**P**	**22 26 05.0**	**0.0**
ISCO				pmax	pmax		
	comp=Z,31nm,1.6s						
ISCO	**Idaho Springs**	**88.46**	**48**	P	**P**	**22 26 05.0**	**0.0**
ISCO				IAmb	IAmb	22 26 07.1	
	comp=Z,31nm,1.6s						
ISCO	**Idaho Springs**	**88.46**	**48**	P	**P**	**22 26 05.8**	**+0.8**
	baz=246,SNR=6.7						
Q24A	**Divide**	**88.46**	**48**	P	**P**	**22 26 05.9**	**+0.9**
	baz=247,SNR=12						
YAK	**Yakutsk**	**88.48**	**338**	P	**P**	**22 26 03.2**	**-1.0**
	comp=Z,16nm,0.7s,baz=322,slow=1.1,SNR=4.8						
YAK	**Yakutsk**	**88.48**	**338**	*de*P	**P**	**22 26 03.1**	**-1.0**
YAK				pmax	pmax		
	comp=Z,31nm,0.8s						
YAK	**Yakutsk**	**88.48**	**338**	P	**P**	**22 26 03.7**	**-0.5**
YAK				IAmb	IAmb	22 26 04.3	
	comp=Z,41nm,1.0s						
EPYK	**Eagle Plains**	**88.81**	**16**	P	**P**	**22 26 05.3**	**-0.3**
	baz=220,SNR=14						
K22A	**Casper**	**88.98**	**45**	IAmb	IAmb	22 26 08.8	
	comp=Z,33nm,1.2s						
K22A	**Casper**	**88.98**	**45**	P	**P**	**22 26 07.7**	**+0.5**
	baz=246,SNR=7.3						
833A	**Chaparral WMA,**	**89.06**	**60**	P	**P**	**22 26 08.9**	**+1.2**
	baz=250						
EGMT	**Eagleton**	**89.22**	**39**	P	**P**	**22 26 08.3**	**+0.3**
EGMT				IAmb	IAmb	22 26 09.7	
	comp=Z,31nm,1.4s						
EGMT	**Eagleton**	**89.22**	**39**	P	**P**	**22 26 08.4**	**+0.4**
	baz=243						
A21K	**Barrow**	**89.35**	**7**	P	**P**	**22 26 07.7**	**-0.3**
	baz=201						
JCT	**Junction City**	**89.46**	**58**	P	**P**	**22 26 09.6**	**0.0**
JCT				pmax	pmax		
	comp=Z,14nm,0.8s						
JCT	**Junction City**	**89.46**	**58**	P	**P**	**22 26 09.6**	**0.0**
JCT				IAmb	IAmb	22 26 10.5	
	comp=Z,14nm,0.8s						
JCT	**Junction City**	**89.46**	**58**	P	**P**	**22 26 10.0**	**+0.4**
	baz=250						
AMTX	**Amarillo**	**89.51**	**53**	IAmb	IAmb	22 26 11.2	
	comp=Z,43nm,1.2s						
AMTX	**Amarillo**	**89.51**	**53**	P	**P**	**22 26 10.0**	**+0.3**
	baz=249						
LZH	**Lanzhou**	**89.88**	**308**	*e*P	**P**	**22 26 12.8**	**+1.3**
LZH				pP	pwP	22 28 12.5	+1.0
LZH				pmax	pmax		
	comp=Z,68nm,1.1s						
SYO	**Syowa Base**	**89.99**	**193**	⇓*e*X	P	22 26 05.4	-5.8
SYO	**Syowa Base**	**89.99**	**193**	⇓*e*PcP	**P**	**22 26 10.6**	**-0.6**
KSCO	**Kaye Shedlock'**	**90.29**	**49**	P	**P**	**22 26 13.9**	**+0.6**
	baz=248						
ABTX	**Abilene, Hawle**	**90.31**	**56**	P	**P**	**22 26 13.8**	**+0.4**
	baz=250						
LAO	**LASA Array**	**90.82**	**41**	P	**P**	**22 26 16.9**	**+1.4**
	baz=246,SNR=25						
INK	**Inuvik**	**91.08**	**15**	P	**P**	**22 26 15.4**	**-0.7**
	comp=Z,18nm,0.9s,baz=220,slow=5.0,SNR=35						
INK	**Inuvik**	**91.08**	**15**	P	**P**	**22 26 15.2**	**-0.8**
	baz=223,SNR=16						
RSSD	**Black Hills**	**91.22**	**44**	P	**P**	**22 26 17.5**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,37nm,1.1s						
RSSD	**Black Hills**	**91.22**	**44**	P	**P**	**22 26 17.5**	**-0.1**
RSSD				IAmb	IAmb	22 26 18.9	
	comp=Z,37nm,1.1s						
RSSD	**Black Hills**	**91.22**	**44**	P	**P**	**22 26 17.7**	**0.0**
	baz=247						
435B	**Jarrell**	**91.36**	**58**	P	**P**	**22 26 19.1**	**+0.8**
	baz=251						
OGNE	**Ogallala**	**91.42**	**48**	P	**P**	**22 26 18.9**	**+0.4**
	baz=249						
SNAA	**Sanae**	**91.58**	**179**	P	**P**	**22 26 17.5**	**-1.1**
SNAA	**Sanae**	**91.58**	**179**	P	**P**	**22 26 17.7**	**-0.9**
	comp=Z,1.6nm,0.5s,baz=199,slow=18,SNR=6.6						
VNA3	**Neumayer Olymp**	**91.75**	**177**	P	**P**	**22 26 18.6**	**-0.7**
WHTX	**Lake Whitney,**	**91.85**	**57**	P	**P**	**22 26 21.0**	**+0.5**
	baz=251						
ULN	**Ulaanbaatar**	**92.07**	**320**	*d i*P	**P**	**22 26 21.1**	**-0.3**
ULN				pmax	pmax		
	comp=Z,24nm,1.1s						
VNA2	**Neumayer--Watz**	**92.18**	**177**	P	**P**	**22 26 20.6**	**-0.7**
	baz=195,slow=3.7						
CBKS	**Cedar Bluff**	**92.33**	**50**	P	**P**	**22 26 22.4**	**-0.2**
CBKS				pmax	pmax		
	comp=Z,38nm,1.3s						
CBKS	**Cedar Bluff**	**92.33**	**50**	P	**P**	**22 26 22.4**	**-0.2**
CBKS				IAmb	IAmb	22 26 24.2	
	comp=Z,38nm,1.2s						
CBKS	**Cedar Bluff**	**92.33**	**50**	P	**P**	**22 26 23.2**	**+0.6**
	baz=250						
PLCA	**Paso Flores**	**92.38**	**134**	P	**P**	**22 26 22.7**	**-0.3**
PLCA				pmax	pmax		
	comp=Z,19nm,1.6s						
PLCA	**Paso Flores**	**92.38**	**134**	P	**P**	**22 26 22.6**	**-0.3**
X34A	**Smith Ranch, M**	**92.39**	**55**	P	**P**	**22 26 23.4**	**+0.5**
X34A				IAmb	IAmb	22 26 24.4	
	comp=Z,15nm,0.7s						
VNA1	**Neumayer--Stat**	**92.41**	**177**	P	**P**	**22 26 21.8**	**-0.6**
SONM	**Songino Array**	**92.47**	**319**	P	**P**	**22 26 22.9**	**-0.2**
	comp=Z,4.3nm,0.5s,baz=121,slow=4.4,SNR=14						
SONM	**Songino Array**	**92.47**	**319**	IAmb	IAmb	22 26 24.1	
	comp=Z,40nm,1.7s						
HKT	**Hockley**	**92.54**	**60**	⇑*e*P	**P**	**22 26 24.8**	**+1.2**
HKT				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DGMT	**Dagmar**	**92.78**	**40**	P	**P**	**22 26 25.0**	**+0.6**
	baz=248,SNR=17						
KAN01	**Argonia South**	**93.27**	**52**	P	**P**	**22 26 26.9**	**0.0**
W35A	**Tecumseh**	**93.31**	**54**	P	**P**	**22 26 27.6**	**+0.5**
YKA	**Yellowknife Ar**	**93.66**	**25**	P	**P**	**22 26 27.9**	**-0.2**
	comp=Z,19nm,0.6s,baz=244,slow=4.5,SNR=165						
YKA				PKKP	**PKKPdf**	**22 43 29.3**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=36,slow=2.2,SNR=3.8						
GTA	**Gaotai**	**94.01**	**310**	*e*P	**P**	**22 26 30.4**	**0.0**
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
T35A	**Sooner Cattle**	**94.14**	**53**	P	**P**	**22 26 31.3**	**+0.4**
K31A	**O'Neill**	**94.30**	**47**	P	**P**	**22 26 31.5**	**0.0**
BGNE	**Belgrade**	**94.34**	**48**	P	**P**	**22 26 32.6**	**+0.9**
	baz=251						
KSU1	**Kansas State U**	**94.73**	**51**	P	**P**	**22 26 34.1**	**+0.6**
KSU1	**Kansas State U**	**94.73**	**51**	P	**P**	**22 26 34.4**	**+0.8**
	baz=252						
U38A	**Gravette**	**95.63**	**54**	P	**P**	**22 26 37.5**	**-0.2**
U38A				IAmb	IAmb	22 26 39.6	
	comp=Z,11nm,0.9s						
A36M	**Sachs Harbour**	**95.67**	**15**	P	**P**	**22 26 36.7**	**-0.2**
	baz=231						
W39A	**Magazine**	**95.74**	**55**	P	**P**	**22 26 38.5**	**+0.4**
	baz=253						
ECSD	**EROS Data Cent**	**96.13**	**46**	IAmb	IAmb	22 26 40.4	
	comp=Z,8.8nm,0.8s						
ECSD	**EROS Data Cent**	**96.13**	**46**	P	**P**	**22 26 39.9**	**+0.2**
	baz=252						
U40A	**Yellville**	**96.79**	**54**	IAmb	IAmb	22 26 45.3	
	comp=Z,17nm,1.1s						
U40A	**Yellville**	**96.79**	**54**	P	**P**	**22 26 43.8**	**+0.9**
	baz=254						
S39A	**Bolivar**	**96.80**	**53**	P	**P**	**22 26 43.4**	**+0.5**
S39A				IAmb	IAmb	22 26 44.5	
	comp=Z,14nm,0.8s						
P38A	**Dawn**	**97.17**	**51**	P	**P**	**22 26 44.0**	**-0.5**
P38A				IAmb	IAmb	22 26 45.6	
	comp=Z,11nm,0.9s						
MGMO	**Mountain Grove**	**97.46**	**54**	P	**P**	**22 26 46.6**	**+0.7**
CCM	**Cathedral Cave**	**98.48**	**53**	P	**P**	**22 26 51.1**	**+0.7**
	baz=255						
ULM	**Lac du Bonnet**	**98.50**	**40**	P	Pdif	22 26 49.5	-0.6
	comp=Z,3.6nm,0.9s,baz=224,slow=8.4,SNR=3.4						
JFWS	**Jewell Farm**	**100.40**	**48**	P	**Pdif**	**22 26 59.8**	**+1.1**
	baz=256						
ZALV	**Zalesovo Beam**	**107.14**	**322**	PKiKP	**PKiKP**	**22 31 32.8**	**-1.5**
	comp=Z,3.0nm,0.5s,baz=102,slow=0.7,SNR=11						
MKAR	**Makanchi Array**	**108.08**	**314**	PKiKP	**PKiKP**	**22 31 35.0**	**-1.4**
	comp=Z,2.6nm,0.5s,baz=185,slow=0.5,SNR=34						
KURK	**Kurchatov**	**110.75**	**318**	*i* PKIKP	**PKiKP**	**22 31 40.2**	**-1.0**
KURBB	**Kurchatov Arra**	**110.81**	**318**	PKiKP	**PKiKP**	**22 31 40.2**	**-1.1**
	comp=Z,3.6nm,0.6s,baz=94,slow=1.9,SNR=17						
AAK	**Ala-Archa**	**113.36**	**310**	PKiKP	**PKiKP**	**22 31 45.9**	**-0.8**
	comp=Z,1.4nm,0.5s,baz=97,slow=3.5,SNR=4.9						
BVAR	**Borovoye Array**	**115.76**	**321**	PKP	**PKPdf**	**22 31 49.1**	**-1.6**
	comp=Z,7.1nm,0.5s,baz=208,slow=5.5,SNR=42						
BRVK	**Borovoye**	**115.82**	**321**	*d i*PKIKP	**PKPdf**	**22 31 49.6**	**-1.2**
BRVK	**Borovoye**	**115.82**	**321**	PKPdf	**PKPdf**	**22 31 49.9**	**-0.9**
SPA0	**Spitsbergen Ar**	**118.26**	**356**	*e*PKPdf	**PKPdf**	**22 31 54.6**	**-0.3**
SUMG	**Summit**	**119.90**	**13**	PKIKP	**PKPdf**	**22 31 58.4**	**-0.2**
SUMG	**Summit**	**119.90**	**13**		**PKPdf**	**22 31 58.4**	**-0.2**
ARU	**Arti**	**121.75**	**327**	PKP	**PKPdf**	**22 32 01.4**	**-0.7**
	comp=Z,10.0nm,0.4s,baz=83,slow=1.8,SNR=55						
ARU	**Arti**	**121.75**	**327**	*i* PKIKP	**PKPdf**	**22 32 01.2**	**-0.9**
ARU						22 33 44.2	
ARU						22 38 21.6	
ARU				SP	SP	22 42 42.3	-2.0
ARU				SS	**SS**	**22 49 33.5**	**-6.3**
AKTO	**Aktyubinsk**	**123.79**	**320**	PKP	**PKPdf**	**22 32 05.7**	**-0.5**
	comp=Z,11nm,0.8s,baz=74,slow=3.1,SNR=14						
HAMF	**Hammerfest**	**124.57**	**351**	*e*PKPdf	**PKPdf**	**22 32 06.5**	**-0.6**
ARA0	**ARCESS Array S**	**125.26**	**350**	*e*PKPdf	**PKPdf**	**22 32 08.3**	**-0.2**
ARCES	**ARCESS Array B**	**125.26**	**350**	PKP	**PKPdf**	**22 32 08.0**	**-0.5**
	comp=Z,16nm,0.6s,baz=38,slow=0.9,SNR=55						
KIRV	**Kirov**	**125.42**	**331**	PKP	**PKPdf**	**22 32 08.7**	**-0.3**
	comp=Z,27nm,0.7s,baz=118,slow=2.3,SNR=7.1						
PRGR	**Permogore**	**125.44**	**336**	*e*PKIKP	**PKPdf**	**22 32 07.4**	**-1.6**
PRGR				pmax	pmax		
	comp=Z,68nm,1.3s						
WSAR	**Wadi Sarin**	**125.84**	**287**	PKP	**PKPdf**	**22 32 10.6**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=240,slow=7.3,SNR=8.5						
KTK1	**Kautokeino**	**126.10**	**350**	*e*PKPdf	**PKPdf**	**22 32 09.2**	**-0.9**
TRO	**Tromso**	**126.16**	**352**	*e*PKPdf	**PKPdf**	**22 32 09.7**	**-0.4**
UOSS	**Minazif**	**128.16**	**289**	PKPdf	**PKPdf**	**22 32 13.6**	**-1.7**
STEI	**Steigen**	**128.21**	**353**	*e*PKPdf	**PKPdf**	**22 32 13.9**	**-0.2**
KLMR	**Klimovskoe**	**128.26**	**337**	*e*PKIKP	**PKPdf**	**22 32 12.4**	**-2.0**
KLMR				*e*		22 34 25.1	
KLMR				pmax	pmax		
	comp=Z,17nm,0.8s						
KLMR	**Klimovskoe**	**128.26**	**337**	*e*PKPdf	**PKPdf**	**22 32 12.5**	**-2.0**
KLMR				AMP		22 32 14.7	
	comp=Z,17nm,0.8s						
KLMR				*e*PP	**PP**	**22 34 25.2**	**-1.5**
FAUS	**Fauske**	**128.73**	**353**	*e*PKPdf	**PKPdf**	**22 32 14.1**	**-1.0**
BELG	**Belogornoye**	**129.19**	**325**	*c i*PKIKP	**PKPdf**	**22 32 16.5**	**+0.1**
KONS	**Konsvik**	**129.82**	**354**	*e*PKPdf	**PKPdf**	**22 32 17.3**	**+0.1**
NSS	**Namsos**	**131.86**	**354**	*e*PKPdf	**PKPdf**	**22 32 21.2**	**+0.1**
FINES	**FINESS Array B**	**132.11**	**344**	PKhKP	PKPpre	22 32 06.3	
	comp=Z,1.6nm,0.6s,baz=86,slow=2.7,SNR=4.8						
FINES				PKP	**PKPdf**	**22 32 21.3**	**-0.4**
	comp=Z,7.6nm,0.4s,baz=61,slow=2.4,SNR=26						
FINES				SKP		22 35 00.2	
	comp=Z,5.6nm,0.6s,baz=68,slow=2.4,SNR=11						
MOS	**Moscow**	**132.33**	**333**	*e*PKIKP	**PKPdf**	**22 32 22.1**	**-0.2**
OBN	**Obninsk**	**133.19**	**333**	*c i*PKIKP	**PKPdf**	**22 32 22.2**	**-1.7**
OBN				*e*		22 34 25.7	
OBN				*e*		22 35 01.3	
OBN				pmax	pmax		
	comp=Z,16nm,0.9s						
OBN	**Obninsk**	**133.19**	**333**		**PKPdf**	**22 32 24.3**	**+0.4**
VSU	**Vasula**	**134.39**	**341**	*c i*PKIKP	**PKPdf**	**22 32 25.6**	**-0.5**
DOMB	**Dombas**	**134.58**	**355**	*e*	PKPpre	22 32 15.6	
DOMB				*e*PKPdf	**PKPdf**	**22 32 26.7**	**+0.3**
AKN	**Aaknes**	**134.61**	**356**	*e*PKPdf	**PKPdf**	**22 32 26.7**	**+0.2**
FOO	**Floro**	**135.29**	**357**	*e*PKPdf	**PKiKP**	**22 32 28.5**	**-0.8**
NB2	**NORSAR Subarra**	**135.34**	**353**	PKP	PKPpre	22 32 16.0	
	comp=Z,1.4nm,0.6s,baz=27,slow=2.4						
NOA	**NORSAR Array B**	**135.34**	**353**	PKhKP	PKPpre	22 32 15.9	
	comp=Z,1.6nm,0.7s,baz=32,slow=2.0,SNR=5.3						
NOA				PKP	**PKPdf**	**22 32 27.8**	**-0.1**
	comp=Z,2.6nm,0.5s,baz=59,slow=1.5,SNR=15						
NC602	**NORSAR Array S**	**135.60**	**353**	*e*	PKPpre	22 32 16.1	
NC602				*e*PKPdf	**PKPdf**	**22 32 28.9**	**+0.7**
KBZ	**Khabaz**	**135.74**	**316**	⇑*i*PKIKP	**PKiKP**	**22 32 30.5**	**-0.3**
KIV	**Kislovodsk**	**135.79**	**317**	*e*PKIKP	**PKPdf**	**22 32 29.1**	**-0.2**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SKAR	**Skarslia**	**135.99**	**355**	*e*PKPdf	**PKPdf**	**22 32 29.2**	**+0.1**
RAYN	**Ar Rayn**	**137.90**	**286**	PKIKP	**PKPdf**	**22 32 33.5**	**-0.2**
RAYN	**Ar Rayn**	**137.90**	**286**		**PKPdf**	**22 32 33.5**	**-0.2**
HOMB	**Homborsund**	**138.35**	**354**	*i* P	PKPpre	22 32 23.0	
HOMB				*i* P	PKPpre	22 32 23.0	
KIBK	**Kibwezi**	**138.77**	**246**		PKPpre	22 32 28.1	
KAC	**Achnashellach**	**139.22**	**5**	*e*P	PKPpre	22 32 26.9	
DEL	**Delary**	**139.35**	**349**	*i* P	PKPpre	22 32 26.0	
AKASG	**Malin Array Be**	**139.45**	**332**	PKhKP	PKPpre	22 32 26.6	
	comp=Z,1.8nm,0.4s,baz=46,slow=4.1,SNR=11						
BSD	**Bornholm Skovb**	**140.42**	**348**	*i* P	**PKPdf**	**22 32 30.0**	**-7.2**
BSD				*i* P	**PKPdf**	**22 32 30.0**	**-7.2**
LAWE	**Loch Awe, Argy**	**140.43**	**6**	*e*P	**PKPdf**	**22 32 30.6**	**-6.7**
NEWG	**New Galloway**	**141.67**	**5**	*e*P	**PKPdf**	**22 32 34.0**	**-5.5**
SORM	**Soroca**	**141.68**	**330**	⇑P	**PKPdf**	**22 32 34.8**	**-4.9**
SORM	**Soroca**	**141.68**	**330**	⇑PKHKP	PKPpre	22 32 34.8	
GAL1	**Galloway**	**141.88**	**5**	*e*P	**PKPdf**	**22 32 34.9**	**-5.0**
EDMD	**Edmundbyers**	**142.10**	**3**	*e*P	**PKPdf**	**22 32 36.1**	**-4.2**
LVV	**L'vov**	**142.30**	**336**	*e*PKHKP	PKPpre	22 32 36.0	
MILM	**Milestii Mici**	**142.31**	**329**	⇑P	**PKPdf**	**22 32 36.7**	**-4.2**
MILM	**Milestii Mici**	**142.31**	**329**	⇑PKHKP	PKPpre	22 32 36.7	
KWP	**Kalwaria Pacla**	**142.97**	**337**	*e*PKP	**PKPdf**	**22 32 39.7**	**-2.3**
VASR	**Vaslui**	**143.00**	**329**	⇑P	PKPbc	22 32 40.5	+0.4
RUE	**Ruedersdorf**	**143.13**	**347**	*e*PKPbc	PKPab	22 32 39.9	+0.1
	baz=16,slow=2.9						
PRAR	**RASCA**	**143.24**	**331**	⇓P	PKPab	22 32 38.9	-1.5
BIR	**Birlad**	**143.35**	**329**	⇑P	**PKPdf**	**22 32 42.1**	**-0.7**
BIR	**Birlad**	**143.35**	**329**	⇑PKIKP	**PKPdf**	**22 32 42.1**	**-0.7**

WME	Myndd Eilian	143.37	5	*e*P	PKPab	22 32 40.1	-0.6
VLDR	Vladesti	143.41	328	⇑P	PKPdf	22 32 42.3	-0.5
WLF1	Llynfaes	143.47	5	*e*P	PKPab	22 32 40.6	-0.4
TLCR		143.47	326	⇓P	PKPbc	22 32 41.8	+0.3
TLCR		143.47	326	⇓PKIKP	PKPbc	22 32 41.8	+0.2
YRC	Rhoscolyn	143.49	6	*e*P	PKPab	22 32 40.7	-0.4
VARL	Varlezi	143.49	328	⇑P	PKPdf	22 32 42.5	-0.5
BURAR	Bucovina Array	143.51	332	⇑P	PKPbc	22 32 42.4	+0.6
BURAR	Bucovina Array	143.51	332	⇑PKIKP	PKPbc	22 32 42.4	+0.6
OJC	Ojcow	143.52	340	*e*PKP	PKPbc	22 32 41.6	0.0
LBWR	Ladybower, Pea	143.54	3	*e*P	PKPbc	22 32 41.6	+0.1
SCTR	Scanteiesti	143.57	328	⇑P	PKPdf	22 32 42.5	-0.6
GIUM	Giurgiulesti	143.59	327	⇑P	PKPdf	22 32 42.8	-0.4
TATR	Tatarca	143.59	328	⇑P	PKPdf	22 32 42.6	-0.6
GHRR		143.60	329	⇓P	PKPdf	22 32 43.1	-0.1
YLL	Llanberis	143.63	5	*e*P	PKPab	22 32 41.4	-0.4
TESR	Tescani	143.65	330	⇓P	PKPab	22 32 42.0	-0.1
KOLS	Kolonicke sedl	143.70	336	*e*PKIKP	PKPbc	22 32 42.6	+0.4
KOLS	Kolonicke sedl	143.70	336	*e*PKP	PKPbc	22 32 42.6	+0.4
JURR	Jurilovca	143.72	326	⇓P	PKPbc	22 32 42.8	+0.5
BRTR	Keskin Array B	143.72	315	PKP	PKPab	22 32 42.6	-0.1
	comp=Z,27nm,0.5s,baz=106,slow=2.1,SNR=188						
LODK	Lodwar	143.74	252	PKPdf	PKPbc	22 32 43.8	+0.4
SLCR	Slobozia Conac	143.74	328	⇓P	PKPdf	22 32 43.2	-0.3
FLTG	Flechtingen	143.77	349	*e*PKPbc	PKPab	22 32 41.8	-0.5
	baz=16,slow=2.9						
SCHL	Schela	143.77	328	⇓P	PKPdf	22 32 43.3	-0.2
IZVR	Izvoarele	143.78	328	⇓P	PKPdf	22 32 43.3	-0.2
NRDL	Niedersach Rie	143.80	351	*e*PKPbc	PKPbc	22 32 42.1	-0.2
	baz=16,slow=2.9						
CFR	Carcaliu	143.83	327	⇓P	PKPab	22 32 43.0	+0.3
CFR	Carcaliu	143.83	327	⇓PKIKP	PKPab	22 32 43.0	+0.3
TPGR	Topolog	143.90	326	⇓P	PKPdf	22 32 43.6	-0.2
UZH	Uzhgorod	143.94	336	*d i*PKIKP	PKPbc	22 32 41.2	-1.7
FOEL	Foel Wylfa	143.96	4	*e*P	PKPbc	22 32 42.7	-0.2
ODBI	Odobesti	143.98	329	⇓P	PKPdf	22 32 44.6	+0.8
KSP	Ksiaz	144.03	344	*e*PKP	PKPdf	22 32 43.7	-0.1
NIE	Niedzica	144.03	338	*e*PKP	PKPdf	22 32 44.6	+0.7
ASSE	Asse, Remlinge	144.06	350	*e*PKPbc	PKPbc	22 32 42.9	-0.2
	baz=16,slow=2.9						
VRI	Vrincioaia	144.07	329	⇓P	PKPab	22 32 43.8	+0.1
VRI	Vrincioaia	144.07	329	⇓PKIKP	PKPab	22 32 43.8	+0.1
PLOR	Plostina	144.12	329	⇓P	PKPbc	22 32 43.6	-0.1
PLOR	Plostina	144.12	329	⇓PKIKP	PKPbc	22 32 43.6	-0.1
TIRR	Tirgusor	144.17	326	⇓P	PKPab	22 32 44.0	0.0
TIRR	Tirgusor	144.17	326	⇓PKIKP	PKPab	22 32 44.0	0.0
BMR	Baia Mare	144.21	334	⇓P	PKPab	22 32 44.1	0.0
BMR	Baia Mare	144.21	334	⇓PKIKP	PKPab	22 32 44.1	0.0
ANTO	Ankara	144.22	316	PKIKP	PKPdf	22 32 44.7	+0.1
ANTO	Ankara	144.22	316		PKPdf	22 32 44.7	+0.1
CWF	Charnwood Fore	144.22	2	*e*P	PKPbc	22 32 43.0	-0.7
TRPA	Tarpa	144.24	335	⇓P	PKPab	22 32 44.1	0.0
HARR	Harsova	144.27	326	⇑P	PKPdf	22 32 44.3	-0.1
HARR	Harsova	144.27	326	⇑PKIKP	PKPdf	22 32 44.3	-0.1
WACR	West Acre	144.28	0	*e*P	PKPbc	22 32 43.3	-0.6
ARCR	ARCALIA	144.29	332	⇑P	PKPab	22 32 45.2	+0.8
GRER		144.29	328	⇓P	PKPab	22 32 45.7	+1.2
IBBN	Ibbenburen	144.30	353	*e*PKPbc	PKPbc	22 32 44.0	0.0
	baz=16,slow=2.9						
OSTC	Ostas	144.31	343	⇑*e*PKP	PKPab	22 32 44.5	+0.1
TLBR	Topalu	144.31	326	⇓P	PKPab	22 32 44.6	+0.1
BISRR	Bisoca	144.31	329	⇑P	PKPab	22 32 45.1	+0.5
CHVC	Chvalec	144.32	344	⇑*e*PKP	PKPab	22 32 44.6	+0.1
COVR	Voineasa-Covas	144.35	329	⇓P	PKPdf	22 32 44.6	0.0
MFTR	Murfatlar	144.35	325	⇓P	PKPab	22 32 44.8	+0.1
HLM1	Long Mynd	144.35	4	*e*P	PKPbc	22 32 43.7	-0.4
OZUR		144.37	330	⇓P	PKPab	22 32 45.1	+0.3
OKC	Ostrava-Krasne	144.38	341	*e*PKIKP	PKPab	22 32 44.7	0.0
OKC	Ostrava-Krasne	144.38	341	⇑*e*PKP	PKPab	22 32 44.7	0.0
CLZ	Clausthal	144.39	350	*e*PKPbc	PKPdf	22 32 44.5	+0.1
	baz=16,slow=2.9						
CLL	Collm	144.40	347	⇓*e*PKIKP	PKPbc	22 32 44.0	-0.3
CLL				pmax	pmax		
	comp=Z,360nm,1.1s						
CLL	Collm	144.40	347	⇓*i*PKPbc	PKPbc	22 32 44.2	-0.1
	comp=Z,360nm,1.1s						
CLL	Collm	144.40	347	*e*PKPbc	PKPbc	22 32 44.3	0.0
	baz=16,slow=2.9						
UPC	Upice	144.41	344	*e*PKIKP	PKPab	22 32 44.9	+0.1
UPC	Upice	144.41	344	⇑*e*PKP	PKPab	22 32 44.9	+0.1
CVDA	Cernavoda	144.45	326	⇑P	PKPab	22 32 45.6	+0.5
DPC	Dobruska-Polom	144.46	343	*e*PKIKP	PKPab	22 32 45.2	+0.2
DPC	Dobruska-Polom	144.46	343	⇑*e*PKP	PKPab	22 32 45.2	+0.2
MANR	Mangalia	144.49	325	⇑P	PKPab	22 32 45.1	-0.1
LANS	Liptovska Anna	144.54	339	*e*PKIKP	PKPab	22 32 46.0	+0.6
LANS	Liptovska Anna	144.54	339	*e*PKP	PKPab	22 32 46.0	+0.6
KRLC	Kraliky	144.58	342	*e*PKIKP	PKPab	22 32 45.3	-0.2
KRLC	Kraliky	144.58	342	⇑*e*PKP	PKPab	22 32 45.3	-0.2
BRG	Berggiesshubel	144.59	346	*e*PKPbc	PKPbc	22 32 45.1	+0.2
	baz=16,slow=2.9						
BRG	Berggiesshubel	144.59	346	⇓*i*PKP	PKPab	22 32 45.2	-0.2
BRG				Amp		22 32 46.3	
	comp=Z,141nm,1.0s						
BRG				Amp		22 51 48.0	
	comp=N,0.4nm,18.4s						
BRG				Amp		22 51 52.0	
	comp=E,0.6nm,12.3s						
BRG				Amp		22 51 55.0	
	comp=Z,0.9nm,15.9s						
MORC	Moravsky Berou	144.62	341	⇑P	PKPbc	22 32 45.1	0.0
MORC	Moravsky Berou	144.62	341	*e*PKP	PKPdf	22 32 44.6	-0.3
CEI	Carei	144.63	335	⇓P	PKPab	22 32 45.4	-0.3
CEI	Carei	144.63	335	⇓PKIKP	PKPab	22 32 45.4	-0.3
AMRR	Amara	144.64	327	⇑P	PKPab	22 32 46.3	+0.5
DOPR	Dopca	144.65	330	⇓P	PKPab	22 32 46.4	+0.5
FBE	Freiberg	144.68	347	*e*PKPbc	PKPab	22 32 45.8	0.0
	baz=16,slow=2.9						
ISR	Istrita	144.69	328	⇓P	PKPab	22 32 46.0	-0.1
ISR	Istrita	144.69	328	⇓PKIKP	PKPab	22 32 46.0	-0.1
ICOR	Ion Corvin	144.72	326	⇓P	PKPab	22 32 46.2	+0.1
MLR	Muntele Rosu	144.73	329	⇓P	PKPbc	22 32 45.8	+0.1
MLR	Muntele Rosu	144.73	329	⇓PKIKP	PKPbc	22 32 45.8	+0.1
GTTG	Gottingen	144.74	350	*e*PKPbc	PKPbc	22 32 45.6	+0.2
	baz=16,slow=2.9						
KECS	Kecovo	144.74	337	*e*PKIKP	PKPab	22 32 46.0	-0.1
KECS	Kecovo	144.74	337	*e*PKP	PKPab	22 32 46.0	-0.1
RSBS	Rosebush, Pemb	144.75	6	*e*P	PKPdf	22 32 44.6	-0.4
PVCC	Panska Ves	144.76	345	*e*PKIKP	PKPab	22 32 45.9	-0.2
PVCC	Panska Ves	144.76	345	⇑*e*PKP	PKPab	22 32 45.9	-0.2
MESR	Meseseni	144.85	334	⇑P	PKPab	22 32 46.4	-0.1
KALB	Balgarevo	144.85	324	⇑P	PKPab	22 32 46.5	-0.2
MCH1	Michaelchurch	144.86	4	*e*P	PKPdf	22 32 45.2	0.0
CBBR	Cluj-Babes-Bol	144.89	333	⇓P	PKPab	22 32 46.7	0.0
CJR	Cluj-Napoca	144.91	333	⇑P	PKPab	22 32 46.6	-0.3
CJR	Cluj-Napoca	144.91	333	⇑PKIKP	PKPab	22 32 46.6	-0.3
ELMS	Elmsett, Ipswi	144.91	0	*e*P	PKPdf	22 32 45.1	-0.1
IZAB	Izabela	144.95	338	*e*PKIKP	PKPab	22 32 46.6	-0.3
SECR		144.99	328	⇓P	PKPbc	22 32 46.6	+0.3
MDB	Medias	144.99	331	⇓P	PKPbc	22 32 46.3	0.0
MDB	Medias	144.99	331	⇓PKIKP	PKPbc	22 32 46.3	0.0
LEHL	Lehliu	145.00	327	⇑P	PKPab	22 32 47.0	-0.2
RASA	Rasa	145.00	327	⇑P	PKPbc	22 32 46.5	+0.1
PLAR	PLOIESTI	145.10	328	⇑P	PKPab	22 32 47.2	-0.3
LTVH	Ltavrtes, Hu	145.10	335	⇑P	PKPab	22 32 47.2	-0.3
SULR		145.15	328	⇓P	PKPbc	22 32 46.8	+0.1
VOIR		145.20	330	⇓P	PKPbc	22 32 47.0	-0.1
VOIR		145.20	330	⇓PKP2	PKPbc	22 32 47.0	-0.1
BUG	Bochum--Univer	145.21	353	*e*PKPbc	PKPbc	22 32 46.4	-0.3
	baz=16,slow=2.9						
DRGR		145.23	334	⇓P	PKPbc	22 32 47.4	+0.3
DRGR		145.23	334	⇓PKP2	PKPbc	22 32 47.4	+0.3
PRU	Pruhonice	145.27	345	*e*PKP2	PKPbc	22 32 47.1	+0.1
PRU	Pruhonice	145.27	345	⇑*e*PKP	PKPbc	22 32 47.1	+0.1
VYHS	Vyhne	145.32	339	*e*PKP2	PKPbc	22 32 47.6	+0.4
VYHS	Vyhne	145.32	339	*e*PKP	PKPbc	22 32 47.6	+0.4
VRAC	Vranov	145.32	342	⇓P	PKPbc	22 32 47.5	+0.3
VRAC	Vranov	145.32	342	*e*PKP	PKPdf	22 32 46.2	+0.1
VRAC	Vranov	145.32	342	⇓PKP2	PKPbc	22 32 47.5	+0.3
PLN	Plauen	145.35	347	*e*PKPbc	PKPbc	22 32 47.2	0.0
	baz=16,slow=2.9						
TANN	Tannenbergstha	145.35	347	*e*PKPbc	PKPbc	22 32 47.5	+0.1
	baz=16,slow=2.9						
WERD	Werda	145.35	347	*e*PKPbc	PKPbc	22 32 47.3	+0.1
	baz=16,slow=2.9						
BORR	Bors	145.38	335	⇓P	PKPab	22 32 48.3	-0.3
JAVC	Velka Javorina	145.39	341	*e*PKP	PKPbc	22 32 47.1	-0.4
SWN1	Swindon	145.42	3	*e*P	PKPdf	22 32 46.6	+0.5
GUNZ	Gunzen	145.43	347	*e*PKPbc	PKPbc	22 32 47.8	+0.3
	baz=16,slow=2.9						
PSZ	Piszkesteto	145.43	337	⇓P	PKPdf	22 32 46.0	-0.4
PSZ	Piszkesteto	145.43	337	⇓PKIKP	PKPdf	22 32 46.0	-0.4
ARR	Arges	145.45	330	⇑P	PKPdf	22 32 46.9	+0.4
WERN	Wernitzgruen	145.49	347	*e*PKPbc	PKPbc	22 32 48.1	+0.4
	baz=16,slow=2.9						
NKC	Novy Kostel	145.53	347	*e*PKP2	PKPbc	22 32 48.1	+0.3
NKC	Novy Kostel	145.53	347	⇑*e*PKP	PKPbc	22 32 48.1	+0.3
KRUC	Moravsky	145.60	342	*e*PKP	PKPdf	22 32 46.5	-0.1
TREC	Trest	145.65	343	*e*PKP2	PKPbc	22 32 48.1	-0.1
TREC	Trest	145.65	343	⇑*e*PKP	PKPbc	22 32 48.1	-0.1
HTL	Hartland	145.73	6	*e*P	PKPbc	22 32 48.5	+0.3
RAZG	Razgrad	145.78	326	⇑P	PKPbc	22 32 48.6	-0.2
LOT	Lotru	145.80	331	⇓P	PKPbc	22 32 48.0	-0.8
BSZH	Besenyszg	145.81	336	⇓P	PKPbc	22 32 49.3	+0.7
HUMR	Humele	145.89	329	⇓P	PKPbc	22 32 48.5	-0.5
MODS	Modra-Piesok	145.94	341	*e*PKP2	PKPbc	22 32 48.7	-0.3
MODS	Modra-Piesok	145.94	341	*e*PKP	PKPbc	22 32 48.7	-0.3
MBAR	Mbarara	145.94	242	PKP2	PKPdf	22 32 49.2	+0.8
MBAR	Mbarara	145.94	242		PKPdf	22 32 49.2	+0.8
BEBN	Eben Emael	146.01	355	*d*PKP	PKPbc	22 32 49.2	+0.2
BEBN				*d*PKiKP	PKPab	22 32 50.9	0.0
ROTZ	Rotzenmuhle	146.02	347	*e*PKPbc	PKPbc	22 32 49.3	+0.2
	baz=16,slow=2.9						
COPA	Copaceanca	146.06	328	⇑P	PKPbc	22 32 49.4	0.0
SRO	Srobarova	146.09	339	*e*PKP2	PKPbc	22 32 49.9	+0.5
SRO	Srobarova	146.09	339	*e*PKP	PKPbc	22 32 49.9	+0.5
SIRR	Siria	146.09	334	⇑P	PKPbc	22 32 49.8	+0.3
UCC	Uccle	146.11	356	*d*PKP	PKPbc	22 32 49.2	-0.1
AHRW	Bad Neuenahr-A	146.12	353	*e*PKPbc	PKPbc	22 32 49.2	-0.1
	baz=16,slow=2.9						
ZST	Bratislava	146.15	341	*e*PKP2	PKPbc	22 32 50.2	+0.6
ZST	Bratislava	146.15	341	*e*PKP	PKPbc	22 32 50.2	+0.6
MEM	Membach	146.16	354	*d*PKPdf	PKPdf	22 32 47.4	0.0
MEM				*d*PKPbc	PKPbc	22 32 49.3	-0.2
MEM				*d*PKiKP	PKiKP	22 32 52.0	+0.1
BTNL	Ternell	146.18	354	*d*PKPdf	PKPdf	22 32 47.0	-0.5
BTNL				*d*PKPbc	PKPbc	22 32 49.2	-0.3
BSTI	Sart Tilman	146.23	355	*d*PKP	PKPbc	22 32 49.6	-0.1
TNS	Taunus Mts	146.25	351	*e*PKPbc	PKPbc	22 32 50.0	+0.1
	baz=16,slow=2.9						
GZR	Gura Zlata	146.29	332	⇓P	PKPdf	22 32 47.8	-0.1
GZR	Gura Zlata	146.29	332	⇓PKIKP	PKPdf	22 32 47.8	-0.1
GRF	Grafenberg Arr	146.29	348	*e*PKPbc	PKPbc	22 32 50.4	+0.5
	baz=16,slow=2.9						
GRFO	Grafenberg	146.30	348	PKP2	PKPbc	22 32 49.9	0.0
GRFO	Grafenberg	146.30	348		PKPbc	22 32 49.9	0.0
KHC	Kasperske Hory	146.30	345	*e*PKIKP	PKPdf	22 32 47.7	-0.1
KHC				*e*		22 32 50.4	
KHC	Kasperske Hory	146.30	345	*e*PKPDF	PKPdf	22 32 47.7	-0.1
KHC				⇑*e*PKP	PKPbc	22 32 50.4	+0.4
ZIMR		146.32	327	⇑P	PKPbc	22 32 50.2	+0.1
ZIMR		146.32	327	⇑PKP2	PKPbc	22 32 50.2	+0.1
DYA	Yadsworthy	146.34	6	*e*P	PKPbc	22 32 49.5	-0.5
SNF	Seneffe	146.40	356	*d*PKP	PKPbc	22 32 50.2	0.0
SNF				*d*PKiKP	PKiKP	22 32 52.2	-0.2
CKRC	Cesky Krumlov	146.40	344	*e*PKPDF	PKPdf	22 32 49.0	+1.1
CKRC				⇑*e*PKP	PKiKP	22 32 51.6	-0.9
AMBH	Ambrzfalva	146.41	335	⇑P	PKiKP	22 32 51.4	-1.1
BCLA	Clavier	146.41	355	*d*PKP	PKPdf	22 32 47.8	-0.1
BHOU	Houvegnez	146.42	354	*d*PKP	PKPbc	22 32 50.5	+0.2
BHOU				*d*PKiKP	PKPab	22 32 52.6	0.0
WET	Wettzell	146.46	346	*e*PKPbc	PKPbc	22 32 50.5	+0.1
	baz=16,slow=2.9						
BGES	Gesves	146.47	355	*d*PKP	PKPbc	22 32 49.8	-0.5
BGES				*d*PKiKP	PKiKP	22 32 52.0	-0.6
GEC2	GERESS Array S	146.53	345	*e*PKPbc	PKPbc	22 32 50.8	+0.1
	baz=16,slow=2.9						
GERES	GERESS Array B	146.53	345	PKP	PKPdf	22 32 47.6	-0.7
	comp=Z,26nm,0.7s,baz=26,slow=2.6,SNR=126						
GERES				PKPbc	PKPbc	22 32 50.7	0.0
	comp=Z,27nm,0.7s,baz=46,slow=2.8,SNR=112						
VLAD	Vladila	146.56	329	⇑P	PKPbc	22 32 51.6	+0.7
BMRD	Maredsous	146.57	356	*d*PKPdf	PKPdf	22 32 48.1	0.0
BZS	Buzias	146.63	333	⇑P	PKPdf	22 32 47.9	-0.5
BZS	Buzias	146.63	333	⇑PKIKP	PKPdf	22 32 47.9	-0.5
SRE	Strehaia	146.65	331	⇑P	PKPbc	22 32 51.6	+0.5
SRE	Strehaia	146.65	331	⇑PKP2	PKPbc	22 32 51.6	+0.5
RCHB	Rochefort	146.68	355	*d*PKP	PKPbc	22 32 50.6	-0.3
RCHB				*d*PKiKP	PKiKP	22 32 52.7	-0.3
TIM	Timisoara	146.70	334	⇑P	PKPbc	22 32 51.8	+0.7
TIM	Timisoara	146.70	334	⇑PKP2	PKPbc	22 32 51.8	+0.7
CONA	Conrad Observa	146.77	342	*e*P	PKPdf	22 32 48.1	-0.6
	comp=Z,3.3nm,0.9s						
CONA				*i* P	PKPbc	22 32 51.9	+0.5
	comp=Z,68nm,0.6s,SNR=46						
DOU	Dourbes	146.79	356	*d*PKP	PKPbc	22 32 51.3	+0.1
HERR	Herculane	146.85	332	⇓P	PKPbc	22 32 51.5	-0.1
DJES	Djerdap	146.97	331	⇑P	PKPbc	22 32 52.1	+0.1
BANR	Banloc	147.02	334	⇑P	PKiKP	22 32 53.0	-0.8
BAIL	Bailesti	147.07	330	⇑P	PKiKP	22 32 53.3	-0.7
WLF	Walferdange	147.08	354	*d*PKPdf	PKPdf	22 32 49.7	+0.7
WLF				*d*PKP	PKPbc	22 32 52.5	+0.5
WLF	Walferdange	147.08	354	*e*PKPbc	PKPbc	22 32 52.6	+0.5
	baz=16,slow=2.9						
MDVR	Moldovita	147.24	332	⇓P	PKPbc	22 32 52.4	-0.3
MOA	Molln	147.30	343	*e*P	PKPdf	22 32 48.8	-0.6
	comp=Z,2.5nm,0.8s						
MOA				*i* P	PKPbc	22 32 52.8	0.0
	comp=Z,64nm,1.1s,SNR=21						
ARSA	Arzberg	147.48	342	*i* P	PKPbc	22 32 53.0	-0.2
	comp=Z,25nm,0.7s,SNR=16						
KUBS	Kucevo	147.55	332	*e*P	PKPbc	22 32 52.0	-1.4
STU	Stuttgart	147.55	350	*e*PKPbc	PKPbc	22 32 53.4	+0.2
	baz=16,slow=2.9						
JSA	Saint Aubin	147.72	4	*e*P	PKPbc	22 32 53.4	-0.2
FUR	Furstenfeldbru	147.74	347	*e*PKPbc	PKPbc	22 32 53.9	0.0
	baz=16,slow=2.9						
ZAGS	Zajecar	147.75	331	*e*P	PKPbc	22 32 52.7	-1.3
FRGS	Fruska Gora	147.75	335	⇓P	PKPbc	22 32 53.8	-0.2
FRGS	Fruska Gora	147.75	335	⇓*i*P	PKPbc	22 32 53.6	-0.4
FRGS	Fruska Gora	147.75	335	*e*P	PKPbc	22 32 53.7	-0.2
RJOB	Jochberg	147.79	345	*e*PKPbc	PKPbc	22 32 53.9	-0.2
	baz=16,slow=2.9						
SVIS	Svilajnac	147.87	332	*e*P	PKPbc	22 32 54.5	+0.3
KOGS	Kog	147.97	340	*i* PKPbc	PKPbc	22 32 54.0	-0.5
KOGS				*i* PKPab	PKPab	22 32 58.9	-0.1
ZAPS	Zavoj	147.97	330	*e*P	PKPbc	22 32 54.7	+0.1
BFO	Black Forest	148.12	351	PKHKP	PKPpre	22 32 50.6	
BFO	Black Forest	148.12	351	*e*PKPbc	PKPbc	22 32 54.7	-0.1
	baz=16,slow=2.9						
BFO	Black Forest	148.12	351		PKPdf	22 32 50.6	-0.2
BOVS	Bovan	148.13	331	⇓P	PKPbc	22 32 54.3	-0.7
BOVS	Bovan	148.13	331	*e*P	PKPbc	22 32 54.1	-0.8
SOKA	Soboth	148.15	342	*i* P	PKPdf	22 32 50.3	-0.7
	comp=Z,3.6nm,1.2s						
SOKA				*i* P	PKPbc	22 32 54.4	-0.6
	comp=Z,43nm,0.8s,SNR=29						
VTS	Vitosha	148.15	328	⇑P	PKPbc	22 32 55.1	-0.1
VTS	Vitosha	148.15	328	⇑PKP2	PKPbc	22 32 55.1	-0.1
PERS	Pernice	148.16	341	*i* PKPbc	PKPbc	22 32 54.5	-0.5
KALN	Kalnik	148.18	339	P	PKPbc	22 32 54.1	-0.9
TRUS	Trudelj	148.26	333	*e*P	PKPbc	22 32 55.2	0.0
KBA	Koelnbreinsper	148.26	344	*i* P	PKPdf	22 32 50.1	-1.1
	comp=Z,4.1nm,1.0s						
KBA				*i* P	PKPbc	22 32 54.6	-0.8
	comp=Z,43nm,0.5s,SNR=22						
LOBO	Lobor	148.28	340	P	PKPbc	22 32 54.6	-0.7
TEKS	Tekeris	148.37	334	⇓*i*P	PKPbc	22 32 54.4	-1.1
TEKS	Tekeris	148.37	334	*e*P	PKPbc	22 32 54.8	-0.7
GRUS	Gruza	148.39	332	*e*P	PKPbc	22 32 55.7	+0.1
UBR	Ueberruh	148.44	348	*e*PKPbc	PKPbc	22 32 55.2	-0.4
	baz=16,slow=2.9						
OBKA	Obir	148.44	342	*i* P	PKPbc	22 32 55.0	-0.7
	comp=Z,19nm,0.8s,SNR=14						
WATA	Walderalm	148.45	346	*i* P	PKPdf	22 32 50.9	-0.6
	comp=Z,13nm,1.3s						
WATA				*i* P	PKPbc	22 32 55.5	-0.3
	comp=Z,40nm,0.6s,SNR=21						
RETA	Reutte	148.49	347	*i* P	PKPdf	22 32 51.1	-0.4
	comp=Z,9.3nm,1.7s						
RETA				*i* P	PKPbc	22 32 55.6	-0.2
	comp=Z,24nm,0.5s,SNR=20						
WTTA	Wattenberg	148.51	346	*i* P	PKPdf	22 32 51.3	-0.3
	comp=Z,16nm,1.4s						
WTTA				*i* P	PKPbc	22 32 56.0	0.0
	comp=Z,116nm,0.6s,SNR=31						
MOSL	Moslavina	148.53	339	P	PKPbc	22 32 55.3	-0.5
DIVS	Divibare	148.53	333	⇓*i*P	PKPbc	22 32 55.9	-0.1
DIVS	Divibare	148.53	333	*e*P	PKPbc	22 32 56.1	+0.1
PTJ	Puntijarka	148.54	340	P	PKPbc	22 32 55.4	-0.6
MOTA	Moosalm	148.55	347	*i* P	PKPdf	22 32 50.8	-0.9
	comp=Z,15nm,1.3s						
MOTA				*i* P	PKPbc	22 32 55.8	-0.3
	comp=Z,90nm,1.0s,SNR=21						
MYKA	Terra Mystica	148.59	343	*i* P	PKPbc	22 32 55.2	-0.8
	comp=Z,57nm,0.5s,SNR=25						
ZAG	Zagreb	148.60	340	⇓*i*P	PKPbc	22 32 56.2	+0.2
BOSS	Bosilegrad	148.62	329	*e*P	PKPbc	22 32 56.0	-0.2
SQTA	Sankt Quirin	148.65	347	*i* P	PKPdf	22 32 51.1	-0.7
	comp=Z,12nm,1.4s						
SQTA				*i* P	PKPbc	22 32 56.1	-0.2
	comp=Z,76nm,0.6s,SNR=29						
GCIS	Gornji Cirnik	148.68	340	*i* PKPbc	PKPbc	22 32 56.2	0.0
BARS	Barje	148.71	330	*e*P	PKPdf	22 32 51.5	-0.4
BARS	Barje	148.71	330	*e*P	PKPbc	22 32 56.3	-0.1
SELS	Selova	148.72	331	*e*P	PKPbc	22 32 55.8	-0.7
CRES	Cresnjev	148.77	340	⇓*i*P	PKPbc	22 32 56.2	-0.3
ABTA	Abfaltersbach	148.78	345	*i* P	PKPdf	22 32 51.1	-0.9
	comp=Z,16nm,1.5s,SNR=66						
ABTA				*e*P	PKPbc	22 32 55.8	-0.7
	comp=Z,96nm,0.6s						
PRVS	Prvonek	148.81	329	*e*P	PKPbc	22 32 56.3	-0.4
DAVA	Damuels	148.86	348	*i* P	PKPdf	22 32 51.7	-0.5
	comp=Z,6.8nm,1.2s						
DAVA				*i* P	PKPbc	22 32 56.7	-0.1
	comp=Z,84nm,1.0s,SNR=25						
LJU	Ljubljana	148.87	342	*i* PKPbc	PKPbc	22 32 56.6	-0.2
LJU	Ljubljana	148.87	342	⇓*i*P	PKPbc	22 32 56.5	-0.2
IVAS	Ivanjica	148.88	333	*e*P	PKPbc	22 32 56.1	-0.8
FETA	Feichten	148.94	347	*i* P	PKPdf	22 32 51.6	-0.8
	comp=Z,17nm,1.2s,SNR=45						
FETA				*e*P	PKPbc	22 32 57.1	0.0
	comp=Z,39nm,0.6s						
OZLJ	Ozalj	148.96	340	P	PKPbc	22 32 56.3	-0.5
BBLS	Lazići	148.97	334	⇓*i*P	PKPbc	22 32 57.2	+0.1
BBLS	Lazići	148.97	334	*e*P	PKPbc	22 32 57.2	+0.1
MRAK	Mrakovica	148.99	338	⇓*i*P	PKPbc	22 32 56.6	-0.5
VOJS	Vojsko	149.07	342	*i* PKPbc	PKPbc	22 32 56.5	-0.8
BLY	Banja Luka	149.12	337	⇓*i*P	PKPbc	22 32 57.4	+0.1
CEY	Cerknica	149.17	342	⇓*i*P	PKPbc	22 32 57.2	-0.3
RUDO	Rudo	149.19	334	⇑*i*P	PKPbc	22 32 57.0	-0.6
SJES	Sjenica	149.21	332	*e*P	PKPbc	22 32 57.8	0.0
VAY	Valandovo	149.43	327	⇓*i*P	PKPbc	22 32 57.2	-1.0
MGRS	Mrkonjic Grad	149.44	337	⇑*i*P	PKPbc	22 32 58.4	+0.2
SKO	Skopje	149.53	329	⇓*i*P	PKPbc	22 32 58.2	-0.2
RIY	Rijeka	149.53	341	⇓*i*P	PKPbc	22 32 57.8	-0.5
UPM	Unac-Piva	149.72	334	⇓*i*P	PKPbc	22 32 58.2	-0.9
UDBI	Udbina	149.82	339	P	PKPbc	22 32 58.6	-0.5
SMRN	Sveta Marina	149.89	341	P	PKPbc	22 32 58.5	-0.6
RABC	Rab	149.95	340	P	PKPbc	22 32 58.8	-0.5
KIJV	Kijevo	150.04	337	P	PKPbc	22 32 59.0	-0.6
NVLJ	Novalja	150.09	340	P	PKPbc	22 32 58.9	-0.7
BRY	Bratogost	150.12	334	⇓*i*P	PKPbc	22 32 59.1	-0.9
BRJN	Brijuni	150.13	342	P	PKPbc	22 32 58.9	-0.8
PDG	Podgorica	150.19	332	⇓P	PKPbc	22 32 59.4	-0.5
PDG	Podgorica	150.19	332	⇓*i*P	PKPbc	22 32 59.4	-0.5
RICI	Ricice	150.20	336	P	PKPbc	22 32 59.1	-0.9
TREB	Trebinje	150.35	334	*e*P	PKPbc	22 32 59.5	-0.8
MORI	Morici	150.41	338	P	PKPbc	22 32 59.7	-0.7
DRME	Dracevica, Mon	150.42	332	⇓*i*P	PKPbc	22 33 00.1	-0.4
MAKA	Makarska	150.42	336	P	PKPbc	22 32 59.4	-1.0
OHR	Ohrid	150.49	329	⇓*i*P	PKPbc	22 33 00.2	-0.6
STON	Ston	150.50	335	⇓*i*P	PKPbc	22 32 59.5	-1.1
STON	Ston	150.50	335	P	PKPbc	22 32 59.2	-1.4
APE	Apeiranthos	150.51	318	⇓P	PKPbc	22 32 59.6	-1.3
APE	Apeiranthos	150.51	318	⇓PKIKP	PKPbc	22 32 59.6	-1.3
HCY	Herceg Novi	150.51	333	⇓*i*P	PKPbc	22 32 59.6	-1.1
DUGI	Dugi Otok	150.53	339	P	PKPbc	22 32 59.8	-0.9
ZIRJ	Zirje	150.62	338	P	PKPbc	22 32 60.0	-0.9
HVAR	Hvar	150.74	337	P	PKPbc	22 33 00.1	-1.1
TIR	Tirane	150.76	330	⇓P	PKPbc	22 33 00.5	-0.8
TIR	Tirane	150.76	330	⇓PKIKP	PKPbc	22 33 00.5	-0.8
LSTV	Lastovo	150.91	336	P	PKPbc	22 33 00.4	-1.1
SANT	Santorini	150.97	317	⇑P	PKPbc	22 33 00.7	-1.3
AQU	L'Aquila	152.54	340	⇓*i*P	PKPbc	22 33 04.7	-0.6
MATE	Matera	152.75	333	⇑P	PKPab	22 33 19.1	-0.1
PGAV	Gavieira, Arco	153.80	16	*e*PKPbc	PKiKP	22 33 08.5	+0.4
PGAV	Gavieira, Arco	153.80	16	*e*PKPab	PKPab	22 33 23.6	-0.1
TIP	Timpagrande	153.93	331	⇑P	PKPbc	22 33 08.1	-0.3
PCAB	Cabril	154.10	16	*e*PKPbc	PKPbc	22 33 08.4	-0.3
PCAB	Cabril	154.10	16	*e*PKPab	PKPab	22 33 24.9	0.0
PBRG	Braganca	154.32	14	*e*PKPbc	PKiKP	22 33 08.9	-0.2
PBRG	Braganca	154.32	14	*e*PKPab	PKPab	22 33 25.3	-0.6
POLO	Lamas de Olo	154.47	16	*i* LQ	LQ	22 33 09.5	
POLO	Lamas de Olo	154.47	16	*e*PKPab	PKPab	22 33 26.6	0.0
PVRL	Vila Real	154.59	16	*e*PKPab	PKPab	22 33 27.4	+0.4
MVO	Moncorvo	154.86	14	*i* LQ	LQ	22 33 10.8	
MVO	Moncorvo	154.86	14	*e*PKPab	PKPab	22 33 29.2	+0.9
PVIS	Viseu	155.06	16	*e*PKPab	PKPab	22 33 29.4	+0.3
MTE	Manteigas	155.45	16	*e*PKPab	PKPab	22 33 31.0	+0.2
PCAS	Casmilo, Conde	155.51	18	*e*PKPab	PKPab	22 33 30.2	-0.8
PSBE	So Bento	155.92	19	*e*PKPab	PKPab	22 33 33.0	+0.2
PCBR	Castelo Branco	156.00	16	*e*PKPdf	PKPdf	22 33 02.9	+0.3
PCBR	Castelo Branco	156.00	16	*e*PKPab	PKPab	22 33 33.1	0.0
PMAFR	Mafra	156.27	20	*e*PKPab	PKPab	22 33 34.7	+0.4
PMRV	Marv??o	156.40	16	*e*PKPab	PKPab	22 33 35.1	+0.2
PMTG	Montargil	156.50	18	*e*PKPab	PKPab	22 33 34.9	-0.4
PESTR	Estremoz	156.87	17	*e*PKPab	PKPab	22 33 36.7	-0.2
ESDC	Sonseca Array	156.92	10	PKP	PKPdf	22 33 03.8	-0.1
	comp=Z,0.7nm,0.7s,baz=334,slow=2.2,SNR=4.8						
ESDC				PKPab	PKPab	22 33 36.9	-0.3
	comp=Z,4.0nm,0.6s,baz=344,slow=5.1,SNR=20						
ESDC				PP	PP	22 37 23.0	+6.1
	comp=Z,3.0nm,1.2s,baz=346,slow=5.8,SNR=4.5						
EVO	Evora	157.06	18	*e*PKPdf	PKPdf	22 33 04.7	+0.7
EVO	Evora	157.06	18	*e*PKPab	PKPab	22 33 38.0	+0.3
PNCL	Nicolau / Gran	157.28	20	*e*PKPab	PKPab	22 33 38.5	-0.2
PBEJ	Beja	157.57	19	*e*PKPab	PKPab	22 33 40.0	+0.1
MESJ	Messejana	157.63	20	*e*PKPdf	PKPdf	22 33 04.8	+0.1
MESJ	Messejana	157.63	20	*e*PKPdf	PKPdf	22 33 05.2	+0.5
MESJ	Messejana	157.63	20	*e*PKPab	PKPab	22 33 40.1	-0.1
PTEO	Sao Teotonio	157.73	21	*e*PKPab	PKPab	22 33 40.9	+0.3
PCVE	Castro Verde	157.88	19	*e*PKPab	PKPab	22 33 41.4	+0.1
MORF	Marmelete	157.97	21	*e*PKPdf	PKPdf	22 33 05.1	-0.1
MORF	Marmelete	157.97	21	*e*PKPdf	PKPdf	22 33 06.2	+1.0
MORF	Marmelete	157.97	21	*e*PKPab	PKPab	22 33 41.8	0.0
PVAQ	Vaqueiros	158.19	19	*e*PKPab	PKPab	22 33 42.9	+0.3
PVAQ	Vaqueiros	158.19	19	PKPab	PKPab	22 33 43.0	+0.3
PBDV	Barranco-do-Ve	158.27	20	*e*PKPab	PKPab	22 33 43.8	+0.8
KEST	Kesra	159.87	340	PKPab	PKPab	22 33 50.4	+0.3
	comp=Z,12nm,0.8s,baz=51,slow=0.7,SNR=11						
PALE	Palemas	161.25	13	P	PKPdf	22 33 09.0	0.0
JBK	JBK	162.36	10	P	PKPdf	22 33 11.0	+0.7
MDT	Midelt	163.38	17	P	PKPdf	22 33 12.0	+0.8
OUK	Oukaimeden	163.63	28	P	PKPdf	22 33 13.0	+1.2
OUZM	OUZ	164.37	26	P	PKPdf	22 33 13.2	+1.0
TZRR	Tazzarine	164.94	22	P	PKPdf	22 33 13.1	+0.5
ZGR	Zagora	165.52	24	P	PKPdf	22 33 14.0	+0.8
LIC	Lamto	167.82	150	*e*PKIKP	PKPdf	22 33 12.7	-2.5
	comp=Z,52nm,1.3s						
KIC	Kosan Boka	168.07	151	*e*PKIKP	PKPdf	22 33 12.8	-2.5
	comp=Z,32nm,1.3s						
TIC	Toumodi	168.19	149	*e*PKIKP	PKPdf	22 33 13.5	-1.9
KOWA	Kowa	174.56	116		PKPdf	22 33 17.1	-1.3
KOWA	Kowa	174.56	116	P	PKPdf	22 33 17.2	-1.2
TORD	Torodi Ar. Bea	176.19	190	PKP	PKPdf	22 33 17.3	-1.6
	comp=Z,4.9nm,0.8s,baz=345,slow=1.3,SNR=8.8						

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*NEIC **18** 22:15:31.4±2.8, 63°.30S±0°.09×171°.4E±0°.5, h10^{km}±2^{km}, mb4.7/27, Error ellipse: s-maj=36.0km s-min=14.7km az=86.0*

*IDC **18** 22:15:32.7±1.4, 63°.69S×170°.95E, h0^{km}, mb4.2/2, mb1 4.3/3, mb1mx3.7/37, mbtmp4.2/3, ML3.5/1, MS4.6/8, Ms1 4.6/8, ms1mx4.4/18, Error ellipse: s-maj=64.8km s-min=39.3km az=83.0*

*GCMT **18** 22:15:34.0±0.2, 63°.22S±0°.01×171°.27E±0°.03, h12^{km}, MW5.3/127, Moment Tensor Solution. s73,c98; s127,c209; Duration: $1^{s}1$ Moment tensor: Scale 10^{17} Nm; M_{rr}-0.18±.02; $M_{\theta\theta}$1.15±.02; $M_{\phi\phi}$-0.96±.02; $M_{r\theta}$-0.63±.05; $M_{\theta\phi}$-0.20±.02; $M_{\phi r}$-0.03±.06; Best double couple: $M_0$1.20900×10^{17} NP1:ϕ_s323.00000°, δ69.00000°, λ10.00000°. NP2:ϕ_s229.00000°, δ81.00000°, λ159.00000°. Principal axes: T 1.4170, Plg22.0000°, Azm185.0000°; N -0.4130, Plg67.0000°, Azm27.0000°; P -1.0000, Plg8.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 18 22:15:31.3±0.6, **63°.36S**±0°.06×**171°.1E**±0°.2, **h10^{km}, n63, σ$1^{s}61$**/40, **mb4.8**/11, **MS4.7**/10, **Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	14.52	188	Pn	Pn	22 18 53.8	-2.7

	0.2nm,0.3s,baz=20,slow=16,SNR=21						
VNDA	Vanda	14.52	188		Pn	22 18 55.0	-1.6
SBA	Scott Base	14.63	184		Pn	22 18 57.4	-0.6
PYZ	Puysegur Point	17.41	350	Pn	Pn	22 19 31.0	-3.0
PYZ				IAmb	IAmb	22 19 36.7	
	comp=Z,109nm,1.2s						
WHZ	Wether Hill Ro	17.59	353	P	P	22 19 36.8	-0.6
WHZ				IAmb	IAmb	22 19 42.1	
	comp=Z,98nm,1.3s						
DCZ	Deep Cove	18.07	351		Pn	22 19 40.1	-2.1
DCZ				IAmb	IAmb	22 19 47.7	
	comp=Z,31nm,1.0s						
MLZ	Mavora Lakes	18.11	353	Pn	Pn	22 19 39.9	-2.8
MLZ				IAmb	IAmb	22 19 52.8	
	comp=Z,39nm,1.1s						
WKZ	Wanaka	18.61	355	P	Pn	22 19 48.9	+0.1
WKZ				IAmb	IAmb	22 19 56.5	
	comp=Z,27nm,0.6s						
LBZ	Lake Benmore	19.02	358	P	Pn	22 19 53.2	-0.6
LBZ				IAmb	IAmb	22 20 00.0	
	comp=Z,31nm,0.7s						
RPZ	Rata Peaks	19.68	0	P	Pn	22 20 00.9	-0.8
RPZ				IAmb	IAmb	22 20 16.9	
	comp=Z,22nm,0.7s						
MQZ	McQueen's Vall	19.71	3	P	Pn	22 20 01.3	-0.8
OXZ	Oxford	20.08	2	P	P	22 20 03.2	-1.5
OXZ				IAmb	IAmb	22 20 20.4	
	comp=Z,34nm,1.1s						
LTZ	Lake Taylor	20.63	3	P	Pn	22 20 11.1	-1.8
LTZ				IAmb	IAmb	22 20 21.8	
	comp=Z,43nm,1.3s						
KHZ	Kahutara	21.03	5	P	P	22 20 13.3	-1.6
KHZ				IAmb	IAmb	22 20 22.6	
	comp=Z,64nm,1.5s						
THZ	Tophouse	21.66	4	P	P	22 20 21.8	0.0
BSWZ	Blackbirch Sta	21.74	6	P	P	22 20 21.4	-1.2
PLWZ	Palliser	21.96	8	P	P	22 20 25.1	+0.1
BHW	Baring Head	22.10	8	P	P	22 20 25.7	-0.7
MSWZ	Moikau Station	22.12	8	P	P	22 20 26.3	-0.4
SNZO	South Karori	22.19	7	P	P	22 20 28.8	+1.4
SNZO				IAmb	IAmb	22 20 33.0	
	comp=Z,48nm,1.1s						
NNZ	Nelson	22.22	5	P	P	22 20 24.2	-3.5
NNZ				IAmb	IAmb	22 20 36.2	
	comp=Z,62nm,1.3s						
QRZ	Quartz Range	22.59	3	P	P	22 20 29.9	-1.8
HIZ	Hauiti	24.98	7	P	P	22 20 54.2	-0.6
QSPA	South Pole Qui	26.73	180	P	P	22 21 09.9	-0.8
STKA	Stephens Creek	36.58	315	LR	LR	22 35 21.5	
	comp=Z,938nm,18.2s,baz=149,slow=32						
BELA	Belgrano 2	38.14	171	P	P	22 22 49.4	-0.5
BELA				IAmb	IAmb	22 22 57.7	
	comp=Z,14nm,1.5s						
MAW	Mawson	39.59	215	LR	LR	22 39 16.5	
	comp=Z,2μm,19.5s,baz=134,slow=36						
MAW	Mawson	39.59	215	P	P	22 23 03.3	+1.2
DZM	Mont Dzumac	41.38	354	eP	P	22 23 19.4	+1.9
	comp=Z,76nm,1.4s						
DZM				eS	S	22 29 34.7	+2.6
	comp=Z,393nm,24.6s						
DZM				eLR	LR	22 34 39.5	
	comp=Z,2μm,22.4s						
DZM	Mont Dzumac	41.38	354	LR	LR	22 37 36.2	
	comp=Z,1μm,21.0s,baz=188,slow=32						
H01W1	Cape Leeuwin H	44.71	282	T	T	23 11 51.1	
	baz=147,slow=76,SNR=160						
H01W2	Cape Leeuwin H	44.71	282	T	T	23 11 51.5	
	baz=147,slow=76,SNR=143						
H01W3	Cape Leeuwin H	44.72	282	T	T	23 11 52.3	
	baz=147,slow=76,SNR=161						
SNAA	Sanae	45.18	183	P	P	22 23 48.9	+1.2
SNAA				IAmb	IAmb	22 24 03.0	
	comp=Z,10nm,1.3s						
MSVF	Nonsavu	45.84	9	LR	LR	22 41 40.4	
	comp=Z,1μm,18.1s,baz=192,slow=34						
CTAO	Charters Tower	46.41	327	P	P	22 23 56.6	-1.3
RAR	Rarotonga	46.50	39	LR	LR	22 38 49.1	
	comp=Z,365nm,19.2s,baz=231,slow=30						
ASAR	Alice Springs	46.70	310	P	P	22 24 04.3	+4.1
	comp=Z,1.5nm,0.8s,baz=147,slow=7.1,SNR=4.2						
ASAR	Alice Springs	46.70	310	P	P	22 24 01.4	+1.2
TBI	Tubuai	47.81	52	eT	T	23 15 09.6	
	comp=Z,9.6nm,0.3s						
SANVU	Saraoutou	47.93	355	P	P	22 24 09.9	+0.2
WRAB	Tennant Creek	50.02	313	P	P	22 24 26.2	+0.5
WRAB				IAmb	IAmb	22 24 36.2	
	comp=Z,21nm,1.4s						
WB0	Warramunga Arr	50.16	313	P	P	22 24 25.8	-1.0
WB0				IAmb	IAmb	22 24 32.4	
	comp=Z,13nm,1.2s						
PAE	Paea	53.03	49	eT	T	23 21 39.8	
	comp=Z,4.6nm,0.3s						
PPT2	Papeete2	53.09	49	eS	S	22 32 20.4	+1.5
	comp=Z,126nm,25.8s						
PPT2				eLR	LR	22 39 55.0	
	comp=Z,1μm,26.0s						
PPT2	Papeete2	53.09	49	eT	T	23 21 45.2	
	comp=Z,18nm,0.4s						
PPT	Papeete	53.11	49	LR	LR	22 42 12.0	
	comp=Z,412nm,18.3s,baz=186,slow=30						
TIAR	Tiarei	53.20	49	eT	T	23 21 52.9	
	comp=Z,0.9nm,0.2s						
MEH	Mehetia	53.35	51	eT	T	23 22 04.1	
	comp=Z,42nm,0.3s						
PSA00	Pilbara Seismi	53.90	296	P	P	22 24 55.0	+0.4
PSA00				IAmb	IAmb	22 24 57.6	
	comp=Z,6.5nm,1.2s						
PSA00	Pilbara Seismi	53.90	296	P	P	22 24 55.9	+1.3
PSA00				IAmb	IAmb	22 25 10.2	
	comp=Z,20nm,1.1s						
HNR	Honiara	54.42	346	LR	LR	22 45 31.2	
	comp=Z,403nm,19.4s,baz=190,slow=33						
VAH	Vaihoa	55.95	50	eT	T	23 25 18.6	
	comp=Z,118nm,0.3s						
PMG	Port Moresby	56.52	331	LR	LR	22 44 58.1	
	comp=Z,418nm,20.6s,baz=162,slow=31						
TAOE	Nuku Hiva Isla	64.54	55	eLR	LR	22 45 16.2	
	comp=Z,860nm,25.4s						
BOSA	Boshof	84.41	210	P	P	22 28 05.6	+1.8
	comp=Z,1.9nm,0.8s,baz=156,slow=10.0,SNR=2.2						
BOSA	Boshof	84.41	210	IAmb	IAmb	22 28 13.3	
	comp=Z,16nm,1.4s						
H08S2	Diego Garcia H	87.05	259	T	T	00 04 59.5	
	baz=153,slow=76,SNR=234						
H08S1	Diego Carcia H	87.06	259	T	T	00 05 00.0	
	baz=153,slow=76,SNR=152						
H08S3	Diego Garcia H	87.07	259	T	T	00 04 58.1	
	baz=153,slow=76,SNR=306						
ILAR	Eielson Array	131.53	23	PKP	PKiKP	22 34 45.3	+2.0
	comp=Z,1.2nm,0.9s,baz=202,slow=3.9,SNR=4.9						
NRIK	Noril'sk	144.72	322	PKP	PKiKP	22 35 08.8	-1.2
	comp=Z,5.0nm,1.0s,baz=140,slow=0.7,SNR=5.1						
RES	Resolute Bay	150.34	32	PKPbc	PKPab	22 35 24.6	-2.7
	comp=Z,3.7nm,1.0s,baz=233,slow=4.6,SNR=5.4						

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*BGR **18** 22:16:43.1±0.0, 27°.81N×82°.62E, h10^{km}, mb5.2, Ms4.8*

*IDC **18** 22:16:53.6±0.3, 29°.24N×81°.66E, h0^{km}, mb5.0/42, mb1 5.1/44, mb1mx4.8/65, mbtmp5.0/44, ML5.0/2, MS4.7/24, Ms1 4.7/24, ms1mx4.5/36, Error ellipse: s-maj=11.3km s-min=8.8km az=36.0*

*MOS **18** 22:16:55.8±1.1, 29°.44N×81°.63E, h21^{km}, mb5.2/40, MS4.9/21, Error ellipse: s-maj=5.4km s-min=3.2km az=111.1*

*DMN **18** 22:16:56.4±0.0, 29°.37N×81°.28E, h60^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*NEIC **18** 22:16:56.5±1.6, 29°.40N±0°.07×81°.65E±0°.07, h10^{km}±1^{km}, mb5.4/274, Error ellipse: s-maj=13.1km s-min=9.8km az=208.0*

*GCMT **18** 22:17:00.5±0.2, 29°.04N±0°.01×81°.60E±0°.02, h23^{km}, MW5.2/110, Moment Tensor Solution. s66,c80; s110,c168; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.75±.03; $M_{\theta\theta}$-0.66±.02; $M_{\phi\phi}$-0.09±.02; $M_{r\theta}$0.47±.03; $M_{\theta\phi}$0.40±.01; $M_{\phi r}$0.03±.03; Best double couple: $M_0$0.94000×10^{17} NP1:ϕ_s314.00000°, δ34.00000°, λ118.00000°. NP2:ϕ_s102.00000°, δ60.00000°, λ72.00000°. Principal axes: T 0.9180, Plg69.0000°, Azm335.0000°; N 0.0440, Plg15.0000°, Azm111.0000°; P -0.9620, Plg14.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NDI **18** 22:17:00.1±31.0, 29°.17N×81°.42E, h13^{km}±108^{km}, mb5.1, ML5.1, mb5.4(NEIC)*

ISC 18 22:16:56.2±0.4, **29°.28N**±0°.03×**81°.64E**±0°.02, **h16**^{km}±2^{km}, **h16**^{km}**:pP-P, n1068, σ1^{s}62**/1040, **mb5.3**/315, **MS4.9**/57, **231C-127D, Fault plane solution: NP1:**ϕ_s103.47518°, δ57.38562°, λ76.46806°. **NP2:**ϕ_s307.53708°, δ35.02177°, λ110.08613°. **Principal axes:** T Plg73.7791°, Azm337.1548°; N Plg11.3669°, Azm110.8661°; P Plg11.4174°, Azm203.1929°; **Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTH	Pithoragarh	1.27	283	ePG	Pn	22 17 17.3	-2.2
PYUN	Piuthan	1.67	134	ePg	Pg	22 17 28.2	-0.2
BRCI	Bahraich	1.71	182	⇑eP	Pg	22 17 29.4	+0.4
DANN	Dangsing	2.08	116	ePn	Pb	22 17 33.8	+0.1
DANN				eSg	Sg	22 18 02.6	-0.6
GKN	Gorkha	2.92	115	ePn	Pn	22 17 45.0	+2.8
GKN				eSn	Sb	22 18 21.5	-2.2
	9μm,0.4s						
DMN	Daman	3.48	118	ePn	Pn	22 17 52.6	+2.7
DMN				eSn	Sn	22 18 31.9	+1.0
	2μm,0.3s						
KKN	Kakani	3.53	114	ePn	Pn	22 17 53.0	+2.4
KKN				eSn	Sn	22 18 35.1	+3.0
	3μm,0.4s						
PKI	Pulchoki	3.73	116	ePn	Pn	22 17 55.6	+2.1
PKI				eSn	Sn	22 18 39.6	+2.4
	2μm,0.4s						
GUN	Gumba	3.97	109	ePn	Pn	22 17 59.5	+2.7
KKR	Kurukshetra	4.25	280	eP	Pn	22 18 02.4	+2.1
SMLA	Simla	4.29	297	eP	Pn	22 18 02.5	+1.7
SMLA				eS	Sn	22 18 52.3	+1.8
SMLA				IAML		22 18 54.2	
	comp=E,4μm,0.5s						
JIRN	Jiri	4.32	111	ePn	Pn	22 18 03.9	+2.3
JIRN				eSn	Sn	22 18 54.5	+2.7
	comp=E,1μm,0.2s						
JHNI	Jhansi	4.69	217	eP	Pn	22 18 06.6	+0.2
BHK	Bhakra	4.99	297	eP	Pn	22 18 12.8	+2.3
DHRM	DHARAMSHALA	5.47	304	eP	Pn	22 18 18.6	+1.4
DHRM				eS	Sn	22 19 19.9	0.0
DHRM				IAML		22 19 21.3	
	comp=E,3μm,0.4s						
DHRM				IAML		22 19 22.8	
	comp=N,2μm,0.4s						
JBP	Jabalpur	6.27	194	eP	Pn	22 18 28.0	0.0
JBP				eS	Sn	22 19 39.0	-0.3
GTK	Tadong	6.44	106	eP	Pn	22 18 32.6	+2.1
GTK				eP	Sn	22 19 42.7	-1.1
GTK				IAML		22 19 47.3	
	comp=N,4μm,0.6s						
BOK	Bokaro	6.65	144	eP	Pn	22 18 35.5	+2.1
BOK				eS	Sn	22 19 46.7	-2.2
BHPL	Bhopal	7.10	213	eP	Pn	22 18 39.3	-0.3
BHPL				eS	Sn	22 19 55.7	-4.3
BHPL				IAML		22 19 59.8	
	comp=N,895nm,0.4s						
SARP	Sargodha	8.17	291	P	Pn	22 18 53.3	-0.8
LSA	Lhasa	8.30	85	P	Pn	22 18 59.3	+2.9
LSA				S	Sn	22 20 32.4	+2.4
LSA				pmax	pmax		
	comp=N,410nm,1.3s						
LSA				LR	LR		
	comp=N,28μm,12.1s						
LSA				LR	LR		
	comp=N,16μm,12.1s						
LSA				LR	LR		
	comp=N,16μm,11.4s						
LSA	Lhasa	8.30	85	P	Pn	22 18 59.6	+3.2
LSA	Lhasa	8.30	85	P	Pn	22 18 57.7	+1.3
LSA	Lhasa	8.30	85	Pn	Pn	22 18 57.6	+1.3
NIL	Nilore	8.38	303	P	Pn	22 18 57.0	-0.1
NIL	Nilore	8.38	303	P	Pn	22 18 57.9	+0.8
NIL	Nilore	8.38	303	Pn	Pn	22 18 57.0	-0.1
THW	Thamme Wali	9.19	295	P	Pn	22 19 07.7	-0.4
CEP	Cherat	9.46	301	P	Pn	22 19 09.4	-2.5
SHL	Shillong	9.82	110	P	Pn	22 19 15.8	-1.2
SHL	Shillong	9.82	110	eP	Pn	22 19 17.0	0.0
SHL				i S	Sn	22 21 02.0	-5.1
SHL	Shillong	9.82	110	P	Pn	22 19 16.4	-0.6
	SNR=66						
SHL	Shillong	9.82	110	Pn	Pn	22 19 15.8	-1.2
ITAN	ITANAGAR	10.87	98	eP	Pn	22 19 31.8	+0.6
ITAN				eS	Sn	22 21 30.0	-2.5
ITAN				IAML		22 21 33.4	
	comp=E,1μm,0.7s						
KSH	Kashi	11.23	337	P	Pn	22 19 32.9	-3.3
KSH				S	Sn	22 21 30.0	-11
KSH				pmax	pmax		
	comp=E,49nm,0.7s						
KSH				LR	LR		
	comp=E,7μm,13.1s						
KSH				LR	LR		
	comp=E,7μm,9.1s						
KSH				LR	LR		
	comp=E,7μm,13.2s						
KOHI	KOHIMA	11.62	105	eP	Pn	22 19 40.5	-1.1
KOHI				eS	Sn	22 21 45.1	-6.0
KOHI				IAML		22 21 52.8	
	comp=E,1μm,0.9s						
MOKO	MOKOCHONG	11.77	101	eP	Pn	22 19 42.3	-1.4
MOKO				eS	Sn	22 21 48.1	-6.7
MOKO				IAML		22 21 55.4	
	comp=E,2μm,0.5s						
KBL	Kabul	11.92	299	P	Pn	22 19 43.9	-1.8
KBL	Kabul	11.92	299	P	Pn	22 19 44.7	-1.0
KBL	Kabul	11.92	299	Pn	Pn	22 19 43.9	-1.8
HYB	Hyderabad	12.14	194	i P	Pn	22 19 46.5	-2.2
HYB				eS	Sn	22 21 55.0	-8.8
HYB	Hyderabad	12.14	194	eP	Pn	22 19 46.6	-2.0
HYB				eS	Sn	22 21 55.0	-8.8
HYB				IAML		22 22 42.4	
	comp=E,326nm,1.1s						
BHUJ	Bhuj	12.31	244	eP	Pn	22 19 51.1	+0.2
BHUJ				IAmb	IAmb	22 20 00.7	
	comp=Z,89nm,0.5s						
LKP	Lekhapani	12.67	95	eP	Pn	22 19 53.7	-2.0
LKP				eS	Sn	22 22 08.8	-7.7
LKP				IAML		22 22 13.7	
	comp=N,712nm,0.3s						
TARG	Taragay, Kyrgy	12.81	347		Pn	22 19 57.3	-0.7
POO	Poona	12.85	215	eP	Pn	22 19 55.9	-2.4
POO				i S	Sn	22 22 08.0	-13
POO				eS	Sn	22 22 11.8	-9.3
POO				IAML		22 22 14.6	
	comp=E,185nm,0.3s						
POO				IAML		22 22 15.0	
	comp=N,199nm,0.3s						
DRK	Karamyk	13.01	324		Pn	22 19 58.8	-1.9
KDJ	Kajisay	13.32	345	P	Pn	22 20 04.1	-0.7
KDJ	Kajisay	13.32	345		Pn	22 20 04.1	-0.7
PRZ	Przheval'sk	13.43	350	P	Pn	22 20 05.4	-0.9
PRZ	Przheval'sk	13.43	350		Pn	22 20 05.4	-0.9
GAR	Garm	13.48	319		Pn	22 20 02.7	-4.2
ULHL	Ulahol	13.66	343	P	Pn	22 20 07.6	-1.8
	SNR=12						
CHGR	Chuyangaron	13.94	315		Pn	22 20 08.1	-5.1
BTK	Batken	13.95	323	P	Pn	22 20 09.7	-3.6
BTK	Batken	13.95	323		Pn	22 20 09.7	-3.6
SHLS	Shalkode	13.96	353	eP	Pn	22 20 10.2	-3.3
	comp=N,11nm,0.5s,baz=355						
SHLS				eS	Sn	22 22 45.4	-2.8
	baz=355						
SHLS	Shalkode	13.96	353	eP	Pn	22 20 10.2	-3.3
SHLS				eS	Sn	22 22 45.3	-2.8
SHLS				pmax	pmax		
	comp=Z,11nm,0.5s						
BOOM	Boomskoye usch	13.96	342	P	Pn	22 20 11.5	-2.1
BOOM	Boomskoye usch	13.96	342		Pn	22 20 11.5	-2.1
SATY	Saty	14.00	350	eP	Pn	22 20 11.2	-2.8
	comp=Z,7.1nm,0.4s,baz=350						
SATY	Saty	14.00	350	eP	Pn	22 20 11.1	-2.8
SATY				pmax	pmax		
	comp=Z,7.0nm,0.4s						
UZB	Uzynbulak	14.00	352	eP	Pn	22 20 11.4	-2.6
	comp=Z,27nm,0.5s,baz=352						
UZB	Uzynbulak	14.00	352	eP	Pn	22 20 11.4	-2.6
UZB				pmax	pmax		
	comp=Z,27nm,0.5s						
UCH	Uchtor	14.15	338	P	Pn	22 20 15.5	-0.8
	SNR=14						
MDOK	Medeo	14.34	346	eP	Pn	22 20 16.1	-2.7
	baz=346						
MDOK				eS	Sn	22 22 55.6	-1.8
	baz=346						
MDOK	Medeo	14.34	346	eP	Pn	22 20 16.0	-2.7
MDOK				eS	Sn	22 22 55.6	-1.8
AML	Almayashu	14.35	335	P	Pn	22 20 17.9	-1.1
	SNR=17						
AML	Almayashu	14.35	335	i P	Pn	22 20 16.3	-2.7
	SNR=124						
AML	Almayashu	14.35	335	P	Pn	22 20 17.1	-1.9
KBK	Karagaybulak	14.40	340	P	Pn	22 20 20.1	+0.5
	SNR=24						
TKM2	Tokmak 2	14.46	342	P	Pn	22 20 19.3	-1.1
	SNR=23						
AAK	Ala-Archa	14.52	339	Pn	Pn	22 20 19.2	-2.1
	comp=Z,5.7nm,0.3s,baz=151,slow=9.5,SNR=60						
AAK				LR	LR	22 26 23.6	
	comp=Z,3μm,18.4s,baz=152,slow=39						
AAK	Ala-Archa	14.52	339	P	Pn	22 20 19.1	-2.1
	SNR=27						
AAK	Ala-Archa	14.52	339	i P	Pn	22 20 19.3	-1.9
	SNR=31						
AAK	Ala-Archa	14.52	339	⇓eP	Pn	22 20 19.4	-1.9
AAK				pmax	pmax		
	comp=Z,79nm,1.3s						
AAK	Ala-Archa	14.52	339	P	Pn	22 20 19.6	-1.6
FRU1	Bishkek	14.64	339	P	Pn	22 20 21.2	-1.5
FRU1	Bishkek	14.64	339		Pn	22 20 21.1	-1.5
CHMS	Chumysh	14.77	340	P	Pn	22 20 23.1	-1.3
	SNR=13						
EKS2	Erkin-Say	14.78	337	P	Pn	22 20 24.1	-0.6
	SNR=21						
USP	Ospenovka	15.09	340	P	Pn	22 20 28.6	-0.2
	SNR=8.9						
KUU	Kurty	15.19	345	eP	Pn	22 20 26.8	-3.2
	baz=345						
KUU	Kurty	15.19	345	eP	Pn	22 20 26.8	-3.2
ARXS	Arharly	15.21	350	eP	Pn	22 20 27.2	-3.2
SGDS	Sogindy	15.22	340	eP	Pn	22 20 28.0	-2.5
	baz=340						
SGDS	Sogindy	15.22	340	eP	P	22 20 35.0	-0.4
WMQ	Urumqi	15.30	17	eP	Pn	22 20 30.6	-1.0
WMQ				sP	pP	22 20 39.9	-1.5
WMQ				PP	sP	22 20 46.4	+2.5
WMQ				S	Sn	22 23 20.8	+0.1
WMQ				SS	S	22 23 35.5	-1.6
WMQ				pmax	pmax		
	comp=Z,84nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,1μm,4.5s						
WMQ				LR	LR		
	comp=Z,6μm,12.3s						
WMQ				LR	LR		
	comp=Z,2μm,10.5s						
WMQ				LR	LR		
	comp=Z,2μm,14.9s						
GOA	Goa	15.50	209	eP	Pn	22 20 35.4	+1.2
GOA				eS	Sn	22 23 12.5	-13
TDK	Taldyqorghan	15.90	352	eP	Pn	22 20 36.2	-3.1
	baz=352						
TDK	Taldyqorghan	15.90	352	eP	Pn	22 20 36.2	-3.1
IUG	Iuzhnay	15.91	327	eP	Pn	22 20 36.2	-3.3
	baz=327						
IUG	Iuzhnay	15.91	327	eP	Pn	22 20 36.2	-3.3
DZA	Taraz	15.92	331	eP	Pn	22 20 36.4	-3.1
	baz=331						
DZA	Taraz	15.92	331	eP	Pn	22 20 36.4	-3.1
MDRS	Chennai	16.18	185	eS	Sn	22 23 32.6	-10
KKAR	Karatay Array	16.44	330	P	Pn	22 20 42.0	-4.2
KKAR	Karatay Array	16.44	330	Pn	Pn	22 20 42.0	-4.2
HRA	Herat	17.25	292		Pn	22 20 55.6	-1.0
MK31	Makanchi Array	17.49	1	c iP	Pn	22 20 56.9	-2.5
MK31	Makanchi Array	17.49	1		Pn	22 20 57.1	-2.3
MKAR	Makanchi Array	17.49	1	P	Pn	22 20 57.0	-2.5
	comp=Z,1.5nm,0.3s,baz=174,slow=12,SNR=48						
MKAR				LR	LR	22 28 49.4	
	comp=Z,3μm,18.1s,baz=176,slow=41						
MKAR	Makanchi Array	17.49	1	i P	Pn	22 20 57.0	-2.5
MKAR				pmax	pmax		
	comp=Z,17nm,0.5s						
MKAR	Makanchi Array	17.49	1		Pn	22 20 56.5	-3.0
MAKZ	Makanchi	17.50	1	P	Pn	22 20 56.4	-3.1
MAKZ				pmax	pmax		
	comp=Z,150nm,1.3s						
MAKZ	Makanchi	17.50	1		Pn	22 20 56.4	-3.1
GTA	Gaotai	18.06	51	eP	Pn	22 21 04.4	-2.2
GTA				pP	pP	22 21 10.0	-2.3
GTA				sP	sP	22 21 12.5	-2.0
GTA				sS	S	22 24 34.3	+0.6
GTA				LR	LR		
	comp=Z,5μm,13.1s						
GTA				LR	LR		
	comp=Z,3μm,13.5s						
GTA				LR	LR		
	comp=Z,4μm,13.8s						
ZSN	Zaisan	18.32	7	eP	Pn	22 21 07.4	-2.2
	baz=7.0						
ZSN	Zaisan	18.32	7	eP	Pn	22 21 07.3	-2.2
CHTO	Chiang Mai	18.90	120	P	P	22 21 16.2	-0.1
CHTO				pmax	pmax		
	comp=Z,34nm,0.8s						
CHTO	Chiang Mai	18.90	120	P	Pn	22 21 17.4	+0.5
CHTO	Chiang Mai	18.90	120	P	P	22 21 16.1	-0.1
CHTO	Chiang Mai	18.90	120	P	Pn	22 21 17.1	+0.2
CM31	Chiang Mai Arr	19.12	120	P	Pn	22 21 20.4	+1.0
	SNR=25						
CM31	Chiang Mai Arr	19.12	120	P	P	22 21 18.7	+0.1
CMAR	Chiang Mai Arr	19.12	120	P	P	22 21 18.6	0.0
	comp=Z,1.9nm,0.3s,baz=306,slow=11,SNR=88						
CMAR				PcP	PcP	22 25 44.1	+1.4
	baz=300,slow=4.8,SNR=5.7						
CMAR				LR	LR	22 31 02.4	
	comp=Z,751nm,18.7s,baz=332,slow=44						
CMAR	Chiang Mai Arr	19.12	120	P	P	22 21 19.0	+0.4
CMAR	Chiang Mai Arr	19.12	120	P	P	22 21 19.0	+0.4
DGPR	DIGLIPUR	19.15	144	eP	Pn	22 21 20.9	+1.1
DGPR				IAmb	IAmb	22 21 43.1	
	comp=Z,131nm,1.1s						
CD2	Chengdu	19.21	80	P	Pn	22 21 20.4	-0.1
CD2				S	Sn	22 24 54.4	-1.1
CD2				pmax	pmax		
	comp=Z,200nm,1.6s						
CD2				pmax	pmax		
	comp=Z,1μm,8.0s						
CD2				LR	LR		
	comp=Z,9μm,11.8s						
CD2				LR	LR		
	comp=Z,10μm,10.3s						
CD2				LR	LR		
	comp=Z,11μm,11.6s						
KMI	Kunming	19.21	97	⇑P	Pn	22 21 20.8	0.0
KMI				pP	pP	22 21 23.3	-1.8
KMI				S	Sn	22 24 53.0	-3.0
KMI				pmax	pmax		
	comp=Z,170nm,1.2s						
KMI				pmax	pmax		
	comp=Z,1μm,4.8s						
KMI				LR	LR		
	comp=Z,2μm,12.2s						
KMI				LR	LR		
	comp=Z,1μm,12.9s						
KMI				LR	LR		
	comp=Z,1μm,11.7s						
LZH	Lanzhou	19.86	64	eP	P	22 21 27.4	+0.6
LZH				sP	sP	22 21 34.3	-0.1
LZH				S	S	22 25 05.4	-4.6
LZH				SS	SnSn	22 25 30.5	+4.7
LZH				pmax	pmax		
	comp=Z,75nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1μm,4.6s						
LZH				LR	LR		
	comp=Z,5μm,14.1s						
LZH				LR	LR		
	comp=Z,2μm,12.2s						
LZH				LR	LR		
	comp=Z,4μm,14.9s						
PBA	Port Blair	20.36	147	P	Pn	22 21 35.0	+0.8
PBA	Port Blair	20.36	147	P	Pn	22 21 34.8	+0.6
PBA				IAmb	IAmb	22 22 09.5	
	comp=Z,183nm,0.8s						
DGZ	Jazzator, Alta	20.87	11	c iP	P	22 21 38.1	+0.5
DGZ				pmax	pmax		
	comp=Z,62nm,1.4s						
SEM	Semipalatinsk	21.13	358	eP	P	22 21 38.3	-2.2
	baz=358						

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SEM   Semipalatinsk   21.13 358  eP    P      22 21 38.3 -2.2
JLN   Jalan Bani Buh  21.23 256   P    P      22 21 44.5 +3.0
      SNR=29
GEYT  Alibeck         21.37 300   LR   LR     22 31 26.0
      comp=Z,2µm,18.7s,baz=130,slow=41
GYA0B ALIBECK ARRAY   21.37 300   P    P      22 21 42.8 -0.1
WBK   Wadi Bani Khal  21.42 257   P    P      22 21 47.0 +3.4
      SNR=19
KURBB Kurchatov Arra  21.45 355   P    P      22 21 42.7 -0.9
      comp=Z,54nm,1.0s,baz=179,slow=9.9,SNR=149
WSAR  Wadi Sarin      21.48 259   P    P      22 21 47.1 +2.9
      comp=Z,45nm,0.6s,baz=110,slow=8.9,SNR=101
WSAR                              LR   LR     22 31 23.6
      comp=Z,823nm,18.5s,baz=90,slow=40
WSAR  Wadi Sarin      21.48 259   P    P      22 21 47.3 +3.0
      SNR=19
KURK  Kurchatov       21.53 355c iP    P      22 21 43.6 -0.9
KURK                              pmax pmax
      comp=Z,90nm,1.3s
KURK  Kurchatov       21.53 355   P    P      22 21 44.0 -0.5
KURK  Kurchatov       21.53 355   P    P      22 21 43.7 -0.9
SLVN  Son La          21.60 106   P    P      22 21 46.7 +1.0
SLVN                              IAmb IAmb   22 21 48.9
      comp=Z,141nm,1.1s
BRZS  Berezniki       21.77 344  eP    P      22 21 45.3 -1.8
      comp=Z,21nm,0.6s,baz=344
BRZS  Berezniki       21.77 344  eP    P      22 21 45.3 -1.8
BRZS                              pmax pmax
      comp=Z,21nm,0.6s
PBKT  Sadao Pong      21.80 121   P    P      22 21 49.0 +1.4
PBKT                              IAmb IAmb   22 22 09.0
      comp=Z,288nm,1.5s
BIDO  Bidbid          21.81 260   P    P      22 21 51.0 +3.2
      SNR=27
PALK  Pallekele       21.91 182   LR   LR     22 30 59.2
      comp=Z,2µm,18.5s,baz=117,slow=39
PALK  Pallekele       21.91 182   P    P      22 21 51.8 +2.9
PALK                              pmax pmax
      comp=Z,125nm,1.4s
PALK  Pallekele       21.91 182   P    P      22 21 54.0 +5.2
PALK  Pallekele       21.91 182   P    P      22 21 51.8 +2.9
SMDO  Samad           22.04 259   P    P      22 21 53.1 +2.8
      SNR=9.4
JMDO  Jabal Madar     22.25 257   P    P      22 21 55.6 +3.0
      SNR=18
GYA   Guiyang         22.29  91⇑iP    P      22 21 53.3 +0.3
GYA                               PP   PnPn   22 22 21.3 +5.6
GYA                               S    S      22 25 54.6 -3.2
GYA                               pmax pmax
      comp=Z,110nm,1.2s
GYA                               pmax pmax
      comp=Z,610nm,3.6s
GYA                               LR   LR
      comp=Z,1µm,11.7s
GYA                               LR   LR
      comp=Z,2µm,11.2s
GYA                               LR   LR
      comp=Z,3µm,15.8s
HOQ   Hoqain          22.49 261   P    P      22 21 58.5 +3.4
      SNR=10
BANOM Banah           22.69 268 i P    P      22 21 58.7 +1.4
      SNR=8.8
BANOM Banah           22.69 268   P    P      22 21 58.8 +1.6
      SNR=6.8
SHME  Shamm           22.80 268 i P    P      22 22 00.9 +2.6
      SNR=6.8
SHME  Shamm           22.80 268   P    P      22 22 01.1 +2.8
      SNR=8.3
BSY   Bisya           22.89 259   P    P      22 22 02.5 +3.2
      SNR=9.9
MASF  Masafi          22.95 266   P    P      22 22 03.3 +3.3
      SNR=8.2
MSFE  Esma-Masafi     22.96 266 i P    P      22 22 02.8 +2.7
      SNR=5.3
SOHO  SOHO            22.99 263   P    P      22 22 02.7 +2.4
SOHO  SOHO            22.99 263   P    P      22 22 03.2 +2.9
UOSS  Minazif         23.03 265 i P    P      22 22 02.4 +1.7
      SNR=8.5
UOSS  Minazif         23.03 265   P    P      22 22 03.5 +2.8
UOSS  Minazif         23.03 265   P    P      22 22 01.1 +0.3
HATD  Hatta, Dubai    23.13 265 i P    P      22 22 04.9 +3.2
      SNR=9.6
HATD  Hatta, Dubai    23.13 265   P    P      22 22 05.8 +4.0
      SNR=18
ASHO  Ashiyiah        23.23 265 i P    P      22 22 05.8 +2.9
      SNR=38
ASHO  Ashiyiah        23.23 265   P    P      22 22 06.4 +3.5
      SNR=42
ARQ   Araqi           23.26 261   P    P      22 22 06.3 +3.2
NAZ   Nazwa, Dubai    23.49 266 i P    P      22 22 08.6 +3.2
      SNR=13
NAZ   Nazwa, Dubai    23.49 266   P    P      22 22 09.2 +3.9
      SNR=12
FAQ   Al Faqa, Dubai  23.62 265 i P    P      22 22 09.2 +2.6
      SNR=15
FAQ   Al Faqa, Dubai  23.62 265   P    P      22 22 09.6 +2.9
      SNR=24
XAN   Xi'an           23.67  71   P    P      22 22 07.1  0.0
XAN                               pP   sP     22 22 14.1 -0.8
XAN                               pmax pmax
      comp=Z,77nm,1.0s
XAN                               pmax pmax
      comp=Z,1µm,3.9s
XAN                               LR   LR
      comp=Z,7µm,12.7s
XAN                               LR   LR
      comp=Z,2µm,12.7s
XAN                               LR   LR
      comp=Z,5µm,11.0s
ALNE  Al Ain          23.69 263 i P    P      22 22 09.7 +2.3
      SNR=9.4
ALNE  Al Ain          23.69 263   P    P      22 22 10.5 +3.1
      SNR=27
ASUD  Al Ashush, Dub  23.89 265 i P    P      22 22 12.6 +3.4
      SNR=5.6
ASUD  Al Ashush, Dub  23.89 265   P    P      22 22 13.1 +3.9
ENH   Enshi           24.17  81   IAmb IAmb   22 22 26.4
      comp=Z,147nm,1.1s
AJN   Ajban           24.20 265 i P    P      22 22 14.0 +1.8
      SNR=5.8
UMZA  Um Al Zommool   24.65 261   P    P      22 22 18.3 +2.0
ZAA0  Zalesovo Array  24.76   4   P    P      22 22 16.1 -0.8
ZAA0                              IAmb IAmb   22 22 18.1
      comp=Z,46nm,0.8s
ZALV  Zalesovo Beam   24.76   4   P    P      22 22 16.6 -0.3
      comp=Z,59nm,0.8s,baz=197,slow=9.7,SNR=191
ZALV  Zalesovo Beam   24.76   4   P    P      22 22 15.9 -1.0
BVAR  Borovoye Array  25.13 344   P    P      22 22 20.0 -0.3
      comp=Z,15nm,0.5s,baz=169,slow=14,SNR=59
BVAR  Borovoye Array  25.13 344   P    P      22 22 20.0 -0.3
BRVK  Borovoye        25.19 344c iP    P      22 22 20.4 -0.4
BRVK                              pmax pmax
      comp=Z,35nm,1.3s
BRVK  Borovoye        25.19 344   P    P      22 22 20.8  0.0
BRVK  Borovoye        25.19 344   P    P      22 22 19.7 -1.1
MZWR  Madinat Zayed   25.41 264   P    P      22 22 23.6 +0.5
BTO   Baotou          25.75  56  eP    P      22 22 26.4 +0.2
BTO                               S    S      22 26 57.6 +2.9
BTO                               LR   LR
      comp=Z,9µm,16.8s
BTO                               LR   LR
      comp=Z,7µm,13.0s
ABKAR Akbulak array   25.92 326   P    P      22 22 27.9 +0.5
ABKAR                             IAmb IAmb   22 22 29.8
      comp=Z,77nm,0.8s
ABKAR Akbulak array   25.92 326   P    P      22 22 27.7 +0.3
MZR   Muzera          26.00 263 i P    P      22 22 30.9 +2.3
      SNR=12
MZR   Muzera          26.00 263   P    P      22 22 30.1 +1.5
      SNR=5.2
UBPT  Khong Chiam     26.01 117   P    P      22 22 29.7 +1.0
GHWR  Ruwais          26.22 265   P    P      22 22 32.5 +2.1
SHAO  Shalim          26.27 251   P    P      22 22 34.0 +3.0
SHAO  Shalim          26.27 251   P    P      22 22 32.7 +1.7
SONM  Songino Array   26.61  39   P    P      22 22 35.7 +1.7
      comp=Z,28nm,0.8s,baz=228,slow=8.7,SNR=171
SONM                              PcP  PcP    22 25 58.2 +0.4
      comp=Z,5.2nm,0.7s,baz=239,slow=3.4,SNR=5.7
SONM  Songino Array   26.61  39   P    P      22 22 35.0 +1.1
SONM                              IAmb IAmb   22 22 48.1
      comp=Z,74nm,1.0s
MOY   Mondy           26.61  27  eP    P      22 22 34.6 +0.7
MOY                               pmax pmax
      comp=Z,77nm,2.2s
ZAK   Zakamensk       26.66  32  eP    P      22 22 35.6 +1.3
ZAK                               pmax pmax
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      comp=Z,32nm,1.6s
TIY   Taiyuan         26.93  64 ⇓P    P      22 22 40.3 +3.4
TIY                               S    S      22 27 17.1 +3.8
TIY                               pmax pmax
      comp=Z,500nm,6.6s
TIY                               LR   LR
      comp=Z,850nm,10.8s
TIY                               LR   LR
      comp=Z,2µm,12.0s
TIY                               LR   LR
      comp=Z,4µm,13.8s
DMTO  DMTO            26.98 251   P    P      22 22 40.8 +3.4
ULN   Ulaanbaatar     26.99  40c iP    P      22 22 38.5 +1.1
ULN                               pmax pmax
      comp=Z,79nm,1.7s
ULN   Ulaanbaatar     26.99  40   P    P      22 22 38.5 +1.1
ULN   Ulaanbaatar     26.99  40   P    P      22 22 38.0 +0.6
ULN                                    pP     22 22 38.3 -4.8
ULN                               IAmb IAmb   22 22 48.0
      comp=Z,117nm,1.4s
SLWR  Sila            27.22 266   P    P      22 22 40.6 +1.1
DOK   Doka            27.23 253   P    P      22 22 41.7 +2.1
SHMA  Al-Shehemyia    27.37 270   P    P      22 22 42.0 +1.2
TRNA  Turayna         27.44 268   P    P      22 22 42.3 +0.8
QIZ   Qiongzhong      27.62 105   P    P      22 22 45.3 +2.2
QIZ                               S    S      22 27 20.6 -3.7
QIZ                               LR   LR
      comp=Z,630nm,11.3s
QIZ                               LR   LR
      comp=Z,690nm,12.5s
QIZ                               LR   LR
      comp=Z,900nm,12.5s
AKTO  Aktyubinsk      27.63 326   P    P      22 22 43.5 +0.5
      comp=Z,9.0nm,0.7s,baz=127,slow=9.2,SNR=23
AKTO                              LR   LR     22 34 39.6
      comp=Z,4µm,18.4s,baz=137,slow=38
RBK   Rabkut          27.70 251   P    P      22 22 45.8 +1.9
SAKB  Bahrain         27.71 271   P    P      22 22 45.0 +1.1
TLY   Talaya          27.74  30   LR   LR     22 34 39.9
      comp=Z,2µm,18.6s,baz=222,slow=38
TLY   Talaya          27.74  30c iP    P      22 22 45.7 +1.8
TLY                              e            22 23 31.2
TLY                               pmax pmax
      comp=Z,26nm,0.9s
TLY                               MLR  MLR
      comp=Z,3µm,15.0s
TLY   Talaya          27.74  30   P    P      22 22 46.1 +2.2
TLY   Talaya          27.74  30   P    P      22 22 44.3 +0.3
WHFO  Wadi Hawf       27.86 252   P    P      22 22 47.0 +1.7
WHN   Wuhan           28.33  79 ⇑P    P      22 22 49.6 +0.2
WHN                               pmax pmax
      comp=Z,110nm,1.3s
WHN                               LR   LR
      comp=Z,7µm,12.8s
WHN                               LR   LR
      comp=Z,8µm,12.8s
WHN                               LR   LR
      comp=Z,11µm,13.5s
IRK   Irkutsk         28.41  30  eP    P      22 22 49.6 -0.3
IRK                               pmax pmax
      comp=Z,59nm,3.3s
ABTO  Aybut           28.53 252   P    P      22 22 52.8 +1.5
KULM  Kulim           29.88 139   P    P      22 23 03.4 +0.1
BJT   Baijiatuau      30.19  60   P    P      22 23 06.9 +1.1
BJT                               pmax pmax
      comp=Z,198nm,1.9s
BJT   Baijiatuau      30.19  60   P    P      22 23 06.9 +1.1
BJT                               IAmb IAmb   22 23 08.8
      comp=Z,198nm,1.9s
BJI   Beijing         30.20  60   P    P      22 23 07.1 +1.3
BJI                               pP   pP     22 23 11.8 +0.4
BJI                               sP   sP     22 23 14.6 +0.9
BJI                               pmax pmax
      comp=Z,42nm,0.9s
BJI                               pmax pmax
      comp=Z,400nm,6.8s
BJI                               LR   LR
      comp=Z,4µm,11.9s
BJI                               LR   LR
      comp=Z,2µm,11.9s
BJI                               LR   LR
      comp=Z,3µm,14.8s
TIA   Tai'an          30.51  68 ⇑P    P      22 23 09.4 +0.7
TIA                               pmax pmax
      comp=Z,18nm,1.5s
TIA                               LR   LR
      comp=Z,1µm,14.1s
TIA                               LR   LR
      comp=Z,2µm,18.4s
TIA                               LR   LR
      comp=Z,3µm,13.1s
MAK   Makhachkala     30.54 306  eP    P      22 23 03.7 -5.1
MAK                              eS    S      22 28 01.8 -8.0
MAK                              eSS   SnSn   22 29 41.1 -5.4
MAK                               pmax pmax
      comp=Z,156nm,1.0s
MAK                               MLR  MLR
      comp=Z,990nm,14.0s
SOCY  Socotra         30.83 242   P    P      22 23 12.3 +0.5
SOCY  Socotra         30.83 242   P    P      22 23 10.0 -1.7
SOCY                              IAmb IAmb   22 23 35.3
      comp=Z,43nm,1.1s
PSI   Prapat          31.04 145   P    P      22 23 13.7 +0.1
      comp=Z,6.1nm,0.5s,baz=342,slow=8.0,SNR=12
SVE   Sverdlovsk      31.26 338⇑eP    P      22 23 15.9 +0.9
SVE                               pmax pmax
      comp=Z,27nm,1.3s
SVE                               MLR  MLR
      comp=Z,3µm,13.0s
ARU   Arti            31.67 335   LR   LR     22 37 15.6
      comp=Z,2µm,20.1s,baz=132,slow=38
ARU   Arti            31.67 335c iP    P      22 23 19.2 +0.6
ARU                                           22 24 18.8
ARU                                           22 26 07.4
ARU                               S    S      22 28 31.3 +4.1
ARU                               SS   SnSn   22 30 13.9 +0.2
ARU                               pmax pmax
      comp=Z,32nm,0.8s
ARU                               MLR  MLR
      comp=Z,2µm,16.0s
ARU   Arti            31.67 335   P    P      22 23 18.5 -0.2
ARU                               IAmb IAmb   22 23 20.3
      comp=Z,27nm,0.7s
GSI   Gunungsitoli    31.70 149   P    P      22 23 21.8 +2.5
      comp=Z,2µmcomp=Z,185nm,0.7s
GSI   Gunungsitoli    31.70 149   P    P      22 23 20.8 +1.6
GSI   Gunungsitoli    31.70 149   P    P      22 23 21.7 +2.5
GROC  Groznyy         31.82 306  eP    P      22 23 21.1 +1.0
GROC                             e            22 24 24.1
GROC                              pmax pmax
      comp=Z,42nm,1.0s
GNI   Garni           32.00 300   P    P      22 23 22.9 +0.9
GNI                               pmax pmax
      comp=Z,78nm,1.4s
GNI   Garni           32.00 300   P    P      22 23 22.9 +0.9
GNI                               IAmb IAmb   22 23 47.2
      comp=Z,78nm,1.4s
NJ2   Nanjing         32.03  76  eP    P      22 23 23.3 +1.2
NJ2                               pmax pmax
      comp=Z,5.0nm,0.5s
NJ2                               LR   LR
      comp=Z,2µm,13.7s
NJ2                               LR   LR
      comp=Z,2µm,14.7s
NJ2                               LR   LR
      comp=Z,2µm,16.6s
RAYN  Ar Rayn         32.78 269 i P    P      22 23 30.1 +1.3
      SNR=19
RAYN  Ar Rayn         32.78 269   P    P      22 23 29.3 +0.4
RAYN                              pmax pmax
      comp=Z,36nm,1.2s
RAYN  Ar Rayn         32.78 269   P    P      22 23 29.8 +1.0
RAYN  Ar Rayn         32.78 269   P    P      22 23 29.3 +0.4
RAYN                              IAmb IAmb   22 23 38.5
      comp=Z,36nm,1.2s
ZEI   Tsey            33.08 304  eP    P      22 23 31.5 +0.1
ZEI                               pmax pmax
      comp=Z,25nm,1.4s
MNSI  Mandailing Nat  33.09 146   P    P      22 23 30.9 -0.6
      comp=Z,778nmcomp=Z,44nm,0.6s
KARS  Kars            33.33 300   P    P      22 23 35.2 +1.6
KARS                              pmax pmax
      comp=Z,118nm,1.1s
KARS  Kars            33.33 300   P    P      22 23 35.2 +1.6
ONI   Oni             33.37 304   P    P      22 23 35.4 +1.6
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ONI                               pmax pmax
      comp=Z,63nm,1.4s
ONI   Oni             33.37 304   P    P      22 23 35.4 +1.6
ONI                               IAmb IAmb   22 23 59.1
      comp=Z,63nm,1.4s
NCK   Nalchik         33.45 306deP    P      22 23 35.9 +1.5
NCK                               pmax pmax
      comp=Z,38nm,0.9s
SIRT  Sirnak          33.55 295   P    P      22 23 35.8 +0.4
GURO  Guroymak-BITLI  33.93 296   P    P      22 23 40.0 +1.2
KBZ   Khabaz          33.99 306   P    P      22 23 39.9 +0.9
      comp=Z,16nm,0.8s,baz=111,slow=6.4,SNR=46
KBZ                               LR   LR     22 40 59.8
      comp=Z,642nm,18.9s,baz=97,slow=42
KBZ   Khabaz          33.99 306c iP    P      22 23 39.7 +0.6
KBZ                               pmax pmax
      comp=Z,17nm,0.9s
NEY   Neytrino        34.02 305⇓eP    P      22 23 42.1 +2.5
NEY                               pmax pmax
      comp=Z,7.0nm,0.8s
BELG  Belogornoye     34.08 322⇑eP    P      22 23 39.9 +0.2
BELG                              pmax pmax
      comp=Z,7.0nm,1.1s
SSE   Sheshan         34.11  77   P    P      22 23 41.5 +1.2
SSE                               S    S      22 29 06.8 +1.1
SSE                               pmax pmax
      comp=Z,24nm,0.8s
SSE                               pmax pmax
      comp=Z,140nm,5.5s
SSE                               LR   LR
      comp=Z,1µm,16.2s
SSE                               LR   LR
      comp=Z,730nm,17.9s
KIV   Kislovodsk      34.19 306 i P    P      22 23 41.9 +0.9
      SNR=14
KIV   Kislovodsk      34.19 306  eP    P      22 23 41.8 +0.9
KIV                              eS    S      22 29 08.8 +2.0
KIV                               pmax pmax
      comp=Z,38nm,1.0s
KIV                               MLR  MLR
      comp=Z,480nm,16.0s
KIV   Kislovodsk      34.19 306   P    P      22 23 42.2 +1.3
KIV   Kislovodsk      34.19 306   P    P      22 23 41.4 +0.5
KIV                               IAmb IAmb   22 23 51.6
      comp=Z,47nm,1.1s
GOF   Gofitskoye      34.19 308⇑eP    P      22 23 49.4 +8.6
BKNI  Bangkinang      34.23 144   P    P      22 23 42.0 +0.6
      comp=Z,2µmcomp=Z,157nm,1.1s
BKNI  Bangkinang      34.23 144   P    P      22 23 42.2 +0.8
BKNI  Bangkinang      34.23 144   P    P      22 23 42.6 +1.2
DL2   Dalian          34.25  63   P    P      22 23 42.9 +1.5
DL2                               pP   sP     22 23 48.3 -1.0
DL2                               S    S      22 29 11.9 +4.3
DL2                               pmax pmax
      comp=Z,97nm,0.7s
DL2                               pmax pmax
      comp=Z,260nm,7.3s
DL2                               LR   LR
      comp=Z,910nm,13.7s
DL2                               LR   LR
      comp=Z,4µm,14.3s
DL2                               LR   LR
      comp=Z,4µm,14.9s
SISI  Saibi           34.71 148   P    P      22 23 46.3 +0.8
      comp=Z,642nmcomp=Z,53nm,1.3s
PDSI  Padang          35.00 146   P    P      22 23 48.7 +0.6
      comp=Z,52nm,1.1s
HIA   Hailar          35.12  45   P    P      22 23 49.5 +0.7
HIA                               pmax pmax
      comp=Z,14nm,0.9s
HIA   Hailar          35.12  45   P    P      22 23 49.5 +0.7
KOPT  Kop Dagi        35.23 299   P    P      22 23 51.7 +1.5
TWG   Pinlang         35.88  91   P    P      22 23 57.3 +1.6
YULB  Yu-li           35.90  90   P    P      22 23 57.5 +1.7
YULB                              IAmb IAmb   22 24 06.4
      comp=Z,53nm,1.0s
SNY   Shenyang        36.00  58 ⇑P    P      22 23 56.9 +0.4
SNY                               S    S      22 29 39.4 +4.8
SNY                               pmax pmax
      comp=Z,45nm,0.9s
SNY                               pmax pmax
      comp=Z,440nm,4.1s
SNY                               LR   LR
      comp=Z,2µm,13.2s
SNY                               LR   LR
      comp=Z,2µm,12.8s
SNY                               LR   LR
      comp=Z,2µm,18.1s
SOC   Sochi           36.23 305  eP    P      22 23 55.5 -2.9
SOC                              e            22 25 14.7
SOC                              eS    S      22 29 36.3 -1.8
SOC                              eSS   SnSn   22 32 01.5 -3.1
SOC                              eSSS  SSS    22 32 26.8
SOC                               pmax pmax
      comp=Z,22nm,0.9s
SOC                               MLR  MLR
      comp=Z,420nm,19.0s
BOD   Bodaibo         36.30  29  eP    P      22 23 59.7 +0.9
BOD                               pmax pmax
      comp=Z,52nm,1.7s
KRJI  Kerinci         36.51 145   P    P      22 24 01.8 +0.6
      comp=Z,3µmcomp=Z,386nm,0.8s
KIRV  Kirov           36.72 332   P    P      22 24 02.9 +0.6
      comp=Z,42nm,0.5s,baz=80,slow=0.3,SNR=20
KIRV  Kirov           36.72 332ceP    P      22 24 02.8 +0.5
VRH   Novokhopyorsk   36.89 318  eP    P      22 24 04.1 +0.2
VRH                               pmax pmax
      comp=Z,20nm,0.6s
CN2   Changchun       37.62  55  eP    P      22 24 11.1 +0.9
CN2                               sP   sP     22 24 18.3 +0.1
CN2                               PcP  PcP    22 26 27.4 -0.3
CN2                               S    S      22 30 00.0 +0.8
CN2                               pmax pmax
      comp=Z,60nm,0.9s
CN2                               pmax pmax
      comp=Z,200nm,4.0s
CN2                               LR   LR
      comp=Z,1µm,12.0s
CN2                               LR   LR
      comp=Z,4µm,12.0s
CN2                               LR   LR
      comp=Z,5µm,14.0s
GAZ   Gaziantep       37.71 294   P    P      22 24 10.7 -0.5
INCN  Inchon          38.16  66   P    P      22 24 15.2 +0.3
INCN                              pmax pmax
      comp=Z,67nm,0.9s
INCN  Inchon          38.16  66   P    P      22 24 15.2 +0.3
INCN                              IAmb IAmb   22 24 16.3
      comp=Z,67nm,0.8s
INCN  Inchon          38.16  66   P    P      22 24 15.9 +1.0
VORD  Divnogorie      38.26 317  eP    P      22 24 15.4 -0.1
VORD                              pmax pmax
      comp=Z,20nm,1.2s
TOKA  Tokat           38.32 299   P    P      22 24 17.1 +0.9
VSR   Storozhevoye    38.41 317  eP    P      22 24 16.7 -0.1
VSR                               pmax pmax
      comp=Z,30nm,1.5s
BNN   Bunyan          38.77 297   P    P      22 24 21.0 +0.8
BNN                               IAmb IAmb   22 24 44.4
      comp=Z,90nm,1.6s
TJN   Taejon          38.78  67ceP    P      22 24 19.7 -0.4
TJN   Taejon          38.78  67   P    P      22 24 20.2 +0.1
KSM   Kuching         38.86 130   P    P      22 24 22.4 +1.5
KSM                               IAmb IAmb   22 24 41.2
      comp=Z,51nm,0.8s
PMBI  Palembang       38.95 141   P    P      22 24 24.3 +2.6
PMBI  Palembang       38.95 141   P    P      22 24 22.8 +1.1
PMBI  Palembang       38.95 141   P    P      22 24 23.5 +1.8
LPSR  Galich'ya Gora  39.00 319  eP    P      22 24 22.0 +0.3
LPSR                              pmax pmax
      comp=Z,10.0nm,0.7s
KS19  Wonju Array Si  39.14  65   P    P      22 24 23.5 +0.4
KSAR  Wonju Array Be  39.15  66   P    P      22 24 22.7 -0.5
KSAR  Wonju Array Be  39.15  66   P    P      22 24 22.7 -0.5
KSRS  Korea Array     39.18  66   P    P      22 24 23.6 +0.2
      comp=Z,17nm,0.7s,baz=272,slow=8.6,SNR=49
KSRS                              PcP  PcP    22 26 32.7  0.0
      comp=Z,5.7nm,0.8s,baz=268,slow=2.0,SNR=6.7
KSRS                              LR   LR     22 42 49.4
      comp=Z,664nm,20.8s,baz=272,slow=40
SBUM  Sibu            39.45 127   P    P      22 24 27.0 +1.1
MMAI  Mount Meron Ar  39.51 287   P    P      22 24 27.8 +1.5
      comp=Z,1.9nm,0.5s,baz=65,slow=12,SNR=13
MMAI                              PcP  PcP    22 26 35.5 +1.7
      comp=Z,11nm,1.0s,baz=76,slow=4.5,SNR=4.8
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GHAJ	Ghor Haditha	39.62	285	P	P	22 24 28.4	+1.3
GHAJ				IAmb	IAmb	22 24 37.7	
	comp=Z,48nm,0.7s						
MDSI	Maura Dua	39.94	143	P	P	22 24 28.4	-1.5
	comp=Z,309nmcomp=Z,14nm,1.3s						
PRGR	Permogore	40.10	334	eP	P	22 24 30.5	-0.2
PRGR				e		22 26 33.4	
PRGR				pmax	pmax		
	comp=Z,96nm,1.4s						
ATD	Arta Tunnel	40.18	252	P	P	22 24 34.5	+2.4
ATD	Arta Tunnel	40.18	252	P	P	22 24 34.0	+1.9
NRIK	Noril'sk	40.24	3	P	P	22 24 32.3	+0.5
	comp=Z,38nm,0.9s,baz=181,slow=5.4,SNR=45						
NRIK	Noril'sk	40.24	3c	eP	P	22 24 32.1	+0.3
NRIK				pmax	pmax		
	comp=Z,37nm,0.9s						
NRIK	Noril'sk	40.24	3	P	P	22 24 32.0	+0.1
BZK	Bozkurt	40.26	301	P	P	22 24 33.5	+1.2
SIM	Simferopol'	40.40	306c	iP	P	22 24 33.2	-0.3
SIM				S	S	22 30 32.0	-9.1
SIM				pmax	pmax		
	comp=Z,36nm,0.4s						
KLSI		40.41	143	P	P	22 24 43.4	+10
ILGA	Ilgaz	40.44	300	P	P	22 24 34.2	+0.1
BR131	Keskin Array S	40.49	298	P	P	22 24 35.0	+0.5
	SNR=5.9						
BRTR	Keskin Array B	40.49	298	P	P	22 24 34.6	+0.1
	comp=Z,5.8nm,0.7s,baz=121,slow=9.8,SNR=39						
BRTR				LR	LR	22 45 22.7	
	comp=Z,364nm,18.1s,baz=104,slow=42						
BRTR	Keskin Array B	40.49	298	iP	P	22 24 34.9	+0.5
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MDJ	Mudanjiang	40.67	54	P	P	22 24 36.8	+1.1
MDJ				S	S	22 30 45.5	+0.4
MDJ				pmax	pmax		
	comp=Z,32nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,200nm,4.9s						
MDJ				LR	LR		
	comp=Z,620nm,9.0s						
MDJ				LR	LR		
	comp=Z,910nm,13.7s						
MDJ				LR	LR		
	comp=Z,1µm,16.2s						
MDJ	Mudanjiang	40.67	54	IAmb	IAmb	22 25 09.7	
	comp=Z,62nm,0.9s						
MDJ	Mudanjiang	40.67	54	IAmb	IAmb	22 25 09.7	
	comp=Z,62nm,0.9s						
MDJ	Mudanjiang	40.67	54	P	P	22 24 37.2	+1.5
MOS	Moscow	40.83	323	eP	P	22 24 35.2	-1.7
MOS				e		22 26 10.2	
MOS				ePPP	PPP	22 26 34.8	
MOS				eS	S	22 30 43.7	-3.5
MOS				pmax	pmax		
	comp=Z,51nm,1.6s						
MOS				MLR	MLR		
	comp=Z,2µm,16.0s						
KASI	Kota Agung	40.99	144	P	P	22 24 36.6	-2.0
	comp=Z,1µmcomp=Z,141nm,0.9s						
ZEA	Zeya	41.02	40	eP	P	22 24 40.4	+1.9
ZEA				e		22 30 44.6	
ZEA				pmax	pmax		
	comp=Z,200nm,6.0s						
ZEA				pmax	pmax		
	comp=N,20nm,1.7s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				MLR	MLR		
	comp=E,1µm,10.0s						
ZEA				MLR	MLR		
	comp=N,500nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,11.0s						
ANTO	Ankara	41.14	298	P	P	22 24 40.2	+0.4
ANTO				pmax	pmax		
	comp=Z,14nm,0.8s						
ANTO	Ankara	41.14	298	P	P	22 24 40.2	+0.4
OBN	Obninsk	41.17	322	eP	P	22 24 40.2	+0.5
OBN				e		22 26 15.1	
OBN				ePPP	PPP	22 26 42.6	
OBN				eS	S	22 30 53.6	+1.4
OBN				eSS	SS	22 33 46.8	-8.2
OBN				eSSS	SSS	22 34 30.1	
OBN				pmax	pmax		
	comp=Z,40nm,1.3s						
OBN				MLR	MLR		
	comp=Z,1µm,15.0s						
OBN	Obninsk	41.17	322	P	P	22 24 39.0	-0.7
MSEY	Mahe Island	42.08	221	P	P	22 24 49.6	+2.0
MSEY				pmax	pmax		
	comp=Z,26nm,1.3s						
MSEY	Mahe Island	42.08	221	P	P	22 24 49.6	+2.0
KLMR	Klimovskoe	42.14	331	eP	P	22 24 46.9	-0.6
KLMR				e		22 26 25.3	
KLMR				pmax	pmax		
	comp=Z,35nm,1.0s						
KLMR	Klimovskoe	42.14	331	eP	P	22 24 47.0	-0.6
KLMR				AMP		22 24 56.9	
	comp=Z,35nm,1.0s						
KLMR				ePP	PP	22 26 25.4	+0.4
KLMR				LQ	LQ	22 39 02.4	
KLMR				LQ	LQ	22 39 02.4	
KLMR				LR	LR	22 42 23.9	
VLA	Vladivostok	42.23	57c	eP	P	22 24 49.5	+1.0
VLA				pmax	pmax		
	comp=Z,41nm,1.0s						
MYLDM	Lahad Datu	42.28	117	P	P	22 24 50.8	+1.6
MYLDM				IAmb	IAmb	22 24 52.4	
	comp=Z,224nm,2.0s						
MDUB	Mudurnu	42.35	299	P	P	22 24 50.3	+0.6
USA0B	Ussuriysk Arra	42.35	55	P	P	22 24 50.0	+0.5
USA0B				pmax	pmax		
	comp=Z,168nm,1.9s						
USA0B	Ussuriysk Arra	42.35	55	P	P	22 24 50.0	+0.5
USA0B				IAmb	IAmb	22 24 51.7	
	comp=Z,168nm,1.9s						
USRK	Ussuriysk Ar.	42.35	55	P	P	22 24 50.4	+0.9
	comp=Z,15nm,0.7s,baz=259,slow=7.3,SNR=29						
USRK				LR	LR	22 44 36.3	
	comp=Z,679nm,18.6s,baz=256,slow=39						
USRK	Ussuriysk Ar.	42.35	55	P	P	22 24 50.2	+0.7
USRK	Ussuriysk Ar.	42.35	55	P	P	22 24 50.1	+0.7
KLR	Kul'dur	42.72	48	P	P	22 24 53.2	+0.8
	comp=Z,28nm,0.8s,baz=277,slow=9.3,SNR=59						
KLR	Kul'dur	42.72	48c	iP	P	22 24 53.1	+0.7
KLR				pmax	pmax		
	comp=Z,26nm,0.9s						
BORA	Eskisehir	42.94	298	P	P	22 24 54.5	0.0
ISP	Isparta	43.00	295	P	P	22 24 54.8	-0.2
ISP				pmax	pmax		
	comp=Z,20nm,0.7s						
ISP	Isparta	43.00	295	P	P	22 24 54.8	-0.2
PURM	Purcari	43.51	308	⇓P	P	22 24 59.7	+0.9
JURR	Jurilovca	44.10	305	⇓P	P	22 25 04.3	+0.7
TLCR		44.16	306	⇓P	P	22 25 04.8	+0.6
MILM	Milestii Mici	44.27	309	⇓P	P	22 25 05.0	+0.1
MILM	Milestii Mici	44.27	309	eP	P	22 25 05.0	+0.1
MILM				pmax	pmax		
	comp=Z,70nm,1.0s						
KIS	Kishinev	44.27	309	eP	P	22 25 05.0	+0.1
	comp=Z,80nm,1.2s						
KIS				eLR	LR	22 46 44.0	
	comp=Z,300nm,16.0s						
KIS	Kishinev	44.27	309	eP	P	22 25 05.0	+0.1
KIS				pmax	pmax		
	comp=Z,80nm,1.2s						
MANR	Mangalia	44.29	304	⇑P	P	22 25 06.3	+1.2
JMN	Monobe	44.38	70	P	P	22 25 06.3	+0.2
JMN				IAmb	IAmb	22 25 14.9	
	comp=Z,63nm,0.9s						
AKASG	Malin Array Be	44.41	314	P	P	22 25 05.4	-0.6
	comp=Z,3.7nm,0.5s,baz=79,slow=6.9,SNR=29						
AKASG				LR	LR	22 47 02.5	
	comp=Z,666nm,18.7s,baz=90,slow=41						
AKBB	Malin Array Si	44.41	314c	iP	P	22 25 05.7	-0.3
MFTR	Murfatlar	44.41	305	⇓P	P	22 25 06.7	+0.6
TIRR	Tirgusor	44.43	305	⇑P	P	22 25 06.2	0.0
TIRR	Tirgusor	44.43	305	P	P	22 25 05.8	-0.5
TIRR				pmax	pmax		
	comp=Z,50nm,1.0s						
TIRR	Tirgusor	44.43	305	P	P	22 25 05.8	-0.5
TIRR				IAmb	IAmb	22 25 14.8	
	comp=Z,50nm,1.0s						
TPGR	Topolog	44.43	306	⇑P	P	22 25 07.3	+1.0
CFR	Carcaliu	44.64	306	⇓P	P	22 25 08.3	+0.3
SORM	Soroca	44.67	310	⇓P	P	22 25 08.2	0.0
VLDR	Vladesti	44.71	307	⇑P	P	22 25 09.9	+1.4
TATR	Tatarca	44.72	307	⇑P	P	22 25 10.4	+1.9
HARR	Harsova	44.78	305	⇓P	P	22 25 09.8	+0.8
ICOR	Ion Corvin	44.86	304	⇑P	P	22 25 10.8	+1.1
BALB	Balikesir	44.93	298	P	P	22 25 10.2	-0.1
GHRR		45.19	307	⇑P	P	22 25 13.6	+1.3
YAK	Yakutsk	45.21	30	P	P	22 25 12.2	0.0
	comp=Z,5.1nm,0.4s,baz=96,slow=1.7,SNR=9.8						
YAK	Yakutsk	45.21	30	eP	P	22 25 10.9	-1.3
YAK				e*PP	pP	22 25 16.0	-2.0
YAK				e		22 26 52.1	
YAK				eS	S	22 31 50.9	-0.4
YAK				e*SS	sS	22 32 00.8	-0.1
YAK				e		22 35 06.0	
YAK				pmax	pmax		
	comp=Z,28nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,385nm,4.1s						
YAK				pmax	pmax		
	comp=N,156nm,4.1s						
YAK				pmax	pmax		
	comp=E,234nm,4.1s						
YAK				smax	smax		
	comp=E,505nm,5.8s						
YAK				MLR	MLR		
	comp=Z,796nm,16.0s						
YAK				MLR	MLR		
	comp=E,626nm,23.0s						
YAK				MLR	MLR		
	comp=N,241nm,21.0s						
YAK	Yakutsk	45.21	30	P	P	22 25 12.3	0.0
YAK				IAmb	IAmb	22 25 25.0	
	comp=Z,32nm,0.7s						
BKB	Balikpapan	45.36	126	P	P	22 25 14.4	+0.3
JWT	Wachi	45.39	68	P	P	22 25 14.9	+0.8
JWT				IAmb	IAmb	22 25 16.4	
	comp=Z,271nm,1.8s						
ODBI	Odobesti	45.42	307	⇓P	P	22 25 16.9	+2.7
BBKI	Banjar Baru	45.53	130	P	P	22 25 25.5	+10
VRI	Vrincioaia	45.66	307	⇓P	P	22 25 18.0	+2.0
BISRR	Bisoca	45.66	306	⇓P	P	22 25 18.0	+1.9
PLOR	Plostina	45.71	307	⇓P	P	22 25 18.2	+1.7
TESR	Tescani	45.73	308	⇑P	P	22 25 16.8	+0.2
ISR	Istrita	45.77	306	⇓P	P	22 25 19.8	+2.8
RAZG	Razgrad	45.80	304	⇓P	P	22 25 18.1	+0.9
XMI	Christmas Isla	45.81	146	P	P	22 25 18.4	+0.9
XMIS	Christmas Isla	45.82	146	P	P	22 25 17.9	+0.3
XMIS	Christmas Isla	45.82	146	P	P	22 25 18.4	+0.8
MNK	Minsk	45.85	319	iP	P	22 25 17.0	-0.4
MNK				i		22 26 53.5	
MNK				i		22 27 04.8	
MNK				iPPP	PPP	22 27 45.3	
MNK				iS	S	22 32 01.9	+1.1
MNK				i		22 35 11.1	
MNK				iSSS	SSS	22 36 23.4	
MNK				pmax	pmax		
	comp=Z,24nm,1.0s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.1s						
MNK				pmax	pmax		
	comp=N,15nm,0.9s						
MNK				MLR	MLR		
	comp=Z,984nm,18.0s						
MNK				MLR	MLR		
	comp=E,145nm,18.0s						
MNK				MLR	MLR		
	comp=N,305nm,15.0s						
MNK	Minsk	45.85	319	iP	P	22 25 17.0	-0.4
	comp=E,4.0nm,1.1s						
MNK				iP	P	22 25 17.0	-0.4
	comp=N,15nm,0.9s						
MNK				iP	P	22 25 17.0	-0.4
	comp=Z,24nm,1.0s,baz=279						
MNK				iPcP	PcP	22 26 53.5	-1.0
MNK				iPP	PP	22 27 04.9	+0.1
MNK				iPPP	PPP	22 27 45.4	
MNK				iS	S	22 32 01.9	+1.1
MNK				iSS	SS	22 35 29.1	+4.1
MNK				iSSS	SSS	22 36 23.5	
MNK				iLQ	LQ	22 41 29.9	
MNK				iLR	LR	22 43 38.1	
MNK				iLRM	MLR	22 46 23.7	
	comp=Z,984nm,17.6s						
MNK				iLRM	MLR	22 46 26.4	
	comp=E,145nm,17.6s						
MNK				iLRM	MLR	22 46 29.1	
	comp=N,305nm,15.4s						
GRNR	Gornyy	45.91	46	⇓iP	P	22 25 13.0	-5.0
GRNR				eS	S	22 31 56.6	-5.1
GRNR				pmax	pmax		
	comp=N,20nm,1.0s						
GRNR				pmax	pmax		
	comp=E,20nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,80nm,1.1s						
GRNR				smax	smax		
	comp=N,3.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,1µm,11.0s						
GRNR				MLR	MLR		
	comp=N,340nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,11.0s						
NEHR	Nehoiu	45.95	306	⇑P	P	22 25 20.8	+2.4
COVR	Voineasa-Covas	46.02	307	⇑P	P	22 25 20.2	+1.2
PRAR	RASCA	46.05	309	⇓P	P	22 25 19.7	+0.5
MLR	Muntele Rosu	46.20	306	⇓P	P	22 25 23.0	+2.5
MLR	Muntele Rosu	46.20	306	P	P	22 25 22.1	+1.6
MLR				pmax	pmax		
	comp=Z,120nm,1.0s						
MLR	Muntele Rosu	46.20	306	P	P	22 25 22.1	+1.6
ALN	Alexandroupoli	46.25	300	P	P	22 25 21.0	+0.3
ALN				pmax	pmax		
	comp=Z,29nm,1.1s						
ALN	Alexandroupoli	46.25	300	P	P	22 25 21.0	+0.3
ALN				IAmb	IAmb	22 25 22.7	
	comp=Z,29nm,1.1s						
KBKI	Kotabaru	46.31	129	P	P	22 25 25.0	+3.5
OZUR		46.32	307	⇑P	P	22 25 21.1	-0.2
MPSI	Mapaga	46.46	121	P	P	22 25 24.8	+2.1
	comp=Z,37nm,1.4s						
NACGM	Naroch	46.56	319	iP	P	22 25 22.6	-0.3
DOPR	Dopca	46.59	307	⇑P	P	22 25 24.7	+1.3
TOLI2	Tolitoli	46.62	120	P	P	22 25 24.3	+0.4
TOLI2				IAmb	IAmb	22 25 25.8	
	comp=Z,36nm,1.4s						
BURAR	Bucovina Array	46.75	309	⇑P	P	22 25 25.3	+0.6
VOIR		46.83	306	⇑P	P	22 25 26.3	+0.9
HUMR	Humele	46.88	305	⇑P	P	22 25 26.8	+1.1
IIGN	Ignalina	46.95	320	eP	P	22 25 26.8	+0.7
IIGN				eP	S	22 32 23.4	+6.9
ISAL	Salakas	47.05	320	eP	P	22 25 27.5	+0.7
ARR	Arges	47.12	306	⇓P	P	22 25 28.6	+1.0
SANT	Santorini	47.18	294	P	P	22 25 28.8	+0.7
MDB	Medias	47.29	307	⇓P	P	22 25 30.8	+1.9
VSU	Vasula	47.32	324	eP	P	22 25 29.2	+0.3
VSU	Vasula	47.32	324	⇓eP	P	22 25 29.0	+0.2
VSU				pmax	pmax		
	comp=Z,57nm,1.1s						
MAJO	Matsushiro	47.46	66	P	P	22 25 30.6	+0.2
MAJO				pmax	pmax		
	comp=Z,110nm,1.9s						
MAJO	Matsushiro	47.46	66	P	P	22 25 30.6	+0.2
MAJO				IAmb	IAmb	22 25 37.0	
	comp=Z,110nm,1.9s						
MAT	Matsushiro	47.46	66	P	P	22 25 30.0	-0.4
MAT				S	S	22 32 21.2	-3.1
MJAR	Matsushiro Arr	47.46	66	P	P	22 25 31.1	+0.7
	comp=Z,4.0nm,0.8s,baz=278,slow=8.5,SNR=2.6						
MJAR				PcP	PcP	22 27 01.1	+0.5
	comp=Z,7.4nm,0.7s,baz=287,slow=2.7,SNR=4.5						
MJAR				LR	LR	22 47 19.7	
	comp=Z,1µm,18.4s,baz=280,slow=38						
MJAR	Matsushiro Arr	47.46	66	P	P	22 25 29.7	-0.7
MJAR				IAmb	IAmb	22 25 32.3	
	comp=Z,67nm,1.9s						
LVV	L'vov	47.64	312	eP	P	22 25 31.0	-0.5
LOT	Lotru	47.73	306	⇓P	P	22 25 33.9	+1.5
APA	Apatity	47.73	337	⇓iP	P	22 25 16.4	-16
APA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,3µm,13.0s						
MRSI	Marisa	47.91	119	P	P	22 25 35.4	+1.4
	comp=Z,1µmcomp=Z,75nm,0.8s						
BMR	Baia Mare	47.91	309	⇓P	P	22 25 35.6	+2.0
BLJI	Banyuglugur	47.98	135	P	P	22 25 42.5	+8.0
VTS	Vitosha	48.23	303	⇑P	P	22 25 37.9	+1.5
VTS	Vitosha	48.23	303	IAmb	IAmb	22 25 43.9	
	comp=Z,45nm,1.0s						
PABE	Paberze	48.24	320	eP	P	22 25 36.7	+0.7
PABE	Paberze	48.24	320	IAmb	IAmb	22 26 11.2	
	comp=Z,45nm,0.9s						
PUNG	Punghina	48.36	305	⇓P	P	22 25 38.7	+1.6
FIA1	FINESS Array S	48.39	328	P	P	22 25 37.3	+0.2
FINES	FINESS Array B	48.39	328	P	P	22 25 37.1	+0.1
	comp=Z,24nm,0.5s,baz=109,slow=8.1,SNR=230						
FINES				LR	LR	22 47 43.1	
	comp=Z,2µm,19.6s,baz=104,slow=38						
GZR	Gura Zlata	48.43	306	⇓P	P	22 25 38.6	+0.9
DRGR		48.45	308	⇑P	P	22 25 40.2	+2.3
KWP	Kalwaria Pacla	48.48	312	eP	P	22 25 39.4	+1.3
SUW	Suwalki	48.51	318	eP	P	22 25 38.8	+0.6
SUW	Suwalki	48.51	318	IAmb	IAmb	22 26 15.7	
	comp=Z,58nm,1.2s						
TRPA	Tarpa	48.56	310	⇑P	P	22 25 39.9	+1.2
TRPA	Tarpa	48.56	310	eP	P	22 25 38.9	+0.2
ZAPS	Zavoj	48.63	303	eP	P	22 25 40.3	+1.0
TTSI	Tana Toraja	48.69	125	P	P	22 25 42.2	+2.2
	comp=Z,981nmcomp=Z,36nm,1.2s						
HERR	Herculane	48.70	306	⇓P	P	22 25 40.0	+0.2
UZH	Uzhgorod	48.73	311d	iP	P	22 25 39.5	-0.5
UZH				e		22 25 44.0	
KOLS	Kolonicke sedl	48.75	311	eP	P	22 25 41.5	+1.4
KOLS	Kolonicke sedl	48.75	311	eP	P	22 25 41.5	+1.4
BOSS	Bosilegrad	48.80	302	eP	P	22 25 41.3	+0.7
VAY	Valandovo	48.83	301	iP	P	22 25 41.0	+0.2
MTSE	Matsula	48.87	324	eP	P	22 25 41.0	+0.3
ZAGS	Zajecar	48.89	304	eP	P	22 25 41.6	+0.4
LTVH	Ltavrtes, Hu	48.99	309	eP	P	22 25 32.2	-10
JYT	Yasato	49.09	66	P	P	22 25 42.1	-0.8
PRVS	Prvonek	49.09	302	eP	P	22 25 43.2	+0.3
SIRR	Siria	49.18	307	⇓P	P	22 25 45.1	+1.6
BZS	Buzias	49.23	307	⇓P	P	22 25 45.0	+1.1
JEW	Eniwo	49.25	57	P	P	22 25 44.1	+0.1
BARS	Barje	49.26	303	eP	P	22 25 41.8	-2.3
BARS	Barje	49.26	303	eP	P	22 25 44.3	+0.2
AGG	Agios Georgios	49.27	298	IAmb	IAmb	22 25 44.8	
	comp=Z,51nm,0.8s						
BOVS	Bovan	49.28	304	⇓P	P	22 25 44.4	+0.1
BOVS	Bovan	49.28	304	eP	P	22 25 44.5	+0.3
JMM	Marumori	49.31	64	P	P	22 25 43.9	-0.6
KMSI	Cibinong	49.41	118	P	P	22 25 53.7	+8.1
TIXI	Tiksi	49.50	18	P	P	22 25 45.4	-0.1
	comp=Z,22nm,0.7s,baz=238,slow=4.7,SNR=47						
TIXI	Tiksi	49.50	18c	iP	P	22 25 45.2	-0.3
TIXI				pmax	pmax		
	comp=Z,34nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,1µm,16.0s						
TIXI	Tiksi	49.50	18	P	P	22 25 45.3	-0.1
LUWI	Luwuk	49.52	120	P	P	22 25 47.7	+1.3
SKO	Skopje	49.61	302	iP	P	22 25 47.0	+0.2
SELS	Selova	49.74	303	eP	P	22 25 48.1	+0.3
FNA	Florina	49.78	300	IAmb	IAmb	22 25 56.7	
	comp=Z,99nm,1.8s						
ITM	Ithomi	49.86	296	IAmb	IAmb	22 26 16.5	
	comp=Z,31nm,0.9s						
YSS	Yuzh-Sakhalins	49.94	52	eP	P	22 25 48.8	-0.4
YSS				e		22 27 47.5	
YSS				pmax	pmax		
	comp=Z,40nm,1.4s						
YSS				pmax	pmax		
	comp=Z,700nm,4.3s						
YSS				MLR	MLR		
	comp=Z,2µm,13.0s						
GRUS	Gruza	49.98	304	eP	P	22 25 50.6	+1.0
TRUS	Trudelj	50.17	305	eP	P	22 25 51.4	+0.3
KBN	Korca	50.25	300	IAmb	IAmb	22 25 58.1	
	comp=Z,56nm,1.1s						
PSZ	Piszkesteto	50.34	310	⇓P	P	22 25 53.8	+1.4
PSZ	Piszkesteto	50.34	310	eP	P	22 25 52.7	+0.3
PSZ	Piszkesteto	50.34	310	P	P	22 25 53.1	+0.7
PSZ				pmax	pmax		
	comp=Z,50nm,1.5s						
PSZ	Piszkesteto	50.34	310	P	P	22 25 53.1	+0.7
PSZ				IAmb	IAmb	22 26 01.3	
	comp=Z,50nm,1.5s						
OJC	Ojcow	50.38	313	P	P	22 25 53.3	+0.8
OJC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
OJC	Ojcow	50.38	313	P	P	22 25 53.3	+0.8
IVAS	Ivanjica	50.41	304	eP	P	22 25 53.1	+0.2
DIVS	Divibare	50.48	305	⇑iP	P	22 25 53.6	+0.1
DIVS	Divibare	50.48	305	IAmb	IAmb	22 26 04.2	
	comp=Z,110nm,2.0s						
DIVS	Divibare	50.48	305	eP	P	22 25 53.7	+0.2
FRGS	Fruska Gora	50.53	306	⇑P	P	22 25 53.9	+0.1
FRGS	Fruska Gora	50.53	306	⇑iP	P	22 25 52.9	-0.9
FRGS	Fruska Gora	50.53	306	eP	P	22 25 54.4	+0.6
SJES	Sjenica	50.57	304	eP	P	22 25 55.0	+0.8
LANS	Liptovska Anna	50.60	311	eP	P	22 25 55.7	+1.5
LANS	Liptovska Anna	50.60	311	eP	P	22 25 55.7	+1.5
LODK	Lodwar	50.83	249	P	P	22 25 58.5	+2.0
	SNR=10						
LODK	Lodwar	50.83	249	P	P	22 25 58.1	+1.6
TIR	Tirane	50.85	301	P	P	22 25 55.2	-1.0
TIR				pmax	pmax		
	comp=Z,39nm,0.8s						
TIR	Tirane	50.85	301	P	P	22 25 55.2	-1.0
TIR				IAmb	IAmb	22 26 02.9	
	comp=Z,39nm,0.8s						
BBLS	Lazići	50.92	304	⇑iP	P	22 25 56.8	0.0
BBLS	Lazići	50.92	304	eP	P	22 25 57.7	+0.9
RUDO	Rudo	50.97	304	⇑iP	P	22 25 57.1	0.0
VYHS	Vyhne	51.03	310	eP	P	22 25 58.0	+0.5
VYHS	Vyhne	51.03	310	eP	P	22 25 58.0	+0.5
PDG	Podgorica	51.18	303	⇑P	P	22 25 58.4	-0.2
PDG	Podgorica	51.18	303	⇑iP	P	22 25 57.2	-1.4
PDG	Podgorica	51.18	303	IAmb	IAmb	22 26 00.0	
	comp=Z,40nm,1.0s						
ARA0	ARCESS Array S	51.19	338	eP	P	22 25 58.5	+0.1
ARCES	ARCESS Array B	51.19	338	P	P	22 25 58.1	-0.2
	comp=Z,5.7nm,0.4s,baz=94,slow=7.6,SNR=76						
ARCES				LR	LR	22 48 23.9	
	comp=Z,1µm,19.5s,baz=120,slow=37						
ARCES	ARCESS Array B	51.19	338	P	P	22 25 58.3	-0.1
ARCES				pmax	pmax		
	comp=Z,223nm,2.0s						
ARCES	ARCESS Array B	51.19	338	P	P	22 25 58.3	-0.1
DRME	Dracevica, Mon	51.26	302	⇑iP	P	22 25 58.7	-0.6
KOLL	Kolacno	51.32	311	eP	P	22 26 00.2	+0.6
UPM	Unac-Piva	51.35	304	⇑iP	P	22 26 00.1	-0.1
SRO	Srobarova	51.41	310	eP	P	22 26 01.7	+1.4
SRO	Srobarova	51.41	310	eP	P	22 26 01.7	+1.4
BRY	Bratogost	51.65	303	⇑iP	P	22 26 02.1	-0.3
KOVH	Kovagotottos	51.66	307	eP	P	22 26 01.5	-0.7
HCY	Herceg Novi	51.74	303	⇑iP	P	22 26 02.1	-0.7
TIH	Tihany	51.75	308	eP	P	22 26 04.4	+1.6
KTK1	Kautokeino	51.77	337	eP	P	22 26 02.5	-0.1
JAVC	Velka Javorina	51.79	311	eP	P	22 26 04.5	+1.3
TREB	Trebinje	51.81	303	⇑iP	P	22 26 01.9	-1.5
MORC	Moravsky Berou	51.84	312	⇓P	P	22 26 04.4	+0.8
MORC	Moravsky Berou	51.84	312	eP	P	22 26 04.1	+0.6
MORC	Moravsky Berou	51.84	312	P	P	22 26 03.9	+0.4
MORC				pmax	pmax		
	comp=Z,15nm,0.9s						
MORC	Moravsky Berou	51.84	312	P	P	22 26 03.9	+0.4
MPLH	Magyarpolny	51.97	309	eP	P	22 26 04.6	+0.1
GKP	Gorka Klasztor	51.99	317	eP	P	22 26 04.7	+0.2
KMBO	Kilima Mbogo	52.07	242	P	P	22 26 07.0	+1.0
	comp=Z,7.2nm,0.8s,baz=37,slow=10,SNR=19						
KMBO	Kilima Mbogo	52.07	242	iP	P	22 26 07.4	+1.4
	SNR=9.0						
KMBO	Kilima Mbogo	52.07	242	P	P	22 26 06.9	+1.0
KMBO				pmax	pmax		
	comp=Z,33nm,1.6s						
KMBO	Kilima Mbogo	52.07	242	P	P	22 26 06.9	+1.0
MODS	Modra-Piesok	52.07	310	eP	P	22 26 05.6	+0.3
MODS	Modra-Piesok	52.07	310	eP	P	22 26 05.6	+0.3
SCTE	Santa Cesarea	52.08	300	P	P	22 26 03.6	-1.8

HAMF	Hammerfest	52.17	339	*e*P	P	22 26 06.2	+0.5
UPP	Uppsala	52.18	325	*e*P	P	22 26 05.5	-0.3
KIBK	Kibwezi	52.23	241	P	P	22 26 09.8	+2.9
	SNR=5.5						
KIBK	Kibwezi	52.23	241	P	P	22 26 08.2	+1.3
STON	Ston	52.27	303⇑	*i*P	P	22 26 06.5	-0.2
STON	Ston	52.27	303	P	P	22 26 05.6	-1.1
KRLC	Kraliky	52.32	313	*e*P	P	22 26 07.3	+0.2
KRLC				*e*		22 26 16.0	
KRLC				MLR	MLR		
	comp=Z,600nm,18.6s						
KRLC	Kraliky	52.32	313	*e*P	P	22 26 07.3	+0.2
KRLC				*e*x	x	22 26 16.0	
KRLC				AMS	AMS	22 50 40.0	
	comp=Z,600nm,18.6s						
YUK	Yuzh-Kuril'sk	52.33	55	*e*P	P	22 26 07.5	+0.3
YUK				*e*		22 28 05.2	
YUK				*e*S	S	22 33 29.4	-2.7
YUK				MLR	MLR		
	comp=Z,1µm,14.0s						
BLY	Banja Luka	52.42	306⇑	*i*P	P	22 26 08.0	+0.1
VRAC	Vranov	52.48	312	*e*P	P	22 26 08.4	+0.2
MGRS	Mrkonjic Grad	52.53	305	*e*P	P	22 26 10.2	+1.4
SOP	Sopron	52.60	310	*e*P	P	22 26 09.8	+0.6
RICI	Ricice	52.60	304	P	P	22 26 07.2	-2.1
DPC	Dobruska-Polom	52.60	313	*e*P	P	22 26 10.3	+1.1
DPC				*e*		22 26 17.3	
DPC				MLR	MLR		
	comp=Z,1µm,16.1s						
DPC	Dobruska-Polom	52.60	313	*e*P	P	22 26 10.3	+1.1
DPC				*e*x	x	22 26 17.3	
DPC				AMS	AMS	22 50 50.0	
	comp=Z,1µm,16.1s						
KRUC	Moravsky	52.62	311	*e*P	P	22 26 09.4	+0.1
SANI	Sanana	52.62	118	P	P	22 26 08.9	-0.8
	comp=Z,47nm,1.1s						
SANI	Sanana	52.62	118	P	P	22 26 09.0	-0.8
MOSL	Moslavina	52.64	307	P	P	22 26 08.8	-0.8
OSTC	Ostas	52.66	313	*e*P	P	22 26 10.1	+0.5
MAKA	Makarska	52.71	304	P	P	22 26 08.9	-1.1
CHVC	Chvalec	52.77	313	*e*P	P	22 26 10.9	+0.5
CHVC				AMS	AMS	22 50 50.0	
	comp=Z,1µm,19.9s						
UPC	Upice	52.80	313	*e*P	P	22 26 11.7	+1.1
UPC				MLR	MLR		
	comp=Z,1µm,17.8s						
UPC	Upice	52.80	313	*e*P	P	22 26 11.7	+1.1
UPC				AMS	AMS	22 50 50.0	
	comp=Z,1µm,17.8s						
LSTV	Lastovo	52.87	303	P	P	22 26 10.5	-0.7
JETT	Jettan, Norway	52.90	337	*e*P	P	22 26 12.7	+1.7
LBMI	Labuha	52.92	116	P	P	22 26 17.1	+5.2
CONA	Conrad Observa	53.05	310	*e*P	P	22 26 13.5	+0.9
	comp=Z,39nm,1.3s,SNR=16						
KIJV	Kijevo	53.06	305	P	P	22 26 12.2	-0.5
HVAR	Hvar	53.14	304	P	P	22 26 12.2	-1.0
ARSA	Arzberg	53.33	309	*e*P	P	22 26 15.4	+0.8
	comp=Z,26nm,1.5s,SNR=7.6						
TRO	Tromso	53.42	337	*e*P	P	22 26 15.0	+0.2
CRES	Cresnjev	53.52	307⇑	*i*P	P	22 26 16.0	0.0
TIP	Timpagrande	53.53	299	P	P	22 26 15.7	-0.6
TIP				IAmb	IAmb	22 26 24.2	
	comp=Z,41nm,1.3s						
MORI	Morici	53.58	305	P	P	22 26 15.8	-0.6
ZIRJ	Zirje	53.66	305	P	P	22 26 16.3	-0.7
BOJS	Bojanci	53.70	307	*e*P	P	22 26 17.6	+0.3
PVCC	Panska Ves	53.72	313	*e*P	P	22 26 18.1	+0.8
PVCC				MLR	MLR		
	comp=Z,900nm,15.0s						
PVCC	Panska Ves	53.72	313	*e*P	P	22 26 18.1	+0.8
PVCC				AMS	AMS	22 51 10.0	
	comp=Z,900nm,15.0s						
SOKA	Soboth	53.72	308	*e*P	P	22 26 18.6	+1.0
	comp=Z,43nm,1.4s,SNR=22						
PRU	Pruhonice	53.77	313	*e*P	P	22 26 18.4	+0.7
PRU				*e*		22 26 25.7	
PRU				MLR	MLR		
	comp=Z,900nm,19.3s						
PRU	Pruhonice	53.77	313	*e*P	P	22 26 18.4	+0.7
PRU				*e*x	x	22 26 25.7	
PRU				AMS	AMS	22 51 20.0	
	comp=Z,900nm,19.3s						
SGRT	San Giovanni R	53.86	302	P	P	22 26 18.6	0.0
GBRS	Gornja Briga	54.01	307	*e*P	P	22 26 20.2	+0.6
CKRC	Cesky Krumlov	54.01	311	*e*P	P	22 26 20.8	+1.3
CKRC				*e*x	x	22 26 27.8	
DUGI	Dugi Otok	54.03	305	P	P	22 26 18.9	-0.8
OBKA	Obir	54.07	308	*e*P	P	22 26 21.2	+1.1
	comp=Z,32nm,1.2s,SNR=13						
BRG	Berggiesshubel	54.09	314	*e*P	P	22 26 20.8	+0.7
	comp=Z,21nm,1.1s,baz=85,slow=7.0						
BRG	Berggiesshubel	54.09	314⇑	*i*P	P	22 26 20.8	+0.7
BRG				Amp		22 26 22.6	
	comp=Z,11nm,0.6s						
BRG	Berggiesshubel	54.09	314	P	P	22 26 27.6	+7.5
BRG				Amp		22 26 29.5	
	comp=Z,15nm,0.9s						
MOA	Molln	54.12	310	*e*P	P	22 26 20.8	+0.4
	comp=Z,25nm,1.3s,SNR=5.9						
LJU	Ljubljana	54.14	308	*e*P	P	22 26 21.4	+0.9
LJU	Ljubljana	54.14	308⇑	*i*P	P	22 26 19.8	-0.7
CEY	Cerknica	54.25	307	*e*P	P	22 26 21.7	+0.4
CEY	Cerknica	54.25	307⇑	*i*P	P	22 26 22.0	+0.6
FAUS	Fauske	54.25	334	*e*P	P	22 26 20.9	-0.1
RIY	Rijeka	54.26	307⇑	*i*P	P	22 26 19.4	-2.0
STEI	Steigen	54.36	335	*e*P	P	22 26 21.7	0.0
CEL	Celeste	54.37	298	P	P	22 26 23.0	+0.6
MOR8	Moi Rana	54.40	333	*e*P	P	22 26 21.6	-0.5
GEC2	GERESS Array S	54.41	311	*e*P	P	22 26 22.6	0.0
	baz=85,slow=7.0						
GERES	GERESS Array B	54.41	311	P	P	22 26 22.7	+0.2
	comp=Z,2.7nm,0.5s,baz=86,slow=7.0,SNR=40						
GERES				LR	LR	22 52 57.1	
	comp=Z,375nm,20.8s,baz=76,slow=40						
FBE	Freiberg	54.46	314	*e*P	P	22 26 23.5	+0.7
	comp=Z,42nm,1.2s,baz=85,slow=7.0						
KHC	Kasperske Hory	54.46	312	*e*P	P	22 26 23.0	+0.1
KHC				*e*		22 26 30.4	
KHC				MLR	MLR		
	comp=Z,700nm,16.2s						
KHC	Kasperske Hory	54.46	312	*e*P	P	22 26 23.0	+0.1
KHC				*e*x	x	22 26 30.4	
KHC				AMS	AMS	22 52 10.0	
	comp=Z,700nm,16.2s						
CLL	Collm	54.65	314	*i* P	P	22 26 23.7	-0.4
CLL				*i*		22 26 31.9	
CLL				*e*S	S	22 34 05.0	+1.6
CLL				pmax	pmax		
	comp=Z,19nm,1.3s						
CLL	Collm	54.65	314	*i* P	P	22 26 23.7	-0.4
	comp=Z,19nm,1.3s						
CLL				*i* sP	sP	22 26 31.9	-0.4
CLL				*e*PP	PP	22 28 29.0	+2.5
CLL				*e*		22 32 50.0	
CLL				*e*S	S	22 34 05.0	+1.6
CLL				*e*SS	SS	22 37 48.0	+2.1
MA2	Magadan	54.74	36*c*	*i*P	P	22 26 24.8	+0.1
MA2				pmax	pmax		
	comp=Z,21nm,1.3s						
MA2	Magadan	54.74	36	P	P	22 26 25.0	+0.3
MA2				IAmb	IAmb	22 26 25.6	
	comp=Z,27nm,1.0s						
BRJN	Brijuni	54.83	306	P	P	22 26 25.1	-0.4
KBA	Koelnbreinsper	54.83	309	*i* P	P	22 26 25.9	+0.2
	comp=Z,5.8nm,0.5s,SNR=5.1						
KONS	Konsvik	54.97	333	*e*P	P	22 26 26.2	0.0
STOK	Stokkvaagen	54.99	333	*e*P	P	22 26 26.4	+0.1
LOF	Lofoten	55.02	335	*e*P	P	22 26 26.3	-0.3
RJOB	Jochberg	55.12	310	*e*P	P	22 26 27.5	-0.2
	comp=Z,22nm,1.4s,baz=85,slow=7.0						
WERN	Wernitzgruen	55.13	313	*e*P	P	22 26 28.1	+0.4
	comp=Z,19nm,1.3s,baz=85,slow=7.0						
ZOU	Zoufplan	55.15	308	IAmb	IAmb	22 26 36.8	
	comp=Z,70nm,1.7s						
GUNZ	Gunzen	55.15	313	*e*P	P	22 26 28.4	+0.6
	comp=Z,21nm,1.2s,baz=85,slow=7.0						
WERD	Werda	55.16	313	*e*P	P	22 26 28.0	+0.1
	comp=Z,17nm,1.1s,baz=85,slow=7.0						
NSS	Namsos	55.25	330	*e*P	P	22 26 29.1	+0.9
PLN	Plauen	55.25	313	*e*P	P	22 26 28.6	0.0
	comp=Z,29nm,1.5s,baz=85,slow=7.0						
NC602	NORSAR Array S	55.26	326	*e*P	P	22 26 28.1	-0.2
ROTZ	Rotzenmuhle	55.29	312	*e*P	P	22 26 29.3	+0.5
	comp=Z,8.9nm,1.2s,baz=85,slow=7.0						
MANZ	Manzenberg	55.33	313	*e*P	P	22 26 29.8	+0.6
	comp=Z,12nm,1.4s,baz=85,slow=7.0						
NC303	NORSAR Array S	55.35	326	IAmb	IAmb	22 26 30.1	
	comp=Z,62nm,1.1s						
STAL	STALIGIAL	55.37	308	IAmb	IAmb	22 26 31.0	
	comp=Z,62nm,1.2s						
NB2	NORSAR Subarra	55.42	326	P	P	22 26 29.0	-0.6
	comp=Z,39nm,0.8s,baz=91,slow=7.4						
NB2	NORSAR Subarra	55.42	326	P	P	22 26 29.0	-0.6
	baz=91,slow=7.4						
NOA	NORSAR Array B	55.42	326	P	P	22 26 29.2	-0.4
	comp=Z,27nm,0.8s,baz=91,slow=7.1,SNR=61						
NOA				LR	LR	22 51 29.3	
	comp=Z,1µm,18.9s,baz=90,slow=37						
ABTA	Abfaltersbach	55.44	309	*e*P	P	22 26 29.5	-0.6
	comp=Z,14nm,1.1s,SNR=6.8						
AQU	L'Aquila	55.48	303⇑	*i*P	P	22 26 30.4	0.0
MOX	Moxa	55.58	314	*e*L	L	22 52 53.6	
	comp=Z,691nm,19.0s						
NRCA	Norcia	55.61	304	IAmb	IAmb	22 26 44.4	
	comp=Z,40nm,0.7s						
SEY	Seymchan	55.63	32	P	P	22 26 31.6	+0.6
	comp=Z,5.1nm,0.3s,baz=304,slow=7.1,SNR=3.6						
OSL	Oslo	55.65	325	*e*P	P	22 26 31.5	+0.3
FLTG	Flechtingen	55.67	316	*e*P	P	22 26 31.0	-0.5
	comp=Z,40nm,1.2s,baz=85,slow=7.0						
RAFF	Raffo Rosso	55.77	297	P	P	22 26 33.2	+0.7
RAFF				IAmb	IAmb	22 26 45.3	
	comp=Z,37nm,0.8s						
GRA1	Grafenberg Arr	55.93	312	IAmb	IAmb	22 26 44.2	
	comp=Z,54nm,1.3s						
GRF	Grafenberg Arr	55.93	312	*e*P	P	22 26 33.9	+0.5
	comp=Z,48nm,1.3s,baz=85,slow=7.0						
GRF				*e*L	L	22 53 18.6	
	comp=Z,617nm,19.5s						
GRFO	Grafenberg	55.94	312	P	P	22 26 34.0	+0.6
GRFO				pmax	pmax		
	comp=Z,54nm,1.3s						
GRFO	Grafenberg	55.94	312	P	P	22 26 34.0	+0.6
GRFO				IAmb	IAmb	22 26 44.2	
	comp=Z,54nm,1.3s						
TBLU	Trondheim	55.94	329	*e*P	P	22 26 32.5	-0.7
WTTA	Wattenberg	55.96	309	*e*P	P	22 26 33.6	-0.3
	comp=Z,32nm,1.1s,SNR=10						
WATA	Walderalm	55.99	310	*e*P	P	22 26 33.6	-0.5
	comp=Z,26nm,1.2s,SNR=7.7						
RER	Riviere de l'E	56.01	209	P	P	22 26 35.4	+1.1
RER				IAmb	IAmb	22 28 23.9	
	comp=Z,62nm,1.3s						
SWI	Sorong	56.04	113	P	P	22 26 34.3	-0.3
	comp=Z,49nm,1.4s						
SIJI	Sorong	56.05	113	P	P	22 26 33.7	-1.0
	comp=Z,26nm,0.9s,baz=316,slow=7.9,SNR=14						
BSEG	Bad Segeberg	56.09	318	*e*P	P	22 26 35.0	+0.5
	comp=Z,38nm,1.1s,baz=85,slow=7.0						
TEOL	Teolo	56.22	307	IAmb	IAmb	22 26 48.4	
	comp=Z,44nm,0.8s						
KONO	Kongsberg	56.22	324	P	P	22 26 35.8	+0.5
KONO				pmax	pmax		
	comp=Z,38nm,0.9s						
KONO	Kongsberg	56.22	324	*e*P	P	22 26 35.7	+0.3
KONO	Kongsberg	56.22	324	P	P	22 26 35.8	+0.5
KONO				IAmb	IAmb	22 26 36.4	
	comp=Z,38nm,0.9s						
CLZ	Clausthal	56.24	315	*e*P	P	22 26 36.0	+0.4
	comp=Z,56nm,1.2s,baz=85,slow=7.0						
SQTA	Sankt Quirin	56.26	309	*e*P	P	22 26 35.0	-0.9
	comp=Z,32nm,1.2s,SNR=8.8						
MOTA	Moosalm	56.31	310	*e*P	P	22 26 35.8	-0.5
	comp=Z,31nm,1.0s,SNR=11						
NRDL	Niedersach Rie	56.34	316	*e*P	P	22 26 37.1	+0.9
	comp=Z,59nm,1.1s,baz=85,slow=7.0						
CORL	Corleone	56.44	298	P	P	22 26 38.0	+0.6
CORL				IAmb	IAmb	22 26 56.0	
	comp=Z,33nm,1.2s						
DOMB	Dombas	56.47	327	*e*P	P	22 26 36.9	-0.2
SOEI	Soe	56.51	127	P	P	22 26 38.4	+0.3
	comp=Z,76nm,1.0s						
SOEI	Soe	56.51	127	P	P	22 26 36.8	-1.3
SOEI	Soe	56.51	127	P	P	22 26 37.1	-1.0
RETA	Reutte	56.52	310	*i* P	P	22 26 37.5	-0.2
	comp=Z,12nm,0.7s,SNR=9.3						
SPB2	Spitsbergen Ar	56.53	347	P	P	22 26 37.6	+0.3
SPA0	Spitsbergen Ar	56.53	347	*e*P	P	22 26 37.9	+0.6
CLTB	Caltabellotta	56.58	298	P	P	22 26 37.9	-0.5
LATE	Laterza	56.60	304	P	P	22 26 37.9	-0.4
FETA	Feichten	56.61	309	*i* P	P	22 26 38.2	-0.3
	comp=Z,12nm,0.6s,SNR=11						
OSSC	Osservatorio P	56.83	305	P	P	22 26 39.6	-0.3
OSSC				IAmb	IAmb	22 26 52.7	
	comp=Z,22nm,0.8s						
HOMB	Homborsund	56.84	323	*e*P	P	22 26 40.1	+0.5
SKAR	Skarslia	56.85	326	*e*P	P	22 26 39.8	0.0
ZCCA	Zocca	56.87	306	P	P	22 26 41.1	+0.8
ZCCA				IAmb	IAmb	22 26 58.4	
	comp=Z,27nm,0.8s						
MBAR	Mbarara	56.92	248*c*	*e*P	P	22 26 41.4	+0.3
MBAR	Mbarara	56.92	248	P	P	22 26 41.9	+0.8
SALO	Salr	56.97	308	P	P	22 26 41.2	+0.3
DAVA	Damuels	57.14	310	*e*P	P	22 26 42.2	-0.1
	comp=Z,68nm,1.2s,SNR=19						
MOL	Molde	57.17	328	*e*P	P	22 26 42.6	+0.6
CASP	Castiglione de	57.24	304	P	P	22 26 41.8	-1.1
PRMA	PARMA	57.27	307	P	P	22 26 43.6	+0.6
PRMA				IAmb	IAmb	22 27 45.0	
	comp=Z,30nm,0.8s						
VLC	Villacollemand	57.33	306	IAmb	IAmb	22 26 56.9	
	comp=Z,32nm,1.0s						
STU	Stuttgart	57.37	312	IAmb	IAmb	22 26 45.2	
	comp=Z,31nm,1.1s						
AKN	Aaknes	57.44	328	*e*P	P	22 26 44.2	+0.3
SNART	Snartemo	57.52	323	*e*P	P	22 26 45.2	+0.8
TNS	Taunus Mts	57.64	313	*e*P	P	22 26 45.8	+0.1
	comp=Z,27nm,1.4s,baz=85,slow=7.0						
IBBN	Ibbenburen	57.80	316	*e*P	P	22 26 46.8	+0.3
	comp=Z,47nm,1.2s,baz=85,slow=7.0						
BLS5	Blasjo	57.83	324	*e*P	P	22 26 47.5	+0.8
HYA	Hoyanger	57.86	326	*e*P	P	22 26 47.3	+0.4
MSSA	Maissana	57.91	306	P	P	22 26 46.8	-0.9
MSSA				IAmb	IAmb	22 26 56.0	
	comp=Z,33nm,1.1s						
BFO	Black Forest	58.01	311	P	P	22 26 47.5	-0.7
BFO				pmax	pmax		
	comp=Z,25nm,1.5s						
BFO	Black Forest	58.01	311	P	P	22 26 47.5	-0.7
FAKI	Fak Fak	58.05	115	P	P	22 26 48.8	-0.1
	comp=Z,58nm,1.1s						
FAKI	Fak Fak	58.05	115	P	P	22 26 48.3	-0.6
FAKI				IAmb	IAmb	22 26 49.2	
	comp=Z,51nm,1.0s						
FAKI	Fak Fak	58.05	115	P	P	22 26 48.9	0.0
BUG	Bochum--Univer	58.21	315	*e*P	P	22 26 49.7	+0.2
	comp=Z,38nm,1.1s,baz=85,slow=7.0						
BER	Bergen	58.33	325	*e*P	P	22 26 50.4	+0.3
ABPO	Ambohimpanom	58.38	219	P	P	22 26 51.9	+0.7
ABPO				pmax	pmax		
	comp=Z,11nm,1.0s						
ABPO	Ambohimpanom	58.38	219	P	P	22 26 51.9	+0.7
ASK	Askoy	58.39	326	*e*P	P	22 26 50.7	+0.1
KMY	Karmoy	58.47	324	*e*P	P	22 26 51.4	+0.3
SUE	Sulen	58.56	326	*e*P	P	22 26 51.4	-0.3
ECH	Echery	58.80	311	P	P	22 26 53.0	-0.7
ECH				pmax	pmax		
	comp=Z,12nm,1.1s						
ECH	Echery	58.80	311	P	P	22 26 53.0	-0.7
PETK	Petropavlovsk-	59.00	43	P	P	22 26 54.4	-0.6
	comp=Z,5.7nm,0.7s,baz=218,slow=9.3,SNR=4.4						
SENIN	Lac Senin/Sane	59.05	309	IAmb	IAmb	22 26 56.9	
	comp=Z,38nm,0.7s						
BTNL	Ternell	59.05	314	*d*P	P	22 26 55.7	+0.3
VSL	Villasalto	59.06	301	IAmb	IAmb	22 26 56.5	
	comp=Z,35nm,1.2s						
MEM	Membach	59.13	314	*d*P	P	22 26 56.2	+0.3
	comp=Z,12nm,1.0s						
WLF	Walferdange	59.20	313	*d*P	P	22 26 57.4	+1.0
	comp=Z,15nm,1.0s						
WLF	Walferdange	59.20	313	P	P	22 26 56.8	+0.4
WLF				pmax	pmax		
	comp=Z,42nm,1.2s						
WLF	Walferdange	59.20	313	P	P	22 26 56.8	+0.4
WLF				IAmb	IAmb	22 27 06.0	
	comp=Z,42nm,1.2s						
BSTI	Sart Tilman	59.41	314	*d*P	P	22 26 58.6	+0.7
BCLA	Clavier	59.60	314	*d*P	P	22 26 59.4	+0.3
	comp=Z,16nm,1.1s						
RCHB	Rochefort	59.70	314	*d*P	P	22 27 00.2	+0.4
	comp=Z,16nm,1.0s						
BNI	Bardonecchia	59.74	308	IAmb	IAmb	22 27 07.5	
	comp=Z,33nm,1.0s						
BGES	Gesves	59.74	314	*d*P	P	22 27 00.3	+0.1
	comp=Z,15nm,1.1s						
BMRD	Maredsous	59.96	314	*d*P	P	22 27 01.9	+0.3
	comp=Z,16nm,1.1s						
KEST	Kesra	60.06	297	P	P	22 27 03.0	+0.3
	comp=Z,16nm,0.9s,baz=22,slow=2.1,SNR=32						
KEST	Kesra	60.06	297	P	P	22 27 03.1	+0.4
KEST	Kesra	60.06	297	P	P	22 27 03.2	+0.4
KEST				IAmb	IAmb	22 27 09.5	
	comp=Z,29nm,1.1s						
DOU	Dourbes	60.11	314	*d*P	P	22 27 02.9	+0.2
	comp=Z,8.9nm,1.1s						
SNF	Seneffe	60.23	314	*d*P	P	22 27 04.4	+0.9
	comp=Z,19nm,1.0s						
SSB	Saint Sauveur	61.16	308	IAmb	IAmb	22 27 11.0	
	comp=Z,38nm,1.2s						
BILL	Bilibino	61.21	25	*e*P	P	22 27 10.0	+0.1
BILL				*e*		22 27 16.6	
BILL				*e*		22 27 51.2	
BILL				*e*		22 29 27.0	
BILL				*e*PPP	PPP	22 30 48.8	
BILL				*e*S	S	22 35 27.2	-1.5
BILL				*e*SS	SS	22 39 30.5	+2.2
BILL				pmax	pmax		
	comp=Z,42nm,2.5s						
BILL				MLR	MLR		
	comp=Z,776nm,16.0s						
BILL	Bilibino	61.21	25	P	P	22 27 10.8	+0.9
BILL				IAmb	IAmb	22 27 12.0	
	comp=Z,23nm,0.9s						
LRW	Lerwick	61.58	326	*e*P	P	22 27 11.3	-1.2
ELMS	Elmsett, Ipswi	61.93	316	*e*P	P	22 27 14.8	-0.2
WACR	West Acre	62.02	317	*e*P	P	22 27 15.4	-0.2
WACR				IAmb	IAmb	22 27 17.1	
	comp=Z,120nm,0.8s						
CLF	Chambon-Foret	62.05	312	P	P	22 27 16.1	+0.2
CLF				IAmb	IAmb	22 27 27.1	
	comp=Z,35nm,1.2s						
MBWA	Marble Bar	62.15	139	P	P	22 27 16.6	-0.2
NOR	Nord	62.44	351	*i* P	P	22 27 16.9	-1.1
NOR				IAmb	IAmb	22 27 18.0	
	comp=Z,18nm,0.6s						
PSA00	Pilbara Seismi	62.54	140	IAmb	IAmb	22 27 27.0	
	comp=Z,22nm,1.3s						
DRUM	Mains of Drumt	62.88	322	*e*P	P	22 27 21.3	0.0
EDMD	Edmundbyers	63.05	320	*e*P	P	22 27 22.2	-0.3
EDMD				IAmb	IAmb	22 27 23.7	
	comp=Z,50nm,0.5s						
HPK	Haverah Park	63.06	319	*e*P	P	22 27 22.5	0.0
HPK				IAmb	IAmb	22 27 23.2	
	comp=Z,44nm,0.7s						
MCD	Coleburn Disti	63.14	323	*e*P	P	22 27 22.8	-0.2
ESY	Stoneypath	63.17	321	*e*P	P	22 27 23.0	-0.2
BIGH	Upper Bighouse	63.28	324	*e*P	P	22 27 24.1	+0.2
FITZ	Fitzroy Crossi	63.42	132	P	P	22 27 25.0	-0.3
	comp=Z,7.2nm,0.8s,baz=270,slow=6.7						
EBL	Broad Law	63.44	321	*e*P	P	22 27 24.8	-0.2
EDI	Edinburgh	63.48	321	*e*P	P	22 27 25.1	-0.1
ESK	Eskdalemuir	63.63	321	*e*P	P	22 27 25.6	-0.7
ESK				IAmb	IAmb	22 27 26.6	
	comp=Z,43nm,0.7s						
ESK	Eskdalemuir	63.63	321	P	P	22 27 26.2	-0.1
ESK				pmax	pmax		
	comp=Z,49nm,0.9s						
ESK	Eskdalemuir	63.63	321	P	P	22 27 26.2	-0.1
KESW	Keswick, Cumbr	63.75	320	*e*P	P	22 27 27.4	+0.3
KESW				IAmb	IAmb	22 27 29.1	
	comp=Z,82nm,0.9s						
KNRA	Kununurra	63.77	128	P	P	22 27 28.0	+0.3
KNRA	Kununurra	63.77	128	P	P	22 27 27.9	+0.3
INVG	Invergeldie, C	63.83	322	*e*P	P	22 27 26.8	-0.8
HLM1	Long Mynd	64.14	317	*e*P	P	22 27 29.6	-0.2
KAC	Achnashellach	64.23	323	*e*P	P	22 27 29.9	-0.3
FOEL	Foel Wylfa	64.24	318	*e*P	P	22 27 30.1	-0.3
FOEL				IAmb	IAmb	22 27 31.2	
	comp=Z,115nm,1.1s						
NEWG	New Galloway	64.25	320	*e*P	P	22 27 30.2	-0.1
NEWG				IAmb	IAmb	22 27 31.1	
	comp=Z,34nm,0.6s						
MCH1	Michaelchurch	64.35	317	*e*P	P	22 27 30.3	-0.7
MCH1				IAmb	IAmb	22 27 31.4	
	comp=Z,52nm,0.6s						
LLW	Llanuwychllyn	64.52	318	*e*P	P	22 27 31.6	-0.6
LAWE	Loch Awe, Argy	64.60	322	*e*P	P	22 27 32.2	-0.3
TETE	Tete	64.75	232	*i* P	P	22 27 28.7	-5.3
TETE	Tete	64.75	232	*i* P	P	22 27 28.7	-5.3
WLF1	Llynfaes	64.83	319	*e*P	P	22 27 34.1	0.0
DBG	Daneborg	65.21	343	*i* P	P	22 27 35.3	-1.0
DBG				IAmb	IAmb	22 27 37.1	
	comp=Z,7.8nm,0.7s						
MORW	Morawa	66.68	147	P	P	22 27 45.5	-0.8
SCO	Scoresbysund	67.09	339	*i* P	P	22 27 47.7	-0.7
SCO				IAmb	IAmb	22 27 49.5	
	comp=Z,4.2nm,0.7s						
LSZ	Lusaka	67.99	237	P	P	22 27 55.1	0.0
LSZ				pmax	pmax		
	comp=Z,13nm,1.0s						
LSZ	Lusaka	67.99	237	P	P	22 27 55.1	0.0
ESBB	Sonseca Array	68.83	304	P	P	22 28 00.3	+0.3
ESDC	Sonseca Array	68.83	304	P	P	22 27 60.0	0.0
	comp=Z,9.8nm,0.9s,baz=55,slow=6.7,SNR=56						
ESDC				LR	LR	23 04 08.2	
	comp=Z,127nm,18.8s,baz=35,slow=41						
PAB	San Pablo	69.16	304	P	P	22 28 02.4	+0.3
PAB				pmax	pmax		
	comp=Z,17nm,1.0s						
PAB	San Pablo	69.16	304	P	P	22 28 02.4	+0.3
PAB				IAmb	IAmb	22 28 03.1	
	comp=Z,16nm,1.0s						
PAB	San Pablo	69.16	304	P	P	22 28 02.4	+0.3
MUN	Mundaring	69.21	149	P	P	22 28 05.4	+3.2
GOG	Mont Gurugu	69.74	300	P	P	22 28 07.0	+1.2
JBK	JBK	69.75	299	P	P	22 28 07.0	+1.0
NEEM	North Greenlan	69.81	350	*i* P	P	22 28 05.2	-0.6
NEEM				IAmb	IAmb	22 28 06.7	
	comp=Z,37nm,0.7s						
TDRA	Tendrara	69.82	297	P	P	22 28 07.0	+0.5
WRKA	Warakurna	70.17	135	P	P	22 28 08.6	+0.3
PALE	Palemas	70.46	300	P	P	22 28 10.0	-0.1
MVO	Moncorvo	70.47	307	*e*P	P	22 28 10.7	+0.6
	comp=Z,40nm,1.1s						
WRA	Warramunga Arr	70.54	127	P	P	22 28 10.1	-0.6
	comp=Z,48nm,0.6s,baz=316,slow=5.5,SNR=180						
WRAB	Tennant Creek	70.55	127*c*	*i*P	P	22 28 10.4	-0.3
WRAB				pmax	pmax		
	comp=Z,60nm,0.9s						
WRAB	Tennant Creek	70.55	127	P	P	22 28 10.5	-0.1
WRAB	Tennant Creek	70.55	127	P	P	22 28 10.6	-0.1
SUMG	Summit	70.61	344	P	P	22 28 10.9	+0.1
SUMG				pmax	pmax		
	comp=Z,136nm,1.9s						
SUMG	Summit	70.61	344	*i* P	P	22 28 10.0	-0.8
SUMG				IAmb	IAmb	22 28 11.0	
	comp=Z,11nm,0.6s						
SUMG	Summit	70.61	344	P	P	22 28 10.9	+0.1
WR0	Warramunga Arr	70.69	127	IAmb	IAmb	22 28 12.2	
	comp=Z,37nm,0.8s						
EUNU	Eureka	70.70	358	IAmb	IAmb	22 28 32.2	
	comp=Z,22nm,1.1s						
BLWY	Bulawayo	70.91	233	*i* P	P	22 28 18.4	+5.4
BLWY	Bulawayo	70.91	233	*i* P	P	22 28 18.4	+5.4
PGAV	Gavieira, Arco	71.02	308	*e*P	P	22 28 14.2	+0.7
	comp=Z,82nm,1.5s						
MTE	Manteigas	71.12	306	*e*P	P	22 28 15.0	+0.9
	comp=Z,43nm,1.1s						
MTE	Manteigas	71.12	306	IAmb	IAmb	22 28 16.0	
	comp=Z,25nm,0.9s						
MATP	Matopo	71.17	232	*i* P	P	22 28 21.7	+7.1
MATP	Matopo	71.17	232	*i* P	P	22 28 21.7	+7.1
PVIS	Viseu	71.24	307	*e*P	P	22 28 15.4	+0.6
	comp=Z,35nm,1.6s						
PCBR	Castelo Branco	71.29	306	*e*P	P	22 28 15.4	+0.4
	comp=Z,28nm,1.5s						
MOPA	Mopani	71.35	228	*i* P	P	22 28 15.3	-0.1
MOPA	Mopani	71.35	228	*i* P	P	22 28 15.3	-0.1
SMIR	Smir Dam	71.37	301	P	P	22 28 15.0	-0.6
PMRV	Marv??o	71.38	305	*e*P	P	22 28 15.9	+0.3
	comp=Z,34nm,2.0s						
MSNA	Messina	71.44	230	*i* P	P	22 28 17.8	+1.7
MSNA	Messina	71.44	230	*i* P	P	22 28 17.8	+1.7
TNA	Tin City	71.61	24	P	P	22 28 16.3	-0.1

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        baz=300
A21K  Barrow            71.79  17  IAmb    IAmb    22 28 18.7
        comp=Z,34nm,0.8s
A21K  Barrow            71.79  17  P       P       22 28 17.3  -0.1
        baz=309,SNR=5.1
EVO   Evora             72.18 305  eP      P       22 28 18.9  -1.5
        comp=Z,42nm,1.7s
PBEJ  Beja              72.28 304  eP      P       22 28 21.7  +0.7
        comp=Z,31nm,1.6s
PVAQ  Vaqueiros         72.42 303  eP      P       22 28 21.0  -0.8
        comp=Z,34nm,1.2s
PCVE  Castro Verde      72.56 304  eP      P       22 28 23.9  +1.2
        comp=Z,32nm,2.1s
MESJ  Messejana         72.61 304  eP      P       22 28 23.4  +0.4
        comp=Z,23nm,1.7s
PBDV  Barranco-do-Ve    72.64 303  eP      P       22 28 24.2  +1.0
        comp=Z,42nm,1.3s
PNCL  Nicolau / Gran    72.72 304  eP      P       22 28 22.5  -1.1
        comp=Z,50nm,1.4s
ASAR  Alice Springs     72.78 131  P       P       22 28 23.4  -0.7
        comp=Z,40nm,0.7s,baz=317,slow=6.0,SNR=134
TULEG Thule             72.85 353  i P     P       22 28 21.0  -2.7
TULEG                              IAmb    IAmb    22 28 23.4
        comp=Z,18nm,0.8s
TULEG Thule             72.85 353  IAmb    IAmb    22 28 24.1
        comp=Z,28nm,0.8s
ICESG Greenland Ices    73.07 341  i P     P       22 28 24.5  -1.1
ICESG                              IAmb    IAmb    22 28 26.6
        comp=Z,37nm,0.9s
TZRR  Tazzarine         73.48 296  P       P       22 28 29.0  +0.6
ZGR   Zagora            73.79 296  P       P       22 28 31.0  +0.7
UPNV  Upernavik         74.23 348  i P     P       22 28 29.1  -2.7
UPNV                               IAmb    IAmb    22 28 32.1
        comp=Z,10nm,0.8s
ANGG  Ammassalik, Gr    74.62 338  i P     P       22 28 32.9  -1.3
ANGG                               IAmb    IAmb    22 28 35.1
        comp=Z,21nm,1.0s
ANGG  Ammassalik, Gr    74.62 338  IAmb    IAmb    22 28 35.3
        comp=Z,81nm,1.3s
QIS   Mount Isa         74.67 125  P       P       22 28 35.7  +0.5
TORD  Torodi Ar. Bea    75.02 277  P       P       22 28 36.9  -0.6
        comp=Z,18nm,1.0s,baz=54,slow=4.1,SNR=71
TOLK  Toolik Lake Re    75.39  17  IAmb    IAmb    22 28 40.2
        comp=Z,75nm,0.8s
TOLK  Toolik Lake Re    75.39  17  IAmb    IAmb    22 28 40.2
        comp=Z,75nm,0.8s
TOLK  Toolik Lake Re    75.39  17  P       P       22 28 38.8  +0.1
        baz=315,SNR=42
LBTB  Lobatse           76.22 231  P       P       22 28 44.7  +0.5
LBTB                               pmax    pmax
        comp=Z,21nm,0.9s
LBTB  Lobatse           76.22 231  P       P       22 28 44.7  +0.5
LBTB                               IAmb    IAmb    22 28 45.3
        comp=Z,21nm,0.9s
COLD  Coldfoot          76.23  18  IAmb    IAmb    22 28 46.1
        comp=Z,31nm,0.9s
COLD  Coldfoot          76.23  18  P       P       22 28 43.8  +0.3
        baz=315,SNR=29
RES   Resolute Bay      76.27 359  P       P       22 28 43.4  -0.2
        comp=Z,2.8nm,0.8s,baz=15,slow=10,SNR=6.6
H21K  Melozitna Rive    76.57  20  IAmb    IAmb    22 28 47.3
        comp=Z,54nm,0.9s
H21K  Melozitna Rive    76.57  20  P       P       22 28 46.0  +0.5
H21K                               IAmb    IAmb    22 28 47.3
        comp=Z,54nm,0.9s
H21K  Melozitna Rive    76.57  20  P       P       22 28 46.2  +0.7
        baz=313
MTSU  Mount Surprise    76.66 120  P       P       22 28 46.2  -0.5
DY2G  Dye2              76.69 341  i P     P       22 28 45.3  -1.1
DY2G                               IAmb    IAmb    22 28 46.8
        comp=Z,12nm,1.0s
OOD   Oodnadatta        76.78 133  P       P       22 28 47.1   0.0
I21K  Tanana            77.15  20  IAmb    IAmb    22 28 50.7
        comp=Z,23nm,0.9s
I21K  Tanana            77.15  20  P       P       22 28 49.6  +0.9
        baz=314
J20K  Nowinta River     77.16  22  IAmb    IAmb    22 28 50.9
        comp=Z,27nm,0.8s
J20K  Nowinta River     77.16  22  P       P       22 28 49.9  +1.1
        baz=312
A36M  Sachs Harbour     77.29   8  P       P       22 28 49.5  +0.1
A36M                               IAmb    IAmb    22 28 50.5
        comp=Z,21nm,0.8s
A36M  Sachs Harbour     77.29   8  P       P       22 28 49.3  -0.1
        baz=336
TTA   Tatalina          77.36  23  P       P       22 28 51.0  +0.9
TTA                                pmax    pmax
        comp=Z,36nm,1.2s
TTA   Tatalina          77.36  23          P       22 28 51.0  +0.9
TTA                                IAmb    IAmb    22 28 59.9
        comp=Z,36nm,1.2s
TTA   Tatalina          77.36  23  P       P       22 28 51.1  +1.1
        baz=311
MULG  Mulgathing        77.48 135  P       P       22 28 50.4  -0.6
SFJD  Kangerlussuaq     77.50 343  P       P       22 28 50.2  -0.4
SFJD                               pmax    pmax
        comp=Z,22nm,1.0s
SFJD  Kangerlussuaq     77.50 343  i P     P       22 28 48.4  -2.2
SFJD                               IAmb    IAmb    22 28 50.8
        comp=Z,6.5nm,0.8s
SFJD  Kangerlussuaq     77.50 343  P       P       22 28 50.2  -0.4
SFJD                               IAmb    IAmb    22 28 51.2
        comp=Z,22nm,1.0s
MLY   Manley            77.63  20  IAmb    IAmb    22 28 53.2
        comp=Z,37nm,0.9s
MLY   Manley            77.63  20  P       P       22 28 52.0  +0.5
        baz=315
K20K  Telida            77.74  22  IAmb    IAmb    22 28 54.4
        comp=Z,57nm,1.0s
K20K  Telida            77.74  22  P       P       22 28 53.1  +1.0
        baz=312
H24K  Noodor Dome       77.88  19  IAmb    IAmb    22 28 54.8
        comp=Z,28nm,0.8s
H24K  Noodor Dome       77.88  19  IAmb    IAmb    22 28 54.8
        comp=Z,28nm,0.8s
H24K  Noodor Dome       77.88  19  P       P       22 28 53.6  +0.7
        baz=317
CHUM  Lake Minchumin    77.95  21  P       P       22 28 54.0  +0.8
        baz=314
I23K  Minto, Yukon-K    77.96  20  IAmb    IAmb    22 28 55.0
        comp=Z,27nm,0.8s
I23K  Minto, Yukon-K    77.96  20  IAmb    IAmb    22 28 55.0
        comp=Z,27nm,0.8s
I23K  Minto, Yukon-K    77.96  20  P       P       22 28 53.6  +0.4
        baz=316,SNR=14
FYU   Fort Yukon        78.05  17  P       P       22 28 54.3  +0.6
FYU                                IAmb    IAmb    22 28 56.1
        comp=Z,53nm,1.0s
BPAW  Bear Paw Mtn.     78.22  21  IAmb    IAmb    22 28 56.9
        comp=Z,29nm,0.8s
BPAW  Bear Paw Mtn.     78.22  21  IAmb    IAmb    22 28 56.9
        comp=Z,29nm,0.8s
BPAW  Bear Paw Mtn.     78.22  21  P       P       22 28 54.8   0.0
        baz=315,SNR=18
L19K  White Mountain    78.26  24  IAmb    IAmb    22 28 57.7
        comp=Z,51nm,0.9s
TSUM  Tsumeb            78.34 240  P       P       22 28 56.9  +0.7
CAST  Castle Rocks      78.35  22  P       P       22 28 55.8  +0.4
        baz=314,SNR=63
L20K  Farewell, AK      78.40  23  P       P       22 28 56.5  +0.7
        baz=313
MDM   Murphy Dome       78.43  19  IAmb    IAmb    22 28 57.3
        comp=Z,42nm,0.8s
NEA2  Nenana            78.45  20  IAmb    IAmb    22 28 57.7
        comp=Z,66nm,0.8s
NEA2  Nenana            78.45  20  IAmb    IAmb    22 28 57.7
        comp=Z,66nm,0.8s
NEA2  Nenana            78.45  20  P       P       22 28 56.0   0.0
        baz=316,SNR=23
POKR  Poker Plat Res    78.54  19  IAmb    IAmb    22 28 58.2
        comp=Z,53nm,0.8s
POKR  Poker Plat Res    78.54  19  IAmb    IAmb    22 28 58.2
        comp=Z,53nm,0.8s
POKR  Poker Plat Res    78.54  19  P       P       22 28 56.8  +0.3
        baz=318,SNR=15
TCOL  CIGO, UAF Yank    78.59  19  P       P       22 28 56.3  -0.4
        baz=317,SNR=10
COLA  College           78.60  19  P       P       22 28 57.5  +0.8
COLA                               pmax    pmax
        comp=Z,56nm,0.9s
COLA  College           78.60  19  P       P       22 28 57.5  +0.8
COLA  College           78.60  19  P       P       22 28 56.7  -0.1
        baz=317
M19K  Big River Lodg    78.61  24  P       P       22 28 58.2  +1.3
M19K                               IAmb    IAmb    22 28 59.8
        comp=Z,24nm,0.9s
M19K  Big River Lodg    78.61  24  P       P       22 28 58.3  +1.3
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        baz=312
KTH   Kantishna Hill    78.62  21  IAmb    IAmb    22 28 59.0
        comp=Z,30nm,0.9s
PPLA  Purkeypile        78.68  22  P       P       22 28 57.7  +0.3
        baz=314,SNR=6.1
PRP   Porcupine Dome    78.77  18  IAmb    IAmb    22 29 07.2
        comp=Z,41nm,1.2s
PRP   Porcupine Dome    78.77  18  IAmb    IAmb    22 29 07.2
        comp=Z,41nm,1.2s
PRP   Porcupine Dome    78.77  18  P       P       22 28 58.4  +0.5
        baz=319,SNR=6.9
WRH   Wood River Hil    78.83  20  IAmb    IAmb    22 28 58.6
        comp=Z,20nm,0.8s
BOSA  Boshof            78.85 228  P       P       22 28 58.4  -0.4
        comp=Z,11nm,0.8s,baz=44,slow=4.5,SNR=15
BOSA  Boshof            78.85 228  P       P       22 28 58.4  -0.4
TRF   Thorofare Moun    78.90  21  P       P       22 28 58.1  -0.6
        baz=316
IL31                    78.95  19  IAmb    IAmb    22 28 59.8
        comp=Z,27nm,0.8s
ILAR  Eielson Array     78.95  19  P       P       22 28 58.0  -0.7
        comp=Z,25nm,0.8s,baz=305,slow=4.5,SNR=79
ILAR                               PP      PP      22 31 57.1  +0.1
        comp=Z,2.3nm,0.8s,baz=301,slow=6.6,SNR=4.5
ILAR  Eielson Array     78.95  19  P       P       22 28 58.6  -0.1
ILAR                                               22 31 57.1
ILAR  Eielson Array     78.95  19  P       P       22 28 58.6  -0.1
MCK   McKinley          79.11  20  IAmb    IAmb    22 29 08.9
        comp=Z,19nm,0.8s
MCK   McKinley          79.11  20  P       P       22 28 58.5  -1.2
        baz=317,SNR=6.1
HDA   Harding Lake      79.20  19  P       P       22 28 59.1  -1.1
        baz=318
INK   Inuvik            79.27  13  P       P       22 29 00.5  +0.1
        comp=Z,12nm,0.7s,baz=346,slow=7.3,SNR=22
INK   Inuvik            79.27  13  P       P       22 29 00.1  -0.2
        baz=329,SNR=14
CTA   Charters Tower    79.29 120  P       P       22 29 00.8  -0.5
        comp=Z,24nm,0.8s,baz=316,slow=7.2,SNR=13
CTA   Charters Tower    79.29 120  P       P       22 29 01.0  -0.2
CTAO  Charters Tower    79.29 120  P       P       22 29 01.5  +0.3
CTAO                               pmax    pmax
        comp=Z,40nm,0.8s
CTAO  Charters Tower    79.29 120  P       P       22 29 01.5  +0.3
CTAO                               IAmb    IAmb    22 29 02.3
        comp=Z,40nm,0.8s
CTAO  Charters Tower    79.29 120  P       P       22 29 01.1  -0.2
N19K  Bonanza Creek     79.31  24  P       P       22 29 01.9  +0.9
N19K                               IAmb    IAmb    22 29 05.7
        comp=Z,51nm,0.8s
KOWA  Kowa              79.33 281  P       P       22 29 02.2  +0.5
KOWA                               IAmb    IAmb    22 29 03.3
        comp=Z,44nm,1.1s
KOWA  Kowa              79.33 281  P       P       22 29 02.7  +1.0
RND   Reindeer          79.38  21  IAmb    IAmb    22 29 01.7
        comp=Z,27nm,0.9s
J25K  Salcha River,     79.50  19  P       P       22 29 01.0  -0.8
        baz=320,SNR=11
CUT   Chulitna          79.65  22  IAmb    IAmb    22 29 30.9
        comp=Z,45nm,1.0s
CUT   Chulitna          79.65  22  P       P       22 29 02.3  -0.3
        baz=316
O19K  Port Alsworth     79.79  25  P       P       22 29 04.0  +0.7
O19K                               IAmb    IAmb    22 29 05.5
        comp=Z,52nm,1.0s
O19K  Port Alsworth     79.79  25  P       P       22 29 04.1  +0.7
        baz=313
P18K  Big Mountain,     80.00  26  P       P       22 29 04.9  +0.3
P18K                               IAmb    IAmb    22 29 06.5
        comp=Z,36nm,0.8s
P18K  Big Mountain,     80.00  26  P       P       22 29 05.0  +0.4
        baz=312
DHY   Denali Highway    80.07  20  P       P       22 29 04.3  -0.8
        baz=318,SNR=10
INKA  Innaminka         80.08 129  P       P       22 29 05.6  +0.3
J26L  Joseph Creek      80.09  18  P       P       22 29 04.9  -0.2
        baz=321,SNR=42
M22K  Willow            80.17  22  P       P       22 29 05.1  -0.3
        baz=316
LCRK  Leigh Creek       80.20 133  P       P       22 29 05.8  -0.1
EPYK  Eagle Plains      80.26  15  IAmb    IAmb    22 29 06.7
        comp=Z,28nm,0.8s
EPYK  Eagle Plains      80.26  15  IAmb    IAmb    22 29 06.7
        comp=Z,28nm,0.8s
EPYK  Eagle Plains      80.26  15  P       P       22 29 05.2  -0.7
        baz=327,SNR=13
RIDG  Independent Ri    80.32  19  P       P       22 29 05.8  -0.5
        baz=320,SNR=10
WAT6  Susitna Watana    80.33  21  P       P       22 29 05.5  -0.9
        baz=318,SNR=5.9
SCRK  Sand Creek        80.38  19  IAmb    IAmb    22 29 08.0
        comp=Z,43nm,0.8s
SCRK  Sand Creek        80.38  19  IAmb    IAmb    22 29 08.0
        comp=Z,43nm,0.8s
SCRK  Sand Creek        80.38  19  P       P       22 29 06.3  -0.3
        baz=321,SNR=35
BBOO  Buckleboo         80.46 136  IAmb    IAmb    22 29 07.0
        comp=Z,26nm,1.0s
BBOO  Buckleboo         80.46 136  P       P       22 29 06.1  -1.2
EGAK  Eagle             80.50  17  IAmb    IAmb    22 29 08.3
        comp=Z,21nm,0.8s
EGAK  Eagle             80.50  17  P       P       22 29 07.2  +0.1
        baz=323,SNR=9.4
GHO   Glory Hole Cre    80.55  22  P       P       22 29 07.6   0.0
GHO                                IAmb    IAmb    22 29 09.1
        comp=Z,37nm,1.0s
PMR   Palmer            80.61  22  P       P       22 29 07.9  +0.1
PMR                                pmax    pmax
        comp=Z,45nm,0.9s
PMR   Palmer            80.61  22  P       P       22 29 07.9  +0.1
PMR                                IAmb    IAmb    22 29 08.9
        comp=Z,45nm,0.9s
PMR   Palmer            80.61  22  P       P       22 29 07.0  -0.8
        baz=317,SNR=7.8
SML   Sawmill           80.72  22  P       P       22 29 08.4   0.0
        baz=317,SNR=14
PAX   Paxson            80.73  20  P       P       22 29 08.1  -0.4
        baz=320,SNR=6.9
I29M  Ogilvie Camp,     80.74  16  P       P       22 29 07.9  -0.6
        baz=325,SNR=7.5
RC01  Rabbit Creek A    80.78  23  IAmb    IAmb    22 29 10.0
        comp=Z,48nm,1.0s
RC01  Rabbit Creek A    80.78  23  P       P       22 29 08.6  -0.1
        baz=316,SNR=7.9
Q19K  Cape Douglas,     80.91  26  P       P       22 29 08.6  -0.9
        baz=313
KNK   Knik Glacier      80.97  22  P       P       22 29 09.4  -0.3
        baz=317
SCM   Sheep Creek Mo    81.02  21  P       P       22 29 09.8  -0.3
        baz=318,SNR=20
M24K  Tolsona, Glenn    81.17  21  P       P       22 29 11.6  +0.7
M24K                               IAmb    IAmb    22 29 37.8
        comp=Z,46nm,0.8s
M24K  Tolsona, Glenn    81.17  21  P       P       22 29 11.1  +0.2
        baz=319,SNR=5.6
O22K  Cooper Landing    81.22  23  P       P       22 29 10.7  -0.3
        baz=316
HARP  HAARP             81.26  20  P       P       22 29 11.9  +0.6
        baz=320,SNR=23
L26K  Log Cabin Wild    81.30  19  P       P       22 29 12.1  +0.6
L26K                               IAmb    IAmb    22 29 13.3
        comp=Z,19nm,0.8s
L26K  Log Cabin Wild    81.30  19  P       P       22 29 11.6  +0.1
        baz=321,SNR=9.0
CNPM  China Poot        81.38  24  IAmb    IAmb    22 29 14.9
        comp=Z,51nm,0.9s
BRSE  Bradley Lake S    81.40  24  P       P       22 29 11.8  -0.3
        baz=316
PWL   Port Wells        81.41  22  IAmb    IAmb    22 29 15.6
        comp=Z,27nm,0.8s
PWL   Port Wells        81.41  22  P       P       22 29 11.6  -0.5
        baz=318
J29M  Klondike Camp     81.51  16  P       P       22 29 12.5  -0.2
        baz=326,SNR=5.7
DAWY  Dawson            81.53  17  IAmb    IAmb    22 29 13.9
        comp=Z,27nm,1.0s
DAWY  Dawson            81.53  17  P       P       22 29 12.5  -0.3
        baz=325,SNR=12
WHYH  Whyalla           81.54 135  P       P       22 29 13.0   0.0
SEW   Seward            81.59  23  IAmb    IAmb    22 29 14.1
        comp=Z,56nm,0.9s
SEW   Seward            81.59  23  P       P       22 29 12.8  -0.2
        baz=317
L27K  Beaver Creek,     81.70  18  P       P       22 29 14.4  +0.8
L27K                               IAmb    IAmb    22 29 15.6
        comp=Z,25nm,0.9s
L27K  Beaver Creek,     81.70  18  P       P       22 29 13.7  +0.1
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        baz=323,SNR=15
KLU   Klutina           81.72  21  IAmb    IAmb    22 29 26.3
        comp=Z,32nm,0.7s
KLU   Klutina           81.72  21  P       P       22 29 14.0  +0.2
        baz=319,SNR=6.3
QLP   Quilpie           81.75 127  P       P       22 29 15.1  +0.8
M26K  Nabesna, AK       81.89  19  P       P       22 29 15.1  +0.4
        baz=322,SNR=13
N25K  Chitina, Valde    82.04  20  P       P       22 29 15.5  +0.1
        baz=320,SNR=19
DIV   Divide            82.04  21  IAmb    IAmb    22 29 17.1
        comp=Z,30nm,0.8s
KDAK  Kodiak Island     82.11  26  P       P       22 29 16.2  +0.4
        comp=Z,74nm,0.7s,baz=320,slow=3.4,SNR=49
KDAK  Kodiak Island     82.11  26  P       P       22 29 16.4  +0.6
KDAK  Kodiak Island     82.11  26  P       P       22 29 16.2  +0.4
        baz=314
OHAK  Old Harbor        82.23  27  P       P       22 29 17.5  +1.1
OHAK  Old Harbor        82.23  27  P       P       22 29 16.4   0.0
        baz=314
SII   Sitkinak Islan    82.33  28  P       P       22 29 18.0  +1.0
        baz=313
GLB   Gilahina Butte    82.40  20  IAmb    IAmb    22 29 19.1
        comp=Z,25nm,1.0s
BVCY  Beaver Creek      82.49  18  P       P       22 29 18.1  +0.3
        baz=324,SNR=5.5
EYAK  Cordova Ski Ar    82.49  22  P       P       22 29 19.0  +1.3
        baz=320,SNR=8.2
BMRM  Bremner River     82.53  21  IAmb    IAmb    22 29 19.7
        comp=Z,41nm,0.9s
BMRM  Bremner River     82.53  21  P       P       22 29 18.8  +0.8
        baz=321,SNR=7.5
VRDI  Verde Repeater    82.68  20  IAmb    IAmb    22 29 20.8
        comp=Z,43nm,0.8s
MCARA McCarthy VSAT     82.69  20  P       P       22 29 19.5  +0.7
        baz=322,SNR=31
YUK3  Moose Creek       83.11  19  P       P       22 29 21.7  +0.4
        baz=324
Q23K  Middleton Isla    83.15  22  P       P       22 29 22.1  +0.9
        baz=319
STKA  Stephens Creek    83.31 132  P       P       22 29 21.6  -0.8
        comp=Z,9.9nm,0.6s,baz=314,slow=5.9,SNR=31
STKA                               LR      LR      23 13 08.1
        comp=Z,272nm,18.0s,baz=322,slow=40
STKA  Stephens Creek    83.31 132  P       P       22 29 22.4   0.0
BARN  Barnard Glacie    83.35  20  IAmb    IAmb    22 29 24.5
        comp=Z,35nm,0.9s
KAIM  Kayak Island      83.39  21  P       P       22 29 23.2  +0.8
        baz=321
M30M  Minto, Yukon      83.43  17  P       P       22 29 23.0  +0.3
        baz=327
WAX   Waxell Ridge      83.47  20  P       P       22 29 23.5  +0.6
ISLE  Juniper Island    83.51  20  P       P       22 29 23.7  +0.5
ISLE                               IAmb    IAmb    22 29 33.0
        comp=Z,22nm,0.9s
CTG   Chitna Glacier    83.52  20  P       P       22 29 24.0  +0.8
        baz=323,SNR=6.3
CTGM  Chitina Glacie    83.52  20  P       P       22 29 23.5  +0.2
CTGM                               IAmb    IAmb    22 29 25.3
        comp=Z,26nm,1.0s
SNH   Sunshine Point    83.69  21  P       P       22 29 24.8  +0.7
LOGN  Logan Glacier     83.73  20  IAmb    IAmb    22 29 26.4
        comp=Z,54nm,1.5s
DBIC  Dimbokro          83.73 274  P       P       22 29 25.1  +0.1
        comp=Z,19nm,0.8s,baz=72,slow=5.2,SNR=26
DBIC  Dimbokro          83.73 274  P       P       22 29 25.1  +0.1
DBIC                               pmax    pmax
        comp=Z,26nm,0.9s
DBIC  Dimbokro          83.73 274  P       P       22 29 25.1  +0.1
DBIC                               IAmb    IAmb    22 29 31.9
        comp=Z,26nm,0.8s
KIC   Kosan Boka        83.78 274  eP      P       22 29 25.3  +0.1
        comp=Z,36nm,0.8s
YAH   Yahtse            83.88  20  IAmb    IAmb    22 29 27.3
        comp=Z,32nm,0.8s
TIC   Toumodi           83.89 274  eP      P       22 29 25.7  -0.1
MESA  MESA              83.96  20  P       P       22 29 26.3  +0.7
MESA  MESA              83.96  20  P       P       22 29 26.6  +0.9
        baz=323,SNR=5.9
TABL  Table Mountain    84.00  20  IAmb    IAmb    22 30 10.9
        comp=Z,36nm,1.2s
LIC   Lamto             84.09 274  eP      P       22 29 26.7  -0.1
        comp=Z,57nm,0.9s
M31M  Drury Creek, Y    84.34  16  P       P       22 29 27.5  +0.2
        baz=329,SNR=10
PINM  Pinnacle          84.54  20  P       P       22 29 29.1  +0.7
        baz=324
FARO  Faro, Yukon       84.57  16  P       P       22 29 28.4  -0.1
        baz=330
N31M  Braeburn, Yuko    84.61  17  P       P       22 29 29.0  +0.3
        baz=328,SNR=24
RMQ   Roma              84.92 124  P       P       22 29 32.1  +1.4
PNL   Peninsula         85.14  20  P       P       22 29 31.8  +0.5
        baz=325
WHY   Whitehorse        85.55  17  IAmb    IAmb    22 29 34.5
        comp=Z,25nm,0.9s
WHY   Whitehorse        85.55  17  P       P       22 29 33.4   0.0
        baz=329,SNR=11
CMSA  Cobar Meteorol    85.81 130  P       P       22 29 35.1  +0.1
EIDS  Eidsvold          85.97 122  P       P       22 29 35.8  -0.1
P33M  Teslin, Yukon     86.45  16  P       P       22 29 37.9   0.0
        baz=330
SKAG  Skagway           86.45  18  P       P       22 29 38.4  +0.6
        baz=328,SNR=20
BESE  Bessie Mountai    87.33  18  P       P       22 29 43.0  +0.7
BESE                               IAmb    IAmb    22 29 44.4
        comp=Z,30nm,0.9s
YKA   Yellowknife Ar    87.62   7  P       P       22 29 42.9  -0.6
        comp=Z,15nm,0.8s,baz=339,slow=4.8,SNR=108
YKA   Yellowknife Ar    87.62   7  i P     P       22 29 43.2  -0.2
YKA                                pmax    pmax
        comp=Z,15nm,0.8s
JIS   Juneau Island     87.72  18  IAmb    IAmb    22 29 46.2
        comp=Z,28nm,0.9s
SIT   Sitka             88.50  19  P       P       22 29 49.0  +1.3
        baz=328
DLBC  Dease Lake        88.70  16  IAmb    IAmb    22 29 50.7
        comp=Z,28nm,0.9s
ARMA  Armidale          89.25 126  P       P       22 29 51.9  +0.2
TOO   Toolangi          89.40 134  IAmb    IAmb    22 29 53.5
        comp=Z,15nm,0.8s
WRAK  Wrangell Islan    89.89  18  P       P       22 29 55.1  +0.9
        baz=331
SCHQ  Schefferville     91.95 342  P       P       22 30 03.5  -0.4
        comp=Z,5.3nm,0.9s,baz=14,slow=2.5,SNR=6.0
SCHQ                               LR      LR      23 15 56.1
        comp=Z,200nm,19.0s,baz=340,slow=38
EDM   Edmonton          96.82   9  P       P       22 30 26.1  -0.2
EDM                                pmax    pmax
        comp=Z,14nm,1.0s
EDM   Edmonton          96.82   9  P       P       22 30 26.1  -0.2
EDM                                IAmb    IAmb    22 30 27.1
        comp=Z,14nm,1.0s
MAW   Mawson            97.61 187  LR      LR      23 09 53.2
        comp=Z,545nm,18.3s,baz=48,slow=33
NVAR  Mina Array Bea   110.11  17  PKiKP   PKiKP   22 35 28.1  +0.5
        comp=Z,0.9nm,0.6s,baz=350,slow=1.1,SNR=6.2
GSC   Goldstone, Bar   113.45  16  P       PKiKP   22 35 35.0  +1.1
        baz=343
EDW2  Edwards Air Fo   113.55  18  P       PKiKP   22 35 33.7  -0.3
        baz=341
WVT   Waverly          114.19 351  P       PKPdf   22 35 35.7  +0.5
        baz=10.0
U40A  Yellville        114.51 355  P       PKiKP   22 35 35.5  -0.3
        baz=5.2
MONP2 Monument Peak    115.84  17  P       PKPdf   22 35 38.9  +0.2
        baz=343
MIAR  Mount Ida        116.36 356  P       PKPdf   22 35 39.5  +0.1
        baz=4.6
121A  Cookes Peak, D   117.88   9  P       PKPdf   22 35 42.4  -0.2
        baz=351
MNTX  Cornudas Mount   118.99   7  PKPdf   PKiKP   22 35 44.8  +0.2
MNTX  Cornudas Mount   118.99   7  P       PKiKP   22 35 45.2  +0.6
        baz=353,SNR=7.2
QSPA  South Pole Qui   119.08 180  PKP     PKPdf   22 35 43.2  -0.4
        comp=Z,1.0nm,0.2s,baz=168,slow=6.8,SNR=1.5
JCT   Junction City    120.56   1  P       PKPdf   22 35 47.6   0.0
        baz=358
TXAR  Lajitas Array    121.50   5  PKP     PKPdf   22 35 49.4  -0.2
        comp=Z,2.0nm,0.8s,baz=191,slow=0.7,SNR=20
TMAB  Tom-Au,PA,Br     125.31 290  eP      PKiKP   22 35 58.2  +0.8
SJMB  Sao Joao De Ma   127.15 268  eP      PKiKP   22 36 01.5  +0.7
SDBA  SAO DESIDERIO    127.74 277  eP      PKiKP   22 36 02.9  +0.7
SMTB  Santa Maria do   128.35 283  eP      PKiKP   22 36 04.4  +1.0
MC01  Montes Claros    128.77 272  eP      PKiKP   22 36 05.4  +1.1
PRPB  Parauapebas      128.83 287  eP      PKiKP   22 36 04.9  +0.5
DIAM  Diamantina, MG   129.17 270  eP      PKiKP   22 36 05.8  +0.7
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PEXB	Peixe	130.54	279	eP	PKiKP	22 36 08.3	+0.5
ITTB	Itaituba	132.67	293	eP	PKPdf	22 36 11.0	0.0
NPGB	Novo Progresso	133.90	290	eP	PKiKP	22 36 14.7	0.0
ARAG	Araguaiana, MT	135.20	277	eP	PKiKP	22 36 16.8	-0.3
CLDB	Colider	136.32	286	eP	PKPdf	22 36 18.4	+0.5
PTBC	PUERTO BERRIO,	137.61	323	eP	PKPdf	22 36 16.1	-4.2
SPBC	San Pablo de B	138.15	322	eP	PKPpre	22 36 12.8	
SALV	Santo Antonio	138.64	279	eP	PKiKP	22 36 23.4	-0.8
NORC	Norcasia	138.65	323	eP	PKPdf	22 36 15.8	-6.4
PP1B	Ponte de Pedra	138.66	276	eP	PKiKP	22 36 23.7	-0.5
GUY2C	Guyana, Caldas	139.19	323	eP	PKPpre	22 36 11.6	
PRAC	Prado	140.21	322	eP	PKPpre	22 36 14.1	
VILB	Vilhena	141.08	286	eP	PKPdf	22 36 27.1	+0.5
SAML	Samuel	141.33	294	PKIKP	PKPdf	22 36 27.7	+0.7
SAML	Samuel	141.33	294	PKPdf	PKPdf	22 36 27.7	+0.7
PTLB	Pontes e Lacer	141.39	282	eP	PKPdf	22 36 27.1	+0.1
PCON	Cinco Dias	142.18	322	eP	PKPdf	22 36 28.2	-1.1
SOTA	Rioblanco	142.46	323	eP	PKPdf	22 36 22.2	-7.5
CPUP	Villa Florida	143.72	265	PKP	PKPbc	22 36 28.6	+0.1
	comp=Z,10nm,0.8s,baz=80,slow=4.1,SNR=10.0						
ITQB	Itaqui	143.81	259	PKPdf	PKPdf	22 36 31.0	+0.1
OTAV	Otavalo	145.03	324	eP	PKPbc	22 36 32.3	-1.2
OTAV	Otavalo	145.03	324	eP	PKPab	22 36 33.5	0.0
CZSB	Cruzeiro do Su	147.72	307	eP	PKPbc	22 36 40.1	-0.8
LPAZ	La Paz	149.38	288	PKP	PKPdf	22 36 42.3	+0.9
	comp=Z,12nm,0.9s,baz=34,slow=3.4,SNR=15						
LPAZ				PKPbc	PKPbc	22 36 46.3	+0.4
	comp=Z,12nm,0.9s,baz=45,slow=3.7,SNR=19						
LPAZ	La Paz	149.38	288	eP	PKPdf	22 36 42.4	+0.9
MG05	Puerto Natales	150.49	213		PKPab	22 36 54.0	+0.7
LVC	Limon Verde	152.75	277	eP	PKPdf	22 36 48.3	+2.1
PLCA	Paso Flores	154.62	236	PKP	PKPdf	22 36 48.6	+0.6
	comp=Z,5.0nm,1.0s,baz=148,slow=3.6,SNR=5.0						
PLCA				PKPbc	sPKPdf	22 36 57.4	+0.8
	comp=Z,6.5nm,0.9s,baz=97,slow=3.8,SNR=7.5						
PLCA	Paso Flores	154.62	236	eP	PKPdf	22 36 49.4	+1.5

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*IDC **18** 22:21:38.8±0.9, 63°.53S×171°.43E, h0^{km}, mb4.6/6, mb1 4.8/7, mb1mx4.3/34, mbtmp4.7/7, ML4.8/1, MS4.6/5, Ms1 4.6/5, ms1mx4.3/19 Error ellipse: s-maj=44.2km s-min=22.5km az=60.0*

*NEIC **18** 22:21:41.1±1.9, 63°.5S±0°.1×171°.4E±0°.3, h10^{km}±1^{km}, mb4.8/21, Error ellipse: s-maj=23.1km s-min=19.0km az=257.0*

*GCMT **18** 22:21:42.1±0.2, 63°.35S±0°.01×171°.35E±0°.03, h19^{km}±1^{km}, MW5.4/119, Moment Tensor Solution. s63,c84; s119,c188; Duration: 1^{s}.2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.44±.04; $M_{\theta\theta}$1.33±.04; $M_{\phi\phi}$-0.89±.03; $M_{r\theta}$-0.88±.08; $M_{\theta\phi}$-0.20±.03; $M_{\phi r}$-0.22±.07; Best double couple: $M_0$1.41600×10^{17} NP1:ϕ_s321.00000°,δ47.00000°, λ-12.00000°. NP2:ϕ_s59.00000°,δ82.00000°, λ-137.00000°. Principal axes: T 1.6950, Plg22.0000°, Azm182.0000°; N -0.5620, Plg46.0000°, Azm68.0000°; P -1.1360, Plg36.0000°, Azm289.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 22:21:40.7±0.6**, 63°.53S**±0°.07×**171°.4E**±0°.2**, h10**^{km}**, n59,** σ**0^{s}.66**/37**, mb4.8**/12**, MS4.8**/8**, 1D, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	14.38	188	Pn	Pn	22 25 04.8	+0.9
	4.2nm,0.3s,baz=31,slow=17,SNR=191						
SBA	Scott Base	14.47	184	Pn	Pn	22 25 05.4	+0.3
WHZ	Wether Hill Ro	17.78	352	P	Pn	22 25 47.4	-0.7
DCZ	Deep Cove	18.26	350	P	P	22 25 55.3	+1.3
MLZ	Mavora Lakes	18.30	353		P	22 25 55.2	+0.7
ODZ	Otahua Downs	18.53	358	P	Pn	22 25 57.7	+0.5
WKZ	Wanaka	18.79	355	P	Pn	22 26 01.1	+0.7
WKZ				IAmb	IAmb	22 26 12.1	
	comp=Z,40nm,1.0s						
LBZ	Lake Benmore	19.19	357	P	Pn	22 26 06.1	+0.8
LBZ				IAmb	IAmb	22 26 20.1	
	comp=Z,34nm,1.0s						
RPZ	Rata Peaks	19.85	359	P	P	22 26 11.7	+0.1
RPZ				IAmb	IAmb	22 26 23.9	
	comp=Z,38nm,1.1s						
LTZ	Lake Taylor	20.79	2	P	P	22 26 21.5	-0.3
LTZ				IAmb	IAmb	22 26 37.1	
	comp=Z,42nm,1.4s						
KHZ	Kahutara	21.19	4	P	P	22 26 26.8	+0.8
KHZ				IAmb	IAmb	22 26 37.1	
	comp=Z,33nm,1.1s						
NNZ	Nelson	22.38	4	P	P	22 26 39.3	+0.5
NNZ				IAmb	IAmb	22 26 47.1	
	comp=Z,72nm,1.4s						
QRZ	Quartz Range	22.75	2	P	P	22 26 41.4	-1.3
CASY	Casey	25.07	237	P	P	22 27 05.0	+0.2
CASY				IAmb	IAmb	22 27 08.7	
	comp=Z,48nm,1.4s						
QSPA	South Pole Qui	26.56	180	LR	LR	22 36 11.3	
	comp=Z,2µm,21.1s,baz=31,slow=33						
QSPA	South Pole Qui	26.56	180	P	P	22 27 18.7	+0.1
QSPA				IAmb	IAmb	22 27 21.9	
	comp=Z,37nm,1.2s						
RAO	Raoul Island	34.97	16	LR	LR	22 43 06.7	
	comp=Z,586nm,18.0s,baz=207,slow=37						
STKA	Stephens Creek	36.81	315	P	P	22 28 49.4	+0.9
	comp=Z,2.7nm,1.0s,baz=160,slow=12,SNR=2.7						
BELA	Belgrano 2	37.94	171		P	22 28 57.5	-0.1
BELA				IAmb	IAmb	22 29 02.0	
	comp=Z,47nm,1.5s						
MAW	Mawson	39.54	215	P	P	22 29 11.7	+0.6
DZM	Mont Dzumac	41.57	353	eLR	LR	22 40 48.9	
	comp=Z,2µm,22.5s						
SYO	Syowa Base	43.43	203	⇓esP	sP	22 29 46.0	-0.1
H01W1	Cape Leeuwin H	44.89	282	T	T	23 18 05.9	
	baz=147,slow=76,SNR=166						
H01W2	Cape Leeuwin H	44.90	282	T	T	23 18 06.7	
	baz=147,slow=76,SNR=186						
H01W3	Cape Leeuwin H	44.91	282	T	T	23 18 07.6	
	baz=147,slow=76,SNR=168						
SNAA	Sanae	45.01	183	P	P	22 29 55.6	-0.2
SNAA	Sanae	45.01	183	P	P	22 29 55.5	-0.2
	comp=Z,7.2nm,0.9s,baz=177,slow=7.4,SNR=15						
SNAA	Sanae	45.01	183	P	P	22 29 55.5	-0.2
SNAA				IAmb	IAmb	22 29 56.6	
	comp=Z,11nm,1.0s						
VNA3	Neumayer Olymp	45.50	180	P	P	22 29 59.2	-0.3
VNA2	Neumayer--Watz	45.82	181	P	P	22 30 01.8	-0.2
	baz=179,slow=6.6						
VNA1	Neumayer--Stat	46.10	180	P	P	22 30 04.2	0.0
CTA	Charters Tower	46.64	327	LR	LR	22 47 56.4	
	comp=Z,1µm,20.0s,baz=312,slow=34						
ASAR	Alice Springs	46.93	310	P	P	22 30 10.3	-1.0
	comp=Z,4.8nm,0.8s,baz=160,slow=8.1,SNR=8.4						
TBI	Tubuai	47.80	52	eT	T	23 21 16.0	
	comp=Z,20nm,0.3s						
PAE	Paea	53.02	49	eT	T	23 27 46.0	
	comp=Z,3.8nm,0.2s						
PPT2	Papeete2	53.09	49	eLR	LR	22 46 00.8	
	comp=Z,1µm,26.2s,baz=200						
PPT2	Papeete2	53.09	49	eT	T	23 27 51.2	
	comp=Z,11nm,0.3s						
MEH	Mehetia	53.34	50	eT	T	23 28 11.6	
	comp=Z,50nm,0.3s						
VAH	Vaihoa	55.94	50	eT	T	23 31 25.0	
	comp=Z,310nm,0.3s						
TAOE	Nuku Hiva Isla	64.50	55	eLR	LR	22 51 23.5	
	comp=Z,870nm,25.0s						
AC02	Maricunga	78.21	127	P	P	22 33 41.8	+1.0
AC02				IAmb	IAmb	22 33 44.9	
	comp=Z,16nm,1.4s						
CPUP	Villa Florida	82.58	137	P	P	22 34 03.0	-0.7
	comp=Z,4.7nm,0.8s,baz=156,slow=7.6,SNR=4.0						
CPUP				LR	LR	23 08 04.3	
	comp=Z,338nm,18.2s,baz=188,slow=34						
CPUP	Villa Florida	82.58	137	IAmb	IAmb	22 34 05.9	
	comp=Z,19nm,1.3s						
BOSA	Boshof	84.34	209	P	P	22 34 11.8	-1.1
	comp=Z,4.0nm,0.8s,baz=155,slow=2.7,SNR=6.0						
BOSA	Boshof	84.34	209	IAmb	IAmb	22 34 13.6	
	comp=Z,18nm,1.4s						
PB11	IPOC Station P	84.48	124	P	P	22 34 14.4	+0.7
H08S2	Diego Garcia H	87.17	259	T	T	00 11 12.5	
	baz=153,slow=76,SNR=201						
H08S1	Diego Carcia H	87.18	259	T	T	00 11 12.5	
	baz=153,slow=76,SNR=152						
H08S3	Diego Garcia H	87.19	259	T	T	00 11 14.0	
	baz=153,slow=76,SNR=203						
LPAZ	La Paz	88.23	124	P	P	22 34 32.7	0.0
	comp=Z,6.9nm,1.1s,baz=138,slow=1.9,SNR=13						
LPAZ	La Paz	88.23	124	P	P	22 34 32.9	+0.2
CMAR	Chiang Mai Arr	98.81	294	LR	LR	23 17 26.6	
	comp=Z,150nm,20.2s,baz=180,slow=34						
ILAR	Eielson Array	131.63	22	PKP	PKPdf	22 40 51.5	-0.4
	comp=Z,1.4nm,0.9s,baz=280,slow=2.5,SNR=9.7						
KBZ	Khabaz	144.89	261	PKP	PKPab	22 41 15.6	-0.4
	comp=Z,8.3nm,1.0s,baz=170,slow=0.9,SNR=8.6						
NRIK	Noril'sk	144.95	322	LR	LR	22 41 14.7	
	comp=Z,552nm,18.5s,baz=194,slow=36						
NRIK	Noril'sk	144.95	322	PKP	PKPab	22 41 14.7	-0.7
	comp=Z,5.3nm,0.8s,baz=124,slow=2.8,SNR=9.7						
NRIK	Noril'sk	144.95	322		PKPab	22 41 15.1	-0.3
BRTR	Keskin Array B	145.58	247	PKPbc	PKPdf	22 41 17.8	-0.5
	comp=Z,8.0nm,1.2s,baz=157,slow=4.0,SNR=14						
BRTR	Keskin Array B	145.58	247		PKPdf	22 41 18.0	-0.3

TAP 18 22:21:40.1, 23°.16N×120°.96E, h4^{km}±1^{km}, ML1.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	Lidau	0.06	62	i P	Pg	22 21 41.7	+0.2
	baz=66						
ELDTW				i S	Sg	22 21 42.8	+0.3
	baz=66						
STYH	Taoyuan	0.17	273	eP	Pg	22 21 44.0	+0.6
	baz=273						
STYH				i S	Sg	22 21 46.5	+0.8
	baz=273						
FULB	Fuli	0.31	83	eS	Sg	22 21 51.5	+1.4
	baz=83						

IDC 18 23:15:37.7±2.6**, 20°.85S×168°.87E, h0**^{km}**, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.7**/22**, mbtmp3.7**/4**, ML2.5**/1**, Error ellipse: s-maj=160.0km s-min=31.0km az=155.0, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.57	241	Pn	Pn	23 16 20.5	-0.2
	0.9nm,0.3s,baz=75,slow=19,SNR=1.4						
WRA	Warramunga Arr	32.35	265	P	P	23 22 08.9	-0.2
	1.1nm,1.1s,baz=100,slow=8.0,SNR=5.3						
ASAR	Alice Springs	32.44	258	P	P	23 22 09.9	+0.1
	0.7nm,0.8s,baz=82,slow=9.0,SNR=5.5						
NVAR	Mina Array Bea	90.12	49	P	P	23 28 40.0	-0.1
	0.3nm,0.3s,baz=227,slow=9.5,SNR=4.6						

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*IDC **18** 23:41:46.7±0.9, 57°.95S×9°.48W, h0^{km}, mb4.2/8, mb1 4.4/9, mb1mx4.1/29, mbtmp4.3/9, ML4.8/1, MS4.3/19, Ms1 4.2/19, ms1mx4.2/26, Error ellipse: s-maj=32.2km s-min=21.2km az=60.0*

*NEIC **18** 23:41:50.0±1.7, 58°.1S±0°.1×9°.4W±0°.2, h15^{km}±5^{km}, mb4.6/16, Error ellipse: s-maj=20.9km s-min=16.0km az=210.0*

*GCMT **18** 23:41:53.0±0.2, 58°.18S±0°.01×9°.30W±0°.02, h28^{km}±1^{km}, MW5.2/119, Moment Tensor Solution. s64,c82; s119,c194; Duration: 1^{s}.0 Moment tensor: Scale 10^{16} Nm; M_{rr}0.38±.22; $M_{\theta\theta}$-3.40±.21; $M_{\phi\phi}$3.02±.17; $M_{r\theta}$0.53±.34; $M_{\theta\phi}$6.46±.13; $M_{\phi r}$-3.79±.34; Best double couple: $M_0$8.17200×10^{16} NP1:ϕ_s258.00000°,δ62.00000°, λ3.00000°. NP2:ϕ_s166.00000°,δ87.00000°,λ152.00000°. Principal axes: T 8.1900, Plg22.0000°, Azm118.0000°; N -0.0400, Plg62.0000°, Azm340.0000°; P -8.1540, Plg17.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 23:41:48.7±0.7**, 58°.0S**±0°.1×**9°.4W**±0°.1**, h10**^{km}**, n48,** σ**0^{s}.98**/31**, mb4.4**/13**, MS4.3**/18**, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.68	178	P	Pn	23 44 49.2	+0.5
VNA1				S	Sn	23 46 59.6	-10
VNA2	Neumayer--Watz	12.98	177	P	Pn	23 44 52.0	-0.8
	baz=356,slow=14						
VNA2				S	Sn	23 47 03.1	-14
	baz=356,slow=22						
VNA3	Neumayer Olymp	13.27	180	P	Pn	23 44 56.2	-0.6
VNA3				S	Sn	23 47 10.1	-14
SNAA	Sanae	13.96	171	P	Pn	23 45 06.2	-0.1
SNAA				S	Sn	23 47 27.0	-14
SNAA	Sanae	13.96	171	Pn	Pn	23 45 05.3	-1.0
	4.5nm,0.3s,baz=337,slow=14,SNR=201						
SNAA				Sn	Sn	23 47 26.5	-15
	2.1nm,0.3s,baz=242,slow=14,SNR=4.3						
SNAA				LR	LR	23 49 33.8	
	comp=Z,244nm,20.7s,baz=346,slow=33						
SNAA	Sanae	13.96	171	Pn	Pn	23 45 05.9	-0.4
HOPE	Hope Point	15.53	272	Pn	Pn	23 45 28.2	+0.8
HOPE				IAmb	IAmb	23 45 46.3	
	comp=Z,27nm,1.1s						
PMSA	Palmer Station	26.26	232	LR	LR	23 55 59.4	
	comp=Z,517nm,20.1s,baz=98,slow=32						
USHA	Ushuaia	31.92	250	LR	LR	23 58 04.1	
	comp=Z,2µm,20.3s,baz=100,slow=31						
QSPA	South Pole Qui	32.21	180	P	P	23 48 16.7	+0.1
	comp=Z,4.8nm,0.7s,baz=221,slow=9.1,SNR=27						
QSPA	South Pole Qui	32.21	180	P	P	23 48 17.0	+0.3
QSPA				IAmb	IAmb	23 48 28.3	
	comp=Z,10.0nm,0.9s						
MAW	Mawson	32.40	137	P	P	23 48 18.7	+0.7
	comp=Z,12nm,1.0s,baz=258,slow=9.0,SNR=9.6						
MAW				LR	LR	23 59 23.4	
	comp=Z,419nm,21.5s,baz=248,slow=32						
MAW	Mawson	32.40	137	IAmb	IAmb	23 48 27.0	
	comp=Z,1.3nm,0.8s						
MG02	Cerro Sombrero	33.41	253	P	P	23 48 25.4	-1.6
BOSA	Boshof	37.96	54	LR	LR	00 01 24.9	
	comp=Z,598nm,21.3s,baz=208,slow=31						
PLTB	Pedras Altas	39.81	292	P	P	23 49 23.9	+2.1
PLTB				IAmb	IAmb	23 49 39.1	
	comp=Z,7.6nm,1.1s						
PLCA	Paso Flores	41.83	267	P	P	23 49 37.0	-1.5
	comp=Z,0.8nm,0.6s,baz=168,slow=10,SNR=3.1						
PLCA				LR	LR	00 05 57.3	
	comp=Z,158nm,18.5s,baz=129,slow=35						
LC01	Cunco	43.86	268	P	P	23 49 53.8	-1.1
VNDA	Vanda	44.60	177	P	P	23 50 01.7	+1.5
	comp=Z,1.6nm,0.6s,baz=214,slow=6.8,SNR=5.6						
VNDA				LR	LR	00 07 46.0	
	comp=Z,318nm,21.1s,baz=184,slow=35						
VNDA	Vanda	44.60	177	P	P	23 50 01.8	+1.5
CPUP	Villa Florida	46.12	292	LR	LR	00 06 22.8	
	comp=Z,250nm,20.8s,baz=160,slow=32						
BO02	Sierra Bellavi	46.34	272	P	P	23 50 15.6	+0.9
BO02				IAmb	IAmb	23 50 35.0	
	comp=Z,14nm,1.1s						
GO05	Huala	46.79	271	P	P	23 50 19.4	+1.2
MT09	Talagante	47.23	273	P	P	23 50 21.0	-0.7
MT01	Popeta	47.30	273	P	P	23 50 22.2	+0.1
MT01				IAmb	IAmb	23 50 27.6	
	comp=Z,7.3nm,0.7s						
MT02	Curacav	47.71	273	P	P	23 50 25.7	+0.4
H10S2	ASCENSION HYDR	49.13	353	T	T	00 44 02.1	
	baz=179						
H10S3	ASCENSION HYDR	49.13	353	T	T	00 43 25.5	
	baz=41,SNR=8.0						
CO03	El Pedregal	49.35	276	P	P	23 50 37.7	-0.4
CO03				IAmb	IAmb	23 50 46.1	
	comp=Z,17nm,1.1s						
H10N3	ASCENSION HYDR	50.23	353	T	T	00 45 16.9	
	SNR=4.0						
LSZ	Lusaka	51.03	49	P	P	23 50 51.1	+0.1
LSZ				IAmb	IAmb	23 50 51.6	
	comp=Z,3.8nm,0.8s						
BDFB	Brasilia	51.16	309	LR	LR	00 09 07.3	
	comp=Z,388nm,19.3s,baz=143,slow=32						
LPAZ	La Paz	59.94	288	P	P	23 51 55.2	-0.5
	comp=Z,4.5nm,1.0s,baz=128,slow=7.7,SNR=5.5						
LPAZ				LR	LR	00 16 15.1	
	comp=Z,208nm,20.8s,baz=125,slow=35						
LPAZ	La Paz	59.94	288	P	P	23 51 55.4	-0.2
LPAZ				IAmb	IAmb	23 52 06.4	
	comp=Z,3.4nm,0.8s						
DBIC	Dimbokro	64.58	5	LR	LR	00 13 37.8	
	comp=Z,148nm,20.3s,baz=341,slow=30						
KMBO	Kilima Mbogo	67.54	52	LR	LR	00 20 07.3	
	comp=Z,696nm,18.8s,baz=208,slow=34						
TORD	Torodi Ar. Bea	71.50	11	P	P	23 53 09.0	-0.3
	comp=Z,0.8nm,1.1s,baz=200,slow=5.1,SNR=4.7						
ROSC	El Rosal	81.18	294	LR	LR	00 29 49.9	
	comp=Z,259nm,18.9s,baz=116,slow=36						
STKA	Stephens Creek	87.17	156	LR	LR	00 30 58.2	
	comp=Z,110nm,19.4s,baz=198,slow=34						
MDT	Midelt	90.58	4	LR	LR	00 30 14.9	
	comp=Z,124nm,19.9s,baz=172,slow=32						
ASAR	Alice Springs	93.03	147	P	P	23 55 01.8	-0.6
	comp=Z,1.0nm,0.8s,baz=198,slow=4.1,SNR=6.8						
EIL	Elat	94.91	38	LR	LR	00 37 08.4	
	comp=Z,130nm,18.0s,baz=209,slow=35						
WRA	Warramunga Arr	96.68	146	P	P	23 55 18.0	-1.1
	comp=Z,0.6nm,0.8s,baz=198,slow=7.1,SNR=2.3						
WRA				LR	LR	00 32 52.2	
	comp=Z,97nm,20.9s,baz=205,slow=32						
PPT	Papeete	97.82	218	LR	LR	00 32 15.9	
	comp=Z,132nm,19.0s,baz=100,slow=31						
MMAI	Mount Meron Ar	98.15	37	LR	LR	00 37 49.2	
	comp=Z,101nm,19.1s,baz=185,slow=34						
NRIK	Noril'sk	144.52	37	PKP	PKPab	00 01 22.3	+0.3
	comp=Z,1.3nm,0.3s,baz=184,slow=1.7,SNR=2.3						
YKA	Yellowknife Ar	144.58	309	PKP	PKPab	00 01 20.6	-1.8
	comp=Z,1.4nm,1.0s,baz=115,slow=3.6,SNR=9.7						
KSRS	Korea Array	145.46	108	PKPbc	PKPdf	00 01 25.8	-0.3
	comp=Z,1.9nm,1.0s,baz=198,slow=3.5,SNR=6.1						

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*NEIC **18** 23:53:00.7±0.9, 59°.52N±0°.04×153°.47W±0°.08, h114^{km}±4^{km}, Error ellipse: s-maj=6.5km s-min=5.7km az=158.0*

*AEIC **18** 23:53:01.3±1.1, 59°.50N±0°.05×153°.44W±0°.08, h114^{km}±1^{km}, ML3.3/147, ML3.5/108(NEIC), Error ellipse: s-maj=7.4km s-min=5.8km az=161.0*

ISC 18 23:53:00.5±1.3**, 59°.52N**±0°.04×**153°.44W**±0°.05**, h117**^{km}±7^{km}**, n235,** σ**0^{s}.61**/229**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUL	Augustine Lava	0.14	178		Pn	23 53 16.8	+0.2
AUL					Sn	23 53 28.8	+0.1
AUW	Augustine West	0.15	185		Pn	23 53 16.8	+0.2
AU22	Augustine Moun	0.16	164		Pn	23 53 16.7	+0.1
AU22					Sn	23 53 28.3	-0.3
AGU	Augustine-Summ	0.16	178		Pn	23 53 16.9	+0.1
AUQ	Augustine Qik'	0.17	175		Pn	23 53 16.8	+0.1
P19K	Oil Pt	0.17	39		Pn	23 53 16.6	-0.1
P19K					Sn	23 53 28.6	-0.3
P19K	Oil Pt	0.17	39	P	Pn	23 53 16.7	-0.1
	baz=215						
P19K				S	Sn	23 53 28.8	-0.1
	baz=215						
OPT	Oil Point	0.17	39		Pn	23 53 16.7	0.0
OPT	Oil Point	0.17	39	P	Pn	23 53 16.7	0.0
	baz=215						
ILS	Iliamna Low So	0.48	23		Pn	23 53 17.8	-0.3
ILS					Sn	23 53 30.7	-0.6
ILSW	Iliamna Southw	0.49	18		Pn	23 53 17.9	-0.3
ILSW	Iliamna Southw	0.49	18	IAML		23 53 19.1	
	comp=N,173nm,0.4s						
ILSW					Sn	23 53 30.7	-0.7
IVE	Iliamna Volcan	0.54	23		Pn	23 53 18.4	-0.1
IVE					Sn	23 53 31.2	-0.8
Q19K	Cape Douglas,	0.60	190		Pn	23 53 18.8	-0.1
Q19K					Sn	23 53 32.4	-0.2
Q19K	Cape Douglas,	0.60	190	P	Pn	23 53 18.8	-0.1
	baz=10						
Q19K				S	Sn	23 53 32.4	-0.2
	baz=10						
O20K	Slope Mountain	0.70	36		Pn	23 53 19.6	0.0
O20K					Sn	23 53 33.7	-0.3
O20K	Slope Mountain	0.70	36	P	Pn	23 53 19.6	0.0
	baz=216						
O20K				S	Sn	23 53 33.7	-0.3
	baz=216						
O19K	Port Alsworth	0.81	327		Pn	23 53 20.5	+0.1
O19K					Sn	23 53 35.0	-0.4
O19K				IAML		23 53 36.5	
	comp=N,2µm,0.5s						
O19K	Port Alsworth	0.81	327	P	Pn	23 53 20.4	+0.1
	baz=147						
O19K				S	Sn	23 53 35.2	-0.2
	baz=147						
P18K	Big Mountain,	0.92	263		Pn	23 53 21.4	-0.1
P18K					Sn	23 53 36.8	-0.6
P18K	Big Mountain,	0.92	263	P	Pn	23 53 21.4	-0.1
	baz=82						
P18K				S	Sn	23 53 36.8	-0.6
	baz=82						
HOM	Homer	0.93	81		Pn	23 53 21.8	+0.3
HOM					Sn	23 53 37.8	+0.5
HOM				IAML		23 53 39.1	
	comp=E,2µm,0.4s						
HOM				IAML		23 53 39.5	
	comp=N,2µm,0.3s						
HOM	Homer	0.93	81	P	Pn	23 53 21.8	+0.3
	baz=261						
HOM				S	Sn	23 53 38.0	+0.7
	baz=261						
RED	Redoubt Volcan	0.96	20		Pn	23 53 21.8	-0.2
RED					Sn	23 53 37.3	-0.8
RSO	Redoubt South	1.00	20		Pn	23 53 22.7	+0.2
RDWB	Redoubt West	1.02	17		Pn	23 53 22.5	-0.1
RDWB					Sn	23 53 38.4	-0.8
NCT	North Crescent	1.07	14		Pn	23 53 23.1	0.0
RDJH	Redoubt Jeurge	1.12	16		Pn	23 53 23.6	0.0
CNPM	China Poot	1.12	89		Pn	23 53 23.4	-0.1
CNPM				IAML		23 53 41.5	
	comp=E,866nm,0.5s						
CNPM				IAML		23 53 41.8	
	comp=N,2µm,0.4s						
DFR	Drift River	1.14	19		Pn	23 53 23.8	0.0
BRLK	Bradley Lake	1.32	78		Pn	23 53 25.2	-0.5
BRLK				IAML		23 53 45.6	
	comp=N,744nm,0.1s						
BRLK				IAML		23 53 47.4	
	comp=E,802nm,0.2s						
BRSE	Bradley Lake S	1.39	80		Pn	23 53 26.0	-0.5
BRSE	Bradley Lake S	1.39	80	P	Pn	23 53 26.0	-0.5
	baz=261						
N19K	Bonanza Creek	1.40	339		Pn	23 53 26.8	+0.2
N19K	Bonanza Creek	1.40	339	P	Pn	23 53 26.9	+0.2
	baz=158						
CAPN	Captain Cook N	1.70	42		Pn	23 53 31.3	+1.4
CAPN	Captain Cook N	1.70	42	IAML		23 53 56.6	
	comp=E,872nm,0.5s						
CAPN				IAML		23 53 56.9	
	comp=N,890nm,0.6s						
CAPN	Captain Cook N	1.70	42	P	Pn	23 53 31.3	+1.4
	baz=223						
SPCR	Spurr Chakacha	1.79	19		Pn	23 53 31.5	+0.2
SPCR	Spurr Chakacha	1.79	19	P	Pn	23 53 31.5	+0.2
	baz=200						
KDAK	Kodiak Island	1.80	165		Pn	23 53 30.3	-1.0
KDAK	Kodiak Island	1.80	165	IAML		23 53 53.6	
	comp=N,346nm,0.3s						
KDAK				IAML		23 53 56.5	
	comp=N,339nm,0.6s						
SPCN	Chakachatna No	1.82	20		Pn	23 53 32.1	+0.5
SPBG	Spurr Blockage	1.82	17		Pn	23 53 32.1	+0.5
SVW2	Sparrevohn	1.91	327		Pn	23 53 32.7	+0.1
SPCG	Spurr Capps Gl	1.91	21		Pn	23 53 32.9	+0.2
SEW	Seward	2.10	72		Pn	23 53 34.5	-0.4
SEW	Seward	2.10	72	P	Pn	23 53 34.5	-0.4
	baz=255						
O22K	Cooper Landing	2.10	61		Pn	23 53 34.9	-0.1
O22K	Cooper Landing	2.10	61	P	Pn	23 53 34.9	-0.1
	baz=244						
STLK	Strandline Lak	2.14	21		Pn	23 53 35.7	+0.1
OHAK	Old Harbor	2.31	178		Pn	23 53 36.4	-1.2
OHAK	Old Harbor	2.31	178	P	Pn	23 53 36.4	-1.2
	baz=358						
RC01	Rabbit Creek A	2.42	48		Pn	23 53 39.1	0.0
RC01	Rabbit Creek A	2.42	48	IAML		23 54 09.5	
	comp=E,404nm,0.2s						
RC01				IAML		23 54 10.1	
	comp=N,245nm,0.2s						
RC01	Rabbit Creek A	2.42	48	P	Pn	23 53 39.1	0.0
	baz=231						
M19K	Big River Lodg	2.44	349		Pn	23 53 39.5	+0.2
M19K	Big River Lodg	2.44	349	P	Pn	23 53 39.5	+0.2
	baz=169						
L19K	White Mountain	2.76	346		Pn	23 53 43.5	+0.1
L19K	White Mountain	2.76	346	P	Pn	23 53 43.5	+0.1
	baz=165						

M22K	Willow	2.77	35		Pn	23 53 43.9	+0.3
M22K	Willow	2.77	35	P	Pn	23 53 43.9	+0.3
	baz=217						
PWL	Port Wells	2.88	60		Pn	23 53 44.5	-0.6
PWL	Port Wells	2.88	60	IAML		23 54 19.3	
	comp=E,208nm,0.4s						
L20K	Farewell, AK	2.98	356		Pn	23 53 46.7	+0.4
L20K	Farewell, AK	2.98	356	P	Pn	23 53 46.7	+0.4
	baz=176						
PMR	Palmer	2.98	44		Pn	23 53 45.3	-0.9
PMR	Palmer	2.98	44	IAML		23 54 21.1	
	comp=E,94nm,0.4s						
PMR				IAML		23 54 23.5	
	comp=N,126nm,0.2s						
PMR	Palmer	2.98	44	P	Pn	23 53 45.3	-0.9
	baz=227						
SII	Sitkinak Islan	3.00	188		Pn	23 53 45.6	-1.1
SII	Sitkinak Islan	3.00	188	P	Pn	23 53 45.6	-1.1
	baz=7.3						
KNK	Knik Glacier	3.11	50		Pn	23 53 47.3	-0.9
KNK	Knik Glacier	3.11	50	IAML		23 54 22.8	
	comp=N,217nm,0.5s						
KNK				IAML		23 54 24.3	
	comp=E,191nm,0.4s						
KNK	Knik Glacier	3.11	50	P	Pn	23 53 47.3	-0.9
	baz=234						
GHO	Glory Hole Cre	3.17	43		Pn	23 53 48.0	-1.0
GHO	Glory Hole Cre	3.17	43	IAML		23 54 26.4	
	comp=E,156nm,0.4s						
GHO				IAML		23 54 26.8	
	comp=N,119nm,0.3s						
CUT	Chulitna	3.28	27		Pn	23 53 50.3	0.0
CUT				IAML		23 54 30.4	
	comp=N,137nm,0.4s						
CUT				IAML		23 54 32.9	
	comp=E,153nm,0.3s						
CUT	Chulitna	3.28	27	P	Pn	23 53 50.7	+0.4
	baz=209						
SML	Sawmill	3.40	45		Pn	23 53 51.0	-1.0
SML	Sawmill	3.40	45	IAML		23 54 31.1	
	comp=E,85nm,1.0s						
SML				IAML		23 54 33.1	
	comp=N,74nm,0.7s						
SML	Sawmill	3.40	45	P	Pn	23 53 51.0	-1.0
	baz=230						
PPLA	Purkeypile	3.44	10		Pn	23 53 52.9	+0.3
PPLA	Purkeypile	3.44	10	P	Pn	23 53 53.7	+1.1
	baz=191						
GLI	Glacier Island	3.45	64		Pn	23 53 52.0	-0.6
GLI	Glacier Island	3.45	64	IAML		23 54 30.7	
	comp=E,138nm,0.4s						
GLI				IAML		23 54 32.7	
	comp=N,136nm,0.5s						
GLI	Glacier Island	3.45	64	P	Pn	23 53 52.0	-0.6
	baz=249						
HIN	Hinchinbrook I	3.60	73		Pn	23 53 54.5	-0.1
HIN	Hinchinbrook I	3.60	73	IAML		23 54 34.9	
	comp=N,120nm,0.5s						
HIN				IAML		23 54 35.8	
	comp=E,111nm,0.5s						
TT01	Tatalina	3.62	341		Pn	23 53 54.7	-0.1
Q23K	Middleton Isla	3.62	88		Pn	23 53 54.5	-0.3
Q23K	Middleton Isla	3.62	88	P	Pn	23 53 54.5	-0.3
	baz=274						
MID	Middleton Isla	3.63	88	Pn	Pn	23 53 54.4	-0.5
TTA	Tatalina	3.64	341		Pn	23 53 55.0	-0.1
TTA	Tatalina	3.64	341	P	Pn	23 53 55.0	-0.1
	baz=159						
FID	Port Fidalgo	3.69	68		Pn	23 53 54.2	-1.6
JPK	Jack Peak	3.74	63		Pn	23 53 55.8	-0.7
SCM	Sheep Creek Mo	3.80	50		Pn	23 53 56.6	-0.7
SCM	Sheep Creek Mo	3.80	50	IAML		23 54 41.2	
	comp=E,87nm,0.4s						
SCM				IAML		23 54 42.0	
	comp=N,106nm,0.7s						
K20K	Telida	3.86	356		Pn	23 53 58.3	+0.2
K20K	Telida	3.86	356	P	Pn	23 53 58.3	+0.2
	baz=175						
CAST	Castle Rocks	3.96	9		Pn	23 53 59.8	+0.3
CAST	Castle Rocks	3.96	9	P	Pn	23 53 59.7	+0.3
	baz=190						
EYAK	Cordova Ski Ar	3.99	72		Pn	23 53 59.1	-0.7
EYAK	Cordova Ski Ar	3.99	72	P	Pn	23 53 59.1	-0.7
	baz=258						
WAT7	Susitna Watana	4.00	32		Pn	23 53 59.6	-0.3
WAT1	Susitna Watana	4.08	33		Pn	23 54 00.3	-0.6
WAT1	Susitna Watana	4.08	33	P	Pn	23 54 00.3	-0.6
	baz=218						
WAT6	Susitna Watana	4.13	40		Pn	23 54 00.9	-0.9
WAT6	Susitna Watana	4.13	40	P	Pn	23 54 00.9	-0.9
	baz=224						
DIV	Divide	4.14	64		Pn	23 54 01.3	-0.5
CHGN	Chignik	4.18	222	Pn	Pn	23 54 02.0	-0.2
CHGN				IAML		23 55 22.0	
	comp=E,68nm,2.4s						
CHGN				IAML		23 56 49.4	
	comp=N,64nm,0.1s						
KLU	Klutina	4.21	59		Pn	23 54 02.2	-0.6
KLU	Klutina	4.21	59	IAML		23 54 50.5	
	comp=E,96nm,0.5s						
KLU	Klutina	4.21	59	P	Pn	23 54 02.2	-0.6
	baz=245						
KTH	Kantishna Hill	4.22	16		Pn	23 54 02.9	0.0
KTH	Kantishna Hill	4.22	16	IAML		23 55 36.6	
	comp=N,33nm,4.8s						
TRF	Thorofare Moun	4.22	20		Pn	23 54 02.5	-0.5
TRF	Thorofare Moun	4.22	20	IAML		23 54 50.6	
	comp=N,44nm,2.0s						
TRF				IAML		23 55 25.5	
	comp=E,44nm,2.9s						
TRF	Thorofare Moun	4.22	20	P	Pn	23 54 02.5	-0.5
	baz=202						
M24K	Tolsona, Glenn	4.40	51		Pn	23 54 05.2	-0.2
M24K	Tolsona, Glenn	4.40	51	IAML		23 55 48.9	
	comp=E,69nm,4.5s						
M24K	Tolsona, Glenn	4.40	51	P	Pn	23 54 05.2	-0.2
	baz=237						
RND	Reindeer	4.48	27		Pn	23 54 05.8	-0.6
RND	Reindeer	4.48	27	IAML		23 55 31.1	
	comp=N,29nm,4.7s						
RAGM	Ragged Mountai	4.49	75		Pn	23 54 05.9	-0.7
GOAT	Goat Mountain	4.50	73		Pn	23 54 06.2	-0.4
KAIM	Kayak Island	4.59	81		Pn	23 54 07.8	0.0
KAIM	Kayak Island	4.59	81	P	Pn	23 54 07.8	0.0
	baz=268						
DHY	Denali Highway	4.61	37		Pn	23 54 07.5	-0.7
DHY	Denali Highway	4.61	37	IAML		23 55 02.4	
	comp=N,51nm,0.4s						
DHY				IAML		23 55 03.1	
	comp=E,62nm,0.4s						
DHY	Denali Highway	4.61	37	P	Pn	23 54 07.5	-0.7
	baz=222						
BMRM	Bremner River	4.64	68		Pn	23 54 07.8	-0.6
BMRM	Bremner River	4.64	68	IAML		23 55 01.7	
	comp=N,59nm,0.5s						
BMRM				IAML		23 55 01.7	
	comp=E,48nm,0.4s						
BMRM	Bremner River	4.64	68	P	Pn	23 54 07.8	-0.6
	baz=255						
J20K	Nowinta River	4.68	356		Pn	23 54 09.1	+0.1
J20K	Nowinta River	4.68	356	IAML		23 55 59.8	
	comp=E,25nm,5.0s						
J20K	Nowinta River	4.68	356	P	Pn	23 54 09.1	+0.1
	baz=176						
HMT	Hamilton	4.69	76	Pn	Pn	23 54 09.2	+0.1
BPAW	Bear Paw Mtn.	4.74	13		Pn	23 54 09.5	-0.3
BPAW	Bear Paw Mtn.	4.74	13	IAML		23 55 19.5	
	comp=E,25nm,4.7s						
BPAW				IAML		23 57 08.7	
	comp=N,22nm,5.0s						
BPAW	Bear Paw Mtn.	4.74	13	P	Pn	23 54 09.5	-0.3
	baz=195						
MCK	McKinley	4.74	25		Pn	23 54 09.5	-0.3
MCK	McKinley	4.74	25	IAML		23 55 05.7	
	comp=E,29nm,0.5s						
MCK				IAML		23 56 41.9	
	comp=N,38nm,4.5s						
MCK	McKinley	4.74	25	P	Pn	23 54 09.5	-0.3
	baz=209						
NICHA	Nichawak Mount	4.83	77		Pn	23 54 10.8	-0.2
N25K	Chitina, Valde	4.84	61		Pn	23 54 10.8	-0.4
N25K	Chitina, Valde	4.84	61	IAML		23 55 06.2	
	comp=N,34nm,0.4s						
N25K				IAML		23 55 07.4	
	comp=E,26nm,0.5s						
N25K	Chitina, Valde	4.84	61	P	Pn	23 54 10.8	-0.4
	baz=248						
SUCK	Suckling Hills	4.91	79	Pn	Pn	23 54 12.6	+0.5
HARP	HAARP	4.96	51		Pn	23 54 13.0	+0.2
HARP	HAARP	4.96	51	P	Pn	23 54 13.0	+0.2
	baz=238						
BERG	Berg Lake	4.97	76		Pn	23 54 12.6	-0.4
BWN	Browne	5.03	20	Pn	Pn	23 54 13.4	-0.3
BWN				IAML		23 56 37.6	
	comp=E,48nm,2.8s						
GLB	Gilahina Butte	5.14	64		Pn	23 54 14.7	-0.6
GLB	Gilahina Butte	5.14	64	IAML		23 55 12.3	
	comp=E,31nm,0.4s						
GLB				IAML		23 55 13.0	
	comp=N,33nm,1.1s						
GRIN	Grindle Hills	5.15	77		Pn	23 54 15.2	-0.2
PAX	Paxson	5.17	45		Pn	23 54 15.6	-0.1
PAX	Paxson	5.17	45	P	Pn	23 54 15.6	-0.1
	baz=231						
KHIT	Khitrov Hills	5.20	75		Pn	23 54 15.7	-0.5
VRDI	Verde Repeater	5.24	67		Pn	23 54 16.5	-0.3
VRDI	Verde Repeater	5.24	67	IAML		23 55 15.5	
	comp=N,27nm,0.2s						
VRDI				IAML		23 55 16.4	
	comp=E,18nm,0.4s						
CRQM	Cirque	5.30	72		Pn	23 54 17.2	-0.3
CRQE	Cirque	5.32	72	P	Pn	23 54 17.2	-0.5
	baz=261						
SNH	Sunshine Point	5.39	78		Pn	23 54 18.9	+0.3
WAX	Waxell Ridge	5.40	76		Pn	23 54 18.6	-0.2
TGL	Tana Glacier	5.45	72		Pn	23 54 19.2	-0.3
GCSA	Galena City Sc	5.49	344		Pn	23 54 19.3	-0.5
GCSA	Galena City Sc	5.49	344	P	Pn	23 54 19.3	-0.5
	baz=161						
MCARA	McCarthy VSAT	5.49	66		Pn	23 54 19.7	-0.2
MCARA	McCarthy VSAT	5.49	66	P	Pn	23 54 19.7	-0.2
	baz=254						
NEA2	Nenana	5.49	20		Pn	23 54 18.9	-1.0
NEA2	Nenana	5.49	20	P	Pn	23 54 18.8	-1.0
	baz=204						
WRH	Wood River Hil	5.57	25		Pn	23 54 20.1	-0.9
ISLE	Juniper Island	5.67	74	Pn	Pn	23 54 22.3	-0.1
PTPK	Patty Peak	5.70	68		Pn	23 54 23.2	+0.3
KIAG	Kiagna River	5.70	71		Pn	23 54 22.9	-0.1
I21K	Tanana	5.72	6	Pn	Pn	23 54 23.5	+0.5
BALM	Baldy	5.73	70		Pn	23 54 22.9	-0.3
BAGL	Bagley Icefiel	5.78	75		Pn	23 54 24.1	+0.3
CCB	Clear Creek Bu	5.78	25		Pn	23 54 22.8	-1.0
MENT	Mentasta	5.81	50	Pn	Pn	23 54 24.5	+0.2
MESA	MESA	5.83	79	Pn	Pn	23 54 23.6	-1.1
RIDG	Independent Ri	5.89	40	Pn	Pn	23 54 26.0	+0.7
YAH	Yahtse	5.94	77		Pn	23 54 26.2	0.0
COLA	College	5.97	24	Pn	Pn	23 54 25.4	-1.0
MDM	Murphy Dome	5.97	22		Pn	23 54 25.7	-0.8
L26K	Log Cabin Wild	6.00	50	Pn	Pn	23 54 27.2	+0.4
BARN	Barnard Glacie	6.06	70		Pn	23 54 27.8	+0.1
DOT	Dot Lake	6.10	43	Pn	Pn	23 54 28.9	+0.8
IL31		6.10	27		Pn	23 54 27.1	-0.9
ILAR	Eielson Array	6.10	27	Pn	Pn	23 54 27.5	-0.6
H21K	Melozitna Rive	6.17	2		Pn	23 54 28.5	-0.5
H21K	Melozitna Rive	6.17	2	P	Pn	23 54 28.5	-0.5
	baz=183						
CTG	Chitna Glacier	6.20	71	P	Pn	23 54 29.8	+0.2
	baz=262						
CTGM	Chitina Glacie	6.20	71		Pn	23 54 29.8	+0.1
TABL	Table Mountain	6.24	76		Pn	23 54 30.2	0.0
CHX	Chaix Hills	6.25	80		Pn	23 54 30.3	0.0
POKR	Poker Plat Res	6.27	24		Pn	23 54 29.6	-0.9
POKR	Poker Plat Res	6.27	24	P	Pn	23 54 29.6	-0.9
	baz=209						
M27K	Edge Creek, AK	6.31	58		Pn	23 54 31.0	-0.2
M27K	Edge Creek, AK	6.31	58	P	Pn	23 54 31.0	-0.2
	baz=248						
SCRK	Sand Creek	6.33	41		Pn	23 54 30.8	-0.6
SCRK	Sand Creek	6.33	41	P	Pn	23 54 30.8	-0.6
	baz=229						
LOGN	Logan Glacier	6.34	73		Pn	23 54 31.2	-0.4
J25K	Salcha River,	6.36	33		Pn	23 54 30.8	-0.9
J25K	Salcha River,	6.36	33	P	Pn	23 54 30.8	-0.9
	baz=220						
IM03		6.49	359		Pn	23 54 33.3	0.0
IMAR	Indian Mountai	6.49	359	Pn	Pn	23 54 33.9	+0.5
YUK2	White River	6.60	64		Pn	23 54 35.1	+0.1
BC03		6.64	53		Pn	23 54 36.0	+0.6
BCAR	Beaver Creek A	6.64	53	Pn	Pn	23 54 35.8	+0.3
PCA	Pinnacle	6.68	79		Pn	23 54 36.7	+0.7
PINM	Pinnacle	6.68	79	P	Pn	23 54 36.7	+0.6
	baz=271						
YUK3	Moose Creek	6.77	65		Pn	23 54 37.9	+0.5
YUK3	Moose Creek	6.77	65	P	Pn	23 54 37.9	+0.5
	baz=256						
J26L	Joseph Creek	6.82	39		Pn	23 54 37.1	-0.9
J26L	Joseph Creek	6.82	39	P	Pn	23 54 37.1	-0.9
	baz=227						
H24K	Noodor Dome	6.83	20		Pn	23 54 37.0	-1.1
H24K	Noodor Dome	6.83	20	P	Pn	23 54 37.0	-1.1
	baz=204						
BCPM	Bancas Point	6.99	81		Pn	23 54 42.3	+2.0
PRP	Porcupine Dome	7.04	28		Pn	23 54 40.5	-0.4
PRP	Porcupine Dome	7.04	28	P	Pn	23 54 40.5	-0.4
	baz=215						
PNL	Peninsula	7.13	83		Pn	23 54 41.7	-0.4
EGAK	Eagle	7.79	42	Pn	Pn	23 54 50.9	-0.1
FYU	Fort Yukon	7.99	24	Pn	Pn	23 54 52.7	-0.8
DAWY	Dawson	8.06	50	Pn	Pn	23 54 55.1	+0.5
BM03	Burnt Mountain	8.85	23		Pn	23 55 04.5	-0.7
BMAR	Burnt Mountain	8.86	23	Pn	Pn	23 55 04.6	-0.8
BM01	Burnt Mountain	8.89	23		Pn	23 55 05.2	-0.7
UNV	Unalaska Valle	9.16	237	Pn	Pn	23 55 11.0	+1.5
SKAG	Skagway	9.21	83	Pn	Pn	23 55 12.2	+2.0
WHY	Whitehorse	9.34	75	Pn	Pn	23 55 12.8	+0.8
BESE	Bessie Mountai	9.62	88	Pn	Pn	23 55 17.4	+1.6
SIT	Sitka	9.85	97	Pn	Pn	23 55 19.2	+0.4
JIS	Juneau Island	9.94	89	Pn	Pn	23 55 22.3	+2.3

IDC 19 00:02:08.5±2.5**, 4.°02S**×**129.°58E, h0^{km}, mb3.7**/1**, mb1 3.4**/3**, mb1mx2.9**/30**, mbtmp3.3**/3**, ML2.5**/2**, Error ellipse: s-maj=181.2km s-min=29.8km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.49	164	Pn	Pn	00 06 00.1	-1.4
	0.0nm,0.3s,baz=347,slow=14,SNR=1.9						
ASAR	Alice Springs	19.97	168	P	P	00 06 43.3	+0.7
	0.0nm,0.3s,baz=351,slow=10,SNR=2.2						
MKAR	Makanchi Array	65.52	326	P	P	00 12 53.9	0.0
	0.3nm,0.4s,baz=111,slow=8.1,SNR=10.0						

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*BJI **19** 00:13:50.2±0.0, 47.°06N×151.°80E, h119^{km}, mB5.0/29, mb5.0/63*

*IDC **19** 00:13:51.6±0.5, 46.°99N×151.°54E, h103^{km}±4^{km}, mb4.4/45, mb1 4.5/48, mb1mx4.4/70, mbtmp4.7/48, MS3.4/7, Ms1 3.4/7, ms1mx3.1/39, Error ellipse: s-maj=10.1km s-min=8.4km az=140.0*

*SKHL **19** 00:13:51.7±0.8, 46.°60N×152.°00E, h128^{km}±17^{km}, mb5.6/15, mbv5.2/2, msh5.5/3, msha6.4/6*

*MOS **19** 00:13:52.1±1.2, 46.°87N×151.°70E, h129^{km}, mb4.7/45, Error ellipse: s-maj=5.7km s-min=4.5km az=86.5*

*NEIC **19** 00:13:54.2±1.5, 47.°03N±0.°09×151.°7E±0.°1, h125^{km}±5^{km}, mb4.8/174, Error ellipse: s-maj=15.1km s-min=9.8km az=141.0*

*JMA **19** 00:13:55.7±0.6, 45.°84N×151.°88E, h129^{km}, M4.4*

ISC 19 00:13:52.2±0.4**, 46.°82N**±0.°04×**151.°73E**±0.°04**, h116**^{km}±3^{km}**, h116**^{km}**:pP-P, n709,** σ1^{s}**37**/732**, mb4.8**/187**, 58C-28D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.12	241	c *i*PN	Pn	00 14 41.4	+1.5
KUR				*i*S	Sn	00 15 19.6	+2.9
KUR				pmax	pmax		
	comp=Z,1µm,0.4s						
KUR				pmax	pmax		
	comp=N,191nm,0.3s						
KUR				pmax	pmax		
	comp=E,216nm,0.3s						
KUR				smax	smax		
	comp=N,2µm,0.7s						
KUR				smax	smax		
	comp=E,3µm,0.7s						
KUR	Kuril'sk	3.12	241	*i*P	Pn	00 14 41.4	+1.5
KUR				AMB	AMB	00 14 44.0	
	comp=E,1µm,0.4s						
KUR				*i*S	Sn	00 15 18.6	+1.9
KUR				A	A	00 15 21.0	
	comp=E,2µm,0.7s						
KUR				A	A	00 15 21.0	
	comp=E,3µm,0.7s						
KUR				A	A	00 15 22.0	
	comp=E,11µm,2.0s						
KUR				A	A	00 15 22.0	
	comp=E,12µm,2.0s						
SHO	Shikotan	4.54	231	*e*PN	Pn	00 14 57.7	-1.1
SHO				*e*S	Sn	00 15 46.1	-4.5
SHO				pmax	pmax		
	comp=Z,273nm,0.3s						
SHO				pmax	pmax		
	comp=N,64nm,0.2s						
SHO				pmax	pmax		
	comp=E,142nm,0.2s						
SHO				smax	smax		
	comp=N,706nm,0.3s						
SHO				smax	smax		
	comp=E,513nm,0.3s						
SHO	Shikotan	4.54	231	*e*P	Pn	00 14 57.7	-1.1
SHO				AMB	AMB	00 15 08.0	
	comp=E,270nm,0.3s						
SHO				*e*S	Sn	00 15 47.0	-3.6
SHO				A	A	00 15 53.0	
	comp=E,2µm,3.0s						
SHO				A	A	00 15 53.0	
	comp=E,2µm,3.0s						
SHO				A	A	00 15 54.0	
	comp=E,710nm,0.3s						
SHO				A	A	00 15 54.0	
	comp=E,510nm,0.3s						
SKR	Severo-Kuril's	4.84	35	*e*PN	Pn	00 15 02.1	-0.6
SKR				*e*S	Sn	00 15 54.2	-3.4
SKR				pmax	pmax		
	comp=Z,1µm,0.6s						
SKR				pmax	pmax		
	comp=Z,2µm,4.3s						
SKR				pmax	pmax		
	comp=Z,800nm,4.2s						
SKR				smax	smax		
	comp=E,689nm,0.4s						
SKR				smax	smax		
	comp=N,639nm,0.6s						
SKR				MLR	MLR		
	comp=Z,1µm,17.0s						
SKR				MLR	MLR		
	comp=Z,800nm,15.0s						
SKR	Severo-Kuril's	4.84	35	*e*P	Pn	00 15 03.0	+0.3
SKR				AMB	AMB	00 15 03.9	
	comp=Z,1µm,0.6s						
SKR				AMB	AMB	00 15 04.5	
	comp=Z,800nm,4.0s						
SKR				*e*S	Sn	00 15 57.6	0.0
SKR				A	A	00 16 01.6	
	comp=Z,260nm,0.3s						
SKR				A	A	00 16 01.6	
	comp=Z,130nm,0.3s						
SKR				AMS	AMS	00 17 28.2	
	comp=Z,800nm,15.0s						
YUK	Yuzh-Kuril'sk	4.98	238	c *e*PN	Pn	00 15 05.8	+1.1
YUK	Yuzh-Kuril'sk	4.98	238	*e*P	Pn	00 15 05.9	+1.2
YUK				AMB	AMB	00 15 06.0	
	comp=Z,80nm,0.3s						
YUK				AMB	AMB	00 15 06.0	
	comp=Z,180nm,0.3s						
YUK				AMB	AMB	00 15 06.0	
	comp=Z,800nm,0.3s						
YUK				*e*S	Sn	00 16 01.5	+0.3
YUK				A	A	00 16 07.0	
	comp=Z,740nm,0.6s						
YUK				A	A	00 16 07.0	
	comp=Z,940nm,0.6s						
RUSJ	Misakicho	5.31	242	*e*PN	Pn	00 15 11.5	+2.4
RUSJ				*e*S	Sn	00 16 15.1	+6.1
GLVR	Golovnino	5.36	237	*e*PN	Pn	00 15 10.1	+0.3
GLVR				*e*S	Sn	00 16 09.2	-1.0
GLVR				pmax	pmax		
	comp=Z,264nm,0.1s						
GLVR				smax	smax		
	comp=N,743nm,0.3s						
GLVR				smax	smax		
	comp=E,2µm,0.3s						
GLVR	Golovnino	5.36	237	*e*P	Pn	00 15 10.6	+0.8
GLVR				AMB	AMB	00 15 11.0	
	comp=E,260nm,0.1s						
GLVR				*e*S	Sn	00 16 09.2	-1.0
GLVR				A	A	00 16 13.0	
	comp=E,740nm,0.3s						
GLVR				A	A	00 16 13.0	
	comp=E,2µm,0.3s						
NEM2	Nemuro 2	5.47	233	P	Pn	00 15 09.8	-1.5
NEM2				*e*S	Sn	00 16 07.6	-5.3
NMR	Nemuro--Hokkai	5.47	233	*e*P	Pn	00 15 10.2	-1.1
JRA	Rausu	5.47	241	P	Pn	00 15 12.6	+1.2
PAU	Pauzhetka	5.72	34	*e*P	Pn	00 15 14.9	+0.2
PAU				AMB	AMB	00 15 15.2	
	comp=E,160nm,0.5s						
PAU				*e*S	Sn	00 16 18.2	-0.9
PAU				A	A	00 16 25.0	
	comp=E,340nm,0.3s						
PAU				A	A	00 16 25.0	
	comp=E,390nm,0.3s						
JNK	Nakash	5.92	239	P	Pn	00 15 18.0	+0.7
YSS	Yuzh-Sakhalins	6.16	275	α *e*PN	Pn	00 15 23.7	+3.1
YSS	Yuzh-Sakhalins	6.16	275	*e*P	Pn	00 15 23.7	+3.1
YSS				AMB	AMB	00 15 24.0	
	comp=E,30nm,0.8s						
YSS				*e*S	Sn	00 16 32.7	+3.1
YSS				A	A	00 16 46.5	
	comp=E,150nm,0.6s						
YSS				A	A	00 16 46.5	
	comp=E,90nm,0.6s						
YSS	Yuzh-Sakhalins	6.16	275		Pn	00 15 21.2	+0.6
JTKR	Abashiri--Toko	6.20	246	P	Pn	00 15 22.9	+1.7
JAK	Akkeshi	6.29	235	P	Pn	00 15 20.9	-1.5
JAK				*e*S	Sn	00 16 28.0	-4.8
JMP	Maruseppu	6.53	248	P	Pn	00 15 27.6	+1.9
JAR	Ashorobuto	6.65	241	P	Pn	00 15 27.9	+0.7
JOB	Onbets	6.84	238	P	Pn	00 15 29.3	-0.5
JOB				*e*S	Sn	00 16 42.5	-3.7
UGL	Uglegorsk	6.88	293	*e*PN	Pn	00 15 32.9	+2.6
UGL				S	Sn	00 16 42.8	-4.2
UGL				pmax	pmax		
	comp=Z,300nm,1.0s						
UGL	Uglegorsk	6.88	293	*e*P	Pn	00 15 32.9	+2.6
UGL				AMB	AMB	00 15 35.7	
	comp=Z,90nm,0.6s						
JKA	Kamikawa-asahi	6.97	251	*e*P	Pn	00 15 33.2	+1.6
JKA	Kamikawa-asahi	6.97	251		Pn	00 15 33.2	+1.6
ASAJ	Asahikawa	6.97	251	P	Pn	00 15 34.3	+2.8
	comp=Z,5.8nm,0.3s,baz=75,slow=11,SNR=31						
ASAJ	Asahikawa	6.97	251	P	Pn	00 15 34.3	+2.8
ASAJ	Asahikawa	6.97	251	PN	Pn	00 15 33.2	+1.6
JKK2	Kamakawa 2	6.98	248	P	Pn	00 15 33.9	+2.1
JWK2	Keihoku	7.00	261	P	Pn	00 15 37.3	+5.3
TYV	Tymovskoe	7.23	307	*e*PN	Pn	00 15 38.1	+3.1
TYV				*e*S	Sn	00 16 57.0	+1.5
TYV				pmax	pmax		
	comp=Z,58nm,0.8s						
TYV				pmax	pmax		
	comp=Z,300nm,3.0s						
TYV				smax	smax		
	comp=N,14nm,0.8s						
TYV				smax	smax		
	comp=E,18nm,0.8s						
TYV				smax	smax		
	comp=N,400nm,4.6s						
TYV	Tymovskoe	7.23	307	*e*P	Pn	00 15 38.1	+3.1
TYV				AMB	AMB	00 15 39.0	
	comp=N,60nm,0.8s						
TYV				AMB	AMB	00 15 40.0	
	comp=N,300nm,3.0s						
TYV				*e*S	Sn	00 16 57.0	+1.5
TYV				A	A	00 16 57.0	
	comp=N,10.0nm,0.8s						
TYV				A	A	00 16 57.0	
	comp=N,20nm,0.8s						
TYV				A	A	00 16 58.0	
	comp=N,400nm,5.0s						
JCH	Churui	7.29	238	P	Pn	00 15 34.9	-1.1

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JCH                              eS    Sn     00 16 51.6  -5.5
PEA0B Petropavlovsk-   7.38  29ceePN  Pn     00 15 36.6  -0.5
PEA0B Petropavlovsk-   7.38  29  Pn    Pn     00 15 35.9  -1.2
PETK  Petropavlovsk-   7.38  29  P     Pn     00 15 36.4  -0.7
      comp=N,7.2nm,0.3s,baz=196,slow=13,SNR=107
PETK                             LR    LR     00 17 49.6
      comp=N,68nm,21.1s,baz=219,slow=33
PETK  Petropavlovsk-   7.38  29  Pn    Pn     00 15 35.8  -1.3
JFR   Furan            7.44 244  P     Pn     00 15 39.4  +1.5
JAB   Ashibetsu        7.49 247  P     Pn     00 15 40.7  +2.0
JRBN  Rebuntou         7.54 263  P     Pn     00 15 43.8  +4.5
PET   Petropavlovsk    7.65  33⇑ePN   Pn     00 15 40.8  +0.1
PET   Petropavlovsk    7.65  33 eP     Pn     00 15 40.8  +0.1
PET                              AMB   AMB    00 15 47.4
      comp=N,90nm,0.5s
PET                              AMS   AMS    00 18 23.6
      comp=N,200nm,20.0s
PET   Petropavlovsk    7.65  33  Pn    Pn     00 15 39.1  -1.6
JBT2  Biratori 2       7.79 242  P     Pn     00 15 42.8  +0.1
JBT2                            eS     Sn     00 17 07.4  -1.8
JEM   Erimo            7.79 235 eS     Sn     00 17 03.4  -5.8
JEM   Erimo            7.79 235  Pn    Pn     00 15 34.1  -8.6
JEM                              Sn    Sn     00 16 53.0   -16
ERM   Erimo            7.79 235ceePN  Pn     00 15 43.2  +0.5
ERM   Erimo            7.79 235        Pn     00 15 43.5  +0.8
JNBK  Urakawa-nobuka   7.85 238  P     Pn     00 15 41.9  -1.7
JNBK                            eS     Sn     00 17 04.8  -6.0
JNB   Noboribetsu      8.77 244  P     Pn     00 15 55.4  -0.6
JNB                             eS     Sn     00 17 29.1  -4.0
JKB   Kayabe           9.11 241  P     Pn     00 15 59.5  -1.0
JKB                             eS     Sn     00 17 33.8  -7.4
JSH   Shimam           9.30 248  P     Pn     00 16 04.3  +1.1
JYM2  Yakumo 2         9.38 244  P     Pn     00 16 03.0  -1.2
NKL   Nikolayevsk      9.53 316 eP     Pn     00 16 08.1  +2.0
NKL                              AMB   AMB    00 16 16.0
      comp=N,50nm,0.8s
JTM   Tenmabayashi     9.78 236  P     Pn     00 16 06.8  -2.8
JTM                             eS     Sn     00 17 46.3   -11
JTM   Tenmabayashi     9.78 236  Pn    Pn     00 16 07.3  -2.3
JANG  Nango            9.81 233  P     Pn     00 16 06.0  -4.1
JANG                            eS     Sn     00 17 46.1   -12
JOSM  Okushiri--Mats   9.96 246  P     Pn     00 16 11.1  -0.9
TEY   Ternei          10.69 266⇑ePN   Pn     00 16 23.8  +1.9
TEY                              pmax  pmax
      comp=N,20nm,1.1s
TEY                              pmax  pmax
      comp=Z,30nm,0.9s
TEY   Ternei          10.69 266 eP     Pn     00 16 23.0  +1.1
TEY                              AMB   AMB    00 16 25.0
      comp=Z,20nm,0.9s
JRG   Rokugo          10.98 232  P     Pn     00 16 22.9  -3.0
JIO   Ouri            11.32 226 eS     Sn     00 18 21.9   -13
JMM   Marumori        12.05 226  Pn    Pn     00 16 38.6  -1.4
MA2   Magadan         12.80 358⇑ePN   Pn     00 16 49.5  -0.1
MA2   Magadan         12.80 358 eP     Pn     00 16 49.5  -0.1
KLR   Kul'dur         13.59 288  P     P      00 17 02.8  -2.1
      comp=Z,0.3nm,0.3s,baz=98,slow=15,SNR=23
KLR   Kul'dur         13.59 288deP     P      00 17 02.0  -2.9
KLR   Kul'dur         13.59 288 eP     P      00 17 02.0  -2.9
USA0B Ussuriysk Arra  14.09 266  P     P      00 17 07.8  -2.7
USA0B Ussuriysk Arra  14.09 266  Pn    P      00 17 07.8  -2.7
USRK  Ussuriysk Ar.   14.09 266  P     Pn     00 17 07.1  +0.6
      baz=76,slow=14,SNR=47
USRK  Ussuriysk Ar.   14.09 266  P     Pn     00 17 07.4  +1.0
USRK  Ussuriysk Ar.   14.09 266  Pn    Pn     00 17 07.4  +1.0
MAJO  Matsushiro      14.38 229deP     Pn     00 17 09.3  -1.0
MAJO                             pmax  pmax
      comp=Z,31nm,1.0s
MAJO  Matsushiro      14.38 229  P     P      00 17 14.9  +1.2
MAT   Matsushiro      14.38 229  P     Pn     00 17 08.2  -2.1
MJAR  Matsushiro Arr  14.38 229  P     Pn     00 17 08.6  -1.6
      comp=Z,0.2nm,0.3s,baz=24,slow=12,SNR=4.7
MJAR                             LR    LR     00 22 25.4
      comp=Z,12nm,20.8s,baz=55,slow=36
MJAR  Matsushiro Arr  14.38 229  Pn    P      00 17 14.2  +0.4
VLA   Vladivostok     14.52 262⇑iP    P      00 17 12.7  -2.5
VLA                              pmax  pmax
      comp=Z,101nm,2.7s
VLA   Vladivostok     14.52 262 eP     P      00 17 12.7  -2.5
JGF   Kuroka          15.55 229  P     P      00 17 28.1  +1.4
JGF                              IAmb  IAmb   00 17 29.2
      comp=Z,37nm,0.7s
MDJ   Mudanjiang      15.62 270  P     P      00 17 26.5  -0.9
MDJ                              pmax  pmax
      comp=Z,36nm,1.0s
MDJ                              pmax  pmax
      comp=Z,170nm,3.6s
MDJ   Mudanjiang      15.62 270        P      00 17 26.6  -0.7
MDJ                              IAmb  IAmb   00 17 28.1
      comp=Z,46nm,1.2s
INU   Inuyama         15.92 229        P      00 17 30.1  -0.6
INU                              IAmb  IAmb   00 17 33.0
      comp=Z,58nm,1.0s
SEY   Seymchan        16.16   1  P     P      00 17 32.5  -0.7
      comp=Z,1.2nm,0.3s,baz=0.3,slow=23,SNR=12
JWT   Wachi           16.83 233  P     Pn     00 17 40.4  -0.2
JWT                              IAmb  IAmb   00 17 43.6
      comp=Z,72nm,1.1s
ZEA   Zeya            17.06 303 eP     Pn     00 17 43.7  +0.4
ZEA                              pmax  pmax
      comp=E,20nm,0.6s
ZEA                              pmax  pmax
      comp=N,20nm,0.7s
ZEA                              pmax  pmax
      comp=Z,30nm,0.9s
ZEA   Zeya            17.06 303 eP     Pn     00 17 43.7  +0.4
ZEA                              AMB   AMB    00 17 46.2
      comp=Z,30nm,0.9s
JHS   Saijyo          18.31 237  P     Pn     00 17 58.5  -0.1
JHS                              IAmb  IAmb   00 18 00.2
      comp=Z,52nm,0.9s
CN2   Changchun       18.70 270 eP     P      00 17 59.0  -2.3
CN2                              pmax  pmax
      comp=Z,10.0nm,0.7s
JMN   Monobe          18.82 232  P     Pn     00 18 04.8  +0.2
YAK   Yakutsk         19.76 328  P     Pn     00 18 13.2  -2.1
      comp=Z,0.2nm,0.3s,baz=310,slow=2.9,SNR=24
YAK                              LR    LR     00 26 33.0
      comp=Z,90nm,19.0s,baz=88,slow=39
YAK   Yakutsk         19.76 328 eP     Pn     00 18 13.0  -2.2
YAK                              pmax  pmax
      comp=Z,188nm,1.2s
YAK                              pmax  pmax
      comp=E,84nm,1.2s
YAK                              pmax  pmax
      comp=N,98nm,1.2s
YAK   Yakutsk         19.76 328  P     P      00 18 10.1  -2.5
KSWJU Wonju           19.86 250  P     Pn     00 18 18.0  +1.3
      SNR=5.5
KSRS  Korea Array     19.92 251  P     Pn     00 18 15.5  -1.7
      comp=N,1.9nm,0.3s,baz=56,slow=11,SNR=29
KSRS                             PcP   PcP    00 22 28.2  +1.7
      comp=N,0.3nm,0.3s,baz=347,slow=1.6,SNR=6.0
KSRS                             LR    LR     00 25 48.7
      comp=N,83nm,19.3s,baz=5.0,slow=36
KS19  Wonju Array Si  19.93 251  P     Pn     00 18 16.0  -1.4
KS19                             IAmb  IAmb   00 18 20.0
      comp=Z,45nm,1.4s
KSAR  Wonju Array Be  19.95 251  P     Pn     00 18 15.7  -1.9
KSAR  Wonju Array Be  19.95 251        Pn     00 18 15.7  -1.9
KSMGY Mungyeong       20.30 249  P     Pn     00 18 20.7  -1.1
      SNR=6.4
KSMGY Mungyeong       20.30 249  P     Pn     00 18 20.7  -1.1
      SNR=6.4
KSBON Boeun           20.56 249  P     Pn     00 18 23.3  -1.5
      SNR=6.3
KSBON Boeun           20.56 249  P     Pn     00 18 23.3  -1.5
      SNR=6.3
KSCPR CHUPUNGNYEONG20.62 248     P     Pn     00 18 24.3  -1.3
      SNR=11
KSCPR CHUPUNGNYEONG20.62 248     P     Pn     00 18 24.3  -1.3
      SNR=11
OKCB  Cheongsan-myeo  20.66 248  P     Pn     00 18 24.4  -1.5
      SNR=9.2
OKCB  Cheongsan-myeo  20.66 248  P     Pn     00 18 24.4  -1.5
      SNR=9.2
INCN  Inchon          20.74 252  P     Pn     00 18 24.8  -2.1
INCN                             pmax  pmax
      comp=Z,47nm,0.7s
INCN  Inchon          20.74 252  P     Pn     00 18 24.8  -2.1
INCN                             IAmb  IAmb   00 18 28.8
      comp=Z,46nm,0.7s
TJN   Taejon          20.92 249⇓eP    P      00 18 25.9  +0.6
JNU   Nakatsue        20.95 237  P     Pn     00 18 27.1  -2.4
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      comp=Z,31nm,0.8s,baz=69,slow=5.6,SNR=6.8
JNU   Nakatsue        20.95 237  P     Pn     00 18 27.3  -2.1
JNU                              IAmb  IAmb   00 18 30.7
      comp=Z,39nm,1.0s
KSKCH Geochang        21.04 246  P     P      00 18 28.5  +1.8
      SNR=5.9
KSKCH Geochang        21.04 246  P     P      00 18 28.5  +1.8
      SNR=5.9
HIA   Hailar          21.45 288deP     P      00 18 29.0  -1.9
HIA                              pmax  pmax
      comp=Z,13nm,1.1s
HIA   Hailar          21.45 288  P     P      00 18 28.7  -2.2
KSKWJ Gwangju         21.91 247  P     P      00 18 38.8  +2.9
      SNR=8.9
KSKWJ Gwangju         21.91 247  P     P      00 18 39.0  +3.1
      SNR=8.9
KSKWJ Gwangju         21.91 247  P     P      00 18 39.0  +3.1
      SNR=8.8
KSKWJ Gwangju         21.91 247  P     P      00 18 38.8  +2.9
      SNR=8.9
KSKWJ Gwangju         21.91 247  P     P      00 18 39.0  +3.1
      SNR=8.9
KSKWJ Gwangju         21.91 247  P     P      00 18 39.0  +3.1
      SNR=8.8
BOSB  Boseong-gun     22.03 246  P     P      00 18 40.1  +3.0
      SNR=7.0
BOSB  Boseong-gun     22.03 246  P     P      00 18 40.1  +3.0
      SNR=7.0
KOHB  KOHEUNG         22.08 245  P     P      00 18 39.0  +1.3
      SNR=7.8
KOHB  KOHEUNG         22.08 245  P     P      00 18 39.0  +1.3
      SNR=7.8
GMDB  Geomundo        22.45 244  P     P      00 18 43.1  +1.6
      SNR=7.1
GMDB  Geomundo        22.45 244  P     P      00 18 43.1  +1.6
      SNR=7.1
BILL  Bilibino        22.55  14⇑eP    P      00 18 40.8  -1.3
BILL                            i             00 19 06.2
BILL                            eS     S      00 22 39.3  -1.3
BILL                             pmax  pmax
      comp=Z,31nm,2.5s
BILL  Bilibino        22.55  14 eP     P      00 18 41.7  -0.4
DL2   Dalian          23.33 261  P     P      00 18 51.3  +1.4
DL2                              pmax  pmax
      comp=Z,34nm,0.8s
BOD   Bodaibo         25.22 310 eP     P      00 19 05.1  -1.6
BOD                              pmax  pmax
      comp=Z,27nm,1.6s
BJI   Beijing         26.53 268  P     P      00 19 21.4  +2.7
BJI                              pP    pwP    00 19 48.6  +2.6
BJI                              pmax  pmax
      comp=Z,22nm,0.9s
BJT   Baijiatuau      26.55 268  P     P      00 19 21.3  +2.4
BJT                              pmax  pmax
      comp=Z,14nm,0.8s
BJT   Baijiatuau      26.55 268  P     P      00 19 21.3  +2.4
BJT                              IAmb  IAmb   00 19 22.6
      comp=Z,14nm,0.8s
TIXI  Tiksi           27.14 344  P     P      00 19 22.0  -1.9
      comp=Z,0.8nm,0.3s,baz=132,slow=12,SNR=1.9
TIXI                             PcP   PcP    00 22 41.6  +0.4
      comp=Z,1.7nm,0.5s,baz=110,slow=2.2,SNR=3.6
TIXI  Tiksi           27.14 344⇓eP    P      00 19 21.8  -2.1
TIXI                             pmax  pmax
      comp=Z,20nm,4.2s
JOW   Kunigami        27.21 231  P     P      00 19 26.0  +0.9
      comp=Z,22nm,0.5s,baz=3.8,slow=9.4,SNR=7.2
TIA   Tai'an          27.79 260 eP     P      00 19 30.6  +0.5
TIA                              pmax  pmax
      comp=Z,12nm,1.5s
NJ2   Nanjing         29.11 251 eP     P      00 19 42.1  +0.3
NJ2                              pmax  pmax
      comp=Z,19nm,0.7s
HHC   Hu-ho-hao-te    29.34 273 eP     P      00 19 44.1  +0.2
HHC                              pmax  pmax
      comp=Z,39nm,1.1s
HHC                              pmax  pmax
      comp=Z,260nm,5.2s
H11N2 WAKE ISLAND Hy 29.73 150   T     T      00 51 13.7
      baz=339,slow=75,SNR=1020
H11N1 WAKE ISLAND Hy 29.74 150   T     T      00 51 14.8
      baz=339,slow=75,SNR=793
H11N3 WAKE ISLAND Hy 29.75 150   T     T      00 51 22.9
      baz=339,slow=75,SNR=888
ULN   Ulaanbaatar     29.98 289c iP    P      00 19 48.6  -0.9
ULN                              pmax  pmax
      comp=Z,12nm,1.3s
ULN   Ulaanbaatar     29.98 289  P     P      00 19 48.6  -0.9
ULN   Ulaanbaatar     29.98 289 eP     P      00 19 48.6  -0.9
ULN   Ulaanbaatar     29.98 289  P     P      00 19 49.6  +0.1
ULN                              IAmb  IAmb   00 19 55.3
      comp=Z,22nm,1.0s
SONM  Songino Array   30.42 289  P     P      00 19 52.5  -0.9
      comp=Z,3.1nm,0.9s,baz=75,slow=8.4,SNR=15
SONM                             PcP   PcP    00 22 50.7  +0.7
      comp=Z,1.4nm,0.6s,baz=143,slow=3.3,SNR=4.9
SONM                             ScP   ScP    00 26 22.3  +0.7
      comp=Z,0.3nm,0.5s,baz=119,slow=2.7,SNR=4.0
SONM  Songino Array   30.42 289  P     P      00 19 52.3  -1.0
H11S1 WAKE ISLAND Hy 30.80 151   T     T      00 52 41.9
      baz=340,slow=76,SNR=442
H11S3 WAKE ISLAND Hy 30.81 151   T     T      00 52 40.0
      baz=340,slow=76,SNR=236
H11S2 WAKE ISLAND Hy 30.82 151   T     T      00 52 33.0
      baz=340,slow=76,SNR=304
TLY   Talaya          31.30 297  P     P      00 20 00.7  -0.3
      comp=Z,9.3nm,0.8s,baz=50,slow=9.4,SNR=3.2
TLY                              LR    LR     00 32 47.5
      comp=Z,66nm,18.8s,baz=32,slow=36
TLY   Talaya          31.30 297c iP    P      00 20 00.4  -0.6
TLY                              pmax  pmax
      comp=Z,13nm,0.9s
TLY                              pmax  pmax
      comp=Z,10.0nm,1.3s
TLY   Talaya          31.30 297  P     P      00 20 00.9  -0.1
TLY   Talaya          31.30 297 eP     P      00 20 00.4  -0.6
TLY   Talaya          31.30 297  P     P      00 20 00.2  -0.8
TLY                              IAmb  IAmb   00 20 01.8
      comp=Z,14nm,0.9s
ZAK   Zakamensk       31.79 295 eP     P      00 20 04.5  -0.9
ZAK                              pmax  pmax
      comp=Z,14nm,1.1s
WHN   Wuhan           33.03 254⇓iP    P      00 20 16.9  +0.6
WHN                              pmax  pmax
      comp=Z,50nm,0.5s
IMAR  Indian Mountai  34.27  36  P     P      00 20 26.3  -0.4
A21K  Barrow          34.37  27  P     P      00 20 27.0  -0.4
A21K                             IAmb  IAmb   00 20 29.8
      comp=Z,23nm,0.7s
A21K  Barrow          34.37  27  P     P      00 20 27.8  +0.4
      baz=253,SNR=12
TWG   Pinlang         34.37 236  P     P      00 20 28.4  +0.5
TWG                              IAmb  IAmb   00 20 28.9
      comp=Z,23nm,0.7s
XAN   Xi'an           34.58 264  P     P      00 20 30.4  +0.7
XAN                              pmax  pmax
      comp=Z,33nm,1.2s
H21K  Melozitna Rive  34.63  37  P     P      00 20 30.3  +0.6
      baz=265
BPAW  Bear Paw Mtn.   35.31  40  P     P      00 20 35.8  +0.2
BPAW                             IAmb  IAmb   00 20 41.6
      comp=Z,27nm,1.8s
KTH   Kantishna Hill  35.33  41  P     P      00 20 36.7  +0.8
KTH                              IAmb  IAmb   00 21 03.1
      comp=Z,20nm,1.2s
MLY   Manley          35.45  38  P     P      00 20 38.1  +1.3
      baz=268
COLD  Coldfoot        35.81  34  P     P      00 20 39.7  -0.2
COLD  Coldfoot        35.81  34  P     P      00 20 40.5  +0.7
      baz=265
BWN   Browne          35.98  40  P     P      00 20 41.6  +0.3
I23K  Minto, Yukon-K  36.04  38  P     P      00 20 42.2  +0.5
I23K                             IAmb  IAmb   00 21 24.6
      comp=Z,32nm,1.8s
NEA2  Nenana          36.15  39  P     P      00 20 43.8  +1.0
      baz=270
TOLK  Toolik Lake Re  36.19  32  P     P      00 20 43.6  +0.6
TOLK  Toolik Lake Re  36.19  32  P     P      00 20 43.7  +0.6
      baz=264,SNR=5.4
MCK   McKinley        36.22  40  P     P      00 20 43.8  +0.5
MCK                              pmax  pmax
      comp=Z,9.0nm,1.0s
MCK   McKinley        36.22  40  P     P      00 20 43.8  +0.5
MCK   McKinley        36.22  40  P     P      00 20 44.3  +0.9
      baz=271
RND   Reindeer        36.26  41  P     P      00 20 43.7  -0.1
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RND                              pmax  pmax
      comp=Z,51nm,2.0s
RND   Reindeer        36.26  41  P     P      00 20 43.7  -0.1
RND                              IAmb  IAmb   00 21 28.8
      comp=Z,51nm,2.0s
GHO   Glory Hole Cre  36.30  44  P     P      00 20 45.0  +0.9
GHO                              IAmb  IAmb   00 21 32.2
      comp=Z,50nm,1.7s
MDM   Murphy Dome     36.51  38  P     P      00 20 45.9   0.0
KNK   Knik Glacier    36.55  44  P     P      00 20 46.2   0.0
KNK                              IAmb  IAmb   00 20 52.4
      comp=Z,31nm,1.4s
SML   Sawmill         36.58  44  P     P      00 20 46.5   0.0
SML                              IAmb  IAmb   00 20 48.6
      comp=Z,43nm,1.4s
SML   Sawmill         36.58  44  P     P      00 20 47.1  +0.6
      baz=274
PWL   Port Wells      36.65  45  P     P      00 20 48.2  +1.1
H24K  Noodor Dome     36.67  37  P     P      00 20 47.9  +0.7
H24K                             IAmb  IAmb   00 21 06.5
      comp=Z,22nm,1.8s
H24K  Noodor Dome     36.67  37  P     P      00 20 48.2  +1.0
      baz=269
COLA  College         36.67  38⇑eP    P      00 20 47.9  +0.8
COLA                             pmax  pmax
      comp=Z,11nm,0.9s
CCB   Clear Creek Bu  36.70  39  P     P      00 20 47.6  +0.3
CCB                              IAmb  IAmb   00 21 41.6
      comp=Z,16nm,1.6s
POKR  Poker Plat Res  36.85  38  P     P      00 20 49.2  +0.5
POKR                             IAmb  IAmb   00 20 51.4
      comp=Z,12nm,0.9s
POKR  Poker Plat Res  36.85  38  P     P      00 20 49.9  +1.2
      baz=271
LZH   Lanzhou         36.94 271 eP     P      00 20 51.3  +1.3
LZH                              pP    pwP    00 21 19.3  +3.8
LZH                              sP    sP     00 21 33.9  +5.3
LZH                              pmax  pmax
      comp=Z,28nm,1.3s
DHY   Denali Highway  36.94  41  P     P      00 20 49.6  -0.1
DHY                              IAmb  IAmb   00 20 51.4
      comp=Z,14nm,1.3s
DHY   Denali Highway  36.94  41  P     P      00 20 50.1  +0.4
      baz=274
SCM   Sheep Creek Mo  37.05  44  P     P      00 20 51.3  +0.8
SCM                              pmax  pmax
      comp=Z,105nm,2.0s
SCM   Sheep Creek Mo  37.05  44  P     P      00 20 51.2  +0.8
HDA   Harding Lake    37.07  39  P     P      00 20 50.5   0.0
HDA                              IAmb  IAmb   00 21 18.0
      comp=Z,20nm,1.6s
HDA   Harding Lake    37.07  39  P     P      00 20 50.9  +0.3
      baz=272
IL31                  37.09  39  IAmb  IAmb   00 21 17.1
      comp=Z,36nm,2.0s
ILAR  Eielson Array   37.09  39  P     P      00 20 50.9  +0.2
      comp=Z,1.2nm,0.5s,baz=263,slow=8.1,SNR=17
ILAR                             PcP   PcP    00 23 07.6  -1.0
      comp=Z,0.6nm,0.5s,baz=279,slow=3.7,SNR=6.4
ILAR  Eielson Array   37.09  39  P     P      00 20 50.7   0.0
M24K  Tolsona, Glenn  37.57  43  P     P      00 20 55.9  +1.0
PRP   Porcupine Dome  37.65  37  P     P      00 20 56.3  +0.7
PRP   Porcupine Dome  37.65  37  P     P      00 20 56.8  +1.2
      baz=272
FYU   Fort Yukon      37.74  36  P     P      00 20 57.3  +1.1
FYU                              IAmb  IAmb   00 21 20.8
      comp=Z,51nm,1.8s
J25K  Salcha River,   37.75  39  P     P      00 20 56.1  -0.3
      baz=273
KLU   Klutina         37.75  44  P     P      00 20 56.9  +0.5
KLU                              IAmb  IAmb   00 21 04.4
      comp=Z,42nm,1.7s
BMAR  Burnt Mountain  38.00  34  P     P      00 20 59.4  +1.0
GTA   Gaotai          38.02 278 ⇓P    P      00 20 58.1  -0.9
GTA                              pP    pP     00 21 24.8  +0.2
GTA                              sP    sP     00 21 43.6  +6.0
GTA                              PcP   PcP    00 23 13.8  +1.8
GTA                              pmax  pmax
      comp=Z,15nm,1.2s
NRIK  Noril'sk        38.21 329  PcP   PcP    00 23 12.9  +1.0
      comp=Z,1.6nm,0.3s,baz=59,slow=4.3,SNR=5.5
N25K  Chitina, Valde  38.37  44  P     P      00 21 02.5  +0.9
N25K                             IAmb  IAmb   00 22 07.8
      comp=Z,47nm,1.9s
SCRK  Sand Creek      38.39  40  P     P      00 21 01.6  -0.2
SCRK  Sand Creek      38.39  40  P     P      00 21 01.9  +0.1
      baz=275
BMRM  Bremner River   38.45  45  P     P      00 21 03.2  +1.0
BMRM                             IAmb  IAmb   00 21 33.6
      comp=Z,12nm,1.1s
VRDI  Verde Repeater  38.97  44  P     P      00 21 06.8  +0.1
VRDI                             IAmb  IAmb   00 21 42.1
      comp=Z,34nm,1.7s
M26K  Nabesna, AK     39.01  42  P     P      00 21 08.5  +1.6
M26K                             IAmb  IAmb   00 21 10.0
      comp=Z,10.0nm,0.9s
M26K  Nabesna, AK     39.01  42  P     P      00 21 08.8  +1.9
      baz=278
CRQM  Cirque          39.19  45  P     P      00 21 09.5  +0.9
CRQE  Cirque          39.22  45  P     P      00 21 10.2  +1.5
      baz=280
WAX   Waxell Ridge    39.38  45  P     P      00 21 10.9  +0.9
L27K  Beaver Creek,   39.45  41  P     P      00 21 11.4  +0.8
L27K                             IAmb  IAmb   00 21 37.8
      comp=Z,16nm,1.2s
L27K  Beaver Creek,   39.45  41  P     P      00 21 12.2  +1.6
      baz=278
BCAR  Beaver Creek A  39.47  41  P     P      00 21 11.3  +0.5
M27K  Edge Creek, AK  39.53  42  P     P      00 21 13.4  +2.0
M27K                             IAmb  IAmb   00 21 14.9
      comp=Z,17nm,1.2s
M27K  Edge Creek, AK  39.53  42  P     P      00 21 13.4  +2.0
      baz=279
EGAK  Eagle           39.54  38  P     P      00 21 11.1   0.0
EGAK  Eagle           39.54  38  P     P      00 21 11.4  +0.3
      baz=277,SNR=6.1
ISLE  Juniper Island  39.61  45  P     P      00 21 11.9   0.0
ISLE                             IAmb  IAmb   00 21 42.5
      comp=Z,38nm,1.3s
YAH   Yahtse          39.94  45  P     P      00 21 14.7  -0.1
YAH                              IAmb  IAmb   00 21 18.6
      comp=Z,22nm,0.8s
CD2   Chengdu         39.94 264  P     P      00 21 15.6  +0.6
CD2                              pmax  pmax
      comp=Z,100nm,0.9s
BVCY  Beaver Creek    39.99  42  P     P      00 21 16.6  +1.6
      baz=280
CTG   Chitna Glacier  40.02  44  P     P      00 21 17.0  +1.6
      baz=281
TABL  Table Mountain  40.22  45  P     P      00 21 14.8  -2.3
YUK3  Moose Creek     40.29  43  P     P      00 21 18.8  +1.1
      baz=281
DAWY  Dawson          40.39  39  P     P      00 21 19.4  +1.1
I29M  Ogilvie Camp,   40.66  37  P     P      00 21 21.9  +1.4
      baz=278,SNR=6.0
GYA   Guiyang         40.81 256⇑iP    P      00 21 23.1  +0.9
GYA                              pP    pwP    00 21 51.3  +0.7
GYA                              pmax  pmax
      comp=Z,42nm,1.0s
ZALV  Zalesovo Beam   41.80 305  P     P      00 21 27.9  -2.0
      comp=Z,1.4nm,0.4s,baz=66,slow=7.3,SNR=9.2
ZALV                             PcP   PcP    00 23 24.0  +0.3
      comp=Z,2.9nm,0.4s,baz=77,slow=2.9,SNR=16
ZALV                             LR    LR     00 40 27.5
      comp=Z,72nm,18.1s,baz=59,slow=38
ZALV  Zalesovo Beam   41.80 305 i P    P      00 21 28.1  -1.8
ZALV                             pmax  pmax
      comp=Z,1.0nm,0.4s
INK   Inuvik          42.10  32  P     P      00 21 33.1  +1.0
      comp=Z,2.7nm,0.5s,baz=295,slow=6.2,SNR=17
INK   Inuvik          42.10  32  P     P      00 21 33.0  +0.9
      baz=279
N31M  Braeburn, Yuko  42.53  43  P     P      00 21 38.1  +2.3
      baz=285
M31M  Drury Creek, Y  42.99  41  P     P      00 21 40.9  +1.5
      baz=285
WHY   Whitehorse      43.17  44  P     P      00 21 43.0  +2.0
      baz=286
WMQ   Urumqi          44.02 291 eP     P      00 21 48.4  +0.4
WMQ                              pmax  pmax
      comp=Z,13nm,0.7s
WMQ                              pmax  pmax
      comp=Z,110nm,3.7s
WMQ                              LR    LR
      comp=Z,830nm,29.3s
WMQ                              LR    LR
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      comp=Z,1μm,28.9s
WMQ                                LR      LR
      comp=Z,98nm,28.9s
A36M  Sachs Harbour     44.21  26    IAmb    IAmb    00 21 51.8
      comp=Z,22nm,0.7s
A36M  Sachs Harbour     44.21  26    P       P       00 21 50.5 +1.5
      baz=282,SNR=9.2
P33M  Teslin, Yukon     44.28  44    P       P       00 21 51.8 +1.9
      baz=288
KMI   Kunming           44.32 258 ⇑ P       P       00 21 52.1 +1.3
KMI                                  pmax    pmax
      comp=Z,33nm,1.1s
MK31  Makanchi Array    46.07 297 d iP      P       00 22 02.9 -1.2
MK31  Makanchi Array    46.07 297    P       P       00 22 02.6 -1.4
MKAR  Makanchi Array    46.07 297    P       P       00 22 03.0 -1.1
      comp=Z,7.6nm,0.7s,baz=62,slow=6.3,SNR=44
MKAR                                 PcP     PcP     00 23 38.2 -0.2
      comp=Z,2.5nm,0.5s,baz=71,slow=2.6,SNR=17
MKAR                                 ScP     ScP     00 27 20.5 -0.1
      comp=Z,1.0nm,0.7s,baz=66,slow=4.5,SNR=6.1
SLVN  Son La            46.15 253    P       P       00 22 07.0 +1.9
SLVN                                 IAmb    IAmb    00 22 07.4
      comp=Z,11nm,0.8s
MAKZ  Makanchi          46.25 297    P       P       00 22 04.5 -1.0
MAKZ                                 pmax    pmax
      comp=Z,8.0nm,0.9s
MAKZ  Makanchi          46.25 297    P       P       00 22 04.5 -1.0
KURK  Kurchatov         46.54 303 c iP      P       00 22 06.0 -1.6
KURK                                 pmax    pmax
      comp=Z,12nm,1.1s
KURK  Kurchatov         46.54 303    P       P       00 22 05.7 -1.9
KURK                                 IAmb    IAmb    00 22 07.1
      comp=Z,14nm,1.1s
KURBB Kurchatov Arra    46.63 303    P       P       00 22 06.8 -1.6
      comp=Z,6.4nm,0.8s,baz=69,slow=8.2,SNR=25
KURBB                                PcP     PcP     00 23 40.6 +0.3
      comp=Z,2.6nm,0.8s,baz=70,slow=3.8,SNR=5.8
EUNU  Eureka            49.25  11    P       P       00 22 28.3 +0.1
EUNU                                 IAmb    IAmb    00 22 29.1
      comp=Z,12nm,1.0s
LSA   Lhasa             49.32 272    P       P       00 22 31.9 +2.0
LSA   Lhasa             49.32 272    P       P       00 22 32.0 +2.0
UBPT  Khong Chiam       49.56 246    P       P       00 22 33.1 +1.8
BVAR  Borovoye Array    50.08 309    P       P       00 22 33.6 -1.2
      comp=Z,3.6nm,0.4s,baz=53,slow=2.9,SNR=48
BVAR                                 PcP     PcP     00 23 53.1 +0.3
      comp=Z,6.8nm,0.8s,baz=175,slow=2.4,SNR=8.2
BRVK  Borovoye          50.12 309 ⇑eP      P       00 22 34.1 -1.0
BRVK                                 pmax    pmax
      comp=Z,17nm,1.3s
BRVK  Borovoye          50.12 309  eP      P       00 22 34.1 -1.0
BRVK  Borovoye          50.12 309    P       P       00 22 34.3 -0.8
BRVK                                 IAmb    IAmb    00 22 35.5
      comp=Z,8.3nm,0.6s
RES   Resolute Bay      51.07  18    P       P       00 22 42.1 +0.1
      comp=Z,3.5nm,0.6s,baz=310,slow=11,SNR=6.2
RES                                  PcP     PcP     00 23 56.9 +0.9
      comp=Z,1.8nm,0.7s,baz=326,slow=3.8,SNR=5.0
RES   Resolute Bay      51.07  18    P       P       00 22 41.7 -0.3
CHTO  Chiang Mai        51.21 255    P       P       00 22 44.6 +0.9
CHTO                                 pmax    pmax
      comp=Z,27nm,0.9s
CHTO  Chiang Mai        51.21 255    P       P       00 22 44.6 +0.9
TARG  Taragay, Kyrgy    51.37 293    P       P       00 22 45.5 +0.3
SHL   Shillong          51.42 267    P       P       00 22 45.8 +0.3
SHL                                  pmax    pmax
      comp=Z,100nm,1.0s
SHL   Shillong          51.42 267    P       P       00 22 46.0 +0.5
      SNR=14
SHL   Shillong          51.42 267    P       P       00 22 45.8 +0.3
YKA   Yellowknife Ar    51.44  36    P       P       00 22 45.5 +0.7
      comp=Z,5.1nm,0.8s,baz=297,slow=7.0,SNR=33
YKA                                  pP      pP      00 23 10.3 -1.8
      comp=Z,2.4nm,0.8s,baz=298,slow=7.4,SNR=4.6
YKA                                  PcP     PcP     00 23 58.3 +0.7
      comp=Z,0.6nm,0.4s,baz=303,slow=3.7,SNR=6.0
YKA   Yellowknife Ar    51.44  36    P       P       00 22 45.0 +0.2
CMAR  Chiang Mai Arr    51.47 255    P       P       00 22 47.0 +1.3
      comp=Z,10nm,0.8s,baz=33,slow=7.5,SNR=41
CMAR                                 PcP     PcP     00 23 59.9 +1.5
      comp=Z,1.7nm,0.3s,baz=5.4,slow=2.8,SNR=7.0
CMAR  Chiang Mai Arr    51.47 255 ceP      P       00 22 47.4 +1.8
CMAR                                 pmax    pmax
      comp=Z,11nm,0.8s
KDJ   Kajisay           51.55 294    P       P       00 22 45.9 -0.3
KDJ                                  pmax    pmax
      comp=Z,14nm,0.8s
KDJ   Kajisay           51.55 294    P       P       00 22 45.9 -0.3
KDJ                                  IAmb    IAmb    00 22 47.5
      comp=Z,14nm,0.8s
SPMM  Sapulut           51.82 227    P       P       00 22 50.0 +1.7
BOOM  Boomskoye usch    52.13 295    P       P       00 22 50.4 -0.1
BOOM                                 pmax    pmax
      comp=Z,10.0nm,0.8s
BOOM  Boomskoye usch    52.13 295    P       P       00 22 50.4 -0.1
BOOM                                 IAmb    IAmb    00 22 52.0
      comp=Z,10nm,0.8s
CHMS  Chumysh           52.60 296    P       P       00 22 53.6 -0.1
      SNR=6.0
USP   Ospenovka         52.61 296    P       P       00 22 53.8 -0.1
      SNR=17
KBK   Karagaybulak      52.66 295    P       P       00 22 54.4  0.0
      SNR=5.5
AAK   Ala-Archa         52.95 296    P       P       00 22 56.3 -0.2
      comp=Z,6.7nm,0.8s,baz=102,slow=4.1,SNR=23
AAK   Ala-Archa         52.95 296    P       P       00 22 56.4 -0.2
      SNR=10
AAK   Ala-Archa         52.95 296    P       P       00 22 56.2 -0.4
AAK   Ala-Archa         52.95 296 c iP      P       00 22 56.1 -0.4
AAK                                  pmax    pmax
      comp=Z,25nm,0.9s
AAK   Ala-Archa         52.95 296  eP      P       00 22 56.1 -0.4
SVE   Sverdlovsk        53.13 317  eP      P       00 22 56.7 -0.7
SVE                                  pmax    pmax
      comp=Z,18nm,1.3s
SVE   Sverdlovsk        53.13 317  eP      P       00 22 56.7 -0.7
EKS2  Erkin-Say         53.38 296    P       P       00 22 59.3 -0.3
      SNR=10
AML   Almayashu         53.73 295    P       P       00 23 02.9 +0.4
      SNR=5.0
AML   Almayashu         53.73 295    P       P       00 23 02.7 +0.2
KSH   Kashi             53.75 292    P       P       00 23 06.1 +3.7
KSH                                  pmax    pmax
      comp=Z,7.0nm,0.7s
JIRN  Jiri              53.99 274  eP      P       00 23 05.5 +0.9
      comp=Z,17nm,0.2s
GUN   Gumba             54.05 274  eP      P       00 23 05.4 +0.4
      comp=Z,52nm,0.5s
TULEG Thule             54.24  11  i P      P       00 23 03.0 -2.2
TULEG                                IAmb    IAmb    00 23 04.5
      comp=Z,12nm,0.6s
TULEG Thule             54.24  11    P       P       00 23 04.0 -1.2
TULEG                                IAmb    IAmb    00 23 05.1
      comp=Z,16nm,0.7s
ARU   Arti              54.32 317    P       P       00 23 04.6 -1.5
      comp=Z,5.0nm,0.5s,baz=76,slow=4.0,SNR=25
ARU                                  PcP     PcP     00 24 08.8 +0.3
      comp=Z,1.7nm,0.6s,baz=22,slow=3.4,SNR=4.4
ARU   Arti              54.32 317 c iP      P       00 23 05.0 -1.1
ARU                                  *PP     pP      00 23 32.0 -0.6
ARU                                                  00 24 06.4
ARU                                  S       S       00 30 34.2 -0.4
ARU                                  SS      SS      00 34 14.4 -3.1
ARU                                  pmax    pmax
      comp=Z,14nm,0.6s
ARU   Arti              54.32 317    P       P       00 23 04.4 -1.7
ARU                                  IAmb    IAmb    00 23 05.6
      comp=Z,16nm,0.7s
KKN   Kakani            54.54 274  eP      P       00 23 09.2 +0.9
PKI   Pulchoki          54.59 274  eP      P       00 23 09.3 +0.5
PKIN  Phulchoki         54.59 274  eP      P       00 23 09.2 +0.4
      comp=Z,49nm,0.5s
DMN   Daman             54.77 274  eP      P       00 23 11.2 +1.1
      comp=Z,31nm,0.4s
GKN   Gorkha            54.84 275  eP      P       00 23 11.2 +0.7
      comp=Z,131nm,0.6s
KKAR  Karatay Array     55.13 298    P       P       00 23 11.4 -0.8
KKAR  Karatay Array     55.13 298    P       P       00 23 11.4 -0.8
NEEM  North Greenlan    55.20   6  i P      P       00 23 10.1 -2.4
NEEM                                 IAmb    IAmb    00 23 11.8
      comp=Z,17nm,0.8s
DANN  Dangsing          55.22 276  eP      P       00 23 14.4 +1.0
      comp=Z,185nm,0.5s
PYUN  Piuthan           55.91 276  eP      P       00 23 18.8 +0.6
      comp=Z,15nm,0.2s
LVZ   Lovozero          56.33 336    P       P       00 23 19.6 -0.8
LVZ                                  pmax    pmax
      comp=Z,266nm,2.0s
LVZ   Lovozero          56.33 336    P       P       00 23 19.6 -0.8
BTK   Batken            56.69 295    P       P       00 23 23.6 +0.2
BTK                                  pmax    pmax
      comp=Z,14nm,1.1s
BTK   Batken            56.69 295    P       P       00 23 23.6 +0.2
BTK                                  IAmb    IAmb    00 23 24.0
      comp=Z,14nm,1.1s
PRGR  Permogore         56.80 327  eP      P       00 23 22.1 -1.6
PRGR                                 pmax    pmax
      comp=Z,79nm,1.4s
EDM   Edmonton          56.95  46    P       P       00 23 25.6 +0.6
EDM                                  pmax    pmax
      comp=Z,13nm,0.7s
EDM   Edmonton          56.95  46    P       P       00 23 25.6 +0.6
EDM                                  IAmb    IAmb    00 23 26.6
      comp=Z,12nm,0.7s
KEV   Kevo              56.96 340    P       P       00 23 22.8 -1.9
KEV                                  pmax    pmax
      comp=Z,224nm,1.9s
KEV   Kevo              56.96 340    P       P       00 23 22.8 -1.9
KIRV  Kirov             57.15 322    P       P       00 23 25.3 -0.9
      comp=Z,7.2nm,0.6s,baz=234,slow=15,SNR=4.1
KIRV                                 PcP     PcP     00 24 19.9 +0.4
      comp=Z,11nm,0.6s,baz=270,slow=0.3,SNR=6.7
KIRV  Kirov             57.15 322 ceP      P       00 23 25.0 -1.2
ARA0  ARCESS Array S    57.48 340  eP      P       00 23 27.7 -0.7
ARCES ARCESS Array B    57.48 340    P       P       00 23 28.0 -0.4
      comp=Z,2.2nm,0.6s,baz=36,slow=7.4,SNR=11
ARCES                                PcP     PcP     00 24 21.2 +0.6
      comp=Z,7.7nm,0.9s,baz=61,slow=5.0,SNR=8.8
GAR   Garm              57.63 294    P       P       00 23 29.3 -0.8
ABKAR Akbulak array     57.65 309    P       P       00 23 29.5 -0.4
ABKAR Akbulak array     57.65 309    P       P       00 23 28.4 -1.6
ABKAR                                IAmb    IAmb    00 23 29.9
      comp=Z,16nm,0.5s
NEW   Newport           57.89  52    P       P       00 23 32.8 +1.1
      baz=306
AKTO  Aktyubinsk        57.97 311    P       P       00 23 31.3 -0.8
      comp=Z,3.7nm,0.6s,baz=62,slow=9.9,SNR=12
AKTO                                 PcP     PcP     00 24 23.0 +0.1
      comp=Z,4.5nm,0.7s,baz=77,slow=2.7,SNR=7.5
PINE  Pine Mountain     58.37  58    P       P       00 23 35.3  0.0
PINE                                 IAmb    IAmb    00 24 03.4
      comp=Z,10nm,1.0s
KTK1  Kautokeino        58.40 341  eP      P       00 23 34.0 -0.9
CHGR  Chuyangaron       58.56 294    P       P       00 23 35.5 -1.1
JETT  Jettan, Norway    58.59 342  eP      P       00 23 36.6 +0.5
TRO   Tromso            58.84 343  eP      P       00 23 37.5 -0.3
NIL   Nilore            58.98 288    P       P       00 23 39.4  0.0
NIL                                  pmax    pmax
      comp=Z,24nm,0.9s
NIL   Nilore            58.98 288    P       P       00 23 39.4  0.0
K05A  Summer Lake       59.03  59    P       P       00 23 41.6 +1.8
WALA  Waterton Lakes    59.13  50    P       P       00 23 40.5 +0.2
WALA                                 IAmb    IAmb    00 23 44.8
      comp=Z,26nm,1.8s
UPNV  Upernavik         59.13   9  i P      P       00 23 37.7 -2.1
UPNV                                 IAmb    IAmb    00 23 39.1
      comp=Z,22nm,0.6s
KULM  Kulim             60.25 243    P       P       00 23 50.0 +1.7
JRMM  Jerantut          60.25 241    P       P       00 23 50.0 +1.7
PLID  Pearl Lake        60.41  54    P       P       00 23 49.6 +0.3
PLID                                 IAmb    IAmb    00 24 16.7
      comp=Z,10.0nm,1.0s
WVOR  Wild Horse Val    60.53  58    P       P       00 23 50.8 +0.7
WVOR                                 pmax    pmax
      comp=Z,7.0nm,1.0s
WVOR  Wild Horse Val    60.53  58    P       P       00 23 50.8 +0.7
WVOR                                 IAmb    IAmb    00 24 17.7
      comp=Z,7.1nm,1.0s
SUMG  Summit            60.70   4    P       P       00 23 51.0  0.0
SUMG                                 pmax    pmax
      comp=Z,36nm,0.9s
SUMG  Summit            60.70   4  i P      P       00 23 49.9 -1.1
SUMG                                 IAmb    IAmb    00 23 51.7
      comp=Z,24nm,0.8s
SUMG  Summit            60.70   4    P       P       00 23 51.0  0.0
COEN  Coen              60.98 190    P       P       00 23 54.5 +1.5
STEI  Steigen           61.01 343  eP      P       00 23 52.7 +0.1
KBL   Kabul             61.16 291    P       P       00 23 52.7 -1.8
KBL                                  pmax    pmax
      comp=Z,8.0nm,0.9s
KBL   Kabul             61.16 291    P       P       00 23 53.4 -1.1
      SNR=5.8
KBL   Kabul             61.16 291    P       P       00 23 52.7 -1.8
KBL                                  IAmb    IAmb    00 23 56.8
      comp=Z,8.5nm,0.8s
LOF   Lofoten           61.18 343  eP      P       00 23 53.9 +0.2
FAUS  Fauske            61.46 342  eP      P       00 23 55.5 -0.2
FCC   Fort Churchill    61.72  33    P       P       00 23 57.1 -0.5
FCC                                  pmax    pmax
      comp=Z,41nm,1.4s
FCC   Fort Churchill    61.72  33    P       P       00 23 57.1 -0.5
PAHR  Pah Rah Range     61.78  61    P       P       00 23 59.5 +1.0
PAHR                                 IAmb    IAmb    00 24 44.5
      comp=Z,12nm,1.4s
BELG  Belogornoye       61.85 318    P       P       00 23 57.5 -1.1
      comp=Z,16nm,0.5s,baz=310,slow=1.1,SNR=24
BELG                                 PcP     sP      00 24 38.5 +0.5
      comp=Z,15nm,0.8s,baz=23,slow=2.4,SNR=5.4
BELG  Belogornoye       61.85 318 ceP      P       00 23 57.4 -1.1
BELG                                 pmax    pmax
      comp=Z,3.0nm,0.6s
LRM   Limekiln Ridge    61.91  52    P       P       00 23 59.6 +0.2
KONS  Konsvik           62.66 343  eP      P       00 24 03.9 +0.2
MOR8  Moi Rana          62.67 342  eP      P       00 24 02.7 -1.1
SCO   Scoresbysund      62.92 358    P       P       00 24 05.7 +0.3
SCO                                  pmax    pmax
      comp=Z,84nm,1.8s
SCO   Scoresbysund      62.92 358    P       P       00 24 05.7 +0.3
KVN   Kaiserville       62.97  61    P       P       00 24 07.4 +0.9
KVN                                  pmax    pmax
      comp=Z,8.0nm,1.0s
KVN   Kaiserville       62.97  61    P       P       00 24 07.4 +0.9
KVN                                  IAmb    IAmb    00 24 08.9
      comp=Z,7.7nm,1.0s
RYN   Ryan              62.98  62    P       P       00 24 07.0 +0.4
RYN                                  IAmb    IAmb    00 24 38.5
      comp=Z,24nm,1.8s
LHV   Little Huntoon    63.23  62    P       P       00 24 09.8 +1.8
LHV                                  IAmb    IAmb    00 24 11.1
      comp=Z,8.8nm,1.0s
NVAR  Mina Array Bea    63.24  62    P       P       00 24 09.8 +1.4
      comp=Z,2.6nm,0.7s,baz=288,slow=7.6,SNR=15
NVAR                                 pP      pP      00 24 34.5 -1.8
      comp=Z,2.0nm,0.7s,baz=295,slow=6.7,SNR=4.6
NVAR  Mina Array Bea    63.24  62    P       P       00 24 09.4 +1.0
GCMT  Greycliff         63.42  51    P       P       00 24 09.6 +0.3
FIA1  FINESS Array S    63.57 334    P       P       00 24 09.2 -0.7
FINES FINESS Array B    63.57 334    P       P       00 24 08.3 -1.5
      comp=Z,6.3nm,0.6s,baz=35,slow=7.3,SNR=49
FINES                                PcP     PcP     00 24 45.1 -0.2
      comp=Z,3.3nm,0.4s,baz=48,slow=4.4,SNR=10
FINES FINESS Array B    63.57 334  i P      P       00 24 08.5 -1.3
FINES                                pmax    pmax
      comp=Z,6.0nm,0.6s
FINES FINESS Array B    63.57 334    P       P       00 24 08.6 -1.2
ICESG Greenland Ices    64.11   5  i P      P       00 24 12.3 -1.4
ICESG                                IAmb    IAmb    00 24 14.2
      comp=Z,30nm,0.6s
MOOW  Moose Ponds       64.17  53    P       P       00 24 14.3 -0.1
LCH   Last Change Ra    64.41  62    P       P       00 24 15.4 -0.5
NSS   Namsos            64.62 342  eP      P       00 24 16.7 +0.1
CWC   Cottonwood Cre    64.66  63    P       P       00 24 18.8 +1.2
      baz=311
OBN   Obninsk           64.72 325 ⇑eP      P       00 24 17.1 -0.3
OBN                                  pmax    pmax
      comp=Z,9.0nm,1.4s
OBN   Obninsk           64.72 325  eP      P       00 24 17.1 -0.3
R11A  Troy Canyon, C    64.92  60    P       P       00 24 19.7 +0.4
R11A  Troy Canyon, C    64.92  60    P       P       00 24 20.7 +1.4
      baz=311,SNR=7.0
SPR3  Spring Creek 3    65.24  59    P       P       00 24 22.0 +0.5
MPMC  Manual Prospec    65.27  63    P       P       00 24 22.7 +1.1
      baz=311
DUG   Dugway, Tooele    65.34  57    P       P       00 24 22.3 +0.4
DUG                                  pmax    pmax
      comp=Z,7.0nm,1.1s
DUG   Dugway, Tooele    65.34  57    P       P       00 24 22.3 +0.4
DUG   Dugway, Tooele    65.34  57    P       P       00 24 23.5 +1.6
      baz=312
FURC  Furnace Creek,    65.38  62    P       P       00 24 24.0 +2.0
      baz=311
TPNV  Topopah Spring    65.44  62    P       P       00 24 23.4 +0.8
TPNV                                 pmax    pmax
      comp=Z,3.0nm,0.9s
TPNV  Topopah Spring    65.44  62    P       P       00 24 23.4 +0.8
TPNV  Topopah Spring    65.44  62    P       P       00 24 24.1 +1.5
      baz=311
BW06  Boulder Array     65.47  53    P       P       00 24 23.1 +0.3
BW06  Boulder Array     65.47  53    P       P       00 24 25.1 +2.2
      baz=312
PD31  Pinedale Array    65.47  53    P       P       00 24 23.2 +0.4
PDAR  Pinedale Array    65.47  53    P       P       00 24 23.7 +0.9
      comp=Z,1.9nm,0.7s,baz=298,slow=1.5,SNR=20
PDAR                                 pP      PcP     00 24 49.4 -4.4
      comp=Z,2.2nm,0.9s,baz=325,slow=2.3,SNR=4.2
PDAR                                 LR      LR      00 54 55.5
      comp=Z,70nm,18.1s,baz=132,slow=38
LRMC  Laurel Mtn Rad    65.53  64    P       P       00 24 24.6 +1.4
      baz=311
HRA   Herat             65.56 295    P       P       00 24 23.3 -0.2
HRA                                  IAmb    IAmb    00 24 26.0
      comp=Z,28nm,1.9s
GWY   Greenwater Val    65.68  63    P       P       00 24 25.0 +0.8
QSM   Queen of Sheba    65.71  63    P       P       00 24 25.1 +1.0
QSM                                  IAmb    IAmb    00 24 26.9
      comp=Z,9.9nm,1.1s
EDW2  Edwards Air Fo    65.73  64    P       P       00 24 25.9 +1.5
      baz=312,SNR=5.7
HYB   Hyderabad         66.05 270  i P      P       00 24 26.5 -0.1
      comp=Z,70nm,1.0s
GSC   Goldstone, Bar    66.18  63    P       P       00 24 28.6 +1.3
      baz=312
TUQ   Turquoise Moun    66.63  63    P       P       00 24 31.8 +1.6
      baz=312,SNR=5.5
HEC   Hector,Ludlow     66.78  63    P       P       00 24 32.7 +1.6
      baz=312
LCMT  Little Creek M    67.20  60    P       P       00 24 32.5 -1.3
GMRC  Granite Mounta    67.23  63    P       P       00 24 35.4 +1.4
      baz=312
SRU   San Rafael Swe    67.38  57    P       P       00 24 33.3 -1.7
SRU                                  pmax    pmax
      comp=Z,6.0nm,0.9s
SRU   San Rafael Swe    67.38  57    P       P       00 24 33.3 -1.7
DOMB  Dombas            67.44 342  eP      P       00 24 34.8  0.0
KNB   Kanab             67.44  60    P       P       00 24 34.4 -1.0
KNB   Kanab             67.44  60    P       P       00 24 34.4 -1.0
KNB                                  IAmb    IAmb    00 24 44.0
      comp=Z,22nm,1.8s
RSSD  Black Hills       67.50  49    P       P       00 24 35.7  0.0
RSSD                                 pmax    pmax
      comp=Z,5.0nm,0.8s
RSSD  Black Hills       67.50  49    P       P       00 24 35.6  0.0
RSSD  Black Hills       67.50  49    P       P       00 24 36.5 +0.8
      baz=314
NC204 NORSAR Array S    67.75 341    P       P       00 24 36.1 -0.6
NB201 NORSAR Array S    67.83 340    P       P       00 24 36.9 -0.3
NB2   NORSAR Subarra    67.85 340    P       P       00 24 37.1 -0.3
      comp=Z,5.7nm,0.5s,baz=30,slow=6.2
NB2   NORSAR Subarra    67.85 340    P       P       00 24 37.1 -0.3
      baz=30,slow=6.2
NOA   NORSAR Array B    67.85 340    P       P       00 24 36.6 -0.8
      comp=Z,5.6nm,0.6s,baz=29,slow=6.5,SNR=37
IRM   Iron Mountain     67.96  63    P       P       00 24 40.0 +1.4
      baz=313,SNR=6.1
NC602 NORSAR Array S    68.05 340  eP      P       00 24 38.5 -0.1
HFS   Hagfors           68.06 339    P       P       00 24 37.4 -1.3
      comp=Z,14nm,0.4s,baz=55,slow=5.6,SNR=80
BC3   Big Chuckawall    68.11  64    P       P       00 24 40.5 +1.0
      baz=313
U15A  North Rim         68.16  60    P       P       00 24 41.0 +0.9
WRAB  Tennant Creek     68.27 198 ⇓eP      P       00 24 40.2 -0.1
WRAB                                 pmax    pmax
      comp=Z,22nm,2.5s
WB2   Warramunga Arr    68.27 198    P       P       00 24 41.2 +0.8
WRA   Warramunga Arr    68.28 198    P       P       00 24 40.9 +0.5
      comp=Z,5.4nm,0.8s,baz=14,slow=5.9,SNR=33
WRA                                  PcP     PcP     00 25 06.6 +1.3
      comp=Z,2.0nm,0.8s,baz=15,slow=4.9,SNR=6.0
MNK   Minsk             68.45 329  i P      P       00 24 39.1 -2.1
MNK                                i                 00 25 05.0
MNK                                i *PP    pP      00 25 08.7 -0.2
MNK                                i *SP    sP      00 25 21.2  0.0
MNK                                i S      S       00 33 30.9 -2.3
MNK                                i *SS    sS      00 34 22.4 +1.5
MNK                                  pmax    pmax
      comp=N,5.0nm,0.9s
MNK                                  pmax    pmax
      comp=Z,23nm,0.9s
MNK                                  pmax    pmax
      comp=E,2.0nm,0.9s
MNK   Minsk             68.45 329  i P      P       00 24 39.1 -2.0
      comp=E,2.0nm,0.9s
MNK                                i P      P       00 24 39.1 -2.0
      comp=N,5.0nm,0.9s
MNK                                i P      P       00 24 39.1 -2.0
      comp=Z,23nm,0.9s,baz=38
MNK                                i PcP    PcP     00 25 05.1 -0.6
MNK                                i pP     pP      00 25 08.7 -0.2
MNK                                i sP     sP      00 25 21.3 +0.1
MNK                                i PP     PP      00 27 31.8  +19
MNK                                i PPP    PPP     00 30 02.7
MNK                                i S      S       00 33 30.9 -2.3
MNK                                i sS     sS      00 34 22.5 +1.6
MNK                                i SS     SS      00 37 21.4  -37
MNK                                i SSS    SSS     00 42 49.3
PDMCI Parker Dam,Lak    68.48  63    P       P       00 24 43.4 +1.7
      baz=313
POO   Poona             68.51 274  eP      P       00 24 39.0 -3.1
NACGM Naroch            68.52 329  i P      P       00 24 39.7 -1.9
FITZ  Fitzroy Crossi    68.76 207    P       P       00 24 44.8 +1.4
      comp=Z,13nm,0.8s,baz=14,slow=6.2,SNR=27
SKAR  Skarslia          68.82 342  eP      P       00 24 44.1 +0.6
GLA   Glamis            68.90  64    P       P       00 24 46.0 +1.6
      baz=313
OSL   Oslo              68.95 340  eP      P       00 24 44.4 +0.3
GOF   Gofitskoye        69.10 314 ⇑eP      P       00 24 45.1 -0.3
GOF                                  pmax    pmax
      comp=Z,28nm,0.6s
KONO  Kongsberg         69.46 341  eP      P       00 24 48.1 +0.8
ISCO  Idaho Springs     69.67  53    P       P       00 24 51.3 +2.0
      baz=315
NCK   Nalchik           69.94 313 ⇑eP      P       00 24 50.3 -0.3
NCK                                  pmax    pmax
      comp=Z,11nm,0.8s
KIV   Kislovodsk        70.07 313  i P      P       00 24 51.6 +0.2
      SNR=5.9
KIV   Kislovodsk        70.07 313  eP      P       00 24 50.3 -1.2
KIV                                  pmax    pmax
      comp=Z,11nm,1.0s
KIV   Kislovodsk        70.07 313    P       P       00 24 53.4 +2.0
KIV                                  IAmb    IAmb    00 24 56.8
      comp=Z,9.2nm,0.8s
F33A  5 Mile Ranch,     70.12  44    P       P       00 24 51.6  0.0
F33A                                 IAmb    IAmb    00 24 52.6
      comp=Z,6.9nm,0.6s
KBZ   Khabaz            70.13 313    P       P       00 24 52.1 +0.5
      comp=Z,9.1nm,0.8s,baz=127,slow=1.5,SNR=25
KBZ   Khabaz            70.13 313 ⇓eP      P       00 24 52.4 +0.8
KBZ                                  pmax    pmax
      comp=Z,14nm,0.9s
KBZ   Khabaz            70.13 313  eP      P       00 24 52.4 +0.8
ZEI   Tsey              70.30 312  eP      P       00 24 53.3 +0.3
ZEI                                  pmax    pmax
      comp=Z,3.0nm,0.9s
S22A  4UR Ranch, Cre    70.42  56    P       P       00 24 56.2 +2.3
      baz=315
AKASG Malin Array Be    70.96 325    P       P       00 24 55.2 -1.3
      comp=Z,6.8nm,0.5s,baz=34,slow=6.3,SNR=30
AKBB  Malin Array Si    70.96 325 ⇑eP      P       00 24 55.7 -0.9
AKBB  Malin Array Si    70.96 325    P       P       00 24 55.5 -1.1
AKBB                                 IAmb    IAmb    00 24 57.3
      comp=Z,7.9nm,0.7s
AKH   Akhalkalaki       71.50 311 ⇑ P       P       00 25 01.3 +1.0
ECSD  EROS Data Cent    71.52  45    P       P       00 25 00.6 +0.5
      baz=318,SNR=6.8
PALK  Pallekele         71.77 261    P       P       00 25 02.9 +0.8
PALK                                 pmax    pmax
      comp=Z,17nm,0.9s
PALK  Pallekele         71.77 261    P       P       00 25 02.9 +0.8
PALK                                 IAmb    IAmb    00 25 03.6
      comp=Z,16nm,0.8s
AS31  Alice Springs     71.98 197    P       P       00 25 04.9 +2.0
ASAR  Alice Springs     71.98 197    P       P       00 25 04.6 +1.6
      comp=Z,6.0nm,0.7s,baz=5.8,slow=5.3,SNR=64
KARS  Kars              72.29 311    P       P       00 25 06.2 +1.3
KARS                                 pmax    pmax
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	comp=Z,20nm,0.8s						
KARS	Kars	72.29	311	P	P	00 25 06.2	+1.3
KARS				IAmb	IAmb	00 25 06.9	
	comp=Z,20nm,0.8s						
ANMO	Albuquerque	72.60	57	P	P	00 25 08.6	+1.6
	baz=316						
I37A	Lemond, Waseca	72.85	43	P	P	00 25 08.0	0.0
I37A				IAmb	IAmb	00 25 09.4	
	comp=Z,18nm,0.8s						
SORM	Soroca	73.35	324	⇑P	P	00 25 09.8	-1.1
SORM	Soroca	73.35	324	⇑P	P	00 25 09.8	-1.1
SCHQ	Schefferville	73.61	22	P	P	00 25 12.8	+0.5
	comp=Z,4.3nm,0.4s,baz=334,slow=5.3,SNR=47						
MILM	Milestii Mici	74.14	323	⇑P	P	00 25 14.4	-1.1
MILM	Milestii Mici	74.14	323	⇑P	P	00 25 14.4	-1.1
KWP	Kalwaria Pacla	74.28	328	P	P	00 25 17.1	+0.8
KWP				pmax	pmax		
	comp=Z,385nm,1.5s						
KWP	Kalwaria Pacla	74.28	328	P	P	00 25 17.1	+0.8
GURO	Guroymak-BITLI	74.36	310	P	P	00 25 17.2	+0.1
BUR08	Bucovina Ar. S	74.99	326	IAmb	IAmb	00 25 21.7	
	comp=Z,13nm,0.6s						
BURAR	Bucovina Array	75.01	326	⇑P	P	00 25 20.4	-0.3
BURAR	Bucovina Array	75.01	326	⇑P	P	00 25 20.4	-0.3
BURAR	Bucovina Array	75.01	326	IAmb	IAmb	00 25 22.1	
	comp=Z,17nm,0.6s						
KOLS	Kolonicke sedl	75.02	328	*e*P	P	00 25 21.2	+0.6
KOLS	Kolonicke sedl	75.02	328	*e*P	P	00 25 21.2	+0.6
BANOM	Banah	75.08	292	*i* P	P	00 25 22.0	+0.7
	SNR=32						
BANOM	Banah	75.08	292	P	P	00 25 22.0	+0.7
	SNR=12						
SHME	Shamm	75.09	292	*i* P	P	00 25 21.5	+0.1
	SNR=14						
SHME	Shamm	75.09	292	P	P	00 25 21.5	+0.1
	SNR=5.3						
VLDR	Vladesti	75.30	323	⇑P	P	00 25 21.5	-0.7
TESR	Tescani	75.34	324	⇑P	P	00 25 22.1	-0.3
AMTX	Amarillo	75.37	55	P	P	00 25 25.2	+2.3
	baz=318						
TLCR		75.53	322	⇓P	P	00 25 23.4	-0.1
TLCR		75.53	322	⇓P	P	00 25 23.4	-0.1
MNTX	Cornudas Mount	75.55	59	P	P	00 25 24.5	+0.6
MNTX	Cornudas Mount	75.55	59	P	P	00 25 25.1	+1.2
	baz=317						
MASF	Masafi	75.56	292	P	P	00 25 24.6	+0.5
	SNR=5.1						
MSFE	Esma-Masafi	75.57	292	*i* P	P	00 25 24.5	+0.4
	SNR=11						
TRPA	Tarpa	75.59	328	⇓P	P	00 25 23.9	+0.1
OSTC	Ostas	75.69	333	*e*P	P	00 25 24.5	+0.1
CHVC	Chvalec	75.71	333	*e*P	P	00 25 24.8	+0.3
JLN	Jalan Bani Buh	75.72	287	P	P	00 25 26.3	+1.3
	SNR=5.2						
ODBI	Odobesti	75.79	324	⇓P	P	00 25 26.0	+1.0
CFR	Carcaliu	75.82	323	⇑P	P	00 25 24.9	-0.2
CFR	Carcaliu	75.82	323	⇑P	P	00 25 24.9	-0.2
LANS	Liptovska Anna	75.82	330	*e*P	P	00 25 26.3	+1.0
LANS				pmax	pmax		
	comp=Z,6.0nm,1.6s						
LANS	Liptovska Anna	75.82	330	*e*P	P	00 25 26.2	+1.0
UOSS	Minazif	75.83	291	*i* P	P	00 25 25.8	+0.2
	SNR=26						
UOSS	Minazif	75.83	291	P	P	00 25 25.6	0.0
DPC	Dobruska-Polom	75.83	332	*e*P	P	00 25 25.9	+0.7
DPC				*e*		00 25 31.9	
DPC	Dobruska-Polom	75.83	332	*e*P	P	00 25 25.9	+0.7
DPC				*e*x	x	00 25 31.9	
VRI	Vrincioaia	75.84	324	⇑P	P	00 25 26.2	+0.9
VRI	Vrincioaia	75.84	324	⇑P	P	00 25 26.2	+0.9
KRLC	Kraliky	75.92	332	*e*P	P	00 25 26.1	+0.3
KRLC				*e*		00 25 32.3	
KRLC	Kraliky	75.92	332	*e*P	P	00 25 26.1	+0.3
KRLC				*e*x	x	00 25 32.3	
MORC	Moravsky Berou	75.93	331	*e*P	P	00 25 26.0	+0.2
MARD	Mardin	75.94	310	P	P	00 25 26.2	0.0
MARD				IAmb	IAmb	00 25 28.6	
	comp=Z,13nm,1.0s						
TPGR	Topolog	75.96	322	⇓P	P	00 25 25.9	-0.2
HATD	Hatta, Dubai	75.96	291	*i* P	P	00 25 26.8	+0.4
	SNR=27						
HATD	Hatta, Dubai	75.96	291	P	P	00 25 27.2	+0.8
	SNR=13						
CLL	Collm	76.01	335	*i* P	P	00 25 26.0	-0.1
CLL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CLL	Collm	76.01	335	*i* P	P	00 25 26.0	-0.1
	comp=Z,10.0nm,0.6s						
CLL				*e*PcP	PcP	00 25 38.0	0.0
CLL	Collm	76.01	335	IAmb	IAmb	00 25 26.8	
	comp=Z,11nm,0.5s						
OZUR		76.03	325	⇓P	P	00 25 25.9	-0.6
EKA	Eskdalemuir Ar	76.05	346	P	P	00 25 26.2	-0.1
	comp=Z,4.1nm,0.6s,baz=23,slow=5.0,SNR=12						
COVR	Voineasa-Covas	76.07	324	⇑P	P	00 25 25.8	-0.9
HOQ	Hoqain	76.08	290	P	P	00 25 27.6	+0.5
	SNR=6.7						
BISRR	Bisoca	76.10	324	⇑P	P	00 25 27.8	+0.9
ASHO	Ashiyiah	76.11	291	*i* P	P	00 25 27.6	+0.4
	SNR=12						
ASHO	Ashiyiah	76.11	291	P	P	00 25 27.7	+0.4
	SNR=8.5						
NAZ	Nazwa, Dubai	76.15	292	*i* P	P	00 25 27.9	+0.5
	SNR=16						
NAZ	Nazwa, Dubai	76.15	292	P	P	00 25 28.0	+0.6
	SNR=7.0						
SOHO	SOHO	76.19	290	*i* P	P	00 25 27.8	+0.1
	SNR=15						
SOHO	SOHO	76.19	290	P	P	00 25 28.1	+0.4
DOPR	Dopca	76.29	325	⇑P	P	00 25 27.5	-0.4
FAQ	Al Faqa, Dubai	76.36	292	*i* P	P	00 25 28.8	+0.2
	SNR=44						
FAQ	Al Faqa, Dubai	76.36	292	P	P	00 25 29.0	+0.4
	SNR=6.7						
TLBR	Topalu	76.36	322	⇑P	P	00 25 27.3	-1.0
JMDO	Jabal Madar	76.42	288	P	P	00 25 29.9	+0.9
MLR	Muntele Rosu	76.46	324	⇑P	P	00 25 30.0	+1.0
MLR	Muntele Rosu	76.46	324	P	P	00 25 29.8	+0.8
	comp=Z,8.6nm,0.5s,baz=331,slow=3.5,SNR=25						
MLR	Muntele Rosu	76.46	324	⇑P	P	00 25 30.0	+1.0
MLR	Muntele Rosu	76.46	324	P	P	00 25 28.5	-0.5
MLR				IAmb	IAmb	00 25 31.1	
	comp=Z,10.0nm,0.5s						
ISR	Istrita	76.52	323	⇑P	P	00 25 29.6	+0.3
ISR	Istrita	76.52	323	⇑P	P	00 25 29.6	+0.3
ILGA	Ilgaz	76.61	317	P	P	00 25 29.6	-0.5
ASUD	Al Ashush, Dub	76.62	292	*i* P	P	00 25 30.7	+0.7
	SNR=19						
ASUD	Al Ashush, Dub	76.62	292	P	P	00 25 30.7	+0.7
	SNR=7.2						
VRAC	Vranov	76.65	332	P	P	00 25 30.3	+0.4
	comp=Z,2.2nm,0.4s,baz=27,slow=6.5,SNR=5.0						
VRAC	Vranov	76.65	332	*e*P	P	00 25 30.0	+0.2
JAVC	Velka Javorina	76.68	331	*e*P	P	00 25 31.5	+1.4
PRU	Pruhonice	76.71	333	*e*P	P	00 25 30.5	+0.4
PRU	Pruhonice	76.71	333	*e*P	P	00 25 30.5	+0.4
BSY	Bisya	76.74	289	P	P	00 25 31.7	+0.9
	SNR=7.6						
ALNE	Al Ain	76.75	291	*i* P	P	00 25 31.0	+0.2
	SNR=19						
ALNE	Al Ain	76.75	291	P	P	00 25 31.4	+0.5
	SNR=10						
ARQ	Araqi	76.76	290	P	P	00 25 31.7	+0.8
ICOR	Ion Corvin	76.81	322	⇑P	P	00 25 31.2	+0.4
VOIR		76.86	325	⇑P	P	00 25 31.6	+0.4
VOIR		76.86	325	⇑P	P	00 25 31.6	+0.4
AJN	Ajban	76.88	292	*i* P	P	00 25 31.6	0.0
	SNR=6.7						
AJN	Ajban	76.88	292	P	P	00 25 31.5	0.0
	SNR=7.6						
KRUC	Moravsky	76.93	332	*e*P	P	00 25 31.8	+0.4
ARR	Arges	77.09	325	⇑P	P	00 25 33.3	+0.9
BNN	Bunyan	77.29	314	P	P	00 25 33.4	-0.4
SIRR	Siria	77.48	327	⇓P	P	00 25 35.0	+0.4
BR131	Keskin Array S	77.69	316	P	P	00 25 36.9	+0.9
BR131	Keskin Array S	77.69	316	IAmb	IAmb	00 25 37.7	
	comp=Z,12nm,1.0s						
BRTR	Keskin Array B	77.69	316	P	P	00 25 35.6	-0.4
	comp=Z,5.0nm,0.9s,baz=73,slow=4.4,SNR=27						
BRTR	Keskin Array B	77.69	316	*ce*P	P	00 25 36.7	+0.7
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KHC	Kasperske Hory	77.76	333	⇓*e*P	P	00 25 37.0	+0.9
KHC				pmax	pmax		
	comp=Z,14nm,0.5s						
KHC	Kasperske Hory	77.76	333	*e*P	P	00 25 36.3	+0.2
KHC				*e*x	x	00 25 41.3	
KHC	Kasperske Hory	77.76	333	IAmb	IAmb	00 25 42.0	
	comp=Z,13nm,0.7s						
UMR	Umm Al-Rimmam	77.78	300	*e*P	P	00 25 36.6	+0.2
GZR	Gura Zlata	77.79	326	⇓P	P	00 25 36.3	-0.1
GZR	Gura Zlata	77.79	326	⇓P	P	00 25 36.3	-0.1
CKRC	Cesky Krumlov	77.81	333	*e*P	P	00 25 37.9	+1.6
CKRC				*e*x	x	00 25 42.1	
MIB	Mutribah	77.82	301	*e*P	P	00 25 36.8	+0.1
GRA1	Grafenberg Arr	77.97	335	IAmb	IAmb	00 25 42.2	
	comp=Z,26nm,1.4s						
GRFO	Grafenberg	77.97	335	P	P	00 25 37.1	-0.1
GRFO				pmax	pmax		
	comp=Z,29nm,1.5s						
GRFO	Grafenberg	77.97	335	P	P	00 25 37.1	-0.1
GRFO				IAmb	IAmb	00 25 43.2	
	comp=Z,29nm,1.5s						
GERES	GERESS Array B	77.97	333	P	P	00 25 37.0	-0.3
	comp=Z,2.6nm,0.6s,baz=38,slow=5.7,SNR=21						
BZS	Buzias	78.04	327	⇑P	P	00 25 37.6	-0.1
BZS	Buzias	78.04	327	⇑P	P	00 25 37.6	-0.1
KBD	Kabd	78.06	300	*e*P	P	00 25 38.6	+0.5
UMZA	Um Al Zommool	78.08	290	P	P	00 25 38.3	+0.1
CONA	Conrad Observa	78.09	331	*e*P	P	00 25 38.8	+0.8
	comp=Z,2.0nm,0.5s						
MZWR	Madinat Zayed	78.16	292	P	P	00 25 38.5	-0.1
RST	Umm Al-Ruwaisa	78.24	301	*e*P	P	00 25 38.6	-0.5
MDUB	Mudurnu	78.25	318	P	P	00 25 39.1	+0.1
QRN	Al-Qurain	78.25	299	*e*P	P	00 25 39.0	0.0
TX31	Lajitas Ar. Si	78.28	60	IAmb	IAmb	00 25 41.2	
	comp=Z,10.0nm,0.7s						
TX32	Lajitas Array	78.28	60	P	P	00 25 39.8	+0.4
TXAR	Lajitas Array	78.28	60	P	P	00 25 40.5	+1.1
	comp=Z,2.6nm,0.6s,baz=298,slow=4.6,SNR=42						
TXAR				pP	pP	00 26 06.3	-2.3
	comp=Z,2.4nm,0.6s,baz=299,slow=4.3,SNR=5.8						
KHOR	Al-Khor Airpor	78.31	295	P	P	00 25 39.8	+0.3
SHMA	Al-Shehemyia	78.48	295	P	P	00 25 40.7	+0.3
MEM	Membach	78.55	339	*d*P	P	00 25 40.2	-0.1
	comp=Z,6.0nm,0.9s						
GHWR	Ruwais	78.65	293	P	P	00 25 41.5	+0.1
SAKB	Bahrain	78.66	296	P	P	00 25 41.7	+0.4
BSTI	Sart Tilman	78.68	339	*d*P	P	00 25 42.0	+1.0
BHOU	Houvegnez	78.78	338	*d*x	x	00 25 42.4	
STKA	Stephens Creek	78.86	189	P	P	00 25 43.8	+1.7
	comp=Z,0.7nm,0.2s,baz=347,slow=14,SNR=2.9						
BCLA	Clavier	78.89	339	*d*x	x	00 25 43.7	
BGES	Gesves	78.98	339	*d*P	P	00 25 42.7	0.0
U40A	Yellville	78.98	48	P	P	00 25 43.0	0.0
	baz=321						
FRGS	Fruska Gora	79.11	328	⇓P	P	00 25 43.4	-0.1
FRGS	Fruska Gora	79.11	328	*e*P	P	00 25 42.4	-1.1
BMRD	Maredsous	79.14	339	*d*P	P	00 25 43.7	+0.1
TRNA	Turayna	79.14	294	P	P	00 25 44.1	+0.1
RCHB	Rochefort	79.16	339	*d*P	P	00 25 43.8	+0.2
SLWR	Sila	79.32	294	P	P	00 25 45.4	+0.4
SOKA	Soboth	79.46	331	*e*P	P	00 25 45.5	0.0
	comp=Z,8.8nm,1.1s,SNR=5.0						
ZAPS	Zavoj	79.62	325	*e*P	P	00 25 46.5	+0.1
KBA	Koelnbreinsper	79.65	333	*i* P	P	00 25 47.6	+0.9
	comp=Z,19nm,0.9s,SNR=10						
BOVS	Bovan	79.68	326	*e*P	P	00 25 45.7	-0.9
FCAR	Ozark Folk Cen	79.72	48	IAmb	IAmb	00 25 57.4	
	comp=Z,39nm,2.0s						
OBKA	Obir	79.77	332	*i* P	P	00 25 47.1	-0.1
	comp=Z,3.9nm,0.9s						
GRUS	Gruza	79.85	326	*e*P	P	00 25 47.7	+0.2
VTS	Vitosha	79.93	324	⇑P	P	00 25 49.2	+1.0
VTS	Vitosha	79.93	324	⇑P	P	00 25 49.2	+1.0
VTS	Vitosha	79.93	324	IAmb	IAmb	00 25 50.5	
	comp=Z,14nm,1.0s						
DIVS	Divibare	79.94	327	*e*P	P	00 25 47.8	-0.4
MYKA	Terra Mystica	79.95	332	*i* P	P	00 25 47.7	-0.4
	comp=Z,6.9nm,1.2s						
WATA	Walderalm	79.97	334	*e*P	P	00 25 49.0	+0.7
	comp=Z,11nm,0.9s,SNR=5.9						
BFO	Black Forest	80.02	336	P	P	00 25 48.7	+0.3
BFO				pmax	pmax		
	comp=Z,14nm,1.2s						
BFO	Black Forest	80.02	336	P	P	00 25 48.7	+0.3
BFO				IAmb	IAmb	00 25 49.4	
	comp=Z,14nm,1.2s						
WTTA	Wattenberg	80.02	334	*e*P	P	00 25 49.5	+0.9
	comp=Z,16nm,0.8s,SNR=7.3						
RETA	Reutte	80.08	334	*i* P	P	00 25 49.2	+0.4
	comp=Z,10nm,1.4s						
MOTA	Moosalm	80.11	334	*i* P	P	00 25 49.6	+0.5
	comp=Z,17nm,1.1s,SNR=6.6						
FORT	Forrest	80.14	201	P	P	00 25 51.0	+2.0
SQTA	Sankt Quirin	80.19	334	*e*P	P	00 25 49.6	+0.2
	comp=Z,17nm,1.1s						
ABTA	Abfaltersbach	80.21	333	*i* P	P	00 25 49.2	-0.4
	comp=Z,6.2nm,1.1s						
IVAS	Ivanjica	80.33	327	*e*P	P	00 25 49.7	-0.5
BOSS	Bosilegrad	80.34	324	*e*P	P	00 25 50.5	+0.3
BBLS	Lazići	80.36	327	*e*P	P	00 25 50.5	+0.1
P49A	Miami Univ. Ec	80.37	41	P	P	00 25 50.6	+0.1
	baz=325						
FETA	Feichten	80.51	334	*i* P	P	00 25 50.7	-0.5
	comp=Z,8.4nm,1.3s						
DAVA	Damuels	80.52	335	*i* P	P	00 25 51.7	+0.4
	comp=Z,10nm,0.7s						
ACSO	Alum Creek Sta	80.57	39	P	P	00 25 51.8	+0.4
	baz=326						
SJES	Sjenica	80.67	326	*e*P	P	00 25 51.8	-0.3
DAVOX	Davos/Dischmat	80.98	335	P	P	00 25 53.9	+0.1
	comp=Z,7.8nm,0.7s,baz=9.0,slow=5.0,SNR=16						
CTI	Castel Tesino	81.10	333	IAmb	IAmb	00 25 58.7	
	comp=Z,19nm,1.7s						
SHAO	Shalim	81.14	287	*i* P	P	00 25 55.1	+0.2
	SNR=11						
SHAO	Shalim	81.14	287	P	P	00 25 55.6	+0.8
SMRN	Sveta Marina	81.19	331	P	P	00 25 53.0	-1.6
RABC	Rab	81.24	331	P	P	00 25 53.6	-1.3
O53A	New Philadelph	81.31	38	P	P	00 25 55.6	+0.2
	baz=327						
KIJV	Kijevo	81.33	329	P	P	00 25 54.3	-1.1
NVLJ	Novalja	81.37	330	P	P	00 25 53.6	-2.0
RICI	Ricice	81.51	328	P	P	00 25 54.7	-1.7
PDG	Podgorica	81.65	327	⇑P	P	00 25 57.0	-0.2
DOK	Doka	81.69	288	P	P	00 25 58.1	+0.4
MAKA	Makarska	81.73	328	P	P	00 25 56.0	-1.5
DMTO	DMTO	81.81	287	P	P	00 25 59.1	+0.7
DUGI	Dugi Otok	81.81	330	P	P	00 25 56.7	-1.3
ZIRJ	Zirje	81.90	329	P	P	00 25 56.5	-1.9
ASF	Jabal al Asfar	81.92	309	P	P	00 26 00.3	+1.4
	comp=Z,7.3nm,0.7s,baz=135,slow=2.3,SNR=5.5						
HVAR	Hvar	82.03	329	P	P	00 25 57.7	-1.4
MMAI	Mount Meron Ar	82.06	311	P	P	00 26 00.5	+1.0
	comp=Z,10.0nm,0.5s,baz=46,slow=7.1,SNR=96						
LSTV	Lastovo	82.23	328	P	P	00 25 58.5	-1.6
WHFO	Wadi Hawf	82.43	288	P	P	00 26 01.9	+0.2
WHFO				P	P	00 26 02.0	+0.2
RBK	Rabkut	82.45	287	P	P	00 26 02.0	+0.2
PPT	Papeete	82.97	125	LR	LR	00 58 01.7	
	comp=Z,50nm,18.8s,baz=0.0,slow=32						
ABTO	Aybut	83.15	288	P	P	00 26 05.8	+0.4
GHAJ	Ghor Haditha	83.31	309	P	P	00 26 05.9	0.0
MURB	Monte Urbino	83.31	331	IAmb	IAmb	00 26 09.0	
	comp=Z,19nm,1.0s						
BNI	Bardonecchia	83.47	336	P	P	00 26 07.2	+0.5
BNI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BNI	Bardonecchia	83.47	336	P	P	00 26 07.2	+0.5
BNI				IAmb	IAmb	00 26 09.3	
	comp=Z,7.0nm,0.6s						
OSSC	Osservatorio P	83.49	332	P	P	00 26 06.3	-0.4
OSSC				IAmb	IAmb	00 26 07.8	
	comp=Z,24nm,1.4s						
NRCA	Norcia	83.49	331	IAmb	IAmb	00 26 08.2	
	comp=Z,26nm,1.1s						
RAYN	Ar Rayn	83.55	298	*i* P	P	00 26 07.9	+0.6
	SNR=23						
RAYN	Ar Rayn	83.55	298	P	P	00 26 08.0	+0.6
RAYN				pmax	pmax		
	comp=Z,24nm,0.9s						
RAYN	Ar Rayn	83.55	298	P	P	00 26 08.2	+0.8
RAYN	Ar Rayn	83.55	298	P	P	00 26 08.0	+0.6
SSB	Saint Sauveur	83.85	337	P	P	00 26 08.4	-0.1
SSB				pmax	pmax		
	comp=Z,33nm,1.4s						
SSB	Saint Sauveur	83.85	337	P	P	00 26 08.4	-0.1
SSB				IAmb	IAmb	00 26 10.3	
	comp=Z,33nm,1.4s						
EIL	Elat	84.92	309	P	P	00 26 15.1	+1.0
	comp=Z,32nm,0.7s,baz=55,slow=2.0,SNR=38						
IDI	Anoyia	85.35	319	P	P	00 26 14.9	-1.4
	comp=Z,18nm,0.6s,baz=36,slow=9.1,SNR=22						
JSC	Jenkinsville	86.26	42	P	P	00 26 20.5	-0.2
JSC				pmax	pmax		
	comp=Z,38nm,0.8s						
JSC	Jenkinsville	86.26	42	P	P	00 26 20.5	-0.2
KEST	Kesra	91.15	330	P	P	00 26 44.0	+0.2
	comp=Z,12nm,0.7s,baz=305,slow=2.7,SNR=23						
KEST	Kesra	91.15	330	P	P	00 26 44.3	+0.4
KEST	Kesra	91.15	330	P	P	00 26 43.1	-0.8
ESDC	Sonseca Array	91.20	341	P	P	00 26 43.2	-0.8
	comp=Z,1.7nm,0.9s,baz=360,slow=3.7,SNR=9.4						
TORD	Torodi Ar. Bea	114.54	328	PKP	PKPdf	00 32 18.4	-0.4
	comp=Z,0.9nm,0.4s,baz=21,slow=1.8,SNR=23						
TORD	Torodi Ar. Bea	114.54	328		PKPdf	00 32 18.6	-0.1
DBIC	Dimbokro	122.83	332	PKP	PKiKP	00 32 34.6	-0.3
	comp=Z,3.8nm,0.5s,baz=339,slow=1.2,SNR=11						
TIC	Toumodi	122.91	332	*e*PKP1	PKiKP	00 32 34.4	-0.7
KIC	Kosan Boka	123.09	332	*e*PKP1	PKiKP	00 32 34.3	-1.2
	comp=Z,5.7nm,0.5s						
LIC	Lamto	123.31	332	*e*PKP1	PKPdf	00 32 33.5	-2.2
	comp=Z,38nm,1.6s						
H03N2	Juan Fernandez	139.70	89	T	T	03 09 01.2	
	baz=308,slow=77,SNR=32						
H03N1	Juan Fernandez	139.71	89	T	T	03 09 02.5	
	baz=308,slow=77,SNR=35						
H03N3	Juan Fernandez	139.71	89	T	T	03 09 03.2	
	baz=308,slow=77,SNR=26						
BDFB	Brasilia	144.84	34	PKP	PKPdf	00 33 15.0	-0.7
	comp=Z,3.3nm,0.7s,baz=6.1,slow=4.5,SNR=5.0						
PLCA	Paso Flores	149.16	94	PKPbc	PKiKP	00 33 27.8	+0.2
	comp=Z,7.7nm,0.7s,baz=275,slow=2.9,SNR=24						
PLCA				pPKPbc	pPKPdf	00 33 55.2	+1.6
	comp=Z,5.0nm,0.8s,baz=289,slow=3.4,SNR=4.3						
PLCA	Paso Flores	149.16	94	PKP2	PKPab	00 33 28.1	-3.2
PLCA	Paso Flores	149.16	94	PKPbc	PKPab	00 33 28.1	-3.2
CPUP	Villa Florida	149.25	58	PKPbc	PKiKP	00 33 27.9	-0.3
	comp=Z,4.7nm,0.6s,baz=301,slow=1.2,SNR=12						
CPUP				pPKPbc	pPKPdf	00 33 56.4	+2.3
	comp=Z,2.6nm,0.6s,baz=245,slow=1.9,SNR=2.4						
SNAA	Sanae	152.34	197	PKKPab	PKPab	00 33 44.6	+1.0
SNAA	Sanae	152.34	197	PKKPbc	PKiKP	00 33 33.2	0.0
SNAA	Sanae	152.34	197	PKIKP	PKiKP	00 33 33.3	0.0
SNAA	Sanae	152.34	197		PKiKP	00 33 33.2	0.0
VNA2	Neumayer--Watz	153.82	195	PKKPab	PKPab	00 33 50.7	+1.0
	baz=136,slow=3.0						
VNA2	Neumayer--Watz	153.82	195	PKKPbc	PKiKP	00 33 36.7	+0.5
	baz=135,slow=0.9						
VNA3	Neumayer Olymp	153.94	194	PKKPab	PKPab	00 33 51.0	+0.8
VNA3	Neumayer Olymp	153.94	194	PKKPbc	PKiKP	00 33 36.6	+0.2
VNA1	Neumayer--Stat	154.21	195	PKKPab	PKPab	00 33 52.5	+1.2
VNA1	Neumayer--Stat	154.21	195	PKKPbc	PKiKP	00 33 37.5	+0.6

IDC 19 00:25:52.4±6.6, **31°.20S**×**178°.14W**, **h0**^{km}, **mb3.6**/2, **mb1 3.9**/2, **mb1mx3.1**/26, **mbtmp3.6**/2, **Error ellipse: s-maj=281.4km s-min=54.1km az=157.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.95	268	P	P	00 33 52.6	-0.8
	0.6nm,0.7s,baz=105,slow=7.4,SNR=9.6						
WRA	Warramunga Arr	44.01	273	P	P	00 34 02.5	+0.5
	0.7nm,0.7s,baz=114,slow=7.7,SNR=12						
FINES	FINESS Array B	145.85	339	PKPbc	PKPdf	00 45 32.0	-0.3
	1.9nm,0.7s,baz=65,slow=3.7,SNR=11						

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*IDC **19** 00:42:05.4±0.5, 1°.83N×90°.95E, h0^{km}, mb4.5/22, mb1 4.6/25, mb1mx4.3/45, mbtmp4.5/25, ML4.3/2, MS3.7/25, Ms1 3.7/25, ms1mx3.6/37, Error ellipse: s-maj=15.7km s-min=13.4km az=45.0*

*DJA **19** 00:42:06.9±0.2, 2°N±4°×9°1E±°, h10^{km}, M5.1/27, mB5.5/5, mb4.9/27, MLv5.2/7, Mw(mB)5.0/5*

*NEIC **19** 00:42:07.8±1.4, 1°.88N±0°.10×90°.95E±0°.07, h10^{km}±1^{km}, mb4.8/72, Error ellipse: s-maj=16.6km s-min=11.3km az=179.0*

*KLM **19** 00:42:13, 1°.95N×91°.15E, h60^{km}, mb4.8*

ISC 19 00:42:06.7±0.4, **1°.76N**±0°.06×**91°.01E**±0°.04, **h10**^{km}, **n226**, σ**1^{s}.54**/219, **mb4.8**/75, **MS3.8**/24, **6C-14D, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPTI		6.34	76	P	Pn	00 43 40.4	+0.1
	0.2nm880nm29nm,0.8s						
GSI	Gunungsitoli	6.58	94	P	Pn	00 43 43.4	-0.1
	1.1nm3µm147nm,0.7s						
GSI				S	Sn	00 44 51.5	-7.2
	1.1nm3µm147nm,0.7s						
GSI	Gunungsitoli	6.58	94	Pn	Pn	00 43 43.8	+0.3
LHMI	Lhok Sumawe	6.85	60	P	Pn	00 43 48.3	+1.0
	0.9nm209nm,0.8s						
LHMI	Lhok Sumawe	6.85	60	Pn	Pn	00 43 48.2	+0.9
KCSI	Kotacane, Aceh	6.98	75	P	Pn	00 43 50.5	+1.5
	1.4nm4µm443nm,0.7s						
TSI	Tuntungan	7.74	77	P	Pn	00 44 00.9	+1.4
	1.1nm176nm,0.7s						
RPSI	Rantau Prapat	7.96	83		Pn	00 44 05.0	+2.5
RPSI	Rantau Prapat	7.96	83		Pn	00 44 03.6	+1.1
RPSI					Sn	00 45 26.5	-6.2
PSI	Prapat	7.97	82	Pn	Pn	00 44 03.6	+0.8
	1.9nm,0.3s,baz=268,slow=9.1,SNR=6.4						
PSI				Sn	Sn	00 45 26.5	-6.7
	3.4nm,0.3s,baz=88,slow=24,SNR=1.8						
PSI				LR	LR	00 47 09.3	
	comp=Z,473nm,18.7s,baz=239,slow=38						
MNSI	Mandailing Nat	8.62	96	P	Pn	00 44 12.5	+0.9
	2µm104nm,0.8s						
SISI	Saibi	8.64	111	P	Pn	00 44 11.5	-0.3
	47nm,0.8s						
PDSI	Padang	9.81	106	P	Pn	00 44 28.1	+0.1
	35nm,0.9s						
PPSI	Pulau Pagai	10.05	117	P	Pn	00 44 31.2	-0.1
	136nm,1.0s						
KULM	Kulim	10.24	70	P	Pn	00 44 35.0	+1.2
KULM	Kulim	10.24	70	Pn	Pn	00 44 34.1	+0.3
IPM	Ipoh	10.36	75	P	Pn	00 44 37.0	+1.6
IPM	Ipoh	10.36	75		Pn	00 44 36.4	+1.0
SRIT	Nakonsritamara	10.92	51		Pn	00 44 43.5	+0.3
KRJI	Kerinci	11.13	110	P	Pn	00 44 45.1	-1.0
	14µm658nm,0.8s						
DGPR	DIGLIPUR	11.50	9	*e*P	Pn	00 44 52.1	+1.1
DGPR				*e*S	Sn	00 46 48.9	-11
PALK	Pallekele	11.64	298	Pn	Pn	00 44 51.3	-1.8
	3.5nm,0.3s,baz=231,slow=13,SNR=22						
PALK				Sn	Sn	00 46 49.7	-14
	8.8nm,0.3s,baz=119,slow=12,SNR=7.1						
PALK				LR	LR	00 48 46.5	
	comp=Z,165nm,19.5s,baz=218,slow=35						
JRMM	Jerantut	11.64	79	P	Pn	00 44 56.0	+2.9
KLSI		15.13	115	P	Pn	00 45 40.0	-0.7
	19nm,1.2s						
CGJI	Cibinong	16.85	120	P	Pn	00 46 03.7	+0.8
	63nm,1.3s						
VIS	Vishakhapatnam	17.57	335	*e*P	P	00 46 12.5	-0.3
VIS				IAmb	IAmb	00 46 19.3	
	comp=Z,26nm,0.7s						
VIS				*e*S	Sn	00 49 12.4	-15
CM31	Chiang Mai Arr	18.33	25		Pn	00 46 20.7	-0.5
CMAR	Chiang Mai Arr	18.33	25	P	Pn	00 46 20.2	-0.9
	baz=216,slow=12,SNR=22						
CMAR				LR	LR	00 54 24.1	
	comp=Z,265nm,18.1s,baz=249,slow=40						
LEM	Lembang	18.64	117	LR	LR	00 52 54.6	
	comp=Z,175nm,20.5s,baz=311,slow=35						
CHTO	Chiang Mai	18.65	24	P	P	00 46 24.7	-0.1
UBPT	Khong Chiam	19.59	46	P	Pn	00 46 36.4	-0.2
HYB	Hyderabad	19.80	323	*i* P	Pn	00 46 38.5	-0.5
HYB				*e*S	S	00 50 07.0	-14
HYB	Hyderabad	19.80	323	*e*P	Pn	00 46 38.5	-0.5
HYB				IAmb	IAmb	00 46 48.4	
	comp=Z,44nm,1.4s						
HYB				*e*S	S	00 50 15.9	-4.9
STKI	Sintang	20.53	94	P	Pn	00 46 46.9	-0.8
	comp=Z,28nm,0.6s						
H08S2	Diego Garcia H	20.70	243	T	T	01 07 58.5	
	baz=63,slow=76,SNR=78						
H08S3	Diego Garcia H	20.70	243	T	T	01 08 06.4	

	baz=63,slow=76,SNR=65						
H08S1	**Diego Carcia H**	20.72	243	T	T	01 08 11.4	
	baz=63,slow=76,SNR=52						
SBUM	**Sibu**	21.20	88	P	P	00 46 55.0	+2.2
GOA	**Goa**	21.76	310	*e*P	P	00 47 00.1	+1.4
BOK	**Bokaro**	22.46	348	*e*P	P	00 47 08.5	+2.4
BOK				IAmb	IAmb	00 47 22.6	
	comp=Z,11nm,0.6s						
BOK				*e*S	S	00 51 08.6	-4.2
POO	**Poona**	23.68	316	*e*S	S	00 51 36.1	+2.1
KOHI	**KOHIMA**	24.01	7	*e*P	P	00 47 21.8	-0.2
KOHI				IAmb	IAmb	00 47 29.0	
	comp=Z,22nm,0.9s						
BHPL	**Bhopal**	25.09	329	*e*P	P	00 47 33.1	+1.4
BHPL				IAmb	IAmb	00 47 37.9	
	comp=Z,9.4nm,1.0s						
SPMM	**Sapulut**	25.58	83	P	P	00 47 39.0	+2.7
KMI	**Kunming**	25.84	25	⇓P	P	00 47 40.9	+2.2
KMI				sP	pwP	00 47 48.3	+2.2
KMI				PP	PnPn	00 48 24.3	+8.5
KMI				pmax	pmax		
	comp=Z,21nm,1.3s						
KMI				pmax	pmax		
	comp=Z,190nm,3.5s						
KMI				LR	LR		
	comp=Z,1µm,24.0s						
KMI				LR	LR		
	comp=Z,2µm,27.0s						
KMI				LR	LR		
	comp=Z,3µm,25.2s						
MYLDM	**Lahad Datu**	27.64	82	P	P	00 47 55.5	+0.6
MYLDM				IAmb	IAmb	00 48 08.0	
	comp=Z,23nm,1.0s						
LSA	**Lhasa**	27.79	0	P	P	00 47 57.5	+1.0
LSA				pmax	pmax		
	comp=Z,49nm,0.6s						
LSA	**Lhasa**	27.79	0	P	P	00 47 58.2	+1.7
LSA	**Lhasa**	27.79	0	P	P	00 47 57.2	+0.7
LSA				IAmb	IAmb	00 48 11.5	
	comp=Z,12nm,0.8s						
KAPI	**Kappang**	29.49	103	LR	LR	00 59 46.9	
	comp=Z,74nm,20.5s,baz=304,slow=36						
CD2	**Chengdu**	31.40	21	P	P	00 48 28.1	0.0
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
SMLA	**Simla**	32.01	337	*e*P	P	00 48 33.9	+0.5
SMLA				IAmb	IAmb	00 48 46.8	
	comp=Z,17nm,1.2s						
DHRM	**DHARAMSHALA**	33.34	337	*e*P	P	00 48 45.6	+0.2
DHRM				IAmb	IAmb	00 48 46.6	
	comp=Z,8.1nm,0.4s						
NIL	**Nilore**	35.82	334	P	P	00 49 05.8	-0.7
NIL				IAmb	IAmb	00 49 07.4	
	comp=Z,12nm,0.7s						
MSEY	**Mahe Island**	36.07	260	P	P	00 49 06.5	-2.5
MSEY				IAmb	IAmb	00 49 06.6	
	comp=Z,17nm,1.2s						
LZH	**Lanzhou**	36.17	18	*e*P	P	00 49 08.9	-0.7
LZH				pP	pwP	00 49 16.3	-0.7
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
WHN	**Wuhan**	36.18	35	⇓P	P	00 49 12.0	+2.5
SSLB	**Suanglung**	36.33	51	P	P	00 49 09.9	-1.1
GTA	**Gaotai**	38.32	11	⇑P	P	00 49 28.6	+0.8
GTA				pP	pwP	00 49 36.1	+0.9
GTA				sP	sP	00 49 40.3	+10
GTA				pmax	pmax		
	comp=Z,13nm,0.8s						
GTA				pmax	pmax		
	comp=Z,160nm,5.5s						
GTA				LR	LR		
	comp=Z,190nm,14.5s						
GTA				LR	LR		
	comp=Z,180nm,14.9s						
GTA				LR	LR		
	comp=Z,150nm,16.0s						
KBL	**Kabul**	38.52	330	P	P	00 49 29.3	-0.4
NJ2	**Nanjing**	39.95	38	*e*P	P	00 49 43.4	+2.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
KSH	**Kashi**	40.00	342	P	P	00 49 40.4	-1.5
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SOHO	**SOHO**	40.08	307	P	P	00 49 43.4	+0.9
ALNE	**Al Ain**	40.67	306	*i* P	P	00 49 48.4	+0.9
	SNR=7.9						
ASHO	**Ashiyiah**	40.72	307	P	P	00 49 50.1	+2.2
HATD	**Hatta, Dubai**	40.73	307	P	P	00 49 51.0	+3.0
UOSS	**Minazif**	40.73	307	P	P	00 49 46.6	-1.4
MSFE	**Esma-Masafi**	40.97	308	P	P	00 49 51.6	+1.6
FAQ	**Al Faqa, Dubai**	41.12	307	P	P	00 49 51.8	+0.6
BANOM	**Banah**	41.13	309	P	P	00 49 52.3	+0.9
ASUD	**Al Ashush, Dub**	41.28	306	*i* P	P	00 49 53.5	+1.1
	SNR=9.4						
RER	**Riviere de l'E**	41.34	235	P	P	00 49 53.5	+0.3
DRK	**Karamyk**	41.43	337	P	P	00 49 53.4	-0.5
DRK				IAmb	IAmb	00 49 55.5	
	comp=Z,12nm,0.7s						
TARG	**Taragay, Kyrgy**	41.53	345	P	P	00 49 53.5	-1.3
GAR	**Garm**	41.61	336	P	P	00 49 54.2	-0.9
GAR				IAmb	IAmb	00 50 11.7	
	comp=Z,14nm,1.1s						
CHGR	**Chuyangaron**	41.81	334	P	P	00 49 55.6	-1.2
CHGR				IAmb	IAmb	00 49 56.6	
	comp=Z,10nm,0.8s						
WMQ	**Urumqi**	41.98	356	*e*P	P	00 50 01.3	+3.2
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.9s						
WMQ				LR	LR		
	comp=Z,360nm,29.1s						
WMQ				LR	LR		
	comp=Z,920nm,29.0s						
WMQ				LR	LR		
	comp=Z,130nm,29.1s						
PRZ	**Przheval'sk**	42.09	346	P	P	00 49 57.7	-1.4
PRZ				IAmb	IAmb	00 50 01.0	
	comp=Z,20nm,0.9s						
HRA	**Herat**	42.12	324	P	P	00 49 59.5	0.0
BTK	**Batken**	42.31	337	P	P	00 50 01.0	+0.2
UCH	**Uchtor**	42.92	342	P	P	00 50 06.7	+0.5
	SNR=11						
AML	**Almayashu**	43.10	341	P	P	00 50 08.1	+0.5
	SNR=16						
AML	**Almayashu**	43.10	341	*i* P	P	00 50 08.1	+0.5
	SNR=16						
HHC	**Hu-ho-hao-te**	43.12	23	*e*P	P	00 50 07.1	-0.4
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,4.5s						
KBK	**Karagaybulak**	43.18	343	P	P	00 50 08.6	+0.6
	SNR=5.0						
AAK	**Ala-Archa**	43.30	342	P	P	00 50 08.9	-0.1
EKS2	**Erkin-Say**	43.55	342	P	P	00 50 11.4	+0.6
	SNR=9.0						
USP	**Ospenovka**	43.88	343	P	P	00 50 13.8	+0.4
	SNR=9.4						
BJT	**Baijiatuau**	44.41	28	P	P	00 50 18.5	+0.9
BJI	**Beijing**	44.43	28	P	P	00 50 19.5	+1.7
BJI				pP	pwP	00 50 23.6	-1.6
BJI				sP	sP	00 50 26.4	+6.1
BJI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KKAR	**Karatay Array**	45.05	339	P	P	00 50 22.5	-0.3
MK31	**Makanchi Array**	45.49	352	P	P	00 50 25.8	-0.5
MKAR	**Makanchi Array**	45.49	352	P	P	00 50 25.5	-0.7
	comp=Z,5.6nm,0.7s,baz=172,slow=8.6,SNR=44						
MKAR				LR	LR	01 10 51.7	
	comp=Z,111nm,20.8s,baz=170,slow=38						
GEYT	**Alibeck**	46.97	324	P	P	00 50 38.4	+0.3
	comp=Z,10nm,0.6s,baz=158,slow=12,SNR=13						
GEYT				LR	LR	01 12 07.6	
	comp=Z,100nm,18.6s,baz=60,slow=38						
WRA	**Warramunga Arr**	47.65	119	P	P	00 50 43.9	+0.4
	comp=Z,5.7nm,0.9s,baz=298,slow=8.8,SNR=18						
WRAB	**Tennant Creek**	47.65	119	P	P	00 50 45.1	+1.5
WRAB				IAmb	IAmb	00 50 47.0	
	comp=Z,8.1nm,0.9s						
WB2	**Warramunga Arr**	47.66	119	P	P	00 50 45.7	+2.0
WB2				IAmb	IAmb	00 50 52.8	
	comp=Z,8.3nm,0.9s						
ABPO	**Ambohimpanom**	47.71	242	P	P	00 50 44.5	+0.2
ABPO				IAmb	IAmb	00 50 45.9	
	comp=Z,12nm,0.8s						
SONM	**Songino Array**	47.79	14	P	P	00 50 45.2	+0.9
	comp=Z,33nm,0.7s,baz=193,slow=9.1,SNR=210						
SONM				PcP	PcP	00 52 13.6	+0.3
	comp=Z,3.3nm,0.8s,baz=194,slow=5.0,SNR=1.9						
SONM				LR	LR	01 10 27.8	
	comp=Z,132nm,18.6s,baz=233,slow=36						
SONM	**Songino Array**	47.79	14	P	P	00 50 45.2	+0.9
WR0	**Warramunga Arr**	47.83	119	P	P	00 50 46.2	+1.2
WR0				IAmb	IAmb	00 50 48.3	
	comp=Z,12nm,1.0s						
ULN	**Ulaanbaatar**	47.98	15	P	P	00 50 45.5	-0.3
ULN				IAmb	IAmb	00 50 47.3	
	comp=Z,11nm,1.1s						
ATD	**Arta Tunnel**	48.74	284	P	P	00 50 51.7	-0.5
ASAR	**Alice Springs**	48.76	124	P	P	00 50 52.7	+0.6
	comp=Z,0.9nm,0.7s,baz=294,slow=7.2,SNR=6.7						
ASAR				PcP	PcP	00 52 17.4	+0.2
	comp=Z,1.3nm,0.6s,baz=302,slow=3.4,SNR=8.9						
ASAR				LR	LR	01 10 46.3	
	comp=Z,54nm,20.1s,baz=335,slow=35						
ASAR	**Alice Springs**	48.76	124	P	P	00 50 53.8	+1.7
RAYN	**Ar Rayn**	49.08	300	*i* P	P	00 50 54.4	-0.1
	SNR=16						
RAYN	**Ar Rayn**	49.08	300	P	P	00 50 54.1	-0.5
KSAR	**Wonju Array Be**	49.09	39	P	P	00 50 54.3	0.0
KS19	**Wonju Array Si**	49.11	39	P	P	00 50 55.2	+0.6
KSRS	**Korea Array**	49.12	39	P	P	00 50 55.4	+0.8
	comp=Z,2.5nm,0.9s,baz=215,slow=7.9,SNR=6.4						
KSRS				LR	LR	01 14 15.0	
	comp=Z,52nm,18.4s,baz=20,slow=39						
KURK	**Kurchatov**	49.90	350	P	P	00 50 59.8	-0.4
KURK				IAmb	IAmb	00 51 00.7	
	comp=Z,10.0nm,1.1s						
ZAA0	**Zalesovo Array**	52.27	355	IAmb	IAmb	00 51 17.8	
	comp=Z,9.6nm,0.6s						
ZALV	**Zalesovo Beam**	52.27	355	P	P	00 51 17.4	-0.7
	comp=Z,10nm,0.4s,baz=173,slow=7.1,SNR=62						
ZALV				LR	LR	01 15 04.9	
	comp=Z,54nm,21.7s,baz=136,slow=38						
KIBK	**Kibwezi**	53.11	266	P	P	00 51 25.1	-0.1
KMBO	**Kilima Mbogo**	53.83	267	P	P	00 51 31.1	+0.5
	comp=Z,4.0nm,0.9s,baz=72,slow=7.2,SNR=8.6						
KMBO	**Kilima Mbogo**	53.83	267	P	P	00 51 31.2	+0.5
KMBO	**Kilima Mbogo**	53.83	267	P	P	00 51 30.6	0.0
KMBO				IAmb	IAmb	00 51 32.3	
	comp=Z,8.8nm,1.2s						
BRVK	**Borovoye**	53.94	345	P	P	00 51 29.2	-1.2
ABKAR	**Akbulak array**	54.27	335	IAmb	IAmb	00 51 33.5	
	comp=Z,6.7nm,0.9s						
JCJ	**Chichijima**	55.08	58	LR	LR	01 15 10.1	
	comp=Z,83nm,18.4s,baz=288,slow=36						
MJAR	**Matsushiro Arr**	55.59	46	P	P	00 51 43.2	+0.5
MJAR				IAmb	IAmb	00 51 46.1	
	comp=Z,7.2nm,1.1s						
LODK	**Lodwar**	55.61	273	P	P	00 51 43.6	+0.2
LODK				IAmb	IAmb	00 51 45.3	
	comp=Z,5.7nm,0.9s						
USRK	**Ussuriysk Ar.**	55.67	35	P	P	00 51 42.5	-0.6
GNI	**Garni**	56.69	318	P	P	00 51 51.9	+1.2
SIRT	**Sirnak**	57.01	315	P	P	00 51 52.3	-0.6
PMG	**Port Moresby**	57.01	102	LR	LR	01 17 36.7	
	comp=Z,43nm,21.0s,baz=268,slow=37						
GURO	**Guroymak-BITLI**	57.77	316	P	P	00 51 58.4	0.0
JMM	**Marumori**	58.03	45	P	P	00 52 00.3	+0.3
MARD	**Mardin**	58.12	314	P	P	00 51 59.9	-0.9
MARD				IAmb	IAmb	00 52 02.1	
	comp=Z,12nm,0.9s						
CTAO	**Charters Tower**	58.32	115	P	P	00 52 03.1	+0.7
CTAO				IAmb	IAmb	00 52 06.8	
	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	58.41	129	P	P	00 52 04.0	+1.2
	comp=Z,6.5nm,0.9s,baz=313,slow=8.9,SNR=9.1						
STKA				LR	LR	01 17 13.0	
	comp=Z,63nm,18.9s,baz=327,slow=36						
STKA	**Stephens Creek**	58.41	129	P	P	00 52 03.9	+1.1
KLR	**Kul'dur**	58.70	30	P	P	00 52 04.9	+0.4
	comp=Z,4.1nm,0.9s,baz=275,slow=7.1,SNR=8.2						
ONI	**Oni**	58.76	320	P	P	00 52 05.0	-0.1
ONI				IAmb	IAmb	00 52 06.5	
	comp=Z,5.4nm,0.7s						
KBZ	**Khabaz**	59.68	321	P	P	00 52 11.5	+0.1
	comp=Z,6.7nm,0.8s,baz=125,slow=7.0,SNR=20						
KBZ				LR	LR	01 19 42.4	
	comp=Z,53nm,21.0s,baz=99,slow=38						
KIV	**Kislovodsk**	59.93	321	*i* P	P	00 52 13.5	+0.2
	SNR=7.8						
KIV	**Kislovodsk**	59.93	321	P	P	00 52 12.8	-0.4
MBAR	**Mbarara**	60.31	268	P	P	00 52 15.8	-0.7
MBAR				IAmb	IAmb	00 52 18.0	
	comp=Z,12nm,1.2s						
BR131	**Keskin Array S**	64.21	314	P	P	00 52 41.1	-1.0
BR131				IAmb	IAmb	00 52 41.7	
	comp=Z,6.1nm,0.7s						
BRTR	**Keskin Array B**	64.21	314	P	P	00 52 41.1	-1.0
	comp=Z,3.3nm,0.6s,baz=133,slow=7.1,SNR=25						
BRTR				LR	LR	01 20 58.7	
	comp=Z,106nm,21.9s,baz=124,slow=36						
BRTR	**Keskin Array B**	64.21	314	P	P	00 52 41.2	-1.0
LSZ	**Lusaka**	64.37	252	P	P	00 52 43.6	+0.1
LSZ				IAmb	IAmb	00 52 43.8	
	comp=Z,6.4nm,0.9s						
ILGA	**Ilgaz**	64.63	315	P	P	00 52 43.5	-1.5
ANTO	**Ankara**	64.87	314	P	P	00 52 45.4	-1.0
YAK	**Yakutsk**	66.75	19	P	P	00 52 57.6	-0.3
	comp=Z,5.0nm,0.3s,baz=186,slow=3.2,SNR=4.7						
YAK	**Yakutsk**	66.75	19	IAmb	IAmb	00 52 58.5	
	comp=Z,23nm,0.7s						
NRIK	**Noril'sk**	67.50	359	P	P	00 53 01.3	-1.3
	comp=Z,3.6nm,0.7s,baz=162,slow=5.6,SNR=11						
NRIK	**Noril'sk**	67.50	359	P	P	00 53 01.5	-1.1
NRIK				IAmb	IAmb	00 53 02.1	
	comp=Z,7.9nm,1.0s						
LBTB	**Lobatse**	68.62	242	P	P	00 53 10.9	+0.3
BOSA	**Boshof**	69.74	239	P	P	00 53 17.5	0.0
	comp=Z,8.6nm,0.7s,baz=86,slow=5.5,SNR=26						
BOSA				LR	LR	01 21 11.7	
	comp=Z,55nm,18.9s,baz=25,slow=34						
BOSA	**Boshof**	69.74	239	P	P	00 53 17.5	0.0
HARR	**Harsova**	69.87	317	⇓P	P	00 53 17.8	-0.1
MILM	**Milestii Mici**	70.02	320	⇑P	P	00 53 17.8	-0.9
RAZG	**Razgrad**	70.51	316	⇓P	P	00 53 22.0	+0.2
KLMR	**Klimovskoe**	70.66	336	*e*P	P	00 53 20.4	-1.9
KLMR				AMP		00 53 25.5	
	comp=Z,16nm,1.5s						
SORM	**Soroca**	70.72	321	⇓P	P	00 53 22.4	-0.6
BISRR	**Bisoca**	70.96	318	⇓P	P	00 53 25.8	+1.2
VRI	**Vrincioaia**	71.04	318	⇑P	P	00 53 25.3	+0.3
PLOR	**Plostina**	71.09	318	⇑P	P	00 53 25.8	+0.5
AKASG	**Malin Array Be**	71.09	324	LR	LR	01 28 41.3	
	comp=Z,38nm,18.9s,baz=285,slow=39						
TESR	**Tescani**	71.29	319	⇑P	P	00 53 26.2	-0.3
MLR	**Muntele Rosu**	71.45	318	⇓P	P	00 53 28.1	+0.5
MLR	**Muntele Rosu**	71.45	318	P	P	00 53 27.3	-0.3
HUMR	**Humele**	71.83	317	⇓P	P	00 53 29.4	-0.4
DOPR	**Dopca**	71.97	318	⇓P	P	00 53 30.4	-0.2
MAW	**Mawson**	71.97	191	P	P	00 53 31.1	+1.1
	comp=Z,3.8nm,0.8s,baz=2.8,slow=8.8,SNR=4.1						
MAW				LR	LR	01 17 10.4	
	comp=Z,74nm,20.1s,baz=54,slow=29						
BURAR	**Bucovina Array**	72.56	320	⇓P	P	00 53 34.9	+0.7
VTS	**Vitosha**	72.56	314	⇓P	P	00 53 34.1	-0.3
VTS	**Vitosha**	72.56	314	IAmb	IAmb	00 53 34.5	
	comp=Z,4.5nm,0.6s						
BUR08	**Bucovina Ar. S**	72.58	320	P	P	00 53 34.0	-0.4
BUR08				IAmb	IAmb	00 53 37.6	
	comp=Z,12nm,1.4s						
PRVS	**Prvonek**	73.37	314	*e*P	P	00 53 38.2	-0.9
ZAGS	**Zajecar**	73.56	315	*e*P	P	00 53 38.2	-1.9
BARS	**Barje**	73.63	314	*e*P	P	00 53 38.6	-1.9
HERR	**Herculane**	73.69	316	⇓P	P	00 53 40.7	-0.2
TIXI	**Tiksi**	73.81	12	P	P	00 53 39.3	-1.6
BOVS	**Bovan**	73.89	315	⇑P	P	00 53 40.0	-2.1
BOVS	**Bovan**	73.89	315	*e*P	P	00 53 40.6	-1.5
SELS	**Selova**	74.22	314	*e*P	P	00 53 42.6	-1.4
BZS	**Buzias**	74.42	317	⇓P	P	00 53 44.5	-0.6
TRPA	**Tarpa**	74.43	320	⇓P	P	00 53 44.8	-0.3
GRUS	**Gruza**	74.65	315	*e*P	P	00 53 45.9	-0.6
TRUS	**Trudelj**	74.94	315	*e*P	P	00 53 47.7	-0.5
IVAS	**Ivanjica**	74.98	315	*e*P	P	00 53 46.6	-1.9
SJES	**Sjenica**	75.04	314	*e*P	P	00 53 48.8	-0.1
DIVS	**Divibare**	75.20	315	*e*P	P	00 53 49.2	-0.6
BBLS	**Lazići**	75.57	315	*e*P	P	00 53 51.7	-0.2
SEY	**Seymchan**	75.75	24	P	P	00 53 51.5	-0.8
	comp=Z,1.7nm,0.7s,baz=259,slow=8.8,SNR=3.7						
FINES	**FINESS Array B**	76.69	333	P	P	00 53 57.0	-0.7
	comp=Z,2.6nm,0.6s,baz=95,slow=6.2,SNR=15						
FINES				LR	LR	01 29 09.4	
	comp=Z,58nm,19.7s,baz=63,slow=37						
KRLC	**Kraliky**	78.56	321	*e*P	P	00 54 09.0	+0.5
ARSA	**Arzberg**	78.88	318	*e*P	P	00 54 10.3	0.0
	comp=Z,2.6nm,0.6s						
DPC	**Dobruska-Polom**	78.90	321	*e*P	P	00 54 10.9	+0.5
OSTC	**Ostas**	79.01	321	*e*P	P	00 54 11.9	+0.9
CHVC	**Chvalec**	79.11	321	*e*P	P	00 54 12.0	+0.5
SOKA	**Soboth**	79.11	317	*e*P	P	00 54 11.2	-0.5
	comp=Z,2.8nm,0.9s						
CKRC	**Cesky Krumlov**	79.93	319	*e*P	P	00 54 17.4	+1.4
ARCES	**ARCESS Array B**	79.96	341	LR	LR	01 31 23.0	
	comp=Z,68nm,19.8s,baz=25,slow=37						
PRU	**Pruhonice**	79.97	320	*e*P	P	00 54 16.8	+0.6
MYKA	**Terra Mystica**	80.05	317	*i* P	P	00 54 16.6	-0.2
	comp=Z,8.0nm,1.1s						
GEC2	**GERESS Array S**	80.33	319	P	P	00 54 18.0	-0.3
GEC2				IAmb	IAmb	00 54 19.4	
	comp=Z,12nm,0.9s						
GERES	**GERESS Array B**	80.33	319	P	P	00 54 18.3	0.0
	comp=Z,6.7nm,0.8s,baz=103,slow=5.8,SNR=55						
GERES				LR	LR	01 33 01.8	
	comp=Z,29nm,21.7s,baz=88,slow=38						
KHC	**Kasperske Hory**	80.45	319	*e*P	P	00 54 18.7	-0.2
BRG	**Berggiesshubel**	80.48	321	*e*P	P	00 54 19.7	+0.7
BRG				Amp		00 54 23.3	
	comp=Z,3.6nm,0.8s						
ZOU	**Zoufplan**	80.50	317	P	P	00 54 18.5	-0.9
ZOU				IAmb	IAmb	00 54 19.9	
	comp=Z,16nm,1.4s						
CLL	**Collm**	81.14	322	*e*P	P	00 54 22.0	-0.4
	comp=Z,6.0nm,1.2s						
CTI	**Castel Tesino**	81.35	316	P	P	00 54 23.0	-0.8
CTI				IAmb	IAmb	00 54 24.6	
	comp=Z,7.6nm,0.7s						
WATA	**Walderalm**	81.55	317	*i* P	P	00 54 24.7	-0.1
	comp=Z,3.3nm,0.7s						
SQTA	**Sankt Quirin**	81.78	317	*i* P	P	00 54 25.4	-0.7
	comp=Z,3.0nm,0.7s						
MOTA	**Moosalm**	81.87	317	*e*P	P	00 54 25.7	-0.9
	comp=Z,8.4nm,0.9s						
FETA	**Feichten**	82.09	317	*e*P	P	00 54 28.1	+0.4
	comp=Z,7.9nm,1.3s						
RETA	**Reutte**	82.11	318	*i* P	P	00 54 27.0	-0.7
	comp=Z,7.2nm,1.0s						
KEST	**Kesra**	82.21	306	P	P	00 54 29.5	+1.0
	comp=Z,9.9nm,0.8s,baz=19,slow=1.1,SNR=15						
KEST	**Kesra**	82.21	306	P	P	00 54 28.0	-0.5
DAVA	**Damuels**	82.69	317	*e*P	P	00 54 31.0	+0.2
	comp=Z,16nm,0.8s						
NOA	**NORSAR Array B**	83.52	331	LR	LR	01 32 59.9	
	comp=Z,27nm,20.1s,baz=140,slow=37						
BNI	**Bardonecchia**	84.75	315	IAmb	IAmb	00 54 47.0	
	comp=Z,6.1nm,0.9s						
VNDA	**Vanda**	87.62	168	LR	LR	01 28 27.3	
	comp=Z,56nm,18.0s,baz=288,slow=32						
TORD	**Torodi Ar. Bea**	88.94	283	P	P	00 55 02.0	-0.3
	comp=Z,1.1nm,1.0s,baz=94,slow=6.0,SNR=4.9						
ESDC	**Sonseca Array**	92.72	310	P	P	00 55 20.0	+0.5
	comp=Z,1.2nm,0.9s,baz=42,slow=4.2,SNR=4.6						
ESDC				LR	LR	01 41 49.1	
	comp=Z,28nm,18.2s,baz=300,slow=39						
KOWA	**Kowa**	94.43	285	P	P	00 55 27.4	-0.4
KOWA				IAmb	IAmb	00 55 29.2	
	comp=Z,5.1nm,0.8s						
A21K	**Barrow**	95.38	17	P	P	00 55 31.0	+0.1
ILAR	**Eielson Array**	101.54	22	PP	PP	01 00 06.0	-2.3
	comp=Z,0.9nm,1.2s,baz=244,slow=6.7,SNR=4.2						
SCHQ	**Schefferville**	120.71	345	PKP	PKPdf	01 00 58.1	-0.8
	comp=Z,3.8nm,0.9s,baz=234,slow=1.3,SNR=3.6						
NVAR	**Mina Array Bea**	131.73	31	PKP	PKiKP	01 01 21.8	0.0
	comp=Z,0.9nm,0.7s,baz=29,slow=0.2,SNR=5.1						
PDAR	**Pinedale Array**	131.95	20	PKP	PKPdf	01 01 21.5	+0.4
	comp=Z,0.5nm,0.8s,baz=27,slow=3.6,SNR=4.8						
TXAR	**Lajitas Array**	146.04	23	PKPbc	PKPbc	01 01 47.8	+0.1
	comp=Z,11nm,0.9s,baz=203,slow=0.6,SNR=81						
LPAZ	**La Paz**	154.89	234	PKPbc	PKiKP	01 02 10.4	+0.1
	comp=Z,2.1nm,0.9s,baz=300,slow=2.9,SNR=4.4						

IDC 19 01:04:54.6±38.0, 17°.56S×179°.79W, h415^{km}±56^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.1/25, mbtmp4.4/3, Error ellipse: s-maj=739.9km s-min=76.0km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	2.07	265	P	P	01 05 52.4	-0.1
	0.6nm,0.3s,baz=104,slow=14,SNR=8.3						
STKA	**Stephens Creek**	37.65	240	P	P	01 11 33.5	+1.1
	1.3nm,0.5s,baz=91,slow=10,SNR=6.2						
WRA	**Warramunga Arr**	43.40	259	P	P	01 12 18.1	-0.9
	1.1nm,0.2s,baz=93,slow=7.7,SNR=112						
ASAR	**Alice Springs**	43.62	254	P	P	01 12 20.4	-0.2
	7.6nm,0.5s,baz=88,slow=8.0,SNR=184						

ANF 19 01:37:14.9±0.2, 36°.67N×97°.97W, h1^{km}, ML3.5/6, Error ellipse: s-maj=2.3km s-min=1.9km az=6.0

TUL 19 01:37:15.1±1.2, 36°.70N±0°.02×97°.99W±0°.06, h7^{km}±7^{km}, ML3.3, mb_Lg2.9/38(NEIC), Error ellipse: s-maj=6.5km s-min=2.4km az=76.0

NEIC 19 01:37:15.1±0.9, 36°.67N±0°.02×97°.98W±0°.04, h1^{km}±7^{km}, Error ellipse: s-maj=4.7km s-min=2.2km az=83.0

ISC 19 01:37:15.4±1.1, 36°.68N±0°.02×97°.97W±0°.02, h2^{km}±10^{km}, n76, $\sigma 0^{s}.54$/78, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	0.17	184	Pg	Pg	01 37 19.2	+0.5
CROK				Sg	Sg	01 37 22.1	+1.1
GC02	**Grant County #**	0.20	27	Pg	Pg	01 37 19.3	+0.1
GC02				Sg	Sg	01 37 22.2	+0.5
OK032	**Salt Plains WL**	0.23	303	Pg	Pg	01 37 19.7	-0.2
OK032				Sg	Sg	01 37 22.9	0.0
KAN14	**Manchester OK**	0.28	1		Pg	01 37 20.7	-0.1
KAN17	**Caldwell West**	0.40	24	Pg	Pg	01 37 23.0	-0.2
KAN17				Sg	Sg	01 37 28.4	+0.1
KAN05	**Bluff City Nor**	0.44	10		Pg	01 37 23.6	-0.2
KAN05				Sg	Sg	01 37 29.5	0.0
KAN10	**Anthony SW Sta**	0.46	347	Pg	Pg	01 37 23.9	-0.3
KAN01	**Argonia South**	0.51	19		Pg	01 37 24.8	-0.3
KAN13	**South Haven SW**	0.52	49	Pg	Pg	01 37 25.3	-0.1
KAN13				Sg	Sg	01 37 32.3	+0.3
KAN09	**Caldwell North**	0.54	31	Pg	Pg	01 37 25.5	-0.3
KAN08	**Anthony NE Sta**	0.55	360		Pg	01 37 25.5	-0.4
KAN16	**Harper SW Stat**	0.55	352	Pg	Pg	01 37 25.7	-0.4
KAN06	**Argonia West S**	0.58	9		Pg	01 37 26.1	-0.4
BLOK	**Blackwell**	0.61	82	Pg	Pg	01 37 27.1	0.0
KAN12	**Harper NE Stat**	0.62	358	Pg	Pg	01 37 26.8	-0.5
U32A	**Winter Ranch,**	0.88	251		Pg	01 37 31.6	-0.7
U32A	**Winter Ranch,**	0.88	251	P	Pg	01 37 31.6	-0.7
	baz=70						
U32A				S	Sg	01 37 43.9	+0.1
	baz=70						
OK029	**Liberty Lake**	0.97	154	Pg	Pg	01 37 33.8	-0.3
BCOK	**Bluff Creek, N**	1.06	164	Pg	Pg	01 37 35.1	-0.6
QUOK	**Quay**	1.14	116		Pg	01 37 36.9	-0.3
OK031	**S. Brethren Rd**	1.16	128		Pg	01 37 37.2	-0.5
T35A	**Sooner Cattle**	1.19	78	Pg	Pg	01 37 37.7	-0.6
T35B	**Sooner Cattle**	1.19	78	P	Pg	01 37 37.6	-0.7
	baz=258						
T35B				S	Sg	01 37 53.6	-0.2
	baz=258						
OK025	**Westminster Rd**	1.21	155		Pg	01 37 38.0	-0.5
OK034	**N. Norfolk Rd.**	1.21	123		Pg	01 37 38.0	-0.6
OK030	**Cody Creek RV**	1.22	128		Pg	01 37 38.0	-0.7
OKCFA	**Oklahoma City**	1.33	161		Pg	01 37 39.7	-1.1
OKCFA	**Oklahoma City**	1.33	161	P	Pg	01 37 39.9	-1.0
	baz=341						
OKCFA				S	Sn	01 37 58.8	-0.4
	baz=341						
OKCSW	**OKLAHOMA CITY**	1.34	161		Pg	01 37 40.1	-1.0
FNO	**Franklin**	1.49	162		Pn	01 37 42.7	-0.4
W35A	**Tecumseh**	1.76	149		Pn	01 37 46.7	-0.2
R32A	**Long Quarter,**	1.84	342		Pn	01 37 48.2	+0.2
R32A				IAmb_Lg		01 38 13.4	
	comp=Z,52nm,0.8s						
R32A	**Long Quarter,**	1.84	342	P	Pn	01 37 48.2	+0.2
	baz=162						
R32A				S	Sn	01 38 12.4	+0.5
	baz=162						

TUL1	Leonard	1.92	113		Pn	01 37 49.7	+0.7
TUL1				IAmb_Lg		01 38 20.3	
	comp=Z,69nm,0.8s						
TUL1	Leonard	1.92	113	P	Pn	01 37 49.7	+0.7
	baz=294						
TUL1				S	Sn	01 38 14.4	+0.7
	baz=294						
X34A	Smith Ranch, M	2.07	177		Pn	01 37 51.8	+0.6
CBKS	Cedar Bluff	2.55	327	Pn	Pn	01 37 58.3	+0.5
CBKS	Cedar Bluff	2.55	327	P	Pn	01 37 57.9	+0.1
	baz=146						
KSU1	Kansas State U	2.65	24		Pn	01 37 58.8	-0.3
LOOK	Love County	2.75	166		Pn	01 38 00.6	0.0
U38A	Gravette	2.90	94		Pn	01 38 02.8	+0.3
X37A	Clayton	2.97	134		Pn	01 38 05.0	+1.5
X37A				IAmb_Lg		01 38 53.3	
	comp=Z,43nm,0.7s						
HHAR	Hobbs	3.27	96		Pn	01 38 07.4	-0.3
AMTX	Amarillo	3.51	240		Pn	01 38 11.9	+0.9
AMTX				IAmb_Lg		01 39 13.2	
	comp=Z,28nm,0.7s						
W39A	Magazine	3.70	112		Pn	01 38 14.7	+1.1
S39A	Bolivar	3.85	73		Pn	01 38 15.2	-0.3
S39A	Bolivar	3.85	73	P	Pn	01 38 15.3	-0.3
	baz=256						
U40A	Yellville	4.13	93		Pn	01 38 19.3	-0.2
MIAR	Mount Ida	4.16	119	Pn	Pn	01 38 20.1	+0.1
MIAR				IAmb_Lg		01 39 34.0	
	comp=Z,30nm,1.0s						
Z38A	Mt. Pleasant	4.20	143	IAmb_Lg		01 39 31.0	
	comp=Z,29nm,0.9s						
ABTX	Abilene, Hawle	4.27	199	Pn	Pn	01 38 22.1	+0.7
ABTX				IAmb_Lg		01 39 30.5	
	comp=Z,25nm,1.1s						
KSCO	Kaye Shedlock’	4.36	304		Pn	01 38 23.6	+0.8
KSCO				IAmb_Lg		01 39 36.5	
	comp=Z,29nm,0.7s						
P38A	Dawn	4.57	49		Pn	01 38 25.0	-0.5
P38A				IAmb_Lg		01 39 44.1	
	comp=Z,21nm,0.8s						
MGMO	Mountain Grove	4.59	82		Pn	01 38 25.8	-0.1
WHTX	Lake Whitney,	4.69	175	Pn	Pn	01 38 26.9	-0.3
X40A	Basin Creek Fa	4.72	116	Pn	Pn	01 38 27.9	+0.4
X40A				IAmb_Lg		01 39 47.2	
	comp=Z,27nm,0.7s						
BGNE	Belgrade	4.73	358	IAmb_Lg		01 39 47.2	
	comp=Z,23nm,0.9s						
MSTX	Muleshoe	4.77	237		Pn	01 38 28.5	+0.2
FCAR	Ozark Folk Cen	4.79	98	Pn	Pn	01 38 28.4	0.0
WHAR	Wooly Hollow	4.81	105		Pn	01 38 28.0	-0.8
R40A	Maddies Statio	4.81	69		Pn	01 38 28.6	-0.2
WLAR	White Oak Lake	4.97	125	IAmb_Lg		01 40 02.4	
	comp=Z,24nm,0.9s						
T25A	Trinidad	5.18	277	Pn	Pn	01 38 33.6	-0.5
T25A				IAmb_Lg		01 40 03.2	
	comp=Z,29nm,0.9s						
OGNE	Ogallala	5.31	325	Pn	Pn	01 38 35.6	-0.2
L34A	Svendsen Farm,	5.42	13	IAmb_Lg		01 40 09.1	
	comp=Z,23nm,0.7s						
P40A	Paris	5.47	57	IAmb_Lg		01 40 08.9	
	comp=Z,27nm,0.7s						
T42A	Van Buren	5.53	84	Pn	Pn	01 38 38.7	+0.1
N38A	Joes South For	5.53	41	IAmb_Lg		01 40 19.0	
	comp=Z,27nm,0.7s						
CCM	Cathedral Cave	5.53	74	Pn	Pn	01 38 39.0	+0.3
LCAR	Lake Charles	5.53	94	Pn	Pn	01 38 38.0	-0.8
LCAR				IAmb_Lg		01 40 16.2	
	comp=Z,13nm,0.9s						
K31A	O'Neill	5.97	354	IAmb_Lg		01 40 34.4	
	comp=Z,20nm,0.7s						
PBMO	Poplar Bluff	6.06	87	IAmb_Lg		01 40 32.0	
	comp=Z,16nm,0.8s						
SDCO	Great Sand Dun	6.11	282	Pn	Pn	01 38 47.2	+0.3
FVM	French Village	6.15	75	Pn	Pn	01 38 46.5	-0.8
JCT	Junction City	6.37	194	IAmb_Lg		01 40 52.4	
	comp=Z,14nm,0.8s						
ISCO	Idaho Springs	6.78	300	Pn	Pn	01 38 56.7	+0.6

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*NEIC **19** 01:45:46.8±1.0, 33.°82N±0.°01×117.°03W±0.°02, h16^{km}±2^{km}, Error ellipse: s-maj=2.1km s-min=1.5km az=62.0*

*ANF **19** 01:45:46.0±0.2, 33.°84N×117.°05W, h18^{km}±1^{km}, ML2.9/27, Error ellipse: s-maj=1.4km s-min=1.1km az=57.0*

*PAS **19** 01:45:47.2±1.1, 33.°84N±0.°01×117.°05W±0.°02, h14^{km}±4^{km}, ML3.1/238, ML2.8/48(NEIC), Error ellipse: s-maj=1.9km s-min=1.5km az=91.0*

ISC 19 01:45:46.5±0.9**, 33.°81N**±0.°02×**117.°05W**±0.°02**, h16**^{km}±7^{km}**, n53,** σ**0.^{s}73**/84**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MURC	Murrieta	0.24	210	P	Pg	01 45 52.7	+0.7
	baz=27,SNR=956						
MURC				S	Sb	01 45 56.8	+0.2
	baz=27						
RSBC	Riverside Bore	0.28	305		Pg	01 45 52.4	-0.2
RSBC					Sg	01 45 56.3	-0.5
GVDA	Garner Valley	0.34	114		Pg	01 45 53.9	+0.2
GVDA					Sg	01 45 58.7	+0.1
BBRC	Big Bear Solar	0.47	13	P	Pg	01 45 55.5	-0.5
	baz=194,SNR=42						
BBRC				S	Sg	01 46 01.6	-0.7
	baz=194						
PFO	Pinyon Flats O	0.53	112	Pg	Pg	01 45 57.0	-0.1
PFO				IAML		01 46 04.8	
	713nm,0.5s						
PFO				IAML		01 46 04.9	
	456nm,0.1s						
PFO	Pinyon Flats O	0.53	112	P	Pg	01 45 57.0	-0.1
	baz=295,SNR=58						
PFO				S	Sg	01 46 04.1	-0.1
	baz=295						
BFSC	Mount Baldy Ra	0.66	310	P	Pg	01 45 58.7	-0.9
	baz=128,SNR=67						
BFSC				S	Sg	01 46 07.3	-1.1
	baz=128						
BELC	Belle Mtn. Jos	0.89	77	P	Pb	01 46 03.5	-0.3
	baz=260,SNR=87						
BELC				S	Sb	01 46 15.3	-0.2
	baz=260						
109C	Camp Elliot, M	0.92	183		Pb	01 46 03.4	-0.6
109C	Camp Elliot, M	0.92	183	P	Pb	01 46 03.8	-0.3
	baz=2.9,SNR=28						
109C				S	Sb	01 46 16.0	-0.1
	baz=2.9						
GVRC	Garvey Reservo	0.92	285		Pg	01 46 04.9	+0.5
MWC	Mount Wilson	0.94	297		Pb	01 46 03.6	-0.9
PASC	Pasadena Art C	1.01	291		Pb	01 46 05.1	-0.6
PASC				IAML		01 46 19.5	
	comp=E,183nm,0.3s						
PASC				IAML		01 46 20.3	
	comp=N,189nm,0.5s						
FMP	Fort Macarthur	1.04	265	S	Sb	01 46 19.7	+0.1
	baz=83						
MONP2	Monument Peak	1.05	150	P	Pb	01 46 06.8	+0.2
	baz=331,SNR=116						
MONP2				S	Sb	01 46 20.6	+0.4
	baz=331						
RRX	Edison Barstow	1.06	2	P	Pb	01 46 06.3	-0.4
	baz=182,SNR=12						
RRX				S	Sb	01 46 20.1	-0.3
	baz=182						
DECC	Green Verdugo	1.16	293	P	Pn	01 46 07.5	-0.6
	baz=111						
DECC				S	Sb	01 46 23.4	+0.4
	baz=111						
BAR	Barrett	1.17	164		Pn	01 46 07.6	-0.6
BAR				IAML		01 46 24.1	
	comp=N,239nm,0.2s						
HEC	Hector,Ludlow	1.18	30	Pg	Pn	01 46 08.1	-0.3
	baz=211,SNR=20						
HEC				S	Sb	01 46 23.5	-0.2
	baz=211						
CIS	Catalina Islan	1.21	251	P	Pn	01 46 08.5	-0.3
	baz=69						
CIS				S	Sb	01 46 25.1	+0.6
	baz=69						
TKX	Tecate	1.29	163		Pn	01 46 09.3	-0.7
TKX				IAML		01 46 31.3	
	comp=N,256nm,0.2s						
TJX	Tijuana	1.29	180	Pn	Pb	01 46 10.8	+0.3
EDW2	Edwards Air Fo	1.32	324	Pg	Pn	01 46 10.8	+0.3
	baz=143,SNR=30						
EDW2				Sb	Sn	01 46 27.6	-0.2
	baz=143						
BC3	Big Chuckawall	1.34	96	P	Pn	01 46 10.2	-0.5
	baz=278,SNR=28						
SWSC	Sam W. Stewart	1.35	129	Pn	Pn	01 46 10.0	-0.8
	baz=311,SNR=15						
SWSC				Pg	Pg	01 46 12.6	0.0
	baz=311						
SWSC				Sb	Sg	01 46 30.4	+0.1
	baz=311						
IKP	In-Ko-Pah, Jac	1.40	145	P	Pn	01 46 11.4	-0.1
	baz=327,SNR=29						
IKP				Sb	Sg	01 46 31.2	-0.5
	baz=327						
RMX	La Rumorosa	1.45	146		Pb	01 46 13.6	+0.3
RMX				IAML		01 46 38.6	
	comp=E,95nm,0.6s						
RMX				IAML		01 46 40.0	
	comp=N,90nm,0.3s						
GSC	Goldstone, Bar	1.50	8		Pn	01 46 13.0	+0.1
GSC				IAML		01 46 35.4	
	comp=N,167nm,0.6s						
GSC	Goldstone, Bar	1.50	8	Pb	Pn	01 46 13.0	+0.1
	baz=188,SNR=59						
GSC				S	Sn	01 46 31.3	-0.9
	baz=188						
GMRC	Granite Mounta	1.51	49	Pb	Pn	01 46 12.6	-0.4
	baz=231,SNR=15						
GMRC				S	Sn	01 46 31.6	-0.8
	baz=231						
CBX	Cerro Bola	1.53	168		Pn	01 46 14.1	+0.8
CBX				IAML		01 46 37.1	
	comp=N,101nm,0.5s						
CBX				IAML		01 46 39.4	
	comp=E,110nm,0.6s						
OSI	Osito Audit: C	1.60	301	Sb	Sn	01 46 35.1	+0.4
	baz=119						
IRM	Iron Mountain	1.62	77	Pn	Pn	01 46 13.7	-0.7
	baz=259						
IRM				Pg	Pb	01 46 16.7	+0.7
	baz=259,SNR=35						
IRM				Sb	Sg	01 46 37.4	-1.4
	baz=259						
LRMC	Laurel Mtn Rad	1.75	343	Pn	Pn	01 46 16.1	-0.2
	baz=162						
LRMC				Pg	Pb	01 46 19.1	+0.8
	baz=162,SNR=24						
LRMC				S	Sn	01 46 38.3	-0.1
	baz=162						
TUQ	Turquoise Moun	1.87	29	Pn	Pn	01 46 17.6	-0.4
	baz=210,SNR=26						
TUQ				Pg	Pb	01 46 20.9	+0.5
	baz=210						
CCX	Cicese	1.96	170	Pn	Pn	01 46 20.8	+1.6
CCX				IAML		01 46 51.4	
	comp=E,83nm,0.6s						
CCX				IAML		01 47 09.9	
	comp=N,68nm,0.1s						
GLA	Glamis	2.00	112	Pn	Pn	01 46 20.0	+0.2
GLA				IAML		01 46 54.2	
	comp=E,74nm,0.7s						
GLA	Glamis	2.00	112	Pn	Pn	01 46 19.6	-0.2
	baz=294						
GLA				Pg	Pg	01 46 24.6	-0.4
	baz=294,SNR=10						
QSM	Queen of Sheba	2.16	4	Pn	Pn	01 46 22.0	+0.2
QSM				IAML		01 46 54.9	
	comp=N,108nm,0.5s						
SHOC	Shoshone, Teco	2.18	17	Pn	Pn	01 46 22.3	+0.1
	baz=197,SNR=31						
SHOC				Pg	Pb	01 46 27.0	+1.4
	baz=197						
SHOC				S	Sn	01 46 48.6	-0.3
	baz=197						
ISA	Isabella, Lake	2.19	328		Pn	01 46 22.8	+0.5
ISA	Isabella, Lake	2.19	328	Pg	Pb	01 46 26.6	+0.7
	baz=147,SNR=16						
ISA				Sb	Sb	01 46 53.8	+1.0
	baz=147						
MPMC	Manual Prospec	2.27	351	Pn	Pn	01 46 23.6	0.0
	baz=171						
MPMC				Pg	Pb	01 46 28.6	+1.3
	baz=171,SNR=23						
MPMC				Sb	Sg	01 46 57.8	-1.9
	baz=171						
GWY	Greenwater Val	2.39	7	Pn	Pn	01 46 25.2	0.0
SHPR	Sheep Range	3.10	29	Pn	Pn	01 46 34.9	-0.1
TPNV	Topopah Spring	3.20	12		Pn	01 46 37.3	+0.9
TPNV				IAML		01 47 29.9	
	comp=N,21nm,0.6s						
TPNV	Topopah Spring	3.20	12	P	Pn	01 46 37.2	+0.9
	baz=192,SNR=5.3						
TPNV				Sb	Sb	01 47 25.5	+3.5
	baz=192						
LCH	Last Change Ra	3.45	352		Pn	01 46 40.2	+0.4
PRN	Pahroc Range	3.94	24		Pn	01 46 47.2	+0.7
PRN				IAML		01 47 57.4	
	comp=E,15nm,1.0s						
PRN				IAML		01 48 03.5	
	comp=N,12nm,0.8s						
LCMT	Little Creek M	4.46	43	Pn	Pn	01 46 53.3	-0.3
X16A	Lo Mia Camp, P	4.69	81	Pn	Pn	01 46 56.5	-0.4
U15A	North Rim	4.69	55	Pn	Pn	01 46 57.4	+0.4
U15A				IAML		01 47 58.5	
	comp=E,6.5nm,4.2s						
U15A				IAML		01 49 10.4	
	comp=N,5.8nm,4.3s						
KNB	Kanab	4.71	46	Pn	Pn	01 46 57.3	+0.2
KNB				IAML		01 48 17.2	
	comp=E,6.4nm,3.5s						
KNB				IAML		01 48 52.5	
	comp=N,7.4nm,4.0s						

WEL 19 02:07:45.0, 40°S±3°×**17°5E**±°**, h25**^{km}±3^{km}**, M3.4**/45**, ML3.7**/46**, MLv3.4**/45**, Error ellipse: s-maj=0.0km s-min=0.0km az=41.5, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHWZ	Ohakea	0.03	93	P	Pb	02 07 49.4	+0.2
OHWZ				S	Sb	02 07 53.4	+1.2
POWZ	Post Office Ro	0.42	117	P	Pb	02 07 54.1	+0.3
POWZ				S	Sb	02 08 00.7	+0.8
WAZ	Wanganui	0.50	333	P	Pb	02 07 55.7	+0.4
MRZ	Mangatainoka R	0.51	154	P	Pb	02 07 55.6	+0.2
MRZ				S	Sb	02 08 03.0	+0.5
TSZ	Takapari Road	0.54	75	P	Pb	02 07 56.0	0.0
TSZ				S	Sb	02 08 03.7	+0.3
OGWZ	Otaki Gorge	0.62	188	P	Pb	02 07 56.7	-0.6
OGWZ				S	Sb	02 08 04.9	-0.6
PRWZ	Pori Road	0.63	124	P	Pn	02 07 58.7	+0.3
DVHZ	Dannevirke	0.68	98	P	Pn	02 07 58.9	-0.3
DVHZ				S	Sn	02 08 08.7	-0.3
KIW	Kapiti Island	0.71	203	P	Pb	02 07 57.8	-1.0
KIW				S	Sb	02 08 06.9	-1.5
HOWZ	Holdsworth Sta	0.71	166	P	Pb	02 07 59.0	+0.1
TIWZ	Tintock	0.73	141	P	Pn	02 08 00.0	+0.1
TIWZ				S	Sn	02 08 10.9	+0.6
PNHZ	Pukenui	0.76	68	P	Pb	02 07 59.5	-0.2
PNHZ				S	Sb	02 08 09.8	+0.1
MTVZ	Mangateitei	0.83	10	P	Pb	02 08 00.6	-0.3
MOVZ	Moawhango	0.88	25	P	Pb	02 08 00.6	-1.0
MOVZ				S	Sb	02 08 12.4	-0.6
BFZ	Birch Farm	0.88	123	P	Pn	02 08 02.3	+0.5
WPHZ	Waipukurau	0.90	81	P	Pn	02 08 02.9	+0.8
WNVZ	Wahianoa	0.91	16	P	Pb	02 08 01.5	-0.8
PKVZ	Pokaka	0.92	3	P	Pb	02 08 01.9	-0.4
CAW	Cannon Point	0.92	190	P	Pb	02 08 01.7	-0.6
TRVZ	Turoa	0.93	13	P	Pb	02 08 02.2	-0.4
BHHZ	Black Hill Sta	0.93	40	P	Pb	02 08 01.7	-0.9
WHVZ	Whangaehu Hut	0.95	15	P	Pb	02 08 02.4	-0.6
DRZ	Dome Shelter	0.95	13	P	Pb	02 08 02.7	-0.4
MTW	Mount Morrison	0.97	170	P	Pb	02 08 03.4	+0.2
FWVZ	Far West T-bar	0.97	13	P	Pn	02 08 02.8	-0.5
TUVZ	Tukino	0.98	17	P	Pn	02 08 02.9	-0.5
CPWZ	Castlepoint	0.99	135	P	Pb	02 08 04.9	+1.3
KRHZ	Kereru	1.01	57	P	Pn	02 08 03.6	-0.1
TMWZ	Te Maipa	1.01	153	P	Pb	02 08 04.1	+0.1
PRHZ	Porangahau	1.04	94	P	Pb	02 08 04.9	+0.5
SNVZ	South Ngauruho	1.05	15	P	Pn	02 08 04.1	-0.3
NGZ	Ngauruhoe	1.06	14	P	Pn	02 08 04.3	-0.1
OTVZ	Oturere	1.08	16	P	Pn	02 08 04.6	-0.2
NNVZ	North Ngauruho	1.10	14	P	Pn	02 08 05.0	-0.1
WTVZ	West Tongariro	1.11	12	P	Pn	02 08 05.1	-0.1
ETVZ	East Tongariro	1.12	17	P	Pn	02 08 05.3	+0.1
TMVZ	Te Maari	1.14	17	P	Pn	02 08 05.3	-0.1
TWVZ	Taurewa	1.14	6	P	Pn	02 08 05.1	-0.4
KRVZ	Karewarewa	1.14	14	P	Pn	02 08 05.8	+0.2
NTVZ	North Tongarir	1.15	16	P	Pn	02 08 05.6	0.0
VRZ	Vera Road	1.15	339	P	Pn	02 08 05.6	0.0
KWHZ	Kaweka Forest	1.18	49	P	Pb	02 08 06.5	-0.2
PAWZ	Paruwai Farm	1.18	175	P	Pb	02 08 06.8	0.0
DUWZ	D’Urville Isla	1.20	240	P	Pn	02 08 05.8	-0.4
MSWZ	Moikau Station	1.21	181	P	Pb	02 08 07.2	-0.1
PXZ	Pawanui	1.23	82	P	Pn	02 08 07.0	+0.5
TRWZ	Traveller	1.23	166	P	Pb	02 08 07.7	0.0
BHW	Baring Head	1.24	194	P	Pn	02 08 07.1	+0.3
TCW	Tory Channel	1.26	217	P	Pn	02 08 06.6	-0.5
KATZ	Kakaramea	1.27	15	P	Pb	02 08 08.1	-0.2
KAHZ	Kahuranaki	1.29	72	P	Pb	02 08 08.4	-0.3
RITZ	Rihia Road	1.30	20	P	Pb	02 08 08.7	-0.2
NEZ	North Egmont	1.31	315	P	Pb	02 08 08.9	-0.1
MCHZ	McNeill Hill	1.33	56	P	Pb	02 08 09.7	+0.5
KHEZ	Kahui Hut	1.33	313	P	Pb	02 08 09.4	0.0
PLWZ	Palliser	1.36	181	P	Pn	02 08 08.9	+0.3
RATZ	Rangitukua	1.39	16	P	Pb	02 08 10.2	-0.1
BKZ	Black Stump Fm	1.40	42	P	Pb	02 08 10.1	-0.3
PKE	Pukeiti	1.42	315	P	Pb	02 08 10.8	0.0
WATZ	Wairara	1.54	13	P	Pb	02 08 11.9	-0.9
TUWZ	Tuamarina	1.59	219	P	Pn	02 08 12.2	+0.6
NMHZ	Naumai	1.61	47	P	Pb	02 08 13.5	-0.7
ARHZ	Aropaoanui	1.62	55	P	Pb	02 08 16.1	+1.8
WHTZ	Whakaora	1.62	19	P	Pb	02 08 15.9	+1.5
MRHZ	Matea Rd	1.63	33	P	Pb	02 08 13.7	-0.7
HIZ	Hauiti	1.72	349	P	Pn	02 08 13.5	+0.1
KUTZ	Kaahu Road	1.76	14	P	Pb	02 08 17.3	+0.6
NNZ	Nelson	1.77	234	P	Pn	02 08 14.4	+0.5
MTHZ	Maungataniwha	1.81	42	P	Pn	02 08 15.9	+1.2
ALRZ	Allen Road	1.83	27	P	Pn	02 08 16.3	+1.3
BSWZ	Blackbirch Sta	1.85	215	P	Pn	02 08 15.4	+0.3
TLZ	Tolley Road	1.88	6	P	Pn	02 08 16.8	+1.2
RAHZ	Arahi	1.90	48	P	Pb	02 08 19.6	+0.6
HRRZ	Handcock Road	1.97	24	P	Pb	02 08 18.8	-1.4
RTZ	Ruatahuna	2.06	40	P	Pb	02 08 22.4	+0.6
RRRZ	Republican Roa	2.09	28	P	Pb	02 08 23.1	+0.8
SNGZ	Shannon Statio	2.13	49	P	Pb	02 08 26.2	+3.2
TARZ	Mount Tarawera	2.18	26	P	Pb	02 08 25.6	+1.7
QRZ	Quartz Range	2.19	253	P	Pn	02 08 19.9	+0.1
NGRZ	Ngongotaha	2.21	19	P	Pb	02 08 26.1	+1.7
THZ	Tophouse	2.38	228	P	Pn	02 08 22.6	+0.1
URZ	Urewera	2.41	37	P	Pn	02 08 21.7	-1.1
TOZ	Tahuroa Road	2.48	4	P	Pn	02 08 26.2	+2.5
MWZ	Matawai	2.56	44	P	Pb	02 08 29.7	-0.5
KHZ	Kahutara	2.57	210	P	Pn	02 08 24.5	-0.5
RUGZ	Raukumara Rang	2.91	41	P	Pn	02 08 32.3	+2.4
HAZ	Te Kaha	3.13	39	P	Pn	02 08 33.3	+0.6
JCZ	Jackson Bay	6.18	229	P	Pn	02 09 18.1	+3.2

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*BJI **19** 02:10:51.4±0.0, 17.°93S×169.°82E, h9^{km}, mB5.7/63, mb5.3/74, Ms5.8/81, Ms7 5.6/78*

*IDC **19** 02:10:51.3±0.4, 18.°31S×169.°46E, h0^{km}, mb4.9/28, mb1 5.0/31, mb1mx4.8/45, mbtmp5.0/31, ML4.7/3, MS5.5/37, Ms1 5.5/37, ms1mx5.5/38, Error ellipse: s-maj=14.3km s-min=12.7km az=140.0*

*NOU **19** 02:10:52.6, 18.°31S×169.°43E, h2^{km}, ML5.6/108, Vanuatu Islands*

*NEIC **19** 02:10:53.3, 18.°40S×169.°40E, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.47; $M_{\theta\theta}$-3.31; $M_{\phi\phi}$2.85; $M_{r\theta}$-1.97; $M_{\theta\phi}$-6.96; $M_{\phi r}$0.28; Fault plane solution: $M_0$7.88000×10^{17} NP1:ϕ_s281.80000°, δ89.65000°, λ165.37000°. NP2:ϕ_s11.89000°, δ75.37000°, λ0.36000°. Principal axes: T 7.6192, Plg11.0000°, Azm236.0000°; N 0.4905, Plg75.0000°, Azm100.0000°; P -8.1097, Plg10.0000°, Azm328.0000°;*

*NEIC **19** 02:10:53.4±1.8, 18.°38S±0.°06×169.°39E±0.°07, h10^{km}±1^{km}, mb5.7/166, Ms_20 5.8/379, Mwb5.9/56, Mwp6.2, Mww6.0 Error ellipse: s-maj=11.1km s-min=9.7km az=90.0*

*MOS **19** 02:10:54.4±1.3, 18.°38S×169.°43E, h30^{km}, mb5.7/50, MS5.6/32, Error ellipse: s-maj=8.2km s-min=6.6km az=133.3*

*GCMT **19** 02:10:58.4±0.1, 18.°17S×169.°46E, h15^{km}, MW6.0/167, Moment Tensor Solution. s152,c323; s167,c554; Duration: 2.^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.03±.01; $M_{\theta\theta}$-0.30±.01; $M_{\phi\phi}$0.33±.01; $M_{r\theta}$0.25±.02; $M_{\theta\phi}$-1.15±.01; $M_{\phi r}$0.20±.02; Best double couple: $M_0$1.23500×10^{18} NP1:ϕ_s279.00000°, δ80.00000°, λ-170.00000°. NP2:ϕ_s187.00000°, δ80.00000°, λ-11.00000°. Principal axes: T 1.2100, Plg0.0000°, Azm233.0000°; N 0.0510, Plg75.0000°, Azm324.0000°; P -1.2600, Plg15.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **19** 02:10:58, 18.°00S×169.°40E, h14^{km}, Moment Tensor Solution. Duration: 10.^{s}6 Moment tensor: Scale 10^{18}Nm; M_{rr}0.10; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$0.15; $M_{r\theta}$-0.13; $M_{\theta\phi}$-1.03; $M_{\phi r}$0.33; Fault plane solution: $M_0$1.11000×10^{18} NP1: ϕ_s274.00000°, δ73.00000°, λ170.00000°. NP2:ϕ_s7.00000°, δ81.00000°, λ17.00000°. Principal axes: T 1.1097, Plg19.0000°, Azm232.0000°; N 0.0002, Plg70.0000°, Azm34.0000°; P -1.1098, Plg5.0000°, Azm140.0000°;*

ISC 19 02:10:54.1±0.4**, 18.°37S**±0.°03×**169.°54E**±0.°04**, h18**^{km}±1^{km}**, h19**^{km}**:pP-P, n1004,** σ**1.^{s}81**/783**, mb5.6**/158**, MS5.8**/272**, 52C-37D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.20	298	P	Pn	02 11 12.7	-3.3
DVP	Devils Point	1.44	296	P	Pn	02 11 16.3	-2.9
LIFNC	LIFOU	3.23	222	Pn	Pn	02 11 40.9	-3.0
LIFNC	LIFOU	3.23	222	P	Pn	02 11 43.7	-0.2
MARNC	Mare, Loyalty	3.41	204	⇑P	Pn	02 11 43.9	-2.4
MARNC	Mare, Loyalty	3.41	204		Pn	02 11 43.6	-2.7
MARNC	Mare, Loyalty	3.41	204	P	Pn	02 11 47.1	+0.8
SANVU	Saraoutou	3.67	322	⇓P	Pn	02 11 47.0	-2.9
SANVU	Saraoutou	3.67	322		Pn	02 11 47.8	-2.1
SANVU	Saraoutou	3.67	322	P	Pn	02 11 50.1	+0.2
YATNC	Mamie plateau,	4.43	214	P	Pn	02 11 59.5	-1.0
PINNC	Pines Island,	4.66	205		Pn	02 12 02.7	-0.8
PINNC	Pines Island,	4.66	205	P	Pn	02 12 03.7	+0.2
DZM	Mont Dzumac	4.69	218	*e*Pn	Pn	02 12 02.9	-1.2
	2μm,1.2s						
DZM				*e*Sn	Sn	02 12 55.3	-2.8
	3μm,1.2s						
DZM				*e*LR	LR	02 13 07.8	
	comp=Z,292μm,26.1s						
DZM	Mont Dzumac	4.69	218	Pn	Pn	02 12 01.9	-2.1
	8.7nm,0.3s,baz=72,slow=19,SNR=46						
DZM				LR	LR	02 12 59.7	
	comp=Z,37μm,20.6s,baz=56,slow=27						
DZM				Sn	Sn	02 12 59.8	+1.7
	45nm,0.3s,baz=312,slow=20,SNR=1.7						
DZM	Mont Dzumac	4.69	218	⇑P	Pn	02 12 02.1	-1.9
DZM	Mont Dzumac	4.69	218	Pn	Pn	02 12 02.9	-1.2
DZM	Mont Dzumac	4.69	218		Sn	02 12 59.8	+1.7
DZM	Mont Dzumac	4.69	218	P	Pn	02 12 04.1	0.0
OUENC	Ouen Island, N	4.76	212	Pn	Pn	02 12 04.1	-0.8
OUENC	Ouen Island, N	4.76	212	P	Pn	02 12 05.1	+0.2
NOUC	Port Laguerre	4.80	219	P	Pn	02 12 05.5	+0.1
ONTNC	Ouen Toro	4.87	216		Pn	02 12 06.1	-0.3
ONTNC	Ouen Toro	4.87	216	P	Pn	02 12 06.7	+0.2
KOUNC	Koumac, New Ca	5.41	245	⇑P	Pn	02 12 12.3	-1.6
KOUNC	Koumac, New Ca	5.41	245	P	Pn	02 12 13.2	-0.7
MSVF	Nonsavu	8.12	87	Pn	Pn	02 12 54.2	+3.0
	9.0nm,0.3s,baz=252,slow=10,SNR=313						
MSVF				LR	LR	02 15 29.1	
	comp=Z,85μm,19.6s,baz=273,slow=34						
MSVF	Nonsavu	8.12	87	P	Pn	02 12 53.5	+2.3
MSVF	Nonsavu	8.12	87	⇑P	Pn	02 12 53.8	+2.6
MSVF	Nonsavu	8.12	87	Pn	Pn	02 12 53.5	+2.3
MSVF	Nonsavu	8.12	87	P	Pn	02 12 54.3	+3.1
DGTI	Dogotuki	9.95	80	P	Pn	02 13 17.1	+0.8
TAVE	Taveuni	10.20	82	P	Pn	02 13 22.4	+2.7
NFK	Norfolk Island	10.73	188	P	Pn	02 13 34.6	+7.8
	baz=11,SNR=5.1						
LKBA	Tubou, Lakemba	11.06	91	P	Pn	02 13 34.5	+3.0
HNR	Honiara	12.86	312	Pn	Pn	02 13 56.1	0.0
	22nm,0.3s,baz=136,slow=14,SNR=11						
HNR				LR	LR	02 18 23.3	
	comp=Z,25μm,19.8s,baz=152,slow=35						
HNR	Honiara	12.86	312	Pn	Pn	02 13 53.4	-2.7
HNR	Honiara	12.86	312	P	Pn	02 13 56.0	-0.1

RAO	Raoul Island	15.77	136	LR	LR	02 19 18.8	
	comp=Z,20µm,20.4s,baz=311,slow=32						
RAO	Raoul Island	15.77	136	P	Pn	02 14 34.7	-0.6
RAO				pmax	pmax		
	comp=Z,2µm,1.2s						
RAO	Raoul Island	15.77	136	Pn	Pn	02 14 34.7	-0.6
LHI	Lord Howe Isla	16.16	214	P	P	02 14 42.9	-0.5
	baz=16,SNR=4.5						
LHI	Lord Howe Isla	16.16	214	⇑P	Pn	02 14 40.5	+0.2
LHI	Lord Howe Isla	16.16	214	P	P	02 14 42.3	-1.1
OUZ	Omahuta	17.17	169	⇓P	P	02 14 55.4	+0.8
OUZ	Omahuta	17.17	169	Pn	Pn	02 14 51.6	-1.4
RK1H	Rockhampton Ha	18.48	251	P	Pn	02 15 10.0	+0.7
EIDS	Eidsvold	18.48	245	P	P	02 15 08.4	-0.7
	baz=18,SNR=9.7						
EIDS	Eidsvold	18.48	245	⇑P	Pn	02 15 10.6	+1.2
EIDS	Eidsvold	18.48	245	P	Pn	02 15 10.9	+1.6
AFI	Afiamalu	18.49	79	P	P	02 15 08.6	-0.7
	comp=Z,1.9nm,0.3s,baz=282,slow=15,SNR=24						
AFI				LR	LR	02 20 15.5	
	comp=Z,17µm,21.6s,baz=245,slow=30						
NIUE	Niue	19.46	95	P	Pn	02 15 30.6	+9.4
	baz=20,SNR=5.1						
NIUE	Niue	19.46	95	P	Pn	02 15 21.6	+0.4
TARA	Tarawa	19.88	10	P	P	02 15 23.6	-0.9
TARA				IAmb	IAmb	02 15 40.9	
	comp=Z,382nm,1.1s						
TARA	Tarawa	19.88	10	P	P	02 15 24.9	+0.4
ARMA	Armidale	20.21	230	P	Pn	02 15 29.7	-0.5
	baz=20,SNR=16						
ARMA	Armidale	20.21	230	⇑P	Pn	02 15 29.6	-0.6
ARMA	Armidale	20.21	230	P	Pn	02 15 29.5	-0.7
HIZ	Hauiti	20.60	168	IAMs_20	IAMs_20	02 22 30.8	
	comp=Z,40µm,18.0s						
MXZ	Matakaoa Point	20.61	160	IAMs_20	IAMs_20	02 21 34.9	
	comp=Z,38µm,21.0s						
RMQ	Roma	20.82	243	P	P	02 15 34.6	-0.1
	baz=20,SNR=60						
RMQ	Roma	20.82	243	P	Pn	02 15 36.8	-0.4
URZ	Urewera	20.89	163	P	P	02 15 36.3	+0.9
	comp=Z,23nm,1.1s,baz=121,slow=23,SNR=3.2						
URZ				LR	LR	02 22 04.6	
	comp=Z,36µm,21.4s,baz=32,slow=32						
URZ	Urewera	20.89	163	⇓P	Pn	02 15 37.1	-0.8
URZ	Urewera	20.89	163	IAMs_20	IAMs_20	02 21 43.2	
	comp=Z,36µm,22.0s						
NTLH	Newcastle Hard	21.58	224	P	P	02 15 45.2	+2.4
BKZ	Black Stump Fm	21.59	165	P	P	02 15 42.6	-0.3
BKZ				IAMs_20	IAMs_20	02 22 30.1	
	comp=Z,35µm,20.0s						
BKZ	Black Stump Fm	21.59	165	P	P	02 15 46.1	+3.2
CTA	Charters Tower	22.05	262	P	P	02 15 48.3	+0.3
	comp=Z,27nm,0.6s,baz=82,slow=14,SNR=17						
CTA				LR	LR	02 24 04.2	
	comp=Z,13µm,18.4s,baz=80,slow=36						
CTA	Charters Tower	22.05	262	P	P	02 15 48.3	+0.3
CTAO	Charters Tower	22.05	262	P	P	02 15 45.1	-2.9
CTAO				pmax	pmax		
	comp=Z,143nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,18µm,20.0s						
CTAO	Charters Tower	22.05	262	⇑P	P	02 15 48.4	+0.3
CTAO	Charters Tower	22.05	262	P	P	02 15 45.1	-2.9
CTAO	Charters Tower	22.05	262	P	P	02 15 48.4	+0.3
RABL	Rabaul	22.07	308	P	P	02 15 47.9	-0.4
MGCD	Mangrove Creek	22.17	225	P	P	02 15 50.9	+1.8
	baz=22,SNR=10.0						
MGCD	Mangrove Creek	22.17	225	P	P	02 15 49.8	+0.7
SYDH	Sydney Hard Ro	22.75	224	P	P	02 15 56.2	+0.9
BFZ	Birch Farm	22.97	167	IAMs_20	IAMs_20	02 23 57.7	
	comp=Z,43µm,20.0s						
BFZ	Birch Farm	22.97	167	P	P	02 16 00.1	+2.5
SNZO	South Karori	23.29	170	IAMs_20	IAMs_20	02 23 49.8	
	comp=Z,36µm,20.0s						
PMG	Port Moresby	23.46	289	P	P	02 16 02.6	-0.1
	comp=Z,91nm,0.9s,baz=134,slow=5.6,SNR=16						
PMG				LR	LR	02 23 36.0	
	comp=Z,11µm,19.7s,baz=104,slow=33						
PMG	Port Moresby	23.46	289	⇓P	P	02 16 01.4	-1.3
PMG	Port Moresby	23.46	289	P	P	02 16 00.3	-2.4
PMG				IAmb	IAmb	02 16 18.0	
	comp=Z,268nm,1.4s						
PMG	Port Moresby	23.46	289	IAMs_20	IAMs_20	02 24 38.8	
	comp=Z,28µm,18.0s						
PMG	Port Moresby	23.46	289	P	P	02 16 03.1	+0.4
PMG	Port Moresby	23.46	289	P	P	02 16 03.1	+0.4
MTSU	Mount Surprise	23.95	267	P	P	02 16 07.2	-0.3
	baz=24,SNR=139						
MTSU	Mount Surprise	23.95	267	P	P	02 16 07.8	+0.3
KNTN	Kanton	24.03	52	P	P	02 16 05.8	-2.4
KNTN	Kanton	24.03	52	P	P	02 16 07.7	-0.5
KHZ	Kahutara	24.21	173	⇑P	P	02 16 15.2	+5.5
LTZ	Lake Taylor	24.45	175	IAmb	IAmb	02 16 19.8	
	comp=Z,86nm,0.7s						
CNB	Canberra Magne	24.60	223	P	P	02 16 13.8	+0.5
	baz=24,SNR=74						
CNB	Canberra Magne	24.60	223	P	P	02 16 13.9	+0.5
QLP	Quilpie	24.74	246	P	P	02 16 14.7	+0.1
	baz=24,SNR=25						
QLP	Quilpie	24.74	246	P	P	02 16 14.5	-0.1
CAN	Canberra	24.84	223	P	P	02 16 14.3	-1.2
CAN				pmax	pmax		
	comp=Z,185nm,1.2s						
CAN				MLR	MLR		
	comp=Z,14µm,19.0s						
CAN	Canberra	24.84	223	⇑P	P	02 16 15.5	0.0
CAN	Canberra	24.84	223	P	P	02 16 14.3	-1.2
CAN				IAmb	IAmb	02 16 19.8	
	comp=Z,185nm,1.2s						
CAN	Canberra	24.84	223	P	P	02 16 16.3	+0.8
CMSA	Cobar Meteorol	25.22	234	P	P	02 16 18.5	-0.3
	baz=25,SNR=81						
CMSA	Cobar Meteorol	25.22	234	P	P	02 16 18.6	-0.3
COEN	Coen	25.69	276	⇑P	P	02 16 23.4	+0.1
COEN	Coen	25.69	276	P	P	02 16 23.9	+0.6
MILA	Mila	25.83	220	P	P	02 16 25.0	+0.5
	baz=26,SNR=5.6						
MILA	Mila	25.83	220	⇑P	P	02 16 24.6	+0.1
WKZ	Wanaka	26.38	181	IAMs_20	IAMs_20	02 25 23.2	
	comp=Z,26µm,20.0s						
MLZ	Mavora Lakes	26.95	182	P	P	02 16 34.1	-0.4
KWAJ	Kwajalein Atol	27.07	356	P	P	02 16 34.7	-1.0
KWAJ				pmax	pmax		
	comp=Z,276nm,1.2s						
KWAJ				MLR	MLR		
	comp=Z,10µm,20.0s						
KWAJ	Kwajalein Atol	27.07	356	P	P	02 16 34.7	-1.0
KWAJ				IAmb	IAmb	02 16 46.1	
	comp=Z,276nm,1.1s						
WHZ	Wether Hill Ro	27.48	182	IAMs_20	IAMs_20	02 26 26.7	
	comp=Z,19µm,19.0s						
INKA	Innaminka	28.03	245	P	P	02 16 44.6	+0.3
QIS	Mount Isa	28.29	261	P	P	02 16 45.0	-1.8
	baz=28,SNR=14						
QIS	Mount Isa	28.29	261	P	P	02 16 46.9	+0.1
TOO	Toolangi	28.44	223	P	P	02 16 48.5	+0.5
	baz=28,SNR=8.9						
TOO	Toolangi	28.44	223	⇓P	P	02 16 48.5	+0.5
TOO	Toolangi	28.44	223	P	P	02 16 48.4	+0.5
STKA	Stephens Creek	28.55	237	P	P	02 16 48.7	-0.2
	comp=Z,27nm,0.7s,baz=66,slow=8.1,SNR=42						
STKA				LR	LR	02 27 40.9	
	comp=Z,23µm,19.5s,baz=63,slow=35						
STKA	Stephens Creek	28.55	237	P	P	02 16 48.8	-0.1
	baz=28,SNR=41						
STKA	Stephens Creek	28.55	237	P	P	02 16 47.5	-1.4
STKA	Stephens Creek	28.55	237	P	P	02 16 49.2	+0.2
RAR	Rarotonga	28.99	101	LR	LR	02 27 15.9	
	comp=Z,2µm,21.0s,baz=266,slow=34						
RAR	Rarotonga	28.99	101	P	P	02 16 53.1	+0.2
RAR				pmax	pmax		
	comp=Z,74nm,1.4s						
RAR	Rarotonga	28.99	101	P	P	02 16 53.1	+0.2
GLAD	Gladstone	29.14	215	P	P	02 16 55.3	+1.3
BRAT	Ballarat	29.45	224	P	P	02 16 57.2	+0.4
CORO	Coronation Par	29.93	215	P	P	02 17 02.1	+1.1
ARPS	Mount Arapiles	30.47	227	P	P	02 17 06.6	+0.6
	baz=30,SNR=17						
ARPS	Mount Arapiles	30.47	227	P	P	02 17 06.1	+0.2
MOO	Moorlands	30.60	214	P	P	02 17 08.6	+1.7
	baz=30,SNR=4.6						
MOO	Moorlands	30.60	214	P	P	02 17 08.1	+1.2
LCRK	Leigh Creek	30.85	241	P	P	02 17 08.6	-0.7
TAU	Tasmania Unive	30.86	213	P	P	02 17 06.9	-2.3
TAU				pmax	pmax		
	comp=Z,55nm,1.2s						
TAU				MLR	MLR		
	comp=Z,21µm,19.0s						
TAU	Tasmania Unive	30.86	213	P	P	02 17 06.9	-2.3
TAU	Tasmania Unive	30.86	213	IAMs_20	IAMs_20	02 28 02.9	
	comp=Z,21µm,19.0s						
HTT	Hallett	31.22	235	P	P	02 17 12.1	-0.5
	baz=31,SNR=11						
HTT	Hallett	31.22	235	⇓P	P	02 17 12.2	-0.4
HTT	Hallett	31.22	235	P	P	02 17 12.7	+0.1
NAPP	Napperby	31.74	236	P	P	02 17 17.5	+0.4
TWOA	Tennyson Woods	32.08	233	P	P	02 17 20.7	+0.6
WHYH	Whyalla	32.14	237	P	P	02 17 20.7	+0.1
OOD	Oodnadatta	32.43	247	P	P	02 17 23.1	-0.2
GENI	Genyem	32.77	295	P	P	02 17 28.9	+2.5
	comp=Z,120nm,1.5s						
GENI	Genyem	32.77	295	P	P	02 17 26.9	+0.6
WR0	Warramunga Arr	33.06	261	IAmb	IAmb	02 17 29.1	
	comp=Z,95nm,1.4s						
WB2	Warramunga Arr	33.24	261	IAmb	IAmb	02 17 30.7	
	comp=Z,146nm,1.3s						
WRAB	Tennant Creek	33.24	262	*c i*P	P	02 17 29.1	-1.4
WRAB				pmax	pmax		
	comp=Z,130nm,1.3s						
WRAB				MLR	MLR		
	comp=Z,11µm,17.0s						
WRAB	Tennant Creek	33.24	262	⇑P	P	02 17 28.2	-2.3
WRAB	Tennant Creek	33.24	262	P	P	02 17 28.4	-2.1
WRAB				IAmb	IAmb	02 17 30.6	
	comp=Z,158nm,1.4s						
WRAB	Tennant Creek	33.24	262	P	P	02 17 29.1	-1.4
WRA	Warramunga Arr	33.25	261	P	P	02 17 28.1	-2.4
	comp=Z,57nm,1.1s,baz=102,slow=8.5,SNR=72						
WRA				LR	LR	02 30 05.6	
	comp=Z,14µm,18.8s,baz=95,slow=35						
BBOO	Buckleboo	33.28	238	P	P	02 17 30.1	-0.5
	baz=33,SNR=42						
BBOO	Buckleboo	33.28	238	P	P	02 17 28.4	-2.3
BBOO				IAmb	IAmb	02 17 31.5	
	comp=Z,70nm,0.8s						
BBOO	Buckleboo	33.28	238	P	P	02 17 30.3	-0.4
AS31	Alice Springs	33.62	255	P	P	02 17 31.7	-2.0
AS31				IAmb	IAmb	02 17 34.1	
	comp=Z,49nm,0.7s						
ASAR	Alice Springs	33.62	255	P	P	02 17 32.2	-1.5
	comp=Z,126nm,0.7s,baz=83,slow=8.9,SNR=518						
ASAR				LR	LR	02 29 46.7	
	comp=Z,21µm,22.0s,baz=92,slow=34						
MULG	Mulgathing	34.30	243	P	P	02 17 39.0	-0.5
KDU	Kakadu	36.11	274	P	P	02 17 51.6	-3.7
	baz=36,SNR=9.5						
KDU	Kakadu	36.11	274	⇑P	P	02 17 53.9	-1.4
KDU	Kakadu	36.11	274	P	P	02 17 54.5	-0.8
H11S2	WAKE ISLAND Hy	36.73	356	T	T	02 56 52.2	
	baz=181,slow=77,SNR=559						
H11S3	WAKE ISLAND Hy	36.74	355	T	T	02 56 48.7	
	baz=181,slow=77,SNR=216						
H11S1	WAKE ISLAND Hy	36.75	355	T	T	02 56 54.1	
	baz=181,slow=77,SNR=224						
MTN	Manton Dam	37.34	273	P	P	02 18 05.1	-0.6
	baz=37,SNR=15						
MTN	Manton Dam	37.34	273	⇑P	P	02 18 05.2	-0.6
MTN	Manton Dam	37.34	273	P	P	02 18 04.7	-1.2
MTN				IAmb	IAmb	02 18 06.5	
	comp=Z,123nm,1.1s						
MTN	Manton Dam	37.34	273	P	P	02 18 05.2	-0.6
DRS	Darwin Rock St	37.66	273	P	P	02 18 08.3	-0.2
H11N1	WAKE ISLAND Hy	37.94	356	T	T	02 58 15.0	
	baz=175,slow=76,SNR=348						
H11N3	WAKE ISLAND Hy	37.94	356	T	T	02 58 15.4	
	baz=175,slow=76,SNR=313						
H11N2	WAKE ISLAND Hy	37.95	356	T	T	02 58 16.3	
	baz=175,slow=76,SNR=478						
XMAS	Kiritimati	38.31	61	IAMs_20	IAMs_20	02 29 47.7	
	comp=Z,18µm,21.0s						
TBI	Tubuai	38.54	105	*e*S	S	02 24 03.2	-7.9
	comp=Z,1µm,30.5s						
TBI				*e*LQ	LQ	02 26 48.2	
	comp=Z,53µm,29.8s						
TBI				*e*LR	LR	02 28 24.0	
	comp=Z,8µm,32.5s						
SAUI	Saumlaki	38.56	280	IAMs_20	IAMs_20	02 33 53.1	
	comp=Z,11µm,18.0s						
WRKA	Warakurna	38.78	253	P	P	02 18 16.6	-1.3
	baz=38,SNR=58						
WRKA	Warakurna	38.78	253	⇑P	P	02 18 15.9	-2.0
WRKA	Warakurna	38.78	253	P	P	02 18 16.8	-1.1
PPT2	Papeete2	38.84	95	*e*S	S	02 24 08.6	-7.2
	comp=Z,5µm,25.2s						
PPT2				*e*LQ	LQ	02 26 56.6	
	comp=Z,64µm,30.8s						
PPT2				*e*LR	LR	02 28 35.5	
	comp=Z,9µm,26.0s						
PPT	Papeete	38.84	95	LR	LR	02 32 48.6	
	comp=Z,3µm,18.4s,baz=260,slow=34						
KNRA	Kununurra	39.03	268	P	P	02 18 18.4	-1.6
	baz=39,SNR=52						
KNRA	Kununurra	39.03	268	P	P	02 18 18.6	-1.4
KNRA	Kununurra	39.03	268	P	P	02 18 19.0	-1.0
FORT	Forrest	39.48	244	P	P	02 18 23.1	-0.5
	baz=39,SNR=12						
FORT	Forrest	39.48	244	⇑P	P	02 18 22.4	-1.2
FORT	Forrest	39.48	244	P	P	02 18 22.0	-1.6
FORT				IAmb	IAmb	02 18 34.9	
	comp=Z,124nm,0.8s						
FORT	Forrest	39.48	244	P	P	02 18 23.1	-0.5
FAKI	Fak Fak	39.61	288	⇑P	P	02 18 23.3	-1.6
FAKI	Fak Fak	39.61	288	P	P	02 18 24.2	-0.7
	comp=Z,3µmcomp=Z,103nm,1.1s						
FAKI	Fak Fak	39.61	288	P	P	02 18 22.9	-1.9
FAKI				IAmb	IAmb	02 18 25.4	
	comp=Z,149nm,1.2s						
FAKI	Fak Fak	39.61	288	P	P	02 18 23.9	-1.0
GUMO	Guam	40.00	321	LR	LR	02 33 24.1	
	comp=Z,9µm,21.8s,baz=136,slow=34						
GUMO	Guam	40.00	321	IAMs_20	IAMs_20	02 33 02.3	
	comp=Z,11µm,21.0s						
SIJI	Sorong	41.39	291	P	P	02 18 38.2	-1.5
	comp=Z,36nm,0.9s,baz=90,slow=7.9,SNR=21						
SWI	Sorong	41.40	291	P	P	02 18 39.5	-0.2
	comp=Z,3µmcomp=Z,2µmcomp=Z,81nm,0.8s						
FITZ	Fitzroy Crossi	41.62	263	P	P	02 18 40.6	-0.9
	comp=Z,197nm,1.1s,baz=101,slow=8.2,SNR=63						
SOEI	Soe	44.64	275	P	P	02 19 07.6	+1.5
	comp=Z,3µmcomp=Z,142nm,1.2s						
SOEI	Soe	44.64	275	P	P	02 19 05.8	-0.3
SOEI				IAmb	IAmb	02 19 34.9	
	comp=Z,117nm,1.0s						
SOEI	Soe	44.64	275	P	P	02 19 07.0	+0.9
BATI	Baumata	45.09	274	P	P	02 19 10.1	+0.5
	comp=Z,165nm,1.0s,baz=93,slow=1.0,SNR=14						
BATI	Baumata	45.09	274	P	P	02 19 11.6	+2.0
	comp=Z,2µmcomp=Z,140nm,1.2s						
TNTI	Ternate	45.61	290	P	P	02 19 11.8	-1.8
SANI	Sanana	45.65	286	⇓P	P	02 19 13.1	-0.9
SANI	Sanana	45.65	286	P	P	02 19 13.6	-0.5
	comp=Z,3µmcomp=Z,152nm,0.9s						
SANI	Sanana	45.65	286	P	P	02 19 13.5	-0.5
PSA00	Pilbara Seismi	46.66	257	P	P	02 19 19.8	-2.1
PSA00				IAmb	IAmb	02 19 24.1	
	comp=Z,165nm,1.4s						
PSA00	Pilbara Seismi	46.66	257	P	P	02 19 21.9	0.0
MBWA	Marble Bar	46.81	258	⇑P	P	02 19 22.9	-0.2
MBWA	Marble Bar	46.81	258	IAMs_20	IAMs_20	02 40 25.0	
	comp=Z,11µm,19.0s						
MBWA	Marble Bar	46.81	258	P	P	02 19 23.1	+0.1
MMRI	Maumere	46.88	275	P	P	02 19 22.2	-1.5
MMRI				IAmb	IAmb	02 19 42.4	
	comp=Z,128nm,1.2s						
EDFI	Ende, Flores	47.36	275	P	P	02 19 27.5	-0.1
	comp=Z,908nmcomp=Z,32nm,1.5s						
MEEK	Meekatharra	47.51	250	P	P	02 19 27.5	-1.0
	baz=47,SNR=59						
MEEK	Meekatharra	47.51	250	P	P	02 19 28.3	-0.2
KLBR	Kellerberrin	48.34	244	P	P	02 19 34.0	-0.8
	baz=48,SNR=9.9						
KLBR	Kellerberrin	48.34	244	P	P	02 19 34.2	-0.7
NWAO	Narrogin (SRO)	48.87	242	P	P	02 19 38.9	0.0
LUWI	Luwuk	49.00	285	P	P	02 19 41.4	+1.3
	comp=Z,4µmcomp=Z,135nm,1.2s						
LUWI	Luwuk	49.00	285	P	P	02 19 38.9	-1.2
LUWI	Luwuk	49.00	285	P	P	02 19 40.6	+0.5
BLDU	Ballidu	49.20	245	P	P	02 19 41.1	-0.4
	baz=49,SNR=7.9						
BLDU	Ballidu	49.20	245	P	P	02 19 41.3	-0.2
WBSI	Waikabubak, Su	49.29	273	P	P	02 19 43.9	+1.5
	comp=Z,2µmcomp=Z,128nm,0.9s						
TAOE	Nuku Hiva Isla	49.67	86	*e*S	S	02 26 46.5	-7.1
	comp=Z,6µm,26.2s						
TAOE				*e*LQ	LQ	02 31 33.8	
	comp=Z,14µm,25.5s						
TAOE				*e*LR	LR	02 33 37.6	
	comp=Z,22µm,26.6s						
MUN	Mundaring	49.68	243	P	P	02 19 44.9	-0.2
	baz=49,SNR=4.7						
MUN	Mundaring	49.68	243	P	P	02 19 45.2	+0.1
MORW	Morawa	49.76	247	P	P	02 19 45.7	-0.1
	baz=49,SNR=6.2						
MORW	Morawa	49.76	247	⇑P	P	02 19 45.4	-0.4
MORW	Morawa	49.76	247	P	P	02 19 43.9	-1.9
MORW				IAmb	IAmb	02 19 46.7	
	comp=Z,130nm,1.4s						
MORW	Morawa	49.76	247	P	P	02 19 45.6	-0.1
APSI	Ampana	50.08	285	P	P	02 19 50.0	+1.6
	comp=Z,2µmcomp=Z,137nm,1.2s						
BNSI	Bone	50.23	280	P	P	02 19 58.0	+8.5
KAPI	Kappang	50.35	279	P	P	02 19 48.9	-1.5
KAPI				pmax	pmax		
	comp=Z,81nm,1.2s						
KAPI	Kappang	50.35	279	P	P	02 19 48.9	-1.5
KAPI				IAmb	IAmb	02 19 59.4	
	comp=Z,81nm,1.1s						
MRSI	Marisa	50.37	287	P	P	02 20 03.6	+13
HON	Honolulu	50.66	40	P	P	02 19 51.7	-0.9
HON				pmax	pmax		
	comp=Z,443nm,1.5s						
HON	Honolulu	50.66	40	P	P	02 19 51.7	-0.9
KIP	Kipapa	50.73	40	IAMs_20	IAMs_20	02 36 27.5	
	comp=Z,11µm,20.0s						
TTSI	Tana Toraja	50.97	281	P	P	02 19 59.6	+4.5
HMH	Humuʻula Sheep	51.02	44	P	P	02 19 54.3	-1.3
PLAI	Plampang	51.05	273	P	P	02 19 58.0	+2.3
	comp=Z,2µmcomp=Z,121nm,1.2s						
PLAI	Plampang	51.05	273	P	P	02 19 56.2	+0.5
TOLI2	Tolitoli	51.69	287	P	P	02 19 58.7	-1.8
TOLI2				IAmb	IAmb	02 20 08.9	
	comp=Z,57nm,0.9s						
TOLI2	Tolitoli	51.69	287	P	P	02 19 59.3	-1.2
MPSI	Mapaga	52.18	285	P	P	02 20 03.8	-0.3
	comp=Z,2µmcomp=Z,126nm,0.9s						
JCJ	Chichijima	52.41	329	LR	LR	02 40 26.4	
	comp=Z,4µm,21.8s,baz=120,slow=34						
JCJ	Chichijima	52.41	329	P	P	02 20 05.8	+0.3
MYLDM	Lahad Datu	55.48	290	P	P	02 20 27.9	-0.4
MYLDM				IAmb	IAmb	02 20 43.8	
	comp=Z,115nm,1.3s						
BBKI	Banjar Baru	55.48	279	P	P	02 20 37.1	+8.7
SPMM	Sapulut	57.10	288	P	P	02 20 41.0	+1.1
PCJI	Pacitan	57.49	272	P	P	02 20 50.3	+7.7
WOJI	Wonogiri, Jawa	57.83	272	P	P	02 20 52.5	+7.5
KKM	Kota Kinabalu	57.90	290	P	P	02 20 45.9	+0.3
VNDA	Vanda	59.30	182	P	P	02 20 55.0	+0.7
	comp=Z,7.1nm,0.8s,baz=357,slow=7.4,SNR=12						
VNDA				LR	LR	02 44 16.4	
	comp=Z,5µm,18.1s,baz=12,slow=34						
VNDA	Vanda	59.30	182	P	P	02 20 54.9	+0.6
SBA	Scott Base	59.53	181	P	P	02 20 55.8	-0.1
SBA				pmax	pmax		
	comp=Z,146nm,1.1s						
SBA	Scott Base	59.53	181	P	P	02 20 55.8	-0.1
STKI	Sintang	59.87	281	P	P	02 21 08.0	+8.8
SBUM	Sibu	60.06	284	P	P	02 21 02.0	+1.5
SBUM	Sibu	60.06	284	P	P	02 21 00.7	+0.2
JOW	Kunigami	60.18	317	P	P	02 21 00.8	-0.3
	comp=Z,23nm,0.7s,baz=142,slow=14,SNR=3.7						
JOW				LR	LR	02 45 07.1	
	comp=Z,3µm,20.1s,baz=132,slow=34						
JOW	Kunigami	60.18	317	P	P	02 21 00.3	-0.7
JOW				IAmb	IAmb	02 21 09.4	
	comp=Z,116nm,1.3s						
JOW	Kunigami	60.18	317	P	P	02 21 02.2	+1.1
JYT	Yasato	60.98	333	P	P	02 21 06.4	+0.1
CASY	Casey	61.03	203	⇓P	P	02 21 06.9	+0.6
CASY	Casey	61.03	203	P	P	02 21 05.6	-0.7
CASY	Casey	61.03	203	IAMs_20	IAMs_20	02 42 46.1	
	comp=Z,7µm,20.0s						
LEM	Lembang	61.26	272	P	P	02 21 08.4	-0.5
	comp=Z,27nm,0.6s,baz=334,slow=20,SNR=4.7						
KSM	Kuching	61.47	282	P	P	02 21 11.0	+0.9
KSM	Kuching	61.47	282	P	P	02 21 09.2	-0.9
KSM				IAmb	IAmb	02 21 20.4	
	comp=Z,49nm,0.8s						
KSM	Kuching	61.47	282	P	P	02 21 10.3	+0.2
INU	Inuyama	61.69	330	P	P	02 21 11.9	+0.8
MJAR	Matsushiro Arr	62.12	332	P	P	02 21 12.9	-1.1
	comp=Z,9.0nm,0.8s,baz=161,slow=6.7,SNR=5.0						
MJAR				LR	LR	02 45 43.9	
	comp=Z,3µm,21.9s,baz=150,slow=34						
MJAR	Matsushiro Arr	62.12	332	P	P	02 21 13.5	-0.5
MJAR				pmax	pmax		
	comp=Z,28nm,1.2s						
MJAR	Matsushiro Arr	62.12	332	P	P	02 21 13.5	-0.5
MAJO	Matsushiro	62.12	332	⇑*e*P	P	02 21 13.1	-1.0
MAJO				pmax	pmax		
	comp=Z,32nm,0.9s						
MAJO	Matsushiro	62.12	332	P	P	02 21 13.5	-0.5
MAJO				IAmb	IAmb	02 21 20.9	
	comp=Z,31nm,0.9s						
MAJO	Matsushiro	62.12	332	P	P	02 21 14.5	+0.4
MAT	Matsushiro	62.12	332	P	P	02 21 12.8	-1.3
MAT				S	S	02 29 39.2	+0.7
MJB9	Matsu-Tunnel	62.13	332	P	P	02 21 14.3	+0.3
MJB9				IAmb	IAmb	02 21 27.6	
	comp=Z,38nm,0.8s						
DBJI	Dramaga	62.16	272	P	P	02 21 21.3	+6.5
JSU	Suzuyama	62.18	322	P	P	02 21 13.7	-0.8
JSU				IAmb	IAmb	02 21 31.5	
	comp=Z,102nm,1.2s						
NACB	Ninganchiao	63.03	310	P	P	02 21 20.4	+0.1
NACB				IAmb	IAmb	02 21 34.6	
	comp=Z,81nm,1.0s						
JNU	Nakatsue	63.13	324	P	P	02 21 20.5	-0.4
	comp=Z,21nm,0.9s,baz=39,slow=3.0,SNR=5.1						
JNU	Nakatsue	63.13	324	IAmb	IAmb	02 21 25.4	
	comp=Z,94nm,1.5s						
JNU	Nakatsue	63.13	324	P	P	02 21 21.3	+0.4
TPUB	Ta-pu	63.21	309	P	P	02 21 20.8	-0.8
TPUB	Ta-pu	63.21	309	P	P	02 21 21.3	-0.3
SSLB	Suanglung	63.27	310	P	P	02 21 22.4	+0.4
YHNB	Yeheng	63.49	311	P	P	02 21 23.3	-0.2
TATO	Taipei	63.60	311	IAMs_20	IAMs_20	02 48 24.6	
	comp=Z,5µm,19.0s						
KASI	Kota Agung	64.61	273	P	P	02 21 37.0	+6.0
ERM	Erimo	64.84	339	⇑*e*P	P	02 21 30.6	-1.3
ERM				pmax	pmax		
	comp=Z,128nm,1.1s						
ERM	Erimo	64.84	339	IAMs_20	IAMs_20	02 46 56.1	
	comp=Z,6µm,19.0s						
MDSI	Maura Dua	65.22	274	P	P	02 21 46.3	+11
QZH	Quanzhou	65.68	309	⇑*i*P	P	02 21 44.3	+6.6
QZH				S	S	02 30 26.8	+3.8
QZH				LR	LR		
	comp=N,1µm,16.6s						
QZH				LR	LR		
	comp=E,2µm,16.6s						
QZH				LR	LR		
	comp=Z,3µm,28.4s						
KUR	Kuril'sk	66.30	343	⇑*e*P	P	02 21 40.6	-0.6
KUR				pmax	pmax		
	comp=Z,237nm,1.0s						
KUR				MLR	MLR		
	comp=Z,2µm,18.0s						
JKA	Kamikawa-asahi	66.89	339	IAmb	IAmb	02 21 53.2	
	comp=Z,82nm,1.0s						
ASAJ	Asahikawa	66.89	339	P	P	02 21 45.8	+0.8
	comp=Z,27nm,0.9s,baz=224,slow=16,SNR=6.9						
ASAJ				LR	LR	02 45 41.3	
	comp=Z,4µm,21.7s,baz=156,slow=31						
TJN	Taejon	67.48	324	⇑*e*P	P	02 21 48.4	-0.5
SSE	Sheshan	67.64	316	P	P	02 21 49.3	-0.8
SSE				S	S	02 30 47.8	+1.3
SSE				ScS	SKiKP	02 31 47.3	0.0
SSE				pmax	pmax		
	comp=Z,24nm,0.7s						
SSE				pmax	pmax		
	comp=Z,360nm,9.1s						
SSE				LR	LR		
	comp=Z,1µm,21.3s						
KSRS	Korea Array	67.95	325	P	P	02 21 51.3	-0.6
	comp=Z,4.8nm,1.0s,baz=144,slow=6.2,SNR=12						
KSRS				LR	LR	02 49 00.5	

	comp=Z,2µm,21.9s,baz=134,slow=34						
KSAR	**Wonju Array Be**	**67.97**	**325**	P	**P**	**02 21 51.6**	**-0.4**
KSAR	**Wonju Array Be**	**67.97**	**325**	P	**P**	**02 21 51.6**	**-0.4**
INCN	**Inchon**	**68.68**	**324**	P	**P**	**02 21 56.5**	**0.0**
INCN				pmax	pmax		
	comp=Z,117nm,1.5s						
INCN	**Inchon**	**68.68**	**324**	P	**P**	**02 21 56.5**	**0.0**
INCN				IAmb	IAmb	02 22 02.7	
	comp=Z,117nm,1.5s						
INCN	**Inchon**	**68.68**	**324**	P	**P**	**02 21 57.5**	**+1.0**
YSS	**Yuzh-Sakhalins**	**69.36**	**341**	*e*P	**P**	**02 22 00.9**	**+0.5**
YSS				*e*S	**S**	**02 31 05.3**	**-1.0**
YSS				*e*SS	**SS**	**02 35 36.2**	**+2.2**
YSS				pmax	pmax		
	comp=Z,1µm,3.3s						
YSS				pmax	pmax		
	comp=Z,60nm,1.2s						
YSS	**Yuzh-Sakhalins**	**69.36**	**341**	P	**P**	**02 22 00.1**	**-0.3**
YSS				IAmb	IAmb	02 22 08.2	
	comp=Z,100nm,1.2s						
YSS				IAMs_20	IAMs_20	02 47 00.5	
	comp=Z,6µm,22.0s						
YSS	**Yuzh-Sakhalins**	**69.36**	**341**	P	**P**	**02 22 01.6**	**+1.2**
QIZ	**Qiongzhong**	**69.40**	**299**	P	**P**	**02 22 00.9**	**-0.5**
QIZ				S	**S**	**02 31 09.3**	**+1.3**
QIZ				LR	LR		
	comp=Z,2µm,24.7s						
QIZ				LR	LR		
	comp=Z,1µm,16.1s						
QIZ				LR	LR		
	comp=Z,2µm,31.4s						
JRMM	**Jerantut**	**69.62**	**281**	P	**P**	**02 22 06.0**	**+3.1**
BKNI	**Bangkinang**	**69.74**	**277**	P	P	02 22 12.4	+8.8
BKNI	**Bangkinang**	**69.74**	**277**	P	**P**	**02 22 03.4**	**-0.2**
BKNI				IAMs_20	IAMs_20	02 56 01.3	
	comp=Z,4µm,18.0s						
BKNI	**Bangkinang**	**69.74**	**277**	P	**P**	**02 22 04.6**	**+1.0**
SKR	**Severo-Kuril's**	**69.76**	**351**	*e*P	**P**	**02 22 03.1**	**+0.3**
SKR				*e*		02 22 15.7	
SKR				*e*S	**S**	**02 31 14.8**	**+3.9**
SKR				pmax	pmax		
	comp=Z,500nm,5.7s						
SKR				pmax	pmax		
	comp=Z,300nm,6.6s						
SKR				pmax	pmax		
	comp=Z,68nm,1.0s						
SKR				MLR	MLR		
	comp=Z,1µm,18.0s						
SKR				MLR	MLR		
	comp=Z,1µm,19.0s						
NJ2	**Nanjing**	**69.79**	**316**	*e*P	**P**	**02 22 02.6**	**-0.8**
NJ2				pP	**pP**	**02 22 07.1**	**-1.9**
NJ2				PcP	**PcP**	**02 22 24.6**	**-1.4**
NJ2				S	**S**	**02 31 13.8**	**+1.8**
NJ2				sS	**sS**	**02 31 21.3**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,70nm,1.5s						
NJ2				pmax	pmax		
	comp=Z,940nm,5.0s						
NJ2				LR	LR		
	comp=Z,2µm,18.0s						
NJ2				LR	LR		
	comp=Z,3µm,23.2s						
NJ2				LR	LR		
	comp=Z,4µm,19.4s						
PDSI	**Padang**	**69.88**	**276**	P	P	02 22 11.7	+7.2
VLA	**Vladivostok**	**70.29**	**332**	⇑*e*P	**P**	**02 22 06.6**	**+0.3**
VLA				pmax	pmax		
	comp=Z,183nm,2.0s						
SISI	**Saibi**	**71.04**	**275**	P	P	02 22 19.8	+8.3
USA0B	**Ussuriysk Arra**	**71.10**	**332**	P	**P**	**02 22 11.3**	**+0.1**
USA0B				pmax	pmax		
	comp=Z,47nm,1.4s						
USA0B	**Ussuriysk Arra**	**71.10**	**332**	P	**P**	**02 22 11.3**	**+0.1**
USRK	**Ussuriysk Ar.**	**71.10**	**332**	P	**P**	**02 22 10.8**	**-0.4**
	comp=Z,5.3nm,0.8s,baz=145,slow=4.7,SNR=9.8						
USRK				LR	LR	02 50 02.6	
	comp=Z,2µm,21.8s,baz=139,slow=33						
IPM	**Ipoh**	**71.19**	**281**	P	**P**	**02 22 13.2**	**+0.8**
MNSI	**Mandailing Nat**	**71.27**	**277**	P	**P**	**02 22 14.3**	**+1.4**
	comp=Z,5µmcomp=Z,61nm,1.2s						
QSPA	**South Pole Qui**	**71.68**	**180**	P	**P**	**02 22 14.9**	**+0.2**
QSPA				IAmb	IAmb	02 22 24.1	
	comp=Z,92nm,1.1s						
QSPA	**South Pole Qui**	**71.68**	**180**	IAMs_20	IAMs_20	02 51 10.4	
	comp=Z,4µm,18.0s						
PET	**Petropavlovsk**	**71.72**	**353**	*e*P	P	02 22 19.8	+5.1
PET				*e*S	**S**	**02 31 37.0**	**+3.4**
PET				*e*PS	**PnS**	**02 32 06.8**	**+2.6**
PET				pmax	pmax		
	comp=Z,100nm,7.3s						
KULM	**Kulim**	**71.82**	**282**	P	**P**	**02 22 17.0**	**+0.7**
PETK	**Petropavlovsk-**	**71.91**	**353**	P	**P**	**02 22 15.5**	**-0.4**
	comp=Z,10nm,1.0s,baz=198,slow=14,SNR=2.0						
PETK				LR	LR	02 48 26.7	
	comp=Z,3µm,21.5s,baz=161,slow=31						
PETK	**Petropavlovsk-**	**71.91**	**353**	P	**P**	**02 22 17.2**	**+1.3**
PETK	**Petropavlovsk-**	**71.91**	**353**	P	**P**	**02 22 17.2**	**+1.3**
WHN	**Wuhan**	**71.98**	**312**	⇓P	**P**	**02 22 17.4**	**+0.6**
WHN				pP	**pP**	**02 22 21.9**	**-0.5**
WHN				S	**S**	**02 31 40.6**	**+3.0**
WHN				pmax	pmax		
	comp=Z,580nm,2.0s						
WHN				pmax	pmax		
	comp=Z,2µm,6.9s						
WHN				LR	LR		
	comp=Z,6µm,21.3s						
WHN				LR	LR		
	comp=Z,4µm,18.3s						
WHN				LR	LR		
	comp=Z,7µm,22.5s						
DL2	**Dalian**	**72.50**	**323**	P	**P**	**02 22 20.3**	**+0.6**
DL2				PcP	**PcP**	**02 22 42.4**	**+5.0**
DL2				S	**S**	**02 31 44.9**	**+1.7**
DL2				pmax	pmax		
	comp=Z,55nm,1.1s						
DL2				pmax	pmax		
	comp=Z,190nm,4.9s						
DL2				LR	LR		
	comp=Z,2µm,19.0s						
DL2				LR	LR		
	comp=Z,2µm,31.0s						
DL2				LR	LR		
	comp=Z,5µm,29.0s						
MDJ	**Mudanjiang**	**72.50**	**331**	P	**P**	**02 22 19.9**	**+0.3**
MDJ				pP	pP	02 22 23.5	-1.5
MDJ				sP	sP	02 22 25.5	-1.6
MDJ				S	**S**	**02 31 48.1**	**+5.1**
MDJ				sS	sS	02 31 52.8	+0.7
MDJ				pmax	pmax		
	comp=Z,1µm,5.1s						
MDJ				LR	LR		
	comp=Z,2µm,17.8s						
MDJ				LR	LR		
	comp=Z,3µm,20.8s						
MDJ				LR	LR		
	comp=Z,5µm,25.0s						
MDJ	**Mudanjiang**	**72.50**	**331**	P	**P**	**02 22 18.8**	**-0.8**
MDJ				IAmb	IAmb	02 22 27.0	
	comp=Z,82nm,1.2s						
MDJ	**Mudanjiang**	**72.50**	**331**	P	**P**	**02 22 20.6**	**+1.0**
RPSI	**Rantau Prapat**	**72.53**	**279**	IAmb	IAmb	02 22 27.9	
	comp=Z,56nm,1.2s						
RPSI				IAMs_20	IAMs_20	02 58 15.7	
	comp=Z,4µm,20.0s						
TYV	**Tymovskoe**	**72.87**	**343**	*e*P	P	02 22 27.6	+5.9
TYV				pmax	pmax		
	comp=Z,1µm,4.9s						
TYV				pmax	pmax		
	comp=Z,36nm,1.4s						
GSI	**Gunungsitoli**	**73.33**	**277**	P	P	02 22 32.8	+7.5
GSI	**Gunungsitoli**	**73.33**	**277**	P	**P**	**02 22 24.5**	**-0.7**
GSI				IAmb	IAmb	02 22 36.4	
	comp=Z,79nm,1.2s						
GSI				IAMs_20	IAMs_20	02 57 16.4	
	comp=Z,7µm,19.0s						
GSI	**Gunungsitoli**	**73.33**	**277**	P	**P**	**02 22 25.9**	**+0.6**
SNY	**Shenyang**	**73.42**	**326**	⇑P	**P**	**02 22 25.4**	**+0.3**
SNY				S	**SKiKP**	**02 31 57.5**	**+2.0**
SNY				SS	**SS**	**02 36 33.6**	**-3.0**
SNY				pmax	pmax		
	comp=Z,45nm,2.0s						
SNY				pmax	pmax		
	comp=Z,700nm,5.5s						
SNY				LR	LR		
	comp=Z,3µm,20.6s						
SNY				LR	LR		
	comp=Z,2µm,20.1s						
SNY				LR	LR		
	comp=Z,4µm,26.3s						
TIA	**Tai'an**	**73.49**	**318**	⇓P	**P**	**02 22 24.8**	**-0.9**
TIA				S	**SKiKP**	**02 31 55.3**	**-0.5**
TIA				pmax	pmax		
	comp=Z,46nm,2.0s						
TIA				LR	LR		
	comp=Z,2µm,20.6s						
TIA				LR	LR		
	comp=Z,2µm,21.6s						
TIA				LR	LR		
	comp=Z,4µm,25.0s						
CN2	**Changchun**	**73.87**	**328**	*e*P	**P**	**02 22 27.8**	**+0.1**
CN2				SS	SS	02 36 43.8	+0.4
CN2				pmax	pmax		
	comp=Z,30nm,1.4s						
CN2				pmax	pmax		
	comp=Z,300nm,3.7s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
CN2				LR	LR		
	comp=Z,2µm,19.2s						
SRIT	**Nakonsritamara**	**74.00**	**285**	P	**P**	**02 22 28.5**	**-0.7**
SRIT				IAmb	IAmb	02 22 48.7	
	comp=Z,98nm,1.5s						
RPN	**Rapa Nui**	**74.18**	**114**	LR	LR	02 49 13.9	
	comp=Z,2µm,20.6s,baz=266,slow=31						
TPTI		**74.36**	**279**	P	P	02 22 38.9	+7.6
GRNR	**Gornyy**	**74.75**	**339**	⇑*i*P	**P**	**02 22 33.9**	**+1.2**
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
KLR	**Kul'dur**	**75.20**	**335**	P	**P**	**02 22 35.7**	**+0.3**
	comp=Z,9.5nm,1.1s,baz=134,slow=3.7,SNR=8.5						
KLR				LR	LR	02 50 28.8	
	comp=Z,2µm,21.9s,baz=148,slow=32						
KLR	**Kul'dur**	**75.20**	**335**	*d i*P	**P**	**02 22 35.3**	**0.0**
KLR				pmax	pmax		
	comp=Z,135nm,2.0s						
ENH	**Enshi**	**75.34**	**309**	P	**P**	**02 22 35.9**	**-0.7**
ENH				IAmb	IAmb	02 22 43.7	
	comp=Z,38nm,0.9s						
NKL	**Nikolayevsk**	**75.47**	**343**	*e*P	**P**	**02 22 36.2**	**-0.5**
NKL				pmax	pmax		
	comp=N,3.0nm,1.0s						
NKL				pmax	pmax		
	comp=E,3.0nm,1.0s						
NKL				pmax	pmax		
	comp=Z,36nm,1.2s						
NKL				MLR	MLR		
	comp=N,28nm,12.0s						
NKL				MLR	MLR		
	comp=E,28nm,12.0s						
NKL				MLR	MLR		
	comp=Z,1µm,17.0s						
GYA	**Guiyang**	**75.56**	**305**	⇓*i*P	**P**	**02 22 38.8**	**+0.7**
GYA				pP	pP	02 22 44.3	+0.6
GYA				S	**S**	**02 32 18.1**	**-0.4**
GYA				pmax	pmax		
	comp=Z,30nm,1.2s						
GYA				pmax	pmax		
	comp=Z,550nm,4.7s						
GYA				LR	LR		
	comp=Z,1µm,20.0s						
GYA				LR	LR		
	comp=Z,2µm,16.4s						
GYA				LR	LR		
	comp=Z,2µm,18.0s						
BJT	**Baijiatuau**	**76.44**	**321**	P	**P**	**02 22 42.9**	**+0.2**
BJT				pmax	pmax		
	comp=Z,45nm,0.9s						
BJT	**Baijiatuau**	**76.44**	**321**	P	**P**	**02 22 42.9**	**+0.2**
BJT				IAmb	IAmb	02 22 49.5	
	comp=Z,45nm,0.9s						
BJT	**Baijiatuau**	**76.44**	**321**	IAMs_20	IAMs_20	02 52 32.7	
	comp=Z,5µm,22.0s						
BJI	**Beijing**	**76.45**	**321**	P	**P**	**02 22 43.1**	**+0.4**
BJI				sP	**sP**	**02 22 49.4**	**-0.8**
BJI				PP	**PP**	**02 25 35.5**	**+0.7**
BJI				S	**S**	**02 32 27.8**	**+0.4**
BJI				sS	**sS**	**02 32 37.4**	**+0.9**
BJI				pmax	pmax		
	comp=Z,34nm,0.9s						
BJI				pmax	pmax		
	comp=Z,1µm,4.6s						
BJI				LR	LR		
	comp=Z,4µm,27.4s						
BJI				LR	LR		
	comp=Z,4µm,24.0s						
BJI				LR	LR		
	comp=Z,9µm,25.7s						
TIY	**Taiyuan**	**77.39**	**317**	*e*P	**P**	**02 22 49.4**	**+1.2**
TIY				S	**S**	**02 32 41.6**	**+3.6**
TIY				pmax	pmax		
	comp=Z,23nm,0.6s						
TIY				pmax	pmax		
	comp=Z,340nm,6.0s						
XAN	**Xi'an**	**77.74**	**312**	P	**P**	**02 22 50.6**	**+0.4**
XAN				S	**S**	**02 32 39.8**	**-2.0**
XAN				pmax	pmax		
	comp=Z,32nm,1.7s						
XAN				LR	LR		
	comp=Z,2µm,18.7s						
XAN				LR	LR		
	comp=Z,1µm,18.0s						
XAN				LR	LR		
	comp=Z,2µm,20.6s						
KMI	**Kunming**	**78.06**	**302**	⇓P	**P**	**02 22 53.1**	**+0.7**
KMI				pP	sP	02 22 59.3	-0.6
KMI				sP	PcP	02 23 02.4	+0.4
KMI				PP	**PP**	**02 25 47.9**	**-1.1**
KMI				S	**S**	**02 32 49.1**	**+3.1**
KMI				sS	SKSac	02 33 01.4	-4.8
KMI				SS	**SS**	**02 37 47.0**	**-1.1**
KMI				pmax	pmax		
	comp=Z,40nm,1.1s						
KMI				pmax	pmax		
	comp=Z,190nm,3.5s						
KMI				LR	LR		
	comp=Z,1µm,24.0s						
KMI				LR	LR		
	comp=Z,2µm,27.0s						
KMI				LR	LR		
	comp=Z,3µm,25.2s						
CM31	**Chiang Mai Arr**	**78.41**	**294**	P	**P**	**02 22 53.7**	**-0.5**
CM31				IAmb	IAmb	02 23 02.9	
	comp=Z,44nm,1.1s						
CMAR	**Chiang Mai Arr**	**78.41**	**294**	P	**P**	**02 22 54.6**	**+0.4**
	comp=Z,2.4nm,0.3s,baz=128,slow=4.1,SNR=28						
CMAR				LR	LR	02 55 52.0	
	comp=Z,815nm,21.4s,baz=162,slow=34						
CMAR	**Chiang Mai Arr**	**78.41**	**294**	*i* P	**P**	**02 22 55.2**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CHTO	**Chiang Mai**	**78.55**	**294**	P	**P**	**02 22 54.5**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,33nm,1.0s						
CHTO	**Chiang Mai**	**78.55**	**294**	⇓P	**P**	**02 22 55.1**	**+0.2**
CHTO	**Chiang Mai**	**78.55**	**294**	P	**P**	**02 22 54.5**	**-0.4**
CHTO	**Chiang Mai**	**78.55**	**294**	P	**P**	**02 22 55.6**	**+0.7**
MA2	**Magadan**	**79.17**	**350**	⇑*e*P	**P**	**02 22 59.6**	**+2.2**
MA2				pmax	pmax		
	comp=Z,50nm,2.3s						
MA2	**Magadan**	**79.17**	**350**	IAMs_20	IAMs_20	02 51 42.5	
	comp=Z,4µm,22.0s						
MAW	**Mawson**	**79.34**	**202**	P	**P**	**02 22 59.0**	**+0.6**
	comp=Z,6.6nm,1.0s,baz=91,slow=7.3,SNR=4.0						
MAW				LR	LR	02 53 45.0	
	comp=Z,7µm,20.7s,baz=96,slow=32						
MAW	**Mawson**	**79.34**	**202**	⇑P	P	02 23 03.6	+5.2
MAW				⇑P	pP	02 23 03.6	-0.3
MAW	**Mawson**	**79.34**	**202**	P	**P**	**02 22 57.8**	**-0.6**
HHC	**Hu-ho-hao-te**	**79.75**	**319**	*e*P	**P**	**02 23 02.3**	**+1.1**
HHC				sP	sP	02 23 08.1	-0.6
HHC				S	**S**	**02 33 07.9**	**+4.7**
HHC				pmax	pmax		
	comp=Z,35nm,1.2s						
HHC				pmax	pmax		
	comp=Z,870nm,6.1s						
HHC				LR	LR		
	comp=Z,3µm,20.6s						
HHC				LR	LR		
	comp=Z,3µm,20.2s						
HHC				LR	LR		
	comp=Z,5µm,20.6s						
CD2	**Chengdu**	**79.94**	**307**	P	**P**	**02 23 02.9**	**+0.6**
CD2				PP	**PP**	**02 26 04.0**	**-0.4**
CD2				S	**S**	**02 33 04.8**	**-0.7**
CD2				SS	**SS**	**02 38 15.1**	**-0.6**
CD2				pmax	pmax		
	comp=Z,60nm,1.4s						
CD2				pmax	pmax		
	comp=Z,700nm,9.2s						
CD2				LR	LR		
	comp=Z,3µm,24.1s						
CD2				LR	LR		
	comp=Z,2µm,20.9s						
CD2				LR	LR		
	comp=Z,3µm,22.8s						
ZEA	**Zeya**	**80.48**	**336**	*e*P	**P**	**02 23 05.5**	**+0.9**
ZEA				*e*S	**S**	**02 33 14.7**	**+4.6**
ZEA				pmax	pmax		
	comp=N,200nm,5.9s						
ZEA				pmax	pmax		
	comp=Z,500nm,6.2s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.1s						
ZEA				smax	smax		
	comp=E,500nm,7.2s						
ZEA				smax	smax		
	comp=N,900nm,14.3s						
HIA	**Hailar**	**80.51**	**330**	⇑*i*P	**P**	**02 23 05.0**	**0.0**
HIA				pmax	pmax		
	comp=Z,78nm,2.2s						
HIA	**Hailar**	**80.51**	**330**	P	**P**	**02 23 04.7**	**-0.3**
BTO	**Baotou**	**80.58**	**318**	*e*P	**P**	**02 23 05.8**	**+0.2**
BTO				S	**S**	**02 33 14.3**	**+2.4**
KDAK	**Kodiak Island**	**82.12**	**19**	LR	LR	02 52 18.7	
	comp=Z,5µm,22.0s,baz=229,slow=30						
KDAK	**Kodiak Island**	**82.12**	**19**	IAMs_20	IAMs_20	02 51 33.5	
	comp=Z,6µm,22.0s						
SEY	**Seymchan**	**82.15**	**352**	P	**P**	**02 23 12.5**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=207,slow=6.8,SNR=1.7						
SEY				LR	LR	02 55 34.5	
	comp=Z,3µm,20.5s,baz=160,slow=33						
LZH	**Lanzhou**	**82.36**	**312**	*e*P	**P**	**02 23 16.6**	**+1.3**
LZH				sP	sP	02 23 22.4	-0.4
LZH				S	**S**	**02 33 34.4**	**+3.7**
LZH				sS	sS	02 33 41.1	+1.1
LZH				pmax	pmax		
	comp=Z,38nm,1.2s						
LZH				pmax	pmax		
	comp=Z,710nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
LZH				LR	LR		
	comp=Z,2µm,15.7s						
LZH				LR	LR		
	comp=Z,2µm,19.5s						
BELA	**Belgrano 2**	**82.94**	**175**	P	**P**	**02 23 16.4**	**-1.0**
BELA				IAmb	IAmb	02 23 24.8	
	comp=Z,81nm,1.5s						
O19K	**Port Alsworth**	**83.58**	**17**	IAMs_20	IAMs_20	02 53 03.5	
	comp=Z,4µm,22.0s						
O19K	**Port Alsworth**	**83.58**	**17**	P	P	02 23 26.8	+6.1
	baz=214						
CNPM	**China Poot**	**83.95**	**19**	IAMs_20	IAMs_20	02 55 11.6	
	comp=Z,5µm,20.0s						
N19K	**Bonanza Creek**	**84.05**	**17**	IAMs_20	IAMs_20	02 53 40.9	
	comp=Z,4µm,22.0s						
BRLK	**Bradley Lake**	**84.24**	**19**	IAMs_20	IAMs_20	02 55 51.1	
	comp=Z,5µm,20.0s						
SMAI	**San Martin Ant**	**84.56**	**162**	P	**P**	**02 23 27.3**	**+1.5**
ANM	**Nome**	**84.90**	**11**	IAMs_20	IAMs_20	02 53 55.3	
	comp=Z,4µm,22.0s						
ANM	**Nome**	**84.90**	**11**	P	P	02 23 34.3	+6.9
	baz=204						
HOPS	**Hopland Field**	**84.94**	**46**	P	**P**	**02 23 28.4**	**+0.2**
HOPS				IAMs_20	IAMs_20	02 52 29.8	
	comp=Z,4µm,20.0s						
M19K	**Big River Lodg**	**84.98**	**16**	IAMs_20	IAMs_20	02 55 19.5	
	comp=Z,4µm,22.0s						
M19K	**Big River Lodg**	**84.98**	**16**	P	**P**	**02 23 31.6**	**+3.7**
	baz=214						
SAO	**San Andreas Ge**	**85.04**	**49**	P	**P**	**02 23 29.8**	**+1.0**
SAO				pmax	pmax		
	comp=Z,128nm,1.4s						
SAO	**San Andreas Ge**	**85.04**	**49**	P	**P**	**02 23 29.8**	**+1.0**
L19K	**White Mountain**	**85.09**	**16**	IAmb	IAmb	02 23 37.1	
	comp=Z,76nm,1.2s						
L19K				IAMs_20	IAMs_20	02 54 38.3	
	comp=Z,4µm,21.0s						
L19K	**White Mountain**	**85.09**	**16**	P	**P**	**02 23 31.9**	**+3.4**
	baz=214						
KMRM	**Mail Ridge**	**85.09**	**45**	P	**P**	**02 23 30.0**	**+0.9**
O22K	**Cooper Landing**	**85.17**	**19**	IAMs_20	IAMs_20	02 55 40.6	
	comp=Z,4µm,20.0s						
PKM	**Mcpherson Peak**	**85.39**	**51**	P	P	02 23 37.5	+6.7
	baz=244						
TNA	**Tin City**	**85.41**	**9**	P	P	02 23 37.3	+7.4
	baz=202						
TTA	**Tatalina**	**85.43**	**15**	P	P	02 23 36.8	+6.7
	baz=213						
PAGB	**Antelope Grade**	**85.44**	**50**	IAmb	IAmb	02 23 40.2	
	comp=Z,94nm,1.3s						
SCI2	**San Clemente I**	**85.52**	**53**	P	P	02 23 38.0	+6.7
	baz=245						
L20K	**Farewell, AK**	**85.59**	**16**	P	**P**	**02 23 35.2**	**+4.2**
	baz=215						
RC01	**Rabbit Creek A**	**85.64**	**19**	IAMs_20	IAMs_20	02 56 37.5	
	comp=Z,5µm,20.0s						
O02D	**Mt. Diablo Mer**	**85.69**	**45**	P	**P**	**02 23 33.2**	**+1.1**
	baz=242,SNR=10						
SYO	**Syowa Base**	**85.84**	**196**	⇓*e*P	**P**	**02 23 31.5**	**-0.7**
SYO	**Syowa Base**	**85.84**	**196**	⇓*e*pP	pP	02 23 36.2	-1.6
N02D	**Trinity Center**	**86.12**	**45**	P	**P**	**02 23 35.8**	**+1.6**
	baz=242,SNR=16						
YAK	**Yakutsk**	**86.13**	**342**	P	**P**	**02 23 33.1**	**-0.5**
	comp=Z,8.0nm,0.4s,baz=324,slow=2.6,SNR=1.5						
YAK				LR	LR	03 01 14.1	
	comp=Z,2µm,18.8s,baz=139,slow=35						
YAK	**Yakutsk**	**86.13**	**342**	*e*P	**P**	**02 23 36.8**	**+3.3**
YAK				*e**PP	**pwP**	**02 23 45.6**	**+4.1**
YAK				*e*S	**S**	**02 34 00.6**	**-6.3**
YAK				*e**SS	sS	02 35 03.3	+47
YAK				pmax	pmax		
	comp=Z,33nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,312nm,5.1s						
YAK				pmax	pmax		
	comp=E,148nm,2.5s						
YAK				pmax	pmax		
	comp=N,434nm,5.4s						
YAK				smax	smax		
	comp=N,1µm,12.6s						
YAK				smax	smax		
	comp=E,392nm,11.3s						
YAK				MLR	MLR		
	comp=Z,3µm,22.0s						
YAK				MLR	MLR		
	comp=E,1µm,17.0s						
YAK				MLR	MLR		
	comp=N,2µm,19.0s						
YAK	**Yakutsk**	**86.13**	**342**	⇑P	P	02 23 39.6	+6.1
YAK	**Yakutsk**	**86.13**	**342**	P	**P**	**02 23 34.1**	**+0.6**
YAK				IAmb	IAmb	02 23 46.9	
	comp=Z,58nm,0.9s						
YAK				IAMs_20	IAMs_20	03 01 03.4	
	comp=Z,3µm,20.0s						
BILL	**Bilibino**	**86.19**	**359**	⇑*e*P	**P**	**02 23 37.2**	**+3.4**
BILL				*e*		02 26 55.2	
BILL				*e*S	**S**	**02 34 13.9**	**+6.5**
BILL				*e*SS	**SS**	**02 39 47.5**	**+0.6**
BILL				pmax	pmax		
	comp=Z,31nm,1.3s						
BILL				MLR	MLR		
	comp=Z,1µm,19.0s						
BILL	**Bilibino**	**86.19**	**359**	P	**P**	**02 23 35.2**	**+1.5**
M02C	**Callahan**	**86.22**	**44**	P	**P**	**02 23 35.9**	**+1.3**
	baz=242,SNR=11						
K20K	**Telida**	**86.27**	**16**	IAMs_20	IAMs_20	02 55 25.5	
	comp=Z,4µm,21.0s						
KNK	**Knik Glacier**	**86.28**	**19**	IAMs_20	IAMs_20	02 53 57.2	
	comp=Z,3µm,22.0s						
PASC	**Pasadena Art C**	**86.30**	**52**	P	**P**	**02 23 37.3**	**+2.2**

PASC				IAmb	IAmb	02 23 43.4	
	comp=Z,53nm,1.1s						
GLI	Glacier Island	86.30	20	IAMs_20	IAMs_20	02 57 03.0	
	comp=Z,3µm,20.0s						
K02D	Willamette Mer	86.32	43	P	P	02 23 36.8	+1.7
	baz=241,SNR=6.6						
H06S1	SOCORRO T	86.33	69	T	T	03 58 43.7	
	SNR=6.2						
ULN	Ulaanbaatar	86.34	323	*d i*P	P	02 23 34.8	-0.4
ULN				pmax	pmax		
	comp=Z,98nm,1.0s						
ULN	Ulaanbaatar	86.34	323	⇑P	P	02 23 35.4	+0.2
ULN				⇑P	PcP	02 23 35.8	-1.8
ULN				⇑P	pP	02 23 40.8	+0.1
ULN				⇑P	sP	02 23 41.1	-1.7
CMB	Columbia Colle	86.37	48	IAMs_20	IAMs_20	02 54 51.8	
	comp=Z,5µm,20.0s						
H06E1	SOCORRO T-PHAS	86.38	69	T	T	03 58 45.7	
	SNR=6.1						
FID	Port Fidalgo	86.40	20	IAMs_20	IAMs_20	02 56 24.2	
	comp=Z,3µm,20.0s						
O03E	Paynes Creek	86.41	46	P	P	02 23 36.6	+1.0
	baz=242,SNR=14						
GHO	Glory Hole Cre	86.42	18	IAMs_20	IAMs_20	02 57 22.8	
	comp=Z,5µm,20.0s						
CUT	Chulitna	86.53	18	IAMs_20	IAMs_20	02 55 00.4	
	comp=Z,5µm,22.0s						
109C	Camp Elliot, M	86.58	54	IAMs_20	IAMs_20	02 53 03.9	
	comp=Z,3µm,19.0s						
SML	Sawmill	86.63	19	IAMs_20	IAMs_20	02 57 29.2	
	comp=Z,3µm,20.0s						
CBX	Cerro Bola	86.69	55	P	P	02 23 36.9	-0.3
SONM	Songino Array	86.70	323	P	P	02 23 36.1	-0.8
	comp=Z,30nm,1.2s,baz=136,slow=2.2,SNR=45						
SONM				PKKPbc	PKKPbc	02 41 35.1	+1.2
	comp=Z,0.6nm,0.8s,baz=258,slow=2.0,SNR=3.7						
SONM	Songino Array	86.70	323	P	P	02 23 36.4	-0.5
SONM				pmax	pmax		
	comp=Z,84nm,1.2s						
SONM	Songino Array	86.70	323	P	P	02 23 36.4	-0.5
SONM				IAmb	IAmb	02 23 44.1	
	comp=Z,84nm,1.2s						
ISA	Isabella, Lake	86.71	51	P	P	02 23 37.8	+0.6
ISA				pmax	pmax		
	comp=Z,82nm,1.3s						
ISA	Isabella, Lake	86.71	51	P	P	02 23 37.8	+0.6
ISA				IAmb	IAmb	02 23 45.5	
	comp=Z,82nm,1.3s						
ISA	Isabella, Lake	86.71	51	P	P	02 23 37.9	+0.6
	baz=245,SNR=15						
BFSC	Mount Baldy Ra	86.72	52	P	P	02 23 36.8	-0.5
	baz=245						
RAGM	Ragged Mountai	86.73	21	IAMs_20	IAMs_20	03 00 22.4	
	comp=Z,5µm,19.0s						
HUMO	Hull Mountain	86.73	43	⇑P	P	02 23 38.4	+1.3
HUMO				⇑P	sP	02 23 44.2	-0.4
HUMO				⇑P	pP	02 23 44.9	+2.2
HUMO	Hull Mountain	86.73	43	IAmb	IAmb	02 23 45.7	
	comp=Z,84nm,1.1s						
GTA	Gaotai	86.74	313	⇓P	P	02 23 37.3	0.0
GTA				pP	PcP	02 23 41.1	+1.5
GTA				sP	sP	02 23 44.1	-0.8
GTA				S	S	02 34 11.6	-2.6
GTA				sS	ScS	02 34 21.8	-0.4
GTA				SS	SS	02 39 51.4	-5.0
GTA				pmax	pmax		
	comp=Z,24nm,1.4s						
GTA				pmax	pmax		
	comp=Z,240nm,5.5s						
GTA				LR	LR		
	comp=Z,2µm,19.3s						
GTA				LR	LR		
	comp=Z,2µm,20.7s						
GTA				LR	LR		
	comp=Z,2µm,21.4s						
EDW2	Edwards Air Fo	86.74	52	P	P	02 23 37.7	+0.4
	baz=245,SNR=11						
MURC	Murrieta	86.81	53	P	P	02 23 37.8	+0.1
	baz=246,SNR=6.0						
HMT	Hamilton	86.83	21	IAMs_20	IAMs_20	02 57 32.1	
	comp=Z,3µm,19.0s						
CAST	Castle Rocks	86.84	16	IAMs_20	IAMs_20	02 56 59.5	
	comp=Z,3µm,20.0s						
CAST	Castle Rocks	86.84	16	P	P	02 23 38.3	+1.2
	baz=216						
J20K	Nowinta River	86.93	15	IAMs_20	IAMs_20	02 58 45.0	
	comp=Z,4µm,19.0s						
L04D	Klamath Falls	86.97	44	P	P	02 23 38.9	+0.5
	baz=242,SNR=8.1						
BERG	Berg Lake	87.07	21	IAMs_20	IAMs_20	02 57 47.3	
	comp=Z,4µm,18.0s						
M04C	Macdoel	87.08	44	P	P	02 23 40.0	+1.1
	baz=242,SNR=9.4						
MONP2	Monument Peak	87.11	54	P	P	02 23 39.8	+0.4
	baz=246,SNR=6.8						
KLU	Klutina	87.14	20	IAMs_20	IAMs_20	02 57 29.1	
	comp=Z,3µm,20.0s						
BMRM	Bremner River	87.18	21	IAMs_20	IAMs_20	02 57 58.9	
	comp=Z,3µm,20.0s						
LRMC	Laurel Mtn Rad	87.22	51	P	P	02 23 39.9	+0.2
	baz=245,SNR=8.0						
IKP	In-Ko-Pah, Jac	87.25	54	P	P	02 23 39.9	0.0
	baz=246,SNR=6.8						
KTH	Kantishna Hill	87.26	17	IAMs_20	IAMs_20	02 55 44.0	
	comp=Z,4µm,22.0s						
RMX	La Rumorosa	87.26	54	IAmb	IAmb	02 23 48.4	
	comp=Z,58nm,1.4s						
CWC	Cottonwood Cre	87.33	50	P	P	02 23 40.7	+0.4
	baz=245						
TRF	Thorofare Moun	87.35	17	IAMs_20	IAMs_20	02 56 10.4	
	comp=Z,3µm,22.0s						
WAT1	Susitna Watana	87.35	18	P	P	02 23 42.3	+2.7
	baz=220						
PFO	Pinyon Flats O	87.37	53	P	P	02 23 41.4	+0.9
PFO				pmax	pmax		
	comp=Z,31nm,1.2s						
PFO	Pinyon Flats O	87.37	53	P	P	02 23 41.4	+0.9
PFO				IAmb	IAmb	02 23 49.2	
	comp=Z,31nm,1.2s						
PFO	Pinyon Flats O	87.37	53	IAMs_20	IAMs_20	02 53 13.9	
	comp=Z,6µm,22.0s						
PFO	Pinyon Flats O	87.37	53	P	P	02 23 41.1	+0.6
	baz=246,SNR=7.7						
TPFO	Pinon Flats	87.38	53	P	P	02 23 41.1	+0.5
	baz=246,SNR=6.7						
WAX	Waxell Ridge	87.40	21	IAMs_20	IAMs_20	02 58 36.2	
	comp=Z,3µm,20.0s						
J04D	Umpqua Nationa	87.58	43	P	P	02 23 42.0	+0.6
	baz=242,SNR=9.5						
YERR	Yerington	87.59	48	IAmb	IAmb	02 23 50.4	
	comp=Z,75nm,1.2s						
MPMC	Manual Prospec	87.61	51	P	P	02 23 44.5	+2.8
	baz=245,SNR=12						
SWSC	Sam W. Stewart	87.61	54	P	P	02 23 41.9	+0.4
	baz=246,SNR=6.1						
PMSA	Palmer Station	87.62	160	P	P	02 23 43.5	+2.5
TGL	Tana Glacier	87.63	21	IAMs_20	IAMs_20	02 59 01.1	
	comp=Z,3µm,18.0s						
N25K	Chitina, Valde	87.65	20	P	P	02 23 42.2	+1.1
	baz=223						
BPAW	Bear Paw Mtn.	87.68	16	IAMs_20	IAMs_20	02 56 07.1	
	comp=Z,3µm,21.0s						
RND	Reindeer	87.72	17	IAMs_20	IAMs_20	02 55 03.1	
	comp=Z,6µm,22.0s						
GSC	Goldstone, Bar	87.80	52	IAmb	IAmb	02 23 50.7	
	comp=Z,46nm,1.5s						
GSC	Goldstone, Bar	87.80	52	P	P	02 23 45.7	+3.2
	baz=246,SNR=7.5						
PAHR	Pah Rah Range	87.81	47	P	P	02 23 43.2	+0.7
BELC	Belle Mtn. Jos	87.88	53	P	P	02 23 43.6	+0.6
	baz=246,SNR=23						
DHY	Denali Highway	87.89	18	IAMs_20	IAMs_20	02 55 50.5	
	comp=Z,5µm,22.0s						
RYN	Ryan	87.94	48	IAmb	IAmb	02 23 50.8	
	comp=Z,69nm,1.3s						
MCK	McKinley	87.95	17	IAMs_20	IAMs_20	02 55 33.9	
	comp=Z,6µm,22.0s						
MCK	McKinley	87.95	17	P	P	02 23 44.5	+2.1
	baz=219						
HEC	Hector,Ludlow	87.96	52	P	P	02 23 43.5	+0.3
	baz=246,SNR=11						
LCH	Last Change Ra	87.98	50	IAmb	IAmb	02 23 51.5	
	comp=Z,44nm,1.4s						
NVAR	Mina Array Bea	88.02	48	P	P	02 23 43.7	+0.1
	comp=Z,5.5nm,0.9s,baz=228,slow=8.0,SNR=17						
NVAR				LR	LR	02 54 41.0	
	comp=Z,7µm,21.2s,baz=265,slow=30						
QSM	Queen of Sheba	88.03	51	IAmb	IAmb	02 23 52.1	
	comp=Z,51nm,1.2s						
NV11	Mina Array Sit	88.12	48	P	P	02 23 44.5	+0.5
BWN	Browne	88.14	17	IAMs_20	IAMs_20	02 56 58.7	
	comp=Z,4µm,21.0s						
BC3	Big Chuckawall	88.16	54	P	P	02 23 45.0	+0.7
	baz=247,SNR=7.2						
J05D	Fort Rock, OR	88.17	43	P	P	02 23 45.1	+1.0
	baz=243						
BCPM	Bancas Point	88.21	23	IAMs_20	IAMs_20	02 54 23.7	
	comp=Z,3µm,21.0s						
FURC	Furnace Creek,	88.23	51	P	P	02 23 44.9	+0.6
	baz=246,SNR=7.5						
GWY	Greenwater Val	88.26	51	IAmb	IAmb	02 23 53.3	
	comp=Z,42nm,1.2s						
I21K	Tanana	88.29	15	IAmb	IAmb	02 23 51.1	
	comp=Z,36nm,1.4s						
I21K				IAMs_20	IAMs_20	02 59 35.9	
	comp=Z,4µm,19.0s						
I21K	Tanana	88.29	15	P	P	02 23 44.3	+0.4
	baz=216						
GLA	Glamis	88.40	54	IAmb	IAmb	02 23 54.8	
	comp=Z,57nm,1.1s						
GLA	Glamis	88.40	54	P	P	02 23 46.7	+1.3
	baz=247,SNR=9.0						
KVN	Kaiserville	88.42	48	IAmb	IAmb	02 23 54.3	
	comp=Z,78nm,1.2s						
SHOC	Shoshone, Teco	88.44	51	P	P	02 23 46.0	+0.6
	baz=246,SNR=11						
GMRC	Granite Mounta	88.45	53	P	P	02 23 48.7	+3.1
	baz=246,SNR=9.8						
H21K	Melozitna Rive	88.48	15	IAMs_20	IAMs_20	02 57 07.8	
	comp=Z,4µm,21.0s						
MLY	Manley	88.49	16	IAMs_20	IAMs_20	03 02 48.0	
	comp=Z,3µm,20.0s						
TUQ	Turquoise Moun	88.51	52	P	P	02 23 46.1	+0.1
	baz=246,SNR=11						
IMAR	Indian Mountai	88.52	14	P	P	02 23 46.2	+1.2
IRM	Iron Mountain	88.59	53	P	P	02 23 46.9	+0.7
	baz=247						
BOD	Bodaibo	88.68	334	*e*P	P	02 23 44.8	-1.2
BOD				pmax	pmax		
	comp=Z,91nm,1.9s						
M26K	Nabesna, AK	88.75	20	P	P	02 23 49.5	+3.2
	baz=224						
WRH	Wood River Hil	88.75	17	IAMs_20	IAMs_20	02 56 32.2	
	comp=Z,5µm,22.0s						
TPNV	Topopah Spring	88.88	50	IAMs_20	IAMs_20	02 56 33.5	
	comp=Z,3µm,20.0s						
TPNV	Topopah Spring	88.88	50	P	P	02 23 48.0	+0.3
	baz=246,SNR=9.7						
I23K	Minto, Yukon-K	88.94	16	IAMs_20	IAMs_20	03 02 57.0	
	comp=Z,3µm,18.0s						
CCB	Clear Creek Bu	88.97	17	IAMs_20	IAMs_20	02 56 37.9	
	comp=Z,5µm,22.0s						
HDA	Harding Lake	89.03	17	P	P	02 23 46.1	-1.3
	baz=221						
L26K	Log Cabin Wild	89.09	20	IAMs_20	IAMs_20	02 58 12.2	
	comp=Z,3µm,20.0s						
MDM	Murphy Dome	89.09	17	IAMs_20	IAMs_20	02 58 28.2	
	comp=Z,3µm,20.0s						
TCOL	CIGO, UAF Yank	89.13	17	IAMs_20	IAMs_20	02 56 42.1	
	comp=Z,4µm,22.0s						
COLA	College	89.13	17	⇓*e*P	P	02 23 46.3	-1.6
COLA				pmax	pmax		
	comp=Z,26nm,1.3s						
COLA	College	89.13	17	IAMs_20	IAMs_20	02 56 42.5	
	comp=Z,4µm,22.0s						
JIS	Juneau Island	89.19	26	IAMs_20	IAMs_20	02 54 47.6	
	comp=Z,5µm,20.0s						
IL31		89.32	17	P	P	02 23 49.7	+1.0
ILAR	Eielson Array	89.32	17	P	P	02 23 46.7	-2.2
	comp=Z,2.4nm,1.0s,baz=231,slow=5.8,SNR=9.7						
ILAR				LR	LR	02 57 21.8	
	comp=Z,5µm,22.0s,baz=234,slow=31						
PDMCI	Parker Dam,Lak	89.42	54	P	P	02 23 51.0	+1.0
	baz=247,SNR=8.6						
POKR	Poker Plat Res	89.43	17	IAMs_20	IAMs_20	02 57 37.1	
	comp=Z,4µm,21.0s						
WVOR	Wild Horse Val	89.50	45	⇓P	P	02 23 51.0	+0.6
SHPR	Sheep Range	89.51	51	IAmb	IAmb	02 23 59.2	
	comp=Z,47nm,1.5s						
214A	Organ Pipe Nat	89.56	56	P	P	02 23 51.0	+0.2
	baz=248						
BMN	Battle Mountai	89.62	47	IAmb	IAmb	02 24 00.0	
	comp=Z,96nm,1.3s						
NVL	N'lazarevskaya	89.75	187	⇑*i*P	P	02 23 54.2	+3.2
NVL				*e*		02 27 28.3	
NVL				*e*S	S	02 34 46.1	+4.5
NVL				pmax	pmax		
	comp=Z,49nm,1.2s						
ZAK	Zakamensk	89.76	324	*e*P	P	02 23 49.8	-1.6
ZAK				pmax	pmax		
	comp=Z,35nm,1.6s						
R11A	Troy Canyon, C	89.93	49	P	P	02 23 52.7	+0.1
	baz=246						
PRN	Pahroc Range	89.94	50	IAmb	IAmb	02 24 01.8	
	comp=Z,92nm,1.3s						
B05A	Bryant	89.95	38	P	P	02 23 53.1	+1.0
	baz=242						
SNAA	Sanae	90.04	182	P	P	02 23 51.7	-0.8
SNAA	Sanae	90.04	182	⇑*i*P	P	02 23 51.4	-1.0
SNAA				pmax	pmax		
	comp=Z,55nm,1.4s						
SNAA				MLR	MLR		
	comp=Z,4µm,16.0s						
SNAA	Sanae	90.04	182	P	P	02 23 52.5	+0.1
SNAA				IAmb	IAmb	02 24 00.8	
	comp=Z,39nm,1.1s						
SNAA				IAMs_20	IAMs_20	03 03 44.6	
	comp=Z,3µm,18.0s						
J26L	Joseph Creek	90.08	18	P	P	02 23 56.4	+3.8
	baz=224						
IRK	Irkutsk	90.16	326	*e*P	P	02 23 57.8	+4.8
IRK				pmax	pmax		
	comp=Z,82nm,1.1s						
TLY	Talaya	90.21	325	P	P	02 23 52.3	-1.0
	comp=Z,2.3nm,0.4s,baz=116,slow=6.0,SNR=3.3						
TLY				LR	LR	03 04 26.8	
	comp=Z,1µm,19.2s,baz=124,slow=36						
TLY	Talaya	90.21	325	*e*P	P	02 23 53.4	+0.1
TLY				*e*S	SKSac	02 34 25.9	+2.5
TLY				*e*PPS	PPS	02 36 27.4	
TLY				pmax	pmax		
	comp=Z,63nm,0.9s						
TLY				MLR	MLR		
	comp=Z,3µm,17.0s						
TLY	Talaya	90.21	325	P	P	02 23 54.0	+0.6
TLY				IAmb	IAmb	02 24 00.2	
	comp=Z,28nm,1.0s						
COLD	Coldfoot	90.37	15	P	P	02 23 54.5	+0.9
COLD	Coldfoot	90.37	15	P	P	02 23 54.0	+0.3
	baz=218						
VNA3	Neumayer Olymp	90.62	180	P	P	02 23 54.6	-0.4
HAWA	Hanford	90.65	41	IAMs_20	IAMs_20	02 55 19.6	
	comp=Z,4µm,21.0s						
VNA2	Neumayer--Watz	90.91	181	P	P	02 23 55.6	-0.8
	baz=177,slow=4.4						
M30M	Minto, Yukon	90.98	22	P	P	02 23 56.1	-0.6
	baz=230						
EGAK	Eagle	91.01	19	P	P	02 23 57.6	+0.9
EGAK				IAMs_20	IAMs_20	03 01 47.2	
	comp=Z,3µm,19.0s						
EGAK	Eagle	91.01	19	P	P	02 23 57.4	+0.7
	baz=226						
DAWY	Dawson	91.08	20	P	P	02 23 58.3	+1.1
	baz=228						
SPR3	Spring Creek 3	91.08	49	IAmb	IAmb	02 24 06.7	
	comp=Z,32nm,1.3s						
LCMT	Little Creek M	91.12	51	IAmb	IAmb	02 24 06.3	
	comp=Z,36nm,1.2s						
FYU	Fort Yukon	91.12	16	IAMs_20	IAMs_20	02 59 10.9	
	comp=Z,4µm,20.0s						
PALK	Pallekele	91.16	277	IAMs_20	IAMs_20	03 02 41.7	
	comp=Z,3µm,22.0s						
LLLB	Lillooet	91.17	36	IAmb	IAmb	02 24 05.8	
	comp=Z,39nm,1.1s						
VNA1	Neumayer--Stat	91.20	181	P	P	02 23 57.2	-0.5
CCUT	Cedar City	91.24	51	IAmb	IAmb	02 24 07.3	
	comp=Z,46nm,1.3s						
TUC	Tucson	91.29	56	P	P	02 23 59.7	+0.8
TUC				pmax	pmax		
	comp=Z,40nm,1.4s						
TUC	Tucson	91.29	56	P	P	02 23 59.7	+0.8
TUC				IAmb	IAmb	02 24 07.5	
	comp=Z,40nm,1.4s						
TUC	Tucson	91.29	56	IAMs_20	IAMs_20	03 01 43.6	
	comp=Z,3µm,18.0s						
TUC	Tucson	91.29	56	P	P	02 24 00.2	+1.3
	baz=249						
D08A	Wollman Farm,	91.32	40	IAmb	IAmb	02 24 06.2	
	comp=Z,56nm,1.2s						
BMO	Blue Mountains	91.40	43	IAmb	IAmb	02 24 07.1	
	comp=Z,35nm,1.2s						
KNB	Kanab	91.44	51	IAmb	IAmb	02 24 07.5	
	comp=Z,60nm,1.3s						
SZCU	Shurtz Canyon	91.46	51	IAmb	IAmb	02 24 08.2	
	comp=Z,56nm,1.5s						
X16A	Lo Mia Camp, P	91.53	54	IAmb	IAmb	02 24 08.6	
	comp=Z,28nm,1.1s						
U15A	North Rim	91.61	52	IAmb	IAmb	02 24 14.2	
	comp=Z,41nm,1.1s						
TOLK	Toolik Lake Re	91.63	14	IAMs_20	IAMs_20	03 04 06.1	
	comp=Z,4µm,19.0s						
B08A	Colville Reser	91.63	39	P	P	02 24 00.1	+0.1
B08A				IAmb	IAmb	02 24 07.6	
	comp=Z,42nm,1.1s						
MOY	Mondy	91.65	325	*e*P	P	02 24 00.3	+0.2
MOY				pmax	pmax		
	comp=Z,78nm,2.5s						
MFID	Camas Ranch	91.78	45	IAmb	IAmb	02 24 10.5	
	comp=Z,27nm,1.2s						
F10A	Beach Ranch, E	91.92	42	IAmb	IAmb	02 24 09.3	
	comp=Z,57nm,1.1s						
PKCU	Pink Cliffs	91.97	51	IAmb	IAmb	02 24 16.4	
	comp=Z,47nm,1.3s						
WUAZ	Wupatki	91.98	53	IAmb	IAmb	02 24 10.5	
	comp=Z,31nm,1.1s						
WUAZ				IAMs_20	IAMs_20	02 56 12.6	
	comp=Z,4µm,22.0s						
WUAZ	Wupatki	91.98	53	P	P	02 24 03.5	+1.3
	baz=249						
C09A	Chrisman Ranch	92.03	40	IAmb	IAmb	02 24 10.4	
	comp=Z,29nm,1.3s						
319A	Douglas	92.16	58	P	P	02 24 03.0	-0.1
319A				IAmb	IAmb	02 24 11.5	
	comp=Z,36nm,1.0s						
MTPU	Mount Pierson	92.28	51	IAmb	IAmb	02 24 17.6	
	comp=Z,27nm,1.3s						
DUG	Dugway, Tooele	92.62	49	P	P	02 24 07.4	+2.4
	baz=248						
HLID	Hailey	92.79	45	P	P	02 24 07.2	+1.5
	baz=247						
NEW	Newport	92.93	40	IAMs_20	IAMs_20	02 57 20.8	
	comp=Z,3µm,20.0s						
NEW	Newport	92.93	40	P	P	02 24 06.9	+0.8
	baz=246						
HVU	Hansel Valley	93.24	47	IAmb	IAmb	02 24 17.5	
	comp=Z,30nm,1.5s						
EPYK	Eagle Plains	93.45	19	IAMs_20	IAMs_20	03 01 26.8	
	comp=Z,3µm,19.0s						
BCYI	Bear Canyon	93.75	45	P	P	02 24 11.2	+1.1
TIXI	Tiksi	93.95	348	PP	PP	02 27 55.7	-0.7
	comp=Z,1.1nm,0.3s,baz=125,slow=7.4,SNR=4.2						
TIXI	Tiksi	93.95	348	⇓*e*P	P	02 24 10.1	-0.1
TIXI				pmax	pmax		
	comp=Z,23nm,2.8s						
TIXI				MLR	MLR		
	comp=Z,2µm,19.0s						
TIXI	Tiksi	93.95	348	P	P	02 24 10.6	+0.5
HWUT	Hardware Ranch	94.02	48	IAMs_20	IAMs_20	03 07 13.2	
	comp=Z,2µm,18.0s						
MSO	Missoula	94.34	42	IAMs_20	IAMs_20	03 00 30.9	
	comp=Z,4µm,18.0s						
DGAR	Diego Garcia	94.36	261	*ce*P	P	02 24 09.3	-4.1
DGAR				pmax	pmax		
	comp=Z,83nm,1.3s						
EPT	El Paso	94.53	58	IAMs_20	IAMs_20	02 59 07.5	
	comp=Z,4µm,20.0s						
MVCO	Mesa Verde	94.74	52	IAMs_20	IAMs_20	03 00 32.7	
	comp=Z,4µm,20.0s						
Y22D	IRIS PASSCAL I	94.93	56	IAMs_20	IAMs_20	03 04 22.1	
	comp=Z,3µm,18.0s						
FXWY	Fox Creek	95.11	46	IAMs_20	IAMs_20	02 58 15.9	
	comp=Z,4µm,22.0s						
REDW	Red Top Meadow	95.13	46	IAMs_20	IAMs_20	02 58 49.5	
	comp=Z,3µm,21.0s						
MOOW	Moose Ponds	95.33	46	IAMs_20	IAMs_20	02 59 27.0	
	comp=Z,4µm,20.0s						
LOHW	Long Hollow	95.38	46	IAMs_20	IAMs_20	02 59 39.3	
	comp=Z,4µm,20.0s						
MNTX	Cornudas Mount	95.41	59	IAMs_20	IAMs_20	02 59 36.0	
	comp=Z,4µm,20.0s						
FLWY	Flagg Ranch	95.48	45	IAMs_20	IAMs_20	02 58 16.8	
	comp=Z,4µm,21.0s						
ANMO	Albuquerque	95.57	55	IAMs_20	IAMs_20	03 00 37.0	
	comp=Z,2µm,19.0s						
ANMO	Albuquerque	95.57	55	P	P	02 24 18.7	0.0
	baz=252						
INK	Inuvik	95.63	18	P	P	02 24 17.2	-0.7
	comp=Z,2.1nm,1.0s,baz=223,slow=3.5,SNR=4.3						
INK				PP	PP	02 28 08.4	-1.1
	comp=Z,3.9nm,1.1s,baz=204,slow=5.0,SNR=3.3						
INK				LR	LR	03 04 22.8	
	comp=Z,2µm,19.4s,baz=231,slow=34						
INK	Inuvik	95.63	18	P	P	02 24 17.2	-0.7
	baz=233						
BW06	Boulder Array	95.82	47	IAMs_20	IAMs_20	03 01 40.8	
	comp=Z,3µm,20.0s						
BW06	Boulder Array	95.82	47	P	P	02 24 23.6	+3.9
	baz=250						
PDAR	Pinedale Array	95.82	47	P	P	02 24 20.0	+0.3
	comp=Z,0.6nm,1.0s,baz=246,slow=7.7,SNR=2.4						
PDAR				LR	LR	03 02 30.5	
	comp=Z,2µm,19.0s,baz=259,slow=32						
TXAR	Lajitas Array	96.10	61	P	P	02 24 21.8	+0.7
	comp=Z,0.6nm,0.8s,baz=218,slow=5.9,SNR=5.6						
TXAR				LR	LR	02 58 41.2	
	comp=Z,4µm,21.3s,baz=0.0,slow=30						
TXAR	Lajitas Array	96.10	61	P	P	02 24 20.5	-0.7
S22A	4UR Ranch, Cre	96.17	52	P	P	02 24 26.3	+4.7
	baz=252						
KAAM	Kaadhehdhoo	96.37	268	IAMs_20	IAMs_20	03 07 50.4	
	comp=Z,3µm,20.0s						
SMCO	Snowmass	96.51	51	IAMs_20	IAMs_20	03 01 38.5	
	comp=Z,2µm,20.0s						
H03S2	Juan Fernandez	96.69	129	T	T	04 12 02.2	
	baz=241,SNR=12						
H03S1	Juan Fernandez	96.70	129	T	T	04 12 03.3	
	baz=241,SNR=10						
H03S3	Juan Fernandez	96.71	129	T	T	04 12 02.1	
	baz=241,SNR=11						
WMQ	Urumqi	96.81	314	P	P	02 24 23.4	-0.6
WMQ				pP	pP	02 24 29.8	+0.2
WMQ				SKS	SKSac	02 34 59.4	-0.8
WMQ				sS	pS	02 35 53.6	+1.1
WMQ				SS	SS	02 42 22.3	+1.2
WMQ				pmax	pmax		
	comp=Z,43nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,360nm,5.1s						
WMQ				LR	LR		
	comp=Z,2µm,16.9s						
WMQ				LR	LR		
	comp=Z,2µm,25.3s						
WMQ				LR	LR		
	comp=Z,3µm,20.5s						
H03N3	Juan Fernandez	96.87	128	T	T	04 12 10.1	
	baz=246,slow=73,SNR=6.6						
H03N2	Juan Fernandez	96.87	128	T	T	04 12 09.3	
	baz=246,slow=73,SNR=5.1						
H03N1	Juan Fernandez	96.88	128	T	T	04 12 09.7	
	baz=246,slow=73,SNR=19						
UNM	Universidad Na	97.07	72	IAMs_20	IAMs_20	02 57 44.6	
	comp=Z,3µm,20.0s						
RWWY	Rawlins	97.12	49	IAMs_20	IAMs_20	03 02 30.5	
	comp=Z,3µm,20.0s						
SDCO	Great Sand Dun	97.17	53	IAMs_20	IAMs_20	03 00 55.1	
	comp=Z,3µm,20.0s						
EGMT	Eagleton	97.42	42	IAMs_20	IAMs_20	03 00 58.9	
	comp=Z,3µm,19.0s						
LL04	Puerto Octay	97.71	138	P	Pdif	02 24 28.5	+0.2
LL04				IAmb	IAmb	02 24 38.9	
	comp=Z,15nm,1.1s						
T25A	Trinidad	97.82	54	IAMs_20	IAMs_20	03 00 04.3	
	comp=Z,3µm,22.0s						
DGZ	Jazzator, Alta	98.83	319	⇑*i*P	P	02 24 32.8	-0.2
DGZ				pmax	pmax		
	comp=Z,17nm,1.1s						
PLCA	Paso Flores	98.99	138	LR	LR	02 59 50.7	
	comp=Z,642nm,18.6s,baz=238,slow=30						
AMTX	Amarillo	99.31	56	IAMs_20	IAMs_20	03 02 17.0	
	comp=Z,3µm,20.0s						
YKA	Yellowknife Ar	99.77	27	P	Pdif	02 24 33.9	-2.7
	comp=Z,1.0nm,0.8s,baz=253,slow=4.9,SNR=12						

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YKA                                PP       PP       02 28 32.6  -8.8
       comp=Z,2.0nm,1.1s,baz=251,slow=8.3,SNR=6.1
YKA                                LR       LR       03 03 21.7
       comp=Z,3µm,19.8s,baz=0.0,slow=32
YKA    Yellowknife Ar    99.77  27  P        Pdif     02 24 37.9 +1.2
YKA    Yellowknife Ar    99.77  27  Pdif     Pdif     02 24 37.9 +1.2
A36M   Sachs Harbour    100.01  17  IAMs_20  IAMs_20  03 04 12.8
       comp=Z,4µm,22.0s
RSSD   Black Hills      100.06  47  IAMs_20  IAMs_20  03 03 00.1
       comp=Z,3µm,20.0s
KVTX   Kingsville       100.48  64  IAMs_20  IAMs_20  03 00 01.5
       comp=Z,4µm,21.0s
OGNE   Ogallala         100.65  50  IAMs_20  IAMs_20  03 01 33.9
       comp=Z,5µm,22.0s
DGMT   Dagmar           101.11  43  IAMs_20  IAMs_20  03 05 41.4
       comp=Z,3µm,20.0s
MK31   Makanchi Array   101.32 316⇑eP        Pdif     02 24 44.2 +0.2
MK31   Makanchi Array   101.32 316  Pdif     Pdif     02 24 43.5 -0.5
MKAR   Makanchi Array   101.32 316  P        Pdif     02 24 44.0  0.0
       comp=Z,3.5nm,0.6s,baz=99,slow=4.3,SNR=18
MKAR                                PP       PP       02 28 52.7 -1.0
       comp=Z,1.0nm,0.9s,baz=134,slow=4.2,SNR=3.1
MKAR   Makanchi Array   101.32 316 i P        Pdif     02 24 47.7 +3.7
MKAR                                pmax     pmax
       comp=Z,4.0nm,0.6s
435B   Jarrell          101.57  61  IAMs_20  IAMs_20  03 03 51.2
       comp=Z,3µm,20.0s
WMOK   Wichita Mounta   101.57  57  IAMs_20  IAMs_20  03 04 58.0
       comp=Z,3µm,19.0s
ZALV   Zalesovo Beam    101.59 323  P        Pdif     02 24 43.9 -1.1
       comp=Z,2.4nm,0.9s,baz=120,slow=5.3,SNR=7.7
ZALV   Zalesovo Beam    101.59 323 i P        Pdif     02 24 44.2 -0.8
ZALV                                pmax     pmax
       comp=Z,2.0nm,0.9s
ZALV   Zalesovo Beam    101.59 323  Pdif     Pdif     02 24 44.1 -0.9
U32A   Winter Ranch,    101.80  56  IAMs_20  IAMs_20  03 10 29.9
       comp=Z,2µm,18.0s
CBKS   Cedar Bluff      101.82  53  IAMs_20  IAMs_20  03 04 42.3
       comp=Z,3µm,20.0s
OK035  E0210 Rd and N   102.11  55  IAMs_20  IAMs_20  03 10 36.6
       comp=Z,3µm,18.0s
OK032  Salt Plains WL   102.52  55  IAMs_20  IAMs_20  03 10 10.9
       comp=Z,3µm,18.0s
OK025  Westminster Rd   102.92  57  IAMs_20  IAMs_20  03 04 30.7
       comp=Z,3µm,20.0s
OK031  S. Brethren Rd   103.40  56  IAMs_20  IAMs_20  03 04 47.4
       comp=Z,4µm,20.0s
OK030  Cody Creek RV    103.44  56  IAMs_20  IAMs_20  03 04 56.4
       comp=Z,4µm,20.0s
OK034  N. Norfolk Rd.   103.51  56  IAMs_20  IAMs_20  03 05 00.3
       comp=Z,4µm,20.0s
RER    Riviere de l'E   104.19 242  IAMs_20  IAMs_20  03 07 57.3
       comp=Z,2µm,19.0s
TUL1   Leonard          104.22  57  IAMs_20  IAMs_20  03 05 11.1
       comp=Z,3µm,20.0s
NRIK   Noril'sk         104.23 339  Pdiff    Pdif     02 24 59.9 +3.5
       comp=Z,1.5nm,0.5s,baz=135,slow=7.1,SNR=5.1
KSU1   Kansas State U   104.27  53  IAMs_20  IAMs_20  03 05 09.9
       comp=Z,3µm,20.0s
HOPE   Hope Point       104.28 165  IAMs_20  IAMs_20  03 03 51.3
       comp=Z,3µm,22.0s
KURK   Kurchatov        104.56 319  IAMs_20  IAMs_20  03 09 25.9
       comp=Z,4µm,22.0s
KURBB  Kurchatov Arra   104.60 319  Pdiff    Pdif     02 24 58.6 +0.2
       comp=Z,0.4nm,0.3s,baz=64,slow=2.2,SNR=2.9
KURBB                               PP       PKiKP    02 29 13.8 -0.5
       comp=Z,1.5nm,0.9s,baz=99,slow=6.9,SNR=2.4
SNET   Serv Nac Est T   104.68  80  IAMs_20  IAMs_20  03 01 31.3
       comp=Z,2µm,22.0s
LCO    Las Campanas     105.17 128  IAMs_20  IAMs_20  03 02 44.3
       comp=Z,2µm,19.0s
MIAR   Mount Ida        105.71  58  IAMs_20  IAMs_20  03 06 03.7
       comp=Z,3µm,20.0s
X40A   Basin Creek Fa   106.30  59  IAMs_20  IAMs_20  03 10 10.3
       comp=Z,2µm,19.0s
U40A   Yellville        106.64  57  IAMs_20  IAMs_20  03 06 26.1
       comp=Z,4µm,20.0s
SCIA   State Center     107.33  51  IAMs_20  IAMs_20  03 12 19.8
       comp=Z,3µm,19.0s
PB14   IPOC Station P   107.64 124  IAMs_20  IAMs_20  03 03 04.3
       comp=Z,3µm,22.0s
VBMS   Vicksburg        107.77  61  IAMs_20  IAMs_20  03 08 44.4
       comp=Z,4µm,20.0s
PB10   IPOC Station P   108.08 123  IAMs_20  IAMs_20  03 03 17.0
       comp=Z,3µm,21.0s
CCM    Cathedral Cave   108.20  55  IAMs_20  IAMs_20  03 09 21.3
       comp=Z,3µm,20.0s
HDC    Heredia          108.50  85  IAMs_20  IAMs_20  03 02 37.6
       comp=Z,3µm,21.0s
PB04   IPOC Station P   108.99 122  IAMs_20  IAMs_20  03 03 31.3
       comp=Z,2µm,22.0s
PB15   IPOC Station P   109.10 123  IAMs_20  IAMs_20  03 03 24.8
       comp=Z,2µm,21.0s
PB06   IPOC Station P   109.27 123  IAMs_20  IAMs_20  03 04 03.5
       comp=Z,2µm,21.0s
PB07   IPOC Station P   109.50 122  IAMs_20  IAMs_20  03 03 46.9
       comp=Z,2µm,21.0s
PATCX  Punta Patache    109.73 121  IAMs_20  IAMs_20  03 03 54.1
       comp=Z,2µm,21.0s
LVC    Limon Verde      109.84 123  IAMs_20  IAMs_20  03 04 21.6
       comp=Z,3µm,22.0s
PB09   IPOC Station P   109.99 122  IAMs_20  IAMs_20  03 04 24.7
       comp=Z,2µm,21.0s
BRVK   Borovoye         110.00 321  IAMs_20  IAMs_20  03 12 50.5
       comp=Z,3µm,22.0s
HDIL   Hopedale         110.06  53  IAMs_20  IAMs_20  03 09 29.3
       comp=Z,3µm,20.0s
PB01   IPOC Station P   110.17 121  IAMs_20  IAMs_20  03 04 08.5
       comp=Z,2µm,21.0s
WVT    Waverly          110.61  58  IAMs_20  IAMs_20  03 12 50.3
       comp=Z,3µm,19.0s
PB11   IPOC Station P   110.66 120  IAMs_20  IAMs_20  03 03 36.7
       comp=Z,2µm,22.0s
PB08   IPOC Station P   110.88 121  IAMs_20  IAMs_20  03 04 20.6
       comp=Z,2µm,20.0s
L44A   Lake County Fo   111.28  51  IAMs_20  IAMs_20  03 13 31.4
       comp=Z,3µm,19.0s
PB16   IPOC Station P   111.47 119  IAMs_20  IAMs_20  03 04 15.4
       comp=Z,2µm,22.0s
BCIP   Isla Barro Col   112.33  87  IAMs_20  IAMs_20  03 05 07.8
       comp=Z,2µm,22.0s
P49A   Miami Univ. Ec   113.45  54  IAMs_20  IAMs_20  03 10 51.1
       comp=Z,3µm,21.0s
TZTN   Tazewell         114.09  58  IAMs_20  IAMs_20  03 17 43.4
       comp=Z,3µm,18.0s
AAM    Ann Arbor        114.44  51  IAMs_20  IAMs_20  03 12 03.0
       comp=Z,3µm,21.0s
ACSO   Alum Creek Sta   114.83  54  IAMs_20  IAMs_20  03 13 39.6
       comp=Z,3µm,20.0s
DWPF   Disney Wildern   114.86  67  IAMs_20  IAMs_20  03 13 32.4
       comp=Z,3µm,20.0s
SVE    Sverdlovsk       115.52 325 i PKIKP    PKPdf    02 29 35.6 +1.0
SVE                                 MLR      MLR
       comp=Z,2µm,21.0s
NHSC   New Hope         116.53  62  IAMs_20  IAMs_20  03 12 42.3
       comp=Z,3µm,21.0s
M53A   WI Miller and    116.63  52  IAMs_20  IAMs_20  03 17 32.1
       comp=Z,3µm,19.0s
ARU    Arti             116.70 325  PKP      PKPdf    02 29 35.5 -1.4
       comp=Z,0.5nm,0.2s,baz=300,slow=16,SNR=7.6
ARU    Arti             116.70 325 i PKIKP    PKPdf    02 29 33.3 -3.6
ARU                                                   02 36 45.5
ARU                                 SP       SP       02 40 26.9 +2.0
ARU                                 SS       SS       02 46 41.8 -8.6
ARU                                 SSS      SSS      02 51 02.3
ARU    Arti             116.70 325  IAMs_20  IAMs_20  03 19 49.8
       comp=Z,2µm,20.0s
NEEM   North Greenlan   117.61   9 i P        PKPdf    02 29 37.4 -1.2
NEEM                                IAmb     IAmb     02 29 44.0
       comp=Z,7.7nm,0.6s
NEEM                                IAMs_20  IAMs_20  03 18 34.7
       comp=Z,3µm,19.7s
AKTO   Aktyubinsk       117.62 318  PKP      PKPdf    02 29 38.8 -0.1
       comp=Z,2.1nm,0.9s,baz=118,slow=3.7,SNR=4.3
GEYT   Alibeck          117.78 304  PKP      PKiKP    02 29 40.3 +0.6
       comp=Z,1.1nm,0.4s,baz=51,slow=21,SNR=2.4
SOCY   Socotra          117.79 274  IAMs_20  IAMs_20  03 18 12.5
       comp=Z,2µm,20.0s
UPNV   Upernavik        119.78  14 i P        PKPdf    02 29 40.1 -2.3
UPNV                                IAmb     IAmb     02 29 47.9
       comp=Z,8.7nm,0.7s
UPNV                                IAMs_20  IAMs_20  03 15 19.5
       comp=Z,3µm,19.3s
FRB    Frobisher Bay    120.25  26  PKP      PKPdf    02 29 42.2 -1.3
       comp=Z,3.1nm,0.9s,baz=50,slow=3.0,SNR=3.5
FRB                                 PP       PP       02 31 09.5 +0.2
       comp=Z,8.2nm,1.1s,baz=297,slow=8.1,SNR=4.6
PRGR   Permogore        121.89 332 ePKIKP    PKiKP    02 29 52.6 +5.7
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PRGR                                pmax     pmax
       comp=Z,40nm,1.0s
BOSA   Boshof           121.92 217  PKP      PKPdf    02 29 48.2  0.0
       comp=Z,2.2nm,0.8s,baz=98,slow=7.1,SNR=3.0
GRTK   Grand Turk       123.19  76  IAMs_20  IAMs_20  03 17 02.5
       comp=Z,2µm,20.0s
SUMG   Summit           123.46  10  PKIKP    PKPdf    02 29 49.4 -0.6
SUMG   Summit           123.46  10 i P        PKPdf    02 29 49.0 -1.0
SUMG                                IAmb     IAmb     02 29 57.1
       comp=Z,8.7nm,1.0s
SUMG   Summit           123.46  10  PKPdf    PKPdf    02 29 49.4 -0.6
APA    Apatity          123.50 341⇑i PKIKP    PKiKP    02 29 58.6 +8.7
APA                                i                  02 31 32.1
APA                                 pmax     pmax
       comp=Z,15nm,1.0s
BELG   Belogornoye      123.72 321  PKP      PKPdf    02 29 49.7 -0.8
       comp=Z,18nm,0.9s,baz=337,slow=1.5,SNR=7.6
BELG   Belogornoye      123.72 321⇑i PKIKP    PKPdf    02 29 49.8 -0.8
BELG                                MLR      MLR
       comp=Z,259nm,23.0s
DBG    Daneborg         123.79   3 i P        PKPdf    02 29 48.1 -2.0
DBG                                 IAmb     IAmb     02 29 55.9
       comp=Z,8.6nm,0.8s
SCHQ   Schefferville    124.04  36  PKP      PKiKP    02 29 51.3 -0.1
       comp=Z,4.4nm,0.9s,baz=352,slow=7.1,SNR=2.9
ARCES  ARCESS Array B   124.30 346  PKP      PKiKP    02 29 51.6 +0.1
       comp=Z,8.6nm,1.0s,baz=25,slow=1.1,SNR=19
SPB    Sao Paulo        124.85 138  IAMs_20  IAMs_20  03 16 29.9
       comp=Z,2µm,21.0s
KLMR   Klimovskoe       124.90 333 ePKIKP    PKPdf    02 29 52.3 -0.2
KLMR                                pmax     pmax
       comp=Z,47nm,1.5s
KLMR   Klimovskoe       124.90 333 ePKPdf    PKPdf    02 29 52.3 -0.2
KLMR                                AMP               02 30 01.4
       comp=Z,47nm,1.5s
KLMR                               e                  02 32 06.4
KLMR                                LQ       LQ       03 10 01.4
KLMR                                LQ       LQ       03 10 01.4
KLMR                                LR       LR       03 18 56.7
SFJD   Kangerlussuaq    124.98  18  PKP      PKPdf    02 29 52.4 -0.1
       comp=Z,8.5nm,1.0s,baz=0.0,slow=3.0,SNR=2.5
SFJD   Kangerlussuaq    124.98  18 i P        PKPdf    02 29 50.4 -2.1
SFJD                                IAmb     IAmb     02 29 57.6
       comp=Z,4.2nm,0.8s
MAK    Makhachkala      125.62 310 i P        Pdif     02 26 27.9 -4.2
MAK                                e                  02 36 48.3
MAK                                ePS       SP       02 41 40.9 -4.4
MAK                                eSS       SS       02 48 47.0 +1.6
MAK                                 pmax     pmax
       comp=Z,284nm,1.3s
MAK                                 MLR      MLR
       comp=Z,1µm,21.0s
MACA   Manacapuru-AM    126.12 108  PKPdf    PKPdf    02 29 55.9 -0.5
ICESG  Greenland Ices   126.16  13 i P        PKPdf    02 29 52.0 -3.2
ICESG                               IAmb     IAmb     02 30 05.5
       comp=Z,9.6nm,0.8s
DY2G   Dye2             126.59  17 i P        PKPdf    02 29 53.5 -2.4
DY2G                                IAmb     IAmb     02 30 01.4
       comp=Z,17nm,0.8s
SCO    Scoresbysund     127.43   5 i P        PKiKP    02 30 00.0 +2.4
SCO                                 IAmb     IAmb     02 30 03.3
       comp=Z,5.1nm,1.0s
VRH    Novokhopyorsk    127.58 321 ePKIKP    PKPdf    02 29 55.3 -2.6
VRH                                 pmax     pmax
       comp=Z,20nm,1.6s
HUMP   Col San Antoni   127.58  81           PKPdf    02 29 58.8 -0.2
RAYN   Ar Rayn          127.75 286  PKIKP    PKPdf    02 29 58.0 -1.2
RAYN                                MLR      MLR
       comp=Z,2µm,20.0s
RAYN   Ar Rayn          127.75 286           PKPdf    02 29 58.0 -1.2
RAYN   Ar Rayn          127.75 286  IAMs_20  IAMs_20  03 27 28.3
       comp=Z,2µm,20.0s
PNSH   Pansheti         127.78 310  P        PKPdf    02 29 58.4 -0.6
PNSH   Pansheti         127.78 310 ePKIKP    PKPdf    02 29 58.3 -0.6
PTGA   Pitinga          127.78 106  PKP      PKiKP    02 30 00.7 +0.6
       comp=Z,4.4nm,0.6s,baz=328,slow=22,SNR=2.9
KIBK   Kibwezi          128.02 252  PKPdf    PKPdf    02 30 00.4 +0.3
KIBK                                IAMs_20  IAMs_20  03 22 02.4
       comp=Z,2µm,19.0s
MOS    Moscow           128.11 328 i PKIKP    PKiKP    02 30 01.6 +2.2
MOS                                e                  02 32 02.0
MOS                                eSS       SS       02 49 14.2 -1.0
MOS                                 MLR      MLR
       comp=E,1µm,20.0s
MOS                                 MLR      MLR
       comp=Z,2µm,20.0s
ATD    Arta Tunnel      128.19 270  IAMs_20  IAMs_20  03 20 54.1
       comp=Z,3µm,20.0s
LPSR   Galich'ya Gora   128.70 324 ePKIKP    PKPdf    02 29 58.1 -1.9
LPSR                                pmax     pmax
       comp=Z,20nm,1.1s
KBZ    Khabaz           128.80 312  PKP      PKPdf    02 30 00.2 -0.3
       comp=Z,2.2nm,1.1s,baz=110,slow=17,SNR=3.2
KBZ    Khabaz           128.80 312⇑i PKIKP    PKPdf    02 29 59.8 -0.7
KBZ                                 MLR      MLR
       comp=Z,2µm,23.0s
KIV    Kislovodsk       128.90 312 i PKIKP    PKPdf    02 30 01.2 +0.3
KIV                                e                  02 32 07.5
KIV                                ePS       PS       02 42 15.9 -1.3
KIV                                eSS       SS       02 49 27.4 +1.1
KIV                                eSSS      SSS      02 54 10.0
KIV                                 pmax     pmax
       comp=Z,11nm,1.1s
KIV                                 MLR      MLR
       comp=Z,872nm,23.0s
OBN    Obninsk          128.92 327⇑i PKIKP    PKPdf    02 30 00.1 -0.3
OBN                                e                  02 32 09.2
OBN                                eSS       SS       02 49 18.4 -6.9
OBN                                 pmax     pmax
       comp=Z,12nm,1.1s
OBN                                 MLR      MLR
       comp=Z,1µm,20.0s
VSR    Storozhevoye     129.08 322 ePKIKP    PKPdf    02 29 59.5 -1.3
VSR                                 pmax     pmax
       comp=Z,7.0nm,0.7s
KARS   Kars             129.25 308  PKIKP    PKiKP    02 30 02.8 +0.4
KARS   Kars             129.25 308  PKPdf    PKiKP    02 30 02.8 +0.4
KMBO   Kilima Mbogo     129.25 253  PKP      PKiKP    02 30 03.5 +0.1
       comp=Z,0.9nm,0.4s,baz=100,slow=1.9,SNR=4.2
KMBO   Kilima Mbogo     129.25 253  PKIKP    PKPdf    02 30 01.1 -1.5
KMBO   Kilima Mbogo     129.25 253  PKPdf    PKPdf    02 30 01.1 -1.5
KMBO   Kilima Mbogo     129.25 253  IAMs_20  IAMs_20  03 22 59.2
       comp=Z,2µm,20.0s
FINES  FINESS Array B   129.89 338  PKhKP    PKPpre   02 29 57.6
       comp=Z,3.3nm,0.9s,baz=214,slow=0.7,SNR=4.3
BDFB   Brasilia         129.90 130  PKP      PKiKP    02 30 05.3 +0.9
       comp=Z,5.1nm,0.8s,baz=174,slow=6.1,SNR=6.9
BDFB   Brasilia         129.90 130  PKPdf    PKPdf    02 29 59.8 -3.8
SABA   Saba             129.94  82  IAMs_20  IAMs_20  03 14 00.7
       comp=Z,2µm,22.0s
SOC    Sochi            131.08 312 i PKIKP    PKPdf    02 30 02.9 -2.0
SOC                                ePPP      PPP      02 35 11.8
SOC                                e                  02 37 13.1
SOC                                ePS       PS       02 42 30.7 -5.1
SOC                                eSS       SS       02 49 47.9 -5.0
SOC                                eSSS      SSS      02 54 46.1
SOC                                 MLR      MLR
       comp=Z,1µm,20.0s
FURI   Furi             131.46 266  IAMs_20  IAMs_20  03 25 16.3
       comp=Z,2µm,20.0s
LODK   Lodwar           132.78 257  PKPdf    PKPdf    02 30 06.3 -2.8
MNK    Minsk            133.54 330 i PKIKP    PKPdf    02 30 07.2 -2.0
MNK                                i SP       SP       02 42 45.7 -7.0
MNK                                 pmax     pmax
       comp=E,3.0nm,1.0s
MNK                                 pmax     pmax
       comp=Z,9.0nm,1.0s
MNK                                 pmax     pmax
       comp=N,18nm,1.0s
MNK                                 MLR      MLR
       comp=E,169nm,20.0s
MNK                                 MLR      MLR
       comp=N,1µm,20.0s
MNK    Minsk            133.54 330 i PKP      PKPdf    02 30 07.3 -1.9
       comp=E,3.0nm,1.0s
MNK                                i PKP      PKPdf    02 30 07.3 -1.9
       comp=N,18nm,1.0s
MNK                                i PKP      PKPdf    02 30 07.3 -1.9
       comp=Z,9.0nm,1.0s,baz=55
MNK                                i PP       PP       02 32 28.9 -8.4
MNK                                i SKP               02 33 16.9
MNK                                i PKS      PKSab    02 33 26.7  -14
MNK                                i PPP      PPP      02 34 27.4
MNK                                i SKS      SKSac    02 37 28.2 +8.0
MNK                                i PS       PS       02 43 25.9  +29
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MNK                                i SKKS     SKKSdf   02 46 43.2  -29
MNK                                i SS       SS       02 50 37.5  +16
MNK                                i SSS      SSS      02 55 05.1
MNK                                i LR       LR       03 25 51.4
MNK                                i LRM      MLR      03 29 53.4
       comp=E,169nm,20.1s
MNK                                i LRM      MLR      03 30 29.9
       comp=N,1µm,19.8s
MNK                                i LRM      MLR      03 33 15.4
       comp=Z,1µm,19.8s
TSUM   Tsumeb           133.61 218  PKPdf    PKPdf    02 30 06.6 -4.0
NACGM  Naroch           133.81 331 i PKP      PKiKP    02 30 11.2 +0.2
NB2    NORSAR Subarra134.68 345  PKPdf    PKiKP    02 30 17.4 +4.8
       comp=Z,7.2nm,1.1s,baz=31,slow=1.9
NB2    NORSAR Subarra134.68 345  PKPdf    PKiKP    02 30 17.4 +4.8
       baz=31,slow=1.9
PABE   Paberze          134.69 333  IAMs_20  IAMs_20  03 40 20.2
       comp=Z,2µm,22.0s
AKASG  Malin Array Be   134.95 325  PKhKP    PKPpre   02 30 03.8
       comp=Z,0.3nm,0.3s,baz=70,slow=1.9,SNR=1.4
AKASG                               PKP      PKPdf    02 30 12.3 +0.4
       comp=Z,0.4nm,0.4s,baz=79,slow=1.6,SNR=1.8
AKASG                               PP       PP       02 32 40.5 -5.9
       comp=Z,0.1nm,0.3s,baz=50,slow=6.3,SNR=4.2
AKASG  Malin Array Be   134.95 325  PKPdf    PKPdf    02 30 10.0 -2.0
BRTR   Keskin Array B   136.50 309  PKhKP    PKPpre   02 30 10.2
       comp=Z,1.1nm,0.9s,baz=106,slow=5.0,SNR=5.7
BRTR                                PKP      PKPdf    02 30 16.0 +0.6
       comp=Z,1.4nm,0.7s,baz=90,slow=2.6,SNR=6.2
BRTR                                PP       PP       02 32 56.7 -0.3
       comp=Z,2.2nm,1.1s,baz=81,slow=7.6,SNR=6.0
BRTR   Keskin Array B   136.50 309  PKIKP    PKPdf    02 30 16.0 +0.6
BRTR   Keskin Array B   136.50 309  PKPdf    PKPdf    02 30 14.0 -1.4
GHAJ   Ghor Haditha     136.58 296  IAMs_20  IAMs_20  03 32 16.0
       comp=Z,2µm,20.0s
KIS    Kishinev         137.01 321 ePKP      PKiKP    02 30 17.0 -0.7
KIS                                eLR       LR       03 28 44.0
       comp=Z,700nm,21.0s
KIS    Kishinev         137.01 321 ePKIKP    PKiKP    02 30 17.0 -0.7
MILM   Milestii Mici    137.06 320 ePKIKP    PKPdf    02 30 16.0  0.0
MILM                                MLR      MLR
       comp=Z,2µm,19.0s
EIL    Elat             137.26 294  PKP      PKPdf    02 30 16.7 -0.2
       comp=Z,9.3nm,1.1s,baz=139,slow=14,SNR=3.9
CSS    Mathiatis        137.88 302  IAMs_20  IAMs_20  03 35 03.1
       comp=Z,1µm,20.0s
LVV    L'vov            138.21 327 ePKIKP    PKiKP    02 30 24.3 +4.2
LVV                                 MLR      MLR
       comp=E,500nm,22.0s
LVV                                 MLR      MLR
       comp=N,1µm,23.0s
LVV                                 MLR      MLR
       comp=Z,1µm,22.0s
BURAR  Bucovina Array   138.81 323  PKPdf    PKPdf    02 30 17.4 -2.0
ISP    Isparta          139.38 307  IAMs_20  IAMs_20  03 40 53.5
       comp=Z,1µm,20.0s
MLR    Muntele Rosu     139.49 320  PKP      PKiKP    02 30 22.7 -0.3
       comp=Z,2.4nm,0.8s,baz=92,slow=17,SNR=3.2
MLR                                 PP       PP       02 33 16.9 +1.8
       comp=Z,1.0nm,0.6s,baz=334,slow=5.0,SNR=4.6
MLR    Muntele Rosu     139.49 320  IAMs_20  IAMs_20  03 34 15.7
       comp=Z,2µm,22.0s
KOLS   Kolonicke sedl   139.66 327 ePKIKP    PKPdf    02 30 21.9 +1.2
KOLS   Kolonicke sedl   139.66 327 ePKP      PKPdf    02 30 21.9 +1.2
UZH    Uzhgorod         139.84 326 ePKIKP    PKPdf    02 30 15.3 -5.7
UZH                                 MLR      MLR
       comp=N,200nm,20.0s
UZH                                 MLR      MLR
       comp=E,200nm,20.0s
UZH                                 MLR      MLR
       comp=Z,160nm,20.0s
LANS   Liptovska Anna   140.96 329 ePKIKP    PKiKP    02 30 24.9 -0.9
LANS   Liptovska Anna   140.96 329 ePKP      PKiKP    02 30 24.9 -0.9
PSZ    Piszkesteto      141.54 327  PKIKP    PKPdf    02 30 23.4 -0.8
PSZ                                 MLR      MLR
       comp=Z,2µm,22.0s
PSZ    Piszkesteto      141.54 327  PKPdf    PKPdf    02 30 23.4 -0.8
PSZ                                 IAMs_20  IAMs_20  03 32 46.6
       comp=Z,2µm,22.0s
CHVC   Chvalec          141.54 333 ePKPpre   PKPpre   02 30 22.7
CHVC                                AMS      AMS      03 33 40.0
       comp=Z,3µm,23.3s
KRLC   Kraliky          141.59 332 ePKIKP    PKPdf    02 30 25.6 +1.4
KRLC                                MLR      MLR
       comp=Z,2µm,24.6s
KRLC   Kraliky          141.59 332 ePKPDF    PKPdf    02 30 25.6 +1.4
KRLC                                AMS      AMS      03 32 10.0
       comp=Z,2µm,24.6s
DPC    Dobruska-Polom   141.59 332 ePKIKP    PKPdf    02 30 21.0 -3.2
DPC                                e                  02 30 25.5
DPC                                 MLR      MLR
       comp=Z,2µm,20.3s
DPC    Dobruska-Polom   141.59 332 ePKPpre   PKPpre   02 30 21.0
DPC                                ePKPDF    PKPdf    02 30 25.5 +1.3
DPC                                 AMS      AMS      03 33 50.0
       comp=Z,2µm,20.3s
JAVC   Velka Javorina   142.03 330 ePKP      PKPdf    02 30 22.2 -2.9
BRG    Berggiesshubel   142.21 335 ePKP      PKPdf    02 30 21.6 -3.6
BRG                                 Amp               02 30 23.9
       comp=Z,3.3nm,1.1s
BRG    Berggiesshubel   142.21 335  P        PKiKP    02 30 29.1 +0.8
BRG                                 Amp               02 30 31.9
       comp=Z,5.8nm,0.8s
PVCC   Panska Ves       142.22 334 ePKIKP    PKPdf    02 30 21.1 -4.2
PVCC                                MLR      MLR
       comp=Z,2µm,23.5s
PVCC   Panska Ves       142.22 334 ePKPpre   PKPpre   02 30 21.1
PVCC                                AMS      AMS      03 32 30.0
       comp=Z,2µm,23.5s
VRAC   Vranov           142.22 331  PKP      PKPdf    02 30 24.7 -0.6
       comp=Z,3.5nm,0.8s,baz=42,slow=3.5,SNR=7.1
CLL    Collm            142.25 336 ePKIKP    PKPdf    02 30 24.0 -1.3
CLL                                 pmax     pmax
       comp=Z,7.0nm,0.9s
CLL                                 MLR      MLR
       comp=Z,2µm,20.4s
CLL    Collm            142.25 336 ePKPdf    PKPdf    02 30 24.0 -1.3
CLL                                i PKiKP    PKiKP    02 30 27.2 -1.1
       comp=Z,7.0nm,0.9s
CLL                                i (SKPbc)           02 34 08.0
CLL                                e                  02 35 00.0
CLL                                ePPP      PPP      02 36 24.0
CLL                                eSKKSac   SKKSac   02 40 24.0 +0.1
CLL                                ePSKS              02 43 42.0
CLL                                e                  02 44 48.0
CLL                                eSS       SS       02 52 00.0 -4.3
CLL                                eSSS      SSS      02 57 18.0
CLL                                eSSSS              03 01 18.0
CLL                                e                  03 02 24.0
CLL                                 LmV               03 36 00.0
       comp=Z,2µm,20.4s
CLL                                 L(360             03 59 00.0
       comp=Z,1µm,21.9s
CLL    Collm            142.25 336  IAMs_20  IAMs_20  03 36 47.0
       comp=Z,2µm,20.0s
SRO    Srobarova        142.41 328 ePKIKP    PKPdf    02 30 27.2 +1.5
SRO    Srobarova        142.41 328 ePKP      PKPdf    02 30 27.2 +1.5
KRUC   Moravsky         142.49 331 ePKP      PKPdf    02 30 22.9 -2.9
MODS   Modra-Piesok     142.55 329 ePKIKP    PKPdf    02 30 25.8 -0.2
MODS   Modra-Piesok     142.55 329 ePKP      PKPdf    02 30 25.8 -0.2
VTS    Vitosha          142.61 318  PKIKP    PKPdf    02 30 23.6 -2.8
VTS    Vitosha          142.61 318  PKPdf    PKPdf    02 30 23.6 -2.8
ZAGS   Zajecar          142.62 320 eP        PKiKP    02 30 28.0 -1.3
PRU    Pruhonice        142.63 333 ePKIKP    PKPdf    02 30 24.6 -1.4
PRU                                 MLR      MLR
       comp=Z,2µm,22.5s
PRU    Pruhonice        142.63 333 ePKPDF    PKPdf    02 30 24.6 -1.4
PRU                                 AMS      AMS      03 38 50.0
       comp=Z,2µm,22.5s
ZAPS   Zavoj            142.66 319 eP        PKPdf    02 30 27.5 +1.2
EKA    Eskdalemuir Ar   142.68 353  PKP      PKPdf    02 30 24.4 -1.6
       comp=Z,0.7nm,0.5s,baz=352,slow=3.4,SNR=4.3
ZST    Bratislava       142.76 329 ePKIKP    PKiKP    02 30 28.7 -0.7
ZST    Bratislava       142.76 329 ePKP      PKiKP    02 30 28.7 -0.7
NVR    Nevrokopi        142.81 315  P        PKPdf    02 30 23.6 -3.1
KOKK   Kokkinochori,    142.96 315  P        PKPdf    02 30 23.3 -3.6
BOVS   Bovan            143.04 320 eP        PKPbc    02 30 24.0 +0.2
SRS    Serrai           143.10 315  P        PKPab    02 30 18.9 -3.7
BOSS   Bosilegrad       143.16 318 eP        PKPdf    02 30 26.0 -1.2
MORH   Mrgy, Hungar     143.28 326 eP        PKPbc    02 30 23.7 -0.6
FRGS   Fruska Gora      143.29 323 eP        PKPab    02 30 23.0 -0.2
FRGS   Fruska Gora      143.29 323 eP        PKPab    02 30 23.2  0.0
WERN   Wernitzgruen     143.30 335 ePKP      PKPab    02 30 23.7 +0.6
       baz=38,slow=3.3
MOX    Moxa             143.31 336 ePKP      PKPbc    02 30 24.5 +0.3
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	baz=38,slow=3.3						
MOX				eL	L	03 37 48.2	
	comp=Z,2µm,20.4s						
NKC	Novy Kostel	143.31	335	ePKIKP	PKPbc	02 30 24.8	+0.5
NKC				MLR	MLR		
	comp=Z,2µm,21.0s						
NKC	Novy Kostel	143.31	335	ePKPpre	PKPpre	02 30 24.8	
NKC				AMS	AMS	03 34 50.0	
	comp=Z,2µm,21.0s						
PRVS	Prvonek	143.41	318	eP	PKPbc	02 30 24.7	-0.2
BARS	Barje	143.41	319	eP	PKPbc	02 30 26.0	+1.2
BARS	Barje	143.41	319	eP	PKPdf	02 30 26.5	-1.1
TRUS	Trudelj	143.49	322	eP	PKPbc	02 30 25.6	+0.6
GRUS	Gruza	143.50	321	eP	PKPbc	02 30 26.0	+1.0
PLG	Polygyros	143.54	314	P	PKPab	02 30 24.0	-0.4
CONA	Conrad Observa	143.54	330	i P	PKPbc	02 30 26.2	+1.1
	comp=Z,58nm,1.1s,SNR=15						
KNT	Kendrikon	143.54	316	P	PKPab	02 30 24.1	-0.2
CKRC	Cesky Krumlov	143.61	332	ePKPpre	PKPpre	02 30 26.7	
CKRC				ePKPDF	PKiKP	02 30 31.3	+0.1
CKRC				AMS	AMS	03 34 10.0	
	comp=Z,2µm,24.2s						
SELS	Selova	143.63	320	eP	PKPbc	02 30 25.9	+0.5
MANZ	Manzenberg	143.64	335	ePKP	PKPab	02 30 24.8	+0.4
	baz=38,slow=3.3						
VAY	Valandovo	143.68	316	i P	PKPab	02 30 24.4	-0.4
KHC	Kasperske Hory	143.69	333	ePKIKP	PKPbc	02 30 25.1	-0.4
KHC				e		02 30 31.4	
KHC				MLR	MLR		
	comp=Z,2µm,19.6s						
KHC	Kasperske Hory	143.69	333	ePKPpre	PKPpre	02 30 25.1	
KHC				ePKPDF	PKiKP	02 30 31.4	0.0
KHC				ex	x	02 54 15.2	
KHC				AMS	AMS	03 39 00.0	
	comp=Z,2µm,19.6s						
ROTZ	Rotzenmuhle	143.77	335	ePKP	PKPab	02 30 25.3	+0.3
	baz=38,slow=3.3						
DIVS	Divibare	143.81	322	eP	PKPab	02 30 25.0	-0.4
DIVS	Divibare	143.81	322	eP	PKPbc	02 30 26.1	+0.1
TEKS	Tekeris	143.81	323	eP	PKiKP	02 30 30.2	-1.6
TEKS	Tekeris	143.81	323	eP	PKiKP	02 30 30.9	-0.9
GERES	GERESS Array B	143.86	333	PKP	PKPab	02 30 25.7	+0.2
	comp=Z,9.6nm,1.1s,baz=46,slow=3.9,SNR=32						
GRG	Griva	143.97	316	P	PKPab	02 30 25.6	-0.4
IVAS	Ivanjica	144.01	321	eP	PKPab	02 30 25.9	-0.2
SKO	Skopje	144.09	318	i P	PKPab	02 30 26.2	-0.2
BUG	Bochum--Univer	144.14	341	ePKP	PKPbc	02 30 27.3	+0.7
	baz=38,slow=3.3						
NEO	Neokhori	144.17	313	P	PKPab	02 30 23.2	-3.6
ARSA	Arzberg	144.18	329	i P	PKPbc	02 30 27.4	+0.4
	comp=Z,61nm,1.4s,SNR=13						
GRA1	Grafenberg Arr	144.22	336	IAMs_20	IAMs_20	03 37 54.3	
	comp=Z,2µm,22.0s						
GRF	Grafenberg Arr	144.22	336	eL	L	03 39 31.9	
	comp=Z,2µm,19.7s						
GRFO	Grafenberg	144.22	336	PKIKP	PKPbc	02 30 27.4	+0.4
GRFO	Grafenberg	144.22	336	PKPdf	PKPbc	02 30 27.4	+0.4
GRFO				IAMs_20	IAMs_20	03 37 55.3	
	comp=Z,2µm,21.0s						
BBLS	Lazići	144.29	322	eP	PKPab	02 30 26.7	-0.5
BBLS	Lazići	144.29	322	eP	PKPab	02 30 27.0	-0.2
SJES	Sjenica	144.30	321	eP	PKPbc	02 30 28.0	+0.4
MOA	Molln	144.34	331	i P	PKPbc	02 30 27.9	+0.4
	comp=Z,31nm,0.9s,SNR=11						
KOGS	Kog	144.38	328	i PKPbc	PKPab	02 30 27.1	-0.2
KOGS				i		02 30 33.5	
RUDO	Rudo	144.45	322	eP	PKPab	02 30 25.8	-1.9
IDI	Anoyia	144.47	305	PKP	PKPdf	02 30 29.5	-0.3
	comp=Z,27nm,0.9s,baz=175,slow=13,SNR=3.9						
KALN	Kalnik	144.49	327	P	PKPab	02 30 27.5	-0.3
LOBO	Lobor	144.67	328	P	PKPdf	02 30 30.8	+1.0
MOSL	Moslavina	144.68	326	P	PKPbc	02 30 28.6	0.0
FNA	Florina	144.73	316	P	PKPab	02 30 27.5	-1.4
TNS	Taunus Mts	144.80	339	ePKP	PKPab	02 30 28.7	-0.1
	baz=38,slow=3.3						
SOKA	Soboth	144.82	329	eP	PKPab	02 30 28.2	-0.8
	comp=Z,173nm,1.1s,SNR=29						
SOKA				eP	PP	02 33 53.4	+6.4
	comp=Z,21nm,1.7s						
PHP	Peshkopia	144.87	318	P	PKPab	02 30 28.2	-1.2
LTK	Loutraki	144.89	311	P	PKPab	02 30 27.8	-1.7
AGG	Agios Georgios	144.91	313	P	PKPab	02 30 26.4	-3.2
ZAG	Zagreb	144.93	327	eP	PKPbc	02 30 29.5	+0.1
OHR	Ohrid	144.94	317	i P	PKPab	02 30 28.3	-1.3
EPID	Epidavros	144.95	310	P	PKPab	02 30 28.4	-1.3
CWF	Charnwood Fore	144.96	350	eP	PKPab	02 30 28.6	-0.6
VAM	Vamos	144.96	306	P	PKPab	02 30 29.8	0.0
UPM	Unac-Piva	144.97	321	eP	PKPab	02 30 27.8	-2.0
MRAK	Mrakovica	144.99	325	eP	PKPab	02 30 27.3	-2.4
BLY	Banja Luka	145.01	325	eP	PKPbc	02 30 28.2	-1.5
KRND	KRANIDI	145.02	310	P	PKPbc	02 30 28.4	-1.5
MAKR	Makrakomi, Fth	145.06	313	P	PKPbc	02 30 29.4	-0.7
FOEL	Foel Wylfa	145.09	352	eP	PKPdf	02 30 30.4	+0.1
RJOB	Jochberg	145.09	332	ePKP	PKPbc	02 30 29.8	-0.1
	baz=38,slow=3.3						
THAL	Thalero	145.11	311	P	PKPbc	02 30 29.1	-1.1
IMMV	Iera Moni Meta	145.11	306	P	PKPdf	02 30 31.0	+0.2
PRIJ	Prijedor	145.11	325	eP	PKPab	02 30 30.2	+0.2
NEST	Nestorio	145.13	316	P	PKPbc	02 30 29.4	-0.9
ELMS	Elmsett, Ipswi	145.16	348	eP	PKPbc	02 30 29.6	-0.3
OBKA	Obir	145.18	329	eP	PKPbc	02 30 29.0	-1.3
	comp=Z,112nm,0.9s,SNR=49						
OBKA				eP	PP	02 33 55.3	+6.2
	comp=Z,18nm,2.0s						
LLW	Llanuwychllyn	145.18	353	eP	PKPbc	02 30 29.4	-0.5
BEBN	Eben Emael	145.19	342	dPKP	PKiKP	02 30 33.8	-0.6
KBN	Korca	145.20	316	P	PKPbc	02 30 29.7	-0.8
CRES	Cresnjev	145.20	328	eP	PKPbc	02 30 29.5	-0.8
PDG	Podgorica	145.20	320	⇑iP	PKPbc	02 30 29.2	-1.2
PDG	Podgorica	145.20	320		PKPbc	02 30 29.6	-0.7
PDG				IAMs_20	IAMs_20	03 35 08.8	
	comp=Z,2µm,22.0s						
BTNL	Ternell	145.24	341	dPKP	PKPbc	02 30 29.7	-0.5
MEM	Membach	145.25	342	dPKP	PKPbc	02 30 29.5	-0.8
MEM				dx	x	02 30 36.6	
MGRS	Mrkonjic Grad	145.27	324	eP	PKPdf	02 30 31.2	+0.3
EVR	Evrytania	145.32	313	P	PKPbc	02 30 30.6	-0.4
KBA	Koelnbreinsper	145.34	331	i P	PKPbc	02 30 29.9	-1.0
	comp=Z,149nm,1.0s,SNR=19						
KBA				eP	PP	02 33 56.3	+6.2
	comp=Z,21nm,1.4s						
BRY	Bratogost	145.37	321	eP	PKPbc	02 30 30.7	-0.4
DRME	Dracevica, Mon	145.38	320	eP	PKPbc	02 30 30.3	-0.7
ANX	Ano Chora	145.39	312	P	PKPbc	02 30 30.7	-0.5
HLM1	Long Mynd	145.41	352	eP	PKPbc	02 30 30.2	-0.5
BSTI	Sart Tilman	145.41	342	dPKP	PKPbc	02 30 30.5	-0.2
FUR	Furstenfeldbru	145.41	334	ePKP	PKPab	02 30 31.2	+0.1
	baz=38,slow=3.3						
KNDR	Palaiochora Ch	145.42	306	P	PKPab	02 30 31.5	0.0
TIR	Tirane	145.42	318	P	PKPab	02 30 31.5	+0.2
TIR	Tirane	145.42	318	IAMs_20	IAMs_20	03 37 13.8	
	comp=Z,1µm,22.0s						
VLI	Veliai	145.44	309	P	PKPbc	02 30 27.6	-3.7
KLV	Kalavryta, Ach	145.47	311	P	PKPdf	02 30 30.2	-1.3
EFP	Efpalio	145.48	312	P	PKPbc	02 30 31.4	0.0
BHOU	Houvegnez	145.48	341	dPKP	PKPdf	02 30 30.8	-0.2
ANKY	Antikythira Is	145.49	307	P	PKPdf	02 30 30.6	-0.8
LAKA	Lakka	145.51	312	P	PKPdf	02 30 30.6	-0.9
LJU	Ljubljana	145.52	329	ePKPbc	PKPdf	02 30 30.9	-0.3
LJU				i		02 30 37.5	
LJU	Ljubljana	145.52	329	eP	PKPdf	02 30 30.5	-0.7
KTHA	Kythira Island	145.52	308	P	PKPdf	02 30 31.2	-0.3
MYKA	Terra Mystica	145.53	330	eP	PKPdf	02 30 30.0	-1.3
	comp=Z,136nm,0.8s,SNR=24						
BOJS	Bojanci	145.53	327	ePKPbc	PKPdf	02 30 30.6	-0.6
UCC	Uccle	145.56	343	dPKP	PKPdf	02 30 30.9	-0.2
LSK	Leskovik	145.56	316	P	PKPdf	02 30 31.5	-0.1
KTHR	Kythira	145.56	308	P	PKPdf	02 30 30.4	-1.2
SHEL	Horse Pasture	145.57	188	PKP2	PKPdf	02 30 31.6	-0.6
SHEL	Horse Pasture	145.57	188	PKPbc	PKPdf	02 30 31.6	-0.6
TREB	Trebinje	145.59	321	eP	PKPdf	02 30 31.0	-0.4
BCLA	Clavier	145.63	342	dPKP	PKPdf	02 30 31.2	0.0
BCLA				dx	x	02 30 37.7	
JAN	Janina	145.63	315	P	PKPdf	02 30 31.3	-0.3
HCY	Herceg Novi	145.66	321	eP	PKPdf	02 30 31.0	-0.6
BGES	Gesves	145.72	342	dPKPdf	PKPdf	02 30 31.4	0.0
STU	Stuttgart	145.75	337	ePKP	PKPbc	02 30 31.9	0.0
	baz=38,slow=3.3						
STU	Stuttgart	145.75	337	IAMs_20	IAMs_20	03 39 09.6	
	comp=Z,2µm,20.0s						
CEY	Cerknica	145.78	328	eP	PKPdf	02 30 31.0	-0.7
DRO	Drossia	145.82	311	P	PKPdf	02 30 31.7	-0.3
RICI	Ricice	145.83	323	P	PKPdf	02 30 31.0	-0.8
SNF	Seneffe	145.84	343	dPKP	PKPbc	02 30 31.9	-0.2
STON	Ston	145.88	322	eP	PKPdf	02 30 31.9	0.0
RCHB	Rochefort	145.89	342	dPKP	PKPbc	02 30 32.3	0.0
RCHB				dx	x	02 30 38.6	
BMRD	Maredsous	145.89	343	dPKP	PKPdf	02 30 31.3	-0.3
KIJV	Kijevo	145.91	324	P	PKPdf	02 30 31.5	-0.4
UDBI	Udbina	145.92	326	P	PKPdf	02 30 31.8	-0.2
WATA	Walderalm	145.93	333	eP	PKPdf	02 30 31.4	-0.6
	comp=Z,136nm,1.0s,SNR=22						
WATA				eP	PP	02 33 59.3	+5.7
	comp=Z,16nm,1.7s						
MCH1	Michaelchurch	145.93	352	eP	PKPdf	02 30 31.1	-0.6
RLS	Riolos of Patr	145.95	312	P	PKPbc	02 30 32.7	-0.2
WTTA	Wattenberg	145.96	333	eP	PKPdf	02 30 31.8	-0.4
	comp=Z,210nm,1.3s,SNR=24						
ABTA	Abfaltersbach	145.96	331	i P	PKPdf	02 30 31.4	-0.6
	comp=Z,260nm,1.0s,SNR=52						
ITM	Ithomi	146.00	310	P	PKPdf	02 30 32.1	-0.2
WLF	Walferdange	146.04	341	dPKP	PKPdf	02 30 30.9	-1.1
WLF	Walferdange	146.04	341	ePKP	PKPab	02 30 33.3	0.0
	baz=38,slow=3.3						
IGT	Igoumenitsa	146.04	315	P	PKPdf	02 30 32.4	+0.1
RIY	Rijeka	146.04	328	eP	PKPbc	02 30 32.7	-0.2
SRN	Sarande	146.09	316	P	PKPbc	02 30 33.1	-0.1
DOU	Dourbes	146.12	343	dPKP	PKPdf	02 30 32.4	+0.3
MOTA	Moosalm	146.13	333	i P	PKPdf	02 30 32.4	0.0
	comp=Z,188nm,1.5s,SNR=30						
RETA	Reutte	146.16	334	i P	PKPdf	02 30 32.7	+0.3
	comp=Z,119nm,1.5s,SNR=12						
RETA				eP	PP	02 34 01.1	+6.3
	comp=Z,12nm,1.6s						
TSLK	Tsoukalades, L	146.17	314	P	PKPdf	02 30 32.9	+0.4
SQTA	Sankt Quirin	146.18	333	i P	PKPdf	02 30 32.7	+0.2
	comp=Z,209nm,1.5s,SNR=25						
SQTA				eP	PP	02 34 00.8	+5.9
	comp=Z,23nm,2.0s						
LKD2	Lefkada island	146.18	313	P	PKPdf	02 30 33.1	+0.5
NYDR	Nydri-Lefkada	146.19	313	P	PKPdf	02 30 32.9	+0.4
SWN1	Swindon	146.22	350	eP	PKPdf	02 30 32.7	+0.5
PYL	PYLOS	146.25	310	P	PKPdf	02 30 32.7	0.0
EVGI	Lefkada island	146.26	313	P	PKPbc	02 30 33.9	+0.1
UBR	Ueberruh	146.28	335	ePKP	PKPbc	02 30 33.7	+0.1
	baz=38,slow=3.3						
DRAG	Dragano-Lefkad	146.29	313	P	PKPdf	02 30 30.6	-2.2
RABC	Rab	146.29	327	P	PKPab	02 30 34.5	+0.1
KEK	Kerkira	146.31	316	P	PKPdf	02 30 32.4	-0.4
FSK	Fiskardo	146.40	313	P	PKPdf	02 30 29.7	-3.2
BFO	Black Forest	146.43	337	PKP2	PKPdf	02 30 32.6	-0.1
BFO	Black Forest	146.43	337	ePKP	PKPbc	02 30 34.3	+0.2
	baz=38,slow=3.3						
BFO	Black Forest	146.43	337		PKPdf	02 30 32.6	-0.1
BFO				IAMs_20	IAMs_20	03 46 40.8	
	comp=Z,2µm,19.0s						
VLS	Valsamata	146.51	313	P	PKPdf	02 30 33.6	+0.4
FETA	Feichten	146.54	333	i P	PKPbc	02 30 34.4	-0.2
	comp=Z,84nm,0.8s,SNR=27						
FETA				eP	PP	02 34 01.5	+4.3
	comp=Z,6.9nm,1.2s						
LTHK	Lithakia	146.55	312	P	PKPbc	02 30 34.3	-0.4
ZIRJ	Zirje	146.56	325	P	PKPdf	02 30 32.8	-0.2
KEF4	Livadi, Kephal	146.59	313	P	PKPdf	02 30 32.9	-0.3
DAVA	Damuels	146.68	334	eP	PKPbc	02 30 34.4	-0.6
	comp=Z,117nm,1.4s,SNR=20						
ECH	Echery	146.95	338	IAMs_20	IAMs_20	03 46 10.5	
	comp=Z,2µm,21.0s						
DAVOX	Davos/Dischmat	147.09	334	PKPbc	PKPbc	02 30 36.2	+0.1
	comp=Z,29nm,1.0s,baz=191,slow=1.9,SNR=28						
SENIN	Lac Senin/Sane	148.46	336	IAMs_20	IAMs_20	03 46 16.4	
	comp=Z,2µm,21.0s						
NRCA	Norcia	148.48	326		PKPbc	02 30 39.2	-0.7
TIP	Timpagrande	148.59	317		PKPbc	02 30 40.0	-0.4
TIP				IAMs_20	IAMs_20	03 52 15.8	
	comp=Z,1µm,21.0s						
AQU	L'Aquila	148.65	325	eP	PKPdf	02 30 35.3	-1.3
AQU	L'Aquila	148.65	325	IAMs_20	IAMs_20	03 40 32.9	
	comp=Z,2µm,22.0s						
CLF	Chambon-Foret	148.65	343	PKPbc	PKPbc	02 30 40.5	+0.4
BNI	Bardonecchia	149.79	335	PKP2	PKPbc	02 30 42.3	-0.9
BNI				MLR	MLR		
	comp=Z,3µm,20.0s						
BNI	Bardonecchia	149.79	335		PKPbc	02 30 42.3	-0.9
VSL	Villasalto	152.83	325		PKPbc	02 30 48.7	-1.6
VSL				PKPab	pPKPbc	02 30 56.7	+0.7
VSL				IAMs_20	IAMs_20	03 50 27.4	
	comp=Z,1µm,22.0s						
KEST	Kesra	155.38	319	PKPab	PKPab	02 31 12.8	+0.5
	comp=Z,12nm,1.1s,baz=277,slow=1.6,SNR=6.4						
ESDC	Sonseca Array	158.04	346	PP	PP	02 35 02.0	-0.1
	comp=Z,0.4nm,0.6s,baz=284,slow=13,SNR=2.3						
CART	Cartagena	159.13	338	IAMs_20	IAMs_20	03 56 40.8	
	comp=Z,1µm,19.0s						
LIC	Lamto	166.82	204	ePKIKP	PKPdf	02 31 03.3	+3.7
	comp=Z,26nm,1.2s						
KIC	Kosan Boka	166.82	206	ePKIKP	PKPdf	02 31 03.7	+4.1
	comp=Z,22nm,1.3s						
DBIC	Dimbokro	167.15	206	PKP	PKPdf	02 30 59.6	-0.2
	comp=Z,3.7nm,1.1s,baz=166,slow=5.2,SNR=2.8						
TIC	Toumodi	167.20	205	ePKIKP	PKPdf	02 31 03.3	+3.4
TORD	Torodi Ar. Bea	167.20	248	PKP	PKPdf	02 30 59.0	-0.8
	comp=Z,4.4nm,1.1s,baz=338,slow=2.5,SNR=8.8						
TORD				PKPab	PKPab	02 32 04.2	-0.2
	comp=Z,4.3nm,1.2s,baz=148,slow=1.6,SNR=1.6						
TORD				PP	PP	02 35 55.9	+3.3
	comp=Z,2.4nm,1.1s,baz=127,slow=3.1,SNR=3.1						
KOWA	Kowa	172.72	239	PKP	PKPdf	02 31 03.5	+0.5
	comp=Z,3.6nm,1.1s,baz=289,slow=3.0,SNR=5.3						
KOWA				PKPab	PKPab	02 32 29.4	+0.7
	comp=Z,3.0nm,0.8s,baz=123,slow=4.9,SNR=4.8						
KOWA	Kowa	172.72	239		PKPdf	02 31 08.1	+5.1

TEH ***19*** *02:13:25.6, 36°.87N×45°.28E, h6^{km}, ML3.0*
ISN ***19*** *02:13:26.7±2.4, 36°.88N×45°.32E, h25^{km}, ML3.1*
DDA ***19*** *02:13:26.0, 36°.87N×45°.16E, h10^{km}±11^{km}, ML3.2*
ISC 19 02:13:26.3±1.2, **36°.95N**±0°.04×**45°.32E**±0°.03, **h4**^{km}±11^{km}, **n33,** σ**1^{s}.21**/39, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAHB	Mahabad	0.36	121	ePg	Pg	02 13 32.6	-0.7
MAHB				eSg	Sg	02 13 37.9	-0.1
IAZR	Azarshahr	0.90	36	ePg	Pn	02 13 44.6	-1.3
IAZR				eSg	Sn	02 13 58.2	-1.3
IAZR				e		02 14 05.1	
	comp=Z,10µm,0.4s						
YOVA	Hakkari_Yksek	1.04	308	i P	Pg	02 13 45.5	-0.7
YOVA	Hakkari_Yksek	1.04	308	ePg	Pg	02 13 45.5	-0.7
ISHB	Shabestar	1.35	10	ePg	Pn	02 13 51.7	-0.5
ISHB				e		02 13 56.1	
	comp=Z,2µm,0.3s						
CUKT	Cukurca	1.40	283	i P	Pn	02 13 52.2	-0.5
CUKT				i S	Sg	02 14 12.4	+1.1
CUKT				IAML		02 14 16.0	
	comp=N,575nm,0.4s						
CUKT				IAML		02 14 18.0	
	comp=E,802nm,0.6s						
CUKT	Cukurca	1.40	283	ePg	Pn	02 13 52.2	-0.5
HAKT	HAKKARI	1.42	296	i P	Pn	02 13 51.8	-1.3
HAKT				i S	Sn	02 14 13.6	+1.1
HAKT				IAML		02 14 17.0	
	comp=E,318nm,0.4s						
HAKT	HAKKARI	1.42	296	ePg	Pn	02 13 51.8	-1.3
IBST	Bostanabad	1.46	59	ePg	Pb	02 13 53.9	-0.2
IBST				e		02 14 20.0	
	comp=Z,2µm,0.3s						
IKRK	Kirkuk	1.74	207	ePg	Pn	02 13 55.0	-2.2
	baz=28						
IKRK				eSg	Sn	02 14 20.0	+0.1
IKRK				AML	AML	02 14 22.9	
	comp=E,334nm,0.3s						
IKRK				AML	AML	02 14 23.6	
	comp=N,231nm,0.4s						
IMRD	Marand	1.79	10	ePn	Pg	02 14 00.0	-0.5
IMRD				e		02 14 30.1	
	comp=Z,1µm,0.3s						
OZAP	Van, Ozalp-Mer	2.01	329	i P	Pg	02 14 07.0	+2.3
ISRB	Sarab	2.06	64	e		02 14 39.3	
	comp=Z,1µm,0.4s						
ISRB				ePn	Pb	02 14 04.0	-0.4
TVAN	Van	2.19	317	i P	Pg	02 14 09.4	+1.2
IDHR	Dehrash	2.41	159	e		02 14 44.0	
	comp=Z,2µm,0.3s						
IDHR				ePn	Pn	02 14 07.6	+1.0
PERV	Siirt/Pervari-	2.42	295	i P	Pn	02 14 08.4	+1.6
PERV				i S	Sb	02 14 40.4	-0.5
ILIN	Lien	2.43	146	ePn	Pn	02 14 08.3	+1.4
CLDR	Caldiran	2.45	334	i P	Pb	02 14 11.6	+0.5
MAKU	Maku	2.45	348	ePn	Pb	02 14 10.9	-0.1
SNGE	Sanandaj	2.48	138	ePn	Pn	02 14 07.3	-0.3
ZNJK	Zanjan	2.71	95	ePn	Pb	02 14 15.5	-0.1
GRMI	Germi	2.75	47	ePn	Pb	02 14 14.4	-1.8
IGHG	Ghaleghazi	2.81	158	ePn	Pn	02 14 12.8	+0.7
IGHG				e		02 14 59.3	
	comp=Z,909nm,0.7s						
IALM	Almabolaq	3.11	131	ePn	Pn	02 14 18.3	+1.9
MIDY	Mardin/Midyat-	3.17	279	i P	Pn	02 14 15.2	-1.8
KOTA	Agri, Merkez-K	3.30	330	i P	Pn	02 14 20.9	+2.0
SVAN	Silvan-Diyarba	3.49	291	i P	Pb	02 14 27.4	-1.2
HAGD	Aghdareh	3.76	123	ePn	Pn	02 14 26.3	+1.0
HSAM	Samen	3.82	135	ePn	Pn	02 14 27.7	+1.5
IKFM	Kafar-mosalman	4.00	148	ePn	Pn	02 14 29.4	+1.2
IKFM				e		02 14 30.9	
	comp=Z,426nm,0.2s						
ASAO	Ashtian	4.52	121	ePn	Pn	02 14 36.3	+0.6
KHMZ	Khomeyn	4.96	129	ePn	Pn	02 14 42.1	+0.3

IDC 19 02:15:07.0±2.3, **18°.21S**×**169°.29E, h0**^{km}**, mb4.5**/3, **mb1 4.6**/5, **mb1mx3.7**/46, **mbtmp4.4**/5, **ML4.4**/2, **Error ellipse: s-maj=70.2km s-min=32.1km az=168.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.69	214	Pn	Pn	02 16 19.3	+0.2
	3.8nm,0.3s,baz=36,slow=19,SNR=2.5						
MSVF	Nonsavu	8.35	88	Pn	Pn	02 17 09.5	+0.1
	0.3nm,0.3s,baz=258,slow=17,SNR=4.3						
STKA	Stephens Creek	28.45	236	P	P	02 21 04.7	+0.9
	2.8nm,0.6s,baz=53,slow=14,SNR=1.4						
WRA	Warramunga Arr	33.05	261	P	P	02 21 43.5	-1.0
	1.2nm,0.5s,baz=96,slow=8.7,SNR=1.9						
ASAR	Alice Springs	33.44	254	P	P	02 21 47.8	-0.1
	11nm,0.6s,baz=82,slow=8.4,SNR=8.5						

IDC ***19*** *02:15:30.6±1.8, 18°.71S×169°.29E, h0^{km}, mb4.6/3, mb1 4.8/4, mb1mx3.7/43, mbtmp4.7/4, ML5.0/1, Error ellipse: s-maj=82.1km s-min=30.4km az=166.0*
ISC 19 02:15:31.8±1.3, **19°.1S**±0°.5×**169°.4E**±0°.1, **h10**^{km}**, n16,** σ**0^{s}.68**/16, **mb4.7**/3, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.34	82	Pn	Pn	02 17 32.8	-0.1
	0.6nm,0.3s,baz=256,slow=12,SNR=4.2						
WRA	Warramunga Arr	33.00	263	P	P	02 22 06.6	-0.7
	4.3nm,1.0s,baz=89,slow=8.5,SNR=5.9						
ASAR	Alice Springs	33.28	256	P	P	02 22 10.2	+0.5
	8.5nm,0.4s,baz=83,slow=8.5,SNR=23						
SONM	Songino Array	87.22	323	P	P	02 28 18.3	-0.2
	5.0nm,1.1s,baz=149,slow=6.0,SNR=5.3						
GERES	GERESS Array B	144.47	332	PKP	PKPab	02 35 06.8	0.0
	2.1nm,1.1s,baz=71,slow=4.5,SNR=3.6						
SOKA	Soboth	145.40	328	eP	PKPab	02 35 10.8	+0.5
	16nm,1.3s						
OBKA	Obir	145.76	329	i P	PKPab	02 35 11.8	+0.2
	8.7nm,1.1s						
KBA	Koelnbreinsper	145.93	330	eP	PKPbc	02 35 12.2	+0.4
	15nm,1.1s						
MYKA	Terra Mystica	146.12	329	i P	PKPbc	02 35 12.7	+0.4
	9.8nm,0.8s						
WATA	Walderalm	146.54	332	eP	PKPbc	02 35 14.2	+0.6
	12nm,1.1s						
ABTA	Abfaltersbach	146.56	331	eP	PKPbc	02 35 13.8	+0.2
	22nm,1.0s,SNR=5.8						
WTTA	Wattenberg	146.57	332	eP	PKPbc	02 35 14.7	+0.9
	21nm,1.2s						
MOTA	Moosalm	146.74	333	eP	PKPbc	02 35 14.8	+0.6
	17nm,1.1s,SNR=5.4						
SQTA	Sankt Quirin	146.79	332	eP	PKPbc	02 35 15.3	+1.0
	14nm,1.0s,SNR=4.8						
FETA	Feichten	147.16	333	eP	PKPbc	02 35 16.3	+0.9
	14nm,1.7s						
DAVA	Damuels	147.31	334	eP	PKiKP	02 35 17.1	-1.0
	8.4nm,1.1s						

NIC ***19*** *02:16:32.2±0.0, 35°.96N×30°.75E, h2^{km}±1^{km}, Ml3.2/4*
DDA ***19*** *02:16:33.0, 36°.01N×30°.79E, h19^{km}±2^{km}, MW3.6*
ISK ***19*** *02:16:33.2, 35°.98N×30°.69E, h16^{km}, ML3.2/27*
ISC 19 02:16:31.8±1.3, **35°.96N**±0°.03×**30°.75E**±0°.02, **h9**^{km}±10^{km}, **n71,** σ**1^{s}.28**/95, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.49	318	i P	Pb	02 16 42.9	+0.3
AKUM				i S	Sb	02 16 50.7	+0.9
AKUM				IAML		02 16 53.0	
	comp=N,1µm,0.3s						
AKUM				IAML		02 16 56.0	
	comp=E,1µm,0.5s						
KEMT	Kemer-ANTALYA	0.66	347	PG	Pb	02 16 45.6	+0.1
DEMR	Demre-Antalya	0.73	293	PG	Pb	02 16 47.2	+0.5
ANTB	Antalya	0.94	356	PG	Pn	02 16 51.7	+0.5
KSL	Kastellorizon	0.96	282	P	Pn	02 16 51.9	+0.5
KSL				S	Sn	02 17 05.7	+0.5
KSL				AML	AML	02 17 13.2	
	comp=E,1.3nm,0.5s						
KSL				AML	AML	02 17 13.2	
	comp=E,1.3nm,0.5s						
KSL				AML	AML	02 17 15.1	
	comp=E,0.6nm,0.6s						
KSL				AML	AML	02 17 15.1	
	comp=E,0.6nm,0.6s						
AKAS	Kas	0.96	287	i P	Pn	02 16 52.2	+0.6
AKAS				i S	Sn	02 17 05.8	+0.4
AKAS				IAML		02 17 17.0	
	comp=E,751nm,0.6s						
AKAS				IAML		02 17 18.0	
	comp=N,894nm,0.8s						
AKAS	Kas	0.96	287	PG	Pb	02 16 51.5	+0.8
ELL	Elmali	1.04	320	PG	Pb	02 16 52.8	+0.8
ELL				SG	Sb	02 17 07.1	+1.3
ELL	Elmali	1.04	320	P	Pg	02 16 52.1	+0.3
ELL				S	Sn	02 17 08.5	+1.1
KORT	Korkueli	1.09	343	i P	Pn	02 16 54.1	+0.8
KORT				i S	Sb	02 17 08.2	+1.0
KORT				IAML		02 17 11.0	
	comp=N,188nm,0.6s						
KORT				IAML		02 17 15.0	
	comp=E,233nm,0.6s						
KORT	Korkueli	1.09	343	PG	Pn	02 16 53.9	+0.6
KORT				SG	Sn	02 17 09.1	+0.5
KEPZ	Antalya-Kepez	1.17	36	i P	Pg	02 16 53.5	-0.8
KEPZ				i S	Sg	02 17 08.7	-0.8
KEPZ				IAML		02 17 10.0	
	comp=N,283nm,0.6s						
KEPZ				IAML		02 17 15.0	
	comp=E,125nm,0.6s						
GAZI	Gazipasa	1.30	77	i P	Pb	02 16 56.7	+0.2
GAZI				i S	Sn	02 17 14.0	+0.4
GAZI				IAML		02 17 16.0	
	comp=N,546nm,0.5s						
GAZI				IAML		02 17 16.0	
	comp=E,647nm,0.6s						
BUCA	Burdur, Bucak-	1.38	354	i P	Pn	02 16 57.9	+0.7
FETY	Fethiye	1.50	297	i P	Pb	02 17 00.1	+0.3
FETY				i S	Sn	02 17 17.1	-1.5
FETY				IAML		02 17 32.0	
	comp=N,104nm,0.6s						
FETY				IAML		02 17 37.0	
	comp=E,97nm,0.8s						
FETY	Fethiye	1.50	297	PN	Pn	02 16 59.4	+0.5
FETY				SN	Sn	02 17 19.0	+0.4
BCK	Bucak	1.51	355	PN	Pn	02 16 59.6	+0.6
CAME	Cameli-Denizli	1.52	311	PN	Pn	02 16 59.9	+0.6
GOLH	Golhisar	1.59	324	i P	Pg	02 17 02.6	+0.2
CAEL	Denizli, Camel	1.63	316	i P	Pb	02 17 02.7	+0.6
SEYD	Seydisehir-KON	1.69	31	PN	Pn	02 17 02.5	+0.9
SEDI	Konya, Seydise	1.70	28	i P	Pn	02 17 02.7	+1.0
SEDI				i S	Sn	02 17 22.8	-0.8
SEDI				IAML		02 17 27.0	
	comp=N,136nm,0.6s						
SEDI				IAML		02 17 27.0	
	comp=E,151nm,0.6s						
ALFC	Alefka	1.71	117	P	Pb	02 17 03.8	+0.4
ALFC				AML	AML	02 17 40.8	
	comp=E,0.7nm,0.8s						

ALFC				AML	AML	02 17 44.2	
	comp=E,1.1nm,1.0s						
HDMB	Hadim	1.73	54	PN	Pb	02 17 04.0	+0.2
BRDR	BURDUR-Merkez	1.82	343	*i* P	Pb	02 17 05.3	0.0
ISP	Isparta	1.87	355	PN	Pn	02 17 05.4	+1.3
ERMK	Ermenek	1.88	68	*i* P	Pb	02 17 06.0	-0.4
ERMK				*i* S	Sg	02 17 33.7	+1.4
ERMK				IAML		02 17 36.0	
	comp=E,136nm,0.5s						
NATA	Nata	1.90	128	P	Pn	02 17 05.3	+0.9
NATA				S	Sg	02 17 31.5	-1.4
NATA				AML	AML	02 17 45.8	
	comp=E,0.9nm,1.1s						
NATA				AML	AML	02 17 45.8	
	comp=E,0.9nm,1.1s						
NATA				AML	AML	02 17 49.5	
	comp=E,1.4nm,0.8s						
NATA				AML	AML	02 17 49.5	
	comp=E,1.4nm,0.8s						
TEKE	Tekeli-Mersin	1.93	84	PN	Pb	02 17 06.7	-0.4
LEF	Lefka	1.94	115	PN	Pn	02 17 06.3	+1.4
BAGO	Egridir - ISPA	2.03	1	*i* P	Pn	02 17 05.7	-0.6
BASM	Basmaki-Afyon	2.04	344	PN	Pn	02 17 07.5	+1.2
BERE	Bereket-Mersin	2.04	78	PN	Pb	02 17 08.9	-0.3
TAVA	DENIZLI_Tavas	2.10	316	*i* P	Pn	02 17 08.6	+1.3
TAVA				*i* S	Sn	02 17 32.9	-0.8
TAVA				IAML		02 17 41.0	
	comp=N,44nm,0.9s						
TAVA				IAML		02 17 51.0	
	comp=E,64nm,0.9s						
ARG	Arkhangelos	2.14	278	PN	Pn	02 17 08.8	+1.2
KKBE	Karaman, Kazim	2.17	54	*i* P	Pb	02 17 10.5	-0.8
KKBE				*i* S	Sn	02 17 37.1	+1.9
KKBE				IAML		02 17 43.0	
	comp=N,55nm,0.7s						
TURN	Turunc	2.18	293	*i* P	Pn	02 17 08.6	+0.5
TURN				*i* S	Sn	02 17 31.0	-4.2
TURN				IAML		02 17 37.0	
	comp=N,37nm,0.3s						
TURN	Turunc	2.18	293	PN	Pn	02 17 09.5	+1.4
KMER	Konya-Meram	2.23	35	*i* P	Pb	02 17 11.2	-1.1
KMER				*i* S	Sn	02 17 37.4	+0.7
KMER				IAML		02 17 39.0	
	comp=E,87nm,1.1s						
KMER				IAML		02 17 40.0	
	comp=N,108nm,0.8s						
DOGA	KONYA_Doganhis	2.27	19	*i* P	Pn	02 17 11.6	+2.0
GULN	MERSIN_Gulnar	2.28	83	*i* P	Pn	02 17 10.0	+0.5
GULN				*i* S	Sn	02 17 39.3	+1.6
GULN				IAML		02 17 44.0	
	comp=E,59nm,0.6s						
GULN				IAML		02 17 47.0	
	comp=N,40nm,0.5s						
AKKU	Akkuyu-Mersin	2.28	84	PN	Pb	02 17 12.3	-0.8
ATHAL	Athalassa	2.31	110	S	Sb	02 17 42.5	+0.3
CSS	Mathiatis	2.33	114	P	Pn	02 17 11.3	+1.0
MULA	Mugla, Merkez-	2.34	304	*i* P	Pn	02 17 11.8	+1.3
YVAC	Isparta, Yalva	2.34	10	*i* P	Pn	02 17 11.5	+0.9
KZIL	AFYON_Kizioren	2.35	348	*i* P	Pn	02 17 11.2	+0.6
ASGA	Asgata	2.36	119	P	Pn	02 17 12.6	+2.0
ASGA				AML	AML	02 17 55.3	
	comp=N,0.3nm,0.7s						
ASGA				AML	AML	02 17 56.1	
	comp=N,0.4nm,1.3s						
KRMN	Karaman	2.36	58	PN	Pb	02 17 13.1	-1.5
KONT	Konya--Tatoy	2.37	33	*i* P	Pn	02 17 12.8	+2.0
KONT				*i* S	Sb	02 17 42.9	-1.1
KONT				IAML		02 17 43.0	
	comp=N,49nm,1.4s						
KONT				IAML		02 17 52.0	
	comp=E,61nm,0.9s						
KONT	Konya--Tatoy	2.37	33	PN	Pn	02 17 13.1	+2.2
IKL	Isikli	2.40	82	PN	Pb	02 17 13.9	-1.2
KEBE	Keben-Mersin	2.45	78	PN	Pb	02 17 14.6	-1.4
OSC1	CSNet OBS 1	2.49	170	S	Sb	02 17 46.4	-0.9
MVOU	Mavrovouni	2.54	111	P	Pn	02 17 14.0	+0.9
LADK	Ladik-KONYA	2.59	30	PN	Pn	02 17 15.9	+2.0
PASA	Karahalli, USA	2.59	338	*i* P	Pn	02 17 15.0	+1.1
PASA				*i* S	Sn	02 17 43.7	-1.8
PASA				IAML		02 17 46.0	
	comp=N,32nm,0.3s						
PASA				IAML		02 17 46.0	
	comp=E,35nm,0.3s						
SHUT	Suhut-Afyon	2.60	357	PN	Pn	02 17 14.9	+0.9
DAT	Datca	2.67	288	*i* P	Pn	02 17 15.4	+0.4
DAT				*i* S	Sn	02 17 45.5	-2.1
DAT				IAML		02 17 49.0	
	comp=E,35nm,0.5s						
DAT				IAML		02 17 49.0	
	comp=N,29nm,0.3s						
DAT	Datca	2.67	288	PN	Pn	02 17 16.1	+1.0
MLSB	Milas	2.74	300	PN	Pn	02 17 17.1	+1.2
KDHN	Kadinhani	2.78	23	*i* P	Pn	02 17 17.5	+0.9
BDRM	Kayabasi	2.88	294	*i* P	Pn	02 17 18.8	+1.0
BDRM				*i* S	Sn	02 17 47.8	-4.7
BDRM				IAML		02 17 53.0	
	comp=N,71nm,0.3s						
BDRM				IAML		02 17 53.0	
	comp=E,43nm,0.2s						
ALIN	Konya, Altinte	2.89	35	*i* P	Pn	02 17 15.7	-2.5
BODT	Bodrum	2.98	293	PN	Pn	02 17 20.3	+1.1
YKAV	Yalikavak-Bodr	3.02	294	PN	Pn	02 17 20.8	+1.0
AYDB	Zeytinkoy-Aydi	3.03	312	PN	Pn	02 17 19.9	-0.1
KIZT	Kizilcal	3.05	17	PN	Pn	02 17 21.4	+1.1
USAK	Uak-Merkez	3.08	334	*i* P	Pn	02 17 21.6	+1.0
USAK				IAML		02 17 33.0	
	comp=Z,11nm,0.4s						
USAK				IAML		02 17 48.0	
	comp=N,58nm,0.9s						
USAK				*i* S	Sn	02 17 54.8	-2.8
USAK				IAML		02 18 21.0	
	comp=E,42nm,2.5s						
GDZ	Gediz	3.28	343	*i* P	Pn	02 17 23.4	-0.1
GCAM	G?zelcaml?	3.31	303	*i* P	Pn	02 17 23.6	-0.2

DJA ***19*** *02:24:51.8±0.6, 4°S±5°×12°9E±°, h22^{km}, M4.0/7, MLv4.0/7*
NEIC ***19*** *02:24:54.9±2.3, 3°.96S±0°.08×129°.30E±0°.08, h62^{km}±9^{km}, mb4.1/12, Error ellipse: s-maj=12.7km s-min=10.5km az=205.0*
IDC ***19*** *02:24:55.1±2.5, 3°.91S×129°.22E, h58^{km}±22^{km}, mb3.7/9, mb1 3.8/11, mb1mx3.4/58, mbtmp4.0/11, ML3.8/2, Error ellipse: s-maj=24.9km s-min=17.3km az=117.0*
ISC 19 02:24:51.8±0.6, **3°.94S**±0°.06×**129°.05E**±0°.06, **h32**^{km}, **n33, σ1^{s}.23**/33, **mb4.0**/11, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.60	348	P	Pb	02 25 01.7	-2.3
MSAI				S	Sb	02 25 10.8	-1.5
AAI	Ambon	0.89	286	P	Pn	02 25 07.4	-0.7
FAKI	Fak Fak	3.35	72	P	Pn	02 25 43.1	+1.2
FAKI	Fak Fak	3.35	72		Pn	02 25 40.8	-1.2
SANI	Sanana	3.59	301	P	Pn	02 25 45.4	+0.2
LBMI	Labuha	3.63	335	P	Pn	02 25 47.3	+1.6
SIJI	Sorong	3.77	36	P	Pn	02 25 48.0	+0.3
	5.3nm,0.3s,baz=177,slow=22,SNR=16						
SIJI				S	Sn	02 26 31.8	+0.8
	3.7nm,0.3s,baz=218,slow=23,SNR=6.5						
SWI	Sorong	3.77	36	P	Pn	02 25 49.0	+1.3
KAPI	Kappang	9.33	263	P	Pn	02 27 09.5	+5.3
	1.1nm,0.3s,baz=175,slow=4.0,SNR=5.4						
KNRA	Kununurra	11.67	181	Pn	Pn	02 27 36.9	+0.8
WB0	Warramunga Arr	16.57	162	Pn	Pn	02 28 39.9	-2.0
WRAB	Tennant Creek	16.72	162		Pn	02 28 43.9	+0.2
WRAB				IAmb	IAmb	02 29 08.4	
	comp=Z,20nm,1.4s						
WRA	Warramunga Arr	16.72	162	P	Pn	02 28 41.2	-2.6
	comp=Z,0.2nm,0.3s,baz=352,slow=12,SNR=11						
WB2	Warramunga Arr	16.73	162	Pn	Pn	02 28 41.3	-2.5
WB2				IAmb	IAmb	02 28 45.9	
	comp=Z,12nm,1.1s						
PSA00	Pilbara Seismi	19.68	206	P	Pn	02 29 20.0	+0.2
PSA00				IAmb	IAmb	02 29 31.2	
	comp=Z,26nm,1.4s						
AS31	Alice Springs	20.16	167	P	P	02 29 23.8	+0.1
ASAR	Alice Springs	20.16	167	P	P	02 29 24.9	+1.2
	comp=Z,7.8nm,0.7s,baz=349,slow=10,SNR=87						
ASAR				PcP	PcP	02 33 37.5	-0.3
	comp=Z,0.5nm,0.5s,baz=349,slow=1.7,SNR=8.0						
ASAR	Alice Springs	20.16	167		Pn	02 29 25.1	-0.6
CMAR	Chiang Mai Arr	37.09	308	P	P	02 32 01.3	+1.9
	comp=Z,0.7nm,0.3s,baz=142,slow=7.4,SNR=5.4						
CHTO	Chiang Mai	37.28	308	P	P	02 32 01.3	+0.2
SONM	Songino Array	55.26	342	P	P	02 34 23.0	+1.0
	comp=Z,1.2nm,1.1s,baz=86,slow=4.6,SNR=3.8						
MK31	Makanchi Array	65.17	327	P	P	02 35 30.6	+0.8
MKAR	Makanchi Array	65.17	327	P	P	02 35 30.4	+0.6
	comp=Z,0.9nm,0.6s,baz=113,slow=8.3,SNR=11						
ZAA0	Zalesovo Array	68.44	334	P	P	02 35 49.9	-0.6
ZAA0				IAmb	IAmb	02 35 51.3	
	comp=Z,2.1nm,1.0s						
ZALV	Zalesovo Beam	68.44	334	P	P	02 35 50.3	-0.1
	comp=Z,0.5nm,0.3s,baz=130,slow=6.0,SNR=3.8						
KURBB	Kurchatov Arra	69.42	328	P	P	02 35 57.4	+0.7
	comp=Z,1.5nm,0.6s,baz=132,slow=6.0,SNR=13						
KURK	Kurchatov	69.43	328	P	P	02 35 57.4	+0.7
KURK	Kurchatov	69.43	328	IAmb	IAmb	02 36 02.0	
	comp=Z,2.8nm,0.8s						
ABKAR	Akbulak array	79.54	322	P	P	02 36 55.0	-0.5
ABKAR				IAmb	IAmb	02 36 56.7	
	comp=Z,1.8nm,0.8s						
AKTO	Aktyubinsk	81.09	322	P	P	02 37 04.8	+1.0
	comp=Z,1.1nm,0.6s,baz=118,slow=6.4,SNR=5.3						
ARU	Arti	82.62	328	P	P	02 37 12.6	+0.9
	comp=Z,0.5nm,0.3s,baz=112,slow=8.5,SNR=3.2						
IL31		91.00	25	P	P	02 37 51.2	-1.3
ILAR	Eielson Array	91.00	25	P	P	02 37 51.9	-0.6
	comp=Z,0.5nm,0.7s,baz=224,slow=5.0,SNR=2.6						

MOS ***19*** *02:30:01.6±0.0, 42°.52N×44°.56E, h16^{km}, MPVA3.4*
NORS ***19*** *02:30:02.6±0.0, 42°.49N×44°.55E, h9^{km}, MPVA3.3*
TIF ***19*** *02:30:03.6, 42°.56N×44°.55E, h15^{km}±1^{km}*
DRS ***19*** *02:30:05.9±0.0, 42°.58N×44°.64E, h17^{km}*
ISC 19 02:30:04.3±0.8, **42°.58N**±0°.02×**44°.60E**±0°.02, **h13**^{km}±5^{km}, **n34, σ1^{s}.24**/70, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTEO	Meteo	0.11	335	P	Pg	02 30 07.4	-0.5
MTEO				S	Sg	02 30 09.7	-0.8
GUDG	Gudauri	0.14	219	P	Pg	02 30 08.9	+0.8
GUDG				S	Sg	02 30 11.6	+0.9
LACR	Lac	0.33	318	*i* Pg	Pg	02 30 10.7	-0.5
LACR				*e*Sg	Sg	02 30 15.7	0.0
VLKR	Vladikavkaz	0.47	7	*e*Pg	Pg	02 30 13.3	-0.3
VLKR				*e*Pg	Pg	02 30 13.4	-0.3
VLKR				*e*Sg	Sb	02 30 21.7	+0.3
VLKR				*e*Sg	Sb	02 30 21.7	+0.3
KMGR	Komgaron	0.52	22	*e*Pg	Pb	02 30 15.1	-0.2
KMGR				*e*Sg	Sb	02 30 24.1	+1.3
ZEI	Tsey	0.56	293	*e*Pg	Pg	02 30 14.3	-1.0
ZEI				*e*Sg	Sg	02 30 21.8	-0.9
KORR	Kora	0.64	323	*i* Pg	Pb	02 30 17.2	-0.2
KORR				*e*Sg	Sb	02 30 26.6	+0.4
ARNR	Ardon	0.65	339	*e*Pg	Pb	02 30 17.3	-0.2
ARNR				*e*Sg	Sb	02 30 27.3	+0.9
BTKR	Batakoyurt	0.80	357	*e*Pg	Pn	02 30 20.9	-0.4
BTKR				*e*Sg	Sn	02 30 33.5	+0.5
DIGR	Digorskoe uzhe	0.82	294	*e*Pg	Pg	02 30 18.8	-1.4
DIGR				*e*Sg	Sg	02 30 29.4	-1.5
ONI	Oni	0.85	271	P	Pg	02 30 19.4	-1.3
ONI				S	Sg	02 30 30.8	-1.0
STDR	Stavd-Durt	0.88	334	*e*Pg	Pn	02 30 22.4	-0.1
STDR				*e*Sg	Sn	02 30 36.6	+1.4
LSNR	Lesken	0.90	321	*e*Pg	Pb	02 30 21.7	-0.1
LSNR				*e*Sg	Sb	02 30 35.0	+1.3
GROC	Groznyy	1.08	54	*e*Pg	Pn	02 30 25.3	+0.2
GROC				*e*Sg	Sn	02 30 41.6	+1.7
TRLG	Trialeti	1.10	200	P	Pg	02 30 24.4	-1.2
TRLG				S	Sb	02 30 39.7	+0.1
BRNG	Burnasheti	1.11	211	P	Pb	02 30 25.1	-0.4
BRNG				S	Sb	02 30 40.7	+0.7
DVE	Vedeno	1.19	71	*e*Pg	Pg	02 30 25.9	-1.2
DVE				*e*Sg	Sn	02 30 44.3	+1.5
PRTR	Priterechnaya	1.20	349	*e*Pg	Pn	02 30 27.5	+0.8
PRTR				*e*Sg	Sn	02 30 45.4	+2.5
BTLR	Botlikh	1.20	85	*e*Pg	Pg	02 30 26.0	-1.4
BTLR				*e*Sg	Sb	02 30 42.2	-0.3
TKB	Tkibuli	1.21	260	P	Pg	02 30 26.5	-1.1
TKB				S	Sg	02 30 42.5	-0.7
DGRG	David-gareji	1.27	153	P	Pn	02 30 27.7	0.0
DGRG				S	Sn	02 30 47.2	+2.6
DMNI	Dmanisi	1.28	194	P	Pg	02 30 26.7	-2.3
DMNI				S	Sg	02 30 43.9	-1.8
LGD	Lagodekhi	1.43	121	P	Pn	02 30 29.7	-0.2
LGD				S	Sg	02 30 49.1	-1.2
NEY	Neytrino	1.53	297	*e*Pg	Pn	02 30 32.1	+0.6
NEY				*e*Sg	Sg	02 30 52.9	-0.8
XNZR	Khunzakh	1.56	91	*e*Pg	Pg	02 30 32.9	-1.3
XNZR				*e*Sg	Sg	02 30 54.0	-0.5
ABS	Abastumani	1.56	239	P	Pn	02 30 31.5	-0.4
ABS				S	Sb	02 30 53.2	+0.4
DLMR	Dylym	1.57	71	*e*Pg	Pb	02 30 32.9	-0.4
DLMR				*e*Sg	Sg	02 30 53.8	-1.2
DDFL	Dedoflistskaro	1.60	134	P	Pg	02 30 35.3	+0.3
DDFL				S	Sg	02 31 01.5	+5.7
DBC	Dubki	1.70	74	*e*Pg	Pb	02 30 35.1	-0.3
DBC				*e*Sg	Sg	02 30 57.9	-1.1
KRNR	Karanay	1.72	81	*e*Pg	Pb	02 30 35.1	-0.7
KRNR				*e*Sg	Sg	02 30 58.4	-1.2
GNBR	Gunib	1.76	95	*e*Pg	Pb	02 30 36.0	-0.5
GNBR				*e*Sg	Sg	02 30 59.7	-1.2
ARKR	Arakani	1.77	88	*e*Pg	Pb	02 30 35.7	-0.9
ARKR				*e*Sg	Sg	02 30 59.7	-1.5
SHA1	Shidzhatmaz	1.83	310	*e*Pg	Pn	02 30 36.4	+0.7
SHA1				*e*Sg	Sb	02 31 01.1	+0.3
KMKR	Kumukh	1.91	103	*e*Pg	Pb	02 30 38.0	-1.0
KMKR				*e*Sg	Sb	02 31 03.3	+0.4

IDC ***19*** *02:36:37.0±6.7, 36°.19N×71°.42E, h91^{km}±110^{km}, mb3.7/5, mb1 3.6/7, mb1mx3.0/60, mbtmp3.9/7, ML3.4/2, MS3.7/1, Ms1 3.7/1, ms1mx3.3/41, Error ellipse: s-maj=183.7km s-min=42.5km az=105.0*
NNC ***19*** *02:36:39.1±7.0, 36°.91N×70°.53E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=55.8km s-min=45.0km az=3.0*
ISC 19 02:36:42.0±1.5, **36°.7N**±0°.1×**70°.8E**±0°.1, **h100**^{km}, **n20, σ1^{s}.22**/23, **mb4.1**/5, **6C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.85	21	P	Pn	02 38 06.2	-0.4
	SNR=22						
UCH	Uchtor	6.20	26	P	Pn	02 38 10.7	-0.7
	SNR=8.3						
EKS2	Erkin-Say	6.37	20	P	Pn	02 38 13.4	+0.1
	SNR=13						
KK09	Karatay Array	6.41	358	⇑P	Pn	02 38 14.2	+0.4
	2.6nm,0.2s,baz=182,slow=12						
KK09				⇑S	Sn	02 39 25.8	+0.2
	9.0nm,0.8s,baz=185,slow=22						
AAK	Ala-Archa	6.56	24	P	Pn	02 38 16.0	0.0
	4.1nm,0.3s,baz=191,slow=5.9,SNR=60						
AAK				S	Sn	02 39 30.2	+0.8
	0.3nm,0.3s,baz=344,slow=20,SNR=3.7						
AAK	Ala-Archa	6.56	24	P	Pn	02 38 15.9	0.0
	SNR=19						
AAK	Ala-Archa	6.56	24	⇓P	Pn	02 38 15.5	-0.5
	7.1nm,0.5s						
AAK				⇑S	Sn	02 39 30.4	+1.0
	14nm,0.9s						
CHMS	Chumysh	6.97	24	P	Pn	02 38 21.3	-0.1
	SNR=5.8						
USP	Ospenovka	7.13	22	P	Pn	02 38 23.5	-0.1
	SNR=7.7						
TKM2	Tokmak 2	7.21	29	P	Pn	02 38 23.8	-1.0
	SNR=6.9						
TKM2	Tokmak 2	7.21	29	⇑P	Pn	02 38 23.5	-1.2
	3.0nm,0.5s						
GEYT	Alibeck	10.20	281	LR	LR	02 43 56.2	
	comp=Z,377nm,19.4s,baz=135,slow=41						
MKAR	Makanchi Array	13.20	37	P	P	02 39 50.3	-1.3
	0.1nm,0.3s,baz=213,slow=8.4,SNR=5.4						
AB31	Akbulak array	14.84	331	⇑P	Pn	02 40 06.8	+0.4
	1.1nm,0.7s,baz=166,slow=11,SNR=18						
AB31				⇑S	Sn	02 42 47.2	-2.8
	1.2nm,0.6s,baz=150,slow=24,SNR=10						
KURBB	Kurchatov Arra	14.97	19	P	Pn	02 40 09.6	+1.5
	0.0nm,0.3s,baz=209,slow=10,SNR=2.4						
FINES	FINESS Array B	37.24	326	P	P	02 43 45.1	+1.7
	2.7nm,1.0s,baz=120,slow=8.3,SNR=1.4						
ARCES	ARCESS Array B	40.90	338	P	P	02 44 15.5	+1.6
	4.6nm,0.9s,baz=104,slow=7.5,SNR=2.3						
HFS	Hagfors	42.82	322	P	P	02 44 31.7	+2.1
	1.7nm,0.5s,baz=93,slow=13,SNR=5.7						
NOA	NORSAR Array B	44.13	323	P	P	02 44 40.9	+0.7
	0.9nm,0.8s,baz=97,slow=7.9,SNR=2.3						
TORD	Torodi Ar. Bea	65.59	268	P	P	02 47 13.9	-1.5
	0.6nm,0.5s,baz=50,slow=5.9,SNR=10						

IDC ***19*** *02:41:36.5±1.6, 18°.10S×169°.18E, h0^{km}, mb4.0/3, mb1 4.2/5, mb1mx3.6/41, mbtmp3.9/5, ML4.0/2, Error ellipse: s-maj=55.2km s-min=26.7km az=158.0*
NEIC ***19*** *02:41:38.9±1.5, 18°.3S±0°.2×169°.2E±0°.1, h10^{km}±2^{km}, mb4.3/1, Error ellipse: s-maj=40.7km s-min=7.5km az=330.0*
ISC 19 02:41:41.1±1.1, **18°.3S**±0°.2×**169°.2E**±0°.1, **h35**^{km}, **n11, σ0^{s}.85**/11, **mb4.1**/4, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIFNC	LIFOU	3.11	217	Pn	Pn	02 42 26.1	-1.7
MARNC	Mare, Loyalty	3.38	199	Pn	Pn	02 42 31.8	+0.4
DZM	Mont Dzumac	4.59	214	Pn	Pn	02 42 49.1	+0.9
	0.7nm,0.3s,baz=33,slow=17,SNR=2.5						
PINNC	Pines Island,	4.62	201	Pn	Pn	02 42 48.1	-0.4
OUENC	Ouen Island, N	4.69	208	Pn	Pn	02 42 49.3	-0.1
ONTNC	Ouen Toro	4.78	213	Pn	Pn	02 42 50.5	-0.2
MSVF	Nonsavu	8.41	88	Pn	Pn	02 43 40.3	-0.3
	0.2nm,0.3s,baz=239,slow=14,SNR=6.0						
WRA	Warramunga Arr	32.98	261	P	P	02 48 12.5	-0.5
	0.6nm,0.6s,baz=91,slow=8.6,SNR=8.4						
AS31	Alice Springs	33.36	255	P	P	02 48 17.1	+0.8
AS31				IAmb	IAmb	02 48 17.5	
	comp=Z,2.3nm,0.6s						
ASAR	Alice Springs	33.36	255	P	P	02 48 17.1	+0.8
	comp=Z,4.0nm,0.5s,baz=84,slow=8.6,SNR=59						
ILAR	Eielson Array	89.32	17	P	P	02 54 33.6	+0.3
	comp=Z,0.6nm,1.0s,baz=205,slow=6.0,SNR=2.2						

IDC ***19*** *02:43:39.3±1.1, 18°.09S×169°.23E, h0^{km}, mb4.3/7, mb1 4.5/9, mb1mx4.1/41, mbtmp4.3/9, ML4.6/2, MS4.6/1, Ms1 4.6/1, ms1mx3.7/31, Error ellipse: s-maj=31.1km s-min=22.9km az=155.0*
NOU ***19*** *02:43:39.8, 18°.38S×169°.36E, h0^{km}, MLv4.8/12, Vanuatu Islands*
NEIC ***19*** *02:43:40.9±1.9, 18°.25S±0°.04×169°.28E±0°.09, h10^{km}±1^{km}, mb4.7/21, Error ellipse: s-maj=14.1km s-min=7.5km az=83.0*
ISC 19 02:43:44.0±0.5, **18°.30S**±0°.05×**169°.36E**±0°.08, **h35**^{km}, **n99, σ1^{s}.40**/90, **mb4.7**/20, **MS4.8**/3, **3D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.02	299	P	Pn	02 43 59.2	-2.6
DVP	Devils Point	1.25	297	P	Pn	02 44 02.9	-2.1
LIFNC	LIFOU	3.17	219	Pn	Pn	02 44 29.7	-1.7
LIFNC	LIFOU	3.17	219	P	Pn	02 44 28.5	-3.0
MARNC	Mare, Loyalty	3.41	201		Pn	02 44 33.6	-1.1
MARNC	Mare, Loyalty	3.41	201	P	Pn	02 44 31.4	-3.2
SANVU	Saraoutou	3.50	324	Pn	Pn	02 44 33.6	-2.5
SANVU	Saraoutou	3.50	324	P	Pn	02 44 37.5	+1.5
YATNC	Mamie plateau,	4.40	211	P	Pn	02 44 46.5	-1.9
DZM	Mont Dzumac	4.65	216	*e*Pn	Pn	02 44 50.4	-1.4
	158nm,0.8s						
DZM				*e*LR	LR	02 45 55.8	
	comp=Z,6μm,26.3s						
DZM	Mont Dzumac	4.65	216	Pn	Pn	02 44 51.1	-0.7
	4.1nm,0.3s,baz=75,slow=20,SNR=12						
DZM				Sn	Sn	02 45 45.9	+1.3
	5.1nm,0.3s,baz=103,slow=19,SNR=3.5						
DZM	Mont Dzumac	4.65	216	Pn	Pn	02 44 50.4	-1.4
DZM	Mont Dzumac	4.65	216	P	Pn	02 44 51.4	-0.4
PINNC	Pines Island,	4.65	202		Pn	02 44 51.0	-0.8
OUENC	Ouen Island, N	4.73	210	Pn	Pn	02 44 51.5	-1.4
OUENC	Ouen Island, N	4.73	210	P	Pn	02 44 52.6	-0.3
NOUC	Port Laguerre	4.75	217	P	Pn	02 44 52.7	-0.4
ONTNC	Ouen Toro	4.83	214	Pn	Pn	02 44 52.3	-1.9
ONTNC	Ouen Toro	4.83	214	P	Pn	02 44 53.6	-0.7
KOUNC	Koumac, New Ca	5.29	244	P	Pn	02 45 00.3	-0.2
MSVF	Nonsavu	8.29	87	Pn	Pn	02 45 40.7	-1.2
	0.7nm,0.3s,baz=263,slow=9.3,SNR=13						
MSVF	Nonsavu	8.29	87	Pn	Pn	02 45 40.5	-1.3
URZ	Urewera	21.01	163	LR	LR	02 54 38.7	
	comp=Z,2μm,19.4s,baz=31,slow=31						
LTZ	Lake Taylor	24.53	175	P	P	02 49 00.1	-0.2
CAN	Canberra	24.77	223	P	P	02 49 01.1	-1.5
CAN				IAmb	IAmb	02 49 09.2	
	comp=Z,24nm,1.0s						
STKA	Stephens Creek	28.45	236	P	P	02 49 36.2	+0.5
	comp=Z,2.0nm,0.5s,baz=77,slow=10.0,SNR=5.3						
STKA	Stephens Creek	28.45	236	P	P	02 49 34.6	-1.1
WB2	Warramunga Arr	33.08	261	P	P	02 50 15.5	-1.2
WB2				IAmb	IAmb	02 50 29.8	
	comp=Z,16nm,1.4s						
WRAB	Tennant Creek	33.08	261	P	P	02 50 16.0	-0.8
WRAB				IAmb	IAmb	02 50 21.0	
	comp=Z,10nm,1.0s						
WRA	Warramunga Arr	33.09	261	P	P	02 50 15.7	-1.1
	comp=Z,2.1nm,0.7s,baz=85,slow=8.4,SNR=18						
BBOO	Buckleboo	33.18	238	P	P	02 50 16.9	-0.5
AS31	Alice Springs	33.47	255	P	P	02 50 18.5	-1.6
AS31				IAmb	IAmb	02 50 20.5	
	comp=Z,4.2nm,0.5s						
ASAR	Alice Springs	33.47	255	P	P	02 50 19.6	-0.6
	comp=Z,7.5nm,0.5s,baz=82,slow=8.6,SNR=68						
ASAR	Alice Springs	33.47	255	P	P	02 50 19.2	-0.9
H11S2	WAKE ISLAND Hy	36.65	356	T	T	03 29 32.2	
	baz=182,slow=77,SNR=23						
H11S3	WAKE ISLAND Hy	36.66	356	T	T	03 29 37.9	
	baz=182,slow=77,SNR=19						
H11S1	WAKE ISLAND Hy	36.67	356	T	T	03 29 33.7	
	baz=182,slow=77,SNR=24						
H11N1	WAKE ISLAND Hy	37.85	356	T	T	03 31 01.8	
	baz=175,slow=76,SNR=21						
H11N3	WAKE ISLAND Hy	37.85	356	T	T	03 31 01.5	
	baz=175,slow=76,SNR=21						
H11N2	WAKE ISLAND Hy	37.87	356	T	T	03 31 02.6	
	baz=175,slow=76,SNR=33						
FORT	Forrest	39.36	244	P	P	02 51 12.0	+1.8
TAOE	Nuku Hiva Isla	49.83	86	*e*LR	LR	03 06 31.4	
	comp=Z,1μm,22.2s						
VNDA	Vanda	59.37	182	P	P	02 53 45.4	+3.1
	comp=Z,1.4nm,0.7s,baz=11,slow=7.6,SNR=7.0						
VNDA	Vanda	59.37	182	P	P	02 53 44.0	+1.7
SBA	Scott Base	59.60	181	P	P	02 53 45.6	+1.7
KS19	Wonju Array Si	67.86	325	P	P	02 54 38.9	0.0
NJ2	Nanjing	69.61	316	*e*P	P	02 54 51.6	+1.7
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USRK	Ussuriysk Ar.	70.96	332	P	P	02 54 58.5	+0.7
QSPA	South Pole Qui	71.75	180	P	P	02 55 04.1	+1.5
QSPA				IAmb	IAmb	02 55 09.1	
	comp=Z,7.3nm,1.0s						
CN2	Changchun	73.72	328	*e*P	P	02 55 15.9	+1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	Chiang Mai Arr	78.22	294	P	P	02 55 41.7	+1.1
	comp=Z,1.0nm,0.3s,baz=148,slow=5.3,SNR=1.8						
CMAR	Chiang Mai Arr	78.22	294	P	P	02 55 39.5	-1.1
HHC	Hu-ho-hao-te	79.58	319	*e*P	P	02 55 47.9	+0.2
HHC				pmax	pmax		
	comp=Z,15nm,1.3s						
HHC				pmax	pmax		
	comp=Z,3μm,7.2s						
CD2	Chengdu	79.76	307	P	P	02 55 48.8	0.0
LZH	Lanzhou	82.19	312	*e*P	P	02 56 02.8	+1.0
LZH				pP	PcP	02 56 06.6	-0.5
LZH				sP	pP	02 56 09.5	-2.8
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
BELA	Belgrano 2	83.02	175	P	P	02 56 06.0	+0.7
ULN	Ulaanbaatar	86.18	323	P	P	02 56 21.7	-0.1
SONM	Songino Array	86.54	323	P	P	02 56 23.3	-0.2
	comp=Z,2.2nm,0.9s,baz=161,slow=6.0,SNR=7.6						
SONM	Songino Array	86.54	323	P	P	02 56 22.9	-0.7
SONM				IAmb	IAmb	02 56 35.8	
	comp=Z,5.4nm,1.2s						
GTA	Gaotai	86.56	313	*e*P	P	02 56 23.6	-0.3
GTA				pP	pP	02 56 29.4	-5.0
GTA				sP	sP	02 56 31.8	-6.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NVAR	Mina Array Bea	88.10	48	P	P	02 56 32.2	+0.8
	comp=Z,1.0nm,0.8s,baz=214,slow=6.2,SNR=3.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVAR	Mina Array Bea	88.10	48	P	P	02 56 31.7	+0.3
TCOL	CIGO, UAF Yank	89.11	17	P	P	02 56 34.9	-0.3
TCOL				IAmb	IAmb	02 56 54.5	
	comp=Z,16nm,0.3s						
PRN	Pahroc Range	90.03	50	P	P	02 56 41.3	+0.9
SNAA	Sanae	90.10	182	P	P	02 56 39.8	-0.3
SNAA	Sanae	90.10	182	P	P	02 56 40.6	+0.5
SNAA				IAmb	IAmb	02 56 42.9	
	comp=Z,4.9nm,1.0s						
G08A	Pilot Rock	90.59	42	P	P	02 56 43.3	+0.5
VNA3	Neumayer Olymp	90.69	180	P	P	02 56 40.9	-1.9
VNA2	Neumayer--Watz	90.98	181	P	P	02 56 42.9	-1.2
	baz=152,slow=4.3						
VNA1	Neumayer--Stat	91.27	181	P	P	02 56 44.4	-1.1
X16A	Lo Mia Camp, P	91.63	54	P	P	02 56 49.3	+1.3
X16A				IAmb	IAmb	02 56 54.6	
	comp=Z,3.6nm,1.1s						
WMQ	Urumqi	96.64	314	*e*P	P	02 57 12.4	+1.8
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.3s						
WMQ				LR	LR		
	comp=N,570nm,29.2s						
WMQ				LR	LR		
	comp=E,1μm,29.0s						
WMQ				LR	LR		
	comp=Z,770nm,29.1s						
CLL	Collm	142.11	336	*e*PKiKP	PKiKP	03 03 17.0	+1.7
CONA	Conrad Observa	143.39	330	*e*P	PKiKP	03 03 18.8	+0.6
	comp=Z,3.1nm,0.9s						
GERES	GERESS Array B	143.71	333	PKP	PKPdf	03 03 13.2	-2.3
	comp=Z,0.6nm,0.9s,baz=74,slow=5.7,SNR=4.5						
GERES	GERESS Array B	143.71	333	PKPdf	PKiKP	03 03 17.2	-1.7
ARSA	Arzberg	144.03	329	*i* P	PKiKP	03 03 18.9	-0.6
	comp=Z,3.7nm,1.1s						
SOKA	Soboth	144.67	329	*i* P	PKPdf	03 03 16.6	-0.5
	comp=Z,10nm,1.2s						
OBKA	Obir	145.03	329	*i* P	PKPdf	03 03 16.7	-1.1
	comp=Z,4.9nm,0.8s						
BTNL	Ternell	145.11	341	*d*x	x	03 03 23.5	
MEM	Membach	145.13	341	*d*PKiKP	PKiKP	03 03 21.4	-0.2
KBA	Koelnbreinsper	145.19	331	*e*P	PKPdf	03 03 17.0	-1.1
	comp=Z,4.7nm,0.8s						
MYKA	Terra Mystica	145.38	330	*e*P	PKPdf	03 03 18.4	+0.1
	comp=Z,6.8nm,0.7s						
STU	Stuttgart	145.61	337		PKiKP	03 03 20.5	-2.1
ZOU	Zoufplan	145.75	331		PKiKP	03 03 20.4	-2.8
WATA	Walderalm	145.79	333	*i* P	PKPab	03 03 20.3	+0.3
	comp=Z,7.9nm,0.9s						
ABTA	Abfaltersbach	145.82	331	*e*P	PKPab	03 03 19.9	-0.2
	comp=Z,14nm,0.9s						
WTTA	Wattenberg	145.82	333	*e*P	PKPab	03 03 19.6	-0.6
	comp=Z,14nm,1.2s						
WLF	Walferdange	145.91	340	*d*x	x	03 03 24.0	
WLF	Walferdange	145.91	340		PKiKP	03 03 21.6	-1.7
MOTA	Moosalm	145.99	333	*e*P	PKiKP	03 03 21.1	-2.6
	comp=Z,8.6nm,1.2s						
RETA	Reutte	146.02	334	*e*P	PKiKP	03 03 22.6	-1.0
	comp=Z,12nm,1.5s						
SQTA	Sankt Quirin	146.04	333	*e*P	PKiKP	03 03 22.6	-1.1
	comp=Z,9.7nm,0.9s						
STAL	STALIGIAL	146.09	330	PKPbc	PKiKP	03 03 21.6	-2.2
FETA	Feichten	146.40	333	*e*P	PKPab	03 03 20.7	-1.6
	comp=Z,6.8nm,0.8s						
DAVA	Damuels	146.54	334	*e*P	PKiKP	03 03 25.1	+0.3
	comp=Z,9.0nm,1.0s						
NRCA	Norcia	148.32	326		PKPab	03 03 28.8	-1.3
MURB	Monte Urbino	148.34	327	PKPbc	PKiKP	03 03 27.4	-1.1
BNI	Bardonecchia	149.66	335		PKPab	03 03 33.8	-1.5

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*JMA **19** 02:44:11.8±0.1, 37°.66N×142°.01E, h31km±2km, M4.4*
JMA Felt I J1.
*IDC **19** 02:44:15.1±5.5, 37°.61N×141°.98E, h35km±44km, mb3.5/9, mb1 3.7/12, mb1mx3.4/45, mbtmp3.7/12, ML3.1/3, Error ellipse: s-maj=29.7km s-min=18.5km az=109.0*
ISC 19 02:44:11.7±1.9**, 37°.68N**±0°.05×**141°.97E**±0°.06**, h13**km±11km**, n37, σ1ˢ01**/39**, mb3.7**/10**, 5C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.75	328	⇓P	Pg	02 44 26.3	+0.1
JIKH				S	Sg	02 44 36.2	+0.2
JMST	Minamisoumatoc	0.86	273	⇑P	Pb	02 44 27.9	-0.5
JMST				S	Sb	02 44 39.5	-0.3
JIO	Ouri	0.92	328	⇓P	Pb	02 44 29.0	-0.4
JIO				S	Sb	02 44 41.0	-0.5
JFK	Kawauchi	0.92	251	⇑P	Pb	02 44 28.8	-0.8
JFK				S	Sb	02 44 40.8	-1.0
JMM	Marumori	0.95	282	⇑P	Pb	02 44 29.5	-0.5
JMM				S	Sb	02 44 42.0	-0.5
ONAJ	Iwakimizuishiy	1.09	239	⇑P	Pb	02 44 31.1	-1.4
JKMT	Kesennumamotoy	1.20	341	⇓P	Pn	02 44 33.0	-1.1
JKMT				S	Sb	02 44 47.8	-1.8
JOU	Okura	1.24	304	⇓P	Pn	02 44 34.5	-0.2
JOU				S	Sb	02 44 51.0	+0.2
JFT	Otama	1.30	263	⇑P	Pn	02 44 35.5	-0.1
JFT				S	Sb	02 44 52.3	-0.4
JMK	Ichinoseki	1.40	335	P	Pn	02 44 36.2	-0.7
JMK				*e*S	Sn	02 44 54.2	-1.1
JYK	Kaneyama	1.77	315	P	Pn	02 44 41.9	-0.1
JFY	Yanaizu	1.82	262	P	Pn	02 44 43.3	+0.6
JFY				S	Sn	02 45 06.3	+0.7
JOM	Ohasama	1.87	344	⇓P	Pn	02 44 43.0	-0.4
MJAR	Matsushiro Arr	3.21	250	Pn	Pn	02 45 02.5	+0.6
	0.9nm,0.3s,baz=79,slow=15,SNR=12						
MAT	Matsushiro	3.21	250	P	Pn	02 45 02.8	+0.9
MAT				*e*S	Sn	02 45 39.6	-0.4
ASAJ	Asahikawa	6.45	4	Pn	Pn	02 45 48.0	+1.7
	1.4nm,0.3s,baz=5.9,slow=32,SNR=6.4						
USRK	Ussuriysk Ar.	9.97	314	Pn	Pn	02 46 37.9	+3.4
	baz=122,slow=14,SNR=2.8						
SEY	Seymchan	26.07	11	P	P	02 49 46.1	+1.4
	1.2nm,0.4s,baz=0.3,slow=23,SNR=1.5						
SONM	Songino Array	27.80	303	P	P	02 50 01.6	+1.1
	0.3nm,0.6s,baz=112,slow=11,SNR=3.1						
H11N2	WAKE ISLAND Hy	28.11	123	T	T	03 19 30.2	
	baz=315,slow=75,SNR=205						
H11N1	WAKE ISLAND Hy	28.12	123	T	T	03 19 30.5	
	baz=315,slow=75,SNR=208						
H11N3	WAKE ISLAND Hy	28.13	123	T	T	03 19 31.2	
	baz=315,slow=75,SNR=204						
H11S1	WAKE ISLAND Hy	28.85	125	T	T	03 20 30.4	
	baz=317,slow=76,SNR=54						
H11S3	WAKE ISLAND Hy	28.85	125	T	T	03 20 22.0	
	baz=317,slow=76,SNR=65						
H11S2	WAKE ISLAND Hy	28.87	125	T	T	03 20 23.2	
	baz=317,slow=76,SNR=50						
ZALV	Zalesovo Beam	41.81	312	P	P	02 52 01.2	+0.4
	0.9nm,0.5s,baz=100,slow=7.9,SNR=2.3						
MKAR	Makanchi Array	44.15	302	P	P	02 52 20.2	+0.3
	0.4nm,0.6s,baz=87,slow=9.3,SNR=2.4						
ILAR	Eielson Array	48.71	33	P	P	02 52 53.5	-2.0
	0.4nm,0.6s,baz=277,slow=7.2,SNR=4.5						
WRA	Warramunga Arr	57.76	188	P	P	02 54 02.0	-0.5
	0.8nm,0.6s,baz=6.9,slow=6.4,SNR=8.0						
ASAR	Alice Springs	61.49	188	P	P	02 54 27.9	-0.2
	0.5nm,0.7s,baz=13,slow=4.9,SNR=5.4						
YKA	Yellowknife Ar	63.03	30	P	P	02 54 38.3	+0.3
	0.2nm,0.7s,baz=297,slow=5.6,SNR=4.1						
PDAR	Pinedale Array	76.90	46	P	P	02 56 04.1	+0.2
	0.3nm,0.5s,baz=290,slow=2.1,SNR=5.9						
TXAR	Lajitas Array	89.38	53	P	P	02 57 08.7	+0.3
	0.3nm,0.5s,baz=308,slow=2.8,SNR=8.1						
LPAZ	La Paz	145.99	59	PKPbc	PKPbc	03 03 52.4	+0.1
	1.3nm,0.6s,baz=292,slow=1.4,SNR=5.6						
H03N2	Juan Fernandez	146.65	95	T	T	05 47 39.5	
	baz=291,slow=75,SNR=8.5						
H03N3	Juan Fernandez	146.66	95	T	T	05 47 48.2	
	baz=291,slow=75,SNR=6.9						
H03N1	Juan Fernandez	146.66	95	T	T	05 47 46.0	
	baz=291,slow=75,SNR=9.2						

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*NOU **19** 02:48:42.9, 18°.21S×169°.62E, h0km, MLv4.9/8, Vanuatu Islands*
*IDC **19** 02:48:44.9±1.6, 17°.84S×169°.22E, h0km, mb4.0/4, mb1 4.2/6, mb1mx3.7/41, mbtmp4.1/6, ML4.4/2, Error ellipse: s-maj=46.0km s-min=28.8km az=157.0*
*NEIC **19** 02:48:46.9±2.2, 18°.20S±0°.05×169°.38E±0°.08, h10km±2km, mb4.4/4, Error ellipse: s-maj=14.7km s-min=6.3km az=58.0*
ISC 19 02:48:49.5±0.9**, 18°.20S**±0°.06×**169°.36E**±0°.09**, h35**km**, n27, σ1ˢ00**/23**, mb4.2**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.98	295	P	Pn	02 49 05.6	-1.1
DVP	Devils Point	1.21	293	P	Pn	02 49 09.2	-0.8
LIFNC	LIFOU	3.25	218	Pn	Pn	02 49 37.0	-1.1
LIFNC	LIFOU	3.25	218	P	Pn	02 49 36.4	-1.6
SANVU	Saraoutou	3.43	323		Pn	02 49 40.4	-0.1
MARNC	Mare, Loyalty	3.49	201		Pn	02 49 39.9	-1.4
YATNC	Mamie plateau,	4.48	211	P	Pn	02 49 54.2	-0.8
DZM	Mont Dzumac	4.72	215	Pn	Pn	02 49 58.9	+0.6
	2.2nm,0.3s,baz=38,slow=19,SNR=7.8						
PINNC	Pines Island,	4.74	202	Pn	Pn	02 49 58.7	+0.2
OUENC	Ouen Island, N	4.81	209	Pn	Pn	02 50 00.1	+0.6
OUENC	Ouen Island, N	4.81	209	P	Pn	02 49 58.2	-1.3
ONTNC	Ouen Toro	4.91	213		Pn	02 49 59.8	-1.1
ONTNC	Ouen Toro	4.91	213	P	Pn	02 50 00.9	0.0
KOUNC	Koumac, New Ca	5.33	243	P	Pn	02 50 06.5	-0.1
MSVF	Nonsavu	8.29	88	Pn	Pn	02 50 48.3	+1.0
	0.5nm,0.3s,baz=257,slow=13,SNR=13						
MSVF	Nonsavu	8.29	88		Pn	02 50 46.7	-0.7
STKA	Stephens Creek	28.50	236	P	P	02 54 43.1	+1.4
	0.9nm,0.5s,baz=79,slow=10,SNR=1.6						
WB0	Warramunga Arr	33.07	262	P	P	02 55 23.4	+1.3
WRA	Warramunga Arr	33.11	261	P	P	02 55 22.2	-0.3
	0.5nm,0.5s,baz=86,slow=8.4,SNR=8.4						
WRA	Warramunga Arr	33.11	261	IAmb	IAmb	02 55 29.1	
	comp=Z,0.5nm,1.4s						
AS31	Alice Springs	33.50	254	P	P	02 55 26.5	+0.6
AS31				IAmb	IAmb	02 55 30.5	
	comp=Z,2.7nm,0.5s						
ASAR	Alice Springs	33.50	254	P	P	02 55 26.1	+0.2
	comp=Z,3.3nm,0.4s,baz=83,slow=8.4,SNR=26						
H11N1	WAKE ISLAND Hy	37.76	356	T	T	03 36 06.9	
	baz=175,slow=76,SNR=7.4						
H11N3	WAKE ISLAND Hy	37.76	356	T	T	03 36 07.4	
	baz=175,slow=76,SNR=5.0						
H11N2	WAKE ISLAND Hy	37.77	356	T	T	03 36 08.1	
	baz=175,slow=76,SNR=10						
SONM	Songino Array	86.46	323	P	P	03 01 28.1	-0.6
	comp=Z,0.3nm,0.3s,baz=117,slow=5.2,SNR=4.3						
SONM	Songino Array	86.46	323	P	P	03 01 27.3	-1.4
SONM				IAmb	IAmb	03 01 38.9	
	comp=Z,3.7nm,1.4s						

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*NOU **19** 02:54:40.3, 18°.21S×169°.57E, h0km, MLv4.9/14, Vanuatu Islands*
*IDC **19** 02:54:42.8±1.7, 18°.05S×169°.18E, h0km, mb4.2/4, mb1 4.3/6, mb1mx3.8/37, mbtmp4.2/6, ML5.3/1, MS4.4/1, Ms1 4.4/1, ms1mx3.6/26, Error ellipse: s-maj=46.7km s-min=29.0km az=157.0*
*NEIC **19** 02:54:46.2±2.9, 18°.50S±0°.07×169°.31E±0°.07, h10km±1km, mb4.6/10, Error ellipse: s-maj=12.5km s-min=11.4km az=150.0*
ISC 19 02:54:45.6±0.6**, 18°.41S**±0°.06×**169°.23E**±0°.08**, h10**km**, n58, σ1ˢ39**/48**, mb4.4**/9**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.98	309	P	Pb	02 55 02.8	-1.9
DVP	Devils Point	1.20	304	P	Pn	02 55 06.2	-2.3
LIFNC	LIFOU	3.01	218		Pn	02 55 32.5	-0.8
LIFNC	LIFOU	3.01	218	P	Pn	02 55 33.1	-0.2
MARNC	Mare, Loyalty	3.26	200		Pn	02 55 36.0	-0.8
MARNC	Mare, Loyalty	3.26	200	P	Pn	02 55 35.9	-0.8
SANVU	Saraoutou	3.53	326		Pn	02 55 42.5	+2.1
YATNC	Mamie plateau,	4.24	211	P	Pn	02 55 49.8	-0.5
DZM	Mont Dzumac	4.48	215	*e*Pn	Pn	02 55 54.8	+1.1
	18nm,0.3s						
DZM				*e*LR	LR	02 57 01.1	
	comp=Z,4μm,26.5s						
DZM	Mont Dzumac	4.48	215	Pn	Pn	02 55 54.9	+1.2
	2.1nm,0.3s,baz=23,slow=14,SNR=19						
DZM	Mont Dzumac	4.48	215		Pn	02 55 55.2	+1.5
DZM	Mont Dzumac	4.48	215	P	Pn	02 55 55.2	+1.5
PINNC	Pines Island,	4.50	201	Pn	Pn	02 55 53.9	+0.1
OUENC	Ouen Island, N	4.57	209	Pn	Pn	02 55 55.8	+0.9
OUENC	Ouen Island, N	4.57	209	P	Pn	02 55 55.9	+1.1
NOUC	Port Laguerre	4.59	216	P	Pn	02 55 56.1	+1.1
ONTNC	Ouen Toro	4.67	213	Pn	Pn	02 55 56.8	+0.6
ONTNC	Ouen Toro	4.67	213	P	Pn	02 55 57.6	+1.4
KOUNC	Koumac, New Ca	5.13	245	P	Pn	02 56 04.0	+1.5
MSVF	Nonsavu	8.42	87	Pn	Pn	02 56 45.7	-2.0
	1.3nm,0.3s,baz=248,slow=12,SNR=7.6						
MSVF	Nonsavu	8.42	87	P	Pn	02 56 39.4	-8.3
ARMA	Armidale	19.96	230	P	P	02 59 16.1	-2.0
ARMA				IAmb	IAmb	02 59 41.5	
	comp=Z,22nm,1.4s						
CTAO	Charters Tower	21.75	262	P	P	02 59 39.2	+1.7
CTAO				IAmb	IAmb	02 59 53.8	
	comp=Z,21nm,1.4s						
PMG	Port Moresby	23.20	290	LR	LR	03 06 14.3	
	comp=Z,784nm,18.0s,baz=262,slow=30						
CAN	Canberra	24.61	223	P	P	03 00 04.5	-1.6
CAN				IAmb	IAmb	03 00 14.5	
	comp=Z,15nm,1.2s						
STKA	Stephens Creek	28.29	236	P	P	03 00 39.2	-0.1
	comp=Z,1.3nm,0.6s,baz=66,slow=9.6,SNR=5.6						
WRA	Warramunga Arr	32.96	262	P	P	03 01 19.1	-1.6
	comp=Z,1.9nm,0.9s,baz=85,slow=8.3,SNR=16						
WRA	Warramunga Arr	32.96	262	IAmb	IAmb	03 01 21.9	
	comp=Z,0.6nm,1.4s						
BBOO	Buckleboo	33.01	238	P	P	03 01 21.3	+0.2
BBOO				IAmb	IAmb	03 01 27.9	
	comp=Z,18nm,1.3s						
AS31	Alice Springs	33.33	255		P	03 01 23.4	-0.6
AS31				IAmb	IAmb	03 01 25.5	
	comp=Z,4.8nm,0.5s						
ASAR	Alice Springs	33.33	255	P	P	03 01 23.1	-0.8
	comp=Z,7.9nm,0.5s,baz=82,slow=8.6,SNR=77						
ASAR	Alice Springs	33.33	255	P	P	03 01 25.0	+1.1
H11S2	WAKE ISLAND Hy	36.75	356	T	T	03 40 38.8	
	baz=172,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	36.76	356	T	T	03 40 40.8	
	baz=172,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	36.77	356	T	T	03 40 39.3	
	baz=172,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	37.96	356	T	T	03 42 06.3	
	baz=175,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	37.96	356	T	T	03 42 05.5	
	baz=175,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	37.97	356	T	T	03 42 04.5	
	baz=175,slow=76,SNR=22						
ULN	Ulaanbaatar	86.20	323	P	P	03 07 28.7	+1.4
SONM	Songino Array	86.56	323	P	P	03 07 27.7	-1.4
	comp=Z,0.3nm,0.3s,baz=114,slow=3.6,SNR=3.0						
SONM	Songino Array	86.56	323	IAmb	IAmb	03 07 37.8	
	comp=Z,6.9nm,1.4s						
NVAR	Mina Array Bea	88.26	49	P	P	03 07 38.7	+1.1
	comp=Z,0.7nm,0.7s,baz=231,slow=8.7,SNR=7.8						
IL31		89.45	17	P	P	03 07 43.2	+1.0
SNAA	Sanae	89.98	183	PKPdf	P	03 07 48.5	+3.5
VNA3	Neumayer Olymp	90.58	180	PKPdf	P	03 07 48.6	+0.9
VNA2	Neumayer--Watz	90.87	181	PKPdf	P	03 07 48.0	-1.1
	baz=139,slow=3.1						
VNA1	Neumayer--Stat	91.16	181	PKPdf	P	03 07 47.4	-3.0
CONA	Conrad Observa	143.43	330	*e*P	PKPdf	03 14 22.0	+1.5
	comp=Z,6.3nm,1.6s						
SOKA	Soboth	144.71	329	*e*P	PKPdf	03 14 23.5	+0.7
	comp=Z,5.9nm,0.8s						
OBKA	Obir	145.06	329	*e*P	PKPbc	03 14 22.3	-0.5
	comp=Z,6.0nm,1.1s						
KBA	Koelnbreinsper	145.23	331	*e*P	PKPdf	03 14 24.8	+1.0
	comp=Z,12nm,1.2s						
MYKA	Terra Mystica	145.41	330	*i* P	PKPab	03 14 25.2	+1.1
	comp=Z,4.5nm,0.5s						
WATA	Walderalm	145.83	333	*e*P	PKPab	03 14 26.6	+0.9
	comp=Z,12nm,1.3s						
ABTA	Abfaltersbach	145.86	331	*e*P	PKPdf	03 14 25.4	+0.6
	comp=Z,18nm,1.3s						
WTTA	Wattenberg	145.86	332	*e*P	PKPdf	03 14 25.7	+0.9
	comp=Z,22nm,1.4s						
MOTA	Moosalm	146.03	333	*e*P	PKPdf	03 14 26.1	+0.9
	comp=Z,17nm,1.3s						
RETA	Reutte	146.07	334	*e*P	PKPab	03 14 27.4	+0.9
	comp=Z,10.0nm,1.2s						
SQTA	Sankt Quirin	146.08	333	*e*P	PKPdf	03 14 25.9	+0.7
	comp=Z,14nm,1.2s						

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*IDC **19** 02:55:09.3±10.0, 19°.52S×170°.06E, h0km, mb4.6/4, mb1 4.8/4, mb1mx3.9/34, mbtmp4.6/4, MS4.5/1, Ms1 4.4/1, ms1mx3.4/26, Error ellipse: s-maj=293.7km s-min=51.6km az=135.0*
ISC 19 02:55:13.7±3.1**, 19°.8S**±0°.7×**170°.2E**±0°.5**, h35**km**, n18, σ1ˢ42**/17**, mb4.5**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	28.34	239	LR	LR	03 12 01.6	
	comp=Z,930nm,18.4s,baz=33,slow=36						
WRA	Warramunga Arr	33.69	263	P	P	03 01 50.8	-0.9
	5.3nm,1.1s,baz=95,slow=8.4,SNR=5.0						
ASAR	Alice Springs	33.88	257	P	P	03 01 53.6	+0.2
	15nm,0.7s,baz=82,slow=9.1,SNR=13						
CMAR	Chiang Mai Arr	79.54	294	P	P	03 07 18.9	+1.4
	1.2nm,0.3s,baz=131,slow=4.2,SNR=1.7						
SONM	Songino Array	88.19	323	P	P	03 08 00.3	-0.8
	3.0nm,1.0s,baz=125,slow=3.1,SNR=6.0						
CONA	Conrad Observa	145.06	329	*e*P	PKiKP	03 14 49.8	-1.4
	5.4nm,1.3s						
ARSA	Arzberg	145.70	329	*e*P	PKiKP	03 14 49.6	-2.9
	6.3nm,1.4s						
SOKA	Soboth	146.34	329	*e*P	PKiKP	03 14 52.9	-1.0
	17nm,1.0s						
OBKA	Obir	146.69	329	*e*P	PKiKP	03 14 54.0	-0.7
	11nm,0.9s						
KBA	Koelnbreinsper	146.85	331	*e*P	PKiKP	03 14 54.3	-0.8
	13nm,1.1s						
MYKA	Terra Mystica	147.04	330	*e*P	PKiKP	03 14 54.7	-0.7
	13nm,1.1s						
WATA	Walderalm	147.45	333	*e*P	PKiKP	03 14 56.5	+0.2
	26nm,1.8s						
ABTA	Abfaltersbach	147.48	331	*e*P	PKiKP	03 14 56.0	-0.3
	26nm,1.6s						
WTTA	Wattenberg	147.48	332	*e*P	PKiKP	03 14 56.8	+0.4
	28nm,1.4s						
MOTA	Moosalm	147.65	333	*e*P	PKiKP	03 14 58.4	+1.7
	21nm,1.3s						
RETA	Reutte	147.68	334	*e*P	PKiKP	03 14 58.8	+2.1
	22nm,1.6s						
SQTA	Sankt Quirin	147.70	333	*e*P	PKiKP	03 14 58.9	+2.1
	25nm,1.8s						
FETA	Feichten	148.06	333	*e*P	PKPab	03 14 58.8	+0.2
	7.5nm,0.9s						

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*IDC **19** 03:09:57.1±2.4, 13°.60S×166°.99E, h0km, mb4.2/5, mb1 4.2/5, mb1mx3.7/39, mbtmp4.2/5, Error ellipse: s-maj=88.5km s-min=35.0km az=120.0*
*NEIC **19** 03:09:59.8±1.4, 13°.33S±0°.09×166°.8E±0°.2, h10km±1km, mb4.4/9, Error ellipse: s-maj=29.3km s-min=15.3km az=84.0*
ISC 19 03:10:03.2±0.8**, 13°.38S**±0°.10×**166°.7E**±0°.2**, h35**km**, n19, σ1ˢ08**/18**, mb4.3**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.12	166		Pn	03 10 36.2	+0.1
LIFNC	LIFOU	7.37	176	Pn	Pn	03 11 47.7	-0.7
DZM	Mont Dzumac	8.64	181	Pn	Pn	03 12 06.5	+0.6
ONTNC	Ouen Toro	8.88	181	Pn	Pn	03 12 07.6	-1.5
PINNC	Pines Island,	9.21	175	Pn	Pn	03 12 14.1	+0.4
LHI	Lord Howe Isla	19.35	200	P	P	03 14 25.7	-0.1
LHI				IAmb	IAmb	03 14 54.6	
	comp=Z,38nm,0.9s						
PMG	Port Moresby	19.51	280	P	P	03 14 25.7	-2.0
PMG				IAmb	IAmb	03 14 52.2	
	comp=Z,15nm,0.9s						
STKA	Stephens Creek	29.44	227	P	P	03 16 03.6	-0.1
	comp=Z,0.6nm,0.4s,baz=27,slow=11,SNR=4.5						
KNRA	Kununurra	36.72	262	P	P	03 17 07.8	+0.4
USRK	Ussuriysk Ar.	65.42	333	P	P	03 20 44.2	+1.9
	comp=Z,2.1nm,0.7s,baz=123,slow=5.3,SNR=5.0						
USRK	Ussuriysk Ar.	65.42	333	P	P	03 20 42.8	+0.4
QSPA	South Pole Qui	76.64	180	P	P	03 21 51.5	+1.2
QSPA				IAmb	IAmb	03 21 53.6	
	comp=Z,4.1nm,1.1s						
ULN	Ulaanbaatar	80.70	324	P	P	03 22 13.3	+0.3
ULN				IAmb	IAmb	03 22 15.6	
	comp=Z,4.9nm,1.1s						
SONM	Songino Array	81.06	324	P	P	03 22 16.2	+1.4
	comp=Z,0.7nm,0.6s,baz=130,slow=4.9,SNR=5.9						
SONM	Songino Array	81.06	324	IAmb	IAmb	03 22 16.9	
	comp=Z,3.5nm,1.2s						
IL31		85.44	18	P	P	03 22 35.9	-0.9
IL31				IAmb	IAmb	03 22 57.5	
	comp=Z,3.4nm,1.1s						
ILAR	Eielson Array	85.44	18	P	P	03 22 36.8	0.0
	comp=Z,0.7nm,0.4s,baz=236,slow=4.9,SNR=16						
KVN	Kaiserville	87.21	49	P	P	03 22 44.8	-1.6
ZALV	Zalesovo Beam	95.96	324	P	P	03 23 26.3	-0.1
	comp=Z,0.5nm,0.3s,baz=120,slow=8.5,SNR=2.3						

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*IDC **19** 03:10:32.4±6.1, 6°.31S×154°.41E, h81km±48km, mb3.4/5, mb1 3.8/6, mb1mx3.3/41, mbtmp3.9/6, ML2.9/1, Error ellipse: s-maj=45.6km s-min=32.7km az=114.0*
ISC 19 03:10:28.2±1.2**, 6°.4S**±0°.2×**154°.7E**±0°.2**, h48**km**, n13, σ1ˢ83**/18**, mb4.5**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.03	247	P	Pn	03 12 23.7	+1.4
	8.8nm,0.3s,baz=51,slow=9.7,SNR=20						
PMG				S	Sn	03 13 51.2	-0.7
	2.1nm,0.3s,baz=327,slow=23,SNR=6.3						
WRA	Warramunga Arr	23.92	234	P	P	03 15 37.3	-0.6
	3.4nm,0.8s,baz=60,slow=9.8,SNR=5.7						
WRA				PcP	PcP	03 19 20.1	+0.4
	1.7nm,0.9s,baz=85,slow=2.2,SNR=9.3						
ASAR	Alice Springs	26.36	227	P	P	03 15 59.2	-0.9
	0.4nm,0.7s,baz=57,slow=9.8,SNR=6.6						
ASAR				PcP	PcP	03 19 25.6	+0.4
	0.6nm,0.7s,baz=49,slow=2.5,SNR=5.4						
CMAR	Chiang Mai Arr	60.22	295	P	P	03 20 32.1	+0.2
	0.8nm,0.3s,baz=117,slow=5.8,SNR=5.0						
CMAR				pP	pwP	03 20 55.7	+5.2
	1.0nm,0.4s,baz=110,slow=14,SNR=1.8						
SONM	Songino Array	68.63	327	P	P	03 21 25.1	-1.4
	0.6nm,0.7s,baz=132,slow=8.8,SNR=2.6						
JIRN	Jiri	74.18	301	*e*P	P	03 21 59.9	-0.8
	12nm,0.7s						
GUN	Gumba	74.51	301	*e*P	P	03 22 01.6	-1.0
	23nm,0.7s						
DMN	Daman	75.09	301	*e*P	P	03 22 05.1	-0.8
	40nm,0.9s						
GKN	Gorkha	75.60	301	*e*P	P	03 22 07.4	-1.2
DANN	Dangsing	76.43	301	*e*P	P	03 22 12.1	-1.5
	23nm,0.7s						
PYUN	Piuthan	77.03	301	*e*P	P	03 22 15.0	-1.8
	28nm,0.9s						
NVAR	Mina Array Bea	91.58	52	P	P	03 23 31.9	+1.4
	0.4nm,0.5s,baz=243,slow=6.0,SNR=3.9						
TORD	Torodi Ar. Bea	152.54	286	PKPbc	PKPbc	03 30 18.7	-1.7
	1.0nm,0.6s,baz=60,slow=2.6,SNR=8.8						
TORD				PKPab	PKPab	03 30 29.2	-1.7
	1.8nm,0.7s,baz=72,slow=3.8,SNR=9.9						

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*NSSP **19** 03:21:26.1, 38°.75N×44°.03E, h5km, Ms3.5*
*TEH **19** 03:21:29.7, 39°.02N×43°.81E, h7km, ML3.4*
*DDA **19** 03:21:29.2, 39°.02N×43°.82E, h4km±3km, ML3.3*
ISC 19 03:21:30.0±1.2**, 39°.03N**±0°.02×**43°.81E**±0°.02**, h1**km±11km**, n58, σ1ˢ31**/68**, 3C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLDR	Caldiran	0.14	37	*i* P	Pg	03 21 32.5	-0.4
CLDR	Caldiran	0.14	37	*e*Pg	Pg	03 21 32.6	-0.2
ERCV	ERCIS-VAN	0.37	268	*e*Pg	Pg	03 21 37.0	-0.1
OZAP	Van, Ozalp-Mer	0.40	159	*i* P	Pg	03 21 37.5	-0.1
AGRB	Hanur-Agry	0.83	311	*e*Pg	Pg	03 21 45.5	-0.6
IGDI	IGDIR	0.86	14	*i* P	Pg	03 21 46.1	-0.6
IGDI	IGDIR	0.86	14	*e*Pg	Pg	03 21 46.0	-0.6
ADCV	BITLIS_Adilcev	0.87	256	*i* P	Pg	03 21 46.4	-0.4
ADCV				*i* S	Sb	03 22 00.0	-0.4
ADCV				IAML		03 22 02.0	
	comp=E,939nm,0.4s						
ADCV				IAML		03 22 03.0	
	comp=N,802nm,0.4s						
ADCV	BITLIS_Adilcev	0.87	256	*e*Pg	Pg	03 21 46.3	-0.4
KOTA	Agri, Merkez-K	0.90	329	*i* P	Pg	03 21 46.5	-0.8
AKDM	Akdamar-Van	0.95	223	*e*Pg	Pg	03 21 47.4	-0.9

MLAZ	Malazgirt-MUS	0.98	277	*e*Pg	Pg	03 21 48.7	-0.2
TASB	TASBURUN-IGDIR	1.01	19	*e*Pg	Pg	03 21 49.1	-0.3
VNNZ	Vanand	1.07	1	*i* P	Pg	03 21 50.4	-0.2
VNNZ				*i* S	Sn	03 22 10.3	+2.4
NRKZ	NAREK	1.17	34	*i* P	Pn	03 21 53.2	-0.4
NRKZ				*i* S	Sn	03 22 11.4	+1.1
EATA	Eleskirt	1.31	310	*i* P	Pb	03 21 55.0	-0.7
EATA	Eleskirt	1.31	310	*e*Pg	Pb	03 21 55.0	-0.7
GNI	Garni	1.33	33	*i* P	Pn	03 21 54.6	-1.3
GNI				*i* S	Sn	03 22 17.2	+2.8
GNI	Garni	1.33	33	*e*Pg	Pn	03 21 54.8	-1.1
BLIS	Bitlis-Merkez	1.46	246	*i* P	Pn	03 21 56.1	-1.6
BLIS				*i* S	Sg	03 22 18.1	+1.2
BLIS				IAML		03 22 21.0	
	comp=E,410nm,0.9s						
BLIS				IAML		03 22 24.0	
	comp=N,439nm,0.6s						
BLIS	Bitlis-Merkez	1.46	246	*e*Pn	Pn	03 21 56.1	-1.6
KAPZ	Kaputan	1.46	28	*i* P	Pn	03 21 56.9	-0.9
KAPZ				*i* S	Sg	03 22 18.9	+1.8
GURO	Guroymak-BITLI	1.47	252	*e*Pn	Pn	03 21 56.4	-1.4
PERV	Siirt/Pervari-	1.47	223	*i* P	Pg	03 21 59.0	+0.8
HAKT	HAKKARI	1.47	183	*i* P	Pb	03 21 57.2	-1.2
HAKT	HAKKARI	1.47	183	*e*Pg	Pb	03 21 57.2	-1.2
YOVA	Hakkari_Yksek	1.49	165	*i* P	Pb	03 21 57.4	-1.2
YOVA	Hakkari_Yksek	1.49	165	*e*Pg	Pb	03 21 57.4	-1.2
IMRD	Marand	1.51	101	*e*Pg	Pn	03 21 57.0	-1.5
IMRD				*e*Sg	Sg	03 22 20.1	+1.4
IMRD				*e*		03 22 23.4	
	comp=Z,11μm,0.4s						
CUKT	Cukurca	1.79	185	*i* P	Pb	03 22 02.4	-1.3
CUKT	Cukurca	1.79	185	*e*Pn	Pb	03 22 02.4	-1.3
VRTB	Varto-Mus	1.83	275	*i* P	Pb	03 22 03.8	-0.8
VRTB	Varto-Mus	1.83	275	*e*Pn	Pb	03 22 03.7	-0.8
SIRT	Sirnak	1.87	216	*e*Pn	Pb	03 22 04.5	-0.5
STE	Stepanavan	2.01	12	⇑*i*P	Pb	03 22 06.3	-1.3
STE				⇑S	Sg	03 22 37.3	+2.5
GRS	Goris	2.02	76	⇑*i*P	Pn	03 22 02.0	-3.3
GRS				⇓*i*S	Sn	03 22 29.0	-2.3
ERZM	Erzurum	2.08	296	*i* P	Pg	03 22 09.3	-0.7
EJDE	Erzurum, Palan	2.10	293	*i* P	Pn	03 22 07.0	+0.3
SLHN	Bingol, Solhan	2.17	269	*i* P	Pb	03 22 10.0	-0.2
IAZR	Azarshahr	2.18	128	*e*Pn	Pb	03 22 08.2	-2.2
IAZR				*e*		03 23 00.9	
	comp=Z,3μm,0.7s						
SVAN	Silvan-Diyarba	2.23	248	*i* P	Pb	03 22 09.4	-1.8
SVAN				*i* S	Sb	03 22 38.8	-0.4
SVAN	Silvan-Diyarba	2.23	248	*e*Pn	Pb	03 22 09.3	-1.8
DDEM	Demirkent	2.44	320	*i* P	Pg	03 22 15.7	-1.1
MIDY	Mardin/Midyat-	2.50	230	*i* P	Pn	03 22 12.4	+0.5
EPOS	Posof	2.60	342	*i* P	Pb	03 22 17.8	+0.1
MAHB	Mahabad	2.71	146	*e*Pn	Pn	03 22 15.9	+1.0
HANI	Diyarbakir_Han	2.74	258	*i* P	Pb	03 22 18.3	-1.6
KOPT	Kop Dagi	2.74	292	*i* P	Pn	03 22 15.3	-0.2
IBST	Bostanabad	2.76	118	*e*Pn	Pn	03 22 16.0	+0.3
DBOC	Borcka	2.83	325	*i* P	Pb	03 22 19.7	-1.8
BAYB	BAYBURT	3.00	295	*i* P	Pb	03 22 23.6	-0.8
KOVA	Elazig, Kovanc	3.13	265	*i* P	Pg	03 22 28.7	-1.5
EUZM	Uzumlu	3.26	283	*i* P	Pb	03 22 29.5	+0.8
ISRB	Sarab	3.26	110	*e*Pn	Pn	03 22 23.5	+1.0
ISRB				*e*		03 22 30.1	
	comp=Z,950nm,0.4s						
IDHR	Dehrash	4.79	154	*e*Pn	Pn	03 22 45.4	+1.8
IGHG	Ghaleghazi	5.19	154	*e*Pn	Pn	03 22 51.0	+1.9
QABG	Abgarm-Qazvin	5.67	124	*e*Pn	Pn	03 22 55.0	-0.6
QALM	Alamut, Qazvin	6.01	113	*e*Pn	Pn	03 23 02.4	+2.1

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*JMA **19** 03:27:47.3±0.1, 22°.90N×121°.36E, h39^{km}, M3.4*
*TAP **19** 03:27:48.7, 22°.91N×121°.33E, h36^{km}, ML3.5, C*
ISC 19 03:27:48.5±0.9**, 22°.89N**±0°.02×**121°.40E**±0°.02**, h33**^{km}±3^{km}**,**
n78, σ1^{s}.05/131**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDH	Donghe	0.12	315	P	Pb	03 27 54.7	+0.3
	baz=339						
EDH				*e*S	Sb	03 27 59.4	+0.9
	baz=339						
CHKT	Chengkung	0.22	352	P	Pb	03 27 55.7	+0.4
	baz=11						
CHKT				*e*S	Sb	03 28 00.1	+0.3
	baz=11						
LDUT	Ludao	0.22	163	*e*P	Pb	03 27 56.0	+0.7
	baz=146						
LDUT				S	Sb	03 28 01.7	+1.7
	baz=146						
LONT	Longtian	0.25	275	*e*P	Pn	03 27 55.5	-0.3
	baz=270						
LONT				S	Sn	03 28 00.3	+0.6
	baz=270						
TTN	Taitung	0.27	241	P	Pb	03 27 56.5	+0.7
	baz=236						
TTN				S	Sb	03 28 03.0	+2.2
	baz=236						
TWGBT	Beinan	0.30	257	P	Pb	03 27 55.8	-0.5
	baz=258						
TWGBT				S	Sn	03 28 00.9	-0.7
	baz=258						
TWG	Pinlang	0.31	258	P	Pb	03 27 55.8	-0.6
	baz=258						
TWG				S	Sn	03 28 00.9	-1.0
	baz=258						
FULB	Fuli	0.33	343	*e*P	Pb	03 27 56.6	0.0
	baz=345						
FULB				*e*S	Sn	03 28 02.8	+0.4
	baz=345						
ELDTW	Lidau	0.46	311	P	Pb	03 27 57.6	-1.1
	baz=315						
ELDTW				*e*S	Sb	03 28 03.5	-2.1
	baz=315						
ECL	Taimali	0.50	235	P	Pb	03 27 58.0	-1.2
	baz=229						
ECL				*e*S	Sb	03 28 04.7	-1.7
	baz=229						
YULB	Yu-li	0.51	350	P	Pn	03 27 57.9	-1.7
	baz=346						
YULB				*e*S	Sb	03 28 04.7	-2.1
	baz=346						
HGSD	Ruisui	0.60	2	*e*P	Pn	03 28 00.2	-0.7
	baz=8.0						
HGSD				S	Sb	03 28 10.2	+0.9
	baz=8.0						
STYH	Taoyuan	0.64	296	*e*P	Pn	03 28 00.7	-0.6
	baz=303						
TAW	Tawu	0.70	222	*e*P	Pn	03 28 01.0	-1.1
	baz=216						
TAW				*e*S	Sn	03 28 10.2	-1.6
	baz=216						
EAST	Anshuo	0.71	226	P	Pn	03 28 01.3	-1.1
	baz=215						
SSD	Sandimen	0.72	259	P	Pn	03 28 01.6	-0.8
	baz=256						
SSD				*e*S	Sn	03 28 10.1	-2.2
	baz=256						
MASBT	Mashibuluo	0.76	249	P	Pn	03 28 02.4	-0.5
	baz=246						
MASBT				*e*S	Sn	03 28 11.5	-1.7
	baz=246						
SGST	Jiashian	0.78	285	*e*P	Pn	03 28 02.6	-0.6
	baz=291						
SGST				*e*S	Sn	03 28 13.9	+0.2
	baz=291						
WTP	Ta-pu	0.81	297	*e*P	Pn	03 28 03.9	+0.3
	baz=297						
WTP				*e*S	Sn	03 28 14.9	+0.4
	baz=297						
TPUB	Ta-pu	0.82	300	*e*P	Pn	03 28 04.0	+0.2
	baz=302						
TPUB				*e*S	Sn	03 28 15.4	+0.6
	baz=302						
ALS	Alishan	0.83	319	P	Pn	03 28 04.0	-0.1
	baz=326						
ALS				S	Sn	03 28 15.3	-0.1
	baz=326						
LAY	Lan-yu	0.85	170	*e*P	Pn	03 28 03.9	-0.3
	baz=157						
CHN1	Nanshi	0.86	291	P	Pn	03 28 05.0	+0.7
	baz=297						
CHN1				*e*S	Sb	03 28 16.9	+0.6
	baz=297						
SLIU	Shizi	0.87	220	*e*P	Pn	03 28 03.6	-0.8
	baz=202						
CHN4	Tsaushan	0.88	302	P	Pn	03 28 05.2	+0.7
	baz=304						
CHN4				*e*S	Sb	03 28 17.5	+0.8
	baz=304						
SCZT	Fangliau	0.88	235	*e*P	Pn	03 28 04.2	-0.4
	baz=230						
SNST	Tainan City	0.90	292	*e*P	Pn	03 28 05.6	+0.8
	baz=293						
SNST				*e*S	Sb	03 28 18.2	+0.9
	baz=293						
VWDT	VWDT	0.90	345	*e*P	Pn	03 28 04.2	-0.7
	baz=358						
VWDT				*e*S	Sn	03 28 15.8	-0.8
	baz=358						
TWM1	Shoushan	0.90	266	*e*P	Pb	03 28 07.4	+1.6
	baz=265						
TWM1				*e*S	Sb	03 28 20.2	+2.6
	baz=265						
ESL	Shilin	0.93	2	*e*P	Pn	03 28 03.2	-2.1
	baz=6.0						
ESL				*e*S	Sn	03 28 13.9	-3.5
	baz=6.0						
SSLB	Suanglung	0.99	336	*e*P	Pn	03 28 06.2	0.0
	baz=343						
SSLB				*e*S	Sn	03 28 18.2	-0.8
	baz=343						
CHN2	Minshiung	1.07	307	*e*S	Sb	03 28 23.7	+1.5
	baz=309						
TSEB	Hengchuen, Pin	1.08	205	*e*S	Sb	03 28 22.2	-0.4
	baz=194						
OWD	Renai	1.08	349	*e*S	Sn	03 28 19.3	-2.3
	baz=359						
CHY	Chiayi	1.08	304	*e*P	Pn	03 28 08.3	+0.9
	baz=306						
CHY				*e*S	Sb	03 28 23.0	+0.3
	baz=306						
TWKBT	Hengchun	1.08	210	*e*P	Pn	03 28 07.2	-0.2
	baz=197						
TWKBT				*e*S	Sn	03 28 21.4	+0.1
	baz=197						
TWK1	Hengchun	1.09	210	*e*P	Pn	03 28 07.2	-0.3
	baz=197						
TWK1				*e*S	Sn	03 28 21.4	0.0
	baz=197						
SMLT	Sun Moon Lake	1.09	335	*e*P	Pn	03 28 08.5	+0.8
	baz=338						
SMLT				*e*S	Sn	03 28 21.4	-0.3
	baz=338						
WJS	Zhushan	1.12	327	*e*S	Sb	03 28 24.1	+0.4
	baz=329						
WDLH	Douliu	1.13	315	*e*P	Pn	03 28 08.7	+0.7
	baz=317						
WDLH				*e*S	Sb	03 28 23.9	+0.1
	baz=317						
TYC	Yuchr	1.13	334	*e*P	Pn	03 28 09.0	+0.9
	baz=349						
TYC				*e*S	Sn	03 28 23.8	+1.4
	baz=349						
CHN8	Yiju	1.19	293	*e*S	Sb	03 28 25.9	+0.4
	baz=294						
WNT	Mingjian	1.19	327	*e*P	Pn	03 28 10.2	+1.4
	baz=329						
WNT				*e*S	Sb	03 28 26.0	+0.4
	baz=329						
CHGB	Renai	1.19	350	*e*P	Pn	03 28 08.9	-0.2
	baz=359						
CHGB				*e*S	Sn	03 28 22.7	-1.5
	baz=359						
TWD	Chiawan	1.20	9	*e*P	Pn	03 28 07.9	-1.1
	baz=5.0						
WCS	Beigang Elemen	1.25	339	*e*S	Sn	03 28 25.7	+0.3
	baz=342						
WHF	Hehuan Shan	1.26	354	*e*S	Sn	03 28 24.1	-2.2
	baz=6.0						
NACB	Ninganchiao	1.30	8	*e*P	Pn	03 28 08.8	-1.6
	baz=13						
ETLH	Xiulin Townshi	1.32	3	*e*P	Pn	03 28 09.1	-1.7
	baz=17						
TWT	Tachien	1.38	352	*e*P	Pn	03 28 11.8	+0.2
	baz=1.0						
TWT				*e*S	Sn	03 28 27.5	-1.3
	baz=1.0						
TDCB	Techi	1.38	351	*e*P	Pn	03 28 11.8	+0.2
	baz=3.0						
WHP	Taichung City	1.45	343	*e*P	Pn	03 28 14.1	+1.6
	baz=353						
WHP				*e*S	Sb	03 28 33.0	-0.1
	baz=353						
NNSB	Datong	1.54	359	*e*P	Pn	03 28 13.5	-0.3
	baz=14						
TWQ1	Liyutan	1.57	339	*e*P	Pn	03 28 16.0	+1.9
	baz=341						
TWQ1				*e*S	Sb	03 28 35.6	-0.8
	baz=341						
ENA	Nanau	1.57	11	*e*P	Pn	03 28 13.2	-0.9
	baz=7.0						
WDJ	Dajia District	1.61	335	*e*S	Sb	03 28 37.3	-0.5
	baz=337						
NSY	Sanyi	1.63	339	*e*P	Pn	03 28 16.9	+1.9
	baz=341						
NSY				*e*S	Sb	03 28 37.8	-0.5
	baz=341						
WDGT	Dungji	1.64	283	*e*P	Pn	03 28 14.8	-0.3
	baz=283						
NDT	Datong Townshi	1.71	3	*e*P	Pn	03 28 17.2	+1.1
	baz=16						
ENTT	Nioudou	1.75	5	*e*P	Pn	03 28 16.4	-0.3
	baz=19						
TWC	Suao	1.77	13	*e*P	Pn	03 28 17.3	+0.5
	baz=9.0						
NSTT	Nanjuang	1.78	348	*e*P	Pn	03 28 18.5	+1.5
	baz=350						
NSTT				*e*S	Sn	03 28 39.8	+1.4
	baz=350						
YHNB	Yeheng	1.78	359	*e*P	Pn	03 28 17.4	+0.4
	baz=12						
YHNB				*e*S	Sn	03 28 37.5	-1.0
	baz=12						
NSK	Sanguang	1.78	359	*e*P	Pn	03 28 17.5	+0.4
	baz=12						
NSK				*e*S	Sn	03 28 38.1	-0.6
	baz=12						
LIOB	Emei	1.79	349	*e*P	Pn	03 28 18.3	+1.2
	baz=351						
LIOB				*e*S	Sn	03 28 39.9	+1.1
	baz=351						
PNG	Penghu	1.83	292	*e*P	Pn	03 28 17.5	-0.1
	baz=279						
NWLT	Wulai	1.89	3	*e*P	Pn	03 28 18.7	+0.2
	baz=19						
JYNG	Yonagunijimaku	2.11	42	P	Pn	03 28 21.5	0.0
JYNG				S	Sn	03 28 47.1	+0.5
TIPB	Shuangxi	2.11	11	*e*P	Pn	03 28 21.9	+0.3
	baz=12						
TIPB				*e*S	Sn	03 28 46.5	-0.3
	baz=12						
YOJ	Yonaguni jima	2.16	43	P	Pn	03 28 23.2	+1.0
YOJ				S	Sn	03 28 48.3	+0.5
NWF	Wu-fen Shan	2.20	9	*e*P	Pn	03 28 23.5	+0.6
	baz=10.0						
NWF				*e*S	Sn	03 28 48.5	-0.6
	baz=10.0						
YM01	YM01	2.26	4	*e*P	Pn	03 28 24.1	+0.5
	baz=16						
YM01				*e*S	Sn	03 28 49.6	-0.7
	baz=16						
HATJ	Hateruma jima	2.50	62	P	Pn	03 28 27.5	+0.6
HATJ				S	Sn	03 28 56.2	0.0
IRIF	Iriomote-Funau	2.58	56	P	Pn	03 28 29.0	+1.0
IRIF				S	Sn	03 28 59.0	+0.8
JKRS	Kuro-shima	2.75	60	P	Pn	03 28 31.2	+0.9
JKRS				S	Sn	03 29 02.3	-0.1
JIJ	Ishigaki jima	2.92	59	P	Pn	03 28 33.2	+0.6
JIJ				S	Sn	03 29 06.0	-0.5
JISG	Ishigakijimahi	3.16	57	P	Pn	03 28 36.3	+0.3
JISG				S	Sn	03 29 11.5	-1.1
JTJ	Tarama	3.50	59	P	Pn	03 28 41.2	+0.6
JTJ				S	Sn	03 29 20.5	-0.3

NNC 19 03:54:52.3±4.1**, 38°.33N×73°.27E, h0**^{km}**, mb3.5, mpv3.1,**
6C-1D, Error ellipse: s-maj=29.4km s-min=20.0km
az=169.0, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.41	12	⇑Pg	Pb	03 56 13.4	+2.8
	6.4nm,1.4s						
AAK				⇑Lg	Lg	03 57 13.7	
	3.1nm,0.9s						
TKM2	Tokmak 2	4.92	20	⇑Pg	Pb	03 56 20.8	+1.4
	3.5nm,0.9s						
TKM2				⇑Lg	Lg	03 57 29.5	
	4.8nm,1.2s						
KK09	Karatay Array	5.23	337	⇓Pn	Pn	03 56 12.0	+0.2
	0.9nm,0.5s,baz=150,slow=12						
KK09				⇑Sn	Sn	03 57 13.7	+0.8
	1.5nm,0.6s,baz=156,slow=27						
KK09				⇑Lg	Lg	03 57 38.1	
	2.4nm,0.8s						

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*IDC **19** 03:58:28.1±3.9, 38°.21N×73°.00E, h0^{km}, mb4.0/4,*
mb1 4.0/6, mb1mx3.5/40, mbtmp3.8/6, ML2.7/1, Error
ellipse: s-maj=75.9km s-min=32.6km az=176.0
*NEIC **19** 03:58:37.1±2.3, 38°.63N±0°.03×73°.13E±0°.08, h21^{km}±6^{km},*
mb4.4/3, Error ellipse: s-maj=9.8km s-min=3.1km
az=111.0
*NNC **19** 03:58:38.5±2.7, 38°.96N×73°.19E, h0^{km}, mb4.1, mpv3.7,*
Error ellipse: s-maj=20.6km s-min=12.9km az=170.0
ISC 19 03:58:34.3±0.7**, 38°.64N**±0°.05×**73°.17E**±0°.06**, h10**^{km}**, n34,**
σ1^{s}.89/35**, mb4.3**/6**, 1C-2D, Tajikistan-Xinjiang border**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	Garm	2.25	280	Pn	Pn	03 59 12.8	+1.1
BTK	Batken	2.31	309	Pn	Pn	03 59 13.5	+1.0
CHGR	Chuyangaron	3.14	272		Pn	03 59 24.9	+1.1
TAS	Tashkent	4.00	313	Pn	Pn	03 59 37.8	+2.1
AAK	Ala-Archa	4.12	14	⇓Pn	Pn	03 59 39.8	+2.4
	14nm,0.7s						
AAK				Lg	Lg	04 00 39.2	
	42nm,0.8s						
AAK	Ala-Archa	4.12	14	Pn	Pn	03 59 38.3	+0.9
FRU1	Bishkek	4.31	14	Pn	Pn	03 59 41.2	+1.2
BOOM	Boomskoye usch	4.39	28	Pn	Pn	03 59 43.4	+2.3
TKM2	Tokmak 2	4.66	23	Pg	Pg	04 00 01.7	-1.8
	8.2nm,0.6s						
TKM2				Lg	Lg	04 00 57.0	
	12nm,0.6s						
TARG	Taragay, Kyrgy	4.71	48	Pn	Pn	03 59 47.5	+1.8
KST	Kastek	4.88	25	Pg	Pb	04 00 02.3	+2.3
	13nm,0.4s						
KST				Lg	Lg	04 01 05.9	
	21nm,0.8s						
KKAR	Karatay Array	4.89	337	Pn	Pn	03 59 49.6	+1.8
KK09	Karatay Array	4.91	337	⇑Pn	Pn	03 59 48.7	+0.6
	3.1nm,0.3s						
KK09				Sn	Sn	04 00 45.9	+0.8
	26nm,0.8s						
SGDS	Sogindy	4.93	12	Pg	Pb	04 00 01.4	+0.6
	8.0nm,0.7s						
SGDS				Lg	Lg	04 01 05.3	
	9.6nm,0.8s						
NIL	Nilore	4.98	179	Pn	Pn	03 59 52.4	+3.2
DGS	Degeres	5.00	22	Pg	Pb	04 00 01.9	-0.1
	8.9nm,0.7s						
DGS				Lg	Lg	04 01 05.8	
	10nm,0.7s						
TNSS	Tian-Shan	5.25	32	Pg	Pb	04 00 07.7	+1.4
	7.9nm,0.7s						
TNSS				Lg	Lg	04 01 15.2	
	7.3nm,0.8s						
KBL	Kabul	5.27	220	Pn	Pn	03 59 55.4	+2.1
ARXS	Arharly	6.58	31	Pg	Pb	04 00 31.9	+3.2
	3.8nm,0.7s						
ARXS				Lg	Lg	04 01 57.1	
	6.9nm,0.8s						
DHRM	DHARAMSHALA	6.87	157	*e*P	Pb	04 00 29.0	-4.8
DHRM				*e*S	Sn	04 01 35.9	+2.3
SMLA	Simla	8.18	155	*e*S	Sn	04 02 01.8	-3.7
MKAR	Makanchi Array	10.55	37	Pn	Pn	04 01 07.0	+1.5
	0.1nm,0.3s,baz=216,slow=13,SNR=2.6						
AB31	Akbulak array	14.24	322	Pn	Pn	04 01 56.6	+0.8
	0.6nm,0.5s,baz=130,slow=14,SNR=23						
AB31				⇓Sn	Sn	04 04 35.2	+1.5
	3.1nm,1.0s,baz=135,slow=23,SNR=5.2						
ABKAR	Akbulak array	14.24	322		Pn	04 01 54.8	-1.0
ZALV	Zalesovo Beam	17.26	24	P	P	04 02 37.7	+0.9
	baz=196,slow=9.9,SNR=1.8						
ZALV	Zalesovo Beam	17.26	24	Pn	Pn	04 02 35.2	0.0
SONM	Songino Array	25.73	58	P	P	04 04 03.6	-1.2
	1.0nm,0.7s,baz=262,slow=9.6,SNR=8.7						
SONM	Songino Array	25.73	58	IAmb	IAmb	04 04 11.9	
	comp=Z,8.7nm,1.9s						
ULN	Ulaanbaatar	26.17	58	P	P	04 04 06.5	-2.4
ULN				IAmb	IAmb	04 04 08.0	
	comp=Z,15nm,1.9s						
ILGA	Ilgaz	30.21	287	P	P	04 04 44.8	-0.3
ILGA				IAmb	IAmb	04 05 15.4	
	comp=Z,26nm,1.0s						
FINES	FINESS Array B	36.72	324	P	P	04 05 39.1	-2.1
	comp=Z,4.7nm,1.0s,baz=125,slow=12,SNR=1.6						
FINES	FINESS Array B	36.72	324	P	P	04 05 42.1	+0.9
ARCES	ARCESS Array B	39.86	336	P	P	04 06 05.5	-2.0
	comp=Z,8.8nm,1.1s,baz=112,slow=7.1,SNR=2.5						
YKA	Yellowknife Ar	79.02	4	P	P	04 10 35.4	-2.6
	comp=Z,0.3nm,0.7s,baz=351,slow=5.6,SNR=3.3						

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*IDC **19** 04:16:17.8±0.9, 60°.00N×141°.85W, h0^{km}, mb3.5/10,*
mb1 3.7/13, mb1mx3.6/69, mbtmp3.5/13, ML3.1/3, Error
ellipse: s-maj=22.3km s-min=12.4km az=49.0
*PGC **19** 04:16:18.2±0.2, 59°.90N×141°.70W, h2^{km}, ML3.6, ML3.1/6,*
141km Wnw of Yakutat, Ak Southeastern Alaska
*ANF **19** 04:16:19.5±0.4, 60°.00N×141°.52W, h16^{km}±2^{km}, ML4.0/32,*
Error ellipse: s-maj=4.0km s-min=2.3km az=14.0
*AEIC **19** 04:16:19±1.7, 60°.00N±0°.03×141°.55W±0°.04, h18^{km}±4^{km},*
ML3.7, mb3.9/3(NEIC), ML3.9/110(NEIC), Error ellipse:
s-maj=4.2km s-min=2.9km az=187.0
*NEIC **19** 04:16:20.0±1.6, 59°.99N±0°.03×141°.56W±0°.04, h20^{km}±4^{km},*
Error ellipse: s-maj=4.8km s-min=2.9km az=190.0
ISC 19 04:16:19.2±1.0**, 59°.99N**±0°.03×**141°.56W**±0°.02**, h13**^{km}±6^{km}**,**
n248, σ1^{s}.12/282**, mb3.6**/10**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHX	Chaix Hills	0.23	72		Pb	04 16 24.7	-0.7
MESA	MESA	0.27	314		Pg	04 16 25.1	0.0
MESA	MESA	0.27	314		Sb	04 16 30.8	+0.1
MESA	MESA	0.27	314	P	Pg	04 16 25.1	0.0
	baz=132,SNR=1000						
MESA				S	Sb	04 16 31.0	+0.4
	baz=132						
MESA	MESA	0.27	314	P	Pg	04 16 25.1	0.0
YAH	Yahtse	0.39	346		Pb	04 16 27.3	-0.8
YAH	Yahtse	0.39	346	IAML		04 16 36.5	
	comp=N,15μm,0.6s						
YAH				IAML		04 16 36.8	
	comp=E,7μm,0.7s						
SAMH	Samovar Hills	0.42	70		Pb	04 16 28.1	-0.3
SAMH					Sb	04 16 35.7	+1.0
SAMH	Samovar Hills	0.42	70	P	Pb	04 16 28.1	-0.3
CYK	Cape Yakataga	0.47	282		Pb	04 16 29.3	0.0
CYK					Sn	04 16 37.8	-2.0
TABL	Table Mountain	0.50	25		Pb	04 16 29.4	-0.6
TABL				IAML		04 16 38.3	
	comp=N,9μm,0.7s						
TABL				IAML		04 16 39.2	
	comp=E,8μm,0.8s						
TABL	Table Mountain	0.50	25		Sb	04 16 37.8	+0.6
TABL	Table Mountain	0.50	25	P	Pb	04 16 29.4	-0.6
TABL				S	Sb	04 16 37.2	0.0
BAGL	Bagley Icefiel	0.57	333		Pb	04 16 30.4	-0.6
PCA	Pinnacle	0.66	80		Pg	04 16 32.0	-0.1
PCA					Sb	04 16 42.4	+0.6
PCA	Pinnacle	0.66	80	P	Pg	04 16 32.1	-0.1
PCA				S	Sb	04 16 41.3	-0.5
PINM	Pinnacle	0.67	80	P	Pg	04 16 32.1	-0.1
	baz=262,SNR=182						
PINM				S	Sb	04 16 42.3	+0.4
	baz=262						
SNH	Sunshine Point	0.67	287	Pg	Pg	04 16 32.1	-0.1
SNH				IAML		04 16 44.5	
	comp=E,5μm,0.7s						
ISLE	Juniper Island	0.73	328		Pg	04 16 33.0	-0.4
ISLE					Sn	04 16 44.4	-1.9
ISLE	Juniper Island	0.73	328	IAML		04 16 45.2	
	comp=E,7μm,0.9s						
GRNC	Granite Creek	0.75	353		Pg	04 16 33.4	-0.4
GRNC				IAML		04 16 45.2	
	comp=N,5μm,0.7s						

GRNC	Granite Creek	0.75	353	P	Pg	04 16 33.4	-0.4
GRNC				S	Sb	04 16 44.8	+0.4
WAX	Waxell Ridge	0.79	306		Pb	04 16 33.6	-1.2
WAX				IAML		04 16 46.8	
	comp=E,7µm,0.6s						
WAX	Waxell Ridge	0.79	306		Sn	04 16 46.1	-1.8
BGLC	Bering Glacier	0.87	279		Pn	04 16 36.2	-0.9
BGLC	Bering Glacier	0.87	279	P	Pn	04 16 36.2	-0.9
	baz=97						
LOGN	Logan Glacier	0.88	18		Pb	04 16 35.0	-1.4
LOGN				IAML		04 16 48.9	
	comp=N,3µm,0.6s						
LOGN				IAML		04 16 49.9	
	comp=E,3µm,0.6s						
LOGN	Logan Glacier	0.88	18		Sg	04 16 48.1	+0.2
LOGN	Logan Glacier	0.88	18	P	Pb	04 16 35.4	-1.0
LOGN				S	Sg	04 16 48.3	+0.4
GRIN	Grindle Hills	0.93	289		Pb	04 16 36.7	-0.4
KHIT	Khitrov Hills	0.96	299		Pb	04 16 36.8	-0.9
BCPM	Bancas Point	0.97	91		Pb	04 16 36.8	-1.1
BCPM					Sg	04 16 50.8	+0.2
CTG	Chitna Glacier	0.98	6	P	Pb	04 16 37.4	-0.8
	baz=186,SNR=454						
CTG				S	Sg	04 16 51.3	+0.1
	baz=186						
CTGM	Chitina Glacie	0.98	7		Pb	04 16 37.1	-1.1
CTGM					Sg	04 16 51.2	+0.1
CTGM	Chitina Glacie	0.98	7	IAML		04 16 51.6	
	comp=N,3µm,0.6s						
CTGM				IAML		04 16 53.6	
	comp=E,4µm,0.9s						
CTGM	Chitina Glacie	0.98	7	P	Pb	04 16 37.1	-1.1
CTGM				S	Sg	04 16 51.3	+0.1
TGL	Tana Glacier	0.99	321		Pb	04 16 37.2	-1.1
KIAG	Kiagna River	1.02	337		Pb	04 16 37.5	-1.3
KIAG					Sg	04 16 51.9	-0.2
KIAG	Kiagna River	1.02	337	P	Pb	04 16 37.5	-1.3
KIAG				S	Sb	04 16 51.4	-0.7
YKU2	Yakutat	1.07	116		Pb	04 16 39.1	-0.4
BARN	Barnard Glacie	1.07	357		Pb	04 16 38.5	-1.3
BARN	Barnard Glacie	1.07	357	IAML		04 16 57.2	
	comp=E,2µm,1.0s						
SUCK	Suckling Hills	1.11	275		Pn	04 16 40.2	-0.3
SUCK				IAML		04 16 58.8	
	comp=N,3µm,0.5s						
SUCK				IAML		04 16 58.8	
	comp=E,4µm,0.5s						
BALM	Baldy	1.12	340		Pb	04 16 39.1	-1.4
BALM	Baldy	1.12	340	P	Pb	04 16 39.1	-1.4
BALM				S	Sg	04 16 56.5	+1.2
PNL	Peninsula	1.14	105		Pn	04 16 39.2	-1.6
PNL					Sn	04 16 55.4	-0.9
PNL	Peninsula	1.14	105	P	Pn	04 16 39.3	-1.6
	baz=288,SNR=68						
PNL				S	Sn	04 16 55.5	-0.8
	baz=288						
PNL	Peninsula	1.14	105	P	Pn	04 16 39.2	-1.6
PNL				S	Sb	04 16 54.4	-1.0
BERG	Berg Lake	1.14	292		Pn	04 16 40.0	-0.9
NICHA	Nichawak Mount	1.23	283		Pb	04 16 42.0	-0.3
PTPK	Patty Peak	1.28	340		Pn	04 16 42.1	-0.9
PTPK	Patty Peak	1.28	340	P	Pn	04 16 42.0	-0.9
PTPK				Sn	Sg	04 17 00.3	-0.3
PTPK				S	Sg	04 17 00.3	-0.3
HMT	Hamilton	1.39	286		Pb	04 16 44.3	-0.8
KAIM	Kayak Island	1.44	269		Pn	04 16 44.6	-0.3
KAIM	Kayak Island	1.44	269	P	Pn	04 16 44.6	-0.3
	baz=86						
KAIM				Sb	Sg	04 17 05.2	-0.3
	baz=86						
VRDI	Verde Repeater	1.55	324		Pn	04 16 45.8	-0.9
VRDI	Verde Repeater	1.55	324	IAML		04 17 09.6	
	comp=N,2µm,0.6s						
VRDI				IAML		04 17 09.9	
	comp=E,1µm,0.7s						
MCARA	McCarthy VSAT	1.57	333		Pn	04 16 46.5	-0.3
MCARA	McCarthy VSAT	1.57	333	P	Pb	04 16 46.9	-1.2
	baz=152,SNR=122						
MCARA				S	Sg	04 17 08.6	-1.2
	baz=152						
RAGM	Ragged Mountai	1.61	286		Pn	04 16 47.0	-0.3
GOAT	Goat Mountain	1.69	292		Pn	04 16 48.0	-0.4
BMRM	Bremner River	1.80	304		Pn	04 16 49.8	-0.2
BMRM	Bremner River	1.80	304	P	Pn	04 16 50.0	+0.1
	baz=122,SNR=199						
BMRM				S	Sb	04 17 14.8	+0.3
	baz=122						
GLB	Gilahina Butte	1.83	324		Pn	04 16 49.9	-0.5
GLB	Gilahina Butte	1.83	324	IAML		04 17 17.1	
	comp=N,1µm,0.6s						
YUK2	White River	1.84	11		Pb	04 16 51.9	-0.8
YUK2	White River	1.84	11	Pn	Pb	04 16 51.9	-0.8
YUK2				Sn	Sb	04 17 16.1	+0.5
YUK3	Moose Creek	1.87	16		Pb	04 16 52.3	-1.0
YUK3	Moose Creek	1.87	16	Pb	Pb	04 16 52.5	-0.8
	baz=197,SNR=237						
YUK3				Sb	Sg	04 17 18.4	-1.0
	baz=197						
YUK3	Moose Creek	1.87	16	Pn	Pb	04 16 52.3	-1.0
YUK3				Sn	Sg	04 17 18.2	-1.2
EYAK	Cordova Ski Ar	2.16	287		Pn	04 16 54.3	-0.6
EYAK	Cordova Ski Ar	2.16	287	P	Pn	04 16 54.3	-0.6
	baz=103						
EYAK				S	Sn	04 17 21.5	+0.1
	baz=103						
N25K	Chitina, Valde	2.20	319		Pn	04 16 55.8	+0.3
N25K				IAML		04 17 27.4	
	comp=N,635nm,0.5s						
N25K	Chitina, Valde	2.20	319	P	Pn	04 16 55.7	+0.2
	baz=136,SNR=122						
PS12	TAPS Pump St12	2.31	312		Pn	04 16 57.4	+0.5
DIV	Divide	2.37	301		Pn	04 16 57.5	-0.3
DIV	Divide	2.37	301	Pn	Pn	04 16 57.4	-0.4
DIV				Sn	Sn	04 17 27.8	+1.0
M27K	Edge Creek, AK	2.38	356		Pn	04 16 59.1	+1.1
M27K				IAML		04 17 43.4	
	comp=N,507nm,1.1s						
M27K	Edge Creek, AK	2.38	356	P	Pn	04 16 58.8	+0.8
	baz=176						
M27K				Sb	Sb	04 17 32.2	+0.9
	baz=176						
BVCY	Beaver Creek	2.46	8		Pn	04 17 00.3	+1.3
BVCY	Beaver Creek	2.46	8	Pb	Pb	04 17 03.2	+0.1
	baz=188,SNR=156						
BVCY				Sb	Sb	04 17 33.2	-0.1
	baz=188						
BVCY	Beaver Creek	2.46	8	Pn	Pn	04 17 00.5	+1.5
BVCY				Sn	Sb	04 17 31.2	-2.1
HIN	Hinchinbrook I	2.50	282	Pn	Pn	04 16 59.0	-0.6
HIN				IAML		04 17 36.0	
	comp=N,380nm,0.6s						
HIN				IAML		04 17 37.7	
	comp=E,407nm,0.9s						
M26K	Nabesna, AK	2.52	345		Pn	04 17 00.2	+0.4
M26K	Nabesna, AK	2.52	345	IAML		04 17 39.7	
	comp=N,563nm,0.6s						
M26K				IAML		04 17 44.8	
	comp=E,377nm,0.6s						
M26K	Nabesna, AK	2.52	345	P	Pn	04 17 00.0	+0.2
	baz=163						
M26K				Sb	Sb	04 17 35.0	-0.1
	baz=163						
FID	Port Fidalgo	2.56	289		Pn	04 17 00.2	-0.2
FID				IAML		04 17 41.2	
	comp=N,342nm,0.7s						
FID				IAML		04 17 47.7	
	comp=E,335nm,0.6s						
KLU	Klutina	2.62	307		Pn	04 17 01.3	+0.1
KLU				IAML		04 17 41.6	
	comp=N,661nm,0.4s						
KLU				IAML		04 17 42.4	
	comp=E,664nm,0.8s						
KLU	Klutina	2.62	307	P	Pn	04 17 01.4	+0.1
	baz=123,SNR=82						
KLU				S	Sn	04 17 34.1	+1.3
	baz=123						
JPK	Jack Peak	2.71	295		Pn	04 17 01.9	-0.5
PS11	TAPS Pump St11	2.83	319		Pn	04 17 05.0	+1.0
GLI	Glacier Island	2.88	290	Pn	Pn	04 17 03.4	-1.4
GLI				IAML		04 17 53.3	
	comp=E,270nm,0.6s						
HARP	HAARP	2.98	326		Pn	04 17 07.5	+1.4
HARP	HAARP	2.98	326	P	Pn	04 17 08.3	+2.2
	baz=142,SNR=23						
L27K	Beaver Creek,	3.09	358		Pn	04 17 07.8	+0.1
L27K	Beaver Creek,	3.09	358	P	Pn	04 17 07.7	+0.1
	baz=177						
L27K				S	Sn	04 17 43.2	-1.1
	baz=177						
BC03		3.09	358		Pn	04 17 08.0	+0.4
BCAR	Beaver Creek A	3.09	358	Pn	Pn	04 17 07.3	-0.4
M24K	Tolsona, Glenn	3.09	315		Pn	04 17 07.8	+0.1
M24K				IAML		04 18 02.9	
	comp=N,496nm,0.8s						
M24K				IAML		04 18 03.4	
	comp=E,434nm,1.1s						
M24K	Tolsona, Glenn	3.09	315	P	Pn	04 17 08.6	+0.9
	baz=131,SNR=16						
M24K				S	Sn	04 17 46.5	+2.0
	baz=131						
MENT	Mentasta	3.13	342		Pn	04 17 08.4	+0.1
MENT				IAML		04 18 05.3	
	comp=E,227nm,0.7s						
MENT				IAML		04 18 06.2	
	comp=N,229nm,0.9s						
L26K	Log Cabin Wild	3.16	345		Pn	04 17 09.7	+1.0
L26K				IAML		04 17 52.2	
	comp=E,321nm,0.4s						
L26K				IAML		04 18 07.2	
	comp=N,199nm,0.7s						
SKAG	Skagway	3.20	97	Pn	Pn	04 17 09.0	-0.1
N31M	Braeburn, Yuko	3.21	60		Pn	04 17 10.0	+0.6
N31M	Braeburn, Yuko	3.21	60	P	Pn	04 17 10.2	+0.8
	baz=245,SNR=23						
SCM	Sheep Creek Mo	3.37	306	Pn	Pn	04 17 10.6	-0.9
SCM				IAML		04 18 05.3	
	comp=N,287nm,0.8s						
SCM				IAML		04 18 12.2	
	comp=E,197nm,0.9s						
SCM	Sheep Creek Mo	3.37	306	Pn	Pn	04 17 11.5	0.0
	baz=121						
SCM				Pb	Pb	04 17 19.8	+1.1
	baz=121,SNR=10						
WHY	Whitehorse	3.39	76		Pn	04 17 12.0	+0.1
WHY	Whitehorse	3.39	76	P	Pn	04 17 12.1	+0.3
	baz=262,SNR=20						
WHY	Whitehorse	3.39	76	Pn	Pn	04 17 12.2	+0.3
WHY				Sn	Sn	04 17 53.2	+1.3
M30M	Minto, Yukon	3.47	40		Pn	04 17 13.9	+1.0
M30M	Minto, Yukon	3.47	40	P	Pn	04 17 13.9	+1.0
	baz=224,SNR=11						
PWL	Port Wells	3.47	287	Pn	Pn	04 17 12.2	-0.6
PWL	Port Wells	3.47	287	P	Pn	04 17 12.1	-0.8
	baz=102						
PAX	Paxson	3.53	330		Pn	04 17 14.1	+0.4
KNK	Knik Glacier	3.68	296		Pn	04 17 15.9	+0.2
KNK				IAML		04 18 16.1	
	comp=E,274nm,1.0s						
KNK				IAML		04 18 19.3	
	comp=N,301nm,0.8s						
KNK	Knik Glacier	3.68	296	P	Pn	04 17 16.4	+0.7
	baz=110,SNR=14						
BESE	Bessie Mountai	3.72	109	Pn	Pn	04 17 16.5	+0.2
BESE	Bessie Mountai	3.72	109	Pn	Pn	04 17 17.4	+1.0
BESE				Sn	Sn	04 18 01.2	+1.2
SML	Sawmill	3.78	302	Pn	Pn	04 17 16.2	-0.9
SML				IAML		04 18 21.0	
	comp=E,225nm,0.9s						
SML				IAML		04 18 38.5	
	comp=N,178nm,0.9s						
SML	Sawmill	3.78	302	P	Pn	04 17 18.5	+1.4
	baz=116,SNR=7.0						
DOT	Dot Lake	3.86	343		Pn	04 17 18.4	+0.1
DOT	Dot Lake	3.86	343	Pn	Pn	04 17 18.3	+0.1
DOT				Sn	Sn	04 18 05.0	+1.7
WAT6	Susitna Watana	3.96	314	S	Sn	04 18 07.2	+1.3
	baz=128						
SEW	Seward	3.96	275	Pn	Pn	04 17 18.5	-1.0
GHO	Glory Hole Cre	4.02	300		Pn	04 17 20.6	+0.1
GHO				IAML		04 18 23.5	
	comp=E,146nm,1.3s						
GHO				IAML		04 18 31.8	
	comp=N,176nm,0.8s						
PMR	Palmer	4.04	297	Pn	Pn	04 17 20.9	+0.3
PMR				IAML		04 18 24.0	
	comp=N,119nm,0.9s						
PMR				IAML		04 18 25.6	
	comp=E,117nm,0.8s						
RIDG	Independent Ri	4.07	339		Pn	04 17 21.6	+0.4
RIDG	Independent Ri	4.07	339	IAML		04 18 29.9	
	comp=E,101nm,1.6s						
JIS	Juneau Island	4.08	112		Pn	04 17 20.7	-0.5
JIS				IAML		04 18 55.0	
	comp=N,120nm,0.9s						
O22K	Cooper Landing	4.10	280	Pn	Pn	04 17 20.7	-0.8
M31M	Drury Creek, Y	4.13	54		Pn	04 17 23.3	+1.4
M31M	Drury Creek, Y	4.13	54	P	Pn	04 17 23.4	+1.4
	baz=241,SNR=16						
M31M				S	Sn	04 18 10.5	+0.5
	baz=241						
DHY	Denali Highway	4.16	321		Pb	04 17 27.5	-4.8
SCRK	Sand Creek	4.16	345		Pn	04 17 22.8	+0.3
SCRK	Sand Creek	4.16	345	P	Pn	04 17 24.5	+2.0
	baz=163,SNR=26						
RC01	Rabbit Creek A	4.19	289		Pn	04 17 22.6	-0.1
RC01	Rabbit Creek A	4.19	289	IAML		04 18 34.3	
	comp=N,115nm,0.8s						
RC01				IAML		04 18 39.5	
	comp=E,98nm,0.7s						
DAWY	Dawson	4.22	13		Pn	04 17 24.1	+1.0
DAWY	Dawson	4.22	13	IAML		04 18 38.3	
	comp=E,120nm,1.4s						
DAWY				IAML		04 18 38.6	
	comp=N,93nm,1.4s						
DAWY	Dawson	4.22	13	P	Pn	04 17 24.2	+1.0
	baz=195,SNR=19						
DAWY				S	Sn	04 18 14.0	+1.8
	baz=195						
DAWY	Dawson	4.22	13	Pn	Pn	04 17 24.1	+1.0
DAWY				Sn	Sn	04 18 13.9	+1.8
SLKM	Skilak Lake	4.35	281		Pn	04 17 23.6	-1.3
SIT	Sitka	4.40	129	Pn	Pn	04 17 25.1	-0.5
WAT1	Susitna Watana	4.40	313	Pb	Pb	04 17 35.7	-0.6
	baz=127						
WAT1				Sb	Sb	04 18 28.3	-1.0
	baz=127						
WAT7	Susitna Watana	4.51	312		Pn	04 17 28.6	+1.3
FARO	Faro, Yukon	4.57	57	Pn	Pn	04 17 29.4	+1.4
J26L	Joseph Creek	4.62	349		Pn	04 17 29.8	+1.0
J26L	Joseph Creek	4.62	349	P	Pn	04 17 31.1	+2.3
	baz=167,SNR=38						
BRSE	Bradley Lake S	4.63	271		Pn	04 17 29.6	+0.7
BRLK	Bradley Lake	4.71	271	Pn	Pn	04 17 29.4	-0.4
BRLK				IAML		04 18 33.8	
	comp=E,69nm,3.3s						
EGAK	Eagle	4.81	2		Pn	04 17 31.4	+0.2
EGAK				IAML		04 18 55.8	
	comp=E,95nm,2.1s						
CUT	Chulitna	4.86	304		Pn	04 17 32.6	+0.8
CUT	Chulitna	4.86	304	Sb	Sb	04 18 41.9	-0.4
	baz=116						
RND	Reindeer	4.88	318		Pn	04 17 31.3	-0.9
RND				IAML		04 18 55.8	
	comp=N,67nm,0.9s						
RND				IAML		04 18 57.7	
	comp=E,55nm,2.5s						
CNPM	China Poot	4.92	269		Pn	04 17 31.1	-1.6
CNPM				IAML		04 19 08.9	
	comp=E,76nm,2.9s						
CNPM				IAML		04 19 13.2	
	comp=N,101nm,2.7s						
J25K	Salcha River,	4.97	341		Pn	04 17 33.7	+0.3
J25K	Salcha River,	4.97	341	P	Pn	04 17 33.8	+0.4
	baz=157,SNR=12						
HOM	Homer	5.10	271		Pn	04 17 36.6	+1.4
HDA	Harding Lake	5.10	333	Pn	Pn	04 17 34.9	-0.3
MCK	McKinley	5.12	320	Pn	Pn	04 17 36.6	+1.0
MCK	McKinley	5.12	320	P	Pn	04 17 38.4	+2.8
	baz=134						
STLK	Strandline Lak	5.26	291		Pn	04 17 37.3	-0.2
IL31		5.40	335	Pn	Pn	04 17 39.3	0.0
ILAR	Eielson Array	5.40	335	Pn	Pn	04 17 38.9	-0.4
	comp=N,0.6nm,0.3s,baz=162,slow=13,SNR=26						
ILAR				Lg	Lg	04 19 06.8	
	comp=N,1.3nm,0.3s,baz=169,slow=26,SNR=5.3						
ILAR	Eielson Array	5.40	335	Pn	Pn	04 17 39.3	0.0
TRF	Thorofare Moun	5.41	314		Pn	04 17 39.9	+0.3
TRF	Thorofare Moun	5.41	314	P	Pn	04 17 41.3	+1.7
	baz=126,SNR=7.5						
WRH	Wood River Hil	5.43	329		Pn	04 17 40.3	+0.5
CCB	Clear Creek Bu	5.50	331		Pn	04 17 41.0	+0.2
O20K	Slope Mountain	5.55	276		Pn	04 17 41.5	0.0
RSO	Redoubt South	5.60	280	Pn	Pn	04 17 42.6	+0.4
BWN	Browne	5.60	322	Pn	Pn	04 17 41.4	-0.7
KTH	Kantishna Hill	5.70	313		Pn	04 17 43.1	-0.4
IVE	Iliamna Volcan	5.75	275		Pn	04 17 44.3	+0.1
NEA2	Nenana	5.79	326		Pn	04 17 44.2	-0.5
ILSW	Iliamna Southw	5.81	275		Pn	04 17 45.7	+0.5
POKR	Poker Plat Res	5.82	335	Pn	Pn	04 17 44.7	-0.3
PRP	Porcupine Dome	5.84	344		Pn	04 17 45.8	+0.4
MDM	Murphy Dome	5.87	331		Pn	04 17 46.0	+0.2
PPLA	Purkeypile	5.87	304	Pn	Pn	04 17 46.6	+0.6
PPLA	Purkeypile	5.87	304	P	Pn	04 17 47.1	+1.2
	baz=115						
BPAW	Bear Paw Mtn.	6.05	317		Pn	04 17 48.5	+0.2
BPAW	Bear Paw Mtn.	6.05	317	P	Pn	04 17 48.9	+0.6
	baz=129						
CAST	Castle Rocks	6.07	309		Pn	04 17 49.3	+0.8
CAST	Castle Rocks	6.07	309	P	Pn	04 17 49.7	+1.2
	baz=120						
DLBC	Dease Lake	6.12	100	Pn	Pb	04 17 58.3	-7.4
	comp=N,1.3nm,0.3s,baz=20,slow=6.3,SNR=15						
DLBC				Lg	Lg	04 19 27.0	
	comp=N,1.9nm,0.3s,baz=93,slow=27,SNR=3.4						
DLBC	Dease Lake	6.12	100	Pn	Pn	04 17 49.3	-0.1
DLBC	Dease Lake	6.12	100	Pn	Pn	04 17 49.2	-0.1
KDAK	Kodiak Island	6.13	254	Pn	Pn	04 17 49.0	-0.3
	comp=N,5.8nm,0.3s,baz=76,slow=8.1,SNR=130						
KDAK				Sn	Sn	04 18 55.9	-3.2
	comp=N,1.9nm,0.3s,baz=330,slow=23,SNR=6.5						
KDAK	Kodiak Island	6.13	254	Pn	Pn	04 17 49.6	+0.3
Q19K	Cape Douglas,	6.25	265		Pn	04 17 51.3	+0.3
Q19K	Cape Douglas,	6.25	265	P	Pn	04 17 51.9	+0.8
	baz=75,SNR=6.8						
I23K	Minto, Yukon-K	6.30	329	P	Pn	04 17 52.6	+0.9
	baz=142						
WTLY	Watson Lake, Y	6.40	83	Sn	Sn	04 19 04.9	-0.9
WTLY				Sg	Sg	04 19 37.9	-6.4
H24K	Noodor Dome	6.54	337		Pn	04 17 55.8	+0.8
H24K	Noodor Dome	6.54	337	P	Pn	04 17 58.4	+3.5
	baz=151						
M19K	Big River Lodg	6.54	293	Pn	Pn	04 17 55.7	+0.8
M19K	Big River Lodg	6.54	293	P	Pn	04 17 55.8	+0.8
	baz=101						
MLY	Manley	6.60	324		Pn	04 17 55.7	-0.1
MLY	Manley	6.60	324	P	Pn	04 17 58.1	+2.2
	baz=136						
EPYK	Eagle Plains	6.77	17	Pn	Pn	04 17 58.0	-0.1
EPYK	Eagle Plains	6.77	17	Pn	Pn	04 17 58.8	+0.7
EPYK				Sn	Sn	04 19 11.6	-3.3
FYU	Fort Yukon	6.80	348	Pn	Pn	04 17 59.1	+0.5
L19K	White Mountain	6.81	295		Pn	04 17 58.1	-0.6
L19K	White Mountain	6.81	295	P	Pn	04 17 57.9	-0.8
	baz=103						
K20K	Telida	6.84	305		Pn	04 17 58.5	-0.6
K20K	Telida	6.84	305	P	Pn	04 17 59.7	+0.6
	baz=114						
I21K	Tanana	7.08	322		Pn	04 18 02.4	0.0
I21K	Tanana	7.08	322	P	Pn	04 18 04.3	+1.9
	baz=132						
J20K	Nowinta River	7.24	311	Pn	Pn	04 18 04.3	-0.3
J20K	Nowinta River	7.24	311	P	Pn	04 18 06.3	+1.7
	baz=120						
LIB	Langara Island	7.38	137	Pn	Pn	04 18 05.6	-0.8
TT01	Tatalina	7.52	299		Pn	04 18 07.8	-0.6
TTA	Tatalina	7.52	299		Pn	04 18 08.7	+0.2
TTA	Tatalina	7.52	299	P	Pn	04 18 09.3	+0.8
	baz=106						
BM03	Burnt Mountain	7.58	351		Pn	04 18 10.5	+1.2
BMAR	Burnt Mountain	7.59	351		Pn	04 18 10.9	+1.5
BM01	Burnt Mountain	7.60	351		Pn	04 18 11.1	+1.6
H21K	Melozitna Rive	7.66	323		Pn	04 18 10.8	+0.5
H21K	Melozitna Rive	7.66	323	P	Pn	04 18 11.8	+1.5
	baz=133						
IM03		8.17	323		Pn	04 18 16.4	-0.8
IMAR	Indian Mountai	8.17	323	Pn	Pn	04 18 17.3	0.0
COLD	Coldfoot	8.21	336	Pn	Pn	04 18 18.4	+0.5
COLD	Coldfoot	8.21	336	Pn	Pn	04 18 19.1	+1.2
INK	Inuvik	9.05	19	Pn	Pn	04 18 30.1	+0.9
	comp=N,0.2nm,0.3s,baz=200,slow=15,SNR=9.0						
INK				Sn	Sn	04 20 08.2	-2.6
	comp=N,0.1nm,0.3s,baz=217,slow=20,SNR=1.4						
INK				Lg	Lg	04 21 08.3	
	comp=N,0.1nm,0.3s,baz=351,slow=9.3,SNR=4.9						
INK	Inuvik	9.05	19	Pn	Pn	04 18 29.3	+0.1
INK	Inuvik	9.05	19	P	Pn	04 18 32.2	+2.9
	baz=206						
INK	Inuvik	9.05	19	Pn	Pn	04 18 30.2	+0.9
INK				Sn	Sn	04 20 05.6	-5.2
TOLK	Toolik Lake Re	9.34	342	P	Pn	04 18 39.4	+6.0
	baz=154,SNR=8.8						
FNBB	Fort Nelson	9.51	89	Sn	Sn	04 20 22.7	+0.3
YKA	Yellowknife Ar	13.17	67	Pn	Pn	04 19 25.6	0.0
	comp=N,0.1nm,0.3s,baz=267,slow=13,SNR=7.8						
YKA	Yellowknife Ar	13.17	67	Pn	Pn	04 19 24.5	-1.2
KUKN	Kugluktuk,NWT	13.93	45	Pn	Pn	04 19 34.2	-1.8
RES	Resolute Bay	22.32	31	P	P	04 21 17.7	+1.7
	comp=N,0.8nm,0.7s,baz=243,slow=11,SNR=4.1						
RES	Resolute Bay	22.32	31	IAmb	IAmb	04 22 01.0	
	comp=Z,5.6nm,1.4s						
ELK	Elko	25.26	128	P	P	04 21 47.3	+2.3
	comp=Z,0.7nm,0.7s,baz=354,slow=8.4,SNR=2.3						
ELK	Elko	25.26	128	IAmb	IAmb	04 21 52.8	
	comp=Z,3.4nm,1.2s						
PDAR	Pinedale Array	26.00	117	P	P	04 21 53.2	+1.4
	comp=Z,0.2nm,0.4s,baz=321,slow=8.1,SNR=3.1						
NVAR	Mina Array Bea	26.13	135	P	P	04 21 55.2	+2.3
	comp=Z,0.2nm,0.4s,baz=320,slow=5.7,SNR=3.7						
PETK	Petropavlovsk-	33.09	286	P	P	04 22 54.2	-0.1
	comp=Z,1.3nm,0.5s,baz=71,slow=10,SNR=5.9						
TXAR	Lajitas Array	39.85	123	P	P	04 23 54.3	+2.0
	comp=Z,0.3nm,0.7s,baz=347,slow=7.4,SNR=2.9						
MKAR	Makanchi Array	67.72	329	P	P	04 27 15.5	-0.4
	comp=Z,2.0nm,1.1s,baz=47,slow=7.2,SNR=4.6						
AKASG	Malin Array Be	69.41	6	P	P	04 27 26.3	0.0
	comp=Z,0.7nm,0.3s,baz=354,slow=5.4,SNR=11						
AKASG	Malin Array Be	69.41	6	IAmb	IAmb	04 29 31.6	
	comp=Z,3.0nm,1.4s						
GERES	GERESS Array B	69.67	17	P	P	04 27 28.5	+0.5
	comp=Z,0.2nm,0.4s,baz=0.6,slow=9.8,SNR=2.2						
ESDC	Sonseca Array	74.74	33	P	P	04 27 59.4	+0.9
	comp=Z,0.8nm,0.9s,baz=337,slow=6.8,SNR=2.3						
BOSA	Boshof	147.37	22	PKPbc	PKPbc	04 36 01.6	-0.6
	comp=Z,1.2nm,0.4s,baz=345,slow=4.4,SNR=6.9						

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*HEL **19** 04:24:01.8±0.3, 67.°66N×33.°83E, h0^{km}, ML2.0, Explosion*
*KOLA **19** 04:24:02.3, 67.°66N×33.°73E, h0^{km}, ML2.1, Khibiny, mines Kirovsk, Yukspor*
*NAO **19** 04:24:02.3±1.2, 67.°69N×33.°67E, ML2.7*
ISC 19 04:24:01.2±1.3, **67.°63N**±0.°03×**33.°78E**±0.°06, **h0^{km}, n32, σ1.^{s}36**/64, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	Apatity	0.16	246	P	Pg	04 24 04.9	+0.7
APA				S	Sg	04 24 07.3	+1.1
APZ9	Apatity	0.16	246	Pg	Pg	04 24 05.0	+0.8
APZ9				Lg	Lg	04 24 07.5	
APZ9				Rg	Rg	04 24 08.4	
APZ9	Apatity	0.16	246	Pg	Pg	04 24 05.0	+0.8
APZ9				Sg	Sg	04 24 07.5	+1.2
APZ9				Rg	Rg	04 24 08.4	
APA0	Apatity Array	0.30	265	Pg	Pg	04 24 07.5	+0.5
	baz=81,slow=18						
APA0				Lg	Lg	04 24 11.3	
	baz=67,slow=37						
APA0				Rg	Rg	04 24 12.9	
APA0	Apatity Array	0.30	265	Pg	Pg	04 24 07.5	+0.5
	baz=81,slow=18						
APA0				Sg	Sg	04 24 11.3	+0.4
	baz=67,slow=37						
APA0				Rg	Rg	04 24 12.9	
APA0	Apatity Array	0.30	265	P	Pg	04 24 07.3	+0.3
APA0				S	Sg	04 24 11.5	+0.6
VRF	Varrio	1.60	276	PG	Pn	04 24 30.3	-0.4
	baz=91						
VRF				MSG		04 24 50.0	
	comp=Z,15nm,0.2s						
VRF				SG	Sn	04 24 50.8	-1.2
TERR	Teriberka	1.65	17	P	Pn	04 24 31.3	-0.1
TERR				S	Sn	04 24 52.4	-0.9
KU6	Riekki	2.23	225	PB	Pn	04 24 40.8	+1.4

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      baz=43
KU6                                MSG          04 25 08.7
      comp=Z,7.4nm,0.2s
KU6                                SG     Sb    04 25 11.2 +0.8
MSF   Maaselka          2.55 230   PB     Pn    04 24 46.3 +2.5
MSF                                SG     Sb    04 25 21.2 +1.5
SGF   Sodankyl          2.79 269   PN     Pn    04 24 48.1 +1.0
SGF                                SB     Sb    04 25 25.9 -0.7
RNF   Rovaniemi         3.21 255   PN     Pn    04 24 53.5 +0.7
      baz=72
RNF                                SN     Sn    04 25 32.2 +0.7
KEV   Kevo              3.27 314   Pn     Pn    04 24 54.4 +0.9
KEV                                Sn     Sn    04 25 32.8 -0.2
KEV   Kevo              3.27 314  eP      Pn    04 24 54.5 +0.9
KEV   Kevo              3.27 314   PN     Pn    04 24 54.4 +0.9
      baz=126
KEV                                SN     Sn    04 25 32.8 -0.2
ARA0  ARCESS Array S    3.59 306   Pn     Pn    04 24 58.3 +0.3
      baz=122,slow=16
ARA0                               Pg     Pb    04 25 06.1 +0.7
      baz=119,slow=16
ARA0                               Sn     Sn    04 25 39.5 -1.5
      baz=119,slow=28
ARA0                               Lg     Lg    04 25 51.0
      baz=110,slow=37
ARA0  ARCESS Array S    3.59 306   Pn     Pn    04 24 58.3 +0.3
      baz=122,slow=16
ARA0                               Pg     Pb    04 25 06.1 +0.7
      baz=119,slow=16
ARA0                               Sn     Sn    04 25 39.5 -1.5
      baz=119,slow=28
ARA0                               Sg     Sb    04 25 51.0 +1.5
      baz=110,slow=37
ARA0                               IAML         04 25 56.1
      comp=Z,18nm,0.6s
ARCES ARCESS Array B    3.59 306   P      Pn    04 24 58.1 +0.1
ARCES                              S      Sn    04 25 39.6 -1.4
HEF   Hetta             3.88 286   Pn     Pn    04 25 02.5 +0.4
HEF                                Pg     Pb    04 25 12.3 +1.8
HEF                                Sn     Sn    04 25 46.8 -1.5
HEF                                Lg     Lg    04 25 59.7
HEF   Hetta             3.88 286  eP      Pn    04 25 02.2 +0.1
HEF                               eS      Sn    04 25 45.0 -3.3
HEF   Hetta             3.88 286   PN     Pn    04 25 02.5 +0.4
      baz=95
HEF                                SN     Sn    04 25 48.7 +0.4
TOF   Tornio            4.05 252   PG     Pb    04 25 12.8 -0.4
TOF                                SG     Sg    04 26 10.2 -0.8
OUL   Oulu              4.08 235   PG     Pg    04 25 17.1 -2.1
KTK1  Kautokeino        4.15 294  eP      Pn    04 25 05.0 -0.7
KTK1                              eS      Sn    04 25 52.4 -2.4
KTK1                               IAML         04 26 16.3
      comp=Z,13nm,0.5s
PAJU  Pajala            4.18 267   PN     Pn    04 25 06.7 +0.6
PAJU                               SN     Sn    04 25 54.0 -1.5
LANU  Lannavaara        4.49 281   PN     Pn    04 25 10.1 -0.3
LANU                               SN     Sn    04 26 02.3 -0.9
ERTU  Ertsjaerv         4.66 262   PN     Pn    04 25 12.4 -0.3
      baz=76
ERTU                               SN     Sn    04 26 05.6 -1.8
KIF   Kilpisjarvi       5.01 292   Pn     Pn    04 25 17.2 -0.2
KIF                                Sn     Sn    04 26 12.6 -3.2
KIF   Kilpisjarvi       5.01 292   Pn     Pn    04 25 17.2 -0.2
KIF                                Sn     Sn    04 26 12.6 -3.2
JETT  Jettan, Norway    5.26 298   Pn     Pn    04 25 20.9 -0.2
JETT                               Sn     Sn    04 26 20.1 -2.3
FIA0  FINESS Array S    7.04 212   Pn     Pn    04 25 45.5 +0.2
      baz=25,slow=11
FIA0                               Sn     Sn    04 27 03.1 -2.9
      baz=40,slow=28
FIA0                               Lg     Lg    04 27 39.4
      baz=28,slow=28
FIA0  FINESS Array S    7.04 212   Pn     Pn    04 25 45.5 +0.2
      baz=25,slow=11
FIA0                               Sn     Sn    04 27 03.1 -2.9
      baz=40,slow=28
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*NEIC **19** 04:25:25.4±2.1, 11°.1S±0°.1×71°.0W±0°.1, h601^{km}±7^{km}, mb4.0/5, Error ellipse: s-maj=23.3km s-min=13.1km az=208.0*

*IDC **19** 04:25:25.7±1.1, 11°.18S×70°.98W, h624^{km}±20^{km}, mb3.1/6, mb1 3.1/11, mb1mx2.9/45, mbtmp4.0/11, Error ellipse: s-maj=35.6km s-min=17.3km az=29.0*

ISC 19 04:25:24.8±0.7**, 11°.04S**±0°.10×**71°.0W**±0°.1**, h600**^{km}**, n28,** σ**1^{s}.49**/24**, mb3.7**/6**, Peru-Brazil border region**

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Code  Station Name       Δ°  AZ°    Phase ID         Time    Res
                                   Op     ISC      h  m  s   ISC
CZSB  Cruzeiro do Su    3.70 333   P      P     04 26 49.8 +1.4
ETMB  Extrema           4.85  76   P      P     04 26 57.8 +1.2
LPAZ  La Paz            5.91 152   P      P     04 27 07.6 +1.7
      0.5nm,0.3s,baz=342,slow=8.6,SNR=14
LPAZ                               S      S     04 28 28.3  0.0
      0.1nm,0.3s,baz=286,slow=19,SNR=6.6
TBTG  Tabatinga, AM     6.89   9   P      P     04 27 14.6 +0.7
PB12  IPOC Station P    7.56 175   P      P     04 27 18.6 -1.5
SAML  Samuel            7.96  76   P      P     04 27 24.4 +0.7
ATAH  Atahualpa         8.28 297   P      P     04 27 30.3 +3.0
      0.4nm,0.3s,baz=37,slow=2.7,SNR=6.1
PB11  IPOC Station P    8.77 172   P      P     04 27 31.0 -0.6
VILB  Vilhena          10.72 101   P      P     04 27 51.9 +1.1
SIV   San Ignacio      10.82 118   P      P     04 27 52.8 +1.0
      0.5nm,0.3s,baz=293,slow=9.9,SNR=6.2
LVC   Limon Verde      11.68 170   P      P     04 28 01.8 +1.1
      0.5nm,0.3s,baz=23,slow=7.7,SNR=2.6
PB15  IPOC Station P   12.19 173   P      P     04 28 06.6 +1.0
MACA  Manacapuru-AM    12.87  53   P      P     04 28 12.8 +0.4
PTGA  Pitinga          14.99  48   P      P     04 28 33.8 +0.8
      2.2nm,0.3s,baz=225,slow=11,SNR=24
ZARC  Zaragoza, Cauc   18.81 348   P      P     04 29 07.6 -0.3
ZARC                               IAmb   IAmb  04 29 08.5
      comp=Z,3.3nm,0.7s
PDAR  Pinedale Array   64.12 329   P      P     04 35 01.4 -0.2
      comp=Z,0.2nm,0.4s,baz=108,slow=8.7,SNR=5.4
DBIC  Dimbokro         68.12  78   P      P     04 35 25.6 -1.1
      comp=Z,1.3nm,0.4s,baz=259,slow=4.5,SNR=5.6
DBIC  Dimbokro         68.12  78   IAmb   IAmb  04 35 26.7
      comp=Z,6.8nm,1.2s
KOWA  Kowa             71.05  70   P      P     04 35 43.9 -0.1
      comp=Z,1.0nm,0.5s,baz=259,slow=4.4,SNR=5.1
KOWA  Kowa             71.05  70   IAmb   IAmb  04 35 44.4
      comp=Z,2.2nm,0.8s
TORD  Torodi Ar. Bea   76.01  73   P      P     04 36 11.5 -0.7
      comp=Z,0.9nm,0.3s,baz=245,slow=4.6,SNR=15
TORD  Torodi Ar. Bea   76.01  73   IAmb   IAmb  04 36 12.2
      comp=Z,1.9nm,0.9s
YKA   Yellowknife Ar   80.71 341   P      P     04 36 35.4 -0.7
      comp=Z,0.9nm,0.6s,baz=137,slow=5.2,SNR=13
INK   Inuvik           90.48 341   P      P     04 37 22.6 -0.4
      comp=Z,0.7nm,0.6s,baz=56,slow=4.1,SNR=3.8
INK   Inuvik           90.48 341   IAmb   IAmb  04 37 26.7
      comp=Z,1.4nm,1.0s
ASAR  Alice Springs   137.78 215   PKP    PKPdf 04 43 39.1 -3.6
      comp=Z,0.3nm,0.6s,baz=116,slow=2.2,SNR=1.8
WRA   Warramunga Arr  140.38 219   PKP    PKPdf 04 43 44.8 -2.7
      comp=Z,0.4nm,0.3s,baz=146,slow=2.5,SNR=5.3
SONM  Songino Array   143.26   3   PKP    PKPab 04 43 50.0 -0.2
      comp=Z,1.2nm,0.5s,baz=330,slow=3.2,SNR=6.6
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*IDC **19** 04:27:27.5±0.5, 2°.17N×84°.46W, h0^{km}, mb4.6/24, mb1 4.7/28, mb1mx4.6/48, mbtmp4.6/28, ML3.8/3, MS3.9/11, Ms1 3.9/11, ms1mx3.6/32, Error ellipse: s-maj=20.2km s-min=10.2km az=53.0*

*MOS **19** 04:27:28.1±1.0, 2°.13N×84°.45W, h14^{km}, mb5.0/24, Error ellipse: s-maj=10.8km s-min=6.9km az=112.2*

*NEIC **19** 04:27:32.8±1.5, 2°.12N±0°.07×84°.43W±0°.07, h30^{km}±2^{km}, mb5.0/256, Error ellipse: s-maj=10.9km s-min=9.1km az=53.0*

ISC 19 04:27:32.4±0.3**, 2°.08N**±0°.05×**84°.45W**±0°.06**, h35**^{km}**, n496,** σ**0^{s}.95**/400**, mb4.9**/157**, MS3.9**/9**, 30C-13D, Off coast of central America**

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Code  Station Name       Δ°  AZ°    Phase ID         Time    Res
                                   Op     ISC      h  m  s   ISC
TUMC  Tumaco            5.73  92  eP      Pn    04 28 54.5 -0.6
TUMC  Tumaco            5.73  92   Pn     Pn    04 28 54.0 -1.0
CTUM2 Tumaco            5.73  92  eP      Pn    04 28 54.6 -0.4
OTAV  Otavalo           6.27 107   P      Pn    04 29 01.6 -1.3
OTAV  Otavalo           6.27 107⇑ iP      Pn    04 29 02.0 -0.9
OTAV  Otavalo           6.27 107  eP      Pn    04 29 02.2 -0.8
OTAV  Otavalo           6.27 107          Pn    04 29 01.6 -1.3
PAYG  Puerto Ayora      6.44 245   Pn     Pn    04 29 04.2 -0.6
CDITO Canoas            6.64  14   Pn     Pn    04 29 06.9 -0.7
RIOS  Rincon, Osa       6.65   8   Pn     Pn    04 29 07.0 -0.7
CMBC  Cumbal            6.72 100  eP      Pn    04 29 08.3 -0.8
BRU2  Volcan            6.90  15   Pn     Pn    04 29 11.5 +0.2
GCUF  Volcan Galeras    7.16  97⇑ eP      Pn    04 29 14.8 -0.4
CPAS1 Pasto             7.18  97  eP      Pn    04 29 17.9 +2.5
SRBA  San Rafael, Bu    7.19   9          Pn    04 29 14.5 -0.7
PEZE  Perez Zeledon,    7.30   6   Pn     Pn    04 29 15.9 -0.8
CAO2  Cobano, Puntar    7.59 355   Pn     Pn    04 29 20.2 -0.4
RIMA  Rio Macho         7.66   4          Pn    04 29 21.5 -0.3
POPC  Popayan, Colom    7.79  86  eP      Pn    04 29 22.6 -0.9
SOTA  Rioblanco         7.84  89⇑ eP      Pn    04 29 24.9 +0.4
HDC   Heredia           7.88   2   Pn     Pn    04 29 24.8  0.0
PCON  Cinco Dias        8.05  88⇑ eP      Pn    04 29 27.9 +0.4
JTS   Las Juntas de     8.18 357   Pn     Pn    04 29 27.8 -0.9
JTS   Las Juntas de     8.18 357 deP      Pn    04 29 27.9 -0.8
JTS                                pmax   pmax
      comp=Z,12nm,0.3s
JTS   Las Juntas de     8.18 357  eP      Pn    04 29 28.0 -0.8
JTS   Las Juntas de     8.18 357   Pn     Pn    04 29 28.6 -0.2
GUAI  GUAI              8.21 353  eP      Pn    04 29 27.9 -1.3
ORTG  Ortega, Santa     8.29 353          Pn    04 29 29.2 -1.1
CASO  Castillo          8.31 358  eP      Pn    04 29 30.6  0.0
YOTC  Yotoco, Valle     8.32  77  eP      Pn    04 29 30.5 -0.2
PTAC  Punta Ardita,     8.32  53  eP      Pn    04 29 30.5 -0.2
CEDE  Laguna Cedeo      8.36 358  eP      Pn    04 29 32.5 +1.2
BCIP  Isla Barro Col    8.41  33   P      Pn    04 29 31.9  0.0
ACAL  Aguas Claras      8.52 356  eP      Pn    04 29 33.0 -0.6
MARP  Paez Belalcaza    8.53  85⇑ iP      Pn    04 29 34.6 +0.9
CUI   Cuipilapa         8.55 355  eP      Pn    04 29 33.1 -0.8
COLC  Colonia           8.57 355  eP      Pn    04 29 34.9 +0.8
COVE  Coope Vega, Sa    8.59   0          Pn    04 29 34.6 +0.3
PTEN  Parque Tenorio    8.60 356  eP      Pn    04 29 35.9 +1.4
PLMC  San Jos del P     8.63  71⇑ eP      Pn    04 29 33.9 -1.0
HZTE  Horizontes, Gu    8.66 353          Pn    04 29 35.3  0.0
LAPC  Finca la Perla    8.69 354  eP      Pn    04 29 35.2 -0.5
GBS3  Finca Las Img     8.71 353  eP      Pn    04 29 35.4 -0.6
BUEV  Buena Vista       8.72 354  eP      Pn    04 29 34.8 -1.3
FLOC  Florencia         8.81  93⇑ eP      Pn    04 29 37.8 +0.4
FLOC  Florencia         8.81  93          Pn    04 29 37.5 +0.1
GARC  Garzon, Huila     8.96  89  eP      Pn    04 29 40.5 +0.8
BETC  Betania           9.03  86  eP      Pn    04 29 42.6 +2.2
CBOC  Ciudad Bolivar    9.22  66⇑ eP      Pn    04 29 44.5 +1.3
ANIL  Santa Ana         9.35  75⇑ eP      Pn    04 29 45.7 +0.7
ORTC  Ortega, Tolima    9.37  79⇑ iP      Pn    04 29 45.9 +0.8
DBBC  Dabeiba           9.57  59  eP      Pn    04 29 49.2 +1.3
GUY2C Guyana, Caldas    9.59  71⇑ eP      Pn    04 29 49.3 +0.8
PRAC  Prado             9.69  80⇑ eP      Pn    04 29 50.3 +0.7
HELC  Santa Helena      9.79  65  eP      Pn    04 29 53.1 +1.9
ESPN  Las Esperanzas   10.05   1          Pn    04 29 55.3 +0.8
CNOCA NORCASIA, CALD   10.17  70  eP      Pn    04 29 58.5 +2.5
NORC  Norcasia         10.17  70⇑ iP      Pn    04 29 57.7 +1.6
ROSC  El Rosal         10.48  75   Pn     Pn    04 30 02.5 +1.8
      comp=Z,8.5nm,0.3s,baz=38,slow=13,SNR=22
ROSC                               LR     LR    04 32 48.8
      comp=Z,772nm,19.1s,baz=218,slow=31
ROSC  El Rosal         10.48  75   P      Pn    04 30 02.2 +1.5
ROSC  El Rosal         10.48  75⇑ eP      Pn    04 30 02.8 +2.2
ROSC  El Rosal         10.48  75   Pn     Pn    04 30 02.2 +1.5
UREC  San Jos de Ur    10.52  57⇑ eP      Pn    04 30 02.5 +1.6
MACC  Macarena, Meta   10.60  89  eP      Pn    04 30 03.0 +1.0
MACC  Macarena, Meta   10.60  89⇑ iP      Pn    04 30 02.0  0.0
CRIN  San Cristobal    10.87 346          Pn    04 30 06.3 +0.7
MATN  Matagalpa        10.88 352          Pn    04 30 06.6 +0.7
PTBC  PUERTO BERRIO,   10.91  66⇑ eP      Pn    04 30 07.9 +1.7
VILC  Villavicencio,   10.93  79  eP      Pn    04 30 08.7 +2.1
SPBC  San Pablo de B   10.95  71⇑ eP      Pn    04 30 07.9 +1.1
ATAH  Atahualpa        10.97 147   Pn     Pn    04 30 09.3 +1.9
      comp=Z,0.9nm,0.3s,baz=319,slow=13,SNR=8.9
ATAH                               Sn     Sn    04 32 06.4 -2.6
      comp=Z,0.2nm,0.3s,baz=323,slow=21,SNR=0.8
ATAH                               LR     LR    04 33 15.6
      comp=Z,402nm,18.5s,baz=44,slow=32
ZARC  Zaragoza, Cauc   10.97  60  eP      Pn    04 30 08.7 +1.6
ZARC  Zaragoza, Cauc   10.97  60          Pn    04 30 08.6 +1.6
MOTC  Monteria, Cord   10.99  52⇓ eP      Pn    04 30 10.2 +2.9
MOTC  Monteria, Cord   10.99  52          Pn    04 30 08.6 +1.3
CHIC  Chingaza         11.00  76⇑ eP      Pn    04 30 08.7 +0.9
BRRC  Barranca, Sant   11.81  65⇑ eP      Pn    04 30 19.8 +1.2
GUVC  San Jose del G   11.83  88  eP      Pn    04 30 18.8 +0.1
RUSC  La Rusia         11.96  71⇑ eP      Pn    04 30 21.5 +0.5
SJCC  San Jacinto, C   12.05  49  eP      Pn    04 30 21.5 -0.4
SJCC  San Jacinto, C   12.05  49   Pn     Pn    04 30 22.4 +0.4
BARC  Barichara        12.10  68  eP      Pn    04 30 23.7 +1.1
TGUH  Tegucigalpa,Un   12.23 347  eP      Pn    04 30 26.0 +1.7
TGUH  Tegucigalpa,Un   12.23 347   Pn     Pn    04 30 25.2 +0.9
SMLC  San Martn de     12.30  57  eP      Pn    04 30 25.6 +0.4
SNET  Serv Nac Est T   12.47 338   Pn     Pn    04 30 27.7 +0.2
OCAC  Ocana            12.66  61  eP      Pn    04 30 31.8 +1.5
ARGC  Ariguani, Magd   12.76  52  eP      Pn    04 30 32.2 +0.8
PAMC  Pamplona, Colo   12.82  66  eP      Pn    04 30 34.5 +1.7
SOCV  Socops           14.88  65  eP      Pn    04 30 59.4 -1.0
CZSB  Cruzeiro do Su   15.24 130  eP      Pn    04 31 04.2 -1.0
CZSB  Cruzeiro do Su   15.24 130   Pn     Pn    04 31 04.1 -1.0
SDV   Santo Domingo    15.32  63  eP      P     04 31 12.1 +1.3
SDV   Santo Domingo    15.32  63  eP      Pn    04 31 06.2 -0.3
SDV   Santo Domingo    15.32  63   Pn     Pn    04 31 05.2 -1.3
URIC  Uribia, Colomb   15.63  52  eP      Pn    04 31 10.5 +0.4
PETF  Flores           15.68 340   Pn     Pn    04 31 11.5 +0.7
TBTG  Tabatinga, AM    15.81 113  eP      Pn    04 31 10.0 -2.6
NNA   Nana             15.89 152   Pn     Pn    04 31 14.4 +0.8
      comp=Z,0.4nm,0.3s,baz=334,slow=14,SNR=4.6
CCIG  Comitan          16.02 332   Pn     Pn    04 31 14.7 -0.6
BAUV  El Baul          17.70  67   IAmb   IAmb  04 31 40.4
      comp=Z,122nm,1.4s
CMIG  Matias Romero    18.11 326   P      P     04 31 41.4  0.0
      comp=Z,0.2nm,0.3s,baz=135,slow=8.8,SNR=8.4
BIRV  Birongo          19.89  64   P      P     04 31 59.6 -1.5
BIRV                               IAmb   IAmb  04 32 04.8
      comp=Z,79nm,0.8s
TLIG  Tlapa            20.71 319   P      P     04 32 10.1  0.0
TLIG                               IAmb   IAmb  04 32 19.1
      comp=Z,80nm,1.2s
SDDR  Presa de Saban   21.18  37   P      P     04 32 12.7 -2.3
PCRV  Puerto La Cruz   21.27  67   P      P     04 32 16.2 +0.2
      comp=Z,28nm,0.9s,baz=232,slow=6.6,SNR=8.7
ETMB  Extrema          21.67 123  eP      P     04 32 20.3 +0.1
ETMB  Extrema          21.67 123   P      P     04 32 20.5 +0.3
ETMB                               IAmb   IAmb  04 32 21.8
      comp=Z,105nm,1.2s
OBIP  Obispado Ponce   23.63  47   P      P     04 32 40.2 -0.4
OBIP                               IAmb   IAmb  04 33 05.6
      comp=Z,104nm,1.5s
SAML  Samuel           23.86 118   P      P     04 32 42.0 -0.8
SAML                               pmax   pmax
      comp=Z,59nm,1.2s
SAML  Samuel           23.86 118   P      P     04 32 42.0 -0.8
SAML                               IAmb   IAmb  04 32 44.7
      comp=Z,59nm,1.2s
BOAV  Boa Vista        23.91  89  eP      P     04 32 44.2 +0.8
SJG   San Juan         24.01  47   P      P     04 32 44.5 +0.4
      comp=Z,26nm,0.8s,baz=283,slow=3.4,SNR=7.9
SJG                                LR     LR    04 41 13.3
      comp=Z,267nm,21.4s,baz=258,slow=34
SJG   San Juan         24.01  47   P      P     04 32 44.2 +0.1
SJG                                pmax   pmax
      comp=Z,58nm,1.1s
SJG   San Juan         24.01  47  eP      P     04 32 43.6 -0.6
SJG   San Juan         24.01  47   P      P     04 32 44.2 +0.1
SJG                                IAmb   IAmb  04 32 51.9
      comp=Z,58nm,1.1s
PDPR  Patillas Dam,    24.04  48   P      P     04 32 45.2 +0.8
PDPR                               IAmb   IAmb  04 32 47.3
      comp=Z,90nm,1.4s
GCPR  Guaynabo City    24.18  47   P      P     04 32 45.8 +0.1
GCPR                               IAmb   IAmb  04 33 01.8
      comp=Z,25nm,0.8s
HUMP  Col San Antoni   24.25  48   P      P     04 32 45.9 -0.5
HUMP                               IAmb   IAmb  04 32 54.0
      comp=Z,51nm,1.1s
MACA  Manacapuru-AM    24.32 102   P      P     04 32 47.4 +0.2
MACA                               IAmb   IAmb  04 32 47.8
      comp=Z,29nm,0.9s
LPAZ  La Paz           24.35 139   P      P     04 32 49.8 +1.7
      comp=Z,31nm,0.8s,baz=323,slow=8.8,SNR=65
LPAZ  La Paz           24.35 139  eP      P     04 32 49.6 +1.6
LPAZ  La Paz           24.35 139   IAmb   IAmb  04 32 54.5
      comp=Z,34nm,0.8s
PTGA  Pitinga          24.64  96   P      P     04 32 50.5 +0.5
      comp=Z,19nm,0.9s,baz=284,slow=9.6,SNR=22
CUPR  Culebra, Puert   24.77  48   IAmb   IAmb  04 32 52.2
      comp=Z,28nm,0.8s
PB12  IPOC Station P   24.82 147   IAmb   IAmb  04 33 02.5
      comp=Z,54nm,1.1s
PB16  IPOC Station P   25.06 145   IAmb   IAmb  04 33 00.0
      comp=Z,44nm,0.8s
PB11  IPOC Station P   26.11 147   IAmb   IAmb  04 33 15.3
      comp=Z,53nm,1.0s
PATCX Punta Patache    26.72 149   P      P     04 33 08.5 -0.4
PATCX                              IAmb   IAmb  04 33 17.6
      comp=Z,36nm,1.0s
ZAIG  Zacatecas        27.06 321   P      P     04 33 12.2 +0.1
VILB  Vilhena          28.33 122  eP      P     04 33 24.5 +1.3
LVC   Limon Verde      28.84 149   P      P     04 33 30.5 +2.4
      comp=Z,4.6nm,0.7s,baz=320,slow=8.4,SNR=5.0
LVC   Limon Verde      28.84 149   P      P     04 33 29.1 +0.9
LVC                                pmax   pmax
      comp=Z,22nm,1.4s
LVC   Limon Verde      28.84 149  eP      P     04 33 28.3 +0.2
LVC   Limon Verde      28.84 149   P      P     04 33 29.1 +0.9
SIV   San Ignacio      29.26 129   P      P     04 33 32.3 +0.8
      comp=Z,8.5nm,0.9s,baz=300,slow=9.8,SNR=25
SIV                                LR     LR    04 44 48.8
      comp=Z,204nm,18.5s,baz=314,slow=36
HKT   Hockley          29.75 340⇓ eP      P     04 33 36.5 +0.9
HKT                                pmax   pmax
      comp=Z,36nm,1.5s
HKT   Hockley          29.75 340   P      P     04 33 35.3 -0.3
HKT                                IAmb   IAmb  04 33 44.5
      comp=Z,34nm,1.5s
NPGB  Novo Progresso   30.42 108  eP      P     04 33 41.8 -0.1
152A  Waverly Hall     30.43 360   IAmb   IAmb  04 33 48.7
      comp=Z,22nm,1.1s
MALB  Monte Alegre     30.43  97  eP      P     04 33 42.8 +0.8
PTLB  Pontes e Lacer   30.50 126  eP      P     04 33 43.3 +0.8
PTLB  Pontes e Lacer   30.50 126   P      P     04 33 43.0 +0.5
PDRB  Porto dos Gac    30.73 117  eP      P     04 33 44.8 +0.2
H06E1 SOCORRO T-PHAS30.79 304      T      T     05 06 00.3
      SNR=20
435B  Jarrell          31.14 338   P      P     04 33 48.2 +0.3
GOGA  Godfrey          31.19   2   P      P     04 33 46.7 -1.6
GOGA  Godfrey          31.19   2   P      P     04 33 46.8 -1.6
      baz=182
CLDB  Colider          31.28 115  eP      P     04 33 49.5 +0.1
JCT   Junction City    31.77 334   IAmb   IAmb  04 34 01.4
      comp=Z,22nm,1.2s
HPIG                   32.01 322   P      P     04 33 55.5 -0.4
X48A  Hartselle        32.30 356   IAmb   IAmb  04 34 05.3
      comp=Z,27nm,1.1s
FPAL  Fort Paine       32.32 358   IAmb   IAmb  04 33 59.9
      comp=Z,19nm,1.1s
AC02  Maricunga        32.32 154   IAmb   IAmb  04 34 08.8
      comp=Z,22nm,1.1s
TXAR  Lajitas Array    32.70 328   P      P     04 34 01.9 +0.1
      comp=Z,1.3nm,0.6s,baz=145,slow=8.9,SNR=14
TXAR                               PcP    PcP   04 36 48.9 +1.7
      comp=Z,1.5nm,0.9s,baz=164,slow=5.1,SNR=5.0
TX31  Lajitas Ar. Si   32.70 328   IAmb   IAmb  04 34 24.5
      comp=Z,40nm,1.4s
TX32  Lajitas Array    32.70 328   P      P     04 34 02.2 +0.4
SWET  Sewanee          33.00 358   IAmb   IAmb  04 34 10.9
      comp=Z,23nm,1.1s
KMSC  Kings Mountain   33.03   5   P      P     04 34 05.3 +0.8
      baz=186,SNR=8.9
Z35A  Perchaven, San   33.33 340   P      P     04 34 06.9 -0.2
Z35A                               IAmb   IAmb  04 34 15.5
      comp=Z,30nm,1.2s
V51A  Loudon           33.56   0   IAmb   IAmb  04 34 16.1
      comp=Z,30nm,1.1s
V48A  Smith Brothers   33.57 357   IAmb   IAmb  04 34 16.0
      comp=Z,34nm,1.1s
SALV  Santo Antonio    33.57 123  eP      P     04 34 11.3 +1.8
ABTX  Abilene, Hawle   33.58 336   P      P     04 34 09.3  0.0
ABTX                               IAmb   IAmb  04 34 16.8
      comp=Z,30nm,1.1s
V52A  Sevierville      33.61   1   IAmb   IAmb  04 34 16.5
      comp=Z,18nm,0.9s
W41B  Gary Mavity, V   33.72 348   P      P     04 34 11.2 +0.7
      baz=166
LPAR  Lepanto          33.80 351   P      P     04 34 12.5 +1.4
WHAR  Wooly Hollow     33.84 348   IAmb   IAmb  04 34 17.6
      comp=Z,16nm,1.1s
WVT   Waverly          34.03 355   P      P     04 34 13.1 -0.1
WVT                                pmax   pmax
      comp=Z,17nm,1.1s
WVT   Waverly          34.03 355   P      P     04 34 13.1 -0.1
WVT                                IAmb   IAmb  04 34 19.3
      comp=Z,17nm,1.1s
WVT   Waverly          34.03 355   P      P     04 34 13.1 -0.1
      baz=174
U49A  Red Boiling Sp   34.29 358   IAmb   IAmb  04 34 22.8
      comp=Z,25nm,1.1s
LCAR  Lake Charles     34.39 350   IAmb   IAmb  04 34 22.8
      comp=Z,29nm,1.1s
X34A  Smith Ranch, M   34.68 340   IAmb   IAmb  04 34 26.7
      comp=Z,26nm,1.1s
U40A  Yellville        34.98 348   IAmb   IAmb  04 34 28.1
      comp=Z,22nm,1.1s
U40A  Yellville        34.98 348   P      P     04 34 21.2 -0.3
      baz=165
PP1B  Ponte de Pedra   35.10 125  eP      P     04 34 23.4 +0.7
BLA   Blacksburg       35.16   6   P      P     04 34 23.3 +0.3
BLA                                pmax   pmax
      comp=Z,44nm,1.1s
BLA   Blacksburg       35.16   6   P      P     04 34 23.2 +0.3
BLA   Blacksburg       35.16   6   P      P     04 34 23.4 +0.4
      baz=187
T42A  Van Buren        35.32 351   IAmb   IAmb  04 34 25.1
      comp=Z,12nm,0.9s
MNTX  Cornudas Mount   35.47 328   IAmb   IAmb  04 34 33.1
      comp=Z,26nm,1.1s
MNTX  Cornudas Mount   35.47 328   P      P     04 34 25.5 -0.2
      baz=142,SNR=25
H03N2 Juan Fernandez   35.71 172   T      T     05 12 09.1
      baz=351,slow=76,SNR=114
H03N1 Juan Fernandez   35.71 172   T      T     05 12 16.6
      baz=351,slow=76,SNR=108
H03N3 Juan Fernandez   35.72 172   T      T     05 12 08.9
      baz=351,slow=76,SNR=94
SNDB  Serra Nova Dou   35.78 114  eP      P     04 34 28.5 -0.1
AQDB  Aquidauana       36.01 130   P      P     04 34 30.5  0.0
AQDB                               IAmb   IAmb  04 34 39.1
      comp=Z,19nm,1.2s
WCI   Wyandotte Cave   36.02 358   P      P     04 34 30.4 +0.1
WCI                                pmax   pmax
      comp=Z,56nm,1.4s
WCI   Wyandotte Cave   36.02 358   P      P     04 34 30.4 +0.1
MSTX  Muleshoe         36.05 334   IAmb   IAmb  04 34 37.9
      comp=Z,29nm,1.1s
MSTX  Muleshoe         36.05 334   P      P     04 34 30.9 +0.1
      baz=148
CCM   Cathedral Cave   36.35 351   P      P     04 34 32.9 -0.2
CCM                                pmax   pmax
      comp=Z,26nm,1.0s
CCM   Cathedral Cave   36.35 351   P      P     04 34 32.9 -0.2
CCM                                IAmb   IAmb  04 34 39.6
      comp=Z,26nm,1.0s
CCM   Cathedral Cave   36.35 351   P      P     04 34 32.7 -0.4
      baz=168
S39A  Bolivar          36.37 348   IAmb   IAmb  04 34 39.9
      comp=Z,14nm,1.0s
AMTX  Amarillo         36.37 336   P      P     04 34 33.5  0.0
      baz=150
TMAB  Tom-Au,PA,Br     36.62  97  eP      P     04 34 36.0 +0.3
ZON   Zonda            36.64 157   P      P     04 34 36.9 +1.1
ZON                                pmax   pmax
      comp=Z,13nm,1.2s
ZON   Zonda            36.64 157   P      P     04 34 36.9 +1.1
R40A  Maddies Statio   36.75 350   IAmb   IAmb  04 34 42.9
      comp=Z,23nm,1.1s
VA01  Torpederas       36.95 162   P      P     04 34 39.2 +0.9
VA03  San Esteban      37.06 160   P      P     04 34 40.7 +1.2
VA03                               IAmb   IAmb  04 34 48.5
      comp=Z,31nm,0.9s
319A  Douglas          37.40 324   IAmb   IAmb  04 34 50.8
      comp=Z,26nm,1.0s
121A  Cookes Peak, D   37.40 327   IAmb   IAmb  04 34 51.3
      comp=Z,24nm,0.9s
121A  Cookes Peak, D   37.40 327   P      P     04 34 43.8 +1.4
      baz=139,SNR=15
P52A  Corning          37.44   3   P      P     04 34 42.3 -0.1
      baz=184
P46A  Rosedale         37.45 357   IAmb   IAmb  04 34 48.5
      comp=Z,28nm,0.9s
P40A  Paris            37.92 350   IAmb   IAmb  04 34 52.9
      comp=Z,30nm,1.1s
O53A  New Philadelph   38.11   4   P      P     04 34 48.0 -0.1
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	baz=185						
SFIN	Lafayette	38.20	357	P	P	04 34 48.3	-0.5
	baz=176						
SMTB	Santa Maria do	38.31	107	*e*P	P	04 34 50.5	+0.3
HDIL	Hopedale	38.55	354	P	P	04 34 51.7	-0.1
	baz=172						
ANMO	Albuquerque	38.59	330	P	P	04 34 52.9	+0.5
	comp=Z,11nm,1.0s,baz=156,slow=8.9,SNR=21						
ANMO	Albuquerque	38.59	330	P	P	04 34 53.0	+0.6
ANMO				pmax	pmax		
	comp=Z,21nm,1.1s						
ANMO	Albuquerque	38.59	330	P	P	04 34 53.0	+0.6
ANMO				IAmb	IAmb	04 35 00.6	
	comp=Z,21nm,1.1s						
ANMO	Albuquerque	38.59	330	P	P	04 34 53.3	+0.9
	baz=143						
SSPA	Standing Stone	38.84	8	P	P	04 34 54.9	+0.7
SSPA	Standing Stone	38.84	8	P	P	04 34 54.1	-0.1
	baz=190						
N41A	Harden Midland	38.89	352	IAmb	IAmb	04 35 00.9	
	comp=Z,32nm,1.1s						
TUC	Tucson	38.96	323	P	P	04 34 56.2	+0.8
TUC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TUC	Tucson	38.96	323	P	P	04 34 56.2	+0.8
TUC	Tucson	38.96	323	P	P	04 34 55.9	+0.4
	baz=135						
CBKS	Cedar Bluff	39.14	341	P	P	04 34 57.9	+1.1
	baz=155,SNR=10						
N38A	Joes South For	39.35	349	IAmb	IAmb	04 35 05.2	
	comp=Z,35nm,0.9s						
T25A	Trinidad	39.44	335	P	P	04 35 00.8	+1.3
	baz=148,SNR=9.3						
N59A	State Game Lan	39.45	10	P	P	04 34 59.9	+0.6
	baz=194						
ML02	Panimavida	39.56	163	P	P	04 35 00.9	+0.6
ML02				IAmb	IAmb	04 35 08.6	
	comp=Z,32nm,1.0s						
M57A	Sunshine Farm,	39.64	9	IAmb	IAmb	04 35 07.9	
	comp=Z,43nm,1.1s						
214A	Organ Pipe Nat	39.96	321	IAmb	IAmb	04 35 12.1	
	comp=Z,26nm,1.1s						
214A	Organ Pipe Nat	39.96	321	P	P	04 35 04.6	+0.9
	baz=132						
BDFB	Brasilia	40.10	117	P	P	04 35 04.5	-0.7
	comp=Z,2.6nm,0.7s,baz=251,slow=15,SNR=4.3						
BDFB	Brasilia	40.10	117	P	P	04 35 04.5	-0.7
BDFB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BDFB	Brasilia	40.10	117	IAmb	IAmb	04 35 05.7	
	comp=Z,9.0nm,1.1s						
N33A	J Bar K, Exete	40.24	345	P	P	04 35 06.3	+0.4
L40A	Anamosa	40.27	352	IAmb	IAmb	04 35 07.4	
	comp=Z,25nm,0.9s						
KSCO	Kaye Shedlock'	40.33	338	P	P	04 35 07.8	+1.0
	baz=151,SNR=10						
W18A	Petrified Fore	40.41	327	IAmb	IAmb	04 35 16.1	
	comp=Z,53nm,1.2s						
W18A	Petrified Fore	40.41	327	P	P	04 35 08.6	+1.0
	baz=139,SNR=14						
SDCO	Great Sand Dun	40.42	334	IAmb	IAmb	04 35 16.0	
	comp=Z,28nm,1.1s						
SDCO	Great Sand Dun	40.42	334	P	P	04 35 08.8	+1.0
	baz=146,SNR=18						
ROSB	Rosrio	40.62	97	*e*P	P	04 35 09.2	-0.2
BINY	Binghamton	40.66	10	P	P	04 35 10.0	+0.6
	baz=193						
IPMB	Ipameri, GO	40.88	121	*e*P	P	04 35 11.3	-0.3
S22A	4UR Ranch, Cre	41.02	333	P	P	04 35 13.4	+0.7
	baz=145,SNR=12						
ITQB	Itaqui	41.29	142	*e*P	P	04 35 16.0	+1.4
ITQB	Itaqui	41.29	142	P	P	04 35 15.8	+1.2
Q24A	Divide	41.29	335	P	P	04 35 15.1	+0.1
	baz=148						
MVCO	Mesa Verde	41.38	331	IAmb	IAmb	04 35 23.2	
	comp=Z,28nm,1.2s						
MVCO	Mesa Verde	41.38	331	P	P	04 35 16.0	+0.3
	baz=142						
WUAZ	Wupatki	41.61	326	IAmb	IAmb	04 35 25.8	
	comp=Z,29nm,1.1s						
WUAZ	Wupatki	41.61	326	P	P	04 35 18.6	+1.2
	baz=137,SNR=16						
OGNE	Ogallala	41.83	340	P	P	04 35 20.0	+1.0
	baz=153						
SDBA	SAO DESIDERIO	41.83	111	*e*P	P	04 35 19.5	+0.1
CPBX	Cerro Prieto	41.86	319	P	P	04 35 20.8	+1.5
CPBX				IAmb	IAmb	04 35 22.9	
	comp=Z,48nm,1.1s						
I40A	Norwalk	42.00	353	IAmb	IAmb	04 35 26.2	
	comp=Z,39nm,1.1s						
ISCO	Idaho Springs	42.19	336	P	P	04 35 22.9	+0.6
	baz=148,SNR=11						
SMCO	Snowmass	42.26	334	IAmb	IAmb	04 35 30.9	
	comp=Z,21nm,1.0s						
PDMCI	Parker Dam,Lak	42.36	323	P	P	04 35 24.8	+1.4
	baz=133						
RMX	La Rumorosa	42.48	319	P	P	04 35 23.8	-0.8
I37A	Lemond, Waseca	42.51	350	IAmb	IAmb	04 35 30.9	
	comp=Z,67nm,1.4s						
BC3	Big Chuckawall	42.75	321	P	P	04 35 27.6	+0.9
	baz=131,SNR=7.4						
U15A	North Rim	42.78	326	IAmb	IAmb	04 35 35.7	
	comp=Z,26nm,1.1s						
ECSD	EROS Data Cent	42.87	347	P	P	04 35 26.6	-0.7
ECSD				IAmb	IAmb	04 35 33.7	
	comp=Z,55nm,1.2s						
ECSD	EROS Data Cent	42.87	347	P	P	04 35 26.5	-0.9
	baz=162,SNR=10						
IRM	Iron Mountain	42.88	322	P	P	04 35 28.6	+0.9
	baz=132,SNR=19						
MONP2	Monument Peak	42.88	319	P	P	04 35 28.3	+0.4
	baz=129						
JANB	Januaria	43.22	115	*e*P	P	04 35 30.1	-0.5
N23A	Red Feather La	43.25	336	P	P	04 35 31.2	+0.4
	baz=148						
G40A	Rib Lake	43.31	354	IAmb	IAmb	04 35 37.2	
	comp=Z,32nm,1.1s						
BELC	Belle Mtn. Jos	43.32	321	P	P	04 35 32.3	+0.9
	baz=130,SNR=7.7						
109C	Camp Elliot, M	43.33	319	IAmb	IAmb	04 35 39.4	
	comp=Z,20nm,1.1s						
109C	Camp Elliot, M	43.33	319	P	P	04 35 32.0	+0.8
	baz=128						
TPFO	Pinon Flats	43.35	320	P	P	04 35 32.6	+0.9
	baz=130						
PFO	Pinyon Flats O	43.36	320	P	P	04 35 31.7	0.0
PFO				pmax	pmax		
	comp=Z,14nm,1.2s						
PFO	Pinyon Flats O	43.36	320	P	P	04 35 31.7	0.0
PFO	Pinyon Flats O	43.36	320	P	P	04 35 32.6	+0.9
	baz=130						
KNB	Kanab	43.50	326	IAmb	IAmb	04 35 41.3	
	comp=Z,28nm,1.1s						
SPMN	Marine on St.	43.60	351	P	P	04 35 33.0	-0.2
SPMN	Marine on St.	43.60	351	P	P	04 35 33.1	-0.1
	baz=168,SNR=11						
O20A	White River Ci	43.60	333	IAmb	IAmb	04 35 42.9	
	comp=Z,22nm,1.2s						
O20A	White River Ci	43.60	333	P	P	04 35 34.5	+0.9
	baz=144						
GMRC	Granite Mounta	43.62	322	P	P	04 35 34.4	+0.7
	baz=131,SNR=7.1						
CPSB	Cacapava Do Su	43.79	140	*e*P	P	04 35 36.9	+1.9
HEC	Hector,Ludlow	44.06	321	P	P	04 35 38.3	+1.0
	baz=131,SNR=9.3						
SUSD	Miller	44.10	345	P	P	04 35 37.2	-0.1
	baz=159						
LL04	Puerto Octay	44.17	167	P	P	04 35 38.6	+0.8
LL04				IAmb	IAmb	04 35 45.7	
	comp=Z,30nm,1.2s						
CCUT	Cedar City	44.18	327	IAmb	IAmb	04 35 47.1	
	comp=Z,22nm,1.1s						
TUQ	Turquoise Moun	44.21	322	P	P	04 35 39.0	+0.5
	baz=132,SNR=7.1						
F36A	Milaca	44.33	351	IAmb	IAmb	04 35 40.4	
	comp=Z,27nm,1.1s						
RWWY	Rawlins	44.43	336	IAmb	IAmb	04 35 48.0	
	comp=Z,25nm,0.9s						
PLCA	Paso Flores	44.45	165	P	P	04 35 40.8	+0.6
	comp=Z,5.2nm,0.7s,baz=338,slow=9.4,SNR=20						
PLCA	Paso Flores	44.45	165	P	P	04 35 41.1	+0.9
PLCA				pmax	pmax		
	comp=Z,13nm,0.9s						
PLCA	Paso Flores	44.45	165	*e*P	P	04 35 41.2	+0.9
PLCA	Paso Flores	44.45	165	P	P	04 35 41.1	+0.9
PLCA				IAmb	IAmb	04 35 48.5	
	comp=Z,13nm,0.9s						
TCRU	Three Creeks R	44.46	328	IAmb	IAmb	04 35 54.0	
	comp=Z,16nm,0.9s						
BFSC	Mount Baldy Ra	44.53	320	P	P	04 35 41.7	+0.7
	baz=129,SNR=6.2						
RDMU	Red Mountain	44.55	333	IAmb	IAmb	04 35 54.5	
	comp=Z,12nm,0.9s						
GSC	Goldstone, Bar	44.66	321	P	P	04 35 42.6	+0.6
	baz=131						
SHOC	Shoshone, Teco	44.73	323	P	P	04 35 43.2	+0.7
	baz=132,SNR=8.3						
MWC	Mount Wilson	44.78	319	P	P	04 35 42.8	-0.3
MWC				pmax	pmax		
	comp=Z,16nm,1.2s						
MWC	Mount Wilson	44.78	319	P	P	04 35 42.8	-0.3
MWC				IAmb	IAmb	04 35 58.0	
	comp=Z,16nm,1.2s						
DIAM	Diamantina, MG	44.95	119	*e*P	P	04 35 44.8	+0.2
K22A	Casper	44.97	337	IAmb	IAmb	04 35 51.8	
	comp=Z,19nm,1.1s						
K22A	Casper	44.97	337	P	P	04 35 44.3	-0.1
	baz=148						
QSM	Queen of Sheba	45.13	322	IAmb	IAmb	04 35 53.6	
	comp=Z,18nm,1.0s						
EDW2	Edwards Air Fo	45.15	320	P	P	04 35 46.4	+0.5
	baz=129,SNR=7.2						
LRMC	Laurel Mtn Rad	45.33	321	P	P	04 35 48.4	+1.0
	baz=130,SNR=7.7						
RSSD	Black Hills	45.33	340	P	P	04 35 48.0	+0.7
RSSD				pmax	pmax		
	comp=Z,20nm,1.1s						
RSSD	Black Hills	45.33	340	P	P	04 35 48.0	+0.7
RSSD				IAmb	IAmb	04 35 55.1	
	comp=Z,20nm,1.1s						
RSSD	Black Hills	45.33	340	P	P	04 35 48.1	+0.7
	baz=152						
TPNV	Topopah Spring	45.41	324	P	P	04 35 49.5	+1.4
	baz=132						
FURC	Furnace Creek,	45.46	323	P	P	04 35 49.0	+0.8
	baz=131,SNR=7.5						
JLU	Jordanelle	45.47	331	IAmb	IAmb	04 35 59.6	
	comp=Z,19nm,1.5s						
MPMC	Manual Prospec	45.58	322	P	P	04 35 49.8	+0.4
	baz=130,SNR=6.7						
CTU	Camp Tracy	45.68	331	IAmb	IAmb	04 35 57.6	
	comp=Z,12nm,1.0s						
SPR3	Spring Creek 3	45.75	327	IAmb	IAmb	04 35 58.4	
	comp=Z,18nm,1.2s						
DUG	Dugway, Tooele	45.83	330	P	P	04 35 52.2	+0.9
DUG				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DUG	Dugway, Tooele	45.83	330	P	P	04 35 52.2	+0.9
DUG	Dugway, Tooele	45.83	330	P	P	04 35 51.4	+0.1
	baz=139						
ARVC	Arvin	45.84	320	P	P	04 35 52.3	+1.0
	baz=128						
ISA	Isabella, Lake	45.94	321	P	P	04 35 52.6	+0.4
ISA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ISA	Isabella, Lake	45.94	321	P	P	04 35 52.5	+0.4
ISA	Isabella, Lake	45.94	321	P	P	04 35 53.5	+1.3
	baz=129						
R11A	Troy Canyon, C	45.99	326	P	P	04 35 53.5	+0.9
	baz=134,SNR=12						
CWC	Cottonwood Cre	46.19	322	P	P	04 35 54.6	+0.4
	baz=130						
HWUT	Hardware Ranch	46.30	332	IAmb	IAmb	04 35 57.1	
	comp=Z,18nm,1.1s						
BW06	Boulder Array	46.31	334	P	P	04 35 54.3	-0.9
	baz=144,SNR=7.7						
PDAR	Pinedale Array	46.31	334	P	P	04 35 54.4	-0.8
	comp=Z,4.3nm,0.9s,baz=133,slow=6.9,SNR=21						
PDAR				PcP	PcP	04 37 29.8	-0.3
	comp=Z,2.0nm,0.8s,baz=138,slow=4.8,SNR=4.8						
PDAR				LR	LR	04 55 51.5	
	comp=Z,220nm,18.5s,baz=128,slow=37						
PDAR	Pinedale Array	46.31	334	P	P	04 35 54.6	-0.6
PKM	Mcpherson Peak	46.33	319	P	P	04 35 55.9	+0.5
	baz=127						
VES	Vestal, Richgr	46.44	320	P	P	04 35 57.0	+1.0
	baz=128,SNR=7.2						
BGU	Big Grassy Mou	46.49	330	IAmb	IAmb	04 35 59.0	
	comp=Z,14nm,1.2s						
SPUT	South Promonto	46.49	331	IAmb	IAmb	04 36 03.3	
	comp=Z,16nm,1.2s						
TPH	Tonopah	46.74	324	P	P	04 35 58.3	-0.3
TPH				pmax	pmax		
	comp=Z,48nm,1.0s						
TPH	Tonopah	46.74	324	P	P	04 35 58.3	-0.3
AGMN	Agassiz Nation	47.09	350	P	P	04 36 00.4	-0.4
	baz=164,SNR=11						
REDW	Red Top Meadow	47.35	334	IAmb	IAmb	04 36 10.4	
	comp=Z,24nm,1.1s						
MDND	Maddock	47.44	346	P	P	04 36 03.9	+0.3
	baz=159,SNR=9.6						
NV11	Mina Array Sit	47.53	324	IAmb	IAmb	04 36 07.8	
	comp=Z,20nm,1.2s						
NVAR	Mina Array Bea	47.61	324	P	P	04 36 06.2	+0.8
	comp=Z,6.6nm,0.9s,baz=142,slow=7.3,SNR=22						
NVAR				PcP	PcP	04 37 34.9	+0.1
	comp=Z,4.1nm,0.8s,baz=136,slow=4.0,SNR=8.4						
NVAR	Mina Array Bea	47.61	324	P	P	04 36 05.8	+0.4
LHV	Little Huntoon	47.62	323	IAmb	IAmb	04 36 13.0	
	comp=Z,17nm,1.2s						
CMC01	Camacan, BA	47.70	113	*e*P	P	04 36 06.7	+0.6
RLMT	Red Lodge	48.12	336	P	P	04 36 08.5	-0.6
	baz=146						
RIB01	Linhares ES	48.21	118	*e*P	P	04 36 10.2	+0.2
LAO	LASA Array	48.32	340	IAmb	IAmb	04 36 17.3	
	comp=Z,20nm,1.2s						
LAO	LASA Array	48.32	340	P	P	04 36 10.0	-0.5
	baz=150						
BMN	Battle Mountai	48.34	326	IAmb	IAmb	04 36 13.6	
	comp=Z,12nm,1.1s						
YMR	Madison River	48.45	335	IAmb	IAmb	04 36 25.0	
	comp=Z,11nm,0.9s						
ULM	Lac du Bonnet	48.97	350	P	P	04 36 14.6	-0.8
	comp=Z,21nm,1.0s,baz=166,slow=8.4,SNR=16						
HLID	Hailey	49.15	331	P	P	04 36 17.5	+0.4
	baz=139,SNR=9.8						
BCYI	Bear Canyon	49.24	333	P	P	04 36 17.7	-0.2
BOZ	Bozeman (W)	49.47	335	IAmb	IAmb	04 36 21.8	
	comp=Z,13nm,1.1s						
BOZ	Bozeman (W)	49.47	335	P	P	04 36 19.6	+0.1
	baz=143,SNR=14						
MFID	Camas Ranch	49.73	330	IAmb	IAmb	04 36 29.1	
	comp=Z,15nm,1.4s						
ORV	Oroville	50.25	323	IAmb	IAmb	04 36 33.4	
	comp=Z,18nm,1.2s						
BMO	Blue Mountains	51.51	330	P	P	04 36 34.2	-0.6
BMO				pmax	pmax		
	comp=Z,12nm,1.3s						
BMO	Blue Mountains	51.51	330	P	P	04 36 34.1	-0.6
J05D	Fort Rock, OR	52.48	327	P	P	04 36 42.3	+0.1
	baz=131						
WALA	Waterton Lakes	53.17	336	IAmb	IAmb	04 36 49.6	
	comp=Z,24nm,1.1s						
D08A	Wollman Farm,	53.87	331	IAmb	IAmb	04 36 59.0	
	comp=Z,16nm,1.5s						
EFI	East Falkland	58.04	161	⇓*e*P	P	04 37 21.2	-0.6
EFI				pmax	pmax		
	comp=Z,96nm,2.4s						
USHA	Ushuaia	58.24	169	P	P	04 37 23.9	+0.8
	comp=Z,9.9nm,0.8s,baz=38,slow=8.7,SNR=3.8						
YKA	Yellowknife Ar	64.34	345	P	P	04 38 03.1	-1.2
	comp=Z,7.2nm,0.9s,baz=143,slow=6.6,SNR=44						
YKA	Yellowknife Ar	64.34	345	P	P	04 38 04.0	-0.3
PPT	Papeete	67.03	250	LR	LR	05 00 36.0	
	comp=Z,243nm,18.8s,baz=72,slow=30						
P33M	Teslin, Yukon	68.73	336	P	P	04 38 32.5	-0.1
	baz=127						
MACI	Morro de la Ar	69.64	61	P	P	04 38 39.8	+0.8
FARO	Faro, Yukon	70.15	338	P	P	04 38 42.0	+0.8
	baz=127						
M31M	Drury Creek, Y	70.53	338	P	P	04 38 43.9	+0.3
	baz=126						
N31M	Braeburn, Yuko	70.66	337	P	P	04 38 45.2	+0.8
	baz=124						
M30M	Minto, Yukon	71.66	337	P	P	04 38 50.7	+0.3
	baz=124						
YUK3	Moose Creek	72.71	336	P	P	04 38 57.7	+0.8
	baz=120						
ICESG	Greenland Ices	73.25	15	*i* P	P	04 38 56.6	-3.5
ICESG				IAmb	IAmb	04 39 12.1	
	comp=Z,6.2nm,0.7s						
DAWY	Dawson	73.46	338	P	P	04 39 00.3	-0.8
	baz=121						
M27K	Edge Creek, AK	73.57	336	IAmb	IAmb	04 39 10.0	
	comp=Z,14nm,1.1s						
M27K	Edge Creek, AK	73.57	336	P	P	04 39 01.5	-0.4
	baz=119						
MCARA	McCarthy VSAT	73.60	335	IAmb	IAmb	04 39 10.4	
	comp=Z,26nm,1.2s						
I29M	Ogilvie Camp,	73.75	339	P	P	04 39 02.8	+0.1
	baz=123						
BCAR	Beaver Creek A	73.88	336	P	P	04 39 03.9	+0.3
L27K	Beaver Creek,	73.89	336	IAmb	IAmb	04 39 11.8	
	comp=Z,20nm,1.2s						
L27K	Beaver Creek,	73.89	336	P	P	04 39 04.8	+1.2
	baz=119						
INK	Inuvik	73.93	343	P	P	04 39 03.9	+0.2
	comp=Z,9.3nm,0.9s,baz=112,slow=6.0,SNR=21						
INK	Inuvik	73.93	343	IAmb	IAmb	04 39 11.4	
	comp=Z,16nm,1.1s						
INK	Inuvik	73.93	343	P	P	04 39 04.0	+0.3
	baz=128						
GLB	Gilahina Butte	73.96	335	IAmb	IAmb	04 39 12.1	
	comp=Z,20nm,1.2s						
M26K	Nabesna, AK	74.05	336	IAmb	IAmb	04 39 06.9	
	comp=Z,13nm,1.2s						
M26K	Nabesna, AK	74.05	336	P	P	04 39 05.1	+0.4
	baz=118						
BMRM	Bremner River	74.10	334	IAmb	IAmb	04 39 08.1	
	comp=Z,25nm,1.0s						
BMRM	Bremner River	74.10	334	P	P	04 39 05.9	+1.0
	baz=116						
EGAK	Eagle	74.48	338	IAmb	IAmb	04 39 23.3	
	comp=Z,16nm,1.4s						
EGAK	Eagle	74.48	338	P	P	04 39 07.0	0.0
	baz=120						
L26K	Log Cabin Wild	74.49	336	IAmb	IAmb	04 39 15.5	
	comp=Z,15nm,1.1s						
L26K	Log Cabin Wild	74.49	336	P	P	04 39 07.7	+0.6
	baz=117						
TULEG	Thule	74.90	4	P	P	04 39 09.9	+0.7
TULEG				IAmb	IAmb	04 39 16.4	
	comp=Z,27nm,1.5s						
DOT	Dot Lake	75.06	337	IAmb	IAmb	04 39 18.1	
	comp=Z,16nm,1.0s						
SCRK	Sand Creek	75.18	337	P	P	04 39 12.2	+1.0
SCRK				IAmb	IAmb	04 39 19.4	
	comp=Z,16nm,1.2s						
SCRK	Sand Creek	75.18	337	P	P	04 39 11.5	+0.3
	baz=117						
J26L	Joseph Creek	75.25	337	P	P	04 39 12.0	+0.4
	baz=118						
PAX	Paxson	75.33	336	IAmb	IAmb	04 39 18.6	
	comp=Z,26nm,1.5s						
PAX	Paxson	75.33	336	P	P	04 39 12.4	+0.3
	baz=115						
SUMG	Summit	75.91	13	P	P	04 39 15.9	+0.3
SUMG				pmax	pmax		
	comp=Z,34nm,1.5s						
SUMG	Summit	75.91	13	*i* P	P	04 39 15.0	-0.6
SUMG				IAmb	IAmb	04 39 23.1	
	comp=Z,4.2nm,0.8s						
SUMG	Summit	75.91	13	P	P	04 39 15.9	+0.3
SUMG				IAmb	IAmb	04 39 24.5	
	comp=Z,34nm,1.5s						
KNK	Knik Glacier	75.98	334	P	P	04 39 15.7	0.0
	baz=112						
WAT6	Susitna Watana	76.12	335	P	P	04 39 16.7	0.0
	baz=113						
HDA	Harding Lake	76.53	337	IAmb	IAmb	04 39 26.0	
	comp=Z,23nm,1.1s						
HDA	Harding Lake	76.53	337	P	P	04 39 18.8	+0.1
	baz=114						
IL31		76.66	337	IAmb	IAmb	04 39 26.5	
	comp=Z,16nm,1.1s						
ILAR	Eielson Array	76.66	337	P	P	04 39 19.2	-0.3
	comp=Z,7.3nm,1.0s,baz=134,slow=3.6,SNR=31						
ILAR				PP	PP	04 42 11.5	-0.6
	comp=Z,0.5nm,0.9s,baz=119,slow=7.3,SNR=1.9						
RND	Reindeer	76.91	335	IAmb	IAmb	04 39 28.7	
	comp=Z,25nm,1.1s						
MCK	McKinley	77.07	336	IAmb	IAmb	04 39 30.1	
	comp=Z,14nm,1.0s						
MCK	McKinley	77.07	336	P	P	04 39 22.7	+0.9
	baz=112						
COLA	College	77.08	337	⇓*e*P	P	04 39 22.2	+0.4
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NEEM	North Greenlan	77.43	7	*i* P	P	04 39 23.8	-0.2
NEEM				IAmb	IAmb	04 39 26.4	
	comp=Z,10nm,0.8s						
NEA2	Nenana	77.45	336	IAmb	IAmb	04 39 31.1	
	comp=Z,17nm,1.1s						
NEA2	Nenana	77.45	336	P	P	04 39 23.7	-0.3
	baz=112						
H24K	Noodor Dome	77.48	338	P	P	04 39 24.4	+0.3
	baz=114						
I23K	Minto, Yukon-K	77.78	337	P	P	04 39 25.4	-0.3
I23K				IAmb	IAmb	04 39 27.8	
	comp=Z,11nm,0.9s						
I23K	Minto, Yukon-K	77.78	337	P	P	04 39 27.0	+1.2
	baz=112						
CAST	Castle Rocks	78.27	335	IAmb	IAmb	04 39 35.5	
	comp=Z,22nm,1.2s						
CAST	Castle Rocks	78.27	335	P	P	04 39 28.2	-0.4
	baz=109						
MLY	Manley	78.28	337	IAmb	IAmb	04 39 35.0	
	comp=Z,16nm,1.2s						
MLY	Manley	78.28	337	P	P	04 39 28.4	-0.1
	baz=111						
I21K	Tanana	78.82	337	P	P	04 39 31.4	-0.1
	baz=110						
COLD	Coldfoot	78.88	339	IAmb	IAmb	04 39 40.2	
	comp=Z,16nm,1.2s						
COLD	Coldfoot	78.88	339	P	P	04 39 32.7	+1.0
	baz=112						
K20K	Telida	79.10	335	IAmb	IAmb	04 39 40.2	
	comp=Z,26nm,1.2s						
K20K	Telida	79.10	335	P	P	04 39 33.0	-0.2
	baz=108						
L19K	White Mountain	79.10	333	P	P	04 39 34.1	+1.0
	baz=106						
TOLK	Toolik Lake Re	79.19	340	P	P	04 39 33.7	+0.2
	baz=113						
LIC	Lamto	79.27	84	*e*PKIKP	P	04 39 34.7	-0.3
	comp=Z,21nm,0.8s						
TIC	Toumodi	79.27	84	*e*PKIKP	P	04 39 34.4	-0.6
H21K	Melozitna Rive	79.31	337	P	P	04 39 34.5	+0.4
	baz=109						
J20K	Nowinta River	79.38	335	IAmb	IAmb	04 39 41.6	
	comp=Z,24nm,1.1s						
J20K	Nowinta River	79.38	335	P	P	04 39 34.2	-0.4
	baz=108						
DBIC	Dimbokro	79.43	84	P	P	04 39 35.2	-0.7
	comp=Z,4.1nm,0.8s,baz=312,slow=6.6,SNR=6.6						
DBIC				LR	LR	05 10 43.2	
	comp=Z,73nm,21.3s,baz=298,slow=33						
DBIC	Dimbokro	79.43	84	P	P	04 39 34.9	-1.0
DBIC				pmax	pmax		
	comp=Z,17nm,1.3s						
DBIC	Dimbokro	79.43	84	P	P	04 39 34.9	-1.0
DBIC				IAmb	IAmb	04 39 43.3	
	comp=Z,16nm,1.3s						
KIC	Kosan Boka	79.55	84	*e*PKIKP	P	04 39 34.7	-1.9
	comp=Z,17nm,0.9s						
IMAR	Indian Mountai	79.78	337	P	P	04 39 36.5	-0.2
KOWA	Kowa	80.23	76	P	P	04 39 40.8	+0.6
	comp=Z,4.6nm,0.7s,baz=270,slow=3.8,SNR=19						
KOWA	Kowa	80.23	76	P	P	04 39 39.5	-0.7
KOWA				IAmb	IAmb	04 39 48.4	
	comp=Z,27nm,1.4s						
MDT	Midelt	80.34	57	P	P	04 39 42.0	+1.4
	comp=Z,4.2nm,0.9s,baz=289,slow=4.8,SNR=14						
ESDC	Sonseca Array	81.36	50	P	P	04 39 46.5	+0.7
	comp=Z,2.5nm,0.9s,baz=265,slow=4.8,SNR=13						
ESDC	Sonseca Array	81.36	50	P	P	04 39 45.5	-0.4
EKA	Eskdalemuir Ar	83.34	35	P	P	04 39 54.9	-0.9
	comp=Z,0.7nm,0.4s,baz=232,slow=4.4,SNR=3.8						
BELA	Belgrano 2	84.20	171	P	P	04 40 01.0	+1.3
TORD	Torodi Ar. Bea	85.78	77	P	P	04 40 08.9	0.0
	comp=Z,2.2nm,0.7s,baz=273,slow=5.6,SNR=14						
TORD				LR	LR	05 15 41.9	
	comp=Z,58nm,21.4s,baz=295,slow=34						
TORD	Torodi Ar. Bea	85.78	77	P	P	04 40 08.5	-0.4
TORD				IAmb	IAmb	04 40 17.1	
	comp=Z,9.2nm,1.3s						
VNA3	Neumayer Olymp	87.09	162	P	P	04 40 15.0	+0.8
VNA3	Neumayer Olymp	87.09	162	PKiKP	PKiKP	04 45 18.8	-0.3
VNA1	Neumayer--Stat	87.39	161	P	P	04 40 16.2	+0.6
VNA1	Neumayer--Stat	87.39	161	PKiKP	PKiKP	04 45 19.4	-0.1
VNA2	Neumayer--Watz	87.73	161	P	P	04 40 17.8	+0.5

	baz=291,slow=3.2						
VNA2	Neumayer--Watz	87.73	161	PKiKP	PKiKP	04 45 18.6	-1.6
	baz=324,slow=50						
DOU	Dourbes	87.81	40	*d*P	P	04 40 17.2	-0.9
DOU				*d*PcP	PcP	04 40 19.7	-0.3
DOU				*d*pP	pP	04 40 23.6	-4.7
BGES	Gesves	88.12	40	*d*pP	pP	04 40 26.6	-3.1
BCLA	Clavier	88.26	40	*d*PcP	PcP	04 40 22.3	+0.3
SNAA	Sanae	89.31	162	P	P	04 40 25.0	+0.2
SNAA	Sanae	89.31	162	⇑*i*P	P	04 40 25.1	+0.2
SNAA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
SNAA	Sanae	89.31	162	P	P	04 40 24.9	+0.1
SNAA				IAmb	IAmb	04 40 32.6	
	comp=Z,9.3nm,1.4s						
NOA	NORSAR Array B	90.95	29	LR	LR	05 16 45.2	
	comp=Z,20nm,21.1s,baz=330,slow=32						
QSPA	South Pole Qui	92.11	180	P	P	04 40 38.7	+0.7
QSPA				IAmb	IAmb	04 40 52.6	
	comp=Z,4.1nm,0.8s						
CLL	Collm	93.06	39	*e*P	P	04 40 49.0	+6.4
CLL	Collm	93.06	39	*e*(pP)	pP	04 40 49.0	-3.8
KHC	Kasperske Hory	93.70	41	⇑*e*P	P	04 40 47.4	+1.7
KHC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GERES	GERESS Array B	93.82	41	P	P	04 40 46.6	+0.3
	comp=Z,0.6nm,0.8s,baz=238,slow=3.3,SNR=3.2						
GERES				LR	LR	05 17 27.7	
	comp=Z,46nm,19.3s,baz=292,slow=32						
BILL	Bilibino	95.21	339	⇑*e*P	P	04 40 52.7	+0.6
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	FINESS Array B	97.87	27	LR	LR	05 22 48.2	
	comp=Z,29nm,21.9s,baz=343,slow=34						
SYO	Syowa Base	103.60	162	⇑*e*Pdiff	Pdif	04 41 28.6	-1.0
SYO	Syowa Base	103.60	162	⇓*e*pPdiff	pPdif	04 41 39.0	-0.8
SYO	Syowa Base	103.60	162	⇑*e*PP	PKiKP	04 45 45.8	-2.0
YAK	Yakutsk	110.99	344	⇑*i*PKIKP	PKiKP	04 46 03.5	+1.7
BELG	Belogornoye	112.46	29	*i* PKIKP	PKiKP	04 46 03.7	-1.2
ZALV	Zalesovo Beam	123.46	8	PKP	PKPdf	04 46 25.1	-0.9
	comp=Z,2.0nm,0.8s,baz=260,slow=5.6,SNR=4.2						
KURK	Kurchatov	125.45	13	⇑*i*PKIKP	PKiKP	04 46 30.8	+0.5
DGZ	Jazzator, Alta	127.95	7	⇑*i*PKIKP	PKPdf	04 46 33.5	-1.5
ULN	Ulaanbaatar	129.26	350	⇓*i*PKIKP	PKPdf	04 46 37.7	+0.2
SONM	Songino Array	129.40	351	PKP	PKPdf	04 46 37.4	-0.4
	comp=Z,1.9nm,0.9s,baz=337,slow=1.1,SNR=7.6						
MKAR	Makanchi Array	129.96	12	PKP	PKPdf	04 46 37.4	-1.3
	comp=Z,1.8nm,0.8s,baz=302,slow=2.9,SNR=3.8						
KSRS	Korea Array	130.53	326	PKP	PKPdf	04 46 39.8	-0.2
	comp=Z,2.6nm,0.9s,baz=334,slow=0.8,SNR=10						
AAK	Ala-Archa	131.60	21	⇓*i*PKIKP	PKPdf	04 46 39.5	-2.6
WMQ	Urumqi	133.77	8	*e*PKP	PKiKP	04 46 47.5	+0.2
HHC	Hu-ho-hao-te	134.85	343	*e*PKP	PKPdf	04 46 46.3	-1.9
KSH	Kashi	134.88	21	*e*PKP	PKiKP	04 46 50.8	+1.0
ASAR	Alice Springs	137.13	237	PKP	PKPdf	04 46 52.6	-0.2
	comp=Z,0.7nm,0.7s,baz=89,slow=2.4,SNR=6.2						
ASAR	Alice Springs	137.13	237	PKIKP	PKPdf	04 46 52.2	-0.6
ASAR	Alice Springs	137.13	237		PKPdf	04 46 52.2	-0.6
WRA	Warramunga Arr	138.16	242	PKP	PKPdf	04 46 54.2	-0.6
	comp=Z,2.1nm,1.0s,baz=128,slow=3.1,SNR=5.4						
NJ2	Nanjing	139.50	329	*e*PKP	PKPdf	04 46 56.8	-0.1
PSA00	Pilbara Seismi	149.42	229	PKPbc	PKPbc	04 47 17.4	-1.4
GYA	Guiyang	149.67	340	PKPbc	PKPbc	04 47 19.3	-0.1
KMI	Kunming	152.08	346	⇑PKPbc	PKPdf	04 47 21.1	+2.4
KMI				pPKP	PKPbc	04 47 25.5	+0.2
CMAR	Chiang Mai Arr	159.32	351	PKP	PKPdf	04 47 27.3	-0.9
	comp=Z,1.0nm,0.4s,baz=291,slow=2.5,SNR=4.8						
CMAR				PKPab	PKPab	04 48 04.8	-0.6
	comp=Z,1.7nm,0.4s,baz=352,slow=5.7,SNR=6.0						

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*IDC **19** 04:28:19.9±9.8, 20°.54S×178°.00W, h599^{km}±97^{km}, mb3.5/3, mb1 3.6/5, mb1mx3.1/32, mbtmp4.4/5, Error ellipse: s-maj=91.5km s-min=41.5km az=39.0*

ISC 19 04:28:18.9±1.9**, 20°.5S**±0°.3×**177°.8W**±0°.3**, h600**^{km}**, n7, σ0^{s}.75**/8**, mb4.0**/3**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.73	261	P	P	04 31 24.8	0.0
	0.4nm,0.3s,baz=16,slow=20,SNR=1.3						
URZ	Urewera	18.24	193	P	P	04 31 56.8	+0.2
	1.0nm,0.3s,baz=118,slow=24,SNR=1.7						
ASAR	Alice Springs	44.66	257	P	P	04 35 40.0	0.0
	2.4nm,0.6s,baz=93,slow=7.6,SNR=36						
ASAR				PcP	PcP	04 37 09.0	-0.3
	0.3nm,0.8s,baz=106,slow=4.1,SNR=4.3						
WRA	Warramunga Arr	44.75	262	P	P	04 35 40.0	-0.7
	1.5nm,0.3s,baz=97,slow=7.6,SNR=69						
CMAR	Chiang Mai Arr	90.25	290	P	P	04 40 18.4	+1.2
	1.5nm,0.3s,baz=114,slow=4.0,SNR=4.6						
BRTR	Keskin Array B	146.94	312	PKPbc	PKPbc	04 46 55.4	-0.1
	0.4nm,0.5s,baz=140,slow=3.1,SNR=2.8						
MMAI	Mount Meron Ar	147.93	300	PKPbc	PKiKP	04 46 58.6	-0.9
	1.9nm,0.8s,baz=104,slow=6.1,SNR=4.4						

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*DNK **19** 04:36:27.8±1.9, 51°.45N×16°.05E, h15^{km}*
*VIE **19** 04:36:29.6±0.8, 51°.42N×16°.18E, h0^{km}, mb2.5/3, ml2.7/3, Error ellipse: s-maj=11.6km s-min=4.7km az=66.0 68 km WNW of Wroclaw Suspected Mining induced.*
*PRU **19** 04:36:30.2±0.0, 51°.44N×16°.15E, h0^{km}*

ISC 19 04:36:27.3±0.8**, 51°.55N**±0°.03×**16°.19E**±0°.03**, h0**^{km}**, n31, σ1^{s}.29**/61**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	175	*e*Pg	Pg	04 36 41.2	+0.3
KSP				*e*Sg	Sg	04 36 49.6	-0.6
CHVC	Chvalec	0.97	185	*e*PG	Pg	04 36 46.1	+0.3
CHVC				*e*SG	Sg	04 36 58.2	-0.2
	comp=Z,42nm,0.4s						
OSTC	Ostas	1.00	179	*e*PG	Pg	04 36 46.6	+0.2
OSTC				*e*SG	Sg	04 36 59.0	-0.3
	comp=Z,43nm,0.4s						
UPC	Upice	1.05	186	*e*PG	Pg	04 36 47.3	-0.1
UPC				*e*SG	Sg	04 37 00.9	-0.2
	comp=Z,90nm,0.3s						
DPC	Dobruska-Polom	1.21	176	*e*PG	Pg	04 36 50.1	-0.3
DPC				*e*SG	Sg	04 37 04.8	-1.2
	comp=Z,23nm,0.3s						
PVCC	Panska Ves	1.45	226	*e*PG	Pn	04 36 55.1	+0.4
PVCC				*e*SG	Sg	04 37 14.3	+0.5
	comp=Z,91nm,0.3s						
KRLC	Kraliky	1.53	166	*e*PG	Pn	04 36 56.1	+0.3
KRLC				*e*SG	Sg	04 37 14.8	-1.5
BRG	Berggiesshubel	1.57	245	Pg	Pg	04 36 58.0	+0.6
BRG				Sg	Sg	04 37 18.4	+0.7
BRG				Amp		04 37 18.9	
	comp=Z,32nm,0.4s						
PRU	Pruhonice	1.89	214	*e*PG	Pb	04 37 02.3	-0.2
PRU				*e*SG	Sn	04 37 26.0	+0.8
	comp=Z,17nm,0.3s						
MORC	Moravsky Berou	1.98	154	*e*PN	Pn	04 37 01.7	-0.3
MORC				*e*SG	Sn	04 37 27.9	+0.4
CLL	Collm	2.01	264	*e*Pg	Pg	04 37 06.0	+0.2
CLL				*e*Sg	Sg	04 37 32.0	+0.2
	comp=Z,22nm,0.7s						
OKC	Ostrava-Krasne	2.12	143	*e*SG	Sb	04 37 33.2	-0.2
	comp=Z,24nm,0.5s						
VRAC	Vranov	2.26	173	*e*PN	Pn	04 37 06.0	+0.1
VRAC				*e*SG	Sb	04 37 37.8	+0.3
TREC	Trest	2.31	192	*e*SG	Sb	04 37 39.3	+0.6
	comp=Z,14nm,0.2s						
KRUC	Moravsky	2.50	177	*e*PN	Pn	04 37 09.7	+0.6
KRUC				*e*SG	Sb	04 37 45.2	+0.9
OJC	Ojcow	2.65	119	*e*Pg	Pg	04 37 18.7	+0.8
OJC				*e*Sg	Sg	04 37 53.5	+1.3
NKC	Novy Kostel	2.71	242	*e*PN	Pn	04 37 13.1	+1.0
NKC				*e*PG	Pg	04 37 19.9	+0.7
NKC				*e*SG	Sg	04 37 55.7	+1.3
	comp=Z,20nm,0.3s						
JAVC	Velka Javorina	2.86	160	*e*PN	Pn	04 37 13.8	-0.4
KHC	Kasperske Hory	2.95	216	*e*PN	Pn	04 37 15.9	+0.6
KHC				*e*PG	Pb	04 37 21.2	+0.5
KHC				*e*SN	Sn	04 37 50.5	-0.9
KHC				*e*SG	Sg	04 38 00.3	-1.6
	comp=Z,7.7nm,0.6s						
CKRC	Cesky Krumlov	2.99	205	*e*PN	Pn	04 37 18.0	+2.0
CKRC				*e*PG	Pg	04 37 23.8	-0.8
CKRC				*e*SG	Sg	04 38 01.6	-1.7
	comp=Z,12nm,0.7s						
LANS	Liptovska Anna	3.19	138	*e*PG	Pg	04 37 28.9	+0.5
LANS				*e*SG	Sg	04 38 07.9	-1.9
MODS	Modra-Piesok	3.26	167	*e*PG	Pg	04 37 31.5	+1.8
MODS				*e*SG	Sg	04 38 09.4	-2.5
KOLL	Kolacno	3.30	154	*e*SG	Sg	04 38 10.8	-2.5
NIE	Niedzica	3.38	128	*e*Pg	Pg	04 37 33.8	+1.7
NIE				*e*Sg	Sg	04 38 18.4	+2.4
CONA	Conrad Observa	3.63	183	*i* Pn	Pn	04 37 25.9	+1.1
	comp=Z,0.2nm,0.1s						
CONA				Sg	Sg	04 38 22.5	-1.5
	comp=Z,11nm,0.4s						
BSD	Bornholm Skovb	3.65	348	*e*P	Pn	04 37 24.8	-0.1
BSD				*i* S	Sn	04 38 09.0	+0.4
MOA	Molln	3.91	199	*i* Pn	Pn	04 37 29.3	+0.7
	comp=Z,0.5nm,0.1s						
MOA				*e*Sg	Sg	04 38 30.5	-2.4
	comp=Z,4.5nm,0.4s						
ARSA	Arzberg	4.33	186	Sg	Sg	04 38 44.4	-1.9
	comp=Z,3.6nm,0.4s						
LUNU	Lund	4.40	339	*i* P	Pn	04 37 35.5	+0.2
LUNU				*i* S	Sn	04 38 25.3	-1.8
BLEU	Blekinge	4.76	357	*i* P	Pn	04 37 41.6	+1.4
BLEU				*i* S	Sn	04 38 34.0	-2.1
DEL	Delary	5.11	345	*i* P	Pn	04 37 45.6	+0.5
DEL				*i* S	Sn	04 38 40.3	-4.4

DDA 19 04:54:33.2, 39°.12N×40°.38E, h12^{km}±2^{km}, MW3.5, 6C-8D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLHN	Bingol, Solhan	0.52	108	⇑*i*P	Pg	04 54 43.8	+0.3
SLHN				*i* S	Sb	04 54 51.3	-0.6
SLHN				IAML		04 54 52.0	
	comp=E,7µm,0.7s						
SLHN				IAML		04 54 53.0	
	comp=N,3µm,0.3s						
KOVA	Elazig, Kovanc	0.61	227	⇑*i*P	Pb	04 54 45.5	-0.2
KOVA				*i* S	Sb	04 54 54.5	+0.2
KOVA				IAML		04 54 55.0	
	comp=E,3µm,0.3s						
KOVA				IAML		04 54 56.0	
	comp=N,2µm,0.3s						
TNCL	Tunceli-Merkez	0.66	270	⇑*i*P	Pg	04 54 45.8	-0.1
TNCL				*i* S	Sb	04 54 55.9	+0.2
TNCL				IAML		04 54 57.0	
	comp=E,5µm,0.3s						
TNCL				IAML		04 54 58.0	
	comp=N,3µm,0.2s						
HANI	Diyarbakir_Han	0.70	179	⇓*i*P	Pg	04 54 47.0	+0.2
HANI				*i* S	Sb	04 54 57.6	+0.6
EUZM	Uzumlu	0.79	318	⇓*i*P	Pg	04 54 48.6	0.0
EUZM				*i* S	Sb	04 55 00.1	+0.4
EUZM				IAML		04 55 04.0	
	comp=E,504nm,0.3s						
VRTB	Varto-Mus	0.83	87	⇑*i*P	Pg	04 54 49.3	-0.1
VRTB				*i* S	Sn	04 55 03.1	0.0
VRTB				IAML		04 55 09.0	
	comp=E,1µm,0.5s						
VRTB				IAML		04 55 11.0	
	comp=N,1µm,0.6s						
KOPT	Kop Dagi	0.90	6	⇓*i*P	Pb	04 54 50.9	-0.1
KOPT				*i* S	Sn	04 55 05.2	+0.2
MUSM	Mu-Merkez	0.96	114	⇑*i*P	Pg	04 54 50.9	-0.9
MUSM				*i* S	Sg	04 55 03.5	-0.9
EJDE	Erzurum, Palan	1.01	45	*i* P	Pg	04 54 52.0	-0.7
EJDE				*i* S	Sg	04 55 05.4	-0.6
EJDE				IAML		04 55 10.0	
	comp=N,1µm,0.6s						
ERZM	Erzurum	1.09	44	⇓*i*P	Pb	04 54 54.1	0.0
ERZM				*i* S	Sn	04 55 11.7	+2.0
BAYB	BAYBURT	1.14	355	*i* P	Pb	04 54 53.5	-1.5
BAYB				*i* S	Sn	04 55 14.1	+3.3
SVAN	Silvan-Diyarba	1.16	146	⇓*i*P	Pg	04 54 55.9	+0.4
SVAN				*i* S	Sn	04 55 11.8	+0.8
DIYA	Diyarbakir	1.21	190	⇓*i*P	Pg	04 54 57.4	+0.9
DIYA				IAML		04 55 15.0	
	comp=E,463nm,0.5s						
DIYA				*i* S	Sn	04 55 15.3	+3.0
DIYA				IAML		04 55 18.0	
	comp=N,929nm,0.4s						
ELZG	Elazig	1.26	241	*i* P	Pn	04 54 56.5	-0.1
ELZG				*i* S	Sg	04 55 14.4	+0.6
ELZG				IAML		04 55 21.0	
	comp=N,760nm,0.6s						
KELT	Kelkit	1.35	320	*i* P	Pg	04 54 58.9	-0.3
BTMN	Batman	1.41	150	⇓*i*P	Pg	04 55 00.2	0.0
BTMN				*i* S	Sg	04 55 19.7	+1.1
BTMN				IAML		04 55 21.0	
	comp=Z,853nm,0.7s						
BTMN				IAML		04 55 22.0	
	comp=E,2µm,0.6s						
BTMN				IAML		04 55 24.0	
	comp=N,833nm,0.6s						
KEMA	Kemaliye	1.48	276	*i* P	Pb	04 55 00.8	+0.2
KEMA				*i* S	Sg	04 55 21.3	+0.5
KEMA				IAML		04 55 22.0	
	comp=N,336nm,0.3s						
KEMA				IAML		04 55 23.0	
	comp=E,550nm,0.6s						
REFA	Refahiye_ERZN	1.48	303	*i* P	Pg	04 55 01.7	+0.1
REFA				*i* S	Sg	04 55 23.3	+2.4
HOMI	Horasan	1.50	51	⇑*i*P	Pb	04 55 01.3	+0.2
HOMI				*i* S	Sg	04 55 24.4	+2.9
BLIS	Bitlis-Merkez	1.52	117	⇓*i*P	Pb	04 55 00.9	-0.5
BLIS				*i* S	Sg	04 55 22.6	+0.3
BLIS				IAML		04 55 26.0	
	comp=N,694nm,0.5s						
BLIS				IAML		04 55 27.0	
	comp=E,384nm,0.5s						
EATA	Eleskirt	1.79	65	*i* P	Pg	04 55 07.0	-0.7
EATA				*i* S	Sg	04 55 33.0	+2.1
EATA				IAML		04 55 38.0	
	comp=E,312nm,0.7s						
EATA				IAML		04 55 41.0	
	comp=N,208nm,1.0s						
MARD	Mardin	1.83	170	*i* P	Pb	04 55 06.8	+0.2
MARD				*i* S	Sg	04 55 31.5	-0.5
MARD				IAML		04 55 35.0	
	comp=E,488nm,0.3s						
ADCV	BITLIS_Adilcev	1.85	99	*i* P	Pn	04 55 05.6	+0.7
MIDY	Mardin/Midyat-	1.89	155	*i* P	Pb	04 55 07.9	+0.3
MIDY				*i* S	Sb	04 55 30.6	-0.6
MIDY				IAML		04 55 35.0	
	comp=N,587nm,0.3s						
MIDY				IAML		04 55 35.0	
	comp=E,985nm,0.5s						
PERV	Siirt/Pervari-	2.06	124	*i* P	Pb	04 55 11.4	+0.9
SANL	SANLIURFA_Merk	2.23	210	*i* P	Pb	04 55 12.5	-0.9
KOTA	Agri, Merkez-K	2.29	72	*i* P	Pb	04 55 15.6	+1.1
GZT	Gaziantep	2.83	232	*i* P	Pg	04 55 28.0	+0.5
SIRC	Yozgat	4.07	275	*i* P	Pb	04 55 42.7	-2.2

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*IDC **19** 05:03:56.3±3.6, 36°.43N×71°.11E, h197^{km}±30^{km}, mb3.4/11, mb1 3.5/17, mb1mx3.2/46, mbtmp3.9/17, Error ellipse: s-maj=25.8km s-min=15.6km az=19.0*
*NNC **19** 05:04:01.3±10.0, 37°.24N×70°.79E, h0^{km}, mb4.4, mpv4.1, Error ellipse: s-maj=84.9km s-min=71.3km az=171.0*
*SOME **19** 05:04:05.7, 38°.43N×72°.03E, h0^{km}*

ISC 19 05:03:58.4±0.6**, 36°.73N**±0°.05×**71°.11E**±0°.08**, h200**^{km}**, n38, σ1^{s}.67**/45**, mb3.3**/11**, 4C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.98	167	P	Pn	05 04 49.7	+1.7
CEP				S	Sn	05 05 28.0	+1.4
THW	Thamme Wali	3.96	172	P	Pn	05 05 01.0	+1.2
IUG	Iuzhnay	5.47	352	*e*P	Pn	05 05 22.2	+3.3
	130nm,0.3s						
IUG				*e*S	Sn	05 06 20.8	-1.7
	176nm,0.6s						
CHM	Chimkent	5.70	349	*e*P	Pn	05 05 26.6	+4.9
	180nm,0.2s						
CHM				*e*S	Sn	05 06 29.0	+1.3
	230nm,0.2s						
AML	Almayashu	5.75	20	P	Pn	05 05 23.9	+1.2
	SNR=121						
UCH	Uchtor	6.08	25	P	Pn	05 05 28.5	+1.3
	SNR=84						
DZA	Taraz	6.15	1	*e*P	Pn	05 05 30.8	+3.2
	103nm,0.1s						
DZA				*e*S	Sn	05 06 36.1	-2.2
	100nm,0.2s						
MRKS	Merke	6.22	15	*e*P	Pn	05 05 32.2	+3.7
	28nm,0.6s						
MRKS				*e*S	Sn	05 06 38.6	-1.4
	64nm,0.5s						
EKS2	Erkin-Say	6.27	18	P	Pn	05 05 30.8	+1.6
	SNR=15						
BRLS	Borolday	6.37	352	*e*P	Pn	05 05 30.5	+0.1
	2.0nm,0.4s						
BRLS				*e*S	Sn	05 06 35.3	-8.0
	14nm,0.4s						
KK09	Karatay Array	6.40	356	⇑Pn	Pn	05 05 31.8	+1.0
	2.2nm,0.4s,baz=179,slow=12						
KK09				⇓Sn	Sn	05 06 39.8	-4.2
	26nm,0.7s,baz=186,slow=22						
AAK	Ala-Archa	6.45	23	P	Pn	05 05 33.1	+1.6
	3.2nm,0.3s,baz=196,slow=10,SNR=38						
AAK				S	Sn	05 06 45.4	+0.1
	2.2nm,0.3s,baz=323,slow=23,SNR=9.5						
AAK	Ala-Archa	6.45	23	P	Pn	05 05 33.0	+1.5
	SNR=16						
AAK	Ala-Archa	6.45	23	⇑Pn	Pn	05 05 32.8	+1.3
	12nm,0.7s						
AAK				⇓Sn	Sn	05 06 44.7	-0.7
	28nm,1.1s						
KBK	Karagaybulak	6.61	25	P	Pn	05 05 35.4	+1.7
	SNR=17						
ULHL	Ulahol	6.78	34	P	Pn	05 05 36.8	+0.8
	SNR=8.8						
USP	Ospenovka	7.02	21	P	Pn	05 05 39.8	+0.9
	SNR=6.0						
TKM2	Tokmak 2	7.08	28	P	Pn	05 05 40.9	+1.1
	SNR=34						
TKM2	Tokmak 2	7.08	28	⇑Pn	Pn	05 05 40.7	+1.0
	31nm,0.7s						
TKM2				⇑Sn	Sn	05 06 58.6	-1.7
	21nm,1.1s						
KST	Kastek	7.32	29	*e*P	Pn	05 05 47.7	+4.8
	11nm,0.5s						
KST				*e*S	Sn	05 07 06.2	+0.3
	8.1nm,1.4s						
BTLS	Baital	8.59	14	*e*P	Pn	05 06 13.1	+14
	1.4nm,0.4s						
BTLS				*e*S	Sn	05 07 51.6	+16
	3.9nm,0.5s						
MKAR	Makanchi Array	13.05	36	P	Pn	05 06 57.1	+0.6
	0.1nm,0.3s,baz=225,slow=16,SNR=1.8						
KURBB	Kurchatov Arra	14.87	19	P	P	05 07 20.4	+0.7
	0.1nm,0.3s,baz=202,slow=12,SNR=7.1						
BVAR	Borovoye Array	16.30	358	P	Pn	05 07 37.2	+1.0
	0.5nm,0.3s,baz=184,slow=13,SNR=9.3						
AKTO	Aktyubinsk	16.62	330	P	P	05 07 40.6	+1.6
	0.6nm,0.3s,baz=130,slow=9.9,SNR=8.9						
ZALV	Zalesovo Beam	19.67	25	P	P	05 08 12.0	0.0
	0.7nm,0.3s,baz=232,slow=12,SNR=5.5						
SONM	Songino Array	28.13	56	P	P	05 09 32.3	+0.4
	0.3nm,0.5s,baz=246,slow=11,SNR=2.5						
AKASG	Malin Array Be	32.87	309	P	P	05 10 13.6	+0.3
	0.5nm,0.5s,baz=81,slow=6.2,SNR=4.1						
FINES	FINESS Array B	37.34	326	P	P	05 10 51.6	+0.4
	9.4nm,1.2s,baz=119,slow=7.0,SNR=8.5						
ARCES	ARCESS Array B	40.97	337	P	P	05 11 21.1	0.0
	9.2nm,1.1s,baz=101,slow=6.3,SNR=12						
NB2	NORSAR Subarra	44.25	323	P	P	05 11 47.5	-0.2
	comp=Z,1.0nm,0.5s,baz=95,slow=7.9						
NOA	NORSAR Array B	44.25	323	P	P	05 11 47.8	+0.1
	comp=Z,0.5nm,0.8s,baz=103,slow=7.1,SNR=7.2						
KLR	Kul'dur	44.93	54	P	P	05 11 52.6	-0.6
	comp=Z,0.6nm,0.5s,baz=323,slow=10,SNR=1.5						
TORD	Torodi Ar. Bea	65.81	269	P	P	05 14 20.0	-2.5
	comp=Z,0.2nm,0.4s,baz=49,slow=5.9,SNR=4.7						
INK	Inuvik	73.66	9	P	P	05 15 09.5	0.0
	comp=Z,1.5nm,0.4s,baz=330,slow=5.6,SNR=13						
YKA	Yellowknife Ar	81.01	3	P	P	05 15 50.0	-0.3
	comp=Z,0.9nm,0.4s,baz=350,slow=5.4,SNR=26						
WRA	Warramunga Arr	82.04	122	P	P	05 15 53.7	-2.8
	comp=Z,0.3nm,0.6s,baz=322,slow=4.9,SNR=5.2						
ASAR	Alice Springs	84.31	125	P	P	05 16 05.7	-2.3
	comp=Z,0.4nm,0.7s,baz=303,slow=5.1,SNR=5.5						

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*IDC **19** 05:04:24.1±1.8, 15°.62N×93°.63W, h84^{km}±14^{km}, mb3.5/10, mb1 3.7/12, mb1mx3.6/40, mbtmp3.8/12, Error ellipse: s-maj=50.5km s-min=13.5km az=48.0*
*NEIC **19** 05:04:24.9±2.6, 15°.59N±0°.06×93°.73W±0°.05, h88^{km}±6^{km}, Error ellipse: s-maj=8.4km s-min=6.2km az=193.0*
*MEX **19** 05:04:25.3±1.1, 15°.65N×93°.76W, h90^{km}±11^{km}, MD4.4*

ISC 19 05:04:24.9±0.7**, 15°.65N**±0°.04×**93°.72W**±0°.03**, h94**^{km}±7^{km}**, n62, σ2^{s}.30**/86**, mb3.7**/10**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.48	84		Pn	05 04 38.9	-1.0
PCIG					Sn	05 04 49.0	-2.2
PCIG		0.48	84	*e*P	Pn	05 04 38.9	-1.0
PCIG				*i* S	Sn	05 04 49.6	-1.5
TGIG		1.26	27		Pn	05 04 47.6	-0.4
TGIG					Sn	05 05 03.5	-1.8
TGIG		1.26	27	*e*P	Pn	05 04 47.6	-0.4
TGIG				*i* S	Sn	05 05 03.7	-1.7
TGBT	Tuxtla Gutierr	1.27	28	*e*P	Pn	05 04 47.5	-0.6
TGBT				*i* S	Sn	05 05 04.0	-1.5
PATR	El Naranjo	1.53	110	*e*P	Pn	05 04 50.3	-1.1
PATR				*i* S	Sn	05 05 11.5	0.0
PAVE	Pavencul	1.56	107	*e*P	Pn	05 04 51.0	-0.8
PAVE				*i* S	Sn	05 05 11.8	-0.4
THIG		1.59	118	*i* P	Pn	05 04 51.1	-0.8
THIG				*i* S	Sn	05 05 11.3	-1.1
CCIG	Comitan	1.65	67		Pn	05 04 52.2	-0.6
CCIG					Sn	05 05 10.6	-3.4
CCIG	Comitan	1.65	67	*e*P	Pn	05 04 52.2	-0.6
CCIG				*i* S	Sn	05 05 12.9	-1.2
UXUV	UXUV	1.71	346	*i* P	Pn	05 04 54.5	+1.1
UXUV				*i* S	Sn	05 05 15.8	+0.6
CMIG	Matias Romero	1.81	322	P	Pn	05 04 55.7	+0.8
	24nm,0.3s,baz=164,slow=10,SNR=286						
CMIG				S	Sn	05 05 18.2	+0.5
	125nm,0.3s,baz=153,slow=13,SNR=17						
CMIG	Matias Romero	1.81	322		Pn	05 04 55.7	+0.8
CMIG					Sn	05 05 16.4	-1.3
CMIG	Matias Romero	1.81	322	*e*P	Pn	05 04 55.7	+0.8
CMIG				*i* S	Sn	05 05 16.6	-1.1
HUEH	Huehuetenango	2.16	99		Pn	05 04 59.6	0.0
RTAL	Retalhuleu	2.25	120		Pn	05 05 00.7	+0.1
HUIG	Huatulco	2.30	273		Pn	05 05 00.3	-1.0
HUIG					Sn	05 05 24.2	-4.9
HUIG	Huatulco	2.30	273	*i* P	Pn	05 05 00.6	-0.6
HUIG				*i* S	Sn	05 05 27.2	-1.9
VHSA	Villahermosa	2.43	18	*i* S	Sn	05 05 29.4	-2.7
NEUV	Arroyo Zacate	2.86	316	*e*P	Pn	05 05 09.3	+0.7
NEUV				*i* S	Sn	05 05 33.2	-9.1
VHO	Vista Hermosa	3.22	296	*e*P	Pn	05 05 15.4	+1.7
VHO				*e*S	Sn	05 05 46.1	-5.1
PEIG	Puerto Escondi	3.32	276	*e*P	Pn	05 05 14.0	-0.8
PEIG				*e*S	Sn	05 05 48.0	-5.4
YOIG	Yosondua	3.87	289	*e*P	Pn	05 05 24.7	+2.2
YOIG				*e*S	Sn	05 06 02.0	-5.0
PETF	Flores	3.91	71		Pn	05 05 22.4	-0.4
TOIG	Toxpalan	4.02	308	*e*P	Pn	05 05 25.5	+1.1
TOIG				*e*S	Sn	05 06 10.0	-0.5
SCIG	Sabancuy	4.09	36		Pn	05 05 24.1	-1.1
SCIG					Sn	05 06 04.3	-7.7
SCIG	Sabancuy	4.09	36	*e*P	Pn	05 05 24.1	-1.1
SCIG				*e*S	Sn	05 06 04.3	-7.7
PNIG	Pinotepa	4.30	280		Pn	05 05 28.4	+0.3
PNIG					Sn	05 06 12.4	-4.8
PNIG	Pinotepa	4.30	280	*e*P	Pn	05 05 28.4	+0.3
PNIG				*e*S	Sn	05 06 12.4	-4.8
ESQI	Esquipulas	4.37	104	Pn	Pn	05 05 30.3	+1.2
MTO3	Montecristo	4.39	106		Pn	05 05 30.1	+0.5
JAUV	Jalcomulco	4.72	322	*e*P	Pn	05 05 33.6	-0.2
JAUV				*e*S	Sn	05 06 20.4	-7.1
FTIG	Fresnillo de T	4.79	299	*e*P	Pn	05 05 37.3	+2.5
FTIG				*e*S	Sn	05 06 25.8	-3.3
TLIG	Tlapa	5.02	293		Pn	05 05 39.8	+1.9
ORTG	Ortega, Santa	9.61	122		Pn	05 06 41.4	+0.9
JTS	Las Juntas de	10.07	121	P	Pn	05 06 45.7	-0.9
JTS	Las Juntas de	10.07	121	Pn	Pn	05 06 47.4	+0.7
RIMA	Rio Macho	11.25	120		Pn	05 07 03.8	+0.9
SRBA	San Rafael, Bu	11.96	121		Pn	05 07 12.2	-0.2
LCCY	Blossom Villag	13.60	71	Pn	Pn	05 07 34.8	+0.9
TXAR	Lajitas Array	16.41	328	P	P	05 08 12.2	+1.3
	0.1nm,0.3s,baz=148,slow=12,SNR=7.2						
GTBY	Guantanamo Bay	18.22	74	P	P	05 08 30.9	+0.1
GTBY				IAmb	IAmb	05 08 31.0	

	comp=Z,20nm,0.8s						
MIAR	**Mount Ida**	**18.81**	**0**	P	**P**	**05 08 38.6**	**+1.5**
MIAR				IAmb	IAmb	05 08 40.1	
	comp=Z,15nm,1.4s						
255A	**Hazlehurst**	**19.17**	**30**	P	**P**	**05 08 40.9**	**0.0**
X48A	**Hartselle**	**19.66**	**17**	P	**P**	**05 08 46.5**	**+0.2**
X48A				IAmb	IAmb	05 08 50.4	
	comp=Z,14nm,0.9s						
FNO	**Franklin**	**19.80**	**351**	P	**Pn**	**05 08 50.2**	**0.0**
FNO				IAmb	IAmb	05 08 55.0	
	comp=Z,18nm,0.5s						
GOGA	**Godfrey**	**19.97**	**26**	P	**P**	**05 08 49.4**	**-0.3**
GOGA				IAmb	IAmb	05 08 54.2	
	comp=Z,28nm,1.4s						
FPAL	**Fort Paine**	**20.17**	**20**	P	**P**	**05 08 51.6**	**-0.3**
FPAL				IAmb	IAmb	05 09 10.2	
	comp=Z,22nm,1.4s						
AMTX	**Amarillo**	**20.44**	**341**	P	**P**	**05 08 57.0**	**+2.1**
AMTX				IAmb	IAmb	05 09 00.1	
	comp=Z,14nm,0.5s						
TKL	**Tuckaleechee C**	**21.82**	**22**	P	**P**	**05 09 09.6**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=197,slow=14,SNR=1.1						
ANMO	**Albuquerque**	**22.36**	**332**	P	**P**	**05 09 17.1**	**+1.6**
	comp=Z,0.7nm,0.6s,baz=159,slow=13,SNR=4.5						
ANMO	**Albuquerque**	**22.36**	**332**	IAmb	IAmb	05 09 21.8	
	comp=Z,1.6nm,1.1s						
T25A	**Trinidad**	**23.41**	**338**	P	**P**	**05 09 28.4**	**+2.5**
PDAR	**Pinedale Array**	**30.24**	**336**	P	**P**	**05 10 27.2**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=125,slow=8.9,SNR=2.6						
NVAR	**Mina Array Bea**	**31.35**	**321**	P	**P**	**05 10 37.8**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=135,slow=9.0,SNR=3.5						
SIV	**San Ignacio**	**45.03**	**133**	P	**P**	**05 12 30.8**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=305,slow=7.8,SNR=4.3						
YKA	**Yellowknife Ar**	**49.05**	**347**	P	**P**	**05 13 02.6**	**+0.5**
	comp=Z,3.0nm,0.7s,baz=153,slow=7.3,SNR=33						
BDFB	**Brasilia**	**54.81**	**122**	P	**P**	**05 13 44.4**	**-1.4**
	comp=Z,1.0nm,0.4s,baz=277,slow=8.1,SNR=2.5						
BDFB	**Brasilia**	**54.81**	**122**	IAmb	IAmb	05 13 49.1	
	comp=Z,9.5nm,1.3s						
INK	**Inuvik**	**58.39**	**344**	P	**P**	**05 14 11.1**	**+0.9**
	comp=Z,2.5nm,0.6s,baz=122,slow=5.8,SNR=17						
ILAR	**Eielson Array**	**60.67**	**337**	P	**P**	**05 14 26.9**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=140,slow=4.3,SNR=6.0						
ARCES	**ARCESS Array B**	**85.09**	**18**	P	**P**	**05 16 49.9**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=337,slow=3.4,SNR=6.7						

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*IDC **19** 05:28:49.4±1.2, 37°.78N×72°.73E, h0^{km}, mb3.7/12, mb1 3.8/17, mb1mx3.6/59, mbtmp3.7/17, ML3.3/5, MS3.5/1, Ms1 3.5/1, ms1mx2.4/58, Error ellipse: s-maj=22.0km s-min=19.5km az=21.0*

*NNC **19** 05:28:51.6±3.0, 37°.87N×72°.93E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=22.0km s-min=14.8km az=165.0*

ISC 19 05:28:50.9±0.9, **37°.73N**±0°.08×**72°.62E**±0°.08, **h10^{km}, n28, σ2^{s}.49**/32, **mb3.8**/11, **6C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**4.84**	**337**	Pg	**Pb**	**05 30 16.9**	**+1.1**
IUG				Lg	Lg	05 31 16.3	
MRKS	**Merke**	**5.03**	**5**	Pg	**Pb**	**05 30 19.7**	**+0.7**
MRKS				Lg	Lg	05 31 21.8	
AAK	**Ala-Archa**	**5.11**	**16**	Pn	**Pn**	**05 30 09.6**	**+2.0**
	0.9nm,0.3s,baz=179,slow=10.0,SNR=6.3						
AAK				Sn	**Sn**	**05 31 04.5**	**-2.2**
	baz=179,slow=19,SNR=1.2						
AAK	**Ala-Archa**	**5.11**	**16**	⇑Pg	**Pb**	**05 30 19.5**	**-0.9**
	7.1nm,0.6s						
AAK				Lg	Lg	05 31 26.7	
	21nm,0.8s						
KK09	**Karatay Array**	**5.63**	**344**	⇓Pn	**Pn**	**05 30 15.3**	**+0.7**
	4.8nm,0.6s,baz=158,slow=12						
KK09				⇓Pg	**Pb**	**05 30 31.5**	**+2.3**
	8.0nm,0.7s						
KK09				⇑Sn	**Sn**	**05 31 23.6**	**+4.3**
	6.0nm,0.6s,baz=161,slow=26						
KK09				⇑Lg	Lg	05 31 48.7	
	9.9nm,0.7s						
TKM2	**Tokmak 2**	**5.66**	**23**	⇑Pg	**Pb**	**05 30 31.1**	**+1.2**
	5.3nm,0.8s						
TKM2				⇓Lg	Lg	05 31 47.1	
	19nm,1.4s						
KST	**Kastek**	**5.89**	**25**	Pg	**Pb**	**05 30 37.2**	**+3.5**
KST				Lg	Lg	05 31 51.6	
SGDS	**Sogindy**	**5.92**	**14**	Pg	**Pb**	**05 30 36.0**	**+1.9**
	4.6nm,0.7s						
SGDS				Lg	Lg	05 31 49.2	
	6.0nm,1.0s						
DGS	**Degeres**	**6.01**	**23**	Pg	**Pb**	**05 30 38.4**	**+2.7**
	6.1nm,0.7s						
DGS				Lg	Lg	05 31 53.9	
	9.0nm,0.8s						
TNSS	**Tian-Shan**	**6.25**	**31**	Pg	**Pb**	**05 30 42.3**	**+2.3**
	2.8nm,0.5s						
TNSS				Lg	Lg	05 31 59.9	
	4.0nm,1.1s						
KURBB	**Kurchatov Arra**	**13.56**	**16**	Pn	**Pn**	**05 32 01.3**	**-1.9**
	0.0nm,0.3s,baz=208,slow=12,SNR=3.1						
AB31	**Akbulak array**	**14.72**	**326**	⇑Pn	**Pn**	**05 32 19.3**	**+0.3**
	0.8nm,0.5s,baz=132,slow=12,SNR=18						
AB31				⇑Sn	**Sn**	**05 35 04.8**	**+2.6**
	0.7nm,0.6s,baz=142,slow=24,SNR=3.7						
BVAR	**Borovoye Array**	**15.38**	**355**	Pn	**Pn**	**05 32 25.5**	**-2.3**
	0.2nm,0.3s,baz=180,slow=19,SNR=7.5						
AKTO	**Aktyubinsk**	**16.44**	**325**	Pn	**Pn**	**05 32 39.6**	**-1.9**
	0.6nm,0.3s,baz=120,slow=6.7,SNR=8.8						
AKTO				Sn	**Sn**	**05 35 34.8**	**-9.0**
	0.1nm,0.3s,baz=189,slow=23,SNR=1.6						
ZALV	**Zalesovo Beam**	**18.27**	**23**	P	**Pn**	**05 33 03.4**	**-0.9**
	0.4nm,0.3s,baz=229,slow=11,SNR=2.3						
ARU	**Arti**	**20.94**	**338**	P	**P**	**05 33 31.5**	**-2.1**
	0.8nm,0.4s,baz=137,slow=21,SNR=1.8						
BELG	**Belogornoye**	**22.79**	**318**	P	**P**	**05 33 52.1**	**-1.3**
	2.1nm,0.5s,baz=247,slow=7.1,SNR=2.3						
SONM	**Songino Array**	**26.57**	**57**	P	**P**	**05 34 28.7**	**-0.5**
	0.4nm,0.7s,baz=246,slow=11,SNR=5.5						
FINES	**FINESS Array B**	**37.21**	**325**	P	**P**	**05 36 02.2**	**+0.2**
	1.0nm,0.4s,baz=119,slow=9.1,SNR=8.5						
HFS	**Hagfors**	**42.92**	**321**	P	**P**	**05 36 49.7**	**+0.3**
	1.4nm,0.6s,baz=90,slow=7.2,SNR=1.9						
TIXI	**Tiksi**	**44.15**	**22**	P	**P**	**05 36 58.0**	**-1.2**
	1.3nm,0.4s,baz=291,slow=8.0,SNR=2.4						
NOA	**NORSAR Array B**	**44.19**	**322**	P	**P**	**05 36 58.3**	**-1.4**
	0.5nm,0.6s,baz=91,slow=7.6,SNR=1.8						
USRK	**Ussuriysk Ar.**	**44.45**	**62**	LR	LR	05 57 49.6	
	comp=Z,52nm,18.4s,baz=74,slow=39						
ESDC	**Sonseca Array**	**58.03**	**298**	P	**P**	**05 38 45.1**	**+1.1**
	0.2nm,0.5s,baz=51,slow=7.0,SNR=4.4						
TORD	**Torodi Ar. Bea**	**67.04**	**269**	P	**P**	**05 39 45.5**	**+1.0**
	0.6nm,0.9s,baz=42,slow=5.1,SNR=3.0						
INK	**Inuvik**	**72.48**	**10**	P	**P**	**05 40 17.3**	**+0.1**
	0.7nm,0.6s,baz=347,slow=3.6,SNR=4.5						
YKA	**Yellowknife Ar**	**79.95**	**3**	P	**P**	**05 40 59.5**	**-0.2**
	0.4nm,0.7s,baz=349,slow=5.4,SNR=6.3						
WRA	**Warramunga Arr**	**81.56**	**123**	P	**P**	**05 41 08.7**	**-0.2**
	0.8nm,1.2s,baz=315,slow=5.7,SNR=1.3						

IDC 19 05:48:02.9±1.1, **20°.79N**×**120°.90E, h0^{km}, mb3.6**/7, **mb1 3.8**/7, **mb1mx3.4**/55, **mbtmp3.6**/7, **MS3.0**/1, **Ms1 3.2**/1, **ms1mx2.5**/44, **Error ellipse: s-maj=43.2km s-min=20.0km az=63.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.81**	**267**	P	P	05 52 47.1	+1.0
	0.6nm,0.4s,baz=74,slow=10,SNR=7.6						
CMAR				LR	LR	06 01 48.7	
	comp=Z,45nm,20.9s,baz=305,slow=40						
SONM	**Songino Array**	**29.41**	**340**	P	P	05 54 09.9	+1.7
	0.3nm,0.5s,baz=159,slow=8.5,SNR=1.8						
MKAR	**Makanchi Array**	**40.65**	**319**	P	P	05 55 44.3	-0.5
	0.8nm,0.9s,baz=112,slow=11,SNR=2.0						
WRA	**Warramunga Arr**	**42.57**	**161**	P	P	05 56 00.3	-0.4
	0.6nm,0.6s,baz=334,slow=11,SNR=10.0						
KURBB	**Kurchatov Arra**	**44.57**	**322**	P	P	05 56 14.8	-1.8
	0.3nm,0.4s,baz=119,slow=7.3,SNR=5.0						
ASAR	**Alice Springs**	**45.97**	**163**	P	P	05 56 28.1	+0.1
	0.4nm,0.4s,baz=349,slow=7.1,SNR=7.0						
YKA	**Yellowknife Ar**	**86.18**	**23**	P	P	06 00 46.3	+0.3
	0.1nm,0.5s,baz=313,slow=5.1,SNR=2.2						

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*IDC **19** 06:26:27.5±1.7, 23°.57S×179°.97W, h520^{km}±14^{km}, mb3.5/13, mb1 3.7/16, mb1mx3.4/29, mbtmp4.4/16, Error ellipse: s-maj=26.1km s-min=14.6km az=144.0*

*NOU **19** 06:26:28.3, 23°.60S×179°.96W, h519^{km}, mb4.6/11, South of Fiji Islands*

*NEIC **19** 06:26:29.3±1.3, 23°.5S±0°.1×180°.0W±0°.1, h531^{km}±7^{km}, mb4.4/19, Error ellipse: s-maj=19.0km s-min=16.0km az=100.0*

ISC 19 06:26:30.3±0.5, **23°.48S**±0°.08×**179°.91E**±0°.09, **h550^{km}, n95, σ1^{s}.57**/99, **mb4.1**/24, **8C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.98**	**343**	P	**P**	**06 28 06.4**	**-2.5**
	12nm,0.3s,baz=199,slow=7.1,SNR=71						
MSVF				S	**S**	**06 29 26.6**	**-2.8**
	baz=148,slow=23,SNR=0.5						
MSVF	**Nonsavu**	**5.98**	**343**	P	**P**	**06 28 06.6**	**-2.3**
TAVE	**Taveuni**	**6.74**	**1**	P	**P**	**06 28 14.5**	**-1.4**
DGTI	**Dogotuki**	**7.14**	**359**	P	**P**	**06 28 18.0**	**-1.8**
MARNC	**Mare, Loyalty**	**11.17**	**278**	P	**P**	**06 28 59.5**	**-0.8**
MARNC	**Mare, Loyalty**	**11.17**	**278**	P	**P**	**06 28 59.8**	**-0.4**
PINNC	**Pines Island,**	**11.51**	**272**	P	**P**	**06 29 03.6**	**-0.2**
DZM	**Mont Dzumac**	**12.51**	**274**	P	**P**	**06 29 12.0**	**-2.2**
	0.4nm,0.3s,baz=169,slow=3.7,SNR=1.7						
OUZ	**Omahuta**	**12.93**	**204**	P	**P**	**06 29 18.2**	**0.0**
OUZ	**Omahuta**	**12.93**	**204**	P	**P**	**06 29 16.7**	**-1.5**
MBAZ	**Motutapu North**	**13.93**	**197**	P	P	06 29 35.3	+6.7
MXZ	**Matakaoa Point**	**14.11**	**185**	P	**P**	**06 29 29.1**	**-1.2**
MXZ	**Matakaoa Point**	**14.11**	**185**	P	**P**	**06 29 29.0**	**-1.3**
MYRZ	**Mayor Island**	**14.11**	**192**	P	**P**	**06 29 33.1**	**+2.6**
HAZ	**Te Kaha**	**14.35**	**187**	P	**P**	**06 29 31.1**	**-1.7**
SANVU	**Saraoutou**	**14.40**	**301**	P	**P**	**06 29 34.8**	**+1.1**
RUGZ	**Raukumara Rang**	**14.57**	**187**	P	**P**	**06 29 33.6**	**-1.6**
PUZ	**Puketiti**	**14.62**	**185**	P	**P**	**06 29 35.0**	**-0.6**
TOZ	**Tahuroa Road**	**14.70**	**194**	P	**P**	**06 29 38.0**	**+1.5**
URZ	**Urewera**	**14.93**	**189**	P	**P**	**06 29 35.5**	**-3.3**
	6.1nm,0.3s,baz=118,slow=24,SNR=33						
URZ	**Urewera**	**14.93**	**189**	P	**P**	**06 29 35.2**	**-3.6**
URZ	**Urewera**	**14.93**	**189**	P	**P**	**06 29 36.3**	**-2.5**
URZ	**Urewera**	**14.93**	**189**	P	**P**	**06 29 35.2**	**-3.6**
MWZ	**Matawai**	**14.95**	**187**	P	**P**	**06 29 36.4**	**-2.6**
RIGZ	**Rimuhau**	**15.29**	**186**	P	**P**	**06 29 40.2**	**-2.4**
BKZ	**Black Stump Fm**	**15.91**	**190**	P	**P**	**06 29 45.7**	**-3.1**
NTVZ	**North Tongarir**	**15.98**	**192**	P	**P**	**06 29 47.9**	**-1.7**
TMVZ	**Te Maari**	**15.99**	**192**	P	**P**	**06 29 47.6**	**-2.1**
OTVZ	**Oturere**	**16.05**	**192**	P	**P**	**06 29 47.6**	**-2.7**
SNVZ	**South Ngauruho**	**16.07**	**192**	P	**P**	**06 29 48.4**	**-2.2**
FWVZ	**Far West T-bar**	**16.16**	**192**	P	**P**	**06 29 49.1**	**-2.3**
BHHZ	**Black Hill Sta**	**16.29**	**191**	P	**P**	**06 29 48.9**	**-3.6**
QRZ	**Quartz Range**	**18.38**	**198**	P	**P**	**06 30 11.5**	**+0.1**
KHZ	**Kahutara**	**19.62**	**194**	P	**P**	**06 30 21.2**	**-1.4**
ARMA	**Armidale**	**26.10**	**249**	P	**P**	**06 31 22.2**	**+1.3**
ARMA				IAmb	IAmb	06 31 57.9	
	comp=Z,12nm,1.3s						
EIDS	**Eidsvold**	**26.30**	**260**	P	**P**	**06 31 23.2**	**+0.7**
EIDS				IAmb	IAmb	06 31 45.5	
	comp=Z,24nm,1.6s						
CTAO	**Charters Tower**	**31.40**	**270**	P	**P**	**06 32 07.3**	**+0.4**
CTAO				IAmb	IAmb	06 32 08.2	
	comp=Z,16nm,0.5s						
PMG	**Port Moresby**	**34.28**	**289**	P	**P**	**06 32 31.7**	**+0.4**
	comp=Z,7.6nm,0.4s,baz=94,slow=6.4,SNR=2.5						
PMG	**Port Moresby**	**34.28**	**289**	IAmb	IAmb	06 32 40.5	
	comp=Z,56nm,1.5s						
STKA	**Stephens Creek**	**34.81**	**248**	P	**P**	**06 32 35.9**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=96,slow=9.2,SNR=3.0						
AS31	**Alice Springs**	**42.03**	**260**	P	**P**	**06 33 33.8**	**-0.4**
ASAR	**Alice Springs**	**42.03**	**260**	P	**P**	**06 33 34.1**	**-0.1**
	comp=Z,2.6nm,0.8s,baz=100,slow=7.1,SNR=28						
ASAR				ScP	**ScP**	**06 38 18.8**	**+4.1**
	comp=Z,1.1nm,0.8s,baz=109,slow=4.6,SNR=7.7						
ASAR				S	**S**	**06 39 12.6**	**-1.3**
	comp=Z,0.4nm,0.9s,baz=96,slow=14,SNR=4.4						
WR0	**Warramunga Arr**	**42.17**	**266**	P	**P**	**06 33 35.0**	**-0.3**
WR0				IAmb	IAmb	06 34 17.0	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**42.36**	**266**	P	**P**	**06 33 36.2**	**-0.6**
	comp=Z,2.9nm,0.5s,baz=94,slow=8.4,SNR=56						
WRA	**Warramunga Arr**	**42.36**	**266**	P	**P**	**06 33 36.4**	**-0.4**
KNRA	**Kununurra**	**48.61**	**269**	P	**P**	**06 34 24.8**	**+0.3**
KNRA				IAmb	IAmb	06 35 19.2	
	comp=Z,87nm,2.0s						
DHH	**Diamond Head**	**49.49**	**28**	P	**P**	**06 34 30.4**	**-0.4**
QSPA	**South Pole Qui**	**66.60**	**180**	P	**P**	**06 36 26.8**	**+0.7**
QSPA				IAmb	IAmb	06 36 57.6	
	comp=Z,9.6nm,1.6s						
JWT	**Wachi**	**72.07**	**323**	P	**P**	**06 37 00.1**	**+1.0**
KSRS	**Korea Array**	**77.88**	**320**	P	**P**	**06 37 32.6**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=141,slow=4.4,SNR=2.6						
PETK	**Petropavlovsk-**	**78.67**	**347**	P	**P**	**06 37 35.1**	**-0.3**
	comp=Z,3.3nm,0.6s,baz=142,slow=7.5,SNR=4.1						
PETK	**Petropavlovsk-**	**78.67**	**347**	P	**P**	**06 37 36.2**	**+0.8**
USRK	**Ussuriysk Ar.**	**80.37**	**327**	P	**P**	**06 37 46.2**	**+1.7**
	comp=Z,1.8nm,0.8s,baz=134,slow=6.2,SNR=2.4						
CMB	**Columbia Colle**	**82.95**	**43**	P	**P**	**06 37 58.3**	**+0.4**
NVAR	**Mina Array Bea**	**84.51**	**44**	P	**P**	**06 38 05.6**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=219,slow=7.1,SNR=5.0						
TPNV	**Topopah Spring**	**85.00**	**46**	P	**P**	**06 38 08.7**	**+0.5**
TPNV				IAmb	IAmb	06 39 31.6	
	comp=Z,9.4nm,2.0s						
SNAA	**Sanae**	**85.09**	**179**	P	**P**	**06 38 07.2**	**-0.8**
SNAA	**Sanae**	**85.09**	**179**	P	**P**	**06 38 07.3**	**-0.6**
SNAA				IAmb	IAmb	06 39 54.2	
	comp=Z,16nm,2.0s						
VNA3	**Neumayer Olymp**	**85.30**	**177**	P	**P**	**06 38 08.2**	**-0.7**
VNA2	**Neumayer--Watz**	**85.71**	**178**	P	**P**	**06 38 10.7**	**-0.2**
	baz=184,slow=2.7						
G08A	**Pilot Rock**	**88.15**	**38**	P	**P**	**06 38 23.9**	**+1.1**
G08A				IAmb	IAmb	06 38 47.0	
	comp=Z,18nm,1.7s						
SEY	**Seymchan**	**88.84**	**348**	P	**P**	**06 38 25.7**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=95,slow=4.3,SNR=3.6						
WAX	**Waxell Ridge**	**88.95**	**17**	P	**P**	**06 38 27.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**89.31**	**290**	P	**P**	**06 38 30.8**	**+2.1**
	comp=Z,0.7nm,0.3s,baz=83,slow=2.8,SNR=4.5						
HVU	**Hansel Valley**	**89.89**	**44**	P	**P**	**06 38 31.6**	**+0.5**
HVU				IAmb	IAmb	06 38 32.4	
	comp=Z,3.3nm,0.7s						
SRU	**San Rafael Swe**	**89.97**	**47**	P	**P**	**06 38 32.4**	**+0.8**
SRU				IAmb	IAmb	06 38 32.9	
	comp=Z,6.4nm,0.8s						
TX31	**Lajitas Ar. Si**	**90.28**	**58**	P	**P**	**06 38 34.3**	**+1.2**
TXAR	**Lajitas Array**	**90.28**	**58**	P	**P**	**06 38 34.1**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=211,slow=6.7,SNR=21						
TXAR	**Lajitas Array**	**90.28**	**58**	P	**P**	**06 38 34.0**	**+0.9**
ILAR	**Eielson Array**	**91.64**	**14**	P	**P**	**06 38 37.5**	**-0.9**
	comp=Z,1.3nm,1.1s,baz=222,slow=5.5,SNR=6.1						
PDAR	**Pinedale Array**	**92.44**	**44**	P	**P**	**06 38 43.0**	**0.0**
	comp=Z,0.7nm,0.6s,baz=204,slow=3.7,SNR=7.8						
MKAR	**Makanchi Array**	**111.81**	**313**	PKiKP	**PKiKP**	**06 44 02.1**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=219,slow=1.8,SNR=6.5						
BVAR	**Borovoye Array**	**120.07**	**319**	PKP	**PKPdf**	**06 44 17.9**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=203,slow=6.4,SNR=6.2						
AKTO	**Aktyubinsk**	**127.94**	**316**	PKP	**PKPdf**	**06 44 33.8**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=57,slow=7.7,SNR=4.7						
ARCES	**ARCESS Array B**	**131.46**	**348**	PKP	**PKPdf**	**06 44 39.9**	**+0.2**
	comp=Z,3.7nm,0.9s,baz=43,slow=2.4,SNR=4.9						
BELG	**Belogornoye**	**133.76**	**321**	PKP	**PKPdf**	**06 44 43.9**	**-0.6**
	comp=Z,5.1nm,0.8s,baz=53,slow=2.8,SNR=2.9						
FINES	**FINESS Array B**	**138.02**	**342**	PKP	**PKPdf**	**06 44 52.5**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=79,slow=3.0,SNR=6.0						
FINES				SKPbc	**SKiKP**	**06 47 37.3**	**-1.1**
	comp=Z,2.3nm,0.9s,baz=29,slow=3.2,SNR=3.7						
NB2	**NORSAR Subarra**	**141.66**	**351**	PKP	**PKPdf**	**06 44 53.9**	**-4.9**
	comp=Z,0.8nm,0.5s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**141.66**	**351**	PKhKP	PKPpre	06 44 54.0	
	comp=Z,0.4nm,0.5s,baz=345,slow=2.0,SNR=6.8						
HFS	**Hagfors**	**142.12**	**349**	PKhKP	PKPpre	06 44 55.3	
	comp=Z,8.7nm,0.5s,baz=53,slow=3.2,SNR=74						
AKASG	**Malin Array Be**	**144.58**	**328**	PKP	**PKPdf**	**06 45 03.8**	**-0.3**
	comp=Z,3.3nm,0.4s,baz=44,slow=4.0,SNR=31						
AKBB	**Malin Array Si**	**144.58**	**328**		**PKPdf**	**06 45 03.9**	**-0.2**
BRTR	**Keskin Array B**	**147.26**	**308**	PKPbc	**PKPbc**	**06 45 12.6**	**0.0**
	comp=Z,1.0nm,0.6s,baz=147,slow=5.8,SNR=6.1						
MLR	**Muntele Rosu**	**149.53**	**322**	PKPbc	**PKPbc**	**06 45 16.9**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=314,slow=5.7,SNR=3.8						
OSTC	**Ostas**	**150.14**	**339**	⇑*e*PKP	**PKiKP**	**06 45 19.9**	**+0.3**
CHVC	**Chvalec**	**150.16**	**339**	⇑*e*PKP	**PKPbc**	**06 45 19.7**	**+0.6**
DPC	**Dobruska-Polom**	**150.28**	**339**	⇑*e*PKP	**PKPbc**	**06 45 20.1**	**+0.7**
KRLC	**Kraliky**	**150.36**	**338**	⇑*e*PKP	**PKPbc**	**06 45 20.1**	**+0.5**
KRLC				*e*PKPAB	**PKPab**	**06 45 29.4**	**+0.9**
CLL	**Collm**	**150.43**	**343**	*i* PKPbc	**PKPbc**	**06 45 19.6**	**-0.1**
	comp=Z,11nm,0.7s						
CLL				*i* PKPab	**PKPab**	**06 45 28.5**	**-0.1**
	comp=Z,6.0nm,0.8s						
CLL				*e*pPKPab	**pPKPbc**	**06 47 28.0**	**+1.7**
BRG	**Berggiesshubel**	**150.56**	**342**	*i* PKP	**PKPbc**	**06 45 20.5**	**+0.5**
BRG				Amp		06 45 21.3	
	comp=Z,6.8nm,0.6s						
PVCC	**Panska Ves**	**150.69**	**341**	⇑*e*PKP	**PKiKP**	**06 45 21.1**	**+0.4**
PRU	**Pruhonice**	**151.17**	**340**	⇑*e*PKP	**PKPbc**	**06 45 21.8**	**+0.4**
KHC	**Kasperske Hory**	**152.22**	**341**	⇑*e*PKP	**PKPbc**	**06 45 24.3**	**+0.5**
KHC				*e*PKPAB	**PKPab**	**06 45 37.1**	**+0.8**
CKRC	**Cesky Krumlov**	**152.26**	**339**	⇑*e*PKP	**PKiKP**	**06 45 25.0**	**+0.9**
GERES	**GERESS Array B**	**152.44**	**340**	PKPbc	**PKPbc**	**06 45 23.8**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=90,slow=2.7,SNR=5.7						

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*IDC **19** 06:32:17.3±2.4, 38°.62N×73°.10E, h0^{km}, mb3.8/4, mb1 3.9/7, mb1mx3.4/55, mbtmp3.8/7, ML2.9/2, MS2.9/2, Ms1 2.8/2, ms1mx2.5/44, Error ellipse: s-maj=38.5km s-min=29.3km az=151.0*

*SOME **19** 06:32:21.0, 38°.78N×73°.35E, h10^{km}*

*NNC **19** 06:32:24.3±2.9, 38°.87N×73°.38E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=22.8km s-min=15.0km az=166.0*

ISC 19 06:32:23.4±1.5, **38°.87N**±0°.09×**73°.39E**±0°.04, **h10^{km}, n37, σ2^{s}.71**/46, **mb3.9**/4, **3C-6D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.27**	**4**	P	**Pn**	**06 33 17.9**	**+2.9**
	SNR=57						
UCH	**Uchtor**	**3.46**	**14**	P	**Pn**	**06 33 19.9**	**+2.1**
	SNR=16						
EKS2	**Erkin-Say**	**3.80**	**4**	P	**Pn**	**06 33 26.5**	**+4.3**
	SNR=20						
AAK	**Ala-Archa**	**3.86**	**12**	Pn	**Pn**	**06 33 25.6**	**+2.7**
	baz=195,slow=11						
AAK				Sn	**Sb**	**06 34 17.4**	**-1.1**
	baz=344,slow=20,SNR=1.8						
AAK	**Ala-Archa**	**3.86**	**12**	P	**Pn**	**06 33 25.2**	**+2.2**
	SNR=44						
AAK	**Ala-Archa**	**3.86**	**12**	⇑Pn	**Pn**	**06 33 26.1**	**+3.1**
	33nm,0.7s						
AAK				⇓Lg	Lg	06 34 26.0	
	60nm,0.8s						
MRKS	**Merke**	**3.88**	**358**	*e*P	**Pb**	**06 33 32.1**	**+0.2**
	13nm,0.6s						
MRKS				*e*S	**Sg**	**06 34 23.4**	**-4.5**
	20nm,0.7s						
KBK	**Karagaybulak**	**3.97**	**17**	P	**Pb**	**06 33 32.1**	**-1.4**
	SNR=6.4						
ULHL	**Ulahol**	**4.01**	**32**	P	**Pb**	**06 33 35.3**	**+0.9**
	SNR=7.6						
IUG	**Iuzhnay**	**4.16**	**323**	*e*P	**Pb**	**06 33 40.0**	**+3.3**
	1µm,0.4s						
IUG				*e*S	**Sg**	**06 34 36.7**	**-0.2**
	89nm,0.4s						
CHMS	**Chumysh**	**4.25**	**14**	P	**Pn**	**06 33 32.3**	**+4.0**
	SNR=8.6						
TKM2	**Tokmak 2**	**4.38**	**22**	⇓Pn	Pn	06 33 35.2	+5.0
	11nm,0.7s						
TKM2				⇓Lg	Lg	06 34 45.1	
	25nm,0.8s						
USP	**Ospenovka**	**4.47**	**10**	P	Pn	06 33 36.6	+5.3
	SNR=12						
CHM	**Chimkent**	**4.49**	**321**	*e*P	**Pg**	**06 33 46.7**	**-2.8**
	162nm,0.3s						
CHM				*e*S	**Sg**	**06 34 48.2**	**+0.5**
	191nm,0.3s						
KST	**Kastek**	**4.60**	**24**	*e*P	**Pb**	**06 33 47.3**	**+3.0**
	8.4nm,0.6s						
KST				*e*S	**Sg**	**06 34 49.5**	**-1.7**
	20nm,0.6s						
KST	**Kastek**	**4.60**	**24**	Pg	**Pb**	**06 33 46.3**	**+1.9**
	15nm,1.1s						
KST				Lg	Lg	06 34 51.0	
	38nm,0.7s						
SGDS	**Sogindy**	**4.67**	**11**	Pg	**Pb**	**06 33 46.8**	**+1.3**
	9.3nm,1.1s						
SGDS				Lg	Lg	06 34 51.8	
	17nm,1.2s						
DGS	**Degeres**	**4.73**	**22**	*e*P	**Pg**	**06 33 51.6**	**-2.4**
	8.4nm,0.9s						
DGS				*e*S	**Sg**	**06 34 56.8**	**+1.6**
	18nm,0.8s						
DGS	**Degeres**	**4.73**	**22**	Pg	**Pb**	**06 33 50.4**	**+3.9**
	13nm,0.8s						
DGS				Lg	Lg	06 34 58.6	
	18nm,0.8s						
KK09	**Karatay Array**	**4.78**	**334**	⇑Pn	**Pn**	**06 33 35.2**	**-0.3**
	12nm,0.6s,baz=151,slow=13						
KK09				⇓Sn	**Sn**	**06 34 35.4**	**+4.5**
	13nm,0.6s,baz=150,slow=24						
MTBS	**Maitube**	**4.84**	**27**	*e*P	**Pg**	**06 33 53.4**	**-2.7**
	8.0nm,0.5s						
MTBS				*e*S	**Sg**	**06 34 59.3**	**+0.5**
	16nm,1.0s						
BRLS	**Boroldav**	**4.95**	**328**	*e*P	**Pb**	**06 33 52.7**	**+2.5**
	6.7nm,0.5s						
BRLS				*e*S	**Sg**	**06 34 59.1**	**-3.2**
	14nm,0.5s						
TNSS	**Tian-Shan**	**4.96**	**32**	*e*P	**Pg**	**06 33 55.4**	**-3.0**
	8.8nm,0.6s						
TNSS				*e*S	**Sg**	**06 35 03.7**	**+1.0**
	12nm,0.8s						
TNSS	**Tian-Shan**	**4.96**	**32**	Pg	**Pb**	**06 33 53.2**	**+2.6**
	8.8nm,0.6s						
TNSS				Lg	Lg	06 35 03.7	
	12nm,0.8s						
MDOK	**Medeo**	**5.11**	**32**	⇓Pg	**Pb**	**06 33 56.5**	**+3.6**
	8.1nm,0.7s						
MDOK				Lg	Lg	06 35 05.5	
	31nm,0.9s						
KRBS	**Karabastau**	**5.12**	**19**	*e*P	**Pg**	**06 33 58.1**	**-3.4**
	9.5nm,0.7s						
KRBS				*e*S	**Sg**	**06 35 07.8**	**-0.1**
	20nm,0.7s						
KRBS	**Karabastau**	**5.12**	**19**	Pg	**Pb**	**06 33 55.4**	**+2.3**
	9.5nm,0.7s						
KRBS				Lg	Lg	06 35 07.1	
	20nm,0.7s						
BTLS	**Baital**	**6.19**	**4**	*e*P	**Pg**	**06 34 17.9**	**-4.0**
	1.5nm,0.3s						
BTLS				*e*S	**Sg**	**06 35 41.9**	**-0.1**
	7.5nm,0.7s						
MKAR	**Makanchi Array**	**10.26**	**37**	Pn	**Pn**	**06 34 53.1**	**+2.4**
	0.0nm,0.3s,baz=229,slow=13,SNR=4.2						
AB31	**Akbulak array**	**14.16**	**321**	⇑Pn	**Pn**	**06 35 45.8**	**+1.8**
	1.0nm,0.5s,baz=130,slow=13,SNR=20						
AB31				⇓Sn	**Sn**	**06 38 24.8**	**+3.6**
	1.3nm,0.7s,baz=131,slow=27,SNR=4.2						
AKTO	**Aktyubinsk**	**15.88**	**322**	Pn	**Pn**	**06 36 04.1**	**-2.8**
	0.2nm,0.3s,baz=110,slow=13,SNR=2.4						
ZALV	**Zalesovo Beam**	**16.98**	**24**	P	**Pn**	**06 36 21.3**	**+0.4**
	0.5nm,0.3s,baz=224,slow=8.0,SNR=1.5						
ZALV				LR	LR	06 43 10.7	
	comp=Z,17nm,18.5s,baz=44,slow=38						
SONM	**Songino Array**	**25.46**	**59**	P	**P**	**06 37 49.8**	**-1.7**
	1.8nm,0.6s,baz=274,slow=9.9,SNR=12						
FINES	**FINESS Array B**	**36.64**	**324**	P	**P**	**06 39 26.1**	**-3.6**
	9.3nm,1.2s,baz=305,slow=28,SNR=1.7						
ARCES	**ARCESS Array B**	**39.72**	**336**	P	**P**	**06 39 52.8**	**-2.8**
	2.1nm,0.8s,baz=115,slow=8.3,SNR=1.3						
YKA	**Yellowknife Ar**	**78.78**	**4**	P	P	06 44 21.9	-4.0
	0.2nm,0.6s,baz=346,slow=5.5,SNR=2.6						
BOSA	**Boshof**	**80.77**	**222**	LR	LR	07 24 10.7	
	comp=Z,12nm,18.3s,baz=186,slow=39						

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*RSNC **19** 06:51:04.3±1.3, 6°.82N×73°.14W, h150^{km}±4^{km}, ML3.4, Mw3.6, Fault plane solution: NP1:φ$_{s}$25.00000°, δ51.00000°, λ75.00000°.*

*IDC **19** 06:51:04.7±1.5, 6°.33N×72°.95W, h200^{km}±92^{km}, mb2.6/2, mb1 3.2/4, mb1mx3.0/31, mbtmp3.5/4, Error ellipse: s-maj=193.5km s-min=25.9km az=161.0*

ISC 19 06:51:03.3±0.9, **6°.82N**±0°.03×**73°.09W**±0°.04, **h155^{km}**±6^{km}, **n38, σ1^{s}.55**/71, **7C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.24**	**202**	⇑*i*P	**Pn**	**06 51 24.5**	**-0.1**
BARC				*e*S	**Sn**	**06 51 39.3**	**-1.5**
BARC				*i*		06 51 42.3	
	comp=Z,471nm,0.3s						
PAMC	**Pamplona, Colo**	**0.65**	**37**	⇑*e*P	**Pn**	**06 51 27.4**	**+0.7**
PAMC				*e*S	**Sn**	**06 51 44.6**	**+0.2**
PAMC				*i*		06 51 46.7	
	comp=Z,384nm,0.5s						
BRRC	**Barranca, Sant**	**0.68**	**295**	⇑*i*P	**Pn**	**06 51 26.3**	**+0.1**
BRRC				*e*S	**Sn**	**06 51 43.6**	**-0.1**
BRRC				*i*		06 51 48.1	

	comp=Z,284nm,0.1s						
RUSC	La Rusia	0.92	180	*e*P	Pn	06 51 28.5	0.0
RUSC				*e*S	Sn	06 51 47.3	-0.4
RUSC				*i*		06 51 48.4	
	comp=Z,320nm,0.3s						
TAMC	Tame, Arauca	1.34	106	⇑*i*P	Pn	06 51 33.0	+1.2
TAMC				*e*S	Sn	06 51 54.7	+1.3
TAMC				*i*		06 51 55.8	
	comp=Z,116nm,0.5s						
PTBC	PUERTO BERRIO,	1.39	259	*e*P	Pn	06 51 31.1	-1.0
PTBC				*e*S	Sn	06 51 52.2	-1.9
PTBC				*i*		06 51 57.8	
	comp=Z,176nm,0.4s						
OCAC	Ocana	1.43	351	⇑*e*P	Pn	06 51 32.6	-0.1
OCAC				*e*S	Sn	06 51 54.3	-1.0
OCAC				*i*		06 51 58.3	
	comp=Z,438nm,0.2s						
SPBC	San Pablo de B	1.52	220	*e*P	Pn	06 51 33.5	-0.1
SPBC				*e*S	Sn	06 51 55.2	-1.5
SPBC				*i*		06 51 57.3	
	comp=Z,357nm,0.1s						
ZARC	Zaragoza, Cauc	1.88	291	*e*P	Pn	06 51 37.1	-0.2
ZARC				*e*S	Sn	06 52 02.3	-1.2
ZARC				*i*		06 52 07.8	
	comp=Z,339nm,0.6s						
NORC	Norcasia	2.16	235	*e*P	Pn	06 51 40.6	-0.1
NORC				*e*S	Sn	06 52 08.5	-1.1
NORC				*i*		06 52 14.1	
	comp=Z,124nm,0.2s						
SMLC	San Martn de	2.20	334	*e*P	Pn	06 51 40.8	-0.2
SMLC				*e*S	Sn	06 52 10.6	+0.4
SMLC				*i*		06 52 12.8	
	comp=Z,355nm,0.1s						
CHIC	Chingaza	2.27	196	⇑*e*P	Pn	06 51 42.9	+0.5
CHIC				*e*S	Sn	06 52 12.4	0.0
CHIC				*i*		06 52 18.2	
	comp=Z,111nm,0.3s						
ROSC	El Rosal	2.32	212	P	Pn	06 51 44.8	+1.9
	comp=Z,40nm,0.3s,baz=68,slow=19,SNR=90						
ROSC				S	Sn	06 52 14.3	+0.9
	comp=Z,152nm,0.3s,baz=192,slow=23,SNR=19						
ROSC	El Rosal	2.32	212	*e*P	Pn	06 51 44.3	+1.4
ROSC				*e*S	Sn	06 52 14.7	+1.4
ROSC				*i*		06 52 19.2	
	comp=Z,350nm,0.4s						
HELC	Santa Helena	2.50	256	*e*P	Pn	06 51 45.4	+0.3
HELC				*e*S	Sn	06 52 16.0	-1.2
HELC				*i*		06 52 24.7	
	comp=Z,69nm,0.3s						
UREC	San Jos de Ur	2.59	291	*e*P	Pn	06 51 45.2	-0.7
UREC				*e*S	Sn	06 52 15.7	-3.0
UREC				*i*		06 52 25.9	
	comp=Z,205nm,0.3s						
SOCV	Socops	2.65	57	⇑*i*P	Pn	06 51 46.4	-0.2
SOCV				*e*S	Sn	06 52 16.6	-3.4
SOCV				*i*		06 52 20.1	
	comp=Z,307nm,0.7s						
LL1C	La Loma 1 Cana	2.74	350	*e*P	Pn	06 51 50.1	+2.4
LL1C				*e*S	Sn	06 52 25.3	+3.2
VILC	Villavicencio,	2.75	193	*e*P	Pn	06 51 48.0	0.0
VILC				*e*S	Sn	06 52 21.8	-0.7
GUY2C	Guyana, Caldas	2.76	235	*e*P	Pn	06 51 49.2	+0.8
GUY2C				*e*S	Sn	06 52 23.1	0.0
GUY2C				*i*		06 52 34.8	
	comp=Z,92nm,0.4s						
PTGC	Puerto Gaitan,	2.77	160	⇓*i*P	Pn	06 51 47.7	-0.3
PTGC				*e*S	Sn	06 52 21.0	-1.7
PTGC				*i*		06 52 26.1	
	comp=Z,118nm,0.6s						
CBOC	Ciudad Bolivar	3.06	252	*e*P	Pn	06 51 52.3	+0.5
CBOC				*e*S	Sn	06 52 28.8	-0.5
CBOC				*i*		06 52 39.5	
	comp=Z,31nm,0.5s						
SDV	Santo Domingo	3.19	50	*e*P	Pn	06 51 54.2	+0.7
SDV				*e*S	Sn	06 52 31.5	-0.7
SDV				*i*		06 52 36.6	
	comp=Z,30nm,0.6s						
MOTC	Monteria, Cord	3.21	308	*e*P	Pn	06 51 51.6	-1.9
MOTC				*e*S	Sn	06 52 30.3	-2.1
MOTC				*i*		06 52 43.9	
	comp=Z,85nm,0.5s						
ARGC	Ariguani, Magd	3.23	339	*e*P	Pn	06 51 54.5	+0.7
ARGC				*e*S	Sn	06 52 33.6	+0.6
ARGC				*i*		06 52 42.4	
	comp=Z,34nm,0.4s						
ANIL	Santa Ana	3.26	225	*e*P	Pn	06 51 55.8	+1.3
ANIL				*e*S	Sn	06 52 35.2	+1.0
ANIL				*i*		06 52 40.7	
	comp=Z,242nm,0.3s						
PRAC	Prado	3.57	210	*e*P	Pn	06 51 58.5	+0.3
PRAC				*e*S	Sn	06 52 39.8	-1.0
PRAC				*i*		06 52 46.8	
	comp=Z,124nm,0.4s						
SJCC	San Jacinto, C	3.69	326	*e*P	Pn	06 51 58.2	-1.6
SJCC				*e*S	Sn	06 52 42.9	-0.8
SJCC				*i*		06 52 54.3	
	comp=Z,43nm,0.7s						
PLMC	San Jos del P	3.70	239	*e*P	Pn	06 52 00.0	+0.1
PLMC				*e*S	Sn	06 52 43.3	-0.6
PLMC				*i*		06 52 48.0	
	comp=Z,26nm,0.2s						
CRJC	Cerrejon, Guaj	4.18	3	*e*P	Pn	06 52 05.0	-1.2
CRJC				*e*S	Sn	06 52 51.2	-3.9
CRJC				*i*		06 52 55.6	
	comp=Z,48nm,0.2s						
GUVC	San Jose del G	4.27	174	*e*P	Pn	06 52 07.0	-0.4
GUVC				*e*S	Sn	06 52 55.5	-1.7
GUVC				*i*		06 53 00.0	
	comp=Z,79nm,0.2s						
YOTC	Yotoco, Valle	4.29	229	*e*P	Pn	06 52 11.2	+3.5
MACC	Macarena, Meta	4.70	189	⇓*i*P	Pn	06 52 11.5	-1.6
MACC				*e*S	Sn	06 53 03.4	-4.0
MACC				*i*		06 53 08.6	
	comp=Z,23nm,0.5s						
GARC	Garzon, Huila	5.19	208	*e*P	Pn	06 52 18.5	-1.1
GARC				*e*S	Sn	06 53 15.6	-3.5
GARC				*i*		06 53 22.8	
	comp=Z,27nm,0.2s						
BBAC	Balboa, Cauca	6.32	221	*e*S	Sn	06 53 43.8	-2.2
PCRV	Puerto La Cruz	9.00	68	P	Pn	06 53 12.2	+2.0
	comp=Z,0.4nm,0.3s,baz=198,slow=20,SNR=2.4						
TXAR	Lajitas Array	36.49	312	P	P	06 57 54.7	+0.8
	comp=Z,0.1nm,0.6s,baz=144,slow=7.8,SNR=1.4						
YKA	Yellowknife Ar	63.28	340	P	P	07 01 15.1	-0.2
	comp=Z,0.3nm,0.6s,baz=135,slow=6.8,SNR=5.3						

IDC ***19*** *06:54:60.0±2.7, 36°.37N×70°.97E, h182^{km}±24^{km}, mb3.3/11, mb1 3.5/17, mb1mx3.2/56, mbtmp3.9/17, Error ellipse: s-maj=21.8km s-min=15.4km az=4.0*

NNC ***19*** *06:55:02.5±3.3, 37°.01N×70°.56E, h0^{km}, mb4.7, mpv4.6, Error ellipse: s-maj=26.8km s-min=20.9km az=174.0*

SOME ***19*** *06:55:13.2, 38°.53N×71°.87E, h0^{km}*

ISC 19 06:55:03.3±0.6**, 36°.65N**±0°.05×**70°.89E**±0°.06**, h200^{km}, n47, σ1^{s}.76**/56**, mb3.4**/11**, 6C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.94	163	P	Pn	06 55 53.3	+0.8
CEP				S	Sn	06 56 30.0	-0.8
THW	Thamme Wali	3.91	169	P	Pn	06 56 04.5	+0.4
IUG	Iuzhnay	5.53	353	*e*P	Pn	06 56 27.9	+3.4
	823nm,0.5s						
IUG				*e*S	Sn	06 57 27.0	-1.7
	274nm,0.7s						
AML	Almayashu	5.89	21	P	Pn	06 56 31.0	+1.6
	SNR=10						
UCH	Uchtor	6.24	26	P	Pn	06 56 34.3	+0.4
	SNR=77						
DZA	Taraz	6.24	3	*e*P	Pn	06 56 31.6	-2.0
	46nm,0.1s						
DZA				*e*S	Sn	06 57 33.9	-11
	122nm,0.1s						
MRKS	Merke	6.35	16	*e*P	Pn	06 56 37.7	+2.6
	32nm,0.5s						
MRKS				*e*S	Sn	06 57 44.8	-3.0
	40nm,0.3s						
EKS2	Erkin-Say	6.40	19	P	Pn	06 56 36.3	+0.5
	SNR=29						
BRLS	Borolday	6.42	353	*e*P	Pn	06 56 35.2	-0.8
	10.0nm,0.1s						
BRLS				*e*S	Sn	06 57 40.0	-9.4
	26nm,0.3s						
KK09	Karatay Array	6.47	357	⇓P	Pn	06 56 35.4	-1.2
	16nm,0.3s,baz=179,slow=12						
KK09				⇑S	Sn	06 57 46.6	-4.0
	18nm,0.5s,baz=181,slow=24						
AAK	Ala-Archa	6.59	24	P	Pn	06 56 38.8	+0.5
	11nm,0.3s,baz=180,slow=6.0,SNR=64						
AAK				S	Sn	06 57 51.9	-1.7
	2.6nm,0.3s,baz=133,slow=21,SNR=8.2						
AAK	Ala-Archa	6.59	24	P	Pn	06 56 39.0	+0.7
	SNR=23						
AAK	Ala-Archa	6.59	24	⇑P	Pn	06 56 38.6	+0.3
	16nm,0.4s						
AAK				⇑S	Sn	06 57 51.6	-2.1
	12nm,0.5s						
KBK	Karagaybulak	6.76	26	P	Pn	06 56 41.3	+0.8
	SNR=7.5						
ULHL	Ulahol	6.95	35	P	Pn	06 56 43.3	+0.2
	SNR=7.5						
CHMS	Chumysh	7.00	24	P	Pn	06 56 43.7	+0.2
	SNR=7.5						
USP	Ospenovka	7.17	22	P	Pn	06 56 45.1	-0.6
	SNR=18						
TKM2	Tokmak 2	7.23	29	P	Pn	06 56 46.8	+0.1
	SNR=53						
TKM2	Tokmak 2	7.23	29	⇑P	Pn	06 56 46.6	-0.1
	50nm,0.7s						
KST	Kastek	7.48	30	*e*P	Pn	06 56 53.4	+3.6
	14nm,0.6s						
KST				*e*S	Sn	06 58 12.8	-1.7
	13nm,0.7s						
DGS	Degeres	7.58	28	*e*P	Pn	06 56 55.7	+4.6
	5.9nm,0.3s						
DGS				*e*S	Sn	06 58 16.9	+0.2
	4.7nm,1.1s						
GEYT	Alibeck	10.26	281	P	Pn	06 57 24.8	-1.1
	0.5nm,0.3s,baz=72,slow=14,SNR=1.6						
GEYT				S	Sn	06 59 20.2	-0.2
	0.5nm,0.3s,baz=135,slow=57,SNR=1.5						
MKAR	Makanchi Array	13.22	36	P	Pn	06 58 02.9	-0.5
	0.3nm,0.3s,baz=209,slow=10,SNR=17						
PYUN	Piuthan	13.30	126	*e*P	P	06 58 06.5	-1.1
	5.4nm,0.2s						
DANN	Dangsing	13.64	124	*e*P	P	06 58 10.4	-1.1
	4.7nm,0.2s						
GKN	Gorkha	14.46	123	*e*P	P	06 58 20.2	-0.2
	6.8nm,0.3s						
AB31	Akbulak array	14.91	331	P	P	06 58 27.4	+2.4
	2.1nm,0.5s,baz=138,slow=13,SNR=62						
AB31				⇑S	S	07 01 09.4	-0.3
	3.5nm,0.9s						
KURBB	Kurchatov Arra	15.01	19	P	Pn	06 58 23.9	-1.5
	0.2nm,0.3s,baz=209,slow=10,SNR=2.3						
PKIN	Phulchoki	15.25	122	*e*P	P	06 58 30.7	+1.5
	4.6nm,0.2s						
PKI	Pulchoki	15.26	122	*e*P	P	06 58 30.4	+1.0
	4.1nm,0.2s						
GUN	Gumba	15.37	120	*e*P	P	06 58 31.8	+1.1
	7.6nm,0.3s						
JIRN	Jiri	15.74	120	*e*P	Pn	06 58 36.7	+1.8
	16nm,0.4s						
BVAR	Borovoye Array	16.38	359	P	P	06 58 41.3	+0.2
	0.8nm,0.3s,baz=194,slow=16,SNR=9.0						
AKTO	Aktyubinsk	16.61	330	P	P	06 58 44.7	+1.0
	0.6nm,0.3s,baz=136,slow=11,SNR=7.4						
AKTO	Aktyubinsk	16.61	330	⇑P	Pn	06 58 49.5	+4.9
	8.8nm,1.1s						
ZALV	Zalesovo Beam	19.82	25	P	P	06 59 18.0	-0.5
	2.0nm,0.3s,baz=218,slow=12,SNR=5.2						
SONM	Songino Array	28.32	56	P	P	07 00 38.1	-0.4
	0.3nm,0.5s,baz=254,slow=10,SNR=3.6						
AKASG	Malin Array Be	32.78	309	P	P	07 01 17.6	+0.2
	0.3nm,0.4s,baz=96,slow=10,SNR=2.1						
FINES	FINESS Array B	37.31	326	P	P	07 01 56.7	+0.9
	5.5nm,1.1s,baz=111,slow=10,SNR=4.8						
ARCES	ARCESS Array B	40.97	338	P	P	07 02 26.7	+0.7
	5.4nm,1.0s,baz=118,slow=9.4,SNR=1.5						
NOA	NORSAR Array B	44.21	323	P	P	07 02 52.2	-0.1
	0.6nm,0.9s,baz=97,slow=7.8,SNR=2.1						
KSRS	Korea Array	44.91	71	P	P	07 02 52.8	-5.2
	0.5nm,0.3s,baz=282,slow=9.6,SNR=1.4						
TORD	Torodi Ar. Bea	65.63	268	P	P	07 05 24.7	-1.6
	0.2nm,0.4s,baz=46,slow=5.5,SNR=3.0						
INK	Inuvik	73.77	9	P	P	07 06 15.8	+0.7
	0.8nm,0.5s,baz=348,slow=6.9,SNR=8.5						
YKA	Yellowknife Ar	81.10	3	P	P	07 06 55.8	+0.1
	0.4nm,0.5s,baz=350,slow=5.4,SNR=11						
WRA	Warramunga Arr	82.15	122	P	P	07 06 59.5	-2.4
	0.5nm,0.7s,baz=316,slow=4.3,SNR=5.6						
ASAR	Alice Springs	84.41	125	P	P	07 07 10.9	-2.5
	0.8nm,0.7s,baz=310,slow=4.9,SNR=11						

IDC ***19*** *07:03:22.5±1.6, 5°.60S×147°.31E, h190^{km}±15^{km}, mb4.1/4, mb1 4.4/6, mb1mx3.7/31, mbtmp4.6/6, Error ellipse: s-maj=28.9km s-min=11.7km az=116.0*

NEIC ***19*** *07:03:24.5±2.2, 5°.61S±0°.06×147°.27E±0°.08, h195^{km}±8^{km}, mb4.7/14, Error ellipse: s-maj=13.6km s-min=5.3km az=124.0*

ISC 19 07:03:24.2±0.5**, 5°.62S**±0°.06×**147°.24E**±0°.09**, h195^{km}, n53, σ1^{s}.09**/56**, mb4.6**/15**, 1C, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.55	2		Pn	07 04 21.2	+0.8
PMG	Port Moresby	3.77	181	P	Pn	07 04 22.4	-0.6
	61nm,0.3s,baz=326,slow=6.7,SNR=48						
PMG				S	Sn	07 05 06.8	-2.2
	55nm,0.3s,baz=212,slow=22,SNR=14						
PMG	Port Moresby	3.77	181		Pn	07 04 22.5	-0.5
PMG	Port Moresby	3.77	181	P	Pn	07 04 22.5	-0.5
PMG	Port Moresby	3.77	181	P	Pn	07 04 22.5	-0.5
RABL	Rabaul	5.11	74		Pn	07 04 40.0	+0.1
COEN	Coen	9.20	205	Pn	Pn	07 05 34.7	+1.4
COEN	Coen	9.20	205	P	Pn	07 05 34.7	+1.4
CTA	Charters Tower	14.42	184	P	P	07 06 43.5	+2.4
	1.3nm,0.3s,baz=3.3,slow=12,SNR=8.6						
CTAO	Charters Tower	14.42	184	P	P	07 06 41.7	+0.7
CTAO	Charters Tower	14.42	184	P	Pn	07 06 41.3	+1.7
KDU	Kakadu	16.18	243	P	P	07 07 00.2	-0.3
QIS	Mount Isa	16.60	206	P	P	07 07 06.5	+1.3
MTN	Manton Dam	17.44	245	P	P	07 07 14.3	-0.1
MTN				IAmb	IAmb	07 07 15.2	
	comp=Z,53nm,1.2s						
MTN	Manton Dam	17.44	245	P	P	07 07 15.0	+0.6
DRS	Darwin Rock St	17.49	246	P	P	07 07 15.5	+0.5
WB0	Warramunga Arr	18.82	220		P	07 07 29.3	-0.1
WB0				IAmb	IAmb	07 07 33.6	
	comp=Z,35nm,0.8s						
WR0	Warramunga Arr	18.86	220	P	P	07 07 30.3	+0.4
WR0				IAmb	IAmb	07 07 34.2	
	comp=Z,37nm,0.8s						
WRAB	Tennant Creek	18.96	220	P	P	07 07 30.9	-0.1
WRAB	Tennant Creek	18.96	220	P	P	07 07 31.1	+0.1
WRA	Warramunga Arr	18.98	220	P	P	07 07 31.2	0.0
	comp=Z,4.5nm,0.3s,baz=42,slow=10,SNR=210						
WRA				S	S	07 10 54.8	-1.5
	baz=53,slow=17,SNR=4.6						
WRA	Warramunga Arr	18.98	220	P	P	07 07 29.4	-1.7
EIDS	Eidsvold	19.98	170	P	P	07 07 43.9	+2.1
KNRA	Kununurra	20.71	240	P	P	07 07 48.9	-0.7
KNRA	Kununurra	20.71	240	P	P	07 07 49.2	-0.5
SANVU	Saraoutou	21.90	118	P	P	07 08 02.8	+0.7
SANVU				IAmb	IAmb	07 08 08.8	
	comp=Z,13nm,0.7s						
AS31	Alice Springs	22.07	214	P	P	07 08 04.1	+0.4
AS31				IAmb	IAmb	07 08 09.2	
	comp=Z,12nm,1.1s						
ASAR	Alice Springs	22.07	214	P	P	07 08 03.8	+0.1
	comp=Z,17nm,0.8s,baz=50,slow=8.7,SNR=191						
ASAR				S	S	07 11 54.2	+1.3
	comp=Z,3.7nm,0.7s,baz=26,slow=24,SNR=9.2						
INKA	Innaminka	22.85	195	P	P	07 08 11.5	+0.8
FITZ	Fitzroy Crossi	24.47	238	P	P	07 08 25.4	-0.2
	comp=Z,15nm,0.5s,baz=54,slow=10,SNR=29						
OOD	Oodnadatta	24.64	205	P	P	07 08 27.2	+0.2
ARMA	Armidale	25.01	171	P	P	07 08 30.9	+0.4
ARMA				IAmb	IAmb	07 09 06.6	
	comp=Z,39nm,2.0s						
WRKA	Warakurna	26.51	221	P	P	07 08 43.4	-0.5
MULG	Mulgathing	27.50	205	P	P	07 08 52.3	-0.3
FORT	Forrest	30.85	213	P	P	07 09 21.8	-0.4
	comp=Z,32nm,1.0s						
MEEK	Meekatharra	34.38	229	P	P	07 09 52.5	-0.5
KLBR	Kellerberrin	37.81	223	P	P	07 10 20.8	-1.2
	comp=Z,30nm,0.9s						
TUWZ	Tuamarina	42.89	150	P	P	07 11 03.7	+0.2
NJ2	Nanjing	46.20	326	*e*P	P	07 11 29.1	-0.7
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
KMI	Kunming	52.96	307	⇑P	P	07 12 22.3	+1.1
KMI				pmax	pmax		
	comp=Z,13nm,0.7s						
CN2	Changchun	52.98	340	*e*P	P	07 12 22.3	+1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	Hu-ho-hao-te	56.64	328	*e*P	P	07 12 47.0	-0.2
HHC				pP	pP	07 13 25.4	-5.5
HHC				sP	sP	07 14 04.3	+12
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,5.2s						
SONM	Songino Array	64.19	331	P	P	07 13 37.8	-0.5
	comp=Z,0.6nm,0.8s,baz=142,slow=7.3,SNR=3.3						
VNDA	Vanda	72.28	177	P	P	07 14 27.7	-0.2
	comp=Z,1.7nm,0.6s,baz=329,slow=6.8,SNR=11						
VNDA	Vanda	72.28	177	P	P	07 14 27.6	-0.2
VNDA				IAmb	IAmb	07 14 58.2	
	comp=Z,11nm,1.6s						
WMQ	Urumqi	72.66	319	*e*P	P	07 14 31.5	+0.7
WMQ				LR	LR		
	comp=N,400nm,29.1s						
WMQ				LR	LR		
	comp=E,630nm,29.1s						
WMQ				LR	LR		
	comp=Z,67nm,25.3s						
IMAR	Indian Mountai	83.05	21	P	P	07 15 26.2	-1.3
RND	Reindeer	83.67	24	P	P	07 15 28.9	-1.9
ILAR	Eielson Array	85.04	23	P	P	07 15 35.0	-2.5
	comp=Z,2.4nm,0.6s,baz=251,slow=4.9,SNR=27						
BMAR	Burnt Mountain	86.96	21	P	P	07 15 46.5	-0.5
EPYK	Eagle Plains	89.55	23	P	P	07 15 58.3	-1.0
EPYK				IAmb	IAmb	07 16 45.2	
	comp=Z,29nm,1.7s						
GERES	GERESS Array B	121.73	326	PKP	PKPdf	07 21 53.4	-1.8
	comp=Z,0.2nm,0.3s,baz=64,slow=2.3,SNR=3.7						
TORD	Torodi Ar. Bea	145.23	285	PKPbc	PKPdf	07 22 37.7	-2.0
	comp=Z,1.1nm,0.8s,baz=74,slow=4.3,SNR=8.7						

DDA ***19*** *07:15:15.4, 38°.18N×26°.71E, h7^{km}±2^{km}, ML2.1*

THE ***19*** *07:15:15.3, 38°.19N×26°.73E, h8^{km}±1^{km}, ML2.2/4, Error ellipse: s-maj=1.5km s-min=0.5km az=134.0*

ISK ***19*** *07:15:15.2, 38°.21N×26°.73E, h8^{km}, ML2.5/10*

ISC 19 07:15:15.5±0.9**, 38°.19N**±0°.02×**26°.72E**±0°.02**, h11^{km}**±7^{km}**, n27, σ0^{s}.55**/44**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEYE	Izmir, Urla-Ze	0.18	287	*i* P	Pg	07 15 19.1	-0.3
ZEYE				IAML		07 15 22.0	
	comp=E,837nm,0.3s						
ZEYE				*i* S	Sg	07 15 22.5	+0.2
ZEYE				IAML		07 15 24.0	
	comp=N,508nm,0.2s						
DGB	zmir	0.18	136	*i* P	Pg	07 15 19.7	+0.2
DGB				*i* S	Sg	07 15 22.3	0.0
URLA	Izmir	0.20	330	*i* P	Pg	07 15 19.6	-0.2
URLA				*i* S	Sg	07 15 23.3	+0.5
URLA				IAML		07 15 24.0	
	comp=E,568nm,0.3s						
URLA	Izmir	0.20	330	PG	Pg	07 15 19.7	-0.2
URLA				SG	Sg	07 15 22.9	0.0
BLCB	Balcova	0.32	51	P	Pg	07 15 21.9	-0.1
BLCB				S	Sg	07 15 26.2	-0.1
BLCB	Balcova	0.32	51	PG	Pg	07 15 21.8	-0.2
BLCB				SG	Sg	07 15 26.3	-0.1
SMG	Samos	0.48	169	P	Pg	07 15 24.9	-0.1
SMG				S	Sb	07 15 32.2	-0.9
	comp=E,382nm,0.3s						
FOCM	Foa	0.53	1	PG	Pg	07 15 25.4	-0.4
FOCM				SG	Sg	07 15 32.9	+0.1
CHOS	Chios island	0.56	291	P	Pg	07 15 26.1	-0.4
CHOS				S	Sg	07 15 34.7	+0.7
	comp=E,240nm,0.4s						
CHOS	Chios island	0.56	291	PG	Pg	07 15 26.2	-0.3
CHOS				SG	Sg	07 15 34.6	+0.6
GCAM	G?zelcaml?	0.63	140	PG	Pb	07 15 28.1	-0.4
GCAM				SG	Sb	07 15 37.3	0.0
ZEDA	zmir-Bergama	0.83	19	*i* P	Pg	07 15 30.8	-0.7
ZEDA				*i* S	Sb	07 15 43.6	+0.6
DDIM	Aydin, Didim	0.83	150	*i* P	Pb	07 15 32.0	+0.1
DDIM				*i* S	Sb	07 15 43.5	+0.3
DDIM				IAML		07 15 47.0	
	comp=E,62nm,0.8s						
DDIM				IAML		07 15 47.0	
	comp=N,99nm,0.4s						
DKL	Dikili	0.90	9	PG	Pg	07 15 32.6	-0.2
AYDB	Zeytinkoy-Aydi	0.95	104	PG	Pb	07 15 33.9	-0.2
AYDN	Tasoluk	1.05	119	*i* P	Pg	07 15 34.8	-1.0
AKHS	Akhisar	1.10	51	*i* P	Pn	07 15 37.4	+0.6
PRK	Paraskevi	1.12	342	P	Pg	07 15 36.0	-1.0
PRK				S	Sb	07 15 52.1	+0.8
	comp=N,130nm,0.5s						
AYVA	Ayvalik	1.12	359	*i* P	Pg	07 15 36.6	-0.5
AYVA				IAML		07 15 56.0	
	comp=N,52nm,0.9s						
SIGR	SIGRI	1.23	327	P	Pb	07 15 37.6	-1.1
SIGR				S	Sb	07 15 54.4	-0.1
	comp=N,58nm,0.4s						
SIGR	SIGRI	1.23	327	PN	Pg	07 15 38.9	-0.2
BUHA	Balikesir, Bur	1.34	12	*i* P	Pn	07 15 40.4	+0.3
BUHA				*i* S	Sg	07 16 00.3	+1.5
BUHA				IAML		07 16 02.0	
	comp=E,37nm,0.3s						
KOCA	Canakkale, Ayv	1.39	341	*i* P	Pg	07 15 41.9	-0.4
KOCA				IAML		07 16 06.0	
	comp=N,31nm,0.6s						
STEP	BALIKESIR_Sava	1.42	33	*i* P	Pn	07 15 41.3	0.0
STEP				*i* S	Sg	07 16 02.1	+0.8
STEP				IAML		07 16 06.0	
	comp=E,28nm,0.5s						
APE	Apeiranthos	1.46	221	PN	Pb	07 15 42.6	-0.1
KULA	Kula-Manisa	1.56	77	PN	Pb	07 15 44.0	-0.4
BOZC	Bozcaada	1.73	343	PN	Pn	07 15 46.0	+0.5

SOME ***19*** *07:24:38.7, 37°.85N×72°.75E, h5^{km}*

IDC ***19*** *07:24:40.8±1.1, 37°.77N×72°.69E, h0^{km}, mb3.9/12, mb1 4.0/18, mb1mx3.8/49, mbtmp3.9/18, ML3.4/6, MS3.0/6, Ms1 3.0/6, ms1mx2.7/55, Error ellipse: s-maj=18.8km s-min=16.9km az=139.0*

NNC ***19*** *07:24:43.6±3.3, 37°.89N×72°.88E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=25.3km s-min=18.8km az=167.0*

ISC 19 07:24:41.7±0.9**, 37°.60N**±0°.07×**72°.51E**±0°.06**, h10^{km}, n48, σ2^{s}.21**/59**, mb3.8**/12**, MS3.0**/3**, 5C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.62	11	P	Pn	07 25 52.6	+0.7
	SNR=12						
UCH	Uchtor	4.87	18	P	Pn	07 25 55.5	+0.1
	SNR=11						
IUG	Iuzhnay	4.92	338	*e*P	Pb	07 26 07.8	-0.2
	1µm,0.9s						
IUG				*e*S	Sb	07 27 11.4	+4.1
	139nm,0.7s						
IUG	Iuzhnay	4.92	338	Pg	Pb	07 26 05.3	-2.7
	1µm,0.9s						
IUG				Lg	Lg	07 27 07.0	
	139nm,0.7s						
EKS2	Erkin-Say	5.15	11	P	Pn	07 26 03.8	+4.9
	SNR=7.8						
MRKS	Merke	5.17	6	*e*P	Pb	07 26 10.1	-2.1
	22nm,0.4s						
MRKS				*e*S	Sb	07 27 15.2	+0.9
	32nm,0.7s						
MRKS	Merke	5.17	6	Pg	Pb	07 26 10.4	-1.8
	22nm,0.6s						
MRKS				Lg	Lg	07 27 15.2	
	32nm,0.7s						
AAK	Ala-Archa	5.25	16	Pn	Pn	07 26 00.9	+0.5
	1.5nm,0.3s,baz=188,slow=8.5,SNR=22						
AAK				Pg	Pb	07 26 11.4	-2.3
	3.4nm,0.3s,baz=203,slow=9.5,SNR=17						
AAK				Sn	Sn	07 27 03.6	+2.5
	1.6nm,0.3s,baz=196,slow=22,SNR=4.6						
AAK				LR	LR	07 27 48.1	
	comp=Z,55nm,18.1s,baz=174,slow=37						
AAK	Ala-Archa	5.25	16	P	Pn	07 26 01.0	+0.5
	SNR=10						

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AAK   Ala-Archa           5.25  16 ⇓Pn   Pn   07 26 00.6 +0.2
      6.4nm,0.6s
AAK                                ⇓Pg   Pb   07 26 11.9  -1.8
      13nm,0.6s
AAK                                ⇑Lg   Lg   07 27 23.8
      39nm,1.1s
KK09  Karatay Array       5.72 345 ⇑Pn   Pn   07 26 06.5  -0.2
      8.4nm,0.6s
KK09                               ⇑Pg   Pb   07 26 22.9 +1.4
      9.4nm,0.5s
KK09                               ⇓Sn   Sn   07 27 15.7 +3.2
      14nm,0.7s
BRLS  Borolday            5.79 340 eP    Pb   07 26 20.5  -2.3
      6.2nm,0.8s
BRLS                               eS    Sb   07 27 32.5 +0.3
      17nm,1.0s
TKM2  Tokmak 2            5.81  23  P    Pn   07 26 08.7 +0.5
      SNR=6.3
TKM2  Tokmak 2            5.81  23 ⇓Pn   Pn   07 26 08.9 +0.7
      5.1nm,0.7s
TKM2                               ⇓Pg   Pb   07 26 23.1  -0.2
      14nm,0.9s
TKM2                               ⇓Lg   Lg   07 27 39.3
      26nm,1.1s
KST   Kastek              6.04  25 eP    Pb   07 26 24.3  -2.8
      8.7nm,0.9s
KST                                eS    Sb   07 27 39.4  -0.1
      32nm,1.1s
KST   Kastek              6.04  25  Pg   Pb   07 26 24.3  -2.8
      8.7nm,0.9s
KST                                 Lg   Lg   07 27 39.4
      32nm,1.1s
SGDS  Sogindy             6.06  15  Pg   Pb   07 26 24.4  -3.0
      16nm,0.6s
SGDS                                Lg   Lg   07 27 40.1
      13nm,1.0s
DGS   Degeres             6.16  23 eP    Pb   07 26 27.2  -1.9
      14nm,0.7s
DGS                                eS    Sb   07 27 45.0 +2.1
      17nm,0.7s
DGS   Degeres             6.16  23  Pg   Pb   07 26 27.2  -1.9
      14nm,0.7s
DGS                                 Lg   Lg   07 27 45.0
      17nm,0.7s
IZV   Izvestkoviy         6.27  29 eP    Pb   07 26 29.7  -1.3
      7.4nm,1.0s
IZV                                eS    Sb   07 27 48.8 +2.7
      30nm,0.7s
IZV   Izvestkoviy         6.27  29  Pg   Pb   07 26 29.7  -1.3
      7.4nm,1.0s
IZV                                 Lg   Lg   07 27 48.8
      30nm,0.7s
KRBS  Karabastau          6.55  21 eP    Pb   07 26 34.1  -1.6
      6.4nm,1.2s
KRBS                               eS    Sb   07 27 56.8 +2.8
      12nm,0.7s
KRBS  Karabastau          6.55  21  Pg   Pb   07 26 34.1  -1.6
      6.4nm,1.2s
KRBS                                Lg   Lg   07 27 56.8
      12nm,0.7s
MDOK  Medeo               6.55  31  Pg   Pb   07 26 37.3 +1.6
      12nm,1.0s
MDOK                                Lg   Lg   07 28 03.4
      30nm,1.3s
GEYT  Alibeck            11.40 276  LR   LR   07 32 59.7
      comp=Z,60nm,19.1s,baz=60,slow=43
MKAR  Makanchi Array     11.70  35  Pn   Pn   07 27 28.7 +0.1
      0.1nm,0.3s,baz=221,slow=15,SNR=2.0
KURBB Kurchatov Arra     13.71  16  Pn   Pn   07 27 52.4  -3.6
      0.2nm,0.3s,baz=205,slow=12,SNR=6.6
KURBB                               Lg   Lg   07 31 43.6
      0.0nm,0.3s,baz=199,slow=29,SNR=5.1
AB31  Akbulak array      14.77 326  Pn   Pn   07 28 10.1  -0.4
      1.5nm,0.5s,baz=133,slow=12,SNR=32
AB31                                Sn   Sn   07 30 55.6 +1.4
      3.3nm,0.8s,baz=138,slow=25,SNR=5.0
BVAR  Borovoye Array     15.49 355  Pn   Pn   07 28 15.7  -4.4
      0.3nm,0.3s,baz=182,slow=18,SNR=16
AKTO  Aktyubinsk         16.49 326  Pn   Pn   07 28 31.3  -1.6
      0.6nm,0.3s,baz=141,slow=8.2,SNR=10
AKTO                                Sn   Sn   07 31 26.2   -10
      0.2nm,0.3s,baz=90,slow=20,SNR=2.2
AKTO  Aktyubinsk         16.49 326 ⇑Pn   Pn   07 28 33.0   0.0
      8.3nm,0.8s
AKTO                               ⇑Sn   Sn   07 31 37.2 +1.3
      3.6nm,1.0s
ZALV  Zalesovo Beam      18.42  24  P    Pn   07 28 54.5  -2.5
      0.5nm,0.3s,baz=211,slow=10,SNR=3.9
WSAR  Wadi Sarin         18.62 224  LR   LR   07 37 09.2
      comp=Z,31nm,18.8s,baz=23,slow=40
ARU   Arti               21.02 338  P    P    07 29 24.6  -0.7
      1.3nm,0.5s,baz=149,slow=7.5,SNR=6.2
ARU                                 LR   LR   07 36 54.7
      comp=Z,46nm,19.4s,baz=48,slow=35
BELG  Belogornoye        22.82 318  P    P    07 29 44.7 +0.1
      10nm,0.8s,baz=124,slow=11,SNR=2.6
SONM  Songino Array      26.72  57  P    P    07 30 21.1  -0.1
      1.5nm,0.8s,baz=262,slow=10,SNR=9.4
AKASG Malin Array Be     33.22 307  LR   LR   07 46 56.7
      comp=Z,33nm,21.1s,baz=345,slow=40
FINES FINESS Array B     37.26 325  P    P    07 31 53.3 +0.1
      1.9nm,0.6s,baz=119,slow=8.8,SNR=9.0
ARCES ARCESS Array B     40.60 337  P    P    07 32 20.8  -0.3
      4.4nm,1.1s,baz=104,slow=7.5,SNR=4.2
NB2   NORSAR Subarra     44.24 322  P    P    07 32 50.3  -0.6
      comp=Z,1.2nm,0.5s,baz=95,slow=7.9
NOA   NORSAR Array B     44.24 322  P    P    07 32 50.9   0.0
      comp=Z,0.3nm,0.4s,baz=107,slow=7.7,SNR=1.7
ESDC  Sonseca Array      58.01 298  P    P    07 34 36.1 +1.4
      comp=Z,0.6nm,0.8s,baz=60,slow=7.1,SNR=6.4
OPO   Ambohidratompo     60.74 208  LR   LR   07 59 04.6
      comp=Z,26nm,19.1s,baz=168,slow=34
TORD  Torodi Ar. Bea     66.94 269  P    P    07 35 36.3 +1.6
      comp=Z,0.5nm,0.6s,baz=39,slow=6.0,SNR=3.5
INK   Inuvik             72.62  10  P    P    07 36 08.5  -0.3
      comp=Z,1.1nm,0.6s,baz=328,slow=6.0,SNR=7.6
ILAR  Eielson Array      73.39  16  P    P    07 36 12.4  -1.0
      comp=Z,0.7nm,0.8s,baz=321,slow=5.8,SNR=7.8
YKA   Yellowknife Ar     80.08   3  P    P    07 36 51.0  -0.2
      comp=Z,0.9nm,0.8s,baz=348,slow=5.2,SNR=13
WRA   Warramunga Arr     81.56 123  P    P    07 37 00.5 +0.7
      comp=Z,0.6nm,0.8s,baz=323,slow=4.4,SNR=2.0
```

NEIC ***19*** *07:40:20.8±1.1, 20°.9N±0°.1×122°.0E±0°.2, h152^{km}±8^{km}, mb4.1/15, Error ellipse: s-maj=21.5km s-min=13.8km az=71.0*

TAP ***19*** *07:40:21.7, 21°.05N×121°.96E, h176^{km}±1^{km}, ML4.9, D*

IDC ***19*** *07:40:26.6±5.2, 20°.90N×122°.18E, h217^{km}±52^{km}, mb3.4/10, mb1 3.5/11, mb1mx3.1/59, mbtmp3.9/11, Error ellipse: s-maj=29.6km s-min=11.6km az=74.0*

ISC 19 07:40:21.8±0.7**, 21°.01N**±0°.04×**121°.99E**±0°.06**, h166**^{km}±5^{km}**,**
n142, σ1^{s}**43**/221**, mb3.8**/17**, 8C-1D, Taiwan region**

```
Code  Station Name         Δ°  AZ°   Phase ID        Time      Res
                                    Op    ISC      h  m  s     ISC
BBP   Basco               0.57 183⇑eP    Pn    07 40 44.7  -0.6
BBP                                eS    Sn    07 41 01.3  -2.1
LAY   Lan-yu              1.10 338 i P   Pn    07 40 50.2 +1.2
      baz=339
LAY                                i S   Sn    07 41 09.5  -0.6
      baz=339
TSEB  Hengchuen, Pin      1.35 311 i P   Pn    07 40 52.5 +1.4
      baz=309
TSEB                               i S   Sn    07 41 14.3 +0.5
      baz=309
TWKBT Hengchun            1.44 310 ⇓P    Pn    07 40 53.0 +1.0
      baz=309
TWKBT                               S    Sn    07 41 14.9  -0.4
      baz=309
TWK1  Hengchun            1.44 310 i P   Pn    07 40 52.5 +0.4
      baz=309
TWK1                               i S   Sn    07 41 14.7  -0.7
      baz=309
SNW   Nanwan              1.49 310  S    Sn    07 41 16.6 +0.3
      baz=308
HEN   Hengchun            1.53 311 eP    Pn    07 40 53.2 +0.3
      baz=310
HEN                                i S   Sn    07 41 16.8  -0.1
      baz=310
SLIU  Shizi               1.64 317 i P   Pn    07 40 54.7 +0.7
      baz=317
SLIU                               i S   Sn    07 41 17.5  -1.4
      baz=317
TAW   Tawu                1.69 323 i P   Pn    07 40 54.8 +0.3
      baz=322
TAW                                i S   Sn    07 41 18.1  -1.7
      baz=322
LDUT  Ludao               1.73 344 eP    Pn    07 40 54.1  -0.8
      baz=344
LDUT                                S    Sn    07 41 19.4  -1.2
      baz=344
EAST  Anshuo              1.73 322 i P   Pn    07 40 55.2 +0.1
      baz=322
EAST                               i S   Sn    07 41 18.9  -1.9
      baz=322
ECL   Taimali             1.85 329 i P   Pn    07 40 55.6  -0.7
      baz=328
ECL                                 S    Sn    07 41 20.1  -2.9
      baz=328
SCZT  Fangliau            1.86 317 i P   Pn    07 40 56.5 +0.1
      baz=316
SCZT                               i S   Sn    07 41 21.2  -2.0
      baz=316
TTN   Taitung             1.91 336  P    Pn    07 40 57.9 +1.1
      baz=336
TTN                                 S    Sn    07 41 24.8 +0.7
      baz=336
SSPT  Xinbi               1.98 318 i P   Pn    07 40 58.7 +1.1
      baz=317
SSPT                               i S   Sn    07 41 24.8  -0.6
      baz=317
TWGBT Beinan              1.99 335  P    Pn    07 40 57.2  -0.6
      baz=335
TWGBT                               S    Sn    07 41 23.0  -2.7
      baz=335
TWG   Pinlang             2.00 335⇑iP    Pn    07 40 57.2  -0.7
      baz=335
TWG                                i S   Sn    07 41 23.5  -2.3
      baz=335
TWG   Pinlang             2.00 335       Pn    07 40 57.2  -0.7
WLCH  Liuqiu              2.01 312 eP    Pn    07 40 58.6 +0.6
      baz=311
MASBT Mashibuluo          2.03 322 ⇑P    Pn    07 40 58.6 +0.3
      baz=321
MASBT                               S    Sn    07 41 24.3  -2.3
      baz=321
LONT  Longtian            2.05 337  P    Pn    07 40 58.1  -0.3
      baz=337
LONT                                S    Sn    07 41 25.3  -1.7
      baz=337
EDH   Donghe              2.06 342 eP    Pn    07 40 58.1  -0.4
      baz=342
EDH                                eS    Sn    07 41 25.8  -1.3
      baz=342
TSMG  Majia               2.10 324 eP    Pn    07 40 59.2 +0.1
      baz=323
TSMG                               eS    Sn    07 41 26.3  -1.7
      baz=323
SSD   Sandimen            2.14 324⇑iP    Pn    07 40 59.6 +0.1
      baz=324
SSD                                i S   Sn    07 41 26.9  -1.9
      baz=324
CHKT  Chengkung           2.16 345  P    Pn    07 40 58.9  -0.8
      baz=345
CHKT                                S    Sn    07 41 27.6  -1.6
      baz=345
KAU   Kaohsiung           2.20 315 eP    Pn    07 41 00.6 +0.4
      baz=314
KAU                                eS    Sn    07 41 28.5  -1.5
      baz=314
FULB  Fuli                2.27 344  P    Pn    07 41 01.4 +0.3
      baz=343
FULB                                S    Sn    07 41 31.1  -0.5
      baz=343
TWM1  Shoushan            2.32 321 i P   Pn    07 41 02.8 +1.2
      baz=321
TWM1                                S    Sn    07 41 30.2  -2.3
      baz=321
SLGT  Liugui              2.34 328 eP    Pn    07 41 02.2 +0.4
      baz=327
SLGT                               eS    Sn    07 41 30.8  -2.1
      baz=327
ELDTW Lidau               2.35 338  P    Pn    07 41 01.8  -0.3
      baz=337
ELDTW                               S    Sn    07 41 32.2  -1.1
      baz=337
EYUL  Yuli                2.41 345 eP    Pn    07 41 03.3 +0.7
      baz=345
TWF1  Yuli                2.42 345  P    Pn    07 41 02.7  -0.1
      baz=345
TWF1                               eS    Sn    07 41 32.6  -2.1
      baz=345
STYH  Taoyuan             2.43 333 eP    Pn    07 41 02.7  -0.1
      baz=332
STYH                               eS    Sn    07 41 33.1  -1.7
      baz=332
SGST  Jiashian            2.44 328 i P   Pn    07 41 02.2  -0.8
      baz=327
SGST                                S    Sn    07 41 32.3  -2.8
      baz=327
YULB  Yu-li               2.46 345  P    Pn    07 41 02.3  -1.0
      baz=345
YULB                                S    Sn    07 41 33.3  -2.2
      baz=345
YULB  Yu-li               2.46 345       Pn    07 41 03.2   0.0
HGSD  Ruisui              2.53 348 eP    Pn    07 41 02.8  -1.2
      baz=348
CHN1  Nanshi              2.56 328 i P   Pn    07 41 04.3  -0.1
      baz=328
CHN1                               i S   Sn    07 41 35.3  -2.2
      baz=328
WTP   Ta-pu               2.57 330 i P   Pn    07 41 04.4  -0.2
      baz=330
WTP                                i S   Sn    07 41 36.1  -1.7
      baz=330
SNST  Tainan City         2.60 328  P    Pn    07 41 04.9   0.0
      baz=327
SNST                                S    Sn    07 41 36.4  -2.1
      baz=327
TAI1  Yung-k'ang          2.60 321  S    Sn    07 41 38.2  -0.1
      baz=321
TPUB  Ta-pu               2.61 331 ⇑P    Pn    07 41 04.7  -0.3
      baz=331
TPUB                                S    Sn    07 41 36.1  -2.5
      baz=331
TPUB  Ta-pu               2.61 331       Pn    07 41 05.0   0.0
SSHA  Shanhua             2.64 324  P    Pn    07 41 05.5 +0.1
      baz=323
SSHA                                S    Sn    07 41 39.0  -0.3
      baz=323
TWK   Hsinying            2.64 328 i P   Pn    07 41 05.0  -0.5
      baz=328
TWK                                i S   Sn    07 41 37.3  -2.2
      baz=328
CHN4  Tsaushan            2.67 331 i P   Pn    07 41 05.3  -0.4
      baz=331
CHN4                               i S   Sn    07 41 38.2  -1.7
      baz=331
ALS   Alishan             2.72 336⇑iP    Pn    07 41 06.2  -0.4
      baz=336
ALS                                i S   Sn    07 41 40.1  -1.5
      baz=336
SCLT  Jiali               2.73 323 i P   Pn    07 41 06.6 +0.2
      baz=322
SCLT                               i S   Sn    07 41 40.3  -0.8
      baz=322
ICHU  Yijhu               2.83 326 i P   Pn    07 41 07.7   0.0
      baz=325
ICHU                               eS    Sn    07 41 40.8  -2.6
      baz=325
ESL   Shilin              2.84 350  P    Pn    07 41 08.0 +0.1
      baz=350
ESL                                 S    Sn    07 41 41.6  -2.1
      baz=350
VWDT  VWDT                2.84 344  P    Pn    07 41 08.5 +0.7
      baz=344
VWDT                                S    Sn    07 41 43.1  -0.6
      baz=344
CHN5  Tsauling            2.85 335  S    Sn    07 41 42.0  -2.0
      baz=334
CHN8  Yiju                2.85 325 i P   Pn    07 41 07.8  -0.1
      baz=324
CHN8                               i S   Sn    07 41 42.6  -1.3
      baz=324
CHY   Chiayi              2.87 330 eP    Pn    07 41 07.6  -0.6
      baz=329
CHY                                 S    Sn    07 41 43.3  -1.0
      baz=329
CHN2  Minshiung           2.88 331  S    Sn    07 41 43.9  -0.6
      baz=330
SSLB  Suanglung           2.93 341  P    Pn    07 41 08.7  -0.3
      baz=341
SSLB                                S    Sn    07 41 44.1  -1.5
      baz=341
SSLB  Suanglung           2.93 341       Pn    07 41 08.9  -0.1
WDLH  Douliu              2.99 334 eP    Pn    07 41 09.2  -0.4
      baz=333
WDLH                               eS    Sn    07 41 44.1  -2.8
      baz=333
OWD   Renai               3.03 346 eP    Pn    07 41 10.5 +0.3
      baz=345
OWD                                eS    Sn    07 41 47.6  -0.4
      baz=345
SMLT  Sun Moon Lake       3.03 341  P    Pn    07 41 09.7  -0.6
      baz=341
SMLT                                S    Sn    07 41 47.4  -0.8
      baz=341
WJS   Zhushan             3.03 338  P    Pn    07 41 10.3 +0.1
      baz=337
WJS                                 S    Sn    07 41 45.9  -2.1
      baz=337
WTK   Tuku                3.05 331 eP    Pn    07 41 09.3  -1.1
      baz=331
WTK                                eS    Sn    07 41 45.6  -2.7
      baz=331
TYC   Yuchr               3.07 340 i P   Pn    07 41 10.2  -0.4
      baz=340
TYC                                 S    Sn    07 41 45.3  -3.4
      baz=340
TWD   Chiawan             3.08 353  S    Sn    07 41 47.9  -1.0
      baz=353
WSF   Szhu                3.09 328  S    Sn    07 41 46.8  -2.3
      baz=328
WNT   Mingjian            3.10 337  P    Pn    07 41 10.9  -0.2
      baz=337
WNT                                 S    Sn    07 41 47.5  -1.9
      baz=337
WDGT  Dungji              3.11 316 ⇑P    Pn    07 41 10.9  -0.3
      baz=315
WDGT                                S    Sn    07 41 47.3  -2.3
      baz=315
CHGB  Renai               3.13 346  P    Pn    07 41 11.6   0.0
      baz=346
CHGB                                S    Sn    07 41 49.3  -1.2
      baz=346
NACB  Ninganchiao         3.17 353  P    Pn    07 41 11.6  -0.3
      baz=353
NACB                                S    Sn    07 41 49.6  -1.4
      baz=353
NACB  Ninganchiao         3.17 353  Pn   Pn    07 41 11.6  -0.3
WHF   Hehuan Shan         3.19 348 i P   Pn    07 41 12.6   0.0
      baz=348
WHF                                eS    Sn    07 41 49.3  -2.9
      baz=348
WCS   Beigang Elemen      3.19 342 eP    Pn    07 41 11.6  -0.6
      baz=342
WCS                                eS    Sn    07 41 50.7  -0.8
      baz=342
APYP  Conner              3.21 193⇑eP    Pn    07 41 12.5   0.0
APYP                               i S   Sn    07 41 50.0  -1.9
ETLH  Xiulin Townshi      3.22 352  P    Pn    07 41 12.4  -0.1
      baz=352
ETLH                               eS    Sn    07 41 50.3  -1.9
      baz=352
VCHM  Qimei               3.23 313  P    Pn    07 41 11.6  -1.0
      baz=312
VCHM                                S    Sn    07 41 50.3  -2.0
      baz=312
WRL   Guolierlin Hig      3.24 333 eP    Pn    07 41 11.6  -1.2
      baz=332
WRL                                eS    Sn    07 41 49.0  -3.6
      baz=332
WWF   Wufeng              3.25 339 eP    Pn    07 41 12.9 +0.1
      baz=338
WWF                                eS    Sn    07 41 51.6  -1.1
      baz=338
WTCT  Ta-ch'eng           3.25 331 eS    Sn    07 41 51.4  -1.4
      baz=331
FUSS  Fushou              3.30 348 eP    Pn    07 41 13.6  -0.2
      baz=348
FUSS                               eS    Sn    07 41 52.2  -2.1
      baz=348
TWT   Tachien             3.32 347  P    Pn    07 41 14.3 +0.4
      baz=347
TDCB  Techi               3.32 347 eP    Pn    07 41 14.0 +0.1
      baz=346
TDCB                               eS    Sn    07 41 52.7  -1.9
      baz=346
WCHH  Zhanghua            3.33 337  P    Pn    07 41 12.9  -1.0
      baz=336
WCHH                                S    Sn    07 41 53.0  -1.6
      baz=336
PHUB  P'eng-hu            3.35 318  P    Pn    07 41 13.3  -0.8
      baz=318
PHUB                                S    Sn    07 41 51.6  -3.5
      baz=318
TCU   Taichung            3.35 339 eS    Sn    07 41 52.7  -2.3
      baz=339
WHP   Taichung City       3.39 344  P    Pn    07 41 14.9 +0.1
      baz=343
WHP                                 S    Sn    07 41 55.4  -0.8
      baz=343
PNG   Penghu              3.40 319  P    Pn    07 41 14.3  -0.5
      baz=318
PNG                                 S    Sn    07 41 53.0  -3.1
      baz=318
NNSB  Datong              3.45 351  P    Pn    07 41 16.0 +0.4
      baz=351
NNSB                                S    Sn    07 41 56.4  -1.1
      baz=351
NNS   Nan Shan            3.46 351  P    Pn    07 41 15.6  -0.1
      baz=351
NNS                                 S    Sn    07 41 56.5  -1.3
      baz=351
TWQ1  Liyutan             3.51 342  P    Pn    07 41 16.4 +0.3
      baz=341
TWQ1                                S    Sn    07 41 57.6  -1.1
      baz=341
WDJ   Dajia District      3.55 340 eS    Sn    07 41 58.9  -0.6
      baz=339
NSY   Sanyi               3.58 342 eP    Pn    07 41 18.1 +1.0
      baz=341
NSY                                eS    Sn    07 41 58.6  -1.5
      baz=341
TWC   Suao                3.59 358  P    Pn    07 41 17.1   0.0
      baz=358
TWC                                eS    Sn    07 41 58.1  -2.3
      baz=358
NDT   Datong Townshi      3.60 353 eP    Pn    07 41 17.5 +0.1
      baz=353
NDS   Dongshan            3.62 356 eP    Pn    07 41 18.3 +0.8
      baz=356
NMLH  Miaoli              3.68 343 eS    Sn    07 42 01.1  -1.5
      baz=342
YHNB  Yeheng              3.69 351 eP    Pn    07 41 19.4 +0.9
      baz=351
YHNB                               eS    Sn    07 42 00.7  -2.2
      baz=351
YHNB  Yeheng              3.69 351       Pn    07 41 19.5 +1.0
NSK   Sanguang            3.70 351  P    Pn    07 41 19.7 +1.0
      baz=351
NSK                                eS    Sn    07 42 01.6  -1.4
      baz=351
NSTT  Nanjuang            3.72 346 eP    Pn    07 41 20.2 +1.4
      baz=346
LIOB  Emei                3.73 346 eP    Pn    07 41 18.9  -0.2
      baz=346
NWLT  Wulai               3.78 353 eP    Pn    07 41 20.2 +0.6
      baz=353
TIPB  Shuangxi            3.95 358 eP    Pn    07 41 22.6 +0.8
      baz=358
TIPB                               eS    Sn    07 42 05.6  -3.1
      baz=358
NWF   Wu-fen Shan         4.05 357 eP    Pn    07 41 24.8 +1.6
      baz=357
YM01  YM01                4.14 355 eP    Pn    07 41 25.3 +1.1
      baz=355
KNM   Kinmen              4.72 317 eP    Pn    07 41 32.3 +0.5
      baz=314
KNM                                eS    Sn    07 42 26.1  -0.5
      baz=314
KNMB  Chin-men Tao        4.78 317 eP    Pn    07 41 32.0  -0.6
      baz=315
KNMB                               eS    Sn    07 42 25.3  -2.8
      baz=315
KNMB  Chin-men Tao        4.78 317  Pn   Pn    07 41 32.2  -0.4
PTMZ  Houxiangcun         4.80 327 eP    Pn    07 41 32.3  -0.6
      baz=326
ZPLA  Ao Xicun            4.88 307 eP    Pn    07 41 35.0 +1.1
      baz=306
ZPLA                               eS    Sn    07 42 27.1  -3.2
      baz=306
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AXDP	Jialang	5.36	317	*e*P	Pn	07 41 39.8	-0.3
	baz=316						
AXDP				*e*S	Sn	07 42 39.2	-2.4
	baz=316						
MATB	Ma-tsu	5.45	340	*e*P	Pn	07 41 40.1	-1.3
	baz=339						
MATB				*e*S	Sn	07 42 39.2	-4.6
	baz=339						
LYJJ	Jianjiangzhen	5.88	340	*e*P	Pn	07 41 45.8	-1.3
	baz=339						
LYJJ				*e*S	Sn	07 42 50.5	-3.5
	baz=339						
KSRS	Korea Array	17.18	16	P	Pn	07 44 12.5	+0.7
	0.4nm,0.3s,baz=200,slow=12,SNR=8.4						
MDJ	Mudanjiang	24.37	13	P	P	07 45 23.2	-1.2
SONM	Songino Array	29.58	338	P	P	07 46 13.0	+2.0
	1.1nm,0.5s,baz=150,slow=9.6,SNR=12						
SONM	Songino Array	29.58	338	IAmb	IAmb	07 46 14.0	
	comp=Z,0.9nm,0.7s						
MK31	Makanchi Array	41.16	318	P	P	07 47 51.2	+1.4
MK31				IAmb	IAmb	07 48 11.2	
	comp=Z,13nm,1.5s						
MKAR	Makanchi Array	41.16	318	P	P	07 47 51.4	+1.6
	comp=Z,0.7nm,0.5s,baz=108,slow=8.7,SNR=14						
WB0	Warramunga Arr	42.30	163	P	P	07 47 57.4	-1.8
WRA	Warramunga Arr	42.46	163	P	P	07 47 58.6	-1.9
	comp=Z,0.7nm,0.3s,baz=344,slow=8.8,SNR=35						
WRA	Warramunga Arr	42.46	163	IAmb	IAmb	07 48 03.9	
	comp=Z,0.4nm,1.2s						
WB2	Warramunga Arr	42.46	163	P	P	07 47 58.7	-1.7
WB2				IAmb	IAmb	07 47 59.3	
	comp=Z,8.4nm,1.1s						
ZALV	Zalesovo Beam	43.32	329	P	P	07 48 08.0	+1.0
	comp=Z,1.0nm,0.3s,baz=112,slow=6.4,SNR=2.2						
ASAR	Alice Springs	45.90	165	P	P	07 48 26.8	-1.0
	comp=Z,0.3nm,0.3s,baz=346,slow=7.9,SNR=8.6						
BBOO	Buckleboo	55.18	166	P	P	07 49 36.3	-0.8
STKA	Stephens Creek	55.84	160	P	P	07 49 41.0	-1.0
	comp=Z,1.5nm,0.6s,baz=345,slow=6.7,SNR=3.8						
STKA	Stephens Creek	55.84	160	IAmb	IAmb	07 50 00.1	
	comp=Z,1.8nm,1.4s						
ABKAR	Akbulak array	56.21	316	P	P	07 49 46.9	+2.6
ABKAR				IAmb	IAmb	07 50 07.0	
	comp=Z,2.1nm,1.2s						
ABKAR	Akbulak array	56.21	316	P	P	07 49 46.2	+1.9
J20K	Nowinta River	68.64	28	P	P	07 51 08.1	+1.5
J20K				IAmb	IAmb	07 51 25.8	
	comp=Z,4.3nm,1.4s						
IMAR	Indian Mountai	68.69	26	P	P	07 51 07.9	+1.0
M19K	Big River Lodg	68.71	30	P	P	07 51 08.3	+1.2
CAST	Castle Rocks	69.62	29	P	P	07 51 13.8	+1.1
I23K	Minto, Yukon-K	70.59	27	P	P	07 51 19.6	+1.1
I23K				IAmb	IAmb	07 51 34.5	
	comp=Z,5.1nm,1.4s						
RND	Reindeer	71.07	28	P	P	07 51 21.5	0.0
RND				IAmb	IAmb	07 51 39.6	
	comp=Z,16nm,1.4s						
ILAR	Eielson Array	71.69	27	P	P	07 51 24.1	-1.0
	comp=Z,0.4nm,0.8s,baz=267,slow=4.8,SNR=6.1						
BMAR	Burnt Mountain	72.11	24	P	P	07 51 29.1	+1.4
M27K	Edge Creek, AK	74.41	29	P	P	07 51 42.0	+0.7
M27K				IAmb	IAmb	07 52 07.5	
	comp=Z,9.6nm,1.4s						
FINES	FINESS Array B	74.56	330	P	P	07 51 41.7	-0.3
	comp=Z,1.6nm,0.8s,baz=24,slow=5.2,SNR=4.0						
INK	Inuvik	75.88	22	P	P	07 51 49.4	0.0
	comp=Z,1.4nm,1.0s,baz=281,slow=4.3,SNR=3.7						
INK	Inuvik	75.88	22	IAmb	IAmb	07 52 00.2	
	comp=Z,2.8nm,1.2s						
YKA	Yellowknife Ar	85.59	23	P	P	07 52 40.8	-0.3
	comp=Z,0.5nm,0.4s,baz=308,slow=4.8,SNR=16						

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*IDC **19** 07:58:29.3±1.3, 4°.67N×119°.78E, h0^{km}, mb3.9/8, mb1 4.0/8, mb1mx3.8/31, mbtmp3.9/8, Error ellipse: s-maj=53.6km s-min=27.9km az=60.0*

ISC 19 07:58:35.0±1.0**, 4°.7N**±0°.2×**119°.8E**±0°.3**, h35**^{km}**, n9, σ0^{s}.99**/9**, mb4.0**/8**, Sulu Archipelago**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	28.38	150	P	P	08 04 25.6	-0.5
	0.6nm,0.8s,baz=333,slow=9.0,SNR=2.2						
ASAR	Alice Springs	31.40	155	PcP	PcP	08 07 48.1	+2.0
	0.2nm,0.6s,baz=346,slow=2.8,SNR=2.0						
SONM	Songino Array	44.46	347	P	P	08 06 42.9	+0.1
	1.4nm,0.8s,baz=165,slow=7.6,SNR=10						
MKAR	Makanchi Array	52.94	328	P	P	08 07 48.0	+0.1
	0.9nm,0.5s,baz=130,slow=8.4,SNR=12						
ZALV	Zalesovo Beam	56.72	336	P	P	08 08 14.8	-0.2
	1.0nm,0.4s,baz=152,slow=6.5,SNR=1.8						
PETK	Petropavlovsk-	57.34	26	P	P	08 08 20.1	+0.6
	1.7nm,0.7s,baz=215,slow=7.0,SNR=1.3						
AKTO	Aktyubinsk	68.64	323	P	P	08 09 34.8	+0.2
	0.5nm,0.4s,baz=100,slow=6.1,SNR=2.2						
BRTR	Keskin Array B	84.06	309	P	P	08 11 02.0	-0.5
	0.8nm,0.6s,baz=116,slow=6.6,SNR=5.5						
ILAR	Eielson Array	87.17	25	P	P	08 11 16.3	-1.0
	0.5nm,0.8s,baz=248,slow=3.8,SNR=2.7						

IDC 19 08:10:52.7±3.6**, 20°.65N**×**147°.01E, h0**^{km}**, mb4.0**/5**, mb1 4.1**/5**, mb1mx3.4**/53**, mbtmp4.0**/5**, MS2.6**/1**, Ms1 2.6**/1**, ms1mx2.1**/43**, Error ellipse: s-maj=142.2km s-min=28.6km az=82.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	17.61	336	LR	LR	08 22 43.3	
	comp=Z,18nm,19.1s,baz=35,slow=40						
WRA	Warramunga Arr	42.20	198	P	P	08 18 47.5	-0.2
	0.3nm,0.3s,baz=21,slow=8.4,SNR=11						
MKAR	Makanchi Array	58.03	313	P	P	08 20 47.2	-0.4
	0.4nm,0.5s,baz=93,slow=7.9,SNR=6.5						
KURBB	Kurchatov Arra	60.72	317	P	P	08 21 06.1	0.0
	0.4nm,0.2s,baz=96,slow=7.5,SNR=4.5						
BVAR	Borovoye Array	65.78	320	P	P	08 21 39.7	+0.1
	0.5nm,0.3s,baz=79,slow=7.5,SNR=6.0						
FINES	FINESS Array B	85.64	336	P	P	08 23 33.3	+0.2
	4.0nm,1.0s,baz=24,slow=4.7,SNR=4.1						

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*NAO **19** 08:29:04.1±1.1, 76°.11N×24°.18E, h8^{km}±10^{km}, ML3.4*
*IEPN **19** 08:29:05.0, 76°.17N×24°.90E, h10^{km}*
*BER **19** 08:29:06.3±3.6, 76°.15N×25°.04E, h21^{km}±9^{km}, ML2.9, MW3.3, ML3.4(NAO), Confirmed Earthquake*
*KOLA **19** 08:29:10.6, 75°.73N×25°.44E, h0^{km}, ML2.6, Error ellipse: s-maj=20.2km s-min=19.3km az=80.0, Barentz Sea*

ISC 19 08:29:04.0±1.0**, 76°.09N**±0°.03×**25°.23E**±0°.04**, h31**^{km}±9^{km}**, n38, σ2^{s}.20**/80**, 3C, Barents Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPEN	Hopen	0.43	353	Pg	Pb	08 29 13.3	0.0
HOPEN				Lg	Lg	08 29 18.8	
HOPEN	Hopen	0.43	353	⇑*i*P	Pb	08 29 13.3	0.0
HOPEN				*e*S	Sb	08 29 18.8	-1.0
HOPEN				IAML		08 29 19.2	
	comp=Z,1µm,0.4s						
HOPEN	Hopen	0.43	353	⇑*i*P	Pb	08 29 13.3	0.0
HOPEN				*i* S	Sb	08 29 18.8	-1.0
BJO1	Bjornoya	2.25	228	Pn	Pn	08 29 38.8	-0.2
BJO1				Sn	Sn	08 30 03.5	-2.1
BJO1				Lg	Lg	08 30 11.5	
BJO1	Bjornoya	2.25	228	*e*P	Pb	08 29 42.3	-1.6
BJO1				*e*Pg	Pn	08 29 45.2	+6.3
BJO1				*e*S	Sb	08 30 07.7	-3.5
BJO1				*e*Sg	Sn	08 30 13.8	+8.2
BJO1				IAML		08 30 15.4	
	comp=Z,204nm,0.7s						
BJO1	Bjornoya	2.25	228	*e*P	Pb	08 29 45.1	+1.2
BJO1				*e*S	Sb	08 30 12.4	+1.2
HSPB	Hornsund (broa	2.45	297	Pn	Pn	08 29 42.0	+0.4
HSPB				Sn	Sn	08 30 06.9	-3.5
HSPB				Lg	Lg	08 30 15.2	
HSPB	Hornsund (broa	2.45	297	*e*P	Pn	08 29 42.2	+0.6
HSPB				*e*Pg	Pb	08 29 47.5	+0.3
HSPB				*e*S	Sn	08 30 09.3	-1.1
HSPB				*e*Sg	Sb	08 30 15.7	-1.2
HSPB				IAML		08 30 19.8	
	comp=Z,132nm,0.4s						
SPA0	Spitsbergen Ar	2.89	321	Pn	Pn	08 29 48.4	+0.6
	baz=140,slow=12						
SPA0				Sn	Sn	08 30 19.5	-1.9
	baz=140,slow=22						
SPA0				Lg	Lg	08 30 28.9	
	baz=131,slow=56						
SPA0	Spitsbergen Ar	2.89	321	Pn	Pn	08 29 48.4	+0.6
	baz=140,slow=12						
SPA0				Sn	Sn	08 30 19.5	-1.9
	baz=140,slow=22						
SPA0				Sg	Sb	08 30 28.9	-0.7
	baz=131,slow=56						
SPA0				IAML		08 30 43.4	
	comp=Z,306nm,0.5s						
SPA0	Spitsbergen Ar	2.89	321	⇑*i*P	Pn	08 29 48.5	+0.7
SPA0				*e*S	Sn	08 30 20.5	-0.9
BRBA	Barentsburg A	3.17	314	Pn	Pn	08 29 51.9	+0.3
BRBA				Sn	Sn	08 30 26.9	-1.3
BRBA				Lg	Lg	08 30 37.6	
BRBA	Barentsburg A	3.17	314	Pn	Pn	08 29 51.9	+0.3
BRBA				Sn	Sn	08 30 26.9	-1.3
BRBA				Sg	Sb	08 30 37.6	+0.1
BRBB	Barentsburg B	3.19	314	Pn	Pn	08 29 52.8	+0.9
BRBB				Sn	Sn	08 30 27.9	-0.8
BRBB				Lg	Lg	08 30 38.5	
BRBB	Barentsburg B	3.19	314	*e*P	Pn	08 29 52.7	+0.9
BRBB				*e*S	Sn	08 30 27.4	-1.3
BRBB				*e*Sg	Sb	08 30 39.1	+1.0
KBS	Kingsbay	4.05	321	Pn	Pn	08 30 03.5	-0.2
KBS				Sn	Sn	08 30 49.4	-0.5
KBS				Lg	Lg	08 31 05.2	
KBS	Kingsbay	4.05	321	*e*P	Pn	08 30 03.1	-0.6
KBS				*e*S	Sn	08 30 46.1	-3.8
KBS				*e*Sg	Sb	08 31 03.9	+1.1
KBS				IAML		08 31 14.4	
	comp=Z,227nm,0.5s						
KBS	Kingsbay	4.05	321	*e*P	Pn	08 30 03.2	-0.5
KBS				*e*S	Sn	08 30 46.9	-2.9
HAMF	Hammerfest	5.49	185	Pn	Pn	08 30 25.6	+2.1
HAMF				Sn	Sn	08 31 23.8	-1.6
HAMF	Hammerfest	5.49	185	*e*P	Pn	08 30 25.8	+2.3
HAMF				*e*S	Sn	08 31 23.6	-1.8
HAMF				IAML		08 32 00.3	
	comp=Z,11nm,0.5s						
KEV	Kevo	6.39	174	Pn	Pn	08 30 38.8	+3.1
KEV				Sn	Sn	08 31 48.6	+1.1
KEV	Kevo	6.39	174	Pn	Pn	08 30 38.8	+3.1
KEV				Sn	Sn	08 31 48.6	+1.1
ZFI	Zemlya Franca-	6.48	33	*e*P	Pn	08 30 41.1	+4.2
ZFI				*e*S	Sn	08 31 50.7	+1.2
	comp=Z,61nm,2.4s						
ZFI2	Zemlya Franca-	6.48	33	*e*P	Pn	08 30 40.9	+4.0
ZFI2				*e*S	Sn	08 31 49.8	+0.2
	comp=Z,72nm,3.5s						
ARA0	ARCESS Array S	6.59	179	Pn	Pn	08 30 41.1	+2.6
	baz=0.8,slow=11						
ARA0				Sn	Sn	08 31 52.0	-0.4
	baz=5.0,slow=22						
ARA0	ARCESS Array S	6.59	179	Pn	Pn	08 30 41.1	+2.6
	baz=0.8,slow=11						
ARA0				Sn	Sn	08 31 52.0	-0.4
	baz=5.0,slow=22						
ARCES	ARCESS Array B	6.59	179	P	Pn	08 30 42.0	+3.5
ARCES				S	Sn	08 31 50.5	-1.9
JETT	Jettan, Norway	6.71	195	Pn	Pn	08 30 42.3	+2.0
JETT				Sn	Sn	08 31 51.7	-3.9
KTK1	Kautokeino	7.14	186	*e*P	Pn	08 30 49.3	+3.3
KTK1				*e*S	Sn	08 32 05.0	-0.9
KTK1				IAML		08 32 17.2	
	comp=Z,4.9nm,0.7s						
KIF	Kilpisjarvi	7.24	193	Pn	Pn	08 30 50.1	+2.7
KIF				Sn	Sn	08 32 05.2	-3.2
KIF	Kilpisjarvi	7.24	193	Pn	Pn	08 30 50.1	+2.7
KIF				Sn	Sn	08 32 05.2	-3.2
TERR	Teriberka	7.51	152	P	Pn	08 30 54.2	+3.1
TERR				S	Sn	08 32 12.7	-2.3
HEF	Hetta	7.73	184	Pn	Pn	08 30 56.1	+1.9
HEF				Sn	Sn	08 32 19.6	-1.0
HEF	Hetta	7.73	184	Pn	Pn	08 30 56.1	+1.9
HEF				Sn	Sn	08 32 19.6	-1.0
APA0	Apatity Array	8.85	160	Pn	Pn	08 31 11.8	+2.3
	baz=8.6,slow=12						
APA0				Sn	Sn	08 32 45.0	-2.9
	baz=6.3,slow=22						
APA0	Apatity Array	8.85	160	Pn	Pn	08 31 11.8	+2.3
	baz=8.6,slow=12						
APA0				Sn	Sn	08 32 45.0	-2.9
	baz=6.3,slow=22						
FIA0	FINESS Array S	14.72	178	P	Pn	08 32 30.1	+0.5
	baz=354,slow=14						
FIA0	FINESS Array S	14.72	178	P	Pn	08 32 30.1	+0.5
	baz=354,slow=14						

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*NEIC **19** 08:34:53.5±1.1, 37°.76N±0°.01×121°.99W±0°.02, h16^{km}±1^{km}, Error ellipse: s-maj=2.4km s-min=1.6km az=107.0*

NCEDC 19 08:34:52.9±1.0**, 37°.78N**±0°.01×**121°.97W**±0°.01**, h8**^{km}±2^{km}**, ML3.1**/23**, ML2.6**/34(NEIC)**, Error ellipse: s-maj=1.7km s-min=1.3km az=215.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCM	Mills College	0.17	272		Pg	08 34 57.1	+0.8
BDM	Black Diamond	0.20	24		Pg	08 34 57.9	+1.0
WENL	Wente Vineyard	0.23	132		Pg	08 34 58.9	+1.4
BKS	Berkeley--Byer	0.23	296		Pg	08 34 58.6	+1.0
VAK	Adit at Lawren	0.24	295		Pg	08 34 58.8	+1.0
BL67	Building 67, L	0.25	294		Pg	08 34 58.7	+0.8
BL88	Building 88, L	0.25	294		Pg	08 34 58.9	+1.0
BRK	Berkeley--Havi	0.25	293		Pg	08 34 58.8	+0.8
RFSB	Richmond Field	0.32	296		Pb	08 35 00.1	-0.8
J061	Lakeshore Driv	0.42	264		Pg	08 35 01.8	+0.6
JRSC	Jasper Ridge	0.43	210		Pb	08 35 02.0	-0.7
MHC	Mount Hamilton	0.50	149		Pb	08 35 03.8	-0.3
COSM	Mount Oso	0.54	119		Pb	08 35 04.3	-0.4
CVS	Carmenet Viney	0.69	326		Pb	08 35 06.7	-0.4
GHS	Gilroy Hot Spr	0.80	148		Pb	08 35 09.0	+0.1
MCCM	Marconi Confer	0.81	297		Pg	08 35 08.7	+0.2
MCCM	Marconi Confer	0.81	297	IAML		08 35 23.4	
	comp=E,386nm,0.6s						
MCCM				IAML		08 35 25.3	
	comp=N,330nm,0.8s						
FARB	Farallon Islan	0.82	265		Pg	08 35 08.9	+0.2
HCOM	Corn Cob Canyo	0.91	167		Pb	08 35 10.7	-0.2
HFEM	San Felipe	0.91	150		Pg	08 35 10.5	+0.1
PACP	Pacheco Peak	0.94	144		Pg	08 35 11.2	+0.2
HSFM	Saint Francis	1.03	159		Pn	08 35 13.7	+0.1
SAO	San Andreas Ge	1.09	157		Pg	08 35 13.4	-0.5
MOBB	Monterey Bay O	1.09	188		Pn	08 35 14.3	0.0
GCRM	Castle Rock Sp	1.16	330		Pg	08 35 14.5	-0.6
GDXM	Geysers	1.22	328		Pn	08 35 16.3	0.0
SCZ	Santa Cruz	1.26	159		Pn	08 35 15.1	-1.6
CMB	Columbia Colle	1.28	78		Pn	08 35 15.7	-1.3
CMB	Columbia Colle	1.28	78	IAML		08 35 34.8	
	comp=N,96nm,0.5s						
BJCM	Johnson Can.	1.31	159		Pn	08 35 15.9	-1.5
HAST	Hastings Reser	1.42	166		Pn	08 35 17.9	-1.1
BSMM	Soledad Missio	1.46	163		Pn	08 35 18.8	-0.7
ORV	Oroville	1.81	12		Pn	08 35 23.4	-1.0
PMPB	Monarch Peak	1.81	149		Pn	08 35 24.0	-0.4
PMPB				IAML		08 36 07.8	
	comp=E,113nm,1.0s						
PMPB				IAML		08 36 15.2	
	comp=N,90nm,1.4s						
EMB	Emerald Bay	1.89	50		Pn	08 35 25.6	-0.1
PAPM	Alder Peak	1.92	165		Pn	08 35 25.3	-0.6
KCC	Kaiser Creek	2.15	101		Pn	08 35 29.5	+0.4
PNTR	Pine Nut	2.28	54		Pn	08 35 31.8	+0.8
RAMR	Ramage Ranch	2.31	157		Pn	08 35 30.9	-0.3
MDCM	Deadman Creek	2.32	91		Pn	08 35 32.5	+0.9
YERR	Yerington	2.46	60		Pn	08 35 34.1	+0.7
PAGB	Antelope Grade	2.46	145		Pn	08 35 34.1	+0.8
PAGB				IAML		08 36 49.3	
	comp=N,25nm,2.0s						
PAGB				IAML		08 36 54.3	
	comp=E,21nm,3.5s						
THIS	South End of C	2.48	145		Pg	08 35 39.5	-0.8
HELL	Mitchell Peak,	2.59	114		Pn	08 35 35.0	-0.1
LHV	Little Huntoon	2.78	79		Pn	08 35 38.3	+0.7
LHV				IAML		08 36 32.4	
	comp=E,35nm,0.8s						
LHV				IAML		08 36 40.2	
	comp=N,31nm,0.8s						
PAHR	Pah Rah Range	2.79	46		Pn	08 35 38.4	+0.4
PAHR				IAML		08 36 33.3	
	comp=E,15nm,3.9s						
RYN	Ryan	2.84	72		Pn	08 35 39.4	+0.7
RYN				IAML		08 36 26.8	
	comp=N,16nm,0.5s						
RYN				IAML		08 36 31.0	
	comp=E,14nm,0.6s						
NVAR	Mina Array Bea	2.96	76		Pn	08 35 40.7	+0.3
NV11	Mina Array Sit	3.08	77		Pn	08 35 42.1	+0.2
NV11				IAML		08 36 54.2	
	comp=E,14nm,4.3s						
KVN	Kaiserville	3.29	66		Pn	08 35 44.3	-0.6
KVN				IAML		08 36 46.5	
	comp=N,11nm,1.8s						
LCH	Last Change Ra	3.48	98		Pn	08 35 46.2	-1.2
LCH				IAML		08 36 44.5	
	comp=E,13nm,1.0s						
LCH				IAML		08 37 03.8	
	comp=N,10.0nm,4.6s						
ISA	Isabella, Lake	3.51	126		Pn	08 35 47.8	+0.1
ISA				IAML		08 36 47.4	
	comp=E,11nm,0.8s						
ISA				IAML		08 36 51.4	
	comp=N,8.8nm,1.3s						

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*IDC **19** 08:38:38.0±1.1, 35°.43N×25°.69E, h0^{km}, mb3.7/2, mb1 3.6/7, mb1mx3.4/53, mbtmp3.5/7, ML3.5/5, MS3.3/1, Ms1 3.3/1, ms1mx2.3/57, Error ellipse: s-maj=24.3km s-min=8.6km az=166.0*
*ATH **19** 08:38:38.9, 35°.71N×25°.43E, h26^{km}±2^{km}, ML3.5/8, Error ellipse: s-maj=2.6km s-min=0.9km az=98.0*
*ISK **19** 08:38:39.3, 35°.72N×25°.47E, h9^{km}, ML3.5/19*
*THE **19** 08:38:39.4, 35°.72N×25°.46E, h6^{km}±1^{km}, ML3.4/15, Error ellipse: s-maj=1.2km s-min=0.4km az=103.0*
*DDA **19** 08:38:42.8, 35°.68N×25°.70E, h7^{km}±3^{km}, ML2.9*

ISC 19 08:38:39.5±0.9**, 35°.71N**±0°.02×**25°.46E**±0°.02**, h17**^{km}±7^{km}**, n94, σ1^{s}.42**/125**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NPS	Neapolis	0.46	165	P	Pg	08 38 48.6	-0.3
NPS				S	Sb	08 38 56.3	+0.6
	7µm,0.4s						
NPS	Neapolis	0.46	165	P	Pg	08 38 48.6	-0.3
NPS				S	Sb	08 38 55.7	0.0
NPS				AML	AML	08 38 57.4	
	comp=N,10918µm,0.2s						
NPS				AML	AML	08 38 57.6	
	comp=E,17116µm,0.5s						
HRKL	Herakleio	0.49	217	P	Pg	08 38 49.5	0.0
HRKL				S	Sb	08 38 56.9	+0.3
	comp=E,7µm,0.4s						
HRKL	Herakleio	0.49	217	PG	Pg	08 38 49.4	0.0
HRKL				SG	Sb	08 38 57.5	+0.9
IACM	Heraklion	0.51	219	P	Pg	08 38 49.7	-0.1
IACM				S	Sb	08 38 58.4	+1.2
IACM	Heraklion	0.51	219	P	Pg	08 38 49.6	-0.2
KSTL	Kastelli Herak	0.51	219	P	Pg	08 38 49.5	-0.3
KSTL				S	Sg	08 38 57.1	+0.3
	comp=E,1µm,0.3s						
IDI	Anoyia	0.63	228	Pg	Pg	08 38 51.3	-0.7
	comp=E,95nm,0.3s,baz=61,slow=18,SNR=225						
IDI				Lg	Lg	08 39 00.0	
	comp=E,413nm,0.3s,baz=131,slow=20,SNR=29						
IDI				LR	LR	08 39 19.7	
	comp=E,92nm,20.3s,baz=189,slow=63						
IDI	Anoyia	0.63	228	P	Pg	08 38 51.2	-0.7
IDI				S	Sg	08 39 00.3	0.0
	comp=E,5µm,0.3s						
IDI	Anoyia	0.63	228	P	Pg	08 38 51.2	-0.7
IDI				S	Sg	08 38 59.9	-0.5
IDI				AML	AML	08 39 02.6	
	comp=E,9766µm,0.3s						
IDI				AML	AML	08 39 02.9	
	comp=N,8871µm,0.2s						
THR6	Thira Island,	0.65	355	P	Pg	08 38 51.7	-0.7
THR9	Santorini-Faro	0.65	353	P	Pg	08 38 52.1	-0.4
THR9	Santorini-Faro	0.65	353	P	Pg	08 38 51.9	-0.6
SANT	Santorini	0.66	360	P	Pg	08 38 51.9	-0.7
SANT				S	Sb	08 39 02.0	+0.4
	comp=N,4µm,0.3s						
SANT	Santorini	0.66	360	P	Pg	08 38 52.0	-0.7
SANT	Santorini	0.66	360	PG	Pg	08 38 51.8	-0.8
SANT				SG	Sb	08 39 02.4	+0.8
STAX	Taxiarchis Har	0.69	356	P	Pg	08 38 52.2	-1.0
STAX				S	Sb	08 39 03.3	+0.9
STAX	Taxiarchis Har	0.69	356	P	Pg	08 38 52.2	-1.0
SNT5	Nea Kammeni, S	0.70	356	P	Pg	08 38 53.3	0.0
SNT5	Nea Kammeni, S	0.70	356	P	Pg	08 38 53.2	0.0
THR8	Santorini-Mono	0.70	1	P	Pg	08 38 51.8	-1.5
THR3	Thira Island,	0.70	356	P	Pg	08 38 52.2	-1.1
THR5	Thira Island,	0.71	353	P	Pg	08 38 52.7	-0.9
THR5	Thira Island,	0.71	353	P	Pg	08 38 52.8	-0.7
STIA	Sitia Lasithi	0.72	134	P	Pb	08 38 53.9	+0.3
STIA				S	Sb	08 39 04.0	+0.8
FRMA	Ierapetra Chan	0.73	162	P	Pb	08 38 54.2	+0.5
FRMA				S	Sb	08 39 05.3	+2.0
	comp=N,4µm,0.4s						
THR2	Thira island,	0.74	358	P	Pg	08 38 53.1	-0.9
CMBO	Columbo, Santo	0.76	357	P	Pg	08 38 54.2	-0.3
CMBO				S	Sb	08 39 05.0	+0.5
	comp=N,3µm,0.5s						
CMBO	Columbo, Santo	0.76	357	P	Pg	08 38 54.1	-0.3
CMBO				S	Sg	08 39 04.7	+0.1
CMBO				AML	AML	08 39 11.9	
	comp=E,9420µm,0.6s						
CMBO				AML	AML	08 39 11.9	
	comp=N,7178µm,0.5s						
TMBK	Timbaki Herakl	0.85	222	P	Pb	08 38 56.3	+0.5
TMBK				S	Sb	08 39 08.4	+1.4
	comp=N,4µm,0.4s						
ZKR	Zakros	0.85	134	P	Pb	08 38 56.2	+0.3
ZKR				S	Sb	08 39 08.0	+1.0
	comp=N,3µm,0.4s						
ZKR	Zakros	0.85	134	P	Pb	08 38 56.3	+0.3
ZKR				S	Sb	08 39 08.0	+1.0
ZKR				AML	AML	08 39 10.6	
	comp=N,3688µm,0.4s						
ZKR				AML	AML	08 39 12.3	
	comp=E,8238µm,0.4s						
ZKR	Zakros	0.85	134	PG	Pb	08 38 56.2	+0.3
ZKR				SG	Sb	08 39 08.1	+1.0
PRNS	Prines Rethymn	0.85	247	P	Pb	08 38 56.6	+0.7
PRNS				S	Sb	08 39 09.5	+2.4
	comp=E,1µm,0.4s						
VAM	Vamos	1.07	254	P	Pg	08 38 59.0	-1.3
VAM				S	Sg	08 39 14.2	-0.2
	comp=E,3µm,0.2s						
VAM	Vamos	1.07	254	P	Pg	08 38 59.1	-1.2
VAM				AML	AML	08 39 16.1	
	comp=E,5942µm,0.2s						
VAM				AML	AML	08 39 19.9	
	comp=N,5476µm,0.3s						
IMMV	Iera Moni Meta	1.23	259	P	Pb	08 39 02.0	-0.4
IMMV				S	Sn	08 39 19.7	+1.5
	comp=N,2µm,0.3s						
IMMV	Iera Moni Meta	1.23	259	P	Pb	08 39 02.0	-0.4
IMMV				AML	AML	08 39 22.6	
	comp=N,4031µm,0.3s						
IMMV				AML	AML	08 39 22.9	
	comp=E,3846µm,0.3s						
IMMV	Iera Moni Meta	1.23	259	PN	Pb	08 39 02.4	0.0
MHLO	Agia Marina, M	1.30	319	P	Pn	08 39 02.8	-0.1
MHLO				S	Sb	08 39 20.6	+0.6
	comp=E,5µm,0.4s						
MHLO	Agia Marina, M	1.30	319	P	Pn	08 39 03.2	+0.3
APE	Apeiranthos	1.36	2	P	Pn	08 39 02.9	-0.9
APE				S	Sb	08 39 22.3	+0.6
	comp=E,422nm,0.5s						
APE	Apeiranthos	1.36	2	PN	Pn	08 39 03.3	-0.5
RODP	Rodopos	1.40	264	P	Pn	08 39 04.2	0.0
RODP	Rodopos	1.40	264	PN	Pn	08 39 05.2	+1.0
GVDS	Gavdos	1.42	233	P	Pn	08 39 05.3	+0.8
GVDS	Gavdos	1.42	233	PN	Pg	08 39 06.8	0.0
GVD	Gavdhos	1.42	233	P	Pn	08 39 04.5	0.0
GVD	Gavdhos	1.42	233	PN	Pg	08 39 06.5	-0.4
KNDR	Palaiochora Ch	1.52	252	P	Pn	08 39 07.2	+1.2
KNDR	Palaiochora Ch	1.52	252	PN	Pg	08 39 08.7	-0.2
KOSK	Kos Island	1.61	49	PN	Pb	08 39 08.7	-0.1
NIS1	Nisyros Isl.	1.65	57	PN	Pn	08 39 09.2	+1.4
ANKY	Antikythira Is	1.76	276	P	Pn	08 39 08.8	-0.5
ANKY				S	Sn	08 39 32.0	+0.7
	comp=E,570nm,0.5s						
ANKY	Antikythira Is	1.76	276	P	Pn	08 39 09.0	-0.3
ANKY				AML	AML	08 39 41.3	

	comp=E,1267µm,0.7s						
ANKY				AML	AML	08 39 42.7	
	comp=N,1027µm,0.4s						
DAT	Datca	1.99	59	i P	Pb	08 39 15.7	+0.3
DAT	Datca	1.99	59	PN	Pn	08 39 13.9	+1.4
BODT	Bodrum	2.01	47	PN	Pn	08 39 14.2	+1.5
KTHA	Kythira Island	2.02	286	P	Pn	08 39 13.0	+0.1
KTHA	Kythira Island	2.02	286	P	Pn	08 39 12.9	0.0
KTHA				AML	AML	08 39 49.1	
	comp=E,1337µm,0.5s						
KTHA				AML	AML	08 39 50.4	
	comp=N,960µm,0.5s						
KTHR	Kythira	2.07	286	P	Pn	08 39 13.9	+0.4
ARG	Arkhangelos	2.22	76	PN	Pn	08 39 17.0	+1.5
DDIM	Aydin, Didim	2.26	39	i P	Pb	08 39 19.6	-0.2
DDIM				IAML		08 40 11.0	
	comp=N,116nm,1.4s						
DDIM				IAML		08 40 14.0	
	comp=E,81nm,0.6s						
VLI	Veliai	2.28	297	P	Pn	08 39 16.4	0.0
GCAM	G?zelcaml?	2.45	35	i P	Pg	08 39 27.5	+1.0
GCAM	G?zelcaml?	2.45	35	PN	Pn	08 39 20.5	+1.9
TURN	Turunc	2.49	64	i P	Pn	08 39 20.8	+1.6
TURN				i S	Sn	08 39 50.2	+1.1
TURN	Turunc	2.49	64	PN	Pn	08 39 21.4	+2.2
KRND	KRANIDI	2.50	313	P	Pn	08 39 19.3	-0.1
DGB	zmir	2.60	26	i P	Pn	08 39 23.7	+2.9
DION	Dionisos Attik	2.67	333	P	Pn	08 39 22.6	+0.9
YER	Yerkesik	2.68	57	PN	Pn	08 39 24.3	+2.3
CHOS	Chios island	2.72	10	PN	Pn	08 39 23.6	+1.1
AYDN	Tasoluk	2.75	44	i P	Pn	08 39 26.0	+3.0
MULA	Mugla, Merkez-	2.77	55	i P	Pb	08 39 27.8	-0.9
MULA				i S	Sn	08 39 58.7	+2.3
URLA	Izmir	2.80	19	PN	Pn	08 39 25.4	+1.8
FETY	Fethiye	3.07	71	i P	Pn	08 39 29.3	+2.0
FETY				i S	Sn	08 40 03.9	+0.2
FETY				IAML		08 40 08.0	
	comp=N,33nm,0.8s						
FETY				IAML		08 40 13.0	
	comp=E,38nm,0.4s						
ITM	Ithomi	3.21	298	PN	Pn	08 39 31.1	+1.9
TAVA	DENIZLI_Tavas	3.29	57	i P	Pb	08 39 35.1	-2.4
TAVA				i S	Sb	08 40 14.6	-2.5
CAEL	Denizli, Camel	3.42	64	i P	Pn	08 39 34.6	+2.5
CAEL				i S	Sn	08 40 17.3	+5.0
CAEL				IAML		08 40 28.0	
	comp=E,88nm,1.1s						
CAEL				IAML		08 40 28.0	
	comp=N,73nm,0.7s						
KLV	Kalavryta, Ach	3.53	312	P	Pn	08 39 33.7	0.0
BRTR	Keskin Array B	7.62	56	Pn	Pn	08 40 32.8	+2.9
	comp=N,0.1nm,0.3s,baz=234,slow=14,SNR=3.8						
MMAI	Mount Meron Ar	8.65	105	Pn	Pn	08 40 42.2	-1.7
	comp=N,0.9nm,0.3s,baz=315,slow=14,SNR=1.4						
MMAI				Sn	Sn	08 42 17.0	-4.0
	comp=N,0.9nm,0.3s,baz=306,slow=25,SNR=2.1						
EIL	Elat	10.01	124	Pn	Pn	08 40 59.5	-3.0
	comp=N,0.2nm,0.3s,baz=238,slow=9.5,SNR=1.4						
EIL				Sn	Sn	08 42 49.0	-5.4
	comp=N,0.7nm,0.3s,baz=293,slow=6.4,SNR=4.5						
ASF	Jabal al Asfar	10.13	107	Sn	Sn	08 42 53.5	-4.0
	comp=N,0.3nm,0.3s,baz=27,slow=15,SNR=2.4						
AKASG	Malin Array Be	15.23	9	Pn	P	08 42 18.5	-0.1
	comp=N,0.8nm,0.3s,baz=199,slow=10,SNR=5.5						
CKRC	Cesky Krumlov	15.46	331	eP	P	08 42 23.5	+2.3
KRLC	Kraliky	15.69	339	eP	P	08 42 23.5	-0.2
GERES	GERESS Array B	15.72	330	Pn	P	08 42 24.3	+0.1
	comp=N,0.2nm,0.3s,baz=144,slow=12,SNR=14						
KHC	Kasperske Hory	16.00	331	eP	P	08 42 28.6	+1.4
DPC	Dobruska-Polom	16.07	338	eP	P	08 42 28.4	+0.5
TORD	Torodi Ar. Bea	31.03	230	P	P	08 44 56.7	+0.2
	comp=N,0.6nm,0.5s,baz=33,slow=8.7,SNR=6.3						
MKAR	Makanchi Array	43.27	57	P	P	08 46 40.4	+0.3
	comp=N,0.3nm,0.3s,baz=264,slow=8.7,SNR=8.7						
NRIK	Noril'sk	47.28	25	LR	LR	09 10 53.6	
	comp=N,34nm,18.4s,baz=34,slow=41						

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*IDC **19** 08:42:22.4±0.8, 4°.26S×129°.39E, h0^{km}, mb4.0/7, mb1 4.2/11, mb1mx3.9/41, mbtmp4.0/11, ML3.7/4, MS3.1/5, Ms1 3.1/5, ms1mx2.7/44, Error ellipse: s-maj=37.4km s-min=11.8km az=76.0*

*NEIC **19** 08:42:24.6±2.6, 4°.21S±0°.06×129°.51E±0°.09, h10^{km}±1^{km}, mb4.5/12, Error ellipse: s-maj=16.5km s-min=8.7km az=117.0*

*DJA **19** 08:42:25.1±1.6, 4°S±7°×12°9E±°, h16^{km}±11^{km}, M4.0/6, MLv4.0/6*

ISC 19 08:42:27.4±0.5**, 4°.21S**±0°.05×**129°.43E**±0°.05**, h36^{km}, n50,** σ**1^s.39**/54**, mb4.2**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.57	123	P	Pn	08 42 35.6	-3.5
MSAI	Masohi	0.99	330	P	Pn	08 42 42.0	-2.8
MSAI				S	Sn	08 42 55.5	-2.1
AAI	Ambon	1.34	293	P	Pn	08 42 48.2	-1.3
AAI				S	Sn	08 43 04.4	-1.7
FAKI	Fak Fak	3.10	66	P	Pn	08 43 12.7	-1.1
FAKI				S	Sn	08 43 49.9	+0.3
FAKI	Fak Fak	3.10	66		Pn	08 43 12.6	-1.2
FAKI	Fak Fak	3.10	66	P	Pn	08 43 12.7	-1.1
SIJI	Sorong	3.80	29	Pn	Pn	08 43 22.9	-0.5
	5.9nm,0.3s,baz=235,slow=16,SNR=25						
SIJI				Sn	Sn	08 44 04.2	-2.6
	9.2nm,0.3s,baz=266,slow=9.8,SNR=5.6						
SIJI				LR	LR	08 45 12.1	
	comp=Z,193nm,20.6s,baz=228,slow=44						
SWI	Sorong	3.80	29	P	Pn	08 43 25.1	+1.7
LBMI	Labuha	4.04	332	P	Pn	08 43 42.8	+16
SANI	Sanana	4.05	302	P	Pn	08 43 27.3	+0.4
SANI	Sanana	4.05	302	P	Pn	08 43 27.6	+0.7
SOEI	Soe	7.52	223	Pn	Pn	08 44 13.8	-0.8
DRS	Darwin Rock St	8.29	170	P	Pn	08 44 26.7	+1.5
MTN	Manton Dam	8.74	169	Pn	Pn	08 44 31.5	+0.2
MTN	Manton Dam	8.74	169	P	Pn	08 44 31.5	+0.2
KDU	Kakadu	8.94	161	P	Pn	08 44 33.1	-1.0
KNRA	Kununurra	11.41	183	Pn	Pn	08 45 07.5	-0.4
KNRA	Kununurra	11.41	183	P	Pn	08 45 09.1	+1.2
FITZ	Fitzroy Crossi	14.29	195	Pn	Pn	08 45 46.9	-0.4
	0.1nm,0.3s,baz=21,slow=11,SNR=1.9						
FITZ				LR	LR	08 51 41.0	
	comp=Z,38nm,19.0s,baz=4.5,slow=39						
WRA	Warramunga Arr	16.35	163	Pn	Pn	08 46 11.5	-2.8
	0.4nm,0.3s,baz=348,slow=13,SNR=17						
WRA				LR	LR	08 52 46.2	
	comp=Z,100nm,19.7s,baz=350,slow=38						
WRA	Warramunga Arr	16.35	163		Pn	08 46 11.6	-2.8
WB2	Warramunga Arr	16.35	163		Pn	08 46 11.8	-2.6
WB2				IAmb	IAmb	08 46 18.3	
	comp=Z,32nm,1.4s						
COEN	Coen	16.66	126	Pn	Pn	08 46 15.6	-2.7
COEN				IAmb	IAmb	08 46 32.0	
	comp=Z,53nm,1.6s						
COEN	Coen	16.66	126	P	Pn	08 46 17.5	-0.8
QIS	Mount Isa	19.03	149	P	P	08 46 45.2	-1.2
PSA00	Pilbara Seismi	19.60	208	P	Pn	08 46 53.9	-0.4
PSA00				IAmb	IAmb	08 46 55.4	
	comp=Z,77nm,1.5s						
PSA00	Pilbara Seismi	19.60	208	P	Pn	08 46 53.7	-0.5
PSA00				IAmb	IAmb	08 46 54.7	
	comp=Z,22nm,1.2s						
PSA00	Pilbara Seismi	19.60	208	P	Pn	08 46 54.4	+0.2
AS31	Alice Springs	19.82	168	P	Pn	08 46 56.1	-0.7
ASAR	Alice Springs	19.82	168	P	P	08 46 55.2	+0.2
	comp=Z,0.6nm,0.3s,baz=354,slow=12,SNR=67						
ASAR				S	Sn	08 50 38.8	+0.1
	baz=352,slow=20,SNR=5.0						
ASAR				LR	LR	08 54 40.7	
	comp=Z,70nm,20.5s,baz=12,slow=37						
ASAR	Alice Springs	19.82	168	P	P	08 46 55.5	+0.4
WRKA	Warakurna	20.73	183	P	P	08 47 05.9	+0.9
CTAO	Charters Tower	22.75	135	P	P	08 47 25.6	-1.1
CTAO				IAmb	IAmb	08 47 37.1	
	comp=Z,20nm,1.3s						
OOD	Oodnadatta	24.20	166	P	P	08 47 40.8	+0.1
MULG	Mulgathing	26.30	171	P	P	08 47 59.0	-0.7
STKA	Stephens Creek	29.80	159	P	P	08 48 30.7	-0.3
	comp=Z,2.2nm,0.9s,baz=8.8,slow=8.1,SNR=3.6						
STKA				LR	LR	09 00 17.1	
	comp=Z,78nm,19.8s,baz=22,slow=36						
CMAR	Chiang Mai Arr	37.55	308	P	P	08 49 39.2	+0.7
	comp=Z,0.8nm,0.4s,baz=135,slow=7.2,SNR=5.9						
JMM	Marumori	43.18	13	P	P	08 50 25.4	+0.7
SONM	Songino Array	55.64	341	P	P	08 52 01.0	+1.1
	comp=Z,0.4nm,0.6s,baz=152,slow=6.5,SNR=3.3						
MK31	Makanchi Array	65.60	326	P	P	08 53 08.4	+0.7
MKAR	Makanchi Array	65.60	326	P	P	08 53 07.6	-0.1
	comp=Z,1.6nm,0.6s,baz=112,slow=7.5,SNR=15						
ZALV	Zalesovo Beam	68.85	334	P	P	08 53 28.4	+0.3
	comp=Z,1.1nm,0.3s,baz=99,slow=8.0,SNR=1.9						
SEY	Seymchan	69.19	11	P	P	08 53 30.8	+0.8
	comp=Z,1.4nm,0.6s,baz=185,slow=4.7,SNR=3.7						
VNDA	Vanda	75.26	173	P	P	08 54 08.6	+2.4
VNDA				IAmb	IAmb	08 56 43.5	
	comp=Z,8.0nm,1.4s						
ABKAR	Akbulak array	79.99	321	P	P	08 54 32.8	-0.2
QSPA	South Pole Qui	85.74	180	P	P	08 55 02.1	-0.6
RSO	Redoubt South	87.66	29	P	P	08 55 12.7	+0.5
ILAR	Eielson Array	91.08	25	P	P	08 55 29.8	+1.8
	comp=Z,0.5nm,0.7s,baz=242,slow=1.9,SNR=2.5						
BMAR	Burnt Mountain	92.32	23	P	P	08 55 34.4	+0.7
TORD	Torodi Ar. Bea	127.67	283	PKP	PKPdf	09 01 29.9	-0.1
	comp=Z,0.3nm,0.6s,baz=75,slow=1.8,SNR=2.1						

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*TUL **19** 08:58:12.5±0.3, 36°.46N±0°.02×98°.76W±0°.02, h4^{km}±4^{km}, ML2.8, mb_Lg2.6/22(NEIC), Error ellipse: s-maj=2.9km s-min=2.0km az=146.0*

NEIC 19 08:58:13.3±0.3**, 36°.46N**±0°.02×**98°.75W**±0°.02**, h2^{km}**±8^{km}**, Error ellipse: s-maj=3.4km s-min=1.2km az=150.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.22	247		Pg	08 58 17.1	-0.3
U32A				Sg	Sg	08 58 20.5	+0.3
OK035	E0210 Rd and N	0.25	8	Pg	Pg	08 58 18.0	-0.1
OK032	Salt Plains WL	0.55	52		Pg	08 58 23.5	-0.4
OK032				IAmb_Lg		08 58 30.5	
	comp=Z,47nm,0.9s						
OK032				Sg	Sg	08 58 31.4	+0.3
CROK	Carrier	0.62	86	Pg	Pg	08 58 24.8	-0.4
CROK				Sg	Sg	08 58 33.5	+0.2
KAN14	Manchester OK	0.81	52		Pg	08 58 28.0	-0.8
KAN14				Sg	Sg	08 58 39.3	+0.1
GC02	Grant County #	0.82	61		Pg	08 58 28.2	-0.7
GC02				Sg	Sg	08 58 39.6	0.0
KAN10	Anthony SW Sta	0.84	39		Pg	08 58 28.7	-0.8
KAN16	Harper SW Stat	0.94	36	Pg	Pg	08 58 30.5	-0.8
KAN05	Bluff City Nor	0.96	47		Pg	08 58 30.9	-0.8
KAN17	Caldwell West	0.98	54		Pg	08 58 31.2	-0.9
KAN08	Anthony NE Sta	0.99	39	Pg	Pg	08 58 31.2	-1.0
KAN01	Argonia South	1.05	49		Pg	08 58 32.6	-0.9
KAN06	Argonia West S	1.06	42		Pg	08 58 32.5	-1.2
KAN09	Caldwell North	1.13	53		Pg	08 58 33.9	-1.1
KAN13	South Haven SW	1.16	61		Pg	08 58 34.3	-1.3
BCOK	Bluff Creek, N	1.23	131		Pg	08 58 35.5	-1.3
OK029	Liberty Lake	1.25	122		Pg	08 58 35.7	-1.5
BLOK	Blackwell	1.27	76		Pg	08 58 36.3	-1.4
OK025	Westminster Rd	1.45	127		Pn	08 58 39.2	-1.3
OKCSW	OKLAHOMA CITY	1.50	134		Pn	08 58 40.3	-0.9
OK031	S. Brethren Rd	1.63	108		Pn	08 58 42.1	-0.9
QUOK	Quay	1.68	99	Pn	Pn	08 58 43.1	-0.6
OK030	Cody Creek RV	1.68	108	Pn	Pn	08 58 43.1	-0.7
OK034	N. Norfolk Rd.	1.71	105	Pn	Pn	08 58 43.5	-0.7
T35A	Sooner Cattle	1.86	75	Pn	Pn	08 58 46.1	-0.1
R32A	Long Quarter,	1.96	1	Pn	Pn	08 58 47.4	-0.2
X34A	Smith Ranch, M	2.00	158	IAmb_Lg		08 59 19.4	
	comp=Z,38nm,0.7s						
W35A	Tecumseh	2.01	130	Pn	Pn	08 58 48.5	+0.2
TUL1	Leonard	2.46	102	IAmb_Lg		08 59 31.4	
	comp=Z,13nm,0.9s						
CBKS	Cedar Bluff	2.47	342	IAmb_Lg		08 59 31.2	
	comp=Z,23nm,0.7s						
HHAR	Hobbs	3.89	91	IAmb_Lg		09 00 20.9	
	comp=Z,10.0nm,0.8s						
ABTX	Abilene, Hawle	3.90	191	IAmb_Lg		09 00 18.4	
	comp=Z,8.2nm,0.7s						
S39A	Bolivar	4.51	73	IAmb_Lg		09 00 39.7	
	comp=Z,15nm,0.8s						
R40A	Maddies Statio	5.48	69	IAmb_Lg		09 01 06.0	
	comp=Z,8.8nm,1.0s						
435B	Jarrell	5.75	170	IAmb_Lg		09 01 23.4	
	comp=Z,8.7nm,0.8s						
JCT	Junction City	6.03	189	IAmb_Lg		09 01 29.7	
	comp=Z,13nm,1.0s						
K31A	O'Neill	6.15	360	IAmb_Lg		09 01 41.8	
	comp=Z,15nm,0.7s						
PBMO	Poplar Bluff	6.70	85	IAmb_Lg		09 01 44.2	
	comp=Z,14nm,0.7s						

KMA 19 09:00:22.6±0.1**, 37°.02N**×**129°.53E, h0^{km}, Error ellipse: s-maj=2.1km s-min=0.7km az=269.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UJN	ULJIN	0.10	251	P	Pg	09 00 24.9	+0.4
	SNR=34						
IMWB	Imwonan-gil	0.26	325	P	Pg	09 00 27.8	+0.2
	SNR=56						
KSULJ	Uljin	0.34	197	P	Pg	09 00 29.7	+0.7
	SNR=116						
YODB	Yeongdeok	0.50	191	P	Pg	09 00 32.8	+0.6
	SNR=10						
EUSB	Uiseong	0.95	226	P	Pb	09 00 42.0	+0.1
	SNR=18						
EUSB	Uiseong	0.95	226	P	Pb	09 00 42.0	+0.1
	SNR=18						
KSDGY	Daegwallycong	0.95	315	P	Pg	09 00 40.5	-0.4
	SNR=27						
KSDGY	Daegwallycong	0.95	315	P	Pg	09 00 40.5	-0.4
	SNR=27						
KSEUS	ULSEONG	0.95	225	P	Pb	09 00 41.5	-0.5
	SNR=12						
KSEUS	ULSEONG	0.95	225	P	Pb	09 00 41.5	-0.5
	SNR=12						
KSJMJ	Jumunjin	1.05	325	P	Pg	09 00 42.4	-0.4
	SNR=19						
KSJMJ	Jumunjin	1.05	325	P	Pg	09 00 42.4	-0.4
	SNR=19						
JECH	Jecheon	1.07	278	P	Pb	09 00 44.0	-0.1
	SNR=8.1						
JECH	Jecheon	1.07	278	P	Pb	09 00 44.0	-0.1
	SNR=8.1						
KSMGY	Mungyeong	1.23	253	P	Pg	09 00 45.9	-0.3
	SNR=7.6						
KSMGY	Mungyeong	1.23	253	P	Pg	09 00 45.9	-0.3
	SNR=7.6						
KSWJU	Wonju	1.24	288	P	Pg	09 00 46.0	-0.3
	SNR=15						
KSWJU	Wonju	1.24	288	P	Pg	09 00 46.0	-0.3
	SNR=15						
KSCHJ	Chungju	1.25	264	P	Pg	09 00 46.1	-0.6
	SNR=9.3						
KSCHJ	Chungju	1.25	264	P	Pg	09 00 46.1	-0.6
	SNR=9.3						
KSDAG	Daegu	1.35	202	P	Pg	09 00 48.1	-0.4
	SNR=14						
KSDAG	Daegu	1.35	202	P	Pg	09 00 48.1	-0.4
	SNR=14						
KSBON	Boeun	1.48	250	P	Pn	09 00 50.0	-0.5
	SNR=8.2						
KSBON	Boeun	1.48	250	P	Pn	09 00 50.0	-0.5
	SNR=8.2						
KSSKC	Sokcho	1.50	328	P	Pn	09 00 50.6	-0.1
	SNR=6.2						
KSSKC	Sokcho	1.50	328	P	Pn	09 00 50.6	-0.1
	SNR=6.2						
KSCHC	Chuncheon	1.56	299	P	Pn	09 00 52.0	+0.4
	SNR=12						
KSCHC	Chuncheon	1.56	299	P	Pn	09 00 52.0	+0.4
	SNR=12						
SEHB	SEOHWA	1.60	321	P	Pb	09 00 52.7	-0.4
	SNR=33						
SEHB	SEOHWA	1.60	321	P	Pb	09 00 52.7	-0.4
	SNR=33						

KMA 19 09:15:21.9±0.1**, 37°.67N**×**129°.23E, h3^{km}, Error ellipse: s-maj=1.4km s-min=0.6km az=236.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKEB	Okgye-meyeon	0.20	257	P	Pg	09 15 26.3	+0.5
	SNR=6.6						
OKEB	Okgye-meyeon	0.20	257	P	Pg	09 15 26.3	+0.5
	SNR=6.6						
KSJMJ	Jumunjin	0.43	300	P	Pg	09 15 30.2	+0.1
	SNR=24						
KSJMJ	Jumunjin	0.43	300	P	Pg	09 15 30.2	+0.1
	SNR=24						
KSDGY	Daegwallycong	0.44	273	P	Pg	09 15 30.6	+0.3
	SNR=16						
KSDGY	Daegwallycong	0.44	273	P	Pg	09 15 30.6	+0.3
	SNR=16						
IMWB	Imwonan-gil	0.44	168	P	Pg	09 15 30.4	+0.1
	SNR=29						
IMWB	Imwonan-gil	0.44	168	P	Pg	09 15 30.4	+0.1
	SNR=29						
KSTBA	Taebaek	0.59	202	P	Pg	09 15 33.5	+0.3
	SNR=22						
KSTBA	Taebaek	0.59	202	P	Pg	09 15 33.5	+0.3
	SNR=22						
CHYB	Chungyang	0.76	199	P	Pg	09 15 36.6	+0.1
	SNR=19						
CHYB	Chungyang	0.76	199	P	Pg	09 15 36.6	+0.1
	SNR=19						
KSYOW	Yeongwol	0.79	231	P	Pg	09 15 36.9	-0.1
	SNR=10						
KSYOW	Yeongwol	0.79	231	P	Pg	09 15 36.9	-0.1
	SNR=10						
JECH	Jecheon	0.96	239	P	Pg	09 15 40.1	-0.3
	SNR=12						
JECH	Jecheon	0.96	239	P	Pg	09 15 40.1	-0.3
	SNR=12						
KSWJU	Wonju	0.97	255	P	Pg	09 15 40.4	0.0
	SNR=40						
KSWJU	Wonju	0.97	255	P	Pg	09 15 40.4	0.0
	SNR=40						
KSULJ	Uljin	0.97	171	P	Pg	09 15 40.2	-0.3
	SNR=38						
KSULJ	Uljin	0.97	171	P	Pg	09 15 40.2	-0.3
	SNR=38						
SEHB	SEOHWA	0.98	308	P	Pg	09 15 40.3	-0.3
	SNR=38						
SEHB	SEOHWA	0.98	308	P	Pg	09 15 40.3	-0.3
	SNR=38						
KSCHC	Chuncheon	1.12	276	P	Pg	09 15 43.3	-0.2
	SNR=50						
KSCHC	Chuncheon	1.12	276	P	Pg	09 15 43.3	-0.2
	SNR=50						
KSCHJ	Chungju	1.27	232	P	Pg	09 15 46.2	-0.1
	SNR=13						
KSCHJ	Chungju	1.27	232	P	Pg	09 15 46.2	-0.1
	SNR=13						
KSMGY	Mungyeong	1.37	223	P	Pn	09 15 47.6	-0.3
	SNR=14						
KSMGY	Mungyeong	1.37	223	P	Pn	09 15 47.6	-0.3
	SNR=14						
EUSB	Uiseong	1.38	198	P	Pn	09 15 48.0	0.0
	SNR=11						
EUSB	Uiseong	1.38	198	P	Pn	09 15 48.0	0.0
	SNR=11						
KSCWO	Cheorwon	1.42	288	P	Pb	09 15 48.7	-0.2
	SNR=12						
KSCWO	Cheorwon	1.42	288	P	Pb	09 15 48.7	-0.2
	SNR=12						
KSPHA	Pohang	1.48	175	P	Pb	09 15 50.0	+0.1
	SNR=5.7						
KSPHA	Pohang	1.48	175	P	Pb	09 15 50.0	+0.1
	SNR=5.7						
KSBON	Boeun	1.63	225	P	Pn	09 15 50.7	-0.7
	SNR=20						
OKCB	Cheongsan-myeo	1.75	221	P	Pb	09 15 54.7	+0.1
	SNR=5.5						
KSDAG	Daegu	1.91	188	P	Pb	09 15 57.0	-0.4
	SNR=8.6						

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*IDC **19** 09:18:00.4±0.9, 27°.43N×102°.45E, h0^{km}, mb3.8/9, mb1 4.0/9, mb1mx3.6/57, mbtmp3.9/9, MS3.6/6, Ms1 3.6/6, ms1mx3.1/64, Error ellipse: s-maj=37.4km s-min=17.3km az=58.0*

ISC 19 09:18:06.1±0.8**, 27°.5N**±0°.1×**102°.6E**±0°.2**, h35^{km}, n13,** σ**0^s.56**/10**, mb3.8**/8**, MS3.6**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.62	201	Pn	Pn	09 20 22.5	+0.4
	2.3nm,0.3s,baz=11,slow=12,SNR=8.5						
CMAR				LR	LR	09 24 34.0	
	comp=Z,126nm,19.8s,baz=19,slow=42						
SONM	Songino Array	20.50	7	P	P	09 22 41.4	+0.3
	0.6nm,0.4s,baz=192,slow=12,SNR=8.3						
SONM				LR	LR	09 31 31.6	
	comp=Z,183nm,18.5s,baz=140,slow=39						
JOW	Kunigami	22.87	86	LR	LR	09 32 23.0	
	comp=Z,83nm,18.3s,baz=238,slow=38						
KSRS	Korea Array	23.51	59	P	P	09 23 13.0	+0.1
	1.6nm,0.8s,baz=243,slow=10,SNR=8.6						
MKAR	Makanchi Array	25.00	326	P	P	09 23 26.3	-0.2
	1.1nm,0.7s,baz=135,slow=11,SNR=7.3						
KURBB	Kurchatov Arra	29.43	328	P	P	09 24 06.2	0.0
	1.4nm,1.0s,baz=134,slow=9.2,SNR=8.7						
GEYT	Alibeck	38.49	297	LR	LR	09 44 00.8	
	comp=Z,94nm,20.2s,baz=320,slow=41						
KIRV	Kirov	47.89	326	LR	LR	09 49 23.9	
	comp=Z,64nm,18.0s,baz=91,slow=39						
WRA	Warramunga Arr	56.33	143	P	P	09 27 43.2	-0.5
	1.1nm,0.6s,baz=325,slow=6.7,SNR=18						
ASAR	Alice Springs	59.20	146	P	P	09 28 03.3	-0.5
	0.7nm,0.6s,baz=329,slow=6.9,SNR=9.5						
FINES	FINESS Array B	59.81	327	P	P	09 28 07.2	-0.3
	4.2nm,1.0s,baz=92,slow=4.5,SNR=6.2						
ARCES	ARCESS Array B	59.99	337	P	P	09 28 08.0	-0.7
	3.1nm,0.9s,baz=91,slow=7.8,SNR=14						
ARCES				LR	LR	09 55 54.4	
	comp=Z,80nm,18.1s,baz=20,slow=38						
YKA	Yellowknife Ar	85.50	16	P	P	09 30 40.9	+0.8
	0.4nm,1.0s,baz=325,slow=4.9,SNR=3.8						

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*NEIC **19** 09:18:21.7±1.8, 15°.84S±0°.08×72°.66W±0°.09, h158^{km}±2^{km}, mb4.2/23, Error ellipse: s-maj=13.9km s-min=10.1km az=56.0*

*VAO **19** 09:18:21.3±0.6, 15°.62S×72°.72W, h97^{km}, mb4.4*

*IDC **19** 09:18:23.8±1.7, 15°.75S×72°.56W, h120^{km}±19^{km}, mb3.7/3, mb1 3.9/7, mb1mx3.5/27, mbtmp4.3/7, MS2.5/2, Ms1 2.5/2, ms1mx2.4/28, Error ellipse: s-maj=25.5km s-min=16.4km az=55.0*

*GUC **19** 09:18:24.6±0.7, 16°.19S×72°.84W, h121^{km}±6^{km}, ML4.3*

ISC 19 09:18:17.9±0.5**, 15°.82S**±0°.06×**72°.95W**±0°.07**, h100^{km}, n95,** σ**2^s.43**/91**, mb4.1**/11**, 2D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	3.56	136	eP	Pn	09 19 13.9	+2.8
AP01				i S	Sn	09 19 51.0	-1.3
AP01	Chacalluta	3.56	136		Pn	09 19 14.1	+3.0
PB12	IPOC Station P	3.74	138	⇓ iP	Pn	09 19 15.7	+2.1
PB12				i S	Sn	09 19 54.0	-2.9
PB12				IAML		09 19 58.1	
	comp=N,633nm,0.4s						
PB12	IPOC Station P	3.74	138	Pn	Pn	09 19 15.8	+2.1
PB16	IPOC Station P	4.14	128	⇓ iP	Pn	09 19 22.3	+2.9
PB16	IPOC Station P	4.14	128		Pn	09 19 22.4	+3.0
LPAZ	La Paz	4.66	96	P	Pn	09 19 29.3	+2.8
	baz=309,slow=19						
PB11	IPOC Station P	5.02	142	Pn	Pn	09 19 32.6	+1.6
TA02	Huaiquique	5.17	149		Pn	09 19 35.4	+2.4
NNA	Nana	5.37	315	P	Pn	09 19 44.5	+8.8
	comp=N,5.4nm,0.3s,baz=156,slow=9.3,SNR=21						
NNA				S	Sn	09 20 43.0	+6.8
	comp=N,18nm,0.3s,baz=248,slow=23,SNR=8.7						
NNA				LR	LR	09 22 04.9	
	comp=N,36nm,19.0s,baz=160,slow=40						
NNA	Nana	5.37	315	Pn	Pn	09 19 43.6	+8.0
TA01	Diego Aracena	5.40	151		Pn	09 19 38.6	+2.5
PB08	IPOC Station P	5.61	140		Pn	09 19 41.2	+1.9
PATCX	Punta Patache	5.64	152		Pn	09 19 41.5	+2.2
PB01	IPOC Station P	6.15	148		Pn	09 19 48.1	+1.9
PB07	IPOC Station P	6.55	154	Pn	Pn	09 19 54.1	+2.2
PB09	IPOC Station P	6.90	150		Pn	09 19 58.6	+2.0
PB04	IPOC Station P	7.00	158		Pn	09 19 59.5	+1.6
PB06	IPOC Station P	7.55	156		Pn	09 20 06.4	+0.9
LVC	Limon Verde	7.76	151	P	Pn	09 20 11.4	+3.1
	comp=N,13nm,0.3s,baz=338,slow=11,SNR=191						
LVC				S	Sn	09 21 33.7	-1.1
	comp=N,10nm,0.3s,baz=194,slow=18,SNR=12						
LVC	Limon Verde	7.76	151	eP	Pn	09 20 11.5	+3.1
LVC	Limon Verde	7.76	151	Pn	Pn	09 20 10.4	+2.0
PB10	IPOC Station P	7.98	164	Pn	Pn	09 20 13.0	+2.0
PB15	IPOC Station P	8.05	156		Pn	09 20 14.0	+1.8

CZSB	Cruzeiro do Su	8.05	2	eP	Pn	09 20 12.9	+0.8
CZSB	Cruzeiro do Su	8.05	2	Pn	Pn	09 20 13.2	+1.1
ETMB	Extrema	8.88	49	eP	Pn	09 20 22.5	-0.9
ETMB	Extrema	8.88	49	Pn	Pn	09 20 22.4	-0.9
ATAH	Atahualpa	10.15	328	P	Pn	09 20 48.6	+7.6
	comp=N,0.3nm,0.3s,baz=117,slow=6.8,SNR=2.7						
ATAH				S	Sn	09 22 43.8	+11
	comp=N,0.4nm,0.3s,baz=49,slow=12,SNR=2.0						
SIV	San Ignacio	11.43	92	P	Pn	09 20 55.0	-3.0
	comp=N,1.0nm,0.3s,baz=283,slow=8.9,SNR=14						
SIV				LR	LR	09 25 30.2	
	comp=N,28nm,19.3s,baz=199,slow=39						
AC02	Maricunga	11.52	163		Pn	09 21 03.4	+3.7
VILB	Vilhena	12.68	79	eP	Pn	09 21 14.6	-0.1
VILB	Vilhena	12.68	79		Pn	09 21 11.2	-3.5
PTLB	Pontes e Lacer	13.31	90	eP	Pn	09 21 24.0	+1.0
PTLB	Pontes e Lacer	13.31	90		Pn	09 21 20.2	-2.8
PDRB	Porto dos Gac	16.31	77	eP	Pn	09 22 01.0	-0.1
SALV	Santo Antonio	16.61	93	eP	P	09 22 06.5	+1.0
CLDB	Colider	17.40	76	eP	P	09 22 14.0	-0.3
PP1B	Ponte de Pedra	17.40	98	eP	P	09 22 15.3	+0.9
MACA	Manacapuru-AM	17.44	45	eP	P	09 22 14.0	-0.8
MACA	Manacapuru-AM	17.44	45	P	P	09 22 11.0	-3.8
CPUP	Villa Florida	17.92	128	eP	Pn	09 22 22.9	+2.2
H03N1	Juan Fernandez	18.35	196	T	T	09 40 58.2	
	baz=21,slow=73,SNR=92						
H03N2	Juan Fernandez	18.35	196	T	T	09 41 04.9	
	baz=21,slow=73,SNR=94						
H03N3	Juan Fernandez	18.37	196	T	T	09 40 57.1	
	baz=21,slow=73,SNR=91						
NPGB	Novo Progresso	19.31	65	eP	P	09 22 35.4	+0.1
PTGA	Pitinga	19.73	42	P	P	09 22 40.5	+0.8
	comp=N,2.4nm,0.3s,baz=207,slow=13,SNR=50						
ML02	Panimavida	19.91	176	P	P	09 22 41.2	-0.3
ML02				IAmb	IAmb	09 22 52.9	
	comp=Z,17nm,1.1s						
ARAG	Araguaiana, MT	20.35	93	eP	P	09 22 46.9	+0.4
ITQB	Itaqui	20.38	135	eP	Pn	09 22 50.3	+0.7
ITTB	Itaituba	20.40	58	eP	P	09 22 47.1	+0.1
PCMB	Pacaembu	21.33	109	eP	P	09 22 59.5	+2.5
SNDB	Serra Nova Dou	21.37	82	eP	P	09 22 57.4	0.0
ITRB	Iturama	21.86	104	eP	P	09 23 04.5	+1.9
BOAV	Boa Vista	21.88	35	eP	P	09 23 04.0	+1.2
PAYG	Puerto Ayora	22.78	310	P	P	09 23 11.6	-0.6
CPSB	Cacapava Do Su	23.03	132	eP	P	09 23 17.5	+3.0
MALB	Monte Alegre	23.07	55	eP	P	09 23 16.2	+1.2
FRTB	Fartura	23.25	112	eP	P	09 23 18.6	+1.9
PLTB	Pedras Altas	23.71	135	eP	P	09 23 24.9	+4.1
BB19B	Bebedouro	23.74	106	eP	P	09 23 23.5	+2.3
IPMB	Ipameri, GO	23.77	99	eP	P	09 23 22.4	+0.9
BDFB	Brasilia	24.00	93	P	P	09 23 24.5	+0.8
	comp=Z,2.7nm,0.4s,baz=260,slow=12,SNR=5.8						
BDFB	Brasilia	24.00	93	P	P	09 23 18.6	-5.0
BDFB				IAmb	IAmb	09 23 25.9	
	comp=Z,3.6nm,0.5s						
PEXB	Peixe	24.20	84	eP	P	09 23 26.7	+1.4
MOTC	Monteria, Cord	24.59	354	P	P	09 23 25.7	-3.1
PRPB	Parauapebas	24.63	70	eP	P	09 23 30.4	+1.1
PLCA	Paso Flores	24.91	176	P	P	09 23 36.6	+5.0
	comp=Z,1.7nm,0.8s,baz=352,slow=14,SNR=4.4						
PLCA	Paso Flores	24.91	176	eP	P	09 23 36.9	+5.3
PLCA	Paso Flores	24.91	176	P	P	09 23 29.3	-2.3
PLCA				IAmb	IAmb	09 23 58.9	
	comp=Z,6.9nm,1.4s						
MCPB	Macapa, AP	25.72	55	eP	P	09 23 40.7	+1.6
SRBA	San Rafael, Bu	26.94	337	P	P	09 23 50.5	+0.3
SRBA				IAmb	IAmb	09 23 50.7	
	comp=Z,7.8nm,1.1s						
URIC	Uribia, Colomb	27.36	2	P	P	09 23 51.5	-2.3
JANB	Januaria	27.61	92	eP	P	09 23 57.6	+1.4
CMC01	Camacan, BA	32.19	94	eP	P	09 24 39.3	+2.7
NBPN	Ponto Novo - B	32.23	85	eP	P	09 24 39.1	+2.1
NBIT	Itapeh - BA	32.31	93	eP	P	09 24 40.4	+2.7
553A	Crawfordville	47.06	346	P	P	09 26 36.9	-2.6
OK030	Cody Creek RV	56.20	337	P	P	09 27 47.2	-0.3
OK030				IAmb	IAmb	09 28 04.0	
	comp=Z,4.3nm,0.7s						
HSIG		57.75	320	P	P	09 27 59.9	+1.3
WES	Weston	57.94	1	P	P	09 27 58.2	-1.3
214A	Organ Pipe Nat	60.96	321	P	P	09 28 20.5	-0.2
214A				IAmb	IAmb	09 28 20.7	
	comp=Z,3.3nm,1.0s						
P18A	Preston Nutter	65.21	329	P	P	09 28 48.9	-0.1
SNAA	Sanae	68.86	161	P	P	09 29 08.1	-3.3
SNAA				IAmb	IAmb	09 29 17.4	
	comp=Z,2.7nm,0.5s						
DLMT	Dillon	70.71	332	P	P	09 29 22.3	-0.8
DLMT				IAmb	IAmb	09 29 24.3	
	comp=Z,3.8nm,1.4s						
MFID	Camas Ranch	70.82	328	P	P	09 29 23.7	-0.2
E09A	Wood Farm, Sta	74.19	329	P	P	09 29 40.5	-3.1
E09A				IAmb	IAmb	09 29 51.1	
	comp=Z,4.6nm,1.4s						
QSPA	South Pole Qui	74.33	180	P	P	09 29 41.7	-2.7
QSPA				PcP	PcP	09 29 51.5	-7.2
QSPA				IAmb	IAmb	09 30 00.5	
	comp=Z,4.2nm,1.2s						
D08A	Wollman Farm,	74.95	329	P	P	09 29 44.8	-3.2
H04A	Detroit Lake	75.02	326	P	P	09 29 45.0	-3.5
H04A				IAmb	IAmb	09 29 53.5	
	comp=Z,14nm,1.3s						
BUCK	Buck Mountain	75.14	325	P	P	09 29 46.4	-2.9
TORD	Torodi Ar. Bea	79.22	73	P	P	09 30 13.8	+1.2
	comp=Z,1.4nm,0.7s,baz=259,slow=5.4,SNR=10						
TORD	Torodi Ar. Bea	79.22	73	P	P	09 30 08.1	-4.5
RSD	Rainshed	88.19	291	P	P	09 30 55.0	-3.4
SONM	Songino Array	148.07	1	PKPab	PKPab	09 37 58.6	+3.6
	comp=Z,0.6nm,1.0s,baz=345,slow=1.6,SNR=2.2						

IDC 19 09:27:15.4±1.7, 15°.83S×175°.68W, h373^{km}±26^{km}, mb3.7/3, mb1 3.7/5, mb1mx3.2/31, mbtmp4.3/5, Error ellipse: s-maj=128.7km s-min=33.2km az=157.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.23	64	P	Pn	09 28 28.2	0.0
	13nm,0.3s,baz=232,slow=12,SNR=14						
MSVF	Nonsavu	6.29	252	P	Pn	09 28 50.5	0.0
	0.8nm,0.3s,baz=89,slow=18,SNR=2.2						
STKA	Stephens Creek	41.92	240	P	P	09 34 31.0	-0.1
	0.8nm,0.3s,baz=78,slow=9.3,SNR=5.1						
WRA	Warramunga Arr	47.60	257	P	P	09 35 15.6	-0.1
	3.0nm,0.5s,baz=91,slow=7.0,SNR=48						
ASAR	Alice Springs	47.89	252	P	P	09 35 17.5	-0.3
	9.4nm,0.5s,baz=87,slow=8.0,SNR=232						

KMA 19 09:30:12.6±0.1, 36°.26N×129°.49E, h3^{km}, Error ellipse: s-maj=2.1km s-min=0.7km az=287.0, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSPHA	Pohang	0.12	234	P	Pg	09 30 13.8	-1.1
	SNR=78						
KSPHA	Pohang	0.12	234	P	Pg	09 30 13.8	-1.1
	SNR=78						
YODB	Yeongdeok	0.28	347	P	Pg	09 30 18.3	+0.4
KSULJ	Uljin	0.44	352	P	Pg	09 30 21.4	+0.3
	SNR=43						
KSULJ	Uljin	0.44	352	P	Pg	09 30 21.4	+0.3
	SNR=43						
KSADO	Andong	0.46	289	P	Pg	09 30 21.2	-0.2
	SNR=8.2						
KSADO	Andong	0.46	289	P	Pg	09 30 21.2	-0.2
	SNR=8.2						
YOCB	Yeongcheon	0.52	237	P	Pg	09 30 20.3	-2.3
KSTBA	Taebaek	0.96	333	P	Pg	09 30 31.0	0.0
	SNR=10						
IMWB	Imwonan-gil	0.98	353	P	Pg	09 30 31.3	-0.1
	SNR=13						
YOJB	Youngju	0.99	308	P	Pb	09 30 32.0	-0.4
	SNR=11						
KSMGY	Mungyeong	1.22	289	P	Pg	09 30 34.6	-1.2
	SNR=34						
KSCHJ	Chungju	1.36	297	P	Pn	09 30 38.0	-0.5
	SNR=11						
JECH	Jecheon	1.37	311	P	Pn	09 30 38.0	-0.7
	SNR=21						
KSBON	Boeun	1.38	280	P	Pn	09 30 38.1	-0.6
	SNR=11						
KSWJU	Wonju	1.62	315	P	Pn	09 30 42.1	+0.1
	SNR=7.1						
EMSB	Eumseong	1.66	296	P	Pn	09 30 42.3	-0.2
	SNR=6.5						
KSJEO	Jeonju	1.81	260	P	Pn	09 30 44.0	-0.6
	SNR=6.3						
KSCEA	Cheonan	1.88	288	P	Pn	09 30 46.2	+0.5
	SNR=5.6						
KSCHC	Chuncheon	2.02	319	P	Pn	09 30 47.0	-0.6
	SNR=26						
KSCHC	Chuncheon	2.02	319	P	Pn	09 30 47.0	-0.6
	SNR=26						
KSJEU	Jeongeup	2.21	250	P	Pn	09 30 50.5	+0.3
	SNR=6.1						
KSJEU	Jeongeup	2.21	250	P	Pn	09 30 50.5	+0.3
	SNR=6.1						
GAPB	Gapyeong	2.24	315	P	Pn	09 30 52.0	+1.4
	SNR=6.9						
KSKWJ	Gwangju	2.31	242	P	Pn	09 30 51.8	+0.2
	SNR=6.5						
KSKWJ	Gwangju	2.31	242	P	Pn	09 30 52.0	+0.4
	SNR=6.6						
KSKWJ	Gwangju	2.31	242	P	Pn	09 30 51.8	+0.2
	SNR=6.5						
KSKWJ	Gwangju	2.31	242	P	Pn	09 30 52.0	+0.4
	SNR=6.6						
BOSB	Boseong-gun	2.38	232	P	Pn	09 30 52.2	-0.3
	SNR=12						
BOSB	Boseong-gun	2.38	232	P	Pn	09 30 52.2	-0.3
	SNR=12						
KSCWO	Cheorwon	2.41	320	P	Pn	09 30 51.9	-0.9
	SNR=10						
KSCWO	Cheorwon	2.41	320	P	Pn	09 30 51.9	-0.9
	SNR=10						

NEIC ***19*** *09:38:53.6±1.5, 18°.46N±0°.06×119°.60E±0°.09, h10^{km}±1^{km}, mb4.7/56, Error ellipse: s-maj=14.5km s-min=10.3km az=105.0*

GCMT ***19*** *09:38:53.6±0.3, 18°.49N±0°.03×119°.36E±0°.04, h19^{km}±1^{km}, MW4.8/67, Moment Tensor Solution. s18,c21; s67,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.63±.15; $M_{\theta\theta}$0.92±.09; $M_{\phi\phi}$0.70±.10; $M_{r\theta}$-0.27±.20; $M_{\theta\phi}$0.73±.05; $M_{\phi r}$1.36±.25; Best double couple: $M_0$2.04700×10^{16} NP1:ϕ_s67.00000°,δ36.00000°,λ-49.00000°. NP2: ϕ_s200.00000°,δ64.00000°,λ-116.00000°. Principal axes: T 1.7450, Plg15.0000°, Azm308.0000°; N 0.6030, Plg23.0000°, Azm211.0000°; P -2.3490, Plg62.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MAN ***19*** *09:38:55.6, 18°.51N×119°.58E, h33^{km}, mb5.4, ML4.4, MS4.6*

IDC ***19*** *09:39:01.2±2.3, 18°.50N×119°.67E, h67^{km}±22^{km}, mb3.9/23, mb1 4.1/25, mb1mx3.8/76, mbtmp4.2/25, MS3.7/19, Ms1 3.7/19, ms1mx3.5/41, Error ellipse: s-maj=19.6km s-min=10.4km az=70.0*

ISC 19 09:38:56.3±0.3, 18°.43N±0°.04×119°.64E±0°.05, h32^{km}, n136, σ1^{s}.61/134, mb4.5/50, MS3.9/22, 5C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.93	123	⇓iP	Pn	09 39 13.4	+0.3
SIPP				i S	Sb	09 39 27.0	+1.0
SAMP	Sagada Mountai	1.81	138	⇑eP	Pn	09 39 26.3	+1.1
SAMP				i S	Sb	09 39 49.2	-1.8
SMPP	San Manuel, Pa	2.48	156	⇑eP	Pn	09 39 36.3	+1.9
SMPP				i S	Sn	09 40 05.3	+1.7
BBP	Basco	2.97	47	⇓iP	Pn	09 39 40.9	-0.3
BBP				i S	Sn	09 40 11.2	-4.5
TGY	Tagaytay City	4.48	164	P	Pb	09 40 08.7	-5.7
	49nm,0.3s,baz=145,slow=3.1,SNR=2.0						
TGY				S	Sb	09 41 00.1	-7.9
	27nm,0.3s,baz=106,slow=19,SNR=1.1						
LQP	Lukban	4.67	157	⇑eP	Pb	09 40 16.7	-0.8
KNMB	Chin-men Tao	6.12	349	Pn	Pn	09 40 20.3	-4.1
KNMB				Sn	Sn	09 41 24.1	-9.2
YHNB	Yeheng	6.42	14	Pn	Pn	09 40 28.0	-0.6
HKPS	Hong Kong Po S	6.42	308		Pn	09 40 25.1	-3.5
HKPS				Sn	Sn	09 41 34.9	-6.0
QZH	Quanzhou	6.55	352	Pn	Pn	09 40 25.8	-4.6
QZH				LR	LR		
	comp=Z,850nm,7.6s						
QIZ	Qiongzhong	9.30	275	P	Pn	09 41 06.9	-1.3
QIZ				S	Sn	09 42 52.8	+1.1
QIZ				LR	LR		
	comp=N,1µm,17.8s						
QIZ				LR	LR		
	comp=E,970nm,14.5s						
QIZ				LR	LR		
	comp=Z,760nm,10.6s						
QIZ	Qiongzhong	9.30	275		Pn	09 41 04.8	-3.4
JOW	Kunigami	11.55	42	LR	LR	09 46 16.0	
	comp=Z,167nm,18.0s,baz=75,slow=38						
WHN	Wuhan	12.98	339	P	Pn	09 42 01.3	+2.8
NJ2	Nanjing	13.58	357	eP	Pn	09 42 06.8	+0.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=N,630nm,10.9s						
NJ2				LR	LR		
	comp=E,620nm,12.3s						
NJ2				LR	LR		
	comp=Z,700nm,12.8s						
GYA	Guiyang	14.40	306	⇑P	Pn	09 42 17.8	-0.3
GYA				S	Sn	09 45 02.3	+5.5
GYA				pmax	pmax		
	comp=Z,21nm,1.4s						
GYA				LR	LR		
	comp=Z,610nm,12.4s						
ENH	Enshi	14.97	324	Pn	Pn	09 42 24.1	-1.5
SLVN	Son La	15.08	284	Pn	Pn	09 42 25.4	-1.7
TOLI2	Tolitoli	17.25	176	P	P	09 42 55.4	-0.7
TOLI2				IAmb	IAmb	09 43 01.8	
	comp=Z,30nm,0.8s						
JNU	Nakatsue	17.77	32	P	Pn	09 42 59.3	-1.9
JNU				IAmb	IAmb	09 43 13.3	
	comp=Z,41nm,1.2s						
TIA	Tai'an	17.85	353	⇑P	Pn	09 43 01.3	-0.9
TIA				pmax	pmax		
	comp=Z,8.0nm,1.8s						
TIA				LR	LR		
	comp=Z,290nm,12.0s						
TIA				LR	LR		
	comp=Z,270nm,9.4s						
TIA				LR	LR		
	comp=Z,340nm,13.7s						
CD2	Chengdu	19.01	314	P	P	09 43 15.6	+0.1
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
CD2				LR	LR		
	comp=Z,1µm,11.3s						
CD2				LR	LR		
	comp=Z,900nm,12.7s						
CD2				LR	LR		
	comp=Z,900nm,12.9s						
TNTI	Ternate	19.12	156	P	P	09 43 16.1	-0.6
TNTI				IAmb	IAmb	09 43 17.8	
	comp=Z,82nm,1.3s						
CHTO	Chiang Mai	19.61	274	P	P	09 43 22.4	+0.2
CMAR	Chiang Mai Arr	19.63	273	P	Pn	09 43 25.0	+1.1
	comp=Z,0.2nm,0.3s,baz=88,slow=10.0,SNR=7.3						
CMAR				PcP	PcP	09 47 42.6	+1.3
	baz=29,slow=0.8,SNR=7.3						
CMAR				LR	LR	09 50 26.0	
	comp=Z,87nm,19.0s,baz=138,slow=35						
KSAR	Wonju Array Be	20.27	19	P	P	09 43 27.7	-1.5
KSRS	Korea Array	20.30	19	P	P	09 43 30.3	+0.9
	comp=Z,3.9nm,0.9s,baz=200,slow=12,SNR=10.0						
KSRS				LR	LR	09 52 25.1	
	comp=Z,104nm,19.0s,baz=206,slow=40						
KS19	Wonju Array Si	20.32	19	P	P	09 43 29.2	-0.6
BJT	Baijiatuau	21.72	353	P	P	09 43 43.7	-1.0
BJI	Beijing	21.74	353	P	P	09 43 46.1	+1.2
BJI				S	S	09 47 46.1	+2.3
BJI				sS	pS	09 47 53.3	-0.8
BJI				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH	Lanzhou	22.45	325	eP	P	09 43 54.1	+1.3
LZH				pP	pP	09 43 58.1	-2.1
LZH				sP	sP	09 44 01.8	-2.0
LZH				PP	PnPn	09 44 19.8	+3.4
LZH				sS	S	09 48 01.1	+3.6
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,4.6s						
LZH				LR	LR		
	comp=Z,750nm,12.2s						
LZH				LR	LR		
	comp=Z,350nm,9.8s						
LZH				LR	LR		
	comp=Z,730nm,12.2s						
INU	Inuyama	22.84	39	P	P	09 43 56.4	-0.3
INU				IAmb	IAmb	09 43 58.9	
	comp=Z,30nm,0.9s						
JGF	Kuroka	23.21	39	P	P	09 43 58.8	-1.8
JGF				IAmb	IAmb	09 44 16.8	
	comp=Z,24nm,1.3s						
KAPI	Kappang	23.30	180	P	P	09 44 00.9	-0.6
HHC	Hu-ho-hao-te	23.39	344	eP	P	09 44 02.4	0.0
HHC				SS	Sn	09 48 52.8	+19
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,4.8s						
HHC				LR	LR		
	comp=Z,350nm,13.3s						
HHC				LR	LR		
	comp=Z,290nm,11.3s						
HHC				LR	LR		
	comp=Z,380nm,13.0s						
MAJO	Matsushiro	24.35	38	P	P	09 44 10.5	-0.9
MAJO				IAmb	IAmb	09 44 11.3	
	comp=Z,12nm,1.1s						
MAT	Matsushiro	24.35	38	P	P	09 44 10.0	-1.4
MJAR	Matsushiro Arr	24.35	38	P	P	09 44 10.0	-1.4
MJB9	Matsu-Tunnel	24.35	38	P	P	09 44 10.0	-1.4
GUMO	Guam	24.72	98	LR	LR	09 54 13.3	
	comp=Z,114nm,18.7s,baz=98,slow=37						
RPSI	Rantau Prapat	25.62	235	P	P	09 44 21.9	-1.1
LHMI	Lhok Sumawe	25.75	242	P	P	09 44 23.5	-0.7
CN2	Changchun	25.76	10	eP	P	09 44 26.1	+2.1
CN2				S	S	09 48 52.1	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
SHL	Shillong	26.66	290	P	P	09 44 31.9	-0.7
SHL				IAmb	IAmb	09 44 36.5	
	comp=Z,8.6nm,0.9s						
GTA	Gaotai	27.05	325	eP	P	09 44 36.3	+0.4
GTA				pP	pP	09 44 43.8	-0.2
GTA				sP	sP	09 44 47.4	+0.1
GTA				S	S	09 49 14.1	+2.3
GTA				sS	pS	09 49 22.0	+1.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,74nm,5.1s						
GTA				LR	LR		
	comp=Z,240nm,13.4s						
GTA				LR	LR		
	comp=Z,350nm,13.1s						
GTA				LR	LR		
	comp=Z,530nm,14.5s						
MDJ	Mudanjiang	27.41	16	P	P	09 44 39.3	+0.4
MDJ				IAmb	IAmb	09 45 03.2	
	comp=Z,18nm,1.5s						
USRK	Ussuriysk Ar.	27.71	19	P	P	09 44 41.1	-0.4
LSA	Lhasa	28.25	299	P	P	09 44 44.8	-2.3
LSA				IAmb	IAmb	09 45 10.5	
	comp=Z,5.0nm,0.7s						
SONM	Songino Array	31.26	343	P	P	09 45 13.9	+0.7
	comp=Z,1.1nm,1.0s,baz=153,slow=9.6,SNR=5.1						
SONM				PcP	PcP	09 48 07.9	+0.8
	comp=Z,0.3nm,0.4s,baz=148,slow=4.7,SNR=4.2						
SONM				LR	LR	09 57 47.3	
	comp=Z,102nm,21.0s,baz=157,slow=36						
SONM	Songino Array	31.26	343	P	P	09 45 12.5	-0.7
KLR	Kul'dur	32.24	15	P	P	09 45 22.9	+1.2
	comp=Z,4.7nm,1.0s,baz=227,slow=7.1,SNR=7.9						
YSS	Yuzh-Sakhalins	34.20	29	P	P	09 45 38.2	-0.6
KNRA	Kununurra	35.06	165	P	P	09 45 45.6	-0.8
KNRA				IAmb	IAmb	09 46 11.0	
	comp=Z,15nm,1.1s						
TLY	Talaya	35.50	343	LR	LR	10 00 12.9	
	comp=Z,127nm,20.6s,baz=144,slow=36						
WMQ	Urumqi	36.88	320	eP	P	09 46 03.8	+1.9
WMQ				LR	LR		
	comp=Z,390nm,14.3s						
WMQ				LR	LR		
	comp=Z,380nm,10.5s						
WB0	Warramunga Arr	40.63	158	P	P	09 46 33.6	+0.1
WB0				IAmb	IAmb	09 46 44.6	
	comp=Z,27nm,1.4s						
WRAB	Tennant Creek	40.77	159	P	P	09 46 34.5	-0.1
WRAB				IAmb	IAmb	09 46 45.8	
	comp=Z,30nm,1.4s						
WRA	Warramunga Arr	40.77	159	P	P	09 46 35.5	+0.8
	comp=Z,8.2nm,0.8s,baz=329,slow=11,SNR=56						
WRA				PcP	PcP	09 48 37.0	+1.3
	comp=Z,2.6nm,0.8s,baz=327,slow=2.3,SNR=7.1						
WRA				LR	LR	10 05 41.9	
	comp=Z,50nm,18.1s,baz=180,slow=39						
WRA	Warramunga Arr	40.77	159	P	P	09 46 34.1	-0.6
WB2	Warramunga Arr	40.78	159		P	09 46 34.6	-0.1
WB2				IAmb	IAmb	09 46 45.8	
	comp=Z,23nm,1.2s						
WR0	Warramunga Arr	40.86	158	P	P	09 46 35.4	+0.1
WR0				IAmb	IAmb	09 46 46.6	
	comp=Z,25nm,1.4s						
MKAR	Makanchi Array	41.68	321	P	P	09 46 42.8	+0.9
	comp=Z,2.0nm,1.0s,baz=127,slow=7.7,SNR=5.0						
MKAR				PcP	PcP	09 48 39.1	+0.9
	comp=Z,1.1nm,1.0s,baz=48,slow=2.1,SNR=2.2						
MKAR				LR	LR	10 04 46.6	
	comp=Z,104nm,18.3s,baz=84,slow=37						
MKAR	Makanchi Array	41.68	321	P	P	09 46 41.6	-0.3
NIL	Nilore	43.98	300	P	P	09 47 00.8	0.0
NIL				IAmb	IAmb	09 47 12.7	
	comp=Z,10nm,0.9s						
AS31	Alice Springs	44.10	161		P	09 47 00.6	-1.2
ASAR	Alice Springs	44.10	161	P	P	09 47 02.8	+1.1
	comp=Z,2.1nm,0.4s,baz=341,slow=6.7,SNR=33						
ASAR				PcP	PcP	09 48 47.3	+0.7
	comp=Z,1.0nm,0.6s,baz=350,slow=3.3,SNR=5.4						
ASAR	Alice Springs	44.10	161		P	09 47 01.4	-0.3
ZAA0	Zalesovo Array	44.42	331	P	P	09 47 04.1	+0.1
ZALV	Zalesovo Beam	44.42	331	LR	LR	10 05 45.3	
	comp=Z,110nm,19.5s,baz=46,slow=36						
H11S3	WAKE ISLAND Hy	44.53	82	T	T	10 32 31.5	
	baz=276,slow=75,SNR=9.0						
H11S1	WAKE ISLAND Hy	44.54	82	T	T	10 32 30.0	
	baz=276,slow=75,SNR=4.7						
H11S2	WAKE ISLAND Hy	44.55	82	T	T	10 32 49.0	
	baz=276,slow=75,SNR=4.8						
H11N1	WAKE ISLAND Hy	44.57	80	T	T	10 32 43.2	
	baz=284						
H11N2	WAKE ISLAND Hy	44.57	80	T	T	10 32 39.6	
	baz=284						
H11N3	WAKE ISLAND Hy	44.59	80	T	T	10 32 41.0	
	baz=284						
PETK	Petropavlovsk-	45.47	31	LR	LR	10 08 50.5	
	comp=Z,64nm,19.1s,baz=77,slow=39						
KURK	Kurchatov	45.74	324	P	P	09 47 14.9	+0.5
KURK				IAmb	IAmb	09 47 27.3	
	comp=Z,12nm,0.9s						
KURBB	Kurchatov Arra	45.74	324	P	P	09 47 15.2	+0.8
	comp=Z,2.8nm,0.8s,baz=123,slow=8.2,SNR=16						
MORW	Morawa	47.35	184	P	P	09 47 28.0	+0.7
KKAR	Karatay Array	48.01	312	P	P	09 47 32.4	0.0
SEY	Seymchan	49.86	19	P	P	09 47 47.1	+1.0
	comp=Z,3.1nm,0.7s,baz=258,slow=6.8,SNR=5.4						
BVAR	Borovoye Array	51.33	324	P	P	09 47 58.7	+1.2
	comp=Z,0.6nm,0.6s,baz=134,slow=6.2,SNR=2.8						
BBOO	Buckleboo	53.32	163	P	P	09 48 10.8	-1.6
TIXI	Tiksi	53.50	4	P	P	09 48 12.6	-0.6
TIXI				IAmb	IAmb	09 48 13.6	
	comp=Z,8.2nm,0.9s						
STKA	Stephens Creek	54.27	157	P	P	09 48 20.6	+1.2
	comp=Z,2.8nm,0.8s,baz=331,slow=6.5,SNR=6.1						
STKA	Stephens Creek	54.27	157	IAmb	IAmb	09 48 21.8	
	comp=Z,1.2nm,0.9s						

NRIK	Noril'sk	54.60	347	P	P	09 48 22.2	+0.9
	comp=Z,6.4nm,1.0s,baz=127,slow=5.0,SNR=5.9						
NRIK				LR	LR	10 12 11.6	
	comp=Z,116nm,19.2s,baz=156,slow=36						
NRIK	Noril'sk	54.60	347	P	P	09 48 21.0	-0.3
NRIK				IAmb	IAmb	09 48 22.6	
	comp=Z,8.3nm,1.1s						
ABKAR	Akbulak array	56.54	317	P	P	09 48 36.0	+0.4
ABKAR	Akbulak array	56.54	317	P	P	09 48 35.8	+0.2
GEYT	Alibeck	56.61	304	LR	LR	10 15 19.5	
	comp=Z,110nm,21.7s,baz=230,slow=38						
ARMA	Armidale	57.51	147	P	P	09 48 42.8	+0.1
ARMA				IAmb	IAmb	09 48 44.2	
	comp=Z,6.0nm,1.2s						
AKTO	Aktyubinsk	57.98	318	P	P	09 48 46.8	+1.0
	comp=Z,3.1nm,0.8s,baz=97,slow=8.1,SNR=8.9						
UOSS	Minazif	58.85	288	P	P	09 48 51.2	-1.0
UOSS				IAmb	IAmb	09 48 57.2	
	comp=Z,4.8nm,1.1s						
ARU	Arti	58.91	325	P	P	09 48 52.7	+0.6
	comp=Z,2.1nm,0.5s,baz=88,slow=2.3,SNR=11						
ARU	Arti	58.91	325	P	P	09 48 52.3	+0.2
KIRV	Kirov	64.15	327	P	P	09 49 28.0	+0.6
	comp=Z,12nm,0.7s,baz=167,slow=0.7,SNR=5.2						
GNI	Garni	66.95	306	P	P	09 49 46.0	-0.2
ONI	Oni	67.71	309	P	P	09 49 49.3	-1.5
KBZ	Khabaz	68.02	310	P	P	09 49 53.7	+1.2
	comp=Z,2.1nm,0.9s,baz=127,slow=5.1,SNR=3.1						
KBZ				LR	LR	10 22 49.2	
	comp=Z,51nm,19.9s,baz=56,slow=39						
KIV	Kislovodsk	68.15	311	P	P	09 49 54.1	+0.6
RAYN	Ar Rayn	68.72	289	P	P	09 49 56.9	-0.5
RAYN				IAmb	IAmb	09 50 08.8	
	comp=Z,6.6nm,1.1s						
GURO	Guroymak-BITLI	69.22	305	P	P	09 50 00.7	+0.4
KLMR	Klimovskoe	69.28	329	eP	P	09 49 59.3	-0.8
KLMR				AMP		09 50 05.2	
	comp=Z,21nm,1.2s						
IMAR	Indian Mountai	71.96	25	P	P	09 50 17.1	+0.7
CHIR	Chirikof Islan	72.03	36	P	P	09 50 16.7	-0.2
H21K	Melozitna Rive	72.38	26	P	P	09 50 20.2	+1.3
CAST	Castle Rocks	72.93	28	P	P	09 50 23.0	+0.8
CAST				IAmb	IAmb	09 50 24.0	
	comp=Z,8.3nm,0.9s						
ARCES	ARCESS Array B	74.33	339	LR	LR	10 26 00.3	
	comp=Z,68nm,18.7s,baz=30,slow=38						
RND	Reindeer	74.37	28	P	P	09 50 30.9	+0.2
RND				IAmb	IAmb	09 50 31.5	
	comp=Z,9.7nm,0.9s						
MDM	Murphy Dome	74.38	26	P	P	09 50 31.4	+0.7
MDM				IAmb	IAmb	09 50 32.4	
	comp=Z,9.7nm,1.0s						
ILAR	Eielson Array	74.97	26	P	P	09 50 34.8	+0.6
	comp=Z,1.0nm,0.7s,baz=272,slow=5.6,SNR=9.4						
BMAR	Burnt Mountain	75.35	23	P	P	09 50 37.5	+1.3
BRTR	Keskin Array B	75.45	307	LR	LR	10 27 16.1	
	comp=Z,40nm,18.4s,baz=42,slow=38						
FINES	FINESS Array B	75.68	330	P	P	09 50 38.4	+0.2
	comp=Z,5.8nm,1.1s,baz=44,slow=9.0,SNR=4.4						
FINES				LR	LR	10 24 12.0	
	comp=Z,62nm,19.7s,baz=52,slow=36						
AKASG	Malin Array Be	76.22	319	P	P	09 50 41.0	-0.5
	comp=Z,0.4nm,0.4s,baz=61,slow=5.5,SNR=5.4						
L27K	Beaver Creek,	77.55	27	P	P	09 50 49.2	+0.4
L27K				IAmb	IAmb	09 50 51.1	
	comp=Z,5.4nm,1.0s						
BCAR	Beaver Creek A	77.57	27	P	P	09 50 50.1	+1.2
INK	Inuvik	79.08	21	P	P	09 50 57.2	+0.1
	comp=Z,2.1nm,0.8s,baz=298,slow=6.5,SNR=6.4						
BURAR	Bucovina Array	79.52	317	P	P	09 51 00.2	+0.1
MLR	Muntele Rosu	79.61	314	P	P	09 51 01.6	+0.9
	comp=Z,3.0nm,0.8s,baz=192,slow=4.3,SNR=6.9						
MLR	Muntele Rosu	79.61	314	IAmb	IAmb	09 51 01.9	
	comp=Z,4.3nm,1.0s						
VTS	Vitosha	82.31	312	P	P	09 51 15.2	+0.1
VTS				IAmb	IAmb	09 51 16.5	
	comp=Z,5.5nm,1.0s						
NOA	NORSAR Array B	82.62	332	LR	LR	10 29 37.5	
	comp=Z,57nm,19.7s,baz=75,slow=37						
KMBO	Kilima Mbogo	83.13	267	P	P	09 51 21.6	+1.6
	comp=Z,1.3nm,0.3s,baz=44,slow=6.1,SNR=5.4						
KMBO	Kilima Mbogo	83.13	267	P	P	09 51 20.0	0.0
KMBO				IAmb	IAmb	09 51 23.0	
	comp=Z,8.3nm,1.4s						
RES	Resolute Bay	84.54	9	P	P	09 51 25.2	-0.6
RES				IAmb	IAmb	09 51 27.3	
	comp=Z,7.7nm,1.2s						
CLL	Collm	85.75	323	e(P)	P	09 51 36.0	+3.7
GERES	GERESS Array B	86.34	320	P	P	09 51 35.7	+0.3
	comp=Z,0.9nm,0.9s,baz=83,slow=5.5,SNR=5.0						
GERES				LR	LR	10 35 26.1	
	comp=Z,48nm,18.6s,baz=62,slow=39						
GERES	GERESS Array B	86.34	320	P	P	09 51 35.2	-0.2
RUBB	Prince Rupert	86.36	33	P	P	09 51 35.1	-0.1
YKA	Yellowknife Ar	88.81	22	P	P	09 51 47.3	+0.5
	comp=Z,3.4nm,0.8s,baz=315,slow=4.7,SNR=42						
YKA	Yellowknife Ar	88.81	22	P	P	09 51 47.1	+0.3
VNDA	Vanda	98.85	171	LR	LR	10 39 39.8	
	comp=Z,18nm,19.4s,baz=260,slow=37						
TXAR	Lajitas Array	116.75	42	PKP	PKiKP	09 57 38.8	+0.7
	comp=Z,0.4nm,0.7s,baz=214,slow=0.9,SNR=5.4						
TXAR	Lajitas Array	116.75	42		PKiKP	09 57 39.5	+1.4

IDC 19 10:08:44.1±1.7**, 4°.34S×130°.68E, h0^{km}, mb3.4**/1**, mb1 3.6**/4**, mb1mx3.4**/37**, mbtmp3.4**/4**, ML3.2**/3**, Error ellipse: s-maj=69.1km s-min=23.7km az=87.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.49	10	Pn	Pn	10 09 39.3	-0.4
	3.0nm,0.3s,baz=64,slow=23,SNR=23						
SIJI				Sn	Sn	10 10 22.1	+0.2
	0.1nm,0.3s,baz=224,slow=23,SNR=1.1						
WRA	Warramunga Arr	15.92	167	Pn	Pn	10 12 29.5	-0.2
	0.1nm,0.3s,baz=347,slow=11,SNR=2.3						
ASAR	Alice Springs	19.47	171	P	P	10 13 12.5	-0.2
	0.1nm,0.3s,baz=348,slow=8.2,SNR=12						
MKAR	Makanchi Array	66.40	326	P	P	10 19 35.4	+0.4
	0.3nm,0.8s,baz=126,slow=7.4,SNR=1.6						

*NEIC **19** 10:17:18.8±1.2, 9°.82S±0°.07×119°.19E±0°.07, h76^{km}±5^{km}, mb4.1/10, Error ellipse: s-maj=11.0km s-min=9.1km az=208.0*
*DJA **19** 10:17:19.4±0.3, 10°S±3°×11°9E±°, h32^{km}±4^{km}, M4.4/15, mb4.4/3, mB5.5/1, MLv4.4/15, Mw(mB)5.0/1*
*IDC **19** 10:17:21.5±4.2, 9°.55S×119°.39E, h90^{km}±33^{km}, mb3.5/4, mb1 3.5/8, mb1mx3.2/39, mbtmp3.8/8, MS3.0/1, Ms1 3.0/1, ms1mx2.4/24, Error ellipse: s-maj=45.3km s-min=12.2km az=57.0*
ISC 19 10:17:16.5±0.5**, 9°.79S**±0°.05×**119°.24E**±0°.04**, h50^{km}, n63, σ2^{s}.35**/68**, mb4.0**/7**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.21	46	P	Pn	10 17 26.1	+1.1
WBSI				S	Sn	10 17 32.9	+1.9
BASI	Baing, Sumba	1.39	108	P	Pn	10 17 43.1	+3.6
PLAI	Plampang	1.73	303	P	Pn	10 17 45.7	+1.5
PLAI				S	Sn	10 18 06.9	+1.8
PLAI	Plampang	1.73	303	P	Pn	10 17 46.1	+1.9
TWSI	Taliwang, Sumb	2.55	294	P	Pn	10 17 57.2	+1.8
TWSI				S	Sn	10 18 26.6	+1.4
EDFI	Ende, Flores	2.63	67	P	Pn	10 17 57.1	+0.5
MMRI	Maumere	3.18	69	P	Pn	10 18 06.0	+2.0
MMRI	Maumere	3.18	69		Pn	10 18 07.0	+3.0
MMRI	Maumere	3.18	69	P	Pn	10 18 07.2	+3.2
BSSI	Bau Bau, Buton	3.83	19	P	Pn	10 18 14.6	+1.6
IGBI	Denpasar	4.15	283	P	Pn	10 18 20.2	+2.8
SRBI	Singaraja	4.32	293	P	Pn	10 18 21.7	+2.0
BATI	Baumata	4.38	96	P	Pn	10 18 24.2	+3.6
	30nm,0.3s,baz=83,slow=1.6,SNR=15						
BATI				S	Sn	10 19 13.1	+2.8
	22nm,0.3s,baz=331,slow=21,SNR=7.5						
BATI	Baumata	4.38	96	P	Pn	10 18 24.3	+3.8
BKSI	Bulukumba	4.53	11	P	Pn	10 18 25.3	+2.8
BKSI				S	Sn	10 19 15.0	+1.1
KAPI	Kappang	4.77	6	P	Pn	10 18 28.3	+2.4
	12nm,0.3s,baz=191,slow=5.4,SNR=34						
KAPI				S	Sn	10 19 19.5	-0.5
	25nm,0.3s,baz=61,slow=23,SNR=12						
KAPI	Kappang	4.77	6	P	Pn	10 18 28.5	+2.6
SOEI	Soe	4.96	90	P	Pn	10 18 31.6	+3.0
SOEI	Soe	4.96	90	Pn	Pn	10 18 31.4	+2.8
SOEI	Soe	4.96	90	P	Pn	10 18 32.8	+4.2
JAGI	Jajag, Banyuwa	5.19	284	P	Pn	10 18 34.6	+3.0
JAGI	Jajag, Banyuwa	5.19	284		Pn	10 18 32.9	+1.3
JAGI	Jajag, Banyuwa	5.19	284	P	Pn	10 18 33.9	+2.3
BNSI	Bone	5.42	9	P	Pn	10 18 39.3	+4.5
SPSI	Sidrap Palu	5.81	5	P	Pn	10 18 42.9	+2.7
	0.2nm40nm,1.1s						
GMJI	Gumukmas	5.92	284	P	Pn	10 18 44.8	+3.2
FITZ	Fitzroy Crossi	10.33	144	P	Pn	10 19 43.9	+1.7
	0.4nm,0.3s,baz=333,slow=10,SNR=12						
FITZ				S	Sn	10 21 31.6	-5.0
	0.7nm,0.3s,baz=210,slow=16,SNR=6.4						
KNRA	Kununurra	10.98	123	Pn	Pn	10 19 53.0	+2.0
KNRA	Kununurra	10.98	123	P	Pn	10 19 53.3	+2.3
MBWA	Marble Bar	11.31	178	P	Pn	10 19 56.3	+0.8
PSA00	Pilbara Seismi	11.73	177	Pn	Pn	10 20 02.5	+1.2
PSA00	Pilbara Seismi	11.73	177	P	Pn	10 20 02.3	+1.1
DRS	Darwin Rock St	11.74	104	P	Pn	10 20 04.7	+3.3
MTN	Manton Dam	12.05	106	Pn	Pn	10 20 05.6	-0.1
KDU	Kakadu	13.30	104	P	Pn	10 20 25.5	+2.8
GIRL	Giralia	13.65	200	Pn	Pn	10 20 28.1	+0.7
GIRL	Giralia	13.65	200	P	Pn	10 20 29.2	+1.7
FAKI	Fak Fak	14.62	63	Pn	Pn	10 20 40.5	0.0
MEEK	Meekatharra	16.77	182	P	P	10 21 10.7	+1.1
WRA	Warramunga Arr	17.73	126	P	P	10 21 21.9	+1.6
	0.2nm,0.3s,baz=296,slow=12,SNR=12						
WRA				S	Sn	10 24 26.4	-10
	0.2nm,0.3s,baz=301,slow=26,SNR=2.4						
WRA	Warramunga Arr	17.73	126	P	Pn	10 21 17.6	-2.3
WRAB	Tennant Creek	17.73	126	P	Pn	10 21 19.0	-1.0
WRAB				IAmb	IAmb	10 21 46.8	
	comp=Z,11nm,1.2s						
WRAB	Tennant Creek	17.73	126	P	P	10 21 23.1	+2.8
WB2	Warramunga Arr	17.74	126	P	Pn	10 21 17.8	-2.3
WB2				IAmb	IAmb	10 21 34.0	
	comp=Z,10nm,1.3s						
WR0	Warramunga Arr	17.90	126	P	Pn	10 21 22.1	+0.1
ASAR	Alice Springs	19.66	136	P	Pn	10 21 44.7	+1.5
	comp=Z,0.2nm,0.3s,baz=321,slow=12,SNR=6.9						
ASAR				S	S	10 25 14.7	-6.0
	comp=Z,0.1nm,0.3s,baz=314,slow=24,SNR=3.2						
ASAR				LR	LR	10 30 48.6	
	comp=Z,43nm,19.1s,baz=96,slow=41						
ASAR	Alice Springs	19.66	136	P	P	10 21 41.2	-0.2
COEN	Coen	23.78	102	P	P	10 22 24.9	+0.2
COEN				IAmb	IAmb	10 22 27.4	
	comp=Z,22nm,1.4s						
TOO	Toolangi	36.40	144	P	P	10 24 15.5	-0.7
CAN	Canberra	37.16	138	P	P	10 24 20.5	-2.3
H08S2	Diego Garcia H	46.23	269	T	T	11 14 58.8	
	baz=96,slow=76,SNR=14						
H08S3	Diego Garcia H	46.24	269	T	T	11 14 59.1	
	baz=96,slow=76,SNR=14						
H08S1	Diego Carcia H	46.24	269	T	T	11 14 59.7	
	baz=96,slow=76,SNR=15						
KSRS	Korea Array	47.70	9	P	P	10 25 47.6	-0.5
	comp=Z,0.7nm,0.5s,baz=193,slow=7.2,SNR=4.9						
USA0B	Ussuriysk Arra	54.97	11	P	P	10 26 41.3	-1.2
USA0B				IAmb	IAmb	10 26 51.8	
	comp=Z,5.1nm,1.4s						
USRK	Ussuriysk Ar.	54.97	11	P	P	10 26 41.2	-1.3
	comp=Z,1.4nm,0.7s,baz=196,slow=6.7,SNR=7.1						
SONM	Songino Array	58.49	350	P	P	10 27 06.9	-0.7
	comp=Z,0.5nm,0.5s,baz=168,slow=8.5,SNR=6.3						
SONM	Songino Array	58.49	350	P	P	10 27 07.2	-0.4
SONM				IAmb	IAmb	10 27 08.1	
	comp=Z,1.0nm,0.9s						
MKAR	Makanchi Array	65.26	333	P	P	10 27 52.3	-0.8
	comp=Z,0.9nm,0.6s,baz=153,slow=5.5,SNR=6.6						
MKAR	Makanchi Array	65.26	333	P	P	10 27 52.1	-1.0
KKAR	Karatay Array	68.83	324	P	P	10 28 13.7	-2.1
ABKAR	Akbulak array	78.34	325	P	P	10 29 10.6	-0.8
QSPA	South Pole Qui	80.21	180	P	P	10 29 20.3	-1.3
QSPA				IAmb	IAmb	10 29 45.0	
	comp=Z,2.4nm,1.4s						

KRSC 19 10:22:32.2±1.1**, 50°.96N×157°.40E, h98^{km}**±14^{km}**, ML3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	0.63	324	eP	Pn	10 22 49.6	+0.8
SKR	Severo-Kuril's	0.86	252	eP	Pn	10 22 52.6	+1.6
SKR				eS	Sn	10 23 06.5	+1.5
KDTR	Khodutka, Kamc	0.95	26	eP	Pn	10 22 53.7	+1.8
KDTR				eS	Sn	10 23 07.8	+1.0
MIPR	Malaya Ipel'ka	1.38	343	eP	Pn	10 22 57.2	+0.3
ASAK	Asacha	1.46	12	eP	Pn	10 22 59.5	+1.5
ASAK				eS	Sn	10 23 19.0	+1.6
RUS	Russkaya	1.63	25	eP	Pn	10 23 01.3	+1.3
RUS				eS	Sn	10 23 21.5	+0.5
KRMR	Karymshinskiy	1.93	13	eP	Pn	10 23 05.3	+1.6
KRMR				eS	Sn	10 23 29.9	+2.1
APC	Apacha	1.98	356	eP	Pn	10 23 04.7	+0.4
PET	Petropavlovsk	2.21	20	eP	Pn	10 23 09.1	+1.7
PET				eS	Sn	10 23 36.7	+2.4
DALK	Dalny	2.24	21	eP	Pn	10 23 09.5	+1.7
DALK				eS	Sn	10 23 36.4	+1.4
UGLR	Uglovaya	2.42	21	eP	Pn	10 23 12.9	+2.6
UGLR				eS	Sn	10 23 42.9	+3.5
AVH	Avacha	2.45	19	eP	Pn	10 23 13.5	+2.8
KOK	Koryaka	2.46	18	eP	Pn	10 23 13.7	+2.9
SMAR	Somma	2.47	20	eP	Pn	10 23 13.4	+2.4
KRER	Koryakskii	2.49	19	eP	Pn	10 23 13.9	+2.6
KRER				eS	Sn	10 23 44.6	+3.3
NLC	Nalytchevo	2.52	28	eP	Pn	10 23 12.7	+1.2
SPN	Mys Shipunski	2.69	36	eP	Pn	10 23 16.7	+3.0
GNL	Ganaly	2.76	7	eP	Pn	10 23 16.2	+1.4
MKZ	Mys Kozlova	4.46	34	eP	Pn	10 23 38.5	+1.0
TUMD	Tumrok D	4.62	22	eP	Pn	10 23 43.0	+3.3
KBTR	Krutoberegovo	6.17	29	eP	Pn	10 24 02.0	+1.4

*EAF **19** 11:10:47.4±2.8, 26°.35S×29°.29E, h0^{km}±20^{km}, MD4.0*
*BUL **19** 11:10:47.6±2.1, 26°.39S×29°.28E, h0^{km}±14^{km}, MD4.3*
ISC 19 11:10:48.5±1.1**, 26°.29S**±0°.05×**29°.32E**±0°.04**, h10^{km}, n12, σ1^{s}.79**/22**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	Changalane	2.58	91	iP	Pn	11 11 31.7	+1.4
CNG				iSg	Sb	11 12 07.4	+0.9
CNG	Changalane	2.58	91	iP	Pn	11 11 31.7	+1.4
CNG				iSg	Sb	11 12 07.4	+0.9
MOPA	Mopani	3.34	35	iP	Pn	11 11 41.0	+0.1
MOPA				iS	Sn	11 12 18.5	-2.2
MOPA	Mopani	3.34	35	iP	Pn	11 11 41.0	+0.1
MOPA				iS	Sn	11 12 18.5	-2.2
LBTB	Lobatse	3.59	290	iP	Pn	11 11 45.3	+0.9
LBTB				iSg	Sb	11 12 38.0	+2.1
LBTB	Lobatse	3.59	290	iP	Pn	11 11 45.3	+0.9
LBTB				iSg	Sb	11 12 38.0	+2.1
MSNA	Messina	3.98	9	iP	Pn	11 11 51.8	+2.2
MSNA	Messina	3.98	9	iP	Pn	11 11 51.8	+2.2
BOSA	Boshof	4.29	236	iP	Pn	11 11 52.9	-1.1
BOSA				iSg	Sb	11 12 57.4	+1.4
BOSA	Boshof	4.29	236	iP	Pn	11 11 52.9	-1.1
BOSA				iSg	Sb	11 12 57.4	+1.4
MATP	Matopo	5.89	352	iP	Pn	11 12 16.2	+0.3
MATP				iS	Sn	11 13 20.4	-3.1
MATP	Matopo	5.89	352	iP	Pn	11 12 16.2	+0.3
MATP				iS	Sn	11 13 20.4	-3.1

*IDC **19** 11:14:55.9±1.3, 38°.60N×26°.69E, h0^{km}, mb3.4/2, mb1 3.6/8, mb1mx3.4/41, mbtmp3.5/8, ML3.5/6, MS2.8/7, Ms1 2.8/7, ms1mx2.6/36, Error ellipse: s-maj=18.8km s-min=14.2km az=52.0*
*ATH **19** 11:14:56.6, 38°.61N×26°.52E, h37^{km}±2^{km}, ML3.7/6, Error ellipse: s-maj=3.2km s-min=1.1km az=257.0*
*THE **19** 11:14:56.7, 38°.63N×26°.60E, h7^{km}±1^{km}, ML3.8/5, Error ellipse: s-maj=1.1km s-min=0.3km az=228.0*
*DDA **19** 11:14:56.9, 38°.63N×26°.58E, h5^{km}, MW4.0*
ISC 19 11:14:56.4±1.0**, 38°.63N**±0°.02×**26°.66E**±0°.02**, h13^{km}**±7^{km}**, n113, σ1^{s}.11**/144**, MS3.0**/3**, 24C-8D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.27	191	⇑iP	Pg	11 15 02.3	+0.2
URLA				iS	Sb	11 15 07.4	-0.4
BLCB	Balcova	0.38	129	P	Pb	11 15 04.9	-0.2
BLCB				S	Sb	11 15 11.0	+0.1
ZEYE	Izmir, Urla-Ze	0.41	198	⇑iP	Pg	11 15 04.5	-0.1
ZEYE				iS	Sb	11 15 11.8	+0.1
ZEDA	zmir-Bergama	0.47	44	⇑iP	Pg	11 15 05.8	+0.1
ZEDA				iS	Sb	11 15 13.3	-0.1
CHOS	Chios island	0.54	243	P	Pg	11 15 06.7	-0.2
CHOS				S	Sg	11 15 13.7	-0.3
	15μm,0.2s						
CHOS	Chios island	0.54	243	P	Pg	11 15 06.8	-0.2
CHOS				S	Sg	11 15 13.8	-0.3
CHOS				AML	AML	11 15 14.5	
	comp=N,30490μm,0.2s						
CHOS				AML	AML	11 15 15.7	
	comp=E,30390μm,0.2s						
DGB	zmir	0.60	163	⇑iP	Pg	11 15 08.3	+0.2
DGB				iS	Sb	11 15 17.4	+0.3
AYVA	Ayvalik	0.68	2	⇑iP	Pg	11 15 08.8	-0.9
AYVA				iS	Sb	11 15 19.5	0.0
PRK	Paraskevi	0.69	334	P	Pb	11 15 10.2	-0.1
PRK				S	Sb	11 15 19.5	-0.3
	comp=E,11μm,0.7s						
PRK	Paraskevi	0.69	334	P	Pb	11 15 10.4	0.0
PRK				S	Sb	11 15 19.8	0.0
PRK				AML	AML	11 15 20.0	
	comp=E,24759μm,1.0s						
PRK				AML	AML	11 15 23.2	
	comp=N,17710μm,0.4s						
SIGR	SIGRI	0.86	313	P	Pb	11 15 12.2	-1.0
SIGR				S	Sb	11 15 24.1	-0.6
	comp=N,5μm,0.5s						
SIGR	SIGRI	0.86	313	P	Pb	11 15 12.3	-1.0
SIGR				S	Sb	11 15 24.1	-0.6
SIGR				AML	AML	11 15 26.2	
	comp=N,11671μm,0.5s						
SIGR				AML	AML	11 15 26.9	
	comp=E,8674μm,0.5s						
SMG	Samos	0.93	171	P	Pb	11 15 14.2	-0.2
SMG				S	Sn	11 15 27.8	-0.6
	comp=E,13μm,0.5s						
SMG	Samos	0.93	171	P	Pb	11 15 14.2	-0.2
SMG				S	Sn	11 15 28.0	-0.4
BUHA	Balikesir, Bur	0.93	20	⇑iP	Pb	11 15 13.2	-1.2
BUHA				iS	Sn	11 15 28.2	-0.2
AKHS	Akhisar	0.93	74	⇓iP	Pn	11 15 14.9	-0.4
AKHS				iS	Sn	11 15 28.7	+0.1
KOCA	Canakkale, Ayv	0.96	335	⇑iP	Pb	11 15 14.4	-0.6
KOCA				iS	Sb	11 15 27.2	-0.5
GCAM	G?zelcaml?	1.03	154	⇓iP	Pg	11 15 16.4	+0.1
GCAM				iS	Sn	11 15 31.2	+0.3
STEP	BALIKESIR_Sava	1.11	47	⇓iP	Pn	11 15 17.5	-0.3
STEP				iS	Sn	11 15 33.3	+0.3
BAYC	CANAKKALE_Bayr	1.12	355	⇓iP	Pb	11 15 16.8	-0.8
BAYC				iS	Sb	11 15 31.7	-0.4
EZN	Ezine	1.23	348	P	Pn	11 15 18.5	-0.8
DDIM	Aydin, Didim	1.25	159	iP	Pb	11 15 20.1	+0.1
DDIM				iS	Sg	11 15 36.8	-0.1
BOZC	Bozcaada	1.30	339	⇑iP	Pn	11 15 19.4	-0.9
BOZC				iS	Sb	11 15 36.9	-0.5
BALY	Balya	1.34	33	⇑iP	Pn	11 15 20.6	-0.3
BALY				iS	Sg	11 15 40.5	+1.0
AYDN	Tasoluk	1.36	135	⇓iP	Pb	11 15 21.5	-0.3
AYDN				iS	Sg	11 15 40.5	+0.2
ECEA	Canakkale, Ece	1.47	345	iP	Pb	11 15 22.9	-0.7
ECEA				iS	Sb	11 15 42.3	+0.2
KULA	Kula-Manisa	1.57	94	P	Pb	11 15 24.8	-0.6
BODT	Bodrum	1.64	162	P	Pn	11 15 25.0	-0.1
DEMI	Demirci	1.66	75	iP	Pb	11 15 26.1	-0.7
DEMI				iS	Sg	11 15 48.4	-1.3
GOKA	anakkale-Gk	1.67	340	iP	Pn	11 15 24.8	-0.6
GADA	Gvkgeada	1.67	339	P	Pn	11 15 24.8	-0.6
BDRM	Kayabasi	1.68	158	iP	Pn	11 15 25.5	0.0
DURS	Dursunbey	1.71	55	iP	Pn	11 15 26.2	+0.2
DURS				iS	Sb	11 15 49.6	+0.3
LIA	Limnos Island	1.71	318	P	Pn	11 15 25.5	-0.5
LIA	Limnos Island	1.71	318	P	Pn	11 15 25.3	-0.7
LIA				AML	AML	11 15 53.6	
	comp=N,1647μm,0.7s						
LIA				AML	AML	11 15 56.7	
	comp=E,1865μm,0.7s						
KNL	Balıkesir	1.77	22	iP	Pn	11 15 26.7	-0.2
APE	Apeiranthos	1.80	210	⇑P	Pn	11 15 25.6	-1.6
APE	Apeiranthos	1.80	210	P	Pn	11 15 26.0	-1.2
APE	Apeiranthos	1.80	210	P	Pn	11 15 25.7	-1.5
USAK	Uak-Merkez	1.84	87	iP	Pb	11 15 28.8	-1.3
KARY	Karystos	1.85	252	P	Pn	11 15 27.4	-0.5
MULA	Mugla, Merkez-	1.90	136	iP	Pb	11 15 29.6	-1.4
YER	Yerkesik	1.96	139	P	Pn	11 15 30.1	+0.6
DAT	Datca	2.03	159	P	Pn	11 15 30.4	-0.1
DAT	Datca	2.03	159	iP	Pn	11 15 30.0	-0.4
SMTH	Samothraki Isl	2.04	335	P	Pn	11 15 29.9	-0.6
SMTH	Samothraki Isl	2.04	335	P	Pn	11 15 29.7	-0.8
SMTH				AML	AML	11 16 07.9	
	comp=E,924μm,0.5s						
SMTH				AML	AML	11 16 08.1	
	comp=N,585μm,0.6s						
NIS1	Nisyros Isl.	2.06	168	P	Pn	11 15 31.1	+0.3
CAVK	Edirne/Enez-Ca	2.10	350	iP	Pn	11 15 31.5	+0.2
SART	Tekirdag	2.10	11	iP	Pn	11 15 32.2	+0.8
TAVA	DENIZLI_Tavas	2.12	122	iP	Pn	11 15 32.5	+0.8
ENEZ	Enez	2.14	350	P	Pn	11 15 31.9	0.0
KESN	Edirne-Kesan	2.20	0	iP	Pn	11 15 32.7	-0.3
DION	Dionisos Attik	2.22	257	P	Pn	11 15 32.7	-0.3
PASA	Karahalli, USA	2.23	96	iP	Pn	11 15 34.2	+1.0
TURN	Turunc	2.23	145	iP	Pn	11 15 33.4	+0.3
ALN	Alexandroupoli	2.32	348	P	Pn	11 15 34.0	-0.3
ALN				S	Sn	11 16 03.1	+0.4
	comp=N,938nm,0.6s						
ALN	Alexandroupoli	2.32	348	P	Pn	11 15 33.8	-0.5
ALN				AML	AML	11 16 11.7	
	comp=E,1921μm,0.5s						
ALN				AML	AML	11 16 11.7	
	comp=N,1729μm,0.7s						
VLY	Voula,Athens	2.39	252	P	Pn	11 15 35.0	-0.3
THR3	Thira Island,	2.43	205	P	Pn	11 15 35.8	-0.1
ULDT	Uludag	2.44	51	iP	Pb	11 15 38.1	-2.2
THR5	Thira Island,	2.44	206	P	Pn	11 15 35.2	-0.8
THR6	Thira Island,	2.48	204	P	Pn	11 15 35.7	-0.9
THAS	Thassos island	2.48	323	P	Pn	11 15 35.9	-0.7
THAS	Thassos island	2.48	323	P	Pn	11 15 35.7	-0.9
RDO	Rodhopi	2.66	341	P	Pn	11 15 39.2	+0.2
RDO	Rodhopi	2.66	341	P	Pn	11 15 39.2	+0.2
ANDZ	Kutahya, Merke	2.67	70	iP	Pn	11 15 40.6	+1.3
GOLH	Golhisar	2.68	120	iP	Pn	11 15 41.5	+2.1
KAVA	Kavala	2.89	326	P	Pn	11 15 41.8	-0.4
KAVA	Kavala	2.89	326	P	Pn	11 15 41.5	-0.6
KOKK	Kokkinochori,	3.00	318	P	Pn	11 15 43.2	-0.5
KOKK	Kokkinochori,	3.00	318	P	Pn	11 15 43.2	-0.5
EDRB	Edirne	3.22	1	P	Pn	11 15 46.4	-0.3
IDI	Anoyia	3.62	204	Pn	Pn	11 15 51.5	-0.9
	comp=N,1.2nm,0.3s,baz=30,slow=6.4,SNR=8.6						
IDI				Sn	Sn	11 16 34.5	-0.5
	comp=N,1.8nm,0.3s,baz=354,slow=20,SNR=1.5						
IDI				LR	LR	11 17 42.6	
	comp=N,32nm,21.0s,baz=325,slow=46						
VAY	Valandovo	4.14	312	iPn	Pg	11 16 14.5	-1.2
VAY				eSn	Sg	11 17 09.3	0.0
STIP	Stip	4.60	313	iPn	Pn	11 16 05.1	-0.6
VTS	Vitosha	4.76	328	⇑P	Pn	11 16 08.5	+0.4
BOSS	Bosilegrad	5.01	322	ePn	Pn	11 16 12.6	+1.3
PRVS	Prvonek	5.22	319	ePn	Pn	11 16 15.1	+0.9
BRTR	Keskin Array B	5.53	76	Pn	Pn	11 16 20.7	+2.1
	comp=N,1.0nm,0.3s,baz=256,slow=14,SNR=12						
BRTR				Sn	Sn	11 17 21.6	-0.5
	comp=N,0.6nm,0.3s,baz=254,slow=23,SNR=1.5						
BRTR				Lg	Lg	11 17 53.2	
	comp=N,0.2nm,0.3s,baz=264,slow=26,SNR=6.0						
BRTR				LR	LR	11 18 58.1	
	comp=N,102nm,18.3s,baz=290,slow=44						
ZAPS	Zavoj	5.55	328	ePn	Pn	11 16 19.9	+1.1
BARS	Barje	5.57	320	ePn	Pn	11 16 19.6	+0.5
TIRR	Tirgusor	5.97	12	⇑P	Pn	11 16 24.2	-0.3
TLBR	Topalu	6.00	9	⇑P	Pn	11 16 25.4	+0.5
ZAGS	Zajecar	6.16	329	ePn	Pn	11 16 26.9	-0.3
SELS	Selova	6.22	319	ePn	Pn	11 16 29.7	+1.8
BOVS	Bovan	6.25	325	⇑P	Pn	11 16 28.9	+0.6
BOVS	Bovan	6.25	325	ePn	Pn	11 16 28.5	+0.2
TPGR	Topolog	6.36	11	⇓P	Pn	11 16 29.6	-0.3
CFR	Carcaliu	6.64	9	⇓P	Pn	11 16 32.8	-0.8
MLR	Muntele Rosu	6.88	356	⇑P	Pn	11 16 38.2	+1.1
MLR	Muntele Rosu	6.88	356	Pn	Pn	11 16 38.2	+1.1

	comp=N,0.5nm,0.3s,baz=268,slow=11,SNR=9.1						
MLR				Sn	Sn	11 17 55.9	+0.6
	comp=N,0.9nm,0.3s,baz=54,slow=23,SNR=1.7						
MLR				Lg	Lg	11 18 35.0	
	comp=N,0.3nm,0.3s,baz=277,slow=16,SNR=2.4						
VOIR		6.91	351	⇑P	Pn	11 16 37.2	-0.3
IVAS	Ivanjica	6.97	317	*e*Pn	Pn	11 16 38.3	0.0
HERR	Herculane	7.01	334	⇑P	Pn	11 16 37.9	-0.8
PLOR	Plostina	7.22	360	⇑P	Pn	11 16 42.7	+1.0
VRI	Vrincioaia	7.23	0	⇑P	Pn	11 16 42.2	+0.3
GZR	Gura Zlata	7.35	338	⇑P	Pn	11 16 42.9	-0.7
DOPR	Dopca	7.40	353	⇑P	Pn	11 16 44.6	+0.5
OZUR		7.49	355	⇑P	Pn	11 16 46.2	+0.7
TESR	Tescani	7.88	360	⇑P	Pn	11 16 51.2	+0.5
BZS	Buzias	7.93	333	⇑P	Pn	11 16 51.1	-0.2
MMAI	Mount Meron Ar	9.04	126	Pn	Pn	11 17 06.5	-0.2
	comp=N,1.7nm,0.3s,baz=316,slow=12,SNR=7.2						
MMAI				Sn	Sn	11 18 43.5	-4.8
	comp=N,0.6nm,0.3s,baz=193,slow=24,SNR=1.3						
MMAI				LR	LR	11 21 14.1	
	comp=N,34nm,19.4s,baz=350,slow=42						
BURAR	Bucovina Array	9.04	354	⇓P	Pn	11 17 06.9	+0.1
EIL	Elat	11.26	140	Pn	Pn	11 17 37.2	+0.1
	comp=N,0.3nm,0.3s,baz=232,slow=12,SNR=1.8						
EIL				Sn	Sn	11 19 35.6	-7.2
	comp=N,0.3nm,0.3s,baz=39,slow=19,SNR=2.0						
GERES	GERESS Array B	13.84	322	Pn	Pn	11 18 15.6	+3.3
	comp=N,0.1nm,0.3s,baz=128,slow=13,SNR=2.1						
GERES				Sn	Sn	11 20 48.1	+2.2
	comp=N,0.1nm,0.3s,baz=295,slow=38,SNR=1.8						
GNI	Garni	14.07	78	LR	LR	11 23 48.9	
	comp=N,58nm,18.9s,baz=304,slow=38						
HFS	Hagfors	23.04	343	LR	LR	11 29 20.5	
	comp=N,54nm,19.1s,baz=284,slow=38						
ESDC	Sonseca Array	23.72	282	P	P	11 20 10.5	+2.3
	comp=N,0.6nm,0.6s,baz=64,slow=12,SNR=2.5						
NOA	NORSAR Array B	24.42	342	LR	LR	11 30 48.1	
	comp=N,25nm,19.6s,baz=0.0,slow=39						
BORG	Borgarnes	38.15	329	LR	LR	11 38 17.0	
	comp=N,20nm,18.7s,baz=303,slow=37						
MKAR	Makanchi Array	40.93	60	P	P	11 22 41.3	+2.8
	comp=N,0.6nm,0.8s,baz=278,slow=10.0,SNR=2.5						

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*IDC **19** 11:48:25.1±2.5, 34°.41N×134°.06E, h0^{km}, mb3.2/1, mb1 3.3/4, mb1mx2.8/40, mbtmp3.2/4, ML3.1/3, Error ellipse: s-maj=40.8km s-min=24.7km az=164.0*
*JMA **19** 11:48:26.5, 34°.65N×134°.26E, h12^{km}, M3.8*
JMA Felt II J1.
*NIED **19** 11:48:26.5, 34°.65N×134°.26E, h12^{km}, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.13; $M_{\theta\theta}$1.25; $M_{\phi\phi}$-1.13; $M_{r\theta}$-0.36; $M_{\theta\phi}$-0.06; $M_{\phi r}$0.47; Fault plane solution: $M_0 1.34000\times10^{14}$ NP1: ϕ_s135.00000°, δ85.00000°, λ-27.00000°. NP2: ϕ_s228.00000°, δ63.00000°, λ-174.00000°.*
ISC 19 11:48:25.9±1.0**, 34°.66N**±0°.03×**134°.26E**±0°.03**, h12**^{km}±9^{km}**, n13,** $\sigma 1^{s}.$**15**/24**, 4C-4D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAD	Aida	0.29	346	⇑P	Pb	11 48 32.6	-0.5
JAD				S	Sb	11 48 36.8	-1.1
JJS	Sakaide	0.39	224	⇓P	Pg	11 48 34.2	+0.6
JJS				S	Sg	11 48 39.5	+0.7
JAWN	Awajishima-nag	0.56	108	⇓P	Pg	11 48 37.2	+0.4
JAWN				S	Sg	11 48 44.9	+0.6
JKS	Kasai	0.58	56	⇓P	Pg	11 48 37.6	+0.3
JKS				S	Sg	11 48 45.4	+0.4
JAI	Aioi	0.88	169	⇑P	Pg	11 48 43.1	+0.3
JAI				S	Sg	11 48 54.5	+0.2
JMN	Monobe	0.98	199	⇑P	Pg	11 48 44.6	-0.1
JKSM	Kasumi	0.99	20	⇑P	Pg	11 48 44.7	-0.2
JKSM				S	Sb	11 48 58.3	+0.4
JHS	Saijyo	1.00	290	⇓P	Pg	11 48 44.7	-0.4
JHS				S	Sg	11 48 57.9	-0.2
JNU	Nakatsue	3.20	242	Pn	Pn	11 49 14.6	-1.4
	10.0nm,0.3s,baz=95,slow=6.2,SNR=21						
JNU				Sn	Sn	11 49 55.0	+0.9
	2.0nm,0.3s,baz=346,slow=5.0,SNR=1.9						
MAT	Matsushiro	3.73	59	P	Pn	11 49 24.8	+1.5
MAT				*e*S	Sb	11 50 14.8	-2.0
MJAR	Matsushiro Arr	3.73	59	Pn	Pb	11 49 29.1	-2.6
	0.2nm,0.3s,baz=236,slow=14,SNR=3.7						
MJAR				Sn	Sb	11 50 17.8	+0.9
	0.4nm,0.3s,baz=235,slow=36,SNR=2.2						
KSRS	Korea Array	5.84	300	Pn	Pn	11 49 54.2	+2.0
	0.4nm,0.3s,baz=117,slow=14,SNR=6.9						
KSRS				Sn	Sn	11 51 00.3	+1.3
	0.6nm,0.3s,baz=117,slow=24,SNR=7.4						
SONM	Songino Array	24.59	311	P	P	11 53 45.7	-0.1
	0.2nm,0.3s,baz=104,slow=9.1,SNR=2.3						

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*NNC **19** 11:53:04.6±3.1, 46°.37N×90°.08E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=23.4km s-min=18.4km az=65.0*
ISC 19 11:53:00.1±2.5**, 46°.36N**±0°.08×**90°.4E**±0°.1**, h10**^{km}**, n12,** $\sigma 2^{s}.$**30**/21**, 7C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGZ	Jazzator, Alta	3.90	330	Pg	Pb	11 54 10.1	+1.1
DGZ				Sg	Sg	11 55 05.7	+0.5
CUR	Chagan-Uzun	3.99	340	Pg	Pg	11 54 14.9	-1.6
CUR				Sg	Sg	11 55 08.4	+0.3
AKAR	Aktash	4.38	336	Pg	Pg	11 54 21.7	-2.2
AKAR				Sg	Sg	11 55 20.6	-0.1
ULGR	Ulagan, Altay	4.57	340	Pg	Pg	11 54 25.7	-1.8
ULGR				Sg	Sg	11 55 25.8	-0.8
MK31	Makanchi Array	5.62	277	⇓Pn	Pn	11 54 24.9	+1.2
	0.3nm,0.3s,baz=97,slow=13,SNR=16						
MK31				⇑Pg	Pg	11 54 43.1	-4.6
	0.6nm,0.3s,baz=92,slow=19,SNR=5.8						
MK31				⇓Sn	Sn	11 55 30.4	+2.1
	1.2nm,0.3s						
MK31				⇓Lg	Lg	11 55 56.1	
	3.7nm,0.5s,baz=88,slow=30,SNR=5.2						
ARTR	Artybash	5.82	340	Pg	Pg	11 54 49.2	-2.3
ARTR				Sg	Sg	11 56 05.6	-1.2
MAKZ	Makanchi	5.84	277	⇓Pn	Pn	11 54 31.6	+4.9
	4.9nm,1.1s						
MAKZ				⇑Lg	Lg	11 56 00.6	
	10nm,0.8s						
UKR	Ust'-Kan	5.91	323	Pg	Pg	11 54 49.2	-4.1
UKR				Sg	Sg	11 56 10.6	+0.8
TASR	Tashtagol	6.61	346	Pg	Pg	11 55 03.0	-3.6
TASR				Sg	Sg	11 56 32.4	+0.2
PDGK	Podgornoye	8.34	253	⇑Pn	Pn	11 55 02.3	+1.2
	4.9nm,1.1s						
PDGK				⇓Sn	Sn	11 56 37.3	+2.0
	4.0nm,0.8s						
PDGK				⇑Lg	Lg	11 57 24.6	
	3.9nm,0.6s						
KURK	Kurchatov	8.96	303	⇓Sn	Sn	11 56 53.4	+3.2
	2.9nm,0.8s						
KURK				⇑Lg	Lg	11 57 42.2	
	9.1nm,0.7s						
KURBB	Kurchatov Arra	8.97	303	⇑Sn	Sn	11 56 52.0	+1.4
	8.8nm,0.8s						
KURBB				⇑Lg	Lg	11 57 43.2	
	18nm,0.7s						

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*VAO **19** 12:07:36.5±1.1, 3°.28S×79°.42W, h10^{km}, mb4.7*
*IDC **19** 12:07:44.9±0.6, 2°.80S×79°.12W, h78^{km}±5^{km}, mb3.7/14, mb1 3.9/20, mb1mx3.9/36, mbtmp4.1/20, MS3.4/4, Ms1 3.4/4, ms1mx2.9/29, Error ellipse: s-maj=17.7km s-min=11.2km az=61.0*
*NEIC **19** 12:07:45.6±1.9, 2°.86S±0°.04×79°.1W±0°.1, h78^{km}±6^{km}, mb4.5/22, Error ellipse: s-maj=17.1km s-min=4.1km az=79.0*
*IGQ **19** 12:07:46±0.2, 3°S±1°×7°9W±°, h38^{km}*
ISC 19 12:07:43.8±0.5**, 2°.96S**±0°.04×**79°.28W**±0°.04**, h73**^{km}±4^{km}**, n185,** $\sigma 1^{s}.$**41**/203**, mb4.4**/23**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACUE	Ecuador-Cuenca	0.32	81	P	Pn	12 07 56.0	+0.1
ACUE				S	Sn	12 08 06.0	+1.3
COHC	Cochancay	0.49	3	P	Pn	12 07 56.0	-0.8
COHC				S	Sn	12 08 06.0	-0.4
ACH2	Ecuador-Machal	0.61	240	P	Pn	12 07 57.0	-1.0
ACH2				S	Sn	12 08 08.0	-0.4
ACH1	Ecuador-Univer	0.71	243	P	Pn	12 07 58.0	-1.0
BOSC	San Juan Bosco	0.81	104	P	Pn	12 08 02.0	+1.7
BOSC				S	Sn	12 08 14.0	+1.5
AMIL	Milagro (Trans	0.88	339	P	Pn	12 08 00.0	-1.0
AMIL				S	Sn	12 08 12.0	-1.7
ARNL	Arenillas	0.98	233	P	Pn	12 08 02.0	-0.2
ARNL				S	Sn	12 08 16.0	+0.1
GONZ	Gonzanam	1.27	185	P	Pn	12 08 08.0	+1.7
GONZ				S	Sn	12 08 25.0	+1.8
SANGA	Volcan Sangay	1.28	45	P	Pn	12 08 07.0	+0.6
SANGA				S	Sn	12 08 24.0	+0.6
LOJ1	Universidad t	1.37	138	P	Pn	12 08 05.0	-2.4
TAMH	Tambohuasha Ch	1.49	20	P	Pn	12 08 10.0	+0.7
CHSH	Refugio Sur-Vo	1.51	16	P	Pn	12 08 10.0	+0.4
CHSH				S	Sn	12 08 28.0	-1.0
MCRA	Macar, Loja	1.55	206	P	Pn	12 08 10.0	+0.3
MCRA				S	Sn	12 08 29.0	-0.2
PORT	Chimborazo Vol	1.57	19	P	Pn	12 08 11.0	+0.6
PORT				S	Sn	12 08 31.0	+0.7
IGUA	Igualata	1.59	24	P	Pn	12 08 12.0	+1.3
BMAS	Trigal station	1.65	29	P	Pn	12 08 12.0	+0.7
ARRY	Arrayan	1.66	30	P	Pn	12 08 12.0	+0.6
BPAT	Tungurahua Vol	1.68	30	P	Pn	12 08 13.0	+1.3
BPAT				S	Sn	12 08 34.0	+1.3
BIL2	Estacion Bilba	1.68	27	P	Pn	12 08 14.0	+2.4
BBIL	Ulba Tungurahu	1.70	28	P	Pn	12 08 13.0	+1.2
RETU	Refugio	1.71	29	P	Pn	12 08 13.0	+0.8
JUI6	Juive	1.73	28	P	Pn	12 08 13.0	+0.8
BRUN	Tungurahua Vol	1.76	30	P	Pn	12 08 14.0	+1.4
PUYO	Puyo, Santa Ro	1.92	41	P	Pn	12 08 15.0	+0.4
PIS1	Pisayambo	2.09	25	P	Pn	12 08 18.0	+0.8
BRRN	Barrancas-Volc	2.31	20	P	Pn	12 08 21.0	+0.9
SRAM	San Ramn-Vol	2.31	18	P	Pn	12 08 21.0	+0.9
VCES	Cotopaxi	2.32	22	P	Pn	12 08 21.0	+0.6
PAST	Pastocalle	2.34	16	P	Pn	12 08 23.0	+2.5
SLOR	San Lorenzo -	2.35	19	P	Pn	12 08 22.0	+1.3
BMOR	Cotopaxi Volca	2.36	20	P	Pn	12 08 22.0	+1.1
CAMI	Rancho Maria	2.40	19	P	Pn	12 08 23.0	+1.7
BNAS	Cotopaxi Volca	2.41	19	P	Pn	12 08 23.0	+1.5
BREF	Cotopaxi Volca	2.42	20	P	Pn	12 08 23.0	+1.1
TAMB	Tambo	2.43	22	P	Pn	12 08 23.0	+1.2
SUCR	Mariscal Sucre	2.43	19	P	Pn	12 08 23.0	+1.2
BTAM	Cotopaxi Volca	2.44	21	P	Pn	12 08 23.0	+1.1
NAS2	Nasa	2.44	19	P	Pn	12 08 24.0	+2.1
BVC2	Cotopaxi Volca	2.45	21	P	Pn	12 08 23.0	+0.9
ISPT	Isla de la Pla	2.46	313	P	Pn	12 08 22.0	+0.2
VC1	Cotopaxi 1	2.46	21	P	Pn	12 08 24.0	+1.7
TOMA	Boca Toma-Volc	2.59	19	P	Pn	12 08 25.0	+1.1
ANTM	Antisana-La Mi	2.63	24	P	Pn	12 08 25.0	+0.5
ANTG	Antisana-Guama	2.65	23	P	Pn	12 08 26.0	+1.2
ANTS	Antisana-Sarah	2.69	24	P	Pn	12 08 27.0	+1.6
ANTI	Antisana	2.73	24	P	Pn	12 08 27.0	+1.0
HPAL	Hacienda Las P	2.79	13	P	Pn	12 08 28.0	+1.4
GGPT	Toaza - Volcan	2.80	14	P	Pn	12 08 28.0	+1.3
CAB1	Cabo Pasado-Ma	2.80	336	P	Pn	12 08 27.0	+0.6
CABP	Cabo Pasado	2.80	336	P	Pn	12 08 27.0	+0.6
JUA2	San Juan 2	2.81	14	P	Pn	12 08 28.0	+1.1
JAMA	Jama	2.84	341	P	Pn	12 08 27.0	+0.1
GGPC	Guagua Pichinc	2.84	14	P	Pn	12 08 30.0	+2.5
TERV	Terraza Guagua	2.85	14	P	Pn	12 08 29.0	+1.5
PINO	Pino	2.86	14	P	Pn	12 08 29.0	+1.2
YANA	Yana	2.91	14	P	Pn	12 08 29.0	+0.7
MAG1	Magdalena	2.91	350	P	Pn	12 08 27.0	-0.9
BV15	Puerto Quito-O	3.10	1	P	Pn	12 08 29.0	-1.4
PAC1	Pacto, Paraso	3.24	9	P	Pn	12 08 33.0	+0.5
OTAV	Otavalo	3.28	15	*e*P	Pn	12 08 32.0	-1.4
OTAV	Otavalo	3.28	15	*e*P	Pn	12 08 34.6	+1.3
OTAV	Otavalo	3.28	15		Pn	12 08 34.6	+1.3
LAV4	Lava4-Reventad	3.29	30	P	Pn	12 08 34.0	+0.7
REVN	San Rafael	3.31	30	P	Pn	12 08 35.0	+1.5
CUSW	Cuicocha Oeste	3.35	16	P	Pn	12 08 37.0	+2.7
CUSE	Cuicocha Este	3.36	15	P	Pn	12 08 37.0	+2.6
CUIC	Cuicocha-Domo	3.37	16	P	Pn	12 08 36.0	+1.5
IMBA	Imbabura, San	3.39	19	P	Pn	12 08 37.0	+2.2
YAHU	Yahuarcocha	3.52	20	P	Pn	12 08 38.0	+1.5
URCU	Urcuqui	3.53	17	P	Pn	12 08 38.0	+1.4
TULM	Tulcn-Chalpat	3.94	22	P	Pn	12 08 44.0	+1.6
CHL1	Volc¡n Chiles	3.96	20	P	Pn	12 08 44.0	+1.4
CHL2	Volc¡n Chiles	3.98	20	P	Pn	12 08 45.0	+2.1
ECEN	Cerro Negro	3.98	19	P	Pn	12 08 44.0	+1.1
CHMA	Chilma	3.99	18	P	Pn	12 08 43.0	+0.2
ATAH	Atahualpa	4.24	168	P	Pn	12 08 49.2	+2.9
	9.1nm,0.3s,baz=14,slow=8.7,SNR=46						
ATAH				S	Sn	12 09 36.9	+2.1
	14nm,0.3s,baz=337,slow=7.7,SNR=6.5						
CCUFI	Cufio, Nario	4.59	25	*e*P	Pn	12 08 50.1	-1.1
GCUF	Volcan Galeras	4.59	25	*e*P	Pn	12 08 52.9	+1.7
TUMC	Tumaco	4.78	7	*e*P	Pn	12 08 55.8	+2.4
TUMC	Tumaco	4.78	7	Pn	Pn	12 08 54.2	+0.8
BBAC	Balboa, Cauca	5.35	22	*e*P	Pn	12 09 00.6	-0.8
PTLC	Puerto Leguiza	5.45	55	*e*P	Pn	12 08 57.7	-4.9
PTLC	Puerto Leguiza	5.45	55	P	Pn	12 08 58.0	-4.6
SOTA	Rioblanco	5.72	28	*e*P	Pn	12 09 09.2	+2.5
FLOC	Florencia	5.79	39	*e*P	Pn	12 09 06.1	-1.1
FLOC	Florencia	5.79	39	Pn	Pn	12 09 06.1	-1.1
PCON	Cinco Dias	5.99	29	*e*P	Pn	12 09 12.1	+1.6
POPC	Popayan, Colom	6.05	25	*e*P	Pn	12 09 10.1	-0.8
GARC	Garzon, Huila	6.36	37	*e*P	Pn	12 09 14.0	-1.3
MACC	Macarena, Meta	7.43	47	*e*P	Pn	12 09 28.3	-1.3
YOTC	Yotoco, Valle	7.50	23	*e*P	Pn	12 09 33.0	+2.5
ORTC	Ortega, Tolima	7.92	31	*e*P	Pn	12 09 37.8	+1.4
PRAC	Prado	7.95	34	*e*P	Pn	12 09 37.8	+1.0
CZSB	Cruzeiro do Su	8.08	126	*e*P	Pn	12 09 36.0	-2.5
CZSB	Cruzeiro do Su	8.08	126	Pn	Pn	12 09 38.3	-0.2
PLMC	San Jos del P	8.37	21	*e*P	Pn	12 09 40.1	-2.3
ROSC	El Rosal	9.20	33	P	Pn	12 09 54.1	0.0
	1.3nm,0.3s,baz=307,slow=20,SNR=1.3						
ROSC				LR	LR	12 13 49.8	
	comp=Z,236nm,21.6s,baz=243,slow=41						
NNA	Nana	9.29	165	P	Pn	12 09 56.1	+1.1
	13nm,0.3s,baz=307,slow=11,SNR=16						
NNA				S	Sn	12 11 36.2	-1.8
	26nm,0.3s,baz=0.0,slow=7.1,SNR=14						
NNA	Nana	9.29	165		Pn	12 09 56.8	+1.8
CBOC	Ciudad Bolivar	9.35	20	*e*P	Pn	12 09 58.8	+2.8
CHIC	Chingaza	9.36	36	*e*P	Pn	12 09 57.9	+1.6
TBTG	Tabatinga, AM	9.43	98	*e*P	Pn	12 09 52.1	-4.8
TBTG	Tabatinga, AM	9.43	98	*e*P	Pn	12 09 54.8	-2.2
TBTG	Tabatinga, AM	9.43	98	Pn	Pn	12 09 55.0	-2.0
ZARC	Zaragoza, Cauc	11.28	23		Pn	12 10 25.0	+2.7
SJCC	San Jacinto, C	13.41	18		Pn	12 10 49.2	-1.9
ETMB	Extrema	14.66	118	*e*P	Pn	12 11 03.5	-4.0
ETMB	Extrema	14.66	118	Pn	Pn	12 11 03.4	-4.0
BAUV	El Baul	16.29	43	Pn	Pn	12 11 27.1	-1.1
SAML	Samuel	17.07	111	Pn	Pn	12 11 34.8	-3.1
SAML				IAmb	IAmb	12 11 43.4	
	comp=Z,20nm,0.6s						
LPAZ	La Paz	17.20	141	P	P	12 11 39.6	-0.9
	comp=Z,0.2nm,0.3s,baz=0.0,slow=4.0,SNR=2.5						
MACA	Manacapuru-AM	18.57	91	*e*P	P	12 11 55.0	-0.1
MACA	Manacapuru-AM	18.57	91	P	P	12 11 54.0	-1.2
PTGA	Pitinga	19.43	84	P	P	12 12 04.0	-0.5
	comp=Z,1.7nm,0.3s,baz=277,slow=10,SNR=17						
PTGA				S	S	12 15 35.4	-5.2
	comp=Z,0.3nm,0.3s,baz=305,slow=23,SNR=1.8						
PTGA				LR	LR	12 20 09.6	
	comp=Z,82nm,19.1s,baz=320,slow=39						
BOAV	Boa Vista	19.49	74	*e*P	Pn	12 12 06.2	-0.8
BOAV	Boa Vista	19.49	74	P	P	12 12 03.3	-1.9
BOAV				IAmb	IAmb	12 12 10.6	
	comp=Z,14nm,0.8s						
PCRV	Puerto La Cruz	19.57	48	P	P	12 12 05.1	-0.9
	comp=Z,1.0nm,0.3s,baz=284,slow=2.4,SNR=2.4						
VILB	Vilhena	21.32	119	*e*P	P	12 12 24.3	-0.7
VILB	Vilhena	21.32	119		P	12 12 25.4	+0.5
VILB				IAmb	IAmb	12 12 30.3	
	comp=Z,24nm,0.7s						
LVC	Limon Verde	21.97	154	P	P	12 12 35.1	+3.0
	comp=Z,14nm,1.2s,baz=286,slow=17,SNR=1.8						
SIV	San Ignacio	22.11	127	P	P	12 12 34.8	+1.4
	comp=Z,3.1nm,0.6s,baz=309,slow=12,SNR=10						
TOSP	Speyside	23.42	52	P	P	12 12 44.3	-2.4
ITTB	Itaituba	23.54	94	*e*P	P	12 12 47.3	-0.5
PDRB	Porto dos Gac	23.94	112	*e*P	P	12 12 51.4	0.0
NPGB	Novo Progresso	24.17	101	*e*P	P	12 12 53.4	-0.1
CLDB	Colider	24.58	110	*e*P	P	12 12 57.5	+0.2
PDPR	Patillas Dam,	24.60	32	P	P	12 12 56.8	-0.5
PDPR				IAmb	IAmb	12 12 58.5	
	comp=Z,18nm,0.9s						
MALB	Monte Alegre	25.02	88	*e*P	P	12 13 01.1	-0.1
SALV	Santo Antonio	26.54	120	*e*P	P	12 13 15.5	+0.6
MCPB	Macapa, AP	27.33	85	*e*P	P	12 13 23.4	+1.3
MDP	Montagnes des	27.79	73	P	P	12 13 24.3	-1.9
	comp=Z,11nm,0.6s,baz=257,slow=8.7,SNR=10						
MDP				LR	LR	12 25 12.4	
	comp=Z,67nm,20.9s,baz=300,slow=38						
PRPB	Parauapebas	29.54	97	*e*P	P	12 13 41.9	+0.1
ARAG	Araguaiana, MT	29.86	117	*e*P	P	12 13 44.7	+0.1
PEXB	Peixe	31.99	108	*e*P	P	12 14 03.5	+0.1
SMTB	Santa Maria do	32.05	102	*e*P	P	12 14 04.1	+0.2
NBPS	Pedro II - PI	37.78	93	*e*P	P	12 14 53.3	-0.1
PLCA	Paso Flores	38.42	169	P	P	12 14 59.9	+1.5
	comp=Z,2.6nm,0.6s,baz=344,slow=7.9,SNR=11						
PLCA	Paso Flores	38.42	169	P	P	12 15 00.4	+2.0
PLCA				IAmb	IAmb	12 15 01.6	
	comp=Z,14nm,1.4s						
TXAR	Lajitas Array	39.72	326	P	P	12 15 10.6	+1.2
	comp=Z,0.4nm,0.8s,baz=144,slow=11,SNR=4.8						
TXAR				PcP	PcP	12 17 15.8	+1.0
	comp=Z,0.8nm,0.7s,baz=147,slow=7.3,SNR=8.2						
TXAR	Lajitas Array	39.72	326	P	P	12 15 10.1	+0.7
SJMB	Sao Joao De Ma	40.42	116	*e*P	P	12 15 15.0	-0.3
BSFB	Barra de Sao F	40.76	116	*e*P	P	12 15 17.6	-0.5
NBLA	Lagarto - SE	41.91	103	*e*P	P	12 15 27.2	-0.4
NBLV	Livramento - P	42.40	98	*e*P	P	12 15 31.7	+0.1
NBAN	Anadia - AL	43.23	101	*e*P	P	12 15 38.3	+0.1
ANMO	Albuquerque	45.53	328	P	P	12 15 58.3	+1.8
WUAZ	Wupatki	48.66	325	P	P	12 16 22.1	+1.2
WUAZ				IAmb	IAmb	12 16 24.3	
	comp=Z,7.6nm,1.1s						
ECSD	EROS Data Cent	49.03	343	P	P	12 16 23.3	0.0
ECSD				IAmb	IAmb	12 16 51.5	
	comp=Z,2.4nm,0.8s						
E62A	Clayton Lake	50.12	9	P	P	12 16 32.5	+0.9
PDAR	Pinedale Array	53.10	332	P	P	12 16 54.5	+0.3
	comp=Z,0.7nm,0.6s,baz=127,slow=9.1,SNR=8.4						
PDAR	Pinedale Array	53.10	332	P	P	12 16 54.3	+0.1
NVAR	Mina Array Bea	54.72	323	P	P	12 17 06.9	+0.8
	comp=Z,0.6nm,0.5s,baz=122,slow=6.6,SNR=6.7						
NVAR				pP	pP	12 17 26.9	+1.5
	comp=Z,0.5nm,0.5s,baz=134,slow=7.4,SNR=2.9						
GCMT	Greycliff	55.52	335	P	P	12 17 12.5	+0.9
WVOR	Wild Horse Val	57.51	326	P	P	12 17 26.4	+0.6
WVOR				IAmb	IAmb	12 17 50.6	
	comp=Z,5.9nm,1.4s						
K05A	Summer Lake	58.97	325	P	P	12 17 36.8	+0.7
EDM	Edmonton	62.84	338	P	P	12 18 01.6	-0.3
EDM				IAmb	IAmb	12 18 02.7	
	comp=Z,6.3nm,0.9s						
YKA	Yellowknife Ar	70.56	343	P	P	12 18 48.8	-1.9
	comp=Z,0.2nm,0.5s,baz=143,slow=5.5,SNR=6.7						
YKA				pP	PcP	12 19 10.1	-1.4
	comp=Z,1.1nm,0.8s,baz=139,slow=5.4,SNR=7.7						
LIC	Lamto	74.69	83	*e*P	P	12 19 13.7	-2.6
	comp=Z,15nm,1.1s						
TIC	Toumodi	74.74	82	*e*P	P	12 19 15.0	-1.6
DBIC	Dimbokro	74.90	82	P	P	12 19 17.2	-0.3
	comp=Z,2.7nm,0.6s,baz=253,slow=5.3,SNR=6.1						
DBIC				LR	LR	12 50 25.7	
	comp=Z,33nm,19.8s,baz=352,slow=34						
DBIC	Dimbokro	74.90	82	P	P	12 19 17.3	-0.3
DBIC				IAmb	IAmb	12 19 33.8	
	comp=Z,7.5nm,1.2s						
KIC	Kosan Boka	74.99	83	*e*P	P	12 19 16.7	-1.3
	comp=Z,14nm,0.8s						
RES	Resolute Bay	78.10	356	P	P	12 19 35.9	+1.5
ESDC	Sonseca Array	80.63	49	P	P	12 19 48.7	-0.3
	comp=Z,1.0nm,0.9s,baz=297,slow=5.6,SNR=2.2						
VNA3	Neumayer Olymp	80.73	162	P	P	12 19 50.2	+1.4
VNA1	Neumayer--Stat	80.99	161	P	P	12 19 51.2	+1.1
VNA2	Neumayer--Watz	81.34	162	P	P	12 19 53.1	+1.1
	baz=293,slow=7.9						
TORD	Torodi Ar. Bea	81.89	76	P	P	12 19 55.4	-0.6
	comp=Z,0.9nm,0.4s,baz=274,slow=6.6,SNR=11						
TORD				pP	pP	12 20 16.4	-0.4
	comp=Z,1.9nm,1.0s,baz=283,slow=6.3,SNR=5.8						
TORD	Torodi Ar. Bea	81.89	76	P	P	12 19 55.4	-0.6
SNAA	Sanae	82.95	162	P	P	12 20 01.3	+0.9
SNAA	Sanae	82.95	162	P	P	12 20 01.4	+0.9
	comp=Z,0.6nm,0.5s,baz=275,slow=6.5,SNR=8.1						
SNAA	Sanae	82.95	162	P	P	12 20 01.2	+0.7
ILAR	Eielson Array	83.30	336	P	P	12 20 01.9	-0.4
	comp=Z,0.6nm,0.8s,baz=123,slow=3.6,SNR=5.3						
ILAR				pP	pP	12 20 23.4	+0.7
	comp=Z,0.8nm,0.8s,baz=127,slow=4.8,SNR=5.2						
BMAR	Burnt Mountain	83.47	339	P	P	12 20 03.4	+0.2
CAST	Castle Rocks	85.01	334	P	P	12 20 10.8	-0.2
CAST				IAmb	IAmb	12 20 24.6	
	comp=Z,8.9nm,1.4s						
IMAR	Indian Mountai	86.41	337	P	P	12 20 17.7	-0.2
QSPA	South Pole Qui	87.11	180	P	P	12 20 23.3	+1.8
	comp=Z,3.7nm,0.8s,baz=178,slow=1.3,SNR=19						
QSPA	South Pole Qui	87.11	180	P	P	12 20 22.9	+1.4
QSPA				IAmb	IAmb	12 20 24.4	
	comp=Z,6.0nm,1.0s						
MKAR	Makanchi Array	133.49	17	PKP	PKPdf	12 26 51.1	-1.0
	comp=Z,0.4nm,0.8s,baz=357,slow=2.9,SNR=1.9						
MKAR				pPKP	pPKPdf	12 27 14.6	+0.4
	comp=Z,0.3nm,0.5s,baz=254,slow=4.0,SNR=1.9						
MKAR	Makanchi Array	133.49	17		PKPdf	12 26 52.3	+0.3
SONM	Songino Array	135.03	355	PKP	PKPdf	12 26 55.1	0.0
	comp=Z,0.1nm,0.4s,baz=20,slow=4.6,SNR=2.5						
KSRS	Korea Array	137.55	327	PKP	PKPdf	12 27 00.5	+0.7
	comp=Z,0.5nm,0.6s,baz=35,slow=2.3,SNR=4.2						
ASAR	Alice Springs	138.24	229	PKP	PKPdf	12 27 00.5	-1.1
	comp=Z,0.7nm,0.8s,baz=115,slow=2.2,SNR=5.4						
ASAR	Alice Springs	138.24	229		PKPdf	12 27 00.9	-0.7
WRA	Warramunga Arr	139.91	234	PKP	PKPdf	12 27 04.7	0.0
	comp=Z,0.6nm,0.5s,baz=135,slow=2.6,SNR=8.6						

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*NEIC **19** 12:12:13.7±1.8, 16°.37S±0°.06×71°.1W±0°.2, h53^{km}±11^{km}, mb4.1/3, ML4.3(ARE), Error ellipse: s-maj=24.4km s-min=6.0km az=75.0*
*ARE **19** 12:12:16±4.9, 16°.77S±0°.06×70°.6W±0°.1, h17^{km}±6^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=164.0*
*IDC **19** 12:12:27.7±4.2, 16°.61S×70°.22W, h91^{km}±36^{km}, mb3.4/5, mb1 3.6/7, mb1mx3.4/30, mbtmp3.7/7, MS2.7/3, Ms1 2.7/3, ms1mx2.6/13, Error ellipse: s-maj=48.7km s-min=26.3km az=70.0*
ISC 19 12:12:17.2±0.9**, 16°.73S**±0°.06×**70°.81W**±0°.10**, h10**^{km}**, n29,** $\sigma 1^{s}.$**84**/34**, mb4.0**/6**, 1C-1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	Chacalluta	1.69	165	*e*P	Pn	12 12 44.3	-2.5
AP01				*e*S	Sn	12 13 06.0	-2.4
AP01				IAML		12 13 10.1	
	comp=N,2µm,0.9s						
AP01	Chacalluta	1.69	165	Pn	Pn	12 12 44.5	-2.2
PB12	IPOC Station P	1.93	166	⇑*i*P	Pn	12 12 48.3	-1.8
PB12				⇓*i*S	Sn	12 13 12.5	-1.9
PB12				IAML		12 13 14.5	
	comp=E,1µm,0.8s						
PB12	IPOC Station P	1.93	166		Pn	12 12 48.3	-1.8
PB16	IPOC Station P	2.02	142	*e*P	Pn	12 12 49.3	-2.6
PB16	IPOC Station P	2.02	142		Pn	12 12 50.2	-1.6
LPAZ	La Paz	2.60	81	P	Pn	12 13 01.2	+1.2
	comp=E,8.0nm,0.3s,baz=257,slow=12,SNR=52						
LPAZ				LR	LR	12 13 27.7	
	comp=E,78nm,19.8s,baz=262,slow=30						
LPAZ				S	Sn	12 13 32.5	+0.5
	comp=E,5.6nm,0.3s,baz=24,slow=15,SNR=1.7						
PB11	IPOC Station P	3.20	160	*e*P	Pn	12 13 06.9	-0.9
PB11				*i* S	Sn	12 13 50.0	+3.9
PB11				IAML		12 13 52.0	
	comp=N,446nm,0.6s						
PB11	IPOC Station P	3.20	160		Pn	12 13 08.0	+0.2
PB11				Sn	Sn	12 13 48.9	+2.8
TA02	Huaiquique	3.58	170		Pn	12 13 13.3	+0.6
TA02				Sn	Sn	12 13 56.9	+1.9
HMBC	Humberstone	3.63	166	*e*P	Pn	12 13 12.8	-0.9
HMBC				*e*S	Sn	12 13 57.0	+0.4
PB08	IPOC Station P	3.73	155	*e*P	Pn	12 13 16.1	+0.8
PB08				IAML		12 14 06.6	
	comp=N,122nm,0.5s						
PB08	IPOC Station P	3.73	155		Pn	12 13 16.8	+1.5
PB08				Sn	Sn	12 14 02.2	+2.7
TA01	Diego Aracena	3.86	171		Pn	12 13 16.6	0.0
TA01				Sn	Sn	12 14 03.1	+1.1
PATCX	Punta Patache	4.11	171		Pn	12 13 19.5	-0.8
LVC	Limon Verde	6.11	163	P	Pn	12 13 48.8	+0.8
	comp=N,1.0nm,0.3s,baz=20,slow=8.7,SNR=8.7						
LVC				S	Sn	12 15 00.6	+2.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=N,1.6nm,0.3s,baz=194,slow=22,SNR=2.2						
LVC	Limon Verde	6.11	163	Pn	Pn	12 13 48.4	+0.4
NNA	Nana	7.51	308	LR	LR	12 16 57.6	
	comp=N,31nm,21.2s,baz=122,slow=34						
SIV	San Ignacio	9.37	87	P	Pn	12 14 31.9	-0.6
	comp=N,0.5nm,0.3s,baz=272,slow=12,SNR=1.7						
ATAH	Atahualpa	12.08	321	LR	LR	12 20 14.8	
	comp=N,152nm,21.4s,baz=176,slow=38						
TXAR	Lajitas Array	55.71	325	P	P	12 21 55.7	+1.5
	comp=N,0.2nm,0.6s,baz=148,slow=8.7,SNR=3.1						
SNAA	Sanae	67.34	161	P	P	12 23 12.2	0.0
	comp=N,0.8nm,0.9s,baz=218,slow=14,SNR=2.2						
QSPA	South Pole Qui	73.43	180	P	P	12 23 50.9	+1.3
	comp=N,0.6nm,0.7s,baz=112,slow=16,SNR=1.2						
QSPA	South Pole Qui	73.43	180	P	P	12 23 42.5	-7.0
QSPA				IAmb	IAmb	12 23 42.8	
	comp=Z,3.1nm,1.3s						
TORD	Torodi Ar. Bea	77.53	72	P	P	12 24 10.1	-3.7
	comp=Z,0.6nm,0.7s,baz=237,slow=5.0,SNR=3.2						
TORD	Torodi Ar. Bea	77.53	72	P	P	12 24 04.1	-10
TORD				IAmb	IAmb	12 24 18.2	
	comp=Z,2.4nm,1.4s						
VNDA	Vanda	81.21	190	P	P	12 24 25.0	-7.9
VNDA				IAmb	IAmb	12 24 27.6	
	comp=Z,3.5nm,1.3s						
YKA	Yellowknife Ar	86.12	341	P	P	12 24 58.4	+0.4
	comp=Z,0.9nm,0.7s,baz=135,slow=4.8,SNR=18						
SONM	Songino Array	148.90	4	PKPbc	PKiKP	12 32 05.9	-0.9
	comp=Z,0.3nm,0.7s,baz=347,slow=1.5,SNR=4.1						

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*IDC **19** 12:29:32.7±3.2, 14°.48S×166°.95E, h80^{km}±26^{km}, mb3.5/7, mb1 3.8/8, mb1mx3.6/27, mbtmp4.0/8, MS3.2/2, Ms1 3.2/2, ms1mx2.8/24, Error ellipse: s-maj=28.8km s-min=16.4km az=67.0*

*NEIC **19** 12:29:32.2±1.0, 14°.40S±0°.08×167°.3E±0°.2, h78^{km}±6^{km}, mb4.5/9, Error ellipse: s-maj=22.6km s-min=11.0km az=93.0*

*NOU **19** 12:29:34.3, 14°.54S×166°.97E, h75^{km}, MLv5.3/24, Vanuatu Islands*

ISC 19 12:29:31.0±0.7, **14°.39S**±0°.07×**167°.10E**±0°.10, **h67**^{km}, **n57**, σ**1^{s}.25**/58, **mb4.2**/12, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.06	175	Pn	Pn	12 29 51.5	+1.4
SANVU	Saraoutou	1.06	175	P	Pn	12 29 51.6	+1.5
DVP	Devils Point	3.48	163	P	Pn	12 30 24.7	+2.0
RTV	Rentapao	3.62	160	P	Pn	12 30 27.4	+2.9
LIFNC	LIFOU	6.36	179	Pn	Pn	12 31 03.7	+1.7
LIFNC	LIFOU	6.36	179	P	Pn	12 31 04.4	+2.4
KOUNC	Koumac, New Ca	6.69	203	P	Pn	12 31 07.5	+0.9
MARNC	Mare, Loyalty	7.11	173		Pn	12 31 14.1	+1.7
MARNC	Mare, Loyalty	7.11	173	P	Pn	12 31 13.9	+1.6
YATNC	Mamie plateau,	7.63	181	P	Pn	12 31 19.8	+0.3
DZM	Mont Dzumac	7.67	185	*e*Pn	Pn	12 31 20.0	-0.1
	48nm,0.2s						
DZM				*e*Sn	Sn	12 32 47.0	+1.5
	12nm,0.2s						
DZM	Mont Dzumac	7.67	185	P	Pn	12 31 20.6	+0.5
	16nm,0.3s,baz=328,slow=9.1,SNR=80						
DZM				S	Sn	12 32 44.8	-0.7
	baz=304,slow=22,SNR=0.8						
DZM	Mont Dzumac	7.67	185		Pn	12 31 20.3	+0.3
DZM	Mont Dzumac	7.67	185	P	Pn	12 31 20.7	+0.6
NOUC	Port Laguerre	7.71	186	P	Pn	12 31 21.4	+0.8
ONTNC	Ouen Toro	7.90	184		Pn	12 31 24.4	+1.2
ONTNC	Ouen Toro	7.90	184	P	Pn	12 31 24.2	+1.0
OUENC	Ouen Island, N	7.99	182		Pn	12 31 25.5	+1.1
OUENC	Ouen Island, N	7.99	182	P	Pn	12 31 25.7	+1.3
PINNC	Pines Island,	8.19	178		Pn	12 31 28.5	+1.4
PINNC	Pines Island,	8.19	178	P	Pn	12 31 28.0	+0.9
HNR	Honiara	8.56	304	P	Pn	12 31 34.1	+1.9
	18nm,0.3s,baz=176,slow=8.3,SNR=3.2						
HNR				S	Sn	12 33 06.9	-0.4
	46nm,0.3s,baz=37,slow=23,SNR=10.0						
HNR	Honiara	8.56	304		Pn	12 31 35.0	+2.7
HNR	Honiara	8.56	304	P	Pn	12 31 35.3	+3.1
MSVF	Nonsavu	11.04	109	LR	LR	12 36 16.3	
	comp=Z,81nm,19.7s,baz=293,slow=36						
MSVF	Nonsavu	11.04	109	P	Pn	12 32 10.5	+4.4
EIDS	Eidsvold	18.59	232		Pn	12 33 43.8	+0.1
AFI	Afiamalu	20.49	91	LR	LR	12 40 07.4	
	comp=Z,94nm,18.1s,baz=88,slow=31						
URZ	Urewera	25.38	161	P	P	12 34 51.8	-0.1
	5.8nm,0.8s,baz=289,slow=19,SNR=3.1						
BKZ	Black Stump Fm	26.03	163	P	P	12 34 57.2	-0.8
BKZ	Black Stump Fm	26.03	163	P	P	12 34 58.1	+0.2
TUWZ	Tuamarina	27.59	169	P	P	12 35 11.7	-0.1
STKA	Stephens Creek	29.09	229	P	P	12 35 24.6	-0.7
	0.8nm,0.3s,baz=74,slow=6.3,SNR=6.1						
STKA	Stephens Creek	29.09	229	P	P	12 35 25.6	+0.2
STKA	Stephens Creek	29.09	229	P	P	12 35 26.3	+0.9
WRA	Warramunga Arr	31.75	255	P	P	12 35 46.9	-2.1
	0.4nm,0.7s,baz=88,slow=9.4,SNR=1.4						
ASAR	Alice Springs	32.64	249	P	P	12 35 55.5	-1.3
	0.3nm,0.4s,baz=76,slow=10.0,SNR=12						
ASAR				PcP	PcP	12 38 40.8	-0.9
	0.6nm,0.6s,baz=74,slow=2.4,SNR=6.4						
BBOO	Buckleboo	33.66	232	P	P	12 36 05.8	+0.2
BBOO	Buckleboo	33.66	232	P	P	12 36 06.2	+0.7
WRKA	Warakurna	37.91	248	P	P	12 36 43.5	+1.4
VNDA	Vanda	63.20	181	P	P	12 39 51.4	-0.3
VNDA				IAmb	IAmb	12 40 11.1	
	comp=Z,5.4nm,1.5s						
SBA	Scott Base	63.48	180	P	P	12 39 54.1	+0.6
SBA				IAmb	IAmb	12 40 19.9	
	comp=Z,9.5nm,1.3s						
CASY	Casey	63.78	202	P	P	12 39 55.6	-0.1
CASY				IAmb	IAmb	12 39 56.6	
	comp=Z,5.5nm,0.9s						
QSPA	South Pole Qui	75.64	180	P	P	12 41 08.1	-0.6
QSPA				IAmb	IAmb	12 41 09.2	
	comp=Z,6.0nm,0.8s						
SONM	Songino Array	82.13	324	P	P	12 41 44.8	+0.3
	comp=Z,0.2nm,0.6s,baz=110,slow=12,SNR=1.9						
IMAR	Indian Mountai	85.28	15	P	P	12 41 59.2	-0.8
ILAR	Eielson Array	86.25	18	P	P	12 42 04.7	-0.1
	comp=Z,0.4nm,0.6s,baz=238,slow=5.8,SNR=4.6						
BELA	Belgrano 2	87.07	176	P	P	12 42 07.2	-1.7
BELA				IAmb	IAmb	12 42 08.5	
	comp=Z,2.7nm,0.8s						
SNAA	Sanae	93.88	183	P	P	12 42 39.5	-1.3
VNA3	Neumayer Olymp	94.55	181	P	P	12 42 42.5	-1.4
VNA2	Neumayer--Watz	94.81	182	P	P	12 42 43.9	-1.1
	baz=184,slow=4.4						
VNA1	Neumayer--Stat	95.11	182	P	P	12 42 45.4	-0.9
MKAR	Makanchi Array	96.85	316	P	P	12 42 54.9	+0.2
	comp=Z,2.0nm,1.1s,baz=90,slow=8.6,SNR=3.7						
ARCES	ARCESS Array B	119.88	345	PKP	PKiKP	12 48 13.0	-0.2
	comp=Z,3.4nm,0.9s,baz=39,slow=1.9,SNR=7.4						
FINES	FINESS Array B	125.35	338	PKP	PKPdf	12 48 23.6	-0.2
	comp=Z,3.7nm,1.0s,baz=123,slow=5.1,SNR=3.6						
KEST	Kesra	150.85	321	PKPbc	PKiKP	12 49 16.9	-0.1
	comp=Z,4.2nm,0.7s,baz=82,slow=4.9,SNR=6.1						
TORD	Torodi Ar. Bea	165.77	267	PKPab	PKPab	12 50 28.2	-0.5
	comp=Z,0.8nm,0.8s,baz=39,slow=2.4,SNR=4.1						

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*IDC **19** 12:42:50.4±1.7, 0°.19N×121°.74E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.3/43, mbtmp3.4/3, Error ellipse: s-maj=207.2km s-min=28.3km az=60.0*

*DJA **19** 12:43:01.2±0.5, 1°N±4°×12°2E±°, h73^{km}±5^{km}, M3.6/8, MLv3.6/8*

ISC 19 12:43:01.0±1.1, **0°.52N**±0°.10×**122°.23E**±0°.07, **h100**^{km}, **n10**, σ**1^{s}.70**/11, **mb3.3**/3, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MRSI	Marisa	0.29	261	P	Pn	12 43 13.8	-1.8
MRSI				S	Sn	12 43 23.7	-2.8
APSI	Ampana	1.54	202	P	Pn	12 43 28.3	+0.5
LUWI	Luwuk	1.65	161	P	Pn	12 43 30.3	+1.2
KMSI	Cibinong	1.75	88	P	Pn	12 43 31.6	+1.2
MPSI	Mapaga	2.34	265	P	Pn	12 43 38.4	+0.4
TTSI	Tana Toraja	4.29	214	P	Pn	12 44 04.5	+0.4
SANI	Sanana	4.54	124	P	Pn	12 44 05.5	-2.1
WRA	Warramunga Arr	23.55	150	P	P	12 48 01.7	-0.9
	0.9nm,0.6s,baz=325,slow=10,SNR=10						
ASAR	Alice Springs	26.59	156	P	P	12 48 30.3	+0.2
	0.2nm,0.5s,baz=344,slow=14,SNR=1.5						
MKAR	Makanchi Array	57.77	329	P	P	12 52 43.7	+1.9
	0.3nm,0.9s,baz=128,slow=8.5,SNR=1.2						

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*IDC **19** 12:52:46.4±0.9, 5°.98S×151°.56E, h0^{km}, mb4.0/13, mb1 4.2/14, mb1mx4.1/41, mbtmp4.0/14, ML2.4/1, Error ellipse: s-maj=35.3km s-min=16.1km az=120.0*

*NEIC **19** 12:52:50.9±2.2, 6°.0S±0°.1×151°.6E±0°.2, h25^{km}±3^{km}, mb4.5/11, Error ellipse: s-maj=33.8km s-min=9.0km az=125.0*

ISC 19 12:52:52.5±0.7, **6°.0S**±0°.1×**151°.5E**±0°.1, **h41**^{km}, **n38**, σ**0^{s}.86**/40, **mb4.2**/19, **New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.92	20		Pn	12 53 23.0	+0.2
PMG	Port Moresby	5.47	232	Pn	Pn	12 54 11.2	-0.3
	7.1nm,0.3s,baz=26,slow=12,SNR=12						
PMG				Sn	Sn	12 55 14.3	+1.0
	5.7nm,0.3s,baz=328,slow=23,SNR=3.4						
PMG	Port Moresby	5.47	232		Pn	12 54 12.0	+0.4
COEN	Coen	11.38	225	Pn	Pn	12 55 30.3	-2.4
MTN	Manton Dam	21.20	250	P	P	12 57 33.3	-1.5
MTN				IAmb	IAmb	12 57 37.5	
	comp=Z,36nm,1.4s						
WB0	Warramunga Arr	21.54	229	P	P	12 57 37.0	-1.4
WB0				IAmb	IAmb	12 57 41.0	
	comp=Z,14nm,1.3s						
WB2	Warramunga Arr	21.68	229	P	P	12 57 38.9	-1.0
WB2				IAmb	IAmb	12 58 06.6	
	comp=Z,20nm,1.4s						
WRA	Warramunga Arr	21.68	229	P	P	12 57 39.2	-0.8
	comp=Z,2.1nm,0.5s,baz=56,slow=10,SNR=23						
WRA				PcP	PcP	13 01 40.5	+0.2
	comp=Z,0.7nm,1.0s,baz=92,slow=2.1,SNR=5.2						
WRA	Warramunga Arr	21.68	229	P	P	12 57 38.5	-1.4
KNRA	Kununurra	24.29	245	P	P	12 58 05.2	-1.1
AS31	Alice Springs	24.39	222	P	P	12 58 07.1	-0.1
ASAR	Alice Springs	24.39	222	P	P	12 58 07.0	-0.2
	comp=Z,9.9nm,0.9s,baz=58,slow=8.9,SNR=61						
ASAR	Alice Springs	24.39	222	P	P	12 58 07.5	+0.2
STKA	Stephens Creek	27.35	199	P	P	12 58 35.1	+1.2
	comp=Z,1.2nm,0.3s,baz=12,slow=9.3,SNR=3.4						
FITZ	Fitzroy Crossi	27.95	242	P	P	12 58 38.1	-1.2
	comp=Z,4.7nm,0.6s,baz=67,slow=7.5,SNR=12						
KSRS	Korea Array	48.52	335	P	P	13 01 32.4	+0.9
	comp=Z,0.3nm,0.5s,baz=157,slow=11,SNR=2.4						
SONM	Songino Array	66.67	329	P	P	13 03 38.9	-0.3
	comp=Z,0.5nm,0.6s,baz=138,slow=5.1,SNR=4.0						
SONM	Songino Array	66.67	329	P	P	13 03 39.0	-0.3
SONM				IAmb	IAmb	13 03 40.3	
	comp=Z,0.8nm,0.8s						
MKAR	Makanchi Array	80.39	319	P	P	13 05 00.2	+0.4
	comp=Z,0.3nm,0.6s,baz=98,slow=7.7,SNR=2.4						
CAST	Castle Rocks	81.10	22	P	P	13 05 03.1	-0.1
CAST				IAmb	IAmb	13 05 14.4	
	comp=Z,13nm,1.5s						
ZALV	Zalesovo Beam	81.45	327	P	P	13 05 06.3	+1.1
	comp=Z,0.8nm,0.3s,baz=150,slow=3.3,SNR=2.3						
IMAR	Indian Mountai	81.95	20	P	P	13 05 08.1	+0.4
ILAR	Eielson Array	83.76	22	P	P	13 05 15.5	-1.5
	comp=Z,1.4nm,0.7s,baz=250,slow=4.7,SNR=15						
ILAR	Eielson Array	83.76	22	P	P	13 05 16.6	-0.5
KURBB	Kurchatov Arra	83.96	322	P	P	13 05 18.6	+0.2
	comp=Z,0.5nm,0.8s,baz=124,slow=6.9,SNR=2.2						
QSPA	South Pole Qui	83.96	180	P	P	13 05 18.2	0.0
QSPA				IAmb	IAmb	13 05 30.4	
	comp=Z,4.3nm,0.9s						
MAW	Mawson	83.97	203	P	P	13 05 18.4	+0.4
	comp=Z,2.2nm,1.1s,baz=31,slow=5.9,SNR=1.3						
M27K	Edge Creek, AK	84.72	25	P	P	13 05 23.1	+1.0
TOLK	Toolik Lake Re	84.76	18	P	P	13 05 22.8	+0.7
TOLK				IAmb	IAmb	13 05 29.2	
	comp=Z,8.1nm,1.4s						
BMAR	Burnt Mountain	85.82	20	P	P	13 05 28.3	+0.8
NVAR	Mina Array Bea	93.84	52	P	P	13 06 06.0	-0.1
	comp=Z,0.5nm,0.7s,baz=258,slow=5.8,SNR=5.0						
YKA	Yellowknife Ar	97.09	28	P	P	13 06 20.2	+0.1
	comp=Z,0.4nm,0.7s,baz=268,slow=4.6,SNR=8.0						
GERES	GERESS Array B	124.39	327	PKP	PKiKP	13 11 47.8	+0.1
	comp=Z,1.2nm,0.7s,baz=54,slow=2.3,SNR=11						
GERES	GERESS Array B	124.39	327		PKPdf	13 11 47.4	0.0
TORD	Torodi Ar. Bea	149.43	286	PKPbc	PKPbc	13 12 37.8	-0.5
	comp=Z,3.3nm,0.6s,baz=65,slow=3.0,SNR=22						
TORD	Torodi Ar. Bea	149.43	286		PKPbc	13 12 38.5	+0.3
DBIC	Dimbokro	156.50	273	PKPab	PKPab	13 13 12.9	0.0
	comp=Z,1.1nm,0.5s,baz=135,slow=2.9,SNR=3.8						
DBIC	Dimbokro	156.50	273		PKPab	13 13 12.6	-0.4

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*IDC **19** 12:56:29.7±1.2, 28°.02S×178°.30W, h270^{km}±12^{km}, mb3.3/6, mb1 3.6/7, mb1mx3.2/31, mbtmp4.0/7, Error ellipse: s-maj=24.7km s-min=21.1km az=80.0*

*NEIC **19** 12:56:30.1±1.5, 27°.8S±0°.1×178°.2W±0°.2, h257^{km}±9^{km}, mb4.2/6, Error ellipse: s-maj=23.5km s-min=15.1km az=83.0*

ISC 19 12:56:30.7±0.6, **28°.52S**±0°.07×**178°.0W**±0°.1, **h300**^{km}, **n115**, σ**2^{s}.10**/126, **mb3.7**/10, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RIZ	Raoul Island	0.73	173	P	Pn	12 57 09.5	-0.4
RIZ				S	S	12 57 40.1	-0.9
RAO	Raoul Island	0.73	172	P	Pn	12 57 08.5	-1.4
	565nm,0.3s,baz=16,slow=19,SNR=36						
RAO				S	S	12 57 37.3	-3.8
	1µm,0.3s,baz=16,slow=23,SNR=8.6						
RAO	Raoul Island	0.73	172		Pn	12 57 09.4	-0.5
GLKZ	Green Lake	0.74	173	P	Pn	12 57 07.7	-2.3
GLKZ				S	S	12 57 39.2	-1.9
MXZ	Matakaoa Point	9.53	198	P	Pn	12 58 42.4	-0.4
MXZ				S	S	13 00 30.7	+0.1
WMGZ	Waiomatatini S	9.74	197	P	Pn	12 58 41.9	-3.6
WMGZ				S	S	13 00 31.0	-4.5
URZ	Urewera	10.53	201	P	Pn	12 58 55.4	+0.3
	4.8nm,0.3s,baz=304,slow=22,SNR=34						
URZ				S	S	13 00 51.4	-1.8
	5.4nm,0.3s,baz=304,slow=23,SNR=3.0						
WHHZ	Waihua	11.24	199	P	P	12 59 07.0	+1.0
WHHZ				S	S	13 01 19.1	+10
MSVF	Nonsavu	11.33	341	P	Pn	12 58 56.8	-8.4
	10nm,0.3s,baz=158,slow=10,SNR=100						
NMHZ	Naumai	11.39	201	P	Pn	12 59 04.7	-1.0
NMHZ				S	S	13 01 12.6	-0.3
BKZ	Black Stump Fm	11.55	202	P	Pn	12 59 06.1	-1.6
BKZ				S	S	13 01 15.7	-0.8
MCHZ	McNeill Hill	11.74	200	P	Pn	12 59 10.0	0.0
MCHZ				S	S	13 01 23.8	+3.1
KWHZ	Kaweka Forest	11.81	201	P	Pn	12 59 08.6	-2.2
KWHZ				S	S	13 01 22.4	+0.1
WTVZ	West Tongariro	11.82	205	P	P	12 59 12.9	+0.3
SNVZ	South Ngauruho	11.86	205	P	P	12 59 13.8	+0.6
NGZ	Ngauruhoe	11.87	205	P	Pn	12 59 11.0	-0.6
NGZ				S	S	13 01 30.0	+6.1
FWVZ	Far West T-bar	11.96	205	P	P	12 59 13.7	-0.6
BHHZ	Black Hill Sta	11.98	203	P	Pn	12 59 11.1	-1.9
BHHZ				S	S	13 01 24.9	-1.4
TRVZ	Turoa	12.00	205	P	P	12 59 15.6	+0.9
WNVZ	Wahianoa	12.00	204	P	P	12 59 14.7	0.0
WNVZ				S	S	13 01 26.8	-0.1
KAHZ	Kahuranaki	12.01	199	P	Pn	12 59 11.8	-1.4
KAHZ				S	S	13 01 23.1	-3.7
KRHZ	Kereru	12.02	201	P	Pn	12 59 14.0	+0.6
KRHZ	Kereru	12.02	201	P	Pn	12 59 08.5	-4.9
KRHZ				S	S	13 01 24.0	-3.1
PKVZ	Pokaka	12.06	205	P	P	12 59 15.8	+0.5
VRZ	Vera Road	12.15	208	P	P	12 59 18.8	+2.6
PXZ	Pawanui	12.23	199	P	Pn	12 59 12.6	-3.2
PXZ				S	S	13 01 28.2	-3.5
PNHZ	Pukenui	12.32	201	P	Pn	12 59 16.6	-0.5
PNHZ	Pukenui	12.32	201	P	Pn	12 59 12.1	-4.9
PNHZ				S	S	13 01 31.9	-2.0
WPHZ	Waipukurau	12.38	200	P	P	12 59 19.8	+1.1
WPHZ	Waipukurau	12.38	200	P	Pn	12 59 14.1	-3.7
WPHZ				P	S	13 01 33.0	-2.2
DREZ	Durham Road	12.44	209	P	P	12 59 27.7	+8.4
PRHZ	Porangahau	12.51	199	P	P	12 59 19.9	-0.3
PRHZ	Porangahau	12.51	199	P	Pn	12 59 14.2	-5.2
PRHZ				S	S	13 01 37.4	-0.8
TSZ	Takapari Road	12.53	202	P	Pn	12 59 17.0	-2.5
TSZ	Takapari Road	12.53	202	P	Pn	12 59 16.1	-3.5
TSZ				S	S	13 01 36.7	-1.9
PKE	Pukeiti	12.54	210	P	P	12 59 25.5	+5.0
NEZ	North Egmont	12.55	209	P	P	12 59 24.3	+3.6
NEZ	North Egmont	12.55	209	P	P	12 59 24.7	+4.0
WAZ	Wanganui	12.60	205	P	P	12 59 21.4	+0.2
WAZ	Wanganui	12.60	205	P	Pn	12 59 19.3	-1.2
DVHZ	Dannevirke	12.68	201	P	P	12 59 22.1	0.0
DVHZ	Dannevirke	12.68	201	P	Pn	12 59 20.0	-1.4
DVHZ				P	S	13 01 38.1	-3.9
ANWZ	Angora Road	12.74	199	P	P	12 59 23.0	+0.3
ANWZ	Angora Road	12.74	199	P	P	12 59 22.9	+0.3
ANWZ				S	S	13 01 42.7	-0.4
POWZ	Post Office Ro	12.89	202	P	P	12 59 25.3	+0.9
POWZ	Post Office Ro	12.89	202	P	P	12 59 25.3	+0.9
PRWZ	Pori Road	12.98	201	P	P	12 59 26.3	+1.0
PRWZ	Pori Road	12.98	201	P	Pn	12 59 24.6	-0.3
BFZ	Birch Farm	13.01	200	P	Pn	12 59 24.1	-1.2
BFZ	Birch Farm	13.01	200	P	Pn	12 59 24.1	-1.2
MRZ	Mangatainoka R	13.20	202	P	Pn	12 59 24.2	-3.3
MRZ	Mangatainoka R	13.20	202	P	Pn	12 59 23.1	-4.4
TIWZ	Tintock	13.21	201	P	P	12 59 28.1	+0.2
TIWZ	Tintock	13.21	201	P	Pn	12 59 26.4	-1.2
HOWZ	Holdsworth Sta	13.43	202	P	P	12 59 29.3	-1.1
HOWZ	Holdsworth Sta	13.43	202	P	P	12 59 27.9	-2.5
OGWZ	Otaki Gorge	13.47	203	P	P	12 59 29.8	-1.0
TMWZ	Te Maipa	13.51	200	P	P	12 59 30.5	-0.7
KIW	Kapiti Island	13.60	203	P	P	12 59 32.2	-0.1
MTW	Mount Morrison	13.67	201	P	P	12 59 32.7	-0.3
MTW	Mount Morrison	13.67	201	P	P	12 59 32.6	-0.5
MTW				P	S	13 01 59.2	-4.8
CAW	Cannon Point	13.77	202	P	P	12 59 33.7	-0.3
CAW	Cannon Point	13.77	202	P	S	13 02 03.9	-2.1
TRWZ	Traveller	13.84	200	P	Pn	12 59 35.2	0.0
PAWZ	Paruwai Farm	13.90	201	P	Pn	12 59 36.4	+0.5
DUWZ	D'Urville Isla	13.92	206	P	Pn	12 59 36.6	+0.4
MSWZ	Moikau Station	13.99	201	P	Pn	12 59 37.2	+0.2
MSWZ	Moikau Station	13.99	201	P	S	13 02 08.4	-2.2
WEL	Wellington	14.03	203	P	P	12 59 36.7	-0.2
WEL	Wellington	14.03	203	P	S	13 02 11.3	-0.2
BHW	Baring Head	14.11	202	P	P	12 59 37.5	-0.2
BHW	Baring Head	14.11	202	P	S	13 02 10.4	-2.7
PLWZ	Palliser	14.12	201	P	P	12 59 38.3	+0.3
PLWZ	Palliser	14.12	201	P	S	13 02 11.5	-2.0
TCW	Tory Channel	14.14	204	P	P	12 59 37.3	-0.8
MARNC	Mare, Loyalty	14.45	296	P	P	12 59 38.9	-2.8
TUWZ	Tuamarina	14.45	205	P	P	12 59 41.7	+0.2
TUWZ	Tuamarina	14.45	205	P	S	13 02 18.4	-1.7
NNZ	Nelson	14.48	207	P	P	12 59 41.6	-0.3
QRZ	Quartz Range	14.51	210	P	Pn	12 59 43.3	+0.1
CMWZ	Cape Campbell	14.63	204	P	S	13 02 24.1	+0.3
BSWZ	Blackbirch Sta	14.72	205	P	Pn	12 59 46.3	+0.6
BSWZ	Blackbirch Sta	14.72	205	P	S	13 02 26.5	+0.9
THZ	Tophouse	15.14	207	P	P	12 59 49.1	0.0
THZ	Tophouse	15.14	207	P	S	13 02 35.5	+1.6
DZM	Mont Dzumac	15.44	291	P	P	12 59 50.5	-2.2
	0.7nm,0.3s,baz=212,slow=13,SNR=6.4						
KHZ	Kahutara	15.46	204	P	P	12 59 52.9	+0.3
KHZ	Kahutara	15.46	204	P	S	13 02 34.8	-5.4
DSZ	Denniston Nort	15.58	209	P	Pn	12 59 55.6	-0.2
DSZ	Denniston Nort	15.58	209	P	S	13 02 44.4	+1.6
LTZ	Lake Taylor	16.25	206	P	S	13 02 52.1	-4.1
CTAO	Charters Tower	33.52	276	P	P	13 02 43.2	+0.4
CTAO				IAmb	IAmb	13 02 60.0	
	comp=Z,23nm,1.4s						
XMAS	Kiritimati	36.25	36	P	P	13 03 03.6	-2.4
ASAR	Alice Springs	43.22	265	P	P	13 04 03.5	+0.4
	comp=Z,0.5nm,0.5s,baz=94,slow=8.2,SNR=4.5						
WB2	Warramunga Arr	44.02	270	P	P	13 04 08.5	-1.1
WB2				IAmb	IAmb	13 04 37.3	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	44.03	270	P	P	13 04 08.4	-1.2
	comp=Z,1.3nm,0.9s,baz=113,slow=7.9,SNR=3.4						
WB0	Warramunga Arr	44.05	270	P	P	13 04 09.9	+0.2
WB0				IAmb	IAmb	13 04 14.4	
	comp=Z,16nm,1.4s						
SBA	Scott Base	49.90	184	P	P	13 05 03.1	+9.3
SBA				IAmb	IAmb	13 05 23.5	
	comp=Z,7.9nm,1.1s						
VNDA	Vanda	49.96	186	P	P	13 04 58.2	+4.0
	comp=Z,1.7nm,1.0s,baz=60,slow=4.9,SNR=2.8						
QSPA	South Pole Qui	61.58	180	P	P	13 06 25.5	+9.0
VNA3	Neumayer Olymp	80.17	176	P	P	13 08 14.3	+6.8
VNA2	Neumayer--Watz	80.61	177	P	P	13 08 16.9	+7.1
	baz=182,slow=3.7						
VNA1	Neumayer--Stat	80.84	177	P	P	13 08 18.1	+7.2
PETK	Petropavlovsk-	83.99	346	P	P	13 08 26.4	-0.8
	comp=Z,2.4nm,0.9s,baz=109,slow=8.0,SNR=5.9						
PETK	Petropavlovsk-	83.99	346	P	P	13 08 27.0	-0.2
NVAR	Mina Array Bea	86.88	43	P	P	13 08 43.6	+1.6
	comp=Z,0.4nm,0.6s,baz=213,slow=11,SNR=4.4						
ILAR	Eielson Array	96.11	13	P	P	13 09 22.4	-1.4
	comp=Z,0.2nm,0.6s,baz=209,slow=9.2,SNR=1.8						
ARCES	ARCESS Array B	136.75	348	PKP	PKiKP	13 15 19.3	+0.9
	comp=Z,3.3nm,1.0s,baz=5.7,slow=2.4,SNR=1.3						
FINES	FINESS Array B	143.37	341	PKhKP	PKPpre	13 15 26.5	
	comp=Z,3.6nm,1.0s,baz=28,slow=1.7,SNR=5.6						
NB2	NORSAR Subarra	146.90	352	PKP	PKPbc	13 15 38.0	+0.7
	comp=Z,0.6nm,0.5s,baz=13,slow=2.9						
NOA	NORSAR Array B	146.90	352	PKPbc	PKPbc	13 15 37.7	+0.4
	comp=Z,1.6nm,0.8s,baz=14,slow=4.3,SNR=3.8						
AKASG	Malin Array Be	149.78	325	PKPbc	PKiKP	13 15 46.1	+0.4
	comp=Z,2.8nm,0.7s,baz=42,slow=3.1,SNR=11						
BRTR	Keskin Array B	151.64	302	PKPbc	PKiKP	13 15 50.8	+0.7
	comp=Z,0.5nm,0.5s,baz=132,slow=2.2,SNR=3.8						
TORD	Torodi Ar. Bea	164.70	179	PKPab	PKPab	13 17 01.9	+5.5
	comp=Z,0.4nm,0.5s,baz=186,slow=3.0,SNR=2.7						
TORD	Torodi Ar. Bea	164.70	179		PKPab	13 17 03.0	+6.5

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*IDC **19** 12:58:55.4±0.6, 15°.08S×173°.69W, h0^{km}, mb4.3/16, mb1 4.5/18, mb1mx4.2/36, mbtmp4.3/18, ML4.3/2, MS4.0/27, Ms1 4.0/27, ms1mx4.0/32, Error ellipse: s-maj=23.6km s-min=14.3km az=138.0*

*NEIC **19** 12:59:01.2±1.3, 15°.16S±0°.09×173°.7W±0°.1, h35^{km}±1^{km}, mb4.8/40, Error ellipse: s-maj=21.2km s-min=15.8km az=85.0*

*GCMT **19** 12:59:06.2±0.3, 15°.09S±0°.02×173°.41W±0°.02, h61^{km}±4^{km}, MW5.0/98, Moment Tensor Solution. s25,c27; s98,c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.05±.24; M$_{\theta\theta}$1.71±.25; M$_{\phi\phi}$-1.76±.24; M$_{r\theta}$-4.10±.16; M$_{\theta\phi}$0.51±.14; M$_{\phi r}$-0.14±.08; Best double couple: M$_0$4.21500×10^{16} NP1:φ$_s$214.00000°, δ10.00000°, λ-149.00000°. NP2: φ$_s$93.00000°, δ85.00000°, λ-81.00000°. Principal axes: T 5.0980, Plg39.0000°, Azm175.0000°; N -1.7630, Plg9.0000°, Azm272.0000°; P -3.3330, Plg50.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 12:58:59.6±0.4, **15°.11S**±0°.06×**173°.48W**±0°.06, **h30**^{km}, **n133**, σ**1^{s}.31**/105, **mb4.7**/36, **MS4.0**/27, **8C-2D**, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.03	54	Pn	Pn	12 59 31.4	-0.6
	689nm,0.3s,baz=186,slow=1.6,SNR=857						
AFI				Sn	Sn	12 59 51.5	-4.8
	2µm,0.3s,baz=128,slow=19,SNR=32						
AFI				LR	LR	13 00 15.5	
	comp=Z,3µm,20.1s,baz=181,slow=37						
NIUE	Niue	5.20	140	Pn	Pn	13 00 15.7	+0.2
KNTN	Kanton	12.38	8	Pn	Pn	13 01 52.9	-1.0
RAR	Rarotonga	14.36	117	Pn	Pn	13 02 20.8	-0.2
	1.5nm,0.3s,baz=302,slow=23,SNR=2.0						
RAR				Sn	Sn	13 04 50.3	-9.1
	0.6nm,0.3s,baz=345,slow=21,SNR=2.1						
RAR				LR	LR	13 07 13.8	
	comp=Z,203nm,18.0s,baz=274,slow=34						
RAR	Rarotonga	14.36	117	Pn	Pn	13 02 20.7	-0.3
RAO	Raoul Island	14.66	196	LR	LR	13 07 29.3	
	comp=Z,702nm,20.1s,baz=9.0,slow=35						
DZM	Mont Dzumac	20.24	247	*e*P	Pn	13 03 35.6	+0.9
	105nm,1.1s						
DZM				*e*S	S	13 07 16.4	-2.0
	128nm,28.0s						
DZM				*e*LQ	LQ	13 07 29.0	
	1µm,25.9s						
DZM				*e*LR	LR	13 08 22.1	
	comp=Z,1µm,27.2s						
DZM	Mont Dzumac	20.24	247	P	P	13 03 32.2	-0.5
	6.2nm,0.8s,baz=46,slow=18,SNR=1.9						
DZM				LR	LR	13 10 16.9	
	comp=Z,431nm,20.7s,baz=65,slow=34						
PPT	Papeete	23.06	99	LR	LR	13 10 32.3	
	comp=Z,118nm,21.0s,baz=249,slow=30						

PAE	Paea	23.06	100	*e*T	T	13 27 23.2	
	3.7nm,0.2s						
PPT2	Papeete2	23.06	99	*e*S	S	13 08 10.0	-2.2
	82nm,27.2s						
PPT2				*e*LQ	LQ	13 08 45.6	
	614nm,26.2s						
PPT2				*e*LR	LR	13 09 26.6	
	comp=Z,562nm,27.5s						
PPT2	Papeete2	23.06	99	*e*T	T	13 27 23.2	
	11nm,0.4s						
TVO	Taravao	23.38	100	*e*T	T	13 27 32.0	
TBI	Tubuai	24.09	114	*e*LQ	LQ	13 09 10.6	
	768nm,25.0s						
TBI				*e*LR	LR	13 10 01.0	
	comp=Z,799nm,27.8s						
TBI	Tubuai	24.09	114	*e*T	T	13 28 47.0	
	29nm,0.3s						
URZ	Urewera	24.51	198	P	P	13 04 16.5	+0.1
	7.3nm,0.7s,baz=288,slow=20,SNR=2.6						
URZ				LR	LR	13 13 02.8	
	comp=Z,1µm,19.5s,baz=31,slow=35						
URZ	Urewera	24.51	198	P	P	13 04 16.1	-0.3
URZ				IAmb	IAmb	13 04 36.7	
	comp=Z,27nm,1.3s						
VAH	Vaihoa	24.95	94	*e*T	T	13 30 05.6	
	comp=Z,9.3nm,0.3s						
HNR	Honiara	26.56	279	LR	LR	13 14 24.9	
	comp=Z,55nm,19.5s,baz=132,slow=35						
LTZ	Lake Taylor	30.17	201	P	P	13 05 05.8	-1.4
LTZ				IAmb	IAmb	13 05 09.1	
	comp=Z,11nm,1.0s						
TAOE	Nuku Hiva Isla	33.16	83	*e*LR	LR	13 14 16.7	
	comp=Z,177nm,23.9s						
TAOE	Nuku Hiva Isla	33.16	83	*e*T	T	13 40 15.2	
	comp=Z,43nm,0.2s						
WHZ	Wether Hill Ro	34.43	203	P	P	13 05 44.2	-0.2
RABL	Rabaul	35.51	284	P	P	13 05 54.7	+0.5
H11N3	WAKE ISLAND Hy	39.62	330	T	T	13 48 28.7	
	baz=150,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	39.63	330	T	T	13 48 33.4	
	baz=150,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	39.64	330	T	T	13 48 44.8	
	baz=150,slow=76,SNR=49						
TOO	Toolangi	42.59	230	P	P	13 06 51.2	-1.9
STKA	Stephens Creek	44.12	240	P	P	13 07 04.7	-0.8
	comp=Z,2.1nm,0.8s,baz=44,slow=12,SNR=3.1						
STKA				LR	LR	13 23 35.3	
	comp=Z,135nm,19.0s,baz=44,slow=34						
BBOO	Buckleboo	48.89	240	P	P	13 07 41.0	-2.0
BBOO				IAmb	IAmb	13 08 07.4	
	comp=Z,10nm,1.1s						
WB0	Warramunga Arr	49.80	257	P	P	13 07 48.2	-1.9
WB2	Warramunga Arr	49.83	257	P	P	13 07 48.5	-1.8
WB2				IAmb	IAmb	13 08 11.0	
	comp=Z,13nm,1.1s						
WRA	Warramunga Arr	49.84	257	P	P	13 07 48.4	-2.0
	comp=Z,1.3nm,0.3s,baz=92,slow=7.8,SNR=15						
WRA	Warramunga Arr	49.84	257	P	P	13 07 48.4	-2.0
GUMO	Guam	50.12	303	LR	LR	13 25 34.5	
	comp=Z,73nm,19.3s,baz=102,slow=32						
AS31	Alice Springs	50.13	252	P	P	13 07 50.4	-2.2
AS31				IAmb	IAmb	13 08 12.3	
	comp=Z,3.9nm,0.7s						
ASAR	Alice Springs	50.13	252	P	P	13 07 50.3	-2.3
	comp=Z,12nm,0.7s,baz=85,slow=8.4,SNR=71						
ASAR				LR	LR	13 27 32.5	
	comp=Z,178nm,21.1s,baz=98,slow=34						
ASAR	Alice Springs	50.13	252	P	P	13 07 50.5	-2.1
SIJI	Sorong	56.34	279	LR	LR	13 31 02.5	
	comp=Z,110nm,21.3s,baz=352,slow=34						
SBA	Scott Base	63.53	185	P	P	13 09 28.4	+1.6
SBA				IAmb	IAmb	13 09 47.9	
	comp=Z,9.8nm,1.1s						
VNDA	Vanda	63.66	186	P	P	13 09 28.2	+0.6
	comp=Z,3.4nm,0.8s,baz=14,slow=5.1,SNR=9.5						
VNDA				LR	LR	13 32 05.2	
	comp=Z,47nm,21.1s,baz=22,slow=31						
VNDA	Vanda	63.66	186	P	P	13 09 27.9	+0.3
VNDA				IAmb	IAmb	13 09 29.9	
	comp=Z,6.0nm,1.1s						
JHJ	Hachijo jima 2	65.50	318	LR	LR	13 32 21.0	
	comp=Z,84nm,20.2s,baz=246,slow=31						
MJAR	Matsushiro Arr	68.67	320	LR	LR	13 34 29.9	
	comp=Z,170nm,22.0s,baz=125,slow=31						
ASAJ	Asahikawa	71.25	328	LR	LR	13 35 52.0	
	comp=Z,62nm,21.7s,baz=168,slow=31						
PETK	Petropavlovsk-	72.33	342	P	P	13 10 22.4	+0.1
	comp=Z,1.6nm,0.7s,baz=86,slow=8.1,SNR=2.8						
PETK	Petropavlovsk-	72.33	342	P	P	13 10 22.7	+0.4
ISA	Isabella, Lake	72.50	44	P	P	13 10 25.0	+1.2
ISA				IAmb	IAmb	13 10 26.8	
	comp=Z,12nm,1.3s						
CMB	Columbia Colle	72.60	41	P	P	13 10 26.0	+1.7
WDC	Whiskeytown Da	72.80	38	P	P	13 10 27.1	+1.7
WDC				IAmb	IAmb	13 10 28.6	
	comp=Z,20nm,1.4s						
ORV	Oroville	72.80	40	P	P	13 10 27.0	+1.5
YBH	Yreka Blue Hor	73.41	37	P	P	13 10 31.3	+2.2
NVAR	Mina Array Bea	74.16	42	P	P	13 10 35.2	+1.4
	comp=Z,5.1nm,0.9s,baz=226,slow=9.7,SNR=24						
NVAR				LR	LR	13 35 30.9	
	comp=Z,239nm,21.1s,baz=253,slow=30						
NV11	Mina Array Sit	74.26	42	P	P	13 10 36.0	+1.7
NV11				IAmb	IAmb	13 10 37.1	
	comp=Z,11nm,1.1s						
KVN	Kaiserville	74.65	42	P	P	13 10 38.0	+1.5
KVN				IAmb	IAmb	13 10 39.3	
	comp=Z,7.0nm,1.0s						
QSPA	South Pole Qui	74.93	180	P	P	13 10 38.2	+0.5
QSPA				IAmb	IAmb	13 10 39.6	
	comp=Z,14nm,1.0s						
PINE	Pine Mountain	75.71	36	P	P	13 10 44.2	+1.6
PRN	Pahroc Range	75.76	44	P	P	13 10 44.6	+1.7
PRN				IAmb	IAmb	13 10 46.2	
	comp=Z,9.9nm,1.2s						
KSRS	Korea Array	75.90	316	P	P	13 10 43.6	+0.2
	comp=Z,0.4nm,0.5s,baz=100,slow=3.0,SNR=3.1						
KSRS				LR	LR	13 38 27.4	
	comp=Z,70nm,21.5s,baz=110,slow=31						
BMN	Battle Mountai	75.98	41	P	P	13 10 45.5	+1.4
BMN				IAmb	IAmb	13 10 47.0	
	comp=Z,9.7nm,1.1s						
TUC	Tucson	76.27	51	P	P	13 10 47.0	+1.2
J08A	Circle Bar Ran	76.89	38	P	P	13 10 50.5	+1.4
J08A				IAmb	IAmb	13 10 52.2	
	comp=Z,10nm,1.3s						
SPR3	Spring Creek 3	77.08	43	P	P	13 10 51.7	+1.2
USRK	Ussuriysk Ar.	77.11	323	LR	LR	13 38 31.2	
	comp=Z,180nm,21.3s,baz=131,slow=31						
U15A	North Rim	77.16	46	P	P	13 10 52.2	+1.2
U15A				IAmb	IAmb	13 10 55.0	
	comp=Z,9.0nm,1.2s						
WUAZ	Wupatki	77.36	48	P	P	13 10 53.4	+1.3
WUAZ				IAmb	IAmb	13 10 55.4	
	comp=Z,9.8nm,1.2s						
ELK	Elko	77.42	41	P	P	13 10 53.4	+1.1
TMUT	Trail Mountain	79.32	44	P	P	13 11 04.9	+1.9
NJ2	Nanjing	79.93	307	*e*P	P	13 11 07.3	+1.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
TX31	Lajitas Ar. Si	80.51	56	P	P	13 11 10.4	+1.0
TX32	Lajitas Array	80.51	56	P	P	13 11 11.0	+1.7
TXAR	Lajitas Array	80.51	56	P	P	13 11 11.7	+2.4
	comp=Z,1.1nm,0.9s,baz=262,slow=2.5,SNR=7.3						
TXAR				LR	LR	13 41 06.2	
	comp=Z,104nm,19.0s,baz=0.0,slow=31						
TXAR	Lajitas Array	80.51	56	P	P	13 11 10.1	+0.7
RND	Reindeer	80.57	11	P	P	13 11 10.2	+1.3
CN2	Changchun	80.82	320	*e*P	P	13 11 12.3	+1.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MCK	McKinley	80.85	11	P	P	13 11 11.4	+1.1
MCMT	McKenzie Canyo	81.08	39	P	P	13 11 12.9	+0.7
WRH	Wood River Hil	81.68	11	P	P	13 11 15.5	+0.8
WRH				IAmb	IAmb	13 11 17.3	
	comp=Z,15nm,1.1s						
LRM	Limekiln Ridge	81.84	38	P	P	13 11 17.3	+1.1
PDAR	Pinedale Array	82.10	42	P	P	13 11 18.5	+0.8
	comp=Z,1.4nm,0.8s,baz=202,slow=3.2,SNR=8.5						
PDAR				LR	LR	13 42 04.1	
	comp=Z,157nm,18.8s,baz=269,slow=32						
ILAR	Eielson Array	82.18	11	P	P	13 11 17.4	+0.1
	comp=Z,1.1nm,0.8s,baz=231,slow=6.5,SNR=8.0						
ILAR				LR	LR	13 39 28.7	
	comp=Z,168nm,19.9s,baz=216,slow=30						
ILAR	Eielson Array	82.18	11	P	P	13 11 17.0	-0.3
IMAR	Indian Mountai	82.20	8	P	P	13 11 18.9	+1.5
POKR	Poker Plat Res	82.39	11	P	P	13 11 19.1	+0.7
BELA	Belgrano 2	84.29	172	P	P	13 11 27.7	-0.5
BELA				IAmb	IAmb	13 11 29.3	
	comp=Z,11nm,1.1s						
BMAR	Burnt Mountain	84.98	11	P	P	13 11 33.9	+2.2
TOLK	Toolik Lake Re	85.27	9	P	P	13 11 34.7	+1.6
H03S2	Juan Fernandez	85.42	124	T	T	14 46 26.6	
	baz=250						
H03S1	Juan Fernandez	85.44	124	T	T	14 46 28.3	
	baz=250						
H03S3	Juan Fernandez	85.44	124	T	T	14 46 26.4	
	baz=250						
H03N2	Juan Fernandez	85.52	123	T	T	14 46 27.6	
	baz=253						
H03N3	Juan Fernandez	85.52	123	T	T	14 46 39.5	
	baz=253						
H03N1	Juan Fernandez	85.54	123	T	T	14 46 41.0	
	baz=253						
MAW	Mawson	88.04	199	P	P	13 11 46.0	-0.7
	comp=Z,4.2nm,0.8s,baz=110,slow=4.1,SNR=5.3						
MAW				LR	LR	13 48 39.9	
	comp=Z,260nm,20.4s,baz=62,slow=34						
MAW	Mawson	88.04	199	P	P	13 11 46.5	-0.2
HHC	Hu-ho-hao-te	88.78	313	*e*P	P	13 11 51.5	+0.7
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,180nm,7.1s						
PLCA	Paso Flores	89.76	132	LR	LR	13 44 41.9	
	comp=Z,108nm,19.9s,baz=222,slow=30						
YKA	Yellowknife Ar	89.86	23	P	P	13 11 56.0	+0.8
	comp=Z,1.4nm,0.9s,baz=241,slow=4.2,SNR=11						
YKA				LR	LR	13 45 21.7	
	comp=Z,147nm,21.0s,baz=0.0,slow=31						
YKA	Yellowknife Ar	89.86	23	P	P	13 11 54.3	-0.9
CMAR	Chiang Mai Arr	92.45	288	LR	LR	13 47 58.5	
	comp=Z,41nm,21.5s,baz=85,slow=32						
LZH	Lanzhou	92.99	306	*e*P	P	13 12 10.8	+0.2
LZH				pP	PcP	13 12 13.3	+2.0
LZH				sP	pP	13 12 15.8	-3.8
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
VNA3	Neumayer Olymp	93.15	175	P	P	13 12 10.9	+0.4
SNAA	Sanae	93.20	177	P	P	13 12 10.9	+0.1
VNA2	Neumayer--Watz	93.65	175	P	P	13 12 13.6	+0.7
	baz=196,slow=2.3						
ULM	Lac du Bonnet	93.75	39	LR	LR	13 47 17.8	
	comp=Z,220nm,19.6s,baz=280,slow=31						
VNA1	Neumayer--Stat	93.84	175	P	P	13 12 14.4	+0.8
SONM	Songino Array	94.58	318	P	P	13 12 17.0	-0.6
	comp=Z,0.1nm,0.4s,baz=84,slow=1.3,SNR=1.8						
SONM				LR	LR	13 49 36.7	
	comp=Z,96nm,21.6s,baz=96,slow=32						
TLY	Talaya	97.36	321	P	P	13 12 28.3	-1.8
	comp=Z,1.7nm,0.5s,baz=113,slow=13,SNR=3.2						
PLOR	Plostina	145.00	335	⇓P	PKPdf	13 18 34.3	+0.1
TPGR	Topolog	145.03	332	⇑P	PKPdf	13 18 34.3	+0.1
OZUR		145.14	336	⇑P	PKPdf	13 18 36.1	+1.7
TIRR	Tirgusor	145.35	332	⇓P	PKPdf	13 18 35.8	+1.1
HARR	Harsova	145.38	333	⇑P	PKPab	13 18 35.8	+1.0
DOPR	Dopca	145.40	337	⇑P	PKPab	13 18 36.2	+1.3
MLR	Muntele Rosu	145.57	336	⇑P	PKPab	13 18 36.8	+1.1
KMBO	Kilima Mbogo	145.59	245	PKPbc	PKPdf	13 18 36.1	-0.3
	comp=Z,1.2nm,0.3s,baz=114,slow=3.4,SNR=4.0						
KMBO	Kilima Mbogo	145.59	245		PKPdf	13 18 35.5	-0.9
GERES	GERESS Array B	145.84	352	PKPbc	PKPab	13 18 36.4	-0.1
	comp=Z,0.4nm,0.4s,baz=53,slow=3.8,SNR=2.6						
BRTR	Keskin Array B	145.89	321	PKPbc	PKPbc	13 18 36.9	+0.2
	comp=Z,2.4nm,0.8s,baz=93,slow=2.5,SNR=12						
ARR	Arges	146.19	337	⇑P	PKiKP	13 18 39.5	-0.9
CONA	Conrad Observa	146.38	349	*e*P	PKPab	13 18 39.4	+0.8
	comp=Z,4.6nm,1.1s						
GZR	Gura Zlata	146.84	339	⇑P	PKPab	13 18 40.2	-0.3
BZS	Buzias	147.04	340	⇑P	PKPab	13 18 40.7	-0.4
RETA	Reutte	147.53	355	*i* P	PKPab	13 18 42.9	-0.2
	comp=Z,5.3nm,1.1s						
WATA	Walderalm	147.59	354	*i* P	PKiKP	13 18 42.8	-0.6
	comp=Z,6.6nm,1.4s						
MOTA	Moosalm	147.63	354	*i* P	PKPab	13 18 43.7	+0.1
	comp=Z,6.2nm,1.0s						
WTTA	Wattenberg	147.66	353	*i* P	PKiKP	13 18 42.6	-1.0
	comp=Z,4.5nm,1.1s						
SQTA	Sankt Quirin	147.75	354	*i* P	PKiKP	13 18 43.8	+0.1
	comp=Z,3.6nm,1.0s						
DAVA	Damuels	147.80	356	*i* P	PKiKP	13 18 43.1	-0.7
	comp=Z,4.5nm,1.0s						
FETA	Feichten	147.99	355	*i* P	PKiKP	13 18 43.8	-0.4
	comp=Z,4.9nm,1.1s						
ABTA	Abfaltersbach	148.06	352	*i* P	PKPbc	13 18 43.1	+0.6
	comp=Z,6.6nm,1.0s						
ESDC	Sonseca Array	153.86	19	PKPab	PKPab	13 19 10.4	+1.0
	comp=Z,0.3nm,0.3s,baz=8.3,slow=7.1,SNR=2.4						
TORD	Torodi Ar. Bea	174.93	112	PKPab	PKPab	13 20 44.1	+1.6
	comp=Z,0.4nm,0.8s,baz=261,slow=4.9,SNR=1.4						

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*IDC **19** 13:26:04.1±0.4, 3°.69S×28°.44E, $h0^{km}$, mb4.5/31, mb1 4.6/35, mb1mx4.5/51, mbtmp4.6/35, ML4.7/4, MS3.7/11, Ms1 3.7/11, ms1mx3.4/43, Error ellipse: s-maj=15.3km s-min=11.0km az=100.0*

*BJI **19** 13:26:04.0±0.0, 3°.80S×28°.50E, $h10^{km}$, mB5.0/10, mb4.7/17, Ms4.7/1, Ms7 4.4/2*

*NEIC **19** 13:26:05.3±1.6, 3°.79S±0°.05×28°.55E±0°.09, $h10^{km}\pm 1^{km}$, mb4.8/29, Error ellipse: s-maj=17.6km s-min=2.9km az=298.0*

ISC 19 13:26:05.1±0.3, **3°.81S**±0°.04×**28°.60E**±0°.06, **$h10^{km}$, n172, σ1^{s}44**/177, **mb4.7**/59, **MS3.7**/9, **12C-5D, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	Mbarara	3.83	34	Pn	Pn	13 27 05.4	+1.1
	75nm,0.3s,baz=207,slow=18,SNR=105						
MBAR				Lg	Lg	13 28 00.4	
	573nm,0.3s,baz=329,slow=22,SNR=9.1						
MBAR				LR	LR	13 28 46.8	
	comp=Z,968nm,18.9s,baz=274,slow=42						
MBAR	Mbarara	3.83	34	P	Pn	13 27 05.5	+1.2
TEBE	Entebbe	5.45	45	P	Pn	13 27 30.8	+4.2
NBI	Nairobi	8.57	73	*e*P	Pn	13 28 09.2	-0.3
NBI				*e*S	Sn	13 29 42.7	-3.7
KMBO	Kilima Mbogo	9.04	73	Pn	Pn	13 28 17.8	+1.7
	4.8nm,0.3s,baz=237,slow=14,SNR=48						
KMBO				Sn	Sn	13 29 54.1	-4.0
	8.7nm,0.3s,baz=160,slow=22,SNR=4.6						
KMBO				Lg	Lg	13 30 46.3	
	15nm,0.3s,baz=165,slow=23,SNR=12						
KMBO				LR	LR	13 32 12.0	
	comp=Z,297nm,20.1s,baz=104,slow=40						
KMBO	Kilima Mbogo	9.04	73	Pn	Pn	13 28 16.8	+0.7
KMBO	Kilima Mbogo	9.04	73	P	Pn	13 28 18.0	+2.0
KIBK	Kibwezi	9.54	81	Pn	Pn	13 28 22.4	-0.3
LODK	Lodwar	9.86	43	Pn	Pn	13 28 25.5	-1.6
LSZ	Lusaka	11.40	182	Pn	Pn	13 28 48.2	-0.1
	3.2nm,0.3s,baz=8.5,slow=12,SNR=22						
LSZ				Sn	Sn	13 30 50.9	-5.0
	13nm,0.3s,baz=106,slow=7.5,SNR=2.6						
LSZ				Lg	Lg	13 31 56.7	
	16nm,0.3s,baz=96,slow=4.4,SNR=3.9						
LSZ				LR	LR	13 33 26.8	
	comp=Z,448nm,20.4s,baz=7.5,slow=38						
LSZ	Lusaka	11.40	182		Pn	13 28 47.8	-0.5
LSZ	Lusaka	11.40	182	P	Pn	13 28 49.1	+0.8
KRI	Karoi	12.98	176	*i* P	Pn	13 29 11.7	+1.8
KRI	Karoi	12.98	176	*i* P	Pn	13 29 11.7	+1.8
TETE	Tete	13.20	159	*i* P	P	13 29 27.8	+4.9
TETE	Tete	13.20	159	*i* P	P	13 29 27.8	+4.9
ZOMB	Zomba	13.28	150	P	Pn	13 29 15.8	+1.8
MATP	Matopo	16.52	180	Pn	Pn	13 29 57.3	+0.1
	1.3nm,0.3s,baz=360,slow=18,SNR=50						
MATP				Sn	Sn	13 33 00.2	-0.5
	2.0nm,0.3s,baz=237,slow=22,SNR=3.4						
MATP				Lg	Lg	13 34 41.5	
	1.1nm,0.3s,baz=264,slow=22,SNR=5.9						
CHIPN	CHIPINGE	16.80	167	*i* P	P	13 30 01.7	-1.1
CHIPN	CHIPINGE	16.80	167	*i* P	P	13 30 01.7	-1.1
MSNA	Messina	18.48	176	*i* P	P	13 30 13.8	-7.5
MSNA	Messina	18.48	176	*i* P	P	13 30 13.8	-7.5
TSUM	Tsumeb	18.71	214	P	P	13 30 21.7	-2.3
	1.6nm,0.3s,baz=15,slow=13,SNR=15						
TSUM				S	Sn	13 33 40.9	-13
	1.6nm,0.3s,baz=102,slow=9.1,SNR=3.4						
TSUM				Lg	Lg	13 35 41.3	
	1.5nm,0.3s,baz=291,slow=18,SNR=1.1						
TSUM				LR	LR	13 38 05.4	
	comp=Z,120nm,20.2s,baz=336,slow=39						
TSUM	Tsumeb	18.71	214	P	P	13 30 21.7	-2.3
MOPA	Mopani	19.78	172	*i* P	Pn	13 30 36.7	-0.4
MOPA	Mopani	19.78	172	*i* P	Pn	13 30 36.7	-0.4
LESE	Lesego, Limpop	20.52	177	P	Pn	13 30 46.2	+0.3
ATD	Arta Tunnel	20.81	43	LR	LR	13 38 53.9	
	comp=Z,206nm,20.7s,baz=46,slow=37						
LBTB	Lobatse	21.28	188	P	P	13 30 53.5	+1.4
	25nm,0.7s,baz=5.9,slow=13,SNR=26						
LBTB				LR	LR	13 38 51.7	
	comp=Z,229nm,20.1s,baz=10.0,slow=36						
LBTB	Lobatse	21.28	188	*i* P	P	13 30 49.7	-2.3
LBTB	Lobatse	21.28	188	*i* P	P	13 30 49.7	-2.3
LBTB	Lobatse	21.28	188	P	P	13 30 53.4	+1.4
LBTB	Lobatse	21.28	188	P	P	13 30 53.9	+1.9
CNG	Changalane	22.62	172	*i* P	P	13 31 06.5	+0.3
CNG	Changalane	22.62	172	*i* P	P	13 31 06.5	+0.3
OPO	Ambohidratompo	23.36	130	P	P	13 31 14.7	+0.5
	1.0nm,0.4s,baz=135,slow=19,SNR=1.3						
OPO				LR	LR	13 40 06.9	
	comp=Z,144nm,19.7s,baz=214,slow=36						
ABPO	Ambohimpanom	23.66	131	P	P	13 31 15.1	-2.1
ABPO				IAmb	IAmb	13 31 30.0	
	comp=Z,28nm,1.1s						
BOSA	Boshof	24.88	187	P	P	13 31 29.2	+1.0
	comp=Z,17nm,0.7s,baz=5.1,slow=9.3,SNR=32						
BOSA				LR	LR	13 41 30.1	
	comp=Z,452nm,18.0s,baz=12,slow=37						
BOSA	Boshof	24.88	187	*i* P	P	13 31 29.7	+1.4
BOSA	Boshof	24.88	187	*i* P	P	13 31 29.7	+1.4
BOSA	Boshof	24.88	187	P	P	13 31 28.9	+0.7
SUR	Sutherland	29.35	194	LR	LR	13 44 26.8	
	comp=Z,212nm,21.2s,baz=34,slow=38						
TORD	Torodi Ar. Bea	31.59	303	P	P	13 32 26.3	-2.0
	comp=Z,4.1nm,0.6s,baz=113,slow=5.9,SNR=35						
TORD				PcP	PcP	13 35 18.9	-1.9
	comp=Z,4.0nm,0.8s,baz=114,slow=2.8,SNR=2.6						
TORD				LR	LR	13 45 47.8	
	comp=Z,439nm,20.5s,baz=100,slow=38						
TORD	Torodi Ar. Bea	31.59	303	P	P	13 32 26.4	-1.8
KIC	Kosan Boka	34.79	287	*e*P	P	13 32 57.8	+1.5
	comp=Z,20nm,0.5s						
DBIC	Dimbokro	34.98	287	P	P	13 32 56.1	-1.9
	comp=Z,5.9nm,0.4s,baz=127,slow=6.9,SNR=18						
DBIC	Dimbokro	34.98	287	P	P	13 32 56.4	-1.5
LIC	Lamto	35.03	286	*e*P	P	13 32 55.7	-2.6
	comp=Z,46nm,0.7s						
TIC	Toumodi	35.13	287	*e*P	P	13 32 57.6	-1.7
KOWA	Kowa	37.10	300	P	P	13 33 15.0	-1.0
WSAR	Wadi Sarin	39.76	46	P	P	13 33 39.4	+1.0
	comp=Z,10.0nm,1.1s,baz=344,slow=13,SNR=2.7						
AGG	Agios Georgios	43.01	353	P	P	13 34 04.1	-0.7
AGG				IAmb	IAmb	13 34 11.1	
	comp=Z,14nm,1.0s						
KEST	Kesra	43.27	337	P	P	13 34 05.9	-1.2
	comp=Z,4.5nm,0.8s,baz=262,slow=6.7,SNR=7.9						
KEST	Kesra	43.27	337	P	P	13 34 06.9	-0.2
BR131	Keskin Array S	43.57	6	P	P	13 34 10.6	+1.1
BR131				IAmb	IAmb	13 34 12.6	
	comp=Z,8.2nm,0.8s						
BRTR	Keskin Array B	43.57	6	P	P	13 34 09.7	+0.3
	comp=Z,4.7nm,0.7s,baz=179,slow=8.5,SNR=24						
BRTR				PcP	PcP	13 35 58.4	+1.2
	comp=Z,3.3nm,0.8s,baz=187,slow=4.8,SNR=5.1						
SCTE	Santa Cesarea	44.65	349	P	P	13 34 15.2	-2.8
GNI	Garni	46.19	17	P	P	13 34 30.1	-0.2
	comp=Z,2.8nm,0.4s,baz=58,slow=13,SNR=2.3						
VTS	Vitosha	46.46	355	⇑P	P	13 34 33.2	+0.7
PRVS	Prvonek	46.48	353	*e*P	P	13 34 28.8	-3.6
VSL	Villasalto	46.59	339	P	P	13 34 32.2	-1.1
VSL				IAmb	IAmb	13 34 37.6	
	comp=Z,8.0nm,0.9s						
PDG	Podgorica	46.80	351	⇑P	P	13 34 35.2	+0.3
BARS	Barje	46.81	353	*e*P	P	13 34 35.4	+0.4
SGRT	San Giovanni R	46.83	347	P	P	13 34 32.6	-2.7
ZAPS	Zavoj	47.17	354	*e*P	P	13 34 36.0	-1.9
BOVS	Bovan	47.63	353	⇑P	P	13 34 41.3	-0.1
BOVS	Bovan	47.63	353	*e*P	P	13 34 41.2	-0.2
IVAS	Ivanjica	47.78	352	*e*P	P	13 34 41.8	-0.8
AQU	L'Aquila	47.97	345	P	P	13 34 43.5	-0.6
AQU				IAmb	IAmb	13 34 54.0	
	comp=Z,12nm,0.9s						
GRUS	Gruza	48.01	352	*e*P	P	13 34 44.9	+0.6
TPGR	Topolog	48.45	360	⇓P	P	13 34 49.2	+1.5
NRCA	Norcia	48.50	345	P	P	13 34 47.3	-0.9
NRCA				IAmb	IAmb	13 35 00.3	
	comp=Z,6.2nm,0.9s						
HERR	Herculane	48.79	354	⇑P	P	13 34 49.7	-0.6
KBZ	Khabaz	49.04	14	P	P	13 34 51.8	-0.4
	comp=Z,3.4nm,0.9s,baz=226,slow=2.8,SNR=7.2						
KBZ				PcP	PcP	13 36 17.1	+1.1
	comp=Z,4.4nm,0.8s,baz=131,slow=2.3,SNR=5.0						
ARR	Arges	49.09	356	⇓P	P	13 34 52.4	-0.3
VOIR		49.13	357	⇑P	P	13 34 53.0	0.0
MLR	Muntele Rosu	49.14	358	⇑P	P	13 34 54.1	+1.0
LOT	Lotru	49.23	356	⇑P	P	13 34 54.0	+0.2
GZR	Gura Zlata	49.26	355	⇑P	P	13 34 53.7	-0.3
PLOR	Plostina	49.47	358	⇑P	P	13 34 56.3	+0.7
BZS	Buzias	49.60	354	⇑P	P	13 34 57.3	+0.8
SIRR	Siria	50.24	354	⇓P	P	13 35 00.9	-0.5
KOVH	Kovagotottos	50.55	351	*e*P	P	13 35 02.2	-1.5
MORH	Mrgy, Hungar	50.58	351	⇓P	P	13 35 04.2	+0.3
MORH	Mrgy, Hungar	50.58	351	*e*P	P	13 35 03.2	-0.8
GBRS	Gornja Briga	50.64	347	*i* P	P	13 35 04.7	+0.3
GBRS				*i* pP	sP	13 35 07.9	-1.8
GCIS	Gornji Cirnik	50.79	348	*i* P	P	13 35 05.9	+0.4
BURAR	Bucovina Array	51.29	357	⇑P	P	13 35 11.3	+1.9
OBKA	Obir	51.62	348	*e*P	P	13 35 12.0	+0.1
	comp=Z,4.7nm,0.7s						
SOKA	Soboth	51.68	348	*e*P	P	13 35 12.8	+0.4
	comp=Z,5.3nm,0.8s						
MPLH	Magyarpolny	51.69	350	*e*P	P	13 35 11.7	-0.6
SORM	Soroca	51.73	360	⇓P	P	13 35 11.9	-0.6
TRPA	Tarpa	51.99	355	*e*P	P	13 35 12.7	-1.8
ZOU	Zoufplan	52.02	346	P	P	13 35 14.8	-0.2
ZOU				IAmb	IAmb	13 35 19.3	
	comp=Z,11nm,0.9s						
PSZ	Piszkesteto	52.07	353	⇑P	P	13 35 15.1	-0.1
PSZ	Piszkesteto	52.07	353	*e*P	P	13 35 14.1	-1.1
ARSA	Arzberg	52.13	349	*i* P	P	13 35 16.3	+0.7
	comp=Z,8.0nm,0.8s						
ABTA	Abfaltersbach	52.31	346	*e*P	P	13 35 17.2	+0.2
	comp=Z,5.3nm,0.9s						
KBA	Koelnbreinsper	52.43	347	*e*P	P	13 35 18.1	+0.1
	comp=Z,10nm,0.9s						
BNI	Bardonecchia	52.44	340	P	P	13 35 16.9	-1.1
BNI				IAmb	IAmb	13 35 22.5	
	comp=Z,7.8nm,0.9s						
ESDC	Sonseca Array	52.62	328	P	P	13 35 18.9	-0.5
	comp=Z,2.8nm,0.9s,baz=139,slow=6.7,SNR=13						
ESDC				PcP	PcP	13 36 30.2	+0.7
	comp=Z,2.9nm,0.9s,baz=177,slow=1.6,SNR=8.3						
ESDC	Sonseca Array	52.62	328	P	P	13 35 18.0	-1.4
CONA	Conrad Observa	52.72	349	*e*P	P	13 35 20.3	+0.3
	comp=Z,7.5nm,0.8s,SNR=5.2						
VYHS	Vyhne	52.78	352	*e*P	P	13 35 23.8	+3.4
MOA	Molln	52.96	348	*e*P	P	13 35 21.6	-0.1
	comp=Z,16nm,0.8s						
FETA	Feichten	53.01	345	*i* P	P	13 35 22.8	+0.5
	comp=Z,5.3nm,0.8s						
SQTA	Sankt Quirin	53.07	345	*i* P	P	13 35 22.4	-0.3
	comp=Z,12nm,0.7s,SNR=5.0						
WATA	Walderalm	53.09	346	*i* P	P	13 35 22.4	-0.4
	comp=Z,2.9nm,0.6s						
MOTA	Moosalm	53.22	345	*e*P	P	13 35 23.1	-0.7
	comp=Z,8.8nm,0.6s,SNR=4.7						
JAVC	Velka Javorina	53.31	351	*e*P	P	13 35 26.6	+2.3
LANS	Liptovska Anna	53.34	353	*e*P	P	13 35 25.8	+1.3
SENIN	Lac Senin/Sane	53.40	342	P	P	13 35 23.5	-1.7
SENIN				IAmb	IAmb	13 35 29.1	
	comp=Z,6.2nm,0.7s						
RETA	Reutte	53.44	345	*i* P	P	13 35 24.6	-0.7
	comp=Z,7.7nm,0.8s						
DAVA	Damuels	53.48	344	*i* P	P	13 35 24.9	-0.9
	comp=Z,14nm,0.7s						
KRUC	Moravsky	53.72	350	*e*P	P	13 35 27.1	-0.1
CKRC	Cesky Krumlov	53.87	348	*e*P	P	13 35 29.1	+0.7
CKRC				*e*x	x	13 35 32.9	
VRAC	Vranov	53.92	350	*e*P	P	13 35 28.5	-0.2
GEC2	GERESS Array S	54.02	348	P	P	13 35 29.2	-0.4
GEC2				IAmb	IAmb	13 35 33.4	
	comp=Z,8.2nm,0.8s						

GERES	GERESS Array B	54.02	348	P	P	13 35 28.6	-1.0
	comp=Z,6.4nm,0.7s,baz=160,slow=8.4,SNR=27						
GERES	GERESS Array B	54.02	348	P	P	13 35 28.8	-0.9
MORC	Moravsky Berou	54.22	351	*e*P	P	13 35 31.2	+0.2
AKASG	Malin Array Be	54.30	0	P	P	13 35 30.4	-1.0
	comp=Z,1.7nm,0.7s,baz=187,slow=7.1,SNR=12						
AKASG				PcP	PcP	13 36 36.6	+1.1
	comp=Z,2.4nm,0.7s,baz=189,slow=4.5,SNR=6.2						
KHC	Kasperske Hory	54.32	348	*e*P	P	13 35 31.0	-0.7
KHC				*e*pP	pP	13 35 34.6	-0.9
KHC	Kasperske Hory	54.32	348	P	P	13 35 30.6	-1.1
KRLC	Kraliky	54.63	351	*e*P	P	13 35 33.4	-0.6
KRLC				*e*pP	pP	13 35 36.9	-0.9
DPC	Dobruska-Polom	54.97	350	*e*P	P	13 35 39.6	+3.2
CLL	Collm	56.50	348	*e*(P)	P	13 35 50.0	+2.7
CLL				Lm	MLR	14 19 00.0	
	comp=Z,100nm,19.9s						
BELG	Belogornoye	58.27	14	P	P	13 35 59.8	+0.1
	comp=Z,33nm,0.9s,baz=304,slow=1.3,SNR=9.7						
NACGM	Naroch	58.52	359	*i* P	P	13 35 59.8	-1.7
AKTO	Aktyubinsk	59.66	21	P	P	13 36 09.9	+0.4
	comp=Z,4.8nm,0.8s,baz=214,slow=7.7,SNR=9.1						
KKAR	Karatay Array	60.07	34	P	P	13 36 12.6	+0.1
AAK	Ala-Archa	62.10	37	P	P	13 36 26.7	+0.3
	comp=Z,1.2nm,0.6s,baz=192,slow=9.8,SNR=2.5						
KIRV	Kirov	64.38	12	P	P	13 36 40.8	-0.2
	comp=Z,8.2nm,0.7s,baz=195,slow=5.3,SNR=3.5						
ARU	Arti	64.82	18	P	P	13 36 44.0	0.0
	comp=Z,6.5nm,0.7s,baz=204,slow=4.5,SNR=26						
ARU	Arti	64.82	18	P	P	13 36 42.4	-1.6
KLMR	Klimovskoe	65.03	6	*e*P	P	13 36 43.8	-1.4
KLMR				AMP		13 36 50.9	
	comp=Z,26nm,1.0s						
FINES	FINESS Array B	65.09	359	P	P	13 36 46.0	+0.4
	comp=Z,2.9nm,0.6s,baz=160,slow=6.1,SNR=11						
NB2	NORSAR Subarra	66.06	351	P	P	13 36 51.8	-0.2
	comp=Z,7.3nm,0.8s,baz=162,slow=6.2						
NOA	NORSAR Array B	66.06	351	P	P	13 36 51.0	-0.9
	comp=Z,3.1nm,0.7s,baz=163,slow=6.1,SNR=7.7						
BRVK	Borovoye	66.60	26	P	P	13 36 54.4	-1.1
BRVK				IAmb	IAmb	13 36 56.5	
	comp=Z,6.5nm,0.8s						
BVAR	Borovoye Array	66.62	26	P	P	13 36 55.7	0.0
	comp=Z,6.2nm,0.7s,baz=219,slow=13,SNR=28						
MAW	Mawson	67.86	167	P	P	13 37 05.0	+1.7
	comp=Z,4.0nm,0.9s,baz=351,slow=8.9,SNR=4.2						
MAW	Mawson	67.86	167	P	P	13 37 03.7	+0.5
KURBB	Kurchatov Arra	69.00	31	P	P	13 37 11.8	+1.0
	comp=Z,10nm,0.8s,baz=240,slow=6.6,SNR=21						
MK31	Makanchi Array	69.02	36	P	P	13 37 10.8	-0.2
MK31				IAmb	IAmb	13 37 11.9	
	comp=Z,3.7nm,0.8s						
MKAR	Makanchi Array	69.02	36	P	P	13 37 11.4	+0.5
	comp=Z,4.4nm,0.7s,baz=243,slow=5.8,SNR=26						
MKAR	Makanchi Array	69.02	36	P	P	13 37 11.2	+0.2
KURK	Kurchatov	69.10	31	P	P	13 37 11.5	+0.1
SNAA	Sanae	70.61	190	P	P	13 37 23.6	+3.2
SNAA	Sanae	70.61	190	P	P	13 37 21.3	+0.8
SNAA				IAmb	IAmb	13 37 29.6	
	comp=Z,11nm,1.5s						
VNA1	Neumayer--Stat	70.83	192	P	P	13 37 25.5	+3.8
VNA2	Neumayer--Watz	70.87	192	P	P	13 37 25.0	+3.1
	baz=18,slow=6.3						
WMQ	Urumqi	71.01	41	*e*P	P	13 37 24.9	+1.6
VNA3	Neumayer Olymp	71.59	192	P	P	13 37 29.0	+2.8
CMAR	Chiang Mai Arr	72.67	69	P	P	13 37 35.1	+1.4
	comp=Z,0.7nm,0.4s,baz=260,slow=7.2,SNR=13						
CMAR				LR	LR	14 07 11.8	
	comp=Z,6.9nm,20.2s,baz=235,slow=34						
ARCES	ARCESS Array B	73.22	359	P	P	13 37 35.6	-0.4
	comp=Z,2.5nm,0.7s,baz=160,slow=3.9,SNR=7.4						
ZALV	Zalesovo Beam	74.05	31	P	P	13 37 41.3	+0.2
	comp=Z,6.8nm,0.8s,baz=260,slow=5.2,SNR=21						
BDFB	Brasilia	76.10	255	P	P	13 37 54.6	+0.7
	comp=Z,7.1nm,0.7s,baz=96,slow=9.2,SNR=5.7						
GTA	Gaotai	78.04	49	*e*P	P	13 38 01.3	-3.1
GTA				sP	sP	13 38 09.9	+0.1
GTA				pmax	pmax		
	comp=Z,85nm,5.1s						
GTA				LR	LR		
	comp=Z,150nm,13.1s						
GTA				LR	LR		
	comp=Z,130nm,14.9s						
NRIK	Noril'sk	83.05	18	P	P	13 38 31.0	+0.6
	comp=Z,3.1nm,0.7s,baz=175,slow=3.1,SNR=4.6						
SONM	Songino Array	84.64	41	P	P	13 38 40.3	+1.1
	comp=Z,2.7nm,0.7s,baz=251,slow=4.9,SNR=16						
SONM	Songino Array	84.64	41	P	P	13 38 39.3	0.0
SONM				IAmb	IAmb	13 38 46.1	
	comp=Z,16nm,1.6s						
QSPA	South Pole Qui	86.25	180	P	P	13 38 49.9	+3.0
	comp=Z,3.6nm,0.7s,baz=266,slow=1.5,SNR=30						
QSPA	South Pole Qui	86.25	180	P	P	13 38 47.6	+0.7
QSPA				IAmb	IAmb	13 38 54.9	
	comp=Z,11nm,1.1s						
HHC	Hu-ho-hao-te	87.15	49	*e*P	P	13 38 52.6	+0.8
HHC				pmax	pmax		
	comp=Z,11nm,1.3s						
HHC				pmax	pmax		
	comp=Z,240nm,6.0s						
NJ2	Nanjing	92.21	58	*e*P	P	13 39 15.1	-0.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ASAR	Alice Springs	102.42	115	P	Pdif	13 40 03.3	+1.3
	comp=Z,0.5nm,0.9s,baz=256,slow=3.7,SNR=2.6						
ASAR				PKKPbc	PKKPbc	13 56 02.4	-1.2
	comp=Z,0.5nm,0.8s,baz=97,slow=2.7,SNR=3.6						
YKA	Yellowknife Ar	115.43	342	PKP	PKPdf	13 44 47.1	+0.2
	comp=Z,0.7nm,0.6s,baz=33,slow=1.8,SNR=5.7						
YKA				PKKPab	PKKPab	13 55 27.8	+1.3
	comp=Z,0.6nm,1.0s,baz=223,slow=4.6,SNR=5.2						
ILAR	Eielson Array	119.07	358	PKP	PKiKP	13 44 54.0	+0.1
	comp=Z,0.6nm,0.6s,baz=352,slow=3.3,SNR=6.5						
PDAR	Pinedale Array	126.30	322	PKP	PKiKP	13 45 09.2	0.0
	comp=Z,1.4nm,0.9s,baz=93,slow=4.7,SNR=6.9						
TXAR	Lajitas Array	128.18	305	PKP	PKiKP	13 45 12.8	-0.4
	comp=Z,0.9nm,0.7s,baz=138,slow=2.9,SNR=12						
NVAR	Mina Array Bea	134.22	323	PKhKP	PKPpre	13 45 18.3	
	comp=Z,0.7nm,0.7s,baz=72,slow=4.8,SNR=3.9						

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*IDC **19** 13:30:03.4±1.8, 38°.81N×73°.44E, h0^{km}, mb3.5/4, mb1 3.7/10, mb1mx3.5/50, mbtmp3.6/10, ML3.1/6, MS3.2/2, Ms1 3.2/2, ms1mx2.5/40, Error ellipse: s-maj=29.8km s-min=18.8km az=138.0*

*NNC **19** 13:30:03.9±1.9, 38°.79N×73°.32E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=14.3km s-min=9.2km az=168.0*

ISC 19 13:30:07.8±1.2**, 39°.29N**±0°.08×**73°.34E**±0°.07**, h10^{km}, n37, σ1^{s}.45**/37**, mb3.4**/4**, 4C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	2.85	5	P	Pb	13 30 58.5	-0.5
	SNR=10						
UCH	Uchtor	3.07	16	P	Pb	13 31 01.7	-1.1
	SNR=19						
EKS2	Erkin-Say	3.39	5	P	Pg	13 31 10.6	-2.1
	SNR=8.8						
MRKS	Merke	3.46	359	Pg	Pg	13 31 13.3	-0.7
	13nm,0.6s						
MRKS				Lg	Lg	13 32 06.8	
	21nm,0.5s						
AAK	Ala-Archa	3.46	14	Pn	Pb	13 31 08.0	-1.3
	2.5nm,0.3s,baz=188,slow=7.5,SNR=20						
AAK				Sn	Sg	13 31 57.0	-1.9
	1.8nm,0.3s,baz=81,slow=7.2,SNR=3.7						
AAK	Ala-Archa	3.46	14	P	Pb	13 31 07.4	-1.8
	SNR=21						
AAK	Ala-Archa	3.46	14	⇑Pn	Pb	13 31 07.2	-2.0
	17nm,0.8s						
AAK				⇑Lg	Lg	13 32 09.1	
	61nm,1.1s						
KBK	Karagaybulak	3.58	19	P	Pg	13 31 16.9	+0.6
	SNR=6.2						
ULHL	Ulahol	3.69	36	P	Pg	13 31 18.0	-0.4
	SNR=6.1						
CHMS	Chumysh	3.86	16	P	Pb	13 31 16.5	+0.6
	SNR=8.8						
TKM2	Tokmak 2	4.01	24	⇓Pg	Pg	13 31 25.4	+0.8
	7.2nm,0.5s						
TKM2				⇑Lg	Lg	13 32 25.2	
	18nm,0.8s						
KST	Kastek	4.24	27	Pg	Pg	13 31 28.2	-0.9
	15nm,0.4s						
KST				Lg	Lg	13 32 32.5	
	32nm,1.4s						
SGDS	Sogindy	4.27	13	Pg	Pg	13 31 30.6	+1.0
	8.7nm,0.6s						
SGDS				Lg	Lg	13 32 36.8	
	22nm,1.1s						
DGS	Degeres	4.36	24	Pg	Pg	13 31 32.4	+1.2
	25nm,0.9s						
DGS				Lg	Lg	13 32 39.4	
	23nm,1.2s						
KK09	Karatay Array	4.39	332	⇓Pn	Pn	13 31 16.8	+2.3
	9.7nm,0.6s,baz=145,slow=12						
KK09				⇓Sn	Sb	13 32 17.1	-0.9
	33nm,0.8s,baz=151,slow=24						
MTBS	Maitube	4.49	30	Pg	Pg	13 31 33.6	-0.2
	7.8nm,0.6s						
MTBS				Lg	Lg	13 32 41.6	
	14nm,0.8s						
TNSS	Tian-Shan	4.63	35	Pg	Pg	13 31 35.5	-1.0
	19nm,0.4s						
TNSS				Lg	Lg	13 32 45.3	
	10nm,0.8s						
KRBS	Karabastau	4.74	21	Pg	Pg	13 31 37.9	-0.7
	12nm,0.5s						
KRBS				Lg	Lg	13 32 49.1	
	25nm,1.0s						
MDOK	Medeo	4.78	35	⇑Pg	Pg	13 31 38.2	-1.1
	7.3nm,0.6s						
MDOK				⇓Lg	Lg	13 32 49.5	
	27nm,1.0s						
KTBS	Karatobe	5.08	28	Pg	Pg	13 31 44.7	-0.4
	8.8nm,1.0s						
KTBS				Lg	Lg	13 33 00.6	
	22nm,0.9s						
KUU	Kurty	5.12	25	Pg	Pg	13 31 44.4	-1.5
	5.1nm,0.8s						
KUU				Lg	Lg	13 33 00.1	
	25nm,0.9s						
SATY	Saty	5.37	44	Pg	Pg	13 31 49.9	-0.7
	17nm,0.9s						
SATY				Lg	Lg	13 33 09.9	
	23nm,1.5s						
UZB	Uzynbulak	5.76	46	Pg	Pg	13 31 55.9	-2.2
	10.0nm,0.5s						
UZB				Lg	Lg	13 33 20.3	
	13nm,1.1s						
SHLS	Shalkode	6.02	48	Pg	Pg	13 32 05.0	+1.9
	6.6nm,0.8s						
SHLS				Lg	Lg	13 33 36.2	
	9.0nm,1.4s						
PDGK	Podgornoye	6.14	47	Pg	Pg	13 32 04.4	-1.0
	3.7nm,0.9s						
PDGK				Lg	Lg	13 33 34.7	
	7.2nm,1.1s						
MKAR	Makanchi Array	9.96	38	Pn	Pn	13 32 33.9	+3.0
	0.1nm,0.3s,baz=221,slow=13,SNR=12						
MKAR				Lg	Lg	13 35 30.8	
	baz=221,slow=31,SNR=2.4						
KURBB	Kurchatov Arra	11.91	16	Pn	Pn	13 32 59.5	+1.9
	0.1nm,0.3s,baz=206,slow=12,SNR=1.7						
AB31	Akbulak array	13.81	321	⇓Pn	Pn	13 33 24.2	+0.6
	1.0nm,0.5s,baz=130,slow=13,SNR=10						
BVAR	Borovoye Array	13.89	353	Pn	Pn	13 33 27.0	+2.4
	0.1nm,0.3s,baz=182,slow=13,SNR=3.3						
AKTO	Aktyubinsk	15.53	321	Pn	Pn	13 33 46.8	+0.1
	0.1nm,0.3s,baz=123,slow=16,SNR=3.5						
ZALV	Zalesovo Beam	16.62	24	P	P	13 34 02.8	-0.3
	0.2nm,0.3s,baz=219,slow=11,SNR=1.9						
TLY	Talaya	24.40	50	LR	LR	13 44 49.6	
	comp=Z,31nm,21.3s,baz=146,slow=36						
KIRV	Kirov	24.66	329	LR	LR	13 45 09.9	
	comp=Z,90nm,18.5s,baz=306,slow=36						
SONM	Songino Array	25.27	59	P	P	13 35 33.2	-1.0
	0.6nm,0.7s,baz=267,slow=11,SNR=5.3						
NOA	NORSAR Array B	43.32	321	P	P	13 38 09.7	+0.1
	0.6nm,0.7s,baz=94,slow=7.6,SNR=1.5						
TORD	Torodi Ar. Bea	67.63	269	P	P	13 41 02.6	-2.5
	0.5nm,0.8s,baz=65,slow=5.0,SNR=1.7						
YKA	Yellowknife Ar	78.36	4	P	P	13 42 08.2	+0.3
	0.2nm,0.6s,baz=349,slow=5.5,SNR=3.1						

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*IDC **19** 14:06:42.1±1.8, 5°.72S×129°.53E, h363^{km}±28^{km}, mb3.0/1, mb1 3.3/5, mb1mx2.8/28, mbtmp4.0/5, Error ellipse: s-maj=50.0km s-min=13.6km az=78.0*

ISC 19 14:06:41.3±1.0**, 5°.79S**±0°.07×**129°.3E**±0°.2**, h350^{km}, n12, σ1^{s}.45**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	4.11	46	P	Pn	14 07 53.0	+1.5
SANI	Sanana	4.96	318	P	Pn	14 07 55.8	-4.7
SIJI	Sorong	5.28	22	P	Pn	14 08 04.3	+0.3
	2.8nm,0.3s,baz=153,slow=23,SNR=14						
SIJI				S	S	14 09 08.9	-2.1
	3.8nm,0.3s,baz=294,slow=23,SNR=13						
SOEI	Soe	6.34	231	P	Pn	14 08 09.9	-6.2
DRS	Darwin Rock St	6.79	166	P	Pn	14 08 20.3	-0.9
MTN	Manton Dam	7.24	165	P	Pn	14 08 25.2	-1.3
KDU	Kakadu	7.54	156	P	Pn	14 08 29.7	-0.3
KNRA	Kununurra	9.84	183	P	Pn	14 08 55.1	-2.2
FITZ	Fitzroy Crossi	12.73	196	P	Pn	14 09 33.2	+1.5
	0.5nm,0.3s,baz=33,slow=7.4,SNR=7.5						
FITZ				S	S	14 11 50.1	-1.6
	0.5nm,0.3s,baz=276,slow=19,SNR=1.6						
WRA	Warramunga Arr	14.90	161	P	P	14 09 56.2	+1.3
	1.0nm,0.3s,baz=340,slow=12,SNR=45						
WRA				S	S	14 12 35.3	-0.2
	0.2nm,0.3s,baz=347,slow=20,SNR=1.8						
ASAR	Alice Springs	18.32	166	P	P	14 10 33.3	+1.6
	0.3nm,0.3s,baz=344,slow=11,SNR=26						
ASAR				S	S	14 13 42.4	-0.5
	0.2nm,0.3s,baz=347,slow=21,SNR=13						
MKAR	Makanchi Array	66.83	327	P	P	14 16 56.5	+0.1
	0.4nm,0.5s,baz=114,slow=8.0,SNR=4.9						

MAN 19 14:07:58.1, 10°.09N×126°.40E, h18^{km}, mb4.2, ML3.0, MS2.7, 2C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.40	221	⇓*i*P	Pb	14 08 06.6	0.0
GLSP				*i* S	Sg	14 08 11.9	-0.1
SCPH	Surigao	0.94	251	⇑*e*P	Pb	14 08 15.1	-0.8
SCPH				*i* S	Sb	14 08 26.9	-1.2
MSLP	Maasin	1.51	272	⇑*e*P	Pb	14 08 25.1	-0.5
MSLP				*e*S	Sn	14 08 42.8	-0.8
BESP	Borongan	1.77	328	⇓*i*P	Pn	14 08 28.1	+0.2
BESP				*i* S	Sn	14 08 50.3	+0.3

IDC 19 14:34:57.9±3.5**, 49°.79S×110°.50E, h0^{km}, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.6**/27**, mbtmp3.7**/2**, Error ellipse: s-maj=791.8km s-min=69.9km az=131.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	15.12	12	T	T	14 52 55.3	
	baz=192,slow=74,SNR=14						
H01W1	Cape Leeuwin H	15.12	12	T	T	14 52 56.9	
	baz=192,slow=74,SNR=14						
H01W3	Cape Leeuwin H	15.13	12	T	T	14 52 59.0	
	baz=192,slow=74,SNR=18						
ASAR	Alice Springs	31.86	44	P	P	14 41 24.6	0.0
	0.9nm,0.9s,baz=209,slow=7.4,SNR=5.1						
WRA	Warramunga Arr	35.32	41	P	P	14 41 54.7	0.0
	1.3nm,0.9s,baz=207,slow=10,SNR=4.0						
YKA	Yellowknife Ar	152.48	45	PKPbc	PKPbc	14 54 54.6	-0.1
	0.5nm,0.9s,baz=269,slow=2.2,SNR=4.8						

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*IDC **19** 14:45:20.1±0.9, 4°.23S×129°.44E, h0^{km}, mb3.8/7, mb1 3.9/10, mb1mx3.6/40, mbtmp3.8/10, ML3.7/3, Error ellipse: s-maj=41.1km s-min=18.8km az=73.0*

ISC 19 14:45:25.5±0.7**, 4°.19S**±0°.07×**129°.55E**±0°.08**, h36^{km}, n19, σ1^{s}.29**/20**, mb3.8**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.48	133	P	Pn	14 45 34.6	-1.2
FAKI	Fak Fak	2.98	65	P	Pn	14 46 11.7	+1.5
SIJI	Sorong	3.72	28	Pn	Pn	14 46 20.1	-0.3
	7.4nm,0.3s,baz=216,slow=19,SNR=20						
SIJI				Sn	Sn	14 47 03.4	+0.4
	6.3nm,0.3s,baz=350,slow=22,SNR=6.9						
SANI	Sanana	4.14	301	P	Pn	14 46 26.4	+0.2
MTN	Manton Dam	8.74	170	P	Pn	14 47 30.8	+1.4
KDU	Kakadu	8.92	161	P	Pn	14 47 31.7	-0.2
KNRA	Kununurra	11.44	184	P	Pn	14 48 07.8	+1.4
WRA	Warramunga Arr	16.34	164	Pn	Pn	14 49 09.0	-3.3
	0.2nm,0.3s,baz=347,slow=13,SNR=4.3						
COEN	Coen	16.58	127	P	P	14 49 15.3	-2.2
QIS	Mount Isa	18.99	150	P	Pn	14 49 44.9	-0.1
ASAR	Alice Springs	19.82	168	P	Pn	14 49 53.3	-1.6
	0.5nm,0.3s,baz=339,slow=9.9,SNR=26						
ASAR				PcP	PcP	14 54 09.7	-0.6
	0.0nm,0.3s,baz=350,slow=1.3,SNR=4.9						
WRKA	Warakurna	20.76	183	P	Pn	14 50 04.8	-1.2
STKA	Stephens Creek	29.78	159	P	P	14 51 29.1	+0.3
	1.4nm,0.9s,baz=342,slow=9.6,SNR=1.9						
CMAR	Chiang Mai Arr	37.63	308	P	P	14 52 36.6	-0.6
	0.3nm,0.4s,baz=126,slow=5.7,SNR=1.9						
SONM	Songino Array	55.65	341	P	P	14 54 58.7	+0.7
	0.6nm,0.8s,baz=139,slow=6.8,SNR=3.1						
PETK	Petropavlovsk-	61.82	19	P	P	14 55 41.2	+0.5
	1.4nm,0.6s,baz=248,slow=7.6,SNR=1.3						
MKAR	Makanchi Array	65.65	326	P	P	14 56 06.1	0.0
	0.5nm,0.3s,baz=114,slow=7.7,SNR=21						
ZALV	Zalesovo Beam	68.88	334	P	P	14 56 25.9	-0.5
	0.3nm,0.3s,baz=126,slow=7.3,SNR=1.4						
KURBB	Kurchatov Arra	69.90	328	P	P	14 56 32.8	+0.1
	0.8nm,0.6s,baz=128,slow=5.7,SNR=3.1						

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*IDC **19** 14:48:35.4±3.4, 14°.10N×91°.59W, h0^{km}, mb3.7/3, mb1 4.0/5, mb1mx3.7/36, mbtmp3.6/5, ML3.3/2, MS3.2/3, Ms1 3.2/3, ms1mx2.8/42, Error ellipse: s-maj=119.9km s-min=42.0km az=36.0*

ISC 19 14:48:33.7±3.0**, 13°.6N**±0°.7×**91°.9W**±0°.7**, h10^{km}, n9, σ1^{s}.42**/7**, mb3.7**/3**, MS3.1**/3**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	4.57	321	Pn	Pn	14 49 40.9	-2.0
	1.8nm,0.3s,baz=134,slow=11,SNR=11						
CMIG				Sn	Sn	14 50 37.7	+1.5
	3.2nm,0.3s,baz=254,slow=14,SNR=4.3						
TXAR	Lajitas Array	19.14	327	P	Pn	14 52 58.1	0.0
	0.0nm,0.3s,baz=148,slow=14,SNR=5.9						
TKL	Tuckaleechee C	23.19	17	LR	LR	15 02 55.1	
	comp=Z,106nm,18.4s,baz=198,slow=38						
ATAH	Atahualpa	24.52	146	LR	LR	15 02 33.2	
	comp=Z,32nm,21.8s,baz=289,slow=34						
ANMO	Albuquerque	25.06	331	LR	LR	15 04 11.1	
	comp=Z,58nm,18.5s,baz=1.5,slow=38						
NVAR	Mina Array Bea	34.10	321	P	P	14 55 19.7	+0.8
	0.5nm,0.5s,baz=134,slow=7.6,SNR=5.4						
YKA	Yellowknife Ar	51.49	347	P	P	14 57 38.7	-0.5
	1.4nm,0.7s,baz=150,slow=7.4,SNR=18						
ILAR	Eielson Array	63.31	337	P	P	14 59 03.0	+0.4
	0.4nm,1.0s,baz=116,slow=6.2,SNR=4.3						
CMAR	Chiang Mai Arr	146.46	341	PKPbc	PKPab	15 08 17.6	+0.8
	1.4nm,0.6s,baz=336,slow=3.2,SNR=10						

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*JMA **19** 14:53:28.9±0.4, 21°.14N×120°.84E, h0^{km}, M5.0*

*BJI **19** 14:53:29.5±0.0, 21°.10N×120°.86E, h7^{km}, mB4.8/21, mb4.3/31, Ms4.4/23, Ms7 4.2/22*

*MAN **19** 14:53:31.6, 20°.78N×120°.92E, h4^{km}, mb5.1, ML4.0, MS4.1*

*TAP **19** 14:53:31.6, 21°.10N×120°.94E, h86^{km}, ML4.6, D*

*NEIC **19** 14:53:33.5±3.0, 20°.99N±0°.07×120°.9E±0°.1, h34^{km}±3^{km}, mb4.6/23, Error ellipse: s-maj=14.1km s-min=9.6km az=80.0*

*IDC **19** 14:53:34.8±2.4, 21°.00N×121°.09E, h48^{km}±24^{km}, mb4.1/30, mb1 4.2/33, mb1mx4.1/50, mbtmp4.4/33, ML4.2/3, MS3.8/5, Ms1 3.8/5, ms1mx3.5/63, Error ellipse: s-maj=15.4km s-min=9.4km az=72.0*

ISC 19 14:53:33.0±1.6**, 21°.00N**±0°.03×**120°.82E**±0°.04**, h31^{km}**±11^{km}**, n244, σ1^{s}.33**/274**, mb4.6**/52**, MS3.9**/6**, 2C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSEB	Hengchuen, Pin	0.90	5	*e*P	Pn	14 53 49.6	+0.2
	baz=354						
TSEB				S	Sb	14 54 02.4	+0.7
	baz=354						
TWK1	Hengchun	0.94	359	*e*P	Pn	14 53 49.5	-0.5
	baz=352						
TWK1				*e*S	Sb	14 54 02.8	0.0
	baz=352						
SNW	Nanwan	0.95	356	*e*P	Pn	14 53 50.4	+0.1
	baz=348						
SNW				*e*S	Sb	14 54 04.2	+0.8
	baz=348						
HEN	Hengchun	1.00	356	P	Pn	14 53 50.5	-0.4
	baz=348						
HEN				S	Sb	14 54 04.6	0.0
	baz=348						
BBP	Basco	1.21	117	⇑*e*P	Pn	14 53 51.5	-2.2
BBP				*e*S	Sn	14 54 08.0	-1.0
SLIU	Shizi	1.21	359	P	Pn	14 53 52.9	-0.9
	baz=353						
SLIU				*e*S	Sn	14 54 08.3	-0.8
	baz=353						
LAY	Lan-yu	1.23	33	P	Pn	14 53 52.6	-1.5
	baz=31						
LAY				S	Sn	14 54 08.3	-1.5
	baz=31						
TAW	Tawu	1.35	3	P	Pn	14 53 54.5	-1.2
	baz=358						
TAW				S	Sn	14 54 11.4	-1.1
	baz=358						
EAST	Anshuo	1.37	1	P	Pn	14 53 55.1	-0.9
	baz=356						
EAST				*e*S	Sn	14 54 12.4	-0.8
	baz=356						
SCZT	Fangliau	1.38	352	*e*P	Pn	14 53 55.0	-1.1
	baz=347						
SCZT				*e*S	Sn	14 54 12.1	-1.1
	baz=347						
TWP	Hsiaoliuchiu	1.40	342	P	Pn	14 53 56.1	-0.3
	baz=337						
WLCH	Liuqiu	1.40	343	P	Pn	14 53 56.1	-0.3
	baz=337						
WLCH				*e*S	Sn	14 54 14.1	+0.2
	baz=337						
SSPT	Xinbi	1.49	351	P	Pn	14 53 56.8	-0.8
	baz=346						
ECL	Taimali	1.59	4	*e*P	Pn	14 53 57.3	-1.7
ECL				S	Sn	14 54 16.6	-2.0
MASBT	Mashibuluo	1.61	354	P	Pn	14 53 58.2	-1.1
	baz=349						
TSPT	Pingtung City	1.69	350	*e*P	Pn	14 53 59.8	-0.6
	baz=345						
TSMG	Majia	1.70	355	P	Pn	14 53 59.3	-1.3
	baz=350						
TSMG				S	Sn	14 54 19.9	-1.4
	baz=350						
SGLT	Jiouru	1.74	350	*e*P	Pn	14 54 00.2	-0.9
	baz=345						
SSD	Sandimen	1.74	354	P	Pn	14 53 59.9	-1.2
	baz=350						
SSD				*e*S	Sn	14 54 20.4	-1.9
	baz=350						
LDUT	Ludao	1.77	20	*e*P	Pn	14 54 00.0	-1.4
	baz=17						
LDUT				S	Sn	14 54 20.1	-2.7
	baz=17						
TTN	Taitung	1.77	10	*e*P	Pn	14 54 00.1	-1.4
	baz=7.0						
TWGBT	Beinan	1.82	8	*e*P	Pn	14 54 00.9	-1.3
	baz=4.0						
TWG	Pinlang	1.82	7		Pn	14 54 00.1	-2.1
TWM1	Shoushan	1.85	349	*e*P	Pn	14 54 02.1	-0.5
	baz=344						
LONT	Longtian	1.92	9	P	Pn	14 54 01.9	-1.6
	baz=5.0						
SLGT	Liugui	1.99	355	*e*P	Pn	14 54 03.6	-0.9
	baz=351						
SLGT				*e*S	Sn	14 54 26.6	-1.8
	baz=351						
EDH	Donghe	2.01	13	*e*P	Pn	14 54 03.0	-1.8
	baz=10.0						
EDH				*e*S	Sn	14 54 27.2	-1.7
	baz=10.0						
SGST	Jiashian	2.08	354	*e*P	Pn	14 54 04.1	-1.7
	baz=350						
SGST				*e*S	Sn	14 54 28.8	-1.9
	baz=350						
TAI1	Yung-k'ang	2.10	345	*e*P	Pn	14 54 05.1	-0.9

	baz=341						
CHN3	**Shinhua**	**2.11**	**349**	*e*P	**Pn**	**14 54 05.1**	**-1.0**
	baz=344						
ECS	**Chishang**	**2.12**	**10**	*e*P	**Pn**	**14 54 04.9**	**-1.4**
	baz=7.0						
CHKT	**Chengkung**	**2.15**	**14**	*e*P	**Pn**	**14 54 05.0**	**-1.7**
	baz=11						
STYT	**Tauyuan**	**2.15**	**358**	*e*P	**Pn**	**14 54 05.9**	**-0.9**
	baz=355						
STYH	**Taoyuan**	**2.16**	**359**	*e*P	**Pn**	**14 54 06.1**	**-0.7**
	baz=355						
SSHA	**Shanhua**	**2.18**	**347**	*e*P	**Pn**	**14 54 06.2**	**-0.9**
	baz=343						
ELDTW	**Lidau**	**2.18**	**5**	*e*P	**Pn**	**14 54 06.2**	**-1.0**
	baz=2.0						
CHN1	**Nanshi**	**2.19**	**353**	*e*P	**Pn**	**14 54 06.2**	**-1.1**
	baz=349						
SNST	**Tainan City**	**2.23**	**352**	*e*P	**Pn**	**14 54 06.8**	**-0.9**
	baz=349						
SNST				*e*S	**Sn**	**14 54 32.1**	**-2.1**
	baz=349						
FULB	**Fuli**	**2.23**	**11**	*e*P	**Pn**	**14 54 06.5**	**-1.3**
	baz=9.0						
SCLT	**Jiali**	**2.24**	**345**	*e*P	**Pn**	**14 54 06.7**	**-1.2**
	baz=341						
SCLT				*e*S	**Sn**	**14 54 33.2**	**-1.3**
	baz=341						
WTP	**Ta-pu**	**2.24**	**355**	*e*P	**Pn**	**14 54 06.9**	**-1.1**
	baz=352						
TPUB	**Ta-pu**	**2.29**	**356**	*e*P	**Pn**	**14 54 07.6**	**-1.1**
	baz=352						
TPUB				*e*S	**Sn**	**14 54 33.5**	**-2.4**
	baz=352						
TPUB	**Ta-pu**	**2.29**	**356**	Pn	**Pn**	**14 54 07.7**	**-1.1**
CHN4	**Tsaushan**	**2.35**	**355**	*e*P	**Pn**	**14 54 08.2**	**-1.2**
	baz=351						
CHN4				*e*S	**Sn**	**14 54 34.6**	**-2.6**
	baz=351						
ECBN	**Changbin**	**2.38**	**14**	*e*P	**Pn**	**14 54 08.1**	**-1.7**
	baz=12						
EYUL	**Yuli**	**2.38**	**11**	*e*P	**Pn**	**14 54 08.6**	**-1.2**
	baz=9.0						
TWF1	**Yuli**	**2.38**	**11**	*e*P	**Pn**	**14 54 08.1**	**-1.8**
	baz=8.0						
ICHU	**Yijhu**	**2.40**	**348**	*e*P	**Pn**	**14 54 08.4**	**-1.7**
	baz=344						
ICHU				*e*S	**Sn**	**14 54 36.3**	**-2.2**
	baz=344						
YULB	**Yu-li**	**2.42**	**10**	*e*P	**Pn**	**14 54 08.5**	**-1.9**
	baz=8.0						
YULB	**Yu-li**	**2.42**	**10**		**Pn**	**14 54 09.0**	**-1.4**
WDGT	**Dungji**	**2.49**	**335**	*e*P	**Pn**	**14 54 09.8**	**-1.6**
	baz=331						
WDGT				*e*S	**Sn**	**14 54 38.3**	**-2.4**
	baz=331						
ALS	**Alishan**	**2.50**	**360**	*e*P	**Pn**	**14 54 10.9**	**-0.9**
	baz=357						
CHY	**Chiayi**	**2.51**	**352**	*e*P	**Pn**	**14 54 10.3**	**-1.4**
	baz=348						
CHY				*e*S	**Sn**	**14 54 39.0**	**-2.2**
	baz=348						
EHY	**Hungye**	**2.54**	**10**	*e*P	**Pn**	**14 54 09.9**	**-2.1**
	baz=8.0						
CHN2	**Minshiung**	**2.54**	**353**	*e*P	**Pn**	**14 54 10.9**	**-1.1**
	baz=349						
HGSD	**Ruisui**	**2.54**	**13**	*e*P	**Pn**	**14 54 10.7**	**-1.4**
	baz=10.0						
VCHM	**Qimei**	**2.55**	**330**	*e*P	**Pn**	**14 54 10.2**	**-2.0**
	baz=326						
VCHM				*e*S	**Sn**	**14 54 39.0**	**-3.1**
	baz=326						
CHN5	**Tsauling**	**2.59**	**357**	*e*P	**Pn**	**14 54 11.8**	**-1.0**
	baz=354						
WGK	**Gukeng**	**2.68**	**355**	*e*P	**Pn**	**14 54 12.7**	**-1.3**
	baz=352						
WDLH	**Douliu**	**2.69**	**354**	*e*P	**Pn**	**14 54 12.7**	**-1.4**
	baz=351						
WTK	**Tuku**	**2.70**	**352**	*e*P	**Pn**	**14 54 12.6**	**-1.7**
	baz=348						
WTK				*e*S	**Sn**	**14 54 43.1**	**-2.8**
	baz=348						
EGFH	**Guangfu**	**2.71**	**12**	*e*P	**Pn**	**14 54 13.5**	**-1.0**
	baz=10.0						
PHUB	**P'eng-hu**	**2.75**	**335**	*e*P	**Pn**	**14 54 13.3**	**-1.7**
	baz=332						
PHUB				*e*S	**Sn**	**14 54 44.4**	**-2.8**
	baz=332						
VWDT	**VWDT**	**2.75**	**6**	*e*P	**Pn**	**14 54 15.0**	**0.0**
	baz=4.0						
SSLB	**Suanglung**	**2.77**	**3**	*e*P	**Pn**	**14 54 14.8**	**-0.6**
SSLB	**Suanglung**	**2.77**	**3**	Pn	**Pn**	**14 54 15.1**	**-0.3**
WJS	**Zhushan**	**2.81**	**358**	*e*P	**Pn**	**14 54 14.9**	**-0.9**
	baz=355						
PNG	**Penghu**	**2.81**	**336**	*e*P	**Pn**	**14 54 14.1**	**-1.7**
	baz=332						
PNG				*e*S	**Sn**	**14 54 45.7**	**-2.9**
	baz=332						
ESL	**Shilin**	**2.85**	**11**	*e*P	**Pn**	**14 54 15.9**	**-0.5**
	baz=9.0						
WNT	**Mingjian**	**2.87**	**357**	*e*P	**Pn**	**14 54 15.7**	**-0.8**
	baz=355						
SMLT	**Sun Moon Lake**	**2.87**	**1**	*e*P	**Pn**	**14 54 15.9**	**-0.7**
	baz=359						
WTCT	**Ta-ch'eng**	**2.89**	**350**	*e*P	**Pn**	**14 54 15.3**	**-1.6**
	baz=347						
WRL	**Guolierlin Hig**	**2.91**	**352**	*e*P	**Pn**	**14 54 15.3**	**-1.9**
	baz=349						
WRL				*e*S	**Sn**	**14 54 47.8**	**-3.4**
	baz=349						
OWD	**Renai**	**2.96**	**6**	*e*P	**Pn**	**14 54 16.8**	**-1.1**
	baz=4.0						
WPL	**Puli Township**	**3.00**	**2**	*e*P	**Pn**	**14 54 16.6**	**-1.8**
ETM	**Tongmen**	**3.01**	**12**	*e*P	**Pn**	**14 54 17.5**	**-1.1**
	baz=10.0						
DPDB	**Guoxing**	**3.02**	**2**	*e*P	**Pn**	**14 54 17.8**	**-0.9**
	baz=359						
WWF	**Wufeng**	**3.03**	**358**	*e*P	**Pn**	**14 54 17.1**	**-1.7**
	baz=355						
WCS	**Beigang Elemen**	**3.04**	**2**	*e*P	**Pn**	**14 54 18.2**	**-0.8**
	baz=359						
CHGB	**Renai**	**3.06**	**6**	*e*P	**Pn**	**14 54 19.4**	**-0.1**
	baz=4.0						
WCHH	**Zhanghua**	**3.07**	**356**	*e*P	**Pn**	**14 54 18.2**	**-1.2**
	baz=353						
TCU	**Taichung**	**3.13**	**358**	*e*P	**Pn**	**14 54 18.4**	**-1.8**
	baz=355						
TWD	**Chiawan**	**3.15**	**13**	*e*P	**Pn**	**14 54 18.7**	**-1.7**
	baz=11						
WHF	**Hehuan Shan**	**3.15**	**7**	*e*P	**Pn**	**14 54 20.1**	**-0.8**
	baz=5.0						
NACB	**Ninganchiao**	**3.24**	**13**	*e*P	**Pn**	**14 54 20.0**	**-1.6**
	baz=11						
NACB	**Ninganchiao**	**3.24**	**13**		**Pn**	**14 54 21.4**	**-0.3**
ETLH	**Xiulin Townshi**	**3.25**	**11**	*e*P	**Pn**	**14 54 20.8**	**-1.1**
	baz=9.0						
TDCB	**Techi**	**3.25**	**5**	*e*P	**Pn**	**14 54 21.7**	**-0.3**
	baz=3.0						
TWT	**Tachien**	**3.25**	**6**	*e*P	**Pn**	**14 54 21.7**	**-0.3**
	baz=3.0						
FUSS	**Fushou**	**3.25**	**7**	*e*P	**Pn**	**14 54 21.8**	**-0.4**
	baz=5.0						
WHP	**Taichung City**	**3.26**	**2**	*e*P	**Pn**	**14 54 21.4**	**-0.7**
TWQ1	**Liyutan**	**3.33**	**359**	*e*P	**Pn**	**14 54 23.4**	**+0.5**
	baz=357						
WDJ	**Dajia District**	**3.33**	**357**	*e*P	**Pn**	**14 54 23.6**	**+0.6**
	baz=355						
NSY	**Sanyi**	**3.40**	**359**	*e*P	**Pn**	**14 54 23.0**	**-0.9**
	baz=357						
NNSB	**Datong**	**3.45**	**9**	*e*P	**Pn**	**14 54 24.9**	**+0.3**
	baz=7.0						
NNS	**Nan Shan**	**3.46**	**8**	*e*P	**Pn**	**14 54 24.9**	**0.0**
	baz=7.0						
ENA	**Nanau**	**3.51**	**14**	*e*P	**Pn**	**14 54 25.0**	**-0.5**
	baz=12						
NMLH	**Miaoli**	**3.52**	**360**	*e*P	**Pn**	**14 54 24.9**	**-0.6**
	baz=357						
EWUT	**Wuta**	**3.54**	**14**	*e*P	**Pn**	**14 54 25.9**	**+0.1**
	baz=13						
NSTT	**Nanjuang**	**3.62**	**3**	*e*P	**Pn**	**14 54 26.4**	**-0.5**
	baz=1.0						
LIOB	**Emei**	**3.63**	**3**	*e*P	**Pn**	**14 54 26.1**	**-1.0**
	baz=1.0						
NDT	**Datong Townshi**	**3.64**	**10**	*e*P	**Pn**	**14 54 27.5**	**+0.3**
	baz=8.0						
ENTT	**Nioudou**	**3.69**	**11**	*e*P	**Pn**	**14 54 27.8**	**-0.1**
	baz=9.0						
YHNB	**Yeheng**	**3.69**	**8**	*e*P	**Pn**	**14 54 28.3**	**+0.4**
	baz=6.0						
YHNB	**Yeheng**	**3.69**	**8**	Pn	**Pn**	**14 54 28.8**	**+0.9**
NSK	**Sanguang**	**3.69**	**8**	*e*P	**Pn**	**14 54 28.2**	**+0.2**
	baz=6.0						
NDS	**Dongshan**	**3.71**	**13**	*e*P	**Pn**	**14 54 26.6**	**-1.5**
	baz=11						
TWC	**Suao**	**3.71**	**15**	*e*P	**Pn**	**14 54 28.2**	**0.0**
	baz=13						
TWE	**Neicheng**	**3.78**	**12**	*e*P	**Pn**	**14 54 28.5**	**-0.6**
	baz=10.0						
NWLT	**Wulai**	**3.81**	**9**	*e*P	**Pn**	**14 54 29.6**	**0.0**
	baz=8.0						
VDOS	**Pratas Island**	**3.84**	**266**	*e*P	**Pn**	**14 54 29.0**	**-0.9**
	baz=264						
SAMP	**Sagada Mountai**	**3.90**	**179**	⇓*i*P	**Pn**	**14 54 30.9**	**+0.1**
SAMP				*e*S	**Sn**	**14 55 14.7**	**-0.9**
NTC	**Toucheng**	**3.94**	**13**	*e*P	**Pn**	**14 54 30.8**	**-0.5**
	baz=12						
YOJ	**Yonaguni jima**	**3.99**	**30**	*e*P	**Pn**	**14 54 31.6**	**-0.4**
	baz=29						
YOJ	**Yonaguni jima**	**3.99**	**30**	P	**Pn**	**14 54 32.8**	**+0.7**
YOJ				*e*S	**Sn**	**14 55 17.0**	**-0.8**
YOJ	**Yonaguni jima**	**3.99**	**30**		**Pn**	**14 54 32.7**	**+0.7**
NHDH	**Xindian Distri**	**4.00**	**9**	*e*P	**Pn**	**14 54 31.6**	**-0.5**
	baz=8.0						
TATO	**Taipei**	**4.00**	**9**	*e*P	**Pn**	**14 54 31.6**	**-0.5**
	baz=7.0						
TWA	**Mucha**	**4.02**	**10**	*e*P	**Pn**	**14 54 32.5**	**0.0**
	baz=8.0						
KNM	**Kinmen**	**4.05**	**327**	*e*P	**Pn**	**14 54 32.1**	**-0.7**
	baz=323						
TIPB	**Shuangxi**	**4.06**	**13**	*e*P	**Pn**	**14 54 33.1**	**+0.1**
	baz=12						
ZPLA	**Ao Xicun**	**4.07**	**316**	*e*P	**Pn**	**14 54 30.9**	**-2.1**
	baz=313						
HATJ	**Hateruma jima**	**4.11**	**42**	P	**Pn**	**14 54 33.6**	**0.0**
HATJ				S	**Sn**	**14 55 20.0**	**-0.5**
KNMB	**Chin-men Tao**	**4.11**	**327**	*e*P	**Pn**	**14 54 31.9**	**-1.8**
	baz=324						
TWB1	**Santiao Chiao**	**4.13**	**15**	*e*P	**Pn**	**14 54 33.5**	**-0.4**
	baz=14						
NWF	**Wu-fen Shan**	**4.14**	**12**	*e*P	**Pn**	**14 54 33.9**	**-0.4**
	baz=11						
WFSB	**Wu-fen Shan**	**4.14**	**12**	*e*P	**Pn**	**14 54 33.4**	**-0.8**
	baz=11						
YM01	**YM01**	**4.18**	**9**	*e*P	**Pn**	**14 54 34.1**	**-0.5**
	baz=8.0						
ANP	**Anpu**	**4.21**	**9**	*e*P	**Pn**	**14 54 33.3**	**-1.8**
	baz=7.0						
IRIF	**Iriomote-Funau**	**4.27**	**38**	P	**Pn**	**14 54 36.0**	**+0.2**
PTMZ	**Houxiangcun**	**4.31**	**339**	*e*P	**Pn**	**14 54 34.8**	**-1.6**
	baz=336						
JKRS	**Kuro-shima**	**4.36**	**42**	P	**Pn**	**14 54 37.3**	**+0.2**
JIJ	**Ishigaki jima**	**4.54**	**42**	P	**Pn**	**14 54 39.0**	**-0.5**
JIJ				*e*S	**Sn**	**14 55 30.1**	**-1.2**
AXDP	**Jialang**	**4.69**	**326**	*e*P	**Pn**	**14 54 39.9**	**-1.6**
	baz=324						
JISG	**Ishigakijimahi**	**4.81**	**41**	P	**Pn**	**14 54 42.7**	**-0.5**
JISG				S	**Sn**	**14 55 36.1**	**-1.7**
SMPP	**San Manuel, Pa**	**4.83**	**182**	⇓*i*P	**Pn**	**14 54 43.6**	**0.0**
SMPP				*e*S	**Sn**	**14 55 39.1**	**+0.7**
JTJ	**Tarama**	**5.09**	**44**	P	**Pn**	**14 54 47.3**	**+0.2**
JTJ				*e*S	**Sn**	**14 55 43.6**	**-1.3**
MATB	**Ma-tsu**	**5.19**	**351**	*e*P	**Pn**	**14 54 46.1**	**-2.4**
	baz=349						
MSUT	**Lienchiang**	**5.21**	**351**	*e*P	**Pn**	**14 54 46.7**	**-2.0**
	baz=349						
JIRB	**Irabujima**	**5.53**	**46**	P	**Pn**	**14 54 52.9**	**-0.3**
JIRB				*e*S	**Sn**	**14 55 55.5**	**-0.2**
JMJ2	**Miyako jima3**	**5.58**	**47**	*e*S	**Sn**	**14 55 55.8**	**-1.1**
JMJ	**Miyako jima 2**	**5.60**	**47**	*e*P	**Pn**	**14 54 53.0**	**-1.2**
	baz=47						
LYJJ	**Jianjiangzhen**	**5.61**	**350**	*e*P	**Pn**	**14 54 52.3**	**-1.9**
	baz=348						
JOGS	**Gusukube**	**5.64**	**48**	*e*S	**Sn**	**14 56 00.2**	**+1.7**
JIKM	**Ikemajima**	**5.65**	**45**	*e*S	**Sn**	**14 55 59.2**	**+0.7**
XPSS	**Dashiqiu**	**5.93**	**355**	*e*P	**Pn**	**14 54 56.3**	**-2.3**
	baz=353						
HKPS	**Hong Kong Po S**	**6.34**	**283**	*e*P	**Pn**	**14 55 03.2**	**-1.1**
	baz=280						
TGY	**Tagaytay City**	**6.86**	**179**	P	**Pn**	**14 55 12.7**	**+1.1**
	12nm,0.3s,baz=196,slow=23,SNR=1.2						
LQP	**Lukban**	**6.89**	**174**	⇑*e*P	**Pn**	**14 55 13.8**	**+1.8**
JNTH	**Nagotoyohara**	**8.58**	**49**	P	**Pn**	**14 55 34.5**	**-0.6**
JOW	**Kunigami**	**8.95**	**48**	P	**Pn**	**14 55 39.5**	**-0.6**
	3.0nm,0.3s,baz=144,slow=14,SNR=7.3						
JOW	**Kunigami**	**8.95**	**48**		**Pn**	**14 55 39.0**	**-1.2**
TIA	**Tai'an**	**15.49**	**349**	*e*P	**P**	**14 57 14.8**	**+1.4**
TIA				pmax	pmax		
	comp=Z,12nm,1.0s						
TIA				LR	LR		
	comp=N,530nm,17.7s						
TIA				LR	LR		
	comp=E,730nm,20.1s						
TIA				LR	LR		
	comp=Z,670nm,18.2s						
KSRS	**Korea Array**	**17.52**	**19**	P	**Pn**	**14 57 34.7**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=198,slow=11,SNR=51						
KSRS				LR	LR	15 05 34.9	
	comp=Z,317nm,20.5s,baz=206,slow=41						
KS19	**Wonju Array Si**	**17.54**	**19**	P	**P**	**14 57 35.9**	**-0.2**
CD2	**Chengdu**	**18.22**	**306**	P	**P**	**14 57 44.8**	**+1.2**
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				LR	LR		
	comp=Z,1µm,14.6s						
CD2				LR	LR		
	comp=Z,950nm,13.2s						
BJT	**Baijiatuau**	**19.37**	**349**	Pn	**Pn**	**14 57 58.3**	**+1.0**
BJT				IAmb	IAmb	14 57 58.7	
	comp=Z,17nm,0.8s						
INU	**Inuyama**	**20.16**	**41**	P	**P**	**14 58 05.4**	**+0.6**
INU				IAmb	IAmb	14 58 09.7	
	comp=Z,25nm,0.7s						
SBUM	**Sibu**	**20.26**	**206**	P	**P**	**14 58 03.5**	**-2.5**
SBUM				IAmb	IAmb	14 58 16.0	
	comp=Z,17nm,1.3s						
MRSI	**Marisa**	**20.43**	**177**	P	Pn	14 58 16.3	+6.3
MPSI	**Mapaga**	**20.56**	**183**	P	Pn	14 58 10.5	-1.1
	comp=Z,17nm,1.3s						
JHJ	**Hachijo jima 2**	**20.72**	**50**	LR	LR	15 05 04.6	
	comp=Z,193nm,21.9s,baz=262,slow=34						
CMAR	**Chiang Mai Arr**	**20.75**	**267**	P	Pn	14 58 13.3	-0.5
	comp=Z,13nm,0.8s,baz=74,slow=9.2,SNR=101						
CMAR	**Chiang Mai Arr**	**20.75**	**267**		Pn	14 58 13.0	-0.8
LZH	**Lanzhou**	**21.12**	**319**	*e*P	**P**	**14 58 17.5**	**+2.1**
LZH				pP	sP	14 58 27.8	+0.6
LZH				pmax	pmax		
	comp=Z,31nm,1.2s						
LZH				LR	LR		
	comp=Z,1µm,13.5s						
LZH				LR	LR		
	comp=Z,1µm,16.0s						
LZH				LR	LR		
	comp=Z,1µm,16.7s						
MAT	**Matsushiro**	**21.67**	**41**	P	**P**	**14 58 21.2**	**+0.1**
MAT				S	**S**	**15 02 22.2**	**+2.8**
MJAR	**Matsushiro Arr**	**21.67**	**41**	P	**P**	**14 58 20.2**	**-0.9**
	comp=Z,6.5nm,0.8s,baz=222,slow=8.2,SNR=18						
APSI	**Ampana**	**21.79**	**178**	P	**P**	**14 58 24.8**	**+2.3**
	comp=Z,489nmcomp=Z,62nm,0.8s						
LUWI	**Luwuk**	**21.99**	**175**	P	**P**	**14 58 25.9**	**+1.3**
	comp=Z,107nm,0.8s						
LBMI	**Labuha**	**22.48**	**162**	P	**P**	**14 58 31.3**	**+1.4**
	comp=Z,58nm,0.8s						
SANI	**Sanana**	**23.46**	**167**	P	**P**	**14 58 40.4**	**+0.5**
	comp=Z,43nm,0.8s						
SWI	**Sorong**	**24.01**	**154**	P	**P**	**14 58 44.0**	**-1.2**
	comp=Z,32nm,0.6s						
SIJI	**Sorong**	**24.02**	**154**	P	**P**	**14 58 44.5**	**-0.8**
	comp=Z,23nm,0.5s,baz=355,slow=13,SNR=18						
GUMO	**Guam**	**24.09**	**104**	LR	LR	15 07 36.3	
	comp=Z,213nm,19.6s,baz=268,slow=35						
MDJ	**Mudanjiang**	**24.64**	**15**	P	**P**	**14 58 48.8**	**-1.9**
MDJ				pmax	pmax		
	comp=Z,15nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,300nm,5.3s						
USRK	**Ussuriysk Ar.**	**24.92**	**19**	P	**P**	**14 58 52.9**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=211,slow=7.6,SNR=5.3						
IPM	**Ipoh**	**25.29**	**232**	P	**P**	**14 58 55.7**	**-1.2**
IPM				IAmb	IAmb	14 58 57.7	
	comp=Z,16nm,0.8s						
MSAI	**Masohi**	**25.47**	**161**	P	**P**	**14 58 59.3**	**+0.9**
	comp=Z,2µmcomp=Z,36nm,0.7s						
AAI	**Ambon**	**25.58**	**163**	P	**P**	**14 59 00.3**	**+0.9**
	comp=Z,72nm,0.9s						
GTA	**Gaotai**	**25.70**	**320**	*e*P	**P**	**14 59 01.8**	**+1.2**
GTA				pP	pP	14 59 08.5	-0.7
GTA				sP	sP	14 59 12.3	-0.6
GTA				pmax	pmax		
	comp=Z,94nm,5.5s						
GTA				LR	LR		
	comp=Z,290nm,17.1s						
GTA				LR	LR		
	comp=Z,280nm,17.5s						
GTA				LR	LR		
	comp=Z,460nm,17.1s						
MNSI	**Mandailing Nat**	**28.87**	**229**	P	**P**	**14 59 29.6**	**+0.6**
SONM	**Songino Array**	**29.19**	**340**	P	**P**	**14 59 32.8**	**+1.0**
	comp=Z,3.1nm,0.7s,baz=157,slow=9.3,SNR=22						
ASAJ	**Asahikawa**	**29.29**	**33**	P	**P**	**14 59 31.4**	**-1.1**
	comp=Z,11nm,1.0s,baz=242,slow=8.8,SNR=2.0						
ASAJ				LR	LR	15 12 40.1	
	comp=Z,255nm,19.0s,baz=224,slow=39						
KLR	**Kul'dur**	**29.49**	**15**	P	**P**	**14 59 33.5**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=296,slow=9.7,SNR=2.9						
KLR				LR	LR	15 12 40.0	
	comp=Z,354nm,21.2s,baz=196,slow=39						
JIRN	**Jiri**	**32.17**	**289**	*e*P	**P**	**14 59 59.6**	**+1.1**
	comp=Z,36nm,1.0s						
GUN	**Gumba**	**32.46**	**289**	*e*P	**P**	**15 00 02.8**	**+1.7**
	comp=Z,22nm,0.9s						
PKI	**Pulchoki**	**32.85**	**289**	*e*P	**P**	**15 00 05.5**	**+1.0**
PKIN	**Phulchoki**	**32.87**	**289**	*e*P	**P**	**15 00 06.0**	**+1.5**
DMN	**Daman**	**33.12**	**289**	*e*P	**P**	**15 00 07.5**	**+0.7**
GKN	**Gorkha**	**33.56**	**289**	*e*P	**P**	**15 00 11.5**	**+1.0**
DANN	**Dangsing**	**34.36**	**290**	*e*P	**P**	**15 00 17.7**	**+0.1**
PYUN	**Piuthan**	**35.02**	**289**	*e*P	**P**	**15 00 23.8**	**+0.6**
	comp=Z,15nm,0.9s						
WMQ	**Urumqi**	**35.68**	**317**	*e*P	**P**	**15 00 30.5**	**+2.0**
FITZ	**Fitzroy Crossi**	**39.15**	**173**	P	**P**	**15 00 56.7**	**-1.2**
	comp=Z,3.3nm,0.7s,baz=346,slow=12,SNR=2.3						
PMG	**Port Moresby**	**39.79**	**137**	P	**P**	**15 01 02.0**	**-1.4**
	comp=Z,33nm,1.0s,baz=331,slow=5.5,SNR=7.0						
PMG	**Port Moresby**	**39.79**	**137**	P	**P**	**15 01 01.6**	**-1.8**
MK31	**Makanchi Array**	**40.44**	**319**	P	**P**	**15 01 09.0**	**+0.5**
MKAR	**Makanchi Array**	**40.44**	**319**	P	**P**	**15 01 09.8**	**+1.3**
	comp=Z,3.6nm,0.9s,baz=114,slow=9.8,SNR=22						
MKAR	**Makanchi Array**	**40.44**	**319**	P	**P**	**15 01 09.7**	**+1.2**
MAKZ	**Makanchi**	**40.64**	**319**	P	**P**	**15 01 11.2**	**+1.0**
KSH	**Kashi**	**42.42**	**306**	P	**P**	**15 01 29.3**	**+4.3**
KSH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
WB0	**Warramunga Arr**	**42.64**	**161**	P	**P**	**15 01 25.7**	**-1.1**
WB0				IAmb	IAmb	15 01 38.0	
	comp=Z,23nm,1.2s						
PETK	**Petropavlovsk-**	**42.70**	**32**	P	**P**	**15 01 24.7**	**-2.3**
	comp=Z,2.1nm,0.8s,baz=176,slow=5.7,SNR=5.5						
ZALV	**Zalesovo Beam**	**42.76**	**329**	P	**P**	**15 01 27.5**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=116,slow=7.6,SNR=7.8						
WRAB	**Tennant Creek**	**42.78**	**161**	P	**P**	**15 01 25.8**	**-2.1**
WRAB				IAmb	IAmb	15 01 38.7	
	comp=Z,15nm,0.9s						
WRA	**Warramunga Arr**	**42.79**	**161**	P	**P**	**15 01 27.1**	**-0.9**
	comp=Z,8.9nm,0.5s,baz=343,slow=8.8,SNR=82						
WRA	**Warramunga Arr**	**42.79**	**161**	P	**P**	**15 01 25.8**	**-2.2**
WB2	**Warramunga Arr**	**42.79**	**161**	P	**P**	**15 01 26.7**	**-1.3**
WB2				IAmb	IAmb	15 01 27.8	
	comp=Z,15nm,0.7s						
WR0	**Warramunga Arr**	**42.87**	**161**	P	**P**	**15 01 27.5**	**-1.1**
WR0				IAmb	IAmb	15 01 39.8	
	comp=Z,19nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**43.13**	**85**	T	T	15 47 32.3	
	baz=281,slow=75,SNR=24						
H11S1	**WAKE ISLAND Hy**	**43.14**	**85**	T	T	15 47 37.7	
	baz=281,slow=75,SNR=11						
H11S2	**WAKE ISLAND Hy**	**43.15**	**85**	T	T	15 47 41.7	
	baz=281,slow=75,SNR=14						
AAK	**Ala-Archa**	**44.23**	**310**	P	**P**	**15 01 41.1**	**+1.5**
	comp=Z,1.8nm,0.8s,baz=156,slow=4.1,SNR=8.4						
KURK	**Kurchatov**	**44.35**	**322**	P	**P**	**15 01 41.5**	**+1.3**
KURK				IAmb	IAmb	15 01 55.9	
	comp=Z,13nm,1.1s						
KURBB	**Kurchatov Arra**	**44.36**	**322**	P	**P**	**15 01 41.8**	**+1.5**
	comp=Z,6.4nm,0.8s,baz=124,slow=7.4,SNR=45						
AS31	**Alice Springs**	**46.19**	**163**	P	**P**	**15 01 54.8**	**-0.3**
AS31				IAmb	IAmb	15 02 10.9	
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**46.19**	**163**	P	**P**	**15 01 54.8**	**-0.4**
	comp=Z,6.3nm,0.5s,baz=347,slow=6.5,SNR=71						
ASAR	**Alice Springs**	**46.19**	**163**	P	**P**	**15 01 54.2**	**-0.9**
KKAR	**Karatay Array**	**47.18**	**310**	P	**P**	**15 02 04.9**	**+2.1**
CTA	**Charters Tower**	**47.82**	**147**	P	**P**	**15 02 06.3**	**-1.6**
	comp=Z,9.9nm,0.7s,baz=332,slow=11,SNR=5.3						
NRIK	**Noril'sk**	**52.38**	**346**	P	**P**	**15 02 42.9**	**+1.1**
	comp=Z,6.8nm,0.9s,baz=116,slow=8.3,SNR=8.9						
GEYT	**Alibeck**	**56.16**	**302**	P	**P**	**15 03 12.1**	**+2.2**
	comp=Z,1.5nm,0.5s,baz=63,slow=9.9,SNR=1.6						
STKA	**Stephens Creek**	**56.22**	**159**	P	**P**	**15 03 09.7**	**-0.5**
	comp=Z,6.8nm,0.7s,baz=334,slow=7.4,SNR=21						
STKA	**Stephens Creek**	**56.22**	**159**	P	**P**	**15 03 09.4**	**-0.8**
KBZ	**Khabaz**	**67.22**	**310**	P	**P**	**15 04 25.6**	**+1.3**
	comp=Z,2.5nm,0.9s,baz=75,slow=3.7,SNR=4.6						
A21K	**Barrow**	**67.90**	**20**	P	**P**	**15 04 27.9**	**-0.2**
J20K	**Nowinta River**	**69.16**	**28**	P	**P**	**15 04 36.9**	**+0.8**
K20K	**Telida**	**69.27**	**29**	P	**P**	**15 04 36.7**	**-0.1**
K20K				IAmb	IAmb	15 04 46.9	
	comp=Z,10nm,1.2s						
CAST	**Castle Rocks**	**70.15**	**29**	P	**P**	**15 04 42.6**	**+0.3**
TOLK	**Toolik Lake Re**	**70.50**	**23**	P	**P**	**15 04 42.4**	**-1.9**
TOLK				IAmb	IAmb	15 04 58.1	
	comp=Z,7.7nm,1.1s						
RND	**Reindeer**	**71.59**	**28**	P	**P**	**15 04 50.0**	**-1.1**
IL31		**72.19**	**27**	P	**P**	**15 04 52.5**	**-2.0**
IL31				IAmb	IAmb	15 04 56.4	
	comp=Z,3.4nm,0.8s						
ILAR	**Eielson Array**	**72.19**	**27**	P	**P**	**15 04 53.0**	**-1.6**
	comp=Z,1.5nm,0.7s,baz=268,slow=4.9,SNR=23						
ILAR	**Eielson Array**	**72.19**	**27**	P	**P**	**15 04 52.5**	**-2.0**
ARCES	**ARCESS Array B**	**72.36**	**338**	P	**P**	**15 04 55.2**	**-0.3**
	comp=Z,7.7nm,1.1s,baz=70,slow=7.9,SNR=1.8						
ARCES	**ARCESS Array B**	**72.36**	**338**	P	**P**	**15 04 54.2**	**-1.3**
FINES	**FINESS Array B**	**74.02**	**330**	P	**P**	**15 05 06.3**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=46,slow=5.5,SNR=8.0						
BRTR	**Keskin Array B**	**74.80**	**307**	P	**P**	**15 05 11.2**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=95,slow=8.7,SNR=2.4						
AKASG	**Malin Array Be**	**75.02**	**319**	P	**P**	**15 05 11.8**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=60,slow=6.2,SNR=1.8						
NOA	**NORSAR Array B**	**80.87**	**332**	P	**P**	**15 05 45.0**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=67,slow=4.8,SNR=1.3						
CLL	**Collm**	**84.38**	**323**	*e*P	**P**	**15 06 01.0**	**-1.2**
KMBO	**Kilima Mbogo**	**84.39**	**267**	P	**P**	**15 06 03.6**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=298,slow=7.7,SNR=1.5						
GERES	**GERESS Array B**	**85.08**	**321**	P	**P**	**15 06 07.0**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=72,slow=4.3,SNR=5.9						
YKA	**Yellowknife Ar**	**86.02**	**23**	P	**P**	**15 06 09.6**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=310,slow=4.8,SNR=36						

BJI ***19*** *15:03:31.5±0.0, 8°.30S×107°.10E, h10^{km}, mB5.4/60, mb5.2/75, Ms5.6/86, Ms7 5.4/82*

NEIC ***19*** *15:03:35.1, 8°.36S×107°.05E, h23^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.80; M$_{\theta\theta}$-1.21; M$_{\phi\phi}$-0.60; M$_{r\theta}$1.63; M$_{\theta\phi}$0.32; M$_{\phi r}$-0.09; Fault plane solution: M$_0$2.30000×10^{17} NP1:ϕ_s99.57000°, δ68.08000°, λ83.45000°. NP2:ϕ_s296.67000°, δ22.83000°, λ105.83000°. Principal axes: T 2.5167, Plg66.0000°, Azm358.0000°; N -0.5159, Plg6.0000°, Azm102.0000°; P -2.0008, Plg23.0000°, Azm195.0000°;*

MOS ***19*** *15:03:36.1±1.1, 7°.96S×107°.26E, h30^{km}, mb5.8/64, MS5.1/23 Error ellipse: s-maj=7.9km s-min=4.3km az=110.8*

NEIC ***19*** *15:03:36.0±2.8, 8°.37S±0°.06×107°.02E±0°.06, h27^{km}±1^{km}, mb5.6/107, Ms_20 5.4/105, Mwb5.5/44, Mww5.7, Error ellipse: s-maj=10.7km s-min=9.6km az=118.0*

DJA ***19*** *15:03:38.8±0.2, 8°S±2°×10°7E±°, h52^{km}±3^{km}, M5.4/76, mB5.9/66, mb5.7/76, MLv5.9/31, Mw(mB)5.5/66, MwMwp5.3/48, Mwp5.5/48*

IDC ***19*** *15:03:38.1±1.5, 8°.09S×107°.26E, h33^{km}±10^{km}, mb5.1/53, mb1 5.1/55, mb1mx5.0/61, mbtmp5.3/55, ML5.0/2, MS5.1/33, Ms1 5.1/33, ms1mx5.0/46, Error ellipse: s-maj=10.5km s-min=7.8km az=52.0*

KLM ***19*** *15:03:39, 8°.42S×107°.01E, h44^{km}, mb5.5*

NEIC ***19*** *15:03:41, 8°.35S×107°.04E, h24^{km}, Moment Tensor Solution. Duration: 10^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.08; M$_{\theta\theta}$-2.06; M$_{\phi\phi}$-0.02; M$_{r\theta}$3.20; M$_{\theta\phi}$1.13; M$_{\phi r}$-0.35; Fault plane solution: M$_0$3.99000×10^{17} NP1:*

ϕ_s313.00000°,δ20.00000°,λ122.00000°. NP2: ϕ_s99.00000°,δ73.00000°,λ79.00000°. Principal axes: T 3.8342, Plg61.0000°, Azm353.0000°; N 0.2924, Plg11.0000°, Azm102.0000°; P -4.1266, Plg27.0000°, Azm198.0000°;

*GCMT **19** 15:03:42.0±0.1, 8°.54S±0°.01×107°.11E±0°.01, h33^{km}, MW5.6/139, Moment Tensor Solution. s132,c240; s139,c256; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}2.56±.04; $M_{\theta\theta}$-2.48±.03; $M_{\phi\phi}$-0.08±.03; $M_{r\theta}$2.39±.06; $M_{\theta\phi}$1.09±.02; $M_{\phi r}$-0.40±.05; Best double couple: $M_0$3.65500×10^{17} NP1:ϕ_s301.00000°,δ25.00000°, λ106.00000°. NP2:ϕ_s103.00000°,δ66.00000°,λ83.00000°. Principal axes: T 3.5130, Plg68.0000°, Azm359.0000°; N 0.2790, Plg7.0000°, Azm106.0000°; P -3.7960, Plg21.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 15:03:36.6±0.4**, 8°.35S**±0°.03×**107°.24E**±0°.03**, h27**^{km}±2^{km}**, h27**^{km}**:pP-P, n1066, σ2^{s}01**/1099**, mb5.5**/199**, MS5.3**/130**, 109C-22D, Fault plane solution: NP1:**ϕ_s74.22574°, δ66.06350°, λ53.51078°. **NP2:**ϕ_s315.48007°**,** δ42.70765°, λ143.25995°. **Principal axes:** T Plg53.7543°, Azm298.8931°**;** N Plg32.9241°, Azm90.9303°**;** P Plg13.4566°**,** Azm189.8436°**; Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNJI	Cibinong	1.04	354	P	Pb	15 03 57.2	+1.1
CNJI				S	Sb	15 04 10.8	+1.4
CMJI	Cimerak	1.33	65	P	Pb	15 04 01.5	+0.6
CMJI				S	Sb	15 04 21.1	+3.6
SKJI	Sukabumi	1.50	333	P	Pb	15 04 03.8	0.0
SKJI				S	Sb	15 04 22.1	-0.4
LEM	Lembang	1.56	14	Pn	Pb	15 04 05.9	+0.9
	2µm,0.3s,baz=190,slow=9.9,SNR=509						
LEM				Sn	Sb	15 04 30.8	+6.3
	5µm,0.3s,baz=169,slow=21,SNR=9.7						
LEM				LR	LR	15 04 49.0	
	comp=Z,141µm,18.6s,baz=271,slow=54						
LEM	Lembang	1.56	14	P	Pb	15 04 06.8	+1.8
LEM				S	Sb	15 04 30.1	+5.7
DBJI	Dramaga	1.85	345	P	Pb	15 04 09.7	-0.1
DBJI				S	Sb	15 04 34.7	+2.1
TNG	Tangerang	2.25	345	P	Pn	15 04 17.1	+5.1
TNG				P	Pb	15 04 15.3	-1.2
CGJI	Cibinong	2.31	318	P	Pn	15 04 14.1	+1.2
CGJI				S	Sn	15 04 42.2	+1.8
SBJI	Serang	2.48	334	P	Pn	15 04 17.8	+2.6
XMI	Christmas Isla	2.58	216	P	Pn	15 04 14.4	-2.3
XMIS	Christmas Isla	2.63	216		Pn	15 04 14.2	-3.2
XMIS	Christmas Isla	2.63	216	P	Pn	15 04 14.7	-2.6
YOGI	Yogyakarta	3.08	80	P	Pb	15 04 27.5	-3.2
UGM	Wanagama	3.28	83	P	Pn	15 04 29.6	+3.2
UGM	Wanagama	3.28	83		Pn	15 04 29.2	+2.9
UGM	Wanagama	3.28	83	P	Pn	15 04 29.5	+3.2
SMRI	Semarang	3.43	68	P	Pb	15 04 33.4	-3.3
SMRI				S	Pn	15 04 33.5	+5.2
SMRI	Semarang	3.43	68	Pn	Pn	15 04 31.3	+2.9
SMRI	Semarang	3.43	68	P	Pb	15 04 33.3	-3.4
BLSI	Bandar Lampung	3.56	326	P	Pn	15 04 32.2	+2.0
WOJI	Wonogiri, Jawa	3.69	82	P	Pb	15 04 36.6	-4.5
PCJI	Pacitan	3.90	88	P	Pb	15 04 39.0	-5.8
PCJI				S	Pn	15 04 38.6	+3.8
KASI	Kota Agung	3.91	316	P	Pn	15 04 35.8	+0.9
UWJI	Ujung Watu	4.15	63	P	Pn	15 04 42.9	+4.6
KLI	Kotabumi	4.20	326	P	Pn	15 04 41.2	+2.3
KLSI		4.41	325	P	Pn	15 04 43.9	+2.1
LWLI	Liwa	4.58	316	P	Pn	15 04 45.7	+1.5
MDSI	Maura Dua	4.90	321	P	Pn	15 04 49.8	+1.3
LHSI	Lahat	5.82	320	P	Pn	15 05 03.3	+2.1
	7.0nm24µm19µm2µm,0.9s						
PMBI	Palembang	5.92	335	P	Pn	15 05 06.1	+3.5
	14nm26µm29µm2µm,1.0s						
PMBI	Palembang	5.92	335	Pn	Pn	15 05 00.1	-2.5
PMBI	Palembang	5.92	335	P	Pn	15 05 02.6	0.0
BWJI	Bawean	5.93	66	P	Pn	15 05 06.1	+3.4
	6.6nm16µm13µm1µm,1.2s						
GMJI	Gumukmas	6.14	90	P	Pn	15 05 10.4	+4.8
	3.9nm8µm837nm,0.8s						
PPBI	Pangkal Pinang	6.25	350	P	Pn	15 05 10.9	+3.8
	4.2nm31µm8µm606nm,0.9s						
BLJI	Banyuglugur	6.33	85	P	Pn	15 05 13.5	+5.4
	2.4nm8µm554nm,0.6s						
JAGI	Jajag, Banyuwa	6.84	91	P	Pn	15 05 20.0	+4.7
	5.9nm9µm12µm1µm,0.7s						
JAGI	Jajag, Banyuwa	6.84	91	Pn	Pn	15 05 18.5	+3.3
JAGI	Jajag, Banyuwa	6.84	91	P	Pn	15 05 20.2	+4.9
ABJI	Asem Bagus	6.95	86	P	Pn	15 05 23.1	+6.4
	7.6nm12µm17µm2µm,0.7s						
PBKI	Pangkalan Bun	7.14	38	P	Pn	15 05 24.3	+5.0
	5.6nm138µm16µm2µm,1.0s						
MASI	Maura Aman, Be	7.18	316	P	Pn	15 05 20.8	+0.9
	11nm15µm26µm1µm,1.0s						
JMBI	JAMBI	7.58	332	P	Pn	15 05 31.8	+6.5
IGBI	Denpasar	7.83	94	P	Pn	15 05 33.3	+4.4
	10µm965nm,0.8s						
DNP	Denpasar	7.89	93	P	Pn	15 05 33.9	+4.2
SRBI	Singaraja	7.90	89	P	Pn	15 05 34.6	+4.8
	9µm10µm1µm,0.7s						
DSRI	Dabo	8.26	341	P	Pn	15 05 37.0	+2.3
	10µm5µm328nm,1.4s						
KRJI	Kerinci	8.47	317	P	Pn	15 05 38.7	+1.0
	12µm15µm1µm,0.9s						
BBKI	Banjar Baru	8.99	58	P	Pn	15 05 51.4	+6.7
	14µm4µm261nm,1.0s						
PPSI	Pulau Pagai	9.09	307	P	Pn	15 05 45.8	-0.3
	16µm2µm,1.0s						
STKI	Sintang	9.37	27	P	Pn	15 05 54.7	+4.7
	20µm212nm,1.0s						
PDSI	Padang	10.01	317	P	Pn	15 05 59.5	+0.7
	7µm2µm121nm,0.9s						
KBKI	Kotabaru	10.20	61	P	Pn	15 06 07.7	+6.3
	2µm280nm,0.8s						
KSM	Kuching	10.23	18	P	Pn	15 06 07.0	+5.2
KSM	Kuching	10.23	18	Pn	Pn	15 06 03.6	+1.8
PLAI	Plampang	10.43	93	P	Pn	15 06 08.8	+4.3
	4µm10µm960nm,1.0s						
PLAI	Plampang	10.43	93	P	Pn	15 06 07.4	+2.9
MTKI	Muara Teweh, K	10.60	46	P	Pn	15 06 14.8	+7.9
	8µm4µm74nm,0.6s						
BKNI	Bangkinang	10.61	324	P	Pn	15 06 07.8	+0.9
	8µm4µm372nm,1.3s						
BKNI	Bangkinang	10.61	324	Pn	Pn	15 06 04.5	-2.5
BKNI	Bangkinang	10.61	324	P	Pn	15 06 05.7	-1.2
MYKOM	Kota Tinggi	10.63	341	P	Pn	15 06 10.0	+2.8
MYKOM	Kota Tinggi	10.63	341		Pn	15 06 04.7	-2.5
SISI	Saibi	10.70	310	P	Pn	15 06 07.1	-1.1
	4µm506nm,1.1s						
SBUM	Sibu	11.83	25	P	Pn	15 06 30.0	+6.4
MNSI	Mandailing Nat	11.87	320	P	Pn	15 06 23.6	-0.6
	2µm127nm,0.9s						
WBSI	Waikabubak, Su	12.07	97	P	Pn	15 06 30.6	+3.5
	4µm413nm,0.7s						
KAPI	Kappang	12.86	76	Pn	Pn	15 06 39.5	+1.7
	3.2nm,0.3s,baz=273,slow=13,SNR=17						
KAPI				LR	LR	15 12 30.0	
	comp=Z,15µm,19.8s,baz=278,slow=42						
KAPI	Kappang	12.86	76	P	P	15 06 43.8	-4.5
KAPI				P	P	15 06 43.8	-4.5
KAPI	Kappang	12.86	76	Pn	Pn	15 06 41.0	+3.2
KAPI	Kappang	12.86	76	P	Pn	15 06 41.4	+3.6
JRMM	Jerantut	13.05	338	P	Pn	15 06 43.0	+2.6
BKSI	Bulukumba	13.14	78	P	P	15 06 46.7	-4.7
	10µm5µm313nm,0.9s						
SPSI	Sidrap Palu	13.20	71	P	P	15 06 48.3	-3.8
	9µm3µm133nm,0.8s						
BASI	Baing, Sumba	13.30	99	P	Pn	15 06 46.5	+2.8
	2µm4µm329nm,1.1s						
BSSI	Bau Bau, Buton	13.33	81	P	Pn	15 06 48.6	+4.4
	9µm5µm403nm,0.8s						
BNSI	Bone	13.38	74	P	P	15 06 51.3	-2.7
	8µm274nm,1.0s						
TTSI	Tana Toraja	13.58	68	P	P	15 06 53.4	-2.9
	9µm4µm234nm,1.2s						
GSI	Gunungsitoli	13.59	314	P	Pn	15 06 44.5	-3.3
	5µm250nm,0.7s						
GSI	Gunungsitoli	13.59	314	Pn	Pn	15 06 42.1	-5.7
GSI	Gunungsitoli	13.59	314	P	Pn	15 06 42.6	-5.2
	248nm,0.9s						
PSI	Prapat	13.84	323	Pn	Pn	15 06 44.9	-6.3
	0.7nm,0.3s,baz=138,slow=12,SNR=10						
IPM	Ipoh	14.17	334	P	P	15 07 03.0	+0.1
IPM	Ipoh	14.17	334	Pn	Pn	15 06 55.3	-0.4
IPM	Ipoh	14.17	334	P	Pn	15 06 55.4	-0.4
EDFI	Ende, Flores	14.30	93	P	Pn	15 06 56.0	-1.5
	2µm2µm202nm,0.8s						
TSI	Tuntungan	14.61	323	P	Pn	15 07 04.4	+2.7
	7µm152nm,0.8s						
MMRI	Maumere	14.84	92	P	P	15 07 07.6	-2.7
	4µm13µm600nm,1.1s						
MMRI	Maumere	14.84	92	Pn	Pn	15 07 04.2	-0.6
MMRI	Maumere	14.84	92	P	P	15 07 08.6	-1.7
KULM	Kulim	15.06	334	P	Pn	15 07 06.0	-1.7
KULM	Kulim	15.06	334	Pn	Pn	15 07 02.7	-5.0
KCSI	Kotacane, Aceh	15.11	321	P	Pn	15 07 09.6	+1.2
	1µm53nm,1.3s						
MPSI	Mapaga	15.29	56	P	P	15 07 15.9	+0.6
	8µm5µm309nm,1.7s						
GIRL	Giralia	15.72	155	P	Pn	15 07 13.5	-2.8
	baz=16,SNR=5.4						
GIRL	Giralia	15.72	155		Pn	15 07 13.3	-2.9
GIRL				IAmb	IAmb	15 08 02.3	
	comp=Z,347nm,1.1s						
SPMM	Sapulut	15.91	36	P	P	15 07 26.0	+3.8
APSI	Ampana	16.15	63	P	P	15 07 25.4	+0.5
	comp=Z,4µmcomp=Z,5µmcomp=Z,628nm,1.0s						
BATI	Baumata	16.32	98	Pn	Pn	15 07 23.9	-0.2
	comp=Z,13nm,0.3s,baz=301,slow=1.8,SNR=24						
BATI				Sn	Sn	15 10 17.6	-6.8
	comp=Z,10nm,0.3s,baz=326,slow=8.4,SNR=4.1						
BATI	Baumata	16.32	98	P	Pn	15 07 24.5	+0.5
	comp=Z,2µmcomp=Z,4µmcomp=Z,377nm,0.9s						
TOLI2	Tolitoli	16.45	56	P	P	15 07 28.9	+0.6
TOLI2	Tolitoli	16.45	56	P	P	15 07 30.0	+1.7
KKM	Kota Kinabalu	16.87	32	P	P	15 07 33.3	+0.3
KKM	Kota Kinabalu	16.87	32	P	P	15 07 33.1	+0.1
SOEI	Soe	16.88	96	P	P	15 07 33.3	+0.2
	comp=Z,3µmcomp=Z,9µmcomp=Z,988nm,0.9s						
SOEI	Soe	16.88	96	Pn	Pn	15 07 29.8	-1.4
SOEI				IAmb	IAmb	15 08 15.5	
	comp=Z,848nm,0.9s						
SOEI	Soe	16.88	96	P	P	15 07 34.7	+1.6
LHMI	Lhok Sumawe	16.95	322	Pn	Pn	15 07 29.4	-2.7
MRSI	Marisa	17.08	60	P	P	15 07 36.9	+1.7
	comp=Z,7µmcomp=Z,5µmcomp=Z,518nm,0.8s						
LUWI	Luwuk	17.09	66	P	P	15 07 36.9	+1.6
	comp=Z,8µmcomp=Z,6µmcomp=Z,669nm,0.9s						
LUWI	Luwuk	17.09	66	P	P	15 07 35.7	+0.4
LUWI				IAmb	IAmb	15 08 01.4	
	comp=Z,561nm,0.9s						
LUWI	Luwuk	17.09	66	P	P	15 07 36.9	+1.6
MBWA	Marble Bar	17.53	138	P	Pn	15 07 38.2	-1.0
MBWA				P	Pn	15 07 38.3	-1.0
MBWA	Marble Bar	17.53	138	P	Pn	15 07 39.5	+0.3
PSA00	Pilbara Seismi	17.90	139	P	Pn	15 07 42.1	-1.6
PSA00	Pilbara Seismi	17.90	139	P	Pn	15 07 42.3	-1.5
PSA00				IAmb	IAmb	15 08 12.0	
	comp=Z,117nm,1.4s						
PSA00	Pilbara Seismi	17.90	139	P	P	15 07 44.0	-0.2
SRIT	Nakonsritamara	18.48	336	P	P	15 07 47.3	-3.3
KMSI	Cibinong	18.90	63	P	Pn	15 07 57.8	+1.8
	comp=Z,305nmcomp=Z,5µmcomp=Z,424nm,0.8s						
SANI	Sanana	19.69	72	P	Pn	15 08 06.2	+0.7
	comp=Z,5µmcomp=Z,6µmcomp=Z,611nm,0.9s						
SANI	Sanana	19.69	72	P	Pn	15 08 05.4	-0.1
DLV	T Lat	20.20	4	P	P	15 08 09.2	-0.4
DLV				IAMs_20	IAMs_20	15 16 52.9	
	comp=Z,12µm,18.0s						
DLV	T Lat	20.20	4	P	P	15 08 09.9	+0.2
FITZ	Fitzroy Crossi	20.35	120	P	Pn	15 08 14.0	+0.8
	comp=Z,198nm,0.8s,baz=284,slow=5.8,SNR=44						
FITZ				S	S	15 11 48.0	-10
	comp=Z,13nm,0.9s,baz=145,slow=15,SNR=1.2						
FITZ				LR	LR	15 16 04.0	
	comp=Z,4µm,20.5s,baz=304,slow=36						
FITZ	Fitzroy Crossi	20.35	120	P	Pn	15 08 14.1	+0.9
	baz=21,SNR=79						
MEEK	Meekatharra	21.15	151	P	P	15 08 22.0	+2.3
	baz=22,SNR=14						
MEEK	Meekatharra	21.15	151	P	P	15 08 22.4	+2.7
AAI	Ambon	21.35	79	P	P	15 08 23.5	+1.6
	comp=Z,8µmcomp=Z,881nm,0.8s						
LBMI	Labuha	21.59	70	P	P	15 08 25.7	+1.1
	comp=Z,4µmcomp=Z,7µmcomp=Z,972nm,1.1s						
TNTI	Ternate	22.02	67	P	P	15 08 30.8	+1.7
	comp=Z,3µmcomp=Z,6µmcomp=Z,377nm,1.0s						
TNTI	Ternate	22.02	67	P	P	15 08 28.9	-0.2
TNTI	Ternate	22.02	67	P	P	15 08 31.2	+2.1
MSAI	Masohi	22.14	78	P	P	15 08 34.3	+3.9
	comp=Z,366nmcomp=Z,30nm,1.0s						
MORW	Morawa	22.21	159	P	P	15 08 33.0	+2.0
	baz=22,SNR=5.1						
MORW	Morawa	22.21	159	P	P	15 08 30.9	-0.2
MORW	Morawa	22.21	159	P	P	15 08 33.6	+2.6
KNRA	Kununurra	22.26	111	P	P	15 08 33.9	+2.1
	baz=23,SNR=46						
KNRA	Kununurra	22.26	111	P	P	15 08 31.7	0.0
KNRA				IAmb	IAmb	15 08 50.9	
	comp=Z,397nm,1.1s						
KNRA	Kununurra	22.26	111	P	P	15 08 33.8	+2.1
DRS	Darwin Rock St	23.62	102	P	P	15 08 47.7	+2.0
SAUI	Saumlaki	23.82	91	P	P	15 08 50.1	+2.4
	comp=Z,247nm,0.9s						
SAUI	Saumlaki	23.82	91	P	P	15 08 51.8	+4.1
BLDU	Ballidu	23.85	159	P	P	15 08 49.9	+2.1
	baz=24						
DAV	Davao City (W)	23.86	51	P	P	15 08 49.4	+1.4
	comp=Z,282nm,0.7s,baz=264,slow=1.3,SNR=22						
DAV				LR	LR	15 20 13.7	
	comp=Z,5µm,18.2s,baz=230,slow=42						
DAV	Davao City (W)	23.86	51	P	P	15 08 51.3	+3.4
MTN	Manton Dam	23.90	103	P	P	15 08 50.3	+1.9
	baz=24,SNR=40						
MTN	Manton Dam	23.90	103	P	P	15 08 47.9	-0.5
MTN				IAmb	IAmb	15 09 17.9	
	comp=Z,359nm,1.1s						
MTN	Manton Dam	23.90	103	P	P	15 08 50.4	+2.0
MUN	Mundaring	24.94	162	P	P	15 08 59.2	+1.5
	baz=25,SNR=3.5						
MUN	Mundaring	24.94	162	P	P	15 08 59.9	+2.2
SWI	Sorong	25.06	74	P	P	15 08 58.9	-0.1
	comp=Z,2µmcomp=Z,187nm,0.8s						
SIJI	Sorong	25.06	74	P	P	15 08 59.0	0.0
	comp=Z,149nm,0.8s,baz=292,slow=6.1,SNR=64						
SIJI				S	S	15 13 18.6	-3.5
	comp=Z,9.8nm,1.0s,baz=102,slow=22,SNR=2.1						
SIJI				LR	LR	15 21 40.2	
	comp=Z,3µm,18.6s,baz=264,slow=43						
KDU	Kakadu	25.18	102	P	P	15 09 01.5	+1.5
	baz=26,SNR=36						
KDU	Kakadu	25.18	102	P	P	15 09 01.3	+1.3
FAKI	Fak Fak	25.46	79	P	P	15 09 05.1	+2.5
	comp=Z,3µmcomp=Z,2µmcomp=Z,123nm,1.1s						
FAKI	Fak Fak	25.46	79	P	P	15 09 03.2	+0.5
FAKI				IAmb	IAmb	15 09 33.4	
	comp=Z,146nm,1.1s						
WRKA	Warakurna	26.05	132	P	P	15 09 11.5	+3.5
	baz=26,SNR=6.7						
WRKA	Warakurna	26.05	132	P	P	15 09 11.3	+3.4
NWAO	Narrogin (SRO)	26.15	161	IAMs_20	IAMs_20	15 18 11.6	
	comp=Z,8µm,21.0s						
H01W3	Cape Leeuwin H	27.15	168	T	T	15 39 26.3	
	baz=347						
H01W1	Cape Leeuwin H	27.17	167	T	T	15 38 57.6	
	baz=347,slow=74						
H01W2	Cape Leeuwin H	27.17	168	T	T	15 39 07.7	
	baz=347,slow=74						
QIZ	Qiongzhong	27.33	5	P	P	15 09 21.3	+1.9
QIZ				S	S	15 14 03.5	+5.8
QIZ				LR	LR		
	comp=Z,5µm,18.6s						
QIZ				LR	LR		
	comp=Z,4µm,19.0s						
QIZ				LR	LR		
	comp=Z,5µm,20.6s						
QIZ	Qiongzhong	27.33	5	IAMs_20	IAMs_20	15 20 41.7	
	comp=Z,6µm,20.0s						
CM31	Chiang Mai Arr	27.87	343	P	P	15 09 22.0	-2.3
	SNR=15						
CM31	Chiang Mai Arr	27.87	343	P	P	15 09 21.6	-2.7
CMAR	Chiang Mai Arr	27.87	343	P	P	15 09 21.3	-2.9
	comp=Z,37nm,0.7s,baz=179,slow=8.8,SNR=215						
CMAR				ScP	ScP	15 16 18.5	-0.6
	comp=Z,6.2nm,1.2s,baz=182,slow=3.0,SNR=6.3						
CMAR				LR	LR	15 22 48.4	
	comp=Z,3µm,18.6s,baz=212,slow=42						
CMAR	Chiang Mai Arr	27.87	343	*ce*P	P	15 09 21.5	-2.8
CMAR				pmax	pmax		
	comp=Z,37nm,0.7s						
CHTO	Chiang Mai	28.21	343	P	P	15 09 24.1	-3.2
CHTO				pmax	pmax		
	comp=Z,63nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,4µm,19.0s						
CHTO	Chiang Mai	28.21	343	P	P	15 09 24.5	-2.8
CHTO	Chiang Mai	28.21	343	P	P	15 09 24.1	-3.2
CHTO	Chiang Mai	28.21	343	P	P	15 09 24.5	-2.8
WB0	Warramunga Arr	28.63	116	P	P	15 09 31.8	+0.7
WRA	Warramunga Arr	28.64	117	P	P	15 09 33.0	+1.8
	comp=Z,26nm,0.9s,baz=289,slow=12,SNR=70						
WRA				LR	LR	15 21 07.7	
	comp=Z,5µm,22.0s,baz=305,slow=36						
WRA	Warramunga Arr	28.64	117	P	P	15 09 32.8	+1.6
WRAB	Tennant Creek	28.65	117	*ce*P	P	15 09 32.1	+0.8
WRAB				pmax	pmax		
	comp=Z,49nm,1.3s						
WRAB	Tennant Creek	28.65	117	P	P	15 09 33.1	+1.8
WRAB	Tennant Creek	28.65	117	IAMs_20	IAMs_20	15 21 08.3	
	comp=Z,6µm,22.0s						
WRAB	Tennant Creek	28.65	117	P	P	15 09 33.1	+1.8
WB2	Warramunga Arr	28.65	117	P	P	15 09 32.4	+1.1
WC3	Warramunga Arr	28.68	117	P	P	15 09 33.3	+1.8
	baz=29						
WR0	Warramunga Arr	28.83	116	P	P	15 09 34.1	+1.3
SRPI	Serui, Papua	29.58	79	P	P	15 09 42.2	+2.6
	comp=Z,86nm,0.8s						
FORT	Forrest	29.60	142	P	P	15 09 38.8	-0.7
FORT				IAmb	IAmb	15 10 25.5	
	comp=Z,59nm,0.8s						
FORT	Forrest	29.60	142	P	P	15 09 42.6	+3.0
AS31	Alice Springs	29.73	124	P	P	15 09 42.5	+1.6
ASAR	Alice Springs	29.73	124	P	P	15 09 42.5	+1.6
	comp=Z,12nm,0.8s,baz=293,slow=8.0,SNR=68						
ASAR	Alice Springs	29.73	124	P	P	15 09 42.3	+1.4
PALK	Pallekele	30.67	300	LR	LR	15 21 19.9	
	comp=Z,5µm,20.2s,baz=221,slow=35						
PALK	Pallekele	30.67	300	P	P	15 09 52.7	+3.5
PALK				P	P	15 09 52.7	+3.5
PALK				S	S	15 14 54.9	+4.4
PALK				S	S	15 14 54.9	+4.4
OOD	Oodnadatta	33.10	129	P	P	15 10 12.3	+1.9
MULG	Mulgathing	33.25	135	P	P	15 10 13.4	+1.7
GENI	Genyem	33.26	82	P	P	15 10 12.7	+0.7
	comp=Z,90nm,1.6s						
GENI	Genyem	33.26	82	P	P	15 10 13.1	+1.1
	comp=Z,78nm,0.8s						
QIS	Mount Isa	33.53	115	P	P	15 10 16.2	+1.8
	baz=34,SNR=27						
QIS	Mount Isa	33.53	115	P	P	15 10 16.6	+2.3
KMI	Kunming	33.56	353	⇑P	P	15 10 13.9	-0.8
KMI				pP	pP	15 10 22.9	+1.1
KMI				sP	pwP	15 10 28.0	+1.9
KMI				S	S	15 15 34.3	-1.3
KMI				ScP	ScP	15 16 39.3	+1.3
KMI				pmax	pmax		
	comp=Z,390nm,7.6s						
KMI				LR	LR		
	comp=Z,6µm,15.6s						
KMI				LR	LR		
	comp=Z,4µm,22.6s						
KMI				LR	LR		
	comp=Z,8µm,16.0s						
JAY	Jayapura	33.80	82	P	P	15 10 18.1	+1.3
	comp=Z,27nm,0.9s						
TPUB	Ta-pu	34.08	22	P	P	15 10 18.0	-1.0
TPUB				IAmb	IAmb	15 10 21.3	
	comp=Z,75nm,1.0s						
TPUB	Ta-pu	34.08	22	P	P	15 10 19.6	+0.6
MDRS	Chennai	34.23	308	*e*P	P	15 10 22.2	+1.8
H08S2	Diego Garcia H	34.41	269	T	T	15 46 08.3	
	baz=92,slow=75,SNR=64						
H08S3	Diego Garcia H	34.42	269	T	T	15 46 19.0	
	baz=92,slow=75,SNR=79						
YULB	Yu-li	34.42	23	P	P	15 10 21.6	-0.3
YULB				IAmb	IAmb	15 10 25.4	
	comp=Z,62nm,0.8s						
H08S1	Diego Carcia H	34.42	269	T	T	15 46 32.9	
	baz=92,slow=75,SNR=75						
DGAR	Diego Garcia	34.46	269	IAMs_20	IAMs_20	15 22 23.6	
	comp=Z,5µm,20.0s						
GYA	Guiyang	34.61	359	⇑*i*P	P	15 10 25.3	+1.7
GYA				pP	pP	15 10 31.9	+1.2
GYA				S	S	15 15 48.8	-2.8
GYA				ScP	ScP	15 16 42.8	+1.3
GYA				pmax	pmax		
	comp=Z,39nm,0.8s						
GYA				pmax	pmax		
	comp=Z,610nm,7.3s						
GYA				LR	LR		
	comp=Z,4µm,16.0s						
GYA				LR	LR		
	comp=Z,3µm,18.1s						
GYA				LR	LR		
	comp=Z,4µm,17.0s						
SSLB	Suanglung	34.64	22	P	P	15 10 22.5	-1.4
SSLB				IAmb	IAmb	15 10 29.9	
	comp=Z,69nm,0.7s						
SSLB	Suanglung	34.64	22	P	P	15 10 24.0	+0.1
QZH	Quanzhou	34.90	18	P	P	15 10 29.8	+3.8
QZH				S	S	15 16 00.5	+4.7
QZH				LR	LR		
	comp=Z,2µm,21.3s						
QZH				LR	LR		
	comp=Z,3µm,23.7s						
VIS	Vishakhapatnam	35.06	318	*e*P	P	15 10 27.8	+0.3
VIS				IAmb	IAmb	15 10 29.4	
	comp=Z,196nm,1.1s						
NACB	Ninganchiao	35.24	23	P	P	15 10 27.9	-1.0
NACB				IAmb	IAmb	15 10 38.5	
	comp=Z,62nm,1.1s						
YHNB	Yeheng	35.60	22	P	P	15 10 30.8	-1.4
YHNB	Yeheng	35.60	22	P	P	15 10 32.3	+0.1
COEN	Coen	35.67	102	P	P	15 10 34.2	+1.3
	baz=36						
COEN	Coen	35.67	102	P	P	15 10 33.0	+0.1
COEN				IAmb	IAmb	15 10 36.1	
	comp=Z,107nm,1.1s						
COEN	Coen	35.67	102	P	P	15 10 34.4	+1.5
BBOO	Buckleboo	36.11	136	P	P	15 10 38.6	+2.1
	baz=36,SNR=11						
BBOO	Buckleboo	36.11	136	P	P	15 10 35.5	-0.9
BBOO				IAmb	IAmb	15 10 51.9	
	comp=Z,53nm,0.9s						
BBOO	Buckleboo	36.11	136	P	P	15 10 37.9	+1.5
KOHI	KOHIMA	36.20	340	*e*P	P	15 10 34.1	-3.3
KOHI				*e*S	S	15 16 12.4	-3.6
LCRK	Leigh Creek	36.35	131	P	P	15 10 41.7	+3.2
MOKO	MOKOCHONG	36.62	341	*e*P	P	15 10 37.0	-4.0
MOKO				*e*S	S	15 16 15.8	-6.6
SHL	Shillong	36.88	337	P	P	15 10 39.9	-3.3
SHL				pmax	pmax		
	comp=Z,134nm,1.4s						
SHL	Shillong	36.88	337	*e*P	P	15 10 39.9	-3.3
SHL				*e*P	P	15 10 40.0	-3.3
SHL				IAmb	IAmb	15 10 42.9	
	comp=Z,27nm,0.7s						
SHL				*i* S	S	15 16 20.0	-6.5
SHL	Shillong	36.88	337	P	P	15 10 41.1	-2.1
	SNR=27						
SHL	Shillong	36.88	337	P	P	15 10 39.9	-3.3
SHL				IAmb	IAmb	15 10 50.8	
	comp=Z,134nm,1.4s						
INKA	Innaminka	37.05	126	P	P	15 10 47.7	+3.2
MTSU	Mount Surprise	37.31	109	P	P	15 10 49.9	+3.0
	baz=38,SNR=65						
MTSU	Mount Surprise	37.31	109	P	P	15 10 49.8	+2.9
NAPP	Napperby	37.76	135	P	P	15 10 53.6	+3.1
BOK	Bokaro	38.16	327	*e*P	P	15 10 52.8	-1.1
HYB	Hyderabad	38.20	312	*i* P	P	15 10 54.5	+0.1
	comp=Z,250nm,1.0s						
HYB				*e*S	S	15 16 50.0	+3.4
HYB	Hyderabad	38.20	312	*e*P	P	15 10 54.2	-0.1
HYB				IAmb	IAmb	15 11 02.7	
	comp=Z,138nm,1.2s						
HTT	Hallett	38.44	135	P	P	15 10 58.6	+2.4
	baz=39,SNR=4.8						
HTT	Hallett	38.44	135	P	P	15 10 58.0	+1.8
ENH	Enshi	38.46	3	P	P	15 10 54.7	-1.7
ENH				IAMs_20	IAMs_20	15 28 34.8	
	comp=Z,4µm,18.0s						
BLSP	Bilaspur	39.03	321	*e*P	P	15 10 59.8	-1.5
TWOA	Tennyson Woods	39.10	137	P	P	15 11 04.8	+3.1
CD2	Chengdu	39.18	355	P	P	15 11 02.8	+0.4

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CD2                                  PP      PnPn     15 12 35.8 +0.4
CD2                                  S       S        15 16 57.6 -3.4
CD2                                  pmax    pmax
      comp=Z,40nm,0.9s
CD2                                  LR      LR
      comp=Z,460nm,15.9s
CD2                                  LR      LR
      comp=Z,4µm,15.9s
CD2                                  LR      LR
      comp=Z,5µm,15.3s
WHN   Wuhan              39.27  10 ⇑P       P        15 11 04.8 +1.7
WHN                                  S       S        15 17 03.9 +1.6
WHN                                  LR      LR
      comp=Z,3µm,11.8s
WHN                                  LR      LR
      comp=Z,5µm,17.7s
WHN                                  LR      LR
      comp=Z,5µm,18.9s
PMG   Port Moresby       39.44  95   P       P        15 11 05.5 +0.6
      comp=Z,109nm,1.0s,baz=282,slow=5.8,SNR=29
PMG   Port Moresby       39.44  95   P       P        15 11 06.4 +1.6
PMG                                  pmax    pmax
      comp=Z,130nm,1.0s
PMG                                  MLR     MLR
      comp=Z,1µm,20.0s
PMG   Port Moresby       39.44  95   P       P        15 11 06.4 +1.6
PMG                                  IAmb    IAmb     15 11 08.2
      comp=Z,130nm,0.9s
PMG   Port Moresby       39.44  95   P       P        15 11 07.0 +2.1
PMG   Port Moresby       39.44  95   P       P        15 11 06.9 +2.1
QLP   Quilpie            39.47 122   P       P        15 11 08.1 +3.2
      baz=40,SNR=37
QLP   Quilpie            39.47 122   P       P        15 11 08.2 +3.3
CTA   Charters Tower     39.48 111   P       P        15 11 07.5 +2.5
      comp=Z,17nm,0.7s,baz=284,slow=12,SNR=8.3
CTAO  Charters Tower     39.48 111   P       P        15 11 08.4 +3.3
STKA  Stephens Creek     39.57 131   P       P        15 11 07.8 +2.2
      comp=Z,57nm,0.8s,baz=302,slow=8.8,SNR=32
STKA                                 LR      LR       15 28 29.4
      comp=Z,5µm,20.1s,baz=298,slow=38
STKA  Stephens Creek     39.57 131   P       P        15 11 07.9 +2.2
      baz=40,SNR=62
STKA  Stephens Creek     39.57 131   P       P        15 11 07.5 +1.8
STKA  Stephens Creek     39.57 131   P       P        15 11 07.9 +2.2
JOW   Kunigami           40.50  30   P       P        15 11 13.9 +0.6
JOW                                  IAmb    IAmb     15 11 15.2
      comp=Z,79nm,1.0s
JOW   Kunigami           40.50  30   P       P        15 11 14.4 +1.0
GOA   Goa                40.71 306  eP       P        15 11 16.6 +1.3
GOA                                  IAmb    IAmb     15 11 18.2
      comp=Z,156nm,0.9s
LSA   Lhasa              40.88 338   P       P        15 11 14.8 -2.2
LSA                                  LR      LR
      comp=Z,9µm,22.1s
LSA                                  LR      LR
      comp=Z,8µm,29.2s
LSA                                  LR      LR
      comp=Z,6µm,28.5s
LSA   Lhasa              40.88 338   P       P        15 11 15.0 -2.1
LSA   Lhasa              40.88 338   P       P        15 11 14.9 -2.1
LSA                                  pmax    pmax
      comp=Z,57nm,0.9s
LSA                                  MLR     MLR
      comp=Z,2µm,22.0s
LSA   Lhasa              40.88 338   P       P        15 11 14.9 -2.1
JBP   Jabalpur           41.14 320  eP       P        15 11 19.2 +0.5
JBP                                  IAmb    IAmb     15 11 20.0
      comp=Z,87nm,0.8s
JBP                                 eS       S        15 17 33.0 +2.6
JIRN  Jiri               41.19 331  eP       P        15 11 17.1 -2.4
      comp=Z,88nm,0.8s
SSE   Sheshan            41.44  18   P       P        15 11 22.3 +1.3
SSE                                  S       S        15 17 37.3 +2.7
SSE                                  pmax    pmax
      comp=Z,32nm,0.8s
SSE                                  pmax    pmax
      comp=Z,280nm,9.6s
SSE                                  LR      LR
      comp=Z,790nm,23.2s
SSE                                  LR      LR
      comp=Z,650nm,23.0s
PKI   Pulchoki           41.50 330  eP       P        15 11 19.0 -3.0
PKIN  Phulchoki          41.51 330  eP       P        15 11 18.8 -3.2
      comp=Z,25nm,0.8s
GUN   Gumba              41.55 331  eP       P        15 11 19.9 -2.6
      comp=Z,91nm,0.8s
DMN   Daman              41.68 330  eP       P        15 11 20.6 -2.8
      comp=Z,83nm,0.8s
NJ2   Nanjing            41.68  15 ⇑P       P        15 11 22.8 -0.2
NJ2                                  pP      pP       15 11 25.9 -4.3
NJ2                                  PcP     PcP      15 13 19.9 +0.4
NJ2                                  S       S        15 17 37.5 -0.7
NJ2                                  sS      sS       15 17 51.6 +1.6
NJ2                                  pmax    pmax
      comp=Z,56nm,1.2s
NJ2                                  pmax    pmax
      comp=Z,880nm,7.1s
NJ2                                  LR      LR
      comp=Z,2µm,20.4s
NJ2                                  LR      LR
      comp=Z,2µm,19.9s
NJ2                                  LR      LR
      comp=Z,3µm,21.3s
KKN   Kakani             41.74 330  eP       P        15 11 20.8 -3.1
      comp=Z,65nm,0.8s
XAN   Xi'an              42.19   2   P       P        15 11 26.4 -0.8
XAN                                  pP      pP       15 11 34.8 +0.4
XAN                                  S       S        15 17 41.3 -4.5
XAN                                  pmax    pmax
      comp=Z,71nm,0.9s
XAN                                  LR      LR
      comp=Z,6µm,17.7s
XAN                                  LR      LR
      comp=Z,3µm,15.5s
XAN                                  LR      LR
      comp=Z,9µm,16.5s
GKN   Gorkha             42.24 330  eP       P        15 11 25.1 -2.7
ARPS  Mount Arapiles     42.27 137   P       P        15 11 30.3 +2.5
      baz=43,SNR=10
ARPS  Mount Arapiles     42.27 137   P       P        15 11 30.5 +2.7
POO   Poona              42.41 309⇑iP       P        15 11 26.0 -3.3
      comp=Z,240nm,1.0s
POO                                 eP       pP       15 11 29.9 -6.5
POO                                  IAmb    IAmb     15 11 31.8
      comp=Z,97nm,0.8s
CMSA  Cobar Meteorol     42.54 128   P       P        15 11 33.2 +3.1
      baz=43,SNR=44
CMSA  Cobar Meteorol     42.54 128   P       P        15 11 33.1 +2.9
BHPL  Bhopal             42.85 318  eP       P        15 11 32.5 -0.3
BHPL                                 IAmb    IAmb     15 11 33.7
      comp=Z,132nm,0.8s
DANN  Dangsing           42.96 329  eP       P        15 11 31.3 -2.6
      comp=Z,107nm,0.8s
PYUN  Piuthan            43.16 328  eP       P        15 11 32.5 -2.9
      comp=Z,84nm,0.9s
RMQ   Roma               43.28 120   P       P        15 11 40.3 +4.1
      baz=44,SNR=14
RMQ   Roma               43.28 120   P       P        15 11 41.2 +5.0
      comp=Z,23nm,0.8s
JHNI  Jhansi             43.70 321  eP       P        15 11 38.3 -1.3
LZH   Lanzhou            44.32 356  eP       P        15 11 44.0 -0.5
LZH                                  pP      pP       15 11 51.3 -0.5
LZH                                  PP      PP       15 13 24.5 -3.8
LZH                                  ScP     ScP      15 17 20.3 +1.5
LZH                                  S       S        15 18 06.4  -11
LZH                                  sS      pS       15 18 27.0 +1.3
LZH                                  pmax    pmax
      comp=Z,61nm,1.0s
LZH                                  pmax    pmax
      comp=Z,470nm,5.2s
LZH                                  LR      LR
      comp=Z,5µm,15.7s
LZH                                  LR      LR
      comp=Z,3µm,15.7s
LZH                                  LR      LR
      comp=Z,5µm,16.3s
EIDS  Eidsvold           45.00 118   P       P        15 11 53.5 +3.4
      baz=45,SNR=4.1
EIDS  Eidsvold           45.00 118   P       P        15 11 48.7 -1.3
EIDS                                 IAmb    IAmb     15 12 09.5
      comp=Z,79nm,1.4s
EIDS  Eidsvold           45.00 118   P       P        15 11 53.4 +3.4
TOO   Toolangi           45.17 136   P       P        15 11 55.5 +4.3
      baz=46,SNR=6.4
TOO   Toolangi           45.17 136   P       P        15 11 54.1 +2.9
TIA   Tai'an             45.29  11 ⇑P       P        15 11 50.4 -1.7
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TIA                                  pmax    pmax
      comp=Z,37nm,0.9s
TIA                                  pmax    pmax
      comp=Z,450nm,11.3s
TIA                                  LR      LR
      comp=Z,2µm,16.7s
TIA                                  LR      LR
      comp=Z,630nm,15.2s
TIA                                  LR      LR
      comp=Z,3µm,18.6s
JSU   Suzuyama           45.44  28   P       P        15 11 52.0 -1.3
JSU                                  IAmb    IAmb     15 11 54.0
      comp=Z,93nm,1.0s
TIY   Taiyuan            46.08   6 ⇓P       P        15 11 58.5 +0.1
TIY                                  pP      pP       15 12 05.9 +0.2
TIY                                  sP      sP       15 12 08.6 +0.1
TIY                                  S       S        15 18 42.0 -0.5
TIY                                  pmax    pmax
      comp=Z,140nm,0.9s
TIY                                  pmax    pmax
      comp=Z,350nm,5.0s
TIY                                  LR      LR
      comp=Z,1µm,13.8s
TIY                                  LR      LR
      comp=Z,630nm,10.9s
TIY                                  LR      LR
      comp=Z,2µm,20.5s
CAN   Canberra           46.63 131   P       P        15 12 03.1 +0.2
CAN                                  pmax    pmax
      comp=Z,40nm,0.7s
CAN                                  MLR     MLR
      comp=Z,6µm,22.0s
CAN   Canberra           46.63 131   P       P        15 12 03.1 +0.2
CAN                                  IAmb    IAmb     15 12 26.3
      comp=Z,40nm,0.7s
CAN                                  IAMs_20 IAMs_20  15 31 15.9
      comp=Z,6µm,22.0s
CAN   Canberra           46.63 131   P       P        15 12 05.9 +3.0
NDI   New Delhi          46.85 323  eP       P        15 12 05.0 +0.5
ARMA  Armidale           46.88 124   P       P        15 12 08.8 +3.9
      baz=47,SNR=9.8
ARMA  Armidale           46.88 124   P       P        15 12 04.9  0.0
ARMA  Armidale           46.88 124   P       P        15 12 08.3 +3.4
CNB   Canberra Magne     46.90 131   P       P        15 12 07.9 +2.9
JNU   Nakatsue           46.98  27   P       P        15 12 04.9 -0.6
GTA   Gaotai             48.02 352 ⇑P       P        15 12 12.3 -1.3
GTA                                  pP      pP       15 12 21.3 +0.5
GTA                                  sP      pwP      15 12 25.3 +0.2
GTA                                  PcP     PcP      15 13 43.3 +2.0
GTA                                  ScP     ScP      15 17 34.9 +0.8
GTA                                  S       S        15 19 02.4 -7.7
GTA                                  sS      sS       15 19 23.9 +1.8
GTA                                  ScS     ScS      15 22 02.4 -2.8
GTA                                  pmax    pmax
      comp=Z,12nm,0.9s
GTA                                  pmax    pmax
      comp=Z,440nm,6.5s
GTA                                  LR      LR
      comp=Z,3µm,19.3s
GTA                                  LR      LR
      comp=Z,3µm,19.3s
GTA                                  LR      LR
      comp=Z,4µm,18.5s
TJN   Taejon             48.35  22ceP       P        15 12 15.5 -0.5
TJN   Taejon             48.35  22   P       P        15 12 15.5 -0.5
      comp=Z,338nm,1.0s
BHUJ  Bhuj               48.35 311  eP       P        15 12 18.1 +1.9
SMLA  Simla              48.69 325  eP       P        15 12 16.4 -2.3
SMLA                                 IAmb    IAmb     15 12 19.0
      comp=Z,221nm,0.8s
BTO   Baotou             48.78   3  eP       P        15 12 19.8 +0.4
BTO                                  S       S        15 19 24.8 +4.0
BTO                                  LR      LR
      comp=Z,14µm,22.2s
BTO                                  LR      LR
      comp=Z,10µm,16.7s
BJT   Baijiatuau         48.83   9   P       P        15 12 17.4 -2.2
BJT                                  pmax    pmax
      comp=Z,51nm,0.8s
BJT   Baijiatuau         48.83   9   P       P        15 12 17.4 -2.2
BJT                                  IAmb    IAmb     15 12 20.5
      comp=Z,50nm,0.8s
BJI   Beijing            48.85   9   P       P        15 12 19.1 -0.7
BJI                                  pP      pP       15 12 26.8 -0.3
BJI                                  PcP     PcP      15 13 45.5 +1.4
BJI                                  ScP     ScP      15 17 38.3 +0.8
BJI                                  pmax    pmax
      comp=Z,79nm,0.8s
BJI                                  pmax    pmax
      comp=Z,610nm,5.2s
BJI                                  LR      LR
      comp=Z,2µm,17.6s
BJI                                  LR      LR
      comp=Z,1µm,15.4s
BJI                                  LR      LR
      comp=Z,4µm,17.2s
JCJ   Chichijima         48.88  43   LR      LR       15 34 54.6
      comp=Z,812nm,19.8s,baz=288,slow=39
DL2   Dalian             48.89  15   P       P        15 12 17.3 -2.8
DL2                                  pmax    pmax
      comp=Z,44nm,0.9s
DL2                                  pmax    pmax
      comp=Z,440nm,8.7s
DL2                                  LR      LR
      comp=Z,1µm,22.6s
DL2                                  LR      LR
      comp=Z,1µm,18.4s
DL2                                  LR      LR
      comp=Z,2µm,20.7s
JMN   Monobe             48.90  30   P       P        15 12 19.9 -0.4
JMN                                  IAmb    IAmb     15 12 21.2
      comp=Z,47nm,0.9s
INCN  Inchon             49.08  20   P       P        15 12 19.7 -1.9
INCN                                 pmax    pmax
      comp=Z,32nm,0.9s
INCN  Inchon             49.08  20   P       P        15 12 19.7 -1.9
INCN                                 IAmb    IAmb     15 12 21.3
      comp=Z,32nm,0.8s
INCN  Inchon             49.08  20   P       P        15 12 21.0 -0.6
      comp=Z,49nm,0.9s
HHC   Hu-ho-hao-te       49.12   4  eP       P        15 12 22.0  0.0
HHC                                  PcP     PcP      15 13 46.1 +0.8
HHC                                  pmax    pmax
      comp=Z,45nm,1.0s
HHC                                  pmax    pmax
      comp=Z,560nm,5.9s
HHC                                  LR      LR
      comp=Z,3µm,14.7s
HHC                                  LR      LR
      comp=Z,2µm,15.6s
HHC                                  LR      LR
      comp=Z,2µm,14.9s
TAU   Tasmania Unive     49.14 141   IAMs_20 IAMs_20  15 31 42.7
      comp=Z,4µm,20.0s
TAU   Tasmania Unive     49.14 141   P       P        15 12 25.5 +3.4
KSAR  Wonju Array Be     49.49  22   P       P        15 12 24.1 -0.6
KSAR  Wonju Array Be     49.49  22   P       P        15 12 24.1 -0.6
KSRS  Korea Array        49.51  22   P       P        15 12 24.4 -0.5
      comp=Z,27nm,0.8s,baz=207,slow=9.1,SNR=111
KSRS                                 PcP     PcP      15 13 46.6 +0.1
      comp=Z,11nm,0.9s,baz=187,slow=3.1,SNR=8.4
KSRS                                 ScP     ScP      15 17 39.3 -1.0
      comp=Z,2.7nm,1.0s,baz=212,slow=3.0,SNR=5.9
KSRS                                 LR      LR       15 34 47.0
      comp=Z,892nm,20.5s,baz=228,slow=38
KS19  Wonju Array Si     49.53  22   P       P        15 12 24.5 -0.5
KS19                                 IAmb    IAmb     15 12 26.0
      comp=Z,41nm,0.9s
JHS   Saijyo             49.57  28   P       P        15 12 24.1 -1.4
JHS                                  IAmb    IAmb     15 12 27.3
      comp=Z,98nm,0.8s
DHRM  DHARAMSHALA        50.02 325  eP       P        15 12 27.7 -1.4
DHRM                                 IAmb    IAmb     15 12 29.1
      comp=Z,368nm,1.4s
JWT   Wachi              50.90  30   P       P        15 12 34.2 -1.3
JWT                                  IAmb    IAmb     15 12 35.7
      comp=Z,48nm,0.9s
RER   Riviere de l'E     51.18 250   IAMs_20 IAMs_20  15 29 22.7
      comp=Z,3µm,18.0s
MSEY  Mahe Island        51.52 271   IAMs_20 IAMs_20  15 31 05.2
      comp=Z,3µm,20.0s
INU   Inuyama            51.76  31   P       P        15 12 40.0 -1.9
INU   Inuyama            51.76  31   P       P        15 12 40.0 -1.9
HNR   Honiara            52.05  95   P       P        15 12 45.1 +0.6
      comp=Z,51nm,0.6s,baz=202,slow=4.8,SNR=5.4
HNR   Honiara            52.05  95   P       P        15 12 43.4 -1.1
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SNY   Shenyang           52.14  15 ⇑P       P        15 12 43.1 -1.5
SNY                                  S       S        15 20 11.5 +4.3
SNY                                  pmax    pmax
      comp=Z,47nm,1.7s
SNY                                  pmax    pmax
      comp=Z,450nm,3.9s
SNY                                  LR      LR
      comp=Z,2µm,24.5s
SNY                                  LR      LR
      comp=Z,2µm,22.0s
SNY                                  LR      LR
      comp=Z,3µm,22.8s
NIL   Nilore             52.78 324   P       P        15 12 47.4 -2.2
NIL                                  pmax    pmax
      comp=Z,225nm,1.0s
NIL                                  MLR     MLR
      comp=Z,1µm,19.0s
NIL   Nilore             52.78 324   P       P        15 12 47.4 -2.2
MAJO  Matsushiro         53.29  31   P       P        15 12 51.5 -1.8
MAJO                                 pmax    pmax
      comp=Z,32nm,1.1s
MAJO  Matsushiro         53.29  31   P       P        15 12 51.5 -1.8
MAJO                                 PcP     PcP      15 13 58.9 -1.8
MAJO  Matsushiro         53.29  31   P       P        15 12 51.9 -1.4
MAT   Matsushiro         53.29  31   P       P        15 12 50.4 -2.9
MAT                                 eS       S        15 20 22.8 -0.5
MJAR  Matsushiro Arr     53.29  31   P       P        15 12 50.6 -2.7
      comp=Z,19nm,0.9s,baz=199,slow=7.3,SNR=37
MJAR                                 PcP     PcP      15 14 01.1 +0.3
      comp=Z,13nm,0.9s,baz=198,slow=4.6,SNR=5.5
MJAR                                 LR      LR       15 37 52.6
      comp=Z,544nm,19.9s,baz=195,slow=39
MJAR  Matsushiro Arr     53.29  31   P       P        15 12 50.9 -2.4
MJAR                                 pmax    pmax
      comp=Z,25nm,1.0s
MJAR  Matsushiro Arr     53.29  31   P       P        15 12 50.9 -2.4
CN2   Changchun          54.48  16  eP       P        15 12 59.3 -2.5
CN2                                  S       S        15 20 39.6 +0.6
CN2                                  pmax    pmax
      comp=Z,10.0nm,1.2s
CN2                                  pmax    pmax
      comp=Z,100nm,3.0s
CN2                                  LR      LR
      comp=Z,2µm,21.0s
CN2                                  LR      LR
      comp=Z,1µm,21.0s
CN2                                  LR      LR
      comp=Z,2µm,23.0s
JSD   Sado               54.48  30   P       P        15 12 59.9 -2.0
JSD                                  IAmb    IAmb     15 13 01.5
      comp=Z,98nm,0.8s
WMQ   Urumqi             54.87 343  eP       P        15 13 05.6 +0.9
WMQ                                  pP      pP       15 13 10.3 -1.8
WMQ                                  PcP     PcP      15 14 08.3 +1.6
WMQ                                  ScP     ScP      15 18 04.3 +0.7
WMQ                                  S       S        15 20 42.9 -1.6
WMQ                                  pmax    pmax
      comp=Z,30nm,1.5s
WMQ                                  pmax    pmax
      comp=Z,500nm,5.5s
WMQ                                  LR      LR
      comp=Z,3µm,18.3s
WMQ                                  LR      LR
      comp=Z,2µm,11.1s
WMQ                                  LR      LR
      comp=Z,2µm,29.3s
JMM   Marumori           55.64  32   P       P        15 13 08.3 -2.0
JMM                                  IAmb    IAmb     15 13 10.0
      comp=Z,94nm,1.0s
KSH   Kashi              55.75 331   P       P        15 13 08.8 -2.4
KSH                                  sP      pwP      15 13 22.3 -0.8
KSH                                  pmax    pmax
      comp=Z,49nm,0.7s
KSH                                  pmax    pmax
      comp=Z,430nm,4.3s
KSH                                  LR      LR
      comp=Z,2µm,17.9s
KSH                                  LR      LR
      comp=Z,2µm,17.5s
KSH                                  LR      LR
      comp=Z,1µm,19.9s
JLN   Jalan Bani Buh     55.82 304   P       P        15 13 15.0 +3.1
      SNR=10.0
KBL   Kabul              55.91 322   P       P        15 13 08.8 -3.8
KBL                                  pmax    pmax
      comp=Z,97nm,0.9s
KBL   Kabul              55.91 322   P       P        15 13 11.3 -1.3
      SNR=52
KBL   Kabul              55.91 322   P       P        15 13 08.8 -3.8
KBL                                  IAmb    IAmb     15 13 27.9
      comp=Z,97nm,0.9s
VLA   Vladivostok        55.93  22c iP       P        15 13 11.0 -1.2
VLA                                  pmax    pmax
      comp=Z,51nm,1.0s
VLA                                  MLR     MLR
      comp=Z,918nm,20.0s
SONM  Songino Array      55.95 359   P       P        15 13 11.7 -0.8
      comp=Z,35nm,0.8s,baz=172,slow=7.5,SNR=202
SONM                                 PcP     PcP      15 14 10.1 -0.7
      comp=Z,29nm,0.9s,baz=183,slow=3.3,SNR=12
SONM                                 ScP     ScP      15 18 07.8 -0.4
      comp=Z,2.9nm,1.0s,baz=159,slow=4.5,SNR=4.5
SONM                                 LR      LR       15 40 23.0
      comp=Z,5µm,18.1s,baz=180,slow=40
SONM                                 PKPPKP  P'P'df   15 43 12.0 +2.2
      comp=Z,0.7nm,1.1s,baz=348,slow=1.9,SNR=2.7
SONM  Songino Array      55.95 359   P       P        15 13 11.2 -1.3
SONM                                 IAmb    IAmb     15 13 13.4
      comp=Z,40nm,0.8s
SONM                                 PcP     PcP      15 14 11.4 +0.6
ULN   Ulaanbaatar        55.97 360   P       P        15 13 11.9 -0.8
ULN                                  pmax    pmax
      comp=Z,55nm,0.8s
ULN                                  MLR     MLR
      comp=Z,4µm,21.0s
ULN   Ulaanbaatar        55.97 360   P       P        15 13 11.8 -0.8
ULN                                  IAmb    IAmb     15 13 13.5
      comp=Z,55nm,0.8s
ULN   Ulaanbaatar        55.97 360   IAMs_20 IAMs_20  15 39 12.1
      comp=Z,4µm,21.0s
KOUNC Koumac, New Ca     56.31 109   P       P        15 13 18.4 +3.0
WBK   Wadi Bani Khal     56.39 304   P       P        15 13 19.1 +3.1
      SNR=8.2
MDJ   Mudanjiang         56.46  19   P       P        15 13 15.3 -0.8
MDJ                                  pP      pP       15 13 21.3 -2.1
MDJ                                  sP      sP       15 13 24.5 -1.7
MDJ                                  S       S        15 21 07.0 +1.6
MDJ                                  sS      sS       15 21 19.0 +1.4
MDJ                                  ScS     ScS      15 23 03.8 +0.4
MDJ                                  pmax    pmax
      comp=Z,35nm,0.9s
MDJ                                  pmax    pmax
      comp=Z,310nm,3.7s
MDJ                                  LR      LR
      comp=Z,770nm,19.2s
MDJ                                  LR      LR
      comp=Z,670nm,21.2s
MDJ                                  LR      LR
      comp=Z,1µm,24.8s
MDJ   Mudanjiang         56.46  19   P       P        15 13 14.1 -1.9
MDJ   Mudanjiang         56.46  19   P       P        15 13 15.2 -0.8
      comp=Z,37nm,1.3s
SOCY  Socotra            56.73 290   P       P        15 13 23.7 +5.1
USA0B Ussuriysk Arra     56.90  21   P       P        15 13 17.3 -1.9
USA0B                                pmax    pmax
      comp=Z,45nm,1.0s
USA0B Ussuriysk Arra     56.90  21   P       P        15 13 17.3 -1.9
USA0B                                IAmb    IAmb     15 13 19.1
      comp=Z,45nm,0.9s
USRK  Ussuriysk Ar.      56.90  21   P       P        15 13 18.0 -1.1
      comp=Z,27nm,0.8s,baz=206,slow=6.3,SNR=35
USRK                                 LR      LR       15 39 38.0
      comp=Z,864nm,19.4s,baz=211,slow=38
USRK  Ussuriysk Ar.      56.90  21   P       P        15 13 17.3 -1.9
WSAR  Wadi Sarin         56.96 305   P       P        15 13 21.2 +1.2
      comp=Z,18nm,0.7s,baz=161,slow=7.5,SNR=17
WSAR                                 LR      LR       15 36 24.3
      comp=Z,4µm,19.7s,baz=137,slow=35
WSAR  Wadi Sarin         56.96 305   P       P        15 13 22.5 +2.5
      SNR=13
JMDO  Jabal Madar        57.00 303   P       P        15 13 23.0 +2.7
      SNR=9.4
JMDO                                 P       P        15 13 23.0 +2.7
      SNR=9.4
SHLS  Shalkode           57.16 336  eP       P        15 13 18.1 -3.1
      comp=Z,27nm,1.1s,baz=336
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SHLS	Shalkode	57.16	336	eP	P	15 13 18.0	-3.1
SHLS				pmax	pmax		
	comp=Z,27nm,1.1s						
KDJ	Kajisay	57.27	334	P	P	15 13 20.7	-1.4
KDJ				pmax	pmax		
	comp=Z,376nm,1.9s						
KDJ	Kajisay	57.27	334	P	P	15 13 20.7	-1.4
PDGK	Podgornoye	57.29	336	iP	P	15 13 20.2	-1.9
PDGK				pmax	pmax		
	comp=Z,44nm,0.8s						
SHAO	Shalim	57.29	298	P	P	15 13 21.7	-0.7
UZB	Uzynbulak	57.33	336	eP	P	15 13 20.4	-2.1
	comp=Z,59nm,1.6s,baz=336						
UZB	Uzynbulak	57.33	336	eP	P	15 13 20.3	-2.1
UZB				pmax	pmax		
	comp=Z,59nm,1.6s						
SMDO	Samad	57.35	304	P	P	15 13 25.0	+2.1
	SNR=17						
BIDO	Bidbid	57.50	305	P	P	15 13 26.0	+2.2
	SNR=30						
SATY	Saty	57.51	335	eP	P	15 13 22.0	-1.7
	comp=Z,68nm,1.9s,baz=335						
SATY	Saty	57.51	335	eP	P	15 13 21.9	-1.7
SATY				pmax	pmax		
	comp=Z,68nm,1.9s						
DMTO	DMTO	57.77	297	P	P	15 13 29.3	+3.4
CASY	Casey	57.88	178	P	P	15 13 24.4	-1.4
CASY	Casey	57.88	178	IAMs_20	IAMs_20	15 34 06.5	
	comp=Z,3µm,20.0s						
BSY	Bisya	57.91	303	P	P	15 13 29.0	+2.2
	SNR=20						
JTM	Tenmabayashi	57.98	30	P	P	15 13 25.5	-1.3
TNSS	Tian-Shan	58.11	334	eP	P	15 13 26.8	-1.4
	baz=334						
BOOM	Boomskoye usch	58.11	333	P	P	15 13 24.5	-3.5
BOOM				pmax	pmax		
	comp=Z,123nm,1.7s						
BOOM	Boomskoye usch	58.11	333	P	P	15 13 24.5	-3.5
BOOM				IAmb	IAmb	15 13 29.0	
	comp=Z,123nm,1.7s						
MDOK	Medeo	58.17	334	eP	P	15 13 26.5	-1.9
	baz=334						
MDOK	Medeo	58.17	334	eP	P	15 13 26.4	-1.9
HOQ	Hoqain	58.19	304	P	P	15 13 30.2	+1.5
	SNR=24						
GAR	Garm	58.27	327	P	P	15 13 26.4	-2.7
RBK	Rabkut	58.35	296	P	P	15 13 31.0	+1.1
	SNR=8.5						
DZM	Mont Dzumac	58.41	111	eP	P	15 13 30.3	-0.1
	comp=Z,137nm,1.2s						
DZM				eS	S	15 21 33.3	+1.1
	comp=Z,2µm,28.6s						
DZM				eLR	LR	15 30 41.5	
	comp=Z,4µm,23.9s						
DZM	Mont Dzumac	58.41	111	LR	LR	15 41 26.2	
	comp=Z,2µm,18.5s,baz=278,slow=39						
DZM	Mont Dzumac	58.41	111	P	P	15 13 32.3	+1.9
HIA	Hailar	58.41	10	P	P	15 13 28.0	-1.8
HIA				pmax	pmax		
	comp=Z,35nm,1.0s						
HIA				MLR	MLR		
	comp=Z,2µm,18.0s						
HIA	Hailar	58.41	10	P	P	15 13 28.0	-1.8
HIA				IAmb	IAmb	15 13 29.8	
	comp=Z,34nm,1.0s						
HIA	Hailar	58.41	10	IAMs_20	IAMs_20	15 42 23.4	
	comp=Z,2µm,18.0s						
UCH	Uchtor	58.56	332	P	P	15 13 30.9	-0.5
	SNR=18						
ZAK	Zakamensk	58.59	357	eP	P	15 13 29.4	-1.7
ZAK				pmax	pmax		
	comp=Z,16nm,1.0s						
TKM2	Tokmak 2	58.61	333	P	P	15 13 29.6	-1.8
	SNR=50						
TKM2	Tokmak 2	58.61	333	P	P	15 13 29.5	-2.0
CHGR	Chuyangaron	58.66	326	P	P	15 13 29.9	-1.9
KBK	Karagaybulak	58.69	333	P	P	15 13 29.8	-2.2
	SNR=31						
ARXS	Arharly	58.70	336	eP	P	15 13 30.6	-1.3
ARQ	Araqi	58.73	304	P	P	15 13 33.7	+1.2
	SNR=12						
BTK	Batken	58.76	328	P	P	15 13 31.2	-1.3
BTK				pmax	pmax		
	comp=Z,86nm,0.9s						
BTK	Batken	58.76	328	P	P	15 13 31.2	-1.3
BTK				IAmb	IAmb	15 13 33.0	
	comp=Z,86nm,0.9s						
YATNC	Mamie plateau,	58.83	111	P	P	15 13 36.8	+3.6
DOK	Doka	58.83	298	P	P	15 13 34.1	+0.8
AML	Almayashu	58.87	331	P	P	15 13 32.1	-1.4
	SNR=41						
AML	Almayashu	58.87	331	iP	P	15 13 33.3	-0.2
	SNR=42						
AML	Almayashu	58.87	331	P	P	15 13 32.2	-1.4
AAK	Ala-Archa	58.88	332	P	P	15 13 31.9	-1.4
	comp=Z,9.4nm,0.9s,baz=158,slow=5.5,SNR=29						
AAK				LR	LR	15 44 10.3	
	comp=Z,2µm,18.7s,baz=152,slow=42						
AAK	Ala-Archa	58.88	332	P	P	15 13 33.3	0.0
	SNR=20						
AAK	Ala-Archa	58.88	332	iP	P	15 13 32.6	-0.7
	SNR=24						
AAK	Ala-Archa	58.88	332	P	P	15 13 32.0	-1.4
AAK	Ala-Archa	58.88	332	P	P	15 13 33.4	0.0
AAK	Ala-Archa	58.88	332	IAMs_20	IAMs_20	15 43 48.6	
	comp=Z,3µm,20.0s						
WHFO	Wadi Hawf	58.89	297	P	P	15 13 34.8	+1.1
SANVU	Saraoutou	58.95	103	P	P	15 13 31.9	-2.1
SANVU				IAMs_20	IAMs_20	15 41 13.3	
	comp=Z,2µm,20.0s						
ZSN	Zaisan	59.00	342	eP	P	15 13 32.5	-1.4
	baz=342						
ZSN	Zaisan	59.00	342	eP	P	15 13 32.4	-1.4
OPO	Ambohidratompo	59.05	253	P	P	15 13 36.5	+1.5
	comp=Z,11nm,0.9s,baz=87,slow=8.6,SNR=4.1						
CHMS	Chumysh	59.05	333	P	P	15 13 33.7	-0.7
	SNR=11						
KUU	Kurty	59.06	334	eP	P	15 13 32.1	-2.3
	comp=Z,68nm,1.1s,baz=334						
KUU	Kurty	59.06	334	eP	P	15 13 32.1	-2.3
KUU				pmax	pmax		
	comp=Z,68nm,1.1s						
SOHO	SOHO	59.08	304	iP	P	15 13 35.3	+0.5
	SNR=12						
SOHO	SOHO	59.08	304	P	P	15 13 35.5	+0.7
ABTO	Aybut	59.10	296	P	P	15 13 37.0	+1.8
	SNR=14						
TDK	Taldyqorghan	59.12	337	eP	P	15 13 32.7	-2.1
	baz=336						
TDK	Taldyqorghan	59.12	337	eP	P	15 13 32.6	-2.1
MK31	Makanchi Array	59.23	340	P	P	15 13 33.5	-2.0
MK31				pmax	pmax		
	comp=Z,28nm,0.9s						
MK31	Makanchi Array	59.23	340	P	P	15 13 33.5	-2.0
MK31				IAmb	IAmb	15 13 50.3	
	comp=Z,28nm,0.8s						
MKAR	Makanchi Array	59.23	340	P	P	15 13 33.3	-2.2
	comp=Z,28nm,0.7s,baz=149,slow=7.0,SNR=133						
MKAR				S	S	15 21 38.8	-2.9
	comp=Z,1.7nm,1.0s,baz=146,slow=14,SNR=3.7						
MKAR				LR	LR	15 42 41.6	
	comp=Z,3µm,18.1s,baz=150,slow=40						
MKAR				PKPPKP	P'P'df	15 43 08.7	+3.4
	comp=Z,0.3nm,0.8s,baz=354,slow=2.9,SNR=1.6						
MKAR	Makanchi Array	59.23	340	P	P	15 13 33.5	-2.0
MKAR	Makanchi Array	59.23	340	P	P	15 13 33.5	-2.0
EKS2	Erkin-Say	59.24	332	P	P	15 13 34.5	-1.2
	SNR=51						
MAKZ	Makanchi	59.35	340	P	P	15 13 35.5	-0.8
MAKZ	Makanchi	59.35	340	P	P	15 13 35.0	-1.3
MAKZ				IAmb	IAmb	15 14 40.6	
	comp=Z,43nm,1.1s						
TEY	Ternei	59.36	24⇑	eP	P	15 13 35.3	-1.0
TEY				pmax	pmax		
	comp=Z,40nm,0.8s						
USP	Ospenovka	59.37	333	P	P	15 13 35.9	-0.7
	SNR=28						
SGDS	Sogindy	59.46	333	eP	P	15 13 35.1	-2.1
	comp=Z,50nm,1.7s,baz=333						
SGDS	Sogindy	59.46	333	eP	P	15 13 36.4	-0.8
VOI	Vohitsoka	59.55	250	IAMs_20	IAMs_20	15 33 08.7	
	comp=Z,3µm,20.0s						
VOI	Vohitsoka	59.55	250	P	P	15 13 42.7	+4.4
UMZA	Um Al Zommool	59.59	302	P	P	15 13 38.8	+0.4
ALNE	Al Ain	59.68	304	iP	P	15 13 39.9	+0.8
	SNR=7.9						
ALNE	Al Ain	59.68	304	P	P	15 13 40.6	+1.6
	SNR=24						
UOSS	Minazif	59.71	305	iP	P	15 13 39.6	+0.4
	SNR=13						
UOSS	Minazif	59.71	305	P	P	15 13 39.5	+0.2
ASHO	Ashiyiah	59.71	305	iP	P	15 13 40.0	+0.8
	SNR=14						
ASHO	Ashiyiah	59.71	305	P	P	15 13 41.0	+1.7
	SNR=15						
HATD	Hatta, Dubai	59.71	305	iP	P	15 13 40.6	+1.3
	SNR=19						
HATD	Hatta, Dubai	59.71	305	P	P	15 13 41.0	+1.7
	SNR=29						
TLY	Talaya	59.87	357	P	P	15 13 38.6	-1.2
	baz=54,slow=8.7						
TLY	Talaya	59.87	357c	iP	P	15 13 39.1	-0.7
TLY				pmax	pmax		
	comp=Z,38nm,1.0s						
TLY				MLR	MLR		
	comp=Z,6µm,20.0s						
TLY	Talaya	59.87	357	IAMs_20	IAMs_20	15 42 54.5	
	comp=Z,2µm,19.0s						
MSFE	Esma-Masafi	59.93	306	iP	P	15 13 42.0	+1.2
	SNR=11						
ERM	Erimo	59.94	30	P	P	15 13 39.8	-0.6
ERM				pmax	pmax		
	comp=Z,60nm,0.8s						
ERM				MLR	MLR		
	comp=Z,2µm,20.0s						
ERM	Erimo	59.94	30	P	P	15 13 39.8	-0.6
ERM				IAmb	IAmb	15 13 40.8	
	comp=Z,60nm,0.8s						
ERM	Erimo	59.94	30	IAMs_20	IAMs_20	15 41 19.1	
	comp=Z,2µm,20.0s						
MASF	Masafi	59.94	306	P	P	15 13 42.7	+1.9
	SNR=13						
MOY	Mondy	60.02	356	eP	P	15 13 40.4	-0.5
MOY				pmax	pmax		
	comp=Z,58nm,2.6s						
BANOM	Banah	60.08	306	iP	P	15 13 42.4	+0.7
	SNR=10.0						
BANOM	Banah	60.08	306	P	P	15 13 43.2	+1.5
	SNR=5.9						
FAQ	Al Faqa, Dubai	60.12	305	iP	P	15 13 42.4	+0.4
	SNR=18						
FAQ	Al Faqa, Dubai	60.12	305	P	P	15 13 43.0	+1.0
	SNR=32						
FAQ				P	P	15 13 43.0	+1.0
	SNR=32						
NAZ	Nazwa, Dubai	60.17	305	iP	P	15 13 42.6	+0.2
	SNR=10.0						
NAZ	Nazwa, Dubai	60.17	305	P	P	15 13 43.4	+1.1
	SNR=21						
SHME	Shamm	60.26	306	iP	P	15 13 43.9	+0.9
	SNR=10						
SHME	Shamm	60.26	306	P	P	15 13 44.5	+1.6
	SNR=7.9						
SHME				P	P	15 13 44.5	+1.6
	SNR=7.9						
ASUD	Al Ashush, Dub	60.28	304	iP	P	15 13 44.3	+1.2
	SNR=21						
ASUD	Al Ashush, Dub	60.28	304	P	P	15 13 44.4	+1.3
	SNR=12						
ASUD				P	P	15 13 44.4	+1.3
	SNR=12						
DGZ	Jazzator, Alta	60.35	345c	iP	P	15 13 42.4	-0.9
DGZ				pmax	pmax		
	comp=Z,94nm,0.8s						
DGZ				MLR	MLR		
	comp=Z,4µm,19.0s						
CIT	Chita	60.38	4	eP	P	15 13 44.0	+0.7
CIT				e		15 14 27.8	
CIT				pmax	pmax		
	comp=Z,164nm,2.2s						
TAS	Tashkent	60.47	328	P	P	15 13 41.1	-3.1
TAS				pmax	pmax		
	comp=Z,221nm,0.8s						
TAS	Tashkent	60.47	328	P	P	15 13 41.0	-3.1
AJN	Ajban	60.53	304	iP	P	15 13 45.1	+0.3
	SNR=10						
AJN	Ajban	60.53	304	P	P	15 13 45.4	+0.6
	SNR=10						
DZA	Taraz	60.58	330	eP	P	15 13 43.1	-1.9
	baz=330						
DZA	Taraz	60.58	330	eP	P	15 13 43.0	-1.9
IUG	Iuzhnay	60.69	329	eP	P	15 13 43.6	-2.1
	baz=329						
IUG	Iuzhnay	60.69	329	eP	P	15 13 43.6	-2.1
BTLS	Baital	60.97	334	eP	P	15 13 45.0	-2.5
	comp=Z,30nm,1.6s,baz=334						
BTLS	Baital	60.97	334	eP	P	15 13 44.9	-2.5
BTLS				pmax	pmax		
	comp=Z,30nm,1.6s						
MZWR	Madinat Zayed	61.10	303	P	P	15 13 49.9	+1.2
KKAR	Karatay Array	61.14	330	P	P	15 13 46.9	-1.8
KKAR	Karatay Array	61.14	330	P	P	15 13 46.9	-1.8
KLR	Kul'dur	61.24	18c	eP	P	15 13 47.7	-1.4
KLR				pmax	pmax		
	comp=Z,85nm,0.9s						
KLR				MLR	MLR		
	comp=Z,1µm,17.0s						
ASAJ	Asahikawa	61.24	28	P	P	15 13 48.1	-1.2
ASAJ				pmax	pmax		
	comp=Z,47nm,0.7s						
JKA	Kamikawa-asahi	61.24	28	P	P	15 13 48.1	-1.2
JKA				IAmb	IAmb	15 13 49.6	
	comp=Z,47nm,0.7s						
BRLS	Borolday	61.43	330	eP	P	15 13 48.1	-2.5
	baz=329						
BRLS	Borolday	61.43	330	eP	P	15 13 48.1	-2.5
GHWR	Ruwais	62.02	303	P	P	15 13 55.4	+0.5
PYZ	Puysegur Point	63.04	138	IAMs_20	IAMs_20	15 42 13.6	
	comp=Z,3µm,20.0s						
SEM	Semipalatinsk	63.05	341	eP	P	15 13 59.9	-1.7
	baz=341						
SEM	Semipalatinsk	63.05	341	eP	P	15 13 59.8	-1.7
SLWR	Sila	63.05	302	P	P	15 14 02.1	+0.3
DCZ	Deep Cove	63.15	137	IAMs_20	IAMs_20	15 39 13.8	
	comp=Z,3µm,21.0s						
YSS	Yuzh-Sakhalins	63.48	26	eP	P	15 14 03.3	-0.8
YSS				e		15 16 24.3	
YSS				eS	S	15 22 34.2	-1.4
YSS				ePS	PnS	15 22 54.7	+0.3
YSS				pmax	pmax		
	comp=Z,1µm,7.2s						
YSS				pmax	pmax		
	comp=Z,230nm,0.8s						
YSS				MLR	MLR		
	comp=Z,900nm,18.0s						
YSS	Yuzh-Sakhalins	63.48	26	P	P	15 14 03.4	-0.8
YSS	Yuzh-Sakhalins	63.48	26	P	P	15 14 03.7	-0.4
TRNA	Turayna	63.72	303	P	P	15 14 06.8	+0.6
MLZ	Mavora Lakes	63.78	137	IAMs_20	IAMs_20	15 39 22.4	
	comp=Z,3µm,21.0s						
KURBB	Kurchatov Arra	63.80	340	P	P	15 14 05.8	-0.4
	comp=Z,49nm,0.8s,baz=156,slow=5.7,SNR=173						
KURBB				S	S	15 22 37.6	-1.8
	comp=Z,0.7nm,0.9s,baz=153,slow=17,SNR=2.7						
KURBB				PKP2bc		15 43 07.2	
	comp=Z,0.7nm,0.8s,baz=320,slow=2.4,SNR=4.8						
KURBB	Kurchatov Arra	63.80	340	P	P	15 14 05.4	-0.8
WHZ	Wether Hill Ro	63.81	137	IAMs_20	IAMs_20	15 39 33.1	
	comp=Z,4µm,22.0s						
KHOR	Al-Khor Airpor	63.83	304	P	P	15 14 07.7	+0.8
KURK	Kurchatov	63.84	340c	eP	P	15 14 06.1	-0.4
KURK				pmax	pmax		
	comp=Z,109nm,0.9s						
KURK	Kurchatov	63.84	340	P	P	15 14 04.2	-2.3
KURK	Kurchatov	63.84	340	P	P	15 14 05.8	-0.7
KURK	Kurchatov	63.84	340	IAMs_20	IAMs_20	15 45 13.3	
	comp=Z,3µm,19.0s						
GRNR	Gornyy	64.08	20⇑	iP	P	15 14 07.3	-0.8
GRNR				pmax	pmax		
	comp=Z,30nm,1.0s						
ZEA	Zeya	64.14	13	eP	P	15 14 07.7	-0.7
ZEA				eS	S	15 22 46.5	+3.0
ZEA				pmax	pmax		
	comp=E,20nm,0.7s						
ZEA				pmax	pmax		
	comp=N,40nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,80nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,300nm,6.6s						
ZEA				smax	smax		
	comp=E,200nm,18.6s						
ZEA				MLR	MLR		
	comp=E,400nm,11.0s						
ZEA				MLR	MLR		
	comp=N,1µm,16.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,15.0s						
SHMA	Al-Shehemyia	64.38	304	P	P	15 14 11.0	+0.5
SAKB	Bahrain	64.78	304	P	P	15 14 13.4	+0.3
ZAA0	Zalesovo Array	64.89	346	P	P	15 14 11.6	-1.7
ZAA0				IAmb	IAmb	15 14 36.2	
	comp=Z,37nm,1.1s						
ZALV	Zalesovo Beam	64.89	346	P	P	15 14 11.0	-2.3
	comp=Z,11nm,0.4s,baz=112,slow=4.2,SNR=52						
ZALV				S	S	15 22 44.3	-8.6
	comp=Z,0.7nm,0.6s,baz=144,slow=12,SNR=1.3						
ZALV				PKP2bc		15 43 04.9	
	comp=Z,0.5nm,0.3s,baz=316,slow=4.0,SNR=3.8						
ZALV				LR	LR	15 44 50.8	
	comp=Z,1µm,18.5s,baz=158,slow=38						
ZALV	Zalesovo Beam	64.89	346	iP	P	15 14 11.8	-1.5
ZALV				pmax	pmax		
	comp=Z,11nm,0.4s						
ZALV	Zalesovo Beam	64.89	346		P	15 14 11.3	-2.0
GEYT	Alibeck	64.93	319	P	P	15 14 13.6	-0.4
	comp=Z,51nm,0.8s,baz=159,slow=9.5,SNR=48						
GEYT				LR	LR	15 45 41.7	
	comp=Z,778nm,20.6s,baz=85,slow=39						
GEYT	Alibeck	64.93	319	P	P	15 14 12.8	-1.1
GEYT				IAmb	IAmb	15 14 15.2	
	comp=Z,70nm,0.9s						
BRZS	Berezniki	65.43	336	eP	P	15 14 15.0	-1.9
	comp=Z,85nm,1.5s,baz=336						
BRZS	Berezniki	65.43	336	eP	P	15 14 15.0	-1.9
BRZS				pmax	pmax		
	comp=Z,85nm,1.5s						
QRZ	Quartz Range	65.93	131	IAMs_20	IAMs_20	15 45 47.9	
	comp=Z,2µm,18.0s						
OXZ	Oxford	66.04	134	P	P	15 14 20.5	-0.5
OXZ				IAmb	IAmb	15 14 40.9	
	comp=Z,28nm,0.7s						
OXZ				IAMs_20	IAMs_20	15 42 45.7	
	comp=Z,3µm,20.0s						
MAW	Mawson	66.15	197	P	P	15 14 22.5	+1.3
	comp=Z,19nm,0.8s,baz=60,slow=6.4,SNR=30						
MAW				LR	LR	15 36 37.0	
	comp=Z,805nm,21.9s,baz=42,slow=30						
MAW				PKP2bc		15 42 58.5	
	comp=Z,3.9nm,0.9s,baz=264,slow=7.0,SNR=4.6						
MAW	Mawson	66.15	197	P	P	15 14 22.6	+1.3
	baz=66,SNR=26						
BOD	Bodaibo	66.17	4	eP	P	15 14 20.2	-1.3
BOD				pmax	pmax		
	comp=Z,88nm,1.2s						
TYV	Tymovskoe	66.46	24	eP	P	15 14 23.5	0.0
TYV				pmax	pmax		
	comp=Z,30nm,1.1s						
TYV				pmax	pmax		
	comp=Z,400nm,6.3s						
NNZ	Nelson	66.63	131	IAMs_20	IAMs_20	15 42 54.6	
	comp=Z,3µm,20.0s						
HIZ	Hauiti	67.35	128	P	P	15 14 38.9	+9.4
HIZ	Hauiti	67.35	128	IAMs_20	IAMs_20	15 47 18.8	
	comp=Z,3µm,19.0s						
QRN	Al-Qurain	68.02	305	eP	P	15 14 33.4	-0.4
WNVZ	Wahianoa	68.03	129	P	P	15 14 37.5	+3.5
NTVZ	North Tongarir	68.06	129	P	P	15 14 31.9	-2.3
OTVZ	Oturere	68.06	129	P	P	15 14 38.1	+3.9
RAYN	Ar Rayn	68.11	299	iP	P	15 14 34.9	+0.3
	SNR=19						
RAYN	Ar Rayn	68.11	299	P	P	15 14 33.4	-1.2
RAYN				pmax	pmax		
	comp=Z,155nm,1.6s						
RAYN				MLR	MLR		
	comp=Z,2µm,20.0s						
RAYN	Ar Rayn	68.11	299	P	P	15 14 35.5	+0.9
RAYN	Ar Rayn	68.11	299	P	P	15 14 33.4	-1.2
RAYN				IAmb	IAmb	15 14 51.6	
	comp=Z,155nm,1.6s						
RAYN	Ar Rayn	68.11	299	IAMs_20	IAMs_20	15 43 52.7	
	comp=Z,2µm,20.0s						
GRRZ	Galatos Road	68.31	128	P	P	15 14 47.9	+12
KBD	Kabd	68.37	306	eP	P	15 14 35.6	-0.4
BHHZ	Black Hill Sta	68.41	129	P	P	15 14 38.3	+2.0
HLRZ	Highlands Stat	68.49	128	P	P	15 14 41.6	+4.8
UMR	Umm Al-Rimmam	68.50	306	eP	P	15 14 36.7	-0.1
BFZ	Birch Farm	68.70	130	IAMs_20	IAMs_20	15 48 25.4	
	comp=Z,2µm,19.0s						
BVAR	Borovoye Array	68.70	337	P	P	15 14 37.2	-0.4
	comp=Z,121nm,0.7s,baz=172,slow=11,SNR=363						
BVAR				S	S	15 23 34.1	-4.9
	comp=Z,2.5nm,0.8s,baz=148,slow=17,SNR=6.8						
BKZ	Black Stump Fm	68.70	129	P	P	15 14 40.1	+2.0
BKZ	Black Stump Fm	68.70	129	P	P	15 14 40.3	+2.2
BRVK	Borovoye	68.76	337	P	P	15 14 37.5	-0.5
BRVK	Borovoye	68.76	337	P	P	15 14 37.3	-0.7
BRVK	Borovoye	68.76	337	P	P	15 14 36.8	-1.3
BRVK	Borovoye	68.76	337	IAMs_20	IAMs_20	15 47 24.2	
	comp=Z,2µm,21.0s						
MUGZ	Murupara	68.84	128	P	P	15 14 46.4	+7.5
MCHZ	McNeill Hill	68.89	129	P	P	15 14 42.9	+3.8
MIB	Mutribah	68.90	306	eP	P	15 14 39.2	-0.2
MTHZ	Maungataniwha	68.93	128	P	P	15 14 42.1	+2.5
NMHZ	Naumai	68.94	129	P	P	15 14 43.3	+3.7
RST	Umm Al-Ruwaisa	69.05	306	eP	P	15 14 39.5	-0.9
KAHZ	Kahuranaki	69.07	129	P	P	15 14 43.5	+3.2
KIBK	Kibwezi	69.08	271	P	P	15 14 44.5	+3.5
	SNR=11						
KIBK	Kibwezi	69.08	271	IAMs_20	IAMs_20	15 40 38.6	
	comp=Z,3µm,20.0s						
URZ	Urewera	69.08	128	P	P	15 14 41.7	+1.3
	comp=Z,5.7nm,0.6s,baz=286,slow=22,SNR=8.2						
URZ	Urewera	69.08	128	P	P	15 14 42.6	+2.3
URZ	Urewera	69.08	128	IAmb	IAmb	15 15 37.4	
	comp=Z,44nm,1.2s						
URZ				IAMs_20	IAMs_20	15 43 54.1	
	comp=Z,2µm,20.0s						
WHHZ	Waihua	69.26	129	P	P	15 14 41.4	-0.1
MSVF	Nonsavu	69.29	106	P	P	15 14 46.2	+4.1
	comp=Z,41nm,1.5s						
MWZ	Matawai	69.42	128	P	P	15 14 44.2	+1.7
KMBO	Kilima Mbogo	70.03	272	P	P	15 14 47.6	+0.6
	comp=Z,11nm,0.9s,baz=60,slow=7.4,SNR=20						
KMBO	Kilima Mbogo	70.03	272	iP	P	15 14 48.8	+1.8
	SNR=15						
KMBO	Kilima Mbogo	70.03	272	P	P	15 14 49.4	+2.3
KMBO	Kilima Mbogo	70.03	272	IAMs_20	IAMs_20	15 40 51.9	
	comp=Z,2µm,20.0s						
FURI	Furi	70.41	283	IAMs_20	IAMs_20	15 41 01.0	
	comp=Z,2µm,21.0s						
AB31	Akbulak array	70.69	329	P	P	15 14 49.5	-0.4
ABKAR	Akbulak array	70.69	329	P	P	15 14 49.5	-0.5
ABKAR	Akbulak array	70.69	329	P	P	15 14 49.7	-0.2
DGTI	Dogotuki	70.97	104	P	P	15 14 54.7	+2.3
YAK	Yakutsk	72.31	11	eP	P	15 14 57.9	-1.5
YAK				e*PP	pP	15 15 07.5	+0.5
YAK				e		15 15 12.4	
YAK				e		15 17 34.9	
YAK				eS	S	15 24 07.5	-13
YAK				eSSS	SSS	15 31 58.7	
YAK				pmax	pmax		
	comp=Z,387nm,0.8s						
YAK				pmax	pmax		
	comp=E,58nm,1.2s						
YAK				pmax	pmax		
	comp=N,105nm,1.0s						
YAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
YAK				smax	smax		
	comp=E,266nm,3.3s						
YAK				smax	smax		
	comp=N,227nm,3.7s						
YAK				MLR	MLR		
	comp=Z,1µm,18.0s						
YAK				MLR	MLR		
	comp=E,662nm,14.0s						
YAK	Yakutsk	72.31	11	P	P	15 14 57.6	-1.8
AKTO	Aktyubinsk	72.40	329	P	P	15 14 59.8	-0.5
	comp=E,81nm,1.2s,baz=129,slow=6.1,SNR=76						
AKTO				S	S	15 24 16.7	-5.6
	comp=E,1.6nm,0.8s,baz=310,slow=20,SNR=9.3						
LODK	Lodwar	72.62	276	P	P	15 15 05.0	+2.5
	SNR=9.7						
SYO	Syowa Base	74.32	200⇓	eP	P	15 15 12.0	+0.7
SYO	Syowa Base	74.32	200⇓	epP	pP	15 15 19.6	+0.6
SYO	Syowa Base	74.32	200⇑	ePcP	PcP	15 15 25.2	-0.7

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MAK   Makhachkala      74.45 319  eP       P        15 15 07.4  -5.0
MAK                               e                 15 17 52.3
MAK                               eS       SKiKP    15 24 38.1  +0.7
MAK                                pmax    pmax
      comp=Z,222nm,1.2s
VNDA  Vanda            74.60 169   P       P        15 15 14.0  +1.2
      comp=Z,7.6nm,0.9s,baz=319,slow=6.5,SNR=24
VNDA                               LR      LR       15 46 42.7
      comp=Z,1µm,18.2s,baz=319,slow=34
VNDA  Vanda            74.60 169   P       P        15 15 12.5  -0.3
VNDA                               IAmb    IAmb     15 15 28.9
      comp=Z,69nm,1.4s
PEA0B Petropavlovsk-   74.66  29   P       P        15 15 13.0  -0.5
PEA0B                              pmax    pmax
      comp=Z,62nm,1.0s
PEA0B Petropavlovsk-   74.66  29   P       P        15 15 13.0  -0.5
PEA0B                              IAmb    IAmb     15 15 14.1
      comp=Z,62nm,0.9s
PETK  Petropavlovsk-   74.66  29   P       P        15 15 12.1  -1.4
      comp=Z,22nm,0.7s,baz=207,slow=6.3,SNR=24
PETK  Petropavlovsk-   74.66  29   P       P        15 15 12.2  -1.3
PET   Petropavlovsk    75.06  29  eP       P        15 15 15.4  -0.4
PET                               e                 15 18 01.1
PET                               eS       S        15 24 52.5  +0.4
PET                               ePS      PnS      15 25 29.7   0.0
PET                               ePPS     PPS      15 25 41.2
PET                                pmax    pmax
      comp=Z,150nm,1.8s
PET                                pmax    pmax
      comp=Z,800nm,16.7s
PET                                pmax    pmax
      comp=Z,700nm,10.7s
PET                                MLR     MLR
      comp=Z,1µm,18.0s
PET                                MLR     MLR
      comp=Z,1µm,20.0s
PET   Petropavlovsk    75.06  29   P       P        15 15 14.3  -1.5
GNI   Garni            75.07 315   P       P        15 15 16.2  -0.2
      comp=Z,30nm,0.9s,baz=161,slow=1.5,SNR=24
GNI   Garni            75.07 315   P       P        15 15 16.7  +0.3
GNI   Garni            75.07 315   P       P        15 15 16.7  +0.3
SVE   Sverdlovsk       75.33 336d iP       P        15 15 17.6  +0.3
SVE                               eS       S        15 24 53.8  -1.2
SVE                                pmax    pmax
      comp=Z,384nm,1.0s
SVE                                MLR     MLR
      comp=Z,2µm,23.0s
GROC  Groznyy          75.67 318  eP       P        15 15 19.6  +0.1
GROC                              e                 15 15 33.3
GROC                              e                 15 18 07.9
GROC                              eS       S        15 25 01.2  +1.9
GROC                               pmax    pmax
      comp=Z,77nm,0.8s
ARU   Arti             75.94 335   P       P        15 15 20.6  -0.2
      comp=Z,57nm,0.9s,baz=124,slow=3.0,SNR=124
ARU                                S       S        15 24 58.7  -3.0
      comp=Z,0.4nm,0.3s,baz=10,slow=23,SNR=14
ARU   Arti             75.94 335c iP       P        15 15 20.5  -0.2
ARU                                                 15 18 04.9
ARU                                S       S        15 25 06.0  +4.3
ARU                                pmax    pmax
      comp=Z,379nm,1.3s
ARU                                MLR     MLR
      comp=Z,2µm,22.0s
ARU   Arti             75.94 335   P       P        15 15 20.2  -0.5
MA2   Magadan          76.06  21ceP        P        15 15 21.5  +0.1
MA2                                pmax    pmax
      comp=Z,129nm,1.7s
MA2                                MLR     MLR
      comp=Z,471nm,19.0s
MA2   Magadan          76.06  21   P       P        15 15 21.1  -0.4
MA2                                IAmb    IAmb     15 15 22.8
      comp=Z,87nm,1.0s
MA2   Magadan          76.06  21   P       P        15 15 21.0  -0.4
MBAR  Mbarara          76.55 271   P       P        15 15 27.0  +1.6
      comp=Z,8.8nm,0.3s,baz=110,slow=5.2,SNR=15
MBAR  Mbarara          76.55 271   IAMs_20 IAMs_20  15 44 10.1
      comp=Z,2µm,21.0s
ZEI   Tsey             76.75 317  eP       P        15 15 24.9  -1.1
ZEI                                pmax    pmax
      comp=Z,42nm,1.4s
MARD  Mardin           76.82 311   P       P        15 15 25.3  -1.0
MARD                               IAmb    IAmb     15 15 44.6
      comp=Z,97nm,0.9s
NCK   Nalchik          77.25 318  i P      P        15 15 27.3  -1.2
NCK                                pmax    pmax
      comp=Z,47nm,0.9s
NCK                                MLR     MLR
      comp=Z,259nm,18.0s
NEY   Neytrino         77.73 318  i P      P        15 15 29.9  -1.5
NEY                                pmax    pmax
      comp=Z,15nm,1.0s
NEY                                MLR     MLR
      comp=Z,229nm,20.0s
BCA   Borcka           77.76 316  ⇑P       P        15 15 33.2  +1.8
BATM  Batumi           77.77 316  ⇑P       P        15 15 32.0  +0.6
KBZ   Khabaz           77.81 318   P       P        15 15 31.8  +0.3
      comp=Z,58nm,0.9s,baz=167,slow=5.0,SNR=70
KBZ   Khabaz           77.81 318ceP        P        15 15 32.0  +0.5
KBZ                                pmax    pmax
      comp=Z,64nm,0.9s
CHVG  Ch'k'valeri      77.94 317  ⇓P       P        15 15 33.7  +1.3
SHA1  Shidzhatmaz      77.97 318c iP       P        15 15 33.5  +0.7
KVAR  Kislovodsk Arr   78.03 318   P       P        15 15 32.6  -0.4
      comp=Z,3.4nm,0.4s,baz=89,slow=24,SNR=3.4
KIV   Kislovodsk       78.04 318  ⇑P       P        15 15 33.5  +0.5
KIV   Kislovodsk       78.04 318  i P      P        15 15 33.3  +0.3
      SNR=9.7
KIV   Kislovodsk       78.04 318  eP       P        15 15 33.4  +0.4
KIV                               eS       S        15 25 27.6  +2.3
KIV                               eSS      SS       15 30 29.9  +2.6
KIV                                pmax    pmax
      comp=Z,58nm,1.1s
KIV                                pmax    pmax
      comp=Z,178nm,4.1s
KIV   Kislovodsk       78.04 318   P       P        15 15 33.4  +0.4
ASF   Jabal al Asfar   78.12 305   P       P        15 15 33.9  +0.2
      comp=Z,44nm,1.0s,baz=141,slow=3.1,SNR=21
GOF   Gofitskoye       78.26 319⇓iP        P        15 15 35.3  +1.2
GOF                               eS       S        15 25 37.2  +10
GOF                                pmax    pmax
      comp=Z,117nm,1.2s
NRIK  Noril'sk         78.71 353   P       P        15 15 35.1  -0.9
      comp=Z,87nm,1.0s,baz=148,slow=4.7,SNR=80
NRIK                               LR      LR       15 53 19.9
      comp=Z,4µm,19.1s,baz=166,slow=38
NRIK  Noril'sk         78.71 353ceP        P        15 15 34.8  -1.2
NRIK                               pmax    pmax
      comp=Z,171nm,1.1s
NRIK                               MLR     MLR
      comp=Z,4µm,19.0s
NRIK  Noril'sk         78.71 353   P       P        15 15 35.1  -0.9
BELG  Belogornoye      78.89 327   P       P        15 15 36.8  -0.6
      comp=Z,121nm,0.8s,baz=75,slow=0.3,SNR=39
GHAJ  Ghor Haditha     78.94 304   IAMs_20 IAMs_20  15 51 09.5
      comp=Z,2µm,20.0s
LBTB  Lobatse          78.97 246   P       P        15 15 40.4  +1.7
      comp=Z,3.9nm,0.7s,baz=93,slow=3.1,SNR=4.7
EIL   Elat             78.99 302   P       P        15 15 38.2  -0.2
      comp=Z,23nm,1.0s,baz=153,slow=4.2,SNR=19
EIL                                LR      LR       15 50 38.0
      comp=Z,1µm,18.9s,baz=109,slow=36
BOSA  Boshof           79.04 242   P       P        15 15 40.7  +1.7
      comp=Z,4.7nm,0.7s,baz=102,slow=3.4,SNR=7.7
BOSA                               LR      LR       15 47 28.4
      comp=Z,703nm,18.1s,baz=98,slow=33
GAZ   Gaziantep        79.44 310   P       P        15 15 38.6  -2.3
GAZ                                IAmb    IAmb     15 15 57.9
      comp=Z,202nm,1.6s
MMAI  Mount Meron Ar   79.58 306   P       P        15 15 42.8  +1.1
      comp=Z,19nm,0.9s,baz=104,slow=7.0,SNR=16
MMAI                               LR      LR       15 51 12.8
      comp=Z,2µm,20.3s,baz=75,slow=36
SOC   Sochi            79.88 317  eP       P        15 15 41.8  -1.1
SOC                               e                 15 18 40.4
SOC                               ePPP     PPP      15 20 29.8
SOC                               eS       S        15 25 46.6  +1.9
SOC                               eSSS     SSS      15 34 17.7
SOC                                pmax    pmax
      comp=Z,67nm,0.9s
SOC                                MLR     MLR
      comp=Z,588nm,20.0s
TIXI  Tiksi            81.11   7ceP        P        15 15 47.4  -1.6
TIXI                               pmax    pmax
      comp=Z,143nm,0.8s
TIXI                               MLR     MLR
      comp=Z,1µm,19.0s
TIXI  Tiksi            81.11   7   P       P        15 15 47.1  -1.8
KIRV  Kirov            81.19 333   P       P        15 15 49.8  +0.1
      comp=Z,130nm,0.8s,baz=47,slow=0.6,SNR=39
VRH   Novokhopyorsk    81.61 325  eP       P        15 15 51.9  -0.2
VRH                                pmax    pmax
      comp=Z,280nm,1.7s
QSPA  South Pole Qui   81.64 180   P       P        15 15 53.2  +1.0
      comp=Z,11nm,1.0s,baz=293,slow=1.1,SNR=42
QSPA  South Pole Qui   81.64 180   P       P        15 15 51.6  -0.6
QSPA                               IAmb    IAmb     15 16 08.1
      comp=Z,99nm,1.2s
QSPA  South Pole Qui   81.64 180   IAMs_20 IAMs_20  15 46 52.9
      comp=Z,2µm,22.0s
CSS   Mathiatis        81.78 307   IAMs_20 IAMs_20  15 52 40.9
      comp=Z,2µm,20.0s
SUR   Sutherland       82.58 238   P       P        15 16 00.3  +2.4
      comp=Z,25nm,1.2s,baz=152,slow=6.7,SNR=3.9
BR131 Keskin Array S   82.90 312   P       P        15 15 58.4  -0.9
BR131                              pmax    pmax
      comp=Z,132nm,1.3s
BR131 Keskin Array S   82.90 312   P       P        15 15 58.1  -1.3
      SNR=28
BR131 Keskin Array S   82.90 312   P       P        15 15 58.4  -0.9
BR131                              IAmb    IAmb     15 16 16.6
      comp=Z,132nm,1.2s
BRTR  Keskin Array B   82.90 312   P       P        15 15 59.0  -0.3
      comp=Z,23nm,0.8s,baz=131,slow=6.3,SNR=85
BRTR                               LR      LR       15 54 37.7
      comp=Z,2µm,20.5s,baz=120,slow=37
BRTR  Keskin Array B   82.90 312   P       P        15 15 58.0  -1.3
VSR   Storozhevoye     83.09 324  eP       P        15 15 59.3  -0.5
VSR                                pmax    pmax
      comp=Z,130nm,1.0s
VORR  Voronezh         83.25 324  eP       P        15 15 59.0  -1.6
VORR                               pmax    pmax
      comp=Z,300nm,1.2s
BZK   Bozkurt          83.30 314  ⇑P       P        15 16 02.4  +1.4
ANTO  Ankara           83.56 312   IAMs_20 IAMs_20  15 54 37.2
      comp=Z,1µm,21.0s
LPSR  Galich'ya Gora   83.76 325  eP       P        15 16 03.7  +0.5
LPSR                               pmax    pmax
      comp=Z,80nm,1.0s
NVL   N'lazarevskaya   83.95 199  eP       P        15 16 13.9  +10
NVL                               i                 15 19 22.6
NVL                               i PPP    PPP      15 21 13.7
NVL                               i S      S        15 26 28.1  +2.2
NVL                                pmax    pmax
      comp=Z,50nm,1.5s
SIM   Simferopol'      84.12 317  eP       P        15 16 04.9  -0.3
SIM                                pmax    pmax
      comp=Z,51nm,0.5s
PRGR  Permogore        84.38 335  eP       P        15 16 05.8  -0.3
PRGR                              e                 15 16 20.5
PRGR                              eS       S        15 26 25.4  -4.8
PRGR                               pmax    pmax
      comp=Z,175nm,0.9s
MOS   Moscow           85.64 328  eP       P        15 16 11.5  -1.1
MOS                               i                 15 16 26.3
MOS                               e                 15 26 38.2
MOS                                pmax    pmax
      comp=Z,182nm,1.5s
OBN   Obninsk          85.98 327   P       P        15 16 13.9  -0.4
      comp=Z,13nm,0.7s,baz=4.8,slow=1.9,SNR=21
OBN   Obninsk          85.98 327⇑iP        P        15 16 14.3   0.0
OBN                               i                 15 16 29.3
OBN                               i S      S        15 26 47.9  +1.6
OBN                                pmax    pmax
      comp=Z,268nm,1.7s
OBN                                MLR     MLR
      comp=Z,2µm,24.0s
KULA  Kula-Manisa      86.32 310   P       P        15 16 17.1  +0.6
KLMR  Klimovskoe       86.69 333  eP       P        15 16 17.2  -0.4
KLMR                              e                 15 19 38.8
KLMR                              eS       SKSac    15 26 42.7  +0.3
KLMR                               pmax    pmax
      comp=Z,357nm,1.4s
KLMR  Klimovskoe       86.69 333  eP       P        15 16 17.3  -0.4
KLMR                               AMP              15 16 35.3
      comp=Z,357nm,1.4s
KLMR                              ePP      PP       15 19 38.8  -1.3
KLMR                              eS       SKSac    15 26 42.7  +0.3
KLMR                              eS       SKSac    15 26 42.7  +0.3
KLMR                               LQ      LQ       15 48 43.7
KLMR                               LQ      LQ       15 48 43.7
KLMR                               LR      LR       15 54 46.3
BILL  Bilibino         86.69  19⇑iP        P        15 16 17.1  -0.4
BILL                              e                 15 19 35.4
BILL                               pmax    pmax
      comp=Z,45nm,0.9s
TSUM  Tsumeb           86.97 251   IAMs_20 IAMs_20  15 49 21.7
      comp=Z,2µm,20.0s
PURM  Purcari          87.42 318  ⇑P       P        15 16 21.5   0.0
MANR  Mangalia         87.63 315  ⇑P       P        15 16 23.1  +0.5
JURR  Jurilovca        87.65 316  ⇑P       P        15 16 23.1  +0.4
MFTR  Murfatlar        87.83 315  ⇑P       P        15 16 24.0  +0.4
TIRR  Tirgusor         87.90 315  ⇑P       P        15 16 24.3  +0.4
TPGR  Topolog          87.99 316  ⇑P       P        15 16 25.1  +0.7
NPS   Neapolis         87.99 306   P       P        15 16 26.5  +1.9
TLBR  Topalu           88.18 315  ⇑P       P        15 16 25.2   0.0
MILM  Milestii Mici    88.22 318  ⇑P       P        15 16 25.2  -0.1
MILM  Milestii Mici    88.22 318  eP       P        15 16 25.0  -0.4
MILM                              e                 15 16 42.0
MILM                               pmax    pmax
      comp=Z,600nm,2.0s
ICOR  Ion Corvin       88.25 315  ⇑P       P        15 16 25.8  +0.2
CFR   Carcaliu         88.26 316  ⇑P       P        15 16 26.0  +0.4
HARR  Harsova          88.29 315  ⇑P       P        15 16 26.4  +0.6
PRK   Paraskevi        88.30 310   P       P        15 16 27.9  +2.0
SNAA  Sanae            88.31 197   P       P        15 16 27.4  +1.9
SNAA  Sanae            88.31 197   P       P        15 16 27.1  +1.6
      comp=Z,25nm,1.1s,baz=121,slow=4.4,SNR=29
SNAA  Sanae            88.31 197ceP        P        15 16 25.7  +0.2
SNAA                               pmax    pmax
      comp=Z,33nm,1.3s
SNAA  Sanae            88.31 197   P       P        15 16 24.6  -1.0
SNAA                               IAmb    IAmb     15 16 42.1
      comp=Z,82nm,1.2s
VLDR  Vladesti         88.46 317  ⇑P       P        15 16 26.5   0.0
EDRB  Edirne           88.50 313   P       P        15 16 27.4  +0.6
IDI   Anoyia           88.58 306   P       P        15 16 27.5   0.0
      comp=Z,23nm,1.1s,baz=52,slow=11,SNR=3.8
IDI                                LR      LR       15 56 52.0
      comp=Z,630nm,22.0s,baz=86,slow=36
GADA  Gvkgeada         88.78 311   P       P        15 16 29.3  +1.2
ALN   Alexandroupoli   88.81 311   P       P        15 16 28.0  -0.3
ALN   Alexandroupoli   88.81 311   P       P        15 16 28.4  +0.1
ALN                                pmax    pmax
      comp=Z,106nm,1.1s
ALN   Alexandroupoli   88.81 311   P       P        15 16 28.4  +0.1
SORM  Soroca           88.82 319  ⇑P       P        15 16 28.2   0.0
AKASG Malin Array Be   88.89 322   P       P        15 16 27.7  -0.8
      comp=Z,8.9nm,0.8s,baz=86,slow=4.6,SNR=38
AKASG                              PP      PP       15 19 57.4  -0.8
      comp=Z,9.7nm,0.9s,baz=89,slow=6.5,SNR=11
AKASG                              LR      LR       16 03 46.4
      comp=Z,375nm,18.1s,baz=85,slow=41
AKASG Malin Array Be   88.89 322  i P      P        15 16 28.2  -0.2
AKASG                              pmax    pmax
      comp=Z,12nm,0.8s
AKASG Malin Array Be   88.89 322   P       P        15 16 26.4  -2.0
AKASG                              IAmb    IAmb     15 16 45.4
      comp=Z,72nm,1.4s
AKBB  Malin Array Si   88.89 322ceP        P        15 16 28.5  +0.1
PGOR  Pogoanele        89.00 316  ⇑P       P        15 16 29.5  +0.5
RAZG  Razgrad          89.04 314  ⇑P       P        15 16 30.2  +0.9
GRER                   89.11 316  ⇑P       P        15 16 29.9  +0.3
RDO   Rodhopi          89.24 312   P       P        15 16 31.0  +0.7
BISRR Bisoca           89.33 316  ⇑P       P        15 16 30.7   0.0
ISR   Istrita          89.35 316  ⇑P       P        15 16 31.9  +1.0
VRI   Vrincioaia       89.38 316  ⇑P       P        15 16 32.0  +1.1
PLOR  Plostina         89.43 316  ⇑P       P        15 16 31.8  +0.6
SULR                   89.45 315  ⇑P       P        15 16 31.8  +0.5
NEHR  Nehoiu           89.58 316  ⇑P       P        15 16 31.9   0.0
SECR                   89.66 316  ⇑P       P        15 16 32.7  +0.5
COVR  Voineasa-Covas   89.74 316  ⇑P       P        15 16 32.3  -0.3
THAS  Thassos island   89.74 311   P       P        15 16 32.8  +0.1
MLR   Muntele Rosu     89.84 316  ⇑P       P        15 16 34.3  +1.1
MLR   Muntele Rosu     89.84 316   P       P        15 16 33.9  +0.7
      comp=Z,12nm,0.6s,baz=68,slow=2.7,SNR=28
MLR                                PP      PP       15 20 06.3  +0.3
      comp=Z,17nm,0.9s,baz=97,slow=7.3,SNR=4.2
VNA2  Neumayer--Watz   89.96 197   P       P        15 16 35.2  +2.1
      baz=107,slow=5.3
VNA2                               S       S        15 27 28.9  +5.0
      baz=277,slow=16
ANKY  Antikythira Is   89.96 306   P       P        15 16 34.8  +1.0
OUR   Ouranopolis      90.24 311   P       P        15 16 35.7  +0.7
VNA1  Neumayer--Stat   90.34 198   P       P        15 16 38.2  +3.3
VNA1                               S       S        15 27 27.6  +0.3
VILL  Villia           90.36 308   P       P        15 16 35.5  -0.2
VLI   Veliai           90.40 307   P       P        15 16 35.1  -0.8
VOIR                   90.45 316  ⇑P       P        15 16 36.2  +0.2
VNA3  Neumayer Olymp   90.47 197   P       P        15 16 37.4  +1.9
VNA3                               S       S        15 27 28.0  -0.6
MNK   Minsk            90.61 325  i P      P        15 16 33.2  -3.2
MNK                               i S      SKSac    15 27 03.2  -2.8
MNK                                pmax    pmax
      comp=Z,67nm,1.0s
MNK                                pmax    pmax
      comp=N,21nm,1.0s
MNK                                pmax    pmax
      comp=E,4.0nm,1.0s
MNK                                MLR     MLR
      comp=N,639nm,20.0s
MNK   Minsk            90.61 325  i P      P        15 16 33.3  -3.1
      comp=E,4.0nm,1.0s
MNK                               i P      P        15 16 33.3  -3.1
      comp=N,21nm,1.0s,baz=103
MNK                               i P      P        15 16 33.3  -3.1
      comp=Z,67nm,1.0s
MNK                               i PP     PP       15 19 59.1   -13
MNK                               i PPP    PPP      15 21 50.4
MNK                               i S      SKSac    15 27 03.3  -2.8
MNK                               i SS     SS       15 32 24.5   -68
MNK                               i SSS    SSS      15 35 45.1
MNK                               i LQ     LQ       15 47 01.6
MNK                               i LR     LR       15 53 04.5
MNK                               i LRM    MLR      16 00 50.8
      comp=N,639nm,20.1s
MNK                               i LRM    MLR      16 02 49.3
      comp=Z,855nm,20.1s
MNK                               i LRM    MLR      16 04 15.8
      comp=E,109nm,20.5s
PUL   Pulkovo          90.64 330  i P      P        15 16 35.7  -0.7
PUL                                pmax    pmax
      comp=Z,58nm,1.3s
PUL                                MLR     MLR
      comp=Z,574nm,22.0s
SRS   Serrai           90.67 311   P       P        15 16 36.4  -0.7
ATAL  Atalanti         90.68 309   P       P        15 16 36.4  -0.7
LKR   Lokris           90.69 309   P       P        15 16 36.9  -0.2
ARR   Arges            90.72 316  ⇑P       P        15 16 37.0  -0.2
BURAR Bucovina Array   90.76 318   P       P        15 16 36.3  -1.1
VALR  Valaam           90.80 332  i P      P        15 16 36.6  -0.5
VALR                               pmax    pmax
      comp=Z,56nm,1.0s
VTS   Vitosha          91.21 313  ⇑P       P        15 16 39.8  +0.2
VTS   Vitosha          91.21 313   P       P        15 16 37.7  -2.0
VTS                                pmax    pmax
      comp=Z,65nm,1.4s
VTS   Vitosha          91.21 313   P       P        15 16 37.7  -2.0
VTS                                IAmb    IAmb     15 16 57.7
      comp=Z,65nm,1.4s
LVZ   Lovozero         91.23 339   P       P        15 16 37.8  -1.3
LVZ                                pmax    pmax
      comp=Z,207nm,1.7s
LVZ   Lovozero         91.23 339   P       P        15 16 37.8  -1.3
KLV   Kalavryta, Ach   91.24 308   P       P        15 16 39.6  -0.2
NACGM Naroch           91.32 325  i P      P        15 16 43.1  +3.4
LAKA  Lakka            91.41 308   P       P        15 16 41.3  +0.7
VAY   Valandovo        91.47 311  i P      P        15 16 40.8   0.0
GRG   Griva            91.53 311   P       P        15 16 41.2  +0.1
APA   Apatity          91.58 338⇑iP        P        15 16 37.9  -2.7
APA                                pmax    pmax
      comp=Z,16nm,0.9s
APA                                MLR     MLR
      comp=Z,200nm,20.0s
EVR   Evrytania        91.65 309   P       P        15 16 41.9  +0.2
IIGN  Ignalina         91.73 326  eP       P        15 16 42.6  +1.0
BOSS  Bosilegrad       91.73 313  eP       P        15 16 41.7  -0.3
ZAPS  Zavoj            91.75 313  eP       P        15 16 43.1  +1.0
STIP  Stip             91.82 312  i P      P        15 16 42.2  -0.2
ISAL  Salakas          91.83 326  eP       P        15 16 43.1  +1.1
LVV   L'vov            91.96 320  eP       P        15 16 43.1  +0.3
PRVS  Prvonek          92.03 313  eP       P        15 16 42.9  -0.5
DJES  Djerdap          92.07 315  eP       P        15 16 44.4  +1.0
VSU   Vasula           92.12 329  eP       P        15 16 43.9  +0.6
ZAGS  Zajecar          92.13 314  eP       P        15 16 43.8  +0.1
HERR  Herculane        92.18 315  ⇑P       P        15 16 44.2  +0.3
BARS  Barje            92.27 313  eP       P        15 16 43.1  -1.3
BARS  Barje            92.27 313  eP       P        15 16 44.3  -0.1
SKO   Skopje           92.41 312  i P      P        15 16 44.9  -0.1
BOVS  Bovan            92.48 314  ⇑P       P        15 16 45.1  -0.3
BOVS  Bovan            92.48 314  eP       P        15 16 45.3   0.0
OHR   Ohrid            92.76 311  i P      P        15 16 45.3  -1.5
SELS  Selova           92.84 313  eP       P        15 16 47.1   0.0
BZS   Buzias           92.85 316  ⇑P       P        15 16 46.8  -0.2
UZH   Uzhgorod         92.87 319  eP       P        15 16 48.3  +1.3
UZH                               i                 15 16 54.4
UZH                               e                 15 17 04.6
IGT   Igoumenitsa      92.88 309   P       P        15 16 47.3   0.0
SVIS  Svilajnac        92.93 314  eP       P        15 16 48.4  +1.0
KOLS  Kolonicke sedl   92.94 319  eP       P        15 16 48.5  +1.2
KOLS  Kolonicke sedl   92.94 319  eP       P        15 16 48.5  +1.2
PABE  Paberze          93.02 326  eP       P        15 16 48.3  +0.8
FINES FINESS Array B   93.07 332   P       P        15 16 47.5  -0.1
      comp=Z,9.7nm,0.8s,baz=103,slow=4.7,SNR=19
FINES                              PP      PP       15 20 30.0  -0.8
      comp=Z,6.1nm,1.0s,baz=99,slow=8.9,SNR=2.1
FINES                              LR      LR       16 02 51.7
      comp=Z,1µm,21.9s,baz=93,slow=38
FINES FINESS Array B   93.07 332  i P      P        15 16 48.0  +0.4
FINES                              pmax    pmax
      comp=Z,10.0nm,0.8s
FINES FINESS Array B   93.07 332   P       P        15 16 44.5  -3.1
SUW   Suwalki          93.21 324  eP       P        15 16 48.4   0.0
SUW   Suwalki          93.21 324  eP       P        15 16 48.4   0.0
SUW   Suwalki          93.21 324   P       P        15 16 47.1  -1.4
SUW                                pmax    pmax
      comp=Z,162nm,1.0s
SUW   Suwalki          93.21 324   P       P        15 16 47.0  -1.4
GRUS  Gruza            93.23 314  eP       P        15 16 49.5  +0.7
TRUS  Trudelj          93.50 314  eP       P        15 16 50.7  +0.7
IVAS  Ivanjica         93.59 313  eP       P        15 16 50.7  +0.2
SJES  Sjenica          93.67 313  eP       P        15 16 51.1  +0.1
DIVS  Divibare         93.77 314  eP       P        15 16 51.0  -0.4
PDG   Podgorica        94.08 312  ⇑P       P        15 16 52.9  +0.2
BBLS  Lazi&#263;i      94.16 314  eP       P        15 16 53.5  +0.3
PSZ   Piszkesteto      94.36 318  eP       P        15 16 52.8  -1.2
PSZ   Piszkesteto      94.36 318  eP       P        15 16 53.4  -0.6
ARCES ARCESS Array B   94.88 340   P       P        15 16 54.9  -0.9
      comp=Z,14nm,0.9s,baz=71,slow=4.1,SNR=11
ARCES                              LR      LR       16 05 26.1
      comp=Z,1µm,18.5s,baz=90,slow=39
MORH  Mrgy, Hungar     94.99 316  ⇑P       P        15 16 57.0  +0.2
MORH  Mrgy, Hungar     94.99 316  eP       P        15 16 55.7  -1.1
MORH  Mrgy, Hungar     94.99 316  eP       P        15 16 55.7  -1.1
KOVH  Kovagotottos     95.35 316  eP       P        15 16 56.7  -1.8
KOVH  Kovagotottos     95.35 316  eP       P        15 16 57.4  -1.1
MPLH  Magyarpolny      95.85 317  eP       P        15 17 00.2  -0.6
MPLH  Magyarpolny      95.85 317  eP       P        15 17 00.6  -0.2
JAVC  Velka Javorina   95.94 318  eP       P        15 17 03.0  +1.8
MORC  Moravsky Berou   96.11 319  eP       P        15 17 03.6  +1.7
MORC                              ePP      PP       15 20 55.2  +0.2
ANM   Nome             96.36  26   P       P        15 17 03.5  +0.8
      baz=264
KRLC  Kraliky          96.63 320  eP       P        15 17 04.7  +0.4
KRLC  Kraliky          96.63 320  eP       P        15 17 04.7  +0.4
VRAC  Vranov           96.68 319   PP      PP       15 20 58.4  -1.0
      comp=Z,3.7nm,1.0s,baz=76,slow=6.8,SNR=5.3
VRAC  Vranov           96.68 319  eP       P        15 17 04.6  +0.1
VRAC                              ePP      PP       15 20 59.5  +0.1
KRUC  Moravsky         96.79 319  eP       P        15 17 04.7  -0.3
KRUC                              ePP      PP       15 21 00.4  +0.2
DPC   Dobruska-Polom   96.95 320  eP       P        15 17 06.2  +0.5
DPC                               e                 15 17 13.3
DPC   Dobruska-Polom   96.95 320  eP       P        15 17 06.2  +0.5
DPC                               epP      pP       15 17 13.3  -0.2
CONA  Conrad Observa   97.05 317  eP       Pdif     15 17 06.7  +0.3
      comp=Z,5.8nm,1.7s
CONA                               P       PP       15 20 55.9  -6.5
      comp=Z,8.6nm,1.6s
CHVC  Chvalec          97.14 320  eP       Pdif     15 17 08.1  +1.5
ARSA  Arzberg          97.23 317  eP       P        15 17 05.7  -1.4
      comp=Z,5.9nm,1.0s
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ARSA				eP	PP	15 20 55.9	-7.7
	comp=Z,5.7nm,1.3s						
SOKA	Soboth	97.52	316	eP	Pdif	15 17 09.0	+0.5
	comp=Z,10nm,1.7s						
SOKA				eP	PP	15 21 05.3	-0.7
	comp=Z,20nm,1.4s						
OBKA	Obir	97.84	316	eP	Pdif	15 17 11.4	+1.5
	comp=Z,7.2nm,1.5s						
OBKA				P	PP	15 21 07.6	-0.9
	comp=Z,20nm,1.4s						
CKRC	Cesky Krumlov	98.15	318	ePP	PP	15 21 11.0	+0.3
SPITS	Spitsbergen Ar	98.30	348	P	P	15 17 10.2	-1.0
SPITS				pmax	pmax		
	comp=Z,499nm,1.9s						
BRG	Berggiesshubel	98.49	320	eP	Pdif	15 17 14.4	+1.8
BRG				Amp		15 17 16.1	
	comp=Z,2.3nm,1.0s						
BRG	Berggiesshubel	98.49	320	P	Pdif	15 17 23.6	+11
BRG				Amp		15 17 31.7	
	comp=Z,6.2nm,1.0s						
GERES	GERESS Array B	98.55	318	P	P	15 17 12.8	-0.3
	comp=Z,0.7nm,0.6s,baz=71,slow=5.8,SNR=5.4						
GERES				PP	PP	15 21 13.4	-0.4
	comp=Z,4.3nm,1.1s,baz=93,slow=6.7,SNR=6.4						
KHC	Kasperske Hory	98.64	318	eP	Pdif	15 17 14.8	+1.4
KHC				e		15 21 14.9	
KHC	Kasperske Hory	98.64	318	eP	Pdif	15 17 14.8	+1.4
KHC				epP	pP	15 17 19.6	-1.5
KHC				ePP	PP	15 21 14.9	+0.4
TBI	Tubuai	98.77	115	eS	S	15 28 40.0	-3.1
	comp=Z,775nm,29.2s						
TBI				eSS	SS	15 35 31.8	+2.4
	comp=Z,410nm,30.5s						
TBI	Tubuai	98.77	115	eLR	LR	15 49 24.2	
	comp=Z,2µm,23.8s						
HFS	Hagfors	98.95	330	P	P	15 17 14.0	-0.4
	comp=Z,8.2nm,0.9s,baz=168,slow=2.7,SNR=7.4						
HFS				PP	PP	15 21 16.7	+0.3
	comp=Z,5.2nm,0.8s,baz=116,slow=6.6,SNR=2.2						
HFS				LR	LR	16 06 28.2	
	comp=Z,452nm,21.1s,baz=83,slow=38						
HFS	Hagfors	98.95	330	P	P	15 17 14.0	-0.4
CLL	Collm	99.10	321	eP	Pdif	15 17 21.0	+5.7
CLL				e		15 21 11.0	
CLL				e		15 27 51.0	
CLL	Collm	99.10	321	ePdif	Pdif	15 17 16.0	+0.7
CLL				ePP	PP	15 21 11.0	-6.8
CLL				eSKSac	SKSac	15 27 51.0	-0.8
CLL				eSdif	ScS	15 28 42.0	-2.7
CLL				ePS	PS	15 30 12.0	-2.4
CLL				ePPS	PPS	15 30 48.0	
CLL				eSS	SS	15 35 36.0	+2.9
CLL				eSSS	SSS	15 39 18.0	
CLL				e		15 41 42.0	
CLL				eSSSS		15 42 42.0	
ABTA	Abfaltersbach	99.25	316	eP	Pdif	15 17 16.8	+0.6
	comp=Z,2.7nm,0.8s						
ABTA				eP	PP	15 21 18.2	-1.1
	comp=Z,13nm,1.6s						
A21K	Barrow	99.83	19	Pdiff	Pdif	15 17 18.2	+0.1
	baz=273						
WTTA	Wattenberg	99.87	317	eP	Pdif	15 17 21.8	+2.7
	comp=Z,16nm,2.0s						
WTTA				P	PP	15 21 17.6	-6.5
	comp=Z,12nm,1.2s						
PPT2	Papeete2	99.90	109	eS	S	15 28 49.7	-3.4
	comp=Z,939nm,26.2s						
PPT2				eSS	SS	15 35 49.2	+3.4
	comp=Z,439nm,26.5s						
PPT2	Papeete2	99.90	109	eLR	LR	15 49 59.8	
	comp=Z,1µm,22.8s						
PPT	Papeete	99.91	109	LR	LR	15 59 13.1	
	comp=Z,615nm,21.6s,baz=252,slow=33						
GCSA	Galena City Sc	100.02	26	Pdiff	Pdif	15 17 20.2	+1.2
	baz=272						
SQTA	Sankt Quirin	100.16	316	eP	Pdif	15 17 23.2	+2.9
	comp=Z,11nm,1.7s						
NB2	NORSAR Subarra	100.17	331	P	Pdif	15 17 20.6	+0.7
	comp=Z,5.7nm,1.1s,baz=87,slow=4.6						
NB2	NORSAR Subarra	100.17	331	P	Pdif	15 17 20.6	+0.7
	baz=87,slow=4.6						
NOA	NORSAR Array B	100.17	331	P	Pdif	15 17 19.7	-0.2
	comp=Z,1.7nm,0.9s,baz=94,slow=4.5,SNR=2.1						
NOA				LR	LR	16 07 24.5	
	comp=Z,1µm,21.5s,baz=95,slow=38						
MOTA	Moosalm	100.24	317	eP	Pdif	15 17 21.2	+0.5
	comp=Z,8.0nm,1.1s						
MOTA				eP	PP	15 21 25.8	-1.1
	comp=Z,10nm,1.0s						
RETA	Reutte	100.47	317	eP	Pdif	15 17 22.7	+1.1
	comp=Z,12nm,1.7s						
RETA				P	PP	15 21 18.3	-10
	comp=Z,8.6nm,1.3s						
FETA	Feichten	100.49	316	eP	Pdif	15 17 21.5	-0.3
	comp=Z,5.9nm,1.3s						
FETA				eP	PP	15 21 25.3	-3.4
	comp=Z,16nm,1.2s						
DAVOX	Davos/Dischmat	101.06	316	P	Pdif	15 17 23.7	-0.7
	comp=Z,1.8nm,0.8s,baz=110,slow=5.6,SNR=5.0						
KEST	Kesra	101.21	305	P	Pdif	15 17 25.2	0.0
	comp=Z,2.7nm,0.9s,baz=294,slow=5.5,SNR=3.1						
IMAR	Indian Mountai	101.25	24	Pdif	Pdif	15 17 25.4	+0.8
N19K	Bonanza Creek	101.28	30	Pdiff	Pdif	15 17 26.6	+1.7
	baz=273						
H21K	Melozitna Rive	101.67	25	Pdiff	Pdif	15 17 27.5	+1.1
	baz=276						
I21K	Tanana	102.06	25	Pdiff	Pdif	15 17 29.3	+1.2
	baz=276						
TOLK	Toolik Lake Re	102.53	21	Pdif	Pdif	15 17 30.9	+0.6
TOLK	Toolik Lake Re	102.53	21	Pdiff	Pdif	15 17 30.8	+0.6
	baz=280						
MLY	Manley	102.60	25	Pdiff	Pdif	15 17 31.6	+1.0
	baz=278						
BPAW	Bear Paw Mtn.	102.61	26	Pdiff	Pdif	15 17 32.1	+1.4
	baz=277						
I23K	Minto, Yukon-K	103.17	25	Pdiff	Pdif	15 17 34.0	+1.0
	baz=279						
BNI	Bardonecchia	103.32	314	IAMs_20	IAMs_20	16 09 31.9	
	comp=Z,2µm,22.0s						
MCK	McKinley	103.56	26	Pdiff	Pdif	15 17 36.0	+1.1
	baz=279						
ILAR	Eielson Array	104.27	25	Pdiff	Pdif	15 17 37.5	-0.5
	comp=Z,0.7nm,0.9s,baz=215,slow=3.9,SNR=4.1						
ILAR				PP	PP	15 21 56.2	-0.1
	comp=Z,1.8nm,1.0s,baz=296,slow=5.6,SNR=4.6						
BMAR	Burnt Mountain	104.62	22	Pdif	Pdif	15 17 40.7	+1.1
ALE	Alert	105.72	359	IAMs_20	IAMs_20	16 07 59.4	
	comp=Z,1µm,20.0s						
TORD	Torodi Ar. Bea	106.91	281	PKiKP	PKiKP	15 22 00.4	-0.4
	comp=Z,1.4nm,0.7s,baz=75,slow=1.6,SNR=6.3						
EKA	Eskdalemuir Ar	108.39	326	PP	PP	15 22 26.9	0.0
	comp=Z,1.2nm,0.5s,baz=189,slow=32,SNR=4.9						
TAOE	Nuku Hiva Isla	110.73	103	eLR	LR	15 55 01.0	
	comp=Z,855nm,21.5s						
ESDC	Sonseca Array	111.59	309	PP	PP	15 22 52.1	+1.4
	comp=Z,2.3nm,0.9s,baz=73,slow=5.6,SNR=4.3						
KOWA	Kowa	112.54	282	IAMs_20	IAMs_20	16 05 51.8	
	comp=Z,924nm,19.0s						
DBIC	Dimbokro	112.73	274	PKiKP	PKiKP	15 22 11.8	-0.1
	comp=Z,3.8nm,0.8s,baz=150,slow=3.5,SNR=3.8						
YKA	Yellowknife Ar	118.04	21	PKP	PKPdf	15 22 20.6	0.0
	comp=Z,3.0nm,0.7s,baz=333,slow=1.5,SNR=33						
YKA				PKKPbc	PKKPbc	15 32 42.5	0.0
	comp=Z,0.9nm,0.9s,baz=119,slow=3.9,SNR=5.4						
EFI	East Falkland	118.89	190	IAMs_20	IAMs_20	16 06 58.5	
	comp=Z,1µm,22.0s						
B05A	Bryant	122.56	37	P	PKiKP	15 22 31.2	+1.2
	baz=297						
I03D	Drain, OR	123.72	42	P	PKiKP	15 22 33.7	+1.3
	baz=294						
H04D	Lebanon	123.79	41	P	PKiKP	15 22 34.2	+1.7
	baz=294						
I04A	Tendick Farm,	124.30	42	P	PKiKP	15 22 34.3	+0.7
	baz=294						
J04D	Umpqua Nationa	124.72	42	P	PKiKP	15 22 35.7	+1.0
	baz=294						
I05D	Terrebonne, OR	124.77	41	P	PKiKP	15 22 35.6	+1.0
	baz=296						
M02C	Callahan	124.94	45	P	PKiKP	15 22 36.3	+1.3
	baz=292						
L04D	Klamath Falls	125.00	44	P	PKiKP	15 22 35.6	+0.5
	baz=293						
N02D	Trinity Center	125.20	45	P	PKiKP	15 22 36.6	+1.1
	baz=292						
J05D	Fort Rock, OR	125.29	42	P	PKiKP	15 22 37.0	+1.3
	baz=295						
O02D	Mt. Diablo Mer	125.44	46	P	PKiKP	15 22 37.7	+1.7
	baz=292						
NEW	Newport	125.46	35	P	PKiKP	15 22 37.7	+1.9
	baz=302						
M04C	Macdoel	125.49	44	P	PKiKP	15 22 37.2	+1.0
	baz=294						
O03E	Paynes Creek	126.10	46	P	PKiKP	15 22 38.0	+0.7
	baz=293						
NVAR	Mina Array Bea	129.32	46	PKP	PKiKP	15 22 43.9	-0.1
	comp=Z,4.4nm,0.9s,baz=250,slow=1.8,SNR=16						
NVAR				PP	PP	15 24 53.1	+1.0
	comp=Z,1.5nm,0.8s,baz=275,slow=8.0,SNR=4.7						
NVAR				SKPbc	SKPbc	15 26 03.0	-0.2
	comp=Z,6.8nm,1.0s,baz=273,slow=3.5,SNR=7.2						
PKM	Mcpherson Peak	129.53	51	P	PKiKP	15 22 46.9	+2.4
	baz=290						
HLID	Hailey	129.54	39	P	PKiKP	15 22 46.4	+2.1
	baz=302						
EGMT	Eagleton	129.61	32	P	PKiKP	15 22 44.7	+0.6
	baz=310						
BOZ	Bozeman (W)	130.07	35	IAMs_20	IAMs_20	16 31 10.1	
	comp=Z,610nm,18.0s						
BOZ	Bozeman (W)	130.07	35	P	PKiKP	15 22 46.8	+1.6
	baz=306						
ISA	Isabella, Lake	130.27	50	P	PKiKP	15 22 48.0	+2.1
	baz=292						
CWC	Cottonwood Cre	130.28	49	P	PKiKP	15 22 47.7	+1.8
	baz=293						
MPMC	Manual Prospec	130.86	49	P	PKiKP	15 22 48.5	+1.3
	baz=293						
EDW2	Edwards Air Fo	130.93	51	P	PKiKP	15 22 48.8	+1.6
	baz=292						
PLCA	Paso Flores	131.12	182	PKP	PKiKP	15 22 48.0	+0.5
	comp=Z,2.5nm,0.9s,baz=298,slow=3.5,SNR=3.8						
PLCA	Paso Flores	131.12	182	PKIKP	PKiKP	15 22 48.0	+0.5
PLCA	Paso Flores	131.12	182	eP	PKPdf	15 22 44.8	-1.7
FURC	Furnace Creek,	131.17	48	P	PKiKP	15 22 49.2	+1.8
	baz=294						
R11A	Troy Canyon, C	131.29	45	P	PKiKP	15 22 49.4	+1.5
	baz=297						
TPNV	Topopah Spring	131.42	47	IAMs_20	IAMs_20	16 11 59.9	
	comp=Z,382nm,18.0s						
TPNV	Topopah Spring	131.42	47	P	PKiKP	15 22 50.2	+1.9
	baz=295						
GSC	Goldstone, Bar	131.67	50	P	PKiKP	15 22 50.5	+1.8
	baz=293						
TUQ	Turquoise Moun	132.28	49	P	PKiKP	15 22 53.0	+3.0
	baz=294						
DUG	Dugway, Tooele	132.30	42	P	PKiKP	15 22 50.7	+0.8
	baz=301						
PFO	Pinyon Flats O	132.58	52	PKP	PKiKP	15 22 51.9	+1.3
	comp=Z,4.6nm,1.0s,baz=178,slow=1.3,SNR=5.6						
PFO	Pinyon Flats O	132.58	52	P	PKiKP	15 22 52.4	+1.8
	baz=292						
GMRC	Granite Mounta	132.74	50	P	PKiKP	15 22 52.7	+1.8
	baz=294						
BELC	Belle Mtn. Jos	132.79	51	P	PKiKP	15 22 52.6	+1.6
	baz=293						
MONP2	Monument Peak	132.87	52	P	PKiKP	15 22 52.8	+1.5
	baz=292						
BW06	Boulder Array	132.94	37	P	PKiKP	15 22 53.0	+1.8
	baz=306						
PDAR	Pinedale Array	132.94	37	PKP	PKPdf	15 22 48.5	-1.5
	comp=Z,1.3nm,0.8s,baz=90,slow=1.5,SNR=5.0						
PDAR				PP	PP	15 25 15.0	-0.1
	comp=Z,0.8nm,0.8s,baz=290,slow=5.6,SNR=2.2						
PDAR				SKPbc	SKPbc	15 26 15.9	-0.1
	comp=Z,2.2nm,0.9s,baz=336,slow=2.0,SNR=5.5						
PDAR				PKPPKP		15 40 49.8	
	comp=Z,0.4nm,0.6s,baz=190,slow=1.6,SNR=4.3						
IKP	In-Ko-Pah, Jac	133.20	53	P	PKiKP	15 22 54.0	+2.1
	baz=292						
SWSC	Sam W. Stewart	133.34	52	P	PKiKP	15 22 53.3	+1.3
	baz=292						
IRM	Iron Mountain	133.38	50	P	PKiKP	15 22 53.6	+1.5
	baz=294						
SCHQ	Schefferville	133.41	355	PKP	PKPdf	15 22 50.0	-0.3
	comp=Z,3.5nm,0.8s,baz=270,slow=15,SNR=2.0						
ULM	Lac du Bonnet	134.02	21	PKP	PKPdf	15 22 51.5	0.0
	comp=Z,10.0nm,0.9s,baz=327,slow=4.1,SNR=8.3						
ULM				SKPbc	SKPbc	15 26 17.4	-1.6
	comp=Z,9.2nm,0.9s,baz=330,slow=4.8,SNR=8.0						
GLA	Glamis	134.05	52	P	PKiKP	15 22 55.3	+1.8
	baz=293						
RSSD	Black Hills	135.17	32	P	PKiKP	15 22 55.0	-0.7
	baz=314						
O20A	White River Ci	135.27	39	P	PKiKP	15 22 56.2	+0.2
	baz=306						
WUAZ	Wupatki	135.58	47	P	PKiKP	15 22 57.8	+1.0
	baz=298						
PLTB	Pedras Altas	136.10	204	eP	PKPdf	15 22 53.8	-2.3
MVCO	Mesa Verde	136.74	43	P	PKiKP	15 22 59.7	+0.6
	baz=303						
RFA	San Rafael	136.92	185	eP	PKiKP	15 22 59.0	-0.3
CNLB	Canela	137.01	209	eP	PKPdf	15 22 56.6	-1.3
ISCO	Idaho Springs	137.09	38	P	PKiKP	15 22 59.2	-0.6
	baz=308						
CPSB	Cacapava Do Su	137.23	205	eP	PKPdf	15 22 57.5	-0.7
SDCO	Great Sand Dun	138.40	40	P	PKiKP	15 23 02.5	-0.1
	baz=307						
NBRF	Rio Formoso -	138.86	247	eP	PKPdf	15 22 59.7	-1.9
ECSD	EROS Data Cent	139.07	27	P	PKPdf	15 22 59.9	-1.2
	baz=323						
ASAL	Salagasta	139.11	185	eP	PKPdf	15 23 01.1	-0.6
ANMO	Albuquerque	139.34	44	PKP	PKPdf	15 23 02.4	+0.2
	comp=Z,4.7nm,0.9s,baz=261,slow=3.7,SNR=5.5						
ANMO	Albuquerque	139.34	44	P	PKiKP	15 23 05.8	+1.4
	baz=303						
T25A	Trinidad	139.46	40	P	PKiKP	15 23 03.8	-0.8
	baz=307						
121A	Cookes Peak, D	139.62	48	P	PKiKP	15 23 05.7	+0.6
	baz=299						
SPB	Sao Paulo	139.74	217	IAMs_20	IAMs_20	16 16 01.5	
	comp=Z,828nm,20.0s						
CBKS	Cedar Bluff	141.17	34	IAMs_20	IAMs_20	16 38 47.8	
	comp=Z,916nm,20.0s						
MNTX	Cornudas Mount	141.81	48	P	PKPdf	15 23 06.7	+0.3
	baz=301						
CPUP	Villa Florida	142.40	203	PKP	PKPdf	15 23 07.3	-0.3
	comp=Z,4.3nm,0.9s,baz=166,slow=3.9,SNR=4.1						
CPUP	Villa Florida	142.40	203	eP	PKPdf	15 23 06.8	-0.9
VCA	Vinchina	142.87	187	eP	PKPdf	15 23 08.5	-0.2
MOQ	Mont Orford	143.18	359	PKPdf	PKPbc	15 23 04.9	-0.5
SADO	Sadowa	143.30	8	PKP	PKPdf	15 23 09.4	+0.7
	comp=Z,12nm,0.9s,baz=274,slow=5.1,SNR=4.6						
NBCL	Cascavel-CE	143.42	251	eP	PKPbc	15 23 08.0	+1.1
JANB	Januaria	143.44	231	eP	PKPdf	15 23 09.0	-0.8
PCMB	Pacaembu	143.50	215	eP	PKPdf	15 23 10.5	+0.8
LONY	Lake Ozonia	143.84	2	P	PKPbc	15 23 07.4	+0.1
	baz=357						
NBPB	Pedra_Branca-C	144.15	248	eP	PKPdf	15 23 10.2	-0.9
LBNH	Lisbon	144.24	359	PKIKP	PKPdf	15 23 09.5	-0.9
LBNH	Lisbon	144.24	359	PKPdf	PKPdf	15 23 09.5	-0.9
LBNH	Lisbon	144.24	359	P	PKPbc	15 23 09.0	+0.5
	baz=1.7						
TX32	Lajitas Array	144.26	50	PKPdf	PKPdf	15 23 11.2	+0.2
TXAR	Lajitas Array	144.26	50	PKP	PKPdf	15 23 10.6	-0.3
	comp=Z,7.6nm,0.7s,baz=258,slow=1.5,SNR=68						
TXAR	Lajitas Array	144.26	50	PKIKP	PKPdf	15 23 11.0	0.0
TXAR	Lajitas Array	144.26	50	PKPdf	PKPdf	15 23 11.0	0.0
T35A	Sooner Cattle	144.31	34	PKPdf	PKPdf	15 23 10.0	-0.7
IPMB	Ipameri, GO	144.33	223	eP	PKPbc	15 23 10.2	+0.6
AHML	Horco Molle	144.34	191	eP	PKPdf	15 23 11.0	-0.1
AHML				eP	PKPbc	15 23 11.6	+2.2
NCB	Newcomb	144.50	2	PKPdf	PKPbc	15 23 09.6	+0.2
HDIL	Hopedale	144.71	22	PKPdf	PKPbc	15 23 10.4	+0.3
HDIL	Hopedale	144.71	22	P	PKPbc	15 23 10.4	+0.3
	baz=331						
QUOK	Quay	144.74	35	PKPdf	PKPdf	15 23 11.4	-0.1
AAM	Ann Arbor	144.85	14	P	PKPdf	15 23 11.1	-0.3
	baz=341						
MEDO	Medina	144.97	7	PKPdf	PKPab	15 23 09.8	-1.1
L48A	N Adams	144.99	15	PKPdf	PKPbc	15 23 11.3	+0.3
FSA	Cafayete	145.11	191	eP	PKPdf	15 23 14.2	+1.5
ABTX	Abilene, Hawle	145.31	42	P	PKPdf	15 23 14.1	+1.5
	baz=309						
P43A	Skaggs, Pawnee	145.42	23	PKPdf	PKPab	15 23 13.2	+0.6
TUL1	Leonard	145.44	34	IAMs_20	IAMs_20	16 38 48.8	
	comp=Z,818nm,21.0s						
TUL1	Leonard	145.44	34	P	PKPab	15 23 13.5	+0.7
	baz=317						
SDBA	SAO DESIDERIO	145.47	234	eP	PKPbc	15 23 11.4	-1.9
SFIN	Lafayette	145.64	20	P	PKPab	15 23 13.7	+0.3
	baz=335						
WVNY	West Valley, N	145.69	8	PKPdf	PKPab	15 23 13.5	-0.1
ERPA	Erie	145.77	10	P	PKPab	15 23 14.0	+0.2
	baz=348						
BDFB	Brasilia	145.80	226	PKPbc	PKPbc	15 23 14.6	+0.2
	comp=Z,9.9nm,0.7s,baz=146,slow=4.7,SNR=14						
HRV	Adam Dziewonsk	145.97	358	P	PKPab	15 23 15.2	+0.7
	baz=2.5						
L61B	Northampton	146.04	360	P	PKPab	15 23 15.5	+0.7
	baz=0.5						
CCM	Cathedral Cave	146.04	27	PKP2	PKPab	15 23 14.8	-0.1
CCM	Cathedral Cave	146.04	27	PKPdf	PKPab	15 23 14.8	-0.1
CCM	Cathedral Cave	146.04	27	P	PKPab	15 23 14.9	-0.1
	baz=326						
L56A	Greenwood	146.09	6	PKPdf	PKPbc	15 23 14.6	+0.1
NBPS	Pedro II - PI	146.30	249	eP	PKPdf	15 23 13.0	-1.9
M53A	WI Miller and	146.31	11	PKPbc	PKPbc	15 23 15.2	+0.1
M53A	WI Miller and	146.31	11	P	PKPbc	15 23 15.0	-0.2
	baz=346						
SLA	San Lorenzo	146.37	192	eP	PKiKP	15 23 19.3	+0.2
M54A	Oil Creek Stat	146.42	9	P	PKPbc	15 23 15.7	+0.2
	baz=348						
JCT	Junction City	146.48	45	P	PKPab	15 23 16.6	-0.4
	baz=306						
U40A	Yellville	146.66	30	P	PKPdf	15 23 15.5	+0.7
	baz=322						
AZAP	Zapla	146.76	193	eP	PKPab	15 23 18.1	-0.3
AQDB	Aquidauana	146.80	210	eP	PKPdf	15 23 14.9	-0.5
ASTB	Santa Barbara	146.88	194	eP	PKiKP	15 23 20.2	0.0
N54A	Moraine State	146.90	10	P	PKPab	15 23 17.6	-0.6
	baz=347						
ACSO	Alum Creek Sta	146.97	14	P	PKPbc	15 23 17.3	+0.2
	baz=342						
W39A	Magazine	147.07	33	P	PKPbc	15 23 17.9	+0.4
	baz=320						
WHTX	Lake Whitney,	147.14	41	P	PKPab	15 23 19.3	-0.1
	baz=311						
P49A	Miami Univ. Ec	147.16	17	PKPbc	PKPbc	15 23 17.8	+0.2
P49A	Miami Univ. Ec	147.16	17	P	PKPbc	15 23 17.6	0.0
	baz=338						
O52A	Adamsville	147.35	13	PKPbc	PKPbc	15 23 18.4	+0.2
O53A	New Philadelph	147.35	12	P	PKPbc	15 23 18.5	+0.3
	baz=345						
N59A	State Game Lan	147.46	4	P	PKPbc	15 23 18.9	+0.5
	baz=355						
PAL	Palisades	147.47	2	P	PKPbc	15 23 18.4	0.0
	baz=358						
SSPA	Standing Stone	147.53	7	P	PKPbc	15 23 18.9	+0.2
	baz=351						
MIAR	Mount Ida	147.67	33	P	PKiKP	15 23 20.3	-1.0
	baz=319						
P52A	Corning	147.74	14	P	PKPbc	15 23 19.1	-0.2
	baz=343						
O56A	Blue Knob Stat	147.80	8	P	PKPbc	15 23 19.9	+0.4
	baz=350						
HJA	Humahuaca	147.82	193	eP	PKPab	15 23 23.7	+1.0
WCI	Wyandotte Cave	147.85	20	P	PKPbc	15 23 19.9	+0.4
	baz=335						
W41B	Gary Mavity, V	147.89	31	P	PKPbc	15 23 19.5	-0.3
	baz=322						
833A	Chaparral WMA,	147.99	48	P	PKPbc	15 23 19.6	-0.7
	baz=304						
X40A	Basin Creek Fa	148.11	32	P	PKiKP	15 23 22.1	-0.1
	baz=320						
MCWV	Mont Chateau	148.19	10	P	PKPbc	15 23 21.1	+0.6
	baz=347						
PEXB	Peixe	148.30	230	eP	PKPdf	15 23 17.0	-1.1
ARAG	Araguaiana, MT	148.34	221	eP	PKPdf	15 23 17.0	-1.0
PB15	IPOC Station P	148.47	186	eP	PKPab	15 23 24.4	-0.7
P60A	Greenville	148.57	4	P	PKPbc	15 23 21.4	0.0
	baz=355						
PP1B	Ponte de Pedra	148.74	214	eP	PKPdf	15 23 17.6	-1.1
LVC	Limon Verde	149.00	187	PKPbc	PKPbc	15 23 23.7	+0.2
	comp=Z,21nm,0.8s,baz=173,slow=0.6,SNR=16						
LVC	Limon Verde	149.00	187	eP	PKPdf	15 23 18.0	-1.5
LVC	Limon Verde	149.00	187	IAMs_20	IAMs_20	16 22 38.6	
	comp=Z,873nm,21.0s						
NATX	Nacogdoches	149.06	38	P	PKiKP	15 23 24.6	+0.4
	baz=315						
Z41A	Richland Creek	149.06	34	P	PKiKP	15 23 24.0	-0.1
	baz=319						
WVT	Waverly	149.12	24	P	PKPbc	15 23 23.5	+0.5
	baz=330						
ROSB	Rosrio	149.33	250	eP	PKPdf	15 23 18.3	-1.5
PB03	IPOC Station P	149.64	186	eP	PKiKP	15 23 26.8	+0.9
SMTB	Santa Maria do	149.64	236	eP	PKPdf	15 23 19.5	-0.8
TZTN	Tazewell	150.27	18	P	PKiKP	15 23 26.2	-0.4
	baz=338						
BLA	Blacksburg	150.44	12	P	PKPbc	15 23 26.4	+0.2
	baz=345						
SALV	Santo Antonio	150.56	215	eP	PKPdf	15 23 20.4	-1.2
PB01	IPOC Station P	150.61	186	IAMs_20	IAMs_20	16 24 34.4	
	comp=Z,761nm,20.0s						
SNDB	Serra Nova Dou	150.61	227	eP	PKPdf	15 23 21.1	-0.7
V52A	Sevierville	150.90	18	PKPbc	PKiKP	15 23 28.2	+0.3
TKL	Tuckaleechee C	151.02	19	PKPbc	PKPbc	15 23 27.7	+0.2
	comp=Z,43nm,0.8s,baz=143,slow=5.4,SNR=29						
KMSC	Kings Mountain	152.20	15	P	PKiKP	15 23 30.6	0.0
	baz=342						
Y52A	Lilburn	152.56	21	PKPbc	PKiKP	15 23 31.9	+0.5
PTLB	Pontes e Lacer	152.77	210	eP	PKPdf	15 23 24.2	-0.8
PRPB	Parauapebas	152.95	238	eP	PKPdf	15 23 25.1	-0.2
PB12	IPOC Station P	153.10	185	IAMs_20	IAMs_20	16 27 16.4	
	comp=Z,763nm,20.0s						
GOGA	Godfrey	153.17	20	P	PKiKP	15 23 33.1	+0.4
	baz=336						
SIV	San Ignacio	153.18	206	PKP	PKPdf	15 23 25.0	-0.6
	comp=Z,3.5nm,0.8s,baz=143,slow=3.8,SNR=10						
SIV				PKPbc	pPKPdf	15 23 34.5	+0.9
	comp=Z,13nm,1.2s,baz=129,slow=3.7,SNR=9.5						
TMAB	Tom-Au,PA,Br	153.19	248	eP	PKPdf	15 23 24.8	-0.9
CLDB	Colider	154.51	222	eP	PKPdf	15 23 28.8	+1.3
PDRB	Porto dos Gac	154.55	219	eP	PKPdf	15 23 27.9	+0.3
LPAZ	La Paz	155.09	191	PKP	PKPdf	15 23 28.9	-0.1
	comp=Z,0.9nm,0.7s,baz=7.4,slow=2.2,SNR=5.4						
LPAZ				PKPab	PKPab	15 23 53.6	+0.3
	comp=Z,13nm,1.1s,baz=154,slow=3.0,SNR=9.3						
LPAZ	La Paz	155.09	191	eP	PKPab	15 23 43.4	-10
LPAZ	La Paz	155.09	191	eP	PKPdf	15 23 28.5	-0.5
VILB	Vilhena	155.43	211	eP	PKPdf	15 23 28.5	-0.3
NPGB	Novo Progresso	156.87	229	eP	PKPdf	15 23 31.0	+0.3
MCPB	Macapa, AP	157.62	248	eP	PKPdf	15 23 31.6	-0.1
NNA	Nana	159.39	169	IAMs_20	IAMs_20	16 32 51.7	
	comp=Z,698nm,20.0s						
ETMB	Extrema	160.81	200	eP	PKPdf	15 23 36.6	+1.2
MACA	Manacapuru-AM	163.39	227	eP	PKPdf	15 23 39.0	+1.1
CZSB	Cruzeiro do Su	164.02	180	eP	PKPdf	15 23 40.0	+1.4
BOAV	Boa Vista	166.46	245	eP	PKPdf	15 23 42.4	+1.8
TBTG	Tabatinga, AM	167.22	193	eP	PKPdf	15 23 54.6	+13
TBTG	Tabatinga, AM	167.22	193	eP	PKPdf	15 23 42.4	+1.3
GTBY	Guantanamo Bay	168.27	11	eP	PKPdf	15 23 39.3	-2.4
OTAV	Otavalo	170.15	145	eP	PKPdf	15 23 43.2	-0.5
OTAV	Otavalo	170.15	145	eP	PKPdf	15 23 45.5	+1.9
TUMC	Tumaco	171.21	137	eP	PKPdf	15 23 28.8	-15
FLOC	Florencia	172.68	157	eP	PKPdf	15 23 44.1	-0.3
SOTA	Rioblanco	172.73	148	eP	PKPdf	15 23 44.1	-0.9
POPC	Popayan, Colom	173.03	146	eP	PKPdf	15 23 41.2	-3.5
YOTC	Yotoco, Valle	174.38	140	eP	PKPdf	15 23 43.2	-2.0
PRAC	Prado	174.93	155	eP	PKPdf	15 23 38.4	-6.8
ORTC	Ortega, Tolima	174.94	151	eP	PKPdf	15 23 41.2	-4.0
PLMC	San Jos del P	175.10	134	eP	PKPdf	15 23 41.2	-4.0
PTGC	Puerto Gaitan,	175.82	189	eP	PKPdf	15 23 44.1	-1.3
CBOC	Ciudad Bolivar	175.94	127	eP	PKPdf	15 23 38.4	-7.2
CHIC	Chingaza	176.18	165⇑	eP	PKPdf	15 23 38.4	-7.6
ELOV	Elorza	176.48	248	eP	PKPdf	15 23 46.0	+0.5
NORC	Norcasia	176.53	143	eP	PKPdf	15 23 42.2	-3.4
SPBC	San Pablo de B	177.02	154	eP	PKPdf	15 23 45.1	-0.7
PTBC	PUERTO BERRIO,	177.54	137	eP	PKPdf	15 23 43.2	-2.6
ZARC	Zaragoza, Cauc	177.76	112	eP	PKPdf	15 23 44.1	-1.6
SDV	Santo Domingo	177.83	284	eP	PKPdf	15 23 47.1	+1.1
SOCV	Socops	178.11	268	eP	PKPdf	15 23 39.3	-6.4
BRRC	Barranca, Sant	178.44	143	eP	PKPdf	15 23 43.2	-2.6
LL6C	La Loma 6 Bece	178.54	20	eP	PKPdf	15 23 44.0	-1.7

*IDC **19** 15:10:16.3±1.4, 60°.61S×31°.78W, h0^{km}, mb4.2/2, mb1 4.2/2, mb1mx3.7/31, mbtmp4.1/2, MS4.0/1, Ms1 4.0/1, ms1mx3.2/27 Error ellipse: s-maj=90.2km s-min=53.7km az=112.0*

ISC 19 15:10:17.5±1.3, **60°.7S**±0°.2×**31°.7W**±0°.4, **h10^{km}, n14, σ1^{s}.16**/8, **Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA3	Neumayer Olymp	13.73	149	P	Pn	15 13 31.4	-0.6
VNA1	Neumayer--Stat	13.74	146	P	Pn	15 13 33.7	+1.7
VNA2	Neumayer--Watz	14.14	146	P	Pn	15 13 37.4	0.0
	baz=308,slow=16						
SNAA	Sanae	15.78	146	P	P	15 14 02.0	-1.5

LBTB	Lobatse	52.64	74	LR	LR	15 38 03.4	
	comp=Z,152nm,19.7s,baz=180,slow=32						
H10S2	ASCENSION HYDR	53.22	21	T	T	16 17 12.5	
	baz=30,slow=74,SNR=21						
H10S3	ASCENSION HYDR	53.22	21	T	T	16 17 11.5	
	baz=190,slow=74,SNR=32						
H10N1	ASCENSION HYDR	54.34	21	T	T	16 18 33.0	
	baz=190,slow=75,SNR=26						
H10N3	ASCENSION HYDR	54.34	21	T	T	16 18 35.3	
	baz=190,slow=75,SNR=71						
H10N2	ASCENSION HYDR	54.35	21	T	T	16 18 34.0	
	baz=190,slow=75,SNR=58						
TORD	Torodi Ar. Bea	78.31	33	P	P	15 22 17.6	0.0
	1.6nm,0.6s,baz=190,slow=5.6,SNR=8.3						
ASAR	Alice Springs	95.09	167	P	P	15 23 41.6	+1.0
	0.5nm,0.8s,baz=187,slow=4.5,SNR=1.9						
YKA	Yellowknife Ar	137.99	316	PKP	PKPdf	15 29 40.0	-0.8
	0.6nm,0.8s,baz=128,slow=2.5,SNR=5.8						
ILAR	Eielson Array	151.21	306	PKPbc	PKPbc	15 30 09.4	+0.1
	1.3nm,0.7s,baz=101,slow=1.8,SNR=15						

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*EAF **19** 15:13:22.2±6.1, 19°.69S×30°.41E, h10^{km}, MD3.9*

BUL 19 15:13:21.7±1.7**, 19°.71S×30°.58E, h10^{km}, MD3.4, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLWY	Bulawayo	1.90	257	i P	Pb	15 13 55.9	-0.7
BLWY	Bulawayo	1.90	257	i P	Pn	15 13 50.4	-3.9
CHIPN	CHIPINGE	2.02	105	i P	Pg	15 14 01.1	+0.7
CHIPN	CHIPINGE	2.02	105	i P	Pg	15 14 08.8	+8.4
MATP	Matopo	2.08	250	i P	Pn	15 13 56.1	-0.7
MATP				i Sg	Sb	15 14 25.6	0.0
MATP	Matopo	2.08	250	i P	Pn	15 13 51.3	-5.5
MATP				i Sg	Sg	15 14 31.8	+3.2
KRI	Karoi	3.01	342	i P	Pn	15 14 00.1	-9.4
KRI	Karoi	3.01	342	i P	Pn	15 13 59.3	-10
MOPA	Mopani	3.86	169	i P	Pb	15 14 26.2	-3.8
MOPA	Mopani	3.86	169	i P	Pn	15 14 18.9	-2.4

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*MEX **19** 15:15:46.6±1.1, 15°.79N×93°.69W, h93^{km}±8^{km}, MD4.5*

*IDC **19** 15:15:46.2±2.3, 16°.10N×93°.38W, h75^{km}±28^{km}, mb3.6/5, mb1 4.0/7, mb1mx3.4/53, mbtmp4.0/7, Error ellipse: s-maj=99.3km s-min=18.5km az=36.0*

ISC 19 15:15:45.3±0.8**, 15°.73N**±0°.05×**93°.75W**±0°.03**, h86^{km}**±8^{km}**, n28, σ1^{s}.71**/47**, mb4.0**/5**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.52	93	i P	Pn	15 15 59.7	0.0
PCIG				i S	Sn	15 16 11.3	+0.8
TGIG		1.20	30	i P	Pn	15 16 07.3	+0.1
TGIG				eS	Sn	15 16 22.0	-1.7
TGBT	Tuxtla Gutierr	1.22	31	eP	Pn	15 16 07.2	-0.1
TGBT				eS	Sn	15 16 22.6	-1.3
PATR	El Naranjo	1.59	112	eP	Pn	15 16 11.8	-0.5
PATR				eS	Sn	15 16 32.1	-0.4
PAVE	Pavencul	1.61	109	eP	Pn	15 16 12.6	0.0
PAVE				eS	Sn	15 16 32.6	-0.5
UXUV	UXUV	1.62	347	eP	Pn	15 16 13.7	+1.3
UXUV				eS	Sn	15 16 32.8	-0.2
CCIG	Comitan	1.65	70	eP	Pn	15 16 12.9	0.0
CCIG				eS	Sn	15 16 31.0	-2.8
THIG		1.65	120	eP	Pn	15 16 12.6	-0.2
THIG				eS	Sn	15 16 33.2	-0.5
CMIG	Matias Romero	1.73	321	P	Pn	15 16 14.6	+0.7
	110nm,0.3s,baz=138,slow=13,SNR=748						
CMIG				S	Sn	15 16 36.1	+0.5
	82nm,0.3s,baz=148,slow=13,SNR=7.3						
CMIG	Matias Romero	1.73	321	eP	Pn	15 16 14.4	+0.5
CMIG				eS	Sn	15 16 35.3	-0.3
HUIG	Huatulco	2.27	271	eP	Pn	15 16 19.6	-1.3
HUIG				eS	Sn	15 16 44.0	-4.2
NEUV	Arroyo Zacate	2.78	315	eP	Pn	15 16 27.8	0.0
NEUV				eS	Sn	15 16 54.2	-6.3
VHO	Vista Hermosa	3.16	295	eP	Pn	15 16 34.7	+1.6
VHO				eS	Sn	15 17 08.8	-1.1
PEIG	Puerto Escondi	3.28	275	i P	Pn	15 16 33.5	-1.0
PEIG				i S	Sn	15 17 10.9	-1.6
YOIG	Yosondua	3.81	288	eP	Pn	15 16 43.5	+1.5
YOIG				eS	Sn	15 17 22.6	-3.3
TOIG	Toxpalan	3.95	307	eP	Pn	15 16 45.3	+1.6
TOIG				eS	Sn	15 17 29.3	+0.3
SCIG	Sabancuy	4.04	37	eP	Pn	15 16 44.4	-0.5
SCIG				eS	Sn	15 17 27.7	-3.5
PNIG	Pinotepa	4.26	279	eP	Pn	15 16 47.5	-0.3
PNIG				i S	Sn	15 17 37.4	+1.0
JAUV	Jalcomulco	4.64	322	i P	Pn	15 16 52.7	-0.4
JAUV				i S	Sn	15 17 43.6	-2.2
JTS	Las Juntas de	10.14	121	P	Pn	15 18 08.0	-0.1
TXAR	Lajitas Array	16.33	328	P	Pn	15 19 30.9	+1.4
	0.1nm,0.3s,baz=143,slow=14,SNR=8.9						
NVAR	Mina Array Bea	31.27	321	P	P	15 21 59.8	+2.4
	1.3nm,0.7s,baz=126,slow=9.0,SNR=9.4						
ITTB	Itaituba	42.60	115	eP	P	15 23 33.8	+0.4
MALB	Monte Alegre	42.76	111	eP	P	15 23 34.1	-0.6
YKA	Yellowknife Ar	48.97	347	P	P	15 24 22.5	-0.3
	1.2nm,0.5s,baz=152,slow=7.3,SNR=12						
INK	Inuvik	58.31	344	P	P	15 25 30.9	0.0
	1.2nm,0.8s,baz=128,slow=7.4,SNR=1.8						
ILAR	Eielson Array	60.59	337	P	P	15 25 47.0	+0.3
	0.4nm,0.9s,baz=131,slow=7.0,SNR=2.2						
ARCES	ARCESS Array B	85.03	18	P	P	15 28 10.3	-0.8
	2.9nm,0.8s,baz=304,slow=5.3,SNR=7.7						

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*MOS **19** 15:24:21.9±1.2, 41°.62N×79°.58E, h6^{km}, mb4.6/1, Error ellipse: s-maj=7.3km s-min=4.7km az=119.4*

*IDC **19** 15:24:21.6±1.0, 41°.49N×79°.41E, h0^{km}, mb3.7/13, mb1 3.8/19, mb1mx3.5/75, mbtmp3.7/19, ML3.5/6, MS4.6/1, Ms1 4.6/1, ms1mx3.1/59, Error ellipse: s-maj=18.9km s-min=15.3km az=5.0*

*BJI **19** 15:24:23.7±0.0, 41°.86N×79°.28E, h7^{km}, mb4.3/4, ML4.0/9*

*KRNET **19** 15:24:26.0±0.1, 41°.85N×79°.31E, h20^{km}, mb4.2*

*SOME **19** 15:24:26.1, 41°.88N×79°.22E, h10^{km}, MS3.5*

*NNC **19** 15:24:26.6±1.6, 41°.84N×79°.28E, h0^{km}, mb4.7, mpv4.5, Error ellipse: s-maj=11.6km s-min=6.3km az=152.0*

ISC 19 15:24:25.8±1.1**, 41°.80N**±0°.03×**79°.40E**±0°.03**, h17^{km}**±7^{km}**, n156, σ2^{s}.22**/227**, mb3.8**/14**, 34C-22D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.01	313	PG	Pg	15 24 43.9	-1.5
PRZ	Przheval'sk	1.01	313	⇑iP	Pg	15 24 43.9	-1.5
	baz=14						
PRZ				⇑iS	Sg	15 24 56.8	-1.9
	baz=14						
SHLS	Shalkode	1.36	2	eP	Pg	15 24 52.2	+0.2
	575nm,0.3s						
SHLS				eS	Sg	15 25 11.1	+1.3
	5μm,0.7s						
SHLS	Shalkode	1.36	2	i Pb	Pg	15 24 52.1	+0.2
	baz=14						
SHLS				ePg	Pb	15 24 53.0	+2.1
	baz=14						
SHLS				i Sn	Sn	15 25 07.1	-0.6
	baz=14						
SHLS	Shalkode	1.36	2	i PN	Pg	15 24 52.1	+0.1
SHLS				e		15 24 52.9	
SHLS	Shalkode	1.36	2	P	Pg	15 24 52.2	+0.2
	575nm,0.3s						
SHLS				S	Sg	15 25 11.1	+1.3
	5μm,0.7s						
SHLS	Shalkode	1.36	2	eP	Pg	15 24 52.2	+0.2
	baz=18						
SHLS				eS	Sg	15 25 11.1	+1.3
	baz=18						
UZB	Uzynbulak	1.38	348	eP	Pn	15 24 50.6	+0.2
	308nm,0.4s						
UZB				eS	Sn	15 25 08.3	0.0
	1μm,0.4s						
UZB	Uzynbulak	1.38	348	⇓iPn	Pn	15 24 50.5	+0.2
	baz=347						
UZB				eSn	Sn	15 25 08.0	-0.2
	baz=347						
UZB				i Sn	Sn	15 25 08.1	-0.2
	baz=347						
UZB	Uzynbulak	1.38	348	⇓iPN	Pn	15 24 50.5	+0.2
UZB				e		15 25 08.0	
UZB	Uzynbulak	1.38	348	P	Pn	15 24 50.5	+0.2
	360nm,0.4s						
UZB				S	Sn	15 25 08.3	0.0
	1μm,0.4s						
UZB	Uzynbulak	1.38	348	eP	Pn	15 24 50.6	+0.2
	baz=51						
UZB				eS	Sn	15 25 08.3	0.0
	baz=51						
SATY	Saty	1.46	330	⇓eP	Pn	15 24 51.7	+0.2
	212nm,0.3s						
SATY				eS	Sn	15 25 10.1	-0.2
	3μm,0.3s						
SATY	Saty	1.46	330	⇓iPn	Pn	15 24 51.7	+0.2
	baz=329						
SATY	Saty	1.46	330	⇓iPN	Pn	15 24 51.6	+0.2
SATY	Saty	1.46	330	P	Pn	15 24 51.6	+0.2
	212nm,0.3s						
SATY				S	Sn	15 25 10.1	-0.2
	3μm,0.3s						
SATY	Saty	1.46	330	⇓eP	Pn	15 24 51.7	+0.2
	baz=31						
SATY				⇓eS	Sn	15 25 10.1	-0.2
	baz=31						
PDGK	Podgornoye	1.53	2	PN	Pb	15 24 53.4	-0.4
PDGK				S	Sg	15 25 17.4	+2.1
PDGK	Podgornoye	1.53	2	P	Pb	15 24 53.4	-0.4
	227nm,0.4s						
PDGK				S	Sn	15 25 13.1	+1.0
	2μm,0.7s						
PDGK	Podgornoye	1.53	2	⇑P	Pb	15 24 53.4	-0.4
	144nm,0.3s						
PDGK				⇑S	Sg	15 25 17.4	+2.1
	3μm,0.6s						
ZHN	Zhinishke	1.54	333	eP	Pn	15 24 53.5	+0.9
	532nm,0.2s						
ZHN				eS	Sn	15 25 13.0	+0.6
	6μm,0.4s						
ZHN	Zhinishke	1.54	333	P	Pn	15 24 53.5	+0.9
	532nm,0.2s						
ZHN				S	Sn	15 25 13.0	+0.6
	6μm,0.4s						
ZHN	Zhinishke	1.54	333	eP	Pn	15 24 53.5	+0.9
	baz=34						
ZHN				eS	Sn	15 25 13.0	+0.6
	baz=34						
ANVS	Anan'yevo	1.62	308	⇓iP	Pn	15 24 54.5	+0.8
	baz=8.0						
ANVS				⇓iS	Sn	15 25 15.7	+1.4
	baz=8.0						
KDJ	Kajisay	1.69	282	i PN	Pb	15 24 55.5	-1.0
KDJ				i S	Sn	15 25 17.4	+1.4
KDJ	Kajisay	1.69	282	⇑iP	Pb	15 24 55.5	-1.0
	baz=81						
KDJ				⇑iS	Sn	15 25 17.4	+1.4
	baz=81						
KTMS	Ketmen	1.79	23	eP	Pg	15 24 58.4	-1.8
	345nm,0.4s						
KTMS				eS	Sb	15 25 21.7	+1.3
	998nm,0.6s						
KTMS	Ketmen	1.79	23	P	Pg	15 24 58.4	-1.8
	345nm,0.4s						
KTMS				S	Sb	15 25 21.7	+1.3
	998nm,0.6s						
KTMS	Ketmen	1.79	23	eP	Pg	15 24 58.4	-1.8
	baz=25						
KTMS				eS	Sb	15 25 21.7	+1.3
	baz=25						
TNSS	Tian-Shan	2.20	305	eP	Pb	15 25 04.3	-1.0
	114nm,0.3s						
TNSS				eS	Sn	15 25 31.9	+3.0
	486nm,0.3s						
TNSS	Tian-Shan	2.20	305	ePg	Pg	15 25 08.0	-0.1
	baz=304						
TNSS	Tian-Shan	2.20	305	Pg	Pb	15 25 04.3	-1.0
	114nm,0.3s						
TNSS				Lg	Lg	15 25 31.9	
	486nm,0.3s						
TNSS	Tian-Shan	2.20	305	eP	Pb	15 25 04.3	-1.0
	baz=5.0						
TNSS				eS	Sn	15 25 31.9	+3.0
	baz=5.0						
MDOK	Medeo	2.21	309	eP	Pb	15 25 04.5	-0.9
	178nm,0.5s						
MDOK				eS	Sn	15 25 32.5	+3.7
	2μm,0.5s						
MDOK	Medeo	2.21	309	ePn	Pn	15 25 02.6	+0.8
	baz=308						
MDOK	Medeo	2.21	309	ePN	Pn	15 25 02.6	+0.8
MDOK	Medeo	2.21	309	⇑Pn	Pb	15 25 04.2	-1.2
	116nm,0.5s						
MDOK				⇓Sn	Sn	15 25 32.5	+3.7
	1μm,0.5s						
MDOK	Medeo	2.21	309	Pg	Pb	15 25 04.5	-0.9
	178nm,0.5s						
MDOK				Lg	Lg	15 25 32.5	
	2μm,0.5s						
MDOK	Medeo	2.21	309	eP	Pb	15 25 04.5	-0.9
	baz=9.0						
MDOK				eS	Sn	15 25 32.5	+3.7
	baz=9.0						
KNDC	Almaty	2.29	309	PN	Pb	15 25 06.1	-0.6
KNDC				S	Sn	15 25 35.9	+5.2
KNDC	Almaty	2.29	309	⇑Pn	Pb	15 25 06.1	-0.6
	238nm,0.6s						
KNDC				⇓Sn	Sn	15 25 36.0	+5.2
	2μm,0.7s						
ULHL	Ulahol	2.40	282	P	Pb	15 25 07.1	-1.4
	SNR=40						
ULHL	Ulahol	2.40	282	ePN	Pb	15 25 06.8	-1.8
ULHL				i S	Sn	15 25 36.5	+3.0
ULHL	Ulahol	2.40	282	⇑eP	Pb	15 25 06.8	-1.8
	baz=81						
ULHL				⇑iS	Sn	15 25 36.5	+3.0
	baz=81						
MTBS	Maitube	2.57	302	eP	Pb	15 25 10.8	-0.6
	104nm,0.3s						
MTBS				eS	Sn	15 25 42.9	+5.4
	623nm,0.5s						
MTBS	Maitube	2.57	302	Pg	Pb	15 25 10.8	-0.6
	104nm,0.3s						
MTBS				Lg	Lg	15 25 42.9	
	623nm,0.5s						
BOOM	Boomskoye usch	2.66	286	i PN	Pn	15 25 10.0	+1.9
BOOM				i S	Sn	15 25 42.9	+2.9
BOOM	Boomskoye usch	2.66	286	⇑iP	Pn	15 25 10.0	+1.9
	baz=86						
BOOM				⇑iS	Sn	15 25 42.9	+2.9
	baz=86						
ARXS	Arharly	2.67	335	eP	Pb	15 25 12.2	-1.1
	110nm,0.5s						
ARXS				eS	Sn	15 25 45.1	+5.0
	1μm,0.6s						
ARXS	Arharly	2.67	335	ePN	Pn	15 25 10.3	+2.2
ARXS	Arharly	2.67	335	Pg	Pb	15 25 12.2	-1.1
	110nm,0.5s						
ARXS				Lg	Lg	15 25 45.1	
	1μm,0.6s						
KTBS	Karatobe	2.77	315	eP	Pb	15 25 13.5	-1.3
	71nm,0.3s						
KTBS				eS	Sn	15 25 47.7	+5.2
	2μm,0.7s						
KTBS	Karatobe	2.77	315	Pg	Pb	15 25 13.5	-1.3
	71nm,0.3s						
KTBS				Lg	Lg	15 25 47.7	
	2μm,0.7s						
KST	Kastek	2.83	297	eP	Pb	15 25 14.6	-1.3
	158nm,0.4s						
KST				eS	Sn	15 25 49.9	+5.8
	779nm,0.9s						
KST	Kastek	2.83	297	Pg	Pb	15 25 14.6	-1.3
	158nm,0.4s						
KST				Lg	Lg	15 25 49.9	
	779nm,0.9s						
TKM2	Tokmak 2	3.03	293	P	Pn	15 25 15.7	+2.5
	SNR=51						
TKM2	Tokmak 2	3.03	293	ePN	Pn	15 25 15.4	+2.2
TKM2	Tokmak 2	3.03	293	⇓Pn	Pn	15 25 15.3	+2.1
	48nm,0.4s						
TKM2				⇑Lg	Lg	15 26 00.9	
	229nm,0.5s						
TKM2	Tokmak 2	3.03	293	⇑eP	Pn	15 25 15.4	+2.2
	baz=92						
TKM2				⇑iS	Sn	15 25 51.7	+2.5
	baz=92						
DGS	Degeres	3.04	299	eP	Pb	15 25 17.5	-2.1
	54nm,0.6s						
DGS				eS	Sn	15 25 54.7	+5.4
	376nm,0.8s						
DGS	Degeres	3.04	299	Pg	Pb	15 25 17.5	-2.1
	54nm,0.6s						
DGS				Lg	Lg	15 25 54.7	
	376nm,0.8s						
KUU	Kurty	3.07	314	eP	Pb	15 25 20.3	+0.3
	55nm,0.4s						
KUU				eS	Sb	15 25 58.7	+1.5
	1μm,0.8s						
KUU	Kurty	3.07	314	ePn	Pn	15 25 14.9	+1.3
	baz=314						
KUU				ePb	Pb	15 25 21.2	+1.2
	baz=314						
KUU	Kurty	3.07	314	ePN	Pn	15 25 14.8	+1.3
KUU				e		15 25 21.1	
KUU	Kurty	3.07	314	Pg	Pb	15 25 20.3	+0.3
	55nm,0.4s						
KUU				Lg	Lg	15 25 58.7	
	1μm,0.8s						
TDK	Taldyqorghan	3.28	348	eP	Pb	15 25 23.9	+0.3
	283nm,0.4s						
TDK				eS	Sb	15 26 05.4	+2.2
	1μm,0.7s						
TDK	Taldyqorghan	3.28	348	ePn	Pn	15 25 17.6	+1.1
	baz=347						
TDK				ePb	Pb	15 25 24.6	+1.1
	baz=347						
TDK				ePg	Pg	15 25 27.4	-1.3
	baz=347						
TDK	Taldyqorghan	3.28	348	ePN	Pn	15 25 17.5	+1.1
TDK				e		15 25 27.3	
TDK	Taldyqorghan	3.28	348	Pg	Pb	15 25 23.9	+0.3
	283nm,0.4s						
TDK				Lg	Lg	15 26 05.4	
	1μm,0.7s						
KRBS	Karabastau	3.33	306	eP	Pb	15 25 24.1	-0.4
	64nm,0.3s						
KRBS				eS	Sb	15 26 05.5	+0.7
	365nm,0.6s						
KRBS	Karabastau	3.33	306	Pg	Pb	15 25 24.1	-0.4
	64nm,0.3s						
KRBS				Lg	Lg	15 26 05.5	
	365nm,0.6s						
KBK	Karagaybulak	3.42	286	P	Pn	15 25 21.0	+2.6
	SNR=19						
KBK	Karagaybulak	3.42	286	i PN	Pn	15 25 20.9	+2.5
KBK				i S	Sn	15 26 01.1	+2.5
KBK	Karagaybulak	3.42	286	⇑iP	Pn	15 25 20.9	+2.5
	baz=85						
KBK				⇑iS	Sn	15 26 01.1	+2.5
	baz=85						
KSH	Kashi	3.46	230	Pg	Pg	15 25 32.8	+0.7
KSH				Sn	Sg	15 26 17.6	+0.6
KSH				smax	smax		
	comp=N,230nm,1.0s						
KSH				smax	smax		
	comp=E,280nm,0.8s						
KAPS	Kapalarasan	3.49	360	eP	Pb	15 25 27.4	+0.4
	152nm,0.5s						
KAPS				eS	Sb	15 26 11.8	+2.6
	146nm,0.4s						
KAPS	Kapalarasan	3.49	360	Pg	Pb	15 25 27.4	+0.4
	152nm,0.5s						
KAPS				Lg	Lg	15 26 11.8	
	146nm,0.4s						
CHMS	Chumysh	3.65	291	P	Pb	15 25 26.7	-3.1
	SNR=11						
CHMS	Chumysh	3.65	291	ePN	Pn	15 25 23.9	+2.5
CHMS				i S	Sn	15 26 06.2	+2.1
CHMS	Chumysh	3.65	291	⇓iP	Pn	15 25 23.9	+2.5
	baz=90						
CHMS				⇓iS	Sn	15 26 06.2	+2.1
	baz=90						
UCH	Uchtor	3.67	278	P	Pb	15 25 31.2	+0.8
	SNR=15						
UCH	Uchtor	3.67	278	i PN	Pn	15 25 24.6	+2.5
UCH				i S	Sn	15 26 07.6	+2.5
UCH	Uchtor	3.67	278	⇓iP	Pn	15 25 24.6	+2.5
	baz=78						
UCH				⇓iS	Sn	15 26 07.6	+2.5
	baz=78						
FRU1	Bishkek	3.68	288	i PN	Pn	15 25 24.7	+2.8
FRU1				i S	Sn	15 26 07.6	+2.7
FRU1	Bishkek	3.68	288	⇑iP	Pn	15 25 24.7	+2.8
	baz=87						
FRU1				⇑iS	Sn	15 26 07.6	+2.7
	baz=87						
AAK	Ala-Archa	3.74	285	Pn	Pn	15 25 25.0	+2.2
	2.8nm,0.3s,baz=113,slow=11,SNR=26						
AAK				Sn	Sb	15 26 17.5	+1.0
	11nm,0.3s,baz=237,slow=19,SNR=5.4						
AAK	Ala-Archa	3.74	285	P	Pn	15 25 25.7	+2.9
	SNR=18						
AAK	Ala-Archa	3.74	285	i PN	Pn	15 25 25.6	+2.8
AAK	Ala-Archa	3.74	285	⇑Pn	Pn	15 25 25.4	+2.6
	9.1nm,0.5s						
AAK				Pg	Pg	15 25 36.1	-1.3
	64nm,0.8s						
AAK				⇓Lg	Lg	15 26 21.9	
	133nm,0.6s						
AAK	Ala-Archa	3.74	285	⇑iP	Pn	15 25 25.2	+2.4
	baz=84						
AAK				⇑iS	Sn	15 26 08.6	+2.1
	baz=84						
ARLS	Aral	3.79	273	i PN	Pn	15 25 26.1	+2.5
ARLS				i S	Sn	15 26 10.3	+2.4
ARLS	Aral	3.79	273	⇑iP	Pn	15 25 26.1	+2.5
	baz=72						
ARLS				⇑iS	Sn	15 26 10.3	+2.4
	baz=72						
SGDS	Sogindy	3.89	297	ePn	Pn	15 25 25.2	+0.4
	baz=296						
SGDS				ePg	Pg	15 25 38.6	-1.6
	baz=296						
SGDS	Sogindy	3.89	297	ePN	Pn	15 25 26.6	+1.8
SGDS	Sogindy	3.89	297	Pg	Pb	15 25 33.5	-0.4
	33nm,0.7s						
SGDS				Lg	Lg	15 26 21.6	
	84nm,0.3s						
USP	Ospenovka	3.91	294	P	Pn	15 25 27.4	+2.3
	SNR=7.8						
USP	Ospenovka	3.91	294	ePN	Pn	15 25 27.3	+2.3
USP				i S	Sn	15 26 12.2	+1.7
USP	Ospenovka	3.91	294	⇑iP	Pn	15 25 27.3	+2.3
	baz=93						
USP				⇑iS	Sn	15 26 12.2	+1.7
	baz=93						
EKS2	Erkin-Say	4.26	284	P	Pb	15 25 43.2	+2.9
	SNR=24						
EKS2	Erkin-Say	4.26	284	ePN	Pn	15 25 32.7	+2.7
EKS2	Erkin-Say	4.26	284	⇑iP	Pn	15 25 32.7	+2.7
	baz=83						
EKS2				⇑iS	Sn	15 26 21.1	+1.7
	baz=83						
AML	Almayashu	4.27	276	P	Pb	15 25 43.1	+2.6
	SNR=30						
AML	Almayashu	4.27	276	i PN	Pn	15 25 33.0	+2.7
AML				i S	Sn	15 26 22.0	+2.1
AML	Almayashu	4.27	276	⇑iP	Pn	15 25 33.0	+2.7
	baz=76						
AML				⇑iS	Sn	15 26 22.0	+2.1
	baz=76						
MRKS	Merke	4.68	284	eP	Pb	15 25 49.9	+2.5
	37nm,0.6s						
MRKS				eS	Sb	15 26 49.9	+6.5
	72nm,0.6s						
BTLS	Baital	5.07	312	eP	Pb	15 25 56.0	+2.0
	17nm,0.8s						
BTLS				eS	Sb	15 27 00.5	+5.8
	81nm,0.8s						
BTLS	Baital	5.07	312	ePN	Pb	15 25 53.2	-0.8
MAKZ	Makanchi	5.34	19	⇓Pn	Pn	15 25 47.3	+2.6
	17nm,0.9s						
MAKZ				⇑Sn	Sn	15 26 48.5	+2.7
	23nm,0.6s						
MAKZ				⇓Lg	Lg	15 27 15.5	
	24nm,0.6s						
MK31	Makanchi Array	5.41	22	i PN	Pn	15 25 48.2	+2.6
MK31	Makanchi Array	5.41	22	Pn	Pn	15 25 48.3	+2.6
	4.4nm,0.3s,baz=203,slow=12,SNR=313						
MK31				⇑Sn	Sn	15 26 51.5	+4.1
	62nm,0.8s,baz=208,slow=26,SNR=3.6						
MK31				⇓Lg	Lg	15 27 18.0	
	53nm,0.7s						
MKAR	Makanchi Array	5.41	22	Pn	Pn	15 25 48.6	+3.0
	7.0nm,0.3s,baz=214,slow=16,SNR=261						
MKAR				Sn	Sn	15 26 51.5	+4.1
	9.4nm,0.3s,baz=205,slow=23,SNR=12						
MKAR	Makanchi Array	5.41	22	ePN	Pn	15 25 48.3	+2.7

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MKAR                                    pmax     pmax
        comp=Z,7.0nm,0.3s
DZA     Taraz               6.08 283  ePg      Pg      15 26 17.9  -4.2
        baz=283
WMQ     Urumqi              6.43  69  ePn      Pn      15 26 03.0  +3.3
WMQ                                    Sn      Sn      15 27 17.9  +5.3
WMQ                                    Sg      Sg      15 27 52.1  +0.1
WMQ                                    smax    smax
        comp=Z,98nm,0.9s
WMQ                                    smax    smax
        comp=Z,86nm,1.3s
KK09    Karatay Array       6.71 284  ⇑Pg      Pg      15 26 29.6  -4.7
        comp=Z,8.2nm,0.6s
KK09                                  ⇓Lg      Lg      15 27 58.6
        comp=Z,24nm,0.6s
ZSN     Zaisan              6.86  33  ePn      Pn      15 26 06.1  +0.4
        baz=33
ZSN     Zaisan              6.86  33  ePN      Pn      15 26 06.0  +0.4
ZSN                                    pmax    pmax
        comp=Z,5.0nm,0.6s
IUG     Iuzhnay             6.99 276  eP       Pg      15 26 34.1  -5.5
        comp=Z,196nm,0.9s
IUG                                   eS       Sg      15 28 05.7  -4.4
        comp=Z,65nm,0.9s
IUG     Iuzhnay             6.99 276  ePg      Pg      15 26 35.8  -3.8
        baz=276
IUG     Iuzhnay             6.99 276  eP*      Pg      15 26 35.7  -3.8
BRLS    Borolday            7.18 283  ePg      Pg      15 26 40.4  -2.8
        baz=281
KURBB   Kurchatov Arra      8.85 356   Pn      Pn      15 26 35.5  +2.7
        comp=Z,0.1nm,0.3s,baz=163,slow=12,SNR=5.2
KURBB                                  Lg      Lg      15 29 00.3
        comp=Z,0.4nm,0.3s,baz=177,slow=27,SNR=4.6
KURBB   Kurchatov Arra      8.85 356  ⇑Lg      Lg      15 29 07.8
        comp=Z,121nm,0.8s
KURK    Kurchatov           8.94 357  i P      Pn      15 26 35.8  +1.8
KURK    Kurchatov           8.94 357  ⇓Lg      Lg      15 29 11.0
        comp=Z,84nm,1.0s
BRZS    Berezniki           9.43 333  ePn      Pn      15 26 41.4  +0.6
        baz=332
BRZS    Berezniki           9.43 333  eP       Pn      15 26 41.3  +0.6
DGZ     Jazzator, Alta      9.69  33  i P      Pn      15 26 46.5  +2.1
CEP     Cherat              9.92 219   P       Pn      15 26 51.6  +3.9
ZALV    Zalesovo Beam      12.68  15   Pn      Pn      15 27 27.2  +2.0
        comp=Z,0.8nm,0.3s,baz=204,slow=12,SNR=8.9
ZALV                                   Sn      Sn      15 29 40.5  -5.5
        comp=Z,0.7nm,0.3s,baz=200,slow=20,SNR=8.4
BVAR    Borovoye Array     12.77 335   Pn      Pn      15 27 26.4   0.0
        comp=Z,0.3nm,0.3s,baz=164,slow=19,SNR=5.7
BVAR                                   Sn      Sn      15 29 42.6  -5.4
        comp=Z,0.3nm,0.3s,baz=153,slow=23,SNR=3.2
BVAR                                   Lg      Lg      15 31 06.2
        comp=Z,0.6nm,0.3s,baz=144,slow=25,SNR=5.7
BRVK    Borovoye           12.83 334  i P      Pn      15 27 27.2   0.0
AKTO    Aktyubinsk         17.11 308   P       Pn      15 28 24.9  +0.9
        comp=Z,0.2nm,0.3s,baz=104,slow=9.7,SNR=3.8
ARU     Arti               19.89 324   P       Pn      15 28 57.5  -0.2
        comp=Z,0.6nm,0.3s,baz=117,slow=16,SNR=3.0
SONM    Songino Array      20.02  63   P       Pn      15 28 59.2  -0.4
        comp=Z,2.1nm,0.7s,baz=266,slow=11,SNR=19
SONM    Songino Array      20.02  63  eP       Pn      15 28 59.3  -0.2
SONM                                   pmax    pmax
        comp=Z,2.0nm,0.7s
ULN     Ulaanbaatar        20.46  63  i P      Pn      15 29 04.4  -0.4
ULN                                    pmax    pmax
        comp=Z,6.0nm,1.4s
KIV     Kislovodsk         26.85 287  eP       P       15 30 04.6  -0.8
KIV                                    pmax    pmax
        comp=Z,6.0nm,1.1s
CMAR    Chiang Mai Arr     28.62 138   P       P       15 30 17.9  -3.5
        comp=Z,0.3nm,0.3s,baz=328,slow=9.9,SNR=1.1
OBN     Obninsk            30.85 310  eP       P       15 30 41.7  +1.0
OBN                                    pmax    pmax
        comp=Z,44nm,2.0s
BRTR    Keskin Array B     34.41 282   P       P       15 31 11.9  -0.4
        comp=Z,0.8nm,0.8s,baz=109,slow=7.6,SNR=6.3
YAK     Yakutsk            35.82  38  i P      P       15 31 25.5  +1.6
YAK                                    pmax    pmax
        comp=Z,15nm,1.9s
FINES   FINESS Array B     37.16 320   P       P       15 31 35.2  -0.2
        comp=Z,3.2nm,0.9s,baz=94,slow=5.7,SNR=5.7
KSRS    Korea Array        37.23  80   P       P       15 31 35.0  -1.3
        comp=Z,0.2nm,0.5s,baz=294,slow=7.6,SNR=1.4
KSRS    Korea Array        37.23  80   P       P       15 31 35.0  -1.3
YASH    Mount Yoash        37.76 266   P       P       15 31 49.5  +8.6
MLR     Muntele Rosu       38.27 294   P       P       15 31 44.8  -0.2
        comp=Z,0.9nm,0.4s,baz=299,slow=21,SNR=2.1
ARCES   ARCESS Array B     39.05 333   P       P       15 31 51.3  +0.1
        comp=Z,3.0nm,0.9s,baz=110,slow=9.7,SNR=1.9
HFS     Hagfors            43.21 318   P       P       15 32 25.3  -0.2
        comp=Z,4.0nm,0.9s,baz=104,slow=10,SNR=5.8
NB2     NORSAR Subarra     44.33 320   P       P       15 32 34.1  -0.5
        comp=Z,0.6nm,0.6s,baz=84,slow=8.6
NOA     NORSAR Array B     44.33 320   P       P       15 32 34.5  -0.1
        comp=Z,0.7nm,0.7s,baz=84,slow=8.1,SNR=3.5
KEST    Kesra              53.59 288   LR      LR      16 02 02.3
        comp=Z,532nm,20.5s,baz=18,slow=42
ILAR    Eielson Array      67.76  20   P       P       15 35 21.7  -0.3
        comp=Z,0.3nm,0.7s,baz=316,slow=5.0,SNR=2.6
TORD    Torodi Ar. Bea     72.23 272   P       P       15 35 49.6  -0.6
        comp=Z,0.2nm,0.3s,baz=59,slow=3.7,SNR=2.1
YKA     Yellowknife Ar     75.45   7   P       P       15 36 08.0  -0.3
        comp=Z,0.4nm,0.6s,baz=343,slow=5.8,SNR=5.9
YKA     Yellowknife Ar     75.45   7  eP       P       15 36 08.1  -0.2
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BJI ***19*** *15:27:02.5±0.0, 5.°81S×151.°95E, h45^{km}, mB5.6/8, mb4.7/32, Ms4.9/4, Ms7 4.8/5*

NEIC ***19*** *15:27:04.5±2.0, 5.°64S±0.°05×152.°3E±0.°1, h42^{km}±7^{km}, mb4.9/32, Error ellipse: s-maj=17.6km s-min=7.0km az=102.0*

IDC ***19*** *15:27:05.9±2.8, 5.°48S×151.°96E, h54^{km}±25^{km}, mb4.2/22, mb1 4.4/24, mb1mx4.2/43, mbtmp4.5/24, ML2.8/1, MS4.3/8, Ms1 4.3/8, ms1mx4.0/32, Error ellipse: s-maj=16.3km s-min=14.9km az=123.0*

DJA ***19*** *15:27:05.1±1.1, 5°S±11°×15°3E±1°6, h126^{km}±10^{km}, M5.0/9, mB4.9/3, mb4.7/9, MLv5.3/2, Mw(mB)4.2/3*

GCMT ***19*** *15:27:05.5±0.2, 5.°75S±0.°02×152.°16E±0.°02, h28^{km}, MW5.1/78, Moment Tensor Solution. s47,c63; s78,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.52±.24; $M_{\theta\theta}$-4.26±.14; $M_{\phi\phi}$-0.25±.15; $M_{r\theta}$3.20±.22; $M_{\theta\phi}$-1.09±.11; $M_{\phi r}$1.00±.27; Best double couple: $M_0$5.63500×10^{16} NP1:ϕ_s258.00000°, δ27.00000°, λ93.00000°. NP2: ϕ_s74.00000°, δ63.00000°, λ88.00000°. Principal axes: T 5.6280, Plg72.0000°, Azm340.0000°; N 0.0150, Plg1.0000°, Azm75.0000°; P -5.6410, Plg18.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 15:27:05.0±0.4, **5.°55S**±0.°06×**152.°11E**±0.°07, **h45^{km}, n126, σ1.^{s}46**/125, **mb4.7**/53, **MS4.5**/9, **1C, New Britain region**

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Code    Station Name        Δ°   AZ°    Phase ID             Time     Res
                                      Op       ISC      h  m  s      ISC
RABL    Rabaul              1.35   2   Pn      Pn      15 27 27.1  -0.4
RABL    Rabaul              1.35   2   P       Pn      15 27 28.6  +1.1
MANU    Manus Island        5.87 306   Pn      Pn      15 28 32.9  +3.4
PMG     Port Moresby        6.22 232   P       Pn      15 28 35.1  +0.8
        14nm,0.3s,baz=43,slow=9.5,SNR=37
PMG                                    S       Sn      15 29 44.7  +0.5
        22nm,0.3s,baz=140,slow=19,SNR=8.1
PMG                                    LR      LR      15 30 15.9
        comp=Z,551nm,19.4s,baz=337,slow=31
PMG     Port Moresby        6.22 232   Pn      Pn      15 28 34.8  +0.5
PMG     Port Moresby        6.22 232   P       Pn      15 28 34.7  +0.3
PMG     Port Moresby        6.22 232   P       Pn      15 28 34.9  +0.5
HNR     Honiara             8.68 117   P       Pn      15 29 10.8  +2.8
        7.0nm,0.3s,baz=220,slow=5.3,SNR=2.3
COEN    Coen               12.13 226   Pn      Pn      15 29 53.9  -1.5
COEN    Coen               12.13 226   P       Pn      15 29 55.9  +0.6
PATS    Pohnpei            13.78  27   Pn      Pn      15 30 18.1  +0.4
PATS    Pohnpei            13.78  27   P       Pn      15 30 19.0  +1.2
CTAO    Charters Tower     15.53 201   P       P       15 30 43.8  -1.0
QIS     Mount Isa          19.23 218   P       Pn      15 31 27.1  +0.2
EIDS    Eidsvold           19.73 183           P       15 31 29.7  -1.3
GUMO    Guam               20.33 339   LR      LR      15 40 01.8
        comp=Z,284nm,18.2s,baz=200,slow=38
KDU     Kakadu             20.63 249   P       Pn      15 31 41.9  -1.6
SIJI    Sorong             21.32 282   P       P       15 31 46.6  -1.7
        3.5nm,0.3s,baz=317,slow=24,SNR=5.5
SWI     Sorong             21.32 282   P       P       15 31 53.7  +5.4
DZM     Mont Dzumac        21.50 141   P       P       15 31 52.7  +2.5
        6.2nm,0.8s,baz=14,slow=22,SNR=2.0
DZM     Mont Dzumac        21.50 141   P       P       15 31 48.2  -2.0
MTN     Manton Dam         21.92 249   P       P       15 31 56.0  +1.3
MTN                                    IAmb    IAmb    15 32 01.5
        comp=Z,60nm,1.1s
MTN     Manton Dam         21.92 249   P       P       15 31 56.3  +1.5
DRS     Darwin Rock St     22.02 250   P       P       15 31 57.3  +1.5
QLP     Quilpie            22.23 199   P       P       15 31 58.9  +1.0
WB0     Warramunga Arr     22.29 229   P       P       15 31 58.2  -0.5
WB0                                    IAmb    IAmb    15 32 06.6
        comp=Z,73nm,1.2s
WR0     Warramunga Arr     22.29 228   P       P       15 31 58.6  -0.1
WR0                                    IAmb    IAmb    15 32 03.2
        comp=Z,58nm,1.3s
WRAB    Tennant Creek      22.42 229   P       P       15 31 59.3  -0.8
WRAB                                   IAmb    IAmb    15 32 18.8
        comp=Z,26nm,0.7s
WRAB    Tennant Creek      22.42 229   P       P       15 31 59.1  -1.0
WB2     Warramunga Arr     22.43 229   P       P       15 31 59.4  -0.8
WB2                                    IAmb    IAmb    15 32 20.4
        comp=Z,27nm,0.8s
WRA     Warramunga Arr     22.43 229   P       P       15 31 59.3  -1.0
        comp=Z,11nm,0.7s,baz=53,slow=9.9,SNR=32
WRA                                    S       S       15 36 00.1  -3.8
        comp=Z,17nm,1.2s,baz=49,slow=20,SNR=9.1
WRA                                    LR      LR      15 42 08.6
        comp=Z,991nm,18.1s,baz=240,slow=40
WRA     Warramunga Arr     22.43 229   P       P       15 31 59.0  -1.3
INKA    Innaminka          24.57 205   P       P       15 32 21.2  +0.4
KNRA    Kununurra          25.02 244   P       P       15 32 24.6  -0.5
KNRA    Kununurra          25.02 244   P       P       15 32 26.1  +1.0
AS31    Alice Springs      25.13 222   P       P       15 32 25.7  -0.3
ASAR    Alice Springs      25.13 222   P       P       15 32 25.5  -0.5
        comp=Z,38nm,0.9s,baz=56,slow=9.3,SNR=122
ASAR                                   LR      LR      15 43 52.0
        comp=Z,1μm,18.1s,baz=17,slow=40
CMSA    Cobar Meteorol     26.54 192   P       P       15 32 38.9  +0.2
OOD     Oodnadatta         27.07 213   P       P       15 32 45.1  +1.6
SOEI    Soe                27.90 260   P       P       15 32 52.7  +1.5
STKA    Stephens Creek     27.98 199   P       P       15 32 51.2  -0.3
        comp=Z,5.2nm,0.9s,baz=33,slow=12,SNR=7.5
STKA                                   LR      LR      15 43 48.9
        comp=Z,811nm,19.2s,baz=11,slow=36
STKA    Stephens Creek     27.98 199   P       P       15 32 50.9  -0.7
LCRK    Leigh Creek        28.01 206   P       P       15 32 52.5  +0.7
BATI    Baumata            28.54 259   P       P       15 32 55.5  -1.3
        comp=Z,24nm,0.6s,baz=348,slow=14,SNR=4.3
BATI                                   LR      LR      15 46 47.3
        comp=Z,1μm,19.5s,baz=66,slow=42
FITZ    Fitzroy Crossi     28.70 242   P       P       15 32 56.9  -1.2
        comp=Z,4.8nm,0.4s,baz=69,slow=14,SNR=3.3
MULG    Mulgathing         29.90 213   P       P       15 33 07.9  -0.8
WRKA    Warakurna          29.95 227   P       P       15 33 08.0  -1.2
ARPS    Mount Arapiles     32.47 195   P       P       15 33 31.7  +0.6
        comp=Z,20nm,0.7s
FORT    Forrest            33.77 219   P       P       15 33 41.0  -1.6
FORT    Forrest            33.77 219   P       P       15 33 42.4  -0.3
        comp=Z,42nm,0.8s
MBWA    Marble Bar         35.00 241   P       P       15 33 55.0  +1.6
        comp=Z,20nm,1.1s
PSA00   Pilbara Seismi     35.06 240   P       P       15 33 54.0  +0.1
PSA00                                  IAmb    IAmb    15 34 18.7
        comp=Z,22nm,1.4s
JAGI    Jajag, Banyuwa     37.77 263   P       P       15 34 21.0  +3.8
        comp=Z,51nm,2.1s
MEEK    Meekatharra        38.20 233   P       P       15 34 20.3  -0.4
        comp=Z,31nm,1.0s
MORW    Morawa             41.34 231   P       P       15 34 45.8  -0.9
MORW                                   IAmb    IAmb    15 35 08.4
        comp=Z,33nm,1.4s
MORW    Morawa             41.34 231   P       P       15 34 48.4  +1.7
MJAR    Matsushiro Arr     43.85 344   P       P       15 35 06.6  -0.3
        comp=Z,1.0nm,0.7s,baz=158,slow=7.9,SNR=1.7
MAT     Matsushiro         43.85 344   P       P       15 35 08.4  +1.5
KSRS    Korea Array        48.36 334   P       P       15 35 41.1  -1.2
        comp=Z,1.1nm,0.9s,baz=158,slow=7.3,SNR=4.2
NJ2     Nanjing            49.00 322  eP       P       15 35 49.8  +2.4
NJ2                                    pmax    pmax
        comp=Z,14nm,0.7s
KMI     Kunming            56.84 305  ⇑P       P       15 36 47.3  +1.7
KMI                                    pP      sP      15 37 02.3  -1.3
KMI                                    pmax    pmax
        comp=Z,11nm,1.3s
CMAR    Chiang Mai Arr     57.58 296   P       P       15 36 49.9  -0.8
        comp=Z,4.7nm,1.1s,baz=118,slow=4.5,SNR=14
PETK    Petropavlovsk-     58.63   4   P       P       15 36 56.6  -0.8
        comp=Z,1.3nm,0.5s,baz=168,slow=7.7,SNR=9.5
PETK                                   LR      LR      15 58 24.0
        comp=Z,354nm,19.9s,baz=252,slow=32
HHC     Hu-ho-hao-te       59.26 325  eP       P       15 37 05.8  +3.7
HHC                                    pmax    pmax
        comp=Z,9.0nm,1.2s
HHC                                    LR      LR
        comp=Z,400nm,17.5s
HHC                                    LR      LR
        comp=Z,400nm,14.6s
HHC                                    LR      LR
        comp=Z,690nm,17.2s
LZH     Lanzhou            61.29 316  eP       P       15 37 16.0  -0.2
LZH                                    pmax    pmax
        comp=Z,16nm,1.3s
GTA     Gaotai             65.74 318  eP       P       15 37 41.3  -4.2
GTA                                    pP      pP      15 37 56.5  -2.1
GTA                                    sP      sP      15 38 03.8  +0.1
GTA                                    pmax    pmax
        comp=Z,4.0nm,0.7s
SONM    Songino Array      66.59 328   P       P       15 37 50.5  -0.3
        comp=Z,3.6nm,0.5s,baz=146,slow=4.7,SNR=34
SONM    Songino Array      66.59 328   P       P       15 37 50.6  -0.3
JIRN    Jiri               71.58 301  eP       P       15 38 21.4  -1.1
GUN     Gumba              71.92 302  eP       P       15 38 23.6  -0.9
        comp=Z,11nm,0.4s
VNDA    Vanda              72.11 178   P       P       15 38 24.8  +0.6
        comp=Z,1.0nm,0.9s,baz=219,slow=22,SNR=1.9
PKI     Pulchoki           72.22 301  eP       P       15 38 25.3  -1.0
PKIN    Phulchoki          72.24 301  eP       P       15 38 25.0  -1.3
        comp=Z,6.1nm,0.6s
KKN     Kakani             72.39 301  eP       P       15 38 26.3  -0.9
GKN     Gorkha             73.00 301  eP       P       15 38 29.6  -1.1
DANN    Dangsing           73.84 301  eP       P       15 38 34.2  -1.6
PYUN    Piuthan            74.43 301  eP       P       15 38 37.2  -1.9
        comp=Z,9.5nm,0.8s
WMQ     Urumqi             75.83 318  eP       P       15 38 46.4  -0.3
WMQ                                    pmax    pmax
        comp=Z,13nm,1.1s
WMQ                                    LR      LR
        comp=Z,190nm,29.2s
WMQ                                    LR      LR
        comp=Z,310nm,29.0s
WMQ                                    LR      LR
        comp=Z,3μm,29.1s
HYB     Hyderabad          76.09 289  i P      P       15 38 46.0  -2.6
CNPM    China Poot         78.69  26   P       P       15 39 02.6  +0.3
L19K    White Mountain     78.70  22   P       P       15 39 03.6  +1.2
L19K                                   IAmb    IAmb    15 39 05.8
        comp=Z,22nm,1.1s
M19K    Big River Lodg     78.72  23   P       P       15 39 03.2  +0.8
M19K                                   IAmb    IAmb    15 39 05.6
        comp=Z,12nm,0.9s
MK31    Makanchi Array     80.44 319   P       P       15 39 11.1  -1.0
MKAR    Makanchi Array     80.44 319   P       P       15 39 11.6  -0.5
        comp=Z,1.6nm,0.6s,baz=100,slow=6.3,SNR=15
CAST    Castle Rocks       80.45  22   P       P       15 39 11.8   0.0
CAST                                   IAmb    IAmb    15 39 13.3
        comp=Z,7.5nm,0.8s
ZALV    Zalesovo Beam      81.39 327   P       P       15 39 15.3  -1.7
        comp=Z,2.5nm,0.5s,baz=108,slow=5.1,SNR=10
RND     Reindeer           81.68  23   P       P       15 39 18.1  -0.3
RND                                    IAmb    IAmb    15 39 40.7
        comp=Z,24nm,1.2s
MCK     McKinley           81.82  23   P       P       15 39 17.4  -1.7
MLY     Manley             81.83  21   P       P       15 39 19.5  +0.4
MLY                                    IAmb    IAmb    15 39 20.8
        comp=Z,12nm,0.8s
CCB     Clear Creek Bu     82.70  22   P       P       15 39 22.8  -0.9
CCB                                    IAmb    IAmb    15 39 24.2
        comp=Z,5.3nm,0.7s
GLB     Gilahina Butte     82.83  26   P       P       15 39 24.1  -0.4
KSH     Kashi              82.90 311   P       P       15 39 27.0  +1.6
KSH                                    pmax    pmax
        comp=Z,7.0nm,1.1s
IL31                       83.11  22   P       P       15 39 24.0  -1.6
IL31                                   IAmb    IAmb    15 39 26.6
        comp=Z,6.0nm,0.7s
ILAR    Eielson Array      83.11  22   P       P       15 39 24.8  -0.9
        comp=Z,4.7nm,0.6s,baz=246,slow=5.3,SNR=68
ILAR    Eielson Array      83.11  22   P       P       15 39 24.7  -1.1
CTGM    Chitina Glacie     83.72  27   P       P       15 39 29.4  +0.2
KURK    Kurchatov          83.93 322   P       P       15 39 29.6  -0.7
KURK                                   IAmb    IAmb    15 39 31.2
        comp=Z,9.0nm,1.1s
TKM2    Tokmak 2           83.95 314   P       P       15 39 31.1  +0.3
        SNR=6.3
KURBB   Kurchatov Arra     83.96 322   P       P       15 39 29.5  -0.9
        comp=Z,2.7nm,0.8s,baz=109,slow=4.0,SNR=14
TOLK    Toolik Lake Re     84.14  18   P       P       15 39 31.8  +0.8
TOLK                                   IAmb    IAmb    15 39 47.3
        comp=Z,5.7nm,0.8s
QSPA    South Pole Qui     84.42 180   P       P       15 39 32.9  +0.2
CHMS    Chumysh            84.57 314   P       P       15 39 33.8   0.0
        SNR=8.0
UCH     Uchtor             84.58 313   P       P       15 39 35.1  +0.8
        SNR=12
MAW     Mawson             84.62 203   LR      LR      16 15 55.0
        comp=Z,253nm,19.1s,baz=68,slow=35
AAK     Ala-Archa          84.68 314   P       P       15 39 34.0  -0.5
        comp=Z,12nm,1.2s,baz=105,slow=3.1,SNR=10
AAK     Ala-Archa          84.68 314   P       P       15 39 34.8  +0.3
        SNR=7.3
USP     Ospenovka          84.81 314   P       P       15 39 34.2  -0.7
        SNR=19
AML     Almayashu          85.15 313   P       P       15 39 37.9  +0.7
        SNR=23
EKS2    Erkin-Say          85.20 314   P       P       15 39 33.1  -3.9
        SNR=12
NRIK    Noril'sk           86.45 341   P       P       15 39 40.5  -1.9
        comp=Z,1.4nm,0.3s,baz=168,slow=5.8,SNR=4.9
WHY     Whitehorse         86.58  28   P       P       15 39 43.1  -0.3
KKAR    Karatay Array      87.64 314   P       P       15 39 49.2  +0.3
INK     Inuvik             89.40  21   P       P       15 39 54.9  -1.6
BVAR    Borovoye Array     89.42 323   P       P       15 39 55.5  -1.6
        comp=Z,1.5nm,0.6s,baz=142,slow=5.1,SNR=10
NVAR    Mina Array Bea     93.09  52   P       P       15 40 15.1  +0.4
        comp=Z,1.4nm,0.8s,baz=257,slow=5.7,SNR=9.0
YKA     Yellowknife Ar     96.41  28   P       P       15 40 29.5  +0.5
        comp=Z,1.6nm,0.8s,baz=271,slow=4.9,SNR=15
YKA     Yellowknife Ar     96.41  28   P       P       15 40 29.1  +0.1
CLL     Collm             123.17 331  ePKPdf   PKPdf   15 45 56.0  -0.8
CKRC    Cesky Krumlov     124.02 328  ePKP     PKiKP   15 46 01.3  +2.5
KHC     Kasperske Hory    124.22 328  ePKP     PKiKP   15 46 00.4  +1.1
GERES   GERESS Array B    124.32 328   PKP     PKPdf   15 45 57.9  -1.4
        comp=Z,1.1nm,0.5s,baz=83,slow=2.3,SNR=14
DAVOX   Davos/Dischmat    127.63 328   PKP     PKiKP   15 46 06.7  +0.4
        comp=Z,1.6nm,0.4s,baz=185,slow=8.3,SNR=6.9
MDT     Midelt            145.26 324   PKPbc   PKPbc   15 46 37.3  -1.0
        comp=Z,6.2nm,0.9s,baz=61,slow=3.6,SNR=11
TORD    Torodi Ar. Bea    149.87 287   PKPbc   PKPbc   15 46 50.9  -0.5
        comp=Z,12nm,1.0s,baz=46,slow=2.3,SNR=42
BDFB    Brasilia          151.01 137   PKPbc   PKPbc   15 46 54.5  +0.2
        comp=Z,1.6nm,0.4s,baz=51,slow=2.2,SNR=2.3
DBIC    Dimbokro          157.07 274   PKPab   PKPab   15 47 26.1  -1.3
        comp=Z,2.4nm,0.7s,baz=55,slow=1.4,SNR=4.3
```

INMG ***19*** *15:47:47.9±2.4, 38.°16N×0.°40W, h24^{km}±7^{km}, ML3.6, Error ellipse: s-maj=9.4km s-min=5.0km az=114.0*

IDC ***19*** *15:47:50.6±1.1, 38.°27N×0.°83W, h0^{km}, mb3.5/4, mb1 3.6/8, mb1mx3.3/47, mbtmp3.4/8, ML3.1/4, Error ellipse: s-maj=22.3km s-min=14.7km az=38.0*

CNRM ***19*** *15:47:51.3, 38.°26N×1.°06W, h0^{km}, ml3.3*

SFS ***19*** *15:47:51.0, 38.°20N×0.°80W, ML3.4, CREVILLENT (ALICANTE)*

MDD ***19*** *15:47:51.7±0.2, 38.°27N×0.°85W, h0^{km}, mbLg3.6/45, Error ellipse: s-maj=2.4km s-min=1.8km az=84.0, PRXIMO*

MDD EMS: III INTENSIDAD MAXIMA.

LDG ***19*** *15:47:53.1±0.1, 38.°23N×0.°84W, h10^{km}, Ml3.3/17, Error ellipse: s-maj=3.5km s-min=2.1km az=135.0*

ISC 19 15:47:50.5±1.1, **38.°32N**±0.°02×**0.°84W**±0.°02, **h6^{km}**±8^{km}, **n120, σ1.^{s}84**/205, **mb3.6**/4, **2C-5D, Spain**

```
Code    Station Name        Δ°   AZ°    Phase ID             Time     Res
                                      Op       ISC      h  m  s      ISC
ETRV    Los Montesinos      0.30 169  ⇓Pg      Pg      15 47 56.3  -0.1
        1μm,0.6s,SNR=18
ETRV                                   Lg      Lg      15 48 00.4
        6μm,0.3s,SNR=7.9
AFON    Font Roja           0.42  34  ⇑Pg      Pb      15 48 00.6  +0.3
        293nm,0.5s,SNR=18
AFON                                   Lg      Lg      15 48 07.3
        8μm,0.7s,SNR=5.0
EMUR    La Murta            0.57 214  ⇓Pg      Pg      15 48 00.7  -0.8
        118nm,0.6s,SNR=18
ETOB    Tobarra             0.65 301  ⇓Pg      Pb      15 48 04.2   0.0
        1μm,0.8s,SNR=18
ETOB                                   Lg      Lg      15 48 13.9
        3μm,0.5s,SNR=5.0
CART    Cartagena           0.74 190   P       Pg      15 48 04.4  -0.3
CART                                   S       Sg      15 48 11.4  -2.9
CART    Cartagena           0.74 190   P       Pg      15 48 04.2  -0.5
EZAR    Zarzadilla de       0.81 237   Pg      Pg      15 48 05.3  -0.7
        170nm,0.6s,SNR=7.9
EZAR                                   Lg      Lg      15 48 16.8
        2μm,0.7s,SNR=7.9
TLOR    Lorca, Murcia       0.94 226   Pg      Pb      15 48 09.1  -0.1
        2μm,0.4s,SNR=7.9
TLOR                                   Lg      Lg      15 48 21.2
        4μm,0.6s,SNR=4.0
ECHE    Chera               1.27 356  ⇓Pg      Pn      15 48 15.0  +0.2
        44nm,0.5s,SNR=18
ECHE                                   Lg      Lg      15 48 33.5
        1μm,0.6s,SNR=7.9
SESP    Santiago Espad      1.36 262  ⇓Pg      Pb      15 48 16.3  -0.1
        151nm,0.5s,SNR=18
SESP                                   Lg      Lg      15 48 35.1
        2μm,0.6s,SNR=7.9
ENIJ    Nijar               1.73 219  ⇑Pn      Pn      15 48 20.2  -0.9
        94nm,0.6s,SNR=18
ENIJ                                   Lg      Lg      15 48 45.6
        332nm,0.8s,SNR=7.9
EQES    Quesada             1.84 254   Pn      Pn      15 48 23.5  +0.8
        22nm,0.4s,SNR=107
EQES                                   Pg      Pg      15 48 25.3  -0.4
        242nm,0.5s,SNR=7.9
EQES                                   Lg      Lg      15 48 49.6
        2μm,0.7s,SNR=5.0
EIBI    Ibiza               1.85  67   Pn      Pn      15 48 23.0  +0.3
        11nm,0.3s,SNR=30
EIBI                                   Lg      Lg      15 48 48.5
        116nm,0.5s,SNR=5.8
GORA    Gorafe              1.93 245   Pn      Pb      15 48 25.3  -0.9
        61nm,0.5s,SNR=7.9
GORA                                   Lg      Lg      15 48 53.2
        1μm,0.7s,SNR=7.9
EMOS    Mosqueruela         2.06   8   Pn      Pn      15 48 26.8  +1.0
        7.7nm,0.5s,SNR=60
EMOS                                   Sn      Sn      15 48 51.9  -0.1
        72nm,0.5s
EMOS                                   Lg      Lg      15 49 00.4
        188nm,0.7s,SNR=7.9
EBER    Berja               2.16 230   Pn      Pn      15 48 26.9  -0.3
        22nm,0.6s,SNR=19
EBER                                   Pg      Pb      15 48 30.8  +0.7
        81nm,0.7s,SNR=7.9
EBER                                   Lg      Lg      15 49 00.6
        332nm,0.8s,SNR=4.8
OKGL    Djebel Kef Gue      2.57 152   Pn      Pn      15 48 32.7   0.0
        2.6nm,0.1s,SNR=7.9
OKGL                                   Sn      Sn      15 49 03.8  -0.4
        96nm,0.4s,SNR=7.9
ELGU    Los Guajares,       2.65 238   Pn      Pn      15 48 34.4  +0.6
        2.1nm,0.4s,SNR=7.9
ELGU                                   Pg      Pg      15 48 41.0  -0.2
        15nm,0.3s,SNR=7.9
ELGU                                   Sn      Sn      15 49 05.9  -0.3
        46nm,0.4s,SNR=7.9
ELGU                                   Lg      Lg      15 49 16.6
        296nm,0.9s,SNR=7.9
ETOR    Torete              2.67 340   Pn      Pn      15 48 36.1  +2.0
        6.3nm,0.3s,SNR=7.9
ETOR                                   Pg      Pg      15 48 42.2  +0.6
        25nm,0.4s,SNR=7.9
ETOR                                   Sn      Sn      15 49 08.1  +1.3
        55nm,0.6s,SNR=7.9
ETOR                                   Lg      Lg      15 49 17.8
        306nm,1.1s,SNR=7.9
UCM     Universidad Co      2.73 318   P       Pn      15 48 35.0  +0.2
UCM                                    S       Sg      15 49 17.4  -0.6
ERTA    Horta de San J      2.79  19   Pn      Pn      15 48 36.9  +1.3
        49nm,0.4s,SNR=94
ERTA                                   Sn      Sn      15 49 11.6  +2.0
        79nm,0.5s,SNR=7.1
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ERTA				Lg	Lg	15 49 22.1	
	112nm,0.6s,SNR=5.0						
ESDC	**Sonseca Array**	**2.79**	**300**	Pn	**Pn**	**15 48 35.3**	**-0.3**
	1.3nm,0.3s,baz=117,slow=13,SNR=85						
ESDC				Pg	**Pg**	**15 48 43.8**	**-0.1**
	11nm,0.3s,baz=118,slow=16,SNR=52						
ESDC				Lg	Lg	15 49 19.3	
	28nm,0.3s,baz=118,slow=29,SNR=3.1						
ESDC	**Sonseca Array**	**2.79**	**300**	Pn	**Pn**	**15 48 35.4**	**-0.3**
	17nm,0.4s,baz=115,slow=13,SNR=7.9						
ESDC				Pg	**Pg**	**15 48 43.1**	**-0.8**
	48nm,0.6s,baz=116,slow=18,SNR=7.9						
ESDC				Sn	**Sn**	**15 49 10.6**	**+1.0**
	71nm,0.9s,baz=112,slow=16,SNR=7.9						
ESDC				Lg	Lg	15 49 20.6	
	398nm,0.6s,baz=118,slow=29,SNR=7.9						
EGOR	**Sierra Gorda,**	**2.86**	**246**	Pn	**Pn**	**15 48 37.7**	**+0.9**
	9.6nm,0.5s,SNR=7.9						
EGOR				Sn	**Sn**	**15 49 11.6**	**0.0**
	31nm,0.5s,SNR=7.9						
EGOR				Lg	Lg	15 49 22.4	
	183nm,0.6s,SNR=7.9						
EADA	**Adamuz**	**2.95**	**268**	Pn	**Pn**	**15 48 36.9**	**-1.0**
	2.1nm,0.2s,SNR=14						
EADA				Pg	**Pg**	**15 48 45.6**	**-1.3**
	8.4nm,0.3s,SNR=7.9						
EADA				Sn	**Sn**	**15 49 11.0**	**-2.6**
	24nm,0.4s,SNR=5.4						
EADA				Lg	Lg	15 49 26.0	
	268nm,0.6s,SNR=5.0						
EALB	**Alboran**	**2.95**	**217**	Pn	**Pn**	**15 48 38.3**	**+0.4**
	1.3nm,0.2s,SNR=7.9						
EALB				Sn	**Sn**	**15 49 09.6**	**-4.1**
	17nm,0.5s,SNR=7.9						
PAB	**San Pablo**	**3.00**	**295**	Pn	**Pn**	**15 48 38.2**	**-0.4**
	11nm,0.3s,SNR=7.9						
PAB				Sn	**Sn**	**15 49 14.1**	**-0.8**
	33nm,0.6s,SNR=7.9						
PAB				Lg	Lg	15 49 26.7	
	354nm,0.7s,SNR=7.9						
PAB	**San Pablo**	**3.00**	**295**	P	**Pn**	**15 48 38.3**	**-0.3**
ETOS	**Mallorca**	**3.19**	**62**	Pn	**Pn**	**15 48 41.7**	**+0.5**
	4.4nm,0.4s,SNR=37						
ETOS				Lg	Lg	15 49 34.5	
	35nm,0.7s,SNR=5.0						
EMAL	**Malaga-Limoner**	**3.25**	**243**	P	**Pn**	**15 48 43.5**	**+1.5**
EMAL				S	**Sb**	**15 49 28.4**	**0.0**
EPOB	**Poblet**	**3.37**	**25**	Pn	**Pn**	**15 48 44.9**	**+1.2**
	7.6nm,0.3s,SNR=40						
EPOB				Sn	**Sn**	**15 49 25.4**	**+1.3**
	28nm,0.5s,SNR=9.1						
EPOB				Lg	Lg	15 49 38.5	
	53nm,0.8s,SNR=5.0						
CHAS	**Isla Isabel II**	**3.38**	**203**	P	**Pn**	**15 48 42.5**	**-1.3**
GUD	**Guadarrama**	**3.46**	**313**	Pn	**Pn**	**15 48 45.1**	**+0.1**
	2.5nm,0.5s,SNR=6.2						
GUD				Pg	**Pg**	**15 48 55.9**	**-0.8**
	9.3nm,0.4s,SNR=7.9						
GUD				Sn	**Sn**	**15 49 26.1**	**-0.3**
	20nm,0.5s,SNR=5.0						
GUD				Lg	Lg	15 49 43.0	
	132nm,0.6s,SNR=5.6						
GOG	**Mont Gurugu**	**3.54**	**210**	P	**Pn**	**15 48 47.0**	**+0.9**
EMIJ	**Mijas**	**3.59**	**242**	Pn	**Pn**	**15 48 46.5**	**-0.1**
	8.5nm,0.6s,SNR=12						
EMIJ				Lg	Lg	15 49 45.0	
	87nm,0.8s,SNR=4.8						
ECAB	**El Cabril**	**3.62**	**268**	Pn	**Pn**	**15 48 46.1**	**-1.0**
	5.8nm,0.3s,SNR=27						
ECAB				Sn	**Sn**	**15 49 28.6**	**-1.4**
	53nm,0.7s,SNR=8.5						
ECAB				Lg	Lg	15 49 45.0	
	143nm,0.6s,SNR=5.9						
TAF	**Taforalt**	**3.72**	**200**	P	**Pn**	**15 48 49.0**	**+0.4**
LIJA	**Lijar**	**3.89**	**250**	P	**Pn**	**15 48 51.2**	**+0.4**
LIJA				S	**Sg**	**15 49 57.0**	**+1.6**
EMIR	**Miracle**	**4.02**	**26**	Pn	**Pn**	**15 48 54.6**	**+1.9**
	17nm,0.4s,SNR=7.9						
EMIR				Sn	**Sn**	**15 49 40.5**	**+0.3**
	13nm,0.4s,SNR=7.9						
JBK	**JBK**	**4.21**	**200**	P	**Pn**	**15 48 56.0**	**+0.5**
ESPR	**Espera**	**4.24**	**252**	Lg	Lg	15 50 09.6	
	54nm,0.6s,SNR=7.9						
CFON	**Fontmartina**	**4.26**	**35**	Pn	**Pn**	**15 48 57.0**	**+1.0**
	3.2nm,0.2s,SNR=7.9						
CFON				Sn	**Sn**	**15 49 44.4**	**-1.6**
	8.3nm,0.3s,SNR=7.9						
MAHO	**Mahon**	**4.27**	**67**	S	**Pn**	**15 48 53.9**	**-2.1**
CSOR	**Sort**	**4.32**	**20**	Pn	**Pn**	**15 48 58.4**	**+1.5**
	12nm,0.4s,SNR=7.9						
CSOR				Sn	**Sn**	**15 49 47.5**	**-0.1**
	6.6nm,0.4s,SNR=7.9						
CSOR				Lg	Lg	15 50 10.9	
	45nm,0.6s,SNR=7.9						
ECHI	**Chisagues Biel**	**4.41**	**10**	Pn	**Pn**	**15 49 00.5**	**+2.4**
	0.5nm,0.2s,SNR=7.9						
ECHI				Sn	**Sn**	**15 49 50.4**	**+0.5**
	13nm,0.6s,SNR=7.9						
ECHI				Lg	Lg	15 50 15.2	
	43nm,0.8s,SNR=7.9						
EPLA	**Plasencia**	**4.43**	**295**	Pn	**Pn**	**15 49 00.0**	**+1.8**
	3.2nm,0.3s,SNR=7.9						
EPLA				Pg	**Pg**	**15 49 15.2**	**-0.1**
	9.8nm,0.4s,SNR=7.9						
EPLA				Lg	Lg	15 50 11.4	
	136nm,0.6s,SNR=7.9						
EARA	**Aranguren**	**4.49**	**353**	Pn	**Pn**	**15 49 01.3**	**+2.3**
	7.0nm,0.3s,SNR=5.6						
EARA				Sn	**Sn**	**15 49 52.0**	**+0.5**
	5.7nm,0.3s,SNR=4.0						
EARA				Lg	Lg	15 50 16.8	
	66nm,0.6s,SNR=6.9						
ETSF	**Etsaut**	**4.58**	**3**	*e*Pn	**Pn**	**15 49 02.0**	**+1.7**
ETSF				*e*Sn	**Sn**	**15 49 51.9**	**-2.0**
ETSF				*e*Sg	**Sg**	**15 50 17.1**	**-0.4**
	72nm,1.0s						
EORO	**Oroz-Betelu**	**4.58**	**356**	Pn	**Pn**	**15 49 02.7**	**+2.3**
	10nm,0.4s,SNR=34						
EORO				Sn	**Sn**	**15 49 52.7**	**-1.3**
	16nm,0.5s,SNR=7.9						
EORO				Lg	Lg	15 50 17.1	
	132nm,0.7s,SNR=5.0						
EMIN	**Mina Concepcio**	**4.64**	**265**	Pn	**Pn**	**15 49 01.3**	**+0.3**
	3.3nm,0.4s,SNR=7.9						
EMIN				Sn	**Sn**	**15 49 52.7**	**-2.5**
	13nm,0.7s,SNR=7.9						
EMIN				Lg	Lg	15 50 16.0	
	104nm,0.7s,SNR=7.9						
CLLI	**Llivia**	**4.68**	**26**	Pn	**Pn**	**15 49 03.6**	**+1.9**
	5.3nm,0.4s,SNR=7.9						
ATE	**Arette**	**4.76**	**1**	Pn	**Pn**	**15 49 04.9**	**+2.1**
	5.6nm,0.3s,SNR=7.9						
ATE				Sn	**Sn**	**15 49 58.2**	**-0.1**
	21nm,0.6s,SNR=7.9						
EPF	**Esparros**	**4.79**	**10**	*e*Pn	**Pn**	**15 49 05.1**	**+1.9**
EPF				*e*Sn	**Sn**	**15 49 57.2**	**-1.9**
	25nm,0.5s						
EPF				*e*Sg	**Sg**	**15 50 23.6**	**-0.7**
	52nm,0.8s						
SJPF	**Ste Jean**	**4.80**	**357**	*e*Pn	**Pn**	**15 49 05.5**	**+2.2**
SJPF				*e*Sn	**Sn**	**15 49 58.0**	**-1.2**
SJPF				*e*Sg	**Sg**	**15 50 23.4**	**-1.1**
EBAD	**Badajoz**	**4.86**	**277**	Pn	**Pn**	**15 49 04.2**	**+0.1**
	2.0nm,0.4s,SNR=7.9						
EBAD				Sn	**Sn**	**15 49 58.6**	**-2.1**
	5.9nm,0.2s,SNR=7.9						
EBAD				Lg	Lg	15 50 23.6	
	97nm,0.5s,SNR=7.9						
PBAR	**Barrancos**	**4.88**	**270**	*e*Sg	**Sg**	**15 50 26.1**	**-1.2**
EALK	**Alkurruntz**	**4.92**	**354**	Pn	**Pn**	**15 49 07.5**	**+2.4**
	28nm,0.5s,SNR=9.0						
EALK				Lg	Lg	15 50 28.1	
	233nm,0.6s,SNR=5.0						
SJAF	**Saint Jean de**	**5.04**	**33**	Pn	**Pn**	**15 49 08.1**	**+1.5**
	5.7nm,0.5s,SNR=7.9						
SJAF				Sn	**Sn**	**15 50 03.3**	**-1.8**
	3.2nm,0.6s,SNR=7.9						
SJAF				Lg	Lg	15 50 38.4	
	13nm,0.8s,SNR=7.9						
PMRV	**Marv??o**	**5.23**	**284**	*e*Pg	**Pg**	**15 49 30.0**	**-0.7**
PMRV				*e*Sn	**Sb**	**15 50 18.3**	**-7.1**
PMRV				*e*Sg	**Sg**	**15 50 40.0**	**+1.5**
PMRV				A	A	15 50 41.6	
	61nm,0.5s						
ELAN	**Lanestosa**	**5.29**	**339**	Pn	**Pn**	**15 49 11.5**	**+1.5**
	3.2nm,0.5s,SNR=5.2						
ELAN				Sn	**Sn**	**15 50 09.8**	**-1.5**
	11nm,0.7s,SNR=7.9						
ELAN				Lg	Lg	15 50 42.9	
	61nm,0.7s,SNR=7.9						
EGRO	**El Granado**	**5.31**	**264**	Pn	**Pn**	**15 49 09.5**	**-0.8**
	3.2nm,0.3s,SNR=7.9						
EGRO				Sn	**Sn**	**15 50 08.6**	**-3.2**
	4.0nm,0.3s,SNR=7.9						
EGRO				Lg	Lg	15 50 41.8	
	71nm,0.7s,SNR=7.9						
PESTR	**Estremoz**	**5.32**	**278**	*e*Pg	**Pg**	**15 49 32.8**	**+0.5**
PESTR				*e*Sn	**Sn**	**15 50 11.6**	**-0.4**
PESTR				*e*Sg	**Sg**	**15 50 41.3**	**+0.1**
PESTR				A	A	15 50 59.4	
	53nm,0.7s						
PCBR	**Castelo Branco**	**5.38**	**288**	*e*Pn	**Pn**	**15 49 11.6**	**+0.3**
PCBR				*e*Sg	**Sg**	**15 50 45.9**	**+2.6**
PVAQ	**Vaqueiros**	**5.52**	**263**	*e*Pn	**Pn**	**15 49 12.3**	**-0.9**
PVAQ				*e*Sn	**Sn**	**15 50 14.8**	**-2.1**
PVAQ				*e*Sg	**Sg**	**15 50 47.2**	**-0.5**
PVAQ				A	A	15 50 57.7	
	34nm,0.5s						
PVAQ	**Vaqueiros**	**5.52**	**263**	P	**Pn**	**15 49 12.0**	**-1.2**
MTLF	**Montolieu**	**5.53**	**24**	*e*Pn	**Pn**	**15 49 14.4**	**+1.1**
MTLF				*e*Sn	**Sn**	**15 50 14.6**	**-2.5**
	20nm,0.7s						
MTLF				*e*Sg	**Sg**	**15 50 46.4**	**-1.5**
	12nm,0.6s						
PBEJ	**Beja**	**5.54**	**269**	*e*Sn	**Sn**	**15 50 15.4**	**-2.2**
PBEJ				*e*Sg	**Sg**	**15 50 47.0**	**-1.5**
MVO	**Moncorvo**	**5.55**	**303**	*e*Pn	**Pn**	**15 49 13.6**	**-0.1**
MVO				*e*Sn	**Sn**	**15 50 15.1**	**-2.8**
MVO				*e*Sg	**Sg**	**15 50 51.9**	**+3.2**
MVO				A	A	15 51 02.5	
	71nm,0.6s						
MVO	**Moncorvo**	**5.55**	**303**	Pn	**Pn**	**15 49 13.5**	**-0.2**
	4.2nm,0.3s,SNR=7.9						
MVO				Sn	**Sn**	**15 50 15.3**	**-2.5**
	21nm,0.6s,SNR=7.9						
MVO				Lg	Lg	15 50 48.6	
	257nm,0.8s,SNR=7.9						
MTE	**Manteigas**	**5.60**	**294**	*e*Pg	**Pg**	**15 49 38.2**	**+0.5**
MTE				*e*Sg	**Sg**	**15 50 51.8**	**+1.6**
MTE				A	A	15 51 02.8	
	77nm,0.7s						
EVO	**Evora**	**5.64**	**274**	P	**Pg**	**15 49 39.3**	**+0.8**
EVO				S	**Sn**	**15 50 17.4**	**-2.5**
EVO	**Evora**	**5.64**	**274**	*e*Sn	**Sn**	**15 50 17.6**	**-2.3**
EVO				*e*Sg	**Sg**	**15 50 54.5**	**+3.0**
EVO				A	A	15 51 04.6	
	36nm,0.6s						
PBRG	**Braganca**	**5.71**	**309**	*e*Pn	**Pn**	**15 49 16.1**	**+0.2**
PBRG				*e*Sn	**Sn**	**15 50 20.6**	**-1.1**
PBRG				*e*Sg	**Sg**	**15 50 53.8**	**0.0**
PBRG				A	A	15 51 07.7	
	36nm,0.6s						
PBDV	**Barranco-do-Ve**	**5.72**	**261**	*e*Pn	**Pn**	**15 49 15.3**	**-0.7**
PBDV				*e*Sn	**Sn**	**15 50 20.1**	**-1.8**
PBDV				*e*Sg	**Sg**	**15 50 53.1**	**-1.0**
PBDV				A	A	15 51 06.6	
	28nm,0.9s						
PCVE	**Castro Verde**	**5.73**	**265**	*e*Pn	**Pn**	**15 49 16.9**	**+0.8**
PCVE				*e*Sn	**Sn**	**15 50 19.8**	**-2.3**
PCVE				*e*Sg	**Sg**	**15 50 53.4**	**-1.0**
PCVE				A	A	15 50 57.6	
	33nm,0.6s						
ECAL	**Calabor**	**5.79**	**311**	Pn	**Pn**	**15 49 16.8**	**-0.1**
	15nm,0.3s,SNR=21						
ECAL				Sn	**Sn**	**15 50 20.6**	**-3.1**
	12nm,0.6s,SNR=7.9						
ECAL				Lg	Lg	15 50 55.2	
	132nm,0.6s,SNR=7.9						
PMTG	**Montargil**	**5.83**	**280**	*e*Sn	**Sn**	**15 50 24.9**	**+0.4**
PMTG				*e*Sg	**Sg**	**15 50 56.5**	**-1.0**
PMTG				A	A	15 51 06.8	
	76nm,0.7s						
MESJ	**Messejana**	**5.84**	**268**	*e*Sn	**Sn**	**15 50 22.2**	**-2.7**
MESJ				*e*Sg	**Sg**	**15 50 56.9**	**-1.2**
MESJ				A	A	15 50 58.5	
	27nm,0.6s						
PVIS	**Viseu**	**5.96**	**296**	*e*Pn	**Pn**	**15 49 19.3**	**+0.1**
PVIS				*e*Sn	**Sn**	**15 50 24.7**	**-3.1**
PVIS				*e*Sg	**Sg**	**15 51 01.4**	**-0.3**
PVIS				A	A	15 51 04.6	
	41nm,0.6s						
EARI	**Arriondas**	**5.98**	**328**	Pn	**Pn**	**15 49 20.4**	**+0.9**
	2.5nm,0.4s,SNR=6.2						
EARI				Sn	**Sn**	**15 50 25.8**	**-2.5**
	7.0nm,0.5s,SNR=7.9						
EARI				Lg	Lg	15 51 04.6	
	63nm,0.8s,SNR=7.9						
PNCL	**Nicolau / Gran**	**6.06**	**270**	*e*Sn	**Sn**	**15 50 29.3**	**-0.9**
PNCL				*e*Sg	**Sg**	**15 51 01.5**	**-3.5**
PNCL				A	A	15 51 13.8	
	34nm,0.7s						
PVRL	**Vila Real**	**6.06**	**301**	*e*Pn	**Pn**	**15 49 20.9**	**+0.2**
PVRL				*e*Sg	**Sg**	**15 51 07.1**	**+2.0**
PVRL				A	A	15 51 12.0	
	41nm,0.7s						
POLO	**Lamas de Olo**	**6.16**	**302**	*e*Pn	**Pn**	**15 49 21.5**	**-0.6**
POLO				*e*Sg	**Sg**	**15 51 08.6**	**+0.4**
POLO				A	A	15 51 13.3	
	21nm,0.5s						
COI	**Coimbra**	**6.17**	**290**	*e*Sg	**Sg**	**15 51 09.4**	**+0.8**
PCAS	**Casmilo, Conde**	**6.20**	**289**	*e*Pn	**Pn**	**15 49 22.5**	**0.0**
PCAS				*e*Sg	**Sg**	**15 51 09.7**	**+0.3**
PCAS				A	A	15 51 13.8	
	53nm,0.7s						
MORF	**Marmelete**	**6.27**	**263**	*e*Sn	**Sn**	**15 50 32.5**	**-3.0**
MORF				*e*Sg	**Sg**	**15 51 11.7**	**0.0**
PTEO	**Sao Teotonio**	**6.28**	**265**	*e*Sg	**Sg**	**15 51 14.6**	**+2.5**
PTEO				A	A	15 51 25.7	
	44nm,0.6s						
MDT	**Midelt**	**6.29**	**210**	Pn	**Pn**	**15 49 24.5**	**+0.6**
	0.3nm,0.3s,baz=115,slow=20,SNR=6.7						
PSBE	**So Bento**	**6.32**	**283**	*e*Sg	**Sg**	**15 51 14.8**	**+1.5**
PSBE				A	A	15 51 28.3	
	65nm,0.6s						
PFVI	**Vila Bisbo**	**6.44**	**262**	*e*Sg	**Sg**	**15 51 19.8**	**+2.5**
PCAB	**Cabril**	**6.47**	**304**	*e*Sg	**Sg**	**15 51 19.7**	**+1.4**
PMST	**Lisbon--Monsan**	**6.56**	**276**	*e*Sg	**Sg**	**15 51 26.1**	**+5.2**
ELOB	**Lobios**	**6.57**	**305**	Pn	**Pn**	**15 49 27.0**	**-0.7**
	3.7nm,0.4s,SNR=7.9						
ELOB				Sn	**Sn**	**15 50 40.7**	**-2.3**
	6.9nm,0.4s,SNR=7.9						
ELOB				Lg	Lg	15 51 22.1	
	72nm,0.6s,SNR=7.9						
PMAFR	**Mafra**	**6.64**	**278**	*e*Sg	**Sg**	**15 51 26.4**	**+2.7**
PMAFR	**Mafra**	**6.64**	**278**	Lg	Lg	15 51 25.6	
	187nm,0.8s,SNR=7.9						
LFF	**La Frestale**	**6.72**	**10**	*e*Pn	**Pn**	**15 49 30.3**	**+0.7**
LFF				*e*Sn	**Sn**	**15 50 42.9**	**-3.6**
	20nm,0.7s						
LASF	**Ste Croix**	**6.75**	**30**	*e*Pn	**Pn**	**15 49 31.6**	**+1.5**
LASF				*e*Sn	**Sn**	**15 50 44.7**	**-2.7**
	4.2nm,0.7s						
PGAV	**Gavieira, Arco**	**6.76**	**305**	*e*Sn	**Sn**	**15 50 46.7**	**-0.9**
PGAV				*e*Sg	**Sg**	**15 51 26.4**	**-1.0**
EPON	**Pontenova**	**6.92**	**318**	Lg	Lg	15 51 31.8	
	71nm,0.7s,SNR=7.9						
CAF	**Calviac**	**6.95**	**17**	*e*Pn	**Pn**	**15 49 33.9**	**+1.1**
CAF				*e*Sn	**Sn**	**15 50 49.2**	**-3.0**
	11nm,0.6s						
EAGO	**Agolada(Pontev**	**7.11**	**311**	Lg	Lg	15 51 38.6	
	59nm,0.7s,SNR=7.9						
EZAM	**Zamans**	**7.12**	**305**	Lg	Lg	15 51 38.9	
	84nm,0.9s,SNR=7.9						
RJF	**Les Rejaudoux**	**7.20**	**13**	*e*Pn	**Pn**	**15 49 37.3**	**+1.1**
RJF				*e*Sn	**Sn**	**15 50 56.2**	**-2.1**
	10nm,0.6s						
LMR	**La Mourre**	**7.49**	**46**	*e*Pn	**Pn**	**15 49 42.1**	**+1.9**
LMR				*e*Sn	**Sn**	**15 51 01.0**	**-4.5**
	36nm,1.2s						
FRF	**La Foret Royal**	**7.71**	**45**	*e*P	Pn	15 49 48.1	+4.8
FRF				*e*Sn	**Sn**	**15 51 05.9**	**-5.0**
	9.8nm,0.9s						
TCF	**Toulx Ste Croi**	**8.28**	**15**	*e*Pn	**Pn**	**15 49 51.4**	**+0.4**
TCF				*e*Sn	**Sn**	**15 51 22.3**	**-2.5**
MFF	**Saint Martin d**	**8.29**	**3**	*e*Pn	**Pn**	**15 49 52.1**	**+0.9**
MFF				*e*Sn	**Sn**	**15 51 20.3**	**-4.9**
	1.9nm,0.5s						
KEST	**Kesra**	**8.54**	**104**	Pn	**Pn**	**15 49 55.2**	**+0.5**
	0.1nm,0.3s,baz=295,slow=17,SNR=1.6						
KEST				Sn	**Sn**	**15 51 34.0**	**+2.5**
	0.3nm,0.3s,baz=127,slow=7.3,SNR=1.5						
PGF	**Pioggiola**	**8.61**	**58**	*e*Pn	**Pn**	**15 49 57.6**	**+1.9**
PGF				*e*Sn	**Sn**	**15 51 27.7**	**-5.4**
	0.7nm,0.3s						
SMF	**Signal de Mont**	**9.01**	**21**	*e*Pn	**Pn**	**15 50 02.2**	**+1.1**
AVF	**Avril sur Loir**	**9.01**	**19**	*e*Pn	**Pn**	**15 50 01.6**	**+0.5**
AVF				*e*Sn	**Sn**	**15 51 37.9**	**-4.9**
	1.0nm,0.4s						
CABF	**La Chapelle**	**9.73**	**29**	*e*Pn	**Pn**	**15 50 12.6**	**+1.5**
CABF				*e*Sn	**Sn**	**15 51 55.3**	**-5.4**
	0.4nm,0.2s						
QUIF	**Quistinic**	**9.74**	**351**	*e*Pn	**Pn**	**15 50 12.7**	**+1.6**
SGMF	**Saint Gilles**	**10.01**	**353**	*e*Pn	**Pn**	**15 50 14.1**	**-0.6**
ROSF	**Rostrenen**	**10.17**	**351**	*e*Pn	**Pn**	**15 50 19.2**	**+2.3**
GERES	**GERESS Array B**	**14.86**	**40**	Pn	**Pn**	**15 51 23.0**	**+1.8**
	0.1nm,0.3s,baz=234,slow=12,SNR=2.8						
KOWA	**Kowa**	**23.89**	**188**	P	**P**	**15 53 06.1**	**+1.1**
	1.1nm,0.4s,baz=11,slow=12,SNR=4.6						
TORD	**Torodi Ar. Bea**	**25.17**	**174**	P	**P**	**15 53 16.8**	**+0.1**
	1.2nm,0.7s,baz=353,slow=8.9,SNR=7.7						
MKAR	**Makanchi Array**	**59.12**	**53**	P	**P**	**15 57 52.8**	**+1.1**
	0.2nm,0.7s,baz=284,slow=5.8,SNR=1.3						
YKA	**Yellowknife Ar**	**66.44**	**332**	P	**P**	**15 58 41.5**	**+1.4**
	0.3nm,0.8s,baz=59,slow=6.5,SNR=2.6						

IDC 19 15:51:32.6±4.3,**4°68S**×**102°17E,h0**^{km}**,mb3.3**/4,
mb1 3.5/4,**mb1mx3.1**/46,**mbtmp3.3**/4,**Error ellipse:
s-maj=183.5km s-min=22.7km az=55.0,Southern
Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**23.21**	**352**	P	P	15 56 41.3	-0.1
	0.4nm,0.7s,baz=186,slow=7.3,SNR=5.3						
H01W3	**Cape Leeuwin H**	**32.03**	**161**	T	T	16 31 33.6	
	baz=339						
H01W2	**Cape Leeuwin H**	**32.05**	**161**	T	T	16 31 45.6	
	baz=339						
H01W1	**Cape Leeuwin H**	**32.05**	**161**	T	T	16 31 51.7	
	baz=339						
WRA	**Warramunga Arr**	**34.80**	**119**	P	P	15 58 25.0	-0.3
	0.3nm,0.7s,baz=306,slow=8.6,SNR=5.2						
ASAR	**Alice Springs**	**35.95**	**125**	P	P	15 58 35.4	+0.1
	0.1nm,0.4s,baz=301,slow=8.3,SNR=8.5						
MKAR	**Makanchi Array**	**54.19**	**343**	P	P	16 00 59.9	0.0
	0.4nm,0.5s,baz=157,slow=9.1,SNR=8.9						

IDC 19 15:59:17.2±1.8,**4°01S**×**129°16E,h0**^{km}**,mb2.9**/2,
mb1 3.3/4,**mb1mx3.3**/35,**mbtmp3.2**/4,**ML2.9**/2,**Error
ellipse: s-maj=55.5km s-min=28.3km az=84.0,Banda
Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.76**	**34**	Pn	Pn	16 00 16.1	-0.5
	1.7nm,0.3s,baz=214,slow=22,SNR=24						
SIJI				Sn	Sn	16 00 59.8	-1.8
	2.6nm,0.3s,baz=188,slow=22,SNR=5.9						
WRA	**Warramunga Arr**	**16.62**	**163**	Pn	P	16 03 13.8	-0.6
	0.0nm,0.3s,baz=337,slow=13,SNR=1.2						
ASAR	**Alice Springs**	**20.07**	**167**	P	P	16 03 51.4	-1.0
	0.4nm,1.0s,baz=349,slow=12,SNR=4.5						
MKAR	**Makanchi Array**	**65.29**	**326**	P	P	16 10 01.3	+0.3
	0.2nm,0.5s,baz=108,slow=6.1,SNR=2.3						

*NOU **19** 16:08:10.3,22°16S×177°75W,h377^{km},mb4.4/19,South
of Fiji Islands*

*IDC **19** 16:08:12.9±2.8,22°00S×178°06W,h390^{km}±25^{km},mb3.5/9,
mb1 3.7/10,mb1mx3.4/24,mbtmp4.3/10,Error ellipse:
s-maj=25.3km s-min=21.2km az=126.0*

ISC 19 16:08:09.4±0.7,**22°28S**±0°09×**177°9W**±0°1,**h350**^{km}**,n33,**
σ**1ˢ44**/32,**mb3.8**/15,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAVE	**Taveuni**	**5.85**	**341**	P	**Pn**	**16 09 40.4**	**+1.8**
MSVF	**Nonsavu**	**5.90**	**319**	P	**Pn**	**16 09 40.8**	**+1.6**
	3.7nm,0.3s,baz=272,slow=22,SNR=22						
MSVF	**Nonsavu**	**5.90**	**319**	P	**Pn**	**16 09 41.2**	**+2.0**
DGTI	**Dogotuki**	**6.34**	**339**	P	**Pn**	**16 09 45.9**	**+1.6**
NIUE	**Niue**	**8.14**	**68**	P	**Pn**	**16 10 05.5**	**+0.3**
AFI	**Afiamalu**	**10.17**	**36**	P	Pn	16 10 23.9	-5.7
	1.4nm,0.3s,baz=288,slow=1.6,SNR=5.7						
AFI				S	S	16 12 09.2	-15
	2.1nm,0.3s,baz=46,slow=21,SNR=6.6						
URZ	**Urewera**	**16.49**	**194**	P	**P**	**16 11 40.3**	**+0.3**
	0.4nm,0.3s,baz=308,slow=20,SNR=1.8						
URZ				S	**S**	**16 14 31.7**	**-3.1**
	0.4nm,0.3s,baz=119,slow=23,SNR=1.3						
BKZ	**Black Stump Fm**	**17.50**	**195**	P	**P**	**16 11 52.7**	**+1.8**
SNZO	**South Karori**	**19.97**	**196**	P	**P**	**16 12 16.2**	**-0.6**
QRZ	**Quartz Range**	**20.18**	**201**	P	**P**	**16 12 19.4**	**+0.5**
KHZ	**Kahutara**	**21.31**	**198**	P	**P**	**16 12 29.1**	**0.0**
CNB	**Canberra Magne**	**31.32**	**238**	P	**P**	**16 13 59.0**	**+0.5**
	24nm,1.8s						
CAN	**Canberra**	**31.61**	**238**	P	**P**	**16 14 01.0**	**0.0**
	28nm,1.7s						
CTA	**Charters Tower**	**33.42**	**267**	P	**P**	**16 14 16.8**	**0.0**
	16nm,0.5s,baz=94,slow=11,SNR=20						
CTAO	**Charters Tower**	**33.42**	**267**	P	**P**	**16 14 17.4**	**+0.6**
QLP	**Quilpie**	**34.63**	**255**	P	**P**	**16 14 27.4**	**+0.4**
TOO	**Toolangi**	**34.93**	**236**	P	**P**	**16 14 30.8**	**+1.4**
	8.5nm,1.8s						
MTSU	**Mount Surprise**	**35.61**	**270**	P	**P**	**16 14 35.4**	**0.0**
	7.7nm,0.8s						
PMG	**Port Moresby**	**35.84**	**285**	P	**P**	**16 14 36.7**	**-0.6**
	19nm,1.0s,baz=53,slow=7.1,SNR=7.1						
STKA	**Stephens Creek**	**37.11**	**246**	P	**P**	**16 14 47.4**	**-0.3**
	1.8nm,0.5s,baz=94,slow=11,SNR=6.2						
ARPS	**Mount Arapiles**	**37.59**	**238**	P	**P**	**16 14 50.9**	**-0.7**
	15nm,0.7s						
COEN	**Coen**	**37.80**	**276**	P	**P**	**16 14 53.9**	**+0.2**
	14nm,1.5s						
ASAR	**Alice Springs**	**44.21**	**258**	P	**P**	**16 15 44.4**	**-1.0**
	4.5nm,0.9s,baz=87,slow=7.4,SNR=50						
WRA	**Warramunga Arr**	**44.45**	**264**	P	**P**	**16 15 45.7**	**-1.6**
	1.6nm,0.3s,baz=96,slow=8.4,SNR=44						
VNDA	**Vanda**	**56.15**	**185**	P	**P**	**16 17 15.9**	**+2.7**
	0.9nm,0.7s,baz=50,slow=9.2,SNR=2.0						
QSPA	**South Pole Qui**	**67.80**	**180**	P	**P**	**16 18 31.4**	**+1.1**
	1.2nm,0.9s,baz=102,slow=3.9,SNR=2.6						
ILAR	**Eielson Array**	**90.03**	**13**	P	**P**	**16 20 26.9**	**-2.5**
	0.3nm,0.4s,baz=216,slow=5.7,SNR=7.4						
CMAR	**Chiang Mai Arr**	**90.77**	**290**	P	**P**	**16 20 33.8**	**-0.2**
	1.3nm,1.1s,baz=117,slow=3.3,SNR=5.5						
ARCES	**ARCESS Array B**	**130.67**	**349**	PKP	**PKPdf**	**16 26 36.8**	**-1.7**
	6.0nm,1.0s,baz=48,slow=1.8,SNR=5.4						
FINES	**FINESS Array B**	**137.49**	**343**	PKP	**PKPdf**	**16 26 49.0**	**-2.4**
	2.9nm,1.0s,baz=159,slow=12,SNR=1.3						
AKASG	**Malin Array Be**	**144.59**	**330**	PKP	PKPbc	16 27 01.1	-2.9
	0.8nm,0.4s,baz=40,slow=3.9,SNR=9.7						
BRTR	**Keskin Array B**	**148.06**	**310**	PKPbc	**PKPdf**	**16 27 12.2**	**+1.4**
	0.7nm,0.6s,baz=138,slow=4.5,SNR=4.1						
GERES	**GERESS Array B**	**151.92**	**344**	PKPbc	**PKPbc**	**16 27 21.9**	**-1.4**
	0.2nm,0.5s,baz=338,slow=3.2,SNR=3.6						

*IDC **19** 16:26:47.9±2.8,22°79N×11°77W,h0^{km},mb3.7/4,
mb1 3.8/8,mb1mx3.4/52,mbtmp3.8/8,ML3.5/4,MS4.1/1,
Ms1 4.1/1,ms1mx3.2/39,Error ellipse: s-maj=73.4km
s-min=22.1km az=74.0*

ISC 19 16:26:50.2±1.8,**22°8N**±0°1×**11°5W**±0°2,**h10**^{km}**,n11,**
σ**1ˢ28**/11,**mb3.8**/4,**Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOWA	**Kowa**	**10.85**	**138**	Pn	**Pn**	**16 29 27.6**	**+1.9**
	0.9nm,0.3s,baz=315,slow=11,SNR=16						
KOWA				Sn	**Sn**	**16 31 25.6**	**-1.6**
	0.3nm,0.3s,baz=240,slow=12,SNR=2.0						
KOWA				Lg	Lg	16 32 40.3	
	0.1nm,0.3s,baz=204,slow=11,SNR=1.5						
MDT	**Midelt**	**11.73**	**30**	Pn	**Pn**	**16 29 37.7**	**-0.1**
	0.1nm,0.3s,baz=230,slow=13,SNR=3.7						
TORD	**Torodi Ar. Bea**	**15.76**	**125**	Pn	**Pn**	**16 30 33.4**	**+1.0**
	0.1nm,0.3s,baz=312,slow=12,SNR=2.2						
TORD				Sn	**Sn**	**16 33 25.6**	**-1.7**
	0.1nm,0.3s,baz=301,slow=21,SNR=2.9						
DBIC	**Dimbokro**	**17.22**	**157**	P	**Pn**	**16 30 49.9**	**-1.1**
	0.6nm,0.3s,baz=349,slow=11,SNR=5.9						
I48TN	**KESRA INFRASON**	**22.28**	**50**	*i*		18 48 00.0	
	baz=239,slow=302,SNR=2.4						
GERES	**GERESS Array B**	**32.81**	**31**	P	**P**	**16 33 23.6**	**-0.2**
	0.3nm,0.5s,baz=219,slow=7.6,SNR=2.2						
HFS	**Hagfors**	**41.33**	**19**	P	**P**	**16 34 35.1**	**-0.8**

	3.3nm,0.9s,baz=191,slow=14,SNR=2.1						
FINES	FINESS Array B	46.47	24	P	P	16 35 16.5	-0.7
	2.1nm,0.9s,baz=232,slow=9.4,SNR=3.4						
SFJD	Kangerlussuaq	50.58	341	LR	LR	16 52 16.5	
	comp=Z,202nm,19.0s,baz=175,slow=30						
MKAR	Makanchi Array	76.26	45	P	P	16 38 40.0	+0.8
	0.2nm,0.6s,baz=284,slow=5.8,SNR=1.7						
ASAR	Alice Springs	148.23	99	PKPbc	PKPbc	16 46 37.4	+0.1
	0.4nm,0.8s,baz=290,slow=2.2,SNR=2.8						

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*SKO **19** 16:29:27.8, 40.°74N×21.°23E, h15^{km}*

*ATH **19** 16:29:31.2, 40.°75N×21.°23E, h17^{km}±1^{km}, ML2.6/7, Error ellipse: s-maj=2.4km s-min=1.1km az=316.0*

*THE **19** 16:29:31.1, 40.°76N×21.°18E, h5^{km}±2^{km}, ML2.8/3, Error ellipse: s-maj=2.7km s-min=0.9km az=348.0*

*BEO **19** 16:29:33.2±0.7, 40.°84N×21.°22E, h12^{km}±2^{km}, ML2.2/9*

ISC 19 16:29:31.1±0.8**, 40.°73N**±0.°02×**21.°19E**±0.°02**, h13**^{km}±5^{km}**, n59, σ1.^{s}26**/89**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	Florina	0.15	68	P	Pg	16 29 34.7	-0.1
FNA				S	Sg	16 29 37.3	-0.1
	19µm,0.2s						
FNA	Florina	0.15	68	P	Pg	16 29 34.8	0.0
FNA				S	Sg	16 29 37.1	-0.3
FNA				AML	AML	16 29 37.5	
	comp=N,36942µm,0.2s						
FNA				AML	AML	16 29 37.6	
	comp=E,38138µm,0.3s						
FNA	Florina	0.15	68	*i* Pg	Pg	16 29 34.8	0.0
FNA				*e*Sg	Sg	16 29 37.3	-0.1
KBN	Korca	0.32	252	P	Pg	16 29 37.9	+0.2
KBN				S	Sg	16 29 42.7	+0.6
	comp=E,712nm,0.4s						
NEST	Nestorio	0.33	199	P	Pg	16 29 38.2	+0.4
NEST				S	Sb	16 29 43.8	-0.4
	comp=E,2µm,0.2s						
NEST	Nestorio	0.33	199	P	Pg	16 29 38.2	+0.4
NEST				S	Sb	16 29 43.7	-0.5
NEST				AML	AML	16 29 44.6	
	comp=E,5925µm,0.3s						
NEST				AML	AML	16 29 44.6	
	comp=N,4824µm,0.2s						
OHR	Ohrid	0.48	323	*i* Pg	Pg	16 29 40.8	+0.1
OHR				*i* Sg	Sb	16 29 48.8	+0.2
OHR				*e*Lg	Lg	16 29 49.3	
	comp=N,137nm,0.3s						
OHR				*e*Lg	Lg	16 29 49.5	
	comp=E,296nm,0.5s						
OHR	Ohrid	0.48	323	*e*Pg	Pg	16 29 40.7	+0.1
OHR				*e*Sg	Sb	16 29 48.5	-0.1
PENT	Pentalofos	0.53	184	P	Pg	16 29 41.9	+0.4
PENT	Pentalofos	0.53	184	P	Pg	16 29 42.0	+0.5
PENT				S	Sb	16 29 49.8	-0.2
PENT				AML	AML	16 29 53.2	
	comp=E,802µm,0.4s						
PENT				AML	AML	16 29 54.7	
	comp=N,390µm,0.2s						
KZN	Kozani	0.61	133	P	Pg	16 29 42.9	-0.1
KZN	Kozani	0.61	133	P	Pg	16 29 43.1	+0.1
KZN				S	Sb	16 29 52.3	+0.1
KZN				AML	AML	16 29 53.7	
	comp=N,1216µm,0.4s						
KZN				AML	AML	16 29 54.5	
	comp=E,1226µm,0.4s						
LSK	Leskovik	0.73	218	P	Pg	16 29 44.6	-0.7
KTI	Kastanea	0.78	115	P	Pg	16 29 45.6	-0.6
KPRO	Kipourio	0.78	170	P	Pg	16 29 45.5	-0.7
KPRO	Kipourio	0.78	170	P	Pb	16 29 47.4	+0.8
KPRO				AML	AML	16 30 03.1	
	comp=N,686µm,0.4s						
KPRO				AML	AML	16 30 06.5	
	comp=E,748µm,0.5s						
GRG	Griva	0.95	76	P	Pb	16 29 48.5	-0.9
PHP	Peshkopia	1.11	330	P	Pb	16 29 50.6	-1.6
TIR	Tirane	1.18	302	*e*Pg	Pg	16 29 54.2	+0.5
TIR	Tirane	1.18	302	*e*Pg	Pg	16 29 53.8	0.0
TIR				*e*Sg	Sg	16 30 10.1	+1.0
VAY	Valandovo	1.20	60	*i* Pg	Pg	16 29 54.0	-0.1
VAY				*i* Sg	Sg	16 30 09.6	-0.2
VAY				*e*Lg	Lg	16 30 10.7	
	comp=N,44nm,0.6s						
VAY				*e*Lg	Lg	16 30 15.0	
	comp=E,30nm,0.6s						
VAY	Valandovo	1.20	60	*e*Pg	Pn	16 29 53.3	-0.3
VAY				*e*Sg	Sn	16 30 09.3	-0.5
STIP	Stip	1.23	38	*i* Pg	Pg	16 29 57.1	+2.5
STIP				*i* Sg	Sg	16 30 16.3	+5.7
SKO	Skopje	1.26	9	*e*Pg	Pg	16 29 55.1	-0.2
THL	Klokotos Trika	1.32	151	P	Pn	16 29 55.3	+0.1
THL	Klokotos Trika	1.32	151	P	Pn	16 29 55.4	+0.1
THL				S	Sg	16 30 15.5	+1.8
THL				AML	AML	16 30 18.2	
	comp=E,153µm,0.7s						
THL				AML	AML	16 30 21.8	
	comp=N,201µm,0.7s						
IGT	Igoumenitsa	1.36	209	P	Pb	16 29 57.0	+0.6
IGT	Igoumenitsa	1.36	209	P	Pg	16 29 58.3	+1.0
KNT	Kendrikon	1.36	71	P	Pb	16 29 56.3	-0.2
KNT	Kendrikon	1.36	71	P	Pb	16 29 56.3	-0.2
KNT				S	Sg	16 30 15.2	+0.2
KEK	Kerkira	1.47	227	P	Pg	16 30 00.0	+0.7
PLG	Polygyros	1.75	101	P	Pb	16 30 02.1	-1.1
EVR	Evrytania	1.87	165	P	Pb	16 30 05.3	+0.1
EVR				S	Sb	16 30 29.7	+1.2
EVR				AML	AML	16 30 35.8	
	comp=N,108µm,0.7s						
EVR				AML	AML	16 30 35.8	
	comp=E,94µm,0.4s						
PRVS	Prvonek	1.90	20	*e*Pn	Pn	16 30 02.9	-0.4
PRVS				*e*Sn	Sn	16 30 26.8	-0.3
AGG	Agios Georgios	1.92	152	P	Pb	16 30 04.8	-1.1
AGG	Agios Georgios	1.92	152	P	Pn	16 30 04.6	+1.1
AGG				S	Sb	16 30 29.9	+0.2
BOSS	Bosilegrad	2.02	28	*e*Pn	Pn	16 30 05.8	+0.9
BOSS				*e*Sn	Sn	16 30 29.4	-0.6
DRAG	Dragano-Lefkad	2.10	193	P	Pb	16 30 08.7	-0.2
KOKK	Kokkinochori,	2.14	87	P	Pn	16 30 07.0	+0.6
BARS	Barje	2.14	12	*e*Pn	Pn	16 30 07.3	+0.7
BARS	Barje	2.14	12	*e*Pn	Pn	16 30 07.1	+0.5
BARS				*e*Sn	Sn	16 30 32.1	-0.9
EVGI	Lefkada island	2.14	191	P	Pb	16 30 10.0	+0.2
PDG	Podgorica	2.24	320	*e*Pn	Pn	16 30 09.2	+1.4
PDG				*e*Sn	Sn	16 30 35.3	0.0
SELS	Selova	2.49	359	*e*Pn	Pn	16 30 12.5	+1.1
LAKA	Lakka	2.56	166	P	Pb	16 30 15.1	-1.7
SJES	Sjenica	2.69	341	*e*Pn	Pn	16 30 15.3	+1.1
SJES				*e*Sn	Sn	16 30 47.0	+0.3
BOVS	Bovan	2.93	7	*e*Pn	Pn	16 30 17.4	0.0
IVAS	Ivanjica	2.95	345	*e*Pn	Pn	16 30 18.9	+1.2
BBLS	Lazići	3.41	338	*e*Pn	Pn	16 30 25.8	+1.8
DIVS	Divibare	3.48	346	*e*Pn	Pn	16 30 25.0	-0.1
DIVS				*e*Sn	Sn	16 31 04.9	-1.4
LSTV	Lastovo	3.81	304	*e*Pn	Pn	16 30 30.4	+1.0
LSTV				Sn	Sn	16 31 11.0	-3.1
MAKA	Makarska	4.03	311	*e*Pn	Pn	16 30 33.2	+0.8
RICI	Ricice	4.09	314	*e*Pn	Pn	16 30 35.1	+1.7
RICI				Sn	Sn	16 31 20.0	-1.1
HVAR	Hvar	4.30	306	*e*Pn	Pn	16 30 36.5	+0.2
HVAR				Sn	Sn	16 31 22.4	-3.9
KIJV	Kijevo	4.83	314	*e*Pn	Pn	16 30 45.0	+1.5
KIJV				Sn	Sn	16 31 37.7	-1.5
ZIRJ	Zirje	5.05	307	*e*Pn	Pn	16 30 46.6	0.0
MORI	Morici	5.13	309	*e*Pn	Pn	16 30 49.0	+1.4
MORI				Sn	Sn	16 31 44.4	-2.4
DUGI	Dugi Otok	5.59	308	*e*Pn	Pn	16 30 54.7	+0.7
DUGI				Sn	Sn	16 31 54.0	-4.1
NVLJ	Novalja	6.03	312	*e*Pn	Pn	16 31 00.8	+0.8

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*IDC **19** 16:35:57.9±2.2, 2.°00S×133.°37E, h0^{km}, mb3.3/2, mb1 3.8/5, mb1mx3.2/50, mbtmp3.6/5, ML3.7/3, Error ellipse: s-maj=53.2km s-min=21.6km az=63.0*

*DJA **19** 16:35:58.8±2.0, 4°S±11°×13°1E±1°5, h10^{km}, M3.9/3, MLv3.9/3*

ISC 19 16:35:58.5±1.7**, 2.°0S**±0.°1×**133.°5E**±0.°1**, h10**^{km}**, n7, σ1.^{s}24**/9**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.52	233	P	Pb	16 36 26.4	-0.4
SIJI	Sorong	2.48	297	Pn	Pn	16 36 38.2	-0.7
	9.5nm,0.3s,baz=205,slow=23,SNR=124						
SIJI				Sn	Sn	16 37 09.9	+0.6
	22nm,0.3s,baz=160,slow=23,SNR=6.6						
SWI	Sorong	2.49	297	P	Pg	16 36 44.7	-1.5
SWI				S	Sg	16 37 20.6	+2.1
FITZ	Fitzroy Crossi	17.74	205	P	Pn	16 40 05.8	0.0
	0.2nm,0.3s,baz=32,slow=12,SNR=1.4						
WRA	Warramunga Arr	17.84	177	P	P	16 40 08.1	+0.3
	0.4nm,0.3s,baz=355,slow=12,SNR=12						
WRA				S	Sn	16 43 12.7	-14
	0.1nm,0.3s,baz=5.5,slow=24,SNR=1.7						
ASAR	Alice Springs	21.53	179	P	P	16 40 49.2	+1.1
	0.7nm,0.4s,baz=5.8,slow=12,SNR=18						
MKAR	Makanchi Array	66.10	324	P	P	16 46 46.4	+0.4
	0.6nm,0.9s,baz=119,slow=7.7,SNR=4.6						

IDC 19 16:46:24.9±1.6**, 1.°22N**×**128.°17E, h0**^{km}**, mb3.2**/3**, mb1 3.5**/4**, mb1mx3.3**/38**, mbtmp3.3**/4**, ML3.0**/1**, Error ellipse: s-maj=69.9km s-min=25.5km az=60.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	3.72	124	Pn	Pn	16 47 22.6	-1.1
	1.1nm,0.3s,baz=156,slow=22,SNR=2.5						
SIJI				Sn	Sn	16 48 00.1	-8.2
	1.2nm,0.3s,baz=327,slow=23,SNR=7.6						
WRA	Warramunga Arr	21.88	164	P	P	16 51 18.9	-0.7
	1.3nm,0.8s,baz=343,slow=11,SNR=5.2						
ASAR	Alice Springs	25.36	168	P	P	16 51 54.7	+0.8
	0.2nm,0.5s,baz=352,slow=12,SNR=7.7						
MKAR	Makanchi Array	60.43	325	P	P	16 56 36.2	-0.1
	0.2nm,0.5s,baz=116,slow=7.6,SNR=4.7						

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*IDC **19** 16:55:30.5±1.3, 23.°64S×64.°71W, h0^{km}, mb3.8/5, mb1 3.9/9, mb1mx3.8/33, mbtmp3.7/9, ML3.6/4, Error ellipse: s-maj=35.1km s-min=18.4km az=28.0*

*NEIC **19** 16:55:36.0±2.8, 23.°84S±0.°09×64.°70W±0.°04, h27^{km}±7^{km}, Error ellipse: s-maj=13.8km s-min=4.5km az=191.0*

ISC 19 16:55:35.7±0.7**, 23.°67S**±0.°08×**64.°65W**±0.°08**, h35**^{km}**, n29, σ1.^{s}43**/31**, mb4.0**/6**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	4.06	284	Pn	Pn	16 56 35.1	-0.5
	0.6nm,0.3s,baz=165,slow=3.9,SNR=3.2						
LVC	Limon Verde	4.06	284		Pn	16 56 35.5	-0.1
PB15	IPOC Station P	4.45	275		Pn	16 56 42.7	+1.8
PB06	IPOC Station P	4.63	281		Pn	16 56 44.2	+0.9
PB09	IPOC Station P	4.63	293		Pn	16 56 46.1	+2.8
PB01	IPOC Station P	5.18	299		Pn	16 56 52.6	+1.8
PB07	IPOC Station P	5.21	291		Pn	16 56 51.8	+0.6
PB10	IPOC Station P	5.42	270		Pn	16 56 54.3	+0.3
PB08	IPOC Station P	5.46	309		Pn	16 56 56.9	+1.9
PATCX	Punta Patache	5.83	298		Pn	16 57 00.0	+0.3
TA01	Diego Aracena	5.98	300		Pn	16 57 02.4	+0.6
PB11	IPOC Station P	6.06	309		Pn	16 57 05.2	+2.2
PB16	IPOC Station P	6.98	319		Pn	16 57 19.1	+3.1
CPUP	Villa Florida	7.15	113	Pn	Pn	16 57 17.5	-0.4
	0.8nm,0.3s,baz=297,slow=12,SNR=16						
CPUP				Pg		16 57 52.2	
	2.9nm,0.3s,baz=298,slow=13,SNR=11						
CPUP				Lg	Lg	16 59 20.3	
	5.5nm,0.3s,baz=3.9,slow=18,SNR=3.1						
CPUP	Villa Florida	7.15	113		Pn	16 57 18.1	+0.3
PB12	IPOC Station P	7.30	312	Pn	Pn	16 57 19.8	-0.2
LPAZ	La Paz	8.04	335	Pn	Pn	16 57 30.3	-0.3
	0.4nm,0.3s,baz=158,slow=13,SNR=4.1						
LPAZ				Sn	Sn	16 58 58.3	-2.2
	0.6nm,0.3s,baz=175,slow=14,SNR=1.9						
LPAZ	La Paz	8.04	335	Pn	Pn	16 57 32.0	+1.4
SIV	San Ignacio	8.34	24	Pn	Pn	16 57 34.2	-0.1
	1.2nm,0.3s,baz=217,slow=9.9,SNR=9.5						
SIV				Sn	Sn	16 59 07.2	-0.1
SIV				Lg	Lg	16 59 44.5	
	1.6nm,0.3s,baz=94,slow=22,SNR=1.5						
CO06	Fray Jorge	9.35	220	Pn	Pn	16 57 44.8	-3.1
TXAR	Lajitas Array	64.69	323	P	P	17 06 09.7	-0.7
	0.1nm,0.6s,baz=148,slow=8.6,SNR=1.7						
QSPA	South Pole Qui	66.54	180	P	P	17 06 22.6	+0.6
QSPA				IAmb	IAmb	17 06 24.8	
	comp=Z,3.7nm,0.9s						
KOWA	Kowa	70.35	64	P	P	17 06 46.9	+0.5
	comp=Z,0.8nm,0.3s,baz=263,slow=6.8,SNR=5.3						
TORD	Torodi Ar. Bea	74.45	68	P	P	17 07 11.7	+0.9
	comp=Z,3.4nm,0.7s,baz=255,slow=5.7,SNR=17						
TORD	Torodi Ar. Bea	74.45	68	P	P	17 07 10.1	-0.7
TORD				IAmb	IAmb	17 07 12.4	
	comp=Z,2.9nm,0.8s						
PDAR	Pinedale Array	77.98	328	P	P	17 07 30.8	+0.2
	comp=Z,0.3nm,0.7s,baz=116,slow=8.1,SNR=2.4						
YKA	Yellowknife Ar	94.57	339	P	P	17 08 52.5	+0.3
	comp=Z,0.2nm,0.6s,baz=129,slow=4.6,SNR=5.0						
MKAR	Makanchi Array	144.88	41	PKP	PKPab	17 15 08.9	+0.7
	comp=Z,0.6nm,0.6s,baz=303,slow=3.5,SNR=8.4						
SONM	Songino Array	154.85	14	PKPbc	PKPbc	17 15 31.8	-1.6
	comp=Z,0.3nm,0.6s,baz=318,slow=1.8,SNR=2.4						

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*IDC **19** 17:05:24.3±1.2, 8.°13S×110.°79E, h0^{km}, mb3.6/4, mb1 3.7/5, mb1mx3.3/35, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=78.9km s-min=21.7km az=41.0*

*NEIC **19** 17:05:28.0±2.8, 9.°13S±0.°06×109.°86E±0.°06, h50^{km}±5^{km}, mb4.6/9, Error ellipse: s-maj=8.8km s-min=7.5km az=141.0*

ISC 19 17:05:23.1±0.6**, 9.°07S**±0.°06×**109.°88E**±0.°04**, h10**^{km}**, n24, σ1.^{s}58**/27**, mb3.8**/7**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	Wanagama	1.31	29		Pg	17 05 48.9	+0.6
UGM					Sb	17 06 02.8	-2.0
SMRI	Semarang	2.08	16		Pg	17 06 03.0	-0.1
SMRI					Sb	17 06 28.0	+1.1
LEM	Lembang	3.16	315	Pn	Pb	17 06 18.7	-0.7
	12nm,0.3s,baz=28,slow=18,SNR=5.0						
LEM				Sn	Sb	17 06 59.1	+1.0
	9.3nm,0.3s,baz=327,slow=19,SNR=3.9						
JAGI	Jajag, Banyuwa	4.26	82		Pn	17 06 30.1	+1.9
JAGI				Sn	Sn	17 07 14.1	-3.9
XMIS	Christmas Isla	4.40	251		Pn	17 06 32.0	+1.9
XMIS				Sn	Sn	17 07 18.1	-3.3
GIRL	Giralia	14.13	163	Pn	Pn	17 08 42.4	-1.1
SOEI	Soe	14.21	94	Pn	Pn	17 08 45.4	+0.7
KNRA	Kununurra	19.57	111	Pn	Pn	17 09 52.4	-0.4
KNRA				IAmb	IAmb	17 10 27.3	
	comp=Z,68nm,1.6s						
MTN	Manton Dam	21.20	102	P	P	17 10 10.4	+1.3
MTN				IAmb	IAmb	17 10 50.7	
	comp=Z,58nm,1.6s						
FAKI	Fak Fak	23.06	76	P	P	17 10 29.3	+0.3
WB0	Warramunga Arr	25.98	117		P	17 10 54.8	-1.5
WB0				IAmb	IAmb	17 11 11.5	
	comp=Z,29nm,1.6s						
WRA	Warramunga Arr	25.99	117	P	P	17 10 57.2	+0.7
	comp=Z,0.2nm,0.4s,baz=297,slow=11,SNR=1.4						
WB2	Warramunga Arr	26.00	117	P	P	17 10 55.9	-0.6
WB2				IAmb	IAmb	17 11 09.1	
	comp=Z,17nm,1.4s						
ASAR	Alice Springs	27.18	125	P	P	17 11 08.5	+1.4
	comp=Z,0.4nm,0.9s,baz=306,slow=9.1,SNR=5.1						
ASAR				PcP	PcP	17 14 28.9	+1.3
	comp=Z,0.2nm,0.4s,baz=315,slow=2.0,SNR=5.0						
CTAO	Charters Tower	36.78	111	P	P	17 12 32.3	+0.9
H08S2	Diego Garcia H	37.01	269	T	T	17 51 51.5	
	baz=92						
H08S3	Diego Garcia H	37.02	269	T	T	17 51 41.2	
	baz=92						
H08S1	Diego Carcia H	37.02	269	T	T	17 51 44.1	
	baz=92						
STKA	Stephens Creek	37.15	132	P	P	17 12 35.9	+1.6
	comp=Z,0.9nm,0.5s,baz=312,slow=11,SNR=3.0						
STKA	Stephens Creek	37.15	132	P	P	17 12 35.1	+0.7
MK31	Makanchi Array	60.81	339	P	P	17 15 34.3	-1.2
MKAR	Makanchi Array	60.81	339	P	P	17 15 34.9	-0.6
	comp=Z,0.4nm,0.6s,baz=148,slow=8.0,SNR=7.1						
THZ	Tophouse	63.96	132	P	P	17 15 55.1	-1.8
ABKAR	Akbulak array	72.65	328	P	P	17 16 51.1	+0.1

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*NEIC **19** 17:36:49.3±1.8, 32.°07N±0.°03×115.°19W±0.°05, h18^{km}±2^{km}, Error ellipse: s-maj=5.8km s-min=4.8km az=79.0*

*ECX **19** 17:36:49.0±0.4, 32.°12N×115.°17W, h15^{km}±2^{km}, MD3.5, ML3.7*

*PAS **19** 17:36:49.3±3.2, 32.°09N±0.°03×115.°15W±0.°05, h27^{km}±7^{km}, Error ellipse: s-maj=6.8km s-min=3.4km az=75.0*

*ANF **19** 17:36:49.9±0.7, 32.°16N×115.°17W, h25^{km}, ML3.4/14, Error ellipse: s-maj=8.7km s-min=4.0km az=17.0*

*MEX **19** 17:36:50.2±0.6, 32.°18N×115.°02W, h43^{km}±9^{km}, MD4.0*

ISC 19 17:36:49.4±0.9**, 32.°10N**±0.°03×**115.°17W**±0.°02**, h25**^{km}±6^{km}**, n94, σ1.^{s}16**/119**, 14C-13D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RITX	Riito Sonora	0.19	69	⇑*e*P	Pb	17 36 54.8	-0.2
RITX				*e*S	Sb	17 36 58.9	+0.2
GUVIX	Guadalupe Vict	0.22	22		Pb	17 36 55.0	-0.3
GUVIX				IAML		17 36 57.1	
	comp=E,4µm,0.3s						
GUVIX				Sg	Sb	17 36 59.1	-0.2
GUVIX	Guadalupe Vict	0.22	22	⇓*i*P	Pb	17 36 55.0	-0.3
GUVIX				*e*S	Sb	17 36 59.2	0.0
MBIG	Mexicali	0.31	356		Pb	17 36 56.5	0.0
MBIG					Sn	17 37 02.5	-1.7
MBIG	Mexicali	0.31	356	*e*P	Pb	17 36 56.5	0.0
MBIG				*e*S	Sn	17 37 02.5	-1.7
MBIG	Mexicali	0.31	356	⇓*i*P	Pb	17 36 56.7	+0.2
MBIG				*e*S	Sn	17 37 02.7	-1.4
CPBX	Cerro Prieto	0.34	341		Pb	17 36 56.8	-0.2
CPBX	Cerro Prieto	0.34	341	⇑*e*P	Pb	17 36 57.0	0.0
CPBX				*e*S	Sb	17 37 03.0	+0.8
CPBX				⇑*e*		17 37 03.8	
CPBX				IAML		17 37 03.8	
	comp=N,22µm,0.1s						
CPBX				IAML		17 37 03.8	
	comp=E,24µm,0.3s						
CPBX				⇓*e*		17 37 03.8	
CTLX	Tlaxcala, TLX	0.37	3	⇓*i*P	Pb	17 36 57.2	-0.4
CTLX				*e*S	Sb	17 37 03.5	+0.4
YUCAX	Ej. Yucat¡n	0.51	7	⇓*i*P	Pb	17 37 00.0	+0.2
YUCAX				*e*S	Sn	17 37 08.2	-0.9
SLRCX	San Luis Rio C	0.53	48	⇓*e*P	Pb	17 37 00.3	+0.1
UABX	UABC, Campus M	0.58	337		Pb	17 37 00.9	-0.1
UABX				Sg	Sn	17 37 09.8	-1.0
UABX	UABC, Campus M	0.58	337	⇑*e*P	Pb	17 37 01.1	+0.1
UABX				*e*S	Sn	17 37 10.4	-0.5
UABX				IAML		17 37 10.7	
	comp=N,10µm,0.3s						
UABX				⇑*e*		17 37 10.7	
UABX				*e*		17 37 11.3	
UABX				IAML		17 37 11.3	
	comp=E,11µm,0.5s						
EMSC	East Mesa	0.66	14	⇑*e*P	Pb	17 37 02.0	-0.3
EMSC				*e*S	Sn	17 37 11.5	-1.3
SGL	Mount Signal	0.72	320	*e*P	Pb	17 37 03.2	-0.2
DREC	Desert Rsrch C	0.74	342	⇓*i*P	Pb	17 37 03.5	-0.2
COA	Coachella	0.76	3	*e*P	Pb	17 37 03.3	-0.8
WESC	Westside Schoo	0.81	324	⇓*e*P	Pn	17 37 05.0	-0.3
YUH2	Yuha Desert	0.84	311	⇑*e*P	Pb	17 37 04.5	-0.9
YUH2				IAML		17 37 16.9	
	comp=E,1µm,0.5s						
YUH2				⇓*e*		17 37 16.9	
COK2	Cook Ranch 2	0.89	328	*e*P	Pb	17 37 05.5	-0.6
RMX	La Rumorosa	0.92	303		Pb	17 37 05.1	-1.7
RMX				Sg	Sb	17 37 16.8	-1.8
RMX				IAML		17 37 17.5	
	comp=N,2µm,0.8s						
RMX	La Rumorosa	0.92	303	⇑*e*P	Pb	17 37 05.2	-1.7
RMX				IAML		17 37 17.5	
	comp=N,2µm,0.6s						
RMX				⇓*e*		17 37 17.5	
RMX				IAML		17 37 17.5	
	comp=E,2µm,0.3s						
RMX				*e*		17 37 17.5	
IKP	In-Ko-Pah, Jac	0.97	305	P	Pn	17 37 06.7	-0.9
	baz=124,SNR=125						
IKP				S	Sb	17 37 19.8	-0.2
	baz=124						
IKP	In-Ko-Pah, Jac	0.97	305	⇑*e*P	Pn	17 37 06.6	-0.9
GLA	Glamis	0.99	17		Pn	17 37 06.6	-1.3
GLA				IAML		17 37 21.3	
	comp=N,744nm,0.3s						
GLA				IAML		17 37 34.1	
	comp=E,768nm,0.6s						
GLA	Glamis	0.99	17	P	Pn	17 37 06.6	-1.3
	baz=196,SNR=157						
GLA				S	Sb	17 37 19.9	-0.8
	baz=196						
GLA	Glamis	0.99	17	⇓*e*P	Pn	17 37 06.6	-1.3
SWSC	Sam W. Stewart	1.00	328	P	Pb	17 37 07.8	-0.2
	baz=147,SNR=42						
SWSC				S	Sn	17 37 21.1	-0.1
	baz=147						
CRR	Carrizo Plain	1.03	320	*e*P	Pn	17 37 07.5	-0.9
SPIG	San Pedro Mart	1.08	194		Pn	17 37 09.2	-0.1
SPIG					Sb	17 37 23.6	+0.1
SPIG	San Pedro Mart	1.08	194	*e*P	Pn	17 37 09.2	-0.1
SPIG				*e*S	Sb	17 37 23.6	+0.1
SPIG	San Pedro Mart	1.08	194	⇓*e*P	Pn	17 37 09.4	+0.1
SFX	San Felipe	1.09	165		Pn	17 37 08.4	-0.8
SFX				IAML		17 37 26.9	
	comp=N,889nm,0.4s						
SFX				IAML		17 37 28.9	
	comp=E,689nm,1.0s						
SFX	San Felipe	1.09	165	*e*P	Pn	17 37 08.6	-0.6
CBX	Cerro Bola	1.28	280		Pn	17 37 11.8	-0.1
CBX				IAML		17 37 31.3	
	comp=E,946nm,0.6s						
CBX				IAML		17 37 31.9	
	comp=N,810nm,0.4s						
CBX	Cerro Bola	1.28	280	⇑*e*P	Pn	17 37 12.0	0.0
CCX	Cicese	1.29	260		Pn	17 37 12.4	+0.5
CCX	Cicese	1.29	260	*e*P	Pb	17 37 12.8	-0.2
TKX	Tecate	1.30	291		Pn	17 37 11.3	-0.8
TKX	Tecate	1.30	291	*e*P	Pn	17 37 11.6	-0.6
TKX				*e*		17 37 31.2	
TKX				IAML		17 37 31.2	
	comp=E,2µm,0.2s						
TJIG	Tijuana	1.32	285		Pn	17 37 12.0	-0.3
TJIG					Sn	17 37 28.9	-0.2
TJIG	Tijuana	1.32	285	*e*P	Pn	17 37 12.0	-0.3
TJIG				*e*S	Sn	17 37 28.9	-0.2
TJIG	Tijuana	1.32	285	⇑*e*P	Pn	17 37 12.2	-0.1
MONP2	Monument Peak	1.32	307	P	Pn	17 37 11.8	-0.7
	baz=126,SNR=80						
MONP2				S	Sb	17 37 30.7	+0.4
	baz=126						
MONP2	Monument Peak	1.32	307	⇑*e*P	Pn	17 37 11.9	-0.6
BAR	Barrett	1.40	295		Pn	17 37 13.3	-0.1
BAR				IAML		17 37 33.2	
	comp=E,619nm,0.3s						
BAR	Barrett	1.40	295	⇑*e*P	Pn	17 37 13.3	-0.1
SLH	Sleepy Hollow	1.42	320	⇑*e*P	Pb	17 37 15.2	-0.1
BC3	Big Chuckawall	1.57	351	P	Pn	17 37 15.2	-0.7
	baz=171,SNR=21						
BC3				S	Sn	17 37 33.7	-1.8
	baz=171						
OLP	Otay Lakes Par	1.57	289	*e*P	Pn	17 37 16.1	+0.3
TJX	Tijuana	1.65	285		Pn	17 37 17.1	+0.3
MATG	Mataguay Scout	1.66	312	⇓*e*P	Pn	17 37 16.9	-0.2
109C	Camp Elliot, M	1.81	296		Pn	17 37 18.9	-0.2
109C				IAML		17 37 47.1	
	comp=N,560nm,0.5s						
109C				IAML		17 37 47.7	
	comp=E,561nm,0.2s						
109C	Camp Elliot, M	1.81	296	P	Pn	17 37 19.8	+0.7
	baz=115,SNR=38						
PFO	Pinyon Flats O	1.86	325		Pn	17 37 18.9	-1.0
PFO	Pinyon Flats O	1.86	325	P	Pn	17 37 19.1	-0.8
	baz=144,SNR=7.6						
214A	Organ Pipe Nat	2.01	93	Pn	Pn	17 37 21.1	-0.7
214A				IAML		17 37 57.0	
	comp=N,186nm,0.5s						
214A				IAML		17 37 57.3	
	comp=E,189nm,0.5s						
214A	Organ Pipe Nat	2.01	93		Sb	17 37 50.3	+0.4
214A	Organ Pipe Nat	2.01	93	P	Pn	17 37 21.3	-0.5
	baz=275,SNR=27						
214A	Organ Pipe Nat	2.01	93	*e*P	Pn	17 37 21.1	-0.7
214A				*e*S	Sb	17 37 50.3	+0.4
IRM	Iron Mountain	2.05	1	P	Pn	17 37 22.1	-0.3
	baz=180,SNR=64						

MURC	**Murrieta**	**2.27**	**312**	Pn	**Pn**	**17 37 25.5**	**+0.1**
	baz=131						
MURC				Pb	**Pb**	**17 37 30.8**	**+1.0**
	baz=131,SNR=17						
MURC				Sb	**Sb**	**17 37 59.4**	**+2.1**
	baz=131						
GMRC	**Granite Mounta**	**2.71**	**351**	P	**Pn**	**17 37 31.6**	**+0.1**
	baz=171,SNR=8.4						
CIS	**Catalina Islan**	**3.03**	**296**	Sb	**Sb**	**17 38 20.3**	**+1.2**
	baz=115						
MWC	**Mount Wilson**	**3.22**	**312**		**Pn**	**17 37 38.5**	**-0.1**
MWC				IAML		17 38 35.9	
	comp=N,81nm,0.8s						
MWC				IAML		17 38 37.1	
	comp=E,84nm,0.8s						
PASC	**Pasadena Art C**	**3.27**	**310**	Pn	**Pn**	**17 37 39.8**	**+0.7**
PASC	**Pasadena Art C**	**3.27**	**310**	IAML		17 38 31.5	
	comp=N,113nm,0.8s						
PASC				IAML		17 38 31.5	
	comp=E,61nm,0.8s						
GSC	**Goldstone, Bar**	**3.47**	**337**		**Pn**	**17 37 40.9**	**-1.2**
GSC				IAML		17 39 20.5	
	comp=E,34nm,1.5s						
EDW2	**Edwards Air Fo**	**3.64**	**320**	Sb	**Sb**	**17 38 41.6**	**+4.7**
	baz=139						
TUC	**Tucson**	**3.73**	**86**		**Pn**	**17 37 45.5**	**0.0**
TUC				IAML		17 38 55.8	
	comp=E,56nm,0.7s						
TUC				IAML		17 38 56.7	
	comp=E,31nm,0.6s						
X16A	**Lo Mia Camp, P**	**3.89**	**52**	Pn	**Pn**	**17 37 48.9**	**+1.1**
QSM	**Queen of Sheba**	**4.11**	**340**		**Pn**	**17 37 46.7**	**-4.0**
GWY	**Greenwater Val**	**4.26**	**343**		**Pn**	**17 37 50.9**	**-2.1**
GWY				IAML		17 39 17.7	
	comp=E,22nm,1.1s						
SHPR	**Sheep Range**	**4.40**	**0**	Pn	**Pn**	**17 37 56.3**	**+1.6**
ISA	**Isabella, Lake**	**4.49**	**323**		**Pn**	**17 37 54.4**	**-1.6**
WUAZ	**Wupatki**	**4.65**	**42**	Pn	**Pn**	**17 38 00.3**	**+2.1**
WUAZ				IAML		17 39 29.9	
	comp=E,51nm,0.8s						
WUAZ	**Wupatki**	**4.65**	**42**	P	**Pn**	**17 38 00.4**	**+2.1**
	baz=224,SNR=6.6						
TPNV	**Topopah Spring**	**4.92**	**350**		**Pn**	**17 38 00.0**	**-2.0**
U15A	**North Rim**	**4.93**	**28**	Pn	**Pn**	**17 38 03.3**	**+1.0**
U15A				IAML		17 39 32.6	
	comp=E,39nm,1.3s						
U15A				IAML		17 39 57.2	
	comp=N,19nm,2.9s						
X18A	**Snowflake**	**5.00**	**60**		**Pn**	**17 38 03.1**	**0.0**
319A	**Douglas**	**5.07**	**97**		**Pn**	**17 38 05.0**	**+1.0**
LCMT	**Little Creek M**	**5.15**	**17**		**Pn**	**17 38 06.8**	**+1.6**
KNB	**Kanab**	**5.28**	**21**	Pn	**Pn**	**17 38 08.8**	**+1.9**
KNB				IAML		17 39 56.6	
	comp=E,20nm,1.2s						
KNB				IAML		17 39 59.6	
	comp=N,18nm,1.4s						
PRN	**Pahroc Range**	**5.30**	**1**	Pn	**Pn**	**17 38 09.3**	**+2.2**
PRN				IAML		17 40 04.9	
	comp=E,19nm,0.9s						
PRN				IAML		17 40 07.3	
	comp=N,15nm,1.7s						
W18A	**Petrified Fore**	**5.44**	**55**	Pn	**Pn**	**17 38 11.6**	**+2.4**
CCUT	**Cedar City**	**5.64**	**15**	Pn	**Pn**	**17 38 14.4**	**+2.5**
PKCU	**Pink Cliffs**	**5.83**	**23**		**Pn**	**17 38 16.5**	**+1.8**
R11A	**Troy Canyon, C**	**6.25**	**357**		**Pn**	**17 38 20.5**	**+0.3**
121A	**Cookes Peak, D**	**6.27**	**84**	Pn	**Pn**	**17 38 21.8**	**+1.3**
121A	**Cookes Peak, D**	**6.27**	**84**	P	**Pn**	**17 38 22.1**	**+1.6**
	baz=268						
121A				S	**Sn**	**17 39 30.6**	**-0.9**
	baz=268						
SPR3	**Spring Creek 3**	**6.92**	**5**	Pn	**Pn**	**17 38 30.2**	**+0.6**
MVCO	**Mesa Verde**	**7.50**	**45**		**Pn**	**17 38 40.0**	**+2.5**
SRU	**San Rafael Swe**	**7.95**	**27**	Pn	**Pn**	**17 38 43.1**	**-0.5**
MNTX	**Cornudas Mount**	**8.33**	**90**	Pn	**Pn**	**17 38 49.6**	**+0.9**

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*IDC **19** 17:43:34.1±0.9, 26°.58N×142°.75E, h0^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.6/37, mbtmp3.8/9, ML2.6/1, Error ellipse: s-maj=28.6km s-min=17.5km az=69.0*

*NEIC **19** 17:43:36.0±2.5, 26°.54N±0°.07×142°.78E±0°.09, h11^{km}±4^{km}, mb4.6/16, Error ellipse: s-maj=14.3km s-min=7.8km az=51.0*

ISC 19 17:43:39.5±0.7**, 26°.60N**±0°.10×**142°.6E**±0°.1**, h35**^{km}**, n36, σ1^{s}.06**/37**, mb4.4**/15**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**0.64**	**321**	Pn	**Pn**	**17 43 51.1**	**-0.9**
	217nm,0.3s,baz=84,slow=23,SNR=22						
JCJ				Sn	**Sn**	**17 44 01.5**	**+0.4**
	390nm,0.3s,baz=294,slow=23,SNR=8.1						
MJAR	**Matsushiro Arr**	**10.61**	**340**	Pn	**Pn**	**17 46 08.4**	**-0.5**
	0.1nm,0.3s,baz=356,slow=35,SNR=1.7						
MJAR	**Matsushiro Arr**	**10.61**	**340**	Pn	**Pn**	**17 46 07.9**	**-1.1**
MAJO	**Matsushiro**	**10.61**	**340**	Pn	**Pn**	**17 46 07.4**	**-1.6**
JMM	**Marumori**	**11.35**	**353**	Pn	**Pn**	**17 46 17.3**	**-1.7**
KLR	**Kul'dur**	**24.12**	**342**	P	**P**	**17 48 54.0**	**+2.1**
	2.2nm,0.9s,baz=100,slow=12,SNR=3.5						
HKPS	**Hong Kong Po S**	**26.27**	**267**	P	**P**	**17 49 12.4**	**+0.8**
HIA	**Hailar**	**28.74**	**328**	P	**P**	**17 49 33.2**	**-0.3**
HIA				IAmb	IAmb	17 49 34.2	
	comp=Z,3.9nm,0.5s						
PETK	**Petropavlovsk-**	**28.77**	**19**	P	**P**	**17 49 35.6**	**+1.9**
MTN	**Manton Dam**	**40.77**	**197**	P	**P**	**17 51 16.8**	**-0.5**
WB0	**Warramunga Arr**	**46.78**	**191**	P	**P**	**17 52 04.9**	**-0.7**
WR0	**Warramunga Arr**	**46.94**	**190**	P	**P**	**17 52 06.6**	**-0.3**
WR0				IAmb	IAmb	17 52 32.2	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**46.95**	**191**	P	**P**	**17 52 06.2**	**-0.8**
WB2				IAmb	IAmb	17 52 10.6	
	comp=Z,8.8nm,0.9s						
WRA	**Warramunga Arr**	**46.96**	**191**	P	**P**	**17 52 07.0**	**0.0**
	comp=Z,4.8nm,0.9s,baz=12,slow=7.9,SNR=15						
WRA	**Warramunga Arr**	**46.96**	**191**	P	**P**	**17 52 06.8**	**-0.2**
ASAR	**Alice Springs**	**50.68**	**190**	P	**P**	**17 52 35.2**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=333,slow=40,SNR=1.7						
MK31	**Makanchi Array**	**51.10**	**310**	P	**P**	**17 52 37.2**	**-1.5**
MKAR	**Makanchi Array**	**51.10**	**310**	P	**P**	**17 52 37.8**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=101,slow=6.9,SNR=3.2						
MKAR	**Makanchi Array**	**51.10**	**310**	P	**P**	**17 52 37.6**	**-1.1**
J20K	**Nowinta River**	**54.76**	**29**	P	**P**	**17 53 04.2**	**-1.0**
J20K				IAmb	IAmb	17 53 29.2	
	comp=Z,10nm,1.4s						
DHY	**Denali Highway**	**57.59**	**30**	P	**P**	**17 53 25.6**	**0.0**
ILAR	**Eielson Array**	**57.96**	**28**	P	**P**	**17 53 27.5**	**-0.5**
	comp=Z,1.6nm,1.2s,baz=268,slow=6.6,SNR=4.8						
BMAR	**Burnt Mountain**	**59.13**	**25**	P	**P**	**17 53 35.9**	**-0.4**
SCRK	**Sand Creek**	**59.16**	**29**	P	**P**	**17 53 36.2**	**-0.4**
SCRK				IAmb	IAmb	17 54 09.3	
	comp=Z,14nm,1.7s						
KKAR	**Karatay Array**	**59.70**	**306**	P	**P**	**17 53 41.5**	**+0.9**
ABKAR	**Akbulak array**	**65.73**	**315**	P	**P**	**17 54 20.1**	**-0.4**
ABKAR	**Akbulak array**	**65.73**	**315**	P	**P**	**17 54 20.2**	**-0.4**
ABKAR				IAmb	IAmb	17 54 25.3	
	comp=Z,1.3nm,0.8s						
EUNU	**Eureka**	**70.34**	**8**	P	**P**	**17 54 51.2**	**+2.1**
EUNU				IAmb	IAmb	17 55 11.2	
	comp=Z,6.4nm,1.5s						
YKA	**Yellowknife Ar**	**72.39**	**28**	P	**P**	**17 55 01.0**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=294,slow=6.0,SNR=5.6						
ARCES	**ARCESS Array B**	**74.14**	**341**	P	**P**	**17 55 13.3**	**+1.4**
WALA	**Waterton Lakes**	**78.56**	**41**	P	**P**	**17 55 36.0**	**-1.5**
WALA				IAmb	IAmb	17 55 36.2	
	comp=Z,3.5nm,1.2s						
FIA1	**FINESS Array S**	**78.57**	**334**	P	**P**	**17 55 37.0**	**-0.1**
FINES	**FINESS Array B**	**78.57**	**334**	P	**P**	**17 55 37.1**	**0.0**
	comp=Z,2.7nm,0.7s,baz=120,slow=11,SNR=6.0						
FINES	**FINESS Array B**	**78.57**	**334**	P	**P**	**17 55 36.8**	**-0.3**
KBZ	**Khabaz**	**78.64**	**313**	P	**P**	**17 55 39.7**	**+1.9**
	comp=Z,1.6nm,0.8s,baz=66,slow=4.0,SNR=5.3						
LPAZ	**La Paz**	**149.65**	**77**	PKPbc	**PKPbc**	**18 03 26.4**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=260,slow=4.7,SNR=4.2						

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*NEIC **19** 17:44:04.9±1.1, 19°.94S±0°.04×71°.14W±0°.03, h10^{km}±5^{km}, mb4.3/2, Mwr3.8/38, ML3.6(GUC), Error ellipse: s-maj=6.4km s-min=4.3km az=199.0*

*NEIC **19** 17:44:05, 19°.94S×71°.13W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}6.70; $M_{\theta\theta}$0.27; $M_{\phi\phi}$-6.98; $M_{r\theta}$0.38; $M_{\theta\phi}$1.20; $M_{\phi r}$-1.65; Fault plane solution: $M_0$7.15000×10^{14} NP1:ϕ_s169.82000°, δ51.85000°, λ88.71000°. NP2:ϕ_s351.91000°, δ38.16000°, λ91.64000°. Principal axes: T 6.9055, Plg83.0000°, Azm72.0000°; N 0.4661, Plg1.0000°, Azm171.0000°; P -7.3716, Plg7.0000°, Azm261.0000°;*

*GUC **19** 17:44:07.4±0.6, 19°.91S×71°.12W, h42^{km}±4^{km}, ML3.6*

*IDC **19** 17:44:14.8±3.7, 19°.89S×70°.48W, h78^{km}±28^{km}, mb3.7/3, mb1 3.7/6, mb1mx3.4/23, mbtmp3.8/6, MS2.7/1, Ms1 2.8/1, ms1mx2.4/20, Error ellipse: s-maj=52.2km s-min=16.2km az=88.0*

ISC 19 17:44:05.2±3.1**, 19°.94S**±0°.03×**71°.15W**±0°.07**, h15**^{km}±20^{km}**, n51, σ1^{s}.12**/64**, mb4.1**/4**, 8C, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**1.01**	**109**	*e*P	**Pb**	**17 44 24.1**	**-0.3**
TA02				*e*S	**Sb**	**17 44 37.2**	**-0.3**
TA02				IAML		17 44 38.7	
	comp=N,2μm,0.7s						
TA02	**Huaiquique**	**1.01**	**109**		**Pb**	**17 44 24.2**	**-0.2**
TA02				Sg	**Sb**	**17 44 37.4**	**-0.1**
TA01	**Diego Aracena**	**1.10**	**124**	⇑*i*P	**Pb**	**17 44 26.0**	**+0.1**
TA01				*i* S	**Sb**	**17 44 39.7**	**-0.4**
TA01	**Diego Aracena**	**1.10**	**124**		**Pb**	**17 44 26.0**	**+0.1**
TA01				Sg	**Sb**	**17 44 39.6**	**-0.5**
HMBC	**Humberstone**	**1.23**	**106**	⇑*i*P	**Pn**	**17 44 27.6**	**-0.4**
HMBC				*i* S	**Sb**	**17 44 43.8**	**-0.2**
HMBC				IAML		17 44 47.9	
	comp=N,4μm,0.8s						
PATCX	**Punta Patache**	**1.28**	**133**	⇑*i*P	**Pn**	**17 44 28.7**	**+0.2**
PATCX				*e*S	**Sb**	**17 44 44.5**	**-0.9**
PATCX	**Punta Patache**	**1.28**	**133**		**Pn**	**17 44 28.8**	**+0.2**
PB11	**IPOC Station P**	**1.42**	**83**		**Pn**	**17 44 30.2**	**-0.4**
PB11				Sn	**Sn**	**17 44 48.1**	**-1.0**
PB12	**IPOC Station P**	**1.53**	**31**	⇑*i*P	**Pn**	**17 44 31.6**	**-0.6**
PB12				*e*S	**Sn**	**17 44 50.1**	**-1.7**
PB12				IAML		17 45 00.0	
	comp=N,837nm,0.5s						
PB12	**IPOC Station P**	**1.53**	**31**		**Pn**	**17 44 31.4**	**-0.7**
AP01	**Chacalluta**	**1.74**	**26**	*e*P	**Pn**	**17 44 34.5**	**-0.3**
AP01				*e*S	**Sn**	**17 44 54.7**	**-2.1**
AP01	**Chacalluta**	**1.74**	**26**		**Pn**	**17 44 34.6**	**-0.2**
PB08	**IPOC Station P**	**1.89**	**96**	⇑*e*P	**Pn**	**17 44 37.3**	**0.0**
PB08				*e*S	**Sn**	**17 45 00.8**	**-0.2**
PB08				IAML		17 45 12.2	
	comp=E,553nm,0.6s						
PB08	**IPOC Station P**	**1.89**	**96**		**Pn**	**17 44 37.3**	**0.0**
PB01	**IPOC Station P**	**1.90**	**125**	*e*P	**Pn**	**17 44 37.4**	**+0.2**
PB01				*e*S	**Sn**	**17 45 00.5**	**-0.5**
PB01				IAML		17 45 11.3	
	comp=E,682nm,0.5s						
PB01	**IPOC Station P**	**1.90**	**125**		**Pn**	**17 44 37.7**	**+0.5**
PB07	**IPOC Station P**	**2.13**	**147**	*e*P	**Pn**	**17 44 40.8**	**+0.3**
PB07				IAML		17 45 18.7	
	comp=E,411nm,0.6s						
PB07	**IPOC Station P**	**2.13**	**147**		**Pn**	**17 44 39.6**	**-0.8**
PB16	**IPOC Station P**	**2.23**	**44**	⇑*e*P	**Pn**	**17 44 42.3**	**+0.1**
PB16				*e*S	**Sn**	**17 45 10.2**	**+0.5**
PB16				IAML		17 45 21.1	
	comp=N,709nm,0.4s						
PB16	**IPOC Station P**	**2.23**	**44**		**Pn**	**17 44 42.2**	**+0.1**
PB03	**IPOC Station P**	**2.47**	**148**	*e*P	**Pn**	**17 44 45.6**	**+0.5**
PB04	**IPOC Station P**	**2.56**	**159**	*e*P	**Pn**	**17 44 46.5**	**+0.2**
PB04				⇑*e*S	**Sn**	**17 45 15.2**	**-1.9**
PB04				IAML		17 45 41.0	
	comp=N,321nm,0.6s						
PB04	**IPOC Station P**	**2.56**	**159**		**Pn**	**17 44 46.5**	**+0.2**
PB09	**IPOC Station P**	**2.56**	**136**	⇑*e*P	**Pn**	**17 44 48.0**	**+1.6**
PB09				*e*S	**Sn**	**17 45 17.1**	**-0.3**
PB09				IAML		17 45 33.3	
	comp=E,682nm,0.7s						
PB09	**IPOC Station P**	**2.56**	**136**		**Pn**	**17 44 47.7**	**+1.3**
PB05	**IPOC Station P**	**3.03**	**163**	*e*P	**Pn**	**17 44 52.7**	**0.0**
PB05				IAML		17 45 59.8	
	comp=N,96nm,0.4s						
PB06	**IPOC Station P**	**3.12**	**152**	*e*P	**Pn**	**17 44 54.6**	**+0.6**
PB06				IAML		17 45 55.9	
	comp=E,146nm,0.4s						
PB06	**IPOC Station P**	**3.12**	**152**		**Pn**	**17 44 54.4**	**+0.4**
LVC	**Limon Verde**	**3.38**	**142**	P	**Pn**	**17 44 59.6**	**+1.9**
	comp=E,2.6nm,0.3s,baz=297,slow=8.8,SNR=5.6						
LVC				S	**Sn**	**17 45 38.3**	**+0.6**
	comp=E,9.9nm,0.3s,baz=341,slow=2.6,SNR=5.8						
PB10	**IPOC Station P**	**3.59**	**171**		**Pn**	**17 45 00.1**	**-0.3**
PB15	**IPOC Station P**	**3.60**	**155**		**Pn**	**17 45 01.0**	**+0.3**
LPAZ	**La Paz**	**4.63**	**39**	P	**Pn**	**17 45 18.1**	**+2.9**
	comp=E,1.5nm,0.3s,baz=195,slow=5.3,SNR=17						
LPAZ				LR	LR	17 47 10.4	
	comp=E,93nm,19.1s,baz=248,slow=42						
LPAZ	**La Paz**	**4.63**	**39**		**Pn**	**17 45 18.3**	**+3.1**
LPAZ	**La Paz**	**4.63**	**39**	Pn	**Pn**	**17 45 17.1**	**+1.9**
AC02	**Maricunga**	**7.11**	**165**		**Pn**	**17 45 49.5**	**+0.4**
AC02					**Sn**	**17 47 09.8**	**-0.1**
CO05	**La Serena**	**9.93**	**180**	Pn	**Pn**	**17 46 26.7**	**-0.7**
GO04	**Tololo Observa**	**10.19**	**178**	Pn	**Pn**	**17 46 29.5**	**-1.7**
SIV	**San Ignacio**	**10.36**	**69**	P	**Pn**	**17 46 34.3**	**+0.9**
	comp=E,0.5nm,0.3s,baz=248,slow=12,SNR=11						
CO03	**El Pedregal**	**10.86**	**178**	Pn	**Pn**	**17 46 40.3**	**+0.1**
PTLB	**Pontes e Lacer**	**12.29**	**71**		**Pn**	**17 46 58.0**	**-1.7**
VILB	**Vilhena**	**12.59**	**58**		**Pn**	**17 47 06.8**	**+2.9**
H03N1	**Juan Fernandez**	**15.12**	**206**	T	T	18 03 34.0	
	baz=31,slow=71,SNR=6.8						
H03N2	**Juan Fernandez**	**15.12**	**206**	T	T	18 03 33.8	
	baz=31,slow=71,SNR=6.6						
H03N3	**Juan Fernandez**	**15.13**	**206**	T	T	18 03 35.0	
	baz=31,slow=71,SNR=5.0						
PTGA	**Pitinga**	**22.01**	**31**	P	**P**	**17 48 57.5**	**-1.6**
	comp=E,2.4nm,0.3s,baz=181,slow=19,SNR=10						
BOAV	**Boa Vista**	**24.53**	**26**	P	**P**	**17 49 24.3**	**-0.1**
BOAV				IAmb	IAmb	17 49 47.4	
	comp=Z,12nm,1.4s						
TORD	**Torodi Ar. Bea**	**78.83**	**72**	P	**P**	**17 56 05.9**	**-2.3**
	comp=Z,1.3nm,0.6s,baz=257,slow=5.2,SNR=9.0						
TORD	**Torodi Ar. Bea**	**78.83**	**72**	P	**P**	**17 56 07.9**	**-0.2**
TORD				IAmb	IAmb	17 56 17.2	
	comp=Z,1.8nm,0.8s						
YKA	**Yellowknife Ar**	**89.04**	**341**	P	**P**	**17 57 00.6**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=139,slow=4.7,SNR=3.5						
MKAR	**Makanchi Array**	**145.54**	**33**	PKPbc	**PKPab**	**18 03 44.3**	**+1.1**
	comp=Z,0.4nm,0.9s,baz=328,slow=4.3,SNR=2.1						
SONM	**Songino Array**	**152.11**	**4**	PKPbc	**PKiKP**	**18 04 01.9**	**+1.4**
	comp=Z,0.8nm,1.1s,baz=325,slow=2.4,SNR=3.9						

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*IDC **19** 18:17:47.0±5.2, 28°.63N×132°.45E, h0^{km}, mb3.6/4, mb1 3.7/5, mb1mx3.5/27, mbtmp3.5/5, ML2.6/1, MS3.1/1, Ms1 3.3/1, ms1mx2.7/25, Error ellipse: s-maj=115.0km s-min=41.2km az=168.0*

*JMA **19** 18:17:54.7±0.2, 29°.30N×132°.18E, h79^{km}, M3.5*

ISC 19 18:17:55.9±0.9**, 29°.26N**±0°.04×**132°.29E**±0°.06**, h50**^{km}**, n26, σ2^{s}.39**/37**, mb3.3**/4**, Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMTN	**Minamitane**	**1.66**	**314**	P	**Pn**	**18 18 21.4**	**-1.1**
JMTN				S	**Sn**	**18 18 40.7**	**-1.9**
JTN	**Tanegashima 3**	**1.79**	**321**	P	**Pn**	**18 18 23.1**	**-1.3**
JTN				S	**Sn**	**18 18 43.8**	**-2.3**
JYAK	**Yakushimahirau**	**1.83**	**303**	P	**Pn**	**18 18 23.7**	**-1.2**
JYAK				S	**Sn**	**18 18 44.3**	**-2.6**
JKC	**Kuchinoerabu**	**2.18**	**304**	P	**Pn**	**18 18 28.9**	**-0.8**
JKC				*e*S	**Sn**	**18 18 53.7**	**-1.7**
JNN	**Nakanoshima**	**2.18**	**286**	P	**Pn**	**18 18 28.8**	**-0.9**
JTSR	**Tashiro 2**	**2.24**	**328**	P	**Pn**	**18 18 29.3**	**-1.2**
JTSR				*e*S	**Sn**	**18 18 54.7**	**-2.3**
JZK	**Kikaishima**	**2.24**	**246**	P	**Pn**	**18 18 29.7**	**-0.8**
JZK				*e*S	**Sn**	**18 18 56.1**	**-0.9**
JNAR	**Kushima--Naru**	**2.42**	**339**	P	**Pn**	**18 18 32.1**	**-0.9**
JNAR				*e*S	**Sn**	**18 18 58.9**	**-2.6**
JAM	**Amami Oshima**	**2.50**	**251**	P	**Pn**	**18 18 32.3**	**-1.8**
JAM				*e*S	**Sn**	**18 19 01.7**	**-1.7**
JTAJ	**Takarajima**	**2.70**	**268**	P	**Pn**	**18 18 35.4**	**-1.4**
JTZ	**Takazaki**	**2.83**	**339**	P	**Pn**	**18 18 37.6**	**-1.0**
JTZ				*e*S	**Sn**	**18 19 08.9**	**-2.6**
JAMN	**Amaminishikomi**	**2.92**	**250**	P	**Pn**	**18 18 38.3**	**-1.5**
JAMN				*e*S	**Sn**	**18 19 11.4**	**-2.2**
JSJ	**Shimokoshiki**	**3.28**	**318**	P	**Pn**	**18 18 42.5**	**-2.3**
JSJ				S	**Sn**	**18 19 17.9**	**-4.6**
JTK	**Tokunoshima**	**3.29**	**244**	P	**Pn**	**18 18 43.7**	**-1.2**
JTK				*e*S	**Sn**	**18 19 20.0**	**-2.7**
JKDJ	**Kitadaitoujima**	**3.41**	**195**	P	**Pn**	**18 18 45.3**	**-1.3**
JKDJ				*e*S	**Sn**	**18 19 22.7**	**-3.1**
JMZ	**Minamidaito 2**	**3.56**	**196**	P	**Pn**	**18 18 47.1**	**-1.5**
JMZ				*e*S	**Sn**	**18 19 25.5**	**-3.9**
JTO	**Tosashimizu**	**3.62**	**7**	P	**Pn**	**18 18 47.9**	**-1.5**
JTO				*e*S	**Sn**	**18 19 24.0**	**-6.8**
MJAR	**Matsushiro Arr**	**8.80**	**33**	Pn	**Pn**	**18 20 02.4**	**+1.9**
	0.1nm,0.3s,baz=202,slow=13,SNR=6.6						
SONM	**Songino Array**	**27.26**	**320**	P	**P**	**18 23 37.4**	**+2.0**
	0.4nm,0.6s,baz=137,slow=9.0,SNR=4.1						
CMAR	**Chiang Mai Arr**	**32.23**	**258**	LR	LR	18 37 05.5	
	comp=Z,31nm,19.8s,baz=176,slow=36						
MKAR	**Makanchi Array**	**42.33**	**309**	P	**P**	**18 25 47.7**	**+2.8**
	0.4nm,0.6s,baz=97,slow=10.0,SNR=6.2						
FINES	**FINESS Array B**	**71.99**	**331**	P	**P**	**18 29 15.1**	**+1.1**
	2.0nm,0.8s,baz=69,slow=7.6,SNR=4.2						
YKA	**Yellowknife Ar**	**74.25**	**26**	P	**P**	**18 29 28.9**	**+1.5**
	0.3nm,0.8s,baz=293,slow=6.0,SNR=2.4						
H03N2	**Juan Fernandez**	**153.07**	**107**	T	T	21 28 18.5	
	baz=272,slow=74,SNR=7.3						
H03N3	**Juan Fernandez**	**153.07**	**107**	T	T	21 28 18.0	
	baz=272,slow=74,SNR=6.1						
H03N1	**Juan Fernandez**	**153.08**	**107**	T	T	21 28 17.6	
	baz=272,slow=74,SNR=7.3						

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*ANF **19** 18:34:00.8±0.4, 37°.28N×115°.01W, h1^{km}, ML2.9/13, Error ellipse: s-maj=4.3km s-min=2.8km az=80.0*

*NEIC **19** 18:34:01.3±0.8, 37°.25N±0°.02×115°.07W±0°.01, h7^{km}±7^{km}, Error ellipse: s-maj=2.8km s-min=1.0km az=149.0*

*REN **19** 18:34:01.4±1.3, 37°.24N±0°.02×115°.050W±0°.009, h0^{km}±6^{km}, ML3.0/11, ML2.8/92(NEIC), Error ellipse: s-maj=3.2km s-min=0.9km az=170.0*

ISC 19 18:34:01.1±1.0**, 37°.25N**±0°.02×**115°.06W**±0°.02**, h7**^{km}±10^{km}**, n65, σ0^{s}.77**/77**, Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRN	**Pahroc Range**	**0.15**	**3**		**Pg**	**18 34 04.7**	**+0.3**
PRN				Sg	**Sg**	**18 34 07.0**	**+0.4**
S11A	**Rachel**	**0.67**	**306**		**Pg**	**18 34 14.3**	**+0.2**
SHPR	**Sheep Range**	**0.75**	**186**		**Pg**	**18 34 14.7**	**-0.8**
SHPR				Sg	**Sg**	**18 34 24.7**	**-0.6**
SHPR				IAML		18 34 31.0	
	comp=E,339nm,0.2s						
ICU	**Indian Springs**	**0.92**	**96**		**Pg**	**18 34 18.6**	**-0.1**
TPNV	**Topopah Spring**	**1.00**	**253**		**Pg**	**18 34 20.3**	**+0.1**
TPNV				Sg	**Sg**	**18 34 33.3**	**+0.1**
TPNV				IAML		18 34 37.3	
	comp=E,316nm,0.4s						
TPNV				IAML		18 34 37.9	
	comp=E,219nm,0.4s						
TPNV	**Topopah Spring**	**1.00**	**253**	P	**Pg**	**18 34 20.5**	**+0.3**
	baz=73,SNR=102						
R11A	**Troy Canyon, C**	**1.17**	**339**		**Pg**	**18 34 23.1**	**-0.4**
R11A				Sg	**Sg**	**18 34 38.7**	**0.0**
R11A				IAML		18 34 42.3	
	comp=E,225nm,0.4s						
R11A				IAML		18 34 42.4	
	comp=N,232nm,0.4s						
R11A	**Troy Canyon, C**	**1.17**	**339**	P	**Pg**	**18 34 23.1**	**-0.4**
	baz=159,SNR=98						
R11A				S	**Sb**	**18 34 39.7**	**+0.6**
	baz=159						
CCUT	**Cedar City**	**1.39**	**77**		**Pg**	**18 34 27.9**	**+0.2**
CCUT				Sn	**Sb**	**18 34 45.5**	**+0.2**
CCUT				IAML		18 34 49.5	
	comp=N,159nm,0.6s						
CCUT				IAML		18 34 50.0	
	comp=E,114nm,0.5s						
LCMT	**Little Creek M**	**1.47**	**99**		**Pn**	**18 34 28.6**	**+0.5**
LCMT				IAML		18 34 50.3	
	comp=N,139nm,0.6s						
V12A	**Nelson**	**1.53**	**174**		**Pn**	**18 34 29.5**	**+0.6**
PSUT	**Pine Spring**	**1.59**	**36**		**Pn**	**18 34 30.4**	**+0.5**
PSUT				IAML		18 34 55.3	
	comp=N,152nm,0.5s						
SZCU	**Shurtz Canyon**	**1.61**	**77**	Pn	**Pn**	**18 34 28.4**	**-1.6**
SZCU				IAML		18 34 56.3	
	comp=E,128nm,0.4s						
SZCU				IAML		18 34 57.0	
	comp=N,126nm,0.3s						
FURC	**Furnace Creek,**	**1.65**	**242**	P	**Pg**	**18 34 32.4**	**-0.2**
	baz=61,SNR=35						
FURC				S	**Sg**	**18 34 54.8**	**+0.9**
	baz=61						
SHOC	**Shoshone, Teco**	**1.67**	**216**	Pb	**Pg**	**18 34 33.1**	**0.0**
	baz=36,SNR=10						
GWY	**Greenwater Val**	**1.68**	**231**		**Pn**	**18 34 31.2**	**+0.2**
GWY				IAML		18 34 59.4	
	comp=E,90nm,0.6s						
GWY				IAML		18 35 00.1	
	comp=N,80nm,0.6s						
KNB	**Kanab**	**1.81**	**97**	Pn	**Pn**	**18 34 33.6**	**+0.9**
SPR3	**Spring Creek 3**	**1.83**	**18**		**Pn**	**18 34 32.3**	**-1.0**
SPR3				IAML		18 34 59.5	
	comp=E,68nm,0.6s						
SPR3				IAML		18 35 00.1	
	comp=N,83nm,0.3s						
TPH	**Tonopah**	**1.90**	**296**		**Pn**	**18 34 34.2**	**+0.2**
QSM	**Queen of Sheba**	**1.94**	**229**		**Pn**	**18 34 34.5**	**0.0**
TUQ	**Turquoise Moun**	**1.94**	**201**	Pb	**Pg**	**18 34 37.9**	**-0.4**
	baz=21,SNR=32						
LCH	**Last Change Ra**	**2.06**	**270**		**Pn**	**18 34 36.5**	**+0.3**
LCH				IAML		18 35 14.4	
	comp=E,73nm,0.4s						
PKCU	**Pink Cliffs**	**2.20**	**84**		**Pn**	**18 34 40.0**	**+1.7**
MPMC	**Manual Prospec**	**2.29**	**239**	P	**Pn**	**18 34 39.6**	**+0.2**
	baz=58,SNR=18						
MPMC				Sb	**Sg**	**18 35 14.0**	**-0.6**
	baz=58						
DSP	**Deep Springs**	**2.32**	**274**		**Pn**	**18 34 40.4**	**+0.7**
U15A	**North Rim**	**2.37**	**110**		**Pn**	**18 34 42.0**	**+1.4**
U15A				IAML		18 35 19.4	
	comp=N,41nm,0.5s						
U15A				IAML		18 35 25.0	
	comp=E,37nm,0.7s						
GSC	**Goldstone, Bar**	**2.41**	**216**		**Pn**	**18 34 41.5**	**+0.6**
GSC				IAML		18 35 26.4	
	comp=E,36nm,1.0s						
GSC	**Goldstone, Bar**	**2.41**	**216**	Pb	**Pg**	**18 34 46.3**	**-0.9**
	baz=36,SNR=16						
MTPU	**Mount Pierson**	**2.42**	**70**		**Pn**	**18 34 41.8**	**+0.5**
TCRU	**Three Creeks R**	**2.47**	**56**		**Pn**	**18 34 44.2**	**+2.2**
TCRU				IAML		18 35 24.6	
	comp=N,50nm,0.7s						
TCRU				IAML		18 35 26.7	
	comp=E,45nm,0.7s						
GMRC	**Granite Mounta**	**2.51**	**191**	P	**Pn**	**18 34 43.4**	**+0.9**
	baz=11,SNR=12						
GMRC				Sb	**Sg**	**18 35 20.7**	**-1.0**
	baz=11						
MVU	**Marysvale**	**2.58**	**60**		**Pn**	**18 34 43.6**	**+0.2**
MSU	**Marysvale**	**2.60**	**60**		**Pn**	**18 34 44.1**	**+0.3**
HEC	**Hector,Ludlow**	**2.63**	**203**	Pb	**Pg**	**18 34 50.9**	**-0.6**
	baz=23						
NV11	**Mina Array Sit**	**2.72**	**297**		**Pn**	**18 34 45.1**	**-0.2**
NVAR	**Mina Array Bea**	**2.82**	**296**		**Pn**	**18 34 46.7**	**0.0**
LHV	**Little Huntoon**	**2.90**	**291**		**Pn**	**18 34 48.0**	**+0.4**
LHV				IAML		18 35 41.0	
	comp=E,41nm,0.7s						
KVN	**Kaiserville**	**2.99**	**308**		**Pn**	**18 34 49.4**	**+0.3**
RYN	**Ryan**	**3.06**	**298**		**Pn**	**18 34 50.1**	**+0.1**
RYN				IAML		18 35 43.0	
	comp=N,32nm,0.4s						
RYN				IAML		18 35 43.4	
	comp=E,27nm,0.6s						
IRM	**Iron Mountain**	**3.09**	**181**	Pg	**Pg**	**18 34 59.8**	**-0.5**
	baz=1.4,SNR=7.8						
IRM				Sb	**Sg**	**18 35 40.1**	**-0.2**
	baz=1.4						
ISA	**Isabella, Lake**	**3.18**	**241**		**Pn**	**18 34 51.6**	**+0.1**
BELC	**Belle Mtn. Jos**	**3.33**	**194**	Pg	**Pg**	**18 35 04.7**	**-0.3**
	baz=13,SNR=5.6						
BELC				Sb	**Sg**	**18 35 47.6**	**-0.6**
	baz=13						
EDW2	**Edwards Air Fo**	**3.35**	**226**	Sb	**Sg**	**18 35 47.4**	**-1.4**
	baz=44						
DUG	**Dugway, Tooele**	**3.42**	**30**		**Pn**	**18 34 55.2**	**+0.3**
DUG				IAML		18 35 25.4	
	comp=E,15nm,4.9s						
DUG				IAML		18 35 53.1	
	comp=E,16nm,0.8s						
DUG	**Dugway, Tooele**	**3.42**	**30**	Sb	**Sg**	**18 35 50.2**	**-0.8**
	baz=211						
WUAZ	**Wupatki**	**3.44**	**119**		**Pn**	**18 34 55.7**	**+0.5**
WUAZ				IAML		18 35 48.1	
	comp=E,26nm,0.4s						
WUAZ	**Wupatki**	**3.44**	**119**	Pg	**Pg**	**18 35 06.2**	**-0.8**
	baz=301,SNR=8.9						

WUAZ				Sb	Sb	18 35 46.9	+2.3
	baz=301						
ELK	Elko	3.49	358		Pn	18 34 55.9	0.0
NLU	North Lily Min	3.57	40		Pn	18 34 56.5	-0.6
BMN	Battle Mountai	3.59	333		Pn	18 34 57.8	+0.5
BMN				IAML		18 35 55.5	
	comp=E,16nm,1.0s						
BMN				IAML		18 35 57.3	
	comp=N,23nm,0.3s						
TMUT	Trail Mountain	3.65	55		Pn	18 34 58.5	+0.2
TMUT				IAML		18 36 02.8	
	comp=E,18nm,0.6s						
TMUT				IAML		18 36 04.6	
	comp=N,22nm,2.5s						
YERR	Yerington	3.72	299		Pn	18 34 59.0	-0.1
YERR				IAML		18 36 00.8	
	comp=E,22nm,4.8s						
YERR				IAML		18 36 02.6	
	comp=N,13nm,0.7s						
PFO	Pinyon Flats O	3.81	198	Pn	Pn	18 35 00.6	+0.3
MWC	Mount Wilson	3.88	220	Pn	Pn	18 35 02.2	+0.9
MWC				IAML		18 35 54.9	
	comp=E,11nm,0.4s						
MWC				IAML		18 36 28.3	
	comp=N,17nm,4.2s						
BGU	Big Grassy Mou	3.99	23	Pn	Pn	18 35 02.0	-0.8
BGU				IAML		18 36 14.0	
	comp=E,10nm,3.2s						
BGU				IAML		18 36 18.3	
	comp=N,12nm,4.0s						
PNTR	Pine Nut	4.02	299		Pn	18 35 02.8	-0.4
SRU	San Rafael Swe	4.03	61		Pn	18 35 01.4	-1.9
SRU				IAML		18 36 16.4	
	comp=E,10nm,0.8s						
SRU				IAML		18 37 30.4	
	comp=N,10nm,5.0s						
P17A	Butcher Ranch,	4.05	56	Pn	Pn	18 35 04.2	+0.5
P17A				IAML		18 35 45.9	
	comp=E,13nm,4.7s						
X16A	Lo Mia Camp, P	4.08	133		Pn	18 35 03.5	-0.6
VCNR	Virginia City	4.15	301	Pn	Pn	18 35 04.9	0.0
PAHR	Pah Rah Range	4.18	307	Pn	Pn	18 35 04.6	-0.8
PAHR				IAML		18 36 43.4	
	comp=E,9.0nm,5.0s						
GLA	Glamis	4.20	177	Pn	Pn	18 35 06.0	+0.5
GLA				IAML		18 36 21.4	
	comp=N,14nm,0.7s						
P18A	Preston Nutter	4.46	56	Pn	Pn	18 35 08.1	-1.3
P18A				IAML		18 36 01.3	
	comp=N,8.4nm,4.0s						
P18A				IAML		18 37 12.0	
	comp=E,12nm,4.3s						
SPUT	South Promonto	4.53	26	Pn	Pn	18 35 10.2	+0.1
SPUT				IAML		18 37 15.2	
	comp=N,9.4nm,3.9s						
SPUT				IAML		18 38 03.5	
	comp=E,8.9nm,3.5s						
HWUT	Hardware Ranch	5.12	31	Pn	Pn	18 35 17.1	-1.2

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*IDC **19** 18:45:21.5±1.7, 3°.71S×127°.27E, h0^{km}, mb3.7/2, mb1 3.9/4, mb1mx3.5/29, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=46.0km s-min=28.3km az=75.0*

*DJA **19** 18:45:27.2±0.8, 4°S±8°×12°7E±°, h26^{km}±10^{km}, M3.7/6, MLv3.7/6*

ISC 19 18:45:25.8±1.4**, 4°.0S**±0°.1×**127°.36E**±0°.06**, h35^{km}, n9, σ2^{s}.15**/14**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	0.88	72	P	Pn	18 45 39.9	-1.8
AAI				S	Sn	18 45 56.3	+3.1
MSAI	Masohi	1.68	69	P	Pn	18 45 54.8	+2.1
MSAI				S	Sn	18 46 16.4	+3.3
SANI	Sanana	2.34	324	P	Pn	18 46 02.3	+0.5
SANI				S	Sn	18 46 29.5	+0.1
LBMI	Labuha	3.30	2	P	Pn	18 46 16.5	+1.4
LBMI				S	Sn	18 46 54.1	+0.9
SWI	Sorong	4.96	52	P	Pn	18 46 38.0	+0.1
SWI				S	Sn	18 47 32.6	-1.6
SIJI	Sorong	4.96	52	Pn	Pn	18 46 37.5	-0.5
	3.9nm,0.3s,baz=262,slow=22,SNR=22						
SIJI				Sn	Sn	18 47 30.2	-4.0
	4.9nm,0.3s,baz=353,slow=21,SNR=15						
WRA	Warramunga Arr	17.28	157	Pn	P	18 49 25.7	-0.1
	0.1nm,0.3s,baz=343,slow=12,SNR=7.4						
ASAR	Alice Springs	20.59	163	P	Pn	18 50 05.8	+1.5
	5.2nm,0.7s,baz=342,slow=11,SNR=72						
MKAR	Makanchi Array	64.26	327	P	P	18 55 56.6	-0.9
	0.2nm,0.5s,baz=114,slow=7.8,SNR=4.0						

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*IDC **19** 19:00:42.7±1.6, 2°.63N×95°.53E, h0^{km}, mb4.1/8, mb1 4.2/10, mb1mx3.6/51, mbtmp4.1/10, ML3.8/2, MS3.6/4, Ms1 3.6/4, ms1mx3.2/47, Error ellipse: s-maj=45.3km s-min=19.9km az=54.0*

*DJA **19** 19:00:47.7±0.7, 3°N±3°×9°6E±°, h10^{km}, M4.4/11, mb4.5/4, mB4.8/1, MLv4.3/11, Mw(mB)4.1/1*

*NEIC **19** 19:00:48.3±1.3, 2°.65N±0°.08×95°.7E±0°.1, h29^{km}±6^{km}, mb4.4/25, Error ellipse: s-maj=19.1km s-min=9.4km az=63.0*

ISC 19 19:00:47.0±0.6**, 2°.64N**±0°.05×**95°.64E**±0°.06**, h25^{km}, n69, σ1^{s}.01**/66**, mb4.4**/23**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPTI		1.66	68	P	Pn	19 01 13.6	-0.9
TPTI				S	Sn	19 01 35.2	+0.2
KCSI	Kotacane, Aceh	2.31	68	P	Pn	19 01 24.4	+1.0
KCSI				S	Sb	19 01 54.1	-1.9
GSI	Gunungsitoli	2.35	124	P	Pn	19 01 24.7	+0.7
GSI				S	Sn	19 01 50.9	-1.1
GSI	Gunungsitoli	2.35	124		Pn	19 01 24.1	+0.1
LHMI	Lhok Sumawe	2.89	27	P	Pn	19 01 32.4	+1.0
LHMI	Lhok Sumawe	2.89	27	Pn	Pn	19 01 31.8	+0.4
TSI	Tuntungan	3.05	74	P	Pn	19 01 35.2	+1.6
TSI				S	Sb	19 02 21.9	+4.6
RPSI	Rantau Prapat	3.28	89		Pn	19 01 37.5	+0.7
PSI	Prapat	3.29	87	Pn	Pn	19 01 37.5	+0.5
	3.4nm,0.3s,baz=327,slow=17,SNR=21						
PSI				Sn	Sn	19 02 15.3	0.0
	2.9nm,0.3s,baz=243,slow=18,SNR=4.5						
PSI				LR	LR	19 03 13.3	
	comp=Z,553nm,18.6s,baz=262,slow=44						
MNSI	Mandailing Nat	4.34	115	P	Pn	19 01 52.7	+1.3
MNSI				S	Sn	19 02 39.9	-1.4
SISI	Saibi	5.24	139	P	Pn	19 02 04.5	+0.8
	0.2nm14nm,0.7s						
KULM	Kulim	5.65	62		Pn	19 02 09.5	0.0
IPM	Ipoh	5.68	71		Pn	19 02 09.8	0.0
PDSI	Padang	5.97	126	P	Pn	19 02 24.3	+10
PPSI	Pulau Pagai	6.92	141	P	Pn	19 02 27.2	+0.4
RGRI	Rengat	7.32	114	P	Pn	19 02 18.9	-13
MYKOM	Kota Tinggi	8.25	96	Pn	Pn	19 02 45.0	-0.1
PALK	Pallekele	15.57	288	LR	LR	19 09 44.6	
	comp=Z,202nm,20.2s,baz=212,slow=35						
UBPT	Khong Chiam	15.87	37	Pn	Pn	19 04 28.2	-0.6
CM31	Chiang Mai Arr	16.05	11	Pn	Pn	19 04 32.1	+0.9
CMAR	Chiang Mai Arr	16.05	11	Pn	Pn	19 04 31.0	-0.2
	0.3nm,0.3s,baz=200,slow=11,SNR=39						
CMAR				LR	LR	19 10 20.5	
	comp=Z,174nm,18.3s,baz=235,slow=36						
CMAR	Chiang Mai Arr	16.05	11		Pn	19 04 30.7	-0.5
CHTO	Chiang Mai	16.40	11		Pn	19 04 35.4	-0.2
SLVN	Son La	20.25	23	P	P	19 05 20.3	-0.4
SLVN				IAmb	IAmb	19 05 38.2	
	comp=Z,19nm,1.4s						
KKM	Kota Kinabalu	20.79	80	P	P	19 05 26.8	+0.1
MYLDM	Lahad Datu	22.95	83	P	P	19 05 49.5	-0.1
SHL	Shillong	23.08	351	P	P	19 05 49.7	-1.4
H08S2	Diego Garcia H	25.25	246	T	T	19 32 20.8	
	baz=67,slow=76,SNR=3835						
H08S3	Diego Garcia H	25.25	246	T	T	19 32 20.9	
	baz=67,slow=76,SNR=3331						
H08S1	Diego Carcia H	25.27	246	T	T	19 32 19.3	
	baz=67,slow=76,SNR=3681						
JIRN	Jiri	26.47	341	*e*P	P	19 06 23.6	+0.9
	comp=Z,26nm,0.7s						
PKI	Pulchoki	26.66	339	*e*P	P	19 06 26.9	+2.6
	comp=Z,4.4nm,0.6s						
PKIN	Phulchoki	26.66	339	*e*P	P	19 06 26.6	+2.3
	comp=Z,2.9nm,0.5s						
GUN	Gumba	26.81	341	*e*P	P	19 06 26.0	+0.3
	comp=Z,19nm,0.7s						
KKN	Kakani	26.90	339	*e*P	P	19 06 27.5	+1.1
LSA	Lhasa	27.25	351	P	P	19 06 29.1	-0.7
LSA				IAmb	IAmb	19 06 42.7	
	comp=Z,4.7nm,0.9s						
GKN	Gorkha	27.33	338	*e*P	P	19 06 30.8	+0.6
DANN	Dangsing	27.97	337	*e*P	P	19 06 36.2	+0.1
PYUN	Piuthan	28.05	336	*e*P	P	19 06 38.3	+1.6
H01W3	Cape Leeuwin H	41.16	157	T	T	19 52 10.7	
	baz=332,slow=76,SNR=164						
H01W2	Cape Leeuwin H	41.18	157	T	T	19 52 09.8	
	baz=332,slow=76,SNR=155						
H01W1	Cape Leeuwin H	41.18	157	T	T	19 52 11.8	
	baz=332,slow=76,SNR=131						
BJT	Baijiatuau	41.61	24	P	P	19 08 32.2	-0.8
BJT				IAmb	IAmb	19 08 41.7	
	comp=Z,11nm,1.1s						
TARG	Taragay, Kyrgy	42.09	340	P	P	19 08 38.1	+0.6
TARG				IAmb	IAmb	19 08 49.5	
	comp=Z,3.8nm,0.8s						
WB0	Warramunga Arr	44.09	122	P	P	19 08 53.4	0.0
WB0				IAmb	IAmb	19 09 03.4	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	44.12	122	P	P	19 08 53.9	+0.2
	comp=Z,2.7nm,1.1s,baz=269,slow=7.6,SNR=6.9						
WRA	Warramunga Arr	44.12	122	P	P	19 08 53.8	+0.1
MK31	Makanchi Array	45.49	347	P	P	19 09 04.7	+0.4
MK31				IAmb	IAmb	19 09 05.7	
	comp=Z,7.5nm,1.1s						
MKAR	Makanchi Array	45.49	347	P	P	19 09 03.9	-0.3
	comp=Z,2.3nm,0.4s,baz=159,slow=8.6,SNR=109						
MKAR	Makanchi Array	45.49	347	P	P	19 09 04.8	+0.5
ASAR	Alice Springs	45.50	127	P	P	19 09 04.8	+0.1
	comp=Z,0.9nm,0.8s,baz=304,slow=7.1,SNR=4.8						
MAKZ	Makanchi	45.58	347	P	P	19 09 05.4	+0.5
MAKZ				IAmb	IAmb	19 09 05.7	
	comp=Z,3.5nm,0.8s						
KSRS	Korea Array	45.59	37	P	P	19 09 04.5	-0.7
	comp=Z,1.6nm,0.8s,baz=227,slow=9.6,SNR=6.6						
KSRS				LR	LR	19 30 45.7	
	comp=Z,93nm,20.4s,baz=248,slow=40						
SONM	Songino Array	45.97	10	P	P	19 09 07.5	-0.7
	comp=Z,1.6nm,0.7s,baz=189,slow=9.7,SNR=15						
SONM	Songino Array	45.97	10	P	P	19 09 08.0	-0.2
SONM				IAmb	IAmb	19 09 15.3	
	comp=Z,4.4nm,1.1s						
KKAR	Karatay Array	46.09	334	P	P	19 09 10.1	+1.1
ULN	Ulaanbaatar	46.12	11	P	P	19 09 09.0	-0.4
ULN				IAmb	IAmb	19 09 11.3	
	comp=Z,5.7nm,1.4s						
KURK	Kurchatov	50.02	346	P	P	19 09 39.5	+0.3
KURK				IAmb	IAmb	19 09 40.2	
	comp=Z,4.2nm,1.1s						
ZAA0	Zalesovo Array	51.91	352	P	P	19 09 52.9	-0.5
ZAA0				IAmb	IAmb	19 10 01.2	
	comp=Z,6.1nm,1.1s						
ZALV	Zalesovo Beam	51.91	352	P	P	19 09 53.5	0.0
	comp=Z,2.7nm,0.6s,baz=180,slow=7.1,SNR=13						
ZALV	Zalesovo Beam	51.91	352	P	P	19 09 53.0	-0.4
BRVK	Borovoye	54.46	341	P	P	19 10 12.4	+0.2
BRVK				IAmb	IAmb	19 10 13.7	
	comp=Z,3.4nm,0.7s						
ABKAR	Akbulak array	55.52	332	P	P	19 10 20.1	+0.1
ABKAR				IAmb	IAmb	19 10 21.6	
	comp=Z,5.8nm,1.2s						
ABKAR	Akbulak array	55.52	332	P	P	19 10 20.3	+0.3
KLR	Kul'dur	55.70	28	P	P	19 10 21.4	+0.2
	comp=Z,2.4nm,1.0s,baz=273,slow=9.6,SNR=3.7						
YAK	Yakutsk	64.50	17	P	P	19 11 20.7	-0.6
LHI	Lord Howe Isla	69.03	125	P	P	19 11 51.0	+0.1
FINES	FINESS Array B	78.01	333	P	P	19 12 42.2	-0.8
	comp=Z,1.5nm,0.8s,baz=303,slow=24,SNR=3.5						
FINES	FINESS Array B	78.01	333	P	P	19 12 42.9	-0.2

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*FUNV **19** 19:01:50.0, 8°.39N×71°.40W, h5^{km}, MW3.7*

ISC 19 19:01:48.8±1.2**, 8°.50N**±0°.03×**71°.40W**±0°.02**, h2^{km}**±10^{km}**, n27, σ1^{s}.73**/51**, 2C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.58	112	⇑*e*P	Pg	19 02 00.7	+0.8
SOCV				*e*S	Sg	19 02 08.2	+0.9
SOCV	Socops	0.58	112	*e*P	Pg	19 01 59.6	-0.3
SOCV				*e*S	Sg	19 02 08.6	+1.2
SDV	Santo Domingo	0.85	63	*e*P	Pg	19 02 05.6	+0.5
SDV				*e*S	Sg	19 02 17.2	+1.1
CAPV	Capacho	1.10	235	*e*P	Pg	19 02 09.5	-0.5
CAPV				*e*S	Sb	19 02 24.2	-1.5
PAMC	Pamplona, Colo	1.73	228	*e*P	Pg	19 02 21.5	-0.5
PAMC				*e*S	Sg	19 02 45.4	+1.0
MCQV	Machiques	1.91	324	*e*P	Pn	19 02 23.0	+0.7
MCQV				*e*S	Sn	19 02 49.5	+2.6
OCAC	Ocana	1.92	262	*e*P	Pn	19 02 23.1	+0.4
OCAC				*e*S	Sb	19 02 48.4	-0.7
TAMC	Tame, Arauca	2.09	191	*e*P	Pg	19 02 27.1	-1.7
TAMC				*e*S	Sg	19 02 57.1	+1.2
LL1C	La Loma 1 Cana	2.37	296	*e*S	Sb	19 03 02.0	+0.1
ELOV	Elorza	2.41	128	*e*P	Pb	19 02 33.0	+0.1
ELOV				*e*S	Sg	19 03 04.7	-1.7
BARC	Barichara	2.59	223	*e*P	Pb	19 02 34.0	-2.1
BARC				*e*S	Sg	19 03 11.7	-0.5
SMLC	San Martn de	2.66	277	*e*P	Pn	19 02 34.0	+1.3
SMLC				*e*S	Sn	19 03 08.2	+2.7
BRRC	Barranca, Sant	2.68	239	*e*P	Pb	19 02 37.8	+0.4
BRRC				*e*S	Sg	19 03 13.6	-1.3
BRRC				*i*		19 03 16.8	
	comp=Z,93nm,0.3s						
CRJC	Cerrejon, Guaj	2.90	330	*e*P	Pn	19 02 35.9	-0.2
CRJC				*e*S	Sn	19 03 08.6	-3.0
RUSC	La Rusia	3.08	213	*e*P	Pn	19 02 40.6	+1.7
RUSC				*e*S	Sg	19 03 25.7	-2.3
BAUV	El Baul	3.35	82	*e*P	Pn	19 02 43.0	+0.9
BAUV				*e*S	Sn	19 03 21.5	-0.9
ZARC	Zaragoza, Cauc	3.57	254	*e*P	Pn	19 02 45.4	+0.1
ZARC				*e*S	Sb	19 03 32.9	-3.6
PTBC	PUERTO BERRIO,	3.60	238	*e*P	Pb	19 02 54.6	+1.3
PTBC				*e*S	Sb	19 03 36.4	-1.1
MONV	Montecano	3.71	22	*e*P	Pn	19 02 47.9	+0.8
MONV				*e*S	Sn	19 03 31.0	-0.5
BENV	Beln	4.02	69	*e*P	Pn	19 02 52.5	+1.0
BENV				*e*S	Sn	19 03 37.3	-2.0
CHIC	Chingaza	4.49	211	⇑*e*P	Pn	19 03 00.0	+1.8
CHIC				*e*S	Sn	19 03 50.9	-0.4
CHIC				*i*		19 04 09.9	
	comp=Z,14nm,0.5s						
NORC	Norcasia	4.51	230	*e*P	Pn	19 02 59.4	+1.1
NORC				*e*S	Sn	19 03 54.6	+3.3
HELC	Santa Helena	4.70	241	*e*P	Pn	19 03 03.0	+2.0
HELC				*i* S	Sb	19 04 13.3	+4.0
VILC	Villavicencio,	4.92	208	*e*P	Pn	19 03 05.0	+1.2
MERV	Las Mercedes	5.09	81	*e*P	Pn	19 03 04.9	-1.3
MERV				*e*S	Sn	19 04 01.6	-4.0
GUY2C	Guyana, Caldas	5.11	231	*e*P	Pn	19 03 08.4	+1.6
GUY2C				*e*S	Sn	19 04 06.1	-0.5
ANIL	Santa Ana	5.63	225	*e*P	Pn	19 03 15.9	+2.1

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*FUNV **19** 19:05:03.3, 8°.49N×71°.45W, h5^{km}, MW3.7*

ISC 19 19:05:02.5±1.3**, 8°.52N**±0°.04×**71°.42W**±0°.02**, h10^{km}**±11^{km}**, n22, σ1^{s}.57**/38**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.60	113	*e*P	Pg	19 05 14.2	-0.1
SOCV				*e*S	Sg	19 05 22.0	-0.3
SDV	Santo Domingo	0.86	65	*e*P	Pb	19 05 19.6	0.0
SDV				*e*S	Sb	19 05 31.0	-0.2
CAPV	Capacho	1.10	234	*e*P	Pb	19 05 22.9	-0.9
CAPV				*e*S	Sg	19 05 37.5	-0.5
PAMC	Pamplona, Colo	1.73	227	*e*S	Sg	19 05 59.9	+1.7
MCQV	Machiques	1.88	324	*e*P	Pn	19 05 35.6	+0.9
MCQV				*e*S	Sn	19 05 59.5	+1.1
OCAC	Ocana	1.90	262	*e*P	Pb	19 05 36.8	-0.6
OCAC				*e*S	Sb	19 06 01.1	-0.2
TAMC	Tame, Arauca	2.10	190	*e*P	Pb	19 05 41.0	+0.1
TAMC				*e*S	Sg	19 06 10.6	+0.4
ELOV	Elorza	2.44	128	*e*P	Pb	19 05 46.7	+0.2
ELOV				*e*S	Sb	19 06 16.8	+0.1
BARC	Barichara	2.59	223	*e*P	Pb	19 05 49.0	-0.3
BARC				*e*S	Sg	19 06 25.1	-0.9
SMLC	San Martn de	2.64	276	*e*P	Pb	19 05 49.4	-0.5
SMLC				*e*S	Sb	19 06 22.4	0.0
BRRC	Barranca, Sant	2.67	238	*e*P	Pb	19 05 50.4	-0.1
BRRC				*e*S	Sg	19 06 26.4	-2.0
RUSC	La Rusia	3.09	212	*e*P	Pn	19 05 53.4	+1.6
RUSC				*e*S	Sb	19 06 32.0	-3.9
BAUV	El Baul	3.37	83	*e*P	Pn	19 05 57.0	+1.8
BAUV				*e*S	Sn	19 06 34.9	-0.3
ZARC	Zaragoza, Cauc	3.56	254	*e*P	Pn	19 05 58.8	+1.0
PTBC	PUERTO BERRIO,	3.60	237	*e*P	Pn	19 05 58.8	+0.4
PTBC				*e*S	Sb	19 06 47.5	-2.5
MONV	Montecano	3.70	23	*e*P	Pn	19 06 00.5	+0.7
MONV				*e*S	Sn	19 06 42.7	-0.7
BENV	Beln	4.03	69	*e*P	Pn	19 06 05.1	+0.6
BENV				*e*S	Sn	19 06 50.5	-1.3
CHIC	Chingaza	4.50	211	*e*P	Pn	19 06 13.0	+1.9
HELC	Santa Helena	4.69	241	*e*S	Sb	19 07 25.5	+3.7
VILC	Villavicencio,	4.93	207	*e*P	Pn	19 06 18.4	+1.6
GUY2C	Guyana, Caldas	5.11	230	*e*P	Pn	19 06 23.0	+3.4
BIRV	Birongo	5.44	69	*e*P	Pn	19 06 23.9	+0.2
BIRV				*e*S	Sn	19 07 23.5	-2.9

ROM 19 19:08:14.7±0.1**, 39°.886N**±0°.006×**15°.580E**±0°.008**, h16^{km}**±1^{km}**, Md1.5**/5**, 1D, Error ellipse: s-maj=0.8km s-min=0.2km az=228.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUC	Castrocucco	0.21	59	⇓P	Pg	19 08 19.7	+0.1
CUC				S	Sb	19 08 23.5	-0.4
CUC				AML	AML		
	comp=E,882µm,0.2s						
CUC				AML	AML		
	comp=N,840µm,0.3s						
CUC				END			
BULG	Bulgheria - Ca	0.25	321	P	Pb	19 08 20.9	0.0
BULG				AML	AML		
	comp=E,470µm,0.5s						
BULG				AML	AML		
	comp=N,600µm,0.6s						
BULG				AML	AML		
	comp=E,479µm,0.5s						
BULG				AML	AML		
	comp=N,631µm,0.6s						
BULG				END			
MGR	Morigerati	0.25	355	P	Pg	19 08 20.5	+0.2
MGR				S	Sb	19 08 24.9	-0.2
MGR				AML	AML		
	comp=E,1865µm,0.2s						
MGR				AML	AML		
	comp=N,868µm,0.9s						
MGR				AML	AML		
	comp=E,1640µm,0.2s						
MGR				AML	AML		
	comp=N,1295µm,0.2s						
MGR				AML	AML		
	comp=E,1860µm,0.2s						
MGR				AML	AML		
	comp=N,868µm,0.9s						
MGR				END			
MMN	Mormanno	0.32	89	P	Pg	19 08 21.4	+0.1
MMN				AML	AML		
	comp=N,898µm,0.2s						
MMN				AML	AML		
	comp=E,684µm,0.2s						
MMN				AML	AML		
	comp=N,897µm,0.2s						
SIRI	Monte Sirino -	0.37	37	P	Pg	19 08 22.6	+0.3
SIRI				AML	AML		
	comp=E,492µm,0.3s						
SIRI				AML	AML		
	comp=E,508µm,0.3s						
SIRI				AML	AML		
	comp=N,321µm,0.2s						
SIRI				AML	AML		
	comp=E,492µm,0.3s						
SIRI				AML	AML		
	comp=N,317µm,0.2s						
SIRI				END			
MTSN	Montesano sull	0.40	19	P	Pb	19 08 23.4	-0.2
MTSN				AML	AML		
	comp=E,195µm,1.1s						
MTSN				AML	AML		
	comp=N,218µm,0.5s						
CET2	Cetraro	0.46	141	P	Pg	19 08 24.2	+0.2
CET2				AML	AML		
	comp=E,838µm,0.2s						
CET2				AML	AML		
	comp=E,839µm,0.2s						
CET2				AML	AML		
	comp=N,974µm,0.7s						
CET2				END			
MCEL	Monticello	0.47	21	P	Pg	19 08 24.4	+0.2
CMPR	Campora	0.48	334	P	Pg	19 08 24.1	-0.3
SALB	San Lorenzo Be	0.59	91	P	Pg	19 08 26.1	-0.3
CDRU	Civita di Ruta	0.64	341	P	Pg	19 08 26.6	-0.7
CELI	Celico	0.86	124	P	Pb	19 08 30.6	-0.8

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*TEH **19** 19:10:05.4, 37°.76N×58°.56E, h8^{km}, ML3.3*

ISC 19 19:10:04.4±0.9**, 37°.90N**±0°.04×**58°.64E**±0°.05**, h10^{km}, n31, σ2^{s}.03**/37**, 2C-2D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IEMG	Emamgholi	0.49	179	*e*Pg	Pg	19 10 12.8	-1.2
IEMG				*e*Sg	Sg	19 10 18.3	-2.1
IEMG				*e*		19 10 18.9	
	comp=Z,3µm,0.2s						
ISFR	Sfrayin	0.99	211	*e*Pg	Pg	19 10 22.3	-1.2
ISFR				*e*Sg	Sg	19 10 34.0	-2.3
ISFR				*e*		19 10 38.0	
	comp=Z,18µm,0.2s						
BJRD	Bojnurd	1.00	259	*e*Pg	Pg	19 10 22.7	-0.9
IAKL	Akhelmad	1.30	176	*e*Pg	Pn	19 10 28.4	-0.5
IAKL				*e*		19 10 36.6	
	comp=Z,8µm,0.2s						
IKRD	Kardeh	1.32	148	*e*Pg	Pn	19 10 30.1	+0.9
IKRD				*e*Sg	Sb	19 10 47.0	+0.4
IKRD				*e*		19 10 52.4	
	comp=Z,15µm,0.3s						
SBZV	Sabzevar	1.72	209	*e*Pg	Pn	19 10 35.6	+1.0
SBZV				*e*Sg	Sn	19 10 58.2	+1.4
IMOG	Moghan	1.88	162	*e*Pg	Pn	19 10 38.7	+1.9
IMOG				*e*		19 11 09.9	
	comp=Z,6µm,0.6s						
IMYA	Miami	1.95	143	*e*Pn	Pn	19 10 39.8	+2.1
MRVT	Maraveh tapeh	2.04	264	*e*Pn	Pn	19 10 40.8	+2.0
JRKH	Jarkhoshk	2.42	145	*e*Pn	Pn	19 10 46.0	+1.9
JRKH				*e*		19 11 25.0	
	comp=Z,2µm,0.2s						
SHRO	Shahrood	2.84	229	*e*Pn	Pn	19 10 51.6	+1.6
TBJM	Torbat-e-JAM	2.96	152	*e*Pn	Pn	19 10 53.8	+2.2
IGLO	Ghaloghah	4.09	251	*e*Pn	Pn	19 11 07.8	+0.6
TNSJ	Nastanj	4.26	203	*e*Pn	Pn	19 11 10.9	+1.4
TNSJ				*e*		19 12 04.1	
	comp=Z,201nm,0.5s						
TABS	Tabas	4.42	197	*e*Pn	Pn	19 11 13.8	+2.1
SHRT	Shahrakht	4.45	162	*e*Pn	Pn	19 11 14.4	+2.3
TKDS	Koohdasht(Taba	4.45	197	*e*Pn	Pn	19 11 14.2	+2.1
TKDS				*e*		19 11 29.1	
	comp=Z,126nm,0.7s						
AFRZ	Afriz	4.48	176	*e*Pn	Pn	19 11 14.5	+2.0
ISHM	Shahmirzad	4.77	246	*e*Pn	Pn	19 11 19.4	+2.8
IMON	Monand	4.77	170	*e*Pn	Pn	19 11 18.6	+2.0
ITEG	Tejag	5.00	179	*e*Pn	Pn	19 11 21.1	+1.5
TPRV	Parvadeh(Tabas	5.12	199	*e*Pn	Pn	19 11 22.3	+1.1
TPRV				*e*		19 11 39.9	
	comp=Z,98nm,0.6s						
IFIR	Firoozkooh	5.24	246	*e*Pn	Pn	19 11 26.0	+3.0
IDAH	Dahanechah	5.25	169	*e*Pn	Pn	19 11 24.9	+1.7
IKOO	Kooshah	5.47	177	*e*Pn	Pn	19 11 27.4	+1.1
BSRN	Basiran	5.94	176	*e*Pn	Pn	19 11 34.7	+2.2
ANAR	Anarak	6.17	222	*e*Pn	Pn	19 11 37.4	+1.6
ISFB	Sefidab	6.27	238	*e*Pn	Pn	19 11 39.0	+1.9
KRSH	Karshahi	6.58	235	*e*Pn	Pn	19 11 43.2	+1.9
AB31	Akbulak array	11.39	4	⇓P	Pn	19 12 48.6	+1.5
	comp=Z,0.3nm,0.4s,baz=187,slow=13,SNR=4.8						
AB31				⇓S	Sn	19 14 51.1	-3.2
	comp=Z,0.5nm,0.5s,baz=191,slow=24,SNR=4.5						
AKTO	Aktyubinsk	12.54	358	⇑P	Pn	19 13 04.7	+1.9
	comp=Z,1.8nm,0.7s						
AKTO				⇑S	Sn	19 15 17.9	-4.5
	comp=Z,5.4nm,1.4s						

GUC ***19*** *19:12:14.7±0.7, 18°.74S×69°.53W, h97km±4km, ML3.8*

IDC ***19*** *19:12:23.5±6.7, 18°.15S×69°.06W, h160km±42km, mb3.2/2, mb1 3.3/3, mb1mx3.0/21, mbtmp3.5/3, MS3.7/1, Ms1 3.7/1, ms1mx2.6/10, Error ellipse: s-maj=81.9km s-min=53.2km az=21.0*

ISC 19 19:12:14.0±0.9**, 18°.78S**±0°.04×**69°.61W**±0°.08**, h103**km±7km**, n16,** σ1^s**23**/26**, 4C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB16	IPOC Station P	0.45	13	⇑*i*P	Pn	19 12 30.6	+0.1
PB16				*i* S	Sn	19 12 42.4	-0.3
PB16				IAML		19 12 44.1	
	comp=N,4μm,0.7s						
PB12	IPOC Station P	0.70	284	⇑*i*P	Pn	19 12 32.1	+0.3
PB12				*i* S	Sn	19 12 45.4	+0.3
PB12				IAML		19 12 45.8	
	comp=N,3μm,0.3s						
AP01	Chacalluta	0.80	300	⇑*i*P	Pn	19 12 33.2	+0.6
AP01				*i* S	Sn	19 12 47.2	+0.6
AP01				IAML		19 12 49.6	
	comp=N,4μm,0.3s						
PB11	IPOC Station P	0.98	182	⇓*i*P	Pn	19 12 34.9	+0.4
PB11				*i* S	Sn	19 12 50.5	+0.5
PB11				IAML		19 12 51.8	
	comp=E,2μm,0.4s						
PB08	IPOC Station P	1.42	162	⇓*i*P	Pn	19 12 40.7	+0.9
PB08				*i* S	Sn	19 13 00.7	+1.3
PB08				IAML		19 13 03.9	
	comp=E,933nm,0.1s						
HMBC	Humberstone	1.51	190	*i* P	Pn	19 12 41.1	+0.4
HMBC				*e*S	Sn	19 13 01.3	+0.4
HMBC				IAML		19 13 06.9	
	comp=N,950nm,0.4s						
TA02	Huaiquique	1.56	198	IAML		19 13 08.6	
	comp=N,2μm,0.1s						
TA01	Diego Aracena	1.85	197	*e*P	Pn	19 12 44.9	+0.1
TA01				*i* S	Sn	19 13 07.7	-0.6
TA01				IAML		19 13 16.1	
	comp=N,566nm,0.2s						
PATCX	Punta Patache	2.09	194	*e*P	Pn	19 12 48.5	+0.6
PATCX				*e*S	Sn	19 13 11.4	-2.5
PATCX				IAML		19 13 24.0	
	comp=E,413nm,0.6s						
PB01	IPOC Station P	2.25	177	⇑*e*P	Pn	19 12 50.4	+0.3
PB01				*e*S	Sn	19 13 18.0	+0.3
PB01				IAML		19 13 25.3	
	comp=N,760nm,0.3s						
LPAZ	La Paz	2.85	30	P	Pn	19 13 00.6	+2.2
	comp=N,1.6nm,0.3s,baz=199,slow=6.6,SNR=15						
LPAZ				S	Sn	19 13 29.5	-3.0
	comp=N,0.8nm,0.3s,baz=210,slow=12,SNR=7.1						
PB07	IPOC Station P	2.94	185	*e*P	Pn	19 13 00.1	+0.9
PB07				IAML		19 13 44.7	
	comp=E,455nm,0.5s						
PB03	IPOC Station P	3.25	182	*e*P	Pn	19 13 04.3	+1.0
PB03				*e*S	Sn	19 13 39.6	-1.8
PB03				IAML		19 13 52.9	
	comp=E,324nm,0.3s						
CMIG	Matias Romero	43.45	324	LR	LR	19 36 07.6	
	comp=E,96nm,20.9s,baz=271,slow=33						
TORD	Torodi Ar. Bea	77.09	71	P	P	19 23 55.7	-0.9
	comp=E,0.5nm,0.8s,baz=250,slow=5.1,SNR=3.4						
YKA	Yellowknife Ar	88.42	341	P	P	19 24 55.0	+1.0
	comp=E,0.2nm,0.4s,baz=134,slow=4.8,SNR=5.1						
YKA				pP	pP	19 25 20.9	-1.1
	comp=E,0.2nm,0.6s,baz=135,slow=4.9,SNR=4.0						

TUL ***19*** *19:14:45.1±1.1, 36°.50N±0°.02×98°.73W±0°.02, h6km±7km, ML2.9, mb_Lg2.4/14(NEIC), Error ellipse: s-maj=3.0km s-min=2.4km az=137.0*

NEIC 19 19:14:45.6±1.2**, 36°.48N**±0°.03×**98°.70W**±0°.02**, h8**km±7km**, Error ellipse: s-maj=4.8km s-min=2.6km az=167.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK035	E0210 Rd and N	0.23	359	Pg	Pg	19 14 49.9	-0.3
OK035				Sg	Sg	19 14 53.5	+0.2
U32A	Winter Ranch,	0.26	247	Pg	Pg	19 14 50.3	-0.5
U32A					Sg	19 14 54.3	0.0
OK032	Salt Plains WL	0.51	51		Pg	19 14 55.2	-0.3
OK032				Sg	Sg	19 15 02.2	0.0
CROK	Carrier	0.58	88		Pg	19 14 56.7	-0.1
CROK				Sg	Sg	19 15 05.1	+0.6
KAN14	Manchester OK	0.76	51	Pg	Pg	19 14 59.8	-0.5
KAN14				Sg	Sg	19 15 10.7	+0.5
GC02	Grant County #	0.77	61		Pg	19 15 00.0	-0.4
GC02				Sg	Sg	19 15 10.6	+0.1
KAN10	Anthony SW Sta	0.81	37	Pg	Pg	19 15 00.2	-0.9
KAN10				IAmb_Lg		19 15 10.5	
	comp=Z,22nm,0.8s						
KAN16	Harper SW Stat	0.90	34	Pg	Pg	19 15 02.7	-0.2
KAN16				Sg	Sg	19 15 14.7	0.0
KAN05	Bluff City Nor	0.92	47	Pg	Pg	19 15 02.4	-0.8
KAN01	Argonia South	1.01	48	Pg	Pg	19 15 04.4	-0.7
KAN01				Sg	Sg	19 15 17.9	-0.2
KAN06	Argonia West S	1.02	41	Pg	Pg	19 15 04.6	-0.7
KAN09	Caldwell North	1.09	53	Pg	Pg	19 15 05.7	-0.8
KAN13	South Haven SW	1.12	61		Pg	19 15 06.3	-0.8
BCOK	Bluff Creek, N	1.21	133	Pg	Pb	19 15 08.1	-0.6
OK029	Liberty Lake	1.22	124	Pg	Pb	19 15 08.1	-0.8
BLOK	Blackwell	1.23	77		Pb	19 15 08.2	-0.9
OK025	Westminster Rd	1.43	129		Pn	19 15 11.7	-0.1
OKCFA	Oklahoma City	1.47	136		Pn	19 15 12.0	-0.4
OKCSW	OKLAHOMA CITY	1.49	136		Pn	19 15 12.2	-0.4
OK033	Mehan	1.49	107		Pn	19 15 12.8	+0.1
OK031	S. Brethren Rd	1.60	109	Pn	Pn	19 15 13.8	-0.3
FNO	Franklin	1.62	139	Pn	Pn	19 15 14.7	+0.3
QUOK	Quay	1.64	100	Pn	Pn	19 15 15.2	+0.5
OK030	Cody Creek RV	1.65	109	Pn	Pn	19 15 14.6	-0.2
OK034	N. Norfolk Rd.	1.68	106	Pn	Pn	19 15 15.6	+0.4
T35A	Sooner Cattle	1.81	76	Pn	Pn	19 15 17.9	+0.8
T35A				IAmb_Lg		19 15 45.7	
	comp=Z,25nm,0.8s						
R32A	Long Quarter,	1.94	360		Pn	19 15 19.6	+0.8
W35A	Tecumseh	1.99	131	Pn	Pn	19 15 20.8	+1.2
X34A	Smith Ranch, M	2.01	159	Pn	Pb	19 15 21.4	-0.9
X34A				IAmb_Lg		19 15 49.2	
	comp=Z,17nm,0.9s						
TUL1	Leonard	2.42	103	Pn	Pn	19 15 25.8	+0.3
TUL1				IAmb_Lg		19 16 06.6	
	comp=Z,16nm,0.9s						
CBKS	Cedar Bluff	2.47	341	Pn	Pn	19 15 27.5	+1.4
LOOK	Love County	2.78	153	Pn	Pn	19 15 30.7	+0.3
AMTX	Amarillo	2.90	238	Pn	Pn	19 15 32.4	+0.3
X37A	Clayton	3.31	124	Pn	Pn	19 15 38.1	+0.4
U38A	Gravette	3.48	89		Pn	19 15 40.2	+0.2
HHAR	Hobbs	3.85	92	IAmb_Lg		19 16 51.7	
	comp=Z,6.7nm,0.8s						
KSCO	Kaye Shedlock'	4.00	310	IAmb_Lg		19 16 49.1	
	comp=Z,7.1nm,0.7s						
MSTX	Muleshoe	4.17	234	IAmb_Lg		19 17 04.0	
	comp=Z,10nm,0.7s						
S39A	Bolivar	4.47	73		Pn	19 15 53.7	+0.1
S39A				IAmb_Lg		19 17 17.6	
	comp=Z,9.0nm,1.1s						
WHTX	Lake Whitney,	4.60	167	Pn	Pn	19 15 55.2	-0.2
MIAR	Mount Ida	4.61	113	Pn	Pn	19 15 55.4	-0.1
T25A	Trinidad	4.63	280		Pn	19 15 55.4	-0.6
SDCO	Great Sand Dun	5.58	285	Pn	Pn	19 16 10.0	+0.9

IDC ***19*** *19:24:57.6±0.3, 30°.65S×71°.23W, h0km, mb5.8/28, mb1 5.8/32, mb1mx5.8/35, mbtmp5.8/32, ML5.5/4, MS5.2/23, Ms1 5.1/23, ms1mx5.1/29, Error ellipse: s-maj=12.5km s-min=9.1km az=83.0*

SJA ***19*** *19:25:01.9±0.9, 30°.66S×71°.54W, h29km±6km, ML6.2, MW5.3*

MOS ***19*** *19:25:01.8±0.7, 30°.55S×71°.24W, h33km, mb6.1/23, MS5.3/23, Error ellipse: s-maj=11.9km s-min=5.7km az=95.1*

BJI ***19*** *19:25:03.1±0.0, 30°.50S×71°.25W, h40km, mB5.6/63, Ms5.7/71, Ms7 5.6/73*

NEIC ***19*** *19:25:05.5, 30°.61S×71°.32W, h54km, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*7.72;* $M_{\theta\theta}$*-1.13;* $M_{\phi\phi}$*-6.60;* $M_{r\theta}$*1.32;* $M_{\theta\phi}$*0.17;* $M_{\phi r}$*-1.50; Fault plane solution:* M_0*7.50000×*10^{17} *NP1:*ϕ_s*169.90000°, δ51.65000°, λ80.26000°. NP2:*ϕ_s*5.36000°, δ39.38000°, λ102.07000°. Principal axes: T 8.0616, Plg80.0000°, Azm36.0000°; N -1.2914, Plg8.0000°, Azm176.0000°; P -6.7702, Plg6.0000°, Azm267.0000°;*

VAO ***19*** *19:25:05.1±0.3, 30°.60S×71°.10W, h46km, mb6.3*

GUC ***19*** *19:25:05.2±0.5, 30°.64S×71°.31W, h50km±3km, ML6.0*

NEIC ***19*** *19:25:05.6±2.0, 30°.61S±0°.04×71°.31W±0°.07, h48km±2km, mb6.1/373, Ms_20 5.4/103, Mwb5.9/56, Mwr5.8/44, Mww5.8, Mwr5.8(GUC), Error ellipse: s-maj=9.0km s-min=6.2km az=88.0*

NEIC ***19*** *19:25:05.5, 30°.61S×71°.32W, h60km, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*3.83;* $M_{\theta\theta}$*-0.94;* $M_{\phi\phi}$*-2.89;* $M_{r\theta}$*0.83;* $M_{\theta\phi}$*0.53;* $M_{\phi r}$*-4.19; Fault plane solution:* M_0*5.52000×*10^{17} *NP1:*ϕ_s*168.09000°, δ70.62000°, λ91.02000°. NP2:*ϕ_s*345.01000°, δ19.41000°, λ87.09000°. Principal axes: T 5.8761, Plg64.0000°, Azm80.0000°; N -0.8074, Plg1.0000°, Azm348.0000°; P -5.0687, Plg26.0000°, Azm257.0000°;*

NEIC ***19*** *19:25:07, 30°.64S×71°.37W, h60km, Moment Tensor Solution. Duration: 6^{s}0 Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*6.00;* $M_{\theta\theta}$*-0.21;* $M_{\phi\phi}$*-5.80;* $M_{r\theta}$*0.77;* $M_{\theta\phi}$*1.10;* $M_{\phi r}$*-1.94; Fault plane solution:* M_0*6.36000×*10^{17} *NP1:* ϕ_s*353.00000°, δ36.00000°, λ96.00000°. NP2:* ϕ_s*166.00000°, δ54.00000°, λ86.00000°. Principal axes: T 6.3681, Plg80.0000°, Azm59.0000°; N -0.0232, Plg3.0000°, Azm168.0000°; P -6.3449, Plg9.0000°, Azm259.0000°;*

GCMT ***19*** *19:25:08.6±0.1, 30°.70S±0°.01×71°.54W±0°.01, h62km, MW5.8/145, Moment Tensor Solution. s145,c288; s130,c330; Duration: 2^{s}0 Moment tensor: Scale* 10^{17} *Nm;* M_{rr}*5.38±.06;* $M_{\theta\theta}$*1.30±.06;* $M_{\phi\phi}$*-6.68±.06;* $M_{r\theta}$*0.81±.05;* $M_{\theta\phi}$*1.03±.05;* $M_{\phi r}$*-2.96±.06; Best double couple:* M_0*6.83000×*10^{17} *NP1:*ϕ_s*359.00000°, δ32.00000°, λ99.00000°. NP2:*ϕ_s*168.00000°, δ58.00000°, λ84.00000°. Principal axes: T 6.1330, Plg76.0000°, Azm61.0000°; N 1.3940, Plg5.0000°, Azm171.0000°; P -7.5270, Plg13.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 19 19:25:04.4±0.5**, 30°.62S**±0°.03×**71°.26W**±0°.04**, h48**km±4km**, h48**km**:pP-P, n1462,** σ1^s**41**/1451**, mb6.1**/252**, MS5.4**/99**, 106C-19D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.33	260	*e*P	Pn	19 25 13.7	+0.1
CO06	Fray Jorge	0.33	260		Pn	19 25 13.8	+0.1
CO03	El Pedregal	0.54	115	⇓*i*P	Pn	19 25 16.9	+0.9
CO03				*i* S	Sn	19 25 26.4	+2.0
CO03				IAML		19 25 29.6	
	comp=N,0.0nm,0.6s						
CO03	El Pedregal	0.54	115		Pn	19 25 16.9	+0.9
CO03					Sn	19 25 26.2	+1.8
GO04	Tololo Observa	0.59	42	*i* P	Pn	19 25 18.1	+1.2
GO04				*i* S	Sn	19 25 28.4	+2.5
GO04	Tololo Observa	0.59	42		Pn	19 25 18.3	+1.4
GO04	Tololo Observa	0.59	42	*i* P	Pn	19 25 18.4	+1.5
CO05	La Serena	0.70	1		Pn	19 25 19.1	+1.1
CO05				Sn	Sn	19 25 29.7	+1.9
AROD	Rodeo	1.60	74	*i* P	Pn	19 25 34.0	+3.4
LCO	Las Campanas	1.67	17		Pn	19 25 32.8	+1.3
LCO				Sn	Sn	19 25 53.5	+1.6
LCO	Las Campanas	1.67	17	*i* P	Pn	19 25 32.9	+1.4
LCO				IAML		19 25 58.2	
	comp=Z,372μm,0.9s						
ACCO	Cerro Coronel	1.89	90	*i* P	Pn	19 25 38.4	+3.9
ACDV	Cuesta del Vie	1.90	77	*i* P	Pn	19 25 39.3	+4.8
ACDV				IAML		19 26 14.2	
	comp=Z,38μm,0.7s						
VA06	Catapilco	1.94	181	⇓*i*P	Pn	19 25 35.4	+0.6
VA06				*i* S	Sn	19 26 00.3	+2.3
VA06				IAML		19 26 09.2	
	comp=N,133μm,0.5s						
RTLS	Leoncito	2.05	126	*i* P	Pn	19 25 40.2	+3.5
RTLS				IAML		19 26 21.9	
	comp=Z,23μm,0.8s						
VA03	San Esteban	2.22	165	⇓*i*P	Pn	19 25 40.0	+1.0
VA03				*i* S	Sn	19 26 08.3	+3.1
VA03				IAML		19 26 13.8	
	comp=E,167μm,0.5s						
VA03	San Esteban	2.22	165		Pn	19 25 39.9	+1.0
AUSP	Uspallata	2.26	136	*i* P	Pn	19 25 42.9	+3.3
ROCH	El Roble	2.36	175	IAML		19 26 21.1	
	comp=E,84μm,0.7s						
ROCH				IAML		19 26 26.1	
	comp=E,69μm,0.7s						
ROC1	El Roble	2.36	175	*i* P	Pn	19 25 41.0	+0.1
ZON	Zonda	2.40	113	P	Pn	19 25 44.5	+3.3
ZON	Zonda	2.40	113	Pn	Pn	19 25 44.5	+3.3
ZON	Zonda	2.40	113	*i* P	Pn	19 25 44.6	+3.4
ZON				IAML		19 26 31.3	
	comp=Z,27μm,0.6s						
AC04	Llanos de Chal	2.41	4		Pn	19 25 42.8	+1.5
AC04	Llanos de Chal	2.41	4	*i* P	Pn	19 25 43.0	+1.6
AC04				*e*S	Sn	19 26 13.6	+3.9
VA01	Torpederas	2.42	188	*e*P	Pn	19 25 41.1	-0.4
VA01				*e*S	Sn	19 26 11.6	+1.7
VA01	Torpederas	2.42	188		Pn	19 25 41.1	-0.4
VA01	Torpederas	2.42	188	*i* P	Pn	19 25 41.0	-0.5
PEL	Peldehue	2.56	169	P	Pn	19 25 44.2	+0.7
PEL	Peldehue	2.56	169	IAML		19 26 27.9	
	comp=N,56μm,1.1s						
PEL	Peldehue	2.56	169	Pn	Pn	19 25 44.2	+0.7
MT02	Curacav	2.64	178		Pn	19 25 44.8	+0.3
MT02	Curacav	2.64	178	*i* P	Pn	19 25 45.2	+0.7
RTCV	Cerro Valdivia	2.64	119	*i* P	Pn	19 25 47.8	+3.4
MT05	Renca	2.80	171	IAML		19 26 42.6	
	comp=E,86μm,0.2s						
MT05	Renca	2.80	171		Pn	19 25 47.8	+1.1
MT05	Renca	2.80	171	*i* P	Pn	19 25 48.0	+1.2
ASAL	Salagasta	2.85	134	*i* P	Pn	19 25 51.4	+3.9
ARCO	CERRO ARCO	2.97	139	*i* P	Pn	19 25 53.5	+4.2
ARCO				IAML		19 26 41.0	
	comp=Z,51μm,0.8s						
VA05	Santo Domingo	3.05	186		Pn	19 25 49.6	-0.5
GO03	Copiap	3.14	17	Pn	Pn	19 25 53.1	+1.7
GO03	Copiap	3.14	17	*i* P	Pn	19 25 53.7	+2.2
MT09	Talagante	3.16	176	IAML		19 26 46.3	
	comp=N,42μm,0.5s						
MT09	Talagante	3.16	176		Pn	19 25 52.6	+0.9
AAGR	Agrelo	3.21	141	*i* P	Pn	19 25 56.2	+3.8
MT01	Popeta	3.24	180	IAML		19 26 46.0	
	comp=E,31μm,0.6s						
MT01	Popeta	3.24	180		Pn	19 25 53.0	+0.3
MT01	Popeta	3.24	180	*i* P	Pn	19 25 53.2	+0.5
VCA	Vinchina	3.25	56	*i* P	Pn	19 25 58.0	+5.0
VCA				IAML		19 26 51.1	
	comp=Z,77μm,1.3s						
LMEL	Las Melosas	3.34	165	IAML		19 26 45.6	
	comp=N,45μm,0.3s						
BO01	Tunca	3.77	178		Pn	19 25 60.0	0.0
BO01	Tunca	3.77	178	*i* P	Pn	19 26 00.8	+0.8
ACLC	CERRO LA CRUZ	3.92	73	*i* P	Pn	19 26 05.5	+3.3
ACLC				IAML		19 26 59.1	
	comp=Z,51μm,1.8s						
APLL	PUNTA DE LOS L	4.09	88	*i* P	Pn	19 26 07.0	+2.6
APLL				IAML		19 27 40.2	
	comp=Z,7μm,3.2s						
BO02	Sierra Bellavi	4.18	175		Pn	19 26 05.8	+0.1
BO02	Sierra Bellavi	4.18	175	*i* P	Pn	19 26 07.0	+1.3
AC02	Maricunga	4.21	27	Pn	Pn	19 26 08.8	+2.3
AC02	Maricunga	4.21	27	*i* P	Pn	19 26 09.0	+2.5
AC02				*e*S	Sn	19 27 03.8	+9.2
GO05	Huala	4.42	187	Pn	Pn	19 26 07.5	-1.4
GO05	Huala	4.42	187	*i* P	Pn	19 26 07.0	-1.9
RFA	San Rafael	4.76	151	*i* P	Pn	19 26 14.8	+1.1
RFA				IAML		19 27 20.0	
	comp=Z,11μm,0.7s						
ML02	Panimavida	5.13	181	Pn	Pn	19 26 18.4	-0.3
PB14	IPOC Station P	6.02	7	Pn	Pn	19 26 29.9	-1.3
AHML	Horco Molle	6.45	55	*i* P	Pn	19 26 38.0	+1.1
AHML				IAML		19 28 23.6	
	comp=Z,7μm,2.0s						
FSA	Cafayete	6.46	47	*i* P	Pn	19 26 39.0	+1.9
I14CL	ROBINSON CRUSO	7.08	243	*i*		20 09 10.0	
	baz=73,slow=318,SNR=0.7						
H03N1	Juan Fernandez	7.08	245	Pn	Pn	19 26 43.7	-1.5
	baz=115,slow=19						
H03N1				T	T	19 33 35.9	
	baz=73,slow=72,SNR=2244						
H03N3	Juan Fernandez	7.10	245	Pn	Pn	19 26 43.4	-2.0
	baz=115,slow=19						
H03N3				T	T	19 33 36.6	
	baz=73,slow=72,SNR=1778						
H03N2	Juan Fernandez	7.10	245	Pn	Pn	19 26 43.5	-1.9
	baz=115,slow=19						
H03N2				T	T	19 33 35.9	
	baz=73,slow=72,SNR=1624						
PB10	IPOC Station P	7.10	5	Pn	Pn	19 26 43.5	-2.3
PB10	IPOC Station P	7.10	5	*i* P	Pn	19 26 44.0	-1.8
PB10				IAML		19 28 44.9	
	comp=Z,9μm,0.8s						
H03S3	Juan Fernandez	7.23	242	Pn	Pn	19 26 45.0	-2.2
H03S3				T	T	19 34 00.3	
	SNR=89						
H03S1	Juan Fernandez	7.24	242	Pn	Pn	19 26 44.8	-2.5
H03S1				T	T	19 34 00.3	
	SNR=97						
H03S2	Juan Fernandez	7.25	242	Pn	Pn	19 26 45.0	-2.5
H03S2				T	T	19 34 00.3	
	SNR=124						
PB15	IPOC Station P	7.55	13		Pn	19 26 50.6	-1.4
PB15	IPOC Station P	7.55	13	*i* P	Pn	19 26 51.0	-1.1
SLA	San Lorenzo	7.78	42	*i* P	Pn	19 26 57.0	+1.8
SLA				IAML		19 29 07.7	
	comp=Z,3μm,2.1s						
PB05	IPOC Station P	7.79	7	*i* P	Pn	19 26 53.0	-2.3
PB05				IAML		19 29 05.4	
	comp=Z,12μm,0.9s						
PB06	IPOC Station P	8.02	11	*i* P	Pn	19 26 57.0	-1.5
LVC	Limon Verde	8.25	15	Pn	Pn	19 27 00.1	-1.8
	comp=Z,15nm,0.3s,baz=175,slow=8.8,SNR=30						
LVC				Sn	Sn	19 28 34.0	+0.2
	comp=Z,80nm,0.3s,baz=124,slow=16,SNR=1.8						
LVC	Limon Verde	8.25	15	*e*P	Pn	19 27 00.4	-1.4
LVC	Limon Verde	8.25	15	*i* P	Pn	19 27 00.0	-1.8
LVC				IAML		19 29 15.3	
	comp=Z,8μm,1.1s						
LC01	Cunco	8.28	183	Pn	Pn	19 27 00.1	-1.8
LC01	Cunco	8.28	183	*i* P	Pn	19 27 00.0	-1.8
PB04	IPOC Station P	8.31	7		Pn	19 26 59.5	-3.0
PB04	IPOC Station P	8.31	7	*i* P	Pn	19 27 00.0	-2.5
AZAP	Zapla	8.41	42	*i* P	Pn	19 27 05.0	+1.1
AZAP				IAML		19 29 21.0	
	comp=Z,4μm,1.3s						
PB03	IPOC Station P	8.64	9	*i* P	Pn	19 27 04.0	-3.0
PB07	IPOC Station P	8.94	8	Pn	Pn	19 27 08.2	-2.9
PB09	IPOC Station P	8.97	12		Pn	19 27 10.1	-1.5
PB09	IPOC Station P	8.97	12	*i* P	Pn	19 27 10.0	-1.5
ASTB	Santa Barbara	8.98	44	*i* P	Pn	19 27 12.0	+0.3
HJA	Humahuaca	9.04	37	*i* P	Pn	19 27 15.0	+2.4
HJA				IAML		19 29 12.6	
	comp=Z,356nm,1.4s						
LR03	Panguipulli	9.04	185		Pn	19 27 11.2	-1.1
ALOL	LOMAS DE OLMED	9.37	45	*i* P	Pn	19 27 18.0	+1.1
PB01	IPOC Station P	9.67	10		Pn	19 27 17.9	-3.1
PB01	IPOC Station P	9.67	10	*i* P	Pn	19 27 18.0	-3.0
PATCX	Punta Patache	9.81	6		Pn	19 27 20.6	-2.3
PATCX	Punta Patache	9.81	6	*i* P	Pn	19 27 20.0	-2.9
YJA	Yavi	9.85	33	*i* P	Pn	19 27 27.0	+3.1
TA01	Diego Aracena	10.06	6	*i* P	Pn	19 27 24.0	-2.2
PLCA	Paso Flores	10.11	177	Pn	Pn	19 27 26.5	-0.5
	comp=Z,1.5nm,0.3s,baz=347,slow=10,SNR=49						
PLCA				Sn	Sn	19 29 23.9	+4.9
	comp=Z,3.5nm,0.3s,baz=9.3,slow=19,SNR=1.0						
PLCA				LR	LR	19 31 54.0	
	comp=Z,13μm,20.3s,baz=343,slow=41						
PLCA	Paso Flores	10.11	177	P	Pn	19 27 26.1	-0.9
PLCA	Paso Flores	10.11	177	*e*P	Pn	19 27 27.1	+0.1
PLCA	Paso Flores	10.11	177	Pn	Pn	19 27 26.1	-0.9
PLCA	Paso Flores	10.11	177	*i* P	Pn	19 27 27.0	+0.1
LL04	Puerto Octay	10.31	185		Pn	19 27 27.2	-2.5
TA02	Huaiquique	10.35	6		Pn	19 27 28.6	-1.7
LL03	Petrohue	10.54	185	Pn	Pn	19 27 30.4	-2.4
PB08	IPOC Station P	10.60	11		Pn	19 27 30.8	-3.3
PB11	IPOC Station P	10.91	8	Pn	Pn	19 27 36.0	-2.0
PB11	IPOC Station P	10.91	8	*i* P	Pn	19 27 35.0	-3.0
LL05	Los Muermos	10.91	189		Pn	19 27 34.6	-3.2
PB12	IPOC Station P	11.98	4	Pn	Pn	19 27 49.9	-2.8
PB12	IPOC Station P	11.98	4	*i* P	Pn	19 27 50.0	-2.6
LPA	La Plata	12.00	114	*de*P	Pn	19 27 57.4	+4.7
LPA				sS	S	19 30 24.7	-7.8
LPA				PCP	PcP	19 33 37.0	+1.3
LPA				SCS	ScS	19 40 43.8	+3.3
AP01	Chacalluta	12.22	4		Pn	19 27 53.8	-2.0
LL07	Hotel Espejo d	12.32	188	Pn	Pn	19 27 57.0	0.0
PB16	IPOC Station P	12.33	8	Pn	Pn	19 27 57.0	-0.9
GO07	Milladeo Hill,	12.62	188	Pn	Pn	19 27 59.6	-1.5
ITQB	Itaqui	12.70	89	*e*P	Pn	19 28 00.9	-1.4
ITQB	Itaqui	12.70	89	Pn	Pn	19 28 01.1	-1.2
CPUP	Villa Florida	12.97	74	Pn	Pn	19 28 03.0	-3.0
	comp=Z,15nm,0.3s,baz=247,slow=12,SNR=94						
CPUP				Sn	Sn	19 30 24.4	-4.6
	comp=Z,6.8nm,0.3s,baz=218,slow=14,SNR=1.8						
CPUP				LR	LR	19 33 39.7	
	comp=Z,23μm,18.7s,baz=257,slow=40						
CPUP	Villa Florida	12.97	74	Pn	Pn	19 28 03.4	-2.6
LPAZ	La Paz	14.55	12	Pn	Pn	19 28 26.2	-1.8
	comp=Z,5.1nm,0.3s,baz=186,slow=8.5,SNR=146						
LPAZ				Sn	Sn	19 31 14.5	+6.2
	comp=Z,1.3nm,0.3s,baz=138,slow=13,SNR=1.7						
LPAZ	La Paz	14.55	12	P	Pn	19 28 25.5	-2.5
LPAZ	La Paz	14.55	12	⇑*i*P	Pn	19 28 30.0	+2.0
LPAZ	La Paz	14.55	12	*e*P	Pn	19 28 26.5	-1.5
LPAZ	La Paz	14.55	12	Pn	Pn	19 28 25.5	-2.5
COYC	Coyhaique	14.95	182		Pn	19 28 31.8	-0.7
PLTB	Pedras Altas	15.15	99	Pn	Pn	19 28 32.2	-3.1
ITAB	Concordia	17.08	83		Pn	19 28 58.0	-1.8
ITAB				IAmb	IAmb	19 29 05.3	
	comp=Z,3μm,1.6s						
AQDB	Aquidauana	17.27	58	*e*P	Pn	19 29 00.4	-1.9
AQDB	Aquidauana	17.27	58		Pn	19 29 00.5	-1.7
SIV	San Ignacio	17.29	35	P	Pn	19 29 00.4	-2.1
	comp=Z,54nm,0.3s,baz=218,slow=8.6,SNR=98						
CNLB	Canela	17.73	91	*e*P	Pn	19 29 05.5	-2.3
PTGB	Pitanga	17.98	76	*e*P	P	19 29 11.7	+0.7
PTLB	Pontes e Lacer	18.75	39	*e*P	P	19 29 19.6	+0.1
PTLB	Pontes e Lacer	18.75	39		P	19 29 19.5	+0.1
NNA	Nana	19.25	343	P	Pn	19 29 26.4	+0.1
	comp=Z,3.0nm,0.3s,baz=182,slow=12,SNR=15						
NNA				S	S	19 32 59.5	-1.0
	comp=Z,1.5nm,0.3s,baz=96,slow=21,SNR=1.0						
NNA				LR	LR	19 35 25.6	
	comp=Z,4μm,20.9s,baz=166,slow=33						
NNA	Nana	19.25	343	P	Pn	19 29 26.1	-0.2
NNA				pmax	pmax		
	comp=Z,179nm,1.3s						
NNA	Nana	19.25	343		Pn	19 29 26.1	-0.2
PP1B	Ponte de Pedra	19.75	53	*e*P	P	19 29 30.9	+0.4
PCMB	Pacaembu	20.05	68	*e*P	P	19 29 33.8	+0.1
VILB	Vilhena	20.33	33	*e*P	P	19 29 36.8	+0.1
VILB	Vilhena	20.33	33	P	P	19 29 36.7	0.0
SALV	Santo Antonio	20.43	48	*e*P	P	19 29 37.6	-0.2
GO09	Cerro Castillo	20.65	182	P	P	19 29 40.4	+0.5
MG05	Puerto Natales	21.06	182	P	P	19 29 44.7	+0.4
ETMB	Extrema	21.22	14	*e*P	P	19 29 47.4	+1.1
ETMB	Extrema	21.22	14	P	P	19 29 46.7	+0.4
ETMB				IAmb	IAmb	19 29 51.7	
	comp=Z,668nm,0.8s						
ITRB	Iturama	21.77	65	*e*P	P	19 29 51.6	-0.7
MG02	Cerro Sombrero	22.20	177	P	P	19 29 55.9	-0.5
MG02				IAmb	IAmb	19 30 00.6	
	comp=Z,1μm,1.1s						
MG04	Isla Riesco	22.22	181	P	P	19 29 56.7	0.0
SPB	Sao Paulo	22.31	77	*e*P	P	19 29 57.7	-0.2
SPB	Sao Paulo	22.31	77	P	P	19 29 57.1	-0.8
GO10	Punta Arenas	22.52	180	P	P	19 29 59.2	-0.8
GO10				IAmb	IAmb	19 30 26.6	
	comp=Z,914nm,1.2s						
BB19B	Bebedouro	22.52	70	*e*P	P	19 29 59.4	-0.9
CZSB	Cruzeiro do Su	22.81	356	*e*P	P	19 30 04.3	+1.0
CZSB	Cruzeiro do Su	22.81	356	P	P	19 30 03.7	+0.4
CZSB				IAmb	IAmb	19 30 10.8	
	comp=Z,918nm,1.1s						
SAML	Samuel	22.84	21	P	P	19 30 03.5	-0.1
SAML				pmax	pmax		
	comp=Z,417nm,1.0s						
SAML	Samuel	22.84	21	P	P	19 30 03.5	-0.1
VAO	Valinhos	22.94	77	*e*P	P	19 30 03.8	-0.9
ARAG	Araguaiana, MT	23.18	55	*e*P	P	19 30 05.9	-1.1
EFI	East Falkland	23.20	159	*ce*P	P	19 30 06.7	-0.2

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EFI                              pmax     pmax
       comp=Z,543nm,1.0s
EFI    East Falkland     23.20 159  P        P          19 30 05.6  -1.2
EFI                                 IAmb     IAmb       19 30 11.6
       comp=Z,462nm,0.9s
PDRB   Porto dos Gac     23.22  39 eP        P          19 30 06.4  -1.0
DSPA   Despedida         23.42 176  P        P          19 30 08.6  -0.4
PARB   Paraibuna         23.93  79 eP        P          19 30 13.6  -0.6
USHA   Ushuaia           24.29 176  P        P          19 30 17.6  +0.5
       comp=Z,377nm,1.0s,baz=356,slow=5.2,SNR=70
ATAH   Atahualpa         24.30 343  P        P          19 30 19.1  +1.1
       comp=Z,35nm,0.8s,baz=160,slow=6.8,SNR=18
ATAH                                PcP      PcP        19 33 58.4  +1.3
       comp=Z,26nm,0.7s,baz=163,slow=5.7,SNR=4.4
ATAH                                LR       LR         19 39 06.4
       comp=Z,2µm,19.8s,baz=181,slow=35
CLDB   Colider           24.34  39 eP        P          19 30 17.1  -0.8
IPMB   Ipameri, GO       24.42  64 eP        P          19 30 18.2  -0.5
MG01   Puerto William    24.44 175  P        P          19 30 17.8  -0.6
BSCB   Bom Sucesso       25.64  74 eP        P          19 30 29.3  -0.4
BDFB   Brasilia          25.98  60  P        P          19 30 32.6  -0.4
       comp=Z,1µm,0.7s,baz=233,slow=8.7,SNR=1514
BDFB                                LR       LR         19 41 56.3
       comp=Z,14µm,19.5s,baz=234,slow=39
BDFB   Brasilia          25.98  60  P        P          19 30 32.5  -0.4
BDFB                                pmax     pmax
       comp=Z,1µm,0.7s
BDFB   Brasilia          25.98  60  P        P          19 30 32.5  -0.4
SNDB   Serra Nova Dou    26.19  49 eP        P          19 30 34.8  +0.1
TBTG   Tabatinga, AM     26.32   3⥣eP        P          19 30 36.9  +1.1
TBTG   Tabatinga, AM     26.32   3 eP        P          19 30 36.4  +0.6
TBTG   Tabatinga, AM     26.32   3  P        P          19 30 36.4  +0.6
NPGB   Novo Progresso    27.79  36 eP        P          19 30 47.9  -1.2
DIAM   Diamantina, MG    27.86  70 eP        P          19 30 49.8  -0.1
PEXB   Peixe             28.12  54 eP        P          19 30 52.0   0.0
MC01   Montes Claros     28.50  67 eP        P          19 30 54.9  -0.6
MACA   Manacapuru-AM     29.08  22 eP        P          19 31 00.3  -0.2
MACA   Manacapuru-AM     29.08  22  P        P          19 31 00.3  -0.2
MACA                                IAmb     IAmb       19 31 01.9
       comp=Z,770nm,1.1s
JANB   Januaria          29.16  64 eP        P          19 31 00.8  -0.5
SJMB   Sao Joao De Ma    29.70  73 eP        P          19 31 05.8  -0.2
BSFB   Barra de Sao F    29.91  74 eP        P          19 31 07.4  -0.5
ITTB   Itaituba          29.93  32 eP        P          19 31 06.9  -1.1
SDBA   SAO DESIDERIO     30.36  59 eP        P          19 31 11.9   0.0
PTLC   Puerto Leguiza    30.80 353 eP        P          19 31 12.3  -3.4
SMTB   Santa Maria do    30.93  51 eP        P          19 31 17.0  +0.1
OTAV   Otavalo           31.44 346  P        P          19 31 23.0  +1.1
OTAV                                pmax     pmax
       comp=Z,55nm,1.0s
OTAV                                MLR      MLR
       comp=Z,2µm,22.0s
OTAV   Otavalo           31.44 346 eP        P          19 31 23.7  +1.8
OTAV   Otavalo           31.44 346 eP        P          19 31 24.3  +2.4
OTAV   Otavalo           31.44 346  P        P          19 31 23.0  +1.1
PRPB   Parauapebas       31.57  44 eP        P          19 31 22.0  -0.6
PTGA   Pitinga           31.60  22  P        P          19 31 22.6  -0.1
       comp=Z,536nm,1.0s,baz=207,slow=11,SNR=400
PTGA                                PcP      PcP        19 34 14.9  +0.6
       comp=Z,36nm,0.6s,baz=307,slow=5.1,SNR=2.9
PTGA                                LR       LR         19 46 22.7
       comp=Z,7µm,18.6s,baz=190,slow=41
GUA01  Guaratinga, BA    31.90  71 eP        P          19 31 25.1  -0.4
GCUF   Volcan Galeras    32.19 349⥣eP        P          19 31 31.5  +3.0
FLOC   Florencia         32.29 352⥣eP        P          19 31 30.6  +1.8
MACC   Macarena, Meta    32.67 355⥣eP        P          19 31 33.2  +1.0
CMC01  Camacan, BA       32.78  70 eP        P          19 31 33.1  -0.1
MALB   Monte Alegre      32.83  33 eP        P          19 31 32.8  -0.7
GARC   Garzon, Huila     32.87 352 eP        P          19 31 27.8  -6.4
SOTA   Rioblanco         32.97 350⥣eP        P          19 31 38.5  +3.2
TUMC   Tumaco            33.04 346⥣eP        P          19 31 38.1  +2.8
NBIT   Itapeh - BA       33.09  69 eP        P          19 31 35.9  +0.1
PCON   Cinco Dias        33.13 351⥣eP        P          19 31 39.5  +2.8
BETC   Betania           33.35 352 eP        P          19 31 41.4  +3.3
POPC   Popayan, Colom    33.38 350 eP        P          19 31 40.1  +1.6
RPN    Rapa Nui          33.42 266  LR       LR         19 41 43.5
       comp=Z,3µm,18.5s,baz=122,slow=30
MARP   Paez Belalcaza    33.57 351⥣eP        P          19 31 42.0  +1.7
GDU01  Guandu, BA        33.65  67 eP        P          19 31 40.1  -0.7
ESPZ   Base Esperanza    34.04 169  P        P          19 31 44.4  +0.8
ESPZ                                IAmb     IAmb       19 32 26.0
       comp=Z,510nm,1.7s
PRAC   Prado             34.31 354⥣eP        P          19 31 48.5  +2.0
HOPE   Hope Point        34.34 144  P        P          19 31 46.9  +0.7
HOPE                                pmax     pmax
       comp=Z,156nm,1.1s
HOPE                                MLR      MLR
       comp=Z,4µm,20.0s
HOPE   Hope Point        34.34 144  P        P          19 31 46.9  +0.7
HOPE                                IAmb     IAmb       19 31 48.9
       comp=Z,156nm,1.1s
BOAV   Boa Vista         34.39  19 eP        P          19 31 47.0  -0.1
BOAV   Boa Vista         34.39  19  P        P          19 31 47.0  -0.1
PMSA   Palmer Station    34.47 175  P        P          19 31 48.1  +0.8
       comp=Z,100nm,1.0s,baz=356,slow=7.2,SNR=28
PMSA   Palmer Station    34.47 175 eP        P          19 31 49.0  +1.7
PMSA   Palmer Station    34.47 175  P        P          19 31 48.3  +1.0
PMSA                                IAmb     IAmb       19 31 50.2
       comp=Z,206nm,1.2s
PMSA   Palmer Station    34.47 175  IAMs_20  IAMs_20    19 45 19.6
       comp=Z,8µm,21.0s
ORTC   Ortega, Tolima    34.54 353 eP        P          19 31 50.6  +2.1
VILC   Villavicencio,    34.61 356 eP        P          19 31 51.5  +2.3
PTGC   Puerto Gaitan,    34.63 358 eP        P          19 31 48.6  -0.6
YOTC   Yotoco, Valle     34.75 351⥣eP        P          19 31 51.6  +1.2
PAYG   Puerto Ayora      34.83 325  P        P          19 31 52.4  +1.4
PAYG   Puerto Ayora      34.83 325  IAMs_20  IAMs_20    19 42 20.7
       comp=Z,5µm,20.0s
ORCD   Orcadas           34.88 157  P        P          19 31 50.7  -0.2
NBPN   Ponto Novo - B    34.89  62 eP        P          19 31 51.1  -0.5
CHIC   Chingaza          35.13 356⥣eP        P          19 31 55.2  +1.3
ANIL   Santa Ana         35.13 353⥣eP        P          19 31 54.9  +1.0
MCPB   Macapa, AP        35.19  35 eP        P          19 31 53.8  -0.3
ROSC   El Rosal          35.38 355  P        P          19 31 57.6  +1.6
       comp=Z,158nm,0.9s,baz=159,slow=2.1,SNR=26
ROSC                                PcP      PcP        19 34 25.8  +0.3
       comp=Z,48nm,0.7s,baz=172,slow=22,SNR=2.9
ROSC   El Rosal          35.38 355⥣eP        P          19 31 58.3  +2.2
ROSC   El Rosal          35.38 355  P        P          19 31 58.1  +2.0
ROSC                                IAmb     IAmb       19 32 02.5
       comp=Z,195nm,0.9s
TMAB   Tom-Au,PA,Br      35.63  42 eP        P          19 31 58.2  +0.4
PLMC   San Jos del P     35.65 351⥣eP        P          19 31 59.4  +1.4
GUY2C  Guyana, Caldas    35.85 353⥣eP        P          19 32 02.2  +1.9
NORC   Norcasia          36.14 354 eP        P          19 32 02.0  -0.3
SPBC   San Pablo de B    36.16 355⥣eP        P          19 32 03.3  +0.8
RUSC   La Rusia          36.34 357⥣iP        P          19 32 06.0  +1.5
CBOC   Ciudad Bolivar    36.56 352⥣eP        P          19 32 07.5  +1.5
NBLA   Lagarto - SE      36.66  65 eP        P          19 32 05.9  -0.8
HELC   Santa Helena      36.83 353⥣eP        P          19 32 09.5  +1.1
TAMC   Tame, Arauca      36.84 359 eP        P          19 32 07.7  -0.5
TAMC   Tame, Arauca      36.84 359⥣eP        P          19 32 09.3  +1.1
BARC   Barichara         37.04 357 eP        P          19 32 09.6  -0.5
PTBC   PUERTO BERRIO,    37.07 355⥣eP        P          19 32 09.7  -0.4
ELOV   Elorza            37.44   3⥣eP        P          19 32 12.8  -0.4
BRRC   Barranca, Sant    37.58 356⥣eP        P          19 32 13.7  -0.8
SMAI   San Martin Ant    37.63 177  P        P          19 32 14.6  +0.4
ROSB   Rosrio            37.66  48 eP        P          19 32 15.1   0.0
DBBC   Dabeiba           37.72 352 eP        P          19 32 18.1  +2.4
PAMC   Pamplona, Colo    37.77 358 eP        P          19 32 16.3  -0.2
ZARC   Zaragoza, Cauc    38.05 354⥣eP        P          19 32 18.6  +0.2
ZARC   Zaragoza, Cauc    38.05 354  P        P          19 32 18.4  +0.1
ZARC                                IAmb     IAmb       19 32 21.0
       comp=Z,344nm,1.2s
PTAC   Punta Ardita,     38.07 349⥣eP        P          19 32 20.1  +1.6
NBMA   Muriti-CE         38.21  59 eP        P          19 32 19.9  +0.1
NBPS   Pedro II - PI     38.33  53 eP        P          19 32 20.9   0.0
UREC   San Jos de Ur     38.37 353⥣eP        P          19 32 21.8  +0.8
NBAN   Anadia - AL       38.65  65 eP        P          19 32 22.7  -0.8
SOCV   Socops            38.68   1⥣eP        P          19 32 23.0  -0.7
OCAC   Ocana             38.68 357 eP        P          19 32 21.1  -2.8
OCAC   Ocana             38.68 357  P        P          19 32 22.3  -1.5
NBPB   Pedra_Branca-C    38.84  56 eP        P          19 32 25.5  +0.4
SDV    Santo Domingo     39.28   1⥣eP        P          19 32 29.1  +0.2
SDV    Santo Domingo     39.28   1 eP        P          19 32 28.7  -0.2
SDV    Santo Domingo     39.28   1  P        P          19 32 27.9  -1.0
SDV                                 IAmb     IAmb       19 32 34.5
       comp=Z,206nm,0.9s
SMLC   San Martn de      39.28 356⥣eP        P          19 32 28.1  -0.6
MOTC   Monteria, Cord    39.40 353⥣eP        P          19 32 30.5  +0.8
MOTC   Monteria, Cord    39.40 353  P        P          19 32 30.1  +0.5
BAUV   El Baul           39.45   5 eP        P          19 32 29.8  -0.3
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BAUV   El Baul           39.45   5  P        P          19 32 29.6  -0.5
CAPC   Capurgana         39.46 350 eP        P          19 32 32.0  +1.9
LCBC   Los crdobas,      39.55 352 eP        P          19 32 33.8  +2.9
NBLV   Livramento - P    39.60  61 eP        P          19 32 31.2  -0.2
MDP    Montagnes des     39.73  30  P        P          19 32 32.3  -0.2
       comp=Z,536nm,0.6s,baz=204,slow=9.1,SNR=290
LL1C   La Loma 1 Cana    39.99 356⥣eP        P          19 32 34.8  +0.2
NBMO   Morrinhos-CE      40.08  53 eP        P          19 32 35.3  -0.1
NBRF   Rio Formoso -     40.15  65 eP        P          19 32 35.5  -0.5
LL6C   La Loma 6 Bece    40.17 357 eP        P          19 32 32.2  -3.9
ARGC   Ariguani, Magd    40.34 355⥣eP        P          19 32 38.1  +0.6
BCIP   Isla Barro Col    40.41 347  P        P          19 32 39.8  +1.8
BCIP                                pmax     pmax
       comp=Z,282nm,1.4s
BCIP                                MLR      MLR
       comp=Z,1µm,20.0s
BCIP   Isla Barro Col    40.41 347  P        P          19 32 39.8  +1.8
BCIP                                IAmb     IAmb       19 33 19.6
       comp=Z,282nm,1.4s
SJCC   San Jacinto, C    40.46 354⥣eP        P          19 32 39.0  +0.6
SJCC   San Jacinto, C    40.46 354  P        P          19 32 39.1  +0.6
SJCC                                IAmb     IAmb       19 32 43.0
       comp=Z,431nm,1.2s
NBCL   Cascavel-CE       40.67  56 eP        P          19 32 40.9  +0.6
BRU2   Volcan            40.70 343 eP        P          19 32 40.7  +0.1
PCRV   Puerto La Cruz    41.05  10  P        P          19 32 43.8  +0.4
       comp=Z,193nm,1.1s,baz=202,slow=2.4,SNR=39
BIRV   Birongo           41.14   7  P        P          19 32 44.1   0.0
BIRV                                IAmb     IAmb       19 32 45.8
       comp=Z,480nm,1.1s
SRBA   San Rafael, Bu    41.29 342  P        P          19 32 46.6  +1.2
CRJC   Cerrejon, Guaj    41.43 358 eP        P          19 32 44.1  -2.4
NBPV   Pedro Velho       41.44  62 eP        P          19 32 46.8  +0.2
SMRC   Santa Marta, M    41.64 356 eP        P          19 32 48.5  +0.4
TPP    Pointe-a-Pierr    41.77  15 eP        P          19 32 51.0  +1.7
RIMA   Rio Macho         41.94 341  P        P          19 32 52.2  +1.4
TBH    Brigand Hill      42.02  15 eP        P          19 32 53.6  +2.3
URIC   Uribia, Colomb    42.08 359 eP        P          19 32 48.7  -3.0
URIC   Uribia, Colomb    42.08 359  P        P          19 32 50.0  -1.8
TRN    Trinidad (W)      42.11  15 eP        P          19 32 51.6  -0.3
CAO2   Cobano, Puntar    42.23 339  P        P          19 32 53.2  +0.3
HATO   Hato, Curacao     42.61   3  P        P          19 32 55.0  -1.0
HATO                                IAmb     IAmb       19 32 55.9
       comp=Z,261nm,0.8s
JTS    Las Juntas de     42.75 340  P        P          19 32 58.7  +1.5
       comp=Z,19nm,0.8s
JTS    Las Juntas de     42.75 340 i P       P          19 32 56.1  -1.1
JTS                                 pmax     pmax
       comp=Z,106nm,2.4s
JTS    Las Juntas de     42.75 340 eP        P          19 32 59.4  +2.2
JTS    Las Juntas de     42.75 340  P        P          19 32 58.1  +0.9
TOSP   Speyside          42.93  16 eP        P          19 32 59.3  +0.7
TOSP   Speyside          42.93  16  P        P          19 32 59.4  +0.7
TOSP                                IAmb     IAmb       19 33 01.4
       comp=Z,418nm,1.0s
ORTG   Ortega, Santa     42.97 339  P        P          19 32 59.9  +0.8
COVE   Coope Vega, Sa    43.00 341  P        P          19 33 00.2  +1.0
COVE                                IAmb     IAmb       19 33 33.9
       comp=Z,301nm,1.2s
HZTE   Horizontes, Gu    43.34 339  P        P          19 33 03.6  +1.6
GRGR   Grenville         43.49  14 eP        P          19 33 03.2   0.0
GRGR   Grenville         43.49  14  P        P          19 33 03.1  -0.1
GRGR                                IAmb     IAmb       19 33 04.3
       comp=Z,508nm,0.9s
GCMP   Grenada, Carri    43.88  14 eP        P          19 33 06.7  +0.4
ACON   Acoyapa           44.41 340  P        P          19 33 10.7  +0.2
ACON                                PcP      PcP        19 34 53.4  -0.3
SVB    Belmont           44.69  14 eP        P          19 33 12.1  -0.7
SVB    Belmont           44.69  14  P        P          19 33 12.1  -0.7
SVB                                 IAmb     IAmb       19 33 13.8
       comp=Z,380nm,0.8s
BOAB   BOACO BROADBAN45.01 340      P        P          19 33 14.5  -0.8
MCLT   Moule a Chique    45.17  14 eP        P          19 33 15.0  -1.7
MCLT   Moule a Chique    45.17  14  P        P          19 33 15.5  -1.2
SLBI   Saint Lucia, B    45.47  14 eP        P          19 33 18.9  -0.1
H05S1  Guadeloupe/Mar    45.89  14  P        P          19 33 21.6  -0.7
       SNR=24
MPOM   Morne Pois Mar    45.91  14 eP        P          19 33 21.7  -0.7
MPOM   Morne Pois Mar    45.91  14  P        P          19 33 21.5  -0.8
BIM    Bigot             45.93  14 eP        P          19 33 21.4  -1.3
BIM    Bigot             45.93  14  P        P          19 33 21.7  -1.0
FDF    Fort de France    46.12  14  P        P          19 33 22.9  -1.3
FDF                                 pmax     pmax
       comp=Z,544nm,0.7s
FDF                                 MLR      MLR
       comp=Z,4µm,22.0s
FDF    Fort de France    46.12  14 eP        P          19 33 23.2  -1.0
FDF    Fort de France    46.12  14  P        P          19 33 22.9  -1.3
FDF                                 IAMs_20  IAMs_20    19 55 33.8
       comp=Z,4µm,22.0s
ILAM   Ilet Lapin Mar    46.22  14 eP        P          19 33 24.3  -0.5
ILAM   Ilet Lapin Mar    46.22  14  P        P          19 33 23.5  -1.3
SVN    Savane Anatole    46.23  14  P        P          19 33 24.0  -1.0
SVN                                 IAMs_20  IAMs_20    19 55 37.4
       comp=Z,4µm,22.0s
DSLB   Salisbury         46.76  13 eP        P          19 33 27.5  -1.6
TGUH   Tegucigalpa,Un    47.02 339⥣eP        P          19 33 32.2  +1.0
TGUH   Tegucigalpa,Un    47.02 339  P        P          19 33 30.2  -1.0
TDBA   Terre de Bas,     47.12  13 eP        P          19 33 29.9  -2.0
MAGL   Barre de l'ile    47.28  13 eP        P          19 33 31.3  -1.8
CBE    Ff, Capester      47.34  13 eP        P          19 33 32.2  -1.4
H05N1  Guadeloupe/Mar    47.68  13  P        P          19 33 34.6  -1.7
       SNR=26
MTO3   Montecristo       48.03 336  P        P          19 33 39.5  +0.3
ANBD   Bethesda, Anti    48.26  12 eP        P          19 33 38.4  -2.3
SKI    Saint Kitts       48.37  11 eP        P          19 33 41.6   0.0
MLPR   Magueyes Islan    48.48   5  P        P          19 33 42.0  -0.3
SEUS   St. Eustatius     48.49  11 eP        P          19 33 41.8  -0.6
SEUS   St. Eustatius     48.49  11  P        P          19 33 41.7  -0.8
SEUS                                IAMs_20  IAMs_20    19 55 46.3
       comp=Z,3µm,21.0s
CDVI   St. Croix         48.49   8 eP        P          19 33 43.2  +0.7
CDVI   St. Croix         48.49   8  P        P          19 33 41.5  -1.0
CDVI                                IAmb     IAmb       19 34 10.5
       comp=Z,205nm,0.7s
CRPR   Cabo Rojo, PR     48.51   5  P        P          19 33 42.4  -0.2
SABA   Saba              48.58  10 eP        P          19 33 42.8  -0.4
SABA   Saba              48.58  10  P        P          19 33 42.8  -0.4
SABA                                IAMs_20  IAMs_20    19 57 29.5
       comp=Z,3µm,21.0s
OBIP   Obispado Ponce    48.59   6  P        P          19 33 42.7  -0.5
JAKH   Jacmel            48.59 358  P        P          19 33 42.8  -0.4
JAKH                                IAmb     IAmb       19 33 45.3
       comp=Z,243nm,1.1s
PDPR   Patillas Dam,     48.62   7  P        P          19 33 42.7  -0.7
CELP   Cerrillos         48.62   6  P        P          19 33 43.2  -0.3
H09W1  TRISTAN DA CUN    48.69 114  P        P          19 33 45.0  +1.1
       SNR=14
SJG    San Juan          48.70   6  P        P          19 33 43.6  -0.4
SJG                                 pmax     pmax
       comp=Z,801nm,1.1s
SJG    San Juan          48.70   6⥣eP        P          19 33 43.6  -0.4
SJG    San Juan          48.70   6 eP        P          19 33 43.6  -0.4
SJG    San Juan          48.70   6  P        P          19 33 43.6  -0.4
H09N1  TRISTAN DA CUN    48.71 114  P        P          19 33 45.4  +1.3
       SNR=16
PRSN   Puerto Rico Se    48.71   5  P        P          19 33 44.1   0.0
HUMP   Col San Antoni    48.76   7  P        P          19 33 44.0  -0.5
HUMP                                IAmb     IAmb       19 33 45.2
       comp=Z,300nm,1.1s
SDD    Santo Domingo     48.81   2  P        P          19 33 46.8  +1.9
LGNH   Logne             48.86 358  P        P          19 33 46.0  +0.6
LGNH                                IAmb     IAmb       19 33 47.8
       comp=Z,138nm,0.7s
ANWB   Willy Bob         48.86  12 eP        P          19 33 43.5  -1.9
ANWB   Willy Bob         48.86  12  P        P          19 33 43.8  -1.5
AOPR   Arecibo Observ    48.87   6 eP        P          19 33 44.6  -0.9
AOPR   Arecibo Observ    48.87   6  P        P          19 33 44.6  -0.9
GCPR   Guaynabo City     48.90   7  P        P          19 33 44.4  -1.2
MTDJ   Mount Denham      48.94 352  P        P          19 33 45.9  -0.2
MTDJ                                IAmb     IAmb       19 33 48.4
       comp=Z,227nm,1.1s
AGPR   Aguadilla, PR     48.96   5  P        P          19 33 45.1  -1.0
EMPR   Esperanza - Ma    49.02   6  P        P          19 33 45.5  -1.0
SMRT   St. Maarten       49.02  10 eP        P          19 33 44.6  -2.0
SMRT   St. Maarten       49.02  10  P        P          19 33 45.0  -1.6
SMRT                                IAMs_20  IAMs_20    19 56 01.4
       comp=Z,3µm,21.0s
SDDR   Presa de Saban    49.31 360⥣eP        P          19 33 48.4  -0.4
SDDR   Presa de Saban    49.31 360  P        P          19 33 48.9   0.0
SDDR                                IAmb     IAmb       19 33 52.3
       comp=Z,112nm,0.8s
SC01   Santiago de lo    49.76   1  P        P          19 33 52.7  +0.6
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GTBY   Guantanamo Bay    50.39 355⥣eP        P          19 33 56.4  -0.5
GTBY   Guantanamo Bay    50.39 355  P        P          19 33 57.3  +0.4
PETF   Flores            50.54 337  P        P          19 33 58.6  +0.5
CCIG   Comitan           50.78 334  P        P          19 34 00.5  +0.4
GRTK   Grand Turk        51.83   0  P        P          19 34 08.4  +0.7
VNA3   Neumayer Olymp    52.25 159  P        P          19 34 10.5  +0.2
VNA3   Neumayer Olymp    52.25 159  PKiKP    PKiKP      19 41 52.5  -8.3
VNA1   Neumayer--Stat    52.53 158  P        P          19 34 13.3  +0.9
CMIG   Matias Romero     52.60 331  P        P          19 34 14.0  +0.4
       comp=Z,36nm,1.1s,baz=133,slow=5.2,SNR=7.0
CMIG                                PcP      PcP        19 35 24.0  +0.8
       comp=Z,38nm,0.8s,baz=119,slow=7.9,SNR=5.2
VNA2   Neumayer--Watz    52.88 158  P        P          19 34 15.0   0.0
       baz=286,slow=8.5
VNA2   Neumayer--Watz    52.88 158  PKiKP    PKiKP      19 42 01.0  -0.4
       baz=252,slow=0.8
SNAA   Sanae             54.47 159  P        P          19 34 26.5  -0.2
SNAA   Sanae             54.47 159  P        P          19 34 26.3  -0.5
       comp=Z,262nm,1.0s,baz=279,slow=6.5,SNR=468
SNAA   Sanae             54.47 159ceP        P          19 34 26.1  -0.7
SNAA                                pmax     pmax
       comp=Z,521nm,1.4s
SNAA   Sanae             54.47 159  P        P          19 34 26.2  -0.5
TLIG   Tlapa             54.64 328  P        P          19 34 29.4  +0.8
UNM    Universidad Na    56.46 328  IAMs_20  IAMs_20    19 54 00.8
       comp=Z,3µm,20.0s
H10S3  ASCENSION HYDR56.82  80      P        P          19 34 44.7  +0.7
       baz=200,slow=74,SNR=9.4
H10S2  ASCENSION HYDR56.83  80      P        P          19 34 45.1  +1.0
       baz=20,slow=74,SNR=12
H10N3  ASCENSION HYDR57.52  79      P        P          19 34 50.3  +1.4
       baz=224,slow=6.4,SNR=12
H10N1  ASCENSION HYDR57.54  79      P        P          19 34 50.3  +1.3
       baz=224,slow=6.4,SNR=20
H10N2  ASCENSION HYDR57.54  79      P        P          19 34 50.4  +1.3
       baz=224,slow=6.4,SNR=15
ASCN   Ascension         57.60  79  P        P          19 34 50.3  +0.5
ASCN                                IAMs_20  IAMs_20    19 56 40.0
       comp=Z,4µm,21.0s
MOIG   Morelia           57.70 326  P        P          19 34 50.7  +0.1
MOIG                                IAmb     IAmb       19 34 53.3
       comp=Z,85nm,0.8s
NVL    N'lazarevskaya    59.17 157 eP        P          19 35 04.4  +4.5
NVL                                i                    19 37 08.7
NVL                                eS        S          19 42 57.2  -6.4
NVL                                 pmax     pmax
       comp=Z,301nm,1.2s
DWPF   Disney Wildern    59.20 350  P        P          19 35 00.8  +0.2
       baz=170
QSPA   South Pole Qui    59.61 180  LR       LR         20 00 28.0
       comp=Z,1µm,21.4s,baz=165,slow=36
QSPA   South Pole Qui    59.61 180  P        P          19 35 03.2   0.0
ZAIG   Zacatecas         61.00 327  P        P          19 35 14.4  +1.1
SHEL   Horse Pasture     61.17  92  P        P          19 35 15.4  +0.9
SHEL                                pmax     pmax
       comp=Z,167nm,1.0s
SHEL   Horse Pasture     61.17  92  P        P          19 35 15.4  +0.9
SHEL                                IAmb     IAmb       19 35 16.8
       comp=Z,167nm,1.0s
553A   Crawfordville     61.76 347  P        P          19 35 18.6  +0.7
H06S1  SOCORRO T         62.18 317  T        T          20 42 31.6
       SNR=21
H06E1  SOCORRO T-PHAS62.19 317      T        T          20 42 32.5
       SNR=48
TIGA   Tifton            62.82 348  P        P          19 35 24.9  -0.2
TIGA                                IAmb     IAmb       19 35 26.6
       comp=Z,202nm,1.1s
TIGA   Tifton            62.82 348  P        P          19 35 25.4  +0.4
       baz=168,SNR=7.5
BBSR   BB Station        62.95   6  P        P          19 35 26.5  +0.6
352A   Blakely           63.11 347  P        P          19 35 27.0   0.0
BRAL   Brewton           63.25 345  P        P          19 35 28.2  +0.3
BRAL   Brewton           63.25 345  P        P          19 35 28.8  +0.8
       baz=165,SNR=8.9
NHSC   New Hope          63.94 352  P        P          19 35 33.1  +0.7
NHSC   New Hope          63.94 352  P        P          19 35 33.5  +1.1
       baz=172,SNR=21
152A   Waverly Hall      64.22 347  IAmb     IAmb       19 35 35.5
       comp=Z,125nm,0.9s
SACV   Santiago Islan    64.45  52  P        P          19 35 36.4  +0.2
SACV                                IAmb     IAmb       19 35 38.1
       comp=Z,167nm,0.9s
833A   Chaparral WMA,    64.47 333  P        P          19 35 37.4  +1.4
       baz=153,SNR=61
441A   DeRidder          64.49 339  P        P          19 35 37.7  +1.6
441A                                IAmb     IAmb       19 35 39.5
       comp=Z,259nm,1.1s
HKT    Hockley           64.62 336 i P       P          19 35 37.1  +0.3
HKT                                 pmax     pmax
       comp=Z,99nm,1.2s
HKT    Hockley           64.62 336  P        P          19 35 38.2  +1.4
GOGA   Godfrey           64.72 349  P        P          19 35 37.4  -0.1
GOGA                                pmax     pmax
       comp=Z,137nm,1.2s
GOGA   Godfrey           64.72 349  P        P          19 35 37.4  -0.1
GOGA   Godfrey           64.72 349  P        P          19 35 37.5   0.0
       baz=168,SNR=24
Y57A   Sumter            64.86 352  P        P          19 35 38.8  +0.3
Y57A                                IAmb     IAmb       19 35 40.3
       comp=Z,234nm,0.9s
VBMS   Vicksburg         65.11 342  P        P          19 35 41.5  +1.5
       baz=162,SNR=15
146A   Union             65.13 343  P        P          19 35 41.4  +1.2
146A                                IAmb     IAmb       19 35 42.9
       comp=Z,204nm,1.1s
JSC    Jenkinsville      65.24 351  P        P          19 35 41.4  +0.5
JSC                                 pmax     pmax
       comp=Z,177nm,1.1s
JSC    Jenkinsville      65.24 351  P        P          19 35 41.4  +0.5
JSC                                 IAmb     IAmb       19 35 42.6
       comp=Z,177nm,1.1s
HODGE  Hodges            65.33 350  P        P          19 35 41.6  +0.1
Z47A   Carrollton        65.43 345  IAmb     IAmb       19 35 44.0
       comp=Z,341nm,1.3s
BIRD   Birdtown, Kers    65.49 352  IAmb     IAmb       19 35 44.3
       comp=Z,196nm,1.3s
SLBS   Sierra La Lagu    65.52 321  P        P          19 35 44.3  +1.3
CNNC   Cliffs of the     65.80 354  P        P          19 35 45.4  +0.9
CNNC   Cliffs of the     65.80 354  P        P          19 35 45.7  +1.2
       baz=174,SNR=15
PAULI  Pauline           65.85 350  IAmb     IAmb       19 35 46.6
       comp=Z,234nm,1.2s
NATX   Nacogdoches       65.89 338  P        P          19 35 46.1  +0.9
NATX                                IAmb     IAmb       19 35 48.1
       comp=Z,281nm,1.1s
NATX   Nacogdoches       65.89 338  P        P          19 35 47.0  +1.8
       baz=158,SNR=18
435B   Jarrell           65.99 335  P        P          19 35 47.2  +1.4
435B                                IAmb     IAmb       19 35 48.5
       comp=Z,125nm,0.9s
435B   Jarrell           65.99 335  P        P          19 35 47.4  +1.5
       baz=156,SNR=13
HPIG                     66.01 326  P        P          19 35 47.4  +1.1
KMSC   Kings Mountain    66.09 351  P        P          19 35 46.5  +0.1
KMSC                                IAmb     IAmb       19 35 48.1
       comp=Z,178nm,1.0s
KMSC   Kings Mountain    66.09 351  P        P          19 35 46.8  +0.4
       baz=171,SNR=33
BG3    Lake Jocassee     66.18 350  P        P          19 35 47.3  +0.3
BG3                                 IAmb     IAmb       19 35 48.9
       comp=Z,214nm,1.1s
FPAL   Fort Paine        66.21 347  P        P          19 35 47.3  +0.1
FPAL                                IAmb     IAmb       19 35 48.7
       comp=Z,141nm,1.0s
W52A   Murphy            66.44 349  P        P          19 35 48.9  +0.2
W52A                                IAmb     IAmb       19 35 50.6
       comp=Z,202nm,0.9s
SBA    Scott Base        66.51 191  P        P          19 35 49.9  +1.3
SBA                                 pmax     pmax
       comp=Z,77nm,1.1s
SBA    Scott Base        66.51 191  P        P          19 35 49.9  +1.3
JCT    Junction City     66.55 333  P        P          19 35 49.9  +0.4
JCT                                 pmax     pmax
       comp=Z,371nm,1.3s
JCT    Junction City     66.55 333  P        P          19 35 49.9  +0.4
JCT                                 IAmb     IAmb       19 35 52.1
       comp=Z,371nm,1.3s
JCT    Junction City     66.55 333  P        P          19 35 50.7  +1.3
       baz=154,SNR=42
Z41A   Richland Creek    66.72 340  P        P          19 35 51.7  +1.3
       baz=160,SNR=13
V55A   Taylorsville      66.78 351  P        P          19 35 51.1  +0.4
V55A                                IAmb     IAmb       19 35 52.6
       comp=Z,314nm,1.1s
CPCT   Cooper Cave       66.89 348  P        P          19 35 51.7  +0.2
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U59A	Littleton	66.90	354	P	P	19 35 52.3	+0.8
U59A				IAmb	IAmb	19 35 54.0	
	comp=Z,299nm,1.0s						
SWET	Sewanee	66.93	347	P	P	19 35 51.9	+0.1
TKL	Tuckaleechee C	66.97	349	P	P	19 35 51.8	-0.2
TKL				pmax	pmax		
	comp=Z,301nm,1.0s						
TKL	Tuckaleechee C	66.97	349	P	P	19 35 51.8	-0.2
TKL				IAmb	IAmb	19 35 53.4	
	comp=Z,301nm,1.0s						
WHTX	Lake Whitney,	67.04	336	P	P	19 35 53.3	+0.8
WHTX				IAmb	IAmb	19 35 54.9	
	comp=Z,254nm,1.1s						
WHTX	Lake Whitney,	67.04	336	P	P	19 35 53.5	+1.0
	baz=156,SNR=22						
CCAR	Cane Creek	67.05	342	P	P	19 35 53.6	+1.1
CCAR				IAmb	IAmb	19 35 55.2	
	comp=Z,156nm,1.0s						
TX31	Lajitas Ar. Si	67.14	329	P	P	19 35 53.8	+0.5
TX31				IAmb	IAmb	19 35 55.4	
	comp=Z,140nm,0.8s						
TXAR	Lajitas Array	67.14	329	P	P	19 35 54.0	+0.7
	comp=Z,36nm,0.6s,baz=152,slow=8.3,SNR=392						
TXAR				LR	LR	20 00 45.4	
	comp=Z,1µm,20.7s,baz=0.0,slow=32						
TXAR				PKPPKP	P'P'df	20 04 21.6	+5.7
	comp=Z,2.3nm,1.0s,baz=298,slow=2.7,SNR=11						
U56A	King	67.16	352	IAmb	IAmb	19 35 55.3	
	comp=Z,318nm,1.1s						
V51A	Loudon	67.21	348	IAmb	IAmb	19 35 55.0	
	comp=Z,251nm,0.9s						
TAOE	Nuku Hiva Isla	67.40	273	*e*S	S	19 44 52.4	+4.3
	comp=Z,1µm,27.4s						
TAOE	Nuku Hiva Isla	67.40	273	*e*LR	LR	19 56 24.0	
	comp=Z,4µm,32.1s,baz=128						
VNDA	Vanda	67.54	191	P	P	19 35 56.1	+1.0
	comp=Z,36nm,1.0s,baz=142,slow=6.1,SNR=56						
VNDA				PKPPKP	P'P'df	20 04 15.8	-7.2
	comp=Z,6.4nm,0.9s,baz=313,slow=4.9,SNR=9.9						
VNDA	Vanda	67.54	191	P	P	19 35 56.6	+1.4
W45A	Hickory Valley	67.57	344	P	P	19 35 56.2	+0.4
T60A	Surry	67.60	355	P	P	19 35 57.0	+1.2
T57A	Hurt	67.68	353	P	P	19 35 57.0	+0.6
T57A				IAmb	IAmb	19 35 58.4	
	comp=Z,204nm,1.2s						
MET	Memphis--Engin	67.72	344	P	P	19 35 57.8	+1.1
TZTN	Tazewell	67.80	349	P	P	19 35 57.5	+0.3
TZTN				IAmb	IAmb	19 35 58.7	
	comp=Z,336nm,1.6s						
TZTN	Tazewell	67.80	349	P	P	19 35 57.2	0.0
	baz=169,SNR=17						
X40A	Basin Creek Fa	67.88	341	P	P	19 35 58.0	+0.3
X40A	Basin Creek Fa	67.88	341	P	P	19 35 58.4	+0.7
	baz=160,SNR=7.4						
BLA	Blacksburg	68.02	352	P	P	19 35 59.3	+0.7
BLA				pmax	pmax		
	comp=Z,131nm,1.1s						
BLA				MLR	MLR		
	comp=Z,1µm,21.0s						
BLA	Blacksburg	68.02	352	P	P	19 35 59.3	+0.7
BLA				IAmb	IAmb	19 36 00.6	
	comp=Z,130nm,1.1s						
BLA	Blacksburg	68.02	352	P	P	19 35 59.3	+0.7
	baz=172,SNR=17						
MIAR	Mount Ida	68.15	340	P	P	19 36 00.0	+0.6
MIAR				pmax	pmax		
	comp=Z,102nm,1.1s						
MIAR	Mount Ida	68.15	340	P	P	19 36 00.0	+0.6
MIAR	Mount Ida	68.15	340	P	P	19 36 00.1	+0.6
	baz=160,SNR=32						
U49A	Red Boiling Sp	68.16	347	IAmb	IAmb	19 36 00.4	
	comp=Z,115nm,0.7s						
WVT	Waverly	68.20	346	P	P	19 35 59.6	-0.1
WVT				pmax	pmax		
	comp=Z,344nm,0.9s						
WVT				MLR	MLR		
	comp=Z,700nm,18.0s						
WVT	Waverly	68.20	346	P	P	19 35 59.6	-0.1
WVT	Waverly	68.20	346	P	P	19 35 60.0	+0.3
	baz=165						
LPAR	Lepanto	68.26	343	P	P	19 36 01.0	+0.9
LPAR				IAmb	IAmb	19 36 02.1	
	comp=Z,307nm,1.3s						
HBAR	Harrisburg	68.31	343	IAmb	IAmb	19 36 02.4	
	comp=Z,148nm,0.9s						
HALT	Halls	68.33	344	P	P	19 36 00.6	+0.1
W41B	Gary Mavity, V	68.36	342	P	P	19 36 01.2	+0.4
	baz=161,SNR=29						
ABTX	Abilene, Hawle	68.40	334	P	P	19 36 01.6	+0.5
ABTX				IAmb	IAmb	19 36 03.5	
	comp=Z,267nm,1.1s						
ABTX	Abilene, Hawle	68.40	334	P	P	19 36 02.0	+0.9
	baz=154,SNR=56						
WHAR	Wooly Hollow	68.48	342	P	P	19 36 01.9	+0.4
R58B	Mineral	68.51	354	IAmb	IAmb	19 36 04.3	
	comp=Z,334nm,1.0s						
CBN	Corbin Frederi	68.70	355	IAmb	IAmb	19 36 05.4	
	comp=Z,363nm,1.4s						
CBN	Corbin Frederi	68.70	355	P	P	19 36 03.9	+1.1
	baz=174,SNR=7.5						
MBO	M'Bour	68.76	58	P	P	19 36 04.5	+0.8
SYO	Syowa Base	68.77	159⇑	*i*P	P	19 36 03.0	+0.1
SYO	Syowa Base	68.77	159⇓	*i*pP	pP	19 36 14.8	-1.9
SYO	Syowa Base	68.77	159⇑	*i*sP	sP	19 36 19.4	-2.7
TBI	Tubuai	68.80	255	*e*S	S	19 45 08.6	+4.2
	comp=Z,2µm,29.0s						
TBI	Tubuai	68.80	255	*e*LR	LR	19 57 01.7	
	comp=Z,5µm,29.5s,baz=107						
TBI	Tubuai	68.80	255	*e*T	T	20 50 38.5	
	comp=Z,30nm,0.2s						
W39A	Magazine	68.81	340	IAmb	IAmb	19 36 06.3	
	comp=Z,339nm,0.9s						
W39A	Magazine	68.81	340	P	P	19 36 04.5	+0.9
	baz=159,SNR=118						
LCAR	Lake Charles	68.92	343	IAmb	IAmb	19 36 05.9	
	comp=Z,271nm,1.0s						
R53A	Hurricane	69.32	351	IAmb	IAmb	19 36 08.1	
	comp=Z,143nm,0.9s						
PBMO	Poplar Bluff	69.41	344	IAmb	IAmb	19 36 09.1	
	comp=Z,341nm,1.1s						
U40A	Yellville	69.64	342	IAmb	IAmb	19 36 10.6	
	comp=Z,249nm,1.1s						
U40A	Yellville	69.64	342	P	P	19 36 09.1	+0.4
	baz=160,SNR=83						
Q56A	Snyder Ridge,	69.69	353	IAmb	IAmb	19 36 11.7	
	comp=Z,199nm,1.1s						
W35A	Tecumseh	69.73	338		P	19 36 09.0	-0.3
R49A	Shelbyville	69.77	348	IAmb	IAmb	19 36 10.7	
	comp=Z,185nm,1.2s						
SDMD	Soldier's Deli	69.86	355	P	P	19 36 10.9	+0.9
HHAR	Hobbs	69.87	341	IAmb	IAmb	19 36 12.0	
	comp=Z,281nm,0.9s						
WCI	Wyandotte Cave	69.92	347	P	P	19 36 10.0	-0.3
WCI				pmax	pmax		
	comp=Z,187nm,0.9s						
WCI				MLR	MLR		
	comp=Z,900nm,20.0s						
WCI	Wyandotte Cave	69.92	347	P	P	19 36 10.0	-0.3
WCI				IAmb	IAmb	19 36 11.4	
	comp=Z,187nm,0.9s						
WCI	Wyandotte Cave	69.92	347	P	P	19 36 10.1	-0.2
	baz=166						
MNTX	Cornudas Mount	69.92	329	P	P	19 36 10.3	-0.3
MNTX				IAMs_20	IAMs_20	20 02 51.8	
	comp=Z,2µm,20.0s						
MNTX	Cornudas Mount	69.92	329	P	P	19 36 10.2	-0.3
	baz=149,SNR=111						
Q52A	Bidwell	69.98	351	IAmb	IAmb	19 36 12.8	
	comp=Z,324nm,1.1s						
MEH	Mehetia	70.01	261	*e*T	T	20 52 09.5	
	comp=Z,86nm,0.2s						
P61A	Hammonton	70.01	357	IAmb	IAmb	19 36 13.5	
	comp=Z,378nm,1.1s						
P57A	Homestead Farm	70.03	354	IAmb	IAmb	19 36 13.9	
	comp=Z,346nm,0.9s						
TUL1	Leonard	70.08	339	IAmb	IAmb	19 36 13.2	
	comp=Z,350nm,0.9s						
TUL1	Leonard	70.08	339	P	P	19 36 11.5	+0.1
	baz=158,SNR=79						
P60A	Greenville	70.19	356	IAmb	IAmb	19 36 14.4	
	comp=Z,202nm,0.9s						
P60A	Greenville	70.19	356	P	P	19 36 13.3	+1.3
	baz=176,SNR=26						
MGMO	Mountain Grove	70.23	342	IAmb	IAmb	19 36 14.3	
	comp=Z,138nm,0.9s						
MCWV	Mont Chateau	70.37	353	IAmb	IAmb	19 36 15.2	
	comp=Z,214nm,1.1s						
MCWV	Mont Chateau	70.37	353	P	P	19 36 13.9	+0.8
	baz=172,SNR=26						
P53A	Whipple	70.38	352	IAmb	IAmb	19 36 14.9	
	comp=Z,260nm,1.1s						
MVL	Millersville	70.42	356	IAmb	IAmb	19 36 16.2	
	comp=Z,201nm,1.0s						
EPT	El Paso	70.48	329	IAMs_20	IAMs_20	20 02 49.4	
	comp=Z,2µm,20.0s						
FVM	French Village	70.56	344	IAmb	IAmb	19 36 16.2	
	comp=Z,290nm,0.8s						
P52A	Corning	70.62	351	IAmb	IAmb	19 36 16.6	
	comp=Z,269nm,0.9s						
P52A	Corning	70.62	351	P	P	19 36 14.5	-0.1
	baz=170,SNR=45						
MSTX	Muleshoe	70.80	333	P	P	19 36 16.5	+0.5
MSTX				IAmb	IAmb	19 36 18.0	
	comp=Z,250nm,0.9s						
MSTX	Muleshoe	70.80	333	P	P	19 36 16.2	+0.3
	baz=152,SNR=98						
CCM	Cathedral Cave	70.83	343	P	P	19 36 16.2	+0.3
CCM				pmax	pmax		
	comp=Z,363nm,1.0s						
CCM	Cathedral Cave	70.83	343	P	P	19 36 16.2	+0.3
CCM				IAmb	IAmb	19 36 17.9	
	comp=Z,362nm,1.0s						
CCM	Cathedral Cave	70.83	343	P	P	19 36 16.1	+0.2
	baz=162						
O56A	Blue Knob Stat	70.85	354	IAmb	IAmb	19 36 18.6	
	comp=Z,230nm,1.2s						
O56A	Blue Knob Stat	70.85	354	P	P	19 36 16.9	+0.8
	baz=174,SNR=28						
BLO	Bloomington	70.87	347	IAmb	IAmb	19 36 17.2	
	comp=Z,271nm,1.1s						
P49A	Miami Univ. Ec	70.91	349	IAMs_20	IAMs_20	20 06 10.3	
	comp=Z,2µm,22.0s						
P49A	Miami Univ. Ec	70.91	349	P	P	19 36 16.0	-0.3
	baz=168,SNR=36						
S39A	Bolivar	71.02	342	IAmb	IAmb	19 36 19.1	
	comp=Z,225nm,0.9s						
O52A	Adamsville	71.06	351	IAmb	IAmb	19 36 18.7	
	comp=Z,183nm,0.9s						
O53A	New Philadelph	71.11	352	IAmb	IAmb	19 36 19.2	
	comp=Z,288nm,1.4s						
O53A	New Philadelph	71.11	352	P	P	19 36 17.8	+0.2
	baz=171,SNR=16						
SLM	Saint Louis	71.14	344	P	P	19 36 17.8	0.0
SLM				pmax	pmax		
	comp=Z,336nm,1.0s						
SLM	Saint Louis	71.14	344	P	P	19 36 17.8	0.0
SLM				IAmb	IAmb	19 36 19.5	
	comp=Z,336nm,1.0s						
SSPA	Standing Stone	71.16	355	P	P	19 36 18.3	+0.4
SSPA				IAmb	IAmb	19 36 20.2	
	comp=Z,188nm,1.1s						
SSPA	Standing Stone	71.16	355	P	P	19 36 19.0	+1.1
	baz=174						
AMTX	Amarillo	71.18	334	P	P	19 36 18.7	+0.5
AMTX				IAmb	IAmb	19 36 20.6	
	comp=Z,216nm,1.1s						
T35A	Sooner Cattle	71.23	339	IAmb	IAmb	19 36 21.1	
	comp=Z,246nm,1.1s						
TIAR	Tiarei	71.24	260	*e*T	T	20 53 41.7	
	comp=Z,8.4nm,0.2s						
N59A	State Game Lan	71.30	356	IAmb	IAmb	19 36 21.7	
	comp=Z,309nm,0.9s						
N59A	State Game Lan	71.30	356	P	P	19 36 20.4	+1.6
	baz=176,SNR=54						
PAL	Palisades	71.31	358	P	P	19 36 20.0	+1.3
	baz=178,SNR=9.5						
ACSO	Alum Creek Sta	71.33	351	P	P	19 36 19.0	+0.1
ACSO	Alum Creek Sta	71.33	351	P	P	19 36 19.1	+0.3
	baz=170,SNR=58						
PAE	Paea	71.39	260	*e*T	T	20 53 53.1	
	comp=Z,1.5nm,0.2s						
PPT2	Papeete2	71.42	260	*e*S	S	19 45 38.4	+3.1
	comp=Z,2µm,35.0s						
PPT2	Papeete2	71.42	260	*e*LR	LR	19 58 19.9	
	comp=Z,5µm,25.0s,baz=117						
PPT2	Papeete2	71.42	260	*e*T	T	20 53 54.4	
	comp=Z,3.4nm,0.2s						
PPT	Papeete	71.43	260	P	P	19 36 21.0	+0.9
	comp=Z,66nm,0.9s,baz=250,slow=16,SNR=6.3						
PPT				LR	LR	20 00 50.6	
	comp=Z,548nm,19.6s,baz=110,slow=30						
WSPT	Westport, CT	71.45	358	P	P	19 36 20.7	+1.1
WSPT				IAmb	IAmb	19 36 22.2	
	comp=Z,226nm,0.9s						
N54A	Moraine State	71.68	353	IAmb	IAmb	19 36 23.0	
	comp=Z,286nm,1.1s						
N54A	Moraine State	71.68	353	P	P	19 36 21.8	+0.8
	baz=172,SNR=30						
121A	Cookes Peak, D	71.70	328	P	P	19 36 23.2	+1.6
121A				IAmb	IAmb	19 36 24.9	
	comp=Z,194nm,1.0s						
121A	Cookes Peak, D	71.70	328	P	P	19 36 23.6	+2.0
	baz=148,SNR=158						
KAN17	Caldwell West	71.75	338		P	19 36 22.2	+0.7
KAN17				IAmb	IAmb	19 36 23.7	
	comp=Z,262nm,1.2s						
M57A	Sunshine Farm,	71.80	355	IAmb	IAmb	19 36 24.3	
	comp=Z,200nm,1.1s						
P43A	Skaggs, Pawnee	71.94	345	IAmb	IAmb	19 36 24.0	
	comp=Z,373nm,1.1s						
KSPA	Keystone Colle	71.94	356	IAmb	IAmb	19 36 25.0	
	comp=Z,194nm,1.2s						
SFIN	Lafayette	72.15	347	P	P	19 36 23.3	-0.5
	baz=166,SNR=19						
BRYW	Bryant College	72.18	360	IAmb	IAmb	19 36 26.7	
	comp=Z,276nm,0.9s						
M54A	Oil Creek Stat	72.19	353	IAmb	IAmb	19 36 25.8	
	comp=Z,203nm,1.1s						
M54A	Oil Creek Stat	72.19	353	P	P	19 36 24.5	+0.4
	baz=172,SNR=17						
M53A	WI Miller and	72.22	353	IAmb	IAmb	19 36 25.9	
	comp=Z,225nm,0.9s						
M53A	WI Miller and	72.22	353	P	P	19 36 25.0	+0.8
	baz=172,SNR=14						
ALLY	Alegheny Colle	72.37	353	IAmb	IAmb	19 36 26.9	
	comp=Z,258nm,1.1s						
M52A	Chesterland	72.40	352	IAmb	IAmb	19 36 26.9	
	comp=Z,277nm,0.9s						
L59A	Walton	72.53	357	IAmb	IAmb	19 36 28.8	
	comp=Z,377nm,1.0s						
BINY	Binghamton	72.59	356	IAmb	IAmb	19 36 28.8	
	comp=Z,177nm,1.0s						
BINY	Binghamton	72.59	356	P	P	19 36 27.6	+1.1
	baz=176,SNR=18						
Y22D	IRIS PASSCAL I	72.62	330	IAMs_20	IAMs_20	20 03 29.9	
	comp=Z,2µm,22.0s						
L61B	Northampton	72.72	359	P	P	19 36 28.4	+1.3
	baz=179,SNR=32						
HDIL	Hopedale	72.76	346	IAmb	IAmb	19 36 28.3	
	comp=Z,188nm,0.7s						
HDIL	Hopedale	72.76	346	P	P	19 36 27.6	+0.1
	baz=164,SNR=26						
HRV	Adam Dziewonsk	72.76	360	P	P	19 36 28.7	+1.3
HRV				pmax	pmax		
	comp=Z,212nm,1.0s						
HRV	Adam Dziewonsk	72.76	360	P	P	19 36 28.6	+1.3
HRV				IAmb	IAmb	19 36 30.2	
	comp=Z,212nm,0.9s						
HRV	Adam Dziewonsk	72.76	360	P	P	19 36 28.7	+1.3
	baz=180						
ERPA	Erie	72.82	353	P	P	19 36 28.2	+0.5
ERPA				IAmb	IAmb	19 36 29.5	
	comp=Z,348nm,1.1s						
ERPA	Erie	72.82	353	P	P	19 36 28.3	+0.5
	baz=172,SNR=12						
TUC	Tucson	72.93	326	P	P	19 36 29.5	+0.7
TUC				pmax	pmax		
	comp=Z,54nm,1.2s						
TUC	Tucson	72.93	326	P	P	19 36 29.5	+0.7
TUC	Tucson	72.93	326	P	P	19 36 30.1	+1.3
	baz=145						
LIC	Lamto	73.09	72	*e*PKP1	P	19 36 30.5	+0.5
	comp=Z,1µm,0.7s						
K57A	Scipio Center	73.15	356	IAmb	IAmb	19 36 31.6	
	comp=Z,170nm,0.9s						
ANMO	Albuquerque	73.16	330	P	P	19 36 31.3	+1.1
	comp=Z,39nm,0.9s,baz=153,slow=7.6,SNR=54						
ANMO	Albuquerque	73.16	330	P	P	19 36 30.6	+0.4
ANMO				pmax	pmax		
	comp=Z,100nm,1.3s						
ANMO	Albuquerque	73.16	330	P	P	19 36 30.6	+0.4
ANMO	Albuquerque	73.16	330	P	P	19 36 31.8	+1.6
	baz=149						
KSU1	Kansas State U	73.27	340	P	P	19 36 30.7	+0.2
	baz=158,SNR=15						
R32A	Long Quarter,	73.31	338	IAmb	IAmb	19 36 33.1	
	comp=Z,244nm,1.0s						
TIC	Toumodi	73.33	72	*e*PKP1	P	19 36 31.1	-0.4
KIC	Kosan Boka	73.40	72	*e*PKP1	P	19 36 31.7	-0.2
	comp=Z,1µm,0.8s						
AAM	Ann Arbor	73.45	350	P	P	19 36 31.6	+0.1
	baz=169,SNR=9.6						
DBIC	Dimbokro	73.48	72	P	P	19 36 32.2	-0.1
	comp=Z,914nm,0.9s,baz=234,slow=5.5,SNR=1091						
DBIC				LR	LR	20 06 20.7	
	comp=Z,3µm,19.5s,baz=242,slow=34						
DBIC	Dimbokro	73.48	72	P	P	19 36 32.2	-0.1
214A	Organ Pipe Nat	73.65	324	P	P	19 36 34.8	+1.8
	baz=144,SNR=74						
J56A	Wolcott	73.71	356	IAmb	IAmb	19 36 34.8	
	comp=Z,229nm,0.9s						
MEDO	Medina	73.72	355	IAmb	IAmb	19 36 34.0	
	comp=Z,196nm,1.1s						
J59A	Piesco	73.78	358	IAmb	IAmb	19 36 35.8	
	comp=Z,186nm,1.0s						
J57A	Williamstown	73.80	356	IAmb	IAmb	19 36 35.5	
	comp=Z,230nm,0.9s						
J54A	Appleton	73.84	354	IAmb	IAmb	19 36 35.6	
	comp=Z,205nm,0.9s						
CBKS	Cedar Bluff	74.00	337	P	P	19 36 35.8	+0.9
	baz=155,SNR=46						
L44A	Lake County Fo	74.05	347	IAmb	IAmb	19 36 36.4	
	comp=Z,291nm,0.9s						
L44A	Lake County Fo	74.05	347	P	P	19 36 35.2	+0.2
	baz=165,SNR=10.0						
T25A	Trinidad	74.21	333	P	P	19 36 37.4	+1.0
T25A				IAmb	IAmb	19 36 39.6	
	comp=Z,254nm,1.0s						
T25A	Trinidad	74.21	333	P	P	19 36 37.9	+1.5
	baz=151,SNR=146						
PECO	Prince Edward	74.38	356	IAmb	IAmb	19 36 38.8	
	comp=Z,181nm,0.9s						
LBNH	Lisbon	74.50	360	IAmb	IAmb	19 36 40.4	
	comp=Z,184nm,0.9s						
LBNH	Lisbon	74.50	360	P	P	19 36 39.2	+1.6
	baz=180,SNR=23						
K43A	Burlington	74.63	347	IAmb	IAmb	19 36 39.9	
	comp=Z,243nm,1.1s						
W18A	Petrified Fore	74.75	328	IAmb	IAmb	19 36 42.7	
	comp=Z,196nm,1.1s						
W18A	Petrified Fore	74.75	328	P	P	19 36 41.2	+1.7
	baz=146,SNR=43						
LONY	Lake Ozonia	74.94	358	IAmb	IAmb	19 36 42.4	
	comp=Z,180nm,1.0s						
LONY	Lake Ozonia	74.94	358	P	P	19 36 41.0	+0.9
	baz=177,SNR=31						
SCIA	State Center	74.95	343	P	P	19 36 40.6	+0.3
SCIA				IAmb	IAmb	19 36 42.3	
	comp=Z,197nm,0.8s						
SCIA	State Center	74.95	343	P	P	19 36 40.7	+0.5
	baz=161,SNR=21						
FRNY	Flat Rock	75.12	358	IAmb	IAmb	19 36 43.5	
	comp=Z,214nm,0.9s						
SDCO	Great Sand Dun	75.17	333	P	P	19 36 42.7	+0.7
SDCO	Great Sand Dun	75.17	333	P	P	19 36 43.1	+1.1
	baz=150,SNR=90						
KSCO	Kaye Shedlock'	75.18	335	P	P	19 36 42.7	+0.8
KSCO				IAmb	IAmb	19 36 44.8	
	comp=Z,290nm,1.1s						
KSCO	Kaye Shedlock'	75.18	335	P	P	19 36 43.1	+1.3
	baz=152,SNR=21						
HAL	Halifax	75.22	6	P	P	19 36 42.8	+1.1
HAL				pmax	pmax		
	comp=Z,242nm,0.9s						
HAL	Halifax	75.22	6	P	P	19 36 42.8	+1.1
HAL				IAmb	IAmb	19 36 44.5	
	comp=Z,242nm,0.9s						
JFWS	Jewell Farm	75.22	346	P	P	19 36 41.8	0.0
	baz=163,SNR=42						
SADO	Sadowa	75.37	354	P	P	19 36 42.9	+0.3
SADO				IAmb	IAmb	19 36 44.3	
	comp=Z,279nm,1.1s						
GGN	Saint George	75.48	3	P	P	19 36 44.6	+1.4
GGN				IAmb	IAmb	19 36 46.1	
	comp=Z,183nm,0.9s						
PLVO	Plevna	75.48	356	P	P	19 36 43.8	+0.5
PLVO				IAmb	IAmb	19 36 45.4	
	comp=Z,158nm,1.0s						
PKME	Peaks-Kenny Pk	75.54	1	IAmb	IAmb	19 36 46.2	
	comp=Z,133nm,0.9s						
PKME	Peaks-Kenny Pk	75.54	1	P	P	19 36 45.0	+1.5
	baz=182,SNR=12						
GLA	Glamis	75.55	323	P	P	19 36 45.3	+1.3
	baz=142,SNR=25						
S22A	4UR Ranch, Cre	75.70	332	P	P	19 36 46.3	+1.3
	baz=149,SNR=64						
WUAZ	Wupatki	75.84	327	IAMs_20	IAMs_20	20 04 54.3	
	comp=Z,2µm,22.0s						
WUAZ	Wupatki	75.84	327	P	P	19 36 47.2	+1.5
	baz=145,SNR=75						
BGNE	Belgrade	75.85	339	P	P	19 36 46.5	+1.0
	baz=156,SNR=38						
I42A	Draeger Farm,	75.89	347	IAmb	IAmb	19 36 47.4	
	comp=Z,249nm,1.2s						
SUR	Sutherland	75.89	119	P	P	19 36 47.4	+1.0
SUR				IAmb	IAmb	19 36 49.2	
	comp=Z,549nm,1.4s						
SUR				IAMs_20	IAMs_20	20 04 59.0	
	comp=Z,2µm,22.0s						
IKP	In-Ko-Pah, Jac	75.91	322	P	P	19 36 48.0	+1.9
	baz=141,SNR=31						
MVCO	Mesa Verde	75.95	330	IAMs_20	IAMs_20	20 06 02.5	
	comp=Z,1µm,21.0s						
MVCO	Mesa Verde	75.95	330	P	P	19 36 47.7	+1.3
	baz=148,SNR=94						
SWSC	Sam W. Stewart	75.98	323	P	P	19 36 48.1	+1.8
	baz=142,SNR=21						
GLMI	Grayling	76.06	350	P	P	19 36 46.5	0.0
	baz=168,SNR=8.2						
Q24A	Divide	76.08	333	P	P	19 36 48.8	+1.6
	baz=150,SNR=161						
F64A	Sherman	76.17	2	IAmb	IAmb	19 36 49.9	
	comp=Z,217nm,0.9s						
GBN	Guysborough	76.18	7	P	P	19 36 48.4	+1.2
PDMCI	Parker Dam,Lak	76.20	325	P	P	19 36 49.0	+1.5
	baz=143,SNR=12						
MAW	Mawson	76.23	164	P	P	19 36 47.7	+0.4
	comp=Z,235nm,0.9s,baz=216,slow=6.5,SNR=166						
MAW				PKPPKP	P'P'df	20 04 06.6	-1.2
	comp=Z,3.9nm,0.6s,baz=252,slow=5.8,SNR=7.0						
MAW				LR	LR	20 11 00.7	
	comp=Z,2µm,20.3s,baz=232,slow=36						
MAW	Mawson	76.23	164	P	P	19 36 47.4	+0.1
MAW				pmax	pmax		
	comp=Z,98nm,1.2s						
MAW	Mawson	76.23	164	P	P	19 36 47.4	+0.1
H43A	Windswept, Lux	76.23	348	IAmb	IAmb	19 36 49.1	
	comp=Z,364nm,1.1s						
I40A	Norwalk	76.24	346	P	P	19 36 48.0	+0.4
I40A				IAmb	IAmb	19 36 49.2	
	comp=Z,167nm,0.8s						
MONP2	Monument Peak	76.26	322	P	P	19 36 50.1	+1.9
	baz=141,SNR=36						
BC3	Big Chuckawall	76.35	323	P	P	19 36 50.4	+1.8
	baz=142,SNR=89						
TRQ	Mont Tremblant	76.54	358	IAmb	IAmb	19 36 51.1	
	comp=Z,238nm,0.9s						
IRM	Iron Mountain	76.59	324	P	P	19 36 51.6	+1.8
	baz=142,SNR=66						
109C	Camp Elliot, M	76.62	322	P	P	19 36 51.8	+1.8
	baz=141						
OGNE	Ogallala	76.69	337	P	P	19 36 51.4	+1.1
OGNE				IAmb	IAmb	19 36 53.0	
	comp=Z,151nm,1.0s						
OGNE	Ogallala	76.69	337	P	P	19 36 51.8	+1.5
	baz=153,SNR=15						
NEE2	Needles Airpor	76.80	325	P	P	19 36 52.8	+1.8
	baz=143,SNR=11						
TPFO	Pinon Flats	76.83	323	P	P	19 36 53.4	+2.0
	baz=141,SNR=46						
PFO	Pinyon Flats O	76.84	323	P	P	19 36 52.0	+0.6
PFO				pmax	pmax		
	comp=Z,108nm,1.0s						
PFO	Pinyon Flats O	76.84	323	P	P	19 36 52.0	+0.6
PFO	Pinyon Flats O	76.84	323	P	P	19 36 53.4	+2.0
	baz=141,SNR=63						
BELC	Belle Mtn. Jos	76.90	323	P	P	19 36 53.5	+1.7
	baz=142,SNR=32						
PQI	Presque Isle	76.98	2	P	P	19 36 52.8	+1.1
PQI				IAmb	IAmb	19 36 54.4	
	comp=Z,203nm,0.9s						

I37A	**Lemond, Waseca**	**76.98**	**344**	P	**P**	**19 36 51.9**	**+0.1**
ISCO	**Idaho Springs**	**76.99**	**333**	P	**P**	**19 36 53.2**	**+0.9**
ISCO				pmax	pmax		
	comp=Z,100nm,1.0s						
ISCO	**Idaho Springs**	**76.99**	**333**	P	**P**	**19 36 53.2**	**+0.9**
ISCO	**Idaho Springs**	**76.99**	**333**	P	**P**	**19 36 53.6**	**+1.3**
	baz=150,SNR=89						
SMCO	**Snowmass**	**76.99**	**332**	P	**P**	**19 36 53.3**	**+0.9**
SMCO				IAmb	IAmb	19 36 55.9	
	comp=Z,238nm,0.9s						
U15A	**North Rim**	**77.01**	**327**	P	**P**	**19 36 53.7**	**+1.2**
U15A				IAmb	IAmb	19 36 55.9	
	comp=Z,109nm,0.9s						
MURC	**Murrieta**	**77.22**	**322**	P	**P**	**19 36 55.2**	**+1.8**
	baz=141,SNR=27						
GMRC	**Granite Mounta**	**77.34**	**324**	P	**P**	**19 36 55.8**	**+1.6**
	baz=142,SNR=104						
SCI2	**San Clemente I**	**77.47**	**321**	P	**P**	**19 36 56.8**	**+2.0**
	baz=140						
WIN	**Windhoek**	**77.51**	**109**	P	**P**	**19 36 55.8**	**+0.1**
WIN				pmax	pmax		
	comp=Z,386nm,1.2s						
WIN	**Windhoek**	**77.51**	**109**	P	**P**	**19 36 55.8**	**+0.1**
F42A	**Maple Grove Fa**	**77.55**	**348**	IAmb	IAmb	19 36 56.7	
	comp=Z,195nm,1.0s						
ECSD	**EROS Data Cent**	**77.55**	**341**	P	**P**	**19 36 55.4**	**+0.4**
	baz=158,SNR=378						
BBRC	**Big Bear Solar**	**77.59**	**323**	P	**P**	**19 36 58.1**	**+2.4**
	baz=141,SNR=5.4						
BATG	**Bathurst New B**	**77.67**	**4**	IAmb	IAmb	19 36 58.2	
	comp=Z,200nm,0.9s						
CIS	**Catalina Islan**	**77.72**	**321**	P	**P**	**19 36 58.4**	**+2.2**
	baz=140,SNR=7.7						
HEC	**Hector,Ludlow**	**77.72**	**323**	P	**P**	**19 36 57.8**	**+1.6**
	baz=142,SNR=119						
KNB	**Kanab**	**77.73**	**327**	P	**P**	**19 36 57.3**	**+0.9**
KNB				pmax	pmax		
	comp=Z,176nm,1.0s						
KNB	**Kanab**	**77.73**	**327**	P	**P**	**19 36 57.3**	**+0.9**
KNB				IAmb	IAmb	19 36 59.9	
	comp=Z,176nm,1.0s						
LMQ	**La Malbaie**	**77.81**	**1**	IAmb	IAmb	19 36 58.6	
	comp=Z,207nm,1.0s						
FMP	**Fort Macarthur**	**77.89**	**321**	P	**P**	**19 36 58.8**	**+1.8**
	baz=140						
E43A	**Lone Tree Farm**	**77.95**	**349**	IAmb	IAmb	19 36 58.9	
	comp=Z,211nm,0.9s						
BFSC	**Mount Baldy Ra**	**77.96**	**322**	P	**P**	**19 36 59.0**	**+1.3**
	baz=141,SNR=43						
TUQ	**Turquoise Moun**	**77.99**	**324**	P	**P**	**19 36 59.3**	**+1.5**
	baz=142,SNR=38						
SPMN	**Marine on St.**	**77.99**	**345**	IAmb	IAmb	19 36 58.6	
	comp=Z,171nm,0.8s						
SPMN	**Marine on St.**	**77.99**	**345**	P	**P**	**19 36 57.3**	**0.0**
	baz=161,SNR=49						
COWI	**Conover**	**78.06**	**347**	P	**P**	**19 36 58.2**	**+0.4**
COWI				IAmb	IAmb	19 36 59.6	
	comp=Z,151nm,0.9s						
N23A	**Red Feather La**	**78.06**	**334**	P	**P**	**19 36 59.8**	**+1.6**
	baz=150,SNR=31						
RRX	**Edison Barstow**	**78.10**	**323**	P	**P**	**19 37 00.5**	**+2.2**
	baz=141,SNR=5.3						
MWC	**Mount Wilson**	**78.16**	**322**	P	**P**	**19 36 59.8**	**+1.0**
MWC				pmax	pmax		
	comp=Z,110nm,1.0s						
MWC	**Mount Wilson**	**78.16**	**322**	P	**P**	**19 36 59.8**	**+1.0**
RAR	**Rarotonga**	**78.28**	**252**	P	**P**	**19 36 59.7**	**+0.1**
	comp=Z,42nm,1.0s,baz=231,slow=8.0,SNR=4.8						
RAR				LR	LR	20 02 47.6	
	comp=Z,1µm,21.7s,baz=110,slow=29						
O20A	**White River Ci**	**78.31**	**332**	IAmb	IAmb	19 37 02.5	
	comp=Z,169nm,1.1s						
O20A	**White River Ci**	**78.31**	**332**	P	**P**	**19 37 01.1**	**+1.5**
	baz=148,SNR=58						
DECC	**Green Verdugo**	**78.33**	**322**	P	**P**	**19 37 01.1**	**+1.6**
	baz=140,SNR=14						
GSC	**Goldstone, Bar**	**78.33**	**323**	P	**P**	**19 37 01.2**	**+1.5**
	baz=141,SNR=49						
MACI	**Morro de la Ar**	**78.44**	**47**	P	**P**	**19 37 01.9**	**+1.4**
SHPR	**Sheep Range**	**78.45**	**325**	P	**P**	**19 37 01.0**	**+0.6**
SHOC	**Shoshone, Teco**	**78.53**	**324**	P	**P**	**19 37 02.3**	**+1.7**
	baz=142,SNR=7.9						
EDW2	**Edwards Air Fo**	**78.62**	**322**	P	**P**	**19 37 02.1**	**+0.9**
	baz=140,SNR=63						
KOWA	**Kowa**	**78.64**	**66**	P	**P**	**19 37 01.6**	**0.0**
	comp=Z,451nm,0.6s,baz=236,slow=5.0,SNR=1248						
KOWA	**Kowa**	**78.64**	**66**	P	**P**	**19 37 01.7**	**0.0**
MVU	**Marysvale**	**78.66**	**328**	P	**P**	**19 37 02.8**	**+1.2**
OSI	**Osito Audit: C**	**78.81**	**322**	IAmb	IAmb	19 37 05.2	
	comp=Z,176nm,1.0s						
OSI	**Osito Audit: C**	**78.81**	**322**	P	**P**	**19 37 03.8**	**+1.6**
	baz=140,SNR=14						
SUSD	**Miller**	**78.87**	**340**	IAmb	IAmb	19 37 03.9	
	comp=Z,325nm,0.9s						
SUSD	**Miller**	**78.87**	**340**	P	**P**	**19 37 02.7**	**+0.5**
	baz=156,SNR=15						
LRMC	**Laurel Mtn Rad**	**78.92**	**323**	P	**P**	**19 37 04.5**	**+1.6**
	baz=141,SNR=14						
RWWY	**Rawlins**	**79.23**	**333**	P	**P**	**19 37 05.6**	**+1.0**
RWWY				IAmb	IAmb	19 37 07.4	
	comp=Z,196nm,0.8s						
ARVC	**Arvin**	**79.25**	**322**	P	**P**	**19 37 06.2**	**+1.6**
	baz=140						
FURC	**Furnace Creek,**	**79.27**	**324**	P	**P**	**19 37 06.2**	**+1.7**
	baz=141,SNR=38						
MPMC	**Manual Prospec**	**79.27**	**323**	P	**P**	**19 37 05.9**	**+1.0**
	baz=141,SNR=39						
TPNV	**Topopah Spring**	**79.33**	**325**	P	**P**	**19 37 06.1**	**+0.9**
TPNV				pmax	pmax		
	comp=Z,45nm,1.0s						
TPNV	**Topopah Spring**	**79.33**	**325**	P	**P**	**19 37 06.1**	**+0.9**
TPNV	**Topopah Spring**	**79.33**	**325**	P	**P**	**19 37 06.7**	**+1.5**
	baz=142,SNR=58						
F33A	**5 Mile Ranch,**	**79.42**	**342**	IAmb	IAmb	19 37 06.5	
	comp=Z,160nm,0.9s						
ISA	**Isabella, Lake**	**79.48**	**323**	P	**P**	**19 37 06.9**	**+1.0**
ISA				pmax	pmax		
	comp=Z,126nm,1.0s						
ISA	**Isabella, Lake**	**79.48**	**323**	P	**P**	**19 37 06.9**	**+1.0**
ISA	**Isabella, Lake**	**79.48**	**323**	P	**P**	**19 37 07.4**	**+1.5**
	baz=140,SNR=91						
TSUM	**Tsumeb**	**79.50**	**106**	P	**P**	**19 37 07.2**	**+0.6**
TSUM	**Tsumeb**	**79.50**	**106**	IAMs_20	IAMs_20	20 07 22.1	
	comp=Z,2µm,20.0s						
PKM	**Mcpherson Peak**	**79.60**	**321**	P	**P**	**19 37 08.7**	**+1.9**
	baz=139,SNR=50						
K22A	**Casper**	**79.80**	**334**	P	**P**	**19 37 08.2**	**+0.7**
K22A				IAmb	IAmb	19 37 10.5	
	comp=Z,245nm,1.1s						
K22A	**Casper**	**79.80**	**334**	P	**P**	**19 37 09.0**	**+1.5**
	baz=150,SNR=69						
CWC	**Cottonwood Cre**	**79.87**	**323**	P	**P**	**19 37 09.6**	**+1.5**
	baz=140						
VES	**Vestal, Richgr**	**79.93**	**322**	P	**P**	**19 37 09.9**	**+1.7**
	baz=140,SNR=44						
R11A	**Troy Canyon, C**	**80.11**	**326**	P	**P**	**19 37 10.7**	**+1.3**
	baz=142,SNR=87						
RSSD	**Black Hills**	**80.19**	**337**	P	**P**	**19 37 10.2**	**+0.5**
RSSD				pmax	pmax		
	comp=Z,167nm,1.0s						
RSSD	**Black Hills**	**80.19**	**337**	P	**P**	**19 37 10.2**	**+0.5**
RSSD				IAmb	IAmb	19 37 12.1	
	comp=Z,167nm,0.9s						
RSSD	**Black Hills**	**80.19**	**337**	P	**P**	**19 37 10.7**	**+1.0**
	baz=152						
DUG	**Dugway, Tooele**	**80.31**	**329**	P	**P**	**19 37 11.0**	**+0.7**
DUG				pmax	pmax		
	comp=Z,74nm,0.9s						
DUG				MLR	MLR		
	comp=Z,2µm,21.0s						
DUG	**Dugway, Tooele**	**80.31**	**329**	P	**P**	**19 37 11.0**	**+0.7**
DUG				IAMs_20	IAMs_20	20 08 17.5	
	comp=Z,2µm,21.0s						
DUG	**Dugway, Tooele**	**80.31**	**329**	P	**P**	**19 37 11.4**	**+1.0**
	baz=145,SNR=80						
TIN	**Tinemaha, Big**	**80.42**	**324**	P	**P**	**19 37 13.0**	**+2.0**
	baz=140,SNR=11						
VOG	**Valley Oaks Go**	**80.45**	**322**	P	**P**	**19 37 12.0**	**+1.0**
	baz=140						
DRLN	**Deer Lake**	**80.46**	**9**	IAmb	IAmb	19 37 12.6	
	comp=Z,192nm,0.8s						
HWUT	**Hardware Ranch**	**80.92**	**331**	IAmb	IAmb	19 37 15.9	
	comp=Z,164nm,0.8s						
HWUT				IAMs_20	IAMs_20	20 09 06.8	
	comp=Z,1µm,20.0s						
BOSA	**Boshof**	**81.06**	**118**	P	**P**	**19 37 15.0**	**+0.2**
	comp=Z,313nm,0.8s,baz=245,slow=4.8,SNR=333						
BOSA				LR	LR	20 11 55.9	
	comp=Z,1µm,18.0s,baz=252,slow=35						
BOSA	**Boshof**	**81.06**	**118**	P	**P**	**19 37 15.0**	**+0.2**
BOSA	**Boshof**	**81.06**	**118**	P	**P**	**19 37 15.0**	**+0.2**
PD31	**Pinedale Array**	**81.06**	**332**	P	**P**	**19 37 14.8**	**+0.3**
PDAR	**Pinedale Array**	**81.06**	**332**	P	**P**	**19 37 14.8**	**+0.3**
	comp=Z,18nm,0.7s,baz=140,slow=7.2,SNR=93						
PDAR				PKKP	**PKKPdf**	**19 55 39.8**	**-3.7**
	comp=Z,0.4nm,0.8s,baz=57,slow=5.5,SNR=3.7						
PDAR				PKKPbc	**PKKPbc**	**19 55 50.0**	**-2.9**
	comp=Z,1.4nm,0.7s,baz=91,slow=0.5,SNR=10						
PDAR				LR	LR	20 10 03.9	
	comp=Z,941nm,20.7s,baz=150,slow=33						
PDAR	**Pinedale Array**	**81.06**	**332**	P	**P**	**19 37 14.5**	**+0.1**
BW06	**Boulder Array**	**81.06**	**332**	P	**P**	**19 37 14.9**	**+0.5**
	baz=147,SNR=42						
MLAC	**Mammoth, Mammo**	**81.17**	**324**	P	**P**	**19 37 16.9**	**+1.7**
	baz=140,SNR=17						
PMOZ	**Porto Moniz, M**	**81.22**	**44**	*e*P	**P**	**19 37 15.9**	**+0.6**
PMAR	**Madeira**	**81.32**	**44**	*e*P	**P**	**19 37 16.6**	**+0.6**
	comp=Z,347nm,1.5s						
NV11	**Mina Array Sit**	**81.44**	**325**	P	**P**	**19 37 17.1**	**+0.6**
NVAR	**Mina Array Bea**	**81.51**	**324**	P	**P**	**19 37 18.1**	**+1.2**
	comp=Z,42nm,0.8s,baz=154,slow=6.0,SNR=186						
NVAR				PKKPbc	**PKKPbc**	**19 55 50.5**	**-1.1**
	comp=Z,1.3nm,0.7s,baz=329,slow=2.1,SNR=9.0						
NVAR				LR	LR	20 07 10.3	
	comp=Z,710nm,21.1s,baz=140,slow=31						
NVAR	**Mina Array Bea**	**81.51**	**324**	P	**P**	**19 37 17.8**	**+0.9**
AGMN	**Agassiz Nation**	**81.60**	**344**	P	**P**	**19 37 17.0**	**+0.2**
AGMN				IAmb	IAmb	19 37 18.5	
	comp=Z,250nm,0.9s						
AGMN	**Agassiz Nation**	**81.60**	**344**	P	**P**	**19 37 17.2**	**+0.4**
	baz=159,SNR=96						
AHID	**Auburn Hatcher**	**81.69**	**332**	P	**P**	**19 37 17.8**	**+0.1**
ELK	**Elko**	**81.85**	**328**	IAMs_20	IAMs_20	20 09 41.2	
	comp=Z,1µm,21.0s						
SAO	**San Andreas Ge**	**81.88**	**321**	P	**P**	**19 37 19.2**	**+0.6**
SAO				pmax	pmax		
	comp=Z,31nm,1.0s						
SAO	**San Andreas Ge**	**81.88**	**321**	P	**P**	**19 37 19.2**	**+0.6**
PMPS	**Porto Santo**	**81.90**	**44**	*e*P	**P**	**19 37 23.1**	**+4.3**
TANT	**Tantan**	**81.97**	**50**	P	**P**	**19 37 21.0**	**+1.7**
SNOW	**Snow King Moun**	**82.13**	**332**	P	**P**	**19 37 20.5**	**+0.4**
MDND	**Maddock**	**82.16**	**341**	P	**P**	**19 37 20.6**	**+0.8**
	baz=156,SNR=50						
TORD	**Torodi Ar. Bea**	**82.43**	**70**	P	**P**	**19 37 21.7**	**-0.3**
	comp=Z,595nm,0.9s,baz=266,slow=5.0,SNR=1680						
TORD				S	**S**	**19 47 29.3**	**-5.8**
	comp=Z,2.6nm,1.1s,baz=249,slow=12,SNR=5.1						
TORD				PKKPbc	**PKKPbc**	**19 55 47.0**	**-0.6**
	comp=Z,1.3nm,0.9s,baz=28,slow=2.1,SNR=5.0						
TORD				LR	LR	20 11 16.4	
	comp=Z,4µm,21.0s,baz=235,slow=34						
TORD	**Torodi Ar. Bea**	**82.43**	**70**	P	**P**	**19 37 21.8**	**-0.2**
H17A	**Grant Village**	**82.83**	**333**	P	**P**	**19 37 25.1**	**+1.4**
	baz=147						
RLMT	**Red Lodge**	**82.94**	**334**	P	**P**	**19 37 25.2**	**+1.0**
	baz=148,SNR=10						
LBTB	**Lobatse**	**83.12**	**115**	P	**P**	**19 37 25.8**	**+0.1**
LBTB				pmax	pmax		
	comp=Z,674nm,0.8s						
LBTB	**Lobatse**	**83.12**	**115**	*i* P	**P**	**19 37 24.4**	**-1.3**
LBTB	**Lobatse**	**83.12**	**115**	*i* P	**P**	**19 37 24.4**	**-1.3**
LBTB	**Lobatse**	**83.12**	**115**	P	**P**	**19 37 25.8**	**+0.1**
LAO	**LASA Array**	**83.18**	**337**	P	**P**	**19 37 25.4**	**+0.2**
LAO				IAmb	IAmb	19 37 27.3	
	comp=Z,192nm,0.9s						
LAO	**LASA Array**	**83.18**	**337**	P	**P**	**19 37 25.6**	**+0.4**
	baz=150,SNR=45						
YMR	**Madison River**	**83.21**	**333**	P	**P**	**19 37 26.9**	**+1.2**
YMR				IAmb	IAmb	19 37 28.5	
	comp=Z,109nm,0.9s						
SFNM	**Sidi Ifni**	**83.29**	**50**	P	**P**	**19 37 28.1**	**+2.0**
CASY	**Casey**	**83.40**	**181**	P	**P**	**19 37 26.6**	**+0.4**
CASY	**Casey**	**83.40**	**181**	IAMs_20	IAMs_20	20 16 07.7	
	comp=Z,2µm,20.0s						
ULM	**Lac du Bonnet**	**83.42**	**344**	P	**P**	**19 37 26.2**	**0.0**
	comp=Z,207nm,0.8s,baz=160,slow=5.0,SNR=168						
ULM	**Lac du Bonnet**	**83.42**	**344**	P	**P**	**19 37 26.3**	**0.0**
ULM				IAmb	IAmb	19 37 27.6	
	comp=Z,238nm,0.8s						
GCMT	**Greycliff**	**83.65**	**334**	P	**P**	**19 37 28.2**	**+0.4**
HLID	**Hailey**	**83.73**	**330**	P	**P**	**19 37 29.0**	**+0.7**
HLID	**Hailey**	**83.73**	**330**	P	**P**	**19 37 29.1**	**+0.8**
	baz=144,SNR=107						
BCYI	**Bear Canyon**	**83.91**	**331**	P	**P**	**19 37 30.2**	**+0.9**
DGMT	**Dagmar**	**84.08**	**339**	P	**P**	**19 37 30.5**	**+0.8**
	baz=152,SNR=134						
BOZ	**Bozeman (W)**	**84.25**	**333**	P	**P**	**19 37 31.2**	**+0.4**
	baz=146,SNR=27						
CGR	**Cap Guir**	**84.31**	**49**	P	**P**	**19 37 33.1**	**+1.8**
O03E	**Paynes Creek**	**84.69**	**324**	P	**P**	**19 37 33.2**	**+0.1**
	baz=138,SNR=18						
O02D	**Mt. Diablo Mer**	**85.11**	**323**	P	**P**	**19 37 35.6**	**+0.4**
	baz=138,SNR=9.3						
EAH	**EAH**	**85.17**	**49**	P	**P**	**19 37 38.0**	**+2.4**
SCHQ	**Schefferville**	**85.19**	**3**	P	**P**	**19 37 35.3**	**+0.2**
	comp=Z,94nm,1.0s,baz=188,slow=4.4,SNR=31						
SCHQ				LR	LR	20 15 46.8	
	comp=Z,468nm,21.0s,baz=188,slow=36						
SCHQ	**Schefferville**	**85.19**	**3**	P	**P**	**19 37 35.2**	**+0.2**
SCHQ				IAmb	IAmb	19 37 36.6	
	comp=Z,202nm,1.2s						
TTIG	**Tnine Tigouga,**	**85.21**	**50**	P	**P**	**19 37 38.0**	**+2.0**
J08A	**Circle Bar Ran**	**85.39**	**328**	IAmb	IAmb	19 37 39.3	
	comp=Z,203nm,1.1s						
BFZ	**Birch Farm**	**85.52**	**225**	IAMs_20	IAMs_20	20 06 23.0	
	comp=Z,2µm,22.0s						
EGMT	**Eagleton**	**85.57**	**335**	P	**P**	**19 37 37.4**	**+0.1**
EGMT				IAmb	IAmb	19 37 38.9	
	comp=Z,105nm,1.1s						
EGMT	**Eagleton**	**85.57**	**335**	P	**P**	**19 37 37.5**	**+0.1**
	baz=148,SNR=28						
N02D	**Trinity Center**	**85.65**	**324**	P	**P**	**19 37 38.3**	**+0.4**
	baz=138,SNR=12						
M04C	**Macdoel**	**85.81**	**325**	P	**P**	**19 37 39.4**	**+0.7**
	baz=138,SNR=19						
OUK	**Oukaimeden**	**86.01**	**50**	P	**P**	**19 37 42.0**	**+1.7**
ODZ	**Otahua Downs**	**86.01**	**219**	P	**P**	**19 37 40.1**	**+0.3**
M02C	**Callahan**	**86.04**	**324**	P	**P**	**19 37 40.7**	**+0.9**
	baz=138,SNR=8.7						
K05A	**Summer Lake**	**86.06**	**326**	IAmb	IAmb	19 37 42.4	
	comp=Z,102nm,0.9s						
KHZ	**Kahutara**	**86.06**	**222**	P	**P**	**19 37 41.0**	**+1.0**
KHZ				IAmb	IAmb	19 37 42.8	
	comp=Z,105nm,1.0s						
KHMM	**Horse Mountain**	**86.11**	**323**	IAmb	IAmb	19 37 43.3	
	comp=Z,309nm,1.9s						
MSO	**Missoula**	**86.18**	**332**	IAMs_20	IAMs_20	20 13 41.8	
	comp=Z,2µm,18.0s						
BKZ	**Black Stump Fm**	**86.27**	**226**	P	**P**	**19 37 42.3**	**+1.0**
BSWZ	**Blackbirch Sta**	**86.30**	**223**	P	**P**	**19 37 42.3**	**+1.1**
OXZ	**Oxford**	**86.34**	**221**	P	**P**	**19 37 42.3**	**+0.9**
L04D	**Klamath Falls**	**86.37**	**325**	P	**P**	**19 37 42.1**	**+0.6**
	baz=138						
K04D	**Chiloquin, OR**	**86.40**	**325**	P	**P**	**19 37 42.9**	**+1.3**
	baz=138,SNR=5.3						
URZ	**Urewera**	**86.43**	**227**	P	**P**	**19 37 43.1**	**+1.1**
	comp=Z,11nm,0.9s,baz=120,slow=21,SNR=4.6						
URZ				LR	LR	20 06 56.8	
	comp=Z,1µm,21.4s,baz=211,slow=29						
URZ	**Urewera**	**86.43**	**227**	IAMs_20	IAMs_20	20 06 34.2	
	comp=Z,2µm,21.0s						
TUWZ	**Tuamarina**	**86.44**	**223**	P	**P**	**19 37 42.8**	**+0.9**
LTZ	**Lake Taylor**	**86.56**	**221**	P	**P**	**19 37 43.6**	**+1.0**
LTZ				IAmb	IAmb	19 37 45.4	
	comp=Z,132nm,1.0s						
LTZ				IAMs_20	IAMs_20	20 06 10.4	
	comp=Z,1µm,19.0s						
OUZM	**OUZ**	**86.56**	**51**	P	**P**	**19 37 44.0**	**+1.3**
J05D	**Fort Rock, OR**	**86.64**	**326**	P	**P**	**19 37 44.1**	**+1.3**
	baz=139,SNR=30						
RPZ	**Rata Peaks**	**86.65**	**220**	P	**P**	**19 37 43.6**	**+0.7**
RPZ				IAmb	IAmb	19 37 45.5	
	comp=Z,111nm,1.1s						
LBZ	**Lake Benmore**	**86.69**	**219**	P	**P**	**19 37 43.5**	**+0.4**
SRHM	**Skhour des Reh**	**86.79**	**49**	P	**P**	**19 37 45.0**	**+1.3**
ZGR	**Zagora**	**86.84**	**52**	P	**P**	**19 37 46.0**	**+1.9**
PINE	**Pine Mountain**	**86.88**	**326**	IAmb	IAmb	19 37 46.4	
	comp=Z,108nm,0.8s						
L02E	**Cave Junction**	**86.98**	**324**	P	**P**	**19 37 45.8**	**+1.5**
	baz=137						
J04D	**Umpqua Nationa**	**87.03**	**325**	P	**P**	**19 37 45.9**	**+1.1**
	baz=138,SNR=11						
JTMT	**Jette**	**87.06**	**333**	IAmb	IAmb	19 37 46.2	
	comp=Z,70nm,0.7s						
TZRR	**Tazzarine**	**87.28**	**52**	P	**P**	**19 37 48.0**	**+1.8**
K02D	**Willamette Mer**	**87.40**	**324**	P	**P**	**19 37 48.2**	**+1.7**
	baz=137,SNR=10						
I05D	**Terrebonne, OR**	**87.48**	**327**	P	**P**	**19 37 47.8**	**+1.1**
	baz=139,SNR=29						
DBO	**Dodson Butte**	**87.50**	**325**	P	**P**	**19 37 48.2**	**+1.3**
CNG	**Changalane**	**87.52**	**119**	*i* P	**P**	**19 37 47.5**	**+0.1**
CNG	**Changalane**	**87.52**	**119**	*i* P	**P**	**19 37 47.5**	**+0.1**
I04A	**Tendick Farm,**	**87.59**	**326**	P	**P**	**19 37 48.1**	**+0.8**
	baz=138,SNR=8.2						
AVE	**Averroes**	**87.63**	**49**	P	**P**	**19 37 49.4**	**+1.7**
QRZ	**Quartz Range**	**87.65**	**223**	P	**P**	**19 37 47.8**	**0.0**
QRZ				IAmb	IAmb	19 39 02.5	
	comp=Z,181nm,1.6s						
HIZ	**Hauiti**	**87.69**	**226**	IAMs_20	IAMs_20	20 08 06.1	
	comp=Z,2µm,20.0s						
XMAS	**Kiritimati**	**87.75**	**274**	P	**P**	**19 37 50.3**	**+1.6**
XMAS				IAmb	IAmb	19 37 52.9	
	comp=Z,115nm,1.1s						
MATP	**Matopo**	**87.78**	**112**	*i* P	**P**	**19 37 48.9**	**-0.1**
MATP	**Matopo**	**87.78**	**112**	*i* P	**P**	**19 37 48.9**	**-0.1**
MSNA	**Messina**	**87.97**	**115**	*i* P	**P**	**19 37 50.2**	**+0.5**
MSNA	**Messina**	**87.97**	**115**	*i* P	**P**	**19 37 50.2**	**+0.5**
WALA	**Waterton Lakes**	**87.97**	**334**	IAmb	IAmb	19 37 51.1	
	comp=Z,165nm,1.1s						
F07A	**Phinny Hill Vi**	**88.00**	**328**	P	**P**	**19 37 50.2**	**+1.2**
G05D	**Wamic, OR**	**88.15**	**327**	P	**P**	**19 37 51.7**	**+1.8**
	baz=139,SNR=12						
HAWA	**Hanford**	**88.20**	**329**	IAmb	IAmb	19 37 52.5	
	comp=Z,154nm,1.4s						
ZHG	**ZHG**	**88.22**	**49**	P	**P**	**19 37 51.1**	**+0.5**
RAO	**Raoul Island**	**88.26**	**237**	LR	LR	20 08 01.3	
	comp=Z,683nm,19.5s,baz=144,slow=29						
GOLM	**Goulmima**	**88.27**	**51**	P	**P**	**19 37 53.0**	**+2.1**
H04D	**Lebanon**	**88.29**	**326**	P	**P**	**19 37 51.5**	**+1.0**
	baz=138						
MOPA	**Mopani**	**88.41**	**116**	*i* P	**P**	**19 37 52.9**	**+1.1**
MOPA	**Mopani**	**88.41**	**116**	*i* P	**P**	**19 37 52.9**	**+1.1**
COR	**Corvallis**	**88.61**	**326**	P	**P**	**19 37 53.3**	**+1.4**
COR				pmax	pmax		
	comp=Z,157nm,1.0s						
COR	**Corvallis**	**88.61**	**326**	P	**P**	**19 37 53.3**	**+1.4**
COR				IAmb	IAmb	19 37 54.9	
	comp=Z,157nm,0.9s						
NEW	**Newport**	**88.62**	**331**	P	**P**	**19 37 52.0**	**0.0**
NEW				pmax	pmax		
	comp=Z,39nm,1.3s						
NEW	**Newport**	**88.62**	**331**	P	**P**	**19 37 52.0**	**0.0**
NEW	**Newport**	**88.62**	**331**	P	**P**	**19 37 52.1**	**0.0**
	baz=142						
F05D	**White Salmon**	**88.69**	**328**	P	**P**	**19 37 53.5**	**+1.1**
	baz=139,SNR=9.5						
MDT	**Midelt**	**89.17**	**51**	P	**P**	**19 37 56.3**	**+1.2**
	comp=Z,66nm,1.2s,baz=250,slow=5.1,SNR=42						
MDT	**Midelt**	**89.17**	**51**	P	**P**	**19 37 56.5**	**+1.4**
MORF	**Marmelete**	**89.40**	**45**	*e*P	**P**	**19 37 56.6**	**+0.6**
MORF				IAmb	IAmb	19 37 57.6	
	comp=Z,48nm,0.9s						
MORF	**Marmelete**	**89.40**	**45**	*e*P	**P**	**19 37 56.6**	**+0.6**
MORF	**Marmelete**	**89.40**	**45**	*e*P	**P**	**19 37 56.6**	**+0.6**
	comp=Z,119nm,1.6s						
PTEO	**Sao Teotonio**	**89.51**	**45**	*e*P	**P**	**19 37 57.4**	**+1.0**
	comp=Z,145nm,1.7s						
LCRM	**LCR**	**89.54**	**50**	P	**P**	**19 37 58.0**	**+1.1**
PBDV	**Barranco-do-Ve**	**89.80**	**45**	*e*P	**P**	**19 37 58.9**	**+1.1**
	comp=Z,108nm,1.9s						
PCVE	**Castro Verde**	**89.98**	**45**	*e*P	**P**	**19 37 59.5**	**+0.9**
	comp=Z,93nm,1.9s						
PNCL	**Nicolau / Gran**	**89.99**	**45**	*e*P	**P**	**19 37 59.7**	**+1.1**
	comp=Z,117nm,1.6s						
MESJ	**Messejana**	**90.00**	**45**	*e*P	**P**	**19 37 59.4**	**+0.7**
MESJ				IAmb	IAmb	19 38 01.2	
	comp=Z,192nm,1.7s						
MESJ	**Messejana**	**90.00**	**45**	*e*P	**P**	**19 37 59.4**	**+0.7**
MESJ	**Messejana**	**90.00**	**45**	*e*P	**P**	**19 37 59.8**	**+1.1**
	comp=Z,86nm,2.1s						
PVAQ	**Vaqueiros**	**90.03**	**45**	*e*P	**P**	**19 37 59.7**	**+0.8**
	comp=Z,88nm,1.3s						
PVAQ	**Vaqueiros**	**90.03**	**45**	*e*LR	LR	20 11 53.0	
	comp=Z,2µm,18.0s						
PVAQ	**Vaqueiros**	**90.03**	**45**	P	**P**	**19 37 59.4**	**+0.5**
CHEFC	**Chefchaouen**	**90.10**	**48**	P	**P**	**19 38 01.0**	**+1.6**
LSZ	**Lusaka**	**90.22**	**108**	P	**P**	**19 38 01.4**	**+0.9**
LSZ				pmax	pmax		
	comp=Z,317nm,1.0s						
LSZ				MLR	MLR		
	comp=Z,2µm,20.0s						
LSZ	**Lusaka**	**90.22**	**108**	P	**P**	**19 38 01.4**	**+0.9**
LSZ	**Lusaka**	**90.22**	**108**	IAMs_20	IAMs_20	20 15 19.0	
	comp=Z,2µm,20.0s						
PBEJ	**Beja**	**90.34**	**45**	*e*P	**P**	**19 38 01.1**	**+0.8**
	comp=Z,78nm,1.3s						
SMIR	**Smir Dam**	**90.42**	**48**	P	**P**	**19 38 02.0**	**+1.2**
KRI	**Karoi**	**90.56**	**110**	*i* P	**P**	**19 38 03.8**	**+1.7**
KRI	**Karoi**	**90.56**	**110**	*i* P	**P**	**19 38 03.8**	**+1.7**
EVO	**Evora**	**90.57**	**44**	*e*P	**P**	**19 38 01.8**	**+0.4**
	comp=Z,43nm,1.4s						
D03D	**Eldon**	**90.67**	**328**	P	**P**	**19 38 02.6**	**+1.0**
	baz=138,SNR=6.4						
PSBE	**So Bento**	**90.73**	**43**	*e*P	**P**	**19 38 02.9**	**+0.8**
	comp=Z,131nm,1.2s						
B05A	**Bryant**	**90.76**	**329**	P	**P**	**19 38 02.3**	**+0.3**
	baz=138,SNR=9.9						
PMTG	**Montargil**	**90.79**	**44**	*e*P	**P**	**19 38 02.8**	**+0.5**
	comp=Z,132nm,1.1s						
PESTR	**Estremoz**	**91.04**	**44**	*e*P	**P**	**19 38 04.4**	**+0.8**
	comp=Z,88nm,1.2s						
PESTR	**Estremoz**	**91.04**	**44**	P	**P**	**19 38 04.3**	**+0.8**
PESTR	**Estremoz**	**91.04**	**44**	P	**P**	**19 38 04.5**	**+1.0**
TDRA	**Tendrara**	**91.04**	**52**	P	**P**	**19 38 05.1**	**+1.2**
PALE	**Palemas**	**91.07**	**49**	P	**P**	**19 38 05.0**	**+1.2**
CHIPN	**CHIPINGE**	**91.16**	**114**	*i* P	**P**	**19 38 06.5**	**+1.7**
CHIPN	**CHIPINGE**	**91.16**	**114**	*i* P	**P**	**19 38 06.5**	**+1.7**
EDM	**Edmonton**	**91.16**	**336**	IAmb	IAmb	19 38 04.2	
	comp=Z,81nm,1.0s						
PCAS	**Casmilo, Conde**	**91.25**	**43**	*e*P	**P**	**19 38 04.4**	**-0.1**
	comp=Z,72nm,1.8s						
A04D	**Lummi Island**	**91.37**	**329**	P	**P**	**19 38 06.3**	**+1.5**
	baz=138						
COI	**Coimbra**	**91.41**	**43**	P	**P**	**19 38 05.6**	**+0.4**
COI				pmax	pmax		
	comp=Z,122nm,1.0s						
COI	**Coimbra**	**91.41**	**43**	*e*P	**P**	**19 38 06.1**	**+0.9**
	comp=Z,149nm,1.4s						
COI	**Coimbra**	**91.41**	**43**	P	**P**	**19 38 05.6**	**+0.4**
COI				IAmb	IAmb	19 38 06.9	
	comp=Z,122nm,1.0s						
JBK	**JBK**	**91.45**	**50**	P	**P**	**19 38 07.0**	**+1.2**
PMRV	**Marv??o**	**91.52**	**44**	*e*P	**P**	**19 38 04.5**	**-1.2**
	comp=Z,60nm,1.6s						
PMRV	**Marv??o**	**91.52**	**44**	*e*LR	LR	20 12 29.9	
	comp=Z,1µm,20.0s						
GOG	**Mont Gurugu**	**91.69**	**50**	P	**P**	**19 38 08.0**	**+1.2**
PCBR	**Castelo Branco**	**91.72**	**44**	*e*P	**P**	**19 38 06.7**	**0.0**
	comp=Z,63nm,1.3s						
AFI	**Afiamalu**	**91.82**	**253**	LR	LR	20 08 51.8	
	comp=Z,2µm,21.3s,baz=110,slow=29						
PVIS	**Viseu**	**92.03**	**43**	*e*P	**P**	**19 38 08.2**	**0.0**
	comp=Z,80nm,1.4s						
MTE	**Manteigas**	**92.04**	**43**	*e*P	**P**	**19 38 08.5**	**+0.3**
	comp=Z,83nm,1.2s						
MTE	**Manteigas**	**92.04**	**43**	*e*LR	LR	20 13 30.7	
	comp=Z,2µm,20.0s						
MTE	**Manteigas**	**92.04**	**43**	P	**P**	**19 38 08.3**	**+0.1**
MTE				IAmb	IAmb	19 38 09.5	
	comp=Z,65nm,0.9s						
PVRL	**Vila Real**	**92.49**	**42**	*e*P	**P**	**19 38 11.1**	**+0.8**
	comp=Z,76nm,1.6s						
PCAB	**Cabril**	**92.59**	**42**	*e*P	**P**	**19 38 10.8**	**+0.1**
	comp=Z,165nm,1.6s						
PGAV	**Gavieira, Arco**	**92.61**	**42**	*e*P	**P**	**19 38 10.9**	**0.0**
	comp=Z,112nm,1.5s						
PGAV	**Gavieira, Arco**	**92.61**	**42**	*e*LR	LR	20 15 25.7	
	comp=Z,2µm,22.0s						
MVO	**Moncorvo**	**92.83**	**43**	*e*P	**P**	**19 38 12.2**	**+0.4**
	comp=Z,94nm,1.1s						
MVO	**Moncorvo**	**92.83**	**43**	*e*LR	LR	20 13 52.8	
	comp=Z,2µm,22.0s						
PBRG	**Braganca**	**93.39**	**43**	*e*P	**P**	**19 38 14.8**	**+0.4**
	comp=Z,71nm,1.4s						
IVI	**Ivigtut**	**93.41**	**11**	P	**P**	**19 38 14.0**	**+0.1**
IVI				IAmb	IAmb	19 38 15.5	
	comp=Z,86nm,1.3s						
PAB	**San Pablo**	**93.44**	**45**	P	**P**	**19 38 14.5**	**-0.2**
PAB				pmax	pmax		

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      comp=Z,41nm,1.0s
PAB   San Pablo          93.44  45   P        P         19 38 14.5 -0.2
PAB   San Pablo          93.44  45   P        P         19 38 15.3 +0.6
ESDC  Sonseca Array      93.75  46   P        P         19 38 16.4 +0.3
      comp=Z,18nm,0.8s,baz=251,slow=4.2,SNR=61
ESDC                                 LR       LR        20 20 09.8
      comp=Z,1µm,18.5s,baz=255,slow=35
ESDC  Sonseca Array      93.75  46   P        P         19 38 16.3 +0.2
ESBB  Sonseca Array      93.75  46   P        P         19 38 16.8 +0.6
FRB   Frobisher Bay      94.07   1   P        P         19 38 18.0 +1.2
      comp=Z,6.5nm,0.8s,baz=169,slow=6.5,SNR=8.6
MSVF  Nonsavu            97.87 244   LR       LR        20 15 14.7
      comp=Z,182nm,19.8s,baz=120,slow=31
YKA   Yellowknife Ar     99.08 341   P        Pdif      19 38 39.2 -0.4
      comp=Z,14nm,0.8s,baz=143,slow=4.4,SNR=139
YKA                                  PKiKP    PKiKP     19 43 11.2 +1.5
      comp=Z,2.1nm,0.8s,baz=136,slow=2.0,SNR=6.0
YKA                                  PKKPbc   PKKPbc    19 55 03.5 -3.7
      comp=Z,0.5nm,0.8s,baz=324,slow=3.1,SNR=4.8
YKA   Yellowknife Ar     99.08 341            Pdif      19 38 39.1 -0.5
MBAR  Mbarara           100.01  97 i P        Pdif      19 38 45.7 +0.4
MBAR  Mbarara           100.01  97   IAMs_20  IAMs_20   20 21 55.8
      comp=Z,1µm,20.0s
KEST  Kesra             100.38  55   P        Pdif      19 38 46.3 +0.1
      comp=Z,8.1nm,0.9s,baz=158,slow=2.7,SNR=12
KEST  Kesra             100.38  55            Pdif      19 38 46.9 +0.7
VOI   Vohitsoka         100.86 123   IAMs_20  IAMs_20   20 18 40.4
      comp=Z,1µm,20.0s
WTLY  Watson Lake, Y    101.94 334   Pdiff    Pdif      19 38 53.5 +1.0
      baz=132
VSL   Villasalto        102.27  51   IAMs_20  IAMs_20   20 23 46.8
      comp=Z,1µm,21.0s
EKA   Eskdalemuir Ar    103.42  33   Pdiff    Pdif      19 38 57.3 -1.8
      comp=Z,4.4nm,0.9s,baz=241,slow=1.7,SNR=4.4
DZM   Mont Dzumac       103.77 234 ePP        PKiKP     19 43 25.5 +5.8
      comp=Z,161nm,28.4s
DZM                                eSP        SP        19 52 17.2 -6.8
      comp=Z,614nm,27.4s
DZM                                eSS        SS        19 58 07.0 +5.6
      comp=Z,2µm,31.8s
DZM   Mont Dzumac       103.77 234 eLQ        LQ        20 08 55.9
      comp=Z,1µm,31.6s
DZM                                eLR        LR        20 13 20.5
      comp=Z,5µm,28.1s
BMRD  Maredsous         104.79  40 dPdif      Pdif      19 39 05.6 +0.2
RCHB  Rochefort         104.98  40 dPdif      Pdif      19 39 06.5 +0.3
BGES  Gesves            105.01  40 dPdif      Pdif      19 39 06.6 +0.3
BGES                               dPKiKP     PKiKP     19 43 21.0 +0.1
BCLA  Clavier           105.15  40 dPKiKP     PKiKP     19 43 23.6 +2.6
WLF   Walferdange       105.25  41 dPdif      Pdif      19 39 08.0 +0.6
KMBO  Kilima Mbogo      105.29 101   IAMs_20  IAMs_20   20 25 20.9
      comp=Z,1µm,19.0s
LODK  Lodwar            106.03  96   IAMs_20  IAMs_20   20 25 44.8
      comp=Z,1µm,20.0s
RES   Resolute Bay      106.18 354   PKKPbc   PKKPbc    19 54 42.4 -4.0
      comp=Z,3.1nm,0.8s,baz=185,slow=1.7,SNR=7.8
DAVA  Damuels           106.31  44 eP         Pdif      19 39 13.3 +1.0
      comp=Z,13nm,1.1s,SNR=4.2
DAVA                               eP         PKiKP     19 43 18.2 -5.4
      comp=Z,22nm,1.4s
FETA  Feichten          106.70  45 eP         Pdif      19 39 15.0 +0.9
      comp=Z,9.8nm,1.1s,SNR=8.5
FETA                               eP         PKiKP     19 43 20.7 -3.6
      comp=Z,7.9nm,1.0s
RETA  Reutte            106.93  45 eP         Pdif      19 39 16.0 +1.0
      comp=Z,6.6nm,0.8s
MOTA  Moosalm           107.07  45 eP         Pdif      19 39 16.6 +0.8
      comp=Z,12nm,1.1s
MOTA                               eP         PKiKP     19 43 24.1 -0.9
      comp=Z,7.2nm,1.0s
SQTA  Sankt Quirin      107.08  45 eP         Pdif      19 39 16.7 +1.0
      comp=Z,15nm,1.0s,SNR=7.4
WATA  Walderalm         107.36  45 eP         Pdif      19 39 16.8 -0.2
      comp=Z,12nm,1.4s
WTTA  Wattenberg        107.36  45 eP         Pdif      19 39 18.1 +1.0
      comp=Z,14nm,1.5s,SNR=4.6
ABTA  Abfaltersbach     107.67  46 eP         Pdif      19 39 19.3 +0.9
      comp=Z,6.4nm,1.0s,SNR=5.9
ABTA                               eP         PKiKP     19 43 23.6 -2.4
      comp=Z,10nm,1.1s
MYKA  Terra Mystica     108.32  46 i P        Pdif      19 39 22.3 +1.0
      comp=Z,4.7nm,1.0s
MYKA                               eP         PKiKP     19 43 25.5 -1.7
      comp=Z,5.9nm,0.9s
KBA   Koelnbreinsper    108.33  46 eP         Pdif      19 39 21.7 +0.3
      comp=Z,6.0nm,1.1s
KBA                                eP         PKiKP     19 43 26.2 -1.2
      comp=Z,6.4nm,1.0s
L27K  Beaver Creek,     108.70 333   PKiKP    PKiKP     19 43 27.5 +0.1
      baz=121
INK   Inuvik            108.74 340   Pdiff    Pdif      19 39 22.3 -0.2
      comp=Z,4.3nm,0.9s,baz=122,slow=4.9,SNR=11
INK                                  PKiKP    PKiKP     19 43 26.3 -0.9
      comp=Z,2.3nm,0.9s,baz=319,slow=2.8,SNR=3.9
INK                                  PKKPbc   PKKPbc    19 54 35.8 -2.3
      comp=Z,3.3nm,1.0s,baz=312,slow=1.0,SNR=4.9
INK   Inuvik            108.74 340 i P        Pdif      19 39 22.6 +0.1
INK   Inuvik            108.74 340   Pdif     Pdif      19 39 22.6 +0.1
OBKA  Obir              108.84  47 eP         Pdif      19 39 24.7 +1.2
      comp=Z,3.7nm,0.8s
OBKA                               eP         PKiKP     19 43 27.2 -1.0
      comp=Z,9.3nm,0.8s
A36M  Sachs Harbour     108.90 345   IAMs_20  IAMs_20   20 32 24.2
      comp=Z,1µm,20.0s
NKC   Novy Kostel       109.13  43 eP         Pdif      19 39 26.3 +1.6
NKC   Novy Kostel       109.13  43 ePDIFF     Pdif      19 39 26.3 +1.6
NKC                                ePKP       PKiKP     19 43 29.0 +0.4
SOKA  Soboth            109.21  47 eP         Pdif      19 39 26.7 +1.5
      comp=Z,3.8nm,1.3s
SOKA                               eP         PKiKP     19 43 28.6 -0.3
      comp=Z,5.0nm,1.1s
MOA   Molln             109.22  45 eP         Pdif      19 39 25.8 +0.7
      comp=Z,3.8nm,0.8s
MOA                                eP         PKiKP     19 43 28.4 -0.4
      comp=Z,8.1nm,1.2s
L26K  Log Cabin Wild    109.28 333   PKiKP    PKiKP     19 43 28.5 +0.1
      baz=120
GERES GERESS Array B    109.29  44   Pdiff    Pdif      19 39 25.5  0.0
      comp=Z,1.1nm,0.7s,baz=224,slow=3.7,SNR=9.4
GERES                                PKiKP    PKiKP     19 43 28.0 -1.0
      comp=Z,5.8nm,0.7s,baz=192,slow=1.2,SNR=24
GERES                                PKKPbc   PKKPbc    19 54 36.9 +1.0
      comp=Z,0.4nm,0.7s,baz=64,slow=3.1,SNR=4.4
GERES GERESS Array B    109.29  44 i P        Pdif      19 39 26.9 +1.4
GERES GERESS Array B    109.29  44            Pdif      19 39 26.9 +1.4
EGAK  Eagle             109.33 335   PKiKP    PKiKP     19 43 28.1 -0.3
      baz=121
KHC   Kasperske Hory    109.34  44 ePKP       PKiKP     19 43 28.5 -0.5
KHC                                ePP        PP        19 44 00.0 +0.4
CKRC  Cesky Krumlov     109.65  44 ePKP       PKiKP     19 43 30.5 +0.9
CKRC                                 AMS      AMS       20 25 00.0
      comp=Z,2µm,22.4s
ARSA  Arzberg           109.75  46 eP         PKiKP     19 43 28.8 -1.1
      comp=Z,6.0nm,0.9s
CLL   Collm             109.90  42 eP         Pdif      19 39 29.0 +1.0
CLL                                e                    19 44 00.0
CLL                                  pmax     pmax
      comp=Z,11nm,1.1s
CLL                                  MLR      MLR
      comp=Z,2µm,19.5s
CLL   Collm             109.90  42 ePdif      Pdif      19 39 29.0 +1.0
CLL                                e                    19 39 34.0
CLL                                ePKiKP     PKiKP     19 43 30.0 +0.1
      comp=Z,11nm,1.1s
CLL                                ePP        PP        19 44 00.0 -3.5
CLL                                i pPP                19 44 18.8
CLL                                eSKKSac    SKKSac    19 51 00.0 -1.8
CLL                                ePS        PS        19 53 30.0 -2.4
CLL                                esPS                 19 53 57.0
CLL                                ePPS       PPS       19 54 36.0
CLL                                ePKKPab    PKKPab    19 54 45.0 +2.9
CLL                                e                    19 58 42.0
CLL                                eSS        SS        19 59 24.0 -0.8
CLL                                e(PSPS)              20 00 06.0
CLL                                eSSS       SSS       20 03 36.0
CLL                                e(SSSS)              20 06 24.0
CLL                                  Lm       MLR       20 29 00.0
      comp=N,500nm,19.8s
CLL                                  Lm       MLR       20 29 00.0
      comp=E,1µm,21.0s
CLL                                  Lm       MLR       20 29 00.0
      comp=Z,2µm,19.5s
CONA  Conrad Observa    110.23  46 eP         PKiKP     19 43 30.3 -0.5
      comp=Z,3.5nm,0.6s
PRU   Pruhonice         110.26  43 eP         Pdif      19 39 31.2 +1.5
PRU                                e                    19 43 30.4
PRU   Pruhonice         110.26  43 ePDIFF     Pdif      19 39 31.2 +1.5
PRU                                ePKP       PKiKP     19 43 30.4 -0.2
BRG   Berggiesshubel    110.26  42 ePKP       PKiKP     19 43 31.1 +0.5
BRG                                  Amp                19 43 31.9
      comp=Z,7.5nm,0.8s
STKA  Stephens Creek    110.48 210   PKiKP    PKiKP     19 43 30.8 -1.0
      comp=Z,1.4nm,0.8s,baz=331,slow=22,SNR=2.9
STKA                                 PKKPbc   PKKPbc    19 54 30.0 -1.4
      comp=Z,3.1nm,0.9s,baz=337,slow=3.0,SNR=5.8
PVCC  Panska Ves        110.49  43 ePKIKP     PKiKP     19 43 31.6 +0.5
PVCC  Panska Ves        110.49  43 ePKP       PKiKP     19 43 31.6 +0.5
J25K  Salcha River,     110.83 334   PKiKP    PKiKP     19 43 31.5 +0.1
      baz=118
WAT6  Susitna Watana    110.85 331   PKiKP    PKiKP     19 43 31.7 +0.1
      baz=116
EGYH  Egyhazaskeszo     110.95  47 eP         PKiKP     19 43 27.4 -4.6
KRUC  Moravsky          111.01  45 ePKIKP     PKiKP     19 43 31.6 -0.5
KRUC                               ePP        PP        19 44 07.5 -4.1
SJES  Sjenica           111.07  52 eP         PKiKP     19 43 35.8 +3.2
VRAC  Vranov            111.22  45 ⇑P         PKiKP     19 43 32.6 +0.1
VRAC  Vranov            111.22  45 ePKIKP     PKiKP     19 43 32.3 -0.2
VRAC                               ePP        PP        19 44 09.3 -3.8
VRAC  Vranov            111.22  45 ⇑PKIKP     PKiKP     19 43 32.6 +0.1
MORH  Mrgy, Hungar      111.32  48 ⇑P         PKiKP     19 43 32.5 -0.2
UPC   Upice             111.33  43 ePKIKP     PKiKP     19 43 32.7  0.0
UPC   Upice             111.33  43 ePKP       PKiKP     19 43 32.7  0.0
CHVC  Chvalec           111.39  43 ePDIFF     Pdif      19 39 29.2 -5.5
CHVC                               ePKP       PKiKP     19 43 32.9 +0.1
DIVS  Divibare          111.40  51 eP         PKiKP     19 43 32.9 -0.2
DPC   Dobruska-Polom    111.45  43 eP         Pdif      19 39 36.8 +1.7
DPC                                e                    19 43 33.3
DPC   Dobruska-Polom    111.45  43 ePDIFF     Pdif      19 39 36.8 +1.7
DPC                                ePKP       PKiKP     19 43 33.3 +0.3
OSTC  Ostas             111.47  43 ePDIFF     Pdif      19 39 36.9 +1.8
OSTC                               ePKP       PKiKP     19 43 33.3 +0.3
ILAR  Eielson Array     111.48 334   Pdiff    Pdif      19 39 34.3 -0.5
      comp=Z,1.6nm,0.9s,baz=156,slow=4.0,SNR=12
ILAR                                 PKiKP    PKiKP     19 43 31.4 -1.1
      comp=Z,4.8nm,0.8s,baz=170,slow=1.0,SNR=22
ILAR                                 PKKPbc   PKKPab    19 54 32.0 -2.6
      comp=Z,2.7nm,0.7s,baz=299,slow=3.9,SNR=8.0
ILAR  Eielson Array     111.48 334   Pdif     Pdif      19 39 33.9 -0.8
KRLC  Kraliky           111.62  44 eP         Pdif      19 39 37.9 +2.1
KRLC                               e                    19 43 33.7
KRLC  Kraliky           111.62  44 ePDIFF     Pdif      19 39 37.9 +2.1
KRLC                               ePKP       PKiKP     19 43 33.7 +0.4
FRGS  Fruska Gora       111.68  50 ⇑P         PKiKP     19 43 33.1 -0.5
JAVC  Velka Javorina    111.71  45 ePKIKP     PKiKP     19 43 34.5 +1.0
TRUS  Trudelj           111.73  51 eP         PKiKP     19 43 33.5 -0.1
GRUS  Gruza             111.81  51 eP         PKiKP     19 43 33.5 -0.3
MCK   McKinley          111.84 332   PKiKP    PKiKP     19 43 33.1 -0.1
      baz=115
MORC  Moravsky Berou    111.97  44 ⇑P         PKiKP     19 43 34.3 +0.3
MORC  Moravsky Berou    111.97  44 ePKIKP     PKiKP     19 43 34.2 +0.2
MORC  Moravsky Berou    111.97  44 ⇑PKIKP     PKiKP     19 43 34.3 +0.3
KOLL  Kolacno           112.05  46 ePKP       PKiKP     19 43 34.2 +0.1
BARS  Barje             112.16  52 eP         PKiKP     19 43 29.5 -5.0
TRF   Thorofare Moun    112.27 332   PKiKP    PKiKP     19 43 33.9 -0.4
      baz=114
VYHS  Vyhne             112.29  46 ePKIKP     PKiKP     19 43 34.6  0.0
VYHS  Vyhne             112.29  46 ePKP       PKiKP     19 43 34.6  0.0
H24K  Noodor Dome       112.32 334   PKiKP    PKiKP     19 43 33.9 -0.2
      baz=115
SANT  Santorini         112.37  60   IAMs_20  IAMs_20   20 34 54.8
      comp=Z,798nm,21.0s
BOVS  Bovan             112.38  52 eP         PKiKP     19 43 27.9 -7.0
NB2   NORSAR Subarra    112.81  32   PKPdf    PKiKP     19 43 34.6 -0.6
      comp=Z,1.9nm,0.8s,baz=241,slow=1.9
NOA   NORSAR Array B    112.81  32   PKiKP    PKiKP     19 43 34.2 -1.0
      comp=Z,2.3nm,0.9s,baz=246,slow=1.9,SNR=4.9
BPAW  Bear Paw Mtn.     112.82 332   PKiKP    PKiKP     19 43 34.6 -0.5
      baz=113
LANS  Liptovska Anna    112.92  45 ePKIKP     PKiKP     19 43 36.9 +1.1
LANS  Liptovska Anna    112.92  45 ePKP       PKiKP     19 43 36.9 +1.1
CAST  Castle Rocks      113.00 331   PKiKP    PKiKP     19 43 34.9 -0.6
      baz=112
BZS   Buzias            113.03  50 ⇑P         PKiKP     19 43 35.5 -0.5
BZS   Buzias            113.03  50 ⇑PKIKP     PKiKP     19 43 35.5 -0.5
VTS   Vitosha           113.06  53 ⇓P         PKiKP     19 43 36.3 -0.1
VTS   Vitosha           113.06  53 ⇓PKIKP     PKiKP     19 43 36.3 -0.1
CHUM  Lake Minchumin    113.28 332   PKiKP    PKiKP     19 43 35.6 -0.4
      baz=112
SIRR  Siria             113.29  49 ⇑P         PKiKP     19 43 36.1 -0.4
HERR  Herculane         113.31  51 ⇑P         PKiKP     19 43 36.1 -0.5
HFS   Hagfors           113.62  33   PKiKP    PKiKP     19 43 35.2 -1.5
      comp=Z,3.5nm,0.7s,baz=139,slow=3.4,SNR=6.4
TOLK  Toolik Lake Re    114.05 337   P        PKiKP     19 43 37.5 +0.1
      baz=112
H21K  Melozitna Rive    114.12 333   P        PKiKP     19 43 37.7 +0.1
      baz=111
DRGR                    114.15  49 ⇑P         PKiKP     19 43 38.2 -0.1
DRGR                    114.15  49 ⇑PKIKP     PKPdf     19 43 38.2 -0.1
TRPA  Tarpa             114.48  47 ⇑P         PKPdf     19 43 38.5 -0.3
TRPA  Tarpa             114.48  47 eP         PKPdf     19 43 38.4 -0.3
UZH   Uzhgorod          114.49  47 ePKIKP     PKiKP     19 43 49.4 +11
UZH                                e                    19 44 00.4
HUMR  Humele            114.91  52 ⇑P         PKPdf     19 43 39.3 -0.3
ARR   Arges             114.95  51 ⇑P         PKPdf     19 43 39.8 -0.1
ARCR  ARCALIA           115.31  49 ⇑P         PKPdf     19 43 40.0 -0.3
MLR   Muntele Rosu      115.86  51 ⇑P         PKPdf     19 43 40.4 -1.3
MLR   Muntele Rosu      115.86  51 ⇑PKIKP     PKPdf     19 43 40.4 -1.3
MLR   Muntele Rosu      115.86  51            PKPdf     19 43 40.7 -1.0
LVV   L'vov             115.95  46 ePKIKP     PKPdf     19 43 40.6 -0.9
LVV                                  MLR      MLR
      comp=E,1µm,24.0s
LVV                                  MLR      MLR
      comp=N,600nm,23.0s
LVV                                  MLR      MLR
      comp=Z,1µm,24.0s
BUR08 Bucovina Ar. S    116.03  48            PKPdf     19 43 41.6 -0.3
BURAR Bucovina Array    116.03  48 ⇑P         PKiKP     19 43 42.0 +0.1
BURAR Bucovina Array    116.03  48 ⇑PKIKP     PKiKP     19 43 42.0 +0.1
BURAR Bucovina Array    116.03  48            PKPdf     19 43 41.5 -0.4
NEHR  Nehoiu            116.08  51 ⇑P         PKPdf     19 43 41.2 -0.7
BISRR Bisoca            116.39  51 ⇑P         PKPdf     19 43 41.7 -0.9
PLOR  Plostina          116.44  51 ⇑P         PKPdf     19 43 41.3 -1.4
PLOR  Plostina          116.44  51 ⇑PKIKP     PKPdf     19 43 41.3 -1.4
ATD   Arta Tunnel       116.47  92   IAMs_20  IAMs_20   20 33 43.5
      comp=Z,974nm,20.0s
VRI   Vrincioaia        116.50  51 ⇑P         PKPdf     19 43 41.5 -1.2
VRI   Vrincioaia        116.50  51 ⇑PKIKP     PKPdf     19 43 41.5 -1.2
TESR  Tescani           116.64  50 ⇑P         PKPdf     19 43 42.3 -0.7
SUW   Suwalki           116.64  41 eP         PKPdf     19 43 42.6 -0.1
SUW   Suwalki           116.64  41   PKIKP    PKPdf     19 43 41.8 -0.9
SUW   Suwalki           116.64  41            PKPdf     19 43 41.8 -0.9
ISP   Isparta           116.67  60   IAMs_20  IAMs_20   20 35 35.6
      comp=Z,1µm,22.0s
ODBI  Odobesti          116.69  51 ⇑P         PKPdf     19 43 42.5 -0.6
ICOR  Ion Corvin        116.70  53 ⇑P         PKPdf     19 43 42.5 -0.6
HARR  Harsova           116.96  52 ⇑P         PKPdf     19 43 43.1 -0.5
HARR  Harsova           116.96  52 ⇑PKIKP     PKPdf     19 43 43.1 -0.5
TLBR  Topalu            116.99  52 ⇑P         PKPdf     19 43 43.2 -0.5
GHRR                    117.01  51 ⇑P         PKPdf     19 43 43.2 -0.5
A21K  Barrow            117.21 339   PKPdf    PKiKP     19 43 43.4 +0.1
A21K  Barrow            117.21 339   P        PKiKP     19 43 43.4 +0.1
      baz=105
TIRR  Tirgusor          117.22  53 ⇑P         PKPdf     19 43 43.8 -0.3
TIRR  Tirgusor          117.22  53   PKIKP    PKPdf     19 43 43.1 -1.0
TIRR                                 MLR      MLR
      comp=Z,3µm,20.0s
TIRR  Tirgusor          117.22  53   PKPdf    PKPdf     19 43 43.1 -1.0
CFR   Carcaliu          117.24  52 ⇑P         PKPdf     19 43 43.8 -0.3
CFR   Carcaliu          117.24  52 ⇑PKIKP     PKPdf     19 43 43.8 -0.3
BORA  Eskisehir         117.28  58   PKPdf    PKPdf     19 43 43.8 -0.7
SCTR  Scanteiesti       117.29  51 ⇑P         PKPdf     19 43 43.9 -0.3
TATR  Tatarca           117.31  51 ⇑P         PKPdf     19 43 43.8 -0.5
TPGR  Topolog           117.34  52 ⇑P         PKPdf     19 43 43.8 -0.6
VLDR  Vladesti          117.40  51 ⇑P         PKPdf     19 43 44.2 -0.2
VASR  Vaslui            117.43  50 ⇑P         PKPdf     19 43 44.2 -0.3
PABE  Paberze           117.48  40 eP         PKiKP     19 43 44.2  0.0
PABE  Paberze           117.48  40   PKPdf    PKPdf     19 43 43.7 -0.6
JURR  Jurilovca         117.63  52 ⇑P         PKPdf     19 43 44.4 -0.4
TLCR                    117.70  52 ⇑P         PKPdf     19 43 44.6 -0.4
TLCR                    117.70  52 ⇑PKIKP     PKPdf     19 43 44.6 -0.4
CSS   Mathiatis         117.86  64   PKPdf    PKiKP     19 43 46.1 +0.3
CSS                                  IAMs_20  IAMs_20   20 33 09.6
      comp=Z,985nm,22.0s
MTSE  Matsula           118.17  36 eP         PKPdf     19 43 44.9 -0.6
MILM  Milestii Mici     118.18  50 ⇑P         PKPdf     19 43 45.0 -0.9
MILM  Milestii Mici     118.18  50 ⇑PKIKP     PKPdf     19 43 45.0 -0.9
SORM  Soroca            118.21  49 ⇑P         PKPdf     19 43 44.7 -1.2
SORM  Soroca            118.21  49 ⇑PKIKP     PKPdf     19 43 44.7 -1.2
KIS   Kishinev          118.21  50 ePKP       PKPdf     19 43 45.0 -0.9
KIS                                eLR        LR        20 36 43.0
      comp=Z,600nm,19.0s
KIS   Kishinev          118.21  50 ePKIKP     PKPdf     19 43 45.0 -0.9
ISAL  Salakas           118.69  40 eP         PKiKP     19 43 46.7 +0.1
IIGN  Ignalina          118.69  40 eP         PKiKP     19 43 46.9 +0.3
PURM  Purcari           118.78  51 ⇑P         PKPdf     19 43 46.5 -0.6
MMAI  Mount Meron Ar    118.84  67   PKP      PKPdf     19 43 47.4 -0.4
      comp=Z,5.6nm,0.6s,baz=47,slow=1.7,SNR=13
NACGM Naroch            118.90  41 i PKP      PKPdf     19 43 47.0 -0.1
BR231 Keskin MP Arra    118.97  59            PKPdf     19 43 47.7 -0.1
ANTO  Ankara            118.99  59   PKIKP    PKPdf     19 43 47.5 -0.3
ANTO                                 MLR      MLR
      comp=Z,900nm,21.0s
ANTO  Ankara            118.99  59            PKPdf     19 43 47.5 -0.3
ANTO                                 IAMs_20  IAMs_20   20 36 47.0
      comp=Z,924nm,21.0s
SPITS Spitsbergen Ar    119.24  14   PKP      PKPdf     19 43 46.6 -0.5
      comp=Z,15nm,0.8s,baz=101,slow=12,SNR=2.8
AKASG Malin Array Be    119.39  46   PKP      PKPdf     19 43 46.7 -1.4
      comp=Z,24nm,0.7s,baz=265,slow=2.6,SNR=125
AKASG Malin Array Be    119.39  46   PKIKP    PKPdf     19 43 46.3 -1.8
AKASG Malin Array Be    119.39  46            PKPdf     19 43 46.3 -1.8
AKBB  Malin Array Si    119.39  46c iPKIKP    PKPdf     19 43 46.9 -1.2
AKBB  Malin Array Si    119.39  46   PKPdf    PKPdf     19 43 46.7 -1.4
MNK   Minsk             119.44  41 i PKIKP    PKPdf     19 43 46.6 -1.5
MNK                                i                    19 44 01.8
MNK                                i                    19 45 08.1
MNK                                i PPP      PPP       19 47 40.0
MNK                                i SS       SS        20 01 29.7 -0.4
MNK                                  pmax     pmax
      comp=Z,90nm,0.9s
MNK                                  pmax     pmax
      comp=N,10.0nm,0.9s
MNK                                  pmax     pmax
      comp=E,3.0nm,0.9s
MNK                                  MLR      MLR
      comp=Z,964nm,19.0s
MNK                                  MLR      MLR
      comp=E,99nm,19.0s
MNK                                  MLR      MLR
      comp=N,450nm,19.0s
MNK   Minsk             119.44  41 i PKP      PKPdf     19 43 46.7 -1.4
      comp=E,3.0nm,0.9s
MNK                                i PKP      PKPdf     19 43 46.7 -1.4
      comp=N,10.0nm,0.9s
MNK                                i PKP      PKPdf     19 43 46.7 -1.4
      comp=Z,90nm,0.9s,baz=258
MNK                                i pPKP     pPKPdf    19 44 01.8 -1.0
MNK                                i PP       PP        19 45 08.2 -2.5
MNK                                i PKS                19 47 23.4
MNK                                i SKP                19 47 24.7
MNK                                i PPP      PPP       19 47 40.1
MNK                                i SKKS               19 52 07.2
MNK                                i SS       SS        20 01 29.7 -0.4
MNK                                i SSS      SSS       20 05 10.5
MNK                                i LR       LR        20 26 20.9
MNK                                i LRM      MLR       20 34 36.8
      comp=Z,964nm,19.0s
MNK                                i LRM      MLR       20 34 39.7
      comp=E,99nm,19.0s
MNK                                i LRM      MLR       20 37 13.2
      comp=N,450nm,19.3s
BR131 Keskin Array S    119.57  59   PKIKP    PKPdf     19 43 48.4 -0.6
BR131 Keskin Array S    119.57  59            PKPdf     19 43 48.4 -0.6
BRTR  Keskin Array B    119.57  59   PKP      PKPdf     19 43 48.4 -0.6
      comp=N,8.3nm,0.8s,baz=185,slow=3.2,SNR=37
BRTR                                 PKKPbc   PKKPab    19 54 03.3 +2.6
      comp=N,0.7nm,0.8s,baz=78,slow=1.8,SNR=3.7
BRTR  Keskin Array B    119.57  59   PKIKP    PKPdf     19 43 48.2 -0.8
BRTR  Keskin Array B    119.57  59   PKPdf    PKPdf     19 43 48.2 -0.8
VSU   Vasula            119.61  37 eP         PKPdf     19 43 48.2 -0.1
VSU   Vasula            119.61  37 i PKIKP    PKPdf     19 43 48.1 -0.1
ASF   Jabal al Asfar    119.76  68   PKP      PKPdf     19 43 49.2 -0.3
      comp=N,7.8nm,0.7s,baz=20,slow=3.4,SNR=5.4
FINES FINESS Array B    119.82  33   PKP      PKPdf     19 43 48.2 -0.4
      comp=N,7.8nm,0.7s,baz=129,slow=1.2,SNR=14
FINES                                PKKPbc   PKKPbc    19 53 59.0 -0.8
      comp=N,3.5nm,0.9s,baz=174,slow=5.7,SNR=5.6
FIA1  FINESS Array S    119.82  33   PKPdf    PKPdf     19 43 48.2 -0.4
ILGA  Ilgaz             120.00  58   PKPdf    PKPdf     19 43 48.9 -1.0
TNA   Tin City          120.16 331   PKPdf    PKiKP     19 43 49.1  0.0
TNA   Tin City          120.16 331   P        PKiKP     19 43 49.4 +0.2
      baz=98
MORW  Morawa            120.24 187   PKPdf    PKPdf     19 43 49.1 -1.5
ARCES ARCESS Array B    120.67  24   PKP      PKPdf     19 43 49.3 -0.7
      comp=N,6.8nm,0.7s,baz=300,slow=2.4,SNR=9.9
ARCES                                PKKPbc   PKKPbc    19 53 56.2 -0.6
      comp=N,3.8nm,0.8s,baz=38,slow=2.2,SNR=3.7
ARCES ARCESS Array B    120.67  24   PKIKP    PKPdf     19 43 49.2 -0.8
ARCES ARCESS Array B    120.67  24            PKPdf     19 43 49.2 -0.8
AS31  Alice Springs     120.88 207   PKPdf    PKPdf     19 43 50.4 -1.6
ASAR  Alice Springs     120.88 207   PKP      PKPdf     19 43 50.2 -1.8
      comp=N,9.3nm,0.8s,baz=138,slow=1.9,SNR=47
ASAR                                 PKKPbc   PKKPbc    19 53 53.0 -2.3
      comp=N,5.7nm,0.8s,baz=340,slow=2.7,SNR=26
ASAR  Alice Springs     120.88 207   PKIKP    PKPdf     19 43 49.8 -2.2
ASAR  Alice Springs     120.88 207   PKPdf    PKPdf     19 43 49.8 -2.2
BNN   Bunyan            120.97  60   PKPdf    PKPdf     19 43 51.1 -0.6
TOKA  Tokat             121.83  59            PKPdf     19 43 52.5 -0.7
VALR  Valaam            122.10  34 i PKIKP    PKPdf     19 43 52.5 -0.4
VALR                                 pmax     pmax
      comp=Z,29nm,0.9s
APA   Apatity           123.48  26⇓iPKIKP     PKPdf     19 43 48.8 -6.7
APA                                i                    19 45 37.7
APA                                  pmax     pmax
      comp=Z,24nm,0.7s
APA                                  MLR      MLR
      comp=Z,2µm,19.0s
RAYN  Ar Rayn           123.87  81   PKiKP    PKPdf     19 43 57.6  0.0
RAYN  Ar Rayn           123.87  81   PKIKP    PKPdf     19 43 57.6  0.0
RAYN                                 MLR      MLR
      comp=Z,600nm,20.0s
RAYN  Ar Rayn           123.87  81   PKPdf    PKPdf     19 43 57.6  0.0
RAYN  Ar Rayn           123.87  81   IAMs_20  IAMs_20   20 40 26.1
      comp=Z,615nm,20.0s
WR0   Warramunga Arr    123.93 210            PKPdf     19 43 56.6 -1.3
LVZ   Lovozero          123.95  26c iPKIKP    PKiKP     19 43 57.1 +0.4
LVZ                                  pmax     pmax
      comp=Z,217nm,2.5s
LVZ   Lovozero          123.95  26   PKPdf    PKPdf     19 43 56.2 -0.2
WRA   Warramunga Arr    124.03 209   PKP      PKPdf     19 43 56.7 -1.4
      comp=Z,18nm,0.7s,baz=163,slow=1.7,SNR=89
WRA                                  PKKPbc   PKKPbc    19 53 43.6 +0.5
      comp=Z,8.4nm,0.8s,baz=330,slow=3.2,SNR=23
WRA   Warramunga Arr    124.03 209   PKIKP    PKPdf     19 43 56.2 -1.9
WRA   Warramunga Arr    124.03 209            PKPdf     19 43 56.2 -1.9
WRAB  Tennant Creek     124.03 209c iPKIKP    PKPdf     19 43 57.3 -0.8
WRAB                                 pmax     pmax
      comp=Z,50nm,1.7s
WRAB  Tennant Creek     124.03 209   IAMs_20  IAMs_20   20 31 14.9
      comp=Z,870nm,22.0s
MARD  Mardin            124.31  63            PKPdf     19 43 58.1 -0.1
OBN   Obninsk           124.50  42 ⇑P         PKPdf     19 43 56.7 -1.0
OBN   Obninsk           124.50  42c iPKIKP    PKPdf     19 43 56.6 -1.1
OBN                                i                    19 45 41.7
OBN                                  pmax     pmax
      comp=Z,77nm,1.0s
OBN                                  MLR      MLR
      comp=Z,1µm,21.0s
OBN   Obninsk           124.50  42   PKPdf    PKPdf     19 43 57.0 -0.7
COEN  Coen              124.67 222   PKPdf    PKPdf     19 43 59.0 -0.4
KOPT  Kop Dagi          124.75  60   PKPdf    PKiKP     19 43 59.5  0.0
SOC   Sochi             124.91  56 i PKIKP    PKPdf     19 43 57.3 -1.6
SOC                                ePPP       PPP       19 48 29.4
SOC                                ePS        PS        19 55 45.0 -3.6
SOC                                eSS        SS        20 02 37.2 -3.3
SOC                                eSSS       SSS       20 07 14.8
SOC                                  pmax     pmax
      comp=Z,34nm,0.9s
MOS   Moscow            125.15  41 i PKIKP    PKPdf     19 43 57.3 -1.7
MOS                                e                    19 44 12.7
MOS                                  pmax     pmax
      comp=Z,75nm,0.9s
GURO  Guroymak-BITLI    125.57  62   PKPdf    PKPdf     19 44 00.7 +0.1
SIRT  Sirnak            125.64  64   PKPdf    PKiKP     19 44 01.2 +0.2
LPSR  Galich'ya Gora    125.66  45 ePKIKP     PKPdf     19 43 59.5 -0.6
LPSR                                 pmax     pmax
      comp=Z,100nm,0.8s
VSR   Storozhevoye      125.67  47 ePKIKP     PKPdf     19 43 58.8 -1.3
VSR                                  pmax     pmax
      comp=Z,40nm,0.8s
VORD  Divnogorie        125.73  47 ePKIKP     PKPdf     19 43 59.1 -1.1
VORD                                 pmax     pmax
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	comp=Z,40nm,0.7s						
PMG	Port Moresby	125.75	229	PKP	PKPdf	19 44 01.2	-0.3
	comp=Z,29nm,0.9s,baz=60,slow=2.9,SNR=11						
PMG	Port Moresby	125.75	229	PKIKP	PKPdf	19 44 01.0	-0.5
PMG				MLR	MLR		
	comp=Z,1µm,21.0s						
PMG	Port Moresby	125.75	229	PKPdf	PKPdf	19 44 01.0	-0.5
BCA	Borcka	125.88	59	⇑P	PKiKP	19 44 05.5	+4.1
RABL	Rabaul	126.00	238		PKPdf	19 44 01.0	-1.1
KLMR	Klimovskoe	126.27	35	*e*PKIKP	PKPdf	19 43 59.9	-1.0
KLMR				pmax	pmax		
	comp=Z,85nm,0.8s						
KLMR	Klimovskoe	126.27	35	*e*PKPdf	PKPdf	19 44 00.0	-1.0
KLMR				AMP		19 44 01.9	
	comp=Z,85nm,0.8s						
KLMR				*e*PP	PP	19 45 52.0	-4.6
KLMR				LQ	LQ	20 29 52.8	
KLMR				LQ	LQ	20 29 52.8	
KLMR				LR	LR	20 36 12.7	
SOCY	Socotra	126.35	97	IAMs_20	IAMs_20	20 36 23.0	
	comp=Z,1µm,20.0s						
H11S2	WAKE ISLAND Hy	126.42	271	T	T	22 02 52.7	
	baz=115,slow=75,SNR=2965						
H11S1	WAKE ISLAND Hy	126.44	271	T	T	22 02 55.3	
	baz=115,slow=75,SNR=1110						
H11S3	WAKE ISLAND Hy	126.44	271	T	T	22 02 54.0	
	baz=115,slow=75,SNR=1862						
H11N3	WAKE ISLAND Hy	126.75	273	T	T	22 03 26.9	
	baz=116,slow=75,SNR=67						
H11N1	WAKE ISLAND Hy	126.77	273	T	T	22 03 22.8	
	baz=116,slow=75,SNR=49						
H11N2	WAKE ISLAND Hy	126.77	273	T	T	22 03 19.7	
	baz=116,slow=75,SNR=466						
KARS	Kars	126.80	60	PKIKP	PKiKP	19 44 03.2	-0.1
KARS	Kars	126.80	60	PKPdf	PKiKP	19 44 03.2	-0.1
PSA00	Pilbara Seismi	127.03	193	PKPdf	PKPdf	19 44 01.9	-1.9
PSA00	Pilbara Seismi	127.03	193	PKPdf	PKPdf	19 44 02.3	-1.5
SHA1	Shidzhatmaz	127.04	56	*i* PKIKP	PKPdf	19 44 02.3	-1.0
KIV	Kislovodsk	127.10	56	⇑P	PKiKP	19 44 03.8	+0.1
KIV	Kislovodsk	127.10	56	*i* PKPdf	PKiKP	19 44 03.5	-0.3
	SNR=11						
KIV	Kislovodsk	127.10	56	*i* PKIKP	PKPdf	19 44 03.4	+0.1
KIV				*e*		19 46 02.0	
KIV				*e*PS	PS	19 56 06.9	-1.1
KIV				*e*SS	SS	20 03 08.2	+0.2
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KIV	Kislovodsk	127.10	56	PKPdf	PKPdf	19 44 03.0	-0.3
RST	Umm Al-Ruwaisa	127.16	74	*e*P	PKPdf	19 44 03.3	-0.4
KBZ	Khabaz	127.21	56	PKP	PKiKP	19 44 03.8	0.0
	comp=Z,17nm,0.9s,baz=164,slow=1.4,SNR=22						
KBZ				PP	PP	19 46 07.0	+3.6
	comp=Z,12nm,1.0s,baz=175,slow=1.9,SNR=3.7						
KBZ	Khabaz	127.21	56*c*	*i*PKIKP	PKiKP	19 44 03.9	+0.1
AKH	Akhalkalaki	127.26	59	⇑P	PKiKP	19 44 04.5	+0.2
VRH	Novokhopyorsk	127.27	47	*e*PKIKP	PKPdf	19 44 02.5	-0.7
VRH				pmax	pmax		
	comp=Z,40nm,0.7s						
ONI	Oni	127.43	58	PKIKP	PKiKP	19 44 04.2	-0.2
ONI	Oni	127.43	58	PKPdf	PKiKP	19 44 04.2	-0.2
GOF	Gofitskoye	127.51	55⇓	*i*PKIKP	PKiKP	19 44 04.4	0.0
GOF				pmax	pmax		
	comp=Z,48nm,0.7s						
MIB	Mutribah	127.53	74	*e*P	PKPdf	19 44 04.0	-0.4
UMR	Umm Al-Rimmam	127.77	75	*e*P	PKPdf	19 44 04.7	-0.2
ZEI	Tsey	127.79	57	*i* PKIKP	PKPdf	19 43 57.8	-7.0
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GNI	Garni	127.96	61	PKP	PKPdf	19 44 05.0	-0.1
	comp=Z,8.5nm,0.8s,baz=320,slow=5.4,SNR=5.9						
GNI	Garni	127.96	61	PKiKP	PKiKP	19 44 06.2	+0.5
GNI	Garni	127.96	61		PKiKP	19 44 05.7	0.0
GNI	Garni	127.96	61	IAMs_20	IAMs_20	20 43 45.2	
	comp=Z,599nm,21.0s						
PRGR	Permogore	129.15	33	*e*PKIKP	PKiKP	19 44 07.1	0.0
PRGR				pmax	pmax		
	comp=Z,116nm,0.9s						
GROC	Groznyy	129.22	57	*i* PKIKP	PKiKP	19 44 07.7	-0.2
GROC				*e*		19 46 14.5	
GROC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BILL	Bilibino	130.06	336⇓	*i*PKIKP	PKPdf	19 44 08.3	+0.3
BILL				pmax	pmax		
	comp=Z,45nm,0.9s						
BILL				MLR	MLR		
	comp=Z,335nm,19.0s						
BILL	Bilibino	130.06	336		PKPdf	19 44 08.2	+0.2
MAK	Makhachkala	130.44	58	*i* P	Pdif	19 40 58.2	-1.3
MAK				*i*		19 44 08.7	
MAK				*e*		19 44 25.0	
MAK				*e*		19 46 22.2	
MAK				*e*		19 51 12.4	
MAK				*e*SS	SS	20 03 49.8	+0.7
MAK				pmax	pmax		
	comp=Z,121nm,1.3s						
BELG	Belogornoye	130.97	45	PP	PP	19 46 22.1	-5.6
	comp=Z,21nm,0.9s,baz=320,slow=2.7,SNR=4.7						
BELG	Belogornoye	130.97	45	*i* PKIKP	PKPdf	19 44 09.7	-0.5
KIRV	Kirov	131.46	37	PKP	PKPdf	19 44 11.1	+0.2
	comp=Z,36nm,0.6s,baz=51,slow=0.6,SNR=15						
KIRV	Kirov	131.46	37*c*	*i*PKIKP	PKiKP	19 44 11.7	-0.2
FAQ	Al Faqa, Dubai	132.92	84	PKPdf	PKPdf	19 44 14.3	-0.4
ASHO	Ashiyiah	133.30	84	PKPdf	PKPdf	19 44 14.9	-0.7
UOSS	Minazif	133.51	84	IAMs_20	IAMs_20	20 46 06.4	
	comp=Z,1µm,20.0s						
SOHO	SOHO	133.52	85	*i* PKPdf	PKPdf	19 44 15.0	-0.9
	SNR=8.4						
SHME	Shamm	133.81	82	PKPdf	PKPdf	19 44 15.9	-0.5
BANOM	Banah	133.91	82	PKPdf	PKPdf	19 44 16.2	-0.4
WSAR	Wadi Sarin	135.02	87	PP	PP	19 46 51.5	-2.9
	comp=Z,21nm,1.1s,baz=282,slow=7.2,SNR=7.0						
GENI	Genyem	135.41	228	PKP	PKPdf	19 44 20.0	+0.2
ARU	Arti	136.72	38	PP	PP	19 47 02.3	-1.8
	comp=Z,1.8nm,0.7s,baz=272,slow=3.3,SNR=4.0						
ARU	Arti	136.72	38	*i* PKIKP	PKPdf	19 44 21.6	+0.7
ARU						19 47 01.0	
ARU				SS	SS	20 05 03.2	-0.8
ARU				MLR	MLR		
	comp=Z,1µm,23.0s						
ARU	Arti	136.72	38		PKPdf	19 44 21.5	+0.7
SEY	Seymchan	137.40	332	PKhKP	PKPpre	19 44 12.1	
	comp=Z,24nm,0.7s,baz=103,slow=2.5,SNR=15						
SEY				PKP	PKPdf	19 44 21.6	-0.4
	comp=Z,72nm,0.8s,baz=117,slow=2.8,SNR=30						
TIXI	Tiksi	137.48	351	PKhKP	PKPpre	19 44 09.2	
	comp=Z,4.8nm,0.6s,baz=12,slow=3.1,SNR=19						
TIXI				PKP	PKPdf	19 44 20.4	-1.5
	comp=Z,32nm,0.8s,baz=8.5,slow=3.2,SNR=27						
TIXI				PP	PP	19 47 07.3	-0.8
	comp=Z,6.8nm,0.3s,baz=218,slow=18,SNR=13						
TIXI	Tiksi	137.48	351		PKPdf	19 44 21.7	-0.1
AKTO	Aktyubinsk	137.61	47	PKP	PKPdf	19 44 22.2	-0.5
	comp=Z,20nm,0.8s,baz=329,slow=1.2,SNR=22						
PET	Petropavlovsk	137.67	317	*e*PKHKP	PKPpre	19 44 14.5	
PET				*e*		19 47 08.7	
PET				*e*PS	PS	19 57 36.0	-2.2
PET				*e*PPS	PPS	19 59 28.8	
PET				*e*SS	SS	20 05 11.1	-4.3
SVE	Sverdlovsk	137.71	37	*i* PKIKP	PKPdf	19 44 22.8	+0.1
SVE				pmax	pmax		
	comp=Z,23nm,0.9s						
SVE				MLR	MLR		
	comp=Z,2µm,22.0s						
GEYT	Alibeck	137.96	66	PKhKP	PKPpre	19 44 12.5	
	comp=Z,4.7nm,0.8s,baz=63,slow=10,SNR=3.7						
GEYT				PKP	PKPdf	19 44 21.7	-2.2
	comp=Z,19nm,0.8s,baz=358,slow=5.2,SNR=5.1						
GEYT				PP	PP	19 47 09.4	-3.2
	comp=Z,10nm,0.8s,baz=286,slow=5.4,SNR=5.0						
GEYT	Alibeck	137.96	66		PKPdf	19 44 22.5	-1.3
GYA0B	ALIBECK ARRAY	137.96	66	PKPdf	PKPdf	19 44 22.4	-1.4
PEA0B	Petropavlovsk-	138.21	317	PKIKP	PKPdf	19 44 23.5	-0.2
PEA0B	Petropavlovsk-	138.21	317	PKPdf	PKPdf	19 44 23.5	-0.2
PETK	Petropavlovsk-	138.21	317	PKhKP	PKPpre	19 44 13.5	
	comp=Z,5.9nm,0.8s,baz=186,slow=3.0,SNR=5.7						
PETK				PKP	PKPdf	19 44 23.7	-0.1
	comp=Z,38nm,1.0s,baz=133,slow=6.3,SNR=3.8						
PETK	Petropavlovsk-	138.21	317	PKIKP	PKPdf	19 44 23.6	-0.2
AB31	Akbulak array	139.01	49	*i* PKIKP	PKPdf	19 44 25.7	+0.4
ABKAR	Akbulak array	139.01	49		PKPdf	19 44 25.7	+0.4
ABKAR	Akbulak array	139.01	49		PKPdf	19 44 25.5	+0.2
NRIK	Noril'sk	139.38	11	PKhKP	PKPpre	19 44 18.4	
	comp=Z,11nm,0.9s,baz=335,slow=0.1,SNR=3.8						
NRIK				PKP	PKPdf	19 44 25.8	+0.4
	comp=Z,9.5nm,0.8s,baz=358,slow=5.0,SNR=8.6						
NRIK				PP	PP	19 47 26.1	+6.2
	comp=Z,8.1nm,1.0s,baz=327,slow=1.8,SNR=4.1						
NRIK	Noril'sk	139.38	11*c*	*i*PKIKP	PKPdf	19 44 26.0	+0.6
NRIK				pmax	pmax		
	comp=Z,22nm,1.1s						
MA2	Magadan	139.66	328	*i* PKIKP	PKPdf	19 44 25.5	-0.7
MA2				pmax	pmax		
	comp=Z,27nm,1.1s						
SKR	Severo-Kuril's	139.68	314	*e*PKHKP	PKPpre	19 44 01.3	
SKR				*e*		19 47 31.3	
SKR				MLR	MLR		
	comp=Z,300nm,15.0s						
HRA	Herat	140.86	72		PKPdf	19 44 29.3	-0.2
DBJI	Dramaga	142.99	177	PKP	PKPdf	19 44 30.1	-3.6
KAPI	Kappang	143.04	198	IAMs_20	IAMs_20	20 47 54.1	
	comp=Z,524nm,21.0s						
SANI	Sanana	143.59	210	PKP	PKPbc	19 44 32.1	0.0
LBMI	Labuha	144.16	213	PKP	PKPab	19 44 33.2	-0.2
BRVK	Borovoye	144.24	40	*i* PKIKP	PKPdf	19 44 33.8	-0.8
BRVK	Borovoye	144.24	40	PKPdf	PKPbc	19 44 33.1	+0.2
PALK	Pallekele	144.94	126	PKIKP	PKPab	19 44 35.4	-0.9
PALK				MLR	MLR		
	comp=Z,1µm,22.0s						
PALK	Pallekele	144.94	126		PKPab	19 44 35.4	-0.9
TNTI	Ternate	145.45	214	PKPdf	PKPbc	19 44 36.3	-1.6
YAK	Yakutsk	145.74	343	PKPbc	PKPdf	19 44 36.8	0.0
	comp=Z,786nm,0.7s,baz=354,slow=0.3,SNR=556						
YAK	Yakutsk	145.74	343*d*	*i*PKP2	PKPbc	19 44 37.3	0.0
YAK				*e*		19 47 55.6	
YAK				pmax	pmax		
	comp=Z,1µm,0.8s						
YAK				pmax	pmax		
	comp=E,54nm,0.8s						
YAK				pmax	pmax		
	comp=N,86nm,0.9s						
YAK				pmax	pmax		
	comp=E,64nm,1.5s						
YAK				pmax	pmax		
	comp=N,141nm,1.5s						
YAK				pmax	pmax		
	comp=Z,256nm,1.8s						
LUWI	Luwuk	145.80	206	PKPdf	PKPdf	19 44 38.5	0.0
POO	Poona	146.20	103	*e*P	PKPdf	19 44 36.0	-3.0
KUR	Kuril'sk	146.22	307	*i* PKIKP	PKPdf	19 44 36.9	-1.3
PMBI	Palembang	146.43	173	PKPdf	PKPdf	19 44 39.1	-0.5
PMBI				IAMs_20	IAMs_20	20 48 33.3	
	comp=Z,699nm,21.0s						
KBL	Kabul	146.47	73	PKIKP	PKPdf	19 44 38.6	-0.7
KBL	Kabul	146.47	73	PKPdf	PKPdf	19 44 38.6	-0.7
TAS	Tashkent	146.59	60	PKP2	PKPdf	19 44 39.5	+0.5
TAS	Tashkent	146.59	60		PKPdf	19 44 39.5	+0.5
CHGR	Chuyangaron	146.66	65	PKPdf	PKPdf	19 44 39.4	0.0
BRLS	Borolday	146.77	57	*e*PKP	PKPdf	19 44 38.5	-0.8
	baz=58						
BRLS				*e*PKPab	PKPbc	19 44 41.2	+0.1
	baz=58						
BRLS	Borolday	146.77	57	*e*PKIKP	PKPdf	19 44 38.5	-0.8
BRZS	Berezniki	146.81	44	*e*PKP	PKPdf	19 44 38.6	-0.5
	baz=44						
BRZS	Berezniki	146.81	44	*e*PKIKP	PKPdf	19 44 38.6	-0.5
IUG	Iuzhnay	147.04	59	*e*PKP	PKPdf	19 44 39.0	-0.9
	baz=59						
IUG	Iuzhnay	147.04	59	*e*PKIKP	PKPdf	19 44 39.0	-0.9
KKAR	Karatay Array	147.25	57	PKIKP	PKPdf	19 44 39.5	-0.6
KKAR	Karatay Array	147.25	57	PKPdf	PKPdf	19 44 39.5	-0.6
BKB	Balikpapan	147.36	195		PKPbc	19 44 44.2	+0.7
GAR	Garm	147.55	65		PKPdf	19 44 40.9	+0.1
TYV	Tymovskoe	147.72	319	*e*PKP2	PKPbc	19 44 44.3	+0.9
TYV				pmax	pmax		
	comp=Z,1µm,4.3s						
TYV				pmax	pmax		
	comp=Z,221nm,1.0s						
YUK	Yuzh-Kuril'sk	147.87	305	*i* PKIKP	PKPdf	19 44 39.6	-1.4
DZA	Taraz	147.87	57	*e*PKP	PKPdf	19 44 40.9	-0.3
	baz=57						
DZA				*i* PKPbc	PKPbc	19 44 42.8	-1.3
	baz=57						
DZA				*i* PKPab	PKiKP	19 44 45.6	-0.4
	baz=57						
DZA	Taraz	147.87	57	*e*PKIKP	PKPdf	19 44 40.8	-0.3
TOLI2	Tolitoli	148.51	204		PKPbc	19 44 45.2	-1.4
GSI	Gunungsitoli	148.98	158		PKPdf	19 44 43.1	-0.7
GSI				PKPbc	PKPbc	19 44 47.9	+0.1
GSI				PKPab	PKPab	19 44 53.3	+1.4
BKNI	Bangkinang	149.00	165	PKPbc	PKPbc	19 44 46.1	-1.8
BKNI					PKPab	19 44 51.9	0.0
YSS	Yuzh-Sakhalins	149.17	312	*i* PKIKP	PKPdf	19 44 43.6	+0.6
YSS				*e*		19 48 19.4	
YSS				*e*SS	SS	20 07 34.2	+6.0
YSS				pmax	pmax		
	comp=Z,210nm,0.8s						
YSS				MLR	MLR		
	comp=Z,600nm,20.0s						
YSS	Yuzh-Sakhalins	149.17	312		PKPbc	19 44 47.1	-0.2
BTLS	Baital	149.30	52	*e*PKP	PKPdf	19 44 42.8	-0.5
	baz=52						
BTLS	Baital	149.30	52	*e*PKHKP	PKPpre	19 44 42.8	
HYB	Hyderabad	149.56	109	*i* PKP	PKPdf	19 44 44.5	-0.1
HYB				*e*		19 44 48.5	
HYB				*e*		19 44 54.5	
HYB				*e*		19 45 01.0	
EKS2	Erkin-Say	149.69	57	P	PKPdf	19 44 44.7	+0.5
	SNR=14						
AML	Almayashu	149.73	58	P	PKPdf	19 44 45.3	+0.7
	SNR=7.0						
AML	Almayashu	149.73	58	*i* PKPdf	PKPdf	19 44 45.1	+0.5
	SNR=86						
NIL	Nilore	149.88	75	PKHKP	PKPpre	19 44 44.3	
NIL				MLR	MLR		
	comp=Z,800nm,20.0s						
NIL	Nilore	149.88	75	PKPdf	PKPdf	19 44 44.3	-0.4
NIL				PKPbc	PKPbc	19 44 49.5	-0.1
NIL	Nilore	149.88	75	IAMs_20	IAMs_20	20 56 06.1	
	comp=Z,841nm,20.0s						
KURBB	Kurchatov Arra	149.90	40	PKPbc	PKPbc	19 44 49.1	+0.1
	comp=Z,130nm,0.7s,baz=301,slow=3.1,SNR=8.2						
KURBB				PP	PP	19 48 29.7	+6.3
	comp=Z,26nm,0.7s,baz=280,slow=6.3,SNR=9.1						
KURBB	Kurchatov Arra	149.90	40	PKP2	PKPbc	19 44 49.2	+0.2
KURK	Kurchatov	149.91	40	*i* PKIKP	PKPdf	19 44 43.1	-1.0
KURK	Kurchatov	149.91	40	PKPdf	PKPdf	19 44 43.9	-0.2
KURK				PKPbc	PKPbc	19 44 49.1	+0.2
KURK				PKPab	PKPab	19 44 56.1	+1.4
USP	Ospenovka	150.07	55	P	PKPdf	19 44 45.1	+0.4
	SNR=9.2						
SGDS	Sogindy	150.12	55	*e*PKP	PKPdf	19 44 43.7	-1.1
	baz=55						
SGDS	Sogindy	150.12	55	*e*PKIKP	PKiKP	19 44 50.3	-0.4
JKA	Kamikawa-asahi	150.13	306	PKPbc	PKPbc	19 44 49.5	-0.2
ASAJ	Asahikawa	150.14	306	PKPbc	PKPbc	19 44 48.7	-1.0
	comp=Z,148nm,0.9s,baz=268,slow=3.3,SNR=4.5						
AAK	Ala-Archa	150.21	57	P	PKPdf	19 44 45.8	+0.8
	SNR=11						
AAK	Ala-Archa	150.21	57	*i* PKPdf	PKPdf	19 44 45.6	+0.5
	SNR=244						
AAK	Ala-Archa	150.21	57	PKIKP	PKiKP	19 44 50.6	-0.4
AAK	Ala-Archa	150.21	57	PKPdf	PKPdf	19 44 45.0	-0.1
AAK				PKPbc	PKiKP	19 44 50.8	-0.2
ERM	Erimo	150.22	302*c*	*i*PKIKP	PKiKP	19 44 51.6	+0.8
ERM				pmax	pmax		
	comp=Z,310nm,1.7s						
JEM	Erimo	150.22	302	PKPbc	PKPbc	19 44 50.1	+0.1
UCH	Uchtor	150.31	58	P	PKPdf	19 44 46.6	+1.0
	SNR=16						
CHMS	Chumysh	150.31	56	P	PKiKP	19 44 50.7	-0.4
	SNR=84						
KBK	Karagaybulak	150.53	57	P	PKPdf	19 44 45.9	+0.3
	SNR=8.2						
JCJ	Chichijima	150.56	272		PKPbc	19 44 49.4	-1.9
RPSI	Rantau Prapat	150.71	160		PKPab	19 44 59.5	+0.5
PSI	Prapat	150.81	160	PKPbc	PKPbc	19 44 51.2	-1.3
	comp=Z,60nm,0.8s,baz=224,slow=1.6,SNR=6.2						
PSI				PKPab	PKPab	19 44 59.5	-0.1
	comp=Z,187nm,0.8s,baz=187,slow=3.6,SNR=17						
TKM2	Tokmak 2	150.93	56	P	PKPdf	19 44 46.2	0.0
	SNR=16						
TKM2	Tokmak 2	150.93	56	PKIKP	PKiKP	19 44 52.3	-0.3
SEM	Semipalatinsk	150.96	39	*i* PKP	PKPdf	19 44 45.2	-0.8
	baz=39						
SEM	Semipalatinsk	150.96	39	*i* PKIKP	PKPdf	19 44 45.2	-0.8
MYKOM	Kota Tinggi	150.96	170	P	PKPbc	19 44 52.0	-0.6
MYKOM	Kota Tinggi	150.96	170		PKPbc	19 44 51.4	-1.3
KSM	Kuching	150.98	183	P	PKPbc	19 44 52.0	-0.7
KSM	Kuching	150.98	183		PKPbc	19 44 51.4	-1.3
KSM				PKPab	PKPab	19 45 00.8	+0.7
KSM				IAMs_20	IAMs_20	20 49 17.2	
	comp=Z,818nm,21.0s						
ZAA0	Zalesovo Array	150.99	30	PKPdf	PKPdf	19 44 45.2	-0.5
ZAA0				PKPbc	PKPbc	19 44 51.4	-0.1
ZALV	Zalesovo Beam	150.99	30	PKP	PKPdf	19 44 45.4	-0.2
	comp=Z,43nm,0.8s,baz=285,slow=2.4,SNR=110						
ZALV				PKPbc	PKiKP	19 44 51.7	-0.3
	comp=Z,638nm,0.6s,baz=305,slow=3.3,SNR=298						
ZALV	Zalesovo Beam	150.99	30		PKPdf	19 44 44.7	-1.0
ZALV				PKPbc	PKiKP	19 44 51.8	-0.2
GRNR	Gornyy	151.20	322⇓	*i*PKIKP	PKiKP	19 44 52.3	-0.3
GRNR				pmax	pmax		
	comp=N,10.0nm,0.8s						
GRNR				pmax	pmax		
	comp=E,10.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,90nm,0.8s						
GRNR				MLR	MLR		
	comp=E,210nm,12.0s						
KUU	Kurty	151.20	54	*e*PKP	PKPdf	19 44 44.9	-1.6
	baz=54						
KUU	Kurty	151.20	54	*e*PKIKP	PKPdf	19 44 44.8	-1.6
JEW	Eniwo	151.27	304		PKPbc	19 44 52.4	-0.1
ULHL	Ulahol	151.56	57	P	PKPdf	19 44 48.0	+0.7
	SNR=5.6						
SBUM	Sibu	151.79	187	P	PKPbc	19 44 54.0	-0.6
SBUM	Sibu	151.79	187		PKPbc	19 44 54.2	-0.4
TNSS	Tian-Shan	151.86	55	*e*PKP	PKPdf	19 44 46.4	-1.5
	baz=55						
KSH	Kashi	151.87	63	PKPbc	PKPdf	19 44 48.1	+0.4
KSH				sPKP		19 45 03.3	
KSH				PP	PP	19 48 33.3	-2.2
KSH				SS	SS	20 07 53.1	-6.2
KSH				AMB	AMB		
	comp=E,570nm,5.3s						
KSH				LR	LR		
	comp=E,790nm,16.1s						
KSH				LR	LR		
	comp=E,780nm,6.4s						
KSH				LR	LR		
	comp=E,860nm,9.6s						
MDOK	Medeo	151.90	55	*e*PKP	PKPdf	19 44 45.7	-2.0
	baz=55						
MDOK				*e*PKPbc	PKPbc	19 44 54.0	-0.2
	baz=55						
MDOK	Medeo	151.90	55	*e*PKIKP	PKPdf	19 44 45.6	-2.0
JTM	Tenmabayashi	152.00	300		PKPbc	19 44 53.8	-0.4
ARXS	Arharly	152.13	52	*e*PKIKP	PKPbc	19 44 54.1	-0.4
TDK	Taldyqorghan	152.25	50	*e*PKP	PKPdf	19 44 47.4	-0.5
	baz=50						
TDK				*e*PKPbc	PKPbc	19 44 54.2	-0.5
	baz=50						
TDK				*e*PKPab	PKPab	19 45 04.1	-0.7
	baz=50						
TDK	Taldyqorghan	152.25	50	*e*PKIKP	PKPdf	19 44 47.3	-0.6
LHMI	Lhok Sumawe	152.41	154		PKPbc	19 44 55.0	-0.9
BOD	Bodaibo	152.56	354	*e*PKIKP	PKPbc	19 44 53.4	-1.5
BOD				pmax	pmax		
	comp=Z,136nm,1.2s						
NDI	New Delhi	152.58	86	*e*P	PKPdf	19 44 50.0	+1.1
JRMM	Jerantut	152.76	166	P	PKPbc	19 44 55.0	-1.7
TARG	Taragay, Kyrgy	152.81	57		PKPdf	19 44 49.1	-0.3
TARG				PKPbc	PKiKP	19 44 57.0	+0.3
SATY	Saty	152.88	54	*e*PKPbc	PKPbc	19 44 55.8	-0.6
	baz=54						
SATY	Saty	152.88	54	*e*PKIKP	PKPbc	19 44 55.7	-0.6
IPM	Ipoh	153.00	163	P	PKPbc	19 44 56.0	-1.3
IPM	Ipoh	153.00	163	PKPdf	PKPdf	19 44 49.2	-0.8
IPM				PKPbc	PKPbc	19 44 56.0	-1.3
IPM				IAMs_20	IAMs_20	20 49 00.2	
	comp=Z,868nm,22.0s						
MYLDM	Lahad Datu	153.08	202	PKPbc	PKiKP	19 44 58.0	+0.4
SPMM	Sapulut	153.22	197	P	PKPbc	19 44 57.0	-0.8
JYT	Yasato	153.23	290	PKPbc	PKPbc	19 44 56.4	-0.7
UZB	Uzynbulak	153.29	54	*e*PKP	PKPdf	19 44 48.6	-1.1
	baz=54						
UZB				*e*PKPbc	PKPbc	19 44 56.7	-0.5
	baz=54						
UZB	Uzynbulak	153.29	54	*e*PKIKP	PKPdf	19 44 48.5	-1.1
ZEA	Zeya	153.29	335	*e*PKIKP	PKPdf	19 44 48.5	-0.6
ZEA				*e*		20 08 08.7	
ZEA				pmax	pmax		
	comp=E,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.0s						
SHLS	Shalkode	153.59	54	*e*PKP	PKPdf	19 44 49.6	-0.5
	baz=53						
SHLS				*e*PKPbc	PKiKP	19 44 58.5	+0.6
	baz=53						
SHLS				*e*PKPab	PKPab	19 45 11.3	+0.7
	baz=53						
SHLS	Shalkode	153.59	54	*e*PKIKP	PKPdf	19 44 49.5	-0.5
KULM	Kulim	153.68	162	P	PKPbc	19 44 58.0	-0.7
KULM	Kulim	153.68	162		PKPbc	19 44 57.3	-1.5
KULM				PKPab	PKPab	19 45 11.5	+0.2
KULM				IAMs_20	IAMs_20	20 44 02.2	
	comp=Z,874nm,22.0s						
MAKZ	Makanchi	153.77	44	PKIKP	PKPbc	19 44 56.6	-1.4
MAKZ	Makanchi	153.77	44	PKPdf	PKPdf	19 44 49.4	-0.6
MAKZ				PKPbc	PKPbc	19 44 57.7	-0.3
MAKZ				PKPab	pPKPbc	19 45 12.0	-0.7
MK31	Makanchi Array	153.96	44	*i* PKIKP	PKPbc	19 44 58.0	-0.4
MKAR	Makanchi Array	153.96	44	PKP	PKPdf	19 44 49.8	-0.6
	comp=Z,11nm,0.8s,baz=318,slow=1.2,SNR=84						
MKAR				PKPbc	PKPbc	19 44 57.9	-0.5
	comp=Z,51nm,0.8s,baz=317,slow=2.1,SNR=96						
MKAR				PKPab	pPKPbc	19 45 12.7	-0.4
	comp=Z,82nm,0.8s,baz=282,slow=3.6,SNR=21						
MKAR	Makanchi Array	153.96	44	PKIKP	PKPdf	19 44 49.6	-0.8
MKAR						19 44 58.4	
MKAR	Makanchi Array	153.96	44	PKPdf	PKPdf	19 44 49.6	-0.8
MKAR				PKPbc	PKPbc	19 44 58.4	0.0
MKAR				PKPab	pPKPbc	19 45 13.0	-0.1
KLR	Kul'dur	154.54	323	PKP	PKPdf	19 44 50.6	-0.5
	comp=Z,20nm,1.0s,baz=348,slow=3.7,SNR=30						
KLR				PKPbc	PKPbc	19 44 58.8	-0.7
	comp=Z,16nm,0.9s,baz=358,slow=3.9,SNR=13						
KLR				PKPab	pPKPbc	19 45 14.3	+0.1
	comp=Z,26nm,0.9s,baz=60,slow=4.5,SNR=11						
KKM	Kota Kinabalu	154.57	198	PKPbc	PKPbc	19 45 00.0	-0.7
KKM				IAMs_20	IAMs_20	20 55 21.0	
	comp=Z,587nm,22.0s						
MJAR	Matsushiro Arr	154.81	291	PKP	PKPdf	19 44 51.3	-0.5
	comp=Z,11nm,1.0s,baz=132,slow=1.6,SNR=19						
MJAR				PKPbc	PKPbc	19 44 56.9	-3.7
	comp=Z,6.1nm,1.1s,baz=109,slow=1.3,SNR=4.7						
MJAR				PKPab	PKPab	19 45 16.3	+0.5
	comp=Z,52nm,0.8s,baz=108,slow=1.3,SNR=35						
MJAR	Matsushiro Arr	154.81	291	PKPdf	PKPdf	19 44 50.6	-1.2
MJAR				PKPab	PKPab	19 45 15.8	0.0
MAJO	Matsushiro	154.81	291	PKIKP	PKPdf	19 44 50.9	-1.0
MAJO	Matsushiro	154.81	291	PKPdf	PKPdf	19 44 50.9	-1.0
MAJO					PKPab	19 45 16.6	+0.8
MAT	Matsushiro	154.81	291	PKP	PKPdf	19 44 50.8	-1.1
ZSN	Zaisan	155.12	41	*e*PKP	PKPdf	19 44 50.9	-1.0
	baz=41						
ZSN				*e*PKPab	pPKPbc	19 45 15.8	+0.3
	baz=41						
ZSN	Zaisan	155.12	41	*e*PKIKP	PKPdf	19 44 50.9	-1.0
INU	Inuyama	155.86	289		PKPdf	19 44 52.6	-0.7
SRIT	Nakonsritamara	156.48	157		PKPab	19 45 23.3	0.0
USA0B	Ussuriysk Arra	157.19	313	PKIKP	PKPdf	19 44 54.5	-0.2
USA0B	Ussuriysk Arra	157.19	313	PKPdf	PKPdf	19 44 54.5	-0.2
USA0B				PKPab	PKPab	19 45 26.6	+0.9
USRK	Ussuriysk Ar.	157.19	313	PKP	PKPdf	19 44 54.4	-0.3
	comp=Z,3.2nm,0.7s,baz=214,slow=4.5,SNR=6.6						
USRK				PKPab	PKPab	19 45 26.6	+0.8
	comp=Z,15nm,0.8s,baz=82,slow=2.0,SNR=10						
USRK	Ussuriysk Ar.	157.19	313	PKIKP	PKPdf	19 44 53.8	-0.9
USRK	Ussuriysk Ar.	157.19	313	PKPdf	PKPdf	19 44 53.8	-0.9
USRK				PKPab	PKPab	19 45 25.6	-0.1
PYUN	Piuthan	157.43	90	*e*P	PKPdf	19 44 55.4	-0.4
	comp=Z,227nm,1.0s						
DANN	Dangsing	158.14	90	*e*P	PKPdf	19 44 56.8	0.0
	comp=Z,321nm,0.7s						
CIT	Chita	158.32	352	*e*PKIKP	PKPdf	19 44 48.6	-7.3
CIT				*e*		19 49 10.1	
CIT				pmax	pmax		
	comp=Z,172nm,1.7s						
MDJ	Mudanjiang	158.45	316	PKP	PKPdf	19 44 55.1	-1.2
MDJ				SS	SS	20 09 11.4	+2.3
MDJ				AMB	AMB		

	comp=Z,430nm,7.1s						
MDJ				LR	LR		
	comp=Z,250nm,7.0s						
MDJ				LR	LR		
	comp=Z,360nm,8.1s						
MDJ				LR	LR		
	comp=Z,850nm,19.8s						
MDJ	**Mudanjiang**	**158.45**	**316**		**PKPdf**	**19 44 55.9**	**-0.4**
MDJ					**PKPab**	**19 45 31.4**	**+0.2**
MDJ				IAMs_20	IAMs_20	20 53 43.4	
	comp=Z,499nm,22.0s						
TLY	**Talaya**	**158.62**	**9**	PKPab	**PKPab**	**19 45 32.5**	**+0.9**
	comp=Z,33nm,0.9s,baz=266,slow=1.5,SNR=8.0						
TLY	**Talaya**	**158.62**	**9**	*e*PKIKP	**PKPdf**	**19 44 55.6**	**-0.7**
TLY				*e*		19 45 32.4	
TLY				*e*		19 49 14.8	
TLY				pmax	pmax		
	comp=Z,86nm,2.1s						
TLY				MLR	MLR		
	comp=Z,2µm,21.0s						
TLY	**Talaya**	**158.62**	**9**	PKPdf	**PKPdf**	**19 44 56.4**	**+0.1**
TLY				PKPab	**PKPab**	**19 45 32.1**	**+0.5**
TLY				IAMs_20	IAMs_20	21 00 07.5	
	comp=Z,752nm,20.0s						
WMQ	**Urumqi**	**158.75**	**46**	PKP	**PKPdf**	**19 44 56.9**	**+0.1**
WMQ				sPKP		19 45 16.0	
WMQ				PKPab	**PKPab**	**19 45 34.0**	**+1.4**
WMQ				PP	**PP**	**19 49 12.6**	**-0.7**
WMQ				AMB	AMB		
	comp=Z,340nm,7.5s						
WMQ				LR	LR		
	comp=Z,710nm,27.5s						
WMQ				LR	LR		
	comp=Z,900nm,28.9s						
WMQ				LR	LR		
	comp=Z,910nm,29.0s						
GKN	**Gorkha**	**158.82**	**91**	*e*P	**PKPdf**	**19 44 56.9**	**-0.6**
	comp=Z,226nm,0.8s						
DMN	**Daman**	**159.14**	**92**	*e*P	**PKPdf**	**19 44 57.5**	**-0.5**
	comp=Z,269nm,0.9s						
KKN	**Kakani**	**159.33**	**92**	*e*P	**PKPdf**	**19 44 57.6**	**-0.5**
	comp=Z,169nm,0.6s						
PKIN	**Phulchoki**	**159.38**	**93**	*e*P	**PKPdf**	**19 44 57.4**	**-0.9**
	comp=Z,108nm,0.8s						
PKI	**Pulchoki**	**159.39**	**93**	*e*P	**PKPdf**	**19 44 57.5**	**-0.9**
	comp=Z,325nm,1.3s						
HIA	**Hailar**	**159.59**	**339**	PKP2	**PKPab**	**19 45 35.8**	**-0.1**
HIA				MLR	MLR		
	comp=Z,600nm,20.0s						
HIA	**Hailar**	**159.59**	**339**		**PKPab**	**19 45 35.8**	**-0.1**
HIA	**Hailar**	**159.59**	**339**	IAMs_20	IAMs_20	21 10 22.5	
	comp=Z,603nm,20.0s						
ZAK	**Zakamensk**	**159.84**	**10**	*e*PKIKP	**PKPdf**	**19 44 57.2**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GUN	**Gumba**	**159.88**	**92**	*e*P	**PKPdf**	**19 44 58.3**	**-0.6**
	comp=Z,160nm,0.8s						
JIRN	**Jiri**	**160.08**	**93**	*e*P	**PKPdf**	**19 44 58.6**	**-0.6**
	comp=Z,261nm,1.3s						
CN2	**Changchun**	**161.33**	**319**	*e*PKP	**PKPdf**	**19 44 57.5**	**-2.0**
CN2				PP	**PP**	**19 49 26.6**	**-0.4**
CN2				SS	SS	20 09 39.4	+0.1
CN2				AMB	AMB		
	comp=Z,200nm,8.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
CN2				LR	LR		
	comp=Z,600nm,18.0s						
CN2				LR	LR		
	comp=Z,600nm,25.0s						
SONM	**Songino Array**	**162.71**	**5**	PKP	**PKPdf**	**19 44 60.0**	**-1.0**
	comp=Z,9.0nm,0.9s,baz=264,slow=0.5,SNR=32						
SONM				PKPab	**PKPab**	**19 45 50.0**	**+0.4**
	comp=Z,20nm,0.9s,baz=326,slow=5.3,SNR=16						
SONM				PP	**PP**	**19 49 35.4**	**+1.7**
	comp=Z,14nm,1.0s,baz=326,slow=3.1,SNR=12						
SONM	**Songino Array**	**162.71**	**5**		**PKPdf**	**19 45 00.3**	**-0.7**
SONM				PKPab	**PKPab**	**19 45 50.1**	**+0.4**
KSRS	**Korea Array**	**162.72**	**298**	PKP	**PKPdf**	**19 45 00.5**	**-0.6**
	comp=Z,9.5nm,1.1s,baz=105,slow=0.6,SNR=27						
KSRS				PKPab	**PKPab**	**19 45 50.9**	**+0.8**
	comp=Z,11nm,1.0s,baz=63,slow=4.5,SNR=14						
ULN	**Ulaanbaatar**	**162.73**	**4**	PKP2	**PKPab**	**19 45 50.9**	**+1.1**
ULN						20 45 00.4	
ULN	**Ulaanbaatar**	**162.73**	**4**		**PKPdf**	**19 45 00.4**	**-0.7**
ULN				PKPab	**PKPab**	**19 45 50.9**	**+1.1**
KS19	**Wonju Array Si**	**162.75**	**299**		**PKPdf**	**19 45 00.2**	**-1.0**
KSAR	**Wonju Array Be**	**162.75**	**298**	PKP2	**PKPab**	**19 45 50.7**	**+0.5**
KSAR						20 44 59.8	
KSAR	**Wonju Array Be**	**162.75**	**298**		**PKPdf**	**19 44 59.8**	**-1.4**
KSAR				PKPab	**PKPab**	**19 45 50.7**	**+0.5**
SHL	**Shillong**	**164.30**	**105**	PKP2	**PKPab**	**19 45 57.2**	**-0.4**
SHL						20 45 02.1	
SHL	**Shillong**	**164.30**	**105**		**PKPdf**	**19 45 02.1**	**-1.2**
SHL				PKPab	**PKPab**	**19 45 57.2**	**-0.4**
LSA	**Lhasa**	**164.75**	**89**	PKP	**PKPdf**	**19 45 03.8**	**-0.1**
LSA				LR	LR		
	comp=Z,460nm,14.2s						
LSA				LR	LR		
	comp=Z,2µm,21.4s						
LSA				LR	LR		
	comp=Z,840nm,22.8s						
LSA	**Lhasa**	**164.75**	**89**	*i* PKPdf	**PKPdf**	**19 45 04.2**	**+0.3**
	SNR=16						
LSA	**Lhasa**	**164.75**	**89**	PKP2	**PKPab**	**19 46 00.2**	**+0.3**
LSA						20 45 03.4	
LSA	**Lhasa**	**164.75**	**89**		**PKPdf**	**19 45 03.4**	**-0.5**
LSA				PKPab	**PKPab**	**19 46 00.2**	**+0.3**
CM31	**Chiang Mai Arr**	**164.97**	**141**	PKPdf	**PKPdf**	**19 45 03.6**	**-0.2**
CM31					**PKPab**	**19 45 59.5**	**-0.8**
CMAR	**Chiang Mai Arr**	**164.97**	**141**	PKP	**PKPdf**	**19 45 03.5**	**-0.3**
	comp=Z,6.8nm,0.9s,baz=255,slow=2.4,SNR=45						
CMAR				PKPab	**PKPab**	**19 45 59.6**	**-0.7**
	comp=Z,53nm,0.9s,baz=232,slow=6.0,SNR=71						
CMAR				PP	**PP**	**19 49 48.1**	**+1.9**
	comp=Z,6.0nm,1.0s,baz=224,slow=5.8,SNR=4.3						
CMAR	**Chiang Mai Arr**	**164.97**	**141**		**PKPdf**	**19 45 03.2**	**-0.5**
CMAR					**PKPab**	**19 45 59.5**	**-0.8**
DL2	**Dalian**	**166.57**	**311**	PKP	**PKPdf**	**19 45 02.5**	**-2.0**
DL2				PKPab	**PKPab**	**19 46 03.9**	**-3.0**
DL2				PP	**PP**	**19 49 53.8**	**-1.0**
DL2				SS	SS	20 10 34.0	+0.3
DL2				AMB	AMB		
	comp=Z,250nm,6.6s						
DL2				LR	LR		
	comp=Z,350nm,18.4s						
DL2				LR	LR		
	comp=Z,340nm,23.0s						
DL2				LR	LR		
	comp=Z,590nm,19.8s						
QIZ	**Qiongzhong**	**168.42**	**185**	PKP	**PKPdf**	**19 45 05.4**	**-1.0**
QIZ				PP	**PP**	**19 50 04.0**	**+0.9**
QIZ				SS	SS	20 10 50.1	-0.2
QIZ				LR	LR		
	comp=Z,650nm,15.7s						
QIZ				LR	LR		
	comp=Z,570nm,20.1s						
QIZ				LR	LR		
	comp=Z,850nm,21.1s						
GTA	**Gaotai**	**168.58**	**37**	⇑PKP	**PKPdf**	**19 45 06.4**	**+0.3**
GTA				pPKP	pPKPdf	19 45 22.1	+1.2
GTA				PKPab	**PKPab**	**19 46 17.0**	**+1.1**
GTA				PP	**PP**	**19 50 03.4**	**-1.5**
GTA				SS	SS	20 10 56.9	+3.4
GTA				AMB	AMB		
	comp=Z,490nm,6.2s						
GTA				LR	LR		
	comp=Z,440nm,19.6s						
GTA				LR	LR		
	comp=Z,800nm,21.1s						
GTA				LR	LR		
	comp=Z,770nm,21.8s						
BJI	**Beijing**	**168.82**	**329**	PKP	**PKPdf**	**19 45 04.8**	**-1.2**
BJI				PP	**PP**	**19 50 09.3**	**+3.7**
BJI				SKKS		19 56 48.4	
BJI				SS	**SS**	**20 10 57.9**	**+2.8**
BJI				AMB	AMB		
	comp=Z,620nm,8.8s						
BJI				LR	LR		
	comp=Z,430nm,22.3s						
BJI				LR	LR		
	comp=Z,640nm,22.7s						
BJI				LR	LR		
	comp=Z,930nm,23.5s						
BJT	**Baijiatuau**	**168.84**	**329**	PKIKP	**PKPdf**	**19 45 05.2**	**-0.8**
BJT						19 46 16.2	
BJT	**Baijiatuau**	**168.84**	**329**		**PKPdf**	**19 45 05.2**	**-0.8**
BJT					**PKPab**	**19 46 16.2**	**-0.6**
SSE	**Sheshan**	**169.29**	**276**	PKP	**PKPdf**	**19 45 06.0**	**-0.6**
SSE				PP	**PP**	**19 50 09.8**	**+0.3**
SSE				LR	LR		
	comp=Z,190nm,19.6s						
SSE				LR	LR		
	comp=Z,220nm,19.2s						
HHC	**Hu-ho-hao-te**	**169.54**	**348**	*e*PKP	**PKPdf**	**19 45 06.6**	**0.0**
HHC				PP	**PP**	**19 50 08.1**	**-0.9**
HHC				SKKS		19 56 56.6	
HHC				SS	**SS**	**20 11 01.6**	**-0.2**
HHC				AMB	AMB		
	comp=Z,580nm,11.0s						
HHC				LR	LR		
	comp=Z,840nm,23.5s						
HHC				LR	LR		
	comp=Z,570nm,20.7s						
HHC				LR	LR		
	comp=Z,2µm,23.3s						
QZH	**Quanzhou**	**169.61**	**239**	*i* PKP	**PKPdf**	**19 45 07.3**	**+0.3**
QZH				LR	LR		
	comp=Z,650nm,25.6s						
SLVN	**Son La**	**169.78**	**154**	PKPdf	**PKPdf**	**19 45 07.2**	**-0.1**
SLVN				PKPab	**PKPab**	**19 46 21.1**	**-0.4**
BTO	**Baotou**	**169.98**	**354**	*e*PKP	**PKPdf**	**19 45 06.5**	**-0.4**
BTO				LR	LR		
	comp=Z,1µm,14.9s						
BTO				LR	LR		
	comp=Z,1µm,17.6s						
TIA	**Tai'an**	**171.05**	**311**	*e*PKP	**PKPdf**	**19 45 06.8**	**-0.7**
TIA				PP	**PP**	**19 50 15.0**	**-2.5**
TIA				SS	SS	20 11 18.3	-0.2
TIA				AMB	AMB		
	comp=Z,370nm,6.9s						
TIA				LR	LR		
	comp=Z,410nm,19.6s						
TIA				LR	LR		
	comp=Z,440nm,24.5s						
TIA				LR	LR		
	comp=Z,810nm,22.1s						
NJ2	**Nanjing**	**171.24**	**282**	*e*PKP	**PKPdf**	**19 45 06.6**	**-1.1**
NJ2				PP	**PP**	**19 50 16.6**	**-2.6**
NJ2				SKKS		19 56 59.3	
NJ2				SS	**SS**	**20 11 20.0**	**-1.7**
NJ2				AMB	AMB		
	comp=Z,340nm,3.9s						
NJ2				LR	LR		
	comp=Z,560nm,19.4s						
NJ2				LR	LR		
	comp=Z,510nm,24.2s						
NJ2				LR	LR		
	comp=Z,650nm,23.0s						
TIY	**Taiyuan**	**172.29**	**338**	*e*PKP	**PKPdf**	**19 45 05.8**	**-2.3**
TIY				PKPab	**PKPab**	**19 46 31.8**	**-0.4**
TIY				PP	**PP**	**19 50 21.9**	**-1.0**
TIY				SKKS		19 57 07.3	
TIY				AMB	AMB		
	comp=Z,330nm,5.0s						
TIY				LR	LR		
	comp=Z,170nm,10.0s						
TIY				LR	LR		
	comp=Z,190nm,9.4s						
TIY				LR	LR		
	comp=Z,500nm,17.3s						
KMI	**Kunming**	**172.37**	**134**	⇑PKP	**PKPdf**	**19 45 08.6**	**-0.1**
KMI				pPKP	pPKPdf	19 45 23.9	+0.4
LZH	**Lanzhou**	**173.18**	**36**	*e*PKP	**PKPdf**	**19 45 08.3**	**-0.3**
LZH				pPKP	pPKPdf	19 45 16.9	-6.6
LZH				sPKP		19 45 23.9	
LZH				PKPab	**PKPab**	**19 46 37.3**	**+0.9**
LZH				PP	**PP**	**19 50 24.0**	**-3.8**
LZH				AMB	AMB		
	comp=Z,900nm,5.2s						
LZH				LR	LR		
	comp=Z,450nm,17.1s						
LZH				LR	LR		
	comp=Z,930nm,16.5s						
LZH				LR	LR		
	comp=Z,820nm,19.5s						
WHN	**Wuhan**	**175.17**	**271**	⇑PKP	**PKPdf**	**19 45 09.3**	**+0.1**
WHN				PP	**PP**	**19 50 39.8**	**+1.3**
WHN				LR	LR		
	comp=Z,3µm,30.9s						
GYA	**Guiyang**	**175.47**	**156**	⇓*i*PKP	**PKPdf**	**19 45 09.4**	**-0.2**
GYA				pPKP	pPKPdf	19 45 22.0	-2.4
GYA				PKPab	**PKPab**	**19 46 46.0**	**-0.7**
GYA				SKKS		19 57 24.8	
GYA				SS	**SS**	**20 11 57.6**	**-2.5**
GYA				AMB	AMB		
	comp=Z,690nm,13.8s						
GYA				LR	LR		
	comp=Z,520nm,22.5s						
CD2	**Chengdu**	**175.70**	**85**	PKP	**PKPdf**	**19 45 09.6**	**+0.1**
CD2				PKPab	**PKPab**	**19 46 48.3**	**+0.4**
CD2				PP	**PP**	**19 50 42.6**	**+1.5**
CD2				SKKS		19 57 27.3	
CD2				SS	**SS**	**20 12 02.6**	**-2.6**
CD2				AMB	AMB		
	comp=Z,1µm,8.4s						
CD2				LR	LR		
	comp=Z,60nm,19.7s						
CD2				LR	LR		
	comp=Z,500nm,16.5s						
CD2				LR	LR		
	comp=Z,650nm,21.6s						
XAN	**Xi'an**	**176.58**	**358**	PKP	**PKPdf**	**19 45 10.0**	**+0.4**
XAN				PKPab	**PKPab**	**19 46 51.4**	**+0.1**
XAN				PP	**PP**	**19 50 42.8**	**-0.5**
XAN				SS	SS	20 12 04.3	-5.6
XAN				AMB	AMB		
	comp=Z,1µm,7.0s						
XAN				LR	LR		
	comp=Z,620nm,22.0s						
XAN				LR	LR		
	comp=Z,570nm,19.2s						
XAN				LR	LR		
	comp=Z,1µm,20.6s						
ENH	**Enshi**	**179.27**	**242**		**PKPdf**	**19 45 09.1**	**-0.9**

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*DRS **19** 19:26:40.7±0.0, 41°.80N×47°.69E, h14^{km}, ML2.5/5*

ISC 19 19:26:40.4±1.2**, 41°.84N**±0°.03×**47°.77E**±0°.04**, h9**^{km}±10^{km}**,**
n16, σ0^{s}94/31**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URKR	**Urkarakh**	**0.34**	**343**	*e*Pg	**Pg**	**19 26 47.6**	**+0.4**
	68nm,0.2s						
URKR				*i* Sg	**Sg**	**19 26 52.5**	**+0.7**
	394nm,0.2s						
KSMR	**Kasumkent**	**0.36**	**131**	*e*Pg	**Pb**	**19 26 48.3**	**-0.8**
	94nm,0.1s						
KSMR				*i* Sg	**Sb**	**19 26 54.2**	**-0.6**
	1µm,0.2s						
DRN	**Derbent**	**0.46**	**65**	*e*Pg	**Pb**	**19 26 50.9**	**+0.1**
	54nm,0.2s						
DRN				*e*Sg	**Sb**	**19 26 58.6**	**+0.9**
	173nm,0.2s						
KMKR	**Kumukh**	**0.58**	**301**	*e*Pg	**Pg**	**19 26 51.4**	**-0.3**
	48nm,0.2s						
KMKR				*i* Sg	**Sg**	**19 26 59.5**	**+0.2**
	270nm,0.2s						
SGKR	**Sergokala**	**0.62**	**353**	*e*Pg	**Pb**	**19 26 53.0**	**-0.6**
	30nm,0.2s						
SGKR				*e*Sg	**Sb**	**19 27 02.0**	**-0.5**
	26nm,0.2s						
GNBR	**Gunib**	**0.81**	**313**	*e*Pg	**Pg**	**19 26 55.8**	**-0.2**
	20nm,0.1s						
GNBR				*e*Sg	**Sg**	**19 27 06.9**	**+0.2**
	4.0nm,0.2s						
ARKR	**Arakani**	**0.95**	**323**	*e*Pg	**Pg**	**19 26 58.5**	**-0.3**
	14nm,0.3s						
ARKR				*i* Sg	**Sg**	**19 27 11.8**	**+0.6**
	68nm,0.5s						
XNZR	**Khunzakh**	**1.05**	**312**	*e*Pg	**Pg**	**19 27 00.3**	**-0.4**
	16nm,0.3s						
XNZR				*e*Sg	**Sg**	**19 27 14.8**	**+0.4**
	93nm,0.4s						
BUJR	**Buynaksk**	**1.10**	**334**	*e*Pg	**Pn**	**19 27 02.2**	**+0.1**
	26nm,0.2s						
BUJR				*e*Sg	**Sn**	**19 27 17.7**	**+0.3**
	28nm,0.3s						
LGD	**Lagodekhi**	**1.14**	**270**	P	**Pg**	**19 27 01.0**	**-1.3**
LGD				S	**Sg**	**19 27 13.9**	**-3.2**
KRNR	**Karanay**	**1.18**	**327**	*e*Pg	**Pg**	**19 27 02.3**	**-0.8**
	8.0nm,0.4s						
KRNR				*e*Sg	**Sg**	**19 27 18.1**	**-0.2**
	22nm,0.4s						
DDFL	**Dedoflistskaro**	**1.30**	**253**	P	**Pg**	**19 27 07.6**	**+2.3**
DDFL				S	Sn	19 27 32.2	+10
DBC	**Dubki**	**1.37**	**330**	*e*Pg	**Pn**	**19 27 05.7**	**-0.2**
	9.0nm,0.3s						
DBC				*e*Sg	**Sn**	**19 27 24.7**	**+0.6**
	14nm,0.2s						
BTLR	**Botlikh**	**1.41**	**306**	*e*Pg	**Pb**	**19 27 07.0**	**0.0**
	4.0nm,0.2s						
BTLR				*e*Sg	**Sg**	**19 27 26.5**	**+0.6**
	112nm,0.4s						
DLMR	**Dylym**	**1.49**	**326**	*e*Pg	**Pb**	**19 27 08.1**	**-0.2**
	27nm,0.2s						
DLMR				*e*Sg	**Sg**	**19 27 28.4**	**+0.1**
	109nm,0.4s						
DGRG	**David-gareji**	**1.83**	**259**	P	**Pb**	**19 27 14.6**	**+0.3**
DGRG				S	**Sg**	**19 27 40.3**	**+0.9**

IDC 19 19:52:41.9±1.9**, 5°.39N**×**122°.98E, h0**^{km}**, mb3.8**/4**,**
mb1 4.0/4**, mb1mx3.2**/50**, mbtmp3.8**/4**, MS4.7**/2**, Ms1 4.6**/2**,**
ms1mx3.4/43**, Error ellipse: s-maj=303.4km**
s-min=20.9km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**10.82**	**197**	LR	LR	19 58 27.5	
	comp=Z,71nm,21.3s,baz=259,slow=32						
WRA	**Warramunga Arr**	**27.54**	**156**	P	P	19 58 30.9	+0.2
	1.4nm,0.3s,baz=334,slow=9.8,SNR=52						
ASAR	**Alice Springs**	**30.78**	**160**	P	P	19 58 59.2	-0.3
	0.4nm,0.5s,baz=338,slow=7.8,SNR=6.1						
STKA	**Stephens Creek**	**41.09**	**156**	LR	LR	20 19 28.8	
	comp=Z,855nm,21.5s,baz=154,slow=39						
MKAR	**Makanchi Array**	**54.09**	**326**	P	P	20 02 09.2	+0.7
	0.3nm,0.3s,baz=123,slow=7.4,SNR=17						
KURBB	**Kurchatov Arra**	**58.36**	**328**	P	P	20 02 37.9	-1.0
	0.3nm,0.5s,baz=131,slow=7.1,SNR=5.3						
KIRV	**Kirov**	**76.88**	**329**	LR	LR	20 41 32.0	
	comp=Z,492nm,18.8s,baz=296,slow=38						

IDC 19 20:09:06.9±1.5**, 0°.74S**×**130°.91E, h0**^{km}**, mb3.1**/2**,**
mb1 3.3/3**, mb1mx3.1**/54**, mbtmp3.1**/3**, ML3.0**/1**, Error**
ellipse: s-maj=33.9km s-min=9.7km az=18.0, Irian Jaya
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**0.38**	**110**	Pg	Pg	20 09 14.5	+0.4
	65nm,0.3s,baz=143,slow=8.0,SNR=261						
SIJI				Lg	Lg	20 09 18.9	
	142nm,0.3s,baz=252,slow=23,SNR=37						
WRA	**Warramunga Arr**	**19.38**	**170**	P	P	20 13 33.2	-1.2
	0.1nm,0.3s,baz=350,slow=11,SNR=1.8						
ASAR	**Alice Springs**	**22.97**	**173**	P	P	20 14 13.7	+0.5
	0.4nm,0.7s,baz=355,slow=11,SNR=7.0						
MKAR	**Makanchi Array**	**63.59**	**325**	P	P	20 19 39.2	-0.4
	0.2nm,0.7s,baz=113,slow=7.8,SNR=4.1						

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*TUL **19** 20:12:29.9±1.3, 36°.13N±0°.02×97°.06W±0°.02, h7^{km}±6^{km},*
ML2.5, ML2.3/42(NEIC), Error ellipse: s-maj=2.4km
s-min=2.1km az=52.0

NEIC 19 20:12:29.9±0.6**, 36°.13N**±0°.01×**97°.08W**±0°.01**, h7**^{km}±6^{km}**,**
Error ellipse: s-maj=2.2km s-min=1.2km az=144.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK033	**Mehan**	**0.14**	**129**	Pg	Pg	20 12 33.1	+0.2
OK033				IAML		20 12 35.5	
	2µm,0.1s						
OK031	**S. Brethren Rd**	**0.26**	**133**	Pg	Pg	20 12 35.2	+0.1
OK031				IAML		20 12 39.1	
	907nm,0.2s						
OK031				IAML		20 12 39.2	
	488nm,2.5s						
QUOK	**Quay**	**0.30**	**83**	Pg	Pg	20 12 36.1	+0.2
QUOK				IAML		20 12 42.3	
	comp=E,330nm,0.2s						
OK030	**Cody Creek RV**	**0.31**	**131**	Pg	Pg	20 12 36.2	+0.2
OK030				IAML		20 12 40.7	
	comp=E,353nm,0.2s						
OK030				IAML		20 12 40.7	
	comp=E,825nm,0.2s						
OK034	**N. Norfolk Rd.**	**0.32**	**113**	Pg	Pg	20 12 36.3	+0.2
OK025	**Westminster Rd**	**0.59**	**201**		Pg	20 12 41.3	0.0
OK025				IAML		20 12 50.2	
	comp=E,115nm,0.1s						
BLOK	**Blackwell**	**0.64**	**350**	Pg	Pg	20 12 42.3	+0.1
BLOK				IAML		20 12 51.6	
	comp=N,264nm,0.2s						
BLOK				IAML		20 12 52.0	
	comp=E,254nm,0.2s						
BCOK	**Bluff Creek, N**	**0.64**	**222**	Pg	Pg	20 12 42.2	-0.2
BCOK				IAML		20 12 51.4	
	comp=N,216nm,0.2s						
OKCFA	**Oklahoma City**	**0.78**	**203**	Pg	Pg	20 12 44.5	-0.4
OKCFA				IAML		20 12 55.6	
	comp=E,85nm,0.2s						
CROK	**Carrier**	**0.82**	**297**	Pg	Pg	20 12 45.7	0.0
CROK				IAML		20 12 59.5	
	comp=N,100nm,0.3s						
CROK				IAML		20 13 09.8	
	comp=E,77nm,0.3s						
T35A	**Sooner Cattle**	**0.90**	**30**	Pg	Pg	20 12 46.9	-0.4
FNO	**Franklin**	**0.91**	**197**	Pg	Pg	20 12 46.8	-0.7
FNO				IAML		20 12 59.8	
	comp=E,91nm,0.1s						
FNO				IAML		20 13 02.7	
	comp=N,77nm,0.1s						
GC02	**Grant County #**	**0.95**	**319**	Pg	Pg	20 12 48.1	-0.2
W35A	**Tecumseh**	**0.99**	**170**	Pg	Pg	20 12 47.9	-1.1
W35A				IAML		20 13 04.3	
	comp=E,76nm,0.5s						
TUL1	**Leonard**	**1.06**	**102**	Pg	Pg	20 12 49.1	-1.3
TUL1				IAML		20 13 05.1	
	comp=E,50nm,0.2s						
KAN14	**Manchester OK**	**1.09**	**319**	Pg	Pg	20 12 50.4	-0.4
OK032	**Salt Plains WL**	**1.13**	**307**	Pg	Pg	20 12 51.2	-0.5
KAN06	**Argonia West S**	**1.28**	**331**	Pn	Pn	20 12 54.0	-0.2
KAN08	**Anthony NE Sta**	**1.31**	**327**		Pn	20 12 54.1	-0.6
KAN08				IAML		20 13 12.7	
	comp=E,99nm,0.1s						
U32A	**Winter Ranch,**	**1.57**	**280**	Pn	Pn	20 12 58.8	+0.4
X34A	**Smith Ranch, M**	**1.65**	**202**	Pn	Pn	20 12 59.7	+0.3
WMOK	**Wichita Mounta**	**1.97**	**225**	Pn	Pn	20 13 04.6	+0.8
X37A	**Clayton**	**2.08**	**137**	Pn	Pn	20 13 05.9	+0.6
U38A	**Gravette**	**2.19**	**81**	Pn	Pn	20 13 06.8	-0.1
HHAR	**Hobbs**	**2.54**	**86**	Pn	Pn	20 13 11.7	+0.1

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*RSNC **19** 20:19:07.6±1.1, 6°.79N×73°.15W, h137^{km}±4^{km}, ML3.3,*
Mw3.6

*IDC **19** 20:19:09.8±5.9, 6°.82N×73°.82W, h176^{km}±24^{km}, mb2.9/1,*
mb1 3.3/2, mb1mx2.8/42, mbtmp3.5/2, MS3.8/1, Ms1 3.8/1,
ms1mx3.1/14, Error ellipse: s-maj=262.1km s-min=33.7km
az=93.0

ISC 19 20:19:05.2±1.0**, 6°.85N**±0°.03×**73°.10W**±0°.04**, h152**^{km}±6^{km}**,**
n28, σ1^{s}18/50**, 3C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.27**	**198**	⇑*e*P	**Pn**	**20 19 26.4**	**+0.3**
BARC				*e*S	**Sn**	**20 19 40.8**	**-1.3**
BARC				*i*		20 19 42.0	
	comp=Z,611nm,0.2s						
PAMC	**Pamplona, Colo**	**0.63**	**39**	*e*P	**Pn**	**20 19 29.3**	**+1.3**
PAMC				*e*S	**Sn**	**20 19 46.0**	**+0.6**
PAMC				*i*		20 19 48.8	
	comp=Z,331nm,0.6s						
BRRC	**Barranca, Sant**	**0.66**	**293**	⇑*i*P	**Pn**	**20 19 28.4**	**+0.7**
BRRC				*e*S	**Sn**	**20 19 43.9**	**-0.8**
BRRC				*i*		20 19 49.5	
	comp=Z,304nm,0.1s						
RUSC	**La Rusia**	**0.95**	**179**	*e*P	**Pn**	**20 19 30.3**	**0.0**
RUSC				*e*S	**Sn**	**20 19 48.1**	**-1.3**
RUSC				*i*		20 19 49.4	
	comp=Z,275nm,0.2s						
TAMC	**Tame, Arauca**	**1.36**	**107**	⇓*i*P	**Pn**	**20 19 34.9**	**+1.3**

TAMC				*e*S	**Sn**	**20 19 55.5**	**+0.3**
TAMC				*i*		20 19 56.8	
	comp=Z,139nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.38**	**257**⇑	*e*P	**Pn**	**20 19 33.0**	**-0.7**
PTBC				*e*S	**Sn**	**20 19 53.3**	**-2.2**
PTBC				*i*		20 19 56.6	
	comp=Z,236nm,0.1s						
OCAC	**Ocana**	**1.40**	**351**	*e*P	**Pn**	**20 19 34.8**	**+0.8**
OCAC				*e*S	**Sn**	**20 19 56.4**	**+0.2**
OCAC				*i*		20 20 02.2	
	comp=Z,511nm,0.2s						
SPBC	**San Pablo de B**	**1.53**	**219**	*e*P	**Pn**	**20 19 35.4**	**0.0**
SPBC				*e*S	**Sn**	**20 19 56.6**	**-1.8**
SPBC				*i*		20 19 59.1	
	comp=Z,264nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.86**	**290**	*e*P	**Pn**	**20 19 39.4**	**+0.6**
ZARC				*e*S	**Sn**	**20 20 05.1**	**+0.5**
ZARC				*i*		20 20 07.2	
	comp=Z,191nm,0.1s						
SMLC	**San Martn de**	**2.17**	**334**	*e*P	**Pn**	**20 19 43.3**	**+1.0**
SMLC				*e*S	**Sn**	**20 20 11.7**	**+0.6**
SMLC				*i*		20 20 21.1	
	comp=Z,219nm,0.2s						
NORC	**Norcasia**	**2.17**	**234**	*e*P	**Pn**	**20 19 42.5**	**-0.1**
NORC				*e*S	**Sn**	**20 20 11.1**	**-0.2**
NORC				*i*		20 20 12.0	
	comp=Z,144nm,0.2s						
CHIC	**Chingaza**	**2.29**	**196**	*e*P	**Pn**	**20 19 44.7**	**+0.4**
CHIC				*e*S	**Sn**	**20 20 13.3**	**-1.1**
CHIC				*i*		20 20 17.8	
	comp=Z,64nm,0.3s						
ROSC	**El Rosal**	**2.33**	**211**	P	**Pn**	**20 19 46.7**	**+1.9**
	comp=Z,25nm,0.3s,baz=58,slow=19,SNR=16						
ROSC				S	**Sn**	**20 20 16.8**	**+1.5**
	comp=Z,48nm,0.3s,baz=4.4,slow=23,SNR=13						
ROSC	**El Rosal**	**2.33**	**211**	*e*P	**Pn**	**20 19 46.9**	**+2.0**
ROSC				*e*S	**Sn**	**20 20 16.7**	**+1.5**
ROSC				*i*		20 20 22.6	
	comp=Z,128nm,0.5s						
HELC	**Santa Helena**	**2.50**	**255**	*e*P	**Pn**	**20 19 47.4**	**+0.7**
HELC				*e*S	**Sn**	**20 20 17.5**	**-1.2**
HELC				*i*		20 20 25.1	
	comp=Z,115nm,0.3s						
UREC	**San Jos de Ur**	**2.57**	**291**	*e*P	**Pn**	**20 19 46.9**	**-0.5**
UREC				*e*S	**Sn**	**20 20 19.2**	**-0.6**
UREC				*i*		20 20 20.1	
	comp=Z,152nm,0.4s						
SOCV	**Socops**	**2.64**	**57**	*e*P	**Pn**	**20 19 48.4**	**+0.2**
SOCV				*e*S	**Sn**	**20 20 19.9**	**-1.5**
GUY2C	**Guyana, Caldas**	**2.77**	**234**	*e*P	**Pn**	**20 19 51.2**	**+0.9**
GUY2C				*e*S	**Sn**	**20 20 25.7**	**+0.8**
GUY2C				*i*		20 20 31.4	
	comp=Z,91nm,0.3s						
PTGC	**Puerto Gaitan,**	**2.80**	**160**	*e*P	**Pn**	**20 19 49.8**	**-0.4**
PTGC				*e*S	**Sn**	**20 20 22.2**	**-2.8**
PTGC				*i*		20 20 24.5	
	comp=Z,76nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.06**	**251**	*e*P	**Pn**	**20 19 54.6**	**+1.1**
CBOC				*e*S	**Sn**	**20 20 30.7**	**-0.1**
CBOC				*i*		20 20 39.6	
	comp=Z,32nm,0.5s						
DBBC	**Dabeiba**	**3.09**	**273**	*e*P	**Pn**	**20 19 54.7**	**+0.8**
ANIL	**Santa Ana**	**3.28**	**224**	*e*P	**Pn**	**20 19 57.7**	**+1.2**
ANIL				*e*S	**Sn**	**20 20 36.5**	**+0.4**
ANIL				*i*		20 20 48.2	
	comp=Z,127nm,0.3s						
SJCC	**San Jacinto, C**	**3.66**	**326**	*e*P	**Pn**	**20 20 00.7**	**-0.4**
SJCC				*e*S	**Sn**	**20 20 42.0**	**-2.6**
SJCC				*i*		20 20 47.0	
	comp=Z,43nm,0.3s						
PLMC	**San Jos del P**	**3.71**	**239**	*e*P	**Pn**	**20 20 02.4**	**+0.6**
PLMC				*e*S	**Sn**	**20 20 43.5**	**-2.3**
PLMC				*i*		20 20 47.1	
	comp=Z,32nm,0.6s						
PCRV	**Puerto La Cruz**	**9.00**	**68**	LR	LR	20 25 55.7	
	comp=Z,613nm,20.1s,slow=42						
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**20 29 17.9**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=136,slow=6.7,SNR=7.0						
ASAR	**Alice Springs**	**149.14**	**234**	PKPbc	**PKPbc**	**20 38 36.0**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=117,slow=4.1,SNR=5.4						
WRA	**Warramunga Arr**	**150.37**	**241**	PKPbc	**PKPbc**	**20 38 39.3**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=114,slow=2.8,SNR=10						

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*FUNV **19** 20:20:43.0, 8°.53N×71°.46W, h5^{km}, MW3.9*
*IDC **19** 20:20:45.9±4.3, 8°.37N×71°.25W, h35^{km}±38^{km}, mb3.3/2, mb1 3.8/4, mb1mx3.3/47, mbtmp3.7/4, ML2.9/2, Error ellipse: s-maj=42.6km s-min=22.3km az=144.0*
ISC 19 20:20:42.5±3.0**, 8°.51N**±0°.04×**71°.34W**±0°.03**, h9**^{km}±20^{km}**, n39, σ1^{s}.64**/69**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.52**	**115**	*e*P	**Pb**	**20 20 53.1**	**-0.9**
SOCV				*e*S	**Sb**	**20 21 00.8**	**-0.9**
CAPV	**Capacho**	**1.16**	**237**	*e*P	**Pn**	**20 21 02.2**	**-3.0**
CAPV				*e*S	**Sb**	**20 21 18.1**	**-2.2**
TORV	**Torococo**	**1.51**	**46**	*e*P	**Pn**	**20 21 09.9**	**-0.1**
TORV				*e*S	**Sn**	**20 21 30.2**	**+0.3**
PAMC	**Pamplona, Colo**	**1.78**	**229**	*e*P	**Pn**	**20 21 13.6**	**-0.4**
PAMC				*e*S	**Sb**	**20 21 37.9**	**-0.5**
PAMC				*i*		20 21 42.0	
	comp=Z,378nm,0.6s						
MCQV	**Machiques**	**1.94**	**322**	*e*P	**Pn**	**20 21 14.9**	**-0.8**
MCQV				*e*S	**Sn**	**20 21 38.3**	**-1.9**
OCAC	**Ocana**	**1.98**	**262**	*e*P	**Pn**	**20 21 15.8**	**-0.6**
OCAC				*e*S	**Sn**	**20 21 40.7**	**-0.8**
OCAC				*i*		20 21 43.3	
	comp=Z,3μm,0.7s						
CURV	**Curarigua**	**2.02**	**42**	*e*S	**Sn**	**20 21 44.1**	**+1.7**
TAMC	**Tame, Arauca**	**2.11**	**192**	*e*P	**Pb**	**20 21 22.1**	**+1.1**
TAMC				*e*S	**Sb**	**20 21 49.3**	**+2.0**
TAMC				*i*		20 21 56.6	
	comp=Z,382nm,0.6s						
ELOV	**Elorza**	**2.37**	**129**	*e*P	**Pb**	**20 21 24.1**	**-1.4**
ELOV				*e*S	**Sb**	**20 21 53.0**	**-1.9**
DABV	**Dabajuro**	**2.50**	**16**	*e*P	**Pn**	**20 21 24.4**	**+1.0**
BARC	**Barichara**	**2.64**	**224**	*e*P	**Pb**	**20 21 29.1**	**-1.1**
BARC				*e*S	**Sb**	**20 22 02.3**	**-0.5**
BARC				*i*		20 22 11.0	
	comp=Z,213nm,0.5s						
SMLC	**San Martn de**	**2.72**	**276**	*e*P	**Pn**	**20 21 28.5**	**+2.0**
SMLC				*e*S	**Sn**	**20 22 00.7**	**+1.1**
SMLC				*i*		20 22 03.8	
	comp=Z,289nm,0.4s						
BRRC	**Barranca, Sant**	**2.73**	**240**	*e*P	**Pn**	**20 21 27.4**	**+0.7**
BRRC				*e*S	**Sb**	**20 22 06.2**	**+0.8**
BRRC				*i*		20 22 09.3	
	comp=Z,90nm,0.6s						
RUSC	**La Rusia**	**3.12**	**214**	*e*P	**Pn**	**20 21 32.9**	**+0.5**
RUSC				*e*S	**Sb**	**20 22 18.1**	**+1.1**
RUSC				*i*		20 22 26.7	
	comp=Z,69nm,0.5s						
BAUV	**El Baul**	**3.29**	**82**	*e*P	**Pn**	**20 21 35.7**	**+1.5**
BAUV				*e*S	**Sn**	**20 22 14.5**	**+1.0**
ZARC	**Zaragoza, Cauc**	**3.63**	**254**	*e*P	**Pn**	**20 21 37.6**	**-1.4**
ZARC				*e*S	**Sn**	**20 22 19.8**	**-2.3**
ZARC				*i*		20 22 33.7	
	comp=Z,546nm,1.0s						
PTBC	**PUERTO BERRIO,**	**3.66**	**238**	*e*P	**Pn**	**20 21 38.0**	**-1.5**
PTBC				*e*S	**Sb**	**20 22 30.7**	**-1.3**
PTBC				*i*		20 22 38.4	
	comp=Z,53nm,0.5s						
MONV	**Montecano**	**3.68**	**21**	*e*P	**Pn**	**20 21 39.7**	**0.0**
MONV				*e*S	**Sn**	**20 22 21.8**	**-1.4**
SPBC	**San Pablo de B**	**3.93**	**224**	*e*P	**Pn**	**20 21 44.0**	**+0.8**
SPBC				*e*S	**Sb**	**20 22 42.6**	**+2.8**
BENV	**Beln**	**3.96**	**68**	*e*P	**Pn**	**20 21 44.5**	**+0.9**
BENV				*e*S	**Sn**	**20 22 30.1**	**-0.2**
SJCC	**San Jacinto, C**	**4.04**	**290**	*e*P	**Pn**	**20 21 46.4**	**+1.7**
SJCC				*e*S	**Sn**	**20 22 30.8**	**-1.4**
SJCC				*i*		20 22 36.3	
	comp=Z,45nm,0.8s						
PTGC	**Puerto Gaitan,**	**4.35**	**191**	*e*P	**Pn**	**20 21 48.9**	**-0.1**
PTGC				*e*S	**Sb**	**20 22 57.0**	**+5.0**
PTGC				*i*		20 23 21.5	
	comp=Z,158nm,0.6s						
CHIC	**Chingaza**	**4.53**	**212**	*e*P	**Pn**	**20 21 52.5**	**+0.7**
CHIC				*e*S	**Sn**	**20 22 43.7**	**-1.1**
CHIC				*i*		20 22 52.9	
	comp=Z,31nm,0.5s						
NORC	**Norcasia**	**4.57**	**230**	*e*P	**Pn**	**20 21 52.1**	**+0.2**
NORC				*e*S	**Sn**	**20 22 43.1**	**-2.2**
NORC				*i*		20 23 03.9	
	comp=Z,21nm,0.4s						
ROSC	**El Rosal**	**4.70**	**219**	Pn	**Pn**	**20 21 55.0**	**+1.0**
	comp=Z,4.5nm,0.3s,baz=271,slow=23,SNR=1.9						
ROSC				Sn	**Sn**	**20 22 51.2**	**+2.3**
	comp=Z,4.3nm,0.3s,baz=159,slow=23,SNR=1.8						
ROSC				Lg	Lg	20 23 14.9	
	comp=Z,5.4nm,0.3s,baz=7.4,slow=22,SNR=2.3						
HELC	**Santa Helena**	**4.75**	**241**	*e*P	**Pn**	**20 21 54.2**	**-0.6**
HELC				*e*S	**Sb**	**20 23 04.4**	**+0.6**
HELC				*i*		20 23 09.6	
	comp=Z,30nm,0.4s						
CACV	**CAICARA DEL OR**	**4.84**	**101**	*e*P	Pb	20 22 03.9	-3.7
CACV				*e*S	**Sb**	**20 23 03.5**	**-2.4**
MERV	**Las Mercedes**	**5.03**	**81**	*e*P	**Pn**	**20 21 58.9**	**+0.6**
MERV				*e*S	**Sn**	**20 22 55.2**	**-1.4**
GUY2C	**Guyana, Caldas**	**5.16**	**231**	*e*P	**Pn**	**20 22 00.8**	**+0.2**
GUY2C				*e*S	**Sn**	**20 22 60.0**	**-0.5**
GUY2C				*i*		20 23 39.6	
	comp=Z,20nm,0.6s						
CBOC	**Ciudad Bolivar**	**5.33**	**241**	*e*P	**Pn**	**20 22 04.3**	**+1.7**
CBOC				*e*S	**Sb**	**20 23 25.6**	**+5.3**
CBOC				*i*		20 23 30.2	
	comp=Z,8.5nm,0.6s						
BIRV	**Birongo**	**5.37**	**68**	*e*P	**Pn**	**20 22 04.0**	**+1.1**
BIRV				*e*S	**Sn**	**20 23 02.7**	**-2.2**
ANIL	**Santa Ana**	**5.68**	**226**	*e*P	**Pn**	**20 22 08.5**	**+1.1**
ANIL				*e*S	**Sn**	**20 23 12.2**	**-0.8**
ANIL				*i*		20 23 19.7	
	comp=Z,52nm,0.4s						
PLMC	**San Jos del P**	**6.08**	**234**	*e*P	**Pn**	**20 22 13.6**	**+0.8**
PLMC				*e*S	**Sn**	**20 23 23.0**	**+0.4**
PLMC				*i*		20 23 31.4	
	comp=Z,29nm,0.9s						
PCRV	**Puerto La Cruz**	**6.82**	**75**	Pn	**Pn**	**20 22 24.3**	**+1.5**
	comp=Z,0.9nm,0.3s,baz=223,slow=3.7,SNR=5.5						
PCRV				Sn	**Sn**	**20 23 42.2**	**+1.5**
	comp=Z,2.4nm,0.3s,baz=288,slow=23,SNR=9.9						
PTGA	**Pitinga**	**14.58**	**128**	Lg	Lg	20 28 24.0	
	comp=Z,0.6nm,0.3s,baz=330,slow=22,SNR=2.4						
PDAR	**Pinedale Array**	**47.80**	**322**	P	**P**	**20 29 22.1**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=125,slow=9.5,SNR=4.8						
YKA	**Yellowknife Ar**	**62.32**	**339**	P	**P**	**20 31 05.4**	**+0.4**
	comp=Z,0.7nm,1.1s,baz=123,slow=7.4,SNR=2.8						
ASAR	**Alice Springs**	**151.52**	**235**	PKPbc	**PKPbc**	**20 40 36.1**	**-2.0**
	comp=Z,0.6nm,1.0s,baz=150,slow=3.6,SNR=1.6						
WRA	**Warramunga Arr**	**152.69**	**243**	PKPbc	**PKPbc**	**20 40 39.1**	**-1.6**
	comp=Z,1.0nm,1.1s,baz=121,slow=2.9,SNR=2.3						

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*NEIC **19** 20:21:14.1±1.6, 52°.6N±0°.1×172°.63W±0°.09, h141^{km}±6^{km}, mb4.2/53, ML4.3/6, ML4.0(AEIC), Error ellipse: s-maj=19.5km s-min=6.5km az=167.0*
*IDC **19** 20:21:14.0±3.2, 52°.66N×172°.77W, h142^{km}±28^{km}, mb3.4/12, mb1 3.7/14, mb1mx3.2/73, mbtmp3.8/14, MS4.3/1, Ms1 4.3/1, ms1mx3.4/28, Error ellipse: s-maj=23.7km s-min=13.5km az=173.0*
*AEIC **19** 20:21:15±2.8, 52°.4N±0°.1×172°.59W±0°.08, h135^{km}±5^{km}, Error ellipse: s-maj=19.7km s-min=6.3km az=169.0*
ISC 19 20:21:14.2±0.6**, 52°.5N**±0°.1×**172°.61W**±0°.05**, h150**^{km}**, n130, σ1^{s}.13**/130**, mb3.9**/19**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOSE	**Korovin Southe**	**0.89**	**262**		**Pn**	**20 21 37.0**	**-1.1**
KOSE					**Sn**	**20 21 54.8**	**-1.5**
KONE	**Korovin Northe**	**0.93**	**266**		**Pn**	**20 21 37.4**	**-0.9**
KOFP	**Korovin Flat P**	**0.93**	**258**		**Pn**	**20 21 37.5**	**-0.9**
KOKL	**Mount Kliuchef**	**0.98**	**262**		**Pn**	**20 21 38.1**	**-0.8**
ATKA	**Atka Island**	**1.01**	**255**		**Sn**	**20 21 55.1**	**-2.7**
ATKA	**Atka Island**	**1.01**	**255**		**Pn**	**20 21 37.6**	**-1.3**
GSTR	**Great Sitkin T**	**2.15**	**261**	Pn	**Pn**	**20 21 50.3**	**-0.8**
GSMY	**Great Sitkin M**	**2.16**	**260**		**Pn**	**20 21 50.4**	**-0.8**
GSTD	**Great Sitkin T**	**2.21**	**260**		**Pn**	**20 21 51.4**	**-0.4**
GSTD					**Sn**	**20 22 18.9**	**-1.8**
NIKH	**Nikolski High**	**2.34**	**76**		**Pn**	**20 21 51.9**	**-1.4**
NIKH					**Sn**	**20 22 20.9**	**-2.5**
ADK	**Adak**	**2.58**	**258**		**Pn**	**20 21 55.4**	**-0.8**
ADK				Sn	**Sn**	**20 22 26.1**	**-2.5**
ADK	**Adak**	**2.58**	**258**	IAML		20 22 28.9	
	1μm,0.2s						
KIWB	**Kanaga Island**	**2.86**	**259**		**Pn**	**20 21 59.4**	**-0.4**
OKTU	**Okmok Mt. Tuli**	**2.91**	**70**		**Pn**	**20 21 59.8**	**-0.6**
KIMD	**Kanaga Island**	**2.94**	**258**		**Pn**	**20 22 00.6**	**-0.1**
OKFG	**Magazine Ridge**	**2.99**	**70**		**Pn**	**20 22 00.6**	**-0.7**
TAPA	**Tanaga Point A**	**3.27**	**260**		**Pn**	**20 22 04.5**	**-0.4**
TASE	**Tanaga Southea**	**3.40**	**261**		**Pn**	**20 22 06.5**	**-0.2**
MAPS	**Pakushin South**	**3.67**	**66**		**Sn**	**20 22 51.1**	**-2.2**
MSW	**Makushin Switc**	**3.79**	**65**		**Pn**	**20 22 10.9**	**-0.7**
MNAT	**Makushin Natee**	**3.84**	**66**		**Pn**	**20 22 11.5**	**-0.7**
GAEA	**Gareloi East**	**3.84**	**262**		**Pn**	**20 22 12.0**	**-0.3**
GANO	**Gareloi North**	**3.87**	**263**		**Pn**	**20 22 12.2**	**-0.5**
UNV	**Unalaska Valle**	**3.92**	**67**		**Pn**	**20 22 12.7**	**-0.6**
GAKI	**Gareloi-Kavalg**	**3.94**	**259**		**Pn**	**20 22 12.9**	**-0.6**
AKGG	**Akutan Green G**	**4.33**	**64**		**Pn**	**20 22 18.0**	**-0.6**
AKUT	**Akutan**	**4.43**	**65**	Pn	**Pn**	**20 22 20.2**	**+0.3**
AKUT				IAML		20 23 30.1	
	comp=N,243nm,2.9s						
AKSA	**Akutan Strait**	**4.47**	**65**		**Pn**	**20 22 20.1**	**-0.4**
BRPK	**Brown Peak**	**5.72**	**64**		**Pn**	**20 22 36.3**	**-0.7**
ISLZ	**Isanotski Laza**	**5.76**	**63**		**Pn**	**20 22 37.2**	**-0.4**
FALS	**False Pass**	**5.96**	**63**		**Pn**	**20 22 39.5**	**-0.7**
SDPT	**Sand Point**	**7.72**	**63**		**Pn**	**20 23 02.1**	**-1.5**
CHGN	**Chignik**	**9.12**	**60**	Pn	**Pn**	**20 23 19.5**	**-2.8**
OHAK	**Old Harbor**	**12.09**	**59**	Pn	**Pn**	**20 23 57.8**	**-3.6**
O18K	**Koktuh Hills**	**12.16**	**46**	Pn	**Pn**	**20 24 02.5**	**+0.1**
KDAK	**Kodiak Island**	**12.61**	**57**	P	**Pn**	**20 24 04.8**	**-3.3**
	comp=N,0.6nm,0.3s,baz=183,slow=5.6,SNR=8.4						
N19K	**Bonanza Creek**	**12.97**	**43**		**Pn**	**20 24 14.9**	**+2.1**
L19K	**White Mountain**	**13.61**	**37**		**P**	**20 24 24.8**	**+0.2**
M19K	**Big River Lodg**	**13.62**	**39**		**P**	**20 24 24.8**	**+0.1**
HOM	**Homer**	**13.70**	**50**	Pn	**Pn**	**20 24 21.1**	**-0.9**
CNPM	**China Poot**	**13.84**	**51**	Pn	**Pn**	**20 24 23.9**	**+0.1**
BRLK	**Bradley Lake**	**14.10**	**50**	Pn	**Pn**	**20 24 27.0**	**0.0**
K20K	**Telida**	**14.62**	**35**		**P**	**20 24 36.4**	**+0.5**
SEW	**Seward**	**14.89**	**50**	Pn	**Pn**	**20 24 35.3**	**-1.6**
O22K	**Cooper Landing**	**14.90**	**48**		**Pn**	**20 24 37.2**	**+0.1**
PPLA	**Purkeypile**	**15.03**	**38**		**Pn**	**20 24 39.4**	**+0.6**
J20K	**Nowinta River**	**15.14**	**32**	P	**P**	**20 24 41.0**	**-0.6**
RC01	**Rabbit Creek A**	**15.14**	**46**	Pn	**Pn**	**20 24 39.6**	**-0.4**
CUT	**Chulitna**	**15.52**	**41**		**Pn**	**20 24 44.9**	**+0.3**
CUT				IAmb	IAmb	20 24 46.0	
	comp=Z,20nm,0.9s						
PWL	**Port Wells**	**15.68**	**48**	Pn	**Pn**	**20 24 44.6**	**-2.1**
PWL				IAmb	IAmb	20 24 51.7	
	comp=Z,18nm,1.2s						
GHO	**Glory Hole Cre**	**15.79**	**45**	Pn	**Pn**	**20 24 46.8**	**-1.2**
GHO				IAmb	IAmb	20 24 59.6	
	comp=Z,17nm,1.3s						
KNK	**Knik Glacier**	**15.84**	**46**	Pn	**Pn**	**20 24 47.3**	**-1.4**
KTH	**Kantishna Hill**	**15.87**	**37**		**P**	**20 24 49.6**	**-0.1**
KTH				IAmb	IAmb	20 25 17.4	
	comp=Z,12nm,1.3s						
SML	**Sawmill**	**16.05**	**45**	Pn	**Pn**	**20 24 49.8**	**-1.5**
SML				IAmb	IAmb	20 25 13.6	
	comp=Z,29nm,1.3s						
BPAW	**Bear Paw Mtn.**	**16.16**	**36**		**P**	**20 24 53.6**	**+0.7**
FID	**Port Fidalgo**	**16.50**	**50**		**P**	**20 24 56.0**	**-0.6**
SCM	**Sheep Creek Mo**	**16.50**	**46**		**P**	**20 24 55.1**	**-1.6**
SCM				IAmb	IAmb	20 25 21.6	
	comp=Z,27nm,1.4s						
IMAR	**Indian Mountai**	**16.52**	**28**		**Pn**	**20 24 57.4**	**+0.5**
H21K	**Melozitna Rive**	**16.57**	**30**		**P**	**20 24 57.1**	**-0.2**
RND	**Reindeer**	**16.58**	**39**		**P**	**20 24 55.8**	**-1.7**
RND				IAmb	IAmb	20 25 00.7	
	comp=Z,13nm,1.3s						
MLY	**Manley**	**16.81**	**33**	P	**Pn**	**20 25 01.1**	**+0.6**
MLY				IAmb	IAmb	20 25 04.5	
	comp=Z,5.7nm,0.7s						
DHY	**Denali Highway**	**17.01**	**42**	P	**P**	**20 25 02.1**	**-0.2**
DHY				IAmb	IAmb	20 25 09.4	
	comp=Z,12nm,1.4s						
M24K	**Tolsona, Glenn**	**17.11**	**45**	P	**P**	**20 25 02.6**	**-0.8**
I23K	**Minto, Yukon-K**	**17.35**	**34**		**Pn**	**20 25 06.7**	**-0.2**
CCB	**Clear Creek Bu**	**17.62**	**37**	P	**P**	**20 25 07.8**	**-1.0**
MDM	**Murphy Dome**	**17.64**	**35**	P	**P**	**20 25 08.2**	**-0.9**
PAX	**Paxson**	**17.75**	**43**	P	**P**	**20 25 10.7**	**+0.3**
HDA	**Harding Lake**	**17.81**	**38**	P	**P**	**20 25 10.6**	**-0.4**
HDA				IAmb	IAmb	20 25 12.8	
	comp=Z,9.1nm,0.8s						
PEA0B	**Petropavlovsk-**	**17.91**	**284**	P	**Pn**	**20 25 12.8**	**-0.9**
PETK	**Petropavlovsk-**	**17.91**	**284**	P	**Pn**	**20 25 13.0**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=92,slow=14,SNR=14						
PETK	**Petropavlovsk-**	**17.91**	**284**	P	**Pn**	**20 25 12.6**	**-1.1**
IL31		**18.02**	**37**	P	**P**	**20 25 11.3**	**-1.9**
IL31				IAmb	IAmb	20 25 31.8	
	comp=Z,12nm,1.4s						
ILAR	**Eielson Array**	**18.02**	**37**	P	**P**	**20 25 11.3**	**-2.0**
	comp=Z,1.6nm,0.3s,baz=239,slow=10,SNR=84						
ILAR	**Eielson Array**	**18.02**	**37**	P	**P**	**20 25 11.5**	**-1.8**
H24K	**Noodor Dome**	**18.26**	**33**	P	**P**	**20 25 16.2**	**+0.3**
H24K				IAmb	IAmb	20 25 17.6	
	comp=Z,7.2nm,0.8s						
DOT	**Dot Lake**	**18.61**	**42**	P	**P**	**20 25 19.2**	**-0.5**
L26K	**Log Cabin Wild**	**18.67**	**44**	P	**P**	**20 25 20.2**	**-0.1**
L26K				IAmb	IAmb	20 25 42.7	
	comp=Z,12nm,1.4s						
SCRK	**Sand Creek**	**18.77**	**41**	P	**P**	**20 25 20.7**	**-0.9**
SCRK				IAmb	IAmb	20 25 21.8	
	comp=Z,7.5nm,0.9s						
PRP	**Porcupine Dome**	**18.90**	**36**	P	**P**	**20 25 21.8**	**-1.2**
BCAR	**Beaver Creek A**	**19.35**	**45**	P	**P**	**20 25 27.6**	**-0.1**
TOLK	**Toolik Lake Re**	**19.55**	**25**	P	**P**	**20 25 30.1**	**+0.2**
TOLK				IAmb	IAmb	20 25 31.7	
	comp=Z,8.4nm,0.7s						
EGAK	**Eagle**	**20.22**	**40**	P	**P**	**20 25 37.1**	**+0.1**
A21K	**Barrow**	**20.22**	**15**	P	**P**	**20 25 37.8**	**+0.9**
A21K				IAmb	IAmb	20 25 40.6	
	comp=Z,8.7nm,0.5s						
BMAR	**Burnt Mountain**	**20.25**	**32**	P	**P**	**20 25 38.0**	**+0.6**
DAWY	**Dawson**	**20.69**	**43**	P	**P**	**20 25 42.2**	**+0.1**
INK	**Inuvik**	**24.37**	**35**	P	**P**	**20 26 17.6**	**-0.2**
	comp=Z,1.9nm,0.4s,baz=238,slow=7.0,SNR=22						
INK	**Inuvik**	**24.37**	**35**	P	**P**	**20 26 17.5**	**-0.2**
INK				IAmb	IAmb	20 26 18.9	
	comp=Z,12nm,1.4s						
DLBC	**Dease Lake**	**24.53**	**59**	P	**P**	**20 26 21.2**	**+1.7**
	comp=Z,1.3nm,0.6s,baz=226,slow=7.8,SNR=4.8						
DLBC	**Dease Lake**	**24.53**	**59**	P	**P**	**20 26 20.2**	**+0.7**
DLBC				IAmb	IAmb	20 26 39.6	
	comp=Z,14nm,1.4s						
ASAJ	**Asahikawa**	**30.52**	**272**	LR	LR	20 37 40.9	
	comp=Z,576nm,22.0s,baz=86,slow=32						
YKA	**Yellowknife Ar**	**31.66**	**49**	P	**P**	**20 27 22.6**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=274,slow=9.2,SNR=12						
YKA				PcP	**PcP**	**20 30 11.3**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=286,slow=3.1,SNR=4.7						
YKA				ScP	**ScP**	**20 33 41.5**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=285,slow=3.5,SNR=7.2						
YKA	**Yellowknife Ar**	**31.66**	**49**	P	**P**	**20 27 21.8**	**-1.0**
B08A	**Colville Reser**	**33.55**	**75**	P	**P**	**20 27 40.7**	**+1.2**
B08A				IAmb	IAmb	20 27 55.0	
	comp=Z,6.2nm,1.4s						
EDM	**Edmonton**	**34.91**	**65**	P	**P**	**20 27 51.8**	**+0.7**
H11N2	**WAKE ISLAND Hy**	**36.37**	**214**	T	T	21 06 23.0	
	baz=21,slow=76,SNR=5.5						
H11N3	**WAKE ISLAND Hy**	**36.38**	**214**	T	T	21 06 16.2	
	baz=21,slow=76,SNR=4.5						
H11N1	**WAKE ISLAND Hy**	**36.38**	**214**	T	T	21 06 27.3	
	baz=21,slow=76,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**37.57**	**213**	T	T	21 07 46.3	
	baz=20,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**37.58**	**213**	T	T	21 07 45.6	
	baz=20,slow=76,SNR=6.6						
H11S3	**WAKE ISLAND Hy**	**37.59**	**213**	T	T	21 07 43.0	
	baz=20,slow=76,SNR=3.7						
PAHR	**Pah Rah Range**	**38.20**	**88**	P	**P**	**20 28 20.7**	**+1.5**
PAHR				IAmb	IAmb	20 28 41.9	
	comp=Z,4.4nm,1.5s						
BCYI	**Bear Canyon**	**39.15**	**78**	P	**P**	**20 28 28.0**	**+0.8**
MCMT	**McKenzie Canyo**	**39.19**	**77**	P	**P**	**20 28 28.6**	**+1.0**
NVAR	**Mina Array Bea**	**39.65**	**89**	P	**P**	**20 28 33.2**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=302,slow=8.4,SNR=4.5						
ELK	**Elko**	**40.10**	**83**	P	**P**	**20 28 36.9**	**+1.8**
	comp=Z,0.5nm,0.5s,baz=281,slow=9.8,SNR=3.6						
PDAR	**Pinedale Array**	**42.33**	**77**	P	**P**	**20 28 54.1**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=304,slow=3.3,SNR=8.3						
PDAR	**Pinedale Array**	**42.33**	**77**	P	**P**	**20 28 53.8**	**+0.6**
GSC	**Goldstone, Bar**	**42.58**	**91**	P	**P**	**20 28 56.9**	**+1.6**
GSC				IAmb	IAmb	20 28 57.8	
	comp=Z,4.7nm,0.9s						
TX31	**Lajitas Ar. Si**	**54.73**	**86**	P	**P**	**20 30 29.1**	**+1.1**
TX31				IAmb	IAmb	20 30 30.9	
	comp=Z,6.3nm,1.1s						
TXAR	**Lajitas Array**	**54.73**	**86**	P	**P**	**20 30 28.9**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=296,slow=4.7,SNR=16						
TXAR				PcP	**PcP**	**20 31 30.1**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=296,slow=2.2,SNR=4.0						
KURK	**Kurchatov**	**60.95**	**316**	P	**P**	**20 31 11.0**	**+0.1**
KURK				IAmb	IAmb	20 31 23.3	
	comp=Z,2.0nm,1.1s						
KURBB	**Kurchatov Arra**	**61.06**	**316**	P	**P**	**20 31 11.9**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=50,slow=7.6,SNR=4.7						
KURBB				PcP	**PcP**	**20 31 52.5**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=51,slow=4.2,SNR=5.0						
BINY	**Binghamton**	**61.51**	**57**	P	**P**	**20 31 15.2**	**+0.3**
L59A	**Walton**	**62.00**	**57**	P	**P**	**20 31 18.6**	**+0.5**
KSPA	**Keystone Colle**	**62.09**	**57**	P	**P**	**20 31 19.1**	**+0.4**
N59A	**State Game Lan**	**62.55**	**58**	P	**P**	**20 31 22.0**	**+0.2**
FIA1	**FINESS Array S**	**65.45**	**350**	P	**P**	**20 31 40.0**	**-0.3**
FINES	**FINESS Array B**	**65.46**	**350**	P	**P**	**20 31 38.4**	**-2.0**
	comp=Z,1.3nm,0.8s,baz=355,slow=12,SNR=5.4						
FINES	**FINESS Array B**	**65.46**	**350**	P	**P**	**20 31 40.1**	**-0.2**
NC303	**NORSAR Array S**	**66.60**	**358**	P	**P**	**20 31 47.3**	**-0.4**
AAK	**Ala-Archa**	**69.00**	**313**	P	**P**	**20 32 03.6**	**+0.3**
ABKAR	**Akbulak array**	**69.27**	**326**	P	**P**	**20 32 04.5**	**0.0**
ABKAR	**Akbulak array**	**69.27**	**326**	P	**P**	**20 32 04.9**	**+0.4**
ABKAR				IAmb	IAmb	20 32 29.3	
	comp=Z,2.1nm,1.3s						
KKAR	**Karatay Array**	**70.36**	**316**	P	**P**	**20 32 11.2**	**-0.2**
GAR	**Garm**	**73.80**	**314**	P	**P**	**20 32 31.5**	**-0.5**
GAR				IAmb	IAmb	20 32 57.5	
	comp=Z,5.1nm,1.3s						
CMAR	**Chiang Mai Arr**	**74.65**	**280**	P	**P**	**20 32 38.0**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=25,slow=6.2,SNR=4.9						
BUR08	**Bucovina Ar. S**	**79.10**	**348**	P	**P**	**20 33 01.5**	**-0.2**
BUR08				IAmb	IAmb	20 33 26.4	
	comp=Z,5.6nm,1.5s						
BURAR	**Bucovina Array**	**79.13**	**348**	P	**P**	**20 33 01.0**	**-0.8**
WRA	**Warramunga Arr**	**85.55**	**229**	P	**P**	**20 33 34.9**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=35,slow=5.1,SNR=7.6						
ASAR	**Alice Springs**	**88.97**	**227**	P	**P**	**20 33 52.6**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=27,slow=4.9,SNR=18						

VIE 19 20:40:19.1±0.7**, 47°.33N**×**11°.63E, h11**^{km}±2^{km}**, ml0.2**/4**, Error ellipse: s-maj=4.3km s-min=2.2km az=23.0 7 km WSW of Schwaz, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WATA	**Walderalm**	**0.03**	**281**	*i* Pg	Pg	20 40 21.4	+0.1
	1.0nm,0.1s						
WATA				*i* Sg	Sg	20 40 23.4	+0.5
	13nm,0.1s						
WTTA	**Wattenberg**	**0.07**	**173**	*e*Pg	Pg	20 40 21.8	+0.2
	1.3nm,0.1s						
WTTA				*i* Sg	Sg	20 40 23.9	+0.5
	2.2nm,0.1s						
SQTA	**Sankt Quirin**	**0.30**	**249**	*i* Pg	Pg	20 40 25.4	+0.2
	0.1nm,0.1s						
SQTA				*e*Sg	Sg	20 40 29.7	+0.4
	1.6nm,0.2s						
MOTA	**Moosalm**	**0.35**	**273**	*e*Sg	Sg	20 40 31.6	+0.6
	0.3nm,0.1s						

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*ISN **19** 21:12:02.3±1.1, 35°.67N×45°.01E, h5^{km}±19^{km}, ML2.7*
*DDA **19** 21:12:04.4, 35°.79N×44°.39E, h6^{km}±3^{km}, ML3.1*
ISC 19 21:12:02.6±3.6**, 35°.71N**±0°.05×**44°.85E**±0°.10**, h11**^{km}±27^{km}**, n6, σ0^{s}.73**/12**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKRK	**Kirkuk**	**0.52**	**234**	*e*Pg	**Pn**	**21 12 16.2**	**+0.2**
IKRK				*e*Sg	**Sn**	**21 12 24.6**	**-0.2**
IKRK				AML	AML	21 12 29.9	
	comp=N,342nm,0.6s						
IKRK				AML	AML	21 12 31.4	
	comp=E,361nm,0.4s						
CUKT	**Cukurca**	**1.84**	**327**	*i* P	**Pn**	**21 12 34.5**	**+0.3**
CUKT				*i* S	**Sn**	**21 12 57.0**	**-0.5**
CUKT				IAML		21 13 01.0	
	comp=N,244nm,0.7s						
YOVA	**Hakkari_Yksek**	**1.93**	**347**	*i* P	**Pb**	**21 12 37.8**	**-0.2**
YOVA				IAML		21 13 03.0	
	comp=N,208nm,0.9s						
YOVA				*i* S	**Sb**	**21 13 03.2**	**+1.1**

HAKT	HAKKARI	2.07	334	*i* P	Pb	21 12 39.5	-0.8
HAKT				*i* S	Sn	21 13 03.0	-0.3
HAKT				IAML		21 13 07.0	
	comp=E,175nm,0.4s						
HAKT				IAML		21 13 07.0	
	comp=N,115nm,0.5s						
BHD	Baghdad	2.46	189	*e*Pn	Pn	21 12 43.0	+0.4
BHD				*e*Sn	Sn	21 13 13.0	+0.3
IBDR	Badra	2.74	161	*e*Pn	Pn	21 12 47.0	+0.5
IBDR				*e*Sn	Sn	21 13 18.3	-1.2

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*IDC **19** 21:26:28.0±0.9, 55°.47S×26°.83W, h0^{km}, mb4.1/3, mb1 4.3/3, mb1mx3.9/22, mbtmp4.1/3, Error ellipse: s-maj=42.3km s-min=31.0km az=89.0*

*NEIC **19** 21:26:29.6±1.4, 55°.5S±0°.1×27°.0W±0°.2, h10^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=24.0km s-min=17.2km az=25.0*

ISC 19 21:26:31.9±0.7**, 55°.4S**±0°.1×**27°.06W**±0°.10**, h25^{km}, n32, σ0^{s}.89**/28**, mb4.4**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.56	278	Pn	Pn	21 27 53.1	+0.1
HOPE				Sn	Sn	21 28 55.8	-0.3
VNA1	Neumayer--Stat	17.35	159	P	P	21 30 33.6	+0.5
VNA3	Neumayer Olymp	17.55	161	P	P	21 30 35.4	0.0
VNA2	Neumayer--Watz	17.74	159	P	P	21 30 38.3	+0.9
	baz=320,slow=13						
SNAA	Sanae	19.28	157	P	Pn	21 30 57.5	+2.0
SNAA	Sanae	19.28	157	P	P	21 30 52.2	-2.3
PMSA	Palmer Station	20.36	228	P	P	21 31 05.5	-0.7
PMSA				IAmb	IAmb	21 31 14.4	
	comp=Z,32nm,1.3s						
SMAI	San Martin Ant	22.29	219	P	P	21 31 27.1	+0.2
QSPA	South Pole Qui	34.82	180	P	P	21 33 19.9	-0.5
QSPA				IAmb	IAmb	21 33 45.2	
	comp=Z,6.1nm,1.2s						
CPUP	Villa Florida	36.46	310	P	P	21 33 34.6	0.0
CPUP				IAmb	IAmb	21 33 35.4	
	comp=Z,9.4nm,1.4s						
MT09	Talagante	37.19	287	P	P	21 33 40.6	-0.4
MT09				IAmb	IAmb	21 33 47.4	
	comp=Z,8.5nm,1.1s						
MT02	Curacav	37.66	287	P	P	21 33 44.7	-0.1
ZON	Zonda	37.66	292	P	P	21 33 45.3	+0.4
ZON				IAmb	IAmb	21 33 55.0	
	comp=Z,5.1nm,0.8s						
CO03	El Pedregal	39.29	290	P	P	21 34 00.6	+2.0
CO03				IAmb	IAmb	21 34 09.3	
	comp=Z,14nm,1.2s						
LVC	Limon Verde	45.05	299	P	P	21 34 46.9	+1.0
LVC				IAmb	IAmb	21 35 12.7	
	comp=Z,6.6nm,1.1s						
PB01	IPOC Station P	46.66	300	P	P	21 34 59.0	+0.6
VNDA	Vanda	47.20	183	P	P	21 35 01.6	-0.1
	comp=Z,1.5nm,0.7s,baz=195,slow=7.0,SNR=7.7						
VNDA	Vanda	47.20	183	P	P	21 35 01.3	-0.5
VNDA				IAmb	IAmb	21 35 01.7	
	comp=Z,4.3nm,1.2s						
H10S2	ASCENSION HYDR	47.39	17	T	T	22 26 25.9	
	baz=188						
H10S3	ASCENSION HYDR	47.39	17	T	T	22 26 25.5	
	baz=32,SNR=3.2						
H10N1	ASCENSION HYDR	48.50	17	T	T	22 27 56.4	
	baz=192						
H10N3	ASCENSION HYDR	48.51	17	T	T	22 27 48.7	
	baz=192,SNR=4.5						
H10N2	ASCENSION HYDR	48.52	17	T	T	22 27 54.9	
	baz=192						
LPAZ	La Paz	50.08	305	P	P	21 35 26.2	+0.9
	comp=Z,2.2nm,0.7s,baz=111,slow=8.6,SNR=6.3						
LPAZ	La Paz	50.08	305	P	P	21 35 25.9	+0.6
LPAZ				IAmb	IAmb	21 35 34.7	
	comp=Z,3.1nm,1.1s						
BOAV	Boa Vista	63.83	322	P	P	21 37 01.7	-0.3
TORD	Torodi Ar. Bea	72.48	29	P	P	21 37 56.4	+0.2
	comp=Z,1.9nm,0.5s,baz=202,slow=6.2,SNR=27						
TORD	Torodi Ar. Bea	72.48	29	P	P	21 37 56.1	-0.1
YKA	Yellowknife Ar	135.76	318	PKP	PKPdf	21 45 47.8	-0.8
	comp=Z,0.1nm,0.4s,baz=123,slow=2.8,SNR=2.7						
INK	Inuvik	145.37	321	PKPbc	PKPdf	21 46 05.5	-0.3
	comp=Z,1.4nm,0.5s,baz=67,slow=1.9,SNR=4.1						
ILAR	Eielson Array	149.75	312	PKPbc	PKPbc	21 46 18.2	+0.2
	comp=Z,1.5nm,0.8s,baz=128,slow=3.2,SNR=15						
SONM	Songino Array	150.61	85	PKPbc	PKPbc	21 46 19.9	-0.9
	comp=Z,0.5nm,0.5s,baz=214,slow=3.7,SNR=6.1						

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*IDC **19** 21:38:30.3±1.6, 13°.60S×166°.82E, h0^{km}, mb4.2/8, mb1 4.3/9, mb1mx3.9/48, mbtmp4.1/9, ML3.1/1, Error ellipse: s-maj=48.7km s-min=24.3km az=119.0*

*NEIC **19** 21:38:34.5±1.6, 13°.64S±0°.08×166°.8E±0°.1, h24^{km}±6^{km}, mb4.3/15, Error ellipse: s-maj=21.3km s-min=9.0km az=66.0*

ISC 19 21:38:36.0±0.8**, 13°.62S**±0°.07×**166°.8E**±0°.1**, h35^{km}, n35, σ1^{s}.38**/37**, mb4.3**/16**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.86	168		Pn	21 39 05.1	-0.4
SANVU				Sn	Sn	21 39 27.3	-0.5
HNR	Honiara	7.89	301	Pn	Pn	21 40 29.4	+1.1
	8.3nm,0.3s,baz=199,slow=11,SNR=1.3						
HNR				Sn	Sn	21 41 56.1	-0.2
	13nm,0.3s,baz=193,slow=17,SNR=2.5						
HNR	Honiara	7.89	301	Pn	Pn	21 40 28.7	+0.4
MARNC	Mare, Loyalty	7.91	172	Pn	Pn	21 40 27.4	-1.2
DZM	Mont Dzumac	8.41	182	Pn	Pn	21 40 35.0	-0.6
	0.3nm,0.3s,baz=348,slow=19,SNR=1.5						
DZM				Sn	Sn	21 42 14.7	+5.3
	baz=94,slow=22,SNR=2.1						
PINNC	Pines Island,	8.97	176	Pn	Pn	21 40 42.8	-0.3
EIDS	Eidsvold	18.84	229	P	Pn	21 42 53.0	-0.8
STKA	Stephens Creek	29.38	228	P	P	21 44 36.0	0.0
	1.6nm,0.4s,baz=50,slow=8.0,SNR=8.2						
STKA	Stephens Creek	29.38	228	P	P	21 44 35.6	-0.4
TOO	Toolangi	30.48	215	P	P	21 44 45.8	0.0
TOO				IAmb	IAmb	21 45 04.3	
	comp=Z,7.0nm,1.1s						
WB0	Warramunga Arr	31.59	254	P	P	21 44 54.4	-1.4
WB0				IAmb	IAmb	21 45 13.6	
	comp=Z,7.4nm,1.1s						
WRA	Warramunga Arr	31.66	254	P	P	21 44 54.9	-1.4
	comp=Z,1.0nm,0.6s,baz=86,slow=9.8,SNR=11						
WRA	Warramunga Arr	31.66	254	P	P	21 44 54.3	-2.0
AS31	Alice Springs	32.65	247	P	P	21 45 03.4	-1.6
AS31				IAmb	IAmb	21 45 04.6	
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	32.65	247	P	P	21 45 03.6	-1.4
	comp=Z,1.8nm,0.5s,baz=75,slow=9.4,SNR=50						
ASAR	Alice Springs	32.65	247	P	P	21 45 03.2	-1.8
BBOO	Buckleboo	33.91	230	P	P	21 45 14.9	-0.9
BBOO				IAmb	IAmb	21 45 27.5	
	comp=Z,11nm,1.1s						
MTN	Manton Dam	34.70	267	P	P	21 45 22.8	-0.1
VNDA	Vanda	63.96	181	P	P	21 49 04.6	-0.6
VNDA				IAmb	IAmb	21 49 24.0	
	comp=Z,9.2nm,1.5s						
USA0B	Ussuriysk Arra	65.69	333	P	P	21 49 18.6	+1.7
USRK	Ussuriysk Ar.	65.69	333	P	P	21 49 19.1	+2.2
CMAR	Chiang Mai Arr	74.07	294	P	P	21 50 10.6	+1.6
	comp=Z,1.3nm,0.3s,baz=125,slow=4.6,SNR=12						
CMAR	Chiang Mai Arr	74.07	294	P	P	21 50 09.1	+0.1
QSPA	South Pole Qui	76.40	180	P	P	21 50 21.5	-0.3
QSPA				IAmb	IAmb	21 50 21.7	
	comp=Z,1.7nm,1.1s						
SONM	Songino Array	81.33	324	P	P	21 50 48.9	-0.1
	comp=Z,0.6nm,0.9s,baz=134,slow=4.2,SNR=3.4						
SONM	Songino Array	81.33	324	IAmb	IAmb	21 51 04.1	
	comp=Z,2.5nm,1.4s						
TRF	Thorofare Moun	83.63	18	P	P	21 51 00.4	-0.3
IL31		85.62	18	P	P	21 51 10.5	+0.1
IL31				IAmb	IAmb	21 51 30.5	
	comp=Z,2.5nm,1.2s						
ILAR	Eielson Array	85.62	18	P	P	21 51 09.6	-1.0
	comp=Z,0.4nm,0.5s,baz=255,slow=4.7,SNR=8.0						
ILAR	Eielson Array	85.62	18	P	P	21 51 09.7	-0.8
BMAR	Burnt Mountain	88.15	17	P	P	21 51 24.3	+1.5
MK31	Makanchi Array	96.08	317	P	P	21 52 00.0	0.0
MK31				IAmb	IAmb	21 52 27.7	
	comp=Z,1.9nm,1.5s						
MKAR	Makanchi Array	96.08	317	P	P	21 52 00.0	-0.1
	comp=Z,0.8nm,0.6s,baz=93,slow=6.4,SNR=12						
MKAR	Makanchi Array	96.08	317	P	P	21 51 59.9	-0.1
ZALV	Zalesovo Beam	96.22	324	P	P	21 51 59.3	-1.2
	comp=Z,0.7nm,0.6s,baz=132,slow=6.0,SNR=3.0						

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*GUC **19** 21:45:29.8±0.6, 30°.36S×72°.16W, h41^{km}±3^{km}, ML3.8*

*IDC **19** 21:45:32.6±1.5, 30°.64S×71°.01W, h0^{km}, mb3.5/2, mb1 3.7/5, mb1mx3.6/22, mbtmp3.5/5, ML3.4/3, Error ellipse: s-maj=54.7km s-min=34.1km az=91.0*

ISC 19 21:45:28.4±2.3**, 30°.33S**±0°.04×**72°.17W**±0°.09**, h3^{km}**±13^{km}**, n21, σ1^{s}.27**/23**, 2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.57	127	⇓*i*P	Pb	21 45 41.6	+0.5
CO06				*e*S	Sn	21 45 50.8	-2.6
CO05	La Serena	0.90	63	*e*P	Pn	21 45 48.0	0.0
CO05				*e*S	Sn	21 46 00.8	-0.6
CO05				IAML		21 46 07.0	
	comp=E,3µm,0.4s						
GO04	Tololo Observa	1.19	83	⇓*i*P	Pn	21 45 52.4	+0.1
GO04				*i* S	Sn	21 46 09.2	+0.2
GO04				IAML		21 46 16.6	
	comp=N,7µm,0.4s						
CO03	El Pedregal	1.37	112	*e*P	Pg	21 45 54.7	0.0
CO03				*e*S	Sg	21 46 13.1	+0.6
LCO	Las Campanas	1.83	44	*e*P	Pb	21 46 02.1	-0.6
LCO				*e*S	Sg	21 46 26.6	-0.8
AC04	Llanos de Chal	2.33	25	*e*P	Pn	21 46 08.2	+0.7
AC04				*e*S	Sn	21 46 36.2	-0.4
VA06	Catapilco	2.34	162	*e*P	Pn	21 46 08.2	+0.4
VA06				*e*S	Sn	21 46 34.3	-2.8
VA06				IAML		21 46 52.3	
	comp=E,679nm,0.6s						
VA03	San Esteban	2.79	151	*e*P	Pn	21 46 15.4	+1.4
VA03				*e*S	Sn	21 46 48.6	+0.4
VA03				IAML		21 47 05.0	
	comp=N,401nm,0.4s						
ROCH	El Roble	2.81	160	*e*P	Pn	21 46 14.9	+0.4
ROCH				*e*S	Sn	21 46 47.2	-1.7
ROCH				IAML		21 47 07.5	
	comp=N,277nm,0.4s						
H03N1	Juan Fernandez	6.52	240	T	T	21 54 18.6	
	baz=70,slow=72,SNR=348						
H03N2	Juan Fernandez	6.54	240	T	T	21 54 16.3	
	baz=70,slow=72,SNR=299						
H03N3	Juan Fernandez	6.54	240	T	T	21 54 12.5	
	baz=70,slow=72,SNR=320						
PLCA	Paso Flores	10.46	173	Pn	Pn	21 47 59.3	0.0
	comp=N,0.1nm,0.3s,baz=342,slow=13,SNR=1.9						
LPAZ	La Paz	14.46	16	Pn	P	21 48 59.8	-1.9
	comp=N,0.1nm,0.3s,baz=200,slow=12,SNR=2.4						
SIV	San Ignacio	17.52	38	P	P	21 49 34.5	-0.6
	comp=N,0.1nm,0.3s,baz=224,slow=15,SNR=6.2						
TXAR	Lajitas Array	66.50	330	P	P	21 56 30.2	+11
	comp=N,0.2nm,0.6s,baz=145,slow=6.5,SNR=2.0						
TORD	Torodi Ar. Bea	83.08	70	P	P	21 57 57.3	+1.5
	comp=N,0.7nm,0.8s,baz=263,slow=5.5,SNR=4.9						
H11S2	WAKE ISLAND Hy	125.63	272	T	T	00 23 16.8	
	baz=114,slow=74,SNR=5.9						
H11S1	WAKE ISLAND Hy	125.64	272	T	T	00 23 17.6	
	baz=114,slow=74,SNR=4.2						
H11S3	WAKE ISLAND Hy	125.65	272	T	T	00 23 18.1	
	baz=114,slow=74,SNR=5.5						
ZALV	Zalesovo Beam	151.13	29	PKPbc	PKiKP	22 05 24.6	+1.5
	comp=N,1.4nm,0.7s,baz=315,slow=2.6,SNR=7.8						

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*IDC **19** 22:09:25.6±1.0, 7°.04S×109°.19E, h0^{km}, mb3.7/5, mb1 3.8/5, mb1mx3.4/31, mbtmp3.7/5, Error ellipse: s-maj=31.9km s-min=12.3km az=17.0*

*DJA **19** 22:09:28.2±0.7, 8°S±4°×10°8E±°, h31^{km}±11^{km}, M4.4/19, mb4.5/4, MLv4.3/19*

ISC 19 22:09:27.4±1.7**, 8°.4S**±0°.1×**107°.87E**±0°.06**, h56^{km}**±16^{km}**, n27, σ1^{s}.41**/31**, mb3.4**/5**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	0.86	42	P	Pn	22 09 42.3	-1.2
CNJI	Cibinong	1.32	327	P	Pn	22 09 49.2	-0.5
CNJI				S	Sn	22 10 04.8	-1.6
LEM	Lembang	1.60	351	Pg	Pn	22 09 54.3	+0.6
	126nm,0.3s,baz=90,slow=20,SNR=74						
LEM				Lg	Lg	22 10 16.0	
	145nm,0.3s,baz=138,slow=21,SNR=14						
LEM				LR	LR	22 10 33.8	
	comp=Z,195nm,20.6s,baz=190,slow=43						
LEM	Lembang	1.60	351	P	Pn	22 09 54.3	+0.6
SKJI	Sukabumi	1.91	317	P	Pn	22 09 58.5	+0.8
DBJI	Dramaga	2.16	329	P	Pn	22 10 02.1	+1.0
DBJI				S	Sn	22 10 28.1	+1.3
YOGI	Yogyakarta	2.48	76	P	Pn	22 10 05.6	+0.2
YOGI				S	Sn	22 10 33.7	-0.8
UGM	Wanagama	2.68	79	P	Pn	22 10 08.2	0.0
UGM				S	Sn	22 10 40.0	+0.5
CGJI	Cibinong	2.81	310	P	Pn	22 10 09.9	0.0
CGJI				S	Sn	22 10 40.5	-2.0
SBJI	Serang	2.86	323	P	Pn	22 10 12.1	+1.4
SBJI				S	Sn	22 10 45.6	+1.7
SMRI	Semarang	2.89	62	P	Pn	22 10 12.7	+1.6
SMRI				S	Sn	22 10 45.9	+1.2
WOJI	Wonogiri, Jawa	3.08	79	P	Pn	22 10 14.3	+0.6
PCJI	Pacitan	3.28	86	P	Pn	22 10 17.0	+0.6
PCJI				S	Sn	22 10 53.2	-1.1
UWJI	Ujung Watu	3.65	57	P	Pn	22 10 22.8	+1.4
KASI	Kota Agung	4.41	311	P	Pn	22 10 34.7	+2.8
KLSI		4.84	320	P	Pn	22 10 39.7	+1.9
LWLI	Liwa	5.07	312	P	Pn	22 10 43.4	+2.3
	0.7nm60nm,0.7s						
GMJI	Gumukmas	5.52	89	P	Pn	22 10 48.2	+1.1
	0.5nm56nm,1.1s						
JAGI	Jajag, Banyuwa	6.22	91	P	Pn	22 10 57.6	+0.9
	0.3nm45nm,1.1s						
WRA	Warramunga Arr	28.05	117	P	P	22 15 15.0	+1.2
	0.6nm,0.9s,baz=301,slow=12,SNR=5.9						
ASAR	Alice Springs	29.18	124	P	P	22 15 25.2	+1.5
	0.5nm,0.8s,baz=301,slow=8.7,SNR=5.0						
H08S2	Diego Garcia H	35.03	269	T	T	22 53 33.0	
	baz=93,slow=76,SNR=73						
H08S3	Diego Garcia H	35.04	269	T	T	22 53 33.5	
	baz=93,slow=76,SNR=80						
H08S1	Diego Carcia H	35.05	269	T	T	22 53 31.7	
	baz=93,slow=76,SNR=94						
STKA	Stephens Creek	39.06	131	P	P	22 16 55.2	+6.1
	1.2nm,0.3s,baz=294,slow=11,SNR=3.5						
SONM	Songino Array	56.02	359	P	P	22 18 58.5	-2.0
	0.2nm,0.5s,baz=174,slow=5.8,SNR=2.8						
MKAR	Makanchi Array	59.51	340	P	P	22 19 23.6	-1.3
	0.4nm,0.3s,baz=153,slow=7.8,SNR=10						

DDA 19 22:13:37.2, 38°.81N×37°.84E, h7^{km}±1^{km}, ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEKM	Malatya_Hekimh	0.12	54	*i* P	Pg	22 13 40.8	+0.9
HEKM				IAML		22 13 43.0	
	comp=E,574nm,0.3s						
HEKM				*i* S	Sg	22 13 43.3	+1.5
HEKM	Malatya_Hekimh	0.12	54	*i* P	Pg	22 13 40.9	+0.9
HEKM				*i* S	Sg	22 13 43.3	+1.5
AKCD	Akcadag	0.52	173	*i* P	Pb	22 13 48.0	-0.7
AKCD				*i* S	Sb	22 13 56.9	+0.5
AKCD				IAML		22 13 58.0	
	comp=E,111nm,0.2s						
AKCD				IAML		22 13 59.0	
	comp=N,79nm,0.2s						
AKCD	Akcadag	0.52	173	*i* P	Pg	22 13 47.9	+0.7
AKCD				*i* S	Sb	22 13 56.8	+0.3
CUKAN	kangal_SIVAS	0.58	330	*i* P	Pg	22 13 48.6	+0.1
CUKAN				*i* S	Sb	22 13 58.2	-0.2
CUKAN	kangal_SIVAS	0.58	330	*i* P	Pg	22 13 48.6	+0.1
CUKAN				*i* S	Sg	22 13 56.9	+0.7
CUKAN				IAML		22 13 57.0	
	comp=E,27nm,0.3s						
CUKAN				IAML		22 13 58.0	
	comp=N,32nm,0.4s						
KEMA	Kemaliye	0.69	48	*i* P	Pg	22 13 50.4	-0.1
KEMA				*i* S	Sb	22 14 00.6	-0.7
KEMA				IAML		22 14 01.0	
	comp=E,14nm,0.3s						
KEMA				IAML		22 14 04.0	
	comp=N,12nm,0.1s						
ELZG	Elazig	0.95	109	*i* P	Pg	22 13 55.4	0.0
ELZG				*i* S	Sb	22 14 09.3	+0.4
ELZG				IAML		22 14 11.0	
	comp=N,14nm,0.2s						
ELZG				IAML		22 14 11.0	
	comp=E,13nm,0.3s						
CUAYA	Sivas-Altinyay	0.96	299	*i* P	Pb	22 13 56.8	+0.5
CUAYA				*i* S	Sb	22 14 09.6	+0.2

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*IDC **19** 22:37:57.6±0.7, 8°.20S×125°.18E, h0^{km}, mb4.3/10, mb1 4.4/15, mb1mx4.0/37, mbtmp4.3/15, ML3.8/5, MS3.4/6, Ms1 3.4/6, ms1mx3.1/38, Error ellipse: s-maj=25.5km s-min=14.2km az=81.0*

*NEIC **19** 22:37:59.3±1.5, 8°.25S±0°.05×125°.06E±0°.07, h10^{km}±1^{km}, mb4.6/30, Error ellipse: s-maj=11.1km s-min=8.5km az=85.0*

*DJA **19** 22:38:00.4±0.4, 8°S±2°×12°5E±°, h10^{km}, M4.6/12, mb4.7/7, mB5.1/3, MLv4.5/12, Mw(mB)4.5/3*

ISC 19 22:37:58.7±0.4**, 8°.35S**±0°.04×**125°.00E**±0°.05**, h10^{km}, n102, σ2^{s}.01**/102**, mb4.7**/31**, MS4.2**/5**, 1C, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.57	207	P	Pg	22 38 30.1	+1.1
SOEI	Soe	1.57	207		Pb	22 38 28.6	+0.6
SOEI	Soe	1.57	207	P	Pg	22 38 30.0	+1.1
BATI	Baumata	2.27	216	Pn	Pb	22 38 40.1	+0.3
	21nm,0.3s,baz=124,slow=1.2,SNR=12						
BATI				LR	LR	22 39 42.1	
	comp=Z,989nm,20.7s,baz=41,slow=42						
BATI	Baumata	2.27	216	P	Pb	22 38 39.8	0.0
MMRI	Maumere	2.75	264	P	Pb	22 38 47.0	-1.0
MMRI	Maumere	2.75	264	Pn	Pn	22 38 44.4	+1.5
MMRI	Maumere	2.75	264	P	Pb	22 38 46.4	-1.6
EDFI	Ende, Flores	3.30	263	P	Pn	22 38 54.0	+3.4
WBSI	Waikabubak, Su	5.69	257	P	Pn	22 39 26.4	+3.0
	0.6nm114nm,0.9s						
BKSI	Bulukumba	5.70	302	P	Pn	22 39 25.4	+1.9
	0.1nm29nm,1.4s						
KAPI	Kappang	6.18	302	Pn	Pn	22 39 33.2	+3.1
	0.6nm,0.3s,baz=110,slow=15,SNR=1.9						
KAPI				Sn	Sn	22 40 35.4	-5.5
	0.8nm,0.3s,baz=58,slow=18,SNR=1.1						
KAPI	Kappang	6.18	302		Pn	22 39 30.7	+0.6
KAPI	Kappang	6.18	302	P	Pn	22 39 34.4	+4.3
BNSI	Bone	6.25	309	P	Pn	22 39 34.8	+3.7
	0.2nm70nm,1.1s						
SANI	Sanana	6.34	9	P	Pn	22 39 32.6	+0.3
SANI	Sanana	6.34	9	P	Pn	22 39 32.6	+0.3
SPSI	Sidrap Palu	6.79	310	P	Pn	22 39 39.6	+1.2
	0.1nm22nm,0.9s						
DRS	Darwin Rock St	7.08	125	P	Pn	22 39 43.3	+0.9
PLAI	Plampang	7.16	266	P	Pn	22 39 47.5	+3.9
	0.4nm125nm,0.8s						
PLAI	Plampang	7.16	266	P	Pn	22 39 49.5	+5.9
MTN	Manton Dam	7.50	127	Pn	Pn	22 39 48.9	+0.7
MTN	Manton Dam	7.50	127	P	Pn	22 39 49.4	+1.2
LUWI	Luwuk	7.59	343	P	Pn	22 39 50.4	+0.9
LUWI	Luwuk	7.59	343		Pn	22 39 48.7	-0.8
LUWI	Luwuk	7.59	343	P	Pn	22 39 50.0	+0.5
KNRA	Kununurra	8.16	154	Pn	Pn	22 39 58.1	+0.9
KNRA	Kununurra	8.16	154	P	Pn	22 39 58.7	+1.4
KDU	Kakadu	8.52	121	P	Pn	22 40 03.3	+1.1
FAKI	Fak Fak	9.01	54	Pn	Pn	22 40 07.9	-1.0
FAKI	Fak Fak	9.01	54	P	Pn	22 40 10.6	+1.7
SIJI	Sorong	9.70	40	Pn	Pn	22 40 15.0	-3.5
	0.5nm,0.3s,baz=165,slow=20,SNR=1.5						
SIJI				LR	LR	22 43 55.6	
	comp=Z,195nm,18.9s,baz=236,slow=38						
FITZ	Fitzroy Crossi	9.71	176	Pn	Pn	22 40 18.9	+0.4
	1.5nm,0.3s,baz=2.4,slow=11,SNR=28						
FITZ				Sn	Sn	22 42 00.4	-7.4
	2.1nm,0.3s,baz=351,slow=3.7,SNR=4.5						
FITZ				LR	LR	22 45 07.3	
	comp=Z,128nm,19.2s,baz=2.5,slow=44						
TOLI2	Tolitoli	10.30	336	Pn	Pn	22 40 27.0	+0.3
TOLI2	Tolitoli	10.30	336	P	Pn	22 40 29.9	+3.2
JAGI	Jajag, Banyuwa	10.73	269	Pn	Pn	22 40 33.8	+1.2
PSA00	Pilbara Seismi	14.05	200	Pn	Pn	22 41 17.6	-0.5
PSA00	Pilbara Seismi	14.05	200	Pn	Pn	22 41 17.8	-0.2
UGM	Wanagama	14.34	271	Pn	Pn	22 41 21.7	-0.3
WRA	Warramunga Arr	14.64	143	Pn	Pn	22 41 22.2	-4.0
	1.8nm,0.3s,baz=321,slow=13,SNR=55						
WRA				Sn	Sn	22 44 01.4	-7.3
	0.9nm,0.3s,baz=321,slow=19,SNR=7.3						
WRA	Warramunga Arr	14.64	143		Pn	22 41 22.8	-3.4
WRAB	Tennant Creek	14.64	143	Pn	Pn	22 41 22.5	-3.6
AS31	Alice Springs	17.45	152	Pn	Pn	22 42 00.9	-1.6
ASAR	Alice Springs	17.45	152	P	Pn	22 42 01.4	-1.0
	0.7nm,0.3s,baz=324,slow=11,SNR=30						
ASAR				S	Sn	22 45 11.7	-5.3
	0.4nm,0.3s,baz=312,slow=20,SNR=4.2						
ASAR				LR	LR	22 49 39.3	
	comp=Z,154nm,18.0s,baz=326,slow=40						
ASAR	Alice Springs	17.45	152		Pn	22 42 01.1	-1.4
COEN	Coen	18.67	109	P	P	22 42 15.8	-1.4
PMG	Port Moresby	21.92	94	P	P	22 42 53.2	+0.8
	30nm,0.8s,baz=271,slow=7.2,SNR=2.5						
PMG	Port Moresby	21.92	94	P	P	22 42 53.1	+0.8
PMG				IAmb	IAmb	22 42 58.6	
	comp=Z,35nm,0.9s						
CTAO	Charters Tower	23.64	122	P	P	22 43 10.2	-0.2
CTAO				IAmb	IAmb	22 43 14.0	
	comp=Z,15nm,1.0s						
BBOO	Buckleboo	26.41	159	P	P	22 43 35.4	-0.2
STKA	Stephens Creek	28.04	149	P	P	22 43 50.8	+0.5
	comp=Z,1.3nm,0.6s,baz=302,slow=10,SNR=4.7						
STKA				LR	LR	22 55 04.7	
	comp=Z,70nm,19.3s,baz=344,slow=37						
STKA	Stephens Creek	28.04	149	P	P	22 43 50.1	-0.1
CMAR	Chiang Mai Arr	37.02	316	P	P	22 45 09.8	+0.8
	comp=Z,1.3nm,0.4s,baz=145,slow=6.9,SNR=13						
CMAR				LR	LR	23 01 45.9	
	comp=Z,39nm,21.4s,baz=115,slow=39						
CMAR	Chiang Mai Arr	37.02	316	P	P	22 45 08.7	-0.3
CHTO	Chiang Mai	37.27	317	P	P	22 45 10.9	-0.2
CHTO				IAmb	IAmb	22 45 14.0	
	comp=Z,11nm,1.4s						
KMI	Kunming	39.72	327	⇑P	P	22 45 33.4	+1.6
KMI				pmax	pmax		
	comp=Z,11nm,1.5s						
KMI				LR	LR		
	comp=N,140nm,10.2s						
KMI				LR	LR		
	comp=E,170nm,10.6s						
KMI				LR	LR		
	comp=Z,170nm,11.9s						
NJ2	Nanjing	40.60	352	*e*P	P	22 45 40.8	+2.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
JHS	Saijyo	43.79	10	P	P	22 46 05.4	+0.6
JHS				IAmb	IAmb	22 46 30.5	
	comp=Z,18nm,1.2s						
JWT	Wachi	44.49	12	P	P	22 46 10.3	0.0
MAT	Matsushiro	46.35	15	P	P	22 46 23.8	-1.3
MJAR	Matsushiro Arr	46.35	15	P	P	22 46 24.3	-0.8
	comp=Z,6.7nm,0.9s,baz=188,slow=8.4,SNR=14						
MJAR	Matsushiro Arr	46.35	15	P	P	22 46 24.3	-0.8
SHL	Shillong	46.64	317	P	P	22 46 26.5	-1.3
SHL				IAmb	IAmb	22 46 27.6	
	comp=Z,7.4nm,1.1s						
JMM	Marumori	48.29	17	P	P	22 46 40.5	+0.4
LZH	Lanzhou	48.48	337	*e*P	P	22 46 42.9	+1.0
LZH				sP	sP	22 46 50.0	+3.4
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LSA	Lhasa	49.92	321	P	P	22 46 53.5	+0.1
LSA				pmax	pmax		
	comp=Z,35nm,1.6s						
LSA	Lhasa	49.92	321	P	P	22 46 53.0	-0.4
LSA				IAmb	IAmb	22 46 54.9	
	comp=Z,7.7nm,0.9s						
HHC	Hu-ho-hao-te	50.50	347	*e*P	P	22 46 59.6	+2.4
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,5.0s						
H08S2	Diego Garcia H	51.97	267	T	T	23 43 22.0	
	baz=95,slow=76,SNR=13						
H08S3	Diego Garcia H	51.98	267	T	T	23 43 23.2	
	baz=95,slow=76,SNR=12						
H08S1	Diego Carcia H	51.99	267	T	T	23 43 26.4	
	baz=95,slow=76,SNR=12						
USA0B	Ussuriysk Arra	52.69	6	P	P	22 47 12.7	-0.6

USA0B				IAmb	IAmb	22 47 14.1	
	comp=Z,9.2nm,1.1s						
USRK	Ussuriysk Ar.	52.69	6	P	P	22 47 13.3	+0.1
	comp=Z,3.4nm,0.9s,baz=192,slow=7.2,SNR=8.0						
USRK	Ussuriysk Ar.	52.69	6	P	P	22 47 12.9	-0.4
MDJ	Mudanjiang	52.88	4	P	P	22 47 14.7	-0.1
GTA	Gaotai	52.95	336	eP	P	22 47 16.3	+0.7
GTA				pP	sP	22 47 21.8	+1.5
GTA				sP	pP	22 47 25.4	+6.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,78nm,5.1s						
GTA				LR	LR		
	comp=N,170nm,12.4s						
GTA				LR	LR		
	comp=E,160nm,13.1s						
GTA				LR	LR		
	comp=Z,170nm,14.2s						
THZ	Tophouse	53.70	136	P	P	22 47 22.3	+1.3
BKZ	Black Stump Fm	55.27	132	P	P	22 47 33.2	+0.7
BKZ				IAmb	IAmb	22 47 36.5	
	comp=Z,10nm,1.2s						
HIA	Hailar	57.56	356	P	P	22 47 47.9	-0.6
HIA				IAmb	IAmb	22 47 50.5	
	comp=Z,14nm,1.5s						
ULN	Ulaanbaatar	58.18	346	P	P	22 47 52.4	-0.7
ULN				IAmb	IAmb	22 47 54.2	
	comp=Z,10nm,1.3s						
SONM	Songino Array	58.32	345	P	P	22 47 53.9	-0.1
	comp=Z,3.3nm,1.2s,baz=162,slow=7.9,SNR=12						
SONM	Songino Array	58.32	345	P	P	22 47 53.1	-0.8
SONM				IAmb	IAmb	22 47 55.1	
	comp=Z,5.2nm,1.3s						
WMQ	Urumqi	61.96	330	eP	P	22 48 17.9	-1.1
WMQ				pmax	pmax		
	comp=Z,11nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,240nm,3.9s						
WMQ				LR	LR		
	comp=N,250nm,28.8s						
WMQ				LR	LR		
	comp=E,380nm,26.5s						
WMQ				LR	LR		
	comp=Z,140nm,26.5s						
MK31	Makanchi Array	66.75	330	P	P	22 48 49.5	-0.8
MK31				IAmb	IAmb	22 48 50.5	
	comp=Z,5.3nm,0.8s						
MKAR	Makanchi Array	66.75	330	P	P	22 48 49.8	-0.4
	comp=Z,4.2nm,0.7s,baz=130,slow=7.7,SNR=50						
MAKZ	Makanchi	66.92	329	P	P	22 48 50.7	-0.6
MAKZ				IAmb	IAmb	22 48 51.4	
	comp=Z,5.4nm,0.9s						
PETK	Petropavlovsk-	67.24	21	P	P	22 48 53.1	-0.1
	comp=Z,4.0nm,0.8s,baz=205,slow=6.6,SNR=6.2						
AAK	Ala-Archa	68.47	322	P	P	22 49 01.9	+0.5
ZAA0	Zalesovo Array	70.70	336	P	P	22 49 12.8	-1.9
ZALV	Zalesovo Beam	70.70	336	P	P	22 49 13.1	-1.6
	comp=Z,6.2nm,0.9s,baz=122,slow=4.2,SNR=20						
ZALV	Zalesovo Beam	70.70	336	P	P	22 49 12.8	-1.9
KURK	Kurchatov	71.18	331	P	P	22 49 16.8	-0.9
VNDA	Vanda	71.75	172	P	P	22 49 23.3	+2.5
	comp=Z,1.0nm,0.7s,baz=324,slow=6.9,SNR=6.1						
VNDA	Vanda	71.75	172	P	P	22 49 22.6	+1.8
SEY	Seymchan	74.12	13	P	P	22 49 34.4	-0.5
	comp=Z,1.9nm,0.6s,baz=173,slow=22,SNR=2.2						
TIXI	Tiksi	79.87	1	P	P	22 50 05.7	-1.5
TIXI				IAmb	IAmb	22 50 07.4	
	comp=Z,8.4nm,1.4s						
ABKAR	Akbulak array	80.54	323	P	P	22 50 09.9	-1.3
ABKAR	Akbulak array	80.54	323	P	P	22 50 10.2	-1.0
ABKAR				IAmb	IAmb	22 50 32.3	
	comp=Z,2.9nm,1.4s						
QSPA	South Pole Qui	81.64	180	P	P	22 50 18.2	+1.2
QSPA				IAmb	IAmb	22 50 22.9	
	comp=Z,6.8nm,1.2s						
RAYN	Ar Rayn	83.78	295	P	P	22 50 28.9	0.0
RAYN				IAmb	IAmb	22 50 32.8	
	comp=Z,2.3nm,0.8s						
CPUP	Villa Florida	145.45	176	PKPbc	PKPab	22 57 39.4	+1.4
	comp=Z,1.1nm,0.4s,baz=117,slow=2.3,SNR=3.3						
LPAZ	La Paz	152.28	152	PKPbc	PKiKP	22 57 56.9	-0.1
	comp=Z,2.7nm,1.2s,baz=144,slow=7.0,SNR=4.8						

IDC 19 23:04:29.5±2.4**, 26°.49N**×**140°.62E, h0^{km}, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.4**/46**, mbtmp3.6**/5**, ML2.2**/1**, Error ellipse: s-maj=123.7km s-min=23.9km az=80.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	10.23	349	Pn	Pn	23 06 59.1	+1.5
	0.0nm,0.3s,baz=147,slow=13,SNR=1.9						
WRA	Warramunga Arr	46.56	188	P	P	23 12 58.8	-0.3
	2.2nm,0.6s,baz=11,slow=7.4,SNR=18						
MKAR	Makanchi Array	49.78	310	P	P	23 13 23.9	-0.1
	0.1nm,0.4s,baz=92,slow=9.6,SNR=1.5						
ASAR	Alice Springs	50.28	188	P	P	23 13 28.3	+0.5
	0.5nm,0.8s,baz=8.8,slow=6.7,SNR=2.5						
FINES	FINESS Array B	77.86	333	P	P	23 16 28.2	-0.5
	0.9nm,0.7s,baz=64,slow=6.3,SNR=5.0						

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*JMA **19** 23:13:54.7±0.2, 33°.05N×137°.24E, h436^{km}, M2.9*

*IDC **19** 23:14:01.0±1.5, 33°.29N×137°.17E, h381^{km}±15^{km}, mb2.7/5, mb1 2.8/7, mb1mx2.5/48, mbtmp3.4/7, Error ellipse: s-maj=29.6km s-min=22.7km az=74.0*

ISC 19 23:14:01.3±1.0**, 33°.3N**±0°.1×**137°.26E**±0°.09**, h400^{km}, n19, σ2.^{s}15**/21**, mb2.9**/5**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO2	TONANKAI O.B.S	0.48	336	P	Pn	23 14 49.4	-1.2
TTO1	TONANKAI O.B.S	0.51	309	P	Pn	23 14 49.0	-1.7
JIE	Ise	1.18	337	P	Pn	23 14 51.0	-2.0
JTNC	Tanabenakahech	1.47	291	P	Pn	23 14 51.4	-2.9
JWY	Kouya	1.67	304	P	Pn	23 14 53.0	-2.4
JAI	Aioi	2.40	283	P	Pn	23 14 57.2	-2.7
JOD2	Odawara 2	2.48	37	P	Pn	23 14 59.4	-1.0
JWT	Wachi	2.51	323	P	Pn	23 14 58.3	-2.3
JMN	Monobe	2.86	280	P	Pn	23 15 00.9	-2.5
JRY	Ryogami san	3.03	26	P	Pn	23 15 03.8	-0.9
MAT	Matsushiro	3.33	13	P	Pn	23 15 06.2	-1.0
MJAR	Matsushiro Arr	3.33	13	P	Pn	23 15 05.8	-1.3
	0.3nm,0.3s,baz=181,slow=9.1,SNR=18						
MJAR				S	S	23 15 58.4	-2.3
	0.0nm,0.3s,baz=194,slow=18,SNR=2.3						
BSO1	Boso 1	3.37	65	P	Pn	23 15 04.9	-2.0
BSO1				S	S	23 15 56.4	-3.9
KSRS	Korea Array	8.68	301	P	Pn	23 16 02.6	-1.4
	0.3nm,0.3s,baz=116,slow=11,SNR=5.6						
SONM	Songino Array	27.36	311	P	P	23 19 13.8	+2.0
	0.2nm,0.4s,baz=114,slow=10,SNR=2.0						
MKAR	Makanchi Array	43.34	305	P	P	23 21 26.4	+0.6
	0.1nm,0.5s,baz=96,slow=8.2,SNR=2.2						
WRA	Warramunga Arr	53.02	183	P	P	23 22 40.1	+1.1
	1.3nm,1.2s,baz=360,slow=7.5,SNR=4.7						
YKA	Yellowknife Ar	68.72	28	P	P	23 24 25.2	+2.3
	0.1nm,0.4s,baz=303,slow=6.4,SNR=2.5						
FINES	FINESS Array B	70.50	332	P	P	23 24 34.1	+0.5
	1.1nm,0.8s,baz=65,slow=5.0,SNR=7.0						

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*IDC **19** 23:30:14.8±1.3, 6°.55N×125°.95E, h71^{km}±12^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.4/36, mbtmp3.9/6, Error ellipse: s-maj=62.4km s-min=18.1km az=72.0*

*NEIC **19** 23:30:15.7±1.3, 6°.6N±0°.1×125°.9E±0°.2, h76^{km}±8^{km}, mb4.3/12, Error ellipse: s-maj=26.1km s-min=12.3km az=70.0*

*MAN **19** 23:30:17.2, 6°.70N×125°.92E, h22^{km}, mb4.7, ML3.6, MS3.5*

ISC 19 23:30:17.1±0.6**, 6°.53N**±0°.06×**125°.7E**±0°.1**, h100^{km}, n30, σ1.^{s}61**/32**, mb4.1**/10**, 3C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.55	350	P	Pn	23 30 30.4	-2.9
	83nm,0.3s,baz=106,slow=1.8,SNR=9.1						
DAV				S	Sn	23 30 41.2	-4.2
	294nm,0.3s,baz=112,slow=7.6,SNR=9.8						
DAV	Davao City (W)	0.55	350		Pn	23 30 29.4	-3.9
MATI	Mati	0.71	54 ⇑	eP	Pn	23 30 27.2	-7.5
MATI				eS	Sn	23 30 36.2	-12
KCP	Kidapawan	0.75	310 ⇓	iP	Pn	23 30 33.6	-1.5
KCP				iS	Sn	23 30 47.1	-1.5
GSPH	General Santos	0.84	239 ⇑	eP	Pn	23 30 33.1	-2.9
GSPH				iS	Sn	23 30 47.7	-2.5
GLSP	General Luna,	3.27	8 ⇑	eP	Pn	23 31 05.8	-0.6
GLSP				iS	Sn	23 31 42.0	-2.5
TOLI2	Tolitoli	7.26	222	Pn	Pn	23 31 59.4	-1.2
LUWI	Luwuk	8.06	201	Pn	Pn	23 32 12.7	+1.2
MTN	Manton Dam	19.99	164	P	P	23 34 41.5	-0.4
MTN				IAmb	IAmb	23 35 02.1	
	comp=Z,33nm,1.2s						
KNRA	Kununurra	22.27	172	P	P	23 35 06.5	+0.4
KNRA				IAmb	IAmb	23 35 32.8	
	comp=Z,33nm,1.4s						
WB0	Warramunga Arr	27.50	162	P	P	23 35 55.1	+0.8
WB0				IAmb	IAmb	23 35 56.7	
	comp=Z,8.7nm,1.1s						
WRA	Warramunga Arr	27.65	162	P	P	23 35 55.4	-0.3
	comp=Z,1.0nm,1.1s,baz=337,slow=11,SNR=2.2						
WRA	Warramunga Arr	27.65	162	P	P	23 35 55.4	-0.3
AS31	Alice Springs	31.07	165	P	P	23 36 25.5	-0.4
ASAR	Alice Springs	31.07	165	P	P	23 36 25.8	-0.1
	comp=Z,0.5nm,0.4s,baz=340,slow=7.4,SNR=14						
ASAR	Alice Springs	31.07	165	P	P	23 36 25.2	-0.7
BBOO	Buckleboo	40.35	166	P	P	23 37 45.4	+0.4
CAN	Canberra	47.07	154	P	P	23 38 37.7	-1.2
MK31	Makanchi Array	54.68	325	P	P	23 39 37.6	+1.7
MKAR	Makanchi Array	54.68	325	P	P	23 39 37.5	+1.7
	comp=Z,1.0nm,0.5s,baz=117,slow=6.9,SNR=26						
MKAR	Makanchi Array	54.68	325	P	P	23 39 37.1	+1.3
KURK	Kurchatov	58.84	327	P	P	23 40 06.3	+1.2
KURK				IAmb	IAmb	23 40 06.9	
	comp=Z,1.4nm,0.7s						
KKAR	Karatay Array	60.49	316	P	P	23 40 18.1	+1.4
TIXI	Tiksi	65.08	1	P	P	23 40 47.3	+0.7
NRIK	Noril'sk	67.48	346	P	P	23 41 03.4	+1.4
	comp=Z,1.7nm,0.5s,baz=148,slow=9.5,SNR=4.8						
NRIK	Noril'sk	67.48	346	P	P	23 41 03.2	+1.2
NRIK				IAmb	IAmb	23 41 04.0	
	comp=Z,1.9nm,0.7s						
ABKAR	Akbulak array	69.34	320	P	P	23 41 14.2	+0.3
ABKAR	Akbulak array	69.34	320	P	P	23 41 14.5	+0.6
ABKAR				IAmb	IAmb	23 41 36.4	
	comp=Z,3.9nm,1.4s						
ILAR	Eielson Array	83.05	26	P	P	23 42 31.1	-0.2
	comp=Z,0.7nm,0.8s,baz=238,slow=5.0,SNR=7.9						
YKA	Yellowknife Ar	97.39	24	P	P	23 43 40.3	+1.2
	comp=Z,0.2nm,0.9s,baz=299,slow=4.6,SNR=4.5						

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*IDC **19** 23:46:52.0±1.9, 25°.41S×179°.64E, h509^{km}±17^{km}, mb3.5/6, mb1 3.7/9, mb1mx3.4/28, mbtmp4.4/9, Error ellipse: s-maj=29.9km s-min=17.9km az=152.0*

*NEIC **19** 23:46:53.0±1.3, 25°.4S±0°.1×179°.7E±0°.2, h516^{km}±9^{km}, mb4.3/22, Error ellipse: s-maj=19.8km s-min=19.0km az=117.0*

ISC 19 23:46:51.9±0.6**, 25°.39S**±0°.08×**179°.63E**±0°.09**, h507^{km}, n50, σ0.^{s}91**/52**, mb4.2**/18**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	7.76	349	P	P	23 48 45.8	-0.4
	1.5nm,0.3s,baz=118,slow=22,SNR=7.2						
MARNC	Mare, Loyalty	11.33	288	P	P	23 49 25.2	+1.7
PINNC	Pines Island,	11.47	281	P	P	23 49 26.8	+1.9
DZM	Mont Dzumac	12.52	283	P	P	23 49 37.9	+1.8
	1.2nm,0.3s,baz=150,slow=5.8,SNR=8.2						
DZM	Mont Dzumac	12.52	283	P	P	23 49 37.7	+1.6
URZ	Urewera	13.01	189	P	P	23 49 40.7	-0.2
	0.6nm,0.3s,baz=127,slow=23,SNR=1.8						
URZ				S	S	23 51 59.9	-0.3
	0.5nm,0.3s,baz=299,slow=23,SNR=1.8						
URZ	Urewera	13.01	189	P	P	23 49 41.0	+0.1
BKZ	Black Stump Fm	13.99	190	P	P	23 49 51.7	+0.4
ARMA	Armidale	25.21	252	P	P	23 51 38.6	+1.6
ARMA				IAmb	IAmb	23 52 02.7	
	comp=Z,15nm,1.4s						
EIDS	Eidsvold	25.77	264	P	P	23 51 42.4	+0.5
EIDS				IAmb	IAmb	23 51 46.8	
	comp=Z,8.1nm,1.1s						
CAN	Canberra	28.12	242	P	P	23 52 03.5	+1.0
CAN				IAmb	IAmb	23 52 04.1	
	comp=Z,12nm,1.2s						
CTA	Charters Tower	31.18	273	P	P	23 52 29.7	+0.5
	comp=Z,7.6nm,0.4s,baz=96,slow=12,SNR=13						
CTAO	Charters Tower	31.18	273	P	P	23 52 29.8	+0.6
TOO	Toolangi	31.37	239	P	P	23 52 30.9	+0.2
TOO				IAmb	IAmb	23 52 44.0	
	comp=Z,18nm,1.4s						
STKA	Stephens Creek	33.88	250	P	P	23 52 52.2	+0.3
	comp=Z,1.7nm,0.6s,baz=108,slow=13,SNR=6.2						
STKA	Stephens Creek	33.88	250	P	P	23 52 52.1	+0.1
BBOO	Buckleboo	38.57	249	P	P	23 53 30.3	-0.5
AS31	Alice Springs	41.48	262	P	P	23 53 54.2	-0.1
ASAR	Alice Springs	41.48	262	P	P	23 53 54.2	-0.2
	comp=Z,2.8nm,0.5s,baz=92,slow=6.9,SNR=54						
ASAR				S	S	23 59 30.9	-2.1
	comp=Z,0.6nm,0.7s,baz=96,slow=14,SNR=6.4						
ASAR	Alice Springs	41.48	262	P	P	23 53 53.9	-0.4
WR0	Warramunga Arr	41.80	268	P	P	23 53 56.0	-1.0
WR0				IAmb	IAmb	23 53 56.6	
	comp=Z,5.0nm,0.6s						
WRA	Warramunga Arr	41.99	268	P	P	23 53 57.5	-0.9
	comp=Z,3.8nm,0.3s,baz=100,slow=6.8,SNR=145						
WRA	Warramunga Arr	41.99	268	P	P	23 53 57.9	-0.6
FORT	Forrest	45.49	251	P	P	23 54 24.2	-1.2
MTN	Manton Dam	47.25	276	P	P	23 54 38.9	-0.1
KNRA	Kununurra	48.36	271	P	P	23 54 47.1	-0.2
VNDA	Vanda	52.87	185	P	P	23 55 20.5	+1.1
PSA00	Pilbara Seismi	54.58	261	P	P	23 55 31.3	-1.1
PSA00				IAmb	IAmb	23 55 38.9	
	comp=Z,17nm,1.5s						
QSPA	South Pole Qui	64.70	180	P	P	23 56 40.0	+0.7
QSPA				IAmb	IAmb	23 56 40.8	
	comp=Z,3.3nm,0.7s						
SNAA	Sanae	83.19	179	P	P	23 58 23.3	-0.8
SNAA	Sanae	83.19	179	P	P	23 58 23.2	-0.9
VNA3	Neumayer Olymp	83.41	177	P	P	23 58 24.8	-0.4
VNA2	Neumayer--Watz	83.83	178	P	P	23 58 27.0	-0.2
	baz=326,slow=14						
SLBS	Sierra La Lagu	83.83	60	P	P	23 58 28.4	+0.3
SLBS				IAmb	IAmb	23 58 44.9	
	comp=Z,14nm,1.5s						
VNA1	Neumayer--Stat	84.07	177	P	P	23 58 28.5	+0.1
NVAR	Mina Array Bea	86.06	44	P	P	23 58 38.8	-0.1
	comp=Z,1.0nm,0.6s,baz=224,slow=8.1,SNR=6.0						
KVN	Kaiserville	86.55	44	P	P	23 58 40.7	-0.5
KVN				IAmb	IAmb	23 58 41.2	
	comp=Z,1.3nm,0.7s						
K05A	Summer Lake	87.12	39	P	P	23 58 43.8	+0.1
K05A				IAmb	IAmb	23 58 54.8	
	comp=Z,14nm,1.5s						
PINE	Pine Mountain	87.76	39	P	P	23 58 46.6	-0.1
PINE				IAmb	IAmb	23 59 11.5	
	comp=Z,5.4nm,1.1s						
TMUT	Trail Mountain	91.11	46	P	P	23 59 03.0	+0.4
TMUT				IAmb	IAmb	23 59 03.5	
	comp=Z,4.0nm,0.7s						
TXAR	Lajitas Array	91.50	58	P	P	23 59 04.6	+0.3
	comp=Z,0.9nm,0.8s,baz=213,slow=6.3,SNR=9.4						
TXAR	Lajitas Array	91.50	58	P	P	23 59 04.2	-0.1
ARCES	ARCESS Array B	133.27	348	SKPbc	SKPbc	00 07 48.4	-1.2
	comp=Z,12nm,1.1s,baz=340,slow=6.7,SNR=5.5						
FINES	FINESS Array B	139.74	341	PKP	PKPdf	00 05 22.3	+1.1
	comp=Z,3.2nm,1.0s,baz=42,slow=2.3,SNR=3.9						
FINES				SKPbc	SKPbc	00 08 08.0	-0.9
	comp=Z,4.0nm,0.9s,baz=38,slow=2.5,SNR=9.8						
NB2	NORSAR Subarra	143.49	351	PKP	PKPab	00 05 25.0	-1.3
	comp=Z,0.6nm,0.5s,baz=13,slow=3.2						
NOA	NORSAR Array B	143.49	351	PKhKP	PKPpre	00 05 24.2	
	comp=Z,1.0nm,0.8s,baz=27,slow=2.6,SNR=4.8						
AKASG	Malin Array Be	146.02	326	PKPbc	PKPdf	00 05 33.6	+1.1
	comp=Z,0.4nm,0.5s,baz=74,slow=1.9,SNR=1.7						
BRTR	Keskin Array B	148.18	305	PKPbc	PKPbc	00 05 39.3	-1.5
	comp=Z,0.4nm,0.8s,baz=124,slow=0.5,SNR=2.5						
BRTR				PKPab	PKPab	00 05 45.5	-0.1
	comp=Z,0.4nm,0.7s,baz=127,slow=3.3,SNR=3.8						
BRTR	Keskin Array B	148.18	305		PKPbc	00 05 39.5	-1.2
TORD	Torodi Ar. Bea	167.67	189	PKPab	PKPab	00 07 09.0	-0.9
	comp=Z,0.4nm,0.6s,baz=184,slow=4.5,SNR=2.8						

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*IDC **20** 00:08:29.4±0.8, 9°.19S×72°.63W, h0^{km}, mb3.9/10, mb1 4.2/15, mb1mx4.1/37, mbtmp4.1/15, ML4.2/5, MS2.7/4, Ms1 2.8/4, ms1mx2.6/36, Error ellipse: s-maj=25.8km s-min=15.8km az=36.0*

*NEIC **20** 00:08:31.6±2.2, 9°.39S±0°.04×72°.76W±0°.07, h15^{km}±4^{km}, mb4.3/23, Error ellipse: s-maj=10.5km s-min=6.3km az=87.0*

*VAO **20** 00:08:43.3±0.9, 8°.79S×71°.21W, h10^{km}, mbR4.0*

ISC 20 00:08:30.3±0.4**, 9°.33S**±0°.04×**72°.63W**±0°.05**, h10^{km}, n84, σ2.^{s}15**/87**, mb4.1**/13**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	Cruzeiro do Su	1.59	357		Pg	00 09 01.4	+0.5
CZSB					Sg	00 09 25.1	+3.6
NNA	Nana	4.92	237	Pn	Pn	00 09 44.8	+0.5
	9.8nm,0.3s,baz=42,slow=13,SNR=30						
NNA				Sn	Sn	00 10 38.7	-2.7
	35nm,0.3s,baz=212,slow=13,SNR=7.9						
NNA				Lg	Lg	00 10 58.2	
	36nm,0.3s,baz=275,slow=18,SNR=3.9						
NNA				LR	LR	00 12 10.9	
	comp=Z,26nm,20.4s,baz=127,slow=44						
NNA	Nana	4.92	237		Pn	00 09 43.8	-0.6
NNA				Sn	Sn	00 10 38.5	-2.9
TBTG	Tabatinga, AM	5.78	28		Pn	00 10 00.4	+4.2
ATAH	Atahualpa	6.11	290	Pn	Pn	00 10 01.8	+0.7
	8.8nm,0.3s,baz=111,slow=14,SNR=47						
ATAH				Sn	Sn	00 11 08.6	-2.8
	7.1nm,0.3s,baz=109,slow=20,SNR=5.4						
ATAH				Lg	Lg	00 11 37.2	
	6.6nm,0.3s,baz=280,slow=6.0,SNR=5.2						
ATAH				LR	LR	00 12 43.0	
	comp=Z,108nm,18.0s,baz=144,slow=42						
ETMB	Extrema	6.34	95		Pn	00 10 06.8	+2.8
LPAZ	La Paz	8.19	148	Pn	Pn	00 10 33.4	+3.5
	0.7nm,0.3s,baz=338,slow=11,SNR=12						
LPAZ				Sn	Sn	00 12 05.7	+2.9
	1.1nm,0.3s,baz=175,slow=21,SNR=3.8						
LPAZ				Lg	Lg	00 12 51.4	
	4.1nm,0.3s,baz=154,slow=6.5,SNR=6.5						
LPAZ				LR	LR	00 14 16.3	
	comp=Z,74nm,19.3s,baz=341,slow=42						
LPAZ	La Paz	8.19	148		Pn	00 10 31.2	+1.3
SAML	Samuel	9.33	88		Pn	00 10 47.1	+2.1
PB16	IPOC Station P	9.45	162	Pn	Pn	00 10 49.9	+2.7
PB11	IPOC Station P	10.76	165	Pn	Pn	00 11 06.2	+1.4
OTAV	Otavalo	11.13	328		Pn	00 11 11.1	+1.0
VILB	Vilhena	12.71	108	eP	Pn	00 11 28.8	-2.6
VILB	Vilhena	12.71	108		Pn	00 11 32.8	+1.4
SIV	San Ignacio	13.07	122	Pn	Pn	00 11 36.6	+0.4
	1.7nm,0.3s,baz=296,slow=13,SNR=26						
SIV				Sn	Sn	00 13 57.6	-4.3
	0.8nm,0.3s,baz=205,slow=21,SNR=1.9						
SIV				Lg	Lg	00 15 20.9	
	2.3nm,0.3s,baz=22,slow=21,SNR=9.5						
MACA	Manacapuru-AM	13.36	63	eP	Pn	00 11 32.2	-7.9
MACA	Manacapuru-AM	13.36	63	Pn	Pn	00 11 40.3	+0.2
ROSC	El Rosal	14.17	353	Lg	Lg	00 15 51.6	
	1.7nm,0.3s,baz=39,slow=23,SNR=1.7						
PTLB	Pontes e Lacer	14.51	116	eP	Pn	00 11 55.1	-0.8
PTLB	Pontes e Lacer	14.51	116	Pn	Pn	00 11 56.3	+0.4
PTGA	Pitinga	15.22	57	Pn	Pn	00 12 04.5	-1.1
	1.4nm,0.3s,baz=324,slow=22,SNR=12						
PTGA				Sn	Sn	00 14 51.3	-3.1
	1.9nm,0.3s,baz=330,slow=22,SNR=2.8						
PTGA				Lg	Lg	00 16 32.6	
	1.1nm,0.3s,baz=319,slow=23,SNR=1.6						
PDRB	Porto dos Gac	15.80	100	eP	Pn	00 12 08.7	-4.4
CLDB	Colider	16.64	97	eP	Pn	00 12 19.7	-4.2
BOAV	Boa Vista	16.77	47	eP	Pn	00 12 21.2	-4.2
BOAV	Boa Vista	16.77	47		Pn	00 12 24.3	-1.2
ZARC	Zaragoza, Cauc	16.86	352	Pn	Pn	00 12 27.2	+0.6
NPGB	Novo Progresso	17.24	84	eP	Pn	00 12 25.8	-5.7
OCAC	Ocana	17.46	358	Pn	Pn	00 12 29.8	-4.6
ITTB	Itaituba	17.48	75	eP	Pn	00 12 28.1	-6.3
AC02	Maricunga	17.73	170	Pn	Pn	00 12 37.0	-0.9
SALV	Santo Antonio	17.76	113	eP	Pn	00 12 37.7	-0.3
SDV	Santo Domingo	18.20	6	eP	P	00 12 48.0	+4.2
SDV	Santo Domingo	18.20	6	P	P	00 12 44.7	+0.9
SDV				IAmb	IAmb	00 12 53.7	
	comp=Z,5.5nm,0.5s						
BAUV	El Baul	18.72	14	P	Pn	00 12 50.2	+0.7
BAUV				IAmb	IAmb	00 13 04.9	
	comp=Z,12nm,0.8s						
SJCC	San Jacinto, C	19.27	352	P	P	00 12 55.1	-0.2
SJCC				IAmb	IAmb	00 13 02.0	
	comp=Z,24nm,1.3s						
MALB	Monte Alegre	19.71	69	eP	P	00 12 56.8	-3.4
AQDB	Aquidauana	19.74	126	eP	Pn	00 13 05.0	+3.1
AQDB	Aquidauana	19.74	126	P	P	00 13 00.9	+0.5
BIRV	Birongo	20.66	18	P	Pn	00 13 14.6	+1.7
BIRV				IAmb	IAmb	00 13 18.4	
	comp=Z,13nm,1.0s						
SNDB	Serra Nova Dou	21.13	99	eP	P	00 13 14.4	-1.1
ARAG	Araguaiana, MT	21.28	109	eP	P	00 13 17.8	+0.7
CVTR	Volcan Turrial	22.18	330	P	P	00 13 26.3	-1.0
CVTR				IAmb	IAmb	00 13 31.0	
	comp=Z,21nm,0.8s						
CPUP	Villa Florida	22.28	141	P	P	00 13 29.2	+1.4
	comp=Z,1.5nm,0.6s,baz=2.4,slow=5.8,SNR=3.6						
CPUP	Villa Florida	22.28	141	P	P	00 13 28.6	+0.8
CPUP				IAmb	IAmb	00 13 47.9	
	comp=Z,20nm,1.4s						
MCPB	Macapa, AP	22.33	68	eP	P	00 13 25.4	-3.1
JTS	Las Juntas de	23.03	328	LR	LR	00 22 54.5	
	comp=Z,31nm,20.7s,slow=38						
ITRB	Iturama	23.87	118	eP	P	00 13 47.4	+3.2
PEXB	Peixe	24.06	99	eP	P	00 13 46.1	0.0
SMTB	Santa Maria do	24.73	91	eP	P	00 13 52.8	+0.6
BDFB	Brasilia	24.82	107	P	P	00 13 55.0	+1.9
	comp=Z,3.7nm,0.7s,baz=284,slow=14,SNR=5.7						
BDFB	Brasilia	24.82	107	P	P	00 13 56.1	+3.0
BDFB				IAmb	IAmb	00 14 16.0	
	comp=Z,16nm,1.5s						
IPMB	Ipameri, GO	25.21	113	eP	P	00 13 59.7	+3.1
TMAB	Tom-Au,PA,Br	25.35	76	eP	P	00 13 57.0	-0.8
NBAN	Anadia - AL	35.84	94	eP	P	00 15 31.6	+0.9
TXAR	Lajitas Array	48.71	323	P	P	00 17 15.5	+0.2
	comp=Z,0.7nm,0.5s,baz=150,slow=9.3,SNR=15						
TXAR	Lajitas Array	48.71	323	P	P	00 17 15.4	+0.1
TX32	Lajitas Array	48.71	323	P	P	00 17 15.7	+0.4
P43A	Skaggs, Pawnee	51.18	343	P	P	00 17 33.3	-0.5
B35A	Bob, Littlefor	60.39	344	P	P	00 18 38.8	-0.9
PD31	Pinedale Array	61.83	330	P	P	00 18 49.6	-0.4
PD31				IAmb	IAmb	00 19 02.8	
	comp=Z,3.4nm,1.4s						
PDAR	Pinedale Array	61.83	330	P	P	00 18 49.5	-0.4
	comp=Z,0.4nm,0.5s,baz=124,slow=8.6,SNR=4.9						
PDAR	Pinedale Array	61.83	330	P	P	00 18 49.1	-0.8
ULM	Lac du Bonnet	62.70	343	P	P	00 18 54.6	-0.7
	comp=Z,3.0nm,0.5s,baz=158,slow=6.4,SNR=4.3						
ULM	Lac du Bonnet	62.70	343	P	P	00 18 54.5	-0.8
NVAR	Mina Array Bea	63.77	321	P	P	00 19 03.0	+0.1
	comp=Z,0.3nm,0.4s,baz=117,slow=9.2,SNR=2.0						
YHL	Hebgen Lake	64.16	330	P	P	00 19 06.4	+0.9
EDM	Edmonton	71.27	336	P	P	00 19 49.5	-0.4
VNA3	Neumayer Olymp	72.69	162	P	P	00 19 58.5	+0.4
VNA2	Neumayer--Watz	73.26	162	P	P	00 20 02.0	+0.5
	baz=291,slow=6.5						
SNAA	Sanae	74.89	162	P	P	00 20 11.7	+0.6
SNAA	Sanae	74.89	162	P	P	00 20 11.3	+0.2
SNAA				IAmb	IAmb	00 20 16.3	
	comp=Z,4.6nm,1.0s						
TORD	Torodi Ar. Bea	77.09	74	P	P	00 20 24.6	0.0
	comp=Z,1.0nm,0.7s,baz=262,slow=4.9,SNR=6.1						
TORD	Torodi Ar. Bea	77.09	74	P	P	00 20 24.7	0.0
TORD				IAmb	IAmb	00 20 33.3	
	comp=Z,1.5nm,0.9s						
YKA	Yellowknife Ar	78.58	342	P	P	00 20 31.9	+0.1
	comp=Z,1.0nm,0.6s,baz=141,slow=5.6,SNR=14						
YKA	Yellowknife Ar	78.58	342	P	P	00 20 31.2	-0.6
ESDC	Sonseca Array	79.94	47	P	P	00 20 40.2	+0.3
QSPA	South Pole Qui	80.79	180	P	P	00 20 44.5	+0.3
QSPA				IAmb	IAmb	00 21 02.7	
	comp=Z,7.5nm,1.5s						
INK	Inuvik	88.34	341	P	P	00 21 21.8	-0.1
	comp=Z,1.5nm,0.8s,baz=167,slow=3.2,SNR=3.5						
INK	Inuvik	88.34	341	P	P	00 21 22.3	+0.4
INK				IAmb	IAmb	00 21 35.8	
	comp=Z,4.0nm,1.2s						
ILAR	Eielson Array	91.76	336	P	P	00 21 38.1	+0.1
	comp=Z,0.2nm,0.7s,baz=145,slow=3.3,SNR=4.3						
ILAR	Eielson Array	91.76	336	P	P	00 21 38.5	+0.5
WRA	Warramunga Arr	140.62	222	PKP	PKPdf	00 28 00.6	-0.6
	comp=Z,0.8nm,0.9s,baz=131,slow=2.0,SNR=2.5						

SONM	Songino Array	141.61	1	PKP	PKPdf	00 28 03.1	+0.8
	comp=Z,0.2nm,0.4s,baz=333,slow=1.6,SNR=2.2						
KSRS	Korea Array	146.40	330	PKPbc	PKPbc	00 28 11.9	-0.1
	comp=Z,1.1nm,0.6s,baz=32,slow=3.9,SNR=5.3						

DJA **20** *00:08:56.1±0.4, 9°S±3°×10°5E±°, h10^{km}, M4.5/11, mb4.9/1, MLv4.4/11*

NEIC **20** *00:08:57.9±1.5, 8°.88S±0°.06×105°.01E±0°.10, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=16.5km s-min=9.3km az=259.0*

IDC **20** *00:08:57.6±1.2, 8°.68S×105°.01E, h0^{km}, mb3.9/8, mb1 4.0/9, mb1mx3.5/56, mbtmp3.9/9, ML4.3/1, MS2.9/2, Ms1 2.9/2, ms1mx2.7/47, Error ellipse: s-maj=41.8km s-min=18.0km az=47.0*

ISC 20 00:08:58.1±0.6**, 8°.67S**±0°.05×**105°.20E**±0°.06**, h10**^{km}**, n43,** σ**2^{s}06**/46**, mb4.3**/12**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XMIS	Christmas Isla	1.85	166	Pn	Pn	00 09 27.5	-2.4
XMIS					Sn	00 09 47.4	-6.1
CGJI	Cibinong	2.10	13	P	Pn	00 09 32.9	-0.4
SKJI	Sukabumi	2.13	39	P	Pn	00 09 33.0	-0.7
SKJI				S	Sn	00 09 57.4	-2.9
CNJI	Cibinong	2.34	55	P	Pn	00 09 36.0	-0.6
CNJI				S	Sn	00 10 01.6	-3.9
DBJI	Dramaga	2.60	36	P	Pn	00 09 39.9	-0.4
SBJI	Serang	2.70	20	P	Pg	00 09 59.9	+10
CBJI	Citeko	2.77	36	P	Pn	00 09 40.1	-2.4
LEM	Lembang	3.02	53	Pn	Pb	00 09 48.8	-3.2
	34nm,0.3s,baz=325,slow=9.2,SNR=30						
LEM				Sn	Sn	00 10 21.6	-0.8
	46nm,0.3s,baz=178,slow=21,SNR=15						
LEM				LR	LR	00 11 22.0	
	comp=Z,155nm,19.1s,baz=144,slow=46						
LEM	Lembang	3.02	53	P	Pn	00 09 48.5	+2.4
KASI	Kota Agung	3.20	347	P	Pn	00 09 49.2	+0.7
CMJI	Cimerak	3.33	75	P	Pn	00 09 51.6	+1.3
LWLI	Liwa	3.80	343	P	Pn	00 09 56.7	-0.1
KPJI	Karang Pucung	3.93	70	P	Pn	00 10 01.2	+2.8
KLSI		3.98	353	P	Pn	00 09 59.4	+0.2
MDSI	Maura Dua	4.28	346	P	Pn	00 10 02.8	-0.5
UGM	Wanagama	5.32	82	Pn	Pn	00 10 18.5	+0.9
SMRI	Semarang	5.44	73	Pn	Pn	00 10 22.0	+2.7
JAGI	Jajag, Banyuwa	8.86	89	Pn	Pn	00 11 07.2	+1.0
GSI	Gunungsitoli	12.49	322	Pn	Pn	00 11 52.7	-3.3
SBUM	Sibu	13.08	33	Pn	Pn	00 12 04.3	+0.3
IPM	Ipoh	13.71	342	Pn	Pn	00 12 14.1	+1.4
GIRL	Giralia	16.38	149	Pn	Pn	00 12 46.6	-1.7
FITZ	Fitzroy Crossi	21.96	117	P	P	00 13 55.1	+2.9
	1.8nm,0.8s,baz=287,slow=11,SNR=1.8						
FITZ				S	S	00 17 46.9	-8.0
	4.8nm,1.0s,baz=50,slow=10.0,SNR=2.5						
CMAR	Chiang Mai Arr	27.65	347	P	P	00 14 46.9	+0.7
	1.2nm,0.5s,baz=182,slow=8.9,SNR=9.0						
CMAR	Chiang Mai Arr	27.65	347	P	P	00 14 45.7	-0.6
WRA	Warramunga Arr	30.32	115	P	P	00 15 11.2	+1.2
	0.3nm,0.7s,baz=284,slow=12,SNR=1.5						
WRA	Warramunga Arr	30.32	115	P	P	00 15 10.5	+0.4
WR0	Warramunga Arr	30.51	115	P	P	00 15 12.3	+0.6
WR0				IAmb	IAmb	00 15 23.3	
	comp=Z,11nm,1.3s						
ASAR	Alice Springs	31.25	122	P	P	00 15 20.5	+2.2
	comp=Z,0.6nm,0.9s,baz=301,slow=8.7,SNR=2.2						
ASAR				LR	LR	00 29 49.4	
	comp=Z,24nm,18.1s,baz=10,slow=40						
LSA	Lhasa	40.48	341	P	P	00 16 38.0	+0.3
STKA	Stephens Creek	40.91	130	P	P	00 16 43.5	+2.8
	comp=Z,1.2nm,0.5s,baz=191,slow=11,SNR=2.2						
TARG	Taragay, Kyrgy	56.10	335	P	P	00 18 38.5	+0.4
TARG				IAmb	IAmb	00 18 43.5	
	comp=Z,7.2nm,1.5s						
SONM	Songino Array	56.27	1	P	P	00 18 40.5	+1.7
	comp=Z,2.4nm,0.6s,baz=183,slow=9.4,SNR=15						
SONM	Songino Array	56.27	1	P	P	00 18 39.6	+0.8
SONM				IAmb	IAmb	00 18 41.2	
	comp=Z,2.7nm,0.9s						
ULN	Ulaanbaatar	56.31	2	P	P	00 18 40.1	+0.9
ULN				IAmb	IAmb	00 18 41.4	
	comp=Z,2.7nm,0.8s						
ZAA0	Zalesovo Array	64.72	347	P	P	00 19 36.3	0.0
ZAA0				IAmb	IAmb	00 20 03.0	
	comp=Z,2.3nm,1.1s						
ZALV	Zalesovo Beam	64.72	347	P	P	00 19 36.4	+0.2
	comp=Z,1.1nm,0.4s,baz=160,slow=6.1,SNR=7.3						
ABKAR	Akbulak array	69.95	330	P	P	00 20 09.9	+0.4
ABKAR	Akbulak array	69.95	330	P	P	00 20 09.5	0.0
BR131	Keskin Array S	81.61	312	P	P	00 21 16.3	-0.4
BR131				IAmb	IAmb	00 21 17.8	
	comp=Z,2.2nm,0.7s						
BRTR	Keskin Array B	81.61	312	P	P	00 21 17.1	+0.4
	comp=Z,1.6nm,0.6s,baz=132,slow=6.7,SNR=15						
BRTR	Keskin Array B	81.61	312	P	P	00 21 16.5	-0.2
TXAR	Lajitas Array	146.00	49	PKPbc	PKPab	00 28 40.9	+1.4
	comp=Z,0.8nm,0.7s,baz=318,slow=1.2,SNR=11						

IDC **20** *00:10:20.3±0.6, 38°.43N×144°.91E, h0^{km}, mb4.1/21, mb1 4.3/28, mb1mx4.1/54, mbtmp4.2/28, ML3.8/7, MS3.3/10, Ms1 3.4/10, ms1mx3.1/60, Error ellipse: s-maj=15.8km s-min=12.6km az=120.0*

NEIC **20** *00:10:22.5±1.3, 38°.50N±0°.06×144°.77E±0°.10, h10^{km}±1^{km}, mb4.5/51, Error ellipse: s-maj=13.6km s-min=9.5km az=121.0*

BJI **20** *00:10:23.1±0.0, 38°.71N×144°.49E, h10^{km}, mB4.9/22, mb4.3/34, Ms3.9/7, Ms7 3.8/8*

JMA **20** *00:10:24.1±0.2, 38°.53N×144°.63E, h40^{km}, M4.8*

NIED **20** *00:10:24.1, 38°.53N×144°.63E, h40^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.67; M$_{\theta\theta}$0.70; M$_{\phi\phi}$1.96; M$_{r\theta}$0.33; M$_{\theta\phi}$0.70; M$_{\phi r}$2.03; Fault plane solution: M$_0$3.21000×10^{15} NP1: ϕ_s195.00000°, δ65.00000°, λ-96.00000°. NP2: ϕ_s30.00000°, δ26.00000°, λ-77.00000°.*

MOS **20** *00:10:24.5±1.6, 38°.62N×144°.77E, h37^{km}, mb4.5/27 Error ellipse: s-maj=8.4km s-min=5.0km az=97.6*

ISC 20 00:10:22.3±1.3**, 38°.57N**±0°.04×**144°.83E**±0°.05**, h12**^{km}±7^{km}**, n214,** σ**1^{s}87**/239**, mb4.4**/66**, MS3.5**/9**, 9C-2D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.52	283	P	Pn	00 11 02.1	-0.9
MIYJ	Miyakonagasawa	2.55	294	P	Pn	00 11 02.4	-1.0
MIYJ				eS	Sn	00 11 30.4	-3.9
JKMT	Kesennumamotoy	2.63	276	P	Pn	00 11 03.5	-1.1
JKMT				eS	Sn	00 11 32.7	-3.8
JIKH	Ishinomakikobu	2.65	265	P	Pn	00 11 03.3	-1.5
JIKH				eS	Sn	00 11 32.3	-4.6
JMK	Ichinoseki	2.84	279	P	Pn	00 11 06.8	-0.7
JMK				S	Sn	00 11 38.6	-3.1
JOM	Ohasama	2.90	289	P	Pn	00 11 07.7	-0.5
JOM				S	Sn	00 11 39.9	-3.1
JANG	Nango	3.13	306	P	Pn	00 11 10.2	-1.2
JMM	Marumori	3.25	259		Pn	00 11 11.8	-1.4
JMM				Sn	Sn	00 11 46.2	-5.5
JOU	Okura	3.27	268	P	Pn	00 11 12.7	-0.7
JOU				S	Sn	00 11 48.6	-3.7
JRG	Rokugo	3.37	285	P	Pn	00 11 14.5	-0.2
JRG				S	Sn	00 11 52.8	-1.9
JYK	Kaneyama	3.51	277	P	Pn	00 11 16.2	-0.5
JYK				eS	Sn	00 11 55.9	-2.2
JAH	Hinai	3.63	298	P	Pn	00 11 18.1	-0.1
JAH				eS	Sn	00 11 59.0	-2.0
JTM	Tenmabayashi	3.65	309	P	Pn	00 11 18.1	-0.4
JTM				eS	Sn	00 11 58.3	-3.2
ERM	Erimo	3.67	340	P	Pn	00 11 19.2	+0.4
ERM						00 11 58.7	
ERM	Erimo	3.67	340	Pn	Pn	00 11 19.2	+0.4
ERM				Sn	Sn	00 11 58.6	-3.3
JFT	Otama	3.70	255	P	Pn	00 11 18.7	-0.5
JFT				eS	Sn	00 11 59.1	-3.7
JOT	Ohata	4.04	315	P	Pn	00 11 23.7	-0.2
JOT				eS	Sn	00 12 07.4	-3.7
JCH	Churui	4.19	345	P	Pn	00 11 25.2	-0.8
JCH				eS	Sn	00 12 10.7	-4.1
JYT	Yasato	4.37	239		Pn	00 11 26.4	-2.0
JKB	Kayabe	4.41	320	P	Pn	00 11 29.7	+0.8
JKB				eS	Sn	00 12 15.8	-4.3
NEM2	Nemuro 2	4.84	8	P	Pn	00 11 32.9	-2.0
NEM2				S	Sn	00 12 24.4	-6.4
NMR	Nemuro--Hokkai	4.84	8	eP	Pn	00 11 33.0	-1.9
NMR				eS	Sn	00 12 25.0	-5.9
JEW	Eniwo	4.98	330	Pn	Pn	00 11 37.3	+0.5
BSO1	Boso 1	4.99	220	P	Pn	00 11 34.5	-2.0
BSO1				eS	Sn	00 12 28.8	-5.0
JSD	Sado	5.19	266	Pn	Pn	00 11 38.7	-1.1
JRY	Ryogami san	5.37	243	P	Pn	00 11 40.7	-1.5
JRY				eS	Sn	00 12 37.4	-6.6
JOSM	Okushiri--Mats	5.39	312	P	Pn	00 11 43.5	+1.1
JTKR	Abashiri--Toko	5.44	353	P	Pn	00 11 42.6	-0.5
JTKR				eS	Sn	00 12 40.8	-4.8
SHO	Shikotan	5.50	15	eP	Pn	00 11 41.5	-2.5
SHO				eS	Sn	00 12 40.1	-7.1
SHO				pmax	pmax		
	comp=Z,79nm,0.3s						
SHO				pmax	pmax		
	comp=E,66nm,0.2s						
SHO				pmax	pmax		
	comp=N,58nm,0.3s						
SHO				smax	smax		
	comp=E,222nm,0.3s						
SHO				smax	smax		
	comp=N,263nm,0.4s						
YUK	Yuzh-Kuril'sk	5.51	8	eP	Pn	00 11 43.0	-1.1
YUK				eS	Sn	00 12 41.7	-5.7
YUK				pmax	pmax		
	comp=E,78nm,0.2s						
YUK				pmax	pmax		
	comp=Z,223nm,0.2s						
YUK				pmax	pmax		
	comp=N,108nm,0.3s						
YUK				smax	smax		
	comp=N,392nm,0.3s						
YUK				smax	smax		
	comp=E,390nm,0.5s						
RUSJ	Misakicho	5.54	3	eP	Pn	00 11 43.5	-1.0
RUSJ				eS	Sn	00 12 43.5	-4.5
MJAR	Matsushiro Arr	5.63	251	Pn	Pn	00 11 45.3	-0.6
	comp=E,1.0nm,0.3s,baz=56,slow=9.3,SNR=90						
MJAR				Sn	Sn	00 12 48.5	-2.0
	comp=E,0.9nm,0.3s,baz=308,slow=27,SNR=5.0						
MJAR				LR	LR	00 14 22.7	
	comp=E,158nm,19.3s,baz=45,slow=43						
MAJO	Matsushiro	5.64	251	P	Pn	00 11 45.5	-0.4
MAJO	Matsushiro	5.64	251	Pn	Pn	00 11 45.5	-0.4
MAT	Matsushiro	5.64	251	P	Pn	00 11 46.1	+0.2
MAT				S	Sn	00 12 48.3	-2.3
JHR	Hokuryu	5.67	337	P	Pn	00 11 47.8	+1.5
JHR				eS	Sn	00 12 49.8	-1.6
JKA	Kamikawa-asahi	5.79	344	Pn	Pn	00 11 48.7	+0.8
ASAJ	Asahikawa	5.79	344	Pn	Pn	00 11 48.8	+0.9
	comp=E,3.5nm,0.3s,baz=190,slow=11,SNR=23						
ASAJ				Sn	Sn	00 12 50.4	-3.9
	comp=E,6.0nm,0.3s,baz=67,slow=26,SNR=3.7						
ASAJ	Asahikawa	5.79	344	P	Pn	00 11 48.7	+0.8
JGF	Kuroka	6.67	246	Pn	Pn	00 11 59.9	-0.1
JHJ2	Mitsune	6.80	218	Pn	Pn	00 12 01.6	-0.3
JHJ	Hachijo jima 2	6.81	218	Pn	Pn	00 12 00.1	-1.8
	comp=E,24nm,0.3s,baz=92,slow=21,SNR=1.9						
JHJ				Sn	Sn	00 13 10.2	-9.3
	comp=E,40nm,0.3s,baz=66,slow=21,SNR=2.2						
INU	Inuyama	7.03	245		Pn	00 12 04.7	-0.3
KUR	Kuril'sk	7.03	18	eP	Pn	00 12 04.1	-0.9
KUR				eS	Sn	00 13 18.0	-6.8
KUR				smax	smax		
	comp=E,145nm,0.8s						
KUR				smax	smax		
	comp=N,68nm,0.5s						
JWT	Wachi	8.23	249	Pn	Pn	00 12 21.0	-0.5
JHS	Saijyo	10.05	253	Pn	Pn	00 12 45.8	-0.6
USA0B	Ussuriysk Arra	11.16	304	P	Pn	00 13 02.3	+0.7
USA0B	Ussuriysk Arra	11.16	304	Pn	Pn	00 13 02.3	+0.7
USRK	Ussuriysk Ar.	11.16	304	Pn	Pn	00 13 03.6	+2.0
	baz=103,slow=13,SNR=40						
USRK				LR	LR	00 17 07.3	
	comp=N,192nm,21.2s,baz=119,slow=36						
USRK	Ussuriysk Ar.	11.16	304	P	Pn	00 13 02.2	+0.6
USRK	Ussuriysk Ar.	11.16	304		Pn	00 13 02.2	+0.6
JCJ	Chichijima	11.66	192	Pn	Pn	00 12 54.5	-14
	comp=N,3.9nm,0.3s,baz=208,slow=17,SNR=1.4						
JCJ				Sn	Sn	00 15 04.5	-14
	comp=N,3.5nm,0.3s,baz=299,slow=20,SNR=1.8						
MDJ	Mudanjiang	12.90	303	P	Pn	00 13 25.6	+0.3
MDJ				pmax	pmax		
	comp=N,34nm,1.0s						
MDJ				pmax	pmax		
	comp=N,280nm,4.4s						
MDJ				LR	LR		
	comp=N,220nm,13.5s						
MDJ				LR	LR		
	comp=N,340nm,10.7s						
MDJ				LR	LR		
	comp=N,550nm,12.1s						
MDJ	Mudanjiang	12.90	303	Pn	Pn	00 13 25.1	-0.2
KSRS	Korea Array	13.38	270	Pn	Pn	00 13 32.6	+0.7
	comp=N,0.3nm,0.3s,baz=86,slow=14,SNR=7.7						
KSRS				LR	LR	00 18 57.6	
	comp=N,75nm,19.0s,baz=48,slow=38						
KLR	Kul'dur	14.20	323	Pn	Pn	00 13 42.5	-0.7
	comp=N,0.1nm,0.3s,baz=129,slow=16,SNR=4.2						
KLR				LR	LR	00 19 19.7	
	comp=N,78nm,21.1s,baz=133,slow=38						
KLR	Kul'dur	14.20	323	i P	Pn	00 13 44.8	+1.7
KLR				pmax	pmax		
	comp=Z,14nm,1.6s						
PEA0B	Petropavlovsk-	17.04	27	P	P	00 14 22.3	+0.3
PEA0B				pmax	pmax		
	comp=Z,91nm,1.5s						
PEA0B	Petropavlovsk-	17.04	27		P	00 14 22.3	+0.3
PEA0B				IAmb	IAmb	00 14 42.7	
	comp=Z,91nm,1.5s						
PETK	Petropavlovsk-	17.04	27	P	P	00 14 22.6	+0.5
	comp=Z,0.2nm,0.3s,baz=224,slow=10,SNR=5.4						
JOW	Kunigami	18.16	235	P	Pn	00 14 34.3	0.0
	comp=Z,0.9nm,0.3s,baz=12,slow=14,SNR=2.2						
JOW	Kunigami	18.16	235		Pn	00 14 33.6	-0.8
JOW				IAmb	IAmb	00 15 00.8	
	comp=Z,39nm,1.2s						
ZEA	Zeya	19.37	327	eP	Pn	00 14 50.2	+1.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HIA	Hailar	20.90	309	P	P	00 15 05.3	+0.9
HIA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HIA	Hailar	20.90	309	P	P	00 15 05.3	+0.9
MA2	Magadan	21.36	8	P	P	00 15 10.8	+1.6
MA2				pmax	pmax		
	comp=Z,17nm,1.3s						
MA2	Magadan	21.36	8	P	P	00 15 10.8	+1.6
MA2				IAmb	IAmb	00 15 33.7	
	comp=Z,17nm,1.3s						
NJ2	Nanjing	22.13	261	eP	P	00 15 16.8	-0.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SEY	Seymchan	24.82	8	P	P	00 15 46.1	+2.1
	comp=Z,6.2nm,0.6s,baz=182,slow=5.6,SNR=13						
YAK	Yakutsk	25.27	343	P	P	00 15 49.6	+1.6
	comp=Z,8.6nm,0.4s,baz=297,slow=2.6,SNR=5.3						
YAK				LR	LR	00 27 35.7	
	comp=Z,51nm,18.5s,baz=100,slow=41						
YAK	Yakutsk	25.27	343	eP	P	00 15 49.4	+1.3
YAK				pmax	pmax		
	comp=Z,19nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK	Yakutsk	25.27	343	P	P	00 15 48.5	+0.4
HHC	Hu-ho-hao-te	25.61	286	eP	P	00 15 50.5	-1.0
HHC				pmax	pmax		
	comp=E,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=E,200nm,6.0s						
H11N2	WAKE ISLAND Hy	26.79	128	T	T	00 43 54.2	
	baz=320,slow=74,SNR=33						
H11N1	WAKE ISLAND Hy	26.80	128	T	T	00 43 55.6	
	baz=320,slow=74,SNR=34						
H11N3	WAKE ISLAND Hy	26.80	128	T	T	00 43 49.1	
	baz=320,slow=74,SNR=40						
H11S1	WAKE ISLAND Hy	27.60	130	T	T	00 44 54.5	
	baz=321,slow=76,SNR=4.2						
H11S3	WAKE ISLAND Hy	27.60	130	T	T	00 44 57.8	
	baz=321,slow=76,SNR=4.3						
H11S2	WAKE ISLAND Hy	27.62	130	T	T	00 44 56.8	
	baz=321,slow=76,SNR=5.5						
ULN	Ulaanbaatar	28.80	301	i P	P	00 16 21.3	+1.1
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	Ulaanbaatar	28.80	301	P	P	00 16 21.4	+1.2
SONM	Songino Array	29.24	301	P	P	00 16 26.9	+2.8
	comp=Z,0.9nm,0.6s,baz=91,slow=8.4,SNR=8.2						
SONM				LR	LR	00 28 53.1	
	comp=Z,70nm,18.4s,baz=106,slow=38						
SONM	Songino Array	29.24	301	P	P	00 16 25.1	+1.0
SONM				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	Songino Array	29.24	301	P	P	00 16 25.1	+1.0
BILL	Bilibino	31.81	15	⇓eP	P	00 16 47.1	+0.7
BILL				*SP	pwP	00 16 53.0	-2.6
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,58nm,17.0s						
BILL	Bilibino	31.81	15	P	P	00 16 47.0	+0.6
BILL				IAmb	IAmb	00 16 48.1	
	comp=Z,7.8nm,0.9s						
LZH	Lanzhou	32.49	279	eP	P	00 16 55.8	+2.9
LZH				pP	pwP	00 17 00.3	-1.9
LZH				sP	sP	00 17 03.3	+7.6
LZH				pmax	pmax		
	comp=Z,11nm,1.2s						
TIXI	Tiksi	34.14	351	ceP	P	00 17 06.1	-0.5
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIXI	Tiksi	34.14	351	P	P	00 17 06.9	+0.3
TIXI				IAmb	IAmb	00 17 07.5	
	comp=Z,2.9nm,0.6s						
GTA	Gaotai	34.72	286	eP	P	00 17 14.1	+1.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,100nm,5.5s						
GTA				LR	LR		
	comp=Z,100nm,16.7s						
GTA				LR	LR		
	comp=Z,280nm,17.5s						
GTA				LR	LR		
	comp=Z,190nm,16.4s						
DGZ	Jazzator, Alta	41.71	305	i P	P	00 18 12.5	+1.5
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WMQ	Urumqi	42.58	296	eP	P	00 18 21.0	+2.9
ZAA0	Zalesovo Array	42.91	311	P	P	00 18 20.7	+0.2
ZAA0				IAmb	IAmb	00 18 35.2	
	comp=Z,5.1nm,0.7s						
ZALV	Zalesovo Beam	42.91	311	P	P	00 18 21.5	+1.0
	comp=Z,0.6nm,0.5s,baz=76,slow=6.3,SNR=4.7						
ZALV	Zalesovo Beam	42.91	311	P	P	00 18 21.4	+0.9
NRIK	Noril'sk	43.04	334	P	P	00 18 21.8	+0.5
	comp=Z,1.6nm,0.6s,baz=100,slow=7.4,SNR=3.7						
NRIK				LR	LR	00 37 28.0	
	comp=Z,58nm,18.2s,baz=121,slow=38						
NRIK	Noril'sk	43.04	334	ceP	P	00 18 20.4	-0.9
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NRIK	Noril'sk	43.04	334	P	P	00 18 21.9	+0.6
A21K	Barrow	43.98	23	P	P	00 18 29.7	+0.8
KDAK	Kodiak Island	44.14	43	P	P	00 18 30.3	-0.1
KDAK				pmax	pmax		
	comp=Z,73nm,1.3s						
KDAK	Kodiak Island	44.14	43	P	P	00 18 30.2	-0.1
CMAR	Chiang Mai Arr	44.49	256	P	P	00 18 34.1	+0.4
	comp=Z,0.7nm,0.3s,baz=51,slow=7.4,SNR=1.8						
CMAR				LR	LR	00 38 28.2	
	comp=Z,20nm,18.4s,baz=55,slow=38						
MK31	Makanchi Array	45.61	301	i P	P	00 18 42.1	-0.2
MK31	Makanchi Array	45.61	301	P	P	00 18 42.2	0.0
MKAR	Makanchi Array	45.61	301	P	P	00 18 42.6	+0.3
	comp=Z,1.7nm,0.9s,baz=81,slow=10.0,SNR=8.6						
MKAR	Makanchi Array	45.61	301	P	P	00 18 42.7	+0.4
MAKZ	Makanchi	45.82	302	P	P	00 18 44.0	+0.1
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MAKZ	Makanchi	45.82	302	P	P	00 18 44.0	+0.1
MAKZ				IAmb	IAmb	00 18 55.5	
	comp=Z,3.8nm,1.0s						
SML	Sawmill	46.14	37	P	P	00 18 47.0	+0.7
H24K	Noodor Dome	46.34	32	P	P	00 18 49.7	+2.0
H24K				IAmb	IAmb	00 19 01.8	
	comp=Z,11nm,1.5s						
SCM	Sheep Creek Mo	46.62	37	P	P	00 18 50.7	+0.6
SCM				pmax	pmax		
	comp=Z,38nm,1.4s						
SCM	Sheep Creek Mo	46.62	37	P	P	00 18 50.7	+0.6
IL31		46.74	33	P	P	00 18 51.8	+1.0
ILAR	Eielson Array	46.74	33	P	P	00 18 51.3	+0.4
	comp=Z,1.8nm,0.8s,baz=260,slow=6.6,SNR=16						
ILAR	Eielson Array	46.74	33	P	P	00 18 51.9	+0.9
KURK	Kurchatov	47.13	307	ceP	P	00 18 57.2	+3.1
KURK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
KURK	Kurchatov	47.13	307	P	P	00 18 54.5	+0.4
KLU	Klutina	47.31	38	P	P	00 18 56.2	+0.8
BMAR	Burnt Mountain	47.67	30	P	P	00 18 59.9	+1.7
VRDI	Verde Repeater	48.52	38	P	P	00 19 06.1	+1.1
VRDI				IAmb	IAmb	00 19 07.4	
	comp=Z,9.7nm,1.0s						
BCAR	Beaver Creek A	49.09	35	P	P	00 19 10.7	+1.5
EGAK	Eagle	49.19	33	P	P	00 19 10.5	+0.7
EGAK				IAmb	IAmb	00 19 26.7	
	comp=Z,8.0nm,1.4s						
BRVK	Borovoye	51.60	312	ceP	P	00 19 30.5	+2.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRVK	Borovoye	51.60	312	P	P	00 19 29.4	+1.1
BRVK				IAmb	IAmb	00 19 40.3	
	comp=Z,4.6nm,1.1s						
INK	Inuvik	51.77	28	P	P	00 19 30.2	+0.9
	comp=Z,1.4nm,0.5s,baz=295,slow=5.4						
INK	Inuvik	51.77	28	P	P	00 19 30.1	+0.8
INK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
INK	Inuvik	51.77	28	P	P	00 19 30.1	+0.8
AAK	Ala-Archa	52.14	298	P	P	00 19 32.8	+0.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK	Ala-Archa	52.14	298	P	P	00 19 32.8	+0.1
KKAR	Karatay Array	54.69	300	P	P	00 19 51.3	+0.1
KKAR	Karatay Array	54.69	300	P	P	00 19 51.3	+0.1
SVE	Sverdlovsk	55.78	319	eP	P	00 20 00.5	+1.7
NIL	Nilore	56.69	289	P	P	00 20 05.9	+0.2
NIL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NIL	Nilore	56.69	289	P	P	00 20 05.9	+0.2
NIL				IAmb	IAmb	00 20 17.2	
	comp=Z,5.5nm,0.9s						
ARU	Arti	57.00	319	c iP	P	00 20 06.5	-1.0
ARU						00 21 02.7	
ARU						00 22 09.2	
ARU				S	S	00 27 59.5	-1.9
ARU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CHGR	Chuyangaron	57.44	296	P	P	00 20 11.2	+0.2
WR0	Warramunga Arr	59.02	191	P	P	00 20 20.0	-1.9
WR0				IAmb	IAmb	00 20 24.8	
	comp=Z,3.7nm,0.8s						
WRA	Warramunga Arr	59.03	192	P	P	00 20 20.8	-1.3
	comp=Z,4.7nm,0.8s,baz=14,slow=5.9,SNR=23						
WRA	Warramunga Arr	59.03	192	P	P	00 20 19.9	-2.2
KIRV	Kirov	60.65	323	ceP	P	00 20 36.0	+3.2
YKA	Yellowknife Ar	61.10	31	P	P	00 20 36.2	+0.4
	comp=Z,1.0nm,0.6s,baz=295,slow=6.1,SNR=11						
AS31	Alice Springs	62.75	191	P	P	00 20 47.3	0.0
AS31				IAmb	IAmb	00 20 56.0	
	comp=Z,2.9nm,1.4s						
ASAR	Alice Springs	62.75	191	P	P	00 20 46.6	-0.7
	comp=Z,2.4nm,0.8s,baz=11,slow=6.6,SNR=19						
ASAR	Alice Springs	62.75	191	P	P	00 20 46.4	-1.0
ASAR	Alice Springs	62.75	191	P	P	00 20 46.4	-1.0
KLMR	Klimovskoe	63.89	328	eP	P	00 20 54.1	-0.4
KLMR				pmax	pmax		
	comp=Z,24nm,1.4s						
KLMR	Klimovskoe	63.89	328	eP	P	00 20 54.2	-0.3
KLMR				AMP		00 20 55.9	
	comp=Z,24nm,1.4s						
PSA00	Pilbara Seismi	64.25	206	P	P	00 20 56.1	-1.2
PSA00				IAmb	IAmb	00 21 04.8	
	comp=Z,8.9nm,1.2s						
GEYT	Alibeck	65.44	300	P	P	00 21 04.8	-0.3

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K05A  Summer Lake       67.87  52  P       P       00 21 21.9 +1.2
OBN   Obninsk           68.46 324⇓eP      P       00 21 26.1 +2.2
OBN                               e               00 21 36.0
OBN                                               00 21 49.0
OBN                                S       S       00 30 22.0 -3.2
OBN                                pmax    pmax
      comp=Z,3.0nm,0.6s
OBN                                MLR     MLR
      comp=Z,172nm,16.0s
FIA1  FINESS Array S    68.69 333  P       P       00 21 25.6 +0.4
FINES FINESS Array B    68.69 333  P       P       00 21 25.9 +0.7
      comp=Z,2.9nm,0.7s,baz=49,slow=8.6,SNR=12
FINES                              LR      LR      00 58 40.4
      comp=Z,83nm,18.1s,baz=262,slow=42
FINES FINESS Array B    68.69 333ceP      P       00 21 25.8 +0.6
FINES                              pmax    pmax
      comp=Z,3.0nm,0.7s
PLID  Pearl Lake        69.53  48  P       P       00 21 31.6 +0.6
PLID                               IAmb    IAmb    00 21 53.0
      comp=Z,5.9nm,1.4s
STKA  Stephens Creek    70.15 183  P       P       00 21 34.1 -0.4
      comp=Z,0.9nm,0.4s,baz=20,slow=8.6,SNR=2.9
LRM   Limekiln Ridge    71.15  46  P       P       00 21 41.9 +0.9
FCC   Fort Churchill    71.40  28  P       P       00 21 41.7 -0.2
FCC                                pmax    pmax
      comp=Z,3.0nm,0.9s
FCC   Fort Churchill    71.40  28  P       P       00 21 41.7 -0.2
FCC                                IAmb    IAmb    00 21 44.4
      comp=Z,3.5nm,0.9s
BMN   Battle Mountai    71.44  53  P       P       00 21 44.1 +1.4
BMN                                pmax    pmax
      comp=Z,3.0nm,0.7s
BMN   Battle Mountai    71.44  53  P       P       00 21 44.1 +1.4
BMN                                IAmb    IAmb    00 21 45.1
      comp=Z,3.0nm,0.7s
KVN   Kaiserville       71.67  54  P       P       00 21 45.4 +1.2
KVN                                pmax    pmax
      comp=Z,7.0nm,1.2s
KVN   Kaiserville       71.67  54  P       P       00 21 45.4 +1.2
KVN                                IAmb    IAmb    00 21 46.4
      comp=Z,7.3nm,1.2s
BOZ   Bozeman (W)       71.74  46  P       P       00 21 44.8 +0.3
BOZ                                pmax    pmax
      comp=Z,1.0nm,1.4s
BOZ   Bozeman (W)       71.74  46  P       P       00 21 44.8 +0.3
NVAR  Mina Array Bea    71.90  55  P       P       00 21 45.9 +0.3
      comp=Z,1.8nm,0.7s,baz=286,slow=6.2,SNR=9.9
NVAR  Mina Array Bea    71.90  55  P       P       00 21 46.3 +0.7
KIV   Kislovodsk        71.92 312 eP       P       00 21 47.4 +2.0
KIV                                pmax    pmax
      comp=Z,6.0nm,1.1s
KBZ   Khabaz            71.93 312  P       P       00 21 46.6 +1.3
      comp=Z,2.9nm,0.9s,baz=87,slow=5.3,SNR=5.7
KBZ   Khabaz            71.93 312ceP      P       00 21 47.2 +1.9
KBZ                                pmax    pmax
      comp=Z,3.0nm,0.9s
FXWY  Fox Creek         73.27  47  P       P       00 21 54.6 +0.9
FXWY                               IAmb    IAmb    00 21 56.4
      comp=Z,4.0nm,0.9s
NOA   NORSAR Array B    73.78 338  P       P       00 21 56.6 +0.4
      comp=Z,0.9nm,1.0s,baz=37,slow=4.5,SNR=1.5
NOA                                LR      LR      01 01 11.8
      comp=Z,41nm,18.0s,baz=255,slow=41
QSM   Queen of Sheba    74.26  57  P       P       00 22 00.4 +1.0
QSM                                IAmb    IAmb    00 22 01.3
      comp=Z,9.0nm,1.2s
DUG   Dugway, Tooele    74.30  51  P       P       00 22 00.7 +1.0
DUG                                pmax    pmax
      comp=Z,3.0nm,0.9s
DUG   Dugway, Tooele    74.30  51  P       P       00 22 00.7 +1.0
DUG                                IAmb    IAmb    00 22 01.9
      comp=Z,3.2nm,0.8s
PD31  Pinedale Array    74.65  47  P       P       00 22 01.4 -0.4
PD31                               IAmb    IAmb    00 22 15.6
      comp=Z,5.5nm,1.4s
PDAR  Pinedale Array    74.65  47  P       P       00 22 02.5 +0.7
      comp=Z,1.3nm,0.7s,baz=279,slow=2.7,SNR=12
PDAR  Pinedale Array    74.65  47  P       P       00 22 02.2 +0.5
AKASG Malin Array Be    74.70 324  P       P       00 22 02.0 +0.4
      comp=Z,0.3nm,0.3s,baz=43,slow=6.0,SNR=4.2
AKASG Malin Array Be    74.70 324ceP      P       00 22 03.4 +1.8
CCUT  Cedar City        75.56  53  P       P       00 22 07.7 +0.6
CCUT                               IAmb    IAmb    00 22 09.4
      comp=Z,1.9nm,0.7s
TOO   Toolangi          75.77 179  P       P       00 22 08.0 +0.3
TOO                                pmax    pmax
      comp=Z,17nm,1.5s
TOO   Toolangi          75.77 179  P       P       00 22 08.0 +0.3
SRU   San Rafael Swe    76.36  51  P       P       00 22 12.3 +0.7
SRU                                pmax    pmax
      comp=Z,7.0nm,0.7s
SRU   San Rafael Swe    76.36  51  P       P       00 22 12.3 +0.7
U15A  North Rim         76.93  54  P       P       00 22 16.0 +1.0
U15A                               IAmb    IAmb    00 22 19.3
      comp=Z,3.7nm,1.2s
BUR08 Bucovina Ar. S    78.73 323  P       P       00 22 25.0 +0.4
BURAR Bucovina Array    78.74 323  P       P       00 22 25.1 +0.4
CLL   Collm             81.07 332 eP       P       00 22 38.0 +1.0
CLL   Collm             81.07 332 eP       P       00 22 38.0 +1.0
PRU   Pruhonice         81.54 330 eP       P       00 22 40.7 +1.1
PRU   Pruhonice         81.54 330 eP       P       00 22 40.7 +1.1
RAYN  Ar Rayn           82.54 294  P       P       00 22 45.7 +0.4
RAYN                               pmax    pmax
      comp=Z,2.0nm,0.9s
RAYN  Ar Rayn           82.54 294  P       P       00 22 45.7 +0.4
RAYN                               IAmb    IAmb    00 22 46.9
      comp=Z,2.4nm,0.8s
CKRC  Cesky Krumlov     82.57 330 eP       P       00 22 45.7 +0.7
KHC   Kasperske Hory    82.60 330 eP       P       00 22 46.1 +0.9
KHC   Kasperske Hory    82.60 330 eP       P       00 22 46.1 +0.9
GERES GERESS Array B    82.79 330  P       P       00 22 46.2 -0.1
      comp=Z,0.5nm,0.6s,baz=36,slow=3.4,SNR=5.3
GERES GERESS Array B    82.79 330  P       P       00 22 46.0 -0.3
GERES GERESS Array B    82.79 330  P       P       00 22 46.0 -0.3
ABTA  Abfaltersbach     84.95 329 eP       P       00 22 57.2 -0.1
      comp=Z,1.1nm,0.7s
MOTA  Moosalm           85.02 330 eP       P       00 22 58.0 +0.3
      comp=Z,2.3nm,0.8s
RETA  Reutte            85.03 331 eP       P       00 22 58.1 +0.3
      comp=Z,7.0nm,1.1s
SQTA  Sankt Quirin      85.08 330 eP       P       00 22 58.1 +0.1
      comp=Z,2.8nm,0.8s
FETA  Feichten          85.43 330 eP       P       00 22 59.6 -0.3
      comp=Z,3.3nm,1.1s
TXAR  Lajitas Array     87.03  54  P       P       00 23 08.1 +0.1
      comp=Z,0.5nm,0.5s,baz=306,slow=3.6,SNR=9.6
TXAR  Lajitas Array     87.03  54  P       P       00 23 07.5 -0.5
TXAR  Lajitas Array     87.03  54  P       P       00 23 07.5 -0.5
TORD  Torodi Ar. Bea   118.07 319  PKP     PKPdf   00 29 08.7 -0.9
      comp=Z,0.4nm,0.7s,baz=7.9,slow=2.9,SNR=5.5
SNAA  Sanae            143.00 196  PKPdf   PKPdf   00 29 51.0 -3.8
VNA2  Neumayer--Watz   144.53 195  PKPdf   PKPab   00 29 55.1 -0.8
      baz=142,slow=2.1
VNA3  Neumayer Olymp   144.73 194  PKPdf   PKPdf   00 29 57.6 -0.2
VNA1  Neumayer--Stat   144.93 195  PKPdf   PKPab   00 29 57.1 -0.2
SIV   San Ignacio      148.02  52  PKPbc   PKPbc   00 30 07.8 -0.3
      comp=Z,4.3nm,1.0s,baz=318,slow=2.4,SNR=8.1
```

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*NEIC **20** 00:39:15.6±1.1, 6°.16S±0°.07×122°.36E±0°.08, h10km±1km, mb4.3/9, Error ellipse: s-maj=17.6km s-min=6.5km az=230.0*

*IDC **20** 00:39:16.1±1.1, 5°.90S×122°.48E, h0km, mb3.9/4, mb1 4.0/7, mb1mx3.6/51, mbtmp4.0/7, ML3.6/3, MS3.0/4, Ms1 3.1/4, ms1mx2.7/47, Error ellipse: s-maj=42.4km s-min=18.9km az=58.0*

*DJA **20** 00:39:20.4±0.5, 6°S±4°×12°2E±°, h76km±36km, M4.4/12, mb5.2/1, mB5.5/1, MLv4.0/12, Mw(mB)5.0/1*

ISC 20 00:39:19.0±0.7**, 6°.12S**±0°.06×**122°.47E**±0°.07**, h35km, n37, σ1s.33**/37**, mb4.2**/6**, Flores Sea**

```
Code  Station Name        Δ°  AZ°   Phase ID           Time    Res
                                   Op      ISC       h  m  s   ISC
BSSI  Bau Bau, Buton     1.97 269  P       Pn      00 39 51.2 +1.3
BSSI                               S       Sn      00 40 15.1 +1.7
BKSI  Bulukumba          2.47 289  P       Pn      00 39 56.6 -0.1
BKSI                               S       Sn      00 40 25.7 +0.1
MMRI  Maumere            2.51 185  P       Pn      00 39 58.0 +0.6
MMRI  Maumere            2.51 185          Pn      00 39 55.2 -2.2
EDFI  Ende, Flores       2.73 196  P       Pn      00 40 00.7 +0.3
BNSI  Bone               2.91 306  P       Pn      00 40 04.2 +1.4
KAPI  Kappang            2.92 292  Pn      Pn      00 40 03.5 +0.6
      9.9nm,0.3s,baz=140,slow=5.4,SNR=31
KAPI                               Sn      Sn      00 40 37.8 +1.0
      5.9nm,0.3s,baz=63,slow=23,SNR=2.4
KAPI  Kappang            2.92 292          Pn      00 40 01.0 -2.0
SPSI  Sidrap Palu        3.44 308  P       Pn      00 40 11.9 +1.8
SOEI  Soe                4.03 154  P       Pn      00 40 21.6 +3.2
SOEI  Soe                4.03 154  Pn      Pn      00 40 18.1 -0.3
TTSI  Tana Toraja        4.04 319  P       Pn      00 40 20.2 +1.9
BATI  Baumata            4.23 164  Pn      Pn      00 40 25.9 +4.9
      12nm,0.3s,baz=2.5,slow=0.6,SNR=12
BATI                               LR      LR      00 42 31.2
      comp=Z,294nm,19.7s,baz=56,slow=44
BATI  Baumata            4.23 164  P       Pn      00 40 21.8 +0.8
LUWI  Luwuk              5.05   3  P       Pn      00 40 32.8 +0.5
LUWI  Luwuk              5.05   3          Pn      00 40 31.5 -0.7
TOLI2 Tolitoli           7.38 347          Pn      00 41 03.2 -1.0
MTN   Manton Dam        10.85 129  Pn      Pn      00 41 53.2 +1.3
KNRA  Kununurra         11.33 147  Pn      Pn      00 41 58.2 -0.2
FITZ  Fitzroy Crossi    12.30 166  Pn      Pn      00 42 14.5 +2.7
      0.1nm,0.3s,baz=348,slow=9.3,SNR=2.7
WB0   Warramunga Arr    17.85 141  P       Pn      00 43 24.0 -0.7
WB0                                IAmb    IAmb    00 43 36.6
      comp=Z,16nm,1.4s
WRA   Warramunga Arr    17.94 141  P       Pn      00 43 25.5 -0.4
      comp=Z,0.2nm,0.3s,baz=321,slow=13,SNR=3.9
WRA                                LR      LR      00 52 19.0
      comp=Z,30nm,18.1s,baz=330,slow=43
WRA   Warramunga Arr    17.94 141  P       P       00 43 25.8 -0.4
AS31  Alice Springs     20.63 149  P       P       00 43 55.3 -0.2
ASAR  Alice Springs     20.63 149  P       Pn      00 43 59.0 +1.0
      comp=Z,3.1nm,0.8s,baz=326,slow=12,SNR=17
ASAR                               LR      LR      00 51 57.3
      comp=Z,47nm,20.4s,baz=350,slow=37
ASAR  Alice Springs     20.63 149  P       P       00 43 54.8 -0.8
GSI   Gunungsitoli      25.93 286  P       P       00 44 46.6 -1.6
CMAR  Chiang Mai Arr    33.69 317  LR      LR      01 00 03.8
      comp=Z,28nm,19.9s,baz=184,slow=37
SONM  Songino Array     55.56 347  P       P       00 48 52.6 +1.6
      comp=Z,1.3nm,1.1s,baz=165,slow=7.4,SNR=4.9
SONM  Songino Array     55.56 347  P       P       00 48 51.0  0.0
SONM                               IAmb    IAmb    00 48 58.7
      comp=Z,3.5nm,1.3s
MK31  Makanchi Array    63.57 330  P       P       00 49 45.8 -0.4
MK31                               IAmb    IAmb    00 49 53.2
      comp=Z,2.3nm,1.1s
MKAR  Makanchi Array    63.57 330  P       P       00 49 47.6 +1.4
      comp=Z,1.9nm,1.0s,baz=140,slow=7.9,SNR=7.0
MKAR  Makanchi Array    63.57 330  P       P       00 49 44.5 -1.6
KBL   Kabul             64.57 313  P       P       00 49 51.7 -1.6
KBL                                IAmb    IAmb    00 50 00.0
      comp=Z,2.8nm,0.9s
ZAA0  Zalesovo Array    67.67 337  P       P       00 50 12.4  0.0
ZAA0                               IAmb    IAmb    00 50 19.6
      comp=Z,2.3nm,0.8s
ZALV  Zalesovo Beam     67.67 337  P       P       00 50 12.8 +0.4
      comp=Z,1.8nm,0.9s,baz=120,slow=5.2,SNR=7.4
ZALV  Zalesovo Beam     67.67 337  P       P       00 50 12.4 +0.1
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*ATH **20** 00:45:53.3, 36°.59N×25°.63E, h22km±1km, ML2.6/6, Error ellipse: s-maj=3.5km s-min=0.9km az=275.0*

*THE **20** 00:45:54.3, 36°.62N×25°.60E, h4km±2km, ML2.5/8, Error ellipse: s-maj=2.4km s-min=0.5km az=198.0*

ISC 20 00:45:54.0±0.9**, 36°.60N**±0°.03×**25°.60E**±0°.04**, h15km**±7km**, n36, σ0s.31**/50**, Dodecanese Islands**

```
Code  Station Name        Δ°  AZ°   Phase ID           Time    Res
                                   Op      ISC       h  m  s   ISC
THR2  Thira island,      0.20 221  P       Pg      00 45 58.6 -0.2
THR2  Thira island,      0.20 221  P       Pg      00 45 58.7  0.0
CMBO  Columbo, Santo     0.21 231  P       Pg      00 45 58.6 -0.2
CMBO                               S       Sg      00 46 02.1 +0.2
      2µm,0.3s
CMBO  Columbo, Santo     0.21 231  P       Pg      00 45 58.8  0.0
CMBO                               S       Sb      00 46 02.9 -0.3
CMBO                               AML     AML     00 46 06.1
      comp=N,6900µm,0.4s
CMBO                               AML     AML     00 46 07.0
      comp=E,3343µm,0.5s
THR8  Santorini-Mono     0.22 207  P       Pg      00 45 58.6 -0.4
THR8  Santorini-Mono     0.22 207  P       Pg      00 45 58.6 -0.4
THT2  Imerovigli         0.22 221  P       Pg      00 45 58.8 -0.2
THT2                               S       Sb      00 46 03.0 -0.6
      comp=E,672nm,0.3s
THT2  Imerovigli         0.22 221  P       Pg      00 45 59.0  0.0
THT2                               S       Sg      00 46 02.9 +0.5
THT2                               AML     AML     00 46 05.7
      comp=E,4146µm,0.4s
THT2                               AML     AML     00 46 06.2
      comp=N,3208µm,0.3s
SAP4  Santorini-Oia      0.23 236  P       Pg      00 45 59.0 -0.1
SAP4                               S       Sg      00 46 03.0 +0.5
      comp=N,3µm,0.1s
SAP4  Santorini-Oia      0.23 236  P       Pg      00 45 59.0 -0.1
SAP4                               S       Sg      00 46 02.6 +0.1
SFIR  Foira Santorin     0.23 218  P       Pg      00 45 59.0 -0.1
SFIR                               S       Sg      00 46 02.3 -0.3
      comp=N,4µm,0.2s
THR3  Thira Island,      0.25 220  P       Pg      00 45 59.3 -0.2
THR3  Thira Island,      0.25 220  P       Pg      00 45 59.5  0.0
SANT  Santorini          0.26 207  P       Pg      00 45 59.5 -0.1
SANT                               S       Sg      00 46 03.6 +0.1
      comp=N,942nm,0.1s
SANT  Santorini          0.26 207  P       Pg      00 45 59.5 -0.1
SANT                               S       Sg      00 46 03.6 +0.1
SANT                               AML     AML     00 46 04.2
      comp=E,2389µm,0.1s
SANT                               AML     AML     00 46 04.7
      comp=N,990µm,0.2s
STAX  Taxiarchis Har     0.26 219  P       Pg      00 45 59.5 -0.1
STAX                               S       Sg      00 46 03.8 +0.4
SNT5  Nea Kammeni, S     0.26 220  P       Pb      00 46 00.6 +0.2
SNT5                               S       Sb      00 46 04.0 -0.7
      comp=N,2µm,0.2s
THR5  Thira Island,      0.28 228  P       Pg      00 45 59.8 -0.1
THR5  Thira Island,      0.28 228  P       Pg      00 46 00.1 +0.2
THR6  Thira Island,      0.30 214  P       Pg      00 46 00.4 +0.2
THR6  Thira Island,      0.30 214  P       Pg      00 46 00.4 +0.2
THR9  Santorini-Faro     0.31 219  P       Pg      00 46 00.7 +0.2
APE   Apeiranthos        0.47 353  P       Pg      00 46 03.3 -0.2
APE                                S       Sg      00 46 09.9 +0.1
      comp=N,330nm,0.2s
APE   Apeiranthos        0.47 353  P       Pg      00 46 03.3 -0.2
APE                                S       Sg      00 46 10.0 +0.2
APE                                AML     AML     00 46 14.6
      comp=N,613µm,0.2s
APE                                AML     AML     00 46 14.8
      comp=E,696µm,0.2s
MHLO  Agia Marina, M     0.97 276  P       Pb      00 46 12.4 -0.1
MHLO                               S       Sn      00 46 26.6  0.0
      comp=E,1µm,0.5s
MHLO  Agia Marina, M     0.97 276  P       Pn      00 46 13.0 -0.1
MHLO                               AML     AML     00 46 28.6
      comp=E,2016µm,0.3s
MHLO                               AML     AML     00 46 29.8
      comp=N,2154µm,0.6s
TNSA  Tinos              1.00 340  P       Pg      00 46 13.1 -0.3
KOSK  Kos Island         1.12  82  P       Pg      00 46 15.8 +0.2
NPS   Neapolis           1.34 180  P       Pn      00 46 18.1 -0.1
NPS   Neapolis           1.34 180  P       Pn      00 46 18.1 -0.1
IDI   Anoyia             1.43 204  P       Pn      00 46 19.5  0.0
SMG   Samos              1.48  41  P       Pb      00 46 20.8 -0.5
SMG                                AML     AML     00 46 48.4
      comp=N,224µm,0.3s
SMG                                AML     AML     00 46 49.6
      comp=E,309µm,0.5s
ZKR   Zakros             1.56 161  P       Pn      00 46 21.9 +0.6
CHOS  Chios island       1.82  11  P       Pn      00 46 25.4 +0.6
VLY   Voula,Athens       1.91 311  P       Pn      00 46 26.7 +0.7
KTHA  Kythira Island     2.08 261  P       Pn      00 46 29.0 +0.7
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*IDC **20** 00:50:01.9±2.0, 5°.74N×126°.20E, h124km±14km, mb3.2/5, mb1 3.3/5, mb1mx2.9/55, mbtmp3.5/5, Error ellipse: s-maj=143.6km s-min=17.6km az=69.0*

*MAN **20** 00:50:02.6, 5°.65N×126°.04E, h77km, mb4.6, ML3.5, MS3.4*

ISC 20 00:50:00.4±1.1**, 5°.61N**±0°.09×**126°.2E**±0°.1**, h100km, n10, σ1s.29**/15**, mb3.6**/5**, 3C-1D, Mindanao**

```
Code  Station Name        Δ°  AZ°   Phase ID           Time    Res
                                   Op      ISC       h  m  s   ISC
MATI  Mati               1.33   1⇑iP      Pn      00 50 24.5 -0.1
MATI                              iS       Sn      00 50 43.7 +0.8
DAV   Davao City (W)     1.59 336  P       Pn      00 50 29.1 +1.3
      53nm,0.3s,baz=179,slow=1.6,SNR=2.2
DAV                                S       Sn      00 50 50.0 +1.4
      54nm,0.3s,baz=62,slow=22,SNR=2.2
KCP   Kidapawan          1.80 321⇑eP      Pn      00 50 31.0 +0.6
KCP                               eS       Sn      00 50 54.8 +1.5
BUKP  Musuan             2.54 333⇓iP      Pn      00 50 41.2 +1.2
BUKP                              iS       Sn      00 51 09.5 -0.9
PAGZ  Pagadian           3.60 308⇑eP      Pn      00 50 55.3 +1.1
PAGZ                              iS       Sn      00 51 34.5 -1.3
FITZ  Fitzroy Crossi    23.56 181  P       P       00 55 02.2 +0.2
      4.1nm,0.9s,baz=4.8,slow=12,SNR=1.9
WRA   Warramunga Arr    26.61 163  P       P       00 55 30.2 +0.6
      0.4nm,0.9s,baz=343,slow=10.0,SNR=1.2
ASAR  Alice Springs     30.05 166  P       P       00 56 00.8 +0.7
      0.3nm,0.7s,baz=347,slow=6.9,SNR=2.2
MKAR  Makanchi Array    55.74 325  P       P       00 59 25.1 -1.7
      0.2nm,0.3s,baz=115,slow=7.6,SNR=5.6
KURBB Kurchatov Arra    59.90 327  P       P       00 59 53.7 -2.0
      0.4nm,0.6s,baz=122,slow=7.3,SNR=5.3
```

NNC 20 01:00:13.6±6.4**, 38°.87N**×**70°.24E, h8km**±30km**, mb3.6, mpv3.1, 4C-4D, Error ellipse: s-maj=43.0km s-min=21.3km az=178.0, Afghanistan-Tajikistan border region**

```
Code  Station Name        Δ°  AZ°   Phase ID           Time    Res
                                   Op      ISC       h  m  s   ISC
KK02  Karatay Array      4.23   3 ⇑Pn      Pn      01 01 19.3 +0.9
      0.8nm,0.3s,baz=175,slow=12
KK02                              ⇑Lg      Lg      01 02 27.9
      2.0nm,0.4s,baz=183,slow=31
AAK   Ala-Archa          4.96  39 ⇓Pn      Pn      01 01 28.6 +0.1
      2.1nm,0.7s
AAK                               ⇓Lg      Lg      01 02 50.5
      8.0nm,1.0s
TKM2  Tokmak 2           5.73  43 ⇓Pn      Pn      01 01 38.8 -0.2
      1.8nm,0.5s
TKM2                              ⇓Sn      Sn      01 02 46.3 +1.2
      2.4nm,0.8s
AB31  Akbulak array     12.74 328 ⇑Pn      Pn      01 03 12.3 -2.6
      0.9nm,0.5s,baz=151,slow=11,SNR=29
AB31                              ⇑Sn      Sn      01 05 36.6 -0.1
      1.2nm,0.8s,baz=163,slow=22,SNR=6.3
```

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*NEIC **20** 01:06:21.4±1.2, 21°.35S±0°.09×174°.1W±0°.1, h10km±1km, mb4.1/9, Error ellipse: s-maj=16.9km s-min=15.3km az=100.0*

*IDC **20** 01:06:22.5±0.7, 21°.50S×174°.65W, h0km, mb4.2/12, mb1 4.4/14, mb1mx4.0/48, mbtmp4.2/14, ML3.6/2, MS3.8/15, Ms1 3.8/15, ms1mx3.6/39, Error ellipse: s-maj=28.3km s-min=19.0km az=134.0*

ISC 20 01:06:21.4±0.6**, 21°.47S**±0°.10×**174°.00W**±0°.08**, h10km, n52, σ1s.95**/31**, mb4.1**/14**, MS3.9**/13**, Tonga Islands**

```
Code  Station Name        Δ°  AZ°   Phase ID           Time    Res
                                   Op      ISC       h  m  s   ISC
NIUE  Niue               4.50  59  Pn      Pn      01 07 27.3 -2.4
AFI   Afiamalu           7.81  16  Pn      Pn      01 08 14.0 -1.3
      2.9nm,0.3s,baz=242,slow=8.2,SNR=1.8
AFI                                LR      LR      01 11 18.7
      comp=Z,364nm,19.5s,baz=194,slow=37
MSVF  Nonsavu            8.37 295  Pn      Pn      01 08 23.6 +0.7
      2.3nm,0.3s,baz=111,slow=14,SNR=12
MSVF                               LR      LR      01 11 13.8
      comp=Z,2µm,19.6s,baz=146,slow=37
MSVF  Nonsavu            8.37 295          Pn      01 08 26.8 +3.9
RAR   Rarotonga         13.26  91  LR      LR      01 14 44.3
      comp=Z,218nm,18.4s,baz=278,slow=36
RAR   Rarotonga         13.26  91  Pn      Pn      01 09 27.3 -2.5
OUENC Ouen Island, N    17.80 263  Pn      Pn      01 10 25.3 -4.0
OUENC                              IAmb    IAmb    01 10 29.8
      comp=Z,26nm,1.0s
DZM   Mont Dzumac       18.18 265 eLR      LR      01 14 54.9
      comp=Z,418nm,21.6s
DZM   Mont Dzumac       18.18 265  P       Pn      01 10 30.3 -3.8
      comp=Z,0.1nm,0.3s,baz=86,slow=11,SNR=3.0
URZ   Urewera           18.40 203  P       P       01 10 36.9 +0.2
      comp=Z,0.3nm,0.3s,baz=300,slow=23,SNR=2.1
URZ   Urewera           18.40 203  P       P       01 10 36.5 -0.1
URZ                                IAmb    IAmb    01 11 00.3
      comp=Z,18nm,1.2s
PAE   Paea              23.31  85 eT       T       01 35 21.5
      comp=Z,2.0nm,0.4s
PPT2  Papeete2          23.33  85 eLR      LR      01 17 10.5
      comp=Z,272nm,23.2s
PPT2  Papeete2          23.33  85 eT       T       01 35 24.5
      comp=Z,2.2nm,0.4s
PPT   Papeete           23.34  85  LR      LR      01 18 34.8
      comp=Z,169nm,20.5s,baz=254,slow=31
STKA  Stephens Creek    40.77 246  P       P       01 14 00.9 -2.0
      comp=Z,1.8nm,0.6s,baz=65,slow=9.7,SNR=4.5
STKA                               LR      LR      01 29 50.0
      comp=Z,131nm,18.4s,baz=31,slow=35
STKA  Stephens Creek    40.77 246  IAmb    IAmb    01 14 04.2
      comp=Z,0.9nm,1.1s
AS31  Alice Springs     47.94 257  P       P       01 14 59.1 -1.4
AS31                               IAmb    IAmb    01 15 07.9
      comp=Z,1.3nm,0.9s
ASAR  Alice Springs     47.94 257  P       P       01 14 58.8 -1.7
      comp=Z,5.1nm,0.8s,baz=94,slow=8.2,SNR=42
WB2   Warramunga Arr    48.16 262  P       P       01 15 00.5 -1.6
WRA   Warramunga Arr    48.17 262  P       P       01 14 59.9 -2.4
      comp=Z,3.5nm,0.8s,baz=92,slow=8.2,SNR=26
WRA   Warramunga Arr    48.17 262  P       P       01 15 00.9 -1.4
VNDA  Vanda             57.31 186  P       P       01 16 10.3 +1.4
VNDA                               IAmb    IAmb    01 16 17.8
      comp=Z,3.1nm,1.2s
QSPA  South Pole Qui    68.60 180  P       P       01 17 26.8 +2.3
      comp=Z,0.9nm,0.7s,baz=74,slow=1.1,SNR=6.5
QSPA  South Pole Qui    68.60 180  P       P       01 17 25.7 +1.3
MJAR  Matsushiro Arr    73.25 321  P       P       01 17 52.9  0.0
      comp=Z,2.3nm,0.9s,baz=162,slow=5.6,SNR=9.4
PFO   Pinyon Flats O    77.49  46  LR      LR      01 46 38.3
      comp=Z,50nm,18.7s,baz=179,slow=31
PETK  Petropavlovsk-    78.23 343  LR      LR      01 49 09.8
      comp=Z,24nm,21.3s,baz=136,slow=33
NVAR  Mina Array Bea    79.22  41  P       P       01 18 32.6 +5.5
      comp=Z,1.3nm,0.8s,baz=221,slow=6.8,SNR=6.5
KSRS  Korea Array       80.12 317  LR      LR      01 48 10.4
      comp=Z,17nm,21.1s,baz=145,slow=31
MAW   Mawson            81.89 199  P       P       01 18 41.5 +0.8
      comp=Z,2.8nm,0.9s,baz=135,slow=11,SNR=2.8
MAW   Mawson            81.89 199  IAmb    IAmb    01 18 55.7
      comp=Z,1.7nm,1.1s
ELK   Elko              82.51  41  LR      LR      01 53 58.3
      comp=Z,104nm,18.4s,baz=252,slow=34
TXAR  Lajitas Array     84.47  56  P       P       01 19 00.7 +5.9
      comp=Z,0.3nm,0.9s,baz=220,slow=8.2,SNR=2.1
TXAR                               LR      LR      01 50 21.1
      comp=Z,42nm,19.8s,baz=0.0,slow=31
ANMO  Albuquerque       85.14  50  LR      LR      01 50 53.5
      comp=Z,85nm,18.6s,baz=274,slow=31
PLCA  Paso Flores       85.87 132  LR      LR      01 51 03.5
      comp=Z,55nm,18.5s,baz=148,slow=31
SEY   Seymchan          88.21 345  P       P       01 19 13.7 +1.5
      comp=Z,0.6nm,0.3s,baz=109,slow=6.0,SNR=3.6
ILAR  Eielson Array     88.48  11  P       P       01 19 17.0 +3.5
      comp=Z,0.4nm,0.5s,baz=218,slow=4.7,SNR=2.6
ILAR  Eielson Array     88.48  11  P       P       01 19 13.1 -0.4
ATAH  Atahualpa         92.60  99  LR      LR      01 54 47.7
      comp=Z,86nm,18.1s,baz=199,slow=31
JTS   Las Juntas de     92.83  80  LR      LR      01 51 13.8
      comp=Z,43nm,20.2s,slow=29
CMAR  Chiang Mai Arr    93.97 288  P       P       01 19 41.6 +1.5
      comp=Z,1.5nm,0.3s,baz=135,slow=3.4,SNR=6.2
YKA   Yellowknife Ar    95.86  24  P       P       01 19 52.9 +5.2
      comp=Z,0.2nm,0.8s,baz=262,slow=4.7,SNR=2.0
ULM   Lac du Bonnet     98.97  39  LR      LR      02 00 23.5
      comp=Z,114nm,18.9s,baz=338,slow=33
TIXI  Tiksi            100.67 344  P       Pdif    01 20 09.5 +0.4
      comp=Z,1.4nm,0.5s,baz=271,slow=1.5,SNR=5.6
AKASG Malin Array Be   145.61 334  PKPbc   PKPab   01 26 01.1 +0.8
      comp=Z,2.2nm,0.7s,baz=38,slow=4.2,SNR=9.6
OSTC  Ostas            149.88 347 ePKP     PKPab   01 26 19.6 +2.4
DPC   Dobruska-Polom   150.05 347 ePKP     PKPab   01 26 18.7 +0.7
BRTR  Keskin Array B   150.23 314  PKPbc   PKiKP   01 26 14.4 +0.4
      comp=Z,1.1nm,0.7s,baz=118,slow=2.9,SNR=9.5
KHC   Kasperske Hory   151.75 349 ePKP     PKiKP   01 26 17.6 +1.0
CKRC  Cesky Krumlov    151.92 348 ePKP     PKiKP   01 26 19.4 +2.4
GERES GERESS Array B   152.00 349  PKPbc   PKiKP   01 26 18.7 +1.4
      comp=Z,0.7nm,0.8s,baz=46,slow=2.8,SNR=4.7
```

KMA 20 01:07:53.0±0.2**, 38°.25N**×**127°.82E, h7km**±3km**, Error ellipse: s-maj=2.6km s-min=0.7km az=331.0, North**

Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWCB	Hwacheon	0.12	258	P	Pg	01 07 55.6	0.0
	SNR=139						
HWCB	Hwacheon	0.12	258	P	Pg	01 07 55.6	0.0
	SNR=139						
KSCWO	Cheorwon	0.29	236	P	Pg	01 07 58.8	0.0
	SNR=26						
KSCWO	Cheorwon	0.29	236	P	Pg	01 07 58.8	0.0
	SNR=26						
KSCWO				S	Sg	01 08 02.6	-0.1
SEHB	SEOHWA	0.34	86	P	Pg	01 07 59.6	0.0
	SNR=42						
SEHB	SEOHWA	0.34	86	P	Pg	01 07 59.6	0.0
	SNR=42						
KSCHC	Chuncheon	0.47	181	P	Pg	01 08 02.2	+0.1
	SNR=29						
KSCHC	Chuncheon	0.47	181	P	Pg	01 08 02.2	+0.1
	SNR=29						
KSSKC	Sokcho	0.55	85	P	Pg	01 08 03.6	0.0
	SNR=22						
KSDGY	Daegwallycong	0.87	129	P	Pg	01 08 09.7	0.0
	SNR=9.9						
KSDGY	Daegwallycong	0.87	129	P	Pg	01 08 09.7	0.0
	SNR=9.9						
KSICN	Icheon	1.01	199	P	Pg	01 08 12.4	0.0
	SNR=8.4						

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*IDC **20** 01:08:35.7±0.7, 1.°45S×100.°63E, h69^{km}±6^{km}, mb4.1/24, mb1 4.2/27, mb1mx3.8/61, mbtmp4.4/27, MS3.1/6, Ms1 3.1/6, ms1mx2.9/44, Error ellipse: s-maj=17.0km s-min=9.4km az=53.0*

*NEIC **20** 01:08:36.1±1.8, 1.°49S±0.°09×100.°50E±0.°07, h68^{km}±5^{km}, mb4.5/32, Error ellipse: s-maj=13.0km s-min=10.4km az=191.0*

*DJA **20** 01:08:37.7±0.2, 1°S±2°×10°1E±°, h43^{km}±9^{km}, M4.6/20, mb4.6/7, mB4.6/2, MLv4.6/20, Mw(mB)3.8/2*

ISC 20 01:08:34.8±0.4**, 1.°47S**±0.°05×**100.°51E**±0.°04**, h58**^{km}**, n151, σ1^{s}45**/148**, mb4.5**/50**, MS2.9**/3**, 14C-5D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDSI	Padang	0.56	355	S	Sn	01 09 00.0	+3.5
KRJI	Kerinci	1.13	123	P	Pn	01 08 57.8	+3.2
PPSI	Pulau Pagai	1.38	201	P	Pn	01 09 00.2	+2.4
SISI	Saibi	1.43	276	P	Pn	01 09 00.9	+2.4
BKNI	Bangkinang	1.86	16	P	Pn	01 09 07.0	+2.5
BKNI	Bangkinang	1.86	16	Pn	Pn	01 09 07.2	+2.7
RGRI	Rengat	2.14	58	P	Pn	01 09 11.1	+2.9
MASI	Maura Aman, Be	2.39	134	P	Pn	01 09 15.6	+3.9
MNSI	Mandailing Nat	2.44	338	P	Pn	01 09 15.2	+2.9
PBSI	Pulau Batu	2.64	302	P	Pn	01 09 17.9	+2.9
LHSI	Lahat	3.81	128	P	Pn	01 09 34.5	+3.4
GSI	Gunungsitoli	4.03	313	P	Pn	01 09 36.4	+2.3
GSI	Gunungsitoli	4.03	313	Pn	Pn	01 09 35.9	+1.8
DSRI	Dabo	4.18	76	P	Pn	01 09 38.3	+2.1
RPSI	Rantau Prapat	4.43	339		Pn	01 09 42.1	+2.5
PSI	Prapat	4.53	340	P	Pn	01 09 42.1	+1.0
	4.5nm,0.3s,baz=148,slow=12,SNR=20						
PSI				LR	LR	01 11 35.7	
	comp=Z,171nm,21.4s,baz=207,slow=40						
MYKOM	Kota Tinggi	4.65	46	Pn	Pn	01 09 44.4	+1.8
TPRI	Tanjung Pinang	4.67	59	P	Pn	01 09 44.8	+2.0
MDSI	Maura Dua	4.73	129	P	Pn	01 09 47.2	+3.5
LWLI	Liwa	4.99	135	P	Pn	01 09 50.4	+3.0
	1.8nm224nm,0.7s						
KLSI		5.29	127	P	Pn	01 09 54.9	+3.6
	0.1nm19nm,0.9s						
KASI	Kota Agung	5.66	135	P	Pn	01 09 58.6	+2.2
	0.7nm69nm,0.6s						
KCSI	Kotacane, Aceh	5.67	331	P	Pn	01 09 59.1	+2.5
	0.7nm914nm49nm,0.7s						
TPTI		5.76	325	P	Pn	01 09 59.3	+1.5
	0.1nm334nm12nm,0.6s						
IPM	Ipoh	5.94	5	Pn	Pn	01 10 01.1	+0.8
KULM	Kulim	6.72	1	Pn	Pn	01 10 11.8	+0.8
SRIT	Nakonsritamara	10.04	355	Pn	Pn	01 10 56.3	-0.2
KAPI	Kappang	19.53	101	P	P	01 12 57.5	-0.2
	0.8nm,0.3s,baz=223,slow=18,SNR=2.2						
KAPI				LR	LR	01 20 10.5	
	comp=Z,40nm,19.7s,baz=292,slow=36						
KAPI	Kappang	19.53	101	IAmb	IAmb	01 13 02.6	
	comp=Z,27nm,0.9s						
CM31	Chiang Mai Arr	19.87	356	P	P	01 13 00.9	-0.5
CMAR	Chiang Mai Arr	19.87	356	P	P	01 13 02.4	+1.0
	comp=Z,0.2nm,0.3s,baz=186,slow=10,SNR=21						
CMAR				LR	LR	01 21 20.2	
	comp=Z,50nm,19.0s,baz=180,slow=38						
CMAR	Chiang Mai Arr	19.87	356	P	P	01 13 01.7	+0.3
TOLI2	Tolitoli	20.43	83	P	P	01 13 07.7	+0.1
TOLI2				IAmb	IAmb	01 13 09.4	
	comp=Z,20nm,0.9s						
PALK	Pallekele	21.59	294	LR	LR	01 20 38.8	
	comp=Z,35nm,20.1s,baz=217,slow=33						
BATI	Baumata	24.59	112	LR	LR	01 24 17.7	
	comp=Z,116nm,19.5s,baz=259,slow=38						
H08S2	Diego Garcia H	28.58	257	T	T	01 43 35.7	
	baz=80,slow=75,SNR=41						
H08S3	Diego Garcia H	28.59	257	T	T	01 43 39.5	
	baz=80,slow=75,SNR=41						
H08S1	Diego Carcia H	28.60	257	T	T	01 43 11.9	
	baz=80,slow=75,SNR=14						
FITZ	Fitzroy Crossi	29.69	125	P	P	01 14 34.3	-1.2
	comp=Z,3.5nm,0.8s,baz=295,slow=5.4,SNR=7.4						
SIJI	Sorong	30.75	89	P	P	01 14 43.9	-1.2
	comp=Z,5.8nm,0.4s,baz=305,slow=15,SNR=5.3						
PKI	Pulchoki	32.33	334	*e*P	P	01 14 59.5	+0.5
	comp=Z,6.5nm,0.4s						
PKIN	Phulchoki	32.34	334	*e*P	P	01 14 59.5	+0.4
	comp=Z,3.9nm,0.3s						
GUN	Gumba	32.42	335	*e*P	P	01 15 00.7	+0.8
	comp=Z,38nm,0.4s						
NACB	Ninganchiao	32.70	37	P	P	01 15 02.4	+0.5
GKN	Gorkha	33.04	334	*e*P	P	01 15 06.1	+1.0
	comp=Z,17nm,0.2s						
DANN	Dangsing	33.73	333	*e*P	P	01 15 11.9	+0.6
	comp=Z,20nm,0.4s						
MUN	Mundaring	33.76	156	P	P	01 15 13.0	+1.9
	baz=34,SNR=4.9						
PYUN	Piuthan	33.88	332	*e*P	P	01 15 13.3	+0.8
	comp=Z,15nm,0.3s						
WRKA	Warakurna	35.61	133	P	P	01 15 27.1	-0.2
	baz=36,SNR=7.6						
LZH	Lanzhou	37.50	4	*e*P	P	01 15 50.8	+7.5
LZH				pP	sP	01 16 07.5	+2.4
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
NJ2	Nanjing	37.60	26	*e*P	P	01 15 46.0	+2.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WRA	Warramunga Arr	37.82	121	P	P	01 15 44.1	-2.0
	comp=Z,1.6nm,0.4s,baz=298,slow=8.7,SNR=15						
AS31	Alice Springs	39.15	127	P	P	01 15 56.0	-1.3
ASAR	Alice Springs	39.15	127	P	P	01 15 55.8	-1.5
	comp=Z,4.6nm,0.5s,baz=300,slow=7.8,SNR=44						
ASAR				pP	pP	01 16 12.9	+0.8
	comp=Z,3.7nm,0.8s,baz=302,slow=8.0,SNR=7.6						
ASAR				PcP	PcP	01 18 05.3	-0.6
	comp=Z,2.2nm,0.7s,baz=303,slow=2.4,SNR=8.9						
ASAR				ScP	ScP	01 21 46.0	-3.7
	comp=Z,0.5nm,0.7s,baz=308,slow=3.6,SNR=5.8						
HHC	Hu-ho-hao-te	43.31	12	*e*P	P	01 16 34.4	+3.2
HHC				pmax	pmax		
	comp=Z,11nm,1.2s						
HHC				pmax	pmax		
	comp=Z,98nm,6.1s						
NIL	Nilore	43.35	326	P	P	01 16 30.1	-1.5
KSRS	Korea Array	46.31	30	P	P	01 16 54.6	-0.3
	comp=Z,1.2nm,0.7s,baz=229,slow=9.5,SNR=4.8						
KSRS				PcP	PcP	01 18 29.1	-0.4
	comp=Z,0.9nm,0.7s,baz=234,slow=4.2,SNR=4.0						
KSRS				LR	LR	01 34 23.6	
	comp=Z,14nm,21.9s,baz=231,slow=34						
WMQ	Urumqi	46.53	347	*e*P	P	01 16 56.3	-0.4
WMQ				pP	sP	01 17 16.1	-2.5
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,320nm,4.7s						
KSH	Kashi	46.59	334	P	P	01 16 56.9	-0.4
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
TARG	Taragay, Kyrgy	47.67	337	P	P	01 17 06.9	+0.8
HTT	Hallett	48.01	136	P	P	01 17 08.3	-0.1
	baz=48,SNR=9.1						
KDJ	Kajisay	48.26	337	P	P	01 17 10.4	0.0
STKA	Stephens Creek	49.12	132	P	P	01 17 16.3	-0.5
	comp=Z,5.4nm,0.5s,baz=312,slow=7.7,SNR=13						
STKA	Stephens Creek	49.12	132	P	P	01 17 16.4	-0.5
	baz=49,SNR=8.6						
STKA	Stephens Creek	49.12	132	P	P	01 17 16.2	-0.7
SONM	Songino Array	49.38	5	P	P	01 17 18.5	-0.2
	comp=Z,3.1nm,0.8s,baz=188,slow=8.0,SNR=24						
SONM				PcP	PcP	01 18 39.9	-0.6
	comp=Z,2.6nm,0.6s,baz=185,slow=4.3,SNR=9.2						
SONM	Songino Array	49.38	5	P	P	01 17 18.2	-0.5
SONM				IAmb	IAmb	01 17 19.2	
	comp=Z,3.3nm,1.0s						
UCH	Uchtor	49.44	335	P	P	01 17 20.7	+1.0
	SNR=14						
ULN	Ulaanbaatar	49.47	6	P	P	01 17 19.7	+0.2
ULN				IAmb	IAmb	01 17 20.3	
	comp=Z,5.7nm,1.4s						
TKM2	Tokmak 2	49.56	336	P	P	01 17 21.3	+1.0
	SNR=11						
KBK	Karagaybulak	49.61	335	P	P	01 17 22.0	+1.4
	SNR=15						
AML	Almayashu	49.72	334	P	P	01 17 22.4	+0.6
	SNR=24						
AAK	Ala-Archa	49.78	335	P	P	01 17 22.8	+0.9
	SNR=10						
AAK	Ala-Archa	49.78	335	P	P	01 17 22.1	+0.1
CHMS	Chumysh	49.97	335	P	P	01 17 23.8	+0.6
	SNR=12						
EKS2	Erkin-Say	50.11	334	P	P	01 17 25.4	+1.1
	SNR=39						
USP	Ospenovka	50.30	335	P	P	01 17 26.3	+0.6
	SNR=28						
MK31	Makanchi Array	50.67	344	P	P	01 17 27.4	-1.0
MK31				IAmb	IAmb	01 17 28.7	
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	50.67	344	P	P	01 17 27.9	-0.5
	comp=Z,2.3nm,0.6s,baz=156,slow=8.7,SNR=20						
MKAR				pP	pP	01 17 45.7	+2.0
	comp=Z,1.5nm,0.5s,baz=151,slow=7.6,SNR=4.7						
MKAR	Makanchi Array	50.67	344	P	P	01 17 27.2	-1.1
MAKZ	Makanchi	50.77	344	P	P	01 17 28.4	-0.7
MAKZ				IAmb	IAmb	01 17 30.8	
	comp=Z,4.4nm,1.3s						
MJAR	Matsushiro Arr	51.55	39	P	P	01 17 34.3	-0.9
	comp=Z,1.3nm,0.6s,baz=218,slow=8.5,SNR=4.6						
KKAR	Karatay Array	51.93	332	P	P	01 17 37.4	-0.4
CMSA	Cobar Meteorol	52.05	130	P	P	01 17 38.6	-0.4
	baz=52,SNR=18						
USRK	Ussuriysk Ar.	53.45	28	P	P	01 17 48.5	-0.6
	comp=Z,3.6nm,0.6s,baz=228,slow=4.4,SNR=8.7						
KURBB	Kurchatov Arra	55.20	343	P	P	01 18 00.5	-1.2
	comp=Z,3.8nm,0.8s,baz=161,slow=6.8,SNR=27						
KURK	Kurchatov	55.25	343	P	P	01 18 01.3	-0.7
KURK				IAmb	IAmb	01 18 02.5	
	comp=Z,6.8nm,0.8s						
GEYT	Alibeck	55.38	320	P	P	01 18 03.4	+0.1
	comp=Z,5.2nm,0.7s,baz=81,slow=18,SNR=6.3						
GEYT	Alibeck	55.38	320	P	P	01 18 02.7	-0.6
GEYT				IAmb	IAmb	01 18 04.2	
	comp=Z,4.8nm,0.8s						
ZAA0	Zalesovo Array	56.75	349	P	P	01 18 11.7	-1.0
ZAA0				IAmb	IAmb	01 18 12.5	
	comp=Z,7.8nm,0.9s						
ZALV	Zalesovo Beam	56.75	349	P	P	01 18 11.6	-1.1
	comp=Z,4.9nm,0.6s,baz=164,slow=5.9,SNR=32						
KLR	Kul'dur	57.25	24	P	P	01 18 14.9	-1.4
	comp=Z,2.6nm,0.7s,baz=229,slow=7.6,SNR=8.0						
BRVK	Borovoye	59.94	339	P	P	01 18 34.3	-0.7
BRVK				IAmb	IAmb	01 18 34.7	
	comp=Z,5.5nm,0.8s						
ABKAR	Akbulak array	61.43	331	P	P	01 18 44.5	-0.6
KMBO	Kilima Mbogo	63.24	269	P	P	01 18 56.3	-1.9
ARU	Arti	66.93	336	P	P	01 19 20.1	-1.0
ARU				IAmb	IAmb	01 19 21.1	
	comp=Z,6.7nm,1.0s						
ONI	Oni	67.41	318	IAmb	IAmb	01 19 51.8	
	comp=Z,4.6nm,1.1s						
KBZ	Khabaz	68.25	319	P	P	01 19 29.9	+0.3
	comp=Z,4.2nm,0.8s,baz=124,slow=7.3,SNR=15						
KIRV	Kirov	72.12	335	P	P	01 19 52.9	-0.1
	comp=Z,8.4nm,0.6s,baz=205,slow=2.9,SNR=4.7						
BR131	Keskin Array S	73.35	312	IAmb	IAmb	01 20 01.1	
	comp=Z,2.9nm,0.8s						
BRTR	Keskin Array B	73.35	312	P	P	01 20 00.5	-0.5
	comp=Z,1.6nm,0.6s,baz=140,slow=6.8,SNR=17						
BRTR	Keskin Array B	73.35	312	P	P	01 20 00.3	-0.6
BOSA	Boshof	76.36	241	P	P	01 20 18.8	+0.3
	comp=Z,2.6nm,0.8s,baz=101,slow=5.2,SNR=3.2						
BOSA	Boshof	76.36	241	IAmb	IAmb	01 20 44.9	
	comp=Z,5.5nm,0.8s						
TIRR	Tirgusor	78.33	316	⇑P	P	01 20 28.8	-0.2
VLDR	Vladesti	78.89	317	⇑P	P	01 20 30.9	-1.2
VARL	Varlezi	79.06	317	⇑P	P	01 20 33.6	+0.6
AKASG	Malin Array Be	79.38	322	P	P	01 20 33.7	-0.9
	comp=Z,2.6nm,0.4s,baz=84,slow=5.2,SNR=79						
RAZG	Razgrad	79.47	315	⇓P	P	01 20 35.2	-0.1
VRI	Vrincioaia	79.82	317	⇑P	P	01 20 37.8	+0.7
PLOR	Plostina	79.87	317	⇑P	P	01 20 33.9	-3.6
TESR	Tescani	80.01	318	⇑P	P	01 20 38.6	+0.4
MLR	Muntele Rosu	80.27	317	⇓P	P	01 20 40.0	+0.2
PRAR	RASCA	80.48	318	⇓P	P	01 20 40.5	-0.3
VOIR		80.88	316	⇑P	P	01 20 42.6	-0.4
BURAR	Bucovina Array	81.21	319	⇓P	P	01 20 46.3	+1.6
BUR08	Bucovina Ar. S	81.22	319	P	P	01 20 44.1	-0.7
BUR08				IAmb	IAmb	01 20 46.6	
	comp=Z,4.6nm,0.8s						
VTS	Vitosha	81.65	313	⇑P	P	01 20 47.1	0.0
VTS	Vitosha	81.65	313	P	P	01 20 45.8	-1.4
BMR	Baia Mare	82.36	318	⇑P	P	01 20 51.4	+0.8
DEV	Deva	82.44	317	⇑P	P	01 20 51.9	+0.8
VNDA	Vanda	82.58	169	P	P	01 20 51.3	+0.2
	comp=Z,0.8nm,0.5s,baz=328,slow=6.6,SNR=5.3						
HERR	Herculane	82.61	315	⇑P	P	01 20 51.5	-0.4
BOVS	Bovan	82.92	314	⇑P	P	01 20 52.5	-1.1
TRPA	Tarpa	83.07	319	⇓P	P	01 20 54.3	+0.1
BZS	Buzias	83.28	316	⇑P	P	01 20 55.4	0.0
SIRR	Siria	83.36	317	⇑P	P	01 20 55.0	-0.9
FINES	FINESS Array B	83.89	332	P	P	01 20 58.0	-0.1
	comp=Z,0.8nm,0.4s,baz=117,slow=4.8,SNR=12						
FINES				pP	pP	01 21 16.3	+1.7
	comp=Z,1.6nm,0.7s,baz=134,slow=5.5,SNR=2.1						
ARCES	ARCESS Array B	86.16	340	P	P	01 21 09.3	-0.1
	comp=Z,6.1nm,0.9s,baz=69,slow=4.0,SNR=4.8						
ARCES				pP	pP	01 21 28.2	+2.3
	comp=Z,3.4nm,0.9s,baz=111,slow=2.7,SNR=1.7						
QSPA	South Pole Qui	88.48	180	P	P	01 21 21.0	+0.1
	comp=Z,1.1nm,0.7s,baz=259,slow=0.7,SNR=5.8						
GERES	GERESS Array B	88.99	319	P	P	01 21 24.2	+0.7
	comp=Z,0.7nm,0.7s,baz=84,slow=4.2,SNR=6.9						
CTI	Castel Tesino	90.26	316	P	P	01 21 28.3	-1.3
CTI				IAmb	IAmb	01 21 31.1	
	comp=Z,4.6nm,0.9s						
WTTA	Wattenberg	90.31	317	*i* P	P	01 21 29.6	-0.2
	comp=Z,1.2nm,0.6s						
SQTA	Sankt Quirin	90.60	317	*e*P	P	01 21 31.3	+0.1
	comp=Z,1.5nm,0.6s						
MOTA	Moosalm	90.67	317	*e*P	P	01 21 31.7	+0.1
	comp=Z,1.2nm,0.5s						
RETA	Reutte	90.91	317	*e*P	P	01 21 32.9	+0.4
	comp=Z,0.7nm,0.4s						
DAVA	Damuels	91.50	317	*e*P	P	01 21 36.0	+0.6
	comp=Z,0.3nm,0.3s						
IMAR	Indian Mountai	97.72	23	P	P	01 22 02.2	-1.0
TXAR	Lajitas Array	143.98	37	PKP	PKPbc	01 28 02.6	-0.1
	comp=Z,4.3nm,0.6s,baz=282,slow=0.9,SNR=58						
X40A	Basin Creek Fa	144.87	19	PKPdf	PKPab	01 28 04.0	-1.0
CLTN	Cedars of Leba	144.98	10	PKPdf	PKPab	01 28 04.4	-1.0
CPUP	Villa Florida	145.04	216	PKPbc	PKPdf	01 28 06.6	+0.1
	comp=Z,3.0nm,1.0s,baz=122,slow=3.7,SNR=3.4						
Z38A	Mt. Pleasant	145.19	23	PKPbc	PKPbc	01 28 05.1	-1.1
V48A	Smith Brothers	145.23	10	PKPbc	PKPbc	01 28 04.4	-1.9
JCT	Junction City	145.31	32	PKPbc	PKPbc	01 28 05.7	-1.0
WLAR	White Oak Lake	145.50	20	PKPbc	PKPdf	01 28 06.1	-1.0
435B	Jarrell	146.18	29	PKPbc	PKPdf	01 28 08.6	+0.2
KMSC	Kings Mountain	146.46	3	PKPbc	PKPdf	01 28 08.8	+0.1
BG3	Lake Jocassee	146.50	5	PKPbc	PKPdf	01 28 09.1	+0.3
Y49A	Blount Mountai	147.14	11	PKPbc	PKPdf	01 28 09.9	0.0
146A	Union	147.72	15	PKPbc	PKPbc	01 28 13.0	-0.6

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*IDC **20** 01:10:17.6±0.2, 52.°24S×13.°91E, h0^{km}, mb4.2/10, mb1 4.2/10, mb1mx3.9/33, mbtmp4.2/10, MS3.6/10, Ms1 3.6/10, ms1mx3.3/41, Error ellipse: s-maj=8.1km s-min=3.4km az=116.0*

*NEIC **20** 01:10:19.4±0.6, 52.°3S±0.°1×13.°6E±0.°3, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=33.0km s-min=14.4km az=292.0*

ISC 20 01:10:19.0±0.7**, 52.°3S**±0.°1×**13.°8E**±0.°2**, h10**^{km}**, n30, σ0^{s}62**/20**, mb4.3**/11**, MS3.4**/10**, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	20.54	17	P	P	01 14 57.7	+0.1
	11nm,0.8s,baz=215,slow=12,SNR=2.5						
SUR				LR	LR	01 20 46.0	
	comp=Z,153nm,20.2s,baz=183,slow=31						
SNAA	Sanae	20.81	195	P	P	01 15 00.7	+0.5
SNAA	Sanae	20.81	195	P	P	01 15 00.9	+0.7
	28nm,1.0s,baz=25,slow=9.5,SNR=50						
SNAA	Sanae	20.81	195	P	P	01 15 00.4	+0.1
VNA1	Neumayer--Stat	20.98	200	P	P	01 15 02.3	+0.3
VNA2	Neumayer--Watz	21.01	199	P	P	01 15 02.7	+0.4
	baz=23,slow=12						
VNA3	Neumayer Olymp	21.73	200	P	P	01 15 10.2	+0.1
BOSA	Boshof	25.14	24	P	P	01 15 44.5	+0.2
	1.6nm,1.0s,baz=167,slow=14,SNR=1.8						
BOSA				LR	LR	01 24 15.4	
	comp=Z,85nm,19.1s,baz=195,slow=33						
MAW	Mawson	27.98	142	LR	LR	01 24 57.3	
	comp=Z,93nm,22.0s,baz=242,slow=31						
LBTB	Lobatse	28.67	23	LR	LR	01 25 59.5	
	comp=Z,94nm,19.0s,baz=185,slow=33						
TSUM	Tsumeb	33.15	7	LR	LR	01 28 43.8	
	comp=Z,71nm,18.7s,baz=159,slow=33						
MATP	Matopo	33.79	25	LR	LR	01 28 46.3	
	comp=Z,68nm,20.5s,baz=182,slow=33						
QSPA	South Pole Qui	37.94	180	P	P	01 17 35.9	-0.5
QSPA				IAmb	IAmb	01 17 42.8	
	comp=Z,10nm,1.2s						
VNDA	Vanda	48.94	171	P	P	01 19 03.3	-1.3
	comp=Z,1.4nm,0.7s,baz=212,slow=5.7,SNR=5.9						
VNDA				LR	LR	01 38 12.5	
	comp=Z,131nm,20.5s,baz=205,slow=34						
DBIC	Dimbokro	60.86	339	P	P	01 20 31.1	-0.5
	comp=Z,2.9nm,0.8s,baz=168,slow=11,SNR=4.2						
DBIC				LR	LR	01 42 01.7	
	comp=Z,91nm,20.8s,baz=360,slow=31						
TORD	Torodi Ar. Bea	66.01	347	P	P	01 21 05.3	-0.3
	comp=Z,0.6nm,0.9s,baz=176,slow=4.3,SNR=5.2						
TORD				LR	LR	01 46 26.6	
	comp=Z,70nm,18.9s,baz=315,slow=33						
KOWA	Kowa	68.28	341	P	P	01 21 19.5	-0.5
	comp=Z,2.9nm,0.9s,baz=165,slow=6.9,SNR=9.0						
KOWA	Kowa	68.28	341	IAmb	IAmb	01 21 21.0	
	comp=Z,3.8nm,0.9s						
ATD	Arta Tunnel	68.31	31	LR	LR	01 49 37.6	
	comp=Z,46nm,19.0s,baz=70,slow=35						
H01W2	Cape Leeuwin H	68.96	120	T	T	02 36 57.4	
	baz=220,slow=75,SNR=5.3						
H01W3	Cape Leeuwin H	68.97	120	T	T	02 37 09.9	
	baz=220,slow=75,SNR=5.1						
H01W1	Cape Leeuwin H	68.97	120	T	T	02 37 00.8	
	baz=220,slow=75,SNR=5.3						
LPAZ	La Paz	72.39	266	P	P	01 21 47.3	+1.2
	comp=Z,1.4nm,0.7s,baz=54,slow=12,SNR=4.6						
SAML	Samuel	75.02	275	P	P	01 22 00.6	-0.2
SAML				IAmb	IAmb	01 22 02.8	
	comp=Z,3.2nm,1.1s						
STKA	Stephens Creek	84.57	138	P	P	01 22 53.4	+1.0
	comp=Z,2.8nm,0.8s,baz=239,slow=5.9,SNR=3.3						
STKA	Stephens Creek	84.57	138	IAmb	IAmb	01 22 59.0	
	comp=Z,1.4nm,1.1s						
ASAR	Alice Springs	88.13	127	P	P	01 23 10.2	+0.2
	comp=Z,2.4nm,0.7s,baz=208,slow=4.9,SNR=18						
ASAR	Alice Springs	88.13	127	P	P	01 23 10.4	+0.4
AS31	Alice Springs	88.13	127	P	P	01 23 10.4	+0.4
AS31				IAmb	IAmb	01 23 12.4	
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	151.18	311	PKPbc	PKiKP	01 30 11.4	-0.2
	comp=Z,0.2nm,0.5s,baz=96,slow=2.0,SNR=6.1						

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*NEIC **20** 01:10:59.9±1.8, 52.°9N±0.°1×176.°0W±0.°1, h251^{km}±9^{km}, mb4.5/96, Error ellipse: s-maj=21.9km s-min=9.5km az=171.0*

*IDC **20** 01:11:00.6±4.5, 52.°91N×176.°02W, h262^{km}±43^{km}, mb3.6/12, mb1 3.7/15, mb1mx3.4/54, mbtmp4.2/15, Error ellipse: s-maj=23.0km s-min=12.1km az=15.0*

ISC 20 01:10:59.6±0.5**, 52.°98N**±0.°08×**175.°93W**±0.°06**, h250**^{km}**, n149, σ1^{s}16**/148**, mb4.2**/33**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSSP	Great Sitkin S	0.90	190		Pn	01 11 34.5	+0.3
GSTD	Great Sitkin T	0.94	188		Pn	01 11 34.4	-0.1
GSTD					S	01 12 01.2	-0.6
GSMY	Great Sitkin M	0.94	185		Pn	01 11 34.4	0.0
GSCK	Great Sitkin C	0.98	188		Pn	01 11 34.6	0.0
GSCK					S	01 12 01.8	-0.3
GSIG	Igitkin Island	1.00	180		Pn	01 11 34.4	-0.3
ETKA	Kagalaska Isla	1.16	195		Pn	01 11 35.2	-0.4
ADK	Adak	1.19	203		Pn	01 11 35.4	-0.4
ADK					S	01 12 03.4	-0.8
KOKL	Mount Kliuchef	1.24	121		Pn	01 11 37.0	+0.8
KIRH	Kanaga Island	1.30	214		Pn	01 11 34.4	-2.1
ATKA	Atka Island	1.31	126	Pn	Pn	01 11 36.0	-0.6
ATKA	Atka Island	1.31	126		S	01 12 06.3	+0.7
KOFP	Korovin Flat P	1.32	122		Pn	01 11 37.1	+0.3
KIKV	Kanaga Island	1.34	215		Pn	01 11 36.9	0.0
KIWB	Kanaga Island	1.36	214		Pn	01 11 36.8	-0.1
KIMD	Kanaga Island	1.46	214		Pn	01 11 37.3	-0.3
TAFP	Tanaga Falls P	1.66	230		Pn	01 11 39.4	+0.2
TAFP					S	01 12 09.5	-0.9
TAFL	Tanaga Flats	1.72	225		Pn	01 11 39.7	0.0
TASE	Tanaga Southea	1.73	229		Pn	01 11 40.1	+0.3
GAEA	Gareloi East	2.10	236		Pn	01 11 43.3	+0.3
GANO	Gareloi North	2.11	238		Pn	01 11 43.1	0.0
GALAA	Gareloi Lava P	2.13	236		Pn	01 11 43.5	+0.2
GASW	Gareloi Southw	2.16	237		Pn	01 11 43.5	0.0
OHAK	Old Harbor	13.61	63	Pn	Pn	01 14 02.1	-0.7
SVW2	Sparrevohn	13.69	46		P	01 14 06.8	+2.2
N19K	Bonanza Creek	14.04	48	Pn	P	01 14 12.0	+3.3
KDAK	Kodiak Island	14.08	61	P	Pn	01 14 08.4	0.0
	3.4nm,0.3s,baz=220,slow=3.4,SNR=35						
KDAK				S	S	01 16 37.1	-7.0
	0.8nm,0.3s,baz=81,slow=23,SNR=8.5						
TTA	Tatalina	14.46	39		Pn	01 14 12.2	-0.9
L19K	White Mountain	14.51	42		P	01 14 16.7	+2.9
M19K	Big River Lodg	14.57	44		Pn	01 14 16.1	+1.7
SPU	Mount Spurr	15.28	48		Pn	01 14 23.2	+0.3
K20K	Telida	15.43	39	P	Pn	01 14 27.1	+2.4
K20K				IAmb	IAmb	01 14 41.9	
	comp=Z,14nm,0.7s						
J20K	Nowinta River	15.86	36		P	01 14 28.4	-0.2
J20K				IAmb	IAmb	01 14 34.1	
	comp=Z,30nm,1.5s						
PPLA	Purkeypile	15.94	42		Pn	01 14 31.5	+0.6
PPLA				IAmb	IAmb	01 14 39.9	
	comp=Z,23nm,0.8s						
O22K	Cooper Landing	16.13	52		P	01 14 32.1	+0.6
CAST	Castle Rocks	16.23	41	Pn	Pn	01 14 35.5	+1.4
CAST				IAmb	IAmb	01 14 39.2	
	comp=Z,14nm,0.7s						
KTH	Kantishna Hill	16.75	41		P	01 14 39.3	+0.9
TRF	Thorofare Moun	16.96	42		P	01 14 40.8	0.0
TRF				IAmb	IAmb	01 14 51.3	
	comp=Z,18nm,1.1s						
BPAW	Bear Paw Mtn.	16.99	39		Pn	01 14 42.5	-0.5
BPAW				IAmb	IAmb	01 14 45.4	
	comp=Z,22nm,0.7s						
IMAR	Indian Mountai	17.08	32		P	01 14 42.2	+0.3
I21K	Tanana	17.19	35	IAmb	IAmb	01 14 47.9	
	comp=Z,27nm,1.0s						
BILL	Bilibino	17.34	337	P	Pn	01 14 46.5	-0.6
BILL				IAmb	IAmb	01 14 47.8	
	comp=Z,18nm,1.0s						
RND	Reindeer	17.53	43	P	P	01 14 47.8	+1.0
RND				IAmb	IAmb	01 14 49.4	
	comp=Z,13nm,0.6s						
MLY	Manley	17.55	37		Pn	01 14 48.8	-0.9
MCK	McKinley	17.63	42	P	P	01 14 48.3	+0.4
MCK				IAmb	IAmb	01 15 04.1	
	comp=Z,21nm,1.3s						
SCM	Sheep Creek Mo	17.63	49	P	P	01 14 48.8	+0.8
NEA2	Nenana	17.96	39		P	01 14 51.7	+0.2

NEA2				IAmb	IAmb	01 14 54.9	
	comp=Z,32nm,1.2s						
DHY	Denali Highway	18.02	45	P	P	01 14 52.3	0.0
I23K	Minto, Yukon-K	18.12	37		P	01 14 54.3	+1.2
I23K				IAmb	IAmb	01 14 58.4	
	comp=Z,9.4nm,0.7s						
KLU	Klutina	18.19	50	P	P	01 14 55.5	+1.5
KLU				IAmb	IAmb	01 14 59.5	
	comp=Z,18nm,1.1s						
WRH	Wood River Hil	18.28	40	P	P	01 14 54.1	-0.8
WRH				IAmb	IAmb	01 14 58.5	
	comp=Z,11nm,0.9s						
MDM	Murphy Dome	18.45	39		P	01 14 58.0	+1.3
MDM				IAmb	IAmb	01 15 00.3	
	comp=Z,24nm,1.0s						
CCB	Clear Creek Bu	18.47	40		P	01 14 57.2	+0.3
CCB				IAmb	IAmb	01 15 11.2	
	comp=Z,21nm,1.3s						
TCOL	CIGO, UAF Yank	18.55	39		P	01 14 57.3	-0.5
TCOL				IAmb	IAmb	01 15 02.2	
	comp=Z,18nm,1.0s						
COLA	College	18.55	39		P	01 14 57.5	-0.3
COLA				IAmb	IAmb	01 15 02.2	
	comp=Z,20nm,1.0s						
PAX	Paxson	18.80	46	P	P	01 15 01.5	+0.8
PAX				IAmb	IAmb	01 15 05.0	
	comp=Z,14nm,0.9s						
POKR	Poker Plat Res	18.82	39		P	01 14 59.1	-1.7
POKR				IAmb	IAmb	01 15 04.2	
	comp=Z,13nm,1.1s						
N25K	Chitina, Valde	18.83	50		P	01 15 02.1	+1.2
N25K				IAmb	IAmb	01 15 05.9	
	comp=Z,14nm,0.7s						
IL31		18.88	40		P	01 15 00.7	-0.6
IL31				IAmb	IAmb	01 15 17.2	
	comp=Z,27nm,1.2s						
ILAR	Eielson Array	18.88	40	P	P	01 15 00.8	-0.6
	comp=Z,0.3nm,0.3s,baz=237,slow=8.7,SNR=19						
COLD	Coldfoot	18.97	31		P	01 15 02.7	+0.4
COLD				IAmb	IAmb	01 15 08.2	
	comp=Z,11nm,0.8s						
H24K	Noodor Dome	19.00	36	IAmb	IAmb	01 15 07.7	
	comp=Z,34nm,1.4s						
GLB	Gilahina Butte	19.16	51	P	P	01 15 06.6	+2.2
SEY	Seymchan	19.33	313	P	P	01 15 06.5	+0.4
	comp=Z,0.5nm,0.3s,baz=94,slow=15,SNR=4.1						
PRP	Porcupine Dome	19.72	39	IAmb	IAmb	01 15 33.9	
	comp=Z,12nm,1.4s						
M26K	Nabesna, AK	19.75	49	IAmb	IAmb	01 15 15.1	
	comp=Z,13nm,1.1s						
SCRK	Sand Creek	19.75	44	P	P	01 15 11.4	+0.7
SCRK				IAmb	IAmb	01 15 14.4	
	comp=Z,5.6nm,0.7s						
TOLK	Toolik Lake Re	20.02	28	P	P	01 15 13.2	-0.2
FYU	Fort Yukon	20.29	36	P	P	01 15 17.1	+0.8
L27K	Beaver Creek,	20.43	47	IAmb	IAmb	01 15 20.6	
	comp=Z,5.5nm,0.8s						
BCAR	Beaver Creek A	20.45	47	P	P	01 15 19.8	+1.6
BMAR	Burnt Mountain	20.92	34	P	P	01 15 24.6	+1.7
EGAK	Eagle	21.17	43	P	P	01 15 27.3	+1.8
DAWY	Dawson	21.72	45	P	P	01 15 33.3	+2.6
DAWY				IAmb	IAmb	01 15 35.8	
	comp=Z,5.4nm,0.7s						
INK	Inuvik	25.12	36	P	P	01 16 01.9	+0.5
	comp=Z,1.7nm,0.4s,baz=274,slow=17,SNR=8.3						
INK	Inuvik	25.12	36	P	P	01 16 03.0	+1.5
TIXI	Tiksi	30.14	329	P	P	01 16 46.7	+0.8
	comp=Z,1.1nm,0.3s,baz=112,slow=13,SNR=2.7						
TIXI	Tiksi	30.14	329	P	P	01 16 45.5	-0.4
YKA	Yellowknife Ar	32.84	49	P	P	01 17 10.7	+1.1
	comp=Z,2.8nm,0.7s,baz=275,slow=9.5,SNR=60						
K05A	Summer Lake	37.46	83	P	P	01 17 51.3	+2.0
CMB	Columbia Colle	40.64	89	P	P	01 18 17.2	+1.8
BCYI	Bear Canyon	41.00	76	P	P	01 18 18.2	-0.2
MCMT	McKenzie Canyo	41.02	75	P	P	01 18 19.1	+0.4
BOZ	Bozeman (W)	41.30	73	P	P	01 18 20.5	-0.3
KVN	Kaiserville	41.37	86	P	P	01 18 22.1	+0.5
RYN	Ryan	41.38	87	P	P	01 18 23.2	+1.6
KSAR	Wonju Array Be	41.41	271	P	P	01 18 27.0	+5.4
NVAR	Mina Array Bea	41.64	87	P	P	01 18 25.2	+1.5
	comp=Z,1.2nm,0.6s,baz=301,slow=7.0,SNR=8.2						
NVAR	Mina Array Bea	41.64	87	P	P	01 18 26.0	+2.2
YHL	Hebgen Lake	41.98	74	P	P	01 18 26.9	+0.4
YHH	Holmes Hill	42.21	74	P	P	01 18 28.9	+0.5
TPH	Tonopah	42.52	86	P	P	01 18 32.5	+1.7
TPH				IAmb	IAmb	01 18 33.1	
	comp=Z,51nm,1.4s						
FLWY	Flagg Ranch	42.71	75	P	P	01 18 33.9	+1.6
LCH	Last Change Ra	42.81	87	P	P	01 18 34.7	+1.6
HVU	Hansel Valley	42.87	79	P	P	01 18 34.7	+1.2
RLMT	Red Lodge	42.94	73	P	P	01 18 35.0	+0.9
R11A	Troy Canyon, C	43.33	85	P	P	01 18 38.6	+1.3
FCC	Fort Churchill	43.57	48	P	P	01 18 39.4	+0.7
FCC				IAmb	IAmb	01 18 40.0	
	comp=Z,6.9nm,0.6s						
NRIK	Noril'sk	43.92	329	P	P	01 18 42.4	+1.1
	comp=Z,1.7nm,0.4s,baz=73,slow=10,SNR=5.6						
PD31	Pinedale Array	44.16	76	P	P	01 18 44.3	+0.4
PDAR	Pinedale Array	44.16	76	P	P	01 18 44.0	+0.2
	comp=Z,1.9nm,0.5s,baz=334,slow=2.7,SNR=26						
GSC	Goldstone, Bar	44.60	89	P	P	01 18 48.5	+1.3
MSU	Marysvale	45.27	82	P	P	01 18 53.2	+0.6
TMUT	Trail Mountain	45.35	80	P	P	01 18 54.2	+0.9
RDMU	Red Mountain	45.52	78	P	P	01 18 55.2	+0.7
SRU	San Rafael Swe	45.88	80	P	P	01 18 57.9	+0.6
U15A	North Rim	46.57	84	P	P	01 19 04.0	+1.2
TKX	Tecate	46.59	92	P	P	01 19 02.5	-0.2
TKX				IAmb	IAmb	01 19 03.2	
	comp=Z,30nm,1.2s						
SPITS	Spitsbergen Ar	48.89	357	P	P	01 19 20.2	+0.6
	comp=Z,5.4nm,0.5s,baz=57,slow=6.1,SNR=9.4						
214A	Organ Pipe Nat	49.31	89	P	P	01 19 24.2	+0.7
COWI	Conover	53.44	60	P	P	01 19 53.6	-0.2
COWI				IAmb	IAmb	01 19 59.7	
	comp=Z,33nm,1.4s						
E43A	Lone Tree Farm	54.37	58	P	P	01 20 01.0	+0.5
E46A	Sault Ste Mari	55.75	57	P	P	01 20 11.1	+0.8
E46A				IAmb	IAmb	01 20 11.6	
	comp=Z,24nm,0.9s						
TX31	Lajitas Ar. Si	56.70	84	P	P	01 20 17.4	+0.1
TXAR	Lajitas Array	56.70	84	P	P	01 20 17.4	+0.1
	comp=Z,1.3nm,0.5s,baz=304,slow=5.6,SNR=22						
ARCES	ARCESS Array B	56.79	351	P	P	01 20 17.2	-0.1
	comp=Z,3.8nm,0.7s,baz=8.3,slow=7.4,SNR=5.7						
R40A	Maddies Statio	57.04	69	P	P	01 20 18.1	-1.4
R40A				IAmb	IAmb	01 20 18.9	
	comp=Z,4.9nm,0.5s						
SCHQ	Schefferville	57.64	40	P	P	01 20 24.1	+0.7
SCHQ				IAmb	IAmb	01 20 24.6	
	comp=Z,6.5nm,0.9s						
VLDQ	Val d'Or	57.90	51	P	P	01 20 23.9	-1.4
VLDQ				IAmb	IAmb	01 20 32.8	
	comp=Z,23nm,1.4s						
FVM	French Village	58.29	68	P	P	01 20 27.5	-0.6
FVM				IAmb	IAmb	01 20 28.1	
	comp=Z,7.8nm,0.5s						
WHTX	Lake Whitney,	58.49	78	P	P	01 20 30.6	+1.0
WHTX				IAmb	IAmb	01 20 45.2	
	comp=Z,8.4nm,0.8s						
FCAR	Ozark Folk Cen	58.81	71	P	P	01 20 30.8	-1.0
FCAR				IAmb	IAmb	01 20 31.3	
	comp=Z,4.9nm,0.6s						
MIAR	Mount Ida	58.93	73	P	P	01 20 33.1	+0.5
MIAR				IAmb	IAmb	01 20 34.0	
	comp=Z,6.0nm,1.1s						
LCAR	Lake Charles	59.23	70	P	P	01 20 33.2	-1.4
P48A	Milroy	59.99	63	P	P	01 20 39.2	-0.5
P48A				IAmb	IAmb	01 20 41.8	
	comp=Z,18nm,1.3s						
PLVO	Plevna	60.28	54	P	P	01 20 41.3	-0.4
DELO	Deloro Mine	60.40	55	P	P	01 20 42.3	-0.1
MKAR	Makanchi Array	60.40	309	P	P	01 20 41.8	-0.7
	comp=Z,0.1nm,0.3s,baz=38,slow=5.4,SNR=1.7						
O52A	Adamsville	61.44	61	P	P	01 20 49.3	-0.2
O52A				IAmb	IAmb	01 21 15.6	
	comp=Z,20nm,1.2s						
M54A	Oil Creek Stat	61.55	58	P	P	01 20 50.6	+0.3
LMQ	La Malbaie	61.59	48	P	P	01 20 49.7	-0.7
T50A	Nancy	62.08	65	P	P	01 20 54.0	+0.2
T50A				IAmb	IAmb	01 20 54.5	
	comp=Z,5.0nm,0.6s						
L56A	Greenwood	62.16	56	P	P	01 20 54.5	+0.1
MOQ	Mont Orford	62.39	51	P	P	01 20 55.2	-0.6
D62A	Allapoint, All	62.52	47	P	P	01 20 56.8	+0.3
J59A	Piesco	62.69	53	P	P	01 20 57.4	-0.4
SSPA	Standing Stone	63.11	58	P	P	01 21 00.8	+0.4
SSPA				IAmb	IAmb	01 21 12.4	
	comp=Z,13nm,1.4s						
G62A	West of Eustis	63.26	50	P	P	01 21 01.6	+0.1
PQI	Presque Isle	63.29	47	P	P	01 21 01.1	-0.4
H62A	Milan	63.45	51	P	P	01 21 02.8	0.0
WUPA	West Chester U	64.79	57	P	P	01 21 12.2	+0.8
WUPA				IAmb	IAmb	01 21 14.4	
	comp=Z,5.2nm,0.9s						
WES	Weston	65.04	52	P	P	01 21 12.8	-0.2
LMN	Caledonia Moun	65.33	46	P	P	01 21 14.9	+0.1
GOGA	Godfrey	65.49	67	P	P	01 21 15.9	-0.1
GOGA				IAmb	IAmb	01 21 20.2	
	comp=Z,14nm,1.4s						
JSC	Jenkinsville	66.06	65	P	P	01 21 20.0	+0.4
JSC				IAmb	IAmb	01 21 20.5	
	comp=Z,5.8nm,0.5s						
AKASG	Malin Array Be	74.53	344	P	P	01 22 09.6	-0.9
	comp=Z,0.2nm,0.3s,baz=20,slow=5.6,SNR=2.6						
CLL	Collm	75.81	354	*e*P	P	01 22 18.0	+0.2
WRA	Warramunga Arr	84.40	226	P	P	01 23 02.5	-1.3
	comp=Z,0.4nm,0.5s,baz=29,slow=6.0,SNR=9.2						
ASAR	Alice Springs	87.87	225	P	P	01 23 20.0	-0.7
	comp=Z,2.3nm,0.9s,baz=21,slow=5.1,SNR=15						
BOSA	Boshof	151.06	319	PKPbc	PKPbc	01 30 21.4	-1.4
	comp=Z,1.9nm,0.9s,baz=96,slow=0.5,SNR=5.2						

IDC 20 01:37:38.4±14.0, 13°.92S×166°.38E, h0^{km}, mb3.9/3, mb1 4.1/4, mb1mx3.6/39, mbtmp4.0/4, ML4.0/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/31, Error ellipse: s-maj=249.4km s-min=38.8km az=60.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.11	180	Pn	Pn	01 39 37.3	-0.2
	2.0nm,0.3s,baz=304,slow=20,SNR=16						
DZM				Sn	Sn	01 41 09.9	0.0
	1.3nm,0.3s,baz=293,slow=21,SNR=2.1						
DZM				LR	LR	01 42 31.8	
	comp=Z,73nm,19.8s,baz=347,slow=36						
STKA	Stephens Creek	28.88	228	P	P	01 43 39.9	+0.9
	1.2nm,0.5s,baz=70,slow=11,SNR=4.2						
WRA	Warramunga Arr	31.20	254	P	P	01 43 59.0	-0.6
	0.6nm,0.7s,baz=83,slow=10,SNR=7.6						
ASAR	Alice Springs	32.17	248	P	P	01 44 08.1	-0.1
	1.4nm,0.5s,baz=75,slow=9.4,SNR=28						

IDC 20 01:41:36.8±1.6, 16°.08N×95°.77W, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.6/44, mbtmp3.6/5, ML3.2/1, Error ellipse: s-maj=24.8km s-min=18.0km az=139.0

NEIC 20 01:41:41.9±1.5, 16°.08N±0°.05×95°.67W±0°.04, h45^{km}±12^{km}, Error ellipse: s-maj=7.7km s-min=5.5km az=149.0

MEX 20 01:41:42.4±0.8, 16°.05N×95°.66W, h60^{km}±9^{km}, MD4.3

ISC 20 01:41:42.0±0.9, 16°.03N±0°.04×95°.70W±0°.03, h52^{km}±9^{km}, n49, σ2^{s}01/77, mb3.7/5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.47	237		Pn	01 41 53.0	0.0
HUIG					Sn	01 42 01.2	+0.4
HUIG	Huatulco	0.47	237	*e*P	Pn	01 41 53.0	0.0
HUIG				*e*S	Sn	01 42 01.5	+0.6
CMIG	Matias Romero	1.32	37	Pg	Pn	01 42 02.6	-1.5
	208nm,0.3s,baz=227,slow=12,SNR=2335						
CMIG				LR	LR	01 42 03.8	
	comp=Z,40nm,19.5s,baz=212,slow=20						
CMIG				Lg	Lg	01 42 18.7	
	467nm,0.3s,baz=314,slow=22,SNR=14						
CMIG	Matias Romero	1.32	37		Pn	01 42 02.5	-1.5
CMIG					Sn	01 42 18.4	-2.2
CMIG	Matias Romero	1.32	37	*e*P	Pn	01 42 02.5	-1.5
CMIG				*e*S	Sn	01 42 18.4	-2.2
PEIG	Puerto Escondi	1.39	269	*e*P	Pn	01 42 04.1	-0.9
PEIG				*i* S	Sn	01 42 22.1	-0.2
OXLC	Oaxaca	1.41	317	*i* P	Pn	01 42 05.2	-0.3
OXLC				*e*S	Sn	01 42 22.0	-1.1
OXBJ	Oaxaca	1.42	317		Pn	01 42 05.2	-0.5
OXBJ					Sn	01 42 22.4	-1.0
OXBJ	Oaxaca	1.42	317	*i* P	Pn	01 42 05.3	-0.4
OXBJ				*e*S	Sn	01 42 22.4	-1.0
VHO	Vista Hermosa	1.43	317	*i* P	Pn	01 42 05.5	-0.3
VHO				*e*S	Sn	01 42 22.4	-1.3
NEUV	Arroyo Zacate	1.68	357	*e*P	Pn	01 42 07.5	-1.5
NEUV				*i* S	Sn	01 42 27.4	-2.0
YOIG	Yosondua	1.95	295	*e*P	Pn	01 42 13.0	+0.1
YOIG				*e*S	Sn	01 42 35.1	-1.3
UXUV	UXUV	1.97	49	*e*P	Pn	01 42 11.9	-1.0
UXUV				*i* S	Sn	01 42 33.7	-2.8
TXIG	Tlaxiaco	2.32	302	*e*P	Pn	01 42 18.5	+0.4
TXIG				*e*S	Sn	01 42 45.3	-0.3
PNIG	Pinotepa	2.36	279		Pn	01 42 17.5	-0.7
PNIG					Sn	01 42 43.6	-2.5
PNIG	Pinotepa	2.36	279	*e*P	Pn	01 42 17.5	-0.7
PNIG				*e*S	Sn	01 42 43.6	-2.5
PCIG		2.41	97		Pn	01 42 19.6	+0.6
PCIG					Sn	01 42 47.8	+0.4
PCIG		2.41	97	*e*P	Pn	01 42 17.0	-2.0
PCIG				*e*S	Sn	01 42 45.8	-1.5
TOIG	Toxpalan	2.43	328	*e*P	Pn	01 42 21.1	+1.7
TOIG				*e*S	Sn	01 42 51.6	+3.5
FTIG	Fresnillo de T	2.98	309	*e*P	Pn	01 42 27.8	+0.9
FTIG				*e*S	Sn	01 43 00.4	-1.2
MGIG	Malinaltepec	3.05	294	*e*P	Pn	01 42 28.7	+0.8
MGIG				*e*S	Sn	01 43 01.3	-2.1
TLIG	Tlapa	3.14	300		Pn	01 42 30.2	+1.1
CRIG	Cruz Grande	3.36	283		Pn	01 42 31.6	-0.5
CRIG					Sn	01 43 05.4	-5.4
CRIG	Cruz Grande	3.36	283	*e*P	Pn	01 42 31.6	-0.5
CRIG				*e*S	Sn	01 43 05.4	-5.4
CCIG	Comitan	3.44	85		Pn	01 42 34.2	+1.0
JAUV	Jalcomulco	3.48	343	*e*P	Pn	01 42 31.2	-2.5
JAUV				*e*S	Sn	01 43 21.5	+7.7
DAIG	Los Arroyos	3.91	285		Pn	01 42 39.2	-0.4
DAIG					Sn	01 43 21.4	-2.9
DAIG	Los Arroyos	3.91	285	*e*P	Pn	01 42 39.2	-0.4
DAIG				*e*S	Sn	01 43 21.4	-2.9
HUEH	Huehuetenango	4.11	99	Pn	Pn	01 42 41.7	-0.8
PPM	Popocatepetl	4.11	318	*e*P	Pn	01 42 43.5	+0.7
PPM				*e*S	Sn	01 43 30.9	+0.9
YAIG	Yautepec	4.27	312		Pn	01 42 46.6	+1.9
YAIG					Sn	01 43 29.6	-3.8
YAIG	Yautepec	4.27	312	*e*P	Pn	01 42 46.6	+1.9
YAIG				*e*S	Sn	01 43 29.6	-3.8
PETF	Flores	5.67	80		Pn	01 43 03.2	-0.5
MTO3	Montecristo	6.33	104		Pn	01 43 12.3	-0.8
MOIG	Morelia	6.36	306	Pn	Pn	01 43 14.5	+1.1
ZAIG	Zacatecas	9.32	317	Pn	Pn	01 43 53.6	-0.4
435B	Jarrell	14.79	354	Pn	Pn	01 45 07.7	-0.4
TXAR	Lajitas Array	15.14	332	Pn	Pn	01 45 13.8	+1.1
	0.0nm,0.3s,baz=150,slow=13,SNR=6.2						
MIAR	Mount Ida	18.54	6	P	P	01 45 53.3	-1.1
MIAR				IAmb	IAmb	01 45 55.3	
	comp=Z,16nm,1.2s						
HHAR	Hobbs	20.23	4	P	P	01 46 11.3	-1.6
HHAR				IAmb	IAmb	01 46 16.2	
	comp=Z,26nm,1.8s						
U40A	Yellville	20.41	7	P	P	01 46 13.9	-0.8
U40A				IAmb	IAmb	01 46 30.1	
	comp=Z,7.5nm,0.9s						
T35A	Sooner Cattle	20.82	358	P	P	01 46 16.3	-2.9
T35A				IAmb	IAmb	01 46 29.2	
	comp=Z,12nm,0.8s						
PBMO	Poplar Bluff	21.19	12	P	P	01 46 22.1	-1.1
PBMO				IAmb	IAmb	01 46 22.7	
	comp=Z,11nm,0.3s						
SDCO	Great Sand Dun	23.30	340	P	P	01 46 46.8	+1.1
PDAR	Pinedale Array	29.17	339	P	P	01 47 40.2	+1.5
	comp=Z,0.6nm,0.9s,baz=132,slow=8.7,SNR=4.0						
NVAR	Mina Array Bea	29.88	323	P	P	01 47 46.9	+1.9
	comp=Z,0.8nm,0.8s,baz=134,slow=8.5,SNR=4.6						
SIV	San Ignacio	46.70	131	P	P	01 50 08.0	+1.9
	comp=Z,0.6nm,0.7s,baz=273,slow=7.3,SNR=3.9						
RAGM	Ragged Mountai	56.52	333	P	P	01 51 19.7	+0.8
INK	Inuvik	57.51	344	P	P	01 51 25.1	-0.5
	comp=Z,0.9nm,0.7s,baz=153,slow=4.5,SNR=2.5						

ISK 20 01:43:18.7, 34°.53N×33°.25E, h16^{km}, ML3.5/33

HLW 20 01:43:20.8, 34°.49N×33°.37E, h10^{km}±21^{km}, Md3.4, Ml3.7

GII 20 01:43:20.8±0.0, 34°.58N×33°.33E, h15^{km}, MD3.5/3, Mm3.6/5

NIC 20 01:43:21.1±0.0, 34°.60N×33°.21E, h10^{km}±1^{km}, Ml3.6/8

DDA 20 01:43:31.6, 35°.70N×34°.52E, h0^{km}±17^{km}, ML2.4

ISC 20 01:43:20.5±1.0, 34°.58N±0°.02×33°.25E±0°.03, h16^{km}±7^{km}, n84, σ0^{s}87/118, 5C-2D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASGA	Asgata	0.21	0	⇑P	Pb	01 43 26.3	+0.3
ASGA				S	Sg	01 43 28.5	-0.3
ASGA				AML	AML	01 43 30.6	
	87nm,0.2s						
ASGA				AML	AML	01 43 30.6	
	87nm,0.2s						
ASGA				AML	AML	01 43 30.9	
	114nm,0.1s						
ASGA				AML	AML	01 43 30.9	
	114nm,0.1s						
CSS	Mathiatis	0.39	10	PG	Pg	01 43 28.4	-0.1
CSS				SG	Sb	01 43 34.6	-0.3
CSS	Mathiatis	0.39	10	⇑P	Pg	01 43 28.5	-0.1
CSS				S	Sb	01 43 34.6	-0.3
CSS				AML	AML	01 43 36.1	
	7.5nm,0.3s						
CSS				AML	AML	01 43 36.1	
	7.5nm,0.3s						
CSS				AML	AML	01 43 36.2	
	13nm,0.4s						
CSS				AML	AML	01 43 36.2	
	13nm,0.4s						
AKIN	Akıncılar- Kıb	0.47	22	PG	Pg	01 43 28.4	-1.6
MVOU	Mavrovouni	0.54	36	⇓P	Pg	01 43 31.0	-0.3
MVOU				AML	AML	01 43 44.7	
	4.9nm,0.5s						
MVOU				AML	AML	01 43 47.2	
	4.1nm,0.5s						
ATHAL	Athalassa	0.58	12	⇓P	Pb	01 43 32.2	-0.1
ATHAL				S	Sb	01 43 40.7	+0.5
ATHAL				AML	AML	01 43 43.4	
	17nm,0.8s						
ATHAL				AML	AML	01 43 43.4	
	17nm,0.8s						
ATHAL				AML	AML	01 43 49.7	
	18nm,0.7s						
ATHAL				AML	AML	01 43 49.7	
	18nm,0.7s						
NATA	Nata	0.59	290	⇑P	Pg	01 43 32.4	+0.1
NATA				S	Sg	01 43 40.5	+0.3
NATA				AML	AML	01 43 46.2	
	19nm,0.3s						
NATA				AML	AML	01 43 46.2	
	19nm,0.3s						
NATA				AML	AML	01 43 50.2	
	18nm,0.8s						
NATA				AML	AML	01 43 50.2	
	18nm,0.8s						
LEF	Lefka	0.62	332	PG	Pg	01 43 32.1	-0.6
LEF				SG	Sb	01 43 41.8	+0.5
LFK	Lefkose	0.74	18	PG	Pb	01 43 34.8	-0.3
LFK				SG	Sn	01 43 45.8	-1.5
AKDN	Akdeniz- Kıbrı	0.76	342	PG	Pb	01 43 34.9	-0.4
PARAL	Paralimni	0.77	57	P	Pn	01 43 35.9	-0.8
PARAL				S	Sn	01 43 48.4	+0.3
PARAL				AML	AML	01 43 50.3	
	7.6nm,0.5s						
PARAL				AML	AML	01 43 50.3	
	7.6nm,0.5s						
PARAL				AML	AML	01 43 50.5	
	4.7nm,0.5s						
PARAL				AML	AML	01 43 50.5	
	4.7nm,0.5s						
ALFC	Alefka	0.79	318	⇑P	Pb	01 43 35.0	-0.9
ALFC				S	Sg	01 43 46.8	+0.4
ALFC				AML	AML	01 43 47.1	
	20nm,0.5s						
ALFC				AML	AML	01 43 47.1	
	20nm,0.5s						
ALFC				AML	AML	01 43 49.0	
	11nm,0.3s						
ALFC				AML	AML	01 43 49.0	
	11nm,0.3s						
AKMS	Akamas	0.87	301	⇑P	Pb	01 43 36.7	-0.5
AKMS				S	Sg	01 43 49.7	+0.8
AKMS				AML	AML	01 43 52.4	
	9.3nm,0.2s						
AKMS				AML	AML	01 43 52.4	
	9.3nm,0.2s						
AKMS				AML	AML	01 43 52.6	
	5.3nm,0.2s						
AKMS				AML	AML	01 43 52.6	
	5.3nm,0.2s						
EREN	Erenkoy	1.22	38	PN	Pn	01 43 42.3	-0.5
TEKE	Tekeli-Mersin	1.57	356	PN	Pn	01 43 46.4	-1.3
AKK2	Akkuyu-Mersin	1.58	9	PN	Pn	01 43 47.4	-0.4
YORU	Yoruktepe-Mers	1.58	5	PN	Pn	01 43 47.8	-0.1
AKK1	Akkuyu-Mersin	1.58	9	PN	Pn	01 43 46.6	-1.3
AKKU	Akkuyu-Mersin	1.60	9	PN	Pn	01 43 47.5	-0.6
TISA	Tisan-Mersin	1.62	12	PN	Pn	01 43 48.0	-0.4
GULN	MERSIN_Gulnar	1.62	8	*i* P	Pn	01 43 47.7	-0.7
GULN				IAML		01 44 09.0	
	comp=N,92nm,0.2s						
GULN				*i* S	Sb	01 44 09.5	-0.8
GULN				IAML		01 44 10.0	
	comp=E,106nm,0.3s						
OREN	Orenkoy-Mersin	1.64	6	PN	Pn	01 43 48.2	-0.4
YESI	Yesilovacik-Me	1.65	11	PN	Pn	01 43 48.0	-0.8
TEPK	Tepekoy-MERSIN	1.66	8	PN	Pn	01 43 48.1	-0.9
KARG	Kargicak-Mersi	1.67	13	PN	Pn	01 43 48.8	-0.2
IKL	Isikli	1.70	12	PN	Pn	01 43 49.1	-0.3
OSC2	CSNet OBS 4	1.71	209	P	Pb	01 43 50.8	-0.6
OSC2				S	Sg	01 44 16.0	+0.6
BERE	Bereket-Mersin	1.77	359	PN	Pn	01 43 50.2	-0.4
TEVE	Tevekalti-Mers	1.86	5	PN	Pn	01 43 51.4	-0.4
SILI	Silifke-Mersin	1.87	17	PN	Pn	01 43 51.8	0.0
SLFK	Silifke-Mersin	1.90	17	PN	Pn	01 43 52.1	-0.1
KEBE	Keben-Mersin	1.91	11	PN	Pn	01 43 52.4	0.0
OSC1	CSNet OBS 1	1.96	237	P	Pn	01 43 52.5	-0.5
OSC1				S	Sn	01 44 17.6	+0.4
ERMK	Ermenek	2.08	353	*i* P	Pn	01 43 55.3	+0.4
ERMK				*i* S	Sb	01 44 25.1	+1.4
ERMK				IAML		01 44 26.0	
	comp=N,44nm,0.7s						
ERMK				IAML		01 44 26.0	
	comp=E,75nm,0.6s						
DQRL	Deir Qamar	2.11	114	*e*P	Pn	01 43 54.5	-0.7
HNTI	Hanita	2.19	132	Pn	Pn	01 43 55.8	-0.4
HNTI				Sn	Sn	01 44 22.7	-0.2
MMA0B	Mount Meron ar	2.38	130	Pn	Pn	01 43 58.5	-0.3
MMA0B				Sn	Sn	01 44 27.5	-0.2
RCY	Rachaya	2.40	116	*e*P	Pn	01 43 58.4	-0.9
GEM	Giv'at Ha'Em	2.43	123	Pn	Pn	01 43 58.9	-0.6
GEM				Sn	Sn	01 44 27.7	-1.1
OFRI	\`Ofer	2.43	143	Pn	Pn	01 43 58.8	-0.8
OFRI				Sn	Sn	01 44 28.5	-0.4
NATI	Neve Ativ	2.45	122	Pn	Pn	01 43 59.4	-0.4
NATI				Sn	Sn	01 44 27.5	-1.8
BLGI	Bet Lehem HaGe	2.45	138	Pn	Pn	01 43 59.8	0.0
BLGI				Sn	Sn	01 44 29.2	-0.2
HDMB	Hadim	2.46	346	PN	Pn	01 44 00.2	0.0
MERS	Mersin	2.51	24	PN	Pn	01 44 01.1	+0.4
KRMN	Karaman	2.59	0	PN	Pn	01 44 01.8	-0.1
KRTS	Karatas	2.64	40	PN	Pn	01 44 02.5	+0.1
KKBE	Karaman, Kazim	2.65	355	*i* P	Pn	01 44 03.8	+1.1
KKBE				IAML		01 44 37.0	
	comp=E,53nm,1.2s						
KKBE				IAML		01 44 38.0	
	comp=N,36nm,0.8s						
KKBE				*i* S	Sb	01 44 38.0	-1.9
YAYL	Yayladag	2.75	57	PN	Pn	01 44 03.3	-0.8
SLTI	Sal'it	2.77	147	Pn	Pn	01 44 04.4	+0.2
MMLI	Mount Malkishu	2.80	139	Pn	Pn	01 44 04.4	-0.3
MMLI				Sn	Sn	01 44 37.9	-0.2
KERG	Konya-Eregli	2.92	14	*i* P	Pn	01 44 07.7	+1.3
KERG				IAML		01 44 44.0	
	comp=E,36nm,0.7s						
KERG				*i* S	Sb	01 44 46.4	-1.4
TAHT	Tahtakopru-Hat	3.00	52	PN	Pn	01 44 07.4	+0.1
HMDT	Nahal Hemdat	3.00	140	Pn	Pn	01 44 07.7	+0.4
HMDT				Sn	Sn	01 44 43.0	+0.1
SEYD	Seydisehir-KON	3.05	338	PN	Pn	01 44 08.6	+0.5
KARA	Karaisali	3.06	28	PN	Pn	01 44 08.4	+0.3
YESY	Yesilyurt	3.23	7	PN	Pn	01 44 11.0	+0.4
AMAZ	Amatzia	3.34	155	Pn	Pn	01 44 12.3	+0.2

AMAZ				Sn	Sn	01 44 51.4	-0.1
KORT	Korkueli	3.38	317	PN	Pn	01 44 13.0	+0.3
CMRD	Camardi-Nigde	3.39	24	PN	Pn	01 44 13.4	+0.6
AKAS	Kas	3.40	300	PN	Pn	01 44 12.9	-0.1
KONT	Konya--Tatoy	3.44	348	PN	Pn	01 44 14.3	+0.9
ELL	Elmali	3.48	310	PN	Pn	01 44 14.7	+0.7
DSI	Dead Sea	3.49	149	Pn	Pn	01 44 14.3	+0.2
YTIR	Yattir	3.57	153	Pn	Pn	01 44 15.9	+0.6
YTIR				Sn	Sn	01 44 57.6	+0.5
SULT	Sultanhani-AKS	3.62	3	PN	Pn	01 44 16.7	+0.7
NIDE	Nigde/Merkez-G	3.63	19	*i* P	Pn	01 44 18.4	+2.2
NIDE				*i* S	Pb	01 44 29.0	+4.5
NIDE				IAML		01 44 33.0	
	comp=E,23nm,0.2s						
KZIT	Kziot	3.79	165	Pn	Pn	01 44 18.7	+0.5
KZIT				Sn	Sn	01 45 02.4	0.0
PRNI	Paran	4.46	160	Pn	Pn	01 44 27.8	+0.3
KRMI	Paran Flat	4.62	164	Pn	Pn	01 44 30.1	+0.5
KRMI				Sn	Sn	01 45 23.0	+0.1
HHAG	Hagoal	4.71	192	P	Pn	01 44 32.1	+1.1
	baz=194						
HHAG				S	Sn	01 45 23.7	-1.6
	baz=194						
SUZ	Suez	4.73	184	P	Pn	01 44 32.3	+1.0
	baz=186						
HRFI	Mount Harif	4.77	161	Pn	Pn	01 44 32.2	+0.4
HRFI				Sn	Sn	01 45 26.3	-0.5
KOT	Kottamia	4.79	195	P	Pn	01 44 31.9	-0.1
	baz=197						
KOT				S	Sn	01 45 24.2	-3.0
	baz=197						
MBRI	Mt Berech	4.97	163	Pn	Pn	01 44 34.8	+0.2
MBRI				Sn	Sn	01 45 32.5	+0.7
EIL	Elat	5.10	163	Pn	Pn	01 44 36.7	+0.5
EIL				Sn	Sn	01 45 34.9	+0.1
GLL	Jalalah	5.15	195	P	Pn	01 44 36.7	-0.3
	baz=197						
ZAF	Zafarana	5.31	187	P	Pn	01 44 40.5	+1.3
	baz=188						
HBST	Basata	5.49	166	P	Pn	01 44 41.5	-0.1
	baz=167						
HBST				AMP		01 45 00.0	
	baz=167						
NUB	Nuweibaa	5.66	167	P	Pn	01 44 44.5	+0.6
	baz=168						
HRDS	Abu Rudays	5.85	180	P	Pn	01 44 47.3	+0.8
	baz=181						
HDHB	Dhahab	5.95	168	P	Pn	01 44 47.7	-0.3
	baz=169						
RYAN	Fayoum	6.03	206	P	Pn	01 44 50.1	+1.1
	baz=207						
HKAT	Jabal Katrina	6.07	174	P	Pn	01 44 49.8	+0.1
	baz=174						
TR2	Tor 2	6.18	176	P	Pn	01 44 51.0	-0.2
	baz=177						

IDC ***20*** *01:43:54.4±1.1, 51.°35N×168.°82W, h0^{km}, mb3.8/10, mb1 4.0/11, mb1mx3.6/59, mbtmp3.7/11, ML3.3/1, Error ellipse: s-maj=33.3km s-min=18.6km az=0.0*

AEIC ***20*** *01:43:56.9±1.4, 51.°39N±0.°05×168.°67W±0.°09, h26^{km}±6^{km}, Error ellipse: s-maj=7.9km s-min=7.5km az=110.0*

NEIC ***20*** *01:43:58.4±0.9, 51.°48N±0.°02×168.°73W±0.°08, h24^{km}±6^{km}, mb4.0/11, ML3.3/22(AEIC), Error ellipse: s-maj=7.6km s-min=2.1km az=75.0*

ISC 20 01:43:59.5±2.5**, 51.°5N**±0.°1×**168.°75W**±0.°07**, h34**^{km}±10^{km}**, n40,** σ**0^{s}98**/45**, mb3.8**/9**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	1.53	358		Pn	01 44 23.9	-0.5
NIKH					Sn	01 44 44.0	+0.9
OKSP	Okmok Steeple	1.83	9		Pn	01 44 27.6	-0.9
OKSP					Sn	01 44 50.4	-0.1
OKTU	Okmok Mt. Tuli	1.99	12		Pn	01 44 30.1	-0.6
MAPS	Pakushin South	2.61	24		Pn	01 44 38.1	-1.1
MAPS					Sn	01 45 10.3	+0.7
MNAT	Makushin Natee	2.75	26		Pn	01 44 40.2	-0.9
MNAT					Sn	01 45 12.9	-0.2
MSW	Makushin Switc	2.75	25		Pn	01 44 40.3	-0.8
MSW					Sn	01 45 13.7	+0.6
UNV	Unalaska Valle	2.76	29		Pn	01 44 40.6	-0.7
UNV					Sn	01 45 13.8	+0.4
KOFP	Korovin Flat P	3.42	286		Pn	01 44 50.1	-0.3
ATKA	Atka Island	3.46	285		Pn	01 44 50.5	-0.4
GSIG	Igitkin Island	4.50	280		Pn	01 45 04.3	-0.8
FALS	False Pass	4.69	41	Pn	Pn	01 45 07.6	0.0
ADK	Adak	4.96	278	Pn	Pn	01 45 11.1	-0.4
TASE	Tanaga Southea	5.80	277		Pn	01 45 22.9	-0.1
SDPT	Sand Point	6.30	48		Pn	01 45 29.5	-0.4
CHGN	Chignik	7.80	47		Pn	01 45 50.5	0.0
KDAK	Kodiak Island	11.30	50	Pn	Pn	01 46 36.5	-1.9
	1.0nm,0.3s,baz=200,slow=4.0,SNR=8.1						
I21K	Tanana	16.26	26	Pn	Pn	01 47 45.2	+0.3
I21K				IAmb	IAmb	01 47 50.6	
	comp=Z,14nm,1.1s						
H21K	Melozitna Rive	16.41	24	Pn	Pn	01 47 46.7	-0.3
H21K				IAmb	IAmb	01 47 52.1	
	comp=Z,7.3nm,0.8s						
IMAR	Indian Mountai	16.45	22	Pn	Pn	01 47 46.5	-0.8
IL31		17.52	32	Pn	Pn	01 47 59.1	-1.5
ILAR	Eielson Array	17.52	32	P	Pn	01 47 59.1	-1.5
	comp=Z,0.1nm,0.3s,baz=233,slow=8.2,SNR=6.0						
H24K	Noodor Dome	17.91	28	Pn	Pn	01 48 03.0	-2.6
M27K	Edge Creek, AK	18.14	43		Pn	01 48 08.2	-0.3
M27K				IAmb	IAmb	01 48 14.4	
	comp=Z,10nm,0.9s						
COLD	Coldfoot	18.30	23	Pn	P	01 48 08.0	-2.1
COLD				IAmb	IAmb	01 48 12.9	
	comp=Z,13nm,1.3s						
TOLK	Toolik Lake Re	19.56	21	P	P	01 48 22.9	-1.1
TOLK				IAmb	IAmb	01 48 27.9	
	comp=Z,7.4nm,0.8s						
DAWY	Dawson	19.89	39	P	P	01 48 27.3	-0.3
DAWY				IAmb	IAmb	01 48 31.7	
	comp=Z,9.1nm,1.4s						
PETK	Petropavlovsk-	20.49	288	P	P	01 48 34.0	-0.2
	comp=Z,1.8nm,0.7s,baz=90,slow=13,SNR=1.8						
PETK	Petropavlovsk-	20.49	288	P	P	01 48 34.0	-0.2
A21K	Barrow	20.69	11	P	P	01 48 36.2	+0.1
INK	Inuvik	23.92	32	P	P	01 49 10.0	+0.2
	comp=Z,4.1nm,0.8s,baz=258,slow=10,SNR=14						
INK	Inuvik	23.92	32	P	P	01 49 11.8	+2.0
INK				IAmb	IAmb	01 49 12.4	
	comp=Z,5.9nm,0.9s						
YKA	Yellowknife Ar	30.57	48	P	P	01 50 10.0	+0.5
	comp=Z,1.4nm,0.8s,baz=270,slow=8.3,SNR=17						
NVAR	Mina Array Bea	37.27	90	P	P	01 51 09.0	+0.9
	comp=Z,0.6nm,0.8s,baz=292,slow=8.9,SNR=4.8						
PDAR	Pinedale Array	40.21	78	P	P	01 51 33.5	+0.7
	comp=Z,0.8nm,0.7s,baz=310,slow=4.4,SNR=6.6						
SONM	Songino Array	52.11	302	P	P	01 53 06.2	+0.1
	comp=Z,1.1nm,0.9s,baz=45,slow=4.8,SNR=4.5						
SONM	Songino Array	52.11	302	IAmb	IAmb	01 53 08.2	
	comp=Z,5.2nm,1.4s						
TXAR	Lajitas Array	52.38	89	P	P	01 53 08.2	-0.1
	comp=Z,0.2nm,0.6s,baz=294,slow=4.7,SNR=3.5						
MKAR	Makanchi Array	64.72	314	P	P	01 54 34.3	+0.4
	comp=Z,0.5nm,0.7s,baz=60,slow=7.2,SNR=4.8						
FINES	FINESS Array B	66.84	352	P	P	01 54 48.7	+1.5
	comp=Z,2.9nm,0.9s,baz=17,slow=14,SNR=3.9						
ASAR	Alice Springs	90.10	231	P	P	01 56 54.5	-1.2
	comp=Z,0.5nm,0.8s,baz=24,slow=5.1,SNR=4.6						

IDC ***20*** *01:47:14.0±5.1, 13.°24N×91.°68W, h0^{km}, mb3.9/5, mb1 4.0/7, mb1mx3.7/43, mbtmp3.8/7, ML3.3/2, MS3.4/1, Ms1 3.4/1, ms1mx2.7/43, Error ellipse: s-maj=93.7km s-min=38.4km az=11.0*

NEIC ***20*** *01:47:14.8±1.6, 13.°1N±0.°1×91.°96W±0.°09, h10^{km}±1^{km}, mb4.2/9, Error ellipse: s-maj=19.1km s-min=12.8km az=208.0*

SNET ***20*** *01:47:21.9±1.2, 13.°65N×91.°83W, h9^{km}±40^{km}, ML3.3*

UCR ***20*** *01:47:22.1±1.3, 13.°66N×91.°83W, h10^{km}±42^{km}, ML3.2, mb4.2(NEIC)*

GCG ***20*** *01:47:35.5±0.4, 14.°48N×91.°36W, h3^{km}±999^{km}, MD3.9*

ISC 20 01:47:14.5±1.1**, 13.°16N**±0.°09×**91.°80W**±0.°05**, h10**^{km}**, n43,** σ**1^{s}27**/46**, mb4.1**/8**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	1.36	4		Pn	01 47 39.7	0.0
STG3	Santiaguito 3,	1.56	8	*e*P	Pn	01 47 42.9	+0.4
FUG	Fuego 3	1.59	36	*e*P	Pg	01 47 46.4	+1.4
NBG	Las Nubes	2.00	45	*e*P	Pg	01 47 55.1	+2.1
NBG				*e*S	Sn	01 48 10.3	-3.7
SLOZ	Alcaldia de Sa	2.14	66	*e*P	Pg	01 47 56.1	+0.5
SLOZ				*e*S	Sg	01 48 23.1	-0.3
SLOZ				IAML		01 48 38.5	
	comp=Z,143nm,0.5s						
HUEH	Huehuetenango	2.17	8	*e*P	Pn	01 47 51.9	+1.0
HUEH	Huehuetenango	2.17	8	Pn	Pn	01 47 52.0	+1.0
RTR	El Retiro	2.22	70	*e*P	Pg	01 47 58.5	+1.3
RTR	El Retiro	2.22	70	*e*P	Pg	01 47 58.5	+1.3
SBLS	San Blas	2.22	72	*e*P	Pg	01 47 57.9	+0.8
SBLS	San Blas	2.22	72	*e*P	Pg	01 47 57.9	+0.8
SNJE	San Jose	2.25	71	*e*P	Pg	01 47 58.2	+0.6
SNJE	San Jose	2.25	71	*e*P	Pg	01 47 58.2	+0.6
JAYA	Jayaque - finc	2.34	77	*e*P	Pg	01 48 00.3	+0.9
JAYA				*e*S	Sg	01 48 29.6	-0.2
JAYA				IAML		01 48 35.7	
	comp=Z,294nm,0.2s						
JAYA	Jayaque - finc	2.34	77	*e*P	Pg	01 48 00.3	+0.9
JAYA				*e*S	Sg	01 48 29.6	-0.2
JAYA				IAML		01 48 35.7	
	comp=Z,294nm,0.2s						
SNET	Serv Nac Est T	2.55	78	Pn	Pb	01 47 58.7	-1.8
MTO3	Montecristo	2.67	62	*e*P	Pb	01 48 03.1	+0.5
MTO3	Montecristo	2.67	62	*e*P	Pb	01 48 03.1	+0.5
MTO3	Montecristo	2.67	62	Pn	Pb	01 48 00.6	-2.0
LFRS	El Faro	2.70	80	*e*P	Pg	01 48 05.8	-0.6
LFRS	El Faro	2.70	80	*e*P	Pg	01 48 05.8	-0.6
ESQI	Esquipulas	2.77	59	*e*P	Pb	01 48 04.4	+0.3
ESQI	Esquipulas	2.77	59	Pn	Pb	01 48 01.9	-2.3
CCIG	Comitan	3.13	354	Pn	Pn	01 48 04.9	+0.8
LCND	La Caada	3.81	87	*e*P	Pb	01 48 21.4	-0.5
LCND	La Caada	3.81	87	*e*P	Pb	01 48 21.4	-0.5
TGUH	Tegucigalpa,Un	4.49	78	Pn	Pn	01 48 25.9	+3.1
CMIG	Matias Romero	4.92	323	Pn	Pn	01 48 27.7	-0.9
	comp=Z,1.4nm,0.3s,baz=135,slow=7.4,SNR=8.3						
CMIG				Sn	Sn	01 49 26.3	+0.8
	comp=Z,3.3nm,0.3s,baz=76,slow=21,SNR=3.6						
ROSC	El Rosal	19.12	114	LR	LR	01 58 52.1	
	comp=Z,106nm,20.2s,baz=306,slow=37						
TXAR	Lajitas Array	19.51	327	P	Pn	01 51 43.9	+0.6
	comp=Z,0.0nm,0.3s,baz=144,slow=11,SNR=8.0						
TX31	Lajitas Ar. Si	19.51	327	P	P	01 51 40.7	-1.4
TX31				IAmb	IAmb	01 51 58.6	
	comp=Z,10nm,1.2s						
TX32	Lajitas Array	19.51	327	P	P	01 51 41.5	-0.7
MNTX	Cornudas Mount	22.28	328	P	P	01 52 12.3	+0.2
MNTX				IAmb	IAmb	01 52 23.7	
	comp=Z,3.5nm,1.1s						
GNAR	Gosnell	22.77	4	P	P	01 52 17.4	+0.2
MSTX	Muleshoe	23.00	336	P	P	01 52 18.1	-1.6
MSTX				IAmb	IAmb	01 52 21.4	
	comp=Z,4.8nm,0.6s						
AMTX	Amarillo	23.41	339	P	P	01 52 23.3	-0.6
TKL	Tuckaleechee C	23.55	17	P	P	01 52 25.7	+0.6
	comp=Z,2.2nm,0.6s,baz=190,slow=11,SNR=1.7						
TKL	Tuckaleechee C	23.55	17	IAmb	IAmb	01 52 42.5	
	comp=Z,11nm,1.1s						
ANMO	Albuquerque	25.43	331	P	P	01 52 45.0	+2.3
	comp=Z,1.3nm,0.7s,baz=161,slow=11,SNR=5.7						
WCI	Wyandotte Cave	25.45	10	P	P	01 52 43.2	+0.6
WCI				IAmb	IAmb	01 53 04.2	
	comp=Z,14nm,1.3s						
NVAR	Mina Array Bea	34.45	322	P	P	01 54 02.5	-0.2
	comp=Z,0.3nm,0.7s,baz=148,slow=6.9,SNR=2.4						
SCHQ	Schefferville	45.94	20	P	P	01 55 36.2	-1.3
	comp=Z,4.3nm,0.9s,baz=233,slow=9.7,SNR=4.2						
YKA	Yellowknife Ar	51.89	347	P	P	01 56 23.8	+0.8
	comp=Z,1.3nm,0.6s,baz=149,slow=7.5,SNR=29						

IDC 20 02:02:56.5±7.2**, 25.°61S**×**178.°70W, h0**^{km}**, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.5**/28**, mbtmp3.5**/2**, Error ellipse: s-maj=311.4km s-min=109.3km az=161.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.95	262	P	P	02 10 56.2	-1.3
	0.2nm,0.5s,baz=103,slow=7.6,SNR=4.8						
WRA	Warramunga Arr	43.49	267	P	P	02 11 02.5	+0.6
	0.6nm,0.4s,baz=104,slow=7.5,SNR=21						
FINES	FINESS Array B	140.43	342	PKP	PKPdf	02 22 27.1	0.0
	0.9nm,0.3s,baz=64,slow=3.2,SNR=17						

IDC ***20*** *02:42:21.1±1.1, 35.°13N×23.°13E, h0^{km}, mb3.8/7, mb1 3.8/14, mb1mx3.5/61, mbtmp3.6/14, ML3.4/5, Error ellipse: s-maj=22.6km s-min=17.9km az=179.0*

ATH ***20*** *02:42:27.4, 35.°04N×23.°27E, h57^{km}±7^{km}, ML3.4/4, Error ellipse: s-maj=7.9km s-min=1.6km az=95.0*

THE ***20*** *02:42:29.1, 35.°00N×23.°29E, h31^{km}±1^{km}, ML3.1/8, Error ellipse: s-maj=1.3km s-min=0.8km az=221.0*

ISC 20 02:42:26.2±0.8**, 34.°97N**±0.°07×**23.°14E**±0.°05**, h39**^{km}±6^{km}**, n112,** σ**1^{s}90**/128**, mb3.9**/7**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDR	Palaiochora Ch	0.53	59	P	Pn	02 42 36.6	-0.7
KNDR				S	Sn	02 42 43.9	-1.2
	2µm,0.8s						
RODP	Rodopos	0.78	40	P	Pn	02 42 42.1	+1.3
RODP				S	Sn	02 42 50.9	-0.5
	692nm,0.5s						
GVD	Gavdhos	0.79	99	P	Pn	02 42 41.6	+0.7
GVD				S	Sn	02 42 51.0	-0.6
	4µm,0.3s						
GVD	Gavdhos	0.79	99	P	Pn	02 42 41.5	+0.5
GVD				S	Sn	02 42 52.8	+1.3
GVD				AML	AML	02 42 59.7	
	comp=N,9184µm,0.4s						
GVD				AML	AML	02 43 02.3	
	comp=E,4808µm,0.4s						
GVDS	Gavdos	0.80	99	P	Pn	02 42 41.2	+0.3
IMMV	Iera Moni Meta	0.85	54	P	Pn	02 42 42.6	+0.9
IMMV				S	Sn	02 42 53.2	+0.2
	comp=E,2µm,0.8s						
IMMV	Iera Moni Meta	0.85	54	P	Pn	02 42 42.4	+0.7
IMMV				S	Sn	02 42 53.0	0.0
IMMV				AML	AML	02 42 59.5	
	comp=N,4699µm,0.8s						
IMMV				AML	AML	02 42 59.8	
	comp=E,4260µm,0.4s						
ANKY	Antikythira Is	0.91	9	P	Pn	02 42 44.3	+1.8
ANKY				S	Sn	02 42 55.7	+1.2
	comp=E,2µm,0.6s						
ANKY	Antikythira Is	0.91	9	P	Pn	02 42 44.0	+1.5
ANKY				S	Sn	02 42 54.5	0.0
ANKY				AML	AML	02 43 02.5	
	comp=E,3998µm,0.6s						
ANKY				AML	AML	02 43 02.8	
	comp=N,6162µm,0.5s						
VAM	Vamos	0.98	63	P	Pn	02 42 44.2	+0.8
VAM				S	Sn	02 42 55.7	-0.4
	comp=N,2µm,0.7s						
VAM	Vamos	0.98	63	P	Pn	02 42 44.4	+0.9
VAM				AML	AML	02 43 07.7	
	comp=E,2768µm,0.7s						
VAM				AML	AML	02 43 10.4	
	comp=N,3025µm,0.7s						
PRNS	Prines Rethymn	1.19	70	P	Pn	02 42 46.6	+0.3
PRNS				S	Sn	02 42 59.4	-1.9
	comp=N,372nm,0.5s						
KTHA	Kythira Island	1.29	357	P	Pn	02 42 50.1	+2.3
KTHA				S	Sn	02 43 07.0	+3.2
	comp=N,1µm,0.7s						
KTHA	Kythira Island	1.29	357	P	Pn	02 42 50.1	+2.3
KTHR	Kythira	1.30	355	P	Pn	02 42 50.0	+2.1
IDI	Anoyia	1.47	77	Pn	Pn	02 42 50.7	+0.4
	comp=N,12nm,0.3s,baz=282,slow=7.0,SNR=108						
IDI				Sn	Sn	02 43 14.2	+5.8
	comp=N,22nm,0.3s,baz=349,slow=21,SNR=7.4						
IDI	Anoyia	1.47	77	P	Pn	02 42 51.6	+1.3
IDI	Anoyia	1.47	77	P	Pn	02 42 51.4	+1.1
VLI	Veliai	1.76	355	P	Pn	02 42 56.5	+2.3
VLI	Veliai	1.76	355	P	Pn	02 42 56.5	+2.3
MHLO	Agia Marina, M	2.00	31	P	Pn	02 42 59.0	+1.4
MHLO	Agia Marina, M	2.00	31	P	Pn	02 42 58.9	+1.3
NPS	Neapolis	2.05	81	P	Pn	02 43 00.0	+1.8
NPS	Neapolis	2.05	81	P	Pn	02 42 59.8	+1.6
THR6	Thira Island,	2.31	52	P	Pn	02 43 02.4	+0.7
THR6	Thira Island,	2.31	52	P	Pn	02 43 02.4	+0.7
THR5	Thira Island,	2.31	51	P	Pn	02 43 02.2	+0.4
THR5	Thira Island,	2.31	51	P	Pn	02 43 02.1	+0.4
THR3	Thira Island,	2.34	51	P	Pn	02 43 02.6	+0.4
THR8	Santorini-Mono	2.39	52	P	Pn	02 43 03.3	+0.5
THR8	Santorini-Mono	2.39	52	P	Pn	02 43 03.4	+0.6
KRND	KRANIDI	2.41	0	P	Pn	02 43 05.2	+2.0
KRND	KRANIDI	2.41	0	P	Pn	02 43 05.0	+1.9
ITM	Ithomi	2.42	336	P	Pn	02 43 05.5	+2.3
ITM	Ithomi	2.42	336	P	Pn	02 43 05.2	+1.9
ZKR	Zakros	2.53	86	P	Pn	02 43 06.0	+1.2
EPID	Epidavros	2.64	360	P	Pn	02 43 08.3	+1.9
EPID	Epidavros	2.64	360	P	Pn	02 43 08.3	+1.9
VLY	Voula,Athens	2.93	10	P	Pn	02 43 11.6	+1.3
VLY	Voula,Athens	2.93	10	P	Pn	02 43 11.5	+1.2
ATH	Athens Observa	3.04	9	P	Pn	02 43 12.9	+1.1
ATHU	Athens Univers	3.04	10	P	Pn	02 43 12.8	+1.0
LTK	Loutraki	3.06	358	P	Pn	02 43 13.6	+1.6
PTL	Penteli	3.13	11	P	Pn	02 43 14.4	+1.3
DION	Dionisos Attik	3.17	11	P	Pn	02 43 14.5	+0.9
KLV	Kalavryta, Ach	3.17	346	P	Pn	02 43 16.2	+2.5
KLV	Kalavryta, Ach	3.17	346	P	Pn	02 43 15.8	+2.1
DRO	Drossia	3.19	339	P	Pn	02 43 16.3	+2.4
VILL	Villia	3.20	3	P	Pn	02 43 15.2	+1.2
VIL2	Platees	3.24	2	P	Pn	02 43 15.0	+0.4
LAKA	Lakka	3.40	344	P	Pn	02 43 18.6	+1.9
ANX	Ano Chora	3.75	345	P	Pn	02 43 23.6	+2.0
AGG	Agios Georgios	4.10	351	P	Pn	02 43 28.3	+1.9
MAKR	Makrakomi, Fth	4.12	349	P	Pn	02 43 29.1	+2.5
VAE	Valguarnera	7.48	292	Pn	Pn	02 44 12.7	-0.2
	comp=N,0.2nm,0.3s,baz=180,slow=19,SNR=1.4						
VAE				Sn	Sn	02 45 34.0	-2.5
	comp=N,1.1nm,0.3s,baz=177,slow=24,SNR=2.3						
DRME	Dracevica, Mon	7.84	338	*e*Pn	Pn	02 44 15.9	-1.8
BARS	Barje	7.91	353	*e*Pn	Pn	02 44 17.7	-0.9
PDG	Podgorica	8.05	339	*e*Pn	Pn	02 44 19.2	-1.3
HCY	Herceg Novi	8.30	336	*e*Pn	Pn	02 44 20.9	-3.1
ZAPS	Zavoj	8.31	357	*e*Pn	Pn	02 44 24.3	+0.2
SELS	Selova	8.39	350	*e*Pn	Pn	02 44 23.4	-1.8
TREB	Trebinje	8.59	336	*e*Pn	Pn	02 44 24.2	-3.8
SJES	Sjenica	8.64	344	*e*Pn	Pn	02 44 27.4	-1.3
BRY	Bratogost	8.69	337	*e*Pn	Pn	02 44 30.4	+0.9
BOVS	Bovan	8.73	353	*e*Pn	Pn	02 44 27.5	-2.3
UPM	Unac-Piva	8.86	339	*e*Pn	Pn	02 44 30.1	-1.7
IVAS	Ivanjica	8.90	346	*e*Pn	Pn	02 44 29.5	-2.8
STON	Ston	8.96	333	*e*Pn	Pn	02 44 31.8	-1.1
RUDO	Rudo	9.12	342	*e*Pn	Pn	02 44 31.5	-3.7
LSTV	Lastovo	9.18	330	*e*Pn	Pn	02 44 33.4	-2.7
LSTV				Sn	Sn	02 46 03.6	-14
BBLS	Lazići	9.34	343	*e*Pn	Pn	02 44 36.1	-2.2
BBLS	Lazići	9.34	343	*e*Pn	Pn	02 44 36.4	-1.9
DIVS	Divibare	9.44	346	*e*Pn	Pn	02 44 36.4	-3.2
DIVS	Divibare	9.44	346	*e*Pn	Pn	02 44 37.4	-2.2
MAKA	Makarska	9.57	332	*e*Pn	Pn	02 44 38.4	-3.0
BRTR	Keskin Array B	9.62	57	Pn	Pn	02 44 41.5	-0.7
	comp=N,0.0nm,0.3s,baz=238,slow=11,SNR=5.1						
RICI	Ricice	9.70	333	*e*Pn	Pn	02 44 40.1	-3.1
RICI				Sn	Sn	02 46 16.5	-14
HVAR	Hvar	9.71	330	*e*Pn	Pn	02 44 40.9	-2.4
KIJV	Kijevo	10.41	332	*e*Pn	Pn	02 44 50.4	-2.5
ZIRJ	Zirje	10.43	328	*e*Pn	Pn	02 44 50.7	-2.4
ZIRJ				Sn	Sn	02 46 34.1	-15
FRGS	Fruska Gora	10.49	347	*e*Pn	Pn	02 44 50.7	-3.3
MORI	Morici	10.58	329	*e*Pn	Pn	02 44 52.6	-2.5
MORI				Sn	Sn	02 46 39.2	-13
MLR	Muntele Rosu	10.73	11	Pn	Pn	02 44 55.1	-2.3
	comp=N,0.1nm,0.3s,baz=170,slow=11,SNR=2.3						
BLY	Banja Luka	10.78	337	*e*Pn	Pn	02 44 56.4	-1.6
DUGI	Dugi Otok	10.96	328	*e*Pn	Pn	02 44 59.4	-1.0
DUGI				Sn	Sn	02 46 48.7	-13
UDBI	Udbina	11.10	332	*e*Pn	Pn	02 45 00.9	-1.5
MRAK	Mrakovica	11.11	336	*e*Pn	Pn	02 44 59.7	-2.8
EIL	Elat	11.30	115	Pn	Pn	02 45 03.7	-1.4
	comp=N,0.3nm,0.3s,baz=220,slow=4.2,SNR=5.4						
MORH	Mrgy, Hungar	11.74	345	*e*Pn	Pn	02 45 07.3	-3.7
CRES	Cresnjev	12.32	334	*e*Pn	Pn	02 45 16.1	-2.9
CEY	Cerknica	12.63	331	*e*Pn	Pn	02 45 21.3	-2.0
ABTA	Abfaltersbach	14.23	329	*e*Pn	Pn	02 45 44.7	-0.5
	comp=N,0.4nm,0.3s						
ABTA				*i* P	P	02 45 54.3	+2.5
	comp=N,0.5nm,0.3s						
MOA	Molln	14.48	335	Pn	Pn	02 45 48.6	+0.2
	comp=N,3.5nm,0.9s						
MOA				*e*P	P	02 45 56.2	+1.8
	comp=N,1.0nm,0.6s						
WTTA	Wattenberg	15.01	328	*e*Pn	Pn	02 45 57.3	+1.6
	comp=N,5.1nm,1.2s						
VRAC	Vranov	15.12	343	Pn	Pn	02 45 59.5	+2.6
	comp=N,0.5nm,0.3s,baz=206,slow=18,SNR=4.5						
SQTA	Sankt Quirin	15.17	327	Pn	Pn	02 45 59.7	+2.1
	comp=N,1.9nm,0.7s						
SQTA				*i* P	P	02 46 04.7	+2.5
	comp=N,0.4nm,0.3s						
FETA	Feichten	15.23	326	*e*P	P	02 46 02.6	-0.4
	comp=N,5.1nm,1.2s						
CKRC	Cesky Krumlov	15.31	337	*e*P	P	02 46 06.2	+2.6
MOTA	Moosalm	15.31	328	*e*Pn	Pn	02 46 00.3	+0.8
	comp=N,2.5nm,1.2s						
GERES	GERESS Array B	15.53	336	Pn	Pn	02 45 59.5	-2.7
	comp=N,0.1nm,0.3s,baz=161,slow=15,SNR=2.2						
KHC	Kasperske Hory	15.81	336	*e*P	P	02 46 10.6	+1.3
DAVA	Damuels	15.82	325	*e*P	P	02 46 10.9	+1.4
	comp=N,1.7nm,0.6s						
DPC	Dobruska-Polom	16.16	344	*e*P	P	02 46 14.2	+1.1
AKASG	Malin Array Be	16.34	14	Pn	Pn	02 46 10.4	-2.1
	comp=N,1.4nm,0.3s,baz=210,slow=9.8,SNR=5.5						
KBZ	Khabaz	17.58	54	P	Pn	02 46 28.1	0.0
	comp=N,0.1nm,0.3s,baz=222,slow=15,SNR=4.6						
HFS	Hagfors	25.92	349	P	P	02 47 52.9	-1.5
	comp=N,1.0nm,0.5s,baz=126,slow=7.5,SNR=5.5						
FINES	FINESS Array B	26.56	3	P	P	02 47 58.0	-2.1
	comp=N,3.0nm,1.0s,baz=178,slow=10,SNR=5.1						
TORD	Torodi Ar. Bea	29.12	227	P	P	02 48 25.0	+1.6
	comp=N,0.3nm,0.5s,baz=30,slow=9.1,SNR=5.8						
MKAR	Makanchi Array	45.27	56	P	P	02 50 38.4	-1.4
	comp=N,0.7nm,0.4s,baz=270,slow=7.9,SNR=19						
ZALV	Zalesovo Beam	46.34	46	P	P	02 50 46.6	-1.5
	comp=N,0.7nm,0.3s,baz=292,slow=7.8,SNR=5.1						
SONM	Songino Array	60.89	50	P	P	02 52 34.7	-0.2
	comp=N,0.4nm,0.4s,baz=277,slow=8.3,SNR=6.0						
YKA	Yellowknife Ar	77.11	341	P	P	02 54 15.9	+0.8
	comp=N,0.5nm,0.9s,baz=37,slow=5.0,SNR=5.8						

ECX ***20*** *02:47:45.8±0.4, 32.°13N×115.°18W, h13^{km}±2^{km}, MD3.1, ML3.3*

PAS ***20*** *02:47:46.1±1.7, 32.°08N±0.°02×115.°17W±0.°03, h23^{km}±7^{km}, Error ellipse: s-maj=3.9km s-min=2.1km az=64.0*

NEIC ***20*** *02:47:46.4±1.6, 32.°09N±0.°03×115.°16W±0.°03, h22^{km}±9^{km}, Error ellipse: s-maj=5.9km s-min=1.4km az=218.0*

MEX ***20*** *02:47:47.8±0.7, 32.°15N×115.°09W, h37^{km}±15^{km}, MD3.9*

ISC 20 02:47:46.2±0.9**, 32.°10N**±0.°03×**115.°17W**±0.°03**, h26**^{km}±6^{km}**, n48,** σ**0^{s}68**/61**, 11C-3D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RITX	Riito Sonora	0.19	70	⇑*i*P	Pb	02 47 51.6	-0.2
RITX				*e*S	Sb	02 47 55.6	0.0
GUVIX	Guadalupe Vict	0.22	22	Pg	Pb	02 47 51.2	-1.0
GUVIX	Guadalupe Vict	0.22	22	⇑*i*P	Pb	02 47 51.9	-0.3
GUVIX				*e*S	Sb	02 47 56.2	0.0
MBIG	Mexicali	0.31	356		Pb	02 47 53.6	+0.1
MBIG					Sb	02 47 59.2	+0.8
MBIG	Mexicali	0.31	356	*e*P	Pb	02 47 53.6	+0.1
MBIG				*e*S	Sb	02 47 59.2	+0.8
CPBX	Cerro Prieto	0.34	341	Pg	Pb	02 47 53.9	0.0
CPBX	Cerro Prieto	0.34	341	⇑*e*P	Pb	02 47 53.9	0.0
CPBX				*e*S	Sb	02 47 59.3	+0.1
CPBX				⇑*e*		02 48 01.5	
CPBX				IAML		02 48 01.5	
	comp=E,10µm,0.3s						
CTLX	Tlaxcala, TLX	0.37	3	⇑*i*P	Pb	02 47 54.0	-0.4
CTLX				*e*S	Sb	02 48 00.4	+0.4
YUCAX	Ej. Yucat¡n	0.51	7	⇓*i*P	Pb	02 47 56.9	+0.3
YUCAX				*e*S	Sn	02 48 05.0	-0.7
UABX	UABC, Campus M	0.58	337	*e*S	Sn	02 48 07.1	-0.3
EMSC	East Mesa	0.66	14	⇑*e*P	Pb	02 47 58.9	-0.2
EMSC				*e*S	Sn	02 48 08.3	-1.0
SGL	Mount Signal	0.72	320	*e*P	Pb	02 47 59.8	-0.4
COA	Coachella	0.76	3	*e*P	Pb	02 48 00.2	-0.7
WESC	Westside Schoo	0.81	324	*e*P	Pb	02 48 01.4	-0.2

YUH2	Yuha Desert	0.84	311	⇑eP	Pb	02 48 01.4	-0.8
RMX	La Rumorosa	0.92	303		Pn	02 48 02.6	-1.0
RMX				IAML		02 48 14.1	
	comp=N,635nm,0.7s						
RMX				IAML		02 48 14.2	
	comp=E,529nm,0.5s						
RMX	La Rumorosa	0.92	303	eP	Pn	02 48 02.3	-1.3
IKP	In-Ko-Pah, Jac	0.96	305	⇑eP	Pn	02 48 03.8	-0.4
GLA	Glamis	0.99	17		Pn	02 48 03.3	-1.3
GLA	Glamis	0.99	17	⇑eP	Pn	02 48 03.5	-1.0
SPIG	San Pedro Mart	1.08	193		Pn	02 48 06.1	+0.1
SPIG					Sn	02 48 19.5	-0.8
SPIG	San Pedro Mart	1.08	193	i P	Pn	02 48 06.1	+0.1
SPIG				eS	Sn	02 48 19.5	-0.8
SPIG	San Pedro Mart	1.08	193	⇓eP	Pn	02 48 06.1	+0.1
SFX	San Felipe	1.09	165		Pb	02 48 06.6	+0.1
SFX				IAML		02 48 23.1	
	comp=E,216nm,0.2s						
CBX	Cerro Bola	1.28	280		Pn	02 48 08.9	+0.2
CBX				IAML		02 48 28.9	
	comp=N,400nm,0.3s						
CBX	Cerro Bola	1.28	280	⇓eP	Pn	02 48 08.8	+0.2
CCX	Cicese	1.29	260		Pn	02 48 08.9	+0.4
TKX	Tecate	1.30	291		Pb	02 48 10.1	0.0
TJIG	Tijuana	1.32	285		Pn	02 48 08.9	0.0
TJIG					Sn	02 48 25.1	-0.6
TJIG	Tijuana	1.32	285	eP	Pn	02 48 08.9	0.0
TJIG				eS	Sn	02 48 25.1	-0.6
TJIG	Tijuana	1.32	285	⇑eP	Pn	02 48 09.0	0.0
BAR	Barrett	1.40	295	Pn	Pn	02 48 10.2	+0.2
BAR				IAML		02 48 29.9	
	comp=E,296nm,0.3s						
BAR				IAML		02 48 30.2	
	comp=N,453nm,0.2s						
BAR	Barrett	1.40	295	⇑eP	Pn	02 48 10.1	0.0
TJX	Tijuana	1.65	285	Pn	Pn	02 48 14.0	+0.5
TJX				IAML		02 48 43.5	
	comp=E,345nm,0.6s						
109C	Camp Elliot, M	1.81	296	Pn	Pn	02 48 16.9	+1.2
109C				IAML		02 48 42.7	
	comp=N,248nm,0.2s						
109C				IAML		02 48 43.3	
	comp=E,228nm,0.2s						
PFO	Pinyon Flats O	1.86	325	Pn	Pn	02 48 17.1	+0.6
214A	Organ Pipe Nat	2.01	93		Pn	02 48 17.8	-0.7
214A					Sb	02 48 47.2	+0.5
214A	Organ Pipe Nat	2.01	93	IAML		02 48 53.4	
	comp=N,82nm,0.5s						
214A				IAML		02 48 54.1	
	comp=E,85nm,0.4s						
214A	Organ Pipe Nat	2.01	93	eP	Pn	02 48 17.8	-0.7
214A				eS	Sb	02 48 47.2	+0.5
TUC	Tucson	3.73	86	Pn	Pn	02 48 43.0	+0.8
TUC				IAML		02 49 52.6	
	comp=E,40nm,0.6s						
TUC				IAML		02 49 53.5	
	comp=E,17nm,0.5s						
X16A	Lo Mia Camp, P	3.89	53	Pn	Pn	02 48 45.6	+1.1
QSM	Queen of Sheba	4.10	340	Pn	Pn	02 48 48.1	+0.8
QSM				IAML		02 50 41.5	
	comp=E,11nm,3.6s						
WUAZ	Wupatki	4.65	42	Pn	Pn	02 48 55.3	+0.4
WUAZ				IAML		02 50 10.5	
	comp=E,16nm,4.6s						
WUAZ				IAML		02 50 32.6	
	comp=E,14nm,1.8s						
U15A	North Rim	4.93	28	Pn	Pn	02 49 00.3	+1.4
U15A				IAML		02 49 54.3	
	comp=E,11nm,4.8s						
U15A				IAML		02 50 37.8	
	comp=N,8.2nm,3.9s						
319A	Douglas	5.07	97	Pn	Pn	02 49 01.4	+0.7
LCMT	Little Creek M	5.15	17	Pn	Pn	02 49 03.4	+1.5
LCMT				IAML		02 52 16.3	
	comp=N,6.0nm,4.2s						
KNB	Kanab	5.27	21	Pn	Pn	02 49 04.5	+1.0
KNB				IAML		02 50 52.3	
	comp=E,7.2nm,3.8s						
KNB				IAML		02 51 32.7	
	comp=N,11nm,4.6s						
PSUT	Pine Spring	6.51	9	Pn	Pn	02 49 20.9	+0.4

BJI ***20*** *02:47:58.0±0.0, 2°.42N×95°.83E, h19^{km}, mB5.1/34, mb4.9/60, Ms4.5/17, Ms7 4.2/21*

DJA ***20*** *02:48:01.5±0.5, 3°N±2°×9°6E±°, h25^{km}±4^{km}, M5.0/23, mB5.7/7, mb4.9/23, MLv4.8/12, Mw(mB)5.2/7*

NEIC ***20*** *02:48:02.5±1.6, 2°.58N±0°.06×95°.92E±0°.05, h24^{km}±4^{km}, mb4.8/59, Error ellipse: s-maj=9.1km s-min=6.9km az=191.0*

IDC ***20*** *02:48:03.5±5.4, 2°.67N×95°.94E, h33^{km}±40^{km}, mb4.4/26, mb1 4.4/29, mb1mx4.2/45, mbtmp4.5/29, ML4.3/3, MS3.8/8, Ms1 3.8/8, ms1mx3.4/38, Error ellipse: s-maj=18.4km s-min=12.3km az=45.0*

ISC 20 02:48:01.9±0.4**, 2°.52N**±0°.05×**95°.88E**±0°.05**, h25^{km}, n208,** σ**1^{s}46**/204**, mb4.8**/83**, MS4.0**/11**, 13C-8D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPTI		1.50	60	P	Pn	02 48 26.9	-0.3
GSI	Gunungsitoli	2.08	125	P	Pn	02 48 35.9	+0.6
GSI				S	Sn	02 49 01.6	+1.2
GSI	Gunungsitoli	2.08	125	Pn	Pn	02 48 36.1	+0.8
KCSI	Kotacane, Aceh	2.14	62	P	Pn	02 48 37.0	+0.9
TSI	Tuntungan	2.86	70	P	Pn	02 48 46.9	+1.0
LHMI	Lhok Sumawe	2.90	22	P	Pn	02 48 47.2	+0.7
LHMI				S	Sn	02 49 20.3	-0.2
LHMI	Lhok Sumawe	2.90	22	Pn	Pn	02 48 47.2	+0.7
RPSI	Rantau Prapat	3.05	87		Pn	02 48 50.0	+1.5
PSI	Prapat	3.06	85	Pn	Pn	02 48 50.0	+1.2
	11nm,0.3s,baz=280,slow=6.9,SNR=87						
PSI				LR	LR	02 50 23.3	
	comp=Z,1µm,18.1s,baz=271,slow=47						
MNSI	Mandailing Nat	4.08	115	P	Pn	02 49 03.9	+1.2
SISI	Saibi	4.99	140	P	Pn	02 49 16.1	+0.8
	0.6nm67nm,0.7s						
IPM	Ipoh	5.50	69	Pn	Pn	02 49 23.5	+1.2
KULM	Kulim	5.50	60	Pn	Pn	02 49 23.2	+0.9
BKNI	Bangkinang	5.60	113	P	Pn	02 49 25.4	+1.7
	1.0nm8µm290nm,0.8s						
BKNI	Bangkinang	5.60	113	Pn	Pn	02 49 24.3	+0.6
PDSI	Padang	5.71	127	P	Pn	02 49 27.1	+1.9
	0.4nm46nm,1.1s						
SRIT	Nakonsritamara	7.08	31		Pn	02 49 43.4	-0.7
MYKOM	Kota Tinggi	8.00	95	Pn	Pn	02 49 56.0	-0.7
LHSI	Lahat	9.91	129	P	Pn	02 50 22.6	-0.2
	86nm,0.5s						
MDSI	Maura Dua	10.83	130	P	Pn	02 50 35.7	+0.3
	41nm,0.9s						
KLSI		11.38	129	P	Pn	02 50 43.0	0.0
	17nm,0.6s						
LEM	Lembang	14.95	128	LR	LR	02 58 01.6	
	comp=Z,448nm,19.6s,baz=268,slow=40						
STKI	Sintang	15.78	99	P	P	02 51 45.9	-0.5
PALK	Pallekele	15.84	288	Pn	Pn	02 51 43.7	+0.3
	0.4nm,0.3s,baz=212,slow=5.6,SNR=1.7						
PALK				LR	LR	02 57 21.9	
	comp=Z,273nm,18.1s,baz=210,slow=35						
PALK	Pallekele	15.84	288	IAmb	IAmb	02 51 51.6	
	comp=Z,37nm,1.4s						
CM31	Chiang Mai Arr	16.12	11	Pn	Pn	02 51 45.8	-1.2
CMAR	Chiang Mai Arr	16.12	11	Pn	Pn	02 51 45.9	-1.2
	comp=Z,1.6nm,0.3s,baz=198,slow=12,SNR=35						
CMAR				LR	LR	02 57 37.8	
	comp=Z,212nm,20.1s,baz=238,slow=36						
CMAR	Chiang Mai Arr	16.12	11	Pn	Pn	02 51 46.4	-0.7
SBUM	Sibu	16.33	90	Pn	Pn	02 51 48.6	-1.1
CHTO	Chiang Mai	16.47	10		Pn	02 51 49.1	-2.3
SLVN	Son La	20.27	22		P	02 52 34.6	-1.3
SLVN				IAmb	IAmb	02 52 38.7	
	comp=Z,52nm,1.5s						
KKM	Kota Kinabalu	20.58	80	P	P	02 52 39.3	0.0
KKM				IAmb	IAmb	02 52 44.0	
	comp=Z,56nm,0.8s						
QIZ	Qiongzhong	21.36	39	P	P	02 52 49.0	+1.4
QIZ				S	S	02 56 46.9	+3.2
QIZ				LR	LR		
	comp=Z,640nm,12.1s						
QIZ				LR	LR		
	comp=Z,850nm,13.6s						
QIZ				LR	LR		
	comp=Z,500nm,16.7s						
HYB	Hyderabad	22.55	312	i P	P	02 53 03.0	+2.5
MYLDM	Lahad Datu	22.72	83	P	P	02 53 02.8	+0.5
MYLDM				IAmb	IAmb	02 53 06.0	
	comp=Z,30nm,0.7s						
KOHI	KOHIMA	23.13	356	eP	P	02 53 04.8	-1.7
KOHI				⇑eS	S	02 57 14.7	-1.9
SHL	Shillong	23.24	351	eP	P	02 53 04.2	-3.4
SHL				IAmb	IAmb	02 53 07.3	
	comp=Z,15nm,0.6s						
SHL	Shillong	23.24	351	P	P	02 53 04.5	-3.1
SHL				IAmb	IAmb	02 53 07.6	
	comp=Z,20nm,0.6s						
BOK	Bokaro	23.26	336	eP	P	02 53 06.4	-1.3
BOK				IAmb	IAmb	02 53 11.1	
	comp=Z,34nm,0.8s						
MNCI	Minicoy	23.42	285	P	P	02 53 09.5	+0.2
KMI	Kunming	23.43	16	⇓P	P	02 53 10.1	+0.5
KMI				pP	sP	02 53 19.5	-0.4
KMI				sP	pP	02 53 22.5	+5.8
KMI				PP	PnPn	02 53 44.5	+8.1
KMI				S	S	02 57 27.1	+5.4
KMI				pmax	pmax		
	comp=Z,29nm,1.1s						
KMI				LR	LR		
	comp=Z,200nm,21.7s						
KMI				LR	LR		
	comp=Z,340nm,22.7s						
KMI				LR	LR		
	comp=Z,280nm,16.2s						
MPSI	Mapaga	24.11	95	P	P	02 53 15.1	-0.9
	comp=Z,568nmcomp=Z,26nm,1.1s						
TOLI2	Tolitoli	24.93	93	P	P	02 53 22.3	-1.2
TOLI2				IAmb	IAmb	02 53 24.7	
	comp=Z,17nm,0.7s						
KAPI	Kappang	25.00	107	P	P	02 53 24.5	+0.5
	comp=Z,51nm,0.9s,baz=310,slow=7.8,SNR=12						
KAPI	Kappang	25.00	107	P	P	02 53 22.8	-1.2
H08S2	Diego Garcia H	25.42	246	T	T	03 19 35.5	
	baz=67,slow=76,SNR=5234						
H08S3	Diego Garcia H	25.42	246	T	T	03 19 37.0	
	baz=67,slow=76,SNR=5978						
H08S1	Diego Carcia H	25.44	246	T	T	03 19 38.1	
	baz=67,slow=76,SNR=3284						
GYA	Guiyang	25.96	23	⇓iP	P	02 53 32.4	-0.4
GYA				pP	sP	02 53 44.4	+1.1
GYA				pmax	pmax		
	comp=Z,25nm,0.9s						
GYA				pmax	pmax		
	comp=Z,240nm,5.1s						
GYA				LR	LR		
	comp=Z,660nm,14.9s						
JIRN	Jiri	26.66	341	eP	P	02 53 40.0	+0.6
	comp=Z,178nm,0.7s						
PKI	Pulchoki	26.85	339	eP	P	02 53 41.2	+0.2
	comp=Z,63nm,1.0s						
PKIN	Phulchoki	26.86	339	eP	P	02 53 41.1	0.0
	comp=Z,21nm,0.7s						
DMN	Daman	26.99	339	eP	P	02 53 42.5	+0.2
	comp=Z,51nm,1.0s						
GUN	Gumba	27.00	340	eP	P	02 53 42.9	+0.5
	comp=Z,122nm,0.8s						
KKN	Kakani	27.10	339	eP	P	02 53 43.3	+0.2
	comp=Z,74nm,0.9s						
LSA	Lhasa	27.40	351	P	P	02 53 46.6	+0.5
LSA	Lhasa	27.40	351	P	P	02 53 45.7	-0.4
GKN	Gorkha	27.52	338	eP	P	02 53 47.0	+0.1
	comp=Z,96nm,0.9s						
DANN	Dangsing	28.17	337	eP	P	02 53 53.0	+0.2
	comp=Z,63nm,0.6s						
PYUN	Piuthan	28.26	335	eP	P	02 53 53.6	+0.1
	comp=Z,16nm,0.5s						
CD2	Chengdu	29.21	14	⇓iP	P	02 54 00.8	-0.9
CD2				S	S	02 58 55.1	+2.1
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
CD2				pmax	pmax		
	comp=Z,130nm,5.7s						
CD2				LR	LR		
	comp=Z,430nm,16.9s						
CD2				LR	LR		
	comp=Z,370nm,11.4s						
BATI	Baumata	30.42	115	LR	LR	03 08 31.3	
	comp=Z,365nm,19.5s,baz=267,slow=40						
ENH	Enshi	30.47	24	P	P	02 54 11.5	-1.4
WHN	Wuhan	32.91	30	⇑P	P	02 54 34.9	+0.6
WHN				LR	LR		
	comp=Z,700nm,13.3s						
SMLA	Simla	33.50	330	eP	P	02 54 39.0	-0.4
SMLA				IAmb	IAmb	02 54 40.7	
	comp=Z,7.1nm,0.5s						
XAN	Xi'an	33.64	20	P	P	02 54 39.8	-0.9
XAN				pP	pP	02 54 45.9	-2.3
XAN				sP	sP	02 54 49.6	-1.7
XAN				pmax	pmax		
	comp=Z,33nm,0.9s						
LZH	Lanzhou	34.21	12	eP	P	02 54 44.5	-1.3
LZH				pP	pP	02 54 51.0	-2.2
LZH				sP	sP	02 54 56.3	0.0
LZH				pmax	pmax		
	comp=Z,36nm,0.9s						
LZH				LR	LR		
	comp=Z,230nm,11.4s						
LZH				LR	LR		
	comp=Z,320nm,12.5s						
LZH				LR	LR		
	comp=Z,220nm,14.4s						
DHRM	DHARAMSHALA	34.84	330	eP	P	02 54 50.1	-1.3
DHRM				IAmb	IAmb	02 54 53.4	
	comp=Z,13nm,0.6s						
NJ2	Nanjing	36.48	34	eP	P	02 55 07.3	+2.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
GTA	Gaotai	36.90	5	⇑P	P	02 55 07.8	-1.0
GTA				pP	pP	02 55 14.4	-1.9
GTA				sP	sP	02 55 17.4	-2.0
GTA				pmax	pmax		
	comp=Z,32nm,0.9s						
GTA				pmax	pmax		
	comp=Z,210nm,4.7s						
GTA				LR	LR		
	comp=Z,200nm,13.8s						
GTA				LR	LR		
	comp=Z,180nm,14.5s						
GTA				LR	LR		
	comp=Z,86nm,15.6s						
NIL	Nilore	37.51	328	P	P	02 55 13.5	-0.5
NIL				IAmb	IAmb	02 55 14.5	
	comp=Z,16nm,0.8s						
HHC	Hu-ho-hao-te	40.70	18	eP	P	02 55 43.0	+2.3
HHC				pmax	pmax		
	comp=Z,19nm,1.2s						
HHC				pmax	pmax		
	comp=Z,240nm,5.7s						
H01W3	Cape Leeuwin H	40.96	157	T	T	03 39 13.1	
	baz=332,slow=76,SNR=1145						
H01W2	Cape Leeuwin H	40.98	157	T	T	03 39 14.0	
	baz=332,slow=76,SNR=1293						
H01W1	Cape Leeuwin H	40.98	157	T	T	03 39 14.2	
	baz=332,slow=76,SNR=938						
KSH	Kashi	41.04	336	P	P	02 55 42.4	-1.1
KSH				pP	pP	02 55 47.0	-4.0
KSH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BJT	Baijiatuau	41.62	24	P	P	02 55 48.5	+0.4
BJI	Beijing	41.64	24	P	P	02 55 48.8	+0.6
BJI				pP	pP	02 55 54.8	-1.0
BJI				pmax	pmax		
	comp=Z,78nm,0.7s						
WRKA	Warakurna	41.70	133	P	P	02 55 49.9	+0.9
	baz=42,SNR=4.4						
WMQ	Urumqi	41.77	351	eP	P	02 55 49.9	+0.6
WMQ				pP	pP	02 55 55.6	-1.3
WMQ				sP	sP	02 56 01.8	+1.8
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.1s						
TARG	Taragay, Kyrgy	42.28	340	IAmb	IAmb	02 56 03.0	
	comp=Z,14nm,0.8s						
KDJ	Kajisay	42.85	339	IAmb	IAmb	02 56 00.2	
	comp=Z,36nm,1.3s						
GAR	Garm	43.15	331	IAmb	IAmb	02 56 01.1	
	comp=Z,21nm,0.9s						
DL2	Dalian	43.17	30	P	P	02 56 00.9	+0.2
DL2				pmax	pmax		
	comp=Z,44nm,1.0s						
BTK	Batken	43.73	332	IAmb	IAmb	02 56 08.5	
	comp=Z,18nm,0.9s						
WRA	Warramunga Arr	43.85	122	P	P	02 56 06.7	+0.1
	comp=Z,6.2nm,0.5s,baz=297,slow=8.8,SNR=71						
WRAB	Tennant Creek	43.86	122	P	P	02 56 06.6	0.0
WRAB				IAmb	IAmb	02 56 28.6	
	comp=Z,21nm,1.4s						
WB2	Warramunga Arr	43.86	122	P	P	02 56 05.8	-0.9
WB2				IAmb	IAmb	02 56 07.9	
	comp=Z,24nm,1.4s						
UCH	Uchtor	43.92	337	P	P	02 56 07.8	+0.5
	SNR=9.4						
WR0	Warramunga Arr	44.03	122	IAmb	IAmb	02 56 16.1	
	comp=Z,9.7nm,0.7s						
TKM2	Tokmak 2	44.11	339	P	P	02 56 09.4	+0.9
	SNR=5.6						
KBK	Karagaybulak	44.12	338	P	P	02 56 10.2	+1.6
	SNR=11						
AML	Almayashu	44.17	336	P	P	02 56 10.3	+1.2
	SNR=8.9						
AAK	Ala-Archa	44.28	337	P	P	02 56 10.1	+0.3
AAK				IAmb	IAmb	02 56 22.3	
	comp=Z,6.4nm,0.8s						
EKS2	Erkin-Say	44.58	337	P	P	02 56 13.3	+1.1
	SNR=6.0						
USP	Ospenovka	44.82	338	P	P	02 56 14.5	+0.5
	SNR=14						
AS31	Alice Springs	45.24	127	P	P	02 56 16.3	-1.3
ASAR	Alice Springs	45.24	127	P	P	02 56 17.9	+0.2
	comp=Z,3.2nm,0.5s,baz=300,slow=8.0,SNR=75						
ASAR	Alice Springs	45.24	127	P	P	02 56 17.3	-0.3
KSAR	Wonju Array Be	45.52	36	P	P	02 56 18.3	-1.2
KS19	Wonju Array Si	45.55	36	IAmb	IAmb	02 56 20.0	
	comp=Z,5.9nm,0.8s						
KSRS	Korea Array	45.55	36	P	P	02 56 18.9	-0.8
	comp=Z,5.9nm,0.7s,baz=226,slow=9.4,SNR=22						
KSRS				LR	LR	03 17 32.2	
	comp=Z,148nm,19.2s,baz=238,slow=39						
MK31	Makanchi Array	45.66	347	P	P	02 56 20.3	-0.3
MK31				IAmb	IAmb	02 56 28.1	
	comp=Z,21nm,1.1s						
MKAR	Makanchi Array	45.66	347	P	P	02 56 20.4	-0.2
	comp=Z,17nm,0.7s,baz=163,slow=7.8,SNR=157						
MAKZ	Makanchi	45.74	347	P	P	02 56 20.9	-0.3
SONM	Songino Array	46.05	10	P	P	02 56 23.3	-0.5
	comp=Z,12nm,0.6s,baz=189,slow=9.1,SNR=91						
SONM				PcP	PcP	02 58 00.5	+0.5
	comp=Z,2.5nm,0.6s,baz=195,slow=3.0,SNR=5.4						
SONM	Songino Array	46.05	10	P	P	02 56 23.2	-0.5
SONM				IAmb	IAmb	02 56 24.7	
	comp=Z,13nm,0.7s						
ULN	Ulaanbaatar	46.19	10	P	P	02 56 24.0	-0.9
ULN				IAmb	IAmb	02 56 25.7	
	comp=Z,7.3nm,0.6s						
KKAR	Karatay Array	46.30	334	P	P	02 56 25.4	-0.3
QIS	Mount Isa	48.60	120	P	P	02 56 43.8	-0.1
	baz=48,SNR=3.7						
CN2	Changchun	48.76	28	eP	P	02 56 43.9	-0.8
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
GEYT	Alibeck	49.36	320	P	P	02 56 49.7	+0.2
	comp=Z,6.3nm,0.8s,baz=90,slow=14,SNR=6.8						
GEYT	Alibeck	49.36	320	IAmb	IAmb	02 56 57.1	
	comp=Z,7.0nm,0.7s						
GYA0B	ALIBECK ARRAY	49.36	320	P	P	02 56 49.3	-0.2
GYA0B				IAmb	IAmb	02 56 57.0	
	comp=Z,9.0nm,0.7s						
KURK	Kurchatov	50.19	346	P	P	02 56 55.1	-0.4
KURK				IAmb	IAmb	02 56 57.2	
	comp=Z,10nm,0.8s						
MDJ	Mudanjiang	51.39	30	P	P	02 57 06.3	+1.6
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,170nm,5.1s						
MAT	Matsushiro	51.64	44	P	P	02 57 04.8	-1.9
MJAR	Matsushiro Arr	51.64	44	P	P	02 57 05.8	-0.9
	comp=Z,2.0nm,0.9s,baz=154,slow=0.6,SNR=5.0						
MJAR				PcP	PcP	02 58 21.2	+0.9
	comp=Z,3.2nm,0.9s,baz=242,slow=2.7,SNR=7.0						
MJAR				LR	LR	03 21 19.0	
	comp=Z,48nm,18.6s,baz=180,slow=39						
MJAR	Matsushiro Arr	51.64	44	IAmb	IAmb	02 57 07.3	
	comp=Z,1.8nm,0.8s						
MTSU	Mount Surprise	51.92	115	P	P	02 57 10.1	+1.0
	baz=52,SNR=5.3						
ZAA0	Zalesovo Array	52.06	352	P	P	02 57 09.3	-0.2
ZALV	Zalesovo Beam	52.06	352	P	P	02 57 09.3	-0.3
	comp=Z,12nm,0.5s,baz=181,slow=6.3,SNR=60						
USRK	Ussuriysk Ar.	52.35	32	P	P	02 57 11.4	-0.4
	comp=Z,3.8nm,0.9s,baz=227,slow=5.7,SNR=6.7						
USRK	Ussuriysk Ar.	52.35	32	P	P	02 57 10.8	-1.1
RAYN	Ar Rayn	52.98	298	P	P	02 57 16.6	-0.3
RAYN				IAmb	IAmb	02 57 29.9	
	comp=Z,8.5nm,1.2s						
HTT	Hallett	54.08	135	P	P	02 57 25.9	+1.1
	baz=54,SNR=3.9						
BRVK	Borovoye	54.65	341	P	P	02 57 27.1	-1.4
BRVK				IAmb	IAmb	02 57 28.8	
	comp=Z,10.0nm,0.7s						
QLP	Quilpie	54.90	125	P	P	02 57 32.4	+1.6
	baz=55,SNR=4.5						
STKA	Stephens Creek	55.22	132	P	P	02 57 33.4	+0.3
	comp=Z,7.1nm,0.8s,baz=301,slow=7.7,SNR=9.9						
STKA				LR	LR	03 25 16.6	
	comp=Z,47nm,18.1s,baz=333,slow=40						
STKA	Stephens Creek	55.22	132	P	P	02 57 34.1	+1.1
	baz=55,SNR=3.6						
STKA	Stephens Creek	55.22	132	P	P	02 57 33.2	+0.2
KLR	Kul'dur	55.69	28	P	P	02 57 35.7	-0.5
	comp=Z,14nm,0.8s,baz=249,slow=7.5,SNR=36						
ABKAR	Akbulak array	55.74	332	P	P	02 57 35.9	-0.6
ABKAR				IAmb	IAmb	02 57 37.2	
	comp=Z,13nm,0.9s						
CMSA	Cobar Meteorol	58.15	130	P	P	02 57 55.6	+1.7
	baz=58,SNR=11						
KMBO	Kilima Mbogo	58.72	267	P	P	02 58 01.1	+2.6
	comp=Z,1.1nm,0.3s,baz=50,slow=8.9,SNR=3.6						
KMBO	Kilima Mbogo	58.72	267	P	P	02 57 59.6	+1.1
ARU	Arti	61.47	337	P	P	02 58 15.4	-0.8
ARU				IAmb	IAmb	02 58 16.4	
	comp=Z,10nm,1.0s						
KBZ	Khabaz	62.22	319	P	P	02 58 22.5	+0.9
	comp=Z,1.7nm,0.9s,baz=147,slow=8.3,SNR=4.0						
YAK	Yakutsk	64.54	17	P	P	02 58 35.7	-0.9
	comp=Z,17nm,0.5s,baz=208,slow=1.3,SNR=10						
YAK	Yakutsk	64.54	17	P	P	02 58 36.0	-0.6
NRIK	Noril'sk	66.94	357	P	P	02 58 51.0	-0.9
	comp=Z,4.4nm,0.6s,baz=167,slow=5.1,SNR=8.3						
NRIK	Noril'sk	66.94	357	P	P	02 58 51.3	-0.6
NRIK				IAmb	IAmb	02 58 52.4	
	comp=Z,12nm,1.1s						
BR131	Keskin Array S	67.25	312	P	P	02 58 52.9	-1.8
BRTR	Keskin Array B	67.25	312	P	P	02 58 53.6	-1.1
	comp=Z,1.1nm,0.8s,baz=119,slow=6.4,SNR=10						
BRTR	Keskin Array B	67.25	312	P	P	02 58 53.2	-1.5
PET	Petropavlovsk	71.89	34	P	P	02 59 22.3	-0.6
KLMR	Klimovskoe	72.00	335	eP	P	02 59 22.0	-1.3
KLMR				AMP		02 59 35.9	
	comp=Z,21nm,1.4s						
TIXI	Tiksi	72.13	10	P	P	02 59 22.6	-1.4
	comp=Z,5.2nm,0.7s,baz=189,slow=1.9,SNR=17						
TIXI	Tiksi	72.13	10	P	P	02 59 22.9	-1.0
TIXI				IAmb	IAmb	02 59 23.8	
	comp=Z,12nm,1.1s						
TIRR	Tirgusor	72.26	316	⇑P	P	02 59 25.1	-0.1
TIRR	Tirgusor	72.26	316	P	P	02 59 25.6	+0.4
TIRR				IAmb	IAmb	02 59 37.5	
	comp=Z,12nm,0.9s						
CFR	Carcaliu	72.63	317	⇓P	P	02 59 26.4	-1.1
HARR	Harsova	72.65	316	⇑P	P	02 59 24.4	-3.2
SORM	Soroca	73.25	320	⇑P	P	02 59 29.5	-1.6
AKASG	Malin Array Be	73.41	322	P	P	02 59 30.3	-1.7
	comp=Z,0.8nm,0.5s,baz=91,slow=4.8,SNR=7.2						
AKASG	Malin Array Be	73.41	322	P	P	02 59 30.8	-1.1
VRI	Vrincioaia	73.76	317	⇓P	P	02 59 33.6	-0.6
PLOR	Plostina	73.81	317	⇓P	P	02 59 33.8	-0.6
TESR	Tescani	73.96	318	⇓P	P	02 59 35.0	-0.3
MLR	Muntele Rosu	74.21	317	⇑P	P	02 59 34.3	-2.6
HUMR	Humele	74.67	316	⇑P	P	02 59 35.1	-4.3
BURAR	Bucovina Array	75.17	319	⇑P	P	02 59 42.2	-0.2
BUR08	Bucovina Ar. S	75.19	319	P	P	02 59 42.0	-0.6
MNK	Minsk	75.30	326	i P	P	02 59 42.3	-0.6
MNK				i P	P	02 59 42.3	-0.6
MNK				i P	P	02 59 42.3	-0.6
	comp=Z,11nm,0.8s,baz=105						

MNK				*i* PP	**PP**	**03 02 33.2**	**+1.6**
MNK				*i* PPP	PPP	03 04 20.0	
MNK				*i* S	**S**	**03 09 23.1**	**+2.4**
MNK				*i* SS	**SS**	**03 14 19.3**	**+8.5**
VTS	**Vitosha**	**75.56**	**313**	⇑P	**P**	**02 59 43.8**	**-1.0**
NACGM	**Naroch**	**76.02**	**326**	*i* P	**P**	**02 59 47.1**	**+0.1**
BOVS	**Bovan**	**76.83**	**314**	⇑P	**P**	**02 59 49.8**	**-2.0**
TRPA	**Tarpa**	**77.04**	**319**	⇑P	**P**	**02 59 51.7**	**-1.2**
SIRR	**Siria**	**77.30**	**317**	⇓P	**P**	**02 59 54.2**	**-0.2**
FINES	**FINESS Array B**	**78.23**	**333**	P	**P**	**02 59 58.6**	**-0.6**
	comp=Z,5.5nm,0.8s,baz=64,slow=4.4,SNR=10						
PSZ	**Piszkesteto**	**78.75**	**318**	⇑P	**P**	**03 00 02.4**	**-0.1**
ARCES	**ARCESS Array B**	**80.86**	**340**	P	**P**	**03 00 13.5**	**+0.1**
	comp=Z,2.8nm,0.5s,baz=90,slow=4.5,SNR=18						
DPC	**Dobruska-Polom**	**81.40**	**320**	*e*P	**P**	**03 00 17.3**	**+0.5**
DPC				*e*pP	**pP**	**03 00 24.0**	**-0.8**
CHVC	**Chvalec**	**81.60**	**321**	*e*P	**P**	**03 00 17.9**	**+0.1**
OBKA	**Obir**	**82.21**	**316**	*e*P	**P**	**03 00 21.2**	**0.0**
	comp=Z,3.0nm,0.9s						
CKRC	**Cesky Krumlov**	**82.56**	**319**	*e*P	**P**	**03 00 23.7**	**+0.9**
GEC2	**GERESS Array S**	**82.96**	**319**	IAmb	IAmb	03 00 38.1	
	comp=Z,8.6nm,1.2s						
GERES	**GERESS Array B**	**82.96**	**319**	P	**P**	**03 00 24.8**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=99,slow=6.9,SNR=20						
GERES	**GERESS Array B**	**82.96**	**319**	P	**P**	**03 00 24.4**	**-0.6**
KHC	**Kasperske Hory**	**83.06**	**319**	*e*P	**P**	**03 00 23.7**	**-1.8**
KHC				*e*pP	**pP**	**03 00 32.3**	**-1.2**
KBA	**Koelnbreinsper**	**83.07**	**317**	*e*P	**P**	**03 00 25.1**	**-0.6**
	comp=Z,4.1nm,1.3s						
MURB	**Monte Urbino**	**83.44**	**313**	P	**P**	**03 00 25.9**	**-1.7**
CTI	**Castel Tesino**	**84.19**	**316**	P	**P**	**03 00 31.3**	**-0.2**
CTI				IAmb	IAmb	03 00 32.4	
	comp=Z,5.2nm,0.8s						
WTTA	**Wattenberg**	**84.25**	**317**	*e*P	**P**	**03 00 30.9**	**-0.9**
	comp=Z,3.6nm,0.9s						
SQTA	**Sankt Quirin**	**84.54**	**317**	*e*P	**P**	**03 00 32.4**	**-0.8**
	comp=Z,2.7nm,0.8s						
MOTA	**Moosalm**	**84.61**	**317**	*e*P	**P**	**03 00 32.5**	**-1.1**
	comp=Z,3.1nm,0.9s						
RETA	**Reutte**	**84.85**	**317**	*e*P	**P**	**03 00 33.9**	**-0.8**
	comp=Z,1.8nm,0.7s						
DAVA	**Damuels**	**85.44**	**317**	*e*P	**P**	**03 00 38.1**	**+0.3**
	comp=Z,5.2nm,1.0s						
KEST	**Kesra**	**85.72**	**305**	P	**P**	**03 00 40.0**	**+0.7**
	comp=Z,4.4nm,1.0s,baz=302,slow=2.4,SNR=5.2						
TORD	**Torodi Ar. Bea**	**93.50**	**283**	P	**P**	**03 01 17.2**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=85,slow=5.3,SNR=5.7						
IMAR	**Indian Mountai**	**95.89**	**23**	P	**P**	**03 01 26.2**	**0.0**
ESDC	**Sonseca Array**	**95.97**	**310**	P	**P**	**03 01 27.6**	**+0.3**
	comp=Z,0.6nm,1.0s,baz=57,slow=3.8,SNR=2.3						
ESDC	**Sonseca Array**	**95.97**	**310**	IAmb	IAmb	03 01 34.8	
	comp=Z,2.1nm,1.4s						
ILAR	**Eielson Array**	**99.01**	**23**	P	**Pdif**	**03 01 38.9**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=292,slow=4.3,SNR=4.3						
ULM	**Lac du Bonnet**	**126.47**	**9**	PKP	**PKiKP**	**03 07 03.1**	**-0.3**
	comp=Z,3.5nm,0.8s,baz=221,slow=2.9,SNR=3.7						
NVAR	**Mina Array Bea**	**128.47**	**34**	PKP	**PKiKP**	**03 07 08.3**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=290,slow=2.5,SNR=5.6						
PDAR	**Pinedale Array**	**129.41**	**24**	PKP	**PKPdf**	**03 07 09.2**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=111,slow=2.8,SNR=5.8						
TXAR	**Lajitas Array**	**143.21**	**29**	PKhKP	PKPpre	03 07 31.6	
	comp=Z,0.7nm,0.5s,baz=226,slow=2.5,SNR=12						
SLBS	**Sierra La Lagu**	**143.80**	**43**	PKPdf	**PKPdf**	**03 07 35.3**	**-0.7**
JCT	**Junction City**	**143.94**	**23**	PKPdf	PKPbc	03 07 34.2	+0.5
HPIG		**144.09**	**34**	PKPdf	**PKPdf**	**03 07 36.1**	**-0.5**
CPUP	**Villa Florida**	**145.04**	**225**	PKPbc	**PKPdf**	**03 07 37.5**	**-0.4**
	comp=Z,2.4nm,0.7s,baz=136,slow=4.8,SNR=6.5						
BO02	**Sierra Bellavi**	**145.57**	**200**		**PKPdf**	**03 07 37.8**	**-1.0**
344A	**Westbrook Farm**	**145.64**	**10**	PKPbc	**PKPdf**	**03 07 38.0**	**-0.8**
AQDB	**Aquidauana**	**147.03**	**235**	PKPbc	**PKPbc**	**03 07 42.9**	**-0.6**
VA03	**San Esteban**	**147.33**	**201**	PKPbc	**PKPbc**	**03 07 42.9**	**-1.3**
ZON	**Zonda**	**147.66**	**205**	PKPbc	**PKPdf**	**03 07 43.4**	**+1.1**
ZAIG	**Zacatecas**	**149.09**	**35**	PKPbc	**PKPbc**	**03 07 47.4**	**-1.9**

IDC ***20*** *02:51:11.6±2.4, 21°.16S×179°.00W, h0^{km}, mb4.1/2, mb1 4.4/3, mb1mx3.6/35, mbtmp4.2/3, ML4.4/1, Error ellipse: s-maj=59.4km s-min=48.2km az=125.0*

NEIC ***20*** *02:52:10.3±0.7, 23°.8S±0°.2×180°.0W±0°.2, h524^{km}±4^{km}, mb4.2/7, Error ellipse: s-maj=30.8km s-min=24.8km az=101.0*

NOU ***20*** *02:52:10.4, 23°.87S×179°.76W, h533^{km}, mb4.2/8, South of Fiji Islands*

ISC 20 02:52:10.3±1.0**, 23°.8S**±0°.1×**179°.9W**±0°.2**, h550^{km}, n31, σ0^{s}.79**/30**, mb4.0**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.33**	**342**	P	**P**	**02 53 50.5**	**-1.6**
MSVF	**Nonsavu**	**6.33**	**342**	P	**P**	**02 53 51.8**	**-0.3**
TAVE	**Taveuni**	**7.04**	**360**	P	**P**	**02 53 59.6**	**+0.9**
DGTI	**Dogotuki**	**7.45**	**357**	P	**P**	**02 54 03.2**	**+0.4**
URZ	**Urewera**	**14.66**	**189**	P	**P**	**02 55 15.5**	**-0.6**
	1.4nm,0.3s,baz=300,slow=23,SNR=7.6						
URZ	**Urewera**	**14.66**	**189**	P	**P**	**02 55 15.5**	**-0.6**
URZ	**Urewera**	**14.66**	**189**	P	**P**	**02 55 16.7**	**+0.7**
	49nm,1.8s						
BKZ	**Black Stump Fm**	**15.65**	**191**	P	**P**	**02 55 24.4**	**-1.8**
BFZ	**Birch Farm**	**17.17**	**190**	P	**P**	**02 55 39.2**	**-1.1**
QRZ	**Quartz Range**	**18.16**	**199**	P	**P**	**02 55 51.0**	**+1.6**
KHZ	**Kahutara**	**19.38**	**195**	P	**P**	**02 56 01.3**	**+0.9**
LTZ	**Lake Taylor**	**20.04**	**197**	P	**P**	**02 56 06.7**	**+0.2**
LTZ				IAmb	IAmb	02 56 21.2	
	comp=Z,18nm,1.2s						
CTAO	**Charters Tower**	**31.60**	**270**	P	**P**	**02 57 49.0**	**+0.3**
CTAO				IAmb	IAmb	02 57 59.0	
	comp=Z,13nm,1.2s						
AS31	**Alice Springs**	**42.18**	**260**	P	**P**	**02 59 16.1**	**+0.7**
AS31				IAmb	IAmb	02 59 17.6	
	comp=Z,0.8nm,0.9s						
ASAR	**Alice Springs**	**42.18**	**260**	P	**P**	**02 59 16.1**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=95,slow=7.6,SNR=10						
ASAR	**Alice Springs**	**42.18**	**260**	P	**P**	**02 59 16.1**	**+0.7**
WR0	**Warramunga Arr**	**42.35**	**266**	P	**P**	**02 59 17.2**	**+0.4**
WR0				IAmb	IAmb	02 59 23.5	
	comp=Z,11nm,1.5s						
WB2	**Warramunga Arr**	**42.53**	**266**	P	**P**	**02 59 18.3**	**+0.2**
WB2				IAmb	IAmb	02 59 31.8	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**42.54**	**266**	P	**P**	**02 59 18.3**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=97,slow=8.4,SNR=28						
WRA	**Warramunga Arr**	**42.54**	**266**	P	**P**	**02 59 18.3**	**+0.1**
WRA	**Warramunga Arr**	**42.54**	**266**	IAmb	IAmb	02 59 19.8	
	comp=Z,0.6nm,1.5s						
KNRA	**Kununurra**	**48.81**	**270**	P	**P**	**03 00 05.7**	**-0.3**
FINES	**FINESS Array B**	**138.38**	**342**	PKP	**PKiKP**	**03 10 34.5**	**-0.5**
	comp=Z,3.4nm,1.0s,baz=48,slow=2.1,SNR=4.1						
FINES	**FINESS Array B**	**138.38**	**342**		**PKiKP**	**03 10 34.5**	**-0.5**
AKASG	**Malin Array Be**	**144.94**	**327**	PKP	**PKPab**	**03 10 45.9**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=37,slow=3.7,SNR=4.7						
AKASG	**Malin Array Be**	**144.94**	**327**		**PKPab**	**03 10 45.9**	**-0.5**
GAZ	**Gaziantep**	**145.60**	**302**	PKPbc	**PKPab**	**03 10 49.1**	**-0.4**
BNN	**Bunyan**	**146.24**	**305**	PKPbc	**PKPbc**	**03 10 49.6**	**-0.1**
BRTR	**Keskin Array B**	**147.61**	**307**	PKPbc	**PKiKP**	**03 10 54.7**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=68,slow=0.9,SNR=4.9						
BRTR	**Keskin Array B**	**147.61**	**307**		**PKiKP**	**03 10 54.7**	**-0.2**
CLL	**Collm**	**150.78**	**343**	*e*PKPbc	**PKiKP**	**03 11 02.0**	**+1.2**

IDC ***20*** *02:52:26.5±2.1, 23°.57S×115°.35W, h0^{km}, mb3.7/4, mb1 4.1/4, mb1mx3.8/27, mbtmp3.7/4, MS3.8/8, Ms1 3.8/8, ms1mx3.5/26, Error ellipse: s-maj=110.5km s-min=34.6km az=58.0*

ISC 20 02:52:28.0±2.1**, 23°.6S**±0°.4×**115°.4W**±0°.6**, h10^{km}, n26, σ1^{s}.21**/7**, mb3.7**/4**, MS3.8**/10**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**6.49**	**124**	LR	LR	02 55 24.3	
	comp=Z,1μm,21.5s,baz=359,slow=27						
TAOE	**Nuku Hiva Isla**	**27.88**	**298**	*e*LR	LR	03 05 14.3	
	comp=Z,323nm,25.6s						
TBI	**Tubuai**	**31.24**	**264**	*e*LR	LR	03 06 36.7	
	comp=Z,113nm,26.2s						
PPT2	**Papeete2**	**32.53**	**274**	*e*LR	LR	03 07 05.0	
	comp=Z,149nm,25.5s						
PPT	**Papeete**	**32.53**	**274**	LR	LR	03 08 25.8	
	comp=Z,145nm,18.2s,baz=3.5,slow=30						
H03N2	**Juan Fernandez**	**33.33**	**115**	T	T	03 34 30.6	
	baz=282,slow=75,SNR=22						
H03N3	**Juan Fernandez**	**33.34**	**115**	T	T	03 34 21.3	
	baz=282,slow=75,SNR=23						
H03N1	**Juan Fernandez**	**33.35**	**115**	T	T	03 34 22.6	
	baz=282,slow=75,SNR=20						
PLCA	**Paso Flores**	**41.12**	**125**	P	**P**	**03 00 12.9**	**+0.5**
	3.1nm,1.1s,baz=267,slow=13,SNR=3.1						
PLCA				LR	LR	03 12 56.2	
	comp=Z,157nm,21.4s,baz=310,slow=30						
CPUP	**Villa Florida**	**52.30**	**106**	LR	LR	03 18 30.7	
	comp=Z,50nm,21.4s,baz=198,slow=30						
PTGA	**Pitinga**	**58.26**	**75**	LR	LR	03 23 49.0	
	comp=Z,97nm,19.0s,baz=344,slow=32						
NVAR	**Mina Array Bea**	**61.76**	**357**	P	**P**	**03 02 48.4**	**+1.4**
	0.2nm,0.4s,baz=177,slow=9.7,SNR=2.0						
VNDA	**Vanda**	**65.57**	**194**	LR	LR	03 25 01.9	
	comp=Z,59nm,18.2s,baz=222,slow=30						
PDAR	**Pinedale Array**	**66.24**	**5**	P	**P**	**03 03 15.6**	**-0.9**
	0.2nm,0.7s,baz=181,slow=8.9,SNR=2.2						
MDP	**Montagnes des**	**67.44**	**73**	LR	LR	03 29 24.6	
	comp=Z,65nm,19.5s,baz=38,slow=33						
YKA	**Yellowknife Ar**	**85.79**	**0**	P	**P**	**03 05 07.2**	**+0.1**
	0.7nm,1.1s,baz=178,slow=24,SNR=6.6						
H11S2	**WAKE ISLAND Hy**	**86.76**	**292**	T	T	04 40 54.6	
	baz=116,slow=75,SNR=94						
H11S1	**WAKE ISLAND Hy**	**86.77**	**292**	T	T	04 40 55.5	
	baz=116,slow=75,SNR=50						
H11S3	**WAKE ISLAND Hy**	**86.78**	**292**	T	T	04 41 01.1	
	baz=116,slow=75,SNR=42						
H11N3	**WAKE ISLAND Hy**	**87.12**	**293**	T	T	04 41 28.7	
	baz=117,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**87.14**	**293**	T	T	04 41 31.2	
	baz=117,slow=75,SNR=8.5						
H11N2	**WAKE ISLAND Hy**	**87.14**	**293**	T	T	04 41 17.5	
	baz=117,slow=75,SNR=30						
ASAR	**Alice Springs**	**97.99**	**240**	LR	LR	03 47 00.7	
	comp=Z,47nm,19.5s,baz=190,slow=33						
ZALV	**Zalesovo Beam**	**146.10**	**339**	PKPbc	**PKPdf**	**03 12 06.1**	**-1.0**
	0.2nm,0.4s,baz=45,slow=6.3,SNR=2.5						
BRTR	**Keskin Array B**	**149.29**	**51**	PKPbc	**PKPbc**	**03 12 16.2**	**-1.2**
	1.0nm,0.9s,baz=288,slow=2.0,SNR=7.2						
MKAR	**Makanchi Array**	**152.85**	**333**	PKPbc	**PKiKP**	**03 12 26.3**	**+0.7**
	1.9nm,1.2s,baz=27,slow=3.3,SNR=4.3						

IDC ***20*** *02:57:04.7±1.5, 2°.41S×101°.44E, h0^{km}, mb3.9/7, mb1 4.0/7, mb1mx3.6/39, mbtmp3.9/7, Error ellipse: s-maj=72.8km s-min=17.6km az=53.0*

ISC 20 02:57:10.1±1.4**, 2°.4S**±0°.3×**101°.5E**±0°.4**, h35^{km}, n7, σ0^{s}.69**/7**, mb3.9**/7**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.50**	**121**	P	**P**	**03 04 11.8**	**-0.6**
	0.4nm,0.3s,baz=292,slow=12,SNR=29						
ASAR	**Alice Springs**	**37.81**	**127**	P	**P**	**03 04 23.7**	**+0.2**
	1.1nm,0.6s,baz=303,slow=7.9,SNR=18						
STKA	**Stephens Creek**	**47.77**	**132**	P	**P**	**03 05 44.4**	**+0.3**
	2.2nm,0.8s,baz=329,slow=8.0,SNR=4.0						
SONM	**Songino Array**	**50.19**	**4**	P	**P**	**03 06 03.2**	**+0.7**
	2.0nm,0.7s,baz=185,slow=8.8,SNR=9.6						
MKAR	**Makanchi Array**	**51.81**	**343**	P	**P**	**03 06 14.5**	**-0.1**
	0.4nm,0.4s,baz=156,slow=8.5,SNR=11						
ZALV	**Zalesovo Beam**	**57.83**	**348**	P	**P**	**03 06 57.0**	**-1.0**
	1.1nm,0.3s,baz=167,slow=6.7,SNR=8.2						
BRTR	**Keskin Array B**	**74.69**	**312**	P	**P**	**03 08 46.7**	**+0.1**
	0.4nm,0.6s,baz=140,slow=5.5,SNR=4.2						

NEIC ***20*** *03:22:03.2±2.0, 13°.62N±0°.07×92°.58W±0°.06, h3^{km}±7^{km}, mb4.1/3, Error ellipse: s-maj=10.0km s-min=8.8km az=188.0*

IDC ***20*** *03:22:05.3±3.2, 13°.98N×92°.28W, h0^{km}, mb3.9/2, mb1 4.1/4, mb1mx3.6/36, mbtmp3.6/4, ML3.2/2, Error ellipse: s-maj=131.6km s-min=49.3km az=45.0*

ISC 20 03:22:05.0±1.4**, 13°.7N**±0°.2×**92°.4W**±0°.2**, h10^{km}, n18, σ1^{s}.38**/20**, mb4.2**/3**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**1.06**	**41**		**Pn**	**03 22 26.9**	**+1.0**
HUEH	**Huehuetenango**	**1.81**	**29**	Pn	**Pn**	**03 22 37.8**	**+1.2**
PCIG		**2.12**	**339**		**Pn**	**03 22 38.8**	**-1.7**
CCIG	**Comitan**	**2.56**	**6**	Pn	**Pn**	**03 22 48.2**	**+1.5**
MTO3	**Montecristo**	**3.04**	**77**	Pn	**Pn**	**03 22 53.9**	**+0.5**
ESQI	**Esquipulas**	**3.10**	**74**	Pn	**Pn**	**03 22 54.7**	**+0.6**
PETF	**Flores**	**4.01**	**37**	Pn	**Pn**	**03 23 09.7**	**+3.1**
CMIG	**Matias Romero**	**4.11**	**325**	Pn	**Pn**	**03 23 06.3**	**-1.7**
	0.6nm,0.3s,baz=177,slow=16,SNR=7.0						
CMIG				Sn	**Sn**	**03 23 54.3**	**-1.8**
	1.7nm,0.3s,baz=136,slow=10,SNR=4.3						
ORTG	**Ortega, Santa**	**7.58**	**115**	Pn	**Pn**	**03 23 55.8**	**0.0**
DUNO	**Dulce Nombre,**	**7.68**	**117**	Pn	**Pn**	**03 23 56.3**	**-0.8**
JTS	**Las Juntas de**	**8.06**	**114**	Pn	**Pn**	**03 24 02.4**	**+0.1**
SJCC	**San Jacinto, C**	**17.29**	**101**	Pn	**Pn**	**03 26 05.5**	**-1.4**
SJCC				IAmb	IAmb	03 26 14.2	
	comp=Z,13nm,1.0s						
TXAR	**Lajitas Array**	**18.71**	**328**	P	**P**	**03 26 22.9**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=153,slow=11,SNR=6.6						
Y49A	**Blount Mountai**	**20.77**	**14**	P	**P**	**03 26 46.0**	**-0.3**
Y49A				IAmb	IAmb	03 26 58.4	
	comp=Z,9.8nm,1.1s						
AMTX	**Amarillo**	**22.67**	**340**	P	**P**	**03 27 05.6**	**-1.2**
AMTX				IAmb	IAmb	03 27 08.8	
	comp=Z,11nm,0.9s						
NVAR	**Mina Array Bea**	**33.64**	**322**	P	**P**	**03 28 48.0**	**+1.8**
	comp=Z,0.8nm,0.7s,baz=140,slow=10,SNR=6.3						
YKA	**Yellowknife Ar**	**51.20**	**347**	P	**P**	**03 31 08.9**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=152,slow=7.3,SNR=31						
YKA				PcP	**PcP**	**03 32 23.4**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=150,slow=3.0,SNR=4.6						
CMAR	**Chiang Mai Arr**	**146.12**	**340**	PKPbc	**PKPab**	**03 41 47.1**	**+0.2**
	comp=Z,1.5nm,0.3s,baz=339,slow=3.5,SNR=6.5						

IDC 20 03:24:34.7±7.2**, 13°.77N**×**92°.19W, h0^{km}, mb3.9**/3**, mb1 4.1**/5**, mb1mx3.7**/38**, mbtmp3.7**/5**, ML3.2**/2**, Error ellipse: s-maj=182.3km s-min=75.5km az=27.0, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**4.20**	**322**	Pn	Pn	03 25 39.4	-0.7
	0.5nm,0.3s,baz=5.3,slow=15,SNR=0.8						
TXAR	**Lajitas Array**	**18.79**	**327**	P	P	03 28 56.0	+0.2
	0.0nm,0.3s,baz=157,slow=8.1,SNR=4.6						
NVAR	**Mina Array Bea**	**33.74**	**322**	P	P	03 31 18.7	+0.5
	0.7nm,0.7s,baz=137,slow=8.3,SNR=4.6						
YKA	**Yellowknife Ar**	**51.21**	**347**	P	P	03 33 39.9	+0.2
	2.0nm,0.7s,baz=151,slow=7.5,SNR=20						
ILAR	**Eielson Array**	**62.98**	**337**	P	P	03 35 02.2	-0.7
	1.4nm,1.1s,baz=128,slow=5.8,SNR=4.7						

IDC ***20*** *03:41:58.7±0.7, 29°.24S×61°.30E, h0^{km}, mb4.1/9, mb1 4.3/10, mb1mx3.8/44, mbtmp4.1/10, ML4.2/1, MS3.6/5, Ms1 3.5/5, ms1mx3.2/37, Error ellipse: s-maj=27.5km s-min=19.6km az=54.0*

NEIC ***20*** *03:42:01.1±1.7, 29°.3S±0°.1×61°.24E±0°.09, h10^{km}±1^{km}, mb4.6/16, Error ellipse: s-maj=22.2km s-min=4.4km az=213.0*

ISC 20 03:42:00.6±0.6**, 29°.3S**±0°.1×**61°.2E**±0°.1**, h10^{km}, n38, σ0^{s}.78**/28**, mb4.4**/15**, MS3.6**/4**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.46**	**327**	Pn	**Pn**	**03 44 16.0**	**-1.1**
VOI	**Vohitsoka**	**14.93**	**296**	Pn	**Pn**	**03 45 32.3**	**+0.4**
OPO	**Ambohidratompo**	**16.65**	**307**	Pn	**Pn**	**03 45 54.3**	**-0.1**
	1.0nm,0.3s,baz=127,slow=12,SNR=7.2						
OPO				Sn	Sn	03 48 44.9	-14
	0.7nm,0.3s,baz=115,slow=11,SNR=2.8						
OPO				LR	LR	03 50 49.9	
	comp=Z,89nm,20.3s,baz=23,slow=32						
H08S1	**Diego Carcia H**	**23.96**	**28**	T	T	04 11 53.3	
	baz=204,slow=76,SNR=17						
H08S2	**Diego Garcia H**	**23.97**	**28**	T	T	04 11 54.6	
	baz=204,slow=76,SNR=13						
H08S3	**Diego Garcia H**	**23.98**	**28**	T	T	04 11 55.1	
	baz=204,slow=76,SNR=22						
BOSA	**Boshof**	**31.41**	**262**	LR	LR	03 59 13.1	
	comp=Z,56nm,19.9s,baz=54,slow=33						
LSZ	**Lusaka**	**33.45**	**287**	P	**P**	**03 48 39.8**	**-0.4**
LSZ				IAmb	IAmb	03 48 48.3	
	comp=Z,5.1nm,0.8s						
KMBO	**Kilima Mbogo**	**36.11**	**316**	LR	LR	04 00 25.1	
	comp=Z,110nm,20.2s,baz=86,slow=31						
MAW	**Mawson**	**38.39**	**179**	LR	LR	04 01 43.1	
	comp=Z,88nm,18.3s,baz=78,slow=31						
TSUM	**Tsumeb**	**40.84**	**274**	P	**P**	**03 49 43.2**	**+0.3**
TSUM				IAmb	IAmb	03 49 53.2	
	comp=Z,16nm,1.4s						
H01W2	**Cape Leeuwin H**	**44.76**	**111**	T	T	04 37 58.0	
	baz=261,slow=75,SNR=26						
H01W3	**Cape Leeuwin H**	**44.76**	**111**	T	T	04 37 52.0	
	baz=261,slow=75,SNR=27						
H01W1	**Cape Leeuwin H**	**44.78**	**111**	T	T	04 38 03.5	
	baz=261,slow=75,SNR=25						
GSI	**Gunungsitoli**	**46.16**	**55**	P	**P**	**03 50 26.8**	**+1.1**
CASY	**Casey**	**47.54**	**155**	P	**P**	**03 50 34.8**	**-1.0**
CASY				IAmb	IAmb	03 50 35.8	
	comp=Z,8.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**59.79**	**42**	P	**P**	**03 52 05.8**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=238,slow=8.0,SNR=1.8						
QSPA	**South Pole Qui**	**60.90**	**180**	P	**P**	**03 52 13.7**	**+0.3**
	comp=Z,4.4nm,1.0s,baz=277,slow=4.0,SNR=8.7						
QSPA	**South Pole Qui**	**60.90**	**180**	P	**P**	**03 52 13.8**	**+0.4**
QSPA				IAmb	IAmb	03 52 22.2	
	comp=Z,7.1nm,1.1s						
VNDA	**Vanda**	**63.93**	**166**	P	**P**	**03 52 33.2**	**-0.1**
	comp=Z,2.0nm,1.0s,baz=261,slow=7.0,SNR=5.4						
VNDA				LR	LR	04 19 05.4	
	comp=Z,78nm,18.0s,baz=222,slow=35						
VNDA	**Vanda**	**63.93**	**166**	IAmb	IAmb	03 52 35.6	
	comp=Z,4.2nm,1.1s						
ASAR	**Alice Springs**	**64.37**	**104**	P	**P**	**03 52 36.7**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=244,slow=6.0,SNR=21						
WRA	**Warramunga Arr**	**66.19**	**100**	P	**P**	**03 52 47.5**	**-1.5**
	comp=Z,1.2nm,0.7s,baz=228,slow=7.9,SNR=11						
WRAB	**Tennant Creek**	**66.21**	**100**	P	**P**	**03 52 50.6**	**+1.5**
BTK	**Batken**	**69.53**	**8**	P	**P**	**03 53 10.5**	**+1.0**
BTK				IAmb	IAmb	03 53 29.3	
	comp=Z,4.4nm,1.2s						
TORD	**Torodi Ar. Bea**	**71.23**	**298**	P	**P**	**03 53 20.0**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=113,slow=4.0,SNR=13						
TORD	**Torodi Ar. Bea**	**71.23**	**298**	P	**P**	**03 53 21.0**	**+0.7**
KKAR	**Karatay Array**	**72.50**	**7**	P	**P**	**03 53 27.5**	**+0.1**
AAK	**Ala-Archa**	**72.57**	**10**	P	**P**	**03 53 28.4**	**+0.4**
BR131	**Keskin Array S**	**73.27**	**338**	P	**P**	**03 53 31.8**	**-0.4**
BRTR	**Keskin Array B**	**73.27**	**338**	P	**P**	**03 53 32.1**	**-0.1**
	comp=Z,1.1nm,1.0s,baz=168,slow=12,SNR=4.9						
KOWA	**Kowa**	**76.49**	**295**	P	**P**	**03 53 51.1**	**-0.1**
KOWA				IAmb	IAmb	03 53 53.0	
	comp=Z,9.9nm,1.3s						
MKAR	**Makanchi Array**	**78.05**	**15**	P	**P**	**03 53 59.8**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=190,slow=3.6,SNR=4.9						
ABKAR	**Akbulak array**	**78.16**	**359**	P	**P**	**03 53 58.9**	**-0.8**
ZAA0	**Zalesovo Array**	**85.34**	**14**	P	**P**	**03 54 38.1**	**+0.6**
ZAA0				IAmb	IAmb	03 54 46.2	
	comp=Z,3.8nm,0.9s						
ZALV	**Zalesovo Beam**	**85.34**	**14**	P	**P**	**03 54 37.3**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=224,slow=4.1,SNR=8.4						
ZALV	**Zalesovo Beam**	**85.34**	**14**	P	**P**	**03 54 39.2**	**+1.7**
YKA	**Yellowknife Ar**	**146.64**	**356**	PKPbc	**PKPdf**	**04 01 40.2**	**0.0**
	comp=Z,0.5nm,0.7s,baz=348,slow=3.2,SNR=8.4						

KMA 20 03:46:10.2±0.8**, 38°.36N**×**125°.89E, h9^{km}**±5^{km}**, Error ellipse: s-maj=8.1km s-min=2.5km az=22.0, North Korea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YPDB	**Yeonpyeongdo**	**0.76**	**191**	P	Pb	03 46 25.3	-0.3
	SNR=75						
KSGAH	**Ganghwa**	**0.78**	**146**	P	Pg	03 46 25.0	-0.3
	SNR=80						
KSGAH				S	Sb	03 46 36.2	-0.6
KSMUS	**Musan**	**0.83**	**124**	P	Pb	03 46 27.3	+0.5
KSBAR	**Backryungdo**	**1.00**	**248**	P	Pb	03 46 29.7	-0.1
	SNR=59						
KSBAR	**Backryungdo**	**1.00**	**248**	P	Pb	03 46 29.7	-0.1
	SNR=59						
DACB	**Daecheong-do R**	**1.07**	**241**	P	Pg	03 46 30.7	-0.2
	SNR=80						
DACB	**Daecheong-do R**	**1.07**	**241**	P	Pg	03 46 30.7	-0.2
	SNR=80						
KSDEI	**Deokjeokdo**	**1.11**	**171**	P	Pg	03 46 31.6	0.0
	SNR=13						
KSDEI	**Deokjeokdo**	**1.11**	**171**	P	Pg	03 46 31.6	0.0
	SNR=13						
KSCWO	**Cheorwon**	**1.31**	**102**	P	Pn	03 46 34.0	-0.8
	SNR=11						
KSCWO	**Cheorwon**	**1.31**	**102**	P	Pn	03 46 34.0	-0.8
	SNR=11						
HAWB	**Hwaseong-si**	**1.45**	**151**	P	Pn	03 46 36.2	-0.5
	SNR=28						
HAWB	**Hwaseong-si**	**1.45**	**151**	P	Pn	03 46 36.2	-0.5
	SNR=28						
KSCHC	**Chuncheon**	**1.62**	**110**	P	Pn	03 46 38.9	-0.2
	SNR=16						
KSCHC	**Chuncheon**	**1.62**	**110**	P	Pn	03 46 38.9	-0.2
	SNR=16						
KSCHC				S	Sb	03 47 01.4	+0.4

NNC 20 04:34:24.0±7.1**, 39°.66N**×**68°.64E, h4^{km}**±35^{km}**, mb3.6, mpv3.4, 3C, Error ellipse: s-maj=39.4km s-min=21.0km az=19.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**2.70**	**23**	Pg	Pn	04 34 59.1	-9.2
	81nm,0.5s						
IUG				Lg	Lg	04 35 51.5	
	55nm,0.2s						
BRLS	**Borolday**	**3.49**	**15**	Pg	Pn	04 35 07.9	-11
	5.5nm,0.0s						
BRLS				Lg	Lg	04 36 06.6	
	9.2nm,0.2s						
KK02	**Karatay Array**	**3.72**	**22**	⇑Pn	Pn	04 35 22.3	0.0
	0.6nm,0.5s,baz=205,slow=12						
KK02				⇑Pg	Pb	04 35 32.0	+1.8
	0.8nm,0.3s,baz=207,slow=18						
KK02				⇑Lg	Lg	04 36 21.3	
	6.8nm,0.5s,baz=202,slow=30						
MRKS	**Merke**	**4.63**	**47**	Pg	Pn	04 35 33.4	-1.6
	3.2nm,0.8s						
MRKS				Lg	Lg	04 36 50.5	
	4.7nm,0.4s						
SGDS	**Sogindy**	**5.88**	**48**	Pg	Pn	04 35 55.6	+3.6
	1.5nm,0.5s						
SGDS				Lg	Lg	04 37 28.4	
	2.5nm,0.7s						
DGS	**Degeres**	**6.45**	**54**	Pg	Pn	04 36 05.5	+5.7
	1.1nm,0.2s						
DGS				Lg	Lg	04 37 45.1	
	2.2nm,0.6s						

IDC ***20*** *04:59:47.3±3.9, 37°.70N×142°.07E, h42^{km}±38^{km}, mb3.1/5, mb1 3.5/8, mb1mx3.1/36, mbtmp3.4/8, ML3.1/2, MS2.3/3, Ms1 2.3/3, ms1mx2.2/19, Error ellipse: s-maj=44.0km s-min=22.6km az=117.0*

NIED ***20*** *04:59:47.3, 37°.85N×141°.87E, h41^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.38; $M_{\theta\theta}$0.15; $M_{\phi\phi}$0.23; $M_{r\theta}$3.40; $M_{\theta\phi}$-1.51; $M_{\phi r}$0.44; Fault plane solution: $M_0$3.73000×10^{14} NP1: ϕ_s268.00000°, δ88.00000°, λ-114.00000°. NP2: ϕ_s173.00000°, δ24.00000°, λ-6.00000°.*

JMA ***20*** *04:59:47.2±0.1, 37°.85N×141°.87E, h41^{km}±1^{km}, M3.5*

ISC 20 04:59:46.0±1.9**, 37°.83N**±0°.06×**141°.97E**±0°.08**, h28^{km}**±12^{km}**, n30, σ1^{s}.13**/34**, mb3.3**/5**, 4C-7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.63**	**320**	⇓P	**Pb**	**04 59 58.8**	**+0.3**
JIKH				S	**Sb**	**05 00 06.6**	**-0.3**
JIO	**Ouri**	**0.80**	**322**	⇓P	**Pn**	**05 00 01.2**	**-0.2**
JIO				S	**Sb**	**05 00 10.8**	**-0.9**
JMST	**Minamisoumatoc**	**0.87**	**263**	⇑P	**Pn**	**05 00 01.9**	**-0.4**
JMST				S	**Sb**	**05 00 12.3**	**-1.4**
JMM	**Marumori**	**0.94**	**273**	⇑P	**Pn**	**05 00 03.1**	**-0.2**
JMM				S	**Sn**	**05 00 14.1**	**-1.6**
JFK	**Kawauchi**	**0.99**	**242**	⇑P	**Pn**	**05 00 03.7**	**-0.3**
JFK				S	**Sn**	**05 00 15.5**	**-1.6**
JKMT	**Kesennumamotoy**	**1.06**	**338**	⇓P	**Pn**	**05 00 04.9**	**0.0**
JOU	**Okura**	**1.16**	**298**	⇓P	**Pn**	**05 00 06.6**	**+0.1**
JOU				S	**Sn**	**05 00 20.7**	**-0.7**
JMK	**Ichinoseki**	**1.27**	**332**	⇓P	**Pn**	**05 00 08.0**	**+0.1**
JMK				S	**Sn**	**05 00 23.5**	**-0.4**
JFT	**Otama**	**1.33**	**257**	⇑P	**Pn**	**05 00 09.6**	**+0.8**
JFT				S	**Sn**	**05 00 25.8**	**+0.2**
JYK	**Kaneyama**	**1.67**	**311**	P	**Pn**	**05 00 13.9**	**+0.5**

JOM	Ohasama	1.73	342	⇓P	Pn	05 00 14.8	+0.6
JFY	Yanaizu	1.85	258	P	Pn	05 00 18.1	+2.2
JRG	Rokugo	1.88	327	⇓P	Pn	05 00 17.3	+1.0
JYA	Atsumi	1.94	294	P	Pn	05 00 17.9	+0.8
JYA				S	Sn	05 00 41.3	+0.8
MJAR	Matsushiro Arr	3.27	248	P	Pn	05 00 36.7	+1.3
	0.4nm,0.3s,baz=85,slow=17,SNR=20						
MJAR				S	Sb	05 01 22.0	-0.7
	0.3nm,0.3s,baz=87,slow=25,SNR=4.4						
MJAR				LR	LR	05 02 09.8	
	comp=Z,33nm,21.0s,baz=320,slow=44						
MAT	Matsushiro	3.27	248	P	Pn	05 00 36.9	+1.5
MAT				eS	Sn	05 01 14.1	+0.7
JHJ	Hachijo jima 2	5.03	201	LR	LR	05 02 36.8	
	comp=Z,37nm,19.1s,baz=86,slow=34						
ASAJ	Asahikawa	6.30	4	P	Pn	05 01 17.8	+0.8
	0.9nm,0.3s,baz=214,slow=14,SNR=6.1						
ASAJ				LR	LR	05 04 17.7	
	comp=Z,28nm,22.0s,baz=137,slow=42						
USRK	Ussuriysk Ar.	9.87	313	P	Pn	05 02 09.3	+3.4
	baz=121,slow=12,SNR=1.9						
SONM	Songino Array	27.72	303	P	P	05 05 32.4	+0.4
	0.5nm,0.8s,baz=93,slow=7.7,SNR=2.7						
H11N2	WAKE ISLAND Hy	28.19	123	T	T	05 35 09.5	
	baz=315,slow=75,SNR=29						
H11N1	WAKE ISLAND Hy	28.20	123	T	T	05 35 09.5	
	baz=315,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	28.20	123	T	T	05 35 08.4	
	baz=315,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	28.93	125	T	T	05 36 02.7	
	baz=317,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	28.93	125	T	T	05 36 02.2	
	baz=317,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	28.95	125	T	T	05 36 04.8	
	baz=317,slow=76,SNR=12						
ILAR	Eielson Array	48.59	33	P	P	05 08 27.0	+0.4
	0.3nm,0.8s,baz=260,slow=5.4,SNR=1.8						
WRA	Warramunga Arr	57.91	188	P	P	05 09 33.8	-1.8
	0.4nm,0.5s,baz=6.5,slow=6.7,SNR=5.6						
YKA	Yellowknife Ar	62.90	30	P	P	05 10 09.1	-0.1
	0.1nm,0.6s,baz=306,slow=7.0,SNR=2.4						
TXAR	Lajitas Array	89.28	53	P	P	05 12 40.1	+0.2
	0.1nm,0.6s,baz=302,slow=5.2,SNR=1.8						

IDC 20 05:20:38.5±1.2, 28°.14N×139°.36E, h378km±21km, mb3.0/2, mb1 3.0/4, mb1mx2.6/39, mbtmp3.6/4, Error ellipse: s-maj=53.2km s-min=11.0km az=74.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.71	112	P	Pn	05 21 39.4	+1.7
	9.2nm,0.3s,baz=324,slow=22,SNR=8.1						
JCJ				S	S	05 22 25.6	+0.1
	24nm,0.3s,baz=100,slow=22,SNR=13						
MJAR	Matsushiro Arr	8.43	354	P	Pn	05 22 36.6	-1.5
	0.1nm,0.3s,baz=173,slow=17,SNR=4.4						
WRA	Warramunga Arr	48.05	186	P	P	05 28 40.1	-1.3
	1.9nm,1.2s,baz=3.2,slow=7.6,SNR=5.2						
FINES	FINESS Array B	75.89	333	P	P	05 31 44.4	+0.3
	2.0nm,0.9s,baz=72,slow=6.8,SNR=8.5						

NNC 20 05:23:36.0±7.1, 37°.07N×70°.31E, h0km, mb3.6, mpv3.4, 1C-4D, Error ellipse: s-maj=64.2km s-min=55.6km az=147.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	Karatay Array	6.03	1	⇓P	Pn	05 25 07.8	+1.2
	0.8nm,0.3s,baz=175,slow=12						
KK02				⇓S	Sn	05 26 16.6	+0.3
	0.8nm,0.4s						
AAK	Ala-Archa	6.43	29	⇓P	Pn	05 25 12.3	+0.2
	2.4nm,0.9s						
AAK				⇓S	Sn	05 26 28.1	+1.9
	4.1nm,0.7s						
TKM2	Tokmak 2	7.12	33	⇑P	Pn	05 25 20.8	-0.8
	2.6nm,0.5s						
AB31	Akbulak array	14.32	332	P	Pn	05 26 58.1	-1.9
	0.2nm,0.5s,baz=174,slow=11,SNR=7.9						

WEL 20 05:51:17.3±1.1, 35°S±19°×178°E±2°2, h212km±23km, M3.4/8, ML3.5/10, MLv3.4/8, Error ellipse: s-maj=0.0km s-min=0.0km az=128.3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.14	177	P	Pn	05 51 58.1	+0.1
MXZ				S	S	05 52 30.2	+0.6
HAZ	Te Kaha	2.35	188	P	Pn	05 52 00.5	+0.3
HAZ				S	S	05 52 34.4	+0.7
WMGZ	Waiomatatini S	2.40	175	P	Pn	05 52 01.0	+0.2
WMGZ				S	S	05 52 36.2	+1.6
RUGZ	Raukumara Rang	2.57	189	P	Pn	05 52 02.8	+0.1
RUGZ				S	S	05 52 38.8	+0.7
PUZ	Puketiti	2.65	179	P	Pn	05 52 03.1	-0.4
PUZ				S	S	05 52 39.5	+0.1
TWGZ	Tauwhareparae	2.76	183	P	Pn	05 52 05.1	+0.3
TWGZ				S	S	05 52 43.2	+1.6
MWZ	Matawai	2.96	190	P	Pn	05 52 07.0	0.0
MWZ				S	S	05 52 46.0	+0.3
URZ	Urewera	2.96	196	P	Pn	05 52 07.0	0.0
URZ				S	S	05 52 46.0	+0.3
TKGZ	Te Karaka	3.03	185	P	Pn	05 52 07.3	-0.4
TKGZ				S	S	05 52 47.2	+0.1
CNGZ	Carnagh Statio	3.06	179	P	Pn	05 52 08.2	+0.1
RIGZ	Rimuhau	3.30	186	P	Pn	05 52 10.2	-0.8
RIGZ				S	S	05 52 53.5	+0.6
RTZ	Ruatahuna	3.33	196	P	Pn	05 52 11.8	+0.3
SNGZ	Shannon Statio	3.42	191	P	Pn	05 52 13.2	+0.7
SNGZ				S	S	05 52 56.9	+1.4
MTHZ	Maungataniwha	3.59	197	P	Pn	05 52 14.6	+0.1
MTHZ				S	S	05 53 00.0	+0.9
RAHZ	Arahi	3.60	194	P	Pn	05 52 14.1	-0.5
RAHZ				S	S	05 53 01.7	+2.4
MHGZ	Mahia Peninsul	3.73	183	P	Pn	05 52 16.4	+0.2
NMHZ	Naumai	3.83	196	P	Pn	05 52 16.9	-0.5
ARHZ	Aropaoanui	3.95	193	P	Pn	05 52 18.0	-0.8
BKZ	Black Stump Fm	3.97	199	P	Pn	05 52 19.1	-0.1
BKZ				S	S	05 53 08.8	+1.2
MCHZ	McNeill Hill	4.19	196	P	Pn	05 52 22.0	+0.3
KWHZ	Kaweka Forest	4.23	199	P	Pn	05 52 22.0	-0.4
BHHZ	Black Hill Sta	4.40	202	P	Pn	05 52 23.3	-1.1
WNVZ	Wahianoa	4.41	207	P	Pn	05 52 24.5	-0.1
KRHZ	Kereru	4.45	198	P	Pn	05 52 23.5	-1.5
KAHZ	Kahuranaki	4.49	193	P	Pn	05 52 23.9	-1.6
PXZ	Pawanui	4.72	192	P	Pn	05 52 26.0	-2.3
PNHZ	Pukenui	4.75	199	P	Pn	05 52 27.1	-1.8
DVHZ	Dannevirke	5.12	197	P	Pn	05 52 31.6	-1.9
BFZ	Birch Farm	5.47	196	P	Pn	05 52 35.8	-2.1
MRZ	Mangatainoka R	5.62	201	P	Pn	05 52 37.0	-2.7
CPWZ	Castlepoint	5.70	195	P	Pn	05 52 39.2	-1.6
HOWZ	Holdsworth Sta	5.86	200	P	Pn	05 52 39.7	-3.1
TMWZ	Te Maipa	5.96	197	P	Pn	05 52 41.4	-2.7

BUL 20 06:00:53.9±2.4, 23°.27S×28°.92E, h5km±40km, MD4.5

EAF 20 06:00:54.3±1.8, 23°.25S×28°.73E, h0km±28km, MD4.2, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	1.49	53	i P	Pn	06 01 19.9	-2.5
MSNA	Messina	1.49	53	i P	Pn	06 01 19.9	-2.5
MOPA	Mopani	2.47	97	i P	Pn	06 01 35.2	-0.7
MOPA				i S	Sn	06 02 06.1	-0.6
MOPA	Mopani	2.47	97	i P	Pn	06 01 35.2	-0.7
MOPA				i S	Sn	06 02 06.1	-0.6
MATP	Matopo	2.81	356	i P	Pn	06 01 39.7	-1.0
MATP				i Sg	Sg	06 02 22.8	-2.0
MATP	Matopo	2.81	356	i P	Pn	06 01 39.7	-1.0
MATP				i Sg	Sg	06 02 22.8	-2.0
BLWY	Bulawayo	3.09	358	i P	Pn	06 01 44.6	+0.1
BLWY				i Sg	Sb	06 02 29.5	+0.8
BLWY	Bulawayo	3.09	358	i P	Pn	06 01 44.6	+0.1
BLWY				i Sg	Sb	06 02 29.5	+0.8

IDC 20 06:29:52.7±2.1, 24°.74S×179°.20E, h507km±20km, mb3.3/13, mb1 3.6/14, mb1mx3.5/25, mbtmp4.2/14, Error ellipse: s-maj=23.5km s-min=18.4km az=137.0

NOU 20 06:29:53.5, 24°.92S×179°.30E, h521km, mb4.4/30, South of Fiji Islands

NEIC 20 06:29:55.0±2.1, 24°.86S±0°.09×179°.23E±0°.09, h527km±8km, mb4.4/24, Error ellipse: s-maj=16.7km s-min=5.5km az=218.0

ISC 20 06:29:54.2±0.5, 24°.95S±0°.07×179°.23E±0°.09, h527km, n101, σ1s.00/109, mb4.2/25, 7C-6D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	6.92	16	P	P	06 31 40.0	-0.6
OUZ	Omahuta	11.34	204	P	P	06 32 29.1	+3.5
OUZ	Omahuta	11.34	204	P	P	06 32 25.8	+0.2
NIUE	Niue	11.63	62	P	P	06 32 28.8	-0.1
NIUE	Niue	11.63	62	P	P	06 32 28.1	-0.8
URZ	Urewera	13.40	187	P	P	06 32 46.2	-0.9
	3.6nm,0.3s,baz=304,slow=24,SNR=26						
URZ				S	S	06 35 05.2	-4.3
	1.9nm,0.3s,baz=299,slow=23,SNR=3.2						
URZ	Urewera	13.40	187	P	P	06 32 46.1	-0.9
HIZ	Hauiti	14.03	194	P	P	06 32 53.9	+0.3
BKZ	Black Stump Fm	14.37	189	P	P	06 32 56.4	-0.8
BKZ	Black Stump Fm	14.37	189	P	P	06 32 56.7	-0.6
BFZ	Birch Farm	15.89	188	P	P	06 33 11.4	-1.6
SNZO	South Karori	16.75	192	P	P	06 33 21.6	+0.2
SNZO	South Karori	16.75	192	P	P	06 33 21.4	0.0
QRZ	Quartz Range	16.80	198	P	P	06 33 22.3	+0.4
KHZ	Kahutara	18.05	194	P	P	06 33 32.9	-0.5
RPZ	Rata Peaks	19.88	198	P	P	06 33 50.3	+0.2
ODZ	Otahua Downs	21.23	197	P	P	06 34 02.4	+0.2
ARMA	Armidale	25.01	251	P	P	06 34 35.9	-0.5
EIDS	Eidsvold	25.46	263	P	P	06 34 40.9	+0.5
EIDS				IAmb	IAmb	06 34 41.4	
	comp=Z,5.4nm,0.8s						
MGCD	Mangrove Creek	25.86	245	P	P	06 34 45.5	+1.8
TARA	Tarawa	26.85	346	P	P	06 34 52.5	-0.1
CAN	Canberra	28.02	241	P	P	06 35 04.3	+1.6
CMSA	Cobar Meteorol	30.19	250	P	P	06 35 21.9	+0.4
CTAO	Charters Tower	30.80	272	P	P	06 35 27.3	+0.4
CTAO				IAmb	IAmb	06 35 31.6	
	comp=Z,15nm,1.3s						
CTAO	Charters Tower	30.80	272	P	P	06 35 27.4	+0.4
TOO	Toolangi	31.30	238	P	P	06 35 32.4	+1.3
TOO				IAmb	IAmb	06 35 50.0	
	comp=Z,24nm,1.2s						
TOO	Toolangi	31.30	238	P	P	06 35 32.1	+1.0
TAU	Tasmania Unive	31.71	228	P	P	06 35 35.0	+0.5
TAU	Tasmania Unive	31.71	228	P	P	06 35 34.6	+0.2
STKA	Stephens Creek	33.69	249	P	P	06 35 52.0	+0.6
	comp=Z,3.9nm,0.5s,baz=100,slow=11,SNR=12						
STKA	Stephens Creek	33.69	249	P	P	06 35 52.0	+0.6
STKA	Stephens Creek	33.69	249	P	P	06 35 52.1	+0.6
COEN	Coen	35.60	281	P	P	06 36 07.9	+0.3
COEN				IAmb	IAmb	06 36 32.5	
	comp=Z,26nm,1.5s						
HTT	Hallett	36.01	247	P	P	06 36 10.8	-0.1
BBOO	Buckleboo	38.40	248	P	P	06 36 30.0	-0.4
BBOO	Buckleboo	38.40	248	P	P	06 36 29.9	-0.4
OOD	Oodnadatta	38.97	256	P	P	06 36 35.6	+0.6
MULG	Mulgathing	40.18	252	P	P	06 36 44.4	-0.3
AS31	Alice Springs	41.18	262	P	P	06 36 53.0	+0.1
ASAR	Alice Springs	41.18	262	P	P	06 36 52.8	-0.1
	comp=Z,0.9nm,0.3s,baz=89,slow=7.8,SNR=19						
ASAR				S	S	06 42 27.3	-1.1
	comp=Z,0.8nm,0.7s,baz=92,slow=18,SNR=4.6						
WB2	Warramunga Arr	41.64	268	P	P	06 36 55.9	-0.6
WB2				IAmb	IAmb	06 36 58.5	
	comp=Z,5.2nm,0.8s						
WRAB	Tennant Creek	41.64	268	P	P	06 36 56.0	-0.5
WRAB				IAmb	IAmb	06 36 58.4	
	comp=Z,15nm,1.2s						
WRAB	Tennant Creek	41.64	268	P	P	06 36 55.9	-0.6
WB0	Warramunga Arr	41.65	268	P	P	06 36 55.9	-0.7
WB0				IAmb	IAmb	06 36 56.7	
	comp=Z,6.7nm,0.8s						
WRA	Warramunga Arr	41.65	268	P	P	06 36 55.8	-0.7
	comp=Z,4.5nm,0.6s,baz=100,slow=7.8,SNR=24						
WRA				ScP	ScP	06 41 43.6	+2.4
	comp=Z,0.6nm,0.6s,baz=106,slow=3.4,SNR=4.6						
WRA	Warramunga Arr	41.65	268	P	P	06 36 55.9	-0.7
FORT	Forrest	45.30	251	P	P	06 37 24.5	-0.3
FORT	Forrest	45.30	251	P	P	06 37 24.8	0.0
WRKA	Warakurna	45.93	259	P	P	06 37 29.3	-0.5
KNRA	Kununurra	47.99	271	P	P	06 37 45.0	-0.3
KNRA				IAmb	IAmb	06 37 45.7	
	comp=Z,21nm,1.1s						
KNRA	Kununurra	47.99	271	P	P	06 37 45.1	-0.3
VNDA	Vanda	53.28	185	P	P	06 38 24.8	+1.8
	comp=Z,0.4nm,0.5s,baz=10,slow=5.7,SNR=2.5						
VNDA	Vanda	53.28	185	P	P	06 38 24.9	+1.8
PSA00	Pilbara Seismi	54.29	261	P	P	06 38 30.5	-0.6
PSA00				IAmb	IAmb	06 38 54.5	
	comp=Z,41nm,1.5s						
QSPA	South Pole Qui	65.14	180	P	P	06 39 44.7	+1.9
QSPA				IAmb	IAmb	06 39 49.4	
	comp=Z,4.1nm,1.4s						
MJAR	Matsushiro Arr	72.36	326	P	P	06 40 25.6	-1.0
	comp=Z,3.3nm,0.8s,baz=169,slow=5.0,SNR=12						
MJAR	Matsushiro Arr	72.36	326	P	P	06 40 26.2	-0.4
JWT	Wachi	72.86	324	P	P	06 40 29.0	-0.5
JWT				IAmb	IAmb	06 40 35.3	
	comp=Z,17nm,1.4s						
ADK	Adak	76.58	3	P	P	06 40 49.3	-0.6
KSRS	Korea Array	78.60	321	P	P	06 41 00.1	-1.0
	comp=Z,1.3nm,0.7s,baz=127,slow=5.8,SNR=5.1						
PETK	Petropavlovsk-	79.95	347	P	P	06 41 08.1	+0.1
	comp=Z,2.7nm,0.8s,baz=152,slow=6.4,SNR=1.6						
PETK	Petropavlovsk-	79.95	347	P	P	06 41 08.6	+0.6
USRK	Ussuriysk Ar.	81.26	328	P	P	06 41 15.3	+0.3
	comp=Z,3.1nm,0.7s,baz=132,slow=7.0,SNR=4.5						
USRK	Ussuriysk Ar.	81.26	328	P	P	06 41 15.6	+0.6
NVAR	Mina Array Bea	85.99	44	P	P	06 41 38.6	-0.3
	comp=Z,0.3nm,0.6s,baz=226,slow=8.6,SNR=3.8						
ILSW	Iliamna Southw	87.60	13	P	P	06 41 45.6	-0.3
ILSW				IAmb	IAmb	06 42 07.1	
	comp=Z,9.3nm,1.3s						
CNPM	China Poot	87.61	15	P	P	06 41 46.0	+0.2
CMAR	Chiang Mai Arr	89.23	291	P	P	06 41 54.8	+0.5
	comp=Z,1.0nm,0.3s,baz=134,slow=3.2,SNR=7.0						
L19K	White Mountain	89.28	12	P	P	06 41 54.0	+0.6
TXAR	Lajitas Array	91.58	58	P	P	06 42 06.4	+1.4
	comp=Z,0.2nm,0.6s,baz=202,slow=6.8,SNR=2.5						
ILAR	Eielson Array	93.21	14	P	P	06 42 10.5	-1.0
	comp=Z,0.5nm,0.9s,baz=224,slow=5.0,SNR=3.1						
SONM	Songino Array	97.44	320	P	P	06 42 32.0	+0.8
	comp=Z,0.3nm,0.6s,baz=156,slow=3.4,SNR=2.3						
ARCES	ARCESS Array B	132.76	348	PKP	PKPdf	06 48 07.8	-0.6
	comp=Z,1.3nm,0.5s,baz=29,slow=1.1,SNR=6.7						
FINES	FINESS Array B	139.20	341	PKhKP	PKPpre	06 48 12.9	
	comp=Z,0.7nm,0.4s,baz=29,slow=4.4,SNR=6.8						
FINES				PKP	PKPdf	06 48 21.1	+0.6
	comp=Z,3.7nm,0.9s,baz=320,slow=7.7,SNR=3.4						
FINES				SKPbc	SKPbc	06 51 06.5	+0.4
	comp=Z,4.9nm,1.0s,baz=48,slow=2.8,SNR=7.9						
NB2	NORSAR Subarra	142.99	350	PKP	PKPdf	06 48 23.8	-3.5
	comp=Z,1.5nm,0.6s,baz=17,slow=3.1						
NOA	NORSAR Array B	142.99	350	PKhKP	PKPpre	06 48 24.1	
	comp=Z,2.7nm,0.7s,baz=16,slow=4.9,SNR=9.5						
PABE	Paberze	144.49	336		PKPbc	06 48 29.0	-0.9
AKASG	Malin Array Be	145.45	326	PKPbc	PKPdf	06 48 31.9	+0.1
	comp=Z,4.0nm,0.5s,baz=46,slow=4.3,SNR=27						
AKASG	Malin Array Be	145.45	326		PKPdf	06 48 30.9	-0.9
AKBB	Malin Array Si	145.45	326		PKPdf	06 48 31.9	+0.1
BNN	Bunyan	146.20	303		PKPbc	06 48 36.1	+0.3
SORM	Soroca	147.42	323	⇑P	PKPbc	06 48 38.1	-0.4
BR131	Keskin Array S	147.63	306	PKPdf	PKPdf	06 48 36.1	+0.1
BR131					PKPbc	06 48 39.2	-0.3
BR131				PKPab	PKPab	06 48 43.5	-0.2
BRTR	Keskin Array B	147.63	306	PKPbc	PKPdf	06 48 38.5	+2.5
	comp=Z,2.1nm,0.6s,baz=140,slow=4.3,SNR=14						
BRTR	Keskin Array B	147.63	306	PKPdf	PKPdf	06 48 35.7	-0.3
BRTR					PKPbc	06 48 39.1	-0.5
BRTR				PKPab	PKPab	06 48 43.5	-0.2
CFR	Carcaliu	149.16	318	⇓P	PKPbc	06 48 41.7	-1.3
TESR	Tescani	149.30	321	⇑P	PKPab	06 48 49.9	-0.3
BURAR	Bucovina Array	149.42	324	⇓P	PKPbc	06 48 44.5	+0.8
HARR	Harsova	149.53	318	⇑P	PKPbc	06 48 43.8	-0.1
VRI	Vrincioaia	149.62	320	⇑P	PKPbc	06 48 43.9	-0.3
BORA	Eskisehir	149.91	307	PKPdf	PKPdf	06 48 39.5	-0.1
BORA					PKPbc	06 48 45.1	0.0
BORA				PKPab	PKPab	06 48 52.5	-0.5
MLR	Muntele Rosu	150.28	320	⇓P	PKPbc	06 48 45.2	-0.6
DOPR	Dopca	150.33	322	⇓P	PKPbc	06 48 45.4	-0.4
TRPA	Tarpa	150.45	327	⇑P	PKPbc	06 48 45.6	-0.3
VOIR		150.83	321	⇑P	PKPbc	06 48 47.9	+0.9
ARR	Arges	151.11	321	⇑P	PKiKP	06 48 48.6	+0.6
CLL	Collm	151.63	342	i PKPbc	PKPbc	06 48 48.4	-0.1
SIRR	Siria	152.15	325	⇓P	PKPbc	06 48 49.0	-0.9
BZS	Buzias	152.61	324	⇓P	PKPab	06 49 03.3	-0.7
GERES	GERESS Array B	153.58	338	PKPbc	PKPbc	06 48 52.3	-0.7
	comp=Z,0.2nm,0.3s,baz=26,slow=3.4,SNR=3.7						
GERES	GERESS Array B	153.58	338		PKPbc	06 48 52.7	-0.3

NNC 20 06:44:04.0±6.5, 36°.86N×70°.19E, h179km±131km, mb2.9, mpv3.8, 1C-4D, Error ellipse: s-maj=74.3km s-min=37.6km az=24.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	Karatay Array	6.24	2	⇓P	Pn	06 45 34.4	+0.4
	2.8nm,0.3s						
KK02				⇓S	Sn	06 46 45.3	+0.2
	2.0nm,0.6s						
AAK	Ala-Archa	6.65	29	⇓P	Pn	06 45 39.8	+0.1
	2.7nm,0.5s						
AAK				⇓S	Sn	06 46 55.9	+0.8
	10nm,0.6s						
TKM2	Tokmak 2	7.34	33	⇑P	Pn	06 45 48.1	-0.7
	7.0nm,0.6s						
AB31	Akbulak array	14.46	332	P	Pn	06 47 20.4	+0.2
	0.5nm,0.3s,baz=259,slow=36,SNR=31						

NOU 20 06:51:09.1, 15°.27S×167°.58E, h122km, MLv5.2/14, Vanuatu Islands

IDC 20 06:51:09.9±0.7, 15°.23S×167°.07E, h101km±15km, mb3.8/4, mb1 4.0/5, mb1mx3.4/43, mbtmp4.2/5, MS3.6/2, Ms1 3.6/2, ms1mx2.8/28, Error ellipse: s-maj=24.0km s-min=6.1km az=97.0

NEIC 20 06:51:10.1±1.3, 15°.4S±0°.1×167°.49E±0°.08, h118km±7km, mb4.4/12, Error ellipse: s-maj=17.5km s-min=11.5km az=184.0

ISC 20 06:51:09.5±1.2, 15°.35S±0°.08×167°.6E±0°.2, h124km, n36, σ1s.25/37, mb4.2/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.40	256		Pn	06 51 27.2	-0.1
SANVU	Saraoutou	0.40	256	P	Pn	06 51 27.3	0.0
LIFNC	LIFOU	5.41	184	Pn	Pn	06 52 27.1	-0.8
LIFNC				Sn	Sn	06 53 27.1	-2.0
LIFNC	LIFOU	5.41	184	P	Pn	06 52 27.4	-0.6
KOUNC	Koumac, New Ca	6.06	211	P	Pn	06 52 37.9	+1.2
MARNC	Mare, Loyalty	6.11	176	Pn	Pn	06 52 36.8	-0.6
MARNC	Mare, Loyalty	6.11	176	P	Pn	06 52 37.1	-0.3
YATNC	Mamie plateau,	6.70	186	P	Pn	06 52 45.2	-0.3
DZM	Mont Dzumac	6.77	189	ePn	Pn	06 52 46.9	+0.5
	33nm,0.2s						
DZM				eSn	Sn	06 54 02.9	+0.6
	69nm,0.3s						
DZM	Mont Dzumac	6.77	189	P	Pn	06 52 47.5	+1.0
	8.5nm,0.3s,baz=104,slow=8.6,SNR=132						
DZM				S	Sn	06 54 04.4	+2.1
	26nm,0.3s,baz=135,slow=23,SNR=14						
DZM				LR	LR	06 54 56.7	
	comp=Z,59nm,21.4s,baz=351,slow=33						
DZM	Mont Dzumac	6.77	189		Pn	06 52 47.0	+0.5
DZM	Mont Dzumac	6.77	189	P	Pn	06 52 47.1	+0.6
NOUC	Port Laguerre	6.82	190	P	Pn	06 52 48.5	+1.4
ONTNC	Ouen Toro	7.00	189	Pn	Pn	06 52 47.0	-2.5
ONTNC	Ouen Toro	7.00	189	P	Pn	06 52 51.0	+1.5
OUENC	Ouen Island, N	7.06	186		Pn	06 52 48.7	-1.6
OUENC	Ouen Island, N	7.06	186	P	Pn	06 52 51.2	+0.9
PINNC	Pines Island,	7.22	181	Pn	Pn	06 52 51.2	-1.3
PINNC	Pines Island,	7.22	181	P	Pn	06 52 53.7	+1.2
EIDS	Eidsvold	18.40	235	P	P	06 55 13.9	-1.1
BKZ	Black Stump Fm	24.97	163	P	P	06 56 22.7	+1.1
BKZ				IAmb	IAmb	06 56 43.5	
	comp=Z,36nm,1.5s						
CAN	Canberra	25.95	217	P	P	06 56 28.0	-2.5
WB0	Warramunga Arr	31.93	257	P	P	06 57 22.8	-0.9
WB0				IAmb	IAmb	06 57 23.3	
	comp=Z,13nm,1.2s						
WB2	Warramunga Arr	31.98	257	P	P	06 57 23.0	-1.2
WB2				IAmb	IAmb	06 57 39.0	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	31.99	257	P	P	06 57 22.3	-2.0
	comp=Z,1.7nm,0.8s,baz=78,slow=9.0,SNR=8.0						
WRA	Warramunga Arr	31.99	257	P	P	06 57 23.1	-1.2
AS31	Alice Springs	32.76	250	P	P	06 57 30.2	-0.7
ASAR	Alice Springs	32.76	250	P	P	06 57 29.6	-1.3
	comp=Z,2.5nm,0.6s,baz=77,slow=9.1,SNR=32						
BBOO	Buckleboo	33.46	233	P	P	06 57 37.8	+0.9
KNRA	Kununurra	37.39	264	P	P	06 58 11.2	+0.6
VNDA	Vanda	62.25	181	P	P	07 01 19.0	+1.3
VNDA				IAmb	IAmb	07 01 42.5	
	comp=Z,3.0nm,1.3s						
SBA	Scott Base	62.52	180	P	P	07 01 20.0	+0.5
SBA				IAmb	IAmb	07 01 21.9	
	comp=Z,5.6nm,1.0s						
QSPA	South Pole Qui	74.68	180	P	P	07 02 35.7	+0.4
QSPA				IAmb	IAmb	07 02 36.0	
	comp=Z,4.6nm,1.2s						
RPN	Rapa Nui	77.10	115	LR	LR	07 33 15.3	
	comp=Z,251nm,18.1s,baz=349,slow=32						
SONM	Songino Array	83.19	324	P	P	07 03 22.6	+0.6
	comp=Z,1.3nm,1.1s,baz=114,slow=1.8,SNR=5.5						
MKAR	Makanchi Array	97.88	316	P	Pdif	07 04 32.4	+1.2
	comp=Z,0.3nm,0.7s,baz=90,slow=5.8,SNR=2.4						

NNC 20 07:15:08.9±0.3, 50°.04N×78°.79E, h0km, mb3.3, mpv2.7, Error ellipse: s-maj=7.9km s-min=1.7km az=71.0, Suspected Mining explosion.

IDC 20 07:15:10.3±0.9, 50°.09N×78°.82E, h0km, mb1 2.9/2, mb1mx2.8/40, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=11.0km s-min=5.9km az=61.0

ISC 20 07:15:04.8±1.3, 49°.99N±0°.04×77°.86E±0°.08, h0km, n18, σ0s.64/29, 12C-14D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.73	35	⇑P	Pb	07 15 20.0	-0.3
KUR07				⇑S	Sg	07 15 28.7	+0.6
KUR06	Kurchatov Arra	0.74	35	⇓P	Pb	07 15 20.4	-0.2
KUR06				⇑S	Sg	07 15 29.2	+0.5
KUR17	Kurchatov Arra	0.75	31	⇓P	Pb	07 15 21.1	+0.4
KUR17				⇓S	Sg	07 15 29.9	+1.0
KUR16	Kurchatov Arra	0.76	33	⇓P	Pb	07 15 20.9	0.0
KUR16				⇓S	Sg	07 15 29.6	+0.5
KURBB	Kurchatov Arra	0.76	34	Pg	Pb	07 15 20.7	-0.3
	1.5nm,0.3s,baz=165,slow=17,SNR=93						
KURBB				Lg	Lg	07 15 29.8	
	1.3nm,0.3s,baz=158,slow=36,SNR=17						
KURBB	Kurchatov Arra	0.76	34	⇑P	Pb	07 15 20.9	-0.1
KURBB				⇑S	Sg	07 15 29.8	+0.4
	63nm,0.7s						
KUR15	Kurchatov Arra	0.77	35	⇓P	Pb	07 15 20.6	-0.5
KUR15				⇓S	Sg	07 15 29.5	-0.1
KUR14	Kurchatov Arra	0.78	37	⇓P	Pb	07 15 20.4	-0.8
KUR14				⇑S	Sg	07 15 28.9	-1.0
KUR05	Kurchatov Arra	0.78	33	⇓P	Pb	07 15 20.9	-0.4
KUR05				⇑S	Sg	07 15 29.8	-0.1
KUR04	Kurchatov Arra	0.80	33	⇓P	Pb	07 15 21.5	-0.1
KUR04				⇑S	Sg	07 15 30.5	-0.1
KURK	Kurchatov	0.87	34	⇓P	Pb	07 15 22.1	-0.7
	4.6nm,0.3s						
KURK				⇑S	Sg	07 15 31.9	-1.0
	13nm,0.6s						
OTUK	Ortayu	4.03	246	⇓Lg	Lg	07 17 33.8	
	1.2nm,0.4s						
MAKZ	Makanchi	4.20	138	⇓Pg	Pb	07 16 19.8	+0.1
	3.2nm,0.8s						
MAKZ				⇑Lg	Lg	07 17 10.1	
	6.2nm,1.0s						
MK31	Makanchi Array	4.35	136	⇓Pn	Pn	07 16 12.6	+0.4
	0.1nm,0.1s,baz=323,slow=10.0,SNR=48						
MK31				⇑Pg	Pb	07 16 22.4	+0.2
	1.1nm,0.5s,baz=328,slow=13,SNR=16						
MK31				⇑Lg	Lg	07 17 15.3	
	3.5nm,0.6s,baz=334,slow=30,SNR=6.8						
MKAR	Makanchi Array	4.35	136	Pn	Pn	07 16 13.2	+1.0
	0.4nm,0.3s,baz=321,slow=10,SNR=57						
MKAR				Pg	Pb	07 16 20.4	-1.8

	0.9nm,0.3s,baz=324,slow=15,SNR=17						
MKAR				Sn	Sn	07 17 03.4	-0.2
	0.5nm,0.3s,baz=335,slow=19,SNR=5.7						
MKAR				Lg	Lg	07 17 16.8	
	1.0nm,0.3s,baz=333,slow=31,SNR=9.3						
BVAR	Borovoye Array	5.57	306	Sn	Sb	07 17 49.7	-0.4
	0.4nm,0.3s,baz=115,slow=28,SNR=5.6						
I46RU	ZALESOVO INFRA	5.85	45	*i*		07 47 30.0	
	baz=220,slow=318,SNR=1.9						
ZALV	Zalesovo Beam	5.85	45	Pn	Pn	07 16 33.0	+0.4
	0.6nm,0.3s,baz=231,slow=14,SNR=7.6						

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*NNC **20** 07:26:18.7±4.6, 36°.70N×70°.34E, h132^{km}±108^{km}, mb3.1, mpv3.8, Error ellipse: s-maj=46.4km s-min=34.2km az=48.0*

ISC 20 07:26:21.1±3.4**, 36°.8N**±0°.2×**70°.5E**±0°.2**, h200^{km}, n9, σ0^{s}76**/11**, 4C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.84	24	P	Pn	07 27 46.1	-0.5
	SNR=19						
UCH	Uchtor	6.22	29	P	Pn	07 27 51.0	-0.6
	SNR=12						
KK02	Karatay Array	6.25	0	⇑P	Pn	07 27 51.3	-0.2
	0.6nm,0.2s						
KK02				⇑S	Sn	07 29 02.4	-0.9
	6.0nm,0.8s						
EKS2	Erkin-Say	6.34	23	P	Pn	07 27 53.2	+0.4
	SNR=8.3						
AAK	Ala-Archa	6.56	27	P	Pn	07 27 55.5	-0.2
	SNR=6.7						
AAK	Ala-Archa	6.56	27	⇓P	Pn	07 27 55.1	-0.7
	2.3nm,0.3s						
AAK				⇑S	Sn	07 29 12.0	+1.2
	2.8nm,0.6s						
TKM2	Tokmak 2	7.24	31	P	Pn	07 28 04.2	-0.3
	SNR=15						
TKM2	Tokmak 2	7.24	31	⇑P	Pn	07 28 03.6	-0.9
	7.7nm,0.5s						
AB31	Akbulak array	14.58	332	P	P	07 29 39.6	+0.5
	0.7nm,0.5s,baz=143,slow=11,SNR=9.8						

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*IDC **20** 07:29:07.5±0.4, 28°.16S×176°.50W, h0^{km}, mb4.9/17, mb1 5.1/17, mb1mx4.8/23, mbtmp4.9/17, MS4.7/22, Ms1 4.7/22, ms1mx4.6/24, Error ellipse: s-maj=18.2km s-min=15.1km az=131.0*

*BJI **20** 07:29:09.0±0.0, 28°.30S×176°.60W, h10^{km}, mB5.6/26, mb5.2/30, Ms5.1/18, Ms7 4.8/20*

*NEIC **20** 07:29:11.0±1.7, 28°.25S±0°.07×176°.26W±0°.08, h10^{km}±1^{km}, mb5.2/182, Error ellipse: s-maj=13.0km s-min=9.3km az=132.0*

*MOS **20** 07:29:12.1±1.1, 28°.22S×176°.63W, h32^{km}, mb5.4/45, Error ellipse: s-maj=10.1km s-min=8.5km az=71.5*

*GCMT **20** 07:29:12.0±0.2, 28°.26S±0°.01×176°.11W±0°.01, h13^{km}, MW5.2/118, Moment Tensor Solution. s77,c127; s118,c186; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.64±.02; $M_{\theta\theta}$-0.03±.02; $M_{\phi\phi}$-0.60±.01; $M_{r\theta}$0.18±.04; $M_{\theta\phi}$-0.35±.01; $M_{\phi r}$0.51±.04; Best double couple: $M_0$0.88900×10^{17} NP1:ϕ_s211.00000°, δ26.00000°, λ99.00000°. NP2:ϕ_s21.00000°, δ64.00000°, λ85.00000°. Principal axes: T 0.8240, Plg71.0000°, Azm281.0000°; N 0.1310, Plg4.0000°, Azm23.0000°; P -0.9550, Plg19.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 07:29:09.4±0.3**, 28°.42S**±0°.04×**176°.40W**±0°.05**, h10^{km}, n608, σ1^{s}53**/619**, mb5.2**/126**, MS4.8**/27**, 33C-18D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.57	238	Pn	Pg	07 29 39.2	-0.4
	836nm,0.3s,baz=72,slow=10.0,SNR=23						
RAO				Sn	Sg	07 30 02.1	+2.2
	2µm,0.3s,baz=87,slow=23,SNR=12						
RAO	Raoul Island	1.57	238	P	Pg	07 29 40.5	+1.0
RAO				S	Sg	07 30 04.9	+4.9
RAO	Raoul Island	1.57	238		Pg	07 29 39.8	+0.2
RAO	Raoul Island	1.57	238	Sn	Sg	07 30 04.3	+4.4
RIZ	Raoul Island	1.58	238	P	Pg	07 29 40.2	+0.6
RIZ				S	Sg	07 30 05.1	+5.0
GLKZ	Green Lake	1.58	238	P	Pg	07 29 39.2	-0.5
GLKZ				S	Sg	07 30 03.7	+3.5
MXZ	Matakaoa Point	10.14	205	P	Pn	07 31 31.1	-4.0
MXZ				S	Sn	07 33 26.1	-2.7
WMGZ	Waiomatatini S	10.33	204	P	Pn	07 31 34.5	-3.2
WMGZ				S	Sn	07 33 27.3	-6.2
HAZ	Te Kaha	10.51	206	P	Pn	07 31 36.0	-4.0
HAZ				S	Sn	07 33 38.8	+0.9
PKGZ	Pakihiroa	10.51	205	P	Pn	07 31 36.5	-3.7
PKGZ				S	Sn	07 33 35.2	-2.9
PUZ	Puketiti	10.61	204	P	Pn	07 31 36.3	-5.2
PUZ				S	Sn	07 33 36.7	-3.8
RUGZ	Raukumara Rang	10.73	206	P	Pn	07 31 39.3	-4.0
RUGZ				S	Sn	07 33 43.0	-0.5
OUZ	Omahuta	10.88	229	P	Pn	07 31 49.8	+4.6
OUZ	Omahuta	10.88	229	Pn	Pn	07 31 49.1	+4.0
CNGZ	Carnagh Statio	11.00	203	P	Pn	07 31 42.8	-4.0
CNGZ				S	Sn	07 33 46.0	-3.9
NIUE	Niue	11.03	34	P	Pn	07 31 39.3	-8.0
	baz=11,SNR=22						
NIUE	Niue	11.03	34	Pn	Pn	07 31 39.5	-7.8
OPRZ	Ohinepanea	11.10	210	P	Pn	07 31 48.0	-0.1
MWZ	Matawai	11.11	206	P	Pn	07 31 44.4	-3.9
MWZ				S	Sn	07 33 49.3	-3.4
URZ	Urewera	11.21	207	Pn	Pn	07 31 45.5	-4.1
	4.1nm,0.3s,baz=294,slow=23,SNR=10						
URZ				Sn	Sn	07 33 52.5	-2.6
	8.2nm,0.3s,baz=7.5,slow=20,SNR=4.3						
URZ	Urewera	11.21	207	Pn	Pn	07 31 45.8	-3.9
RIGZ	Rimuhau	11.35	204	P	Pn	07 31 47.6	-4.0
RIGZ				S	Sn	07 33 52.6	-6.0
TOZ	Tahuroa Road	11.50	214	P	Pn	07 31 55.7	+2.1
SNGZ	Shannon Statio	11.57	205	P	Pn	07 31 50.5	-4.2
SNGZ				S	Sn	07 33 59.9	-4.1
RAHZ	Arahi	11.79	206	P	Pn	07 31 54.3	-3.3
RAHZ				S	Sn	07 34 06.4	-2.8
MSVF	Nonsavu	11.80	333	Pn	Pn	07 31 56.3	-1.6
	1.1nm,0.3s,baz=133,slow=13,SNR=10						
MSVF				LR	LR	07 35 51.3	
	comp=Z,6µm,18.5s,baz=154,slow=35						
MSVF	Nonsavu	11.80	333	P	Pn	07 31 56.0	-1.9
MSVF	Nonsavu	11.80	333	Pn	Pn	07 31 56.0	-1.9
MTHZ	Maungataniwha	11.83	207	P	Pn	07 31 56.8	-1.4
MTHZ				S	Sn	07 34 06.4	-3.8
BKZ	Black Stump Fm	12.23	207	P	Pn	07 32 00.5	-3.2
BKZ				S	Sn	07 34 16.3	-3.9
BKZ	Black Stump Fm	12.23	207		Pn	07 32 00.6	-3.2
MCHZ	McNeill Hill	12.39	206	P	Pn	07 32 03.4	-2.5
MCHZ				S	Sn	07 34 19.3	-4.8
HIZ	Hauiti	12.43	214	P	Pn	07 32 08.1	+1.7
TMVZ	Te Maari	12.52	210	P	Pn	07 32 03.2	-4.6
KAHZ	Kahuranaki	12.63	204	P	Pn	07 32 05.1	-4.1
BHHZ	Black Hill Sta	12.68	208	P	Pn	07 32 06.2	-3.7
AFI	Afiamalu	15.07	18	Pn	Pn	07 32 33.5	-9.0
	4.7nm,0.3s,baz=51,slow=4.0,SNR=6.4						
AFI				Sn	Sn	07 35 12.0	-18
	4.1nm,0.3s,baz=264,slow=22,SNR=4.3						
AFI				LR	LR	07 40 04.2	
	comp=Z,811nm,18.3s,baz=198,slow=44						
RAR	Rarotonga	16.70	68	Pn	Pn	07 32 57.1	-6.5
	1.9nm,0.3s,baz=128,slow=5.7,SNR=6.8						
RAR				LR	LR	07 40 18.0	
	comp=Z,2µm,18.4s,baz=247,slow=40						
RAR	Rarotonga	16.70	68	P	Pn	07 32 57.1	-6.5
RAR				pmax	pmax		
	comp=Z,203nm,1.0s						
RAR	Rarotonga	16.70	68	Pn	Pn	07 32 57.0	-6.5
RAR				IAmb	IAmb	07 33 05.8	
	comp=Z,203nm,1.0s						
DZM	Mont Dzumac	16.76	288	*e*P	P	07 33 08.4	+1.8
	comp=Z,201nm,1.4s						
DZM				*e*LR	LR	07 37 06.6	
	comp=Z,7µm,27.4s						
DZM	Mont Dzumac	16.76	288	Pn	P	07 33 07.1	+0.4
	comp=Z,0.7nm,0.3s,baz=108,slow=17,SNR=5.8						
DZM				LR	LR	07 38 03.0	
	comp=Z,4µm,21.0s,baz=132,slow=32						
LTZ	Lake Taylor	17.01	210	Pn	Pn	07 33 04.0	-3.4
SANVU	Saraoutou	19.92	307	P	P	07 33 40.2	-1.2
FUNA	Funafuti	20.22	347	P	P	07 33 40.9	-3.8
FUNA				IAmb	IAmb	07 33 45.6	
	comp=Z,206nm,1.1s						
TBI	Tubuai	24.73	84	*e*LQ	LQ	07 39 09.9	
	comp=Z,4µm,26.5s						
TBI				*e*LR	LR	07 40 19.6	
	comp=Z,2µm,29.5s,baz=256						
TBI	Tubuai	24.73	84	*e*T	T	07 59 27.5	
	comp=Z,14nm,0.4s						
KNTN	Kanton	25.89	11	P	P	07 34 41.9	+0.3
PAE	Paea	26.84	72	*e*T	T	08 02 01.0	
	comp=Z,7.0nm,0.4s						
PPT2	Papeete2	26.88	72	*e*LQ	LQ	07 39 57.8	
	comp=Z,4µm,24.0s						
PPT2				*e*LR	LR	07 41 18.8	
	comp=Z,2µm,28.8s						
PPT2	Papeete2	26.88	72	*e*T	T	08 02 04.2	
	comp=Z,4.8nm,0.3s						
PPT	Papeete	26.89	72	LR	LR	07 45 03.0	
	comp=Z,1µm,18.2s,baz=245,slow=36						
ARMA	Armidale	27.88	258	P	P	07 35 00.5	+0.9
EIDS	Eidsvold	29.12	268	P	P	07 35 11.2	+0.7
HNR	Honiara	29.18	306	LR	LR	07 45 56.8	
	comp=Z,1µm,18.4s,baz=149,slow=35						
VAH	Vaihoa	29.66	70	*e*T	T	08 05 32.0	
	comp=Z,14nm,0.2s						
CAN	Canberra	30.07	248	P	P	07 35 19.8	+0.8
CAN				pmax	pmax		
	comp=Z,25nm,1.1s						
CAN	Canberra	30.07	248	P	P	07 35 19.8	+0.8
RMQ	Roma	30.92	265	P	P	07 35 28.0	+1.5
	baz=31,SNR=7.4						
CMSA	Cobar Meteorol	32.88	255	P	P	07 35 43.8	+0.1
	baz=33,SNR=11						
TOO	Toolangi	33.06	244	P	P	07 35 46.3	+1.0
	baz=33,SNR=4.6						
TOO	Toolangi	33.06	244	P	P	07 35 45.4	+0.2
TOO				pmax	pmax		
	comp=Z,28nm,1.2s						
TOO	Toolangi	33.06	244	P	P	07 35 45.4	+0.2
TOO				IAmb	IAmb	07 35 55.8	
	comp=Z,28nm,1.2s						
QLP	Quilpie	34.87	264	P	P	07 36 00.7	-0.3
	baz=35,SNR=3.1						
CTAO	Charters Tower	34.94	275	P	P	07 36 01.5	-0.2
CTAO				pmax	pmax		
	comp=Z,14nm,0.9s						
CTAO	Charters Tower	34.94	275	P	P	07 36 01.5	-0.2
STKA	Stephens Creek	36.33	254	P	P	07 36 13.4	-0.1
	comp=Z,13nm,0.8s,baz=91,slow=9.9,SNR=15						
STKA				LR	LR	07 50 35.6	
	comp=Z,2µm,18.0s,baz=91,slow=36						
STKA	Stephens Creek	36.33	254	P	P	07 36 13.9	+0.4
	baz=36,SNR=12						
STKA	Stephens Creek	36.33	254	P	P	07 36 13.2	-0.3
STKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
STKA	Stephens Creek	36.33	254	P	P	07 36 13.2	-0.3
HTT	Hallett	38.43	251	P	P	07 36 30.8	-0.6
	baz=38,SNR=9.7						
TAOE	Nuku Hiva Isla	39.25	67	*e*LR	LR	07 47 00.0	
	comp=Z,1µm,27.7s						
COEN	Coen	40.15	282	P	P	07 36 45.3	-0.6
BBOO	Buckleboo	40.88	252	P	P	07 36 52.1	+0.3
	baz=41,SNR=5.1						
BBOO	Buckleboo	40.88	252	P	P	07 36 50.9	-0.9
AS31	Alice Springs	44.66	264	P	P	07 37 21.8	-0.8
ASAR	Alice Springs	44.66	264	P	P	07 37 21.2	-1.3
	comp=Z,9.8nm,0.9s,baz=97,slow=7.2,SNR=53						
ASAR				LR	LR	07 56 06.3	
	comp=Z,2µm,18.2s,baz=108,slow=36						
WR0	Warramunga Arr	45.29	269	P	P	07 37 26.3	-1.3
WB2	Warramunga Arr	45.46	269	P	P	07 37 26.6	-2.4
WB2				IAmb	IAmb	07 37 30.2	
	comp=Z,17nm,0.8s						
WRAB	Tennant Creek	45.47	269	*ce*P	P	07 37 26.2	-2.8
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.6s						
WRA	Warramunga Arr	45.47	269	P	P	07 37 26.2	-2.8
	comp=Z,13nm,0.9s,baz=105,slow=7.2,SNR=29						
WRA				PcP	PcP	07 39 08.4	+0.3
	comp=Z,3.8nm,1.1s,baz=134,slow=5.0,SNR=4.6						
WRA				S	S	07 44 06.6	-4.4
	comp=Z,1.6nm,1.1s,baz=99,slow=14,SNR=4.8						
WRA				LR	LR	07 55 40.8	
	comp=Z,921nm,18.2s,baz=100,slow=35						
WRA	Warramunga Arr	45.47	269	P	P	07 37 26.3	-2.8
WB0	Warramunga Arr	45.49	270	P	P	07 37 27.6	-1.6
FORT	Forrest	47.94	253	P	P	07 37 46.2	-2.1
	baz=48,SNR=15						
FORT	Forrest	47.94	253	P	P	07 37 46.5	-1.7
WRKA	Warakurna	49.15	260	P	P	07 37 55.8	-2.0
	baz=49,SNR=9.5						
KDU	Kakadu	50.00	277	P	P	07 38 03.7	-0.5
	baz=50,SNR=5.0						
SBA	Scott Base	50.11	185	P	P	07 38 08.4	+4.2
SBA				pmax	pmax		
	comp=Z,33nm,1.2s						
SBA	Scott Base	50.11	185	P	P	07 38 08.4	+4.2
SBA				IAmb	IAmb	07 38 24.8	
	comp=Z,32nm,1.1s						
VNDA	Vanda	50.20	186	P	P	07 38 06.8	+1.9
	comp=Z,2.7nm,0.9s,baz=350,slow=8.0,SNR=10						
VNDA				LR	LR	07 55 35.4	
	comp=Z,569nm,20.8s,baz=20,slow=32						
VNDA	Vanda	50.20	186	P	P	07 38 08.3	+3.4
KNRA	Kununurra	52.00	272	P	P	07 38 19.9	+0.7
	baz=52,SNR=6.1						
KNRA	Kununurra	52.00	272	P	P	07 38 19.2	0.0
KNRA				IAmb	IAmb	07 38 39.6	
	comp=Z,52nm,1.5s						
KLBR	Kellerberrin	56.33	249	P	P	07 38 49.6	-1.2
	baz=56,SNR=6.3						
CASY	Casey	57.53	207	P	P	07 39 00.5	+1.9
MORW	Morawa	58.46	252	P	P	07 39 06.4	+0.6
	baz=58,SNR=3.3						
MORW	Morawa	58.46	252	P	P	07 39 03.8	-2.0
MORW				IAmb	IAmb	07 39 22.3	
	comp=Z,25nm,1.2s						
SOEI	Soe	58.50	276	P	P	07 39 07.4	+1.0
VA02	Isla de Pascua	58.53	106	P	P	07 39 06.8	+0.6
QSPA	South Pole Qui	61.68	180	P	P	07 39 29.1	+1.6
QSPA				IAmb	IAmb	07 39 31.8	
	comp=Z,26nm,1.1s						
GIRL	Giralia	62.10	258	P	P	07 39 33.8	+3.0
SMAI	San Martin Ant	70.73	158	P	P	07 40 26.1	+0.8
KKM	Kota Kinabalu	73.31	287	P	P	07 40 40.4	-1.4
STKI	Sintang	74.35	279	P	P	07 40 46.4	-1.4
	comp=Z,28nm,0.6s						
MAW	Mawson	74.64	200	P	P	07 40 49.7	+1.1
	comp=Z,7.1nm,0.8s,baz=98,slow=8.1,SNR=11						
MAW				LR	LR	08 14 12.7	
	comp=Z,1µm,18.0s,baz=106,slow=36						
MAW	Mawson	74.64	200	P	P	07 40 50.5	+2.0
	baz=74,SNR=6.4						
MAW	Mawson	74.64	200	P	P	07 40 51.3	+2.8
SBUM	Sibu	74.88	281	P	P	07 40 50.9	+0.1
DBJI	Dramaga	75.36	270	P	P	07 40 52.6	-1.1
DBJI				pP	PcP	07 41 05.0	-1.9
KSM	Kuching	76.06	279	P	P	07 40 56.3	-1.3
KSM				IAmb	IAmb	07 40 58.7	
	comp=Z,24nm,0.9s						
JYT	Yasato	76.19	325	P	P	07 40 56.8	-1.0
JOW	Kunigami	76.40	311	P	P	07 40 59.9	+0.7
INU	Inuyama	77.17	322	P	P	07 41 03.0	-0.3
INU				IAmb	IAmb	07 41 05.1	
	comp=Z,31nm,1.0s						
JGF	Kuroka	77.17	323	P	P	07 41 02.0	-1.4
JGF				IAmb	IAmb	07 41 10.1	
	comp=Z,17nm,1.1s						
MJAR	Matsushiro Arr	77.44	324	P	P	07 41 03.1	-1.8
	comp=Z,20nm,1.0s,baz=164,slow=4.8,SNR=39						
MJAR				LR	LR	08 08 34.6	
	comp=Z,136nm,21.6s,baz=100,slow=31						
MJAR	Matsushiro Arr	77.44	324	P	P	07 41 03.6	-1.3
MJAR				IAmb	IAmb	07 41 06.4	
	comp=Z,21nm,1.0s						
MAJO	Matsushiro	77.44	324	*i* P	P	07 41 02.4	-2.5
MAJO				pmax	pmax		
	comp=Z,23nm,0.9s						
MAJO	Matsushiro	77.44	324	P	P	07 41 03.4	-1.5
MAJO				IAmb	IAmb	07 41 11.7	
	comp=Z,29nm,0.9s						
JMN	Monobe	77.71	319	P	P	07 41 06.3	-0.2
JMN				IAmb	IAmb	07 41 22.3	
	comp=Z,22nm,1.0s						
JWT	Wachi	77.99	321	P	P	07 41 07.8	-0.1
JWT				IAmb	IAmb	07 41 10.0	
	comp=Z,24nm,1.1s						
KLSI		78.00	271	P	P	07 41 06.6	-2.0
	comp=Z,19nm,1.0s						
JSU	Suzuyama	78.17	316	P	P	07 41 08.1	-1.0
JNU	Nakatsue	79.04	317	P	P	07 41 14.9	+1.1
JNU				IAmb	IAmb	07 41 16.3	
	comp=Z,27nm,1.0s						
JHS	Saijyo	79.06	320	P	P	07 41 13.8	-0.2
SYO	Syowa Base	79.35	192	⇓*e*P	P	07 41 16.1	+1.1
SYO	Syowa Base	79.35	192	⇑*e*pP	pP	07 41 21.2	+4.5
COYC	Coyhaique	79.39	136	P	P	07 41 16.8	+1.0
COYC				IAmb	IAmb	07 41 19.7	
	comp=Z,27nm,0.9s						
YUK	Yuzh-Kuril'sk	79.96	333	*e*P	P	07 41 19.4	+0.9
YUK				*e*		07 41 26.9	
YUK				*e*		07 44 20.7	
YUK				*e*PPP	PPP	07 46 09.0	
YUK				*e*S	S	07 51 23.1	+1.0
YUK				*e*SS	SS	07 56 33.1	+0.5
YUK				pmax	pmax		
	comp=Z,248nm,1.0s						
SNAA	Sanae	80.08	178	P	P	07 41 19.8	+0.8
SNAA	Sanae	80.08	178	*ce*P	P	07 41 19.2	+0.1
SNAA				pmax	pmax		
	comp=Z,25nm,1.3s						
SNAA	Sanae	80.08	178	P	P	07 41 20.2	+1.1
VNA3	Neumayer Olymp	80.17	176	P	P	07 41 20.5	+1.0
VNA2	Neumayer--Watz	80.62	176	P	P	07 41 22.9	+1.0
	baz=180,slow=5.4						
LL02	Futaleuf	80.73	134	P	P	07 41 23.9	+0.9
VNA1	Neumayer--Stat	80.85	176	P	P	07 41 24.3	+1.3
LL03	Petrohue	81.41	132	P	P	07 41 27.6	+1.0
LL03				IAmb	IAmb	07 41 29.7	
	comp=Z,28nm,0.9s						
LL04	Puerto Octay	81.52	132	P	P	07 41 27.2	0.0
LL04				IAmb	IAmb	07 41 30.3	
	comp=Z,21nm,1.2s						
LR03	Panguipulli	82.20	131	P	P	07 41 31.9	+1.1
PKM	Mcpherson Peak	82.58	44	P	P	07 41 35.0	+2.1
	baz=228						
PLCA	Paso Flores	82.82	133	P	P	07 41 34.1	0.0
	comp=Z,24nm,1.1s,baz=233,slow=5.7,SNR=16						
PLCA				LR	LR	08 12 57.9	
	comp=Z,553nm,18.2s,baz=250,slow=32						
PLCA	Paso Flores	82.82	133	P	P	07 41 34.6	+0.5
PLCA				IAmb	IAmb	07 41 38.5	
	comp=Z,39nm,1.3s						
LC01	Cunco	82.89	130	P	P	07 41 34.9	+0.4
ARVC	Arvin	83.34	44	P	P	07 41 37.2	+0.6
	baz=228						
MURC	Murrieta	83.36	46	P	P	07 41 37.2	+0.4
	baz=230						
TJN	Taejon	83.37	318	*i* P	P	07 41 37.1	+0.4
IKP	In-Ko-Pah, Jac	83.45	48	P	P	07 41 38.5	+1.1
	baz=230						
BFSC	Mount Baldy Ra	83.48	45	P	P	07 41 38.4	+0.8
	baz=229						
HOPS	Hopland Field	83.50	39	P	P	07 41 38.3	+1.0
YSS	Yuzh-Sakhalins	83.60	333	*e*P	P	07 41 38.6	+1.0
YSS				*e*S	S	07 51 59.3	-0.3
YSS				pmax	pmax		
	comp=Z,60nm,0.9s						
YSS				MLR	MLR		
	comp=Z,700nm,16.0s						
YSS	Yuzh-Sakhalins	83.60	333	P	P	07 41 37.9	+0.3
BKNI	Bangkinang	83.61	274	P	P	07 41 39.1	+0.6
VES	Vestal, Richgr	83.66	43	P	P	07 41 39.3	+1.1
	baz=228						
EFI	East Falkland	83.67	147	*ce*P	P	07 41 37.9	-0.3
EFI				pmax	pmax		
	comp=Z,65nm,1.3s						
EFI	East Falkland	83.67	147	P	P	07 41 39.1	+0.9
EDW2	Edwards Air Fo	83.69	45	P	P	07 41 39.1	+0.5
	baz=229						
KSRS	Korea Array	83.77	319	P	P	07 41 37.5	-1.3
	comp=Z,11nm,0.9s,baz=141,slow=5.9,SNR=24						
KSRS				LR	LR	08 17 09.8	
	comp=Z,152nm,18.0s,baz=126,slow=34						
KSAR	Wonju Array Be	83.79	319	P	P	07 41 39.1	+0.3
KSAR	Wonju Array Be	83.79	319	P	P	07 41 39.1	+0.3
PFO	Pinyon Flats O	83.84	47	P	P	07 41 40.6	+1.2
	baz=230						
TPFO	Pinon Flats	83.84	47	P	P	07 41 39.9	+0.5
	baz=230						
KS19	Wonju Array Si	83.84	319	P	P	07 41 39.5	+0.4
KS19				IAmb	IAmb	07 41 50.8	
	comp=Z,22nm,1.1s						
ISA	Isabella, Lake	83.91	44	P	P	07 41 39.9	+0.3
ISA				pmax	pmax		
	comp=Z,30nm,1.4s						
ISA	Isabella, Lake	83.91	44	P	P	07 41 39.9	+0.3
ISA				IAmb	IAmb	07 41 43.3	
	comp=Z,30nm,1.4s						
ISA	Isabella, Lake	83.91	44	P	P	07 41 40.7	+1.1
	baz=229						
PETK	Petropavlovsk-	84.27	345	P	P	07 41 40.1	-0.8
	comp=Z,20nm,0.9s,baz=165,slow=6.2,SNR=10						
PETK				LR	LR	08 16 40.8	
	comp=Z,354nm,18.8s,baz=147,slow=34						
PETK	Petropavlovsk-	84.27	345	P	P	07 41 40.7	-0.2
LRMC	Laurel Mtn Rad	84.28	45	P	P	07 41 44.1	+2.5
	baz=229						
RRX	Edison Barstow	84.31	45	P	P	07 41 43.7	+2.1
	baz=230						
CMB	Columbia Colle	84.36	41	P	P	07 41 41.6	-0.2
CMB				pmax	pmax		
	comp=Z,21nm,1.3s						
CMB	Columbia Colle	84.36	41	P	P	07 41 41.6	-0.2
CMB				IAmb	IAmb	07 41 44.3	
	comp=Z,21nm,1.3s						
BELC	Belle Mtn. Jos	84.38	47	P	P	07 41 43.4	+1.2
	baz=230						
O02D	Mt. Diablo Mer	84.48	38	P	P	07 41 44.0	+1.5
	baz=225						
BC3	Big Chuckawall	84.51	47	P	P	07 41 44.0	+1.2
	baz=231						
GLA	Glamis	84.54	48	P	P	07 41 43.5	+0.6
GLA				pmax	pmax		
	comp=Z,20nm,1.2s						
GLA	Glamis	84.54	48	P	P	07 41 43.5	+0.6
GLA				IAmb	IAmb	07 41 47.3	
	comp=Z,20nm,1.1s						
GLA	Glamis	84.54	48	P	P	07 41 44.6	+1.7
	baz=231						
CWC	Cottonwood Cre	84.66	44	P	P	07 41 44.0	+0.4
	baz=229						
HEC	Hector,Ludlow	84.70	46	P	P	07 41 44.8	+1.1
	baz=230						
GSC	Goldstone, Bar	84.70	45	P	P	07 41 44.6	+0.9
GSC				pmax	pmax		
	comp=Z,15nm,1.1s						
GSC	Goldstone, Bar	84.70	45	P	P	07 41 44.5	+0.9
GSC				IAmb	IAmb	07 41 47.1	
	comp=Z,15nm,1.1s						
GSC	Goldstone, Bar	84.70	45	P	P	07 41 44.3	+0.6
	baz=230						
HSIG		84.72	53	P	P	07 41 43.6	-0.2
HSIG				IAmb	IAmb	07 41 45.4	
	comp=Z,12nm,1.0s						
ORV	Oroville	84.76	39	P	P	07 41 44.4	+0.6
ORV				pmax	pmax		
	comp=Z,11nm,1.2s						
ORV	Oroville	84.76	39	P	P	07 41 44.4	+0.6
MPMC	Manual Prospec	84.77	44	P	P	07 41 44.7	+0.5
	baz=229						
ML02	Panimavida	84.82	128	P	P	07 41 44.6	+0.2
GO05	Huala	84.85	127	P	P	07 41 45.1	+0.6
WDC	Whiskeytown Da	84.90	38	P	P	07 41 45.0	+0.6
WDC				pmax	pmax		
	comp=Z,29nm,1.3s						
WDC	Whiskeytown Da	84.90	38	P	P	07 41 45.0	+0.6
WDC				IAmb	IAmb	07 41 48.6	
	comp=Z,29nm,1.3s						
TIN	Tinemaha, Big	84.97	43	P	P	07 41 46.0	+0.9
	baz=229						
MLAC	Mammoth, Mammo	84.99	42	P	P	07 41 48.1	+2.8
	baz=228						
IRM	Iron Mountain	85.03	47	P	P	07 41 45.8	+0.5
	baz=231						
N02D	Trinity Center	85.09	38	P	P	07 41 47.0	+1.5
	baz=225						

QSM	Queen of Sheba	85.09	45	P	P	07 41 45.4	-0.1
QSM				IAmb	IAmb	07 41 48.9	
	comp=Z,24nm,1.3s						
GMRC	Granite Mounta	85.09	46	P	P	07 41 46.4	+0.6
	baz=230						
O03E	Paynes Creek	85.11	39	P	P	07 41 46.4	+0.8
	baz=226						
M02C	Callahan	85.30	37	P	P	07 41 47.8	+1.3
	baz=225						
TUQ	Turquoise Moun	85.34	45	P	P	07 41 47.5	+0.5
	baz=230						
GWY	Greenwater Val	85.36	45	P	P	07 41 47.6	+0.5
SHOC	Shoshone, Teco	85.42	45	P	P	07 41 47.7	+0.5
	baz=230						
FURC	Furnace Creek,	85.42	44	P	P	07 41 48.3	+1.2
	baz=230						
LCH	Last Change Ra	85.44	43	P	P	07 41 47.5	+0.1
PNTR	Pine Nut	85.52	41	P	P	07 41 47.8	-0.1
PNTR				IAmb	IAmb	07 41 50.4	
	comp=Z,18nm,1.0s						
IPM	Ipoh	85.60	277	P	P	07 41 49.8	+1.2
IPM				IAmb	IAmb	07 41 50.6	
	comp=Z,21nm,1.1s						
LHV	Little Huntoon	85.60	42	P	P	07 41 49.0	+1.0
LHV				IAmb	IAmb	07 41 52.4	
	comp=Z,21nm,1.2s						
YBH	Yreka Blue Hor	85.62	37	P	P	07 41 48.7	+0.6
YBH				pmax	pmax		
	comp=Z,34nm,1.5s						
YBH	Yreka Blue Hor	85.62	37	P	P	07 41 48.7	+0.6
YBH				IAmb	IAmb	07 41 52.5	
	comp=Z,34nm,1.5s						
VCNR	Virginia City	85.63	41	P	P	07 41 49.1	+0.7
VCNR				IAmb	IAmb	07 41 51.0	
	comp=Z,26nm,1.5s						
YERR	Yerington	85.66	41	P	P	07 41 48.1	-0.5
YERR				IAmb	IAmb	07 41 52.4	
	comp=Z,26nm,1.5s						
BO01	Tunca	85.76	127	P	P	07 41 49.6	+0.5
BO01				IAmb	IAmb	07 41 53.1	
	comp=Z,17nm,1.1s						
BO02	Sierra Bellavi	85.77	127	P	P	07 41 49.8	+0.5
PDMCI	Parker Dam,Lak	85.77	47	P	P	07 41 50.3	+1.4
	baz=231						
VA05	Santo Domingo	85.77	126	P	P	07 41 49.9	+0.8
NVAR	Mina Array Bea	85.84	42	P	P	07 41 48.5	-1.0
	comp=Z,8.9nm,1.0s,baz=220,slow=7.4,SNR=26						
NVAR				LR	LR	08 16 20.5	
	comp=Z,1µm,18.1s,baz=267,slow=33						
NVAR	Mina Array Bea	85.84	42	P	P	07 41 49.4	-0.1
RYN	Ryan	85.84	42	P	P	07 41 49.7	+0.2
MT01	Popeta	85.92	126	P	P	07 41 50.0	0.0
NV11	Mina Array Sit	85.93	42	P	P	07 41 50.2	+0.4
NV11				IAmb	IAmb	07 41 53.6	
	comp=Z,25nm,1.4s						
NJ2	Nanjing	86.04	310	*e*P	P	07 41 52.0	+1.7
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PAHR	Pah Rah Range	86.06	40	P	P	07 41 50.9	+0.4
VA01	Torpederas	86.08	125	P	P	07 41 52.1	+1.5
HUMO	Hull Mountain	86.10	36	P	P	07 41 50.8	+0.4
HUMO				IAmb	IAmb	07 42 00.7	
	comp=Z,28nm,1.4s						
TPNV	Topopah Spring	86.11	44	P	P	07 41 51.1	+0.3
TPNV				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TPNV	Topopah Spring	86.11	44	P	P	07 41 51.1	+0.3
M04C	Macdoel	86.12	38	P	P	07 41 52.8	+2.2
	baz=226						
MT09	Talagante	86.15	126	P	P	07 41 50.3	-1.0
TPH	Tonopah	86.25	43	P	P	07 41 51.5	0.0
TPH				pmax	pmax		
	comp=Z,168nm,1.4s						
TPH	Tonopah	86.25	43	P	P	07 41 51.5	0.0
USA0B	Ussuriysk Arra	86.31	326	P	P	07 41 51.9	+0.6
USA0B				pmax	pmax		
	comp=Z,22nm,1.0s						
USA0B	Ussuriysk Arra	86.31	326	P	P	07 41 51.9	+0.6
USA0B				IAmb	IAmb	07 41 54.2	
	comp=Z,22nm,1.0s						
USRK	Ussuriysk Ar.	86.31	326	P	P	07 41 50.1	-1.2
	comp=Z,17nm,0.9s,baz=82,slow=5.0,SNR=15						
USRK				LR	LR	08 18 09.8	
	comp=Z,351nm,19.0s,baz=119,slow=34						
USRK	Ussuriysk Ar.	86.31	326	P	P	07 41 51.1	-0.2
MT02	Curacav	86.32	126	P	P	07 41 52.6	+0.7
MT02				IAmb	IAmb	07 41 58.0	
	comp=Z,35nm,1.2s						
KVN	Kaiserville	86.37	42	P	P	07 41 51.7	-0.3
KVN				pmax	pmax		
	comp=Z,15nm,1.2s						
KVN	Kaiserville	86.37	42	P	P	07 41 51.7	-0.3
KVN				IAmb	IAmb	07 41 54.2	
	comp=Z,15nm,1.2s						
SHPR	Sheep Range	86.50	45	P	P	07 41 53.1	+0.3
SHPR				IAmb	IAmb	07 41 55.9	
	comp=Z,21nm,1.4s						
MT05	Renca	86.53	126	P	P	07 41 53.8	+0.8
RPSI	Rantau Prapat	86.59	275	P	P	07 41 54.0	+0.5
RPSI				IAmb	IAmb	07 41 54.8	
	comp=Z,19nm,1.1s						
PSI	Prapat	86.64	275	P	P	07 41 54.0	+0.1
PSI				pmax	pmax		
	comp=Z,19nm,1.1s						
PEL	Peldehue	86.70	126	P	P	07 41 54.5	+0.6
PEL				pmax	pmax		
	comp=Z,48nm,1.1s						
PEL	Peldehue	86.70	126	P	P	07 41 54.5	+0.6
TUC	Tucson	86.78	51	P	P	07 41 54.9	+0.8
TUC				pmax	pmax		
	comp=Z,35nm,1.4s						
TUC	Tucson	86.78	51	P	P	07 41 54.9	+0.8
TUC				IAmb	IAmb	07 41 58.2	
	comp=Z,35nm,1.4s						
VA03	San Esteban	87.00	126	P	P	07 41 56.1	+0.7
VA03				IAmb	IAmb	07 41 58.1	
	comp=Z,25nm,1.1s						
MOD	Modoc Plateau	87.03	38	P	P	07 41 56.1	+0.9
MOD				IAmb	IAmb	07 42 21.6	
	comp=Z,33nm,1.4s						
GSI	Gunungsitoli	87.12	273	P	P	07 41 56.4	+0.3
PRN	Pahroc Range	87.14	44	P	P	07 41 55.5	-0.3
319A	Douglas	87.27	52	P	P	07 41 56.7	+0.2
319A				IAmb	IAmb	07 41 59.5	
	comp=Z,15nm,1.2s						
HPIG		87.35	58	P	P	07 41 56.8	-0.4
R11A	Troy Canyon, C	87.41	43	P	P	07 41 57.6	+0.5
R11A	Troy Canyon, C	87.41	43	P	P	07 41 57.8	+0.6
	baz=230						
ZAIG	Zacatecas	87.47	63	P	P	07 41 58.1	+0.2
X16A	Lo Mia Camp, P	87.60	49	P	P	07 41 58.7	+0.6
X16A				IAmb	IAmb	07 42 02.3	
	comp=Z,16nm,1.3s						
BMN	Battle Mountai	87.78	41	P	P	07 41 59.0	+0.2
BMN				pmax	pmax		
	comp=Z,18nm,1.3s						
BMN	Battle Mountai	87.78	41	P	P	07 41 59.0	+0.2
BMN				IAmb	IAmb	07 42 01.9	
	comp=Z,18nm,1.3s						
MDJ	Mudanjiang	87.81	325	P	P	07 41 59.0	+0.4
MDJ				sP	pwP	07 42 05.5	-1.1
MDJ				S	S	07 52 44.3	+3.1
MDJ				sS	ScS	07 52 50.6	+2.9
MDJ				pmax	pmax		
	comp=Z,28nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,200nm,6.4s						
MDJ				LR	LR		
	comp=Z,360nm,20.6s						
MDJ				LR	LR		
	comp=Z,310nm,16.4s						
MDJ				LR	LR		
	comp=Z,600nm,19.2s						
MDJ	Mudanjiang	87.81	325	P	P	07 41 58.7	0.0
CO03	El Pedregal	87.91	124	P	P	07 42 00.8	+0.9
LCMT	Little Creek M	88.02	46	P	P	07 42 00.2	+0.1
U15A	North Rim	88.26	47	P	P	07 42 01.9	+0.5
U15A				IAmb	IAmb	07 42 05.5	
	comp=Z,21nm,1.2s						
CCUT	Cedar City	88.28	45	P	P	07 42 02.5	+1.1
CCUT				IAmb	IAmb	07 42 05.3	
	comp=Z,21nm,1.4s						
KNB	Kanab	88.28	46	P	P	07 42 02.0	+0.6
KNB				pmax	pmax		
	comp=Z,18nm,1.2s						
KNB	Kanab	88.28	46	P	P	07 42 02.0	+0.6
KNB				IAmb	IAmb	07 42 04.5	
	comp=Z,18nm,1.2s						
WHN	Wuhan	88.30	306	⇑P	P	07 42 02.6	+1.3
WUAZ	Wupatki	88.31	48	P	P	07 42 02.5	+1.0
WVOR	Wild Horse Val	88.31	39	P	P	07 42 02.1	+0.8
WVOR				pmax	pmax		
	comp=Z,17nm,1.4s						
WVOR	Wild Horse Val	88.31	39	P	P	07 42 02.1	+0.8
WVOR				IAmb	IAmb	07 42 04.2	
	comp=Z,17nm,1.4s						
SZCU	Shurtz Canyon	88.47	45	P	P	07 42 03.6	+1.3
SZCU				IAmb	IAmb	07 42 06.2	
	comp=Z,20nm,1.4s						
SPR3	Spring Creek 3	88.58	44	P	P	07 42 03.5	+0.6
SPR3				IAmb	IAmb	07 42 05.8	
	comp=Z,16nm,1.5s						
X18A	Snowflake	88.66	49	P	P	07 42 03.5	+0.3
X18A				IAmb	IAmb	07 42 07.2	
	comp=Z,17nm,1.4s						
LCO	Las Campanas	88.87	122	P	P	07 42 07.8	+3.2
LCO				pmax	pmax		
	comp=Z,16nm,1.1s						
LCO	Las Campanas	88.87	122	P	P	07 42 07.8	+3.2
LCO				IAmb	IAmb	07 42 08.6	
	comp=Z,16nm,1.1s						
121A	Cookes Peak, D	88.97	52	P	P	07 42 04.7	0.0
121A	Cookes Peak, D	88.97	52	P	P	07 42 04.9	+0.2
	baz=235						
ZON	Zonda	88.99	126	P	P	07 42 05.2	+0.3
ZON				pmax	pmax		
	comp=Z,16nm,1.3s						
ZON	Zonda	88.99	126	P	P	07 42 05.2	+0.3
ZON				IAmb	IAmb	07 42 09.3	
	comp=Z,16nm,1.3s						
J08A	Circle Bar Ran	89.01	38	P	P	07 42 04.6	+0.1
J08A				IAmb	IAmb	07 42 06.9	
	comp=Z,19nm,1.3s						
E04D	Cinebar	89.08	34	P	P	07 42 07.3	+2.7
	baz=225						
ELK	Elko	89.14	42	P	P	07 42 05.2	-0.2
ELK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ELK	Elko	89.14	42	P	P	07 42 05.2	-0.2
W18A	Petrified Fore	89.14	49	P	P	07 42 05.5	0.0
W18A				IAmb	IAmb	07 42 08.5	
	comp=Z,28nm,1.2s						
W18A	Petrified Fore	89.14	49	P	P	07 42 06.7	+1.3
	baz=234						
MTPU	Mount Pierson	89.31	45	P	P	07 42 06.8	+0.4
MTPU				IAmb	IAmb	07 42 11.6	
	comp=Z,19nm,1.3s						
CN2	Changchun	89.43	322	*e*P	P	07 42 06.8	+0.5
CN2				S	S	07 52 55.4	-1.1
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,19.0s						
MVU	Marysvale	89.58	45	P	P	07 42 08.2	+0.7
MSU	Marysvale	89.60	45	P	P	07 42 09.0	+1.4
MSU	Marysvale	89.60	45	P	P	07 42 09.0	+1.4
O18K	Koktuh Hills	89.67	11	P	P	07 42 07.6	+0.5
	baz=199						
TIA	Tai'an	89.67	312	P	P	07 42 06.9	-0.7
TIA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
TIA				pmax	pmax		
	comp=Z,110nm,3.9s						
TIA				LR	LR		
	comp=Z,190nm,7.1s						
TIA				LR	LR		
	comp=Z,200nm,5.5s						
TIA				LR	LR		
	comp=Z,220nm,12.7s						
D05A	Enumclaw	89.81	34	P	P	07 42 09.1	+1.2
F07A	Phinny Hill Vi	89.95	36	P	P	07 42 09.4	+0.7
F07A				IAmb	IAmb	07 42 12.6	
	comp=Z,27nm,1.4s						
G08A	Pilot Rock	90.04	37	P	P	07 42 09.1	-0.2
G08A				IAmb	IAmb	07 42 11.8	
	comp=Z,23nm,1.2s						
KLR	Kul'dur	90.05	329	*i* P	P	07 42 09.9	+0.8
KLR				pmax	pmax		
	comp=Z,13nm,1.0s						
O19K	Port Alsworth	90.14	11	P	P	07 42 09.4	+0.2
O19K	Port Alsworth	90.14	11	P	P	07 42 08.9	-0.3
	baz=199						
TX31	Lajitas Ar. Si	90.14	56	P	P	07 42 09.9	-0.2
TX32	Lajitas Array	90.14	56	P	P	07 42 10.8	+0.7
TX32				IAmb	IAmb	07 42 13.6	
	comp=Z,19nm,1.4s						
TXAR	Lajitas Array	90.14	56	P	P	07 42 09.6	-0.6
	comp=Z,5.9nm,1.1s,baz=221,slow=6.6,SNR=18						
TXAR				LR	LR	08 16 41.6	
	comp=Z,331nm,18.8s,baz=0.0,slow=32						
TXAR	Lajitas Array	90.14	56	P	P	07 42 10.9	+0.7
MNTX	Cornudas Mount	90.19	54	P	P	07 42 11.2	+1.0
E07A	Sunnyside	90.44	35	P	P	07 42 11.5	+0.5
HAWA	Hanford	90.49	35	P	P	07 42 11.8	+0.6
HAWA				IAmb	IAmb	07 42 15.2	
	comp=Z,29nm,1.3s						
B05A	Bryant	90.51	33	P	P	07 42 11.9	+0.7
	baz=226						
MFID	Camas Ranch	90.51	39	P	P	07 42 12.7	+1.1
NLU	North Lily Min	90.54	44	P	P	07 42 11.8	-0.2
BMO	Blue Mountains	90.63	38	P	P	07 42 12.6	+0.5
BMO				pmax	pmax		
	comp=Z,16nm,1.5s						
BMO	Blue Mountains	90.63	38	P	P	07 42 12.6	+0.5
BMO				IAmb	IAmb	07 42 15.0	
	comp=Z,16nm,1.4s						
TMUT	Trail Mountain	90.68	45	P	P	07 42 12.8	+0.1
E08A	Dider Farm, El	90.80	36	P	P	07 42 13.7	+1.1
E08A				IAmb	IAmb	07 42 20.0	
	comp=Z,22nm,1.4s						
MPU	Maple Canyon	90.85	44	P	P	07 42 14.1	+0.8
SRU	San Rafael Swe	90.99	45	P	P	07 42 14.3	+0.3
SRU				pmax	pmax		
	comp=Z,20nm,1.3s						
SRU	San Rafael Swe	90.99	45	P	P	07 42 14.3	+0.3
SRU				IAmb	IAmb	07 42 16.5	
	comp=Z,20nm,1.3s						
P17A	Butcher Ranch,	91.08	45	P	P	07 42 14.6	+0.3
P17A				IAmb	IAmb	07 42 17.1	
	comp=Z,14nm,1.3s						
SPUT	South Promonto	91.14	43	P	P	07 42 14.8	+0.2
SPUT				IAmb	IAmb	07 42 17.8	
	comp=Z,28nm,1.5s						
CTU	Camp Tracy	91.19	43	P	P	07 42 15.2	+0.3
AC02	Maricunga	91.20	121	P	P	07 42 16.9	+1.1
AC02				IAmb	IAmb	07 42 20.5	
	comp=Z,20nm,1.2s						
HVU	Hansel Valley	91.24	42	P	P	07 42 15.5	+0.5
HVU				pmax	pmax		
	comp=Z,17nm,1.1s						
HVU	Hansel Valley	91.24	42	P	P	07 42 15.5	+0.5
HVU				IAmb	IAmb	07 42 18.2	
	comp=Z,17nm,1.1s						
D08A	Wollman Farm,	91.25	35	P	P	07 42 15.6	+0.9
D08A				IAmb	IAmb	07 42 17.2	
	comp=Z,15nm,1.0s						
ANMO	Albuquerque	91.25	51	P	P	07 42 16.0	+0.7
ANMO				pmax	pmax		
	comp=Z,19nm,1.4s						
ANMO	Albuquerque	91.25	51	P	P	07 42 16.0	+0.7
ANMO				IAmb	IAmb	07 42 18.7	
	comp=Z,19nm,1.4s						
E09A	Wood Farm, Sta	91.28	36	P	P	07 42 15.4	+0.6
JLU	Jordanelle	91.31	44	P	P	07 42 16.4	+0.9
HLID	Hailey	91.40	40	P	P	07 42 16.5	+0.7
HLID				IAmb	IAmb	07 42 18.4	
	comp=Z,12nm,1.2s						
F10A	Beach Ranch, E	91.40	37	P	P	07 42 15.9	+0.3
F10A				IAmb	IAmb	07 42 17.2	
	comp=Z,15nm,1.0s						
SPCR	Spurr Chakacha	91.44	11	P	P	07 42 16.4	+1.0
	baz=201						
P18A	Preston Nutter	91.47	45	P	P	07 42 16.9	+0.5
PLID	Pearl Lake	91.49	38	P	P	07 42 16.6	+0.4
PLID				IAmb	IAmb	07 42 19.7	
	comp=Z,20nm,1.2s						
MA2	Magadan	91.77	344	*i* P	P	07 42 14.8	-2.0
RC01	Rabbit Creek A	91.79	13	P	P	07 42 17.1	+0.2
	baz=203						
L19K	White Mountain	91.94	10	P	P	07 42 18.2	+0.6
	baz=199						
C09A	Chrisman Ranch	92.07	35	P	P	07 42 18.4	-0.1
PMR	Palmer	92.37	13	P	P	07 42 19.9	+0.4
	baz=204						
TTA	Tatalina	92.48	9	P	P	07 42 20.6	+0.4
	baz=198						
BJT	Baijiatuau	92.51	315	P	P	07 42 20.4	-0.3
BJT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BJT	Baijiatuau	92.51	315	P	P	07 42 20.4	-0.3
BJT				IAmb	IAmb	07 42 22.8	
	comp=Z,8.5nm,0.8s						
BJI	Beijing	92.51	315	P	P	07 42 20.3	-0.4
BJI				SKS	SKSac	07 52 55.4	+1.2
BJI				pmax	pmax		
	comp=Z,14nm,1.0s						
S22A	4UR Ranch, Cre	92.57	48	P	P	07 42 20.9	-0.6
	baz=236						
AHID	Auburn Hatcher	92.82	42	P	P	07 42 23.0	+0.6
O20A	White River Ci	93.02	45	P	P	07 42 23.9	+0.5
O20A				IAmb	IAmb	07 42 35.1	
	comp=Z,10nm,1.2s						
O20A	White River Ci	93.02	45	P	P	07 42 23.0	-0.4
	baz=235						
MCMT	McKenzie Canyo	93.06	40	P	P	07 42 23.8	+0.3
K20K	Telida	93.17	10	P	P	07 42 23.4	+0.2
	baz=200						
MSTX	Muleshoe	93.26	53	P	P	07 42 22.8	-1.7
	baz=238						
REDW	Red Top Meadow	93.33	42	P	P	07 42 25.0	+0.3
REDW				IAmb	IAmb	07 42 28.5	
	comp=Z,21nm,1.2s						
FXWY	Fox Creek	93.39	41	P	P	07 42 25.3	+0.3
SDCO	Great Sand Dun	93.44	49	P	P	07 42 24.5	-1.0
CTG	Chitna Glacier	93.53	16	P	P	07 42 27.3	+2.2
	baz=210						
DLMT	Dillon	93.53	39	P	P	07 42 26.4	+0.9
DLMT				IAmb	IAmb	07 42 27.4	
	comp=Z,11nm,1.2s						
WAT6	Susitna Watana	93.55	13	P	P	07 42 25.9	+0.7
	baz=205						
MOOW	Moose Ponds	93.62	41	P	P	07 42 26.5	+0.5
LOHW	Long Hollow	93.62	42	P	P	07 42 26.7	+0.6
LOHW				IAmb	IAmb	07 42 29.1	
	comp=Z,15nm,1.4s						
LVC	Limon Verde	93.64	118	P	P	07 42 27.9	+0.9
LVC				pmax	pmax		
	comp=Z,22nm,1.3s						
LVC	Limon Verde	93.64	118	P	P	07 42 27.9	+0.9
LVC				IAmb	IAmb	07 42 31.4	
	comp=Z,22nm,1.2s						
BW06	Boulder Array	93.74	43	P	P	07 42 26.3	-0.4
PD31	Pinedale Array	93.74	43	P	P	07 42 26.8	+0.1
PDAR	Pinedale Array	93.74	43	P	P	07 42 26.2	-0.4
	comp=Z,2.7nm,1.0s,baz=208,slow=2.9,SNR=12						
PDAR				LR	LR	08 21 24.6	
	comp=Z,599nm,18.1s,baz=248,slow=34						
PDAR	Pinedale Array	93.74	43	P	P	07 42 26.8	+0.1
PB09	IPOC Station P	93.82	117	P	P	07 42 29.1	+1.6
FLWY	Flagg Ranch	93.84	41	P	P	07 42 27.4	+0.4
FLWY				IAmb	IAmb	07 42 29.7	
	comp=Z,14nm,1.1s						
J20K	Nowinta River	93.93	10	P	P	07 42 27.9	+1.2
	baz=200						
YHL	Hebgen Lake	94.02	40	P	P	07 42 29.2	+1.3
YHL				IAmb	IAmb	07 42 31.1	
	comp=Z,22nm,1.3s						
YMR	Madison River	94.04	41	P	P	07 42 28.2	+0.2
YMR				IAmb	IAmb	07 42 32.3	
	comp=Z,22nm,1.3s						
CMAR	Chiang Mai Arr	94.08	289	P	P	07 42 28.9	+0.5
	comp=Z,2.7nm,0.7s,baz=140,slow=3.8,SNR=12						
CMAR				LR	LR	08 26 34.3	
	comp=Z,74nm,19.2s,baz=145,slow=37						
CMAR	Chiang Mai Arr	94.08	289	P	P	07 42 29.0	+0.5
CMAR	Chiang Mai Arr	94.08	289	P	P	07 42 29.8	+1.2
RND	Reindeer	94.09	12	P	P	07 42 28.6	+1.1
RND				pmax	pmax		
	comp=Z,18nm,1.2s						
RND	Reindeer	94.09	12	P	P	07 42 28.6	+1.1
RND				IAmb	IAmb	07 42 41.8	
	comp=Z,18nm,1.2s						
BOZ	Bozeman (W)	94.22	40	P	P	07 42 28.8	+0.1
BOZ				pmax	pmax		
	comp=Z,13nm,1.1s						
BOZ	Bozeman (W)	94.22	40	P	P	07 42 28.8	+0.1
BOZ				IAmb	IAmb	07 42 32.4	
	comp=Z,13nm,1.1s						
Q24A	Divide	94.34	48	P	P	07 42 30.8	+1.1
	baz=237						
BPAW	Bear Paw Mtn.	94.36	11	P	P	07 42 30.4	+1.7
	baz=202						
MCK	McKinley	94.37	12	P	P	07 42 30.1	+1.3
	baz=204						
SEY	Seymchan	94.39	346	P	P	07 42 27.3	-1.5
	comp=Z,8.0nm,0.9s,baz=131,slow=3.6,SNR=11						
M26K	Nabesna, AK	94.39	15	P	P	07 42 29.7	+0.8
	baz=209						
RWWY	Rawlins	94.55	45	P	P	07 42 31.4	+0.9
RWWY				IAmb	IAmb	07 42 33.5	
	comp=Z,16nm,1.4s						
PB11	IPOC Station P	94.58	115	P	P	07 42 31.9	+0.8
M27K	Edge Creek, AK	94.61	15	P	P	07 42 31.3	+1.2
	baz=210						
ZEA	Zeya	95.22	330	*e*P	P	07 42 19.8	-13
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
K22A	Casper	95.51	44	P	P	07 42 34.9	+0.2
K22A				IAmb	IAmb	07 42 36.5	
	comp=Z,7.6nm,1.0s						
K22A	Casper	95.51	44	P	P	07 42 35.4	+0.7
	baz=236						
SCRK	Sand Creek	95.56	14	P	P	07 42 34.6	+0.2
	baz=208						
COLA	College	95.61	12	*i* P	P	07 42 32.9	-1.4
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	95.70	12	P	P	07 42 33.0	-1.8
	comp=Z,1.9nm,0.9s,baz=212,slow=5.2,SNR=13						
ILAR				LR	LR	08 26 12.5	
	comp=Z,146nm,18.2s,baz=210,slow=36						
ILAR	Eielson Array	95.70	12	P	P	07 42 34.1	-0.7
J25K	Salcha River,	95.85	13	P	P	07 42 34.7	-0.8
	baz=207						
HHC	Hu-ho-hao-te	95.88	313	*e*P	P	07 42 38.8	+2.4
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.4s						
J26L	Joseph Creek	96.11	14	P	P	07 42 37.2	+0.4
	baz=209						
PRP	Porcupine Dome	96.62	12	P	P	07 42 40.1	+0.9
	baz=207						
BILL	Bilibino	97.03	354	*e*P	P	07 42 40.9	+0.1
BILL				*e*PPS	PPS	07 56 02.9	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,284nm,17.0s						
LPAZ	La Paz	97.65	113	P	Pdif	07 42 46.8	+1.0
	comp=Z,4.2nm,1.0s,baz=238,slow=2.6,SNR=8.2						
LPAZ				LR	LR	08 20 57.4	
	comp=Z,132nm,18.2s,baz=244,slow=32						
RSSD	Black Hills	97.83	44	P	P	07 42 45.5	+0.2
RSSD				pmax	pmax		
	comp=Z,18nm,1.1s						
RSSD	Black Hills	97.83	44	P	P	07 42 45.5	+0.2
OK030	Cody Creek RV	98.49	54	P	Pdif	07 42 48.8	+0.6
LZH	Lanzhou	98.67	306	*e*P	Pdif	07 42 54.4	+5.2
LZH				pP	pwP	07 42 58.8	+1.6
LZH				sP	sP	07 43 01.3	+10
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
YAK	Yakutsk	99.96	337	*i* P	Pdif	07 42 51.3	-2.7
ULN	Ulaanbaatar	102.25	318	*i* P	Pdif	07 43 01.3	-3.5
ULN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	Songino Array	102.62	318	PKKPbc	PKKPbc	07 59 08.0	+0.8
	comp=Z,0.4nm,0.3s,baz=283,slow=5.0,SNR=5.4						
YKA	Yellowknife Ar	103.06	25	PKiKP	PKiKP	07 47 27.9	+0.4

	comp=Z,0.5nm,0.9s,baz=205,slow=1.5,SNR=5.7						
YKA				PKKPbc	PKKPbc	07 59 04.5	-1.7
	comp=Z,0.2nm,0.7s,baz=44,slow=2.9,SNR=4.5						
WMQ	Urumqi	113.10	308	ePKP	PKiKP	07 47 48.5	+1.5
ZALV	Zalesovo Beam	117.48	319	PKP	PKPdf	07 47 53.3	-1.7
	comp=Z,2.9nm,0.9s,baz=170,slow=0.9,SNR=7.5						
MKAR	Makanchi Array	117.56	311	PKP	PKPdf	07 47 53.4	-2.0
	comp=Z,5.4nm,1.0s,baz=54,slow=2.1,SNR=14						
NRIK	Noril'sk	118.40	336	i PKIKP	PKPdf	07 47 54.8	-1.5
BOSA	Boshof	119.62	202	PKP	PKPdf	07 47 59.6	-0.6
	comp=Z,4.0nm,1.0s,baz=200,slow=9.1,SNR=4.0						
KSH	Kashi	120.43	301	PKP	PKiKP	07 48 02.6	+1.2
KURK	Kurchatov	120.68	314	c iPKIKP	PKPdf	07 47 59.8	-1.4
KURK				pmax	pmax		
	comp=Z,11nm,1.0s						
KURK	Kurchatov	120.68	314	PKPdf	PKPdf	07 48 00.5	-0.7
KURBB	Kurchatov Arra	120.72	314	PKP	PKPdf	07 47 59.4	-1.9
	comp=Z,5.3nm,0.9s,baz=104,slow=2.1,SNR=25						
AAK	Ala-Archa	122.16	305	PKP	PKPdf	07 48 03.2	-1.4
	comp=Z,1.1nm,0.4s,baz=254,slow=7.1,SNR=6.0						
AAK	Ala-Archa	122.16	305	PKPdf	PKiKP	07 48 04.8	0.0
BTK	Batken	124.43	301	PKIKP	PKPdf	07 48 08.6	-0.3
BTK	Batken	124.43	301		PKPdf	07 48 08.6	-0.3
GAR	Garm	124.62	300		PKiKP	07 48 10.1	+0.4
KBL	Kabul	124.71	294	PKIKP	PKPdf	07 48 09.6	-0.2
KBL	Kabul	124.71	294	PKPdf	PKPdf	07 48 09.6	-0.2
KKAR	Karatay Array	125.13	305	PKIKP	PKPdf	07 48 08.8	-1.2
KKAR	Karatay Array	125.13	305	PKPdf	PKPdf	07 48 08.8	-1.2
CHGR	Chuyangaron	125.45	299		PKiKP	07 48 11.2	0.0
BVAR	Borovoye Array	125.95	317	PKP	PKPdf	07 48 09.5	-1.8
	comp=Z,6.4nm,0.8s,baz=197,slow=4.6,SNR=20						
BRVK	Borovoye	126.01	317	c iPKIKP	PKPdf	07 48 10.6	-0.8
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BRVK	Borovoye	126.01	317	PKPdf	PKPdf	07 48 10.9	-0.5
ARU	Arti	132.43	322	i PKIKP	PKPdf	07 48 23.3	-0.2
ARU						07 50 46.7	
ARU				SS	SS	08 08 16.8	-9.3
ARU	Arti	132.43	322	PKPdf	PKPdf	07 48 23.6	+0.1
ABKAR	Akbulak array	132.65	312		PKPdf	07 48 24.5	+0.3
AKTO	Aktyubinsk	133.77	314	PKP	PKPdf	07 48 26.1	-0.1
	comp=Z,5.2nm,0.9s,baz=78,slow=2.2,SNR=9.7						
ARCES	ARCESS Array B	136.94	349	PKP	PKPdf	07 48 31.6	0.0
	comp=Z,8.2nm,0.9s,baz=36,slow=2.3,SNR=8.0						
KLMR	Klimovskoe	139.65	334	ePKIKP	PKPdf	07 48 36.6	-0.1
KLMR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KLMR	Klimovskoe	139.65	334	ePKPdf	PKPdf	07 48 36.7	0.0
KLMR				AMP		07 48 40.5	
	comp=Z,9.0nm,0.7s						
BELG	Belogornoye	139.67	319	PKP	PKPdf	07 48 37.3	+0.3
	comp=Z,25nm,0.9s,baz=108,slow=2.2,SNR=7.9						
VRH	Novokhopyorsk	143.51	319	ePKHKP	PKPpre	07 48 37.0	
VRH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	FINESS Array B	143.74	342	PKhKP	PKPpre	07 48 39.5	
	comp=Z,4.1nm,0.5s,baz=79,slow=4.1,SNR=34						
OBN	Obninsk	144.30	328	⇓ePKIKP	PKPdf	07 48 44.8	-0.4
OBN				e		07 48 51.6	
OBN				e		07 48 59.5	
OBN				pmax	pmax		
	comp=Z,45nm,1.8s						
OBN				pmax	pmax		
	comp=Z,12nm,0.5s						
OBN				MLR	MLR		
	comp=Z,272nm,21.0s						
LPSR	Galich'ya Gora	144.44	323	ePKIKP	PKPab	07 48 43.4	-0.4
LPSR				pmax	pmax		
	comp=Z,20nm,1.2s						
ZEI	Tsey	144.59	305	i PKIKP	PKPab	07 48 44.2	-0.8
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NCK	Nalchik	144.67	306	i PKIKP	PKPab	07 48 44.3	-0.7
GOF	Gofitskoye	144.70	309	⇑ePKIKP	PKPbc	07 48 45.3	+0.1
ONI	Oni	144.95	305	PKIKP	PKPdf	07 48 46.9	0.0
ONI	Oni	144.95	305		PKPdf	07 48 46.9	0.0
VSR	Storozhevoye	144.96	320	ePKIKP	PKPab	07 48 44.6	-1.2
VSR				pmax	pmax		
	comp=Z,30nm,1.1s						
KBZ	Khabaz	145.12	307	PKP	PKPbc	07 48 45.7	-0.8
	comp=Z,5.8nm,0.9s,baz=213,slow=2.1,SNR=6.0						
KBZ	Khabaz	145.12	307	c iPKIKP	PKPdf	07 48 47.3	+0.3
AKH	Akhalkalaki	145.12	302	⇓P	PKPbc	07 48 46.6	-0.3
KIV	Kislovodsk	145.21	307	⇑P	PKPdf	07 48 47.6	+0.2
KIV	Kislovodsk	145.21	307	i PKIKP	PKPdf	07 48 47.5	+0.2
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
KIV	Kislovodsk	145.21	307		PKPdf	07 48 47.1	-0.2
NEY	Neytrino	145.34	306	i PKIKP	PKPbc	07 48 46.4	-1.1
CHVG	Ch'k'valeri	145.91	305	⇓P	PKiKP	07 48 51.5	-1.1
CHVG	Ch'k'valeri	145.91	305	⇓PKP2	PKiKP	07 48 51.5	-1.1
VSU	Vasula	145.95	338	eP	PKPdf	07 48 47.8	-0.2
VSU	Vasula	145.95	338	i PKIKP	PKPdf	07 48 46.9	-1.1
BCA	Borcka	146.50	303	⇓P	PKiKP	07 48 56.1	+2.3
MTSE	Matsula	146.64	341	eP	PKPdf	07 48 49.8	+0.7
NC303	NORSAR Array S	146.79	353		PKPdf	07 48 50.0	+0.6
NC204	NORSAR Array S	146.80	354		PKPbc	07 48 50.9	-0.3
NC405	NORSAR Array S	146.86	353		PKPdf	07 48 50.1	+0.6
NB201	NORSAR Array S	146.97	353		PKPbc	07 48 50.8	-0.8
NB2	NORSAR Subarra	146.99	353	PKP	PKPdf	07 48 49.5	-0.2
	comp=Z,8.0nm,0.7s,baz=11,slow=2.9						
NOA	NORSAR Array B	146.99	353	PKPbc	PKPdf	07 48 50.1	+0.4
	comp=Z,27nm,0.9s,baz=14,slow=4.5,SNR=37						
NBO00	NORSAR Array S	147.04	354		PKPdf	07 48 50.0	+0.2
UPP	Uppsala	147.14	347	eP	PKPdf	07 48 50.3	+0.4
NAO01	NORSAR Array S	147.21	353	PKPdf	PKPbc	07 48 51.9	-0.4
NC602	NORSAR Array S	147.25	353		PKPdf	07 48 50.6	+0.5
NC602				PKPbc	sPKPdf	07 48 53.3	+0.7
SOC	Sochi	147.39	307	i PKP2	PKiKP	07 48 55.4	-0.2
SOC				e		07 52 19.8	
SOC				ePPP	PPP	07 55 31.8	
SOC				pmax	pmax		
	comp=Z,33nm,0.8s						
HFS	Hagfors	147.56	351	PKPbc	PKPdf	07 48 50.7	+0.1
	comp=Z,38nm,0.9s,baz=56,slow=3.7,SNR=26						
KOPT	Kop Dagi	147.59	301		PKPbc	07 48 52.9	-1.5
MARD	Mardin	147.71	296		PKPbc	07 48 55.3	+0.7
KTUT	Trabzon	147.96	303	⇑P	PKPdf	07 48 47.8	-4.1
ISAL	Salakas	148.41	335	eP	PKiKP	07 48 56.5	-0.7
KONO	Kongsberg	148.51	354	PKP2	PKiKP	07 48 56.8	-0.6
KONO	Kongsberg	148.51	354		PKiKP	07 48 56.8	-0.6
MNK	Minsk	148.53	333	i PKP2	PKPbc	07 48 55.6	-0.4
MNK				pmax	pmax		
	comp=Z,74nm,0.9s						
MNK	Minsk	148.53	333	i PKP	PKPbc	07 48 55.6	-0.4
MNK				i PKP	PKPbc	07 48 55.6	-0.4
MNK				i PKP	PKPbc	07 48 55.6	-0.4
	comp=Z,74nm,0.9s,baz=219						
MNK				i PP	PP	07 52 39.0	+14
MNK				i SKS	SKSdf	07 56 03.5	+2.9
MNK				i SKKS	SKKSdf	08 04 53.1	-6.8
MNK				i SS	SS	08 11 15.6	-18
MNK				i LQ	LQ	08 49 06.5	
MNK				i LR	LR	09 00 36.4	
IIGN	Ignalina	148.54	335	eP	PKPbc	07 48 56.2	+0.2
NACGM	Naroch	148.67	334	i PKP	PKPbc	07 48 56.1	-0.3
PABE	Paberze	149.22	337	eP	PKPbc	07 48 57.2	-0.6
PABE	Paberze	149.22	337	PKPdf	PKPbc	07 48 55.7	-2.0
AKASG	Malin Array Be	150.51	326	PKPbc	PKPbc	07 48 59.0	-2.1
	comp=Z,30nm,0.8s,baz=46,slow=2.9,SNR=51						
AKASG	Malin Array Be	150.51	326	PKIKP	PKPbc	07 48 59.0	-2.1
AKASG	Malin Array Be	150.51	326		PKPbc	07 48 59.4	-1.7
AKBB	Malin Array Si	150.51	326	PKIKP	PKPbc	07 48 58.3	-2.7
AKBB	Malin Array Si	150.51	326	PKPdf	PKPbc	07 48 58.3	-2.7
GAZ	Gaziantep	150.56	296	PKPdf	PKPdf	07 48 57.5	+1.1
SUW	Suwalki	150.69	336	eP	PKiKP	07 49 02.0	0.0
SUW	Suwalki	150.69	336	PKIKP	PKiKP	07 49 02.0	0.0
SUW	Suwalki	150.69	336		PKiKP	07 49 02.0	0.0
SIM	Simferopol'	150.72	313	ePKIKP	PKPbc	07 49 00.2	-1.5
SIM						07 49 15.0	
SIM				pmax	pmax		
	comp=Z,29nm,1.0s						
DEL	Delary	151.03	348	i P	PKPbc	07 49 00.0	-2.1
ASF	Jabal al Asfar	151.08	286	PKPbc	PKPbc	07 49 02.1	-1.0
	comp=Z,9.8nm,0.9s,baz=102,slow=1.7,SNR=7.1						
BNN	Bunyan	151.34	300		PKiKP	07 49 04.5	+0.4
ILGA	Ilgaz	152.38	305		PKiKP	07 49 06.9	+0.6
SORM	Soroca	152.55	323	⇓P	PKPbc	07 49 04.2	-1.6
SORM	Soroca	152.55	323	⇓PKIKP	PKPbc	07 49 04.2	-1.6
EIL	Elat	152.61	280	PKPbc	PKPbc	07 49 05.4	-1.2
	comp=Z,8.1nm,0.8s,baz=356,slow=2.5,SNR=5.1						
EIL				PKPab	PKPab	07 49 17.4	+0.3
	comp=Z,16nm,0.9s,baz=301,slow=2.2,SNR=6.9						
EKA	Eskdalemuir Ar	152.67	8	PKPbc	PKPbc	07 49 03.1	-2.8
	comp=Z,3.1nm,0.7s,baz=3.6,slow=2.3,SNR=2.2						
BR131	Keskin Array S	152.81	302	PKIKP	PKiKP	07 49 07.0	-0.1
BR131	Keskin Array S	152.81	302		PKiKP	07 49 07.0	-0.1
BRTR	Keskin Array B	152.81	302	PKPbc	PKPbc	07 49 05.3	-1.6
	comp=Z,5.3nm,0.9s,baz=133,slow=3.8,SNR=18						
BRTR				PKPab	PKPab	07 49 17.0	-0.9
	comp=Z,2.0nm,0.6s,baz=141,slow=4.3,SNR=6.0						
BRTR	Keskin Array B	152.81	302		PKiKP	07 49 07.2	+0.1
LVV	L'vov	153.56	329	ePKIKP	PKiKP	07 49 08.8	+0.7
CSS	Mathiatis	153.94	292	PKPab	PKPab	07 49 23.6	+0.9
VLDR	Vladesti	154.02	319	⇑P	PKiKP	07 49 11.0	+1.8
KWP	Kalwaria Pacla	154.28	331	PKP2	PKPab	07 49 24.1	+0.6
KWP	Kalwaria Pacla	154.28	331	PKPbc	PKiKP	07 49 11.0	+1.4
KWP					PKPab	07 49 24.1	+0.6
LEF	Lefka	154.28	292	⇑P	PKPab	07 49 30.6	+6.5
GHRR		154.29	320	⇓P	PKPab	07 49 25.9	+2.3
TPGR	Topolog	154.35	316	⇑P	PKiKP	07 49 11.3	+1.4
CFR	Carcaliu	154.35	317	⇑P	PKPbc	07 49 08.4	-1.4
CFR	Carcaliu	154.35	317	⇑PKIKP	PKPbc	07 49 08.4	-1.4
TESR	Tescani	154.45	321	⇓P	PKPab	07 49 23.9	-0.5
BUR08	Bucovina Ar. S	154.50	325		PKiKP	07 49 11.2	+0.9
BUR08				PKPab	PKPab	07 49 23.6	-1.0
BURAR	Bucovina Array	154.51	325	⇑P	PKPbc	07 49 10.2	-0.1
BURAR	Bucovina Array	154.51	325	⇑PKIKP	PKPbc	07 49 10.2	-0.1
BURAR	Bucovina Array	154.51	325	PKPbc	PKiKP	07 49 10.8	+0.5
TIRR	Tirgusor	154.56	316	PKIKP	PKPdf	07 49 02.3	+0.4
TIRR	Tirgusor	154.56	316	PKPdf	PKPdf	07 49 02.3	+0.4
VRI	Vrincioaia	154.79	320	⇑P	PKPab	07 49 26.0	+0.1
VRI	Vrincioaia	154.79	320	⇑PKP2	PKPab	07 49 26.0	+0.1
PLOR	Plostina	154.84	320	⇑P	PKPab	07 49 25.8	-0.3
PLOR	Plostina	154.84	320	⇑PKP2	PKPab	07 49 25.8	-0.3
KOLS	Kolonicke sedl	154.99	330	ePKIKP	PKPbc	07 49 12.7	+1.6
KOLS	Kolonicke sedl	154.99	330	ePKP	PKPbc	07 49 12.7	+1.6
UZH	Uzhgorod	155.20	330	ePKP2	PKPab	07 49 25.5	-2.0
MLR	Muntele Rosu	155.45	320	⇑P	PKPab	07 49 29.9	+1.0
MLR	Muntele Rosu	155.45	320	PKP2	PKPab	07 49 29.5	+0.7
MLR	Muntele Rosu	155.45	320	PKPab	PKPab	07 49 29.5	+0.7
DOPR	Dopca	155.47	321	⇓P	PKPab	07 49 28.6	-0.2
OSTC	Ostas	155.91	340	ePKPAB	PKPab	07 49 31.4	+0.9
CHVC	Chvalec	155.93	340	ePKPAB	PKPab	07 49 30.2	-0.4
VOIR		155.99	321	⇑P	PKPab	07 49 29.9	-1.2
VOIR		155.99	321	⇑PKP2	PKPab	07 49 29.9	-1.2
UPC	Upice	156.02	340	ePKP2	PKPab	07 49 31.4	+0.5
UPC	Upice	156.02	340	ePKPAB	PKPab	07 49 31.4	+0.5
DPC	Dobruska-Polom	156.06	340	ePKP2	PKPab	07 49 30.5	-0.6
DPC	Dobruska-Polom	156.06	340	ePKPAB	PKPab	07 49 30.5	-0.6
CLL	Collm	156.07	345	ePKIKP	PKPdf	07 49 13.0	+9.3
CLL				e		07 49 29.0	
CLL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CLL				pmax	pmax		
	comp=Z,13nm,0.8s						
CLL	Collm	156.07	345	ePKPdiff	PKPdf	07 49 13.0	+9.3
	comp=Z,8.0nm,1.0s						
CLL				ePKPab	PKPab	07 49 29.0	-2.0
	comp=Z,13nm,0.8s						
CLL				eSS	SS	08 13 03.0	+6.9
CLL				e(SSS)		08 19 42.0	
CLL				eSSSS		08 22 54.0	
CLL				LmV		09 08 00.0	
	comp=Z,200nm,19.6s						
BRG	Berggiesshubel	156.25	344	⇓ePKPf	PKPdf	07 49 03.7	-0.2
BRG				Amp		07 49 05.4	
	comp=Z,3.4nm,1.1s						
BRG				⇑PKP	sPKPdf	07 49 15.6	+9.2
BRG				Amp		07 49 18.7	
	comp=Z,4.0nm,1.1s						
BRG				PKPab	PKPab	07 49 30.6	-1.2
BRG				Amp		07 49 34.0	
	comp=Z,12nm,1.0s						
ARR	Arges	156.26	321	⇑P	PKPab	07 49 31.9	-0.3
PVCC	Panska Ves	156.41	342	ePKP2	PKPab	07 49 33.2	+0.7
PVCC	Panska Ves	156.41	342	ePKPAB	PKPab	07 49 33.2	+0.7
LIC	Lamto	156.46	158	ePKP1	PKPdf	07 49 05.1	-0.3
	comp=Z,63nm,1.2s						
BORR	Bors	156.56	328	⇓P	PKPab	07 49 43.9	+11
KIC	Kosan Boka	156.68	159	ePKP1	PKPdf	07 49 05.6	-0.1
	comp=Z,48nm,1.1s						
LOT	Lotru	156.68	322	⇑P	PKPab	07 49 34.7	+0.6
VYHS	Vyhne	156.76	334	ePKP2	PKPab	07 49 33.1	-1.1
PSZ	Piszkesteto	156.79	331	PKP2	PKPab	07 49 35.5	+1.1
PSZ	Piszkesteto	156.79	331		PKPab	07 49 35.5	+1.1
TIC	Toumodi	156.85	158	ePKP1	PKPdf	07 49 06.3	+0.4
VRAC	Vranov	156.88	338	⇓P	PKPab	07 49 34.0	-0.7
VRAC	Vranov	156.88	338	⇓PKP2	PKPab	07 49 34.0	-0.7
PRU	Pruhonice	156.90	342	ePKP2	PKPab	07 49 33.7	-1.0
PRU	Pruhonice	156.90	342	ePKPAB	PKPab	07 49 33.7	-1.0
DBIC	Dimbokro	156.93	158	PKP	PKPdf	07 49 06.8	+0.8
	comp=Z,3.9nm,1.0s,baz=229,slow=4.7,SNR=3.6						
NKC	Novy Kostel	157.20	345	ePKP2	PKPab	07 49 35.0	-1.0
NKC	Novy Kostel	157.20	345	ePKPAB	PKPab	07 49 35.0	-1.0
MODS	Modra-Piesok	157.45	336	ePKP2	PKPab	07 49 36.7	-0.4
BZS	Buzias	157.69	325	⇑P	PKPab	07 49 37.1	-1.2
BZS	Buzias	157.69	325	⇑PKP2	PKPab	07 49 37.1	-1.2
KHC	Kasperske Hory	157.94	342	ePKP2	PKPab	07 49 38.4	-0.9
KHC	Kasperske Hory	157.94	342	ePKPAB	PKPab	07 49 38.4	-0.9
KHC	Kasperske Hory	157.94	342	PKPab	PKPab	07 49 38.6	-0.7
GRA1	Grafenberg Arr	157.97	347	PKPdf	PKPdf	07 49 07.9	+1.7
GRA1					PKPab	07 49 39.3	-0.1
GRF	Grafenberg Arr	157.97	347	PKIKP	PKPdf	07 49 07.9	+1.7
CKRC	Cesky Krumlov	158.02	341	ePKPAB	PKPab	07 49 40.1	+0.5
GEC2	GERESS Array S	158.17	342		PKPab	07 49 41.2	+0.8
GERES	GERESS Array B	158.17	342	PKP	PKPdf	07 49 07.1	+0.5
	comp=Z,0.3nm,0.6s,baz=242,slow=2.1,SNR=2.3						
GERES				PKPab	PKPab	07 49 38.3	-2.1
	comp=Z,2.7nm,0.9s,baz=35,slow=4.9,SNR=10						
CONA	Conrad Observa	158.32	337	eP	PKPab	07 49 40.8	-0.2
	comp=Z,4.7nm,0.9s						
ZAPS	Zavoj	158.68	319	eP	PKPab	07 49 42.6	-0.1
VTS	Vitosha	158.72	317	⇑P	PKPab	07 49 42.7	-0.3
VTS	Vitosha	158.72	317	⇑PKP2	PKPab	07 49 42.7	-0.3
VTS	Vitosha	158.72	317	PKPab	PKPab	07 49 42.3	-0.8
MOA	Molln	158.91	340	eP	PKPab	07 49 44.0	+0.6
	comp=Z,6.5nm,1.0s						
FRGS	Fruska Gora	158.91	327	⇓P	PKPab	07 49 35.4	-8.2
FRGS	Fruska Gora	158.91	327	eP	PKPab	07 49 43.0	-0.6
BOVS	Bovan	158.98	321	⇑P	PKPab	07 49 42.3	-1.6
ARSA	Arzberg	159.02	337	eP	PKPab	07 49 45.0	+1.0
	comp=Z,4.4nm,1.0s						
BOSS	Bosilegrad	159.24	318	eP	PKPab	07 49 44.6	-0.5
GRUS	Gruza	159.35	323	eP	PKPab	07 49 45.3	-0.2
BARS	Barje	159.44	319	eP	PKPab	07 49 41.0	-5.0
BARS	Barje	159.44	319	eP	PKPab	07 49 47.4	+1.4
DIVS	Divibare	159.58	324		PKPab	07 49 47.0	+0.4
DIVS	Divibare	159.58	324	eP	PKPab	07 49 46.5	-0.1
SOKA	Soboth	159.69	337	eP	PKPab	07 49 46.0	-1.0
	comp=Z,7.6nm,0.9s						
IVAS	Ivanjica	159.86	323	eP	PKPab	07 49 47.0	-0.8
KBA	Koelnbreinsper	159.88	340	eP	PKPab	07 49 48.0	+0.1
	comp=Z,1.4nm,0.7s						
OBKA	Obir	160.00	337	eP	PKPab	07 49 47.7	-0.7
	comp=Z,6.0nm,1.3s						
WATA	Walderalm	160.12	344	eP	PKPab	07 49 49.0	+0.1
	comp=Z,6.7nm,1.0s						
RETA	Reutte	160.16	346	eP	PKPab	07 49 48.1	-0.9
	comp=Z,3.3nm,0.9s						
WTTA	Wattenberg	160.17	344	eP	PKPab	07 49 48.0	-1.1
	comp=Z,6.6nm,0.9s						
MYKA	Terra Mystica	160.19	339	eP	PKPab	07 49 47.8	-1.3
	comp=Z,7.2nm,1.0s						
MOTA	Moosalm	160.22	345	eP	PKPab	07 49 47.7	-1.6
	comp=Z,6.8nm,0.9s						
ABTA	Abfaltersbach	160.42	341	eP	PKPab	07 49 49.3	-0.8
	comp=Z,11nm,1.1s						
DAVA	Damuels	160.54	347	eP	PKPab	07 49 49.6	-1.1
	comp=Z,8.3nm,1.1s						
STAL	STALIGIAL	160.80	340	PKPab	PKPab	07 49 50.2	-1.5
DAVOX	Davos/Dischmat	161.02	347	PKPab	PKPab	07 49 52.1	-0.8
	comp=Z,6.1nm,0.9s,baz=8.7,slow=6.5,SNR=9.6						
PDG	Podgorica	161.12	322	⇓P	PKPab	07 49 51.6	-1.6
CTI	Castel Tesino	161.29	342	PKP2	PKPab	07 49 53.3	-0.7
CTI	Castel Tesino	161.29	342	PKPab	PKPab	07 49 53.3	-0.7
SENIN	Lac Senin/Sane	161.85	352	PKPab	PKPab	07 49 56.2	-0.4
TEOL	Teolo	161.92	341	PKPab	PKPab	07 49 56.5	-0.1
SALO	Salr	161.98	344		PKPab	07 49 55.6	-1.3
KOWA	Kowa	164.44	151		PKPdf	07 49 13.9	-0.2
TORD	Torodi Ar. Bea	164.70	173	PKP	PKPdf	07 49 13.5	-0.8
	comp=Z,4.6nm,1.0s,baz=318,slow=1.5,SNR=16						
TORD				PKPab	pPKPab	07 50 10.3	-0.9
	comp=Z,20nm,0.9s,baz=198,slow=3.2,SNR=35						
TORD	Torodi Ar. Bea	164.70	173		PKPdf	07 49 14.1	-0.2
TORD				PKPab	pPKPab	07 50 10.6	-0.6
TIP	Timpagrande	164.70	318	⇓P	PKPab	07 50 09.1	-0.1
CEL	Celeste	165.81	317	PKPab	PKPab	07 50 14.3	+0.2
ESDC	Sonseca Array	167.15	27	PKP	PKPdf	07 49 15.9	+0.3
	comp=Z,2.3nm,1.0s,baz=338,slow=3.3,SNR=8.4						
ESDC				PKPab	PKPab	07 50 19.9	0.0
	comp=Z,1.8nm,0.9s,baz=315,slow=4.8,SNR=5.3						
MDT	Midelt	171.68	56	PKP	PKPdf	07 49 19.6	+1.0
	comp=Z,4.6nm,1.0s,baz=22,slow=0.5,SNR=8.4						

TUL ***20*** *07:33:09.9±1.0, 36.°59N±0.°01×97.°810W±0.°009, h7km±5km, ML2.5, mb_Lg2.0/3(NEIC), Error ellipse: s-maj=1.8km s-min=0.8km az=158.0*

NEIC 20 07:33:09.9±0.8, 36.°58N±0.°01×97.°81W±0.°02, h6km±5km, Error ellipse: s-maj=1.9km s-min=1.5km az=119.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.16	241	Pg	Pg	07 33 13.6	+0.4
CROK				Sg	Sg	07 33 16.3	+0.9
GC02	Grant County #	0.27	351		Pg	07 33 15.1	-0.1
GC02				Sg	Sg	07 33 19.4	+0.6
OK032	Salt Plains WL	0.39	304	Pg	Pg	07 33 17.3	-0.2
OK032				Sg	Sg	07 33 23.4	+0.8
KAN14	Manchester OK	0.39	341	Pg	Pg	07 33 17.6	0.0
KAN14				Sg	Sg	07 33 23.4	+0.7
KAN17	Caldwell West	0.46	4	Pg	Pg	07 33 19.0	+0.2
KAN13	South Haven SW	0.50	31	Pg	Pg	07 33 19.4	-0.2
KAN13				Sg	Sg	07 33 26.9	+0.8
BLOK	Blackwell	0.51	69		Pg	07 33 19.9	+0.2
BLOK				Sg	Sg	07 33 27.2	+1.0
KAN05	Bluff City Nor	0.53	354	Pg	Pg	07 33 19.9	-0.2
KAN05				Sg	Sg	07 33 27.6	+0.7
KAN09	Caldwell North	0.57	15	Pg	Pg	07 33 20.9	0.0
KAN10	Anthony SW Sta	0.59	337	Pg	Pg	07 33 21.5	+0.3
KAN08	Anthony NE Sta	0.66	348	Pg	Pg	07 33 22.6	+0.2
KAN06	Argonia West S	0.66	356	Pg	Pg	07 33 22.5	-0.1
KAN16	Harper SW Stat	0.67	342	Pg	Pg	07 33 22.5	-0.3
KAN12	Harper NE Stat	0.73	348	Pg	Pg	07 33 23.9	0.0
OK035	E0210 Rd and N	0.74	280	Pg	Pg	07 33 24.0	0.0
OK029	Liberty Lake	0.84	160	Pg	Pg	07 33 25.8	-0.1
BCOK	Bluff Creek, N	0.94	170	Pg	Pg	07 33 27.9	0.0
QUOK	Quay	0.98	115	Pg	Pg	07 33 28.4	-0.2
U32A	Winter Ranch,	0.98	258	Pg	Pg	07 33 28.4	-0.4
OK031	S. Brethren Rd	1.00	129	Pg	Pg	07 33 29.0	-0.1
OK031				IAmb_Lg		07 33 43.5	
	comp=Z,28nm,0.8s						
OK034	N. Norfolk Rd.	1.05	123	Pg	Pg	07 33 29.8	-0.2
OK030	Cody Creek RV	1.05	128	Pg	Pg	07 33 29.9	-0.2
OK030				IAmb_Lg		07 33 42.8	
	comp=Z,12nm,0.8s						
OK025	Westminster Rd	1.07	159		Pg	07 33 30.4	0.0
T35A	Sooner Cattle	1.09	72		Pg	07 33 30.3	-0.5
OKCFA	Oklahoma City	1.20	166		Pg	07 33 32.4	-0.5
OKCSW	OKLAHOMA CITY	1.21	166		Pg	07 33 32.7	-0.4
FNO	Franklin	1.36	166		Pn	07 33 35.2	-0.3
W35A	Tecumseh	1.62	152		Pn	07 33 39.1	+0.2
TUL1	Leonard	1.76	112		Pn	07 33 41.0	+0.1
WMOK	Wichita Mounta	2.01	204	Pn	Pn	07 33 44.9	+0.5
MIAR	Mount Ida	4.00	119	Pn	Pn	07 34 10.5	-1.3
FVM	French Village	6.05	74	IAmb_Lg		07 36 18.7	
	comp=Z,2.0nm,1.1s						

TUL ***20*** *07:53:08.3±0.7, 35.°998N±0.°004×97.°30W±0.°01, h5km±7km, ML2.4, ML2.4/50(NEIC), Error ellipse: s-maj=1.6km s-min=0.7km az=88.0*

NEIC 20 07:53:08.6±0.6, 36.°01N±0.°01×97.°30W±0.°01, h6km±6km, Error ellipse: s-maj=2.3km s-min=0.8km az=141.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.25	211	Pg	Pg	07 53 13.3	-0.1
OK029				Sg	Sg	07 53 17.0	+0.3
OK031	S. Brethren Rd	0.38	98	Pg	Pg	07 53 15.9	0.0
OK031				Sg	Sg	07 53 21.5	+0.5
OK031				IAML		07 53 21.8	
	313nm,0.2s						
OK030	Cody Creek RV	0.43	101		Pg	07 53 16.9	0.0
OK030				Sg	Sg	07 53 22.8	+0.3
OK025	Westminster Rd	0.43	184	Pg	Pg	07 53 16.8	-0.2
OK025				IAML		07 53 23.1	
	335nm,0.2s						
BCOK	Bluff Creek, N	0.43	216	Pg	Pg	07 53 16.9	-0.1
OK009	Oakdale Elemen	0.44	193	Pg	Pg	07 53 17.2	+0.1
OK001	Jones High Sch	0.45	179	Pg	Pg	07 53 17.2	0.0
OK034	N. Norfolk Rd.	0.48	90	Pg	Pg	07 53 17.7	-0.1
OK034				Sg	Sg	07 53 24.5	+0.5
OK034				IAML		07 53 24.6	
	250nm,0.2s						
OK034				IAML		07 53 25.0	
	216nm,0.1s						
QUOK	Quay	0.51	71	Pg	Pg	07 53 18.5	+0.1
QUOK				Sg	Sg	07 53 25.3	+0.3
QUOK				IAML		07 53 25.7	
	comp=E,386nm,0.2s						
OKCFA	Oklahoma City	0.61	192		Pg	07 53 20.0	-0.3
OKCSW	OKLAHOMA CITY	0.61	191	Pg	Pg	07 53 20.2	-0.2
CROK	Carrier	0.74	312	Pg	Pg	07 53 22.9	0.0
BLOK	Blackwell	0.75	5	Pg	Pg	07 53 22.9	-0.2
BLOK				IAML		07 53 38.0	
	comp=E,193nm,0.2s						
BLOK				IAML		07 53 40.2	
	comp=N,208nm,0.2s						
FNO	Franklin	0.76	186	Pg	Pg	07 53 22.7	-0.4
FNO				Sg	Sg	07 53 33.2	+0.3
FNO				IAML		07 53 35.8	
	comp=E,126nm,0.2s						
FNO				IAML		07 53 36.3	
	comp=N,116nm,0.1s						
W35A	Tecumseh	0.92	158		Pg	07 53 26.1	-0.2
W35A				IAML		07 53 40.7	
	comp=E,104nm,0.4s						
GC02	Grant County #	0.95	332	Pg	Pg	07 53 26.9	-0.1
KAN13	South Haven SW	1.01	352	Pg	Pg	07 53 27.7	-0.3
KAN13				IAML		07 53 45.8	
	comp=N,198nm,0.3s						
KAN13				IAML		07 53 48.5	
	comp=E,173nm,0.2s						
OK032	Salt Plains WL	1.08	317	Pg	Pg	07 53 28.9	-0.4
OK032				IAML		07 53 46.4	
	comp=E,166nm,0.2s						
KAN14	Manchester OK	1.09	331	Pg	Pg	07 53 29.4	0.0
KAN17	Caldwell West	1.10	340	Pg	Pg	07 53 29.8	+0.1
T35A	Sooner Cattle	1.10	35		Pg	07 53 29.4	-0.4
T35A				IAML		07 53 44.9	
	comp=N,73nm,0.2s						
T35A				IAML		07 53 48.7	
	comp=E,75nm,0.4s						
KAN09	Caldwell North	1.15	347	Pg	Pg	07 53 30.4	-0.3
KAN05	Bluff City Nor	1.19	337	Pg	Pg	07 53 31.4	-0.1
KAN01	Argonia South	1.20	342	Pg	Pn	07 53 32.0	0.0
KAN01				IAML		07 53 51.0	
	comp=E,125nm,0.3s						
KAN01				IAML		07 54 11.3	
	comp=N,107nm,1.5s						
TUL1	Leonard	1.23	94		Pg	07 53 30.7	-1.5
TUL1				IAML		07 53 54.4	
	comp=N,60nm,0.3s						
TUL1				IAML		07 53 57.6	
	comp=E,54nm,0.2s						
KAN10	Anthony SW Sta	1.28	330	Pn	Pn	07 53 32.9	-0.2
KAN10				IAML		07 53 52.5	
	comp=N,121nm,0.2s						
KAN10				IAML		07 53 53.3	
	comp=E,122nm,0.5s						
KAN16	Harper SW Stat	1.36	333	Pn	Pn	07 53 34.3	+0.1
U32A	Winter Ranch,	1.43	286		Pn	07 53 34.8	-0.3
X34A	Smith Ranch, M	1.47	197		Pn	07 53 35.8	+0.1
WMOK	Wichita Mounta	1.75	224		Pn	07 53 39.9	+0.3
LOOK	Love County	2.02	177	Pn	Pn	07 53 43.7	+0.5
X37A	Clayton	2.12	131	Pn	Pn	07 53 44.8	+0.2
U38A	Gravette	2.40	79	Pn	Pn	07 53 48.4	0.0
Z35A	Perchaven, San	2.67	179	Pn	Pn	07 53 52.1	-0.2
HHAR	Hobbs	2.73	83	Pn	Pn	07 53 53.1	+0.1
MIAR	Mount Ida	3.38	115	Pn	Pn	07 54 02.5	+0.6
WHAR	Wooly Hollow	4.14	99	Pn	Pn	07 54 11.9	-0.5
FCAR	Ozark Folk Cen	4.20	90	Pn	Pn	07 54 13.8	+0.6

IDC 20 08:23:10.7±0.6, 11°.46S×164°.86E, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.5/38, mbtmp3.8/5, ML4.2/1, MS3.2/2, Ms1 3.2/2, ms1mx2.8/34, Error ellipse: s-maj=18.3km s-min=6.1km az=75.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.24	292	LR	LR	08 26 48.4	
	comp=Z,144nm,19.0s,baz=126,slow=42						
DZM	Mont Dzumac	10.66	172	Pn	Pn	08 25 44.8	0.0
	1.6nm,0.3s,baz=308,slow=14,SNR=34						
URZ	Urewera	28.85	160	LR	LR	08 37 52.6	
	comp=Z,81nm,19.0s,baz=32,slow=31						
WRA	Warramunga Arr	30.53	250	P	P	08 29 25.9	-0.1
	0.8nm,0.9s,baz=90,slow=9.2,SNR=2.1						
ASAR	Alice Springs	31.83	243	P	P	08 29 37.1	-0.4
	0.5nm,0.7s,baz=68,slow=10,SNR=4.9						
ILAR	Eielson Array	84.18	19	P	P	08 35 43.2	-0.3
	0.3nm,0.6s,baz=230,slow=5.7,SNR=6.9						
MKAR	Makanchi Array	93.23	317	P	P	08 36 27.8	+0.6
	1.2nm,0.9s,baz=100,slow=6.7,SNR=4.9						

NNC 20 08:38:45.0±4.3, 37°.04N×70°.30E, h0^{km}, mb3.8, mpv3.5, 4C-3D, Error ellipse: s-maj=37.7km s-min=35.3km az=54.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	Karatay Array	6.06	2	⇑P	Pn	08 40 17.0	+1.2
	0.9nm,0.3s,baz=177,slow=12						
KK02				⇑S	Sn	08 41 26.2	+0.4
	0.7nm,0.5s						
AAK	Ala-Archa	6.45	29	⇓P	Pn	08 40 21.6	+0.2
	2.1nm,0.7s						
AAK				⇓S	Sn	08 41 37.9	+2.1
	2.6nm,0.5s						
TKM2	Tokmak 2	7.14	33	⇑P	Pn	08 40 30.1	-0.8
	2.6nm,0.5s						
MDOK	Medeo	8.01	38	⇓P	Pn	08 40 42.5	-0.3
	1.3nm,0.3s						
AB31	Akbulak array	14.34	332	⇑P	Pn	08 42 07.8	-1.4
	0.3nm,0.4s,baz=163,slow=11,SNR=14						

IDC 20 08:46:30.6±1.2, 6°.52S×128°.82E, h0^{km}, mb3.5/1, mb1 3.3/3, mb1mx3.2/31, mbtmp3.2/3, ML2.8/2, MS3.5/1, Ms1 3.5/1, ms1mx2.6/32, Error ellipse: s-maj=113.0km s-min=11.8km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.38	159	Pn	Pn	08 49 55.6	0.0
	0.0nm,0.3s,baz=337,slow=12,SNR=4.8						
WRA				Sn	Sn	08 52 23.0	-13
	0.2nm,0.3s,baz=337,slow=20,SNR=5.6						
ASAR	Alice Springs	17.74	165	P	Pn	08 50 39.1	0.0
	0.0nm,0.3s,baz=352,slow=14,SNR=1.9						
JCJ	Chichijima	35.84	21	LR	LR	09 04 35.8	
	comp=Z,73nm,21.0s,baz=110,slow=30						
MKAR	Makanchi Array	67.19	327	P	P	08 57 26.6	0.0
	0.2nm,0.3s,baz=111,slow=6.1,SNR=6.0						

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*NOU **20** 08:56:49.7, 33°.46S×179°.94W, h269^{km}, mb5.0/34, South of Kermadec Islands*
*NEIC **20** 08:56:52.2±2.1, 33°.30S±0°.04×179°.6E±0°.1, h260^{km}±6^{km}, mb4.6/40, Error ellipse: s-maj=14.3km s-min=5.6km az=99.0*
*WEL **20** 08:56:53.3±1.0, 34°S±11°×17°9W±1°4, h326^{km}±12^{km}, M5.5/78, mB5.8/66, ML6.1/74, MLv6.0/78, Mw(mB)5.4/66, Error ellipse: s-maj=0.0km s-min=0.0km az=97.9*
*IDC **20** 08:56:56.1±2.4, 32°.99S×179°.45E, h298^{km}±23^{km}, mb4.0/12, mb1 4.3/14, mb1mx3.8/40, mbtmp4.8/14, Error ellipse: s-maj=15.9km s-min=12.1km az=167.0*
ISC 20 08:56:50.6±0.4, 33°.29S±0°.05×179°.77E±0°.06, h250^{km}, n210, σ1^{s}77/221, mb4.5/41, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.43	195	P	Pn	08 58 00.1	+0.8
MXZ				S	S	08 58 55.1	+1.0
MXZ	Matakaoa Point	4.43	195		Pn	08 58 00.3	+0.9
RAO	Raoul Island	4.49	27	S	S	08 58 50.9	-4.7
	552nm,0.3s,baz=179,slow=21,SNR=8.8						
GRZ	Great Barrier	4.62	229	P	Pn	08 58 04.4	+2.8
WMGZ	Waiomatatini S	4.65	193	P	Pn	08 58 03.4	+1.3
WMGZ				S	S	08 58 59.2	+0.1
HAZ	Te Kaha	4.74	199	P	Pn	08 58 03.6	+0.5
KUZ	Kuaotunu	4.79	223	P	Pn	08 58 06.9	+3.2
PKGZ	Pakihiroa	4.79	196	P	Pn	08 58 04.6	+0.8
MYRZ	Mayor Island	4.92	215	P	Pn	08 58 09.0	+3.7
PUZ	Puketiti	4.93	194	P	Pn	08 58 05.9	+0.5
PUZ				S	S	08 59 05.1	-0.1
RUGZ	Raukumara Rang	4.97	199	P	Pn	08 58 06.6	+0.6
RUGZ				S	S	08 59 03.8	-2.3
TWGZ	Tauwhareparae	5.09	196	P	Pn	08 58 08.2	+0.8
TWGZ				S	S	08 59 10.3	+1.6
WHRZ	Whale Island	5.09	206	P	Pn	08 58 10.4	+3.0
MARZ	Manawahe	5.32	207	P	Pn	08 58 13.0	+2.7
CNGZ	Carnagh Statio	5.34	193	P	Pn	08 58 11.0	+0.6
MWZ	Matawai	5.35	199	P	Pn	08 58 10.8	+0.2
MWZ				S	S	08 59 14.4	-0.2
TKGZ	Te Karaka	5.37	196	P	Pn	08 58 10.8	0.0
TKGZ				S	S	08 59 14.4	-0.5
EDRZ	Edgecumbe	5.40	206	P	Pn	08 58 14.9	+3.6
URZ	Urewera	5.41	203	P	Pn	08 58 14.3	+3.1
	218nm,0.3s,baz=302,slow=24,SNR=202						
URZ				S	S	08 59 16.0	+0.2
	216nm,0.3s,baz=1.7,slow=12,SNR=12						
URZ	Urewera	5.41	203	P	Pn	08 58 11.1	-0.2
URZ				S	S	08 59 15.0	-0.8
URZ	Urewera	5.41	203		Pn	08 58 11.6	+0.3
LIRZ	Lichensteins R	5.45	209	P	Pn	08 58 16.8	+5.0
OUZ	Omahuta	5.46	248	Pn	Pn	08 58 12.9	+0.9
OUZ	Omahuta	5.46	248	P	Pn	08 58 14.5	+2.5
	125nm,0.8s						
KARZ	Kaharoa	5.52	210	P	Pn	08 58 15.0	+2.3
MKRZ	Makatiti	5.53	208	P	Pn	08 58 17.2	+4.3
RAGZ	Rawiri	5.54	199	P	Pn	08 58 13.3	+0.4
RAGZ				S	S	08 59 18.4	-0.4
OMRZ	Omania	5.54	209	P	Pn	08 58 15.9	+2.9
TARZ	Mount Tarawera	5.60	207	P	Pn	08 58 17.0	+3.2
NGRZ	Ngongotaha	5.62	210	P	Pn	08 58 19.0	+5.1
RIGZ	Rimuhau	5.64	196	P	Pn	08 58 14.0	-0.3
RIGZ				S	S	08 59 20.2	-0.9
HLRZ	Highlands Stat	5.68	208	P	Pn	08 58 18.6	+3.9
UTU	Utuhina	5.68	210	P	Pn	08 58 19.5	+4.9
RRRZ	Republican Roa	5.69	207	P	Pn	08 58 16.4	+1.6
MUGZ	Murupara	5.72	204	P	Pn	08 58 14.9	-0.3
HSRZ	Hossack Road	5.77	209	P	Pn	08 58 18.4	+2.6
RTZ	Ruatahuna	5.78	202	P	Pn	08 58 15.9	0.0
SNGZ	Shannon Statio	5.82	199	P	Pn	08 58 16.4	-0.1
PRGZ	Paritu Road	5.83	195	P	Pn	08 58 15.8	-0.6
PRRZ	Plateau Road	5.88	207	P	Pn	08 58 17.5	+0.5
ALRZ	Allen Road	5.95	207	P	Pn	08 58 19.3	+1.3
WPRZ	Whakapapatarin	5.98	208	P	Pn	08 58 21.7	+3.2
RAHZ	Arahi	6.02	200	P	Pn	08 58 18.4	-0.5
MTHZ	Maungataniwha	6.04	202	P	Pn	08 58 18.4	-0.7
MHGZ	Mahia Peninsul	6.04	194	P	Pn	08 58 18.8	-0.4
TLZ	Tolley Road	6.09	213	P	Pn	08 58 22.0	+2.2
KUTZ	Kaahu Road	6.10	211	P	Pn	08 58 22.5	+2.7
MRHZ	Matea Rd	6.16	205	P	Pn	08 58 22.6	+1.9
WHTZ	Whakaora	6.19	209	P	Pn	08 58 24.7	+3.6
NMHZ	Naumai	6.27	202	P	Pn	08 58 21.7	-0.4
HATZ	Hinemaiaia	6.33	207	P	Pn	08 58 24.3	+1.5
ARHZ	Aropaoanui	6.37	200	P	Pn	08 58 22.4	-0.8
BKZ	Black Stump Fm	6.43	203	P	Pn	08 58 23.1	-0.9
BKZ	Black Stump Fm	6.43	203	P	Pn	08 58 23.8	-0.3
	2μm,0.5s						
RATZ	Rangitukua	6.44	209	P	Pn	08 58 26.7	+2.5
RITZ	Rihia Road	6.50	208	P	Pn	08 58 26.1	+1.3
KATZ	Kakaramea	6.56	209	P	Pn	08 58 28.3	+2.5
MCHZ	McNeill Hill	6.62	201	P	Pn	08 58 25.3	-1.1
NTVZ	North Tongarir	6.67	209	P	Pn	08 58 26.8	-0.3
TMVZ	Te Maari	6.68	208	P	Pn	08 58 26.6	-0.6
KRVZ	Karewarewa	6.68	209	P	Pn	08 58 29.9	+2.5
KWHZ	Kaweka Forest	6.69	203	P	Pn	08 58 26.0	-1.3
ETVZ	East Tongariro	6.69	208	P	Pn	08 58 26.7	-0.7
CKHZ	Cape Kidnapper	6.71	198	P	Pn	08 58 26.3	-1.3
WTVZ	West Tongariro	6.72	209	P	Pn	08 58 27.9	+0.1
NNVZ	North Ngauruho	6.73	209	P	Pn	08 58 29.2	+1.3
OTVZ	Oturere	6.73	208	P	Pn	08 58 27.5	-0.5
TWVZ	Taurewa	6.75	210	P	Pn	08 58 28.9	+0.8
SNVZ	South Ngauruho	6.76	208	P	Pn	08 58 28.3	0.0
NGZ	Ngauruhoe	6.77	209	P	Pn	08 58 29.0	+0.6
TUVZ	Tukino	6.83	208	P	Pn	08 58 29.2	0.0
FWVZ	Far West T-bar	6.86	209	P	Pn	08 58 29.3	-0.2
WHVZ	Whangaehu Hut	6.87	208	P	Pn	08 58 30.6	+0.9
BHHZ	Black Hill Sta	6.87	205	P	Pn	08 58 27.6	-1.9
DRZ	Dome Shelter	6.87	208	P	Pn	08 58 31.3	+1.5
KAHZ	Kahuranaki	6.90	199	P	Pn	08 58 28.3	-1.6
TRVZ	Turoa	6.90	208	P	Pn	08 58 29.7	-0.4
WNVZ	Wahianoa	6.90	208	P	Pn	08 58 29.2	-0.9
KRHZ	Kereru	6.91	202	P	Pn	08 58 28.0	-2.0
PKVZ	Pokaka	6.97	210	P	Pn	08 58 31.8	+1.0
MTVZ	Mangateitei	7.00	208	P	Pn	08 58 32.4	+1.2
VRZ	Vera Road	7.09	213	P	Pn	08 58 34.5	+2.2
PXZ	Pawanui	7.12	198	P	Pn	08 58 30.4	-2.3
PNHZ	Pukenui	7.21	202	P	Pn	08 58 31.6	-2.2
MHEZ	Mangahewa	7.26	216	P	Pn	08 58 38.7	+4.3
WPHZ	Waipukurau	7.27	201	P	Pn	08 58 32.3	-2.2
PRHZ	Porangahau	7.40	199	P	Pn	08 58 34.1	-2.2
DREZ	Durham Road	7.41	216	P	Pn	08 58 39.7	+3.4
TSZ	Takapari Road	7.42	203	P	Pn	08 58 33.6	-2.8
WAZ	Wanganui	7.51	209	P	Pn	08 58 37.2	-0.4
PKE	Pukeiti	7.52	217	P	Pn	08 58 41.4	+3.7
LREZ	Lake Rotokare	7.52	214	P	Pn	08 58 39.5	+1.7
PREZ	Palmer Road	7.55	215	P	Pn	08 58 40.9	+2.8
DVHZ	Dannevirke	7.57	201	P	Pn	08 58 35.6	-2.7
KHEZ	Kahui Hut	7.58	216	P	Pn	08 58 41.2	+2.7
ANWZ	Angora Road	7.63	199	P	Pn	08 58 37.4	-1.7
NBEZ	Newall Road No	7.63	217	P	Pn	08 58 42.9	+3.7
NMEZ	Namu Road	7.74	216	P	Pn	08 58 43.2	+2.8
OHWZ	Ohakea	7.77	206	P	Pn	08 58 41.2	+0.3
POWZ	Post Office Ro	7.78	203	P	Pn	08 58 40.3	-0.7
PRWZ	Pori Road	7.86	202	P	Pn	08 58 40.2	-1.8
BFZ	Birch Farm	7.90	200	P	Pn	08 58 39.9	-2.6
BFZ	Birch Farm	7.90	200	P	Pn	08 58 42.6	+0.1
	3μm,0.5s						
TIWZ	Tintock	8.09	201	P	Pn	08 58 43.5	-1.5
CPWZ	Castlepoint	8.12	199	P	Pn	08 58 45.6	+0.3
TMWZ	Te Maipa	8.39	200	P	Pn	08 58 45.5	-3.3
MSWZ	Moikau Station	8.87	203	Pn	Pn	08 58 52.6	-2.2
SNZO	South Karori	8.96	205	P	Pn	08 58 52.9	-3.0
	422nm,0.6s						
QRZ	Quartz Range	9.48	215	P	Pn	08 59 00.7	-1.9
	104nm,0.7s						
CMWZ	Cape Campbell	9.52	206	P	Pn	08 59 02.1	-0.9
RPZ	Rata Peaks	12.44	211	P	Pn	08 59 36.3	-3.2
	440nm,0.5s						
ODZ	Otahua Downs	13.69	208	P	Pn	08 59 52.4	-2.4
	69nm,0.7s						
LKBA	Tubou, Lakemba	15.05	5	P	P	09 00 09.4	-1.6
	8.9nm,0.9s						
MSVF	Nonsavu	15.57	354	P	P	09 00 16.2	-0.6
	22nm,0.3s,baz=207,slow=6.3,SNR=113						
MSVF	Nonsavu	15.57	354	P	P	09 00 17.0	+0.2
	266nm,0.7s						
OUENC	Ouen Island, N	15.73	310	P	P	09 00 18.7	+0.2
OUENC	Ouen Island, N	15.73	310	P	P	09 00 19.2	+0.7
	224nm,1.0s						
YATNC	Mamie plateau,	15.96	311	P	Pn	09 00 23.3	+1.0
	210nm,1.3s						
ONTNC	Ouen Toro	16.06	310		P	09 00 22.4	+0.3
ONTNC	Ouen Toro	16.06	310	P	P	09 00 22.6	+0.5
	163nm,1.0s						
DZM	Mont Dzumac	16.23	310	*e*P	P	09 00 24.0	-0.1
	333nm,1.1s						
DZM	Mont Dzumac	16.23	310	P	P	09 00 23.3	-0.8
	3.8nm,0.3s,baz=149,slow=11,SNR=27						
DZM	Mont Dzumac	16.23	310	P	P	09 00 24.7	+0.6
DZM	Mont Dzumac	16.23	310	P	P	09 00 24.4	+0.3
	166nm,0.9s						
NOUC	Port Laguerre	16.30	310	P	P	09 00 25.1	+0.3
	112nm,1.0s						
TAVE	Taveuni	16.51	1	P	P	09 00 27.6	+0.5
	855nm,1.0s						
DGTI	Dogotuki	16.91	360	P	P	09 00 31.5	0.0
	226nm,0.9s						
LHI	Lord Howe Isla	17.57	270	P	P	09 00 38.8	+0.3
LHI	Lord Howe Isla	17.57	270	P	P	09 00 39.4	+0.8
	185nm,0.9s						
KOUNC	Koumac, New Ca	18.72	309	P	P	09 00 51.6	+0.6
	69nm,0.9s						
AFI	Afiamalu	20.77	24	P	P	09 01 13.2	+0.2
	85nm,0.5s,baz=58,slow=4.7,SNR=14						
SANVU	Saraoutou	21.09	324	P	P	09 01 15.4	-0.8
SANVU	Saraoutou	21.09	324	P	P	09 01 15.4	-0.8
	99nm,0.6s						
CAN	Canberra	25.45	257	P	P	09 01 55.8	-0.1
CAN				IAmb	IAmb	09 01 58.1	
	comp=Z,16nm,1.1s						
MCQ	Macquarie Isla	25.79	208	P	P	09 01 56.0	-2.5
EIDS	Eidsvold	26.16	280	P	P	09 02 00.3	-2.0
EIDS				IAmb	IAmb	09 02 02.9	
	comp=Z,20nm,0.8s						
EIDS	Eidsvold	26.16	280	P	P	09 02 02.4	+0.1
	comp=Z,30nm,0.8s						
RMQ	Roma	27.66	276	P	P	09 02 16.7	+1.1
	comp=Z,19nm,1.0s						
TOO	Toolangi	28.16	251	P	P	09 02 18.9	-1.0
TOO				IAmb	IAmb	09 02 41.2	
	comp=Z,38nm,1.5s						
CMSA	Cobar Meteorol	28.75	264	P	P	09 02 25.7	+0.5
	comp=Z,13nm,1.0s						
KNTN	Kanton	31.39	16	P	P	09 02 48.0	-0.4
QLP	Quilpie	31.40	273	P	P	09 02 48.7	+0.1
	comp=Z,25nm,1.1s						
PPTF	Pamatai, Papee	31.65	68	P	P	09 02 50.6	-0.3
STKA	Stephens Creek	32.08	262	P	P	09 02 54.5	+0.1
	comp=Z,6.9nm,1.2s,baz=105,slow=10,SNR=4.0						
STKA	Stephens Creek	32.08	262	P	P	09 02 54.0	-0.4
CTA	Charters Tower	32.55	285	P	P	09 02 57.9	-0.7
	comp=Z,13nm,0.6s,baz=114,slow=12,SNR=14						
CTAO	Charters Tower	32.55	285	P	P	09 02 57.8	-0.8
CTAO				IAmb	IAmb	09 02 59.1	
	comp=Z,22nm,0.7s						
CTAO	Charters Tower	32.55	285	P	P	09 02 58.5	-0.1
	comp=Z,34nm,0.8s						
INKA	Innaminka	33.93	269	P	P	09 03 10.6	+0.2
	comp=Z,25nm,0.9s						
MTSU	Mount Surprise	35.13	287	P	P	09 03 20.7	-0.1
	comp=Z,13nm,0.8s						
LCRK	Leigh Creek	35.24	263	P	P	09 03 21.1	-0.5
	comp=Z,51nm,0.9s						
BBOO	Buckleboo	36.44	258	P	P	09 03 30.8	-0.9
BBOO				IAmb	IAmb	09 03 47.1	
	comp=Z,23nm,1.1s						
QIS	Mount Isa	37.76	279	P	P	09 03 42.1	-0.9
	comp=Z,17nm,1.1s						
OOD	Oodnadatta	38.14	266	P	P	09 03 47.0	+1.0
	comp=Z,29nm,0.8s						
COEN	Coen	38.38	291	P	P	09 03 47.6	-0.6
COEN				IAmb	IAmb	09 04 13.8	
	comp=Z,18nm,1.2s						
RABL	Rabaul	38.74	312	P	P	09 03 50.7	-0.5
AS31	Alice Springs	41.16	271	P	P	09 04 10.1	-0.9
ASAR	Alice Springs	41.16	271	P	P	09 04 09.4	-1.5
	comp=Z,12nm,0.7s,baz=109,slow=7.0,SNR=80						
ASAR				S	S	09 10 01.4	-3.9
	comp=Z,1.6nm,0.9s,baz=113,slow=16,SNR=7.3						
ASAR	Alice Springs	41.16	271	P	P	09 04 09.9	-1.0
WR0	Warramunga Arr	42.24	277	P	P	09 04 18.2	-1.5
WB2	Warramunga Arr	42.41	277	P	P	09 04 19.6	-1.5
WB2				IAmb	IAmb	09 04 22.0	
	comp=Z,15nm,0.6s						
WRAB	Tennant Creek	42.41	277	P	P	09 04 19.5	-1.6
WRAB				IAmb	IAmb	09 04 22.0	
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	42.41	277	P	P	09 04 19.6	-1.5
	comp=Z,18nm,0.8s						
WRA	Warramunga Arr	42.42	277	P	P	09 04 19.6	-1.6
	comp=Z,11nm,0.7s,baz=115,slow=7.8,SNR=58						
WRA				S	S	09 10 18.2	-5.4
	comp=Z,1.4nm,0.9s,baz=122,slow=16,SNR=4.6						
WRA	Warramunga Arr	42.42	277	P	P	09 04 19.2	-1.9
WB0	Warramunga Arr	42.45	277	P	P	09 04 20.0	-1.5
WB0				IAmb	IAmb	09 04 22.3	
	comp=Z,20nm,0.6s						
FORT	Forrest	43.54	259	P	P	09 04 29.2	-0.8
FORT				IAmb	IAmb	09 04 30.5	
	comp=Z,25nm,0.8s						
WRKA	Warakurna	45.31	266	P	P	09 04 42.1	-2.0
	comp=Z,11nm,2.0s						
MTN	Manton Dam	48.66	283	P	P	09 05 10.0	+0.1
MTN				IAmb	IAmb	09 05 10.2	
	comp=Z,32nm,1.4s						
KNRA	Kununurra	49.12	278	P	P	09 05 12.1	-1.3
KNRA				IAmb	IAmb	09 05 14.2	
	comp=Z,53nm,1.4s						
FITZ	Fitzroy Crossi	50.54	273	P	P	09 05 22.9	-1.1
	comp=Z,4.1nm,0.5s,baz=132,slow=6.6,SNR=7.3						
CASY	Casey	51.70	209	P	P	09 05 31.2	-0.7
PSA00	Pilbara Seismi	53.81	266	P	P	09 05 47.1	-0.9
MORW	Morawa	53.94	256	P	P	09 05 47.4	-1.5
MORW				IAmb	IAmb	09 05 57.7	
	comp=Z,23nm,1.2s						
QSPA	South Pole Qui	56.83	180	P	P	09 06 11.5	+2.6
	comp=Z,3.6nm,0.8s,baz=14,slow=1.3,SNR=16						
QSPA	South Pole Qui	56.83	180	P	P	09 06 11.3	+2.4
HMH	Humu‘ula Sheep	57.66	28	P	P	09 06 16.8	+1.3
MAW	Mawson	68.94	201	P	P	09 07 28.8	+0.6
PMSA	Palmer Station	70.42	156	P	P	09 07 39.6	+2.3
PMSA				IAmb	IAmb	09 07 45.2	
	comp=Z,26nm,1.1s						
SNAA	Sanae	75.32	179	P	P	09 08 08.3	+2.4
SNAA	Sanae	75.32	179	P	P	09 08 07.5	+1.5
VNA3	Neumayer Olymp	75.55	177	P	P	09 08 08.5	+1.3
VNA2	Neumayer--Watz	75.95	178	P	P	09 08 10.8	+1.3
	baz=181,slow=5.1						
VNA1	Neumayer--Stat	76.20	177	P	P	09 08 12.8	+2.0
PLCA	Paso Flores	81.91	134	P	P	09 08 45.8	+3.4
	comp=Z,2.3nm,0.8s,baz=288,slow=6.6,SNR=4.0						
PLCA	Paso Flores	81.91	134	P	P	09 08 43.0	+0.6
NJ2	Nanjing	86.72	312	*e*P	P	09 09 09.1	+2.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PETK	Petropavlovsk-	88.16	347	P	P	09 09 10.6	-2.1
	comp=Z,3.6nm,0.6s,baz=132,slow=7.5,SNR=8.2						
PETK	Petropavlovsk-	88.16	347	P	P	09 09 10.8	-1.9
USRK	Ussuriysk Ar.	88.55	328	P	P	09 09 12.9	-1.8
PNTR	Pine Nut	91.34	43	P	P	09 09 30.0	+1.8
PNTR				IAmb	IAmb	09 09 31.7	
	comp=Z,7.3nm,0.8s						
LHV	Little Huntoon	91.40	44	P	P	09 09 29.2	+1.1
LHV				IAmb	IAmb	09 09 31.0	
	comp=Z,3.1nm,0.7s						
NVAR	Mina Array Bea	91.64	44	P	P	09 09 30.8	+1.3
	comp=Z,2.6nm,0.7s,baz=224,slow=7.8,SNR=22						
TPH	Tonopah	92.03	45	P	P	09 09 32.2	+0.9
TPH				IAmb	IAmb	09 09 33.6	
	comp=Z,18nm,0.7s						
TUC	Tucson	92.39	53	P	P	09 09 34.3	+1.4
TUC				IAmb	IAmb	09 09 36.3	
	comp=Z,3.0nm,0.8s						
MOD	Modoc Plateau	92.88	40	P	P	09 09 35.9	+0.8
MOD				IAmb	IAmb	09 09 42.0	
	comp=Z,3.7nm,1.1s						
U15A	North Rim	93.97	49	P	P	09 09 42.7	+2.3
U15A				IAmb	IAmb	09 09 43.4	
	comp=Z,3.0nm,0.8s						
TXAR	Lajitas Array	95.53	59	P	P	09 09 49.3	+1.8
	comp=Z,0.4nm,0.9s,baz=195,slow=6.5,SNR=2.5						
HHC	Hu-ho-hao-te	96.89	315	*e*P	P	09 09 55.8	+2.5
HHC				pmax	pmax		
	comp=Z,18nm,1.2s						
HHC				pmax	pmax		
	comp=Z,92nm,5.7s						
PDAR	Pinedale Array	99.53	45	P	Pdif	09 10 06.5	+1.3
	comp=Z,0.4nm,0.7s,baz=180,slow=3.9,SNR=4.4						
YKA	Yellowknife Ar	108.87	27	Pdiff	Pdif	09 10 47.8	+1.8
	comp=Z,0.2nm,1.0s,baz=252,slow=6.6,SNR=3.6						
WMQ	Urumqi	113.50	308	*e*P	PKiKP	09 14 59.1	+0.4
BVAR	Borovoye Array	127.10	314	PKP	PKPdf	09 15 23.5	-0.9
	comp=Z,0.7nm,0.5s,baz=134,slow=6.2,SNR=3.9						
ARCES	ARCESS Array B	140.96	346	PKP	PKPdf	09 15 48.8	-1.1
	comp=Z,2.9nm,0.9s,baz=29,slow=2.8,SNR=5.0						
FINES	FINESS Array B	147.12	337	PKPbc	PKPdf	09 16 01.0	+0.3
	comp=Z,5.3nm,0.8s,baz=44,slow=3.7,SNR=23						
NB2	NORSAR Subarra	151.25	348	PKP	PKPbc	09 16 11.3	-2.3
	comp=Z,1.3nm,0.5s,baz=18,slow=2.6						
NOA	NORSAR Array B	151.25	348	PKPbc	PKPbc	09 16 11.5	-2.2
	comp=Z,1.4nm,0.4s,baz=17,slow=4.1,SNR=8.2						
AKASG	Malin Array Be	152.30	318	PKPbc	PKPbc	09 16 14.2	-2.1
	comp=Z,0.5nm,0.3s,baz=43,slow=2.8,SNR=5.1						
AKASG	Malin Array Be	152.30	318	PKPdf	PKPdf	09 16 08.7	-0.5
AKASG					PKPbc	09 16 14.1	-2.2
VYHS	Vyhne	159.14	322	*e*PKP	PKPdf	09 16 19.0	+0.6

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*TAP **20** 09:10:58.9, 24°.46N×122°.86E, h89^{km}, ML3.1, C*
*JMA **20** 09:10:58.9±0.2, 24°.44N×122°.83E, h90^{km}±2^{km}, M2.6*
ISC 20 09:11:00.0±1.3, 24°.38N±0°.04×122°.85E±0°.02, h79^{km}±8^{km}, n81, σ1^{s}06/145, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.11	49	P	Pn	09 11 11.6	+0.2
JYNG				S	Sn	09 11 21.2	+1.4
YOJ	Yonaguni jima	0.17	60	P	Pn	09 11 11.7	+0.1
	baz=88						
YOJ				S	Sn	09 11 20.9	+0.8
	baz=88						
YOJ	Yonaguni jima	0.17	60	P	Pn	09 11 11.7	+0.1
YOJ				*e*S	Sn	09 11 21.1	+1.0
IRIF	Iriomote-Funau	0.80	93	P	Pn	09 11 16.6	-0.1
IRIF				*e*S	Sn	09 11 29.5	+0.4
HATJ	Hateruma jima	0.93	110	P	Pn	09 11 18.8	+0.7
HATJ				*e*S	Sn	09 11 33.2	+1.5
TWC	Suao	0.94	284	*i* P	Pn	09 11 17.4	-1.0
	baz=284						
TWC				*i* S	Sn	09 11 30.9	-1.1
	baz=284						
EWUT	Wuta	0.98	274	P	Pn	09 11 18.5	-0.3
	baz=269						
EWUT				*i* S	Sn	09 11 32.3	-0.4
	baz=269						
ENA	Nanau	1.01	273	*i* P	Pn	09 11 19.0	-0.2
	baz=268						
ENA				S	Sn	09 11 33.2	-0.3
	baz=268						
NTC	Toucheng	1.04	297	*i* S	Sn	09 11 33.0	-1.1
	baz=292						
NDS	Dongshan	1.06	284	*i* P	Pn	09 11 19.7	-0.1
	baz=279						
NDS				S	Sn	09 11 34.0	-0.6
	baz=279						
JKRS	Kuro-shima	1.07	97	P	Pn	09 11 20.1	+0.3
JKRS				S	Sn	09 11 35.8	+1.2
TIPB	Shuangxi	1.11	303	*e*P	Pn	09 11 18.9	-1.5
	baz=298						
TWE	Neicheng	1.13	288	*i* P	Pn	09 11 20.2	-0.5
	baz=283						
TWE				S	Sn	09 11 35.1	-0.9
	baz=283						
ETL	Fush Village	1.14	259	S	Sn	09 11 36.1	-0.2
	baz=255						
NACB	Ninganchiao	1.16	260	P	Pn	09 11 20.4	-0.7
	baz=256						
NACB				S	Sn	09 11 35.9	-0.9
	baz=256						
JIJ	Ishigaki jima	1.18	90	P	Pn	09 11 20.9	-0.3
JIJ				S	Sn	09 11 36.3	-0.8
TWD	Chiawan	1.18	256	*i* P	Pn	09 11 20.2	-1.0
	baz=251						
TWD				*i* S	Sn	09 11 36.2	-1.0
	baz=251						
NWF	Wu-fen Shan	1.19	306	P	Pn	09 11 21.4	-0.1
	baz=294						
NWF				S	Sn	09 11 36.3	-1.3
	baz=294						
ENTT	Nioudou	1.20	283	*e*P	Pn	09 11 22.2	+0.7
	baz=281						
HWA	Hwalien	1.21	251	*e*S	Sn	09 11 39.0	+1.3
	baz=247						
NDT	Datong Townshi	1.24	281	P	Pn	09 11 21.5	-0.5
	baz=281						
NDT				*i* S	Sn	09 11 38.5	0.0
	baz=281						
ETLH	Xiulin Townshi	1.26	263	*i* P	Pn	09 11 22.0	-0.3
	baz=253						
ETLH				S	Sn	09 11 38.0	-1.1
	baz=253						
NWLT	Wulai	1.29	288	*i* P	Pn	09 11 22.4	-0.3
	baz=284						
NWLT				*i* S	Sn	09 11 39.0	-0.7
	baz=284						
ETM	Tongmen	1.31	252	*i* P	Pn	09 11 22.3	-0.5
	baz=245						
ETM				*e*S	Sn	09 11 39.0	-1.0
	baz=245						
NNSB	Datong	1.34	273	P	Pn	09 11 22.8	-0.6

	baz=261						
NNSB				S	Sn	09 11 40.4	-0.5
	baz=261						
JISG	Ishigakijimahi	1.35	81	S	Sn	09 11 39.7	-1.2
NNS	Nan Shan	1.35	273	P	Pn	09 11 23.0	-0.5
	baz=262						
NNS				*i* S	Sn	09 11 41.7	+0.5
	baz=262						
YHNB	Yeheng	1.38	283	P	Pn	09 11 23.6	-0.2
	baz=278						
YHNB				S	Sn	09 11 41.5	-0.2
	baz=278						
NSK	Sanguang	1.39	283	*i* P	Pn	09 11 23.8	-0.2
	baz=278						
NSK				S	Sn	09 11 41.5	-0.5
	baz=278						
YM01	YM01	1.40	304	*e*P	Pn	09 11 23.8	-0.2
	baz=291						
ESL	Shilin	1.41	247	*i* P	Pn	09 11 23.6	-0.6
	baz=238						
ESL				S	Sn	09 11 41.8	-0.5
	baz=238						
WHF	Hehuan Shan	1.47	261	*i* P	Pn	09 11 24.6	-0.7
	baz=251						
WHF				*i* S	Sn	09 11 43.5	-0.8
	baz=251						
FUSS	Fushou	1.47	265	*i* P	Pn	09 11 25.2	0.0
	baz=261						
FUSS				S	Sn	09 11 43.2	-1.0
	baz=261						
EGFH	Guangfu	1.48	242	*i* P	Pn	09 11 24.5	-0.5
	baz=234						
EGFH				*i* S	Sn	09 11 43.7	-0.2
	baz=234						
TDCB	Techi	1.55	266	P	Pn	09 11 26.4	+0.3
	baz=262						
TDCB				S	Sn	09 11 45.1	-0.7
	baz=262						
CHGB	Renai	1.56	259	P	Pn	09 11 26.1	-0.2
	baz=249						
CHGB				S	Sn	09 11 45.6	-0.6
	baz=249						
HGSD	Ruisui	1.57	236	P	Pn	09 11 25.4	-0.8
	baz=229						
HGSD				S	Sn	09 11 45.2	-0.9
	baz=229						
OWD	Renai	1.59	255	*i* P	Pn	09 11 26.1	-0.5
	baz=252						
OWD				*i* S	Sn	09 11 45.6	-1.0
	baz=252						
EHY	Hungye	1.65	239	*i* P	Pn	09 11 26.6	-0.6
	baz=244						
EHY				S	Sn	09 11 47.3	-0.5
	baz=244						
VWDT	VWDT	1.68	249	P	Pn	09 11 27.7	+0.1
	baz=239						
VWDT				S	Sn	09 11 48.7	+0.1
	baz=239						
LIOB	Emei	1.69	280	*i* P	Pn	09 11 27.6	-0.3
	baz=276						
LIOB				*i* S	Sn	09 11 49.0	+0.1
	baz=276						
NSTT	Nanjuang	1.70	279	S	Sn	09 11 49.1	-0.1
	baz=275						
JTJ	Tarama	1.71	81	P	Pn	09 11 27.7	-0.3
JTJ				*e*S	Sn	09 11 48.1	-1.1
YULB	Yu-li	1.73	236	P	Pn	09 11 27.7	-0.6
	baz=243						
YULB				S	Sn	09 11 49.0	-0.8
	baz=243						
EYUL	Yuli	1.74	234	*i* P	Pn	09 11 28.4	0.0
	baz=227						
EYUL				*i* S	Sn	09 11 50.2	+0.2
	baz=227						
WHP	Taichung City	1.74	267	P	Pn	09 11 29.6	+1.0
	baz=264						
WHP				*i* S	Sn	09 11 49.7	-0.5
	baz=264						
TWF1	Yuli	1.75	235	*i* P	Pn	09 11 28.4	-0.2
	baz=228						
WCS	Beigang Elemen	1.80	260	*i* P	Pn	09 11 29.6	+0.4
	baz=254						
WCS				S	Sn	09 11 52.0	+0.5
	baz=254						
SSLB	Suanglung	1.83	252	P	Pn	09 11 29.4	-0.3
	baz=252						
SSLB				S	Sn	09 11 52.6	+0.4
	baz=252						
FULB	Fuli	1.85	231	*i* P	Pn	09 11 29.4	-0.4
	baz=222						
FULB				S	Sn	09 11 52.3	-0.3
	baz=222						
SMLT	Sun Moon Lake	1.85	255	*i* P	Pn	09 11 30.3	+0.3
	baz=249						
SMLT				S	Sn	09 11 54.0	+1.3
	baz=249						
CHKT	Chengkung	1.86	227	*i* P	Pn	09 11 28.9	-1.2
	baz=225						
CHKT				*i* S	Sn	09 11 51.7	-1.2
	baz=225						
TYC	Yuchr	1.88	256	*i* P	Pn	09 11 30.9	+0.6
	baz=250						
TYC				*i* S	Sn	09 11 53.9	+0.5
	baz=250						
EDH	Donghe	1.99	226	*i* P	Pn	09 11 30.7	-1.0
	baz=220						
EDH				*i* S	Sn	09 11 54.2	-1.7
	baz=220						
WJS	Zhushan	2.02	255	*i* P	Pn	09 11 33.0	+0.9
	baz=249						
WJS				*i* S	Sn	09 11 58.5	+1.9
	baz=249						
WNT	Mingjian	2.04	256	*i* P	Pn	09 11 33.8	+1.4
	baz=253						
WNT				*i* S	Sn	09 11 59.4	+2.2
	baz=253						
ELDTW	Lidau	2.05	235	*i* P	Pn	09 11 32.2	-0.6
	baz=233						
ELDTW				*i* S	Sn	09 11 57.0	-0.6
	baz=233						
ALS	Alishan	2.06	246	*i* P	Pn	09 11 33.8	+0.8
	baz=237						
ALS				*i* S	Sn	09 11 58.9	+0.8
	baz=237						
LDUT	Ludao	2.12	217	*i* P	Pn	09 11 32.5	-1.0
	baz=211						
LDUT				*i* S	Sn	09 11 55.9	-3.0
	baz=211						
CHN5	Tsauling	2.13	249	*i* P	Pn	09 11 34.8	+1.0
	baz=240						
CHN5				*i* S	Sn	09 12 01.2	+1.7
	baz=240						
LONT	Longtian	2.15	228	*i* P	Pn	09 11 32.8	-1.2
	baz=234						
LONT				*i* S	Sn	09 11 58.7	-1.2
	baz=234						
JIRB	Irabujima	2.16	77	*e*S	Sn	09 11 59.3	-0.7
WDLH	Douliu	2.22	253	*i* P	Pn	09 11 36.2	+1.4
	baz=240						
WDLH				*i* S	Sn	09 12 03.2	+1.7
	baz=240						
TWGBT	Beinan	2.25	227	P	Pn	09 11 34.7	-0.5
	baz=232						
TWGBT				S	Sn	09 12 00.6	-1.5
	baz=232						
STYH	Taoyuan	2.25	238	*i* P	Pn	09 11 35.9	+0.7
	baz=232						
STYH				*i* S	Sn	09 12 02.4	+0.2
	baz=232						
TWG	Pinlang	2.25	227	*i* P	Pn	09 11 34.9	-0.3
	baz=232						
JMJ2	Miyako jima3	2.28	80	*e*S	Sn	09 12 03.0	0.0
TPUB	Ta-pu	2.30	243	P	Pn	09 11 37.3	+1.4
	baz=240						
TPUB				S	Sn	09 12 05.1	+1.7
	baz=240						
CHN4	Tsaushan	2.31	244	*i* P	Pn	09 11 37.4	+1.4
	baz=235						
CHN4				*i* S	Sn	09 12 06.7	+3.1
	baz=235						
WRL	Guolierlin Hig	2.31	259	S	Sn	09 12 04.2	+0.6
	baz=256						
WTP	Ta-pu	2.34	242	P	Pn	09 11 37.9	+1.4
	baz=239						
WTP				S	Sn	09 12 06.2	+1.8
	baz=239						
WTK	Tuku	2.35	254	*e*P	Pn	09 11 36.6	0.0
	baz=262						
WTK				*i* S	Sn	09 12 06.1	+1.4
	baz=262						
TWK	Hsinying	2.43	243	*i* P	Pn	09 11 38.8	+1.1
	baz=241						
TWK				*i* S	Sn	09 12 08.0	+1.4
	baz=241						
CHN1	Nanshi	2.44	241	*i* P	Pn	09 11 39.5	+1.7
	baz=239						
CHN1				*i* S	Sn	09 12 09.5	+2.8
	baz=239						
SGST	Jiashian	2.44	239	P	Pn	09 11 37.5	-0.4
	baz=236						
SLGT	Liugui	2.44	236	*i* P	Pn	09 11 39.5	+1.7
	baz=234						
SLGT				*i* S	Sn	09 12 10.7	+3.8
	baz=234						
SSD	Sandimen	2.60	232	*e*P	Pn	09 11 41.1	+1.1
	baz=228						
LAY	Lan-yu	2.62	207	P	Pn	09 11 39.0	-1.2
	baz=201						
LAY				S	Sn	09 12 09.0	-2.1
	baz=201						
TSMG	Majia	2.62	231	P	Pn	09 11 41.2	+0.9
	baz=226						
MASBT	Mashibuluo	2.69	230	P	Pn	09 11 41.7	+0.5
	baz=224						
MASBT				S	Sn	09 12 15.1	+2.3
	baz=224						
EAST	Anshuo	2.71	223	P	Pn	09 11 40.8	-0.7
	baz=226						

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*SNET **20** 09:27:28.0±1.1, 13°.36N×90°.02W, h34^{km}±5^{km}, ML3.1*
*GCG **20** 09:27:29.2±0.5, 13°.43N×90°.19W, h21^{km}±5^{km}, MD3.3*
ISC 20 09:27:25.7±1.7**, 13°.39N**±0°.09×**89°.99W**±0°.05**, h5**^{km}±11^{km}**,**
n20, σ0^{s}.78/34**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	Las Nubes	0.55	22	*i* P	Pn	09 27 40.0	-0.4
NUBE				*e*S	Sn	09 27 49.6	-0.5
CEVE	Cerro Verde	0.57	39	*e*S	Sn	09 27 50.2	-0.4
CEVE				IAML		09 27 51.7	
	comp=Z,3μm,0.4s						
JAYA	Jayaque - finc	0.59	63	*e*P	Pn	09 27 40.8	-0.2
JAYA				*e*S	Sn	09 27 50.4	-0.7
JAYA				IAML		09 27 51.9	
	comp=Z,908nm,0.2s						
LALI	Alcalda de L	0.66	81	*e*P	Pb	09 27 41.0	+1.2
LALI				*e*S	Sn	09 27 51.6	-1.0
SLOZ	Alcaldia de Sa	0.67	18	*e*P	Pn	09 27 41.5	-0.4
SLOZ				*e*S	Sn	09 27 52.4	-0.4
CEDA	San Andres	0.71	55	*e*S	Sn	09 27 53.4	-0.6
CEDA				IAML		09 28 02.5	
	comp=Z,741nm,0.4s						
UEES	Universidad Ev	0.80	66	*e*P	Pb	09 27 43.5	+1.2
UEES				IAML		09 27 59.4	
	comp=Z,373nm,0.3s						
OPAM	Oficina de Pla	0.84	67	*e*S	Sn	09 27 56.6	-0.5
OPAM				IAML		09 27 59.9	
	comp=Z,384nm,0.2s						
TACO	Tacachico	0.85	47	*i* P	Pb	09 27 43.7	+0.7
TACO				*e*S	Sn	09 27 56.1	-1.2
SJTE	Alcalda de S	0.98	77	*e*P	Pb	09 27 45.9	+0.5
SJTE				*e*S	Sb	09 27 59.6	+0.9
PAVA	Las Pavas	1.08	72	*e*P	Pb	09 27 47.7	+0.8
PAVA				*e*P	Pn	09 27 48.3	+0.6
PCG	Pacaya	1.16	329	*e*P	Pg	09 27 48.5	+0.4
PCG				*e*S	Sb	09 28 04.1	+0.1
TECO	Alcaldia de Te	1.19	83	*e*P	Pg	09 27 48.5	0.0
TECO				*e*S	Sb	09 28 04.9	+0.3
NBG	Las Nubes	1.24	344	*e*P	Pn	09 27 50.8	+0.7
NBG				*e*S	Sn	09 28 07.6	+0.3
SCLA	Alcaldia de Sa	1.27	76	*e*P	Pg	09 27 49.8	-0.3
SCLA				*e*S	Sn	09 28 08.3	+0.6
FUG	Fuego 3	1.34	322	*e*S	Sg	09 28 07.9	-0.9
ALJI	Alcalda de J	1.39	92	*e*S	Sg	09 28 09.1	-1.2
PQSS	Presa 15 de Se	1.41	80	*e*P	Pn	09 27 51.5	-0.6
PQSS				*e*S	Sg	09 28 10.6	-0.6
COEB	Comit de Eme	1.43	85	*e*P	Pn	09 27 52.3	-0.1
COEB				*e*S	Sg	09 28 11.2	-0.5
STG3	Santiaguito 3,	2.02	311	*e*P	Pn	09 28 00.7	0.0
STG3				*e*S	Sn	09 28 24.4	-2.0

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*MAN **20** 09:28:49.5, 12°.92N×124°.38E, h112^{km}, mb5.8, ML4.9, MS5.3*
*MOS **20** 09:28:49.5±0.9, 12°.85N×124°.35E, h111^{km}, mb5.1/32, Error ellipse: s-maj=7.7km s-min=4.5km az=114.0*
*GCMT **20** 09:28:50.8±0.1, 12°.93N±0°.01×124°.38E±0°.01, h112^{km}±1^{km}, MW5.3/136, Moment Tensor Solution. s86,c119; s136,c226; Duration: 1^{s}.1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.35±.02; $M_{\theta\theta}$0.47±.02; $M_{\phi\phi}$-0.82±.02; $M_{r\theta}$-0.74±.01; $M_{\theta\phi}$0.71±.02; $M_{\phi r}$0.14±.01; Best double couple: $M_0$1.25300×10^{17} NP1:ϕ_s196.00000°, δ51.00000°, λ163.00000°. NP2:ϕ_s297.00000°, δ77.00000°, λ40.00000°. Principal axes: T 1.2460, Plg37.0000°, Azm164.0000°; N 0.0150, Plg48.0000°, Azm311.0000°; P -1.2600, Plg17.0000°, Azm61.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **20** 09:28:51.0±0.0, 12°.90N×124°.40E, h110^{km}, mB4.9/37, mb4.8/53*
*IDC **20** 09:28:51.4±0.9, 12°.83N×124°.37E, h114^{km}±7^{km}, mb4.5/38, mb1 4.6/44, mb1mx4.5/54, mbtmp4.9/44, MS3.8/13, Ms1 3.8/13, ms1mx3.6/43, Error ellipse: s-maj=8.7km s-min=6.3km az=68.0*
*DJA **20** 09:28:52.3±0.2, 13°N±2°×12°4E±°, h122^{km}±2^{km}, M5.3/103, mB5.7/58, mb5.4/103, MLv5.8/1, Mw(mB)5.3/58, MwMwp4.9/12, Mwp5.2/12*
*KLM **20** 09:28:54, 12°.80N×124°.54E, h147^{km}, mb5.4*
ISC 20 09:28:50.8±0.3**, 12°.87N**±0°.02×**124°.39E**±0°.03**, h110**^{km}±2^{km}**,**
h110^{km}:pP-P, n622, σ1^{s}.52/705**, mb5.1**/141**, 47C-34D,**
Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	Masbate	0.90	236	⇓*e*P	Pn	09 29 14.1	+3.1
MMPH				*i* S	Sn	09 29 28.0	+1.8
SCSP	San Jose Seism	1.15	313	⇓*i*P	Pn	09 29 13.3	-0.2
SCSP				*e*S	Sn	09 29 29.9	-0.8
BESP	Borongan	1.63	141	⇑*i*P	Pn	09 29 19.4	+0.3
AUQP	San Andres	1.73	285	⇑*e*P	Pn	09 29 20.6	+0.2
RCP	Roxas	2.06	231	⇓*e*P	Pn	09 29 24.2	-0.4
RCP				*e*S	Sn	09 29 51.4	+0.9
GQP	Guinayangan	2.15	299	⇑*e*P	Pn	09 29 24.2	-1.5
GQP				*i* S	Sn	09 29 50.2	-2.2
JCNP	Jose Panganiba	2.17	311	⇑*e*P	Pn	09 29 24.2	-1.7
JCNP				*e*S	Sn	09 29 49.2	-3.5
LLP	Lapu-Lapu	2.57	189	⇓*e*P	Pn	09 29 31.1	-0.1
LLP				*i* S	Sn	09 30 02.6	+0.5
MSLP	Maasin	2.76	170	⇑*i*P	Pn	09 29 34.6	+0.9
MSLP				*i* S	Sn	09 30 08.6	+2.0
LQP	Lukban	3.03	294	⇓*e*P	Pn	09 29 36.2	-1.3
JAP	San Jose, Anti	3.19	229	⇑*e*P	Pn	09 29 41.4	+2.1
TBP	Tagbilaran	3.20	189	*e*P	Pn	09 29 39.9	+0.4
TBP				*i* S	Sn	09 30 17.5	+0.4
SCPH	Surigao	3.25	160	*e*P	Pn	09 29 41.4	+1.2
SCPH				*i* S	Sn	09 30 22.7	+4.4
PGP	Puerto Galera	3.40	281	⇓*e*P	Pn	09 29 41.3	-0.9
PGP				*e*S	Sn	09 30 21.1	-0.8
CNOP	Candoni, Negro	3.47	210	⇓*i*P	Pn	09 29 43.5	+0.4
CNOP				*i* S	Sn	09 30 30.3	+6.7
GLSP	General Luna,	3.51	151	⇓*i*P	Pn	09 29 42.5	-1.1
TGY	Tagaytay City	3.57	290	P	Pn	09 29 44.8	+0.3
	289nm,0.3s,baz=149,slow=4.6,SNR=20						
TGY				S	Sn	09 30 27.5	+1.5
	300nm,0.3s,baz=0.9,slow=24,SNR=130						
TGY	Tagaytay City	3.57	290	⇓*e*P	Pn	09 29 46.7	+2.2
SNPH	Sibulan	3.68	198	⇑*e*P	Pn	09 29 46.8	+0.8
SNPH				*e*S	Sn	09 30 27.7	-0.9
MACP	Maragondon, Ca	3.83	292	⇑*i*P	Pn	09 29 47.1	-0.7
MACP				*e*S	Sn	09 30 35.5	+3.5
LUBP	Lubang	4.12	283	⇓*i*P	Pn	09 29 51.0	-0.8
LUBP				*i* S	Sn	09 30 38.5	-0.6
DCPH	Dipolog City	4.38	194	⇑*e*P	Pn	09 29 55.8	+0.5
SMPP	San Manuel, Pa	4.85	313	⇑*e*P	Pn	09 30 01.7	0.0
BUKP	Musuan	5.00	172	⇓*i*P	Pn	09 30 06.3	+2.5
BUKP				*e*S	Sn	09 31 02.8	+2.3
PAGZ	Pagadian	5.09	191	⇑*i*P	Pn	09 30 06.9	+2.1
PAGZ				*i* S	Sn	09 31 07.4	+4.9
ENPP	El Nido	5.13	252	⇑*e*P	Pn	09 30 06.0	+0.6
SAMP	Sagada Mountai	5.37	322	⇑*i*P	Pn	09 30 08.2	-0.5
SAMP				*e*S	Sn	09 31 03.2	-6.1
APYP	Conner	5.82	329	⇑*i*P	Pn	09 30 12.8	-1.8
APYP				*e*S	Sn	09 31 15.9	-4.1
APYP	Conner	5.82	329	⇓*e*P	Pn	09 30 22.9	+8.2
APYP				*e*S	Sn	09 31 26.1	+6.0
KCP	Kidapawan	5.87	173	⇑*i*P	Pn	09 30 17.1	+1.6
DAV	Davao City (W)	5.88	168	P	Pn	09 30 17.4	+1.8
	54nm,0.3s,baz=326,slow=3.0,SNR=25						
DAV	Davao City (W)	5.88	168	P	Pn	09 30 16.5	+0.9
MATI	Mati	6.17	162	⇑*e*P	Pn	09 30 20.2	+0.7
MATI				*e*S	Sn	09 31 26.1	-2.6
BBP	Basco	7.88	343	⇑*i*P	Pn	09 30 41.1	-1.5
KKM	Kota Kinabalu	10.53	231	P	Pn	09 31 15.5	-3.3
SPMM	Sapulut	11.27	225	P	Pn	09 31 32.0	+3.4
YOJ	Yonaguni jima	11.60	354	P	Pn	09 31 33.6	+0.6
TOLI2	Tolitoli	12.22	197	P	Pn	09 31 38.3	-2.9
KMSI	Cibinong	12.22	182	P	Pn	09 31 44.1	+2.8
	4μm286nm,1.1s						
TNTI	Ternate	12.38	166	P	Pn	09 31 44.8	+1.5
	2μm2μm190nm,1.3s						
TNTI	Ternate	12.38	166	P	Pn	09 31 41.4	-1.9
MRSI	Marisa	12.55	191	P	P	09 31 49.3	-3.4
	2μm5μm231nm,1.0s						
QZH	Quanzhou	13.20	336	P	Pn	09 31 53.8	-0.2
QZH				S	Sn	09 34 19.9	+0.6
QZH				LR	LR		
	comp=Z,730nm,35.0s						
MPSI	Mapaga	13.22	200	P	P	09 31 57.7	-2.5
	2μm1μm65nm,0.7s						
LBMI	Labuha	13.77	167	P	Pn	09 32 03.7	+2.2
	1μm2μm154nm,0.9s						
LUWI	Luwuk	13.91	187	P	P	09 32 07.7	-0.2
	16μm565nm,1.0s						
APSI	Ampana	13.96	191	P	P	09 32 08.0	-0.3
	2μm5μm462nm,1.2s						
JOW	Kunigami	14.36	14	P	Pn	09 32 10.4	+1.4
	9.4nm,0.3s,baz=153,slow=16,SNR=22						
JOW				S	Sn	09 34 35.3	-12
	1.0nm,0.3s,baz=12,slow=13,SNR=1.7						
JOW				LR	LR	09 37 29.1	
	comp=Z,427nm,20.0s,baz=188,slow=36						
JOW	Kunigami	14.36	14	P	Pn	09 32 09.7	+0.7
SANI	Sanana	14.91	174	P	Pn	09 32 13.1	-2.9
SMKI	Samarinda	15.02	209	P	P	09 32 21.0	+0.8
	351nm,1.2s						
SWI	Sorong	15.25	153	P	P	09 32 24.5	+1.8
	351nm,1.4s						
SIJI	Sorong	15.26	153	P	Pn	09 32 21.0	+0.5
	28nm,0.3s,baz=352,slow=11,SNR=28						
SIJI				S	Sn	09 35 01.1	-8.3
	0.4nm,0.3s,baz=216,slow=23,SNR=1.1						
SIJI				LR	LR	09 38 46.1	
	comp=Z,97nm,20.4s,baz=312,slow=39						
QIZ	Qiongzhong	15.26	296	P	P	09 32 21.8	-1.0
QIZ				sP	sP	09 32 55.1	-1.7
QIZ				S	Sn	09 35 10.3	+1.0
QIZ				LR	LR		
	comp=N,2μm,17.3s						
QIZ				LR	LR		
	comp=E,630nm,23.3s						
QIZ				LR	LR		
	comp=Z,650nm,16.5s						
DLV	T Lat	15.56	268	P	Pn	09 32 23.5	-0.9
SBUM	Sibu	15.88	230	P	P	09 32 33.0	+3.3
TTSI	Tana Toraja	16.45	196	P	P	09 32 37.4	+1.4
	6μm770nm,0.8s						
MTKI	Muara Teweh, K	16.64	215	P	P	09 32 40.9	+2.8
	6μm492nm,0.8s						
MSAI	Masohi	16.73	164	P	P	09 32 41.7	+2.6
	78nm,0.8s						
AAI	Ambon	16.88	167	P	P	09 32 43.9	+3.2
	5μm128nm,0.8s						
SPSI	Sidrap Palu	17.34	196	P	Pn	09 32 47.6	+1.5
	3μm265nm,0.9s						
FAKI	Fak Fak	17.52	153	P	Pn	09 32 49.1	+0.8
	2μm2μm224nm,0.7s						
FAKI	Fak Fak	17.52	153	P	P	09 32 47.5	-0.4
BNSI	Bone	17.68	194	P	Pn	09 32 52.9	+2.7
	5μm428nm,1.3s						
KSM	Kuching	17.96	232	P	Pn	09 32 54.0	+0.4
KBKI	Kotabaru	18.02	207	P	Pn	09 32 54.4	+0.1
	201nm,0.7s						
STKI	Sintang	18.05	226	P	Pn	09 32 56.4	+1.8
	149nm,1.3s						
BAKI	Biak	18.18	139	P	Pn	09 32 57.9	+1.7
	819nm,1.6s						
KAPI	Kappang	18.35	195	P	P	09 32 57.4	+0.5
	1.4nm,0.3s,baz=33,slow=8.4,SNR=22						
KAPI	Kappang	18.35	195	P	Pn	09 32 58.1	-0.2
KAPI				pmax	pmax		
	comp=Z,267nm,1.2s						
KAPI	Kappang	18.35	195	P	Pn	09 32 58.4	+0.2
KAPI	Kappang	18.35	195	P	P	09 32 56.6	-0.4
BKSI	Bulukumba	18.56	193	P	P	09 32 59.3	+0.1
	comp=Z,2μmcomp=Z,154nm,0.9s						
SRPI	Serui, Papua	18.79	140	P	Pn	09 33 03.2	-0.2
	comp=Z,134nm,0.6s						
BBKI	Banjar Baru	18.79	211	P	Pn	09 33 03.2	-0.3
	comp=Z,6μmcomp=Z,531nm,0.9s						
BSSI	Bau Bau, Buton	19.28	192	P	P	09 33 07.4	+0.3
	comp=Z,146nm,1.1s						
NJ2	Nanjing	19.76	346	*e*P	Pn	09 33 13.9	-0.7
WHN	Wuhan	19.89	334	⇓P	Pn	09 33 18.5	+2.4
WHN				pmax	pmax		
	comp=Z,68nm,0.9s						
WHN				LR	LR		
	comp=Z,990nm,19.3s						
GUMO	Guam	19.95	86	P	P	09 33 15.2	+0.8
	comp=Z,6.0nm,0.3s,baz=313,slow=3.6,SNR=3.8						
GUMO				LR	LR	09 40 38.3	
	comp=Z,328nm,19.0s,baz=277,slow=35						
PBKI	Pangkalan Bun	19.97	220	P	Pn	09 33 16.6	-0.7
	comp=Z,7μmcomp=Z,812nm,1.1s						
JNU	Nakatsue	21.02	15	P	P	09 33 26.0	+0.3
	comp=Z,63nm,0.9s,baz=180,slow=5.6,SNR=18						
GMDB	Geomundo	21.24	7	P	P	09 33 31.0	+2.9
	SNR=6.7						
GMDB	Geomundo	21.24	7	P	P	09 33 31.0	+2.9
	SNR=6.7						
GMDB				S	S	09 33 48.4	-209
GYA	Guiyang	21.44	312	⇑P	P	09 33 34.5	+4.1
GYA				pP	pP	09 33 56.8	+5.6
GYA				S	S	09 37 25.8	+3.7
GYA				pmax	pmax		
	comp=Z,23nm,1.0s						
GYA				LR	LR		
	comp=Z,650nm,18.1s						
MMRI	Maumere	21.47	186	P	P	09 33 32.9	+2.2
	comp=Z,4μmcomp=Z,276nm,1.3s						
MMRI	Maumere	21.47	186	P	P	09 33 31.6	+0.9
EDFI	Ende, Flores	21.64	187	P	P	09 33 33.7	+1.1
	comp=Z,1μmcomp=Z,90nm,0.8s						
KOHB	KOHEUNG	21.81	6	P	P	09 33 35.2	+1.1
	SNR=14						
KOHB	KOHEUNG	21.81	6	P	P	09 33 35.2	+1.1
	SNR=14						
JCJ	Chichijima	21.87	47	P	P	09 33 34.9	+0.1
	comp=Z,214nm,0.9s,baz=313,slow=7.8,SNR=5.6						
GENI	Genyem	21.94	133	P	P	09 33 37.7	+2.0
	comp=Z,7μmcomp=Z,445nm,1.6s						
GENI	Genyem	21.94	133	P	P	09 33 36.2	+0.5
BOSB	Boseong-gun	21.95	6	P	P	09 33 37.0	+1.4
	SNR=24						
BOSB	Boseong-gun	21.95	6	P	P	09 33 37.0	+1.4
	SNR=24						
KSSCH	SUNCHEON	22.25	6	P	P	09 33 39.8	+1.2
	SNR=13						
KSSCH	SUNCHEON	22.25	6	P	P	09 33 39.8	+1.2
	SNR=13						
JAY	Jayapura	22.27	132	P	P	09 33 39.7	+0.5
	comp=Z,642nmcomp=Z,56nm,1.0s						
KSKWJ	Gwangju	22.32	6	P	P	09 33 40.3	+0.9
	SNR=12						
KSKWJ	Gwangju	22.32	6	P	P	09 33 40.3	+0.9
	SNR=12						
KSKWJ	Gwangju	22.32	6	P	P	09 33 40.3	+0.9
	SNR=12						
KSKWJ	Gwangju	22.32	6	P	P	09 33 40.3	+0.9
	SNR=12						
KSKWJ	Gwangju	22.32	6	P	P	09 33 40.3	+0.9
	SNR=12						
KSKWJ	Gwangju	22.32	6	P	P	09 33 40.3	+0.9

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      SNR=12
SOEI  Soe              22.48 180    P      P      09 33 41.2 -0.1
      comp=Z,2µmcomp=Z,3µmcomp=Z,136nm,0.6s
SOEI  Soe              22.48 180    P      P      09 33 40.9 -0.4
PLAI  Plampang         22.53 197    P      P      09 33 40.5 -1.3
      comp=Z,10µmcomp=Z,1µm,0.8s
PLAI  Plampang         22.53 197    P      P      09 33 41.7 -0.1
SUCA  Sunchang         22.54   6    P      P      09 33 43.0 +1.3
      SNR=8.0
SUCA  Sunchang         22.54   6    P      P      09 33 43.0 +1.3
      SNR=8.0
NAWB  Namwon           22.62   6    P      P      09 33 42.9 +0.4
      SNR=9.0
NAWB  Namwon           22.62   6    P      P      09 33 42.9 +0.4
      SNR=9.0
KSJEU Jeongeup         22.64   5    P      P      09 33 43.6 +0.9
      SNR=9.7
KSJEU Jeongeup         22.64   5    P      P      09 33 43.6 +0.9
      SNR=9.7
TWSI  Taliwang, Sumb   22.72 200    P      P      09 33 44.0 +0.3
      comp=Z,3µmcomp=Z,301nm,0.8s
SRBI  Singaraja        22.73 204    P      P      09 33 44.4 +0.7
      comp=Z,3µmcomp=Z,290nm,1.0s
SMKB  Mukjeong-gil     22.80   5    P      P      09 33 45.1 +0.9
      SNR=12
SMKB  Mukjeong-gil     22.80   5    P      P      09 33 45.1 +0.9
      SNR=12
ABJI  Asem Bagus       22.87 207    P      P      09 33 45.9 +0.8
      comp=Z,197nm,1.1s
WBSI  Waikabubak, Su   22.91 193    P      P      09 33 46.4 +0.9
      comp=Z,146nm,0.9s
MNYD  Munyeodo         22.91   4    P      P      09 33 46.1 +0.8
      SNR=6.8
MNYD  Munyeodo         22.91   4    P      P      09 33 46.1 +0.8
      SNR=6.8
BATI  Baumata          22.94 182    P      P      09 33 44.5 -1.2
      comp=Z,277nm,0.7s,baz=185,slow=0.9,SNR=20
BATI  Baumata          22.94 182    P      P      09 33 45.0 -0.8
      comp=Z,2µmcomp=Z,226nm,0.8s
BLJI  Banyuglugur      23.12 208    P      P      09 33 48.7 +1.2
      comp=Z,3µmcomp=Z,275nm,0.9s
MYKOM Kota Tinggi      23.12 243    P      P      09 33 48.0 +0.4
KSGUS GUNSAN           23.17   5    P      P      09 33 48.6 +0.8
      SNR=6.5
ECDB  Euchungdo        23.19   3    P      P      09 33 47.3 -0.6
      SNR=5.6
ECDB  Euchungdo        23.19   3    P      P      09 33 47.3 -0.6
      SNR=5.6
OYDB  Oeyeondo         23.31   3    P      P      09 33 50.0 +0.9
      SNR=5.4
OYDB  Oeyeondo         23.31   3    P      P      09 33 50.0 +0.9
      SNR=5.4
JRMM  Jerantut         23.42 249    P      P      09 33 51.0 +0.7
IGBI  Denpasar         23.42 204    P      P      09 33 53.2 +3.0
JAGI  Jajag, Banyuwa   23.51 206    P      P      09 33 51.8 +0.7
      comp=Z,121nm,1.3s
JAGI  Jajag, Banyuwa   23.51 206    P      P      09 33 50.9 -0.2
TJN   Taejon           23.56   6 ceP      P      09 33 51.4 +0.1
TJN   Taejon           23.56   6    P      P      09 33 51.8 +0.5
GMJI  Gumukmas         23.65 208    P      P      09 33 54.7 +2.4
      comp=Z,3µmcomp=Z,122nm,1.2s
DSRI  Dabo             23.70 237    P      P      09 33 53.6 +0.7
      comp=Z,2µmcomp=Z,176nm,0.8s
KMI   Kunming          23.78 304  ⇑P      P      09 33 56.5 +2.8
KMI                                 pP     pP     09 34 16.8 +0.3
KMI                                 sP     sP     09 34 32.3 +2.0
KMI                                 S      S      09 37 55.3 -6.2
KMI                                 sS     sS     09 38 41.8 -0.8
KMI                                 SS     SnSn   09 38 56.6 +3.9
KMI                                 pmax   pmax
      comp=Z,14nm,1.1s
KMI                                 pmax   pmax
      comp=Z,120nm,4.4s
KMI                                 LR     LR
      comp=Z,310nm,20.1s
KMI                                 LR     LR
      comp=Z,370nm,14.5s
KMI                                 LR     LR
      comp=Z,410nm,17.3s
TIA   Tai'an           24.14 346    P      P      09 33 56.5 -0.1
TIA                                 S      S      09 38 08.8 +2.1
TIA                                 LR     LR
      comp=Z,100nm,4.9s
TIA                                 LR     LR
      comp=Z,250nm,10.0s
TIA                                 LR     LR
      comp=Z,150nm,4.9s
PWJI  Pagerwojo        24.23 212    P      P      09 33 59.0 +1.4
      comp=Z,3µmcomp=Z,147nm,0.7s
IPM   Ipoh             24.53 252    P      P      09 34 00.0 -0.4
IPM   Ipoh             24.53 252    P      P      09 33 59.9 -0.4
WOJI  Wonogiri, Jawa   24.54 214    P      P      09 34 01.6 +1.2
      comp=Z,2µmcomp=Z,196nm,1.0s
JHJ   Hachijo jima 2   24.58  32    LR     LR     09 43 12.0
      comp=Z,390nm,19.6s,baz=262,slow=35
INCN  Inchon           24.59   4    P      P      09 34 03.4 +2.7
      comp=Z,31nm,1.0s
KULM  Kulim            24.60 254    P      P      09 34 01.0  0.0
KSAR  Wonju Array Be   24.67   7    P      P      09 34 02.3 +0.9
KSRS  Korea Array      24.69   7    P      P      09 34 01.6 +0.2
      comp=Z,34nm,0.9s,baz=184,slow=10,SNR=82
KSRS                                PcP    PcP    09 37 36.6 +0.6
      comp=Z,1.1nm,0.8s,baz=172,slow=2.8,SNR=5.1
KSRS                                ScP    ScP    09 41 03.5 -1.4
      comp=Z,2.0nm,1.0s,baz=175,slow=2.4,SNR=5.2
PCJI  Pacitan          24.70 213    P      P      09 34 04.7 +2.8
      comp=Z,262nm,1.7s
CM31  Chiang Mai Arr   25.11 286    P      P      09 34 05.6  0.0
      SNR=5.9
CMAR  Chiang Mai Arr   25.11 286    P      P      09 34 05.1 -0.5
      comp=Z,9.8nm,0.6s,baz=96,slow=7.5,SNR=46
CMAR                                PcP    PcP    09 37 38.8 +1.5
      comp=Z,5.9nm,0.8s,baz=67,slow=0.9,SNR=12
CMAR                                ScP    ScP    09 41 05.7 -0.9
      comp=Z,1.2nm,0.3s,baz=63,slow=1.8,SNR=11
INU   Inuyama          25.13  25    P      P      09 34 05.5 -0.1
JMBI  JAMBI            25.13 236    P      P      09 34 08.1 +2.3
      comp=Z,92nm,0.4s
CHTO  Chiang Mai       25.16 287    P      P      09 34 05.4 -0.7
CHTO                                pmax   pmax
      comp=Z,18nm,1.2s
CHTO  Chiang Mai       25.16 287    P      P      09 34 05.2 -0.9
CHTO  Chiang Mai       25.16 287    P      P      09 34 05.2 -0.9
KPJI  Karang Pucung    25.27 218    P      P      09 34 08.5 +1.5
      comp=Z,105nm,0.8s
LEM   Lembang          25.70 221    P      P      09 34 12.3 +1.2
      comp=Z,140nm,0.6s,baz=191,slow=23,SNR=17
CBJI  Citeko           25.90 223    P      P      09 34 17.1 +4.3
DRS   Darwin Rock St   25.95 165    P      P      09 34 12.7 -0.5
DL2   Dalian           26.05 355    P      P      09 34 18.1 +4.3
DL2                                 S      S      09 38 39.3 +2.5
DL2                                 pmax   pmax
      comp=Z,41nm,0.9s
CD2   Chengdu          26.16 317 ⇑iP      P      09 34 16.3 +1.3
CD2                                 pmax   pmax
      comp=Z,30nm,0.7s
CD2                                 pmax   pmax
      comp=Z,290nm,9.8s
KLSI                   26.18 229    P      P      09 34 16.7 +1.4
      comp=Z,21nm,1.1s
MTN   Manton Dam       26.41 165    P      P      09 34 16.8 -0.5
MDSI  Maura Dua        26.46 231    P      P      09 34 18.3 +0.5
      comp=Z,1µmcomp=Z,26nm,1.0s
KDU   Kakadu           26.63 162    P      P      09 34 18.3 -0.9
MAJO  Matsushiro       26.64  25  i P      P      09 34 18.2 -1.1
MAJO  Matsushiro       26.64  25    P      P      09 34 18.8 -0.5
MAT   Matsushiro       26.64  25    P      P      09 34 17.9 -1.4
MAT                                 S      S      09 38 50.8 +4.5
MJAR  Matsushiro Arr   26.64  25    P      P      09 34 17.9 -1.4
      comp=Z,14nm,1.0s,baz=195,slow=8.7,SNR=21
MJAR                                PcP    PcP    09 37 41.7 +1.1
      comp=Z,5.9nm,0.7s,baz=157,slow=3.0,SNR=11
MJAR                                ScP    ScP    09 41 11.1 +0.4
      comp=Z,1.3nm,0.7s,baz=207,slow=4.2,SNR=4.2
LWLI  Liwa             26.90 230    P      P      09 34 25.0 +3.1
      comp=Z,109nm,0.6s
PSI   Prapat           27.10 250    P      P      09 34 23.2 -0.5
      comp=Z,18nm,0.6s,baz=61,slow=6.9,SNR=18
PSI                                 PcP    PcP    09 37 42.2  0.0
      comp=Z,15nm,0.8s,baz=173,slow=0.7,SNR=8.2
PSI                                 ScP    ScP    09 41 11.1 -1.5
      comp=Z,1.7nm,0.4s,baz=170,slow=2.0,SNR=4.0
PSI                                 LR     LR     09 45 47.6
      comp=Z,230nm,18.1s,baz=91,slow=38
MASI  Maura Aman, Be   27.14 236    P      P      09 34 24.6 +0.6
      comp=Z,3µmcomp=Z,232nm,0.9s
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KSI   Kapahiang        27.16 234    P      P      09 34 25.7 +1.5
      comp=Z,17µmcomp=Z,218nm,0.9s
MNSI  Mandailing Nat   27.35 246    P      P      09 34 26.5 +0.7
      comp=Z,45nm,0.7s
PDSI  Padang           27.40 242    P      P      09 34 25.5 -0.8
      comp=Z,25nm,0.8s
KCSI  Kotacane, Aceh   27.90 253    P      P      09 34 28.9 -1.9
      comp=Z,3µmcomp=Z,54nm,0.7s
BJI   Beijing          28.02 347    P      P      09 34 31.3 -0.1
BJI                                 pP     pP     09 34 54.6 -1.0
BJI                                 sS     sS     09 39 45.8 -4.1
BJI                                 pmax   pmax
      comp=Z,10.0nm,1.0s
KNRA  Kununurra        28.69 171    P      P      09 34 37.0 -0.6
LZH   Lanzhou          29.60 325  eP      P      09 34 48.3 +2.5
LZH                                 pP     pP     09 35 10.6 +0.6
LZH                                 sP     sP     09 35 22.8 +0.1
LZH                                 PcP    PcP    09 37 48.5 +0.5
LZH                                 pmax   pmax
      comp=Z,12nm,1.1s
LZH                                 LR     LR
      comp=Z,450nm,13.6s
LZH                                 LR     LR
      comp=Z,370nm,14.4s
LZH                                 LR     LR
      comp=Z,400nm,15.2s
FITZ  Fitzroy Crossi   30.80 178    P      P      09 34 54.7 -1.5
      comp=Z,42nm,0.9s,baz=349,slow=6.7,SNR=32
FITZ                                ScP    ScP    09 41 23.4 -0.5
      comp=Z,7.5nm,0.8s,baz=308,slow=5.5,SNR=4.9
CN2   Changchun        30.84   2  eP      P      09 35 01.8 +5.4
CN2                                 pmax   pmax
      comp=Z,10.0nm,0.6s
CN2                                 pmax   pmax
      comp=Z,200nm,3.0s
CN2                                 LR     LR
      comp=Z,400nm,13.0s
CN2                                 LR     LR
      comp=Z,500nm,13.0s
CN2                                 LR     LR
      comp=Z,300nm,15.0s
PBA   Port Blair       30.93 271    P      P      09 34 57.8 +0.2
PMG   Port Moresby     31.64 133    P      P      09 35 02.6 -1.2
      comp=Z,41nm,0.9s,baz=313,slow=5.2,SNR=15
PMG   Port Moresby     31.64 133    P      P      09 35 02.8 -1.0
PMG                                 pmax   pmax
      comp=Z,67nm,1.1s
PMG   Port Moresby     31.64 133    P      P      09 35 03.4 -0.4
PMG   Port Moresby     31.64 133    P      P      09 35 03.4 -0.4
USA0B Ussuriysk Arra   31.90  10    P      P      09 35 07.3 +1.6
USA0B                               pmax   pmax
      comp=Z,47nm,0.9s
USRK  Ussuriysk Ar.    31.90  10    P      P      09 35 06.3 +0.6
      comp=Z,27nm,0.7s,baz=193,slow=7.8,SNR=54
USRK  Ussuriysk Ar.    31.90  10    P      P      09 35 06.5 +0.8
MDJ   Mudanjiang       31.95   7    P      P      09 35 07.5 +1.4
MDJ                                 pP     pP     09 35 33.1 +2.6
MDJ                                 S      S      09 40 13.3 +4.0
MDJ                                 pmax   pmax
      comp=Z,54nm,1.1s
MDJ                                 pmax   pmax
      comp=Z,130nm,4.1s
MDJ                                 LR     LR
      comp=Z,240nm,18.5s
MDJ                                 LR     LR
      comp=Z,550nm,12.8s
MDJ                                 LR     LR
      comp=Z,660nm,24.9s
MDJ   Mudanjiang       31.95   7    P      P      09 35 07.3 +1.2
RABL  Rabaul           32.38 120    P      P      09 35 10.6 +0.3
COEN  Coen             32.51 144    P      P      09 35 10.3 -1.1
SHL   Shillong         33.09 297    P      P      09 35 15.9 -0.7
SHL                                 pmax   pmax
      comp=Z,25nm,0.6s
SHL   Shillong         33.09 297    P      P      09 35 16.2 -0.3
      SNR=8.3
WRAB  Tennant Creek    34.04 163 ceP      P      09 35 23.4 -1.1
WRAB                                pmax   pmax
      comp=Z,73nm,1.3s
WRAB  Tennant Creek    34.04 163    P      P      09 35 23.5 -1.1
WRA   Warramunga Arr   34.05 163    P      P      09 35 23.4 -1.3
      comp=Z,26nm,0.6s,baz=344,slow=9.6,SNR=206
WRA                                 PcP    PcP    09 37 59.3 -0.8
      comp=Z,6.9nm,0.5s,baz=312,slow=1.2,SNR=7.1
WRA                                 S      S      09 40 35.0 -7.3
      comp=Z,7.4nm,0.7s,baz=347,slow=17,SNR=7.8
WRA                                 ScP    ScP    09 41 33.0 -2.1
      comp=Z,2.7nm,0.9s,baz=348,slow=3.6,SNR=2.3
WRA                                 LR     LR     09 50 04.1
      comp=Z,117nm,21.8s,baz=310,slow=37
MBWA  Marble Bar       34.12 188    P      P      09 35 23.9 -1.4
MBWA  Marble Bar       34.12 188    P      P      09 35 23.9 -1.4
GTA   Gaotai           34.21 325  eP      P      09 35 27.3 +1.3
GTA                                 pP     pP     09 35 50.4  0.0
GTA                                 sP     sP     09 36 05.3 +2.2
GTA                                 PcP    PcP    09 38 01.9 +1.4
GTA                                 sS     sS     09 41 33.8 +6.5
GTA                                 ScP    ScP    09 41 37.3 +1.7
GTA                                 pmax   pmax
      comp=Z,7.0nm,1.3s
GTA                                 pmax   pmax
      comp=Z,41nm,6.2s
GTA                                 LR     LR
      comp=Z,230nm,16.4s
GTA                                 LR     LR
      comp=Z,260nm,16.7s
GTA                                 LR     LR
      comp=Z,300nm,16.7s
PSA00 Pilbara Seismi   34.52 187    P      P      09 35 27.1 -1.6
ASAJ  Asahikawa        34.84  23    P      P      09 35 32.0 +0.7
      comp=Z,11nm,0.7s,baz=220,slow=8.4,SNR=12
ASAJ  Asahikawa        34.84  23    P      P      09 35 32.0 +0.7
LSA   Lhasa            35.04 304    P      P      09 35 34.4 +0.7
LSA                                 pmax   pmax
      comp=Z,86nm,0.9s
LSA   Lhasa            35.04 304    P      P      09 35 34.9 +1.2
LSA   Lhasa            35.04 304    P      P      09 35 34.3 +0.6
LSA                                 pmax   pmax
      comp=Z,16nm,0.7s
LSA   Lhasa            35.04 304    P      P      09 35 34.2 +0.5
QIS   Mount Isa        36.43 156    P      P      09 35 44.2 -0.9
MTSU  Mount Surprise   36.55 147    P      P      09 35 46.1 -0.1
KLR   Kul'dur          36.76   8    P      P      09 35 47.8 +0.2
      comp=Z,14nm,0.8s,baz=214,slow=5.9,SNR=33
KLR                                 PcP    PcP    09 38 08.2 +0.5
      comp=Z,10nm,0.8s,baz=205,slow=2.8,SNR=9.0
KLR   Kul'dur          36.76   8 ceP      P      09 35 47.3 -0.3
KLR                                 pmax   pmax
      comp=Z,13nm,0.8s
YSS   Yuzh-Sakhalins   37.32  21  eP      P      09 35 53.3 +1.0
YSS                                e*PP    pP     09 36 16.1 -0.7
YSS                                 eS     S      09 41 33.6 +1.8
YSS                                 pmax   pmax
      comp=Z,40nm,1.1s
ASAR  Alice Springs    37.49 166    P      P      09 35 53.9 -0.2
      comp=Z,84nm,0.7s,baz=348,slow=7.3,SNR=681
ASAR                                PcP    PcP    09 38 09.8 -0.5
      comp=Z,8.8nm,0.5s,baz=342,slow=3.0,SNR=9.9
ASAR                                S      S      09 41 29.0 -5.8
      comp=Z,10nm,0.8s,baz=357,slow=21,SNR=21
ULN   Ulaanbaatar      37.77 341 ceP      P      09 35 56.7 +0.4
ULN                                 pmax   pmax
      comp=Z,11nm,1.0s
WRKA  Warakurna        37.87 174    P      P      09 35 56.3 -0.9
SONM  Songino Array    37.96 340    P      P      09 35 58.6 +0.7
      comp=Z,4.9nm,0.8s,baz=155,slow=9.8,SNR=32
SONM                                ScP    ScP    09 41 49.1 -0.1
      comp=Z,0.6nm,0.8s,baz=174,slow=5.8,SNR=4.0
JIRN  Jiri             38.56 298  eP      P      09 36 03.3 -0.2
      comp=Z,93nm,0.5s
GUN   Gumba            38.88 299  eP      P      09 36 06.1 -0.1
      comp=Z,76nm,0.6s
GRNR  Gornyy           39.05  12 ⇓iP      P      09 36 07.8 +1.0
GRNR                                pmax   pmax
      comp=Z,20nm,0.9s
GRNR                                MLR    MLR
      comp=E,140nm,13.0s
GRNR                                MLR    MLR
      comp=N,170nm,16.0s
GRNR                                MLR    MLR
      comp=Z,140nm,10.0s
CTA   Charters Tower   39.19 146    P      P      09 36 08.8 +0.5
      comp=Z,51nm,0.9s,baz=321,slow=13,SNR=6.5
CTA   Charters Tower   39.19 146    P      P      09 36 08.4 +0.1
CTAO  Charters Tower   39.19 146    P      P      09 36 08.8 +0.5
CTAO                                pmax   pmax
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      comp=Z,104nm,1.0s
CTAO  Charters Tower   39.19 146    P      P      09 36 08.4 +0.1
PKI   Pulchoki         39.20 298  eP      P      09 36 08.3 -0.5
      comp=Z,45nm,0.5s
PKIN  Phulchoki        39.22 298  eP      P      09 36 08.2 -0.7
      comp=Z,49nm,0.5s
KKN   Kakani           39.37 298  eP      P      09 36 09.9 -0.2
      comp=Z,50nm,0.7s
DMN   Daman            39.48 298  eP      P      09 36 10.5 -0.5
      comp=Z,27nm,0.5s
MEEK  Meekatharra      39.67 188    P      P      09 36 10.2 -2.0
GKN   Gorkha           39.97 298  eP      P      09 36 14.6 -0.4
      comp=Z,41nm,0.6s
DANN  Dangsing         40.81 299  eP      P      09 36 21.6 -0.4
      comp=Z,79nm,0.6s
ZEA   Zeya             40.83   3  eP      P      09 36 21.8 +0.3
ZEA                                 e             09 46 08.3
ZEA                                 pmax   pmax
      comp=Z,20nm,1.2s
H11S3 WAKE ISLAND Hy   41.04  77    T      T      10 20 13.6
      baz=270,slow=75,SNR=152
H11S1 WAKE ISLAND Hy   41.05  77    T      T      10 20 16.4
      baz=270,slow=75,SNR=120
H11S2 WAKE ISLAND Hy   41.06  77    T      T      10 20 10.7
      baz=270,slow=75,SNR=146
H11N1 WAKE ISLAND Hy   41.28  75    T      T      10 20 38.5
      baz=267,slow=74,SNR=37
H11N2 WAKE ISLAND Hy   41.28  75    T      T      10 20 40.8
      baz=267,slow=74,SNR=25
H11N3 WAKE ISLAND Hy   41.30  75    T      T      10 20 40.8
      baz=267,slow=74,SNR=38
PYUN  Piuthan          41.41 298  eP      P      09 36 26.6 -0.3
      comp=Z,64nm,0.5s
HNR   Honiara          41.69 120    LR     LR     09 51 46.3
      comp=Z,123nm,19.7s,baz=301,slow=33
OOD   Oodnadatta       41.88 165    P      P      09 36 30.0 -0.3
TLY   Talaya           42.18 341    P      P      09 36 32.4 -0.2
      comp=Z,1.8nm,0.4s,baz=24,slow=20,SNR=1.8
MORW  Morawa           42.46 191    P      P      09 36 34.0 -1.1
INKA  Innaminka        43.37 159    P      P      09 36 43.0 +0.6
FORT  Forrest          43.54 175    P      P      09 36 43.0 -0.7
QLP   Quilpie          43.70 154    P      P      09 36 44.9 -0.2
BLDU  Ballidu          43.86 190    P      P      09 36 45.2 -1.1
MULG  Mulgathing       43.90 168    P      P      09 36 46.3 -0.3
WMQ   Urumqi           44.05 322  eP      P      09 36 50.0 +2.2
WMQ                                 pP     pP     09 37 17.5 +4.3
RK1H  Rockhampton Ha   44.17 145    P      P      09 36 49.5 +0.6
HYB   Hyderabad        44.39 282  i P      P      09 36 52.0 +1.1
      comp=Z,69nm,0.8s
KLBR  Kellerberrin     44.66 188    P      P      09 36 51.6 -1.1
LCRK  Leigh Creek      45.08 163    P      P      09 36 55.9 -0.1
MUN   Mundaring        45.27 190    P      P      09 36 56.3 -1.2
RMQ   Roma             45.74 149    P      P      09 37 01.4 +0.1
NWAO  Narrogin (SRO)   46.05 188    P      P      09 37 02.8 -0.7
NWAO  Narrogin (SRO)   46.05 188    P      P      09 37 03.1 -0.5
EIDS  Eidsvold         46.06 146    P      P      09 37 03.9 +0.1
BBOO  Buckleboo        46.77 166    P      P      09 37 08.9 -0.3
WHYH  Whyalla          47.35 165    P      P      09 37 13.4 -0.3
STKA  Stephens Creek   47.45 160    P      P      09 37 14.3 -0.2
      comp=Z,89nm,0.8s,baz=335,slow=8.0,SNR=86
STKA  Stephens Creek   47.45 160    P      P      09 37 14.8 +0.3
STKA                                pmax   pmax
      comp=Z,31nm,1.0s
STKA  Stephens Creek   47.45 160    P      P      09 37 14.8 +0.3
DGZ   Jazzator, Alta   47.60 328  i P      P      09 37 16.9 +1.2
DGZ                                 pmax   pmax
      comp=Z,11nm,1.5s
NAPP  Napperby         47.64 164    P      P      09 37 16.6 +0.6
ZSN   Zaisan           47.69 324  eP      P      09 37 16.6 +0.2
      baz=324
ZSN   Zaisan           47.69 324  eP      P      09 37 16.5 +0.2
HTT   Hallett          48.08 164    P      P      09 37 19.8 +0.3
PEA0B Petropavlovsk-   48.09  26 ceP      P      09 37 21.0 +1.7
PETK  Petropavlovsk-   48.09  26    P      P      09 37 20.4 +1.1
      comp=Z,37nm,0.9s,baz=186,slow=3.4,SNR=30
PETK                                PcP    PcP    09 38 45.3  0.0
      comp=Z,6.0nm,0.7s,baz=180,slow=1.4,SNR=2.2
PETK  Petropavlovsk-   48.09  26    P      P      09 37 21.2 +1.9
PET   Petropavlovsk    48.46  27 ⇑iP      P      09 37 23.4 +1.4
PET                                e*PP    pwP    09 37 52.7 +2.9
PET                                 eS     S      09 44 13.7 -0.8
PET                                 pmax   pmax
      comp=Z,101nm,1.1s
PET   Petropavlovsk    48.46  27    P      P      09 37 24.1 +2.1
CMSA  Cobar Meteorol   48.66 156    P      P      09 37 24.9 +1.1
MK31  Makanchi Array   48.85 322  i P      P      09 37 25.5 +0.3
MKAR  Makanchi Array   48.85 322    P      P      09 37 26.3 +1.1
      comp=Z,5.3nm,0.9s,baz=118,slow=8.4,SNR=19
MKAR                                PcP    PcP    09 38 48.6 +0.4
      comp=Z,10nm,0.7s,baz=113,slow=3.3,SNR=8.2
MKAR                                ScP    ScP    09 42 33.1 -0.2
      comp=Z,3.3nm,1.1s,baz=111,slow=5.3,SNR=4.0
SHLS  Shalkode         49.00 317  eP      P      09 37 23.7 -2.8
      baz=317
SHLS  Shalkode         49.00 317  eP      P      09 37 23.7 -2.8
MAKZ  Makanchi         49.05 322    P      P      09 37 28.1 +1.4
MAKZ                                pmax   pmax
      comp=Z,36nm,1.3s
YAK   Yakutsk          49.23   3  eP      P      09 37 28.3 +0.5
YAK                                 e             09 38 48.6
YAK                                 ePPP   PPP    09 40 23.4
YAK                                 eS     S      09 44 24.9 -0.2
YAK                                e*SS    sS     09 45 11.5 +1.9
YAK                                 eSS    SS     09 47 56.4 -1.4
YAK                                 eSSS   SSS    09 49 24.5
YAK                                 pmax   pmax
      comp=Z,31nm,0.9s
YAK                                 pmax   pmax
      comp=N,14nm,1.0s
YAK                                 pmax   pmax
      comp=E,5.0nm,1.0s
YAK                                 pmax   pmax
      comp=Z,199nm,2.8s
YAK                                 pmax   pmax
      comp=N,185nm,3.3s
YAK                                 pmax   pmax
      comp=E,168nm,3.3s
YAK                                 smax   smax
      comp=N,154nm,2.5s
YAK                                 smax   smax
      comp=E,135nm,3.3s
UZB   Uzynbulak        49.29 317  eP      P      09 37 28.1 -0.7
      baz=317
UZB   Uzynbulak        49.29 317  eP      P      09 37 28.1 -0.7
GHSS  Government Hou   49.40 165    P      P      09 37 29.8 +0.4
TWOA  Tennyson Woods   49.50 165    P      P      09 37 30.2  0.0
SATY  Saty             49.66 316  eP      P      09 37 31.5 -0.2
      baz=316
SATY  Saty             49.66 316  eP      P      09 37 31.4 -0.2
KSH   Kashi            50.14 311    P      P      09 37 38.3 +3.1
KSH                                 pP     pP     09 38 03.9 +2.7
KSH                                 pmax   pmax
      comp=E,8.0nm,0.7s
ARMA  Armidale         50.40 149    P      P      09 37 38.4 +1.2
TDK   Taldyqorghan     50.45 319  eP      P      09 37 37.6 +0.2
      comp=E,8.4nm,0.7s,baz=319
TDK   Taldyqorghan     50.45 319  eP      P      09 37 37.6 +0.2
TDK                                 pmax   pmax
      comp=Z,8.0nm,0.7s
MA2   Magadan          50.57  17 ceP      P      09 37 39.1 +1.1
MA2                                 pmax   pmax
      comp=Z,55nm,2.5s
MDOK  Medeo            50.62 316  eP      P      09 37 39.4 +0.4
      baz=316
MDOK  Medeo            50.62 316  eP      P      09 37 39.3 +0.4
NIL   Nilore           50.76 303    P      P      09 37 40.1 +0.2
NIL                                 pmax   pmax
      comp=Z,27nm,0.6s
NIL   Nilore           50.76 303    P      P      09 37 40.6 +0.6
SANVU Saraoutou        50.86 122    P      P      09 37 42.7 +1.9
KUU   Kurty            51.37 317  eP      P      09 37 44.5 +0.1
      comp=Z,28nm,1.4s,baz=317
KUU   Kurty            51.37 317  eP      P      09 37 44.4 +0.1
KUU                                 pmax   pmax
      comp=Z,29nm,1.4s
ZALV  Zalesovo Beam    51.47 331    P      P      09 37 45.1 +0.3
      comp=Z,1.9nm,0.4s,baz=121,slow=8.7,SNR=13
ZALV                                PcP    PcP    09 38 56.3 -1.3
      comp=Z,3.0nm,0.6s,baz=149,slow=4.0,SNR=1.6
ZALV                                ScP    ScP    09 42 42.0 -2.3
      comp=Z,2.1nm,0.9s,baz=159,slow=4.5,SNR=3.7
SEM   Semipalatinsk    51.84 325  eP      P      09 37 47.2 -0.7
      baz=326
SEM   Semipalatinsk    51.84 325  eP      P      09 37 47.2 -0.7
ARPS  Mount Arapiles   52.04 162    P      P      09 37 49.4 +0.2
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AAK   Ala-Archa          52.20 314 i P       P        09 37 50.1 -0.5
AAK                                pmax      pmax
      comp=Z,5.0nm,0.8s
KAAM  Kaadhehdhoo        52.38 261   P       P        09 37 53.3 +1.1
NTLH  Newcastle Hard     52.46 151   P       P        09 37 53.4 +1.0
SYDH  Sydney Hard Ro     52.73 152   P       P        09 37 55.6 +1.2
KURK  Kurchatov          52.89 325ceP        P        09 37 56.2 +0.8
KURK                               pmax      pmax
      comp=Z,47nm,1.4s
KURK  Kurchatov          52.89 325   P       P        09 37 56.1 +0.7
CAN   Canberra           53.30 155   P       P        09 37 59.6 +1.0
CAN                                pmax      pmax
      comp=Z,69nm,0.9s
CAN   Canberra           53.30 155   P       P        09 37 59.7 +1.1
BTLS  Baital             53.32 317  eP       P        09 37 58.5 -0.2
      baz=317
BTLS  Baital             53.32 317  eP       P        09 37 58.4 -0.2
BRAT  Ballarat           53.41 161   P       P        09 37 59.8 +0.6
CNB   Canberra Magne     53.45 155   P       P        09 38 00.8 +1.1
LIFNC LIFOU              53.78 128   P       P        09 38 03.7 +1.4
DZM   Mont Dzumac        53.92 130  eP       P        09 38 03.6 +0.2
      comp=Z,128nm,1.3s
DZM                                eS        S        09 45 25.7 -5.0
      comp=Z,65nm,26.4s
DZM                                eLR       LR       09 53 44.6
      comp=Z,188nm,24.6s
DZM   Mont Dzumac        53.92 130   P       P        09 38 04.6 +1.2
      comp=Z,22nm,0.5s,baz=260,slow=8.4,SNR=34
DZM   Mont Dzumac        53.92 130   P       P        09 38 04.9 +1.5
TOO   Toolangi           53.95 159   P       P        09 38 03.3  0.0
TOO                                pmax      pmax
      comp=Z,120nm,0.9s
TOO   Toolangi           53.95 159   P       P        09 38 04.1 +0.8
MLBS  Spotswood, Mel     53.98 160   P       P        09 38 05.0 +1.6
BTK   Batken             54.10 310   P       P        09 38 05.2 +0.7
BTK                                pmax      pmax
      comp=Z,13nm,1.1s
GEXS  Deakin Univers     54.12 161   P       P        09 38 05.9 +1.5
YATNC Mamie plateau,     54.25 129   P       P        09 38 07.6 +1.9
KBL   Kabul              54.36 303   P       P        09 38 07.0 +0.3
KBL                                pmax      pmax
      comp=Z,11nm,0.7s
KBL   Kabul              54.36 303   P       P        09 38 07.2 +0.5
      SNR=8.2
DZA   Taraz              54.49 314  eP       P        09 38 07.4 +0.2
      baz=314
DZA   Taraz              54.49 314  eP       P        09 38 07.4 +0.2
KKAR  Karatay Array      55.13 314   P       P        09 38 12.3 +0.5
IUG   Iuzhnay            55.21 313  eP       P        09 38 12.7 +0.1
      baz=313
IUG   Iuzhnay            55.21 313  eP       P        09 38 12.6 +0.1
BRLS  Borolday           55.58 314  eP       P        09 38 15.5 +0.3
      baz=313
BRLS  Borolday           55.58 314  eP       P        09 38 15.4 +0.3
BRZS  Berezniki          56.00 322  eP       P        09 38 18.3 +0.4
      comp=Z,5.1nm,0.7s,baz=322
BRZS  Berezniki          56.00 322  eP       P        09 38 18.3 +0.4
BRZS                               pmax      pmax
      comp=Z,5.0nm,0.7s
GLAD  Gladstone          57.87 159   P       P        09 38 31.9 +0.8
CORO  Coronation Par     57.99 160   P       P        09 38 33.2 +1.3
BVAR  Borovoye Array     58.49 325   PKP2bc           10 08 21.0
      comp=Z,1.3nm,0.8s,baz=242,slow=11,SNR=5.7
BRVK  Borovoye           58.56 325ceP        P        09 38 35.5 -0.4
BRVK                               pmax      pmax
      comp=Z,16nm,1.0s
BRVK  Borovoye           58.56 325   P       P        09 38 36.4 +0.5
TIXI  Tiksi              58.81   2ceP        P        09 38 36.6 -0.6
TIXI                               pmax      pmax
      comp=Z,6.0nm,0.5s
TAU   Tasmania Unive     59.35 161   P       P        09 38 42.2 +0.8
NRIK  Noril'sk           61.06 346   P       P        09 38 53.3 +0.7
      comp=Z,6.8nm,0.9s,baz=139,slow=6.6,SNR=7.0
NRIK  Noril'sk           61.06 346ceP        P        09 38 52.8 +0.2
NRIK                               pmax      pmax
      comp=Z,8.0nm,1.0s
MSVF  Nonsavu            61.07 119   P       P        09 38 54.5 +0.8
      comp=Z,122nm,0.9s,baz=266,slow=4.2,SNR=40
MSVF  Nonsavu            61.07 119   P       P        09 38 55.6 +1.9
MSVF                               pmax      pmax
      comp=Z,183nm,1.0s
MSVF  Nonsavu            61.07 119   P       P        09 38 56.7 +3.0
BILL  Bilibino           61.44  17⇓iP        P        09 38 55.4 +0.2
BILL                              i *PP      pP       09 39 19.8 -1.9
BILL                              i *SP      sP       09 39 33.1 -0.5
BILL                                                  09 39 36.0
BILL                                                  09 41 14.0
BILL                               *SS       sS       09 47 40.0  -10
BILL                               pmax      pmax
      comp=Z,20nm,1.7s
DGTI  Dogotuki           61.92 116   P       P        09 39 01.6 +2.3
JLN   Jalan Bani Buh     62.26 288   P       P        09 39 01.9 +0.3
TAVE  Taveuni            62.40 117   P       P        09 39 04.6 +2.1
WBK   Wadi Bani Khal     62.65 289   P       P        09 39 04.2  0.0
WSAR  Wadi Sarin         62.92 290   P       P        09 39 06.0  0.0
GEYT  Alibeck            63.52 306   P       P        09 39 11.5 +1.7
      comp=Z,2.5nm,0.5s,baz=129,slow=3.9,SNR=5.5
DQM   DQM                64.17 286   P       P        09 39 14.1 -0.1
BSY   Bisya              64.27 289   P       P        09 39 14.7 -0.2
SOHO  SOHO               64.79 291   P       P        09 39 19.0 +0.8
SOHO  SOHO               64.79 291   P       P        09 39 17.6 -0.6
ARQ   Araqi              64.85 290   P       P        09 39 18.6  0.0
BANOM Banah              64.91 293   P       P        09 39 20.0 +1.0
BANOM Banah              64.91 293   P       P        09 39 19.7 +0.7
UOSS  Minazif            65.05 292   P       P        09 39 19.9  0.0
UOSS  Minazif            65.05 292   P       P        09 39 20.0 +0.1
SHME  Shamm              65.05 293   P       P        09 39 20.5 +0.7
SHME  Shamm              65.05 293   P       P        09 39 20.5 +0.7
MASF  Masafi             65.07 292   P       P        09 39 21.2 +1.2
MSFE  Esma-Masafi        65.07 292   P       P        09 39 21.8 +1.8
HATD  Hatta, Dubai       65.12 292 i P       P        09 39 21.1 +0.7
      SNR=6.2
HATD  Hatta, Dubai       65.12 292   P       P        09 39 20.7 +0.4
ASHO  Ashiyiah           65.19 291   P       P        09 39 21.0 +0.2
ASHO  Ashiyiah           65.19 291   P       P        09 39 21.2 +0.3
UMQ   Umm Al-Quwin       65.51 292   P       P        09 39 23.6 +0.8
ALNE  Al Ain             65.51 291   P       P        09 39 24.2 +1.3
ALNE  Al Ain             65.51 291   P       P        09 39 23.7 +0.8
      SNR=5.1
NAZ   Nazwa, Dubai       65.54 292   P       P        09 39 23.5 +0.5
FAQ   Al Faqa, Dubai     65.61 291   P       P        09 39 24.3 +0.7
ASUD  Al Ashush, Dub     65.86 291   P       P        09 39 25.1  0.0
ASUD  Al Ashush, Dub     65.86 291   P       P        09 39 25.6 +0.5
ARU   Arti               66.05 326c iP       P        09 39 25.3 -0.4
ARU                                *PP       pP       09 39 51.0 -1.9
ARU                                                   09 39 54.8
ARU                                S         S        09 48 08.2 +3.2
ARU                                pmax      pmax
      comp=Z,9.0nm,0.7s
UMZA  Um Al Zommool      66.15 289   P       P        09 39 26.6 -0.4
SHAO  Shalim             66.16 284   P       P        09 39 27.3 +0.2
SHAO  Shalim             66.16 284   P       P        09 39 27.8 +0.7
DMTO  DMTO               66.83 284   P       P        09 39 31.9 +0.5
MZWR  Madinat Zayed      67.24 291   P       P        09 39 34.2 +0.3
DOK   Doka               67.50 285   P       P        09 39 35.8 +0.1
      SNR=5.9
RBK   Rabkut             67.56 284   P       P        09 39 36.4 +0.3
WHFO  Wadi Hawf          67.92 284   P       P        09 39 38.3 -0.1
      SNR=6.1
GHWR  Ruwais             68.14 291   P       P        09 39 39.8 +0.2
ABTO  Aybut              68.44 284   P       P        09 39 41.9 +0.3
SOCY  Socotra            68.51 278   P       P        09 39 41.6 -0.5
SLWR  Sila               69.21 291   P       P        09 39 46.9 +0.7
NEZ   North Egmont       69.51 141   P       P        09 39 50.5 +2.8
HIZ   Hauiti             69.53 140   P       P        09 39 49.9 +2.2
QRZ   Quartz Range       69.53 143   P       P        09 39 49.0 +1.2
TRNA  Turayna            69.59 292   P       P        09 39 49.0 +0.5
SHMA  Al-Shehemyia       69.71 293   P       P        09 39 49.7 +0.4
LREZ  Lake Rotokare      69.82 141   P       P        09 39 51.8 +2.3
VRZ   Vera Road          69.83 140   P       P        09 39 51.8 +2.1
SAKB  Bahrain            70.09 293   P       P        09 39 52.1 +0.6
THZ   Tophouse           70.34 143   P       P        09 39 52.5 -0.3
RPZ   Rata Peaks         70.56 146   P       P        09 39 54.6 +0.6
MSEY  Mahe Island        70.62 260   P       P        09 39 55.6 +0.6
LTZ   Lake Taylor        70.63 145   P       P        09 39 55.0 +0.5
URZ   Urewera            70.82 138   P       P        09 39 55.2 -0.4
      comp=Z,13nm,1.0s,baz=122,slow=23,SNR=6.3
RUGZ  Raukumara Rang     71.03 138   P       P        09 39 57.8 +0.7
KIRV  Kirov              71.28 328ceP        P        09 39 58.4 +0.3
BELG  Belogornoye        71.84 321 i P       P        09 40 00.8 -0.8
BELG                               pmax      pmax
      comp=Z,2.0nm,0.8s
QRN   Al-Qurain          72.17 296  eP       P        09 40 03.7 -0.3
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UMR   Umm Al-Rimmam      72.27 297  eP       P        09 40 04.7 +0.1
KBD   Kabd               72.32 297  eP       P        09 40 04.8 -0.2
RDF   Al-Radifah         72.47 296  eP       P        09 40 05.6 -0.3
MIB   Mutribah           72.58 297  eP       P        09 40 06.0 -0.5
RST   Umm Al-Ruwaisa     72.90 297  eP       P        09 40 07.7 -0.7
PRGR  Permogore          73.43 331  eP       P        09 40 09.5 -1.3
PRGR                               pmax      pmax
      comp=Z,55nm,1.3s
GCSA  Galena City Sc     73.64  26   P       P        09 40 13.0 +1.0
      baz=265
CHIR  Chirikof Islan     73.84  35   P       P        09 40 14.6 +1.2
      baz=269
TTA   Tatalina           73.90  28   P       P        09 40 14.3 +0.6
      baz=267
GNI   Garni              73.95 308   LR      LR       10 17 44.1
      comp=Z,63nm,19.0s,baz=86,slow=40
A21K  Barrow             74.37  19   P       P        09 40 16.5 +0.4
      baz=264
L19K  White Mountain     74.40  29   P       P        09 40 17.6 +1.0
      baz=268
ZEI   Tsey               74.43 311  eP       P        09 40 18.9 +1.6
ZEI                                pmax      pmax
      comp=Z,7.0nm,1.4s
N19K  Bonanza Creek      74.54  30   P       P        09 40 19.3 +1.9
      baz=269
J20K  Nowinta River      74.79  27   P       P        09 40 20.3 +1.6
      baz=268
K20K  Telida             74.80  28   P       P        09 40 19.9 +1.1
      baz=268
RAYN  Ar Rayn            74.90 291 i P       P        09 40 20.9 +0.7
      SNR=32
RAYN  Ar Rayn            74.90 291   P       P        09 40 20.4 +0.1
RAYN                               pmax      pmax
      comp=Z,38nm,0.9s
RAYN  Ar Rayn            74.90 291   P       P        09 40 20.5 +0.2
KBZ   Khabaz             75.10 312   P       P        09 40 21.1 +0.2
      comp=Z,4.3nm,0.9s,baz=80,slow=3.9,SNR=6.0
KBZ                                LR        LR       10 16 38.2
      comp=Z,75nm,19.6s,baz=80,slow=38
KBZ   Khabaz             75.10 312ceP        P        09 40 21.7 +0.8
KBZ                                pmax      pmax
      comp=Z,11nm,1.3s
KIV   Kislovodsk         75.24 312  eP       P        09 40 22.7 +0.8
KIV                                pmax      pmax
      comp=Z,12nm,1.1s
KIV                                MLR       MLR
      comp=Z,60nm,18.0s
H21K  Melozitna Rive     75.40  25   P       P        09 40 23.4 +1.1
      baz=269
PPLA  Purkeypile         75.65  28   P       P        09 40 25.0 +1.1
      baz=270
CAST  Castle Rocks       75.69  27   P       P        09 40 24.8 +0.8
      baz=270
I21K  Tanana             75.74  26   P       P        09 40 25.8 +1.6
      baz=270
BPAW  Bear Paw Mtn.      76.18  27   P       P        09 40 27.8 +1.1
      baz=271
MLY   Manley             76.27  26   P       P        09 40 28.3 +1.0
      baz=271
KLMR  Klimovskoe         76.37 330  eP       P        09 40 26.7 -1.1
KLMR                              e*PP       pP       09 40 51.6 -3.8
KLMR                               pmax      pmax
      comp=Z,29nm,1.3s
KLMR  Klimovskoe         76.37 330  eP       P        09 40 26.7 -1.1
KLMR                               AMP                09 40 33.6
      comp=Z,29nm,1.3s
KLMR                              epP        pP       09 40 51.6 -3.8
BRSE  Bradley Lake S     76.41  31   P       P        09 40 28.9 +0.8
      baz=272
COLD  Coldfoot           76.45  24   P       P        09 40 29.1 +0.9
      baz=271
TRF   Thorofare Moun     76.50  27   P       P        09 40 29.4 +0.6
      baz=272
CUT   Chulitna           76.54  29   P       P        09 40 29.8 +1.1
      baz=272
TOLK  Toolik Lake Re     76.67  22   P       P        09 40 31.0 +1.5
      baz=271
I23K  Minto, Yukon-K     76.85  26   P       P        09 40 32.4 +2.0
      baz=272
MCK   McKinley           77.10  27   P       P        09 40 32.2 +0.3
      baz=273
PMR   Palmer             77.12  29   P       P        09 40 32.8 +0.8
      baz=273
RND   Reindeer           77.15  27   P       P        09 40 32.5 +0.3
RND                                pmax      pmax
      comp=Z,21nm,1.2s
H24K  Noodor Dome        77.44  25   P       P        09 40 34.3 +0.6
      baz=273
TCOL  CIGO, UAF Yank     77.50  26   P       P        09 40 35.1 +1.1
      baz=274
PWL   Port Wells         77.55  30   P       P        09 40 34.5 +0.1
      baz=274
POKR  Poker Plat Res     77.67  26   P       P        09 40 36.1 +1.1
      baz=274
WAT6  Susitna Watana     77.71  28   P       P        09 40 36.3 +0.8
      baz=274
DHY   Denali Highway     77.84  28   P       P        09 40 37.9 +1.7
      baz=274
ILAR  Eielson Array      77.92  26   P       P        09 40 35.8 -0.7
      comp=Z,2.0nm,0.8s,baz=252,slow=6.1,SNR=16
ILAR                               PKKPbc    PKKPbc   09 59 35.7 -3.2
      comp=Z,1.2nm,0.9s,baz=66,slow=1.4,SNR=7.0
ILAR  Eielson Array      77.92  26   P       P        09 40 37.2 +0.8
HDA   Harding Lake       77.92  26   P       P        09 40 35.9 -0.5
      baz=274
SCM   Sheep Creek Mo     77.96  29   P       P        09 40 38.1 +1.4
      baz=275
SBV   Sambava            78.29 253   P       P        09 40 39.6 +0.2
OBN   Obninsk            78.32 324⇓eP        P        09 40 38.8 +0.1
OBN                               i                   09 40 49.6
OBN                               e*PP       pP       09 41 04.9 -1.8
OBN                                *SP       sP       09 41 19.0 +0.5
OBN                                SS        SS       09 55 25.0 -4.4
OBN                                pmax      pmax
      comp=Z,9.0nm,1.2s
PRP   Porcupine Dome     78.43  25   P       P        09 40 39.4  0.0
      baz=276
M24K  Tolsona, Glenn     78.47  29   P       P        09 40 40.8 +1.1
      baz=276
J25K  Salcha River,      78.59  26   P       P        09 40 40.4 +0.2
      baz=276
KLU   Klutina            78.66  29   P       P        09 40 41.6 +1.0
      baz=276
SCRK  Sand Creek         79.26  27   P       P        09 40 44.4 +0.5
      baz=277
J26L  Joseph Creek       79.37  26   P       P        09 40 44.8 +0.2
      baz=278
CTG   Chitna Glacier     80.92  30   P       P        09 40 54.6 +1.6
      baz=280
ARCES ARCESS Array B     81.13 339   P       P        09 40 53.9 +0.2
      comp=Z,2.3nm,0.5s,baz=76,slow=6.2,SNR=14
DAWY  Dawson             81.24  26   P       P        09 40 55.7 +1.2
      baz=281
I29M  Ogilvie Camp,      81.44  25   P       P        09 40 56.8 +1.3
      baz=282
EPYK  Eagle Plains       81.85  24   P       P        09 40 58.3 +0.6
      baz=283
ABPO  Ambohimpanom       82.33 249   P       P        09 41 01.0 -0.2
ABPO                               pmax      pmax
      comp=Z,30nm,0.9s
BR131 Keskin Array S     82.47 309   P       P        09 41 01.5  0.0
BR131                              pmax      pmax
      comp=Z,8.0nm,0.9s
BR131 Keskin Array S     82.47 309   P       P        09 41 01.9 +0.3
      SNR=5.6
BRTR  Keskin Array B     82.47 309   P       P        09 41 00.9 -0.6
      comp=Z,3.7nm,0.7s,baz=106,slow=4.5,SNR=15
BRTR                               LR        LR       10 21 02.7
      comp=Z,39nm,18.6s,baz=94,slow=38
BRTR  Keskin Array B     82.47 309 i P       P        09 41 01.6  0.0
BRTR                               pmax      pmax
      comp=Z,4.0nm,0.7s
INK   Inuvik             82.56  22   P       P        09 41 01.6 +0.4
      comp=Z,4.9nm,0.8s,baz=296,slow=5.4,SNR=25
INK                                PKKPbc    PKKPbc   09 59 25.4 -3.2
      comp=Z,8.1nm,1.2s,baz=86,slow=1.3,SNR=7.0
INK   Inuvik             82.56  22   P       P        09 41 01.9 +0.8
      baz=286
M30M  Minto, Yukon       82.71  27   P       P        09 41 03.9 +1.7
      baz=284
FINES FINESS Array B     82.74 331   P       P        09 41 02.3  0.0
      comp=Z,2.3nm,0.5s,baz=292,slow=5.1,SNR=19
VSU   Vasula             83.11 328  eP       P        09 41 04.2  0.0
MNK   Minsk              83.38 324 i P       P        09 41 06.7 +1.0
MNK                               i *PP      pP       09 41 32.7 -1.3
MNK                               i                   09 44 15.0
MNK                               i PPP      PPP      09 46 11.9
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MNK                               i S        S        09 51 17.7  0.0
MNK                               i SS       SS       09 56 42.5 -2.3
MNK                               i SSS      SSS      10 00 18.6
MNK                                pmax      pmax
      comp=Z,54nm,1.3s
MNK                                MLR       MLR
      comp=E,40nm,20.0s
MNK                                MLR       MLR
      comp=Z,202nm,25.0s
MNK                                MLR       MLR
      comp=N,168nm,14.0s
MNK   Minsk              83.38 324 i P       P        09 41 06.8 +1.1
MNK                               i P        P        09 41 06.8 +1.1
MNK                               i P        P        09 41 06.8 +1.1
      comp=Z,54nm,1.3s,baz=258
MNK                               i pP       pP       09 41 32.8 -1.2
MNK                               i PP       PP       09 44 15.0 -3.6
MNK                               i PPP      PPP      09 46 11.9
MNK                               i S        S        09 51 17.7 +0.1
MNK                               i SS       SS       09 56 42.5 -2.3
MNK                               i SSS      SSS      10 00 18.6
MNK                               i LR       LR       10 16 36.6
MNK                               i LRM      MLR      10 20 32.0
      comp=E,40nm,20.0s
MNK                               i LRM      MLR      10 20 34.5
      comp=Z,202nm,25.2s
MNK                               i LRM      MLR      10 20 38.4
      comp=N,168nm,14.1s
AKASG Malin Array Be     83.40 320   P       P        09 41 05.4 -0.5
      comp=N,9.7nm,0.9s,baz=63,slow=4.5,SNR=26
AKASG Malin Array Be     83.40 320   P       P        09 41 05.6 -0.3
AKBB  Malin Array Si     83.40 320ceP        P        09 41 07.0 +1.1
N31M  Braeburn, Yuko     83.44  28   P       P        09 41 08.0 +2.1
      baz=285
VOI   Vohitsoka          83.54 246   P       P        09 41 06.8 -0.5
VOI   Vohitsoka          83.54 246   P       P        09 41 07.2 -0.1
M31M  Drury Creek, Y     83.89  28   P       P        09 41 09.7 +1.5
      baz=286
NACGM Naroch             83.91 325 i P       P        09 41 09.1 +0.7
LEF   Lefka              83.92 304 ⇑P        P        09 41 09.6 +0.7
A36M  Sachs Harbour      83.99  17   P       P        09 41 09.6 +1.1
      baz=293
WHY   Whitehorse         84.08  29   P       P        09 41 11.1 +1.8
      baz=286
SORM  Soroca             84.51 318 ⇓P        P        09 41 11.4 -0.1
TLCR                     84.86 315 ⇓P        P        09 41 13.8 +0.4
JURR  Jurilovca          84.92 315 ⇓P        P        09 41 14.1 +0.4
TPGR  Topolog            85.21 315 ⇑P        P        09 41 15.1 -0.1
VLDR  Vladesti           85.22 316 ⇑P        P        09 41 15.8 +0.6
ISP   Isparta            85.23 308   P       P        09 41 14.5 -1.1
ISP                                pmax      pmax
      comp=Z,29nm,0.8s
TIRR  Tirgusor           85.31 314 ⇑P        P        09 41 15.9 +0.2
SCTR  Scanteiesti        85.31 316 ⇓P        P        09 41 16.0 +0.3
PABE  Paberze            85.31 326  eP       P        09 41 15.5 +0.1
CFR   Carcaliu           85.33 315 ⇓P        P        09 41 16.3 +0.5
HARR  Harsova            85.59 315 ⇓P        P        09 41 17.8 +0.7
TESR  Tescani            86.02 317 ⇑P        P        09 41 19.7 +0.5
PRAR  RASCA              86.09 318 ⇓P        P        09 41 19.8 +0.3
VRI   Vrincioaia         86.13 316 ⇓P        P        09 41 20.3 +0.5
PLOR  Plostina           86.19 316 ⇓P        P        09 41 20.9 +0.8
COVR  Voineasa-Covas     86.49 316 ⇓P        P        09 41 22.1 +0.5
BURAR Bucovina Array     86.69 318 ⇑P        P        09 41 23.0 +0.5
OZUR                     86.70 316 ⇑P        P        09 41 23.3 +0.7
MLR   Muntele Rosu       86.75 316 ⇓P        P        09 41 23.3 +0.4
MLR   Muntele Rosu       86.75 316   P       P        09 41 23.0  0.0
MLR                                pmax      pmax
      comp=Z,18nm,1.1s
LVV   L'vov              86.84 320  eP       P        09 41 23.2 +0.1
LVV                                pmax      pmax
      comp=Z,70nm,1.5s
KIBK  Kibwezi            86.95 267   P       P        09 41 25.1 +0.7
      SNR=7.7
DOPR  Dopca              87.01 316 ⇓P        P        09 41 24.8 +0.8
VOIR                     87.38 316 ⇑P        P        09 41 26.4 +0.5
KMBO  Kilima Mbogo       87.45 268   P       P        09 41 27.8 +0.7
      comp=Z,3.0nm,0.7s,baz=54,slow=5.6,SNR=11
KMBO  Kilima Mbogo       87.45 268 i P       P        09 41 27.9 +0.9
      SNR=6.8
KMBO  Kilima Mbogo       87.45 268   P       P        09 41 27.8 +0.7
ARR   Arges              87.68 316 ⇑P        P        09 41 27.5 +0.2
KOLS  Kolonicke sedl     88.20 320  eP       P        09 41 30.9 +1.3
KOLS  Kolonicke sedl     88.20 320  eP       P        09 41 30.9 +1.3
TRPA  Tarpa              88.27 319 ⇑P        P        09 41 30.5 +0.5
TRPA  Tarpa              88.27 319  eP       P        09 41 29.6 -0.4
TRPA  Tarpa              88.27 319  eP       P        09 41 29.3 -0.6
UZH   Uzhgorod           88.28 320  eP       P        09 41 31.0 +1.0
UZH                               e*PP       pP       09 41 56.8 -1.7
DRGR                     88.56 318 ⇓P        P        09 41 31.5 +0.1
HFS   Hagfors            88.90 332   PKKPbc  PKKPbc   09 59 09.4 -3.9
      comp=Z,1.9nm,0.7s,baz=242,slow=3.1,SNR=4.8
SIRR  Siria              89.41 317 ⇓P        P        09 41 36.0 +0.6
VTS   Vitosha            89.42 314 ⇑P        P        09 41 36.1 +0.4
NB2   NORSAR Subarra     89.62 333   P       P        09 41 35.1 -1.0
      comp=Z,14nm,1.7s,baz=64,slow=4.8
NB2   NORSAR Subarra     89.62 333   P       P        09 41 35.1 -1.0
      baz=64,slow=4.8
NOA   NORSAR Array B     89.62 333   P       P        09 41 35.2 -0.9
      comp=Z,1.4nm,0.7s,baz=67,slow=4.7,SNR=4.6
NOA                                LR        LR       10 25 18.5
      comp=Z,102nm,19.2s,baz=60,slow=38
BZS   Buzias             89.64 317 ⇓P        P        09 41 36.5  0.0
ZAPS  Zavoj              89.65 314  eP       P        09 41 37.1 +0.5
GKP   Gorka Klasztor     89.76 325  eP       P        09 41 36.7 -0.1
BOSS  Bosilegrad         89.99 314  eP       P        09 41 37.6 -0.6
PSZ   Piszkesteto        90.02 319 ⇓P        P        09 41 38.5 +0.3
PSZ   Piszkesteto        90.02 319  eP       P        09 41 37.9 -0.4
PSZ   Piszkesteto        90.02 319  eP       P        09 41 38.6 +0.3
PPT2  Papeete2           90.13 108  eS       S        09 52 16.8 -7.4
      comp=Z,430nm,27.0s
PPT2  Papeete2           90.13 108  eLR      LR       10 10 11.1
      comp=Z,381nm,33.2s
BOVS  Bovan              90.19 315  eP       P        09 41 37.9 -1.1
BARS  Barje              90.36 314  eP       P        09 41 35.6 -4.3
BARS  Barje              90.36 314  eP       P        09 41 39.8 -0.1
VYHS  Vyhne              90.50 320  eP       P        09 41 41.7 +1.3
VYHS  Vyhne              90.50 320  eP       P        09 41 41.7 +1.3
SELS  Selova             90.72 315  eP       P        09 41 40.8 -0.8
GRUS  Gruza              90.79 315  eP       P        09 41 40.8 -1.0
MORC  Moravsky Berou     90.84 322  eP       P        09 41 41.6 -0.4
FRGS  Fruska Gora        90.99 317 ⇓P        P        09 41 43.0 +0.2
FRGS  Fruska Gora        90.99 317  eP       P        09 41 41.9 -0.9
JAVC  Velka Javorina     91.09 321  eP       P        09 41 45.2 +2.0
DIVS  Divibare           91.21 316  eP       P        09 41 43.9  0.0
IVAS  Ivanjica           91.28 315  eP       P        09 41 43.5 -0.7
DPC   Dobruska-Polom     91.36 322  eP       P        09 41 44.9 +0.5
DPC   Dobruska-Polom     91.36 322  eP       P        09 41 44.9 +0.5
MAW   Mawson             91.50 200   P       P        09 41 43.1 -1.3
      comp=Z,1.9nm,0.7s,baz=51,slow=6.5,SNR=2.7
SJES  Sjenica            91.50 315  eP       P        09 41 46.0 +0.7
TBI   Tubuai             91.55 113  eS       S        09 52 29.9 -6.9
      comp=Z,398nm,23.2s
TBI   Tubuai             91.55 113  eLR      LR       10 11 11.6
      comp=Z,215nm,35.5s
VRAC  Vranov             91.59 321 ⇓P        P        09 41 45.9 +0.4
VRAC  Vranov             91.59 321  eP       P        09 41 45.8 +0.4
BBLS  Lazi&#263;i        91.69 316  eP       P        09 41 46.8 +0.7
MPLH  Magyarpolny        91.78 319  eP       P        09 41 45.8 -0.5
KOVH  Kovagotottos       91.80 318  eP       P        09 41 45.8 -0.7
KRUC  Moravsky           91.80 321  eP       P        09 41 47.0 +0.6
YKA   Yellowknife Ar     92.14  23   P       P        09 41 48.3 +0.7
      comp=Z,1.1nm,0.4s,baz=302,slow=4.6,SNR=49
YKA                                PP        PP       09 45 30.0 +1.5
      comp=Z,0.9nm,1.1s,baz=298,slow=7.8,SNR=3.8
YKA                                PKiKP     PKiKP    09 46 36.7 -0.1
      comp=Z,0.2nm,0.5s,baz=317,slow=1.9,SNR=5.7
YKA                                PKKPbc    PKKPdf   09 59 01.4 -0.2
      comp=Z,2.1nm,0.7s,baz=124,slow=2.6,SNR=33
YKA                                PKPPKP    P'P'df   10 07 07.5 -6.5
      comp=Z,0.3nm,0.9s,baz=119,slow=2.0,SNR=3.6
YKA                                LR        LR       10 27 19.4
      comp=Z,38nm,18.5s,baz=0.0,slow=38
PDG   Podgorica          92.27 314 ⇑P        P        09 41 48.6 -0.1
CONA  Conrad Observa     92.56 320  eP       P        09 41 50.4 +0.3
      comp=Z,6.4nm,1.1s
VNDA  Vanda              92.73 172   P       P        09 41 48.8 -1.2
      comp=Z,3.9nm,0.6s,baz=325,slow=6.5,SNR=44
VNDA                               LR        LR       10 25 29.6
      comp=Z,64nm,18.8s,baz=338,slow=37
CLL   Collm              92.92 324  eP       P        09 41 51.0 -0.5
CLL   Collm              92.92 324  eP       P        09 41 51.0 -0.5
ARSA  Arzberg            93.03 320  eP       P        09 41 51.9 -0.2
      comp=Z,4.0nm,0.9s
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CKRC	Cesky Krumlov	93.16	322	eP	P	09 41 54.5	+1.8
KHC	Kasperske Hory	93.48	322	eP	P	09 41 54.9	+0.7
KHC	Kasperske Hory	93.48	322	eP	P	09 41 54.9	+0.7
GERES	GERESS Array B	93.52	322	P	P	09 41 54.5	0.0
	comp=Z,1.8nm,0.8s,baz=56,slow=5.2,SNR=14						
GERES				PKKPbc	PKKPdf	09 58 60.0	+0.8
	comp=Z,1.4nm,0.8s,baz=208,slow=2.6,SNR=10						
SOKA	Soboth	93.56	319	eP	P	09 41 54.5	-0.2
	comp=Z,7.0nm,0.9s						
MOA	Molln	93.58	321	eP	P	09 41 55.6	+0.9
	comp=Z,13nm,0.8s,SNR=12						
OBKA	Obir	93.93	319	eP	P	09 41 56.7	+0.3
	comp=Z,5.6nm,0.9s						
KBA	Koelnbreinsper	94.46	320	eP	P	09 41 58.7	-0.2
	comp=Z,5.5nm,0.7s,SNR=9.5						
ABTA	Abfaltersbach	95.11	320	eP	P	09 42 01.3	-0.6
	comp=Z,8.2nm,0.8s,SNR=10.0						
WTTA	Wattenberg	95.44	321	eP	P	09 42 03.2	-0.3
	comp=Z,11nm,0.7s,SNR=11						
WATA	Walderalm	95.45	321	eP	P	09 42 03.0	-0.4
	comp=Z,4.1nm,0.8s,SNR=4.1						
SQTA	Sankt Quirin	95.72	321	iP	P	09 42 04.6	0.0
	comp=Z,9.0nm,0.8s						
MOTA	Moosalm	95.73	321	eP	P	09 42 04.6	-0.2
	comp=Z,7.0nm,0.9s,SNR=6.8						
FETA	Feichten	96.10	321	eP	P	09 42 06.7	+0.3
	comp=Z,6.0nm,0.9s,SNR=10						
NVAR	Mina Array Bea	102.38	46	P	Pdif	09 42 35.8	+1.0
	comp=Z,1.5nm,0.7s,baz=288,slow=4.5,SNR=13						
NVAR				PKKPbc	PKKPbc	09 58 35.0	-1.8
	comp=Z,0.9nm,0.8s,baz=136,slow=3.7,SNR=6.8						
NVAR				PKKPab	PKKPab	09 58 56.9	
	comp=Z,0.8nm,0.6s,baz=133,slow=4.1,SNR=5.4						
PDAR	Pinedale Array	105.84	38	PKKPbc	PKKPbc	09 58 25.1	-1.6
	comp=Z,0.4nm,0.9s,baz=101,slow=7.7,SNR=3.7						
VNA2	Neumayer--Watz	115.00	196	PKPdf	PKPdf	09 47 18.4	+0.1
	baz=91,slow=1.0						
VNA3	Neumayer Olymp	115.39	195	PKPdf	PKiKP	09 47 18.8	-0.3
VNA1	Neumayer--Stat	115.40	196	PKPdf	PKPdf	09 47 19.5	+0.5
TXAR	Lajitas Array	117.47	47	PKP	PKiKP	09 47 25.2	+0.7
	comp=Z,2.2nm,0.8s,baz=236,slow=0.9,SNR=23						
TXAR				PKKPbc	PKKPbc	09 57 46.8	-1.1
	comp=Z,1.5nm,0.9s,baz=104,slow=5.3,SNR=11						
TORD	Torodi Ar. Bea	117.58	292	PKP	PKPdf	09 47 23.7	-1.1
	comp=Z,0.9nm,0.7s,baz=36,slow=2.4,SNR=7.2						
TORD				PP	PP	09 48 29.5	-8.9
	comp=Z,1.7nm,0.8s,baz=65,slow=6.9,SNR=7.8						
TORD				PKKPbc	PKKPbc	09 57 46.2	-0.6
	comp=Z,3.2nm,0.8s,baz=258,slow=4.1,SNR=5.5						
JCT	Junction City	119.47	44	PKIKP	PKiKP	09 47 28.3	0.0
KOWA	Kowa	122.12	296	PKP	PKPdf	09 47 32.2	-1.4
	comp=Z,3.0nm,0.8s,baz=46,slow=1.4,SNR=8.5						
KOWA				PKKPbc	PKKPbc	09 57 30.5	+0.2
	comp=Z,3.8nm,0.8s,baz=250,slow=7.0,SNR=8.1						
WVT	Waverly	122.55	31	PKIKP	PKiKP	09 47 34.2	+0.1
DBIC	Dimbokro	125.96	288	PKP	PKPdf	09 47 39.5	-1.4
	comp=Z,3.5nm,0.9s,baz=175,slow=6.3,SNR=4.1						
KIC	Kosan Boka	125.97	288	ePKIKP	PKPdf	09 47 40.2	-0.8
	comp=Z,27nm,1.1s						
TIC	Toumodi	126.12	288	ePKIKP	PKPdf	09 47 40.6	-0.7
LIC	Lamto	126.28	288	ePKIKP	PKPdf	09 47 40.8	-0.8
	comp=Z,31nm,1.3s						
SJG	San Juan	147.51	19	PKP2	PKiKP	09 48 24.3	-0.8
PLCA	Paso Flores	149.31	157	PKPbc	PKiKP	09 48 27.9	-0.4
	comp=Z,42nm,0.8s,baz=211,slow=3.5,SNR=80						
PLCA	Paso Flores	149.31	157	PKP2	PKiKP	09 48 28.1	-0.2
UREC	San Jos de Ur	151.51	45	eP	PKPbc	09 48 33.1	0.0
ZARC	Zaragoza, Cauc	152.16	44	eP	PKiKP	09 48 34.8	-0.1
CBOC	Ciudad Bolivar	152.48	49	eP	PKPbc	09 48 35.5	0.0
OCAC	Ocana	152.63	41	eP	PKiKP	09 48 36.6	+0.6
PLMC	San Jos del P	152.92	51	eP	PKiKP	09 48 37.6	+1.0
GUY2C	Guyana, Caldas	153.39	49	eP	PKiKP	09 48 38.3	+0.3
NORC	Norcasia	153.52	47	eP	PKPbc	09 48 37.4	-0.2
SPBC	San Pablo de B	154.02	46	eP	PKiKP	09 48 39.2	+0.3
ORTC	Ortega, Tolima	154.35	51	eP	PKPbc	09 48 38.8	-0.6
CHIC	Chingaza	154.98	47	eP	PKPdf	09 48 32.3	-0.1
CPUP	Villa Florida	166.51	173	PKP	PKPdf	09 48 43.2	-0.7
	comp=Z,3.8nm,0.9s,baz=46,slow=1.0,SNR=4.0						
CPUP				PKPab	PKPab	09 49 45.7	-0.5
	comp=Z,4.9nm,0.8s,baz=219,slow=3.2,SNR=4.6						
CPUP	Villa Florida	166.51	173	PKIKP	PKPdf	09 48 44.0	+0.1
CPUP						09 49 44.1	
LPAZ	La Paz	167.42	107	PKP	PKPdf	09 48 45.8	+0.2
	comp=Z,6.0nm,1.0s,baz=4.2,slow=2.9,SNR=14						
LPAZ				PKPab	PKPab	09 49 52.9	+1.3
	comp=Z,5.5nm,0.9s,baz=335,slow=0.8,SNR=8.7						
LPAZ				PP	PP	09 53 41.8	+1.4
	comp=Z,3.4nm,1.1s,baz=285,slow=5.4,SNR=4.9						
BDFB	Brasilia	172.13	249	PKP	PKPdf	09 48 46.6	-1.2
	comp=Z,3.1nm,0.9s,baz=355,slow=11,SNR=4.1						
BDFB				PKPab	PKPab	09 50 12.8	+0.9
	comp=Z,1.0nm,0.4s,baz=184,slow=11,SNR=3.4						

JMA 20 09:32:04.2±0.1, 29°.13N×129°.18E, h10^{km}±1^{km}, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTAJ	Takarajima	0.03	41	P	Pg	09 32 06.1	0.0
JTAJ				S	Sg	09 32 07.4	0.0
JAM	Amami Oshima	0.81	152	P	Pg	09 32 19.6	-0.2
JAM				eS	Sg	09 32 30.6	+0.3
JAMN	Amaminishikomi	0.88	180	P	Pg	09 32 21.0	-0.2
JAMN				eS	Sb	09 32 33.5	0.0

TAP 20 09:32:30.3, 21°.66N×121°.56E, h31^{km}, ML3.0, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.38	359	P	Pb	09 32 39.2	+0.1
	baz=360						
LAY				iS	Sb	09 32 45.3	+0.3
	baz=360						
TSEB	Hengchuen, Pin	0.66	291	eP	Pn	09 32 43.8	+0.3
	baz=290						
TSEB				iS	Sn	09 32 55.0	+2.2
	baz=290						
HEN	Hengchun	0.84	294	iP	Pb	09 32 46.2	-0.2
	baz=303						
HEN				eS	Sb	09 32 57.8	+0.5
	baz=303						
EAST	Anshuo	0.98	318	eP	Pn	09 32 45.5	-2.5
	baz=318						
EAST				eS	Sb	09 33 01.7	+0.3
	baz=318						
LDUT	Ludao	1.01	355	eS	Sn	09 32 60.0	-1.6
	baz=355						
SCZT	Fangliau	1.12	309	P	Pb	09 32 50.8	-0.5
	baz=320						
SCZT				eS	Sb	09 33 05.9	+0.4
	baz=320						
TTN	Taitung	1.15	341	P	Pn	09 32 50.3	0.0
	baz=341						
TTN				eS	Sn	09 33 03.8	-1.2
	baz=341						
TWGBT	Beinan	1.23	339	P	Pn	09 32 50.8	-0.7
	baz=328						
TWGBT				S	Sn	09 33 07.3	+0.2
	baz=328						
TWG	Pinlang	1.24	339	iP	Pn	09 32 51.1	-0.4
	baz=328						
TWG				S	Sn	09 33 07.1	-0.1
	baz=328						
EDH	Donghe	1.33	350	eP	Pn	09 32 53.4	+0.6
	baz=359						
EDH				eS	Sn	09 33 08.5	-0.8
	baz=359						

GRAL 20 09:38:49.1±0.3, 33°.01N×35°.42E, h6^{km}±3^{km}, MD2.6
GII 20 09:38:50.3±0.1, 33°.12N×35°.46E, h4^{km}, Mm1.9/5

ISC 20 09:38:50.3±0.9, 33°.10N±0°.04×35°.47E±0°.04, h15^{km}±5^{km}, n15, $\sigma 0^{s}.68$/27, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMC7	Mount Meron ar	0.10	217	Pg	Pg	09 38 53.1	-0.6
MMA0B	Mount Meron ar	0.10	211	Pg	Pg	09 38 53.1	-0.6
MMA0B				Sg	Sg	09 38 55.5	-0.4
GEM	Giv'at Ha'Em	0.20	57	Pg	Pg	09 38 54.7	-0.2
GEM				Sg	Sg	09 38 58.4	+0.3
HNTI	Hanita	0.24	266	Pg	Pg	09 38 55.6	-0.1
HNTI				Sg	Sg	09 38 59.7	+0.4
NATI	Neve Ativ	0.28	55	Pg	Pg	09 38 56.0	-0.2
NATI				Sg	Sg	09 39 00.9	+0.6
BLGI	Bet Lehem HaGe	0.43	212	Pg	Pb	09 38 59.7	0.0
BLGI				Sg	Sb	09 39 06.4	+0.4
QRWL	Qaraoun	0.48	22	eP	Pg	09 38 59.6	-0.4
QRWL				eS	Sg	09 39 07.3	+0.9
RCY	Rachaya	0.50	38	eP	Pg	09 38 59.9	-0.4
RCY				eS	Sg	09 39 07.8	+0.7
DQRL	Deir Qamar	0.61	8	eP	Pg	09 39 01.7	-0.6
DQRL				eS	Sg	09 39 11.2	+0.7
OFRI	`Ofer	0.63	220	Pg	Pb	09 39 03.0	0.0
OFRI				Sg	Sb	09 39 12.5	+0.9
MMLI	Mount Malkishu	0.66	183	Pg	Pb	09 39 03.9	+0.3
MMLI				Sg	Sn	09 39 14.2	-1.2
BHL	Bhannes	0.82	11	eP	Pg	09 39 05.5	-0.7
HMDT	Nahal Hemdat	0.85	176	Pg	Pb	09 39 07.0	+0.2
HMDT				Sg	Sn	09 39 19.4	-0.5
SLTI	Sal'it	0.93	203	Pg	Pn	09 39 09.0	+0.1
SLTI				Sg	Sn	09 39 22.5	+0.5
HWQ	Hawqa	1.24	19	eP	Pg	09 39 12.6	-1.7

WEL 20 09:39:51.9, 39°S±7°×17°6E±1°0, h5^{km}±15^{km}, M1.0/6, ML0.8/6, MLv1.0/6, Error ellipse: s-maj=0.0km s-min=0.0km az=69.2, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FWVZ	Far West T-bar	0.08	240	P	Pg	09 39 54.6	+0.6
NNVZ	North Ngauruho	0.09	343	P	Pg	09 39 54.7	+0.8
ETVZ	East Tongariro	0.09	32	P	Pg	09 39 55.0	+1.0
ETVZ				S	Sg	09 39 56.0	+0.6
TMVZ	Te Maari	0.11	24	P	Pg	09 39 55.0	+0.8
WTVZ	West Tongariro	0.11	335	P	Pg	09 39 54.6	+0.4
TRVZ	Turoa	0.12	222	P	Pg	09 39 55.0	+0.5
NTVZ	North Tongarir	0.12	11	P	Pg	09 39 55.0	+0.6
WNVZ	Wahianoa	0.12	199	P	Pg	09 39 55.1	+0.6
MOVZ	Moawhango	0.21	157	P	Pg	09 39 55.0	-1.1

IDC 20 09:40:14.0±8.7, 30°.81S×179°.63W, h455^{km}±107^{km}, mb2.5/2, mb1 3.0/3, mb1mx2.8/28, mbtmp3.7/3, Error ellipse: s-maj=103.6km s-min=44.6km az=8.0

ISC 20 09:40:08.6±2.1, 30°.6S±0°.1×178°.8W±0°.3, h450^{km}, n30, $\sigma 1^{s}.46$/49, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	7.37	198	P	P	09 41 57.3	+0.2
MXZ				S	S	09 43 25.6	-0.4
WMGZ	Waiomatatini S	7.58	197	P	P	09 42 02.2	+2.8
WMGZ				S	S	09 43 28.8	-1.4
HAZ	Te Kaha	7.70	201	P	P	09 42 01.0	+0.4
HAZ				S	S	09 43 29.9	-2.6
PKGZ	Pakihiroa	7.74	199	P	P	09 42 01.2	+0.1
PKGZ				S	S	09 43 31.8	-1.6
WCZ	Waipu Caves	7.85	225	P	P	09 42 03.2	+0.9
PUZ	Puketiti	7.86	197	P	P	09 42 02.7	+0.4
PUZ				S	S	09 43 34.4	-1.4
RUGZ	Raukumara Rang	7.92	201	P	P	09 42 03.9	+0.7
RUGZ				S	S	09 43 34.7	-2.5
TWGZ	Tauwhareparae	8.03	199	P	P	09 42 05.7	+1.5
TWGZ				S	S	09 43 38.9	-0.4
OPRZ	Ohinepanea	8.21	207	P	P	09 42 08.8	+2.8
CNGZ	Carnagh Statio	8.26	197	P	P	09 42 08.1	+1.5
MWZ	Matawai	8.31	201	P	P	09 42 06.9	-0.4
MWZ				S	S	09 43 43.6	-1.1
TKGZ	Te Karaka	8.31	199	P	P	09 42 05.8	-1.4
TKGZ				S	S	09 43 43.8	-0.8
URZ	Urewera	8.37	203	P	P	09 42 07.5	-0.3
	2.6nm,0.3s,baz=120,slow=23,SNR=43						
URZ				S	S	09 43 44.2	-1.7
	0.7nm,0.3s,baz=116,slow=23,SNR=2.4						
URZ	Urewera	8.37	203	P	P	09 42 07.7	-0.2
URZ				S	S	09 43 45.2	-0.6
RIGZ	Rimuhau	8.59	198	P	P	09 42 10.3	+0.1
RIGZ				S	S	09 43 50.9	+0.7
MUGZ	Murupara	8.69	204	P	P	09 42 11.8	+0.6
MUGZ				S	S	09 43 52.6	+0.4
SNGZ	Shannon Statio	8.78	200	P	P	09 42 09.5	-2.8
SNGZ				S	S	09 43 54.0	0.0
RAHZ	Arahi	8.98	201	P	P	09 42 16.8	+2.4
RAHZ				S	S	09 43 58.9	+0.8
MTHZ	Maungataniwha	9.00	202	P	P	09 42 17.0	+2.3
MTHZ				S	S	09 44 00.1	+1.6
TLZ	Tolley Road	9.04	210	P	P	09 42 19.6	+4.4
NMHZ	Naumai	9.23	202	P	P	09 42 19.5	+2.2
NMHZ				S	S	09 44 04.5	+1.3
ARHZ	Aropaoanui	9.33	201	P	P	09 42 21.2	+3.0
ETVZ	East Tongariro	9.66	206	P	P	09 42 23.4	+1.4
BHHZ	Black Hill Sta	9.84	204	P	P	09 42 24.5	+0.7
BHHZ				S	S	09 44 16.0	+0.8
WNVZ	Wahianoa	9.87	206	P	P	09 42 26.3	+2.0
KRHZ	Kereru	9.87	202	P	P	09 42 24.5	+0.3
KRHZ				S	S	09 44 15.1	-0.7
PNHZ	Pukenui	10.17	202	P	P	09 42 28.0	+0.6
PNHZ				S	S	09 44 21.2	-0.7
ASAR	Alice Springs	42.43	267	P	P	09 47 21.7	-0.9
	0.4nm,0.8s,baz=108,slow=6.4,SNR=4.3						
WRA	Warramunga Arr	43.44	273	P	P	09 47 29.6	-0.9
	0.7nm,1.1s,baz=111,slow=8.1,SNR=5.0						
FINES	FINESS Array B	145.09	339	PKPbc	PKiKP	09 58 57.5	+0.5
	4.0nm,0.9s,baz=47,slow=4.7,SNR=8.3						

MOS 20 09:46:02.1±1.0, 38°.26N×13°.59E, h10^{km}, mb4.6/30, Error ellipse: s-maj=6.5km s-min=3.7km az=62.5

MED_RC 20 09:46:03.0±0.4, 38°.35N×13°.58E, h10^{km}, MW4.4/17, Moment Tensor Solution.Mantle waves: s17,c25; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}3.25±.16; $M_{\theta\theta}$-1.23±.16; $M_{\phi\phi}$-2.02±.14; $M_{r\theta}$-4.00±.49; $M_{\theta\phi}$-1.36±.13; $M_{\phi r}$-2.09±.39; Best double couple: $M_0$5.48000×10^{15} NP1:ϕ_s24.00000°,δ20.00000°, λ59.00000°. NP2:ϕ_s237.00000°,δ73.00000°,λ100.00000°. Principal axes: T 5.7700, Plg61.0000°, Azm162.0000°; N -0.5700, Plg10.0000°, Azm54.0000°; P -5.2000, Plg27.0000°, Azm319.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.

ROM 20 09:46:03.8±0.1, 38°.34N±0°.01×13°.57E±0°.01, h23^{km}±1^{km}, ML4.2/23 Error ellipse: s-maj=1.1km s-min=1.1km az=219.0

LDG 20 09:46:04.5±0.2, 38°.18N×13°.56E, h5^{km}, Ml3.5/15, Error ellipse: s-maj=7.8km s-min=5.2km az=25.0

NEIC 20 09:46:05.4±2.8, 38°.29N±0°.04×13°.64E±0°.04, h13^{km}±4^{km}, Error ellipse: s-maj=6.2km s-min=3.7km az=157.0

IDC 20 09:46:08.9±0.9, 38°.38N×13°.62E, h50^{km}±10^{km}, mb3.9/27, mb1 4.0/38, mb1mx3.9/59, mbtmp4.1/38, ML3.9/11, MS3.4/9, Ms1 3.4/9, ms1mx3.1/54, Error ellipse: s-maj=11.5km s-min=8.7km az=76.0

THE 20 09:46:10.0, 38°.45N×14°.21E, h7^{km}±39^{km}, ML3.9/2, Error ellipse: s-maj=51.8km s-min=3.7km az=261.0

STR 20 09:46:19.0±1.9, 39°N±35°×1°3E±2°7, h0^{km}, mB5.6/1, mb4.5/7, MLv4.5/7, Mw(mB)5.1/1, preliminary

ISC 20 09:46:04.7±0.5, 38°.35N±0°.03×13°.57E±0°.02, h15^{km}±3^{km}, n470, $\sigma 1^{s}.90$/466, mb4.5/65, MS3.3/5, 47C-26D, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPG	Monte Pellegri	0.25	222	P	Pg	09 46 09.1	-1.1
MPG				S	Sg	09 46 13.8	0.0
MPG				AML	AML		
	comp=E,49700µm,1.2s						
MPG				AML	AML		
	comp=E,49650µm,1.2s						
MPG				AML	AML		
	comp=N,65000µm,0.4s						
SOLUN	Solunto	0.25	187	⇓P	Pg	09 46 08.9	-1.3
SOLUN				S	Sg	09 46 13.4	-0.6
SOLUN				AML	AML		
SOLUN				AML	AML		
USI	Ustica	0.47	320	⇓P	Pg	09 46 14.4	+0.2
USI				AML	AML		
USI				AML	AML		
CORL	Corleone	0.50	205	⇓P	Pg	09 46 13.8	-0.8
CORL				S	Sg	09 46 21.4	+0.2
CORL				AML	AML		
	comp=E,64500µm,0.9s						
CORL				AML	AML		
	comp=N,59150µm,0.9s						
CORL	Corleone	0.50	205		Pg	09 46 13.7	-0.9
CORL				Sg	Sb	09 46 22.3	+0.1
GIB	Gibilmanna	0.51	134	⇓P	Pg	09 46 13.4	-1.3
GIB				S	Sb	09 46 22.6	0.0
GIB				AML	AML		
GIB				AML	AML		
CSLB	Castelbuono	0.56	136	⇓P	Pg	09 46 14.2	-1.6
CSLB				S	Sb	09 46 23.8	-0.3
CSLB				AML	AML		
	comp=N,94000µm,0.4s						
CSLB				AML	AML		
	comp=E,57200µm,0.4s						
IACL	Alicudi	0.65	73	⇑P	Pg	09 46 16.7	-0.7
IACL				AML	AML		
	comp=E,49400µm,1.6s						
IACL				AML	AML		
	comp=N,47450µm,1.2s						
PETRA	Petralia Sopra	0.67	140	P	Pg	09 46 16.7	-1.1
PETRA				S	Sb	09 46 27.3	0.0
PETRA				AML	AML		
PETRA				AML	AML		
	comp=E,81100µm,0.4s						
MCT	Mte Cammarata	0.71	176	AML	AML		
	comp=E,48100µm,1.2s						
MCT				AML	AML		
	comp=N,46800µm,0.5s						
MFNL	Monte Finestre	0.75	223	P	Pg	09 46 18.9	-0.5
RESU	Resuttano	0.80	151	⇓P	Pg	09 46 20.3	+0.1
RESU				AML	AML		
	comp=E,32150µm,1.0s						
RESU				AML	AML		
	comp=N,50450µm,1.3s						
IFIL	Filicudi I Eol	0.81	74	P	Pb	09 46 19.2	-1.4
IFIL				AML	AML		
	comp=N,36750µm,0.4s						
IFIL				AML	AML		
CLTB	Caltabellotta	0.81	200	AML	AML		
CLTB				AML	AML		
	comp=E,62650µm,0.6s						
CLTB	Caltabellotta	0.81	200		Pb	09 46 20.6	0.0
CLTB				Sg	Sb	09 46 30.9	-0.5
MMGO	Monte Magaggia	0.83	215	P	Pb	09 46 19.4	-1.3
ERC	Erice	0.83	249	P	Pb	09 46 20.1	-0.9
ERC				AML	AML		
	comp=N,42600µm,0.9s						
ERC				AML	AML		
	comp=E,30250µm,0.8s						
MSFR	San Fratello	0.86	111	⇑P	Pb	09 46 19.8	-1.6
MSFR				S	Sg	09 46 33.0	+0.2
MSFR				AML	AML		
	comp=N,20300µm,1.2s						
MSFR				AML	AML		
	comp=E,16400µm,1.0s						
MNO	Monte Soro	0.98	115	⇑P	Pb	09 46 22.0	-1.5
MNO				AML	AML		
	comp=E,28450µm,1.4s						
MNO				AML	AML		
	comp=N,34500µm,0.8s						
GALF	Gagliano Caste	1.01	129	⇓P	Pb	09 46 23.8	-0.1
GALF				AML	AML		
	comp=E,18850µm,0.6s						
GALF				AML	AML		
	comp=N,17050µm,0.6s						
CAGR	Agira	1.03	134	P	Pb	09 46 24.2	0.0
CAGR				AML	AML		
	comp=E,35900µm,0.6s						
CAGR				AML	AML		
	comp=N,39100µm,1.0s						
MUCR	Ucria	1.07	106	⇑P	Pb	09 46 22.9	-2.1
MUCR				AML	AML		
	comp=E,31950µm,0.4s						
MUCR				AML	AML		
	comp=N,23500µm,0.4s						
FAVR	Favara	1.08	176	AML	AML		
	comp=E,24350µm,1.0s						
FAVR				AML	AML		
	comp=N,20350µm,0.9s						
LLI	Lipari	1.09	84	⇑P	Pb	09 46 23.6	-1.6
LLI				AML	AML		
LLI				AML	AML		
VAE	Valguarnera	1.09	142	P	Pg	09 46 26.0	+0.2
	comp=N,127nm,0.3s,baz=53,slow=2.4,SNR=75						
VAE				S	Sn	09 46 42.2	+1.9
	comp=N,148nm,0.3s,baz=359,slow=2.5,SNR=13						
VPL	Vulcano Piano	1.11	88	⇓P	Pb	09 46 23.6	-2.1
VPL				AML	AML		
	comp=N,48500µm,0.7s						
VPL				AML	AML		
	comp=E,51800µm,1.0s						
EPZF	Pizzo Felice	1.14	117	P	Pb	09 46 25.4	-0.8
ECNV	Catenanuova	1.17	129	P	Pn	09 46 26.3	-0.3
EMSG	Monte Spagnolo	1.21	115	P	Pn	09 46 26.3	-0.9
EMSG				AML	AML		
	comp=E,37950µm,1.4s						
EMSG				AML	AML		
	comp=N,35400µm,1.5s						
CLTA	Licata	1.23	165	AML	AML		
	comp=E,36350µm,0.4s						
CLTA				AML	AML		
	comp=N,23000µm,0.8s						
ESML	S. M. di Licod	1.26	125	P	Pb	09 46 28.1	-0.2
NOV	Novara	1.27	104	⇓P	Pn	09 46 26.7	-1.3
NOV				AML	AML		
	comp=E,16450µm,0.7s						
NOV				AML	AML		
	comp=E,16500µm,0.7s						
NOV				AML	AML		
	comp=N,13250µm,1.5s						
RAFF	Raffo Rosso	1.28	150	AML	AML		
	comp=N,13800µm,0.8s						
RAFF				AML	AML		
	comp=E,15150µm,0.9s						
ESLN	Serra La Nave	1.29	120	P	Pn	09 46 28.0	-0.3
ESLN				AML	AML		
	comp=N,22050µm,1.3s						
ESLN				AML	AML		
	comp=E,22300µm,1.1s						
MILZ	Milazzo	1.31	93	P	Pn	09 46 28.0	-0.5
MILZ				AML	AML		
	comp=N,11600µm,0.9s						
MILZ				AML	AML		
	comp=E,20150µm,0.4s						
ISTR	Stromboli Gino	1.35	70	AML	AML		
	comp=E,5590µm,0.3s						
ISTR				AML	AML		
	comp=N,6120µm,0.3s						
MCSR	Castroreale	1.35	101	P	Pn	09 46 27.8	-1.4
MCSR				AML	AML		
	comp=N,24600µm,0.3s						
MCSR				AML	AML		
	comp=E,26350µm,0.4s						
AIO	Antillo	1.36	105	AML	AML		
	comp=E,11400µm,1.5s						
AIO				AML	AML		
	comp=N,8975µm,0.4s						
IST3	Stromboli F	1.38	70	AML	AML		
	comp=N,3855µm,0.8s						
IST3				AML	AML		
	comp=E,3285µm,0.9s						
MPNC	Port Mandanici	1.42	98	P	Pn	09 46 27.7	-2.2
HLNI	Lentini	1.43	134	AML	AML		
	comp=E,5180µm,1.1s						
HLNI				AML	AML		
	comp=N,6790µm,1.2s						
MSRU	Castanea	1.53	92	P	Pn	09 46 29.0	-2.4
MSRU				AML	AML		
	comp=E,7755µm,0.6s						
MSRU				AML	AML		
	comp=N,5930µm,0.4s						
HAGA	Augusta	1.64	130	AML	AML		
	comp=N,5635µm,0.7s						
HAGA				AML	AML		
	comp=E,8575µm,1.0s						
MEU	Monte Lauro	1.65	139	AML	AML		
	comp=E,15000µm,1.0s						
MEU				AML	AML		
	comp=N,18050µm,0.4s						
SSY	Sortino	1.68	134	AML	AML		
	comp=E,13750µm,1.4s						
SSY				AML	AML		
	comp=N,20000µm,1.0s						
HMDC	Modica	1.69	145	AML	AML		
	comp=E,11450µm,0.4s						
HMDC				AML	AML		
	comp=N,15600µm,1.3s						
MTTG	Motta San Giov	1.71	101	P	Pn	09 46 32.7	-1.3

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MTTG                            AML   AML
      comp=N,6325µm,1.4s
MTTG                            AML   AML
      comp=E,5225µm,1.3s
MSCL  Scilla          1.75  93  AML   AML
      comp=E,6465µm,0.7s
MSCL                            AML   AML
      comp=N,6000µm,0.6s
GMB   Gambarie        1.79  95  AML   AML
      comp=E,10065µm,1.0s
GMB                             AML   AML
      comp=N,10165µm,0.4s
CEL   Celeste         1.83  92  P     Pn    09 46 33.3 -2.4
CEL                             AML   AML
      comp=E,2375µm,1.0s
CEL                             AML   AML
      comp=E,1980µm,1.1s
CEL                             AML   AML
      comp=N,2745µm,0.6s
CEL                             AML   AML
      comp=N,3360µm,0.6s
CEL   Celeste         1.83  92        Pn    09 46 33.5 -2.2
JOPP  Joppolo         1.84  81  P     Pn    09 46 33.5 -2.3
JOPP                            AML   AML
      comp=E,1560µm,1.3s
JOPP                            AML   AML
      comp=N,1290µm,1.6s
HAVL  Avola           1.85 138  AML   AML
      comp=E,8700µm,0.9s
HAVL                            AML   AML
      comp=N,9445µm,0.3s
SOI   Samo            1.98  97  P     Pn    09 46 36.3 -1.3
SOI                             AML   AML
      comp=N,2910µm,0.7s
SOI                             AML   AML
      comp=E,2810µm,0.6s
HPAC  Pachino         2.05 143  AML   AML
      comp=N,10660µm,0.4s
HPAC                            AML   AML
      comp=E,12100µm,0.9s
CET2  Cetraro         2.20  57 ⇑P     Pn    09 46 39.3 -1.5
CET2                            AML   AML
      comp=E,1740µm,0.8s
CET2                            AML   AML
      comp=N,2105µm,0.3s
BULG  Bulgheria - Ca  2.23  38  P     Pn    09 46 40.3 -0.9
BULG                            AML   AML
      comp=E,353µm,0.9s
BULG                            AML   AML
      comp=N,512µm,0.4s
PLAC  Placanica       2.26  86  AML   AML
      comp=N,2060µm,0.7s
PLAC                            AML   AML
      comp=N,1740µm,0.7s
PLAC                            AML   AML
      comp=E,2055µm,0.6s
PLAC                            AML   AML
      comp=E,1730µm,0.7s
GRI   Girifalco       2.28  77  P     Pn    09 46 40.4 -1.5
GRI                             AML   AML
      comp=E,1395µm,0.4s
GRI                             AML   AML
      comp=N,1785µm,0.6s
SPS2  Spezzano della  2.36  65  P     Pn    09 46 41.3 -1.7
SPS2                            AML   AML
      comp=N,439µm,0.3s
SPS2                            AML   AML
      comp=E,376µm,0.5s
MGR   Morigerati      2.36  40  P     Pn    09 46 41.9 -1.0
MGR                             AML   AML
      comp=N,322µm,1.0s
MGR                             AML   AML
      comp=E,270µm,1.1s
CMPR  Campora         2.38  34  P     Pn    09 46 42.4 -1.0
CUC   Castrocucco     2.40  46  P     Pn    09 46 42.3 -1.2
CUC                             AML   AML
      comp=E,591µm,0.9s
CUC                             AML   AML
      comp=N,340µm,0.9s
CUC                             AML   AML
      comp=E,726µm,0.9s
CUC                             AML   AML
      comp=N,408µm,0.9s
MMN   Mormanno        2.43  50  P     Pn    09 46 42.9 -1.0
TDS   Terranova Siba  2.52  58  P     Pn    09 46 43.7 -1.5
TDS                             AML   AML
      comp=N,396µm,1.6s
TDS                             AML   AML
      comp=E,444µm,0.8s
CELI  Celico          2.52  64  P     Pn    09 46 43.8 -1.5
CELI                            AML   AML
      comp=E,1365µm,1.0s
CELI                            AML   AML
      comp=N,1475µm,0.9s
CDRU  Civita di Ruta  2.53  32  P     Pn    09 46 44.5 -0.8
SERS  Sersale         2.54  73  P     Pn    09 46 44.3 -1.2
SERS                            AML   AML
      comp=E,654µm,0.7s
SERS                            AML   AML
      comp=N,670µm,1.1s
MTSN  Montesano sull  2.56  41  AML   AML
      comp=E,406µm,0.9s
MTSN                            AML   AML
      comp=N,375µm,1.5s
SIRI  Monte Sirino -  2.56  43  AML   AML
      comp=E,486µm,0.4s
SIRI                            AML   AML
      comp=N,497µm,1.1s
WDD   Wied Dalam      2.62 163  AML   AML
      comp=N,2435µm,1.0s
WDD                             AML   AML
      comp=E,2545µm,0.4s
WDD                             AML   AML
      comp=N,2480µm,1.0s
WDD                             AML   AML
      comp=E,2870µm,0.4s
MCEL  Monticello      2.63  40  AML   AML
      comp=N,402µm,1.1s
MCEL                            AML   AML
      comp=E,344µm,1.0s
TIP   Timpagrande     2.63  71 ⇑P     Pn    09 46 45.8 -0.9
TIP                            ⇑S     Sn    09 47 17.5 -0.8
TIP   Timpagrande     2.63  71  P     Pn    09 46 45.7 -0.9
TIP                             AML   AML
      comp=E,454µm,1.2s
TIP                             AML   AML
      comp=N,446µm,1.6s
TIP                             AML   AML
      comp=E,516µm,1.6s
TIP                             AML   AML
      comp=N,565µm,1.5s
TIP   Timpagrande     2.63  71  Pn    Pn    09 46 45.9 -0.8
SALB  San Lorenzo Be  2.65  54  AML   AML
      comp=E,490µm,0.5s
SALB                            AML   AML
      comp=N,349µm,0.4s
MCRV  Calabrutti - M  2.73  26  P     Pn    09 46 47.8 -0.3
MODR  Mondragone      2.81   5  AML   AML
      comp=E,224µm,0.9s
MODR                            AML   AML
      comp=N,178µm,0.8s
MRLC  Muro Lucano     2.83  31  P     Pn    09 46 50.3 +0.9
MRLC                            AML   AML
      comp=N,234µm,1.3s
MRLC                            AML   AML
      comp=E,304µm,1.1s
LIO3  Lioni           2.84  26  P     Pn    09 46 50.4 +0.9
SNAL  S. Angelo Dei   2.87  26  AML   AML
      comp=N,428µm,1.5s
SNAL                            AML   AML
      comp=E,478µm,1.2s
PIGN  Pignataro Magg  2.89   9  AML   AML
      comp=E,215µm,1.2s
PIGN                            AML   AML
      comp=N,203µm,0.8s
LPDG  Lampedusa Capo  2.92 195  AML   AML
      comp=N,2185µm,1.0s
LPDG                            AML   AML
      comp=E,1570µm,1.3s
VITU  Vitulano (BN)   2.95  16  P     Pn    09 46 51.8 +0.7
CAFE  Carife          2.97  25  AML   AML
      comp=E,249µm,1.5s
CAFE                            AML   AML
      comp=N,278µm,1.2s
ACER  Acerenza        3.05  36  AML   AML
      comp=E,476µm,0.7s
ACER                            AML   AML
      comp=N,505µm,0.9s
ACER                            AML   AML
      comp=N,566µm,0.9s
ACER                            AML   AML
      comp=E,530µm,0.8s
SGG   Gregorio Mates  3.10  11  AML   AML
      comp=N,300µm,0.6s
SGG                             AML   AML
      comp=E,195µm,0.6s
VAGA  Valle Agricola  3.11   9  P     Pn    09 46 54.0 +0.7
VAGA                            AML   AML
      comp=E,176µm,0.4s
VAGA                            AML   AML
      comp=N,282µm,0.3s
MIGL  Miglionico      3.17  44  AML   AML
      comp=N,1655µm,0.9s
MIGL                            AML   AML
      comp=E,1495µm,1.5s
SACR  S. Croce Del S  3.17  16  AML   AML
      comp=E,154µm,1.5s
SACR                            AML   AML
      comp=N,133µm,1.6s
LATB  Latina          3.18 352  P     Pn    09 46 54.7 +0.5
PALZ  Palazzo San Ge  3.19  35  AML   AML
      comp=E,524µm,1.5s
PALZ                            AML   AML
      comp=N,620µm,1.5s
GIUL  Giuliano Di Ro  3.22 356  P     Pn    09 46 54.8  0.0
GIUL                            AML   AML
      comp=E,136µm,0.7s
GIUL                            AML   AML
      comp=N,312µm,0.6s
CERA  Filignano       3.27   6  P     Pn    09 46 56.7 +1.2
BSSO  Busso           3.29  14  AML   AML
      comp=E,76µm,0.5s
BSSO                            AML   AML
      comp=N,100µm,0.6s
CAPA  Cerignola FG    3.30  31  AML   AML
      comp=E,596µm,1.5s
CAPA                            AML   AML
      comp=N,422µm,1.6s
MATE  Matera          3.34  46 ⇓P     Pn    09 46 57.1 +0.7
MATE                           ⇓S     Sn    09 47 36.0 +0.2
POFI  Posta Fibreno   3.37   2  P     Pn    09 46 57.6 +0.7
VSL   Villasalto      3.47 291  Pn    Pn    09 46 56.0 -2.1
CGL   Cagliari Serpe  3.49 288  P     Pn    09 46 56.4 -2.1
TRIV  Trivento        3.50  12  AML   AML
      comp=E,222µm,1.0s
TRIV                            AML   AML
      comp=N,201µm,1.0s
VVLD  Villa Vallelon  3.52   1  P     Pn    09 46 59.4 +0.4
VVLD                            AML   AML
      comp=E,57µm,0.9s
VVLD                            AML   AML
      comp=N,44µm,0.9s
MELA  Melanico ??? S  3.56  19  AML   AML
      comp=N,309µm,0.7s
MELA                            AML   AML
      comp=E,323µm,0.6s
CERT  Cerreto         3.63 353  AML   AML
      comp=E,84µm,0.5s
CERT                            AML   AML
      comp=N,62µm,0.3s
NOCI  Noci            3.64  47  AML   AML
      comp=N,191µm,0.7s
NOCI                            AML   AML
      comp=E,170µm,1.0s
PTQR  Pietraquaria    3.67 358  P     Pn    09 47 02.0 +1.0
PTQR                            AML   AML
      comp=E,55µm,0.6s
PTQR                            AML   AML
      comp=N,57µm,1.2s
SGRT  San Giovanni R  3.79  25  AML   AML
      comp=N,114µm,1.2s
SGRT                            AML   AML
      comp=E,116µm,1.4s
SGRT  San Giovanni R  3.79  25  Pn    Pn    09 47 03.8 +1.1
MSAG  Monte S. Angel  3.81  27  AML   AML
      comp=E,168µm,0.7s
MSAG                            AML   AML
      comp=N,244µm,1.6s
T0110 Collepietro     3.88   2  AML   AML
      comp=E,95µm,0.8s
T0110                           AML   AML
      comp=N,145µm,0.6s
TOLF  Tolfa           3.91 343  AML   AML
      comp=N,69µm,1.0s
TOLF                            AML   AML
      comp=E,81µm,0.7s
FIAM  Fiamignano      3.93 355  AML   AML
      comp=N,63µm,0.6s
FIAM                            AML   AML
      comp=E,81µm,0.8s
AQU   L'Aquila        4.01 358  P     Pn    09 47 08.1 +2.5
AQU   L'Aquila        4.01 358 ePn    Pn    09 47 06.9 +1.3
AQU   L'Aquila        4.01 358        Pn    09 47 08.1 +2.5
SCTE  Santa Cesarea   4.18  64        Pn    09 47 08.1 +0.2
KEST  Kesra           4.27 234  P     Pn    09 47 10.6 +1.4
      comp=E,8.5nm,0.3s,baz=290,slow=4.5,SNR=26
KEST                            S     Sn    09 47 57.0 -1.7
      comp=E,2.0nm,0.3s,baz=332,slow=13,SNR=4.2
KEST                            LR    LR    09 49 17.7
      comp=E,221nm,21.6s,baz=312,slow=44
KEST  Kesra           4.27 234  Pn    Pn    09 47 11.3 +2.1
MAON  Monte Argentar  4.48 336  AML   AML
      comp=N,65µm,1.2s
MAON                            AML   AML
      comp=E,62µm,0.9s
NRCA  Norcia          4.50 356        Pn    09 47 16.1 +3.8
CASP  Castiglione de  4.89 336  Pn    Pn    09 47 19.0 +1.3
MURB  Monte Urbino    4.98 351  Pn    Pn    09 47 22.1 +3.2
KEK   Kerkira         5.04  72  P     Pn    09 47 19.1 -0.6
VLO   Vlora           5.06  63  P     Pn    09 47 21.5 +1.6
VLO   Vlora           5.06  63        Pn    09 47 21.5 +1.6
LSTV  Lastovo         5.09  29 ePn    Pn    09 47 20.4  0.0
CORF  Corte           5.19 321  P     Pn    09 47 23.0 +1.2
HVAR  Hvar            5.30  23 ePn    Pn    09 47 23.8 +0.5
IGT   Igoumenitsa     5.40  75  P     Pn    09 47 24.5 -0.3
PGF   Pioggiola       5.46 322 ePn    Pn    09 47 25.4 -0.2
PGF                            eSn    Sn    09 48 23.2 -4.9
      comp=E,20nm,0.4s
PGF   Pioggiola       5.46 322  P     Pn    09 47 26.5 +0.9
OSSC  Osservatorio P  5.46 342        Pn    09 47 28.7 +3.1
FSK   Fiskardo        5.49  87  P     Pn    09 47 25.6 -0.4
FSK                             S     Sn    09 48 23.7 -5.2
      comp=E,85nm,0.5s
STON  Ston            5.51  33 ePn    Pn    09 47 25.9 -0.2
STON  Ston            5.51  33 ePn    Pn    09 47 26.0 -0.2
STON                            Sn    Sn    09 48 25.9 -3.2
ZIRJ  Zirje           5.53  16 ePn    Pn    09 47 27.1 +0.7
HCY   Herceg Novi     5.56  41 ePn    Pn    09 47 24.7 -2.2
EVGI  Lefkada island  5.57  85  P     Pn    09 47 26.7 -0.3
TSLK  Tsoukalades, L  5.57  83  P     Pn    09 47 26.6 -0.5
LKD2  Lefkada island  5.57  83  P     Pn    09 47 25.7 -1.4
MAKA  Makarska        5.59  27 ePn    Pn    09 47 27.4 +0.2
NYDR  Nydri-Lefkada   5.60  84  P     Pn    09 47 27.6 +0.2
TREB  Trebinje        5.69  38 ePn    Pn    09 47 28.7 +0.1
TIR   Tirane          5.70  56  P     Pn    09 47 30.1 +1.3
TIR   Tirane          5.70  56        Pn    09 47 30.1 +1.3
MORI  Morici          5.75  16 ePn    Pn    09 47 30.0 +0.6
DUGI  Dugi Otok       5.75  11 ePn    Pn    09 47 30.1 +0.5
DRME  Dracevica, Mon  5.76  46 ePn    Pn    09 47 28.6 -1.0
RICI  Ricice          5.81  27 ePn    Pn    09 47 30.6 +0.2
BRY   Bratogost       5.92  38 ePn    Pn    09 47 31.9  0.0
PDG   Podgorica       5.96  45 ⇑P     Pn    09 47 32.2 -0.1
PDG   Podgorica       5.96  45 ePn    Pn    09 47 31.4 -0.9
PDG   Podgorica       5.96  45  Pn    Pn    09 47 32.0 -0.3
KBN   Korca           6.03  66  P     Pn    09 47 35.3 +1.9
KBN   Korca           6.03  66        Pn    09 47 35.3 +1.9
KIJV  Kijevo          6.04  20 ePn    Pn    09 47 35.2 +1.7
OHR   Ohrid           6.22  61 i P    Pn    09 47 37.8 +1.8
VLC   Villacollemand  6.28 339        Pn    09 47 42.0 +5.1
NVLJ  Novalja         6.29   9 ePn    Pn    09 47 38.0 +1.2
ZCCA  Zocca           6.31 343        Pn    09 47 43.0 +5.8
UPM   Unac-Piva       6.32  38 ePn    Pn    09 47 37.3 -0.2
UDBI  Udbina          6.39  14 ePn    Pn    09 47 40.3 +1.9
RABC  Rab             6.46   8 ePn    Pn    09 47 40.7 +1.4
FNA   Florina         6.50  66  P     Pn    09 47 41.3 +1.4
FNA   Florina         6.50  66  Pn    Pn    09 47 41.3 +1.4
EFP   Efpalio         6.55  87  P     Pn    09 47 41.1 +0.6
BRJN  Brijuni         6.56   1 ePn    Pn    09 47 42.5 +2.0
ANX   Ano Chora       6.56  85  P     Pn    09 47 41.5 +0.8
ANX                             S     Sn    09 48 52.7 -2.5
      comp=E,168nm,0.6s
MGRS  Mrkonjic Grad   6.62  22 ePn    Pn    09 47 44.8 +3.4
MSSA  Maissana        6.70 334  Pn    Pn    09 47 45.0 +2.4
SMRN  Sveta Marina    6.70   4 ePn    Pn    09 47 43.4 +0.9
ITM   Ithomi          6.72  97  Pn    Pn    09 47 42.3 -0.6
KLV   Kalavryta, Ach  6.76  90  P     Pn    09 47 43.8 +0.3
RUDO  Rudo            6.86  38 ePn    Pn    09 47 45.1 +0.4
AGG   Agios Georgios  6.89  82  P     Pn    09 47 45.6 +0.5
AGG   Agios Georgios  6.89  82  P     Pn    09 47 46.0 +0.8
AGG   Agios Georgios  6.89  82  Pn    Pn    09 47 46.0 +0.8
SJES  Sjenica         6.91  43 ePn    Pn    09 47 45.3 -0.2
BLY   Banja Luka      6.95  22 ePn    Pn    09 47 46.7 +0.8
RIY   Rijeka          7.01   5 ePn    Pn    09 47 48.4 +1.7
SKO   Skopje          7.03  57 i P    Pn    09 47 48.8 +1.7
BBLS  Lazi&#263;i     7.06  37 ePn    Pn    09 47 47.5  0.0
BBLS  Lazi&#263;i     7.06  37 ePn    Pn    09 47 48.9 +1.4
MRAK  Mrakovica       7.11  19 ePn    Pn    09 47 50.3 +2.0
TEOL  Teolo           7.15 349  Pn    Pn    09 47 50.5 +1.8
SBF   Sospel          7.20 322 ePn    Pn    09 47 48.5 -0.9
SBF                            eSn    Sn    09 49 05.7 -5.2
      comp=E,26nm,0.6s
IVAS  Ivanjica        7.22  42 ePn    Pn    09 47 50.5 +0.8
SAOF  Saorge          7.23 323  P     Pn    09 47 51.0 +1.1
LMR   La Mourre       7.31 315 ePn    Pn    09 47 49.5 -1.4
LMR                            eSn    Sn    09 49 08.4 -5.2
      comp=E,4.7nm,0.3s
CALF  Calern          7.38 319  P     Pn    09 47 51.8 -0.1
FRF   La Foret Royal  7.39 317 ePn    Pn    09 47 50.8 -1.2
FRF                            eSn    Sn    09 49 13.1 -2.4
      comp=E,15nm,0.8s
STIP  Stip            7.41  60 i P    Pn    09 47 54.9 +2.6
CEY   Cerknica        7.42   5 ePn    Pn    09 47 55.6 +3.2
SPIF  crte de Spivo   7.44 322  P     Pn    09 47 53.6 +0.9
DIVS  Divibare        7.51  38 ePn    Pn    09 47 51.6 -2.2
DIVS  Divibare        7.51  38        Pn    09 47 53.2 -0.5
DIVS  Divibare        7.51  38 ePn    Pn    09 47 54.2 +0.4
SELS  Selova          7.52  47 ePn    Pn    09 47 53.2 -0.6
VAY   Valandovo       7.54  64 i P    Pn    09 47 54.5 +0.5
CRES  Cresnjev        7.61  10 ePn    Pn    09 47 56.7 +1.7
SALO  Salr            7.61 344  Pn    Pn    09 47 57.9 +2.8
BARS  Barje           7.70  52 ePn    Pn    09 47 55.2 -1.1
GRUS  Gruza           7.73  42 ePn    Pn    09 47 57.5 +0.9
TRUS  Trudelj         7.81  39 ePn    Pn    09 47 58.4 +0.7
CTI   Castel Tesino   7.83 350  P     Pn    09 48 01.2 +3.1
CTI   Castel Tesino   7.83 350  Pn    Pn    09 48 01.2 +3.1
ARTF  Artigues        7.87 314  P     Pn    09 47 58.8 +0.3
ARTF                            S     Sn    09 49 23.8 -3.5
STAL  STALIGIAL       7.94 356  Pn    Pn    09 48 01.7 +2.2
SURF  Saint Ours      7.96 323  P     Pn    09 48 01.4 +1.5
BOSS  Bosilegrad      7.96  56 ePn    Pn    09 48 00.3 +0.5
BOVS  Bovan           8.11  47 ⇑P     Pn    09 48 02.3 +0.4
BOVS  Bovan           8.11  47 ePn    Pn    09 48 01.8  0.0
BSTF  la Bastide-des  8.14 315  P     Pn    09 48 02.1 -0.2
MBDF  Montbardon      8.16 324 eP     Pn    09 48 04.8 +2.1
MBDF                           eSn    Sn    09 49 27.9 -6.8
      comp=E,12nm,0.8s
OBKA  Obir            8.19   5 ePn    Pn    09 48 06.1 +3.0
      comp=E,7.9nm,0.7s
ZOU   Zoufplan        8.22 357        Pn    09 48 06.3 +2.7
SMRF  Simiane la Rot  8.24 316 ePn    Pn    09 48 03.1 -0.7
SMRF                           eSn    Sn    09 49 29.6 -7.0
FRGS  Fruska Gora     8.25  32 ePn    Pn    09 48 03.1 -0.7
MYKA  Terra Mystica   8.28   0 ePn    Pn    09 48 07.9 +3.6
      comp=E,5.4nm,0.7s
ABTA  Abfaltersbach   8.43 355 ePn    Pn    09 48 08.9 +2.5
      comp=E,10nm,0.6s,SNR=11
KOVH  Kovagotottos    8.44  22 eP     Pn    09 48 08.2 +1.9
BNI   Bardonecchia    8.45 325  P     Pn    09 48 11.2 +4.5
BNI   Bardonecchia    8.45 325        Pn    09 48 11.2 +4.5
ZAPS  Zavoj           8.45  52 ePn    Pn    09 48 06.4 -0.2
VTS   Vitosha         8.51  57 ⇓P     Pn    09 48 08.0 +0.4
VTS   Vitosha         8.51  57 ⇓P     Pn    09 48 08.0 +0.4
VTS   Vitosha         8.51  57  Pn    Pn    09 48 07.9 +0.4
MORH  Mrgy, Hungar    8.71  24 eP     Pn    09 48 12.6 +2.5
KBA   Koelnbreinsper  8.73 359 ePn    Pn    09 48 13.2 +2.7
      comp=E,5.2nm,0.8s
ORIF  Oris-en-Rattie  8.73 321 ePn    Pn    09 48 12.2 +1.7
ORIF                           eSn    Sn    09 49 41.3 -7.3
      comp=E,1.7nm,0.4s
ORIF  Oris-en-Rattie  8.73 321  P     Pn    09 48 11.7 +1.3
LPG   La Plagne       8.77 327 eSn    Sn    09 49 46.0 -3.8
LPL   La Plagne       8.79 327 eP     Pn    09 48 14.0 +2.6
DAVOX Davos/Dischmat  8.86 343  P     Pn    09 48 14.9 +2.6
      comp=E,0.5nm,0.3s,baz=154,slow=17,SNR=20
MDVR  Moldovita       8.86  41 ⇑P     Pn    09 48 13.4 +1.1
ARSA  Arzberg         9.02   9 ePn    Pn    09 48 17.0 +2.7
      comp=E,1.7nm,0.6s
WTTA  Wattenberg      9.03 352 ePn    Pn    09 48 17.9 +3.3
      comp=E,3.2nm,0.6s
SQTA  Sankt Quirin    9.04 350 ePn    Pn    09 48 18.3 +3.6
      comp=E,3.3nm,0.5s
MOTA  Moosalm         9.18 349 ePn    Pn    09 48 20.0 +3.4
      comp=E,7.9nm,1.0s
SENIN Lac Senin/Sane  9.26 332        Pn    09 48 21.6 +3.8
LASF  Ste Croix       9.29 311 ePn    Pn    09 48 16.6 -1.5
LASF                           eSn    Sn    09 49 54.4 -7.9
      comp=E,4.0nm,0.3s
MPLH  Magyarpolny     9.29  17 eP     Pn    09 48 20.4 +2.3
HERR  Herculane       9.30  43 ⇑P     Pn    09 48 18.1  0.0
VIVF  Saint-Julien-l  9.31 317 ePn    Pn    09 48 17.5 -0.8
VIVF                           eSn    Sn    09 49 59.0 -3.8
      comp=E,0.7nm,0.3s
DAVA  Damuels         9.34 344 ePn    Pn    09 48 22.9 +4.1
      comp=E,14nm,1.0s
RETA  Reutte          9.37 348 ePn    Pn    09 48 23.4 +4.2
      comp=E,9.1nm,1.2s
BZS   Buzias          9.41  37 ⇑P     Pn    09 48 20.5 +0.8
BZS   Buzias          9.41  37 ⇑P     Pn    09 48 20.5 +0.8
MOA   Molln           9.51   3 ePn    Pn    09 48 23.9 +2.8
      comp=E,6.5nm,0.6s,SNR=8.8
APE   Apeiranthos     9.56  94 ⇑P     Pn    09 48 20.0 -1.9
APE   Apeiranthos     9.56  94 ⇑P     Pn    09 48 20.0 -1.9
IDI   Anoyia          9.57 105  P     Pn    09 48 21.0 -1.1
      comp=E,0.6nm,0.3s,baz=20,slow=13,SNR=1.6
IDI                             S     Sn    09 49 46.0  -23
      baz=330,slow=21,SNR=1.3
SSB   Saint Sauveur   9.66 319  P     Pn    09 48 23.6 +0.4
SSB   Saint Sauveur   9.66 319  Pn    Pn    09 48 23.6 +0.4
CONA  Conrad Observa  9.72   9 i Pn   Pn    09 48 26.1 +2.1
      comp=E,1.4nm,0.4s
SIRR  Siria           9.92  35 ⇓P     Pn    09 48 28.2 +1.5
CABF  La Chapelle     9.93 329 eP     Pn    09 48 31.1 +4.1
MTLF  Montolieu       9.94 304 ePn    Pn    09 48 25.3 -1.7
MTLF                           eSn    Sn    09 50 10.1 -8.2
      comp=E,19nm,0.8s
ALN   Alexandroupoli  9.96  71  P     Pn    09 48 27.4 +0.2
ALN   Alexandroupoli  9.96  71  Pn    Pn    09 48 27.4 +0.2
GEC2  GERESS Array S 10.50   0        Pn    09 48 36.6 +1.9
GERES GERESS Array B 10.50   0  P     Pn    09 48 35.8 +1.1
      comp=E,0.4nm,0.3s,baz=174,slow=13,SNR=19
GERES                           LR    LR    09 53 29.4
      comp=E,132nm,18.5s,baz=187,slow=42
GERES GERESS Array B 10.50   0  P     Pn    09 48 36.3 +1.6
GERES GERESS Array B 10.50   0  Pn    Pn    09 48 36.3 +1.6
PSZ   Piszkesteto    10.62  24 ⇑P     Pn    09 48 38.4 +2.1
PSZ   Piszkesteto    10.62  24 ⇑P     Pn    09 48 38.4 +2.1
HINF  Hinteralfeld   10.66 335 eP     Pn    09 48 40.4 +3.6
BFO   Black Forest   10.68 341  P     Pn    09 48 38.6 +1.5
BFO   Black Forest   10.68 341        Pn    09 48 38.6 +1.5
KHC   Kasperske Hory 10.78   0 eP     Pn    09 48 40.0 +1.5
KHC   Kasperske Hory 10.78   0 ePN    Pn    09 48 40.0 +1.5
KHC   Kasperske Hory 10.78   0        Pn    09 48 40.0 +1.5
DRGR                 10.79  36 ⇓P     Pn    09 48 39.6 +0.9
DRGR                 10.79  36 ⇓P     Pn    09 48 39.6 +0.9
ARR   Arges          10.82  46 ⇑P     Pn    09 48 39.9 +0.8
CAF   Calviac        10.83 311 eP     Pn    09 48 41.1 +2.0
VYHS  Vyhne          10.84  19 eP     Pn    09 48 43.1 +3.8
VYHS  Vyhne          10.84  19 ePN    Pn    09 48 43.1 +3.8
STU   Stuttgart      10.89 345  P     Pn    09 48 40.9 +0.9
STU   Stuttgart      10.89 345  Pn    Pn    09 48 40.9 +0.9
ECH   Echery         10.91 337  P     Pn    09 48 42.2 +1.9
ECH   Echery         10.91 337  Pn    Pn    09 48 42.2 +1.9
HAU   Haudompre      11.00 334 eP     Pn    09 48 45.4 +4.0
HAU                            eSn    Sn    09 50 39.9 -4.2
      comp=E,0.4nm,0.2s
CDF   Champ du Feu   11.05 338 eP     Pn    09 48 45.9 +3.7
CDF                            eSn    Sn    09 50 38.9 -6.6
      comp=E,0.2nm,0.2s
EPF   Esparros       11.08 299 eP     Pn    09 48 46.0 +3.4
EPF                            eSn    Sn    09 50 37.6 -8.6
      comp=E,1.5nm,0.4s
VOIR                 11.10  47 ⇑P     Pn    09 48 44.2 +1.3
VOIR                 11.10  47 ⇑P     Pn    09 48 44.2 +1.3
BALB  Balikesir      11.21  79        Pn    09 48 44.5 +0.1
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AVF	Avril sur Loir	11.30	322	eP	Pn	09 48 47.0	+1.4
BGF	Bois d'Agland	11.40	319	eP	Pn	09 48 51.0	+4.1
SSF	Saint Saulge	11.42	323	eP	Pn	09 48 51.5	+4.3
MLR	Muntele Rosu	11.65	48	⇑P	Pn	09 48 51.7	+1.2
MLR	Muntele Rosu	11.65	48	P	Pn	09 48 51.6	+1.2
	comp=E,0.3nm,0.3s,baz=192,slow=8.6,SNR=10						
MLR	Muntele Rosu	11.65	48		Pn	09 48 53.4	+2.9
ETSF	Etsaut	11.66	297	eP	Pn	09 48 54.5	+3.9
PAGF	Fort de Pagny	11.68	333	eP	Pn	09 48 55.1	+4.3
TRPA	Tarpa	11.76	31	⇑P	Pn	09 48 53.8	+2.1
TRPA	Tarpa	11.76	31	eP	Pn	09 49 01.0	+9.2
NEHR	Nehoiu	11.82	49	⇑P	Pn	09 48 53.7	+0.9
COVR	Voineasa-Covas	12.00	47	⇑P	Pn	09 48 56.2	+1.1
UZH	Uzhgorod	12.07	29	eP	Pn	09 48 59.2	+3.2
SJPF	Ste Jean	12.19	298	eP	Pn	09 49 01.0	+3.2
PLOR	Plostina	12.26	48	⇑P	Pn	09 48 59.7	+0.9
PLOR	Plostina	12.26	48	⇑P	Pn	09 48 59.7	+0.9
VRI	Vrincioaia	12.32	48	⇑P	Pn	09 48 60.0	+0.5
VRI	Vrincioaia	12.32	48	⇑P	Pn	09 49 00.0	+0.5
BRG	Berggiesshubel	12.53	1	eP	P	09 49 16.6	+2.6
BRG				Amp		09 49 26.5	
	comp=Z,7.8nm,1.1s						
BURAR	Bucovina Array	12.58	39	Pn	Pn	09 49 06.5	+3.4
BUR08	Bucovina Ar. S	12.59	39		Pn	09 49 06.9	+3.6
TIRR	Tirgusor	12.70	57	⇑P	Pn	09 49 04.5	-0.1
TIRR	Tirgusor	12.70	57	⇑P	Pn	09 49 04.6	-0.1
CFR	Carcaliu	12.83	53	⇑P	Pn	09 49 06.8	+0.4
CFR	Carcaliu	12.83	53	⇑P	Pn	09 49 06.8	+0.4
TPGR	Topolog	12.87	55	⇓P	Pn	09 49 07.3	+0.3
CLL	Collm	12.97	358	eP	Pn	09 49 07.0	-1.3
CLL	Collm	12.97	358	e(P)	Pn	09 49 07.0	-1.3
CLL				e		09 49 23.0	
ELL	Elmali	13.07	92	P	Pn	09 49 08.9	-1.0
ELL	Elmali	13.07	92		Pn	09 49 08.9	-1.0
BORA	Eskisehir	13.20	78		Pn	09 49 10.8	-0.9
RCHB	Rochefort	13.22	336	dPbPb	PbPb	09 49 57.3	+2.1
DOU	Dourbes	13.38	334	dPbPb	PbPb	09 49 59.6	+1.8
MEM	Membach	13.39	339	dPn	Pn	09 49 16.9	+2.9
BCLA	Clavier	13.43	337	dPn	Pn	09 49 17.8	+3.2
BCLA				dPbPb	PbPb	09 49 59.7	+1.1
BGES	Gesves	13.47	336	dPnPn	P	09 49 24.7	+0.3
BMRD	Maredsous	13.50	335	dPn	Pn	09 49 18.5	+2.9
ESDC	Sonseca Array	13.70	281	P	Pn	09 49 19.9	+1.4
	comp=Z,0.1nm,0.3s,baz=90,slow=16,SNR=4.4						
ESDC				LR	LR	09 53 41.0	
	comp=Z,216nm,21.9s,baz=85,slow=33						
MDUB	Mudurnu	13.80	76		Pn	09 49 19.7	-0.1
BR131	Keskin Array S	15.66	79	P	Pn	09 49 45.7	+0.8
BR131				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BR131	Keskin Array S	15.66	79		Pn	09 49 45.7	+0.8
BRTR	Keskin Array B	15.66	79	P	Pn	09 49 43.9	-1.0
	comp=Z,0.2nm,0.3s,baz=259,slow=13,SNR=12						
BRTR	Keskin Array B	15.66	79	ceP	Pn	09 49 45.2	+0.3
BRTR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRTR	Keskin Array B	15.66	79	Pn	Pn	09 49 45.0	+0.1
MDT	Midelt	15.78	255	P	P	09 49 48.9	-1.4
	comp=Z,0.2nm,0.3s,baz=91,slow=11,SNR=6.1						
MDT				LR	LR	09 56 36.3	
	comp=Z,213nm,19.1s,baz=12,slow=40						
CSS	Mathiatis	16.21	96	P	P	09 49 54.4	-0.6
CSS				IAmb	IAmb	09 49 57.2	
	comp=Z,37nm,1.1s						
AKASG	Malin Array Be	16.61	37	P	Pn	09 49 57.1	+0.3
	comp=Z,0.4nm,0.3s,baz=229,slow=10,SNR=9.9						
AKASG	Malin Array Be	16.61	37	ceP	Pn	09 49 58.0	+1.2
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKASG	Malin Array Be	16.61	37	P	Pn	09 49 55.4	-1.4
AKBB	Malin Array Si	16.61	37	ceP	Pn	09 49 57.2	+0.4
AKBB	Malin Array Si	16.61	37	P	P	09 49 59.7	+0.5
KLNR	Kaliningrad	16.88	13	i P	Pn	09 50 00.4	+0.2
KLNR				pmax	pmax		
	comp=Z,55nm,0.6s						
SUW	Suwalki	17.00	20	P	Pn	09 50 02.6	+0.9
SUW				pmax	pmax		
	comp=Z,35nm,0.9s						
SUW	Suwalki	17.00	20		Pn	09 50 02.6	+0.9
SUW				IAmb	IAmb	09 50 05.2	
	comp=Z,35nm,0.9s						
BNN	Bunyan	17.42	81	P	P	09 50 09.6	+1.1
BNN				IAmb	IAmb	09 50 23.1	
	comp=Z,49nm,1.3s						
MMAI	Mount Meron Ar	18.50	100	P	P	09 50 18.9	-1.6
	comp=Z,3.7nm,0.3s,baz=301,slow=15,SNR=6.1						
GAZ	Gaziantep	18.72	86	P	P	09 50 21.9	-0.9
NACGM	Naroch	18.83	24	i P	P	09 50 23.7	0.0
MNK	Minsk	18.87	26	i P	P	09 50 22.3	-1.9
MNK				i S	Sn	09 53 55.3	-0.3
MNK				pmax	pmax		
	comp=Z,18nm,0.7s						
MNK				pmax	pmax		
	comp=N,28nm,1.3s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,171nm,16.0s						
MNK				MLR	MLR		
	comp=Z,103nm,13.0s						
MNK				MLR	MLR		
	comp=E,10.0nm,15.0s						
MNK	Minsk	18.87	26	i P	P	09 50 22.4	-1.8
	comp=E,3.0nm,0.9s,baz=217						
MNK				i P	P	09 50 22.4	-1.8
	comp=N,28nm,1.3s						
MNK				i P	P	09 50 22.4	-1.8
	comp=Z,18nm,0.7s						
MNK				i PP	PnPn	09 50 35.2	-1.8
MNK				i S	Sn	09 53 55.3	-0.3
MNK				i SS	SnSn	09 54 10.7	+1.2
MNK				i LQ	LQ	09 56 01.8	
MNK				i LR	LR	09 57 28.0	
MNK				i LRM	MLR	09 58 40.2	
	comp=N,171nm,15.6s						
MNK				i LRM	MLR	09 58 44.6	
	comp=Z,103nm,12.5s						
MNK				i LRM	MLR	09 58 50.8	
	comp=E,10.0nm,15.2s						
EIL	Elat	19.69	110	P	P	09 50 33.1	-0.3
	comp=E,0.5nm,0.3s,baz=260,slow=11,SNR=2.1						
ASF	Jabal al Asfar	20.00	101	P	P	09 50 36.7	-0.1
	comp=E,0.2nm,0.3s,baz=189,slow=21,SNR=2.6						
SOC	Sochi	20.39	67	eP	P	09 50 38.7	-2.1
SOC				ePPP	PPP	09 51 07.4	
SOC				eS	S	09 54 28.0	-0.7
SOC				eSS	SnSn	09 54 51.2	+4.4
SOC				eSSS	SSS	09 55 10.2	
SOC				pmax	pmax		
	comp=Z,76nm,0.9s						
EKA	Eskdalemuir Ar	20.39	332	P	P	09 50 40.2	-0.6
	comp=Z,2.5nm,0.9s,baz=188,slow=37,SNR=2.8						
KOPT	Kop Dagi	20.92	77	P	Pn	09 50 48.3	-1.1
KOPT				IAmb	IAmb	09 51 09.8	
	comp=Z,19nm,0.9s						
HFS	Hagfors	21.81	0	P	P	09 50 56.0	0.0
	comp=Z,2.0nm,0.6s,baz=176,slow=9.8,SNR=7.1						
HFS				LR	LR	09 59 26.0	
	comp=Z,120nm,18.5s,baz=177,slow=37						
HFS	Hagfors	21.81	0	P	P	09 50 56.0	0.0
VSU	Vasula	21.87	19	i P	P	09 50 58.7	+2.1
VSU				pmax	pmax		
	comp=Z,23nm,0.7s						
VORD	Divnogorie	22.09	47	eP	P	09 51 00.2	+1.1
VORD				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VSR	Storozhevoye	22.13	46	eP	P	09 51 01.7	+2.2
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GURO	Guroymak-BITLI	22.26	81	P	P	09 51 02.8	+1.6
GURO				IAmb	IAmb	09 51 09.3	
	comp=Z,15nm,1.0s						
SHA1	Shidzhatmaz	22.53	67	i P	P	09 51 04.2	+0.1
NEY	Neytrino	22.55	68	i P	P	09 51 05.5	+1.2
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIV	Kislovodsk	22.56	66	eP	P	09 51 04.3	-0.1
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KVAR	Kislovodsk Arr	22.57	66	P	P	09 51 04.8	+0.4
	comp=Z,0.8nm,0.3s,baz=252,slow=6.4,SNR=1.3						
LPSR	Galich'ya Gora	22.63	43	eP	P	09 51 03.7	-1.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KBZ	Khabaz	22.70	67	P	P	09 51 04.4	-1.3
	comp=Z,8.1nm,0.9s,baz=266,slow=6.3,SNR=12						
KBZ	Khabaz	22.70	67	ceP	P	09 51 07.3	+1.6
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SIRT	Sirnak	22.75	83	P	P	09 51 07.5	+1.0
NB2	NORSAR Subarra	22.77	357	P	P	09 51 05.5	-0.8
	comp=Z,21nm,1.4s,baz=175,slow=11						
NOA	NORSAR Array B	22.77	357	P	P	09 51 06.1	-0.2
	comp=Z,5.1nm,0.9s,baz=172,slow=11,SNR=7.7						
NOA				LR	LR	09 59 38.0	
	comp=Z,67nm,20.9s,baz=240,slow=36						
KARS	Kars	22.84	75	P	P	09 51 06.5	-0.9
KARS				pmax	pmax		
	comp=Z,48nm,1.1s						
KARS	Kars	22.84	75	P	P	09 51 06.5	-0.9
OBN	Obninsk	22.85	35	P	P	09 51 06.4	-0.7
	comp=Z,2.5nm,0.3s,baz=193,slow=15,SNR=1.9						
OBN	Obninsk	22.85	35	⇓eP	P	09 51 06.8	-0.3
OBN				*PP	pP	09 51 11.0	-0.1
OBN				*SP	sP	09 51 14.0	+1.2
OBN				e		09 51 29.8	
OBN				pmax	pmax		
	comp=Z,27nm,1.7s						
GOF	Gofitskoye	22.92	64	⇑eP	P	09 51 11.0	+3.0
ONI	Oni	23.07	70	P	P	09 51 10.5	+0.9
ONI				pmax	pmax		
	comp=Z,19nm,1.2s						
ONI	Oni	23.07	70	P	P	09 51 10.5	+0.9
ONI				IAmb	IAmb	09 51 18.4	
	comp=Z,19nm,1.2s						
NCK	Nalchik	23.19	68	i P	P	09 51 12.9	+2.0
NCK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
VRH	Novokhopyorsk	23.59	48	eP	P	09 51 14.3	-0.4
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MOS	Moscow	23.71	35	eP	P	09 51 16.7	+0.9
GNI	Garni	24.15	76	P	P	09 51 19.8	-0.5
	comp=Z,9.8nm,0.3s,baz=299,slow=6.6,SNR=5.3						
FINES	FINESS Array B	24.40	15	P	P	09 51 22.1	-0.1
	comp=Z,14nm,0.9s,baz=177,slow=8.1,SNR=30						
FINES				LR	LR	10 03 23.7	
	comp=Z,96nm,18.2s,baz=237,slow=42						
FINES	FINESS Array B	24.40	15	i P	P	09 51 22.3	+0.1
FINES				pmax	pmax		
	comp=Z,14nm,0.9s						
FINES	FINESS Array B	24.40	15	P	P	09 51 21.6	-0.5
FIA1	FINESS Array S	24.40	15	P	P	09 51 22.3	+0.1
FIA1				IAmb	IAmb	09 51 23.3	
	comp=Z,21nm,1.0s						
VALR	Valaam	25.43	20	i P	P	09 51 33.4	+1.9
VALR				pmax	pmax		
	comp=Z,53nm,1.0s						
TORD	Torodi Ar. Bea	27.23	206	P	P	09 51 48.0	-0.1
	comp=Z,1.9nm,0.8s,baz=16,slow=10,SNR=6.8						
TORD				PcP	PcP	09 55 06.8	-1.3
	comp=Z,0.6nm,0.6s,baz=22,slow=2.7,SNR=3.1						
TORD				LR	LR	10 04 40.7	
	comp=Z,106nm,18.4s,baz=335,slow=41						
TORD	Torodi Ar. Bea	27.23	206	P	P	09 51 48.9	+0.7
BELG	Belogornoye	27.45	48	P	P	09 51 49.5	-0.3
	comp=Z,19nm,1.1s,baz=104,slow=4.1,SNR=6.8						
KLMR	Klimovskoe	27.77	27	eP	P	09 51 52.6	0.0
KLMR				pmax	pmax		
	comp=Z,24nm,1.5s						
KLMR	Klimovskoe	27.77	27	eP	P	09 51 52.6	0.0
KLMR				AMP		09 51 54.6	
	comp=Z,24nm,1.5s						
KOWA	Kowa	28.39	218	P	P	09 51 58.5	-0.1
	comp=Z,0.8nm,0.4s,baz=213,slow=3.0,SNR=2.4						
KIRV	Kirov	30.67	37	P	P	09 52 18.4	0.0
	comp=Z,9.4nm,0.8s,baz=261,slow=3.7,SNR=3.3						
KIRV	Kirov	30.67	37	ceP	P	09 52 18.6	+0.3
ARCES	ARCESS Array B	31.91	8	P	P	09 52 30.0	+0.8
	comp=Z,2.0nm,0.8s,baz=201,slow=6.8,SNR=1.5						
ARCES	ARCESS Array B	31.91	8	P	P	09 52 30.0	+0.8
ARU	Arti	34.65	44	d iP	P	09 52 53.3	+0.1
ARU						09 54 09.8	
ARU						09 55 24.1	
ARU				S	S	09 58 24.7	+2.6
ARU				SS	SnSn	10 00 37.4	+3.0
ARU				pmax	pmax		
	comp=Z,19nm,1.4s						
ARU	Arti	34.65	44	P	P	09 52 53.2	0.0
ARU				IAmb	IAmb	09 52 54.7	
	comp=Z,17nm,1.2s						
ABKAR	Akbulak array	34.69	56	P	P	09 52 54.1	+0.4
SVE	Sverdlovsk	35.85	43	eP	P	09 53 04.3	+0.7
SVE				pmax	pmax		
	comp=Z,24nm,1.1s						
LODK	Lodwar	40.05	145	P	P	09 53 39.6	+0.1
BRVK	Borovoye	41.14	50	ceP	P	09 53 47.7	-0.4
BRVK				pmax	pmax		
	comp=Z,17nm,1.0s						
BRVK	Borovoye	41.14	50	P	P	09 53 48.1	+0.1
KKAR	Karatay Array	42.71	65	P	P	09 54 00.3	-0.7
KKAR	Karatay Array	42.71	65	P	P	09 54 00.3	-0.7
CHGR	Chuyangaron	42.92	72	P	P	09 54 02.4	-0.5
CHGR				IAmb	IAmb	09 54 03.6	
	comp=Z,15nm,1.2s						
GAR	Garm	43.68	71	P	P	09 54 09.8	+0.8
GAR				IAmb	IAmb	09 54 12.7	
	comp=Z,9.3nm,1.1s						
KMBO	Kilima Mbogo	44.94	145	P	P	09 54 19.3	-0.1
	comp=Z,2.9nm,0.8s,baz=350,slow=11,SNR=7.5						
KMBO	Kilima Mbogo	44.94	145	P	P	09 54 20.2	+0.8
KMBO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KMBO	Kilima Mbogo	44.94	145	P	P	09 54 20.2	+0.8
KMBO				IAmb	IAmb	09 54 21.6	
	comp=Z,6.1nm,1.1s						
AAK	Ala-Archa	45.66	64	ceP	P	09 54 25.3	+0.5
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	Kurchatov	46.55	53	ceP	P	09 54 31.2	-0.3
KURK				pmax	pmax		
	comp=Z,15nm,1.0s						
KURK	Kurchatov	46.55	53	P	P	09 54 31.0	-0.5
KSH	Kashi	47.68	68	eP	P	09 54 40.5	-0.2
KSH				pP	pP	09 54 45.9	+0.9
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NIL	Nilore	47.79	76	P	P	09 54 41.9	+0.4
NIL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NIL	Nilore	47.79	76	P	P	09 54 41.9	+0.4
NRIK	Noril'sk	49.11	27	P	P	09 54 51.8	+0.7
	comp=Z,2.7nm,0.7s,baz=262,slow=6.4,SNR=4.3						
NRIK	Noril'sk	49.11	27	ceP	P	09 54 52.0	+0.9
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MAKZ	Makanchi	49.63	57	P	P	09 54 54.6	-0.8
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MAKZ	Makanchi	49.63	57	P	P	09 54 54.6	-0.8
MAKZ				IAmb	IAmb	09 54 55.8	
	comp=Z,9.9nm,1.2s						
ZAA0	Zalesovo Array	49.63	47	P	P	09 54 55.0	-0.3
ZAA0				IAmb	IAmb	09 55 00.5	
	comp=Z,7.3nm,0.8s						
ZALV	Zalesovo Beam	49.63	47	P	P	09 54 55.0	-0.3
	comp=Z,3.0nm,0.3s,baz=289,slow=9.2,SNR=22						
ZALV	Zalesovo Beam	49.63	47	P	P	09 54 55.0	-0.3
ZALV	Zalesovo Beam	49.63	47	P	P	09 54 54.4	-0.8
MK31	Makanchi Array	49.84	57	i P	P	09 54 56.3	-0.7
MK31	Makanchi Array	49.84	57	P	P	09 54 56.0	-1.0
MKAR	Makanchi Array	49.84	57	P	P	09 54 56.4	-0.7
	comp=Z,3.7nm,0.7s,baz=283,slow=6.2,SNR=22						
MKAR	Makanchi Array	49.84	57	P	P	09 54 56.5	-0.5
MKAR	Makanchi Array	49.84	57	P	P	09 54 56.5	-0.5
DGZ	Jazzator, Alta	52.28	52	i P	P	09 55 15.2	-0.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
EUNU	Eureka	54.22	348	P	P	09 55 30.2	+1.0
EUNU				IAmb	IAmb	09 55 55.5	
	comp=Z,5.8nm,1.5s						
WMQ	Urumqi	54.41	59	eP	P	09 55 33.8	+2.6
SCHQ	Schefferville	54.57	316	P	P	09 55 33.3	+1.3
TIXI	Tiksi	61.34	19	ceP	P	09 56 19.2	0.0
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA	Gaotai	64.50	59	eP	P	09 56 40.4	-0.6
GTA				pP	pP	09 56 46.6	+1.2
GTA				sP	sP	09 56 50.3	+3.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONM	Songino Array	64.50	48	P	P	09 56 40.4	-0.5
	comp=Z,3.7nm,1.1s,baz=297,slow=7.8,SNR=13						
SONM	Songino Array	64.50	48	P	P	09 56 40.2	-0.7
SONM				IAmb	IAmb	09 56 46.5	
	comp=Z,3.4nm,1.0s						
ULN	Ulaanbaatar	64.87	48	ceP	P	09 56 43.4	+0.1
ULN				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BOSA	Boshof	67.50	169	P	P	09 56 59.3	-0.8
	comp=Z,1.2nm,0.4s,baz=344,slow=5.8,SNR=7.4						
BOSA	Boshof	67.50	169	P	P	09 57 00.2	+0.1
BOSA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BOSA	Boshof	67.50	169	P	P	09 57 00.2	+0.1
INK	Inuvik	70.85	348	P	P	09 57 20.4	0.0
	comp=Z,1.0nm,0.8s,baz=55,slow=21,SNR=1.9						
INK	Inuvik	70.85	348	P	P	09 57 21.0	+0.7
INK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
INK	Inuvik	70.85	348	P	P	09 57 21.0	+0.7
YKA	Yellowknife Ar	71.24	337	P	P	09 57 23.1	+0.3
	comp=Z,0.6nm,0.7s,baz=37,slow=5.6,SNR=7.6						
HHC	Hu-ho-hao-te	71.36	52	eP	P	09 57 25.3	+1.2
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,5.9s						
BILL	Bilibino	71.96	10	⇑eP	P	09 57 27.5	+0.4
BILL				e*PP	pP	09 57 31.3	-0.3
BILL				e*SP	sP	09 57 33.3	+0.1
BILL						09 57 44.0	
BILL				S	S	10 06 38.0	-9.4
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULM	Lac du Bonnet	72.20	321	P	P	09 57 29.4	+0.5
	comp=Z,3.9nm,0.7s,baz=22,slow=5.4,SNR=1.8						
TOLK	Toolik Lake Re	72.59	354	P	P	09 57 33.4	+2.5
FYU	Fort Yukon	74.15	351	P	P	09 57 41.4	+1.4
CMAR	Chiang Mai Arr	75.25	78	P	P	09 57 45.8	-1.5
	comp=Z,0.7nm,0.3s,baz=306,slow=6.9,SNR=7.6						
CMAR	Chiang Mai Arr	75.25	78	i P	P	09 57 46.9	-0.3
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
H21K	Melozitna Rive	75.79	354	P	P	09 57 50.2	+0.6
H21K				IAmb	IAmb	09 57 57.5	
	comp=Z,6.0nm,0.9s						
ILAR	Eielson Array	76.08	352	P	P	09 57 50.4	-0.8
	comp=Z,0.8nm,0.8s,baz=360,slow=5.7,SNR=8.0						
ILAR	Eielson Array	76.08	352	P	P	09 57 51.5	+0.3
ILAR	Eielson Array	76.08	352	P	P	09 57 51.5	+0.3
MA2	Magadan	76.22	21	ceP	P	09 57 52.2	+0.1
MA2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MLY	Manley	76.23	353	P	P	09 57 54.6	+2.5
ECSD	EROS Data Cent	76.77	316	P	P	09 57 56.2	+0.7
ECSD				IAmb	IAmb	09 58 02.6	
	comp=Z,8.0nm,1.2s						
X48A	Hartselle	76.81	303	P	P	09 57 56.2	+0.3
X48A				IAmb	IAmb	09 58 02.7	
	comp=Z,6.2nm,0.8s						
BCAR	Beaver Creek A	77.02	349	P	P	09 57 58.7	+2.0
PTGA	Pitinga	77.58	259	LR	LR	10 28 59.0	
	comp=Z,26nm,19.2s,baz=98,slow=33						
CN2	Changchun	77.64	43	eP	P	09 58 02.8	+2.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PWL	Port Wells	80.04	351	P	P	09 58 13.3	0.0
NJ2	Nanjing	81.36	56	eP	P	09 58 20.9	+0.1
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KSRS	Korea Array	83.33	47	P	P	09 58 29.1	-1.9
	comp=Z,0.9nm,0.8s,baz=318,slow=5.3,SNR=3.0						
PDAR	Pinedale Array	84.17	322	P	P	09 58 35.6	0.0
	comp=Z,0.2nm,0.5s,baz=45,slow=2.8,SNR=2.8						
PDAR	Pinedale Array	84.17	322	P	P	09 58 35.2	-0.4
PTLB	Pontes e Lacer	86.45	247	P	P	09 58 48.5	+1.5
PTLB				IAmb	IAmb	09 59 10.4	
	comp=Z,4.8nm,1.3s						
TXAR	Lajitas Array	90.75	309	P	P	09 59 08.2	+0.7
	comp=Z,0.5nm,1.0s,baz=35,slow=4.9,SNR=2.4						
TXAR	Lajitas Array	90.75	309	P	P	09 59 06.7	-0.8

IDC 20 09:50:45.1±2.2**, 2°.70N × 127°.69E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/50**, mbtmp3.4**/3**, Error ellipse: s-maj=145.2km s-min=28.2km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.43	164	P	P	09 55 56.1	-0.1
	0.7nm,0.5s,baz=344,slow=11,SNR=11						
ASAR	Alice Springs	26.90	167	P	P	09 56 28.1	0.0
	0.5nm,0.9s,baz=347,slow=7.5,SNR=4.6						
MKAR	Makanchi Array	58.94	325	P	P	10 00 46.4	0.0
	0.3nm,0.5s,baz=122,slow=7.2,SNR=1.8						

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*NOU **20** 10:02:14.6, 39°.41S × 177°.62E, h54^{km}, MLv5.0/9, Off E. Coast of N. Island, N.Z.*

*BJI **20** 10:02:14.6±0.0, 39°.24S × 177°.57E, h26^{km}, mB5.8/2, mb5.4/6, Ms4.8/1*

*NEIC **20** 10:02:15.7, 39°.30S × 177°.47E, h31^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-5.62; $M_{\theta\theta}$1.66; $M_{\phi\phi}$3.97; $M_{r\theta}$-0.37; $M_{\theta\phi}$4.00; $M_{\phi r}$0.68; Fault plane solution: $M_0$6.45000×10^{15} NP1:ϕ_s207.99000°, δ47.17000°, λ-102.53000°. NP2:ϕ_s46.10000°, δ44.28000°, λ-76.83000°. Principal axes: T 6.9793, Plg1.0000°, Azm307.0000°; N -1.2338, Plg9.0000°, Azm217.0000°; P -5.7456, Plg81.0000°, Azm46.0000°;*

*NEIC **20** 10:02:15.9±1.6, 39°.29S±0°.05 × 177°.47E±0°.08, h26^{km}±4^{km}, mb4.6/16, Mwr4.5/23 Error ellipse: s-maj=8.8km s-min=6.4km az=115.0*

*WEL **20** 10:02:16.4, 39°S±3° × 17°7E±°, h41^{km}±7^{km}, M4.7/106, ML5.2/19, MLv4.7/106, Error ellipse: s-maj=0.0km s-min=0.0km az=104.0*

*IDC **20** 10:02:19.8±1.4, 39°.08S × 177°.26E, h60^{km}±12^{km}, mb4.1/9, mb1 4.3/10, mb1mx3.9/34, mbtmp4.4/10, MS3.8/9, Ms1 3.8/9, ms1mx3.6/26, Error ellipse: s-maj=23.5km s-min=14.4km az=40.0*

ISC 20 10:02:17.7±0.7**, 39°.28S**±0°.03 × **177°.50E**±0°.03**, h47^{km}**±5^{km}**, n187, σ1^{s}66**/192**, mb4.6**/16**, MS3.7**/10**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHHZ	Waihua	0.29	315	P	Pn	10 02 33.0	+6.6
WHHZ				S	Sn	10 02 39.4	+6.7
KNZ	Kokohu	0.30	28	P	Pn	10 02 24.3	-2.2
KNZ				S	Sn	10 02 30.7	-2.0
MHGZ	Mahia Peninsul	0.34	68	P	Pn	10 02 25.7	-1.3
MHGZ				S	Sn	10 02 34.1	+0.5
ARHZ	Aropaoanui	0.39	273	P	Pn	10 02 25.8	-1.7
ARHZ				S	Sn	10 02 33.3	-1.2
PRGZ	Paritu Road	0.47	40	P	Pn	10 02 26.9	-1.5
PRGZ				S	Sn	10 02 36.7	+0.6
RAHZ	Arahi	0.49	319	P	Pn	10 02 26.6	-2.0
RAHZ				S	Sn	10 02 34.9	-1.6
CKHZ	Cape Kidnapper	0.49	221	P	Pn	10 02 27.7	-1.0
CKHZ				S	Sn	10 02 37.0	+0.4
SNGZ	Shannon Statio	0.52	346	P	Pn	10 02 27.3	-1.7
SNGZ				S	Sn	10 02 35.8	-1.3
NMHZ	Naumai	0.57	289	P	Pn	10 02 28.3	-1.4
NMHZ				S	Sn	10 02 37.9	-0.4
RIGZ	Rimuhau	0.61	20	P	Pn	10 02 28.7	-1.5
RIGZ				S	Sn	10 02 38.8	-0.5
MCHZ	McNeill Hill	0.64	255	P	Pn	10 02 29.5	-1.0
MCHZ				S	Sn	10 02 40.5	+0.7
MTHZ	Maungataniwha	0.67	310	P	Pn	10 02 29.2	-1.8
MTHZ				S	Sn	10 02 39.0	-1.5
KAHZ	Kahuranaki	0.70	223	P	Pn	10 02 30.3	-1.1
RTZ	Ruatahuna	0.78	329	P	Pn	10 02 30.8	-1.6
RTZ				S	Sn	10 02 42.0	-1.2
BKZ	Black Stump Fm	0.79	278	P	Pn	10 02 31.1	-1.4
BKZ				S	Sn	10 02 42.4	-1.0
BKZ	Black Stump Fm	0.79	278		Pn	10 02 31.3	-1.2
BKZ	Black Stump Fm	0.79	278	P	Pn	10 02 31.2	-1.3
RAGZ	Rawiri	0.79	355	P	Pn	10 02 30.9	-1.7
KWHZ	Kaweka Forest	0.84	260	P	Pn	10 02 32.1	-1.2

TKGZ	**Te Karaka**	**0.89**	**18**	P	**Pn**	**10 02 32.1**	**-1.7**
PXZ	**Pawanui**	**0.89**	**213**	P	**Pn**	**10 02 32.1**	**-1.7**
KRHZ	**Kereru**	**0.94**	**247**	P	**Pn**	**10 02 33.1**	**-1.5**
MWZ	**Matawai**	**0.95**	**1**	P	**Pn**	**10 02 32.8**	**-1.9**
MRHZ	**Matea Rd**	**0.95**	**298**	P	**Pn**	**10 02 33.5**	**-1.2**
MRHZ				S	**Sn**	**10 02 46.5**	**-0.8**
CNGZ	**Carnagh Statio**	**0.97**	**35**	P	**Pn**	**10 02 33.6**	**-1.3**
MUGZ	**Murupara**	**0.98**	**325**	P	**Pn**	**10 02 33.7**	**-1.5**
URZ	**Urewera**	**1.07**	**343**	P	**Pn**	**10 02 34.7**	**-1.5**
	564nm,0.3s,baz=121,slow=23,SNR=3878						
URZ				S	**Sn**	**10 02 48.3**	**-1.6**
	3µm,0.3s,baz=65,slow=22,SNR=21						
URZ				LR	LR	10 02 51.0	
	comp=Z,617nm,20.2s,baz=211,slow=38						
URZ	**Urewera**	**1.07**	**343**	P	**Pn**	**10 02 34.8**	**-1.5**
URZ	**Urewera**	**1.07**	**343**	P	**Pn**	**10 02 34.8**	**-1.5**
WPHZ	**Waipukurau**	**1.13**	**226**	P	**Pn**	**10 02 35.7**	**-1.4**
BHHZ	**Black Hill Sta**	**1.13**	**259**	P	**Pn**	**10 02 35.9**	**-1.3**
ALRZ	**Allen Road**	**1.15**	**308**	P	**Pn**	**10 02 36.1**	**-1.3**
HATZ	**Hinemaiaia**	**1.16**	**289**	P	**Pn**	**10 02 36.6**	**-1.0**
PRRZ	**Plateau Road**	**1.17**	**312**	P	**Pn**	**10 02 36.1**	**-1.5**
TWGZ	**Tauwhareparae**	**1.17**	**19**	P	**Pn**	**10 02 36.3**	**-1.4**
PNHZ	**Pukenui**	**1.18**	**237**	P	**Pn**	**10 02 36.1**	**-1.7**
PRHZ	**Porangahau**	**1.18**	**214**	P	**Pn**	**10 02 35.9**	**-1.9**
RRRZ	**Republican Roa**	**1.22**	**321**	P	**Pn**	**10 02 36.9**	**-1.4**
WPRZ	**Whakapapatarin**	**1.29**	**306**	P	**Pn**	**10 02 38.0**	**-1.3**
HRRZ	**Handcock Road**	**1.30**	**313**	P	**Pn**	**10 02 37.9**	**-1.5**
TARZ	**Mount Tarawera**	**1.30**	**323**	P	**Pn**	**10 02 38.3**	**-1.3**
RITZ	**Rihia Road**	**1.31**	**283**	P	**Pn**	**10 02 38.9**	**-0.7**
EDRZ	**Edgecumbe**	**1.32**	**333**	P	**Pn**	**10 02 38.2**	**-1.5**
RUGZ	**Raukumara Rang**	**1.32**	**6**	P	**Pn**	**10 02 37.9**	**-2.0**
PUZ	**Puketiti**	**1.35**	**26**	P	**Pn**	**10 02 37.9**	**-2.2**
WHTZ	**Whakaora**	**1.35**	**297**	P	**Pn**	**10 02 39.4**	**-0.8**
MOVZ	**Moawhango**	**1.36**	**264**	P	**Pn**	**10 02 39.7**	**-0.6**
HLRZ	**Highlands Stat**	**1.36**	**319**	P	**Pn**	**10 02 39.2**	**-1.1**
HSRZ	**Hossack Road**	**1.38**	**314**	P	**Pn**	**10 02 39.1**	**-1.4**
ETVZ	**East Tongariro**	**1.40**	**276**	P	**Pn**	**10 02 40.0**	**-0.8**
MKRZ	**Makatiti**	**1.40**	**325**	P	**Pn**	**10 02 40.1**	**-0.8**
TMVZ	**Te Maari**	**1.40**	**276**	P	**Pn**	**10 02 40.1**	**-0.8**
RATZ	**Rangitukua**	**1.41**	**287**	P	**Pn**	**10 02 39.9**	**-1.0**
ANWZ	**Angora Road**	**1.41**	**213**	P	**Pn**	**10 02 38.9**	**-2.0**
TSZ	**Takapari Road**	**1.42**	**236**	P	**Pn**	**10 02 39.1**	**-1.9**
NTVZ	**North Tongarir**	**1.43**	**277**	P	**Pn**	**10 02 40.3**	**-0.9**
OTVZ	**Oturere**	**1.43**	**274**	P	**Pn**	**10 02 40.5**	**-0.8**
GRRZ	**Galatos Road**	**1.43**	**310**	P	**Pn**	**10 02 40.2**	**-1.0**
TUVZ	**Tukino**	**1.43**	**270**	P	**Pn**	**10 02 40.7**	**-0.6**
KATZ	**Kakaramea**	**1.44**	**282**	P	**Pn**	**10 02 40.6**	**-0.8**
DVHZ	**Dannevirke**	**1.44**	**225**	P	**Pn**	**10 02 39.5**	**-1.8**
SNVZ	**South Ngauruho**	**1.45**	**273**	P	**Pn**	**10 02 40.8**	**-0.7**
MARZ	**Manawahe**	**1.45**	**333**	P	**Pn**	**10 02 40.2**	**-1.3**
KRVZ	**Karewarewa**	**1.45**	**277**	P	**Pn**	**10 02 41.0**	**-0.6**
NNVZ	**North Ngauruho**	**1.47**	**275**	P	**Pn**	**10 02 41.2**	**-0.7**
OMRZ	**Omania**	**1.47**	**323**	P	**Pn**	**10 02 40.2**	**-1.6**
WNVZ	**Wahianoa**	**1.47**	**268**	P	**Pn**	**10 02 41.2**	**-0.7**
NGZ	**Ngauruhoe**	**1.48**	**274**	P	**Pn**	**10 02 41.1**	**-0.8**
WHVZ	**Whangaehu Hut**	**1.48**	**269**	P	**Pn**	**10 02 41.3**	**-0.8**
WHRZ	**Whale Island**	**1.48**	**344**	P	**Pn**	**10 02 40.6**	**-1.4**
WTVZ	**West Tongariro**	**1.49**	**276**	P	**Pn**	**10 02 41.5**	**-0.6**
DRZ	**Dome Shelter**	**1.50**	**270**	P	**Pn**	**10 02 41.7**	**-0.8**
UTU	**Utuhina**	**1.50**	**317**	P	**Pn**	**10 02 41.1**	**-1.1**
FWVZ	**Far West T-bar**	**1.51**	**270**	P	**Pn**	**10 02 41.6**	**-0.9**
TRVZ	**Turoa**	**1.51**	**269**	P	**Pn**	**10 02 41.7**	**-0.9**
KUTZ	**Kaahu Road**	**1.53**	**301**	P	**Pn**	**10 02 41.3**	**-1.3**
HAZ	**Te Kaha**	**1.54**	**8**	P	**Pn**	**10 02 41.0**	**-1.7**
LIRZ	**Lichensteins R**	**1.55**	**325**	P	**Pn**	**10 02 41.6**	**-1.2**
NGRZ	**Ngongotaha**	**1.56**	**319**	P	**Pn**	**10 02 41.9**	**-1.1**
MTVZ	**Mangateitei**	**1.57**	**266**	P	**Pn**	**10 02 42.4**	**-0.8**
KARZ	**Kaharoa**	**1.60**	**322**	P	**Pn**	**10 02 41.6**	**-1.9**
TWVZ	**Taurewa**	**1.61**	**277**	P	**Pn**	**10 02 42.6**	**-1.2**
OPRZ	**Ohinepanea**	**1.62**	**333**	P	**Pn**	**10 02 41.7**	**-2.1**
WMGZ	**Waiomatatini S**	**1.63**	**27**	P	**Pn**	**10 02 41.9**	**-2.0**
BFZ	**Birch Farm**	**1.69**	**214**	P	**Pn**	**10 02 42.4**	**-2.4**
BFZ	**Birch Farm**	**1.69**	**214**	Pn	**Pn**	**10 02 42.5**	**-2.4**
BFZ	**Birch Farm**	**1.69**	**214**	P	**Pn**	**10 02 42.4**	**-2.4**
PRWZ	**Pori Road**	**1.73**	**222**	P	**Pn**	**10 02 43.5**	**-1.8**
POWZ	**Post Office Ro**	**1.73**	**230**	P	**Pn**	**10 02 43.6**	**-1.7**
TLZ	**Tolley Road**	**1.80**	**301**	P	**Pn**	**10 02 44.7**	**-1.6**
TGRZ	**Tauranga**	**1.83**	**328**	P	**Pn**	**10 02 44.7**	**-2.0**
MXZ	**Matakaoa Point**	**1.83**	**21**	P	**Pn**	**10 02 45.1**	**-1.6**
MXZ	**Matakaoa Point**	**1.83**	**21**	Pn	**Pn**	**10 02 45.5**	**-1.2**
KMRZ	**Kaimai**	**1.88**	**319**	P	**Pn**	**10 02 45.9**	**-1.5**
CPWZ	**Castlepoint**	**1.90**	**211**	P	**Pn**	**10 02 45.8**	**-1.9**
OHWZ	**Ohakea**	**1.92**	**241**	P	**Pn**	**10 02 47.3**	**-0.5**
TIWZ	**Tintock**	**1.94**	**219**	P	**Pn**	**10 02 45.9**	**-2.2**
WAZ	**Wanganui**	**2.00**	**256**	P	**Pn**	**10 02 49.0**	**0.0**
MRZ	**Mangatainoka R**	**2.02**	**226**	P	**Pn**	**10 02 46.8**	**-2.4**
VRZ	**Vera Road**	**2.13**	**273**	P	**Pn**	**10 02 49.8**	**-1.0**
TMWZ	**Te Maipa**	**2.20**	**214**	P	**Pn**	**10 02 48.7**	**-3.1**
HIZ	**Hauiti**	**2.20**	**290**	Pn	**Pn**	**10 02 50.7**	**-1.0**
HIZ	**Hauiti**	**2.20**	**290**	P	**Pn**	**10 02 50.8**	**-0.9**
TOZ	**Tahuroa Road**	**2.20**	**314**	P	**Pn**	**10 02 50.3**	**-1.5**
HOWZ	**Holdsworth Sta**	**2.21**	**223**	P	**Pn**	**10 02 49.2**	**-2.8**
MYRZ	**Mayor Island**	**2.23**	**333**	P	**Pn**	**10 02 50.9**	**-1.3**
OGWZ	**Otaki Gorge**	**2.35**	**229**	P	**Pn**	**10 02 51.3**	**-2.5**
MTW	**Mount Morrison**	**2.42**	**219**	P	**Pn**	**10 02 51.2**	**-3.5**
MHEZ	**Mangahewa**	**2.48**	**274**	P	**Pn**	**10 02 56.0**	**+0.5**
TRWZ	**Traveller**	**2.52**	**213**	P	**Pn**	**10 02 52.3**	**-3.9**
PAWZ	**Paruwai Farm**	**2.62**	**216**	P	**Pn**	**10 02 54.0**	**-3.6**
SNZO	**South Karori**	**2.94**	**226**	P	**Pn**	**10 02 59.2**	**-2.7**
BSWZ	**Blackbirch Sta**	**3.68**	**228**	Pn	**Pn**	**10 03 09.1**	**-2.8**
NNZ	**Nelson**	**3.69**	**237**		**Pn**	**10 03 10.0**	**-2.2**
QRZ	**Quartz Range**	**4.11**	**246**	P	**Pn**	**10 03 14.6**	**-3.3**
KHZ	**Kahutara**	**4.33**	**223**	P	**Pn**	**10 03 17.2**	**-3.8**
OUZ	**Omahuta**	**5.11**	**321**	Pn	**Pn**	**10 03 30.5**	**-1.2**
OUZ	**Omahuta**	**5.11**	**321**	P	**Pn**	**10 03 31.6**	**-0.1**
ODZ	**Otahua Downs**	**7.68**	**219**	P	**Pn**	**10 04 02.5**	**-4.4**
WHZ	**Wether Hill Ro**	**9.65**	**224**	Pn	**Pn**	**10 04 32.0**	**-1.8**
DCZ	**Deep Cove**	**9.83**	**228**	Pn	**Pn**	**10 04 35.7**	**-0.6**
DZM	**Mont Dzumac**	**19.59**	**328**	*e*LR	LR	10 11 32.0	
	comp=Z,640nm,25.4s						
DZM	**Mont Dzumac**	**19.59**	**328**	P	**P**	**10 06 41.4**	**-0.5**
	1.3nm,0.3s,baz=188,slow=10,SNR=11						
DZM				LR	LR	10 14 07.3	
	comp=Z,224nm,18.1s,baz=208,slow=37						
DZM	**Mont Dzumac**	**19.59**	**328**		**P**	**10 06 42.3**	**+0.4**
MSVF	**Nonsavu**	**21.48**	**1**	LR	LR	10 14 42.0	
	comp=Z,166nm,18.2s,baz=62,slow=35						
TOO	**Toolangi**	**25.07**	**264**	P	**P**	**10 07 38.6**	**+1.0**
STKA	**Stephens Creek**	**29.97**	**273**	P	**P**	**10 08 21.6**	**+0.1**
	2.7nm,0.7s,baz=116,slow=12,SNR=5.7						
STKA				LR	LR	10 20 11.2	
	comp=Z,154nm,19.5s,baz=60,slow=36						
STKA	**Stephens Creek**	**29.97**	**273**	P	**P**	**10 08 22.7**	**+1.1**
TBI	**Tubuai**	**32.17**	**70**	*e*LR	LR	10 17 06.9	
	comp=Z,187nm,27.8s						
TBI	**Tubuai**	**32.17**	**70**	*e*T	T	10 41 53.7	
	14nm,0.3s						
CTAO	**Charters Tower**	**32.97**	**296**	P	**P**	**10 08 48.1**	**+0.1**
PAE	**Paea**	**35.78**	**62**	*e*T	T	10 46 27.4	
	5.9nm,0.3s						
PPT2	**Papeete2**	**35.83**	**62**	*e*LR	LR	10 18 45.3	
	comp=Z,225nm,27.8s						
PPT2	**Papeete2**	**35.83**	**62**	*e*T	T	10 46 31.7	
	5.0nm,0.4s						
COEN	**Coen**	**39.34**	**300**	P	**P**	**10 09 42.2**	**-0.3**
COEN				IAmb	IAmb	10 09 56.0	
	comp=Z,12nm,0.9s						
AS31	**Alice Springs**	**39.91**	**280**	P	**P**	**10 09 46.9**	**-0.3**
ASAR	**Alice Springs**	**39.91**	**280**	P	**P**	**10 09 46.5**	**-0.6**
	comp=Z,6.4nm,0.8s,baz=130,slow=8.8,SNR=60						
ASAR				PcP	**PcP**	**10 11 50.4**	**-1.7**
	comp=Z,0.8nm,0.5s,baz=116,slow=4.0,SNR=2.2						
ASAR				ScP	**ScP**	**10 15 34.8**	**-2.3**
	comp=Z,0.3nm,0.7s,baz=98,slow=4.7,SNR=1.8						
ASAR				S	**S**	**10 15 44.7**	**-4.2**
	comp=Z,1.2nm,0.9s,baz=129,slow=15,SNR=5.9						
ASAR				LR	LR	10 27 15.5	
	comp=Z,247nm,18.1s,baz=136,slow=38						
ASAR	**Alice Springs**	**39.91**	**280**	P	**P**	**10 09 46.7**	**-0.5**
WR0	**Warramunga Arr**	**41.56**	**285**	P	**P**	**10 09 59.9**	**-0.9**
WR0				IAmb	IAmb	10 10 11.5	
	comp=Z,11nm,1.0s						
WB2	**Warramunga Arr**	**41.71**	**285**	P	**P**	**10 10 01.2**	**-0.8**
WB2				IAmb	IAmb	10 10 02.6	
	comp=Z,9.9nm,0.8s						
WRAB	**Tennant Creek**	**41.72**	**285**	P	**P**	**10 10 01.2**	**-0.9**
WRAB				IAmb	IAmb	10 10 02.1	
	comp=Z,8.3nm,0.6s						
WRA	**Warramunga Arr**	**41.72**	**285**	P	**P**	**10 10 01.3**	**-0.8**
	comp=Z,5.0nm,0.6s,baz=130,slow=7.6,SNR=101						
WRA				LR	LR	10 27 58.3	
	comp=Z,313nm,18.7s,baz=130,slow=37						
WRA	**Warramunga Arr**	**41.72**	**285**	P	**P**	**10 10 01.2**	**-1.0**
WB0	**Warramunga Arr**	**41.78**	**285**	P	**P**	**10 10 01.0**	**-1.7**
WB0				IAmb	IAmb	10 10 12.5	
	comp=Z,19nm,1.4s						
FITZ	**Fitzroy Crossi**	**49.41**	**280**	P	**P**	**10 11 01.8**	**-1.1**
	comp=Z,5.5nm,0.9s,baz=120,slow=7.0,SNR=6.8						
QSPA	**South Pole Qui**	**50.84**	**180**	P	**P**	**10 11 16.0**	**+2.7**
	comp=Z,6.6nm,0.6s,baz=9.6,slow=1.0,SNR=62						
QSPA				PcP	**PcP**	**10 12 30.6**	**+1.3**
	comp=Z,3.8nm,0.9s,baz=46,slow=2.7,SNR=4.2						
QSPA	**South Pole Qui**	**50.84**	**180**	P	**P**	**10 11 16.1**	**+2.8**
QSPA				IAmb	IAmb	10 11 17.0	
	comp=Z,8.4nm,0.8s						
MORW	**Morawa**	**50.99**	**262**	P	**P**	**10 11 12.9**	**-1.8**
KAPI	**Kappang**	**62.13**	**288**	LR	LR	10 40 53.3	
	comp=Z,139nm,19.7s,baz=218,slow=37						
MAW	**Mawson**	**62.71**	**203**	LR	LR	10 40 55.5	
	comp=Z,78nm,18.3s,baz=54,slow=37						
SNAA	**Sanae**	**69.35**	**180**	P	**P**	**10 13 21.5**	**+1.6**
SNAA	**Sanae**	**69.35**	**180**	P	**P**	**10 13 20.4**	**+0.6**
VNA3	**Neumayer Olymp**	**69.66**	**178**	P	**P**	**10 13 23.2**	**+1.5**
VNA2	**Neumayer--Watz**	**70.04**	**178**	P	**P**	**10 13 25.7**	**+1.6**
	baz=181,slow=6.2						
VNA1	**Neumayer--Stat**	**70.30**	**178**	P	**P**	**10 13 27.5**	**+2.0**
H03S2	**Juan Fernandez**	**78.59**	**124**	T	T	11 40 31.8	
	baz=229						
H03S1	**Juan Fernandez**	**78.60**	**124**	T	T	11 40 32.5	
	baz=229						
H03S3	**Juan Fernandez**	**78.61**	**124**	T	T	11 40 31.8	
	baz=229						
H03N3	**Juan Fernandez**	**78.83**	**124**	T	T	11 40 38.0	
	baz=233,slow=72,SNR=13						
H03N2	**Juan Fernandez**	**78.84**	**124**	T	T	11 40 38.0	
	baz=233,slow=72,SNR=14						
H03N1	**Juan Fernandez**	**78.85**	**124**	T	T	11 40 36.9	
	baz=233,slow=72,SNR=13						
PLCA	**Paso Flores**	**79.08**	**134**	P	**P**	**10 14 19.5**	**+2.5**
	comp=Z,3.1nm,0.8s,baz=205,slow=9.2,SNR=7.5						
PLCA	**Paso Flores**	**79.08**	**134**	P	**P**	**10 14 19.3**	**+2.2**
PLCA				IAmb	IAmb	10 14 20.2	
	comp=Z,4.8nm,0.9s						
LC01	**Cunco**	**79.57**	**132**	P	**P**	**10 14 21.4**	**+1.7**
LC01				IAmb	IAmb	10 14 22.9	
	comp=Z,7.1nm,0.8s						
MJAR	**Matsushiro Arr**	**83.69**	**329**	P	**P**	**10 14 40.3**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=172,slow=4.5,SNR=2.6						
KSRS	**Korea Array**	**88.93**	**323**	P	**P**	**10 15 08.0**	**+1.2**
	comp=Z,2.4nm,0.8s,baz=148,slow=5.5,SNR=7.9						
KSRS				LR	LR	10 50 53.2	
	comp=Z,24nm,21.8s,baz=350,slow=33						
KSAR	**Wonju Array Be**	**88.94**	**323**	P	**P**	**10 15 07.5**	**+0.7**
NJ2	**Nanjing**	**89.43**	**314**	*e*P	**P**	**10 15 12.1**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**93.00**	**291**	P	**P**	**10 15 26.3**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=149,slow=3.4,SNR=11						
CMAR				LR	LR	10 59 21.0	
	comp=Z,25nm,21.4s,baz=182,slow=37						
CMAR	**Chiang Mai Arr**	**93.00**	**291**	P	**P**	**10 15 25.7**	**-0.5**
HHC	**Hu-ho-hao-te**	**99.83**	**315**	*e*P	**Pdif**	**10 15 59.1**	**+2.3**
YKA	**Yellowknife Ar**	**115.02**	**28**	PKP	**PKPdf**	**10 20 52.0**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=254,slow=1.8,SNR=6.5						
WMQ	**Urumqi**	**115.67**	**307**	*e*PKP	**PKiKP**	**10 20 56.3**	**+2.0**
MKAR	**Makanchi Array**	**120.44**	**307**	PKP	**PKPdf**	**10 21 02.5**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=155,slow=1.7,SNR=3.0						
MKAR	**Makanchi Array**	**120.44**	**307**		**PKiKP**	**10 21 03.6**	**+0.1**
ZALV	**Zalesovo Beam**	**122.01**	**316**	PKP	**PKPdf**	**10 21 04.8**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=128,slow=2.4,SNR=1.8						
ARCES	**ARCESS Array B**	**146.23**	**343**	PKPbc	**PKPbc**	**10 21 51.5**	**-0.3**
	comp=Z,3.1nm,0.6s,baz=57,slow=4.0,SNR=19						
ARCES	**ARCESS Array B**	**146.23**	**343**		**PKPdf**	**10 21 51.1**	**+0.5**
LIC	**Lamto**	**147.01**	**175**	*e*PKP1	**PKPbc**	**10 21 55.5**	**-0.1**
	comp=Z,16nm,0.7s						
KIC	**Kosan Boka**	**147.16**	**176**	*e*PKP1	**PKPbc**	**10 21 56.2**	**+0.2**
	comp=Z,21nm,0.8s						
TIC	**Toumodi**	**147.43**	**175**	*e*PKP1	**PKPbc**	**10 21 56.3**	**-0.5**
DBIC	**Dimbokro**	**147.46**	**176**	PKPbc	**PKPbc**	**10 21 57.5**	**+0.6**
	comp=Z,4.9nm,0.8s,baz=177,slow=3.9,SNR=7.3						
DBIC	**Dimbokro**	**147.46**	**176**		**PKPab**	**10 21 58.1**	**-0.8**
FINES	**FINESS Array B**	**151.71**	**331**	PKPbc	**PKPbc**	**10 22 05.2**	**-0.7**
	comp=Z,2.9nm,0.6s,baz=18,slow=2.0,SNR=15						
BRTR	**Keskin Array B**	**152.22**	**283**	PKPbc	**PKPbc**	**10 22 07.5**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=142,slow=5.4,SNR=16						
TORD	**Torodi Ar. Bea**	**153.70**	**189**	PKPbc	**PKPbc**	**10 22 11.7**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=139,slow=2.6,SNR=11						
TORD	**Torodi Ar. Bea**	**153.70**	**189**		**PKiKP**	**10 22 12.0**	**+0.1**
TORD				PKPab	**pPKPbc**	**10 22 25.1**	**-1.1**

MIRAS 20 10:07:57.0±0.0**, 54°.65N**×**59°.19E, h0**km**, ML2.5**/4**, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARU	**Arti**	**1.82**	**349**	*i* P	Pb	10 08 31.1	-0.1
	30nm,0.7s,baz=348						
ARU				*i* S	Sg	10 08 55.4	-0.1
	baz=348						
KAUR	**Kamensk Uralsk**	**2.22**	**35**	*i* P	Pn	10 08 34.9	-0.2
	81nm,2.2s,baz=34						
KAUR				*e*S	Sn	10 09 03.9	+0.7
	baz=34						
SVE	**Sverdlovsk**	**2.33**	**20**	*e*P	Pn	10 08 37.9	+1.3
	28nm,0.3s,baz=18						
SVE				*e*S	Sb	10 09 08.5	-0.8
	baz=18						
PR7R	**Sarany**	**3.92**	**357**	P	Pn	10 09 02.0	+3.6
	43nm,4.3s,baz=356						
PR7R				S	Sn	10 09 49.9	+4.7
	baz=356						

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*TAP **20** 10:13:22.4, 24°.52N×121°.97E, h13km, ML3.8, B*
*JMA **20** 10:13:22.6, 24°.49N×121°.98E, h18km±4km, M3.3*
ISC 20 10:13:22.1±0.9**, 24°.50N**±0°.01×**122°.00E**±0°.02**, h11**km±6km**,**
n127, σ0ˢ80/223**, 7C-18D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao**	**0.17**	**308**	⇓*i*P	**Pg**	**10 13 25.9**	**+0.1**
	baz=311						
TWC				S	**Sg**	**10 13 28.0**	**-0.5**
	baz=311						
EWUT	**Wuta**	**0.21**	**254**	⇓*i*P	**Pg**	**10 13 26.9**	**+0.4**
	baz=247						
EWUT				*e*S	**Sg**	**10 13 29.5**	**+0.1**
	baz=247						
ENA	**Nanau**	**0.25**	**252**	⇓*i*P	**Pg**	**10 13 27.4**	**+0.3**
	baz=245						
ENA				S	**Sg**	**10 13 30.4**	**-0.1**
	baz=245						
NDS	**Dongshan**	**0.29**	**297**	⇓*i*P	**Pg**	**10 13 28.2**	**+0.3**
	baz=291						
NDS				S	**Sg**	**10 13 31.6**	**-0.2**
	baz=291						
EHP	**Heping Village**	**0.30**	**231**	P	**Pg**	**10 13 28.7**	**+0.5**
	baz=224						
EHP				S	**Sg**	**10 13 33.0**	**+0.8**
	baz=224						
EGS		**0.34**	**350**	⇑P	**Pg**	**10 13 29.4**	**+0.4**
	baz=351						
EGS				S	**Sb**	**10 13 35.2**	**-0.5**
	baz=351						
ILA	**Ilan**	**0.35**	**319**	P	**Pg**	**10 13 29.2**	**+0.3**
	baz=321						
ILA				*e*S	**Sg**	**10 13 34.0**	**+0.4**
	baz=321						
TWE	**Neicheng**	**0.37**	**306**	⇓*i*P	**Pg**	**10 13 29.6**	**+0.1**
	baz=307						
TWE				S	**Sg**	**10 13 34.0**	**-0.3**
	baz=307						
NTC	**Toucheng**	**0.38**	**336**	⇑*i*P	**Pg**	**10 13 29.9**	**+0.3**
	baz=338						
NTC				*e*S	**Sg**	**10 13 34.5**	**-0.2**
	baz=338						
ENTT	**Nioudou**	**0.42**	**289**	⇓*i*P	**Pg**	**10 13 30.4**	**+0.1**
	baz=288						
ENTT				S	**Sg**	**10 13 36.4**	**+0.6**
	baz=288						
NDT	**Datong Townshi**	**0.45**	**283**	⇓*i*P	**Pg**	**10 13 31.3**	**+0.3**
	baz=281						
NDT				S	**Sg**	**10 13 37.0**	**0.0**
	baz=281						
ETL	**Fush Village**	**0.48**	**225**	⇑P	**Pg**	**10 13 31.9**	**+0.3**
	baz=223						
ETL				*e*S	**Sg**	**10 13 38.5**	**+0.5**
	baz=223						
TIPB	**Shuangxi**	**0.49**	**341**	⇑*i*P	**Pg**	**10 13 32.0**	**+0.3**
	baz=351						
TIPB				S	**Sg**	**10 13 38.6**	**+0.4**
	baz=351						
NACB	**Ninganchiao**	**0.49**	**228**	⇑*i*P	**Pg**	**10 13 31.9**	**+0.2**
	baz=226						
NACB				S	**Sg**	**10 13 38.6**	**+0.3**
	baz=226						
TWB1	**Santiao Chiao**	**0.50**	**359**	P	**Pg**	**10 13 32.1**	**+0.2**
	baz=353						
TWB1				*e*S	**Sg**	**10 13 38.5**	**-0.1**
	baz=353						
NWLT	**Wulai**	**0.53**	**301**	*e*P	**Pg**	**10 13 32.7**	**+0.4**
	baz=295						
NWLT				S	**Sg**	**10 13 39.6**	**+0.2**
	baz=295						
ETLH	**Xiulin Townshi**	**0.56**	**238**	⇓*i*P	**Pg**	**10 13 33.0**	**+0.1**
	baz=237						
ETLH				*e*S	**Sg**	**10 13 40.1**	**-0.2**
	baz=237						
TWD	**Chiawan**	**0.56**	**221**	⇑*i*P	**Pg**	**10 13 33.2**	**+0.2**
	baz=227						
TWD				*e*S	**Sg**	**10 13 40.7**	**+0.4**
	baz=227						
NNSB	**Datong**	**0.57**	**262**	⇓*i*P	**Pg**	**10 13 33.1**	**0.0**
	baz=261						
NNSB				*e*S	**Sg**	**10 13 40.3**	**-0.3**
	baz=261						
NNS	**Nan Shan**	**0.57**	**264**	⇓*i*P	**Pg**	**10 13 33.3**	**0.0**
	baz=262						
NNS				S	**Sg**	**10 13 40.4**	**-0.4**
	baz=262						
YHNB	**Yeheng**	**0.59**	**286**	⇓*i*P	**Pg**	**10 13 33.9**	**+0.3**
	baz=291						
YHNB				S	**Sg**	**10 13 41.0**	**-0.4**
	baz=291						
NWF	**Wu-fen Shan**	**0.60**	**341**	⇑*i*P	**Pg**	**10 13 34.3**	**+0.6**
	baz=329						
NWF				S	**Sg**	**10 13 42.1**	**+0.4**
	baz=329						
WFSB	**Wu-fen Shan**	**0.60**	**341**	P	**Pb**	**10 13 34.3**	**-0.3**
	baz=329						
WFSB				S	**Sg**	**10 13 41.9**	**+0.3**
	baz=329						
TWA	**Mucha**	**0.61**	**322**	*e*P	**Pb**	**10 13 34.5**	**-0.3**
	baz=322						
TWA				*e*S	**Sb**	**10 13 42.5**	**-0.8**
	baz=322						
NSK	**Sanguang**	**0.61**	**287**	⇓*i*P	**Pg**	**10 13 34.1**	**+0.2**
	baz=291						
NSK				S	**Sg**	**10 13 42.0**	**+0.1**
	baz=291						
NHDH	**Xindian Distri**	**0.63**	**317**	*e*P	**Pb**	**10 13 35.3**	**+0.2**
	baz=317						
NHDH				*e*S	**Sg**	**10 13 42.3**	**-0.2**
	baz=317						
HWA	**Hwalien**	**0.64**	**214**	*e*P	**Pb**	**10 13 35.5**	**+0.3**
	baz=218						
TATO	**Taipei**	**0.66**	**315**	P	**Pb**	**10 13 35.3**	**-0.3**
	baz=306						
TATO				S	**Sg**	**10 13 43.3**	**-0.2**
	baz=306						
TAP	**Taipei**	**0.70**	**320**	*e*P	**Pb**	**10 13 36.5**	**+0.2**
	baz=320						
TAP				*e*S	**Sb**	**10 13 45.2**	**-0.6**
	baz=320						
FUSS	**Fushou**	**0.73**	**250**	P	**Pg**	**10 13 36.6**	**+0.3**
	baz=249						
FUSS				*e*S	**Sb**	**10 13 46.3**	**-0.9**
	baz=249						
YM01	**YM01**	**0.75**	**329**	P	**Pb**	**10 13 37.3**	**+0.1**
	baz=329						
YM01				*e*S	**Sg**	**10 13 46.5**	**+0.1**
	baz=329						
WHF	**Hehuan Shan**	**0.76**	**242**	⇓*i*P	**Pg**	**10 13 37.0**	**+0.2**
	baz=241						
WHF				*e*S	**Sg**	**10 13 46.3**	**-0.4**
	baz=241						
TWT	**Tachien**	**0.79**	**252**	*e*P	**Pb**	**10 13 37.8**	**-0.2**
	baz=251						
TWT				*e*S	**Sg**	**10 13 47.8**	**+0.1**
	baz=251						
TWS1	**Kuangyinshan**	**0.80**	**319**	*e*P	**Pn**	**10 13 38.8**	**-0.5**
	baz=318						
TWS1				*e*S	**Sb**	**10 13 48.5**	**-0.2**
	baz=318						
TDCB	**Techi**	**0.81**	**252**	*e*P	**Pb**	**10 13 37.9**	**-0.3**
	baz=245						
TDCB				*e*S	**Sg**	**10 13 47.8**	**-0.4**
	baz=245						
ANP	**Anpu**	**0.81**	**328**	*e*P	**Pb**	**10 13 38.5**	**+0.3**
	baz=328						
ANP				*e*S	**Sb**	**10 13 49.3**	**+0.2**
	baz=328						
NTST	**Danshui**	**0.82**	**323**	*e*P	**Pn**	**10 13 39.8**	**+0.1**
	baz=323						
TWY	**Chenhua**	**0.85**	**335**	*e*P	**Pn**	**10 13 39.5**	**-0.5**
	baz=328						
TWY				*e*S	**Sb**	**10 13 49.5**	**-0.8**
	baz=328						
ESL	**Shilin**	**0.86**	**217**	*i* P	**Pb**	**10 13 38.5**	**-0.6**
	baz=223						
ESL				*e*S	**Sg**	**10 13 50.4**	**+0.5**
	baz=223						
JYNG	**Yonagunijimaku**	**0.86**	**93**	P	**Pb**	**10 13 39.2**	**+0.1**
JYNG				S	**Sg**	**10 13 51.6**	**+1.6**
NCU	**National Centr**	**0.87**	**302**	*e*P	**Pn**	**10 13 40.3**	**0.0**
	baz=302						
NCU				*e*S	**Sn**	**10 13 51.7**	**-1.3**
	baz=302						
CHGB	**Renai**	**0.87**	**240**	⇓*i*P	**Pg**	**10 13 39.1**	**+0.2**
	baz=239						
CHGB				*e*S	**Sb**	**10 13 51.2**	**0.0**
	baz=239						
NCUH	**Zhongli**	**0.87**	**302**	*e*P	**Pn**	**10 13 40.6**	**+0.3**
	baz=301						
NCUH				*e*S	**Sn**	**10 13 51.2**	**-1.9**
	baz=301						
LIOB	**Emei**	**0.91**	**279**	⇓P	**Pn**	**10 13 40.5**	**-0.3**
	baz=273						
NSTT	**Nanjuang**	**0.92**	**278**	⇓*i*P	**Pn**	**10 13 40.4**	**-0.5**
	baz=277						
NSTT				*e*S	**Sg**	**10 13 52.1**	**+0.4**
	baz=277						
YOJ	**Yonaguni jima**	**0.92**	**92**	*e*P	**Pb**	**10 13 40.0**	**-0.1**
	baz=92						
YOJ				*e*S	**Sb**	**10 13 52.8**	**+0.3**
	baz=92						
YOJ	**Yonaguni jima**	**0.92**	**92**	P	**Pb**	**10 13 40.0**	**-0.1**
YOJ				*e*S	**Sg**	**10 13 53.5**	**+1.6**
OWD	**Renai**	**0.93**	**234**	*e*P	**Pb**	**10 13 40.1**	**-0.2**
	baz=234						
OWD				*e*S	**Sg**	**10 13 52.3**	**+0.2**
	baz=234						
SBCB	**Hsinchu**	**0.96**	**288**	*e*P	**Pn**	**10 13 42.4**	**+0.8**
	baz=281						
SBCB				*e*S	**Sn**	**10 13 55.7**	**+0.3**
	baz=281						
EGFH	**Guangfu**	**0.98**	**212**	*e*P	**Pg**	**10 13 41.2**	**+0.2**
	baz=227						
HSN	**Hsinchu**	**0.98**	**288**	*i* P	**Pn**	**10 13 42.3**	**+0.5**
	baz=283						
HSN				*e*S	**Sn**	**10 13 55.2**	**-0.5**
	baz=283						
WHP	**Taichung City**	**0.99**	**257**	⇓*i*P	**Pn**	**10 13 41.5**	**-0.4**
	baz=257						
WHP				*e*S	**Sg**	**10 13 54.0**	**+0.1**
	baz=257						
VWDT	**VWDT**	**1.08**	**227**	*e*P	**Pn**	**10 13 42.8**	**-0.4**
	baz=234						
VWDT				*e*S	**Sg**	**10 13 57.1**	**+0.1**
	baz=234						
WCS	**Beigang Elemen**	**1.09**	**246**	*e*P	**Pg**	**10 13 43.1**	**+0.1**
	baz=239						
WCS				*e*S	**Sb**	**10 13 56.2**	**-1.0**
	baz=239						
NMLH	**Miaoli**	**1.10**	**272**	*e*P	**Pg**	**10 13 44.5**	**+1.2**
	baz=271						
NMLH				*e*S	**Sn**	**10 13 59.5**	**+0.8**
	baz=271						
PCYT	**Pengchaiyu**	**1.12**	**3**	P	**Pb**	**10 13 43.2**	**-0.4**
	baz=4.0						
TWQ1	**Liyutan**	**1.13**	**262**	*e*P	**Pg**	**10 13 44.2**	**+0.4**
	baz=262						
TWQ1				*e*S	**Sn**	**10 13 58.8**	**-0.6**
	baz=262						
NSY	**Sanyi**	**1.13**	**266**	*e*P	**Pg**	**10 13 45.2**	**+1.3**
	baz=265						

NSY	baz=265			*e*S	Sn	10 14 00.9	+1.4
HGSD	**Ruisui** baz=209	1.14	208	*e*P	Pg	10 13 44.2	+0.3
HGSD	baz=209			*e*S	Sg	10 14 00.6	+1.9
EHY	**Hungye** baz=224	1.17	212	*e*P	Pn	10 13 43.6	-0.8
EHY	baz=224			*e*S	Sb	10 13 58.8	-0.7
SMLT	**Sun Moon Lake** baz=239	1.18	239	*e*P	Pg	10 13 44.6	-0.1
SMLT	baz=239			*e*S	Sg	10 14 00.2	+0.1
SSLB	**Suanglung** baz=240	1.19	233	⇓*i*P	Pg	10 13 44.8	-0.1
SSLB	baz=240			S	Sb	10 13 59.5	-0.7
TYC	**Yuchr** baz=240	1.20	240	*e*P	Pg	10 13 45.3	+0.1
TYC	baz=240			*e*S	Sb	10 13 59.8	-0.6
WDJ	**Dajia District** baz=263	1.25	263	*e*P	Pg	10 13 47.6	+1.6
WDJ	baz=263			*e*S	Sg	10 14 02.4	+0.2
TCU	**Taichung** baz=254	1.26	254	*e*P	Pg	10 13 47.8	+1.6
TCU	baz=254			*e*S	Sg	10 14 05.3	+2.7
YULB	**Yu-li** baz=221	1.28	210	*e*P	Pn	10 13 45.2	-0.8
YULB	baz=221			*e*S	Sg	10 14 03.4	+0.1
EYUL	**Yuli** baz=222	1.31	208	*e*P	Pg	10 13 47.6	+0.4
WJS	**Zhushan** baz=236	1.34	240	*e*P	Pg	10 13 49.2	+1.3
WJS	baz=236			*e*S	Sg	10 14 06.8	+1.4
WNT	**Mingjian** baz=257	1.35	243	*e*P	Pg	10 13 49.5	+1.4
WNT	baz=257			*e*S	Sg	10 14 07.8	+2.2
WCHH	**Zhanghua** baz=252	1.38	252	*e*P	Pg	10 13 49.2	+0.7
WCHH	baz=252			*e*S	Sg	10 14 09.0	+2.5
FULB	**Fuli** baz=225	1.45	207	*e*P	Pn	10 13 48.5	+0.1
FULB	baz=225			*e*S	Sg	10 14 08.6	-0.2
ALS	**Alishan** baz=217	1.47	228	*e*P	Pg	10 13 50.3	-0.1
ALS	baz=217			*e*S	Sg	10 14 10.1	+0.6
CHN5	**Tsauling** baz=245	1.51	233	*e*P	Pg	10 13 51.8	+0.7
CHN5	baz=245			*e*S	Sg	10 14 12.4	+1.8
CHKT	**Chengkung** baz=184	1.51	203	*e*P	Pn	10 13 49.2	0.0
WDLH	**Douliu** baz=252	1.56	239	*e*P	Pg	10 13 52.8	+0.8
WDLH	baz=252			*e*S	Sg	10 14 14.0	+1.7
ELDTW	**Lidau** baz=201	1.59	215	*e*P	Pb	10 13 51.0	-0.5
IRIF	**Iriomote-Funau**	1.59	96	P	Pn	10 13 49.4	-0.8
IRIF				S	Sn	10 14 09.9	-0.8
WRL	**Guolierlin Hig** baz=262	1.60	248	*e*P	Pg	10 13 52.3	-0.4
WRL	baz=262			*e*S	Sg	10 14 14.2	+0.7
EDH	**Donghe** baz=189	1.65	203	*e*P	Pn	10 13 50.5	-0.5
WTK	**Tuku** baz=242	1.68	241	*e*P	Pg	10 13 54.1	-0.2
WTK	baz=242			*e*S	Sg	10 14 17.2	+1.0
CHN2	**Minshiung** baz=237	1.70	236	*e*P	Pg	10 13 55.1	+0.5
CHN2	baz=237			*e*S	Sg	10 14 18.6	+2.0
HATJ	**Hateruma jima**	1.71	105	P	Pn	10 13 52.4	+0.6
HATJ				S	Sn	10 14 14.0	+0.3
CHN4	**Tsaushan** baz=231	1.72	229	P	Pb	10 13 54.4	+0.6
CHN4	baz=231			*e*S	Sg	10 14 16.9	-0.6
TPUB	**Ta-pu** baz=229	1.73	227	P	Pg	10 13 54.9	-0.5
TPUB	baz=229			*e*S	Sg	10 14 18.7	+0.9
STYH	**Taoyuan** baz=223	1.74	220	*e*P	Pb	10 13 54.0	0.0
STYH	baz=223			*e*S	Sb	10 14 16.3	+0.5
CHY	**Chiayi** baz=237	1.75	235	*e*P	Pg	10 13 55.9	+0.2
CHY	baz=237			*e*S	Sg	10 14 19.0	+0.5
LONT	**Longtian** baz=210	1.78	207	*e*P	Pn	10 13 52.3	-0.5
LONT	baz=210			*e*S	Sb	10 14 16.1	-1.0
WTP	**Ta-pu** baz=228	1.78	226	*e*P	Pb	10 13 55.1	+0.3
WTP	baz=228			*e*S	Sg	10 14 19.7	+0.3
WSF	**Szhu** baz=241	1.84	242	*e*P	Pb	10 13 55.2	-0.5
TWK	**Hsinying** baz=231	1.85	229	*e*P	Pg	10 13 57.0	-0.6
TWK	baz=231			*e*S	Sb	10 14 19.8	+0.6
JKRS	**Kuro-shima**	1.85	98	P	Pn	10 13 53.7	-0.1
JKRS				S	Sn	10 14 16.8	-0.5
SNST	**Tainan City** baz=230	1.88	227	*e*P	Pg	10 13 57.4	-0.7
SNST	baz=230			*e*S	Sg	10 14 23.4	+1.0
TWGBT	**Beinan** baz=207	1.88	207	*e*P	Pb	10 13 55.3	-1.1
TWG	**Pinlang** baz=207	1.88	207	*e*P	Pb	10 13 55.5	-0.9
CHN1	**Nanshi** baz=229	1.88	226	*e*P	Pb	10 13 57.2	+0.7
CHN1	baz=229			*e*S	Sg	10 14 22.7	+0.1
LDUT	**Ludao** baz=182	1.89	195	*e*P	Pn	10 13 53.3	-1.0
SGST	**Jiashian** baz=226	1.92	223	*e*P	Pb	10 13 56.9	-0.2
SGST	baz=226			*e*S	Sg	10 14 22.2	-1.6
ICHU	**Yijhu** baz=222	1.94	234	P	Pb	10 13 57.9	+0.4
ICHU	baz=222			*e*S	Sg	10 14 25.8	+1.3
SLGT	**Liugui** baz=223	1.95	220	*e*P	Pb	10 13 57.9	+0.3
SLGT	baz=223			*e*S	Sb	10 14 22.8	+0.9
JIJ	**Ishigaki jima**	1.96	94	P	Pn	10 13 54.7	-0.6
JIJ				S	Sn	10 14 18.3	-1.6
CHN8	**Yiju** baz=224	2.00	235	*e*P	Pb	10 13 57.6	-0.9
CHN8	baz=224			*e*S	Sg	10 14 25.4	-1.0
CHN3	**Shinhua** baz=227	2.06	227	*e*P	Pg	10 14 00.9	-0.8
JISG	**Ishigakijimahi**	2.11	87	P	Pn	10 13 56.5	-0.8
JISG				S	Sn	10 14 22.7	-0.8
ECL	**Taimali** baz=195	2.13	207	*e*P	Pn	10 13 57.9	+0.3
SSD	**Sandimen** baz=234	2.15	216	*e*P	Pb	10 14 00.6	-0.5
SSD	baz=234			*e*S	Sg	10 14 29.7	-1.6
TSMG	**Majia** baz=215	2.18	215	*e*P	Pb	10 14 01.5	-0.1
TWM1	**Shoushan** baz=221	2.21	221	*e*P	Pb	10 14 03.2	+1.1
MASBT	**Mashibuluo** baz=219	2.26	214	*e*P	Pb	10 14 01.6	-1.4
MASBT	baz=219			*e*S	Sb	10 14 30.5	-0.4
EAST	**Anshuo** baz=196	2.36	207	*e*P	Pn	10 14 01.2	+0.4
SSPT	**Xinbi** baz=199	2.40	213	*e*P	Pb	10 14 05.2	-0.1
PNG	**Penghu** baz=249	2.42	248	*e*P	Pn	10 14 02.9	+1.3
PNG	baz=249			*e*S	Sb	10 14 33.0	-2.6
PHUB	**P'eng-hu** baz=248	2.43	247	*e*P	Pn	10 14 02.9	+1.2
PHUB	baz=248			*e*S	Sn	10 14 32.7	+1.3
JTJ	**Tarama**	2.47	86	P	Pn	10 14 02.8	+0.6
JTJ				*e*S	Sn	10 14 32.6	+0.2
SCZT	**Fangliau** baz=217	2.47	211	*e*P	Pb	10 14 05.2	-1.3
SCZT	baz=217			*e*S	Sb	10 14 36.3	-0.7
WDGT	**Dungji** baz=248	2.47	240	*e*P	Pb	10 14 04.7	-1.8
MATB	**Ma-tsu** baz=310	2.48	312	*e*P	Pn	10 14 02.5	0.0
LAY	**Lan-yu** baz=190	2.49	190	*e*P	Pn	10 14 01.8	-0.7
SLIU	**Shizi** baz=196	2.53	206	*e*P	Pn	10 14 04.4	+1.2
PTMZ	**Houxiangcun** baz=280	2.67	282	*e*P	Pn	10 14 05.0	-0.1
VCHM	**Qimei** baz=240	2.68	242	*e*P	Pn	10 14 07.0	+1.8
LYJJ	**Jianjiangzhen** baz=315	2.87	316	*e*P	Pn	10 14 08.0	+0.2
JIRB	**Irabujima**	2.91	83	P	Pn	10 14 08.7	+0.4
JIRB				*e*S	Sn	10 14 42.7	-0.6
JMJ2	**Miyako jima3**	3.04	85	P	Pn	10 14 11.0	+0.9
JOGS	**Gusukube**	3.11	85	P	Pn	10 14 12.1	+1.0
KNM	**Kinmen** baz=266	3.25	269	*e*P	Pn	10 14 15.0	+2.0
KNMB	**Chin-men Tao** baz=267	3.29	270	*e*P	Pn	10 14 13.7	+0.1
AXDP	**Jialang** baz=274	3.69	277	*e*P	Pn	10 14 20.1	+1.0

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*IDC **20** 10:17:39.2±1.9, 8°.24N×104°.01W, h0km, mb3.5/6, mb1 3.9/6, mb1mx3.7/35, mbtmp3.5/6, MS3.8/10, Ms1 3.8/10, ms1mx3.6/25, Error ellipse: s-maj=83.9km s-min=24.8km az=59.0*

ISC 20 10:17:38.0±1.8**, 7°.8N**±0°.3×**104°.6W**±0°.5**, h10km, n23, σ0ˢ.23**/7**, mb3.5**/6**, MS3.9**/13**, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H06S1	**SOCORRO T**	12.45	331	T	T	10 33 36.5	
H06E1	**SOCORRO T-PHAS** SNR=6.5	12.47	331	T	T	10 33 36.3	
CMIG	**Matias Romero** comp=Z,875nm,21.8s,baz=206,slow=31	13.23	45	LR	LR	10 24 05.4	
TXAR	**Lajitas Array** 1.0nm,0.8s,baz=178,slow=8.8,SNR=8.4	21.40	2	P	P	10 22 26.0	-0.2
TXAR	comp=Z,429nm,18.8s,baz=0.0,slow=35			LR	LR	10 29 58.6	
ANMO	**Albuquerque** comp=Z,127nm,21.2s,baz=170,slow=37	27.03	357	LR	LR	10 34 08.0	
PFO	**Pinyon Flats O** comp=Z,154nm,18.7s,baz=152,slow=34	27.88	339	LR	LR	10 33 33.7	
ATAH	**Atahualpa** comp=Z,249nm,21.7s,baz=308,slow=31	30.10	119	LR	LR	10 33 06.0	
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=161,slow=11,SNR=1.4	32.86	340	P	P	10 24 12.4	0.0
NVAR	comp=Z,123nm,19.7s,baz=145,slow=32			LR	LR	10 34 59.8	
PDAR	**Pinedale Array** 1.1nm,0.8s,baz=116,slow=6.1,SNR=5.7	35.06	354	P	P	10 24 31.8	+0.3
TAOE	**Nuku Hiva Isla** comp=Z,241nm,25.5s	39.08	246	*e*LR	LR	10 35 57.2	
LPAZ	**La Paz** 2.9nm,0.9s,baz=316,slow=8.0,SNR=8.5	43.36	124	P	P	10 25 41.6	0.0
H03N2	**Juan Fernandez** baz=329,slow=78,SNR=13	47.77	151	T	T	11 17 24.4	
H03N1	**Juan Fernandez** baz=329,slow=78,SNR=14	47.78	151	T	T	11 17 25.6	
H03N3	**Juan Fernandez** baz=329,slow=78,SNR=14	47.78	151	T	T	11 17 22.4	
PPT	**Papeete** comp=Z,84nm,18.8s,baz=72,slow=30	51.07	240	LR	LR	10 43 25.8	
PPT2	**Papeete2** comp=Z,215nm,24.5s	51.08	240	*e*LR	LR	10 41 32.0	
TBI	**Tubuai** comp=Z,166nm,28.0s	53.67	234	*e*LR	LR	10 42 46.4	
YKA	**Yellowknife Ar** 0.2nm,0.8s,baz=162,slow=6.0,SNR=3.9	55.04	354	P	P	10 27 09.4	-0.2
YKA	comp=Z,171nm,18.6s,baz=0.0,slow=36			LR	LR	10 50 40.4	
SCHQ	**Schefferville** comp=Z,106nm,18.1s,baz=274,slow=36	55.71	25	LR	LR	10 51 11.7	
ILAR	**Eielson Array** 0.4nm,0.8s,baz=160,slow=4.4,SNR=2.8	64.10	341	P	P	10 28 12.4	+0.2
DZM	**Mont Dzumac** comp=Z,48nm,22.9s	91.91	248	*e*LR	LR	11 00 22.5	
NOA	**NORSAR Array B** comp=Z,24nm,19.7s,baz=245,slow=35	95.28	26	LR	LR	11 12 46.5	
CMAR	**Chiang Mai Arr** 0.9nm,0.3s,baz=28,slow=4.1,SNR=5.2	145.01	319	PKPbc	PKiKP	10 37 20.4	-0.1

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*IDC **20** 10:31:07.4±1.5, 34°.65N×24°.95E, h0km, mb3.5/2, mb1 3.7/8, mb1mx3.4/45, mbtmp3.5/8, ML3.8/5, Error ellipse: s-maj=24.9km s-min=10.9km az=78.0*

*ISK **20** 10:31:09.6, 34°.76N×24°.82E, h10km, ML3.5/20*

*THE **20** 10:31:11.3, 34°.81N×24°.82E, h20km±1km, ML3.5/11, Error ellipse: s-maj=1.6km s-min=0.6km az=354.0*

*ATH **20** 10:31:11.7, 34°.84N×24°.80E, h24km±3km, ML3.5/10, Error ellipse: s-maj=3.7km s-min=1.4km az=348.0*

*DDA **20** 10:31:16.6, 34°.96N×25°.24E, h7km±5km, MW3.9*

ISC 20 10:31:10.8±0.8**, 34°.77N**±0°.05×**24°.81E**±0°.02**, h21km**±1km**, n73, σ1ˢ.45**/97**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	**Sivas**	0.25	360	P	Pb	10 31 16.8	-0.1
SIVA	116µm,0.2s			S	Sb	10 31 20.6	-0.6
SIVA	**Sivas**	0.25	360	P	Pb	10 31 16.8	-0.1
SIVA				S	Sb	10 31 20.6	-0.6
SIVA				AML	AML	10 31 20.7	
SIVA				AML	AML	10 31 20.7	
TMBK	**Timbaki Herakl**	0.31	353	P	Pb	10 31 17.9	+0.3
TMBK	12µm,0.2s			S	Sb	10 31 22.6	+0.4
IDI	**Anoyia** 73nm,0.3s,baz=183,slow=19,SNR=1373	0.53	7	Pg	Pb	10 31 20.4	-1.0
IDI	830nm,0.3s,baz=291,slow=23,SNR=75			Lg	Lg	10 31 27.6	
IDI	**Anoyia**	0.53	7	P	Pb	10 31 20.4	-1.0
IDI	7µm,0.3s			S	Sb	10 31 27.8	-0.8
IDI	**Anoyia**	0.53	7	P	Pb	10 31 20.9	-0.5
IDI				S	Sb	10 31 27.4	-1.2
IDI	comp=E,16840µm,0.5s			AML	AML	10 31 29.9	
IDI	comp=N,10020µm,0.2s			AML	AML	10 31 31.6	
KSTL	**Kastelli Herak**	0.58	22	P	Pb	10 31 22.6	+0.3
KSTL	comp=N,3µm,0.4s			S	Sb	10 31 31.1	+1.0
IACM	**Heraklion**	0.58	22	P	Pb	10 31 22.3	0.0
IACM	**Heraklion**	0.58	22	P	Pb	10 31 22.3	0.0
HRKL	**Herakleio**	0.59	24	P	Pb	10 31 22.1	-0.5
HRKL	comp=N,12µm,0.6s			S	Sb	10 31 30.3	-0.3
HRKL	**Herakleio**	0.59	24	PG	Pb	10 31 21.7	-0.9
HRKL				SG	Sb	10 31 30.5	-0.1
GVDS	**Gavdos**	0.60	278	P	Pb	10 31 22.8	+0.2
GVDS	comp=N,5µm,0.3s			S	Sn	10 31 32.7	-0.4
GVDS	**Gavdos**	0.60	278	PG	Pb	10 31 22.5	-0.1
GVDS				SG	Sb	10 31 31.6	+0.9
GVD	**Gavdhos**	0.60	277	P	Pb	10 31 22.5	-0.1
GVD	comp=N,8µm,0.3s			S	Sb	10 31 31.9	+1.2
GVD	**Gavdhos**	0.60	277	P	Pb	10 31 22.6	0.0
GVD				S	Sb	10 31 32.1	+1.4
GVD	comp=N,15829µm,0.3s			AML	AML	10 31 37.2	
GVD	comp=E,16841µm,0.4s			AML	AML	10 31 37.4	
GVD	**Gavdhos**	0.60	277	PG	Pb	10 31 22.1	-0.5
PRNS	**Prines Rethymn**	0.65	337	P	Pb	10 31 22.9	-0.6
PRNS	comp=E,2µm,0.3s			S	Sb	10 31 32.7	+0.6
VAM	**Vamos**	0.81	322	P	Pb	10 31 25.2	-1.0
VAM	comp=E,6µm,0.3s			S	Sb	10 31 37.0	+0.3
VAM	**Vamos**	0.81	322	P	Pb	10 31 25.7	-0.5
VAM	comp=N,14399µm,0.3s			AML	AML	10 31 39.2	
VAM	comp=E,11226µm,0.2s			AML	AML	10 31 40.0	
NPS	**Neapolis**	0.82	53	P	Pb	10 31 26.4	0.0
NPS	comp=E,3µm,0.6s			S	Sb	10 31 37.2	+0.1
NPS	**Neapolis**	0.82	53	P	Pb	10 31 26.3	-0.1
NPS				S	Sb	10 31 37.4	+0.3
NPS	comp=E,5511µm,0.3s			AML	AML	10 31 40.1	
NPS	comp=N,5258µm,0.8s			AML	AML	10 31 45.8	
IMMV	**Iera Moni Meta**	0.97	316	P	Pb	10 31 28.1	-0.7
IMMV	comp=N,3µm,0.4s			S	Sb	10 31 41.8	+0.5
IMMV	**Iera Moni Meta**	0.97	316	P	Pb	10 31 28.1	-0.7
IMMV	comp=N,5473µm,0.3s			AML	AML	10 31 44.4	
IMMV	comp=E,6543µm,0.4s			AML	AML	10 31 44.5	
IMMV	**Iera Moni Meta**	0.97	316	PG	Pb	10 31 28.2	-0.7
IMMV				SG	Sn	10 31 43.0	+0.6
KNDR	**Palaiochora Ch**	1.03	297	P	Pn	10 31 30.4	+0.4
KNDR	**Palaiochora Ch**	1.03	297	PN	Pn	10 31 30.4	+0.4
RODP	**Rodopos**	1.17	313	P	Pn	10 31 31.3	-0.7
RODP	**Rodopos**	1.17	313	PN	Pn	10 31 31.9	-0.1
ZKR	**Zakros**	1.21	73	P	Pb	10 31 33.4	+0.5
ZKR	comp=N,952µm,0.4s			AML	AML	10 31 54.9	
ZKR	comp=E,3271µm,0.5s			AML	AML	10 31 56.8	
ZKR	**Zakros**	1.21	73	PN	Pb	10 31 33.1	+0.2
ANKY	**Antikythira Is**	1.65	312	P	Pb	10 31 41.0	+0.5
ANKY	comp=E,1473µm,0.5s			AML	AML	10 32 11.3	
ANKY	comp=N,927µm,0.7s			AML	AML	10 32 12.9	
THR6	**Thira Island,**	1.66	17	P	Pb	10 31 40.4	-0.1
SNT5	**Nea Kammeni, S**	1.70	16	P	Pb	10 31 41.2	-0.1
SNT5	comp=E,2372µm,0.3s			AML	AML	10 32 12.3	
SNT5	comp=N,1281µm,0.2s			AML	AML	10 32 12.4	
THR5	**Thira Island,**	1.71	15	P	Pb	10 31 40.9	-0.5
THR3	**Thira Island,**	1.71	16	P	Pb	10 31 40.9	-0.5
THR8	**Santorini-Mono**	1.73	18	P	Pn	10 31 40.5	+0.9
THR2	**Thira island,**	1.75	17	P	Pn	10 31 41.2	+1.2
MHLO	**Agia Marina, M**	1.95	350	P	Pn	10 31 43.8	+1.1
MHLO	comp=E,3168µm,0.7s			AML	AML	10 32 18.2	
MHLO	comp=N,4836µm,0.6s			AML	AML	10 32 19.1	
KTHA	**Kythira Island**	2.06	317	P	Pb	10 31 46.2	-1.2
APE	**Apeiranthos**	2.37	14	PN	Pn	10 31 47.8	-0.7
KOSK	**Kos Island**	2.65	41	PN	Pn	10 31 53.3	+1.0
DAT	**Datca**	2.98	48	*i* P	Pn	10 31 59.3	+2.3
DAT	comp=N,17nm,0.6s			IAML		10 32 33.0	
DAT				*i* S	Sn	10 32 33.2	+1.0
DAT	comp=E,26nm,1.2s			IAML		10 33 01.0	
DAT	**Datca**	2.98	48	PN	Pn	10 31 58.7	+1.7
BODT	**Bodrum**	3.06	41	PN	Pn	10 31 59.7	+1.8
ARG	**Arkhangelos**	3.07	61	PN	Pn	10 31 59.9	+1.9
BDRM	**Kayabasi**	3.14	42	*i* P	Pn	10 32 02.5	+3.5
BDRM	comp=N,29nm,1.1s			IAML		10 32 59.0	
BDRM	comp=E,14nm,1.0s			IAML		10 33 06.0	
ITM	**Ithomi**	3.36	317	PN	Pn	10 32 04.2	+2.2
TURN	**Turunc**	3.44	53	*i* P	Pn	10 32 04.6	+1.5
TURN				*i* S	Sn	10 32 41.0	-2.2
TURN	comp=N,27nm,0.7s			IAML		10 32 49.0	
TURN	comp=E,21nm,0.4s			IAML		10 32 53.0	
TURN	**Turunc**	3.44	53	PN	Pn	10 32 04.9	+1.8
YER	**Yerkesik**	3.68	49	PN	Pn	10 32 08.6	+2.1
CHOS	**Chios island**	3.75	15	PN	Pn	10 32 09.3	+1.8
MULA	**Mugla, Merkez-**	3.78	48	*i* P	Pn	10 32 10.8	+2.9
MULA	comp=N,15nm,1.3s			IAML		10 33 16.0	
MULA	comp=E,22nm,0.7s			IAML		10 33 21.0	
AYDN	**Tasoluk**	3.81	40	*i* P	Pn	10 32 12.4	+4.2
AYDN	comp=N,16nm,1.1s			IAML		10 33 26.0	
AYDN	comp=E,15nm,1.1s			IAML		10 33 33.0	
URLA	**Izmir**	3.87	21	PN	Pn	10 32 11.2	+2.2
FETY	**Fethiye**	3.95	61	*i* P	Pn	10 32 10.8	+0.6
FETY				*i* S	Sn	10 32 54.9	-0.9
FETY	comp=E,21nm,0.7s			IAML		10 33 07.0	
FETY	comp=N,23nm,1.0s			IAML		10 33 20.0	
FETY	**Fethiye**	3.95	61	PN	Pn	10 32 10.9	+0.8
AYDB	**Zeytinkoy-Aydi**	4.03	37	PN	Pn	10 32 13.3	+1.9
AKAS	**Kas**	4.18	68	*i* P	Pn	10 32 14.5	+1.1
AKAS				*i* S	Sn	10 33 00.9	-0.8
AKAS	comp=E,29nm,0.5s			IAML		10 33 11.0	
AKAS	comp=N,45nm,0.6s			IAML		10 33 38.0	
AKAS	**Kas**	4.18	68	PN	Pn	10 32 14.8	+1.4
CAME	**Cameli-Denizli**	4.25	58	PN	Pn	10 32 15.9	+1.5
TAVA	**DENIZLI_Tavas**	4.28	50	*i* P	Pn	10 32 16.6	+1.8
TAVA				*i* S	Sn	10 33 08.8	+4.8
TAVA	comp=E,9.8nm,0.6s			IAML		10 33 16.0	
TAVA	comp=N,12nm,0.9s			IAML		10 33 29.0	
GOLH	**Golhisar**	4.57	56	*i* P	Pn	10 32 19.8	+1.0
GOLH				*i* S	Sn	10 33 08.5	-2.9
GOLH	comp=N,32nm,0.9s			IAML		10 33 25.0	
GOLH	comp=E,19nm,0.9s			IAML		10 34 18.0	
ELL	**Elmali**	4.59	63	PN	Pn	10 32 20.9	+1.8
AGG	**Agios Georgios**	4.69	336	PN	Pn	10 32 22.2	+1.8
KORT	**Korkueli**	5.02	62	PN	Pn	10 32 27.4	+2.4
BRTR	**Keskin Array B** comp=E,0.1nm,0.3s,baz=234,slow=17,SNR=2.1	8.60	52	Pn	Pn	10 33 14.7	+0.5
MMAI	**Mount Meron Ar** comp=E,2.1nm,0.3s,baz=296,slow=14,SNR=1.4	8.98	98	Pn	Pn	10 33 16.1	-3.2
MMAI	comp=E,0.7nm,0.3s,baz=263,slow=23,SNR=1.3			Sn	Sn	10 34 50.8	-9.0
EIL	**Elat** comp=E,0.7nm,0.3s,baz=287,slow=14,SNR=2.6	9.98	118	Pn	Pn	10 33 29.2	-3.7
EIL	comp=E,0.5nm,0.3s,baz=99,slow=17,SNR=1.9			Sn	Sn	10 35 13.5	-11
AKASG	**Malin Array Be** comp=E,0.5nm,0.3s,baz=199,slow=10,SNR=3.8	16.25	10	Pn	Pn	10 34 58.0	+0.4
GERES	**GERESS Array B** comp=E,0.2nm,0.3s,baz=144,slow=13,SNR=13	16.30	333	Pn	P	10 35 00.7	-0.5
KBZ	**Khabaz** comp=E,0.1nm,0.3s,baz=267,slow=7.5,SNR=4.3	16.60	52	Pn	P	10 35 05.7	+1.2
TORD	**Torodi Ar. Bea** comp=E,0.5nm,0.7s,baz=35,slow=7.3,SNR=2.4	30.02	230	P	P	10 37 17.6	-0.6
MKAR	**Makanchi Array** comp=E,0.5nm,0.7s,baz=280,slow=6.5,SNR=4.4	44.23	56	P	P	10 39 17.4	-1.1

KMA 20 10:40:19.0±0.2**, 36°.40N×128°.68E, h15km**±1km**, Error ellipse: s-maj=1.6km s-min=1.1km az=168.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EUSB	**Uiseong** SNR=63	0.04	174	P	Pg	10 40 22.0	+0.3
EUSB				S	Sg	10 40 23.8	+0.3
EUSB	**Uiseong** SNR=63	0.04	174	P	Pg	10 40 22.0	+0.3

EUSB				S	Sg	10 40 23.8	+0.3
ADOA	**Andong Acc Bor**	**0.17**	**5**	P	Pg	10 40 23.4	+0.2
ADOA	**Andong Acc Bor**	**0.17**	**5**	P	Pg	10 40 23.4	+0.2
KSADO	**Andong**	**0.21**	**87**	P	Pg	10 40 24.1	+0.3
	SNR=46						
KSADO				S	Sg	10 40 27.4	+0.3
KSADO	**Andong**	**0.21**	**87**	P	Pg	10 40 24.1	+0.3
	SNR=46						
KSADO				S	Sg	10 40 27.4	+0.3
KSGUM	**GUMI**	**0.36**	**242**	P	Pg	10 40 26.6	+0.3
KSGUM	**GUMI**	**0.36**	**242**	P	Pg	10 40 26.6	+0.3
KSSAJ	**Sangju**	**0.42**	**271**	P	Pg	10 40 27.6	+0.1
	SNR=14						
KSSAJ	**Sangju**	**0.42**	**271**	P	Pg	10 40 27.6	+0.1
	SNR=14						
YOJB	**Youngju**	**0.49**	**344**	P	Pg	10 40 28.6	-0.1
YOJB	**Youngju**	**0.49**	**344**	P	Pg	10 40 28.6	-0.1
KSPHA	**Pohang**	**0.59**	**110**	P	Pg	10 40 30.4	-0.3
KSPHA	**Pohang**	**0.59**	**110**	P	Pg	10 40 30.4	-0.3
YODB	**Yeongdeok**	**0.60**	**77**	P	Pg	10 40 30.7	-0.1
YODB	**Yeongdeok**	**0.60**	**77**	P	Pg	10 40 30.7	-0.1
KSDAG	**Daegu**	**0.66**	**165**	P	Pg	10 40 31.9	+0.1
	SNR=23						
KSDAG	**Daegu**	**0.66**	**165**	P	Pg	10 40 31.9	+0.1
	SNR=23						
KSULJ	**Uljin**	**0.66**	**63**	P	Pg	10 40 31.6	-0.2
	SNR=33						
KSULJ	**Uljin**	**0.66**	**63**	P	Pg	10 40 31.6	-0.2
	SNR=33						
KSBON	**Boeun**	**0.72**	**278**	P	Pg	10 40 33.0	0.0
	SNR=11						
KSBON	**Boeun**	**0.72**	**278**	P	Pg	10 40 33.0	0.0
	SNR=11						
OKCB	**Cheongsan-myeo**	**0.72**	**266**	P	Pg	10 40 32.9	-0.1
OKCB	**Cheongsan-myeo**	**0.72**	**266**	P	Pg	10 40 32.9	-0.1
KSUSN	**Ulsan**	**0.78**	**153**	P	Pg	10 40 34.2	0.0
KSUSN	**Ulsan**	**0.78**	**153**	P	Pg	10 40 34.2	0.0

GUC 20 10:45:36.7±0.6**, 31°.12S×71°.65W, h35^{km}**±3^{km}**, ML3.4,
2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.45**	**1**	⇓*i*P	Pb	10 45 44.2	-2.4
CO06				*i* S	Sb	10 45 50.6	-2.8
CO06				IAML		10 45 51.4	
	comp=N,8µm,0.2s						
CO03	**El Pedregal**	**0.87**	**71**	⇓*i*P	Pn	10 45 48.4	-4.2
CO03				*e*S	Sn	10 45 57.8	-6.2
CO03				IAML		10 45 59.7	
	comp=E,4µm,0.1s						
GO04	**Tololo Observa**	**1.20**	**38**	*e*P	Pn	10 45 51.9	-5.3
GO04				*e*S	Sn	10 46 02.3	-10
GO04				IAML		10 46 10.4	
	comp=N,4µm,0.4s						
CO05	**La Serena**	**1.25**	**16**	*e*P	Pn	10 45 52.9	-4.8
CO05				*e*S	Sn	10 46 03.9	-9.4
VA06	**Catapilco**	**1.47**	**168**	*e*P	Pb	10 46 02.7	-0.7
VA06				*e*S	Sb	10 46 21.1	-0.6
VA06				IAML		10 46 27.9	
	comp=E,1µm,0.3s						
VA03	**San Esteban**	**1.88**	**151**	*e*P	Pn	10 46 08.4	+1.8
VA03				*e*S	Sb	10 46 32.7	-1.1
VA01	**Torpederas**	**1.90**	**180**	*e*P	Pn	10 46 08.5	+2.0
VA01				*e*S	Sb	10 46 32.8	-1.2
ROCH	**El Roble**	**1.92**	**164**	*e*P	Pb	10 46 09.4	-1.9
ROCH				*e*P	Pn	10 46 08.8	+1.6
ROCH				*e*S	Sb	10 46 33.7	-1.3
ROCH				*e*S	Sn	10 46 34.4	+4.1
ROCH				IAML		10 46 41.3	
	comp=E,362nm,0.3s						
MT02	**Curacav**	**2.17**	**169**	*e*P	Pn	10 46 12.6	+2.1
MT02				*e*S	Sb	10 46 39.3	-2.7
MT02				IAML		10 46 46.1	
	comp=E,145nm,0.3s						
PEL	**Peldehue**	**2.17**	**158**	*e*P	Pn	10 46 12.6	+2.1
PEL				*e*S	Sb	10 46 41.2	-0.9
PEL				IAML		10 46 46.3	
	comp=N,282nm,0.3s						
LCO	**Las Campanas**	**2.26**	**22**	*e*P	Pn	10 46 07.3	-4.5
LCO				*e*S	Sn	10 46 29.4	-9.2
MT05	**Renca**	**2.39**	**161**	*e*P	Pn	10 46 15.8	+2.3
MT05				*e*S	Sb	10 46 45.3	-2.9
MT05				IAML		10 47 05.5	
	comp=E,594nm,0.4s						
FCH	**Farellones**	**2.48**	**153**	⇑*e*P	Pn	10 46 17.6	+2.7
FCH				*e*S	Sb	10 46 48.8	-2.3
FCH				IAML		10 47 00.5	
	comp=E,165nm,0.4s						
VA05	**Santo Domingo**	**2.53**	**179**	*e*P	Pn	10 46 17.4	+2.1
VA05				*e*S	Sn	10 46 48.2	+3.4
VA05				IAML		10 47 00.1	
	comp=E,300nm,0.2s						
MT09	**Talagante**	**2.70**	**168**	*e*P	Pn	10 46 20.4	+2.5
MT09				*e*S	Sn	10 46 52.5	+3.1
MT09				IAML		10 47 07.0	
	comp=N,215nm,0.3s						
MT01	**Popeta**	**2.75**	**173**	*e*P	Pn	10 46 20.6	+2.1
MT01				*e*S	Sn	10 46 53.7	+3.2
MT01				IAML		10 46 57.5	
	comp=E,142nm,0.3s						
AC04	**Llanos de Chal**	**2.95**	**10**	⇑*i*P	Pn	10 46 16.9	-4.2
AC04				*e*S	Sn	10 46 48.9	-6.4
AC04				IAML		10 47 02.0	
	comp=E,181nm,0.6s						
LMEL	**Las Melosas**	**2.98**	**156**	*e*P	Pn	10 46 24.6	+3.0
LMEL				*e*S	Sn	10 46 59.2	+2.9
LMEL				IAML		10 47 08.6	
	comp=N,169nm,0.3s						
GO03	**Copiap**	**3.73**	**20**	*e*P	Pn	10 46 28.3	-3.5
GO03				*e*S	Sn	10 47 07.7	-6.8
GO03				IAML		10 47 26.8	
	comp=N,142nm,0.3s						

JMA ***20*** *10:46:13.4±0.1, 24°.48N×122°.78E, h93^{km}±1^{km}, M2.6*
TAP ***20*** *10:46:14.1, 24°.46N×122°.75E, h88^{km}±1^{km}, ML3.4, C*
ISC 20 10:46:14.0±1.3**, 24°.46N**±0°.04×**122°.80E**±0°.02**, h89^{km}**±8^{km}**,
n69, σ0ˢ.74**/124**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.14**	**92**	P	**Pn**	**10 46 26.7**	**+0.1**
JYNG				S	**Sn**	**10 46 36.5**	**+0.5**
YOJ	**Yonaguni jima**	**0.20**	**88**	P	**Pn**	**10 46 27.2**	**+0.4**
	baz=87						
YOJ				S	**Sn**	**10 46 36.9**	**+0.5**
	baz=87						
YOJ	**Yonaguni jima**	**0.20**	**88**	P	**Pn**	**10 46 27.0**	**+0.2**
YOJ				S	**Sn**	**10 46 36.8**	**+0.5**
IRIF	**Iriomote-Funau**	**0.86**	**98**	P	**Pn**	**10 46 32.1**	**+0.1**
IRIF				S	**Sn**	**10 46 45.9**	**+0.4**
TWC	**Suao**	**0.88**	**280**	*i* P	**Pn**	**10 46 31.9**	**-0.3**
	baz=280						
TWC				*e*S	**Sn**	**10 46 44.2**	**-1.6**
	baz=280						
TWB1	**Santiao Chiao**	**0.92**	**307**	P	**Pn**	**10 46 32.4**	**-0.3**
	baz=308						
EWUT	**Wuta**	**0.93**	**270**	P	**Pn**	**10 46 32.6**	**-0.2**
	baz=269						
EWUT				S	**Sn**	**10 46 46.4**	**-0.5**
	baz=269						
ENA	**Nanau**	**0.96**	**269**	P	**Pn**	**10 46 33.6**	**+0.5**
	baz=267						
ENA				*e*S	**Sn**	**10 46 48.1**	**+0.6**
	baz=267						
NTC	**Toucheng**	**0.96**	**294**	P	**Pn**	**10 46 32.8**	**-0.4**
	baz=295						
NTC				S	**Sn**	**10 46 46.5**	**-1.1**
	baz=295						
NDS	**Dongshan**	**1.00**	**280**	P	**Pn**	**10 46 33.6**	**0.0**
	baz=280						
NDS				S	**Sn**	**10 46 47.5**	**-0.8**
	baz=280						
HATJ	**Hateruma jima**	**1.00**	**113**	P	**Pn**	**10 46 34.4**	**+0.8**
HATJ				*e*S	**Sn**	**10 46 49.4**	**+1.0**
TIPB	**Shuangxi**	**1.02**	**300**	P	**Pn**	**10 46 33.5**	**-0.3**
	baz=301						
TWE	**Neicheng**	**1.06**	**285**	*i* P	**Pn**	**10 46 34.3**	**0.0**
	baz=284						
NWF	**Wu-fen Shan**	**1.11**	**304**	*i* P	**Pn**	**10 46 34.9**	**0.0**
	baz=304						
WFSB	**Wu-fen Shan**	**1.11**	**304**	P	**Pn**	**10 46 34.8**	**-0.1**
	baz=304						
ETL	**Fush Village**	**1.11**	**255**	*i* P	**Pn**	**10 46 34.9**	**-0.1**
	baz=253						
ETL				*e*S	**Sn**	**10 46 50.4**	**-0.2**
	baz=253						
JKRS	**Kuro-shima**	**1.13**	**101**	P	**Pn**	**10 46 35.7**	**+0.6**
JKRS				S	**Sn**	**10 46 51.7**	**+0.8**
NACB	**Ninganchiao**	**1.13**	**256**	P	**Pn**	**10 46 34.6**	**-0.5**
	baz=254						
NACB				S	**Sn**	**10 46 50.5**	**-0.5**
	baz=254						
ENTT	**Nioudou**	**1.14**	**280**	*i* P	**Pn**	**10 46 35.7**	**+0.5**
	baz=279						
TWD	**Chiawan**	**1.16**	**251**	*i* P	**Pn**	**10 46 35.0**	**-0.4**
	baz=250						
TWD				S	**Sn**	**10 46 51.0**	**-0.5**
	baz=250						
NDT	**Datong Townshi**	**1.18**	**277**	*i* P	**Pn**	**10 46 36.5**	**+0.8**
	baz=277						
NDT				*e*S	**Sn**	**10 46 52.0**	**-0.1**
	baz=277						
NWLT	**Wulai**	**1.22**	**285**	*i* P	**Pn**	**10 46 36.6**	**+0.4**
	baz=285						
NWLT				*e*S	**Sn**	**10 46 51.4**	**-1.6**
	baz=285						
ETLH	**Xiulin Townshi**	**1.22**	**259**	*i* P	**Pn**	**10 46 36.3**	**0.0**
	baz=257						
ETLH				S	**Sn**	**10 46 52.9**	**-0.3**
	baz=257						
JIJ	**Ishigaki jima**	**1.23**	**94**	P	**Pn**	**10 46 36.3**	**0.0**
JIJ				S	**Sn**	**10 46 52.3**	**-0.9**
TEYL	**Yanliau Villag**	**1.24**	**242**	P	**Pn**	**10 46 36.1**	**-0.3**
	baz=242						
TEYL				S	**Sn**	**10 46 53.5**	**+0.2**
	baz=242						
NHDH	**Xindian Distri**	**1.26**	**294**	P	**Pn**	**10 46 36.7**	**0.0**
	baz=294						
ETM	**Tongmen**	**1.29**	**248**	*i* P	**Pn**	**10 46 36.8**	**-0.2**
	baz=246						
ETM				*i* S	**Sn**	**10 46 53.8**	**-0.6**
	baz=246						
NNSB	**Datong**	**1.29**	**269**	P	**Pn**	**10 46 37.0**	**-0.2**
	baz=268						
NNSB				S	**Sn**	**10 46 54.0**	**-0.6**
	baz=268						
NNS	**Nan Shan**	**1.30**	**270**	*i* P	**Pn**	**10 46 37.4**	**+0.1**
	baz=268						
NNS				S	**Sn**	**10 46 54.4**	**-0.4**
	baz=268						
TATO	**Taipei**	**1.30**	**294**	P	**Pn**	**10 46 36.8**	**-0.3**
	baz=294						
YHNB	**Yeheng**	**1.31**	**280**	P	**Pn**	**10 46 37.7**	**+0.3**
	baz=279						
YHNB				S	**Sn**	**10 46 54.0**	**-1.1**
	baz=279						
NSK	**Sanguang**	**1.33**	**280**	*i* P	**Pn**	**10 46 38.0**	**+0.4**
	baz=279						
NSK				*e*S	**Sn**	**10 46 55.2**	**-0.2**
	baz=279						
TEGC	**Jichi Village**	**1.37**	**237**	P	**Pn**	**10 46 38.2**	**+0.2**
	baz=235						
TEGC				S	**Sn**	**10 46 56.1**	**-0.1**
	baz=235						
JISG	**Ishigakijimahi**	**1.39**	**84**	P	**Pn**	**10 46 38.1**	**-0.1**
JISG				S	**Sn**	**10 46 55.7**	**-0.9**
ESL	**Shilin**	**1.40**	**243**	*i* P	**Pn**	**10 46 38.3**	**-0.1**
	baz=241						
ESL				S	**Sn**	**10 46 56.7**	**-0.2**
	baz=241						
TWS1	**Kuangyinshan**	**1.41**	**297**	P	**Pn**	**10 46 38.5**	**+0.1**
	baz=297						
FUSS	**Fushou**	**1.43**	**262**	*i* P	**Pn**	**10 46 39.8**	**+0.7**
	baz=261						
WHF	**Hehuan Shan**	**1.43**	**258**	*i* P	**Pn**	**10 46 39.3**	**+0.1**
	baz=256						
EGFH	**Guangfu**	**1.48**	**238**	P	**Pn**	**10 46 39.4**	**+0.1**
	baz=236						
EGFH				S	**Sn**	**10 46 58.4**	**-0.2**
	baz=236						
TWT	**Tachien**	**1.49**	**263**	*i* P	**Pn**	**10 46 40.8**	**+1.1**
	baz=261						
CHGB	**Renai**	**1.53**	**255**	P	**Pn**	**10 46 40.6**	**+0.3**
	baz=254						
CHGB				S	**Sn**	**10 47 00.0**	**-0.2**
	baz=254						
OWD	**Renai**	**1.56**	**252**	*i* P	**Pn**	**10 46 40.8**	**+0.2**
	baz=250						
OWD				*i* S	**Sn**	**10 47 00.4**	**-0.3**
	baz=250						
HGSD	**Ruisui**	**1.58**	**233**	P	**Pn**	**10 46 40.5**	**-0.2**
	baz=231						
HGSD				S	**Sn**	**10 47 00.9**	**-0.1**
	baz=231						
LIOB	**Emei**	**1.63**	**277**	*i* P	**Pn**	**10 46 42.0**	**+0.6**
	baz=276						
LIOB				*e*S	**Sn**	**10 47 02.3**	**+0.2**
	baz=276						
EHY	**Hungye**	**1.65**	**235**	*i* P	**Pn**	**10 46 41.5**	**-0.1**
	baz=233						
VWDT	**VWDT**	**1.67**	**246**	*i* P	**Pn**	**10 46 42.4**	**+0.6**
	baz=244						
VWDT				*i* S	**Sn**	**10 47 02.8**	**-0.1**
	baz=244						
ECBN	**Changbin**	**1.67**	**228**	P	**Pn**	**10 46 41.7**	**-0.2**
	baz=226						
ECBN				S	**Sn**	**10 47 03.0**	**-0.1**
	baz=226						
WHP	**Taichung City**	**1.70**	**264**	*e*P	**Pn**	**10 46 43.7**	**+1.4**
	baz=263						
WHP				*e*S	**Sn**	**10 47 04.5**	**+0.8**
	baz=263						
YULB	**Yu-li**	**1.73**	**233**	P	**Pn**	**10 46 42.2**	**-0.5**
	baz=231						
YULB				S	**Sn**	**10 47 03.8**	**-0.7**
	baz=231						
WPL	**Puli Township**	**1.74**	**256**	P	**Pn**	**10 46 43.2**	**+0.5**
	baz=254						
WPL				*e*S	**Sn**	**10 47 05.4**	**+0.8**
	baz=254						
JTJ	**Tarama**	**1.75**	**84**	P	**Pn**	**10 46 42.9**	**+0.1**
JTJ				*e*S	**Sn**	**10 47 03.8**	**-0.9**
DPDB	**Guoxing**	**1.76**	**257**	P	**Pn**	**10 46 44.3**	**+1.2**
	baz=255						
DPDB				S	**Sn**	**10 47 04.0**	**-1.1**
	baz=255						
TWF1	**Yuli**	**1.76**	**232**	P	**Pn**	**10 46 42.9**	**-0.1**
	baz=230						
TWF1				S	**Sn**	**10 47 04.5**	**-0.5**
	baz=230						
WCS	**Beigang Elemen**	**1.77**	**257**	P	**Pn**	**10 46 44.1**	**+1.1**
	baz=256						
WCS				*e*S	**Sn**	**10 47 07.0**	**+1.8**
	baz=256						
SSLB	**Suanglung**	**1.81**	**249**	P	**Pn**	**10 46 44.2**	**+0.5**
	baz=247						
SSLB				S	**Sn**	**10 47 06.2**	**-0.1**
	baz=247						
SMLT	**Sun Moon Lake**	**1.82**	**252**	P	**Pn**	**10 46 45.0**	**+1.0**
	baz=251						
SMLT				*e*S	**Sn**	**10 47 08.4**	**+1.7**
	baz=251						
TYC	**Yuchr**	**1.85**	**253**	P	**Pn**	**10 46 45.2**	**+1.0**
	baz=252						
TYC				S	**Sn**	**10 47 07.3**	**0.0**
	baz=252						
FULB	**Fuli**	**1.86**	**228**	P	**Pn**	**10 46 44.7**	**+0.4**
	baz=226						
FULB				S	**Sn**	**10 47 07.5**	**0.0**
	baz=226						
CHKT	**Chengkung**	**1.88**	**224**	*i* P	**Pn**	**10 46 45.4**	**+0.8**
	baz=222						
CHKT				S	**Sn**	**10 47 07.4**	**-0.5**
	baz=222						
WJS	**Zhushan**	**1.99**	**252**	*e*P	**Pn**	**10 46 47.5**	**+1.5**
	baz=251						
WJS				*e*S	**Sn**	**10 47 12.8**	**+2.3**
	baz=251						
EDH	**Donghe**	**2.01**	**223**	*e*S	**Sn**	**10 47 09.7**	**-1.3**
	baz=221						
ALS	**Alishan**	**2.05**	**243**	*e*P	**Pn**	**10 46 48.8**	**+1.7**
	baz=241						
ALS				*e*S	**Sn**	**10 47 13.3**	**+1.0**
	baz=241						
ELDTW	**Lidau**	**2.06**	**233**	P	**Pn**	**10 46 47.1**	**+0.1**
	baz=231						
ELDTW				S	**Sn**	**10 47 10.8**	**-1.5**
	baz=231						
LDUT	**Ludao**	**2.15**	**215**	P	**Pn**	**10 46 48.1**	**-0.1**
	baz=213						
LDUT				*e*S	**Sn**	**10 47 12.5**	**-1.8**
	baz=213						
JIRB	**Irabujima**	**2.19**	**80**	P	**Pn**	**10 46 48.7**	**0.0**
JIRB				*e*S	**Sn**	**10 47 14.0**	**-1.3**
JIKM	**Ikemajima**	**2.28**	**78**	P	**Pn**	**10 46 50.3**	**+0.5**
JIKM				*e*S	**Sn**	**10 47 16.5**	**-0.7**
JMJ2	**Miyako jima3**	**2.32**	**82**	P	**Pn**	**10 46 50.8**	**+0.4**
JMJ2				*e*S	**Sn**	**10 47 17.6**	**-0.7**
JOGS	**Gusukube**	**2.40**	**82**	P	**Pn**	**10 46 51.8**	**+0.4**
JOGS				*e*S	**Sn**	**10 47 20.6**	**+0.6**
LAY	**Lan-yu**	**2.67**	**206**	*i* P	**Pn**	**10 46 54.9**	**-0.1**
	baz=204						
LAY				*e*S	**Sn**	**10 47 24.5**	**-2.0**
	baz=204						

IDC ***20*** *10:58:59.8±4.7, 52°.90N×174°.99E, h137^{km}±45^{km}, mb3.3/5,
mb1 3.5/7, mb1mx3.1/51, mbtmp3.9/7, Error ellipse:
s-maj=66.7km s-min=19.2km az=179.0*
ISC 20 10:59:01.1±2.0**, 52°.9N**±0°.4×**174°.75E**±0°.09**, h150^{km}, n7,
σ2ˢ.09**/8**, mb3.6**/5**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**10.28**	**278**	P	**Pn**	**11 01 25.7**	**+1.1**
	0.5nm,0.3s,baz=90,slow=19,SNR=1.6						
PETK				S	**Sn**	**11 03 14.7**	**-3.6**
	0.4nm,0.3s,baz=32,slow=20,SNR=7.8						
KDAK	**Kodiak Island**	**19.08**	**62**	P	**P**	**11 03 09.7**	**-2.0**
	0.4nm,0.3s,baz=283,slow=7.3,SNR=16						
SONM	**Songino Array**	**42.39**	**292**	P	**P**	**11 06 42.0**	**+1.5**
	0.2nm,0.3s,baz=66,slow=7.8,SNR=6.3						
SPITS	**Spitsbergen Ar**	**48.50**	**354**	P	**P**	**11 07 28.5**	**+0.6**
	12nm,0.9s,baz=356,slow=12,SNR=4.0						
KURBB	**Kurchatov Arra**	**55.13**	**309**	P	**P**	**11 08 18.0**	**+0.7**
	0.8nm,0.6s,baz=42,slow=6.5,SNR=4.5						
MKAR	**Makanchi Array**	**55.92**	**304**	P	**P**	**11 08 23.4**	**+0.3**
	0.3nm,0.4s,baz=59,slow=5.6,SNR=8.2						
TXAR	**Lajitas Array**	**62.27**	**77**	P	**P**	**11 09 06.5**	**-0.6**
	0.1nm,0.4s,baz=310,slow=4.2,SNR=2.4						

VIE ***20*** *11:00:35.2±0.3, 46°.66N×9°.84E, h5^{km}±6^{km}, mb1.4/2,
ml1.4/5, Error ellipse: s-maj=1.5km s-min=1.1km az=121.0
17 km S of Davos*
ZUR 20 11:00:35.2, 46°.66N×9°.84E, h8^{km}±1^{km}**, MLh1.5**/4**, 4C,
Error ellipse: s-maj=3.1km s-min=0.7km az=130.0,
Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAVOX	**Davos/Dischmat**	**0.12**	**13**	⇑Pg	Pg	11 00 38.2	+0.1
	0.2nm,SNR=3.4						
DAVOX				⇑Pg	Pg	11 00 38.2	+0.1
DAVOX				Sg	Sg	11 00 40.1	+0.1
SCEL	**Celerina**	**0.16**	**176**	Pg	Pg	11 00 38.8	+0.3
SCEL				Pg	Pg	11 00 38.8	+0.3
	0.6nm,SNR=3.7						
SCEL				Sg	Sg	11 00 41.2	+0.3
BERNI	**Berninapass**	**0.28**	**153**	Pg	Pg	11 00 41.0	+0.2
BERNI				Pg	Pg	11 00 41.0	+0.2
	0.1nm,SNR=1.1						
BERNI				Sg	Sg	11 00 44.7	+0.1
VDL	**Val di Lei**	**0.32**	**236**	⇑Pg	Pg	11 00 41.6	0.0
VDL				⇑Pg	Pg	11 00 41.6	0.0
	0.1nm,SNR=2.0						
VDL				Sg	Sg	11 00 46.0	0.0
PLONS	**Plons/SG**	**0.50**	**321**	Sg	Sg	11 00 51.7	+0.3
FETA	**Feichten**	**0.71**	**59**	Pg	Pg	11 00 48.6	-0.3
	0.1nm,SNR=1.7						
FETA	**Feichten**	**0.71**	**59**	*e*Pg	Pg	11 00 48.5	-0.3
	0.7nm,0.1s						
FETA				*e*Sg	Sg	11 00 58.1	0.0
	0.3nm,0.1s						
RETA	**Reutte**	**1.04**	**37**	*e*Pg	Pb	11 00 55.7	+0.2
	0.3nm,0.1s						
RETA				*e*Sg	Sn	11 01 10.6	-0.3
	0.2nm,0.1s						
MOTA	**Moosalm**	**1.10**	**51**	Pg	Pb	11 00 56.6	-0.1
	0.3nm,0.2s						
MOTA				*e*Sg	Sn	11 01 12.8	+0.1
	0.4nm,0.3s						

ROM 20 11:02:20.4±0.1**, 42°.605N**±0°.004×**13°.122E**±0°.006**,
h11^{km}, ML1.2**/8**, 3C-1D, Error ellipse: s-maj=0.5km
s-min=0.4km az=233.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.06**	**269**	P	Pg	11 02 22.9	+0.1
LNSS				S	Sg	11 02 24.3	-0.1
LNSS				AML	AML		
	comp=E,916µm,0.6s						
LNSS				AML	AML		
	comp=N,1395µm,0.4s						
LNSS				AML	AML		
	comp=N,1390µm,0.4s						
LNSS				AML	AML		
	comp=E,914µm,0.6s						
RM33	**Pellescritta (**	**0.12**	**144**	P	Pg	11 02 23.9	+0.5
RM33				S	Sg	11 02 26.4	+0.8
RM33				AML	AML		
	comp=N,260µm,0.2s						
RM33				AML	AML		
	comp=E,228µm,0.6s						
SMA1	**SAN MARTINO**	**0.16**	**81**	⇑P	Pg	11 02 24.7	+0.7
SMA1				S	Sg	11 02 27.6	+1.0
SMA1				AML	AML		
	comp=N,589µm,0.2s						
SMA1				AML	AML		
	comp=E,616µm,0.2s						
SMA1				AML	AML		
	comp=N,590µm,0.2s						
CAMP	**Campotosto**	**0.22**	**108**	P	Pg	11 02 25.7	+0.6
CAMP				S	Sg	11 02 29.4	+1.1
CAMP				AML	AML		
	comp=E,41µm,1.5s						
CAMP				AML	AML		
	comp=N,55µm,1.3s						
FIAM	**Fiamignano**	**0.34**	**181**	⇑P	Pb	11 02 27.9	-0.5
FIAM				S	Sb	11 02 33.1	-0.8
FIAM				AML	AML		
	comp=E,77µm,0.9s						
FIAM				AML	AML		
	comp=E,77µm,0.9s						
FIAM				AML	AML		
	comp=N,78µm,0.5s						
TERO	**Teramo**	**0.36**	**87**	⇓P	Pg	11 02 27.8	+0.3
TERO				S	Sg	11 02 33.2	+0.9
TERO				AML	AML		
	comp=E,17µm,1.1s						
TERO				AML	AML		
	comp=N,20µm,0.6s						
GIGS	**Gran Sasso**	**0.36**	**115**	P	Pg	11 02 28.2	+0.5
GIGS				S	Sg	11 02 33.5	+1.0
FDMO	**Fiordimonte**	**0.43**	**357**	⇑P	Pg	11 02 29.1	+0.2
FDMO				S	Sg	11 02 35.6	+1.0
FDMO				AML	AML		
	comp=E,30µm,0.1s						
FDMO				AML	AML		
	comp=N,31µm,0.2s						
CSP1	**Cessapalombo**	**0.49**	**7**	P	Pg	11 02 30.2	+0.2
CSP1				S	Sb	11 02 38.0	-0.4
CSP1				AML	AML		
	comp=E,37µm,1.5s						
CSP1				AML	AML		
	comp=N,42µm,1.6s						

NEIC 20 11:35:16.7±1.0**, 35°.95N**±0°.01×**96°.79W**±0°.02**, h5^{km}**±2^{km}**,
ML2.1**/34**, Error ellipse: s-maj=2.1km s-min=1.7km
az=124.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK030	**Cody Creek RV**	**0.02**	**176**		Pg	11 35 17.6	-0.1
OK030				Sg	Sg	11 35 18.2	-0.1
OK031	**S. Brethren Rd**	**0.04**	**274**	Pg	Pg	11 35 17.7	-0.2
OK031				Sg	Sg	11 35 18.6	-0.1
OK034	**N. Norfolk Rd.**	**0.08**	**45**	Pg	Pg	11 35 18.8	+0.3
OK034				Sg	Sg	11 35 20.5	+0.7
OK034				IAML		11 35 20.7	
	2µm,0.2s						
QUOK	**Quay**	**0.23**	**16**	Pg	Pg	11 35 21.5	+0.3

QUOK				Sg	Sg	11 35 25.0	+0.8
OK029	**Liberty Lake**	**0.56**	**254**	Pg	Pg	11 35 27.3	-0.2
OK029				Sg	Sg	11 35 35.0	+0.1
OK029				IAML		11 35 39.3	
	95nm,0.5s						
OK029				IAML		11 35 41.4	
	55nm,0.6s						
OK025	**Westminster Rd**	**0.58**	**231**	Pg	Pg	11 35 27.5	-0.3
OK025				Sg	Sg	11 35 35.6	+0.2
OK025				IAML		11 35 36.0	
	168nm,0.2s						
BCOK	**Bluff Creek, N**	**0.73**	**247**	Pg	Pg	11 35 30.2	-0.5
BCOK				Sg	Sg	11 35 39.9	-0.3
BCOK				IAML		11 35 40.6	
	comp=E,60nm,0.2s						
OKCSW	**OKLAHOMA CITY**	**0.76**	**225**	Pg	Pg	11 35 30.8	-0.5
OKCSW				Sg	Sg	11 35 41.3	+0.1
OKCFA	**Oklahoma City**	**0.76**	**226**	Pg	Pg	11 35 31.5	+0.2
OKCFA				IAML		11 35 39.6	
	comp=E,88nm,0.1s						
OKCFA				Sg	Sb	11 35 43.2	+0.1
OKCFA				IAML		11 35 46.6	
	comp=N,60nm,0.4s						
W35A	**Tecumseh**	**0.80**	**185**	Pg	Pg	11 35 31.2	-0.8
W35A				Sg	Sg	11 35 42.3	-0.1
W35A				IAML		11 35 42.7	
	comp=E,72nm,0.3s						
W35A				IAML		11 35 42.7	
	comp=N,56nm,2.5s						
TUL1	**Leonard**	**0.81**	**93**	Pg	Pg	11 35 31.8	-0.4
TUL1				Sg	Sg	11 35 42.5	-0.2
FNO	**Franklin**	**0.85**	**216**	Pg	Pg	11 35 32.1	-0.9
FNO				IAML		11 35 42.5	
	comp=E,46nm,3.8s						
FNO				Sg	Sg	11 35 44.1	-0.1
FNO				IAML		11 35 52.7	
	comp=N,77nm,4.5s						
BLOK	**Blackwell**	**0.88**	**337**	Pg	Pg	11 35 33.2	-0.4
BLOK				Sg	Sg	11 35 45.3	+0.3
T35A	**Sooner Cattle**	**0.99**	**13**	Pg	Pg	11 35 35.2	-0.4
T35A				Sg	Sg	11 35 48.6	+0.1
T35A				IAML		11 35 49.4	
	comp=E,50nm,0.1s						
T35A				IAML		11 35 49.4	
	comp=N,58nm,0.1s						
CROK	**Carrier**	**1.11**	**300**	Pg	Pg	11 35 37.5	-0.6
CROK				Sg	Sb	11 35 53.6	+0.3
CROK				IAML		11 35 58.3	
	comp=E,62nm,0.4s						
OK032	**Salt Plains WL**	**1.43**	**307**	Pn	Pn	11 35 42.8	-0.5
KAN06	**Argonia West S**	**1.56**	**327**	Pn	Pb	11 35 46.2	+0.2
X34A	**Smith Ranch, M**	**1.60**	**213**	Pn	Pn	11 35 45.5	-0.1
X37A	**Clayton**	**1.78**	**139**	Pn	Pn	11 35 48.1	-0.1
U32A	**Winter Ranch,**	**1.84**	**284**	Pn	Pn	11 35 48.8	-0.2
LOOK	**Love County**	**1.98**	**190**	Pn	Pn	11 35 51.9	+1.0
U38A	**Gravette**	**2.00**	**75**	Pn	Pn	11 35 51.9	+0.7
WMOK	**Wichita Mounta**	**2.03**	**234**	Pn	Pn	11 35 51.5	-0.1
HHAR	**Hobbs**	**2.33**	**81**	Pn	Pn	11 35 56.0	+0.4
R32A	**Long Quarter,**	**2.91**	**329**	Pn	Pn	11 36 03.9	+0.2
MIAR	**Mount Ida**	**2.98**	**117**	Pn	Pn	11 36 04.3	-0.3
U40A	**Yellville**	**3.21**	**82**	Pn	Pn	11 36 08.8	+1.0
S39A	**Bolivar**	**3.28**	**57**	Pn	Pn	11 36 08.9	+0.2
X40A	**Basin Creek Fa**	**3.55**	**113**	Pn	Pn	11 36 14.4	+1.9
WHAR	**Wooly Hollow**	**3.72**	**99**	Pn	Pn	11 36 15.6	+0.8
FCAR	**Ozark Folk Cen**	**3.78**	**90**	Pn	Pn	11 36 15.6	0.0
R40A	**Maddies Statio**	**4.30**	**56**	Pn	Pn	11 36 21.7	-1.1
CCM	**Cathedral Cave**	**4.91**	**63**	Pn	Pn	11 36 29.6	-1.5

*IDC **20** 11:42:56.7±0.9, 30°.12N×103°.01E, h0^{km}, mb3.7/8, mb1 3.9/9, mb1mx3.4/59, mbtmp3.6/9, ML3.3/1, Error ellipse: s-maj=38.5km s-min=18.5km az=58.0*

ISC 20 11:43:02.3±0.8**, 30°.2N**±0°.1×**103°.1E**±0°.2**, h35**^{km}**, n10, σ0^{s}.71**/10**, mb3.7**/8**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.33**	**199**	Pn	**Pn**	**11 45 56.1**	**+0.6**
	0.3nm,0.3s,baz=9.9,slow=11,SNR=1.3						
SONM	**Songino Array**	**17.75**	**7**	P	**P**	**11 47 07.9**	**+0.7**
	0.1nm,0.3s,baz=196,slow=9.8,SNR=1.8						
KSRS	**Korea Array**	**21.77**	**64**	P	**P**	**11 47 51.0**	**+0.1**
	0.8nm,0.7s,baz=259,slow=9.9,SNR=4.2						
MKAR	**Makanchi Array**	**23.11**	**321**	P	**P**	**11 48 05.6**	**+0.5**
	0.2nm,0.5s,baz=120,slow=8.5,SNR=1.3						
AKASG	**Malin Array Be**	**57.37**	**313**	P	**P**	**11 52 45.8**	**-1.1**
	0.1nm,0.3s,baz=73,slow=6.7,SNR=2.2						
ARCES	**ARCESS Array B**	**57.71**	**336**	P	**P**	**11 52 48.6**	**-0.5**
	5.1nm,1.0s,baz=94,slow=7.3,SNR=2.5						
FINES	**FINESS Array B**	**57.82**	**326**	P	**P**	**11 52 50.0**	**+0.1**
	2.3nm,0.8s,baz=22,slow=15,SNR=1.9						
WRA	**Warramunga Arr**	**58.23**	**145**	P	**P**	**11 52 52.5**	**-0.8**
	2.7nm,0.6s,baz=328,slow=5.9,SNR=37						
ASAR	**Alice Springs**	**61.20**	**148**	P	**P**	**11 53 13.4**	**-0.3**
	1.0nm,0.6s,baz=339,slow=6.8,SNR=25						
YKA	**Yellowknife Ar**	**82.76**	**17**	P	**P**	**11 55 22.8**	**+0.6**
	0.3nm,1.0s,baz=330,slow=5.0,SNR=2.0						

*IDC **20** 11:55:22.1±1.9, 20°.42S×177°.56W, h516^{km}±20^{km}, mb3.1/6, mb1 3.3/9, mb1mx2.9/37, mbtmp4.0/9, Error ellipse: s-maj=33.6km s-min=20.8km az=143.0*

ISC 20 11:55:20.5±0.9**, 20°.4S**±0°.2×**177°.4W**±0°.1**, h500**^{km}**, n9, σ1^{s}.82**/11**, mb3.8**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.11**	**301**	P	**P**	**11 56 51.2**	**+2.5**
	3.4nm,0.3s,baz=132,slow=6.7,SNR=15						
AFI	**Afiamalu**	**8.40**	**40**	P	**P**	**11 57 22.5**	**+1.2**
	2.0nm,0.3s,baz=136,slow=22,SNR=1.2						
AFI				S	**S**	**11 58 57.4**	**-2.9**
	2.5nm,0.3s,baz=218,slow=23,SNR=2.0						
URZ	**Urewera**	**18.40**	**194**	P	**P**	**11 59 04.3**	**-0.1**
	0.4nm,0.3s,baz=305,slow=21,SNR=1.1						
STKA	**Stephens Creek**	**38.35**	**244**	P	**P**	**12 01 57.9**	**-0.3**
	2.9nm,1.0s,baz=79,slow=12,SNR=2.9						
ASAR	**Alice Springs**	**45.12**	**257**	P	**P**	**12 02 51.0**	**-1.0**
	2.4nm,0.6s,baz=88,slow=8.1,SNR=58						
ASAR				PcP	**PcP**	**12 04 21.9**	**-0.2**
	0.6nm,0.7s,baz=108,slow=4.0,SNR=4.9						
WRA	**Warramunga Arr**	**45.20**	**262**	P	**P**	**12 02 50.7**	**-1.9**
	1.0nm,0.3s,baz=98,slow=7.7,SNR=32						
MJAR	**Matsushiro Arr**	**70.52**	**323**	P	**P**	**12 05 43.0**	**-1.5**
	0.4nm,0.4s,baz=158,slow=5.1,SNR=2.1						
TXAR	**Lajitas Array**	**86.52**	**57**	P	**P**	**12 07 12.3**	**+1.9**
	0.2nm,0.8s,baz=206,slow=6.0,SNR=1.9						
CMAR	**Chiang Mai Arr**	**90.66**	**289**	P	**P**	**12 07 29.8**	**-0.1**
	0.6nm,0.3s,baz=108,slow=2.1,SNR=4.1						

*IDC **20** 12:08:25.6±1.2, 4°.08S×129°.43E, h0^{km}, mb3.9/6, mb1 4.0/9, mb1mx3.7/38, mbtmp3.8/9, ML3.5/3, MS3.1/2, Ms1 3.1/2, ms1mx2.5/42, Error ellipse: s-maj=39.0km s-min=23.0km az=80.0*

*NEIC **20** 12:08:27.7±1.1, 4°.13S±0°.08×129°.4E±0°.1, h10^{km}±1^{km}, mb4.1/12, Error ellipse: s-maj=17.6km s-min=12.7km az=76.0*

*DJA **20** 12:08:28.6±0.7, 4°S±6°×12°9E±°, h10^{km}, M3.8/6, MLv3.8/6*

ISC 20 12:08:27.1±0.6**, 4°.09S**±0°.06×**129°.47E**±0°.05**, h10**^{km}**, n32, σ0^{s}.95**/34**, mb4.0**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.92**	**324**	P	**Pb**	**12 08 45.3**	**+0.2**
MSAI				S	**Sg**	**12 08 57.2**	**+0.5**
AAI	**Ambon**	**1.34**	**287**	P	**Pn**	**12 08 51.8**	**-0.1**
AAI				S	**Sb**	**12 09 08.9**	**-0.6**
FAKI	**Fak Fak**	**3.00**	**67**	P	**Pn**	**12 09 16.2**	**+1.4**
FAKI	**Fak Fak**	**3.00**	**67**		**Pn**	**12 09 16.0**	**+1.1**
SIJI	**Sorong**	**3.67**	**29**	Pn	**Pn**	**12 09 24.6**	**+0.7**
	5.7nm,0.3s,baz=222,slow=23,SNR=22						
SIJI				Sn	**Sn**	**12 10 05.3**	**-1.9**
	6.1nm,0.3s,baz=91,slow=23,SNR=1.8						
SWI	**Sorong**	**3.67**	**29**	P	**Pn**	**12 09 25.1**	**+1.1**
SANI	**Sanana**	**4.03**	**300**	P	**Pn**	**12 09 30.9**	**+2.0**
BATI	**Baumata**	**8.38**	**223**	LR	LR	12 13 23.2	
	comp=Z,138nm,18.1s,baz=120,slow=36						
MTN	**Manton Dam**	**8.85**	**169**	Pn	**Pn**	**12 10 34.7**	**-0.5**
KNRA	**Kununurra**	**11.54**	**183**	Pn	**Pn**	**12 11 11.8**	**-0.2**
WB0	**Warramunga Arr**	**16.31**	**163**	Pn	**Pn**	**12 12 15.8**	**-0.6**
WB0				IAmb	IAmb	12 12 16.5	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**16.46**	**164**	Pn	**Pn**	**12 12 16.4**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=343,slow=14,SNR=6.2						
WRA	**Warramunga Arr**	**16.46**	**164**		**Pn**	**12 12 18.6**	**+0.3**
WB2	**Warramunga Arr**	**16.46**	**164**	Pn	**Pn**	**12 12 17.3**	**-1.0**
WB2				IAmb	IAmb	12 12 23.3	
	comp=Z,16nm,1.5s						
COEN	**Coen**	**16.70**	**127**	P	**Pn**	**12 12 22.0**	**+0.6**
COEN				IAmb	IAmb	12 12 23.3	
	comp=Z,41nm,1.5s						
AS31	**Alice Springs**	**19.93**	**168**	P	**P**	**12 12 59.9**	**+0.5**
ASAR	**Alice Springs**	**19.93**	**168**	P	**Pn**	**12 13 00.4**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=350,slow=10,SNR=16						
ASAR				LR	LR	12 21 52.6	
	comp=Z,36nm,18.2s,baz=328,slow=40						
ASAR	**Alice Springs**	**19.93**	**168**	P	**P**	**12 12 59.9**	**+0.5**
KSM	**Kuching**	**19.93**	**286**	P	**P**	**12 13 00.1**	**+0.7**
KSM				IAmb	IAmb	12 13 02.2	
	comp=Z,12nm,0.8s						
CTAO	**Charters Tower**	**22.81**	**136**	P	**P**	**12 13 30.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**37.51**	**308**	P	**P**	**12 15 41.1**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=136,slow=7.4,SNR=10						
MJAR	**Matsushiro Arr**	**41.23**	**11**	P	**P**	**12 16 10.8**	**-1.6**
	comp=Z,0.7nm,0.5s,baz=199,slow=10,SNR=2.9						
KSRS	**Korea Array**	**41.35**	**358**	P	**P**	**12 16 13.8**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=167,slow=9.1,SNR=2.4						
SONM	**Songino Array**	**55.53**	**341**	P	**P**	**12 18 03.7**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=114,slow=6.5,SNR=2.7						
MK31	**Makanchi Array**	**65.52**	**326**	P	**P**	**12 19 10.9**	**+0.1**
MK31				IAmb	IAmb	12 19 12.1	
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**65.52**	**326**	P	**P**	**12 19 11.1**	**+0.3**
	comp=Z,1.5nm,0.4s,baz=113,slow=7.8,SNR=45						
MKAR	**Makanchi Array**	**65.52**	**326**	P	**P**	**12 19 10.5**	**-0.3**
MAKZ	**Makanchi**	**65.70**	**326**	P	**P**	**12 19 12.1**	**+0.1**
ZALV	**Zalesovo Beam**	**68.76**	**334**	P	**P**	**12 19 29.7**	**-1.5**
	comp=Z,0.8nm,0.6s,baz=111,slow=8.1,SNR=4.4						
KURK	**Kurchatov**	**69.78**	**328**	P	**P**	**12 19 37.6**	**+0.1**
ABKAR	**Akbulak array**	**79.92**	**321**	P	**P**	**12 20 36.4**	**+0.1**
ABKAR				IAmb	IAmb	12 20 44.7	
	comp=Z,2.4nm,1.1s						
QSPA	**South Pole Qui**	**85.87**	**180**	P	**P**	**12 21 06.4**	**-0.7**

*MOS **20** 12:22:40.3±0.0, 43°.02N×43°.97E, h13^{km}, MPVA3.3*

*NORS **20** 12:22:40.4±0.0, 43°.03N×43°.97E, h8^{km}, MPVA3.3*

ISC 20 12:22:41.7±0.9**, 42°.98N**±0°.02×**43°.99E**±0°.02**, h18**^{km}±2^{km}**, n20, σ1^{s}.39**/38**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KORR	**Kora**	**0.12**	**30**	*i* Pg	**Pb**	**12 22 43.9**	**-0.7**
	327nm,0.2s						
KORR				*e*Sg	**Sb**	**12 22 46.0**	**-0.4**
ZEI	**Tsey**	**0.20**	**198**	*i* Pg	**Pg**	**12 22 47.4**	**+0.5**
	34nm,0.1s						
ZEI				*e*Sg	**Sg**	**12 22 51.3**	**+1.0**
LACR	**Lac**	**0.28**	**124**	*i* Pg	**Pb**	**12 22 48.9**	**+0.7**
LACR				*e*Sg	**Sg**	**12 22 54.3**	**+2.2**
ARNR	**Ardon**	**0.29**	**48**	*e*Pg	**Pg**	**12 22 48.9**	**+0.7**
	113nm,0.3s						
ARNR				*e*Sg	**Sg**	**12 22 53.1**	**+0.5**
DIGR	**Digorskoe uzhe**	**0.31**	**255**	*i* Pg	**Pb**	**12 22 48.6**	**-0.2**
	64nm,0.1s						
DIGR				*e*Sg	**Sg**	**12 22 53.5**	**+0.4**
LSNR	**Lesken**	**0.32**	**339**	*e*Pg	**Pg**	**12 22 48.2**	**-0.4**
	18nm,0.2s						
LSNR				*e*Sg	**Sg**	**12 22 53.5**	**+0.2**
STDR	**Stavd-Durt**	**0.39**	**8**	*e*Pg	**Pg**	**12 22 49.0**	**-0.8**
STDR				*e*Sg	**Sg**	**12 22 54.2**	**-1.1**
MTEO	**Meteo**	**0.50**	**127**	P	**Pb**	**12 22 52.8**	**+0.5**
MTEO				S	**Sb**	**12 23 00.6**	**+1.2**
ONI	**Oni**	**0.55**	**225**	P	**Pn**	**12 22 54.0**	**-0.7**
ONI				S	**Sn**	**12 23 03.1**	**-0.5**
BTKR	**Batakoyurt**	**0.56**	**46**	*e*Pg	**Pb**	**12 22 51.6**	**-1.4**
BTKR				*e*Sg	**Sb**	**12 22 59.8**	**-0.9**
PNSH	**Pansheti**	**0.58**	**127**	P	Pb	12 22 46.0	-7.4
PNSH				S	**Sb**	**12 22 54.7**	**-6.6**
NCK	**Nalchik**	**0.59**	**331**	*e*Pg	**Pb**	**12 22 53.7**	**+0.3**
NCK				*e*Sg	**Sg**	**12 23 02.2**	**+0.9**
GUDG	**Gudauri**	**0.63**	**145**	P	**Pn**	**12 22 57.1**	**+1.2**
NEY	**Neytrino**	**0.96**	**287**	*e*Pg	**Pb**	**12 22 59.9**	**0.0**
	22nm,0.2s						
NEY				*e*Sg	**Sb**	**12 23 12.2**	**-0.2**
KBZ	**Khabaz**	**1.09**	**314**	*i* Pg	**Pn**	**12 23 02.7**	**+0.7**
KBZ				*e*Sg	**Sn**	**12 23 16.9**	**+0.3**
SHA1	**Shidzhatmaz**	**1.23**	**308**	*e*Pg	**Pb**	**12 23 05.0**	**+0.5**
	14nm,0.3s						
SHA1				*e*Sg	**Sg**	**12 23 21.1**	**-0.5**
PYA1	**Pyatigorsk**	**1.26**	**329**	*e*Pg	**Pb**	**12 23 05.5**	**+0.6**
PYA1				*e*Sg	**Sn**	**12 23 21.9**	**+1.0**
BEYR	**Belyy Ugol+**	**1.33**	**321**	*e*Pg	**Pb**	**12 23 06.5**	**+0.3**
BEYR				*e*Sg	**Sb**	**12 23 23.7**	**+0.7**
KIV0	**Kislovodsk Arr**	**1.35**	**316**	*e*Pg	**Pb**	**12 23 07.1**	**+0.6**
KIV0				*e*Sg	**Sg**	**12 23 24.9**	**-0.6**
KIV	**Kislovodsk**	**1.36**	**316**	*e*Pg	**Pb**	**12 23 07.5**	**+0.9**
KIV				*e*Sg	**Sg**	**12 23 25.1**	**-0.5**

TRN 20 12:56:33.9, 17°.88N×62°.15W, h29^{km}**, MD3.5, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**0.40**	**121**	*e*P	Pn	12 56 44.5	+0.8
ANWB				*e*S	Sn	12 56 51.6	+1.3
SKI	**Saint Kitts**	**0.78**	**226**	*e*P	Pn	12 56 50.6	+1.7
SKI				*e*S	Sn	12 57 02.6	+2.9
SKOC	**St. Kitts, UWI**	**0.80**	**224**	*e*P	Pb	12 56 50.9	+1.6
SKOC				*e*S	Sn	12 57 02.6	+2.4
SEUS	**St. Eustatius**	**0.88**	**245**	*e*P	Pb	12 56 51.9	+1.3
SEUS				*e*S	Sn	12 57 04.7	+2.5
ANBD	**Bethesda, Anti**	**0.90**	**156**	*e*P	Pb	12 56 51.5	+0.6
ANBD				*e*S	Sn	12 57 04.3	+1.7
SMRT	**St. Maarten**	**0.90**	**281**	*e*P	Pb	12 56 52.1	+1.2
SMRT				*e*S	Sn	12 57 05.4	+2.8
SABA	**Saba**	**1.07**	**257**	*e*P	Pb	12 56 54.4	+0.6
SABA				*e*S	Sb	12 57 08.9	+1.4
CBE	**Ff, Capester**	**1.87**	**164**	*e*P	Pb	12 57 05.8	-1.6
CBE				*e*S	Sb	12 57 29.0	-1.3
TBG	**Guadaloupe-3**	**2.07**	**167**	*e*P	Pn	12 57 08.6	+1.9
TBG				*e*S	Sn	12 57 33.7	+2.2
TDBA	**Terre de Bas,**	**2.07**	**166**	*e*P	Pn	12 57 08.8	+2.0
TDBA				*e*S	Sb	12 57 34.2	-2.0
MAGL	**Barre de l'ile**	**2.09**	**156**	*e*P	Pn	12 57 08.7	+1.8
MAGL				*e*S	Sn	12 57 34.1	+2.1
MDCT	**Cottage Hill,**	**2.34**	**164**	*e*P	Pn	12 57 12.1	+1.7
MDCT				*e*S	Sn	12 57 40.7	+2.5
DSLB	**Salisbury**	**2.52**	**164**	*e*P	Pn	12 57 14.5	+1.6
DSLB				*e*S	Sn	12 57 45.5	+2.8

*SNET **20** 13:04:02.3±1.2, 13°.63N×90°.50W, h64^{km}±15^{km}, ML3.1*

*GCG **20** 13:04:04.2±0.6, 13°.60N×90°.73W, h24^{km}±13^{km}, MD3.3*

ISC 20 13:04:00.5±2.1**, 13°.4N**±0°.1×**90°.56W**±0°.08**, h21**^{km}±6^{km}**, n15, σ0^{s}.67**/23**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**0.91**	**57**	*i* P	**Pb**	**13 04 17.5**	**-0.1**
NUBE				*e*S	**Sb**	**13 04 29.3**	**0.0**
SLOZ	**Alcaldia de Sa**	**0.97**	**51**	⇓*i*P	**Pb**	**13 04 18.1**	**-0.6**
SLOZ				*e*S	**Sb**	**13 04 31.0**	**-0.2**
SLOZ				IAML		13 04 34.0	
	comp=Z,212nm,0.3s						
PCG	**Pacaya**	**0.98**	**357**	*e*P	**Pb**	**13 04 19.3**	**+0.3**
CEVE	**Cerro Verde**	**1.00**	**65**	*e*P	**Pb**	**13 04 19.3**	**-0.1**
CEVE				*e*S	**Sb**	**13 04 32.5**	**+0.4**
CEVE				IAML		13 04 36.4	
	comp=Z,814nm,0.1s						
FUG	**Fuego 3**	**1.07**	**345**	*e*P	**Pn**	**13 04 20.5**	**0.0**
JAYA	**Jayaque - finc**	**1.11**	**77**	*e*P	**Pn**	**13 04 20.5**	**-0.4**
JAYA				*e*S	**Sb**	**13 04 35.1**	**0.0**
JAYA				IAML		13 04 35.9	
	comp=Z,992nm,0.2s						
NBG	**Las Nubes**	**1.20**	**10**	*e*P	**Pn**	**13 04 22.2**	**-0.1**
NBG				*e*S	**Sn**	**13 04 39.3**	**+1.3**
LALI	**Alcalda de L**	**1.21**	**86**	*e*P	**Pn**	**13 04 22.3**	**+0.2**
LALI				*e*S	**Sn**	**13 04 38.8**	**+0.9**
TACO	**Tacachico**	**1.30**	**64**	*i* P	**Pn**	**13 04 22.6**	**-0.9**
UEES	**Universidad Ev**	**1.32**	**76**	*e*P	**Pn**	**13 04 24.0**	**+0.2**
UEES				IAML		13 04 43.3	
	comp=Z,455nm,0.2s						
SJTE	**Alcalda de S**	**1.52**	**82**	*e*P	**Pn**	**13 04 27.3**	**+0.7**
SJTE				*e*S	**Sn**	**13 04 45.0**	**-0.8**
SJTE				IAML		13 04 48.7	
	comp=Z,139nm,0.3s						
STG3	**Santiaguito 3,**	**1.63**	**323**	*e*P	**Pn**	**13 04 28.5**	**+0.4**
STG3				*e*S	**Sn**	**13 04 47.1**	**-1.4**
TECO	**Alcaldia de Te**	**1.73**	**85**	*e*P	**Pn**	**13 04 30.2**	**+0.8**
SCLA	**Alcaldia de Sa**	**1.80**	**80**	*e*P	**Pn**	**13 04 30.1**	**-0.3**
PQSS	**Presa 15 de Se**	**1.96**	**83**	*e*P	**Pn**	**13 04 32.0**	**-0.4**

*NEIC **20** 13:05:59.8±1.8, 10°.98S±0°.08×163°.24E±0°.09, h24^{km}±4^{km}, mb4.7/40, Error ellipse: s-maj=15.2km s-min=8.7km az=46.0*

*BJI **20** 13:06:00.0±0.0, 10°.86S×163°.07E, h33^{km}, mB5.1/21, mb4.6/34, Ms4.5/3, Ms7 4.4/3*

*IDC **20** 13:06:04.5±2.8, 11°.01S×163°.03E, h62^{km}±23^{km}, mb4.0/16, mb1 4.2/19, mb1mx4.2/29, mbtmp4.3/19, ML4.3/3, MS3.7/18, Ms1 3.7/18, ms1mx3.5/36, Error ellipse: s-maj=20.4km s-min=13.4km az=78.0*

ISC 20 13:06:01.0±0.4**, 11°.06S**±0°.05×**163°.16E**±0°.07**, h34**^{km}**, n117, σ1^{s}.22**/103**, mb4.6**/39**, MS3.7**/17**, 1C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.55**	**297**	P	**Pn**	**13 06 54.9**	**+1.2**
	95nm,0.3s,baz=157,slow=2.4,SNR=43						
HNR				S	**Sn**	**13 07 35.8**	**+1.2**
	284nm,0.3s,baz=164,slow=8.5,SNR=8.5						
HNR				LR	LR	13 08 20.9	
	comp=Z,1μm,18.3s,baz=134,slow=40						
HNR	**Honiara**	**3.55**	**297**	Pn	**Pn**	**13 06 54.2**	**+0.4**
SANVU	**Saraoutou**	**5.88**	**138**	Pn	**Pn**	**13 07 26.8**	**+1.0**
MARNC	**Mare, Loyalty**	**11.37**	**156**	Pn	**Pn**	**13 08 42.5**	**+1.4**
DZM	**Mont Dzumac**	**11.40**	**164**	*e*Pn	**Pn**	**13 08 44.3**	**+2.8**
	3.2nm,0.2s						
DZM				*e*Sn	**Sn**	**13 10 43.7**	**-4.1**
	4.2nm,0.3s						
DZM				*e*LR	LR	13 11 23.9	
	comp=Z,670nm,23.3s						
DZM	**Mont Dzumac**	**11.40**	**164**	P	**Pn**	**13 08 43.7**	**+2.2**
	0.9nm,0.3s,baz=19,slow=10,SNR=38						
DZM				S	**Sn**	**13 10 45.9**	**-1.9**
	1.2nm,0.3s,baz=152,slow=20,SNR=2.0						
DZM				LR	LR	13 12 30.8	
	comp=Z,548nm,18.9s,baz=22,slow=34						
DZM	**Mont Dzumac**	**11.40**	**164**	Pn	**Pn**	**13 08 41.5**	**0.0**
ONTNC	**Ouen Toro**	**11.62**	**165**	Pn	**Pn**	**13 08 46.5**	**+1.9**
PINNC	**Pines Island,**	**12.20**	**161**	Pn	**Pn**	**13 08 54.9**	**+2.5**
RABL	**Rabaul**	**12.85**	**301**	Pn	**Pn**	**13 09 01.1**	**-0.4**
TARA	**Tarawa**	**15.69**	**39**	P	**Pn**	**13 09 41.0**	**+1.3**
PMG	**Port Moresby**	**15.83**	**274**	P	**P**	**13 09 45.5**	**+0.6**
	0.3nm,0.3s,baz=69,slow=10,SNR=5.1						
PMG				LR	LR	13 15 44.4	
	comp=Z,444nm,18.8s,baz=106,slow=37						
PMG	**Port Moresby**	**15.83**	**274**	P	**P**	**13 09 45.8**	**+0.9**
MSVF	**Nonsavu**	**15.87**	**116**	LR	LR	13 14 55.2	
	comp=Z,154nm,21.8s,baz=59,slow=33						
EIDS	**Eidsvold**	**18.27**	**217**	P	**P**	**13 10 11.2**	**-0.6**
PATS	**Pohnpei**	**18.42**	**345**	P	**P**	**13 10 12.3**	**-1.2**
CTA	**Charters Tower**	**18.58**	**239**	P	**Pn**	**13 10 16.3**	**+0.5**
	0.5nm,0.3s,baz=62,slow=3.2,SNR=2.2						
CTAO	**Charters Tower**	**18.58**	**239**	P	**Pn**	**13 10 17.4**	**+1.6**
CTAO				IAmb	IAmb	13 10 35.4	
	comp=Z,35nm,1.1s						
MTSU	**Mount Surprise**	**19.54**	**247**	P	**Pn**	**13 10 28.5**	**+1.2**
	baz=20,SNR=24						
COEN	**Coen**	**19.72**	**260**	P	**Pn**	**13 10 30.2**	**+0.6**
	baz=20						
COEN	**Coen**	**19.72**	**260**		**Pn**	**13 10 28.9**	**-0.6**
COEN				IAmb	IAmb	13 10 31.7	
	comp=Z,37nm,1.2s						
RMQ	**Roma**	**20.50**	**220**	P	Pn	13 10 39.8	+1.3
	baz=21,SNR=6.5						
ARMA	**Armidale**	**22.05**	**207**	P	**P**	**13 10 55.5**	**+2.5**
	baz=22						
ARMA	**Armidale**	**22.05**	**207**	P	**P**	**13 10 54.4**	**+1.4**
ARMA				IAmb	IAmb	13 10 56.2	
	comp=Z,34nm,1.3s						
QLP	**Quilpie**	**23.60**	**227**	P	**P**	**13 11 10.7**	**+1.8**
	baz=24,SNR=4.8						
AFI	**Afiamalu**	**24.63**	**99**	LR	LR	13 19 09.7	
	comp=Z,207nm,19.2s,baz=289,slow=32						
RAO	**Raoul Island**	**25.29**	**138**	LR	LR	13 20 03.4	
	comp=Z,218nm,19.0s,baz=171,slow=33						
CMSA	**Cobar Meteorol**	**26.01**	**216**	P	**P**	**13 11 31.7**	**+0.8**
	baz=26						
CAN	**Canberra**	**27.37**	**206**	P	**P**	**13 11 43.7**	**+0.5**
STKA	**Stephens Creek**	**28.74**	**221**	P	**P**	**13 11 56.0**	**+0.6**
	comp=Z,3.2nm,0.6s,baz=51,slow=8.7,SNR=5.3						
STKA				LR	LR	13 22 31.2	
	comp=Z,209nm,19.4s,baz=28,slow=34						
WR0	**Warramunga Arr**	**28.93**	**249**	P	**P**	**13 11 55.9**	**-1.3**
WB0	**Warramunga Arr**	**29.02**	**249**	P	**P**	**13 11 56.9**	**-1.1**
WB0				IAmb	IAmb	13 11 57.9	
	comp=Z,13nm,1.1s						
WC3	**Warramunga Arr**	**29.08**	**249**	P	**P**	**13 11 57.5**	**-1.1**
	baz=29						
WRAB	**Tennant Creek**	**29.09**	**249**	P	**P**	**13 11 58.5**	**-0.2**
WRAB				IAmb	IAmb	13 12 09.5	
	comp=Z,9.4nm,1.2s						
WB2	**Warramunga Arr**	**29.09**	**249**	P	**P**	**13 11 57.6**	**-1.1**
WB2				IAmb	IAmb	13 11 58.1	
	comp=Z,14nm,1.2s						
WRA	**Warramunga Arr**	**29.11**	**249**	P	**P**	**13 11 57.6**	**-1.3**
	comp=Z,4.3nm,0.9s,baz=80,slow=9.2,SNR=16						
WRA				LR	LR	13 23 18.1	
	comp=Z,303nm,21.1s,baz=75,slow=36						
WRA	**Warramunga Arr**	**29.11**	**249**	P	**P**	**13 11 57.9**	**-0.9**
H11S2	**WAKE ISLAND Hy**	**29.57**	**7**	T	T	13 42 56.6	
	baz=188,slow=76,SNR=138						
H11S3	**WAKE ISLAND Hy**	**29.57**	**7**	T	T	13 42 53.4	
	baz=188,slow=76,SNR=134						
H11S1	**WAKE ISLAND Hy**	**29.58**	**7**	T	T	13 42 54.6	
	baz=188,slow=76,SNR=185						
KDU	**Kakadu**	**30.07**	**264**	P	**P**	**13 12 05.4**	**-2.0**
	baz=30,SNR=4.1						
AS31	**Alice Springs**	**30.53**	**242**	P	**P**	**13 12 10.2**	**-1.3**
ASAR	**Alice Springs**	**30.54**	**242**	P	**P**	**13 12 10.4**	**-1.1**
	comp=Z,5.1nm,0.6s,baz=73,slow=9.6,SNR=36						
ASAR				PcP	**PcP**	**13 15 09.7**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=86,slow=2.5,SNR=4.5						
ASAR				LR	LR	13 23 47.8	
	comp=Z,152nm,20.3s,baz=74,slow=35						
ASAR	**Alice Springs**	**30.54**	**242**	P	**P**	**13 12 10.1**	**-1.4**
H11N1	**WAKE ISLAND Hy**	**30.79**	**7**	T	T	13 44 30.6	
	baz=188,slow=76,SNR=44						
H11N3	**WAKE ISLAND Hy**	**30.80**	**7**	T	T	13 44 29.2	
	baz=188,slow=76,SNR=70						
TOO	**Toolangi**	**30.81**	**208**	P	**P**	**13 12 15.2**	**+1.5**
TOO				IAmb	IAmb	13 12 24.9	
	comp=Z,9.3nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**30.81**	**7**	T	T	13 44 30.1	
	baz=188,slow=76,SNR=64						
MSWZ	**Moikau Station**	**32.06**	**163**	P	**P**	**13 12 23.4**	**-1.2**
BBOO	**Buckleboo**	**33.00**	**225**	P	**P**	**13 12 33.4**	**+0.4**
	baz=33,SNR=9.5						
BBOO	**Buckleboo**	**33.00**	**225**	P	**P**	**13 12 32.6**	**-0.4**
KNRA	**Kununurra**	**33.76**	**258**	P	**P**	**13 12 38.5**	**-1.3**
	baz=34,SNR=12						
KNRA	**Kununurra**	**33.76**	**258**	P	**P**	**13 12 38.5**	**-1.3**
WRKA	**Warakurna**	**35.82**	**242**	P	**P**	**13 12 56.8**	**-0.8**
	baz=36,SNR=61						
FITZ	**Fitzroy Crossi**	**36.93**	**255**	P	**P**	**13 13 08.3**	**+1.2**
	baz=37						
FORT	**Forrest**	**37.98**	**234**	P	**P**	**13 13 15.6**	**-0.2**
	baz=38						
FORT	**Forrest**	**37.98**	**234**	P	**P**	**13 13 15.1**	**-0.7**
MMRI	**Maumere**	**40.37**	**270**	P	**P**	**13 13 35.6**	**-0.4**
PSA00	**Pilbara Seismi**	**42.74**	**250**	P	**P**	**13 13 54.2**	**-1.2**
PSA00	**Pilbara Seismi**	**42.74**	**250**	P	**P**	**13 13 54.4**	**-0.9**
PSA00				IAmb	IAmb	13 14 04.5	
	comp=Z,16nm,0.9s						
MEEK	**Meekatharra**	**44.67**	**243**	P	**P**	**13 14 11.0**	**+0.1**
	baz=45,SNR=14						
PPT	**Papeete**	**46.16**	**104**	LR	LR	13 30 19.4	
	comp=Z,84nm,21.7s,baz=262,slow=31						
PPT2	**Papeete2**	**46.16**	**104**	*e*LR	LR	13 27 34.8	
	comp=Z,55nm,20.8s						
TBI	**Tubuai**	**46.68**	**112**	*e*LR	LR	13 27 48.8	
	comp=Z,99nm,29.0s						
BLDU	**Ballidu**	**47.19**	**238**	P	**P**	**13 14 30.9**	**+0.3**
	baz=47,SNR=5.9						
MORW	**Morawa**	**47.40**	**241**	P	**P**	**13 14 32.3**	**0.0**
	baz=48,SNR=3.4						

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MORW  Morawa             47.40 241   P      P       13 14 32.2  -0.2
MORW                                 IAmb   IAmb    13 14 45.4
      comp=Z,13nm,1.0s
KKM   Kota Kinabalu      49.72 288   P      P       13 14 49.2  -1.3
MJAR  Matsushiro Arr     52.85 335   P      P       13 15 12.6  -0.9
      comp=Z,1.8nm,1.0s,baz=157,slow=11,SNR=4.6
MJAR                                 LR     LR      13 35 50.2
      comp=Z,38nm,21.9s,baz=190,slow=34
MJAR  Matsushiro Arr     52.85 335   IAmb   IAmb    13 15 16.2
      comp=Z,2.4nm,1.1s
KSRS  Korea Array        58.49 327   P      P       13 15 54.1  +0.3
      comp=Z,0.9nm,0.7s,baz=156,slow=6.1,SNR=3.2
KSRS                                 LR     LR      13 38 36.7
      comp=Z,37nm,20.6s,baz=118,slow=33
NJ2   Nanjing            60.27 317  eP      P       13 16 08.1  +1.8
NJ2                                  pmax   pmax
      comp=Z,8.0nm,0.6s
USA0B Ussuriysk Arra     61.85 335   P      P       13 16 17.0  +0.2
USA0B                                IAmb   IAmb    13 16 18.5
      comp=Z,11nm,1.1s
USRK  Ussuriysk Ar.      61.85 335   P      P       13 16 16.8   0.0
      comp=Z,3.3nm,0.8s,baz=122,slow=7.2,SNR=7.2
PETK  Petropavlovsk-     64.08 356   LR     LR      13 39 24.4
      comp=Z,52nm,19.6s,baz=122,slow=31
CN2   Changchun          64.48 331  eP      P       13 16 33.1  -1.1
CN2                                  pmax   pmax
      comp=Z,10.0nm,0.5s
VNDA  Vanda              66.46 180   P      P       13 16 48.8  +2.2
      comp=Z,3.5nm,0.7s,baz=349,slow=5.6,SNR=24
VNDA                                 LR     LR      13 40 41.2
      comp=Z,50nm,20.7s,baz=322,slow=31
VNDA  Vanda              66.46 180   P      P       13 16 48.5  +1.9
VNDA                                 IAmb   IAmb    13 16 50.0
      comp=Z,4.0nm,0.8s
CMAR  Chiang Mai Arr     69.80 294   P      P       13 17 07.5  -1.1
      comp=Z,0.8nm,0.3s,baz=119,slow=4.9,SNR=7.8
HHC   Hu-ho-hao-te       70.22 321  eP      P       13 17 13.6  +2.8
HHC                                  pmax   pmax
      comp=Z,7.0nm,1.1s
HHC                                  pmax   pmax
      comp=Z,100nm,5.8s
CD2   Chengdu            70.61 308   P      P       13 17 13.3   0.0
CD2                                  pP     pP      13 17 21.8  -0.9
CD2                                  sP     sP      13 17 24.8  -0.2
CD2                                  pmax   pmax
      comp=Z,10.0nm,0.7s
LZH   Lanzhou            72.90 313  eP      P       13 17 27.8  +0.7
LZH                                  pP     pP      13 17 37.5  +1.0
LZH                                  sP     PcP     13 17 42.3  -1.8
LZH                                  pmax   pmax
      comp=Z,18nm,1.0s
ULN   Ulaanbaatar        76.84 325   P      P       13 17 48.9  -0.7
ULN                                  IAmb   IAmb    13 17 52.3
      comp=Z,6.1nm,0.9s
SONM  Songino Array      77.19 325   P      P       13 17 51.5  -0.1
      comp=Z,2.0nm,0.6s,baz=143,slow=5.2,SNR=14
SONM                                 LR     LR      13 52 26.4
      comp=Z,38nm,19.4s,baz=48,slow=36
SONM  Songino Array      77.19 325   P      P       13 17 51.2  -0.4
GTA   Gaotai             77.25 315  ⇑P      P       13 17 52.6  +0.5
GTA                                  pP     pP      13 17 59.5  -2.2
GTA                                  sP     sP      13 18 04.0  +0.2
GTA                                  pmax   pmax
      comp=Z,6.0nm,1.0s
GTA                                  pmax   pmax
      comp=Z,41nm,5.8s
GTA                                  LR     LR
      comp=Z,84nm,15.6s
GTA                                  LR     LR
      comp=Z,93nm,15.6s
GTA                                  LR     LR
      comp=Z,130nm,14.5s
YAK   Yakutsk            77.41 345   P      P       13 17 52.2  -0.1
YAK                                  IAmb   IAmb    13 17 52.9
      comp=Z,9.7nm,0.7s
P18K  Big Mountain,      77.77  20   P      P       13 17 54.1  -0.4
P18K                                 IAmb   IAmb    13 18 17.9
      comp=Z,19nm,1.1s
Q19K  Cape Douglas,      77.98  21   P      P       13 17 55.3  -0.3
BILL  Bilibino           78.92   1   P      P       13 18 00.4  -0.2
BILL                                 IAmb   IAmb    13 18 08.5
      comp=Z,12nm,0.9s
SVW2  Sparrevohn         78.93  19   P      P       13 18 00.5  -0.3
SVW2                                 IAmb   IAmb    13 18 02.7
      comp=Z,8.2nm,0.8s
QSPA  South Pole Qui     78.95 180   P      P       13 18 02.2  +1.1
QSPA                                 IAmb   IAmb    13 18 03.9
      comp=Z,12nm,1.1s
L19K  White Mountain     79.97  19   P      P       13 18 07.0  +0.5
TLY   Talaya             80.74 327   LR     LR      13 53 11.9
      comp=Z,38nm,19.8s,baz=200,slow=35
I21K  Tanana             83.05  17   P      P       13 18 22.5  -0.1
I21K                                 IAmb   IAmb    13 18 26.3
      comp=Z,13nm,1.2s
IMAR  Indian Mountai     83.13  16   P      P       13 18 23.2  +0.2
WRH   Wood River Hil     83.75  19   P      P       13 18 25.7  -0.6
WRH                                  IAmb   IAmb    13 18 28.3
      comp=Z,12nm,1.1s
MAW   Mawson             83.76 202   P      P       13 18 26.5  +0.2
      comp=Z,4.4nm,1.0s,baz=138,slow=6.1,SNR=3.8
MAW   Mawson             83.76 202   IAmb   IAmb    13 18 29.6
      comp=Z,1.9nm,1.1s
H02S1 DAWSON INLET T     84.07  33   T      T       14 50 24.4
      SNR=37
ILAR  Eielson Array      84.34  19   P      P       13 18 28.8  -0.5
      comp=Z,1.5nm,0.6s,baz=244,slow=5.0,SNR=22
EGAK  Eagle              86.27  21   P      P       13 18 38.6  -0.3
WMQ   Urumqi             87.31 315  eP      P       13 18 46.1  +1.5
NVAR  Mina Array Bea     87.98  50   P      P       13 18 49.2  +1.2
      comp=Z,0.5nm,0.7s,baz=66,slow=20,SNR=3.6
MK31  Makanchi Array     91.80 317   P      P       13 19 04.0  -1.5
MK31                                 IAmb   IAmb    13 19 06.0
      comp=Z,3.4nm,0.8s
MKAR  Makanchi Array     91.80 317   P      P       13 19 04.7  -0.8
      comp=Z,3.0nm,0.7s,baz=97,slow=6.1,SNR=24
MKAR                                 LR     LR      14 00 31.3
      comp=Z,28nm,20.7s,baz=13,slow=36
MKAR  Makanchi Array     91.80 317   P      P       13 19 04.0  -1.5
ZALV  Zalesovo Beam      92.09 325   P      P       13 19 04.7  -1.9
      comp=Z,0.8nm,0.7s,baz=101,slow=6.8,SNR=3.8
ZALV                                 LR     LR      13 58 17.0
      comp=Z,48nm,21.8s,baz=128,slow=34
PDAR  Pinedale Array     95.43  48   P      P       13 19 23.4  +0.8
      comp=Z,0.7nm,1.0s,baz=299,slow=1.5,SNR=4.0
YKA   Yellowknife Ar     96.15  28   P      P       13 19 24.2  -0.9
      comp=Z,1.6nm,0.9s,baz=258,slow=4.9,SNR=14
SNAA  Sanae              96.93 184   P      P       13 19 28.7  +0.1
VNA3  Neumayer Olymp     97.75 182   P      P       13 19 32.4  +0.1
VNA2  Neumayer--Watz     97.96 183   P      P       13 19 33.6  +0.4
      baz=135,slow=4.8
BOSA  Boshof            123.35 225   PKP    PKPdf   13 24 53.3  -2.1
      comp=Z,2.8nm,1.0s,baz=23,slow=7.7,SNR=1.9
KEST  Kesra             145.84 320   PKPbc  PKPab   13 25 37.9  +0.1
      comp=Z,1.5nm,0.7s,baz=327,slow=8.9,SNR=3.6
KEST  Kesra             145.84 320          PKPdf   13 25 36.9  +0.1
ESDC  Sonseca Array     149.29 340   PKPbc  PKPbc   13 25 46.5  -0.2
      comp=Z,0.6nm,0.8s,baz=330,slow=8.6,SNR=2.9
```

IDC **20** *13:47:48.6±0.7, 37°.50N×78°.01E, h0^{km}, mb3.9/18, mb1 4.0/23, mb1mx3.8/66, mbtmp3.8/23, ML3.0/5, MS3.2/3, Ms1 3.2/3, ms1mx2.7/43, Error ellipse: s-maj=17.8km s-min=12.1km az=38.0*

BJI **20** *13:47:51.3±0.0, 37°.55N×78°.08E, h10^{km}, mB4.4/17, mb4.3/19, ML4.2/7, Ms3.8/8, Ms7 3.7/9*

NNC **20** *13:47:52.8±0.8, 37°.70N×77°.95E, h9^{km}±3^{km}, mb4.6, mpv4.4, Error ellipse: s-maj=5.7km s-min=4.5km az=133.0*

MOS **20** *13:47:52.7±1.3, 37°.59N×78°.03E, h34^{km}, mb4.2/4, Error ellipse: s-maj=9.3km s-min=4.8km az=91.8*

NEIC **20** *13:47:55.5±2.0, 37°.60N±0°.08×78°.0E±0°.1, h40^{km}±7^{km}, mb4.3/22, Error ellipse: s-maj=13.2km s-min=9.7km az=135.0*

DMN **20** *13:49:25.8±7.0, 31°.30N×82°.41E, h10^{km}, Error ellipse: s-maj=168.6km s-min=15.8km az=154.0*

ISC 20 13:47:51.7±0.4**, 37°.46N**±0°.03×**78°.11E**±0°.04**, h17^{km}, n172, σ2^{s}.14**/177**, mb4.1**/33**, 12C-8D, Southern Xinjiang**

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Code  Station Name        Δ°   AZ°   Phase ID          Time        Res
                                     Op     ISC      h  m  s       ISC
KSH   Kashi               2.65 322   Pn     Pn      13 48 34.5  +0.7
KSH                                  Sn     Sb      13 49 11.4  +0.2
KSH                                  smax   smax
      comp=N,710nm,1.2s
KSH                                  smax   smax
      comp=E,610nm,1.1s
KDJ   Kajisay             4.72 352   P      Pn      13 49 03.6  +1.3
KDJ   Kajisay             4.72 352   Pn     Pn      13 49 03.6  +1.3
PRZ   Przheval'sk         5.03   2   P      Pn      13 49 08.6  +2.1
PRZ   Przheval'sk         5.03   2   Pn     Pn      13 49 08.6  +2.1
BOOM  Boomskoye usch      5.30 342   P      Pn      13 49 10.6  +0.4
BOOM  Boomskoye usch      5.30 342          Pn      13 49 10.6  +0.4
DHRM  DHARAMSHALA         5.40 196  eP      Pn      13 49 17.3  +5.6
DHRM                                eS      Sb      13 50 27.4  -3.0
DHRM                                 IAML           13 50 38.3
      comp=E,159nm,0.8s
NIL   Nilore              5.49 228   P      Pn      13 49 16.3  +3.7
NIL   Nilore              5.49 228   Pn     Pn      13 49 16.3  +3.7
SATY  Saty                5.60   2  ePg     Pb      13 49 28.0  -1.1
      baz=4.0
SATY                                eSn     Sn      13 50 15.0  -3.4
      baz=4.0
SATY  Saty                5.60   2   Pg     Pb      13 49 30.1  +1.0
      comp=E,62nm,0.8s
SATY                                 Lg     Lg      13 50 42.8
      comp=E,254nm,0.6s
TNSS  Tian-Shan           5.64 351   Pg     Pb      13 49 31.2  +1.2
      comp=E,24nm,0.3s
TNSS                                 Lg     Lg      13 50 44.9
      comp=E,41nm,0.6s
ZHN   Zhinishke           5.71   2   Pg     Pb      13 49 32.1  +1.1
      comp=E,70nm,0.1s
ZHN                                  Lg     Lg      13 50 46.7
      comp=E,87nm,0.6s
UZB   Uzynbulak           5.73   7   Pg     Pb      13 49 32.4  +1.2
      comp=E,22nm,0.6s
UZB                                  Lg     Lg      13 50 46.4
      comp=E,69nm,0.5s
MDOK  Medeo               5.76 352  ePg     Pb      13 49 31.4  -0.4
      baz=353
MDOK  Medeo               5.76 352  ⇑Pg     Pb      13 49 32.4  +0.7
      comp=E,45nm,0.9s
MDOK                                ⇓Lg     Lg      13 50 47.4
      comp=E,106nm,0.9s
MDOK  Medeo               5.76 352   Pg     Pb      13 49 33.1  +1.3
      comp=E,29nm,0.5s
MDOK                                 Lg     Lg      13 50 47.8
      comp=E,106nm,0.9s
TKM2  Tokmak 2            5.79 341  ⇓Pg     Pb      13 49 34.0  +1.8
      comp=E,43nm,1.2s
TKM2                                ⇑Lg     Lg      13 50 47.7
      comp=E,87nm,1.2s
SHLS  Shalkode            5.79  10  ePg     Pb      13 49 33.1  +0.8
      baz=15
MTBS  Maitube             5.81 348   Pg     Pb      13 49 34.9  +2.2
      comp=E,14nm,0.8s
MTBS                                 Lg     Lg      13 50 51.2
      comp=E,39nm,0.9s
KST   Kastek              5.82 344   Pg     Pb      13 49 33.1  +0.4
      comp=E,44nm,0.8s
KST                                  Lg     Lg      13 50 47.9
      comp=E,78nm,1.3s
AAA   Alma-Ata            5.82 351   Pg     Pb      13 49 34.9  +2.1
      comp=E,16nm,0.1s
AAA                                  Lg     Lg      13 50 51.2
      comp=E,142nm,0.5s
KOTS  Kotyrbulak          5.82 353   Pg     Pb      13 49 33.6  +0.8
      comp=E,36nm,0.6s
KOTS                                 Lg     Lg      13 50 49.0
      comp=E,205nm,0.5s
AAK   Ala-Archa           5.87 333   Pn     Pn      13 49 18.7  +0.7
      comp=E,0.4nm,0.3s,baz=134,slow=7.2,SNR=7.9
AAK                                  Pg     Pb      13 49 34.7  +1.0
      comp=E,1.4nm,0.3s,baz=148,slow=12,SNR=10
AAK                                  Lg     Lg      13 50 49.6
      comp=E,0.9nm,0.3s,baz=33,slow=18,SNR=6.4
AAK   Ala-Archa           5.87 333ceP       Pn      13 49 18.5  +0.4
AAK                                  pmax   pmax
      comp=Z,22nm,1.3s
AAK   Ala-Archa           5.87 333  ⇑Pg     Pb      13 49 35.1  +1.4
      comp=Z,40nm,1.1s
AAK                                 ⇓Lg     Lg      13 50 51.0
      comp=Z,120nm,1.2s
PDGK  Podgornoye          5.96  10   P      Pn      13 49 18.8  -0.4
PDGK  Podgornoye          5.96  10   Pg     Pb      13 49 37.6  +2.4
      comp=Z,9.8nm,0.6s
PDGK                                 Lg     Lg      13 50 55.7
      comp=Z,52nm,0.5s
PDGK  Podgornoye          5.96  10  ⇑Pn     Pn      13 49 18.8  -0.4
      comp=Z,7.6nm,0.5s
PDGK                                ⇓Pg     Pb      13 49 36.5  +1.3
      comp=Z,27nm,0.7s
PDGK                                ⇓Lg     Lg      13 50 55.9
      comp=Z,180nm,1.0s
FRU1  Bishkek             5.97 335   P      Pn      13 49 19.8  +0.4
FRU1  Bishkek             5.97 335   Pn     Pn      13 49 19.8  +0.4
DGS   Degeres             6.05 344   Pg     Pb      13 49 37.9  +1.3
      comp=Z,28nm,1.0s
DGS                                  Lg     Lg      13 50 56.3
      comp=Z,49nm,1.0s
CEP   Cherat              6.21 236   P      Pn      13 49 25.1  +2.3
KTMS  Ketmen              6.22  15   Pg     Pb      13 49 42.5  +2.8
      comp=Z,27nm,0.7s
KTMS                                 Lg     Lg      13 51 04.3
      comp=Z,60nm,0.6s
BTK   Batken              6.26 297   P      Pn      13 49 24.3  +0.9
BTK   Batken              6.26 297   Pn     Pn      13 49 24.3  +0.9
KTBS  Karatobe            6.34 351   Pg     Pb      13 49 43.4  +1.7
      comp=Z,16nm,0.8s
KTBS                                 Lg     Lg      13 51 05.9
      comp=Z,56nm,0.6s
SMLA  Simla               6.36 187  eP      Pn      13 49 28.1  +3.5
SMLA                                eS      Sn      13 50 40.8  +4.0
SMLA                                 IAML           13 50 49.1
      comp=N,110nm,0.6s
MRKS  Merke               6.47 326   Pg     Pb      13 49 45.1  +1.3
      comp=N,11nm,0.5s
MRKS                                 Lg     Lg      13 51 09.2
      comp=N,36nm,0.9s
KRBS  Karabastau          6.50 344   Pg     Pb      13 49 46.9  +2.6
      comp=N,18nm,0.8s
KRBS                                 Lg     Lg      13 51 11.7
      comp=N,33nm,1.0s
SGDS  Sogindy             6.55 337  ePg     Pb      13 49 44.1  -1.1
      baz=337
SGDS  Sogindy             6.55 337   Pg     Pb      13 49 47.4  +2.2
      comp=N,7.0nm,0.8s
SGDS                                 Lg     Lg      13 51 12.7
      comp=N,26nm,0.7s
KUU   Kurty               6.57 349  ePg     Pb      13 49 44.7  -0.7
      baz=350
KUU   Kurty               6.57 349   Pg     Pb      13 49 48.7  +3.2
      comp=N,14nm,0.6s
KUU                                  Lg     Lg      13 51 15.1
      comp=N,28nm,0.6s
BLB   Baldybastay         6.64   2   Pg     Pb      13 49 50.2  +3.4
      comp=N,40nm,0.5s
BLB                                  Lg     Lg      13 51 16.9
      comp=N,54nm,0.9s
ARXS  Arharly             6.75 358   Pg     Pb      13 49 52.0  +3.4
      comp=N,16nm,0.5s
ARXS                                 Lg     Lg      13 51 20.8
      comp=N,35nm,0.4s
THW   Thamme Wali         6.99 230   P      Pn      13 49 35.5  +2.2
CHGR  Chuyangaron         7.16 282          Pn      13 49 35.6  -0.2
TDK   Taldyqorghan        7.54   2  ePg     Pb      13 50 03.4  +1.4
      baz=2.8
TDK   Taldyqorghan        7.54   2   Pg     Pb      13 50 06.8  +4.8
      comp=N,56nm,0.4s
TDK                                  Lg     Lg      13 51 46.1
      comp=N,76nm,0.6s
IUG   Iuzhnay             7.78 310  ePn     Pn      13 49 42.0  -2.3
      baz=308
IUG                                 ePg     Pb      13 50 07.4  +1.2
      baz=308
IUG                                 eSn     Sn      13 51 08.2  -3.8
      baz=308
IUG   Iuzhnay             7.78 310  eP      Pn      13 49 42.0  -2.3
IUG                                 e               13 51 08.1
IUG   Iuzhnay             7.78 310   Pg     Pb      13 50 08.9  +2.7
      comp=N,131nm,0.6s
IUG                                  Lg     Lg      13 51 49.3
      comp=N,35nm,0.6s
KAPS  Kapalarasan         7.88   6   Pg     Pb      13 50 13.6  +5.8
      comp=N,8.7nm,0.5s
KAPS                                 Lg     Lg      13 51 57.2
      comp=N,15nm,0.6s
KBL   Kabul               7.90 251   P      Pn      13 49 47.4  +1.4
KBL   Kabul               7.90 251   Pn     Pn      13 49 47.4  +1.4
KK02  Karatay Array       8.09 317  ⇑Pn     Pn      13 49 47.4  -1.0
      comp=N,1.1nm,0.6s
KK02                                ⇑Lg     Lg      13 52 01.7
      comp=N,14nm,1.1s
KKAR  Karatay Array       8.09 317   P      Pn      13 49 47.3  -1.1
KKAR  Karatay Array       8.09 317   Pn     Pn      13 49 47.3  -1.1
BTLS  Baital              8.17 339   Pg     Pb      13 50 17.8  +5.1
      comp=N,4.0nm,0.8s
BTLS                                 Lg     Lg      13 52 04.7
      comp=N,12nm,1.1s
BRLS  Borolday            8.42 314  ePg     Pb      13 50 18.3  +1.3
      baz=311
BRLS  Borolday            8.42 314   Pg     Pb      13 50 19.6  +2.6
      comp=N,5.1nm,0.6s
BRLS                                 Lg     Lg      13 52 08.2
      comp=N,21nm,0.9s
NDI   New Delhi           8.78 185  eP      Pn      13 50 01.0  +3.1
NDI                                 eS      Sn      13 51 40.0  +3.5
WMQ   Urumqi              9.67  46  eP      Pn      13 50 12.9  +2.9
WMQ                                  S      Sn      13 51 54.0  -4.2
WMQ                                  smax   smax
      comp=N,87nm,1.1s
WMQ                                  smax   smax
      comp=N,89nm,0.9s
WMQ                                  LR     LR
      comp=N,370nm,11.9s
WMQ                                  LR     LR
      comp=N,310nm,12.3s
WMQ                                  LR     LR
      comp=N,490nm,7.1s
MAKZ  Makanchi            9.78  16   P      Pn      13 50 10.5  -1.0
MAKZ  Makanchi            9.78  16  ⇓Pn     Pn      13 50 11.5   0.0
      comp=N,13nm,0.8s
MAKZ                                ⇑Sn     Sn      13 52 00.0  -0.8
      comp=N,19nm,1.1s
MAKZ  Makanchi            9.78  16          Pn      13 50 10.5  -1.0
MK31  Makanchi Array      9.83  17  i P     Pn      13 50 11.2  -1.1
MK31  Makanchi Array      9.83  17   Pn     Pn      13 50 11.5  -0.7
      comp=N,3.4nm,0.6s,baz=201,slow=12,SNR=77
MK31                                ⇑Sn     Sn      13 51 59.0  -3.2
      comp=N,23nm,0.9s,baz=190,slow=23,SNR=11
MK31  Makanchi Array      9.83  17          Pn      13 50 10.8  -1.4
MKAR  Makanchi Array      9.83  17   Pn     Pn      13 50 11.2  -1.1
      comp=N,0.5nm,0.3s,baz=203,slow=13,SNR=34
MKAR                                 Sn     Sn      13 51 56.4  -5.8
      comp=N,0.8nm,0.3s,baz=192,slow=23,SNR=8.0
MKAR  Makanchi Array      9.83  17          Pn      13 50 11.0  -1.2
PYUN  Piuthan            10.19 155  eP      Pn      13 50 17.9  +0.5
      comp=N,15nm,0.4s
DANN  Dangsing           10.24 151  eP      Pn      13 50 17.5  -0.7
      comp=N,12nm,0.4s
GKN   Gorkha             10.91 148  eP      Pn      13 50 26.3  -0.9
      comp=N,47nm,0.5s
ZSN   Zaisan             11.16  24  ePn     Pn      13 50 29.3  -1.1
      baz=26
ZSN   Zaisan             11.16  24  eP      Pn      13 50 29.3  -1.1
ZSN   Zaisan             11.16  24   Pg     Pg      13 51 12.3
      comp=N,7.2nm,0.5s
ZSN                                  Lg     Lg      13 53 38.8
      comp=N,17nm,0.6s
KKN   Kakani             11.37 146  eP      Pn      13 50 32.7  -0.9
      comp=N,16nm,0.5s
DMN   Daman              11.45 147  eP      Pn      13 50 34.4  -0.3
      comp=N,14nm,0.6s
GUN   Gumba              11.55 143  eP      Pn      13 50 36.6  +0.5
      comp=N,10nm,0.5s
OTUK  Ortayu             11.58 340  ⇓Lg     Lg      13 53 51.4
      comp=N,42nm,1.4s
PKIN  Phulchoki          11.61 146  eP      Pn      13 50 36.1  -0.8
      comp=N,20nm,0.6s
PKI   Pulchoki           11.62 146  eP      Pn      13 50 36.0  -1.1
      comp=N,23nm,0.6s
JIRN  Jiri               11.90 143  eP      Pn      13 50 42.3  +1.3
      comp=N,39nm,0.5s
JHNI  Jhansi             11.96 178  eP      Pn      13 50 39.7  -1.7
JHNI                                eS      Sn      13 52 49.8  -4.6
SEM   Semipalatinsk      13.04   6  ePn     Pn      13 50 54.5  -1.8
      comp=N,0.3nm,0.6s,baz=6.8
SEM   Semipalatinsk      13.04   6  eP      Pn      13 50 54.4  -1.8
BRZS  Berezniki          13.12 344  ePn     Pn      13 50 55.0  -2.1
      comp=N,0.4nm,0.7s,baz=344
BRZS  Berezniki          13.12 344  eP      Pn      13 50 55.0  -2.1
KURBB Kurchatov Arra     13.17   1   Pn     Pn      13 50 57.0  -0.8
      comp=N,0.0nm,0.3s,baz=17,slow=19,SNR=2.4
KURBB                                Sn     Sn      13 53 15.6  -8.1
      baz=286,slow=15,SNR=4.0
KURBB                                Lg     Lg      13 54 43.3
      comp=N,0.0nm,0.3s,baz=193,slow=28,SNR=6.9
KURBB Kurchatov Arra     13.17   1   P      Pn      13 50 58.3  +0.5
KURBB Kurchatov Arra     13.17   1  ⇑Pn     Pn      13 50 56.3  -1.5
      comp=N,3.9nm,1.0s
KURBB                               ⇑Lg     Lg      13 54 47.3
      comp=N,37nm,1.1s
KURK  Kurchatov          13.26   1  i P     Pn      13 50 59.3  +0.2
KURK  Kurchatov          13.26   1          Pn      13 50 57.0  -2.1
KURK                                        Sn      13 53 15.6   -10
DGZ   Jazzator, Alta     13.97  26  i P     Pn      13 51 09.4  +0.5
DGZ                                  pmax   pmax
      comp=Z,3.0nm,0.8s
BHPL  Bhopal             14.18 183  eS      Sn      13 53 44.0  -4.8
JBP   Jabalpur           14.33 173  eP      Pn      13 51 11.5  -2.4
JBP                                  IAmb   IAmb    13 51 16.8
      comp=Z,18nm,0.7s
GEYT  Alibeck            15.84 278   Pn     Pn      13 51 34.4  +0.6
      comp=Z,0.2nm,0.3s,baz=72,slow=19,SNR=6.2
GEYT                                 LR     LR      13 59 32.2
      comp=Z,84nm,18.4s,baz=70,slow=45
GEYT  Alibeck            15.84 278   P      P       13 51 37.2  -0.4
BVAR  Borovoye Array     16.47 343   Pn     Pn      13 51 40.1  -1.8
      comp=Z,0.0nm,0.3s,baz=170,slow=10,SNR=1.8
BRVK  Borovoye           16.53 343ceP       P       13 51 43.8  -1.3
BRVK                                 pmax   pmax
      comp=Z,26nm,1.0s
BRVK  Borovoye           16.53 343   P      P       13 51 45.6  +0.5
BRVK                                 IAmb   IAmb    13 51 51.3
      comp=Z,23nm,1.0s
GTA   Gaotai             17.12  77  eP      P       13 51 53.3  +1.4
GTA                                  pP     pP      13 51 58.0  +0.9
GTA                                  sP     sP      13 52 01.3  +1.8
GTA                                  pmax   pmax
      comp=Z,5.0nm,1.0s
GTA                                  pmax   pmax
      comp=Z,86nm,4.7s
GTA                                  LR     LR
      comp=Z,190nm,11.6s
GTA                                  LR     LR
      comp=Z,170nm,14.2s
GTA                                  LR     LR
      comp=Z,120nm,14.5s
ZAA0  Zalesovo Array     17.13  14          Pn      13 51 48.7  -1.4
ZALV  Zalesovo Beam      17.13  14   P      Pn      13 51 49.6  -0.6
      comp=Z,0.2nm,0.3s,baz=203,slow=9.6,SNR=8.9
ZALV  Zalesovo Beam      17.13  14   P      Pn      13 51 48.6  -1.6
ZALV  Zalesovo Beam      17.13  14          Pn      13 51 48.6  -1.6
AB31  Akbulak array      17.65 318   Pn     Pn      13 51 56.3  -0.4
      comp=Z,2.7nm,0.9s,baz=134,slow=9.7,SNR=4.1
ABKAR Akbulak array      17.65 318          Pn      13 51 55.9  -0.8
AKTO  Aktyubinsk         19.35 318   P      P       13 52 15.1  -1.1
      comp=Z,0.1nm,0.3s,baz=120,slow=7.6,SNR=4.9
HYB   Hyderabad          19.97 179  i P     P       13 52 22.0  -1.2
LZH   Lanzhou            20.65  86  eP      Pn      13 52 36.0  +3.0
LZH                                  sP     sP      13 52 45.8  +7.5
LZH                                  pmax   pmax
      comp=Z,27nm,1.1s
ZAK   Zakamensk          22.14  46  eP      P       13 52 48.7  +2.2
ZAK                                  pmax   pmax
      comp=Z,5.0nm,1.4s
UOSS  Minazif            22.44 243   P      P       13 52 52.1  +2.2
UOSS                                 IAmb   IAmb    13 52 53.7
      comp=Z,12nm,1.1s
SVE   Sverdlovsk         22.61 335  eP      P       13 52 56.2  +4.9
TLY   Talaya             22.93  44   P      P       13 52 54.5  -0.4
TLY                                  IAmb   IAmb    13 53 10.0
      comp=Z,6.5nm,0.8s
ARU   Arti               23.05 332   P      P       13 52 58.8  +2.9
      comp=Z,1.4nm,0.6s,baz=107,slow=5.3,SNR=6.5
ARU   Arti               23.05 332d iP      P       13 53 01.3  +5.3
ARU                                                 13 53 25.4
ARU                                  SS     SnSn    13 57 51.5   +13
ARU                                  pmax   pmax
      comp=Z,48nm,4.2s
SONM  Songino Array      23.13  54   P      P       13 52 57.1  +0.1
      comp=Z,1.5nm,0.7s,baz=248,slow=7.8,SNR=7.3
SONM  Songino Array      23.13  54  eP      P       13 52 58.6  +1.6
SONM                                 pmax   pmax
      comp=Z,2.0nm,0.7s
SONM  Songino Array      23.13  54   P      P       13 52 57.5  +0.5
ULN   Ulaanbaatar        23.56  55  i P     P       13 53 02.0  +0.6
ULN                                  pmax   pmax
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       comp=Z,4.0nm,1.0s
ULN    Ulaanbaatar       23.56  55  P      P      13 53 01.4  0.0
HHC    Hu-ho-hao-te      26.07  72  eP     P      13 53 26.8 +2.4
HHC                                 pmax   pmax
       comp=Z,9.0nm,1.2s
HHC                                 pmax   pmax
       comp=Z,27nm,5.6s
CMAR   Chiang Mai Arr    26.29 130  P      P      13 53 26.6 +0.1
       comp=Z,1.4nm,0.6s,baz=306,slow=11,SNR=13
KIRV   Kirov             28.18 328  LR     LR     14 06 48.3
       comp=Z,74nm,18.8s,baz=90,slow=40
NRIK   Noril'sk          32.35   6  P      P      13 54 22.8 +3.1
       comp=Z,1.1nm,0.5s,baz=179,slow=8.3,SNR=4.3
NRIK   Noril'sk          32.35   6  eP     P      13 54 21.0 +1.2
NRIK                                pmax   pmax
       comp=Z,4.0nm,0.9s
BRTR   Keskin Array B    34.57 288  P      P      13 54 39.6  0.0
       comp=Z,2.1nm,0.9s,baz=85,slow=7.6,SNR=9.5
BRTR   Keskin Array B    34.57 288  P      P      13 54 40.5 +0.9
AKASG  Malin Array Be    36.86 307  P      P      13 54 57.9 -1.0
       comp=Z,0.4nm,0.5s,baz=50,slow=28,SNR=1.4
KSRS   Korea Array       39.16  74  P      P      13 55 18.9 +0.5
       comp=Z,1.1nm,0.7s,baz=296,slow=8.7,SNR=4.8
KSRS   Korea Array       39.16  74  P      P      13 55 19.0 +0.5
KLR    Kul'dur           39.95  55  P      P      13 55 25.4 +0.4
       comp=Z,2.4nm,0.7s,baz=289,slow=9.1,SNR=2.0
FIA1   FINESS Array S    39.97 324  P      P      13 55 25.1 +0.2
FIA1                                IAmb   IAmb   13 55 40.9
       comp=Z,16nm,1.1s
FINES  FINESS Array B    39.97 324  P      P      13 55 25.2 +0.3
       comp=Z,2.3nm,0.8s,baz=140,slow=21,SNR=1.6
USRK   Ussuriysk Ar.     40.70  63  LR     LR     14 12 37.9
       comp=Z,14nm,18.2s,baz=326,slow=36
ARCES  ARCESS Array B    42.53 336  P      P      13 55 45.4 -0.5
       comp=Z,4.1nm,0.9s,baz=114,slow=11,SNR=2.4
GERES  GERESS Array B    47.02 305  P      P      13 56 21.1 -1.0
       comp=Z,1.0nm,0.8s,baz=62,slow=6.2,SNR=6.7
GERES  GERESS Array B    47.02 305  eP     P      13 56 22.8 +0.7
GERES                               pmax   pmax
       comp=Z,1.0nm,0.8s
NB2    NORSAR Subarra    47.08 322  P      P      13 56 21.4 -0.9
       comp=Z,8.9nm,0.9s,baz=89,slow=7.9
NOA    NORSAR Array B    47.08 322  P      P      13 56 21.3 -1.0
       comp=Z,0.6nm,0.7s,baz=209,slow=12,SNR=2.7
MJAR   Matsushiro Arr    47.28  72  P      P      13 56 26.1 +2.0
       comp=Z,1.5nm,0.7s,baz=277,slow=6.7,SNR=6.5
MJAR   Matsushiro Arr    47.28  72  IAmb   IAmb   13 56 27.2
       comp=Z,3.7nm,1.5s
DAVOX  Davos/Dischmat    50.00 304  P      P      13 56 43.8 -1.4
       comp=Z,1.3nm,0.6s,baz=127,slow=10,SNR=5.0
TOLK   Toolik Lake Re    68.46  17  P      P      13 58 52.4  0.0
TOLK                                IAmb   IAmb   13 58 57.8
       comp=Z,4.5nm,0.8s
IMAR   Indian Mountai    69.43  20  P      P      13 58 57.7 -0.7
J20K   Nowinta River     70.67  22  P      P      13 59 06.4 +0.4
TORD   Torodi Ar. Bea    71.40 272  P      P      13 59 09.7 -1.5
       comp=Z,0.7nm,0.7s,baz=43,slow=4.2,SNR=5.3
TORD   Torodi Ar. Bea    71.40 272  IAmb   IAmb   13 59 15.9
       comp=Z,1.8nm,1.1s
CAST   Castle Rocks      71.84  21  P      P      13 59 13.5 +0.3
CAST                                IAmb   IAmb   13 59 19.2
       comp=Z,8.1nm,0.9s
PRP    Porcupine Dome    71.91  18  P      P      13 59 14.2 +0.5
INK    Inuvik            71.92  12  P      P      13 59 12.2 -1.3
       comp=Z,1.0nm,0.8s,baz=322,slow=5.7,SNR=3.3
KTH    Kantishna Hill    72.07  21  P      P      13 59 14.3 -0.3
IL31                     72.18  19  P      P      13 59 15.1  0.0
IL31                                IAmb   IAmb   13 59 25.6
       comp=Z,4.3nm,1.1s
ILAR   Eielson Array     72.18  19  P      P      13 59 14.1 -1.1
       comp=Z,0.9nm,0.8s,baz=321,slow=5.0,SNR=9.5
ILAR   Eielson Array     72.18  19  P      P      13 59 14.3 -0.9
PPLA   Purkeypile        72.21  22  P      P      13 59 14.6 -1.0
DHY    Denali Highway    73.43  20  P      P      13 59 22.3 -0.5
DHY                                 IAmb   IAmb   13 59 28.1
       comp=Z,3.9nm,0.8s
SCRK   Sand Creek        73.56  18  P      P      13 59 23.0 -0.5
SCRK                                IAmb   IAmb   13 59 32.4
       comp=Z,1.5nm,0.8s
SML    Sawmill           74.19  21  P      P      13 59 27.0 -0.1
SCM    Sheep Creek Mo    74.45  21  P      P      13 59 28.6 -0.1
SCM                                 pmax   pmax
       comp=Z,14nm,1.3s
SCM    Sheep Creek Mo    74.45  21  P      P      13 59 28.6 -0.1
BCAR   Beaver Creek A    74.86  18  P      P      13 59 31.5 +0.4
KOWA   Kowa              75.15 277  P      P      13 59 33.3 -0.1
KOWA                                IAmb   IAmb   13 59 40.2
       comp=Z,8.3nm,1.4s
M27K   Edge Creek, AK    75.44  18  P      P      13 59 34.1 -0.4
WRA    Warramunga Arr    77.83 127  P      P      13 59 48.0 -0.4
       comp=Z,0.8nm,0.8s,baz=325,slow=7.1,SNR=2.6
WRA    Warramunga Arr    77.83 127  P      P      13 59 48.0 -0.4
YKA    Yellowknife Ar    79.87   6  P      P      13 59 57.7 -1.3
       comp=Z,0.8nm,0.8s,baz=343,slow=5.3,SNR=14
ASAR   Alice Springs     80.30 130  P      P      14 00 01.2 -0.6
       comp=Z,0.5nm,0.7s,baz=330,slow=5.8,SNR=6.1
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*CNRM **20** 13:48:36.1, 36°.57N×9°.43W, h64km, ml3.0*
*MDD **20** 13:48:36.8±1.1, 36°.81N×9°.70W, h22km±8km, mbLg2.5/6, Error ellipse: s-maj=11.2km s-min=6.5km az=36.0, PRXIMO*
*IGIL **20** 13:48:36.8, 36°.74N×9°.67W, h19km, ML2.1*
*SFS **20** 13:48:36.0, 36°.73N×9°.73W, h30km, ML2.3, CABO DE SAN VICENTE*
*INMG **20** 13:48:37.3±1.3, 36°.75N×9°.66W, h22km±4km, ML2.1, Error ellipse: s-maj=5.1km s-min=3.4km az=43.0*
ISC 20 13:48:33.7±5.3**, 36°.67N**±0°.05×**9°.76W**±0°.07**, h38**km±6km**, n74, σ1ˢ59**/134**, 4C, West of Gibraltar**

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Code   Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC      h  m  s    ISC
PFVI   Vila Bisbo         0.88  58⇑iP    Pn     13 48 51.3 +1.8
PFVI                             eS     Sn     13 49 01.8 +0.7
PFVI                             A      A      13 49 02.4
       36nm,0.1s
PFVI   Vila Bisbo         0.88  58 ⇑P    Pn     13 48 51.2 +1.8
       13nm,0.1s,SNR=18
PFVI                             S      Sn     13 49 01.5 +0.4
       62nm,0.1s,SNR=7.9
PFVI   Vila Bisbo         0.88  58  P     Pn     13 48 51.4 +1.9
PFVI                             S      Sn     13 49 02.1 +0.9
MORF   Marmelete          1.09  54  eP    Pn     13 48 54.2 +1.8
MORF                             eS     Sn     13 49 06.8 +0.4
MORF                             IAML          13 49 09.2
       comp=E,55nm,0.2s
MORF   Marmelete          1.09  54⇑eP    Pn     13 48 54.3 +1.8
MORF                             eS     Sn     13 49 06.9 +0.5
MORF                             A      A      13 49 08.1
       comp=E,35nm,0.2s
MORF   Marmelete          1.09  54  P     Pn     13 48 54.2 +1.8
MORF                             S      Sn     13 49 06.8 +0.4
PTEO   Sao Teotonio       1.21  43⇑eP    Pn     13 48 55.7 +1.7
PTEO                             eS     Sn     13 49 09.5 +0.4
PTEO                             A      A      13 49 14.5
       comp=E,16nm,0.4s
PTEO   Sao Teotonio       1.21  43  P     Pn     13 48 55.7 +1.7
PTEO                             S      Sn     13 49 09.5 +0.4
       comp=E,7.8nm,0.4s
PBDV   Barranco-do-Ve     1.57  68  eP    Pn     13 49 01.1 +2.1
PBDV                             eS     Sn     13 49 18.2  0.0
PBDV                             A      A      13 49 19.7
       comp=E,8.2nm,0.2s
PBDV   Barranco-do-Ve     1.57  68  P     Pn     13 49 01.1 +2.1
PBDV                             S      Sn     13 49 18.2  0.0
       comp=E,8.2nm,0.2s
PCVE   Castro Verde       1.68  54  eP    Pn     13 49 02.5 +2.0
PCVE                             eS     Sn     13 49 21.1 +0.4
PCVE                             A      A      13 49 22.9
       comp=E,17nm,0.3s
PCVE   Castro Verde       1.68  54  P     Pn     13 49 02.5 +2.0
PCVE                             S      Sn     13 49 21.1 +0.4
       comp=E,17nm,0.3s
MESJ   Messejana          1.70  46  eP    Pn     13 49 02.4 +1.7
MESJ                             eS     Sn     13 49 21.2 +0.1
MESJ                             IAML          13 49 21.7
       comp=E,11nm,0.1s
MESJ   Messejana          1.70  46  eP    Pn     13 49 02.4 +1.7
MESJ                             eS     Sn     13 49 21.4 +0.2
MESJ                             A      A      13 49 24.0
       comp=E,8.1nm,0.2s
MESJ   Messejana          1.70  46  P     Pn     13 49 02.4 +1.7
MESJ                             S      Sn     13 49 21.2 +0.1
PNCL   Nicolau / Gran     1.75  34  ePn   Pn     13 49 02.9 +1.5
PNCL                             eSn    Sn     13 49 22.5 +0.2
PNCL                             A      A      13 49 39.3
       comp=E,9.0nm,0.7s
PNCL   Nicolau / Gran     1.75  34  P     Pn     13 49 02.9 +1.5
PNCL                             S      Sn     13 49 22.5 +0.2
       comp=E,9.0nm,0.7s
PVAQ   Vaqueiros          1.79  65  ePn   Pn     13 49 04.0 +2.0
PVAQ                             eSn    Sn     13 49 23.7 +0.2
PVAQ                             A      A      13 49 25.6
       comp=E,17nm,0.1s
PVAQ   Vaqueiros          1.79  65  P     Pn     13 49 04.0 +2.0
PVAQ                             S      Sn     13 49 23.7 +0.2
       comp=E,17nm,0.1s
PVAQ   Vaqueiros          1.79  65  P     Pn     13 49 04.0 +2.0
PVAQ                             S      Sn     13 49 23.8 +0.2
EGRO   El Granado         2.02  64  P     Pn     13 49 06.9 +1.8
       comp=E,5.1nm,0.3s
EGRO                             S      Sn     13 49 29.2 +0.2
       comp=E,9.5nm,0.1s,SNR=16
PBEJ   Beja               2.03  47  ePn   Pn     13 49 06.8 +1.5
PBEJ                             eSn    Sn     13 49 29.2 -0.2
PBEJ                             A      A      13 49 31.7
       comp=E,6.8nm,0.2s
PBEJ   Beja               2.03  47  P     Pn     13 49 06.8 +1.5
PBEJ                             S      Sn     13 49 29.2 -0.2
       comp=E,3.4nm,0.2s
PMST   Lisbon--Monsan     2.12  12  eSn   Sn     13 49 46.2  +15
PMAFR  Mafra              2.32   9  ePn   Pn     13 49 10.8 +1.6
PMAFR                            eSn    Sn     13 49 36.8 +0.3
PMAFR                            A      A      13 49 38.9
       comp=E,19nm,0.2s
PMAFR  Mafra              2.32   9  P     Pn     13 49 10.6 +1.4
       comp=E,9.9nm,0.1s,SNR=7.9
PMAFR                            S      Sn     13 49 36.8 +0.3
       comp=E,34nm,0.2s,SNR=7.9
EVO    Evora              2.32  36  P     Pn     13 49 10.3 +1.0
EVO                              S      Sn     13 49 35.9 -0.7
EVO    Evora              2.32  36  ePn   Pn     13 49 10.7 +1.4
EVO                              eSn    Sn     13 49 36.0 -0.6
EVO    Evora              2.32  36  P     Pn     13 49 10.7 +1.4
EVO                              S      Sn     13 49 36.0 -0.6
PBAR   Barrancos          2.64  54  eSn   Sn     13 49 44.0 -0.4
PBAR   Barrancos          2.64  54  S     Sn     13 49 44.0 -0.4
PMTG   Montargil          2.69  26  ePn   Pn     13 49 16.1 +1.8
PMTG                             eSn    Sn     13 49 45.3 -0.3
PMTG                             A      A      13 50 04.6
       comp=E,2.9nm,0.6s
PMTG   Montargil          2.69  26  P     Pn     13 49 16.1 +1.8
PMTG                             S      Sn     13 49 45.3 -0.3
       comp=E,2.9nm,0.6s
EMIN   Mina Concepcio     2.70  65  P     Pn     13 49 16.0 +1.5
       comp=E,1.3nm,0.1s,SNR=7.9
EMIN                             S      Sn     13 49 45.4 -0.5
       comp=E,4.8nm,0.3s,SNR=8.5
PESTR  Estremoz           2.79  37  ePn   Pn     13 49 16.9 +1.2
PESTR                            eSn    Sn     13 49 47.3 -0.9
PESTR                            A      A      13 50 09.8
       comp=E,2.1nm,0.5s
PESTR  Estremoz           2.79  37  P     Pn     13 49 16.9 +1.2
PESTR                            S      Sn     13 49 47.0 -1.2
PSBE   So Bento           2.94  15  ePn   Pn     13 49 19.4 +1.5
PSBE                             eSn    Sn     13 49 51.9 -0.1
PSBE                             A      A      13 49 55.0
       comp=E,7.5nm,0.6s
EBAD   Badajoz            3.02  45  P     Pn     13 49 19.9 +1.1
       comp=E,3.0nm,0.9s,SNR=26
EBAD                             S      Sn     13 49 52.7 -1.0
       comp=E,6.8nm,0.1s,SNR=9.4
ESPR   Espera             3.14  85  P     Pn     13 49 22.6 +2.0
       comp=E,3.2nm,0.2s,SNR=9.1
ESPR                             S      Sn     13 49 56.3 -0.5
       comp=E,14nm,0.3s
PMRV   Marv??o            3.33  33  ePn   Pn     13 49 24.7 +1.5
PMRV                             eSn    Sn     13 49 59.7 -1.8
PMRV                             A      A      13 50 02.4
       comp=E,2.1nm,0.2s
PMRV   Marv??o            3.33  33  P     Pn     13 49 24.7 +1.5
PMRV                             S      Sn     13 49 59.7 -1.8
       comp=E,2.1nm,0.2s
PCAS   Casmilo, Conde     3.52  16  ePn   Pn     13 49 26.8 +1.0
PCAS                             eSn    Sn     13 50 05.3 -0.9
PCAS                             A      A      13 50 07.1
       comp=E,4.8nm,0.6s
PCAS   Casmilo, Conde     3.52  16  P     Pn     13 49 26.8 +1.0
PCAS                             S      Sn     13 50 05.3 -0.9
       comp=E,4.8nm,0.6s
PCBR   Castelo Branco     3.64  29  ePn   Pn     13 49 29.2 +1.8
PCBR                             eSn    Sn     13 50 08.7 -0.4
PCBR                             A      A      13 50 10.5
       comp=E,3.2nm,0.7s
PCBR   Castelo Branco     3.64  29  P     Pn     13 49 29.2 +1.8
PCBR                             S      Sn     13 50 08.7 -0.4
       comp=E,1.6nm,0.7s
ECAB   El Cabril          3.73  67  P     Pn     13 49 30.6 +1.9
       comp=E,1.5nm,0.7s,SNR=17
ECAB                             S      Sn     13 50 09.6 -1.9
       comp=E,4.0nm,0.3s,SNR=10.0
ZHG    ZHG                4.11 141  P     Pn     13 49 35.6 +1.6
ZHG                              S      Sn     13 50 18.9 -1.8
MTE    Manteigas          4.11  24  ePn   Pn     13 49 35.7 +1.7
MTE    Manteigas          4.11  24  P     Pn     13 49 35.7 +1.7
PVIS   Viseu              4.30  19  ePn   Pn     13 49 37.4 +0.9
PVIS   Viseu              4.30  19  P     Pn     13 49 37.4 +0.9
EADA   Adamuz             4.39  68  P     Pn     13 49 39.7 +2.0
       comp=E,0.4nm,0.1s,SNR=7.9
EADA                             S      Sn     13 50 25.7 -2.0
       comp=E,1.1nm,0.2s,SNR=7.9
EPLA   Plasencia          4.46  39  P     Pn     13 49 39.8 +1.1
       comp=E,3.5nm,0.9s,SNR=5.9
EPLA                             S      Sn     13 50 27.1 -2.2
       comp=E,2.6nm,0.2s
SRHM   Skhour des Reh     4.46 159  P     Pn     13 49 39.4 +0.7
PVRL   Vila Real          4.87  18  ePn   Pn     13 49 45.9 +1.5
PVRL                             eSn    Sn     13 50 37.1 -2.4
PVRL   Vila Real          4.87  18  P     Pn     13 49 45.9 +1.5
PVRL                             S      Sn     13 50 37.1 -2.4
POLO   Lamas de Olo       4.94  17  ePn   Pn     13 49 46.8 +1.4
POLO                             eSn    Sn     13 50 39.6 -1.8
POLO                             A      A      13 50 43.4
       comp=E,3.1nm,0.8s
POLO   Lamas de Olo       4.94  17  P     Pn     13 49 46.8 +1.4
POLO                             S      Sn     13 50 39.6 -1.8
       comp=E,3.1nm,0.8s
MVO    Moncorvo           4.97  25  ePn   Pn     13 49 47.2 +1.4
MVO                              eSn    Sn     13 50 41.3 -0.7
MVO                              A      A      13 50 41.7
       comp=E,6.4nm,0.7s
MVO    Moncorvo           4.97  25  P     Pn     13 49 46.7 +0.9
       comp=E,2.1nm,0.1s,SNR=7.9
MVO                              S      Sn     13 50 39.7 -2.3
       comp=E,0.4nm,0.2s,SNR=7.9
PAB    San Pablo          5.14  54  P     Pn     13 49 49.6 +1.4
       comp=E,0.7nm,0.1s,SNR=7.9
PAB                              S      Sn     13 50 43.1 -3.2
       comp=E,1.0nm,0.2s,SNR=7.9
ELOB   Lobios             5.36  14  P     Pn     13 49 52.1 +1.0
       comp=E,0.5nm,0.1s,SNR=7.9
ELOB                             S      Sn     13 50 48.4 -3.1
       comp=E,0.4nm,0.2s,SNR=7.9
PGAV   Gavieira, Arco     5.42  12  ePn   Pn     13 49 53.0 +1.1
PGAV                             eSn    Sn     13 50 50.7 -2.3
PGAV   Gavieira, Arco     5.42  12  P     Pn     13 49 53.0 +1.1
PGAV                             S      Sn     13 50 50.7 -2.3
ESDC   Sonseca Array      5.47  55  P     Pn     13 49 54.2 +1.6
       comp=E,0.4nm,0.2s,baz=242,slow=13,SNR=12
ESDC                             S      Sn     13 50 51.1 -3.1
       comp=E,1.4nm,0.4s,baz=240,slow=23,SNR=11
MD31   MD31               5.59 131  P     Pn     13 49 56.1 +1.7
MD31                             S      Sn     13 50 53.9 -3.5
PBRG   Braganca           5.64  24  ePn   Pn     13 49 56.4 +1.5
OUK    Oukaimeden         5.67 163  P     Pn     13 49 56.7 +1.1
OUK                              S      Sn     13 50 56.3 -3.3
ECAL   Calabor            5.76  23  P     Pn     13 49 57.6 +0.9
       comp=E,0.7nm,0.1s,SNR=7.9
GUD    Guadarrama         5.92  46  P     Pn     13 50 00.3 +1.4
       comp=E,0.8nm,0.2s,SNR=8.4
GUD                              S      Sn     13 51 02.7 -2.7
       comp=E,0.9nm,0.3s,SNR=7.9
EAGO   Agolada(Pontev     6.26  11  P     Pn     13 50 04.0 +0.6
       comp=E,0.5nm,0.1s,SNR=7.9
OUZM   OUZ                6.26 156  P     Pn     13 50 07.0 +3.5
OUZM                             S      Sn     13 51 11.7 -2.3
ETOR   Torete             7.31  53  P     Pn     13 50 19.7 +1.8
       comp=E,2.2nm,0.3s,SNR=6.2
ETOR                             S      Sn     13 51 34.6 -5.0
       comp=E,0.7nm,0.3s,SNR=7.9
EARI   Arriondas          7.49  26  P     Pn     13 50 22.1 +1.8
       comp=E,0.1nm,0.1s,SNR=7.9
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GUC 20 14:22:33.7±0.5**, 29°.67S×72°.02W, h41**km±3km**, ML3.6, 3C-3D, Off coast of central Chile**

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Code   Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC      h  m  s    ISC
CO05   La Serena          0.72 110⇓iP    Pn     14 22 47.3 -0.1
CO05                             i S    Sn     14 22 57.5 +0.1
CO05                             IAML          14 23 00.9
       comp=E,3μm,0.5s
CO06   Fray Jorge         1.05 162⇑iP    Pn     14 22 52.5 +0.5
GO04   Tololo Observa     1.17 116⇓iP    Pn     14 22 54.9 +1.0
GO04                             i S    Sn     14 23 10.7 +2.0
LCO    Las Campanas       1.33  60  eP    Pn     14 22 56.7 +0.7
LCO                              eS     Sn     14 23 13.8 +1.2
CO03   El Pedregal        1.64 136⇑iP    Pn     14 23 01.9 +1.8
CO03                             i S    Sn     14 23 22.7 +2.7
CO03                             IAML          14 23 26.5
       comp=E,769nm,0.3s
AC04   Llanos de Chal     1.68  30⇑iP    Pn     14 23 00.4 -0.2
AC04                             eS     Sn     14 23 21.0  0.0
AC04                             IAML          14 23 37.5
       comp=N,519nm,0.4s
GO03   Copiap             2.60  38  eP    Pn     14 23 14.9 +1.6
GO03                             IAML          14 24 07.0
       comp=N,236nm,0.3s
VA06   Catapilco          2.94 168  eP    Pn     14 23 19.3 +1.3
VA03   San Esteban        3.33 158  eP    Pn     14 23 26.2 +2.8
VA03                             eS     Sn     14 24 03.6 +2.0
VA03                             IAML          14 24 23.5
       comp=E,227nm,0.6s
ROCH   El Roble           3.40 166  eP           14 23 26.2
ROCH                             eP     Pn     14 23 26.0 +1.5
ROCH                             eS     Sn     14 24 05.7 +2.1
ROCH                             IAML          14 24 33.0
       comp=N,190nm,0.3s
ROCH                             IAML          14 24 33.8
       comp=N,129nm,0.4s
PEL    Peldehue           3.64 162  eP    Pn     14 23 29.4 +1.7
PEL                              eS     Sn     14 24 11.8 +2.4
PEL                              IAML          14 24 32.8
       comp=N,80nm,0.4s
MT02   Curacav            3.65 168⇓eP    Pn     14 23 29.5 +1.8
MT02                             eS     Sn     14 24 09.6  0.0
MT09   Talagante          4.18 168  eP    Pn     14 23 37.3 +2.2
MT09                             eS     Sn     14 24 24.3 +1.4
MT09                             IAML          14 24 49.1
       comp=N,60nm,0.3s
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*IDC **20** 14:26:47.0±0.5, 2°.63N×126°.89E, h0km, mb4.4/20, mb1 4.5/20, mb1mx4.4/35, mbtmp4.4/20, MS3.5/12, Ms1 3.5/12, ms1mx3.2/37, Error ellipse: s-maj=27.2km s-min=11.7km az=78.0*
*BJI **20** 14:26:50.0±0.0, 2°.26N×127°.10E, h54km, mB5.0/28, mb4.7/44, Ms4.6/6, Ms7 4.2/6*
*NEIC **20** 14:26:53±2.0, 2°.65N±0°.06×127°.06E±0°.07, h42km±7km, mb4.7/59, Error ellipse: s-maj=11.3km s-min=8.1km az=63.0*
*DJA **20** 14:26:53.5±0.3, 3°N±2°×12°7E±°, h46km±4km, M4.4/18, mB4.9/5, mb4.7/18, MLv4.4/12, Mw(mB)4.2/5*
ISC 20 14:26:54.2±0.3**, 2°.74N**±0°.03×**127°.02E**±0°.05**, h53**km**, n180, σ1ˢ72**/182**, mb4.7**/56**, MS3.5**/13**, 2C-2D, Northern Molucca Sea**

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Code   Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC      h  m  s    ISC
SGSI   Sangihe            1.76 302  P     Pn     14 27 21.7 -0.6
SGSI                             S      Sn     14 27 45.2 +1.6
TNTI   Ternate            1.98 170  P     Pn     14 27 26.4 +1.0
TNTI                             S      Sn     14 27 52.6 +3.5
TNTI   Ternate            1.98 170        Pn     14 27 22.0 -3.4
TNTI   Ternate            1.98 170  P     Pn     14 27 24.3 -1.1
LBMI   Labuha             3.39 172  P     Pn     14 27 45.3 +0.6
LBMI                             S      Sn     14 28 31.4 +7.8
KMSI   Cibinong           3.72 235  P     Pn     14 27 51.4 +2.2
MATI   Mati               4.25 350⇓iP    Pn     14 27 58.8 +2.3
MATI                             i S    Sn     14 28 45.2 +0.4
DAV    Davao City (W)     4.54 342  Pn    Pn     14 28 01.2 +0.8
       43nm,0.3s,baz=132,slow=9.1,SNR=1.6
DAV                              Sn     Sn     14 28 55.8 +3.9
       14nm,0.3s,baz=190,slow=19,SNR=1.0
KCP    Kidapawan          4.66 336⇑eP    Pn     14 28 03.0 +0.9
SANI   Sanana             4.86 192  P     Pn     14 28 07.6 +2.7
       0.2nm20nm,0.9s
SANI   Sanana             4.86 192  P     Pn     14 28 04.0 -0.9
BUKP   Musuan             5.46 339⇑iP    Pn     14 28 14.5 +1.3
BUKP                             i S    Sn     14 29 19.6 +4.7
MRSI   Marisa             5.55 246  P     Pn     14 28 16.0 +1.7
       0.5nm1μm92nm,0.6s
SWI    Sorong             5.55 130  P     Pn     14 28 16.0 +1.7
       0.2nm38nm,0.8s
SIJI   Sorong             5.56 130  Pn    Pn     14 28 15.3 +0.9
       4.2nm,0.3s,baz=340,slow=22,SNR=18
SIJI                             Sn     Sn     14 29 22.0 +4.9
       1.5nm,0.3s,baz=194,slow=22,SNR=6.6
SIJI                             LR     LR     14 30 47.9
       comp=Z,1μm,20.2s,baz=284,slow=43
LUWI   Luwuk              5.67 229  P     Pn     14 28 20.9 +5.0
       0.4nm1μm76nm,0.8s
LUWI   Luwuk              5.67 229  Pn    Pn     14 28 13.5 -2.4
PAGZ   Pagadian           6.23 325⇓iP    Pn     14 28 23.8  0.0
TOLI2  Tolitoli           6.44 256  Pn    Pn     14 28 26.5  0.0
TOLI2  Tolitoli           6.44 256  P     Pn     14 28 27.1 +0.6
APSI   Ampana             6.47 236  P     Pn     14 28 30.7 +3.7
       0.4nm689nm69nm,1.4s
MPSI   Mapaga             7.50 252  P     Pn     14 28 43.6 +2.5
       0.1nm24nm,0.7s
FAKI   Fak Fak            7.68 137  Pn    Pn     14 28 41.4 -2.2
FAKI   Fak Fak            7.68 137  P     Pn     14 28 45.0 +1.5
MYLDM  Lahad Datu         8.83 286  Pn    Pn     14 28 59.1 -0.3
TTSI   Tana Toraja        9.21 231  P     Pn     14 29 07.4 +3.0
       1μm27nm,1.0s
SBUM   Sibu              14.78 269  P     P      14 30 25.9 +0.8
TWSI   Taliwang, Sumb    15.23 221  P     P      14 30 30.0 -0.1
       41nm,1.1s
DRS    Darwin Rock St    15.56 166  P     Pn     14 30 30.6 +0.3
       15nm,0.9s
MTN    Manton Dam        16.01 165  P     Pn     14 30 35.0 -1.1
       baz=16,SNR=11
MTN    Manton Dam        16.01 165  Pn    Pn     14 30 33.8 -2.3
MTN    Manton Dam        16.01 165  P     P      14 30 37.8 -0.9
KDU    Kakadu            16.25 161  P     Pn     14 30 40.0 +0.8
       baz=16,SNR=9.1
KDU    Kakadu            16.25 161  P     P      14 30 41.4  0.0
KSM    Kuching           16.74 266  Pn    Pn     14 30 42.4 -2.9
JAGI   Jajag, Banyuwa    16.98 229  Pn    Pn     14 30 44.6 -3.7
JAGI                             IAmb   IAmb   14 31 13.5
       comp=Z,51nm,1.1s
KNRA   Kununurra         18.38 175  P     P      14 31 03.6 -1.2
       baz=18,SNR=7.9
KNRA   Kununurra         18.38 175        P      14 31 03.1 -1.7
KNRA   Kununurra         18.38 175  P     Pn     14 31 05.4  0.0
FITZ   Fitzroy Crossi    20.75 184  P     P      14 31 29.8 -1.0
       comp=Z,4.6nm,0.6s
TWG    Pinlang           20.78 344  P     P      14 31 27.9 -3.1
YULB   Yu-li             21.27 345  P     P      14 31 32.8 -3.4
YULB                             IAmb   IAmb   14 31 34.4
       comp=Z,18nm,0.7s
TPUB   Ta-pu             21.36 344  P     P      14 31 33.5 -3.7
TPUB   Ta-pu             21.36 344  P     P      14 31 35.0 -2.2
LEM    Lembang           21.57 244  P     P      14 31 42.2 +2.4
       comp=Z,33nm,0.8s,baz=28,slow=11,SNR=7.0
LEM                              LR     LR     14 42 07.6
       comp=Z,146nm,18.7s,baz=34,slow=43
SSLB   Suanglung         21.73 345  P     P      14 31 38.5 -2.8
SSLB                             IAmb   IAmb   14 31 42.6
       comp=Z,27nm,0.7s
SSLB   Suanglung         21.73 345  P     P      14 31 40.1 -1.2
YHNB   Yeheng            22.47 346  P     P      14 31 48.1 -1.2
YHNB                             IAmb   IAmb   14 31 56.6
       comp=Z,30nm,0.8s
YHNB   Yeheng            22.47 346  P     P      14 31 48.1 -1.2
COEN   Coen              23.06 136  P     P      14 31 55.6 +0.2
QIZ    Qiongzhong        23.34 315  P     P      14 31 57.9 -0.1
PMG    Port Moresby      23.42 121  LR     LR     14 43 13.7
       comp=Z,185nm,18.4s,baz=304,slow=42
WRAB   Tennant Creek     23.65 163  P     P      14 31 58.9 -2.1
WRAB                             IAmb   IAmb   14 31 60.0
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	comp=Z,18nm,0.6s						
WRAB	Tennant Creek	23.65	163	P	P	14 31 59.5	-1.5
WRA	Warramunga Arr	23.66	163	P	P	14 31 59.2	-1.8
	comp=Z,13nm,0.5s,baz=344,slow=11,SNR=231						
WRA	Warramunga Arr	23.66	163	P	P	14 31 58.9	-2.2
WB2	Warramunga Arr	23.66	163	P	P	14 31 59.1	-2.0
	baz=24						
WB2	Warramunga Arr	23.66	163	P	P	14 31 59.1	-2.0
WB2				IAmb	IAmb	14 32 00.1	
	comp=Z,20nm,0.6s						
WR0	Warramunga Arr	23.73	162	P	P	14 32 00.0	-1.8
WR0				IAmb	IAmb	14 32 00.8	
	comp=Z,14nm,0.6s						
UBPT	Khong Chiam	24.62	302	P	P	14 32 08.8	-1.1
PSA00	Pilbara Seismi	25.16	196	P	P	14 32 14.2	-0.5
PSA00				IAmb	IAmb	14 32 39.3	
	comp=Z,38nm,1.4s						
PSA00	Pilbara Seismi	25.16	196	P	P	14 32 13.8	-0.9
PSA00				IAmb	IAmb	14 32 21.9	
	comp=Z,7.6nm,1.1s						
QIS	Mount Isa	26.24	152	P	P	14 32 24.4	-0.1
	baz=26,SNR=8.7						
QIS	Mount Isa	26.24	152	P	P	14 32 24.6	+0.1
AS31	Alice Springs	27.09	166	P	P	14 32 31.0	-1.2
ASAR	Alice Springs	27.09	166	P	P	14 32 30.8	-1.4
	comp=Z,2.1nm,0.5s,baz=345,slow=7.2,SNR=62						
ASAR				PcP	PcP	14 35 52.8	+0.5
	comp=Z,1.5nm,0.6s,baz=347,slow=2.2,SNR=8.5						
ASAR	Alice Springs	27.09	166	P	P	14 32 30.6	-1.6
ASPA	Alice Springs	27.09	166	P	P	14 32 31.0	-1.1
	baz=27						
WRKA	Warakurna	27.64	177	P	P	14 32 36.2	-0.9
	baz=28,SNR=16						
WRKA	Warakurna	27.64	177	P	P	14 32 36.8	-0.3
PSI	Prapat	28.06	271	LR	LR	14 45 47.4	
	comp=Z,40nm,20.5s,baz=104,slow=41						
GSI	Gunungsitoli	29.45	268	P	P	14 32 52.7	-0.7
NJ2	Nanjing	30.16	346	eP	P	14 33 00.8	+1.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MEEK	Meekatharra	30.31	195	P	P	14 33 01.1	+0.3
	baz=30,SNR=4.5						
MEEK	Meekatharra	30.31	195	P	P	14 33 03.2	+2.4
OOD	Oodnadatta	31.48	165	P	P	14 33 12.0	+0.9
CMAR	Chiang Mai Arr	31.62	302	P	P	14 33 11.9	-0.6
	comp=Z,3.2nm,0.9s,baz=116,slow=7.0,SNR=20						
CMAR				LR	LR	14 48 37.0	
	comp=Z,44nm,18.2s,baz=180,slow=42						
CMAR	Chiang Mai Arr	31.62	302	P	P	14 33 10.3	-2.2
CHTO	Chiang Mai	31.78	302	P	P	14 33 12.7	-1.2
ENH	Enshi	32.03	331	P	P	14 33 14.3	-1.6
ENH				IAmb	IAmb	14 33 17.2	
	comp=Z,14nm,1.0s						
JHJ	Hachijo jima 2	32.51	20	LR	LR	14 44 37.8	
	comp=Z,69nm,21.8s,baz=242,slow=33						
MORW	Morawa	33.33	198	P	P	14 33 24.9	-2.4
MORW				IAmb	IAmb	14 33 29.5	
	comp=Z,9.8nm,1.0s						
FORT	Forrest	33.34	178	P	P	14 33 24.5	-2.9
FORT	Forrest	33.34	178	P	P	14 33 27.4	+0.1
MULG	Mulgathing	33.52	169	P	P	14 33 29.7	+0.8
KSRS	Korea Array	34.56	1	P	P	14 33 39.0	+1.2
	comp=Z,3.5nm,0.6s,baz=176,slow=9.7,SNR=25						
KSRS				PcP	PcP	14 36 13.6	+1.9
	comp=Z,1.5nm,0.7s,baz=191,slow=2.0,SNR=5.4						
LCRK	Leigh Creek	34.69	163	P	P	14 33 40.0	+1.0
MJAR	Matsushiro Arr	35.19	16	P	P	14 33 42.6	-0.7
	comp=Z,2.4nm,0.6s,baz=196,slow=8.6,SNR=14						
MJAR				LR	LR	14 46 32.0	
	comp=Z,100nm,21.3s,baz=220,slow=34						
MJAR	Matsushiro Arr	35.19	16	P	P	14 33 41.2	-2.1
MAJO	Matsushiro	35.19	16	P	P	14 33 41.4	-1.9
MAJO				IAmb	IAmb	14 33 44.6	
	comp=Z,6.6nm,0.6s						
MAJO	Matsushiro	35.19	16	P	P	14 33 43.3	0.0
MAT	Matsushiro	35.19	16	P	P	14 33 42.5	-0.8
KLBR	Kellerberrin	35.26	194	P	P	14 33 45.1	+1.2
CD2	Chengdu	35.61	324	P	P	14 33 46.8	-0.3
CD2				S	S	14 39 21.1	+1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,130nm,5.1s						
CD2				LR	LR		
	comp=Z,410nm,9.2s						
CD2				LR	LR		
	comp=Z,430nm,10.0s						
DL2	Dalian	36.33	353	P	P	14 33 54.9	+1.9
DL2				pmax	pmax		
	comp=Z,39nm,0.8s						
BBOO	Buckleboo	36.38	167	P	P	14 33 52.9	-0.6
	baz=36,SNR=9.6						
BBOO	Buckleboo	36.38	167	P	P	14 33 52.2	-1.3
BBOO	Buckleboo	36.38	167	P	P	14 33 52.8	-0.7
EIDS	Eidsvold	36.40	142	P	P	14 33 51.8	-2.0
EIDS				IAmb	IAmb	14 34 10.0	
	comp=Z,7.1nm,0.8s						
JSD	Sado	36.61	15	P	P	14 33 54.5	-1.0
JSD				IAmb	IAmb	14 33 58.0	
	comp=Z,19nm,1.0s						
STKA	Stephens Creek	37.11	159	P	P	14 33 58.6	-1.1
	comp=Z,6.0nm,0.6s,baz=334,slow=7.9,SNR=14						
STKA				PcP	PcP	14 36 19.7	+0.3
	comp=Z,3.8nm,0.7s,baz=348,slow=8.0,SNR=4.5						
STKA	Stephens Creek	37.11	159	P	P	14 33 59.1	-0.7
	baz=37,SNR=11						
STKA	Stephens Creek	37.11	159	P	P	14 33 58.8	-0.9
JMM	Marumori	37.17	18	P	P	14 34 00.7	+0.5
HTT	Hallett	37.69	164	P	P	14 34 04.8	+0.1
	baz=38,SNR=4.5						
BJT	Baijiatuau	38.39	347	P	P	14 34 11.0	+0.6
BJT				IAmb	IAmb	14 34 13.0	
	comp=Z,22nm,0.9s						
BJI	Beijing	38.41	347	P	P	14 34 11.8	+1.2
BJI				sP	pwP	14 34 27.8	+1.4
BJI				PP	PP	14 35 40.3	+0.9
BJI				pmax	pmax		
	comp=Z,29nm,0.9s						
CMSA	Cobar Meteorol	38.44	154	P	P	14 34 10.7	-0.2
	baz=39,SNR=8.2						
HHC	Hu-ho-hao-te	40.42	342	eP	P	14 34 29.9	+2.4
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
ARMA	Armidale	40.49	146	P	P	14 34 27.0	-1.2
ARMA				IAmb	IAmb	14 34 44.8	
	comp=Z,11nm,0.9s						
SHL	Shillong	40.69	307	P	P	14 34 28.9	-1.2
SHL				IAmb	IAmb	14 34 30.6	
	comp=Z,12nm,0.5s						
USA0B	Ussuriysk Arra	41.52	5	P	P	14 34 36.6	+0.3
USA0B				IAmb	IAmb	14 34 39.0	
	comp=Z,7.9nm,0.7s						
USRK	Ussuriysk Ar.	41.52	5	P	P	14 34 37.7	+1.4
	comp=Z,7.7nm,0.7s,baz=185,slow=5.9,SNR=16						
USRK	Ussuriysk Ar.	41.52	5	P	P	14 34 36.7	+0.3
MDJ	Mudanjiang	41.77	3	P	P	14 34 40.3	+1.9
MDJ				pmax	pmax		
	comp=Z,15nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,150nm,5.8s						
MDJ	Mudanjiang	41.77	3	P	P	14 34 38.9	+0.6
MDJ				IAmb	IAmb	14 34 40.9	
	comp=Z,11nm,0.9s						
H11S3	WAKE ISLAND Hy	41.88	65	T	T	15 19 28.0	
	baz=253,slow=75,SNR=22						
H11S2	WAKE ISLAND Hy	41.89	65	T	T	15 19 28.9	
	baz=253,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	41.89	65	T	T	15 19 31.8	
	baz=253,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	42.43	64	T	T	15 20 23.3	
	baz=248						
H11N2	WAKE ISLAND Hy	42.44	64	T	T	15 20 23.2	
	baz=248						
H11N3	WAKE ISLAND Hy	42.45	64	T	T	15 20 17.6	
	baz=248						
GTA	Gaotai	44.09	329	eP	P	14 34 57.4	0.0
GTA				pP	pwP	14 35 12.8	-0.4
GTA				sP	sP	14 35 19.8	+2.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,78nm,4.7s						
GTA				LR	LR		
	comp=Z,250nm,14.5s						
GTA				LR	LR		
	comp=Z,330nm,14.2s						
GTA				LR	LR		
	comp=Z,120nm,15.3s						
PALK	Pallekele	46.34	277	LR	LR	14 55 40.0	
	comp=Z,34nm,21.4s,baz=199,slow=38						
ULN	Ulaanbaatar	48.14	342	P	P	14 35 29.7	+0.5
ULN				IAmb	IAmb	14 35 32.0	
	comp=Z,6.6nm,0.9s						
SONM	Songino Array	48.32	341	P	P	14 35 31.3	+0.7
	comp=Z,2.5nm,0.7s,baz=154,slow=8.4,SNR=18						
SONM				PcP	PcP	14 36 58.1	+1.4
	comp=Z,2.7nm,0.8s,baz=164,slow=4.2,SNR=7.6						
SONM				LR	LR	14 56 23.7	
	comp=Z,92nm,21.6s,baz=164,slow=37						
SONM	Songino Array	48.32	341	P	P	14 35 31.1	+0.5
HYB	Hyderabad	49.72	290	i P	P	14 35 42.0	+0.3
WMQ	Urumqi	53.70	325	eP	P	14 36 10.4	-0.5
WMQ				pP	pP	14 36 25.3	+0.5
WMQ				S	S	14 43 48.5	+7.3
WMQ				pmax	pmax		
	comp=Z,19nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,140nm,6.1s						
PETK	Petropavlovsk-	56.24	22	P	P	14 36 30.7	+1.7
	comp=Z,1.6nm,0.4s,baz=202,slow=3.1,SNR=15						
PETK				LR	LR	15 01 24.1	
	comp=Z,15nm,19.7s,baz=220,slow=37						
PETK	Petropavlovsk-	56.24	22	P	P	14 36 27.2	-1.9
SHLS	Shalkode	58.29	321	eP	P	14 36 41.5	-2.3
	baz=321						
MK31	Makanchi Array	58.53	325	P	P	14 36 45.0	-0.3
MKAR	Makanchi Array	58.53	325	P	P	14 36 45.2	-0.1
	comp=Z,5.0nm,0.7s,baz=124,slow=8.6,SNR=43						
MKAR	Makanchi Array	58.53	325	P	P	14 36 45.1	-0.2
MAKZ	Makanchi	58.71	325	P	P	14 36 46.5	-0.2
MAKZ				IAmb	IAmb	14 36 47.3	
	comp=Z,4.1nm,0.7s						
SATY	Saty	58.91	320	eP	P	14 36 47.7	-0.5
	comp=Z,5.2nm,0.8s,baz=320						
YAK	Yakutsk	59.19	1	P	P	14 36 50.2	+0.7
MDOK	Medeo	59.84	320	eP	P	14 36 54.5	-0.1
	baz=320						
TNSS	Tian-Shan	59.84	319	eP	P	14 36 55.2	+0.2
	baz=320						
MLZ	Mavora Lakes	60.20	148	P	P	14 36 54.5	-2.3
KUU	Kurty	60.63	320	eP	P	14 36 58.4	-1.4
	comp=Z,8.5nm,0.9s,baz=320						
LBZ	Lake Benmore	60.71	146	P	P	14 36 58.9	-1.4
KHZ	Kahutara	61.51	142	P	P	14 37 04.5	-1.2
ZALV	Zalesovo Beam	61.60	333	P	P	14 37 05.9	-0.2
	comp=Z,1.0nm,0.4s,baz=116,slow=6.8,SNR=7.6						
ZALV	Zalesovo Beam	61.60	333	P	P	14 37 06.3	+0.2
BKZ	Black Stump Fm	61.66	138	P	P	14 37 06.0	-0.9
BKZ				IAmb	IAmb	14 37 22.8	
	comp=Z,7.9nm,0.9s						
SEM	Semipalatinsk	61.69	328	eP	P	14 37 05.7	-1.4
	baz=328						
BTLS	Baital	62.62	320	eP	P	14 37 12.5	-0.7
	baz=320						
KURK	Kurchatov	62.73	328	P	P	14 37 13.4	-0.4
GAR	Garm	62.80	313	P	P	14 37 13.8	-0.9
BTK	Batken	62.81	314	P	P	14 37 15.4	+0.7
BTK				IAmb	IAmb	14 37 17.0	
	comp=Z,10nm,1.4s						
CHGR	Chuyangaron	63.54	312	P	P	14 37 19.3	-0.2
CHGR				IAmb	IAmb	14 37 21.6	
	comp=Z,5.8nm,0.7s						
IUG	Iuzhnay	64.12	316	eP	P	14 37 22.8	-0.5
	baz=316						
KKAR	Karatay Array	64.15	317	P	P	14 37 22.9	-0.5
BRLS	Borolday	64.58	317	eP	P	14 37 25.6	-0.6
	baz=317						
BRZS	Berezniki	65.66	325	eP	P	14 37 32.6	-0.5
	baz=325						
BRVK	Borovoye	68.37	327	P	P	14 37 50.1	-0.1
BRVK				IAmb	IAmb	14 37 51.4	
	comp=Z,6.9nm,0.8s						
TIXI	Tiksi	68.83	1	P	P	14 37 52.1	-0.5
TIXI				IAmb	IAmb	14 37 54.5	
	comp=Z,9.7nm,0.9s						
NRIK	Noril'sk	71.45	346	P	P	14 38 09.7	+0.9
	comp=Z,5.3nm,0.7s,baz=133,slow=6.8,SNR=8.9						
NRIK	Noril'sk	71.45	346	P	P	14 38 08.9	+0.1
NRIK				IAmb	IAmb	14 38 10.6	
	comp=Z,7.6nm,0.8s						
ABKAR	Akbulak array	73.09	321	P	P	14 38 18.9	-0.2
ABKAR	Akbulak array	73.09	321	P	P	14 38 18.8	-0.2
ABKAR				IAmb	IAmb	14 38 19.9	
	comp=Z,5.3nm,0.8s						
ARU	Arti	75.92	328	P	P	14 38 34.4	-0.8
ARU				IAmb	IAmb	14 38 36.1	
	comp=Z,14nm,0.8s						
RAYN	Ar Rayn	81.13	293	P	P	14 39 04.7	0.0
VNDA	Vanda	82.41	173	P	P	14 39 10.2	-0.1
	comp=Z,1.6nm,0.8s,baz=316,slow=7.7,SNR=7.6						
SIRT	Sirnak	84.04	307	P	P	14 39 19.8	+0.2
GURO	Guroymak-BITLI	84.38	308	P	P	14 39 21.2	-0.2
GURO				IAmb	IAmb	14 39 23.9	
	comp=Z,9.3nm,0.7s						
PPT	Papeete	84.54	108	LR	LR	15 13 31.6	
	comp=Z,35nm,18.1s,baz=191,slow=33						
ILAR	Eielson Array	85.87	25	P	P	14 39 28.2	+0.2
	comp=Z,0.2nm,0.5s,baz=244,slow=5.0,SNR=2.0						
KLMR	Klimovskoe	86.40	331	eP	P	14 39 29.4	-1.4
KLMR				AMP		14 39 45.7	
	comp=Z,22nm,1.3s						
KMBO	Kilima Mbogo	89.82	269	P	P	14 39 48.6	+0.2
	comp=Z,0.6nm,0.2s,baz=35,slow=3.3,SNR=5.5						
BRTR	Keskin Array B	90.87	310	P	P	14 39 52.7	+0.1
	comp=Z,0.6nm,0.8s,baz=161,slow=4.6,SNR=3.8						
ARCES	ARCESS Array B	91.47	340	P	P	14 39 54.4	-0.2
	comp=Z,3.5nm,0.7s,baz=72,slow=5.0,SNR=9.0						
ARCES				LR	LR	15 24 42.9	
	comp=Z,37nm,18.2s,baz=290,slow=38						
FINES	FINESS Array B	92.84	332	P	P	14 40 00.4	-0.6
	comp=Z,1.8nm,0.8s,baz=23,slow=11,SNR=4.1						
AKASG	Malin Array Be	92.84	321	P	P	14 40 00.2	-1.0
	comp=Z,0.3nm,0.3s,baz=66,slow=5.3,SNR=4.5						
AKASG	Malin Array Be	92.84	321	IAmb	IAmb	14 40 01.2	
	comp=Z,2.7nm,1.2s						
TXAR	Lajitas Array	121.97	53	PKP	PKiKP	14 45 44.7	+0.9
	comp=Z,0.3nm,0.7s,baz=153,slow=0.6,SNR=4.1						
TORD	Torodi Ar. Bea	123.49	288	PKP	PKiKP	14 45 47.3	+0.3
	comp=Z,1.1nm,0.8s,baz=38,slow=2.2,SNR=6.4						
TORD	Torodi Ar. Bea	123.49	288		PKPdf	14 45 46.1	-0.7

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*BUL **20** 14:39:01.7±1.2, 26°.13S×29°.13E, h0^{km}±12^{km}, MD4.7*

EAF 20 14:39:01.5±1.9**, 26°.13S×29°.15E, h0**^{km}±19^{km}**, MD4.3, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	Changalane	2.74	94	i P	Pn	14 39 46.6	-0.1
CNG	Changalane	2.74	94	i P	Pn	14 39 46.6	-0.1
MOPA	Mopani	3.31	39	i P	Pn	14 39 52.2	-2.4
MOPA	Mopani	3.31	39	i P	Pn	14 39 52.2	-2.4
LBTB	Lobatse	3.39	288	i P	Pn	14 39 55.6	-0.2
LBTB				i Sg	Sb	14 40 46.5	+2.0
LBTB	Lobatse	3.39	288	i P	Pn	14 39 55.6	-0.2
LBTB				i Sg	Sb	14 40 46.5	+2.0
MSNA	Messina	3.85	12	i P	Pn	14 40 02.9	+0.8
MSNA	Messina	3.85	12	i P	Pn	14 40 02.9	+0.8
BOSA	Boshof	4.25	234	i P	Pn	14 40 06.9	-0.8
BOSA	Boshof	4.25	234	i P	Pn	14 40 06.9	-0.8
MATP	Matopo	5.71	354	i S	Sn	14 41 29.0	-5.1
MATP	Matopo	5.71	354	i S	Sn	14 41 29.0	-5.1
BLWY	Bulawayo	5.98	355	i P	Pn	14 40 31.2	-0.3
BLWY				i S	Sn	14 41 35.4	-5.5
BLWY	Bulawayo	5.98	355	i P	Pn	14 40 31.2	-0.3
BLWY				i S	Sn	14 41 35.4	-5.5
KRI	Karoi	9.27	3	i P	Pn	14 41 07.2	-9.4
KRI	Karoi	9.27	3	i P	Pn	14 41 07.2	-9.4

IDC 20 14:43:26.2±6.3**, 18°.49S×66°.42W, h262**^{km}±33^{km}**, mb3.4**/2**, mb1 3.5**/3**, mb1mx3.1**/23**, mbtmp3.8**/3**, Error ellipse: s-maj=145.3km s-min=47.6km az=23.0, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	2.73	323	P	Pn	14 44 17.2	-0.2
	4.3nm,0.3s,baz=145,slow=7.4,SNR=34						
LPAZ				S	S	14 44 58.5	+0.5
	0.6nm,0.3s,baz=36,slow=21,SNR=2.0						
TORD	Torodi Ar. Bea	74.14	70	P	P	14 54 34.6	0.0
	1.2nm,0.4s,baz=259,slow=5.0,SNR=14						
YKA	Yellowknife Ar	89.17	340	P	P	14 55 51.7	0.0
	0.9nm,1.1s,baz=124,slow=4.4,SNR=3.7						

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*IDC **20** 14:44:56.3±1.1, 32°.71N×94°.49E, h0^{km}, mb3.7/11, mb1 3.8/14, mb1mx3.5/54, mbtmp3.6/14, ML3.4/2, MS3.4/1, Ms1 3.4/1, ms1mx2.6/33, Error ellipse: s-maj=34.2km s-min=18.5km az=50.0*

ISC 20 14:45:01.3±0.8**, 32°.8N**±0°.1×**94°.5E**±0°.2**, h35**^{km}**, n15, σ0**^{s}**96**/14**, mb3.6**/11**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.79	163	Pn	Pn	14 48 27.4	-0.4
	0.1nm,0.3s,baz=8.7,slow=11,SNR=2.1						
MKAR	Makanchi Array	16.84	330	Pn	Pn	14 48 52.9	-1.3
	0.0nm,0.3s,baz=199,slow=33,SNR=1.8						
SONM	Songino Array	17.57	27	P	Pn	14 49 02.6	-0.7
	baz=214,slow=12,SNR=7.1						
TLY	Talaya	20.07	17	LR	LR	14 57 56.2	
	comp=Z,124nm,21.9s,baz=164,slow=39						
KURBB	Kurchatov Arra	21.39	331	P	P	14 49 45.6	0.0
	2.3nm,0.6s,baz=138,slow=11,SNR=22						
ZALV	Zalesovo Beam	22.28	345	P	P	14 49 56.1	+0.9
	1.3nm,0.8s,baz=165,slow=7.7,SNR=5.3						
BVAR	Borovoye Array	26.65	327	P	P	14 50 38.6	+2.1
	0.4nm,0.7s,baz=169,slow=8.5,SNR=1.8						
KSRS	Korea Array	27.68	71	P	P	14 50 46.7	+0.8
	0.7nm,0.5s,baz=272,slow=9.0,SNR=4.6						
FINES	FINESS Array B	51.59	325	P	P	14 54 04.2	+0.4
	1.0nm,0.6s,baz=104,slow=8.0,SNR=6.3						
ARCES	ARCESS Array B	52.39	336	P	P	14 54 10.7	+1.1
	4.1nm,1.0s,baz=35,slow=4.4,SNR=4.5						
NOA	NORSAR Array B	58.77	326	P	P	14 54 55.1	-0.5
	0.7nm,0.8s,baz=82,slow=6.3,SNR=1.7						
GERES	GERESS Array B	60.43	311	P	P	14 55 07.2	-0.1
	0.4nm,0.8s,baz=60,slow=5.8,SNR=1.8						
ASAR	Alice Springs	67.55	141	P	P	14 55 54.4	+0.2
	0.8nm,0.8s,baz=324,slow=6.8,SNR=8.6						
ILAR	Eielson Array	71.74	23	P	P	14 56 19.4	0.0
	0.6nm,0.8s,baz=317,slow=5.7,SNR=7.0						
YKA	Yellowknife Ar	82.25	13	P	P	14 57 18.1	-0.5
	0.2nm,0.7s,baz=337,slow=5.3,SNR=2.8						

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*NEIC **20** 15:44:20.0±1.3, 11°.04S±0°.09×163°.21E±0°.07, h41^{km}±7^{km}, mb4.6/18, Error ellipse: s-maj=16.4km s-min=3.2km az=216.0*

*IDC **20** 15:44:21.1±2.8, 11°.00S×163°.14E, h49^{km}±25^{km}, mb3.8/9, mb1 4.0/11, mb1mx3.5/52, mbtmp4.1/11, ML4.3/2, MS3.3/6, Ms1 3.3/6, ms1mx3.0/29, Error ellipse: s-maj=23.3km s-min=17.5km az=71.0*

ISC 20 15:44:19.8±0.6**, 11°.04S**±0°.08×**163°.22E**±0°.07**, h35**^{km}**, n57, σ1**^{s}**16**/50**, mb4.3**/16**, MS3.4**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.59	296	P	Pn	15 45 13.3	+0.4
	37nm,0.3s,baz=180,slow=3.8,SNR=8.8						
HNR				S	Sn	15 45 54.5	+0.3
	119nm,0.3s,baz=184,slow=16,SNR=6.0						
HNR				LR	LR	15 46 58.4	
	comp=Z,265nm,20.1s,baz=40,slow=45						
HNR	Honiara	3.59	296		Pn	15 45 12.8	-0.2
SANVU	Saraoutou	5.86	139		Pn	15 45 44.5	+0.4
SANVU	Saraoutou	5.86	139	P	Pn	15 45 45.1	+1.0
DVP	Devils Point	8.21	145	P	Pn	15 46 18.0	+1.6
KOUNC	Koumac, New Ca	9.51	174	P	Pn	15 46 34.7	+0.3
LIFNC	LIFOU	10.43	159	Pn	Pn	15 46 45.8	-1.1
MARNC	Mare, Loyalty	11.36	157	Pn	Pn	15 46 59.2	-0.5
MARNC	Mare, Loyalty	11.36	157	P	Pn	15 47 00.4	+0.7
NOUC	Port Laguerre	11.39	165	P	Pn	15 47 01.8	+1.7
DZM	Mont Dzumac	11.40	165	ePn	Pn	15 47 00.6	+0.3
	6.7nm,0.3s						
DZM				eSn	Sn	15 48 56.7	-10
	1.3nm,0.3s						
DZM				eLR	LR	15 49 33.2	
	comp=Z,260nm,24.4s						
DZM	Mont Dzumac	11.40	165	P	Pn	15 47 01.2	+1.0
	1.8nm,0.3s,baz=4.8,slow=12,SNR=42						
DZM	Mont Dzumac	11.40	165		Pn	15 47 01.0	+0.7
YATNC	Mamie plateau,	11.51	163	P	Pn	15 47 01.3	-0.4
ONTNC	Ouen Toro	11.63	165	Pn	Pn	15 47 03.7	+0.4
OUENC	Ouen Island, N	11.84	163	Pn	Pn	15 47 07.5	+1.3
PINNC	Pines Island,	12.20	161	Pn	Pn	15 47 12.5	+1.4
RABL	Rabaul	12.89	301	P	Pn	15 47 24.2	+3.6
TARA	Tarawa	15.65	39	P	Pn	15 47 59.9	+2.2
PATS	Pohnpei	18.42	344	P	P	15 48 31.7	-0.4
CTAO	Charters Tower	18.64	239	P	Pn	15 48 35.5	+0.4
MTSU	Mount Surprise	19.59	247	P	Pn	15 48 46.3	-0.3
COEN	Coen	19.78	259	Pn	Pn	15 48 48.2	-0.7
COEN				IAmb	IAmb	15 49 03.3	
	comp=Z,33nm,1.4s						
STKA	Stephens Creek	28.78	221	P	P	15 50 15.9	+1.5
	comp=Z,1.9nm,0.9s,baz=56,slow=15,SNR=1.9						
STKA				LR	LR	16 00 54.7	
	comp=Z,133nm,20.2s,baz=26,slow=34						
WR0	Warramunga Arr	28.98	249	P	P	15 50 15.1	-1.3
WR0				IAmb	IAmb	15 50 34.7	
	comp=Z,10nm,1.3s						
WB0	Warramunga Arr	29.07	249	P	P	15 50 15.9	-1.3
WB2	Warramunga Arr	29.15	249	P	P	15 50 16.3	-1.6
WRA	Warramunga Arr	29.16	249	P	P	15 50 16.6	-1.4
	comp=Z,0.7nm,0.6s,baz=81,slow=8.9,SNR=8.3						
WRA	Warramunga Arr	29.16	249	P	P	15 50 16.6	-1.4
H11S2	WAKE ISLAND Hy	29.54	7	T	T	16 21 16.0	
	baz=188,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	29.55	7	T	T	16 21 09.6	
	baz=188,slow=76,SNR=52						
H11S1	WAKE ISLAND Hy	29.56	7	T	T	16 21 16.7	
	baz=188,slow=76,SNR=44						
AS31	Alice Springs	30.59	242	P	P	15 50 28.9	-1.7
ASAR	Alice Springs	30.59	242	P	P	15 50 28.9	-1.7
	comp=Z,0.6nm,0.4s,baz=64,slow=10,SNR=27						
ASAR				PcP	PcP	15 53 28.0	-0.8
	comp=Z,0.2nm,0.4s,baz=82,slow=2.9,SNR=4.6						
ASAR				LR	LR	16 03 03.3	
	comp=Z,85nm,18.2s,baz=70,slow=37						
H11N1	WAKE ISLAND Hy	30.77	7	T	T	16 22 47.5	
	baz=188,slow=76,SNR=33						
H11N3	WAKE ISLAND Hy	30.78	7	T	T	16 22 48.1	
	baz=188,slow=76,SNR=29						
H11N2	WAKE ISLAND Hy	30.79	7	T	T	16 22 49.0	
	baz=188,slow=76,SNR=26						
KNRA	Kununurra	33.81	258	P	P	15 50 57.1	-1.8
RAR	Rarotonga	36.88	111	LR	LR	16 05 27.5	
	comp=Z,24nm,18.9s,baz=170,slow=34						
KSRS	Korea Array	58.50	327	LR	LR	16 18 20.3	
	comp=Z,19nm,18.0s,baz=20,slow=35						
ULN	Ulaanbaatar	76.85	325	P	P	15 56 07.0	-1.4
ULN				IAmb	IAmb	15 56 15.7	
	comp=Z,4.6nm,1.0s						
SONM	Songino Array	77.21	325	P	P	15 56 10.1	-0.2
	comp=Z,0.8nm,0.7s,baz=143,slow=5.5,SNR=6.1						
SONM	Songino Array	77.21	325	P	P	15 56 10.0	-0.4
SONM				IAmb	IAmb	15 56 18.2	
	comp=Z,5.8nm,1.3s						
YAK	Yakutsk	77.41	345	P	P	15 56 09.6	-1.3
YAK				IAmb	IAmb	15 56 11.1	
	comp=Z,15nm,1.3s						
Q19K	Cape Douglas,	77.94	21	P	P	15 56 13.7	-0.3
SVW2	Sparrevohn	78.90	19	P	P	15 56 20.0	+0.7
SVW2				IAmb	IAmb	15 56 22.8	
	comp=Z,13nm,1.3s						
BILL	Bilibino	78.90	1	P	P	15 56 18.6	-0.6
BILL				IAmb	IAmb	15 56 26.8	
	comp=Z,5.4nm,0.9s						
QSPA	South Pole Qui	78.96	180	P	P	15 56 20.8	+1.0
	comp=Z,1.5nm,0.9s,baz=190,slow=1.0,SNR=10						
QSPA	South Pole Qui	78.96	180	P	P	15 56 19.9	+0.1
QSPA				IAmb	IAmb	15 56 22.0	
	comp=Z,10nm,1.4s						
M19K	Big River Lodg	79.88	19	P	P	15 56 24.9	+0.3
M19K				IAmb	IAmb	15 56 33.2	
	comp=Z,17nm,1.4s						
HDA	Harding Lake	84.05	19	P	P	15 56 46.2	-0.2
HDA				IAmb	IAmb	15 56 53.7	
	comp=Z,3.2nm,0.8s						
ILAR	Eielson Array	84.31	19	P	P	15 56 47.0	-0.7
	comp=Z,1.2nm,0.7s,baz=240,slow=5.0,SNR=20						
NVAR	Mina Array Bea	87.92	50	P	P	15 57 06.5	0.0

	comp=Z,0.7nm,0.6s,baz=238,slow=6.6,SNR=4.7						
MKAR	**Makanchi Array**	91.82	317	P	P	15 57 23.6	-0.7
	comp=Z,1.0nm,0.7s,baz=97,slow=6.0,SNR=9.7						
MKAR	**Makanchi Array**	91.82	317	P	P	15 57 23.4	-0.8
YKA	**Yellowknife Ar**	96.11	28	P	P	15 57 42.4	-1.1
	comp=Z,0.4nm,0.9s,baz=262,slow=4.8,SNR=5.7						
TXAR	**Lajitas Array**	98.01	62	LR	LR	16 36 01.7	
	comp=Z,22nm,18.7s,baz=0.0,slow=32						

RSNC 20 15:47:00.9±1.6, 6°.74N×76°.69W, h2^{km}±6^{km}, ML3.1, Mw3.7, 2C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBBC	**Dabeiba**	0.55	60	⇑*i*P	Pg	15 47 11.8	+0.3
DBBC				*e*S	Sb	15 47 20.7	-1.1
SOLC	**Bahia Solano**	0.88	235	*e*P	Pg	15 47 17.0	-0.8
SOLC				*e*S	Sg	15 47 29.6	+0.5
SOLC				*i*		15 47 32.9	
	comp=Z,168nm,0.2s						
CBOC	**Ciudad Bolivar**	1.10	142	⇓*i*P	Pg	15 47 19.9	-2.1
CBOC				*e*S	Sg	15 47 34.8	-1.4
CBOC				*i*		15 47 44.2	
	comp=Z,331nm,0.4s						
PTAC	**Punta Ardita,**	1.18	290	*e*P	Pg	15 47 21.2	-2.4
PTAC				*e*S	Sg	15 47 36.9	-2.0
PTAC				*i*		15 47 39.1	
	comp=Z,651nm,0.4s						
HELC	**Santa Helena**	1.28	115	*e*P	Pg	15 47 23.6	-1.8
HELC				*e*S	Sg	15 47 40.8	-1.2
HELC				*i*		15 47 42.1	
	comp=Z,348nm,0.5s						
UREC	**San Jos de Ur**	1.53	49	*e*P	Pn	15 47 27.5	-1.7
UREC				*i* S	Sn	15 47 46.8	-2.9
UREC				*e*S	Sb	15 47 47.4	-2.4
UREC				*i*		15 47 48.2	
	comp=Z,429nm,0.5s						
PLMC	**San Jos del P**	1.86	167	*e*P	Pn	15 47 28.9	-5.0
PLMC				*e*S	Sn	15 47 48.9	-9.2
PLMC				*i*		15 47 52.7	
	comp=Z,113nm,0.4s						
ZARC	**Zaragoza, Cauc**	1.97	67	⇑*i*P	Pn	15 47 33.5	-1.8
ZARC				*e*S	Sn	15 47 57.2	-3.3
ZARC				*i*		15 47 59.4	
	comp=Z,187nm,0.5s						
GUY2C	**Guyana, Caldas**	2.00	139	*e*P	Pn	15 47 34.4	-1.7
GUY2C				*e*S	Sn	15 48 00.8	-1.1
GUY2C				*i*		15 48 10.5	
	comp=Z,146nm,0.6s						
LCBC	**Los crdobas,**	2.13	9	*e*P	Pn	15 47 35.9	-1.6
LCBC				*e*S	Sn	15 48 04.2	-0.3
LCBC				*i*		15 48 10.8	
	comp=Z,59nm,0.7s						
NORC	**Norcasia**	2.15	123	*e*P	Pn	15 47 37.2	-0.7
NORC				*e*S	Sn	15 48 04.5	-0.7
NORC				*i*		15 48 08.4	
	comp=Z,109nm,0.4s						
PTBC	**PUERTO BERRIO,**	2.23	95	*e*P	Pn	15 47 37.0	-1.9
PTBC				*e*S	Sn	15 48 04.8	-2.2
PTBC				*i*		15 48 10.1	
	comp=Z,146nm,0.6s						
ANIL	**Santa Ana**	2.57	150	*e*P	Pn	15 47 43.3	-0.6
ANIL				*e*S	Sb	15 48 21.4	+1.2
ANIL				*i*		15 48 24.7	
	comp=Z,94nm,0.5s						
YOTC	**Yotoco, Valle**	2.76	173	*e*P	Pn	15 47 41.6	-4.7
YOTC				*e*S	Sn	15 48 11.8	-8.5
YOTC				*i*		15 48 15.6	
	comp=Z,25nm,0.2s						
SPBC	**San Pablo de B**	2.82	112	*e*P	Pn	15 47 46.9	-0.1
SPBC				*e*S	Sb	15 48 24.6	-2.4
SPBC				*i*		15 48 30.0	
	comp=Z,58nm,0.4s						
BRRC	**Barranca, Sant**	2.98	83	*e*P	Pn	15 47 50.8	+1.5
BRRC				*e*S	Sn	15 48 27.7	+2.2
BRRC				*i*		15 48 43.7	
	comp=Z,48nm,0.6s						
ROSC	**El Rosal**	3.02	129	*e*P	Pn	15 47 45.2	-4.9
ROSC				*e*S	Sn	15 48 29.1	+2.0
ROSC				*i*		15 48 43.8	
	comp=Z,40nm,0.5s						
ORTC	**Ortega, Tolima**	3.16	153	*e*P	Pn	15 47 51.4	-0.2
SMLC	**San Martn de**	3.31	52	*e*P	Pn	15 47 52.8	-0.9
SMLC				*e*S	Sn	15 48 29.2	-4.4
BARC	**Barichara**	3.49	92	*e*P	Pn	15 47 56.1	-0.3
BARC				*e*S	Sn	15 48 38.7	+0.3
BARC				*i*		15 48 53.5	
	comp=Z,66nm,0.8s						
CHIC	**Chingaza**	3.61	125	*e*P	Pn	15 47 57.4	-0.9
CHIC				*e*S	Sn	15 48 41.4	-0.4
CHIC				*i*		15 49 02.8	
	comp=Z,22nm,0.7s						
OCAC	**Ocana**	3.66	66	*e*P	Pn	15 47 57.5	-1.2
OCAC				*e*S	Sn	15 48 40.1	-2.5
OCAC				*i*		15 48 42.1	
	comp=Z,98nm,0.5s						
RUSC	**La Rusia**	3.68	103	*e*P	Pn	15 47 59.5	+0.2
RUSC				*e*S	Sn	15 48 45.8	+2.2
RUSC				*i*		15 49 06.9	
	comp=Z,37nm,0.6s						
MARP	**Paez Belalcaza**	3.94	169	*e*P	Pn	15 48 01.6	-1.0
MARP				*e*S	Sn	15 48 49.2	-0.4
POPC	**Popayan, Colom**	4.17	180	*e*P	Pn	15 48 04.0	-1.8
PCON	**Cinco Dias**	4.39	176	*e*P	Pn	15 48 09.5	+0.4

IDC 20 15:54:16.3±2.2, 2°.80N×127°.42E, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.0/49, mbtmp3.5/3, Error ellipse: s-maj=144.9km s-min=27.9km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	23.60	164	P	P	15 59 29.0	-0.1
	1.5nm,0.6s,baz=344,slow=11,SNR=15						
ASAR	**Alice Springs**	27.06	167	P	P	16 00 00.8	+0.1
	0.4nm,0.8s,baz=344,slow=7.5,SNR=5.8						
MKAR	**Makanchi Array**	58.70	325	P	P	16 04 15.8	-0.1
	0.2nm,0.5s,baz=116,slow=7.0,SNR=1.7						

KRSC 20 15:59:07.9±1.2, 48°.14N×156°.04E, h60^{km}±28^{km}, ML3.9

IDC 20 15:59:10.0±3.0, 48°.51N×154°.10E, h104^{km}±28^{km}, mb3.1/5, mb1 3.3/7, mb1mx3.1/44, mbtmp3.5/7, MS3.3/1, Ms1 3.3/1, ms1mx2.3/13, Error ellipse: s-maj=45.5km s-min=19.1km az=140.0

ISC 20 15:59:03.9±1.1, 48°.0N±0°.1×155°.1E±0°.2, h50^{km}, n28, σ2^{s}.30/23, mb3.4/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	2.82	13	*e*S	Sn	16 00 19.0	-0.1
PAU	**Pauzhetka**	3.70	17	*e*P	Pn	16 00 00.4	+2.0
PAU				*e*S	Sn	16 00 39.6	-1.1
KDTR	**Khodutka, Kamc**	4.32	25	*e*P	Pn	16 00 08.5	+1.5
KDTR				*e*S	Sn	16 00 53.3	-2.7
ASAK	**Asacha**	4.79	21	*e*P	Pn	16 00 15.7	+2.2
RUS	**Russkaya**	5.00	25	*e*S	Sn	16 01 09.6	-3.1
KRMR	**Karymshinskiy**	5.26	21	P	Pn	16 00 22.5	+2.7
PETK	**Petropavlovsk-**	5.43	17	P	Pn	16 00 23.7	+1.6
	0.6nm,0.3s,baz=182,slow=11,SNR=16						
UGLR	**Uglovaya**	5.78	23	*e*P	Pn	16 00 30.0	+2.9
KOK	**Koryaka**	5.81	22	P	Pn	16 00 30.0	+2.6
AVH	**Avacha**	5.81	22	*e*P	Pn	16 00 30.5	+3.1
SMAR	**Somma**	5.82	23	*e*P	Pn	16 00 30.4	+2.7
GNL	**Ganaly**	6.03	16	P	Pn	16 00 33.0	+2.5
SPN	**Mys Shipunski**	6.04	30	*e*P	Pn	16 00 32.4	+1.9
SPN				*e*S	Sn	16 01 34.9	-3.3
MKZ	**Mys Kozlova**	7.82	30	*e*P	Pn	16 00 55.5	+0.7
ASAJ	**Asahikawa**	9.49	251	P	Pn	16 01 18.9	+1.0
	1.1nm,0.3s,baz=53,slow=13,SNR=14						
KBTR	**Krutoberegovo**	9.54	27	*e*P	Pn	16 01 20.1	+1.7
KSRS	**Korea Array**	22.44	252	P	P	16 03 56.4	-2.0
	0.4nm,0.5s,baz=56,slow=8.8,SNR=4.4						
JOW	**Kunigami**	29.72	234	LR	LR	16 18 06.3	
	comp=Z,48nm,18.6s,baz=77,slow=38						
H11N2	**WAKE ISLAND Hy**	29.73	157	T	T	16 37 24.7	
	baz=342,slow=76,SNR=8.9						
H11N1	**WAKE ISLAND Hy**	29.75	157	T	T	16 37 39.2	
	baz=342,slow=76,SNR=31						
H11N3	**WAKE ISLAND Hy**	29.75	157	T	T	16 37 26.2	
	baz=342,slow=76,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	30.85	158	T	T	16 38 58.6	
	baz=343,slow=76,SNR=86						
H11S3	**WAKE ISLAND Hy**	30.86	158	T	T	16 38 57.1	
	baz=343,slow=76,SNR=98						
H11S2	**WAKE ISLAND Hy**	30.87	158	T	T	16 38 54.9	
	baz=343,slow=76,SNR=66						
MKAR	**Makanchi Array**	47.59	297	P	P	16 07 26.9	-7.5
	0.3nm,0.6s,baz=64,slow=5.4,SNR=5.2						
YKA	**Yellowknife Ar**	49.16	38	P	P	16 07 47.3	+1.1
	0.4nm,0.7s,baz=301,slow=7.6,SNR=5.1						
CMAR	**Chiang Mai Arr**	53.95	257	P	P	16 08 20.4	-2.2
	0.7nm,0.6s,baz=32,slow=7.0,SNR=7.3						
ASAR	**Alice Springs**	73.78	200	P	P	16 10 33.2	+0.5
	0.3nm,0.8s,baz=6.2,slow=5.3,SNR=1.9						

IDC 20 16:04:48.8±2.9, 37°.19S×178°.11E, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.7/20, mbtmp3.5/3, Error ellipse: s-maj=51.9km s-min=27.1km az=87.0

WEL 20 16:04:51.8, 38°S±8°×17°8E±°, h32^{km}±6^{km}, M3.2/14, ML3.6/15, MLv3.2/14, Error ellipse: s-maj=0.0km s-min=0.0km az=26.5

ISC 20 16:04:48.2±2.1, 37°.52S±0°.06×178°.9E±0°.1, h32^{km}±9^{km}, n82, σ1^{s}.01/91, mb3.4/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	0.45	265	P	Pb	16 04 57.6	-0.3
MXZ				S	Sb	16 05 02.9	-1.8
WMGZ	**Waiomatatini S**	0.47	230	P	Pn	16 04 59.6	+0.9
WMGZ				S	Sb	16 05 06.2	+1.1
PKGZ	**Pakihiroa**	0.73	240	P	Pn	16 05 02.4	+0.1
PKGZ				S	Sb	16 05 10.9	-1.4
PUZ	**Puketiti**	0.73	221	P	Pb	16 05 03.5	+0.9
PUZ				S	Sb	16 05 13.3	+0.9
HAZ	**Te Kaha**	0.90	254	P	Pn	16 05 04.7	+0.2
HAZ				S	Sn	16 05 14.7	-1.7
TWGZ	**Tauwhareparae**	0.96	227	P	Pb	16 05 06.8	+0.4
TWGZ				S	Sb	16 05 20.3	+1.5
RUGZ	**Raukumara Rang**	1.04	245	P	Pn	16 05 07.2	+0.5
RUGZ				S	Sn	16 05 19.2	-1.1
CNGZ	**Carnagh Statio**	1.09	208	P	Pb	16 05 09.3	+0.6
TKGZ	**Te Karaka**	1.22	221	P	Pb	16 05 10.6	-0.1
TKGZ				S	Sn	16 05 25.9	+1.4
MWZ	**Matawai**	1.34	232	P	Pn	16 05 11.3	+0.7
MWZ				S	Sn	16 05 27.4	0.0
RIGZ	**Rimuhau**	1.47	216	P	Pn	16 05 13.4	+0.9
RAGZ	**Rawiri**	1.51	229	P	Pn	16 05 14.2	+1.2
WHRZ	**Whale Island**	1.54	257	P	Pn	16 05 15.3	+1.8
URZ	**Urewera**	1.57	242	Pn	Pn	16 05 14.7	+0.8
	18nm,0.3s,baz=119,slow=24,SNR=117						
URZ				Sn	Sn	16 05 33.2	0.0
	48nm,0.3s,baz=199,slow=18,SNR=25						
URZ	**Urewera**	1.57	242	P	Pn	16 05 14.8	+0.9
PRGZ	**Paritu Road**	1.60	209	P	Pb	16 05 15.8	-1.4
SNGZ	**Shannon Statio**	1.74	223	P	Pn	16 05 17.3	+1.0
KNZ	**Kokohu**	1.77	212	P	Pn	16 05 16.9	+0.4
EDRZ	**Edgecumbe**	1.79	250	P	Pn	16 05 17.6	+0.7
MHGZ	**Mahia Peninsul**	1.80	205	P	Pn	16 05 18.5	+1.6
MARZ	**Manawahe**	1.80	254	P	Pn	16 05 17.5	+0.5
RTZ	**Ruatahuna**	1.85	233	P	Pn	16 05 19.1	+1.3
OPRZ	**Ohinepanea**	1.86	259	P	Pn	16 05 18.1	+0.2
MUGZ	**Murupara**	1.91	239	P	Pn	16 05 19.2	+0.6
RAHZ	**Arahi**	1.98	225	P	Pn	16 05 20.6	+1.1
TARZ	**Mount Tarawera**	2.00	248	P	Pn	16 05 20.9	+1.0
RRRZ	**Republican Roa**	2.03	246	P	Pn	16 05 22.2	+1.9
OMRZ	**Omania**	2.06	253	P	Pb	16 05 23.6	-1.4
MTHZ	**Maungataniwha**	2.08	230	P	Pn	16 05 22.1	+1.2
TGRZ	**Tauranga**	2.08	264	P	Pn	16 05 21.0	+0.2
KARZ	**Kaharoa**	2.14	256	P	Pn	16 05 22.1	+0.4
PRRZ	**Plateau Road**	2.19	243	P	Pn	16 05 23.0	+0.7
HSRZ	**Hossack Road**	2.22	248	P	Pb	16 05 27.1	-0.6
ALRZ	**Allen Road**	2.25	242	P	Pn	16 05 24.6	+1.4
NMHZ	**Naumai**	2.26	225	P	Pn	16 05 24.9	+1.5
ARHZ	**Aropaoanui**	2.28	220	P	Pn	16 05 24.5	+0.9
MRHZ	**Matea Rd**	2.33	235	P	Pn	16 05 25.2	+0.7
BKZ	**Black Stump Fm**	2.49	228	P	Pn	16 05 27.2	+0.7
CKHZ	**Cape Kidnapper**	2.55	213	P	Pn	16 05 27.6	+0.2
MCHZ	**McNeill Hill**	2.57	221	P	Pn	16 05 28.2	+0.6
KUTZ	**Kaahu Road**	2.59	247	P	Pn	16 05 28.5	+0.6
KUZ	**Kuaotunu**	2.63	286	P	Pn	16 05 28.2	-0.2
TOZ	**Tahuroa Road**	2.68	265	P	Pn	16 05 29.4	+0.3
KAHZ	**Kahuranaki**	2.75	214	P	Pn	16 05 30.1	-0.1
TLZ	**Tolley Road**	2.76	252	P	Pn	16 05 29.9	-0.3
RITZ	**Rihia Road**	2.78	238	P	Pn	16 05 31.5	+1.0
KRHZ	**Kereru**	2.89	222	P	Pn	16 05 31.9	-0.1
BHHZ	**Black Hill Sta**	2.95	227	P	Pn	16 05 33.2	+0.3
PXZ	**Pawanui**	2.96	211	P	Pn	16 05 32.2	-0.7
TMVZ	**Te Maari**	2.96	236	P	Pn	16 05 33.5	+0.5
ETVZ	**East Tongariro**	2.96	236	P	Pn	16 05 33.5	+0.4
NTVZ	**North Tongarir**	2.96	237	P	Pn	16 05 33.7	+0.6
GRZ	**Great Barrier**	3.02	294	P	Pn	16 05 34.6	+0.9
NNVZ	**North Ngauruho**	3.02	237	P	Pn	16 05 34.7	+0.7
SNVZ	**South Ngauruho**	3.04	236	P	Pn	16 05 34.7	+0.6
NGZ	**Ngauruhoe**	3.06	236	P	Pn	16 05 34.9	+0.5
TUVZ	**Tukino**	3.07	234	P	Pn	16 05 35.2	+0.6
WIAZ	**Waiheke Island**	3.07	283	P	Pn	16 05 35.1	+0.6
MOVZ	**Moawhango**	3.09	231	P	Pn	16 05 34.8	0.0
WHVZ	**Whangaehu Hut**	3.12	235	P	Pn	16 05 35.8	+0.4
FWVZ	**Far West T-bar**	3.13	235	P	Pn	16 05 35.9	+0.4
WNVZ	**Wahianoa**	3.14	234	P	Pn	16 05 35.8	+0.2
PNHZ	**Pukenui**	3.17	220	P	Pn	16 05 35.0	-0.9
ETAZ	**East Tamaki Re**	3.20	279	P	Pn	16 05 37.8	+1.6
PRHZ	**Porangahau**	3.25	212	P	Pn	16 05 36.0	-0.9
MTVZ	**Mangateitei**	3.25	234	P	Pn	16 05 37.3	+0.2
MBAZ	**Motutapu North**	3.26	282	P	Pn	16 05 38.1	+1.0
PKVZ	**Pokaka**	3.28	236	P	Pn	16 05 37.9	+0.4
HIZ	**Hauiti**	3.32	251	P	Pn	16 05 39.2	+1.2
AWAZ	**Awhitu Peninsu**	3.40	276	P	Pn	16 05 40.7	+1.7
TSZ	**Takapari Road**	3.40	221	P	Pn	16 05 37.8	-1.3
RVAZ	**Riverhead Bore**	3.51	281	P	Pn	16 05 41.9	+1.4
VRZ	**Vera Road**	3.61	242	P	Pn	16 05 43.2	+1.3
BFZ	**Birch Farm**	3.76	212	P	Pn	16 05 42.6	-1.3
WAZ	**Wanganui**	3.77	233	P	Pn	16 05 44.8	+0.6
NEZ	**North Egmont**	4.14	244	P	Pn	16 05 51.8	+2.6
KHEZ	**Kahui Hut**	4.21	244	P	Pn	16 05 52.4	+2.3
OUZ	**Omahuta**	4.84	297	P	Pn	16 06 00.3	+1.6
BSWZ	**Blackbirch Sta**	5.69	221	P	Pn	16 06 09.0	-1.5
ASAR	**Alice Springs**	40.72	277	P	P	16 12 25.9	-0.2
	0.4nm,0.5s,baz=124,slow=8.6,SNR=22						
VNDA	**Vanda**	40.77	186	P	P	16 12 33.6	+7.8
	0.7nm,0.9s,baz=27,slow=6.3,SNR=3.3						
WRA	**Warramunga Arr**	42.37	282	P	P	16 12 39.5	-0.1
	2.1nm,1.2s,baz=123,slow=6.1,SNR=8.8						

SNET 20 16:10:46.6±1.6, 13°.75N×90°.97W, h22^{km}±35^{km}, ML3.4

GCG 20 16:10:52.4±0.4, 14°.62N×90°.97W, h39^{km}±18^{km}, MD3.8

ISC 20 16:10:45.5±2.0, 13°.88N±0°.09×91°.02W±0°.10, h22^{km}±7^{km}, n12, σ1^{s}.19/18, 1C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	0.59	17	*e*P	Pn	16 11 00.3	+1.5
PCG	**Pacaya**	0.65	38	*e*P	Pn	16 11 00.9	+1.2
NBG	**Las Nubes**	0.96	43	⇓*e*P	Pn	16 11 05.5	+1.5
NBG				*e*S	Sn	16 11 15.5	-1.6
STG3	**Santiaguito 3,**	0.98	327	*e*P	Pn	16 11 04.8	+0.5
NUBE	**Las Nubes**	1.20	89	*e*P	Pb	16 11 07.4	-0.3
NUBE				*e*S	Sb	16 11 23.2	+0.3
NUBE				IAML		16 11 24.3	
	comp=Z,840nm,0.2s						
SLOZ	**Alcaldia de Sa**	1.21	83	*e*P	Pb	16 11 07.3	-0.4
SLOZ				*e*S	Sb	16 11 24.8	+1.8
CEVE	**Cerro Verde**	1.35	92	*e*P	Pb	16 11 09.6	-0.7
CEVE				*e*S	Sb	16 11 27.9	+0.5
JAYA	**Jayaque - finc**	1.54	98	*e*P	Pn	16 11 11.8	-0.1
JAYA				*e*S	Sn	16 11 30.3	-1.0
JAYA				IAML		16 11 32.8	
	comp=Z,1μm,0.3s						
TACO	**Tacachico**	1.62	87	*e*P	Pn	16 11 12.4	-0.4
LALI	**Alcalda de L**	1.69	103	*e*P	Pn	16 11 14.2	+0.4
LALI				*e*S	Sn	16 11 35.6	+0.7
LALI				IAML		16 11 39.1	
	comp=Z,209nm,0.3s						
MRL	**Marmol**	1.76	47	⇑*e*P	Pb	16 11 15.4	-1.9
PQSS	**Presa 15 de Se**	2.40	96	*e*P	Pn	16 11 24.5	+1.0

TUL 20 16:18:58.6±1.1, 36°.54N±0°.02×97°.19W±0°.02, h6^{km}±7^{km}, ML3.0, mb_Lg3.0/28(NEIC), Error ellipse: s-maj=3.1km s-min=1.6km az=225.0

NEIC 20 16:18:58.4±0.7, 36°.51N±0°.02×97°.22W±0°.02, h7^{km}±7^{km}, Error ellipse: s-maj=3.2km s-min=0.9km az=220.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLOK	**Blackwell**	0.25	1	Pg	Pg	16 19 03.4	-0.1
BLOK				Sg	Sg	16 19 06.7	-0.1
QUOK	**Quay**	0.53	129	Pg	Pg	16 19 08.9	+0.2
QUOK				Sg	Sg	16 19 15.7	0.0
KAN13	**South Haven SW**	0.55	338	Pg	Pg	16 19 08.8	-0.2
KAN13				Sg	Sg	16 19 16.2	+0.1
CROK	**Carrier**	0.62	270	Pg	Pg	16 19 10.9	+0.6
GC02	**Grant County #**	0.62	304	Pg	Pg	16 19 10.3	0.0
GC02				Sg	Sg	16 19 18.3	-0.1
OK031	**S. Brethren Rd**	0.63	151	Pg	Pg	16 19 10.3	-0.3
OK034	**N. Norfolk Rd.**	0.64	140	Pg	Pg	16 19 11.1	+0.2
OK030	**Cody Creek RV**	0.68	149	Pg	Pg	16 19 11.8	+0.3
KAN17	**Caldwell West**	0.69	321	Pg	Pg	16 19 11.9	+0.1
KAN17				Sg	Sg	16 19 20.9	+0.2
T35A	**Sooner Cattle**	0.70	54	Pg	Pg	16 19 11.2	-0.7
KAN09	**Caldwell North**	0.70	333	Pg	Pg	16 19 11.9	-0.1
KAN09				Sg	Sg	16 19 21.2	+0.1
OK029	**Liberty Lake**	0.73	195	Pg	Pb	16 19 13.1	-0.4
KAN14	**Manchester OK**	0.75	307		Pg	16 19 13.0	+0.1
KAN14				Sg	Sg	16 19 22.9	+0.4
KAN05	**Bluff City Nor**	0.80	319	Sg	Sg	16 19 23.9	-0.2
OK032	**Salt Plains WL**	0.85	291		Pg	16 19 14.9	+0.1
KAN06	**Argonia West S**	0.90	325	Pg	Pg	16 19 15.5	-0.2
BCOK	**Bluff Creek, N**	0.91	201	Pg	Pb	16 19 16.2	-0.3
OK025	**Westminster Rd**	0.93	186	Pg	Pb	16 19 16.6	-0.3
KAN16	**Harper SW Stat**	0.99	317	Pg	Pg	16 19 17.1	-0.3
OKCFA	**Oklahoma City**	1.11	190		Pg	16 19 19.4	-0.2
OKCSW	**OKLAHOMA CITY**	1.11	189	Pg	Pg	16 19 19.5	-0.3
FNO	**Franklin**	1.26	187		Pn	16 19 22.4	0.0
TUL1	**Leonard**	1.30	117		Pn	16 19 22.4	-0.6
W35A	**Tecumseh**	1.38	168		Pn	16 19 23.8	-0.3
U32A	**Winter Ranch,**	1.44	265		Pn	16 19 25.2	+0.2
WMOK	**Wichita Mounta**	2.18	216	Pn	Pn	16 19 34.6	-0.5
R32A	**Long Quarter,**	2.25	329	Pn	Pn	16 19 35.7	-0.5
U38A	**Gravette**	2.28	91	IAmb_Lg		16 20 12.1	
	comp=Z,52nm,0.8s						
X37A	**Clayton**	2.44	141	IAmb_Lg		16 20 17.6	
	comp=Z,40nm,0.8s						
LOOK	**Love County**	2.51	179	Pn	Pn	16 19 39.4	-0.3
S39A	**Bolivar**	3.33	68	Pn	Pn	16 19 51.0	0.0
S39A				IAmb_Lg		16 20 45.4	
	comp=Z,32nm,0.9s						
U40A	**Yellville**	3.52	91	Pn	Pn	16 19 52.7	-0.9
MIAR	**Mount Ida**	3.56	122	Pn	Pn	16 19 54.2	+0.2
Z38A	**Mt. Pleasant**	3.72	150	IAmb_Lg		16 21 04.9	
	comp=Z,52nm,0.8s						
AMTX	**Amarillo**	3.98	247	IAmb_Lg		16 21 11.1	
	comp=Z,26nm,0.8s						
MGMO	**Mountain Grove**	4.02	79	Pn	Pn	16 20 00.7	+0.2
X40A	**Basin Creek Fa**	4.11	118	Pn	Pn	16 20 01.9	+0.3
X40A				IAmb_Lg		16 21 16.2	
	comp=Z,19nm,0.8s						
FCAR	**Ozark Folk Cen**	4.17	97	Pn	Pn	16 20 02.5	+0.1
P38A	**Dawn**	4.26	42	Pn	Pn	16 20 03.3	-0.4
P38A				IAmb_Lg		16 21 15.6	
	comp=Z,25nm,0.8s						
R40A	**Maddies Statio**	4.33	64	IAmb_Lg		16 21 14.8	
	comp=Z,53nm,1.0s						
ABTX	**Abilene, Hawle**	4.36	208	Pn	Pn	16 20 05.2	+0.1
N35A	**Tabor**	4.52	15	Pn	Pn	16 20 06.5	-0.8
N35A				IAmb_Lg		16 21 25.3	
	comp=Z,43nm,0.8s						
KSCO	**Kaye Shedlock'**	4.96	302	IAmb_Lg		16 21 42.3	
	comp=Z,16nm,0.7s						
N38A	**Joes South For**	5.29	35	IAmb_Lg		16 21 59.9	
	comp=Z,30nm,0.7s						
L34A	**Svendsen Farm,**	5.49	7	IAmb_Lg		16 22 00.2	
	comp=Z,40nm,0.8s						
SLM	**Saint Louis**	5.94	67	IAmb_Lg		16 22 08.8	
	comp=Z,35nm,0.9s						
K31A	**O'Neill**	6.22	349	IAmb_Lg		16 22 33.8	
	comp=Z,32nm,1.1s						

IDC 20 16:30:35.0±2.8, 30°.13S×177°.62W, h0^{km}, mb3.6/2, mb1 3.9/3, mb1mx3.6/28, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=59.5km s-min=21.2km az=96.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	0.91	343	Pn	Pn	16 30 55.4	+0.3
	64nm,0.3s,baz=126,slow=19,SNR=2.1						
RAO				Sn	Sn	16 31 08.8	0.0
	784nm,0.3s,baz=110,slow=11,SNR=12						
URZ	**Urewera**	9.21	207	Pn	Pn	16 32 49.5	+0.4
	0.3nm,0.3s,baz=305,slow=19,SNR=1.7						
URZ				Sn	Sn	16 34 25.9	-7.6
	0.4nm,0.3s,baz=319,slow=19,SNR=1.1						
ASAR	**Alice Springs**	43.45	266	P	P	16 38 39.8	-0.3
	0.2nm,0.3s,baz=104,slow=7.4,SNR=14						
WRA	**Warramunga Arr**	44.42	272	P	P	16 38 47.8	-0.1
	0.5nm,0.3s,baz=108,slow=8.0,SNR=21						
FINES	**FINESS Array B**	145.00	340	PKPbc	PKPbc	16 50 11.9	-0.9
	2.0nm,0.8s,baz=64,slow=3.2,SNR=8.7						

NEIC 20 16:31:52.3±2.1, 15°.73N±0°.05×93°.70W±0°.05, h80^{km}±7^{km}, mb4.3/64, Md4.5/24(MEX), Error ellipse: s-maj=8.5km s-min=6.6km az=216.0

IDC 20 16:31:52.7±2.4, 15°.94N×93°.48W, h80^{km}±16^{km}, mb3.7/9, mb1 4.0/11, mb1mx3.8/38, mbtmp4.0/11, MS3.4/1, Ms1 3.4/1, ms1mx2.7/39, Error ellipse: s-maj=55.3km s-min=17.0km az=35.0

MEX 20 16:31:53.4±0.9, 15°.75N×93°.69W, h87^{km}±9^{km}, MD4.5

GCG 20 16:31:57.5±0.7, 15°.64N×93°.27W, h98^{km}±69^{km}, MD4.4

ISC 20 16:31:51.9±0.7, 15°.70N±0°.04×93°.72W±0°.03, h89^{km}±7^{km}, n131, σ1^{s}.26/154, mb4.2/26, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.48	90		Pn	16 32 05.8	-0.6
PCIG					Sn	16 32 16.4	-0.7
PCIG		0.48	90	*i* P	Pn	16 32 05.8	-0.6
PCIG				*e*S	Sn	16 32 16.4	-0.7
TGIG		1.21	28		Pn	16 32 13.8	-0.3
TGIG					Sn	16 32 29.1	-1.7
TGIG		1.21	28	*e*P	Pn	16 32 13.8	-0.3
TGIG				*e*S	Sn	16 32 29.1	-1.7
PATR	**El Naranjo**	1.55	112	*e*P	Pn	16 32 18.2	-0.2
PATR				*e*S	Sn	16 32 38.7	+0.2
PAVE	**Pavencul**	1.57	109	*e*P	Pn	16 32 18.5	-0.2
PAVE				*e*S	Sn	16 32 38.0	-1.0
THIG		1.61	119	*e*P	Pn	16 32 18.8	-0.1
THIG				*e*S	Sn	16 32 39.2	-0.3
CCIG	**Comitan**	1.63	69		Pn	16 32 18.8	-0.6
CCIG	**Comitan**	1.63	69	*e*P	Pn	16 32 19.0	-0.4
CCIG				*e*S	Sn	16 32 40.0	-0.3
UXUV	**UXUV**	1.66	346	*e*P	Pn	16 32 20.0	+0.4
UXUV				*e*S	Sn	16 32 39.2	-1.5
CMIG	**Matias Romero**	1.78	321	P	Pn	16 32 21.1	0.0
	170nm,0.3s,baz=156,slow=12,SNR=1310						
CMIG				S	Sn	16 32 43.5	+0.1
	339nm,0.3s,baz=26,slow=22,SNR=83						
CMIG	**Matias Romero**	1.78	321		Pn	16 32 20.9	-0.2
CMIG					Sn	16 32 43.1	-0.3
CMIG	**Matias Romero**	1.78	321	*e*P	Pn	16 32 20.9	-0.2
CMIG				*e*S	Sn	16 32 43.1	-0.3
HUEH	**Huehuetenango**	2.17	100	Pn	Pn	16 32 26.7	+0.2
RTAL	**Retalhuleu**	2.28	121	Pn	Pn	16 32 27.9	+0.2
STG3	**Santiaguito 3,**	2.30	115	*e*P	Pn	16 32 29.4	+1.2
HUIG	**Huatulco**	2.30	272		Pn	16 32 26.1	-1.9
HUIG					Sn	16 32 50.5	-5.2
HUIG	**Huatulco**	2.30	272	*e*P	Pn	16 32 26.1	-1.9
HUIG				*i* S	Sn	16 32 53.3	-2.4
TUIG	**Tuzandepetl**	2.41	344		Pn	16 32 28.6	-1.0
TUIG					Sn	16 32 55.1	-3.3
TUIG	**Tuzandepetl**	2.41	344	*i* P	Pn	16 32 28.9	-0.6
TUIG				*e*S	Sn	16 32 57.5	-0.9
NEUV	**Arroyo Zacate**	2.83	315	*i* S	Sn	16 33 06.0	-2.2
FUG	**Fuego 3**	3.05	114	*e*P	Pn	16 32 38.8	+0.7
VHO	**Vista Hermosa**	3.20	296	*e*P	Pn	16 32 41.2	+1.0
VHO				*e*S	Sn	16 33 16.8	-0.7
PEIG	**Puerto Escondi**	3.31	276	*i* P	Pn	16 32 39.9	-1.7
PEIG				*i* S	Sn	16 33 16.0	-4.1

NBG	Las Nubes	3.44	108	eP	Pn	16 32 45.2	+1.6
YOIG	Yosondua	3.85	288	eP	Pn	16 32 49.5	+0.4
YOIG				i S	Sn	16 33 34.3	+0.8
PETF	Flores	3.89	71	Pn	Pn	16 32 49.5	+0.1
MRL	Marmol	3.94	98	eP	Pn	16 32 51.1	+0.8
MRL				eS	Sn	16 33 33.2	-2.4
TOIG	Toxpalan	3.99	307	eP	Pn	16 32 51.5	+0.7
TOIG				eS	Sn	16 33 35.9	-0.7
SCIG	Sabancuy	4.05	36		Pn	16 32 50.8	-0.8
SCIG					Sn	16 33 33.1	-4.8
SCIG	Sabancuy	4.05	36	eP	Pn	16 32 50.8	-0.8
SCIG				eS	Sn	16 33 33.1	-4.8
ESQI	Esquipulas	4.38	104	Pn	Pn	16 32 55.9	-0.2
MTO3	Montecristo	4.41	107	Pn	Pn	16 32 56.4	-0.2
FTIG	Fresnillo de T	4.76	298	eP	Pn	16 33 02.7	+1.3
FTIG				i S	Sn	16 33 56.5	+1.1
TLIG	Tlapa	5.00	292	Pn	Pn	16 33 05.1	+0.5
TGUH	Tegucigalpa,Un	6.44	104	Pn	Pn	16 33 24.1	-0.2
MATN	Matagalpa	8.04	109	Pn	Pn	16 33 45.7	-0.4
BOAB	BOACO BROADBAN	8.46	111	Pn	Pn	16 33 50.9	-0.7
ACON	Acoyapa	9.09	113	Pn	Pn	16 33 59.7	-0.6
HZTE	Horizontes, Gu	9.34	121	Pn	Pn	16 34 04.7	+1.0
ORTG	Ortega, Santa	9.64	122		Pn	16 34 08.8	+0.9
DUNO	Dulce Nombre,	9.77	124	Pn	Pn	16 34 10.5	+0.9
JTS	Las Juntas de	10.09	121	P	Pn	16 34 14.3	+0.3
CAO2	Cobano, Puntar	10.31	124	Pn	Pn	16 34 17.3	+0.3
RIMA	Rio Macho	11.28	120		Pn	16 34 30.0	-0.3
PEZE	Perez Zeledon,	11.64	121	Pn	Pn	16 34 35.0	-0.1
SRBA	San Rafael, Bu	11.98	121		Pn	16 34 39.7	0.0
RIOS	Rincon, Osa	12.16	124	Pn	Pn	16 34 42.2	+0.2
BCIP	Isla Barro Col	15.03	114	Pn	Pn	16 35 20.6	+1.1
BCIP				IAmb	IAmb	16 35 43.6	
	comp=Z,25nm,0.9s						
435B	Jarrell	15.42	347	Pn	Pn	16 35 25.0	+0.6
435B				IAmb	IAmb	16 35 41.2	
	comp=Z,16nm,0.5s						
JCT	Junction City	15.73	340	P	P	16 35 31.6	+1.1
JCT				IAmb	IAmb	16 35 33.0	
	comp=Z,11nm,0.6s						
TX32	Lajitas Array	16.37	328	P	P	16 35 38.8	+1.1
TXAR	Lajitas Array	16.37	328	P	P	16 35 38.7	+1.0
	comp=Z,0.1nm,0.3s,baz=147,slow=13,SNR=18						
TX31	Lajitas Ar. Si	16.37	328	P	P	16 35 38.7	+1.0
WHTX	Lake Whitney,	16.57	349		Pn	16 35 38.9	+0.2
WHTX				IAmb	IAmb	16 35 58.0	
	comp=Z,8.7nm,0.7s						
656A	Willston	17.06	35	P	P	16 35 46.2	+1.0
ABTX	Abilene, Hawle	17.68	343	P	Pn	16 35 53.6	+1.2
ABTX				IAmb	IAmb	16 36 00.9	
	comp=Z,12nm,0.8s						
Z47A	Carrollton	18.16	15	P	P	16 35 58.0	+0.8
Z47A				IAmb	IAmb	16 36 01.3	
	comp=Z,14nm,1.0s						
MIAR	Mount Ida	18.76	0	P	P	16 36 03.3	-0.6
MNTX	Cornudas Mount	19.15	328	P	P	16 36 09.2	+1.1
X34A	Smith Ranch, M	19.18	350	P	P	16 36 09.3	+0.8
X34A				IAmb	IAmb	16 36 19.9	
	comp=Z,32nm,1.3s						
WMOK	Wichita Mounta	19.49	347	P	P	16 36 12.2	+0.3
W35A	Tecumseh	19.57	352	P	P	16 36 13.7	+1.0
W35A				IAmb	IAmb	16 36 17.9	
	comp=Z,12nm,0.6s						
X48A	Hartselle	19.61	17		Pn	16 36 16.2	+0.9
X48A				IAmb	IAmb	16 36 16.8	
	comp=Z,9.9nm,0.8s						
FNO	Franklin	19.75	351	P	P	16 36 15.7	+1.1
GOGA	Godfrey	19.92	26	P	P	16 36 16.0	-0.5
GOGA				IAmb	IAmb	16 36 27.1	
	comp=Z,17nm,1.2s						
MSTX	Muleshoe	19.94	337	P	P	16 36 17.7	+0.9
MSTX				IAmb	IAmb	16 36 19.5	
	comp=Z,11nm,0.9s						
OK025	Westminster Rd	20.06	351	P	P	16 36 18.1	+0.1
FPAL	Fort Paine	20.13	20	P	P	16 36 18.0	-0.8
FPAL				IAmb	IAmb	16 36 23.7	
	comp=Z,12nm,0.9s						
BCOK	Bluff Creek, N	20.17	351	P	P	16 36 19.7	+0.5
AMTX	Amarillo	20.39	341	P	P	16 36 22.3	+0.6
QUOK	Quay	20.56	353	P	P	16 36 25.0	+1.6
QUOK				IAmb	IAmb	16 36 44.8	
	comp=Z,10.0nm,0.7s						
U38A	Gravette	20.66	358	P	P	16 36 25.9	+1.5
121A	Cookes Peak, D	21.07	325	P	P	16 36 29.1	0.0
121A				IAmb	IAmb	16 36 33.0	
	comp=Z,12nm,1.0s						
HODGE	Hodges	21.14	27	P	P	16 36 29.2	-0.5
CLTN	Cedars of Leba	21.35	17	P	P	16 36 31.3	-0.5
CLTN				IAmb	IAmb	16 36 46.6	
	comp=Z,11nm,1.3s						
GC02	Grant County #	21.38	351	P	P	16 36 32.3	+0.1
KAN09	Caldwell North	21.63	352	P	P	16 36 35.1	+0.3
TKL	Tuckaleechee C	21.77	22	P	P	16 36 35.1	-1.2
	comp=Z,2.2nm,0.6s,baz=188,slow=20,SNR=6.3						
TKL	Tuckaleechee C	21.77	22	P	P	16 36 35.9	-0.5
TKL				IAmb	IAmb	16 36 43.3	
	comp=Z,14nm,1.4s						
ANMO	Albuquerque	22.31	332	P	P	16 36 43.7	+1.3
	comp=Z,2.0nm,0.7s,baz=146,slow=11,SNR=8.0						
ANMO	Albuquerque	22.31	332	P	P	16 36 43.8	+1.5
T25A	Trinidad	23.36	338	P	P	16 36 53.8	+1.0
T25A				IAmb	IAmb	16 36 55.7	
	comp=Z,8.9nm,0.8s						
P38A	Dawn	23.83	0	P	P	16 36 56.1	-0.7
SDCO	Great Sand Dun	24.30	337	P	P	16 37 02.2	+0.8
KSCO	Kaye Shedlock'	24.50	343	P	P	16 37 04.2	+1.2
KSCO				IAmb	IAmb	16 37 05.4	
	comp=Z,15nm,0.9s						
N38A	Joes South For	25.00	1	P	P	16 37 06.8	-0.6
BGNE	Belgrade	25.90	352	P	P	16 37 14.9	-0.7
CBYP	Canovanas	26.76	81	P	P	16 37 23.1	-0.4
N51A	Ashland	26.99	19	P	P	16 37 25.9	+0.6
PFO	Pinyon Flats O	27.19	315	LR	LR	16 48 15.7	
	comp=Z,80nm,20.6s,baz=126,slow=36						
ECSD	EROS Data Cent	28.05	356	P	P	16 37 33.6	-1.1
ECSD				IAmb	IAmb	16 37 34.3	
	comp=Z,4.7nm,0.6s						
PDAR	Pinedale Array	30.20	336	P	P	16 37 55.2	+1.1
	comp=Z,0.5nm,0.7s,baz=144,slow=9.7,SNR=5.4						
REDW	Red Top Meadow	31.21	336	P	P	16 38 04.6	+1.7
REDW				IAmb	IAmb	16 38 05.5	
	comp=Z,7.0nm,1.0s						
NVAR	Mina Array Bea	31.31	321	P	P	16 38 06.8	+2.9
	comp=Z,0.8nm,0.7s,baz=129,slow=9.0,SNR=5.4						
LOHW	Long Hollow	31.32	336	P	P	16 38 04.9	+1.0
LOHW				IAmb	IAmb	16 38 05.9	
	comp=Z,3.6nm,0.9s						
MOOW	Moose Ponds	31.49	336	P	P	16 38 07.3	+1.9
AGMN	Agassiz Nation	32.55	357	P	P	16 38 13.5	-0.8
AGMN				IAmb	IAmb	16 38 16.2	
	comp=Z,4.1nm,0.7s						
MCMT	McKenzie Canyo	33.23	335	P	P	16 38 22.5	+1.8
BOZ	Bozeman (W)	33.39	337	P	P	16 38 23.6	+1.7
LRM	Limekiln Ridge	33.89	336	P	P	16 38 26.5	+0.1
PLID	Pearl Lake	34.80	332	P	P	16 38 35.4	+1.2
EGMT	Eagleton	34.84	341	P	P	16 38 35.8	+1.5
EGMT				IAmb	IAmb	16 38 36.7	
	comp=Z,3.6nm,0.7s						
YKA	Yellowknife Ar	49.00	347	P	P	16 40 29.1	-0.2
	comp=Z,4.5nm,0.5s,baz=152,slow=7.3,SNR=106						
YKA	Yellowknife Ar	49.00	347	P	P	16 40 28.8	-0.4
DLBC	Dease Lake	50.43	336	P	P	16 40 42.0	+1.7
WHY	Whitehorse	53.76	336	P	P	16 41 06.1	+1.2
WHY				IAmb	IAmb	16 41 18.9	
	comp=Z,2.6nm,0.9s						
NRS	Narsarsuaq	56.91	26	P	P	16 41 26.8	-0.6
DAWY	Dawson	57.49	338	P	P	16 41 31.7	+0.2
DAWY				IAmb	IAmb	16 41 37.2	
	comp=Z,4.1nm,1.4s						
BCAR	Beaver Creek A	57.82	336	P	P	16 41 34.9	+1.1
L27K	Beaver Creek,	57.84	336	P	P	16 41 34.6	+0.7
INK	Inuvik	58.35	344	P	P	16 41 37.6	+0.3
	comp=Z,4.8nm,0.7s,baz=126,slow=6.1,SNR=22						
INK	Inuvik	58.35	344	P	P	16 41 37.4	+0.1
RES	Resolute Bay	58.99	360	P	P	16 41 40.3	-1.4
A36M	Sachs Harbour	59.27	349	P	P	16 41 42.0	-1.6
A36M				IAmb	IAmb	16 41 46.1	
	comp=Z,1.9nm,0.9s						
HDA	Harding Lake	60.48	336	P	P	16 41 52.7	+0.6
PRP	Porcupine Dome	60.48	338	P	P	16 41 53.3	+1.0
ILAR	Eielson Array	60.63	337	P	P	16 41 53.8	+0.6
	comp=Z,0.6nm,0.6s,baz=135,slow=5.1,SNR=9.1						
ILAR	Eielson Array	60.63	337	P	P	16 41 53.0	-0.1
RND	Reindeer	60.79	335	P	P	16 41 55.2	+0.9
BMAR	Burnt Mountain	61.13	340	P	P	16 41 57.1	+0.6
MDM	Murphy Dome	61.23	337	P	P	16 41 56.6	-0.6
MDM				IAmb	IAmb	16 42 24.2	
	comp=Z,3.9nm,1.4s						
TRF	Thorofare Moun	61.40	335	P	P	16 41 59.5	+1.0
TRF				IAmb	IAmb	16 42 25.3	
	comp=Z,1.8nm,0.8s						
H24K	Noodor Dome	61.49	338	P	P	16 41 59.6	+0.6
H24K				IAmb	IAmb	16 42 25.4	
	comp=Z,3.2nm,1.4s						
MLY	Manley	62.22	336	P	P	16 42 04.1	+0.2
MLY				IAmb	IAmb	16 42 32.4	
	comp=Z,4.7nm,1.4s						
J20K	Nowinta River	63.26	335	P	P	16 42 10.1	-0.6
J20K				IAmb	IAmb	16 42 17.4	
	comp=Z,3.8nm,1.2s						
TOLK	Toolik Lake Re	63.36	340	P	P	16 42 11.8	+0.3
IMAR	Indian Mountai	63.75	337	P	P	16 42 13.4	-0.5
EUNU	Eureka	64.47	1	P	P	16 42 17.6	-0.9
ESDC	Sonseca Array	79.97	52	P	P	16 43 52.2	+0.6
	comp=Z,0.3nm,0.5s,baz=294,slow=7.7,SNR=1.9						
ARCES	ARCESS Array B	85.04	18	P	P	16 44 17.0	-0.3
	comp=Z,3.4nm,1.0s,baz=289,slow=3.9,SNR=13						

IDC 20 16:35:14.1±8.5, 26°.36S×28°.22E, h0km, mb1 2.4/1, mb1mx2.2/37, mbtmp2.4/1, ML2.1/1, Error ellipse: s-maj=77.2km s-min=53.8km az=138.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	3.46	229	Pn	Pn	16 36 10.0	+0.6
	0.1nm,0.3s,baz=46,slow=14,SNR=1.3						
BOSA				Sn	Sn	16 36 48.1	-3.0
	0.0nm,0.3s,baz=76,slow=14,SNR=1.7						
BOSA				Lg	Lg	16 37 03.2	
	0.2nm,0.3s,baz=326,slow=11,SNR=5.3						
I47ZA	BOSHOF INFRASO	3.48	229	i		17 01 10.0	
	baz=51,slow=313,SNR=0.7						
I35NA	TSUMEB INFRASO	12.13	304	i		17 49 40.0	
	baz=125,slow=307,SNR=2.5						

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*IDC **20** 16:51:33.1±0.9, 16°.17S×173°.44W, h0km, mb4.1/8, mb1 4.4/9, mb1mx4.0/42, mbtmp4.1/9, ML3.9/1, MS3.3/9, Ms1 3.3/9, ms1mx3.1/36, Error ellipse: s-maj=50.3km s-min=17.0km az=136.0*

*NEIC **20** 16:51:38.3±1.8, 16°.20S±0°.08×173°.3W±0°.1, h35km±1km, mb4.6/14, Error ellipse: s-maj=22.4km s-min=13.5km az=97.0*

ISC 20 16:51:36.3±0.5, 16°.18S±0°.08×173°.2W±0°.1, h26km, n83, σ1^{s}02/71, mb4.4/15, MS3.3/8, 15C-5D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.64	31	Pn	Pn	16 52 17.0	-0.3
	22nm,0.3s,baz=17,slow=7.6,SNR=12						
AFI				Sn	Sn	16 52 44.3	-4.3
	52nm,0.3s,baz=56,slow=22,SNR=10						
AFI				LR	LR	16 53 27.2	
	comp=Z,188nm,19.2s,baz=208,slow=41						
NIUE	Niue	4.24	133		Pn	16 52 38.3	-1.0
MSVF	Nonsavu	8.52	258	LR	LR	16 56 29.2	
	comp=Z,236nm,21.2s,baz=133,slow=36						
RAR	Rarotonga	13.66	114	LR	LR	16 59 05.6	
	comp=Z,67nm,21.6s,baz=286,slow=33						
DZM	Mont Dzumac	20.10	250	eLR	LR	17 01 10.0	
	comp=Z,186nm,25.6s						
DZM	Mont Dzumac	20.10	250	LR	LR	17 02 37.6	
	comp=Z,120nm,20.9s,baz=166,slow=33						
PAE	Paea	22.64	97	eT	T	17 19 31.7	
	0.9nm,0.3s						
PPT	Papeete	22.64	97	LR	LR	17 02 41.0	
	comp=Z,60nm,21.7s,baz=280,slow=29						
PPT2	Papeete2	22.64	97	eLR	LR	17 02 00.6	
	comp=Z,109nm,24.2s						
PPT2	Papeete2	22.64	97	eT	T	17 19 32.8	
	2.9nm,0.4s						
TBI	Tubuai	23.42	111	eLR	LR	17 02 12.8	
	comp=Z,128nm,26.2s						
TBI	Tubuai	23.42	111	eT	T	17 20 31.4	
	5.5nm,0.4s						
URZ	Urewera	23.59	199	P	P	16 56 44.6	-0.3
	6.6nm,0.5s,baz=300,slow=23,SNR=6.5						
URZ	Urewera	23.59	199	P	P	16 56 43.5	-1.5
URZ				IAmb	IAmb	16 56 48.6	
	comp=Z,17nm,0.9s						
BKZ	Black Stump Fm	24.61	200	P	P	16 56 53.8	-0.8
BKZ				IAmb	IAmb	16 57 20.4	
	comp=Z,12nm,1.1s						
HNR	Honiara	27.02	281	LR	LR	17 06 27.8	
	comp=Z,133nm,20.6s,baz=134,slow=33						
EIDS	Eidsvold	34.54	249	P	P	16 58 23.1	+0.2
ARMA	Armidale	35.12	240	P	P	16 58 26.4	-1.5
STKA	Stephens Creek	43.82	241	P	P	16 59 39.3	-1.1
	comp=Z,1.8nm,0.7s,baz=125,slow=11,SNR=4.9						
WR0	Warramunga Arr	49.67	257	P	P	17 00 25.7	-0.6
WR0				IAmb	IAmb	17 00 53.3	
	comp=Z,7.2nm,1.2s						
WB0	Warramunga Arr	49.83	258	P	P	17 00 27.1	-0.5
WB0				IAmb	IAmb	17 00 29.3	
	comp=Z,11nm,1.3s						
WB2	Warramunga Arr	49.85	257	P	P	17 00 27.0	-0.7
WB2				IAmb	IAmb	17 00 40.9	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	49.86	257	P	P	17 00 26.5	-1.3
	comp=Z,0.8nm,0.7s,baz=81,slow=5.9,SNR=16						
AS31	Alice Springs	50.06	253	P	P	17 00 28.0	-1.3
ASAR	Alice Springs	50.06	253	P	P	17 00 27.9	-1.4
	comp=Z,4.3nm,0.7s,baz=89,slow=8.1,SNR=56						
ASAR				LR	LR	17 20 46.5	
	comp=Z,51nm,18.5s,baz=84,slow=35						
FORT	Forrest	55.24	244	P	P	17 01 07.1	-0.4
FITZ	Fitzroy Crossi	58.24	258	LR	LR	17 21 49.6	
	comp=Z,78nm,21.0s,baz=14,slow=31						
MJAR	Matsushiro Arr	69.66	320	LR	LR	17 26 44.9	
	comp=Z,14nm,21.8s,baz=245,slow=30						
QSPA	South Pole Qui	73.86	180	P	P	17 03 10.2	+1.5
QSPA				IAmb	IAmb	17 03 11.3	
	comp=Z,3.5nm,0.8s						
NVAR	Mina Array Bea	74.78	42	P	P	17 03 16.7	+2.2
	comp=Z,1.8nm,0.9s,baz=231,slow=10,SNR=6.5						
NVAR	Mina Array Bea	74.78	42	P	P	17 03 15.9	+1.4
N19K	Bonanza Creek	78.19	9	P	P	17 03 33.9	+0.7
N19K				IAmb	IAmb	17 03 55.5	
	comp=Z,15nm,1.4s						
M19K	Big River Lodg	79.24	9	P	P	17 03 39.7	+0.8
M19K				IAmb	IAmb	17 03 47.2	
	comp=Z,18nm,1.5s						
PDAR	Pinedale Array	82.71	42	P	P	17 03 59.8	+1.6
	comp=Z,1.1nm,0.8s,baz=225,slow=3.1,SNR=10						
PDAR	Pinedale Array	82.71	42	P	P	17 03 59.1	+1.0
ILAR	Eielson Array	83.17	11	P	P	17 04 00.5	+0.8
	comp=Z,0.8nm,0.6s,baz=232,slow=6.2,SNR=17						
YKA	Yellowknife Ar	90.73	23	P	P	17 04 37.8	+1.2
	comp=Z,0.1nm,0.5s,baz=241,slow=4.4,SNR=5.3						
CLL	Collm	144.61	353	ePKPdf	PKPdf	17 11 10.0	-0.5
DPC	Dobruska-Polom	145.06	349	ePKP	PKPdf	17 11 12.4	+1.0
BURAR	Bucovina Array	145.16	338	⇑P	PKPdf	17 11 12.8	+1.1
KRLC	Kraliky	145.24	349	ePKP	PKPdf	17 11 13.0	+1.3
MORC	Moravsky Berou	145.38	348	⇑P	PKPab	17 11 12.9	+0.9
TESR	Tescani	145.54	336	⇓P	PKPbc	17 11 12.3	-0.1
GHRR		145.60	334	⇑P	PKiKP	17 11 14.7	-1.6
TRPA	Tarpa	145.61	341	⇑P	PKPab	17 11 13.5	+0.7
TLCR		145.67	332	⇑P	PKPab	17 11 13.9	+0.8
PRU	Pruhonice	145.70	351	ePKP	PKPab	17 11 14.3	+1.2
NKC	Novy Kostel	145.73	354	ePKP	PKPab	17 11 14.4	+1.2
CFR	Carcaliu	145.98	333	⇑P	PKPab	17 11 14.3	+0.1
VRI	Vrincioaia	146.03	335	⇑P	PKPab	17 11 15.5	+1.0
PLOR	Plostina	146.08	335	⇑P	PKPab	17 11 15.0	+0.3
TPGR	Topolog	146.11	332	⇑P	PKPab	17 11 15.7	+0.9
TIRR	Tirgusor	146.42	332	⇑P	PKPdf	17 11 14.1	+0.3
DOPR	Dopca	146.49	336	⇑P	PKiKP	17 11 17.3	-0.9
MLR	Muntele Rosu	146.66	335	⇑P	PKPab	17 11 17.7	+0.6
KHC	Kasperske Hory	146.68	352	ePKP	PKPab	17 11 17.4	+0.5
DRGR		146.74	340	⇓P	PKPab	17 11 17.4	+0.2
BRTR	Keskin Array B	146.89	320	PKPbc	PKPab	17 11 17.6	-0.6
	comp=Z,2.2nm,0.8s,baz=78,slow=2.5,SNR=13						
GERES	GERESS Array B	146.94	352	PKPbc	PKPab	17 11 17.5	-0.5
	comp=Z,1.5nm,0.7s,baz=28,slow=3.2,SNR=16						
VOIR		147.06	336	⇑P	PKiKP	17 11 18.9	-0.6
ARR	Arges	147.28	336	⇓P	PKiKP	17 11 20.0	0.0
CONA	Conrad Observa	147.47	349	eP	PKPab	17 11 19.6	-0.5
	comp=Z,3.9nm,0.7s,SNR=5.6						
SIRR	Siria	147.54	341	⇓P	PKPab	17 11 19.5	-0.8
MOA	Molln	147.83	351	eP	PKiKP	17 11 20.2	-0.7
	comp=Z,1.1nm,0.6s						
BZS	Buzias	148.13	340	⇑P	PKiKP	17 11 20.9	-0.8
MORH	Mrgy, Hungar	148.47	344	⇓P	PKiKP	17 11 21.6	-0.7
WATA	Walderalm	148.69	354	eP	PKiKP	17 11 22.2	-0.7
	comp=Z,1.5nm,0.5s						
KBA	Koelnbreinsper	148.72	351	eP	PKPbc	17 11 22.1	+0.5
	comp=Z,1.8nm,0.6s						
MOTA	Moosalm	148.72	354	eP	PKiKP	17 11 22.9	-0.1
	comp=Z,7.7nm,1.3s						
WTTA	Wattenberg	148.75	354	eP	PKiKP	17 11 22.6	-0.5
	comp=Z,4.8nm,0.5s,SNR=9.7						
SOKA	Soboth	148.83	349	eP	PKPbc	17 11 22.2	+0.5
	comp=Z,4.5nm,1.0s						
DAVA	Damuels	148.88	356	i P	PKiKP	17 11 23.1	-0.2
	comp=Z,1.3nm,0.4s						
FETA	Feichten	149.08	355	eP	PKiKP	17 11 24.1	+0.3
	comp=Z,1.2nm,0.5s						
ABTA	Abfaltersbach	149.16	352	eP	PKPbc	17 11 23.0	+0.4
	comp=Z,5.2nm,0.7s,SNR=7.2						
TRUS	Trudelj	149.77	340	eP	PKiKP	17 11 25.6	+0.5
ZAPS	Zavoj	149.81	337	eP	PKiKP	17 11 26.3	+1.1
GRUS	Gruza	149.96	340	eP	PKiKP	17 11 25.6	+0.1
DIVS	Divibare	150.01	341	eP	PKiKP	17 11 26.2	+0.5
VTS	Vitosha	150.13	335	⇑P	PKiKP	17 11 26.3	+0.2
BBLS	Lazići	150.40	341	eP	PKiKP	17 11 26.5	0.0
IVAS	Ivanjica	150.43	340	eP	PKiKP	17 11 26.7	+0.2
BARS	Barje	150.51	337	eP	PKiKP	17 11 27.3	+0.6
SJES	Sjenica	150.77	340	eP	PKiKP	17 11 27.0	-0.3

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*NAO **20** 16:57:53.3±1.8, 78°.29N×7°.98E, h0km±11km, ML3.1*

*BER **20** 16:57:54.2±4.2, 78°.26N×7°.53E, h15km±17km, ML2.9, ML3.1(NAO), Confirmed Earthquake*

*IDC **20** 16:57:54.9±0.7, 78°.33N×8°.14E, h0km, mb3.6/11, mb1 3.8/13, mb1mx3.6/54, mbtmp3.6/13, ML2.6/2, MS3.4/21, Ms1 3.4/21, ms1mx3.2/46, Error ellipse: s-maj=14.5km s-min=7.1km az=8.0*

*DNK **20** 16:57:55.9±4.1, 78°.28N×7°.65E, h36km±46km, ML2.5*

*IEPN **20** 16:57:56.0, 78°.10N×7°.88E, h10km*

ISC 20 16:57:53.8±1.6, 78°.35N±0°.04×7°.99E±0°.04, h4km±10km, n63, σ3^{s}07/68, mb3.6/13, MS3.4/17, 1C-1D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	0.98	51	Pg	Pn	16 58 13.9	-0.3
KBS				Lg	Lg	16 58 26.4	
KBS	Kingsbay	0.98	51	i P	Pn	16 58 13.3	-0.9
KBS	Kingsbay	0.98	51	⇓iP	Pn	16 58 13.8	-0.3
KBS				eS	Sb	16 58 26.4	0.0
KBS				IAML		16 58 28.8	
	comp=Z,342nm,0.7s						
KBS	Kingsbay	0.98	51	eP	Pn	16 58 13.6	-0.6
KBS				eS	Sg	16 58 26.0	+0.9
BRBB	Barentsburg B	1.30	98	Pg	Pg	16 58 18.1	-0.6
BRBB				Lg	Lg	16 58 34.4	
BRBB	Barentsburg B	1.30	98	eP	Pg	16 58 18.1	-0.6
BRBB				eS	Sb	16 58 34.2	-1.6
BRBA	Barentsburg A	1.31	100	Pg	Pg	16 58 18.2	-0.7
BRBA				Lg	Lg	16 58 34.4	
BRBA	Barentsburg A	1.31	100	Pg	Pg	16 58 18.2	-0.7
BRBA				Sg	Sb	16 58 34.4	-1.6
SPA0	Spitsbergen Ar	1.72	92	Pn	Pb	16 58 25.0	-0.9
	baz=262,slow=14						
SPA0				Pg	Pg	16 58 26.0	-0.8
SPA0				Sn	Sn	16 58 42.8	-4.1
	baz=273,slow=22						
SPA0				Lg	Lg	16 58 47.1	
	baz=264,slow=18						
SPA0	Spitsbergen Ar	1.72	92	Pn	Pb	16 58 25.0	-0.9
	baz=262,slow=14						
SPA0				Pg	Pg	16 58 26.0	-0.8
SPA0				Sn	Sn	16 58 42.8	-4.1
	baz=273,slow=22						
SPA0				Sg	Sb	16 58 47.1	-0.8
	baz=264,slow=18						
SPA0				IAML		16 58 48.4	
	comp=Z,116nm,0.2s						
SPITS	Spitsbergen Ar	1.72	92	Pn	Pb	16 58 25.3	-0.6
	baz=260,slow=14,SNR=2331						
SPITS				Lg	Lg	16 58 47.0	
	baz=245,slow=14,SNR=17						
HSPB	Hornsund (broa	2.11	126	Pn	Pn	16 58 28.4	-1.3
HSPB				Sn	Sn	16 58 51.8	-4.4
HSPB	Hornsund (broa	2.11	126	eP	Pn	16 58 28.3	-1.4
HSPB				eS	Sn	16 58 52.1	-4.2
HSPB				IAML		16 58 52.7	
	comp=Z,48nm,0.7s						
HSPB	Hornsund (broa	2.11	126	⇑iP	Pn	16 58 28.3	-1.4
HSPB				eS	Sn	16 58 51.7	-4.6
HOPEN	Hopen	4.14	108	Pn	Pn	16 58 57.0	-0.6
HOPEN				Sn	Sn	16 59 42.6	-3.8
HOPEN	Hopen	4.14	108	eP	Pn	16 58 56.6	-1.0
HOPEN				eS	Sn	16 59 43.7	-2.6
HOPEN				IAML		16 59 44.8	
	comp=Z,43nm,0.3s						
HOPEN	Hopen	4.14	108	eP	Pn	16 58 56.6	-1.0
HOPEN				eS	Sn	16 59 42.0	-4.3
BJO1	Bjornoya	4.64	141	P	Pn	16 59 02.2	-2.3
BJO1				eS	Sn	16 59 51.8	-6.9
NOR	Nord	5.35	319	Pn	Pn	16 59 12.4	-1.8
NOR				Sn	Sn	17 00 09.1	-7.1
NOR	Nord	5.35	319	i P	Pn	16 59 12.0	-2.2
NOR				i S	Sn	17 00 08.4	-7.7
NOR				IAML		17 00 10.5	
	comp=Z,11nm,0.6s						
NOR	Nord	5.35	319	i P	Pn	16 59 12.0	-2.2
NOR				i S	Sn	17 00 08.4	-7.7
NOR				IAML		17 00 10.5	
	comp=Z,11nm,0.6s						
DAG	Danmarks Havn	5.93	268	i P	Pn	16 59 15.0	-7.2
DAG	Danmarks Havn	5.93	268	i P	Pn	16 59 17.1	-5.1
DAG				i S	Sn	17 00 17.4	-13
DAG				IAML		17 00 24.8	
	comp=Z,32nm,0.4s						
DAG	Danmarks Havn	5.93	268	i P	Pn	16 59 16.2	-5.9
DAG				i S	Sn	17 00 16.2	-14
DAG				IAML		17 00 24.8	
	comp=Z,32nm,0.4s						
ZFI2	Zemlya Franca-	7.46	52	eP	Pn	16 59 42.9	-0.2
ZFI2				eS	Sn	17 01 01.9	-6.0
	comp=Z,38nm,1.2s						
ZFI	Zemlya Franca-	7.46	52	eP	Pn	16 59 43.7	+0.7
ZFI				eS	Sn	17 01 03.5	-4.4
	comp=Z,55nm,2.0s						
DBG	Daneborg	7.73	253	Pn	Pn	16 59 42.9	-3.9
DBG				Sn	Sn	17 01 00.3	-14
DBG	Daneborg	7.73	253	i P	Pn	16 59 44.6	-2.2
DBG				i S	Sn	17 01 00.8	-14
DBG				IAML		17 01 07.0	
	comp=Z,14nm,0.9s						
DBG	Daneborg	7.73	253	i P	Pn	16 59 44.6	-2.2
DBG				i S	Sn	17 01 00.1	-15
DBG				IAML		17 01 07.0	
	comp=Z,14nm,0.9s						
KIF	Kilpisjarvi	10.02	153	Pn	Pn	17 00 16.1	-2.0
KIF	Kilpisjarvi	10.02	153	Pn	Pn	17 00 16.1	-2.0
ARA0	ARCESS Array S	10.02	143	Pn	Pn	17 00 16.1	-2.1
	baz=335,slow=12						
ARA0	ARCESS Array S	10.02	143	Pn	Pn	17 00 16.1	-2.1
	baz=335,slow=12						
ARCES	ARCESS Array B	10.02	143	Pn	Pn	17 00 16.6	-1.7
	baz=348,slow=13,SNR=1.6						
ARCES				Sn	Sn	17 02 05.0	-5.9
	baz=353,slow=23,SNR=1.8						
ARCES				LR	LR	17 04 02.4	
	comp=Z,190nm,19.1s,baz=290,slow=37						
NEEM	North Greenlan	11.97	295	i P	Pn	17 00 38.9	-6.1
NEEM				IAML		17 00 48.0	
	comp=Z,12nm,0.7s						
NEEM				i S	Sn	17 02 41.0	-18
NEEM	North Greenlan	11.97	295	i P	Pn	17 00 38.9	-6.1
NEEM				IAML		17 00 48.0	
	comp=Z,12nm,0.7s						
NEEM				i S	Sn	17 02 41.0	-18
SUMG	Summit	12.62	268	i P	Pn	17 00 48.6	-5.5
SUMG				i S	Sn	17 02 55.0	-20
SUMG				IAML		17 03 02.6	
	comp=Z,7.9nm,0.9s						
SUMG	Summit	12.62	268	i P	Pn	17 00 50.8	-3.3
SUMG				i S	Sn	17 02 54.2	-21
SUMG				IAML		17 03 02.6	

	comp=Z,7.9nm,0.9s						
NOA	NORSAR Array B	17.43	175	LR	LR	17 08 53.0	
	comp=Z,18nm,19.0s,baz=295,slow=38						
FINES	FINESS Array B	17.91	151	P	P	17 02 03.0	-1.0
	comp=Z,0.1nm,0.3s,baz=16,slow=11,SNR=1.9						
FINES				LR	LR	17 09 54.9	
	comp=Z,64nm,18.5s,baz=288,slow=40						
SFJD	Kangerlussuaq	19.62	268	LR	LR	17 10 02.6	
	comp=Z,194nm,19.4s,baz=16,slow=37						
RES	Resolute Bay	21.27	314	LR	LR	17 10 48.2	
	comp=Z,116nm,21.2s,baz=280,slow=36						
NRIK	Noril'sk	21.81	70	P	P	17 02 51.1	+4.8
	comp=Z,1.1nm,0.4s,baz=323,slow=6.0,SNR=4.3						
NRIK				LR	LR	17 13 42.1	
	comp=Z,70nm,18.3s,baz=276,slow=44						
KIRV	Kirov	23.95	121	LR	LR	17 13 32.3	
	comp=Z,138nm,18.2s,baz=337,slow=39						
FRB	Frobisher Bay	26.10	281	LR	LR	17 14 23.9	
	comp=Z,143nm,18.1s,baz=37,slow=38						
ARU	Arti	27.64	112	LR	LR	17 15 52.2	
	comp=Z,72nm,19.6s,baz=292,slow=39						
AKASG	Malin Array Be	28.82	151	P	P	17 03 54.1	+1.7
	comp=Z,0.1nm,0.2s,baz=331,slow=8.3,SNR=4.1						
AKASG				LR	LR	17 15 22.8	
	comp=Z,41nm,21.0s,baz=325,slow=36						
BELG	Belogornoye	29.58	128	LR	LR	17 15 38.2	
	comp=Z,90nm,21.8s,baz=335,slow=36						
GERES	GERESS Array B	29.69	172	P	P	17 04 02.1	+1.8
	comp=Z,0.3nm,0.6s,baz=24,slow=7.6,SNR=2.4						
GERES				LR	LR	17 14 24.4	
	comp=Z,44nm,21.6s,baz=67,slow=33						
SCHQ	Schefferville	33.96	272	LR	LR	17 18 46.3	
	comp=Z,140nm,18.2s,baz=89,slow=37						
ZALV	Zalesovo Beam	35.20	87	P	P	17 04 50.5	+2.2
	comp=Z,0.7nm,0.7s,baz=338,slow=11,SNR=4.2						
ZALV				LR	LR	17 24 14.1	
	comp=Z,58nm,18.6s,baz=310,slow=45						
YKA	Yellowknife Ar	35.28	317	P	P	17 04 49.3	+0.4
	comp=Z,0.5nm,0.8s,baz=7.5,slow=8.2,SNR=8.6						
ILAR	Eielson Array	36.32	342	P	P	17 05 00.1	+2.3
	comp=Z,0.8nm,0.9s,baz=3.6,slow=7.5,SNR=5.9						
KBZ	Khabaz	37.32	137	LR	LR	17 20 35.7	
	comp=Z,60nm,20.5s,baz=348,slow=36						
BRTR	Keskin Array B	40.13	149	P	P	17 05 32.9	+2.6
	comp=Z,0.4nm,0.9s,baz=302,slow=7.1,SNR=3.8						
BRTR				LR	LR	17 23 26.1	
	comp=Z,32nm,21.6s,baz=338,slow=38						
MKAR	Makanchi Array	41.48	93	P	P	17 05 44.0	+2.7
	comp=Z,1.2nm,0.9s,baz=339,slow=6.5,SNR=7.0						
MKAR				LR	LR	17 26 26.8	
	comp=Z,57nm,18.0s,baz=321,slow=41						
SONM	Songino Array	45.29	70	P	P	17 06 14.4	+2.3
	comp=Z,0.6nm,0.9s,baz=358,slow=6.5,SNR=3.5						
SONM				LR	LR	17 26 56.7	
	comp=Z,33nm,19.4s,baz=5.5,slow=38						
GEYT	Alibeck	45.38	121	LR	LR	17 29 10.9	
	comp=Z,48nm,18.3s,baz=250,slow=41						
PDAR	Pinedale Array	53.62	306	LR	LR	17 30 36.0	
	comp=Z,63nm,21.6s,baz=48,slow=37						
NVAR	Mina Array Bea	59.23	313	P	P	17 07 57.8	+1.9
	comp=Z,0.4nm,0.5s,baz=38,slow=4.6,SNR=3.8						
JNU	Nakatsue	63.91	52	P	P	17 08 29.8	+2.5
	comp=Z,5.2nm,0.3s,baz=0.0,slow=7.1,SNR=5.1						
TORD	Torodi Ar. Bea	65.28	187	P	P	17 08 37.4	+1.0
	comp=Z,0.6nm,0.8s,baz=353,slow=6.7,SNR=2.3						
TXAR	Lajitas Array	65.69	297	P	P	17 08 39.5	+0.5
	comp=Z,0.9nm,0.9s,baz=36,slow=5.3,SNR=8.5						
TXAR				LR	LR	17 39 41.6	
	comp=Z,54nm,19.9s,baz=0.0,slow=38						

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*IDC **20** 16:59:01.1±1.0, 11.°36N×139.°79E, h0^{km}, mb3.9/11, mb1 4.0/11, mb1mx3.8/44, mbtmp3.9/11, MS3.0/1, Ms1 3.0/1, ms1mx2.2/39, Error ellipse: s-maj=34.5km s-min=19.7km az=87.0*

*NEIC **20** 16:59:03.1±2.4, 11.°3N±0.°1×139.°7E±0.°2, h10^{km}±2^{km}, mb4.4/10, Error ellipse: s-maj=33.2km s-min=24.1km az=74.0*

ISC 20 16:59:04.5±0.9**, 11.°3N**±0.°1×**139.°7E**±0.°2**, h22**^{km}**, n30,** σ**1.s01**/22**, mb4.0**/16**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSLB	Suanglung	21.70	307	P	P	17 03 55.9	+1.8
SSLB				IAmb	IAmb	17 03 58.5	
	comp=Z,9.2nm,0.7s						
JNU	Nakatsue	23.15	341	P	P	17 04 09.6	+0.2
	comp=Z,6.1nm,0.4s,baz=358,slow=2.1,SNR=7.9						
JNU	Nakatsue	23.15	341	IAmb	IAmb	17 04 10.2	
	comp=Z,16nm,1.1s						
JWT	Wachi	24.16	351	P	P	17 04 20.2	+1.1
JWT				IAmb	IAmb	17 04 28.3	
	comp=Z,20nm,1.4s						
H11S3	WAKE ISLAND Hy	27.02	71	T	T	17 33 55.2	
	baz=258,slow=74						
H11S1	WAKE ISLAND Hy	27.04	71	T	T	17 34 04.1	
	baz=258,slow=74						
H11S2	WAKE ISLAND Hy	27.04	72	T	T	17 33 52.9	
	baz=258,SNR=8.9						
H11N1	WAKE ISLAND Hy	27.48	69	T	T	17 34 36.6	
	baz=254,slow=75,SNR=7.0						
H11N2	WAKE ISLAND Hy	27.48	69	T	T	17 34 39.7	
	baz=254,slow=75,SNR=3.9						
H11N3	WAKE ISLAND Hy	27.49	69	T	T	17 34 29.9	
	baz=254,slow=75,SNR=6.9						
KSRS	Korea Array	28.08	340	LR	LR	17 14 44.2	
	comp=Z,29nm,18.6s,baz=46,slow=34						
WRA	Warramunga Arr	31.52	190	P	P	17 05 25.2	+0.1
	comp=Z,0.6nm,0.9s,baz=11,slow=9.2,SNR=1.8						
AS31	Alice Springs	35.23	189	P	P	17 05 58.2	+0.7
AS31				IAmb	IAmb	17 06 26.4	
	comp=Z,1.8nm,1.3s						
ASAR	Alice Springs	35.24	189	P	P	17 05 58.1	+0.5
	comp=Z,0.3nm,0.5s,baz=19,slow=12,SNR=12						
CMAR	Chiang Mai Arr	39.94	285	P	P	17 06 38.4	+1.0
	comp=Z,0.8nm,0.7s,baz=86,slow=6.6,SNR=8.9						
CHTO	Chiang Mai	39.96	286	P	P	17 06 36.6	-1.1
SONM	Songino Array	45.85	329	P	P	17 07 25.8	+0.7
	comp=Z,0.3nm,0.5s,baz=146,slow=7.0,SNR=4.2						
MKAR	Makanchi Array	59.67	318	P	P	17 09 07.8	+0.6
	comp=Z,0.7nm,0.7s,baz=106,slow=9.1,SNR=6.3						
MKAR	Makanchi Array	59.67	318	P	P	17 09 04.5	-2.7
ZALV	Zalesovo Beam	60.59	326	P	P	17 09 13.4	+0.1
	comp=Z,0.7nm,0.5s,baz=115,slow=7.8,SNR=2.4						
KURK	Kurchatov	63.11	321	P	P	17 09 29.6	-0.8
KURK				IAmb	IAmb	17 09 30.9	
	comp=Z,2.2nm,0.7s						
GAR	Garm	66.94	308	P	P	17 09 55.7	0.0
CHGR	Chuyangaron	67.83	307	P	P	17 10 00.1	-1.1
BRVK	Borovoye	68.66	323	P	P	17 10 06.0	0.0
BRVK				IAmb	IAmb	17 10 07.1	
	comp=Z,2.0nm,0.7s						
ILAR	Eielson Array	72.77	25	P	P	17 10 30.8	-0.1
	comp=Z,0.3nm,0.5s,baz=250,slow=6.2,SNR=7.1						
BMAR	Burnt Mountain	74.14	23	P	P	17 10 38.6	-0.3
ABKAR	Akbulak array	74.82	318	P	P	17 10 42.5	-0.6
YKA	Yellowknife Ar	87.16	27	P	P	17 11 49.2	+0.5
	comp=Z,0.5nm,0.7s,baz=293,slow=5.2,SNR=5.9						
ARCES	ARCESS Array B	87.63	341	P	P	17 11 50.6	-0.2
	comp=Z,5.2nm,1.1s,baz=12,slow=6.4,SNR=5.7						
FINES	FINESS Array B	91.01	334	P	P	17 12 05.6	-1.2
	comp=Z,1.8nm,0.8s,baz=167,slow=2.4,SNR=1.2						

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*IDC **20** 17:02:52.6±1.8, 15.°65S×73.°14W, h80^{km}±19^{km}, mb3.4/3, mb1 3.7/6, mb1mx3.5/27, mbtmp3.8/6, Error ellipse: s-maj=36.0km s-min=13.4km az=46.0*

ISC 20 17:02:53.6±0.8**, 15.°8S**±0.°1×**73.°2W**±0.°1**, h102**^{km}**, n14,** σ**1.s69**/16**, mb3.4**/3**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB12	IPOC Station P	3.95	137	eP	Pn	17 03 52.1	-0.2
PB12				eS	Sn	17 04 35.1	-2.6
PB16	IPOC Station P	4.36	127	i P	Pn	17 04 00.1	+1.9
PB16				i S	Sn	17 04 48.0	-0.3
NNA	Nana	5.15	316	P	Pn	17 04 07.2	-1.3
	3.1nm,0.3s,baz=133,slow=13,SNR=3.2						
NNA				S	Sn	17 05 05.0	-1.9
	5.4nm,0.3s,baz=198,slow=20,SNR=2.0						
PB11	IPOC Station P	5.22	140	eP	Pn	17 04 10.1	+0.6
PB11				eS	Sn	17 05 05.5	-3.1
LVC	Limon Verde	7.93	150	P	Pn	17 04 48.1	+1.6
	13nm,0.3s,baz=337,slow=11,SNR=64						
LVC				S	Sn	17 06 14.2	-0.7
	6.2nm,0.3s,baz=119,slow=22,SNR=9.4						
SIV	San Ignacio	11.66	93	P	Pn	17 05 34.7	-2.1
	0.7nm,0.3s,baz=271,slow=13,SNR=15						
H03N1	Juan Fernandez	18.36	195	T	T	17 25 28.7	
	baz=18,slow=74,SNR=217						
H03N2	Juan Fernandez	18.36	195	T	T	17 25 28.1	
	baz=18,slow=74,SNR=210						
H03N3	Juan Fernandez	18.38	195	T	T	17 25 27.4	
	baz=18,slow=74,SNR=262						
PTGA	Pitinga	19.82	42	P	P	17 07 16.5	+0.1
	0.5nm,0.3s,baz=332,slow=23,SNR=2.0						
TXAR	Lajitas Array	53.62	327	P	P	17 12 05.6	+0.9
	0.2nm,0.5s,baz=153,slow=9.4,SNR=4.9						
TORD	Torodi Ar. Bea	79.42	73	P	P	17 14 50.2	+1.0
	0.4nm,0.6s,baz=250,slow=5.0,SNR=3.5						
YKA	Yellowknife Ar	84.47	342	P	P	17 15 15.3	+0.7
	1.2nm,0.8s,baz=136,slow=4.9,SNR=17						
SONM	Songino Array	148.00	1	PKPbc	PKPbc	17 22 28.7	+1.3
	0.3nm,0.6s,baz=355,slow=1.6,SNR=6.0						

IDC 20 17:04:55.7±10.0**, 5.°94S**×**153.°70E, h143**^{km}±72^{km}**, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.1**/34**, mbtmp3.8**/3**, Error ellipse: s-maj=144.0km s-min=56.7km az=115.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	7.33	242	P	Pn	17 06 40.3	0.0
	0.8nm,0.3s,baz=68,slow=10,SNR=12						
PMG				S	Sn	17 07 46.0	-16
	1.9nm,0.3s,baz=57,slow=8.7,SNR=6.4						
WRA	Warramunga Arr	23.40	232	P	P	17 09 52.8	+0.8
	2.3nm,0.8s,baz=56,slow=9.9,SNR=8.9						
WRA				PcP	PcP	17 13 33.8	-0.7
	0.7nm,0.7s,baz=57,slow=3.1,SNR=2.6						
ASAR	Alice Springs	25.95	225	P	P	17 10 14.6	-0.5
	0.8nm,0.8s,baz=56,slow=9.1,SNR=18						
ASAR				PcP	PcP	17 13 39.2	-0.9
	0.5nm,0.7s,baz=50,slow=3.0,SNR=5.8						
TORD	Torodi Ar. Bea	151.50	287	PKPbc	PKiKP	17 24 34.3	-0.1
	0.4nm,0.7s,baz=42,slow=1.7,SNR=4.3						

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*TAP **20** 17:05:03.3, 24.°43N×121.°85E, h13^{km}, ML3.0, B*

*JMA **20** 17:05:03.4±0.1, 24.°39N×121.°82E, h16^{km}, M2.3*

ISC 20 17:05:03.1±0.8**, 24.°43N**±0.°02×**121.°88E**±0.°02**, h13**^{km}±5^{km}**, n85,** σ**0.s47**/140**, 10C-7D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EWUT	Wuta	0.09	280	i P	Pg	17 05 06.1	0.0
	baz=283						
EWUT				i S	Sg	17 05 07.7	-0.5
	baz=283						
ENA	Nanau	0.12	270	⇑iP	Pg	17 05 06.5	0.0
	baz=267						
ENA				S	Sg	17 05 08.3	-0.5
	baz=267						
EHP	Heping Village	0.17	227	eP	Pg	17 05 07.4	+0.2
	baz=215						
EHP				S	Sg	17 05 10.0	+0.1
	baz=215						
NDS	Dongshan	0.25	324	⇑iP	Pg	17 05 08.7	+0.2
	baz=330						
NDS				S	Sg	17 05 11.8	-0.4
	baz=330						
TWE	Neicheng	0.35	327	⇑iP	Pb	17 05 10.5	-0.7
	baz=328						
TWE				eS	Sg	17 05 14.7	-0.3
	baz=328						
ENTT	Nioudou	0.35	307	⇑iP	Pg	17 05 10.6	+0.2
	baz=310						
ENTT				eS	Sg	17 05 15.1	-0.1
	baz=310						
ETL	Fush Village	0.36	221	⇓iP	Pg	17 05 10.2	-0.1
	baz=217						
ETL				eS	Sg	17 05 15.1	-0.2
	baz=217						
ILA	Ilan	0.36	341	eP	Pb	17 05 10.9	-0.4
	baz=346						
ILA				eS	Sg	17 05 15.5	+0.3
	baz=346						
NACB	Ninganchiao	0.36	226	⇓iP	Pg	17 05 10.2	-0.3
	baz=214						
NACB				eS	Sg	17 05 14.7	-0.7
	baz=214						
NDT	Datong Townshi	0.38	298	⇑iP	Pb	17 05 11.0	-0.7
	baz=300						
NDT				eS	Sg	17 05 15.4	-0.4
	baz=300						
EGS		0.42	7	eP	Pb	17 05 12.2	-0.2
	baz=19						
EGS				eS	Sb	17 05 17.5	-1.0
	baz=19						
ETLH	Xiulin Townshi	0.42	239	⇓iP	Pg	17 05 11.4	-0.2
	baz=236						
ETLH				eS	Sg	17 05 16.9	-0.4
	baz=236						
NTC	Toucheng	0.43	354	eP	Pb	17 05 12.2	-0.2
	baz=358						
NTC				eS	Sg	17 05 17.4	0.0
	baz=358						
TWD	Chiawan	0.43	217	⇓iP	Pg	17 05 11.6	-0.2
	baz=212						
TWD				eS	Sg	17 05 17.2	-0.3
	baz=212						
NNSB	Datong	0.45	270	⇑iP	Pg	17 05 12.1	0.0
	baz=270						
NNSB				eS	Sg	17 05 17.5	-0.8
	baz=270						
NNS	Nan Shan	0.46	272	⇑iP	Pg	17 05 12.2	-0.1
	baz=271						
NNS				S	Sg	17 05 18.0	-0.5
	baz=271						
NWLT	Wulai	0.49	315	eP	Pg	17 05 12.8	0.0
	baz=312						
NWLT				eS	Sg	17 05 18.8	-0.5
	baz=312						
HWA	Hwalien	0.51	209	eP	Pb	17 05 13.9	-0.1
	baz=210						
YHNB	Yeheng	0.52	298	⇑iP	Pb	17 05 13.6	-0.5
	baz=305						
YHNB				eS	Sg	17 05 19.7	-0.5
	baz=305						
NSK	Sanguang	0.53	298	⇑iP	Pg	17 05 13.8	+0.2
	baz=305						
NSK				eS	Sg	17 05 20.0	-0.8
	baz=305						
TIPB	Shuangxi	0.54	355	eP	Pb	17 05 14.5	-0.1
	baz=358						
TIPB				eS	Sg	17 05 20.9	-0.2
	baz=358						
ETM	Tongmen	0.58	217	i P	Pg	17 05 14.2	-0.3
	baz=225						
ETM				S	Sg	17 05 21.7	-0.5
	baz=225						
TWB1	Santiao Chiao	0.59	10	eP	Pb	17 05 14.9	-0.3
	baz=14						
TWB1				eS	Sg	17 05 22.1	-0.3
	baz=14						
FUSS	Fushou	0.61	253	⇓iP	Pg	17 05 15.0	-0.1
	baz=252						
FUSS				eS	Sg	17 05 22.1	-1.0
	baz=252						
TWA	Mucha	0.61	334	⇑iP	Pb	17 05 15.6	0.0
	baz=325						
TWA				eS	Sg	17 05 23.3	+0.1
	baz=325						
TEYL	Yanliau Villag	0.61	205	eP	Pg	17 05 15.3	+0.2
	baz=210						
NHDH	Xindian Distri	0.62	329	eP	Pb	17 05 15.9	+0.1
	baz=331						
NHDH				eS	Sg	17 05 23.4	-0.2
	baz=331						
WHF	Hehuan Shan	0.63	243	⇓iP	Pg	17 05 15.2	-0.3
	baz=241						
WHF				eS	Sg	17 05 23.0	-0.8
	baz=241						
NWF	Wu-fen Shan	0.65	352	eP	Pb	17 05 16.8	+0.5
	baz=346						
NWF				eS	Sb	17 05 24.5	-0.7
	baz=346						
WFSB	Wu-fen Shan	0.65	352	i P	Pb	17 05 16.6	+0.3
	baz=346						
WFSB				S	Sg	17 05 24.3	0.0
	baz=346						
TATO	Taipei	0.65	327	P	Pb	17 05 16.3	0.0
	baz=329						
TATO				S	Sg	17 05 23.9	-0.5
	baz=329						
NHY	Taipei	0.67	335	eP	Pb	17 05 16.9	+0.3
	baz=338						
TDCB	Techi	0.68	255	eP	Pg	17 05 16.4	0.0
	baz=247						
TDCB				eS	Sg	17 05 25.1	-0.4
	baz=247						
TAP	Taipei	0.70	331	eP	Pg	17 05 16.4	-0.3
	baz=325						
TAP				eS	Sb	17 05 26.1	-0.5
	baz=325						
ESL	Shilin	0.73	214	eP	Pg	17 05 16.9	-0.5
	baz=219						
ESL				eS	Sg	17 05 26.0	-1.1
	baz=219						
CHGB	Renai	0.74	240	⇓iP	Pg	17 05 17.4	-0.1
	baz=239						
CHGB				eS	Sb	17 05 27.9	-0.2
	baz=239						
YM01	YM01	0.77	339	eP	Pb	17 05 18.8	+0.4
	baz=333						
YM01				eS	Sb	17 05 28.2	-0.5
	baz=333						
TWS1	Kuangyinshan	0.79	328	eP	Pn	17 05 19.4	-0.6
	baz=330						
TWS1				eS	Sn	17 05 30.9	-0.7
	baz=330						
OWD	Renai	0.80	234	eP	Pg	17 05 18.2	-0.4
	baz=226						
OWD				eS	Sg	17 05 28.8	-0.3
	baz=226						
LIOB	Emei	0.81	286	eP	Pb	17 05 19.6	+0.5
	baz=292						
LIOB				eS	Sb	17 05 30.2	+0.2
	baz=292						
ANP	Anpu	0.82	337	eP	Pb	17 05 19.4	+0.1
	baz=339						
NSTT	Nanjuang	0.82	284	eP	Pb	17 05 19.5	+0.2
	baz=285						
NSTT				eS	Sg	17 05 29.8	-0.2
	baz=285						
NCU	National Centr	0.83	311	eP	Pn	17 05 20.9	+0.4
	baz=322						
NCU				eS	Sn	17 05 32.8	+0.3
	baz=322						
NCUH	Zhongli	0.83	311	eP	Pb	17 05 19.8	+0.4
	baz=302						
NTST	Danshui	0.83	332	eP	Pn	17 05 20.8	+0.3
	baz=334						
EGFH	Guangfu	0.86	209	eP	Pg	17 05 19.7	-0.1
	baz=211						
WHP	Taichung City	0.86	260	eP	Pb	17 05 20.3	+0.3
	baz=260						
WHP				eS	Sg	17 05 31.0	-0.2
	baz=260						
TWY	Chenhua	0.88	343	eP	Pn	17 05 21.2	0.0
	baz=339						
TWY				eS	Sn	17 05 33.4	-0.4
	baz=339						
SBCB	Hsinchu	0.89	294	eP	Pn	17 05 21.6	+0.3
	baz=289						
VWDT	VWDT	0.95	225	eP	Pg	17 05 20.9	-0.6
	baz=217						
VWDT				eS	Sg	17 05 33.4	-0.6
	baz=217						
WCS	Beigang Elemen	0.96	247	eP	Pg	17 05 21.5	-0.1
	baz=238						
WCS				eS	Sg	17 05 33.4	-0.8
	baz=238						
JYNG	Yonagunijimaku	0.97	88	P	Pn	17 05 22.3	-0.1
JYNG				eS	Sb	17 05 35.1	+0.6
NMLH	Miaoli	1.00	276	eP	Pn	17 05 23.4	+0.6
	baz=284						
NMLH				eS	Sb	17 05 36.2	+0.9
	baz=284						
TWQ1	Liyutan	1.01	266	eP	Pn	17 05 23.5	+0.5
	baz=265						
TWQ1				eS	Sg	17 05 35.7	-0.2
	baz=265						
NSY	Sanyi	1.02	270	eP	Pn	17 05 23.5	+0.4
	baz=269						
NSY				eS	Sn	17 05 38.5	+1.3
	baz=269						
HGSD	Ruisui	1.02	204	eP	Pb	17 05 23.1	+0.4
	baz=219						
YOJ	Yonaguni jima	1.03	88	eP	Pg	17 05 22.7	-0.4
	baz=76						
YOJ				eS	Sb	17 05 36.6	+0.3
	baz=76						
YOJ	Yonaguni jima	1.03	88	P	Pn	17 05 23.8	+0.6
YOJ				S	Sn	17 05 37.4	-0.1
SMLT	Sun Moon Lake	1.05	239	eP	Pb	17 05 23.2	0.0
	baz=238						
SMLT				eS	Sn	17 05 38.1	+0.1
	baz=238						
EHY	Hungye	1.05	209	eP	Pg	17 05 22.6	-0.8
	baz=212						
EHY				eS	Sb	17 05 37.2	+0.4
	baz=212						
SSLB	Suanglung	1.06	233	i P	Pg	17 05 22.8	-0.7
	baz=231						
TYC	Yuchr	1.07	241	eP	Pg	17 05 23.3	-0.5
	baz=240						
TYC				eS	Sg	17 05 36.7	-1.0
	baz=240						
WDJ	Dajia District	1.13	266	eP	Pn	17 05 25.8	+1.2
	baz=273						
TCU	Taichung	1.13	256	eP	Pb	17 05 23.9	-0.7
	baz=254						
YULB	Yu-li	1.16	207	eP	Pb	17 05 23.9	-1.1
	baz=216						
EYUL	Yuli	1.19	206	eP	Pn	17 05 25.7	+0.3
	baz=215						
WJS	Zhushan	1.21	240	eP	Pg	17 05 26.7	+0.3
	baz=232						
WNT	Mingjian	1.22	244	eP	Pg	17 05 27.2	+0.6
	baz=232						
FULB	Fuli	1.34	204	eP	Pn	17 05 27.7	+0.3
	baz=214						
ALS	Alishan	1.34	227	eP	Pg	17 05 28.7	-0.3
	baz=225						
CHN5	Tsauling	1.38	233	eP	Pg	17 05 29.6	0.0
	baz=231						
WDLH	Douliu	1.43	239	eP	Pg	17 05 30.8	+0.2
	baz=221						
ELDTW	Lidau	1.47	213	eP	Pb	17 05 30.0	-0.3
	baz=210						
WRL	Guolierlin Hig	1.47	249	eP	Pb	17 05 30.2	0.0
	baz=247						
TPUB	Ta-pu	1.60	226	eP	Pb	17 05 32.8	+0.2
	baz=209						
STYH	Taoyuan	1.61	219	eP	Pb	17 05 32.8	+0.1
	baz=217						
CHY	Chiayi	1.62	235	eP	Pg	17 05 34.1	-0.2
	baz=233						
WTP	Ta-pu	1.65	225	eP	Pb	17 05 33.4	0.0
	baz=208						
IRIF	Iriomote-Funau	1.69	93	P	Pn	17 05 32.5	+0.2
IRIF				eS	Sn	17 05 54.6	+0.8
TWK	Hsinying	1.72	228	eP	Pb	17 05 35.3	+0.7
	baz=210						
CHN1	Nanshi	1.75	225	eP	Pb	17 05 35.3	+0.2
	baz=224						
SGST	Jiashian	1.79	222	eP	Pn	17 05 34.4	+0.7
	baz=220						
JKRS	Kuro-shima	1.95	95	P	Pn	17 05 37.0	+1.1
JKRS				eS	Sn	17 06 00.8	+0.5
JIJ	Ishigaki jima	2.06	91	P	Pn	17 05 37.9	+0.4
JIJ				eS	Sn	17 06 02.7	-0.4
JISG	Ishigakijimahi	2.22	85	eS	Sn	17 06 06.9	0.0

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*SOME **20** 17:13:32.4, 40.°22N×73.°22E, h10^{km}*

*KRNET **20** 17:13:34.9±0.1, 40.°37N×73.°23E, h18^{km}, mb3.2*

*NNC **20** 17:13:34.9±1.1, 40.°39N×73.°20E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=8.5km s-min=4.3km az=175.0*

*ISU **20** 17:13:38, 40.°40N×72.°30E, h5^{km}*

ISC 20 17:13:34.7±1.0**, 40.°36N**±0.°03×**73.°24E**±0.°02**, h12**^{km}±10^{km}**, n53,** σ**1.s62**/84**, 27C-14D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	0.38	295	⇓iP	Pg	17 13 42.6	+0.3
	baz=95						
OHH				⇓eS	Sg	17 13 47.8	+0.4
	baz=95						

SFK	**Sufi-Kurgan**	**0.40**	**150**	⇑eP	**Pg**	**17 13 43.5**	**+0.8**
	baz=49						
SFK				⇑eS	**Sg**	**17 13 48.9**	**+0.7**
	baz=49						
ANR	**Andizhan**	**0.78**	**301**	eP	**Pn**	**17 13 51.0**	**-0.5**
ANR				eS	**Sn**	**17 14 03.0**	**-0.1**
DRK	**Karamyk**	**1.42**	**232**	⇓iP	**Pb**	**17 14 00.5**	**-0.7**
	baz=32						
DRK				⇓iS	**Sg**	**17 14 20.6**	**+0.4**
	baz=32						
ARLS	**Aral**	**1.71**	**28**	⇓iP	**Pb**	**17 14 06.5**	**+0.4**
	baz=29						
ARLS				⇓iS	**Sg**	**17 14 29.1**	**-0.5**
	baz=29						
ARK	**Arkit**	**1.73**	**326**	⇑iP	**Pb**	**17 14 06.9**	**+0.5**
	baz=27						
ARK				⇑iS	**Sg**	**17 14 29.8**	**-0.4**
	baz=27						
AML	**Almayashu**	**1.80**	**11**	P	**Pg**	**17 14 08.9**	**-0.3**
	SNR=89						
AML	**Almayashu**	**1.80**	**11**	⇑iP	**Pb**	**17 14 08.3**	**+0.5**
	baz=11						
AML				⇑eS	**Sg**	**17 14 32.4**	**-0.2**
	baz=11						
BTK	**Batken**	**1.88**	**261**	eP	**Pb**	**17 14 09.0**	**0.0**
BTK				eS	**Sg**	**17 14 34.0**	**-1.0**
BTK	**Batken**	**1.88**	**261**	⇑eP	**Pb**	**17 14 08.8**	**-0.2**
	baz=61						
BTK				⇑iS	**Sb**	**17 14 33.3**	**+0.8**
	baz=61						
TRKS	**Terek-Say**	**1.97**	**307**	⇑eP	**Pb**	**17 14 09.4**	**-1.2**
	baz=6.0						
TRKS				⇑iS	**Sb**	**17 14 34.4**	**-0.8**
	baz=6.0						
UCH	**Uchtor**	**2.10**	**27**	P	**Pg**	**17 14 14.5**	**-0.4**
	SNR=20						
UCH	**Uchtor**	**2.10**	**27**	⇑iP	**Pb**	**17 14 12.5**	**-0.4**
	baz=27						
UCH				⇑iS	**Sb**	**17 14 39.3**	**+0.2**
	baz=27						
MNAS	**Manas**	**2.19**	**346**	⇑eP	**Pb**	**17 14 13.5**	**-0.9**
	baz=46						
MNAS				⇑eS	**Sb**	**17 14 40.9**	**-0.7**
	baz=46						
EKS2	**Erkin-Say**	**2.33**	**10**	P	**Pg**	**17 14 18.5**	**-0.9**
	SNR=5.4						
EKS2	**Erkin-Say**	**2.33**	**10**	⇑iP	**Pb**	**17 14 15.6**	**-1.1**
	baz=10.0						
EKS2				⇑iS	**Sb**	**17 14 44.5**	**-1.1**
	baz=10.0						
MRKS	**Merke**	**2.38**	**360**	eP	**Pb**	**17 14 17.4**	**-0.1**
	16nm,0.5s						
MRKS				eS	**Sg**	**17 14 50.9**	**-0.3**
	44nm,0.3s						
MRKS	**Merke**	**2.38**	**360**	Pg	**Pb**	**17 14 17.4**	**-0.1**
	16nm,0.5s						
MRKS				Lg	Lg	17 14 50.9	
	44nm,0.3s						
AAK	**Ala-Archa**	**2.46**	**22**	P	**Pg**	**17 14 21.0**	**-0.8**
	SNR=19						
AAK	**Ala-Archa**	**2.46**	**22**	⇑Pg	**Pg**	**17 14 20.7**	**-1.1**
	10nm,0.5s						
AAK				⇓Lg	Lg	17 14 52.5	
	35nm,0.9s						
AAK	**Ala-Archa**	**2.46**	**22**	⇑iP	**Pb**	**17 14 17.1**	**-1.8**
	baz=22						
AAK				⇑iS	**Sb**	**17 14 48.0**	**-1.3**
	baz=22						
KBK	**Karagaybulak**	**2.63**	**29**	P	**Pg**	**17 14 24.4**	**-0.6**
	SNR=5.4						
KBK	**Karagaybulak**	**2.63**	**29**	⇓eP	**Pb**	**17 14 19.4**	**-2.4**
	baz=29						
KBK				⇓iS	**Sb**	**17 14 51.8**	**-2.3**
	baz=29						
GAR	**Garm**	**2.63**	**240**	⇑iP	**Pb**	**17 14 19.3**	**-2.6**
	baz=40						
GAR				⇑iS	**Sb**	**17 14 51.6**	**-2.6**
	baz=40						
FRU1	**Bishkek**	**2.66**	**23**	⇑eP	**Pb**	**17 14 20.2**	**-2.1**
	baz=22						
FRU1				⇑iS	**Sb**	**17 14 52.9**	**-2.0**
	baz=22						
CHMS	**Chumysh**	**2.87**	**23**	P	**Sg**	**17 15 07.0**	**+0.3**
	SNR=5.9						
BOOM	**Boomskoye usch**	**2.94**	**43**	⇑iP	**Pb**	**17 14 24.0**	**-3.1**
	baz=43						
BOOM				⇑iS	**Sb**	**17 14 59.6**	**-3.5**
	baz=43						
USP	**Ospenovka**	**3.05**	**18**	⇓eP	**Pn**	**17 14 25.1**	**+2.3**
	baz=18						
USP				⇓iS	**Sn**	**17 15 02.0**	**+2.7**
	baz=18						
TKM2	**Tokmak 2**	**3.11**	**34**	P	**Pg**	**17 14 33.1**	**-1.1**
	SNR=6.0						
TKM2	**Tokmak 2**	**3.11**	**34**	⇑Pg	**Pg**	**17 14 32.6**	**-1.6**
	2.2nm,0.3s						
TKM2				⇓Lg	Lg	17 15 13.0	
	6.5nm,0.6s						
CHM	**Chimkent**	**3.36**	**307**	eP	**Pb**	**17 14 36.0**	**+1.7**
	2.9nm,0.2s						
CHM				eS	**Sg**	**17 15 22.5**	**-0.1**
	87nm,0.3s						
KST	**Kastek**	**3.37**	**36**	eP	**Pb**	**17 14 36.2**	**+1.8**
	2.9nm,0.2s						
KST				eS	**Sg**	**17 15 23.1**	**+0.4**
	8.7nm,0.7s						
KST	**Kastek**	**3.37**	**36**	Pg	**Pb**	**17 14 36.2**	**+1.8**
	2.9nm,0.2s						
KST				Lg	Lg	17 15 23.1	
	8.7nm,0.7s						
KK02	**Karatay Array**	**3.41**	**324**	⇓Pg	**Pb**	**17 14 37.4**	**+2.3**
	3.0nm,0.3s						
KK02				⇑Lg	Lg	17 15 20.9	
	4.2nm,0.5s						
DGS	**Degeres**	**3.44**	**33**	eP	**Pb**	**17 14 37.7**	**+2.0**
	2.8nm,0.4s						
DGS				eS	**Sg**	**17 15 25.6**	**+0.4**
	6.5nm,0.5s						
DGS	**Degeres**	**3.44**	**33**	Pg	**Pb**	**17 14 37.7**	**+2.0**
	2.8nm,0.4s						
DGS				Lg	Lg	17 15 25.6	
	6.5nm,0.5s						
MTBS	**Maitube**	**3.65**	**40**	eP	**Pb**	**17 14 41.3**	**+2.1**
	1.5nm,0.2s						
MTBS				eS	**Sg**	**17 15 32.0**	**+0.1**
	5.6nm,0.3s						
MTBS	**Maitube**	**3.65**	**40**	Pg	**Pb**	**17 14 41.3**	**+2.1**
	1.5nm,0.2s						
MTBS				Lg	Lg	17 15 32.0	
	5.6nm,0.3s						
BRLS	**Borolday**	**3.69**	**317**	eP	**Pb**	**17 14 39.4**	**-0.4**
	9.2nm,0.3s						
BRLS				eS	**Sb**	**17 15 28.2**	**+3.8**
	5.9nm,0.2s						
BRLS	**Borolday**	**3.69**	**317**	Pg	**Pb**	**17 14 39.4**	**-0.4**
	9.2nm,0.3s						
BRLS				Lg	Lg	17 15 28.2	
	5.9nm,0.2s						
KRBS	**Karabastau**	**3.79**	**28**	eP	**Pb**	**17 14 43.0**	**+1.4**
	1.0nm,0.5s						
KRBS				eS	**Sg**	**17 15 34.2**	**-2.3**
	6.4nm,0.8s						
KRBS	**Karabastau**	**3.79**	**28**	Pg	**Pb**	**17 14 43.0**	**+1.4**
	1.0nm,0.5s						
KRBS				Lg	Lg	17 15 34.2	
	6.4nm,0.8s						
TNSS	**Tian-Shan**	**3.85**	**45**	eP	**Pb**	**17 14 44.8**	**+2.0**
	2.6nm,0.5s						
TNSS				eS	**Sg**	**17 15 37.5**	**-0.9**
	3.8nm,0.5s						
TNSS	**Tian-Shan**	**3.85**	**45**	Pg	**Pb**	**17 14 44.8**	**+2.0**
	2.6nm,0.5s						
TNSS				Lg	Lg	17 15 37.5	
	3.8nm,0.5s						
MDOK	**Medeo**	**3.99**	**44**	eP	**Pb**	**17 14 47.5**	**+2.4**
	2.9nm,0.4s						
MDOK				eS	**Sg**	**17 15 42.3**	**-0.6**
	11nm,0.9s						
MDOK	**Medeo**	**3.99**	**44**	⇓Pg	**Pg**	**17 14 49.0**	**-2.2**
	8.6nm,1.1s						
MDOK				Lg	Lg	17 15 41.9	
	11nm,0.8s						
MDOK	**Medeo**	**3.99**	**44**	Pg	**Pb**	**17 14 47.5**	**+2.4**
	2.9nm,0.4s						
MDOK				Lg	Lg	17 15 42.3	
	11nm,0.9s						
KOTS	**Kotyrbulak**	**4.08**	**44**	eP	**Pb**	**17 14 49.0**	**+2.5**
	2.7nm,0.3s						
KOTS				eS	**Sg**	**17 15 44.5**	**-1.0**
	16nm,0.6s						
KOTS	**Kotyrbulak**	**4.08**	**44**	Pg	**Pb**	**17 14 49.0**	**+2.5**
	2.7nm,0.3s						
KOTS				Lg	Lg	17 15 44.5	
	16nm,0.6s						
KUU	**Kurty**	**4.21**	**32**	eP	**Pb**	**17 14 51.1**	**+2.3**
	1.2nm,0.1s						
KUU				eS	**Sg**	**17 15 48.4**	**-1.6**
	7.3nm,0.5s						
KUU	**Kurty**	**4.21**	**32**	Pg	**Pb**	**17 14 51.1**	**+2.3**
	1.2nm,0.1s						
KUU				Lg	Lg	17 15 48.4	
	7.3nm,0.5s						
KTBS	**Karatobe**	**4.22**	**36**	eP	**Pb**	**17 14 50.9**	**+2.2**
	0.5nm,0.3s						
KTBS				eS	**Sg**	**17 15 48.4**	**-1.6**
	6.1nm,0.5s						
KTBS	**Karatobe**	**4.22**	**36**	Pg	**Pb**	**17 14 50.9**	**+2.2**
	0.5nm,0.3s						
KTBS				Lg	Lg	17 15 48.4	
	6.1nm,0.5s						

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*IDC **20** 17:37:01.3±2.5, 2°.49N×128°.66E, h250km±25km, mb3.1/6, mb1 3.3/8, mb1mx3.0/38, mbtmp3.8/8, Error ellipse: s-maj=43.5km s-min=15.3km az=61.0*

ISC 20 17:37:01.2±1.2, **2°.5N**±0°.1×**128°.7E**±0°.2, **h250**km, **n8**, σ**0ˢ.40**/9, **mb3.6**/5, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.24**	**142**	P	**Pn**	**17 38 08.1**	**+0.2**
	0.8nm,0.3s,baz=319,slow=18,SNR=6.0						
BATI	**Baumata**	**13.59**	**201**	P	**Pn**	**17 40 04.5**	**+0.1**
	1.6nm,0.3s,baz=56,slow=3.6,SNR=1.5						
FITZ	**Fitzroy Crossi**	**20.70**	**188**	P	**P**	**17 41 22.3**	**-0.5**
	2.7nm,0.9s,baz=22,slow=7.4,SNR=1.5						
WRA	**Warramunga Arr**	**23.00**	**166**	P	**P**	**17 41 44.4**	**0.0**
	0.6nm,0.4s,baz=345,slow=10,SNR=34						
ASAR	**Alice Springs**	**26.52**	**169**	P	**P**	**17 42 16.0**	**-0.1**
	1.1nm,0.4s,baz=352,slow=7.4,SNR=57						
ASAR				PcP	**PcP**	**17 45 34.1**	**0.0**
	0.2nm,0.4s,baz=357,slow=2.1,SNR=5.4						
CMAR	**Chiang Mai Arr**	**33.16**	**301**	P	**P**	**17 43 15.2**	**+0.6**
	0.8nm,0.3s,baz=118,slow=6.2,SNR=5.7						
STKA	**Stephens Creek**	**36.34**	**161**	P	**P**	**17 43 41.6**	**+0.1**
	0.6nm,0.3s,baz=330,slow=6.8,SNR=5.0						
MKAR	**Makanchi Array**	**59.66**	**325**	P	**P**	**17 46 38.8**	**-0.6**
	0.2nm,0.4s,baz=116,slow=6.8,SNR=5.0						

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*IDC **20** 17:59:44.5±3.6, 35°.81N×31°.20E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.1/35, mbtmp3.6/4, ML2.9/1, Error ellipse: s-maj=51.2km s-min=46.6km az=6.0*
*NIC **20** 17:59:51.8±0.0, 36°.09N×31°.21E, h31km±2km, Ml3.7/6*
*DDA **20** 17:59:52.3, 35°.89N×31°.18E, h35km±5km, ML3.3*
*HLW **20** 17:59:52.2, 35°.82N×30°.96E, h11km±18km, Ml3.9*
*THE **20** 17:59:58.1, 36°.11N×30°.54E, h1km±1km, ML2.4/2, Error ellipse: s-maj=4.8km s-min=0.8km az=148.0*

ISC 20 17:59:50.4±1.0, **35°.93N**±0°.02×**31°.12E**±0°.02, **h31**km±10km, **n64**, σ**1ˢ.74**/100, **mb3.9**/3, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	**Antalya-Kumluc**	**0.74**	**302**	iP	**Pn**	**18 00 06.9**	**+2.2**
AKUM				iS	**Sn**	**18 00 18.6**	**+3.7**
AKUM				IAML		18 00 20.0	
	comp=N,1µm,0.7s						
AKUM				IAML		18 00 28.0	
	comp=E,828nm,0.6s						
GAZI	**Gazipasa**	**1.01**	**72**	iP	**Pn**	**18 00 10.0**	**+1.5**
GAZI				iS	**Sn**	**18 00 21.5**	**-0.3**
GAZI				IAML		18 00 23.0	
	comp=E,711nm,0.2s						
KORT	**Korkueli**	**1.23**	**330**	iP	**Pb**	**18 00 13.4**	**+0.2**
KORT				iS	**Sn**	**18 00 31.1**	**+3.8**
AKAS	**Kas**	**1.26**	**284**	iP	**Pb**	**18 00 14.3**	**+0.6**
AKAS				IAML		18 00 40.0	
	comp=N,431nm,0.5s						
KSL	**Kastellorizon**	**1.26**	**280**	P	**Pb**	**18 00 13.9**	**+0.2**
KSL				S	**Sn**	**18 00 25.6**	**-2.3**
	comp=N,172nm,0.5s						
KSL	**Kastellorizon**	**1.26**	**280**	P	**Pb**	**18 00 13.8**	**+0.2**
KSL				S	**Sb**	**18 00 30.9**	**+1.4**
KSL				AML	AML	18 00 43.7	
	comp=N,0.5nm,0.7s						
KSL				AML	AML	18 00 43.7	
	comp=N,0.5nm,0.7s						
KSL				AML	AML	18 00 48.1	
	comp=N,0.3nm,0.5s						
KSL				AML	AML	18 00 48.1	
	comp=N,0.3nm,0.5s						
ELL	**Elmali**	**1.27**	**310**	P	**Pb**	**18 00 12.9**	**-1.0**
AKMS	**Akamas**	**1.35**	**132**	P	**Pb**	**18 00 15.1**	**0.0**
AKMS				S	**Sb**	**18 00 33.6**	**+1.6**
AKMS				AML	AML	18 00 40.0	
	comp=N,3.7nm,0.4s						
AKMS				AML	AML	18 00 40.0	
	comp=N,3.7nm,0.4s						
AKMS				AML	AML	18 00 41.2	
	comp=N,2.5nm,0.3s						
AKMS				AML	AML	18 00 41.2	
	comp=N,2.5nm,0.3s						
ALFC	**Alefka**	**1.43**	**122**	P	**Pb**	**18 00 15.8**	**-0.8**
ALFC				S	**Sb**	**18 00 34.7**	**+0.3**
ALFC				AML	AML	18 00 41.4	
	comp=N,3.6nm,0.3s						
ALFC				AML	AML	18 00 41.4	
	comp=N,3.6nm,0.3s						
ALFC				AML	AML	18 00 41.7	
	comp=N,3.6nm,0.3s						
ALFC				AML	AML	18 00 41.7	
	comp=N,3.6nm,0.3s						
BUCA	**Burdur, Bucak-**	**1.46**	**342**	iP	**Pb**	**18 00 15.7**	**-1.4**
SEDI	**Konya, Seydise**	**1.60**	**18**	iP	**Pb**	**18 00 18.8**	**-0.6**
SEDI				iS	**Sb**	**18 00 37.8**	**-1.5**
SEDI				IAML		18 00 40.0	
	comp=N,346nm,0.4s						
SEDI				IAML		18 00 41.0	
	comp=E,368nm,0.5s						
ERMK	**Ermenek**	**1.61**	**63**	iP	**Pb**	**18 00 19.6**	**-0.1**
ERMK				IAML		18 00 45.0	
	comp=E,313nm,0.3s						
NATA	**Nata**	**1.65**	**134**	P	**Pb**	**18 00 19.9**	**-0.3**
NATA				S	**Sb**	**18 00 40.4**	**-0.3**
NATA				AML	AML	18 00 49.9	
	comp=E,6.7nm,0.3s						
NATA				AML	AML	18 00 49.9	
	comp=E,6.7nm,0.3s						
NATA				AML	AML	18 00 53.5	
	comp=E,3.6nm,0.3s						
NATA				AML	AML	18 00 53.5	
	comp=E,3.6nm,0.3s						
FETY	**Fethiye**	**1.79**	**294**	P	**Pb**	**18 00 21.4**	**-1.1**
FETY				S	**Sn**	**18 00 39.7**	**-1.2**
FETY	**Fethiye**	**1.79**	**294**	iP	**Pb**	**18 00 21.4**	**-1.1**
FETY				iS	**Sn**	**18 00 40.4**	**-0.5**
GOLH	**Golhisar**	**1.81**	**317**	iP	**Pb**	**18 00 22.6**	**-0.4**
GOLH				iS	**Sb**	**18 00 43.9**	**-1.4**
CAEL	**Denizli, Camel**	**1.87**	**310**	iP	**Pb**	**18 00 23.5**	**-0.6**
CAEL				IAML		18 00 59.0	
	comp=N,194nm,0.7s						
KKBE	**Karaman, Kazim**	**1.95**	**48**	iP	**Pb**	**18 00 25.3**	**-0.1**
KKBE				iS	**Sb**	**18 00 49.4**	**+0.1**
KKBE				IAML		18 00 52.0	
	comp=E,382nm,0.5s						
BRDR	**BURDUR-Merkez**	**1.95**	**335**	iP	**Pb**	**18 00 24.5**	**-1.0**
GULN	**MERSIN_Gulnar**	**1.98**	**82**	iP	**Pb**	**18 00 24.5**	**-1.3**
GULN				iS	**Sb**	**18 00 49.2**	**-0.8**
ATHAL	**Athalassa**	**2.02**	**112**	S	**Sn**	**18 00 48.3**	**+1.8**
CSS	**Mathiatis**	**2.05**	**118**	P	**Pn**	**18 00 23.9**	**+1.1**
CSS				S	**Sn**	**18 00 49.6**	**+2.3**
BAGO	**Egridir - ISPA**	**2.07**	**353**	iP	**Pn**	**18 00 24.6**	**+1.5**
ASGA	**Asgata**	**2.08**	**123**	P	**Pb**	**18 00 25.8**	**-1.7**
ASGA				AML	AML	18 01 01.0	
	comp=E,0.9nm,0.5s						
ASGA				AML	AML	18 01 02.0	
	comp=E,1.2nm,0.5s						
DOGA	**KONYA_Doganhis**	**2.21**	**11**	iP	**Pb**	**18 00 28.0**	**-1.9**
DOGA				iS	**Sb**	**18 00 54.1**	**-2.8**
DOGA				IAML		18 00 55.0	
	comp=N,249nm,0.5s						
DOGA				IAML		18 00 56.0	
	comp=E,250nm,0.4s						
KONT	**Konya--Tatoy**	**2.24**	**26**	iP	**Pb**	**18 00 29.0**	**-1.3**
MVOU	**Mavrovouni**	**2.25**	**113**	P	**Pn**	**18 00 26.4**	**+1.0**
MVOU				S	**Sn**	**18 00 52.9**	**+0.8**
MVOU				AML	AML	18 01 03.3	
	comp=E,0.7nm,0.8s						
MVOU				AML	AML	18 01 03.3	
	comp=E,0.7nm,0.8s						
MVOU				AML	AML	18 01 05.0	
	comp=E,1.3nm,0.5s						
MVOU				AML	AML	18 01 05.0	
	comp=E,1.3nm,0.5s						
YVAC	**Isparta, Yalva**	**2.33**	**2**	iP	**Pb**	**18 00 29.0**	**-2.9**
YVAC				iS	**Sn**	**18 00 56.2**	**+1.7**
TAVA	**DENIZLI_Tavas**	**2.34**	**311**	iP	**Pb**	**18 00 29.2**	**-2.8**
OSC1	**CSNet OBS 1**	**2.43**	**177**	S	**Sb**	**18 01 02.0**	**-1.0**
ARG	**Arkhangelos**	**2.44**	**278**	P	**Pn**	**18 00 30.1**	**+2.0**
ARG				S	**Sn**	**18 00 56.2**	**-0.7**
	comp=E,125nm,0.3s						
KZIL	**AFYON_Kizioren**	**2.45**	**342**	iP	**Pb**	**18 00 30.7**	**-3.2**
KZIL				iS	**Sn**	**18 00 59.2**	**+1.9**
EREN	**Erenkoy**	**2.51**	**98**	iP	**Pb**	**18 00 31.7**	**-3.1**
EREN				iS	**Sn**	**18 01 00.9**	**+2.2**
EREN				IAML		18 01 07.0	
	comp=E,147nm,0.4s						
YER	**Yerkesik**	**2.58**	**299**	P	**Pn**	**18 00 32.4**	**+2.3**
YER				S	**Sn**	**18 00 58.7**	**-1.8**
MULA	**Mugla, Merkez-**	**2.61**	**301**	iP	**Pn**	**18 00 33.1**	**+2.5**
MULA				iS	**Sn**	**18 01 01.6**	**+0.3**
KDHN	**Kadinhani**	**2.70**	**17**	iP	**Pn**	**18 00 32.9**	**+1.0**
PASA	**Karahalli, USA**	**2.74**	**332**	iP	**Pn**	**18 00 34.2**	**+1.9**
PASA				iS	**Sn**	**18 01 05.9**	**+1.4**
ALIN	**Konya, Altinte**	**2.75**	**30**	iP	**Pn**	**18 00 31.1**	**-1.3**
KERG	**Konya-Eregli**	**2.83**	**58**	iP	**Pn**	**18 00 36.4**	**+2.7**
AFYO	**Afyonkarahisar**	**2.92**	**347**	iP	**Pn**	**18 00 37.5**	**+2.7**
AFYO				iS	**Sn**	**18 01 10.0**	**+1.1**
DAT	**Datca**	**2.97**	**287**	P	**Pn**	**18 00 37.6**	**+2.1**
DAT				S	**Sn**	**18 01 09.2**	**-0.9**
DAT	**Datca**	**2.97**	**287**	iP	**Pn**	**18 00 37.3**	**+1.8**
DAT				iS	**Sn**	**18 01 10.8**	**+0.7**
DAT				IAML		18 01 14.0	
	comp=N,75nm,0.2s						
OSC2	**CSNet OBS 4**	**3.00**	**161**	S	**Sb**	**18 01 16.5**	**-2.9**
AYDN	**Tasoluk**	**3.12**	**304**	iP	**Pn**	**18 00 39.1**	**+1.6**
AYDN				iS	**Sn**	**18 01 13.2**	**-0.5**
BDRM	**Kayabasi**	**3.17**	**292**	iP	**Pn**	**18 00 39.9**	**+1.7**
BDRM				iS	**Sn**	**18 01 14.1**	**-0.8**
BDRM				IAML		18 01 17.0	
	comp=N,86nm,0.4s						
KULA	**Kula-Manisa**	**3.24**	**323**	P	**Pn**	**18 00 40.4**	**+1.2**
USAK	**Uak-Merkez**	**3.24**	**330**	iP	**Pn**	**18 00 40.9**	**+1.7**
USAK				iS	**Sn**	**18 01 17.2**	**+0.4**
BODT	**Bodrum**	**3.27**	**291**	P	**Pn**	**18 00 41.5**	**+2.0**
BODT				S	**Sn**	**18 01 16.5**	**-0.9**
DDIM	**Aydin, Didim**	**3.47**	**297**	iP	**Pn**	**18 00 44.0**	**+1.8**
DDIM				IAML		18 01 25.0	
	comp=E,99nm,1.1s						
GCAM	**G?zelcaml?**	**3.58**	**301**	iP	**Pn**	**18 00 45.2**	**+1.4**
GCAM				iS	**Sn**	**18 01 23.9**	**-1.2**
SGAZ	**Eskisehir, Sey**	**3.60**	**357**	iP	**Pn**	**18 00 46.3**	**+2.2**
ANDZ	**Kutahya, Merke**	**3.70**	**345**	iP	**Pn**	**18 00 47.5**	**+1.9**
ANDZ				iS	**Sn**	**18 01 28.6**	**+0.5**
BRTR	**Keskin Array B**	**4.28**	**27**	Pn	**Pn**	**18 00 55.1**	**+1.6**
	comp=E,0.7nm,0.3s,baz=214,slow=15,SNR=30						
BRTR				Sn	**Sn**	**18 01 43.1**	**+0.7**
	comp=E,1.3nm,0.3s,baz=203,slow=27,SNR=7.5						
MATC	**Matruh**	**5.61**	**216**	P	**Pn**	**18 01 12.9**	**+1.3**
	baz=216						
MATC				S	**Sn**	**18 02 12.0**	**-3.0**
	baz=216						
HHAG	**Hagoal**	**6.02**	**172**	S	**Sn**	**18 02 24.0**	**-1.3**
	baz=170						
HHAG				AMP		18 02 00.0	
	baz=170						
SUZ	**Suez**	**6.24**	**166**	P	**Pn**	**18 01 23.8**	**+3.3**
	baz=164						
GLL	**Jalalah**	**6.36**	**175**	P	**Pn**	**18 01 24.7**	**+2.7**
	baz=174						
NBNS	**Bani Suef**	**7.29**	**179**	P	**Pn**	**18 01 37.3**	**+2.5**
	baz=177						
HKAT	**Jabal Katrina**	**7.78**	**161**	P	**Pn**	**18 01 44.1**	**+2.4**
	baz=159						
HKAT				S	**Sn**	**18 03 06.2**	**-2.6**
	baz=159						
SWA2		**8.20**	**217**	P	**Pn**	**18 01 48.8**	**+1.5**
	baz=217						
HFRF	**Wahat Farafira**	**9.08**	**196**	P	**Pn**	**18 02 01.1**	**+1.8**
	baz=196						
FINES	**FINESS Array B**	**25.73**	**354**	P	**P**	**18 05 17.2**	**-0.6**
	comp=E,3.1nm,0.9s,baz=166,slow=12,SNR=1.8						
ARCES	**ARCESS Array B**	**33.80**	**356**	P	**P**	**18 06 28.5**	**-0.7**
	comp=E,1.1nm,0.8s,baz=174,slow=10.0,SNR=1.0						
MKAR	**Makanchi Array**	**39.27**	**58**	P	**P**	**18 07 14.9**	**-1.3**
	comp=E,0.3nm,0.6s,baz=280,slow=8.6,SNR=2.1						

IDC 20 18:10:32.9±3.9, **5°.70S**×**150°.97E**, **h0**km, **mb3.2**/2, **mb1 3.5**/2, **mb1mx3.2**/30, **mbtmp3.3**/2, **Error ellipse: s-maj=147.4km s-min=53.5km az=118.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.49**	**227**	P	P	18 15 23.5	+0.1
	2.3nm,1.3s,baz=54,slow=10,SNR=4.8						
ASAR	**Alice Springs**	**24.27**	**221**	P	P	18 15 52.3	+0.3
	0.3nm,0.6s,baz=54,slow=9.6,SNR=7.9						
TORD	**Torodi Ar. Bea**	**148.82**	**286**	PKPbc	PKPbc	18 30 22.6	-1.0
	0.5nm,0.7s,baz=75,slow=2.4,SNR=2.8						

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*JMA **20** 18:11:43.7±0.3, 43°.58N×147°.24E, h27km, M3.5*
*SKHL **20** 18:11:44.2±0.3, 43°.70N×147°.30E, h44km±3km, mb4.7/5*

ISC 20 18:11:40.7±2.3, **43°.59N**±0°.08×**147°.39E**±0°.09, **h18**km±10km, **n19**, σ**1ˢ.77**/33, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.49**	**305**	iP	**Pg**	**18 11 53.4**	**+2.8**
SHO				AMB	AMB	18 11 53.9	
	200nm,0.2s						
SHO				iS	**Sg**	**18 12 00.0**	**+2.7**
SHO				A	A	18 12 01.7	
	9µm,0.4s						
SHO				A	A	18 12 01.7	
	4µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.19**	**292**	iP	**Pg**	**18 12 02.8**	**-0.9**
YUK				AMB	AMB	18 12 03.1	
	260nm,0.2s						
YUK				iS	**Sg**	**18 12 16.7**	**-2.6**
YUK				A	A	18 12 22.4	
	1µm,0.4s						
YUK				A	A	18 12 22.4	
	1µm,0.4s						
NEM2	**Nemuro 2**	**1.22**	**260**	P	**Pg**	**18 12 03.6**	**-0.7**
NEM2				eS	**Sg**	**18 12 18.2**	**-2.0**
NMR	**Nemuro--Hokkai**	**1.23**	**260**	iP	**Pg**	**18 12 03.7**	**-0.7**
NMR				iS	**Sg**	**18 12 18.3**	**-2.2**
GRPR	**Tuman**	**1.24**	**289**	iP	**Pg**	**18 12 03.5**	**-1.1**
GRPR				AMB	AMB	18 12 04.0	
	180nm,0.2s						
GRPR				iS	**Sg**	**18 12 17.7**	**-3.1**
GRPR				A	A	18 12 19.0	
	870nm,0.3s						
GRPR				A	A	18 12 19.0	
	1µm,0.3s						
GLVR	**Golovnino**	**1.36**	**277**	iP	**Pg**	**18 12 06.0**	**-1.0**
GLVR				AMB	AMB	18 12 06.0	
	480nm,0.2s						
GLVR				iS	**Sg**	**18 12 22.2**	**-2.6**
GLVR				A	A	18 12 24.0	
	230nm,0.2s						
GLVR				A	A	18 12 24.0	
	1µm,0.2s						
JRA	**Rausu**	**1.68**	**283**	P	**Pn**	**18 12 10.3**	**+1.1**
JRA				eS	**Sn**	**18 12 30.0**	**-0.2**
KUR	**Kuril'sk**	**1.68**	**12**	eP	**Pn**	**18 12 09.2**	**0.0**
KUR				AMB	AMB	18 12 09.7	
	60nm,0.3s						
KUR				iS	**Sn**	**18 12 28.4**	**-1.9**
KUR				A	A	18 12 29.0	
	390nm,0.2s						
KUR				A	A	18 12 29.0	
	180nm,0.2s						
JKHN	**Kushirohamanak**	**1.70**	**253**	P	**Pn**	**18 12 11.0**	**+1.5**
JNSB	**Nemuroshibetsu**	**1.74**	**277**	P	**Pn**	**18 12 11.4**	**+1.4**

JNK	**Nakash**	**1.94**	**271**	P	**Pn**	**18 12 13.8**	**+1.0**
JNK				*e*S	**Sn**	**18 12 36.2**	**-0.5**
AKK	**Akkeshi**	**1.94**	**254**	*e*P	**Pn**	**18 12 14.4**	**+1.5**
AKK				*e*S	**Sn**	**18 12 37.1**	**+0.3**
JAK	**Akkeshi**	**2.05**	**254**	P	**Pn**	**18 12 15.5**	**+1.2**
JAK				*e*S	**Sn**	**18 12 39.3**	**-0.2**
JTKR	**Abashiri--Toko**	**2.55**	**280**	P	**Pn**	**18 12 23.2**	**+2.0**
JAR	**Ashorobuto**	**2.65**	**265**	P	**Pn**	**18 12 24.8**	**+2.2**
JAR				*e*S	**Sn**	**18 12 54.8**	**+0.5**
JOB	**Onbets**	**2.69**	**256**	P	**Pn**	**18 12 24.7**	**+1.6**
JOB				*e*S	**Sn**	**18 12 55.4**	**+0.3**
JCH	**Churui**	**3.10**	**253**	P	**Pn**	**18 12 30.5**	**+1.7**
JCH				*e*S	**Sn**	**18 13 05.6**	**+0.1**
JFR	**Furan**	**3.52**	**265**	P	**Pn**	**18 12 37.5**	**+2.9**
JNBK	**Urakawa-nobuka**	**3.65**	**251**	P	**Pn**	**18 12 37.9**	**+1.6**

IDC 20 18:26:25.7±2.0**,4°.14S×129°.69E,h0^{km},mb3.5**/3**, mb1 3.5**/5**,mb1mx3.3**/44**,mbtmp3.4**/5**,ML2.8**/2**,Error ellipse: s-maj=168.6km s-min=26.5km az=71.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.34**	**164**	Pn	Pn	18 30 16.3	-0.5
	0.0nm,0.3s,baz=348,slow=13,SNR=1.6						
ASAR	**Alice Springs**	**19.83**	**169**	P	P	18 30 58.5	+0.2
	0.1nm,0.3s,baz=348,slow=10,SNR=11						
MKAR	**Makanchi Array**	**65.69**	**326**	P	P	18 37 11.9	-0.2
	0.2nm,0.6s,baz=116,slow=6.6,SNR=1.9						
ZALV	**Zalesovo Beam**	**68.90**	**333**	P	P	18 37 32.9	+0.6
	0.3nm,0.3s,baz=114,slow=6.8,SNR=1.9						
KURBB	**Kurchatov Arra**	**69.93**	**328**	P	P	18 37 38.5	-0.2
	0.2nm,0.5s,baz=123,slow=5.4,SNR=4.7						

BJI **20** *18:47:34.4±0.0,3°.70N×117°.90E,h10^{km},mB6.3/74, mb5.8/79,Ms6.2/97,Ms7 5.9/91*

IDC **20** *18:47:34.1±0.3,3°.63N×117°.68E,h0^{km},mb5.4/47, mb1 5.3/51,mb1mx5.3/56,mbtmp5.4/51,ML4.6/4,MS5.7/41, Ms1 5.7/41,ms1mx5.7/50,Error ellipse: s-maj=11.4km s-min=7.7km az=63.0*

MOS **20** *18:47:34.6±0.9,3°.69N×117°.70E,h15^{km},mb6.0/51, MS5.8/52,Error ellipse: s-maj=6.8km s-min=3.8km az=114.9*

NEIC **20** *18:47:35.3,3°.64N×117°.63E,h9^{km},Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.16; M$_{\theta\theta}$0.27; M$_{\phi\phi}$-0.43; M$_{r\theta}$-0.23; M$_{\theta\phi}$1.22; M$_{\phi r}$-0.08; Fault plane solution: M$_0$1.30000×10^{18} NP1:ϕ_s187.40000°, δ79.24000°,λ173.52000°. NP2:ϕ_s278.62000°,δ83.63000°, λ10.83000°. Principal axes: T 1.2445, Plg12.0000°, Azm143.0000°; N 0.1097, Plg77.0000°, Azm309.0000°; P -1.3543, Plg3.0000°, Azm53.0000°;*

DJA **20** *18:47:36.9±0.5,4°N±1°×11°8E±°,h16^{km}±3^{km},M6.0/146, mB6.4/141,mb5.8/146,MLv6.4/18,Mw6.0/87, Mw(mB)6.1/141,MwMwp5.8/113,Mwp5.9/113*

NEIC **20** *18:47:36.6±1.7,3°.65N±0°.05×117°.64E±0°.05,h14^{km}±1^{km}, mb6.0/133,Ms_20 5.9/295,Mwb6.0/35,Mww6.1,Error ellipse: s-maj=8.3km s-min=8.2km az=210.0*

GCMT **20** *18:47:37.6±0.1,3°.66N×117°.56E,h12^{km},MW6.0/159, Moment Tensor Solution. s148,c308; s159,c533; Duration: 2^{s}6 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.15±.01; M$_{\theta\theta}$0.11±.01; M$_{\phi\phi}$-0.26±.01; M$_{r\theta}$0.08±.02; M$_{\theta\phi}$1.45±.01; M$_{\phi r}$0.27±.02; Best double couple: M$_0$1.49100×10^{18} NP1:ϕ_s94.00000°,δ79.00000°, λ4.00000°. NP2:ϕ_s3.00000°,δ86.00000°,λ169.00000°. Principal axes: T 1.4300, Plg11.0000°, Azm318.0000°; N 0.1220, Plg78.0000°, Azm164.0000°; P -1.5510, Plg5.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

KLM **20** *18:47:39,3°.64N×117°.78E,h24^{km},mb6.1*

NEIC **20** *18:47:42,3°.61N×117°.65E,h12^{km},Moment Tensor Solution. Duration: 10^{s}0 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.12; M$_{\theta\theta}$0.10; M$_{\phi\phi}$-0.21; M$_{r\theta}$-0.34; M$_{\theta\phi}$1.48; M$_{\phi r}$0.32; Fault plane solution: M$_0$1.56000×10^{18} NP1: ϕ_s184.00000°,δ79.00000°,λ-170.00000°. NP2: ϕ_s92.00000°,δ81.00000°,λ-11.00000°. Principal axes: T 1.4303, Plg1.0000°, Azm138.0000°; N 0.2373, Plg75.0000°, Azm234.0000°; P -1.6676, Plg15.0000°, Azm48.0000°;*

ISC 20 18:47:36.1±0.3**,3°.66N**±0°.02×**117°.70E**±0°.03**,h12**^{km}±1^{km}**, h12**^{km}**:pP-P,n1465,**σ**1**^{s}**64**/1651**,mb5.8**/261**,MS5.9**/240**, 179C-133D,Fault plane solution: NP1:**ϕ_s287.86554°, δ78.46855°,λ41.32061°. **NP2:**ϕ_s187.89766°,δ49.68838°, λ164.80180°. **Principal axes:** T Plg36.7850°, Azm156.3301°; N Plg47.3805°, Azm300.6758°; P Plg18.4275°, Azm51.9046°; **Borneo**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPMM	**Sapulut**	**1.61**	**310**	P	**Pn**	**18 48 04.0**	**-0.5**
MYLDM	**Lahad Datu**	**1.71**	**28**	⇓P	**Pb**	**18 48 07.5**	**-0.1**
MYLDM	**Lahad Datu**	**1.71**	**28**	Pn	**Pb**	**18 48 07.3**	**-0.2**
KKM	**Kota Kinabalu**	**2.79**	**328**	⇑P	**Pn**	**18 48 20.3**	**-0.5**
KKM	**Kota Kinabalu**	**2.79**	**328**	Pn	**Pn**	**18 48 20.4**	**-0.5**
KKM	**Kota Kinabalu**	**2.79**	**328**	P	**Pn**	**18 48 20.8**	**0.0**
MPSI	**Mapaga**	**3.96**	**146**	P	**Pn**	**18 48 35.3**	**-1.5**
TOLI2	**Tolitoli**	**3.99**	**129**	Pn	**Pn**	**18 48 36.0**	**-1.2**
TOLI2				Sn	**Sn**	**18 49 23.4**	**-0.5**
TOLI2	**Tolitoli**	**3.99**	**129**	P	**Pn**	**18 48 35.8**	**-1.3**
SMKI	**Samarinda**	**4.11**	**187**	P	**Pn**	**18 48 39.3**	**+0.5**
BKB	**Balikpapan**	**4.95**	**189**	⇑P	**Pn**	**18 48 48.6**	**-1.8**
BKB	**Balikpapan**	**4.95**	**189**	P	**Pn**	**18 48 48.9**	**-1.4**
BKB	**Balikpapan**	**4.95**	**189**		**Pn**	**18 48 48.6**	**-1.8**
BKB	**Balikpapan**	**4.95**	**189**	P	**Pn**	**18 48 49.0**	**-1.4**
MRSI	**Marisa**	**5.29**	**127**	P	**Pn**	**18 48 54.4**	**-0.6**
	19nm131µm38µm3µm,0.9s						
MRSI				S	**Sn**	**18 49 54.6**	**-1.4**
	19nm131µm38µm3µm,0.9s						
MTKI	**Muara Teweh, K**	**5.36**	**212**	P	**Pn**	**18 48 57.0**	**+1.0**
	41nm135µm38µm968nm,0.7s						
ZCP	**Zamboanga City**	**5.44**	**53**	⇓*e*P	**Pn**	**18 48 58.9**	**+1.8**
ZCP				*e*S	**Sn**	**18 49 58.6**	**-1.1**
SBUM	**Sibu**	**5.60**	**258**	⇑P	**Pn**	**18 48 58.4**	**-0.9**
SBUM	**Sibu**	**5.60**	**258**	P	**Pn**	**18 48 59.0**	**-0.3**
SBUM	**Sibu**	**5.60**	**258**	Pn	**Pn**	**18 48 58.6**	**-0.7**
SBUM				Sn	**Sn**	**18 49 59.8**	**-3.9**
APSI	**Ampana**	**6.02**	**139**	P	**Pn**	**18 49 04.9**	**-0.1**
	17nm91µm24µm2µm,1.0s						
PPR	**Puerto Princes**	**6.17**	**10**	⇓*e*P	**Pn**	**18 49 08.7**	**+1.6**
LUWI	**Luwuk**	**6.89**	**133**	⇑P	**Pn**	**18 49 18.1**	**+1.0**
LUWI	**Luwuk**	**6.89**	**133**	P	**Pn**	**18 49 18.0**	**+0.9**
	20nm90µm48µm4µm,1.1s						
LUWI	**Luwuk**	**6.89**	**133**		**Pn**	**18 49 18.2**	**+1.0**
LUWI	**Luwuk**	**6.89**	**133**	P	**Pn**	**18 49 19.1**	**+2.0**
	4µm,1.1s						
KMSI	**Cibinong**	**6.99**	**116**	P	**Pn**	**18 49 17.8**	**-0.6**
	13nm1µm27µm2µm,0.6s						
TTSI	**Tana Toraja**	**6.99**	**162**	P	**Pn**	**18 49 19.4**	**+1.0**
	20nm82µm56µm6µm,0.7s						
PAGZ	**Pagadian**	**7.02**	**53**	⇓*i*P	**Pn**	**18 49 20.1**	**+1.3**
PAGZ				*i* S	**Sb**	**18 51 01.1**	**-1.0**
KBKI	**Kotabaru**	**7.08**	**192**	P	**Pn**	**18 49 18.3**	**-1.3**
	8.9nm2µm12µm582nm,0.7s						
STKI	**Sintang**	**7.17**	**240**	P	**Pn**	**18 49 21.0**	**+0.1**
	18nm78µm11µm162nm,1.0s						
DCPH	**Dipolog City**	**7.45**	**49**	⇑*e*P	**Pn**	**18 49 28.5**	**+3.7**
GSPH	**General Santos**	**7.62**	**71**	⇓*e*P	**Pn**	**18 49 31.0**	**+3.8**
GSPH				*e*S	**Sn**	**18 50 59.1**	**+5.5**
BBKI	**Banjar Baru**	**7.63**	**202**	P	**Pn**	**18 49 27.7**	**+0.5**
	20nm59µm30µm415nm,1.6s						
KSM	**Kuching**	**7.69**	**254**	⇑P	**Pn**	**18 49 26.8**	**-1.3**
KSM	**Kuching**	**7.69**	**254**	P	**Pn**	**18 49 27.0**	**-1.1**
KSM	**Kuching**	**7.69**	**254**	Pn	**Pn**	**18 49 26.8**	**-1.3**
KSM				Sn	**Sn**	**18 50 50.5**	**-4.8**
KSM	**Kuching**	**7.69**	**254**	P	**Pn**	**18 49 27.1**	**-1.1**
	362nm,0.9s						
SGSI	**Sangihe**	**7.82**	**90**	P	**Pn**	**18 49 29.4**	**-0.4**
	4.2nm7µm576nm,1.0s						
SPSI	**Sidrap Palu**	**7.85**	**165**	P	**Pn**	**18 49 31.1**	**+0.9**
	9.5nm57µm33µm3µm,1.0s						
CNOP	**Candoni, Negro**	**7.85**	**38**	⇓*e*P	**Pn**	**18 49 31.4**	**+1.1**
CNOP				*e*S	**Sg**	**18 51 42.5**	**-5.8**
SNPH	**Sibulan**	**7.89**	**44**	⇑*e*P	**Pn**	**18 49 33.3**	**+2.5**
SNPH				*e*S	**Sn**	**18 51 00.1**	**0.0**
KCP	**Kidapawan**	**8.08**	**65**	⇓*i*P	**Pn**	**18 49 35.2**	**+1.8**
KCP				*i* S	**Sn**	**18 51 05.5**	**+0.6**
BNSI	**Bone**	**8.36**	**163**	P	**Pn**	**18 49 38.5**	**+1.3**
	59µm26µm2µm,0.9s						
BUKP	**Musuan**	**8.44**	**60**	⇓*i*P	**Pn**	**18 49 41.6**	**+3.2**
BUKP				*i* S	**Sn**	**18 51 06.9**	**-6.9**
DAV	**Davao City (W)**	**8.55**	**66**	Pn	**Pn**	**18 49 43.4**	**+3.6**
	82nm,0.3s,baz=293,slow=7.3,SNR=2.7						
DAV				Sn	**Sn**	**18 51 18.3**	**+2.0**
	72nm,0.3s,baz=29,slow=22,SNR=5.9						
DAV				LR	LR	18 53 08.2	
	comp=Z,61µm,20.7s,baz=226,slow=39						
DAV	**Davao City (W)**	**8.55**	**66**	P	**Pn**	**18 49 41.4**	**+1.5**
DAV				P	**Pn**	**18 49 41.4**	**+1.5**
DAV				S	**Sn**	**18 51 20.5**	**+4.1**
DAV				S	**Sn**	**18 51 20.5**	**+4.1**
DAV	**Davao City (W)**	**8.55**	**66**	P	Pn	18 49 45.3	+5.4
	2µm,1.7s						
TBP	**Tagbilaran**	**8.57**	**45**	*e*P	**Pn**	**18 49 40.0**	**-0.1**
TBP				*i* S	Sg	18 51 55.3	-16
PBKI	**Pangkalan Bun**	**8.73**	**224**	P	**Pn**	**18 49 42.6**	**+0.2**
	91µm27µm1µm,1.5s						
KAPI	**Kappang**	**8.86**	**167**	Pn	**Pn**	**18 49 44.9**	**+0.9**
	32nm,0.3s,baz=338,slow=8.9,SNR=93						
KAPI				Sn	**Sn**	**18 51 26.4**	**+2.5**
	2.2nm,0.3s,baz=108,slow=6.4,SNR=2.2						
KAPI				LR	LR	18 54 11.5	
	comp=Z,121µm,21.7s,baz=7.0,slow=45						
KAPI	**Kappang**	**8.86**	**167**	P	**Pn**	**18 49 45.2**	**+1.2**
KAPI				P	**Pn**	**18 49 45.2**	**+1.2**
KAPI				P	**Pn**	**18 49 45.2**	**+1.2**
KAPI				S	**Sn**	**18 51 29.8**	**+6.0**
KAPI				S	**Sn**	**18 51 29.8**	**+6.0**
KAPI				S	**Sn**	**18 51 29.8**	**+6.0**
KAPI	**Kappang**	**8.86**	**167**	⇑P	**Pn**	**18 49 44.9**	**+0.9**
KAPI	**Kappang**	**8.86**	**167**	Pn	**Pn**	**18 49 45.2**	**+1.2**
KAPI	**Kappang**	**8.86**	**167**	P	**Pn**	**18 49 45.6**	**+1.5**
	2µm,1.0s						
BKSI	**Bulukumba**	**9.24**	**165**	P	**Pn**	**18 49 49.8**	**+0.4**
	52µm25µm2µm,1.2s						
RCP	**Roxas**	**9.31**	**32**	⇓*e*P	**Pn**	**18 49 52.9**	**+2.6**
MSLP	**Maasin**	**9.59**	**47**	⇓*e*P	**Pn**	**18 49 58.2**	**+4.1**
MSLP				*e*S		18 52 52.5	
SANI	**Sanana**	**10.04**	**124**	⇑P	**Pn**	**18 49 57.5**	**-2.9**
SANI	**Sanana**	**10.04**	**124**	P	**Pn**	**18 49 58.5**	**-1.8**
	41µm6µm282nm,0.7s						
TNTI	**Ternate**	**10.08**	**106**	⇑P	**Pn**	**18 50 01.1**	**+0.2**
TNTI	**Ternate**	**10.08**	**106**	P	**Pn**	**18 50 01.6**	**+0.8**
	15µm7µm494nm,1.1s						
TNTI	**Ternate**	**10.08**	**106**	Pn	**Pn**	**18 50 02.2**	**+1.3**
TNTI	**Ternate**	**10.08**	**106**	P	**Pn**	**18 50 03.8**	**+3.0**
	493nm,1.1s						
BSSI	**Bau Bau, Buton**	**10.13**	**164**	P	**Pn**	**18 50 02.0**	**+0.5**
	33µm12µm964nm,1.0s						
LUBP	**Lubang**	**10.32**	**14**	⇓*e*P	**Pn**	**18 50 04.6**	**+0.4**
LUBP				*e*S	**SgSg**	**18 52 55.1**	**-13**
LBMI	**Labuha**	**10.69**	**113**	P	**Pn**	**18 50 08.3**	**-0.9**
	21µm10µm915nm,1.1s						
BWJI	**Bawean**	**10.70**	**208**	P	**Pn**	**18 50 10.7**	**+1.3**
	35µm9µm543nm,1.1s						
TGY	**Tagaytay City**	**10.86**	**17**	Pn	**Pn**	**18 50 14.6**	**+3.0**
	baz=270,slow=3.1						
TGY				Sn	**Sn**	**18 52 16.7**	**+3.5**
	baz=90,slow=18						
JCNP	**Jose Panganiba**	**11.66**	**25**	⇓*i*P	**Pn**	**18 50 25.8**	**+3.3**
JCNP				*i* S	Sn	18 52 51.6	+19
TPI	**Tanjungpandan**	**11.89**	**238**	P	**Pn**	**18 50 27.0**	**+1.4**
	17µm395nm,3.0s						
ABJI	**Asem Bagus**	**11.89**	**197**	P	**Pn**	**18 50 27.9**	**+2.2**
	41µm12µm273nm,2.2s						
SRBI	**Singaraja**	**11.92**	**192**	P	**Pn**	**18 50 28.0**	**+1.9**
	26µm10µm313nm,1.2s						
BLJI	**Banyuglugur**	**12.04**	**200**	P	**Pn**	**18 50 28.8**	**+1.1**
	30µm5µm144nm,1.5s						
UWJI	**Ujung Watu**	**12.07**	**214**	P	**Pn**	**18 50 29.0**	**+0.9**
	15µm367nm,0.8s						
DLV	**T Lat**	**12.29**	**313**	P	**Pn**	**18 50 32.8**	**+1.6**
	560nm,1.8s						
TWSI	**Taliwang, Sumb**	**12.34**	**184**	P	**Pn**	**18 50 33.6**	**+1.8**
	13µm8µm350nm,1.1s						
PLAI	**Plampang**	**12.40**	**180**	P	**Pn**	**18 50 34.8**	**+2.1**
	21µm21µm729nm,2.7s						
PLAI	**Plampang**	**12.40**	**180**	P	**Pn**	**18 50 36.4**	**+3.7**
	722nm,2.7s						
DNP	**Denpasar**	**12.50**	**191**	P	**Pn**	**18 50 36.4**	**+2.4**
	31µm659nm,0.8s						
JAGI	**Jajag, Banyuwa**	**12.55**	**196**	⇑P	**Pn**	**18 50 36.2**	**+1.4**
JAGI	**Jajag, Banyuwa**	**12.55**	**196**	P	**Pn**	**18 50 36.0**	**+1.2**
	27µm15µm551nm,1.8s						
JAGI	**Jajag, Banyuwa**	**12.55**	**196**	P	**Pn**	**18 50 37.9**	**+3.1**
	548nm,1.8s						
GMJI	**Gumukmas**	**12.59**	**200**	P	**Pn**	**18 50 36.8**	**+1.6**
IGBI	**Denpasar**	**12.65**	**192**	P	**Pn**	**18 50 37.4**	**+1.3**
	15µm8µm301nm,2.1s						
AAI	**Ambon**	**12.78**	**125**	P	**Pn**	**18 50 37.7**	**-0.1**
	38µm6µm463nm,1.1s						
SMRI	**Semarang**	**12.87**	**214**	⇓P	**Pn**	**18 50 41.4**	**+2.4**
SMRI	**Semarang**	**12.87**	**214**	P	**Pn**	**18 50 40.7**	**+1.7**
	65µm37µm890nm,2.0s						
PPBI	**Pangkal Pinang**	**12.92**	**244**	P	**Pn**	**18 50 41.1**	**+1.3**
	45µm20µm430nm,1.8s						
EDFI	**Ende, Flores**	**12.95**	**162**	P	**Pn**	**18 50 40.7**	**+0.4**
	23µm6µm289nm,0.7s						
MMRI	**Maumere**	**13.02**	**160**	⇑P	**Pn**	**18 50 40.4**	**-0.8**
MMRI	**Maumere**	**13.02**	**160**	P	**Pn**	**18 50 41.7**	**+0.5**
	46µm25µm1µm,1.4s						
MMRI	**Maumere**	**13.02**	**160**	P	**Pn**	**18 50 43.0**	**+1.8**
	1µm,1.4s						
MSAI	**Masohi**	**13.21**	**122**	P	**Pn**	**18 50 43.4**	**-0.3**
	664nm62nm,0.8s						
WOJI	**Wonogiri, Jawa**	**13.27**	**211**	P	**Pn**	**18 50 45.5**	**+1.0**
	32µm14µm282nm,1.1s						
WBSI	**Waikabubak, Su**	**13.32**	**173**	P	**Pn**	**18 50 46.1**	**+0.9**
	25µm1µm,1.2s						
TPRI	**Tanjung Pinang**	**13.44**	**259**	P	**Pn**	**18 50 47.5**	**+0.7**
	11µm426nm,2.0s						
PCJI	**Pacitan**	**13.45**	**209**	P	**Pn**	**18 50 48.7**	**+1.7**
	42µm21µm478nm,0.9s						
YOGI	**Yogyakarta**	**13.58**	**213**	P	**Pn**	**18 50 49.5**	**+0.7**
	26µm20µm840nm,1.9s						
DSRI	**Dabo**	**13.74**	**253**	P	**Pn**	**18 50 51.4**	**+0.4**
	22µm8µm262nm,1.9s						
MYKOM	**Kota Tinggi**	**13.95**	**263**	⇓P	**Pn**	**18 50 54.0**	**+0.1**
MYKOM	**Kota Tinggi**	**13.95**	**263**	P	**Pn**	**18 50 55.0**	**+1.1**
MYKOM	**Kota Tinggi**	**13.95**	**263**	Pn	**Pn**	**18 50 54.6**	**+0.8**
KPJI	**Karang Pucung**	**13.99**	**219**	P	**Pn**	**18 50 56.4**	**+2.0**
	18µm599nm,1.8s						
BASI	**Baing, Sumba**	**14.08**	**168**	P	**Pn**	**18 50 56.9**	**+1.3**
	23µm26µm1µm,1.2s						
SWI	**Sorong**	**14.28**	**108**	P	**Pn**	**18 50 57.7**	**-0.7**
	16µm9µm293nm,1.2s						
SIJI	**Sorong**	**14.29**	**108**	Pn	**Pn**	**18 50 58.5**	**0.0**
	0.7nm,0.3s,baz=294,slow=11,SNR=38						
PMBI	**Palembang**	**14.48**	**243**	P	**Pn**	**18 51 02.5**	**+1.4**
	42µm30µm788nm,2.2s						
PMBI	**Palembang**	**14.48**	**243**	P	**P**	**18 51 04.6**	**-3.2**
	788nm,2.2s						
LEM	**Lembang**	**14.48**	**224**	Pn	**Pn**	**18 51 01.9**	**+0.6**
	1.8nm,0.3s,baz=314,slow=22,SNR=4.0						
LEM				LR	LR	18 56 28.3	
	comp=Z,60µm,18.9s,baz=47,slow=37						
LEM	**Lembang**	**14.48**	**224**	P	**Pn**	**18 51 01.8**	**+0.5**
	28µm10µm143nm,2.3s						
CMJI	**Cimerak**	**14.64**	**219**	P	**Pn**	**18 51 03.0**	**-0.3**
	28µm18µm874nm,2.0s						
BNDI	**Bandanaira**	**14.66**	**124**	⇑P	**Pn**	**18 51 02.3**	**-1.2**
TNG	**Tangerang**	**14.73**	**229**	P	**P**	**18 51 06.1**	**-4.6**
	26µm18µm582nm,1.6s						
TNG				P	**Pn**	**18 51 04.5**	**-0.1**
	48µm26µm862nm,1.6s						
CBJI	**Citeko**	**14.75**	**227**	P	**Pn**	**18 51 06.9**	**+2.2**
	49µm23µm295nm,1.0s						
SOEI	**Soe**	**14.85**	**154**	⇑P	**Pn**	**18 51 07.0**	**+0.8**
SOEI	**Soe**	**14.85**	**154**	P	**Pn**	**18 51 08.0**	**+1.8**
	58µm58µm2µm,1.2s						
SOEI	**Soe**	**14.85**	**154**	P	**P**	**18 51 09.3**	**-2.8**
SOEI	**Soe**	**14.85**	**154**	P	**P**	**18 51 09.4**	**-2.6**
	2µm,1.2s						
DBJI	**Dramaga**	**14.91**	**227**	P	**Pn**	**18 51 06.9**	**-0.1**
	48µm22µm440nm,2.1s						
JMBI	**JAMBI**	**15.00**	**250**	P	**Pn**	**18 51 09.8**	**+1.7**
	14µm381nm,1.6s						
BATI	**Baumata**	**15.00**	**157**	Pn	**Pn**	**18 51 10.0**	**+1.8**
	6.7nm,0.3s,baz=225,slow=0.7,SNR=53						
BATI	**Baumata**	**15.00**	**157**	P	**Pn**	**18 51 09.6**	**+1.4**
	27µm21µm1µm,1.2s						
SBJI	**Serang**	**15.09**	**230**	P	**Pn**	**18 51 08.7**	**-0.7**
	19µm579nm,1.5s						
CNJI	**Cibinong**	**15.16**	**224**	P	**Pn**	**18 51 09.8**	**-0.5**
	45µm25µm1µm,2.5s						
JRMM	**Jerantut**	**15.19**	**271**	P	**Pn**	**18 51 12.0**	**+1.3**
BLSI	**Bandar Lampung**	**15.33**	**234**	P	**Pn**	**18 51 12.3**	**-0.3**
	35µm17µm373nm,1.8s						
SKJI	**Sukabumi**	**15.36**	**226**	P	**P**	**18 51 17.2**	**-0.4**
KLI	**Kotabumi**	**15.37**	**237**	P	**Pn**	**18 51 12.3**	**-0.7**
	40µm28µm1µm,1.4s						
CGJI	**Cibinong**	**15.74**	**230**	P	**Pn**	**18 51 17.1**	**-0.8**
	39µm12µm354nm,1.7s						
MDSI	**Maura Dua**	**15.74**	**239**	P	**Pn**	**18 51 18.0**	**+0.1**
	22µm9µm411nm,1.3s						
RGRI	**Rengat**	**15.86**	**256**	P	**Pn**	**18 51 20.2**	**+0.7**
FAKI	**Fak Fak**	**15.94**	**114**	⇑P	**Pn**	**18 51 18.1**	**-2.4**
FAKI	**Fak Fak**	**15.94**	**114**	P	**Pn**	**18 51 17.7**	**-2.8**
FAKI	**Fak Fak**	**15.94**	**114**	P	**Pn**	**18 51 21.9**	**+1.4**
	324nm,3.0s						
LHSI	**Lahat**	**16.00**	**242**	P	**Pn**	**18 51 21.2**	**0.0**
	36µm33µm966nm,2.9s						
KASI	**Kota Agung**	**16.03**	**235**	P	**Pn**	**18 51 21.4**	**-0.2**
	40µm13µm410nm,1.7s						
LWLI	**Liwa**	**16.12**	**238**	P	**Pn**	**18 51 23.0**	**+0.1**
	33µm549nm,1.4s						
IPM	**Ipoh**	**16.65**	**273**	P	**Pn**	**18 51 30.0**	**+0.4**
IPM	**Ipoh**	**16.65**	**273**	P	**Pn**	**18 51 29.6**	**0.0**
IPM	**Ipoh**	**16.65**	**273**	P	**Pn**	**18 51 30.4**	**+0.8**
	641nm,1.5s						
UBPT	**Khong Chiam**	**16.68**	**315**	⇑P	**Pn**	**18 51 30.4**	**+0.4**
UBPT	**Khong Chiam**	**16.68**	**315**	P	**Pn**	**18 51 30.8**	**+0.8**
UBPT				IAmb	IAmb	18 51 35.1	
	comp=Z,2µm,1.8s						
KSI	**Kapahiang**	**16.75**	**244**	P	**Pn**	**18 51 31.5**	**+0.6**
MASI	**Maura Aman, Be**	**16.86**	**247**	P	**Pn**	**18 51 33.1**	**+0.8**
	comp=Z,47µmcomp=Z,59µmcomp=Z,3µm,1.7s						
BKNI	**Bangkinang**	**16.97**	**259**	⇓P	**Pn**	**18 51 34.0**	**+0.3**
BKNI	**Bangkinang**	**16.97**	**259**	P	**Pn**	**18 51 33.9**	**+0.3**
	comp=Z,29µmcomp=Z,18µmcomp=Z,982nm,1.3s						
BKNI	**Bangkinang**	**16.97**	**259**	P	**P**	**18 51 34.8**	**-0.7**
	comp=Z,985nm,1.3s						
KULM	**Kulim**	**17.07**	**276**	⇓P	**Pn**	**18 51 35.1**	**+0.2**
KULM	**Kulim**	**17.07**	**276**	P	**Pn**	**18 51 35.0**	**+0.1**
KULM	**Kulim**	**17.07**	**276**	P	**Pn**	**18 51 35.0**	**+0.1**
QIZ	**Qiongzhong**	**17.10**	**334**	P	**P**	**18 51 36.8**	**-0.1**
QIZ				S	**Sn**	**18 54 48.8**	**+3.4**
QIZ				PcP	**PcP**	**18 56 21.3**	**+1.1**
QIZ				pmax	pmax		
	comp=Z,420nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,6µm,2.9s						
QIZ				LR	LR		
	comp=Z,40µm,14.2s						
QIZ				LR	LR		
	comp=Z,31µm,16.7s						
QIZ				LR	LR		
	comp=Z,45µm,15.1s						
QIZ	**Qiongzhong**	**17.10**	**334**	P	**P**	**18 51 39.2**	**+2.3**
	comp=Z,504nm,1.9s						
BBP	**Basco**	**17.19**	**14**	⇑*e*P	**P**	**18 51 39.5**	**+1.5**
BBP				*e*S	SgSg	18 56 32.3	-16
KRJI	**Kerinci**	**17.20**	**251**	P	**P**	**18 51 38.0**	**-0.2**
	comp=Z,56µmcomp=Z,75µmcomp=Z,3µm,2.2s						
I39PW	**PALAU INFRASON**	**17.20**	**76**	*i*		20 22 30.0	
	baz=264,slow=299,SNR=1.0						
PDSI	**Padang**	**17.81**	**256**	P	**P**	**18 51 45.0**	**+0.1**
SAUI	**Saumlaki**	**17.83**	**130**	⇑P	**Pn**	**18 51 43.7**	**-0.6**
SAUI	**Saumlaki**	**17.83**	**130**	P	**Pn**	**18 51 43.5**	**-0.8**
	comp=Z,51µmcomp=Z,33µmcomp=Z,804nm,1.6s						
SAUI	**Saumlaki**	**17.83**	**130**	P	**P**	**18 51 46.9**	**+1.9**
	comp=Z,1µm,1.2s						
MNSI	**Mandailing Nat**	**18.32**	**262**	P	**P**	**18 51 50.7**	**+0.2**
	comp=Z,30µmcomp=Z,14µmcomp=Z,450nm,1.2s						
XMI	**Christmas Isla**	**18.42**	**220**	P	**P**	**18 51 49.6**	**-2.0**
	comp=Z,744nm,1.9s						
XMIS	**Christmas Isla**	**18.47**	**220**	P	**P**	**18 51 50.7**	**-1.4**
	comp=Z,510nm,1.3s						
PSI	**Prapat**	**18.76**	**268**	P	**Pn**	**18 51 55.9**	**0.0**
	comp=Z,1.6nm,0.3s,baz=78,slow=9.9,SNR=49						
PSI				LR	LR	19 00 03.5	
	comp=Z,14µm,20.9s,baz=98,slow=40						
MCO	**Taipa Grande**	**18.79**	**348**	P	**Pn**	**18 51 59.0**	**+3.0**
PPSI	**Pulau Pagai**	**18.79**	**250**	P	**P**	**18 51 54.9**	**-0.7**
	comp=Z,35µmcomp=Z,30µmcomp=Z,1µm,2.0s						
HKC	**Hong Kong Obse**	**18.85**	**350**	⇑P	**Pn**	**18 51 58.0**	**+1.3**
BAKI	**Biak**	**19.02**	**104**	P	**P**	**18 51 58.3**	**+0.1**
	comp=Z,34µmcomp=Z,906nm,1.4s						
TSI	**Tuntungan**	**19.10**	**270**	P	**Pn**	**18 52 00.7**	**+0.9**
	comp=Z,21µmcomp=Z,21µmcomp=Z,646nm,1.0s						
SISI	**Saibi**	**19.25**	**255**	P	**P**	**18 52 00.6**	**0.0**
	comp=Z,24µmcomp=Z,13µmcomp=Z,402nm,1.2s						
SRPI	**Serui, Papua**	**19.33**	**106**	P	**P**	**18 52 01.2**	**-0.4**
	comp=Z,16µmcomp=Z,11µmcomp=Z,162nm,1.8s						
TPUB	**Ta-pu**	**19.73**	**8**	P	**P**	**18 52 06.6**	**+0.7**
TPUB				IAmb	IAmb	18 52 10.0	
	comp=Z,917nm,0.9s						
TPUB	**Ta-pu**	**19.73**	**8**	P	**Pn**	**18 52 07.2**	**-0.2**
	comp=Z,896nm,0.9s						
KCSI	**Kotacane, Aceh**	**19.89**	**270**	P	**P**	**18 52 07.4**	**-0.3**
	comp=Z,12µmcomp=Z,18µmcomp=Z,2µm,1.2s						
YULB	**Yu-li**	**19.93**	**10**	P	**P**	**18 52 06.3**	**-1.7**
YULB				IAmb	IAmb	18 52 15.6	
	comp=Z,1µm,1.4s						
GSI	**Gunungsitoli**	**20.24**	**264**	⇓P	**P**	**18 52 10.4**	**-1.1**
GSI	**Gunungsitoli**	**20.24**	**264**	P	**P**	**18 52 10.7**	**-0.8**
	comp=Z,26µmcomp=Z,23µmcomp=Z,2µm,1.3s						
GSI	**Gunungsitoli**	**20.24**	**264**	P	**P**	**18 52 09.4**	**-2.1**
GSI	**Gunungsitoli**	**20.24**	**264**	P	**P**	**18 52 10.5**	**-1.0**
	comp=Z,2µm,1.3s						
SSLB	**Suanglung**	**20.26**	**9**	P	**P**	**18 52 12.4**	**+0.8**
SSLB	**Suanglung**	**20.26**	**9**	P	Pn	18 52 13.0	-0.6
	comp=Z,477nm,1.1s						
TPTI		**20.48**	**270**	P	**P**	**18 52 13.1**	**-1.0**
	comp=Z,6µmcomp=Z,2µmcomp=Z,99nm,1.0s						
DRS	**Darwin Rock St**	**20.68**	**141**	P	**P**	**18 52 16.7**	**+0.5**
	comp=Z,564nm,1.0s						
NACB	**Ninganchiao**	**20.74**	**10**	P	**P**	**18 52 16.6**	**-0.2**
NACB				IAmb	IAmb	18 52 27.6	
	comp=Z,670nm,1.2s						
LHMI	**Lhok Sumawe**	**20.75**	**275**	⇑P	Pn	18 52 18.8	-0.6
LHMI	**Lhok Sumawe**	**20.75**	**275**	P	Pn	18 52 18.7	-0.7
	comp=Z,20µmcomp=Z,22µmcomp=Z,2µm,1.2s						
LHMI	**Lhok Sumawe**	**20.75**	**275**	P	**P**	**18 52 14.4**	**-2.6**
LHMI				IAMs_20	IAMs_20	19 01 25.2	
	comp=Z,38µm,20.0s						
LHMI	**Lhok Sumawe**	**20.75**	**275**	P	Pn	18 52 19.4	0.0
	comp=Z,2µm,1.2s						
PBKT	**Sadao Pong**	**20.85**	**309**	P	**P**	**18 52 16.8**	**-1.2**
PBKT				IAmb	IAmb	18 52 24.9	
	comp=Z,592nm,1.2s						
MTN	**Manton Dam**	**21.14**	**141**	P	**P**	**18 52 20.2**	**-1.0**
	baz=21,SNR=60						
MTN	**Manton Dam**	**21.14**	**141**	⇑P	**P**	**18 52 19.9**	**-1.4**
MTN	**Manton Dam**	**21.14**	**141**	P	**P**	**18 52 20.1**	**-1.0**
MTN				IAmb	IAmb	18 52 22.3	
	comp=Z,2µm,1.9s						
MTN	**Manton Dam**	**21.14**	**141**	P	**P**	**18 52 20.3**	**-0.9**
	comp=Z,787nm,2.3s						
QZH	**Quanzhou**	**21.18**	**2**	⇓*i*P	**P**	**18 52 20.9**	**-0.7**
QZH				S	**S**	**18 56 18.0**	**+0.9**
QZH				pmax	pmax		
	comp=Z,290nm,1.3s						
QZH				pmax	pmax		
	comp=Z,6µm,3.1s						
QZH				LR	LR		
	comp=Z,20µm,16.6s						
QZH				LR	LR		
	comp=Z,10µm,13.7s						
QZH				LR	LR		
	comp=Z,24µm,16.6s						
YHNB	**Yeheng**	**21.19**	**9**	P	**P**	**18 52 22.7**	**+1.0**
YHNB				IAmb	IAmb	18 52 33.4	
	comp=Z,663nm,1.2s						
YHNB	**Yeheng**	**21.19**	**9**	P	**P**	**18 52 22.6**	**+0.8**
	comp=Z,474nm,1.4s						
YOJ	**Yonaguni jima**	**21.31**	**13**	P	**P**	**18 52 22.8**	**-0.1**
YOJ				pmax	pmax		
	comp=Z,3µm,1.6s						
YOJ	**Yonaguni jima**	**21.31**	**13**	⇑P	**P**	**18 52 23.9**	**+0.9**
YOJ	**Yonaguni jima**	**21.31**	**13**	P	**P**	**18 52 22.8**	**-0.1**
YOJ	**Yonaguni jima**	**21.31**	**13**	P	**P**	**18 52 24.6**	**+1.7**
	comp=Z,946nm,1.7s						
TATO	**Taipei**	**21.51**	**9**	P	**P**	**18 52 24.8**	**-0.3**
TATO				P	**P**	**18 52 24.8**	**-0.3**
TATO				P	**P**	**18 52 24.8**	**-0.3**
TATO				S	**S**	**18 56 25.7**	**+2.2**
TATO				S	**S**	**18 56 25.7**	**+2.2**

TATO				S	S	18 56 25.7	+2.2
TATO	Taipei	21.51	9	P	P	18 52 25.6	+0.6
TATO				IAmb	IAmb	18 52 28.1	
	comp=Z,552nm,1.1s						
SMPI	Sarmi	21.74	105	P	P	18 52 28.1	+0.4
	comp=Z,15µmcomp=Z,10µmcomp=Z,297nm,2.0s						
KDU	Kakadu	21.89	138	P	P	18 52 27.9	-1.4
	baz=22,SNR=44						
KDU	Kakadu	21.89	138	⇑P	P	18 52 27.8	-1.5
KDU	Kakadu	21.89	138	P	P	18 52 28.0	-1.3
	comp=Z,648nm,0.4s						
SLVN	Son La	22.10	324	P	P	18 52 32.0	+0.4
SLVN				IAmb	IAmb	18 52 45.7	
	comp=Z,675nm,1.5s						
KNRA	Kununurra	22.11	151	P	P	18 52 30.6	-1.1
	baz=22,SNR=61						
KNRA	Kununurra	22.11	151	P	P	18 52 30.2	-1.5
KNRA				IAmb	IAmb	18 52 39.1	
	comp=Z,958nm,1.1s						
KNRA	Kununurra	22.11	151	P	P	18 52 30.7	-0.9
	comp=Z,750nm,1.6s						
JMJ	Miyako jima 2	22.27	18	P	P	18 52 37.1	+3.8
	comp=Z,5µm,1.1s						
FITZ	Fitzroy Crossi	22.99	160	P	P	18 52 39.6	-1.4
	comp=Z,62nm,0.8s,baz=357,slow=8.8,SNR=34						
FITZ				LR	LR	19 04 46.5	
	comp=Z,20µm,18.1s,baz=330,slow=45						
GENI	Genyem	23.30	105	⇑P	P	18 52 44.2	-0.1
GENI	Genyem	23.30	105	P	P	18 52 44.3	+0.1
	comp=Z,18µmcomp=Z,21µmcomp=Z,654nm,2.2s						
GENI	Genyem	23.30	105	P	P	18 52 45.9	+1.7
	comp=Z,645nm,2.2s						
CM31	Chiang Mai Arr	23.52	310	P	P	18 52 46.0	-0.3
	SNR=126						
CM31				P	P	18 52 46.0	-0.3
	SNR=126						
CM31				S	S	18 57 02.9	+2.6
CM31				S	S	18 57 02.9	+2.6
CM31	Chiang Mai Arr	23.52	310	P	P	18 52 46.4	+0.1
CM31				IAmb	IAmb	18 52 52.2	
	comp=Z,708nm,1.5s						
CMAR	Chiang Mai Arr	23.52	310	P	P	18 52 46.5	+0.1
	comp=Z,75nm,0.9s,baz=133,slow=7.7,SNR=381						
CMAR				PcP	PcP	18 56 32.8	+0.7
	comp=Z,11nm,1.0s,baz=202,slow=1.5,SNR=5.0						
CMAR				ScP	ScP	19 00 09.7	-0.7
	comp=Z,2.7nm,1.1s,baz=64,slow=1.5,SNR=4.7						
CMAR				LR	LR	19 03 15.7	
	comp=Z,43µm,19.2s,baz=166,slow=40						
CMAR				PKiKP	PKiKP	19 04 15.7	-0.4
	comp=Z,1.0nm,0.7s,baz=281,slow=1.3,SNR=5.2						
CMAR	Chiang Mai Arr	23.52	310	P	P	18 52 44.2	-2.2
CMAR	Chiang Mai Arr	23.52	310	P	P	18 52 44.2	-2.2
CHTO	Chiang Mai	23.73	311	P	P	18 52 48.1	-0.3
CHTO				pmax	pmax		
	comp=Z,188nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,48µm,19.0s						
CHTO	Chiang Mai	23.73	311	P	P	18 52 47.9	-0.5
CHTO				P	P	18 52 47.9	-0.5
CHTO				P	P	18 52 47.9	-0.5
CHTO				S	S	18 57 04.2	+0.5
CHTO				S	S	18 57 04.2	+0.5
CHTO				S	S	18 57 04.2	+0.5
CHTO	Chiang Mai	23.73	311	⇑P	P	18 52 47.4	-1.0
CHTO	Chiang Mai	23.73	311	P	P	18 52 48.1	-0.3
CHTO	Chiang Mai	23.73	311	IAMs_20	IAMs_20	19 03 10.6	
	comp=Z,48µm,19.0s						
CHTO	Chiang Mai	23.73	311	P	P	18 52 47.7	-0.7
	comp=Z,298nm,2.8s						
JAY	Jayapura	23.80	105	P	P	18 52 48.6	-0.6
	comp=Z,5µmcomp=Z,118nm,2.0s						
MBWA	Marble Bar	24.74	175	P	P	18 52 56.6	-1.1
MBWA				P	P	18 52 56.6	-1.1
MBWA				S	S	18 57 22.4	+2.6
MBWA				S	S	18 57 22.4	+2.6
MBWA	Marble Bar	24.74	175	⇑P	P	18 52 56.5	-1.1
MBWA	Marble Bar	24.74	175	P	P	18 52 56.8	-0.9
	comp=Z,624nm,1.9s						
GYA	Guiyang	25.02	336	⇓iP	P	18 53 00.8	+0.5
GYA				pP	sP	18 53 04.8	-0.6
GYA				S	S	18 57 24.9	+0.5
GYA				SS		18 58 18.6	
GYA				pmax	pmax		
	comp=Z,170nm,0.8s						
GYA				pmax	pmax		
	comp=Z,12µm,4.4s						
GYA				LR	LR		
	comp=Z,22µm,22.0s						
GYA				LR	LR		
	comp=Z,18µm,20.6s						
GYA				LR	LR		
	comp=Z,42µm,18.9s						
PSA00	Pilbara Seismi	25.16	175	P	P	18 53 00.6	-0.9
PSA00				IAmb	IAmb	18 53 02.1	
	comp=Z,363nm,0.9s						
PSA00	Pilbara Seismi	25.16	175	P	P	18 53 00.4	-1.1
PSA00				IAmb	IAmb	18 53 02.0	
	comp=Z,344nm,0.9s						
PSA00	Pilbara Seismi	25.16	175	P	P	18 53 00.8	-0.7
	comp=Z,730nm,1.7s						
JOW	Kunigami	25.17	23	P	P	18 53 02.4	+0.8
	comp=Z,278nm,1.0s,baz=211,slow=7.2,SNR=22						
JOW	Kunigami	25.17	23	⇓P	P	18 53 02.5	+0.9
JOW	Kunigami	25.17	23	P	P	18 53 02.5	+0.9
JOW	Kunigami	25.17	23	P	P	18 53 03.4	+1.8
	comp=Z,583nm,1.6s						
JMZ	Minamidaito 2	25.58	29	⇓P	P	18 53 05.2	0.0
MMPI	Merauke	25.63	118	P	P	18 53 07.0	+1.1
	comp=Z,11µmcomp=Z,705nm,0.9s						
KMI	Kunming	25.74	327	⇑P	P	18 53 08.0	+1.0
KMI				pP	sP	18 53 12.0	-0.1
KMI				PP	PnPn	18 53 47.8	+4.1
KMI				S	S	18 57 40.5	+4.4
KMI				sS	sS	18 57 48.3	+6.2
KMI				SS	SnSn	18 58 40.4	+9.2
KMI				pmax	pmax		
	comp=Z,160nm,1.3s						
KMI				pmax	pmax		
	comp=Z,5µm,7.8s						
KMI				LR	LR		
	comp=Z,6µm,17.1s						
KMI				LR	LR		
	comp=Z,27µm,15.1s						
KMI				LR	LR		
	comp=Z,27µm,15.1s						
PBA	Port Blair	25.96	289	eP	P	18 53 07.4	-1.4
PBA	Port Blair	25.96	289	P	P	18 53 11.0	+2.2
COCO	West Island	26.04	232	⇑P	P	18 53 11.1	+1.6
DGPR	DIGLIPUR	26.23	293	eP	P	18 53 11.7	+0.3
DGPR				IAmb	IAmb	18 53 31.6	
	comp=Z,280nm,1.3s						
GIRL	Giralia	26.36	187	P	P	18 53 12.4	+0.1
	baz=26,SNR=5.5						
GIRL	Giralia	26.36	187	⇑P	P	18 53 12.7	+0.3
GIRL	Giralia	26.36	187	P	P	18 53 11.2	-1.1
GIRL	Giralia	26.36	187	P	P	18 53 15.0	+2.7
	comp=Z,617nm,1.9s						
WHN	Wuhan	26.93	354	⇓P	P	18 53 17.8	+0.4
WHN				S	S	18 57 53.6	-0.7
WHN				pmax	pmax		
	comp=Z,390nm,1.2s						
WHN				LR	LR		
	comp=Z,93µm,15.6s						
WHN				LR	LR		
	comp=Z,14µm,12.9s						
WHN				LR	LR		
	comp=Z,112µm,16.2s						
SSE	Sheshan	27.49	6	P	P	18 53 23.5	+1.0
SSE				S	S	18 58 05.4	+2.2
SSE				pmax	pmax		
	comp=Z,2µm,4.0s						
SSE				LR	LR		
	comp=Z,4µm,20.9s						
SSE				LR	LR		
	comp=Z,8µm,21.5s						
ENH	Enshi	27.59	345	P	P	18 53 23.3	-0.1
ENH				IAMs_20	IAMs_20	19 06 06.3	
	comp=Z,23µm,19.0s						
NJ2	Nanjing	28.27	2	⇓iP	P	18 53 29.6	+0.2
NJ2				pP	sP	18 53 34.0	-0.5
NJ2				sP	pP	18 53 36.8	+3.8
NJ2				S	S	18 58 17.6	+2.2
NJ2				sS	sS	18 58 23.4	+2.1
NJ2				SS	SnSn	18 59 38.5	+6.0
NJ2				pmax	pmax		
	comp=Z,95nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,5µm,4.3s						
NJ2				LR	LR		
	comp=Z,13µm,16.6s						
NJ2				LR	LR		
	comp=Z,13µm,15.6s						
NJ2				LR	LR		
	comp=Z,17µm,17.1s						
GUMO	Guam	28.59	68	LR	LR	19 05 14.0	
	comp=Z,8µm,20.3s,baz=238,slow=37						
WRAB	Tennant Creek	28.59	146	ceP	P	18 53 31.7	-0.8
WRAB				pmax	pmax		
	comp=Z,1µm,2.5s						
WRAB				MLR	MLR		
	comp=Z,23µm,20.0s						
WRAB	Tennant Creek	28.59	146	⇑P	P	18 53 31.7	-0.8
WRAB	Tennant Creek	28.59	146	P	P	18 53 32.2	-0.2
WRAB	Tennant Creek	28.59	146	IAMs_20	IAMs_20	19 06 45.4	
	comp=Z,24µm,20.0s						
WRAB	Tennant Creek	28.59	146	P	P	18 53 31.5	-0.9
	comp=Z,449nm,1.1s						
WRA	Warramunga Arr	28.59	146	P	P	18 53 31.9	-0.6
	comp=Z,206nm,0.9s,baz=337,slow=9.3,SNR=187						
WRA				PcP	PcP	18 56 42.8	-1.0
	comp=Z,11nm,0.9s,baz=316,slow=2.4,SNR=2.9						
WRA				LR	LR	19 06 56.2	
	comp=Z,23µm,20.2s,baz=330,slow=41						
WRA	Warramunga Arr	28.59	146	P	P	18 53 30.4	-2.1
WRA				pmax	pmax		
	comp=Z,73nm,1.2s						
WRA	Warramunga Arr	28.59	146	P	P	18 53 30.4	-2.1
WB2	Warramunga Arr	28.60	146	P	P	18 53 31.9	-0.6
WR0	Warramunga Arr	28.72	145	P	P	18 53 32.1	-1.5
WR0				IAmb	IAmb	18 53 37.5	
	comp=Z,450nm,1.1s						
MEEK	Meekatharra	30.13	178	P	P	18 53 44.6	-1.4
	baz=30,SNR=13						
MEEK	Meekatharra	30.13	178	P	P	18 53 44.7	-1.4
	comp=Z,124nm,1.7s						
CD2	Chengdu	30.13	336	⇑iP	P	18 53 45.1	-0.9
CD2				pP	pP	18 53 49.8	+0.1
CD2				sP	sP	18 53 51.3	+0.2
CD2				S	S	18 58 46.1	+1.2
CD2				sS	sS	18 58 51.5	+0.7
CD2				pmax	pmax		
	comp=Z,290nm,1.0s						
CD2				LR	LR		
	comp=Z,22µm,17.2s						
CD2				LR	LR		
	comp=Z,22µm,17.9s						
JSU	Suzuyama	30.19	22	⇓P	P	18 53 46.6	0.0
WRKA	Warakurna	30.32	161	P	P	18 53 47.3	-0.5
	baz=30,SNR=28						
WRKA	Warakurna	30.32	161	⇑P	P	18 53 46.7	-1.1
WRKA	Warakurna	30.32	161	P	P	18 53 47.6	-0.2
	comp=Z,125nm,1.4s						
COEN	Coen	30.74	125	⇑P	P	18 53 50.2	-1.4
COEN	Coen	30.74	125	P	P	18 53 51.3	-0.2
XAN	Xi'an	31.32	346	P	P	18 53 56.3	-0.2
XAN				pP	sP	18 54 01.3	-0.3
XAN				S	S	18 59 02.6	-0.8
XAN				pmax	pmax		
	comp=Z,390nm,0.8s						
XAN				pmax	pmax		
	comp=Z,8µm,5.5s						
XAN				LR	LR		
	comp=Z,25µm,16.5s						
XAN				LR	LR		
	comp=Z,26µm,13.5s						
XAN				LR	LR		
	comp=Z,32µm,14.5s						
AS31	Alice Springs	31.42	151	P	P	18 53 56.8	-0.7
ASAR	Alice Springs	31.42	151	P	P	18 53 57.4	-0.1
	comp=Z,102nm,1.0s,baz=328,slow=8.2,SNR=147						
ASAR				PcP	PcP	18 56 50.3	-0.7
	comp=Z,21nm,1.0s,baz=344,slow=2.2,SNR=6.6						
ASAR				PKiKP	PKiKP	19 04 19.9	-0.9
	comp=Z,1.6nm,0.9s,baz=3.1,slow=1.1,SNR=7.0						
ASAR				LR	LR	19 07 40.6	
	comp=Z,17µm,21.9s,baz=324,slow=38						
ASAR	Alice Springs	31.42	151	P	P	18 53 57.2	-0.3
ASAR						18 56 50.5	
ASAR	Alice Springs	31.42	151	P	P	18 53 57.1	-0.3
ASAR				PcP	PcP	18 56 50.5	-0.6
LKP	Lekhapani	31.46	321	eP	P	18 53 57.4	-0.4
KOHI	KOHIMA	31.53	316	eP	P	18 53 57.4	-1.2
MOKO	MOKOCHONG	31.64	318	eP	P	18 53 58.2	-1.4
MOKO				IAmb	IAmb	18 54 05.3	
	comp=Z,597nm,1.1s						
JNU	Nakatsue	31.80	21	P	P	18 54 01.1	+0.4
	comp=Z,196nm,1.0s,baz=164,slow=21,SNR=42						
JNU	Nakatsue	31.80	21	⇓P	P	18 54 00.8	0.0
JNU	Nakatsue	31.80	21	P	P	18 54 01.2	+0.4
JNU				IAmb	IAmb	18 54 03.1	
	comp=Z,240nm,1.0s						
JNU	Nakatsue	31.80	21	P	P	18 54 01.6	+0.9
	comp=Z,248nm,1.2s						
BELO	BELONIA	31.99	310	eP	P	18 54 02.8	+0.3
PMG	Port Moresby	32.10	114	P	P	18 54 03.2	-0.4
	comp=Z,74nm,1.0s,baz=313,slow=7.2,SNR=14						
PMG	Port Moresby	32.10	114	P	P	18 54 03.0	-0.6
PMG				pmax	pmax		
	comp=Z,70nm,0.9s						
PMG				MLR	MLR		
	comp=Z,10µm,18.0s						
PMG	Port Moresby	32.10	114	⇑P	P	18 54 02.7	-0.9
PMG	Port Moresby	32.10	114	P	P	18 54 03.0	-0.6
PMG	Port Moresby	32.10	114	P	P	18 54 03.8	+0.2
	comp=Z,99nm,1.7s						
PMG	Port Moresby	32.10	114	P	P	18 54 03.8	+0.2
	comp=Z,99nm,1.7s						
QIS	Mount Isa	32.27	139	P	P	18 54 04.1	-0.8
	baz=32,SNR=62						
QIS	Mount Isa	32.27	139	P	P	18 54 03.9	-1.1
	comp=Z,163nm,0.9s						
TIA	Tai'an	32.40	359	P	P	18 54 05.8	-0.1
TIA				PP	PnPn	18 55 15.1	+2.2
TIA				S	S	18 59 17.8	-2.4
TIA				pmax	pmax		
	comp=Z,68nm,1.1s						
TIA				pmax	pmax		
	comp=Z,740nm,3.9s						
TIA				LR	LR		
	comp=Z,9µm,18.5s						
TIA				LR	LR		
	comp=Z,17µm,18.5s						
TIA				LR	LR		
	comp=Z,9µm,16.4s						
MORW	Morawa	32.58	183	P	P	18 54 06.6	-0.9
	baz=33,SNR=6.0						
MORW	Morawa	32.58	183	⇑P	P	18 54 06.5	-1.1
MORW	Morawa	32.58	183	P	P	18 54 06.7	-0.9
MORW				PcP	PcP	18 56 54.3	+0.3
MORW	Morawa	32.58	183	P	P	18 54 07.3	-0.2
	comp=Z,77nm,2.5s						
ITAN	ITANAGAR	32.72	318	eP	P	18 54 08.1	-0.8
ITAN				IAmb	IAmb	18 54 14.8	
	comp=Z,2µm,1.7s						
SHL	Shillong	33.00	314	P	P	18 54 11.0	-0.6
SHL				pmax	pmax		
	comp=Z,594nm,1.4s						
SHL	Shillong	33.00	314	eP	P	18 54 09.9	-1.7
SHL				eP	pP	18 54 13.0	-2.2
SHL				IAmb	IAmb	18 54 17.1	
	comp=Z,762nm,1.6s						
SHL				eS	S	18 59 25.0	-5.2
SHL	Shillong	33.00	314	P	P	18 54 10.4	-1.2
	SNR=153						
SHL	Shillong	33.00	314	P	P	18 54 11.0	-0.6
JCJ	Chichijima	33.03	43	P	P	18 54 10.9	-0.7
	comp=Z,196nm,0.9s,baz=177,slow=5.3,SNR=5.5						
JCJ	Chichijima	33.03	43	P	P	18 54 14.4	+2.8
	comp=Z,326nm,1.6s						
JMN	Monobe	33.51	25	⇑P	P	18 54 16.3	+0.6
TJN	Taejon	33.76	14	ceP	P	18 54 17.6	-0.2
TJN	Taejon	33.76	14	P	P	18 54 18.6	+0.8
	comp=Z,317nm,0.9s						
MTSU	Mount Surprise	34.02	130	P	P	18 54 20.4	+0.1
	baz=34,SNR=17						
MTSU	Mount Surprise	34.02	130	P	P	18 54 20.7	+0.4
	comp=Z,30nm,0.9s						
BLDU	Ballidu	34.09	182	P	P	18 54 19.1	-1.6
	baz=34,SNR=12						
TIY	Taiyuan	34.24	353	⇑P	P	18 54 22.5	+0.5
TIY				PP	PP	18 55 38.4	-1.3
TIY				S	S	18 59 49.3	+0.5
TIY				pmax	pmax		
	comp=Z,150nm,1.1s						
TIY				pmax	pmax		
	comp=Z,5µm,5.8s						
TIY				LR	LR		
	comp=Z,18µm,15.1s						
TIY				LR	LR		
	comp=Z,9µm,18.5s						
TIY				LR	LR		
	comp=Z,22µm,16.4s						
JHS	Saijyo	34.31	23	⇓P	P	18 54 23.0	+0.4
INCN	Inchon	34.65	13	P	P	18 54 25.5	0.0
INCN				P	P	18 54 25.5	0.0
INCN				P	P	18 54 25.5	0.0
INCN				S	S	18 59 57.9	+2.9
INCN				S	S	18 59 57.9	+2.9
INCN				S	S	18 59 57.9	+2.9
INCN	Inchon	34.65	13	P	P	18 54 28.2	+2.7
	comp=Z,99nm,1.6s						
LZH	Lanzhou	34.71	340	⇑iP	P	18 54 26.9	+0.6
LZH				pP	sP	18 54 33.0	+1.6
LZH				eS	S	18 59 55.3	-1.1
LZH				sS	sS	19 00 05.3	+2.9
LZH				SS	SnSn	19 02 08.3	-1.1
LZH				pmax	pmax		
	comp=Z,250nm,1.2s						
LZH				LR	LR		
	comp=Z,25µm,14.4s						
LZH				LR	LR		
	comp=Z,13µm,14.1s						
LZH				LR	LR		
	comp=Z,23µm,16.8s						
KSAR	Wonju Array Be	34.90	14	P	P	18 54 27.4	-0.3
KSAR	Wonju Array Be	34.90	14	P	P	18 54 27.4	-0.3
KSRS	Korea Array	34.92	14	P	P	18 54 28.4	+0.6
	comp=Z,23nm,0.9s,baz=189,slow=7.0,SNR=42						
KSRS				LR	LR	19 09 45.0	
	comp=Z,16µm,20.9s,baz=194,slow=38						
KLBR	Kellerberrin	35.05	180	P	P	18 54 27.7	-1.3
	baz=35,SNR=4.2						
KLBR	Kellerberrin	35.05	180	P	P	18 54 28.6	-0.5
	comp=Z,70nm,2.1s						
DL2	Dalian	35.27	5	P	P	18 54 31.0	+0.2
DL2				S	S	19 00 04.3	-0.1
DL2				pmax	pmax		
	comp=Z,130nm,1.2s						
DL2				pmax	pmax		
	comp=Z,490nm,3.8s						
DL2				LR	LR		
	comp=Z,11µm,16.6s						
DL2				LR	LR		
	comp=Z,6µm,18.5s						
DL2				LR	LR		
	comp=Z,17µm,16.9s						
RABL	Rabaul	35.31	102	⇑P	P	18 54 32.0	+0.4
RABL	Rabaul	35.31	102	P	P	18 54 32.9	+1.3
	comp=Z,440nm,2.5s						
MUN	Mundaring	35.47	182	P	P	18 54 31.4	-1.2
	baz=36,SNR=3.6						
JWT	Wachi	35.49	25	⇓P	P	18 54 33.0	+0.2
FORT	Forrest	35.64	165	P	P	18 54 33.8	-0.3
	baz=36,SNR=16						
FORT	Forrest	35.64	165	⇑P	P	18 54 33.5	-0.7
FORT	Forrest	35.64	165	P	P	18 54 33.3	-0.9
FORT				IAmb	IAmb	18 54 40.2	
	comp=Z,146nm,0.9s						
FORT	Forrest	35.64	165	P	P	18 54 34.3	+0.2
	comp=Z,167nm,1.0s						
OOD	Oodnadatta	35.76	152	P	P	18 54 35.0	-0.1
	comp=Z,250nm,2.1s						
JHJ	Hachijo jima 2	35.85	33	P	P	18 54 36.3	+0.3
	comp=Z,266nm,1.0s,baz=189,slow=4.2,SNR=3.7						
JHJ				LR	LR	19 09 33.7	
	comp=Z,13µm,19.7s,baz=247,slow=37						
JHJ2	Mitsune	35.87	33	P	P	18 54 37.7	+1.7
	comp=Z,551nm,1.6s						
LSA	Lhasa	36.10	319	P	P	18 54 39.5	+0.8
LSA				S	S	19 00 24.3	+5.9
LSA				pmax	pmax		
	comp=Z,660nm,2.1s						
LSA				LR	LR		
	comp=Z,55µm,21.4s						
LSA				LR	LR		
	comp=Z,48µm,19.2s						
LSA				LR	LR		
	comp=Z,55µm,17.1s						
LSA	Lhasa	36.10	319	i P	P	18 54 38.3	-0.3
	SNR=79						
LSA	Lhasa	36.10	319	P	P	18 54 37.7	-1.0
LSA				pmax	pmax		
	comp=Z,667nm,1.7s						
LSA				MLR	MLR		
	comp=Z,18µm,20.0s						
LSA	Lhasa	36.10	319	P	P	18 54 37.6	-1.0
LSA				P	P	18 54 37.6	-1.0
LSA				P	P	18 54 37.6	-1.0
LSA	Lhasa	36.10	319	P	P	18 54 37.7	-1.0
LSA				IAMs_20	IAMs_20	19 11 41.3	
	comp=Z,18µm,20.0s						
SLGI	Shiliguri	36.19	312	eP	P	18 54 37.6	-1.3
BJT	Baijiatuau	36.22	358	P	P	18 54 39.2	+0.2
BJT				pmax	pmax		
	comp=Z,583nm,1.2s						
BJT				MLR	MLR		
	comp=Z,16µm,19.0s						
BJT	Baijiatuau	36.22	358	P	P	18 54 39.2	+0.2
BJT	Baijiatuau	36.22	358	IAMs_20	IAMs_20	19 11 29.2	
	comp=Z,16µm,19.0s						
BJI	Beijing	36.24	358	P	P	18 54 39.8	+0.6
BJI				S	S	19 00 20.5	+1.1
BJI				pmax	pmax		
	comp=Z,540nm,1.1s						
BJI				pmax	pmax		
	comp=Z,7µm,4.3s						
BJI				LR	LR		
	comp=Z,14µm,15.7s						
BJI				LR	LR		
	comp=Z,13µm,15.9s						
BJI				LR	LR		
	comp=Z,21µm,18.3s						
INU	Inuyama	36.26	27	⇓P	P	18 54 39.0	-0.4
INU	Inuyama	36.26	27	P	P	18 54 38.0	-1.3
INU				IAmb	IAmb	18 54 48.5	
	comp=Z,394nm,1.6s						
INU	Inuyama	36.26	27	P	P	18 54 39.7	+0.3
	comp=Z,129nm,1.4s						
JSG	Sagara	36.26	29	⇓P	P	18 54 39.8	+0.4
NWAO	Narrogin (SRO)	36.39	181	P	P	18 54 39.7	-0.8
NWAO				P	P	18 54 39.7	-0.8
NWAO				P	P	18 54 39.7	-0.8
NWAO				S	S	19 00 27.6	+5.9
NWAO				S	S	19 00 27.6	+5.9
NWAO				S	S	19 00 27.6	+5.9
NWAO	Narrogin (SRO)	36.39	181	P	P	18 54 40.4	-0.1
	comp=Z,135nm,1.6s						
JGF	Kuroka	36.62	27	⇓P	P	18 54 41.9	-0.6
JGF	Kuroka	36.62	27	P	P	18 54 41.6	-1.0
CTA	Charters Tower	36.65	131	P	P	18 54 43.1	+0.2
	comp=Z,110nm,1.0s,baz=308,slow=13,SNR=26						
CTA				LR	LR	19 12 27.8	
	comp=Z,12µm,19.1s,baz=310,slow=41						
CTA	Charters Tower	36.65	131	P	P	18 54 43.7	+0.7
	comp=Z,191nm,1.2s						
CTAO	Charters Tower	36.65	131	P	P	18 54 43.0	0.0
CTAO				pmax	pmax		
	comp=Z,468nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,18µm,21.0s						
CTAO	Charters Tower	36.65	131	⇑P	P	18 54 43.4	+0.4
CTAO	Charters Tower	36.65	131	P	P	18 54 43.0	0.0
CTAO				IAmb	IAmb	18 54 45.3	
	comp=Z,468nm,1.4s						
CTAO	Charters Tower	36.65	131	IAMs_20	IAMs_20	19 10 12.1	
	comp=Z,18µm,21.0s						
CTAO	Charters Tower	36.65	131	P	P	18 54 43.6	+0.6
	comp=Z,226nm,1.2s						
BOK	Bokaro	36.65	306	eP	P	18 54 42.1	-0.8
PALK	Pallekele	36.99	277	P	P	18 54 45.6	-0.5
	comp=Z,21nm,0.8s,baz=190,slow=8.3,SNR=7.6						
PALK				LR	LR	19 13 16.5	
	comp=Z,15µm,18.1s,baz=197,slow=42						
PALK	Pallekele	36.99	277	P	P	18 54 45.5	-0.5
PALK				pmax	pmax		
	comp=Z,319nm,1.8s						

PALK				MLR	MLR		
	comp=Z,15µm,19.0s						
PALK	Pallekele	36.99	277	P	P	18 54 46.6	+0.6
PALK				P	P	18 54 46.6	+0.6
PALK				S	S	19 00 30.3	-1.3
PALK				S	S	19 00 30.3	-1.3
PALK	Pallekele	36.99	277	⇑P	P	18 54 46.2	+0.2
PALK	Pallekele	36.99	277	P	P	18 54 45.5	-0.5
PALK				IAmb	IAmb	18 55 28.3	
	comp=Z,319nm,1.8s						
PALK	Pallekele	36.99	277	IAMs_20	IAMs_20	19 12 46.7	
	comp=Z,15µm,19.0s						
MULG	Mulgathing	37.20	156	P	P	18 54 47.1	-0.4
	comp=Z,255nm,1.5s						
BTO	Baotou	37.43	350	eP	P	18 54 51.1	+1.7
BTO				PP	PP	18 56 13.1	-1.8
BTO				S	S	19 00 44.6	+6.9
BTO				LR	LR		
	comp=Z,63µm,17.6s						
BTO				LR	LR		
	comp=Z,57µm,15.2s						
HHC	Hu-ho-hao-te	37.44	352	⇓iP	P	18 54 49.8	+0.3
HHC				pP	sP	18 54 54.5	-0.1
HHC				sP	pP	18 54 56.8	+3.7
HHC				PP	PnPn	18 56 18.4	+2.7
HHC				S	S	19 00 38.6	+0.8
HHC				sS	sS	19 00 47.8	+3.9
HHC				SS	SnSn	19 03 12.8	-2.3
HHC				pmax	pmax		
	comp=Z,85nm,1.2s						
HHC				pmax	pmax		
	comp=Z,5µm,5.5s						
HHC				LR	LR		
	comp=Z,15µm,17.3s						
HHC				LR	LR		
	comp=Z,13µm,16.1s						
HHC				LR	LR		
	comp=Z,17µm,17.4s						
MAJO	Matsushiro	37.78	27	d iP	P	18 54 50.0	-2.4
MAJO				pmax	pmax		
	comp=Z,300nm,1.5s						
MAJO				MLR	MLR		
	comp=Z,12µm,19.0s						
MAJO	Matsushiro	37.78	27	⇓P	P	18 54 51.1	-1.3
MAJO	Matsushiro	37.78	27	P	P	18 54 51.2	-1.2
MAJO				IAmb	IAmb	18 55 01.0	
	comp=Z,751nm,1.8s						
MAJO	Matsushiro	37.78	27	P	P	18 54 51.8	-0.6
	comp=Z,217nm,1.8s						
MAT	Matsushiro	37.78	27	P	P	18 54 50.7	-1.7
MAT				S	S	19 00 41.6	-1.5
MJAR	Matsushiro Arr	37.78	27	P	P	18 54 51.7	-0.7
	comp=Z,116nm,1.2s,baz=198,slow=8.2,SNR=110						
MJAR				PP	PnPn	18 56 23.4	+3.6
	comp=Z,78nm,1.2s,baz=203,slow=8.6,SNR=5.9						
MJAR				LR	LR	19 09 54.0	
	comp=Z,13µm,20.4s,baz=215,slow=35						
MJAR	Matsushiro Arr	37.78	27	P	P	18 54 52.4	0.0
MJAR				IAmb	IAmb	18 54 53.3	
	comp=Z,302nm,1.5s						
MJB9	Matsu-Tunnel	37.79	27	P	P	18 54 51.4	-1.0
INKA	Innaminka	38.31	146	P	P	18 54 57.3	+0.4
	comp=Z,507nm,1.0s						
SNY	Shenyang	38.37	7	⇓P	P	18 54 56.4	-0.8
SNY				S	S	19 00 51.1	-0.6
SNY				pmax	pmax		
	comp=Z,230nm,1.2s						
SNY				pmax	pmax		
	comp=Z,5µm,4.0s						
SNY				LR	LR		
	comp=Z,13µm,19.6s						
SNY				LR	LR		
	comp=Z,16µm,15.3s						
SNY				LR	LR		
	comp=Z,24µm,17.1s						
JIRN	Jiri	38.37	312	eP	P	18 54 58.0	+0.1
	comp=Z,2µm,1.7s						
GUN	Gumba	38.74	312	eP	P	18 55 01.1	+0.1
	comp=Z,2µm,1.5s						
PKI	Pulchoki	38.91	311	eP	P	18 55 02.1	-0.3
	comp=Z,302nm,1.1s						
PKIN	Phulchoki	38.92	311	eP	P	18 55 02.3	-0.1
	comp=Z,144nm,0.9s						
JSD	Sado	39.04	26	P	P	18 55 02.1	-0.8
BLSP	Bilaspur	39.06	301	eP	P	18 54 59.8	-3.5
GTA	Gaotai	39.12	338	⇑P	P	18 55 04.0	+0.3
GTA				pP	pP	18 55 07.6	+0.2
GTA				sP	sP	18 55 10.4	+1.6
GTA				PP	PnPn	18 56 36.9	+0.9
GTA				S	S	19 01 02.0	-1.4
GTA				ScS	ScS	19 05 12.1	-1.3
GTA				pmax	pmax		
	comp=Z,7µm,5.4s						
GTA				LR	LR		
	comp=Z,11µm,17.1s						
GTA				LR	LR		
	comp=Z,16µm,16.7s						
GTA				LR	LR		
	comp=Z,17µm,16.7s						
KKN	Kakani	39.12	311	eP	P	18 55 03.9	-0.1
	comp=Z,2µm,1.9s						
DMN	Daman	39.16	311	eP	P	18 55 04.2	-0.2
	comp=Z,917nm,1.6s						
LCRK	Leigh Creek	39.17	151	P	P	18 55 04.1	0.0
	comp=Z,283nm,1.2s						
QLP	Quilpie	39.53	141	P	P	18 55 07.8	+0.7
	baz=40,SNR=45						
QLP	Quilpie	39.53	141	P	P	18 55 07.3	+0.2
	comp=Z,814nm,1.1s						
VAR	Varanasi	39.66	306	eP	P	18 55 09.8	+1.6
GKN	Gorkha	39.72	311	eP	P	18 55 08.9	0.0
	comp=Z,221nm,0.7s						
JMM	Marumori	40.07	29	⇓P	P	18 55 10.6	-0.9
JMM	Marumori	40.07	29	P	P	18 55 11.1	-0.4
JMM				IAmb	IAmb	18 55 13.6	
	comp=Z,400nm,1.1s						
BBOO	Buckleboo	40.23	156	P	P	18 55 12.4	-0.4
	baz=40,SNR=48						
BBOO	Buckleboo	40.23	156	P	P	18 55 10.5	-2.3
BBOO				IAmb	IAmb	18 55 17.3	
	comp=Z,316nm,1.3s						
BBOO	Buckleboo	40.23	156	P	P	18 55 12.5	-0.4
	comp=Z,230nm,1.3s						
PATS	Pohnpei	40.56	84	P	P	18 55 15.4	-0.5
	baz=41,SNR=3.9						
DANN	Dangsing	40.56	311	eP	P	18 55 15.7	-0.4
	comp=Z,218nm,0.8s						
CN2	Changchun	40.56	9	⇓iP	P	18 55 14.8	-0.7
CN2				epP	sP	18 55 21.1	+0.5
CN2				PP	PnPn	18 56 51.3	-1.6
CN2				eS	S	19 01 21.6	-3.0
CN2				pmax	pmax		
	comp=Z,90nm,1.3s						
CN2				pmax	pmax		
	comp=Z,2µm,5.0s						
CN2				LR	LR		
	comp=Z,8µm,18.0s						
CN2				LR	LR		
	comp=Z,7µm,18.0s						
CN2				LR	LR		
	comp=Z,12µm,19.0s						
HYB	Hyderabad	40.73	293	i P	P	18 55 17.0	-0.3
	comp=Z,320nm,1.0s						
HYB				eS	S	19 01 30.0	+2.1
HYB				eLR	LR		
	comp=Z,7.0nm,20.0s						
HYB	Hyderabad	40.73	293	eP	P	18 55 17.4	+0.1
HYB				IAmb	IAmb	18 55 23.2	
	comp=Z,143nm,0.9s						
TRD	Trivandrum	40.77	279	eP	P	18 55 17.9	+0.2
TRD				IAmb	IAmb	18 55 24.2	
	comp=Z,27nm,1.0s						
PYUN	Piuthan	41.02	310	eP	P	18 55 19.7	-0.1
	comp=Z,140nm,0.5s						
WHYH	Whyalla	41.06	154	P	P	18 55 20.3	+0.6
VLA	Vladivostok	41.27	16	d iP	P	18 55 21.2	-0.1
VLA				pmax	pmax		
	comp=Z,374nm,3.0s						
VLA				MLR	MLR		
	comp=Z,10µm,22.0s						
JBP	Jabalpur	41.29	301	eP	P	18 55 22.2	+0.4
JBP				IAmb	IAmb	18 55 27.3	
	comp=Z,1µm,2.6s						
JBP				eS	S	19 01 38.7	+2.7
NAPP	Napperby	41.44	154	P	P	18 55 25.1	+2.3
	comp=Z,56nm,0.8s						
RK1H	Rockhampton Ha	41.77	132	P	P	18 55 25.8	+0.1
	comp=Z,115nm,1.0s						
HTT	Hallett	41.99	153	P	P	18 55 27.6	+0.1
	baz=42,SNR=61						
HTT	Hallett	41.99	153	⇑P	P	18 55 27.7	+0.2
HTT	Hallett	41.99	153	P	P	18 55 27.7	+0.2
	comp=Z,518nm,1.1s						
STKA	Stephens Creek	42.02	149	P	P	18 55 27.7	+0.1
	comp=Z,289nm,1.0s,baz=310,slow=8.3,SNR=70						
STKA				LR	LR	19 16 04.3	
	comp=Z,13µm,19.3s,baz=317,slow=41						
STKA	Stephens Creek	42.02	149	P	P	18 55 27.5	-0.1
	baz=42,SNR=179						
STKA	Stephens Creek	42.02	149	P	P	18 55 26.1	-1.5
STKA				pmax	pmax		
	comp=Z,78nm,1.0s						
STKA	Stephens Creek	42.02	149	P	P	18 55 26.1	-1.5
STKA	Stephens Creek	42.02	149	P	P	18 55 27.5	-0.1
	comp=Z,88nm,1.1s						
MDJ	Mudanjiang	42.12	13	P	P	18 55 28.8	+0.6
MDJ				S	S	19 01 53.5	+5.8
MDJ				ScS	ScS	19 05 33.3	+2.5
MDJ				pmax	pmax		
	comp=Z,250nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,4µm,4.4s						
MDJ				LR	LR		
	comp=Z,5µm,22.1s						
MDJ				LR	LR		
	comp=Z,19µm,21.4s						
MDJ				LR	LR		
	comp=Z,20µm,24.2s						
MDJ	Mudanjiang	42.12	13	P	P	18 55 28.0	-0.2
MDJ				IAmb	IAmb	18 55 36.3	
	comp=Z,227nm,0.9s						
MDJ	Mudanjiang	42.12	13	P	P	18 55 28.6	+0.4
	comp=Z,286nm,1.1s						
USA0B	Ussuriysk Arra	42.30	15	P	P	18 55 29.6	-0.1
USA0B				pmax	pmax		
	comp=Z,336nm,1.7s						
USA0B	Ussuriysk Arra	42.30	15	P	P	18 55 29.6	-0.1
USA0B				IAmb	IAmb	18 55 38.1	
	comp=Z,336nm,1.6s						
USRK	Ussuriysk Ar.	42.30	15	P	P	18 55 30.2	+0.5
	comp=Z,16nm,0.9s,baz=191,slow=9.3,SNR=25						
USRK				LR	LR	19 13 47.0	
	comp=Z,6µm,21.8s,baz=190,slow=37						
USRK	Ussuriysk Ar.	42.30	15	P	P	18 55 29.3	-0.4
USRK	Ussuriysk Ar.	42.30	15	P	P	18 55 29.3	-0.4
RMQ	Roma	42.43	137	P	P	18 55 31.5	+0.4
	baz=43,SNR=15						
RMQ	Roma	42.43	137	P	P	18 55 31.8	+0.7
	comp=Z,53nm,0.9s						
JTM	Tenmabayashi	42.54	26	⇓P	P	18 55 31.8	+0.1
TWOA	Tennyson Woods	43.20	155	P	P	18 55 41.1	+4.0
	comp=Z,75nm,1.0s						
EIDS	Eidsvold	43.37	134	P	P	18 55 38.7	0.0
	baz=44,SNR=9.4						
EIDS	Eidsvold	43.37	134	⇑P	P	18 55 38.0	-0.7
EIDS	Eidsvold	43.37	134	P	P	18 55 38.1	-0.7
EIDS				IAmb	IAmb	18 55 40.2	
	comp=Z,652nm,1.9s						
EIDS	Eidsvold	43.37	134	P	P	18 55 38.4	-0.3
	comp=Z,157nm,2.0s						
BHPL	Bhopal	43.51	300	eP	P	18 55 39.8	-0.2
CMSA	Cobar Meteorol	43.99	145	P	P	18 55 44.3	+0.7
	baz=44,SNR=213						
CMSA	Cobar Meteorol	43.99	145	P	P	18 55 44.0	+0.4
	comp=Z,574nm,1.3s						
HNR	Honiara	44.06	107	P	P	18 55 44.2	-0.3
	comp=Z,70nm,0.9s,baz=169,slow=6.2,SNR=14						
HNR	Honiara	44.06	107	P	P	18 55 45.7	+1.2
	comp=Z,182nm,1.6s						
JEW	Eniwo	44.37	25	⇓P	P	18 55 47.0	+0.5
TEY	Ternei	44.43	19	⇓eP	P	18 55 47.0	+0.1
TEY				e		18 55 50.7	
TEY				e		19 02 13.4	
TEY				pmax	pmax		
	comp=E,100nm,4.0s						
TEY				pmax	pmax		
	comp=N,300nm,3.6s						
TEY				pmax	pmax		
	comp=Z,500nm,2.6s						
TEY				pmax	pmax		
	comp=N,60nm,1.1s						
TEY				pmax	pmax		
	comp=Z,130nm,1.1s						
TEY				pmax	pmax		
	comp=E,30nm,1.1s						
TEY				pmax	pmax		
	comp=E,1µm,8.3s						
TEY				pmax	pmax		
	comp=N,2µm,18.9s						
TEY				MLR	MLR		
	comp=E,3µm,21.0s						
TEY				MLR	MLR		
	comp=N,3µm,24.0s						
TEY				MLR	MLR		
	comp=Z,5µm,22.0s						
ERM	Erimo	44.46	27	d iP	P	18 55 46.6	-0.6
ERM				pmax	pmax		
	comp=Z,155nm,1.2s						
ERM				MLR	MLR		
	comp=Z,20µm,20.0s						
ERM	Erimo	44.46	27	IAMs_20	IAMs_20	19 14 41.5	
	comp=Z,15µm,20.0s						
MNCI	Minicoy	44.61	278	P	P	18 55 45.0	-3.9
GOA	Goa	44.73	288	eP	P	18 55 49.5	-0.2
GOA				IAmb	IAmb	18 55 55.8	
	comp=Z,195nm,1.0s						
KAAM	Kaadhehdhoo	44.78	267	⇓P	P	18 55 50.7	+0.5
ULN	Ulaanbaatar	44.99	350	ceP	P	18 55 50.7	-0.8
ULN				pmax	pmax		
	comp=Z,105nm,1.7s						
ULN				MLR	MLR		
	comp=Z,16µm,17.0s						
ULN	Ulaanbaatar	44.99	350	P	P	18 55 52.4	+0.9
ULN				P	P	18 55 52.4	+0.9
ULN				P	P	18 55 52.4	+0.9
ULN				S	S	19 02 30.4	+0.4
ULN				S	S	19 02 30.4	+0.4
ULN				S	S	19 02 30.4	+0.4
ULN	Ulaanbaatar	44.99	350	⇓P	P	18 55 51.5	0.0
ULN	Ulaanbaatar	44.99	350	P	P	18 55 51.0	-0.6
ULN				IAmb	IAmb	18 56 01.7	
	comp=Z,295nm,1.4s						
ULN	Ulaanbaatar	44.99	350	IAMs_20	IAMs_20	19 17 12.8	
	comp=Z,15µm,18.0s						
SONM	Songino Array	45.08	349	P	P	18 55 52.2	-0.1
	comp=Z,17nm,0.6s,baz=165,slow=9.3,SNR=136						
SONM				LR	LR	19 17 28.1	
	comp=Z,16µm,18.1s,baz=160,slow=40						
SONM	Songino Array	45.08	349	P	P	18 55 51.2	-1.0
SONM				pmax	pmax		
	comp=Z,129nm,1.2s						
SONM	Songino Array	45.08	349	P	P	18 55 51.2	-1.0
POO	Poona	45.34	292	eP	P	18 55 51.0	-3.7
POO				eP	pP	18 55 54.7	-3.7
POO				IAmb	IAmb	18 56 00.5	
	comp=Z,140nm,1.1s						
HIA	Hailar	45.48	2	P	P	18 55 53.6	-1.7
HIA				pmax	pmax		
	comp=Z,44nm,0.9s						
HIA				MLR	MLR		
	comp=Z,13µm,21.0s						
HIA	Hailar	45.48	2	P	P	18 55 53.6	-1.7
HIA	Hailar	45.48	2	IAMs_20	IAMs_20	19 16 14.3	
	comp=Z,13µm,21.0s						
BISR	Bishrakh	45.57	307	eP	P	18 55 55.5	-0.8
ASAJ	Asahikawa	45.90	25	P	P	18 55 59.0	+0.4
	comp=Z,130nm,1.2s,baz=240,slow=14,SNR=17						
ASAJ				LR	LR	19 15 45.8	
	comp=Z,5µm,20.7s,baz=202,slow=37						
ARPS	Mount Arapiles	46.09	153	P	P	18 56 00.3	+0.1
	baz=46,SNR=36						
ARPS	Mount Arapiles	46.09	153	P	P	18 56 00.5	+0.3
	comp=Z,374nm,1.0s						
DGAR	Diego Garcia	46.47	256	ceP	P	18 56 03.0	-0.6
DGAR				pmax	pmax		
	comp=Z,289nm,1.7s						
DGAR	Diego Garcia	46.47	256	P	P	18 56 03.1	-0.4
DGAR				P	P	18 56 03.1	-0.4
DGAR				S	S	19 02 51.6	-0.2
DGAR				S	S	19 02 51.6	-0.2
DGAR	Diego Garcia	46.47	256	P	P	18 56 02.7	-0.9
H08S2	Diego Garcia H	46.48	256	P	P	18 56 02.5	-0.9
	baz=33,slow=9.2,SNR=13						
H08S3	Diego Garcia H	46.48	256	P	P	18 56 02.8	-0.6
	baz=33,slow=9.2,SNR=10						
H08S1	Diego Carcia H	46.50	256	P	P	18 56 02.7	-0.8
	baz=33,slow=9.2,SNR=11						
ARMA	Armidale	46.89	139	P	P	18 56 06.8	0.0
	baz=47,SNR=14						
ARMA	Armidale	46.89	139	⇑P	P	18 56 08.6	+1.8
ARMA	Armidale	46.89	139	P	P	18 56 07.5	+0.7
ARMA	Armidale	46.89	139	P	P	18 56 08.7	+1.9
	comp=Z,364nm,2.1s						
SMLA	Simla	46.92	310	eP	P	18 56 05.9	-0.9
SMLA				IAmb	IAmb	18 56 08.8	
	comp=Z,127nm,0.8s						
KLR	Kul'dur	46.96	13	P	P	18 56 06.7	-0.3
	comp=Z,53nm,1.0s,baz=215,slow=6.4,SNR=71						
KLR				LR	LR	19 15 37.5	
	comp=Z,6µm,21.4s,baz=196,slow=36						
KLR	Kul'dur	46.96	13	ceP	P	18 56 06.6	-0.3
KLR				pmax	pmax		
	comp=Z,158nm,1.4s						
YUK	Yuzh-Kuril'sk	47.28	28	eP	P	18 56 02.1	-7.3
YUK				e		18 58 03.2	
YUK				ePPP	PPP	18 58 40.3	
YUK				eS	S	19 02 58.3	-4.3
YUK				e		19 05 55.0	
YUK				eSS	SS	19 06 24.5	-5.6
YUK				eSSS	SSS	19 07 31.0	
YUK				pmax	pmax		
	comp=Z,577nm,1.2s						
YUK				pmax	pmax		
	comp=E,436nm,1.0s						
YUK				pmax	pmax		
	comp=N,153nm,1.4s						
BHK	Bhakra	47.62	310	eP	P	18 56 12.7	+0.4
BRAT	Ballarat	47.70	152	P	P	18 56 14.1	+1.3
	comp=N,58nm,1.1s						
WMQ	Urumqi	47.99	331	P	P	18 56 16.4	+1.3
WMQ				pP	sP	18 56 20.0	-0.3
WMQ				sP	pP	18 56 27.1	+8.3
WMQ				PcP	PcP	18 57 45.1	+1.9
WMQ				S	S	19 03 14.4	+1.5
WMQ				ScS	ScS	19 06 07.9	-0.7
WMQ				pmax	pmax		
	comp=N,190nm,1.5s						
WMQ				pmax	pmax		
	comp=N,5µm,4.5s						
WMQ				LR	LR		
	comp=N,14µm,17.1s						
WMQ				LR	LR		
	comp=N,10µm,19.7s						
WMQ				LR	LR		
	comp=N,12µm,20.9s						
DHRM	DHARAMSHALA	48.09	311	eP	P	18 56 15.2	-1.1
DHRM				IAmb	IAmb	18 56 22.0	
	comp=Z,388nm,1.2s						
ZAK	Zakamensk	48.13	348	eP	P	18 56 16.0	-0.1
ZAK				pmax	pmax		
	comp=Z,85nm,1.1s						
YSS	Yuzh-Sakhalins	48.28	23	eP	P	18 56 17.0	-0.2
YSS				e		18 58 06.6	
YSS				eS	S	19 03 15.3	-1.5
YSS				pmax	pmax		
	comp=Z,80nm,1.3s						
YSS				pmax	pmax		
	comp=Z,2µm,5.6s						
YSS				MLR	MLR		
	comp=Z,4µm,15.0s						
YSS				MLR	MLR		
	comp=N,4µm,16.0s						
YSS	Yuzh-Sakhalins	48.28	23	⇓P	P	18 56 16.8	-0.4
YSS	Yuzh-Sakhalins	48.28	23	P	P	18 56 17.8	+0.6
	comp=N,102nm,1.6s						
CIT	Chita	48.33	357	eP	P	18 56 18.0	+0.5
CIT				e		18 58 15.2	
CIT				e		18 59 06.4	
CIT				pmax	pmax		
	comp=Z,779nm,2.1s						
GEXS	Deakin Univers	48.39	152	P	P	18 56 21.9	+3.8
	comp=Z,208nm,1.0s						
MGCD	Mangrove Creek	48.41	142	P	P	18 56 20.4	+2.0
	baz=49,SNR=7.1						
MGCD	Mangrove Creek	48.41	142	P	P	18 56 21.6	+3.2
	comp=Z,123nm,1.4s						
TOO	Toolangi	48.47	150	P	P	18 56 19.7	+0.8
	baz=49,SNR=4.2						
TOO	Toolangi	48.47	150	P	P	18 56 18.9	+0.1
TOO				pmax	pmax		
	comp=Z,156nm,1.4s						
TOO	Toolangi	48.47	150	⇑P	P	18 56 19.6	+0.8
TOO	Toolangi	48.47	150	P	P	18 56 18.9	+0.1
TOO				IAmb	IAmb	18 56 24.5	
	comp=Z,156nm,1.4s						
TOO	Toolangi	48.47	150	P	P	18 56 19.9	+1.1
	comp=Z,101nm,2.3s						
SYDH	Sydney Hard Ro	48.56	143	P	P	18 56 21.9	+2.4
	comp=Z,115nm,1.0s						
NTLH	Newcastle Hard	48.57	141	P	P	18 56 24.7	+5.1
	comp=Z,150nm,1.1s						
CAN	Canberra	48.63	146	P	P	18 56 20.0	-0.2
CAN				pmax	pmax		
	comp=Z,367nm,1.0s						
CAN				MLR	MLR		
	comp=Z,16µm,21.0s						
CAN	Canberra	48.63	146	⇑P	P	18 56 20.8	+0.6
CAN	Canberra	48.63	146	P	P	18 56 20.0	-0.2
CAN				IAMs_20	IAMs_20	19 19 28.8	
	comp=Z,16µm,21.0s						
CAN	Canberra	48.63	146	P	P	18 56 21.1	+0.9
	comp=Z,596nm,1.4s						
CNB	Canberra Magne	48.84	145	P	P	18 56 22.5	+0.7
	baz=49,SNR=17						
CNB	Canberra Magne	48.84	145	P	P	18 56 22.9	+1.2
	comp=Z,265nm,1.8s						
KUR	Kuril'sk	49.12	28	eP	P	18 56 23.0	-0.6
KUR				eS	S	19 03 28.6	0.0
KUR				eSSS	SSS	19 08 19.7	
KUR				pmax	pmax		
	comp=Z,668nm,1.2s						
KUR				pmax	pmax		
	comp=Z,3µm,5.0s						
KUR				MLR	MLR		
	comp=Z,7µm,19.0s						
TLY	Talaya	49.28	348	P	P	18 56 25.9	+1.0
	comp=Z,24nm,0.7s,baz=192,slow=3.8,SNR=16						
TLY				LR	LR	19 20 05.3	
	comp=Z,11µm,18.3s,baz=145,slow=40						
TLY	Talaya	49.28	348	d iP	P	18 56 25.1	+0.3
TLY				e		18 58 22.9	
TLY				ePPP	PPP	18 59 18.0	
TLY				eS	S	19 03 32.0	+1.2
TLY				pmax	pmax		
	comp=Z,318nm,1.4s						
TLY				MLR	MLR		
	comp=Z,30µm,17.0s						
TLY	Talaya	49.28	348	P	P	18 56 26.2	+1.3
TLY				P	P	18 56 26.2	+1.3
TLY				P	P	18 56 26.2	+1.3
TLY				S	S	19 03 35.3	+4.5
TLY				S	S	19 03 35.3	+4.5
TLY				S	S	19 03 35.3	+4.5
TLY	Talaya	49.28	348	⇑P	P	18 56 25.5	+0.7
TLY	Talaya	49.28	348	IAMs_20	IAMs_20	19 19 53.5	
	comp=Z,11µm,19.0s						
GRNR	Gornyy	49.52	16	⇓iP	P	18 56 27.2	+0.5
GRNR				e		18 57 51.4	
GRNR				eSS	S	19 03 31.0	-3.2
GRNR				pmax	pmax		
	comp=N,10.0nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				MLR	MLR		
	comp=E,2µm,17.0s						
GRNR				MLR	MLR		
	comp=N,2µm,19.0s						
GRNR				MLR	MLR		
	comp=Z,4µm,19.0s						
IRK	Irkutsk	49.70	349	eP	P	18 56 27.9	-0.1
IRK				e		18 58 28.4	
IRK				pmax	pmax		
	comp=Z,541nm,3.6s						
UGL	Uglegorsk	49.80	21	d iP	P	18 56 29.6	+0.9
UGL				eS	S	19 03 38.0	0.0
UGL				pmax	pmax		
	comp=Z,430nm,1.0s						

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UGL                                 pmax     pmax
         comp=Z,4µm,5.0s
UGL                                 pmax     pmax
         comp=N,1µm,7.0s
UGL                                 pmax     pmax
         comp=E,2µm,6.0s
UGL                                 pmax     pmax
         comp=Z,2µm,6.0s
UGL                                 smax     smax
         comp=E,3µm,6.0s
UGL                                 smax     smax
         comp=N,4µm,8.5s
UGL                                 MLR      MLR
         comp=E,3µm,19.0s
UGL                                 MLR      MLR
         comp=N,4µm,20.0s
UGL                                 MLR      MLR
         comp=Z,5µm,21.0s
MOY      Mondy              49.84 346 eP     P        18 56 28.3  -0.9
MOY                                 pmax     pmax
         comp=Z,719nm,3.7s
MILA     Mila               49.98 147  P     P        18 56 31.4 +0.9
         baz=50,SNR=3.0
BHUJ     Bhuj               50.32 297 eP     P        18 56 33.8 +0.7
BHUJ                                IAmb     IAmb     18 56 39.4
         comp=Z,280nm,1.4s
ZEA      Zeya               50.53   7 eP     P        18 56 34.5 +0.2
ZEA                                 e                 18 58 37.7
ZEA                                 eS       S        19 03 49.2 +1.0
ZEA                                 pmax     pmax
         comp=E,70nm,1.3s
ZEA                                 pmax     pmax
         comp=N,40nm,1.1s
ZEA                                 pmax     pmax
         comp=Z,140nm,1.2s
ZEA                                 pmax     pmax
         comp=N,1µm,5.8s
ZEA                                 pmax     pmax
         comp=E,200nm,6.4s
ZEA                                 pmax     pmax
         comp=Z,2µm,9.9s
ZEA                                 smax     smax
         comp=E,1µm,9.0s
ZEA                                 MLR      MLR
         comp=N,6µm,16.0s
ZEA                                 MLR      MLR
         comp=E,3µm,14.0s
ZEA                                 MLR      MLR
         comp=Z,7µm,16.0s
NIL      Nilore             51.00 311  P     P        18 56 38.1  -0.1
NIL                                 pmax     pmax
         comp=Z,447nm,1.4s
NIL                                 MLR      MLR
         comp=Z,16µm,22.0s
NIL      Nilore             51.00 311  P     P        18 56 37.8  -0.5
NIL                                  P       P        18 56 37.8  -0.5
NIL      Nilore             51.00 311  P     P        18 56 38.1  -0.1
NIL      Nilore             51.00 311  IAMs_20 IAMs_20 19 22 21.1
         comp=Z,16µm,22.0s
TYV      Tymovskoe          51.51  20 eP     P        18 56 42.6 +1.0
TYV                                 eS       S        19 04 03.3 +1.6
TYV                                 pmax     pmax
         comp=Z,72nm,1.5s
TYV                                 pmax     pmax
         comp=Z,2µm,4.5s
TYV                                 smax     smax
         comp=N,12nm,1.9s
TYV                                 smax     smax
         comp=N,1µm,5.5s
TYV                                 smax     smax
         comp=E,900nm,5.5s
TYV                                 MLR      MLR
         comp=N,4µm,18.0s
TYV                                 MLR      MLR
         comp=Z,5µm,18.0s
KOUNC    Koumac, New Ca     51.64 120 ⇑P     P        18 56 43.9 +0.8
KOUNC    Koumac, New Ca     51.64 120  P     P        18 56 45.8 +2.7
         comp=Z,186nm,2.6s
KSH      Kashi              51.95 319  P     P        18 56 46.3 +0.9
KSH                                  pP      sP       18 56 51.8 +1.2
KSH                                  S       S        19 04 09.6 +1.1
KSH                                  sS      sS       19 04 17.5 +2.8
KSH                                  ScS     ScS      19 06 36.3 +0.5
KSH                                 pmax     pmax
         comp=Z,63nm,0.8s
KSH                                 pmax     pmax
         comp=Z,4µm,4.7s
KSH                                 LR       LR
         comp=Z,20µm,18.9s
KSH                                 LR       LR
         comp=Z,24µm,22.3s
KSH                                 LR       LR
         comp=Z,21µm,22.8s
ZSN      Zaisan             52.00 332 eP     P        18 56 44.6  -0.9
         baz=332
ZSN      Zaisan             52.00 332 eP     P        18 56 44.5  -0.9
UZB      Uzynbulak          52.16 325 eP     P        18 56 46.3  -0.6
         baz=325
UZB      Uzynbulak          52.16 325 eP     P        18 56 46.3  -0.6
GLAD     Gladstone          52.35 151  P     P        18 56 52.9 +4.8
         comp=Z,64nm,1.1s
SATY     Saty               52.47 324 eP     P        18 56 48.4  -0.8
         baz=324
SATY     Saty               52.47 324 eP     P        18 56 48.3  -0.8
SANVU    Saraoutou          52.54 113 ⇑P     P        18 56 50.8 +0.9
SANVU    Saraoutou          52.54 113  P     P        18 56 49.3  -0.6
SANVU                               IAmb     IAmb     18 56 55.2
         comp=Z,283nm,1.2s
SANVU    Saraoutou          52.54 113  P     P        18 56 51.6 +1.7
         comp=Z,199nm,1.2s
DGZ      Jazzator, Alta     52.56 336d iP    P        18 56 50.2 +0.4
DGZ                                 pmax     pmax
         comp=Z,694nm,2.8s
DGZ                                 MLR      MLR
         comp=Z,10µm,16.0s
KDJ      Kajisay            52.65 323  P     P        18 56 49.8  -0.7
KDJ                                 pmax     pmax
         comp=Z,849nm,2.0s
KDJ      Kajisay            52.65 323  P     P        18 56 49.8  -0.7
MK31     Makanchi Array     52.78 330  P     P        18 56 50.4  -0.8
MK31     Makanchi Array     52.78 330  P     P        18 56 51.0  -0.2
MKAR     Makanchi Array     52.78 330  P     P        18 56 51.2   0.0
         comp=Z,19nm,0.7s,baz=130,slow=7.7,SNR=244
MKAR                                PcP      PcP      18 58 00.6  -0.1
         comp=Z,18nm,0.5s,baz=153,slow=3.3,SNR=13
MKAR                                LR       LR       19 21 52.5
         comp=Z,9µm,19.1s,baz=122,slow=39
MKAR                                PKPPKP   P'P'df   19 27 15.2  -4.9
         comp=Z,1.1nm,0.9s,baz=316,slow=3.3,SNR=4.1
MKAR     Makanchi Array     52.78 330  P     P        18 56 50.9  -0.3
MKAR                                                  18 58 00.8
MKAR     Makanchi Array     52.78 330  P     P        18 56 50.9  -0.3
MKAR                                PcP      PcP      18 58 00.8 +0.1
NKL      Nikolayevsk        52.85  17 eP     P        18 56 49.6  -1.9
NKL                                 e                 18 58 54.1
NKL                                 eS       S        19 04 22.2 +2.2
NKL                                 pmax     pmax
         comp=E,4.0nm,1.1s
NKL                                 pmax     pmax
         comp=N,4.0nm,0.8s
NKL                                 pmax     pmax
         comp=Z,199nm,1.2s
NKL                                 MLR      MLR
         comp=E,22nm,17.0s
NKL                                 MLR      MLR
         comp=N,76nm,11.0s
NKL                                 MLR      MLR
         comp=Z,6µm,19.0s
MAKZ     Makanchi           52.94 330  P     P        18 56 51.1  -1.4
MAKZ     Makanchi           52.94 330 ⇓P     P        18 56 52.3  -0.2
MAKZ     Makanchi           52.94 330  P     P        18 56 51.7  -0.8
MAKZ                                IAmb     IAmb     18 56 58.7
         comp=Z,284nm,1.6s
MAKZ                                IAMs_20  IAMs_20  19 22 43.0
         comp=Z,9µm,19.0s
ULHL     Ulahol             53.29 322  P     P        18 57 00.4 +5.1
         SNR=9.7
MDOK     Medeo              53.33 324 eP     P        18 56 55.5   0.0
         baz=324
MDOK     Medeo              53.33 324 eP     P        18 56 55.5   0.0
AAA      Alma-Ata           53.43 324 eP     P        18 57 04.3 +8.1
ARXS     Arharly            53.50 325 eP     P        18 56 56.6  -0.1
TAU      Tasmania Unive     53.53 153 ⇑P     P        18 56 57.5 +0.7
TAU      Tasmania Unive     53.53 153  P     P        18 56 59.1 +2.4
         comp=Z,208nm,1.4s
TDK      Taldyqorghan       53.66 326 eP     P        18 56 57.6  -0.1
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         comp=Z,48nm,0.6s,baz=326
TDK      Taldyqorghan       53.66 326 eP     P        18 56 57.6  -0.1
TDK                                 pmax     pmax
         comp=Z,48nm,0.6s
NOUC     Port Laguerre      53.96 121  P     P        18 57 03.0 +2.7
         comp=Z,57nm,1.8s
TKM2     Tokmak 2           54.06 323  P     P        18 57 01.3 +0.4
         SNR=20
TKM2     Tokmak 2           54.06 323  P     P        18 57 00.9  -0.1
DZM      Mont Dzumac        54.07 121 eP     P        18 57 01.9 +0.7
         comp=Z,206nm,1.5s
DZM                                 eS       S        19 04 36.8  -1.1
         comp=Z,3µm,28.6s
DZM                                 eLQ      LQ       19 10 25.5
         comp=Z,16µm,27.6s
DZM                                 eLR      LR       19 12 35.6
         comp=Z,10µm,26.6s
DZM      Mont Dzumac        54.07 121  P     P        18 57 01.7 +0.5
         comp=Z,48nm,1.2s,baz=316,slow=6.4,SNR=10
DZM      Mont Dzumac        54.07 121 ⇑P     P        18 57 02.0 +0.7
DZM      Mont Dzumac        54.07 121  P     P        18 57 03.1 +1.9
         comp=Z,113nm,2.6s
KUU      Kurty              54.17 324 eP     P        18 57 01.6 +0.1
         comp=Z,107nm,1.1s,baz=324
KUU      Kurty              54.17 324 eP     P        18 57 01.6 +0.1
KUU                                 pmax     pmax
         comp=Z,107nm,1.1s
KBK      Karagaybulak       54.31 322  P     P        18 57 03.2 +0.4
         SNR=32
UCH      Uchtor             54.34 321  P     P        18 57 04.1 +0.7
         SNR=20
YATNC    Mamie plateau,     54.45 120  P     P        18 57 06.1 +2.2
         comp=Z,182nm,1.9s
KBL      Kabul              54.55 310  P     P        18 57 04.3  -0.4
KBL                                 pmax     pmax
         comp=Z,149nm,1.0s
KBL      Kabul              54.55 310  P     P        18 57 04.5  -0.2
         SNR=134
KBL                                  P       P        18 57 04.5  -0.2
         SNR=134
KBL                                  P       P        18 57 04.5  -0.2
         SNR=134
KBL                                  S       S        19 04 45.3 +1.0
KBL                                  S       S        19 04 45.3 +1.0
KBL                                  S       S        19 04 45.3 +1.0
KBL      Kabul              54.55 310  P     P        18 57 04.3  -0.4
KBL                                 IAmb     IAmb     18 57 10.3
         comp=Z,148nm,1.0s
AAK      Ala-Archa          54.58 322  P     P        18 57 05.3 +0.6
         comp=Z,74nm,1.0s,baz=135,slow=5.7,SNR=74
AAK                                 LR       LR       19 23 50.9
         comp=Z,8µm,19.0s,baz=100,slow=40
AAK      Ala-Archa          54.58 322  P     P        18 57 05.4 +0.6
         SNR=28
AAK      Ala-Archa          54.58 322 i P    P        18 57 05.3 +0.6
         SNR=85
AAK      Ala-Archa          54.58 322ceP     P        18 57 05.1 +0.4
AAK                                 pmax     pmax
         comp=Z,237nm,1.0s
AAK                                 MLR      MLR
         comp=Z,47µm,25.0s
AAK      Ala-Archa          54.58 322  P     P        18 57 05.6 +0.9
AAK                                  P       P        18 57 05.6 +0.9
AAK                                  P       P        18 57 05.6 +0.9
AAK                                  S       S        19 04 45.8 +1.5
AAK                                  S       S        19 04 45.8 +1.5
AAK                                  S       S        19 04 45.8 +1.5
AAK      Ala-Archa          54.58 322 ⇓P     P        18 57 05.3 +0.6
AAK                                 ⇑P       P        18 57 05.4 +0.6
AAK                                 ⇓p       pP       18 57 10.4 +1.9
AAK      Ala-Archa          54.58 322  P     P        18 57 04.7   0.0
AAK                                 IAmb     IAmb     18 57 17.2
         comp=Z,227nm,1.2s
AAK      Ala-Archa          54.58 322  IAMs_20 IAMs_20 19 23 38.1
         comp=Z,10µm,19.0s
FRU1     Bishkek            54.59 322  P     P        18 57 05.4 +0.7
FRU1                                pmax     pmax
         comp=Z,350nm,1.6s
FRU1     Bishkek            54.59 322  P     P        18 57 05.3 +0.7
FRU1                                IAmb     IAmb     18 57 12.3
         comp=Z,350nm,1.6s
CHMS     Chumysh            54.62 322  P     P        18 57 04.9   0.0
         SNR=14
AML      Almayashu          54.81 321  P     P        18 57 07.1 +0.5
         SNR=26
AML      Almayashu          54.81 321 i P    P        18 57 07.1 +0.5
         SNR=66
AML      Almayashu          54.81 321  P     P        18 57 07.5 +0.8
USP      Ospenovka          54.92 322  P     P        18 57 07.1 +0.1
         SNR=15
SGDS     Sogindy            54.94 323 eP     P        18 57 07.0  -0.3
         baz=322
SGDS     Sogindy            54.94 323 eP     P        18 57 07.5 +0.3
EKS2     Erkin-Say          55.04 321  P     P        18 57 08.6 +0.6
         SNR=16
GAR      Garm               55.51 316  P     P        18 57 10.9  -0.6
AIS      Amsterdam Isla     55.54 218  IAMs_20 IAMs_20 19 19 34.9
         comp=Z,13µm,20.0s
BTK      Batken             55.65 317  P     P        18 57 11.9  -0.5
BTK                                 pmax     pmax
         comp=Z,578nm,1.8s
BTK      Batken             55.65 317  P     P        18 57 11.9  -0.5
CHGR     Chuyangaron        56.17 315  P     P        18 57 15.6  -0.6
BTLS     Baital             56.18 324 i P    P        18 57 15.3  -0.7
         baz=324
BTLS     Baital             56.18 324 i P    P        18 57 15.2  -0.7
SEM      Semipalatinsk      56.24 332 eP     P        18 57 16.4  -0.2
         baz=332
SEM      Semipalatinsk      56.24 332 eP     P        18 57 16.4  -0.2
DZA      Taraz              56.70 320 eP     P        18 57 19.7  -0.1
         baz=320
DZA      Taraz              56.70 320 eP     P        18 57 19.6  -0.1
ZAA0     Zalesovo Array     56.87 337  P     P        18 57 19.9  -0.9
ZAA0                                IAmb     IAmb     18 57 21.9
         comp=Z,113nm,1.0s
ZALV     Zalesovo Beam      56.87 337  P     P        18 57 20.2  -0.5
         comp=Z,90nm,1.0s,baz=130,slow=5.4,SNR=181
ZALV                                LR       LR       19 24 27.4
         comp=Z,6µm,18.6s,baz=134,slow=39
ZALV                                PKPPKP   P'P'df   19 27 10.8  -2.9
         comp=Z,0.6nm,0.6s,baz=251,slow=4.4,SNR=4.0
SKR      Severo-Kuril's     56.89  28 eP     P        18 57 18.0  -2.9
SKR                                 eS       S        19 05 32.1  +18
SKR                                 pmax     pmax
         comp=Z,800nm,5.3s
SKR                                 pmax     pmax
         comp=Z,2µm,5.2s
SKR                                 MLR      MLR
         comp=Z,3µm,15.0s
SKR                                 MLR      MLR
         comp=Z,3µm,19.0s
IUG      Iuzhnay            57.17 319 eP     P        18 57 23.3   0.0
         baz=319
IUG      Iuzhnay            57.17 319 eP     P        18 57 23.2   0.0
KURBB    Kurchatov Arra     57.20 331  P     P        18 57 22.9  -0.2
         comp=Z,14nm,0.7s,baz=124,slow=6.8,SNR=131
KURBB                               PKPPKP   P'P'df   19 27 11.4  -2.1
         comp=Z,2.2nm,1.1s,baz=297,slow=2.8,SNR=6.2
KURBB    Kurchatov Arra     57.20 331  P     P        18 57 21.4  -1.7
KURK     Kurchatov          57.22 332ceP     P        18 57 23.1  -0.2
KURK                                pmax     pmax
         comp=Z,172nm,1.7s
KURK                                MLR      MLR
         comp=Z,8µm,17.0s
KURK     Kurchatov          57.22 332  P     P        18 57 23.3 +0.1
KURK                                 P       P        18 57 23.3 +0.1
KURK                                 P       P        18 57 23.3 +0.1
KURK                                 S       S        19 05 20.0 +1.2
KURK                                 S       S        19 05 20.0 +1.2
KURK                                 S       S        19 05 20.0 +1.2
KURK     Kurchatov          57.22 332 ⇓P     P        18 57 23.0  -0.2
KURK                                ⇓P       P        18 57 23.1  -0.2
KURK                                ⇑p       pP       18 57 28.8 +1.8
KURK     Kurchatov          57.22 332  P     P        18 57 22.4  -0.9
KURK                                IAmb     IAmb     18 57 29.5
         comp=Z,202nm,1.0s
KURK     Kurchatov          57.22 332  IAMs_20 IAMs_20 19 26 10.1
         comp=Z,7µm,18.0s
KKAR     Karatay Array      57.32 320  P     P        18 57 22.7  -1.5
KKAR     Karatay Array      57.32 320  P     P        18 57 22.7  -1.5
BRLS     Borolday           57.72 320 eP     P        18 57 26.3  -0.7
         baz=320
BRLS     Borolday           57.72 320 eP     P        18 57 26.2  -0.7
NFK      Norfolk Island     58.11 128 ⇑P     P        18 57 30.7 +0.8
YAK      Yakutsk            58.93   7  P     P        18 57 34.7  -0.3
         comp=Z,18nm,0.4s,baz=200,slow=3.1,SNR=62
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YAK                                 LR       LR       19 24 15.7
         comp=Z,4µm,19.5s,baz=180,slow=37
YAK      Yakutsk            58.93   7d iP    P        18 57 34.6  -0.3
YAK                                 e*PP     sP       18 57 40.1  -0.1
YAK                                 e                 18 58 16.8
YAK                                 e                 18 59 51.1
YAK                                 eS       S        19 05 40.2  -0.5
YAK                                 e*SS     sS       19 05 50.4 +3.4
YAK                                 pmax     pmax
         comp=Z,187nm,1.3s
YAK                                 pmax     pmax
         comp=N,101nm,1.1s
YAK                                 pmax     pmax
         comp=E,46nm,1.1s
YAK                                 pmax     pmax
         comp=Z,419nm,2.5s
YAK                                 pmax     pmax
         comp=N,275nm,2.5s
YAK                                 pmax     pmax
         comp=E,242nm,2.7s
YAK                                 smax     smax
         comp=E,1µm,4.6s
YAK                                 smax     smax
         comp=N,683nm,3.6s
YAK      Yakutsk            58.93   7 ⇓P     P        18 57 34.6  -0.3
YAK      Yakutsk            58.93   7  P     P        18 57 34.1  -0.8
OTUK     Ortayu             58.94 326  P     P        18 57 34.2  -1.2
PEA0B    Petropavlovsk-     59.24  27ceP     P        18 57 37.6 +0.2
PETK     Petropavlovsk-     59.24  27  P     P        18 57 37.8 +0.4
         comp=N,85nm,1.0s,baz=211,slow=5.2,SNR=28
PETK                                LR       LR       19 23 49.3
         comp=N,5µm,20.2s,baz=226,slow=37
JLN      Jalan Bani Buh     59.33 294  P     P        18 57 39.8 +1.2
         SNR=7.4
JLN                                  P       P        18 57 39.8 +1.2
         SNR=7.4
PET      Petropavlovsk      59.62  27κ iP    P        18 57 40.2 +0.3
PET                                 e                 18 59 59.7
PET                                 eS       S        19 05 48.2  -1.7
PET                                 e                 19 07 24.6
PET                                 eSSS     SSS      19 12 15.5
PET                                 pmax     pmax
         comp=Z,189nm,1.3s
PET                                 pmax     pmax
         comp=Z,4µm,5.0s
PET                                 pmax     pmax
         comp=Z,2µm,11.4s
PET                                 pmax     pmax
         comp=Z,1µm,16.2s
PET                                 MLR      MLR
         comp=Z,9µm,21.0s
PET                                 MLR      MLR
         comp=Z,7µm,20.0s
PET      Petropavlovsk      59.62  27 ⇑P     P        18 57 40.9 +0.9
PET      Petropavlovsk      59.62  27  P     P        18 57 39.9   0.0
PET      Petropavlovsk      59.62  27  P     P        18 57 41.1 +1.2
         comp=Z,563nm,1.4s
BRZS     Berezniki          59.75 328 eP     P        18 57 40.3  -0.6
         comp=Z,31nm,0.9s,baz=328
BRZS     Berezniki          59.75 328 eP     P        18 57 40.3  -0.6
BRZS                                pmax     pmax
         comp=Z,31nm,0.9s
WBK      Wadi Bani Khal     59.80 294  P     P        18 57 39.9  -2.0
         SNR=8.3
WBK                                  P       P        18 57 39.9  -2.0
         SNR=8.3
WBK                                  S       S        19 05 54.8 +1.3
WBK                                  S       S        19 05 54.8 +1.3
WSAR     Wadi Sarin         60.22 295  P     P        18 57 44.0  -0.6
         SNR=8.9
WSAR                                 S       S        19 05 59.7 +1.0
JMDO     Jabal Madar        60.56 294  P     P        18 57 46.2  -0.8
         SNR=11
JMDO                                 P       P        18 57 46.2  -0.8
         SNR=11
JMDO                                 P       P        18 57 46.2  -0.8
         SNR=11
JMDO                                 S       S        19 06 04.3 +1.2
JMDO                                 S       S        19 06 04.3 +1.2
JMDO                                 S       S        19 06 04.3 +1.2
SMDO     Samad              60.71 294  P     P        18 57 47.9  -0.3
         SNR=8.7
SMDO                                 P       P        18 57 47.9  -0.3
         SNR=8.7
SMDO                                 P       P        18 57 47.9  -0.3
         SNR=8.7
SMDO                                 S       S        19 06 04.7  -0.7
SMDO                                 S       S        19 06 04.7  -0.7
SMDO                                 S       S        19 06 04.7  -0.7
BIDO     Bidbid             60.72 295  P     P        18 57 46.9  -1.1
         SNR=14
BIDO                                 P       P        18 57 46.9  -1.1
         SNR=14
MA2      Magadan            61.30  18ceP     P        18 57 52.2 +0.8
MA2                                 pmax     pmax
         comp=Z,234nm,1.3s
MA2                                 MLR      MLR
         comp=Z,4µm,20.0s
MA2      Magadan            61.30  18 ⇓P     P        18 57 52.2 +0.8
MA2      Magadan            61.30  18  P     P        18 57 51.6 +0.3
MA2      Magadan            61.30  18  P     P        18 57 52.5 +1.1
         comp=Z,202nm,1.1s
BSY      Bisya              61.44 294  P     P        18 57 51.9  -1.1
         SNR=22
BSY                                  P       P        18 57 51.9  -1.1
         SNR=22
BSY                                  S       S        19 06 14.9 +0.4
BSY                                  S       S        19 06 14.9 +0.4
HOQ      Hoqain             61.47 295  P     P        18 57 52.0  -1.2
         SNR=14
HOQ                                  P       P        18 57 52.0  -1.2
         SNR=14
HOQ                                  P       P        18 57 52.0  -1.2
         SNR=14
HOQ                                  S       S        19 06 16.2 +1.5
HOQ                                  S       S        19 06 16.2 +1.5
HOQ                                  S       S        19 06 16.2 +1.5
ARQ      Araqi              62.15 294  P     P        18 57 57.0  -0.7
         SNR=14
ARQ                                  P       P        18 57 57.0  -0.7
         SNR=14
ARQ                                  P       P        18 57 57.0  -0.7
         SNR=14
ARQ                                  S       S        19 06 20.8  -2.6
ARQ                                  S       S        19 06 20.8  -2.6
ARQ                                  S       S        19 06 20.8  -2.6
SOHO     SOHO               62.26 295 i P    P        18 57 56.7  -1.8
         SNR=24
SOHO     SOHO               62.26 295  P     P        18 57 58.2  -0.2
SOHO                                 P       P        18 57 58.2  -0.2
SOHO                                 P       P        18 57 58.2  -0.2
SOHO                                 S       S        19 06 24.6  -0.1
SOHO                                 S       S        19 06 24.6  -0.1
SOHO                                 S       S        19 06 24.6  -0.1
SHAO     Shalim             62.34 288 i P    P        18 57 58.6  -0.5
         SNR=12
SHAO     Shalim             62.34 288  P     P        18 57 58.7  -0.4
         SNR=9.2
SHAO                                 P       P        18 57 58.7  -0.4
         SNR=9.2
SHAO                                 P       P        18 57 58.7  -0.4
         SNR=9.2
SHAO                                 S       S        19 06 27.5 +1.7
SHAO                                 S       S        19 06 27.5 +1.7
SHAO                                 S       S        19 06 27.5 +1.7
BVAR     Borovoye Array     62.66 330 PKPPKP          19 27 00.5
         comp=Z,1.2nm,0.9s,baz=217,slow=1.4,SNR=3.4
UOSS     Minazif            62.68 296 i P    P        18 57 58.8  -2.5
         SNR=18
UOSS     Minazif            62.68 296  S     S        19 06 29.6  -0.4
UOSS     Minazif            62.68 296  P     P        18 57 59.5  -1.8
UOSS                                IAmb     IAmb     18 58 06.3
         comp=Z,251nm,1.7s
MSEY     Mahe Island        62.71 263  P     P        18 58 01.3  -0.4
HATD     Hatta, Dubai       62.73 296 i P    P        18 58 00.2  -1.4
         SNR=49
HATD     Hatta, Dubai       62.73 296  P     P        18 58 00.7  -0.9
         SNR=42
HATD                                 P       P        18 58 00.7  -0.9
         SNR=42
HATD                                 P       P        18 58 00.7  -0.9
         SNR=42
HATD                                 S       S        19 06 30.9 +0.3
HATD                                 S       S        19 06 30.9 +0.3
HATD                                 S       S        19 06 30.9 +0.3
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BRVK	**Borovoye**	62.73	330	*ce*P	P	18 58 00.2	-0.9
BRVK				pmax	pmax		
	comp=Z,66nm,1.3s						
BRVK				MLR	MLR		
	comp=Z,10µm,19.0s						
BRVK	**Borovoye**	62.73	330	P	P	18 58 01.8	+0.8
BRVK				S	S	19 06 31.0	+1.3
BRVK	**Borovoye**	62.73	330	P	P	18 58 00.6	-0.5
BRVK				IAmb	IAmb	18 58 07.2	
	comp=Z,128nm,0.9s						
BRVK	**Borovoye**	62.73	330	IAMs_20	IAMs_20	19 27 21.9	
	comp=Z,11µm,20.0s						
BANOM	**Banah**	62.76	297	*i* P	P	18 58 00.1	-1.8
	SNR=17						
BANOM	**Banah**	62.76	297	P	P	18 58 01.0	-0.9
	SNR=11						
BANOM				P	P	18 58 01.0	-0.9
	SNR=11						
BANOM				S	S	19 06 32.1	+1.1
BANOM				S	S	19 06 32.1	+1.1
ASHO	**Ashiyiah**	62.77	296	*i* P	P	18 58 00.5	-1.4
	SNR=33						
ASHO	**Ashiyiah**	62.77	296	P	P	18 58 01.5	-0.4
	SNR=29						
ASHO				P	P	18 58 01.5	-0.4
	SNR=29						
ASHO				S	S	19 06 31.2	0.0
ASHO				S	S	19 06 31.2	0.0
MSFE	**Esma-Masafi**	62.79	297	*i* P	P	18 57 59.9	-2.1
	SNR=7.8						
MASF	**Masafi**	62.79	297	P	P	18 58 02.2	+0.1
	SNR=10						
MASF				P	P	18 58 02.2	+0.1
	SNR=10						
MASF				P	P	18 58 02.2	+0.1
	SNR=10						
MASF				S	S	19 06 34.4	+3.0
MASF				S	S	19 06 34.4	+3.0
MASF				S	S	19 06 34.4	+3.0
SHME	**Shamm**	62.92	297	*i* P	P	18 58 01.1	-1.7
	SNR=8.8						
SHME	**Shamm**	62.92	297	P	P	18 58 03.2	+0.3
	SNR=6.8						
SHME				P	P	18 58 03.2	+0.3
	SNR=6.8						
SHME				P	P	18 58 03.2	+0.3
	SNR=6.8						
SHME				S	S	19 06 34.5	+1.6
SHME				S	S	19 06 34.5	+1.6
SHME				S	S	19 06 34.5	+1.6
ALNE	**Al Ain**	62.95	295	*i* P	P	18 58 01.5	-1.6
	SNR=19						
ALNE	**Al Ain**	62.95	295	P	P	18 58 02.4	-0.8
	SNR=41						
ALNE				P	P	18 58 02.4	-0.8
	SNR=41						
ALNE				S	S	19 06 33.2	-0.2
ALNE				S	S	19 06 33.2	-0.2
DMTO	**DMTO**	62.95	288	P	P	18 58 03.2	0.0
	SNR=6.1						
DMTO				P	P	18 58 03.2	0.0
	SNR=6.1						
DMTO				S	S	19 06 34.5	+0.9
DMTO				S	S	19 06 34.5	+0.9
MSVF	**Nonsavu**	63.17	112	*i* P	P	18 58 03.1	-1.6
MSVF				pmax	pmax		
	comp=Z,132nm,1.9s						
MSVF	**Nonsavu**	63.17	112	P	P	18 58 07.5	+2.8
	comp=Z,70nm,1.5s						
NAZ	**Nazwa, Dubai**	63.17	296	*i* P	P	18 58 03.0	-1.5
	SNR=14						
NAZ	**Nazwa, Dubai**	63.17	296	P	P	18 58 03.8	-0.8
	SNR=7.4						
NAZ				P	P	18 58 03.8	-0.8
	SNR=7.4						
FAQ	**Al Faqa, Dubai**	63.20	296	*i* P	P	18 58 04.3	-0.5
	SNR=16						
FAQ	**Al Faqa, Dubai**	63.20	296	P	P	18 58 03.7	-1.1
	SNR=10						
FAQ				P	P	18 58 03.7	-1.1
	SNR=10						
FAQ				S	S	19 06 36.5	0.0
FAQ				S	S	19 06 36.5	0.0
UMQ	**Umm Al-Quwin**	63.26	297	P	P	18 58 03.4	-1.7
UMZA	**Um Al Zommool**	63.30	293	P	P	18 58 04.9	-0.6
UMZA				P	P	18 58 04.9	-0.6
UMZA				P	P	18 58 04.9	-0.6
ASUD	**Al Ashush, Dub**	63.42	296	*i* P	P	18 58 05.4	-0.8
	SNR=19						
ASUD	**Al Ashush, Dub**	63.42	296	P	P	18 58 06.0	-0.1
	SNR=14						
ASUD				P	P	18 58 06.0	-0.1
	SNR=14						
SOCY	**Socotra**	63.55	282	P	P	18 58 07.3	0.0
SOCY	**Socotra**	63.55	282	⇑P	P	18 58 08.5	+1.2
SOCY	**Socotra**	63.55	282	P	P	18 58 05.7	-1.6
SOCY				IAmb	IAmb	18 58 11.9	
	comp=Z,123nm,1.2s						
SOCY				IAMs_20	IAMs_20	19 27 00.8	
	comp=Z,9µm,19.0s						
RBK	**Rabkut**	63.64	288	P	P	18 58 08.0	+0.1
	SNR=11						
RBK				P	P	18 58 08.0	+0.1
	SNR=11						
RBK				P	P	18 58 08.0	+0.1
	SNR=11						
AJN	**Ajban**	63.72	296	*i* P	P	18 58 06.6	-1.5
	SNR=26						
AJN	**Ajban**	63.72	296	P	P	18 58 09.4	+1.3
	SNR=12						
AJN				P	P	18 58 09.4	+1.3
	SNR=12						
DOK	**Doka**	63.81	289	P	P	18 58 08.9	+0.1
	SNR=20						
DOK				P	P	18 58 08.9	+0.1
	SNR=20						
DOK				P	P	18 58 08.9	+0.1
	SNR=20						
GEYT	**Alibeck**	64.00	311	P	P	18 58 10.3	+0.5
	comp=Z,30nm,1.1s,baz=116,slow=8.9,SNR=11						
GEYT	**Alibeck**	64.00	311	P	P	18 58 07.8	-2.1
GEYT				IAmb	IAmb	18 58 35.9	
	comp=Z,131nm,1.6s						
GYA0	**ALIBECK ARRAY**	64.00	311	P	P	18 58 09.3	-0.6
WHFO	**Wadi Hawf**	64.09	288	P	P	18 58 10.1	-0.7
	SNR=10						
WHFO				P	P	18 58 10.1	-0.7
	SNR=10						
SEY	**Seymchan**	64.42	17	PKP2bc		19 27 04.4	
	comp=Z,5.9nm,1.0s,baz=353,slow=0.6,SNR=5.6						
SEY				LR	LR	19 27 34.9	
	comp=Z,5µm,20.9s,baz=216,slow=37						
DGTI	**Dogotuki**	64.43	110	P	P	18 58 15.1	+2.2
	comp=Z,107nm,1.0s						
ABTO	**Aybut**	64.49	287	P	P	18 58 13.2	-0.3
	SNR=12						
ABTO				P	P	18 58 13.2	-0.3
	SNR=12						
ABTO				P	P	18 58 13.2	-0.3
	SNR=12						
OUZ	**Omahuta**	65.06	132	IAMs_20	IAMs_20	19 28 44.7	
	comp=Z,8µm,20.0s						
RER	**Riviere de l'E**	65.46	245	IAMs_20	IAMs_20	19 25 27.1	
	comp=Z,7µm,19.0s						
PYZ	**Puysegur Point**	65.82	145	IAMs_20	IAMs_20	19 28 21.1	
	comp=Z,7µm,22.0s						
LKBA	**Tubou, Lakemba**	66.19	112	P	P	18 58 29.0	+4.7
	comp=Z,2.2nm,1.0s						
MLZ	**Mavora Lakes**	66.22	144	IAMs_20	IAMs_20	19 27 17.7	
	comp=Z,8µm,21.0s						
MIDW	**Midway**	66.24	61	IAMs_20	IAMs_20	19 22 46.3	
	comp=Z,6µm,22.0s						
FOZ	**Fox Glacier**	66.28	141	IAMs_20	IAMs_20	19 30 12.7	
	comp=Z,8µm,19.0s						
WHZ	**Wether Hill Ro**	66.40	144	IAMs_20	IAMs_20	19 28 29.5	
	comp=Z,9µm,21.0s						
AB31	**Akbulak array**	66.62	323	*i* P	P	18 58 25.3	-1.3
ABKAR	**Akbulak array**	66.62	323	P	P	18 58 26.1	-0.4
ABKAR	**Akbulak array**	66.62	323	P	P	18 58 26.3	-0.2
ABKAR				IAmb	IAmb	18 58 33.7	
	comp=Z,262nm,1.6s						
LBZ	**Lake Benmore**	66.95	142	P	P	18 58 28.7	0.0
LBZ				IAmb	IAmb	18 58 32.9	
	comp=Z,214nm,1.3s						
LBZ				IAMs_20	IAMs_20	19 31 01.2	
	comp=Z,8µm,19.0s						
RPZ	**Rata Peaks**	67.15	141	P	P	18 58 30.1	0.0
MCQ	**Macquarie Isla**	67.28	155	P	P	18 58 30.7	+0.2
	baz=67,SNR=3.5						
MCQ	**Macquarie Isla**	67.28	155	P	P	18 58 35.5	+4.9
	comp=Z,242nm,1.3s						
HIZ	**Hauiti**	67.34	134	IAMs_20	IAMs_20	19 26 55.0	
	comp=Z,8µm,22.0s						
THZ	**Tophouse**	67.42	138	IAMs_20	IAMs_20	19 28 40.9	
	comp=Z,9µm,20.0s						
LTZ	**Lake Taylor**	67.48	140	IAMs_20	IAMs_20	19 29 38.4	
	comp=Z,8µm,19.0s						
NNZ	**Nelson**	67.49	138	IAMs_20	IAMs_20	19 28 12.8	
	comp=Z,11µm,22.0s						
SHMA	**Al-Shehemyia**	67.50	296	S	S	19 07 30.2	+1.0
ODZ	**Otahua Downs**	67.57	142	IAMs_20	IAMs_20	19 27 23.5	
	comp=Z,9µm,21.0s						
OXZ	**Oxford**	67.59	140	IAMs_20	IAMs_20	19 29 22.3	
	comp=Z,9µm,19.0s						
MQZ	**McQueen's Vall**	68.16	140	IAMs_20	IAMs_20	19 29 40.5	
	comp=Z,6µm,20.0s						
AKTO	**Aktyubinsk**	68.23	324	P	P	18 58 36.5	-0.3
	comp=Z,45nm,0.8s,baz=104,slow=5.6,SNR=88						
AKTO	**Aktyubinsk**	68.23	324	P	P	18 58 35.8	-0.9
TIXI	**Tiksi**	68.27	4	PKP2bc		19 26 52.5	
	comp=Z,4.5nm,1.0s,baz=16,slow=4.2,SNR=12						
TIXI				LR	LR	19 30 14.8	
	comp=Z,8µm,21.1s,baz=212,slow=38						
TIXI	**Tiksi**	68.27	4	*d i*P	P	18 58 35.1	-1.4
TIXI				pmax	pmax		
	comp=Z,133nm,1.4s						
TIXI				MLR	MLR		
	comp=Z,11µm,22.0s						
TIXI	**Tiksi**	68.27	4	⇓P	P	18 58 35.2	-1.4
TIXI				⇓P	P	18 58 35.2	-1.3
TIXI	**Tiksi**	68.27	4	P	P	18 58 35.4	-1.2
TIXI				IAmb	IAmb	18 58 36.9	
	comp=Z,130nm,1.3s						
TIXI				IAMs_20	IAMs_20	19 32 56.6	
	comp=Z,10µm,20.0s						
MOVZ	**Moawhango**	68.34	135	P	P	18 58 38.6	+0.9
SNZO	**South Karori**	68.42	137	⇑P	P	18 58 37.2	-0.8
SNZO				⇑P	P	18 58 38.2	+0.1
SNZO	**South Karori**	68.42	137	P	P	18 58 37.5	-0.6
SNZO				IAmb	IAmb	18 58 47.3	
	comp=Z,128nm,0.9s						
SNZO	**South Karori**	68.42	137	IAMs_20	IAMs_20	19 31 24.5	
	comp=Z,10µm,20.0s						
NRIK	**Noril'sk**	68.56	349	P	P	18 58 37.9	-0.6
	comp=Z,28nm,0.6s,baz=137,slow=6.0,SNR=40						
NRIK				PKP2bc		19 26 52.7	
	comp=Z,1.3nm,0.3s,baz=277,slow=4.2,SNR=3.7						
NRIK				LR	LR	19 31 24.0	
	comp=Z,5µm,20.9s,baz=153,slow=38						
NRIK	**Noril'sk**	68.56	349	*ce*P	P	18 58 37.8	-0.6
NRIK				pmax	pmax		
	comp=Z,115nm,1.0s						
NRIK				MLR	MLR		
	comp=Z,9µm,16.0s						
NRIK	**Noril'sk**	68.56	349	P	P	18 58 37.5	-0.9
NRIK				IAmb	IAmb	18 58 44.3	
	comp=Z,95nm,0.9s						
BHW	**Baring Head**	68.58	137	P	P	18 58 37.6	-1.4
BHHZ	**Black Hill Sta**	68.60	135	P	P	18 58 39.6	+0.3
BKZ	**Black Stump Fm**	68.77	134	P	P	18 58 40.2	-0.1
BKZ	**Black Stump Fm**	68.77	134	P	P	18 58 40.1	-0.3
BKZ				IAMs_20	IAMs_20	19 31 18.9	
	comp=Z,10µm,22.0s						
BKZ	**Black Stump Fm**	68.77	134	P	P	18 58 40.1	-0.3
	comp=Z,1µm,1.0s						
URZ	**Urewera**	68.86	133	P	P	18 58 40.3	-0.6
	comp=Z,60nm,0.9s,baz=273,slow=2.6,SNR=12						
URZ	**Urewera**	68.86	133	P	P	18 58 40.8	-0.1
URZ	**Urewera**	68.86	133	IAMs_20	IAMs_20	19 26 52.3	
	comp=Z,7µm,21.0s						
MTHZ	**Maungataniwha**	68.89	134	P	P	18 58 41.3	+0.1
RTZ	**Ruatahuna**	68.90	134	P	P	18 58 41.1	-0.1
PLWZ	**Palliser**	68.91	137	P	P	18 58 40.7	-0.5
NMHZ	**Naumai**	68.97	134	P	P	18 58 42.5	+0.9
HAZ	**Te Kaha**	69.16	133	P	P	18 58 43.4	+0.7
RUGZ	**Raukumara Rang**	69.16	133	P	P	18 58 42.5	-0.4
BFZ	**Birch Farm**	69.22	136	P	P	18 58 46.1	+3.1
	comp=Z,191nm,0.9s						
SBV	**Sambava**	69.35	254	P	P	18 58 44.0	-0.4
SBV	**Sambava**	69.35	254	⇑P	P	18 58 45.7	+1.3
SVE	**Sverdlovsk**	69.44	330	*c i*P	P	18 58 43.6	-0.5
SVE				*e*		19 01 19.6	
SVE				*e*S	S	19 07 48.1	-3.0
SVE				pmax	pmax		
	comp=Z,135nm,1.6s						
SVE				MLR	MLR		
	comp=Z,6µm,19.0s						
TWGZ	**Tauwhareparae**	69.46	133	P	P	18 58 45.3	+0.7
MXZ	**Matakaoa Point**	69.47	132	P	P	18 58 45.0	+0.3
MXZ	**Matakaoa Point**	69.47	132	IAMs_20	IAMs_20	19 30 06.5	
	comp=Z,7µm,22.0s						
PUZ	**Puketiti**	69.62	133	P	P	18 58 46.8	+1.2
CNGZ	**Carnagh Statio**	69.74	133	P	P	18 58 45.3	-1.0
MHGZ	**Mahia Peninsul**	69.78	134	P	P	18 58 45.9	-0.7
ARU	**Arti**	70.30	330	P	P	18 58 48.5	-0.9
	comp=Z,8.3nm,0.7s,baz=119,slow=3.6,SNR=42						
ARU				LR	LR	19 32 33.7	
	comp=Z,6µm,20.2s,baz=119,slow=38						
ARU	**Arti**	70.30	330	*ce*P	P	18 58 48.8	-0.6
ARU				pmax	pmax		
	comp=Z,50nm,1.0s						
ARU				MLR	MLR		
	comp=Z,7µm,20.0s						
ARU	**Arti**	70.30	330	P	P	18 58 48.4	-1.1
ARU				IAmb	IAmb	18 58 57.3	
	comp=Z,245nm,1.6s						
ARU				IAMs_20	IAMs_20	19 32 10.0	
	comp=Z,7µm,20.0s						
QRN	**Al-Qurain**	70.54	299	*e*P	P	18 58 50.7	-0.8
KBD	**Kabd**	70.78	300	*e*P	P	18 58 52.2	-0.7
UMR	**Umm Al-Rimmam**	70.81	300	*e*P	P	18 58 52.7	-0.4
RDF	**Al-Radifah**	70.88	299	*e*P	P	18 58 53.1	-0.4
MIB	**Mutribah**	71.16	300	*e*P	P	18 58 54.7	-0.6
RST	**Umm Al-Ruwaisa**	71.42	300	*e*P	P	18 58 55.4	-1.4
AFI	**Afiamalu**	72.06	106	P	P	18 59 01.7	+0.8
	comp=Z,75nm,1.0s,baz=222,slow=1.5,SNR=5.9						
BILL	**Bilibino**	72.12	17	*c i*P	P	18 58 59.8	-0.4
BILL				*e**PP	sP	18 59 07.3	+1.8
BILL						18 59 22.0	
BILL						19 01 44.0	
BILL				PPP	PPP	19 03 29.0	
BILL				*i* S	S	19 08 20.4	-1.6
BILL				*i*		19 09 00.2	
BILL				SS	SS	19 12 58.0	-1.2
BILL				pmax	pmax		
	comp=Z,119nm,1.3s						
BILL	**Bilibino**	72.12	17	P	P	18 59 00.1	-0.2
BILL				IAmb	IAmb	18 59 02.2	
	comp=Z,110nm,1.2s						
RAYN	**Ar Rayn**	72.22	293	*i* P	P	18 59 01.1	-0.8
	SNR=75						
RAYN	**Ar Rayn**	72.22	293	P	P	18 59 01.0	-0.8
RAYN				pmax	pmax		
	comp=Z,146nm,1.1s						
RAYN				MLR	MLR		
	comp=Z,7µm,19.0s						
RAYN	**Ar Rayn**	72.22	293	P	P	18 59 01.2	-0.6
RAYN				P	pP	18 59 01.9	-3.8
RAYN				S	S	19 08 24.9	-0.1
RAYN	**Ar Rayn**	72.22	293	P	P	18 59 01.0	-0.8
RAYN				IAmb	IAmb	18 59 07.6	
	comp=Z,146nm,1.1s						
RAYN	**Ar Rayn**	72.22	293	IAMs_20	IAMs_20	19 35 37.4	
	comp=Z,7µm,19.0s						
ADK	**Adak**	72.24	36	IAMs_20	IAMs_20	19 28 15.6	
	comp=Z,5µm,21.0s						
ABPO	**Ambohimpanom**	72.83	249	IAMs_20	IAMs_20	19 27 57.2	
	comp=Z,9µm,20.0s						
MAK	**Makhachkala**	73.06	314	*e*P	P	18 59 03.6	-2.7
MAK				*e*		19 01 49.0	
MAK				*e*PPP	PPP	19 03 33.1	
MAK				*e*S	S	19 08 28.6	-5.1
MAK				pmax	pmax		
	comp=Z,418nm,2.0s						
VOI	**Vohitsoka**	73.76	246	P	P	18 59 12.7	+1.7
VOI	**Vohitsoka**	73.76	246	P	P	18 59 09.0	-2.0
VOI				IAMs_20	IAMs_20	19 29 51.4	
	comp=Z,7µm,20.0s						
VOI	**Vohitsoka**	73.76	246	P	P	18 59 12.1	+1.1
ATKA	**Atka Island**	73.80	36	P	P	18 59 11.4	+0.9
	comp=Z,200nm,1.0s						
GROC	**Groznyy**	74.34	314	*e*P	P	18 59 13.1	-0.7
GROC				*e*S	S	19 08 53.6	+5.5
GROC				pmax	pmax		
	comp=Z,67nm,1.3s						
ATD	**Arta Tunnel**	74.44	281	P	P	18 59 16.2	+1.1
	SNR=7.2						
ATD				S	S	19 08 50.4	0.0
GNI	**Garni**	74.64	311	P	P	18 59 17.2	+1.3
	comp=Z,10nm,0.9s,baz=120,slow=2.2,SNR=13						
GNI	**Garni**	74.64	311	P	P	18 59 16.3	+0.5
GNI	**Garni**	74.64	311	P	P	18 59 17.9	+2.1
GNI				P	P	18 59 17.9	+2.1
GNI				S	S	19 08 54.6	+2.7
GNI				S	S	19 08 54.6	+2.7
BELG	**Belogornoye**	75.02	323	*i* P	P	18 59 17.2	-0.3
BELG				pmax	pmax		
	comp=Z,31nm,0.9s						
ZEI	**Tsey**	75.65	313	*e*P	P	18 59 20.0	-1.7
ZEI				pmax	pmax		
	comp=Z,34nm,1.3s						
KIRV	**Kirov**	75.68	330	*ce*P	P	18 59 19.8	-1.4
AKH	**Akhalkalaki**	75.75	312	⇑P	P	18 59 23.8	+1.5
NCK	**Nalchik**	75.97	314	*i* P	P	18 59 22.8	-0.5
NCK				pmax	pmax		
	comp=Z,231nm,2.0s						
TEND	**Ethiopian Broa**	76.24	281	*e*P	P	18 59 30.7	+5.3
TEND				*e*S	SKSac	19 09 25.4	-12
CRZF	**Crozet Islands**	76.30	221	IAMs_20	IAMs_20	19 30 16.3	
	comp=Z,4µm,20.0s						
KBZ	**Khabaz**	76.51	314	P	P	18 59 26.4	+0.2
	comp=Z,24nm,0.8s,baz=133,slow=4.3,SNR=30						
KBZ				LR	LR	19 39 31.0	
	comp=Z,4µm,18.2s,baz=84,slow=41						
NEY	**Neytrino**	76.57	313	*i* P	P	18 59 26.7	-0.2
NEY				pmax	pmax		
	comp=Z,94nm,2.4s						
GOF	**Gofitskoye**	76.59	315	⇑*e*P	P	18 59 27.1	+0.3
GOF				pmax	pmax		
	comp=Z,204nm,2.6s						
SHA1	**Shidzhatmaz**	76.68	314	*i* P	P	18 59 26.5	-1.1
KIV	**Kislovodsk**	76.69	314	⇑P	P	18 59 28.4	+0.9
KIV	**Kislovodsk**	76.69	314	*i* P	P	18 59 27.8	+0.3
	SNR=34						
KIV	**Kislovodsk**	76.69	314	*e*P	P	18 59 27.7	+0.3
KIV				*e*S	S	19 09 12.5	-1.8
KIV				*e*SS	SS	19 14 10.0	0.0
KIV				pmax	pmax		
	comp=Z,50nm,1.1s						
KIV				pmax	pmax		
	comp=Z,331nm,4.2s						
KIV	**Kislovodsk**	76.69	314	P	P	18 59 27.4	-0.1
KIV				P	P	18 59 27.4	-0.1
KIV				S	S	19 09 15.4	+1.0
KIV				S	S	19 09 15.4	+1.0
CHVG	**Ch'k'valeri**	76.96	313	⇓P	P	18 59 30.4	+1.5
NIKH	**Nikolski High**	77.15	36	P	P	18 59 30.1	+0.4
	baz=259						
ANKE	**Ethiopia-Afar**	77.54	279	*e*P	P	18 59 35.6	+2.5
ANKE				*e*S	S	19 09 26.8	+1.6
DESE	**Dese**	77.60	281	*e*P	P	18 59 39.2	+5.8
DESE				*e*S	SKSac	19 09 38.5	-9.3
GAMB	**Gambell**	78.23	25	P	P	18 59 36.7	+1.2
	baz=254						
PRGR	**Permogore**	78.32	332	*e*P	P	18 59 35.0	-1.1
PRGR				pmax	pmax		
	comp=Z,81nm,1.4s						
VRH	**Novokhopyorsk**	78.38	321	*e*P	P	18 59 36.4	-0.2
VRH				*e*S	S	19 09 31.1	-1.0
VRH				pmax	pmax		
	comp=Z,130nm,0.8s						
VRH				smax	smax		
	comp=N,990nm,7.8s						
VRH				MLR	MLR		
	comp=Z,6µm,17.0s						
AAE	**Adis Abeba**	78.51	278	*e*P	P	18 59 44.2	+5.7
AAE				*e*S	S	19 09 41.4	+5.8
FURI	**Furi**	78.60	278	*e*P	P	18 59 42.4	+3.4
FURI				*e*S	S	19 09 42.8	+6.3
FURI	**Furi**	78.60	278	IAMs_20	IAMs_20	19 38 15.5	
	comp=Z,6µm,20.0s						
UNV	**Unalaska Valle**	78.69	36	P	P	18 59 37.4	-0.9
UNV				IAmb	IAmb	18 59 39.4	
	comp=Z,215nm,1.1s						
UNV	**Unalaska Valle**	78.69	36	P	P	18 59 37.9	-0.4
	baz=261						
UNV	**Unalaska Valle**	78.69	36	P	P	18 59 38.2	0.0
SOC	**Sochi**	78.78	314	*e*P	P	18 59 37.6	-1.4
SOC				*i*		19 02 35.0	
SOC				*e*PPP	PPP	19 04 22.9	
SOC				*e*S	S	19 09 34.3	-2.5
SOC				*e*SS	SS	19 14 40.1	-1.2
SOC				*e*SSS	SSS	19 17 52.2	
SOC				pmax	pmax		
	comp=Z,74nm,1.1s						
SOC				MLR	MLR		
	comp=Z,3µm,17.0s						
DILA	**Dilla**	79.09	276	*e*P	P	18 59 46.5	+5.1
DILA				*e*S	S	19 09 41.4	-0.1
KIBK	**Kibwezi**	79.83	267	P	P	18 59 45.3	-0.1
	SNR=23						
VORD	**Divnogorie**	79.87	321	*e*P	P	18 59 44.3	-0.4
VORD				*e*S	S	19 09 48.3	+0.3
VORD				pmax	pmax		
	comp=Z,80nm,0.8s						
VORD				smax	smax		
	comp=E,1µm,8.6s						
VSR	**Storozhevoye**	79.97	321	*e*P	P	18 59 44.7	-0.6
VSR				*e*S	S	19 09 44.5	-4.6
VSR				pmax	pmax		
	comp=Z,70nm,0.8s						
VSR				smax	smax		
	comp=N,2µm,13.2s						
VSR				MLR	MLR		
	comp=Z,5µm,26.0s						
VORR	**Voronezh**	80.00	322	*e*P	P	18 59 44.0	-1.5
VORR				pmax	pmax		
	comp=Z,250nm,1.4s						
TNA	**Tin City**	80.25	24	P	P	18 59 47.2	+0.7
	baz=257,SNR=8.9						
LPSR	**Galich'ya Gora**	80.28	323	*e*P	P	18 59 46.5	-0.5
LPSR				*e*S	S	19 09 50.2	-2.1
LPSR				pmax	pmax		
	comp=Z,120nm,0.9s						
LPSR				smax	smax		
	comp=N,2µm,13.9s						
LPSR				MLR	MLR		
	comp=Z,5µm,19.0s						
KMBO	**Kilima Mbogo**	80.54	268	P	P	18 59 49.5	+0.1
	comp=Z,21nm,0.9s,baz=61,slow=7.8,SNR=55						
KMBO	**Kilima Mbogo**	80.54	268	*i* P	P	18 59 48.6	-0.9
	SNR=38						
KMBO	**Kilima Mbogo**	80.54	268	P	P	18 59 49.7	+0.2
KMBO				P	P	18 59 49.7	+0.2
KMBO				S	S	19 09 57.0	0.0
KMBO				S	S	19 09 57.0	0.0
KMBO	**Kilima Mbogo**	80.54	268	IAMs_20	IAMs_20	19 42 43.8	
	comp=Z,4µm,18.0s						
FALS	**False Pass**	80.62	35	P	P	18 59 48.1	-0.6
	baz=263						
MAW	**Mawson**	80.69	199	P	P	18 59 48.3	-0.4
	comp=Z,37nm,1.0s,baz=50,slow=6.2,SNR=32						
MAW				LR	LR	19 31 45.4	
	comp=Z,3µm,21.5s,baz=52,slow=33						
MAW	**Mawson**	80.69	199	P	P	18 59 48.4	-0.4
	baz=81,SNR=13						
MAW	**Mawson**	80.69	199	P	P	18 59 48.3	-0.4
KLMR	**Klimovskoe**	81.06	331	*e*P	P	18 59 48.2	-2.7
KLMR				*e*		19 02 52.0	
KLMR				*e*S	S	19 09 57.9	-2.2
KLMR				pmax	pmax		
	comp=Z,144nm,1.4s						
KLMR	**Klimovskoe**	81.06	331	*e*P	P	18 59 48.3	-2.7
KLMR				AMP		18 59 58.8	
	comp=Z,144nm,1.4s						
KLMR				*e*PP	PP	19 02 52.0	-3.8
KLMR				*e*S	S	19 09 57.9	-2.2
KLMR				*e*S	S	19 09 57.9	-2.2
KLMR				LQ	LQ	19 31 01.9	
KLMR				LQ	LQ	19 31 01.9	
KLMR				LR	LR	19 36 06.9	
KLMR				AMP		19 40 54.2	
	comp=Z,5µm,15.3s						
SHBL	**Chebaa**	81.28	303	*e*P	P	18 59 53.7	+0.7
BHL	**Bhannes**	81.37	304	*e*P	P	18 59 53.7	+0.4

GHAJ	Ghor Haditha	81.39	301	IAMs_20	IAMs_20	19 41 60.0	
	comp=Z,7µm,19.0s						
MOS	Moscow	81.40	326	eP	P	18 59 50.1	-2.7
MOS				e		18 59 56.0	
MOS				e		19 02 54.9	
MOS				eS	S	19 09 58.7	-5.1
MOS				pmax	pmax		
	comp=Z,77nm,1.4s						
OBN	Obninsk	81.94	325	⇑P	P	18 59 55.4	-0.2
OBN	Obninsk	81.94	325	ceP	P	18 59 55.2	-0.5
OBN				e		19 00 00.0	
OBN				i *PP	PcP	19 00 04.9	+3.6
OBN				eS	S	19 10 10.4	+1.1
OBN				ePS	PnS	19 11 02.1	+4.2
OBN				pmax	pmax		
	comp=Z,93nm,1.0s						
OBN				MLR	MLR		
	comp=Z,5µm,23.0s						
OBN	Obninsk	81.94	325	P	P	18 59 54.4	-1.2
OBN				IAmb	IAmb	19 00 05.6	
	comp=Z,193nm,1.4s						
OBN				IAMs_20	IAMs_20	19 42 08.8	
	comp=Z,5µm,18.0s						
LODK	Lodwar	82.15	273	P	P	18 59 58.6	+0.8
	SNR=46						
LODK	Lodwar	82.15	273	IAMs_20	IAMs_20	19 37 23.4	
	comp=Z,4µm,21.0s						
RDOG	Red Dog Mine	82.66	22	P	P	19 00 08.5	+9.2
	baz=262,SNR=28						
SIM	Simferopol'	82.89	315	eP	P	19 00 00.0	-0.9
SIM				e		19 00 05.0	
SIM				pmax	pmax		
	comp=Z,65nm,0.9s						
BR131	Keskin Array S	83.11	309	P	P	19 00 02.2	-0.2
BR131				pmax	pmax		
	comp=Z,59nm,0.9s						
BR131	Keskin Array S	83.11	309	P	P	19 00 02.2	-0.2
	SNR=40						
BR131				P	P	19 00 02.2	-0.2
	SNR=40						
BR131	Keskin Array S	83.11	309	P	P	19 00 02.2	-0.2
BRTR	Keskin Array B	83.11	309	P	P	19 00 01.9	-0.4
	comp=Z,25nm,0.8s,baz=122,slow=5.9,SNR=78						
BRTR				PP	PP	19 03 12.0	-1.4
	comp=Z,2.3nm,0.9s,baz=116,slow=8.6,SNR=2.7						
BRTR				LR	LR	19 44 23.8	
	comp=Z,2µm,18.4s,baz=106,slow=41						
BRTR	Keskin Array B	83.11	309	P	P	19 00 02.0	-0.4
BRTR	Keskin Array B	83.11	309	P	P	19 00 02.1	-0.2
CSS	Mathiatis	83.30	305	P	P	19 00 01.7	-1.6
CSS				IAMs_20	IAMs_20	19 41 49.5	
	comp=Z,4µm,20.0s						
LEF	Lefka	83.67	305	⇓P	P	19 00 05.4	+0.3
LVZ	Lovozero	84.01	338	P	P	19 00 05.7	-0.6
LVZ				pmax	pmax		
	comp=Z,262nm,1.8s						
LVZ	Lovozero	84.01	338	P	P	19 00 05.7	-0.6
LVZ				IAmb	IAmb	19 02 42.3	
	comp=Z,262nm,1.8s						
RAR	Rarotonga	84.36	112	P	P	19 00 08.4	-0.5
	comp=Z,11nm,0.8s,baz=236,slow=8.7,SNR=3.3						
APA	Apatity	84.46	337	⇓iP	P	19 00 16.5	+8.0
APA				i		19 03 31.8	
APA				pmax	pmax		
	comp=Z,21nm,1.0s						
APA				MLR	MLR		
	comp=Z,8µm,18.0s						
VNDA	Vanda	84.61	171	P	P	19 00 08.1	-1.0
	comp=Z,11nm,0.8s,baz=317,slow=6.2,SNR=46						
VNDA				LR	LR	19 40 01.4	
	comp=Z,6µm,18.5s,baz=330,slow=37						
VNDA	Vanda	84.61	171	P	P	19 00 08.0	-1.0
VNDA				pmax	pmax		
	comp=Z,25nm,1.0s						
VNDA	Vanda	84.61	171	P	P	19 00 08.0	-1.0
GCSA	Galena City Sc	84.76	25	P	P	19 00 11.1	+1.1
	baz=268,SNR=101						
KDZE	Karadeniz Ereo	84.79	311	⇓P	P	19 00 10.8	0.0
TTA	Tatalina	85.07	27	P	P	19 00 12.5	+0.7
TTA				pmax	pmax		
	comp=Z,120nm,1.2s						
TTA	Tatalina	85.07	27	P	P	19 00 12.5	+0.7
TTA				IAmb	IAmb	19 00 14.7	
	comp=Z,120nm,1.2s						
TTA	Tatalina	85.07	27	P	P	19 00 12.9	+1.1
	baz=268,SNR=27						
A21K	Barrow	85.17	19	P	P	19 00 12.5	+0.5
A21K				IAMs_20	IAMs_20	19 37 40.2	
	comp=Z,4µm,22.0s						
A21K	Barrow	85.17	19	P	P	19 00 13.0	+1.0
	baz=267						
VALR	Valaam	85.28	331	i P	P	19 00 12.3	-0.4
VALR				pmax	pmax		
	comp=Z,142nm,1.0s						
O18K	Koktuh Hills	85.40	30	P	P	19 00 14.5	+1.1
	baz=269						
PUL	Pulkovo	85.54	330	i P	P	19 00 13.1	-1.0
PUL				pmax	pmax		
	comp=Z,151nm,0.7s						
ISP	Isparta	85.55	308	P	P	19 00 13.4	-1.4
ISP				pmax	pmax		
	comp=Z,163nm,1.4s						
ISP				MLR	MLR		
	comp=Z,3µm,21.0s						
ISP	Isparta	85.55	308	P	P	19 00 13.4	-1.4
ISP				IAmb	IAmb	19 00 23.0	
	comp=Z,163nm,1.4s						
BORA	Eskisehir	85.56	310	P	P	19 00 13.9	-0.9
BORA				IAmb	IAmb	19 00 27.7	
	comp=Z,202nm,1.7s						
L19K	White Mountain	85.60	28	P	P	19 00 13.8	-0.6
L19K				IAmb	IAmb	19 00 17.5	
	comp=Z,120nm,1.2s						
L19K	White Mountain	85.60	28	P	P	19 00 15.7	+1.3
	baz=270,SNR=27						
N19K	Bonanza Creek	85.77	29	P	P	19 00 17.6	+2.2
	baz=270,SNR=11						
M19K	Big River Lodg	85.81	28	P	P	19 00 17.1	+1.7
	baz=270						
O19K	Port Alsworth	85.85	30	P	P	19 00 17.5	+1.9
	baz=270						
PURM	Purcari	85.87	316	⇑P	P	19 00 16.0	0.0
J20K	Nowinta River	85.93	26	P	P	19 00 16.9	+1.0
	baz=270						
L20K	Farewell, AK	86.05	28	P	P	19 00 17.6	+0.9
	baz=270						
ELL	Elmali	86.06	306	P	P	19 00 16.6	-0.8
ELL				pmax	pmax		
	comp=Z,2µm,2.0s						
ELL	Elmali	86.06	306	P	P	19 00 16.6	-0.8
IMAR	Indian Mountai	86.09	24	P	P	19 00 17.4	+0.7
Q19K	Cape Douglas,	86.20	31	IAMs_20	IAMs_20	19 38 34.3	
	comp=Z,4µm,20.0s						
AKASG	Malin Array Be	86.23	320	P	P	19 00 16.9	-0.9
	comp=Z,15nm,0.6s,baz=78,slow=4.4,SNR=107						
AKASG				LR	LR	19 43 55.9	
	comp=Z,5µm,19.2s,baz=75,slow=39						
AKASG	Malin Array Be	86.23	320	i P	P	19 00 16.7	-1.0
AKASG				pmax	pmax		
	comp=Z,15nm,0.6s						
AKASG	Malin Array Be	86.23	320	P	P	19 00 16.8	-0.9
AKASG				IAmb	IAmb	19 00 24.5	
	comp=Z,181nm,1.6s						
AKBB	Malin Array Si	86.23	320	i P	P	19 00 16.5	-1.2
AKBB	Malin Array Si	86.23	320	P	P	19 00 16.8	-0.9
KSL	Kastellorizon	86.34	306	P	P	19 00 17.5	-1.1
OHAK	Old Harbor	86.42	33	P	P	19 00 20.7	+2.2
	baz=271						
H21K	Melozitna Rive	86.49	25	P	P	19 00 19.2	+0.5
H21K				IAmb	IAmb	19 00 22.0	
	comp=Z,109nm,1.2s						
H21K	Melozitna Rive	86.49	25	P	P	19 00 20.2	+1.5
	baz=271,SNR=52						
KIS	Kishinev	86.58	317	eP	P	19 00 20.0	+0.5
	comp=Z,1µm,4.7s						
KIS				eS	S	19 10 52.0	-4.3
KIS				eLQ	LQ	19 36 02.0	
	comp=Z,1µm,23.0s						
KIS				LRM	MLR	19 46 06.0	
	comp=Z,1µm,19.0s						
KIS	Kishinev	86.58	317	eP	P	19 00 20.0	+0.5
KIS				eS	S	19 10 52.0	-4.3
KIS				pmax	pmax		
	comp=Z,1µm,4.7s						
MILM	Milestii Mici	86.59	317	⇑P	P	19 00 18.8	-0.7
MILM	Milestii Mici	86.59	317	c iP	P	19 00 18.7	-0.9
MILM				e		19 03 49.0	
MILM				e		19 10 35.0	
MILM				eS	S	19 10 51.0	-5.3
MILM				ePS	PnS	19 12 01.0	+5.9
MILM				pmax	pmax		
	comp=Z,2µm,4.0s						
MILM				smax	smax		
	comp=E,2µm,5.5s						
ISK	Istanbul-Kandi	86.59	311	P	P	19 00 19.7	0.0
JURR	Jurilovca	86.61	314	⇑P	P	19 00 19.5	-0.2
TLCR		86.64	315	⇑P	P	19 00 19.9	+0.1
FETY	Fethiye	86.73	306	P	P	19 00 20.2	-0.3
CHUM	Lake Minchumin	86.74	26	P	P	19 00 20.9	+1.0
	baz=272,SNR=16						
KDAK	Kodiak Island	86.78	32	IAMs_20	IAMs_20	19 37 22.3	
	comp=Z,6µm,21.0s						
PPLA	Purkeypile	86.82	27	P	P	19 00 18.8	-1.7
PPLA				IAmb	IAmb	19 00 46.6	
	comp=Z,223nm,1.7s						
PPLA	Purkeypile	86.82	27	P	P	19 00 21.4	+0.8
	baz=272,SNR=8.7						
KEV	Kevo	86.83	340	IAMs_20	IAMs_20	19 42 41.0	
	comp=Z,6µm,19.0s						
I21K	Tanana	86.84	25	P	P	19 00 20.4	0.0
I21K				IAmb	IAmb	19 01 27.1	
	comp=Z,295nm,1.9s						
I21K				IAMs_20	IAMs_20	19 37 53.8	
	comp=Z,4µm,21.0s						
I21K	Tanana	86.84	25	P	P	19 00 21.6	+1.2
	baz=272						
MANR	Mangalia	86.85	314	⇓P	P	19 00 21.5	+0.6
CAST	Castle Rocks	86.86	27	P	P	19 00 21.3	+0.8
CAST				IAmb	IAmb	19 00 26.8	
	comp=Z,160nm,1.8s						
CAST	Castle Rocks	86.86	27	P	P	19 00 22.0	+1.4
	baz=272,SNR=19						
SORM	Soroca	86.86	318	⇑P	P	19 00 20.2	-0.7
TPGR	Topolog	86.93	315	⇑P	P	19 00 21.1	-0.2
MNK	Minsk	86.94	324	ceP	P	19 00 21.2	+0.1
MNK	Minsk	86.94	324	i P	P	19 00 21.2	+0.1
	comp=E,13nm,1.2s						
MNK				i P	P	19 00 21.2	+0.1
	comp=N,23nm,1.0s						
MNK				i P	P	19 00 21.2	+0.1
	comp=Z,137nm,1.2s,baz=269						
MNK				i PP	PP	19 03 44.0	0.0
MNK				i PPP	PPP	19 05 38.4	
MNK				i S	SKSac	19 10 47.2	-0.9
MNK				i SS	SS	19 16 43.9	+2.1
MNK				i SSS	SSS	19 20 16.6	
MNK				i LQ	LQ	19 33 38.7	
MNK				i LR	LR	19 36 37.3	
MNK				i LRM	MLR	19 40 27.3	
	comp=E,950nm,24.7s						
MNK				i LRM	MLR	19 40 31.9	
	comp=N,6µm,20.8s						
MNK				i LRM	MLR	19 40 31.9	
	comp=Z,9µm,27.7s						
TIRR	Tirgusor	86.95	314	⇑P	P	19 00 21.1	-0.2
TIRR	Tirgusor	86.95	314	P	P	19 00 20.8	-0.6
TIRR				pmax	pmax		
	comp=Z,286nm,1.4s						
TIRR				MLR	MLR		
	comp=Z,14µm,22.0s						
TIRR	Tirgusor	86.95	314	P	P	19 00 20.8	-0.6
KULA	Kula-Manisa	86.99	308	P	P	19 00 22.1	+0.2
MBAR	Mbarara	87.00	269	c iP	P	19 00 22.6	+0.1
MBAR	Mbarara	87.00	269	P	P	19 00 23.3	+0.8
MBAR				P	P	19 00 23.3	+0.8
MBAR	Mbarara	87.00	269	IAMs_20	IAMs_20	19 36 15.6	
	comp=Z,5µm,22.0s						
HOPEN	Hopen	87.10	346	IVMs_BB	IVMs_BB	19 37 55.5	
	comp=Z,9µm,4.1s						
CFR	Carcaliu	87.12	315	⇑P	P	19 00 22.0	-0.2
VLDR	Vladesti	87.14	316	⇑P	P	19 00 22.4	+0.1
SCTR	Scanteiesti	87.20	315	⇓P	P	19 00 22.6	0.0
HARR	Harsova	87.29	314	⇓P	P	19 00 22.8	-0.2
VASR	Vaslui	87.30	316	⇑P	P	19 00 23.4	+0.4
BPAW	Bear Paw Mtn.	87.31	26	P	P	19 00 24.7	+2.0
	baz=273,SNR=9.5						
YER	Yerkesik	87.35	307	P	P	19 00 22.6	-1.0
SLCR	Slobozia Conac	87.36	315	⇑P	P	19 00 23.9	+0.6
IZVR	Izvoarele	87.37	315	⇑P	P	19 00 23.7	+0.3
ARA0	ARCESS Array S	87.37	339	eP	P	19 00 22.6	-0.4
ARCES	ARCESS Array B	87.37	339	P	P	19 00 22.4	-0.5
	comp=Z,26nm,1.0s,baz=96,slow=6.6,SNR=22						
ARCES	ARCESS Array B	87.37	339	P	P	19 00 22.0	-0.9
ARCES				pmax	pmax		
	comp=Z,62nm,1.1s						
ARCES	ARCESS Array B	87.37	339	P	P	19 00 22.0	-0.9
MLY	Manley	87.38	25	P	P	19 00 23.8	+0.7
MLY	Manley	87.38	25	P	P	19 00 24.2	+1.1
	baz=273,SNR=15						
ICOR	Ion Corvin	87.41	314	⇑P	P	19 00 24.6	+1.0
VSU	Vasula	87.42	328	eP	P	19 00 23.4	+0.2
VSU	Vasula	87.42	328	i P	P	19 00 21.7	-1.6
COLD	Coldfoot	87.47	23	P	P	19 00 23.5	+0.1
COLD	Coldfoot	87.47	23	P	P	19 00 24.5	+1.1
	baz=273,SNR=65						
ARG	Arkhangelos	87.52	306	P	P	19 00 28.5	+4.2
NACGM	Naroch	87.56	325	i P	P	19 00 24.2	+0.1
FINES	FINESS Array B	87.59	331	P	P	19 00 23.4	-0.7
	comp=Z,8.7nm,0.8s,baz=91,slow=3.8,SNR=29						
FINES				PP	PP	19 03 48.2	-0.8
	comp=Z,7.8nm,1.1s,baz=76,slow=5.9,SNR=2.1						
FINES				LR	LR	19 41 49.2	
	comp=Z,4µm,20.4s,baz=98,slow=37						
GHRR		87.59	316	⇓P	P	19 00 25.4	+0.9
TOLK	Toolik Lake Re	87.62	21	P	P	19 00 25.6	+1.4
	baz=274						
TRF	Thorofare Moun	87.66	27	P	P	19 00 24.6	0.0
TRF				IAmb	IAmb	19 01 19.9	
	comp=Z,100nm,1.4s						
TRF	Thorofare Moun	87.66	27	P	P	19 00 24.9	+0.3
	baz=274						
M22K	Willow	87.84	28	P	P	19 00 25.0	-0.3
	baz=274						
ODBI	Odobesti	87.86	316	⇑P	P	19 00 26.0	+0.3
IIGN	Ignalina	87.86	325	eP	P	19 00 26.2	+0.7
ISAL	Salakas	87.90	325	eP	P	19 00 26.5	+0.7
HAMF	Hammerfest	87.91	341	eP	P	19 00 25.4	-0.1
HAMF				eSKSac	SKSac	19 10 53.7	+0.3
HAMF				IVMs_BB	IVMs_BB	19 40 58.4	
	comp=Z,5µm,4.0s						
GRER		87.93	315	⇑P	P	19 00 26.8	+0.7
I23K	Minto, Yukon-K	87.95	25	P	P	19 00 25.8	+0.1
I23K				IAmb	IAmb	19 00 52.4	
	comp=Z,97nm,1.4s						
I23K	Minto, Yukon-K	87.95	25	P	P	19 00 26.4	+0.7
	baz=274,SNR=9.5						
RC01	Rabbit Creek A	88.07	29	P	P	19 00 26.5	+0.1
RC01	Rabbit Creek A	88.07	29	P	P	19 00 25.6	-0.8
	baz=274						
VRI	Vrincioaia	88.08	316	⇓P	P	19 00 27.1	+0.2
TESR	Tescani	88.10	316	⇓P	P	19 00 26.7	-0.2
NEA2	Nenana	88.12	26	P	P	19 00 26.8	+0.2
	baz=274,SNR=9.8						
PLOR	Plostina	88.13	316	⇑P	P	19 00 27.2	+0.1
KTK1	Kautokeino	88.22	339	eP	P	19 00 26.6	-0.3
KTK1				IVmBBB		19 00 32.2	
	comp=Z,3µm,3.5s						
KTK1				eSKSac	SKSac	19 10 54.4	-0.9
KTK1				IVMs_BB	IVMs_BB	19 49 50.5	
	comp=Z,5µm,4.4s						
MCK	McKinley	88.24	26	P	P	19 00 27.0	-0.2
MCK				pmax	pmax		
	comp=Z,61nm,1.0s						
MCK				MLR	MLR		
	comp=Z,2µm,21.0s						
MCK	McKinley	88.24	26	P	P	19 00 27.0	-0.2
MCK				IAmb	IAmb	19 00 29.4	
	comp=Z,61nm,1.0s						
MCK	McKinley	88.24	26	P	P	19 00 27.1	-0.2
	baz=275,SNR=28						
ISR	Istrita	88.25	315	⇑P	P	19 00 27.7	-0.1
EDRB	Edirne	88.30	312	P	P	19 00 27.7	-0.2
RND	Reindeer	88.31	27	P	P	19 00 27.5	-0.1
RND				pmax	pmax		
	comp=Z,42nm,1.1s						
RND				MLR	MLR		
	comp=Z,2µm,20.0s						
RND	Reindeer	88.31	27	P	P	19 00 27.5	-0.1
PMR	Palmer	88.33	29	P	P	19 00 26.4	-1.2
	baz=275						
PRAR	RASCA	88.33	317	⇑P	P	19 00 27.2	-0.8
RAZG	Razgrad	88.37	313	⇑P	P	19 00 28.0	-0.2
NEHR	Nehoiu	88.41	315	⇓P	P	19 00 28.8	+0.4
KOSK	Kos Island	88.41	307	P	P	19 00 28.1	-0.5
COVR	Voineasa-Covas	88.44	316	⇓P	P	19 00 28.4	-0.2
SMG	Samos	88.47	308	P	P	19 00 28.6	-0.3
SULR		88.48	314	⇓P	P	19 00 28.9	+0.2
WAT1	Susitna Watana	88.49	27	P	P	19 00 28.2	-0.2
	baz=275						
H24K	Noodor Dome	88.51	24	P	P	19 00 29.4	+1.0
H24K				IAmb	IAmb	19 01 09.8	
	comp=Z,114nm,1.7s						
H24K	Noodor Dome	88.51	24	P	P	19 00 29.5	+1.0
	baz=276						
TCOL	CIGO, UAF Yank	88.61	25	IAMs_20	IAMs_20	19 38 57.5	
	comp=Z,4µm,21.0s						
COLA	College	88.61	25	i P	P	19 00 27.0	-1.9
COLA				pmax	pmax		
	comp=Z,45nm,3.0s						
MLR	Muntele Rosu	88.65	315	⇓P	P	19 00 29.1	-0.6
MLR	Muntele Rosu	88.65	315	P	P	19 00 28.8	-0.9
MLR				pmax	pmax		
	comp=Z,328nm,2.0s						
MLR				MLR	MLR		
	comp=Z,4µm,22.0s						
MLR	Muntele Rosu	88.65	315	P	P	19 00 28.8	-0.9
MLR				IAMs_20	IAMs_20	19 48 09.6	
	comp=Z,4µm,22.0s						
CCB	Clear Creek Bu	88.65	25	IAMs_20	IAMs_20	19 38 57.7	
	comp=Z,4µm,21.0s						
KNK	Knik Glacier	88.66	29	P	P	19 00 29.6	+0.3
KNK				IAmb	IAmb	19 00 58.9	
	comp=Z,74nm,1.3s						
KNK				IAMs_20	IAMs_20	19 43 55.3	
	comp=Z,4µm,20.0s						
KNK	Knik Glacier	88.66	29	P	P	19 00 29.6	+0.3
	baz=275						
SML	Sawmill	88.69	28	P	P	19 00 29.0	-0.4
	baz=275						
OZUR		88.72	316	⇑P	P	19 00 29.8	-0.1
SPA0	Spitsbergen Ar	88.76	348	eP	P	19 00 28.6	-0.9
PRK	Paraskevi	88.82	309	P	P	19 00 31.0	+0.6
BJO1	Bjornoya	88.83	345	eP	P	19 00 29.9	+0.1
BJO1				eSKSac	SKSac	19 11 03.2	+4.4
BJO1				IVMs_BB	IVMs_BB	19 41 42.0	
	comp=Z,8µm,4.2s						
ALN	Alexandroupoli	88.88	311	P	P	19 00 30.1	-0.6
WAT6	Susitna Watana	88.89	27	P	P	19 00 30.2	-0.2
	baz=276,SNR=16						
BURAR	Bucovina Array	89.00	317	⇓P	P	19 00 31.1	-0.1
BURAR	Bucovina Array	89.00	317	P	P	19 00 30.4	-0.9
DHY	Denali Highway	89.00	27	P	P	19 00 30.9	-0.1
	baz=276,SNR=6.0						
DOPR	Dopca	89.00	316	⇓P	P	19 00 30.9	-0.3
BUR08	Bucovina Ar. S	89.01	317	P	P	19 00 31.2	-0.1
ILAR	Eielson Array	89.03	25	P	P	19 00 30.4	-0.6
	comp=Z,8.4nm,1.2s,baz=298,slow=3.9,SNR=22						
ILAR				PP	PP	19 03 59.0	-1.5
	comp=Z,5.1nm,1.1s,baz=274,slow=8.2,SNR=2.7						
ILAR				PKKPbc	PKKPdf	19 18 08.4	+2.1
	comp=Z,2.3nm,1.0s,baz=101,slow=1.5,SNR=8.0						
ILAR				PKPPKP		19 26 16.9	
	comp=Z,2.0nm,1.0s,baz=92,slow=1.5,SNR=4.5						
ILAR				LR	LR	19 45 48.0	
	comp=Z,1µm,18.4s,baz=294,slow=39						
ILAR	Eielson Array	89.03	25	P	P	19 00 29.4	-1.5
ILAR	Eielson Array	89.03	25	P	P	19 00 29.4	-1.5
CHOS	Chios island	89.04	308	P	P	19 00 34.3	+2.7
HDA	Harding Lake	89.05	26	P	P	19 00 29.6	-1.4
HDA	Harding Lake	89.05	26	P	P	19 00 29.7	-1.3
	baz=276						
PABE	Paberze	89.13	325	eP	P	19 00 31.4	-0.1
PABE	Paberze	89.13	325	P	P	19 00 31.2	-0.3
PABE				IAmb	IAmb	19 00 37.7	
	comp=Z,130nm,1.1s						
PABE				IAMs_20	IAMs_20	19 45 10.0	
	comp=Z,6µm,20.0s						
SYO	Syowa Base	89.14	201	⇑iP	P	19 00 31.0	-0.2
SYO	Syowa Base	89.14	201	⇑ipP	pP	19 00 37.6	+2.4
SYO	Syowa Base	89.14	201	⇑isP	sP	19 00 39.0	+2.4
JETT	Jettan, Norway	89.15	340	eP	P	19 00 31.2	-0.2
SCM	Sheep Creek Mo	89.16	28	P	P	19 00 31.7	+0.1
	baz=276						
HSPB	Hornsund (broa	89.19	347	eP	P	19 00 31.6	+0.2
HSPB				eSKSac	SKSac	19 11 01.0	+0.2
HSPB				IVMs_BB	IVMs_BB	19 41 50.8	
	comp=Z,6µm,4.5s						
RDO	Rodhopi	89.25	311	P	P	19 00 31.5	-0.9
VOIR		89.28	315	⇓P	P	19 00 32.8	+0.2
HUMR	Humele	89.40	314	⇑P	P	19 00 32.7	-0.4
KBS	Kingsbay	89.44	349	eSKSac	SKSac	19 11 07.5	+5.2
PRP	Porcupine Dome	89.51	24	P	P	19 00 32.8	-0.5
PRP	Porcupine Dome	89.51	24	P	P	19 00 33.2	-0.1
	baz=278,SNR=7.3						
LVV	L'vov	89.60	320	eP	P	19 00 33.3	-0.6
LVV				e		19 04 09.8	
LVV				eS	S	19 11 27.5	+2.6
LVV				e		19 17 24.7	
NPS	Neapolis	89.61	305	P	P	19 00 37.0	+2.7
BMAR	Burnt Mountain	89.62	22	P	P	19 00 34.2	+0.5
ARCR	ARCALIA	89.63	317	⇑P	P	19 00 34.7	+0.6
TRO	Tromso	89.65	340	eP	P	19 00 32.4	-1.2
TRO				eSKSac	SKSac	19 11 02.7	-1.1
TRO				IVMsBB		19 40 01.3	
	comp=Z,3µm,4.3s						
M24K	Tolsona, Glenn	89.67	28	P	P	19 00 34.5	+0.5
	baz=277,SNR=8.5						
FID	Port Fidalgo	89.69	29	IAMs_20	IAMs_20	19 39 31.9	
	comp=Z,5µm,22.0s						
J25K	Salcha River,	89.70	25	P	P	19 00 33.1	-1.0
	baz=278						
SUW	Suwalki	89.73	324	eP	P	19 00 34.0	-0.3
SUW	Suwalki	89.73	324	IAMs_20	IAMs_20	19 42 54.8	
	comp=Z,5µm,22.0s						
VLAD	Vladila	89.86	314	⇑P	P	19 00 35.4	+0.2
KLU	Klutina	89.86	28	P	P	19 00 35.8	+0.8
	baz=277						
PAX	Paxson	89.88	27	P	P	19 00 35.3	+0.3
	baz=278,SNR=14						
THAS	Thassos island	89.91	311	P	P	19 00 34.6	-0.9
KAVA	Kavala	90.03	311	P	P	19 00 35.4	-0.7
RIDG	Independent Ri	90.05	26	P	P	19 00 36.3	+0.5
	baz=278,SNR=11						
HARP	HAARP	90.10	28	P	P	19 00 37.2	+1.2
	baz=278,SNR=6.1						
BMR	Baia Mare	90.16	318	⇑P	P	19 00 37.0	+0.4
CJR	Cluj-Napoca	90.18	317	⇓P	P	19 00 36.5	-0.3
LOT	Lotru	90.18	315	⇓P	P	19 00 37.0	+0.2
IDI	Anoyia	90.20	305	P	P	19 00 39.3	+2.2
SCRK	Sand Creek	90.39	26	P	P	19 00 37.4	-0.1
	baz=279,SNR=17						
KOKK	Kokkinochori,	90.44	311	P	P	19 00 39.1	+1.1
N25K	Chitina, Valde	90.48	28	P	P	19 00 38.9	+1.1
	baz=279,SNR=7.4						
LSZ	Lusaka	90.48	255	IAMs_20	IAMs_20	19 41 36.6	
	comp=Z,6µm,19.0s						
J26L	Joseph Creek	90.49	25	P	P	19 00 37.7	-0.1
	baz=280						
NVR	Nevrokopi	90.49	311	P	P	19 00 36.9	-1.4
OUR	Ouranopolis	90.49	310	P	P	19 00 39.4	+1.2
BMRM	Bremner River	90.57	29	IAMs_20	IAMs_20	19 39 49.6	
	comp=Z,4µm,22.0s						
BMRM	Bremner River	90.57	29	P	P	19 00 35.8	-2.4
	baz=279						
SRS	Serrai	90.71	311	P	P	19 00 39.9	+0.6
DEV	Deva	90.74	316	⇓P	P	19 00 39.7	+0.4
TRPA	Tarpa	90.75	318	⇓P	P	19 00 38.7	-0.5
TRPA	Tarpa	90.75	318	eP	P	19 00 38.3	-1.0
DRGR		90.78	317	⇑P	P	19 00 39.7	+0.2
L26K	Log Cabin Wild	90.83	27	P	P	19 00 40.2	+0.8
	baz=280						
VTS	Vitosha	90.83	313	⇑P	P	19 00 39.7	-0.3
VTS	Vitosha	90.83	313	P	P	19 00 38.6	-1.4
VTS				pmax	pmax		
	comp=Z,40nm,1.3s						
VTS	Vitosha	90.83	313	P	P	19 00 38.6	-1.4
KOLS	Kolonicke sedl	90.83	319	eP	P	19 00 39.8	+0.1
KOLS	Kolonicke sedl	90.83	319	eP	P	19 00 39.8	+0.1
UZH	Uzhgorod	90.86	319	eP	P	19 00 39.4	-0.3
UZH				e		19 00 46.4	
UZH				e		19 11 10.9	
UZH				eS	S	19 11 34.4	-2.1
UZH				ePS	PS	19 12 37.4	-8.0
GLB	Gilahina Butte	90.88	28	IAMs_20	IAMs_20	19 40 29.6	

	comp=Z,4µm,21.0s						
GVDS	Gavdos	90.89	305	P	P	19 00 42.1	+1.9
GVD	Gavdhos	90.90	305	P	P	19 00 43.4	+3.1
PLG	Polygyros	90.90	310	P	P	19 00 41.2	+1.0
IMMV	Iera Moni Meta	90.93	305	P	P	19 00 39.1	-1.3
M26K	Nabesna, AK	91.09	27	P	P	19 00 41.0	+0.4
	baz=280						
BERG	Berg Lake	91.10	29	IAMs_20	IAMs_20	19 40 18.6	
	comp=Z,4µm,21.0s						
HERR	Herculane	91.19	315	⇑P	P	19 00 41.2	-0.1
KNDR	Palaiochora Ch	91.19	305	P	P	19 00 43.5	+1.9
ZAPS	Zavoj	91.21	313	*e*P	P	19 00 41.2	-0.4
KNT	Kendrikon	91.23	311	P	P	19 00 39.8	-1.9
MCARA	McCarthy VSAT	91.26	28	P	P	19 00 41.8	+0.4
MCARA	McCarthy VSAT	91.26	28	P	P	19 00 43.0	+1.6
	baz=280						
LTVH	Ltavrtes, Hu	91.26	317	*e*P	P	19 00 40.6	-1.0
STEI	Steigen	91.30	338	*e*P	P	19 00 41.4	0.0
BOSS	Bosilegrad	91.40	313	*e*P	P	19 00 41.3	-1.2
FAUS	Fauske	91.41	338	*e*P	P	19 00 41.9	0.0
FAUS				*e*PP	PP	19 04 22.0	+2.8
FAUS				*e*SKSac	SKSac	19 11 14.2	+0.2
FAUS				IVMs_BB	IVMs_BB	19 49 22.5	
	comp=Z,6µm,4.8s						
LKR	Lokris	91.41	309	P	P	19 00 42.8	+0.3
ZAGS	Zajecar	91.44	314	*e*P	P	19 00 41.4	-1.2
ANKY	Antikythira Is	91.44	306	P	P	19 00 43.6	+0.8
EGAK	Eagle	91.46	25	P	P	19 00 42.5	+0.3
	baz=282,SNR=12						
VAY	Valandovo	91.46	311	*i* P	P	19 00 41.6	-1.1
L27K	Beaver Creek,	91.50	27	P	P	19 00 43.8	+1.3
	baz=281						
BCAR	Beaver Creek A	91.52	27	P	P	19 00 43.7	+1.1
SIRR	Siria	91.56	316	⇓P	P	19 00 42.6	-0.5
M27K	Edge Creek, AK	91.61	27	P	P	19 00 44.0	+0.9
	baz=281						
GRG	Griva	91.63	311	P	P	19 00 42.3	-1.3
BZS	Buzias	91.67	316	⇓P	P	19 00 42.7	-0.8
ISLE	Juniper Island	91.72	29	IAMs_20	IAMs_20	19 40 51.1	
	comp=Z,4µm,22.0s						
KUBS	Kucevo	91.77	315	*e*P	P	19 00 41.7	-2.4
BOVS	Bovan	91.84	314	⇓P	P	19 00 43.7	-0.7
BOVS	Bovan	91.84	314	*e*P	P	19 00 43.4	-1.0
BARS	Barje	91.85	313	*e*P	P	19 00 40.9	-3.6
BARS	Barje	91.85	313	*e*P	P	19 00 42.5	-2.0
LOF	Lofoten	91.87	339	*e*P	P	19 00 44.3	+0.3
LOF				*e*SKSac	SKSac	19 11 16.9	+0.4
LOF				IVMs_BB	IVMs_BB	19 51 01.9	
	comp=Z,5µm,4.0s						
AGG	Agios Georgios	91.89	309	P	P	19 00 41.9	-2.9
AGG	Agios Georgios	91.89	309	P	P	19 00 42.6	-2.2
AGG				pmax	pmax		
	comp=Z,24nm,1.1s						
AGG	Agios Georgios	91.89	309	P	P	19 00 42.6	-2.2
TYRN	Tyrnavos	91.89	310	P	P	19 00 42.2	-2.5
MOR8	Moi Rana	92.01	337	*e*P	P	19 00 43.2	-1.6
MOR8				*e*SKSac	SKSac	19 11 19.1	+1.5
MOR8				IVMs_BB	IVMs_BB	19 50 07.0	
	comp=Z,5µm,21.9s						
KECS	Kecovo	92.07	319	*e*P	P	19 00 47.2	+1.8
KECS	Kecovo	92.07	319	*e*P	P	19 00 47.2	+1.8
BVCY	Beaver Creek	92.07	27	P	P	19 00 46.1	+1.0
	baz=282,SNR=14						
SVIS	Svilajnac	92.11	314	*e*P	P	19 00 45.2	-0.5
KLV	Kalavryta, Ach	92.14	308	P	P	19 00 44.6	-1.4
CTG	Chitna Glacier	92.14	29	P	P	19 00 47.1	+1.4
	baz=281,SNR=5.8						
SKO	Skopje	92.23	312	*i* P	P	19 00 45.9	-0.4
LAKA	Lakka	92.25	308	P	P	19 00 46.5	0.0
ANX	Ano Chora	92.25	309	P	P	19 00 47.5	+0.9
EFP	Efpalio	92.28	309	P	P	19 00 48.9	+2.3
NOR	Nord	92.29	354	*i* P	P	19 00 43.8	-2.0
NOR				IAmb	IAmb	19 00 51.0	
	comp=Z,9.8nm,0.8s						
EVR	Evrytania	92.31	309	P	P	19 00 48.3	+1.5
SELS	Selova	92.31	313	*e*P	P	19 00 45.8	-0.9
TABL	Table Mountain	92.34	29	IAMs_20	IAMs_20	19 40 55.3	
	comp=Z,4µm,22.0s						
DAWY	Dawson	92.36	25	P	P	19 00 46.9	+0.4
	baz=283,SNR=13						
YUK3	Moose Creek	92.39	28	P	P	19 00 48.0	+1.1
	baz=282						
ITM	Ithomi	92.41	307	P	P	19 00 47.7	+0.5
DRO	Drossia	92.49	308	P	P	19 00 48.1	+0.5
I29M	Ogilvie Camp,	92.50	24	P	P	19 00 47.3	+0.3
	baz=284,SNR=28						
GRUS	Gruza	92.52	314	*e*P	P	19 00 47.3	-0.3
PSZ	Piszkesteto	92.54	318	*e*P	P	19 00 48.6	+1.0
PSZ	Piszkesteto	92.54	318	IAMs_20	IAMs_20	19 48 25.4	
	comp=Z,4µm,19.0s						
LANS	Liptovska Anna	92.64	319	*e*P	P	19 00 48.4	+0.3
LANS	Liptovska Anna	92.64	319	*e*P	P	19 00 48.4	+0.3
OHR	Ohrid	92.81	311	*i* P	P	19 00 46.2	-2.8
EPYK	Eagle Plains	92.87	23	P	P	19 00 48.5	-0.3
	baz=286						
IVAS	Ivanjica	92.96	314	*e*P	P	19 00 48.6	-1.1
FRGS	Fruska Gora	92.99	315	⇓P	P	19 00 48.9	-0.9
FRGS	Fruska Gora	92.99	315	*e*P	P	19 00 48.9	-0.9
DIVS	Divibare	93.01	314	*e*P	P	19 00 47.9	-2.0
SJES	Sjenica	93.14	314	*e*P	P	19 00 51.8	+1.2
VYHS	Vyhne	93.15	319	*e*P	P	19 00 49.9	-0.5
VYHS				MLR	MLR		
	comp=Z,6µm,24.9s						
VYHS	Vyhne	93.15	319	*e*P	P	19 00 49.9	-0.5
LKD2	Lefkada island	93.21	309	P	P	19 00 52.0	+1.1
EVGI	Lefkada island	93.23	309	P	P	19 00 52.9	+1.9
IGT	Igoumenitsa	93.37	310	P	P	19 00 50.2	-1.4
BBLS	Lazići	93.46	314	*e*P	P	19 00 52.0	0.0
INK	Inuvik	93.48	21	PKKPbc	PKKPbc	19 17 56.5	-3.9
	comp=Z,4.8nm,1.1s,baz=168,slow=2.6,SNR=5.7						
INK	Inuvik	93.48	21	P	P	19 00 51.3	-0.1
	baz=289						
TIR	Tirane	93.48	312	IAMs_20	IAMs_20	19 50 02.7	
	comp=Z,3µm,19.0s						
QSPA	South Pole Qui	93.57	180	P	P	19 00 51.5	-0.6
	comp=Z,29nm,0.8s,baz=315,slow=1.8,SNR=49						
QSPA	South Pole Qui	93.57	180	IAMs_20	IAMs_20	19 46 04.1	
	comp=Z,4µm,20.0s						
SRO	Srobarova	93.60	318	*e*P	P	19 00 53.0	+0.5
SRO	Srobarova	93.60	318	*e*P	P	19 00 53.0	+0.5
MORH	Mrgy, Hungar	93.64	317	⇓P	P	19 00 51.6	-1.1
MORH	Mrgy, Hungar	93.64	317	*e*P	P	19 00 51.1	-1.5
PPT	Papeete	93.69	107	LR	LR	19 40 49.5	
	comp=Z,663nm,19.9s,baz=270,slow=34						
PPT2	Papeete2	93.69	107	*e*S	S	19 12 01.3	-1.9
	comp=Z,3µm,27.0s						
PPT2	Papeete2	93.69	107	*e*LQ	LQ	19 27 02.4	
	comp=Z,8µm,27.0s						
PPT2				*e*LR	LR	19 31 00.8	
	comp=Z,4µm,26.0s						
MORC	Moravsky Berou	93.77	320	⇓P	P	19 00 53.2	0.0
MORC	Moravsky Berou	93.77	320	*e*P	P	19 00 53.1	-0.2
PDG	Podgorica	93.78	313	⇑P	P	19 00 52.4	-1.0
PDG	Podgorica	93.78	313	IAMs_20	IAMs_20	19 49 15.3	
	comp=Z,4µm,21.0s						
JAVC	Velka Javorina	93.85	319	*e*P	P	19 00 54.2	+0.5
M30M	Minto, Yukon	93.86	27	P	P	19 00 54.3	+0.9
	baz=286						
BOSA	Boshof	93.87	242	P	P	19 00 53.6	-0.7
	comp=Z,5.2nm,1.1s,baz=98,slow=4.5,SNR=3.1						
BOSA				LR	LR	19 38 51.9	
	comp=Z,6µm,20.2s,baz=94,slow=33						
KOVH	Kovagotottos	94.03	317	*e*P	P	19 00 53.2	-1.3
TBI	Tubuai	94.04	113	*e*S	S	19 12 02.0	-4.0
	comp=Z,3µm,27.0s						
TBI	Tubuai	94.04	113	*e*LQ	LQ	19 27 13.7	
	comp=Z,4µm,31.0s						
TBI				*e*LR	LR	19 31 14.4	
	comp=Z,4µm,27.8s						
MODS	Modra-Piesok	94.19	319	*e*P	P	19 00 54.9	-0.3
MODS				*e*		19 04 50.2	
MODS				*e*S	S	19 12 06.2	-0.2
MODS				*e*SS	SS	19 18 39.8	+13
MODS				MLR	MLR		
	comp=Z,8µm,23.8s						
MODS	Modra-Piesok	94.19	319	*e*P	P	19 00 54.9	-0.3
MODS				*e*PP	PP	19 04 50.2	+8.5
MODS				*e*S	S	19 12 06.2	-0.2
MODS				*e*SS	SS	19 18 39.8	+13
MODS				*e*L	L	19 46 00.6	
KRLC	Kraliky	94.20	321	*e*P	P	19 00 56.0	+0.7
KRLC				*e*		19 11 32.9	
KRLC				MLR	MLR		
	comp=Z,7µm,19.9s						
KRLC	Kraliky	94.20	321	*e*P	P	19 00 56.0	+0.7
KRLC				*e*SKS	SKSac	19 11 32.9	+2.5
KRLC				AMS	AMS	19 47 20.0	
	comp=Z,7µm,19.9s						
MPLH	Magyarpolny	94.23	318	*e*P	P	19 00 55.2	-0.2
EGYH	Egyhazaskeszo	94.33	318	*e*P	P	19 00 55.5	-0.3
DPC	Dobruska-Polom	94.44	321	*e*P	P	19 00 56.1	-0.3
DPC				*e*		19 01 01.7	
DPC				MLR	MLR		
	comp=Z,8µm,20.0s						
DPC	Dobruska-Polom	94.44	321	*e*P	P	19 00 56.1	-0.3
DPC				*e*pP	sP	19 01 01.7	0.0
DPC				*e*x	x	19 11 38.4	
DPC				AMS	AMS	19 47 20.0	
	comp=Z,8µm,20.0s						
VRAC	Vranov	94.47	320	⇑P	P	19 00 56.5	0.0
VRAC	Vranov	94.47	320	*e*P	P	19 00 56.3	-0.1
OSTC	Ostas	94.47	321	*e*P	P	19 00 56.8	+0.4
OSTC				AMS	AMS	19 47 20.0	
	comp=Z,7µm,20.9s						
TBLU	Trondheim	94.52	334	*e*P	P	19 00 54.9	-1.4
TBLU				*e*SKSac	SKSac	19 11 32.0	+0.6
CHVC	Chvalec	94.56	321	*e*x	x	19 01 01.8	
CHVC				AMS	AMS	19 47 30.0	
	comp=Z,6µm,19.6s						
N31M	Braeburn, Yuko	94.62	27	P	P	19 00 58.2	+1.2
	baz=286						
KRUC	Moravsky	94.64	320	*e*P	P	19 00 57.1	-0.1
A36M	Sachs Harbour	94.65	16	P	P	19 00 56.6	-0.1
A36M	Sachs Harbour	94.65	16	P	P	19 00 56.2	-0.6
	baz=297						
NC602	NORSAR Array S	94.66	332	*e*SKSac	SKSac	19 11 32.9	+0.6
NB2	NORSAR Subarra	94.73	332	PP	PP	19 04 44.1	-1.4
	comp=Z,12nm,1.4s,baz=74,slow=7.9						
NB2	NORSAR Subarra	94.73	332	PP	PP	19 04 44.1	-1.4
	baz=74,slow=7.9						
NOA	NORSAR Array B	94.73	332	P	P	19 00 57.4	-0.1
	comp=Z,4.1nm,1.0s,baz=73,slow=4.7,SNR=3.5						
NOA				PP	PP	19 04 44.3	-1.2
	comp=Z,3.2nm,1.0s,baz=65,slow=7.9,SNR=4.4						
NOA				LR	LR	19 47 16.4	
	comp=Z,2µm,21.3s,baz=65,slow=38						
M31M	Drury Creek, Y	95.05	27	P	P	19 00 58.8	0.0
	baz=288						
CONA	Conrad Observa	95.21	319	*e*P	P	19 00 59.3	-0.6
	comp=Z,5.8nm,1.2s						
CONA				*e*P	PP	19 04 49.8	+0.1
	comp=Z,19nm,1.5s						
OSL	Oslo	95.28	331	*e*P	P	19 00 59.5	-0.3
OSL				*e*SKSac	SKSac	19 11 35.9	+0.4
WHY	Whitehorse	95.28	28	P	P	19 01 00.5	+0.4
WHY				IAmb	IAmb	19 01 26.8	
	comp=Z,80nm,1.5s						
WHY	Whitehorse	95.28	28	P	P	19 01 01.1	+1.0
	baz=287						
FARO	Faro, Yukon	95.50	26	P	P	19 01 01.5	+0.6
	baz=289						
RUE	Ruedersdorf	95.55	323	*e*P	P	19 01 01.6	+0.4
ARSA	Arzberg	95.57	318	*e*P	P	19 01 00.8	-0.8
	comp=Z,8.6nm,1.4s						
ARSA				*e*P	PP	19 04 51.7	-0.7
	comp=Z,4.4nm,1.0s						
PRU	Pruhonice	95.64	321	*e*P	P	19 01 01.6	-0.2
PRU				*e*		19 01 06.6	
PRU				MLR	MLR		
	comp=Z,8µm,18.4s						
PRU	Pruhonice	95.64	321	*e*P	P	19 01 01.6	-0.2
PRU				*e*pP	sP	19 01 06.6	-0.5
PRU				*e*x	x	19 11 45.2	
PRU				AMS	AMS	19 48 00.0	
	comp=Z,8µm,18.4s						
GCIS	Gornji Cirnik	95.77	317	*i* P	P	19 01 02.0	-0.4
GCIS				*e*		19 05 01.6	
BRG	Berggiesshubel	95.81	322	⇓*e*Pif		19 01 02.0	
BRG				Amp		19 01 03.6	
	comp=Z,17nm,1.1s						
BRG	Berggiesshubel	95.81	322	P	P	19 01 07.4	+4.8
BRG				Amp		19 01 08.3	
	comp=Z,15nm,1.1s						
BRG				PP	PP	19 04 52.1	-2.1
BRG				Amp		19 05 04.4	
	comp=Z,8.1nm,1.1s						
BRG	Berggiesshubel	95.81	322	SP	SP	19 13 46.0	+7.9
CRES	Cresnjev	95.89	317	*i* P	P	19 01 02.5	-0.5
KONO	Kongsberg	95.90	331	*e*P	P	19 01 02.8	+0.1
KONO				*e*SKSac	SKSac	19 11 39.3	+0.4
KONO				IVMs_BB	IVMs_BB	19 56 52.2	
	comp=Z,4µm,4.8s						
KONO	Kongsberg	95.90	331	IAMs_20	IAMs_20	19 49 14.9	
	comp=Z,5µm,20.0s						
MOL	Molde	95.92	334	*e*P	P	19 01 02.9	+0.2
MOL				*e*SKSac	SKSac	19 11 45.2	+6.3
DAG	Danmarks Havn	96.01	351	*i* P	P	19 01 00.6	-2.3
DAG				IAmb	IAmb	19 01 34.1	
	comp=Z,7.0nm,0.9s						
SOKA	Soboth	96.01	318	*e*P	P	19 01 03.2	-0.5
	comp=Z,5.4nm,1.3s						
SOKA				*e*P	PP	19 04 55.4	-0.6
	comp=Z,6.5nm,1.3s						
CKRC	Cesky Krumlov	96.04	320	*e*P	P	19 01 03.9	+0.3
CKRC				*e*x	x	19 01 09.6	
CKRC				*e*SKS	SKSac	19 11 37.9	-2.3
CKRC				AMS	AMS	19 49 10.0	
	comp=Z,6µm,18.4s						
TIP	Timpagrande	96.16	310	⇑P	P	19 01 03.6	-0.9
SKAR	Skarslia	96.20	332	*e*P	P	19 01 04.1	0.0
SKAR				*e*SKSac	SKSac	19 11 38.8	-1.8
SKAR				IVMs_BB	IVMs_BB	19 43 35.9	
	comp=Z,4µm,5.3s						
MOA	Molln	96.28	319	*e*P	P	19 01 04.5	-0.3
	comp=Z,9.3nm,1.2s						
MOA				*e*P	PP	19 05 02.4	+4.5
	comp=Z,29nm,1.7s						
AKN	Aaknes	96.29	334	*e*P	P	19 01 04.3	-0.2
AKN				IVmBBB		19 01 05.7	
	comp=Z,2µm,3.3s						
AKN				*e*SKSac	SKSac	19 11 41.9	+1.0
AKN				IVMs_BB	IVMs_BB	19 54 12.7	
	comp=Z,6µm,24.3s						
CLL	Collm	96.29	322	*e*P	P	19 01 04.0	-0.7
CLL				*i* *PP	sP	19 01 13.2	+3.1
CLL				*e*		19 04 56.0	
CLL				*e*		19 11 42.0	
CLL				*e*S	ScS	19 12 27.0	+2.0
CLL				pmax	pmax		
	comp=Z,15nm,1.3s						
CLL				pmax	pmax		
	comp=Z,292nm,2.7s						
CLL				MLR	MLR		
	comp=Z,7µm,21.5s						
CLL	Collm	96.29	322	*e*P	P	19 01 04.0	-0.7
	comp=Z,15nm,1.3s						
CLL				*i* sP	sP	19 01 13.2	+3.1
	comp=Z,62nm,2.0s						
CLL				*e*		19 01 18.0	
CLL				*e*PP	PP	19 04 56.0	-1.8
	comp=Z,292nm,2.7s						
CLL				*e*PPP	PPP	19 07 00.0	
CLL				*e*SKSac	SKSac	19 11 42.0	+0.7
CLL				*e*S	ScS	19 12 27.0	+2.0
CLL				*e*PS	PS	19 13 47.0	+1.7
CLL				*e*		19 14 55.0	
CLL				*e*		19 16 51.0	
CLL				*e*SS	SS	19 18 48.0	-8.4
CLL				*e*		19 20 12.0	
CLL				*e*SSS	SSS	19 22 42.0	
CLL				LmV		19 48 00.0	
	comp=Z,7µm,21.5s						
CLL				LmH		19 52 00.0	
	comp=N,3µm,20.3s						
CLL				LmH		19 52 00.0	
	comp=E,6µm,20.6s						
CLL				Lmax		19 57 00.0	
OBKA	Obir	96.37	317	*e*P	P	19 01 04.4	-1.0
	comp=E,6.0nm,1.3s						
OBKA				*e*P	PP	19 05 00.1	+1.4
	comp=E,20nm,1.5s						
P33M	Teslin, Yukon	96.39	28	P	P	19 01 05.4	+0.3
	baz=289						
GERES	GERESS Array B	96.42	320	P	P	19 01 05.1	-0.4
	comp=E,3.9nm,1.0s,baz=76,slow=5.6,SNR=19						
GERES				PP	PP	19 04 59.3	+0.2
	comp=E,3.5nm,1.0s,baz=79,slow=7.2,SNR=5.6						
GERES				PKKPbc	PKKPbc	19 17 51.1	-1.0
	comp=E,0.4nm,0.8s,baz=284,slow=5.7,SNR=1.9						
GERES				LR	LR	19 49 43.1	
	comp=E,5µm,19.2s,baz=72,slow=39						
GERES	GERESS Array B	96.42	320	P	P	19 01 04.4	-1.1
GERES	GERESS Array B	96.42	320	P	P	19 01 04.4	-1.1
KHC	Kasperske Hory	96.44	320	*e*P	P	19 01 05.2	-0.3
KHC				*e*		19 01 10.0	
KHC				*e*		19 05 02.6	
KHC				*e*		19 11 44.8	
KHC				MLR	MLR		
	comp=Z,8µm,18.7s						
KHC	Kasperske Hory	96.44	320	*e*P	P	19 01 05.2	-0.3
KHC				*e*pP	pP	19 01 10.0	+0.5
KHC				*e*PP	PP	19 05 02.6	+3.5
KHC				*e*SKS	SKSac	19 11 44.8	+2.5
KHC				AMS	AMS	19 48 50.0	
	comp=Z,8µm,18.7s						
LJU	Ljubljana	96.48	317	*i* P	P	19 01 05.8	+0.1
LJU				*e*		19 05 07.7	
KBA	Koelnbreinsper	97.06	318	*e*P	P	19 01 06.8	-1.7
	comp=Z,3.1nm,1.0s						
BLS5	Blasjo	97.49	331	*e*SKSac	SKSac	19 11 47.6	+0.3
BER	Bergen	97.68	332	*e*P	P	19 01 09.9	-0.8
ABTA	Abfaltersbach	97.69	318	*e*P	P	19 01 09.4	-1.9
	comp=Z,9.2nm,1.8s						
ABTA				*e*P	PP	19 05 10.7	+1.8
	comp=Z,7.4nm,1.7s						
SUR	Sutherland	97.76	238	P	P	19 01 11.8	-0.2
SUR	Sutherland	97.76	238	IAMs_20	IAMs_20	19 39 18.5	
	comp=Z,4µm,20.0s						
GRA1	Grafenberg Arr	97.80	321	IAMs_20	IAMs_20	19 52 24.8	
	comp=Z,5µm,20.0s						
GRFO	Grafenberg	97.80	321	IAMs_20	IAMs_20	19 52 24.4	
	comp=Z,5µm,20.0s						
WTTA	Wattenberg	98.14	319	*e*P	P	19 01 12.2	-1.2
	comp=Z,9.9nm,1.4s						
WTTA				*e*P	PP	19 05 14.5	+2.0
	comp=Z,22nm,1.4s						
WATA	Walderalm	98.17	319	*e*P	P	19 01 12.0	-1.4
	comp=Z,6.7nm,1.2s						
SQTA	Sankt Quirin	98.44	319	*e*P	P	19 01 13.6	-1.0
	comp=Z,12nm,1.7s						
SQTA				P	PP	19 05 15.9	+1.3
	comp=Z,5.7nm,1.0s						
MOTA	Moosalm	98.47	319	*e*P	P	19 01 13.7	-1.1
	comp=Z,11nm,1.4s						
MOTA				*e*P	PP	19 05 20.8	+5.9
	comp=Z,12nm,1.2s						
NEEM	North Greenlan	98.76	358	*i* P	P	19 01 14.7	-1.0
NEEM				IAmb	IAmb	19 01 34.7	
	comp=Z,6.4nm,0.8s						
FETA	Feichten	98.80	319	*e*P	P	19 01 15.4	-0.9
	comp=Z,5.9nm,1.2s						
STU	Stuttgart	99.32	321	IAMs_20	IAMs_20	19 50 35.2	
	comp=Z,6µm,21.0s						
DAVOX	Davos/Dischmat	99.43	318	LR	LR	19 52 35.5	
	comp=Z,5µm,19.6s,baz=60,slow=39						
TULEG	Thule	99.83	2	*i* P	Pdif	19 01 13.2	-6.8
TULEG				IAmb	IAmb	19 01 17.5	
	comp=Z,4.8nm,0.9s						
TULEG	Thule	99.83	2	IAMs_20	IAMs_20	19 51 38.0	
	comp=Z,4µm,20.0s						
WLF	Walferdange	100.95	322	IAMs_20	IAMs_20	19 51 27.8	
	comp=Z,4µm,20.0s						
SENIN	Lac Senin/Sane	101.25	319	IAMs_20	IAMs_20	19 52 48.0	
	comp=Z,5µm,21.0s						
BNI	Bardonecchia	102.07	317	IAMs_20	IAMs_20	19 53 41.0	
	comp=Z,5µm,20.0s						
SUMG	Summit	102.39	353	*i* P	Pdif	19 01 33.5	+1.4
SUMG				IAmb	IAmb	19 02 17.8	
	comp=Z,3.8nm,0.9s						
TAOE	Nuku Hiva Isla	102.55	98	*e*S	Sdif	19 13 17.4	-1.5
	comp=Z,884nm,26.1s						
TAOE	Nuku Hiva Isla	102.55	98	*e*LQ	LQ	19 30 46.7	
	comp=Z,9µm,30.6s						
TAOE				*e*LR	LR	19 35 05.0	
	comp=Z,4µm,26.8s						
KEST	Kesra	102.64	308	PP	PP	19 05 42.5	-4.3
	comp=Z,4.9nm,0.8s,baz=9.5,slow=6.1,SNR=4.5						
SNAA	Sanae	102.74	196	Pdiff	Pdif	19 01 32.1	-1.1
SNAA	Sanae	102.74	196	P	Pdif	19 01 32.9	-0.3
	comp=Z,1.9nm,1.0s,baz=109,slow=2.3,SNR=3.8						
YKA	Yellowknife Ar	103.13	22	Pdiff	Pdif	19 01 35.4	+0.4
	comp=Z,8.5nm,1.0s,baz=309,slow=4.5,SNR=46						
YKA				PP	PP	19 05 49.6	+0.2
	comp=Z,2.8nm,1.0s,baz=306,slow=6.9,SNR=5.6						
YKA				PKKPbc	PKKPbc	19 17 28.2	-5.2
	comp=Z,2.5nm,0.7s,baz=126,slow=2.5,SNR=15						
SSB	Saint Sauveur	103.43	318	IAMs_20	IAMs_20	19 53 44.9	
	comp=Z,3µm,18.0s						
ESK	Eskdalemuir	103.94	330	IAMs_20	IAMs_20	19 51 15.0	
	comp=Z,5µm,22.0s						
VNA2	Neumayer--Watz	104.39	196	PKiKP	PKiKP	19 05 56.3	-0.4
	baz=111,slow=0.8						
VNA2	Neumayer--Watz	104.39	196	Pdiff	Pdif	19 01 40.2	-0.2
	baz=82,slow=3.0						
VNA1	Neumayer--Stat	104.78	196	PKiKP	PKiKP	19 05 57.3	0.0
VNA3	Neumayer Olymp	104.83	195	PKiKP	PKiKP	19 05 57.0	-0.5
MAHO	Mahon	105.36	313	PP	PP	19 06 15.9	+9.2
MAHO				SKS		19 12 02.8	
YBH	Yreka Blue Hor	109.08	44	IAMs_20	IAMs_20	19 45 39.1	
	comp=Z,5µm,22.0s						
CART	Cartagena	110.01	312	PP	PP	19 06 48.5	+7.6
CART				SKS		19 16 17.8	
CART	Cartagena	110.01	312	IAMs_20	IAMs_20	19 59 31.6	
	comp=Z,3µm,21.0s						
UCM	Universidad Co	110.58	316	PP	PP	19 06 53.7	+8.8
UCM				SKS		19 16 25.6	
MOD	Modoc Plateau	110.65	43	IAMs_20	IAMs_20	19 47 24.6	
	comp=Z,4µm,21.0s						
ORV	Oroville	110.79	45	IAMs_20	IAMs_20	19 46 29.6	
	comp=Z,4µm,21.0s						
BMO	Blue Mountains	111.26	39	IAMs_20	IAMs_20	19 47 48.3	
	comp=Z,3µm,20.0s						
ESDC	Sonseca Array	111.34	315	PKiKP	PKiKP	19 06 11.1	+0.4
	comp=Z,0.5nm,0.9s,baz=48,slow=1.9,SNR=2.0						
ESDC				PP	PP	19 06 41.1	-9.4
	comp=Z,2.2nm,1.0s,baz=56,slow=6.2,SNR=4.4						
ESDC				PKKPbc	PKKPbc	19 17 06.4	-0.7
	comp=Z,0.6nm,1.0s,baz=279,slow=2.5,SNR=2.2						
PAB	San Pablo	111.67	315	IAMs_20	IAMs_20	20 01 06.3	
	comp=Z,4µm,19.0s						
MSO	Missoula	112.29	36	PKiKP	PKiKP	19 06 11.9	-0.4
	baz=302						
EMAL	Malaga-Limoner	112.86	312	PP	PP	19 06 48.3	-13
EMAL				SKS		19 15 57.6	
MFID	Camas Ranch	112.89	39	IAMs_20	IAMs_20	19 49 17.5	
	comp=Z,3µm,20.0s						
NVAR	Mina Array Bea	113.52	45	PKiKP	PKiKP	19 06 15.6	+0.5
	comp=Z,0.8nm,0.6s,baz=264,slow=2.7,SNR=4.9						
NVAR				PKKPbc	PKKPbc	19 16 59.1	-1.0
	comp=Z,2.2nm,0.9s,baz=138,slow=4.7,SNR=3.6						
HLID	Hailey	113.70	39	IAMs_20	IAMs_20	19 49 14.0	
	comp=Z,4µm,22.0s						
HLID	Hailey	113.70	39	PKiKP	PKiKP	19 06 16.3	+1.1
	baz=301						
DLMT	Dillon	113.86	36	IAMs_20	IAMs_20	19 47 49.9	
	comp=Z,3µm,21.0s						
EGMT	Eagleton	113.96	33	P	PKiKP	19 06 15.8	+0.4
	baz=307						
BOZ	Bozeman (W)	114.30	36	P	PKiKP	19 06 16.0	-0.3
	baz=304						
TORD	Torodi Ar. Bea	114.32	286	PKP	PKPdf	19 06 15.7	-1.2
	comp=Z,2.3nm,0.7s,baz=54,slow=1.6,SNR=14						
TORD				PP	PP	19 07 03.8	-8.8
	comp=Z,3.5nm,1.0s,baz=62,slow=4.9,SNR=5.7						
TORD				PKKPbc	PKKPbc	19 16 56.6	+0.1
	comp=Z,0.3nm,0.6s,baz=282,slow=2.4,SNR=1.3						
TORD	Torodi Ar. Bea	114.32	286	PKiKP	PKPdf	19 06 14.5	-2.4
ARNO	Arenosillo	114.40	314	PP	PP	19 07 15.3	+3.2
ARNO				SKS		19 16 17.3	
ELK	Elko	114.57	42	IAMs_20	IAMs_20	19 45 15.3	
	comp=Z,4µm,22.0s						
EVO	Evora	114.68	316	PP	PP	19 07 21.1	+7.0
EVO				SKS		19 17 06.2	
MPMC	Manual Prospec	115.12	47	P	PKPdf	19 06 19.4	+1.2
	baz=295						
PASC	Pasadena Art C	115.39	49	IAMs_20	IAMs_20	19 51 25.8	
	comp=Z,4µm,20.0s						
R11A	Troy Canyon, C	115.47	44	P	PKPdf	19 06 19.2	+0.4
	baz=298,SNR=6.4						
FLWY	Flagg Ranch	115.70	37	IAMs_20	IAMs_20	19 51 22.5	
	comp=Z,3µm,20.0s						
AHID	Auburn Hatcher	116.18	38	IAMs_20	IAMs_20	19 49 59.5	
	comp=Z,4µm,21.0s						
DUG	Dugway, Tooele	116.45	41	IAMs_20	IAMs_20	19 50 54.9	
	comp=Z,4µm,22.0s						

DUG	Dugway, Tooele	116.45	41	P	PKiKP	19 06 21.5	+0.9
	baz=301						
AVE	Averroes	116.49	310	PP	PP	19 07 12.9	-14
AVE				SKS		19 17 15.7	
HWUT	Hardware Ranch	116.52	39	IAMs_20	IAMs_20	19 50 23.6	
	comp=Z,3µm,21.0s						
DGMT	Dagmar	116.56	30	IAMs_20	IAMs_20	20 00 46.4	
	comp=Z,3µm,19.0s						
LAO	LASA Array	116.67	32	P	PKiKP	19 06 20.9	+0.2
	baz=309						
109C	Camp Elliot, M	116.73	50	IAMs_20	IAMs_20	19 53 35.5	
	comp=Z,3µm,20.0s						
PFO	Pinyon Flats O	116.92	49	IAMs_20	IAMs_20	19 52 44.6	
	comp=Z,4µm,19.0s						
GMRC	Granite Mounta	117.02	48	P	PKiKP	19 06 23.0	+1.2
	baz=296,SNR=6.1						
BW06	Boulder Array	117.13	37	P	PKPdf	19 06 21.6	-0.3
	baz=305						
PDAR	Pinedale Array	117.13	37	PKP	PKPdf	19 06 21.1	-0.9
	comp=Z,1.2nm,0.7s,baz=96,slow=0.7,SNR=9.2						
PDAR				PP	PP	19 07 24.0	-7.3
	comp=Z,1.4nm,0.9s,baz=289,slow=4.5,SNR=3.9						
PDAR				PKKPbc	PKKPbc	19 16 46.4	-1.4
	comp=Z,0.9nm,0.7s,baz=126,slow=4.1,SNR=6.9						
PMSA	Palmer Station	118.99	179	IAMs_20	IAMs_20	20 03 53.8	
	comp=Z,4µm,19.0s						
K22A	Casper	119.00	36	P	PKPdf	19 06 24.9	-0.6
	baz=307						
ULM	Lac du Bonnet	119.03	24	PKP	PKPdf	19 06 23.6	-1.5
	comp=Z,4.1nm,0.8s,baz=286,slow=3.6,SNR=3.5						
MDND	Maddock	119.20	28	P	PKPdf	19 06 25.3	-0.2
	baz=316						
O20A	White River Ci	119.43	39	P	PKiKP	19 06 26.8	+0.3
	baz=305,SNR=6.3						
KOWA	Kowa	119.50	289	IAMs_20	IAMs_20	20 07 40.7	
	comp=Z,3µm,19.0s						
RSSD	Black Hills	119.50	33	P	PKPdf	19 06 26.0	-0.5
	baz=310						
WUAZ	Wupatki	119.78	45	IAMs_20	IAMs_20	19 50 30.7	
	comp=Z,4µm,22.0s						
WUAZ	Wupatki	119.78	45	P	PKiKP	19 06 28.5	+1.2
	baz=300						
PHWY	Pilot Hill	120.46	37	IAMs_20	IAMs_20	19 52 44.1	
	comp=Z,4µm,21.0s						
MVCO	Mesa Verde	120.89	42	P	PKiKP	19 06 30.2	+0.7
	baz=303						
ISCO	Idaho Springs	121.27	38	P	PKiKP	19 06 30.5	+0.3
	baz=307						
SCHQ	Schefferville	121.60	3	PKP	PKPdf	19 06 29.4	-0.5
	comp=Z,6.9nm,0.9s,baz=280,slow=5.9,SNR=8.1						
KIC	Kosan Boka	121.67	280	*e*PKIKP	PKPdf	19 06 29.4	-1.7
	comp=Z,13nm,0.7s						
S22A	4UR Ranch, Cre	121.69	41	P	PKiKP	19 06 31.8	+0.7
	baz=305						
DBIC	Dimbokro	121.74	280	PKP	PKPdf	19 06 29.9	-1.3
	comp=Z,8.8nm,0.9s,baz=100,slow=2.3,SNR=10						
DBIC	Dimbokro	121.74	280	PKPdf	PKPdf	19 06 30.1	-1.2
TUC	Tucson	121.77	48	IAMs_20	IAMs_20	19 56 18.6	
	comp=Z,2µm,20.0s						
TIC	Toumodi	121.91	280	*e*PKIKP	PKPdf	19 06 29.7	-1.9
LIC	Lamto	121.97	280	*e*PKIKP	PKPdf	19 06 29.5	-2.2
	comp=Z,27nm,0.9s						
SDCO	Great Sand Dun	122.56	40	IAMs_20	IAMs_20	19 54 26.4	
	comp=Z,3µm,20.0s						
EYMN	Ely	122.61	23	IAMs_20	IAMs_20	20 03 07.4	
	comp=Z,4µm,20.0s						
OGNE	Ogallala	122.69	35	IAMs_20	IAMs_20	19 55 21.2	
	comp=Z,3µm,19.0s						
ANMO	Albuquerque	123.51	43	IAMs_20	IAMs_20	19 51 34.1	
	comp=Z,4µm,22.0s						
ANMO	Albuquerque	123.51	43	P	PKiKP	19 06 35.1	+0.4
	baz=304						
T25A	Trinidad	123.61	40	IAMs_20	IAMs_20	19 53 23.4	
	comp=Z,4µm,22.0s						
T25A	Trinidad	123.61	40	P	PKiKP	19 06 35.3	+0.5
	baz=307						
ECSD	EROS Data Cent	123.64	29	P	PKPdf	19 06 33.5	-0.7
	baz=318,SNR=7.5						
121A	Cookes Peak, D	123.86	46	P	PKiKP	19 06 36.3	+1.0
	baz=301						
COWI	Conover	125.04	23	IAMs_20	IAMs_20	20 10 42.0	
	comp=Z,3µm,21.0s						
EPT	El Paso	125.18	47	IAMs_20	IAMs_20	19 58 43.6	
	comp=Z,3µm,20.0s						
HOPE	Hope Point	125.32	198	IAMs_20	IAMs_20	19 55 11.4	
	comp=Z,3µm,22.0s						
CBKS	Cedar Bluff	125.42	36	IAMs_20	IAMs_20	19 56 54.6	
	comp=Z,4µm,22.0s						
MNTX	Cornudas Mount	126.03	46	IAMs_20	IAMs_20	20 04 19.2	
	comp=Z,3µm,20.0s						
MNTX	Cornudas Mount	126.03	46	P	PKPdf	19 06 39.2	+0.1
	baz=303						
SLBS	Sierra La Lagu	126.24	57	IAMs_20	IAMs_20	19 52 17.1	
	comp=Z,3µm,21.0s						
SCIA	State Center	126.65	29	IAMs_20	IAMs_20	20 05 58.4	
	comp=Z,4µm,20.0s						
AMTX	Amarillo	126.74	41	IAMs_20	IAMs_20	19 55 28.1	
	comp=Z,4µm,20.0s						
TXAR	Lajitas Array	128.55	48	PKP	PKPdf	19 06 43.6	-0.4
	comp=Z,2.4nm,0.8s,baz=264,slow=1.6,SNR=17						
CCM	Cathedral Cave	130.58	30	P	PKPdf	19 06 47.7	+0.2
	baz=321						
JCT	Junction City	130.66	44	IAMs_20	IAMs_20	19 59 18.5	
	comp=Z,2µm,20.0s						
JCT	Junction City	130.66	44	P	PKiKP	19 06 49.4	+0.5
	baz=307						
U40A	Yellville	131.03	33	P	PKiKP	19 06 49.2	-0.2
	baz=318						
MIAR	Mount Ida	131.94	35	P	PKiKP	19 06 51.0	-0.2
	baz=316						
435B	Jarrell	131.98	42	IAMs_20	IAMs_20	20 04 06.2	
	comp=Z,3µm,20.0s						
EFI	East Falkland	132.01	184	IAMs_20	IAMs_20	20 02 18.3	
	comp=Z,3µm,22.0s						
M53A	WI Miller and	132.09	19	IAMs_20	IAMs_20	20 13 48.2	
	comp=Z,4µm,21.0s						
833A	Chaparral WMA,	132.22	46	P	PKiKP	19 06 52.8	+0.9
	baz=306						
ACSO	Alum Creek Sta	132.38	21	P	PKiKP	19 06 51.7	-0.3
	baz=332						
WCI	Wyandotte Cave	132.77	26	P	PKiKP	19 06 52.3	-0.4
	baz=327						
P52A	Corning	133.22	21	IAMs_20	IAMs_20	20 07 45.1	
	comp=Z,3µm,21.0s						
HKT	Hockley	133.67	42	IAMs_20	IAMs_20	20 03 56.7	
	comp=Z,3µm,20.0s						
WVT	Waverly	133.78	29	PKIKP	PKPdf	19 06 53.8	+0.2
WVT				MLR	MLR		
	comp=Z,3µm,21.0s						
WVT	Waverly	133.78	29	PKPdf	PKPdf	19 06 53.8	+0.2
WVT	Waverly	133.78	29	IAMs_20	IAMs_20	20 15 18.0	
	comp=Z,3µm,21.0s						
WVT	Waverly	133.78	29	P	PKPdf	19 06 53.6	-0.1
	baz=324						
N59A	State Game Lan	133.96	14	P	PKiKP	19 06 54.7	-0.4
	baz=341						
P60A	Greenville	135.04	15	IAMs_20	IAMs_20	20 15 55.8	
	comp=Z,3µm,20.0s						
UNM	Universidad Na	137.14	56	IAMs_20	IAMs_20	19 56 19.9	
	comp=Z,3µm,22.0s						
COYC	Coyhaique	137.38	170	IAMs_20	IAMs_20	20 07 20.9	
	comp=Z,2µm,20.0s						
SACV	Santiago Islan	137.44	297	IAMs_20	IAMs_20	20 14 10.6	
	comp=Z,2µm,19.0s						
KMSC	Kings Mountain	137.47	23	P	PKiKP	19 07 01.8	-0.6
	baz=331						
PLCA	Paso Flores	142.35	170	PKP	PKPdf	19 07 07.5	-1.9
	comp=Z,11nm,1.0s,baz=187,slow=4.1,SNR=11						
DWPF	Disney Wildern	143.44	29	IAMs_20	IAMs_20	20 09 17.6	
	comp=Z,3µm,22.0s						
LC01	Cunco	143.86	167	PKPdf	PKPdf	19 07 11.4	-0.5
BBSR	BB Station	144.10	3	IAMs_20	IAMs_20	20 19 29.7	
	comp=Z,2µm,21.0s						
EDS3	Malargue	147.38	169	*i* P	PKPbc	19 07 20.7	0.0
GO05	Huala	147.55	165	*i* P	PKPbc	19 07 20.1	-0.9
BO01	Tunca	148.35	166	PKPbc	PKPbc	19 07 22.8	-0.3
RFA	San Rafael	148.52	170	*i* P	PKPbc	19 07 21.9	-1.7
LPA	La Plata	148.64	187*c*	*i* PKIKP	PKPdf	19 07 15.2	-4.9
LPA				SKIKP		19 10 47.2	
LPA				PPP	PPP	19 14 09.3	
LPA				SDIFF		19 19 36.9	
LPA				PPP(2)		19 21 26.6	
LPA				SS	SS	19 30 06.6	+6.3
MT01	Popeta	148.81	166	PKPbc	PKPbc	19 07 23.8	-0.5
MT09	Talagante	148.96	166	PKPbc	PKPbc	19 07 24.1	-0.7
TGUH	Tegucigalpa,Un	149.62	54	IAMs_20	IAMs_20	20 11 44.0	
	comp=Z,2µm,22.0s						
PEL	Peldehue	149.63	166	IAMs_20	IAMs_20	20 20 45.6	
	comp=Z,2µm,21.0s						
PEL	Peldehue	149.63	166	*i* P	PKPdf	19 07 23.3	+1.4
ROC1	El Roble	149.71	165	*i* P	PKPbc	19 07 25.5	-1.4
AVIZ	Vizcacheras	149.77	170	*i* P	PKPbc	19 07 27.2	+0.3
AAGR	Agrelo	150.09	169	*i* P	PKPdf	19 07 23.3	+0.6
ASAL	Salagasta	150.57	169	*i* P	PKPdf	19 07 23.5	+0.1
AUSP	Uspallata	150.81	168	*i* P	PKPdf	19 07 24.5	+0.5
PLTB	Pedras Altas	150.87	195	*e*P	PKPdf	19 07 23.2	-0.6
PLTB	Pedras Altas	150.87	195	PKPbc	PKPbc	19 07 29.3	-0.1
MRA	San Martin	151.21	174	*i* P	PKPdf	19 07 23.3	-1.1
RTLS	Leoncito	151.24	168	*i* P	PKPdf	19 07 24.3	-0.4
RTCV	Cerro Valdivia	151.34	169	*i* P	PKPdf	19 07 24.5	0.0
ZON	Zonda	151.62	168	*i* P	PKPbc	19 07 29.4	-1.8
CPSB	Cacapava Do Su	152.11	197	*e*P	PKPdf	19 07 26.3	+0.6
TER01	Tubaro-SC	152.27	206	*e*P	PKPdf	19 07 27.0	+1.0
ACCO	Cerro Coronel	152.46	167	*i* P	PKPdf	19 07 27.0	+0.4
AVFE	Valle Fertil	152.70	170	*i* P	PKPdf	19 07 25.9	-0.7
AROD	Rodeo	152.77	166	*i* P	PKPdf	19 07 27.8	+0.7
ALF01	Guarapari-ES	153.06	230	*e*P	PKPdf	19 07 27.9	+0.6
APLL	PUNTA DE LOS L	153.11	172	*i* P	PKPbc	19 07 33.8	-0.9
DUB01	Friburgo-RJ	153.37	225	*e*P	PKPdf	19 07 27.8	-0.1
GTBY	Guantanamo Bay	153.40	28	IAMs_20	IAMs_20	20 21 01.3	
	comp=Z,3µm,22.0s						
MTDJ	Mount Denham	153.58	34	*e*P	PKiKP	19 07 40.3	+4.3
MTDJ	Mount Denham	153.58	34	IAMs_20	IAMs_20	20 29 26.9	
	comp=Z,2µm,22.0s						
MAN01	Angra dos Reis	153.93	221	*e*P	PKPdf	19 07 29.6	+1.0
ACLC	CERRO LA CRUZ	154.00	171	*i* P	PKPdf	19 07 27.8	-0.9
BSFB	Barra de Sao F	154.16	233	*e*P	PKPdf	19 07 28.9	0.0
HDC	Heredia	154.39	58	IAMs_20	IAMs_20	20 23 01.9	
	comp=Z,2µm,22.0s						
VCA	Vinchina	154.43	168	*i* P	PKPdf	19 07 29.2	-0.1
VCA				*i* P	pPKPdf	19 07 29.4	-4.0
NBLV	Livramento - P	154.47	261	*e*P	PKPdf	19 07 28.1	-1.6
SJMB	Sao Joao De Ma	154.50	232	*e*P	PKPdf	19 07 27.8	-1.7
NBLA	Lagarto - SE	154.63	252	*e*P	PKPdf	19 07 30.7	+0.9
PARB	Paraibuna	154.64	218	*e*P	PKPdf	19 07 29.8	+0.2
CMC01	Camacan, BA	154.74	241	*e*P	PKPdf	19 07 30.0	+0.2
GDU01	Guandu, BA	155.44	245	*e*P	PKPdf	19 07 30.6	-0.2
SPB	Sao Paulo	155.52	215	*e*P	PKPdf	19 07 31.9	+1.2
SPB	Sao Paulo	155.52	215	IAMs_20	IAMs_20	20 21 35.1	
	comp=Z,2µm,21.0s						
NBMA	Muriti-CE	156.29	260	*e*P	PKPdf	19 07 32.1	0.0
DIAM	Diamantina, MG	156.67	230	*e*P	PKPdf	19 07 32.8	+0.2
FRTB	Fartura	156.87	211	*e*P	PKPdf	19 07 32.4	-0.2
NBPN	Ponto Novo - B	156.95	251	*e*P	PKPdf	19 07 32.8	-0.1
CPUP	Villa Florida	156.96	191	PKP	PKPdf	19 07 33.5	+1.0
	comp=Z,6.1nm,1.0s,baz=173,slow=3.3,SNR=4.5						
PB14	IPOC Station P	157.74	160	IAMs_20	IAMs_20	20 15 40.7	
	comp=Z,2µm,21.0s						
NBMO	Morrinhos-CE	157.78	270	*e*P	PKPdf	19 07 35.3	+1.3
MC01	Montes Claros	157.79	233	*e*P	PKPdf	19 07 33.7	-0.2
SJG	San Juan	158.04	10	IAMs_20	IAMs_20	20 30 22.4	
	comp=Z,1µm,20.0s						
BCIP	Isla Barro Col	158.37	54	*e*P	PKPdf	19 07 33.7	-0.9
BCIP	Isla Barro Col	158.37	54	IAMs_20	IAMs_20	20 36 04.0	
	comp=Z,2µm,20.0s						
SMRT	St. Maarten	158.42	2	IAMs_20	IAMs_20	20 20 50.9	
	comp=Z,3µm,22.0s						
PB10	IPOC Station P	158.71	159	IAMs_20	IAMs_20	20 27 32.6	
	comp=Z,2µm,20.0s						
JANB	Januaria	158.97	236	*e*P	PKPdf	19 07 34.7	-0.7
SEUS	St. Eustatius	158.97	2	IAMs_20	IAMs_20	20 36 19.7	
	comp=Z,2µm,20.0s						
PB06	IPOC Station P	159.80	160	IAMs_20	IAMs_20	20 22 36.2	
	comp=Z,2µm,22.0s						
PB04	IPOC Station P	159.94	158	IAMs_20	IAMs_20	20 13 46.1	
	comp=Z,2µm,21.0s						
LVC	Limon Verde	160.10	162	*e*P	PKPdf	19 07 37.6	+0.7
IPMB	Ipameri, GO	160.17	223	*e*P	PKPdf	19 07 36.0	-0.7
CAPC	Capurgana	160.65	51	*e*P	PKPdf	19 07 36.5	-0.7
SDBA	SAO DESIDERIO	160.72	242	*e*P	PKPdf	19 07 37.3	-0.1
PTAC	Punta Ardita,	161.17	55	*e*P	PKPdf	19 07 35.6	-2.2
BDFB	Brasilia	161.57	229	PKP	PKPdf	19 07 38.1	-0.2
	comp=Z,1.3nm,0.5s,baz=153,slow=6.8,SNR=2.0						
BDFB				PKPab	PKPab	19 08 22.5	-0.4
	comp=Z,5.8nm,0.9s,baz=149,slow=4.4,SNR=3.6						
ROSB	Rosrio	161.84	272	*e*P	PKPdf	19 07 38.3	-0.2
CRJC	Cerrejon, Guaj	162.02	36	*e*P	PKPdf	19 07 35.6	-3.2
ARGC	Ariguani, Magd	162.06	41	*e*P	PKPdf	19 07 41.3	+2.6
AQDB	Aquidauana	162.09	201	*e*P	PKPdf	19 07 38.0	-0.5
DBBC	Dabeiba	162.53	53	*e*P	PKPdf	19 07 35.6	-3.7
CBOC	Ciudad Bolivar	163.36	55	*e*P	PKPdf	19 07 31.8	-8.4
OTAV	Otavalo	163.41	77	*e*P	PKPdf	19 07 38.5	-2.2
OTAV	Otavalo	163.41	77	*e*P	PKPdf	19 07 40.6	0.0
HELC	Santa Helena	163.57	54	*e*P	PKPdf	19 07 41.3	+0.6
PLMC	San Jos del P	163.65	59	*e*P	PKPdf	19 07 37.5	-2.9
PEXB	Peixe	163.80	238	*e*P	PKPdf	19 07 39.5	-0.9
OCAC	Ocana	163.86	43	*e*P	PKPdf	19 07 38.5	-2.2
ARAG	Araguaiana, MT	164.19	220	*e*P	PKPdf	19 07 40.2	-0.5
PTBC	PUERTO BERRIO,	164.19	50	*e*P	PKPdf	19 07 37.5	-3.3
GCUF	Volcan Galeras	164.20	72	*e*P	PKPdf	19 07 38.5	-3.0
GUY2C	Guyana, Caldas	164.25	56	*e*P	PKPdf	19 07 43.2	+1.7
PP1B	Ponte de Pedra	164.35	207	*e*P	PKPdf	19 07 40.5	-0.3
POPC	Popayan, Colom	164.37	67	*e*P	PKPdf	19 07 38.5	-2.8
BRRC	Barranca, Sant	164.38	47	*e*P	PKPdf	19 07 39.4	-1.6
NORC	Norcasia	164.46	54	*e*P	PKPdf	19 07 38.5	-2.7
SMTB	Santa Maria do	164.49	250	*e*P	PKPdf	19 07 40.1	-1.0
ANIL	Santa Ana	164.61	58	*e*P	PKPdf	19 07 35.6	-5.9
PCON	Cinco Dias	164.71	67	*e*P	PKPdf	19 07 41.3	-0.7
SDV	Santo Domingo	165.03	34	*e*P	PKPdf	19 07 40.8	-1.0
ORTC	Ortega, Tolima	165.04	60	*e*P	PKPdf	19 07 38.5	-3.2
BARC	Barichara	165.11	47	*e*P	PKPdf	19 07 37.5	-4.4
ROSC	El Rosal	165.32	55	PKP	PKPdf	19 07 42.3	0.0
	comp=Z,5.9nm,0.4s,baz=115,slow=3.5,SNR=7.1						
PRAC	Prado	165.45	60	*e*P	PKPdf	19 07 40.3	-1.6
FLOC	Florencia	165.68	69	*e*P	PKPdf	19 07 38.5	-3.7
CHIC	Chingaza	165.92	54	*e*P	PKPdf	19 07 36.5	-6.2
LPAZ	La Paz	166.20	156	PKP	PKPdf	19 07 42.8	-0.4
	baz=131,slow=20						
SALV	Santo Antonio	166.20	208	*e*P	PKPdf	19 07 41.3	-1.1
SNDB	Serra Nova Dou	166.32	232	*e*P	PKPdf	19 07 41.5	-1.0
PTLC	Puerto Leguiza	166.95	73	*e*P	PKPdf	19 07 40.3	-2.8
MACC	Macarena, Meta	167.10	64	*e*P	PKPdf	19 07 38.5	-4.8
ELOV	Elorza	167.22	34	*e*P	PKPdf	19 07 41.3	-2.0
PRPB	Parauapebas	167.31	258	*e*P	PKPdf	19 07 43.0	-0.4
PTGC	Puerto Gaitan,	167.46	52	⇑*e*P	PKPdf	19 07 38.5	-5.0
CZSB	Cruzeiro do Su	168.89	112	*e*P	PKPdf	19 07 44.1	-0.3
MCPB	Macapa, AP	169.25	288	*e*P	PKPdf	19 07 43.5	-1.2
CLDB	Colider	170.35	222	*e*P	PKPdf	19 07 45.8	+0.5
PDRB	Porto dos Gac	170.36	215	*e*P	PKPdf	19 07 45.2	0.0
VILB	Vilhena	170.53	193	*e*P	PKPdf	19 07 45.5	+0.2
MALB	Monte Alegre	171.77	282	*e*P	PKPdf	19 07 46.1	+0.1
BOAV	Boa Vista	173.73	343	*e*P	PKPdf	19 07 46.4	-0.5

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*NOU **20** 18:50:36.8, 22°.22S×176°.25W, h96^{km}, mb4.6/9, South of Fiji Islands*

*IDC **20** 18:50:40.7±4.4, 21°.93S×176°.45W, h186^{km}±32^{km}, mb4.2/7, mb1 4.2/9, mb1mx3.8/41, mbtmp4.7/9, Error ellipse: s-maj=37.6km s-min=26.8km az=115.0*

ISC 20 18:50:39.7±0.6**, 22°.14S**±0°.06×**176°.17W**±0°.08**, h200**^{km}**,** **n63,** σ**2**^{s}**95**/68**, mb4.4**/7**, 24C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TAVE	Taveuni	6.45	326	P	Pn	18 52 08.6	-4.3
	179nm,0.8s						
NIUE	Niue	6.59	64	P	Pn	18 52 12.9	-1.8
MSVF	Nonsavu	6.99	308	P	Pn	18 52 16.3	-3.5
	5.1nm,0.3s,baz=134,slow=13,SNR=20						
MSVF	Nonsavu	6.99	308	P	Pn	18 52 16.5	-3.4
GLKZ	Green Lake	7.27	192	P	Pn	18 52 24.5	+1.2
GLKZ				S	Sn	18 53 47.9	+2.2
AFI	Afiamalu	9.19	28	S	Sn	18 54 13.5	-18
	3.9nm,0.3s,baz=114,slow=19,SNR=2.6						
RAR	Rarotonga	15.27	90	S	S	18 56 53.5	-1.4
	1.0nm,0.3s,baz=68,slow=14,SNR=2.0						
MXZ	Matakaoa Point	16.09	196	P	P	18 54 11.6	-2.9
MXZ				S	S	18 57 04.4	-8.7
DZM	Mont Dzumac	16.12	267	P	Pn	18 54 16.5	+0.9
	0.4nm,0.3s,baz=106,slow=16,SNR=1.6						
DZM	Mont Dzumac	16.12	267	P	Pn	18 54 17.7	+2.1
HAZ	Te Kaha	16.42	197	P	P	18 54 19.7	+1.6
HAZ				S	S	18 57 12.4	-7.2
PUZ	Puketiti	16.59	196	P	P	18 54 21.1	+1.1
PUZ				S	S	18 57 13.0	-10
RUGZ	Raukumara Rang	16.64	197	P	P	18 54 19.8	-0.9
RUGZ				S	S	18 57 15.1	-9.3
TWGZ	Tauwhareparae	16.76	196	P	P	18 54 22.0	+0.1
TWGZ				S	S	18 57 17.3	-9.4
CNGZ	Carnagh Statio	16.99	195	P	Pn	18 54 29.2	+3.4
CNGZ				S	S	18 57 18.5	-13
URZ	Urewera	17.07	198	P	P	18 54 28.3	+3.0
	2.4nm,0.3s,baz=121,slow=22,SNR=17						
URZ				S	S	18 57 27.5	-5.3
	1.9nm,0.3s,baz=110,slow=22,SNR=7.2						
URZ	Urewera	17.07	198	P	P	18 54 26.0	+0.7
URZ				S	S	18 57 24.8	-8.1
URZ	Urewera	17.07	198	P	Pn	18 54 28.7	+2.0
RTZ	Ruatahuna	17.44	198	P	P	18 54 29.4	-0.1
RTZ				S	S	18 57 33.2	-7.2
MHGZ	Mahia Peninsul	17.70	195	S	S	18 57 37.9	-7.5
MTHZ	Maungataniwha	17.70	198	P	P	18 54 35.4	+3.1
MTHZ				S	S	18 57 41.3	-4.2
BKZ	Black Stump Fm	18.09	199	S	S	18 57 46.8	-6.6
BKZ	Black Stump Fm	18.09	199	P	P	18 54 39.4	+2.9
BHHZ	Black Hill Sta	18.52	199	P	P	18 54 40.6	-0.6
BHHZ				S	S	18 57 54.6	-7.2
MOVZ	Moawhango	18.54	200	P	P	18 54 38.9	-2.5
MOVZ				S	S	18 57 57.2	-5.0
QRZ	Quartz Range	20.94	205	P	P	18 55 10.9	+3.9
KHZ	Kahutara	21.98	201	P	P	18 55 19.9	+2.4
RPZ	Rata Peaks	23.98	203	P	P	18 55 42.1	+6.2
CTA	Charters Tower	35.06	266	P	P	18 57 14.2	+0.4
	14nm,0.7s,baz=103,slow=10.0,SNR=2.4						
PMG	Port Moresby	37.38	284	P	P	18 57 33.4	-0.1
	16nm,0.9s,baz=148,slow=5.0,SNR=3.2						
ASAR	Alice Springs	45.83	258	P	P	18 58 42.5	+0.5
	14nm,0.8s,baz=97,slow=7.8,SNR=12						
WRA	Warramunga Arr	46.09	263	P	P	18 58 44.1	+0.1
	7.2nm,1.0s,baz=101,slow=6.5,SNR=16						
FITZ	Fitzroy Crossi	54.52	263	P	P	18 59 48.0	+0.8
	8.5nm,0.9s,baz=123,slow=6.1,SNR=13						
SIJI	Sorong	55.31	285	P	P	18 59 53.1	+0.1
	16nm,1.0s,baz=94,slow=5.9,SNR=7.3						
MJAR	Matsushiro Arr	72.54	323	P	P	19 01 44.6	-0.2
	1.1nm,0.7s,baz=142,slow=7.6,SNR=2.1						
MKAR	Makanchi Array	113.56	313	PKiKP	PKiKP	19 08 55.9	+1.9
	0.3nm,0.7s,baz=222,slow=1.7,SNR=1.8						
AKASG	Malin Array Be	145.27	331	PKP	PKPdf	19 09 54.6	+1.3
	0.6nm,0.4s,baz=43,slow=4.1,SNR=8.4						
SORM	Soroca	147.49	329	⇑P	PKPab	19 10 01.7	-0.8
BRTR	Keskin Array B	149.20	312	PKPbc	PKiKP	19 10 06.5	+0.5
	0.9nm,0.6s,baz=124,slow=4.9,SNR=5.3						
VARL	Varlezi	149.27	326	⇑P	PKiKP	19 10 07.6	+1.9
BURAR	Bucovina Array	149.32	331	⇑P	PKPab	19 10 09.0	-1.1
TESR	Tescani	149.45	328	⇑P	PKiKP	19 10 07.0	+1.0
JURR	Jurilovca	149.47	324	⇑P	PKiKP	19 10 07.4	+1.4
CFR	Carcaliu	149.60	325	⇑P	PKiKP	19 10 07.7	+1.4
TPGR	Topolog	149.66	324	⇑P	PKiKP	19 10 08.4	+1.8
VRI	Vrincioaia	149.87	327	⇑P	PKiKP	19 10 08.5	+1.6
TRPA	Tarpa	150.05	335	⇑P	PKiKP	19 10 09.2	+2.0
COVR	Voineasa-Covas	150.14	328	⇑P	PKiKP	19 10 08.7	+1.2
MANR	Mangalia	150.22	322	⇑P	PKiKP	19 10 09.9	+2.2
MORC	Moravsky Berou	150.37	342	⇑P	PKiKP	19 10 10.6	+2.7
DOPR	Dopca	150.45	329	⇑P	PKiKP	19 10 10.8	+2.7
MLR	Muntele Rosu	150.52	327	⇑P	PKiKP	19 10 11.1	+2.7
VOIR		151.00	328	⇑P	PKiKP	19 10 11.4	+2.0
DRGR		151.05	333	⇑P	PKiKP	19 10 11.6	+2.1
ARR	Arges	151.25	329	⇑P	PKiKP	19 10 13.1	+3.2
HUMR	Humele	151.68	327	⇑P	PKiKP	19 10 12.5	+1.8
SIRR	Siria	151.91	333	⇑P	PKiKP	19 10 13.8	+2.7
GERES	GERESS Array B	152.22	346	PKPbc	PKiKP	19 10 13.6	+1.8
	0.9nm,0.8s,baz=42,slow=1.6,SNR=5.0						
BZS	Buzias	152.44	332	⇑P	PKiKP	19 10 14.8	+2.5
HERR	Herculane	152.66	330	⇑P	PKiKP	19 10 15.1	+2.4
MORH	Mrgy, Hungar	153.13	337	⇑P	PKiKP	19 10 15.4	+1.8
FRGS	Fruska Gora	153.56	334	⇑P	PKiKP	19 10 17.0	+2.4
VTS	Vitosha	153.93	326	⇑P	PKiKP	19 10 18.2	+2.5

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*IDC **20** 19:02:05.3±0.8, 3°.15N×116°.97E, h0^{km}, mb3.7/9, mb1 3.8/10, mb1mx3.4/57, mbtmp3.8/10, ML4.1/1, Error ellipse: s-maj=98.1km s-min=16.7km az=61.0*

*KLM **20** 19:02:08, 3°.47N×117°.86E, h4^{km}, mb3.9*

*NEIC **20** 19:02:09.9±1.5, 3°.33N±0°.06×117°.58E±0°.06, h10^{km}±1^{km}, mb4.5/7, Error ellipse: s-maj=10.6km s-min=8.8km az=318.0*

*DJA **20** 19:02:11.5±0.6, 3°N±3°×11°7E±°, h10^{km}, M4.4/4, MLv4.4/4*

ISC 20 19:02:07.5±0.6**, 3°.42N**±0°.06×**117°.71E**±0°.08**, h10**^{km}**, n27,** σ**1**^{s}**61**/27**, mb4.0**/13**, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SPMM	Sapulut	1.78	316	P	Pb	19 02 41.0	+0.8
MYLDM	Lahad Datu	1.92	24	Pn	Pg	19 02 44.2	-0.1
KKM	Kota Kinabalu	3.00	330	Pn	Pn	19 02 56.1	+0.9
TOLI2	Tolitoli	3.83	127		Pn	19 03 08.8	+2.2
BKB	Balikpapan	4.72	190	Pn	Pn	19 03 17.5	-1.3
SBUM	Sibu	5.56	260	P	Pn	19 03 33.0	+2.6
SBUM	Sibu	5.56	260	Pn	Pn	19 03 31.9	+1.5
KSM	Kuching	7.64	256	Pn	Pn	19 03 59.8	+0.8
KAPI	Kappang	8.62	166	Pn	Pn	19 04 10.5	-1.9
	2.1nm,0.3s,baz=326,slow=3.6,SNR=2.9						
KAPI	Kappang	8.62	166	Pn	Pn	19 04 10.7	-1.7
JRMM	Jerantut	15.21	272	P	Pn	19 05 44.0	+1.5
GSI	Gunungsitoli	20.22	265	P	P	19 06 42.9	0.0
GSI				IAmb	IAmb	19 06 49.8	
	comp=Z,16nm,0.6s						
PSA00	Pilbara Seismi	24.93	175	P	P	19 07 30.2	-0.8
WB0	Warramunga Arr	28.28	145	P	P	19 08 03.1	+1.8
WB0				IAmb	IAmb	19 08 04.4	
	comp=Z,15nm,1.2s						
WRA	Warramunga Arr	28.39	146	P	P	19 08 03.8	+1.5
	comp=Z,2.2nm,0.7s,baz=341,slow=11,SNR=14						
WB2	Warramunga Arr	28.40	145	P	P	19 08 04.2	+1.8
WB2				IAmb	IAmb	19 08 23.9	
	comp=Z,23nm,1.5s						
WR0	Warramunga Arr	28.52	145	P	P	19 08 04.9	+1.5
WR0				IAmb	IAmb	19 08 28.1	
	comp=Z,15nm,1.4s						
AS31	Alice Springs	31.21	150	P	P	19 08 29.2	+2.0
AS31				IAmb	IAmb	19 08 29.6	
	comp=Z,2.2nm,1.4s						
ASAR	Alice Springs	31.21	150	P	P	19 08 27.6	+0.4
	comp=Z,0.9nm,0.7s,baz=324,slow=7.9,SNR=6.7						
STKA	Stephens Creek	41.81	149	P	P	19 09 58.6	+1.1
SONM	Songino Array	45.31	349	P	P	19 10 27.0	+1.3
	comp=Z,0.3nm,0.4s,baz=155,slow=8.6,SNR=2.6						
MKAR	Makanchi Array	52.99	330	P	P	19 11 22.9	-1.5
	comp=Z,0.2nm,0.5s,baz=131,slow=8.3,SNR=6.8						
ZALV	Zalesovo Beam	57.09	338	P	P	19 11 52.3	-1.6
	comp=Z,1.8nm,0.8s,baz=134,slow=4.3,SNR=7.1						
KURBB	Kurchatov Arra	57.41	331	P	P	19 11 54.7	-1.5
	comp=Z,0.8nm,0.8s,baz=127,slow=8.4,SNR=6.0						
BVAR	Borovoye Array	62.87	330	P	P	19 12 32.3	-1.4
	comp=Z,0.9nm,0.7s,baz=153,slow=10.0,SNR=4.6						
BRTR	Keskin Array B	83.26	309	P	P	19 14 33.4	-1.4
	comp=Z,0.6nm,0.8s,baz=90,slow=1.2,SNR=3.8						
AKASG	Malin Array Be	86.41	320	P	P	19 14 47.9	-2.3
	comp=Z,0.7nm,0.6s,baz=69,slow=5.1,SNR=4.6						

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*IDC **20** 19:03:32.1±0.7, 3°.38N×117°.56E, h0^{km}, mb4.0/13, mb1 4.2/14, mb1mx3.7/57, mbtmp4.1/14, ML4.4/1, Error ellipse: s-maj=46.8km s-min=13.8km az=61.0*

*NEIC **20** 19:03:33.1±2.6, 3°.47N±0°.06×117°.58E±0°.07, h10^{km}±1^{km}, mb4.4/12, Error ellipse: s-maj=11.8km s-min=9.4km az=257.0*

*DJA **20** 19:03:34.9±0.2, 4°N±2°×11°8E±°, h10^{km}, M4.8/11, mb4.9/11, MLv4.8/9*

ISC 20 19:03:33.6±0.5**, 3°.51N**±0°.06×**117°.74E**±0°.07**, h10**^{km}**, n48,** σ**1**^{s}**76**/49**, mb4.2**/19**, 1C, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MYLDM	Lahad Datu	1.82	24	Pn	Pn	19 04 05.2	+0.1
KKM	Kota Kinabalu	2.94	329		Pn	19 04 18.3	-2.2
MPSI	Mapaga	3.82	146	P	Pn	19 04 33.4	+0.9
TOLI2	Tolitoli	3.86	128		Pn	19 04 32.7	-0.4
MRSI	Marisa	5.16	126	P	Pn	19 04 52.0	+1.0
	0.9nm237nm,0.6s						
MRSI				S	Sn	19 05 51.7	+1.0
	0.9nm237nm,0.6s						
MTKI	Muara Teweh, K	5.26	213	P	Pn	19 04 54.8	+2.5
	0.6nm64nm,1.1s						
SBUM	Sibu	5.61	259	Pn	Pn	19 04 55.8	-1.5
LUWI	Luwuk	6.76	132	P	Pn	19 05 12.5	-0.5
	0.9nm140nm,1.1s						
LUWI	Luwuk	6.76	132		Pn	19 05 14.2	+1.3
TTSI	Tana Toraja	6.83	162	P	Pn	19 05 17.2	+3.2
	0.8nm196nm,0.7s						

SPSI	**Sidrap Palu**	**7.70**	**165**	P	**Pn**	**19 05 27.7**	**+1.9**
	0.5nm74nm,0.7s						
KSM	**Kuching**	**7.70**	**255**	Pn	**Pn**	**19 05 23.5**	**-2.4**
BNSI	**Bone**	**8.20**	**163**	P	**Pn**	**19 05 34.3**	**+1.5**
	43nm,0.5s						
KAPI	**Kappang**	**8.70**	**167**	Pn	**Pn**	**19 05 39.9**	**+0.2**
	4.4nm,0.3s,baz=354,slow=12,SNR=6.8						
KAPI	**Kappang**	**8.70**	**167**	Pn	**Pn**	**19 05 42.6**	**+3.0**
BKSI	**Bulukumba**	**9.09**	**165**	P	**Pn**	**19 05 48.7**	**+3.7**
	76nm,0.9s						
BATI	**Baumata**	**14.85**	**157**	P	**P**	**19 07 08.1**	**-1.6**
	32nm,1.0s						
KCSI	**Kotacane, Aceh**	**19.93**	**271**	P	**Pn**	**19 08 10.6**	**+3.0**
	29nm,1.1s						
GSI	**Gunungsitoli**	**20.27**	**264**	P	**P**	**19 08 10.9**	**+1.4**
	44nm,0.7s						
GSI	**Gunungsitoli**	**20.27**	**264**	P	**P**	**19 08 04.7**	**-4.9**
GSI				IAmb	IAmb	19 08 22.7	
	comp=Z,20nm,0.7s						
CMAR	**Chiang Mai Arr**	**23.65**	**310**	P	**P**	**19 08 45.1**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=134,slow=8.0,SNR=15						
CHTO	**Chiang Mai**	**23.86**	**311**	P	**P**	**19 08 46.2**	**-1.2**
CHTO				IAmb	IAmb	19 08 53.8	
	comp=Z,5.5nm,1.4s						
PSA00	**Pilbara Seismi**	**25.01**	**175**	P	**P**	**19 08 56.4**	**-1.5**
WB0	**Warramunga Arr**	**28.33**	**145**	P	**P**	**19 09 27.0**	**-0.9**
WB0				IAmb	IAmb	19 09 28.0	
	comp=Z,8.7nm,0.7s						
WRAB	**Tennant Creek**	**28.44**	**146**	P	**P**	**19 09 27.3**	**-1.6**
WRAB				IAmb	IAmb	19 09 29.2	
	comp=Z,8.6nm,0.8s						
WRA	**Warramunga Arr**	**28.44**	**146**	P	**P**	**19 09 28.1**	**-0.8**
	comp=Z,4.4nm,0.7s,baz=341,slow=11,SNR=25						
WRA	**Warramunga Arr**	**28.44**	**146**	P	**P**	**19 09 27.3**	**-1.6**
WB2	**Warramunga Arr**	**28.45**	**146**	P	**P**	**19 09 28.3**	**-0.7**
WR0	**Warramunga Arr**	**28.57**	**145**	P	**P**	**19 09 28.3**	**-1.8**
WR0				IAmb	IAmb	19 09 30.2	
	comp=Z,7.9nm,0.8s						
CD2	**Chengdu**	**30.28**	**336**	⇑*i*P	**P**	**19 09 45.5**	**+0.3**
CD2				pmax	pmax		
	comp=Z,23nm,0.6s						
AS31	**Alice Springs**	**31.27**	**151**	P	**P**	**19 09 54.9**	**+1.0**
ASAR	**Alice Springs**	**31.27**	**151**	P	**P**	**19 09 53.5**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=332,slow=8.9,SNR=11						
ASAR	**Alice Springs**	**31.27**	**151**	P	**P**	**19 09 51.6**	**-2.3**
KSRS	**Korea Array**	**35.05**	**14**	P	**P**	**19 10 28.2**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=199,slow=8.5,SNR=4.3						
FORT	**Forrest**	**35.49**	**165**	P	**P**	**19 10 28.1**	**-2.5**
GTA	**Gaotai**	**39.27**	**338**	*e*P	**P**	**19 11 05.1**	**+2.4**
GTA				pP	sP	19 11 14.8	+7.7
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
STKA	**Stephens Creek**	**41.87**	**149**	P	**P**	**19 11 24.4**	**+0.3**
	comp=Z,4.2nm,0.8s,baz=312,slow=12,SNR=5.4						
STKA	**Stephens Creek**	**41.87**	**149**	P	**P**	**19 11 23.4**	**-0.7**
SONM	**Songino Array**	**45.23**	**349**	P	**P**	**19 11 52.5**	**+1.3**
	comp=Z,1.6nm,0.8s,baz=167,slow=8.2,SNR=7.5						
SONM	**Songino Array**	**45.23**	**349**	P	**P**	**19 11 49.8**	**-1.4**
SONM				IAmb	IAmb	19 12 01.5	
	comp=Z,1.8nm,1.0s						
MKAR	**Makanchi Array**	**52.93**	**330**	P	**P**	**19 12 50.4**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=130,slow=8.1,SNR=9.3						
MKAR	**Makanchi Array**	**52.93**	**330**	P	**P**	**19 12 50.0**	**-0.1**
AAK	**Ala-Archa**	**54.72**	**322**	P	**P**	**19 13 02.3**	**-1.2**
	comp=Z,2.4nm,0.7s,baz=230,slow=5.6,SNR=3.9						
ZALV	**Zalesovo Beam**	**57.02**	**337**	P	**P**	**19 13 19.3**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=126,slow=7.3,SNR=6.8						
KURBB	**Kurchatov Arra**	**57.35**	**331**	P	**P**	**19 13 21.6**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=138,slow=4.4,SNR=2.5						
BVAR	**Borovoye Array**	**62.81**	**330**	P	**P**	**19 14 00.1**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=141,slow=7.1,SNR=6.5						
BRTR	**Keskin Array B**	**83.24**	**309**	P	**P**	**19 16 01.2**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=125,slow=2.7,SNR=3.8						
AKASG	**Malin Array Be**	**86.37**	**320**	P	**P**	**19 16 15.6**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=79,slow=4.3,SNR=4.5						

IDC 20 19:07:17.6±19.0**, 17°.02S**×**179°.86W, h619**^{km}±192^{km}**, mb2.8**/3**, mb1 3.0**/3**, mb1mx2.7**/49**, mbtmp3.9**/3**, Error ellipse: s-maj=163.8km s-min=94.6km az=106.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.86**	**240**	P	P	19 13 43.4	-0.4
	1.3nm,0.8s,baz=69,slow=9.2,SNR=1.3						
WRA	**Warramunga Arr**	**43.44**	**259**	P	P	19 14 27.1	-0.9
	0.5nm,0.7s,baz=92,slow=8.2,SNR=7.7						
ASAR	**Alice Springs**	**43.71**	**253**	P	P	19 14 30.8	+0.7
	2.4nm,0.5s,baz=89,slow=7.9,SNR=66						
ASAR				PcP	PcP	19 16 02.5	-0.4
	0.2nm,0.5s,baz=100,slow=3.8,SNR=4.5						
GERES	**GERESS Array B**	**146.39**	**344**	PKPbc	PKPbc	19 25 49.9	-0.6
	0.2nm,0.4s,baz=24,slow=3.3,SNR=2.2						

IDC ***20*** *19:09:24.1±1.0, 3°.07N×117°.24E, h0*^{km}*, mb3.6/8, mb1 3.7/8, mb1mx3.3/53, mbtmp3.6/8, Error ellipse: s-maj=136.4km s-min=19.0km az=56.0*

ISC 20 19:09:25.6±1.1**, 3°.2N**±0°.5×**117°.4E**±0°.7**, h10**^{km}**, n8, σ0**^{s}**.91**/8**, mb3.6**/8**, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**23.59**	**311**	P	**P**	**19 14 35.5**	**-1.2**
	0.3nm,0.3s,baz=144,slow=8.0,SNR=2.5						
WRA	**Warramunga Arr**	**28.37**	**145**	P	**P**	**19 15 19.2**	**-1.0**
	1.1nm,0.9s,baz=334,slow=9.5,SNR=5.7						
ASAR	**Alice Springs**	**31.15**	**150**	P	**P**	**19 15 45.6**	**+0.7**
	0.5nm,0.6s,baz=334,slow=9.3,SNR=9.0						
MKAR	**Makanchi Array**	**53.04**	**330**	P	**P**	**19 18 43.1**	**+0.2**
	0.5nm,0.8s,baz=131,slow=8.3,SNR=4.4						
KURBB	**Kurchatov Arra**	**57.48**	**332**	P	**P**	**19 19 15.2**	**+0.4**
	0.5nm,0.6s,baz=131,slow=7.0,SNR=4.4						
BVAR	**Borovoye Array**	**62.93**	**330**	P	**P**	**19 19 52.4**	**+0.3**
	1.0nm,0.8s,baz=127,slow=3.8,SNR=4.5						
BRTR	**Keskin Array B**	**83.17**	**309**	P	**P**	**19 21 53.3**	**+0.9**
	0.3nm,0.6s,baz=125,slow=5.7,SNR=2.5						
AKASG	**Malin Array Be**	**86.40**	**320**	P	**P**	**19 22 08.0**	**-0.3**
	0.6nm,0.7s,baz=73,slow=4.9,SNR=2.7						

MOS ***20*** *19:11:25.5±1.3, 55°.36N×110°.56E, h11*^{km}*, mb3.4/1, Error ellipse: s-maj=15.0km s-min=8.6km az=68.6*

BYKL ***20*** *19:11:26.3±0.1, 55°.33N×110°.47E*

IDC ***20*** *19:11:30.7±3.8, 55°.05N×110°.08E, h0*^{km}*, mb1 3.2/5, mb1mx2.7/61, mbtmp3.2/5, ML2.6/5, Error ellipse: s-maj=43.4km s-min=26.6km az=108.0*

ISC 20 19:11:26.1±1.1**, 55°.39N**±0°.02×**110°.58E**±0°.02**, h7**^{km}±9^{km}**, n50, σ2**^{s}**.77**/114**, 1C, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMO	**Kumora**	**0.61**	**35**	*e*Pg	**Pb**	**19 11 38.9**	**-0.2**
KMO				*e*Sg	**Sb**	**19 11 48.2**	**+0.3**
KMO				Pmax			
	182nm,0.2s						
KMO				Smax			
	813nm,0.6s						
KMO	**Kumora**	**0.61**	**35**	*e*PG	**Pb**	**19 11 38.8**	**-0.3**
KMO				*e*		19 11 47.3	
KMO				pmax	pmax		
	comp=Z,184nm,0.2s						
KMO				smax	smax		
	comp=N,939nm,0.8s						
YLYR	**Ulyunkhan**	**0.61**	**147**	⇑*i*Pg	**Pg**	**19 11 37.0**	**-0.9**
YLYR				*e*Sg	**Sg**	**19 11 45.4**	**-0.5**
YLYR				Pmax			
	comp=N,258nm,0.1s						
YLYR				Smax			
	comp=N,443nm,0.1s						
NIZ	**Nizh Angarsk**	**0.70**	**303**	*e*Pg	**Pg**	**19 11 38.7**	**-1.0**
NIZ				*e*Sg	**Sg**	**19 11 47.4**	**-1.5**
NIZ				Pmax			
	comp=N,282nm,0.3s						
NIZ				Smax			
	comp=N,534nm,0.3s						
NIZ	**Nizh Angarsk**	**0.70**	**303**	*e*PG	**Pg**	**19 11 38.7**	**-1.0**
NIZ				*e*		19 11 48.3	
NIZ				pmax	pmax		
	comp=Z,282nm,0.5s						
NIZ				smax	smax		
	comp=E,505nm,0.5s						
YOA	**Uoyan**	**0.98**	**40**	*e*Pg	**Pb**	**19 11 45.5**	**0.0**
YOA				*e*Sg	**Sn**	**19 12 00.2**	**-0.4**
YOA				Pmax			
	comp=E,246nm,0.2s						
YOA				Smax			
	comp=E,2μm,0.4s						
YOA	**Uoyan**	**0.98**	**40**	*e*PG	**Pb**	**19 11 45.3**	**-0.2**
YOA				*e*		19 12 00.6	
YOA				pmax	pmax		
	comp=Z,203nm,0.2s						
YOA				smax	smax		
	comp=N,2μm,0.4s						
UKT	**Uakit**	**1.74**	**86**	*e*Pg	**Pb**	**19 11 58.6**	**+0.2**
UKT				*e*Sn	**Sn**	**19 12 20.6**	**+1.3**
UKT				*e*Sg	**Sg**	**19 12 22.4**	**+0.5**
UKT				Pmax			
	comp=N,141nm,0.5s						
UKT				Smax			
	comp=N,464nm,0.6s						
UKT	**Uakit**	**1.74**	**86**	*e*PN	**Pb**	**19 11 58.7**	**+0.3**
SYVR	**Suvo**	**1.77**	**191**	*e*Pg	**Pn**	**19 11 56.5**	**-0.6**
SYVR				*e*Sg	**Sn**	**19 12 19.1**	**-0.8**
SYVR				Pmax			
	comp=N,102nm,0.4s						
SYVR				Smax			
	comp=N,363nm,0.7s						
SYVR	**Suvo**	**1.77**	**191**	*e*PN	**Pn**	**19 11 56.6**	**-0.6**
SYVR				*e*		19 12 19.8	
SYVR				pmax	pmax		
	comp=Z,106nm,0.4s						
SYVR				smax	smax		
	comp=E,398nm,0.5s						
SVKR	**Severomuysk**	**1.83**	**65**	*e*Sg	**Sg**	**19 12 26.2**	**+1.2**
SVKR				Smax			
	comp=E,993nm,0.5s						
MXMB	**Maximikha**	**2.39**	**208**	*e*Pn	**Pn**	**19 12 05.5**	**-0.2**
MXMB				*e*Pg	**Pb**	**19 12 08.6**	**-0.8**
MXMB				*e*		19 12 09.9	
MXMB				*e*Sn	**Sn**	**19 12 33.5**	**-1.7**
MXMB				*e*Sg	**Sb**	**19 12 38.8**	**-0.3**
OGRR	**Ongureny**	**2.47**	**226**	*e*Pg	**Pb**	**19 12 10.1**	**-0.7**
OGRR				*e*		19 12 15.4	
OGRR				*e*Sn	**Sn**	**19 12 35.3**	**-1.9**
OGRR				*e*Sg	**Sb**	**19 12 41.1**	**-0.3**
OGRR				max			
	comp=E,39nm,0.3s						
OGRR				Smax			
	comp=E,116nm,0.2s						
OGRR	**Ongureny**	**2.47**	**226**	*e*PN	**Pn**	**19 12 07.8**	**+1.0**
OGRR				*e*		19 12 11.0	
OGRR				*e*		19 12 41.4	
OGRR				pmax	pmax		
	comp=Z,19nm,0.3s						
OGRR				smax	smax		
	comp=E,145nm,0.6s						
KELR	**Kotokel**	**3.02**	**210**	*e*Pg	**Pb**	**19 12 19.0**	**-1.2**
KELR				*e*Sn	**Sn**	**19 12 48.0**	**-2.8**
KELR				*e*Sg	**Sb**	**19 12 57.2**	**-0.1**
BOD	**Bodaibo**	**3.08**	**36**	*e*Pn	**Pn**	**19 12 16.0**	**+0.8**
BOD				*e*Pg	**Pb**	**19 12 22.7**	**+1.5**
BOD				*e*Sn	**Sn**	**19 12 53.3**	**+1.0**
BOD				*e*Sg	**Sg**	**19 13 03.3**	**-1.7**
BOD				Pmax			
	comp=E,14nm,0.3s						
BOD				Smax			
	comp=E,150nm,0.5s						
BOD	**Bodaibo**	**3.08**	**36**	*e*PN	**Pn**	**19 12 14.7**	**-0.5**
BOD				*e*		19 12 21.4	
BOD				*e*		19 13 02.5	
BOD				pmax	pmax		
	comp=Z,20nm,0.6s						
BOD				smax	smax		
	comp=E,166nm,1.0s						
NLYR	**Nelyaty**	**3.08**	**67**	*e*Pn	**Pn**	**19 12 16.6**	**+1.3**
NLYR				*e*		19 12 21.2	
NLYR				*e*		19 12 25.8	
NLYR				*e*Sn	**Sn**	**19 12 53.1**	**+0.7**
NLYR				*e*Sg	**Sg**	**19 13 04.0**	**-1.1**
NLYR				max			
	comp=E,57nm,0.8s						
NLYR				Smax			
	comp=E,215nm,0.8s						
TRG	**Tyrgan**	**3.63**	**225**	*e*Pn	**Pn**	**19 12 22.2**	**-0.6**
TRG				*e*Pg	**Pb**	**19 12 30.1**	**-0.5**
TRG				*e*Sn	**Sn**	**19 13 02.1**	**-3.7**
TRG				*e*Sg	**Sb**	**19 13 16.0**	**+1.2**
TRG				Pmax			
	comp=E,18nm,0.6s						
TRG				Smax			
	comp=E,121nm,1.2s						
CIT	**Chita**	**3.81**	**151**	*e*Sg	**Sb**	**19 13 23.3**	**+3.3**
CIT				Smax			
	comp=E,120nm,0.3s						
CIT	**Chita**	**3.81**	**151**	*e*PN	**Pn**	**19 12 25.0**	**-0.2**
CIT				*e*		19 12 34.0	
CIT				*e*S	**Sn**	**19 13 06.1**	**-4.2**
CIT				*e*		19 13 22.2	
CIT				pmax	pmax		
	comp=Z,36nm,1.2s						
CIT				smax	smax		
	comp=E,125nm,1.5s						
UUDB	**Ulan-Yde**	**3.94**	**207**	*e*Pg	**Pb**	**19 12 35.3**	**-0.5**
UUDB				*e*Sn	**Sn**	**19 13 09.8**	**-3.6**
UUDB				*e*Sg	**Sb**	**19 13 25.2**	**+1.6**
UUDB				Pmax			
	comp=E,16nm,0.5s						
UUDB				Smax			
	comp=E,96nm,0.8s						
FFNB	**Fofonovo**	**4.05**	**216**	*e*Pn	**Pn**	**19 12 27.1**	**-1.4**
FFNB				*e*Pg	**Pb**	**19 12 37.8**	**+0.1**
FFNB				*e*Sn	**Sn**	**19 13 13.3**	**-2.8**
FFNB				*e*Sg	**Sb**	**19 13 29.2**	**+2.4**
KAB	**Kabansk**	**4.08**	**216**	*e*Sg	**Sb**	**19 13 29.9**	**+2.1**
KAB				Smax			
	comp=E,278nm,0.8s						
STDB	**Stepnoy Dvoret**	**4.08**	**219**	*e*Pn	**Pn**	**19 12 28.3**	**-0.7**
STDB				*e*Sg	**Sb**	**19 13 30.3**	**+2.5**
HRMR	**Khuramsha**	**4.35**	**211**	*e*Pn	**Pn**	**19 12 32.5**	**-0.1**
HRMR				*e*Pg	**Pb**	**19 12 43.4**	**+0.6**
HRMR				*e*Sn	**Sn**	**19 13 19.2**	**-4.3**
HRMR				*e*Sg	**Sb**	**19 13 38.2**	**+2.7**
HRMR				Pmax			
	comp=E,24nm,0.7s						
HRMR				Smax			
	comp=E,209nm,0.7s						
BGT	**Bolshoye Golou**	**4.55**	**225**	*e*Pg	**Pb**	**19 12 47.1**	**+0.9**
BGT				*e*Sn	**Sn**	**19 13 24.7**	**-3.7**
BGT				*e*Sg	**Sb**	**19 13 44.9**	**+3.7**
BGT				Pmax			
	comp=E,61nm,0.3s						
BGT				Smax			
	comp=E,88nm,0.8s						
CRS	**Chara**	**4.56**	**67**	*e*Pn	**Pn**	**19 12 36.8**	**+1.3**
CRS				*e*Pg	**Pb**	**19 12 49.7**	**+3.3**
CRS				*e*Sn	**Sn**	**19 13 28.9**	**+0.2**
CRS				*e*Sg	**Sg**	**19 13 50.0**	**-2.3**
CRS				*e*		19 14 02.6	
CRS				Pmax			
	comp=E,34nm,1.0s						
CRS				max			
	comp=E,94nm,2.0s						
IRK	**Irkutsk**	**4.89**	**232**	*e*Sg	**Sb**	**19 13 54.3**	**+3.2**
IRK				Smax			
	comp=E,151nm,0.7s						
IVK	**Ivanovka**	**5.14**	**228**	*e*Pn	**Pn**	**19 12 43.3**	**-0.2**
IVK				*e*Pg	**Pb**	**19 12 57.4**	**+1.1**
IVK				*e*Sn	**Sn**	**19 13 37.9**	**-5.1**
IVK				*e*Sg	**Sb**	**19 14 02.2**	**+4.0**
IVK				Pmax			
	comp=E,21nm,0.9s						
IVK				Smax			
	comp=E,42nm,0.9s						
KHNR	**Khani**	**5.47**	**70**	*e*Pn	**Pn**	**19 12 50.0**	**+2.0**
KHNR				*e*Pg	**Pb**	**19 13 06.4**	**+4.4**
KHNR				*e*Sn	**Sn**	**19 13 50.8**	**-0.4**
KHNR				*e*Sg	**Sg**	**19 14 17.9**	**-3.8**
TUP	**Tupik**	**5.49**	**96**	*e*Pn	**Pn**	**19 12 48.7**	**+0.4**
TUP				*e*Pg	**Pb**	**19 13 06.3**	**+4.0**
TUP				*e*Sn	**Sn**	**19 13 50.2**	**-1.5**
TUP				*e*Sg	**Sg**	**19 14 17.9**	**-4.5**
TUP				Pmax			
	comp=E,11nm,0.5s						
TUP				Smax			
	comp=E,126nm,0.8s						
TUP	**Tupik**	**5.49**	**96**	*e*PN	**Pn**	**19 12 48.8**	**+0.4**
TUP				*e*		19 13 06.2	
TUP				*e*S	**Sn**	**19 13 52.1**	**+0.4**
TUP				*e*		19 14 17.8	
TUP				pmax	pmax		
	comp=Z,11nm,0.5s						
TUP				smax	smax		
	comp=N,127nm,0.8s						
TLY	**Talaya**	**5.56**	**231**	Pn	**Pn**	**19 12 48.5**	**-0.8**
	comp=N,0.0nm,0.3s,baz=48,slow=16,SNR=2.1						
TLY				Pg	**Pb**	**19 13 00.6**	**-2.9**
	comp=N,0.0nm,0.3s,baz=135,slow=10.0,SNR=2.1						
TLY				Sn	**Sn**	**19 13 47.3**	**-6.1**
	comp=N,0.0nm,0.3s,baz=354,slow=19,SNR=1.9						
TLY				Lg	Lg	19 14 13.6	
	comp=N,0.0nm,0.3s,baz=82,slow=23,SNR=6.1						
KPC	**Khapcheranga**	**5.80**	**168**	*e*Pn	**Pn**	**19 12 53.0**	**+0.4**
KPC				*e*Pg	**Pb**	**19 13 10.0**	**+2.4**
KPC				*e*Sn	**Sn**	**19 13 56.8**	**-2.6**
KPC				*e*Sg	**Sb**	**19 14 24.2**	**+6.9**
KPC				*e*		19 14 37.5	
KPC				Pmax			
	comp=N,15nm,1.2s						
KPC				Smax			
	comp=N,53nm,1.0s						
ARS	**Arshan**	**5.97**	**238**	*e*Pn	**Pn**	**19 12 54.7**	**-0.2**
ARS				*e*Pg	**Pb**	**19 13 11.9**	**+1.5**
ARS				*e*Sn	**Sn**	**19 13 59.3**	**-4.2**
ARS				*e*Sg	**Sb**	**19 14 27.2**	**+5.1**
ARS				Pmax			
	comp=N,21nm,0.5s						
ARS				Smax			
	comp=N,107nm,0.8s						
ZAK	**Zakamensk**	**6.68**	**224**	*e*Pg	**Pb**	**19 13 25.3**	**+2.7**
ZAK				*e*		19 14 22.5	
ZAK				*e*Sg	**Sb**	**19 14 49.7**	**+7.0**
ZAK				Pmax			
	comp=N,8.0nm,0.8s						
ZAK				Smax			
	comp=N,46nm,1.1s						
MOY	**Mondy**	**6.83**	**241**	*e*Pn	**Pn**	**19 13 07.5**	**+0.8**
MOY				*e*		19 13 18.0	
MOY				*e*Pg	**Pb**	**19 13 27.7**	**+2.6**
MOY				*e*Sn	**Sn**	**19 14 19.2**	**-5.5**
MOY				*e*Sg	**Sb**	**19 14 54.9**	**+8.2**
MOY				Pmax			
	comp=N,13nm,0.8s						
MOY				Smax			
	comp=N,66nm,1.5s						
MOY	**Mondy**	**6.83**	**241**	*e*PN	**Pn**	**19 13 09.0**	**+2.3**
MOY				*e*		19 13 29.6	
MOY				*e*		19 14 55.4	
MOY				pmax	pmax		
	comp=Z,4.0nm,0.2s						
MOY				smax	smax		
	comp=E,66nm,1.3s						
ORL	**Orlik**	**6.97**	**250**	*e*Pn	**Pn**	**19 13 08.4**	**-0.3**
ORL				*e*		19 13 22.7	
ORL				*e*Pg	**Pb**	**19 13 31.2**	**+3.7**
ORL				*e*Sn	**Sn**	**19 14 23.5**	**-4.7**
ORL				*e*Sg	**Sb**	**19 14 59.1**	**+8.2**
ORL				Pmax			
	comp=E,20nm,1.2s						
ORL				Smax			
	comp=E,42nm,0.8s						
ORL	**Orlik**	**6.97**	**250**	*e*PN	**Pn**	**19 13 10.3**	**+1.6**
ORL				*e*		19 13 31.6	
ORL				*e*S	**Sn**	**19 14 25.1**	**-3.1**
ORL				*e*		19 14 58.8	
ORL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ORL				smax	smax		
	comp=N,39nm,1.8s						
SONM	**Songino Array**	**8.00**	**201**	Pn	**Pn**	**19 13 22.7**	**-0.2**
	comp=N,0.1nm,0.3s,baz=11,slow=13,SNR=2.2						
SONM				Pg	**Pb**	**19 13 48.7**	**+3.6**
	comp=N,0.2nm,0.3s,baz=1.7,slow=14,SNR=5.0						
SONM				Lg	Lg	19 15 31.1	
	comp=N,0.2nm,0.3s,baz=17,slow=27,SNR=2.5						
IENR	**Iengra**	**8.09**	**78**	*e*Pn	**Pn**	**19 13 24.2**	**+0.3**
IENR				*e*Pg	Pb	19 13 52.5	+6.0
IENR				*e*Sn	**Sn**	**19 14 52.5**	**-3.1**
IENR				*e*Sg	**Sg**	**19 15 38.1**	**-7.4**
KNGR	**Kungurtug, Tuv**	**9.22**	**244**	*e*Sg	Sn	19 16 08.3	+45
KLR	**Kul'dur**	**14.31**	**107**	Lg	Lg	19 18 58.8	
	comp=N,0.1nm,0.3s,baz=357,slow=18,SNR=4.0						
ZALV	**Zalesovo Beam**	**14.95**	**275**	Pn	**Pn**	**19 14 59.4**	**+1.8**
	comp=N,0.1nm,0.3s,baz=70,slow=9.3,SNR=5.4						
ZALV				Lg	Lg	19 19 11.4	
	comp=N,0.1nm,0.3s,baz=75,slow=29,SNR=4.2						
MKAR	**Makanchi Array**	**19.63**	**256**	P	**Pn**	**19 15 57.0**	**+0.7**
	comp=N,0.0nm,0.3s,baz=74,slow=11,SNR=2.7						
KURK	**Kurchatov**	**19.67**	**270**	P	**Pn**	**19 15 58.4**	**+1.6**
KURBB	**Kurchatov Arra**	**19.76**	**269**	P	**Pn**	**19 15 58.4**	**+0.5**
	comp=N,0.0nm,0.3s,baz=67,slow=12,SNR=5.8						

IDC ***20*** *19:11:55.0±0.9, 4°.11N×118°.80E, h0*^{km}*, mb3.6/10, mb1 3.8/10, mb1mx3.4/50, mbtmp3.6/10, Error ellipse: s-maj=81.6km s-min=16.7km az=61.0*

DJA ***20*** *19:11:56.8±0.3, 4°N±3°×11°8E±°, h10*^{km}*, M4.5/7, mb4.8/5, MLv4.4/7*

KLM ***20*** *19:12:09, 3°.91N×118°.44E, h5*^{km}*, mb4.1*

ISC 20 19:11:57.0±0.8**, 3°.7N**±0°.1×**118°.0E**±0°.2**, h10**^{km}**, n15, σ1**^{s}**.75**/15**, mb3.7**/10**, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPMM	**Sapulut**	**1.83**	**304**	P	**Pn**	**19 12 27.0**	**-1.6**
MPSI	**Mapaga**	**3.83**	**150**	P	**Pn**	**19 12 54.9**	**-1.2**
MRSI	**Marisa**	**5.07**	**129**	P	**Pn**	**19 13 14.6**	**+1.5**
	0.4nm67nm,0.5s						
TTSI	**Tana Toraja**	**6.93**	**165**	P	**Pn**	**19 13 38.4**	**-0.3**
	0.3nm74nm,0.7s						
BNSI	**Bone**	**8.30**	**165**	P	**Pn**	**19 13 56.5**	**-1.1**
	18nm,0.6s						
FITZ	**Fitzroy Crossi**	**22.92**	**161**	P	**P**	**19 17 03.8**	**+2.5**
	2.9nm,0.8s,baz=333,slow=18,SNR=2.1						
CMAR	**Chiang Mai Arr**	**23.73**	**310**	P	**P**	**19 17 13.4**	**+3.9**
	0.3nm,0.4s,baz=136,slow=8.5,SNR=1.5						
WRA	**Warramunga Arr**	**28.45**	**146**	P	**P**	**19 17 50.6**	**-1.7**
	0.7nm,0.5s,baz=211,slow=10,SNR=7.2						
ASAR	**Alice Springs**	**31.30**	**151**	P	**P**	**19 18 16.9**	**-0.7**
	0.5nm,0.7s,baz=342,slow=10,SNR=6.7						
SONM	**Songino Array**	**45.10**	**349**	P	**P**	**19 20 12.2**	**-1.4**
	0.3nm,0.6s,baz=152,slow=7.8,SNR=2.2						
MKAR	**Makanchi Array**	**52.90**	**330**	P	**P**	**19 21 13.5**	**+0.2**
	0.2nm,0.4s,baz=122,slow=8.7,SNR=5.7						
ZALV	**Zalesovo Beam**	**56.96**	**337**	P	**P**	**19 21 40.9**	**-1.6**
	0.9nm,0.7s,baz=123,slow=5.3,SNR=4.6						
BVAR	**Borovoye Array**	**62.78**	**330**	P	**P**	**19 22 22.9**	**+0.3**
	0.4nm,0.6s,baz=148,slow=14,SNR=3.0						
BRTR	**Keskin Array B**	**83.32**	**309**	P	**P**	**19 24 25.1**	**+0.5**
	0.3nm,0.3s,baz=103,slow=6.2,SNR=2.2						
AKASG	**Malin Array Be**	**86.39**	**320**	P	**P**	**19 24 39.2**	**-0.5**
	0.2nm,0.4s,baz=77,slow=3.5,SNR=1.1						

IDC ***20*** *19:13:45.3±0.7, 6°.14N×125°.83E, h82*^{km}*±8*^{km}*, mb3.7/9, mb1 3.9/11, mb1mx3.3/53, mbtmp4.1/11, Error ellipse: s-maj=40.4km s-min=11.0km az=76.0*

MAN ***20*** *19:13:49.1, 6°.46N×125°.85E, h10*^{km}*, mb4.8, ML3.7, MS3.7*

NEIC ***20*** *19:13:51.5±2.5, 5°.93N±0°.09×126°.17E±0°.07, h121*^{km}*±16*^{km}*, mb4.0/12, Error ellipse: s-maj=14.7km s-min=8.5km az=151.0*

ISC 20 19:13:46.1±0.6**, 6°.19N**±0°.06×**125°.81E**±0°.09**, h100**^{km}**, n32, σ1**^{s}**.93**/35**, mb3.9**/13**, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.86**	**264**	⇑*e*P	**Pn**	**19 14 02.9**	**-2.3**
GSPH				*i* S	**Sn**	**19 14 16.6**	**-3.0**
DAV	**Davao City (W)**	**0.91**	**345**	P	**Pn**	**19 14 03.1**	**-2.5**
	45nm,0.3s,baz=25,slow=17,SNR=4.2						
DAV				S	**Sn**	**19 14 18.6**	**-1.6**
	106nm,0.3s,baz=95,slow=3.6,SNR=21						
DAV	**Davao City (W)**	**0.91**	**345**		Pn	19 14 16.3	+11
KCP	**Kidapawan**	**1.09**	**319**	⇓*i*P	**Pn**	**19 14 06.4**	**-1.2**
KCP				*i* S	**Sn**	**19 14 22.5**	**-1.3**
BUKP	**Musuan**	**1.84**	**336**	⇑*i*P	**Pn**	**19 14 16.4**	**-0.3**
BUKP				*i* S	**Sn**	**19 14 33.4**	**-6.6**
TNTI	**Ternate**	**5.60**	**164**	Pn	**Pn**	**19 15 07.0**	**+0.1**
SIJI	**Sorong**	**8.87**	**142**	P	**Pn**	**19 15 50.9**	**-0.7**
	1.4nm,0.3s,baz=332,slow=17,SNR=7.2						
SIJI				S	**Sn**	**19 17 29.1**	**-0.8**
	0.3nm,0.3s,baz=135,slow=20,SNR=1.5						

SBUM	Sibu	14.05	255	Pn	P	19 17 09.2	+3.9
SAUI	Saumlaki	15.10	159	Pn	Pn	19 17 14.1	-0.1
KSM	Kuching	16.16	254	Pn	P	19 17 33.2	+4.4
KSM				IAmb	IAmb	19 17 40.7	
	comp=Z,16nm,1.1s						
BATI	Baumata	16.42	188	P	Pn	19 17 30.0	-0.7
	comp=Z,0.9nm,0.3s,baz=357,slow=4.6,SNR=1.6						
MTN	Manton Dam	19.63	164		Pn	19 18 08.2	-1.1
KNRA	Kununurra	21.92	172	P	P	19 18 32.6	+1.2
FITZ	Fitzroy Crossi	24.13	180	P	P	19 18 53.3	+0.5
	comp=Z,2.5nm,0.5s,baz=350,slow=6.1,SNR=12						
COEN	Coen	26.41	139	P	P	19 19 10.8	-2.8
COEN				IAmb	IAmb	19 19 30.1	
	comp=Z,2.0nm,0.8s						
WB0	Warramunga Arr	27.14	162	P	P	19 19 20.3	+0.2
WB0				IAmb	IAmb	19 19 22.0	
	comp=Z,5.4nm,1.1s						
WRA	Warramunga Arr	27.29	162	P	P	19 19 21.6	+0.2
	comp=Z,0.6nm,0.3s,baz=334,slow=11,SNR=25						
WRA	Warramunga Arr	27.29	162	P	P	19 19 20.0	-1.4
WB2	Warramunga Arr	27.29	162	P	P	19 19 21.9	+0.5
WB2				IAmb	IAmb	19 19 36.0	
	comp=Z,6.0nm,1.1s						
WR0	Warramunga Arr	27.36	162	P	P	19 19 22.5	+0.4
WR0				IAmb	IAmb	19 19 35.7	
	comp=Z,5.2nm,1.1s						
PSA00	Pilbara Seismi	28.20	192	P	P	19 19 28.3	-1.2
AS31	Alice Springs	30.70	165	P	P	19 19 52.4	+0.7
ASAR	Alice Springs	30.70	165	P	P	19 19 52.0	+0.3
	comp=Z,0.6nm,0.4s,baz=348,slow=7.7,SNR=19						
ASAR				PcP	PcP	19 22 48.4	+0.9
	comp=Z,0.2nm,0.4s,baz=346,slow=2.4,SNR=5.2						
ASAR	Alice Springs	30.70	165	P	P	19 19 51.5	-0.2
BBOO	Buckleboo	39.98	167	P	P	19 21 10.8	-0.3
BBOO				IAmb	IAmb	19 21 14.5	
	comp=Z,3.5nm,0.9s						
STKA	Stephens Creek	40.73	159	P	P	19 21 17.8	+0.5
	comp=Z,1.2nm,0.4s,baz=334,slow=8.1,SNR=7.0						
STKA	Stephens Creek	40.73	159	P	P	19 21 15.3	-1.9
KLR	Kul'dur	43.19	6	P	P	19 21 38.3	+1.3
	comp=Z,1.2nm,0.6s,baz=169,slow=17,SNR=2.9						
MKAR	Makanchi Array	55.03	325	P	P	19 23 08.9	+1.5
	comp=Z,0.3nm,0.6s,baz=118,slow=7.7,SNR=1.6						
YAK	Yakutsk	55.80	2	P	P	19 23 14.5	+2.0
	comp=Z,14nm,1.1s,baz=98,slow=1.9,SNR=5.0						
ILAR	Eielson Array	83.29	26	P	P	19 26 02.2	+0.7
	comp=Z,1.1nm,0.7s,baz=248,slow=4.8,SNR=6.5						
YKA	Yellowknife Ar	97.65	24	P	Pdif	19 27 10.4	+1.1
	comp=Z,0.3nm,0.7s,baz=297,slow=4.5,SNR=4.1						

KLM 20 19:16:32, 3°.56N×117°.60E, h6km, mb4.1
DJA 20 19:16:33.8±0.5, 4°N±2°×11°8E±°, h10km, M4.2/3, MLv4.2/3, Borneo

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPMM	Sapulut	1.57	318	P	Pg	19 17 04.0	0.0
SBUM	Sibu	5.40	259	P	Pn	19 17 54.0	-0.5

NEIC 20 19:30:06.4±2.8, 3°.37N±0°.06×117°.50E±0°.04, h10km±2km, mb4.3/7, Error ellipse: s-maj=10.6km s-min=5.1km az=203.0
IDC 20 19:30:08.1±0.8, 3°.22N×117°.54E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.6/36, mbtmp3.8/9, Error ellipse: s-maj=78.8km s-min=16.3km az=58.0
DJA 20 19:30:10.3±0.3, 3°N±3°×11°8E±°, h10km, M4.6/7, mb4.9/4, MLv4.4/7
KLM 20 19:30:12, 3°.80N×117°.77E, h5km, mb4.2
ISC 20 19:30:09.1±0.7, 3°.10N±0°.08×117°.46E±0°.09, h10km, n31, σ2s.24/25, mb3.9/12, Borneo

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPMM	Sapulut	1.88	328	P	Pn	19 30 42.0	+0.6
MYLDM	Lahad Datu	2.31	27		Pn	19 30 41.7	-5.5
KKM	Kota Kinabalu	3.18	337		Pn	19 30 54.7	-4.6
MPSI	Mapaga	3.67	138	P	Pn	19 31 07.8	+1.9
TOLI2	Tolitoli	3.86	121		Pn	19 31 07.5	-1.1
BKB	Balikpapan	4.37	187	Pn	Pn	19 31 14.4	-1.1
MRSI	Marisa	5.18	120	P	Pn	19 31 26.5	-0.2
	0.5nm119nm,0.6s						
SBUM	Sibu	5.27	263	Pn	Pn	19 31 29.2	+1.3
TTSI	Tana Toraja	6.54	159	P	Pn	19 31 51.5	+6.1
	0.3nm96nm,0.7s						
LUWI	Luwuk	6.72	128	Pn	Pn	19 31 48.9	+1.1
KSM	Kuching	7.32	257	Pn	Pn	19 31 54.3	-1.9
SPSI	Sidrap Palu	7.39	162	P	Pn	19 32 03.4	+6.4
	0.1nm42nm,0.8s						
GSI	Gunungsitoli	19.95	265	P	Pn	19 34 46.4	+3.2
GSI	Gunungsitoli	19.95	265	P	P	19 34 41.3	-0.2
GSI				IAmb	IAmb	19 34 48.5	
	comp=Z,27nm,0.6s						
YULB	Yu-li	20.52	10	P	P	19 34 37.4	-10
YULB				IAmb	IAmb	19 34 53.4	
	comp=Z,29nm,1.3s						
CM31	Chiang Mai Arr	23.70	311	P	P	19 35 15.6	-5.7
CM31				IAmb	IAmb	19 35 37.6	
	comp=Z,4.8nm,1.1s						
CMAR	Chiang Mai Arr	23.70	311	P	P	19 35 21.0	-0.3
	comp=Z,0.6nm,0.7s,baz=138,slow=8.8,SNR=7.1						
CMAR	Chiang Mai Arr	23.70	311	P	P	19 35 16.6	-4.8
JOW	Kunigami	25.77	23	P	P	19 35 32.9	-7.4
WRAB	Tennant Creek	28.27	145	P	P	19 36 00.7	-2.1
WRAB				IAmb	IAmb	19 36 05.8	
	comp=Z,9.9nm,1.2s						
WRA	Warramunga Arr	28.27	145	P	P	19 36 02.5	-0.3
	comp=Z,1.5nm,0.8s,baz=326,slow=8.4,SNR=9.9						
WRA	Warramunga Arr	28.27	145	P	P	19 35 59.7	-3.1
AS31	Alice Springs	31.05	150	P	P	19 36 25.9	-1.6
AS31				IAmb	IAmb	19 36 31.2	
	comp=Z,1.2nm,1.1s						
ASAR	Alice Springs	31.05	150	P	P	19 36 28.6	+1.1
	comp=Z,0.7nm,0.7s,baz=334,slow=9.8,SNR=11						
ASAR	Alice Springs	31.05	150	P	P	19 36 25.4	-2.1
STKA	Stephens Creek	41.66	148	P	P	19 38 00.5	+2.5
	comp=Z,2.8nm,0.9s,baz=287,slow=17,SNR=3.3						
SONM	Songino Array	45.58	350	P	P	19 38 29.2	-0.2
	comp=Z,1.0nm,0.7s,baz=163,slow=10,SNR=7.1						
MKAR	Makanchi Array	53.14	330	P	P	19 39 26.9	-0.2
	comp=Z,1.1nm,0.8s,baz=124,slow=6.0,SNR=4.2						
ZALV	Zalesovo Beam	57.29	338	P	P	19 39 56.8	-0.1
	comp=Z,0.5nm,0.4s,baz=144,slow=5.3,SNR=7.0						
BRTR	Keskin Array B	83.28	309	P	P	19 42 37.8	+1.3
	comp=Z,0.4nm,0.6s,baz=130,slow=6.5,SNR=3.0						
AKASG	Malin Array Be	86.50	320	P	P	19 42 53.1	+0.8
	comp=Z,0.7nm,0.7s,baz=64,slow=6.5,SNR=4.3						

NNC 20 19:39:09.2±3.3, 40°.81N×71°.65E, h9km±13km, mb3.3, mpv3.2, Error ellipse: s-maj=26.1km s-min=12.6km az=178.0
SOME 20 19:39:09.6, 40°.95N×71°.50E, h10km
KRNET 20 19:39:11.0±0.1, 41°.04N×71°.52E, h30km, mb2.4
ISC 20 19:39:09.3±1.2, 40°.97N±0°.02×71°.56E±0°.03, h2km±11km, n30, σ1s.38/48, 13C-11D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	Terek-Say	0.64	331	⇓*i*P	Pg	19 39 21.3	-0.3
	baz=28						
TRKS				⇓*i*S	Sg	19 39 29.1	-0.9
	baz=28						
ARK	Arkit	0.88	20	⇓*i*P	Pb	19 39 27.5	+0.1
	baz=24						
ARK				⇓*i*S	Sg	19 39 38.8	+1.2
	baz=24						
OHH	Osh	1.03	115	⇑*i*P	Pn	19 39 31.0	+0.2
	baz=18						
OHH				⇑*e*S	Sn	19 39 45.8	0.0
	baz=18						
BTK	Batken	1.07	212	⇓*e*P	Pn	19 39 31.8	+0.4
	baz=9.0						
BTK				⇓*i*S	Sn	19 39 46.8	-0.1
	baz=9.0						
DRK	Karamyk	1.50	173	⇑*i*P	Pg	19 39 38.8	+0.8
	baz=72						
DRK				⇑*i*S	Sg	19 39 59.1	+1.7
	baz=72						
IUG	Iuzhnay	1.64	316	*e*P	Pg	19 39 40.8	0.0
	178nm,0.2s						
IUG				*e*S	Sg	19 40 02.7	+0.6
	30nm,0.2s						
IUG	Iuzhnay	1.64	316	P	Pg	19 39 40.8	0.0
	178nm,0.2s						
IUG				S	Sg	19 40 02.7	+0.6
	30nm,0.2s						
MNAS	Manas	1.67	25	⇑*e*P	Pn	19 39 39.4	-0.3
	baz=27						
MNAS				⇑*i*S	Sn	19 40 00.4	-1.4
	baz=27						
SFK	Sufi-Kurgan	1.76	122	⇑*e*P	Pb	19 39 42.4	0.0
	baz=23						
SFK				⇑*e*S	Sb	19 40 05.2	+0.1
	baz=23						
DZA	Taraz	1.93	355	*e*P	Pb	19 39 46.0	+0.8
	27nm,0.2s						
DZA				*e*S	Sg	19 40 11.8	+0.5
	126nm,0.3s						
DZA	Taraz	1.93	355	Pg	Pb	19 39 46.0	+0.8
	27nm,0.2s						
DZA				Lg	Lg	19 40 11.8	
	126nm,0.3s						
AML	Almayashu	1.98	53	⇓*e*P	Pn	19 39 44.6	+0.5
	baz=55						
AML				⇓*i*S	Sn	19 40 08.9	-0.8
	baz=55						
MRKS	Merke	2.17	34	*e*P	Pb	19 39 49.8	+0.6
	4.4nm,0.3s						
MRKS				*e*S	Sg	19 40 19.1	+0.2
	12nm,0.3s						
MRKS	Merke	2.17	34	Pg	Pb	19 39 49.8	+0.6
	4.4nm,0.3s						
MRKS				Lg	Lg	19 40 19.1	
	12nm,0.3s						
GAR	Garm	2.19	206	⇓*e*P	Pb	19 39 48.2	-1.4
	baz=5.0						
GAR				⇓*e*S	Sb	19 40 15.2	-2.0
	baz=5.0						
ARLS	Aral	2.26	66	⇑*e*P	Pn	19 39 48.4	+0.6
	baz=68						
ARLS				⇑*e*S	Sn	19 40 15.5	-0.8
	baz=68						
KK02	Karatay Array	2.27	340	⇑Pn	Pb	19 39 49.9	-1.1
	0.9nm,0.2s,baz=161,slow=14						
KK02				⇓Sn	Sg	19 40 21.1	-1.1
	15nm,0.5s,baz=161,slow=25						
BRLS	Borolday	2.43	329	*e*P	Pn	19 39 51.3	+1.4
	1.6nm,0.2s						
BRLS				*e*S	Sn	19 40 21.1	+0.9
	14nm,0.4s						
BRLS	Borolday	2.43	329	Pg	Pn	19 39 51.3	+1.4
	1.6nm,0.2s						
BRLS				Lg	Lg	19 40 21.1	
	14nm,0.4s						
AAK	Ala-Archa	2.75	52	⇑Lg	Lg	19 40 38.1	
	3.7nm,0.5s						
SGDS	Sogindy	3.37	42	Pg	Pb	19 40 11.5	+1.8
	1.8nm,0.5s						
SGDS				Lg	Lg	19 40 56.1	
	4.2nm,0.5s						
TKM2	Tokmak 2	3.59	56	⇑Lg	Lg	19 41 03.7	
	1.5nm,0.4s						
DGS	Degeres	3.87	53	*e*P	Pb	19 40 20.6	+2.3
	1.8nm,0.5s						
DGS				*e*S	Sg	19 41 11.1	-2.5
	2.5nm,0.5s						
DGS	Degeres	3.87	53	Pg	Pb	19 40 20.6	+2.3
	1.8nm,0.5s						
DGS				Lg	Lg	19 41 11.0	
	2.5nm,0.5s						
KST	Kastek	3.88	56	*e*P	Pg	19 40 22.6	-1.0
	3.2nm,0.7s						
KST				*e*S	Sg	19 41 15.3	+1.4
	5.4nm,0.7s						
KST	Kastek	3.88	56	Pg	Pg	19 40 22.6	-1.0
	3.2nm,0.7s						
KST				Lg	Lg	19 41 15.3	
	5.4nm,0.7s						
KRBS	Karabastau	4.09	47	*e*P	Pb	19 40 25.3	+3.3
	1.1nm,0.7s						
KRBS				*e*S	Sg	19 41 19.2	-1.3
	2.3nm,0.3s						
KRBS	Karabastau	4.09	47	Pg	Pb	19 40 25.3	+3.3
	1.1nm,0.7s						
KRBS				Lg	Lg	19 41 19.2	
	2.3nm,0.3s						
KTBS	Karatobe	4.68	52	*e*P	Pg	19 40 36.7	-2.2
	0.7nm,0.5s						
KTBS				*e*S	Sg	19 41 39.0	-0.6
	4.3nm,0.5s						
KTBS	Karatobe	4.68	52	Pg	Pg	19 40 36.7	-2.2
	0.7nm,0.5s						
KTBS				Lg	Lg	19 41 39.0	
	4.3nm,0.5s						

KRNET 20 19:49:00.3±0.1, 41°.00N×71°.54E, h14km, mb2.5
NNC 20 19:49:00.7±1.5, 40°.97N×71°.54E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=11.8km s-min=4.4km az=2.0
SOME 20 19:49:00.4, 41°.00N×71°.42E, h15km
ISC 20 19:48:59.3±1.0, 41°.02N±0°.02×71°.52E±0°.02, h16km±10km, n30, σ1s.02/50, 22C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	Terek-Say	0.59	331	⇑*i*P	Pb	19 49 10.8	-0.5
	baz=29						
TRKS				⇑*i*S	Sb	19 49 18.7	-0.7
	baz=29						
ARK	Arkit	0.84	23	⇑*i*P	Pn	19 49 16.5	-0.1
	baz=22						
ARK				⇑*i*S	Sn	19 49 28.1	-0.7
	baz=22						
OHH	Osh	1.08	117	⇑*i*P	Pg	19 49 20.3	+0.2
	baz=17						
OHH				⇑*i*S	Sn	19 49 35.0	+0.5
	baz=17						
BTK	Batken	1.10	209	⇑*e*P	Pg	19 49 21.1	+0.6
	baz=11						
BTK				⇑*i*S	Sn	19 49 36.8	+1.8
	baz=11						
DRK	Karamyk	1.55	172	⇑*i*P	Pg	19 49 28.9	-0.3
	baz=72						
DRK				⇑*i*S	Sg	19 49 50.3	+0.9
	baz=72						
IUG	Iuzhnay	1.59	316	*e*P	Pg	19 49 29.2	-0.6
	122nm,0.2s						
IUG				*e*S	Sg	19 49 50.4	-0.1
	28nm,0.2s						
IUG	Iuzhnay	1.59	316	P	Pg	19 49 30.2	+0.4
	122nm,0.2s						
IUG				S	Sg	19 49 51.6	+1.2
	28nm,0.2s						
MNAS	Manas	1.64	26	⇓*i*P	Pg	19 49 31.0	+0.2
	baz=26						
MNAS				⇓*e*S	Sg	19 49 53.7	+1.6
	baz=26						
SFK	Sufi-Kurgan	1.81	123	⇑*e*P	Pg	19 49 33.9	-0.2
	baz=23						
SFK				⇑*e*S	Sg	19 49 57.9	+0.2
	baz=23						
CHM	Chimkent	1.94	313	*e*P	Pg	19 49 36.4	-0.1
	1.7nm,0.3s						
CHM				*e*S	Sg	19 50 02.7	+1.1
	114nm,0.3s						
AML	Almayashu	1.97	55	⇑*e*P	Pg	19 49 36.8	-0.3
	baz=54						
AML				⇑*i*S	Sg	19 50 03.5	+0.8
	baz=54						
MRKS	Merke	2.14	36	*e*P	Pg	19 49 40.3	0.0
	3.4nm,0.2s						
MRKS				*e*S	Sg	19 50 09.1	+0.9
	9.5nm,0.3s						
MRKS	Merke	2.14	36	Pg	Pg	19 49 40.3	0.0
	3.4nm,0.2s						
MRKS				Lg	Lg	19 50 09.1	
	9.5nm,0.3s						
KK02	Karatay Array	2.21	340	⇑Pn	Pb	19 49 39.7	+0.7
	0.8nm,0.3s,baz=161,slow=14						
KK02				⇓Sn	Sg	19 50 10.0	-0.5
	12nm,0.5s,baz=161,slow=25						
GAR	Garm	2.22	205	⇑*i*P	Pg	19 49 39.7	-2.2
	baz=6.0						
GAR				⇑*i*S	Sg	19 50 08.8	-1.9
	baz=6.0						
ARLS	Aral	2.27	67	⇓*e*P	Pb	19 49 40.8	+0.9
	baz=67						
ARLS				⇓*i*S	Sg	19 50 10.4	-1.7
	baz=67						
BRLS	Borolday	2.37	329	*e*P	Pb	19 49 41.4	-0.2
	1.2nm,0.2s						
BRLS				*e*S	Sb	19 50 11.0	+0.4
	7.3nm,0.2s						
UCH	Uchtor	2.54	61	⇑*e*P	Pb	19 49 45.0	+0.2
	baz=60						
UCH				⇑*i*S	Sb	19 50 17.4	+1.3
	baz=60						
AAK	Ala-Archa	2.75	53	⇑Lg	Lg	19 50 27.6	
	2.5nm,0.5s						
AAK	Ala-Archa	2.75	53	⇑*e*P	Pb	19 49 47.7	-0.4
	baz=53						
AAK				⇑*e*S	Sb	19 50 22.1	+0.5
	baz=53						
SGDS	Sogindy	3.35	42	Pg	Pg	19 50 02.0	-1.4
	2.6nm,0.6s						
SGDS				Lg	Lg	19 50 46.0	
	3.0nm,0.4s						
TKM2	Tokmak 2	3.58	57	⇓Lg	Lg	19 50 53.0	
	4.5nm,1.1s						
DGS	Degeres	3.86	53	*e*P	Pg	19 50 12.3	-0.9
	1.2nm,0.4s						
DGS				*e*S	Sg	19 51 03.3	+0.1
	1.5nm,0.6s						
DGS	Degeres	3.86	53	Pg	Pg	19 50 12.3	-0.9
	1.2nm,0.4s						
DGS				Lg	Lg	19 51 03.3	
	1.5nm,0.6s						
KST	Kastek	3.88	57	*e*P	Pg	19 50 13.1	-0.4
	3.4nm,0.7s						
KST				*e*S	Sg	19 51 05.0	+1.4
	3.9nm,0.6s						
KST	Kastek	3.88	57	Pg	Pg	19 50 13.1	-0.4
	3.4nm,0.7s						
KST				Lg	Lg	19 51 05.0	
	3.9nm,0.6s						
KRBS	Karabastau	4.08	48	*e*P	Pg	19 50 15.4	-1.9
	0.4nm,0.3s						
KRBS				*e*S	Sg	19 51 09.0	-1.1
	1.7nm,0.3s						
KRBS	Karabastau	4.08	48	Pg	Pg	19 50 15.4	-1.9
	0.4nm,0.3s						
KRBS				Lg	Lg	19 51 09.0	
	1.7nm,0.3s						
KTBS	Karatobe	4.67	53	*e*P	Pg	19 50 27.1	-1.6
	0.8nm,0.3s						
KTBS				*e*S	Sg	19 51 28.7	-0.5
	3.4nm,0.3s						
KTBS	Karatobe	4.67	53	Pg	Pg	19 50 27.1	-1.6
	0.8nm,0.3s						
KTBS				Lg	Lg	19 51 28.7	
	3.4nm,0.3s						

IDC 20 19:51:44.8±0.9, 55°.45S×26°.74W, h0km, mb4.0/3, mb1 4.0/4, mb1mx3.6/23, mbtmp3.8/4, ML3.2/1, MS5.2/1, Ms1 5.1/1, ms1mx4.0/22, Error ellipse: s-maj=42.5km s-min=26.2km az=78.0
ISC 20 19:51:46.3±0.9, 55°.4S±0°.2×26°.9W±0°.3, h10km, n17, σ1s.02/10, mb4.1/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA3	Neumayer Olymp	17.56	162	P	P	19 55 52.6	+0.7
VNA2	Neumayer--Watz	17.75	159	P	P	19 55 54.4	+0.5
	baz=308,slow=15						
SNAA	Sanae	19.28	157	P	Pn	19 56 12.7	+0.8
SNAA	Sanae	19.28	157	P	P	19 56 10.6	-0.3
	0.1nm,0.3s,baz=308,slow=11,SNR=2.3						
BDFB	Brasilia	42.88	329	LR	LR	20 15 46.4	
	comp=Z,3µm,21.8s,baz=108,slow=34						
VNDA	Vanda	47.25	183	P	P	20 00 18.1	-0.8
	0.8nm,0.6s,baz=193,slow=5.8,SNR=9.4						
H10N1	ASCENSION HYDR	48.42	16	T	T	20 53 10.4	
	baz=188						
H10N3	ASCENSION HYDR	48.42	16	T	T	20 53 12.3	
	baz=188						
H10N2	ASCENSION HYDR	48.44	16	T	T	20 53 10.2	
	baz=188						
LPAZ	La Paz	50.15	304	P	P	20 00 43.5	+1.0
	1.1nm,0.5s,baz=112,slow=6.3,SNR=5.8						
TORD	Torodi Ar. Bea	72.37	29	P	P	20 03 12.6	+0.3
	2.8nm,0.9s,baz=201,slow=6.2,SNR=9.7						
H08S1	Diego Carcia H	89.03	102	T	T	21 46 03.2	
	baz=226,slow=76						
H08S2	Diego Garcia H	89.04	102	T	T	21 46 04.9	
	baz=226,slow=76						
H08S3	Diego Garcia H	89.05	102	T	T	21 46 08.7	
	baz=226,slow=76						
YKA	Yellowknife Ar	135.80	318	PKP	PKPdf	20 11 03.6	-2.0
	0.2nm,0.5s,baz=133,slow=2.0,SNR=4.1						
ILAR	Eielson Array	149.81	312	PKPbc	PKPbc	20 11 35.0	0.0
	1.2nm,0.9s,baz=130,slow=3.9,SNR=14						
SONM	Songino Array	150.48	85	PKPbc	PKPbc	20 11 37.2	-0.1
	0.5nm,0.8s,baz=216,slow=3.5,SNR=8.7						

KLM 20 19:59:59, 3°.74N×117°.77E, h5km, mb3.4
DJA 20 19:59:58.7±0.7, 3°N±4°×11°8E±°, h31km±5km, M3.7/5, MLv3.7/5, Borneo

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPMM	Sapulut	1.67	322	P	Pn	20 00 27.0	+1.2
MPSI	Mapaga	3.87	142	P	Pn	20 00 57.3	+1.3

IDC 20 20:05:04.3±1.4, 4°.22S×129°.52E, h0km, mb3.5/2, mb1 3.6/6, mb1mx3.3/48, mbtmp3.4/6, ML3.2/4, Error ellipse: s-maj=54.1km s-min=23.7km az=84.0
DJA 20 20:05:06.1±0.9, 4°S±8°×13°0E±°, h10km, M3.1/5, MLv3.1/5
ISC 20 20:05:05.7±0.9, 4°.18S±0°.08×129°.59E±0°.06, h10km, n9, σ0s.80/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.06	322	P	Pn	20 05 27.1	+0.5
MSAI				S	Sn	20 05 41.1	-0.3
AAI	Ambon	1.47	289	P	Pn	20 05 32.5	+0.2
AAI				S	Sn	20 05 50.2	-1.4
FAKI	Fak Fak	2.94	65	P	Pn	20 05 52.8	+0.3
SIJI	Sorong	3.69	27	Pn	Pn	20 06 03.3	+0.4
	1.8nm,0.3s,baz=227,slow=22,SNR=42						
SIJI				Sn	Sn	20 06 45.7	-0.9
	2.9nm,0.3s,baz=160,slow=23,SNR=8.0						
FITZ	Fitzroy Crossi	14.36	195	Pn	Pn	20 08 30.1	+0.9
	0.1nm,0.3s,baz=22,slow=11,SNR=1.9						
WRA	Warramunga Arr	16.34	164	Pn	Pn	20 08 54.2	-1.1
	0.1nm,0.3s,baz=342,slow=13,SNR=1.4						
ASAR	Alice Springs	19.82	168	P	P	20 09 36.1	-0.5
	0.1nm,0.3s,baz=349,slow=11,SNR=12						
MKAR	Makanchi Array	65.66	326	P	P	20 15 50.6	+0.3
	0.2nm,0.5s,baz=122,slow=8.2,SNR=2.8						
KURBB	Kurchatov Arra	69.91	328	P	P	20 16 17.2	+0.3
	0.3nm,0.5s,baz=129,slow=5.9,SNR=5.4						

DJA 20 20:41:09.3±0.4, 3°N±5°×11°8E±°, h22km±7km, M4.3/4, mb5.3/1, mB5.3/2, MLv3.7/4, Mw(mB)4.8/2, Borneo

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	Marisa	5.25	124	P	Pn	20 42 26.1	-0.4

BJI 20 20:42:28.5±0.0, 7°.18S×129°.46E, h171km, mB4.9/26, mb4.4/45
NEIC 20 20:42:29.1±1.8, 6°.94S±0°.08×129°.30E±0°.04, h138km±6km, mb4.6/33, Error ellipse: s-maj=11.1km s-min=5.5km az=178.0
IDC 20 20:42:30.4±1.6, 6°.92S×129°.40E, h155km±14km, mb4.2/26, mb1 4.2/29, mb1mx4.0/50, mbtmp4.7/29, Error ellipse: s-maj=13.8km s-min=10.6km az=61.0
DJA 20 20:42:31.4±0.2, 7°S±2°×12°9E±°, h154km±3km, M4.7/34, mb4.9/34, mB5.2/15, MLv4.8/12, Mw(mB)4.6/15, MwMwp5.7/1, Mwp5.8/1
KLM 20 20:42:31, 7°.08S×129°.58E, h174km, mb5.1
ISC 20 20:42:29.5±0.3, 7°.00S±0°.04×129°.40E±0°.04, h150km, n184, σ1s.60/192, mb4.5/57, 1C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.12	118	P	Pn	20 43 08.8	+2.7
SAUI				S	Sn	20 43 34.1	-0.2
SAUI	Saumlaki	2.12	118		Pn	20 43 07.8	+1.7
SAUI	Saumlaki	2.12	118	P	Pn	20 43 08.9	+2.8

BNDI	Bandanaira	2.51	12	P	Pn	20 43 14.2	+3.4
AAI	Ambon	3.50	340	P	Pn	20 43 26.0	+2.7
MSAI	Masohi	3.66	353	P	Pn	20 43 29.7	+4.3
FAKI	Fak Fak	4.95	35	P	Pn	20 43 41.8	-0.5
	1.1nm4µm275nm,0.5s						
FAKI	Fak Fak	4.95	35	Pn	Pn	20 43 41.3	-1.0
FAKI	Fak Fak	4.95	35	P	Pn	20 43 42.0	-0.3
DRS	Darwin Rock St	5.60	165	P	Pn	20 43 51.6	+0.7
SOEI	Soe	5.77	241	P	Pn	20 43 54.3	+1.0
	2.0nm4µm228nm,0.5s						
SOEI	Soe	5.77	241	Pn	Pn	20 43 52.3	-1.0
SOEI	Soe	5.77	241	P	Pn	20 43 54.7	+1.4
SANI	Sanana	5.98	325	P	Pn	20 43 59.1	+3.1
	0.3nm101nm,1.1s						
MTN	Manton Dam	6.05	164	P	Pn	20 43 57.0	+0.1
	baz=6.1,SNR=506						
MTN				S	Sn	20 45 01.4	-4.1
	baz=6.1						
MTN	Manton Dam	6.05	164	Pn	Pn	20 43 57.2	+0.2
MTN	Manton Dam	6.05	164	P	Pn	20 43 57.7	+0.7
SIJI	Sorong	6.37	17	P	Pn	20 44 00.5	-0.7
	6.2nm,0.3s,baz=145,slow=3.2,SNR=13						
SIJI				S	Sn	20 45 08.7	-4.3
	6.5nm,0.3s,baz=199,slow=23,SNR=7.8						
SWI	Sorong	6.37	17	P	Pn	20 44 02.4	+1.2
	0.5nm1µm34nm,0.9s						
KDU	Kakadu	6.41	152	P	Pn	20 44 01.8	+0.1
	baz=6.4,SNR=936						
KDU				S	Sn	20 45 10.2	-3.8
	baz=6.4						
KDU	Kakadu	6.41	152	P	Pn	20 44 02.1	+0.3
BATI	Baumata	6.50	240	P	Pn	20 44 03.6	+0.6
	110nm,0.3s,baz=105,slow=4.4,SNR=95						
BATI				S	Sn	20 45 14.6	-1.6
	87nm,0.3s,baz=109,slow=23,SNR=17						
BATI	Baumata	6.50	240	P	Pn	20 44 03.6	+0.6
	1.1nm4µm265nm,0.7s						
LBMI	Labuha	6.60	343	P	Pn	20 44 07.3	+3.1
	0.3nm995nm95nm,1.0s						
KNRA	Kununurra	8.65	184	P	Pn	20 44 30.7	-0.8
	baz=8.7,SNR=29						
KNRA				S	Sn	20 46 00.8	-6.9
	baz=8.7						
KNRA	Kununurra	8.65	184	Pn	Pn	20 44 30.8	-0.8
KNRA	Kununurra	8.65	184	P	Pn	20 44 30.9	-0.7
BAKI	Biak	8.83	50	P	Pn	20 44 36.5	+2.4
	298nm,1.0s						
SPSI	Sidrap Palu	10.05	287	P	Pn	20 45 05.6	+15
TTSI	Tana Toraja	10.32	292	P	Pn	20 45 07.2	+13
MRSI	Marisa	10.51	315	P	Pn	20 44 59.3	+2.9
	1µm87nm,1.1s						
SMPI	Sarmi	10.53	62	P	Pn	20 44 58.8	+2.2
	26nm,1.2s						
FITZ	Fitzroy Crossi	11.62	198	P	Pn	20 45 08.3	-2.6
	2.2nm,0.3s,baz=354,slow=8.7,SNR=50						
FITZ				S	Sn	20 47 08.9	-11
	12nm,0.3s,baz=71,slow=23,SNR=14						
FITZ	Fitzroy Crossi	11.62	198	P	Pn	20 45 10.0	-0.9
	baz=12,SNR=7.4						
FITZ				S	Sn	20 47 08.5	-11
	baz=12						
PLAI	Plampang	11.65	260	P	Pn	20 45 09.8	-1.6
MPSI	Mapaga	11.96	307	P	P	20 45 19.7	-2.3
	14nm,0.9s						
WB0	Warramunga Arr	13.59	160	Pn	Pn	20 45 33.8	-2.5
KBKI	Kotabaru	13.68	285	P	Pn	20 45 36.8	-0.7
	645nm66nm,0.7s						
WRAB	Tennant Creek	13.73	160	Pn	Pn	20 45 35.5	-2.5
WRA	Warramunga Arr	13.73	160	P	Pn	20 45 35.9	-2.2
	6.7nm,0.3s,baz=347,slow=13,SNR=89						
WRA				S	Sn	20 47 59.5	-11
	15nm,0.3s,baz=322,slow=24,SNR=13						
WRA	Warramunga Arr	13.73	160	Pn	Pn	20 45 34.6	-3.5
WB2	Warramunga Arr	13.74	160	Pn	Pn	20 45 35.8	-2.4
WR0	Warramunga Arr	13.82	159	Pn	Pn	20 45 37.0	-2.2
BBKI	Banjar Baru	14.91	283	P	P	20 45 55.6	+0.7
	2µm197nm,1.1s						
JAGI	Jajag, Banyuwa	15.18	263	Pn	Pn	20 45 54.0	-2.3
JAGI	Jajag, Banyuwa	15.18	263	P	Pn	20 45 55.2	-1.1
COEN	Coen	15.20	118	Pn	Pn	20 45 56.4	-0.2
COEN				IAmb	IAmb	20 46 01.3	
	comp=Z,31nm,0.6s						
COEN	Coen	15.20	118	P	Pn	20 45 57.3	+0.7
MTKI	Muara Teweh, K	15.66	292	P	P	20 46 05.6	+2.4
	comp=Z,1µmcomp=Z,70nm,0.6s						
QIS	Mount Isa	16.72	145	P	P	20 46 15.4	+0.6
	baz=17,SNR=56						
QIS	Mount Isa	16.72	145	P	Pn	20 46 16.4	+1.3
MBWA	Marble Bar	16.90	213	P	Pn	20 46 17.7	+0.4
AS31	Alice Springs	17.13	166	P	P	20 46 18.9	-0.4
ASAR	Alice Springs	17.13	166	P	Pn	20 46 21.2	+1.2
	comp=Z,5.6nm,0.3s,baz=348,slow=10,SNR=224						
ASAR				S	S	20 49 19.9	-10
	comp=Z,1.1nm,0.3s,baz=336,slow=17,SNR=4.6						
ASAR				ScP	ScP	20 54 15.2	-1.6
	comp=Z,0.0nm,0.3s,baz=348,slow=1.5,SNR=4.8						
ASAR	Alice Springs	17.13	166	P	P	20 46 19.3	-0.1
PSA00	Pilbara Seismi	17.18	212		P	20 46 20.1	+0.2
PSA00				IAmb	IAmb	20 46 21.9	
	comp=Z,20nm,0.8s						
PSA00	Pilbara Seismi	17.18	212	P	P	20 46 20.7	+0.8
PSA00				IAmb	IAmb	20 46 21.8	
	comp=Z,11nm,1.0s						
PSA00	Pilbara Seismi	17.18	212	P	P	20 46 20.6	+0.8
SPMM	Sapulut	17.37	312	P	Pn	20 46 26.0	+2.9
PMG	Port Moresby	17.74	99	P	Pn	20 46 29.0	+1.6
	comp=Z,1.1nm,0.3s,baz=316,slow=7.0,SNR=4.5						
PMG				S	S	20 49 35.3	-7.5
	comp=Z,1.4nm,0.3s,baz=173,slow=15,SNR=1.4						
WRKA	Warakurna	17.97	183	P	Pn	20 46 30.1	+0.1
	baz=18,SNR=89						
WRKA	Warakurna	17.97	183	P	Pn	20 46 30.3	+0.3
PBKI	Pangkalan Bun	18.17	283	P	Pn	20 46 34.0	+1.5
	comp=Z,249nm,1.1s						
MTSU	Mount Surprise	18.27	129	P	Pn	20 46 34.6	+0.9
	baz=18,SNR=24						
KKM	Kota Kinabalu	18.46	314	P	P	20 46 33.6	-0.5
KKM	Kota Kinabalu	18.46	314	P	Pn	20 46 35.7	-0.3
STKI	Sintang	19.20	291	P	Pn	20 46 44.2	-0.4
	comp=Z,15µmcomp=Z,32nm,1.1s						
SBUM	Sibu	19.55	298	P	Pn	20 46 49.0	+0.4
SBUM	Sibu	19.55	298	P	P	20 46 46.3	+0.5
SBUM				IAmb	IAmb	20 46 49.6	
	comp=Z,30nm,0.9s						
KPJI	Karang Pucung	20.31	268	P	P	20 46 56.1	+2.1
	comp=Z,54nm,0.7s						
KSM	Kuching	20.83	293	P	Pn	20 47 02.0	-1.8
KSM	Kuching	20.83	293	P	P	20 46 59.1	-0.4
KSM				IAmb	IAmb	20 47 04.5	
	comp=Z,22nm,0.8s						
KSM	Kuching	20.83	293	P	P	20 47 00.9	+1.4
CTA	Charters Tower	20.89	130	P	P	20 47 01.9	+1.7
	comp=Z,7.3nm,0.7s,baz=311,slow=11,SNR=2.2						
OOD	Oodnadatta	21.53	165	P	P	20 47 07.9	+1.1
LEM	Lembang	21.62	269	P	P	20 47 08.5	+0.3
	comp=Z,26nm,0.6s,baz=337,slow=13,SNR=7.9						
MEEK	Meekatharra	22.06	206	P	P	20 47 14.0	+1.5
	baz=22,SNR=4.0						
MEEK	Meekatharra	22.06	206	P	P	20 47 14.1	+1.6
TGY	Tagaytay City	22.58	338	P	P	20 47 18.0	+0.4
	comp=Z,349nm,0.5s,baz=90,slow=1.6						
INKA	Innaminka	23.27	154	P	P	20 47 25.7	+1.9
MULG	Mulgathing	23.57	170	P	P	20 47 27.8	+1.3
FORT	Forrest	23.69	183	P	P	20 47 28.8	+1.2
	baz=24,SNR=30						
FORT	Forrest	23.69	183	P	P	20 47 25.5	-2.1
FORT	Forrest	23.69	183	P	P	20 47 28.8	+1.2
QLP	Quilpie	24.06	146	P	P	20 47 33.0	+2.0
	baz=24,SNR=16						
QLP	Quilpie	24.06	146	P	P	20 47 33.2	+2.2
LCRK	Leigh Creek	24.75	162	P	P	20 47 39.2	+2.0
BBOO	Buckleboo	26.42	167	P	P	20 47 53.5	+1.2
	baz=26,SNR=7.0						
BBOO	Buckleboo	26.42	167	P	P	20 47 52.9	+0.6
BBOO	Buckleboo	26.42	167	P	P	20 47 53.1	+0.8
STKA	Stephens Creek	27.24	157	P	P	20 48 00.6	+0.9
	comp=Z,4.7nm,0.6s,baz=331,slow=9.3,SNR=8.2						
STKA	Stephens Creek	27.24	157	P	P	20 48 01.0	+1.4
	baz=27,SNR=6.1						
STKA	Stephens Creek	27.24	157	P	P	20 48 00.6	+0.9
STKA	Stephens Creek	27.24	157	P	P	20 48 01.2	+1.5
HTT	Hallett	27.75	163	P	P	20 48 04.1	-0.1
	baz=28,SNR=4.2						
HTT	Hallett	27.75	163	P	P	20 48 05.4	+1.2
CMSA	Cobar Meteorol	28.77	150	P	P	20 48 13.5	+0.2
	baz=29,SNR=9.1						
IPM	Ipoh	30.53	291	P	P	20 48 29.0	0.0
MNSI	Mandailing Nat	30.74	283	P	P	20 48 30.8	-0.1
	comp=Z,18nm,0.7s						
KULM	Kulim	31.18	292	P	P	20 48 36.0	+1.3
KULM	Kulim	31.18	292	P	P	20 48 34.2	-0.5
TPUB	Ta-pu	31.31	344	P	P	20 48 34.1	-1.5
TPUB				IAmb	IAmb	20 48 43.7	
	comp=Z,7.2nm,0.6s						
TPUB	Ta-pu	31.31	344	P	P	20 48 34.2	-1.5
ARPS	Mount Arapiles	31.73	161	P	P	20 48 39.7	+0.5
	baz=32,SNR=11						
ARPS	Mount Arapiles	31.73	161	P	P	20 48 41.4	+2.1
PSI	Prapat	31.93	287	P	P	20 48 41.4	-0.1
	comp=Z,24nm,0.8s,baz=118,slow=5.2,SNR=28						
YHNB	Yeheng	32.43	346	P	P	20 48 44.3	-1.3
YHNB				IAmb	IAmb	20 48 54.0	
	comp=Z,13nm,1.0s						
YHNB	Yeheng	32.43	346	P	P	20 48 44.6	-1.0
UBPT	Khong Chiam	32.44	313	P	P	20 48 44.7	-0.9
GSI	Gunungsitoli	32.81	283	P	P	20 48 49.7	+0.7
GSI	Gunungsitoli	32.81	283	P	P	20 48 47.6	-1.3
GSI				IAmb	IAmb	20 48 50.6	
	comp=Z,16nm,1.0s						
GSI				PcP	PcP	20 51 32.5	+1.8
GSI	Gunungsitoli	32.81	283	P	P	20 48 47.7	-1.3
SANVU	Saraoutou	37.97	106	P	P	20 49 33.6	+0.6
DZM	Mont Dzumac	38.73	117	P	P	20 49 40.8	+1.4
	comp=Z,8.2nm,0.8s,baz=294,slow=20,SNR=2.1						
CMAR	Chiang Mai Arr	39.27	311	P	P	20 49 44.4	+0.5
	comp=Z,8.5nm,0.8s,baz=142,slow=7.5,SNR=71						
CMAR				ScP	ScP	20 55 23.9	-0.7
	comp=Z,0.6nm,0.7s,baz=142,slow=3.4,SNR=6.0						
CMAR	Chiang Mai Arr	39.27	311	P	P	20 49 42.1	-1.8
CHTO	Chiang Mai	39.49	311	P	P	20 49 45.4	-0.3
GYA	Guiyang	39.91	327	⇑P	P	20 49 47.6	-1.6
GYA				PcP	PcP	20 51 53.1	+1.2
GYA				pmax	pmax		
	comp=Z,12nm,2.2s						
NJ2	Nanjing	40.11	346	*e*P	P	20 49 52.9	+2.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KMI	Kunming	41.14	322	⇓P	P	20 50 00.4	+0.9
KMI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MAT	Matsushiro	44.09	10	P	P	20 50 21.7	-1.1
MJAR	Matsushiro Arr	44.09	10	P	P	20 50 21.9	-0.9
	comp=Z,3.7nm,0.9s,baz=197,slow=9.6,SNR=9.7						
KSRS	Korea Array	44.24	358	P	P	20 50 23.3	-0.6
	comp=Z,1.6nm,0.7s,baz=174,slow=9.5,SNR=6.2						
BJT	Baijiatuau	48.35	346	P	P	20 50 55.3	-0.7
BJT				IAmb	IAmb	20 50 56.6	
	comp=Z,8.7nm,0.6s						
BJI	Beijing	48.37	346	P	P	20 50 55.8	-0.3
BJI				pmax	pmax		
	comp=Z,14nm,0.6s						
SHL	Shillong	48.76	313	P	P	20 50 58.6	-1.0
LZH	Lanzhou	49.12	332	*e*P	P	20 51 02.8	+0.6
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC	Hu-ho-hao-te	50.36	342	*e*P	P	20 51 13.9	+2.5
HHC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,65nm,5.7s						
PALK	Pallekele	50.60	285	P	P	20 51 14.1	+0.5
	comp=Z,6.8nm,0.9s,baz=215,slow=8.5,SNR=2.2						
CN2	Changchun	50.69	356	*e*P	P	20 51 13.3	-0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Ar.	51.01	2	P	P	20 51 15.8	-0.2
	comp=Z,3.3nm,0.8s,baz=181,slow=7.6,SNR=5.9						
MDJ	Mudanjiang	51.38	0	P	P	20 51 21.6	+2.9
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,180nm,5.2s						
BKZ	Black Stump Fm	53.02	135	P	P	20 51 32.1	+0.9
BKZ				IAmb	IAmb	20 51 38.0	
	comp=Z,12nm,1.1s						
URZ	Urewera	53.10	133	P	P	20 51 32.2	+0.6
	comp=Z,4.0nm,0.6s,baz=128,slow=20,SNR=2.6						
GTA	Gaotai	53.69	332	*e*P	P	20 51 36.4	+0.4
GTA				pP	pwP	20 52 13.3	-1.9
GTA				PcP	PcP	20 52 41.0	+0.7
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,100nm,5.8s						
GTA				LR	LR		
	comp=Z,170nm,14.2s						
GTA				LR	LR		
	comp=Z,260nm,15.3s						
GTA				LR	LR		
	comp=Z,180nm,18.5s						
JIRN	Jiri	54.14	311	*e*P	P	20 51 39.7	-0.1
GUN	Gumba	54.50	312	*e*P	P	20 51 42.1	-0.3
PKI	Pulchoki	54.67	311	*e*P	P	20 51 43.1	-0.5
	comp=Z,14nm,0.6s						
PKIN	Phulchoki	54.68	311	*e*P	P	20 51 43.1	-0.6
	comp=Z,9.5nm,0.4s						
KKN	Kakani	54.88	311	*e*P	P	20 51 44.8	-0.2
	comp=Z,22nm,0.6s						
DMN	Daman	54.92	311	*e*P	P	20 51 45.1	-0.2
	comp=Z,11nm,0.5s						
GKN	Gorkha	55.48	311	*e*P	P	20 51 48.9	-0.3
	comp=Z,28nm,0.3s						
HYB	Hyderabad	55.78	296	*i* P	P	20 51 53.0	+1.6
KLR	Kul'dur	56.03	2	P	P	20 51 52.5	0.0
	comp=Z,2.8nm,0.8s,baz=198,slow=3.9,SNR=8.8						
DANN	Dangsing	56.32	311	*e*P	P	20 51 54.9	-0.5
	comp=Z,11nm,0.4s						
PYUN	Piuthan	56.77	310	*e*P	P	20 51 58.4	-0.1
	comp=Z,32nm,0.6s						
ULN	Ulaanbaatar	58.08	342	P	P	20 52 07.0	-0.2
ULN				IAmb	IAmb	20 52 08.8	
	comp=Z,5.0nm,0.8s						
SONM	Songino Array	58.25	342	P	P	20 52 08.7	+0.4
	comp=Z,2.8nm,0.6s,baz=155,slow=6.5,SNR=26						
SONM	Songino Array	58.25	342	P	P	20 52 08.9	+0.5
WMQ	Urumqi	63.07	327	*e*P	P	20 52 41.5	+0.5
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,150nm,6.1s						
PETK	Petropavlovsk-	64.51	18	P	P	20 52 50.3	+0.2
	comp=Z,3.8nm,0.7s,baz=158,slow=1.6,SNR=2.5						
NIL	Nilore	66.76	311	P	P	20 53 05.5	+0.4
KSH	Kashi	67.61	318	P	P	20 53 12.5	+2.1
KSH				pmax	pmax		
	comp=Z,12nm,0.7s						
KSH				pmax	pmax		
	comp=Z,330nm,6.2s						
MK31	Makanchi Array	67.90	327	P	P	20 53 11.9	0.0
MK31				IAmb	IAmb	20 53 13.7	
	comp=Z,7.5nm,0.7s						
MKAR	Makanchi Array	67.90	327	P	P	20 53 12.1	+0.2
	comp=Z,8.6nm,0.4s,baz=115,slow=8.7,SNR=156						
MAKZ	Makanchi	68.08	327	P	P	20 53 12.5	-0.5
MAKZ				IAmb	IAmb	20 53 14.6	
	comp=Z,8.6nm,0.6s						
YAK	Yakutsk	68.82	0	P	P	20 53 17.4	+0.2
	comp=Z,6.2nm,0.4s,baz=17,slow=1.6,SNR=8.4						
AAK	Ala-Archa	70.16	320	P	P	20 53 26.6	+0.5
	comp=Z,2.1nm,0.3s,baz=135,slow=4.7,SNR=12						
KBL	Kabul	70.31	310	P	P	20 53 26.2	-1.0
KBL				IAmb	IAmb	20 53 29.4	
	comp=Z,5.4nm,0.8s						
ZAA0	Zalesovo Array	71.32	334	P	P	20 53 31.8	-0.8
ZAA0				IAmb	IAmb	20 53 33.8	
	comp=Z,8.7nm,0.7s						
ZALV	Zalesovo Beam	71.32	334	P	P	20 53 32.2	-0.4
	comp=Z,8.9nm,0.6s,baz=125,slow=5.2,SNR=34						
ZALV	Zalesovo Beam	71.32	334	P	P	20 53 31.9	-0.7
CHGR	Chuyangaron	71.91	314	P	P	20 53 36.1	-0.6
SEY	Seymchan	71.92	11	P	P	20 53 36.2	+0.2
	comp=Z,9.8nm,0.8s,baz=0.4,slow=24,SNR=24						
KURBB	Kurchatov Arra	72.20	329	P	P	20 53 38.0	+0.1
	comp=Z,14nm,0.5s,baz=131,slow=5.0,SNR=51						
KURK	Kurchatov	72.21	329	P	P	20 53 38.4	+0.3
KKAR	Karatay Array	72.95	319	P	P	20 53 42.9	+0.2
BVAR	Borovoye Array	77.74	328	P	P	20 54 09.6	-0.2
	comp=Z,4.0nm,0.7s,baz=163,slow=11,SNR=21						
BRVK	Borovoye	77.82	328	P	P	20 54 10.5	+0.3
BRVK				IAmb	IAmb	20 54 12.0	
	comp=Z,6.7nm,0.8s						
TIXI	Tiksi	78.49	360	P	P	20 54 13.1	-0.3
	comp=Z,4.3nm,0.4s,baz=166,slow=5.8,SNR=16						
NRIK	Noril'sk	81.41	346	P	P	20 54 29.6	+0.3
	comp=Z,7.3nm,0.9s,baz=159,slow=7.4,SNR=6.4						
NRIK	Noril'sk	81.41	346	P	P	20 54 29.7	+0.5
NRIK				IAmb	IAmb	20 54 31.8	
	comp=Z,9.5nm,1.0s						
ABKAR	Akbulak array	82.14	322	P	P	20 54 33.0	-0.4
ABKAR	Akbulak array	82.14	322	P	P	20 54 33.0	-0.4
ABKAR				IAmb	IAmb	20 54 35.1	
	comp=Z,5.0nm,0.6s						
AKTO	Aktyubinsk	83.71	322	P	P	20 54 41.6	+0.1
	comp=Z,3.9nm,0.5s,baz=108,slow=7.4,SNR=15						
ARU	Arti	85.39	328	P	P	20 54 49.2	-0.6
	comp=Z,2.0nm,0.6s,baz=274,slow=1.3,SNR=13						
ILAR	Eielson Array	93.60	25	P	P	20 55 26.9	-1.5
	comp=Z,0.7nm,0.7s,baz=248,slow=5.0,SNR=8.2						
ARCES	ARCESS Array B	101.37	340	P	Pdif	20 56 02.3	-1.0
	comp=Z,1.2nm,0.6s,baz=82,slow=6.6,SNR=8.6						
YKA	Yellowknife Ar	108.01	26	PKiKP	PKiKP	21 00 39.0	0.0
	comp=Z,0.2nm,0.6s,baz=292,slow=1.5,SNR=4.0						
GERES	GERESS Array B	112.04	320	PKiKP	PKiKP	21 00 46.4	-0.8
	comp=Z,0.5nm,0.5s,baz=92,slow=2.9,SNR=8.3						
ESDC	Sonseca Array	127.08	315	PP	PP	21 03 16.4	-0.1
	comp=Z,0.4nm,0.9s,baz=68,slow=8.4,SNR=4.0						
TORD	Torodi Ar. Bea	128.22	281	PKP	PKPdf	21 01 19.5	+0.4
	comp=Z,0.8nm,0.6s,baz=94,slow=1.8,SNR=5.6						
DBIC	Dimbokro	134.59	272	PKP	PKPdf	21 01 31.8	+0.6
	comp=Z,1.0nm,0.4s,baz=214,slow=1.0,SNR=5.4						
LPAZ	La Paz	151.08	143	PKPbc	PKPbc	21 02 06.8	+0.2
	comp=Z,0.9nm,0.4s,baz=64,slow=4.5,SNR=5.7						

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*IDC **20** 20:53:30.4±0.5,2°.39N×126°.62E,h0^{km},mb4.6/34,*
mb1 4.6/35,mb1mx4.4/55,mbtmp4.6/35,ML4.2/1,MS3.7/2,
Ms1 3.8/2,ms1mx3.0/42,Error ellipse: s-maj=18.7km
s-min=10.7km az=75.0

*BJI **20** 20:53:34.3±0.0,2°.13N×126°.71E,h48^{km},mB5.1/21,*
mb4.6/44,Ms4.5/6,Ms7 4.3/6

*NEIC **20** 20:53:36.2±1.9,2°.59N±0°.10×127°.0E±0°.1,h41^{km}±10^{km},*
mb4.7/25,Error ellipse: s-maj=17.0km s-min=12.3km
az=53.0

*KLM **20** 20:53:37,2°.62N×127°.15E,h50^{km},mb4.8*

*DJA **20** 20:53:38.5±0.2,3°N±2°×12°7E±°,h47^{km}±3^{km},M4.5/20,*
mB5.1/6,mb4.8/20,MLv4.5/15,Mw(mB)4.4/6

ISC 20 20:53:37.8±0.3,**2°.48N**±0°.04×**126°.85E**±0°.06,**h53^{km},n142,**
σ**1^{s}57**/147,**mb4.6**/66,**MS4.0**/4,**13C-4D,Northern Molucca**
Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TNTI	Ternate	1.77	163	P	Pn	20 54 05.4	-0.8
TNTI				S	Sn	20 54 30.1	+2.5
TNTI	Ternate	1.77	163	Pn	Pn	20 54 05.2	-1.0
SGSI	Sangihe	1.78	312	P	Pn	20 54 06.1	-0.1
SGSI				S	Sn	20 54 28.6	+0.9
LBMI	Labuha	3.17	168	P	Pn	20 54 26.6	+1.4
KMSI	Cibinong	3.43	237	P	Pn	20 54 30.8	+1.9
SANI	Sanana	4.58	191	P	Pn	20 54 43.1	-1.5
KCP	Kidapawan	4.83	339	⇑*e*P	Pn	20 54 49.5	+1.5
MRSI	Marisa	5.29	248	P	Pn	20 54 56.9	+2.5
	0.9nm2µm210nm,0.5s						
LUWI	Luwuk	5.37	229	P	Pn	20 54 59.1	+3.6
	1.1nm3µm176nm,0.7s						
LUWI	Luwuk	5.37	229		Pn	20 54 58.4	+2.9
SWI	Sorong	5.52	127	P	Pn	20 54 59.1	+1.6
SIJI	Sorong	5.53	127	Pn	Pn	20 54 57.2	-0.4
	6.2nm,0.3s,baz=339,slow=23,SNR=24						
SIJI				Sn	Sn	20 56 04.3	+4.3
	baz=211,slow=19,SNR=0.9						
BUKP	Musuan	5.65	342	*e*P	Pn	20 55 01.5	+2.1
BUKP				*e*S	Sn	20 56 09.0	+6.0
MSAI	Masohi	6.15	160	P	Pn	20 55 15.6	+9.4
APSI	Ampana	6.19	237	P	Pn	20 55 09.2	+2.5
	0.5nm1µm91nm,0.9s						
TOLI2	Tolitoli	6.21	257	Pn	Pn	20 55 07.1	+0.1
MPSI	Mapaga	7.27	253	P	Pn	20 55 25.5	+4.0
	0.1nm33nm,0.8s						
TTSI	Tana Toraja	8.91	232	P	Pn	20 55 44.6	+0.5
	2µm35nm,0.8s						
GENI	Genyem	14.24	111	P	P	20 57 05.1	+2.5
SBUM	Sibu	14.61	270	P	P	20 57 09.0	+2.2
KSM	Kuching	16.56	267	P	P	20 57 30.0	+1.6
KNRA	Kununurra	18.14	174	P	P	20 57 45.0	-0.9
FITZ	Fitzroy Crossi	20.48	183	P	P	20 58 10.6	-0.8
	4.5nm,0.7s,baz=12,slow=11						
TWG	Pinlang	20.98	345	P	P	20 58 12.6	-4.2
TWG				IAmb	IAmb	20 58 16.0	
	comp=Z,28nm,0.7s						
YULB	Yu-li	21.47	346	P	P	20 58 18.8	-3.2
TPUB	Ta-pu	21.56	344	P	P	20 58 20.0	-3.0
TPUB				IAmb	IAmb	20 58 28.5	
	comp=Z,38nm,0.9s						
SSLB	Suanglung	21.94	345	P	P	20 58 24.4	-2.6
SSLB				IAmb	IAmb	20 58 28.0	
	comp=Z,24nm,0.8s						
YHNB	Yeheng	22.68	347	P	P	20 58 33.0	-2.1
YHNB				IAmb	IAmb	20 58 38.2	
	comp=Z,36nm,1.1s						
WB0	Warramunga Arr	23.32	162	P	P	20 58 39.9	-1.5
WB0				IAmb	IAmb	20 58 45.4	
	comp=Z,28nm,1.1s						
PMG	Port Moresby	23.43	121	LR	LR	21 09 08.2	
	comp=Z,328nm,20.5s,baz=291,slow=40						
WRAB	Tennant Creek	23.46	162	P	P	20 58 41.2	-1.6
WRAB				IAmb	IAmb	20 58 46.9	
	comp=Z,43nm,1.4s						
WRA	Warramunga Arr	23.47	162	P	P	20 58 41.1	-1.8
	comp=Z,6.8nm,0.4s,baz=340,slow=11,SNR=74						
WRA				S	S	21 02 51.5	-1.2
	comp=Z,0.7nm,0.8s,baz=336,slow=14,SNR=2.2						
WRA	Warramunga Arr	23.47	162	P	P	20 58 40.4	-2.5
WB2	Warramunga Arr	23.47	162	P	P	20 58 40.5	-2.4
WB2				IAmb	IAmb	20 58 46.9	
	comp=Z,38nm,1.4s						
WR0	Warramunga Arr	23.55	162	P	P	20 58 42.2	-1.4
WR0				IAmb	IAmb	20 58 50.0	
	comp=Z,33nm,1.4s						
MDSI	Maura Dua	23.68	253	P	P	20 58 47.3	+2.3
	comp=Z,11nm,1.0s						
JRMM	Jerantut	24.37	274	P	P	20 58 51.0	-0.3
IPM	Ipoh	25.85	275	P	P	20 59 07.0	+2.3
AS31	Alice Springs	26.88	166	P	P	20 59 13.6	-0.3
ASAR	Alice Springs	26.88	166	P	P	20 59 12.4	-1.5
	comp=Z,3.2nm,0.7s,baz=343,slow=7.5,SNR=23						
ASAR				PcP	PcP	21 02 35.9	+0.5
	comp=Z,0.5nm,0.4s,baz=356,slow=2.1,SNR=4.3						
ASAR				S	S	21 03 44.7	-2.4
	comp=Z,1.1nm,1.0s,baz=355,slow=20,SNR=3.2						
ASAR	Alice Springs	26.88	166	P	P	20 59 13.7	-0.2
PSI	Prapat	27.89	271	P	P	20 59 20.4	-2.9
	comp=Z,3.0nm,0.4s,baz=65,slow=4.0,SNR=4.2						
GSI	Gunungsitoli	29.28	268	P	P	20 59 34.0	-1.4
GSI	Gunungsitoli	29.28	268	P	P	20 59 33.6	-1.8
GSI				IAmb	IAmb	20 59 35.5	
	comp=Z,15nm,1.1s						
NJ2	Nanjing	30.36	346	*e*P	P	20 59 46.3	+1.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
JNU	Nakatsue	30.72	7	P	P	20 59 48.5	+0.6
	comp=Z,13nm,0.8s,baz=32,slow=1.3,SNR=6.3						
CMAR	Chiang Mai Arr	31.62	302	P	P	20 59 55.5	-0.6
	comp=Z,8.2nm,0.9s,baz=117,slow=6.8,SNR=62						
CMAR				LR	LR	21 13 24.1	
	comp=Z,76nm,21.9s,baz=295,slow=38						
CMAR	Chiang Mai Arr	31.62	302	P	P	20 59 56.3	+0.3
CHTO	Chiang Mai	31.78	303	P	P	20 59 56.5	-1.0
CHTO				IAmb	IAmb	20 59 57.8	
	comp=Z,15nm,0.8s						
KMI	Kunming	32.35	316	⇓P	P	21 00 03.9	+1.3
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KSRS	Korea Array	34.82	1	P	P	21 00 24.6	+1.0
	comp=Z,4.4nm,0.6s,baz=182,slow=9.7,SNR=19						
MAT	Matsushiro	35.48	16	P	P	21 00 28.8	-0.6
MJAR	Matsushiro Arr	35.48	16	P	P	21 00 29.6	+0.2
	comp=Z,3.2nm,0.6s,baz=182,slow=9.1,SNR=12						
MJAR	Matsushiro Arr	35.48	16	P	P	21 00 29.6	+0.2
XAN	Xi'an	35.58	334	P	P	21 00 29.8	-0.5
XAN				pP	pP	21 00 38.8	-4.6
XAN				pmax	pmax		
	comp=Z,12nm,1.4s						
BBOO	Buckleboo	36.17	167	P	P	21 00 35.5	+0.2
STKA	Stephens Creek	36.93	159	P	P	21 00 41.4	-0.5

	comp=Z,8.2nm,0.8s,baz=341,slow=8.4,SNR=13						
STKA	Stephens Creek	36.93	159	P	P	21 00 41.6	-0.2
JMM	Marumori	37.47	18	P	P	21 00 46.9	+0.6
BJT	Baijiatuau	38.60	347	P	P	21 00 54.6	-1.3
BJT				IAmb	IAmb	21 00 57.9	
	comp=Z,11nm,0.8s						
BJI	Beijing	38.62	347	P	P	21 00 56.5	+0.5
BJI				pP	pP	21 01 07.1	-2.0
BJI				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH	Lanzhou	39.64	330	eP	P	21 01 06.4	+1.7
LZH				pP	pP	21 01 18.9	+0.9
LZH				sP	sP	21 01 23.4	-0.5
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC	Hu-ho-hao-te	40.62	342	eP	P	21 01 14.6	+1.9
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,5.5s						
USRK	Ussuriysk Ar.	41.79	6	P	P	21 01 22.6	+0.5
	comp=Z,11nm,0.8s,baz=192,slow=8.3,SNR=17						
MDJ	Mudanjiang	42.03	3	P	P	21 01 25.3	+1.2
MDJ				pmax	pmax		
	comp=Z,12nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,260nm,4.8s						
LSA	Lhasa	43.35	312	P	P	21 01 35.6	-0.1
LSA				pmax	pmax		
	comp=Z,40nm,0.8s						
ASAJ	Asahikawa	43.75	16	P	P	21 01 38.9	+0.8
	comp=Z,13nm,1.1s,baz=204,slow=12,SNR=2.6						
GTA	Gaotai	44.23	330	eP	P	21 01 41.9	-0.2
GTA				pP	pP	21 01 50.9	-4.6
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,84nm,5.5s						
GTA				LR	LR		
	comp=Z,130nm,17.1s						
GTA				LR	LR		
	comp=Z,250nm,16.0s						
GTA				LR	LR		
	comp=Z,170nm,18.2s						
JIRN	Jiri	46.20	307	eP	P	21 01 57.0	-1.3
GUN	Gumba	46.56	307	eP	P	21 01 59.9	-1.1
	comp=Z,21nm,0.6s						
KLR	Kul'dur	46.77	4	P	P	21 02 02.6	+0.8
	comp=Z,6.7nm,0.9s,baz=226,slow=4.2,SNR=16						
PKI	Pulchoki	46.79	306	eP	P	21 02 01.4	-1.4
	comp=Z,7.0nm,0.6s						
PKIN	Phulchoki	46.80	306	eP	P	21 02 01.5	-1.4
	comp=Z,9.1nm,0.6s						
KKN	Kakani	46.99	306	eP	P	21 02 02.9	-1.3
	comp=Z,21nm,0.9s						
DMN	Daman	47.05	306	eP	P	21 02 03.7	-1.1
	comp=Z,26nm,1.0s						
GKN	Gorkha	47.59	306	eP	P	21 02 07.3	-1.6
	comp=Z,28nm,1.1s						
ULN	Ulaanbaatar	48.34	342	P	P	21 02 13.4	-0.9
ULN				IAmb	IAmb	21 02 17.9	
	comp=Z,7.4nm,1.0s						
DANN	Dangsing	48.44	306	eP	P	21 02 14.1	-1.5
	comp=Z,45nm,0.8s						
SONM	Songino Array	48.51	342	P	P	21 02 15.8	+0.2
	comp=Z,4.2nm,0.8s,baz=160,slow=8.1,SNR=22						
SONM				PcP	PcP	21 03 41.7	+0.8
	comp=Z,0.9nm,0.8s,baz=184,slow=2.8,SNR=2.4						
SONM	Songino Array	48.51	342	P	P	21 02 15.3	-0.3
PYUN	Piuthan	48.96	306	eP	P	21 02 18.3	-1.2
	comp=Z,43nm,0.9s						
HYB	Hyderabad	49.66	291	i P	P	21 02 24.0	-0.7
WMQ	Urumqi	53.81	326	eP	P	21 02 57.1	+1.7
ZSN	Zaisan	57.61	327	eP	P	21 03 21.2	-1.3
	baz=328						
MK31	Makanchi Array	58.64	326	P	P	21 03 29.4	-0.3
MK31				IAmb	IAmb	21 03 30.9	
	comp=Z,4.1nm,0.9s						
MKAR	Makanchi Array	58.64	326	P	P	21 03 29.2	-0.5
	comp=Z,4.2nm,0.7s,baz=120,slow=7.6,SNR=41						
UZB	Uzynbulak	58.65	321	eP	P	21 03 29.0	-1.0
	baz=321						
SATY	Saty	59.00	320	eP	P	21 03 31.5	-0.9
	comp=Z,7.6nm,1.0s,baz=320						
KSH	Kashi	59.01	316	P	P	21 03 33.9	+1.4
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YAK	Yakutsk	59.45	2	P	P	21 03 35.3	+0.4
	comp=Z,19nm,0.8s,baz=236,slow=0.9,SNR=14						
MDOK	Medeo	59.92	320	eP	P	21 03 37.8	-1.0
	baz=320						
TNSS	Tian-Shan	59.93	320	eP	P	21 03 39.3	+0.2
	baz=320						
TDK	Taldyqorghan	59.97	322	eP	P	21 03 38.1	-0.7
	baz=322						
KUU	Kurty	60.72	320	eP	P	21 03 42.8	-1.3
	comp=Z,12nm,0.7s,baz=320						
AAK	Ala-Archa	61.36	318	P	P	21 03 49.2	+0.6
	comp=Z,3.8nm,0.8s,baz=180,slow=8.9,SNR=10						
ZALV	Zalesovo Beam	61.75	333	P	P	21 03 49.4	-1.3
	comp=Z,2.0nm,0.4s,baz=107,slow=5.0,SNR=11						
ZALV	Zalesovo Beam	61.75	333	P	P	21 03 49.1	-1.7
SEM	Semipalatinsk	61.82	328	eP	P	21 03 49.6	-2.0
	baz=328						
BTLS	Baital	62.71	321	eP	P	21 03 56.2	-1.2
	baz=321						
KURK	Kurchatov	62.85	328	P	P	21 03 57.4	-0.8
GAR	Garm	62.85	313	P	P	21 03 57.5	-1.1
SEY	Seymchan	63.22	13	P	P	21 04 02.2	+1.9
	comp=Z,5.6nm,0.9s,baz=199,slow=5.4,SNR=7.5						
IUG	Iuzhnay	64.19	316	eP	P	21 04 06.5	-0.8
	baz=316						
KKAR	Karatay Array	64.22	317	P	P	21 04 06.7	-0.8
BRLS	Borolday	64.65	317	eP	P	21 04 08.8	-1.4
	baz=317						
BRZS	Berezniki	65.77	325	eP	P	21 04 16.6	-0.8
	baz=325						
BVAR	Borovoye Array	68.43	327	P	P	21 04 34.1	0.0
	comp=Z,5.7nm,0.9s,baz=181,slow=9.8,SNR=14						
TIXI	Tiksi	69.08	1	P	P	21 04 37.5	-0.3
	comp=Z,4.5nm,0.4s,baz=284,slow=15,SNR=29						
NRIK	Noril'sk	71.66	346	P	P	21 04 53.8	+0.2
	comp=Z,7.2nm,0.8s,baz=137,slow=5.2,SNR=11						
GEYT	Alibeck	71.77	309	P	P	21 04 54.6	-0.4
	comp=Z,3.1nm,0.7s,baz=35,slow=44,SNR=3.2						
ABKAR	Akbulak array	73.19	321	P	P	21 05 02.7	-0.4
AKTO	Aktyubinsk	74.71	322	P	P	21 05 11.6	-0.4
	comp=Z,5.0nm,0.7s,baz=112,slow=7.8,SNR=20						
ARU	Arti	76.05	328	P	P	21 05 18.8	-0.8
	comp=Z,6.6nm,0.8s,baz=106,slow=2.6,SNR=34						
ARU	Arti	76.05	328	P	P	21 05 18.2	-1.3
BELG	Belogornoye	81.46	323	P	P	21 05 48.1	-1.2
	comp=Z,34nm,0.9s,baz=113,slow=3.2,SNR=10						
VNDA	Vanda	82.18	173	P	P	21 05 51.7	-0.9
	comp=Z,1.4nm,0.6s,baz=309,slow=2.8,SNR=4.6						
AKH	Akhalkalaki	83.38	311	⇑P	P	21 06 01.3	+1.5
KBZ	Khabaz	83.92	314	P	P	21 06 02.3	0.0
	comp=Z,3.1nm,0.8s,baz=153,slow=7.2,SNR=6.9						
ILAR	Eielson Array	86.17	25	P	P	21 06 14.0	+0.8
	comp=Z,0.4nm,0.9s,baz=246,slow=4.8,SNR=2.3						
KTUT	Trabzon	86.18	311	⇑P	P	21 06 05.0	-8.8
KLMR	Klimovskoe	86.54	331	eP	P	21 06 13.5	-1.5
KLMR				AMP		21 06 19.3	
	comp=Z,17nm,1.2s						
KMBO	Kilima Mbogo	89.64	269	P	P	21 06 31.6	+0.4
	comp=Z,2.8nm,0.9s,baz=29,slow=6.9,SNR=4.6						
BRTR	Keskin Array B	90.90	310	P	P	21 06 35.5	-0.9
	comp=Z,2.4nm,0.8s,baz=112,slow=6.1,SNR=13						
ARCES	ARCESS Array B	91.65	340	P	P	21 06 38.4	-0.6
	comp=Z,2.6nm,0.8s,baz=81,slow=5.8,SNR=5.1						
AKASG	Malin Array Be	92.93	321	P	P	21 06 44.4	-0.9
	comp=Z,1.0nm,0.7s,baz=74,slow=3.9,SNR=4.2						
FINES	FINESS Array B	92.98	332	P	P	21 06 45.9	+0.7
	comp=Z,3.7nm,0.9s,baz=76,slow=5.9,SNR=2.2						
PURM	Purcari	93.02	317	⇓P	P	21 06 45.6	-0.2
SORM	Soroca	93.84	318	⇑P	P	21 06 49.4	-0.1
CFR	Carcaliu	94.39	315	⇑P	P	21 06 52.2	+0.1
TESR	Tescani	95.23	317	⇑P	P	21 06 55.6	-0.3
VRI	Vrincioaia	95.27	316	⇓P	P	21 06 55.8	-0.4
PLOR	Plostina	95.33	316	⇓P	P	21 06 56.8	+0.3
NEHR	Nehoiu	95.64	316	⇑P	P	21 06 58.4	+0.5
MLR	Muntele Rosu	95.88	316	⇑P	P	21 06 59.5	+0.4
MLR	Muntele Rosu	95.88	316	P	P	21 06 57.8	-1.3
	comp=Z,3.0nm,0.9s,baz=177,slow=3.6,SNR=6.6						
BURAR	Bucovina Array	96.00	318	⇑P	P	21 07 00.4	+0.8
DRGR		97.84	318	⇑P	P	21 07 07.8	-0.1
HERR	Herculane	98.44	316	⇑P	Pdif	21 07 10.8	+0.2
SIRR	Siria	98.66	317	⇑P	P	21 07 09.2	-2.3
BZS	Buzias	98.83	317	⇑P	P	21 07 12.2	0.0
CLL	Collm	102.71	324	ePP	PP	21 11 40.0	-3.1
CLL				Lm	MLR	23 15 00.0	
	comp=Z,200nm,21.5s						
TORD	Torodi Ar. Bea	123.41	287	PKP	PKPdf	21 12 29.9	-0.3
	comp=Z,0.4nm,0.5s,baz=17,slow=1.2,SNR=2.7						

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*NEIC **20** 21:06:41.4±1.7, 27°.38S±0°.06×66°.8W±0°.1, h113^{km}±8^{km}, mb4.4/6, Error ellipse: s-maj=14.1km s-min=8.9km az=102.0*

*IDC **20** 21:06:43.5±7.1, 27°.18S×66°.87W, h134^{km}±55^{km}, mb3.6/2, mb1 3.5/5, mb1mx3.2/27, mbtmp3.9/5, Error ellipse: s-maj=63.7km s-min=37.1km az=5.0*

ISC 20 21:06:43.2±0.6**, 27°.30S**±0°.06×**67°.06W**±0°.08**, h146**^{km}**, n44,** σ**1ˢ19**/49**, mb4.1**/5**, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC02	Maricunga	1.91	284		Pn	21 07 17.9	+0.4
AC02				Sn	Sn	21 07 44.5	+0.8
GO03	Copiap	2.84	263		Pn	21 07 28.6	+0.2
GO03				Sn	Sn	21 08 01.9	-1.4
LCO	Las Campanas	3.64	241		Pn	21 07 38.4	-0.4
AC04	Llanos de Chal	3.67	255	Pn	Pn	21 07 37.1	-1.9
PB14	IPOC Station P	4.02	311	Pn	Pn	21 07 44.2	+0.2
GO04	Tololo Observa	4.36	228	Pn	Pn	21 07 47.5	-0.7
GO04				Sn	Sn	21 08 38.6	-0.2
CO05	La Serena	4.51	234	Pn	Pn	21 07 48.3	-1.6
PB15	IPOC Station P	4.62	331		Pn	21 07 52.3	+0.5
CO03	El Pedregal	4.75	221	Pn	Pn	21 07 52.8	-0.4
PB10	IPOC Station P	4.92	319	Pn	Pn	21 07 55.3	-0.2
LVC	Limon Verde	4.96	340	P	Pn	21 07 57.1	+0.7
	2.6nm,0.3s,baz=153,slow=8.9,SNR=30						
LVC				S	Sn	21 08 51.5	-2.0
	2.2nm,0.3s,baz=276,slow=18,SNR=17						
LVC	Limon Verde	4.96	340		Pn	21 07 56.9	+0.5
LVC					Sn	21 08 52.4	-1.1
PB06	IPOC Station P	5.11	333	Pn	Pn	21 07 58.6	+0.4
PB04	IPOC Station P	5.69	330	Pn	Pn	21 08 05.9	0.0
PB09	IPOC Station P	5.83	340	Pn	Pn	21 08 08.4	+0.7
PB07	IPOC Station P	6.12	334		Pn	21 08 09.9	-1.7
VA03	San Esteban	6.23	208	Pn	Pn	21 08 12.8	-0.2
PB01	IPOC Station P	6.61	340	Pn	Pn	21 08 17.6	-0.6
PEL	Peldehue	6.62	207	Pn	Pn	21 08 17.6	-0.4
MT02	Curacav	6.91	210		Pn	21 08 20.1	-1.8
MT09	Talagante	7.29	207		Pn	21 08 25.3	-1.8
PB08	IPOC Station P	7.38	344	Pn	Pn	21 08 28.1	-0.7
BO01	Tunca	7.87	205		Pn	21 08 32.7	-2.0
BO02	Sierra Bellavi	8.12	202		Pn	21 08 36.7	-1.5
GO05	Huala	8.74	207	Pn	Pn	21 08 42.8	-3.7
PB16	IPOC Station P	9.21	345	Pn	Pn	21 08 51.8	-1.4
LPAZ	La Paz	11.01	355	P	Pn	21 09 16.8	-0.4
	0.6nm,0.3s,baz=172,slow=6.0,SNR=12						
LPAZ	La Paz	11.01	355	Pn	Pn	21 09 16.9	-0.3
SIV	San Ignacio	12.55	27	P	Pn	21 09 34.7	-2.1
	0.3nm,0.3s,baz=198,slow=8.1,SNR=4.2						
BOAV	Boa Vista	30.19	13	P	P	21 12 40.9	+1.0
BOAV				IAmb	IAmb	21 12 41.7	
	comp=Z,14nm,1.5s						
RPN	Rapa Nui	37.47	260	P	P	21 13 45.3	+2.6
PMSA	Palmer Station	37.53	178	P	P	21 13 42.5	-0.1
PMSA				IAmb	IAmb	21 13 43.1	
	comp=Z,56nm,1.5s						
SNAA	Sanae	56.27	160	P	P	21 16 08.3	+0.3
SNAA				IAmb	IAmb	21 16 23.3	
	comp=Z,3.6nm,1.5s						
DBIC	Dimbokro	68.92	70	P	P	21 17 32.5	-0.2
	comp=Z,0.8nm,0.3s,baz=236,slow=4.9,SNR=5.2						
DBIC	Dimbokro	68.92	70	P	P	21 17 32.9	+0.2
DBIC				IAmb	IAmb	21 17 50.9	
	comp=Z,4.9nm,1.2s						
TORD	Torodi Ar. Bea	77.82	68	P	P	21 18 25.4	+0.7
	comp=Z,0.4nm,0.3s,baz=267,slow=6.5,SNR=12						
TORD	Torodi Ar. Bea	77.82	68	P	P	21 18 24.9	+0.1
WRA	Warramunga Arr	128.66	206	PKP	PKiKP	21 25 34.3	-0.1
	comp=Z,0.5nm,0.8s,baz=161,slow=1.6,SNR=1.7						
KURBB	Kurchatov Arra	145.02	39	PKP	PKPdf	21 26 03.8	+1.1
	comp=Z,0.7nm,0.7s,baz=258,slow=4.6,SNR=3.3						
AAK	Ala-Archa	145.30	54	PKPbc	PKPab	21 26 04.7	+0.5
	comp=Z,1.8nm,0.7s,baz=255,slow=3.6,SNR=6.3						
AAK	Ala-Archa	145.30	54		PKPab	21 26 05.0	+0.8
ZALV	Zalesovo Beam	146.29	30	PKPbc	PKPab	21 26 06.8	-0.5
	comp=Z,2.0nm,0.4s,baz=303,slow=3.2,SNR=11						
ZALV	Zalesovo Beam	146.29	30		PKPab	21 26 07.0	-0.3
MKAR	Makanchi Array	149.03	43	PKPbc	PKiKP	21 26 15.2	+0.1
	comp=Z,0.8nm,0.6s,baz=329,slow=2.0,SNR=9.8						

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*JMA **20** 21:10:40.3±0.2, 29°.63N×129°.40E, h203^{km}±2^{km}, M3.7*

*IDC **20** 21:10:42.8±3.0, 29°.91N×129°.55E, h239^{km}±40^{km}, mb2.9/5, mb1 3.1/7, mb1mx2.8/45, mbtmp3.5/7, Error ellipse: s-maj=73.4km s-min=18.4km az=66.0*

ISC 20 21:10:39.7±0.8**, 29°.68N**±0°.06×**129°.2E**±0°.1**, h204**^{km}±8^{km}**, n26,** σ**0ˢ84**/36**, mb3.1**/5**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTAJ	Takarajima	0.53	180	P	Pn	21 11 08.0	+0.5
JTAJ				eS	S	21 11 29.6	+0.6
JNN	Nakanoshima	0.60	74	P	Pn	21 11 07.9	+0.1
JKC	Kuchinoerabu	1.16	47	P	Pn	21 11 11.4	+0.4
JYAK	Yakushimahirau	1.26	64	P	Pn	21 11 11.1	-0.7
JYAK				eS	S	21 11 34.6	-1.9
JAM	Amami Oshima	1.31	164	P	Pn	21 11 12.8	+0.5
JAM				eS	S	21 11 37.1	-0.2
JAMN	Amaminishikomi	1.43	181	P	Pn	21 11 13.6	+0.3
JAMN				eS	S	21 11 39.0	0.0
JZK	Kikaishima	1.52	154	P	Pn	21 11 16.0	+2.0
JMTN	Minamitane	1.63	64	P	Pn	21 11 14.5	-0.5
JTN	Tanegashima 3	1.82	57	P	Pn	21 11 16.4	-0.3
JTK	Tokunoshima	1.90	187	P	Pn	21 11 18.2	+0.6
JTK				S	S	21 11 46.3	-0.4
JSJ	Shimokoshiki	2.04	12	P	Pn	21 11 18.9	0.0
JSU	Suzuyama	2.12	30	P	Pn	21 11 20.3	+0.6
JOKE	Okinoerabujima	2.38	194	P	Pn	21 11 22.6	0.0
JOKE				eS	S	21 11 54.8	-0.7
JNAR	Kushima--Naru	2.56	44	P	Pn	21 11 24.8	+0.3
JNAR				eS	S	21 11 58.6	-0.4
JYRO	Yoronjima	2.73	194	P	Pn	21 11 26.0	-0.5
JZO	Okuchi	2.73	26	P	Pn	21 11 27.4	+0.9
JTZ	Takazaki	2.74	36	P	Pn	21 11 27.0	+0.4
JTZ				S	S	21 12 01.3	-1.5
JIH	Iheya	2.85	203	P	Pn	21 11 27.7	-0.2
JOW	Kunigami	2.95	196	P	Pn	21 11 28.8	-0.3
JNU	Nakatsue	3.72	22	P	Pn	21 11 38.6	+0.4
	5.7nm,0.3s,baz=359,slow=23,SNR=31						
JNU				S	S	21 12 24.6	+0.9
	2.7nm,0.3s,baz=123,slow=4.0,SNR=4.0						
KSRS	Korea Array	7.83	352	P	Pn	21 12 30.9	+0.3
	0.2nm,0.3s,baz=176,slow=13,SNR=6.7						
SONM	Songino Array	25.24	322	P	P	21 15 48.1	+1.1
	0.2nm,0.3s,baz=132,slow=11,SNR=2.0						
MKAR	Makanchi Array	39.97	309	P	P	21 17 54.5	+0.2
	0.1nm,0.4s,baz=96,slow=9.1,SNR=1.3						
MKAR				PcP	PcP	21 19 54.4	-0.9
	0.6nm,0.9s,baz=67,slow=3.0,SNR=4.2						
WRA	Warramunga Arr	49.58	174	P	P	21 19 10.6	+0.4
	0.5nm,0.9s,baz=353,slow=8.3,SNR=1.1						
ASAR	Alice Springs	53.23	175	P	P	21 19 38.9	+1.6
	0.4nm,0.8s,baz=356,slow=6.1,SNR=5.3						
FINES	FINESS Array B	70.30	330	P	P	21 21 29.2	-1.4
	3.3nm,0.9s,baz=72,slow=4.5,SNR=1.9						

WEL 20 21:38:34.2±1.1**, 35°S**±6°×**17°8E**±1°6**, h33**^{km}**, M3.4**/9**, ML3.7**/13**, MLv3.4**/9**, Error ellipse: s-maj=0.0km s-min=0.0km az=90.1, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.31	168	P	Pn	21 39 11.2	+1.3
MXZ				S	Sn	21 39 38.9	+1.8
HAZ	Te Kaha	2.45	178	P	Pn	21 39 13.7	+1.9
HAZ				S	Sn	21 39 43.0	+2.4
PKGZ	Pakihiroa	2.60	173	P	Pn	21 39 15.0	+1.1
RUGZ	Raukumara Rang	2.66	180	P	Pn	21 39 15.6	+0.8
RUGZ				S	Sn	21 39 46.3	+0.3
PUZ	Puketiti	2.80	171	P	Pn	21 39 16.9	+0.2
PUZ				S	Sn	21 39 47.7	-1.6
TWGZ	Tauwhareparae	2.88	175	P	Pn	21 39 18.6	+0.8
TWGZ				S	Sn	21 39 52.4	+1.1
URZ	Urewera	2.99	189	P	Pn	21 39 20.7	+1.4
MWZ	Matawai	3.03	182	P	Pn	21 39 20.8	+0.9
MWZ				S	Sn	21 39 55.7	+0.7
TKGZ	Te Karaka	3.13	178	P	Pn	21 39 18.9	-2.3
RAGZ	Rawiri	3.19	184	P	Pn	21 39 22.7	+0.5
RAGZ				S	Sn	21 40 01.0	+1.9
CNGZ	Carnagh Statio	3.20	173	P	Pn	21 39 21.6	-0.6
RTZ	Ruatahuna	3.36	190	P	Pn	21 39 24.3	0.0
RIGZ	Rimuhau	3.40	179	P	Pn	21 39 23.6	-1.3
RIGZ				S	Sn	21 40 03.5	-0.6
SNGZ	Shannon Statio	3.48	185	P	Pn	21 39 23.7	-2.4
SNGZ				S	Sn	21 40 05.7	-0.5
MTHZ	Maungataniwha	3.61	191	P	Pn	21 39 28.0	+0.2
MTHZ				S	Sn	21 40 10.5	+1.2
RAHZ	Arahi	3.64	187	P	Pn	21 39 27.9	-0.4
RAHZ				S	Sn	21 40 10.6	+0.6
KNZ	Kokohu	3.71	180	P	Pn	21 39 27.2	-2.0
BKZ	Black Stump Fm	3.97	194	P	Pn	21 39 32.8	0.0
ARHZ	Aropaoanui	3.99	188	P	Pn	21 39 31.7	-1.3
ARHZ				S	Sn	21 40 17.0	-1.7
NTVZ	North Tongarir	4.12	202	P	Pn	21 39 36.1	+1.2
TMVZ	Te Maari	4.12	202	P	Pn	21 39 35.9	+0.9
SNVZ	South Ngauruho	4.21	202	P	Pn	21 39 36.9	+0.7
CKHZ	Cape Kidnapper	4.38	186	P	Pn	21 39 35.8	-2.5
CKHZ				S	Sn	21 40 24.6	-3.5
BHHZ	Black Hill Sta	4.38	197	P	Pn	21 39 37.9	-0.5
KRHZ	Kereru	4.46	193	P	Pn	21 39 37.7	-1.8
KAHZ	Kahuranaki	4.53	188	P	Pn	21 39 37.9	-2.6
KAHZ				S	Sn	21 40 30.3	-1.8
PNHZ	Pukenui	4.75	194	P	Pn	21 39 40.9	-2.7
TSZ	Takapari Road	4.94	196	P	Pn	21 39 43.2	-3.0
BFZ	Birch Farm	5.49	192	P	Pn	21 39 48.9	-4.8
MRZ	Mangatainoka R	5.60	197	P	Pn	21 39 51.1	-4.1
HOWZ	Holdsworth Sta	5.84	196	P	Pn	21 39 53.7	-4.8
OGWZ	Otaki Gorge	5.85	199	P	Pn	21 39 54.6	-4.0

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*IDC **20** 21:38:37.2±0.7, 3°.46N×117°.37E, h0^{km}, mb4.2/11, mb1 4.3/14, mb1mx4.0/43, mbtmp4.2/14, ML3.8/3, MS3.8/4, Ms1 3.8/4, ms1mx3.3/33, Error ellipse: s-maj=37.4km s-min=13.2km az=62.0*

*NEIC **20** 21:38:38.4±1.8, 3°.67N±0°.04×117°.63E±0°.06, h10^{km}±1^{km}, mb4.6/27, Error ellipse: s-maj=10.3km s-min=6.0km az=292.0*

*DJA **20** 21:38:39.8±0.3, 4°N±2°×11°8E±°, h10^{km}, M4.6/13, mb5.0/10, mB5.0/7, MLv4.8/13, Mw(mB)4.3/7*

*KLM **20** 21:38:40, 3°.61N×117°.66E, h0^{km}, mb4.6*

ISC 20 21:38:38.7±0.4**, 3°.66N**±0°.05×**117°.71E**±0°.06**, h10**^{km}**, n97,** σ**1ˢ86**/94**, mb4.5**/42**, MS4.0**/6**, 1C, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPMM	Sapulut	1.62	310	P	Pn	21 39 07.0	-0.4
MYLDM	Lahad Datu	1.70	28	Pn	Pn	21 39 08.7	+0.2
MYLDM				Sn	Sn	21 39 29.9	-0.4
KKM	Kota Kinabalu	2.80	328	Pn	Pn	21 39 23.0	-0.7
MPSI	Mapaga	3.96	146	P	Pn	21 39 38.7	-0.9
TOLI2	Tolitoli	3.98	129	Pn	Pn	21 39 39.1	-0.7
BKB	Balikpapan	4.96	189	P	Pn	21 39 54.2	+0.9
BKB	Balikpapan	4.96	189	Pn	Pn	21 39 51.1	-2.2
MRSI	Marisa	5.28	127	P	Pn	21 39 58.0	+0.3
	0.8nm2µm208nm,0.7s						
SBUM	Sibu	5.61	258	P	Pn	21 40 03.0	+0.7
SBUM	Sibu	5.61	258	Pn	Pn	21 39 59.9	-2.4
APSI	Ampana	6.01	139	P	Pn	21 40 09.4	+1.6
	0.5nm612nm66nm,0.8s						
LUWI	Luwuk	6.89	133	P	Pn	21 40 21.0	+1.2
	0.7nm2µm172nm,0.7s						
LUWI	Luwuk	6.89	133		Pn	21 40 19.9	0.0
TTSI	Tana Toraja	6.99	162	P	Pn	21 40 23.6	+2.4
	0.9nm2µm259nm,0.8s						
KBKI	Kotabaru	7.09	193	P	Pn	21 40 21.3	-1.3
	0.3nm39nm,0.6s						
KSM	Kuching	7.71	254	P	Pn	21 40 30.0	-1.2
KSM	Kuching	7.71	254	Pn	Pn	21 40 29.9	-1.2
SPSI	Sidrap Palu	7.85	165	P	Pn	21 40 34.9	+1.8
	0.4nm924nm102nm,0.7s						
BNSI	Bone	8.36	163	P	Pn	21 40 41.4	+1.3
	75nm,0.8s						
KAPI	Kappang	8.86	167	Pn	Pn	21 40 46.9	0.0
	3.6nm,0.3s,baz=352,slow=12,SNR=8.7						
KAPI				LR	LR	21 45 14.2	
	comp=Z,589nm,21.5s,baz=354,slow=45						
KAPI	Kappang	8.86	167	Pn	Pn	21 40 45.5	-1.4
BKSI	Bulukumba	9.24	165	P	Pn	21 40 54.0	+1.8
SOEI	Soe	14.84	154	P	P	21 42 25.9	+11
BATI	Baumata	15.00	157	Pn	Pn	21 42 11.7	+0.7
	0.1nm,0.3s,baz=203,slow=7.5,SNR=2.0						
FAKI	Fak Fak	15.93	114	Pn	Pn	21 42 23.7	+0.5
FAKI				IAmb	IAmb	21 42 34.2	
	comp=Z,23nm,0.8s						
IPM	Ipoh	16.66	273	P	P	21 42 36.0	+1.0
IPM	Ipoh	16.66	273	P	Pn	21 42 32.9	+0.3
KULM	Kulim	17.09	276	P	Pn	21 42 38.0	+0.1
KULM	Kulim	17.09	276		Pn	21 42 36.6	-1.3
I39PW	PALAU INFRASON	17.19	76	i		23 23 10.0	
	baz=263,slow=315,SNR=0.5						
PDSI	Padang	17.83	256	P	P	21 42 55.9	+8.0
MNSI	Mandailing Nat	18.34	261	P	P	21 43 00.3	+6.8
PSI	Prapat	18.78	268	P	P	21 42 55.8	-2.7
	comp=Z,0.2nm,0.3s,baz=178,slow=15,SNR=1.4						
KCSI	Kotacane, Aceh	19.90	270	P	Pn	21 43 15.3	+3.0
GSI	Gunungsitoli	20.25	264	P	P	21 43 15.2	+0.7
GSI	Gunungsitoli	20.25	264	P	P	21 43 12.6	-1.9
TPTI		20.50	270	P	Pn	21 43 26.2	+6.9
SLVN	Son La	22.11	324	P	P	21 43 33.0	-1.5
SLVN				IAmb	IAmb	21 43 46.3	
	comp=Z,10nm,0.8s						
CM31	Chiang Mai Arr	23.53	310	P	P	21 43 48.4	-0.9
CM31				IAmb	IAmb	21 43 57.1	
	comp=Z,6.1nm,0.8s						
CMAR	Chiang Mai Arr	23.53	310	P	P	21 43 48.6	-0.7
	comp=Z,3.5nm,0.8s,baz=131,slow=7.1,SNR=14						
CMAR				LR	LR	21 54 07.6	
	comp=Z,283nm,19.9s,baz=135,slow=40						
CMAR	Chiang Mai Arr	23.53	310	P	P	21 43 46.3	-3.0
CHTO	Chiang Mai	23.74	311	P	P	21 43 50.1	-1.2
GYA	Guiyang	25.02	336	P	P	21 44 06.3	+3.1
GYA				pmax	pmax		
	comp=Z,18nm,0.7s						
KMI	Kunming	25.74	327	⇑P	P	21 44 10.8	+0.9
KMI				pP	sP	21 44 13.5	-0.7
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ENH	Enshi	27.59	344	P	P	21 44 24.3	-2.0
NJ2	Nanjing	28.26	2	eP	P	21 44 29.8	-2.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
WRAB	Tennant Creek	28.59	146	P	P	21 44 34.7	-0.5
WRAB				IAmb	IAmb	21 44 35.8	
	comp=Z,16nm,0.9s						
WRA	Warramunga Arr	28.59	146	P	P	21 44 34.8	-0.5
	comp=Z,7.4nm,0.8s,baz=336,slow=10.0,SNR=61						
WRA	Warramunga Arr	28.59	146	P	P	21 44 34.4	-0.9
WB2	Warramunga Arr	28.59	146	P	P	21 44 35.0	-0.4
WB2				IAmb	IAmb	21 44 35.9	
	comp=Z,15nm,0.8s						
WR0	Warramunga Arr	28.71	145	P	P	21 44 35.9	-0.5
WR0				IAmb	IAmb	21 44 36.8	
	comp=Z,11nm,0.8s						
CD2	Chengdu	30.13	336	P	P	21 44 51.8	+2.9
CD2				pmax	pmax		
	comp=Z,40nm,0.8s						
CD2				LR	LR		
	comp=N,30nm,18.2s						
CD2				LR	LR		
	comp=E,320nm,21.4s						
CD2				LR	LR		
	comp=Z,400nm,22.8s						
ASAR	Alice Springs	31.42	151	P	P	21 45 00.8	+0.4
	comp=Z,2.0nm,0.8s,baz=323,slow=7.4,SNR=16						
ASAR				PcP	PcP	21 47 52.4	-1.6
	comp=Z,0.4nm,0.6s,baz=347,slow=2.4,SNR=3.2						
ASAR	Alice Springs	31.42	151	P	P	21 44 59.4	-1.0
LZH	Lanzhou	34.71	340	eP	P	21 45 32.8	+3.6
LZH				pP	sP	21 45 37.8	+4.3
LZH				sP	pP	21 45 41.8	+10
LZH				pmax	pmax		
	comp=Z,28nm,1.2s						
LZH				LR	LR		

	comp=N,290nm,12.3s						
LZH				LR	LR		
	comp=E,300nm,11.3s						
LZH				LR	LR		
	comp=Z,340nm,13.3s						
KSRS	**Korea Array**	**34.91**	**14**	LR	LR	22 00 35.8	
	comp=Z,91nm,21.1s,baz=175,slow=38						
BJT	**Baijiatuau**	**36.22**	**358**	P	**P**	**21 45 40.1**	**-1.7**
BJT				IAmb	IAmb	21 45 48.1	
	comp=Z,18nm,1.3s						
BJI	**Beijing**	**36.24**	**358**	P	**P**	**21 45 43.3**	**+1.3**
BJI				pmax	pmax		
	comp=Z,14nm,1.8s						
HHC	**Hu-ho-hao-te**	**37.43**	**352**	eP	**P**	**21 45 54.9**	**+2.6**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,86nm,5.7s						
JIRN	**Jiri**	**38.38**	**312**	eP	**P**	**21 46 04.0**	**+3.1**
	comp=Z,24nm,0.7s						
GUN	**Gumba**	**38.75**	**312**	eP	**P**	**21 46 06.9**	**+3.0**
	comp=Z,29nm,0.7s						
PKI	**Pulchoki**	**38.92**	**311**	eP	**P**	**21 46 07.9**	**+2.6**
	comp=Z,12nm,0.7s						
PKIN	**Phulchoki**	**38.93**	**311**	eP	**P**	**21 46 08.0**	**+2.6**
	comp=Z,12nm,0.5s						
GTA	**Gaotai**	**39.12**	**338**	eP	**P**	**21 46 07.0**	**+0.4**
GTA				pP	sP	21 46 10.9	0.0
GTA				sP	pP	21 46 13.8	+4.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,88nm,4.7s						
GTA				LR	LR		
	comp=N,130nm,15.6s						
GTA				LR	LR		
	comp=E,260nm,15.3s						
GTA				LR	LR		
	comp=Z,140nm,17.8s						
DMN	**Daman**	**39.17**	**311**	eP	**P**	**21 46 09.9**	**+2.6**
	comp=Z,21nm,0.8s						
GKN	**Gorkha**	**39.73**	**311**	eP	**P**	**21 46 14.3**	**+2.4**
	comp=Z,42nm,0.9s						
DANN	**Dangsing**	**40.57**	**311**	eP	**P**	**21 46 20.8**	**+1.8**
	comp=Z,25nm,0.7s						
HYB	**Hyderabad**	**40.74**	**293**	i P	**P**	**21 46 23.0**	**+2.7**
PYUN	**Piuthan**	**41.03**	**310**	eP	**P**	**21 46 23.6**	**+0.9**
	comp=Z,41nm,1.1s						
STKA	**Stephens Creek**	**42.01**	**149**	P	**P**	**21 46 30.6**	**+0.2**
	comp=Z,6.9nm,0.8s,baz=319,slow=6.5,SNR=11						
STKA	**Stephens Creek**	**42.01**	**149**	P	**P**	**21 46 30.8**	**+0.2**
MDJ	**Mudanjiang**	**42.11**	**13**	P	**P**	**21 46 32.3**	**+1.3**
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,210nm,5.0s						
ULN	**Ulaanbaatar**	**44.98**	**350**	P	**P**	**21 46 54.0**	**-0.4**
ULN				IAmb	IAmb	21 47 00.9	
	comp=Z,5.7nm,1.1s						
SONM	**Songino Array**	**45.07**	**349**	P	**P**	**21 46 57.1**	**+2.0**
	comp=Z,1.4nm,0.5s,baz=168,slow=8.9,SNR=19						
SONM				PcP	**PP**	**21 48 38.1**	**-2.4**
	comp=Z,0.7nm,1.0s,baz=188,slow=5.4,SNR=2.1						
SONM	**Songino Array**	**45.07**	**349**	P	**P**	**21 46 54.4**	**-0.7**
KLR	**Kul'dur**	**46.95**	**13**	P	**P**	**21 47 12.6**	**+2.9**
	comp=Z,0.7nm,0.5s,baz=292,slow=12,SNR=3.6						
WMQ	**Urumqi**	**47.99**	**331**	eP	**P**	**21 47 20.3**	**+2.3**
NIL	**Nilore**	**51.01**	**311**	P	**P**	**21 47 38.2**	**-3.0**
NIL				IAmb	IAmb	21 47 46.8	
	comp=Z,6.4nm,0.7s						
KSH	**Kashi**	**51.96**	**319**	P	**P**	**21 47 48.8**	**+0.5**
KSH				pP	sP	21 47 52.6	-0.1
MKAR	**Makanchi Array**	**52.78**	**330**	P	**P**	**21 47 53.9**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=127,slow=7.8,SNR=21						
KBL	**Kabul**	**54.56**	**310**	P	**P**	**21 48 05.9**	**-1.7**
KBL				IAmb	IAmb	21 48 11.5	
	comp=Z,8.1nm,0.8s						
AAK	**Ala-Archa**	**54.58**	**322**	P	**P**	**21 48 04.9**	**-2.7**
GAR	**Garm**	**55.52**	**316**	P	**P**	**21 48 11.6**	**-2.8**
BTK	**Batken**	**55.66**	**317**	P	**P**	**21 48 14.5**	**-0.9**
BTK				IAmb	IAmb	21 48 24.2	
	comp=Z,6.2nm,1.1s						
CHGR	**Chuyangaron**	**56.17**	**315**	P	**P**	**21 48 18.2**	**-0.8**
ZAA0	**Zalesovo Array**	**56.87**	**337**	P	**P**	**21 48 21.7**	**-1.9**
ZAA0				IAmb	IAmb	21 48 27.3	
	comp=Z,4.6nm,1.1s						
ZALV	**Zalesovo Beam**	**56.87**	**337**	P	**P**	**21 48 22.8**	**-0.8**
	comp=Z,4.9nm,0.8s,baz=134,slow=6.4,SNR=7.3						
ZALV	**Zalesovo Beam**	**56.87**	**337**	P	**P**	**21 48 21.6**	**-2.0**
KKAR	**Karatay Array**	**57.33**	**320**	P	**P**	**21 48 25.0**	**-2.1**
BRVK	**Borovoye**	**62.74**	**330**	P	**P**	**21 49 01.6**	**-2.4**
BRVK				IAmb	IAmb	21 49 12.0	
	comp=Z,6.1nm,0.8s						
ABKAR	**Akbulak array**	**66.63**	**323**	P	**P**	**21 49 28.4**	**-1.1**
ABKAR				IAmb	IAmb	21 49 32.9	
	comp=Z,2.3nm,0.9s						
KMBO	**Kilima Mbogo**	**80.55**	**268**	LR	LR	22 22 57.8	
	comp=Z,66nm,20.6s,baz=90,slow=33						
BRTR	**Keskin Array B**	**83.11**	**309**	P	**P**	**21 51 04.7**	**-0.7**
	comp=Z,1.4nm,0.9s,baz=131,slow=6.5,SNR=6.5						
VNDA	**Vanda**	**84.61**	**171**	P	**P**	**21 51 10.8**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=288,slow=4.5,SNR=2.2						
AKASG	**Malin Array Be**	**86.23**	**320**	P	**P**	**21 51 19.0**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=69,slow=4.5,SNR=3.3						
BMAR	**Burnt Mountain**	**89.61**	**22**	P	**P**	**21 51 36.3**	**-0.2**
QSPA	**South Pole Qui**	**93.57**	**180**	P	**P**	**21 51 54.4**	**-0.6**
QSPA				IAmb	IAmb	21 52 02.1	
	comp=Z,5.1nm,1.3s						

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*TAP **20** 21:46:02.4, 24.°83N×121.°95E, h7^{km}, ML3.2, B*
*JMA **20** 21:46:02.9±0.1, 24.°86N×121.°86E, h40^{km}±4^{km}, M2.7*
ISC 20 21:46:02.6±0.8**, 24.°84N**±0.°02×**122.°00E**±0.°02**, h9**^{km}±5^{km}**,**
n62, σ0.^{s}61/113**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		**0.06**	**271**	i P	**Pg**	**21 46 04.2**	**-0.2**
	baz=357						
EGS				i S	**Sg**	**21 46 05.1**	**-0.7**
	baz=357						
NTC	**Toucheng**	**0.15**	**274**	i P	**Pg**	**21 46 05.6**	**-0.2**
	baz=285						
NTC				i S	**Sg**	**21 46 07.7**	**-0.4**
	baz=285						
TWB1	**Santiao Chiao**	**0.16**	**358**	i P	**Pg**	**21 46 06.6**	**+0.5**
	baz=14						
TWB1				eS	**Sg**	**21 46 09.2**	**+0.8**
	baz=14						
TIPB	**Shuangxi**	**0.20**	**310**	i P	**Pg**	**21 46 06.9**	**+0.2**
	baz=323						
TIPB				S	**Sg**	**21 46 09.9**	**+0.4**
	baz=323						
ILA	**Ilan**	**0.24**	**251**	P	**Pg**	**21 46 07.3**	**0.0**
	baz=250						
ILA				S	**Sg**	**21 46 10.9**	**+0.3**
	baz=250						
TWC	**Suao**	**0.27**	**210**	i P	**Pg**	**21 46 08.1**	**+0.1**
	baz=199						
TWC				S	**Sg**	**21 46 11.3**	**-0.3**
	baz=199						
NWF	**Wu-fen Shan**	**0.30**	**319**	i P	**Pb**	**21 46 09.2**	**-0.9**
	baz=328						
NWF				i S	**Sb**	**21 46 13.8**	**-1.5**
	baz=328						
WFSB	**Wu-fen Shan**	**0.30**	**319**	P	**Pg**	**21 46 09.1**	**+0.6**
	baz=328						
WFSB				S	**Sb**	**21 46 13.8**	**-1.4**
	baz=328						
TWE	**Neicheng**	**0.32**	**248**	i P	**Pg**	**21 46 08.8**	**-0.1**
	baz=245						
TWE				S	**Sg**	**21 46 13.0**	**-0.2**
	baz=245						
NDS	**Dongshan**	**0.33**	**231**	P	**Pg**	**21 46 09.0**	**-0.1**
	baz=227						
NDS				eS	**Sg**	**21 46 12.8**	**-0.7**
	baz=227						
TNOU	**National Taiwa**	**0.36**	**327**	P	**Pb**	**21 46 10.4**	**-0.9**
	baz=334						
TNOU				eS	**Sg**	**21 46 15.3**	**+0.7**
	baz=334						
TWA	**Mucha**	**0.40**	**290**	i P	**Pg**	**21 46 10.6**	**+0.2**
	baz=295						
TWA				S	**Sg**	**21 46 15.6**	**0.0**
	baz=295						
NHY	**Taipei**	**0.43**	**297**	P	**Pb**	**21 46 11.9**	**-0.5**
	baz=301						
NHY				S	**Sg**	**21 46 17.8**	**+1.1**
	baz=301						
ENTT	**Nioudou**	**0.44**	**243**	i P	**Pg**	**21 46 11.2**	**+0.1**
	baz=240						
ENTT				S	**Sg**	**21 46 17.7**	**+0.7**
	baz=240						
EWUT	**Wuta**	**0.44**	**206**	P	**Pg**	**21 46 11.2**	**0.0**
	baz=201						
EWUT				eS	**Sg**	**21 46 18.1**	**+1.0**
	baz=201						
NHDH	**Xindian Distri**	**0.44**	**286**	P	**Pg**	**21 46 11.8**	**+0.6**
	baz=289						
NHDH				S	**Sg**	**21 46 17.5**	**+0.4**
	baz=289						
NWLT	**Wulai**	**0.45**	**262**	P	**Pg**	**21 46 11.2**	**-0.2**
	baz=263						
NWLT				eS	**Sg**	**21 46 16.4**	**-1.0**
	baz=263						
NWRT	**Kuosheng**	**0.47**	**320**	eP	**Pb**	**21 46 12.4**	**-0.6**
	baz=325						
NWRT				eS	**Sb**	**21 46 19.6**	**-0.5**
	baz=325						
ENA	**Nanau**	**0.47**	**209**	i P	**Pg**	**21 46 11.7**	**-0.1**
	baz=204						
ENA				eS	**Sg**	**21 46 17.2**	**-0.8**
	baz=204						
TATO	**Taipei**	**0.48**	**286**	P	**Pg**	**21 46 12.2**	**+0.3**
	baz=289						
TATO				S	**Sg**	**21 46 18.3**	**+0.1**
	baz=289						
TAP	**Taipei**	**0.48**	**294**	P	**Pg**	**21 46 11.3**	**-0.7**
	baz=298						
TAP				S	**Sg**	**21 46 19.0**	**+0.6**
	baz=298						
YM01	**YM01**	**0.49**	**308**	P	**Pb**	**21 46 13.0**	**-0.4**
	baz=313						
YM01				S	**Sg**	**21 46 19.1**	**+0.5**
	baz=313						
NDT	**Datong Townshi**	**0.50**	**241**	i P	**Pg**	**21 46 12.3**	**+0.1**
	baz=240						
YM08	**YM08**	**0.50**	**313**	P	**Pb**	**21 46 13.0**	**-0.7**
	baz=318						
YM08				eS	**Sg**	**21 46 19.1**	**+0.2**
	baz=318						
BACT	**New Taipei Cit**	**0.53**	**287**	P	**Pg**	**21 46 13.1**	**+0.4**
	baz=290						
BACT				S	**Sb**	**21 46 21.1**	**-0.6**
	baz=290						
ANP	**Anpu**	**0.55**	**308**	i P	**Pb**	**21 46 13.8**	**-0.6**
	baz=313						
TWY	**Chenhua**	**0.56**	**320**	i P	**Pb**	**21 46 14.4**	**-0.2**
	baz=325						
NSM	**Shimen**	**0.57**	**320**	eP	**Pn**	**21 46 16.2**	**-0.8**
	baz=324						
NSM				S	**Sb**	**21 46 22.9**	**-0.2**
	baz=324						
TWS1	**Kuangyinshan**	**0.58**	**296**	i P	**Pb**	**21 46 14.8**	**-0.2**
	baz=300						
TWS1				S	**Sb**	**21 46 22.5**	**-0.9**
	baz=300						
NTST	**Danshui**	**0.59**	**303**	i P	**Pb**	**21 46 15.1**	**+0.1**
	baz=306						
NTST				eS	**Sn**	**21 46 25.5**	**-1.4**
	baz=306						
YHNB	**Yeheng**	**0.59**	**253**	P	**Pg**	**21 46 13.6**	**-0.4**
	baz=253						
NSK	**Sanguang**	**0.60**	**254**	i P	**Pg**	**21 46 13.9**	**-0.3**
	baz=253						
NSK				S	**Sg**	**21 46 22.7**	**+0.5**
	baz=253						
NNS	**Nan Shan**	**0.69**	**235**	P	**Pg**	**21 46 16.3**	**+0.3**
	baz=232						
NNS				eS	**Sb**	**21 46 28.2**	**+1.5**
	baz=232						
NNSB	**Datong**	**0.69**	**234**	P	**Pg**	**21 46 15.6**	**-0.4**
	baz=232						
NCU	**National Centr**	**0.74**	**280**	eP	**Pb**	**21 46 18.1**	**+0.3**
	baz=281						
NCU				S	**Sb**	**21 46 28.2**	**+0.2**
	baz=281						
NCUH	**Zhongli**	**0.75**	**280**	eP	**Pb**	**21 46 18.1**	**+0.4**
	baz=281						
NCUH				eS	**Sb**	**21 46 28.8**	**+0.7**
	baz=281						
NACB	**Ninganchiao**	**0.76**	**209**	P	**Pg**	**21 46 17.1**	**-0.1**
	baz=206						
NACB				eS	**Sg**	**21 46 27.0**	**-0.2**
	baz=206						
ETL	**Fush Village**	**0.76**	**206**	P	**Pg**	**21 46 16.8**	**-0.4**
	baz=203						
ETL				eS	**Sg**	**21 46 26.6**	**-0.6**
	baz=203						
PCYT	**Pengchaiyu**	**0.79**	**5**	i P	**Pb**	**21 46 19.0**	**+0.6**
	baz=8.0						
PCYT				S	**Sn**	**21 46 31.2**	**-0.6**
	baz=8.0						
ETLH	**Xiulin Townshi**	**0.79**	**216**	P	**Pg**	**21 46 17.7**	**-0.1**
	baz=214						
ETLH				S	**Sg**	**21 46 28.1**	**+0.1**
	baz=214						
NJD	**Zhudong**	**0.83**	**263**	eP	**Pb**	**21 46 19.7**	**+0.5**
	baz=263						
TWD	**Chiawan**	**0.84**	**206**	P	**Pg**	**21 46 18.8**	**0.0**
	baz=202						
TWD				eS	**Sg**	**21 46 29.1**	**-0.7**
	baz=202						
NHW	**Xinwu Township**	**0.88**	**281**	P	**Pb**	**21 46 20.1**	**+0.1**
	baz=282						
NHW				S	**Sb**	**21 46 32.4**	**+0.6**
	baz=282						
HSN1	**Hsinchu**	**0.89**	**266**	eP	**Pn**	**21 46 21.7**	**+0.4**
	baz=266						
HSN1				eS	**Sn**	**21 46 34.3**	**0.0**
	baz=266						
FUSS	**Fushou**	**0.91**	**229**	P	**Pg**	**21 46 19.6**	**-0.4**
	baz=227						
FUSS				eS	**Sg**	**21 46 31.0**	**-0.8**
	baz=227						
LIOB	**Emei**	**0.91**	**258**	eP	**Pn**	**21 46 22.2**	**+0.6**
	baz=258						
LIOB				eS	**Sn**	**21 46 35.3**	**+0.3**
	baz=258						
SBCB	**Hsinchu**	**0.92**	**267**	eP	**Pn**	**21 46 22.9**	**+1.1**
	baz=267						
SBCB				eS	**Sn**	**21 46 35.5**	**+0.5**
	baz=267						
NSTT	**Nanjuang**	**0.93**	**257**	eP	**Pb**	**21 46 20.9**	**0.0**
	baz=257						
NSTT				eS	**Sn**	**21 46 35.4**	**+0.1**
	baz=257						
JYNG	**Yonagunijimaku**	**0.95**	**114**	P	**Pn**	**21 46 21.9**	**-0.2**
JYNG				eS	**Sn**	**21 46 35.1**	**-0.7**
TDCB	**Techi**	**0.96**	**233**	P	**Pb**	**21 46 21.6**	**+0.1**
	baz=231						
TDCB				eS	**Sg**	**21 46 33.0**	**-0.7**
	baz=231						
WHF	**Hehuan Shan**	**0.96**	**224**	i P	**Pg**	**21 46 20.7**	**-0.5**
	baz=222						
WHF				S	**Sg**	**21 46 33.7**	**+0.1**
	baz=222						
ETM	**Tongmen**	**0.99**	**208**	P	**Pg**	**21 46 21.4**	**-0.2**
	baz=205						
ETM				eS	**Sg**	**21 46 32.8**	**-1.6**
	baz=205						
YOJ	**Yonaguni jima**	**1.00**	**112**	P	**Pn**	**21 46 22.7**	**-0.1**
	baz=110						
YOJ				S	**Sn**	**21 46 36.5**	**-0.6**
	baz=110						
YOJ	**Yonaguni jima**	**1.00**	**112**	P	**Pb**	**21 46 22.5**	**+0.4**
YOJ				eS	**Sb**	**21 46 36.1**	**+0.7**
CHGB	**Renai**	**1.08**	**224**	P	**Pg**	**21 46 22.7**	**-0.7**
	baz=222						
CHGB				S	**Sg**	**21 46 38.0**	**+0.6**
	baz=222						
NMLH	**Miaoli**	**1.14**	**255**	eP	**Pn**	**21 46 25.8**	**+1.1**
	baz=254						
NMLH				eS	**Sn**	**21 46 41.3**	**+0.8**
	baz=254						
ESL	**Shilin**	**1.15**	**207**	i P	**Pg**	**21 46 24.2**	**-0.4**
	baz=204						
ESL				eS	**Sg**	**21 46 39.8**	**+0.3**
	baz=204						
VWDT	**VWDT**	**1.34**	**216**	eP	**Pb**	**21 46 28.0**	**+0.2**
	baz=214						
IRIF	**Iriomote-Funau**	**1.66**	**107**	P	**Pn**	**21 46 31.8**	**-0.1**
JKRS	**Kuro-shima**	**1.93**	**108**	P	**Pn**	**21 46 36.0**	**+0.4**
JIJ	**Ishigaki jima**	**2.01**	**103**	P	**Pn**	**21 46 36.6**	**-0.2**
JISG	**Ishigakijimahi**	**2.12**	**96**	P	**Pn**	**21 46 39.6**	**+1.3**

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*TAP **20** 21:46:32.4, 24.°84N×121.°94E, h7^{km}, ML3.6, C*
*JMA **20** 21:46:33.2±0.1, 24.°83N×121.°90E, h25^{km}, M2.8*
ISC 20 21:46:32.4±0.8**, 24.°83N**±0.°02×**121.°94E**±0.°02**, h7**^{km}±5^{km}**,**
n67, σ1.^{s}03/116**, 7C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		**0.02**	**324**	⇑iP	**Pg**	**21 46 33.9**	**+0.1**
	baz=14						
EGS				S	**Sg**	**21 46 35.0**	**+0.3**
	baz=14						
NTC	**Toucheng**	**0.11**	**283**	P	**Pg**	**21 46 35.4**	**+0.5**
	baz=289						
NTC				eS	**Sg**	**21 46 37.3**	**+0.8**
	baz=289						
TIPB	**Shuangxi**	**0.18**	**323**	⇑iP	**Pg**	**21 46 36.6**	**+0.5**
	baz=322						
TIPB				i S	**Sg**	**21 46 39.4**	**+0.9**
	baz=322						
TWB1	**Santiao Chiao**	**0.18**	**13**	P	**Pg**	**21 46 36.2**	**0.0**
	baz=16						
TWB1				S	**Sg**	**21 46 38.7**	**0.0**
	baz=16						
ILA	**Ilan**	**0.19**	**250**	P	**Pg**	**21 46 36.9**	**+0.7**
	baz=247						
ILA				S	**Sg**	**21 46 39.8**	**+1.0**
	baz=247						
TWC	**Suao**	**0.24**	**202**	⇑iP	**Pg**	**21 46 37.7**	**+0.6**
	baz=188						
TWC				S	**Sg**	**21 46 40.7**	**+0.5**
	baz=188						
TWE	**Neicheng**	**0.27**	**247**	P	**Pg**	**21 46 38.5**	**+0.7**
	baz=244						
TWE				S	**Sg**	**21 46 42.4**	**+0.9**
	baz=244						
NWF	**Wu-fen Shan**	**0.28**	**328**	⇑iP	**Pg**	**21 46 38.7**	**+0.7**
	baz=319						
NWF				i S	**Sg**	**21 46 43.2**	**+1.4**
	baz=319						
WFSB	**Wu-fen Shan**	**0.28**	**328**	⇑iP	**Pg**	**21 46 38.8**	**+0.8**
	baz=319						
WFSB				S	**Sg**	**21 46 42.9**	**+1.2**
	baz=319						
NDS	**Dongshan**	**0.28**	**227**	P	**Pg**	**21 46 38.6**	**+0.6**
	baz=226						
NDS				S	**Sb**	**21 46 43.5**	**-1.3**
	baz=226						
TNOU	**National Taiwa**	**0.35**	**334**	⇑P	**Pg**	**21 46 40.0**	**+0.7**
	baz=325						
TNOU				S	**Sg**	**21 46 44.7**	**+0.7**
	baz=325						
TWA	**Mucha**	**0.36**	**295**	⇓iP	**Pg**	**21 46 40.1**	**+0.7**
	baz=294						
TWA				i S	**Sb**	**21 46 45.3**	**-1.7**
	baz=294						
ENTT	**Nioudou**	**0.39**	**241**	P	**Pb**	**21 46 40.9**	**-0.7**
	baz=239						
ENTT				eS	**Sg**	**21 46 46.2**	**+0.9**
	baz=239						
NHY	**Taipei**	**0.40**	**302**	eP	**Pb**	**21 46 41.1**	**-0.7**
	baz=301						
NHY				eS	**Sb**	**21 46 47.3**	**-0.7**
	baz=301						
NHDH	**Xindian Distri**	**0.40**	**289**	eP	**Pb**	**21 46 41.3**	**-0.5**
	baz=288						
NHDH				S	**Sb**	**21 46 46.9**	**-1.3**
	baz=288						
NWLT	**Wulai**	**0.41**	**263**	P	**Pb**	**21 46 41.0**	**-0.9**
	baz=262						
NWLT				S	**Sg**	**21 46 46.5**	**+0.8**
	baz=262						
EWUT	**Wuta**	**0.41**	**202**	eP	**Pg**	**21 46 40.9**	**+0.5**
	baz=201						
EWUT				eS	**Sg**	**21 46 46.7**	**+0.9**
	baz=201						
TATO	**Taipei**	**0.44**	**289**	eP	**Pb**	**21 46 41.7**	**-0.8**
	baz=279						
TATO				eS	**Sb**	**21 46 47.5**	**-1.7**
	baz=279						
ENA	**Nanau**	**0.44**	**205**	eP	**Pg**	**21 46 41.5**	**+0.6**
	baz=203						
ENA				eS	**Sg**	**21 46 46.7**	**0.0**
	baz=203						
TAP	**Taipei**	**0.45**	**298**	P	**Pb**	**21 46 42.4**	**-0.2**
	baz=297						
TAP				S	**Sb**	**21 46 48.7**	**-0.8**
	baz=297						
NDT	**Datong Townshi**	**0.45**	**240**	P	**Pb**	**21 46 41.9**	**-0.8**
	baz=239						
NDT				eS	**Sb**	**21 46 48.6**	**-0.9**
	baz=239						
YM01	**YM01**	**0.46**	**313**	⇑iP	**Pb**	**21 46 42.5**	**-0.4**
	baz=312						
YM01				S	**Sg**	**21 46 48.3**	**+0.8**
	baz=312						
YM08	**YM08**	**0.48**	**318**	eP	**Pb**	**21 46 42.5**	**-0.7**
	baz=317						
ANP	**Anpu**	**0.52**	**313**	P	**Pb**	**21 46 43.3**	**-0.7**
	baz=312						
YHNB	**Yeheng**	**0.54**	**253**	P	**Pg**	**21 46 43.0**	**+0.2**
	baz=252						
YHNB				eS	**Sg**	**21 46 49.9**	**-0.1**
	baz=252						
TWY	**Chenhua**	**0.54**	**325**	P	**Pb**	**21 46 44.1**	**-0.1**
	baz=314						
TWY				eS	**Sb**	**21 46 50.8**	**-1.4**
	baz=314						
TWS1	**Kuangyinshan**	**0.55**	**300**	P	**Pb**	**21 46 44.4**	**+0.1**
	baz=309						
NSK	**Sanguang**	**0.55**	**254**	P	**Pg**	**21 46 43.4**	**+0.3**
	baz=253						
NSK				eS	**Sb**	**21 46 51.8**	**-0.8**
	baz=253						
NTST	**Danshui**	**0.56**	**307**	P	**Pb**	**21 46 44.7**	**+0.2**
	baz=306						
NTST				eS	**Sb**	**21 46 52.6**	**-0.1**
	baz=306						
NNS	**Nan Shan**	**0.65**	**233**	P	**Pb**	**21 46 45.8**	**-0.3**
	baz=232						
NNS				eS	**Sn**	**21 46 56.5**	**-2.1**
	baz=232						
NNSB	**Datong**	**0.65**	**232**	eP	**Pb**	**21 46 45.8**	**-0.3**
	baz=231						
NNSB				eS	**Sb**	**21 46 54.8**	**-0.5**
	baz=231						
NCU	**National Centr**	**0.70**	**282**	eP	**Pn**	**21 46 48.1**	**-0.6**
	baz=270						
NCU				eS	**Sn**	**21 46 58.9**	**-0.9**
	baz=270						
NCUH	**Zhongli**	**0.70**	**281**	eP	**Pn**	**21 46 47.9**	**-0.8**
	baz=280						
NCUH				eS	**Sn**	**21 46 57.7**	**-2.1**
	baz=280						
NACB	**Ninganchiao**	**0.73**	**206**	P	**Pg**	**21 46 46.8**	**+0.4**
	baz=216						
NACB				S	**Sg**	**21 46 56.2**	**+0.4**
	baz=216						
ETL	**Fush Village**	**0.73**	**204**	P	**Pg**	**21 46 47.0**	**+0.6**
	baz=203						
ETL				S	**Sb**	**21 46 56.9**	**-0.7**
	baz=203						
ETLH	**Xiulin Townshi**	**0.75**	**214**	eP	**Pb**	**21 46 47.4**	**-0.4**
	baz=214						
ETLH				eS	**Sb**	**21 46 58.2**	**0.0**
	baz=214						
PCYT	**Pengchaiyu**	**0.81**	**8**	eP	**Pn**	**21 46 50.4**	**+0.3**
	baz=13						
TWD	**Chiawan**	**0.81**	**203**	P	**Pg**	**21 46 48.5**	**+0.5**
	baz=202						
TWD				S	**Sg**	**21 47 00.0**	**+1.5**
	baz=202						
FUSS	**Fushou**	**0.86**	**228**	eP	**Pn**	**21 46 49.9**	**-1.3**
	baz=220						
FUSS				eS	**Sg**	**21 47 00.9**	**+0.7**
	baz=220						
LIOB	**Emei**	**0.86**	**258**	eP	**Pn**	**21 46 50.9**	**0.0**
	baz=248						
LIOB				eS	**Sn**	**21 47 04.5**	**+0.7**
	baz=248						
SBCB	**Hsinchu**	**0.87**	**268**	eP	**Pn**	**21 46 51.7**	**+0.7**
	baz=267						
SBCB				eS	**Sn**	**21 47 05.2**	**+1.2**
	baz=267						
NSTT	**Nanjuang**	**0.88**	**257**	eP	**Pn**	**21 46 50.8**	**-0.4**
	baz=256						
NSTT				eS	**Sn**	**21 47 04.3**	**+0.1**
	baz=256						

HSN	Hsinchu	0.89	268	eP	Pn	21 46 50.7	-0.5
	baz=269						
HSN				eS	Sn	21 47 03.5	-0.8
	baz=269						
TDCB	Techi	0.92	231	eP	Pn	21 46 51.0	-0.8
	baz=224						
WHF	Hehuan Shan	0.92	222	eP	Pb	21 46 50.1	-0.8
	baz=212						
WHF				S	Sn	21 47 03.7	-2.0
	baz=212						
JYNG	Yonagunijimaku	0.99	112	P	Pb	21 46 51.4	-0.3
JYNG				eS	Sb	21 47 03.8	-1.1
YOJ	Yonaguni jima	1.04	110	eP	Pb	21 46 52.3	-0.4
	baz=111						
YOJ	Yonaguni jima	1.04	110	P	Pb	21 46 52.4	-0.2
YOJ				eS	Sb	21 47 05.9	-0.5
CHGB	Renai	1.04	223	eP	Pn	21 46 53.2	-0.4
	baz=215						
CHGB				eS	Sn	21 47 08.1	-0.3
	baz=215						
WHP	Taichung City	1.06	239	eP	Pg	21 46 54.2	+1.4
	baz=240						
NMLH	Miaoli	1.09	255	eP	Pg	21 46 55.1	+1.8
	baz=254						
NMLH				eS	Sn	21 47 11.2	+1.9
	baz=254						
ESL	Shilin	1.11	205	eP	Pg	21 46 53.9	+0.2
	baz=206						
OWD	Renai	1.12	219	eP	Pg	21 46 54.6	+0.8
	baz=220						
NSY	Sanyi	1.15	249	eP	Pg	21 46 56.0	+1.5
	baz=248						
NSY				eS	Sg	21 47 13.8	+4.4
	baz=248						
TWQ1	Liyutan	1.17	246	eP	Pg	21 46 55.5	+0.6
	baz=247						
WCS	Beigang Elemen	1.22	231	eP	Pg	21 46 58.1	+2.4
	baz=241						
VWDT	VWDT	1.30	215	eP	Pg	21 46 57.6	+0.3
	baz=222						
SMLT	Sun Moon Lake	1.34	226	eP	Pg	21 47 00.8	+2.7
	baz=215						
TYC	Yuchr	1.35	227	eP	Pg	21 46 58.9	+0.6
	baz=217						
ALS	Alishan	1.68	219	eP	Pg	21 47 05.8	+1.3
	baz=212						
CHN5	Tsauling	1.69	224	eP	Pg	21 47 07.0	+2.3
	baz=212						
CHN5				eS	Sg	21 47 28.9	+2.3
	baz=212						
IRIF	Iriomote-Funau	1.70	106	P	Pb	21 47 04.3	+0.4
IRIF				eS	Sb	21 47 25.5	0.0
JKRS	Kuro-shima	1.97	107	P	Pn	21 47 06.6	+0.5
TWK	Hsinying	2.05	221	eP	Pg	21 47 12.2	+0.5
	baz=219						
TWK				eS	Sg	21 47 38.9	+0.7
	baz=219						
JIJ	Ishigaki jima	2.06	103	eS	Sn	21 47 33.1	0.0
CHN1	Nanshi	2.09	219	eP	Pg	21 47 12.0	-0.5
	baz=202						
CHN1				eS	Sg	21 47 39.6	+0.1
	baz=202						
SGST	Jiashian	2.14	216	eP	Pb	21 47 10.6	-0.9
	baz=199						

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*NNC **20** 21:48:03.6±0.5, 47°.76N×82°.46E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=5.2km s-min=2.0km az=87.0*

*SOME **20** 21:48:03.5, 47°.90N×82°.25E, h10km*

ISC 20 21:48:04.3±0.8**, 47°.80N**±0°.03×**82°.46E**±0°.04**, h9km, n24, σ2s.45**/33**, 10C-6D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	Makanchi Array	1.01	186	⇓P	Pg	21 48 22.3	-1.4
	1.1nm,0.2s,baz=28,slow=12,SNR=1291						
MK31				⇑S	Sg	21 48 35.6	-1.3
	13nm,0.2s,baz=18,slow=32,SNR=8.6						
MAKZ	Makanchi	1.04	198	⇑P	Pg	21 48 22.9	-1.4
	3.5nm,0.2s						
MAKZ				⇑S	Sg	21 48 37.0	-0.8
	65nm,0.4s						
ZSN	Zaisan	1.67	101	eP	Pn	21 48 33.2	-0.4
	17nm,0.2s						
ZSN				eS	Sn	21 48 55.5	+0.3
	210nm,0.4s						
ZSN	Zaisan	1.67	101	P	Pn	21 48 33.3	-0.4
	17nm,0.2s						
ZSN				S	Sn	21 48 55.5	+0.3
	210nm,0.4s						
SEM	Semipalatinsk	2.99	332	eP	Pb	21 48 58.1	+0.4
	12nm,0.3s						
SEM				eS	Sg	21 49 37.7	-2.5
	60nm,0.2s						
SEM	Semipalatinsk	2.99	332	Pg	Pb	21 48 58.1	+0.4
	12nm,0.3s						
SEM				Lg	Lg	21 49 37.7	
	60nm,0.2s						
KAPS	Kapalarasan	3.30	222	eP	Pb	21 49 03.7	+0.7
	4.7nm,0.3s						
KAPS				eS	Sg	21 49 47.0	-3.2
	18nm,0.4s						
KAPS	Kapalarasan	3.30	222	Pg	Pb	21 49 03.7	+0.7
	4.7nm,0.3s						
KAPS				Lg	Lg	21 49 47.0	
	18nm,0.4s						
KURBB	Kurchatov Arra	3.82	319	⇑Pg	Pg	21 49 13.7	-3.8
	4.8nm,0.6s						
KURBB				⇑Lg	Lg	21 50 06.4	
	81nm,0.6s						
TDK	Taldyqorghan	3.96	227	eP	Pb	21 49 16.2	+2.0
	10nm,0.4s						
TDK				eS	Sg	21 50 08.9	-2.4
	81nm,0.5s						
TDK	Taldyqorghan	3.96	227	Pg	Pb	21 49 16.2	+2.0
	10nm,0.4s						
TDK				Lg	Lg	21 50 08.9	
	81nm,0.5s						
KTMS	Ketmen	4.60	199	eP	Pb	21 49 27.0	+1.9
KTMS				eS	Sg	21 50 26.8	-5.0
KTMS	Ketmen	4.60	199	Pg	Pb	21 49 27.0	+1.9
KTMS				Lg	Lg	21 50 26.8	
BLB	Baldybastay	4.63	218	Pg	Pg	21 49 30.3	-2.6
	15nm,0.3s						
BLB				Lg	Lg	21 50 32.5	
	15nm,0.3s						
ARXS	Arharly	4.82	224	eP	Pb	21 49 31.1	+2.2
	3.9nm,0.2s						
ARXS				eS	Sg	21 50 34.6	-4.4
	33nm,0.4s						
ARXS	Arharly	4.82	224	Pg	Pb	21 49 31.1	+2.2
	3.9nm,0.2s						
ARXS				Lg	Lg	21 50 34.6	
	33nm,0.4s						
PDGK	Podgornoye	4.93	206	Pg	Pb	21 49 32.9	+2.1
	1.6nm,0.9s						
PDGK				Lg	Lg	21 50 37.3	
	8.4nm,0.6s						
PDGK	Podgornoye	4.93	206	⇓Pn	Pn	21 49 19.2	+0.5
	3.4nm,0.8s						
PDGK				⇑Lg	Lg	21 50 39.2	
	37nm,1.3s						
MDOK	Medeo	5.99	221	Lg	Lg	21 51 13.2	
	25nm,1.8s						
ZAA0	Zalesovo Array	6.34	13	⇑Pn	Pn	21 49 39.2	+1.5
	0.4nm,0.7s						
ZAA0				⇓Sn	Sn	21 50 54.5	+4.3
	0.4nm,0.3s						
ZAA0				⇓Lg	Lg	21 51 25.5	
	2.4nm,1.1s						
OTUK	Ortayu	6.80	278	⇓Pn	Pn	21 49 45.7	+1.5
	5.0nm,1.4s						
OTUK				⇓Sn	Sn	21 51 03.0	+1.3
	2.0nm,0.5s						
OTUK				⇑Lg	Lg	21 51 39.8	
	11nm,0.9s						
BRZS	Berezniki	6.81	292	eP	Pg	21 50 08.2	-6.3
	1.4nm,0.4s						
BRZS				eS	Sg	21 51 37.5	-5.2
	4.8nm,0.7s						
BRZS	Berezniki	6.81	292	Pg	Pg	21 50 08.2	-6.3
	1.4nm,0.4s						
BRZS				Lg	Lg	21 51 37.5	
	4.8nm,0.7s						
BRVK	Borovoye	9.38	309	⇑Sn	Sn	21 52 06.9	+1.9
	1.6nm,0.5s						
BRVK				⇑Lg	Lg	21 53 02.4	
	9.4nm,1.3s						

MAN 20 21:53:35.7, 15°.54N×119°.63E, h33km, mb4.3, ML3.2, MS2.9, Luzon

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*IDC **20** 21:55:46.0±1.4, 16°.11N×91°.30W, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.6/35, mbtmp3.6/6, ML3.3/2, MS3.2/1, Ms1 3.2/1, ms1mx2.6/42, Error ellipse: s-maj=48.3km s-min=23.3km az=48.0*

*MEX **20** 21:55:53.6±1.1, 16°.70N×91°.63W, h10km, MD4.3*

ISC 20 21:55:52.2±2.2**, 16°.59N**±0°.05×**91°.72W**±0°.08**, h11km**±12km**, n15, σ1s.35**/22**, mb3.6**/4**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	0.50	233	eP	Pg	21 56 01.3	-0.8
CCIG				eS	Sg	21 56 10.0	+1.2
TGIG		1.36	278	eP	Pn	21 56 16.4	-0.8
TGIG				eS	Sb	21 56 34.0	-1.2
PAVE	Pavencul	1.46	198	eP	Pn	21 56 18.5	-0.3
PAVE				eS	Sn	21 56 38.3	+0.3
PATR	El Naranjo	1.54	199	eP	Pn	21 56 19.8	-0.2
PATR				eS	Sn	21 56 40.7	+0.5
PCIG		1.69	239	eP	Pn	21 56 20.9	-0.9
PCIG				eS	Sn	21 56 42.5	-0.9
THIG		1.75	197	eP	Pn	21 56 21.9	-0.7
THIG				eS	Sb	21 56 46.4	-0.1
UXUV	UXUV	2.43	288	eP	Pn	21 56 29.6	-2.3
UXUV				eS	Sn	21 57 02.8	+1.0
CMIG	Matias Romero	3.07	280	Pn	Pn	21 56 42.6	+1.8
	1.7nm,0.3s,baz=108,slow=6.7,SNR=11						
CMIG				Sn	Sb	21 57 26.5	+2.0
	20nm,0.3s,baz=44,slow=20,SNR=8.5						
CMIG				Lg	Lg	21 57 35.8	
	16nm,0.3s,baz=12,slow=17,SNR=5.9						
CMIG	Matias Romero	3.07	280	eP	Pn	21 56 41.6	+0.8
CMIG				eS	Sn	21 57 15.4	-2.2
TXAR	Lajitas Array	16.77	321	P	P	21 59 51.4	+1.8
	0.0nm,0.3s,baz=140,slow=13,SNR=4.3						
SJG	San Juan	24.45	83	LR	LR	22 11 21.0	
	comp=Z,57nm,18.7s,baz=117,slow=39						
ATAH	Atahualpa	27.01	150	P	P	22 01 24.9	-10
	12nm,1.0s,baz=64,slow=23,SNR=5.0						
NVAR	Mina Array Bea	31.88	318	P	P	22 02 18.0	+0.1
	0.5nm,0.9s,baz=130,slow=8.4,SNR=2.3						
YKA	Yellowknife Ar	48.59	346	P	P	22 04 34.0	-1.6
	0.2nm,0.5s,baz=151,slow=7.4,SNR=5.0						
ILAR	Eielson Array	60.59	336	P	P	22 06 03.8	+1.0
	0.6nm,1.0s,baz=107,slow=6.2,SNR=4.9						

IDC 20 22:02:27.6±37.0**, 23°.67S×69°.50E, h0km, mb3.5**/3**, mb1 3.5**/3**, mb1mx3.3**/34**, mbtmp3.5**/3**, Error ellipse: s-maj=1206.0km s-min=61.9km az=150.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	16.19	11	T	T	22 22 31.6	
	baz=192,slow=76,SNR=16						
H08S2	Diego Garcia H	16.19	11	T	T	22 22 24.9	
	baz=192,slow=76,SNR=17						
H08S3	Diego Garcia H	16.20	11	T	T	22 22 34.6	
	baz=192,slow=76,SNR=20						
MKAR	Makanchi Array	71.08	9	P	P	22 13 47.3	-0.1
	0.3nm,0.7s,baz=175,slow=5.4,SNR=2.4						
TORD	Torodi Ar. Bea	75.69	291	P	P	22 14 15.4	0.0
	0.3nm,0.9s,baz=119,slow=5.1,SNR=1.8						
ZALV	Zalesovo Beam	78.42	9	P	P	22 14 30.1	+0.2
	0.7nm,0.7s,baz=183,slow=7.2,SNR=2.7						

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*MOS **20** 22:04:32.0±1.0, 6°.10S×154°.64E, h47km, mb5.0/15, Error ellipse: s-maj=10.0km s-min=9.0km az=97.4*

*GCMT **20** 22:04:33.9±0.2, 6°.47S±0°.01×154°.47E±0°.02, h40km, MW5.2/91, Moment Tensor Solution. s73,c87; s91,c113; Duration: 1s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.72±.03; $M_{\theta\theta}$-0.14±.02; $M_{\phi\phi}$-0.57±.02; $M_{r\theta}$-0.17±.02; $M_{\theta\phi}$0.45±.02; $M_{\phi r}$0.02±.02; Best double couple: $M_0$0.80800×10^{17} NP1:ϕ_s160.00000°, δ43.00000°, λ108.00000°. NP2:ϕ_s316.00000°, δ50.00000°, λ74.00000°. Principal axes: T 0.7510, Plg77.0000°, Azm165.0000°; N 0.1130, Plg12.0000°, Azm326.0000°; P -0.8640, Plg4.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **20** 22:04:34.9±1.6, 6°.28S±0°.06×154°.68E±0°.06, h53km±4km, mb5.0/88 Error ellipse: s-maj=9.8km s-min=7.1km az=47.0*

*BJI **20** 22:04:34.8±0.0, 6°.33S×154°.62E, h70km, mB5.2/29, mb4.7/52, Ms4.7/21, Ms7 4.4/24*

*IDC **20** 22:04:35.0±1.7, 6°.20S×154°.69E, h64km±15km, mb4.4/20, mb1 4.6/24, mb1mx4.6/29, mbtmp4.7/24, MS4.2/38, Ms1 4.3/38, ms1mx4.2/50, Error ellipse: s-maj=13.2km s-min=11.3km az=56.0*

*DJA **20** 22:04:39.1±0.5, 6°S±3°×15°5E±°, h84km±4km, M5.2/38, mb5.1/38, mB5.5/15, MLv5.6/3, Mw(mB)5.0/15, MwMwp6.1/1, Mwp6.1/1*

ISC 20 22:04:34.5±0.8**, 6°.30S**±0°.04×**154°.69E**±0°.04**, h56km**±6km**, n302, σ1s.31**/298**, mb4.9**/106**, MS4.3**/45**, 6C-2D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	3.28	310	Pn	Pn	22 05 23.5	+0.1
RABL				Sn	Sn	22 06 02.5	+1.3
HNR	Honiara	6.06	121	P	Pn	22 06 04.1	+2.5
	110nm,0.3s,baz=201,slow=4.1,SNR=33						
HNR				S	Sn	22 07 13.5	+3.8
	baz=273,slow=17,SNR=1.3						
HNR				LR	LR	22 08 25.0	
	comp=Z,4μm,22.0s,baz=304,slow=38						
HNR	Honiara	6.06	121	Pn	Pn	22 06 01.6	-0.1
HNR				Sn	Sn	22 07 11.6	+1.9
PMG	Port Moresby	8.08	247	P	Pn	22 06 30.3	+1.1
	32nm,0.3s,baz=48,slow=8.6,SNR=28						
PMG				S	Sn	22 07 59.0	-0.2
	5.4nm,0.3s,baz=265,slow=15,SNR=1.4						
PMG				LR	LR	22 09 32.2	
	comp=Z,6μm,20.3s,baz=67,slow=37						
PMG	Port Moresby	8.08	247	P	Pn	22 06 30.1	+0.9
PMG						22 07 58.1	
PMG	Port Moresby	8.08	247	Pn	Pn	22 06 30.1	+0.9
PMG					Sn	22 07 58.1	-1.0
PMG	Port Moresby	8.08	247	P	Pn	22 06 33.4	+4.2
PMG	Port Moresby	8.08	247	P	Pn	22 06 33.4	+4.2
MANU	Manus Island	8.44	300		Pn	22 06 33.4	-0.8
PATS	Pohnpei	13.54	16	P	Pn	22 07 45.9	+2.0
	baz=14,SNR=3.2						
PATS	Pohnpei	13.54	16		Pn	22 07 43.6	-0.2
COEN	Coen	13.65	235	Pn	Pn	22 07 44.9	-0.5
COEN	Coen	13.65	235	P	P	22 07 48.5	-4.0
SANVU	Saraoutou	15.27	128	Pn	Pn	22 08 06.8	+0.1
SANVU				IAmb	IAmb	22 08 18.1	
	comp=Z,70nm,0.7s						
MTSU	Mount Surprise	15.52	220	P	P	22 08 12.0	-1.3
	baz=16,SNR=9.3						
CTA	Charters Tower	15.97	210	P	P	22 08 17.6	-0.7
	comp=Z,0.4nm,0.3s,baz=20,slow=12,SNR=3.8						
CTAO	Charters Tower	15.97	210	P	Pn	22 08 16.1	+0.4
CTAO				pmax	pmax		
	comp=Z,76nm,1.4s						
CTAO	Charters Tower	15.97	210	P	Pn	22 08 16.1	+0.4
CTAO	Charters Tower	15.97	210	P	P	22 08 19.4	+1.1
SMPI	Sarmi	16.50	284	P	P	22 08 24.1	-0.1
	comp=Z,46nm,1.2s						
EIDS	Eidsvold	19.28	190	P	Pn	22 08 56.7	+0.5
	baz=19,SNR=11						
EIDS	Eidsvold	19.28	190	P	P	22 08 53.9	-0.7
EIDS				IAmb	IAmb	22 08 59.3	
	comp=Z,104nm,1.2s						
EIDS	Eidsvold	19.28	190	P	Pn	22 08 56.9	+0.8
NOUC	Port Laguerre	19.30	146	P	Pn	22 08 57.4	+0.9
DZM	Mont Dzumac	19.36	145	eP	Pn	22 08 57.2	-0.1
	comp=Z,296nm,1.2s						
DZM				eS	S	22 12 27.0	-4.9
	comp=Z,976nm,26.1s						
DZM				eLR	LR	22 13 32.6	
	comp=Z,3μm,25.4s						
DZM	Mont Dzumac	19.36	145	P	Pn	22 08 57.5	+0.2
	comp=Z,3.8nm,0.3s,baz=355,slow=12,SNR=27						
DZM				LR	LR	22 15 33.3	
	comp=Z,1μm,21.3s,baz=312,slow=34						
DZM	Mont Dzumac	19.36	145	P	Pn	22 08 56.3	-1.0
DZM				IAmb	IAmb	22 08 58.6	
	comp=Z,172nm,1.2s						
DZM	Mont Dzumac	19.36	145	P	Pn	22 08 58.1	+0.8
ONTNC	Ouen Toro	19.55	146	P	P	22 08 57.3	-0.4
ONTNC				IAmb	IAmb	22 09 00.2	
	comp=Z,146nm,1.2s						
YATNC	Mamie plateau,	19.61	144	P	Pn	22 09 00.8	+0.7
TARA	Tarawa	19.72	68	P	Pn	22 09 00.3	-1.2
OUENC	Ouen Island, N	19.86	145	P	Pn	22 09 02.6	-0.5
OUENC				IAmb	IAmb	22 09 05.8	
	comp=Z,110nm,1.1s						
OUENC	Ouen Island, N	19.86	145	P	Pn	22 09 02.9	-0.1
QIS	Mount Isa	20.37	224	P	Pn	22 09 07.7	-1.5
	baz=20,SNR=14						
QIS	Mount Isa	20.37	224	P	Pn	22 09 08.7	-0.5
RMQ	Roma	20.86	195	P	Pn	22 09 13.7	-1.1
	baz=21,SNR=12						
RMQ	Roma	20.86	195	P	Pn	22 09 13.8	-1.1
GUMO	Guam	22.04	334	LR	LR	22 17 36.2	
	comp=Z,317nm,20.6s,baz=138,slow=36						
QLP	Quilpie	22.50	205	P	P	22 09 30.1	+0.7
	baz=23,SNR=7.8						
FAKI	Fak Fak	22.62	278	P	P	22 09 30.4	-0.5
FAKI				IAmb	IAmb	22 09 32.8	
	comp=Z,81nm,1.1s						
FAKI	Fak Fak	22.62	278	P	P	22 09 31.0	+0.1
KDU	Kakadu	22.81	252	P	P	22 09 32.9	0.0
	baz=23,SNR=14						
KDU	Kakadu	22.81	252	P	P	22 09 32.8	0.0
WR0	Warramunga Arr	23.82	233	P	P	22 09 42.4	-0.2
WRAB	Tennant Creek	23.96	234	P	P	22 09 44.3	+0.5
WRAB				pmax	pmax		
	comp=Z,96nm,1.1s						
WRAB	Tennant Creek	23.96	234	P	P	22 09 44.3	+0.5
WRAB				IAmb	IAmb	22 09 45.8	
	comp=Z,96nm,1.1s						
WB2	Warramunga Arr	23.97	234	P	P	22 09 44.4	+0.6
WRA	Warramunga Arr	23.98	234	P	P	22 09 44.5	+0.5
	comp=Z,53nm,0.9s,baz=55,slow=9.6,SNR=157						
WRA				PcP	PcP	22 13 25.7	+0.6
	comp=Z,4.6nm,0.6s,baz=61,slow=2.0,SNR=6.9						
WRA				S	S	22 14 02.0	+5.0
	comp=Z,5.8nm,1.2s,baz=71,slow=13,SNR=8.7						
WRA				ScP	ScP	22 16 59.4	+0.4
	comp=Z,1.7nm,0.8s,baz=69,slow=2.8,SNR=5.4						
WRA				LR	LR	22 19 07.7	
	comp=Z,2μm,18.9s,baz=65,slow=36						
WRA	Warramunga Arr	23.98	234	ceP	P	22 09 45.2	+1.3
WRA				pmax	pmax		
	comp=Z,53nm,0.9s						
WRA	Warramunga Arr	23.98	234	P	P	22 09 42.9	-1.0
WRA					PcP	22 13 24.8	-0.3
SIJI	Sorong	23.99	282	P	P	22 09 44.2	+0.1
	comp=Z,9.1nm,0.4s,baz=75,slow=12,SNR=6.0						
SIJI				LR	LR	22 20 37.0	
	comp=Z,655nm,21.5s,baz=70,slow=40						
MTN	Manton Dam	24.11	253	P	P	22 09 46.5	+1.3
	baz=24,SNR=8.7						
MTN	Manton Dam	24.11	253	P	P	22 09 46.2	+1.0
ARMA	Armidale	24.17	186	P	P	22 09 47.3	+1.6
	baz=24,SNR=8.5						
ARMA	Armidale	24.17	186	P	P	22 09 46.5	+0.8
ARMA				IAmb	IAmb	22 09 47.7	
	comp=Z,74nm,1.1s						
MSVF	Nonsavu	25.48	119	P	P	22 09 57.6	0.0
	comp=Z,6.6nm,0.6s,baz=281,slow=13,SNR=8.7						
MSVF				LR	LR	22 19 16.8	
	comp=Z,1μm,19.8s,baz=240,slow=34						
MSVF	Nonsavu	25.48	119	P	P	22 09 58.9	+1.2
MSVF				pmax	pmax		
	comp=Z,22nm,1.2s						
MSVF	Nonsavu	25.48	119	P	P	22 09 58.9	+1.2
AS31	Alice Springs	26.41	227	P	P	22 10 06.6	+0.5
ASAR	Alice Springs	26.42	227	P	P	22 10 06.3	+0.2
	comp=Z,8.8nm,0.4s,baz=57,slow=9.0,SNR=178						
ASAR				PcP	PcP	22 13 30.7	+0.2
	comp=Z,6.2nm,0.6s,baz=53,slow=2.7,SNR=13						
ASAR				ScP	ScP	22 17 05.8	-0.1
	comp=Z,0.6nm,0.7s,baz=59,slow=3.2,SNR=2.8						
ASAR				LR	LR	22 20 11.0	
	comp=Z,2μm,20.4s,baz=72,slow=35						
ASAR	Alice Springs	26.42	227	P	P	22 10 06.4	+0.3
ASAR	Alice Springs	26.42	227	P	P	22 10 06.4	+0.3
ASAR					PcP	22 13 31.2	+0.6
CMSA	Cobar Meteorol	26.48	197	P	P	22 10 07.0	+0.4
	baz=27,SNR=22						
MGCD	Mangrove Creek	26.98	187	P	P	22 10 12.7	+1.7
	baz=27,SNR=8.8						
KNRA	Kununurra	27.08	248	P	P	22 10 13.6	+1.6
	baz=27,SNR=10						
LBMI	Labuha	27.71	281	P	P	22 10 19.9	+2.1
	comp=Z,2μmcomp=Z,71nm,1.3s						
STKA	Stephens Creek	28.24	204	P	P	22 10 22.2	-0.1
	comp=Z,4.8nm,0.4s,baz=15,slow=8.8,SNR=8.4						
STKA				PcP	PcP	22 13 33.6	-1.1
	comp=Z,5.8nm,0.6s,baz=4.8,slow=2.6,SNR=5.1						
STKA				LR	LR	22 21 30.2	
	comp=Z,1μm,20.4s,baz=21,slow=36						
STKA	Stephens Creek	28.24	204	P	P	22 10 22.6	+0.3
	baz=28,SNR=7.0						
STKA	Stephens Creek	28.24	204	P	P	22 10 22.8	+0.5
STKA					PcP	22 13 34.6	-0.1
FITZ	Fitzroy Crossi	30.67	245	P	P	22 10 44.1	+0.1
	baz=31,SNR=11						
HTT	Hallett	30.71	206	P	P	22 10 44.5	+0.3
	baz=31,SNR=4.8						
BATI	Baumata	30.94	261	LR	LR	22 24 45.2	
	comp=Z,1μm,21.0s,baz=126,slow=39						
MILA	Mila	31.03	189	P	P	22 10 48.5	+1.5
	baz=31,SNR=6.2						
WRKA	Warakurna	31.40	231	P	P	22 10 50.2	-0.2
	baz=31,SNR=20						
KMSI	Cibinong	31.41	281	P	P	22 10 54.1	+3.5
	comp=Z,161nm,0.6s						
BBOO	Buckleboo	31.57	211	P	P	22 10 53.1	+1.3
	baz=32,SNR=12						
DAV	Davao City (W)	31.94	294	LR	LR	22 24 05.7	
	comp=Z,278nm,18.4s,baz=106,slow=37						
LUWI	Luwuk	32.27	278	P	P	22 10 59.3	+1.2
	comp=Z,9μmcomp=Z,178nm,1.0s						
LUWI	Luwuk	32.27	278	P	P	22 10 58.8	+0.6
ARPS	Mount Arapiles	32.53	199	P	P	22 11 01.1	+1.0
	baz=33,SNR=7.0						
EDFI	Ende, Flores	32.80	264	P	P	22 11 02.2	-0.7
	comp=Z,513nmcomp=Z,65nm,0.9s						
MRSI	Marisa	33.38	280	P	P	22 11 08.2	+0.4
	comp=Z,34nm,1.0s						
APSI	Ampana	33.40	278	P	P	22 11 09.2	+1.2
	comp=Z,825nmcomp=Z,78nm,1.0s						
OUZ	Omahuta	33.64	151	P	P	22 11 10.8	+1.0
OUZ				IAmb	IAmb	22 11 12.4	
	comp=Z,16nm,0.9s						
TOLI2	Tolitoli	34.64	281	P	P	22 11 18.2	-0.6
KAPI	Kappang	34.79	270	LR	LR	22 28 08.9	
	comp=Z,90nm,21.1s,baz=108,slow=41						
MPSI	Mapaga	35.35	279	P	P	22 11 24.3	-0.6
	comp=Z,1μmcomp=Z,96nm,0.9s						
PLAI	Plampang	36.67	264	P	P	22 11 35.5	-0.7
	comp=Z,85nm,0.7s						
HAZ	Te Kaha	37.70	149	P	P	22 11 47.3	+2.8
NNVZ	North Ngauruho	37.75	153	P	P	22 11 47.6	+2.4
URZ	Urewera	37.76	151	LR	LR	22 26 43.3	
	comp=Z,322nm,19.8s,baz=212,slow=35						
URZ	Urewera	37.76	151	P	P	22 11 44.6	-0.5
OTVZ	Oturere	37.80	153	P	P	22 11 48.0	+2.3
RUGZ	Raukumara Rang	37.81	150	P	P	22 11 47.3	+1.7
SNVZ	South Ngauruho	37.81	153	P	P	22 11 48.2	+2.5
TRVZ	Turoa	37.86	153	P	P	22 11 48.2	+2.1
PKGZ	Pakihiroa	37.95	149	P	P	22 11 48.8	+2.0
RTZ	Ruatahuna	37.97	151	P	P	22 11 48.7	+1.7
WMGZ	Waiomatatini S	38.07	149	P	P	22 11 49.4	+1.7
BKZ	Black Stump Fm	38.18	152	P	P	22 11 49.0	+0.3
BKZ				IAmb	IAmb	22 11 51.7	
	comp=Z,15nm,0.6s						
THZ	Tophouse	38.85	158	P	P	22 11 54.8	+0.5
TUWZ	Tuamarina	38.96	157	P	P	22 11 55.1	0.0
FOZ	Fox Glacier	39.40	163	P	P	22 11 58.1	-0.6
LTZ	Lake Taylor	39.52	160	P	P	22 12 00.2	+0.4
KHZ	Kahutara	39.66	158	P	P	22 11 60.0	-0.9

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MEEK  Meekatharra       39.85 235   P       P        22 12 03.2 +0.3
        baz=40,SNR=11
OXZ   Oxford            39.92 160   P       P        22 12 03.7 +0.6
RPZ   Rata Peaks        39.95 161   P       P        22 12 04.2 +0.9
JAGI  Jajag, Banyuwa    40.25 264   P       P        22 12 04.8 -1.5
MLZ   Mavora Lakes      40.63 165   P       P        22 12 08.9 -0.1
JOW   Kunigami          41.71 323   LR      LR       22 28 47.9
        comp=Z,147nm,19.8s,baz=122,slow=35
KLBR  Kellerberrin      42.71 229   P       P        22 12 26.0 -0.1
        baz=43,SNR=7.7
MORW  Morawa            42.92 233   P       P        22 12 28.0  0.0
        baz=43,SNR=17
MORW  Morawa            42.92 233   P       P        22 12 27.9  0.0
MORW                                IAmb    IAmb     22 12 28.5
        comp=Z,25nm,0.8s
BLDU  Ballidu           43.06 231   P       P        22 12 29.1 +0.1
        baz=43,SNR=20
PCJI  Pacitan           43.20 265   P       P        22 12 32.9 +2.6
        comp=Z,118nm,1.1s
YULB  Yu-li             43.99 313   P       P        22 12 36.9 +0.3
YULB                                IAmb    IAmb     22 12 53.1
        comp=Z,53nm,1.4s
MUN   Mundaring         44.05 230   P       P        22 12 37.1 +0.1
        baz=44,SNR=5.0
TPUB  Ta-pu             44.42 313   P       P        22 12 40.0 -0.1
TPUB                                IAmb    IAmb     22 12 56.5
        comp=Z,24nm,0.8s
SSLB  Suanglung         44.48 313   P       P        22 12 41.0 +0.4
SSLB                                IAmb    IAmb     22 12 59.5
        comp=Z,24nm,1.0s
JNU   Nakatsue          45.26 332   P       P        22 12 45.8 -0.8
JNU                                 IAmb    IAmb     22 12 52.1
        comp=Z,25nm,0.9s
MJAR  Matsushiro Arr    45.33 341   P       P        22 12 44.9 -2.2
        comp=Z,0.9nm,0.4s,baz=163,slow=8.7,SNR=4.7
KSRS  Korea Array       50.19 332   P       P        22 13 23.9 -0.8
        comp=Z,3.4nm,0.7s,baz=146,slow=7.3,SNR=11
KSRS                                LR      LR       22 34 27.3
        comp=Z,82nm,18.2s,baz=140,slow=36
QIZ   Qiongzhong        50.85 301   P       P        22 13 31.6 +1.6
QIZ                                 S       S        22 20 45.9 +3.5
QIZ                                 LR      LR
        comp=Z,420nm,19.6s
NJ2   Nanjing           51.19 320  eP       P        22 13 35.6 +3.3
NJ2                                 pmax    pmax
        comp=Z,8.0nm,0.6s
ASAJ  Asahikawa         51.36 349   LR      LR       22 32 33.9
        comp=Z,263nm,21.9s,baz=186,slow=33
WHN   Wuhan             53.24 316 ⇓P        P        22 13 51.1 +3.6
USRK  Ussuriysk Ar.     54.28 340   P       P        22 13 53.9 -1.0
        comp=Z,1.5nm,0.6s,baz=137,slow=6.4,SNR=2.4
USRK                                LR      LR       22 33 50.7
        comp=Z,193nm,21.8s,baz=143,slow=32
PDSI  Padang            54.36 273   P       P        22 13 55.5 -0.6
        comp=Z,17nm,0.6s
IPM   Ipoh              54.64 280   P       P        22 13 58.1  0.0
TIA   Tai'an            55.03 323   P       P        22 13 59.6 -0.9
TIA                                 pmax    pmax
        comp=Z,4.0nm,0.4s
KULM  Kulim             55.16 281   P       P        22 14 01.6 -0.3
KULM                                IAmb    IAmb     22 14 01.9
        comp=Z,13nm,0.6s
MNSI  Mandailing Nat    55.46 275   P       P        22 14 02.9 -1.1
        comp=Z,15nm,0.7s
PPT   Papeete           55.48 107   LR      LR       22 33 11.4
        comp=Z,106nm,22.0s,baz=9.5,slow=31
PPT2  Papeete2          55.48 107  eS       S        22 21 45.9 +0.2
        comp=Z,353nm,28.5s
PPT2                               eLQ      LQ       22 27 56.4
        comp=Z,746nm,25.5s
PPT2                               eLR      LR       22 30 20.3
        comp=Z,356nm,25.2s
MDJ   Mudanjiang        55.49 338   P       P        22 14 08.4 +4.8
MDJ                                 pmax    pmax
        comp=Z,6.0nm,0.7s
MDJ                                 pmax    pmax
        comp=Z,200nm,4.0s
TBI   Tubuai            56.23 114  eLQ      LQ       22 28 13.9
        comp=Z,578nm,38.2s
TBI                                eLR      LR       22 30 39.6
        comp=Z,1µm,28.5s
ENH   Enshi             56.55 313   P       P        22 14 10.6 -0.9
ENH                                 IAmb    IAmb     22 14 15.8
        comp=Z,15nm,1.0s
GYA   Guiyang           56.80 307 ⇑P        P        22 14 14.1 +0.6
GYA                                 pP      sP       22 14 35.3 +1.2
GYA                                 pmax    pmax
        comp=Z,11nm,1.0s
GYA                                 LR      LR
        comp=Z,380nm,21.3s
GSI   Gunungsitoli      57.52 276   P       P        22 14 17.5 -1.2
        comp=Z,26nm,0.7s
GSI   Gunungsitoli      57.52 276   P       P        22 14 17.4 -1.2
BJI   Beijing           58.18 326   P       P        22 14 24.5 +1.7
BJI                                 pmax    pmax
        comp=Z,8.0nm,0.7s
KLR   Kul'dur           58.82 343   LR      LR       22 37 46.3
        comp=Z,115nm,21.6s,baz=184,slow=34
KLR   Kul'dur           58.82 343ceP        P        22 14 25.5 -1.5
KLR                                 pmax    pmax
        comp=Z,11nm,1.2s
PETK  Petropavlovsk-    59.23   2   P       P        22 14 29.2 -0.6
        comp=Z,8.6nm,0.8s,baz=256,slow=3.2,SNR=7.3
PETK                                LR      LR       22 36 14.5
        comp=Z,325nm,21.9s,baz=181,slow=32
KMI   Kunming           59.38 304 ⇑P        P        22 14 32.9 +1.2
KMI                                 pP      pwP      22 14 45.8 -3.0
KMI                                 sP      sP       22 14 54.3 +1.7
KMI                                 S       S        22 22 40.4 +3.5
KMI                                 pmax    pmax
        comp=Z,23nm,1.1s
KMI                                 LR      LR
        comp=Z,180nm,22.4s
KMI                                 LR      LR
        comp=Z,290nm,23.7s
KMI                                 LR      LR
        comp=Z,310nm,27.7s
CMAR  Chiang Mai Arr    60.22 295   P       P        22 14 38.0 +0.7
        comp=Z,3.5nm,0.6s,baz=110,slow=4.8,SNR=27
CMAR  Chiang Mai Arr    60.22 295   P       P        22 14 37.2 -0.1
CMAR  Chiang Mai Arr    60.22 295   P       P        22 14 37.2 -0.1
CHTO  Chiang Mai        60.33 296   P       P        22 14 36.9 -1.2
CHTO                                pmax    pmax
        comp=Z,30nm,1.5s
CHTO  Chiang Mai        60.33 296   P       P        22 14 36.9 -1.2
CHTO                                IAmb    IAmb     22 14 40.2
        comp=Z,30nm,1.5s
CD2   Chengdu           61.14 310   P       P        22 14 46.5 +3.1
CD2                                 pmax    pmax
        comp=Z,10.0nm,0.6s
CD2                                 LR      LR
        comp=Z,300nm,21.6s
CD2                                 LR      LR
        comp=Z,370nm,24.5s
HHC   Hu-ho-hao-te      61.36 324  eP       P        22 14 49.5 +4.7
HHC                                 pmax    pmax
        comp=Z,10.0nm,1.2s
HHC                                 pmax    pmax
        comp=Z,140nm,5.6s
HIA   Hailar            63.17 335 i P       P        22 14 56.1 -0.5
HIA                                 pmax    pmax
        comp=Z,7.0nm,0.7s
LZH   Lanzhou           63.61 315  eP       P        22 14 58.9 -1.1
LZH                                 pP      pP       22 15 10.0 -5.2
LZH                                 sP      sP       22 15 14.8 -6.7
LZH                                 pmax    pmax
        comp=Z,12nm,1.0s
LZH   Lanzhou           63.61 315  eP       P        22 15 00.6 +0.6
LZH                                 pmax    pmax
        comp=Z,10.0nm,1.2s
LZH                                 LR      LR
        comp=Z,220nm,13.8s
LZH                                 LR      LR
        comp=Z,340nm,16.5s
LZH                                 LR      LR
        comp=Z,230nm,17.3s
ZEA   Zeya              64.13 342  eP       P        22 15 02.6 -0.2
ZEA                                 pmax    pmax
        comp=N,10.0nm,0.7s
ZEA                                 pmax    pmax
        comp=Z,10.0nm,1.0s
TAOE  Nuku Hiva Isla    64.57  97  eLR      LR       22 34 28.2
        comp=Z,274nm,23.6s
GTA   Gaotai            68.03 317  eP       P        22 15 29.0 +0.7
GTA                                 pmax    pmax
        comp=Z,4.0nm,1.2s
GTA                                 pmax    pmax
        comp=Z,99nm,7.3s
GTA                                 LR      LR
        comp=Z,170nm,16.7s
GTA                                 LR      LR
        comp=Z,220nm,16.7s
GTA                                 LR      LR
        comp=Z,170nm,16.7s
ULN   Ulaanbaatar       68.26 328   P       P        22 15 29.2 -0.4
ULN                                 pmax    pmax
        comp=Z,5.0nm,0.9s
ULN   Ulaanbaatar       68.26 328   P       P        22 15 29.2 -0.4
SONM  Songino Array     68.59 327   P       P        22 15 31.4 -0.2
        comp=Z,4.1nm,0.9s,baz=142,slow=4.7,SNR=17
SONM                                LR      LR       22 47 18.7
        comp=Z,173nm,18.5s,baz=148,slow=37
SONM  Songino Array     68.59 327   P       P        22 15 31.7  0.0
SONM                                pmax    pmax
        comp=Z,5.0nm,1.0s
SONM  Songino Array     68.59 327   P       P        22 15 31.7  0.0
SHL   Shillong          68.69 300   P       P        22 15 32.8  0.0
SHL                                 pmax    pmax
        comp=Z,42nm,0.8s
SHL   Shillong          68.69 300   P       P        22 15 32.8  0.0
SEY   Seymchan          69.06 359   LR      LR       22 46 13.9
        comp=Z,106nm,19.3s,baz=174,slow=36
LSA   Lhasa             70.64 304   P       P        22 15 45.4 +0.4
LSA                                 pmax    pmax
        comp=Z,30nm,0.6s
LSA   Lhasa             70.64 304   P       P        22 15 44.1 -0.9
LSA                                 pmax    pmax
        comp=Z,9.0nm,0.6s
LSA   Lhasa             70.64 304   P       P        22 15 44.1 -0.9
LSA                                 IAmb    IAmb     22 16 00.3
        comp=Z,8.7nm,0.6s
YAK   Yakutsk           70.82 348   LR      LR       22 44 53.4
        comp=Z,166nm,21.8s,baz=197,slow=34
YAK   Yakutsk           70.82 348  eP       P        22 15 44.8  0.0
YAK                                 pmax    pmax
        comp=Z,9.0nm,0.9s
VNDA  Vanda             71.28 178   P       P        22 15 47.2 -0.3
        comp=Z,2.5nm,0.8s,baz=323,slow=7.0,SNR=12
VNDA                                LR      LR       22 42 37.5
        comp=Z,100nm,19.0s,baz=355,slow=32
VNDA  Vanda             71.28 178   P       P        22 15 48.0 +0.5
VNDA                                pmax    pmax
        comp=Z,8.0nm,1.1s
VNDA  Vanda             71.28 178   P       P        22 15 48.0 +0.5
ZAK   Zakamensk         71.75 328  eP       P        22 15 47.6 -3.3
ZAK                                 pmax    pmax
        comp=Z,8.0nm,1.3s
TLY   Talaya            72.32 329 i P       P        22 15 51.6 -2.5
TLY                                 pmax    pmax
        comp=Z,5.0nm,1.0s
JIRN  Jiri              74.17 301  eP       P        22 16 06.1 +0.1
        comp=Z,20nm,0.5s
GUN   Gumba             74.50 301  eP       P        22 16 08.1 +0.2
        comp=Z,25nm,0.4s
BILL  Bilibino          74.61   4⇓eP        P        22 16 06.2 -1.1
BILL                                                 22 16 19.0
BILL                                *PP     PcP      22 16 23.0 +1.7
BILL                                S       S        22 25 45.0 +6.6
BILL                                pmax    pmax
        comp=Z,14nm,0.8s
BILL                                MLR     MLR
        comp=Z,284nm,19.0s
BILL  Bilibino          74.61   4   P       P        22 16 06.8 -0.5
BILL                                IAmb    IAmb     22 16 10.8
        comp=Z,14nm,0.9s
PKI   Pulchoki          74.81 301  eP       P        22 16 09.5 -0.2
PKIN  Phulchoki         74.83 301  eP       P        22 16 09.4 -0.3
        comp=Z,14nm,0.5s
KKN   Kakani            74.98 301  eP       P        22 16 10.6  0.0
        comp=Z,12nm,0.3s
PALK  Pallekele         75.03 279   P       P        22 16 11.0 +0.1
PALK                                pmax    pmax
        comp=Z,19nm,0.9s
PALK  Pallekele         75.03 279   P       P        22 16 11.0 +0.1
PALK                                IAmb    IAmb     22 16 12.0
        comp=Z,19nm,0.8s
DMN   Daman             75.08 301  eP       P        22 16 11.4 +0.2
        comp=Z,40nm,0.7s
GKN   Gorkha            75.59 301  eP       P        22 16 13.8 -0.2
        comp=Z,31nm,0.6s
DANN  Dangsing          76.42 301  eP       P        22 16 18.2 -0.7
        comp=Z,29nm,0.7s
KDAK  Kodiak Island     76.67  26   LR      LR       22 44 14.3
        comp=Z,421nm,20.7s,baz=256,slow=31
PYUN  Piuthan           77.02 301  eP       P        22 16 21.4 -0.7
        comp=Z,11nm,0.5s
SVW2  Sparrevohn        77.47  22   P       P        22 16 24.4 +0.8
SVW2                                IAmb    IAmb     22 16 28.8
        comp=Z,12nm,1.0s
WMQ   Urumqi            78.11 317  eP       P        22 16 30.3 +2.6
WMQ                                 sP      sP       22 16 54.3 +4.8
WMQ                                 pmax    pmax
        comp=Z,15nm,1.3s
WMQ                                 pmax    pmax
        comp=Z,350nm,4.9s
CNPM  China Poot        78.26  25   P       P        22 16 28.7 +0.6
M19K  Big River Lodg    78.42  22   P       P        22 16 29.4 +0.4
M19K                                IAmb    IAmb     22 16 41.4
        comp=Z,25nm,1.4s
TTA   Tatalina          78.48  21   P       P        22 16 30.1 +0.8
TTA                                 pmax    pmax
        comp=Z,7.0nm,0.9s
TTA   Tatalina          78.48  21   P       P        22 16 30.1 +0.8
HYB   Hyderabad         78.76 289 i P       P        22 16 31.0 -0.8
TIXI  Tiksi             79.63 352   LR      LR       22 49 18.9
        comp=Z,101nm,21.7s,baz=190,slow=34
TIXI  Tiksi             79.63 352 i P       P        22 16 33.5 -1.8
TIXI                                pmax    pmax
        comp=Z,16nm,2.1s
J20K  Nowinta River     79.92  20   P       P        22 16 38.1 +1.0
J20K                                IAmb    IAmb     22 16 41.0
        comp=Z,14nm,1.1s
CAST  Castle Rocks      80.19  21   P       P        22 16 38.2 -0.3
DGZ   Jazzator, Alta    80.41 323 i P       P        22 16 38.4 -1.8
DGZ                                 pmax    pmax
        comp=Z,8.0nm,1.7s
I21K  Tanana            81.27  20   P       P        22 16 44.5 +0.2
RND   Reindeer          81.38  22   P       P        22 16 44.8 -0.2
RND                                 pmax    pmax
        comp=Z,7.0nm,0.8s
RND   Reindeer          81.38  22   P       P        22 16 44.8 -0.2
MCK   McKinley          81.53  22   P       P        22 16 45.2 -0.5
MCK                                 pmax    pmax
        comp=Z,15nm,1.0s
MCK   McKinley          81.53  22   P       P        22 16 45.2 -0.5
MCK                                 IAmb    IAmb     22 16 45.9
        comp=Z,15nm,1.0s
KLU   Klutina           81.53  25   P       P        22 16 46.2 +0.4
KLU                                 IAmb    IAmb     22 16 51.4
        comp=Z,25nm,1.3s
MLY   Manley            81.61  20   P       P        22 16 46.3 +0.1
NEA2  Nenana            81.95  21   P       P        22 16 47.2 -0.7
CCB   Clear Creek Bu    82.44  21   P       P        22 16 49.5 -0.9
COLA  College           82.54  21 i P       P        22 16 48.5 -2.4
COLA                                pmax    pmax
        comp=Z,27nm,2.1s
HDA   Harding Lake      82.63  22   P       P        22 16 50.7 -0.8
MK31  Makanchi Array    82.69 319 i P       P        22 16 51.6 -0.6
MK31  Makanchi Array    82.69 319   P       P        22 16 51.8 -0.4
MKAR  Makanchi Array    82.69 319   P       P        22 16 51.5 -0.7
        comp=Z,3.9nm,0.7s,baz=97,slow=6.0,SNR=21
MKAR                                LR      LR       22 54 42.1
        comp=Z,101nm,19.8s,baz=84,slow=36
MKAR  Makanchi Array    82.69 319   P       P        22 16 51.8 -0.4
IL31                    82.84  22   P       P        22 16 52.0 -0.4
IL31                                IAmb    IAmb     22 16 53.7
        comp=Z,14nm,1.5s
ILAR  Eielson Array     82.84  22   P       P        22 16 51.1 -1.4
        comp=Z,2.0nm,0.6s,baz=240,slow=5.5,SNR=28
ILAR                                LR      LR       22 48 55.8
        comp=Z,593nm,21.6s,baz=250,slow=32
ILAR  Eielson Array     82.84  22   P       P        22 16 51.7 -0.8
ILAR  Eielson Array     82.84  22   P       P        22 16 51.7 -0.8
MAKZ  Makanchi          82.90 319   P       P        22 16 52.5 -0.7
MAKZ                                pmax    pmax
        comp=Z,10.0nm,1.3s
MAKZ  Makanchi          82.90 319   P       P        22 16 52.5 -0.7
L26K  Log Cabin Wild    83.33  24   P       P        22 16 55.8 +0.6
L26K                                IAmb    IAmb     22 17 15.1
        comp=Z,14nm,1.5s
DOT   Dot Lake          83.35  23   P       P        22 16 55.6 +0.4
ZALV  Zalesovo Beam     83.44 326   P       P        22 16 54.1 -1.7
        comp=Z,1.6nm,0.4s,baz=121,slow=5.8,SNR=9.1
ZALV                                LR      LR       22 51 44.7
        comp=Z,78nm,22.0s,baz=114,slow=34
M27K  Edge Creek, AK    83.63  25   P       P        22 16 57.6 +0.8
M27K                                IAmb    IAmb     22 17 02.2
        comp=Z,21nm,1.3s
QSPA  South Pole Qui    83.67 180   P       P        22 16 57.8 +0.8
TOLK  Toolik Lake Re    84.05  18   P       P        22 16 59.3 +0.6
MAW   Mawson            84.92 203   P       P        22 17 03.5 +0.4
        comp=Z,21nm,0.5s,baz=100,slow=5.3,SNR=67
MAW                                 LR      LR       22 51 17.9
        comp=Z,186nm,21.9s,baz=64,slow=33
MAW   Mawson            84.92 203   P       P        22 17 03.1  0.0
        baz=85,SNR=21
MAW   Mawson            84.92 203   P       P        22 17 04.2 +1.1
MAW                                 pmax    pmax
        comp=Z,5.0nm,0.7s
MAW   Mawson            84.92 203   P       P        22 17 04.2 +1.1
EGAK  Eagle             85.00  23   P       P        22 17 03.9 +0.4
EGAK                                IAmb    IAmb     22 17 06.4
        comp=Z,9.7nm,1.2s
KSH   Kashi             85.34 310   P       P        22 17 08.1 +2.2
KSH                                 S       S        22 27 31.0 -1.6
KSH                                 SS      SS       22 33 14.0 +5.5
KSH                                 pmax    pmax
        comp=Z,8.0nm,0.7s
KSH                                 pmax    pmax
        comp=Z,280nm,5.4s
KSH                                 LR      LR
        comp=Z,250nm,5.5s
KSH                                 LR      LR
        comp=Z,220nm,5.5s
KSH                                 LR      LR
        comp=Z,280nm,6.0s
BOOM  Boomskoye usch    85.98 313   P       P        22 17 09.2  0.0
BOOM                                pmax    pmax
        comp=Z,6.0nm,0.7s
BOOM  Boomskoye usch    85.98 313   P       P        22 17 09.2  0.0
BOOM                                IAmb    IAmb     22 17 12.7
        comp=Z,5.5nm,0.7s
KURK  Kurchatov         86.10 322ceP        P        22 17 07.5 -1.8
KURK                                pmax    pmax
        comp=Z,13nm,2.5s
KURK  Kurchatov         86.10 322   P       P        22 17 07.7 -1.6
KURK                                IAmb    IAmb     22 17 08.2
        comp=Z,10nm,1.4s
NIL   Nilore            86.37 304   P       P        22 17 10.9 -0.2
NIL                                 pmax    pmax
        comp=Z,9.0nm,0.8s
NIL   Nilore            86.37 304   P       P        22 17 10.9 -0.2
NIL                                 IAmb    IAmb     22 17 12.7
        comp=Z,8.6nm,0.8s
AAK   Ala-Archa         87.06 313 i P       P        22 17 13.2 -1.2
AAK                                 pmax    pmax
        comp=Z,9.0nm,0.7s
AAK   Ala-Archa         87.06 313   P       P        22 17 14.5 +0.1
DLBC  Dease Lake        87.70  31   LR      LR       22 51 00.9
        comp=Z,338nm,20.1s,baz=248,slow=32
NRIK  Noril'sk          87.98 341   P       P        22 17 16.4 -1.7
        comp=Z,5.4nm,0.7s,baz=116,slow=5.4,SNR=7.0
NRIK                                LR      LR       22 56 06.5
        comp=Z,128nm,21.5s,baz=117,slow=35
NRIK  Noril'sk          87.98 341ceP        P        22 17 15.4 -2.6
NRIK                                pmax    pmax
        comp=Z,6.0nm,0.7s
INK   Inuvik            89.18  21   P       P        22 17 23.5 -0.1
INK   Inuvik            89.18  21   P       P        22 17 23.5 -0.1
PAHR  Pah Rah Range     90.85  50   P       P        22 17 32.2 -0.1
PAHR                                IAmb    IAmb     22 17 34.5
        comp=Z,7.7nm,1.0s
NVAR  Mina Array Bea    91.53  52   P       P        22 17 36.1 +0.5
        comp=Z,7.1nm,0.8s,baz=255,slow=6.8,SNR=36
NVAR                                LR      LR       22 53 20.0
        comp=Z,260nm,19.6s,baz=275,slow=32
NVAR  Mina Array Bea    91.53  52   P       P        22 17 36.0 +0.4
BRVK  Borovoye          91.63 323 i P       P        22 17 34.6 -0.8
BRVK                                pmax    pmax
        comp=Z,18nm,3.8s
NV11  Mina Array Sit    91.64  52   P       P        22 17 36.3 +0.3
KVN   Kaiserville       91.76  51   P       P        22 17 36.7 +0.1
KVN                                 pmax    pmax
        comp=Z,9.0nm,0.9s
KVN   Kaiserville       91.76  51   P       P        22 17 36.7 +0.1
KVN                                 IAmb    IAmb     22 17 38.8
        comp=Z,8.7nm,0.9s
QSM   Queen of Sheba    92.39  54   P       P        22 17 39.8 +0.4
QSM                                 IAmb    IAmb     22 17 45.4
        comp=Z,8.8nm,1.0s
GWY   Greenwater Val    92.58  54   P       P        22 17 39.7 -0.7
GWY                                 IAmb    IAmb     22 17 46.5
        comp=Z,13nm,1.4s
TPNV  Topopah Spring    92.99  53   P       P        22 17 42.2 -0.1
TPNV                                pmax    pmax
        comp=Z,4.0nm,1.1s
TPNV  Topopah Spring    92.99  53   P       P        22 17 42.2 -0.1
TPNV                                IAmb    IAmb     22 17 44.1
        comp=Z,4.5nm,1.1s
PRN   Pahroc Range      93.98  53   P       P        22 17 47.1 +0.2
SPR3  Spring Creek 3    94.67  51   P       P        22 17 50.2  0.0
SPR3                                IAmb    IAmb     22 17 54.2
        comp=Z,11nm,1.0s
CCUT  Cedar City        95.33  53   P       P        22 17 53.5 +0.4
CCUT                                IAmb    IAmb     22 17 57.2
        comp=Z,10.0nm,1.4s
LCMT  Little Creek M    95.39  53   P       P        22 17 52.9 -0.4
LCMT                                IAmb    IAmb     22 18 11.2
        comp=Z,5.1nm,1.3s
SZCU  Shurtz Canyon     95.55  53   P       P        22 17 54.0 -0.1
SZCU                                IAmb    IAmb     22 18 11.3
        comp=Z,6.8nm,1.3s
KNB   Kanab             95.73  53   P       P        22 17 54.9  0.0
KNB                                 pmax    pmax
        comp=Z,14nm,1.4s
KNB   Kanab             95.73  53   P       P        22 17 54.9  0.0
YKA   Yellowknife Ar    95.86  28   P       P        22 17 54.2 -0.4
        comp=Z,1.8nm,0.7s,baz=264,slow=4.5,SNR=23
YKA                                 LR      LR       23 00 43.9
        comp=Z,119nm,18.2s,baz=0.0,slow=35
YKA   Yellowknife Ar    95.86  28   P       P        22 17 54.8 +0.1
YKA   Yellowknife Ar    95.86  28   P       P        22 17 54.8 +0.1
HVU   Hansel Valley     96.04  49   P       P        22 17 55.6 -0.6
HVU                                 pmax    pmax
        comp=Z,4.0nm,0.9s
HVU   Hansel Valley     96.04  49   P       P        22 17 55.6 -0.6
HVU                                 IAmb    IAmb     22 17 59.9
        comp=Z,3.7nm,0.9s
U15A  North Rim         96.12  54   P       P        22 17 56.6 -0.2
U15A                                IAmb    IAmb     22 18 06.7
        comp=Z,5.9nm,1.1s
PDAR  Pinedale Array    98.46  48   P       P        22 18 06.8 -0.3
        comp=Z,1.5nm,0.7s,baz=239,slow=2.2,SNR=14
PDAR                                LR      LR       22 59 32.3
        comp=Z,300nm,18.4s,baz=294,slow=34
ARU   Arti              98.61 326   LR      LR       23 03 57.7
        comp=Z,114nm,20.8s,baz=86,slow=36
GEYT  Alibeck           99.02 307   LR      LR       23 05 25.5
        comp=Z,56nm,19.7s,baz=245,slow=37
AKTO  Aktyubinsk        99.07 320   LR      LR       23 02 51.9
        comp=Z,46nm,21.6s,baz=76,slow=35
SNAA  Sanae            100.79 187   P       Pdif     22 18 16.9 +0.1
VNA3  Neumayer Olymp   101.92 185   P       Pdif     22 18 20.9 -0.9
VNA2  Neumayer--Watz   102.01 186   P       Pdif     22 18 22.3 +0.2
        baz=4.9,slow=181
TXAR  Lajitas Array    103.19  61   Pdiff   Pdif     22 18 28.7 +0.4
        comp=Z,0.3nm,0.9s,baz=246,slow=6.8,SNR=2.0
SOC   Sochi            112.33 315 i PKIKP   PKiKP    22 23 00.4 -3.9
SOC                                e                 22 23 44.6
SOC                                ePS      PS       22 33 23.9 -1.0
SOC                                eSSS     SSS      22 43 33.7
BRTR  Keskin Array B   117.70 312   PKP     PKPdf    22 23 13.6 -1.4
        comp=Z,0.3nm,0.6s,baz=76,slow=0.6,SNR=1.5
BOSA  Boshof           120.22 232   PKP     PKPdf    22 23 20.0 -0.1
        comp=Z,2.0nm,0.6s,baz=135,slow=1.8,SNR=8.5
BOSA  Boshof           120.22 232   PKIKP   PKPdf    22 23 18.3 -1.8
BOSA  Boshof           120.22 232           PKPdf    22 23 18.3 -1.8
GERES GERESS Array B   126.31 329   PKP     PKPdf    22 23 30.5 -0.6
        comp=Z,0.5nm,0.7s,baz=96,slow=2.7,SNR=5.9
ZARC  Zaragoza, Cauc   130.81  86           PKPdf    22 23 40.0 -0.6
ROSC  El Rosal         131.21  89   PKP     PKPdf    22 23 41.4 -0.5
        comp=Z,7.7nm,0.3s,baz=169,slow=20,SNR=4.1
LPAZ  La Paz           132.05 118   PKP     PKPdf    22 23 42.4 -1.3
        comp=Z,1.4nm,0.7s,baz=276,slow=4.3,SNR=5.3
SDV   Santo Domingo    135.02  84           PKPdf    22 23 48.3 -0.4
CPUP  Villa Florida    135.09 138   PKP     PKPdf    22 23 47.2 -1.1
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	comp=Z,1.6nm,0.8s,baz=161,slow=4.2,SNR=3.3						
LIJA	**Lijar**	**144.52**	**332**	PKP	**PKPab**	**22 24 03.2**	**-0.4**
BOAV	**Boa Vista**	**144.68**	**95**	PKPdf	PKPbc	22 24 05.2	+0.2
BDFB	**Brasilia**	**148.68**	**134**	PKPbc	**PKPdf**	**22 24 13.5**	**+0.7**
	comp=Z,3.2nm,0.5s,baz=17,slow=2.1,SNR=7.8						
BDFB	**Brasilia**	**148.68**	**134**	PKIKP	**PKPdf**	**22 24 12.7**	**-0.1**
BDFB	**Brasilia**	**148.68**	**134**	PKPdf	**PKPdf**	**22 24 12.7**	**-0.1**
TORD	**Torodi Ar. Bea**	**152.55**	**286**	PKPbc	**PKPbc**	**22 24 24.4**	**-1.3**
	comp=Z,10nm,0.6s,baz=45,slow=2.2,SNR=63						
TORD				PKPab	**PKPab**	**22 24 35.4**	**-0.9**
	comp=Z,5.1nm,0.7s,baz=68,slow=3.5,SNR=13						
TORD	**Torodi Ar. Bea**	**152.55**	**286**	PKPdf	**PKPdf**	**22 24 16.8**	**-1.9**
DBIC	**Dimbokro**	**159.68**	**272**	PKP	**PKPdf**	**22 24 26.6**	**-1.5**
	comp=Z,3.2nm,1.2s,baz=342,slow=3.2,SNR=1.6						
DBIC				PKPab	**PKPab**	**22 25 06.1**	**-0.8**
	comp=Z,9.1nm,0.8s,baz=108,slow=4.4,SNR=14						
DBIC	**Dimbokro**	**159.68**	**272**	PKP2	**PKPab**	**22 25 06.4**	**-0.5**
DBIC	**Dimbokro**	**159.68**	**272**		**PKPab**	**22 25 06.4**	**-0.5**

IDC 20 22:09:19.7±7.9**,23°.32S×69°.15E,h0^{km},mb3.9**/5**, mb1 4.0**/5**,mb1mx3.5**/45**,mbtmp3.9**/5**,Error ellipse: s-maj=262.9km s-min=43.1km az=157.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**15.91**	**12**	T	T	22 28 21.0	
	baz=192,slow=76,SNR=7.3						
H08S2	**Diego Garcia H**	**15.91**	**12**	T	T	22 28 25.2	
	baz=192,slow=76,SNR=8.0						
H08S3	**Diego Garcia H**	**15.93**	**12**	T	T	22 28 22.4	
	baz=192,slow=76,SNR=7.7						
CMAR	**Chiang Mai Arr**	**50.70**	**38**	P	P	22 18 20.8	-0.5
	0.4nm,0.3s,baz=229,slow=6.8,SNR=1.4						
MKAR	**Makanchi Array**	**70.79**	**10**	P	P	22 20 38.1	+0.3
	2.5nm,1.1s,baz=197,slow=4.5,SNR=3.9						
TORD	**Torodi Ar. Bea**	**75.27**	**292**	P	P	22 21 05.0	0.0
	1.1nm,1.0s,baz=134,slow=3.8,SNR=4.8						
ZALV	**Zalesovo Beam**	**78.13**	**9**	P	P	22 21 20.3	0.0
	1.9nm,0.8s,baz=212,slow=5.1,SNR=6.2						
SONM	**Songino Array**	**78.34**	**25**	P	P	22 21 22.0	+0.2
	0.2nm,0.4s,baz=219,slow=3.7,SNR=4.0						

IDC 20 22:21:10.7±2.2**,4°.01S×150°.95E,h0^{km},mb3.2**/3**, mb1 3.6**/3**,mb1mx3.1**/38**,mbtmp3.3**/3**,MS3.4**/1**,Ms1 3.4**/1**, ms1mx2.8**/24**,Error ellipse: s-maj=155.5km s-min=31.9km az=125.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**18.50**	**341**	LR	LR	22 31 13.8	
	comp=Z,124nm,20.7s,baz=150,slow=33						
WRA	**Warramunga Arr**	**22.65**	**224**	P	P	22 26 14.2	+0.5
	0.2nm,0.3s,baz=49,slow=9.4,SNR=11						
ASAR	**Alice Springs**	**25.55**	**219**	P	P	22 26 40.7	-0.7
	0.4nm,0.8s,baz=50,slow=8.6,SNR=2.1						
ILAR	**Eielson Array**	**82.14**	**22**	P	P	22 33 33.2	+0.2
	0.2nm,0.5s,baz=241,slow=4.8,SNR=1.9						

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*IDC **20** 22:24:25.5±1.1,29°.03N×81°.54E,h0^{km},mb3.7/9, mb1 3.8/11,mb1mx3.5/61,mbtmp3.7/11,ML3.4/2,MS3.8/5, Ms1 3.9/5,ms1mx3.2/52,Error ellipse: s-maj=36.6km s-min=19.7km az=63.0*

ISC 20 22:24:31.0±1.1**,29°.2N**±0°.1×**81°.54E**±0°.08**,h33^{km},n19, σ1^{s}.12**/16**,mb3.6**/9**,MS3.8**/5**,Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**1.21**	**288**	*e*PG	**Pb**	**22 24 54.0**	**+0.5**
PTH				*e*SG	**Sb**	**22 25 09.0**	**+0.1**
THW	**Thamme Wali**	**9.14**	**296**	P	**Pn**	**22 26 41.7**	**+1.1**
CEP	**Cherat**	**9.43**	**302**	P	**Pn**	**22 26 46.1**	**+1.5**
CEP				S	**Sn**	**22 28 27.0**	**-2.5**
AAK	**Ala-Archa**	**14.57**	**339**	Pn	**Pn**	**22 27 53.6**	**-1.4**
	0.1nm,0.3s,baz=203,slow=19,SNR=1.6						
MKAR	**Makanchi Array**	**17.59**	**2**	P	**P**	**22 28 35.2**	**+1.0**
	0.2nm,0.3s,baz=178,slow=12,SNR=9.0						
KURBB	**Kurchatov Arra**	**21.53**	**355**	P	**P**	**22 29 17.1**	**0.0**
	0.6nm,0.5s,baz=182,slow=12,SNR=6.6						
ZALV	**Zalesovo Beam**	**24.86**	**5**	P	**P**	**22 29 50.8**	**+0.5**
	0.8nm,0.5s,baz=198,slow=9.9,SNR=5.1						
SONM	**Songino Array**	**26.73**	**39**	P	**P**	**22 30 07.9**	**+0.3**
	0.3nm,0.7s,baz=226,slow=5.8,SNR=2.5						
GNI	**Garni**	**31.97**	**300**	LR	LR	22 46 00.7	
	comp=Z,111nm,22.0s,baz=232,slow=40						
FINES	**FINESS Array B**	**48.41**	**328**	P	**P**	**22 33 10.4**	**+0.7**
	2.9nm,0.8s,baz=124,slow=7.4,SNR=5.8						
ASAJ	**Asahikawa**	**50.11**	**55**	LR	LR	22 57 17.9	
	comp=Z,81nm,18.6s,baz=100,slow=39						
ARCES	**ARCESS Array B**	**51.24**	**338**	P	**P**	**22 33 31.8**	**+0.7**
	5.9nm,1.2s,baz=102,slow=8.4,SNR=1.8						
VRAC	**Vranov**	**52.47**	**312**	LR	LR	22 58 03.6	
	comp=Z,105nm,18.6s,baz=38,slow=38						
GUMO	**Guam**	**60.34**	**91**	LR	LR	23 02 12.6	
	comp=Z,38nm,19.0s,baz=124,slow=38						
WRA	**Warramunga Arr**	**70.56**	**127**	P	**P**	**22 35 41.9**	**-1.2**
	0.6nm,0.8s,baz=309,slow=5.0,SNR=9.2						
ASAR	**Alice Springs**	**72.79**	**131**	P	**P**	**22 35 55.8**	**-0.6**
	0.5nm,0.8s,baz=317,slow=5.0,SNR=4.7						
TORD	**Torodi Ar. Bea**	**74.94**	**277**	P	**P**	**22 36 08.9**	**-0.3**
	0.4nm,0.8s,baz=52,slow=3.4,SNR=1.1						
BOSA	**Boshof**	**78.72**	**228**	LR	LR	23 09 36.0	
	comp=Z,305nm,21.0s,baz=128,slow=34						
YKA	**Yellowknife Ar**	**87.72**	**7**	P	**P**	**22 37 16.3**	**+0.2**
	0.3nm,0.7s,baz=336,slow=5.1,SNR=4.1						

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*IDC **20** 22:34:39.2±1.6,1°.73N×126°.74E,h0^{km},mb3.8/5, mb1 4.0/6,mb1mx3.4/62,mbtmp3.8/6,ML3.3/1,Error ellipse: s-maj=119.6km s-min=20.2km az=69.0*

*DJA **20** 22:34:44.8±1.4,2°N±4°×12°7E±°,h19^{km}±13^{km},M3.5/6, MLv3.5/6*

*NEIC **20** 22:34:46.5±0.6,1°.7N±0°.1×126°.8E±0°.1,h59^{km}±7^{km}, mb4.1/9,Error ellipse: s-maj=23.5km s-min=11.5km az=45.0*

ISC 20 22:34:45.6±0.9**,1°.72N**±0°.09×**126°.8E**±0°.1**,h50^{km},n21, σ0^{s}.77**/24**,mb3.9**/9**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.09**	**150**	P	**Pn**	**22 35 04.8**	**+0.2**
TNTI				S	**Sn**	**22 35 19.3**	**+0.7**
TNTI	**Ternate**	**1.09**	**150**	Pn	**Pn**	**22 35 05.2**	**+0.6**
TNTI				Sn	**Sn**	**22 35 19.1**	**+0.4**
SGSI	**Sangihe**	**2.34**	**326**	P	**Pn**	**22 35 22.7**	**+1.0**
LBMI	**Labuha**	**2.44**	**164**	P	**Pn**	**22 35 23.6**	**+0.5**
LBMI				S	**Sn**	**22 35 53.0**	**+1.3**
TOLI2	**Tolitoli**	**6.07**	**264**	Pn	**Pn**	**22 36 13.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**19.73**	**183**	P	**P**	**22 39 11.2**	**-0.1**
	0.1nm,0.3s,baz=6.1,slow=11,SNR=1.5						
WB0	**Warramunga Arr**	**22.61**	**161**	P	**P**	**22 39 41.8**	**-0.6**
WB0				IAmb	IAmb	22 39 48.8	
	comp=Z,11nm,1.2s						
WRAB	**Tennant Creek**	**22.75**	**161**	P	**P**	**22 39 42.8**	**-1.1**
WRAB				IAmb	IAmb	22 39 45.9	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**22.76**	**161**	P	**P**	**22 39 43.4**	**-0.6**
	comp=Z,4.1nm,0.9s,baz=340,slow=11,SNR=22						
WRA	**Warramunga Arr**	**22.76**	**161**	P	**P**	**22 39 42.9**	**-1.0**
WB2	**Warramunga Arr**	**22.76**	**161**	P	**P**	**22 39 43.0**	**-0.9**
WB2				IAmb	IAmb	22 39 47.4	
	comp=Z,10nm,1.2s						
WR0	**Warramunga Arr**	**22.84**	**161**	P	**P**	**22 39 44.5**	**-0.2**
ASAR	**Alice Springs**	**26.16**	**165**	P	**P**	**22 40 16.9**	**+1.3**
	comp=Z,2.2nm,0.9s,baz=342,slow=11,SNR=9.1						
MK31	**Makanchi Array**	**59.25**	**326**	P	**P**	**22 44 40.8**	**-1.3**
MKAR	**Makanchi Array**	**59.25**	**326**	P	**P**	**22 44 42.5**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=132,slow=6.9,SNR=6.6						
MKAR	**Makanchi Array**	**59.25**	**326**	P	**P**	**22 44 42.0**	**-0.1**
KURBB	**Kurchatov Arra**	**63.47**	**328**	P	**P**	**22 45 10.6**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=117,slow=6.4,SNR=1.9						
KURK	**Kurchatov**	**63.48**	**328**	P	**P**	**22 45 10.0**	**-0.5**
KURK				IAmb	IAmb	22 45 13.5	
	comp=Z,2.4nm,1.1s						
VNDA	**Vanda**	**81.44**	**173**	P	**P**	**22 46 56.5**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=312,slow=4.1,SNR=4.2						
VNDA	**Vanda**	**81.44**	**173**	P	**P**	**22 46 56.3**	**-0.6**
VNDA				IAmb	IAmb	22 47 12.2	
	comp=Z,2.5nm,1.3s						
QSPA	**South Pole Qui**	**91.64**	**180**	P	**P**	**22 47 46.7**	**-0.6**

TAP 20 22:36:45.0,23°.23N×120°.32E,h15^{km},ML3.6,5C-16D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSHA	**Shanhua**	**0.10**	**198**	⇓*i*P	Pb	22 36 48.7	0.0
	baz=198						
SSHA				*i* S	Sb	22 36 52.0	+0.8
	baz=198						
SCLT	**Jiali**	**0.13**	**244**	⇓*i*P	Pb	22 36 49.0	-0.3
	baz=242						
SCLT				*i* S	Sb	22 36 52.7	+0.7
	baz=242						
CHN8	**Yiju**	**0.15**	**318**	⇑*i*P	Pb	22 36 49.4	-0.3
	baz=321						
CHN8				*i* S	Sb	22 36 53.5	+0.9
	baz=321						
TWK	**Hsinying**	**0.16**	**77**	⇓*i*P	Pb	22 36 50.0	+0.2
	baz=79						
TWK				*i* S	Sb	22 36 53.8	+1.0
	baz=79						
CHN3	**Shinhua**	**0.16**	**166**	⇑*i*P	Pb	22 36 50.1	+0.3
	baz=166						
CHN3				*i* S	Sb	22 36 54.1	+1.2
	baz=166						
SNST	**Tainan City**	**0.16**	**94**	⇓*i*P	Pb	22 36 49.8	0.0
	baz=87						
SNST				*i* S	Sb	22 36 53.4	+0.5
	baz=87						
CHN1	**Nanshi**	**0.20**	**104**	⇓*i*P	Pb	22 36 50.3	-0.1
	baz=97						
CHN1				*i* S	Sb	22 36 54.7	+0.8
	baz=97						
TAI1	**Yung-k'ang**	**0.21**	**204**	P	Pb	22 36 50.8	+0.2
	baz=209						
TAI1				S	Sb	22 36 55.7	+1.4
	baz=209						
WTP	**Ta-pu**	**0.27**	**87**	⇓*i*P	Pb	22 36 51.7	+0.1
	baz=88						
WTP				*i* S	Sb	22 36 56.8	+0.8
	baz=88						
CHN4	**Tsaushan**	**0.28**	**65**	⇓*i*P	Pb	22 36 51.8	0.0
	baz=65						
CHN4				*i* S	Sb	22 36 57.0	+0.8
	baz=65						
SGST	**Jiashian**	**0.28**	**122**	⇑*i*P	Pg	22 36 51.3	+0.2
	baz=112						
SGST				*i* S	Sb	22 36 56.9	+0.5
	baz=112						
TPUB	**Ta-pu**	**0.29**	**76**	⇓*i*P	Pb	22 36 51.8	-0.2
	baz=76						
TPUB				*i* S	Sb	22 36 56.8	+0.1
	baz=76						
CHN2	**Minshiung**	**0.33**	**25**	P	Pb	22 36 53.3	+0.7
	baz=26						
CHN2				S	Sb	22 36 59.0	+1.2
	baz=26						
STYT	**Tauyuan**	**0.41**	**100**	*i* P	Pb	22 36 54.5	+0.5
	baz=90						
STYT				*i* S	Sb	22 37 01.0	+1.0
	baz=90						
WSF	**Szhu**	**0.41**	**347**	*e*P	Pb	22 36 53.9	-0.2
	baz=348						
WSF				*e*S	Sb	22 37 01.3	+1.1
	baz=348						
TWM1	**Shoushan**	**0.42**	**167**	*e*P	Pn	22 36 55.7	-0.9
	baz=166						
STYH	**Taoyuan**	**0.42**	**98**	P	Pb	22 36 54.5	+0.2
	baz=88						
STYH				S	Sb	22 37 00.9	+0.5
	baz=88						
WTK	**Tuku**	**0.46**	**8**	*e*P	Pb	22 36 55.0	+0.1
	baz=354						
WTK				*e*S	Sb	22 37 02.0	+0.6
	baz=354						
CHN5	**Tsauling**	**0.49**	**42**	⇓*i*P	Pb	22 36 55.4	0.0
	baz=42						
CHN5				S	Sb	22 37 03.4	+0.9
	baz=42						
WDLH	**Douliu**	**0.50**	**24**	*e*P	Pb	22 36 55.8	+0.3
	baz=24						
WDLH				*e*S	Sb	22 37 03.9	+1.3
	baz=24						
WGK	**Gukeng**	**0.50**	**26**	*e*P	Pb	22 36 56.1	+0.5
	baz=28						
WGK				*e*S	Sn	22 37 04.9	-1.3
	baz=28						
ALS	**Alishan**	**0.52**	**58**	⇓*i*P	Pb	22 36 56.2	+0.1
	baz=59						
ALS				S	Sb	22 37 05.3	+1.6
	baz=59						
SGLT	**Jiouru**	**0.53**	**163**	*e*P	Pn	22 36 58.3	+0.3
	baz=162						
SSD	**Sandimen**	**0.56**	**149**	⇓*i*P	Pb	22 36 57.2	+0.6
	baz=136						
SSD				*e*S	Sn	22 37 07.5	-0.1
	baz=136						
TSMG	**Majia**	**0.60**	**150**	P	Pb	22 36 57.8	+0.5
	baz=141						
TSMG				*e*S	Sn	22 37 07.8	-0.8
	baz=141						
WDGT	**Dungji**	**0.61**	**273**	⇓*i*P	Pg	22 36 56.9	-0.1
	baz=272						
WDGT				*i* S	Sb	22 37 05.7	-0.1
	baz=272						
WTCT	**Ta-ch'eng**	**0.63**	**357**	*e*P	Pg	22 36 57.5	+0.1
	baz=358						
WTCT				S	Sb	22 37 07.7	+1.2
	baz=358						
YUS	**Yu-Shan**	**0.63**	**66**	P	Pb	22 36 58.8	+0.6
	baz=66						
ELDTW	**Lidau**	**0.64**	**94**	P	Pb	22 36 58.3	+0.3
	baz=94						
ELDTW				*e*S	Sb	22 37 08.0	+1.2
	baz=94						
KAU	**Kaohsiung**	**0.66**	**181**	P	Pn	22 36 59.9	0.0
	baz=181						
KAU				S	Sn	22 37 11.2	+1.1
	baz=181						
WRL	**Guolierlin Hig**	**0.67**	**4**	*e*P	Pb	22 36 58.5	+0.1
	baz=356						
WRL				*e*S	Sb	22 37 08.2	+0.7
	baz=356						
MASBT	**Mashibuluo**	**0.68**	**155**	*e*P	Pb	22 36 59.0	+0.3
	baz=139						
MASBT				*e*S	Sn	22 37 10.7	+0.2
	baz=139						
WJS	**Zhushan**	**0.69**	**32**	P	Pb	22 36 59.3	+0.4
	baz=33						
WJS				S	Sb	22 37 09.6	+1.3
	baz=33						
WNT	**Mingjian**	**0.72**	**27**	P	Pb	22 36 59.8	+0.4
	baz=29						
WNT				S	Sn	22 37 11.0	-0.7
	baz=29						
PHUB	**P'eng-hu**	**0.74**	**292**	P	Pg	22 36 58.9	-0.6
	baz=292						
PHUB				S	Sg	22 37 08.9	-0.4
	baz=292						
SSPT	**Xinbi**	**0.78**	**163**	*e*P	Pn	22 37 01.7	+0.2
	baz=163						
PNG	**Penghu**	**0.78**	**295**	⇓*i*P	Pg	22 36 59.6	-0.5
	baz=295						
PNG				*i* S	Sg	22 37 10.4	-0.1
	baz=295						
SSLB	**Suanglung**	**0.80**	**46**	⇓*i*P	Pb	22 37 00.7	-0.1
	baz=47						
SSLB				*i* S	Sn	22 37 12.6	-1.0
	baz=47						
TWG	**Pinlang**	**0.80**	**120**	⇓*i*P	Pn	22 37 01.6	-0.3
	baz=108						
TWG				*i* S	Sn	22 37 13.8	+0.2
	baz=108						
TWGBT	**Beinan**	**0.81**	**120**	P	Pn	22 37 01.5	-0.5
	baz=108						
TWGBT				S	Sn	22 37 13.4	-0.3
	baz=108						
LONT	**Longtian**	**0.81**	**113**	P	Pn	22 37 01.5	-0.5
	baz=102						
LONT				*e*S	Sn	22 37 13.6	-0.2
	baz=102						
VCHM	**Qimei**	**0.82**	**269**	*e*P	Pg	22 37 00.2	-0.8
	baz=268						
VCHM				*e*S	Sb	22 37 12.1	+0.2
	baz=268						
TYC	**Yuchr**	**0.83**	**36**	⇓*i*P	Pb	22 37 01.5	+0.4
	baz=38						
TYC				*i* S	Sn	22 37 14.2	0.0
	baz=38						
SMLT	**Sun Moon Lake**	**0.84**	**39**	P	Pb	22 37 01.8	+0.4
	baz=40						
SMLT				S	Sn	22 37 14.5	-0.1
	baz=40						
ECL	**Taimali**	**0.86**	**137**	P	Pn	22 37 02.5	-0.2
	baz=147						
ECL				S	Sn	22 37 15.2	+0.3
	baz=147						
WCHH	**Zhanghua**	**0.87**	**14**	*e*P	Pg	22 37 02.1	+0.2
	baz=29						
WCHH				*e*S	Sn	22 37 14.8	-0.4
	baz=29						
WWF	**Wufeng**	**0.88**	**23**	S	Sn	22 37 15.3	-0.1
	baz=24						
WLCH	**Liuqiu**	**0.88**	**177**	*e*P	Pn	22 37 04.4	+1.5
	baz=195						
WLCH				*e*S	Sn	22 37 19.3	+3.8
	baz=195						
FULB	**Fuli**	**0.90**	**92**	P	Pn	22 37 03.5	+0.3
	baz=83						
FULB				S	Sn	22 37 16.9	+1.0
	baz=83						
TTN	**Taitung**	**0.90**	**122**	*e*P	Pn	22 37 04.5	+1.3
	baz=111						
TTN				*e*S	Sn	22 37 19.2	+3.3
	baz=111						
SCZT	**Fangliau**	**0.90**	**162**	⇑*i*P	Pn	22 37 03.2	0.0
	baz=147						
SCZT				S	Sn	22 37 16.9	+0.9
	baz=147						
TWF1	**Yuli**	**0.90**	**82**	*i* P	Pn	22 37 03.1	-0.1
	baz=82						
TWF1				S	Sn	22 37 15.8	-0.3
	baz=82						
YULB	**Yu-li**	**0.91**	**80**	P	Pg	22 37 03.0	+0.3
	baz=88						
YULB				S	Sg	22 37 15.1	+0.5
	baz=88						
VWDT	**VWDT**	**0.91**	**55**	P	Pn	22 37 03.3	-0.1
	baz=44						
VWDT				S	Sn	22 37 16.2	-0.1
	baz=44						
EYUL	**Yuli**	**0.92**	**83**	*e*P	Pg	22 37 03.1	+0.2
	baz=83						
EYUL				*e*S	Sn	22 37 15.9	-0.7
	baz=83						
EDH	**Donghe**	**0.94**	**106**	*e*P	Pn	22 37 04.0	+0.3
	baz=99						
EDH				*e*S	Sn	22 37 17.8	+0.9
	baz=99						
EHY	**Hungye**	**0.96**	**73**	P	Pn	22 37 03.9	-0.1
	baz=74						
EHY				S	Sn	22 37 17.1	-0.3
	baz=74						
TCU	**Taichung**	**0.97**	**20**	*e*P	Pn	22 37 04.4	+0.2
	baz=21						
TCU				*e*S	Sn	22 37 17.9	+0.2
	baz=21						
CHKT	**Chengkung**	**0.97**	**98**	*e*P	Pn	22 37 05.0	+0.8
	baz=97						
CHKT				*e*S	Sn	22 37 19.4	+1.7
	baz=97						
WPL	**Puli Township**	**0.97**	**37**	*i* P	Pg	22 37 03.9	+0.1
	baz=37						
EAST	**Anshuo**	**0.97**	**150**	⇑*i*P	Pn	22 37 04.5	+0.2
	baz=150						
EAST				S	Sn	22 37 19.7	+1.8
	baz=150						
WCS	**Beigang Elemen**	**0.98**	**33**	*e*P	Pb	22 37 03.7	-0.1
	baz=34						
WCS				*e*S	Sn	22 37 17.6	-0.5
	baz=34						
HGSD	**Ruisui**	**1.04**	**75**	*e*P	Pg	22 37 05.9	+0.7
	baz=81						
HGSD				*e*S	Sn	22 37 20.6	+1.1
	baz=81						
OWD	**Renai**	**1.06**	**47**	P	Pb	22 37 05.4	+0.1
	baz=36						
SLIU	**Shizi**	**1.10**	**156**	*e*P	Pb	22 37 04.9	-0.9
	baz=157						
CHGB	**Renai**	**1.14**	**43**	*e*P	Pb	22 37 06.0	-0.5
	baz=43						
WDJ	**Dajia District**	**1.15**	**15**	*e*P	Pg	22 37 07.4	+0.2
	baz=26						
WDJ				*e*S	Sg	22 37 23.4	+1.2
	baz=26						
ESL	**Shilin**	**1.17**	**60**	*e*P	Pn	22 37 06.1	-0.9
	baz=67						
ESL				*e*S	Sg	22 37 24.0	+1.1
	baz=67						
TWQ1	**Liyutan**	**1.19**	**20**	*e*P	Pg	22 37 07.6	-0.3
	baz=22						
TWQ1				*e*S	Sg	22 37 24.2	+0.8
	baz=22						
WHP	**Taichung City**	**1.19**	**29**	*e*P	Pn	22 37 07.3	0.0
	baz=30						
WHP				*e*S	Sg	22 37 24.5	+1.0
	baz=30						
LDUT	**Ludao**	**1.20**	**118**	*e*P	Pg	22 37 07.8	-0.3
	baz=117						
LDUT				*e*S	Sg	22 37 25.1	+1.4
	baz=117						
NSY	**Sanyi**	**1.25**	**19**	*e*P	Pg	22 37 08.8	-0.2
	baz=20						
NSY				*e*S	Sg	22 37 27.0	+1.7
	baz=20						
WHF	**Hehuan Shan**	**1.25**	**43**	*e*P	Pg	22 37 09.4	+0.1
	baz=45						
WHF				*e*S	Sg	22 37 26.9	+1.2
	baz=45						
TDCB	**Techi**	**1.27**	**37**	*e*P	Pn	22 37 08.6	+0.2
	baz=45						
HEN	**Hengchun**	**1.28**	**162**	*e*P	Pg	22 37 09.7	0.0
	baz=161						
HEN				*e*S	Sg	22 37 28.9	+2.5
	baz=161						
FUSS	**Fushou**	**1.32**	**40**	*e*P	Pb	22 37 09.8	+0.2
	baz=40						
ETLH	**Xiulin Townshi**	**1.44**	**47**	*e*P	Pb	22 37 11.7	0.0
	baz=49						
TWD	**Chiawan**	**1.44**	**54**	*e*P	Pb	22 37 11.8	+0.2
	baz=55						
NACB	**Ninganchiao**	**1.50**	**51**	*e*P	Pb	22 37 12.4	-0.2
	baz=52						
NSTT	**Nanjuang**	**1.52**	**24**	*e*P	Pb	22 37 12.6	-0.4
	baz=26						
NNSB	**Datong**	**1.54**	**39**	*e*P	Pn	22 37 12.1	0.0
	baz=41						
NNS	**Nan Shan**	**1.54**	**38**	*e*P	Pb	22 37 13.6	+0.2
	baz=40						
LIOB	**Emei**	**1.54**	**24**	*e*P	Pb	22 37 13.0	-0.4
	baz=26						
NSK	**Sanguang**	**1.72**	**33**	*e*P	Pb	22 37 16.0	-0.5
	baz=35						
NSK				*e*S	Sb	22 37 38.6	+0.6
	baz=35						
YHNB	**Yeheng**	**1.73**	**34**	*e*P	Pb	22 37 15.9	-0.6
	baz=35						
YHNB				*e*S	Sb	22 37 39.0	+0.9
	baz=35						
EWUT	**Wuta**	**1.80**	**48**	*e*P	Pg	22 37 19.9	+0.4
	baz=69						
ENTT	**Nioudou**	**1.81**	**39**	*e*P	Pb	22 37 18.1	+0.2
	baz=31						
TWE	**Neicheng**	**1.93**	**39**	*e*P	Pb	22 37 20.5	+0.6
	baz=42						
TWE				*e*S	Sg	22 37 46.8	-0.2
	baz=42						
TWC	**Suao**	**1.96**	**45**	*e*P	Pb	22 37 21.2	+0.8
	baz=33						
KNM	**Kinmen**	**2.09**	**305**	*e*P	Pb	22 37 23.3	+0.6
	baz=301						
PTMZ	**Houxiangcun**	**2.11**	**329**	*e*P	Pn	22 37 21.1	+1.3
	baz=327						
KNMB	**Chin-men Tao**	**2.15**	**305**	*e*P	Pn	22 37 20.1	-0.4
	baz=304						
ZPLA	**Ao Xicun**	**2.46**	**287**	*e*P	Pn	22 37 23.9	-0.8
	baz=286						

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*IDC **20** 22:40:39.4±0.8,76°.17N×24°.66E,h0^{km},mb3.6/6, mb1 3.6/11,mb1mx3.2/69,mbtmp3.6/11,ML2.8/4,Error ellipse: s-maj=20.1km s-min=11.2km az=67.0*

*NAO **20** 22:40:40.2±1.0,76°.12N×24°.24E,h9^{km}±9^{km},ML3.6*

*IEPN **20** 22:40:42.0,76°.10N×24°.02E,h10^{km}*

*BER **20** 22:40:42.3±2.7,76°.12N×24°.79E,h20^{km}±7^{km},ML3.0,*

MW3.1, ML3.6(NAO), Confirmed Earthquake
*KOLA **20** 22:40:42.5, 75°.98N×25°.89E, h0^{km}, ML2.8, Error ellipse: s-maj=39.4km s-min=28.5km az=70.0, Barentz Sea*
ISC 20 22:40:39.7±1.1**, 76°.08N**±0°.03×**24°.28E**±0°.04**, h13**^{km}±8^{km}**, n61, σ2^{s}.28**/101**, mb3.5**/6**, 1C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPEN	Hopen	0.47	21	Pg	Pg	22 40 49.2	+0.4
HOPEN				Lg	Lg	22 40 54.6	
HOPEN	Hopen	0.47	21	eP	Pg	22 40 49.3	+0.4
HOPEN				eS	Sg	22 40 54.8	-0.3
HOPEN				IAML		22 40 55.2	
	comp=Z,2μm,0.4s						
HOPEN	Hopen	0.47	21	⇑iP	Pg	22 40 49.3	+0.4
HOPEN				i S	Sg	22 40 54.8	-0.3
BJO1	Bjornoya	2.08	223	Pn	Pn	22 41 14.0	-0.1
BJO1				Pg	Pg	22 41 19.6	0.0
BJO1				Sn	Sn	22 41 40.7	+0.9
BJO1				Lg	Lg	22 41 47.4	
BJO1	Bjornoya	2.08	223	eP	Pn	22 41 15.2	+1.1
BJO1				ePg	Pg	22 41 20.7	+1.2
BJO1				eS	Sn	22 41 40.2	+0.4
BJO1				eSg	Sg	22 41 47.3	+0.8
BJO1				IAML		22 41 51.3	
	comp=Z,228nm,0.6s						
BJO1	Bjornoya	2.08	223	P	Pn	22 41 15.5	+1.4
BJO1				eS	Sn	22 41 40.1	+0.2
HSPB	Hornsund (broa	2.25	299	Pn	Pn	22 41 18.0	+1.6
HSPB				Lg	Lg	22 41 51.7	
HSPB	Hornsund (broa	2.25	299	eP	Pn	22 41 18.0	+1.6
HSPB				eS	Sn	22 41 43.7	-0.2
HSPB				eSg	Sg	22 41 50.6	-1.2
HSPB				IAML		22 41 55.0	
	comp=Z,453nm,1.0s						
HSPB	Hornsund (broa	2.25	299	eP	Pn	22 41 17.6	+1.2
HSPB				eS	Sn	22 41 44.3	+0.4
SPA0	Spitsbergen Ar	2.75	324	Pn	Pn	22 41 24.0	+0.6
	baz=142,slow=14						
SPA0				Sn	Sn	22 41 56.2	-0.2
	baz=133,slow=22						
SPA0				Lg	Lg	22 42 05.6	
	baz=123,slow=37						
SPA0	Spitsbergen Ar	2.75	324	Pn	Pn	22 41 24.0	+0.6
	baz=142,slow=14						
SPA0				Sn	Sn	22 41 56.2	-0.2
	baz=133,slow=22						
SPA0				Sg	Sg	22 42 05.6	-2.4
	baz=123,slow=37						
SPA0				IAML		22 42 19.4	
	comp=Z,277nm,0.6s						
SPITS	Spitsbergen Ar	2.75	324	Pn	Pn	22 41 24.1	+0.7
	baz=138,slow=16,SNR=467						
SPITS				Sn	Sb	22 42 04.6	+2.3
	baz=114,slow=27,SNR=5.3						
BRBA	Barentsburg A	3.01	316	Pn	Pn	22 41 27.8	+0.9
BRBA				Sn	Sn	22 42 03.2	+0.4
BRBA				Lg	Lg	22 42 12.4	
BRBA	Barentsburg A	3.01	316	Pn	Pn	22 41 27.8	+0.9
BRBA				Sn	Sn	22 42 03.2	+0.4
BRBA				Sg	Sb	22 42 12.4	+2.9
BRBB	Barentsburg B	3.03	317	Pn	Pn	22 41 27.9	+0.7
BRBB				Sn	Sn	22 42 04.1	+0.8
BRBB				Lg	Lg	22 42 15.1	
BRBB	Barentsburg B	3.03	317	Pn	Pn	22 41 27.9	+0.7
BRBB				Sn	Sn	22 42 04.1	+0.8
BRBB				Sg	Sg	22 42 15.1	-1.9
KBS	Kingsbay	3.91	323	Pn	Pn	22 41 39.7	+0.4
KBS				Sn	Sn	22 42 25.9	+1.0
KBS				Lg	Lg	22 42 41.8	
KBS	Kingsbay	3.91	323	eP	Pn	22 41 39.2	0.0
KBS				eS	Sn	22 42 21.4	-3.5
KBS				eSg	Sg	22 42 40.6	-4.5
KBS				IAML		22 42 51.5	
	comp=Z,223nm,0.5s						
KBS	Kingsbay	3.91	323	eP	Pn	22 41 39.2	0.0
KBS				eS	Sn	22 42 22.2	-2.7
HAMF	Hammerfest	5.47	182	Pn	Pn	22 42 01.5	+0.9
HAMF				Sn	Sn	22 42 59.7	-3.5
HAMF	Hammerfest	5.47	182	eP	Pn	22 42 01.4	+0.7
HAMF				eS	Sn	22 42 59.5	-3.8
HAMF				IAML		22 43 02.8	
	comp=Z,21nm,0.3s						
KEV	Kevo	6.41	171	Pn	Pn	22 42 14.7	+1.2
KEV				Sn	Sn	22 43 23.1	-3.2
KEV	Kevo	6.41	171	eP	Pn	22 42 14.7	+1.2
KEV				eS	Sn	22 43 21.8	-4.6
ARA0	ARCESS Array S	6.59	176	Pn	Pn	22 42 17.1	+1.1
	baz=358,slow=12						
ARA0				Sn	Sn	22 43 26.9	-4.0
	baz=1.9,slow=22						
ARA0	ARCESS Array S	6.59	176	Pn	Pn	22 42 17.1	+1.1
	baz=358,slow=12						
ARA0				Sn	Sn	22 43 26.9	-4.0
	baz=1.9,slow=22						
ARA0				IAML		22 43 35.9	
	comp=Z,9.8nm,0.2s						
ARCES	ARCESS Array B	6.59	176	Pn	Pn	22 42 17.9	+1.8
	baz=358,slow=11,SNR=38						
ARCES				Sn	Sn	22 43 25.1	-5.8
	baz=358,slow=20,SNR=8.9						
ARCES	ARCESS Array B	6.59	176	P	Pn	22 42 17.6	+1.6
ARCES				S	Sn	22 43 27.6	-3.3
ZFI	Zemlya Franca-	6.61	34	eP	Pn	22 42 16.6	+0.4
ZFI				eS	Sn	22 43 26.6	-4.6
	comp=Z,49nm,1.8s						
ZFI2	Zemlya Franca-	6.61	34	eP	Pn	22 42 16.2	0.0
ZFI2				eS	Sn	22 43 26.3	-4.9
	comp=Z,42nm,1.3s						
JETT	Jettan, Norway	6.66	192	Pn	Pn	22 42 18.5	+1.5
JETT				Sn	Sn	22 43 28.2	-4.4
JETT				IAML		22 43 46.0	
	comp=Z,29nm,0.4s						
TRO	Tromso	6.67	196	Pn	Pn	22 42 17.9	+0.9
TRO				Sn	Sn	22 43 30.8	-1.9
TRO	Tromso	6.67	196	eP	Pn	22 42 18.2	+1.1
TRO				eS	Sn	22 43 28.1	-4.6
TRO				IAML		22 43 49.9	
	comp=Z,10.0nm,0.6s						
KTK1	Kautokeino	7.11	183	eP	Pn	22 42 25.4	+2.2
KTK1				eS	Sn	22 43 39.9	-3.8
KTK1				IAML		22 44 01.2	
	comp=Z,8.5nm,0.5s						
KIF	Kilpisjarvi	7.19	190	Pn	Pn	22 42 26.0	+1.8
KIF				Sn	Sn	22 43 41.0	-4.5
KIF	Kilpisjarvi	7.19	190	eP	Pn	22 42 25.7	+1.6
KIF				eS	Sn	22 43 40.2	-5.2
TERR	Teriberka	7.61	150	P	Pn	22 42 27.1	-2.9
TERR				S	Sn	22 43 47.8	-8.1
HEF	Hetta	7.71	182	eP	Pn	22 42 32.9	+1.5
LOF	Lofoten	8.62	208	eP	Pn	22 42 45.4	+1.5
LOF				eS	Sn	22 44 15.1	-5.6
APA0	Apatity Array	8.92	158	Pn	Pn	22 42 48.0	0.0
	baz=349,slow=11						
APA0				Sn	Sn	22 44 21.1	-7.0
	baz=348,slow=22						
APA0	Apatity Array	8.92	158	Pn	Pn	22 42 48.0	0.0
	baz=349,slow=11						
APA0				Sn	Sn	22 44 21.1	-7.0
	baz=348,slow=22						
APA0	Apatity Array	8.92	158	P	Pn	22 42 47.8	-0.2
APA0				S	Sn	22 44 21.1	-7.0
APA	Apatity	9.00	157	S	Sn	22 44 22.5	-7.5
NOR	Nord	9.40	324	Pn	Pn	22 42 52.5	-1.9
NOR	Nord	9.40	324	i P	Pn	22 42 52.0	-2.4
NOR				i S		22 43 06.0	
NOR				i P	PcP	22 49 04.0	-7.9
NOR	Nord	9.40	324	eP	Pn	22 42 52.3	-2.1
LSH	Leshukonskoye	13.20	137	eP	Pn	22 43 42.8	-3.5
	comp=Z,70nm,2.6s						
LSH				eS	Sn	22 46 00.2	-12
FIA0	FINESS Array S	14.72	177	Pn	Pn	22 44 05.3	-1.9
	baz=357,slow=12						
FIA0	FINESS Array S	14.72	177	Pn	Pn	22 44 05.3	-1.9
	baz=357,slow=12						
FINES	FINESS Array B	14.72	177	Pn	Pn	22 44 05.0	-2.1
	comp=Z,0.1nm,0.3s,baz=355,slow=11,SNR=6.0						
FINES				Sn	Sn	22 46 35.5	-14
	comp=Z,0.1nm,0.3s,baz=356,slow=17,SNR=2.0						
NOA	NORSAR Array B	15.77	204	Pn	Pn	22 44 21.8	+0.7
	comp=Z,0.0nm,0.3s,baz=13,slow=14,SNR=1.4						
KLMR	Klimovskoe	16.18	153	eP	Pn	22 44 22.4	-3.9
	comp=Z,52nm,3.2s						
KLMR				eS	Sn	22 47 10.3	-15
PRGR	Permogore	16.23	142	eP	Pn	22 44 23.9	-2.9
PRGR				eS	Sn	22 47 09.2	-17
HFS	Hagfors	16.45	199	Pn	Pn	22 44 29.9	+0.2
	comp=Z,0.1nm,0.3s,baz=22,slow=8.0,SNR=1.0						
HFS	Hagfors	16.45	199	P	Pn	22 44 29.9	+0.2
	baz=27,slow=14						
HFS	Hagfors	16.45	199	P	Pn	22 44 29.9	+0.2
	baz=27,slow=14						
ARU	Arti	23.38	128	P	P	22 45 49.3	+1.8
	comp=Z,0.5nm,0.4s,baz=322,slow=12,SNR=4.2						
ZALV	Zalesovo Beam	31.46	100	P	P	22 47 01.1	+0.8
	comp=Z,0.4nm,0.4s,baz=316,slow=8.0,SNR=2.4						
KURBB	Kurchatov Arra	33.06	109	P	P	22 47 15.7	+1.4
	comp=Z,0.5nm,0.2s,baz=339,slow=7.0,SNR=2.0						
MKAR	Makanchi Array	37.52	107	P	P	22 47 54.3	+1.5
	comp=Z,0.5nm,0.7s,baz=335,slow=8.4,SNR=5.7						
TORD	Torodi Ar. Bea	64.08	205	P	P	22 51 15.3	+2.3
	comp=Z,0.5nm,1.0s,baz=7.5,slow=8.9,SNR=2.4						
TXAR	Lajitas Array	69.95	313	P	P	22 51 51.7	+1.4
	comp=Z,0.2nm,0.6s,baz=35,slow=8.0,SNR=3.6						

DNK 20 22:44:31.8±5.2**, 72°.45N**×**29°.57W, h14**^{km}±52^{km}**, ML2.1, Eastern Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUMG	Summit	2.69	277	i P	Pn	22 45 12.6	-2.2
SUMG				i S	Sn	22 45 46.4	-0.8
SUMG				IAML		22 45 51.4	
	comp=Z,17nm,0.7s						
SUMG	Summit	2.69	277	i P	Pn	22 45 12.2	-2.6
SUMG				i S	Sn	22 45 46.9	-0.4
SUMG				IAML		22 45 51.4	
	comp=Z,17nm,0.7s						
SCO	Scoresbysund	3.14	125	i P	Pn	22 45 23.0	+2.4
SCO				i S	Sn	22 45 52.8	-5.0
SCO				IAML		22 46 09.1	
	comp=Z,11nm,0.7s						
SCO	Scoresbysund	3.14	125	i P	Pb	22 45 23.9	-3.3
SCO				eS	Sn	22 45 54.6	-3.2
SCO				IAML		22 46 09.5	
	comp=Z,11nm,0.7s						
SOEG	Soedalen	4.32	189	i P	Pn	22 45 33.6	-3.2
SOEG				eS	Sn	22 46 21.1	-5.8
SOEG	Soedalen	4.32	189	i P	Pn	22 45 34.0	-2.9
ICESG	Greenland Ices	4.74	229	i P	Pn	22 45 43.4	+0.4
ICESG				eS	Sn	22 46 35.1	-2.7
ICESG	Greenland Ices	4.74	229	i P	Pn	22 45 43.4	+0.4
ICESG				i S	Sn	22 46 35.5	-2.3

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*MOS **20** 22:44:46.4±1.1, 42°.24N×143°.04E, h63^{km}, mb4.1/2, Error ellipse: s-maj=10.7km s-min=7.5km az=73.8*
*NEIC **20** 22:44:48.3±0.8, 42°.24N±0°.06×143°.1E±0°.1, h65^{km}±5^{km}, mb4.3/6, Error ellipse: s-maj=11.7km s-min=8.0km az=72.0*
*SKHL **20** 22:44:48.8±0.2, 42°.20N×143°.10E, h75^{km}±5^{km}, mb5.0/3*
*IDC **20** 22:44:48.5±2.2, 42°.22N×143°.02E, h67^{km}±18^{km}, mb3.5/20, mb1 3.6/23, mb1mx3.5/63, mbtmp3.8/23, MS2.9/2, Ms1 2.9/2, ms1mx2.6/35, Error ellipse: s-maj=20.9km s-min=16.7km az=154.0*
*NIED **20** 22:44:49.1, 42°.32N×143°.05E, h49^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.76; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$-0.32; $M_{r\theta}$0.39; $M_{\theta\phi}$-0.27; $M_{\phi r}$0.67; Fault plane solution: $M_0$1.04000×10^{15} NP1:ϕ_s37.00000°, δ69.00000°, λ81.00000°. NP2:ϕ_s240.00000°, δ23.00000°, λ112.00000°.*
*JMA **20** 22:44:49.1±0.1, 42°.32N×143°.05E, h49^{km}±1^{km}, M3.8*
JMA Felt I J1.
ISC 20 22:44:47.9±0.7**, 42°.23N**±0°.04×**143°.13E**±0°.03**, h60**^{km}±5^{km}**, n84, σ1^{s}.13**/101**, mb3.9**/23**, 7C-6D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTHR	Tokachihiroo	0.14	63	⇑P	Pn	22 44 57.1	0.0
JTHR				eS	Sn	22 45 03.5	-0.2
JEM	Erimo	0.21	174	⇑P	Pn	22 44 58.3	+0.9
ERM	Erimo	0.21	174	PN	Pn	22 44 58.4	+1.0
ERM						22 45 05.5	
ERM	Erimo	0.21	174		Pn	22 44 58.4	+1.0
ERM				Sn	Sn	22 45 05.5	+1.2
JNBK	Urakawa-nobuka	0.28	281	⇑P	Pn	22 44 57.3	-0.6
JNBK				eS	Sn	22 45 04.1	-1.0
JCH	Churui	0.42	24	⇑P	Pn	22 44 58.7	-0.4
JCH				eS	Sn	22 45 06.3	-0.9
JSHD	Hidakashinhida	0.52	291	⇓P	Pn	22 44 59.8	-0.3
JBT2	Biratori 2	0.79	315	⇓P	Pn	22 45 02.6	-0.7
JOB	Onbets	0.85	37	⇑P	Pn	22 45 04.8	+0.8
JOB				eS	Sn	22 45 17.2	+1.3
JIAM	Iburiatsuma	0.98	294	P	Pn	22 45 06.5	+0.9
JFR	Furan	1.02	337	P	Pn	22 45 05.1	-1.1
JAR	Ashorobuto	1.17	24	⇑P	Pn	22 45 07.9	-0.3
JAR				eS	Sn	22 45 22.1	-1.1
JEW	Eniwo	1.39	297	⇓P	Pn	22 45 11.3	+0.3
JEW				eS	Sn	22 45 28.2	-0.2
JEW	Eniwo	1.39	297		Pn	22 45 10.9	-0.1
JEW				Sn	Sn	22 45 28.1	-0.3
JAK	Akkeshi	1.39	56	⇑P	Pn	22 45 11.3	+0.2
JAK				eS	Sn	22 45 28.5	+0.1
JAB	Ashibetsu	1.44	333	⇓P	Pn	22 45 12.1	+0.3
AKK	Akkeshi	1.49	57	eP	Pn	22 45 12.7	+0.3
AKK				eS	Sn	22 45 30.2	-0.7
JKA	Kamikawa-asahi	1.93	349	eP	Pn	22 45 18.8	+0.4
JKA	Kamikawa-asahi	1.93	349	Pn	Pn	22 45 18.5	+0.2
ASAJ	Asahikawa	1.93	349	P	Pn	22 45 18.8	+0.4
	36nm,0.3s,baz=198,slow=16,SNR=99						
ASAJ				S	Sn	22 45 48.4	+6.9
	18nm,0.3s,baz=214,slow=32,SNR=8.3						
ASAJ				LR	LR	22 46 24.5	
	comp=Z,172nm,19.8s,baz=223,slow=50						
JTM	Tenmabayashi	2.11	228		Pn	22 45 22.0	+1.2
NMR	Nemuro--Hokkai	2.23	58	⇓iPN	Pn	22 45 21.9	-0.5
NMR				i S	Sn	22 45 47.8	-1.0
NMR	Nemuro--Hokkai	2.23	58	i P	Pn	22 45 22.5	+0.1
NMR				i S	Sn	22 45 47.8	-1.0
GLVR	Golovnino	2.31	48	⇓iPN	Pn	22 45 24.6	+1.0
GLVR				i S	Sn	22 45 51.4	+0.5
GLVR				pmax	pmax		
	comp=N,106nm,0.2s						
GLVR				pmax	pmax		
	comp=E,65nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,310nm,0.2s						
GLVR				smax	smax		
	comp=N,3μm,0.2s						
GLVR				smax	smax		
	comp=E,4μm,0.2s						
GLVR	Golovnino	2.31	48	i P	Pn	22 45 24.6	+1.0
GLVR				AMB	AMB	22 45 27.0	
	comp=E,160nm,0.3s						
GLVR				i S	Sn	22 45 51.4	+0.5
GLVR				A	A	22 45 53.0	
	comp=E,960nm,0.3s						
GLVR				A	A	22 45 53.0	
	comp=E,1μm,0.3s						
RUSJ	Misakicho	2.43	39	ePN	Pn	22 45 27.5	+2.3
RUSJ				eS	Sn	22 45 56.1	+2.3
YUK	Yuzh-Kuril'sk	2.70	47	ePN	Pn	22 45 30.4	+1.6
YUK				eS	Sn	22 46 00.9	+0.7
YUK				pmax	pmax		
	comp=Z,156nm,0.2s						
YUK				pmax	pmax		
	comp=N,62nm,0.1s						
YUK				smax	smax		
	comp=N,1μm,0.4s						
YUK				smax	smax		
	comp=E,447nm,0.1s						
YUK	Yuzh-Kuril'sk	2.70	47	eP	Pn	22 45 30.4	+1.6
YUK				AMB	AMB	22 45 36.0	
	comp=E,170nm,0.2s						
YUK				eS	Sn	22 46 00.9	+0.7
YUK				A	A	22 46 07.7	
	comp=E,1μm,0.4s						
YUK				A	A	22 46 07.7	
	comp=E,450nm,0.4s						
SHO	Shikotan	3.17	58	ePN	Pn	22 45 34.3	-1.0
SHO				eS	Sn	22 46 10.8	-1.1
SHO				pmax	pmax		
	comp=Z,44nm,0.3s						
SHO				smax	smax		
	comp=E,449nm,0.4s						
SHO				smax	smax		
	comp=N,240nm,0.2s						
SHO	Shikotan	3.17	58	eP	Pn	22 45 35.8	+0.5
SHO				AMB	AMB	22 45 37.7	
	comp=N,40nm,0.3s						
SHO				eS	Sn	22 46 11.2	-0.7
SHO				A	A	22 46 16.9	
	comp=N,240nm,0.4s						
SHO				A	A	22 46 16.9	
	comp=N,450nm,0.4s						
KUR	Kuril'sk	4.56	47	ePN	Pn	22 45 54.6	+0.3
KUR				eS	Sn	22 46 49.5	+3.5
KUR				pmax	pmax		
	comp=Z,77nm,0.4s						
KUR				smax	smax		
	comp=N,58nm,0.2s						
KUR				smax	smax		
	comp=E,127nm,0.2s						
KUR	Kuril'sk	4.56	47	eP	Pn	22 45 55.9	+1.6
KUR				AMB	AMB	22 46 02.0	
	comp=E,80nm,0.4s						
KUR				eS	Sn	22 46 46.4	+0.4
KUR				A	A	22 46 52.0	
	comp=E,60nm,0.2s						
KUR				A	A	22 46 52.0	
	comp=E,130nm,0.2s						
JMM	Marumori	4.71	203	Pn	Pn	22 45 56.7	+0.3
YSS	Yuzh-Sakhalins	4.74	357	ePN	Pn	22 45 55.2	-1.5
YSS				pmax	pmax		
	comp=Z,20nm,1.4s						
YSS	Yuzh-Sakhalins	4.74	357	eP	Pn	22 45 58.3	+1.6
YSS				AMB	AMB	22 45 59.9	
	comp=Z,10.0nm,0.6s						
YSS				eS	Sn	22 46 51.0	+0.8
YSS				A	A	22 46 56.5	
	comp=Z,10.0nm,0.4s						
YSS				A	A	22 46 56.5	
	comp=Z,10.0nm,0.4s						
MJAR	Matsushiro Arr	6.84	215	P	Pn	22 46 25.6	+0.1
	comp=Z,0.0nm,0.3s,baz=35,slow=11,SNR=3.6						
MJAR	Matsushiro Arr	6.84	215		Pn	22 46 24.4	-1.2
INU	Inuyama	8.36	217	Pn	Pn	22 46 47.2	+0.9
USRK	Ussuriysk Ar.	8.37	287	P	Pn	22 46 45.7	-0.8
	baz=101,slow=14,SNR=1.8						
USRK				LR	LR	22 50 18.0	
	comp=Z,93nm,18.1s,baz=106,slow=40						
KSRS	Korea Array	12.62	253	P	Pn	22 47 45.5	+1.0
	comp=Z,0.1nm,0.3s,baz=61,slow=14,SNR=4.3						
KSRS				LR	LR	22 52 05.6	
	comp=Z,42nm,19.5s,baz=130,slow=35						
SONM	Songino Array	26.38	295	P	P	22 50 18.2	-0.3
	comp=Z,1.5nm,0.8s,baz=82,slow=8.3,SNR=7.8						
SONM	Songino Array	26.38	295	P	P	22 50 18.9	+0.3
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	Songino Array	26.38	295	P	P	22 50 18.9	+0.3
H11N2	WAKE ISLAND Hy	30.11	131	T	T	23 22 25.2	
	baz=324,slow=75,SNR=140						
H11N1	WAKE ISLAND Hy	30.12	131	T	T	23 22 26.1	
	baz=324,slow=75,SNR=74						
H11N3	WAKE ISLAND Hy	30.13	131	T	T	23 22 26.5	
	baz=324,slow=75,SNR=103						
H11S1	WAKE ISLAND Hy	30.99	133	T	T	23 23 34.0	
	baz=325,slow=76,SNR=54						
H11S3	WAKE ISLAND Hy	30.99	133	T	T	23 23 30.3	
	baz=325,slow=76,SNR=46						
H11S2	WAKE ISLAND Hy	31.01	133	T	T	23 23 31.5	
	baz=325,slow=76,SNR=46						
ZALV	Zalesovo Beam	39.58	308	P	P	22 52 12.1	-0.9
	comp=Z,2.4nm,0.7s,baz=78,slow=7.6,SNR=12						
ZALV	Zalesovo Beam	39.58	308	P	P	22 52 12.3	-0.7
ZALV	Zalesovo Beam	39.58	308	P	P	22 52 12.3	-0.7
MK31	Makanchi Array	42.68	298	P	P	22 52 38.1	-0.4
MK31				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MK31	Makanchi Array	42.68	298	P	P	22 52 38.1	-0.4
MK31				IAmb	IAmb	22 52 41.6	
	comp=Z,2.2nm,1.0s						
MKAR	Makanchi Array	42.68	298	P	P	22 52 37.7	-0.9
	comp=Z,1.8nm,0.8s,baz=86,slow=8.5,SNR=12						
MKAR	Makanchi Array	42.68	298	P	P	22 52 37.9	-0.7
MKAR	Makanchi Array	42.68	298	eP	P	22 52 37.9	-0.7
MKAR	Makanchi Array	42.68	298	P	P	22 52 37.9	-0.7
KURK	Kurchatov	43.94	304	P	P	22 52 48.7	+0.1
KURK	Kurchatov	43.94	304	eP	P	22 52 48.7	+0.1
KURK	Kurchatov	43.94	304	P	P	22 52 47.9	-0.7
KURK				IAmb	IAmb	22 52 49.6	
	comp=Z,5.0nm,0.9s						
KURBB	Kurchatov Arra	44.02	304	P	P	22 52 48.7	-0.6
	comp=Z,3.5nm,0.8s,baz=75,slow=8.7,SNR=12						
ILAR	Eielson Array	44.45	35	P	P	22 52 52.8	+0.3
	comp=Z,1.0nm,1.0s,baz=261,slow=7.5,SNR=7.1						
BVAR	Borovoye Array	48.18	309	P	P	22 53 21.4	-0.6
	comp=Z,1.0nm,0.5s,baz=106,slow=5.3,SNR=4.2						
INK	Inuvik	49.19	29	P	P	22 53 28.9	-0.5
	comp=Z,0.4nm,0.4s,baz=269,slow=4.0,SNR=1.6						
INK	Inuvik	49.19	29	P	P	22 53 29.2	-0.2
INK	Inuvik	49.19	29	P	P	22 53 29.2	-0.2
ARU	Arti	53.43	316	P	P	22 54 01.0	-0.2
	comp=Z,0.9nm,0.6s,baz=91,slow=5.8,SNR=4.2						
ARU	Arti	53.43	316	P	P	22 54 01.1	-0.2
ARU				IAmb	IAmb	22 54 02.5	
	comp=Z,6.3nm,1.2s						
YKA	Yellowknife Ar	58.68	32	P	P	22 54 39.0	+0.3
	comp=Z,0.1nm,0.4s,baz=306,slow=6.7,SNR=2.9						
YKA	Yellowknife Ar	58.68	32	P	P	22 54 39.0	+0.3
ARCES	ARCESS Array B	59.62	339	P	P	22 54 44.9	-0.2
	comp=Z,2.5nm,0.9s,baz=74,slow=7.6,SNR=3.5						
BELG	Belogornoye	60.96	316	P	P	22 54 54.1	-0.3
	comp=Z,5.2nm,0.8s,baz=279,slow=20,SNR=4.1						
WB2	Warramunga Arr	62.38	189	P	P	22 55 03.2	-1.1
WRA	Warramunga Arr	62.39	189	P	P	22 55 03.2	-1.1
	comp=Z,0.4nm,0.7s,baz=5.9,slow=5.9,SNR=1.4						
FINES	FINESS Array B	64.86	332	P	P	22 55 19.3	-0.8
	comp=Z,1.1nm,0.4s,baz=55,slow=7.2,SNR=13						
PAHR	Pah Rah Range	69.43	55	P	P	22 55 49.8	+0.1
PAHR				IAmb	IAmb	22 55 53.7	
	comp=Z,5.3nm,0.8s						
HFS	Hagfors	69.91	336	P	P	22 55 51.4	-0.7
	comp=Z,1.3nm,0.5s,baz=38,slow=9.7,SNR=7.0						
NOA	NORSAR Array B	69.91	337	P	P	22 55 51.7	-0.5
	comp=Z,1.6nm,0.9s,baz=35,slow=6.4,SNR=2.8						
AKASG	Malin Array Be	71.01	322	P	P	22 55 58.5	-0.4
	comp=Z,0.3nm,0.4s,baz=52,slow=5.5,SNR=4.0						
PDAR	Pinedale Array	73.13	47	P	P	22 56 12.7	+0.6
	comp=Z,0.2nm,0.5s,baz=258,slow=4.5,SNR=1.6						
BRTR	Keskin Array B	76.40	312	P	P	22 56 31.1	+0.1
	comp=Z,0.5nm,0.8s,baz=64,slow=6.6,SNR=2.7						
GERES	GERESS Array B	78.98	329	P	P	22 56 44.7	-0.5
	comp=Z,0.2nm,0.4s,baz=23,slow=5.3,SNR=1.9						
TXAR	Lajitas Array	85.94	54	P	P	22 57 22.6	+0.9
	comp=Z,0.5nm,0.7s,baz=294,slow=2.6,SNR=6.1						

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*IDC **20** 22:46:50.3±1.3, 38°.59N×73°.37E, h0^{km}, mb3.7/6, mb1 3.8/10, mb1mx3.3/66, mbtmp3.6/10, ML3.0/4, Error ellipse: s-maj=27.3km s-min=20.2km az=114.0*
*SOME **20** 22:46:52.5, 39°.10N×72°.58E, h20^{km}*
*KRNET **20** 22:46:55.2±0.1, 39°.02N×73°.57E, h18^{km}, mb3.6*
*NNC **20** 22:46:59.3±4.2, 39°.23N×73°.10E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=33.6km s-min=19.0km az=1.0*
ISC 20 22:46:52.1±1.0**, 38°.52N**±0°.07×**73°.28E**±0°.04**, h10**^{km}**, n39, σ1^{s}.93**/54**, mb3.5**/6**, 23C-6D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.50	310	⇑iP	Pg	22 47 22.3	+1.4
	baz=89						
DRK				⇑iS	Sg	22 47 41.9	+1.5
	baz=89						
SFK	Sufi-Kurgan	1.50	7	⇑eP	Pn	22 47 14.2	-5.2
	baz=57						
SFK				⇑eS	Sn	22 47 28.1	-11
	baz=57						
OHH	Osh	2.04	349	⇑iP	Pn	22 47 25.2	-1.4
	baz=38						
OHH				⇑iS	Sn	22 47 47.2	-5.0
	baz=38						
BTK	Batken	2.45	310	⇑iP	Pb	22 47 36.5	+0.2
	baz=97						
BTK				⇑iS	Sb	22 48 07.3	+0.7
	baz=97						
TRKS	Terek-Say	3.43	332	⇑iP	Pn	22 47 46.1	+0.4
	baz=24						

TRKS				⇑iS	Sn	22 48 23.8	-2.7
	baz=24						
ARK	Arkit	3.43	343	⇓iP	Pn	22 47 46.1	+0.4
	baz=37						
ARK				⇓iS	Sn	22 48 23.1	-3.4
	baz=37						
ARLS	Aral	3.44	13	⇓iP	Pn	22 47 44.6	-1.2
	baz=11						
ARLS				⇓iS	Sn	22 48 23.1	-3.6
	baz=11						
MNAS	Manas	4.01	352	⇑iP	Pn	22 47 53.8	+0.1
	baz=47						
MNAS				⇑iS	Sn	22 48 35.8	-5.0
	baz=47						
AAK	Ala-Archa	4.22	12	Pn	Pn	22 47 58.3	+1.7
	1.9nm,0.3s,baz=173,slow=6.7,SNR=26						
AAK				Sn	Sn	22 48 48.2	+2.1
	2.8nm,0.3s,baz=337,slow=22,SNR=10						
AAK	Ala-Archa	4.22	12	⇑Pn	Pn	22 47 56.6	0.0
	20nm,0.7s						
AAK				⇑Lg	Lg	22 48 52.9	
	46nm,0.7s						
MRKS	Merke	4.22	359	eP	Pn	22 47 58.9	+2.3
	3.9nm,0.3s						
MRKS				eS	Sn	22 48 47.1	+1.1
	23nm,0.8s						
MRKS	Merke	4.22	359	Pg	Pn	22 47 58.9	+2.3
	3.9nm,0.3s						
MRKS				Lg	Lg	22 48 47.1	
	23nm,0.8s						
IUG	Iuzhnay	4.39	327	eP	Pn	22 48 00.1	+1.2
	117nm,0.4s						
IUG				eS	Sn	22 48 49.7	-0.5
	71nm,0.7s						
IUG	Iuzhnay	4.39	327	Pg	Pn	22 48 02.1	+3.1
	117nm,0.4s						
IUG				Lg	Lg	22 48 52.4	
	71nm,0.7s						
DZA	Taraz	4.61	342	eP	Pn	22 48 04.1	+2.2
	19nm,0.3s						
DZA				eS	Sn	22 48 56.1	+0.6
	62nm,0.3s						
DZA	Taraz	4.61	342	Pg	Pn	22 48 04.1	+2.2
	19nm,0.3s						
DZA				Lg	Lg	22 48 56.1	
	62nm,0.3s						
CHM	Chimkent	4.72	325	eP	Pn	22 48 03.9	+0.5
	5.6nm,0.6s						
CHM				eS	Sn	22 48 55.7	-2.5
	120nm,0.8s						
TKM2	Tokmak 2	4.74	21	⇑Pn	Pn	22 48 04.3	+0.5
	2.3nm,0.7s						
TKM2				⇑Pg	Pb	22 48 15.8	+0.4
	12nm,1.1s						
TKM2				⇓Lg	Lg	22 49 12.3	
	30nm,0.8s						
KK02	Karatay Array	5.04	336	⇓Pn	Pn	22 48 08.8	+1.1
	3.9nm,0.5s						
KK02				⇑Sn	Sn	22 49 04.4	-1.7
	12nm,0.6s						
DGS	Degeres	5.08	21	eP	Pb	22 48 20.4	-0.8
	5.4nm,0.7s						
DGS				eS	Sb	22 49 23.6	+1.2
	19nm,0.5s						
DGS	Degeres	5.08	21	Pg	Pb	22 48 20.4	-0.8
	5.4nm,0.7s						
DGS				Lg	Lg	22 49 23.6	
	19nm,0.5s						
BRLS	Borolday	5.21	331	eP	Pn	22 48 10.5	+0.4
	1.7nm,0.5s						
BRLS				eS	Sn	22 49 06.9	-3.4
	8.9nm,0.7s						
BRLS	Borolday	5.21	331	Pg	Pn	22 48 10.5	+0.4
	1.7nm,0.5s						
BRLS				Lg	Lg	22 49 06.9	
	8.9nm,0.7s						
MDOK	Medeo	5.45	30	eP	Pb	22 48 27.5	0.0
	6.8nm,0.7s						
MDOK				eS	Sb	22 49 36.7	+3.7
	29nm,0.9s						
MDOK	Medeo	5.45	30	Pg	Pb	22 48 29.9	+2.5
	12nm,0.8s						
MDOK				Lg	Lg	22 49 35.8	
	51nm,1.1s						
MDOK	Medeo	5.45	30	Pg	Pb	22 48 27.5	0.0
	6.8nm,0.7s						
MDOK				Lg	Lg	22 49 36.7	
	29nm,0.9s						
KNDC	Almaty	5.46	30	⇑Pg	Pb	22 48 28.9	+1.2
	35nm,0.8s						
KNDC				⇑Lg	Lg	22 49 36.7	
	115nm,1.1s						
PDGK	Podgornoye	6.72	42	⇑Pg	Pb	22 48 54.8	+5.6
	4.9nm,0.7s						
PDGK				⇑Lg	Lg	22 50 21.5	
	13nm,0.9s						
MKAR	Makanchi Array	10.60	36	Pn	Pn	22 49 23.9	-0.1
	0.1nm,0.3s,baz=215,slow=13,SNR=6.8						
AB31	Akbulak array	14.39	323	⇑Pn	Pn	22 50 15.1	-0.6
	0.6nm,0.5s,baz=130,slow=13,SNR=19						
BVAR	Borovoye Array	14.65	353	Pn	Pn	22 50 16.7	-2.6
	0.2nm,0.3s,baz=169,slow=16,SNR=2.0						
AKTO	Aktyubinsk	16.10	323	⇑Pn	P	22 50 43.1	+1.4
	3.7nm,0.9s						
ZALV	Zalesovo Beam	17.34	23	P	Pn	22 50 53.1	-0.9
	0.1nm,0.3s,baz=216,slow=14,SNR=2.2						
SONM	Songino Array	25.72	58	P	P	22 52 23.0	+0.4
	0.4nm,0.5s,baz=277,slow=8.7,SNR=3.0						
FINES	FINESS Array B	36.87	324	P	P	22 54 00.9	+0.6
	3.6nm,0.9s,baz=106,slow=10,SNR=2.3						
ARCES	ARCESS Array B	40.01	336	P	P	22 54 26.2	-0.4
	5.0nm,1.0s,baz=106,slow=9.5,SNR=2.4						
TORD	Torodi Ar. Bea	67.57	269	P	P	22 57 48.9	-0.1
	0.1nm,0.8s,baz=64,slow=5.9,SNR=0.7						
YKA	Yellowknife Ar	79.14	4	P	P	22 58 55.2	-1.3
	0.2nm,0.6s,baz=348,slow=5.6,SNR=4.6						
WRA	Warramunga Arr	81.56	124	P	P	22 59 09.4	-0.7
	0.8nm,1.1s,baz=322,slow=5.0,SNR=2.0						

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*IDC **20** 22:51:30.2±1.5, 30°.59S×71°.12W, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.7/22, mbtmp3.7/3, Error ellipse: s-maj=67.8km s-min=31.0km az=163.0*

*GUC **20** 22:51:37.4±0.7, 30°.59S×71°.25W, h62^{km}±2^{km}, ML4.0*

ISC 20 22:51:37.7±0.9**, 30°.58S**±0°.03×**71°.32W**±0°.06**, h55**^{km}±7^{km}**, n32, σ1^{s}11**/36**, mb3.7**/3**, 2C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.29	251	⇑iP	Pn	22 51 47.4	+0.2
CO06				eS	Sn	22 51 55.3	+1.2
CO06				IAML		22 51 58.0	
	comp=E,12μm,0.2s						
CO03	El Pedregal	0.60	116	⇓iP	Pn	22 51 49.9	-0.7
CO03				i S	Sn	22 51 58.8	-1.0
CO03				IAML		22 51 59.4	
	comp=N,19μm,0.1s						
GO04	Tololo Observa	0.60	48	eP	Pn	22 51 50.5	-0.2
GO04				eS	Sn	22 52 00.4	+0.2
CO05	La Serena	0.66	6	⇑iP	Pn	22 51 51.5	+0.3
CO05				eS	Sn	22 52 01.9	+0.9
CO05				IAML		22 52 02.5	
	comp=E,8μm,0.3s						
LCO	Las Campanas	1.65	19	i P	Pn	22 52 04.8	+0.2
LCO				eS	Sn	22 52 25.1	+0.3
VA06	Catapilco	1.98	179	eP	Pn	22 52 08.9	+0.2
VA06				IAML		22 52 40.0	
	comp=N,2μm,0.3s						
VA03	San Esteban	2.27	163	eP	Pn	22 52 13.2	+0.3
VA03				eS	Sn	22 52 41.5	+1.6
VA03				IAML		22 52 43.2	
	comp=E,969nm,0.4s						
AC04	Llanos de Chal	2.38	5	eP	Pn	22 52 15.7	+1.4
ROCH	El Roble	2.40	174	eP	Pn	22 52 15.0	+0.3
ROCH				eP	Pn	22 52 14.6	-0.1
ROCH				IAML		22 52 52.6	
	comp=N,680nm,0.5s						
ROCH				IAML		22 52 52.7	
	comp=N,697nm,0.3s						
MT02	Curacav	2.68	177	eP	Pn	22 52 18.4	+0.1
FCH	Farellones	2.88	163	eP	Pn	22 52 22.7	+1.3
FCH				eS	Sn	22 52 56.2	+1.3
FCH				IAML		22 53 07.2	
	comp=E,302nm,0.2s						
VA05	Santo Domingo	3.08	185	eP	Pn	22 52 23.3	-0.6
VA05				IAML		22 53 14.8	
	comp=E,576nm,0.4s						
GO03	Copiap	3.12	18	eP	Pn	22 52 25.7	+1.2
GO03				IAML		22 53 12.2	
	comp=N,372nm,0.2s						
MT09	Talagante	3.20	175	eP	Pn	22 52 26.1	+0.5
MT09				IAML		22 53 10.2	
	comp=N,322nm,0.1s						
MT01	Popeta	3.27	179	eP	Pn	22 52 26.5	-0.1
MT01				eS	Sn	22 53 03.7	-0.6
MT01				IAML		22 53 14.6	
	comp=E,191nm,0.3s						
LMEL	Las Melosas	3.39	164	eP	Pn	22 52 30.2	+1.9
LMEL				eS	Sn	22 53 09.6	+2.3
LMEL				IAML		22 53 15.5	
	comp=N,279nm,0.2s						
H03N1	Juan Fernandez	7.05	244	Pn	Pn	22 53 17.8	-0.3
	baz=117,slow=18,SNR=47						
H03N1				T	T	23 00 17.3	
	baz=73,slow=72,SNR=1059						
H03N2	Juan Fernandez	7.07	244	Pn	Pn	22 53 17.8	-0.4
	baz=117,slow=18,SNR=84						
H03N2				T	T	23 00 09.2	
	baz=73,slow=72,SNR=874						
H03N3	Juan Fernandez	7.07	244	Pn	Pn	22 53 17.6	-0.6
	baz=117,slow=18,SNR=65						
H03N3				T	T	23 00 08.0	
	baz=73,slow=72,SNR=847						
H03S3	Juan Fernandez	7.20	241	Pn	Pn	22 53 18.3	-1.8
	baz=106						
H03S1	Juan Fernandez	7.21	241	Pn	Pn	22 53 18.1	-2.0
	baz=106						
H03S2	Juan Fernandez	7.22	241	Pn	Pn	22 53 18.3	-2.0
	baz=106						
BDFB	Brasilia	26.01	60	P	P	22 57 04.2	-1.5
	comp=N,1.1nm,0.4s,baz=215,slow=12,SNR=1.8						
TXAR	Lajitas Array	67.08	330	P	P	23 02 26.3	+0.8
	comp=N,0.2nm,0.6s,baz=145,slow=9.6,SNR=1.8						
TORD	Torodi Ar. Bea	82.47	70	P	P	23 03 54.2	-0.5
	comp=N,0.6nm,0.5s,baz=252,slow=6.8,SNR=14						
H11S2	WAKE ISLAND Hy	126.37	271	T	T	01 29 25.6	
	baz=114,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	126.38	271	T	T	01 29 24.3	
	baz=114,slow=75,SNR=43						
H11S3	WAKE ISLAND Hy	126.39	271	T	T	01 29 26.7	
	baz=114,slow=75,SNR=41						
H11N3	WAKE ISLAND Hy	126.70	273	T	T	01 29 53.7	
	baz=117						
H11N1	WAKE ISLAND Hy	126.71	273	T	T	01 29 56.4	
	baz=117						
H11N2	WAKE ISLAND Hy	126.71	273	T	T	01 29 52.5	
	baz=117						
ZALV	Zalesovo Beam	150.99	30	PKPbc	PKiKP	23 11 23.6	-0.8
	comp=N,1.2nm,0.4s,baz=312,slow=3.5,SNR=6.9						

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*MOS **20** 22:54:29.2±3.1, 52°.57N×106°.93E, h8^{km}, mb3.3/1, Error ellipse: s-maj=13.2km s-min=9.1km az=56.8*

MOS Felt (II-III) at Tyrgan.

*BYKL **20** 22:54:30.9±0.2, 52°.56N×106°.79E, h20^{km}±3^{km}, FELT I=II-III MSK at Tirgan*

ISC 20 22:54:30.6±0.9**, 52°.54N**±0°.02×**106°.79E**±0°.02**, h13**^{km}±7^{km}**, n42, σ2^{s}15**/95**, 7C-2D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRG	Tyrgan	0.35	309	⇑iPg	Pg	22 54 37.7	+0.1
TRG				eSg	Sg	22 54 42.6	+0.2
TRG				Pmax			
	1μm,0.1s						
TRG				Smax			
	3μm,0.1s						
TRG	Tyrgan	0.35	309	⇑iPG	Pg	22 54 37.7	+0.1
TRG				e		22 54 43.1	
TRG				pmax	pmax		
	comp=Z,2μm,0.5s						
TRG				smax	smax		
	comp=N,5μm,0.5s						
STDB	Stepnoy Dvoret	0.46	215	⇓iPg	Pb	22 54 40.9	+0.5
STDB				eSg	Sb	22 54 48.3	+1.2
FFNB	Fofonovo	0.50	182	⇑iPg	Pg	22 54 40.6	+0.3
FFNB				eSg	Sg	22 54 47.5	+0.6
KAB	Kabansk	0.50	190	ePg	Pg	22 54 40.9	+0.5
KAB				eSg	Sg	22 54 48.2	+1.2
KAB				Pmax			
	comp=N,292nm,0.2s						
KAB				Smax			
	comp=N,2μm,0.3s						
KAB	Kabansk	0.50	190	⇑iPG	Pg	22 54 40.9	+0.5
KAB				e		22 54 48.4	
KAB				pmax	pmax		
	comp=Z,299nm,0.5s						
KAB				smax	smax		
	comp=E,2μm,0.5s						
KELR	Kotokel	0.81	74	⇑iPg	Pg	22 54 45.3	-1.1
KELR				eSg	Sg	22 54 55.6	-1.4
UUDB	Ulan-Yde	0.86	141	⇑iPg	Pg	22 54 47.0	-0.2
UUDB				ePb	Pn	22 54 48.9	+0.5
UUDB				eSg	Sg	22 54 58.2	-0.3
UUDB				eSb	Sn	22 55 02.1	+1.2
UUDB				Pmax			
	comp=E,184nm,0.2s						
UUDB				max			
	comp=E,461nm,0.3s						
HRMR	Khuramsha	0.92	174	⇑iPg	Pg	22 54 48.1	-0.2
HRMR				eSg	Sg	22 55 00.8	+0.4
HRMR				Pmax			
	comp=E,275nm,0.1s						
HRMR				Smax			
	comp=E,1μm,0.2s						
BGT	Bolshoye Golou	0.98	240	ePg	Pb	22 54 49.7	+0.3
BGT				eSg	Sb	22 55 02.8	+0.5
BGT				eSb	Sn	22 55 05.2	+1.3
BGT				Pmax			
	comp=E,82nm,0.2s						
BGT				Smax			
	comp=E,352nm,0.2s						
BGT	Bolshoye Golou	0.98	240	⇓iPG	Pb	22 54 49.8	+0.3
BGT				e		22 55 03.0	
BGT				pmax	pmax		
	comp=Z,82nm,0.2s						
BGT				smax	smax		
	comp=E,351nm,0.2s						
OGRR	Ongureny	1.21	23	ePg	Pg	22 54 54.4	+0.6
OGRR				ePb	Pb	22 54 55.6	+2.4
OGRR				eSg	Sg	22 55 10.2	+0.7
OGRR				max			
	comp=E,51nm,0.4s						
OGRR				Smax			
	comp=E,360nm,0.3s						
OGRR	Ongureny	1.21	23	ePG	Pg	22 54 55.4	+1.6
OGRR				e		22 55 10.5	
OGRR				pmax	pmax		
	comp=Z,82nm,0.5s						
OGRR				smax	smax		
	comp=E,457nm,0.5s						
LSTR	Listvyanka	1.38	242	ePg	Pn	22 54 56.3	+0.8
LSTR				ePb	Pb	22 54 57.0	+0.8
LSTR				eSg	Sb	22 55 14.4	+0.6
LSTR				Pmax			
	comp=E,40nm,0.2s						
LSTR				Smax			
	comp=E,180nm,0.3s						
LSTR	Listvyanka	1.38	242	ePG	Pn	22 54 56.3	+0.8
LSTR				e		22 55 14.4	
LSTR				pmax	pmax		
	comp=Z,57nm,0.5s						
LSTR				smax	smax		
	comp=N,255nm,0.5s						
MXMB	Maximikha	1.39	58	ePg	Pn	22 54 56.0	+0.4
MXMB				eSg	Sb	22 55 14.7	+0.8
IRK	Irkutsk	1.57	260	ePg	Pb	22 54 59.5	+0.1
IRK				eSg	Sb	22 55 20.3	+1.0
IRK				Pmax			
	comp=N,338nm,0.4s						
IRK				Smax			
	comp=N,1μm,0.3s						
IRK	Irkutsk	1.57	260	ePN	Pb	22 54 59.6	+0.1
IRK				e		22 55 20.7	
IRK				pmax	pmax		
	comp=Z,192nm,0.2s						
IRK				smax	smax		
	comp=N,2μm,0.5s						
IVK	Ivanovka	1.64	244	ePg	Pb	22 55 00.7	0.0
IVK				eSg	Sb	22 55 22.0	+0.8
IVK				Pmax			
	comp=N,70nm,0.2s						
IVK				Smax			
	comp=N,483nm,0.2s						
TLY	Talaya	2.12	247	ePn	Pn	22 55 07.2	+1.5
TLY				ePg	Pb	22 55 08.9	0.0
TLY				eSn	Sn	22 55 32.7	+0.7
TLY				eSg	Sb	22 55 36.5	+1.4
TLY				Pmax			
	comp=N,35nm,0.1s						
TLY				Smax			
	comp=N,208nm,0.3s						
TLY	Talaya	2.12	247	ePN	Pn	22 55 07.7	+2.0
TLY				e		22 55 09.4	
TLY				e		22 55 35.9	
TLY				pmax	pmax		
	comp=Z,84nm,0.2s						
SYVR	Suvo	2.23	59	ePn	Pn	22 55 07.6	+0.3
SYVR				ePg	Pb	22 55 11.0	+0.2
SYVR				eSn	Sn	22 55 34.5	-0.2
SYVR				eSg	Sb	22 55 40.5	+2.2
SYVR				Pmax			
	comp=Z,11nm,0.3s						
SYVR				Smax			
	comp=Z,58nm,0.4s						
ARS	Arshan	2.76	259	ePn	Pn	22 55 15.3	+0.8
ARS				ePg	Pb	22 55 19.8	+0.1
ARS				e		22 55 21.4	
ARS				eSn	Sn	22 55 45.6	-2.1
ARS				eSg	Sb	22 55 55.1	+1.7
ARS				max			
	comp=Z,77nm,0.2s						
ARS				Smax			
	comp=Z,429nm,0.4s						
ARS	Arshan	2.76	259	ePN	Pn	22 55 16.0	+1.5
ARS				e		22 55 19.8	
ARS				e		22 55 55.9	
ARS				pmax	pmax		
	comp=Z,100nm,0.5s						
ARS				smax	smax		
	comp=E,640nm,0.5s						
ZAK	Zakamensk	3.08	227	ePn	Pn	22 55 19.2	+0.2
ZAK				ePg	Pb	22 55 26.5	+1.2
ZAK				eSn	Sn	22 55 56.5	+0.8
ZAK				eSg	Sg	22 56 07.3	-2.2
ZAK				Pmax			
	comp=E,7.0nm,0.2s						
ZAK				Smax			
	comp=E,35nm,0.2s						
YLYR	Ulyunkhan	3.50	46	ePn	Pn	22 55 24.7	+0.1
YLYR				ePg	Pb	22 55 33.0	+0.8
YLYR				eSn	Sn	22 56 04.6	-1.2
YLYR				eSg	Sb	22 56 17.5	+2.9
YLYR				e		22 56 30.1	
YLYR				Pmax			
	comp=E,12nm,0.5s						
YLYR				Smax			
	comp=E,32nm,0.4s						
NIZ	Nizh Angarsk	3.62	25	ePn	Pn	22 55 26.8	+0.5
NIZ				ePg	Pb	22 55 35.7	+1.3
NIZ				eSn	Sn	22 56 08.6	-0.3
NIZ				eSn	Sb	22 56 11.6	-6.6
NIZ				eSg	Sg	22 56 22.0	-4.8
NIZ				eSgSg	SbSb	22 56 25.1	+1.8
NIZ				Pmax			
	comp=E,20nm,0.7s						
NIZ				max			
	comp=E,84nm,0.5s						
NIZ	Nizh Angarsk	3.62	25	ePN	Pn	22 55 25.0	-1.3
NIZ				e		22 55 34.6	
NIZ				eS	Sn	22 56 07.5	-1.4
NIZ				e		22 56 20.9	
NIZ				pmax	pmax		
	comp=Z,13nm,0.9s						
NIZ				smax	smax		
	comp=N,102nm,1.2s						
MOY	Mondy	3.68	259	ePN	Pb	22 55 37.8	+2.3
MOY				e		22 56 22.7	
MOY				pmax	pmax		
	comp=Z,31nm,0.5s						
MOY				smax	smax		
	comp=N,121nm,0.7s						
KMO	Kumora	4.24	36	ePn	Pn	22 55 34.9	+0.2
KMO				ePg	Pb	22 55 46.2	+1.4
KMO				eSn	Sn	22 56 23.1	-0.9
KMO				eSg	Sb	22 56 41.2	+5.4
KMO				Pmax			
	comp=N,20nm,1.0s						
KMO				Smax			
	comp=N,55nm,1.2s						
ORL	Orlik	4.26	273	ePn	Pn	22 55 37.2	+2.0
ORL				ePg	Pb	22 55 47.5	+2.1
ORL				eSn	Sn	22 56 23.4	-1.4
ORL				eSg	Sb	22 56 42.0	+5.3
ORL				Pmax			
	comp=N,18nm,0.7s						
ORL				Smax			
	comp=N,42nm,0.4s						
ORL	Orlik	4.26	273	ePN	Pn	22 55 37.2	+2.0
ORL				e		22 55 47.6	
ORL				e		22 56 42.6	
ORL				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ORL				smax	smax		
	comp=E,44nm,0.6s						
KPC	Khapcheranga	4.52	127	ePn	Pn	22 55 38.1	-0.7
KPC				ePg	Pb	22 55 52.2	+2.4
KPC				eSn	Sn	22 56 31.0	-0.2
KPC				eSg	Sg	22 56 52.0	-3.7
KPC				Pmax			
	comp=E,7.0nm,0.3s						
KPC				Smax			
	comp=E,34nm,0.8s						
ULN	Ulaanbaatar	4.69	178	i PN	Pn	22 55 41.9	+0.8
UKT	Uakit	5.00	51	ePn	Pn	22 55 46.0	+0.7
UKT				ePg	Pb	22 55 59.8	+1.9
UKT				eSn	Sn	22 56 40.6	-2.3
UKT				eSg	Sb	22 57 05.0	+7.2
UKT				Pmax			
	comp=E,5.0nm,0.7s						
UKT				Smax			
	comp=E,22nm,1.7s						
KNGR	Kungurtug, Tuv	6.10	255	ePg	Pb	22 56 20.1	+3.4
KNGR				eSn	Sn	22 57 08.0	-2.1
KNGR				eSg	Sg	22 57 39.3	-6.9
BOD	Bodaibo	6.71	35	eSg	Sg	22 57 58.0	-7.6
BOD				Smax			
	comp=E,12nm,0.8s						
TUP	Tupik	8.08	71	ePn	Pn	22 56 27.4	0.0
TUP				ePg	Pb	22 56 56.5	+6.3
TUP				eSn	Sn	22 57 54.6	-4.0
TUP				eSg	Sg	22 58 40.3	-9.2
TUP				Pmax			
	comp=E,2.0nm,0.2s						
TUP				Smax			
	comp=E,40nm,1.6s						
TUP	Tupik	8.08	71	ePN	Pn	22 56 27.5	0.0
TUP				e		22 56 54.5	
TUP				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DGZ	Jazzator, Alta	12.49	265	i P	Pn	22 57 28.1	+0.1
NVS	Novosibirsk	14.13	289	i P	Pn	22 57 49.6	-0.5
KIV	Kislovodsk	42.24	285	eP	P	23 02 21.6	-1.7

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*IDC **20** 22:55:29.9±0.9, 3°.68N×117°.80E, h0^{km}, mb3.7/9, mb1 3.9/9, mb1mx3.5/54, mbtmp3.7/9, MS3.2/7, Ms1 3.2/7, ms1mx3.0/44, Error ellipse: s-maj=84.9km s-min=18.6km az=58.0*

*DJA **20** 22:55:33.9±1.8, 4°N±3°×11°8E±°, h22^{km}±17^{km}, M4.4/7, mb4.6/4, mB5.3/1, MLv4.2/7, Mw(mB)4.8/1*

*KLM **20** 22:55:35, 3°.81N×117°.78E, h6^{km}, mb4.0*

ISC 20 22:55:31.9±0.7**, 3°.7N**±0°.1×**117°.9E**±0°.1**, h10**^{km}**, n21, σ1^{s}31**/16**, mb3.7**/10**, MS3.1**/4**, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPMM	Sapulut	1.74	306	P	Pb	22 56 03.0	-0.9
MPSI	Mapaga	3.89	149	P	Pn	22 56 31.3	-0.4
MRSI	Marisa	5.16	128	P	Pn	22 56 49.4	+0.2
	0.3nm79nm,0.7s						
KBKI	Kotabaru	7.14	194	P	Pn	22 57 17.4	+0.9
	0.2nm2μm34nm,0.5s						
SPSI	Sidrap Palu	7.83	166	P	Pn	22 57 25.8	-0.1

DAV	Davao City (W)	8.37	66	LR	LR	23 01 04.1	
	comp=Z,93nm,20.4s,baz=159,slow=40						
KAPI	Kappang	8.84	168	LR	LR	23 01 54.1	
	comp=Z,148nm,21.1s,baz=14,slow=43						
BATI	Baumata	14.95	157	LR	LR	23 04 33.3	
	comp=Z,128nm,21.9s,baz=52,slow=36						
CMAR	Chiang Mai Arr	23.64	310	P	P	23 00 42.3	-1.2
	1.3nm,0.3s,baz=135,slow=9.8,SNR=4.1						
WRA	Warramunga Arr	28.51	146	P	P	23 01 27.2	-0.5
	1.3nm,0.9s,baz=340,slow=11,SNR=9.1						
ASAR	Alice Springs	31.35	151	P	P	23 01 53.2	+0.3
	0.8nm,0.9s,baz=330,slow=8.7,SNR=3.3						
ASAR				LR	LR	23 14 18.1	
	comp=Z,56nm,20.9s,baz=356,slow=36						
KSRS	Korea Array	34.85	14	LR	LR	23 18 20.8	
	comp=Z,23nm,19.1s,baz=195,slow=39						
GTA	Gaotai	39.16	338	*e*P	P	23 03 03.8	+3.7
GTA				pP	sP	23 03 10.8	+6.4
GTA				sP	pP	23 03 14.4	+11
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	Songino Array	45.09	349	P	P	23 03 48.3	0.0
	comp=Z,0.2nm,0.4s,baz=165,slow=6.0,SNR=1.2						
ASAJ	Asahikawa	45.80	25	LR	LR	23 23 30.5	
	comp=Z,19nm,20.4s,baz=23,slow=37						
MKAR	Makanchi Array	52.84	330	P	P	23 04 46.2	-1.5
	comp=Z,0.3nm,0.4s,baz=128,slow=7.8,SNR=9.8						
MKAR				PcP	PcP	23 05 56.1	-0.9
	comp=Z,0.3nm,0.5s,baz=145,slow=2.6,SNR=5.2						
ZALV	Zalesovo Beam	56.92	337	P	P	23 05 16.5	-0.5
	comp=Z,1.3nm,0.8s,baz=120,slow=8.8,SNR=6.3						
KURBB	Kurchatov Arra	57.26	331	P	P	23 05 18.7	-0.9
	comp=Z,0.4nm,0.7s,baz=129,slow=6.9,SNR=4.8						
BVAR	Borovoye Array	62.73	330	P	P	23 05 56.4	-0.7
	comp=Z,1.6nm,0.8s,baz=167,slow=7.3,SNR=5.3						
BRTR	Keskin Array B	83.23	309	P	P	23 07 59.3	+0.2
	comp=Z,0.5nm,0.8s,baz=111,slow=6.8,SNR=3.8						
HFS	Hagfors	93.85	331	LR	LR	23 51 36.4	
	comp=Z,51nm,18.9s,baz=292,slow=36						

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*IDC **20** 23:03:28.2±13.0, 23.°24S×178.°12W, h269^{km}±119^{km}, mb3.3/5, mb1 3.5/5, mb1mx3.3/27, mbtmp3.9/5, Error ellipse: s-maj=53.2km s-min=36.2km az=57.0*

*NEIC **20** 23:03:42.2±1.0, 23.°4S±0.°2×178.°34W±0.°10, h398^{km}±15^{km}, mb4.1/17, Error ellipse: s-maj=26.1km s-min=5.5km az=207.0*

ISC 20 23:03:37.5±0.8**, 23.°3S**±0.°1×**178.°4W**±0.°1**, h350**^{km}**, n28, σ0.^{s}81**/30**, mb3.9**/13**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	14.04	272	P	Pn	23 06 44.0	+0.5
SANVU	Saraoutou	15.66	297	P	Pn	23 07 02.2	+0.1
RAR	Rarotonga	17.37	87	P	P	23 07 19.2	+1.4
KHZ	Kahutara	20.21	197	P	P	23 07 48.1	+0.8
KHZ				IAmb	IAmb	23 07 51.6	
	comp=Z,7.1nm,0.9s						
CTAO	Charters Tower	32.95	269	P	P	23 09 41.8	+1.0
CTAO				IAmb	IAmb	23 09 54.3	
	comp=Z,8.1nm,1.1s						
STKA	Stephens Creek	36.31	247	P	P	23 10 08.5	-0.7
	comp=Z,0.8nm,0.5s,baz=90,slow=11,SNR=3.9						
STKA	Stephens Creek	36.31	247	P	P	23 10 09.0	-0.1
COEN	Coen	37.48	277	P	P	23 10 20.0	+0.8
COEN				IAmb	IAmb	23 10 21.8	
	comp=Z,9.1nm,1.1s						
PATS	Pohnpei	37.62	320	P	P	23 10 20.7	+0.5
BBOO	Buckleboo	41.03	246	P	P	23 10 47.0	-1.0
BBOO				IAmb	IAmb	23 10 57.2	
	comp=Z,17nm,1.1s						
AS31	Alice Springs	43.58	260	P	P	23 11 09.3	+0.8
ASAR	Alice Springs	43.58	260	P	P	23 11 08.2	-0.4
	comp=Z,1.0nm,0.3s,baz=94,slow=7.2,SNR=27						
ASAR				PcP	PcP	23 12 49.2	+0.1
	comp=Z,0.5nm,0.6s,baz=100,slow=4.6,SNR=6.3						
ASAR	Alice Springs	43.58	260	P	P	23 11 08.8	+0.2
WR0	Warramunga Arr	43.73	265	P	P	23 11 07.6	-2.1
WR0				IAmb	IAmb	23 11 09.6	
	comp=Z,3.2nm,1.0s						
WB2	Warramunga Arr	43.91	265	P	P	23 11 11.1	-0.1
WB0	Warramunga Arr	43.91	265	P	P	23 11 11.3	+0.2
WB0				IAmb	IAmb	23 11 21.8	
	comp=Z,8.6nm,1.1s						
WRA	Warramunga Arr	43.92	265	P	P	23 11 11.1	-0.1
	comp=Z,0.6nm,0.3s,baz=96,slow=8.5,SNR=54						
WRA				PcP	PcP	23 12 50.7	+0.4
	comp=Z,1.0nm,0.8s,baz=104,slow=3.5,SNR=2.7						
FORT	Forrest	47.90	249	P	P	23 11 40.4	-1.4
KNRA	Kununurra	50.16	269	P	P	23 11 59.4	+0.4
KNRA				IAmb	IAmb	23 12 00.7	
	comp=Z,24nm,1.1s						
FAKI	Fak Fak	51.83	285	P	P	23 12 11.6	+0.3
FAKI				IAmb	IAmb	23 12 16.2	
	comp=Z,16nm,0.9s						
VNDA	Vanda	55.10	185	P	P	23 12 32.8	-1.1
	comp=Z,0.8nm,1.0s,baz=152,slow=7.0,SNR=2.8						
VNDA	Vanda	55.10	185	P	P	23 12 34.2	+0.3
PSA00	Pilbara Seismi	56.72	259	P	P	23 12 45.7	-0.5
PSA00				IAmb	IAmb	23 13 04.6	
	comp=Z,18nm,1.1s						
ILAR	Eielson Array	91.11	13	P	P	23 16 01.1	-1.4
	comp=Z,0.3nm,0.7s,baz=224,slow=5.4,SNR=1.9						
FINES	FINESS Array B	138.33	343	PKP	PKPdf	23 22 21.2	+0.3
	comp=Z,0.8nm,0.4s,baz=58,slow=3.6,SNR=6.5						
AKASG	Malin Array Be	145.24	329	PKPbc	PKPdf	23 22 33.2	-0.4
	comp=Z,2.4nm,0.4s,baz=44,slow=4.1,SNR=19						
BRTR	Keskin Array B	148.37	309	PKPbc	PKPbc	23 22 42.9	-0.5
	comp=Z,1.2nm,0.6s,baz=64,slow=3.4,SNR=8.8						
CLL	Collm	150.68	345	*e*PKPbc	PKPbc	23 22 48.0	-0.3

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*NEIC **20** 23:12:27.0±1.6, 20.°1S±0.°1×177.°6W±0.°2, h464^{km}±8^{km}, mb4.3/36, Error ellipse: s-maj=21.0km s-min=18.4km az=109.0*

*IDC **20** 23:12:29.9±1.7, 20.°27S×177.°64W, h505^{km}±17^{km}, mb3.4/10, mb1 3.8/12, mb1mx3.4/31, mbtmp4.3/12, Error ellipse: s-maj=19.6km s-min=13.0km az=142.0*

ISC 20 23:12:29.7±0.5**, 20.°06S**±0.°08×**177.°73W**±0.°09**, h500**^{km}**, n135, σ1.^{s}41**/145**, mb4.2**/24**, 24C-12D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.62	299	P	P	23 13 55.6	+2.1
	33nm,0.3s,baz=203,slow=9.1,SNR=162						
MSVF	Nonsavu	4.62	299	P	P	23 13 55.0	+1.6
OUENC	Ouen Island, N	14.58	258	P	P	23 15 34.5	-1.0
DZM	Mont Dzumac	14.91	259	P	P	23 15 38.4	-0.7
DZM				IAmb	IAmb	23 15 48.0	
	comp=Z,12nm,0.9s						
OUZ	Omahuta	16.93	205	P	P	23 15 59.3	-0.6
OUZ				IAmb	IAmb	23 16 03.6	
	comp=Z,12nm,1.2s						
MXZ	Matakaoa Point	17.78	190	P	P	23 16 04.4	-3.4
MXZ	Matakaoa Point	17.78	190	P	P	23 16 06.3	-1.5
WMGZ	Waiomatatini S	18.01	190	P	P	23 16 09.9	0.0
HAZ	Te Kaha	18.06	192	P	P	23 16 08.8	-1.6
HAZ				S	S	23 19 12.1	+1.6
PKGZ	Pakihiroa	18.14	191	P	P	23 16 11.9	+0.7
PUZ	Puketiti	18.29	190	P	P	23 16 11.2	-1.3
RUGZ	Raukumara Rang	18.29	192	P	P	23 16 11.7	-1.0
RUGZ				S	S	23 19 15.4	+1.0
TWGZ	Tauwhareparae	18.43	191	P	P	23 16 13.2	-0.7
TWGZ				S	S	23 19 19.1	+2.4
MWZ	Matawai	18.67	192	P	P	23 16 15.0	-1.1
MWZ				S	S	23 19 26.4	+5.8
URZ	Urewera	18.68	193	P	P	23 16 12.7	-3.4
	comp=Z,4.0nm,0.3s,baz=299,slow=23,SNR=24						
URZ				S	S	23 19 14.1	-6.5
	comp=Z,0.3nm,0.3s,baz=302,slow=22,SNR=2.2						
URZ	Urewera	18.68	193	P	P	23 16 13.3	-2.8
URZ				S	S	23 19 25.5	+4.9
URZ	Urewera	18.68	193	P	P	23 16 13.7	-2.4
URZ				IAmb	IAmb	23 16 22.4	
	comp=Z,14nm,0.8s						
CNGZ	Carnagh Statio	18.70	190	P	P	23 16 16.2	0.0
TKGZ	Te Karaka	18.71	191	P	P	23 16 16.3	-0.1
RIGZ	Rimuhau	18.99	191	P	P	23 16 18.3	-0.6
BKZ	Black Stump Fm	19.68	193	P	P	23 16 21.2	-4.2
BKZ	Black Stump Fm	19.68	193	P	P	23 16 22.8	-2.5
BKZ				IAmb	IAmb	23 16 23.7	
	comp=Z,7.1nm,0.9s						
TMVZ	Te Maari	19.82	195	P	P	23 16 25.5	-1.2
OTVZ	Oturere	19.87	195	P	P	23 16 26.2	-1.0
SNVZ	South Ngauruho	19.90	195	P	P	23 16 26.6	-0.9
WNVZ	Wahianoa	20.05	195	P	P	23 16 27.2	-1.6
BHHZ	Black Hill Sta	20.09	194	P	P	23 16 26.1	-2.9
KAHZ	Kahuranaki	20.21	192	P	P	23 16 29.2	-0.9
TSZ	Takapari Road	20.66	194	P	P	23 16 32.9	-1.2
BFZ	Birch Farm	21.19	193	P	P	23 16 36.8	-2.1
BFZ	Birch Farm	21.19	193	P	P	23 16 37.0	-1.9
MSWZ	Moikau Station	22.11	194	P	P	23 16 46.8	-0.5
QRZ	Quartz Range	22.31	200	P	P	23 16 47.8	-1.3
NNZ	Nelson	22.41	198	P	P	23 16 49.1	-0.8
KHZ	Kahutara	23.48	196	P	P	23 16 59.2	-0.2
KHZ				IAmb	IAmb	23 17 03.1	
	comp=Z,9.8nm,1.1s						
LTZ	Lake Taylor	24.17	198	P	P	23 17 04.3	-1.4
LTZ				IAmb	IAmb	23 17 04.4	
	comp=Z,5.9nm,0.9s						
FOZ	Fox Glacier	25.63	201	P	P	23 17 16.0	-2.5
FOZ				IAmb	IAmb	23 17 25.2	
	comp=Z,17nm,1.0s						
ODZ	Otahua Downs	26.72	199	P	P	23 17 26.6	-1.6
ODZ				IAmb	IAmb	23 17 38.3	
	comp=Z,12nm,1.0s						
CTAO	Charters Tower	33.79	264	P	P	23 18 30.1	+0.5
CTAO				IAmb	IAmb	23 18 31.1	
	comp=Z,4.9nm,0.7s						
PATS	Pohnpei	35.64	316	P	P	23 18 44.6	-0.5
TOO	Toolangi	36.36	233	P	P	23 18 51.3	+0.3
COEN	Coen	37.81	273	P	P	23 19 03.6	+0.5
COEN				IAmb	IAmb	23 19 04.9	
	comp=Z,13nm,1.1s						
BBOO	Buckleboo	42.97	243	P	P	23 19 43.9	-0.3
BBOO				IAmb	IAmb	23 19 51.8	
	comp=Z,8.4nm,1.1s						
WR0	Warramunga Arr	44.73	262	P	P	23 19 57.9	-0.2
AS31	Alice Springs	44.87	256	P	P	23 19 59.3	+0.1
ASAR	Alice Springs	44.87	256	P	P	23 19 59.5	+0.4
	comp=Z,3.8nm,0.6s,baz=84,slow=8.6,SNR=33						
ASAR				PcP	pP	23 21 30.8	-0.2
	comp=Z,1.5nm,0.6s,baz=103,slow=4.1,SNR=10						
ASAR				S	S	23 25 59.2	-1.0
	comp=Z,0.5nm,0.7s,baz=94,slow=16,SNR=3.5						
WB0	Warramunga Arr	44.89	262	P	P	23 19 59.1	-0.2
WB2	Warramunga Arr	44.91	262	P	P	23 19 59.5	0.0
WRAB	Tennant Creek	44.91	262	P	P	23 19 56.7	-2.7
WRAB				IAmb	IAmb	23 19 60.0	
	comp=Z,6.7nm,0.9s						
WRA	Warramunga Arr	44.92	262	P	P	23 19 59.2	-0.4
	comp=Z,1.0nm,0.3s,baz=92,slow=7.6,SNR=54						
WRA				PcP	pP	23 21 31.2	-0.3
	comp=Z,1.2nm,0.8s,baz=94,slow=3.6,SNR=3.4						
WRA	Warramunga Arr	44.92	262	P	P	23 19 59.6	+0.1
MTN	Manton Dam	49.42	270	P	P	23 20 33.8	+0.2
MTN				IAmb	IAmb	23 20 35.9	
	comp=Z,30nm,1.1s						
FORT	Forrest	49.70	246	P	P	23 20 35.6	+0.1
KNRA	Kununurra	50.95	266	P	P	23 20 45.2	+0.5
KNRA				IAmb	IAmb	23 21 04.8	
	comp=Z,18nm,1.1s						
PSA00	Pilbara Seismi	58.02	257	P	P	23 21 35.0	+0.5
SBA	Scott Base	58.33	184	P	P	23 21 38.0	+2.3
VNDA	Vanda	58.37	185	P	P	23 21 35.0	-0.9
	comp=Z,0.5nm,0.5s,baz=13,slow=8.1,SNR=8.4						
VNDA	Vanda	58.37	185	P	P	23 21 36.8	+0.9
MORW	Morawa	60.23	247	P	P	23 21 49.6	+0.3
MORW				IAmb	IAmb	23 22 03.0	
	comp=Z,11nm,1.1s						
PETK	Petropavlovsk-	75.91	345	P	P	23 23 25.0	+0.8
	comp=Z,6.5nm,0.8s,baz=148,slow=8.7,SNR=4.0						
NVAR	Mina Array Bea	80.53	43	P	P	23 23 49.8	+0.1
	comp=Z,1.2nm,0.6s,baz=225,slow=8.4,SNR=7.6						
F10A	Beach Ranch, E	85.50	38	P	P	23 24 15.1	+0.8
F10A				IAmb	IAmb	23 24 16.0	
	comp=Z,7.7nm,0.9s						
TRF	Thorofare Moun	85.97	12	P	P	23 24 16.6	+0.4
RND	Reindeer	86.21	13	P	P	23 24 17.8	+0.6
RND				IAmb	IAmb	23 24 18.6	
	comp=Z,9.3nm,0.9s						
TXAR	Lajitas Array	86.60	57	P	P	23 24 20.1	+0.2
	comp=Z,1.3nm,0.8s,baz=216,slow=7.0,SNR=12						
TXAR	Lajitas Array	86.60	57	P	P	23 24 21.0	+1.1
HDA	Harding Lake	87.50	13	P	P	23 24 23.6	+0.4
CCB	Clear Creek Bu	87.53	12	P	P	23 24 23.3	0.0
MDM	Murphy Dome	87.72	12	P	P	23 24 24.4	+0.1
MDM				IAmb	IAmb	23 24 25.8	
	comp=Z,8.3nm,1.2s						
ILAR	Eielson Array	87.83	13	P	P	23 24 24.6	-0.1
	comp=Z,1.3nm,0.4s,baz=222,slow=6.0,SNR=24						
PDAR	Pinedale Array	88.47	43	P	P	23 24 28.9	+0.3
	comp=Z,0.8nm,0.6s,baz=219,slow=3.6,SNR=11						
PDAR	Pinedale Array	88.47	43	P	P	23 24 29.0	+0.4
CMAR	Chiang Mai Arr	90.21	289	P	P	23 24 38.1	+1.2
	comp=Z,0.6nm,0.3s,baz=123,slow=3.0,SNR=9.7						
YKA	Yellowknife Ar	96.01	25	P	P	23 25 02.0	-0.4
	comp=Z,0.2nm,0.6s,baz=238,slow=4.5,SNR=4.7						
ROSC	El Rosal	104.23	90	Pdiff	Pdif	23 25 39.4	-1.2
	comp=Z,5.0nm,0.4s,baz=134,slow=20,SNR=2.3						
ZALV	Zalesovo Beam	110.31	321	PKiKP	PKiKP	23 30 03.3	-0.9
	comp=Z,0.5nm,0.4s,baz=104,slow=0.6,SNR=2.5						
MKAR	Makanchi Array	111.08	314	PKiKP	PKiKP	23 30 05.1	-0.8
	comp=Z,0.6nm,0.6s,baz=100,slow=2.8,SNR=8.6						
KURK	Kurchatov	113.84	318		PKiKP	23 30 10.8	-0.2
KURBB	Kurchatov Arra	113.90	317	PKiKP	PKiKP	23 30 09.5	-1.6
	comp=Z,0.8nm,0.6s,baz=98,slow=1.8,SNR=13						
ARCES	ARCESS Array B	128.53	350	PKP	PKPdf	23 30 38.0	-0.7
	comp=Z,2.0nm,0.8s,baz=72,slow=0.9,SNR=6.7						
FINES	FINESS Array B	135.42	344	PKP	PKPdf	23 30 50.2	-1.6
	comp=Z,3.2nm,0.9s,baz=48,slow=2.1,SNR=9.7						
AKASG	Malin Array Be	142.75	332	PKhKP	PKPpre	23 31 02.5	
	comp=Z,2.4nm,0.3s,baz=42,slow=4.7,SNR=27						
SORM	Soroca	144.96	329	⇓P	PKPab	23 31 10.0	-0.7
PURM	Purcari	145.27	326	⇑P	PKPbc	23 31 10.7	-0.2
MILM	Milestii Mici	145.56	327	⇓P	PKPab	23 31 12.1	-1.0
LEOM	Leova	146.15	327	⇓P	PKPab	23 31 14.7	-0.7
VLDR	Vladesti	146.66	326	⇓P	PKiKP	23 31 16.1	-0.9
TLCR		146.70	325	⇓P	PKiKP	23 31 15.8	-1.4
BRTR	Keskin Array B	146.73	313	PKPbc	PKPbc	23 31 15.8	+0.3
	comp=Z,2.5nm,0.4s,baz=139,slow=4.3,SNR=30						
BURAR	Bucovina Array	146.80	331	⇑P	PKiKP	23 31 16.6	-0.8
SCTR	Scanteiesti	146.82	326	⇑P	PKiKP	23 31 16.3	-1.1
GHRR		146.86	327	⇑P	PKiKP	23 31 17.2	-0.2
TESR	Tescani	146.93	329	⇓P	PKPbc	23 31 16.0	+0.3
JURR	Jurilovca	146.94	324	⇑P	PKiKP	23 31 16.6	-1.0
CFR	Carcaliu	147.07	325	⇓P	PKPbc	23 31 16.0	-0.1
TPGR	Topolog	147.13	325	⇑P	PKiKP	23 31 16.8	-1.3
VRI	Vrincioaia	147.34	328	⇑P	PKiKP	23 31 17.5	-1.0
PLOR	Plostina	147.39	328	⇑P	PKiKP	23 31 17.4	-1.2
HARR	Harsova	147.50	325	⇑P	PKiKP	23 31 18.0	-0.8
BMR	Baia Mare	147.52	333	⇓P	PKiKP	23 31 18.0	-0.8
GRER		147.54	327	⇑P	PKiKP	23 31 19.2	+0.3
TRPA	Tarpa	147.56	334	⇑P	PKPbc	23 31 17.0	-0.2
BISRR	Bisoca	147.57	327	⇑P	PKiKP	23 31 18.2	-0.9
COVR	Voineasa-Covas	147.61	328	⇓P	PKPbc	23 31 17.8	+0.3
OSTC	Ostas	147.62	343	*e*PKP	PKiKP	23 31 18.6	-0.3
CHVC	Chvalec	147.64	344	*e*PKP	PKiKP	23 31 18.2	-0.8
CLL	Collm	147.69	347	⇓*i*PKPbc	PKiKP	23 31 18.3	-0.7
	comp=Z,15nm,0.8s						
CLL				*i* PKPab	PKPab	23 31 22.0	+0.5
	comp=Z,7.0nm,1.0s						
MANR	Mangalia	147.70	323	⇑P	PKiKP	23 31 19.0	-0.3
DPC	Dobruska-Polom	147.78	343	*e*PKP	PKiKP	23 31 19.0	-0.3
KRLC	Kraliky	147.90	342	*e*PKP	PKiKP	23 31 19.2	-0.4
DOPR	Dopca	147.93	329	⇑P	PKiKP	23 31 19.7	0.0
ISR	Istrita	147.95	327	⇑P	PKiKP	23 31 19.8	0.0
MLR	Muntele Rosu	147.99	328	⇑P	PKPbc	23 31 18.5	-0.1
MDUB	Mudurnu	148.01	316	PKPbc	PKiKP	23 31 19.6	-0.6
PVCC	Panska Ves	148.07	345	*e*PKP	PKiKP	23 31 19.7	-0.1
SECR		148.25	327	⇑P	PKiKP	23 31 19.8	-0.6
VOIR		148.47	329	⇓P	PKiKP	23 31 20.5	-0.5
DRGR		148.54	333	⇑P	PKiKP	23 31 20.7	-0.3
PRU	Pruhonice	148.58	345	*e*PKP	PKiKP	23 31 20.5	-0.4
VRAC	Vranov	148.64	342	*e*PKP	PKiKP	23 31 21.0	-0.1
ARR	Arges	148.73	329	⇓P	PKiKP	23 31 21.7	+0.3
PSZ	Piszkesteto	148.76	337	⇑P	PKiKP	23 31 21.6	+0.2
NKC	Novy Kostel	148.82	347	*e*PKP	PKiKP	23 31 21.2	-0.2
KRUC	Moravsky	148.92	342	*e*PKP	PKiKP	23 31 21.6	0.0
KRUC				*e*		23 31 27.8	
DEV	Deva	149.15	331	⇑P	PKiKP	23 31 22.0	-0.1
KHC	Kasperske Hory	149.61	345	*e*PKP	PKiKP	23 31 23.0	-0.1
KHC				*e*x	x	23 31 30.8	
CKRC	Cesky Krumlov	149.72	344	*e*PKP	PKiKP	23 31 24.5	+1.2
CKRC				*e*x	x	23 31 31.9	
GERES	GERESS Array B	149.85	345	PKPbc	PKiKP	23 31 23.5	-0.2
	comp=Z,3.7nm,0.7s,baz=43,slow=2.5,SNR=35						
GERES				PKPab	PKPab	23 31 31.0	+0.5
	comp=Z,0.6nm,0.5s,baz=36,slow=5.0,SNR=4.8						
BZS	Buzias	149.93	332	⇑P	PKiKP	23 31 23.2	-0.6
FRGS	Fruska Gora	151.07	334	⇑P	PKiKP	23 31 25.9	-0.3
VTS	Vitosha	151.40	327	⇑P	PKPbc	23 31 25.3	-1.5
VTS	Vitosha	151.40	327		PKiKP	23 31 27.0	-0.1
BOVS	Bovan	151.42	330	⇑P	PKiKP	23 31 26.3	-0.6
FNA	Florina	153.69	326		PKiKP	23 31 31.8	0.0
TORD	Torodi Ar. Bea	173.10	175	PKP	PKPdf	23 31 40.6	-1.4
	comp=Z,0.3nm,0.8s,baz=204,slow=3.2,SNR=1.4						

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*ANF **20** 23:22:31.6±0.2, 33.°64N×117.°88W, h14^{km}±1^{km}, ML3.4/28, Error ellipse: s-maj=1.5km s-min=1.4km az=40.0*

*NEIC **20** 23:22:32.9±1.3, 33.°63N±0.°01×117.°88W±0.°02, h9^{km}±4^{km}, Error ellipse: s-maj=2.4km s-min=1.0km az=55.0*

*PAS **20** 23:22:32.5±1.4, 33.°63N±0.°02×117.°90W±0.°01, h9^{km}±4^{km}, ML3.4/205, ML3.2/64(NEIC), Error ellipse: s-maj=2.4km s-min=1.7km az=192.0*

ISC 20 23:22:32.1±1.0**, 33.°62N**±0.°02×**117.°90W**±0.°02**, h9**^{km}±9^{km}**, n66, σ0.^{s}88**/90**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FMP	Fort Macarthur	0.34	286	P	Pg	23 22 38.9	+0.1
	baz=105,SNR=12						
FMP				S	Sg	23 22 43.2	-0.2
	baz=105						
GVRC	Garvey Reservo	0.47	337		Pg	23 22 41.8	+0.6
CIS	Catalina Islan	0.48	243	P	Pg	23 22 41.7	+0.2
	baz=62,SNR=17						
CIS				S	Sg	23 22 48.5	+0.6
	baz=62						
MURC	Murrieta	0.59	92	P	Pg	23 22 43.4	-0.1
	baz=273,SNR=128						
MURC				S	Sg	23 22 51.4	+0.1
	baz=273						
RSBC	Riverside Bore	0.59	54		Pg	23 22 43.5	-0.1
RSBC					Sg	23 22 51.1	-0.3
PASC	Pasadena Art C	0.60	337	Pg	Pg	23 22 43.1	-0.6
PASC	Pasadena Art C	0.60	337		Sg	23 22 51.1	-0.5
MWC	Mount Wilson	0.61	348	Pg	Pg	23 22 43.4	-0.7
MWC				IAML		23 22 55.9	
	comp=N,1µm,0.2s						
MWC				IAML		23 22 56.1	
	comp=E,879nm,0.2s						
BFSC	Mount Baldy Ra	0.65	18	P	Pg	23 22 44.5	-0.2
	baz=198,SNR=241						
BFSC				S	Sg	23 22 53.0	-0.2
	baz=198						
DECC	Green Verdugo	0.73	330	P	Pg	23 22 46.0	-0.1
	baz=150,SNR=12						
SCI2	San Clemente I	0.84	220	P	Pg	23 22 48.4	+0.2
	baz=40,SNR=12						
SCI2				S	Sb	23 23 01.3	+1.1
	baz=40						
109C	Camp Elliot, M	0.99	137		Pg	23 22 50.2	-0.9
109C				IAML		23 23 06.9	
	comp=E,904nm,0.2s						
109C	Camp Elliot, M	0.99	137	P	Pg	23 22 50.5	-0.6
	baz=318,SNR=20						
109C				S	Sg	23 23 03.7	-0.2
	baz=318						
BBRC	Big Bear Solar	1.04	52	P	Pg	23 22 51.6	-0.5
	baz=232,SNR=28						
BBRC				S	Sg	23 23 05.1	-0.4
	baz=232						
OSI	Osito Audit: C	1.20	326		Pb	23 22 54.4	-0.7
OSI				IAML		23 23 19.1	
	comp=N,359nm,0.6s						
OSI				IAML		23 23 19.7	
	comp=E,278nm,0.6s						
OSI	Osito Audit: C	1.20	326	P	Pb	23 22 54.4	-0.7
	baz=145,SNR=8.8						
OSI				S	Sb	23 23 10.7	-0.2
	baz=145						
PFO	Pinyon Flats O	1.20	90		Pb	23 22 54.1	-1.1
PFO				IAML		23 23 12.7	
	comp=E,402nm,0.7s						
PFO				IAML		23 23 12.8	
	comp=E,347nm,0.5s						
PFO	Pinyon Flats O	1.20	90	P	Pb	23 22 54.0	-1.2
	baz=271,SNR=152						
PFO				S	Sg	23 23 09.8	-1.0
	baz=271						
EDW2	Edwards Air Fo	1.26	357	P	Pn	23 22 55.2	-0.8
	baz=176,SNR=89						
EDW2				S	Sb	23 23 11.7	-0.7
	baz=176						
TJX	Tijuana	1.32	147		Pn	23 22 56.9	+0.3
BAR	Barrett	1.39	132		Pn	23 22 56.7	-1.0
BAR				IAML		23 23 17.0	
	comp=E,514nm,0.3s						
SNCC	San Nicolas Is	1.41	255	Pn	Pn	23 22 57.9	-0.1
SNCC				IAML		23 23 18.4	
	comp=N,235nm,0.5s						
MONP2	Monument Peak	1.44	120	P	Pn	23 22 57.8	-0.7
	baz=301,SNR=21						
MONP2				S	Sb	23 23 16.6	-1.0
	baz=301						
RRX	Edison Barstow	1.46	31	Pg	Pn	23 22 59.1	+0.5
	baz=211,SNR=14						
RRX				Sb	Sn	23 23 18.4	+0.5
	baz=211						
TKX	Tecate	1.51	134		Pn	23 22 59.6	+0.2
TKX				IAML		23 23 20.3	
	comp=N,362nm,0.2s						
TKX				IAML		23 23 20.7	
	comp=E,295nm,0.2s						
BELC	Belle Mtn. Jos	1.63	76	Pg	Pn	23 23 01.9	+0.8
	baz=257,SNR=73						
BELC				Sb	Sb	23 23 23.4	+0.3
	baz=257						
HEC	Hector,Ludlow	1.77	47	Pg	Pb	23 23 04.7	-0.1
	baz=228,SNR=67						
HEC				Sb	Sb	23 23 27.3	+0.1
	baz=228						
IKP	In-Ko-Pah, Jac	1.79	122	Pb	Pn	23 23 03.6	+0.4
	baz=304,SNR=15						
IKP				Sb	Sb	23 23 27.3	-0.3
	baz=304						
RMX	La Rumorosa	1.84	123	Pn	Pn	23 23 05.2	+1.2
RMX				IAML		23 23 37.9	
	comp=E,210nm,0.5s						
RMX				IAML		23 23 39.7	
	comp=N,157nm,0.4s						
LRMC	Laurel Mtn Rad	1.86	5	P	Pn	23 23 03.9	-0.5
	baz=186,SNR=32						
LRMC				S	Sn	23 23 26.4	-1.7
	baz=186						
SWSC	Sam W. Stewart	1.88	110	Pb	Pb	23 23 06.6	-0.1
	baz=292,SNR=11						
SWSC				Sb	Sb	23 23 31.1	+0.8
	baz=292						
GSC	Goldstone, Bar	1.91	28		Pn	23 23 04.9	0.0
GSC	Goldstone, Bar	1.91	28	P	Pn	23 23 04.8	-0.1
	baz=209,SNR=101						
GSC				Sb	Sb	23 23 31.4	+0.4
	baz=209						
CCX	Cicese	2.04	149	Pn	Pn	23 23 06.2	-0.3
BC3	Big Chuckawall	2.04	88	Pg	Pb	23 23 09.7	+0.3
	baz=270,SNR=19						
BC3				Sb	Sb	23 23 35.8	+0.8
	baz=270						
ISA	Isabella, Lake	2.09	347	Pn	Pn	23 23 07.8	+0.4
ISA	Isabella, Lake	2.09	347	S	Sn	23 23 32.3	-1.3
	baz=167						
GMRC	Granite Mounta	2.19	57	P	Pn	23 23 08.3	-0.5
	baz=239,SNR=37						
GMRC				Sb	Sb	23 23 40.3	+1.0
	baz=239						
IRM	Iron Mountain	2.35	76	Pg	Pb	23 23 15.1	+0.4
	baz=258,SNR=23						
IRM				Sb	Sb	23 23 45.3	+1.4
	baz=258						
TUQ	Turquoise Moun	2.44	41	Pn	Pn	23 23 12.8	+0.6
	baz=223						
TUQ				Pg	Pb	23 23 17.0	+0.8
	baz=223,SNR=20						
MPMC	Manual Prospec	2.46	8	P	Pn	23 23 12.3	-0.2
	baz=188,SNR=31						
MPMC				Sb	Sb	23 23 49.1	+2.1
	baz=188						
QSM	Queen of Sheba	2.49	20	Pn	Pn	23 23 13.9	+1.1
QSM				IAML		23 23 52.9	
	comp=N,175nm,0.2s						

QSM				IAML		23 23 52.9	
	comp=E,180nm,0.5s						
GLA	**Glamis**	**2.63**	**102**		**Pb**	**23 23 20.7**	**+1.2**
GLA				IAML		23 24 10.4	
	comp=E,75nm,0.6s						
SHOC	**Shoshone, Teco**	**2.64**	**30**	Sb	**Sb**	**23 23 54.2**	**+2.1**
	baz=211						
GWY	**Greenwater Val**	**2.75**	**21**		**Pn**	**23 23 16.6**	**+0.1**
PAGB	**Antelope Grade**	**2.86**	**318**		**Pn**	**23 23 18.9**	**+1.0**
PAGB				IAML		23 24 13.6	
	comp=N,46nm,1.5s						
NEE2	**Needles Airpor**	**2.95**	**66**	Sb	**Sb**	**23 24 04.1**	**+3.0**
	baz=248						
TPNV	**Topopah Spring**	**3.58**	**22**		**Pn**	**23 23 29.3**	**+1.2**
TPNV				IAML		23 24 27.8	
	comp=N,69nm,0.6s						
TPNV				IAML		23 24 29.3	
	comp=N,61nm,0.5s						
TPNV	**Topopah Spring**	**3.58**	**22**	P	**Pn**	**23 23 28.9**	**+0.9**
	baz=203,SNR=9.1						
LCH	**Last Change Ra**	**3.61**	**3**		**Pn**	**23 23 29.3**	**+1.0**
SFX	**San Felipe**	**3.65**	**134**	Pn	**Pn**	**23 23 29.2**	**+0.5**
SFX				IAML		23 24 20.8	
	comp=E,31nm,0.2s						
SFX				IAML		23 24 28.0	
	comp=N,33nm,0.9s						
SHPR	**Sheep Range**	**3.65**	**37**	Pn	**Pn**	**23 23 29.6**	**+0.6**
PRN	**Pahroc Range**	**4.43**	**31**		**Pn**	**23 23 40.8**	**+1.1**
PRN				IAML		23 24 59.7	
	comp=N,29nm,0.8s						
PRN				IAML		23 25 06.5	
	comp=E,34nm,0.8s						
TPH	**Tonopah**	**4.48**	**7**		**Pg**	**23 23 57.6**	**-0.3**
NVAR	**Mina Array Bea**	**4.81**	**356**	Pn	**Pn**	**23 23 44.2**	**-0.7**
CMB	**Columbia Colle**	**4.84**	**336**	Pn	**Pn**	**23 23 45.6**	**+0.4**
RYN	**Ryan**	**5.02**	**354**		**Pg**	**23 24 08.2**	**-0.1**
RYN				IAML		23 26 32.8	
	comp=N,9.7nm,5.0s						
RYN				IAML		23 27 06.7	
	comp=E,10.0nm,4.9s						
R11A	**Troy Canyon, C**	**5.08**	**21**		**Pg**	**23 24 08.3**	**-1.1**
R11A				IAML		23 25 17.2	
	comp=E,13nm,3.7s						
R11A				IAML		23 25 21.4	
	comp=N,8.4nm,4.4s						
R11A	**Troy Canyon, C**	**5.08**	**21**	Pg	**Pg**	**23 24 08.1**	**-1.3**
	baz=202						
LCMT	**Little Creek M**	**5.09**	**47**		**Pn**	**23 23 50.2**	**+1.5**
LCMT				IAML		23 25 14.0	
	comp=N,8.8nm,0.8s						
KNB	**Kanab**	**5.36**	**49**		**Pn**	**23 23 53.4**	**+1.0**
U15A	**North Rim**	**5.39**	**57**	Pn	**Pn**	**23 23 54.4**	**+1.4**
U15A				IAML		23 25 31.5	
	comp=N,13nm,3.0s						
CCUT	**Cedar City**	**5.39**	**42**		**Pn**	**23 23 54.4**	**+1.5**
CCUT				IAML		23 25 19.1	
	comp=N,8.9nm,4.9s						
CCUT				IAML		23 25 33.8	
	comp=E,9.6nm,2.9s						
KVN	**Kaiserville**	**5.42**	**358**	Pn	**Pn**	**23 23 53.5**	**+0.2**
X16A	**Lo Mia Camp, P**	**5.42**	**80**	Pn	**Pn**	**23 23 53.5**	**+0.1**
SZCU	**Shurtz Canyon**	**5.58**	**43**	Pn	**Pn**	**23 23 54.9**	**-0.6**

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*IDC **20** 23:44:28.2±1.1, 10°.74S×74°.41W, h0^{km}, mb3.4/4, mb1 3.8/9, mb1mx3.6/47, mbtmp3.6/9, ML3.6/5, MS2.4/1, Ms1 2.4/1, ms1mx2.2/25, Error ellipse: s-maj=27.5km s-min=19.5km az=17.0*

ISC 20 23:44:33.2±0.8, **10°.76S**±0°.09×**74°.39W**±0°.07, **h35**^{km}, **n9**, σ**1^{s}.30**/11, **mb3.5**/4, **Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.70**	**243**	Pn	**Pn**	**23 45 13.4**	**-0.8**
	44nm,0.3s,baz=59,slow=15,SNR=47						
NNA				Sn	**Sn**	**23 45 47.0**	**+1.3**
	27nm,0.3s,baz=240,slow=17,SNR=7.5						
NNA				LR	LR	23 45 53.8	
	comp=Z,70nm,20.9s,baz=50,slow=32						
ATAH	**Atahualpa**	**5.35**	**312**	Pn	**Pn**	**23 45 51.5**	**+0.6**
	4.1nm,0.3s,baz=136,slow=6.1,SNR=21						
ATAH				Sn	Sn	23 46 60.0	+8.4
	1.2nm,0.3s,baz=120,slow=8.0,SNR=1.5						
LPAZ	**La Paz**	**8.20**	**133**	Pn	**Pn**	**23 46 28.7**	**-1.6**
	0.1nm,0.3s,baz=312,slow=8.0,SNR=1.6						
LPAZ				Sn	**Sn**	**23 48 04.5**	**+2.3**
	0.1nm,0.3s,baz=11,slow=23,SNR=1.4						
LPAZ				Lg	Lg	23 48 46.0	
	0.3nm,0.3s,baz=202,slow=20,SNR=1.9						
SIV	**San Ignacio**	**13.96**	**113**	Pn	**Pn**	**23 47 48.0**	**-0.7**
	0.2nm,0.3s,baz=288,slow=14,SNR=1.9						
SIV				Lg	Lg	23 51 48.8	
	0.5nm,0.3s,baz=65,slow=22,SNR=2.8						
PTGA	**Pitinga**	**17.45**	**56**	P	**P**	**23 48 34.5**	**-0.5**
	0.6nm,0.3s,baz=324,slow=23,SNR=2.3						
TXAR	**Lajitas Array**	**48.85**	**325**	P	**P**	**23 53 15.5**	**-0.1**
	0.2nm,0.7s,baz=147,slow=6.6,SNR=5.2						
PDAR	**Pinedale Array**	**62.22**	**331**	P	**P**	**23 54 51.5**	**-0.2**
	0.2nm,0.6s,baz=137,slow=9.8,SNR=1.8						
TORD	**Torodi Ar. Bea**	**79.15**	**74**	P	**P**	**23 56 36.2**	**+1.2**
	0.7nm,0.8s,baz=249,slow=4.3,SNR=7.3						
YKA	**Yellowknife Ar**	**79.39**	**342**	P	**P**	**23 56 34.5**	**-0.7**
	0.6nm,1.1s,baz=141,slow=6.4,SNR=4.3						

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*MDD **20** 23:53:27.8±0.8, 36°.72N×7°.03W, h16^{km}±5^{km}, mbLg2.1/6, Error ellipse: s-maj=7.4km s-min=4.0km az=17.0, PRXIMO*

*CNRM **20** 23:53:27.8, 36°.40N×7°.27W, h54^{km}, ml2.8*

*INMG **20** 23:53:27.6±2.1, 36°.64N×7°.09W, h17^{km}±5^{km}, ML1.8, Error ellipse: s-maj=6.0km s-min=3.7km az=41.0*

*IGIL **20** 23:53:28.0, 36°.64N×7°.11W, h18^{km}, ML1.8*

*SFS **20** 23:53:38.0, 36°.71N×7°.00W, h48^{km}, ML2.0, GOLFO DE CADIZ*

ISC 20 23:53:26.7±1.2, **36°.60N**±0°.03×**7°.07W**±0°.03, **h35**^{km}±4^{km}, **n60**, σ**1^{s}.40**/102, **1C**, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBDV	**Barranco-do-Ve**	**0.94**	**313**	*e*P	**Pn**	**23 53 44.1**	**+0.6**
PBDV				*e*S	**Sb**	**23 53 55.6**	**-1.4**
PBDV				A	A	23 53 56.0	
	16nm,0.5s						
PBDV	**Barranco-do-Ve**	**0.94**	**313**	Pg	**Pn**	**23 53 44.1**	**+0.6**
PBDV				Lg	Lg	23 53 55.6	
	16nm,0.5s						
PVAQ	**Vaqueiros**	**0.96**	**327**	*e*P	**Pn**	**23 53 44.3**	**+0.6**
PVAQ				*e*S	**Sb**	**23 53 55.7**	**-1.6**
PVAQ				A	A	23 53 56.5	
	31nm,0.1s						
PVAQ	**Vaqueiros**	**0.96**	**327**	Pg	**Pn**	**23 53 44.3**	**+0.6**
PVAQ				Lg	Lg	23 53 55.7	
	31nm,0.1s						
PVAQ	**Vaqueiros**	**0.96**	**327**	P	**Pn**	**23 53 46.7**	**+3.1**
PVAQ				S	**Sn**	**23 53 58.8**	**+2.7**
EGRO	**El Granado**	**0.99**	**340**	⇑Pg	**Pn**	**23 53 44.7**	**+0.6**
	2.2nm,0.1s,SNR=18						
EGRO				Lg	Lg	23 53 56.6	
	36nm,0.1s,SNR=7.9						
ESPR	**Espera**	**1.01**	**74**	Pg	**Pn**	**23 53 45.4**	**+1.0**
	8.2nm,0.2s,SNR=7.9						
ESPR				Lg	Lg	23 53 58.0	
	8.5nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.21**	**15**	Pg	**Pb**	**23 53 47.2**	**-1.9**
	0.4nm,0.0s,SNR=7.9						
EMIN				Lg	Lg	23 54 01.0	
	3.0nm,0.1s,SNR=7.9						
PCVE	**Castro Verde**	**1.29**	**323**	*e*P	**Pb**	**23 53 49.1**	**-1.4**
PCVE				*e*S	**Sn**	**23 54 04.5**	**+0.1**
PCVE				A	A	23 54 08.8	
	6.6nm,0.5s						
PCVE	**Castro Verde**	**1.29**	**323**	Pg	**Pb**	**23 53 49.1**	**-1.4**
PCVE				Lg	Lg	23 54 04.5	
	6.6nm,0.5s						
MORF	**Marmelete**	**1.45**	**300**	*e*P	**Pn**	**23 53 51.2**	**+0.7**
MORF				*e*S	**Sn**	**23 54 08.0**	**-0.4**
MORF				IAML		23 54 08.9	
	comp=N,12nm,0.1s						
MORF	**Marmelete**	**1.45**	**300**	*e*P	**Pn**	**23 53 51.2**	**+0.7**
MORF				*e*S	**Sn**	**23 54 08.0**	**-0.4**
MORF				A	A	23 54 09.9	
	comp=N,6.9nm,0.1s						
MORF	**Marmelete**	**1.45**	**300**	Pg	**Pn**	**23 53 51.2**	**+0.7**
MORF				Lg	Lg	23 54 08.0	
PFVI	**Vila Bisbo**	**1.51**	**291**	*e*P	**Pn**	**23 53 52.1**	**+0.8**
PFVI				*e*S	**Sn**	**23 54 09.2**	**-0.5**
PFVI				A	A	23 54 13.9	
	comp=N,12nm,1.1s						
PFVI	**Vila Bisbo**	**1.51**	**291**	Pg	**Pb**	**23 53 54.5**	**+0.3**
	comp=N,1.8nm,0.1s,SNR=7.9						
PFVI				Lg	Lg	23 54 08.5	
	comp=N,7.0nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**1.51**	**291**	P	**Pn**	**23 53 51.2**	**-0.1**
PFVI				S	**Sn**	**23 54 10.6**	**+0.9**
MESJ	**Messejana**	**1.54**	**324**	*e*P	**Pn**	**23 53 52.4**	**+0.7**
MESJ				*e*S	**Sn**	**23 54 09.9**	**-0.7**
MESJ				IAML		23 54 11.9	
	comp=E,8.2nm,0.1s						
MESJ	**Messejana**	**1.54**	**324**	*e*P	**Pn**	**23 53 52.4**	**+0.7**
MESJ				*e*S	**Sn**	**23 54 09.9**	**-0.7**
MESJ				A	A	23 54 19.0	
	comp=E,5.7nm,0.9s						
MESJ	**Messejana**	**1.54**	**324**	Pg	**Pn**	**23 53 52.4**	**+0.7**
MESJ				Lg	Lg	23 54 09.9	
PBEJ	**Beja**	**1.56**	**336**	*e*S	**Sn**	**23 54 10.5**	**-0.5**
PBEJ				A	A	23 54 17.0	
	comp=E,4.9nm,0.2s						
PBEJ	**Beja**	**1.56**	**336**	Lg	Lg	23 54 10.5	
	comp=E,2.5nm,0.2s						
PBAR	**Barrancos**	**1.57**	**1**	*e*S	**Sn**	**23 54 10.7**	**-0.6**
PBAR				A	A	23 54 16.1	
	comp=E,21nm,0.5s						
PBAR	**Barrancos**	**1.57**	**1**	Lg	Lg	23 54 10.7	
	comp=E,21nm,0.5s						
SMIR	**Smir Dam**	**1.64**	**123**	P	**Pb**	**23 53 55.1**	**-1.2**
SMIR				S	**Sb**	**23 54 17.4**	**+0.7**
EMIJ	**Mijas**	**1.85**	**90**	Pn	**Pn**	**23 53 57.4**	**+1.4**
	comp=E,0.6nm,0.3s,SNR=7.9						
EMIJ				Sn	**Sn**	**23 54 19.4**	**+1.4**
	comp=E,1.2nm,0.2s,SNR=7.9						
PNCL	**Nicolau / Gran**	**1.91**	**323**	*e*Pn	**Pn**	**23 53 57.5**	**+0.8**
PNCL				*e*Sn	**Sn**	**23 54 19.7**	**+0.2**
PNCL				A	A	23 54 29.5	
	comp=E,4.2nm,0.3s						
PNCL	**Nicolau / Gran**	**1.91**	**323**	Pn	**Pn**	**23 53 57.5**	**+0.8**
PNCL				Sn	**Sn**	**23 54 19.7**	**+0.2**
	comp=E,4.2nm,0.3s						
ECAB	**El Cabril**	**1.97**	**41**	Pn	**Pn**	**23 53 58.5**	**+0.8**
	comp=E,0.2nm,0.3s,SNR=7.9						
ECAB				Pg	**Pb**	**23 54 03.9**	**+1.9**
	comp=E,0.3nm,0.1s,SNR=7.9						
ECAB				Sn	**Sn**	**23 54 18.8**	**-2.4**
	comp=E,0.4nm,0.2s,SNR=7.9						
ECAB				Lg	Lg	23 54 26.2	
	comp=E,3.3nm,0.3s,SNR=11						
EVO	**Evora**	**2.07**	**339**	P	**Sn**	**23 54 23.2**	**-0.4**
EVO				S	**Sb**	**23 54 31.2**	**+2.1**
EVO	**Evora**	**2.07**	**339**	*e*Pn	**Pn**	**23 53 59.8**	**+0.8**
EVO				*e*Sn	**Sn**	**23 54 22.9**	**-0.7**
EVO				A	A	23 54 31.4	
	comp=E,5.1nm,0.1s						
EVO	**Evora**	**2.07**	**339**	Pn	**Pn**	**23 53 59.8**	**+0.8**
EBAD	**Badajoz**	**2.15**	**1**	Pn	**Pn**	**23 54 00.6**	**+0.4**
	comp=E,0.2nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**23 54 23.9**	**-1.7**
	comp=E,1.0nm,0.1s,SNR=7.9						
EBAD				Lg	Lg	23 54 31.2	
	comp=E,2.5nm,0.2s,SNR=7.9						
PESTR	**Estremoz**	**2.30**	**350**	*e*Pn	**Pn**	**23 54 03.9**	**+1.7**
PESTR				*e*Sn	**Sn**	**23 54 28.9**	**-0.4**
PESTR				*e*Sg	**Sb**	**23 54 39.0**	**+3.3**
PESTR				A	A	23 54 41.0	
	comp=E,1.4nm,0.5s						
PESTR	**Estremoz**	**2.30**	**350**	P	**Pb**	**23 54 05.6**	**-1.9**
PESTR				S	**Sb**	**23 54 36.1**	**+0.4**
EGOR	**Sierra Gorda,**	**2.42**	**77**	Pn	**Pn**	**23 54 04.7**	**+0.7**
	comp=E,0.2nm,0.2s,SNR=7.9						
EGOR				Sn	**Sn**	**23 54 32.6**	**0.0**
	comp=E,1.3nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**2.53**	**51**	Pn	**Pn**	**23 54 06.3**	**+1.0**
	comp=E,0.2nm,0.2s,SNR=7.9						
EADA				Sn	**Sn**	**23 54 32.2**	**-2.7**
	comp=E,0.4nm,0.1s,SNR=7.9						
EADA				Lg	Lg	23 54 41.3	
	comp=E,0.4nm,0.2s,SNR=7.9						
PMTG	**Montargil**	**2.63**	**340**	*e*Pn	**Pn**	**23 54 07.5**	**+0.8**
PMTG				*e*Sn	**Sn**	**23 54 37.2**	**-0.2**
PMTG				*e*Sg	**Sb**	**23 54 47.3**	**+2.3**
PMTG				A	A	23 54 58.0	
	comp=E,2.5nm,0.4s						
PMTG	**Montargil**	**2.63**	**340**	Pn	**Pn**	**23 54 07.5**	**+0.8**
PMTG				Sn	**Sn**	**23 54 37.2**	**-0.2**
PMTG				Lg	Lg	23 54 47.3	
	comp=E,2.5nm,0.4s						
ELGU	**Los Guajares,**	**2.78**	**83**	Sn	**Sn**	**23 54 38.5**	**-2.6**
	comp=E,1.1nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**2.84**	**355**	*e*Pn	**Pn**	**23 54 11.1**	**+1.6**
PMRV				*e*Sn	**Sn**	**23 54 41.9**	**-0.6**
PMRV				A	A	23 54 58.2	
	comp=E,1.6nm,0.7s						
PMRV	**Marv??o**	**2.84**	**355**	Pn	**Pn**	**23 54 11.1**	**+1.6**
PMRV				Sn	**Sn**	**23 54 41.9**	**-0.6**
	comp=E,1.6nm,0.7s						
PALE	**Palemas**	**2.89**	**118**	P	**Pn**	**23 54 11.9**	**+1.7**
PALE				S	**Sn**	**23 54 45.5**	**+1.7**
PMAFR	**Mafra**	**2.94**	**324**	*e*Pn	**Pn**	**23 54 09.6**	**-1.3**
PMAFR				*e*Sn	**Sn**	**23 54 45.4**	**+0.5**
PSBE	**So Bento**	**3.21**	**335**	*e*Pn	**Pn**	**23 54 16.2**	**+1.5**
PSBE				*e*Sn	**Sn**	**23 54 51.1**	**-0.7**
PSBE				A	A	23 54 55.4	
	comp=E,3.9nm,0.7s						
PCBR	**Castelo Branco**	**3.25**	**354**	*e*Pn	**Pn**	**23 54 15.9**	**+0.7**
PCBR				*e*Sn	**Sn**	**23 54 51.3**	**-1.4**
PCBR	**Castelo Branco**	**3.25**	**354**	Pn	**Pn**	**23 54 15.9**	**+0.7**
PCBR				Sn	**Sn**	**23 54 51.3**	**-1.4**
AKLM	**AKL**	**3.34**	**128**	P	**Pn**	**23 54 16.9**	**+0.4**
AKLM				S	**Sn**	**23 54 55.0**	**-0.1**
EQES	**Quesada**	**3.41**	**68**	Pn	**Pn**	**23 54 18.8**	**+1.4**
	comp=E,0.5nm,0.4s,SNR=7.9						
EQES				Sn	**Sn**	**23 54 55.0**	**-1.8**
	comp=E,0.7nm,0.3s,SNR=7.9						
PCAS	**Casmilo, Conde**	**3.63**	**342**	*e*Sn	**Sn**	**23 55 01.1**	**-0.9**
MTE	**Manteigas**	**3.81**	**354**	*e*Sn	**Sn**	**23 55 04.8**	**-1.9**
PVIS	**Viseu**	**4.16**	**351**	*e*Sn	**Sn**	**23 55 14.2**	**-1.0**
MD31	**MD31**	**4.18**	**152**	P	**Pn**	**23 54 28.7**	**+0.7**
MD31				S	**Sn**	**23 55 16.0**	**+0.2**
MDT	**Midelt**	**4.29**	**151**	P	**Pn**	**23 54 30.0**	**+0.5**
MDT				S	**Sn**	**23 55 16.2**	**-2.1**
JBK	**JBK**	**4.31**	**120**	P	**Pn**	**23 54 31.1**	**+1.1**
JBK				S	**Sn**	**23 55 17.6**	**-1.6**
MVO	**Moncorvo**	**4.56**	**0**	*e*Pn	**Pn**	**23 54 34.8**	**+1.5**
MVO				*e*Sn	**Sn**	**23 55 21.9**	**-3.1**
MVO				A	A	23 55 22.9	
	comp=E,3.6nm,0.6s						
PVRL	**Vila Real**	**4.70**	**354**	*e*Sn	**Sn**	**23 55 25.4**	**-3.0**
POLO	**Lamas de Olo**	**4.80**	**353**	*e*Pn	**Pn**	**23 54 37.9**	**+1.3**
POLO				*e*Sn	**Sn**	**23 55 29.9**	**-1.2**
PBRG	**Braganca**	**5.20**	**3**	*e*Pn	**Pn**	**23 54 43.6**	**+1.5**
PBRG				*e*Sn	**Sn**	**23 55 39.1**	**-1.8**
OUK	**Oukaimeden**	**5.42**	**187**	P	**Pn**	**23 54 46.1**	**+0.7**
OUK				S	**Sn**	**23 55 43.3**	**-3.4**
OUZM	**OUZ**	**5.68**	**177**	P	**Pn**	**23 54 48.7**	**-0.1**
OUZM				S	**Sn**	**23 55 50.6**	**-2.2**

INET 20 23:59:34.6, 12°.55N×87°.41W, h74^{km}, MW3.6, Near coast of Nicaragua

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*KLM **21** 00:08:06, 3°.52N×117°.67E, h12^{km}, mb3.9*

DJA 21 00:08:07.6±0.5, **4°N**±3°×**11°8E**±°, **h14**^{km}±4^{km}, **M3.6**/7, **mb3.6**/2, **MLv3.7**/7, **Borneo**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPMM	**Sapulut**	**1.63**	**313**	P	Pn	00 08 36.0	+0.1
MPSI	**Mapaga**	**3.93**	**145**	P	Pn	00 09 07.5	-0.1

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*ISK **21** 00:20:50.9, 35°.10N×29°.98E, h17^{km}, ML2.7/14*

*DDA **21** 00:20:54.0, 35°.19N×29°.88E, h21^{km}±1^{km}, ML2.5*

*NIC **21** 00:20:55.4±0.0, 35°.30N×30°.19E, h33^{km}±28^{km}, Ml3.0/5*

ISC 21 00:20:51.9±2.1, **35°.11N**±0°.05×**29°.99E**±0°.03, **h19**^{km}±5^{km}, **n49**, σ**1^{s}.31**/80, **2C-1D**, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSL	**Kastellorizon**	**1.09**	**343**	P	**Pb**	**00 21 11.8**	**-0.3**
KSL				S	**Sg**	**00 21 26.3**	**-1.0**
KSL				AML	AML	00 21 39.5	
	0.3nm,0.7s						
KSL				AML	AML	00 21 39.5	
	0.3nm,0.7s						
KSL				AML	AML	00 21 42.1	
	0.2nm,0.8s						
KSL				AML	AML	00 21 42.1	
	0.2nm,0.8s						
AKAS	**Kas**	**1.16**	**345**	*i* P	**Pb**	**00 21 12.8**	**-0.7**
AKAS	**Kas**	**1.16**	**345**	PN	**Pb**	**00 21 13.1**	**-0.4**
AKAS				SN	**Sb**	**00 21 29.2**	**+1.0**
AKUM	**Antalya-Kumluc**	**1.24**	**13**	*i* P	**Pn**	**00 21 13.9**	**-0.4**
AKUM				*i* S	**Sb**	**00 21 30.0**	**-0.4**
ELL	**Elmali**	**1.64**	**358**	PN	**Pn**	**00 21 19.9**	**+0.1**
ELL				SN	**Sn**	**00 21 40.8**	**+0.4**
ELL	**Elmali**	**1.64**	**358**	P	**Pn**	**00 21 19.8**	**+0.1**
ELL				S	**Sn**	**00 21 37.9**	**-2.5**
FETY	**Fethiye**	**1.69**	**335**	*i* P	**Pn**	**00 21 20.6**	**+0.1**
FETY				IAML		00 21 40.0	
	comp=E,71nm,0.4s						
FETY				IAML		00 21 40.0	
	comp=N,53nm,0.4s						
FETY	**Fethiye**	**1.69**	**335**	PN	**Pn**	**00 21 20.5**	**+0.1**
ARG	**Arkhangelos**	**1.87**	**307**	PN	**Pn**	**00 21 23.1**	**+0.2**
ARG				SN	**Sn**	**00 21 46.4**	**+0.3**
KORT	**Korkueli**	**1.91**	**9**	*i* P	**Pn**	**00 21 24.5**	**+1.0**
KORT				*i* S	**Sn**	**00 21 47.9**	**+0.8**
KORT	**Korkueli**	**1.91**	**9**	PN	**Pn**	**00 21 23.8**	**+0.2**
KORT				SN	**Sn**	**00 21 47.6**	**+0.4**
CAME	**Cameli-Denizli**	**1.91**	**343**	PN	**Pn**	**00 21 23.8**	**+0.2**
CAME				SN	**Sn**	**00 21 47.7**	**+0.5**
AKMS	**Akamas**	**1.93**	**92**	⇓P	**Pn**	**00 21 24.1**	**+0.4**
AKMS				S	**Sn**	**00 21 45.9**	**-1.5**
AKMS				AML	AML	00 21 48.9	
	comp=N,0.6nm,0.2s						
AKMS				AML	AML	00 21 48.9	
	comp=N,0.6nm,0.2s						
AKMS				AML	AML	00 21 50.5	
	comp=N,0.6nm,0.3s						
AKMS				AML	AML	00 21 50.5	
	comp=N,0.6nm,0.3s						
CAEL	**Denizli, Camel**	**2.08**	**345**	*i* P	**Pn**	**00 21 27.4**	**+1.5**
CAEL				*i* S	**Sn**	**00 21 51.8**	**+0.5**
ALFC	**Alefka**	**2.14**	**88**	⇑*e*P	**Pn**	**00 21 27.0**	**+0.3**
ALFC				S	**Sn**	**00 21 50.8**	**-2.0**
ALFC				AML	AML	00 21 52.6	
	comp=N,0.4nm,0.5s						
ALFC				AML	AML	00 21 52.6	
	comp=N,0.4nm,0.5s						
ALFC				AML	AML	00 21 54.4	
	comp=N,0.4nm,0.4s						
ALFC				AML	AML	00 21 54.4	
	comp=N,0.4nm,0.4s						
NATA	**Nata**	**2.15**	**98**	⇑*e*P	**Pn**	**00 21 27.4**	**+0.7**
NATA				AML	AML	00 21 52.3	
	comp=N,0.3nm,0.4s						
NATA				AML	AML	00 21 52.4	
	comp=N,0.4nm,0.3s						
GOLH	**Golhisar**	**2.15**	**351**	*i* P	**Pn**	**00 21 28.2**	**+1.4**
TURN	**Turunc**	**2.18**	**320**	*i* P	**Pn**	**00 21 28.2**	**+1.0**
TURN				*i* S	**Sn**	**00 21 51.8**	**-1.8**
TURN	**Turunc**	**2.18**	**320**	PN	**Pn**	**00 21 27.5**	**+0.3**
TURN				SN	**Sn**	**00 21 54.2**	**+0.6**
GAZI	**Gazipasa**	**2.20**	**59**	*i* P	**Pn**	**00 21 27.5**	**0.0**
GAZI				*i* S	**Sn**	**00 21 52.8**	**-1.4**
GAZI				IAML		00 21 54.0	
	comp=N,38nm,0.5s						
GAZI				IAML		00 21 59.0	
	comp=E,40nm,0.3s						
GAZI	**Gazipasa**	**2.20**	**59**	PN	**Pn**	**00 21 27.9**	**+0.4**
KEPZ	**Antalya-Kepez**	**2.22**	**36**	*i* P	**Pn**	**00 21 28.6**	**+0.9**
KEPZ				*i* S	**Sn**	**00 21 53.1**	**-1.5**
KEPZ				IAML		00 21 57.0	
	comp=N,31nm,0.4s						
BUCA	**Burdur, Bucak-**	**2.26**	**12**	*i* P	**Pn**	**00 21 30.1**	**+1.8**
BCK	**Bucak**	**2.40**	**12**	PN	**Pn**	**00 21 30.7**	**+0.5**
YER	**Yerkesik**	**2.45**	**326**	PN	**Pn**	**00 21 31.5**	**+0.6**
YER				SN	**Sn**	**00 22 00.6**	**+0.3**
TAVA	**DENIZLI_Tavas**	**2.50**	**340**	*i* P	**Pn**	**00 21 32.1**	**+0.4**
MULA	**Mugla, Merkez-**	**2.53**	**328**	*i* P	**Pn**	**00 21 35.4**	**+3.4**
MULA				*i* S	**Sn**	**00 22 00.9**	**-1.5**
MULA				IAML		00 22 04.0	
	comp=E,32nm,0.7s						
DAT	**Datca**	**2.54**	**310**	*i* P	**Pn**	**00 21 33.0**	**+0.8**
DAT				*i* S	**Sn**	**00 22 01.1**	**-1.5**
DAT				IAML		00 22 06.0	
	comp=N,24nm,0.9s						
DAT				IAML		00 22 07.0	
	comp=E,22nm,0.8s						
DAT	**Datca**	**2.54**	**310**	PN	**Pn**	**00 21 32.9**	**+0.8**
ASGA	**Asgata**	**2.70**	**96**	P	**Pn**	**00 21 34.6**	**+0.3**
ASGA				S	**Sn**	**00 22 06.0**	**-0.5**
ASGA				AML	AML	00 22 06.9	
	comp=E,0.2nm,0.3s						
ASGA				AML	AML	00 22 06.9	
	comp=E,0.2nm,0.3s						
ASGA				AML	AML	00 22 07.1	
	comp=E,0.2nm,0.4s						
ASGA				AML	AML	00 22 07.1	
	comp=E,0.2nm,0.4s						
SEYD	**Seydisehir-KON**	**2.74**	**33**	PN	**Pn**	**00 21 35.6**	**+0.7**
SEYD				SN	**Sn**	**00 22 08.1**	**+0.6**
SEDI	**Konya, Seydise**	**2.74**	**31**	*i* P	**Pn**	**00 21 36.5**	**+1.6**
SEDI				*i* S	**Sn**	**00 22 09.1**	**+1.5**
SEDI				IAML		00 22 11.0	
	comp=N,37nm,0.4s						
SEDI				IAML		00 22 12.0	
	comp=E,30nm,0.5s						
HDMB	**Hadim**	**2.74**	**47**	PN	**Pn**	**00 21 35.6**	**+0.5**
CSS	**Mathiatis**	**2.75**	**92**	P	**Pn**	**00 21 34.9**	**-0.1**
CSS				S	**Sn**	**00 22 05.9**	**-1.8**
OSC2	**CSNet OBS 4**	**2.78**	**136**	P	**Pn**	**00 21 38.1**	**+2.8**
BASM	**Basmaki-Afyon**	**2.80**	**1**	PN	**Pn**	**00 21 36.8**	**+1.0**
BDRM	**Kayabasi**	**2.84**	**314**	*i* P	**Pn**	**00 21 36.7**	**+0.5**
BDRM				*i* S	**Sn**	**00 22 08.5**	**-1.3**
BDRM				IAML		00 22 17.0	
	comp=N,21nm,0.7s						
BODT	**Bodrum**	**2.91**	**313**	PN	**Pn**	**00 21 38.1**	**+0.8**
BAGO	**Egridir - ISPA**	**2.95**	**12**	*i* P	**Pn**	**00 21 40.1**	**+2.3**
MVOU	**Mavrovouni**	**2.99**	**91**	P	**Pn**	**00 21 38.9**	**+0.6**
MVOU				S	**Sn**	**00 22 12.9**	**-0.7**
AYDN	**Tasoluk**	**3.06**	**327**	*i* P	**Pn**	**00 21 41.5**	**+2.1**
AYDN				*i* S	**Sn**	**00 22 14.4**	**-1.0**
AYDN				IAML		00 22 17.0	
	comp=E,13nm,0.3s						
GULN	**MERSIN_Gulnar**	**3.09**	**69**	*i* P	**Pn**	**00 21 40.9**	**+1.3**
GULN				*i* S	**Sn**	**00 22 15.0**	**-1.0**
GULN				IAML		00 22 18.0	
	comp=E,18nm,0.7s						
GULN				IAML		00 22 18.0	
	comp=N,18nm,0.3s						
KZIL	**AFYON_Kizioren**	**3.14**	**2**	*i* P	**Pn**	**00 21 42.6**	**+2.1**
KKBE	**Karaman, Kazim**	**3.18**	**48**	*i* P	**Pn**	**00 21 43.5**	**+2.4**
KKBE				*i* S	**Sn**	**00 22 19.6**	**+1.0**
KKBE				IAML		00 22 24.0	
	comp=E,13nm,0.4s						
KKBE				IAML		00 22 27.0	
	comp=N,11nm,0.5s						
DOGA	**KONYA_Doganhis**	**3.28**	**24**	*i* P	**Pn**	**00 21 44.1**	**+1.6**
DOGA				IAML		00 22 29.0	
	comp=N,11nm,0.5s						
YVAC	**Isparta, Yalva**	**3.31**	**17**	*i* P	**Pn**	**00 21 45.2**	**+2.4**
YVAC				*i* S	**Sn**	**00 22 22.2**	**+0.5**
KONT	**Konya--Tatoy**	**3.41**	**33**	*i* P	**Pn**	**00 21 45.9**	**+1.7**
KONT				IAML		00 22 25.0	
	comp=N,9.6nm,1.4s						
USAK	**Uak-Merkez**	**3.68**	**348**	*i* P	**Pn**	**00 21 47.6**	**-0.3**
USAK				*i* S	**Sn**	**00 22 26.9**	**-3.8**
KDHN	**Kadinhani**	**3.81**	**26**	*i* P	**Pn**	**00 21 51.1**	**+1.5**
KDHN				*i* S	**Sn**	**00 22 32.8**	**-1.2**

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*IDC **21** 00:28:55.4±7.4, 8°.02S×129°.16E, h165^{km}±78^{km}, mb2.8/2, mb1 3.3/6, mb1mx2.9/55, mbtmp3.7/6, Error ellipse: s-maj=84.3km s-min=28.3km az=43.0*

ISC 21 00:28:53.7±1.5, **8°.0S**±0°.1×**129°.4E**±0°.2, **h150**^{km}, **n6**, σ**2^{s}.35**/7, **Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.01**	**249**	P	**Pn**	**00 30 20.3**	**-0.4**
	7.4nm,0.3s,baz=263,slow=0.7,SNR=6.2						

BATI				S	Sn	00 31 13.8	-15
	7.3nm,0.3s,baz=184,slow=18,SNR=2.1						
FITZ	**Fitzroy Crossi**	10.63	199	P	Pn	00 31 23.0	+0.9
	0.6nm,0.3s,baz=5.2,slow=11,SNR=27						
WRA	**Warramunga Arr**	12.78	158	P	Pn	00 31 51.0	+0.8
	0.6nm,0.3s,baz=336,slow=12,SNR=40						
WRA				S	Sn	00 34 08.3	-3.3
	0.3nm,0.3s,baz=329,slow=22,SNR=1.7						
ASAR	**Alice Springs**	16.14	165	P	P	00 32 35.6	+3.0
	0.3nm,0.3s,baz=341,slow=9.8,SNR=15						
MKAR	**Makanchi Array**	68.74	327	P	P	00 39 40.8	-0.6
	0.1nm,0.4s,baz=114,slow=8.1,SNR=4.4						
KURBB	**Kurchatov Arra**	73.06	329	P	P	00 40 06.6	-0.7
	0.1nm,0.3s,baz=134,slow=5.1,SNR=1.6						

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*IDC **21** 00:30:11.3±1.3, 6°.86S×129°.36E, h0^{km}, mb3.8/3, mb1 4.3/7, mb1mx3.7/48, mbtmp4.1/7, ML4.4/4, Error ellipse: s-maj=45.0km s-min=20.6km az=73.0*

*NEIC **21** 00:30:24.6±1.8, 7°.36S±0°.08×129°.30E±0°.09, h141^{km}±28^{km}, mb4.2/3, Error ellipse: s-maj=14.2km s-min=10.0km az=131.0*

ISC 21 00:30:23.6±0.8**, 7°.47S**±0°.06×**129°.27E**±0°.07**, h100^{km}, n20, σ2^{s}66**/27**, mb3.7**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	5.41	33	Pn	Pn	00 31 42.6	+0.6
FAKI					Sn	00 32 41.1	-1.9
SOEI	**Soe**	5.44	245		Pn	00 31 45.6	+3.1
SOEI					Sn	00 32 47.5	+3.6
MTN	**Manton Dam**	5.64	161	Pn	Pn	00 31 48.7	+3.6
MTN					Sn	00 32 51.6	+3.0
BATI	**Baumata**	6.17	243	Pn	Pn	00 31 50.3	-2.0
	11nm,0.3s,baz=84,slow=10,SNR=2.1						
BATI				Sn	Sn	00 33 02.5	+1.0
	9.3nm,0.3s,baz=60,slow=21,SNR=8.1						
KNRA	**Kununurra**	8.17	183	Pn	Pn	00 32 21.5	+2.0
FITZ	**Fitzroy Crossi**	11.14	198	Pn	Pn	00 32 59.5	-0.3
	2.5nm,0.3s,baz=28,slow=10,SNR=26						
FITZ				Sn	Sn	00 34 57.7	-4.7
	baz=79,slow=18						
WB0	**Warramunga Arr**	13.19	158	Pn	Pn	00 33 26.9	-0.3
WRAB	**Tennant Creek**	13.33	159		Pn	00 33 28.8	-0.1
WRA	**Warramunga Arr**	13.34	159	Pn	Pn	00 33 28.2	-0.8
	1.5nm,0.3s,baz=338,slow=12,SNR=23						
WRA				Sn	Sn	00 35 50.8	-5.0
	2.7nm,0.3s,baz=338,slow=21,SNR=7.5						
WRA	**Warramunga Arr**	13.34	159		Pn	00 33 29.4	+0.4
WB2	**Warramunga Arr**	13.34	159		Pn	00 33 28.9	-0.2
WR0	**Warramunga Arr**	13.43	158	Pn	Pn	00 33 30.3	+0.1
COEN	**Coen**	15.10	116		Pn	00 33 52.8	+1.0
COEN				IAmb	IAmb	00 34 08.6	
	comp=Z,49nm,1.8s						
AS31	**Alice Springs**	16.70	165	P	P	00 34 13.0	+0.6
AS31				IAmb	IAmb	00 34 14.7	
	comp=Z,4.2nm,1.4s						
ASAR	**Alice Springs**	16.70	165	P	P	00 34 13.8	+1.4
	comp=Z,1.0nm,0.3s,baz=338,slow=9.4,SNR=31						
ASAR				S	Sn	00 37 11.8	-5.4
	comp=Z,0.6nm,0.3s,baz=347,slow=26,SNR=6.2						
ASAR	**Alice Springs**	16.70	165	P	P	00 34 13.5	+1.1
PSA00	**Pilbara Seismi**	16.71	212	P	P	00 34 12.6	+0.2
PSA00				IAmb	IAmb	00 34 21.2	
	comp=Z,23nm,1.6s						
STKA	**Stephens Creek**	26.86	156	P	P	00 35 59.1	+4.0
	comp=Z,0.9nm,0.4s,baz=333,slow=11,SNR=5.0						
MKAR	**Makanchi Array**	68.22	327	P	P	00 41 11.1	-2.4
	comp=Z,0.4nm,0.4s,baz=116,slow=8.0,SNR=14						
KURBB	**Kurchatov Arra**	72.53	329	P	P	00 41 36.8	-2.9
	comp=Z,0.3nm,0.5s,baz=127,slow=4.9,SNR=7.6						

HEL 21 00:38:28.9±0.0**, 67°.85N×20°.21E, h0^{km}, ML1.4, ML0.8**(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	0.12	25	*i* P	Pg	00 38 30.8	-0.3
KUA				*i* S	Sg	00 38 32.4	-0.2
RATU	**Laukkuluspa**	0.23	264	*i* P	Pg	00 38 33.0	-0.4
KOVU	**Salmi**	0.38	357	*i* P	Pg	00 38 35.6	-0.4
NIKU	**Nikkaluokta**	0.44	273	*i* P	Pg	00 38 36.9	-0.5
LANU	**Lannavaara**	0.70	73	*e*P	Pg	00 38 41.5	-0.8
LANU				*e*S	Sg	00 38 50.8	-0.6
DUNU	**Dundret**	0.74	169	*i* P	Pg	00 38 42.1	-1.0
SALU	**Saltoluokta**	0.80	235	*i* P	Pg	00 38 43.5	-0.8
KIF	**Kilpisjarvi**	1.18	10	*e*PB	Pg	00 38 51.7	+0.1
KIF				MSG		00 39 05.8	
	comp=Z,3.4nm,0.2s						
KIF				*e*S	Sg	00 39 06.6	-0.2
PAJU	**Pajala**	1.40	125	*e*P	Pg	00 38 53.7	-1.8
PAJU				*e*SB	Sg	00 39 12.3	-1.3
HEF	**Hetta**	1.41	65	*e*PG	Pn	00 38 54.2	-1.6
	baz=247						
HEF				MSG		00 39 10.2	
	comp=Z,2.1nm,0.2s						
HEF				*e*SB	Sg	00 39 12.9	-1.2
HARU	**Harads**	1.72	170	*e*P	Pn	00 38 59.5	-0.5
TOF	**Tornio**	2.40	136	*e*PB	Pn	00 39 10.4	+0.9
TOF				MSG		00 39 39.2	
	comp=Z,1.1nm,0.2s						
TOF				*e*SB	Sb	00 39 41.8	-1.3
SGF	**Sodankyl**	2.45	97	*e*PB	Pn	00 39 11.3	+1.2
ARA0	**ARCESS Array S**	2.57	46	*e*PB	Pn	00 39 13.4	+1.6
	baz=226						
ARA0				*e*SB	Sn	00 39 45.1	+1.4
RNF	**Rovaniemi**	2.58	116	*e*PB	Pn	00 39 13.5	+1.7
RNF				*e*SB	Sb	00 39 46.6	-1.6
KEV	**Kevo**	3.13	49	*e*S	Sn	00 39 57.6	+0.3
KEV				MSG		00 39 59.7	
	comp=Z,0.8nm,0.2s						

UPP 21 00:39:23.8±0.4**, 67°.83N×20°.21E, h1^{km}**±5^{km}**, ML2.6, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	0.13	22	P	Pg	00 39 26.4	+0.1
KUA				S	Sg	00 39 28.3	+0.2
RATU	**Laukkuluspa**	0.23	268	P	Pg	00 39 28.2	0.0
KOVU	**Salmi**	0.39	358	P	Pg	00 39 31.2	-0.1
NIKU	**Nikkaluokta**	0.45	275	P	Pg	00 39 32.2	-0.1
NIKU				S	Sg	00 39 38.4	+0.4
LANU	**Lannavaara**	0.71	71	P	Pg	00 39 37.0	-0.3
DUNU	**Dundret**	0.73	169	P	Pg	00 39 37.3	-0.4
MASU	**Masugnsbyn**	0.78	118	P	Pg	00 39 38.5	-0.3
SALU	**Saltoluokta**	0.79	236	P	Pg	00 39 38.7	-0.3
PAJU	**Pajala**	1.39	125	P	Pn	00 39 49.1	-1.2

INET 21 00:49:16.1, 9°.51N×84°.73W, h17^{km}, MW3.6, Costa Rica

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NEIC 21 00:53:32.6±0.9**, 36°.161N**±0°.009×**96°.98W**±0°.02**, h5^{km}**±2^{km}**, mb_Lg2.5**/4**, Error ellipse: s-maj=3.0km s-min=2.3km az=87.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK033	**Mehan**	0.12	163	Pg	Pg	00 53 35.5	+0.3
OK033				Sg	Sg	00 53 37.0	+0.2
QUOK	**Quay**	0.22	87	Pg	Pg	00 53 37.3	+0.3
QUOK				Sg	Sg	00 53 40.3	+0.5
OK031	**S. Brethren Rd**	0.24	151	Pg	Pg	00 53 37.4	+0.1
OK031				Sg	Sg	00 53 40.9	+0.5
OK034	**N. Norfolk Rd.**	0.26	125	Pg	Pg	00 53 37.9	+0.1
OK034				Sg	Sg	00 53 41.7	+0.5
OK030	**Cody Creek RV**	0.28	145	Pg	Pg	00 53 38.2	+0.1
OK030				Sg	Sg	00 53 42.3	+0.5
BLOK	**Blackwell**	0.63	343	Pg	Pg	00 53 44.9	+0.2
BLOK				Sg	Sg	00 53 53.3	+0.5
OK025	**Westminster Rd**	0.65	207	Pg	Pg	00 53 45.1	+0.1
BCOK	**Bluff Creek, N**	0.72	226	Pg	Pg	00 53 46.3	-0.1
OKCFA	**Oklahoma City**	0.84	207	Pg	Pg	00 53 48.3	-0.4
OKCSW	**OKLAHOMA CITY**	0.84	206	Pg	Pg	00 53 48.4	-0.4
T35A	**Sooner Cattle**	0.84	26	Pg	Pg	00 53 48.8	0.0
CROK	**Carrier**	0.88	293	Pg	Pg	00 53 49.4	-0.1
KAN13	**South Haven SW**	0.94	335	Pg	Pg	00 53 50.5	-0.1
FNO	**Franklin**	0.96	201		Pg	00 53 50.5	-0.7
GC02	**Grant County #**	0.99	314		Pg	00 53 51.3	-0.3
TUL1	**Leonard**	1.00	104		Pg	00 53 51.0	-0.8
W35A	**Tecumseh**	1.01	175		Pg	00 53 51.5	-0.5
KAN17	**Caldwell West**	1.08	325	Pg	Pg	00 53 53.3	-0.2
KAN14	**Manchester OK**	1.12	315		Pg	00 53 53.9	-0.2
KAN01	**Argonia South**	1.17	328		Pg	00 53 54.6	-0.5
OK032	**Salt Plains WL**	1.18	303	Pn	Pg	00 53 54.7	-0.6
KAN06	**Argonia West S**	1.29	327	Pn	Pn	00 53 56.8	-0.6
KAN10	**Anthony SW Sta**	1.31	317	IAmb_Lg		00 54 17.2	
	comp=Z,57nm,1.2s						
KAN08	**Anthony NE Sta**	1.33	323	Pn	Pn	00 53 57.5	-0.3
U32A	**Winter Ranch,**	1.65	278	Pn	Pn	00 54 02.6	+0.4
X34A	**Smith Ranch, M**	1.71	204	Pn	Pn	00 54 03.3	+0.2
WMOK	**Wichita Mounta**	2.04	227		Pn	00 54 08.3	+0.6
X37A	**Clayton**	2.05	140	Pn	Pn	00 54 07.7	-0.1
LOOK	**Love County**	2.17	184	Pn	Pn	00 54 09.5	+0.1
LOOK				IAmb_Lg		00 54 43.3	
	comp=Z,12nm,0.8s						

NNC 21 00:59:12.2±7.2**, 44°.85N×93°.65E, h0^{km}, mb3.6, mpv3.0, 5C-3D, Error ellipse: s-maj=68.1km s-min=64.5km az=82.0, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	8.17	288	⇑Pn	Pn	01 01 11.6	-0.3
	0.3nm,0.3s,baz=106,slow=15,SNR=16						
MK31				⇓Lg	Lg	01 03 33.3	
	2.6nm,0.7s,baz=97,slow=27						
MAKZ	**Makanchi**	8.39	288	⇑Pn	Pn	01 01 15.1	+0.1
	0.5nm,0.7s						
MAKZ				⇓Lg	Lg	01 03 37.2	
	2.3nm,1.0s						
KURK	**Kurchatov**	11.68	305	⇑Pn	Pn	01 02 01.3	+1.3
	1.3nm,0.8s						
KURK				⇓Lg	Lg	01 05 22.0	
	3.8nm,0.7s						
KURBB	**Kurchatov Arra**	11.70	305	⇑Pn	Pn	01 01 59.2	-1.0
	1.7nm,0.8s						
KURBB				⇑Lg	Lg	01 05 25.1	
	6.8nm,0.9s						

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*IDC **21** 01:18:54.1±1.0, 53°.08S×27°.15E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.8/21, mbtmp3.9/5, MS3.2/1, Ms1 3.1/1, ms1mx2.7/28, Error ellipse: s-maj=43.2km s-min=29.2km az=44.0*

*NEIC **21** 01:18:56.7±2.3, 52°.86S±0°.09×27°.4E±0°.3, h10^{km}±1^{km}, mb4.3/12, Error ellipse: s-maj=29.0km s-min=15.8km az=92.0*

ISC 21 01:18:56.7±0.7**, 52°.9S**±0°.1×**27°.4E**±0°.2**, h13^{km}, n21, σ1^{s}07**/21**, mb4.2**/9**, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	23.07	204		P	01 24 03.1	+1.6
BOSA	**Boshof**	24.27	355	P	P	01 24 15.4	+1.7
	3.1nm,1.1s,baz=189,slow=13,SNR=1.7						
BOSA				LR	LR	01 31 30.4	
	comp=Z,62nm,21.7s,baz=192,slow=31						
BOSA	**Boshof**	24.27	355	P	P	01 24 15.4	+1.7
BOSA				IAmb	IAmb	01 24 42.8	
	comp=Z,13nm,1.4s						
LBTB	**Lobatse**	27.84	356	P	P	01 24 44.9	-1.0
QSPA	**South Pole Qui**	37.36	180	P	P	01 26 08.2	-0.5
QSPA				IAmb	IAmb	01 26 24.6	
	comp=Z,5.5nm,1.1s						
LSZ	**Lusaka**	37.50	1		P	01 26 10.5	+0.3
LSZ				IAmb	IAmb	01 26 35.9	
	comp=Z,7.6nm,1.4s						
SMAI	**San Martin Ant**	44.00	213	P	P	01 27 04.4	+1.2
SBA	**Scott Base**	47.18	169	P	P	01 27 27.9	-0.3
SBA				IAmb	IAmb	01 27 48.4	
	comp=Z,6.6nm,1.1s						
PLCA	**Paso Flores**	63.07	238	P	P	01 29 23.7	+0.2
CPUP	**Villa Florida**	66.39	257	P	P	01 29 44.2	-1.0
	comp=Z,3.7nm,1.0s,baz=97,slow=8.1,SNR=3.5						
CPUP	**Villa Florida**	66.39	257	P	P	01 29 44.7	-0.5
VA03	**San Esteban**	69.06	243	P	P	01 30 02.5	+0.3
TORD	**Torodi Ar. Bea**	69.36	333	P	P	01 30 04.0	+0.1
	comp=Z,0.6nm,0.7s,baz=166,slow=6.6,SNR=5.5						
TORD	**Torodi Ar. Bea**	69.36	333	P	P	01 30 04.0	+0.1
TORD				IAmb	IAmb	01 30 04.2	
	comp=Z,2.8nm,1.4s						
ASAR	**Alice Springs**	80.81	117	P	P	01 31 10.2	+0.1
	comp=Z,0.6nm,0.7s,baz=215,slow=4.8,SNR=8.4						
ASAR	**Alice Springs**	80.81	117	P	P	01 31 10.4	+0.3
SAML	**Samuel**	83.31	264	P	P	01 31 22.5	-0.7
SAML				IAmb	IAmb	01 31 24.5	
	comp=Z,2.8nm,1.2s						
WRA	**Warramunga Arr**	84.05	115	P	P	01 31 27.0	-0.1
	comp=Z,0.9nm,0.9s,baz=219,slow=5.4,SNR=1.3						
NVAR	**Mina Array Bea**	152.34	252	PKPbc	PKPbc	01 38 49.5	-2.5
	comp=Z,0.2nm,0.4s,baz=149,slow=3.7,SNR=2.3						
YKA	**Yellowknife Ar**	157.85	311	PKPab	PKPab	01 39 23.9	-0.7
	comp=Z,0.4nm,0.9s,baz=85,slow=5.0,SNR=4.3						
YKA	**Yellowknife Ar**	157.85	311		PKPab	01 39 25.2	+0.6

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*TIR **21** 01:34:58.4, 41°.02N×20°.35E, h2^{km}±1^{km}, Md2.4*

*THE **21** 01:34:59.4, 41°.09N×20°.18E, h12^{km}±2^{km}, ML2.0/6, Error ellipse: s-maj=2.2km s-min=0.6km az=289.0*

*ATH **21** 01:34:59.9, 41°.16N×20°.25E, h10^{km}±5^{km}, ML2.0/7, Error ellipse: s-maj=6.8km s-min=1.0km az=26.0*

*BEO **21** 01:34:59.6±0.7, 41°.00N×20°.18E, h3^{km}±2^{km}, ML2.2/10*

*PDG **21** 01:34:59.8±0.3, 41°.14N×20°.20E, h0^{km}±11^{km}, ML2.5/12, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

*SKO **21** 01:35:00.1, 41°.10N×20°.15E, h3^{km}*

ISC 21 01:34:59.9±1.0**, 41°.09N**±0°.02×**20°.19E**±0°.02**, h8^{km}**±9^{km}**, n64, σ1^{s}02**/118**, 6C-7D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	0.35	317	P	Pg	01 35 06.3	-0.5
TIR				S	Sg	01 35 12.3	+0.8
	165nm,0.7s						
TIR	**Tirane**	0.35	317	P	Pg	01 35 06.4	-0.5
TIR				S	Sg	01 35 11.8	+0.3
TIR				AML	AML	01 35 18.0	
	comp=E,755µm,0.5s						
TIR				AML	AML	01 35 22.4	
	comp=N,929µm,0.8s						
TIR	**Tirane**	0.35	317	*i* Pg	Pg	01 35 06.2	-0.7
TIR	**Tirane**	0.35	317	P	Pg	01 35 06.3	-0.5
	baz=314						
TIR				S	Sb	01 35 13.1	-1.1
	baz=314						
TIR	**Tirane**	0.35	317	*e*Pg	Pg	01 35 06.5	-0.3
TIR				*e*Sg	Sb	01 35 13.2	-1.1
OHR	**Ohrid**	0.46	87	*i* Pg	Pg	01 35 08.2	-0.6
OHR				*i* Sg	Sb	01 35 16.1	-1.4
OHR				*e*Lg	Lg	01 35 16.2	
	comp=E,160nm,0.4s						
OHR	**Ohrid**	0.46	87	*e*Pg	Pg	01 35 08.5	-0.4
OHR				*e*Sg	Sb	01 35 16.0	-1.4
PHP	**Peshkopia**	0.62	18	P	Pg	01 35 11.2	-0.7
PHP				S	Sb	01 35 21.0	-1.1
	comp=E,138nm,0.3s						
PHP	**Peshkopia**	0.62	18	P	Pg	01 35 11.2	-0.7
	baz=15						
PHP				S	Sb	01 35 21.3	-0.8
	baz=15						
KBN	**Korca**	0.65	136	P	Pg	01 35 11.5	-1.0
KBN				S	Sg	01 35 21.7	+0.7
	comp=E,338nm,0.5s						
KBN	**Korca**	0.65	136	P	Pg	01 35 11.9	-0.6
	baz=137						
KBN				S	Sb	01 35 22.5	-0.4
	baz=137						
NEST	**Nestorio**	0.94	136	P	Pg	01 35 17.4	-0.5
NEST				S	Sb	01 35 31.4	+0.2
	comp=E,50nm,0.5s						
NEST	**Nestorio**	0.94	136	P	Pg	01 35 17.5	-0.5
NEST				S	Sb	01 35 31.8	+0.6
NEST				AML	AML	01 35 36.7	
	comp=N,115µm,0.5s						
NEST				AML	AML	01 35 40.2	
	comp=E,109µm,0.5s						
FNA	**Florina**	0.95	108	P	Pg	01 35 17.0	-1.1
FNA				S	Sb	01 35 31.4	-0.1
	comp=E,118nm,0.4s						
FNA	**Florina**	0.95	108	P	Pg	01 35 17.2	-1.0
FNA				S	Sg	01 35 30.9	+0.4
FNA				AML	AML	01 35 35.7	
	comp=N,224µm,0.3s						
FNA				AML	AML	01 35 38.6	
	comp=E,238µm,0.4s						
FNA	**Florina**	0.95	108	*i* Pg	Pg	01 35 17.1	-1.1
FNA				*i* Sg	Sb	01 35 32.4	+0.9
FNA	**Florina**	0.95	108	P	Pg	01 35 17.4	-0.8
	baz=108						
FNA				S	Sb	01 35 31.6	+0.1
	baz=108						
LSK	**Leskovik**	0.99	161	P	Pg	01 35 17.2	-1.7
LSK				S	Sg	01 35 32.3	+0.5
	comp=E,125nm,0.8s						
LSK	**Leskovik**	0.99	161	P	Pg	01 35 17.6	-1.3
	baz=162						
LSK				S	Sb	01 35 33.6	+0.9
	baz=162						
ULC	**Ulcinj**	1.12	321	*i* Pg	Pg	01 35 20.1	-1.4
ULC	**Ulcinj**	1.12	321	⇓*i*Pg	Pg	01 35 20.0	-1.4
ULC				*i* Sg	Sb	01 35 37.0	+0.6
SKO	**Skopje**	1.29	46	*i* Pg	Pg	01 35 22.9	-1.7
SKO				*i* Sg	Sb	01 35 41.1	0.0
SKO				*e*Lg	Lg	01 35 41.7	
	comp=E,4.6nm,0.9s						
DRME	**Dracevica, Mon**	1.33	326	⇓*i*Pg	Pg	01 35 23.8	-1.6
DRME				*i* Sg	Sn	01 35 44.3	+1.6
KEK	**Kerkira**	1.41	192	P	Pg	01 35 27.0	+0.1
KEK				AML	AML	01 35 52.8	
	comp=N,83µm,0.5s						
KEK				AML	AML	01 35 56.6	
	comp=E,77µm,0.7s						
KZN	**Kozani**	1.44	123	P	Pn	01 35 26.5	+0.1
KZN				AML	AML	01 35 54.0	
	comp=N,57µm,0.4s						
KZN				AML	AML	01 35 56.1	
	comp=E,88µm,0.5s						
KPRO	**Kipourio**	1.45	141	P	Pn	01 35 25.2	-1.3
KPRO				AML	AML	01 35 56.6	
	comp=E,115µm,0.6s						
KPRO				AML	AML	01 36 03.1	
	comp=N,96µm,0.8s						
PDG	**Podgorica**	1.51	333	*i* Pg	Pn	01 35 27.2	0.0
PDG				*i* Sg	Sg	01 35 50.7	+2.3
PDG	**Podgorica**	1.51	333	*e*Pg	Pn	01 35 26.8	-0.5
PDG				*e*Sg	Sg	01 35 50.5	+2.1
TTG	**Podgorica**	1.51	333	⇑*i*Pg	Pn	01 35 26.8	-0.5
TTG				*i* Sg	Sg	01 35 50.1	+1.7
PVY	**Plav**	1.51	354	⇓*i*Pg	Pn	01 35 26.8	-0.7
PVY				*i* Sg	Sg	01 35 49.7	+1.2
JAN	**Janina**	1.52	160	P	Pn	01 35 28.0	+0.6
BUM	**Brajici-Budva**	1.55	322	⇓*i*Pg	Pn	01 35 28.0	+0.1
BUM				*i* Sg	Sg	01 35 51.7	+2.0
IGT	**Igoumenitsa**	1.56	176	P	Pb	01 35 29.4	+0.4
IGT				AML	AML	01 35 55.3	
	comp=E,77µm,0.8s						
IGT				AML	AML	01 35 59.4	
	comp=N,75µm,0.5s						
IGT	**Igoumenitsa**	1.56	176	*i* Pg	Pg	01 35 30.4	+0.6
GRG	**Griva**	1.68	94	*i* Pn	Pb	01 35 31.1	-0.1
GRG				*i* Sn	Sg	01 35 55.2	+1.3
CEME	**Cevo**	1.74	327	⇓*i*Pn	Pn	01 35 31.1	+0.6
CEME				*i* Sn	Sg	01 35 56.9	+1.2
BEY	**Berane**	1.79	353	*i* Pn	Pn	01 35 32.3	+1.1
IVA	**Berane**	1.79	353	⇑*i*Pn	Pn	01 35 32.0	+0.7
IVA				*i* Sn	Sg	01 35 58.5	+1.0
KOME	**Kolasin**	1.83	344	⇓*i*Pn	Pn	01 35 32.7	+0.9
KOME				*i* Sn	Sg	01 35 59.5	+0.8
HCY	**Herceg Novi**	1.85	317	⇑*i*Pn	Pn	01 35 33.4	+1.3
HCY				*i* Sn	Sg	01 36 00.4	+0.9
NKME	**Niksic**	1.91	332	⇓*i*Pn	Pn	01 35 33.8	+0.9
NKME				*i* Sn	Sg	01 36 01.7	+0.4
KNT	**Kendrikon**	2.05	87	*i* Pn	Pn	01 35 34.8	+0.1
KNT				*i* Sn	Sg	01 36 05.0	-0.7
THL	**Klokotos Trika**	2.07	137	P	Pb	01 35 37.5	-0.2
BARS	**Barje**	2.11	35	*i* Pn	Pb	01 35 37.9	-0.5
BARS				*i* Sn	Sg	01 36 07.9	+0.3
BARS	**Barje**	2.11	35	*e*Pn	Pn	01 35 36.6	+1.1
BARS				*e*Sn	Sn	01 36 03.4	+1.4
SJES	**Sjenica**	2.17	356	*e*Pn	Pb	01 35 39.0	-0.6
SJES				*e*Sn	Sb	01 36 07.1	+0.3
BRY	**Bratogost**	2.19	326	⇑*i*Pn	Pn	01 35 38.0	+1.3
BRY				*i* Sn	Sb	01 36 08.3	+1.1
SELS	**Selova**	2.24	18	*e*Pn	Pb	01 35 39.3	-1.3
SELS				*e*Sn	Sb	01 36 08.2	-0.3
PLE	**Pljevlja**	2.31	345	⇑*i*Pn	Pn	01 35 39.5	+1.0
PLE				*i* Sn	Sb	01 36 11.0	+0.2
UPM	**Unac-Piva**	2.32	336	⇑*i*Pn	Pn	01 35 39.6	+1.0
UPM				*i* Sn	Sb	01 36 11.1	+0.2
IVAS	**Ivanjica**	2.48	359	*e*Pn	Pn	01 35 42.7	+2.0
IVAS				*e*Sn	Sb	01 36 13.9	-1.7
STON	**Ston**	2.57	315	*e*Pn	Pn	01 35 41.7	-0.1
STON				Sn	Sn	01 36 13.2	0.0
VTS	**Vitosha**	2.74	55	*e*Pn	Pn	01 35 44.5	+0.2
VTS				*e*Sn	Sn	01 36 17.6	-0.1
BBLS	**Lazići**	2.83	348	*e*Pn	Pn	01 35 47.6	+2.0
BBLS				*e*Sn	Sn	01 36 21.8	+1.9
ZAPS	**Zavoj**	2.84	39	*e*Pn	Pn	01 35 46.2	+0.6
ZAPS				*e*Sn	Sn	01 36 21.5	+1.5
LSTV	**Lastovo**	2.98	305	*e*Pn	Pn	01 35 47.1	-0.3
LSTV				Sn	Sn	01 36 21.8	-1.6
DIVS	**Divibare**	3.01	357	*e*Pn	Pn	01 35 50.1	+2.1
DIVS				*e*Sn	Sn	01 36 27.2	+2.9
MAKA	**Makarska**	3.22	314	*e*Pn	Pn	01 35 51.0	+0.3
MAKA				Sn	Sn	01 36 28.8	-0.5
RICI	**Ricice**	3.30	318	*e*Pn	Pn	01 35 52.1	+0.2
RICI				Sn	Sn	01 36 31.0	-0.4
HVAR	**Hvar**	3.48	308	*e*Pn	Pn	01 35 53.8	-0.5
HVAR				Sn	Sn	01 36 34.7	-0.9
KIJV	**Kijevo**	4.04	317	*e*Pn	Pn	01 36 01.6	-0.5
KIJV				Sn	Sn	01 36 48.9	-0.6
ZIRJ	**Zirje**	4.23	309	*e*Pn	Pn	01 36 04.4	-0.3
ZIRJ				Sn	Sn	01 36 53.8	-0.5
MORI	**Morici**	4.32	311	*e*Pn	Pn	01 36 05.6	-0.3
MORI				Sn	Sn	01 36 55.2	-1.3
DUGI	**Dugi Otok**	4.77	309	*e*Pn	Pn	01 36 11.8	-0.3
DUGI				Sn	Sn	01 37 06.8	-0.8

NNC 21 01:48:40.6±8.1**, 36°.93N×70°.33E, h205^{km}**±136^{km}**, mb2.6, mpv3.7, 4C-3D, Error ellipse: s-maj=76.9km s-min=44.4km az=19.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK02	**Karatay Array**	6.16	1	⇑P	Pn	01 50 10.5	+0.5
	1.2nm,0.3s,baz=179,slow=12						
KK02				⇑S	S	01 51 22.3	+1.6
	2.0nm,0.4s,baz=186,slow=25						
AAK	**Ala-Archa**	6.54	28	P	Pn	01 50 14.9	-0.1
	3.6nm,0.7s						
AAK				⇓S	S	01 51 31.1	+1.5
	7.9nm,0.6s						
TKM2	**Tokmak 2**	7.22	32	⇓P	Pn	01 50 23.8	-0.1
	4.5nm,0.5s						
TKM2				⇑S	S	01 51 43.5	-2.3
	3.0nm,0.7s						
AB31	**Akbulak array**	14.45	332	⇓P	Pn	01 51 55.9	+0.3
	0.9nm,0.7s,baz=268,slow=41,SNR=25						
AB31				⇑S	S	01 54 37.0	+1.2
	1.2nm,0.9s						

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*IDC **21** 01:52:31.8±0.8, 28°.84N×128°.07E, h174^{km}±8^{km}, mb3.2/7, mb1 3.3/10, mb1mx2.9/58, mbtmp3.7/10, Error ellipse: s-maj=29.3km s-min=11.2km az=82.0*

*JMA **21** 01:52:33.0±0.1, 28°.92N×128°.13E, h158^{km}, M3.7*

ISC 21 01:52:31.7±0.8**, 28°.89N**±0°.07×**128°.23E**±0°.10**, h177^{km}**±9^{km}**, n24, σ1^{s}07**/40**, mb3.5**/7**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAMN	**Amaminishikomi**	1.05	127	P	Pn	01 52 59.8	+0.3
JAMN				*e*S	Sn	01 53 20.5	-0.4
JTK	**Tokunoshima**	1.27	150	P	Pn	01 53 02.0	+0.7
JTK				S	Sn	01 53 23.8	-0.4
JAM	**Amami Oshima**	1.30	111	P	Pn	01 53 01.9	+0.3
JAM				*e*S	Sn	01 53 23.9	-0.7
JOKE	**Okinoerabujima**	1.55	169	P	Pn	01 53 04.6	+0.6
JOKE				*e*S	Sn	01 53 28.3	-0.6
JZK	**Kikaishima**	1.63	110	P	Pn	01 53 06.4	+1.7
JZK				*e*S	Sn	01 53 31.6	+1.3
JIH	**Iheya**	1.86	187	P	Pn	01 53 07.9	+0.8
JIH				S	Sn	01 53 34.0	-0.5

JYRO	**Yoronjima**	**1.87**	**174**	P	**Pn**	**01 53 07.6**	**+0.4**
JYRO				S	**Sn**	**01 53 33.4**	**-1.2**
JOW	**Kunigami**	**2.05**	**179**	P	**Pn**	**01 53 09.7**	**+0.5**
	58nm,0.3s,baz=113,slow=15,SNR=37						
JOW				S	**Sn**	**01 53 37.0**	**-1.2**
	151nm,0.3s,baz=115,slow=29,SNR=55						
JOW	**Kunigami**	**2.05**	**179**	P	**Pn**	**01 53 09.6**	**+0.5**
JOW				S	**Sn**	**01 53 36.9**	**-1.2**
JNTH	**Nagotoyohara**	**2.37**	**185**	P	**Pn**	**01 53 13.5**	**+0.8**
JNTH				S	**Sn**	**01 53 43.4**	**-1.2**
JYAK	**Yakushimahirau**	**2.40**	**55**	P	**Pn**	**01 53 13.4**	**+0.4**
JYAK				*e*S	**Sn**	**01 53 43.4**	**-1.8**
JAGN	**Aguni-jima**	**2.45**	**201**	P	**Pn**	**01 53 14.6**	**+0.9**
JAGN				S	**Sn**	**01 53 46.2**	**-0.1**
JJT3	**Tamagusuku3**	**2.76**	**188**	P	**Pn**	**01 53 18.6**	**+1.2**
JJT3				S	**Sn**	**01 53 52.8**	**-0.1**
JMTN	**Minamitane**	**2.77**	**56**	P	**Pn**	**01 53 18.4**	**+1.0**
JMTN				*e*S	**Sn**	**01 53 50.9**	**-2.1**
JKE	**Kume jima 2**	**2.85**	**207**	P	**Pn**	**01 53 19.1**	**+0.6**
JNU	**Nakatsue**	**4.79**	**28**	P	**Pn**	**01 53 45.0**	**+2.0**
	1.6nm,0.3s,baz=177,slow=22,SNR=8.3						
KSRS	**Korea Array**	**8.55**	**358**	P	**Pn**	**01 54 33.8**	**+1.6**
	0.2nm,0.3s,baz=181,slow=14,SNR=5.2						
SONM	**Songino Array**	**25.36**	**324**	P	**P**	**01 57 44.4**	**+1.9**
	1.1nm,0.5s,baz=132,slow=9.6,SNR=6.2						
MKAR	**Makanchi Array**	**39.81**	**310**	P	**P**	**01 59 46.6**	**-0.9**
	0.4nm,0.6s,baz=96,slow=9.9,SNR=5.7						
MKAR				PcP	**PcP**	**02 01 49.5**	**-0.4**
	0.6nm,0.8s,baz=85,slow=1.6,SNR=4.4						
MKAR				ScP	**ScP**	**02 05 22.2**	**+0.1**
	0.2nm,0.5s,baz=108,slow=4.7,SNR=2.5						
ZALV	**Zalesovo Beam**	**40.16**	**321**	P	**P**	**01 59 49.0**	**-1.2**
	0.5nm,0.4s,baz=110,slow=9.9,SNR=1.3						
WRA	**Warramunga Arr**	**48.90**	**172**	P	**P**	**02 01 00.2**	**+0.4**
	0.6nm,0.4s,baz=353,slow=8.0,SNR=9.8						
ASAR	**Alice Springs**	**52.53**	**173**	P	**P**	**02 01 27.7**	**+0.8**
	0.4nm,0.4s,baz=360,slow=6.6,SNR=11						
BRTR	**Keskin Array B**	**75.42**	**307**	P	**P**	**02 03 55.2**	**-1.0**
	1.1nm,1.1s,baz=47,slow=6.3,SNR=1.9						
YKA	**Yellowknife Ar**	**76.13**	**25**	P	**P**	**02 03 59.1**	**-0.5**
	0.2nm,0.5s,baz=305,slow=6.0,SNR=4.1						

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*IDC **21** 02:11:44.2±0.9, 9°.84S×79°.91W, h0km, mb4.2/9, mb1 4.2/14, mb1mx4.0/49, mbtmp4.2/14, ML3.7/5, MS3.8/8, Ms1 3.8/8, ms1mx3.5/37, Error ellipse: s-maj=20.6km s-min=14.2km az=46.0*

*NEIC **21** 02:11:52.6±2.5, 9°.60S±0°.08×79°.5W±0°.1, h39km±8km, mb4.3/14, Error ellipse: s-maj=17.4km s-min=10.7km az=69.0*

*VAO **21** 02:11:56.8±0.5, 9°.45S×79°.21W, h60km, mb4.6*

ISC 21 02:11:51.2±0.6**, 9°.71S**±0°.06×**79°.58W**±0°.09**, h35km, n116, σ1s.55**/101**, mb4.4**/12**, MS3.8**/5**, Off coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.82**	**25**	Pn	**Pn**	**02 12 35.3**	**+1.1**
	7.5nm,0.3s,baz=209,slow=1.2,SNR=49						
ATAH				Sn	**Sn**	**02 13 12.7**	**+5.6**
	35nm,0.3s,baz=213,slow=16,SNR=3.8						
ATAH				Lg	Lg	02 13 23.0	
	38nm,0.3s,baz=115,slow=20,SNR=7.1						
NNA	**Nana**	**3.51**	**130**	Pn	**Pn**	**02 12 42.6**	**-0.8**
	40nm,0.3s,baz=311,slow=12,SNR=82						
NNA				Sn	**Sn**	**02 13 25.4**	**+1.7**
	46nm,0.3s,baz=319,slow=5.7,SNR=6.1						
NNA				Lg	Lg	02 13 43.6	
	56nm,0.3s,baz=311,slow=22,SNR=7.8						
NNA	**Nana**	**3.51**	**130**	Pn	**Pn**	**02 12 42.4**	**-1.0**
CZSB	**Cruzeiro do Su**	**7.08**	**74**	*e*P	**Pn**	**02 13 31.0**	**-1.4**
CZSB	**Cruzeiro do Su**	**7.08**	**74**	Pn	**Pn**	**02 13 30.6**	**-1.7**
OTAV	**Otavalo**	**9.95**	**7**	*i*P	**Pn**	**02 14 11.8**	**-0.5**
OTAV	**Otavalo**	**9.95**	**7**	*e*P	**Pn**	**02 14 11.7**	**-0.5**
OTAV	**Otavalo**	**9.95**	**7**	Pn	**Pn**	**02 14 09.1**	**-3.1**
PTLC	**Puerto Leguiza**	**10.91**	**26**	*e*P	Pn	02 14 16.5	-8.5
TBTG	**Tabatinga, AM**	**11.06**	**61**	*e*P	**Pn**	**02 14 25.4**	**-1.6**
TBTG	**Tabatinga, AM**	**11.06**	**61**	Pn	**Pn**	**02 14 25.2**	**-1.7**
FLOC	**Florencia**	**11.88**	**19**	*i*P	Pn	02 14 32.8	-5.6
FLOC	**Florencia**	**11.88**	**19**	Pn	Pn	02 14 33.5	-4.9
SOTA	**Rioblanco**	**12.14**	**14**	*e*P	**Pn**	**02 14 40.4**	**-1.8**
PCON	**Cinco Dias**	**12.38**	**15**	*i*P	**Pn**	**02 14 44.2**	**-1.3**
GARC	**Garzon, Huila**	**12.50**	**19**	*e*P	**Pn**	**02 14 43.2**	**-3.8**
POPC	**Popayan, Colom**	**12.51**	**14**	*i*P	**Pn**	**02 14 44.2**	**-2.9**
LPAZ	**La Paz**	**12.93**	**122**	Pn	**Pn**	**02 14 51.4**	**-1.7**
	0.1nm,0.3s,baz=292,slow=13,SNR=2.0						
LPAZ	**La Paz**	**12.93**	**122**	*e*P	**Pn**	**02 14 55.5**	**+2.4**
LPAZ	**La Paz**	**12.93**	**122**		**Pn**	**02 14 51.0**	**-2.0**
PB16	**IPOC Station P**	**12.99**	**132**	Pn	**Pn**	**02 14 51.3**	**-2.7**
MACC	**Macarena, Meta**	**13.09**	**26**	*i*P	**Pn**	**02 14 50.9**	**-3.9**
ETMB	**Extrema**	**13.17**	**92**	Pn	**Pn**	**02 14 52.9**	**-3.0**
PB11	**IPOC Station P**	**13.85**	**137**	Pn	**Pn**	**02 15 06.2**	**+1.0**
YOTC	**Yotoco, Valle**	**13.98**	**13**	*e*P	**Pn**	**02 15 08.1**	**+1.0**
PRAC	**Prado**	**14.13**	**20**	*e*P	**Pn**	**02 15 05.2**	**-3.9**
ORTC	**Ortega, Tolima**	**14.20**	**18**	*e*P	**Pn**	**02 15 08.1**	**-2.0**
PB08	**IPOC Station P**	**14.45**	**137**	P	**P**	**02 15 21.2**	**+1.2**
PB01	**IPOC Station P**	**14.88**	**140**		**P**	**02 15 22.8**	**-1.7**
PLMC	**San Jos del P**	**14.89**	**13**	*e*P	**Pn**	**02 15 19.5**	**+0.2**
ROSC	**El Rosal**	**15.38**	**20**	LR	LR	02 22 36.9	
	comp=Z,959nm,18.8s,baz=144,slow=42						
CHIC	**Chingaza**	**15.39**	**22**	*e*P	**Pn**	**02 15 25.2**	**-1.1**
GUY2C	**Guyana, Caldas**	**15.42**	**16**	*e*P	**P**	**02 15 31.0**	**0.0**
PB09	**IPOC Station P**	**15.59**	**142**	P	**P**	**02 15 33.0**	**+0.6**
PB09				IAmb	IAmb	02 15 42.1	
	comp=Z,22nm,1.0s						
CBOC	**Ciudad Bolivar**	**15.88**	**13**	*e*P	**P**	**02 15 34.8**	**-0.9**
SAML	**Samuel**	**16.20**	**89**		**Pn**	**02 15 35.1**	**-1.2**
LVC	**Limon Verde**	**16.40**	**143**	Pn	**Pn**	**02 15 37.1**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=351,slow=12,SNR=2.0						
LVC				LR	LR	02 21 44.7	
	comp=Z,252nm,18.2s,baz=316,slow=36						
LVC	**Limon Verde**	**16.40**	**143**	*e*P	**P**	**02 15 44.1**	**+2.4**
LVC	**Limon Verde**	**16.40**	**143**	Pn	**Pn**	**02 15 37.4**	**-1.8**
LVC				IAmb	IAmb	02 15 45.2	
	comp=Z,19nm,1.1s						
RUSC	**La Rusia**	**16.80**	**23**	*e*P	**P**	**02 15 47.2**	**+0.9**
ZARC	**Zaragoza, Cauc**	**17.73**	**16**	P	**Pn**	**02 15 54.9**	**-0.6**
OCAC	**Ocana**	**18.89**	**19**	P	**P**	**02 16 08.3**	**-0.7**
SIV	**San Ignacio**	**19.08**	**111**	P	**P**	**02 16 10.8**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=288,slow=11,SNR=38						
SIV				LR	LR	02 23 44.1	
	comp=Z,221nm,21.6s,baz=293,slow=37						
SMLC	**San Martn de**	**19.19**	**17**	*e*P	**Pn**	**02 16 14.9**	**+1.6**
VILB	**Vilhena**	**19.27**	**101**	*e*P	**P**	**02 16 12.9**	**-0.2**
VILB	**Vilhena**	**19.27**	**101**	P	**P**	**02 16 12.3**	**-0.8**
VILB				IAmb	IAmb	02 16 33.5	
	comp=Z,21nm,0.9s						
MACA	**Manacapuru-AM**	**19.86**	**72**	*e*P	**P**	**02 16 19.2**	**-0.3**
MACA	**Manacapuru-AM**	**19.86**	**72**	P	**P**	**02 16 18.0**	**-1.5**
SDV	**Santo Domingo**	**20.51**	**26**	*e*P	**P**	**02 16 26.7**	**0.0**
SDV	**Santo Domingo**	**20.51**	**26**	P	**P**	**02 16 26.2**	**-0.6**
SDV				IAmb	IAmb	02 16 27.3	
	comp=Z,22nm,1.4s						
PTLB	**Pontes e Lacer**	**20.74**	**108**	*e*P	**P**	**02 16 30.2**	**+1.1**
PTLB	**Pontes e Lacer**	**20.74**	**108**	P	**P**	**02 16 29.0**	**0.0**
PTGA	**Pitinga**	**21.45**	**67**	P	**P**	**02 16 37.3**	**+0.5**
	comp=Z,23nm,0.9s,baz=242,slow=12,SNR=27						
BAUV	**El Baul**	**21.80**	**32**	P	**P**	**02 16 40.0**	**-0.5**
BOAV	**Boa Vista**	**22.47**	**59**	*e*P	**P**	**02 16 47.6**	**0.0**
PDRB	**Porto dos Gac**	**22.53**	**97**	*e*P	**P**	**02 16 47.6**	**-0.7**
CLDB	**Colider**	**23.43**	**95**	*e*P	**P**	**02 16 57.1**	**-0.4**
H03N2	**Juan Fernandez**	**23.62**	**179**	T	T	02 41 39.7	
	baz=359,slow=75,SNR=264						
H03N1	**Juan Fernandez**	**23.62**	**179**	T	T	02 41 43.4	
	baz=359,slow=75,SNR=854						
H03N3	**Juan Fernandez**	**23.64**	**179**	T	T	02 41 42.2	
	baz=359,slow=75,SNR=836						
SALV	**Santo Antonio**	**24.08**	**107**	*e*P	**P**	**02 17 03.2**	**-0.4**
NPGB	**Novo Progresso**	**24.11**	**86**	*e*P	**P**	**02 17 03.6**	**-0.3**
ITTB	**Itaituba**	**24.25**	**79**	*e*P	**P**	**02 17 05.3**	**+0.1**
PP1B	**Ponte de Pedra**	**25.23**	**111**	*e*P	**P**	**02 17 14.9**	**+0.9**
AQDB	**Aquidauana**	**25.38**	**118**	*e*P	**P**	**02 17 16.5**	**+1.1**
AQDB	**Aquidauana**	**25.38**	**118**	P	**P**	**02 17 16.2**	**+0.8**
AQDB				IAmb	IAmb	02 17 18.4	
	comp=Z,11nm,0.9s						
MALB	**Monte Alegre**	**26.35**	**74**	*e*P	**P**	**02 17 24.6**	**+0.4**
CPUP	**Villa Florida**	**26.77**	**131**	LR	LR	02 29 26.2	
	comp=Z,168nm,19.6s,baz=319,slow=39						
CPUP	**Villa Florida**	**26.77**	**131**	*e*P	**P**	**02 17 30.5**	**+2.5**
ARAG	**Araguaiana, MT**	**27.72**	**105**	*e*P	**P**	**02 17 36.5**	**-0.1**
SNDB	**Serra Nova Dou**	**27.86**	**97**	*e*P	**P**	**02 17 38.1**	**+0.2**
MCPB	**Macapa, AP**	**28.92**	**73**	*e*P	**P**	**02 17 47.3**	**0.0**
PRPB	**Parauapebas**	**29.68**	**85**	*e*P	**P**	**02 17 55.0**	**+0.9**
SJG	**San Juan**	**30.66**	**26**	LR	LR	02 32 10.7	
	comp=Z,203nm,18.9s,baz=245,slow=40						
PEXB	**Peixe**	**30.80**	**97**	*e*P	**P**	**02 18 04.9**	**+0.9**
BDFB	**Brasilia**	**31.33**	**104**	LR	LR	02 31 01.7	
	comp=Z,212nm,20.1s,baz=304,slow=37						
SMTB	**Santa Maria do**	**31.58**	**91**	*e*P	**P**	**02 18 11.3**	**+0.5**
PLCA	**Paso Flores**	**31.91**	**167**	*e*P	**P**	**02 18 17.7**	**+4.2**
SDBA	**SAO DESIDERIO**	**34.12**	**98**	*e*P	**P**	**02 18 33.6**	**+0.4**
JANB	**Januaria**	**34.83**	**102**	*e*P	**P**	**02 18 39.2**	**0.0**
PARB	**Paraibuna**	**35.15**	**117**	*e*P	**P**	**02 18 43.2**	**+1.2**
NBPN	**Ponto Novo - B**	**38.75**	**95**	*e*P	**P**	**02 19 12.9**	**+0.3**
GDU01	**Guandu, BA**	**39.34**	**100**	*e*P	**P**	**02 19 17.8**	**+0.2**
NBMA	**Muriti-CE**	**40.41**	**90**	*e*P	**P**	**02 19 26.6**	**+0.1**
NBLA	**Lagarto - SE**	**41.11**	**96**	*e*P	**P**	**02 19 31.3**	**-0.9**
NBLV	**Livramento - P**	**42.23**	**90**	*e*P	**P**	**02 19 41.9**	**+0.4**
NBAN	**Anadia - AL**	**42.66**	**94**	*e*P	**P**	**02 19 45.1**	**+0.2**
TX32	**Lajitas Array**	**45.24**	**330**	P	**P**	**02 20 05.9**	**+0.4**
PDAR	**Pinedale Array**	**58.97**	**335**	P	**P**	**02 21 45.2**	**-2.3**
	comp=Z,2.0nm,1.2s,baz=141,slow=9.6,SNR=3.9						
PDAR	**Pinedale Array**	**58.97**	**335**	P	**P**	**02 21 47.6**	**+0.1**
NVAR	**Mina Array Bea**	**59.98**	**325**	P	**P**	**02 21 53.0**	**-1.6**
	comp=Z,0.4nm,0.7s,baz=132,slow=6.7,SNR=2.5						
ELK	**Elko**	**60.03**	**329**	P	**P**	**02 21 54.2**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=148,slow=4.2,SNR=4.2						
PPT	**Papeete**	**68.16**	**255**	LR	LR	02 42 55.9	
	comp=Z,41nm,20.3s,baz=65,slow=28						
VNA3	**Neumayer Olymp**	**74.45**	**162**	P	**P**	**02 23 25.3**	**-0.2**
VNA1	**Neumayer--Stat**	**74.73**	**161**	P	**P**	**02 23 27.6**	**+0.5**
VNA2	**Neumayer--Watz**	**75.08**	**161**	P	**P**	**02 23 29.1**	**-0.1**
	baz=326,slow=5.4						
LIC	**Lamto**	**75.94**	**81**	*e*P	**P**	**02 23 34.8**	**-0.3**
	comp=Z,30nm,1.7s						
TIC	**Toumodi**	**76.03**	**81**	*e*P	**P**	**02 23 36.2**	**+0.5**
DBIC	**Dimbokro**	**76.19**	**81**	P	**P**	**02 23 37.4**	**+0.8**
	comp=Z,5.7nm,0.9s,baz=225,slow=6.7,SNR=7.7						
DBIC				LR	LR	02 54 35.2	
	comp=Z,88nm,18.9s,baz=300,slow=34						
DBIC	**Dimbokro**	**76.19**	**81**	P	**P**	**02 23 37.0**	**+0.5**
KIC	**Kosan Boka**	**76.24**	**81**	*e*P	**P**	**02 23 36.9**	**0.0**
	comp=Z,14nm,0.9s						
SNAA	**Sanae**	**76.67**	**162**	P	**P**	**02 23 38.1**	**-0.2**
YKA	**Yellowknife Ar**	**76.92**	**344**	P	**P**	**02 23 37.4**	**-2.2**
	comp=Z,0.7nm,0.7s,baz=143,slow=5.9,SNR=12						
YKA	**Yellowknife Ar**	**76.92**	**344**	P	**P**	**02 23 38.9**	**-0.7**
KOWA	**Kowa**	**78.67**	**73**	P	**P**	**02 23 51.1**	**+0.6**
	comp=Z,6.2nm,0.8s,baz=247,slow=7.9,SNR=23						
KOWA	**Kowa**	**78.67**	**73**	P	**P**	**02 23 51.2**	**+0.8**
KOWA				IAmb	IAmb	02 23 52.1	
	comp=Z,7.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**83.81**	**76**	P	**P**	**02 24 18.1**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=287,slow=5.6,SNR=18						
TORD	**Torodi Ar. Bea**	**83.81**	**76**	P	**P**	**02 24 17.9**	**+0.2**
TORD				IAmb	IAmb	02 24 19.4	
	comp=Z,2.3nm,0.8s						
INK	**Inuvik**	**86.55**	**342**	P	**P**	**02 24 28.2**	**-2.1**
	comp=Z,2.0nm,1.0s,baz=150,slow=5.3,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	**15.26**	**287**	T	T	04 35 34.8	
	baz=92,slow=74,SNR=9.7						
H11N2	**WAKE ISLAND Hy**	**15.27**	**287**	T	T	04 35 36.3	
	baz=92,slow=74,SNR=6.2						
H11N1	**WAKE ISLAND Hy**	**15.28**	**287**	T	T	04 35 35.0	
	baz=92,slow=74,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**15.41**	**286**	T	T	04 36 15.0	
	baz=92,slow=74,SNR=16						
H11S1	**WAKE ISLAND Hy**	**15.42**	**286**	T	T	04 36 11.3	
	baz=92,slow=74,SNR=4.8						
H11S3	**WAKE ISLAND Hy**	**15.43**	**286**	T	T	04 36 20.1	
	baz=92,slow=74,SNR=5.6						
WRA	**Warramunga Arr**	**135.46**	**228**	PKP	**PKPdf**	**02 31 07.9**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=119,slow=2.1,SNR=2.4						

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*MDD **21** 02:17:07.5±1.4, 36°.84N×12°.73W, h0km, mb4.2/12, Error ellipse: s-maj=12.9km s-min=10.6km az=51.0, PRXIMO*

*IGIL **21** 02:17:08.0, 36°.86N×12°.73W, h0km, ML2.0*

*INMG **21** 02:17:09.2±1.3, 36°.62N×13°.06W, h10km, ML2.5, Error ellipse: s-maj=4.7km s-min=2.6km az=124.0*

*CNRM **21** 02:17:10.3, 36°.41N×12°.58W, h64km*

ISC 21 02:17:06.1±3.2**, 36°.88N**±0°.09×**12°.7W**±0°.1**, h10km, n85, σ1s.69**/146**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.15**	**84**	*e*Pn	**Pn**	**02 17 56.6**	**+0.9**
PFVI				*e*Sn	**Sn**	**02 18 32.2**	**-1.1**
PFVI				A	A	02 18 34.3	
	11nm,0.7s						
PFVI	**Vila Bisbo**	**3.15**	**84**	P	**Pn**	**02 17 56.5**	**+0.8**
	6.3nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**02 18 32.3**	**-1.0**
	12nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.15**	**84**	P	**Pn**	**02 17 57.0**	**+1.3**
PFVI				S	**Sn**	**02 18 33.6**	**+0.3**
MORF	**Marmelete**	**3.30**	**81**	*e*P	**Pn**	**02 17 58.9**	**+1.0**
MORF				*e*S	**Sn**	**02 18 36.0**	**-1.2**
MORF				IAML		02 18 38.0	
	comp=N,7.3nm,0.1s						
MORF	**Marmelete**	**3.30**	**81**	*e*Pn	**Pn**	**02 17 59.0**	**+1.1**
MORF				*e*Sn	**Sn**	**02 18 36.0**	**-1.2**
MORF				A	A	02 18 38.8	
	comp=N,7.0nm,0.1s						
MORF	**Marmelete**	**3.30**	**81**	P	**Pn**	**02 17 58.9**	**+1.0**
MORF				S	**Sn**	**02 18 36.0**	**-1.2**
PMST	**Lisbon--Monsan**	**3.38**	**56**	*e*Pn	**Pn**	**02 18 00.7**	**+1.8**
PMST				*e*Sn	**Sn**	**02 18 37.5**	**-1.5**
PMST				A	A	02 18 51.8	
	comp=N,20nm,0.9s						
LIS	**Lisbon**	**3.39**	**56**	*e*Sn	**Sn**	**02 18 39.8**	**+0.6**
LIS	**Lisbon**	**3.39**	**56**	S	**Sn**	**02 18 39.8**	**+0.6**
PMAFR	**Mafra**	**3.43**	**52**	*e*Pn	**Pn**	**02 18 01.7**	**+2.0**
PMAFR				*e*Sn	**Sn**	**02 18 41.6**	**+1.2**
PMAFR				A	A	02 18 42.2	
	comp=N,22nm,0.2s						
PMAFR	**Mafra**	**3.43**	**52**	P	**Pn**	**02 18 01.6**	**+1.9**
	comp=N,2.8nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**02 18 41.4**	**+1.0**
	comp=N,52nm,0.3s,SNR=7.9						
PNCL	**Nicolau / Gran**	**3.57**	**69**	*e*Pn	**Pn**	**02 18 02.9**	**+1.4**
PNCL				*e*Sn	**Sn**	**02 18 45.8**	**+2.0**
PNCL				A	A	02 19 22.3	
	comp=N,11nm,0.7s						
PNCL	**Nicolau / Gran**	**3.57**	**69**	P	**Pn**	**02 18 02.9**	**+1.4**
PNCL				S	**Sn**	**02 18 45.8**	**+2.0**
	comp=N,11nm,0.7s						
MESJ	**Messejana**	**3.73**	**74**	*e*P	**Pn**	**02 18 04.9**	**+1.2**
MESJ				*e*S	**Sn**	**02 18 46.5**	**-1.2**
MESJ				IAML		02 18 49.4	
	comp=E,3.0nm,0.2s						
MESJ	**Messejana**	**3.73**	**74**	*e*Pn	**Pn**	**02 18 05.2**	**+1.5**
MESJ				*e*Sn	**Sn**	**02 18 47.5**	**-0.2**
MESJ				A	A	02 19 01.4	
	comp=E,4.2nm,0.5s						
MESJ	**Messejana**	**3.73**	**74**	P	**Pn**	**02 18 04.9**	**+1.2**
MESJ				S	**Sn**	**02 18 46.5**	**-1.2**
PCVE	**Castro Verde**	**3.83**	**77**	*e*Pn	**Pn**	**02 18 07.0**	**+1.9**
PCVE				*e*Sn	**Sn**	**02 18 50.2**	**+0.1**
PCVE				A	A	02 18 51.6	
	comp=E,3.8nm,0.4s						
PCVE	**Castro Verde**	**3.83**	**77**	P	**Pn**	**02 18 07.0**	**+1.9**
PCVE				S	**Sn**	**02 18 50.2**	**+0.1**
	comp=E,3.8nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.87**	**83**	*e*Pn	**Pn**	**02 18 07.4**	**+1.8**
PBDV				*e*Sn	**Sn**	**02 18 51.3**	**+0.2**
PBDV				A	A	02 18 57.0	
	comp=E,2.8nm,0.2s						
PBDV	**Barranco-do-Ve**	**3.87**	**83**	P	**Pn**	**02 18 07.4**	**+1.8**
PBDV				S	**Sn**	**02 18 51.3**	**+0.2**
	comp=E,2.8nm,0.2s						
PBEJ	**Beja**	**4.05**	**72**	*e*Pn	**Pn**	**02 18 09.9**	**+1.8**
PBEJ				*e*Sn	**Sn**	**02 18 55.0**	**-0.5**
PBEJ	**Beja**	**4.05**	**72**	P	**Pn**	**02 18 09.9**	**+1.8**
PBEJ				S	**Sn**	**02 18 55.0**	**-0.5**
PVAQ	**Vaqueiros**	**4.05**	**81**	*e*Pn	**Pn**	**02 18 09.6**	**+1.5**
PVAQ				*e*Sn	**Sn**	**02 18 55.0**	**-0.6**
PVAQ				A	A	02 18 57.3	
	comp=E,4.4nm,0.3s						
PVAQ	**Vaqueiros**	**4.05**	**81**	P	**Pn**	**02 18 09.6**	**+1.5**
PVAQ				S	**Sn**	**02 18 55.0**	**-0.6**
	comp=E,4.4nm,0.3s						
PVAQ	**Vaqueiros**	**4.05**	**81**	P	**Pn**	**02 18 10.1**	**+2.0**
PVAQ				S	**Sn**	**02 18 56.5**	**+0.9**
PSBE	**So Bento**	**4.07**	**49**	*e*Pn	**Pn**	**02 18 11.0**	**+2.5**
PSBE				*e*Sn	**Sn**	**02 18 57.5**	**+1.3**
PSBE				A	A	02 19 05.0	
	comp=E,5.7nm,0.7s						
EVO	**Evora**	**4.10**	**65**	P	**Pn**	**02 18 10.9**	**+2.1**
EVO				S	**Sn**	**02 18 55.6**	**-1.2**
EVO	**Evora**	**4.10**	**65**	*e*Pn	**Pn**	**02 18 10.1**	**+1.3**
EVO				*e*Sn	**Sn**	**02 18 56.2**	**-0.6**
EVO				A	A	02 19 01.9	
	comp=E,3.8nm,0.3s						
EVO	**Evora**	**4.10**	**65**	P	**Pn**	**02 18 10.9**	**+2.1**
EVO				S	**Sn**	**02 18 55.6**	**-1.2**
PMTG	**Montargil**	**4.19**	**57**	*e*Pn	**Pn**	**02 18 11.4**	**+1.4**
PMTG				*e*Sn	**Sn**	**02 18 59.0**	**0.0**
PMTG				A	A	02 19 03.3	
	comp=E,4.1nm,0.1s						
PMTG	**Montargil**	**4.19**	**57**	P	**Pn**	**02 18 11.4**	**+1.4**
PMTG				S	**Sn**	**02 18 59.0**	**0.0**
	comp=E,4.1nm,0.1s						
EGRO	**El Granado**	**4.25**	**80**	P	**Pn**	**02 18 12.4**	**+1.6**
	comp=E,1.3nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**02 18 58.8**	**-1.7**
	comp=E,3.6nm,0.3s,SNR=7.9						
PESTR	**Estremoz**	**4.54**	**62**	*e*Pn	**Pn**	**02 18 16.0**	**+1.2**
PESTR				*e*Sn	**Sn**	**02 19 06.8**	**-0.8**
PESTR				A	A	02 19 20.9	
	comp=E,1.2nm,0.2s						
PESTR	**Estremoz**	**4.54**	**62**	P	**Pn**	**02 18 17.7**	**+2.8**
PESTR				S	**Sn**	**02 19 08.7**	**+1.1**
PCAS	**Casmilo, Conde**	**4.60**	**45**	*e*Pn	**Pn**	**02 18 17.3**	**+1.6**
PCAS				*e*Sn	**Sn**	**02 19 07.8**	**-1.3**
PCAS				A	A	02 19 20.3	
	comp=E,3.1nm,0.7s						
PCAS	**Casmilo, Conde**	**4.60**	**45**	P	**Pn**	**02 18 17.3**	**+1.6**
PCAS				S	**Sn**	**02 19 07.8**	**-1.3**
	comp=E,3.1nm,0.7s						
COI	**Coimbra**	**4.75**	**44**	*e*Sn	**Sn**	**02 19 13.0**	**+0.1**
COI	**Coimbra**	**4.75**	**44**	S	**Sn**	**02 19 13.0**	**+0.1**
PMPST	**Porto Santo, M**	**4.80**	**219**	*e*Sn	Sn	02 18 56.8	-17
PMPS	**Porto Santo**	**4.82**	**219**	*e*Sn	Sn	02 18 57.3	-17
EBAD	**Badajoz**	**4.91**	**66**	P	**Pn**	**02 18 20.9**	**+1.0**
	comp=E,1.7nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**02 19 15.4**	**-1.3**
	comp=E,2.6nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.92**	**78**	P	**Pn**	**02 18 20.7**	**+0.6**
	comp=E,2.4nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**02 19 14.7**	**-2.4**
	comp=E,0.8nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**4.93**	**57**	*e*Pn	**Pn**	**02 18 21.5**	**+1.3**
PMRV				*e*Sn	**Sn**	**02 19 16.2**	**-1.1**
PMRV				A	A	02 19 27.6	
	comp=E,1.8nm,0.3s						
PMRV	**Marv??o**	**4.93**	**57**	P	**Pn**	**02 18 21.5**	**+1.3**
PMRV				S	**Sn**	**02 19 16.2**	**-1.1**
	comp=E,1.8nm,0.3s						
PCBR	**Castelo Branco**	**5.09**	**53**	*e*Pn	**Pn**	**02 18 24.1**	**+1.7**
PCBR				*e*Sn	**Sn**	**02 19 21.3**	**+0.2**
PCBR				A	A	02 19 37.6	
	comp=E,2.3nm,0.5s						
PCBR	**Castelo Branco**	**5.09**	**53**	P	**Pn**	**02 18 24.1**	**+1.7**
PCBR				S	**Sn**	**02 19 21.3**	**+0.2**
	comp=E,1.2nm,0.5s						
MTE	**Manteigas**	**5.38**	**48**	*e*Pn	**Pn**	**02 18 29.2**	**+2.8**
MTE				*e*Sn	**Sn**	**02 19 28.5**	**0.0**
MTE				A	A	02 19 31.3	
	comp=E,5.8nm,0.4s						
MTE	**Manteigas**	**5.38**	**48**	P	**Pn**	**02 18 29.2**	**+2.8**
MTE				S	**Sn**	**02 19 28.5**	**0.0**
	comp=E,2.9nm,0.4s						
PMAR	**Madeira**	**5.38**	**221**	*e*Sn	Sn	02 19 10.2	-18
PVIS	**Viseu**	**5.39**	**43**	*e*Pn	**Pn**	**02 18 28.3**	**+1.7**
PVIS				*e*Sn	**Sn**	**02 19 28.0**	**-0.7**
PVIS				A	A	02 19 30.9	
	comp=E,8.0nm,0.1s						
PVIS	**Viseu**	**5.39**	**43**	P	**Pn**	**02 18 28.3**	**+1.7**
PVIS				S	**Sn**	**02 19 28.0**	**-0.7**
	comp=E,4.0nm,0.1s						
ESPR	**Espera**	**5.52**	**88**	P	**Pn**	**02 18 30.0**	**+1.7**
	comp=E,2.7nm,0.2s,SNR=5.1						
ESPR				S	**Sn**	**02 19 30.6**	**-1.3**
	comp=E,10nm,0.3s						
PVRL	**Vila Real**	**5.88**	**40**	*e*Pn	**Pn**	**02 18 34.7**	**+1.4**
PVRL				*e*Sn	**Sn**	**02 19 39.6**	**-1.2**
PVRL				A	A	02 19 41.3	
	comp=E,3.1nm,0.3s						
PVRL	**Vila Real**	**5.88**	**40**	P	**Pn**	**02 18 34.7**	**+1.4**
PVRL				S	**Sn**	**02 19 39.6**	**-1.2**
	comp=E,1.6nm,0.3s						
POLO	**Lamas de Olo**	**5.91**	**39**	*e*Pn	**Pn**	**02 18 35.5**	**+1.7**
POLO				*e*Sn	**Sn**	**02 19 39.4**	**-2.2**
POLO				A	A	02 19 41.1	
	comp=E,2.7nm,0.9s						
POLO	**Lamas de Olo**	**5.91**	**39**	P	**Pn**	**02 18 35.5**	**+1.7**
POLO				S	**Sn**	**02 19 39.4**	**-2.2**
	comp=E,2.7nm,0.9s						
ECAB	**El Cabril**	**5.95**	**76**	P	**Pn**	**02 18 35.2**	**+0.9**
	comp=E,1.6nm,0.2s,SNR=17						
ECAB				S	**Sn**	**02 19 40.2**	**-2.2**
	comp=E,1.9nm,0.3s						
PCAB	**Cabril**	**6.05**	**36**	*e*Pn	**Pn**	**02 18 38.0**	**+2.3**
PCAB				*e*Sn	**Sn**	**02 19 44.3**	**-0.8**
PCAB				A	A	02 19 46.9	
	comp=E,4.4nm,0.3s						
PCAB	**Cabril**	**6.05**	**36**	P	**Pn**	**02 18 38.0**	**+2.3**
PCAB				S	**Sn**	**02 19 44.3**	**-0.8**
	comp=E,2.2nm,0.3s						
ZHG	**ZHG**	**6.06**	**123**	P	Pn	02 18 30.2	-5.6
ZHG				S	Sn	02 19 35.9	-9.3
EPLA	**Plasencia**	**6.12**	**57**	P	**Pn**	**02 18 37.9**	**+1.3**
	comp=E,1.1nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**02 19 44.9**	**-1.7**
	comp=E,0.6nm,0.1s,SNR=7.9						
EZAM	**Zamans**	**6.12**	**29**	P	**Pn**	**02 18 38.4**	**+1.7**
	comp=E,0.4nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	**02 19 43.8**	**-2.9**
	comp=E,6.1nm,0.3s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.15**	**33**	*e*Pn	**Pn**	**02 18 39.1**	**+2.1**
PGAV				*e*Sn	**Sn**	**02 19 45.5**	**-1.9**
PGAV				A	A	02 19 59.0	
	comp=E,4.4nm,0.9s						
PGAV	**Gavieira, Arco**	**6.15**	**33**	P	**Pn**	**02 18 39.1**	**+2.1**
PGAV				S	**Sn**	**02 19 45.5**	**-1.9**
	comp=E,4.4nm,0.9s						
ELOB	**Lobios**	**6.16**	**35**	P	**Pn**	**02 18 39.2**	**+2.0**
	comp=E,0.4nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**02 19 45.6**	**-2.1**
	comp=E,2.7nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**6.17**	**44**	*e*Pn	**Pn**	**02 18 39.2**	**+1.8**
MVO				*e*Sn	**Sn**	**02 19 45.8**	**-2.2**
MVO				A	A	02 19 49.0	
	comp=E,4.4nm,0.4s						
MVO	**Moncorvo**	**6.17**	**44**	P	**Pn**	**02 18 38.8**	**+1.4**
	comp=E,1.0nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**02 19 45.0**	**-3.1**
	comp=E,2.4nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**6.41**	**90**	S	**Sn**	**02 19 53.0**	**-0.9**
	comp=E,0.8nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**6.62**	**76**	P	**Pn**	**02 18 44.5**	**+1.1**
	comp=E,1.4nm,0.2s,SNR=10						
EADA				S	**Sn**	**02 19 56.2**	**-2.8**
	comp=E,1.2nm,0.2s						
EMAZ	**Mazaricos**	**6.72**	**24**	P	**Pn**	**02 18 46.4**	**+1.6**
	comp=E,1.5nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**02 19 56.2**	**-5.2**
	comp=E,3.4nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**6.77**	**42**	*e*Pn	**Pn**	**02 18 47.0**	**+1.5**
PBRG				*e*Sn	**Sn**	**02 20 02.1**	**-0.6**
PBRG	**Braganca**	**6.77**	**42**	P	**Pn**	**02 18 47.0**	**+1.5**
PBRG				S	**Sn**	**02 20 02.1**	**-0.6**
ECAL	**Calabor**	**6.87**	**41**	P	**Pn**	**02 18 48.7**	**+1.8**
	comp=E,1.2nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**02 20 02.6**	**-2.5**
	comp=E,2.7nm,0.2s,SNR=7.9						
EGOR	**Sierra Gorda,**	**6.91**	**86**	P	**Pn**	**02 18 49.0**	**+1.3**
	comp=E,0.0nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**02 20 04.3**	**-2.1**
	comp=E,1.8nm,0.6s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.92**	**30**	P	**Pn**	**02 18 49.2**	**+1.7**
	comp=E,0.8nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**02 20 01.9**	**-4.3**
	comp=E,1.9nm,0.1s,SNR=7.9						
OUK	**Oukaimeden**	**6.96**	**143**	P	Pn	02 18 45.8	-2.6
OUK				S	Sn	02 19 56.9	-11
PAB	**San Pablo**	**7.13**	**66**	P	**Pn**	**02 18 51.3**	**+0.9**
	comp=E,0.2nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**02 20 09.3**	**-2.2**
	comp=E,0.7nm,0.4s,SNR=7.9						
TTIG	**Tnine Tigouga,**	**7.26**	**149**	P	Pn	02 18 45.8	-6.5
TTIG				S	Sn	02 20 00.3	-15

ESDC	Sonseca Array	7.45	65	P	Pn	02 18 55.8	+0.9
	comp=E,0.3nm,0.2s,SNR=7.9						
OUZM	OUZ	7.76	138	P	Pn	02 18 56.5	-2.7
OUZM				S	Sn	02 20 19.1	-8.0
EQES	Quesada	7.76	80	P	Pn	02 18 59.5	+0.3
	comp=E,0.3nm,0.2s,SNR=7.9						
EQES				S	Sn	02 20 23.6	-3.6
	comp=E,1.3nm,0.5s,SNR=7.9						
MDT	Midelt	7.82	119	P	Pn	02 18 59.0	-1.1
MDT				S	Sn	02 20 21.0	-7.7
TZRR	Tazzarine	8.52	133	P	Pn	02 19 04.9	-4.7
TZRR				S	Sn	02 20 37.9	-7.9
EZAR	Zarzadilla de	8.85	80	P	Pn	02 19 15.4	+1.2
	comp=E,0.2nm,0.1s,SNR=7.9						
ETOR	Torete	9.22	61	P	Pn	02 19 20.5	+1.4
	comp=E,4.5nm,0.1s,SNR=7.9						
ETOR				S	Sn	02 20 58.2	-4.8
	SNR=7.9						

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*TUL **21** 02:32:57.4±1.1, 36°.49N±0°.03×98°.73W±0°.02, h5^{km}±2^{km}, ML3.0, mb_Lg2.9/25(NEIC), Error ellipse: s-maj=4.9km s-min=3.1km az=338.0*

*ANF **21** 02:32:57.6±0.5, 36°.46N×98°.73W, h6^{km}±3^{km}, ML3.4/7, Error ellipse: s-maj=3.4km s-min=2.1km az=76.0*

*NEIC **21** 02:32:57.5±1.1, 36°.48N±0°.02×98°.72W±0°.03, h5^{km}±2^{km}, Error ellipse: s-maj=4.1km s-min=3.3km az=285.0*

ISC 21 02:32:57.4±1.2**, 36°.48N**±0°.03×**98°.71W**±0°.03**, h2**^{km}±11^{km}**, n72, σ0^{s}56**/74**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK035	E0210 Rd and N	0.23	360	Pg	Pg	02 33 02.3	+0.3
OK035				Sg	Sg	02 33 05.8	+0.8
U32A	Winter Ranch,	0.26	248	Pg	Pg	02 33 02.4	0.0
U32A				Sg	Sg	02 33 05.1	-0.5
U32A	Winter Ranch,	0.26	248	P	Pg	02 33 02.3	0.0
	baz=64						
OK032	Salt Plains WL	0.52	51		Pg	02 33 07.5	+0.1
OK032				Sg	Sg	02 33 14.3	+0.2
CROK	Carrier	0.59	87	Pg	Pg	02 33 09.0	+0.3
KAN14	Manchester OK	0.77	51	Pg	Pg	02 33 12.2	0.0
GC02	Grant County #	0.78	61	Pg	Pg	02 33 12.1	-0.3
GC02				Sg	Sg	02 33 23.1	+0.6
KAN16	Harper SW Stat	0.91	34	Pg	Pg	02 33 14.9	0.0
KAN17	Caldwell West	0.95	53	Pg	Pg	02 33 14.9	-0.7
KAN17				Sg	Sg	02 33 28.2	+0.3
KAN08	Anthony NE Sta	0.95	38	Pg	Pg	02 33 15.4	-0.3
KAN12	Harper NE Stat	1.00	35	Pg	Pg	02 33 16.7	+0.1
KAN01	Argonia South	1.02	48	Pg	Pg	02 33 16.5	-0.5
KAN06	Argonia West S	1.03	41	Pg	Pg	02 33 17.0	-0.2
KAN09	Caldwell North	1.10	53	Pg	Pg	02 33 17.7	-0.8
KAN09				Sg	Sg	02 33 32.8	+0.1
KAN13	South Haven SW	1.12	61	Pg	Pg	02 33 18.5	-0.5
KAN13				IAmb_Lg		02 33 33.9	
	comp=Z,78nm,0.8s						
BCOK	Bluff Creek, N	1.21	132	Pg	Pg	02 33 20.4	-0.2
BLOK	Blackwell	1.23	76		Pg	02 33 20.4	-0.7
OK025	Westminster Rd	1.43	128		Pn	02 33 23.7	-0.6
OKCFA	Oklahoma City	1.47	136	Pn	Pn	02 33 24.6	-0.3
OKCFA	Oklahoma City	1.47	136	P	Pn	02 33 24.8	-0.2
	baz=316						
OKCFA				S	Sb	02 33 44.7	+0.1
	baz=316						
OKCSW	OKLAHOMA CITY	1.48	136	Pn	Pn	02 33 25.3	+0.1
OK033	Mehan	1.49	106	Pn	Pn	02 33 24.8	-0.5
OK031	S. Brethren Rd	1.60	108	Pn	Pn	02 33 26.5	-0.2
FNO	Franklin	1.61	138	Pn	Pn	02 33 26.9	-0.1
QUOK	Quay	1.64	100	Pn	Pn	02 33 27.2	-0.1
OK030	Cody Creek RV	1.65	109	Pn	Pn	02 33 27.5	0.0
OK034	N. Norfolk Rd.	1.68	105	Pn	Pn	02 33 26.6	-1.2
WMOK	Wichita Mounta	1.73	182		Pn	02 33 28.1	-0.5
WMOK	Wichita Mounta	1.73	182	P	Pn	02 33 28.1	-0.5
	baz=1.4						
WMOK				S	Sb	02 33 51.9	-0.4
	baz=1.4						
T35A	Sooner Cattle	1.82	75	Pn	Pn	02 33 29.9	+0.2
T35B	Sooner Cattle	1.82	75	P	Pn	02 33 29.8	0.0
	baz=257						
T35B				S	Sb	02 33 55.0	+0.2
	baz=257						
R32A	Long Quarter,	1.94	360	Pn	Pn	02 33 30.0	-1.5
R32A	Long Quarter,	1.94	360	S	Sb	02 33 58.6	+0.3
	baz=180						
W35A	Tecumseh	1.99	131	Pn	Pn	02 33 32.3	+0.2
TUL1	Leonard	2.43	103	Pn	Pn	02 33 38.0	-0.1
TUL1				IAmb_Lg		02 34 20.0	
	comp=Z,40nm,0.8s						
TUL1	Leonard	2.43	103	P	Pn	02 33 37.9	-0.1
	baz=285						
CBKS	Cedar Bluff	2.47	341	Pn	Pn	02 33 39.2	+0.4
CBKS	Cedar Bluff	2.47	341	P	Pn	02 33 38.3	-0.5
	baz=161						
CBKS				S	Sn	02 34 09.9	+0.3
	baz=161						
LOOK	Love County	2.78	153	Pn	Pn	02 33 43.8	+0.9
LOOK				IAmb_Lg		02 34 28.0	
	comp=Z,36nm,0.9s						
AMTX	Amarillo	2.89	238	Pn	Pn	02 33 44.7	+0.1
KSU1	Kansas State U	3.10	32	S	Sn	02 34 25.7	+0.6
	baz=213						
X37A	Clayton	3.31	124	Pn	Pn	02 33 50.2	0.0
U38A	Gravette	3.48	89	Pn	Pn	02 33 52.8	+0.1
HHAR	Hobbs	3.85	91	IAmb_Lg		02 35 02.9	
	comp=Z,26nm,0.7s						
ABTX	Abilene, Hawle	3.92	192	Pn	Pn	02 33 59.0	+0.4
KSCO	Kaye Shedlock'	4.01	310	IAmb_Lg		02 35 11.6	
	comp=Z,29nm,0.8s						
MSTX	Muleshoe	4.16	234	IAmb_Lg		02 35 13.5	
	comp=Z,18nm,0.8s						
W39A	Magazine	4.20	106	Pn	Pn	02 34 03.7	+1.2
N33A	J Bar K, Exete	4.37	13	IAmb_Lg		02 35 26.1	
	comp=Z,26nm,0.8s						
Z38A	Mt. Pleasant	4.43	135	IAmb_Lg		02 35 20.8	
	comp=Z,19nm,0.8s						
S39A	Bolivar	4.47	73	Pn	Pn	02 34 05.5	-0.8
WHTX	Lake Whitney,	4.59	167	Pn	Pn	02 34 07.8	-0.1
MIAR	Mount Ida	4.61	113	Pn	Pn	02 34 07.6	-0.5
T25A	Trinidad	4.62	280	IAmb_Lg		02 35 32.6	
	comp=Z,22nm,0.8s						
U40A	Yellville	4.72	90	Pn	Pn	02 34 09.1	-0.6
U40A				IAmb_Lg		02 35 29.7	
	comp=Z,24nm,0.7s						
BGNE	Belgrade	4.95	5	IAmb_Lg		02 35 35.7	
	comp=Z,23nm,0.7s						
P38A	Dawn	5.16	51	Pn	Pn	02 34 14.5	-1.1
OGNE	Ogallala	5.16	331	Pn	Pn	02 34 15.5	-0.3
OGNE				IAmb_Lg		02 35 47.5	
	comp=Z,28nm,0.7s						
X40A	Basin Creek Fa	5.19	111	IAmb_Lg		02 35 49.6	
	comp=Z,18nm,0.7s						
MGMO	Mountain Grove	5.21	81	Pn	Pn	02 34 16.3	-0.1
FCAR	Ozark Folk Cen	5.36	94	Pn	Pn	02 34 18.0	-0.4
R40A	Maddies Statio	5.44	69	Pn	Pn	02 34 18.9	-0.6
LCAR	Lake Charles	6.12	92	Pn	Pn	02 34 28.1	-0.7
ISCO	Idaho Springs	6.37	303	Pn	Pn	02 34 32.8	+0.1
PBMO	Poplar Bluff	6.67	85	Pn	Pn	02 34 37.0	+0.6
FVM	French Village	6.78	75	Pn	Pn	02 34 37.4	-0.5
MNTX	Cornudas Mount	7.30	231	Pn	Pn	02 34 44.5	-0.6
ECSD	EROS Data Cent	7.42	12	Pn	Pn	02 34 45.0	-1.7
735A	Kenedy	7.64	174	Pn	Pn	02 34 50.5	+0.8
S44A	Carbondale	7.65	78	Pn	Pn	02 34 49.8	-0.1
TX31	Lajitas Ar. Si	8.25	212	Pn	Pn	02 34 58.2	0.0
TX32	Lajitas Array	8.25	212	Pn	Pn	02 34 58.3	0.0

NEIC 21 02:46:32.5±2.2**, 36°.47N**±0°.04×**98°.69W**±0°.02**, h11**^{km}±4^{km}**, mb_Lg2.5**/4**, Error ellipse: s-maj=5.5km s-min=0.9km az=160.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK035	E0210 Rd and N	0.24	357	Pg	Pg	02 46 36.6	-0.9
OK035				Sg	Sg	02 46 40.2	-0.6
U32A	Winter Ranch,	0.27	250	Pg	Pg	02 46 36.8	-1.2
U32A				Sg	Sg	02 46 40.4	-1.2
OK032	Salt Plains WL	0.51	49	Pg	Pg	02 46 41.9	-0.5
OK032				Sg	Sg	02 46 49.4	+0.1
CROK	Carrier	0.57	87	Pg	Pg	02 46 43.2	-0.4
GC02	Grant County #	0.77	60		Pg	02 46 46.5	-0.8
GC02				Sg	Sg	02 46 57.4	0.0
KAN16	Harper SW Stat	0.91	34	Pg	Pg	02 46 49.2	-0.8
KAN17	Caldwell West	0.94	52	Pg	Pg	02 46 49.3	-1.3
KAN17				Sg	Sg	02 47 02.5	-0.3
KAN08	Anthony NE Sta	0.95	37	Pg	Pg	02 46 49.7	-1.1
KAN08				Sg	Sg	02 47 02.8	-0.4
KAN12	Harper NE Stat	0.99	34	Pg	Pg	02 46 51.1	-0.5
KAN06	Argonia West S	1.02	41		Pb	02 46 51.1	-1.1
KAN06				Sg	Sg	02 47 04.9	-0.6
KAN09	Caldwell North	1.09	52		Pb	02 46 52.6	-0.7
KAN09				Sg	Sb	02 47 07.4	-0.1
KAN13	South Haven SW	1.12	61		Pb	02 46 52.8	-0.9
KAN13				Sg	Sb	02 47 07.8	-0.4
BCOK	Bluff Creek, N	1.20	132		Pn	02 46 54.3	-0.8
BLOK	Blackwell	1.22	76		Pn	02 46 55.2	-0.3
BLOK					Sg	02 47 11.9	0.0
OK025	Westminster Rd	1.41	129	Pn	Pn	02 46 58.3	+0.2
FNO	Franklin	1.60	139	Pn	Pn	02 47 01.3	+0.6
QUOK	Quay	1.63	100	Pn	Pn	02 47 01.7	+0.7
OK030	Cody Creek RV	1.64	109	Pn	Pn	02 47 01.8	+0.6
OK034	N. Norfolk Rd.	1.67	105	Pn	Pb	02 47 02.4	-0.7
WMOK	Wichita Mounta	1.73	182		Pn	02 47 02.4	-0.1
T35A	Sooner Cattle	1.81	75		Pb	02 47 04.6	-1.0
R32A	Long Quarter,	1.95	360	Pn	Pn	02 47 06.5	+1.0
W35A	Tecumseh	1.98	131	Pn	Pn	02 47 07.1	+1.2
TUL1	Leonard	2.41	103	Pn	Pn	02 47 12.2	+0.4
TUL1				IAmb_Lg		02 47 49.1	
	comp=Z,15nm,0.8s						
CBKS	Cedar Bluff	2.48	341	Pn	Pn	02 47 14.0	+1.2
KSU1	Kansas State U	3.10	32	Pn	Pn	02 47 20.4	-0.8
HHAR	Hobbs	3.84	91	Pn	Pn	02 47 30.9	-0.6
S39A	Bolivar	4.46	73	Pn	Pn	02 47 41.1	+1.1
S39A				IAmb_Lg		02 48 53.0	
	comp=Z,9.9nm,0.8s						
MIAR	Mount Ida	4.59	113	Pn	Pn	02 47 42.7	+0.9
T25A	Trinidad	4.64	280	Pn	Pn	02 47 42.4	-0.2
R40A	Maddies Statio	5.43	69	Pn	Pn	02 47 53.8	+0.6
SDCO	Great Sand Dun	5.59	285	Pn	Pn	02 47 56.8	+1.1
ANMO	Albuquerque	6.50	259	Pn	Pn	02 48 09.8	+1.6
MNTX	Cornudas Mount	7.31	231	Pn	Pn	02 48 19.6	+0.5
ECSD	EROS Data Cent	7.43	12	Pn	Pn	02 48 18.6	-2.1

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*TUL **21** 02:49:06.3±1.1, 36°.49N±0°.02×98°.74W±0°.02, h7^{km}±7^{km}, ML2.6, ML2.4/8(NEIC), Error ellipse: s-maj=3.3km s-min=1.9km az=137.0*

NEIC 21 02:49:06.5±0.9**, 36°.47N**±0°.02×**98°.72W**±0°.02**, h5**^{km}±2^{km}**, Error ellipse: s-maj=3.4km s-min=3.0km az=314.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK035	E0210 Rd and N	0.24	2	Pg	Pg	02 49 11.2	0.0
OK035				Sg	Sg	02 49 14.8	+0.4
U32A	Winter Ranch,	0.24	249	Pg	Pg	02 49 10.9	-0.3
U32A				Sg	Sg	02 49 15.1	+0.6
OK032	Salt Plains WL	0.53	51	Pg	Pg	02 49 16.2	-0.4
OK032				Sg	Sg	02 49 24.0	+0.5
OK032				IAML		02 49 24.4	
	262nm,0.2s						
CROK	Carrier	0.59	86	Pg	Pg	02 49 17.8	0.0
CROK				Sg	Sg	02 49 26.6	+1.0
CROK				IAML		02 49 34.0	
	comp=N,198nm,0.2s						
BLOK	Blackwell	1.24	76		Pg	02 49 29.6	-0.7
OK025	Westminster Rd	1.43	128	Pn	Pn	02 49 32.6	-0.4
OKCFA	Oklahoma City	1.47	135	Pn	Pn	02 49 33.3	-0.4
OK033	Mehan	1.50	106	Pn	Pn	02 49 33.8	-0.2
OK031	S. Brethren Rd	1.60	108	Pn	Pn	02 49 35.6	+0.1
FNO	Franklin	1.61	138	Pn	Pn	02 49 35.9	+0.2
QUOK	Quay	1.65	100	Pn	Pn	02 49 36.1	0.0
OK030	Cody Creek RV	1.66	108	Pn	Pn	02 49 36.1	-0.1
WMOK	Wichita Mounta	1.73	182	Pn	Pn	02 49 36.7	-0.4
R32A	Long Quarter,	1.95	0	Pn	Pn	02 49 40.0	-0.3

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*IDC **21** 02:54:35.8±0.5, 52°.77S×27°.63E, h0^{km}, mb4.5/19, mb1 4.6/19, mb1mx4.3/43, mbtmp4.5/19, MS4.0/25, Ms1 4.0/25, ms1mx4.0/31, Error ellipse: s-maj=19.4km s-min=11.9km az=80.0*

*NEIC **21** 02:54:37.8±1.9, 52°.83S±0°.06×27°.5E±0°.2, h10^{km}±1^{km}, mb4.8/39, Error ellipse: s-maj=18.1km s-min=4.5km az=118.0*

*GCMT **21** 02:54:38.8±0.3, 52°.70S±0°.02×27°.51E±0°.05, h20^{km}±1^{km}, MW5.1/74, Moment Tensor Solution. s25,c29; s74,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.19±.33; $M_{\theta\theta}$4.65±.20; $M_{\phi\phi}$-0.46±.20; $M_{r\theta}$3.07±.33; $M_{\theta\phi}$-0.20±.11; $M_{\phi r}$0.84±.50; Best double couple: $M_0$5.45900×10^{16} NP1:ϕ_s104.00000°, δ29.00000°, λ-70.00000°. NP2: ϕ_s261.00000°, δ63.00000°, λ-101.00000°. Principal axes: T 5.6120, Plg17.0000°, Azm359.0000°; N -0.3090, Plg9.0000°, Azm266.0000°; P -5.3060, Plg70.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 02:54:37.9±0.4**, 52°.79S**±0°.06×**27°.48E**±0°.09**, h13**^{km}**, n110, σ1^{s}05**/98**, mb4.8**/33**, MS4.1**/25**, 1C-1D, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYO	Syowa Base	17.25	165	⇑*i*Pn	Pn	02 58 37.0	-1.0
SYO	Syowa Base	17.25	165	⇓*i*pPn	P	02 58 39.6	+0.1
SUR	Sutherland	20.96	344	P	P	02 59 22.3	+1.7
	28nm,0.9s,baz=166,slow=11,SNR=9.9						
SUR				LR	LR	03 05 43.5	
	comp=Z,791nm,21.3s,baz=177,slow=32						
SUR	Sutherland	20.96	344	P	P	02 59 21.7	+1.1
SUR				IAmb	IAmb	02 59 25.9	
	comp=Z,50nm,1.1s						
MAW	Mawson	22.55	145	P	P	02 59 38.5	+1.2
	comp=Z,6.4nm,0.7s,baz=301,slow=15,SNR=5.7						
MAW				LR	LR	03 06 40.6	
	comp=Z,274nm,21.1s,baz=298,slow=32						
MAW	Mawson	22.55	145	P	P	02 59 38.2	+1.0
SNAA	Sanae	23.15	204	P	P	02 59 45.1	+1.6
SNAA	Sanae	23.15	204	P	P	02 59 44.9	+1.4
	comp=Z,30nm,0.8s,baz=68,slow=8.4,SNR=128						
SNAA				LR	LR	03 06 35.0	
	comp=Z,651nm,21.9s,baz=52,slow=31						
SNAA	Sanae	23.15	204	P	P	02 59 44.3	+0.7
SNAA				IAmb	IAmb	02 59 48.9	
	comp=Z,41nm,0.9s						
VNA2	Neumayer--Watz	23.93	208	P	P	02 59 52.5	+1.5
	baz=52,slow=9.4						
VNA1	Neumayer--Stat	24.03	209	P	P	02 59 54.6	+2.5
BOSA	Boshof	24.20	355	P	P	02 59 54.2	0.0
	comp=Z,18nm,0.9s,baz=181,slow=9.8,SNR=19						
BOSA				LR	LR	03 07 34.4	
	comp=Z,737nm,21.2s,baz=176,slow=32						
BOSA	Boshof	24.20	355	P	P	02 59 54.2	0.0
BOSA				IAmb	IAmb	02 59 57.5	
	comp=Z,26nm,0.9s						
VNA3	Neumayer Olymp	24.73	208	P	P	02 59 59.5	+1.0
LBTB	Lobatse	27.77	356	P	P	03 00 26.4	0.0
	comp=Z,4.3nm,0.9s,baz=142,slow=11,SNR=4.6						
LBTB				LR	LR	03 09 30.4	
	comp=Z,645nm,21.2s,baz=174,slow=32						
LBTB	Lobatse	27.77	356	P	P	03 00 25.2	-1.2
LBTB				IAmb	IAmb	03 00 38.0	
	comp=Z,14nm,1.1s						
MOPA	Mopani	29.38	7	*i* P	P	03 00 41.5	+0.9
MOPA	Mopani	29.38	7	*i* P	P	03 00 41.5	+0.9
MSNA	Messina	30.45	5	*i* P	P	03 00 50.5	+0.4
MSNA	Messina	30.45	5	*i* P	P	03 00 50.5	+0.4
WIN	Windhoek	31.20	341	P	P	03 00 57.1	+0.2
WIN				IAmb	IAmb	03 00 58.3	
	comp=Z,27nm,1.3s						
MATP	Matopo	32.31	2	P	P	03 01 05.8	-0.8
	comp=Z,4.8nm,0.9s,baz=179,slow=16,SNR=8.9						
MATP				LR	LR	03 12 06.7	
	comp=Z,164nm,21.5s,baz=184,slow=32						
MATP	Matopo	32.31	2	*i* P	P	03 01 04.3	-2.2
MATP	Matopo	32.31	2	*i* P	P	03 01 04.3	-2.2
VOI	Vohitsoka	34.21	33	P	P	03 01 23.0	-0.2
VOI				IAmb	IAmb	03 01 29.2	
	comp=Z,23nm,1.5s						
TSUM	Tsumeb	34.39	343	P	P	03 01 24.6	-0.2
TSUM				IAmb	IAmb	03 01 37.8	
	comp=Z,11nm,0.8s						
KRI	Karoi	35.91	3	*i* P	P	03 01 35.0	-2.9
KRI	Karoi	35.91	3	*i* P	P	03 01 35.0	-2.9
HOPE	Hope Point	36.89	241	P	P	03 01 45.1	-0.6
ABPO	Ambohimpanom	37.05	32	P	P	03 01 48.3	+0.7
LSZ	Lusaka	37.43	1	P	P	03 01 50.3	-0.4
	comp=Z,5.5nm,0.8s,baz=182,slow=9.7,SNR=12						
LSZ	Lusaka	37.43	1	P	P	03 01 50.2	-0.6
QSPA	South Pole Qui	37.43	180	P	P	03 01 50.3	-0.2
	comp=Z,8.6nm,0.4s,baz=254,slow=3.3,SNR=11						
QSPA	South Pole Qui	37.43	180	P	P	03 01 49.4	-1.0
CASY	Casey	40.87	142	P	P	03 02 19.1	+0.2
SMAI	San Martin Ant	44.08	212	P	P	03 02 46.2	+1.3
SHEL	Horse Pasture	45.11	312	P	P	03 02 54.1	+0.3
VNDA	Vanda	46.92	168	P	P	03 03 07.1	-0.3
	comp=Z,4.3nm,0.7s,baz=237,slow=6.6,SNR=25						
VNDA				LR	LR	03 22 11.2	
	comp=Z,262nm,20.8s,baz=214,slow=35						
VNDA	Vanda	46.92	168	P	P	03 03 06.6	-0.8
VNDA				IAmb	IAmb	03 03 21.7	
	comp=Z,7.3nm,0.7s						
SBA	Scott Base	47.24	169	P	P	03 03 10.5	+0.7
EFI	East Falkland	49.38	235	P	P	03 03 26.9	+0.2
EFI				IAmb	IAmb	03 03 53.7	
	comp=Z,23nm,1.5s						
KIBK	Kibwezi	51.04	14	P	P	03 03 40.4	+0.7
KMBO	Kilima Mbogo	52.12	12	LR	LR	03 23 19.7	
	comp=Z,185nm,21.9s,baz=220,slow=33						
KMBO	Kilima Mbogo	52.12	12	P	P	03 03 48.5	+0.5
H10S2	ASCENSION HYDR	55.39	306	T	T	04 04 09.2	
	baz=148,slow=74,SNR=2.7						
H10S3	ASCENSION HYDR	55.41	306	T	T	04 04 25.8	
	baz=72,slow=74,SNR=5.3						
MG05	Puerto Natales	56.22	228	P	P	03 04 18.0	+0.8
PLCA	Paso Flores	63.14	238	P	P	03 05 05.4	+0.3
	comp=Z,4.5nm,0.6s,baz=132,slow=8.1,SNR=9.8						
PLCA	Paso Flores	63.14	238	P	P	03 05 04.4	-0.8
PLCA				IAmb	IAmb	03 05 05.7	
	comp=Z,6.0nm,0.8s						
ITQB	Itaqui	63.54	255	P	P	03 05 07.0	-0.8
LR03	Panguipulli	64.87	237	P	P	03 05 15.7	-0.8
LIC	Lamto	64.94	324	*e*PKP2	P	03 05 15.9	-1.1
	comp=Z,23nm,1.1s						
KIC	Kosan Boka	64.96	324	*e*PKP2	P	03 05 15.6	-1.6
	comp=Z,26nm,1.4s						
LC01	Cunco	65.18	238	P	P	03 05 17.4	-1.1
LC01				IAmb	IAmb	03 05 41.1	
	comp=Z,9.0nm,1.2s						
DBIC	Dimbokro	65.29	324	P	P	03 05 18.9	-0.5
	comp=Z,7.2nm,1.0s,baz=348,slow=14,SNR=6.0						
DBIC				LR	LR	03 29 46.2	
	comp=Z,140nm,19.3s,baz=178,slow=32						
DBIC	Dimbokro	65.29	324	P	P	03 05 18.5	-0.8
TIC	Toumodi	65.32	324	*e*PKP2	P	03 05 17.1	-2.5
CPUP	Villa Florida	66.44	257	P	P	03 05 26.9	+0.2
	comp=Z,4.6nm,0.8s,baz=143,slow=5.0,SNR=10						
CPUP				LR	LR	03 29 56.3	
	comp=Z,70nm,19.5s,baz=120,slow=32						
BO02	Sierra Bellavi	67.70	242	P	P	03 05 34.9	+0.1
GO05	Huala	68.15	241	P	P	03 05 36.9	-0.6
BDFB	Brasilia	68.94	272	P	P	03 05 43.8	+1.1
	comp=Z,5.9nm,0.8s,baz=147,slow=5.8,SNR=8.7						
BDFB				LR	LR	03 30 14.9	
	comp=Z,186nm,20.2s,baz=114,slow=31						
BDFB	Brasilia	68.94	272	P	P	03 05 42.7	0.0
BDFB				IAmb	IAmb	03 05 46.2	
	comp=Z,14nm,1.2s						
ZON	Zonda	69.03	245	P	P	03 05 43.0	-0.1
ZON				IAmb	IAmb	03 06 03.6	
	comp=Z,4.0nm,0.8s						
TORD	Torodi Ar. Bea	69.32	333	P	P	03 05 44.9	0.0
	comp=Z,4.7nm,0.6s,baz=171,slow=6.2,SNR=54						
TORD				LR	LR	03 32 32.9	
	comp=Z,82nm,18.8s,baz=325,slow=33						
TORD	Torodi Ar. Bea	69.32	333	P	P	03 05 44.5	-0.3
TORD				IAmb	IAmb	03 05 49.7	
	comp=Z,9.3nm,1.2s						
AQDB	Aquidauana	69.89	262	P	P	03 05 48.8	+0.4
KOWA	Kowa	72.30	328	P	P	03 06 03.6	+0.7
KOWA				IAmb	IAmb	03 06 16.5	
	comp=Z,7.1nm,0.9s						
AC02	Maricunga	72.89	248	P	P	03 06 06.9	-0.3
AC02				IAmb	IAmb	03 06 13.7	
	comp=Z,8.4nm,1.1s						
PTLB	Pontes e Lacer	75.83	263	P	P	03 06 23.6	-0.1
PTLB				IAmb	IAmb	03 06 31.6	
	comp=Z,7.7nm,1.2s						
PB01	IPOC Station P	77.60	252	P	P	03 06 33.9	+0.1
PB01				IAmb	IAmb	03 06 37.8	
	comp=Z,9.7nm,1.2s						
STKA	Stephens Creek	78.09	127	P	P	03 06 36.2	-0.1
	comp=Z,2.4nm,0.9s,baz=295,slow=2.0,SNR=4.2						
STKA				LR	LR	03 37 49.6	
	comp=Z,42nm,18.1s,baz=206,slow=33						
STKA	Stephens Creek	78.09	127	P	P	03 06 36.8	+0.5
PB16	IPOC Station P	79.74	253	P	P	03 06 46.2	0.0
PB16				IAmb	IAmb	03 06 54.0	
	comp=Z,22nm,1.5s						
LPAZ	La Paz	80.54	256	P	P	03 06 51.2	+0.5
ASAR	Alice Springs	80.81	117	P	P	03 06 50.6	-0.7
	comp=Z,2.6nm,0.7s,baz=213,slow=4.8,SNR=33						
ASAR				LR	LR	03 37 53.1	
	comp=Z,90nm,19.6s,baz=214,slow=32						
ASAR	Alice Springs	80.81	117	P	P	03 06 50.5	-0.8
AS31	Alice Springs	80.81	117	P	P	03 06 50.9	-0.4
WRA	Warramunga Arr	84.05	115	P	P	03 07 07.3	-0.9
	comp=Z,2.5nm,0.9s,baz=205,slow=5.1,SNR=12						
WRA				LR	LR	03 38 02.4	
	comp=Z,92nm,20.4s,baz=205,slow=31						
WRA	Warramunga Arr	84.05	115	P	P	03 07 07.8	-0.5
WB2	Warramunga Arr	84.06	115	P	P	03 07 07.2	-1.1
WB2				IAmb	IAmb	03 07 23.2	
	comp=Z,11nm,1.1s						
WB0	Warramunga Arr	84.22	115	P	P	03 07 07.7	-1.4
ETMB	Extrema	84.49	261	P	P	03 07 09.2	-1.3
ETMB				IAmb	IAmb	03 07 12.0	
	comp=Z,8.0nm,1.2s						
PTGA	Pitinga	87.87	272	LR	LR	03 42 55.5	
	comp=Z,122nm,19.6s,baz=84,slow=33						
NNA	Nana	89.03	251	LR	LR	03 43 55.2	
	comp=Z,63nm,19.0s,baz=106,slow=33						
KEST	Kesra	89.56	345	LR	LR	03 48 04.8	
	comp=Z,108nm,21.0s,baz=202,slow=36						
BRTR	Keskin Array B	92.29	5	P	P	03 07 47.0	-0.2
	comp=Z,0.4nm,0.6s,baz=183,slow=7.2,SNR=2.7						
BRTR				LR	LR	03 52 06.8	
	comp=Z,50nm,18.2s,baz=172,slow=37						
GNI	Garni	93.76	13	LR	LR	03 49 04.3	
	comp=Z,64nm,20.9s,baz=192,slow=35						
CMAR	Chiang Mai Arr	93.82	64	LR	LR	03 43 47.7	
	comp=Z,63nm,18.5s,baz=276,slow=32						
GEYT	Alibeck	94.19	24	LR	LR	03 47 04.1	
	comp=Z,30nm,20.8s,baz=310,slow=33						
ESDC	Sonseca Array	96.04	336	P	P	03 08 05.8	+1.4
	comp=Z,0.5nm,0.6s,baz=159,slow=4.1,SNR=6.7						
ESDC				LR	LR	03 51 34.1	
	comp=Z,79nm,18.4s,baz=245,slow=36						
ESDC	Sonseca Array	96.04	336	P	P	03 08 06.1	+1.8
KBZ	Khabaz	97.05	11	LR	LR	03 52 16.6	
	comp=Z,79nm,19.8s,baz=229,slow=36						
MLR	Muntele Rosu	97.91	359	LR	LR	03 54 44.6	
	comp=Z,107nm,18.9s,baz=184,slow=37						
ARCES	ARCESS Array B	122.02	359	PKP	PKPdf	03 13 28.2	-2.2
	comp=Z,3.0nm,1.1s,baz=190,slow=2.7,SNR=4.8						
TXAR	Lajitas Array	137.41	256	PKhKP	PKPpre	03 13 55.2	
	comp=Z,0.1nm,0.5s,baz=153,slow=3.0,SNR=1.7						
TIXI	Tiksi	142.32	31	PKhKP	PKPpre	03 14 02.4	
	comp=Z,2.8nm,0.6s,baz=335,slow=2.0,SNR=11						
TIXI	Tiksi	142.32	31		PKPpre	03 14 02.9	
ULM	Lac du Bonnet	145.44	289	PKPbc	PKPdf	03 14 13.9	-0.6
	comp=Z,6.0nm,0.5s,baz=110,slow=1.6,SNR=6.9						
RES	Resolute Bay	148.46	335	PKPbc	PKPbc	03 14 22.1	-0.3
	comp=Z,3.4nm,0.8s,baz=134,slow=3.7,SNR=8.3						
RES	Resolute Bay	148.46	335	PKPdf	PKPdf	03 14 20.5	+1.6
PDAR	Pinedale Array	149.86	268	PKPbc	PKPbc	03 14 25.7	-1.5
	comp=Z,1.3nm,0.8s,baz=118,slow=3.5,SNR=8.8						
PDAR	Pinedale Array	149.86	268		PKPbc	03 14 25.3	-1.9
SEY	Seymchan	149.93	48	PKPbc	PKPbc	03 14 26.1	-0.3
	comp=Z,2.7nm,0.3s,baz=306,slow=1.6,SNR=7.0						
NVAR	Mina Array Bea	152.40	252	PKP	PKPdf	03 14 27.2	+0.8
	comp=Z,0.4nm,0.6s,baz=125,slow=4.2,SNR=4.7						
NVAR				PKPbc	PKiKP	03 14 33.3	-0.2
	comp=Z,1.0nm,0.5s,baz=136,slow=2.2,SNR=14						
NVAR	Mina Array Bea	152.40	252		PKPdf	03 14 26.9	+0.5
YKA	Yellowknife Ar	157.83	311	PKPab	PKPab	03 15 06.0	+0.2
	comp=Z,2.2nm,0.9s,baz=85,slow=4.5,SNR=15						
YKA	Yellowknife Ar	157.83	311	PKPab	PKPab	03 15 06.2	+0.4
INK	Inuvik	161.99	337	PKPab	PKPab	03 15 24.1	+0.5
	comp=Z,0.8nm,0.6s,baz=359,slow=3.9,SNR=7.0						
INK	Inuvik	161.99	337	PKPdf	PKPdf	03 14 37.4	+0.1
INK					PKPab	03 15 23.6	0.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	Eielson Array	167.64	349	PKPab	PKPab	03 15 49.2	+0.6
	comp=Z,0.5nm,0.7s,baz=354,slow=5.6,SNR=4.4						

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*IDC **21** 03:01:27.7±0.7, 17°.59N×94°.32W, h138^{km}±12^{km}, mb3.4/10, mb1 3.7/12, mb1mx3.4/46, mbtmp3.8/12, Error ellipse: s-maj=35.4km s-min=14.7km az=50.0*

*NEIC **21** 03:01:28.0±2.5, 17°.60N±0°.08×94°.56W±0°.05, h136^{km}±10^{km}, mb4.0/45, Md4.5/28(MEX), Error ellipse: s-maj=12.0km s-min=7.4km az=172.0*

*MEX **21** 03:01:29.7±0.8, 17°.50N×94°.56W, h155^{km}±4^{km}, MD4.5*

ISC 21 03:01:28.4±0.6**, 17°.44N**±0°.04×**94°.56W**±0°.03**, h157**^{km}±5^{km}**, n119,** σ**1^{s}.30**/149**, mb4.0**/22**, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UXUV	UXUV	0.42	107	*e*P	Pn	03 01 50.3	+0.2
UXUV				*i* S	Sn	03 02 05.8	-0.9
CMIG	Matias Romero	0.46	221	P	Pn	03 01 50.4	0.0
	398nm,0.3s,baz=77,slow=2.8,SNR=4209						
CMIG				LR	LR	03 01 53.2	
	comp=Z,16nm,21.9s,baz=348,slow=35						
CMIG				S	Sn	03 02 06.2	-0.9
	325nm,0.3s,baz=164,slow=23,SNR=17						
CMIG	Matias Romero	0.46	221	*i* P	Pn	03 01 50.4	0.0
CMIG				*i* S	Sn	03 02 06.2	-0.9
MIHL	Minatitlan	0.55	2	*i* P	Pn	03 01 51.0	+0.3
TUIG	Tuzandepetl	0.60	13	*i* P	Pn	03 01 51.1	0.0
TUIG				*i* S	Sn	03 02 07.3	-1.2
NEUV	Arroyo Zacate	1.21	283	*e*P	Pn	03 01 54.9	-0.7
TGIG		1.53	115		Pn	03 01 59.1	+0.2
TGIG					Sn	03 02 21.1	-1.0
TGIG		1.53	115	*e*P	Pn	03 01 59.1	+0.2
TGIG				*e*S	Sn	03 02 21.1	-1.0
TGBT	Tuxtla Gutierr	1.56	115	*i* P	Pn	03 01 59.3	+0.3
TGBT				*i* S	Sn	03 02 21.7	-0.9
VHSA	Villahermosa	1.64	71	*i* S	Sn	03 02 22.9	-1.2
OXLC	Oaxaca	2.08	260	*e*P	Pn	03 02 05.2	+0.2
OXLC				*i* S	Sn	03 02 32.2	-1.0
OXBJ	Oaxaca	2.10	260	*i* P	Pn	03 02 05.5	+0.3
OXBJ				*i* S	Sn	03 02 32.7	-0.9
VHO	Vista Hermosa	2.10	260	*e*P	Pn	03 02 05.5	+0.1
VHO				*e*S	Sn	03 02 33.5	-0.3
PCIG		2.16	143		Pn	03 02 06.4	+0.7
PCIG					Sn	03 02 33.5	-1.0
PCIG		2.16	143	*e*P	Pn	03 02 06.4	+0.7
PCIG				*e*S	Sn	03 02 33.5	-1.0
HUIG	Huatulco	2.23	222		Pn	03 02 04.6	-1.9
HUIG					Sn	03 02 34.3	-1.7
HUIG	Huatulco	2.23	222	*i* P	Pn	03 02 04.6	-1.9
HUIG				*e*S	Sn	03 02 34.3	-1.7
TOIG	Toxpalan	2.47	286	*e*P	Pn	03 02 08.9	-0.7
TOIG				*i* S	Sn	03 02 40.5	-0.9
CCIG	Comitan	2.59	116		Pn	03 02 11.1	-0.1
CCIG					Sn	03 02 42.3	-1.9
CCIG	Comitan	2.59	116	*e*P	Pn	03 02 11.6	+0.4
CCIG				*i* S	Sn	03 02 43.8	-0.4
OZST	Orizaba	2.79	301	*e*P	Pn	03 02 13.3	-0.2
OZST				*i* S	Sn	03 02 45.8	-2.6
JAUV	Jalcomulco	2.86	312	*e*P	Pn	03 02 13.4	-0.9
JAUV				*i* S	Sn	03 02 48.4	-1.5
PEIG	Puerto Escondi	2.86	240	*e*P	Pn	03 02 11.9	-2.4
PEIG				*i* S	Sn	03 02 49.4	-0.4
THEZ	Tehuacan	2.87	291	*i* P	Pn	03 02 15.2	+0.6
THEZ				*i* S	Sn	03 02 50.4	0.0
YOIG	Yosondua	2.91	259	*e*P	Pn	03 02 14.3	-0.8
YOIG				*i* S	Sn	03 02 51.2	-0.1
PAVE	Pavencul	3.20	134	*e*P	Pn	03 02 19.5	+0.7
PAVE				*i* S	Sn	03 02 57.3	-0.6
PATR	El Naranjo	3.22	136	*e*P	Pn	03 02 19.3	+0.3
PATR				*i* S	Sn	03 02 58.0	-0.3
FTIG	Fresnillo de T	3.43	278	*e*P	Pn	03 02 21.8	+0.1
FTIG				*i* S	Sn	03 03 02.8	-0.2
SCIG	Sabancuy	3.55	64		Pn	03 02 20.3	-2.7
SCIG					Sn	03 03 01.3	-4.2
SCIG	Sabancuy	3.55	64	*i* P	Pn	03 02 21.8	-1.2
SCIG				*i* S	Sn	03 03 03.5	-1.9
PNIG	Pinotepa	3.57	254		Pn	03 02 21.1	-2.2
PNIG					Sn	03 02 59.9	-6.0
PNIG	Pinotepa	3.57	254	*i* P	Pn	03 02 21.1	-2.2
PNIG				*i* S	Sn	03 03 03.9	-2.0
HUEH	Huehuetenango	3.62	125	Pn	Pn	03 02 23.0	-1.2
TLIG	Tlapa	3.82	272	Pn	Pn	03 02 26.5	-0.1
HMTT	Tlapaneco	3.83	276	*e*P	Pn	03 02 26.8	+0.2
HMTT				*i* S	Sn	03 03 11.6	-0.3
PETF	Flores	4.52	96		Pn	03 02 35.7	+0.1
UNM	Universidad Na	4.77	294	Pn	Pn	03 02 38.8	-0.3
ACP2	Acapulco	5.12	264	*i* S	Sn	03 03 41.0	-1.2
MOIG	Morelia	6.67	291	Pn	Pn	03 03 05.9	+1.6
HZTE	Horizontes, Gu	10.97	126	Pn	Pn	03 04 03.2	+2.1
ORTG	Ortega, Santa	11.29	127	Pn	Pn	03 04 06.8	+1.4
JTS	Las Juntas de	11.73	126	P	Pn	03 04 11.5	+0.4
JTS	Las Juntas de	11.73	126	Pn	Pn	03 04 11.6	+0.6
SOR	Soroa	12.09	62	Pn	Pn	03 04 13.0	-2.6
RIMA	Rio Macho	12.89	125	Pn	Pn	03 04 27.2	+1.0
PEZE	Perez Zeledon,	13.27	126	Pn	Pn	03 04 32.0	+1.0
SRBA	San Rafael, Bu	13.61	125	Pn	Pn	03 04 36.0	+0.7
TXAR	Lajitas Array	14.48	326	P	P	03 04 48.2	-0.3
	0.1nm,0.3s,baz=149,slow=9.5,SNR=6.0						
TXAR	Lajitas Array	14.48	326		Pn	03 04 47.1	+1.0
TX31	Lajitas Ar. Si	14.48	326	P	P	03 04 49.2	+0.8
WHTX	Lake Whitney,	14.72	350	P	P	03 04 51.8	+0.8
MIAR	Mount Ida	17.06	3	P	P	03 05 16.7	0.0
WMOK	Wichita Mounta	17.63	348	P	Pn	03 05 23.9	-0.5
W39A	Magazine	17.70	2	P	P	03 05 24.2	+0.5
W39A				IAmb	IAmb	03 05 26.0	
	comp=Z,5.1nm,0.8s						
WHAR	Wooly Hollow	17.89	6	P	P	03 05 26.2	+0.3
Y49A	Blount Mountai	17.91	23	P	P	03 05 25.1	-1.0
BCOK	Bluff Creek, N	18.34	352	P	P	03 05 31.4	+0.6
FCAR	Ozark Folk Cen	18.50	6	P	P	03 05 32.7	+0.2
HHAR	Hobbs	18.77	2	P	P	03 05 34.7	-0.8
HHAR				IAmb	IAmb	03 05 36.4	
	comp=Z,7.3nm,1.1s						
U40A	Yellville	18.90	4	P	P	03 05 37.0	+0.1
U40A				IAmb	IAmb	03 05 37.6	
	comp=Z,9.3nm,0.7s						
SWET	Sewanee	19.30	22	P	P	03 05 39.9	-1.4
SWET				IAmb	IAmb	03 05 40.6	
	comp=Z,5.2nm,0.7s						
W50A	Signal Mountai	19.51	23	P	P	03 05 42.1	-1.5
W50A				IAmb	IAmb	03 05 44.2	
	comp=Z,4.4nm,0.8s						
HODGE	Hodges	20.02	31	P	P	03 05 47.6	-1.5
HODGE				IAmb	IAmb	03 06 03.2	
	comp=Z,12nm,1.1s						
S39A	Bolivar	20.20	3	P	P	03 05 49.9	-1.0
ANMO	Albuquerque	20.41	331	P	P	03 05 55.2	+1.9
	comp=Z,1.1nm,0.6s,baz=136,slow=14,SNR=6.1						
TKL	Tuckaleechee C	20.52	26	P	P	03 05 53.0	-1.4
	comp=Z,2.4nm,0.4s,baz=192,slow=15,SNR=6.2						
TKL	Tuckaleechee C	20.52	26	P	P	03 05 52.4	-1.9
TKL				IAmb	IAmb	03 06 18.0	
	comp=Z,9.9nm,1.1s						
JSC	Jenkinsville	20.57	33	P	P	03 05 53.0	-1.8
CCM	Cathedral Cave	20.74	7	P	P	03 05 55.2	-1.5
V53A	Saluda	20.95	28	P	P	03 05 57.7	-1.2
V53A				IAmb	IAmb	03 06 05.2	
	comp=Z,6.9nm,1.1s						
TZTN	Tazewell	21.38	25	P	P	03 06 02.1	-1.4
TZTN				IAmb	IAmb	03 06 04.9	
	comp=Z,13nm,1.1s						
V55A	Taylorsville	21.83	30	P	P	03 06 06.8	-1.5
V55A				IAmb	IAmb	03 06 07.4	
	comp=Z,4.9nm,0.7s						
P38A	Dawn	22.12	2	P	P	03 06 09.4	-1.8
P38A				IAmb	IAmb	03 06 37.6	
	comp=Z,5.1nm,1.1s						
U56A	King	22.63	31	P	P	03 06 15.1	-1.0
U56A				IAmb	IAmb	03 06 15.9	
	comp=Z,6.5nm,0.6s						
V58A	Windy Hill, Pi	22.86	34	P	P	03 06 16.4	-1.7
V58A				IAmb	IAmb	03 06 37.1	
	comp=Z,5.7nm,0.9s						
MVCO	Mesa Verde	23.21	331	P	P	03 06 23.6	+2.0
MVCO				IAmb	IAmb	03 06 24.2	
	comp=Z,2.9nm,0.7s						
N38A	Joes South For	23.30	3	P	P	03 06 21.6	-0.6
P49A	Miami Univ. Ec	23.62	19	P	P	03 06 23.8	-1.3
P49A				IAmb	IAmb	03 06 38.4	
	comp=Z,9.7nm,1.1s						
R55A	Marlinton	24.31	28	P	P	03 06 29.8	-1.6
R55A				IAmb	IAmb	03 06 32.4	
	comp=Z,8.0nm,1.1s						
JFWS	Jewell Farm	25.66	7	P	P	03 06 43.9	+0.5
ECSD	EROS Data Cent	26.27	357	P	P	03 06 49.2	+0.3
PDAR	Pinedale Array	28.29	336	P	P	03 07 08.8	+1.5
	comp=Z,0.2nm,0.4s,baz=128,slow=9.6,SNR=4.2						
PDAR	Pinedale Array	28.29	336	P	P	03 07 08.1	+0.8
N59A	State Game Lan	28.45	31	P	P	03 07 07.5	-1.0
N59A				IAmb	IAmb	03 07 29.2	
	comp=Z,5.5nm,1.1s						
ELK	Elko	29.28	327	P	P	03 07 18.1	+2.0
	comp=Z,0.4nm,0.5s,baz=146,slow=7.3,SNR=4.6						
REDW	Red Top Meadow	29.30	335	P	P	03 07 17.4	+1.2
NVAR	Mina Array Bea	29.46	320	P	P	03 07 20.4	+2.7
	comp=Z,1.9nm,0.7s,baz=133,slow=9.3,SNR=18						
NVAR	Mina Array Bea	29.46	320	P	P	03 07 19.6	+1.9
PLID	Pearl Lake	32.89	332	P	P	03 07 49.0	+1.2
F10A	Beach Ranch, E	34.12	331	P	P	03 07 58.7	+0.5
F10A				IAmb	IAmb	03 08 25.6	
	comp=Z,0.7nm,0.2s						
D62A	Allapoint, All	36.27	30	P	P	03 08 14.9	-1.5
LPAZ	La Paz	42.45	141	P	P	03 09 09.6	+0.9
	baz=280,slow=6.1						
YKA	Yellowknife Ar	47.14	347	P	P	03 09 44.0	-0.4
	comp=Z,0.7nm,0.6s,baz=152,slow=7.2,SNR=16						
YKA	Yellowknife Ar	47.14	347	P	P	03 09 44.3	-0.2
M27K	Edge Creek, AK	55.57	335	P	P	03 10 48.8	+1.4
M27K				IAmb	IAmb	03 10 55.4	
	comp=Z,1.7nm,1.1s						
GLB	Gilahina Butte	55.90	334	P	P	03 10 51.3	+1.7
BCAR	Beaver Creek A	55.91	336	P	P	03 10 50.9	+1.2
L27K	Beaver Creek,	55.93	336	P	P	03 10 51.1	+1.3
M26K	Nabesna, AK	56.04	335	P	P	03 10 52.4	+1.7
M26K				IAmb	IAmb	03 11 12.9	
	comp=Z,2.2nm,1.1s						
N25K	Chitina, Valde	56.30	334	P	P	03 10 54.3	+1.7
N25K				IAmb	IAmb	03 10 55.9	
	comp=Z,3.0nm,1.1s						
INK	Inuvik	56.46	344	P	P	03 10 53.5	0.0
	comp=Z,1.0nm,0.5s,baz=132,slow=5.4,SNR=12						
INK	Inuvik	56.46	344	P	P	03 10 53.4	0.0
INK				IAmb	IAmb	03 10 53.4	
	comp=Z,2.3nm,1.1s						
PRP	Porcupine Dome	58.58	338	P	P	03 11 09.8	+1.3
IL31		58.72	337	P	P	03 11 09.8	+0.6
ILAR	Eielson Array	58.72	337	P	P	03 11 09.6	+0.3
	comp=Z,0.6nm,0.6s,baz=141,slow=4.9,SNR=20						
RND	Reindeer	58.88	335	P	P	03 11 11.3	+0.7
CCB	Clear Creek Bu	59.01	336	P	P	03 11 11.3	0.0
CCB				IAmb	IAmb	03 11 20.1	
	comp=Z,1.5nm,1.0s						
BMAR	Burnt Mountain	59.23	340	P	P	03 11 13.4	+0.6
MDM	Murphy Dome	59.32	337	P	P	03 11 13.7	+0.3
TRF	Thorofare Moun	59.49	334	P	P	03 11 15.8	+1.0
H24K	Noodor Dome	59.59	337	P	P	03 11 16.1	+0.8
CAST	Castle Rocks	60.22	334	P	P	03 11 19.6	0.0
MLY	Manley	60.31	336	P	P	03 11 20.7	+0.4
N19K	Bonanza Creek	60.38	331	P	P	03 11 21.3	+0.5
M19K	Big River Lodg	60.69	332	P	P	03 11 23.4	+0.6
SVW2	Sparrevohn	60.98	331	P	P	03 11 24.9	+0.1
IMAR	Indian Mountai	61.84	337	P	P	03 11 29.7	-0.8
ESDC	Sonseca Array	79.53	52	P	P	03 13 18.0	-0.1
	comp=Z,0.7nm,0.9s,baz=296,slow=4.2,SNR=3.0						
ARCES	ARCESS Array B	83.65	18	P	P	03 13 39.0	0.0
	comp=Z,1.8nm,0.7s,baz=284,slow=4.5,SNR=4.7						

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*NNC **21** 03:01:36.3±2.8, 37°.34N×77°.38E, h0^{km}, mb4.3, mpv3.9, Error ellipse: s-maj=28.7km s-min=18.8km az=81.0*

*IDC **21** 03:01:44.8±3.4, 38°.01N×78°.39E, h0^{km}, mb3.7/2, mb1 3.7/5, mb1mx3.1/75, mbtmp3.5/5, ML3.3/3, Error ellipse: s-maj=54.0km s-min=43.9km az=131.0*

ISC 21 03:01:47.9±2.2**, 38°.2N**±0°.1×**78°.1E**±0°.1**, h10**^{km}**, n14,** σ**1^{s}.87**/17**, 4C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan	4.95	350	Pg	Pg	03 03 20.2	-2.6
	8.1nm,0.5s						
TNSS				Lg	Lg	03 04 37.3	
	3.7nm,0.6s						
MDOK	Medeo	5.07	351	Pg	Pg	03 03 23.0	-2.0
	9.1nm,0.7s						
MDOK				Lg	Lg	03 04 40.9	
	21nm,0.7s						
MDOK	Medeo	5.07	351	Pg	Pg	03 03 23.1	-1.8
	6.7nm,0.3s						
MDOK				Lg	Lg	03 04 41.2	
	6.3nm,0.8s						
KST	Kastek	5.14	342	Pg	Pb	03 03 21.1	+3.1
	5.1nm,0.8s						
KST				Lg	Lg	03 04 38.5	
	5.5nm,0.5s						
AAK	Ala-Archa	5.25	330	Pn	Pn	03 03 08.7	+2.1
	0.4nm,0.3s,baz=164,slow=7.4,SNR=4.6						
AAK				Lg	Lg	03 04 41.9	
	0.9nm,0.3s,baz=182,slow=21,SNR=3.8						
AAK	Ala-Archa	5.25	330	⇑Pg	Pb	03 03 20.4	+0.5
	4.1nm,0.5s						
AAK				⇑Lg	Lg	03 04 42.5	
	14nm,0.8s						
DGS	Degeres	5.38	342	Pg	Pg	03 03 27.7	-3.3
	9.5nm,0.4s						
DGS				Lg	Lg	03 04 49.0	
	8.0nm,0.7s						
MRKS	Merke	5.89	323	Pg	Pb	03 03 30.4	-0.4
	3.5nm,0.6s						
MRKS				Lg	Lg	03 04 54.1	
	8.6nm,1.3s						
MAKZ	Makanchi	9.11	17	⇓Pn	Pn	03 03 59.8	+0.3
	2.2nm,0.5s						
MAKZ				⇑Sn	Sn	03 05 41.8	-0.3
	0.8nm,0.6s						
MK31	Makanchi Array	9.18	18	⇓Pn	Pn	03 03 60.0	-0.4
	0.4nm,0.3s,baz=192,slow=12,SNR=58						
MK31				⇑Sn	Sn	03 05 46.1	+2.5
	0.6nm,0.5s,baz=183,slow=26,SNR=3.6						
MKAR	Makanchi Array	9.18	18	Pn	Pn	03 04 00.1	-0.2
	0.8nm,0.3s,baz=195,slow=12,SNR=46						
MKAR				Sn	Sn	03 05 44.6	+0.9
	0.3nm,0.3s,baz=190,slow=23,SNR=2.8						
BVAR	Borovoye Array	15.80	343	Pn	Pn	03 05 30.1	-0.3
	0.2nm,0.3s,baz=173,slow=13,SNR=5.0						
FINES	FINESS Array B	39.40	323	P	P	03 09 18.7	+1.2
	3.6nm,0.8s,baz=106,slow=10,SNR=3.6						
YKA	Yellowknife Ar	79.18	6	P	P	03 13 51.6	-1.0
	0.1nm,0.5s,baz=342,slow=5.7,SNR=4.7						

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*IDC **21** 03:07:36.0±1.1, 32°.37N×131°.96E, h0^{km}, mb3.6/5, mb1 3.7/7, mb1mx3.3/66, mbtmp3.5/7, ML2.8/2, MS2.7/1, Ms1 2.7/1, ms1mx2.3/49, Error ellipse: s-maj=31.4km s-min=17.7km az=50.0*

*JMA **21** 03:07:38.8, 32°.45N×132°.02E, h22^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s192.00000°, δ35.00000°, λ79.00000°. NP2: ϕ_s25.00000°, δ55.00000°, λ97.00000°. Principal axes: T Plg78.0000°, Azm321.0000°; N Plg6.0000°, Azm201.0000°; P Plg10.0000°, Azm110.0000°;*

JMA Felt II J1.

*NIED **21** 03:07:38.9, 32°.45N×132°.02E, h22^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.70; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-5.51; $M_{r\theta}$-0.93; $M_{\theta\phi}$-1.47; $M_{\phi r}$-1.53; Fault plane solution: $M_0$6.07000×10^{14} NP1: ϕ_s200.00000°, δ53.00000°, λ96.00000°. NP2: ϕ_s9.00000°, δ37.00000°, λ82.00000°.*

ISC 21 03:07:38.8±1.1**, 32°.43N**±0°.04×**132°.04E**±0°.04**, h19**^{km}±3^{km}**, n26,** σ**0^{s}.79**/28**, mb3.4**/5**, 1C-9D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHC	Hyugahichiya	0.34	272	⇓P	Pg	03 07 46.0	-0.1
JHHC				S	Sg	03 07 50.6	-0.4
JSKE	Saikikamae	0.38	343	⇓P	Pg	03 07 46.6	-0.3
JSKE				S	Sg	03 07 51.6	-0.7
JTSN	Tsuno	0.49	248	⇓P	Pg	03 07 48.4	-0.3
JTSN				S	Sg	03 07 55.2	-0.2
JKIT	Kitakata	0.53	292	⇓P	Pb	03 07 49.1	-0.4
JKIT				S	Sg	03 07 56.5	-0.2
JUS	Usuki	0.68	339	⇓P	Pb	03 07 51.5	-0.5
JUS				S	Sb	03 08 00.2	-0.8
JTO	Tosashimizu	0.77	56	⇓P	Pb	03 07 53.0	-0.7
JTO				S	Sb	03 08 03.5	-0.3
UWA2	Uwa jima 2	0.92	32	P	Pb	03 07 55.7	-0.6
UWA2				*e*S	Sb	03 08 07.8	-0.4
JTZ	Takazaki	0.96	237	⇓P	Pb	03 07 56.4	-0.5
JIU3	Izumi3	1.04	277	⇓P	Pb	03 07 57.7	-0.5
JNA	Nagahama	1.18	18	⇑P	Pn	03 08 00.1	-0.3
JNU	Nakatsue	1.20	306	Pn	Pn	03 08 00.2	-0.3
	399nm,0.3s,baz=122,slow=6.5,SNR=382						
JNU				Sn	Sn	03 08 17.0	+0.7
	219nm,0.3s,baz=11,slow=20,SNR=19						
JKU	Kubokawa	1.23	44	⇓P	Pn	03 08 00.5	-0.5
KSRS	Korea Array	6.04	327	Pn	Pn	03 09 08.8	+1.7
	0.6nm,0.3s,baz=146,slow=14,SNR=4.4						
KSRS				LR	LR	03 11 42.1	
	comp=Z,73nm,21.6s,baz=110,slow=41						
MJAR	Matsushiro Arr	6.54	49	Pn	Pn	03 09 15.4	+1.4
	0.1nm,0.3s,baz=252,slow=14,SNR=2.4						
KLR	Kul'dur	16.78	359	Pn	P	03 11 36.8	+2.0
	0.1nm,0.3s,baz=155,slow=14,SNR=5.1						
SONM	Songino Array	24.76	316	P	P	03 12 59.2	-0.1
	0.6nm,0.6s,baz=146,slow=13,SNR=3.8						
H11N2	WAKE ISLAND Hy	33.61	103	T	T	03 50 11.5	
	baz=298,slow=75,SNR=8.3						
H11N1	WAKE ISLAND Hy	33.62	103	T	T	03 50 11.1	
	baz=298,slow=75,SNR=5.2						
H11N3	WAKE ISLAND Hy	33.63	103	T	T	03 50 13.7	
	baz=298,slow=75,SNR=7.4						
H11S3	WAKE ISLAND Hy	34.06	106	T	T	03 50 46.3	
	baz=302,slow=74,SNR=3.8						
H11S1	WAKE ISLAND Hy	34.06	106	T	T	03 50 44.5	
	baz=302,slow=74,SNR=4.2						
H11S2	WAKE ISLAND Hy	34.07	106	T	T	03 50 43.6	
	baz=302						
MKAR	Makanchi Array	40.25	306	P	P	03 15 13.5	-0.9
	0.1nm,0.4s,baz=90,slow=10,SNR=2.1						
WRA	Warramunga Arr	52.12	177	P	P	03 16 47.2	-0.7
	0.3nm,0.5s,baz=354,slow=8.0,SNR=1.6						
STKA	Stephens Creek	64.60	171	P	P	03 18 15.4	+0.5
	1.5nm,0.5s,baz=24,slow=5.1,SNR=3.2						
YKA	Yellowknife Ar	71.52	27	P	P	03 18 58.4	+0.4
	0.3nm,0.9s,baz=297,slow=5.5,SNR=4.9						

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*JMA **21** 03:07:52.3±0.1, 36°.81N×135°.60E, h367^{km}, M3.1*

*IDC **21** 03:07:53.3±2.9, 36°.73N×135°.28E, h339^{km}±92^{km}, mb2.6/2, mb1 2.9/3, mb1mx2.2/66, mbtmp3.3/3, Error ellipse: s-maj=212.8km s-min=29.8km az=57.0*

ISC 21 03:07:53.2±1.2**, 36°.9N**±0°.1×**135°.6E**±0°.1**, h350**^{km}**, n11,** σ**0^{s}.95**/11**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYTA	Yamagatataniai	1.61	145	P	Pn	03 08 42.6	+0.5
MAT	Matsushiro	2.12	100	P	Pn	03 08 46.3	+0.9
MAT	Matsushiro	2.12	100	P	Pn	03 08 46.3	+0.9
MJAR	Matsushiro Arr	2.12	100	P	Pn	03 08 46.7	+1.3
	0.2nm,0.3s,baz=279,slow=8.4,SNR=20						
JSD	Sado	2.38	62	P	Pn	03 08 48.4	+1.2
JFK	Kawauchi	4.23	83	P	Pn	03 09 04.7	+0.2
JMM	Marumori	4.23	76	P	Pn	03 09 05.5	+1.0
JRG	Rokugo	4.66	57	P	Pn	03 09 08.2	-0.8
BSO1	Boso 1	4.92	116	P	Pn	03 09 11.0	-0.3
MKAR	Makanchi Array	40.22	301	P	P	03 14 56.7	-0.2
	0.1nm,0.3s,baz=100,slow=9.7,SNR=2.3						
WRA	Warramunga Arr	56.58	181	P	P	03 17 00.1	-0.5
	0.7nm,1.0s,baz=359,slow=7.6,SNR=5.4						

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*TUL **21** 03:12:27.4±1.0, 36°.47N±0°.02×97°.18W±0°.02, h7^{km}±7^{km}, ML2.8, mb_Lg2.4/8(NEIC), Error ellipse: s-maj=3.2km s-min=1.5km az=48.0*

*NEIC **21** 03:12:27.4±0.8, 36°.45N±0°.02×97°.20W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.9km s-min=3.0km az=49.0*

*ANF **21** 03:12:28.1±0.6, 36°.41N×97°.19W, h5^{km}, ML2.9/7, Error ellipse: s-maj=5.7km s-min=4.7km az=4.0*

ISC 21 03:12:27.3±1.1**, 36°.45N**±0°.02×**97°.20W**±0°.02**, h7**^{km}±12^{km}**, n52,** σ**0^{s}.60**/57**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLOK	Blackwell	0.31	358	Pg	Pg	03 12 33.6	0.0
BLOK				Sg	Sg	03 12 37.7	0.0
OK033	Mehan	0.45	152	Pg	Pg	03 12 36.3	+0.2
QUOK	Quay	0.48	124	Pg	Pg	03 12 36.9	+0.2
QUOK				Sg	Sg	03 12 43.2	+0.2
OK031	S. Brethren Rd	0.57	149		Pg	03 12 38.5	+0.1
OK034	N. Norfolk Rd.	0.59	138	Pg	Pg	03 12 38.7	0.0
OK034				Sg	Sg	03 12 46.6	+0.3
KAN13	South Haven SW	0.61	339	Pg	Pg	03 12 39.0	-0.1
KAN13				Sg	Sg	03 12 47.7	+0.6
OK030	Cody Creek RV	0.62	147	Pg	Pg	03 12 39.4	+0.2
CROK	Carrier	0.63	276	Pg	Pg	03 12 39.8	+0.2
GC02	Grant County #	0.67	308	Pg	Pg	03 12 40.0	-0.2
T35A	Sooner Cattle	0.73	50	Pg	Pg	03 12 40.8	-0.5
T35B	Sooner Cattle	0.73	50	P	Pg	03 12 40.9	-0.5
	baz=230						
KAN17	Caldwell West	0.75	323	Pg	Pg	03 12 41.7	-0.1
KAN09	Caldwell North	0.77	334	Pg	Pg	03 12 41.6	-0.4
KAN14	Manchester OK	0.80	310		Pg	03 12 42.5	-0.2
KAN01	Argonia South	0.84	328	Pg	Pg	03 12 43.1	-0.3
KAN05	Bluff City Nor	0.85	321	Pg	Pg	03 12 43.5	-0.3
BCOK	Bluff Creek, N	0.85	203		Pb	03 12 44.2	-0.3
OK025	Westminster Rd	0.87	187	Pg	Pg	03 12 44.2	+0.2
OK032	Salt Plains WL	0.89	294	Pg	Pg	03 12 44.1	-0.3
KAN06	Argonia West S	0.96	327		Pg	03 12 45.4	-0.4
KAN10	Anthony SW Sta	0.99	314	Pg	Pg	03 12 45.9	-0.4
KAN08	Anthony NE Sta	0.99	322		Pg	03 12 46.1	-0.4
KAN08				IAmb_Lg		03 13 00.6	
	comp=Z,27nm,1.0s						
KAN16	Harper SW Stat	1.04	319		Pg	03 12 46.9	-0.4
OKCFA	Oklahoma City	1.05	191		Pg	03 12 47.2	-0.3
OKCFA	Oklahoma City	1.05	191	P	Pg	03 12 47.4	-0.1
	baz=11						
OKCFA				S	Sb	03 13 02.1	+0.3
	baz=11						
OKCSW	OKLAHOMA CITY	1.06	191	Pg	Pg	03 12 47.4	-0.3
KAN12	Harper NE Stat	1.06	323	Pg	Pg	03 12 47.3	-0.4
FNO	Franklin	1.20	188		Pg	03 12 49.9	-0.5
TUL1	Leonard	1.26	115		Pg	03 12 50.4	-1.1
TUL1	Leonard	1.26	115	P	Pg	03 12 50.4	-1.1
	baz=296						
TUL1				S	Sg	03 13 07.4	-0.4
	baz=296						
W35A	Tecumseh	1.32	168	Pn	Pn	03 12 51.3	-0.9
U32A	Winter Ranch,	1.45	268		Pn	03 12 54.4	+0.3
U32A	Winter Ranch,	1.45	268	P	Pn	03 12 54.3	+0.2
	baz=87						
U32A				S	Sg	03 13 14.4	+0.3
	baz=87						
X34A	Smith Ranch, M	1.91	196	IAmb_Lg		03 13 28.4	
	comp=Z,23nm,0.9s						
WMOK	Wichita Mounta	2.14	218	P	Pb	03 13 05.3	-1.1
	baz=36						
U38A	Gravette	2.27	89	P	Pn	03 13 06.9	+1.7
	baz=271						
U38A				S	Sb	03 13 37.3	+0.4
	baz=271						
R32A	Long Quarter,	2.31	329		Pn	03 13 06.5	+0.6
R32A	Long Quarter,	2.31	329	S	Sb	03 13 38.9	+0.7
	baz=148						
X37A	Clayton	2.38	141		Pn	03 13 07.6	+0.9
X37A	Clayton	2.38	141	P	Pn	03 13 08.3	+1.6
	baz=322						
HHAR	Hobbs	2.64	93		Pn	03 13 11.3	+0.9
W39A	Magazine	3.04	113	Pn	Pn	03 13 17.1	+1.3
CBKS	Cedar Bluff	3.10	320	Pn	Pn	03 13 17.0	+0.2
S39A	Bolivar	3.34	67	Pn	Pn	03 13 20.8	+0.8
U40A	Yellville	3.51	90	Pn	Pn	03 13 22.5	+0.2
MGMO	Mountain Grove	4.02	78	Pn	Pn	03 13 29.5	+0.2
X40A	Basin Creek Fa	4.07	117	Pn	Pn	03 13 30.6	+0.7
FCAR	Ozark Folk Cen	4.14	96	IAmb_Lg		03 14 41.9	
	comp=Z,8.5nm,0.9s						
P38A	Dawn	4.30	41	IAmb_Lg		03 14 51.6	
	comp=Z,5.9nm,0.7s						
R40A	Maddies Statio	4.34	63	Pn	Pn	03 13 33.8	+0.1
237A	Washetta, Mont	4.58	165	Pn	Pn	03 13 37.2	+0.1
CCM	Cathedral Cave	5.02	70	Pn	Pn	03 13 42.4	-0.6

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*TEH **21** 03:13:02.2, 32°.66N×46°.80E, h8^{km}, ML3.1*

*ISN **21** 03:13:05.3±1.0, 32°.70N×46°.83E, h28^{km}±4^{km}, ML3.1*

ISC 21 03:13:04.2±1.3**, 32°.75N**±0°.04×**46°.86E**±0°.04**, h5**^{km}±12^{km}**,**
n34, σ0^{s}66/40**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHL1	Dehloran	0.36	100	ePg	Pg	03 13 10.8	-0.4
DHL1				eSg	Sg	03 13 15.8	-0.2
IBDR	Badra	0.86	295	ePg	Pb	03 13 22.0	+0.3
IBDR				eSg	Sb	03 13 33.0	-0.6
IBDR				AML	AML	03 13 37.6	
	comp=E,514nm,0.6s						
IBDR				AML	AML	03 13 40.1	
	comp=N,371nm,0.7s						
IKFM	Kafar-mosalman	1.14	47	ePg	Pg	03 13 26.1	+0.1
IKFM				eSg	Sn	03 13 43.9	+1.1
IKFM				e		03 13 49.4	
	comp=Z,7μm,0.6s						
RAFI	Al-Rafai	1.20	212	ePn	Pb	03 13 27.5	+0.1
RAFI				eSn	Sg	03 13 44.0	+1.3
IDOB	Doab	1.52	46	ePn	Pn	03 13 32.6	+0.3
IGHG	Ghaleghazi	1.60	351	ePg	Pb	03 13 33.9	-0.5
IDHR	Dehrash	1.99	349	ePn	Pn	03 13 38.9	+0.1
HSAM	Samen	2.06	44	ePn	Pn	03 13 40.3	+0.4
HSAM				e		03 14 16.9	
	comp=Z,993nm,1.2s						
BHD	Baghdad	2.15	285	ePn	Pn	03 13 41.0	+0.3
BHD				eSn	Sn	03 14 07.0	-0.8
BHD				AML	AML	03 14 17.6	
	comp=E,387nm,0.5s						
ILIN	Lien	2.17	2	ePn	Pn	03 13 41.4	+0.1
ILIN				e		03 14 26.1	
	comp=Z,934nm,0.7s						
AMIS	Naft Sefid	2.32	117	ePn	Pn	03 13 43.3	+0.1
SNGE	Sanandaj	2.38	10	ePn	Pn	03 13 42.7	-1.4
KHMZ	Khomeyn	2.78	68	ePn	Pn	03 13 50.4	+0.7
HAGD	Aghdareh	2.81	42	ePn	Pn	03 13 50.7	+0.6
HAGD				e		03 14 27.6	
	comp=Z,866nm,0.6s						
ASAO	Ashtian	3.20	55	ePn	Pn	03 13 54.6	-0.8
RST	Umm Al-Ruwaisa	3.24	178	eP	Pn	03 13 55.5	-0.2
IKRK	Kirkuk	3.37	322	ePn	Pn	03 13 58.0	+0.4
IKRK				eSn	Sn	03 14 38.0	-0.1
IPIR	Pirpir	3.40	90	ePn	Pn	03 13 58.7	+0.4
IPIR				e		03 14 15.8	
	comp=Z,291nm,0.4s						
SHK1	Shahrekord	3.43	96	ePn	Pn	03 13 58.6	0.0
IRAZ	Razeghan	3.68	43	ePn	Pn	03 14 02.5	+0.5
IBRJ	Brojen	3.82	101	ePn	Pn	03 14 03.9	-0.1
QAMS	Qamsar	3.93	74	ePn	Pn	03 14 05.5	0.0
IKLH	Kolahrood	4.01	81	ePn	Pn	03 14 07.1	+0.5
IKLH				e		03 15 21.5	
	comp=Z,216nm,0.9s						
GHVR	GHOM	4.09	64	ePn	Pn	03 14 08.6	+1.1
ZNJK	Zanjan	4.20	21	ePn	Pn	03 14 08.9	-0.2
KLNJ	Kolanjah	4.38	112	ePn	Pn	03 14 10.7	-1.1
KLNJ				e		03 15 48.9	
	comp=Z,226nm,1.1s						
KRSH	Karshahi	4.58	73	ePn	Pn	03 14 14.9	+0.5
IZEF	Zefreh	4.61	87	ePn	Pn	03 14 15.1	+0.2
IRAM	Ramesheh	4.77	100	ePn	Pn	03 14 16.7	-0.4
ISFB	Sefidab	4.77	69	ePn	Pn	03 14 17.1	+0.2
QALM	Alamut, Qazvin	4.83	39	ePn	Pn	03 14 19.2	+1.4
NASN	Na'in	5.01	88	ePn	Pn	03 14 19.8	-0.7
DAMV	Damavand	5.12	54	ePn	Pn	03 14 21.1	-0.8
ANAR	Anarak	5.79	84	ePn	Pn	03 14 31.9	+0.9

IDC 21 03:15:18.6±2.2**, 2°.42N**×**127°.38E, h0**^{km}**, mb3.3**/3**,**
mb1 3.5/3**, mb1mx2.9**/43**, mbtmp3.3**/3**, Error ellipse:**
s-maj=159.9km s-min=26.2km az=67.0, Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.25	163	P	P	03 20 26.7	-1.1
	0.5nm,0.4s,baz=343,slow=11,SNR=10						
ASAR	Alice Springs	26.70	167	P	P	03 21 00.9	+1.2
	0.2nm,0.6s,baz=338,slow=7.1,SNR=2.0						
MKAR	Makanchi Array	58.99	325	P	P	03 25 20.1	0.0
	0.2nm,0.4s,baz=110,slow=8.9,SNR=5.8						

UCR ***21*** *03:20:22.5±1.3, 8°.79N×84°.45W, h5*^{km}*, MW4.6*
INET ***21*** *03:20:25.4, 8°.89N×84°.27W, h14*^{km}*, MW3.8*
IDC ***21*** *03:20:26.0±10.0, 9°.84N×83°.78W, h0*^{km}*, mb3.5/4,*
mb1 3.9/5, mb1mx3.6/35, mbtmp3.6/5, ML3.7/1, MS3.2/1,
Ms1 3.2/1, ms1mx2.7/28, Error ellipse: s-maj=223.0km
s-min=41.8km az=176.0
ISC 21 03:20:24.5±0.9**, 8°.95N**±0°.08×**84°.29W**±0°.06**, h13**^{km}**, n28,**
σ1^{s}42/28**, mb3.4**/4**, 2C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.52	54	eP	Pn	03 20 37.4	-0.3
EDDO				eS	Sn	03 20 48.2	+1.8
PEZE	Perez Zeledon,	0.75	55	eP	Pn	03 20 40.4	-0.5
EDPN	Palmar Norte	0.83	89	⇑eP	Pn	03 20 41.5	-0.4
EDPN				eS	Sn	03 20 55.9	+1.9
LCR2	La Lucha 2	0.84	20	eP	Pn	03 20 41.5	-0.7
RIMA	Rio Macho	0.92	27	eP	Pn	03 20 43.0	-0.4
SRBA	San Rafael, Bu	0.96	73	eP	Pn	03 20 43.9	0.0
EDBA	Buenos Aires	1.03	78	⇑iP	Pn	03 20 44.6	-0.2
LAFE	Finca La Fe, P	1.05	325	eP	Pb	03 20 42.8	-1.8
HDC	Heredia	1.06	10	eP	Pn	03 20 45.2	-0.1
PIRO	Carate, Puerto	1.09	120	eP	Pb	03 20 43.8	-1.5
EDSV	San Vito	1.31	95	eP	Pg	03 20 48.8	-1.0
JTS	Las Juntas de	1.48	334	Pn	Pn	03 20 49.7	-1.4
JTS	Las Juntas de	1.48	334	eP	Pn	03 20 49.4	-1.6
CASO	Castillo	1.54	344	iP	Pb	03 20 52.0	-1.0
FORC	Fortuna	1.56	346	iP	Pb	03 20 52.4	-0.9
ARE1	Arenal 1	1.56	344	eP	Pb	03 20 52.5	-0.9
COVE	Coope Vega, Sa	1.77	357	eP	Pb	03 20 55.2	-1.6
ACAL	Aguas Claras	1.83	337	iP	Pn	03 20 55.9	+0.1
ACAL				iS	Sb	03 21 20.7	-0.1
CUI	Cuipilapa	1.90	333	iP	Pn	03 20 56.8	0.0
COLC	Colonia	1.93	332	iP	Pb	03 20 58.2	-1.4
CMIG	Matias Romero	13.11	309	Pn	Pn	03 23 33.5	+2.9
	0.4nm,0.3s,baz=139,slow=10,SNR=6.8						
ATAH	Atahualpa	17.02	160	LR	LR	03 29 38.3	
	comp=Z,78nm,21.5s,baz=0.6,slow=31						
TXAR	Lajitas Array	27.23	321	P	P	03 26 08.8	+0.2
	0.2nm,0.7s,baz=144,slow=9.8,SNR=2.3						
H06E1	SOCORRO T-PHAS	27.60	294	T	T	03 55 06.2	
	SNR=5.1						
NVAR	Mina Array Bea	42.37	319	P	P	03 28 21.1	+2.2
	1.0nm,0.8s,baz=133,slow=7.3,SNR=5.9						
YKA	Yellowknife Ar	57.80	344	P	P	03 30 12.1	-3.3
	0.2nm,0.7s,baz=141,slow=6.8,SNR=4.9						
ILAR	Eielson Array	70.46	336	P	P	03 31 39.0	+0.5
	0.5nm,0.8s,baz=124,slow=5.0,SNR=6.9						
ASAR	Alice Springs	140.68	243	PKhKP	PKPpre	03 39 54.3	
	0.2nm,0.6s,baz=103,slow=2.1,SNR=4.0						

MEX ***21*** *03:56:01.0±0.8, 15°.46N×93°.44W, h113*^{km}*±9*^{km}*, MD4.2*
IDC ***21*** *03:56:01.1±7.2, 15°.65N×93°.23W, h68*^{km}*±50*^{km}*, mb3.0/3,*
mb1 3.4/5, mb1mx3.2/31, mbtmp3.3/5, ML3.3/2, MS3.5/1,
Ms1 3.5/1, ms1mx2.9/15, Error ellipse: s-maj=90.0km
s-min=53.2km az=40.0
ISC 21 03:56:01.8±1.0**, 15°.46N**±0°.06×**93°.46W**±0°.04**, h86**^{km}±9^{km}**,**
n22, σ1^{s}16/34**, mb3.2**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.34	43	eP	Pn	03 56 14.2	-0.8
PCIG				iS	Sn	03 56 26.1	+1.3
PATR	El Naranjo	1.23	106	eP	Pn	03 56 23.3	-0.9
PATR				iS	Sn	03 56 40.6	-0.5
PAVE	Pavencul	1.27	102	iP	Pn	03 56 24.1	-0.5
PAVE				iS	Sn	03 56 42.0	+0.2
THIG		1.28	115	iP	Pn	03 56 24.0	-0.6
THIG				iS	Sn	03 56 41.6	-0.1
TGIG		1.35	14	eP	Pn	03 56 24.9	-0.7
TGIG				iS	Sn	03 56 43.0	-0.5
CCIG	Comitan	1.52	57	eP	Pn	03 56 27.5	-0.3
CCIG				iS	Sn	03 56 47.1	-0.2
UXUV	UXUV	1.96	341	iP	Pn	03 56 33.7	+0.3
UXUV				iS	Sn	03 56 58.6	+1.1
CMIG	Matias Romero	2.12	320	P	Pn	03 56 35.1	-0.5
	7.6nm,0.3s,baz=148,slow=13,SNR=103						
CMIG				S	Sn	03 57 00.5	-0.7
	22nm,0.3s,baz=143,slow=16,SNR=12						
CMIG	Matias Romero	2.12	320	eP	Pn	03 56 35.0	-0.5
CMIG				iS	Sn	03 57 01.5	+0.3
HUIG	Huatulco	2.57	277	iP	Pn	03 56 40.1	-1.4
HUIG				e		03 57 08.2	
NEUV	Arroyo Zacate	3.17	315	eP	Pn	03 56 48.8	-0.8
NEUV				i		03 57 21.4	
PEIG	Puerto Escondi	3.59	279	iP	Pn	03 56 53.4	-1.9
PEIG				i		03 57 33.6	
SCIG	Sabancuy	4.11	32	eP	Pn	03 57 01.5	-0.9
SCIG				iS	Sn	03 57 48.1	-1.2
YOIG	Yosondua	4.16	290	eP	Pn	03 57 03.5	+0.2
YOIG				eS	Sn	03 57 50.0	-1.0
TOIG	Toxpalan	4.33	308	eP	Pn	03 57 07.0	+1.5
TOIG				eS	Sn	03 57 55.2	+0.3
PNIG	Pinotepa	4.58	282	e	Pn	03 57 09.3	+0.5
PNIG				e		03 57 59.6	
JAUV	Jalcomulco	5.03	321	iP	Pn	03 57 13.0	-1.9
JAUV				iS	Sn	03 58 09.1	-2.6
TXAR	Lajitas Array	16.71	327	P	P	03 59 50.9	-0.8
	0.0nm,0.3s,baz=152,slow=14,SNR=3.7						
ANMO	Albuquerque	22.65	331	P	P	04 00 56.9	+0.8
	0.4nm,0.4s,baz=148,slow=15,SNR=2.4						
NVAR	Mina Array Bea	31.66	321	P	P	04 02 20.0	+2.8
	0.1nm,0.4s,baz=144,slow=11,SNR=1.8						
YBH	Yreka Blue Hor	36.35	322	LR	LR	04 18 02.3	
	comp=Z,80nm,20.3s,baz=45,slow=36						
YKA	Yellowknife Ar	49.30	347	P	P	04 04 40.5	-1.3
	0.4nm,0.5s,baz=152,slow=7.4,SNR=15						

IDC 21 03:57:06.0±2.0**, 4°.47N**×**127°.43E, h0**^{km}**, mb3.6**/4**,**
mb1 3.7/4**, mb1mx3.5**/30**, mbtmp3.6**/4**, Error ellipse:**
s-maj=171.4km s-min=21.8km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.20	165	P	P	04 02 33.5	0.0
	0.6nm,1.0s,baz=344,slow=11,SNR=5.7						
ASAR	Alice Springs	28.67	168	P	P	04 03 04.7	-0.1
	0.2nm,0.4s,baz=353,slow=7.8,SNR=6.1						
MKAR	Makanchi Array	57.35	325	P	P	04 06 56.2	+0.2
	0.4nm,0.4s,baz=111,slow=7.6,SNR=11						
KURBB	Kurchatov Arra	61.50	327	P	P	04 07 24.3	-0.2
	1.2nm,0.7s,baz=124,slow=6.3,SNR=6.9						

WEL 21 04:03:36.9, 38°S±11°×**17°6E**±1°5**, h141**^{km}±21^{km}**, M2.8**/36**,**
mB5.0/1**, MLv2.8**/36**, Mw(mB)4.3**/1**, Error ellipse:**
s-maj=0.0km s-min=0.0km az=112.8, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MUGZ	Murupara	0.54	142	P	Pn	04 03 57.5	0.0
URZ	Urewera	0.64	109	P	Pn	04 03 57.9	-0.1
TOZ	Tahuroa Road	0.74	295	P	Pn	04 03 57.7	-1.0
RTZ	Ruatahuna	0.75	139	P	Pn	04 03 59.6	+0.7
MRHZ	Matea Rd	0.78	176	P	Pn	04 04 00.3	+1.2
MTHZ	Maungataniwha	0.89	154	P	Pn	04 04 01.1	+1.2
RAGZ	Rawiri	0.95	118	P	Pn	04 04 00.8	+0.3
RAHZ	Arahi	1.04	146	P	Pn	04 04 02.5	+1.3
RUGZ	Raukumara Rang	1.05	86	P	Pn	04 03 59.8	-1.7
SNGZ	Shannon Statio	1.07	133	P	Pn	04 04 02.2	+0.8
NMHZ	Naumai	1.10	161	P	Pn	04 04 03.7	+1.8
BKZ	Black Stump Fm	1.12	174	P	Pn	04 04 02.7	+0.7
NTVZ	North Tongarir	1.17	207	P	Pn	04 04 04.1	+1.6
HAZ	Te Kaha	1.17	76	P	Pn	04 04 00.3	-2.1
TMVZ	Te Maari	1.17	205	P	Pn	04 04 03.7	+1.1
OTVZ	Oturere	1.23	206	P	Pn	04 04 04.3	+1.1
HIZ	Hauiti	1.26	248	P	Pn	04 04 03.1	-0.1
NGZ	Ngauruhoe	1.26	207	P	Pn	04 04 05.0	+1.5
RIGZ	Rimuhau	1.29	121	P	Pn	04 04 03.9	+0.3
ARHZ	Aropaoanui	1.31	157	P	Pn	04 04 05.0	+1.2
TUVZ	Tukino	1.33	204	P	Pn	04 04 05.1	+0.9
KWHZ	Kaweka Forest	1.37	178	P	Pn	04 04 05.5	+1.0
PKGZ	Pakihiroa	1.38	84	P	Pn	04 04 00.8	-3.8
TRVZ	Turoa	1.39	206	P	Pn	04 04 05.8	+0.9
WNVZ	Wahianoa	1.40	204	P	Pn	04 04 05.4	+0.5
MCHZ	McNeill Hill	1.42	169	P	Pn	04 04 06.2	+1.3
KNZ	Kokohu	1.42	133	P	Pn	04 04 05.2	+0.3
MOVZ	Moawhango	1.43	199	P	Pn	04 04 05.3	+0.2
BHHZ	Black Hill Sta	1.45	189	P	Pn	04 04 05.6	+0.3
PKVZ	Pokaka	1.46	212	P	Pn	04 04 06.1	+0.7
PRGZ	Paritu Road	1.49	126	P	Pn	04 04 05.8	+0.1
PUZ	Puketiti	1.51	91	P	Pn	04 04 04.3	-1.6
CNGZ	Carnagh Statio	1.53	107	P	Pn	04 04 06.0	-0.1
WIAZ	Waiheke Island	1.59	322	P	Pn	04 04 02.2	-4.6
KRHZ	Kereru	1.59	179	P	Pn	04 04 07.2	+0.4
MXZ	Matakaoa Point	1.63	73	P	Pn	04 04 04.9	-2.3
MHGZ	Mahia Peninsul	1.64	132	P	Pn	04 04 07.6	+0.2
WMGZ	Waiomatatini S	1.65	82	P	Pn	04 04 05.0	-2.5
CKHZ	Cape Kidnapper	1.70	161	P	Pn	04 04 08.8	+0.8
KAHZ	Kahuranaki	1.79	167	P	Pn	04 04 09.6	+0.6
PNHZ	Pukenui	1.86	183	P	Pn	04 04 09.6	-0.3
WPHZ	Waipukurau	2.01	178	P	Pn	04 04 11.5	-0.1
PXZ	Pawanui	2.02	169	P	Pn	04 04 11.6	-0.1
TSZ	Takapari Road	2.02	188	P	Pn	04 04 11.4	-0.5
PRHZ	Porangahau	2.22	174	P	Pn	04 04 13.8	-0.4
DVHZ	Dannevirke	2.25	184	P	Pn	04 04 13.7	-0.8
ANWZ	Angora Road	2.41	178	P	Pn	04 04 15.9	-0.4
PRWZ	Pori Road	2.52	187	P	Pn	04 04 16.7	-1.0
BFZ	Birch Farm	2.63	182	P	Pn	04 04 17.8	-1.4
MRZ	Mangatainoka R	2.67	193	P	Pn	04 04 17.8	-1.9
OGWZ	Otaki Gorge	2.91	198	P	Pn	04 04 20.5	-2.1
HOWZ	Holdsworth Sta	2.91	192	P	Pn	04 04 20.3	-2.5
KIW	Kapiti Island	3.02	201	P	Pn	04 04 21.8	-2.3
TMWZ	Te Maipa	3.07	186	P	Pn	04 04 22.4	-2.5
MTW	Mount Morrison	3.17	192	P	Pn	04 04 23.0	-3.1
CAW	Cannon Point	3.21	198	P	Pn	04 04 24.0	-2.5
TRWZ	Traveller	3.38	188	P	Pn	04 04 25.9	-2.9
MSWZ	Moikau Station	3.46	194	P	Pn	04 04 26.4	-3.5
PLWZ	Palliser	3.61	193	P	Pn	04 04 28.1	-3.8
NNZ	Nelson	3.90	215	P	Pn	04 04 32.2	-3.4
THZ	Tophouse	4.55	214	P	Pn	04 04 40.7	-3.6
KHZ	Kahutara	4.86	205	P	Pn	04 04 43.8	-4.4
DSZ	Denniston Nort	5.08	222	P	Pn	04 04 47.3	-4.0

IDC ***21*** *04:20:01.6±1.1, 57°.77N×142°.83W, h0*^{km}*, mb3.7/7,*
mb1 3.9/13, mb1mx3.7/47, mbtmp3.7/13, ML3.3/5, MS3.5/2,
Ms1 3.5/2, ms1mx2.8/43, Error ellipse: s-maj=22.5km
s-min=14.2km az=44.0
ANF ***21*** *04:20:01.9±0.8, 57°.72N×142°.90W, h10*^{km}*, ML4.0/28,*
Error ellipse: s-maj=9.1km s-min=4.4km az=178.0
PGC ***21*** *04:20:01.7±1.2, 57°.63N×142°.73W, h10*^{km}*, ML3.8, ML3.7/2,*
263km Wsw of Yakutat, Ak Gulf Of Alaska
NEIC ***21*** *04:20:02.8±1.6, 57°.60N±0°.07×142°.9W±0°.1, h36*^{km}*±47*^{km}*,*
Error ellipse: s-maj=10.2km s-min=8.6km az=195.0
AEIC ***21*** *04:20:03±1.7, 57°.61N±0°.05×142°.87W±0°.09, h47*^{km}*±9*^{km}*,*
ML3.6, ML3.8/92(NEIC), Error ellipse: s-maj=9.7km
s-min=1.5km az=224.0
ISC 21 04:20:00.9±4.0**, 57°.66N**±0°.06×**142°.83W**±0°.03**,**
h10^{km}±28^{km}**, n264, σ1^{s}59**/307**, mb3.8**/7**, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAIM	Kayak Island	2.42	341	Pn	Pn	04 20 40.5	0.0
KAIM					Sn	04 21 06.1	-4.1
KAIM				IAML		04 21 13.4	
	comp=N,642nm,0.6s						
KAIM				IAML		04 21 14.1	
	comp=E,596nm,0.7s						
KAIM	Kayak Island	2.42	341	P	Pn	04 20 40.8	+0.3
	baz=160,SNR=6.9						
KAIM				S	Sn	04 21 07.8	-2.4
	baz=160						
CYK	Cape Yakataga	2.44	4		Pn	04 20 41.2	+0.6
CYK					Sn	04 21 09.0	-1.5
SUCK	Suckling Hills	2.47	349	Pn	Pn	04 20 41.8	+0.6
SUCK				IAML		04 21 14.0	
	comp=N,521nm,0.8s						
SUCK				IAML		04 22 02.4	
	comp=E,451nm,1.4s						
BGLC	Bering Glacier	2.48	355		Pn	04 20 42.2	+0.9
BGLC	Bering Glacier	2.48	355	P	Pn	04 20 42.0	+0.8
	baz=175						
SNH	Sunshine Point	2.53	360	Pn	Pn	04 20 41.5	-0.5
SNH				Sn	Sn	04 21 10.9	-2.0
SNH				IAML		04 21 18.8	
	comp=E,382nm,0.7s						
SNH				IAML		04 21 19.1	
	comp=N,329nm,0.7s						
MID	Middleton Isla	2.56	315	Pn	Pn	04 20 42.1	-0.2
MID				IAML		04 21 27.7	
	comp=N,403nm,3.6s						
MID				IAML		04 22 18.2	
	comp=E,360nm,3.9s						
Q23K	Middleton Isla	2.56	315		Pn	04 20 41.2	-1.1
Q23K				IAML		04 21 14.1	
	comp=N,434nm,1.8s						
Q23K				IAML		04 22 18.3	
	comp=E,382nm,4.0s						
Q23K	Middleton Isla	2.56	315	P	Pn	04 20 42.1	-0.3
	baz=134						
Q23K				S	Sn	04 21 11.3	-2.2
	baz=134						
MESA	MESA	2.57	10	Pn	Pn	04 20 42.7	0.0
MESA				IAML		04 21 35.6	
	comp=N,584nm,0.5s						
MESA	MESA	2.57	10	P	Pn	04 20 43.2	+0.5
	baz=191,SNR=15						
MESA	MESA	2.57	10	Pn	Pn	04 20 43.2	+0.5
MESA				Sn	Sn	04 21 13.3	-0.8
CHX	Chaix Hills	2.57	20		Pn	04 20 43.4	+0.8
GRIN	Grindle Hills	2.64	355		Pn	04 20 44.4	+0.8
NICHA	Nichawak Mount	2.65	348		Pn	04 20 44.1	+0.5
NICHA					Sn	04 21 14.5	-1.4
SAMH	Samovar Hills	2.70	22		Pn	04 20 45.0	+0.7
SAMH					Sn	04 21 17.0	-0.1
SAMH	Samovar Hills	2.70	22	Pn	Pn	04 20 45.1	+0.7
SAMH				Sn	Sn	04 21 17.2	+0.1
PNL	Peninsula	2.70	40		Pn	04 20 44.3	0.0
PNL	Peninsula	2.70	40	P	Pn	04 20 44.3	0.0
	baz=223,SNR=27						
PNL				S	Sn	04 21 13.3	-3.8
	baz=223						
PNL	Peninsula	2.70	40	Pn	Pn	04 20 44.3	0.0
PNL				Sn	Sn	04 21 13.7	-3.3
YAH	Yahtse	2.77	11	Pn	Pn	04 20 45.8	+0.3
BERG	Berg Lake	2.78	351		Pn	04 20 45.5	+0.1
BERG				IAML		04 21 24.5	
	comp=N,376nm,0.9s						
BERG				IAML		04 22 16.4	
	comp=E,457nm,1.0s						
HMT	Hamilton	2.79	345		Pn	04 20 45.4	-0.2
PCA	Pinnacle	2.79	28	Pn	Pn	04 20 45.4	-0.2
PCA	Pinnacle	2.79	28	Pn	Pn	04 20 45.9	+0.3
PCA				Sn	Sn	04 21 16.8	-2.4
PINM	Pinnacle	2.79	28	P	Pn	04 20 45.9	+0.3
	baz=210,SNR=9.5						
PINM				S	Sn	04 21 16.4	-2.9
	baz=210						
WAX	Waxell Ridge	2.80	360		Pn	04 20 45.7	-0.1
WAX				IAML		04 21 30.2	
	comp=N,477nm,0.7s						
WAX				IAML		04 21 55.2	
	comp=E,223nm,0.9s						
KHIT	Khitrov Hills	2.80	356		Pn	04 20 46.1	+0.3
KHIT					Sn	04 21 17.9	-1.8
BCPM	Bancas Point	2.84	34	Pn	Pn	04 20 45.5	-0.7
BCPM				IAML		04 21 22.2	
	comp=E,407nm,0.3s						
BAGL	Bagley Icefiel	2.87	7		Pn	04 20 47.1	+0.5
RAGM	Ragged Mountai	2.90	342		Pn	04 20 46.6	-0.5
TABL	Table Mountain	2.92	17	Pn	Pn	04 20 47.8	+0.2
TABL				IAML		04 21 29.6	
	comp=N,225nm,0.5s						
TABL				IAML		04 21 30.9	
	comp=E,259nm,0.8s						
TABL	Table Mountain	2.92	17	Pn	Pn	04 20 48.4	+0.8
TABL				Sn	Sn	04 21 22.3	-0.6
ISLE	Juniper Island	2.96	5	Pn	Pn	04 20 48.3	+0.2
ISLE				IAML		04 22 12.9	
	comp=N,264nm,1.1s						
GOAT	Goat Mountain	3.09	342		Pn	04 20 49.7	0.0
TGL	Tana Glacier	3.11	360	Pn	Pn	04 20 49.7	-0.3
EYAK	Cordova Ski Ar	3.27	334	Pn	Pn	04 20 51.2	-0.9
EYAK	Cordova Ski Ar	3.27	334	P	Pn	04 20 51.8	-0.3
	baz=152						
EYAK				S	Sn	04 21 28.4	-2.6
	baz=152						
KIAG	Kiagna River	3.28	4		Pn	04 20 52.9	+0.4
KIAG	Kiagna River	3.28	4	Pn	Pn	04 20 53.0	+0.4
KIAG				Sn	Sn	04 21 29.3	-2.4
LOGN	Logan Glacier	3.31	16	Pn	Pn	04 20 52.3	-0.6
LOGN				IAML		04 21 37.6	
	comp=N,252nm,0.4s						
LOGN	Logan Glacier	3.31	16	Pn	Pn	04 20 53.4	+0.6
LOGN				Sn	Sn	04 21 30.6	-1.7
HIN	Hinchinbrook I	3.34	327	Pn	Pn	04 20 51.4	-1.7
BALM	Baldy	3.40	4		Pn	04 20 54.5	+0.5
BALM	Baldy	3.40	4	Pn	Pn	04 20 54.5	+0.5
BALM				Sn	Sn	04 21 32.6	-1.8
CTG	Chitna Glacier	3.40	12	P	Pn	04 20 54.5	+0.4
	baz=194,SNR=12						
CTG				S	Sn	04 21 31.8	-2.7
	baz=194						
CTGM	Chitina Glacie	3.40	12	Pn	Pn	04 20 54.1	0.0
CTGM	Chitina Glacie	3.40	12	Pn	Pn	04 20 54.6	+0.4
CTGM				Sn	Sn	04 21 33.0	-1.7
BMRM	Bremner River	3.44	345	Pn	Pn	04 20 54.1	-0.5
BMRM				IAML		04 21 38.2	
	comp=E,129nm,0.5s						
BMRM	Bremner River	3.44	345	P	Pn	04 20 54.5	-0.1
	baz=164,SNR=6.9						
BARN	Barnard Glacie	3.46	9	Pn	Pn	04 20 54.8	-0.2
PTPK	Patty Peak	3.54	3		Pn	04 20 56.9	+0.8
PTPK	Patty Peak	3.54	3	Pn	Pn	04 20 56.9	+0.8
PTPK				Sn	Sn	04 21 36.4	-1.7
VRDI	Verde Repeater	3.59	355	Pn	Pn	04 20 56.8	0.0
FID	Port Fidalgo	3.62	330	Pn	Pn	04 20 56.0	-1.1
FID				IAML		04 21 39.9	
	comp=N,243nm,0.3s						
FID				IAML		04 21 41.3	
	comp=E,263nm,0.4s						
MCARA	McCarthy VSAT	3.74	359	Pn	Pn	04 20 58.3	-0.3
MCARA				IAML		04 21 47.9	
	comp=E,145nm,0.6s						
MCARA				IAML		04 21 49.3	
	comp=N,121nm,0.5s						
MCARA	McCarthy VSAT	3.74	359	P	Pn	04 20 59.1	+0.5
	baz=179,SNR=19						
DIV	Divide	3.79	338	Pn	Pn	04 20 58.0	-1.4
DIV	Divide	3.79	338	Pn	Pn	04 20 59.2	-0.1
DIV				Sn	Sn	04 21 41.6	-2.5
GLB	Gilahina Butte	3.83	353	Pn	Pn	04 20 59.2	-0.7
GLI	Glacier Island	3.90	328	Pn	Pn	04 20 59.3	-1.6
GLI				IAML		04 21 46.9	
	comp=E,184nm,0.4s						
GLI				IAML		04 21 53.8	
	comp=N,155nm,0.5s						
GLI	Glacier Island	3.90	328	P	Pn	04 21 00.2	-0.7
	baz=145						
GLI				S	Sn	04 21 44.9	-1.8
	baz=145						
JPK	Jack Peak	3.92	332		Pn	04 21 00.7	-0.3
PS12	TAPS Pump St12	4.00	344		Pn	04 21 02.5	+0.2
N25K	Chitina, Valde	4.06	348	Pn	Pn	04 21 02.6	-0.5
N25K	Chitina, Valde	4.06	348	P	Pn	04 21 03.4	+0.3
	baz=167,SNR=14						
KLU	Klutina	4.16	339	Pn	Pn	04 21 03.6	-0.8
KLU				IAML		04 21 52.0	
	comp=E,154nm,0.4s						
KLU				IAML		04 21 52.1	
	comp=N,168nm,0.3s						
KLU	Klutina	4.16	339	P	Pn	04 21 04.3	-0.1
	baz=157,SNR=14						
KLU				S	Sn	04 21 50.4	-2.6
	baz=157						
SEW	Seward	4.22	308		Sn	04 21 51.7	-2.7
SEW	Seward	4.22	308	Pn	Pn	04 21 04.0	-1.2
SEW	Seward	4.22	308	P	Pn	04 21 04.8	-0.4
	baz=123						
SEW				S	Sn	04 21 51.4	-3.0
	baz=123						
YUK2	White River	4.26	13		Pn	04 21 07.4	+1.6
YUK2	White River	4.26	13	Pn	Pn	04 21 06.8	+0.9
PWL	Port Wells	4.28	321	Pn	Pn	04 21 04.6	-1.4
PWL				IAML		04 21 53.2	
	comp=N,163nm,0.3s						
PWL	Port Wells	4.28	321	P	Pn	04 21 05.2	-0.8
	baz=137						
PWL				S	Sn	04 21 52.6	-3.3
	baz=137						
YUK3	Moose Creek	4.30	15		Pn	04 21 08.1	+1.6
YUK3	Moose Creek	4.30	15	P	Pn	04 21 08.2	+1.6
	baz=197,SNR=15						

YUK3	Moose Creek	4.30	15	Pn	Pn	04 21 07.8	+1.3
SKAG	Skagway	4.32	62	Pn	Pn	04 21 05.2	-1.4
SKAG				IAML		04 22 21.6	
	comp=E,72nm,2.9s						
SKAG	Skagway	4.32	62	P	Pn	04 21 07.1	+0.5
	baz=248						
BESE	Bessie Mountai	4.33	74	Pn	Pn	04 21 04.7	-2.0
BESE	Bessie Mountai	4.33	74	Pn	Pn	04 21 05.5	-1.3
BESE				Sn	Sn	04 21 51.3	-6.0
JIS	Juneau Island	4.54	79	Pn	Pn	04 21 08.3	-1.3
JIS				IAML		04 21 59.9	
	comp=N,71nm,0.5s						
JIS				IAML		04 22 07.9	
	comp=E,72nm,0.8s						
O22K	Cooper Landing	4.55	311	Pn	Pn	04 21 09.4	-0.2
O22K	Cooper Landing	4.55	311	P	Pn	04 21 10.5	+0.8
	baz=126						
O22K				S	Sn	04 21 59.6	-2.9
	baz=126						
BRSE	Bradley Lake S	4.62	300		Pn	04 21 10.6	-0.1
BRSE	Bradley Lake S	4.62	300	P	Pn	04 21 10.7	-0.1
	baz=114						
BRSE				S	Sn	04 22 01.2	-3.2
	baz=114						
PS11	TAPS Pump St11	4.63	344		Pn	04 21 12.0	+1.2
BRLK	Bradley Lake	4.70	300	Pn	Pn	04 21 11.2	-0.6
BRLK				IAML		04 22 10.1	
	comp=N,109nm,3.0s						
KNK	Knik Glacier	4.73	325	Pn	Pn	04 21 12.0	-0.2
KNK				IAML		04 22 06.4	
	comp=N,111nm,0.6s						
KNK	Knik Glacier	4.73	325	P	Pn	04 21 12.5	+0.3
	baz=141,SNR=5.6						
KNK				S	Sn	04 22 05.0	-2.1
	baz=141						
M27K	Edge Creek, AK	4.74	5	Pn	Pn	04 21 13.0	+0.5
M27K	Edge Creek, AK	4.74	5	P	Pn	04 21 13.6	+1.2
	baz=186						
M26K	Nabesna, AK	4.76	359	Pn	Pn	04 21 12.7	0.0
M26K	Nabesna, AK	4.76	359	P	Pn	04 21 13.5	+0.8
	baz=179,SNR=10						
SLKM	Skilak Lake	4.76	310		Pn	04 21 12.2	-0.5
SCM	Sheep Creek Mo	4.76	333	Pn	Pn	04 21 12.0	-0.7
SCM				IAML		04 22 12.7	
	comp=E,92nm,0.5s						
SCM				IAML		04 22 19.5	
	comp=N,72nm,1.5s						
SCM	Sheep Creek Mo	4.76	333	P	Pn	04 21 12.6	-0.1
	baz=150						
SCM				S	Sn	04 22 05.5	-2.5
	baz=150						
M24K	Tolsona, Glenn	4.77	341	Pn	Pn	04 21 12.7	-0.1
M24K				IAML		04 22 34.4	
	comp=N,95nm,4.5s						
M24K	Tolsona, Glenn	4.77	341	P	Pn	04 21 13.5	+0.7
	baz=158,SNR=6.5						
M24K				S	Sn	04 22 07.9	-0.2
	baz=158						
CNPM	China Poot	4.78	297	Pn	Pn	04 21 12.3	-0.6
BVCY	Beaver Creek	4.87	11		Pn	04 21 15.8	+1.6
BVCY	Beaver Creek	4.87	11	P	Pn	04 21 15.5	+1.4
	baz=193,SNR=9.9						
BVCY	Beaver Creek	4.87	11	Pn	Pn	04 21 15.7	+1.5
HARP	HAARP	4.90	347		Pn	04 21 15.4	+0.9
HARP	HAARP	4.90	347	P	Pn	04 21 15.1	+0.6
	baz=166						
HARP				S	Sn	04 22 11.1	0.0
	baz=166						
RC01	Rabbit Creek A	4.93	317	Pn	Pn	04 21 13.0	-1.9
RC01	Rabbit Creek A	4.93	317	P	Pn	04 21 14.4	-0.6
	baz=132						
RC01				S	Sn	04 22 09.2	-2.8
	baz=132						
SML	Sawmill	5.00	329	Pn	Pn	04 21 15.9	-0.1
SML				IAML		04 22 14.1	
	comp=E,85nm,0.4s						
SML				IAML		04 22 18.7	
	comp=N,91nm,0.6s						
SML	Sawmill	5.00	329	P	Pn	04 21 16.1	+0.1
	baz=144						
SML				S	Sn	04 22 12.4	-1.5
	baz=144						
HOM	Homer	5.02	297	P	Pn	04 21 16.5	+0.4
	baz=110						
HOM				S	Sn	04 22 12.1	-2.1
	baz=110						
PMR	Palmer	5.08	324	Pn	Pn	04 21 17.4	+0.5
PMR				IAML		04 22 18.1	
	comp=N,53nm,1.8s						
PMR				IAML		04 22 33.7	
	comp=E,57nm,3.9s						
PMR	Palmer	5.08	324	P	Pn	04 21 18.2	+1.3
	baz=139						
PMR				S	Sn	04 22 13.2	-2.4
	baz=139						
WHY	Whitehorse	5.08	50	Pn	Pn	04 21 17.0	0.0
WHY				IAML		04 22 14.6	
	comp=N,64nm,3.9s						
WHY				IAML		04 22 32.7	
	comp=E,53nm,4.2s						
WHY	Whitehorse	5.08	50	P	Pn	04 21 17.6	+0.6
	baz=237						
WHY				S	Sn	04 22 12.0	-3.8
	baz=237						
WHY	Whitehorse	5.08	50	Pn	Pn	04 21 17.5	+0.4
WHY				Sn	Sn	04 22 11.5	-4.2
FIS	Fire Island	5.14	316	Pn	Pn	04 21 17.1	-0.7
GHO	Glory Hole Cre	5.15	326	Pn	Pn	04 21 18.2	+0.1
KDAK	Kodiak Island	5.23	275	Pn	Pn	04 21 19.5	+0.5
	comp=E,17nm,0.3s,baz=108,slow=10,SNR=252						
KDAK				Sn	Sn	04 22 15.7	-3.7
	baz=301,slow=23,SNR=0.7						
KDAK	Kodiak Island	5.23	275	Pn	Pn	04 21 18.6	-0.4
KDAK	Kodiak Island	5.23	275	IAML		04 22 33.5	
	comp=E,85nm,3.9s						
KDAK	Kodiak Island	5.23	275	P	Pn	04 21 19.5	+0.5
	baz=88						
N31M	Braeburn, Yuko	5.25	40	P	Pn	04 21 19.8	+0.5
	baz=226						
N31M				S	Sn	04 22 16.2	-3.7
	baz=226						
CAPN	Captain Cook N	5.29	310	P	Pn	04 21 21.5	+1.6
	baz=123						
MENT	Mentasta	5.32	356	Pn	Pn	04 21 21.3	+1.0
MENT				IAML		04 22 36.0	
	comp=E,35nm,3.5s						
L26K	Log Cabin Wild	5.39	357	Pn	Pn	04 21 22.5	+1.2
L27K	Beaver Creek,	5.44	5	Pn	Pn	04 21 22.5	+0.5
L27K	Beaver Creek,	5.44	5	P	Pn	04 21 22.5	+0.5
	baz=186						
BC03		5.45	5		Pn	04 21 22.9	+0.8
PAX	Paxson	5.49	347	Pn	Pn	04 21 22.5	-0.2
PAX	Paxson	5.49	347	P	Pn	04 21 23.1	+0.4
	baz=165,SNR=14						
PAX				S	Sn	04 22 23.6	-2.3
	baz=165						
WAT6	Susitna Watana	5.51	336		Pn	04 21 22.9	-0.1
WAT6	Susitna Watana	5.51	336	P	Pn	04 21 23.0	-0.1
	baz=152,SNR=11						
WAT6				S	Sn	04 22 23.6	-3.0
	baz=152						
M22K	Willow	5.52	321	P	Pn	04 21 24.4	+1.4
	baz=135						
M22K				S	Sn	04 22 23.8	-2.6
	baz=135						
O20K	Slope Mountain	5.63	300		Pn	04 21 25.5	+0.9
O20K	Slope Mountain	5.63	300	P	Pn	04 21 25.9	+1.2
	baz=112						
O20K				S	Sn	04 22 27.6	-1.8
	baz=112						
OHAK	Old Harbor	5.67	270	Pn	Pn	04 21 23.6	-1.4
OHAK	Old Harbor	5.67	270	P	Pn	04 21 24.8	-0.2
	baz=82						
OHAK				S	Sn	04 22 26.3	-3.7
	baz=82						
M30M	Minto, Yukon	5.78	29		Pn	04 21 27.9	+1.3
M30M	Minto, Yukon	5.78	29	P	Pn	04 21 28.0	+1.3
	baz=214,SNR=7.6						
P33M	Teslin, Yukon	5.78	60		Pn	04 21 26.2	-0.5
P33M	Teslin, Yukon	5.78	60	P	Pn	04 21 26.7	0.0
	baz=248						
OPT	Oil Point	5.79	295		Pn	04 21 27.4	+0.7
IVE	Iliamna Volcan	5.79	298		Pn	04 21 26.9	0.0
ILS	Iliamna Low So	5.80	298		Pn	04 21 27.3	+0.4
RED	Redoubt Volcan	5.83	303		Pn	04 21 27.5	+0.1
ILSW	Iliamna Southw	5.84	298	Pn	Pn	04 21 27.1	-0.5
Q19K	Cape Douglas,	5.84	287	Pn	Pn	04 21 27.2	-0.3
Q19K	Cape Douglas,	5.84	287	P	Pn	04 21 28.7	+1.1
	baz=98						
WRAK	Wrangell Islan	5.86	98	Pn	Pn	04 21 24.7	-2.9
WRAK	Wrangell Islan	5.86	98	S	Sn	04 22 27.3	-7.5
	baz=286						
DFR	Drift River	5.87	304		Pn	04 21 28.1	+0.2
DHY	Denali Highway	5.88	339	Pn	Pn	04 21 28.1	-0.1
DHY	Denali Highway	5.88	339	P	Pn	04 21 28.6	+0.5
	baz=156						
RDWB	Redoubt West	5.89	303		Pn	04 21 28.2	0.0
WAT1	Susitna Watana	5.92	334		Pn	04 21 29.7	+1.2
WAT1	Susitna Watana	5.92	334	P	Pn	04 21 28.7	+0.2
	baz=149						
NCT	North Crescent	5.96	303		Pn	04 21 29.2	+0.1
STLK	Strandline Lak	5.98	314		Pn	04 21 29.3	-0.1
WAT7	Susitna Watana	5.99	333		Pn	04 21 30.0	+0.4
DOT	Dot Lake	6.04	355	Pn	Pn	04 21 30.5	+0.3
DOT	Dot Lake	6.04	355	Pn	Pn	04 21 31.2	+1.0
CUT	Chulitna	6.04	325	P	Pn	04 21 32.0	+1.8
	baz=139						
RIDG	Independent Ri	6.18	352	Pn	Pn	04 21 34.0	+1.8
RIDG	Independent Ri	6.18	352	P	Pn	04 21 33.8	+1.7
	baz=170						
M31M	Drury Creek, Y	6.22	39		Pn	04 21 34.1	+1.4
M31M	Drury Creek, Y	6.22	39	P	Pn	04 21 33.8	+1.1
	baz=226,SNR=9.3						
SCRK	Sand Creek	6.37	355	Pn	Pn	04 21 34.3	-0.5
SCRK	Sand Creek	6.37	355	P	Pn	04 21 35.4	+0.7
	baz=175,SNR=9.9						
O19K	Port Alsworth	6.47	298	Pn	Pn	04 21 36.9	+0.9
O19K	Port Alsworth	6.47	298	P	Pn	04 21 37.0	+0.9
	baz=109,SNR=14						
RND	Reindeer	6.48	335	Pn	Pn	04 21 36.0	-0.3
FARO	Faro, Yukon	6.61	42	Pn	Pn	04 21 38.4	+0.4
FARO				Sn	Sn	04 22 48.3	-4.9
DAWY	Dawson	6.64	13	Pn	Pn	04 21 38.7	+0.2
DAWY	Dawson	6.64	13	P	Pn	04 21 39.6	+1.1
	baz=196,SNR=24						
DAWY	Dawson	6.64	13	Pn	Pn	04 21 39.6	+1.1
NDB	Naden	6.69	119	Pn	Pn	04 21 37.6	-1.6
P18K	Big Mountain,	6.72	290	Pn	Pn	04 21 40.0	+0.4
P18K	Big Mountain,	6.72	290	P	Pn	04 21 40.6	+1.1
	baz=100						
N19K	Bonanza Creek	6.76	303	Pn	Pn	04 21 40.1	0.0
N19K	Bonanza Creek	6.76	303	P	Pn	04 21 40.5	+0.4
	baz=113						
MCK	McKinley	6.79	336	Pn	Pn	04 21 40.6	+0.2
MCK	McKinley	6.79	336	P	Pn	04 21 39.2	-1.3
	baz=151						
O18K	Koktuh Hills	6.80	294	Pn	Pn	04 21 41.2	+0.5
O18K	Koktuh Hills	6.80	294	P	Pn	04 21 41.4	+0.7
	baz=104						
DLBC	Dease Lake	6.84	78	Pn	Pn	04 21 41.9	+0.7
	comp=E,0.6nm,0.3s,baz=241,slow=18,SNR=4.5						
DLBC				Sn	Sn	04 22 54.9	-4.2
	comp=E,0.7nm,0.3s,baz=280,slow=9.9,SNR=3.2						
DLBC	Dease Lake	6.84	78	Pn	Pn	04 21 41.2	0.0
DLBC	Dease Lake	6.84	78	Pn	Pn	04 21 40.6	-0.6
DLBC				Sn	Sn	04 22 53.5	-5.6
TRF	Thorofare Moun	6.87	331		Pn	04 21 41.6	-0.1
TRF	Thorofare Moun	6.87	331	P	Pn	04 21 42.6	+0.9
	baz=145,SNR=6.9						
J26L	Joseph Creek	6.88	357		Pn	04 21 42.7	+1.0
J26L	Joseph Creek	6.88	357	P	Pn	04 21 42.7	+1.0
	baz=177,SNR=22						
PPLA	Purkeypile	7.01	322	Pn	Pn	04 21 44.9	+1.3
PPLA	Purkeypile	7.01	322	P	Pn	04 21 44.5	+0.9
	baz=135						
J25K	Salcha River,	7.08	351		Pn	04 21 45.0	+0.4
J25K	Salcha River,	7.08	351	P	Pn	04 21 45.1	+0.6
	baz=169,SNR=7.6						
KTH	Kantishna Hill	7.12	329	Pn	Pn	04 21 45.9	+0.8
EGAK	Eagle	7.19	6		Pn	04 21 46.6	+0.7
EGAK	Eagle	7.19	6	P	Pn	04 21 46.7	+0.8
	baz=187,SNR=5.2						
M19K	Big River Lodg	7.22	311	P	Pn	04 21 47.6	+1.2
	baz=121						
WRH	Wood River Hil	7.29	342	Pn	Pn	04 21 48.6	+1.2
L20K	Farewell, AK	7.34	316	P	Pn	04 21 48.9	+0.9
	baz=127						
CAST	Castle Rocks	7.36	326	Pn	Pn	04 21 48.9	+0.6
CAST	Castle Rocks	7.36	326	P	Pn	04 21 49.1	+0.8
	baz=138						
SVW2	Sparrevohn	7.37	303	Pn	Pn	04 21 49.3	+0.9
DIB	Dawson Inlet,	7.39	123	Pn	Pn	04 21 46.5	-2.1
H02S1	DAWSON INLET T	7.39	123	Pn	Pn	04 21 46.3	-2.4
	SNR=19						
IL31		7.40	346	Pn	Pn	04 21 47.7	-1.1
ILAR	Eielson Array	7.40	346	Pn	Pn	04 21 48.2	-0.6
	comp=E,0.6nm,0.3s,baz=170,slow=13,SNR=38						
CCB	Clear Creek Bu	7.41	343	Pn	Pn	04 21 48.4	-0.6
NEA2	Nenana	7.58	339	Pn	Pn	04 21 50.3	-1.0
NEA2	Nenana	7.58	339	P	Pn	04 21 51.2	-0.1
	baz=154						
WTLY	Watson Lake, Y	7.67	65	Sn	Sn	04 23 14.2	-5.3
MDM	Murphy Dome	7.77	343	Pn	Pn	04 21 53.7	-0.2
CHUM	Lake Minchumin	7.77	327		Pn	04 21 54.4	+0.5
CHUM	Lake Minchumin	7.77	327	P	Pn	04 21 54.4	+0.5
	baz=140,SNR=9.4						
RUBB	Prince Rupert	7.80	110	Pn	Pn	04 21 51.2	-3.1
PRP	Porcupine Dome	7.99	352	Pn	Pn	04 21 56.5	-0.5
PRP	Porcupine Dome	7.99	352	P	Pn	04 21 57.6	+0.5
	baz=170						
BNAB	Bonilla	8.07	116	Pn	Pn	04 21 54.6	-3.4
BNB	Barry Inlet	8.13	124	Pn	Pn	04 21 56.7	-2.2
GRNB	Grenville Isla	8.20	112	Pn	Pn	04 21 57.2	-2.7
GRNB				Sn	Sn	04 23 23.8	-8.7
MLY	Manley	8.31	336	Pn	Pn	04 22 01.1	-0.3
MLY	Manley	8.31	336	P	Pn	04 22 01.5	+0.2
	baz=150						
TTA	Tatalina	8.40	314	Pn	Pn	04 22 03.6	+1.0
BNKB	Banks Island	8.52	115	Pn	Pn	04 22 01.4	-2.8
J20K	Nowinta River	8.54	325	Pn	Pn	04 22 05.0	+0.6
J20K	Nowinta River	8.54	325	P	Pn	04 22 04.8	+0.4
	baz=135						
H24K	Noodor Dome	8.55	346	Pn	Pn	04 22 03.6	-1.0
H24K	Noodor Dome	8.55	346	P	Pn	04 22 04.5	0.0
	baz=162						
H21K	Melozitna Rive	9.31	334	Pn	Pn	04 22 13.9	-1.1
H21K	Melozitna Rive	9.31	334	P	Pn	04 22 15.1	+0.1
	baz=145						
BUTB	Butedale	9.38	113	Pn	Pn	04 22 14.1	-2.0
IMAR	Indian Mountai	9.80	333	Pn	Pn	04 22 21.3	-0.4
BMAR	Burnt Mountain	9.84	356	Pn	Pn	04 22 23.2	+0.9
BBB	Bella Bella	10.08	117	Pn	Pn	04 22 23.6	-2.0
	comp=E,0.9nm,0.3s,baz=308,slow=15,SNR=1.0						
BBB	Bella Bella	10.08	117	Pn	Pn	04 22 23.3	-2.2
COLD	Coldfoot	10.18	344	Pn	Pn	04 22 25.9	-1.0
COLD	Coldfoot	10.18	344	Pn	Pn	04 22 26.0	-0.9
FNBB	Fort Nelson	10.51	75	Pn	Pn	04 22 30.6	-0.8
FNBB				Sn	Sn	04 24 18.4	-11
HOLB	Holberg	11.11	123	Pn	Pn	04 22 37.9	-1.7
INK	Inuvik	11.47	18	Pn	Pn	04 22 44.4	-0.1
	comp=E,0.1nm,0.3s,baz=202,slow=15,SNR=7.4						
INK	Inuvik	11.47	18	Pn	Pn	04 22 45.5	+1.0
INK	Inuvik	11.47	18	Pn	Pn	04 22 43.8	-0.7
UNV	Unalaska Valle	13.84	264	P	P	04 23 25.4	+0.1
YKA	Yellowknife Ar	14.82	59	Pn	Pn	04 23 30.0	-0.2
	comp=E,0.0nm,0.3s,baz=264,slow=13,SNR=5.1						
YKA	Yellowknife Ar	14.82	59	Pn	Pn	04 23 29.8	-0.4
A36M	Sachs Harbour	16.09	20	P	Pn	04 23 46.6	-0.2
	baz=216,SNR=6.1						
NEW	Newport	18.01	110	P	P	04 24 13.8	+2.2
	comp=E,0.1nm,0.3s,baz=312,slow=11,SNR=6.1						
NEW				LR	LR	04 30 18.9	
	comp=E,217nm,18.2s,baz=46,slow=34						
HLID	Hailey	22.67	116	P	P	04 25 04.0	+1.7
	baz=318,SNR=6.0						
ELK	Elko	24.46	122	P	P	04 25 23.2	+3.2
	comp=E,0.9nm,0.7s,baz=319,slow=11,SNR=6.0						
ELK				LR	LR	04 33 55.8	
	comp=E,60nm,21.1s,baz=58,slow=34						
RES	Resolute Bay	24.68	28	P	P	04 25 24.3	+2.9
	comp=E,5.6nm,0.8s,baz=254,slow=12,SNR=15						
NVAR	Mina Array Bea	25.04	130	P	P	04 25 27.9	+2.7
	comp=E,1.5nm,0.7s,baz=321,slow=8.5,SNR=10						
PDAR	Pinedale Array	25.65	111	P	P	04 25 33.6	+2.8
	comp=E,0.5nm,0.7s,baz=318,slow=6.4,SNR=5.4						
TXAR	Lajitas Array	39.20	119	P	P	04 27 31.2	+2.1
	comp=E,0.7nm,1.0s,baz=333,slow=4.4,SNR=4.7						
H11N2	WAKE ISLAND Hy	52.66	246	T	T	05 26 10.8	
	baz=31,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	52.66	246	T	T	05 26 11.7	
	baz=31,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	52.67	246	T	T	05 26 11.6	
	baz=31,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	53.79	245	T	T	05 27 37.7	
	baz=31,slow=76,SNR=16						
H11S2	WAKE ISLAND Hy	53.80	245	T	T	05 27 40.2	
	baz=31,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	53.81	245	T	T	05 27 36.2	
	baz=31,slow=76,SNR=17						
ZALV	Zalesovo Beam	62.22	330	P	P	04 30 24.0	+1.9
	comp=E,0.6nm,0.4s,baz=34,slow=5.6,SNR=3.9						
MKAR	Makanchi Array	69.38	329	P	P	04 31 09.8	+1.3
	comp=E,0.6nm,0.8s,baz=55,slow=4.6,SNR=4.0						

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*KLM **21** 04:21:14, 3°.53N×117°.69E, h8^{km}, mb4.2*

DJA 21 04:21:17.4±0.5**, 4°N**±3°×**11°8E**±°**, h28^{km}**±4^{km}**, M4.1**/6**, mb4.1**/1**, MLv4.0**/6**, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPMM	Sapulut	1.58	316	P	Pn	04 21 44.0	+0.4
MPSI	Mapaga	3.96	144	P	Pn	04 22 16.4	0.0
SMKI	Samarinda	4.01	185	P	Pn	04 22 17.0	0.0

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*GUC **21** 04:21:57.4±0.6, 31°.56S×72°.04W, h25^{km}±3^{km}, ML3.7*

ISC 21 04:21:54.6±1.6**, 31°.59S**±0°.03×**72°.11W**±0°.10**, h7^{km}**±11^{km}**, n19, σ0^s.75**/32**, 9C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	1.00	24	⇓*e*P	Pg	04 22 13.7	-0.1
CO06				*e*S	Sg	04 22 27.4	+0.7
VA06	Catapilco	1.19	145	⇑*i*P	Pg	04 22 18.3	+0.9
VA06				*e*S	Sn	04 22 34.0	-0.2
VA06				IAML		04 22 38.9	
	comp=N,3µm,0.5s						
CO03	El Pedregal	1.43	59	⇑*i*P	Pn	04 22 21.2	+0.1
CO03				*e*S	Sn	04 22 39.3	-0.9
CO03				IAML		04 22 42.8	
	comp=E,2µm,0.5s						
VA01	Torpederas	1.48	165	*e*P	Pg	04 22 23.1	0.0
VA01				*e*S	Sg	04 22 42.4	+0.1
ROCH	El Roble	1.67	146	⇑*i*P	Pg	04 22 26.2	-0.3
ROCH				⇑*i*P	Pb	04 22 25.8	+0.1
ROCH				*e*S	Sb	04 22 47.5	+0.4
ROCH				*i* S	Sg	04 22 47.8	-0.3
ROCH				IAML		04 22 52.6	
	comp=N,1µm,0.5s						
ROCH				IAML		04 22 53.0	
	comp=N,2µm,0.5s						
VA03	San Esteban	1.77	132	⇑*i*P	Pb	04 22 27.2	-0.3
VA03				*e*S	Sb	04 22 49.2	-0.7
VA03				IAML		04 22 53.8	
	comp=E,2µm,0.3s						
GO04	Tololo Observa	1.81	39	*e*P	Pn	04 22 27.4	+1.0
GO04				*e*S	Sn	04 22 49.9	+0.2
GO04				IAML		04 22 54.8	
	comp=N,5µm,0.5s						
CO05	La Serena	1.83	25	⇓*e*P	Pn	04 22 26.6	+0.2
CO05				*e*S	Sn	04 22 50.4	+0.6
CO05				IAML		04 22 57.7	
	comp=E,692nm,0.4s						
MT02	Curacav	1.86	154	*e*P	Pb	04 22 28.6	-0.3
MT02				*e*S	Sb	04 22 51.5	-0.9
PEL	Peldehue	1.96	142	*e*P	Pb	04 22 30.3	-0.5
PEL				*e*S	Sb	04 22 55.5	-0.1
PEL				IAML		04 23 04.8	
	comp=E,588nm,0.5s						
VA05	Santo Domingo	2.10	169	⇑*i*P	Pb	04 22 31.7	-1.4
VA05				*e*S	Sb	04 22 58.6	-0.8
VA05				IAML		04 23 10.6	
	comp=N,725nm,0.5s						
MT05	Renca	2.14	148	⇑*e*P	Pb	04 22 32.9	-0.8
MT05				*e*S	Sb	04 23 00.8	+0.2
MT05				IAML		04 23 10.2	
	comp=E,1µm,0.3s						
FCH	Farellones	2.32	139	⇑*e*P	Pb	04 22 35.8	-1.2
FCH				*e*S	Sb	04 23 06.1	+0.1
FCH				IAML		04 23 08.8	
	comp=E,322nm,0.3s						
MT09	Talagante	2.38	157	*e*P	Pb	04 22 36.5	-1.3
MT09				*e*S	Sn	04 23 04.1	+0.4
MT09				IAML		04 23 19.9	
	comp=E,419nm,0.5s						
MT01	Popeta	2.38	163	⇑*e*P	Pn	04 22 35.8	+1.7
LCO	Las Campanas	2.84	26	*e*P	Pn	04 22 41.1	+0.4
VNA3	Neumayer Olymp	51.61	159	P	P	04 31 10.9	+10
VNA2	Neumayer--Watz	52.26	158	P	P	04 31 15.4	+9.3
	baz=282,slow=8.9						
SNAA	Sanae	53.84	158	P	P	04 31 27.2	+9.3

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*IDC **21** 04:29:47.3±1.3, 16°.91S×64°.74W, h0^{km}, mb3.6/4, mb1 3.9/4, mb1mx3.6/20, mbtmp3.6/4, Error ellipse: s-maj=49.0km s-min=34.7km az=92.0*

*VAO **21** 04:29:57.1±0.8, 16°.72S×64°.39W, h10^{km}, mb4.0*

ISC 21 04:29:53.2±1.0**, 16°.8S**±0°.1×**64°.88W**±0°.10**, h35^{km}, n14, σ1^s.31**/15**, mb3.5**/4**, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTLB	Pontes e Lacer	5.68	77	*e*P	Pn	04 31 15.3	+0.2
VILB	Vilhena	5.92	51	*e*P	Pn	04 31 20.9	+2.5
SALV	Santo Antonio	8.87	86	*e*P	Pn	04 31 58.8	-0.1
PDRB	Porto dos Gac	9.43	58	*e*P	Pn	04 32 06.4	-0.2
PDRB				*e*S	Sn	04 33 50.1	-1.4
CLDB	Colider	10.60	58	*e*P	Pn	04 32 23.5	+0.9
NPGB	Novo Progresso	13.43	45	*e*P	Pn	04 33 01.9	+0.5
TBTG	Tabatinga, AM	13.45	338	*e*P	P	04 33 10.1	-0.4
SNDB	Serra Nova Dou	14.00	72	*e*P	Pn	04 33 07.5	-1.7
FRTB	Fartura	15.80	117	*e*P	Pn	04 33 34.9	+1.8
IPMB	Ipameri, GO	15.96	97	*e*P	Pn	04 33 36.2	+0.9
PLCA	Paso Flores	24.37	190	P	P	04 35 06.3	-1.7
	1.8nm,0.8s,baz=1.2,slow=11,SNR=4.6						
PDAR	Pinedale Array	72.09	327	P	P	04 41 15.0	+0.8
	0.1nm,0.5s,baz=154,slow=9.0,SNR=1.9						
TORD	Torodi Ar. Bea	72.18	70	P	P	04 41 14.1	-0.9
	0.3nm,0.7s,baz=255,slow=5.0,SNR=4.8						
YKA	Yellowknife Ar	88.09	339	P	P	04 42 40.1	+0.4
	0.4nm,0.8s,baz=125,slow=4.2,SNR=5.5						

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*IDC **21** 04:42:24.9±2.1, 19°.99S×169°.08E, h0^{km}, mb4.1/4, mb1 4.4/5, mb1mx4.0/34, mbtmp4.1/5, ML4.0/1, MS3.5/10, Ms1 3.5/10, ms1mx3.3/35, Error ellipse: s-maj=83.4km s-min=27.9km az=146.0*

*NOU **21** 04:42:28.6, 20°.16S×168°.94E, h3^{km}, MLv4.6/13, Loyalty Islands*

*NEIC **21** 04:42:33.6±1.7, 20°.25S±0°.05×168°.81E±0°.06, h39^{km}±9^{km}, mb4.3/9, Error ellipse: s-maj=9.5km s-min=3.9km az=50.0*

ISC 21 04:42:32.0±0.8**, 20°.22S**±0°.05×**168°.93E**±0°.07**, h33^{km}**±5^{km}**, h33^{km}:pP-P, n72, σ2^s.06**/70**, mb4.4**/8**, MS3.5**/8**, 1D, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.51	214		Pn	04 42 56.0	-0.7
MARNC				Sn	Sn	04 43 14.4	-0.8
MARNC	Mare, Loyalty	1.51	214	P	Pn	04 42 56.4	-0.3
LIFNC	LIFOU	1.68	251		Pn	04 42 57.5	-1.6
LIFNC					Sn	04 43 17.8	-1.6
LIFNC	LIFOU	1.68	251	P	Pn	04 42 58.1	-0.9
RTV	Rentapao	2.47	349	P	Pn	04 43 08.5	-1.4
DVP	Devils Point	2.58	344	P	Pn	04 43 11.3	-0.2
YATNC	Mamie plateau,	2.64	226	P	Pn	04 43 12.0	-0.3
PINNC	Pines Island,	2.75	210		Pn	04 43 14.7	+0.9
OUENC	Ouen Island, N	2.92	221		Pn	04 43 16.7	+0.5
OUENC	Ouen Island, N	2.92	221	P	Pn	04 43 16.8	+0.6
DZM	Mont Dzumac	2.96	231	*e*Pn	Pn	04 43 16.7	-0.1
	35nm,0.2s						
DZM				*e*Sn	Sn	04 43 52.3	+1.0
	168nm,0.3s						
DZM	Mont Dzumac	2.96	231	Pn	Pn	04 43 16.8	-0.1
	15nm,0.3s,baz=90,slow=9.2,SNR=162						
DZM				Sn	Sn	04 43 52.5	+1.3
	17nm,0.3s,baz=72,slow=21,SNR=4.6						
DZM				LR	LR	04 44 30.8	
	comp=Z,606nm,18.6s,baz=138,slow=39						
DZM	Mont Dzumac	2.96	231	Pn	Pn	04 43 16.5	-0.3
DZM	Mont Dzumac	2.96	231	P	Pn	04 43 16.9	+0.1
NOUC	Port Laguerre	3.08	232	P	Pn	04 43 19.8	+1.4

ONTNC	Ouen Toro	3.10	228	Pn	Pn	04 43 18.7	+0.1
ONTNC	Ouen Toro	3.10	228	P	Pn	04 43 19.8	+1.1
KOUNC	Koumac, New Ca	4.37	265	P	Pn	04 43 36.7	+0.6
SANVU	Saraoutou	5.03	341	Pn	Pn	04 43 46.7	+1.5
MSVF	Nonsavu	8.98	75	LR	LR	04 47 14.1	
	comp=Z,267nm,18.4s,baz=167,slow=33						
MSVF	Nonsavu	8.98	75	Pn	Pn	04 44 41.8	+2.3
HNR	Honiara	13.80	320	LR	LR	04 50 01.3	
	comp=Z,144nm,20.4s,baz=148,slow=33						
OUZ	Omahuta	15.49	166	P	P	04 46 13.9	+1.8
OUZ				IAmb	IAmb	04 46 15.7	
	comp=Z,20nm,1.1s						
ARMA	Armidale	18.62	234	P	P	04 46 47.1	+0.2
URZ	Urewera	19.32	160	LR	LR	04 52 56.5	
	comp=Z,127nm,20.6s,baz=31,slow=32						
BKZ	Black Stump Fm	19.97	163	P	Pn	04 47 02.8	-0.6
BKZ				IAmb	IAmb	04 47 04.0	
	comp=Z,21nm,1.0s						
CTAO	Charters Tower	21.29	266		P	04 47 17.8	+1.9
CTAO				IAmb	IAmb	04 47 18.4	
	comp=Z,13nm,1.1s						
PMG	Port Moresby	23.60	294	LR	LR	04 55 17.8	
	comp=Z,91nm,18.1s,baz=142,slow=33						
STKA	Stephens Creek	27.08	239	LR	LR	04 58 46.2	
	comp=Z,81nm,19.6s,baz=33,slow=36						
WRA	Warramunga Arr	32.45	264	P	P	04 48 57.9	-1.6
	comp=Z,1.4nm,0.8s,baz=92,slow=8.6,SNR=8.1						
WRA	Warramunga Arr	32.45	264	P	P	04 48 58.4	-1.1
AS31	Alice Springs	32.62	257	P	P	04 49 00.2	-0.8
AS31				IAmb	IAmb	04 49 18.4	
	comp=Z,2.4nm,0.6s						
ASAR	Alice Springs	32.62	257	P	P	04 49 00.2	-0.8
	comp=Z,4.1nm,0.6s,baz=85,slow=9.1,SNR=73						
ASAR				LR	LR	05 02 47.1	
	comp=Z,141nm,18.4s,baz=94,slow=37						
ASAR	Alice Springs	32.62	257	P	P	04 49 00.0	-0.9
TBI	Tubuai	38.67	102	eLR	LR	05 00 23.0	
	comp=Z,103nm,28.8s						
PPT2	Papeete2	39.27	93	eLR	LR	05 00 18.1	
	comp=Z,101nm,26.0s						
PSA00	Pilbara Seismi	45.72	259	P	P	04 50 53.5	+3.1
PSA00				IAmb	IAmb	04 51 09.5	
	comp=Z,10nm,1.4s						
VNDA	Vanda	57.44	182	LR	LR	05 12 33.4	
	comp=Z,45nm,21.5s,baz=33,slow=31						
ASAJ	Asahikawa	68.42	340	LR	LR	05 19 08.8	
	comp=Z,56nm,19.4s,baz=159,slow=32						
QSPA	South Pole Qui	69.83	180	P	P	04 53 37.5	-1.7
SHEM	Shemya Is, Ala	72.78	3	LR	LR	05 19 11.4	
	comp=Z,49nm,19.7s,baz=312,slow=30						
HHC	Hu-ho-hao-te	80.78	320	eP	P	04 54 46.1	+3.7
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,52nm,6.6s						
SONM	Songino Array	87.83	323	P	P	04 55 16.6	-1.5
	comp=Z,0.7nm,0.7s,baz=103,slow=4.6,SNR=2.5						
SONM				pP	pP	04 55 26.3	-1.0
	comp=Z,2.8nm,0.9s,baz=146,slow=5.3,SNR=5.7						
SONM	Songino Array	87.83	323	P	P	04 55 16.8	-1.3
SNAA	Sanae	88.17	183	P	P	04 55 17.2	-2.1
VNA3	Neumayer Olymp	88.77	180	P	P	04 55 19.9	-2.2
VNA2	Neumayer--Watz	89.06	181	P	P	04 55 21.4	-2.1
	baz=182,slow=5.0						
VNA1	Neumayer--Stat	89.35	181	P	P	04 55 22.8	-2.0
NVAR	Mina Array Bea	89.67	49	P	P	04 55 23.3	-3.8
	comp=Z,0.4nm,0.8s,baz=226,slow=6.0,SNR=4.0						
WMQ	Urumqi	97.67	314	eP	Pdif	04 56 07.0	+3.4
YKA	Yellowknife Ar	101.67	27	pP	pP	04 56 27.6	-3.0
	comp=Z,0.4nm,0.8s,baz=248,slow=4.3,SNR=4.3						
ARCES	ARCESS Array B	125.94	345	pPKP	pPKPdf	05 01 37.8	-2.0
	comp=Z,2.7nm,0.9s,baz=69,slow=6.6,SNR=2.1						
GRUS	Gruza	144.54	319	eP	PKPab	05 02 01.1	-2.5
SELS	Selova	144.63	318	eP	PKPab	05 02 01.1	-2.9
DIVS	Divibare	144.88	320	eP	PKPab	05 02 02.7	-2.3
IVAS	Ivanjica	145.06	319	eP	PKPbc	05 02 03.3	-2.3
KHC	Kasperske Hory	145.06	331	ePKP	PKPbc	05 02 03.0	-2.4
GERES	GERESS Array B	145.21	331	PKPbc	PKPbc	05 02 03.3	-2.6
	comp=Z,0.6nm,0.5s,baz=30,slow=6.0,SNR=6.1						
GERES				pPKPbc	pPKPab	05 02 13.7	-1.4
	comp=Z,3.4nm,0.8s,baz=35,slow=4.9,SNR=14						
GERES	GERESS Array B	145.21	331		PKPbc	05 02 03.6	-2.3
MOA	Molln	145.66	329	eP	PKPdf	05 02 06.0	-1.0
	comp=Z,5.5nm,0.9s						
MOA				eP	pPKPdf	05 02 15.3	-0.9
	comp=Z,7.7nm,0.8s						
SOKA	Soboth	146.09	327	eP	PKPdf	05 02 05.9	-2.0
	comp=Z,1.0nm,0.6s						
SOKA				eP	pPKPdf	05 02 17.0	0.0
	comp=Z,3.5nm,0.9s						
OBKA	Obir	146.45	327	eP	PKiKP	05 02 18.9	+6.1
	comp=Z,1.4nm,0.7s						
KBA	Koelnbreinsper	146.65	329	eP	PKPdf	05 02 07.9	-1.0
	comp=Z,4.4nm,1.2s						
KBA				eP	pPKPdf	05 02 18.0	-0.1
	comp=Z,9.0nm,1.4s						
MYKA	Terra Mystica	146.82	328	eP	PKiKP	05 02 17.8	+4.2
	comp=Z,3.4nm,0.8s						
WATA	Walderalm	147.29	331	eP	PKPbc	05 02 11.6	-0.7
	comp=Z,2.5nm,0.5s						
WATA				eP	pPKPdf	05 02 20.2	+1.1
	comp=Z,5.3nm,0.6s						
WTTA	Wattenberg	147.32	331	eP	PKiKP	05 02 19.3	+4.6
	comp=Z,15nm,1.5s						
MOTA	Moosalm	147.50	331	eP	PKPdf	05 02 10.8	+0.5
	comp=Z,4.0nm,0.8s						
MOTA				i P	pPKPdf	05 02 20.3	+0.8
	comp=Z,7.6nm,0.8s,SNR=5.2						
RETA	Reutte	147.54	332	eP	PKiKP	05 02 20.4	+5.4
	comp=Z,4.7nm,0.8s						
SQTA	Sankt Quirin	147.54	331	eP	PKPdf	05 02 11.0	+0.7
	comp=Z,6.3nm,1.3s						
SQTA				i P	pPKPdf	05 02 20.7	+1.1
	comp=Z,7.1nm,0.7s,SNR=4.5						
WLF	Walferdange	147.57	339	dpPKPbc	pPKPbc	05 02 21.7	-0.3
FETA	Feichten	147.91	331	eP	PKPdf	05 02 12.0	+1.0
	comp=Z,6.4nm,1.2s						
FETA				eP	pPKPbc	05 02 22.1	-1.1
	comp=Z,11nm,1.0s						
DAVA	Damuels	148.08	333	eP	PKPab	05 02 21.6	+4.4
	comp=Z,4.5nm,0.6s						

NNC 21 04:43:13.1±7.7**, 37°.98N**×**73°.53E, h0^{km}, mb3.5, mpv3.1, 3C-3D, Error ellipse: s-maj=69.7km s-min=40.0km az=142.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.71	9	⇓Pg	Pb	04 44 37.5	+0.8
	4.2nm,0.7s						
AAK				⇑Lg	Lg	04 45 44.2	
	5.1nm,0.9s						
TKM2	Tokmak 2	5.18	17	⇓Pg	Pg	04 44 50.6	-1.8
	1.2nm,0.7s						
TKM2				⇑Lg	Lg	04 45 57.6	
	4.6nm,1.1s						
KK02	Karatay Array	5.61	337	⇑Pn	Pn	04 44 37.0	-0.8
	0.8nm,0.3s,baz=152,slow=12						
KK02				⇓Lg	Lg	04 46 10.6	
	4.8nm,0.7s,baz=153,slow=23						

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*IDC **21** 04:46:41.3±1.1, 14°.04N×121°.42E, h0^{km}, mb4.0/6, mb1 4.2/6, mb1mx3.8/41, mbtmp4.0/6, MS3.4/7, Ms1 3.4/7, ms1mx3.1/37, Error ellipse: s-maj=47.4km s-min=19.6km az=61.0*

*MAN **21** 04:46:42.4, 14°.10N×121°.22E, h6^{km}, mb5.0, ML3.9, MS4.0*

*NEIC **21** 04:46:46.1±2.0, 14°.1N±0°.1×121°.6E±0°.2, h35^{km}±2^{km}, mb4.4/10, Error ellipse: s-maj=36.8km s-min=3.0km az=230.0*

ISC 21 04:46:42.6±1.2**, 14°.11N**±0°.04×**121°.23E**±0°.03**, h6^{km}**±8^{km}**, n36, σ1^{s}43**/37**, mb4.1**/12**, MS3.5**/6**, 6C-3D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.28	268	⇓eP	Pb	04 46 49.4	-0.8
TGY				i S	Sb	04 46 55.1	-0.1
LQP	Lukban	0.30	90	⇑eP	Pg	04 46 49.3	+0.6
LQP				eS	Sg	04 46 54.9	+2.2
PGP	Puerto Galera	0.66	204	⇑eP	Pg	04 46 54.8	-0.6
PGP				i S	Sb	04 47 04.5	-1.7
LUBP	Lubang	1.02	248	⇑eP	Pg	04 47 01.7	-0.6
LUBP				eS	Sb	04 47 16.9	+0.3
GQP	Guinayangan	1.20	100	⇑eP	Pn	04 47 05.4	-0.6
GQP				i S	Sn	04 47 23.6	+1.0
JCNP	Jose Panganiba	1.44	83	⇑eP	Pg	04 47 08.4	-1.8
JCNP				eS	Sn	04 47 28.8	+0.4
PCPH	Palayan	1.45	355	⇓eP	Pb	04 47 08.7	-1.3
PCPH				eS	Sg	04 47 29.2	0.0
RCP	Roxas	2.94	150	⇓eP	Pn	04 47 29.9	0.0
APYP	Conner	3.73	0	⇑eP	Pg	04 47 53.4	-0.8
DAV	Davao City (W)	8.20	148	LR	LR	04 52 12.7	
	comp=Z,188nm,18.0s,baz=336,slow=41						
SBUM	Sibu	14.61	218	P	P	04 50 18.6	+1.9
CM31	Chiang Mai Arr	21.82	284	P	P	04 51 39.0	+3.1
CM31				IAmb	IAmb	04 51 48.7	
	comp=Z,11nm,1.2s						
CMAR	Chiang Mai Arr	21.82	284	P	P	04 51 37.7	+1.8
	comp=Z,2.6nm,0.3s,baz=90,slow=8.4,SNR=18						
CMAR				LR	LR	04 59 25.2	
	comp=Z,40nm,19.9s,baz=150,slow=35						
CMAR	Chiang Mai Arr	21.82	284	P	P	04 51 37.3	+1.4
KSRS	Korea Array	24.00	13	LR	LR	05 01 18.9	
	comp=Z,74nm,18.5s,baz=205,slow=37						
MANU	Manus Island	30.48	120		P	04 52 51.3	-5.4
SONM	Songino Array	35.81	343	P	P	04 53 43.4	+0.4
	comp=Z,1.6nm,0.9s,baz=161,slow=11,SNR=2.9						
SONM				LR	LR	05 08 45.9	
	comp=Z,96nm,20.1s,baz=160,slow=37						
SONM	Songino Array	35.81	343	P	P	04 53 43.5	+0.5
WB0	Warramunga Arr	36.08	159	P	P	04 53 43.5	-1.9
WB0				IAmb	IAmb	04 53 45.8	
	comp=Z,4.9nm,0.8s						
WRA	Warramunga Arr	36.22	159	P	P	04 53 44.4	-2.2
	comp=Z,5.2nm,0.9s,baz=330,slow=7.6,SNR=18						
WRA	Warramunga Arr	36.22	159	P	P	04 53 43.0	-3.6
WB2	Warramunga Arr	36.22	159	P	P	04 53 44.6	-2.0
WB2				IAmb	IAmb	04 53 45.6	
	comp=Z,6.2nm,0.8s						
ASAR	Alice Springs	39.54	162	P	P	04 54 13.4	-1.3
	comp=Z,1.5nm,0.8s,baz=340,slow=7.1,SNR=10.0						
ASAR	Alice Springs	39.54	162	P	P	04 54 13.1	-1.6
MK31	Makanchi Array	46.01	323	P	P	04 55 08.2	+1.2
MK31				IAmb	IAmb	04 55 10.2	
	comp=Z,2.2nm,1.1s						
MKAR	Makanchi Array	46.01	323	P	P	04 55 07.5	+0.5
	comp=Z,1.0nm,0.9s,baz=123,slow=10,SNR=5.6						
MKAR	Makanchi Array	46.01	323	P	P	04 55 06.7	-0.3
NIL	Nilore	47.51	303	P	P	04 55 19.2	+0.2
NIL				IAmb	IAmb	04 55 20.2	
	comp=Z,9.3nm,1.1s						
AAK	Ala-Archa	49.14	315	LR	LR	05 17 00.7	
	comp=Z,84nm,19.5s,baz=83,slow=37						
STKA	Stephens Creek	49.73	157	LR	LR	05 21 23.0	
	comp=Z,32nm,18.0s,baz=25,slow=42						
KURK	Kurchatov	50.13	326	P	P	04 55 38.7	-0.1
KURK				IAmb	IAmb	04 55 41.7	
	comp=Z,6.3nm,1.1s						
GAR	Garm	51.06	309	P	P	04 55 46.4	+0.3
KKAR	Karatay Array	52.05	314	P	P	04 55 53.4	0.0
ABKAR	Akbulak array	60.76	319	P	P	04 56 55.0	-0.3
NOA	NORSAR Array B	87.13	333	LR	LR	05 42 57.2	
	comp=Z,26nm,19.6s,baz=280,slow=39						
YKA	Yellowknife Ar	92.20	23	P	P	04 59 53.1	-0.1
	comp=Z,0.2nm,0.9s,baz=256,slow=8.6,SNR=3.6						

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*TAP **21** 04:51:30.4, 24°.40N×121°.96E, h20^{km}, ML3.3, B*

*JMA **21** 04:51:30.0, 24°.34N×121°.98E, h24^{km}±2^{km}, M2.6*

ISC 21 04:51:29.9±0.9**, 24°.38N**±0°.02×**122°.01E**±0°.02**, h17^{km}**±6^{km}**, n103, σ0^{s}49**/143**, 2C-12D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	Wuta	0.22	287	⇓iP	Pb	04 51 35.3	-0.1
	baz=293						
EWUT				S	Sb	04 51 38.7	-0.4
	baz=293						
ENA	Nanau	0.25	281	⇓iP	Pg	04 51 35.6	+0.2
	baz=284						
ENA				i S	Sg	04 51 39.3	+0.1
	baz=284						
EHP	Heping Village	0.25	254	i P	Pg	04 51 35.7	+0.2
	baz=251						
EHP				S	Sb	04 51 39.9	-0.2
	baz=251						
TWC	Suao	0.27	328	⇓iP	Pb	04 51 36.1	-0.2
	baz=343						
TWC				i S	Sg	04 51 39.5	-0.4
	baz=343						
NDS	Dongshan	0.36	314	P	Pg	04 51 37.7	+0.2
	baz=313						
NDS				S	Sg	04 51 42.5	-0.1
	baz=313						
ETL	Fush Village	0.41	238	P	Pg	04 51 38.5	+0.2
	baz=235						
ETL				eS	Sb	04 51 44.9	+0.2
	baz=235						
NACB	Ninganchiao	0.43	241	⇓iP	Pg	04 51 38.4	-0.1
	baz=240						
NACB				i S	Sg	04 51 44.7	+0.3
	baz=240						
ILA	Ilan	0.45	329	i P	Pb	04 51 39.6	+0.3
	baz=330						
ILA				i S	Sb	04 51 45.7	-0.1
	baz=330						
TWE	Neicheng	0.46	318	⇓iP	Pb	04 51 39.4	-0.1
	baz=322						
TWE				i S	Sg	04 51 44.8	-0.6
	baz=322						
ENTT	Nioudou	0.48	303	⇓iP	Pb	04 51 39.7	-0.1
	baz=305						
ENTT				S	Sg	04 51 45.7	-0.3
	baz=305						
TWD	Chiawan	0.48	231	eP	Pb	04 51 40.9	+1.1
	baz=229						
NTC	Toucheng	0.50	341	eP	Pb	04 51 40.6	+0.4
	baz=351						
NDT	Datong Townshi	0.50	296	⇑iP	Pb	04 51 40.3	+0.1
	baz=298						
NDT				S	Sg	04 51 46.2	-0.4
	baz=298						
ETLH	Xiulin Townshi	0.51	250	P	Pg	04 51 40.0	0.0
	baz=253						
ETLH				S	Sb	04 51 47.7	+0.2
	baz=253						
HWA	Hwalien	0.54	222	eP	Pn	04 51 42.0	-0.8
	baz=216						
NNSB	Datong	0.57	275	⇓iP	Pg	04 51 41.2	0.0
	baz=279						
NNSB				S	Sg	04 51 48.6	-0.3
	baz=279						
NNS	Nan Shan	0.58	276	⇓iP	Pg	04 51 41.4	-0.1
	baz=280						
NNS				eS	Sg	04 51 48.2	-1.0
	baz=280						
NWLT	Wulai	0.60	311	P	Pb	04 51 42.1	+0.1
	baz=308						
NWLT				S	Sg	04 51 49.5	-0.4
	baz=308						
TIPB	Shuangxi	0.61	344	i P	Pb	04 51 42.5	+0.3
	baz=349						
TIPB				i S	Sg	04 51 49.9	-0.3
	baz=349						
ETM	Tongmen	0.62	229	eP	Pg	04 51 42.3	+0.1
	baz=224						
TWB1	Santiao Chiao	0.63	359	eP	Pb	04 51 42.8	+0.5
	baz=357						
TWB1				eS	Sb	04 51 50.8	0.0
	baz=357						
TEYL	Yanliau Villag	0.63	216	eP	Pg	04 51 43.0	+0.7
	baz=213						
YHNB	Yeheng	0.64	297	⇓iP	Pb	04 51 42.7	0.0
	baz=300						
YHNB				S	Sg	04 51 50.1	-1.1
	baz=300						
NSK	Sanguang	0.66	297	⇓iP	Pb	04 51 42.9	-0.1
	baz=298						
NSK				i S	Sg	04 51 51.0	-0.7
	baz=298						
FUSS	Fushou	0.71	259	eP	Pg	04 51 44.0	+0.2
	baz=262						
FUSS				eS	Sb	04 51 53.8	+0.3
	baz=262						
TWA	Mucha	0.71	327	P	Pg	04 51 44.1	+0.3
	baz=320						
TWA				i S	Sb	04 51 53.1	-0.2
	baz=320						
WHF	Hehuan Shan	0.72	251	⇓iP	Pg	04 51 43.9	-0.1
	baz=255						
WHF				eS	Sb	04 51 54.0	+0.1
	baz=255						
NWF	Wu-fen Shan	0.72	343	i P	Pg	04 51 44.6	+0.7
	baz=339						
NWF				i S	Sg	04 51 53.5	0.0
	baz=339						
WFSB	Wu-fen Shan	0.72	343	⇑P	Pg	04 51 44.5	+0.6
	baz=339						
WFSB				S	Sb	04 51 53.3	-0.2
	baz=339						
NHDH	Xindian Distri	0.73	323	eP	Pg	04 51 44.6	+0.5
	baz=317						
NHDH				eS	Sg	04 51 53.8	0.0
	baz=317						
TATO	Taipei	0.76	322	eP	Pg	04 51 45.0	+0.3
	baz=315						
ESL	Shilin	0.77	223	P	Pg	04 51 45.2	+0.3
	baz=218						
TDCB	Techi	0.78	261	P	Pb	04 51 45.2	+0.1
	baz=259						
TDCB				S	Sg	04 51 55.7	+0.1
	baz=259						
TEGC	Jichi Village	0.79	213	eP	Pg	04 51 46.0	+0.6
	baz=217						
TNOU	National Taiwa	0.80	345	eP	Pn	04 51 46.0	-0.3
	baz=342						
TNOU				eS	Sb	04 51 55.5	-0.2
	baz=342						
TAP	Taipei	0.80	325	eP	Pb	04 51 44.7	-0.6
	baz=318						
CHGB	Renai	0.82	247	⇓P	Pb	04 51 46.0	+0.1
	baz=251						
CHGB				S	Sg	04 51 57.1	+0.2
	baz=251						
YM01	YM01	0.86	333	eP	Pn	04 51 47.3	0.0
	baz=341						
YM01				S	Sg	04 51 58.3	+0.3
	baz=341						
OWD	Renai	0.87	241	eP	Pn	04 51 47.3	-0.2
	baz=230						
EGFH	Guangfu	0.88	217	eP	Pg	04 51 47.2	+0.1
	baz=222						
YM08	YM08	0.89	335	P	Pn	04 51 47.6	0.0
	baz=328						
TWS1	Kuangyinshan	0.90	323	eP	Pn	04 51 48.2	+0.5
	baz=319						
TWS1				eS	Sn	04 51 59.8	-0.4
	baz=319						
YOJ	Yonaguni jima	0.92	85	eP	Pb	04 51 47.6	+0.3
	baz=78						
YOJ				eS	Sg	04 52 00.3	+0.4
	baz=78						
YOJ	Yonaguni jima	0.92	85	P	Pb	04 51 47.2	-0.2
YOJ				eS	Sb	04 51 59.6	+0.3
NTST	Danshui	0.93	327	eP	Pn	04 51 48.5	+0.4
	baz=329						
LIOB	Emei	0.94	287	eP	Pg	04 51 48.2	+0.1
	baz=291						
NCUH	Zhongli	0.95	308	eP	Pn	04 51 49.2	+0.8
	baz=309						
NSTT	Nanjuang	0.95	285	eP	Pn	04 51 48.4	0.0
	baz=291						
NSTT				eS	Sb	04 52 00.1	-0.1
	baz=291						
TWY	Chenhua	0.96	338	eP	Pg	04 51 48.6	0.0
	baz=330						
WHP	Taichung City	0.97	264	eP	Pg	04 51 49.1	+0.4
	baz=263						
VWDT	VWDT	1.01	232	eP	Pn	04 51 49.3	+0.1
	baz=235						
VWDT				eS	Sn	04 52 03.8	+0.8
	baz=235						
SBCB	Hsinchu	1.02	294	eP	Pg	04 51 50.5	+0.9
	baz=289						
WPL	Puli Township	1.03	249	eP	Pn	04 51 49.5	+0.1
	baz=236						
HGSD	Ruisui	1.03	211	eP	Pb	04 51 49.5	+0.3
	baz=207						
DPDB	Guoxing	1.04	251	eP	Pg	04 51 50.1	0.0
	baz=250						
WCS	Beigang Elemen	1.05	252	eP	Pb	04 51 49.2	-0.4
	baz=259						
EHY	Hungye	1.07	216	eP	Pb	04 51 49.5	-0.5
	baz=212						
TWQ1	Liyutan	1.12	269	eP	Pg	04 51 52.0	+0.4
	baz=276						
SSLB	Suanglung	1.13	239	P	Pb	04 51 51.0	+0.1
	baz=237						
NSY	Sanyi	1.14	272	eP	Pg	04 51 53.2	+1.3
	baz=279						
TYC	Yuchr	1.15	246	eP	Pg	04 51 52.2	0.0
	baz=235						
YULB	Yu-li	1.18	214	eP	Pn	04 51 50.5	-1.1
	baz=210						
EYUL	Yuli	1.21	212	eP	Pb	04 51 52.5	+0.2
	baz=224						
TWF1	Yuli	1.21	213	eP	Pn	04 51 51.3	-0.8
	baz=223						
WWF	Wufeng	1.24	255	eP	Pg	04 51 54.2	+0.3
	baz=254						
PCYT	Pengchaiyu	1.25	3	eP	Pn	04 51 51.6	-0.9
	baz=6.0						
WJS	Zhushan	1.29	245	eP	Pb	04 51 53.9	+0.2
	baz=235						
WNT	Mingjian	1.31	248	eP	Pg	04 51 54.8	-0.3
	baz=238						
YUS	Yu-Shan	1.31	228	P	Pg	04 51 55.2	-0.1
	baz=225						
FULB	Fuli	1.34	209	eP	Pb	04 51 54.7	+0.1
	baz=190						
ALS	Alishan	1.40	232	eP	Pb	04 51 55.9	+0.1
	baz=231						
CHKT	Chengkung	1.40	205	eP	Pn	04 51 54.9	+0.3
	baz=185						
CHN5	Tsauling	1.44	238	eP	Pg	04 51 57.5	-0.2
	baz=236						
CHN5				eS	Sg	04 52 17.3	+0.7
	baz=236						
WGK	Gukeng	1.49	243	eP	Pb	04 51 57.5	+0.4
	baz=241						
ELDTW	Lidau	1.49	218	eP	Pn	04 51 56.2	+0.2
	baz=202						
WDLH	Douliu	1.51	243	eP	Pb	04 51 57.2	-0.2
	baz=242						
EDH	Donghe	1.54	205	eP	Pn	04 51 56.0	-0.6
	baz=189						
WRL	Guolierlin Hig	1.56	253	eP	Pb	04 51 58.1	-0.2
	baz=252						
IRIF	Iriomote-Funau	1.57	91	P	Pn	04 51 56.9	-0.1
IRIF				S	Sn	04 52 16.5	-0.5
STYH	Taoyuan	1.65	223	eP	Pb	04 51 59.4	-0.4
	baz=221						
TPUB	Ta-pu	1.66	230	eP	Pb	04 51 59.8	-0.1
	baz=228						
STYT	Tauyuan	1.67	224	eP	Pb	04 51 59.6	-0.5
	baz=221						
LONT	Longtian	1.67	209	eP	Pn	04 51 58.7	+0.3
	baz=205						
WTP	Ta-pu	1.70	229	eP	Pb	04 52 00.7	0.0
	baz=226						
WTP				eS	Sg	04 52 24.2	-0.6
	baz=226						
LDUT	Ludao	1.77	196	eP	Pn	04 51 59.5	-0.1
	baz=181						
TWGBT	Beinan	1.77	209	eP	Pn	04 51 59.1	-0.7
	baz=192						
TWG	Pinlang	1.77	209	eP	Pn	04 52 00.0	+0.2
	baz=192						
TWK	Hsinying	1.78	232	eP	Pb	04 52 01.8	-0.2
	baz=230						
CHN1	Nanshi	1.80	229	eP	Pb	04 52 02.5	+0.1
	baz=227						
JKRS	Kuro-shima	1.83	94	P	Pn	04 52 01.4	+0.8
JKRS				S	Sn	04 52 23.6	+0.2
SLGT	Liugui	1.86	222	eP	Pb	04 52 02.7	-0.7
	baz=221						
JIJ	Ishigaki jima	1.95	90	P	Pn	04 52 02.3	+0.1
JIJ				S	Sn	04 52 24.9	-1.4
ECL	Taimali	2.02	209	eP	Pn	04 52 04.4	+1.3
	baz=194						
SSD	Sandimen	2.06	218	eP	Pb	04 52 06.0	-0.7
	baz=215						
JISG	Ishigakijimahi	2.11	84	P	Pn	04 52 04.3	-0.1
JISG				S	Sn	04 52 29.4	-0.8
MASBT	Mashibuluo	2.17	216	eP	Pn	04 52 06.3	+1.2
	baz=213						
LAY	Lan-yu	2.37	190	eP	Pn	04 52 07.0	-1.0
	baz=186						
PNG	Penghu	2.38	251	eP	Pn	04 52 08.3	+0.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=250						
PHUB	P'eng-hu	2.39	249	eP	Pn	04 52 08.7	+0.5
	baz=249						
VCHM	Qimei	2.63	244	eP	Pn	04 52 12.7	+1.1
	baz=243						
PTMZ	Houxiangcun	2.71	285	eP	Pn	04 52 12.3	-0.2
	baz=285						
KNMB	Chin-men Tao	3.30	272	eP	Pn	04 52 22.0	+1.2
	baz=273						
AXDP	Jialang	3.71	279	eP	Pn	04 52 26.9	+0.5
	baz=279						

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*BUL **21** 05:13:04.1±3.1, 22°.77S×29°.30E, h10^{km}, MD5.9*
EAF 21 05:13:04.2±0.8, 22°.69S×29°.36E, h10^{km}, MD5.2, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	0.70	61	i P	Pn	05 13 21.2	+0.9
MSNA	Messina	0.70	61	i P	Pn	05 13 21.2	+0.9
MOPA	Mopani	2.05	114	i P	Pb	05 13 41.9	+0.3
MOPA	Mopani	2.05	114	i P	Pb	05 13 41.9	+0.3
MATP	Matopo	2.39	340	i P	Pn	05 13 42.7	-0.9
MATP	Matopo	2.39	340	i P	Pn	05 13 42.7	-0.9
CHIPN	CHIPINGE	3.92	52	i P	Pn	05 14 07.0	+2.4
CHIPN	CHIPINGE	3.92	52	i P	Pn	05 14 07.0	+2.4
LBTB	Lobatse	4.15	235	i P	Pn	05 14 07.4	-0.4
LBTB	Lobatse	4.15	235	i P	Pn	05 14 07.4	-0.4
CNG	Changalane	4.42	145	i P	Pn	05 14 10.5	-0.8
CNG	Changalane	4.42	145	i P	Pn	05 14 10.5	-0.8
KRI	Karoi	5.83	2	i P	Pn	05 14 23.9	-7.1
KRI	Karoi	5.83	2	i P	Pn	05 14 23.9	-7.1

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*IDC **21** 05:14:15.5±1.2, 37°.16N×142°.38E, h0^{km}, mb3.7/6, mb1 3.9/8, mb1mx3.4/54, mbtmp3.8/8, ML3.6/2, MS3.2/5, Ms1 3.3/5, ms1mx2.8/54, Error ellipse: s-maj=28.0km s-min=22.7km az=126.0*
*JMA **21** 05:14:18.7±0.2, 37°.31N×142°.19E, h27^{km}±5^{km}, M3.8*
*NIED **21** 05:14:18.7, 37°.31N×142°.19E, h27^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.88; M$_{\theta\theta}$0.52; M$_{\phi\phi}$0.36; M$_{r\theta}$0.59; M$_{\theta\phi}$-1.26; M$_{\phi r}$3.80; Fault plane solution: M$_0$4.07000×10^{14} NP1: φ$_s$182.00000°, δ85.00000°, λ-72.00000°. NP2: φ$_s$286.00000°, δ19.00000°, λ-166.00000°.*
ISC 21 05:14:15.2±2.1, 37°.17N±0°.05×142°.21E±0°.07, h2^{km}±12^{km}, n30, σ1^{s}69/27, mb3.8/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	1.08	281	P	Pn	05 14 37.5	0.0
JFK				eS	Sb	05 14 50.8	-0.6
ONAJ	Iwakimizuishiy	1.13	267	P	Pg	05 14 38.3	+1.4
JMST	Minamisoumatoc	1.19	298	P	Pg	05 14 38.5	+0.4
JMST				eS	Sb	05 14 52.6	-1.8
JIKH	Ishinomakikobu	1.29	333	P	Pn	05 14 38.9	-1.3
JMM	Marumori	1.33	302	P	Pb	05 14 40.6	-0.2
JMM				eS	Sb	05 14 56.2	-2.1
JIO	Ouri	1.46	332	P	Pb	05 14 42.0	-1.0
JFT	Otama	1.53	284	P	Pb	05 14 44.9	+0.5
JFT				eS	Sn	05 15 03.7	-0.5
JOU	Okura	1.71	315	P	Pb	05 14 46.7	-0.8
JOU				eS	Sn	05 15 07.0	-1.7
JMK	Ichinoseki	1.95	337	P	Pb	05 14 49.4	-2.0
JYK	Kaneyama	2.28	321	P	Pn	05 14 53.1	-0.8
JOM	Ohasama	2.41	343	P	Pn	05 14 56.0	+0.2
MJAR	Matsushiro Arr	3.27	260	Pn	Pb	05 15 11.3	-2.7
	1.9nm,0.3s,baz=91,slow=15,SNR=26						
MJAR				LR	LR	05 16 43.7	
	comp=Z,265nm,18.5s,baz=70,slow=44						
MAT	Matsushiro	3.27	260	P	Pb	05 15 11.8	-2.2
MAT				S	Sn	05 15 49.8	+2.7
JHJ	Hachijo jima 2	4.50	207	Pn	Pn	05 15 24.4	0.0
	22nm,0.3s,baz=55,slow=22,SNR=5.8						
JHJ				Sn	Sn	05 16 13.0	-4.4
	17nm,0.3s,baz=66,slow=22,SNR=2.1						
KSRS	Korea Array	11.38	276	LR	LR	05 21 17.1	
	comp=Z,43nm,19.3s,baz=55,slow=36						
KLR	Kul'dur	14.25	331	LR	LR	05 22 30.3	
	comp=Z,71nm,18.8s,baz=124,slow=34						
H11N2	WAKE ISLAND Hy	27.67	122	T	T	05 49 34.7	
	baz=315,slow=75,SNR=43						
H11N1	WAKE ISLAND Hy	27.68	122	T	T	05 49 18.2	
	baz=315,slow=75,SNR=38						
H11N3	WAKE ISLAND Hy	27.69	122	T	T	05 49 23.5	
	baz=315,slow=75,SNR=38						
SONM	Songino Array	28.24	304	P	P	05 20 11.2	+1.5
	0.7nm,0.4s,baz=81,slow=9.3,SNR=3.7						
H11S1	WAKE ISLAND Hy	28.40	124	T	T	05 50 16.0	
	baz=317,slow=76,SNR=44						
H11S3	WAKE ISLAND Hy	28.40	124	T	T	05 50 14.2	
	baz=317,slow=76,SNR=40						
H11S2	WAKE ISLAND Hy	28.42	124	T	T	05 50 11.4	
	baz=317,slow=76,SNR=48						
CMAR	Chiang Mai Arr	42.15	256	LR	LR	05 40 40.7	
	comp=Z,18nm,18.5s,baz=10.0,slow=38						
MKAR	Makanchi Array	44.59	302	P	P	05 22 29.4	+0.7
	1.0nm,0.7s,baz=87,slow=9.0,SNR=9.7						
KURBB	Kurchatov Arra	46.42	308	P	P	05 22 44.6	+1.5
	2.3nm,0.6s,baz=82,slow=8.1,SNR=11						
ILAR	Eielson Array	49.04	32	P	P	05 23 03.5	+0.2
	0.3nm,0.9s,baz=275,slow=7.6,SNR=5.0						
WRA	Warramunga Arr	57.28	189	P	P	05 24 05.3	+0.8
	0.5nm,0.6s,baz=8.9,slow=6.8,SNR=5.7						
YKA	Yellowknife Ar	63.37	30	P	P	05 24 45.8	+0.2
	0.2nm,0.7s,baz=299,slow=6.2,SNR=5.4						
ESDC	Sonseca Array	97.45	334	LR	LR	06 16 36.8	
	comp=Z,50nm,18.6s,baz=310,slow=38						

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*IDC **21** 05:21:14.9±1.0, 59°.99S×18°.14W, h0^{km}, mb4.0/4, mb1 4.2/5, mb1mx3.8/29, mbtmp4.2/5, ML4.9/1, MS3.7/8, Ms1 3.6/8, ms1mx3.5/18, Error ellipse: s-maj=40.5km s-min=25.8km az=80.0*
*NEIC **21** 05:21:17.6±2.0, 60°.2S±0°.1×18°.5W±0°.2, h20^{km}±2^{km}, mb4.7/27, Error ellipse: s-maj=17.8km s-min=14.2km az=214.0*
ISC 21 05:21:15.5±0.6, 60°.26S±0°.08×18°.4W±0°.1, h10^{km}, n54, σ1^{s}73/43, mb4.6/17, MS3.6/8, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	11.23	162	P	Pn	05 23 58.7	+2.8
VNA1	Neumayer--Stat	11.23	162	S	Sn	05 25 56.4	-4.9
HOPE	Hope Point	11.44	294	Pn	Pn	05 23 57.9	-0.8
VNA3	Neumayer Olymp	11.58	166	P	Pn	05 24 02.3	+1.6
VNA2	Neumayer--Watz	11.61	162	P	Pn	05 24 02.9	+1.8
	baz=330,slow=16						
VNA2	Neumayer--Watz	11.61	162	S	Sn	05 26 05.6	-5.0
	baz=324,slow=26						
SNAA	Sanae	13.03	158	P	Pn	05 24 22.5	+2.0
SNAA	Sanae	13.03	158	Pn	Pn	05 24 22.2	+1.7
	6.5nm,0.3s,baz=324,slow=13,SNR=249						
SNAA	Sanae	13.03	158		Pn	05 24 22.5	+2.0
PMSA	Palmer Station	21.15	238	P	P	05 25 59.5	-0.7
PMSA				IAmb	IAmb	05 26 17.7	
	comp=Z,73nm,1.4s						
SMAI	San Martin Ant	22.02	229	P	P	05 26 09.2	-0.3
SMAI				IAmb	IAmb	05 26 27.9	
	comp=Z,15nm,0.9s						
EFI	East Falkland	23.45	274	P	P	05 26 23.3	-1.4
EFI				IAmb	IAmb	05 26 23.9	
	comp=Z,25nm,0.7s						
MG01	Puerto William	26.37	260	P	P	05 26 53.1	+1.6
QSPA	South Pole Qui	29.98	180	P	P	05 27 26.2	+2.3
QSPA				IAmb	IAmb	05 27 32.4	
	comp=Z,10nm,1.1s						
MAW	Mawson	33.95	137	LR	LR	05 39 32.2	
	comp=Z,74nm,21.0s,baz=242,slow=32						
PLTB	Pedras Altas	36.75	305	P	P	05 28 23.0	+0.1
PLTB				IAmb	IAmb	05 28 31.0	
	comp=Z,30nm,1.3s						
PLCA	Paso Flores	37.24	278	LR	LR	05 42 04.9	
	comp=Z,70nm,19.7s,baz=112,slow=34						
VNDA	Vanda	42.47	180	P	P	05 29 14.0	+4.0
	comp=Z,0.9nm,0.7s,baz=181,slow=7.6,SNR=5.8						
VNDA				LR	LR	05 45 59.7	
	comp=Z,41nm,19.8s,baz=188,slow=35						
VNDA	Vanda	42.47	180	P	P	05 29 10.0	0.0
BO01	Tunca	42.48	283	P	P	05 29 08.8	-1.7
MT09	Talagante	42.93	284	P	P	05 29 13.7	-0.7
MT09				IAmb	IAmb	05 29 21.4	
	comp=Z,12nm,1.1s						
MT01	Popeta	42.98	284	P	P	05 29 13.8	-0.9
CPUP	Villa Florida	43.06	304	LR	LR	05 46 28.2	
	comp=Z,67nm,19.9s,baz=50,slow=35						
BOSA	Boshof	43.12	63	LR	LR	05 43 21.2	
	comp=Z,101nm,19.8s,baz=189,slow=31						
AC02	Maricunga	47.82	291	P	P	05 29 54.1	+0.5
AC02				IAmb	IAmb	05 29 56.6	
	comp=Z,4.6nm,0.9s						
PB14	IPOC Station P	50.30	291	P	P	05 30 13.9	+1.4
H10S2	ASCENSION HYDR	51.27	5	T	T	06 25 38.0	
	baz=184						
H10S3	ASCENSION HYDR	51.28	5	T	T	06 25 43.3	
	baz=36,SNR=3.5						
LVC	Limon Verde	51.35	294	P	P	05 30 17.8	-2.7
LVC				IAmb	IAmb	05 30 32.2	
	comp=Z,18nm,1.5s						
PB06	IPOC Station P	51.57	293	P	P	05 30 22.7	+0.9
PB04	IPOC Station P	52.15	293	P	P	05 30 26.1	-0.1
PB09	IPOC Station P	52.20	294	P	P	05 30 26.4	-0.1
PB01	IPOC Station P	52.97	294	P	P	05 30 31.1	-1.1
PB01				IAmb	IAmb	05 30 59.1	
	comp=Z,16nm,1.5s						
PATCX	Punta Patache	53.47	294	P	P	05 30 35.8	0.0
PTLB	Pontes e Lacer	53.56	309	P	P	05 30 36.1	-0.3
PB08	IPOC Station P	53.60	295	P	P	05 30 36.6	-0.6
PB08				IAmb	IAmb	05 30 48.1	
	comp=Z,6.9nm,1.2s						
PB11	IPOC Station P	54.16	295	P	P	05 30 41.4	+0.4
PB11				IAmb	IAmb	05 30 54.0	
	comp=Z,12nm,1.1s						
PB16	IPOC Station P	55.34	296	P	P	05 30 50.5	+0.4
LSZ	Lusaka	56.12	58	P	P	05 30 54.2	-1.0
LSZ				IAmb	IAmb	05 30 59.1	
	comp=Z,6.3nm,1.2s						
VILB	Vilhena	56.24	309	P	P	05 30 56.3	+0.4
VILB				IAmb	IAmb	05 31 03.3	
	comp=Z,5.6nm,0.8s						
LPAZ	La Paz	56.54	299	P	P	05 30 59.5	+0.8
	comp=Z,1.5nm,0.7s,baz=178,slow=6.6,SNR=7.9						
LPAZ	La Paz	56.54	299	P	P	05 30 58.2	-0.5
LPAZ				IAmb	IAmb	05 31 06.8	
	comp=Z,9.0nm,1.4s						
DBIC	Dimbokro	67.58	15	P	P	05 32 11.5	-0.5
	comp=Z,3.2nm,1.0s,baz=224,slow=9.5,SNR=3.5						
DBIC	Dimbokro	67.58	15	IAmb	IAmb	05 32 33.4	
	comp=Z,13nm,1.4s						
KMBO	Kilima Mbogo	72.67	60	LR	LR	06 00 41.6	
	comp=Z,96nm,21.9s,baz=286,slow=33						
TORD	Torodi Ar. Bea	74.92	20	P	P	05 32 56.2	-0.1
	comp=Z,1.0nm,0.8s,baz=191,slow=5.2,SNR=6.1						
TORD	Torodi Ar. Bea	74.92	20	IAmb	IAmb	05 33 05.0	
	comp=Z,1.2nm,0.8s						
RAR	Rarotonga	92.95	216	LR	LR	06 06 00.8	
	comp=Z,88nm,20.8s,baz=154,slow=29						
ASAR	Alice Springs	93.38	155	LR	LR	06 15 17.1	
	comp=Z,30nm,18.1s,baz=187,slow=35						
YKA	Yellowknife Ar	142.43	311	PKhKP	PKPpre	05 40 43.0	
	comp=Z,0.2nm,0.5s,baz=132,slow=3.2,SNR=7.9						
SONM	Songino Array	146.35	86	PKPbc	PKPdf	05 40 54.2	0.0
	comp=Z,2.4nm,0.8s,baz=216,slow=3.1,SNR=6.5						
SONM	Songino Array	146.35	86		PKPdf	05 40 53.7	-0.6
ILAR	Eielson Array	156.36	303	PKPab	PKPab	05 41 37.3	0.0
	comp=Z,0.3nm,0.5s,baz=135,slow=2.4,SNR=2.6						
ILAR	Eielson Array	156.36	303	PKPdf	PKPdf	05 41 09.1	+0.3
ILAR					PKPab	05 41 37.2	-0.1

NNC 21 05:29:05.8±2.6, 38°.36N×72°.44E, h0^{km}, mb4.1, mpv3.7, 9C-3D, Error ellipse: s-maj=21.3km s-min=15.0km az=173.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.21	335	Pg	Pg	05 30 23.6	-2.8
	461nm,0.6s						
IUG				Lg	Lg	05 31 24.2	
	79nm,0.5s						
MRKS	Merke	4.42	8	Pg	Pb	05 30 26.2	+1.8
	18nm,0.4s						
MRKS				Lg	Lg	05 31 28.7	
	8.9nm,0.5s						
AAK	Ala-Archa	4.55	19	⇑Pn	Pn	05 30 16.8	+0.7
	4.3nm,0.7s						
AAK				⇑Pg	Pb	05 30 27.0	+0.3
	9.3nm,0.6s						
AAK				⇑Lg	Lg	05 31 32.1	
	18nm,1.1s						
KK02	Karatay Array	4.96	343	⇓Pn	Pn	05 30 22.1	+0.5
	3.2nm,0.4s						
KK02				⇑Lg	Lg	05 31 41.1	
	19nm,0.7s						
TKM2	Tokmak 2	5.15	27	⇑Pn	Pn	05 30 26.2	+1.8
	0.7nm,0.5s						
TKM2				⇓Pg	Pb	05 30 39.8	+2.9
	4.2nm,0.6s						
TKM2				⇑Lg	Lg	05 31 49.5	
	11nm,0.8s						
TNSS	Tian-Shan	5.79	35	Pg	Pb	05 30 50.0	+2.0
	4.4nm,0.6s						
TNSS				Lg	Lg	05 32 10.1	
	5.0nm,1.1s						
KRBS	Karabastau	5.86	24	Pg	Pb	05 30 51.7	+2.7
	4.2nm,0.7s						
KRBS				Lg	Lg	05 32 12.4	
	4.1nm,0.8s						
KTBS	Karatobe	6.23	30	Pg	Pb	05 30 56.9	+1.6
	3.9nm,0.9s						
KTBS				Lg	Lg	05 32 22.0	
	9.4nm,0.7s						
AB31	Akbulak array	14.12	324	⇑Pn	Pn	05 32 24.2	-2.8
	0.7nm,0.5s,baz=140,slow=12,SNR=24						
AB31				⇑Sn	Sn	05 35 03.7	-0.6
	1.7nm,0.8s,baz=142,slow=23,SNR=4.4						
AKTO	Aktyubinsk	15.84	324	⇓Pn	Pn	05 32 51.4	+1.3
	2.8nm,0.8s						
AKTO				⇑Sn	Sn	05 35 41.2	-5.0
	2.0nm,0.8s						

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*IDC **21** 05:30:38.8±5.6, 8°.11S×124°.20E, h153^{km}±64^{km}, mb2.8/1, mb1 3.5/4, mb1mx3.1/39, mbtmp3.7/4, Error ellipse: s-maj=94.8km s-min=32.0km az=46.0*
*DJA **21** 05:30:41.3±1.1, 8°S±4°×12°4E±°, h138^{km}±11^{km}, M3.8/7, mb4.8/1, MLv3.3/7*
ISC 21 05:30:38.8±1.4, 8°.1S±0°.1×124°.3E±0°.1, h150^{km}, n8, σ0^{s}78/10, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	2.10	255	P	Pn	05 31 16.4	+1.3
BATI	Baumata	2.19	196	P	Pn	05 31 16.8	+0.7
	12nm,0.3s,baz=10,slow=11,SNR=6.4						
BATI				S	Sn	05 31 44.7	-0.3
	27nm,0.3s,baz=290,slow=20,SNR=11						
BATI	Baumata	2.19	196	P	Pn	05 31 16.7	+0.5
BATI				S	Sn	05 31 44.0	-1.0
EDFI	Ende, Flores	2.65	256	P	Pn	05 31 21.9	0.0
BASI	Baing, Sumba	4.22	240	P	Pn	05 31 42.2	+0.2
WRA	Warramunga Arr	15.28	141	P	Pn	05 34 06.6	-0.2
	0.9nm,0.3s,baz=316,slow=12,SNR=48						
ASAR	Alice Springs	18.02	150	P	P	05 34 39.0	+0.5
	0.4nm,0.3s,baz=330,slow=12,SNR=34						
MKAR	Makanchi Array	66.17	330	P	P	05 41 09.7	-0.6
	0.1nm,0.4s,baz=112,slow=7.2,SNR=1.5						

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*IDC **21** 05:43:42.9±1.1, 37°.88N×72°.75E, h0^{km}, mb3.7/6, mb1 3.9/8, mb1mx3.6/43, mbtmp3.7/8, ML3.0/2, MS2.7/3, Ms1 2.8/3, ms1mx2.5/43, Error ellipse: s-maj=34.0km s-min=25.3km az=84.0*
*SOME **21** 05:43:52.2, 38°.48N×72°.70E, h5^{km}*
*NNC **21** 05:44:02.7±6.7, 39°.01N×72°.92E, h13^{km}±26^{km}, mb4.2, mpv3.7, Error ellipse: s-maj=48.8km s-min=23.3km az=0.0*
ISC 21 05:43:45.0±0.7, 37°.78N±0°.05×72°.47E±0°.07, h10^{km}, n28, σ1^{s}50/34, mb3.6/6, 5C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.97	187	P	Pb	05 44 54.3	-0.9
CEP				S	Sg	05 45 54.0	+1.4
IUG	Iuzhnay	4.75	338	eP	Pb	05 45 09.8	+1.4
	378nm,0.7s						
IUG				eS	Sb	05 46 07.8	+2.2
	120nm,0.7s						
IUG	Iuzhnay	4.75	338	Pg	Pb	05 45 09.8	+1.4
	842nm,0.9s						
IUG				Lg	Lg	05 46 07.8	
	120nm,0.7s						
MRKS	Merke	4.99	6	eP	Pb	05 45 11.8	-0.7
	15nm,0.4s						
MRKS				eS	Sb	05 46 11.4	-1.3
	32nm,0.8s						
MRKS	Merke	4.99	6	Pg	Pb	05 45 11.8	-0.7
	15nm,0.4s						
MRKS				Lg	Lg	05 46 11.4	
	32nm,0.8s						
THW	Thamme Wali	5.01	187	P	Pb	05 45 06.5	-6.3
AAK	Ala-Archa	5.09	17	Pn	Pn	05 45 02.9	+1.3
	0.6nm,0.3s,baz=198,slow=9.2,SNR=8.9						
AAK				LR	LR	05 47 09.1	
	comp=Z,120nm,20.7s,baz=179,slow=42						
AAK	Ala-Archa	5.09	17	⇓Pn	Pn	05 45 02.1	+0.5
	4.2nm,0.8s						
AAK				⇑Pg	Pb	05 45 13.2	-1.2
	15nm,0.7s						
AAK				⇓Lg	Lg	05 46 05.0	
	18nm,0.8s						
KK02	Karatay Array	5.52	345	⇑Pn	Pn	05 45 08.0	+0.7
	12nm,0.7s,baz=149,slow=12						
KK02				⇓Lg	Lg	05 46 25.6	
	30nm,0.8s,baz=148,slow=26						
BRLS	Boroldaу	5.62	340	eP	Pb	05 45 23.1	0.0
	4.6nm,0.6s						
BRLS				eS	Sb	05 46 30.9	+0.4
	21nm,0.9s						
BRLS	Boroldaу	5.62	340	Pg	Pb	05 45 23.1	0.0
	4.6nm,0.6s						
BRLS				Lg	Lg	05 46 30.9	
	21nm,0.9s						
TKM2	Tokmak 2	5.66	24	⇑Pn	Pn	05 45 11.3	+1.9
	2.7nm,0.8s						
TKM2				⇓Pg	Pb	05 45 23.4	-0.6
	11nm,1.1s						
TKM2				⇑Lg	Lg	05 46 23.2	
	17nm,0.9s						
SGDS	Sogindy	5.90	16	Pg	Pb	05 45 29.4	+1.4
	4.6nm,0.7s						
SGDS				Lg	Lg	05 46 41.8	
	16nm,0.8s						
DGS	Degeres	6.01	24	eP	Pb	05 45 31.0	+1.1
	7.3nm,0.6s						
DGS				eS	Sb	05 46 45.4	+3.5
	11nm,0.6s						
DGS	Degeres	6.01	24	Pg	Pb	05 45 31.0	+1.1
	7.3nm,0.6s						
DGS				Lg	Lg	05 46 45.4	
	11nm,0.6s						
MKAR	Makanchi Array	11.57	36	Pn	Pn	05 46 31.7	+1.5
	0.1nm,0.3s,baz=204,slow=17,SNR=3.5						
KURBB	Kurchatov Arra	13.55	17	Pn	Pn	05 46 56.1	-1.1
	0.0nm,0.3s,baz=206,slow=12,SNR=5.6						
AB31	Akbulak array	14.61	326	Pn	P	05 47 18.6	+0.5
	2.0nm,0.7s,baz=138,slow=12,SNR=27						
AB31				⇓Sn	Sn	05 49 50.8	-2.8
	1.6nm,0.6s,baz=161,slow=21,SNR=5.0						
AKTO	Aktyubinsk	16.32	325	⇓Pn	P	05 47 40.1	+3.0
	7.3nm,0.9s						
AKTO				⇑Sn	Sn	05 50 34.9	-0.4
	4.8nm,1.0s						
ZALV	Zalesovo Beam	18.27	24	P	Pn	05 47 57.1	-1.4
	0.2nm,0.3s,baz=230,slow=11,SNR=8.1						
GNI	Garni	21.66	285	LR	LR	05 58 19.2	
	comp=Z,26nm,19.9s,baz=73,slow=40						
CMAR	Chiang Mai Arr	30.09	122	LR	LR	06 04 21.1	
	comp=Z,7.7nm,21.0s,baz=335,slow=41						
FINES	FINESS Array B	37.10	325	P	P	05 50 54.8	-0.4
	6.5nm,1.1s,baz=110,slow=12,SNR=2.7						
TORD	Torodi Ar. Bea	66.92	269	P	P	05 54 39.0	+1.2
	0.2nm,0.4s,baz=43,slow=6.2,SNR=2.4						
ILAR	Eielson Array	73.23	16	P	P	05 55 14.1	-1.8
	0.3nm,0.8s,baz=324,slow=6.0,SNR=2.6						
YKA	Yellowknife Ar	79.91	3	P	P	05 55 52.7	-0.9
	0.2nm,0.5s,baz=350,slow=5.5,SNR=7.9						
WRA	Warramunga Arr	81.69	123	P	P	05 56 02.6	-1.2
	2.0nm,1.2s,baz=319,slow=4.4,SNR=6.1						
ASAR	Alice Springs	84.04	126	P	P	05 56 14.9	-1.0
	0.3nm,0.7s,baz=308,slow=4.6,SNR=1.9						

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*IDC **21** 05:49:31.8±3.7, 38°.29N×37°.77E, h0^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.4/44, mbtmp3.6/4, ML3.0/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/43, Error ellipse: s-maj=83.7km s-min=19.0km az=6.0*
*DDA **21** 05:49:34.0, 38°.82N×37°.85E, h17^{km}, MW3.9*
ISC 21 05:49:35.1±1.0, 38°.81N±0°.02×37°.86E±0°.02, h5^{km}±8^{km}, n48, σ1^{s}00/73, mb3.8/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEKM	Malatya_Hekimh	0.10	51	i P	Pg	05 49 37.6	+0.2
HEKM				i S	Sg	05 49 40.2	+1.2
CUGUR	Gurin_SVAS	0.47	259	i P	Pg	05 49 43.5	-0.6
CUGUR				i S	Sg	05 49 50.6	+0.5
AKCD	Akcadag	0.52	174	i P	Pg	05 49 44.8	-0.4
AKCD				i S	Sb	05 49 53.6	-1.0
CUKAN	kangal_SIVAS	0.59	329	i P	Pg	05 49 45.6	-0.8
CUKAN				i S	Sg	05 49 54.2	+0.1
KEMA	Kemaliye	0.67	47	i P	Pg	05 49 46.7	-1.3
KEMA				i S	Sg	05 49 57.2	+0.4
ELBS	KAHRAMANMARAS_	0.75	229	i P	Pg	05 49 48.6	-0.8
ELBS				i S	Sb	05 50 00.2	-1.0
ELZG	Elazig	0.94	109	i P	Pg	05 49 51.8	-1.3
ELZG				i S	Sb	05 50 05.7	-1.1
CUAYA	Sivas-Altinyay	0.97	298	i P	Pg	05 49 52.3	-1.5
CUAYA				i S	Sg	05 50 06.0	-0.4
CUZAR	Zara_SIVAS	1.07	357	i P	Pg	05 49 55.3	-0.4
CUZAR				i S	Sb	05 50 10.5	-0.1
SCER	sogukcermik	1.19	332	i P	Pb	05 49 56.5	-1.7
SCER				i S	Sn	05 50 14.2	-0.9
REFA	Refahiye_ERZN	1.30	33	i P	Pn	05 49 58.7	-1.4
REFA				i S	Sg	05 50 19.1	+2.3
TNCL	Tunceli-Merkez	1.35	77	i P	Pn	05 49 59.1	-1.6
TNCL				i S	Sb	05 50 17.3	-1.2
ATAB	Bozova	1.39	165	i P	Pg	05 50 01.6	-0.1
ATAB				i S	Sg	05 50 20.5	+0.9
CUSAR	Sarkisla-SIVAS	1.39	296	i P	Pn	05 49 59.7	-1.5
CUSAR				i S	Sg	05 50 20.4	+0.6
SUSE	Susehri	1.42	11	i P	Pg	05 50 02.3	0.0
SUSE				i S	Sg	05 50 23.5	+2.8
KAHM	Kahramanmaras,	1.47	208	i P	Pg	05 50 03.4	+0.2
KAHM				i S	Sg	05 50 23.2	+1.0
GZT	Gaziantep	1.48	189	i P	Pg	05 50 03.1	-0.3
GZT				i S	Sg	05 50 23.9	+1.5
KOVA	Elazig, Kovanc	1.53	93	i P	Pn	05 50 02.7	-0.5
KOVA				i S	Sg	05 50 25.0	+0.6
SAIM	ADANA	1.62	240	i P	Pn	05 50 04.0	-0.4
ALUC	Giresun/Alucra	1.68	25	i P	Pb	05 50 06.3	-0.4
EUZM	Uzumlu	1.69	57	i P	Pg	05 50 06.9	-0.5
EUZM				i S	Sg	05 50 28.9	-0.3
ANDN	Andirin	1.71	224	i P	Pb	05 50 06.4	-0.7
KELT	Kelkit	1.72	39	i P	Pb	05 50 06.0	-1.3
GUNE	Kayseri	1.74	274	i P	Pb	05 50 06.7	-0.9
TOKA	Tokat	1.84	325	i P	Pb	05 50 08.9	-0.4
SANL	SANLIURFA_Merk	1.87	151	i P	Pb	05 50 08.6	-1.1
SANL				i S	Sg	05 50 35.0	-0.1
HACI	Hacifakili, Ak	1.87	299	i P	Pb	05 50 08.6	-1.2
HACI				i S	Sb	05 50 33.3	-0.3
KAMA	Osmaniye	1.88	210	i P	Pb	05 50 08.6	-1.3
DIYA	Diyarbakir	1.99	116	i P	Pb	05 50 10.2	-1.6
HANI	Diyarbakir_Han	2.03	101	i P	Pb	05 50 12.6	0.0
ERBA	Erbaa	2.05	336	i P	Pb	05 50 12.0	-0.8
ERBA				i S	Sb	05 50 38.3	-0.3
YAHY	KAYSERI_Yahyal	2.08	251	i P	Pn	05 50 11.3	+0.5
KUZU	Kuzuini	2.13	197	i P	Pn	05 50 11.2	-0.2
SIRC	Yozgat	2.17	285	i P	Pn	05 50 12.0	0.0
ORDU	Ordu-Boztepe	2.17	0	i P	Pb	05 50 14.2	-0.7
ORDU				i S	Sg	05 50 45.9	+0.9
CKRK	Yozgat, Cekere	2.21	305	i P	Pb	05 50 14.2	-1.5
CKRK				i S	Sb	05 50 44.3	+0.9
BAYB	BAYBURT	2.35	51	i P	Pn	05 50 14.3	-0.3
KOPT	Kop Dagi	2.37	59	i P	Pg	05 50 20.4	-0.2
SLHN	Bingol, Solhan	2.48	86	i P	Pb	05 50 20.7	+0.5
SLHN				i S	Sg	05 50 55.5	+0.9
SVAN	Silvan-Diyarba	2.71	103	i P	Pn	05 50 19.5	+0.2
KRIK	Erzurum-spir	2.82	56	i P	Pg	05 50 27.3	-1.8
CDAG	Cicekdag	2.82	288	i P	Pn	05 50 21.2	+0.3
KIRS	Kırehir-Merke	3.09	277	i P	Pn	05 50 24.6	+0.1

HOMI	Horasan	3.37	67	iP	Pg	05 50 38.6	-1.1
BRTR	Keskin Array B	3.40	287	Pn	Pn	05 50 29.2	+0.4
	1.3nm,0.3s,baz=112,slow=14,SNR=29						
BRTR				Lg	Lg	05 51 25.5	
	1.8nm,0.3s,baz=124,slow=28,SNR=4.7						
BRTR				LR	LR	05 52 10.0	
	comp=Z,112nm,19.3s,baz=67,slow=45						
FINES	FINESS Array B	23.80	346	P	P	05 54 49.8	+1.3
	4.2nm,1.0s,baz=165,slow=7.2,SNR=4.6						
KURBB	Kurchatov Arra	30.84	54	P	P	05 55 52.9	+1.1
	0.3nm,0.2s,baz=266,slow=9.1,SNR=4.3						
YKA	Yellowknife Ar	76.63	347	P	P	06 01 27.5	+1.1
	0.2nm,0.6s,baz=23,slow=5.6,SNR=3.0						

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*NEIC **21** 05:55:37.5±1.8, 26°.3S±0°.1×179°.0E±0°.2, h507^{km}±10^{km}, mb4.2/6, Error ellipse: s-maj=21.0km s-min=19.7km az=83.0*

*IDC **21** 05:55:38.3±1.5, 26°.04S×179°.21E, h507^{km}±19^{km}, mb3.1/3, mb1 3.5/4, mb1mx2.8/28, mbtmp4.0/4, Error ellipse: s-maj=35.2km s-min=22.8km az=163.0*

ISC 21 05:55:36.8±0.7**, 26°.26S**±0°.07×**179°.0E**±0°.1**, h500**^{km}**, n37, σ1^{s}.57**/42**, mb3.8**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	4.05	138	P	P	05 56 57.3	+1.9
RAO	Raoul Island	4.06	138	P	P	05 56 57.7	+2.2
	381nm,0.3s,baz=89,slow=8.0,SNR=19						
RAO	Raoul Island	4.06	138	P	P	05 56 58.0	+2.4
GLKZ	Green Lake	4.06	138	P	P	05 56 57.3	+1.8
GLKZ				S	S	05 57 59.6	-0.3
MSVF	Nonsavu	8.53	354	P	P	05 57 38.6	-0.3
	4.1nm,0.3s,baz=210,slow=8.6,SNR=17						
MSVF	Nonsavu	8.53	354	P	P	05 57 38.5	-0.5
MARNC	Mare, Loyalty	11.08	293	P	P	05 58 05.0	-0.6
MXZ	Matakaoa Point	11.28	183	P	P	05 58 08.3	+0.8
MXZ	Matakaoa Point	11.28	183	P	P	05 58 07.8	+0.3
HAZ	Te Kaha	11.50	185	P	P	05 58 09.6	-0.3
HAZ				S	S	06 00 14.9	-1.1
WMGZ	Waiomatatini S	11.53	182	P	P	05 58 12.5	+2.3
WMGZ				S	S	06 00 13.2	-3.4
PKGZ	Pakihiroa	11.62	184	P	P	05 58 16.0	+4.9
RUGZ	Raukumara Rang	11.72	185	P	P	05 58 12.6	+0.3
RUGZ				S	S	06 00 18.3	-2.2
PUZ	Puketiti	11.79	183	P	P	05 58 14.8	+1.8
PUZ				S	S	06 00 17.6	-4.1
TWGZ	Tauwhareparae	11.91	184	P	P	05 58 14.9	+0.7
URZ	Urewera	12.06	187	P	P	05 58 15.9	+0.1
	2.7nm,0.3s,baz=302,slow=23,SNR=23						
URZ	Urewera	12.06	187	P	P	05 58 14.7	-1.1
MWZ	Matawai	12.10	185	P	P	05 58 17.6	+1.4
MWZ				S	S	06 00 29.1	+1.5
DZM	Mont Dzumac	12.17	287	P	P	05 58 18.2	+0.9
RIGZ	Rimuhau	12.45	184	P	P	05 58 19.2	-0.7
RIGZ				S	S	06 00 37.5	+3.0
SNGZ	Shannon Statio	12.56	186	P	P	05 58 23.7	+2.7
HIZ	Hauiti	12.70	195	P	P	05 58 29.1	+6.6
BKZ	Black Stump Fm	13.03	189	P	P	05 58 25.9	-0.2
ASAR	Alice Springs	40.78	264	P	P	06 02 37.0	+2.9
	0.9nm,0.6s,baz=92,slow=7.2,SNR=18						
ASAR	Alice Springs	40.78	264	P	P	06 02 35.0	+0.9
WR0	Warramunga Arr	41.19	269	P	P	06 02 37.8	+0.4
WR0				IAmb	IAmb	06 03 04.3	
	comp=Z,16nm,1.4s						
WB2	Warramunga Arr	41.37	269	P	P	06 02 38.6	-0.2
WB2				IAmb	IAmb	06 02 55.9	
	comp=Z,11nm,1.3s						
WRA	Warramunga Arr	41.38	269	P	P	06 02 38.5	-0.3
	comp=Z,0.7nm,0.4s,baz=103,slow=7.9,SNR=16						
WRA	Warramunga Arr	41.38	269	P	P	06 02 39.3	+0.4
WB0	Warramunga Arr	41.38	269	P	P	06 02 38.8	-0.1
WB0				IAmb	IAmb	06 03 00.5	
	comp=Z,15nm,1.5s						
KNRA	Kununurra	47.80	272	P	P	06 03 27.5	-0.9
QSPA	South Pole Qui	63.83	180	P	P	06 05 18.8	-0.4
QSPA				IAmb	IAmb	06 05 22.7	
	comp=Z,3.9nm,1.1s						
NVAR	Mina Array Bea	87.09	44	P	P	06 07 28.7	-0.5
	comp=Z,0.8nm,0.6s,baz=221,slow=7.6,SNR=7.6						
NVAR	Mina Array Bea	87.09	44	P	P	06 07 29.0	-0.2
TXAR	Lajitas Array	92.46	59	P	P	06 07 53.7	-0.4
	comp=Z,0.3nm,0.7s,baz=220,slow=7.6,SNR=4.4						
AKASG	Malin Array Be	146.40	325	PKPbc	PKPbc	06 14 20.7	-0.2
	comp=Z,0.3nm,0.5s,baz=53,slow=2.7,SNR=4.9						
AKASG	Malin Array Be	146.40	325		PKPbc	06 14 21.0	0.0

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*MOS **21** 05:57:28.1±0.7, 44°.40N×148°.26E, h93^{km}, mb4.3/1, Error ellipse: s-maj=24.7km s-min=14.6km az=157.3*

*SKHL **21** 05:57:29.2±0.2, 44°.20N×148°.40E, h80^{km}±8^{km}, mb4.7/5, msha5.7/4*

*JMA **21** 05:57:30.1±0.4, 44°.08N×148°.23E, h71^{km}, M4.1*

*IDC **21** 05:57:31.9±5.5, 44°.50N×148°.07E, h111^{km}±54^{km}, mb3.0/3, mb1 3.2/4, mb1mx3.0/32, mbtmp3.4/4, Error ellipse: s-maj=200.5km s-min=32.5km az=167.0*

ISC 21 05:57:26.8±1.5**, 44°.16N**±0°.08×**148°.5E**±0°.1**, h83**^{km}±12^{km}**, n39, σ1^{s}.67**/55**, mb3.4**/3**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.16	338	d iPN	Pn	05 57 47.7	-0.2
KUR				eS	Sn	05 58 01.8	-2.0
KUR				pmax	pmax		
	comp=Z,664nm,0.3s						
KUR				smax	smax		
	comp=E,1μm,0.3s						
KUR				smax	smax		
	comp=N,1μm,0.4s						
KUR	Kuril'sk	1.16	338	iP	Pn	05 57 47.7	-0.2
KUR				AMB	AMB	05 57 48.1	
	comp=N,330nm,0.3s						
KUR				eS	Sn	05 58 01.8	-2.0
KUR				A	A	05 58 02.5	
	comp=N,1μm,0.4s						
KUR				A	A	05 58 02.5	
	comp=N,1μm,0.4s						
SHO	Shikotan	1.22	257	ePN	Pn	05 57 49.7	+1.1
SHO				eS	Sn	05 58 04.5	-0.5
SHO				pmax	pmax		
	comp=N,7.0nm,0.1s						
SHO				pmax	pmax		
	comp=E,10.0nm,0.1s						
SHO				pmax	pmax		
	comp=Z,19nm,0.1s						
SHO				smax	smax		
	comp=E,786nm,0.3s						
SHO				smax	smax		
	comp=N,522nm,0.2s						
SHO	Shikotan	1.22	257	eP	Pn	05 57 49.5	+0.9
SHO				AMB	AMB	05 57 55.4	
	comp=N,60nm,0.2s						
SHO				eS	Sn	05 58 04.5	-0.5
SHO				A	A	05 58 06.6	
	comp=N,560nm,0.3s						
SHO				A	A	05 58 06.6	
	comp=N,840nm,0.3s						
YUK	Yuzh-Kuril'sk	1.88	267	ePN	Pn	05 57 58.6	+1.4
YUK				eS	Sn	05 58 20.7	+0.4
YUK				smax	smax		
	comp=E,947nm,0.4s						
YUK				smax	smax		
	comp=N,595nm,0.1s						
YUK	Yuzh-Kuril'sk	1.88	267	eP	Pn	05 57 58.7	+1.5
YUK				AMB	AMB	05 58 00.2	
	comp=N,300nm,0.2s						
YUK				eS	Sn	05 58 20.3	0.0
YUK				A	A	05 58 23.0	
	comp=N,600nm,0.4s						
YUK				A	A	05 58 23.0	
	comp=N,950nm,0.4s						
NEM2	Nemuro 2	2.13	249	P	Pn	05 58 01.4	+1.0
NEM2				eS	Sn	05 58 24.9	-1.2
NMR	Nemuro--Hokkai	2.14	249	ePN	Pn	05 58 01.5	+1.0
NMR				eS	Sn	05 58 25.6	-0.7
NMR	Nemuro--Hokkai	2.14	249	eP	Pn	05 58 01.5	+1.0
NMR				eS	Sn	05 58 25.6	-0.7
GLVR	Golovnino	2.17	260	ePN	Pn	05 58 02.0	+1.1
GLVR				eS	Sn	05 58 26.8	-0.3
GLVR				smax	smax		
	comp=N,732nm,0.2s						
GLVR				smax	smax		
	comp=E,631nm,0.4s						
GLVR	Golovnino	2.17	260	eP	Pn	05 58 02.1	+1.1
GLVR				eS	Sn	05 58 26.8	-0.3
GLVR				A	A	05 58 34.0	
	comp=E,730nm,0.4s						
GLVR				A	A	05 58 34.0	
	comp=E,630nm,0.4s						
RUSJ	Misakicho	2.32	270	ePN	Pn	05 58 04.5	+1.5
RUSJ				eS	Sn	05 58 31.9	+1.2
JRA	Rausu	2.42	266	P	Pn	05 58 05.6	+1.2
JNSB	Nemuroshibetsu	2.53	263	P	Pn	05 58 07.5	+1.7
JKHN	Kushirohamanak	2.63	247	P	Pn	05 58 08.5	+1.3
JKHN				eS	Sn	05 58 37.3	-0.9
JNK	Nakash	2.77	259	P	Pn	05 58 10.2	+1.1
JNK				eS	Sn	05 58 40.8	-0.8
AKK	Akkeshi	2.87	248	eP	Pn	05 58 11.3	+0.9
AKK				eS	Sn	05 58 43.0	-1.0
JAK	Akkeshi	2.98	248	P	Pn	05 58 12.8	+1.0
JAK				eS	Sn	05 58 45.3	-1.2
JTKR	Abashiri--Toko	3.29	268	P	Pn	05 58 17.2	+1.1
JAR	Ashorobuto	3.51	258	P	Pn	05 58 20.9	+1.8
JAR				eS	Sn	05 58 59.6	0.0
JCH	Churui	4.03	249	P	Pn	05 58 27.1	+1.0
JCH				eS	Sn	05 59 09.6	-2.5
JKK2	Kamakawa 2	4.14	268	P	Pn	05 58 29.3	+1.7
JKA	Kamikawa-asahi	4.23	272	eP	Pn	05 58 30.4	+1.6
ASAJ	Asahikawa	4.23	272	P	Pn	05 58 30.4	+1.6
	comp=E,2.7nm,0.3s,baz=83,slow=13,SNR=9.4						
JNBK	Urakawa-nobuka	4.58	248	P	Pn	05 58 34.2	+0.6
JNBK				eS	Sn	05 59 22.7	-2.8
YSS	Yuzh-Sakhalins	4.89	307	ePN	Pn	05 58 36.0	-1.8
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS	Yuzh-Sakhalins	4.89	307	eP	Pn	05 58 39.8	+2.0
YSS				AMB	AMB	05 58 41.8	
	comp=Z,10.0nm,0.3s						
JKB	Kayabe	5.90	250	P	Pn	05 58 52.3	+0.7
JKB				eS	Sn	05 59 53.3	-4.5
JOT	Ohata	6.12	246	P	Pn	05 58 55.4	+0.8
JOT				eS	Sn	05 59 57.9	-5.3
JANG	Nango	6.39	236	P	Pn	05 58 58.3	0.0
JANG				eS	Sn	06 00 06.4	-3.5
H11N2	WAKE ISLAND Hy	28.81	142	T	T	06 34 17.2	
	baz=333,slow=76,SNR=28						
H11N1	WAKE ISLAND Hy	28.82	142	T	T	06 34 19.3	
	baz=333,slow=76,SNR=25						
H11N3	WAKE ISLAND Hy	28.82	142	T	T	06 34 23.9	
	baz=333,slow=76,SNR=29						
H11S1	WAKE ISLAND Hy	29.80	143	T	T	06 35 41.0	
	baz=334,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	29.80	143	T	T	06 35 38.7	
	baz=334,slow=76,SNR=29						
H11S2	WAKE ISLAND Hy	29.82	143	T	T	06 35 43.1	
	baz=334,slow=76,SNR=28						
ILAR	Eielson Array	40.60	37	P	P	06 04 59.7	+1.8
	comp=Z,0.2nm,0.8s,baz=270,slow=8.1,SNR=1.8						
MKAR	Makanchi Array	45.24	298	P	P	06 05 34.5	-1.2
	comp=Z,0.9nm,0.6s,baz=80,slow=8.4,SNR=6.0						
YKA	Yellowknife Ar	54.93	34	P	P	06 06 49.3	+0.7
	comp=Z,0.3nm,0.7s,baz=302,slow=7.2,SNR=5.1						

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*IDC **21** 06:14:47.2±5.3, 23°.58N×94°.93E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.2/43, mbtmp3.4/3, MS3.3/2, Ms1 3.3/2, ms1mx2.7/43, Error ellipse: s-maj=486.2km s-min=28.5km az=60.0*

ISC 21 06:14:48.7±1.4**, 23°.5N**±0°.5×**94°.6E**±0°.4**, h10**^{km}**, n6, σ3^{s}.12**/5**, mb3.5**/3**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	Shillong	3.27	311	ePN	Pn	06 15 43.0	+2.8
SHL				eSN	Sn	06 16 16.0	-3.3
MKAR	Makanchi Array	25.32	340	P	P	06 20 15.4	-0.2
	0.7nm,0.6s,baz=144,slow=8.4,SNR=6.4						
TLY	Talaya	29.02	12	LR	LR	06 32 38.1	
	comp=Z,52nm,18.2s,baz=1.0,slow=37						
EIL	Elat	53.24	290	LR	LR	06 51 57.5	
	comp=Z,30nm,19.4s,baz=269,slow=42						
WRA	Warramunga Arr	57.97	135	P	P	06 24 41.0	-0.8
	0.4nm,0.8s,baz=322,slow=7.6,SNR=1.3						
ASAR	Alice Springs	60.41	138	P	P	06 24 58.0	-0.6
	0.2nm,0.5s,baz=320,slow=6.7,SNR=4.8						

IDC 21 06:34:00.7±1.5**, 1°.31N**×**122°.78E, h0**^{km}**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/54**, mbtmp3.6**/3**, Error ellipse: s-maj=205.2km s-min=23.3km az=62.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.98	152	P	P	06 39 16.9	-0.2
	0.7nm,0.4s,baz=330,slow=11,SNR=35						
ASAR	Alice Springs	27.09	157	P	P	06 39 46.1	+0.8
	0.3nm,0.3s,baz=336,slow=8.7,SNR=10						
MKAR	Makanchi Array	57.38	328	P	P	06 43 50.5	-0.5
	0.3nm,0.3s,baz=129,slow=7.6,SNR=12						

IDC 21 06:34:11.1±10.0**, 24°.00S**×**114°.07W, h0**^{km}**, mb3.5**/3**, mb1 3.9**/3**, mb1mx3.6**/29**, mbtmp3.5**/3**, MS3.6**/4**, Ms1 3.6**/4**, ms1mx3.3**/16**, Error ellipse: s-maj=557.6km s-min=253.8km az=84.0, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAOE	Nuku Hiva Isla	29.11	297	eLR	LR	06 47 11.0	
	comp=Z,408nm,27.4s						
H03N2	Juan Fernandez	32.09	115	T	T	07 15 54.9	
	baz=281,slow=75,SNR=7.0						
H03N3	Juan Fernandez	32.10	115	T	T	07 15 59.4	
	baz=281,slow=75,SNR=5.5						
H03N1	Juan Fernandez	32.11	115	T	T	07 15 57.8	
	baz=281,slow=75,SNR=8.5						
TBI	Tubuai	32.36	264	eLR	LR	06 48 29.6	
	comp=Z,111nm,26.0s						
PPT2	Papeete2	33.73	274	eLR	LR	06 49 01.3	
	comp=Z,163nm,26.5s						
PPT	Papeete	33.74	274	LR	LR	06 49 30.0	
	comp=Z,106nm,19.1s,baz=72,slow=27						
PLCA	Paso Flores	39.93	125	LR	LR	06 54 30.5	
	comp=Z,91nm,19.9s,baz=315,slow=30						
RAR	Rarotonga	42.14	264	LR	LR	06 54 06.9	
	comp=Z,42nm,21.0s,baz=120,slow=28						
CPUP	Villa Florida	51.06	105	LR	LR	07 00 43.3	
	comp=Z,62nm,21.0s,baz=24,slow=31						
NVAR	Mina Array Bea	62.23	356	P	P	06 44 35.0	+0.1
	0.5nm,0.8s,baz=174,slow=6.0,SNR=4.3						
PDAR	Pinedale Array	66.57	4	P	P	06 45 03.2	0.0
	0.4nm,0.9s,baz=174,slow=9.1,SNR=2.7						
YKA	Yellowknife Ar	86.20	360	P	P	06 46 53.7	-0.2
	0.3nm,0.8s,baz=177,slow=5.5,SNR=5.9						
H11S2	WAKE ISLAND Hy	88.01	291	T	T	08 22 58.8	
	baz=117,slow=75,SNR=81						
H11S1	WAKE ISLAND Hy	88.02	291	T	T	08 23 02.1	
	baz=117,slow=75,SNR=78						
H11S3	WAKE ISLAND Hy	88.02	291	T	T	08 22 56.7	
	baz=117,slow=75,SNR=41						
H11N3	WAKE ISLAND Hy	88.37	292	T	T	08 23 21.9	
	baz=110,slow=74,SNR=6.2						
H11N1	WAKE ISLAND Hy	88.38	292	T	T	08 23 28.0	
	baz=110						
H11N2	WAKE ISLAND Hy	88.39	292	T	T	08 23 29.9	
	baz=110,slow=74,SNR=9.8						

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*KRSZO **21** 06:42:11.0±0.9, 45°.20N×16°.35E, h4^{km}±7^{km}, ML2.6/6, Error ellipse: s-maj=2.7km s-min=2.1km az=64.0*

*RHSSO **21** 06:42:12.3±0.2, 45°.16N×16°.32E, h5^{km}±2^{km}, ML2.3/6*

*VIE **21** 06:42:12.6±0.6, 45°.36N×16°.41E, h14^{km}±2^{km}, mb2.0/3, ml2.2/6, Error ellipse: s-maj=3.7km s-min=3.2km az=119.0 58 km SSE of Zagreb*

ISC 21 06:42:11.4±1.0**, 45°.21N**±0°.01×**16°.35E**±0°.02**, h11**^{km}±9^{km}**, n48, σ0^{s}.81**/85**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRIJ	Prijedor	0.35	132	ePg	Pg	06 42 18.5	+0.1
PRIJ				eSg	Sb	06 42 23.9	-1.4
MRAK	Mrakovica	0.44	117	ePg	Pg	06 42 20.1	0.0
MRAK				eSg	Sb	06 42 26.8	-1.1
MOSL	Moslavina	0.49	35	ePg	Pg	06 42 20.9	-0.2
MOSL				Sg	Sg	06 42 27.3	-0.3
PLIT	Plitvice	0.61	237	ePg	Pg	06 42 23.4	+0.2
PLIT				Sg	Sb	06 42 32.6	-0.2
ZAG	Zagreb	0.67	338	ePg	Pb	06 42 25.4	+0.3
ZAG				eSg	Sb	06 42 34.8	+0.4
ZAG	Zagreb	0.67	338	ePg	Pg	06 42 24.2	-0.2
ZAG				Sg	Sg	06 42 33.6	+0.6
OZLJ	Ozalj	0.74	304	ePg	Pg	06 42 25.5	-0.2
OZLJ				Sg	Sg	06 42 35.2	-0.2
PTJ	Puntijarka	0.74	339	ePg	Pg	06 42 25.8	0.0
PTJ				Sg	Sg	06 42 35.3	-0.3
PTJ	Puntijarka	0.74	339	Pb	Pg	06 42 25.9	+0.1
	comp=Z,0.5nm,SNR=14						
BLY	Banja Luka	0.75	128	ePg	Pg	06 42 25.6	-0.4
BLY				eSg	Sb	06 42 36.0	-0.9
BLY	Banja Luka	0.75	128	Pg	Pg	06 42 25.8	-0.1
	comp=Z,0.2nm,SNR=6.6						
UDBI	Udbina	0.80	211	ePg	Pg	06 42 26.8	0.0
UDBI				Sg	Sg	06 42 37.3	+0.1
CRES	Cresnjev	0.88	315	ePg	Pg	06 42 28.3	0.0
CRES				eSg	Sb	06 42 41.0	+0.5
CRES	Cresnjev	0.88	315	Pg	Pb	06 42 29.3	+0.6
	comp=Z,0.9nm,SNR=8.5						
KALN	Kalnik	0.92	5	ePg	Pg	06 42 28.7	-0.5
KALN				Sg	Sg	06 42 41.0	-0.3
MGRS	Mrkonjic Grad	0.95	146	ePg	Pg	06 42 28.8	-0.9
MGRS				eSg	Sg	06 42 41.7	-0.4
LOBO	Lobor	0.96	348	ePg	Pg	06 42 30.2	+0.2
LOBO				Sg	Sg	06 42 42.3	-0.3
KIJV	Kijevo	1.21	178	ePg	Pg	06 42 34.5	-0.1
KIJV				Sg	Sn	06 42 51.6	+0.9
NVLJ	Novalja	1.23	239	ePg	Pg	06 42 34.9	-0.2
NVLJ				Sg	Sg	06 42 52.2	+1.2
RIY	Rijeka	1.32	276	ePg	Pn	06 42 35.9	+0.1
RIY				eSg	Sn	06 42 53.8	+0.3
RIY	Rijeka	1.32	276	ePg	Pn	06 42 36.0	+0.2
RIY				Sg	Sg	06 42 54.1	+0.2
MORI	Morici	1.42	199	ePn	Pb	06 42 38.0	+0.1
MORI				Sg	Sg	06 42 58.0	+0.9
CEY	Cerknica	1.45	292	ePg	Pb	06 42 38.4	-0.1
CEY				eSg	Sg	06 42 58.5	+0.4
KOVH	Kovagotottos	1.51	54	eP	Pb	06 42 39.9	+0.4
KOVH				eS	Sb	06 42 59.2	+0.5
KOVH	Kovagotottos	1.51	54	Pn	Pb	06 42 39.9	+0.4
	comp=Z,0.1nm,SNR=3.5						
KOVH				Sn	Sb	06 42 59.2	+0.5
LJU	Ljubljana	1.52	304	eSn	Sg	06 43 00.2	-0.2
DUGI	Dugi Otok	1.53	218	ePn	Pb	06 42 39.9	+0.1
DUGI				Sg	Sg	06 43 00.9	+0.4
SMRN	Sveta Marina	1.56	264	ePn	Pb	06 42 40.0	-0.3
SMRN				Sg	Sg	06 43 01.6	0.0
A263A	Hollad	1.58	25	Sn	Sg	06 43 03.5	+1.2
A265A	Kaposfured	1.58	39	Sn	Sg	06 43 03.1	+0.9
ZIRJ	Zirje	1.64	198	ePn	Pb	06 42 41.5	-0.1
ZIRJ				Sn	Sg	06 43 03.8	-0.2
SOKA	Soboth	1.73	328	ePn	Pn	06 42 41.3	-0.3
	comp=Z,0.5nm,0.2s						
SOKA				eSg	Sg	06 43 06.7	-0.4
	comp=Z,3.0nm,0.2s						
OBKA	Obir	1.81	317	ePg	Pg	06 42 45.8	-0.2
	comp=Z,2.0nm,0.2s						
OBKA				eSg	Sb	06 43 08.3	+1.0
	comp=Z,17nm,0.5s						
OBKA	Obir	1.81	317	Pg	Pg	06 42 45.8	-0.2
	comp=Z,0.1nm,SNR=1.3						
RICI	Ricice	1.81	162	ePn	Pb	06 42 43.8	-0.8
RICI				Sn	Sb	06 43 07.8	+0.6
MORH	Mrgy, Hungar	1.90	57	eP	Pb	06 42 46.9	+0.8
MORH				eS	Sg	06 43 11.5	-0.9
MORH	Mrgy, Hungar	1.90	57	ePn	Pb	06 42 46.6	+0.5
MORH				eSn	Sb	06 43 10.4	+0.6
MORH	Mrgy, Hungar	1.90	57	Pg	Pb	06 42 46.9	+0.8
	comp=Z,0.2nm,SNR=2.5						
MORH				Lg	Lg	06 43 11.5	
MAKA	Makarska	1.98	166	ePn	Pb	06 42 46.4	-1.1
MAKA				Sn	Sb	06 43 12.6	+0.4
HVAR	Hvar	2.03	178	ePn	Pb	06 42 47.4	-1.0
HVAR				Sn	Sb	06 43 13.6	-0.1
ARSA	Arzberg	2.12	345	ePn	Pn	06 42 45.9	-0.9
	comp=Z,0.5nm,0.2s						
ARSA				eSg	Sg	06 43 18.3	-1.2
	comp=Z,2.5nm,0.2s						
MYKA	Terra Mystica	2.36	308	ePn	Pn	06 42 50.1	-0.2
	comp=Z,35nm,0.0s						
MYKA				eSg	Sg	06 43 28.0	+0.7
	comp=Z,2.5nm,0.3s						
LSTV	Lastovo	2.47	171	ePn	Pn	06 42 53.1	+1.4
LSTV				Sn	Sb	06 43 24.4	-1.9
STON	Ston	2.53	157	ePn	Pn	06 42 54.3	+1.8
STON				eSn	Sn	06 43 24.1	+0.7
STON	Ston	2.53	157	ePn	Pn	06 42 54.1	+1.6
STON				Sn	Sb	06 43 25.8	-2.3
CONA	Conrad Observa	2.74	353	ePn	Pn	06 42 55.9	+0.5
	comp=Z,0.5nm,0.1s						
CONA				eSn	Sn	06 43 26.5	-2.1
	comp=Z,1.6nm,0.3s						
KBA	Koelnbreinsper	2.80	313	eSn	Sb	06 43 33.5	-2.5
	comp=Z,2.1nm,0.5s						
A269A	Baj	2.81	29	Pg	Pg	06 43 13.6	+8.4
A269A				Lg	Lg	06 43 46.1	

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*NEIC **21** 06:51:31.0±1.3, 52°.0N±0°.1×171°.0W±0°.1, h35^{km}±11^{km}, mb3.7/7, Error ellipse: s-maj=21.1km s-min=6.9km az=155.0*

*IDC **21** 06:51:32.7±7.8, 51°.70N×170°.96W, h56^{km}±71^{km}, mb3.1/3, mb1 3.6/4, mb1mx2.9/57, mbtmp3.6/4, ML3.3/1, Error ellipse: s-maj=100.9km s-min=41.6km az=153.0*

ISC 21 06:51:31.5±1.1**, 52°.0N**±0°.2×**171°.07W**±0°.09**, h42**^{km}**, n22, σ1^{s}.31**/22**, mb3.3**/3**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	1.66	54		Pn	06 51 56.2	-2.0
ATKA	Atka Island	1.94	277	Pn	Pn	06 52 01.2	-0.7
GSTR	Great Sitkin T	3.08	274	Pn	Pn	06 52 16.0	-1.7
UNV	Unalaska Valle	3.32	55	Pn	Pn	06 52 20.8	0.0
ADK	Adak	3.48	270	Pn	Pn	06 52 23.1	0.0
KIWB	Kanaga Island	3.77	270	Pn	Pn	06 52 27.4	+0.4
O18K	Koktuh Hills	11.84	42	Pn	Pn	06 54 17.6	0.0
KDAK	Kodiak Island	12.09	54	P	Pn	06 54 23.8	+2.9
	0.2nm,0.3s,baz=229,slow=3.8,SNR=6.1						
M19K	Big River Lodg	13.41	36	Pn	Pn	06 54 38.7	-0.3
H21K	Melozitna Rive	16.52	27	Pn	Pn	06 55 19.0	-1.0
M24K	Tolsona, Glenn	16.78	43		Pn	06 55 25.0	+1.8
I23K	Minto, Yukon-K	17.23	32		Pn	06 55 30.1	+1.5
MCARA	McCarthy VSAT	17.89	47	P	Pn	06 55 37.2	+0.3
MCARA				IAmb	IAmb	06 55 51.1	
	comp=Z,22nm,1.4s						
H24K	Noodor Dome	18.14	31	P	Pn	06 55 42.2	+2.2
H24K				IAmb	IAmb	06 56 00.0	
	comp=Z,5.1nm,1.5s						
MENT	Mentasta	18.16	42	P	P	06 55 41.4	+1.2
MENT				IAmb	IAmb	06 55 45.5	
	comp=Z,12nm,1.2s						
BARN	Barnard Glacie	18.42	49	P	P	06 55 43.5	+0.3
BARN				IAmb	IAmb	06 56 00.2	
	comp=Z,3.9nm,0.9s						
EGAK	Eagle	19.97	39	P	P	06 55 59.9	0.0
EGAK				IAmb	IAmb	06 56 13.1	
	comp=Z,3.5nm,1.1s						
DAWY	Dawson	20.39	42	P	P	06 56 04.9	+0.4
YKA	Yellowknife Ar	31.26	48	P	P	06 57 47.9	+1.1
	comp=Z,0.1nm,0.4s,baz=274,slow=9.3,SNR=1.4						
TXAR	Lajitas Array	53.80	87	P	P	07 00 49.4	-0.6
	comp=Z,0.2nm,0.7s,baz=293,slow=6.5,SNR=3.5						
ASAR	Alice Springs	89.37	229	P	P	07 04 22.1	-1.3
	comp=Z,0.6nm,0.6s,baz=24,slow=5.2,SNR=8.3						
ASAR	Alice Springs	89.37	229	P	P	07 04 22.6	-0.8

MAN 21 07:04:32.2, 11°.72N×125°.69E, h22^{km}, mb3.9, ML2.7, MS2.3, Samar

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*INET **21** 07:16:27.4, 10°.52N×84°.77W, h11^{km}, MW2.6*

UCR 21 07:16:27.3±1.6**, 10°.56N**×**84°.73W, h13**^{km}±1^{km}**, MW3.6, 11C-5D, Fault plane solution: NP1:**ϕ_s233.31000°, δ73.73000°, λ-11.79000°.**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEDE	Laguna Cedeo	0.08	159	⇑iP	Pg	07 16 30.4	+0.2
CEDE				iS	Sg	07 16 33.0	+0.9

ARE1	**Arenal 1**	**0.10**	**172**	⇓*i*P	Pg	07 16 30.6	+0.2
ARE1				*e*S	Sb	07 16 33.3	-0.5
FORC	**Fortuna**	**0.11**	**147**	⇑*i*P	Pg	07 16 30.8	+0.4
CASO	**Castillo**	**0.13**	**181**	⇓*i*P	Pg	07 16 30.8	+0.1
CASO				*i* S	Sg	07 16 33.8	+0.7
PTEN	**Parque Tenorio**	**0.29**	**301**	⇑*i*P	Pg	07 16 33.5	+0.1
ACAL	**Aguas Claras**	**0.30**	**283**	⇑*i*P	Pg	07 16 33.4	-0.2
JTS	**Las Juntas de**	**0.35**	**219**	⇓*i*P	Pg	07 16 33.8	-0.5
JTS				*e*S	Sg	07 16 38.5	-0.5
COVE	**Coope Vega, Sa**	**0.36**	**64**	*e*P	Pg	07 16 34.8	+0.2
COVE				*e*S	Sb	07 16 41.4	+0.2
CUI	**Cuipilapa**	**0.43**	**283**	⇑*i*P	Pg	07 16 35.7	-0.3
VMAR	**Armenia, Volca**	**0.45**	**303**	*e*P	Pg	07 16 36.3	0.0
VMAR				*e*S	Sb	07 16 43.5	-0.5
COLC	**Colonia**	**0.47**	**282**	⇑*i*P	Pg	07 16 36.3	-0.3
SRA1	**San Ramn**	**0.54**	**152**	⇓*i*P	Pg	07 16 37.6	-0.3
SRA1				*e*S	Sg	07 16 45.3	+0.2
BUAI	**Buenos Aires**	**0.67**	**298**	⇑*i*P	Pg	07 16 39.5	-0.8
BUEV	**Buena Vista**	**0.70**	**289**	*i* P	Pg	07 16 40.4	-0.6
GBS3	**Finca Las Img**	**0.74**	**287**	⇑*i*P	Pg	07 16 41.0	-0.7
LAFE	**Finca La Fe, P**	**0.77**	**193**	*i* P	Pg	07 16 41.6	-0.6
LAFE				*e*S	Sg	07 16 52.6	+0.2
GUAI	**GUAI**	**0.82**	**249**	⇑*i*P	Pg	07 16 42.2	-1.0
HDC	**Heredia**	**0.83**	**132**	*e*P	Pg	07 16 42.9	-0.4
HDC				*e*S	Sg	07 16 54.0	-0.2
HZTE	**Horizontes, Gu**	**0.86**	**280**	⇑*i*P	Pg	07 16 43.1	-0.9
HZTE				*e*S	Sb	07 16 55.9	+0.3
INDI	**Punta indio, G**	**1.03**	**228**	*e*P	Pb	07 16 45.7	-1.2
INDI				*e*S	Sb	07 17 00.2	-0.2
SAJU	**San Juanillo,**	**1.08**	**243**	*e*P	Pb	07 16 46.6	-1.2
SAJU				*e*S	Sb	07 17 01.7	-0.2
LCR2	**La Lucha 2**	**1.09**	**139**	⇓*e*P	Pb	07 16 46.3	-1.8
LCR2				*e*S	Sb	07 17 00.5	-1.8
RIMA	**Rio Macho**	**1.17**	**133**	*e*P	Pb	07 16 47.7	-1.8
EDDO	**Dominical**	**1.56**	**147**	*e*P	Pn	07 16 54.7	-0.1
EDDO				*e*S	Sb	07 17 15.5	-0.2
PEZE	**Perez Zeledon,**	**1.57**	**138**	*e*P	Pn	07 16 54.9	-0.1
SRBA	**San Rafael, Bu**	**1.89**	**134**	*e*P	Pn	07 16 59.8	+0.4
EDBA	**Buenos Aires**	**2.00**	**134**	*e*P	Pn	07 17 01.4	+0.5
EDPN	**Palmar Norte**	**2.03**	**142**	⇑*i*P	Pb	07 17 02.8	-1.2
EDSV	**San Vito**	**2.45**	**135**	*e*P	Pb	07 17 11.1	-0.3
PIRO	**Carate, Puerto**	**2.55**	**147**	*e*P	Pn	07 17 10.6	+2.2

NNC ***21*** *07:18:21.6±1.1, 49°.98N×78°.59E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=11.4km s-min=5.2km az=75.0, Suspected Mining explosion.*

IDC ***21*** *07:18:23.0±1.1, 50°.04N×78°.72E, h0^{km}, mb1 2.9/3, mb1mx2.8/40, mbtmp2.9/3, ML2.7/3, Error ellipse: s-maj=9.6km s-min=7.4km az=53.0*

ISC 21 07:18:23.5±0.9**, 50°.04N**±0°.04×**78°.74E**±0°.05**, h0^{km}, n14,** σ**1^s.03**/17**, 6C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**0.60**	**347**	Pg	**Pg**	**07 18 34.0**	**-1.0**
	3.7nm,0.3s,baz=166,slow=17,SNR=157						
KURBB				Lg	Lg	07 18 43.0	
	4.3nm,0.3s,baz=170,slow=33,SNR=15						
KURBB	**Kurchatov Arra**	**0.60**	**347**	⇑P	**Pg**	**07 18 33.8**	**-1.2**
	35nm,0.4s						
KURBB				⇑S	**Sg**	**07 18 43.6**	**+0.8**
	62nm,0.4s						
KURK	**Kurchatov**	**0.68**	**353**	⇓P	**Pg**	**07 18 35.3**	**-1.2**
	16nm,0.4s						
KURK				⇑S	**Sg**	**07 18 45.9**	**+0.5**
	28nm,0.5s						
SEM	**Semipalatinsk**	**1.04**	**68**	P	**Pb**	**07 18 44.3**	**-0.2**
	5.4nm,0.2s						
SEM				S	**Sn**	**07 19 00.8**	**0.0**
	76nm,0.4s						
MAKZ	**Makanchi**	**3.88**	**145**	⇓Pg	**Pb**	**07 19 32.0**	**-0.8**
	1.2nm,0.5s						
MAKZ				⇓Lg	Lg	07 20 20.7	
	8.6nm,0.5s						
BRZS	**Berezniki**	**3.91**	**272**	Pg	**Pb**	**07 19 34.0**	**+0.7**
	4.2nm,0.3s						
BRZS				Lg	Lg	07 20 25.8	
	5.1nm,0.6s						
MK31	**Makanchi Array**	**4.01**	**143**	⇑Pn	**Pn**	**07 19 26.4**	**+0.2**
	0.1nm,0.3s,baz=331,slow=11,SNR=29						
MK31				⇑Pg	**Pb**	**07 19 34.6**	**-0.4**
	0.7nm,0.3s,baz=337,slow=15,SNR=8.8						
MK31				⇑Lg	Lg	07 20 28.8	
	8.1nm,0.5s,baz=325,slow=26,SNR=28						
MKAR	**Makanchi Array**	**4.01**	**143**	Pn	**Pn**	**07 19 26.4**	**+0.2**
	0.4nm,0.3s,baz=320,slow=10,SNR=50						
MKAR				Lg	Lg	07 20 27.8	
	3.4nm,0.3s,baz=324,slow=27,SNR=7.1						
KAPS	**Kapalarasan**	**4.77**	**175**	Pg	**Pb**	**07 19 47.9**	**-0.1**
	1.4nm,0.3s						
KAPS				Lg	Lg	07 20 50.3	
	13nm,0.5s						
ZSN	**Zaisan**	**4.81**	**120**	Pg	**Pb**	**07 19 50.5**	**+1.9**
	5.7nm,0.3s						
ZSN				Lg	Lg	07 20 55.8	
	8.0nm,0.4s						
I46RU	**ZALESOVO INFRA**	**5.42**	**41**	*i*		07 50 20.0	
	baz=220,slow=320,SNR=1.7						
ZALV	**Zalesovo Beam**	**5.42**	**41**	Pn	**Pn**	**07 19 46.8**	**+1.3**
	1.4nm,0.3s,baz=233,slow=14,SNR=13						
BVAR	**Borovoye Array**	**6.01**	**303**	Pn	**Pn**	**07 19 53.5**	**-0.1**
	0.2nm,0.3s,baz=138,slow=11,SNR=2.9						
KUU	**Kurty**	**6.36**	**196**	Pg	**Pb**	**07 20 16.8**	**+1.8**
	0.6nm,0.4s						
KUU				Lg	Lg	07 21 39.5	
	13nm,0.7s						

WEL ***21*** *07:31:00, 35°.47S×178°.69E, h189^{km}, ML4.8, Mw5.0, Moment Tensor Solution. s5 Moment tensor: Scale 10^{16} Nm; M_{rr}2.28; $M_{\theta\theta}$-0.97; $M_{\phi\phi}$-1.31; $M_{r\theta}$1.62; $M_{\theta\phi}$-1.89; $M_{\phi r}$0.98; Fault plane solution: $M_0$3.28000×10^{16} NP1: ϕ_s207.00000°, δ30.00000°, λ66.00000°. NP2: ϕ_s54.00000°, δ63.00000°, λ103.00000°. Principal axes: T -3598.8400, Plg69.0000°, Azm351.0000°; N 639.0200, Plg12.0000°, Azm227.0000°; P 2959.8200, Plg17.0000°, Azm134.0000°;*

WEL ***21*** *07:31:53.9±0.6, 36°S±3°×17°9E±°, h259^{km}±7^{km}, M5.0/24, mB5.8/1, ML5.8/8, MLv5.0/24, Mw(mB)5.4/1 Error ellipse: s-maj=0.0km s-min=0.0km az=101.9*

NOU ***21*** *07:31:55.2, 35°.72S×178°.81E, h203^{km}, mb5.1/44, Off E. Coast of N. Island, N.Z.*

GCMT ***21*** *07:31:56.5±0.5, 35°.12S±0°.03×178°.75E±0°.04, h220^{km}±3^{km}, MW5.0/63, Moment Tensor Solution. s25,c29; s63,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.99±.18; $M_{\theta\theta}$1.28±.22; $M_{\phi\phi}$-3.27±.20; $M_{r\theta}$2.43±.14; $M_{\theta\phi}$-1.78±.18; $M_{\phi r}$0.69±.15; Best double couple: $M_0$4.20500×10^{16} NP1: ϕ_s164.00000°, δ46.00000°, λ28.00000°. NP2: ϕ_s54.00000°, δ70.00000°, λ132.00000°. Principal axes: T 4.1520, Plg47.0000°, Azm8.0000°; N 0.1070, Plg39.0000°, Azm216.0000°; P -4.2590, Plg15.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***21*** *07:31:57.1±1.0, 35°.49S×178°.52E, h217^{km}±9^{km}, mb4.5/14, mb1 4.7/17, mb1mx4.3/34, mbtmp5.1/17 Error ellipse: s-maj=12.9km s-min=10.7km az=99.0*

NEIC ***21*** *07:31:58.5±2.7, 35°.43S±0°.07×178°.5E±0°.1, h216^{km}±4^{km}, mb4.9/46, Error ellipse: s-maj=13.8km s-min=10.1km az=66.0*

ISC 21 07:31:58.9±0.7**, 35°.63S**±0°.05×**178°.44E**±0°.05**, h231**^{km}±6^{km}**, n440,** σ**2^s.12**/453**, mb4.9**/41**, 20C-6D, Fault plane solution: NP1:** ϕ_s204.88498°**,** δ38.01630°**,** λ62.39556°. **NP2:** ϕ_s58.45720°**,** δ56.92217°**,** λ109.91203°. **Principal axes:** T Plg70.5629°, Azm14.8172°**;** N Plg16.5815°, Azm227.2741°**;** P Plg9.8553°, Azm134.3090°**; Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.93**	**183**	P	**Pn**	**07 32 38.0**	**-1.0**
MXZ				S	**S**	**07 33 08.9**	**-1.7**
MXZ	**Matakaoa Point**	**1.93**	**183**	Pn	**Pn**	**07 32 38.0**	**-1.0**
WSRZ	**White Island S**	**2.14**	**208**	P	**Pn**	**07 32 41.1**	**0.0**
WSRZ				S	**S**	**07 33 14.5**	**+0.4**
WMGZ	**Waiomatatini S**	**2.18**	**180**	P	**Pn**	**07 32 41.1**	**-0.4**
HAZ	**Te Kaha**	**2.18**	**194**	P	**Pn**	**07 32 40.4**	**-1.1**
HAZ				S	**S**	**07 33 13.3**	**-1.6**
PKGZ	**Pakihiroa**	**2.27**	**187**	P	**Pn**	**07 32 41.6**	**-0.8**
RUGZ	**Raukumara Rang**	**2.41**	**194**	P	**Pn**	**07 32 42.3**	**-1.6**
PUZ	**Puketiti**	**2.44**	**183**	P	**Pn**	**07 32 43.0**	**-1.1**
PUZ				S	**S**	**07 33 18.1**	**-1.5**
KUZ	**Kuaotunu**	**2.46**	**242**	P	**Pn**	**07 32 44.0**	**-0.3**
GRZ	**Great Barrier**	**2.50**	**255**	P	**Pn**	**07 32 44.1**	**-0.6**
WHRZ	**Whale Island**	**2.51**	**207**	P	**Pn**	**07 32 45.0**	**+0.2**
WHRZ				S	**S**	**07 33 23.2**	**+2.2**
TWGZ	**Tauwhareparae**	**2.57**	**188**	P	**Pn**	**07 32 45.1**	**-0.4**
TWGZ				S	**S**	**07 33 21.5**	**-0.6**
URZ	**Urewera**	**2.83**	**202**	P	**Pn**	**07 32 47.0**	**-1.3**
	639nm,0.3s,baz=266,slow=3.7,SNR=829						
URZ				S	**S**	**07 33 26.5**	**-0.5**
	636nm,0.3s,baz=76,slow=23,SNR=20						
URZ	**Urewera**	**2.83**	**202**	P	**Pn**	**07 32 47.4**	**-0.8**
URZ				S	**S**	**07 33 26.9**	**-0.2**
URZ	**Urewera**	**2.83**	**202**	Pn	**Pn**	**07 32 47.0**	**-1.3**
TKGZ	**Te Karaka**	**2.84**	**189**	P	**Pn**	**07 32 47.5**	**-0.9**
TKGZ				S	**S**	**07 33 26.1**	**-1.2**
WIAZ	**Waiheke Island**	**2.91**	**246**	P	**Pn**	**07 32 49.3**	**+0.1**
RAGZ	**Rawiri**	**2.97**	**196**	P	**Pn**	**07 32 49.4**	**-0.5**
ABAZ	**Army Bay**	**3.07**	**251**	P	**Pn**	**07 32 51.5**	**+0.5**
MBAZ	**Motutapu North**	**3.08**	**247**	P	**Pn**	**07 32 51.5**	**+0.5**
ETAZ	**East Tamaki Re**	**3.13**	**244**	P	**Pn**	**07 32 52.3**	**+0.7**
EPAZ	**Eden Park BICE**	**3.23**	**246**	P	**Pn**	**07 32 54.0**	**+1.2**
HBAZ	**Herne Bay Bore**	**3.23**	**247**	P	**Pn**	**07 32 53.9**	**+1.1**
RVAZ	**Riverhead Bore**	**3.32**	**249**	P	**Pn**	**07 32 54.5**	**+0.7**
WCZ	**Waipu Caves**	**3.34**	**264**	P	**Pn**	**07 32 53.6**	**-0.4**
AWAZ	**Awhitu Peninsu**	**3.38**	**244**	P	**Pn**	**07 32 55.1**	**+0.6**
WTAZ	**Waiatarua**	**3.38**	**246**	P	**Pn**	**07 32 55.3**	**+0.8**
BKZ	**Black Stump Fm**	**3.85**	**203**	P	**Pn**	**07 32 58.9**	**-1.2**
BKZ				S	**S**	**07 33 47.8**	**-0.6**
BKZ	**Black Stump Fm**	**3.85**	**203**	Pn	**Pn**	**07 32 58.4**	**-1.7**
OUZ	**Omahuta**	**3.98**	**275**	P	**Pn**	**07 33 00.7**	**-0.9**
OUZ	**Omahuta**	**3.98**	**275**	Pn	**Pn**	**07 33 00.5**	**-1.0**
OUZ	**Omahuta**	**3.98**	**275**	P	**Pn**	**07 33 00.7**	**-0.9**
HIZ	**Hauiti**	**4.06**	**224**	P	**Pn**	**07 33 03.8**	**+1.3**
HIZ	**Hauiti**	**4.06**	**224**	Pn	**Pn**	**07 33 03.0**	**+0.5**
CKHZ	**Cape Kidnapper**	**4.16**	**195**	P	**Pn**	**07 33 02.3**	**-1.4**
CKHZ				S	**S**	**07 33 52.9**	**-2.1**
VRZ	**Vera Road**	**4.55**	**219**	P	**Pn**	**07 33 08.1**	**-0.4**
PXZ	**Pawanui**	**4.56**	**195**	P	**Pn**	**07 33 06.2**	**-2.4**
PXZ				S	**S**	**07 33 59.7**	**-4.2**
BFZ	**Birch Farm**	**5.33**	**198**	Pn	**Pn**	**07 33 16.1**	**-2.0**
BFZ	**Birch Farm**	**5.33**	**198**	P	**Pn**	**07 33 15.9**	**-2.2**
MRZ	**Mangatainoka R**	**5.50**	**203**	P	**Pn**	**07 33 17.2**	**-3.1**
MRZ				S	**S**	**07 34 20.1**	**-4.9**
HOWZ	**Holdsworth Sta**	**5.74**	**203**	P	**Pn**	**07 33 19.6**	**-3.7**
HOWZ				S	**S**	**07 34 25.2**	**-5.2**
OGWZ	**Otaki Gorge**	**5.78**	**205**	P	**Pn**	**07 33 20.5**	**-3.3**
OGWZ				S	**S**	**07 34 27.0**	**-4.3**
TMWZ	**Te Maipa**	**5.82**	**199**	P	**Pn**	**07 33 21.2**	**-3.2**
KIW	**Kapiti Island**	**5.91**	**207**	P	**Pn**	**07 33 22.0**	**-3.4**
KIW				S	**S**	**07 34 28.6**	**-5.8**
MTW	**Mount Morrison**	**5.98**	**202**	P	**Pn**	**07 33 22.5**	**-3.8**
MTW				S	**S**	**07 34 30.8**	**-5.1**
CAW	**Cannon Point**	**6.07**	**205**	P	**Pn**	**07 33 23.9**	**-3.6**
CAW				S	**S**	**07 34 30.7**	**-7.4**
TRWZ	**Traveller**	**6.15**	**200**	P	**Pn**	**07 33 24.9**	**-3.5**
TRWZ				S	**S**	**07 34 34.9**	**-4.9**
PAWZ	**Paruwai Farm**	**6.21**	**201**	P	**Pn**	**07 33 25.5**	**-3.7**
PAWZ				S	**S**	**07 34 34.3**	**-6.9**
DUWZ	**D’Urville Isla**	**6.27**	**213**	P	**Pn**	**07 33 26.1**	**-3.8**
MSWZ	**Moikau Station**	**6.29**	**202**	P	**Pn**	**07 33 26.4**	**-3.9**
MSWZ	**Moikau Station**	**6.29**	**202**	Pn	**Pn**	**07 33 26.7**	**-3.6**
WEL	**Wellington**	**6.33**	**206**	P	**Pn**	**07 33 27.2**	**-3.6**
SNZO	**South Karori**	**6.38**	**206**	Pn	**Pn**	**07 33 27.6**	**-3.7**
SNZO	**South Karori**	**6.38**	**206**	P	**Pn**	**07 33 27.9**	**-3.4**
BHW	**Baring Head**	**6.41**	**205**	P	**Pn**	**07 33 27.8**	**-3.9**
BHW	**Baring Head**	**6.41**	**205**	Pn	**Pn**	**07 33 28.1**	**-3.7**
PLWZ	**Palliser**	**6.43**	**202**	P	**Pn**	**07 33 28.2**	**-3.9**
PLWZ	**Palliser**	**6.43**	**202**	Pn	**Pn**	**07 33 28.1**	**-3.9**
TCW	**Tory Channel**	**6.46**	**209**	P	**Pn**	**07 33 28.1**	**-4.2**
TUWZ	**Tuamarina**	**6.77**	**210**	P	**Pn**	**07 33 32.4**	**-3.9**
TUWZ	**Tuamarina**	**6.77**	**210**	Pn	**Pn**	**07 33 32.6**	**-3.8**
NNZ	**Nelson**	**6.84**	**214**	P	**Pn**	**07 33 33.1**	**-4.1**
NNZ	**Nelson**	**6.84**	**214**	Pn	**Pn**	**07 33 33.3**	**-3.9**
CMWZ	**Cape Campbell**	**6.94**	**207**	Pn	**Pn**	**07 33 36.2**	**-2.4**
QRZ	**Quartz Range**	**6.96**	**220**	P	**Pn**	**07 33 34.7**	**-4.1**
QRZ	**Quartz Range**	**6.96**	**220**	Pn	**Pn**	**07 33 36.3**	**-2.5**
QRZ	**Quartz Range**	**6.96**	**220**	P	**Pn**	**07 33 36.1**	**-2.7**
BSWZ	**Blackbirch Sta**	**7.04**	**209**	P	**Pn**	**07 33 35.9**	**-3.9**
BSWZ	**Blackbirch Sta**	**7.04**	**209**		**Pn**	**07 33 36.2**	**-3.6**
GLKZ	**Green Lake**	**7.06**	**27**	P	Pn	07 33 30.9	-9.3
GLKZ				S	S	07 34 44.9	-16
THZ	**Tophouse**	**7.49**	**214**	P	**Pn**	**07 33 41.6**	**-4.1**
THZ	**Tophouse**	**7.49**	**214**	Pn	**Pn**	**07 33 42.0**	**-3.6**
KHZ	**Kahutara**	**7.77**	**208**	P	**Pn**	**07 33 45.0**	**-4.1**
KHZ	**Kahutara**	**7.77**	**208**	Pn	**Pn**	**07 33 45.2**	**-3.9**
KHZ	**Kahutara**	**7.77**	**208**	P	**Pn**	**07 33 45.0**	**-4.1**
DSZ	**Denniston Nort**	**8.01**	**218**	P	**Pn**	**07 33 47.6**	**-4.6**
GVZ	**Greta Valley S**	**8.44**	**208**	P	**Pn**	**07 33 53.6**	**-4.0**
LTZ	**Lake Taylor**	**8.59**	**212**	P	**Pn**	**07 33 55.6**	**-4.0**
LTZ	**Lake Taylor**	**8.59**	**212**	Pn	**Pn**	**07 33 56.6**	**-3.1**
AMCZ	**Amberley**	**8.76**	**209**	P	**Pn**	**07 33 57.9**	**-3.8**
INZ	**Inchbonnie**	**8.92**	**215**	P	**Pn**	**07 33 59.7**	**-4.1**
CTZ	**Chatham Island**	**8.94**	**156**	P	**Pn**	**07 34 04.9**	**+0.8**
CTZ				S	**S**	**07 35 42.9**	**-2.0**
OKCZ	**Okains Bay**	**9.08**	**206**	P	**Pn**	**07 34 02.1**	**-3.7**
OXZ	**Oxford**	**9.13**	**211**	P	Pn	07 34 01.7	-4.9
OXZ	**Oxford**	**9.13**	**211**	Pn	**Pn**	**07 34 02.9**	**-3.7**
MQZ	**McQueen’s Vall**	**9.21**	**207**	P	Pn	07 34 02.3	-5.2
MQZ	**McQueen’s Vall**	**9.21**	**207**	Pn	**Pn**	**07 34 03.1**	**-4.4**
AKCZ	**Akaroa Harbour**	**9.26**	**206**	P	**Pn**	**07 34 04.2**	**-4.0**
RACZ	**Rakaia**	**9.43**	**209**	P	**Pn**	**07 34 05.5**	**-4.7**
MHCZ	**Mount Hutt**	**9.50**	**212**	P	**Pn**	**07 34 07.7**	**-3.6**
WVZ	**Waitaha Valley**	**9.52**	**216**	P	**Pn**	**07 34 07.3**	**-4.2**
WACZ	**Wakanui South**	**9.72**	**209**	P	**Pn**	**07 34 09.5**	**-4.5**
RPZ	**Rata Peaks**	**9.87**	**213**	P	**Pn**	**07 34 12.2**	**-3.8**
RPZ	**Rata Peaks**	**9.87**	**213**	Pn	**Pn**	**07 34 12.4**	**-3.6**
RPZ	**Rata Peaks**	**9.87**	**213**	P	**Pn**	**07 34 12.2**	**-3.8**
GCSZ	**Gaunt Creek Bo**	**9.90**	**217**	P	**Pn**	**07 34 12.6**	**-3.7**
ARCZ	**Arundel**	**10.00**	**212**	P	**Pn**	**07 34 14.1**	**-3.6**
FOZ	**Fox Glacier**	**10.31**	**218**	P	**Pn**	**07 34 17.7**	**-3.9**
FOZ	**Fox Glacier**	**10.31**	**218**	Pn	**Pn**	**07 34 18.5**	**-3.1**
TMZ	**Timaru**	**10.43**	**211**	P	**Pn**	**07 34 19.0**	**-4.1**
LBZ	**Lake Benmore**	**10.79**	**213**	P	**Pn**	**07 34 23.5**	**-4.1**
LBZ	**Lake Benmore**	**10.79**	**213**	Pn	**Pn**	**07 34 25.2**	**-2.4**
NFK	**Norfolk Island**	**11.04**	**304**	P	**Pn**	**07 34 31.2**	**+0.3**
	baz=11,SNR=5.6						
NFK	**Norfolk Island**	**11.04**	**304**	P	**Pn**	**07 34 32.2**	**+1.2**
	363nm,1.1s						
ODZ	**Otahua Downs**	**11.12**	**210**	P	**Pn**	**07 34 28.3**	**-3.4**
ODZ	**Otahua Downs**	**11.12**	**210**	Pn	**Pn**	**07 34 29.4**	**-2.3**
ODZ	**Otahua Downs**	**11.12**	**210**	P	**Pn**	**07 34 29.4**	**-2.3**
JCZ	**Jackson Bay**	**11.22**	**218**	P	**Pn**	**07 34 29.3**	**-3.9**
WKZ	**Wanaka**	**11.66**	**215**	P	**Pn**	**07 34 34.0**	**-4.6**
WKZ	**Wanaka**	**11.66**	**215**	Pn	**Pn**	**07 34 38.7**	**0.0**
HHSZ	**Highcliff Hill**	**11.83**	**208**	P	**Pn**	**07 34 38.7**	**-2.0**
EAZ	**Earnscleugh**	**11.84**	**213**	P	**Pn**	**07 34 36.8**	**-4.0**
TUZ	**Tuapeka**	**12.27**	**210**	P	**Pn**	**07 34 45.3**	**-0.9**
MLZ	**Mavora Lakes**	**12.49**	**216**	P	**Pn**	**07 34 48.0**	**-1.0**
MLZ	**Mavora Lakes**	**12.49**	**216**	Pn	**Pn**	**07 34 48.1**	**-0.8**
SYZ	**Scrubby Hill**	**12.94**	**210**	P	**Pn**	**07 34 54.3**	**-0.3**
WHZ	**Wether Hill Ro**	**12.96**	**215**	P	**Pn**	**07 34 51.7**	**-3.1**
PINNC	**Pines Island,**	**16.12**	**321**	P	**P**	**07 35 31.8**	**-0.5**
OUENC	**Ouen Island, N**	**16.60**	**319**	P	**P**	**07 35 35.8**	**-1.8**
OUENC				IAmb	IAmb	07 35 51.6	
	comp=Z,49nm,1.0s						
MARNC	**Mare, Loyalty**	**16.79**	**324**	P	**P**	**07 35 36.0**	**-3.5**
DZM	**Mont Dzumac**	**17.09**	**319**	*e*P	**P**	**07 35 41.1**	**-2.0**
	comp=Z,66nm,1.0s						
DZM				*e*LR	LR	07 39 37.4	
	comp=Z,274nm,25.4s						
DZM	**Mont Dzumac**	**17.09**	**319**	P	**P**	**07 35 43.3**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=126,slow=15,SNR=8.3						
DZM	**Mont Dzumac**	**17.09**	**319**		**P**	**07 35 43.0**	**-0.1**
DZM				IAmb	IAmb	07 35 45.2	
	comp=Z,30nm,0.9s						
LKBA	**Tubou, Lakemba**	**17.50**	**9**	P	**P**	**07 35 45.2**	**-2.2**
MSVF	**Nonsavu**	**17.83**	**359**	P	**P**	**07 35 49.4**	**-1.7**
	comp=Z,9.9nm,0.3s,baz=231,slow=11,SNR=33						
MSVF	**Nonsavu**	**17.83**	**359**		**P**	**07 35 48.2**	**-2.8**
MSVF	**Nonsavu**	**17.83**	**359**	P	**P**	**07 35 49.0**	**-2.1**
TAVE	**Taveuni**	**18.91**	**5**	P	**P**	**07 36 02.8**	**+0.2**
DGTI	**Dogotuki**	**19.29**	**4**	P	**P**	**07 36 07.1**	**+0.4**
NIUE	**Niue**	**19.43**	**35**	P	**Pn**	**07 36 11.4**	**-0.9**
	baz=20						
KOUNC	**Koumac, New Ca**	**19.50**	**317**	P	**P**	**07 36 09.5**	**+0.6**
SANVU	**Saraoutou**	**22.48**	**331**	P	**P**	**07 36 37.5**	**-1.5**
SANVU	**Saraoutou**	**22.48**	**331**	P	**P**	**07 36 38.5**	**-0.5**
ARMA	**Armidale**	**23.04**	**275**	P	**P**	**07 36 46.2**	**+2.1**
	baz=23,SNR=5.5						
ARMA	**Armidale**	**23.04**	**275**	P	**P**	**07 36 42.4**	**-1.7**
ARMA				IAmb	IAmb	07 36 49.0	
	comp=Z,39nm,1.3s						
ARMA	**Armidale**	**23.04**	**275**	P	**P**	**07 36 47.4**	**+3.3**
AFI	**Afiamalu**	**23.36**	**25**	P	**P**	**07 36 45.7**	**-1.4**
	comp=Z,127nm,0.9s,baz=0.7,slow=13,SNR=8.5						
CNB	**Canberra Magne**	**23.65**	**262**	P	**P**	**07 36 52.7**	**+3.1**
	baz=24,SNR=8.5						
CAN	**Canberra**	**23.94**	**262**	P	**P**	**07 36 55.1**	**+2.9**
CAN				IAmb	IAmb	07 37 16.4	
	comp=Z,54nm,1.4s						
EIDS	**Eidsvold**	**25.62**	**286**	P	**P**	**07 37 08.0**	**+0.6**
	baz=26,SNR=3.3						
EIDS	**Eidsvold**	**25.62**	**286**	P	**P**	**07 37 07.9**	**+0.5**
EIDS	**Eidsvold**	**25.62**	**286**	P	**P**	**07 37 08.4**	**+1.0**
TOO	**Toolangi**	**26.45**	**256**	P	**P**	**07 37 17.1**	**+2.3**
	baz=26,SNR=14						
RMQ	**Roma**	**26.93**	**281**	P	**P**	**07 37 21.0**	**+1.9**
	baz=27,SNR=18						
RMQ	**Roma**	**26.93**	**281**	P	**P**	**07 37 21.0**	**+1.9**
FUNA	**Funafuti**	**26.99**	**2**	P	**P**	**07 37 17.5**	**-2.1**
CMSA	**Cobar Meteorol**	**27.51**	**269**	P	**P**	**07 37 26.0**	**+1.8**
	baz=27,SNR=21						
CMSA	**Cobar Meteorol**	**27.51**	**269**	P	**P**	**07 37 26.3**	**+2.1**
ARPS	**Mount Arapiles**	**29.45**	**257**	P	**P**	**07 37 43.0**	**+1.8**
	baz=29,SNR=5.4						
TBI	**Tubuai**	**30.37**	**75**	*e*T	T	08 07 26.2	
	comp=Z,11nm,0.3s						
QLP	**Quilpie**	**30.52**	**278**	P	**P**	**07 37 51.7**	**+0.9**
	baz=30,SNR=19						
QLP	**Quilpie**	**30.52**	**278**	P	**P**	**07 37 51.9**	**+1.1**
STKA	**Stephens Creek**	**30.75**	**266**	P	**P**	**07 37 54.2**	**+1.5**
	comp=Z,26nm,0.9s,baz=101,slow=9.2,SNR=14						
STKA	**Stephens Creek**	**30.75**	**266**	P	**P**	**07 37 54.5**	**+1.7**
	baz=31,SNR=20						
STKA	**Stephens Creek**	**30.75**	**266**	P	**P**	**07 37 53.9**	**+1.1**
STKA	**Stephens Creek**	**30.75**	**266**	P	**P**	**07 37 54.5**	**+1.7**
HNR	**Honiara**	**31.05**	**323**	P	**P**	**07 37 53.3**	**-2.3**
CTA	**Charters Tower**	**32.22**	**290**	P	**P**	**07 38 07.8**	**+2.1**
CTAO	**Charters Tower**	**32.22**	**290**	P	**P**	**07 38 06.3**	**+0.6**
CTAO	**Charters Tower**	**32.22**	**290**	P	**P**	**07 38 07.0**	**+1.3**
HTT	**Hallett**	**32.48**	**262**	P	**P**	**07 38 09.6**	**+1.6**
	baz=32,SNR=15						
HTT	**Hallett**	**32.48**	**262**	P	**P**	**07 38 09.6**	**+1.6**
INKA	**Innaminka**	**32.87**	**273**	P	**P**	**07 38 13.0**	**+1.7**
NAPP	**Napperby**	**33.17**	**262**	P	**P**	**07 38 15.0**	**+1.1**
PAE	**Paea**	**33.52**	**66**	*e*T	T	08 11 22.4	
	comp=Z,1.2nm,0.2s						
PPT2	**Papeete2**	**33.57**	**66**	*e*LR	LR	07 46 16.0	
	comp=Z,64nm,26.2s						
PPT2	**Papeete2**	**33.57**	**66**	*e*T	T	08 11 32.9	
	comp=Z,2.9nm,0.4s						
WHYH	**Whyalla**	**33.67**	**262**	P	**P**	**07 38 19.7**	**+1.5**
LCRK	**Leigh Creek**	**33.94**	**267**	P	**P**	**07 38 21.7**	**+1.2**
MTSU	**Mount Surprise**	**34.84**	**291**	P	**P**	**07 38 29.4**	**+1.0**
	baz=35,SNR=17						
MTSU	**Mount Surprise**	**34.84**	**291**	P	**P**	**07 38 29.6**	**+1.2**
BBOO	**Buckleboo**	**34.96**	**262**	P	**P**	**07 38 29.7**	**+0.5**
	baz=35,SNR=19						
BBOO	**Buckleboo**	**34.96**	**262**	P	**P**	**07 38 29.9**	**+0.7**
BBOO				IAmb	IAmb	07 38 34.3	
	comp=Z,18nm,0.6s						
BBOO	**Buckleboo**	**34.96**	**262**	P	**P**	**07 38 30.0**	**+0.7**
OOD	**Oodnadatta**	**36.97**	**270**	P	**P**	**07 38 47.6**	**+1.3**
QIS	**Mount Isa**	**37.14**	**283**	P	**P**	**07 38 48.0**	**+0.1**
	baz=37,SNR=16						
QIS	**Mount Isa**	**37.14**	**283**	P	**P**	**07 38 48.4**	**+0.5**
MULG	**Mulgathing**	**37.38**	**265**	P	**P**	**07 38 50.5**	**+0.8**
COEN	**Coen**	**38.30**	**295**	P	**P**	**07 38 58.0**	**+0.5**
COEN	**Coen**	**38.30**	**295**	P	**P**	**07 38 58.0**	**+0.5**
PMG	**Port Moresby**	**38.63**	**305**	P	**P**	**07 39 00.9**	**+0.6**
PMG				IAmb	IAmb	07 39 01.5	
	comp=Z,46nm,0.8s						
PMG	**Port Moresby**	**38.63**	**305**	P	**P**	**07 39 01.2**	**+0.9**
PMG	**Port Moresby**	**38.63**	**305**	P	**P**	**07 39 01.2**	**+0.9**
RABL	**Rabaul**	**39.59**	**316**	P	**P**	**07 39 08.4**	**+0.2**
AS31	**Alice Springs**	**40.19**	**275**	P	**P**	**07 39 13.2**	**+0.1**
ASAR	**Alice Springs**	**40.19**	**275**	P	**P**	**07 39 13.1**	**0.0**
	comp=Z,36nm,0.9s,baz=117,slow=7.9,SNR=150						
ASAR				S	**S**	**07 45 04.4**	**+1.9**
	comp=Z,1.0nm,0.7s,baz=120,slow=15,SNR=3.4						
ASAR				PKiKP	**PKiKP**	**07 48 20.2**	**-1.9**
	comp=Z,0.3nm,0.6s,baz=112,slow=1.3,SNR=6.0						
ASAR	**Alice Springs**	**40.19**	**275**	P	**P**	**07 39 13.6**	**+0.5**
ASPA	**Alice Springs**	**40.19**	**275**	P	**P**	**07 39 13.0**	**-0.1**
	baz=40						
WR0	**Warramunga Arr**	**41.50**	**280**	P	**P**	**07 39 23.5**	**-0.3**
WR0				IAmb	IAmb	07 39 24.4	
	comp=Z,33nm,1.0s						
WC3	**Warramunga Arr**	**41.63**	**280**	P	**P**	**07 39 24.6**	**-0.2**
	baz=42						
WB2	**Warramunga Arr**	**41.66**	**280**	P	**P**	**07 39 24.9**	**-0.2**
WRAB	**Tennant Creek**	**41.66**	**280**	P	**P**	**07 39 24.8**	**-0.3**
WRAB				IAmb	IAmb	07 39 25.5	
	comp=Z,45nm,0.6s						
WRAB	**Tennant Creek**	**41.66**	**280**	P	**P**	**07 39 25.1**	**0.0**
WRA	**Warramunga Arr**	**41.67**	**280**	P	**P**	**07 39 24.8**	**-0.3**
	comp=Z,36nm,0.5s,baz=122,slow=8.0,SNR=447						
WRA				PKiKP	**PKiKP**	**07 48 21.8**	**-1.7**
	comp=Z,0.6nm,1.0s,baz=90,slow=0.4,SNR=6.0						
WRA	**Warramunga Arr**	**41.67**	**280**	P	**P**	**07 39 24.1**	**-1.0**
WB0	**Warramunga Arr**	**41.72**	**280**	P	**P**	**07 39 25.3**	**-0.2**
WB0				IAmb	IAmb	07 39 26.0	
	comp=Z,42nm,0.8s						
FORT	**Forrest**	**42.06**	**262**	P	**P**	**07 39 28.1**	**0.0**
	baz=42,SNR=8.4						
FORT	**Forrest**	**42.06**	**262**	P	**P**	**07 39 29.4**	**+1.2**
FORT				IAmb	IAmb	07 39 32.9	
	comp=Z,38nm,0.8s						
VNDA	**Vanda**	**42.61**	**185**	P	**P**	**07 39 36.1**	**+4.1**
	comp=Z,2.4nm,1.0s,baz=341,slow=9.1,SNR=7.1						
VNDA	**Vanda**	**42.61**	**185**	P	**P**	**07 39 36.0**	**+4.1**
SBA	**Scott Base**	**42.62**	**184**	P	P	07 39 37.4	+5.3
WRKA	**Warakurna**	**44.13**	**270**	P	**P**	**07 39 44.0**	**-0.9**
	baz=44,SNR=61						
WRKA	**Warakurna**	**44.13**	**270**	P	**P**	**07 39 46.5**	**+1.6**
PATS	**Pohnpei**	**46.30**	**332**	P	**P**	**07 40 01.3**	**-0.5**
MTN	**Manton Dam**	**48.17**	**286**	P	**P**	**07 40 16.0**	**-0.4**
	baz=48,SNR=3.4						
MTN	**Manton Dam**	**48.17**	**286**	P	**P**	**07 40 15.8**	**-0.6**
MTN				IAmb	IAmb	07 40 25.3	
	comp=Z,76nm,1.4s						
KNRA	**Kununurra**	**48.43**	**281**	P	**P**	**07 40 18.1**	**-0.2**
	baz=48,SNR=6.3						
KNRA	**Kununurra**	**48.43**	**281**	P	**P**	**07 40 18.3**	**0.0**
KNRA				IAmb	IAmb	07 40 20.2	
	comp=Z,26nm,1.0s						
FITZ	**Fitzroy Crossi**	**49.64**	**276**	P	**P**	**07 40 27.2**	**-0.2**
	baz=50,SNR=5.1						
KLBR	**Kellerberrin**	**50.00**	**256**	P	**P**	**07 40 31.7**	**+1.6**
	baz=50,SNR=15						
KLBR	**Kellerberrin**	**50.00**	**256**	P	**P**	**07 40 31.3**	**+1.3**
MUN	**Mundaring**	**51.08**	**255**	P	**P**	**07 40 39.9**	**+1.9**
	baz=51,SNR=5.4						
MEEK	**Meekatharra**	**51.31**	**262**	P	**P**	**07 40 41.2**	**+1.4**
	baz=51,SNR=13						
MEEK	**Meekatharra**	**51.31**	**262**	P	**P**	**07 40 41.5**	**+1.7**
MORW	**Morawa**	**52.35**	**258**	P	**P**	**07 40 48.8**	**+1.3**
	baz=52,SNR=3.7						
MORW	**Morawa**	**52.35**	**258**	P	**P**	**07 40 49.0**	**+1.5**
MORW				IAmb	IAmb	07 40 49.7	
	comp=Z,8.7nm,0.6s						
PSA00	**Pilbara Seismi**	**52.62**	**269**	P	**P**	**07 40 50.9**	**+1.4**
PSA00	**Pilbara Seismi**	**52.62**	**269**	P	**P**	**07 40 50.9**	**+1.4**
FAKI	**Fak Fak**	**53.66**	**297**	P	**P**	**07 40 57.5**	**+0.4**
FAKI				IAmb	IAmb	07 40 59.7	
	comp=Z,34nm,1.0s						
QSPA	**South Pole Qui**	**54.49**	**180**	P	**P**	**07 41 06.1**	**+3.5**
QSPA				IAmb	IAmb	07 41 07.4	
	comp=Z,29nm,0.7s						
SANI	**Sanana**	**58.88**	**292**	P	**P**	**07 41 32.1**	**-1.9**
	comp=Z,34nm,0.8s						
SANI	**Sanana**	**58.88**	**292**	P	**P**	**07 41 34.8**	**+0.8**
SMAI	**San Martin Ant**	**65.71**	**158**	P	P	07 42 23.6	+5.3
MAW	**Mawson**	**66.36**	**202**	P	**P**	**07 42 24.3**	**+1.8**
	comp=Z,3.0nm,0.4s,baz=123,slow=10,SNR=9.4						
MAW	**Mawson**	**66.36**	**202**	P	**P**	**07 42 24.1**	**+1.7**
	baz=66,SNR=8.6						
MAW	**Mawson**	**66.36**	**202**	P	**P**	**07 42 24.4**	**+2.0**
BBKI	**Banjar Baru**	**66.65**	**283**	P	**P**	**07 42 24.0**	**-1.2**
PMSA	**Palmer Station**	**68.73**	**156**	P	**P**	**07 42 39.0**	**+1.7**

PMSA				IAmb	IAmb	07 42 47.4	
	comp=Z,28nm,0.9s						
SYO	Syowa Base	71.33	194	⇑*i*P	P	07 42 54.1	+1.1
SYO	Syowa Base	71.33	194	⇑*e*X	PcP	07 43 08.6	-2.7
SNAA	Sanae	72.99	180	P	P	07 43 04.6	+1.6
SNAA	Sanae	72.99	180	P	P	07 43 04.5	+1.6
	comp=Z,3.6nm,0.5s,baz=197,slow=5.5,SNR=15						
SNAA	Sanae	72.99	180	P	P	07 43 04.6	+1.6
SNAA				IAmb	IAmb	07 43 06.4	
	comp=Z,18nm,1.2s						
VNA3	Neumayer Olymp	73.27	177	P	P	07 43 06.3	+1.8
VNA2	Neumayer--Watz	73.66	178	P	P	07 43 08.8	+2.1
	baz=176,slow=4.3						
VNA1	Neumayer--Stat	73.91	178	P	P	07 43 10.3	+2.2
H03S2	Juan Fernandez	80.03	124	T	T	09 11 15.0	
	baz=229,SNR=12						
H03S1	Juan Fernandez	80.04	124	T	T	09 11 21.7	
	baz=229,SNR=6.0						
H03S3	Juan Fernandez	80.05	124	T	T	09 10 57.8	
	baz=229						
H03N3	Juan Fernandez	80.26	124	T	T	09 11 22.2	
	baz=234,slow=72,SNR=17						
H03N2	Juan Fernandez	80.26	124	T	T	09 11 14.1	
	baz=234,slow=72,SNR=16						
H03N1	Juan Fernandez	80.27	124	T	T	09 11 22.2	
	baz=234,slow=72,SNR=15						
MJAR	Matsushiro Arr	80.97	328	P	P	07 43 46.1	-1.5
	comp=Z,8.6nm,0.8s,baz=151,slow=6.4,SNR=3.2						
PLCA	Paso Flores	81.08	134	P	P	07 43 51.8	+3.3
	comp=Z,4.3nm,0.7s,baz=248,slow=5.7,SNR=12						
PLCA	Paso Flores	81.08	134	P	P	07 43 51.2	+2.7
JWT	Wachi	81.16	326	P	P	07 43 48.8	+0.2
JWT				IAmb	IAmb	07 43 49.1	
	comp=Z,13nm,0.7s						
JNU	Nakatsue	81.61	321	P	P	07 43 50.3	-0.8
	comp=Z,9.5nm,0.8s,baz=169,slow=7.5,SNR=3.7						
JNU	Nakatsue	81.61	321	P	P	07 43 50.8	-0.2
JNU				IAmb	IAmb	07 43 51.7	
	comp=Z,10nm,0.8s						
GSI	Gunungsitoli	83.33	276	P	P	07 44 02.1	+1.7
MT01	Popeta	85.04	128	P	P	07 44 11.3	+2.5
MT01				IAmb	IAmb	07 44 11.9	
	comp=Z,14nm,0.7s						
KSRS	Korea Array	86.50	322	P	P	07 44 15.9	+0.3
	comp=Z,13nm,0.8s,baz=144,slow=5.5,SNR=37						
KSAR	Wonju Array Be	86.51	322	P	P	07 44 16.1	+0.6
KS19	Wonju Array Si	86.57	322	P	P	07 44 16.6	+0.8
KS19				IAmb	IAmb	07 44 17.4	
	comp=Z,22nm,0.9s						
NJ2	Nanjing	87.48	313	*e*P	P	07 44 23.0	+2.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USRK	Ussuriysk Ar.	89.96	329	P	P	07 44 31.8	+0.1
	comp=Z,13nm,0.8s,baz=149,slow=3.9,SNR=13						
USRK	Ussuriysk Ar.	89.96	329	P	P	07 44 32.1	+0.4
PEA0B	Petropavlovsk-	90.20	348	P	P	07 44 31.9	-0.7
PETK	Petropavlovsk-	90.20	348	P	P	07 44 31.1	-1.5
	comp=Z,27nm,0.6s,baz=130,slow=5.5,SNR=58						
PETK	Petropavlovsk-	90.20	348	P	P	07 44 31.2	-1.4
PKM	Mcpherson Peak	90.76	46	P	P	07 44 37.4	+1.5
	baz=226						
OSI	Osito Audit: C	91.22	47	P	P	07 44 39.4	+1.5
	baz=226						
TIA	Tai'an	91.43	315	*e*P	P	07 44 39.0	+0.3
TIA				pmax	pmax		
	comp=Z,17nm,0.7s						
MURC	Murrieta	91.45	49	P	P	07 44 40.5	+1.5
	baz=227,SNR=5.7						
MONP2	Monument Peak	91.45	50	P	P	07 44 40.9	+1.7
	baz=228,SNR=6.8						
IKP	In-Ko-Pah, Jac	91.49	50	P	P	07 44 40.9	+1.7
	baz=228						
ARVC	Arvin	91.51	47	P	P	07 44 40.4	+1.2
	baz=226						
BFSC	Mount Baldy Ra	91.60	48	P	P	07 44 40.9	+1.2
	baz=227,SNR=8.6						
EDW2	Edwards Air Fo	91.84	47	P	P	07 44 42.2	+1.5
	baz=227,SNR=7.4						
VES	Vestal, Richgr	91.85	46	P	P	07 44 42.1	+1.4
	baz=226						
SWSC	Sam W. Stewart	91.88	50	P	P	07 44 42.6	+1.7
	baz=228,SNR=6.1						
TPFO	Pinon Flats	91.91	49	P	P	07 44 42.8	+1.6
	baz=228						
PFO	Pinyon Flats O	91.91	49	P	P	07 44 42.8	+1.6
	baz=228						
ISA	Isabella, Lake	92.09	47	P	P	07 44 43.6	+1.7
ISA				IAmb	IAmb	07 44 44.2	
	comp=Z,13nm,0.9s						
ISA	Isabella, Lake	92.09	47	P	P	07 44 43.2	+1.3
	baz=227,SNR=8.9						
CMAR	Chiang Mai Arr	92.38	291	P	P	07 44 43.7	+0.2
	comp=Z,2.5nm,0.5s,baz=151,slow=3.7,SNR=14						
LRMC	Laurel Mtn Rad	92.43	47	P	P	07 44 44.8	+1.2
	baz=227,SNR=7.4						
RRX	Edison Barstow	92.44	48	P	P	07 44 45.0	+1.5
	baz=228						
BELC	Belle Mtn. Jos	92.46	49	P	P	07 44 45.6	+1.9
	baz=228,SNR=8.1						
GLA	Glamis	92.56	51	P	P	07 44 46.4	+2.3
	baz=229,SNR=9.5						
BC3	Big Chuckawall	92.56	50	P	P	07 44 46.3	+2.1
	baz=228,SNR=7.3						
CMB	Columbia Colle	92.62	44	P	P	07 44 45.2	+0.9
CMB				IAmb	IAmb	07 44 45.8	
	comp=Z,13nm,0.9s						
HEC	Hector,Ludlow	92.81	48	P	P	07 44 46.6	+1.3
	baz=228,SNR=6.5						
O02D	Mt. Diablo Mer	92.82	41	P	P	07 44 46.6	+1.5
	baz=224,SNR=8.0						
GSC	Goldstone, Bar	92.84	48	P	P	07 44 46.6	+1.2
	baz=228,SNR=6.2						
CWC	Cottonwood Cre	92.85	46	P	P	07 44 46.4	+0.9
	baz=227						
MPMC	Manual Prospec	92.94	47	P	P	07 44 47.2	+1.2
	baz=227						
IRM	Iron Mountain	93.09	50	P	P	07 44 48.4	+1.9
	baz=228,SNR=10						
214A	Organ Pipe Nat	93.13	53	P	P	07 44 48.5	+1.7
214A				IAmb	IAmb	07 44 50.7	
	comp=Z,5.7nm,0.9s						
214A	Organ Pipe Nat	93.13	53	P	P	07 44 48.4	+1.7
	baz=230						
GMRC	Granite Mounta	93.19	49	P	P	07 44 48.2	+1.1
	baz=228						
MLAC	Mammoth, Mammo	93.22	45	P	P	07 44 48.5	+1.2
	baz=227						
O03E	Paynes Creek	93.43	41	P	P	07 44 49.1	+1.1
	baz=225						
N02D	Trinity Center	93.43	40	P	P	07 44 49.1	+1.1
	baz=224						
TUQ	Turquoise Moun	93.46	48	P	P	07 44 49.7	+1.3
	baz=228						
SHOC	Shoshone, Teco	93.56	48	P	P	07 44 50.1	+1.5
	baz=228						
FURC	Furnace Creek,	93.59	47	P	P	07 44 50.1	+1.5
	baz=228						
M02C	Callahan	93.65	40	P	P	07 44 50.7	+1.7
	baz=224						
PDMCI	Parker Dam,Lak	93.81	50	P	P	07 44 51.2	+1.5
	baz=229						
NVAR	Mina Array Bea	94.08	45	P	P	07 44 51.8	+0.6
	comp=Z,6.2nm,0.9s,baz=222,slow=8.3,SNR=30						
TPNV	Topopah Spring	94.28	47	P	P	07 44 53.2	+1.1
	baz=228,SNR=5.5						
M04C	Macdoel	94.47	40	P	P	07 44 53.8	+1.0
	baz=225						
TUC	Tucson	94.67	53	P	P	07 44 55.9	+2.1
	baz=231						
XAN	Xi'an	94.96	309	P	P	07 44 58.4	+3.3
XAN				pP	pwP	07 45 52.8	-1.4
XAN				sP	sP	07 46 15.8	+1.6
XAN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
J04D	Umpqua Nationa	95.36	39	P	P	07 44 58.2	+1.3
	baz=225						
OHAK	Old Harbor	95.53	15	P	P	07 44 59.2	+2.2
	baz=203						
I04A	Tendick Farm,	95.60	39	P	P	07 44 58.4	+0.6
	baz=225						
R11A	Troy Canyon, C	95.60	46	P	P	07 44 58.7	+0.6
	baz=228						
J05D	Fort Rock, OR	95.84	40	P	P	07 45 00.0	+1.0
	baz=225						
WUAZ	Wupatki	96.33	51	P	P	07 45 03.2	+1.8
	baz=230						
I05D	Terrebonne, OR	96.53	39	P	P	07 45 03.0	+1.0
	baz=225						
TXAR	Lajitas Array	97.67	59	P	Pdif	07 45 08.5	+0.9
	comp=Z,0.5nm,0.9s,baz=197,slow=7.8,SNR=5.4						
HHC	Hu-ho-hao-te	97.77	315	*e*P	Pdif	07 45 11.0	+3.3
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,6.6s						
LZH	Lanzhou	99.49	308	*e*P	Pdif	07 45 12.6	-3.0
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
PNL	Peninsula	101.15	20	P	Pdif	07 45 25.1	+2.9
	baz=214						
BW06	Boulder Array	101.95	46	P	Pdif	07 45 28.7	+2.3
	baz=232						
PDAR	Pinedale Array	101.95	46	P	Pdif	07 45 27.1	+0.6
	comp=Z,0.6nm,0.8s,baz=227,slow=3.9,SNR=6.8						
PDAR	Pinedale Array	101.95	46		Pdif	07 45 25.9	-0.5
HARP	HAARP	102.00	16	P	Pdif	07 45 29.1	+3.2
	baz=210						
BOZ	Bozeman (W)	102.52	42	P	Pdif	07 45 31.5	+2.7
	baz=232						
ILAR	Eielson Array	103.70	15	Pdiff	Pdif	07 45 33.9	+0.5
	comp=Z,0.4nm,0.8s,baz=227,slow=5.9,SNR=2.1						
ILAR				PKiKP	PKiKP	07 49 48.8	-1.4
	comp=Z,0.9nm,0.7s,baz=309,slow=2.9,SNR=8.2						
ILAR	Eielson Array	103.70	15		Pdif	07 45 34.3	+0.9
EPYK	Eagle Plains	107.34	17	P	PKiKP	07 49 57.0	+0.2
	baz=217						
W41B	Gary Mavity, V	108.94	60	P	PKiKP	07 50 00.1	-0.7
	baz=240						
INK	Inuvik	109.63	17	PKiKP	PKiKP	07 49 59.7	-1.3
	comp=Z,1.6nm,0.5s,baz=143,slow=0.9,SNR=18						
INK	Inuvik	109.63	17		PKiKP	07 50 00.4	-0.6
INK	Inuvik	109.63	17	P	PKiKP	07 50 00.1	-0.9
	baz=220						
ECSD	EROS Data Cent	110.34	50	P	PKiKP	07 50 02.4	-0.8
	baz=240						
BOSA	Boshof	111.28	205	PKiKP	PKiKP	07 50 05.9	+0.2
	comp=Z,2.4nm,0.8s,baz=206,slow=2.8,SNR=7.1						
BOSA				PKKPbc	PKKPbc	08 01 00.2	-1.1
	comp=Z,1.6nm,0.6s,baz=327,slow=5.5,SNR=6.3						
YKA	Yellowknife Ar	111.45	27	PKiKP	PKiKP	07 50 03.4	-1.2
	comp=Z,1.3nm,0.5s,baz=256,slow=1.8,SNR=77						
YKA				PP	PP	07 50 46.0	-3.9
	comp=Z,0.9nm,1.1s,baz=223,slow=7.5,SNR=5.6						
YKA				PKKPbc	PKKPbc	08 00 60.0	-1.5
	comp=Z,1.0nm,0.7s,baz=41,slow=3.4,SNR=18						
WVT	Waverly	112.55	61	P	PKiKP	07 50 06.2	-1.3
	baz=242						
AGMN	Agassiz Nation	113.02	46	P	PKiKP	07 50 06.8	-1.3
	baz=242						
SPMN	Marine on St.	113.45	50	P	PKiKP	07 50 07.8	-1.2
	baz=243						
ULM	Lac du Bonnet	113.92	44	PKiKP	PKiKP	07 50 08.1	-1.6
	comp=Z,4.0nm,0.5s,baz=204,slow=1.5,SNR=5.1						
JFWS	Jewell Farm	114.03	54	P	PKPdf	07 50 09.6	-0.6
	baz=243						
WMQ	Urumqi	114.07	308	*e*P	PKiKP	07 50 12.8	+2.5
WMQ				pmax	pmax		
	comp=Z,200nm,4.9s						
A36M	Sachs Harbour	114.25	16	P	PKPdf	07 50 08.5	-1.2
	baz=228						
GOGA	Godfrey	114.45	65	P	PKPdf	07 50 11.3	+0.1
	baz=242						
WCI	Wyandotte Cave	114.60	60	P	PKiKP	07 50 11.5	+0.1
	baz=243						
P49A	Miami Univ. Ec	116.28	59	P	PKPdf	07 50 14.2	-0.5
	baz=245						
KMSC	Kings Mountain	116.80	65	P	PKPdf	07 50 15.4	-0.4
	baz=244						
ACSO	Alum Creek Sta	117.79	59	P	PKPdf	07 50 17.3	-0.2
	baz=246						
P52A	Corning	118.14	60	P	PKPdf	07 50 17.5	-0.7
	baz=246						
AAM	Ann Arbor	118.17	56	P	PKPdf	07 50 18.1	-0.1
	baz=246						
BLA	Blacksburg	118.36	63	P	PKPdf	07 50 18.8	0.0
	baz=245						
MKAR	Makanchi Array	118.77	309	PKP	PKPdf	07 50 16.9	-2.3
	comp=Z,5.8nm,0.9s,baz=84,slow=1.3,SNR=24						
MKAR				PKKPab	PKKPab	08 00 37.0	+0.6
	comp=Z,0.5nm,0.7s,baz=305,slow=4.2,SNR=4.9						
MKAR	Makanchi Array	118.77	309	PKPdf	PKPdf	07 50 17.4	-1.9
O53A	New Philadelph	119.03	59	P	PKPdf	07 50 19.8	-0.1
	baz=247						
CNNC	Cliffs of the	119.39	66	P	PKiKP	07 50 20.9	+0.1
	baz=245						
MCWV	Mont Chateau	119.76	61	P	PKPdf	07 50 21.1	-0.2
	baz=247						
M53A	WI Miller and	119.87	58	P	PKPdf	07 50 21.1	-0.4
	baz=248						
ZALV	Zalesovo Beam	119.88	317	PKP	PKPdf	07 50 18.6	-2.5
	comp=Z,1.3nm,0.5s,baz=148,slow=0.7,SNR=8.2						
ZALV	Zalesovo Beam	119.88	317		PKPdf	07 50 19.1	-2.0
N54A	Moraine State	120.17	59	P	PKPdf	07 50 21.8	-0.3
	baz=248						
KSH	Kashi	120.24	299	PKP	PKPdf	07 50 22.3	-0.1
O56A	Blue Knob Stat	120.90	60	P	PKPdf	07 50 23.4	-0.1
	baz=248						
CBN	Corbin Frederi	120.97	63	P	PKPdf	07 50 23.5	-0.2
	baz=247						
ULHL	Ulahol	121.08	302	P	PKPdf	07 50 19.5	-4.6
	SNR=6.5						
SSPA	Standing Stone	121.52	60	P	PKPdf	07 50 24.0	-0.6
	baz=248						
TKM2	Tokmak 2	121.77	303	P	PKPdf	07 50 23.9	-1.5
	SNR=5.9						
KBK	Karagaybulak	122.12	302	P	PKPdf	07 50 24.9	-1.1
	SNR=5.6						
SADO	Sadowa	122.13	55	PKKPab	PKKPab	08 00 20.8	-1.2
	comp=Z,9.1nm,1.0s,baz=278,slow=6.1,SNR=3.2						
UCH	Uchtor	122.27	302	P	PKPdf	07 50 26.0	-0.7
	SNR=9.5						
CHMS	Chumysh	122.38	302	P	PKPdf	07 50 25.1	-1.2
	SNR=5.8						
AAK	Ala-Archa	122.43	302	PKP	PKPdf	07 50 25.2	-1.4
	comp=Z,3.8nm,0.8s,baz=178,slow=4.1,SNR=12						
AAK	Ala-Archa	122.43	302		PKPdf	07 50 25.4	-1.2
USP	Ospenovka	122.65	303	P	PKPdf	07 50 25.5	-1.3
	SNR=6.2						
AML	Almayashu	122.81	301	P	PKPdf	07 50 26.8	-0.8
	SNR=12						
P60A	Greenville	122.82	62	P	PKPdf	07 50 26.6	-0.5
	baz=249						
EKS2	Erkin-Say	122.94	302	P	PKPdf	07 50 26.7	-0.8
	SNR=6.5						
N59A	State Game Lan	123.12	61	P	PKPdf	07 50 27.5	-0.3
	baz=250						
NRIK	Noril'sk	123.14	335	PKP	PKPdf	07 50 25.1	-1.8
	comp=Z,6.1nm,0.7s,baz=74,slow=3.8,SNR=11						
BINY	Binghamton	123.42	59	P	PKPdf	07 50 28.1	-0.2
	baz=250						
PAL	Palisades	124.48	61	P	PKPdf	07 50 30.4	+0.1
	baz=250						
LONY	Lake Ozonia	125.16	57	P	PKPdf	07 50 31.5	0.0
	baz=253						
L61B	Northampton	125.81	60	P	PKPdf	07 50 33.1	+0.3
	baz=252						
HRV	Adam Dziewonsk	126.62	60	P	PKPdf	07 50 34.4	0.0
	baz=253						
LBNH	Lisbon	126.87	58	P	PKPdf	07 50 35.1	+0.3
	baz=254						
KMBO	Kilima Mbogo	128.56	233	PKP	PKiKP	07 50 40.2	+0.2
	comp=Z,0.9nm,0.3s,baz=198,slow=21,SNR=4.5						
PKME	Peaks-Kenny Pk	128.95	57	P	PKPdf	07 50 39.0	+0.3
	baz=256						
SCHQ	Schefferville	132.09	45	PKP	PKPdf	07 50 44.7	+0.3
	comp=Z,5.4nm,0.8s,baz=261,slow=5.2,SNR=8.2						
GEYT	Alibeck	132.86	291	PKP	PKPdf	07 50 46.1	-0.3
	comp=Z,3.0nm,0.5s,baz=46,slow=11,SNR=3.9						
SPA0	Spitsbergen Ar	136.66	355	*e*	PKPdf	07 50 52.2	-0.2
ARA0	ARCESS Array S	142.95	345	*e*	PKPdf	07 51 01.2	-2.7
ARCES	ARCESS Array B	142.95	345	PKhKP	PKPpre	07 50 58.2	
	comp=Z,6.9nm,0.6s,baz=2.9,slow=2.4,SNR=32						
KLMR	Klimovskoe	143.74	327	*e*PKPdf	PKPab	07 50 57.7	-5.3
KLMR				AMP		07 51 02.6	
	comp=Z,31nm,1.0s						
KTK1	Kautokeino	143.85	345	*e*	PKPab	07 51 02.0	-1.2
JETT	Jettan, Norway	143.94	347	*e*	PKPbc	07 51 04.1	-0.1
KBZ	Khabaz	145.19	297	PKPbc	PKPdf	07 51 07.2	-1.3
	comp=Z,12nm,1.0s,baz=128,slow=3.2,SNR=8.0						
STEI	Steigen	146.27	349	*e*	PKPdf	07 51 09.1	-0.6
LOF	Lofoten	146.35	350	*e*PKPdf	PKPbc	07 51 11.9	+0.4
FAUS	Fauske	146.76	348	*e*	PKPdf	07 51 11.2	+0.7
KONS	Konsvik	147.92	349	*e*PKPdf	PKPbc	07 51 14.8	-1.0
MOR8	Moi Rana	148.01	348	*e*PKPdf	PKPdf	07 51 14.3	+1.7
FINES	FINESS Array B	148.81	335	PKPbc	PKPbc	07 51 16.7	-1.5
	comp=Z,51nm,0.9s,baz=36,slow=2.5,SNR=66						
FINES	FINESS Array B	148.81	335		PKPdf	07 51 16.1	+2.0
NSS	Namsos	149.93	348	*e*PKPdf	PKPdf	07 51 17.8	+2.1
LIC	Lamto	150.56	173	*e*PKIKP	PKPdf	07 51 19.3	+1.0
	comp=Z,193nm,0.6s						
KIC	Kosan Boka	150.72	174	*e*PKIKP	PKPdf	07 51 19.4	+0.8
	comp=Z,118nm,0.8s						
TIC	Toumodi	150.98	173	*e*PKIKP	PKPdf	07 51 19.7	+0.7
DBIC	Dimbokro	151.02	173	PKP	PKPdf	07 51 19.6	+0.6
	comp=Z,4.2nm,0.8s,baz=258,slow=1.3,SNR=5.1						
DBIC				PKPbc	PKiKP	07 51 25.4	-0.1
	comp=Z,50nm,0.6s,baz=185,slow=2.5,SNR=94						
DBIC	Dimbokro	151.02	173		PKPdf	07 51 18.9	-0.1
DBIC				PKPbc	PKiKP	07 51 25.4	-0.1
TBLU	Trondheim	151.40	349	*e*PKPdf	PKPbc	07 51 22.9	-1.5
MTSE	Matsula	151.50	332	*e*P	PKPbc	07 51 22.1	-2.6
BRTR	Keskin Array B	151.95	289	PKPbc	PKPbc	07 51 24.9	-1.7
	comp=Z,14nm,0.8s,baz=132,slow=3.7,SNR=29						
MOL	Molde	152.44	351	*e*PKPdf	PKPbc	07 51 25.8	-0.9
ISAL	Salakas	152.51	325	*e*P	PKiKP	07 51 27.4	+0.2
NACGM	Naroch	152.57	323	*i* PKP	PKPbc	07 51 24.0	-3.3
IIGN	Ignalina	152.59	325	*e*P	PKPbc	07 51 26.9	-0.4
DOMB	Dombas	152.73	349	*e*PKPdf	PKPbc	07 51 26.2	-1.2
UPP	Uppsala	152.75	339	*e*P	PKPab	07 51 37.4	-1.9
AKN	Aaknes	152.89	351	*e*PKPdf	PKPbc	07 51 27.1	-0.7
AKASG	Malin Array Be	153.21	314	PKPbc	PKPbc	07 51 27.1	-1.7
	comp=Z,11nm,0.9s,baz=55,slow=2.5,SNR=27						
AKASG				PKPab	PKPab	07 51 40.3	-1.3
	comp=Z,10nm,0.9s,baz=50,slow=4.2,SNR=16						
NB2	NORSAR Subarra	153.29	346	PKP	PKPbc	07 51 27.1	-1.6
	comp=Z,7.7nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	153.29	346	PKPbc	PKPbc	07 51 27.2	-1.5
	comp=Z,6.2nm,0.7s,baz=31,slow=2.1,SNR=16						
NOA				PKPab	PKPab	07 51 39.1	-2.5
	comp=Z,5.4nm,0.7s,baz=25,slow=3.4,SNR=15						
NC602	NORSAR Array S	153.51	346	*e*PKPdf	PKPbc	07 51 27.2	-1.9
SKAR	Skarslia	154.14	349	*e*PKPdf	PKPbc	07 51 29.9	-0.7
ASK	Askoy	154.75	352	*e*PKPbc	PKiKP	07 51 35.4	+3.7
SUW	Suwalki	154.80	325	*e*P	PKPab	07 51 46.5	-1.8
BER	Bergen	154.84	352	*e*PKPbc	PKiKP	07 51 36.0	+4.1
KONO	Kongsberg	154.89	347	*e*PKPbc	PKiKP	07 51 35.7	+3.6
TORD	Torodi Ar. Bea	157.42	188	PKP	PKPdf	07 51 27.7	-0.1
	comp=Z,5.1nm,0.9s,baz=332,slow=0.8,SNR=24						
TORD				PKPab	PKPab	07 52 01.0	+0.6
	comp=Z,19nm,0.9s,baz=175,slow=3.1,SNR=28						
TORD	Torodi Ar. Bea	157.42	188		PKPdf	07 51 27.5	-0.4
CHVC	Chvalec	160.36	325	*e*PKPAB	PKPab	07 52 11.8	-0.7
DPC	Dobruska-Polom	160.39	324	*e*PKPAB	PKPab	07 52 12.3	-0.3
UPC	Upice	160.43	325	*e*PKPAB	PKPab	07 52 12.6	-0.2
CLL	Collm	161.16	331	*e*PKPdf	PKPdf	07 51 31.0	-0.1
	comp=Z,5.0nm,0.7s						
CLL				*e*PKPdiff	PKPdf	07 51 48.0	+17
CLL				*i* PKPab	PKPab	07 52 14.1	-1.8
	comp=Z,10.0nm,0.9s						
CONA	Conrad Observa	162.17	319	*e*P	PKPab	07 52 20.5	0.0
	comp=Z,11nm,1.1s						
NKC	Novy Kostel	162.21	329	*e*PKPAB	PKPab	07 52 19.8	-0.8
KHC	Kasperske Hory	162.52	325	*e*PKPAB	PKPab	07 52 21.2	-0.8
GERES	GERESS Array B	162.66	324	PKP	PKPdf	07 51 30.9	-1.9
	comp=Z,0.3nm,0.2s,baz=331,slow=3.6,SNR=4.9						
GERES				PKPab	PKPab	07 52 21.7	-1.0
	comp=Z,4.8nm,0.8s,baz=39,slow=5.1,SNR=25						
ARSA	Arzberg	162.76	318	*e*P	PKPab	07 52 22.5	-0.6
	comp=Z,3.9nm,0.7s						
SOKA	Soboth	163.37	317	*e*P	PKPab	07 52 25.5	-0.4
	comp=Z,8.1nm,1.1s						
OBKA	Obir	163.73	317	*e*P	PKPab	07 52 24.9	-2.6
	comp=Z,4.0nm,1.2s						
MYKA	Terra Mystica	164.16	319	*e*P	PKPab	07 52 28.5	-0.9
	comp=Z,2.4nm,0.9s						
ABTA	Abfaltersbach	164.68	321	*e*P	PKPab	07 52 29.0	-2.6
	comp=Z,2.6nm,0.9s						
FETA	Feichten	165.37	325	*e*P	PKPab	07 52 33.3	-1.4
	comp=Z,4.5nm,0.8s						
DAVA	Damuels	165.56	327	*e*P	PKPab	07 52 34.2	-1.3
	comp=Z,8.0nm,0.8s						
KEST	Kesra	171.12	274	PKPab	PKPab	07 53 02.1	+1.4
	comp=Z,4.8nm,0.9s,baz=93,slow=5.2,SNR=4.1						
ESDC	Sonseca Array	175.54	25	PKP	PKPdf	07 51 41.6	+0.5
	comp=Z,1.4nm,0.9s,baz=354,slow=1.9,SNR=6.8						
ESDC				PKPab	PKPab	07 53 19.6	-0.2
	comp=Z,1.5nm,0.8s,baz=324,slow=4.3,SNR=6.0						
ESDC	Sonseca Array	175.54	25		PKPdf	07 51 41.2	+0.2
ESDC				PKPab	PKPab	07 53 19.0	-0.8

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*NIED **21** 07:41:25.1, 37°.35N×141°.82E, h41^{km}, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.64; $M_{\theta\theta}$0.20; $M_{\phi\phi}$0.44; $M_{r\theta}$0.90; $M_{\theta\phi}$-0.53; $M_{\phi r}$-0.18; Fault plane solution: $M_0$1.20000×10^{14} NP1: ϕ_s292.00000°, δ73.00000°, λ-114.00000°. NP2: ϕ_s168.00000°, δ29.00000°, λ-38.00000°.*

JMA 21 07:41:25.0±0.1**, 37°.35N×141°.82E, h41**^{km}±3^{km}**, M3.5, 6C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.75	272	⇑P	Pn	07 41 39.5	+0.3
JFK				S	Sn	07 41 49.0	-0.5
JMST	Minamisoumatoc	0.83	297	⇑P	Pn	07 41 40.4	+0.2
JMST				S	Sn	07 41 50.8	-0.5
ONAJ	Iwakimizuishiy	0.85	253	⇑P	Pn	07 41 40.7	+0.1
ONAJ				S	Sn	07 41 51.5	-0.4
JMM	Marumori	0.96	303	P	Pn	07 41 42.6	+0.5
JMM				S	Sn	07 41 54.5	-0.1
JIKH	Ishinomakikobu	1.00	344	⇓P	Pn	07 41 42.7	+0.2
JIKH				*e*S	Sn	07 41 55.3	-0.1
JFFD	Fukushimafurud	1.04	256	⇑P	Pn	07 41 43.4	+0.3
JFFD				S	Sn	07 41 56.5	+0.1
JIO	Ouri	1.16	341	⇓P	Pn	07 41 45.2	+0.4
JIO				S	Sn	07 41 58.8	-0.7
JFT	Otama	1.19	279	⇑P	Pn	07 41 46.6	+1.4
JFT				S	Sn	07 42 01.4	+1.2
JHO	Hitachi	1.24	234	⇑P	Pn	07 41 45.5	-0.4
JHO				S	Sn	07 42 00.7	-0.8
JOU	Okura	1.37	318	P	Pn	07 41 49.0	+1.4
JOU				*e*S	Sn	07 42 06.0	+1.5
JYS	Shirataka	1.64	303	P	Pn	07 41 53.5	+2.2
JYS				S	Sn	07 42 14.1	+2.9
JMK	Ichinoseki	1.67	344	P	Pn	07 41 52.8	+1.1
JFY	Yanaizu	1.69	273	P	Pn	07 41 53.5	+1.5
MAT	Matsushiro	3.00	256	P	Pn	07 42 12.3	+2.2
MAT				S	Sn	07 42 48.4	+3.5

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*IDC **21** 08:00:30.3±0.9, 36°.92N×141°.24E, h0^{km}, mb3.6/10, mb1 3.8/15, mb1mx3.5/48, mbtmp3.6/15, ML3.2/5, MS2.8/3, Ms1 2.8/3, ms1mx2.4/66, Error ellipse: s-maj=20.6km s-min=17.1km az=126.0*

*NIED **21** 08:00:31.2, 36°.86N×141°.24E, h28^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.17; $M_{\theta\theta}$-3.77; $M_{\phi\phi}$3.60; $M_{r\theta}$-0.89; $M_{\theta\phi}$1.91; $M_{\phi r}$1.92; Fault plane solution: $M_0$4.66000×10^{14} NP1: ϕ_s328.00000°, δ87.00000°, λ153.00000°. NP2: ϕ_s60.00000°, δ63.00000°, λ3.00000°.*

*JMA **21** 08:00:31.2, 36°.86N×141°.24E, h28^{km}±1^{km}, M4.2*

JMA Felt II J1.

ISC 21 08:00:30.6±1.6**, 36°.86N**±0°.03×**141°.28E**±0°.06**, h8**^{km}±9^{km}**, n36,** σ1^{s}.**44**/40**, mb3.6**/10**, 6C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.46	302	⇑P	Pg	08 00 40.1	+0.7
ONAJ				S	Sg	08 00 46.7	+1.3
JFK	Kawauchi	0.60	327	⇑P	Pg	08 00 42.6	+0.4
JFK				S	Sg	08 00 50.6	+0.6
JFFD	Fukushimafurud	0.62	292	⇑P	Pg	08 00 42.6	0.0
JFFD				*e*S	Sg	08 00 50.5	-0.2
JHO	Hitachi	0.62	247	P	Pg	08 00 42.8	+0.2
JHO				S	Sg	08 00 51.0	+0.2
JHYU	Hitachinakayam	0.76	227	P	Pg	08 00 45.0	-0.3
JHYU				*e*S	Sg	08 00 55.2	0.0
JFT	Otama	1.00	311	⇑P	Pb	08 00 49.4	-0.8
JFT				S	Sb	08 01 02.4	-1.1
JMM	Marumori	1.07	339	⇓P	Pb	08 00 50.2	-1.3
JMM				S	Sb	08 01 04.1	-1.6
JYT	Yasato	1.08	234	P	Pb	08 00 49.6	-1.9
JYT				S	Sb	08 01 03.5	-2.3
JSB	Shiboa	1.10	276	⇑P	Pb	08 00 51.2	-0.7

JSB				S	Sb	08 01 05.6	-0.7
JFY	Yanaizu	1.37	294	⇑P	Pn	08 00 55.2	-0.9
JFY				S	Sb	08 01 12.8	-1.5
MJAR	Matsushiro Arr	2.49	264	Pn	Pn	08 01 11.4	0.0
	1.3nm,0.3s,baz=88,slow=15,SNR=14						
MJAR				Sn	Sn	08 01 43.0	+0.9
	3.1nm,0.3s,baz=104,slow=15,SNR=3.9						
MJAR				LR	LR	08 02 24.5	
	comp=Z,120nm,18.0s,baz=70,slow=47						
MAT	Matsushiro	2.49	264	P	Pn	08 01 11.5	0.0
MAT				S	Sn	08 01 40.4	-1.7
JHJ	Hachijo jima 2	3.93	199	Pn	Pn	08 01 31.8	+0.5
	3.2nm,0.3s,baz=37,slow=20,SNR=1.3						
JHJ				Sn	Sn	08 02 15.9	-1.7
	9.4nm,0.3s,baz=78,slow=12,SNR=2.3						
ASAJ	Asahikawa	7.32	7	Pn	Pn	08 02 17.1	-0.6
	1.6nm,0.3s,baz=239,slow=15,SNR=9.3						
ASAJ				Sn	Sn	08 03 35.9	-5.1
	baz=114,slow=27,SNR=0.9						
USRK	Ussuriysk Ar.	10.18	319	Pn	Pn	08 02 55.8	-1.2
	baz=110,slow=17,SNR=2.5						
KSRS	Korea Array	10.68	277	Pn	Pn	08 03 05.3	+1.4
	0.2nm,0.3s,baz=91,slow=15,SNR=3.0						
KSRS				LR	LR	08 06 49.1	
	comp=Z,36nm,20.0s,baz=60,slow=36						
SONM	Songino Array	27.79	304	P	P	08 06 21.1	+0.9
	0.5nm,0.3s,baz=99,slow=9.1,SNR=2.1						
H11N2	WAKE ISLAND Hy	28.15	120	T	T	08 35 49.8	
	baz=313,slow=75,SNR=133						
H11N1	WAKE ISLAND Hy	28.16	120	T	T	08 35 53.7	
	baz=313,slow=75,SNR=203						
H11N3	WAKE ISLAND Hy	28.17	120	T	T	08 35 54.4	
	baz=313,slow=75,SNR=172						
H11S1	WAKE ISLAND Hy	28.86	122	T	T	08 36 41.7	
	baz=314,slow=76,SNR=168						
H11S3	WAKE ISLAND Hy	28.86	122	T	T	08 36 43.3	
	baz=314,slow=76,SNR=87						
H11S2	WAKE ISLAND Hy	28.87	122	T	T	08 36 42.9	
	baz=314,slow=76,SNR=70						
DAV	Davao City (W)	32.93	210	LR	LR	08 18 56.8	
	comp=Z,26nm,20.8s,baz=320,slow=34						
ZALV	Zalesovo Beam	41.95	313	P	P	08 08 21.3	-0.4
	0.3nm,0.3s,baz=98,slow=8.9,SNR=2.0						
MKAR	Makanchi Array	44.12	302	P	P	08 08 38.8	-0.7
	0.5nm,0.6s,baz=82,slow=10,SNR=4.4						
ILAR	Eielson Array	49.70	32	P	P	08 09 22.9	+0.1
	1.0nm,0.7s,baz=265,slow=6.3,SNR=14						
INK	Inuvik	54.59	27	P	P	08 09 59.8	+0.8
	0.6nm,0.9s,baz=313,slow=9.6,SNR=1.3						
WRA	Warramunga Arr	56.88	188	P	P	08 10 16.4	+0.4
	0.6nm,0.7s,baz=7.8,slow=7.7,SNR=6.8						
ASAR	Alice Springs	60.60	188	P	P	08 10 44.5	+2.6
	0.2nm,0.6s,baz=356,slow=5.8,SNR=1.7						
YKA	Yellowknife Ar	64.01	30	P	P	08 11 06.1	+1.8
	0.1nm,0.6s,baz=247,slow=5.6,SNR=1.9						
FINES	FINESS Array B	68.92	332	P	P	08 11 37.8	+2.1
	2.4nm,0.7s,baz=74,slow=6.1,SNR=2.1						
TXAR	Lajitas Array	90.31	52	P	P	08 13 32.4	-0.2
	0.3nm,0.9s,baz=306,slow=4.5,SNR=2.1						
H03N2	Juan Fernandez	147.11	96	T	T	11 04 41.5	
	baz=291,slow=76,SNR=27						
H03N3	Juan Fernandez	147.12	96	T	T	11 04 39.9	
	baz=291,slow=76,SNR=31						
H03N1	Juan Fernandez	147.13	96	T	T	11 04 42.0	
	baz=291,slow=76,SNR=31						

IDC 21 08:09:42.1±1.6, 16°.47N×120°.73E, h0^{km}, mb3.9/4, mb1 4.1/4, mb1mx3.3/50, mbtmp3.9/4, Error ellipse: s-maj=192.9km s-min=27.0km az=73.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	33.43	342	P	P	08 16 22.6	-0.1
	1.0nm,0.5s,baz=181,slow=8.4,SNR=3.0						
FITZ	Fitzroy Crossi	34.69	172	P	P	08 16 32.9	-0.8
	2.2nm,0.8s,baz=360,slow=14						
WRA	Warramunga Arr	38.58	159	P	P	08 17 05.6	-1.4
	0.2nm,0.3s,baz=340,slow=8.6,SNR=8.0						
ASAR	Alice Springs	41.92	162	P	P	08 17 36.2	+1.6
	0.8nm,0.3s,baz=339,slow=7.6,SNR=33						

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*THE **21** 08:20:53.7, 38°.45N×20°.45E, h10^{km}±1^{km}, ML2.5/8, Error ellipse: s-maj=1.4km s-min=0.4km az=105.0*

*ATH **21** 08:20:53.7, 38°.46N×20°.46E, h14^{km}±1^{km}, ML2.3/14, Error ellipse: s-maj=1.9km s-min=0.6km az=284.0*

ISC 21 08:20:52.1±0.9, 38°.47N±0°.02×20°.37E±0°.03, h18^{km}±2^{km}, n44, σ1^{s}.47/75, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.15	93	P	Pg	08 20 56.4	0.0
FSK				S	Sb	08 20 58.1	+0.7
	3µm,0.2s						
FSK	Fiskardo	0.15	93	P	Pg	08 20 56.5	0.0
FSK				S	Sb	08 20 58.4	+0.9
FSK				AML	AML	08 20 58.5	
	comp=N,3889µm,0.2s						
FSK				AML	AML	08 20 59.5	
	comp=E,7424µm,0.2s						
KEF4	Livadi, Kephal	0.21	168	P	Pg	08 20 57.9	+0.6
KEF4				S	Sg	08 21 01.4	+0.6
KEF4	Livadi, Kephal	0.21	168	P	Pg	08 20 57.9	+0.6
KEF4				S	Sg	08 21 01.5	+0.7
KEF3	Kipouria, Keph	0.27	184	P	Pg	08 20 58.6	+0.5
KEF3				S	Sg	08 21 02.6	+0.5
	comp=E,3µm,0.5s						
KEF3	Kipouria, Keph	0.27	184	P	Pg	08 20 58.5	+0.5
KEF3				S	Sg	08 21 02.6	+0.5
DRAG	Dragano-Lefkad	0.27	37	P	Pg	08 20 58.5	+0.3
DRAG				S	Sb	08 21 03.4	+0.9
	comp=E,10µm,0.3s						
DRAG	Dragano-Lefkad	0.27	37	P	Pg	08 20 58.5	+0.3
DRAG				S	Sb	08 21 03.4	+0.9
EVGI	Lefkada island	0.27	56	P	Pg	08 20 58.5	+0.3
EVGI				S	Sg	08 21 02.4	0.0
	comp=E,5µm,0.3s						
EVGI	Lefkada island	0.27	56	P	Pg	08 20 58.5	+0.3
EVGI				S	Sg	08 21 02.6	+0.2
LXRA	Lixouri, Kepha	0.27	169	P	Pb	08 20 59.0	+0.6
ARGA	Argostoli. Kep	0.30	163	P	Pb	08 21 00.0	+1.1
ARGA				S	Sb	08 21 04.5	+1.0
VLS	Valsamata	0.34	149	P	Pg	08 20 59.5	+0.2
VLS				S	Sg	08 21 03.9	-0.3
	comp=E,1µm,0.3s						
VLS	Valsamata	0.34	149	P	Pg	08 20 59.5	+0.2
VLS				S	Sg	08 21 03.8	-0.4
VLS				AML	AML	08 21 04.4	
	comp=E,2158µm,0.3s						
VLS				AML	AML	08 21 04.5	
	comp=N,2354µm,0.3s						
NYDR	Nydri-Lefkada	0.36	46	P	Pg	08 20 59.9	+0.3
NYDR				S	Sg	08 21 04.3	-0.4
NYDR	Nydri-Lefkada	0.36	46	P	Pg	08 20 60.0	+0.3
NYDR				S	Sg	08 21 04.3	-0.4
PSDA	Pessada-Kefalo	0.39	154	P	Pg	08 21 00.4	+0.2
PSDA				S	Sg	08 21 06.0	+0.3
PSDA	Pessada-Kefalo	0.39	154	P	Pg	08 21 00.5	+0.3
PSDA				S	Sg	08 21 06.1	+0.4
LKD2	Lefkada island	0.39	35	P	Pg	08 21 00.7	+0.4
LKD2				S	Sg	08 21 06.7	+0.9
	comp=N,500nm,0.3s						
LKD2	Lefkada island	0.39	35	P	Pg	08 21 00.7	+0.4
LKD2				S	Sg	08 21 06.8	+0.9
LKD2				AML	AML	08 21 07.6	
	comp=E,1209µm,0.2s						
LKD2				AML	AML	08 21 12.4	
	comp=N,740µm,0.3s						
TSLK	Tsoukalades, L	0.42	32	P	Pg	08 21 01.4	+0.7
TSLK				S	Sb	08 21 08.2	+1.1
	comp=N,615nm,0.3s						
TSLK	Tsoukalades, L	0.42	32	P	Pg	08 21 01.5	+0.7
TSLK				S	Sg	08 21 07.2	+0.6
TSLK				AML	AML	08 21 09.6	
	comp=E,1293µm,0.2s						
TSLK				AML	AML	08 21 11.1	
	comp=N,1120µm,0.4s						
LTHK	Lithakia	0.84	154	P	Pb	08 21 08.0	-0.1
LTHK				AML	AML	08 21 21.5	
	comp=N,362µm,0.2s						
LTHK				AML	AML	08 21 27.0	
	comp=E,332µm,0.4s						
RLS	Riolos of Patr	0.96	115	P	Pb	08 21 10.4	+0.3
RLS				AML	AML	08 21 30.8	
	comp=N,149µm,0.3s						
RLS				AML	AML	08 21 31.3	
	comp=E,200µm,0.4s						
DRO	Drossia	1.18	116	P	Pb	08 21 14.6	+0.7
DRO				S	Sg	08 21 30.7	+0.5
	comp=E,170nm,0.5s						
DRO	Drossia	1.18	116	P	Pb	08 21 14.4	+0.6
DRO				AML	AML	08 21 40.3	
	comp=E,394µm,0.5s						
DRO				AML	AML	08 21 44.9	
	comp=N,283µm,0.8s						
EFP	Efpalio	1.21	91	P	Pn	08 21 14.1	+0.1
EFP				AML	AML	08 21 37.8	
	comp=E,434µm,0.7s						
EFP				AML	AML	08 21 38.1	
	comp=N,381µm,0.3s						
ANX	Ano Chora	1.22	84	P	Pb	08 21 15.2	+0.5
ANX				AML	AML	08 21 38.4	
	comp=N,339µm,0.5s						
ANX				AML	AML	08 21 38.5	
	comp=E,396µm,0.5s						
LAKA	Lakka	1.28	100	P	Pn	08 21 15.8	+0.6
LAKA				AML	AML	08 21 39.6	
	comp=E,506µm,0.8s						
LAKA				AML	AML	08 21 41.6	
	comp=N,422µm,0.6s						
KEK	Kerkira	1.32	341	P	Pg	08 21 19.3	+1.7
KEK	Kerkira	1.32	341	P	Pg	08 21 18.9	+1.3
KEK				AML	AML	08 21 45.5	
	comp=N,120µm,0.5s						
KEK				AML	AML	08 21 45.9	
	comp=E,132µm,0.2s						
SERG	Sergoula	1.33	92	P	Pn	08 21 16.3	+0.5
SERG				AML	AML	08 21 40.3	
	comp=N,310µm,0.5s						
SERG				AML	AML	08 21 41.1	
	comp=E,290µm,0.4s						
KLV	Kalavryta, Ach	1.47	106	P	Pn	08 21 18.4	+0.7
KLV	Kalavryta, Ach	1.47	106	P	Pn	08 21 17.9	+0.3
KLV				AML	AML	08 21 51.1	
	comp=N,59µm,0.5s						
KLV				AML	AML	08 21 51.2	
	comp=E,61µm,0.5s						
AGG	Agios Georgios	1.63	70	P	Pb	08 21 22.7	+1.0
AGG				AML	AML	08 21 49.4	
	comp=N,116µm,0.8s						
AGG				AML	AML	08 21 52.1	
	comp=E,98µm,0.6s						
STON	Ston	4.84	336	*e*Pn	Pn	08 22 05.1	+1.1
STON				Sn	Sn	08 22 56.5	-3.1
LSTV	Lastovo	5.04	329	*e*Pn	Pn	08 22 07.8	+1.0
LSTV				Sn	Sn	08 23 01.5	-3.1
MAKA	Makarska	5.44	333	*e*Pn	Pn	08 22 14.2	+2.0
MAKA				Sn	Sn	08 23 10.3	-4.0
HVAR	Hvar	5.57	329	*e*Pn	Pn	08 22 15.3	+1.4
HVAR				Sn	Sn	08 23 13.7	-3.7
RICI	Ricice	5.59	335	*e*Pn	Pn	08 22 15.2	+1.0
RICI				Sn	Sn	08 23 15.3	-2.6
KIJV	Kijevo	6.29	333	*e*Pn	Pn	08 22 25.5	+1.7
KIJV				Sn	Sn	08 23 31.7	-3.5
ZIRJ	Zirje	6.29	327	*e*Pn	Pn	08 22 24.1	+0.2
ZIRJ				Sn	Sn	08 23 30.8	-4.5
MORI	Morici	6.44	328	*e*Pn	Pn	08 22 27.4	+1.5
MORI				Sn	Sn	08 23 35.2	-3.7
DUGI	Dugi Otok	6.82	326	*e*Pn	Pn	08 22 31.8	+0.6
DUGI				Sn	Sn	08 23 44.4	-3.8

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*SOME **21** 08:29:11.4, 41°.10N×71°.48E, h0^{km}*

*KRNET **21** 08:29:12.9±0.1, 41°.05N×71°.58E, h13^{km}, mb2.4*

*NNC **21** 08:29:18.2±3.5, 41°.34N×71°.56E, h10^{km}±24^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=29.2km s-min=11.8km az=3.0*

ISC 21 08:29:12.8±1.2, 41°.06N±0°.03×71°.51E±0°.03, h6^{km}±11^{km}, n26, σ1^{s}.39/46, 26C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	Terek-Say	0.55	330	⇑*i*P	Pg	08 29 22.6	-0.7
	baz=24						
TRKS				⇑*i*S	Sg	08 29 30.4	-0.1
	baz=24						
ARK	Arkit	0.82	25	⇑*i*P	Pg	08 29 28.5	+0.1
	baz=21						
ARK				⇑*i*S	Sb	08 29 40.3	-0.4
	baz=21						
OHH	Osh	1.11	118	⇑*i*P	Pg	08 29 34.0	0.0
	baz=19						
OHH				⇑*i*S	Sg	08 29 47.9	-0.4
	baz=19						
BTK	Batken	1.13	208	⇑*i*P	Pn	08 29 35.1	-0.1
	baz=10.0						
BTK				⇑*i*S	Sn	08 29 50.7	-0.3
	baz=10.0						
IUG	Iuzhnay	1.55	315	*e*P	Pb	08 29 41.5	-0.5
	232nm,0.3s						
IUG				*e*S	Sg	08 30 03.6	+0.9
	44nm,0.4s						
IUG	Iuzhnay	1.55	315	P	Pb	08 29 41.5	-0.5
	232nm,0.3s						
IUG				S	Sg	08 30 03.6	+0.9
	44nm,0.4s						
DRK	Karamyk	1.59	172	⇑*i*P	Pb	08 29 43.1	+0.4
	baz=74						
DRK				⇑*i*S	Sg	08 30 04.6	+0.7
	baz=74						
MNAS	Manas	1.61	27	⇑*i*P	Pb	08 29 42.7	-0.3
	baz=26						
MNAS				⇑*i*S	Sg	08 30 05.4	+0.8
	baz=26						
SFK	Sufi-Kurgan	1.84	124	⇓*e*P	Pn	08 29 45.8	+0.6
	baz=24						
SFK				⇓*e*S	Sb	08 30 10.5	+0.1
	baz=24						
AML	Almayashu	1.96	56	⇑*i*P	Pb	08 29 48.5	-0.6
	baz=55						
AML				⇑*i*S	Sg	08 30 15.3	-0.5
	baz=55						
MRKS	Merke	2.12	37	*e*P	Pb	08 29 51.9	+0.3
	4.1nm,0.3s						
MRKS				*e*S	Sg	08 30 21.7	+0.8
	18nm,0.4s						
MRKS	Merke	2.12	37	Pg	Pb	08 29 51.9	+0.3
	4.1nm,0.3s						
MRKS				Lg	Lg	08 30 21.7	
	18nm,0.4s						
KK02	Karatay Array	2.17	340	⇑Pn	Pb	08 29 51.1	-1.4
	1.4nm,0.3s,baz=149,slow=13						
KK02				⇓Lg	Lg	08 30 18.6	
	20nm,0.6s,baz=151,slow=27						
ARLS	Aral	2.26	68	⇓*e*P	Pb	08 29 52.5	-1.6
	baz=68						
ARLS				⇓*i*S	Sb	08 30 22.2	-0.2
	baz=68						
BRLS	Borolday	2.33	328	*e*P	Pn	08 29 53.2	+1.6
	2.2nm,0.5s						
BRLS				*e*S	Sb	08 30 23.5	-0.7
	16nm,0.8s						
BRLS	Borolday	2.33	328	Pg	Pn	08 29 53.2	+1.6
	2.2nm,0.5s						
BRLS				Lg	Lg	08 30 23.5	
	16nm,0.8s						
EKS2	Erkin-Say	2.33	46	⇓*i*P	Pb	08 29 53.9	-1.4
	baz=45						
EKS2				⇓*i*S	Sb	08 30 24.4	0.0
	baz=45						
UCH	Uchtor	2.54	62	⇑*i*P	Pn	08 29 56.6	+1.7
	baz=61						
UCH				⇑*i*S	Sb	08 30 29.4	-1.2
	baz=61						
AAK	Ala-Archa	2.73	54	⇑Pg	Pg	08 30 06.4	+1.3
	2.6nm,0.7s						
AAK				⇑Lg	Lg	08 30 38.5	
	6.4nm,1.0s						
AAK	Ala-Archa	2.73	54	⇑*i*P	Pn	08 29 59.4	+2.1
	baz=53						
AAK				⇑*i*S	Sb	08 30 33.8	-2.2
	baz=53						
KBK	Karagaybulak	3.03	57	⇑*e*P	Pn	08 30 03.5	+2.1
	baz=56						
KBK				⇑*i*S	Sb	08 30 41.0	-3.4
	baz=56						
USP	Ospenovka	3.13	44	⇑*i*P	Pn	08 30 04.9	+2.2
	baz=43						
USP				⇑*i*S	Sb	08 30 43.6	-3.8
	baz=43						
SGDS	Sogindy	3.33	43	Pg	Pb	08 30 12.7	+0.4
	1.1nm,0.2s						
SGDS				Lg	Lg	08 30 57.0	
	6.8nm,0.5s						
TKM2	Tokmak 2	3.57	57	⇓Pg	Pg	08 30 21.7	+0.6
	0.9nm,0.6s						
TKM2				⇑Lg	Lg	08 31 03.7	
	1.4nm,0.5s						
DGS	Degeres	3.85	54	*e*P	Pb	08 30 23.2	+2.1
	0.9nm,0.5s						
DGS				*e*S	Sg	08 31 14.9	-1.4
	2.3nm,0.7s						
KST	Kastek	3.87	58	*e*P	Pg	08 30 24.6	-2.2
	1.8nm,0.2s						
KST				*e*S	Sg	08 31 16.9	0.0
	259nm,0.6s						

MAN 21 08:33:44.3, 15°.48N×119°.71E, h17^{km}, mb4.3, ML3.1, MS2.9, Luzon

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*INET **21** 08:38:41.3, 12°.86N×88°.58W, h15^{km}, MW3.5*

*UCR **21** 08:38:42.2±0.8, 12°.96N×88°.60W, h58^{km}±7^{km}, ML3.9*

*SNET **21** 08:38:42.2±0.8, 12°.96N×88°.60W, h58^{km}±7^{km}, ML3.9*

ISC 21 08:38:41.5±2.3, 12°.9N±0°.1×88°.61W±0°.05, h54^{km}±18^{km}, n58, σ0^{s}.25/72, 3C-15D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJI	Alcalda de J	0.48	5	*i* P	Pn	08 38 52.7	0.0
ALJI				*e*S	Sn	08 39 01.4	+0.5
ALJI				IAML		08 39 01.6	
	comp=Z,9µm,0.2s						
ALJI	Alcalda de J	0.48	5	*i* P	Pn	08 38 52.7	0.0
ALJI				*e*S	Sn	08 39 01.4	+0.5
ALJI				IAML		08 39 01.6	
	comp=Z,9µm,0.2s						
COEB	Comit de Eme	0.65	7	⇓*i*P	Pn	08 38 54.7	-0.3
COEB				*e*S	Sn	08 39 04.6	-0.1
COEB				IAML		08 39 06.0	
	comp=Z,4µm,0.2s						
COEB	Comit de Eme	0.65	7	⇓*i*P	Pn	08 38 54.7	-0.3
COEB				*e*S	Sn	08 39 04.6	-0.1
COEB				IAML		08 39 06.0	
	comp=Z,4µm,0.2s						
LCY	Lacayo	0.65	29	⇓*e*P	Pn	08 38 54.7	-0.2
LCY	Lacayo	0.65	29	⇓*e*P	Pn	08 38 54.7	-0.2
PACA	Pacayal	0.68	25	*e*P	Pn	08 38 55.2	-0.1
PACA				*e*S	Sn	08 39 05.7	+0.4
PACA	Pacayal	0.68	25	*e*P	Pn	08 38 55.2	-0.1
PACA				*e*S	Sn	08 39 05.7	+0.4
TECO	Alcaldia de Te	0.70	347	⇓*e*P	Pn	08 38 55.1	-0.4
CNRM	Centro Naciona	0.76	35	*i* P	Pn	08 38 56.0	-0.2
CNRM	Centro Naciona	0.76	35	*i* P	Pn	08 38 56.0	-0.2
PQSS	Presa 15 de Se	0.77	4	⇑*e*P	Pn	08 38 56.2	-0.1
LCND	La Caada	0.84	57	⇓*e*P	Pn	08 38 57.0	-0.2
LCND				*e*S	Sn	08 39 08.7	-0.1
LCND				IAML		08 39 10.7	
	comp=Z,5µm,0.3s						
LCND	La Caada	0.84	57	⇓*e*P	Pn	08 38 57.0	-0.2
LCND				*e*S	Sn	08 39 08.7	-0.1
LCND				IAML		08 39 10.7	
	comp=Z,5µm,0.3s						
SJTE	Alcalda de S	0.85	333	⇓*i*P	Pn	08 38 57.1	-0.3
SJTE	Alcalda de S	0.85	333	⇓*i*P	Pn	08 38 57.1	-0.3
SCLA	Alcaldia de Sa	0.85	353	⇓*i*P	Pn	08 38 57.6	+0.1
SCLA	Alcaldia de Sa	0.85	353	⇓*i*P	Pn	08 38 57.6	+0.1
CNCH	Conchagua	0.87	61	*i* P	Pn	08 38 57.8	0.0
CNCH	Conchagua	0.87	61	*i* P	Pn	08 38 57.8	0.0
LFRS	El Faro	0.88	330	⇓*i*P	Pn	08 38 57.7	-0.2
LFRS	El Faro	0.88	330	⇓*i*P	Pn	08 38 57.7	-0.2
PAVA	Las Pavas	0.91	340	⇓*i*P	Pn	08 38 58.5	+0.1
PAVA	Las Pavas	0.91	340	⇓*i*P	Pn	08 38 58.5	+0.1
LALI	Alcalda de L	0.94	313	*e*P	Pn	08 38 58.3	-0.2
LALI	Alcalda de L	0.94	313	*e*P	Pn	08 38 58.3	-0.2
AEIL	Aeropuerto Ilo	0.97	330	*e*P	Pn	08 38 59.1	+0.1
AEIL				IAML		08 39 14.7	
	comp=Z,4µm,0.2s						
AEIL	Aeropuerto Ilo	0.97	330	*e*P	Pn	08 38 59.1	+0.1
AEIL				IAML		08 39 14.7	
	comp=Z,4µm,0.2s						
LBRS	Las Brisas	0.98	335	⇑*i*P	Pn	08 38 59.6	+0.4
LBRS	Las Brisas	0.98	335	⇑*i*P	Pn	08 38 59.6	+0.4
IGN	Direccin Gen	1.01	328	*i* P	Pn	08 38 59.5	-0.1
IGN	Direccin Gen	1.01	328	*i* P	Pn	08 38 59.5	-0.1
LFU	La Fuente	1.02	331	*e*P	Pn	08 38 59.9	+0.2
LFU	La Fuente	1.02	331	*e*P	Pn	08 38 59.9	+0.2
SNET	Serv Nac Est T	1.03	324	*i* P	Pn	08 38 59.6	-0.2
SNET				*e*S	Sn	08 39 12.7	-0.6
SNET				IAML		08 39 14.3	
	comp=Z,2µm,0.2s						
SNET	Serv Nac Est T	1.03	324	*i* P	Pn	08 38 59.6	-0.2
SNET				*e*S	Sn	08 39 12.7	-0.6
SNET				IAML		08 39 14.3	
	comp=Z,2µm,0.2s						
OPAM	Oficina de Pla	1.03	327	*e*P	Pn	08 38 59.7	0.0
OPAM				IAML		08 39 15.8	
	comp=Z,3µm,0.1s						
OPAM	Oficina de Pla	1.03	327	*e*P	Pn	08 38 59.7	0.0
OPAM				IAML		08 39 15.8	
	comp=Z,3µm,0.1s						
ITCA	Escuela Especi	1.04	322	*i* P	Pn	08 38 59.9	-0.2
ITCA	Escuela Especi	1.04	322	*i* P	Pn	08 38 59.9	-0.2
UEES	Universidad Ev	1.05	325	*e*P	Pn	08 39 00.1	-0.1
UEES				*e*S	Sn	08 39 13.9	0.0
UEES	Universidad Ev	1.05	325	*e*P	Pn	08 39 00.1	-0.1
UEES				*e*S	Sn	08 39 13.9	0.0
MAGS	Ministerio de	1.06	322	*e*P	Pn	08 39 00.1	-0.1
BOQS	Boqueron	1.09	324	*i* P	Pn	08 39 00.8	+0.1
BOQS	Boqueron	1.09	324	*i* P	Pn	08 39 00.8	+0.1
JAYA	Jayaque - finc	1.14	315	*e*P	Pn	08 39 01.6	+0.2
JAYA				IAML		08 39 17.7	
	comp=Z,2µm,0.2s						
JAYA	Jayaque - finc	1.14	315	*e*P	Pn	08 39 01.6	+0.2
JAYA				IAML		08 39 17.7	
	comp=Z,2µm,0.2s						
CEDA	San Andres	1.22	321	*e*P	Pn	08 39 02.2	-0.1
CEDA	San Andres	1.22	321	*e*P	Pn	08 39 02.2	-0.1
TACO	Tacachico	1.33	327	*i* P	Pn	08 39 03.6	-0.1
TACO				*e*S	Sn	08 39 20.2	-0.2
TACO	Tacachico	1.33	327	*i* P	Pn	08 39 03.6	-0.1
TACO				*e*S	Sn	08 39 20.2	-0.2
SBLS	San Blas	1.39	315	*e*P	Pn	08 39 05.5	+0.6
SBLS	San Blas	1.39	315	*e*P	Pn	08 39 05.5	+0.6
NUBE	Las Nubes	1.54	313	*e*P	Pn	08 39 07.0	+0.2
NUBE	Las Nubes	1.54	313	*e*P	Pn	08 39 07.0	+0.2
MTO3	Montecristo	1.70	335	*e*P	Pn	08 39 09.0	-0.1
MTO3	Montecristo	1.70	335	*e*P	Pn	08 39 09.0	-0.1
ESQI	Esquipulas	1.84	337	*i* P	Pn	08 39 11.2	+0.4

DNK 21 08:47:03.1±1.4, 79°.02N×20°.18W, h8^{km}±12^{km}, ML1.4, Eastern Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAG	Danmarks Havn	2.29	171	*i* P	Pn	08 47 40.6	-0.4
DAG				*i* S	Sn	08 48 09.1	-0.2
DAG				IAML		08 48 19.3	
	comp=Z,9.6nm,0.1s						
NOR	Nord	2.66	11	*i* P	Pn	08 47 45.0	-1.1
NOR				*i* S	Sn	08 48 18.0	-0.5
NOR				IAML		08 48 20.7	
	comp=Z,3.7nm,0.2s						
DBG	Daneborg	4.74	180	*i* P	Pn	08 48 14.7	-0.1
DBG				*i* S	Sn	08 49 05.9	-3.9
DBG				IAML		08 49 11.4	
	comp=Z,0.6nm,0.1s						
NEEM	North Greenlan	6.45	271	*i* P	Pn	08 48 38.0	-0.5
NEEM				*i* S	Sn	08 49 47.0	-5.1
NEEM				IAML		08 49 55.9	
	comp=Z,0.8nm,0.2s						

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*IDC **21** 08:47:34.5±2.4, 42°.08N×119°.93W, h0^{km}, mb2.5/1, mb1 3.1/3, mb1mx3.1/47, mbtmp2.7/3, ML3.2/2, Error ellipse: s-maj=30.1km s-min=14.8km az=107.0*

*REN **21** 08:47:35.1±2.1, 41°.88N±0°.04×119°.60W±0°.07, h10^{km}±7^{km}, ML3.5/5, ML3.3/82(NEIC), Error ellipse: s-maj=7.3km s-min=5.8km az=59.0*

*ANF **21** 08:47:35.8±0.5, 41°.88N×119°.62W, h10^{km}, ML3.6/12,*

Error ellipse: s-maj=4.7km s-min=3.3km az=109.0

NEIC ***21*** *08:47:36.0±2.3, 41°.88N±0°.04×119°.64W±0°.07, h12^{km}±7^{km}, Error ellipse: s-maj=7.3km s-min=5.9km az=64.0*

ISC 21 08:47:35.2±1.2**, 41°.88N**±0°.03×**119°.63W**±0°.03**, h3**^{km}±12^{km}**, n71, σ1ˢ.22**/82**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.51**	**273**		**Pg**	**08 47 45.8**	**+0.8**
MOD				Sg	**Sg**	**08 47 53.5**	**+1.9**
MOD				IAML		08 47 53.8	
	comp=E,2µm,0.6s						
MOD				IAML		08 48 00.1	
	comp=N,2µm,0.6s						
WVOR	**Wild Horse Val**	**0.92**	**52**		**Pg**	**08 47 52.5**	**-0.4**
WVOR				Sg	**Sg**	**08 48 04.9**	**+0.1**
WVOR				IAML		08 48 08.7	
	comp=N,994nm,0.8s						
WVOR				IAML		08 48 08.9	
	comp=N,909nm,0.8s						
K05A	**Summer Lake**	**1.27**	**312**		**Pn**	**08 47 59.4**	**-0.6**
M04C	**Macdoel**	**1.66**	**268**	P	**Pn**	**08 48 05.1**	**-0.2**
	baz=86,SNR=82						
M04C				S	**Sb**	**08 48 27.4**	**-0.3**
	baz=86						
J08A	**Circle Bar Ran**	**1.71**	**29**		**Pn**	**08 48 05.1**	**-0.9**
J08A				IAML		08 48 32.3	
	comp=E,367nm,0.7s						
J08A				IAML		08 48 32.4	
	comp=N,380nm,0.7s						
K04D	**Chiloquin, OR**	**1.75**	**296**	Pb	**Pb**	**08 48 07.4**	**-0.6**
	baz=114,SNR=16						
K04D				S	**Sb**	**08 48 30.4**	**0.0**
	baz=114						
J05D	**Fort Rock, OR**	**1.84**	**320**	Pb	**Pb**	**08 48 09.3**	**-0.3**
	baz=139,SNR=353						
J05D				Sb	**Sg**	**08 48 34.1**	**-0.3**
	baz=139						
L04D	**Klamath Falls**	**2.02**	**281**	P	**Pn**	**08 48 09.8**	**-0.5**
	baz=99,SNR=31						
L04D				Sb	**Sg**	**08 48 39.8**	**-0.4**
	baz=99						
PINE	**Pine Mountain**	**2.15**	**334**		**Pn**	**08 48 12.3**	**+0.3**
PINE				IAML		08 48 57.7	
	comp=E,151nm,0.8s						
PINE				IAML		08 48 58.9	
	comp=N,123nm,0.8s						
PAHR	**Pah Rah Range**	**2.17**	**175**		**Pn**	**08 48 11.1**	**-1.4**
O03E	**Paynes Creek**	**2.28**	**227**	P	**Pn**	**08 48 13.7**	**-0.1**
	baz=46						
O03E				Sb	**Sb**	**08 48 47.1**	**+1.5**
	baz=46						
J04D	**Umpqua Nationa**	**2.29**	**307**	Pb	**Pb**	**08 48 16.8**	**-0.4**
	baz=126,SNR=22						
YBH	**Yreka Blue Hor**	**2.31**	**267**	Pn	**Pn**	**08 48 14.1**	**-0.1**
BMN	**Battle Mountai**	**2.32**	**128**		**Pn**	**08 48 13.4**	**-1.0**
BMN				IAML		08 48 49.7	
	comp=E,219nm,0.6s						
M02C	**Callahan**	**2.47**	**260**	Sb	**Sg**	**08 48 53.3**	**-1.1**
	baz=78						
N02D	**Trinity Center**	**2.49**	**250**	Pb	**Pb**	**08 48 19.6**	**-0.9**
	baz=68,SNR=20						
N02D				Sb	**Sg**	**08 48 54.1**	**-0.9**
	baz=68						
WDC	**Whiskeytown Da**	**2.55**	**240**		**Pn**	**08 48 15.8**	**-1.7**
WDC				IAML		08 48 58.2	
	comp=N,172nm,0.7s						
VCNR	**Virginia City**	**2.58**	**180**		**Pn**	**08 48 17.4**	**-0.6**
VCNR				IAML		08 49 00.3	
	comp=E,192nm,0.9s						
VCNR				IAML		08 49 05.3	
	comp=N,206nm,0.9s						
HUMO	**Hull Mountain**	**2.58**	**288**	Pn	**Pn**	**08 48 17.3**	**-0.5**
MPK	**Martis Peak**	**2.60**	**187**		**Pn**	**08 48 17.1**	**-1.2**
MPK				IAML		08 49 06.2	
	comp=N,166nm,0.7s						
MPK				IAML		08 49 06.3	
	comp=E,138nm,1.2s						
ORV	**Oroville**	**2.72**	**212**		**Pn**	**08 48 20.4**	**+0.6**
I05D	**Terrebonne, OR**	**2.76**	**334**	Pb	**Pb**	**08 48 25.0**	**-0.2**
	baz=152						
I04A	**Tendick Farm,**	**2.81**	**314**	Pb	**Pb**	**08 48 26.1**	**+0.1**
	baz=132,SNR=13						
YERR	**Yerington**	**2.90**	**174**		**Pn**	**08 48 23.9**	**+1.4**
YERR				IAML		08 49 12.1	
	comp=N,146nm,0.8s						
EMB	**Emerald Bay**	**2.92**	**187**		**Pn**	**08 48 20.1**	**-2.7**
EMB				IAML		08 49 12.2	
	comp=N,67nm,0.7s						
O02D	**Mt. Diablo Mer**	**2.93**	**236**	Pb	**Pb**	**08 48 27.8**	**-0.4**
	baz=54						
O02D				Sb	**Sb**	**08 49 06.8**	**+2.3**
	baz=54						
DBO	**Dodson Butte**	**2.95**	**296**		**Pn**	**08 48 22.8**	**-0.2**
DBO				IAML		08 49 01.2	
	comp=E,85nm,3.7s						
DBO				IAML		08 49 10.0	
	comp=N,67nm,1.8s						
L02E	**Cave Junction**	**2.98**	**277**	P	**Pn**	**08 48 24.0**	**+0.7**
	baz=94						
L02E				Sb	**Sb**	**08 49 07.4**	**+1.8**
	baz=94						
KVN	**Kaiserville**	**3.05**	**157**		**Pn**	**08 48 25.1**	**+0.5**
KVN				IAML		08 49 17.5	
	comp=E,82nm,0.7s						
K02D	**Willamette Mer**	**3.11**	**287**	P	**Pn**	**08 48 25.5**	**+0.3**
	baz=104						
K02D				S	**Sn**	**08 49 03.8**	**+0.9**
	baz=104						
MFID	**Camas Ranch**	**3.19**	**60**	Pn	**Pn**	**08 48 26.3**	**-0.1**
I03D	**Drain, OR**	**3.29**	**305**	Sb	**Sb**	**08 49 16.6**	**+2.0**
	baz=122						
RYN	**Ryan**	**3.35**	**165**		**Pn**	**08 48 25.9**	**-2.7**
RYN				IAML		08 49 26.1	
	comp=E,67nm,1.1s						
RYN				IAML		08 49 27.8	
	comp=N,52nm,0.7s						
H04A	**Detroit Lake**	**3.37**	**327**		**Pn**	**08 48 28.6**	**-0.1**
H04A				IAML		08 50 02.6	
	comp=E,45nm,4.5s						
BMO	**Blue Mountains**	**3.42**	**29**		**Pn**	**08 48 28.5**	**-1.0**
KBO	**Bosley Butte**	**3.44**	**277**	Pn	**Pn**	**08 48 30.6**	**+0.8**
JCC	**Jacoby Creek,**	**3.48**	**254**	Pn	**Pn**	**08 48 28.9**	**-1.3**
JCC				IAML		08 49 26.9	
	comp=N,64nm,3.7s						
JCC				IAML		08 49 50.3	
	comp=E,65nm,2.4s						
ELK	**Elko**	**3.49**	**107**	Pn	**Pn**	**08 48 30.9**	**+0.3**
ELK				IAML		08 49 12.3	
	comp=E,45nm,0.3s						
KMRM	**Mail Ridge**	**3.50**	**243**	Pn	**Pn**	**08 48 27.5**	**-3.1**
KMRM				IAML		08 49 37.2	
	comp=E,68nm,1.2s						
KMRM				IAML		08 49 37.7	
	comp=N,68nm,2.4s						
NVAR	**Mina Array Bea**	**3.59**	**163**	Pn	**Pn**	**08 48 33.8**	**+1.9**
	comp=N,0.7nm,0.3s,baz=342,slow=13,SNR=12						
NVAR				Pg	**Pg**	**08 48 44.2**	**+0.3**
	comp=N,4.1nm,0.3s,baz=342,slow=14,SNR=25						
NVAR				Lg	Lg	08 49 29.9	
	comp=N,7.6nm,0.3s,baz=344,slow=29,SNR=2.8						
NVAR	**Mina Array Bea**	**3.59**	**163**	Pn	**Pn**	**08 48 32.1**	**+0.2**
KEBM	**Edson Butte**	**3.63**	**287**	Pn	**Pn**	**08 48 32.1**	**-0.2**
LHV	**Little Huntoon**	**3.72**	**166**	Pn	**Pn**	**08 48 33.7**	**+0.2**
CMB	**Columbia Colle**	**3.88**	**189**		**Pn**	**08 48 36.7**	**+0.9**
PLID	**Pearl Lake**	**4.15**	**38**		**Pn**	**08 48 40.2**	**+0.5**
HLID	**Hailey**	**4.19**	**65**	Pn	**Pn**	**08 48 40.8**	**+0.6**
HLID				IAML		08 50 01.9	
	comp=N,42nm,1.0s						
HLID				IAML		08 50 02.1	
	comp=N,46nm,1.6s						
HLID	**Hailey**	**4.19**	**65**	P	**Pn**	**08 48 40.6**	**+0.4**
	baz=248						
TPH	**Tonopah**	**4.22**	**153**		**Pn**	**08 48 40.2**	**-0.4**
R11A	**Troy Canyon, C**	**4.69**	**137**		**Pn**	**08 48 46.4**	**-0.7**
R11A				IAML		08 50 05.8	
	comp=E,20nm,0.5s						
R11A				IAML		08 50 07.0	
	comp=N,18nm,1.0s						
LCH	**Last Change Ra**	**4.88**	**161**		**Pn**	**08 48 48.1**	**-1.5**
LCH				IAML		08 50 26.2	
	comp=E,14nm,2.8s						
SPR3	**Spring Creek 3**	**4.96**	**124**	Pn	**Pn**	**08 48 51.2**	**+0.4**
SPR3				IAML		08 50 20.7	
	comp=E,28nm,1.1s						
BGU	**Big Grassy Mou**	**5.05**	**99**		**Pn**	**08 48 51.8**	**-0.2**
BGU				IAML		08 50 24.2	
	comp=N,18nm,1.2s						
BGU				IAML		08 50 28.8	
	comp=E,26nm,2.4s						
HVU	**Hansel Valley**	**5.12**	**89**		**Pn**	**08 48 53.9**	**+1.0**
SPUT	**South Promonto**	**5.41**	**94**		**Pn**	**08 48 57.7**	**+0.8**
SPUT				IAML		08 50 33.2	
	comp=E,19nm,2.6s						
DUG	**Dugway, Tooele**	**5.42**	**106**		**Pn**	**08 48 58.7**	**+1.8**
PSUT	**Pine Spring**	**5.54**	**125**	Pn	**Pn**	**08 48 57.3**	**-1.4**
TPNV	**Topopah Spring**	**5.57**	**151**		**Pn**	**08 49 00.3**	**+1.2**
PRN	**Pahroc Range**	**5.69**	**140**		**Pn**	**08 49 02.1**	**+1.3**
MCMT	**McKenzie Canyo**	**5.75**	**57**		**Pn**	**08 49 02.2**	**+0.5**
NLU	**North Lily Min**	**6.03**	**106**		**Pn**	**08 49 03.9**	**-1.6**
HWUT	**Hardware Ranch**	**6.04**	**90**	Pn	**Pn**	**08 49 04.1**	**-1.4**
CTU	**Camp Tracy**	**6.05**	**99**		**Pn**	**08 49 05.4**	**-0.3**
ECR	**Eagle Creek**	**6.22**	**76**	Pn	**Pn**	**08 49 06.0**	**-2.0**
JLU	**Jordanelle**	**6.29**	**99**	Pn	**Pn**	**08 49 09.7**	**+0.6**
TCRU	**Three Creeks R**	**6.39**	**118**	Pn	**Pn**	**08 49 09.2**	**-1.2**
CCUT	**Cedar City**	**6.48**	**130**		**Pn**	**08 49 07.6**	**-4.0**
SZCU	**Shurtz Canyon**	**6.61**	**128**	Pn	**Pn**	**08 49 12.5**	**-0.9**
MSU	**Marysvale**	**6.62**	**118**	Pn	**Pn**	**08 49 13.1**	**-0.5**
PDAR	**Pinedale Array**	**7.51**	**80**	Pn	Pn	08 49 31.1	+5.2
	comp=E,0.1nm,0.3s,baz=266,slow=9.9,SNR=3.6						
PDAR				Lg	Lg	08 51 36.2	
	comp=E,0.1nm,0.3s,baz=263,slow=15,SNR=1.5						
PDAR	**Pinedale Array**	**7.51**	**80**	Pn	**Pn**	**08 49 23.8**	**-2.1**
YKA	**Yellowknife Ar**	**20.86**	**7**	P	**P**	**08 52 16.8**	**-1.2**
	comp=E,0.1nm,0.5s,baz=189,slow=10.0,SNR=2.9						

SOF ***21*** *08:56:13.0, 41°.79N×22°.67E, h11^{km}, MD2.5*

SKO ***21*** *08:56:13.9, 41°.77N×22°.77E, h21^{km}*

BEO ***21*** *08:56:14.9±0.4, 41°.77N×22°.78E, h6^{km}±2^{km}, ML2.3/11*

ATH ***21*** *08:56:14.9, 41°.78N×22°.75E, h10^{km}±4^{km}, ML2.3/4, Error ellipse: s-maj=5.3km s-min=2.1km az=151.0*

THE ***21*** *08:56:15.9, 41°.71N×22°.79E, h6^{km}±1^{km}, ML2.2/6, Error ellipse: s-maj=1.6km s-min=0.9km az=173.0*

ISC 21 08:56:14.6±1.0**, 41°.78N**±0°.02×**22°.76E**±0°.02**, h9**^{km}±9^{km}**, n43, σ0ˢ.53**/72**, 1C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.26**	**70**	Pg	**Pg**	**08 56 20.8**	**+1.0**
VAY	**Valandovo**	**0.48**	**197**	*i* Pg	**Pg**	**08 56 24.1**	**+0.1**
VAY				*i* Sg	**Sg**	**08 56 30.6**	**+0.3**
VAY				*e*Lg	Lg	08 56 31.0	
	comp=N,78nm,0.3s						
VAY	**Valandovo**	**0.48**	**197**	*e*Pg	**Pg**	**08 56 23.9**	**-0.1**
VAY				*e*Sg	**Sg**	**08 56 30.3**	**0.0**
KNT	**Kendrikon**	**0.63**	**170**	P	**Pg**	**08 56 26.6**	**-0.1**
KNT				S	**Sg**	**08 56 35.0**	**+0.1**
	comp=N,362nm,0.2s						
KNT	**Kendrikon**	**0.63**	**170**	P	**Pg**	**08 56 26.8**	**0.0**
KNT				S	**Sg**	**08 56 35.5**	**+0.5**
KNT	**Kendrikon**	**0.63**	**170**	*i* Pg	**Pg**	**08 56 26.6**	**-0.1**
KNT				*i* Sg	**Sg**	**08 56 35.4**	**+0.5**
BOSS	**Bosilegrad**	**0.75**	**344**	*e*Pg	**Pg**	**08 56 29.0**	**0.0**
BOSS				*e*Sg	**Sg**	**08 56 38.6**	**-0.2**
MMB	**Musomiste**	**0.75**	**104**	Pg	**Pb**	**08 56 29.7**	**-0.1**
GRG	**Griva**	**0.87**	**198**	P	**Pg**	**08 56 30.6**	**-0.7**
GRG	**Griva**	**0.87**	**198**	⇑*i*Pg	**Pg**	**08 56 30.5**	**-0.7**
GRG				*i* Sg	**Sg**	**08 56 41.7**	**-0.8**
VTS	**Vitosha**	**0.91**	**23**	Pg	**Pg**	**08 56 31.3**	**-0.9**
VTS	**Vitosha**	**0.91**	**23**	*i* Pg	**Pg**	**08 56 31.3**	**-0.9**
VTS				*i* Sg	**Sg**	**08 56 44.4**	**+0.4**
VTS	**Vitosha**	**0.91**	**23**	*e*Pg	**Pg**	**08 56 31.1**	**-1.0**
VTS	**Vitosha**	**0.91**	**23**	*e*Pg	**Pg**	**08 56 31.2**	**-0.9**
VTS				*e*Sg	**Sg**	**08 56 43.5**	**-0.5**
VTS				*e*Sg	**Sb**	**08 56 44.2**	**-0.7**
SRS	**Serrai**	**0.91**	**136**	P	**Pg**	**08 56 31.8**	**-0.3**
SRS				S	**Sb**	**08 56 44.2**	**-0.5**
	comp=N,185nm,0.5s						
SRS	**Serrai**	**0.91**	**136**	P	**Pg**	**08 56 31.9**	**-0.3**
SRS				S	**Sb**	**08 56 44.5**	**-0.3**
SRS	**Serrai**	**0.91**	**136**	*i* Pg	**Pg**	**08 56 31.8**	**-0.3**
SRS				*i* Sg	**Sb**	**08 56 44.3**	**-0.5**
NVR	**Nevrokopi**	**0.93**	**117**	P	**Pg**	**08 56 32.5**	**0.0**
NVR				S	**Sb**	**08 56 45.2**	**-0.2**
	comp=N,142nm,0.4s						
NVR	**Nevrokopi**	**0.93**	**117**	P	**Pb**	**08 56 32.7**	**-0.2**
NVR				S	**Sb**	**08 56 45.5**	**+0.1**
NVR				AML	AML	08 56 48.4	
	comp=N,273µm,0.4s						
NVR				AML	AML	08 56 49.6	
	comp=E,249µm,0.3s						
SKO	**Skopje**	**1.00**	**281**	*i* Pg	**Pg**	**08 56 34.3**	**+0.3**
SKO				*i* Sg	**Sg**	**08 56 47.1**	**+0.1**
SKO				*e*Lg	Lg	08 56 48.6	
	comp=E,0.9nm,0.3s						
SKO	**Skopje**	**1.00**	**281**	*e*Pg	**Pg**	**08 56 33.7**	**-0.2**
SKO				*e*Sg	**Sn**	**08 56 49.0**	**-0.1**
SOH	**Sokhos**	**1.06**	**155**	P	**Pg**	**08 56 34.7**	**-0.2**
SOH				S	**Sg**	**08 56 48.5**	**-0.1**
	comp=E,178nm,0.5s						
SOH	**Sokhos**	**1.06**	**155**	P	**Pg**	**08 56 34.8**	**-0.2**
SOH				AML	AML	08 56 52.0	
	comp=N,508µm,0.5s						
SOH				AML	AML	08 56 52.2	
	comp=E,363µm,0.5s						
SOH	**Sokhos**	**1.06**	**155**	*i* Pg	**Pg**	**08 56 35.0**	**+0.1**
SOH				*i* Sg	**Sb**	**08 56 48.8**	**-0.2**
THE	**Thessaloniki**	**1.16**	**172**	*i* Pg	**Pb**	**08 56 36.1**	**-0.6**
BARS	**Barje**	**1.25**	**326**	*i* Pg	**Pn**	**08 56 37.8**	**-0.5**
BARS				*i* Sg	**Sb**	**08 56 54.5**	**-0.1**
BARS	**Barje**	**1.25**	**326**	*e*Pg	**Pn**	**08 56 37.8**	**-0.5**
BARS				*e*Sg	**Sb**	**08 56 54.6**	**0.0**
BARS	**Barje**	**1.25**	**326**	*e*Pn	**Sb**	**08 56 54.6**	**0.0**
PGB	**Panagyurishte**	**1.30**	**53**	P	**Pn**	**08 56 38.9**	**-0.1**
KOKK	**Kokkinochori,**	**1.34**	**135**	P	**Pn**	**08 56 39.5**	**0.0**
KOKK				S	**Sg**	**08 56 57.6**	**-0.1**
	comp=E,150nm,0.7s						
KOKK	**Kokkinochori,**	**1.34**	**135**	P	**Pn**	**08 56 39.4**	**-0.1**
KOKK				AML	AML	08 56 59.1	
	comp=N,304µm,0.4s						
KOKK				AML	AML	08 56 59.2	
	comp=E,267µm,0.6s						
ZAPS	**Zavoj**	**1.50**	**356**	*e*Pg	**Pn**	**08 56 42.1**	**+0.4**
ZAPS				*e*Sg	**Sb**	**08 57 02.5**	**+0.8**
PLG	**Polygyros**	**1.50**	**160**	P	**Pb**	**08 56 42.5**	**-0.1**
PLG				AML	AML	08 57 07.1	
	comp=E,82µm,0.5s						
PLG				AML	AML	08 57 08.1	
	comp=N,80µm,0.6s						
KAVA	**Kavala**	**1.53**	**120**	P	**Pn**	**08 56 42.5**	**+0.4**
KAVA				S	**Sb**	**08 57 02.4**	**-0.3**
	comp=N,68nm,0.5s						
KAVA	**Kavala**	**1.53**	**120**	P	**Pn**	**08 56 42.6**	**+0.4**
MPEP	**Malo Peshtene**	**1.73**	**24**	P	**Pb**	**08 56 47.1**	**+0.5**
SELS	**Selova**	**1.88**	**320**	*e*Pn	**Pb**	**08 56 48.7**	**-0.5**
SELS				*e*Sn	**Sb**	**08 57 13.1**	**+0.3**
BOVS	**Bovan**	**2.01**	**338**	*e*Pg	**Pb**	**08 56 50.8**	**-0.5**
BOVS				*e*Sg	**Sg**	**08 57 18.6**	**-0.6**
ZAGS	**Zajecar**	**2.07**	**349**	*e*Pn	**Pn**	**08 56 49.1**	**-0.4**
ZAGS				*e*Sn	**Sn**	**08 57 15.6**	**+0.2**
GRUS	**Gruza**	**2.59**	**325**	*e*Pn	**Pn**	**08 56 56.4**	**-0.3**
GRUS				*e*Sn	**Sn**	**08 57 29.3**	**+1.1**
IVAS	**Ivanjica**	**2.63**	**314**	*e*Pn	**Pn**	**08 56 58.6**	**+1.3**
IVAS				*e*Sn	**Sn**	**08 57 31.0**	**+1.7**
TRUS	**Trudelj**	**2.99**	**326**	*e*Pn	**Pn**	**08 57 02.0**	**-0.2**
DIVS	**Divibare**	**3.08**	**320**	*e*Pn	**Pn**	**08 57 04.3**	**+0.8**

IDC 21 08:57:22.3±999.0**, 46°.42N×68°.73E, h0**^{km}**, Error ellipse: s-maj=1267.0km s-min=241.2km az=55.0, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**12.75**	**48**	*i*		10 17 00.0	
	baz=240,slow=322,SNR=1.0						
I34MN	**SONGINO INFRAS**	**25.52**	**73**	*i*		11 35 20.0	
	baz=281,slow=334,SNR=1.3						
I45RU	**USSURIYSK INFR**	**43.48**	**69**	*i*		13 20 20.0	
	baz=295,slow=332,SNR=2.6						

IDC ***21*** *09:03:56.0±1.8, 2°.75N×89°.53E, h0^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.5/60, mbtmp3.8/6, ML4.0/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/38, Error ellipse: s-maj=64.1km s-min=23.7km az=52.0*

ISC 21 09:03:57.2±1.4**, 2°.7N**±0°.2×**89°.5E**±0°.2**, h10**^{km}**, n14, σ0ˢ.68**/7**, mb4.0**/5**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**9.85**	**298**	Pn	**Pn**	**09 06 19.1**	**0.0**
	1.3nm,0.3s,baz=216,slow=13,SNR=4.7						
PALK				Sn	Sn	09 07 59.0	-11
	2.9nm,0.3s,baz=236,slow=7.1,SNR=6.3						
PALK				LR	LR	09 09 54.8	
	comp=Z,81nm,18.2s,baz=220,slow=36						
H08S3	**Diego Garcia H**	**19.85**	**239**	T	T	09 29 19.3	
	baz=59,slow=76,SNR=7.6						
H08S2	**Diego Garcia H**	**19.85**	**239**	T	T	09 29 37.5	
	baz=59,slow=76,SNR=10						
H08S1	**Diego Carcia H**	**19.86**	**239**	T	T	09 29 23.8	
	baz=59,slow=76,SNR=10.0						
H01W3	**Cape Leeuwin H**	**43.99**	**150**	T	T	09 59 04.5	
	baz=326,slow=76						
H01W2	**Cape Leeuwin H**	**44.00**	**150**	T	T	09 59 04.3	
	baz=326,slow=76						
H01W1	**Cape Leeuwin H**	**44.00**	**150**	T	T	09 59 08.4	
	baz=326,slow=76						
MKAR	**Makanchi Array**	**44.34**	**353**	P	**P**	**09 12 07.4**	**-0.1**
	0.5nm,0.6s,baz=172,slow=9.7,SNR=7.1						
SONM	**Songino Array**	**47.24**	**15**	P	**P**	**09 12 31.1**	**+0.5**
	1.4nm,0.6s,baz=196,slow=10,SNR=3.2						
JNU	**Nakatsue**	**49.11**	**47**	LR	LR	09 33 51.6	
	comp=Z,202nm,21.3s,baz=256,slow=37						
WRA	**Warramunga Arr**	**49.44**	**119**	P	**P**	**09 12 47.2**	**-0.7**
	1.5nm,0.9s,baz=296,slow=8.6,SNR=6.3						
ASAR	**Alice Springs**	**50.55**	**124**	P	**P**	**09 12 56.8**	**+0.4**
	0.4nm,1.0s,baz=286,slow=7.3,SNR=1.6						
ZALV	**Zalesovo Beam**	**51.20**	**356**	P	**P**	**09 12 59.8**	**-0.8**
	1.4nm,0.3s,baz=144,slow=5.4,SNR=2.4						
TXAR	**Lajitas Array**	**145.72**	**21**	PKPbc	**PKPab**	**09 23 38.1**	**+0.5**
	0.3nm,0.6s,baz=343,slow=0.5,SNR=5.3						

IDC ***21*** *09:08:49.3±0.7, 20°.38S×173°.90W, h0^{km}, mb4.4/14, mb1 4.6/17, mb1mx4.5/27, mbtmp4.4/17, ML4.6/3, MS4.0/16, Ms1 4.0/16, ms1mx3.8/31, Error ellipse: s-maj=27.7km s-min=14.8km az=144.0*

NOU ***21*** *09:08:52.7, 20°.17S×173°.33W, h61^{km}, mb4.9/20, Tonga Islands*

NEIC ***21*** *09:08:55.3±2.5, 20°.53S±0°.10×173°.8W±0°.1, h38^{km}±6^{km}, mb4.8/55, Error ellipse: s-maj=15.8km s-min=11.6km az=135.0*

ISC 21 09:08:53.1±0.5**, 20°.53S**±0°.07×**173°.78W**±0°.08**, h27**^{km}**, n134, σ1ˢ.51**/115**, mb4.8**/40**, MS4.0**/16**, 9C-4D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.91**	**69**	P	Pn	09 09 42.7	-8.8
AFI	**Afiamalu**	**6.86**	**17**	Pn	**Pn**	**09 10 28.4**	**-3.7**
	12nm,0.3s,baz=213,slow=5.8,SNR=9.2						
AFI				Sn	Sn	09 11 37.9	-12
	16nm,0.3s,baz=73,slow=21,SNR=6.6						
AFI				T	T	09 17 25.3	
	6.6nm,0.3s,baz=226,slow=23,SNR=5.1						
MSVF	**Nonsavu**	**8.21**	**288**	Pn	**Pn**	**09 10 54.8**	**+4.3**
	2.2nm,0.3s,baz=112,slow=13,SNR=8.0						
MSVF				LR	LR	09 13 47.1	
	comp=Z,1µm,19.3s,baz=87,slow=37						
MSVF	**Nonsavu**	**8.21**	**288**	Pn	**Pn**	**09 10 53.3**	**+2.7**
RAO	**Raoul Island**	**9.46**	**203**	Sn	**Sn**	**09 12 49.2**	**-3.8**
	113nm,0.3s,baz=75,slow=22,SNR=7.2						
RAO				LR	LR	09 14 55.9	
	comp=Z,462nm,18.1s,baz=73,slow=38						
RAR	**Rarotonga**	**13.12**	**95**	Pn	Pn	09 11 47.5	-10
	3.2nm,0.3s,baz=260,slow=10.0,SNR=12						
RAR				LR	LR	09 16 23.8	
	comp=Z,708nm,19.4s,baz=284,slow=34						
MARNC	**Mare, Loyalty**	**17.01**	**264**		**P**	**09 12 50.3**	**-0.6**
PINNC	**Pines Island,**	**17.58**	**260**		**P**	**09 12 57.6**	**+0.4**
PINNC				IAmb	IAmb	09 13 00.9	
	comp=Z,176nm,1.5s						
YATNC	**Mamie plateau,**	**18.07**	**262**	P	**P**	**09 13 04.7**	**+2.0**
OUENC	**Ouen Island, N**	**18.13**	**261**		**P**	**09 13 05.0**	**+1.7**
MXZ	**Matakaoa Point**	**18.31**	**200**	P	**Pn**	**09 13 05.9**	**+0.7**
MXZ				IAmb	IAmb	09 13 13.9	
	comp=Z,90nm,1.5s						
DZM	**Mont Dzumac**	**18.49**	**262**	*e*P	**Pn**	**09 13 08.8**	**+1.2**
	comp=Z,109nm,1.3s						
DZM				*e*LR	LR	09 17 42.2	
	comp=Z,517nm,20.9s						
DZM	**Mont Dzumac**	**18.49**	**262**	P	**Pn**	**09 13 07.9**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=83,slow=22,SNR=9.1						
DZM	**Mont Dzumac**	**18.49**	**262**		**Pn**	**09 13 09.1**	**+1.5**
DZM	**Mont Dzumac**	**18.49**	**262**	P	**Pn**	**09 13 08.9**	**+1.3**
SANVU	**Saraoutou**	**18.77**	**283**		**Pn**	**09 13 11.1**	**+0.1**
SANVU				IAmb	IAmb	09 13 14.5	
	comp=Z,103nm,1.2s						
URZ	**Urewera**	**19.34**	**202**	P	**Pn**	**09 13 18.3**	**+0.6**
	comp=Z,3.9nm,0.3s,baz=300,slow=23,SNR=32						
URZ				S	S	09 16 39.7	-14
	comp=Z,0.6nm,0.3s,baz=112,slow=22,SNR=2.1						
URZ	**Urewera**	**19.34**	**202**	P	**Pn**	**09 13 17.8**	**+0.1**
HIZ	**Hauiti**	**20.43**	**206**	P	Pn	09 13 29.9	-0.6
HIZ				IAmb	IAmb	09 13 33.5	
	comp=Z,50nm,0.9s						
HIZ	**Hauiti**	**20.43**	**206**	P	Pn	09 13 30.2	-0.4
TBI	**Tubuai**	**22.73**	**102**	*e*LR	LR	09 19 09.7	
	comp=Z,342nm,21.8s						
PAE	**Paea**	**23.05**	**87**	*e*T	T	09 37 06.0	
	comp=Z,1.1nm,0.3s						
PPT2	**Papeete2**	**23.06**	**87**	*e*LR	LR	09 19 14.3	
	comp=Z,341nm,21.2s						
PPT2	**Papeete2**	**23.06**	**87**	*e*T	T	09 37 07.5	
	comp=Z,2.1nm,0.3s						
PPT	**Papeete**	**23.07**	**87**	LR	LR	09 21 16.8	
	comp=Z,483nm,18.3s,baz=208,slow=32						
QRZ	**Quartz Range**	**23.35**	**207**	P	**P**	**09 14 01.3**	**+2.0**
KHZ	**Kahutara**	**24.29**	**203**	P	**P**	**09 14 09.4**	**+1.2**
	comp=Z,40nm,1.8s						
HNR	**Honiara**	**27.62**	**290**	LR	LR	09 23 46.8	
	comp=Z,168nm,19.7s,baz=146,slow=33						
ARMA	**Armidale**	**32.63**	**245**	P	**P**	**09 15 22.3**	**-0.7**
ARMA				IAmb	IAmb	09 15 42.9	
	comp=Z,20nm,1.4s						
EIDS	**Eidsvold**	**32.65**	**255**	P	**P**	**09 15 21.8**	**-1.3**
EIDS				IAmb	IAmb	09 15 26.8	
	comp=Z,19nm,1.4s						
MGCD	**Mangrove Creek**	**33.60**	**241**	P	**P**	**09 15 32.7**	**+1.4**
TAOE	**Nuku Hiva Isla**	**34.47**	**75**	*e*LR	LR	09 24 32.1	
	comp=Z,275nm,21.2s						
CNB	**Canberra Magne**	**35.51**	**238**	P	**P**	**09 15 49.1**	**+1.2**
CAN	**Canberra**	**35.80**	**238**	P	**P**	**09 15 50.6**	**+0.3**
CAN	**Canberra**	**35.80**	**238**	P	**P**	**09 15 51.1**	**+0.7**
CTA	**Charters Tower**	**37.41**	**263**	P	**P**	**09 16 03.4**	**-0.8**
	comp=Z,3.7nm,0.4s,baz=87,slow=9.8,SNR=6.3						
CTAO	**Charters Tower**	**37.41**	**263**	P	**P**	**09 16 03.1**	**-1.2**
CTAO				IAmb	IAmb	09 16 19.4	
	comp=Z,24nm,1.4s						
CTAO	**Charters Tower**	**37.41**	**263**	P	**P**	**09 16 03.6**	**-0.7**
QLP	**Quilpie**	**38.82**	**253**	P	**P**	**09 16 15.4**	**-0.6**
TOO	**Toolangi**	**39.10**	**235**	P	**P**	**09 16 18.4**	**+0.1**
TOO				IAmb	IAmb	09 16 24.8	
	comp=Z,25nm,1.3s						
TOO	**Toolangi**	**39.10**	**235**	P	**P**	**09 16 18.3**	**+0.1**
PMG	**Port Moresby**	**39.22**	**280**	P	**P**	**09 16 18.5**	**-1.0**
	comp=Z,14nm,0.9s,baz=75,slow=7.9,SNR=4.6						
PMG	**Port Moresby**	**39.22**	**280**	P	**P**	**09 16 19.4**	**-0.1**
PMG				IAmb	IAmb	09 16 22.8	
	comp=Z,17nm,1.0s						
STKA	**Stephens Creek**	**41.34**	**245**	P	**P**	**09 16 35.8**	**-1.1**
	comp=Z,6.8nm,0.8s,baz=96,slow=11,SNR=8.8						
STKA				LR	LR	09 31 53.9	
	comp=Z,160nm,19.0s,baz=40,slow=34						
STKA	**Stephens Creek**	**41.34**	**245**	P	**P**	**09 16 35.8**	**-1.1**
STKA	**Stephens Creek**	**41.34**	**245**	P	**P**	**09 16 36.7**	**-0.2**
COEN	**Coen**	**41.53**	**272**	P	**P**	**09 16 37.3**	**-1.3**
COEN	**Coen**	**41.53**	**272**	P	**P**	**09 16 38.7**	**+0.1**
LCRK	**Leigh Creek**	**44.16**	**247**	P	**P**	**09 16 59.5**	**-0.3**
BBOO	**Buckleboo**	**46.08**	**244**	P	**P**	**09 17 12.5**	**-2.5**
BBOO	**Buckleboo**	**46.08**	**244**	P	**P**	**09 17 14.2**	**-0.8**
OOD	**Oodnadatta**	**46.40**	**251**	P	**P**	**09 17 18.0**	**+0.4**
MULG	**Mulgathing**	**47.75**	**247**	P	**P**	**09 17 27.0**	**-1.1**
AS31	**Alice Springs**	**48.35**	**256**	P	**P**	**09 17 30.8**	**-2.1**
ASAR	**Alice Springs**	**48.35**	**256**	P	**P**	**09 17 31.4**	**-1.4**
	comp=Z,8.1nm,0.9s,baz=86,slow=8.4,SNR=40						
ASAR				PcP	**PcP**	**09 18 59.8**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=109,slow=4.4,SNR=7.2						
ASAR				S	**S**	**09 24 28.1**	**-3.7**

	comp=Z,0.4nm,0.9s,baz=102,slow=12,SNR=4.2						
ASAR				LR	LR	09 37 18.5	
	comp=Z,187nm,19.6s,baz=102,slow=35						
ASAR	**Alice Springs**	**48.35**	**256**	P	**P**	**09 17 30.8**	**-2.1**
WB0	**Warramunga Arr**	**48.48**	**261**	P	**P**	**09 17 31.6**	**-2.3**
WB2	**Warramunga Arr**	**48.49**	**261**	P	**P**	**09 17 31.8**	**-2.2**
WB2				IAmb	IAmb	09 17 33.5	
	comp=Z,12nm,0.9s						
WRA	**Warramunga Arr**	**48.50**	**261**	P	**P**	**09 17 32.8**	**-1.3**
	comp=Z,6.9nm,1.0s,baz=87,slow=7.0,SNR=22						
WRA				PcP	**PcP**	**09 18 59.3**	**-0.7**
	comp=Z,3.0nm,0.9s,baz=98,slow=3.4,SNR=4.3						
WRA	**Warramunga Arr**	**48.50**	**261**	P	**P**	**09 17 31.8**	**-2.3**
FORT	**Forrest**	**52.91**	**246**	P	**P**	**09 18 05.8**	**-1.3**
MTN	**Manton Dam**	**53.11**	**269**	P	**P**	**09 18 08.1**	**-0.7**
KNRA	**Kununurra**	**54.60**	**265**	P	**P**	**09 18 19.8**	**+0.1**
VNDA	**Vanda**	**58.26**	**186**	P	**P**	**09 18 47.3**	**+2.5**
	comp=Z,1.1nm,0.9s,baz=40,slow=4.6,SNR=2.8						
VNDA				LR	LR	09 42 52.3	
	comp=Z,101nm,18.1s,baz=16,slow=35						
VNDA	**Vanda**	**58.26**	**186**	IAmb	IAmb	09 19 04.9	
	comp=Z,10nm,1.5s						
PSA00	**Pilbara Seismi**	**61.50**	**256**	P	**P**	**09 19 06.6**	**-1.4**
MORW	**Morawa**	**63.46**	**247**	P	**P**	**09 19 19.6**	**-1.5**
QSPA	**South Pole Qui**	**69.54**	**180**	P	**P**	**09 20 00.4**	**+1.0**
QSPA				IAmb	IAmb	09 20 24.7	
	comp=Z,11nm,1.1s						
MJAR	**Matsushiro Arr**	**72.65**	**321**	P	**P**	**09 20 18.5**	**+0.1**
	comp=Z,5.2nm,0.8s,baz=144,slow=6.4,SNR=6.1						
MJAR				LR	LR	09 52 30.1	
	comp=Z,19nm,18.0s,baz=145,slow=36						
MAT	**Matsushiro**	**72.65**	**321**	P	**P**	**09 20 17.7**	**-0.8**
TPUB	**Ta-pu**	**77.35**	**301**	P	**P**	**09 20 45.1**	**-0.8**
GLA	**Glamis**	**77.49**	**47**	P	**P**	**09 20 47.8**	**+1.3**
GLA				IAmb	IAmb	09 20 48.3	
	comp=Z,14nm,1.4s						
YERR	**Yerington**	**78.16**	**40**	P	**P**	**09 20 50.3**	**+0.1**
NVAR	**Mina Array Bea**	**78.39**	**41**	P	**P**	**09 20 52.2**	**+0.6**
	comp=Z,4.7nm,0.9s,baz=227,slow=7.2,SNR=19						
NVAR				LR	LR	09 51 17.6	
	comp=Z,141nm,18.1s,baz=262,slow=32						
NV11	**Mina Array Sit**	**78.48**	**41**	P	**P**	**09 20 51.6**	**-0.5**
NV11				IAmb	IAmb	09 20 54.7	
	comp=Z,12nm,1.2s						
KVN	**Kaiserville**	**78.89**	**41**	P	**P**	**09 20 54.1**	**-0.2**
SHPR	**Sheep Range**	**79.24**	**44**	P	**P**	**09 20 56.9**	**+0.6**
KSRS	**Korea Array**	**79.58**	**316**	P	**P**	**09 20 58.5**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=119,slow=6.6,SNR=6.2						
KNB	**Kanab**	**81.08**	**45**	P	**P**	**09 21 06.2**	**0.0**
KNB				IAmb	IAmb	09 21 09.0	
	comp=Z,13nm,1.3s						
U15A	**North Rim**	**81.11**	**46**	P	**P**	**09 21 07.3**	**+0.8**
U15A				IAmb	IAmb	09 21 09.3	
	comp=Z,14nm,1.4s						
USRK	**Ussuriysk Ar.**	**81.27**	**324**	LR	LR	09 53 21.9	
	comp=Z,128nm,18.8s,baz=129,slow=33						
ELK	**Elko**	**81.67**	**41**	P	**P**	**09 21 10.4**	**+1.1**
MTPU	**Mount Pierson**	**82.07**	**45**	IAmb	IAmb	09 21 15.1	
	comp=Z,12nm,1.3s						
MVU	**Marysvale**	**82.31**	**44**	P	**P**	**09 21 12.9**	**+0.2**
H03S2	**Juan Fernandez**	**82.69**	**123**	T	T	10 53 50.0	
	baz=250,SNR=3.9						
H03S1	**Juan Fernandez**	**82.71**	**123**	T	T	10 53 51.5	
	baz=250,SNR=3.7						
H03S3	**Juan Fernandez**	**82.71**	**123**	T	T	10 54 01.8	
	baz=250,SNR=4.5						
MAW	**Mawson**	**82.84**	**199**	LR	LR	09 57 57.7	
	comp=Z,203nm,18.4s,baz=73,slow=36						
NJ2	**Nanjing**	**82.98**	**308**	*e*P	**P**	**09 21 16.9**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
Q16A	**Castle Valley**	**83.21**	**44**	P	**P**	**09 21 18.7**	**+1.3**
Q16A				IAmb	IAmb	09 21 40.2	
	comp=Z,12nm,1.5s						
TMUT	**Trail Mountain**	**83.40**	**44**	P	**P**	**09 21 20.3**	**+1.9**
MNTX	**Cornudas Mount**	**83.58**	**53**	P	**P**	**09 21 19.1**	**-0.1**
MNTX				IAmb	IAmb	09 21 20.8	
	comp=Z,9.5nm,1.5s						
SRU	**San Rafael Swe**	**83.74**	**44**	P	**P**	**09 21 20.7**	**+0.6**
SRU				IAmb	IAmb	09 21 22.5	
	comp=Z,14nm,1.2s						
TX31	**Lajitas Ar. Si**	**83.78**	**56**	P	**P**	**09 21 19.5**	**-0.8**
TX32	**Lajitas Array**	**83.78**	**56**	P	**P**	**09 21 20.4**	**0.0**
TX32				IAmb	IAmb	09 21 22.7	
	comp=Z,13nm,1.4s						
TXAR	**Lajitas Array**	**83.78**	**56**	P	**P**	**09 21 20.0**	**-0.4**
	comp=Z,1.2nm,0.9s,baz=216,slow=6.2,SNR=10						
P17A	**Butcher Ranch,**	**83.80**	**44**	P	**P**	**09 21 20.7**	**+0.4**
P17A				IAmb	IAmb	09 21 23.0	
	comp=Z,15nm,1.3s						
HLID	**Hailey**	**83.82**	**39**	P	**P**	**09 21 20.8**	**+0.5**
HLID				IAmb	IAmb	09 21 22.7	
	comp=Z,7.4nm,1.1s						
P18A	**Preston Nutter**	**84.20**	**44**	P	**P**	**09 21 23.3**	**+0.7**
P18A				IAmb	IAmb	09 21 41.0	
	comp=Z,10nm,1.2s						
ANMO	**Albuquerque**	**84.38**	**50**	P	**P**	**09 21 23.9**	**+0.5**
ANMO				IAmb	IAmb	09 21 26.1	
	comp=Z,9.8nm,1.3s						
KLR	**Kul'dur**	**84.62**	**328**	LR	LR	09 57 35.8	
	comp=Z,35nm,18.9s,baz=118,slow=35						
RDMU	**Red Mountain**	**85.14**	**44**	P	**P**	**09 21 28.3**	**+1.1**
RDMU				IAmb	IAmb	09 21 31.1	
	comp=Z,9.8nm,1.3s						
AHID	**Auburn Hatcher**	**85.36**	**41**	IAmb	IAmb	09 21 32.2	
	comp=Z,6.7nm,1.0s						
PDAR	**Pinedale Array**	**86.32**	**42**	P	**P**	**09 21 32.2**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=259,slow=2.8,SNR=5.7						
PLCA	**Paso Flores**	**86.35**	**132**	LR	LR	09 53 55.9	
	comp=Z,138nm,18.3s,baz=202,slow=31						
WRH	**Wood River Hil**	**87.04**	**11**	P	**P**	**09 21 35.6**	**-0.1**
HDA	**Harding Lake**	**87.18**	**11**	IAmb	IAmb	09 21 54.0	
	comp=Z,9.2nm,1.1s						
CCB	**Clear Creek Bu**	**87.25**	**11**	P	**P**	**09 21 36.4**	**-0.2**
ILAR	**Eielson Array**	**87.53**	**11**	P	**P**	**09 21 37.6**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=215,slow=5.5,SNR=14						
XAN	**Xi'an**	**91.32**	**306**	P	**P**	**09 21 59.8**	**+3.1**
XAN				pP	pwP	09 22 21.3	+12
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HHC	**Hu-ho-hao-te**	**92.23**	**313**	*e*P	**P**	**09 22 01.5**	**+0.7**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,7.6s						
CMAR	**Chiang Mai Arr**	**93.86**	**288**	P	**P**	**09 22 09.8**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=126,slow=2.7,SNR=7.5						
CMAR				LR	LR	10 04 57.6	
	comp=Z,20nm,19.0s,baz=148,slow=36						
YKA	**Yellowknife Ar**	**94.93**	**24**	P	**P**	**09 22 13.5**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=239,slow=4.5,SNR=7.0						
LZH	**Lanzhou**	**95.95**	**306**	*e*P	**P**	**09 22 16.5**	**-1.6**
LZH				pP	pwP	09 22 32.8	+2.2
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LPAZ	**La Paz**	**98.38**	**111**	LR	LR	09 58 00.9	
	comp=Z,64nm,19.8s,baz=52,slow=30						
ARCES	**ARCESS Array B**	**129.61**	**351**	PKP	**PKPdf**	**09 27 59.2**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=38,slow=2.2,SNR=8.4						
AKASG	**Malin Array Be**	**144.85**	**334**	PKP	**PKPab**	**09 28 25.5**	**-1.0**
	comp=Z,4.2nm,0.9s,baz=34,slow=4.1,SNR=16						
SORM	**Soroca**	**147.19**	**332**	⇑P	**PKPbc**	**09 28 34.1**	**+0.3**
CLL	**Collm**	**148.83**	**352**	*e*PKPbc	**PKiKP**	**09 28 39.0**	**-0.5**
	comp=Z,34nm,1.5s						
CLL				*e*sPKPab	**sPKPab**	**09 28 59.0**	**+7.2**
BURAR	**Bucovina Array**	**148.91**	**335**	⇓P	**PKPbc**	**09 28 39.0**	**+0.5**
TRPA	**Tarpa**	**149.48**	**338**	⇑P	**PKiKP**	**09 28 40.5**	**-0.4**
TPGR	**Topolog**	**149.57**	**328**	⇑P	**PKPbc**	**09 28 39.9**	**-0.3**
VRI	**Vrincioaia**	**149.63**	**331**	⇑P	**PKiKP**	**09 28 42.0**	**+0.7**
PLOR	**Plostina**	**149.68**	**331**	⇑P	**PKPbc**	**09 28 39.7**	**-0.8**
BRTR	**Keskin Array B**	**149.72**	**315**	PKPbc	**PKPbc**	**09 28 39.5**	**-1.4**
	comp=Z,1.0nm,0.5s,baz=153,slow=1.3,SNR=2.3						
DOPR	**Dopca**	**150.15**	**333**	⇑P	**PKPbc**	**09 28 40.3**	**-1.2**
MLR	**Muntele Rosu**	**150.27**	**331**	⇑P	**PKPbc**	**09 28 40.4**	**-1.6**
VYHS	**Vyhne**	**150.31**	**343**	*e*PKP	**PKPbc**	**09 28 41.7**	**-0.2**
VOIR		**150.71**	**332**	⇑P	**PKiKP**	**09 28 44.0**	**+0.4**
KHC	**Kasperske Hory**	**150.86**	**350**	⇑*e*PKP	**PKiKP**	**09 28 44.5**	**+0.7**
ARR	**Arges**	**150.95**	**333**	⇓P	**PKiKP**	**09 28 45.7**	**+1.5**
GERES	**GERESS Array B**	**151.12**	**350**	PKPbc	**PKiKP**	**09 28 45.7**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=5.7,slow=1.3,SNR=7.0						
HERR	**Herculane**	**152.26**	**335**	⇓P	**PKPbc**	**09 28 43.7**	**-2.7**
PDG	**Podgorica**	**155.56**	**336**	⇓P	**PKPdf**	**09 28 43.2**	**-1.3**

IDC 21 09:24:14.9±999.0**,57°.46N×28°.53E,h0km,Error ellipse: s-maj=1413.0km s-min=118.2km az=94.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.80**	**95**	*i*		09 54 50.0	
	baz=284,slow=277,SNR=0.6						
I31KZ	**AKTYUBINSK INF**	**18.64**	**100**	*i*		11 17 31.5	
	baz=304,slow=318,SNR=13						
I46RU	**ZALESOVO INFRA**	**31.14**	**72**	*i*		12 39 00.0	
	baz=293,slow=332,SNR=0.9						

IDC ***21*** *09:26:18.5±2.1,52°.53N×169°.24W,h0km,mb3.2/4, mb1 3.6/6,mb1mx3.1/58,mbtmp3.4/6,ML3.2/2,Error ellipse: s-maj=54.4km s-min=28.0km az=173.0*

AEIC ***21*** *09:26:20±1.8,52°.19N±0°.03×169°.18W±0°.05,h11km±5km, ML2.9/17,ML3.8/6(NEIC),Error ellipse: s-maj=5.1km s-min=3.9km az=157.0*

NEIC ***21*** *09:26:22.0±1.8,52°.20N±0°.03×169°.21W±0°.07,h27km±7km, Error ellipse: s-maj=7.0km s-min=1.9km az=124.0*

ISC 21 09:26:21.9±1.0**,52°.2N**±0°.1**×169°.23W**±0°.08**,h29**km**,n22,** σ1.38/23**,mb3.0/4,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**0.77**	**17**		**Pn**	**09 26 36.5**	**-0.4**
NIKH					**Sn**	**09 26 48.7**	**+1.2**
OKSP	**Okmok Steeple**	**1.17**	**29**		**Pn**	**09 26 41.9**	**-0.4**
OKSO	**Okmok South**	**1.30**	**30**		**Pn**	**09 26 43.8**	**-0.4**
OKSO					**Sb**	**09 27 02.8**	**+0.8**
OKTU	**Okmok Mt. Tuli**	**1.36**	**32**		**Pn**	**09 26 45.2**	**+0.2**
OKFG	**Magazine Ridge**	**1.42**	**34**		**Pn**	**09 26 46.0**	**+0.2**
OKFG					**Sb**	**09 27 06.0**	**+0.5**
MAPS	**Pakushin South**	**2.10**	**40**		**Pn**	**09 26 55.5**	**+0.4**
MSW	**Makushin Switc**	**2.24**	**40**		**Pn**	**09 26 57.8**	**+0.7**
UNV	**Unalaska Valle**	**2.31**	**44**		**Pn**	**09 26 58.9**	**+0.9**
UNV					**Sn**	**09 27 26.6**	**+1.4**
MTBL	**Makushin Table**	**2.32**	**41**		**Pn**	**09 26 59.9**	**+1.6**
AKUT	**Akutan**	**2.82**	**46**	Pn	**Pn**	**09 27 06.0**	**+1.0**
AKUT				IAML		09 27 28.4	
	comp=N,184nm,3.2s						
ATKA	**Atka Island**	**3.05**	**271**	Pn	**Pn**	**09 27 08.2**	**-0.1**
ADK	**Adak**	**4.61**	**269**	IAML		09 30 22.1	
	comp=N,144nm,3.9s						
ADK	**Adak**	**4.61**	**269**	Pn	**Pn**	**09 27 29.9**	**+0.3**
KDAK	**Kodiak Island**	**11.04**	**53**	Pn	**Pn**	**09 28 56.8**	**-0.9**
	comp=N,0.1nm,0.3s,baz=239,slow=3.4,SNR=10						
KDAK				Sn	**Sn**	**09 30 55.5**	**-4.6**
	comp=N,0.1nm,0.3s,baz=257,slow=21,SNR=1.3						
PETK	**Petropavlovsk-**	**19.98**	**286**	P	**P**	**09 30 50.7**	**-1.0**
	comp=N,0.4nm,0.3s,baz=91,slow=13,SNR=7.6						
INK	**Inuvik**	**23.41**	**33**	P	**P**	**09 31 26.1**	**-1.9**
	comp=N,1.0nm,1.1s,baz=240,slow=8.7,SNR=4.7						
YKA	**Yellowknife Ar**	**30.27**	**49**	P	**P**	**09 32 30.5**	**+0.6**
	comp=N,0.1nm,0.4s,baz=274,slow=8.4,SNR=5.7						
H11S1	**WAKE ISLAND Hy**	**38.59**	**218**	T	T	10 14 47.2	
	baz=22,slow=74,SNR=8.4						
H11S2	**WAKE ISLAND Hy**	**38.60**	**218**	T	T	10 14 49.9	
	baz=22,slow=74,SNR=9.6						
H11S3	**WAKE ISLAND Hy**	**38.60**	**218**	T	T	10 15 20.7	
	baz=22,SNR=7.8						
PDAR	**Pinedale Array**	**40.34**	**79**	P	**P**	**09 33 57.8**	**+0.8**
	comp=N,0.1nm,0.5s,baz=308,slow=3.0,SNR=2.0						
TXAR	**Lajitas Array**	**52.66**	**89**	P	**P**	**09 35 34.0**	**+0.4**
	comp=N,0.2nm,0.8s,baz=294,slow=2.7,SNR=2.1						

GUC ***21*** *09:39:49.7±0.6,19°.40S×69°.42W,h104km±3km,ML3.4*

IDC ***21*** *09:39:50.4±2.2,19°.27S×69°.18W,h113km±19km,mb3.5/4, mb1 3.4/7,mb1mx3.3/28,mbtmp3.8/7,MS2.5/1,Ms1 2.6/1, ms1mx2.3/21,Error ellipse: s-maj=33.7km s-min=23.5km az=101.0*

ISC 21 09:39:48.4±0.8**,19°.39S**±0°.04**×69°.41W**±0°.09**,h108**km±8km**, n28,**σ1.07/34**,5C-1D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	**IPOC Station P**	**0.44**	**213**	⇑*i*P	**Pn**	**09 40 05.0**	**+0.2**
PB11				*i* S	**Sn**	**09 40 17.3**	**0.0**
PB11				IAML		09 40 19.0	
	comp=E,3μm,0.5s						
PB08	**IPOC Station P**	**0.78**	**162**	⇓*e*P	**Pn**	**09 40 08.4**	**+0.6**
PB08				*i* S	**Sn**	**09 40 22.9**	**+0.6**
PB08				IAML		09 40 23.6	
	comp=N,2μm,0.3s						
HMBC	**Humberstone**	**0.99**	**207**	⇑*e*P	**Pn**	**09 40 09.9**	**+0.4**
HMBC				*i* S	**Sn**	**09 40 25.4**	**0.0**
HMBC				IAML		09 40 26.7	
	comp=N,1μm,0.4s						
TA02	**Huaiquique**	**1.11**	**218**	*e*P	**Pn**	**09 40 11.0**	**+0.4**
TA02				*i* S	**Sn**	**09 40 26.7**	**-0.7**
TA02				IAML		09 40 28.8	
	comp=E,2μm,0.3s						
PB12	**IPOC Station P**	**1.17**	**311**	⇑*i*P	**Pn**	**09 40 11.5**	**+0.2**
PB12				*i* S	**Sn**	**09 40 28.5**	**-0.1**
PB12				IAML		09 40 29.4	
	comp=E,1μm,0.2s						
AP01	**Chacalluta**	**1.35**	**319**	⇑*i*P	**Pn**	**09 40 13.9**	**+0.7**
AP01				*i* S	**Sn**	**09 40 32.7**	**+0.6**
AP01				IAML		09 40 37.0	
	comp=N,3μm,0.4s						
TA01	**Diego Aracena**	**1.38**	**212**	*e*P	**Pn**	**09 40 13.7**	**+0.1**
TA01				*i* S	**Sn**	**09 40 32.5**	**-0.2**
TA01				IAML		09 40 36.9	
	comp=N,335nm,0.4s						
PATCX	**Punta Patache**	**1.58**	**206**	*e*P	**Pn**	**09 40 16.4**	**+0.2**
PATCX				*i* S	**Sn**	**09 40 37.0**	**-0.4**
PATCX				IAML		09 40 43.8	
	comp=N,266nm,0.2s						
PB01	**IPOC Station P**	**1.65**	**183**	⇑*e*P	**Pn**	**09 40 17.6**	**+0.6**
PB01				*i* S	**Sn**	**09 40 39.1**	**+0.4**
PB01				IAML		09 40 40.8	
	comp=N,430nm,0.2s						
PB07	**IPOC Station P**	**2.37**	**191**	*e*P	**Pn**	**09 40 26.7**	**+0.5**
PB07				*i* S	**Sn**	**09 40 55.1**	**0.0**
PB07				IAML		09 41 06.2	
	comp=E,168nm,0.4s						
PB09	**IPOC Station P**	**2.40**	**176**	*e*P	**Pn**	**09 40 26.5**	**-0.1**
PB09				*i* S	**Sn**	**09 40 57.0**	**+1.1**
PB09				IAML		09 41 05.6	
	comp=E,123nm,0.4s						
PB03	**IPOC Station P**	**2.66**	**187**	*e*P	**Pn**	**09 40 28.9**	**-1.1**
PB03				*i* S	**Sn**	**09 41 01.5**	**-0.6**
PB03				IAML		09 41 11.9	
	comp=E,89nm,0.2s						
LVC	**Limon Verde**	**3.24**	**172**	P	**Pn**	**09 40 41.0**	**+3.2**
	comp=E,3.7nm,0.3s,baz=2.0,slow=9.2,SNR=13						
LVC				S	**Sn**	**09 41 16.6**	**+0.7**
	comp=E,16nm,0.3s,baz=220,slow=23,SNR=28						
PB06	**IPOC Station P**	**3.30**	**183**	*i* S	**Sn**	**09 41 15.2**	**-2.0**
PB06				IAML		09 41 21.2	
	comp=N,73nm,0.3s						
LPAZ	**La Paz**	**3.32**	**22**	P	**Pn**	**09 40 39.4**	**+0.3**
	comp=N,0.5nm,0.3s,baz=191,slow=6.9,SNR=24						
LPAZ				LR	LR	09 42 05.4	
	comp=N,74nm,20.0s,baz=58,slow=43						
PB05	**IPOC Station P**	**3.52**	**192**	IAML		09 41 43.3	
	comp=N,49nm,0.1s						
PB15	**IPOC Station P**	**3.80**	**181**	*i* S	**Sn**	**09 41 27.4**	**-1.8**
SIV	**San Ignacio**	**8.63**	**68**	P	**Pn**	**09 41 48.0**	**-2.5**
	comp=N,1.2nm,0.3s,baz=266,slow=9.2,SNR=18						
H03N1	**Juan Fernandez**	**16.36**	**209**	T	T	10 00 06.9	
	baz=32,slow=72,SNR=3.7						
H03N2	**Juan Fernandez**	**16.37**	**209**	T	T	09 59 56.9	
	baz=32,slow=72,SNR=3.8						
H03N3	**Juan Fernandez**	**16.38**	**209**	T	T	10 00 15.5	
	baz=32,slow=72,SNR=4.4						
PTGA	**Pitinga**	**20.73**	**28**	P	**P**	**09 44 18.9**	**-1.4**
	comp=N,2.4nm,0.8s,baz=198,slow=20,SNR=2.2						
BDFB	**Brasilia**	**20.74**	**83**	P	Pn	09 44 21.6	-2.4
	comp=N,2.7nm,0.5s,baz=233,slow=5.7,SNR=3.7						
TORD	**Torodi Ar. Bea**	**77.10**	**71**	P	**P**	**09 51 30.3**	**-0.1**
	comp=N,0.6nm,0.5s,baz=259,slow=5.4,SNR=7.4						
YKA	**Yellowknife Ar**	**89.05**	**341**	P	**P**	**09 52 32.2**	**+1.4**
	comp=N,0.5nm,0.7s,baz=135,slow=4.5,SNR=13						
YKA				pP	**pP**	**09 53 00.1**	**+0.1**
	comp=N,0.1nm,0.5s,baz=134,slow=4.4,SNR=4.9						
H11S2	**WAKE ISLAND Hy**	**127.12**	**279**	T	T	12 18 09.4	
	baz=100,slow=74,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**127.13**	**279**	T	T	12 18 16.8	
	baz=100,slow=74,SNR=5.4						
H11S3	**WAKE ISLAND Hy**	**127.14**	**279**	T	T	12 18 13.0	
	baz=100,slow=74,SNR=4.3						

SFS ***21*** *09:48:15.0,42°.97N×4°.41W,ML2.6,SAN SALVADOR DE CANTAMUDA (PAL.)*

MDD ***21*** *09:48:16.1±0.4,42°.98N×4°.39W,h4km±3km,mbLg2.7/21, Error ellipse: s-maj=3.9km s-min=2.4km az=170.0, PRXIMO*

LDG ***21*** *09:48:16.5±0.1,43°.07N×4°.43W,h10km,Md3.0/1,Ml3.3/31, Error ellipse: s-maj=2.1km s-min=1.5km az=148.0*

INMG ***21*** *09:48:18.2±1.9,43°.00N×4°.38W,h24km±4km,ML2.7,Error ellipse: s-maj=3.4km s-min=2.6km az=171.0*

STR ***21*** *09:48:20.3±0.8,43°N±4°×°±°,h10km,mB6.0/2,MLv3.1/7, Mw(mB)5.7/2,preliminary*

ISC 21 09:48:13.3±1.2**,43°.04N**±0°.03**×4°.36W**±0°.02**,h12**km±10km**, n115,**σ**2.03**/213**,Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EARI	**Arriondas**	**0.67**	**293**	Pg	**Pn**	**09 48 28.3**	**-0.3**
	8.9nm,0.2s,SNR=160						
EARI				Lg	Lg	09 48 37.2	
	57nm,0.2s,SNR=12						
ELAN	**Lanestosa**	**0.71**	**74**	Pg	**Pn**	**09 48 29.2**	**+0.1**
	14nm,0.1s,SNR=50						
ELAN				Lg	Lg	09 48 40.3	
	127nm,0.1s,SNR=11						
EPON	**Pontenova**	**2.06**	**279**	Pn	**Pb**	**09 48 50.7**	**+0.1**
	10nm,0.7s,SNR=14						
EPON				Pg	**Pg**	**09 48 54.7**	**+1.9**
	8.4nm,0.3s,SNR=9.3						
EPON				Sn	**Sb**	**09 49 15.9**	**-0.3**
	14nm,0.3s,SNR=9.9						
EPON				Lg	Lg	09 49 20.6	
	49nm,0.2s,SNR=5.0						
EARA	**Aranguren**	**2.06**	**96**	Pn	**Pb**	**09 48 52.2**	**+1.5**
EARA	**Aranguren**	**2.06**	**96**	Lg	Lg	09 49 22.0	
	17nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**2.07**	**239**	Pn	**Pn**	**09 48 49.8**	**+1.8**
	1.4nm,0.2s,SNR=14						
ECAL				Pg	**Pg**	**09 48 53.2**	**+0.2**
	6.0nm,0.2s,SNR=9.4						
ECAL				Sn	**Sn**	**09 49 14.6**	**+1.0**
	5.4nm,0.4s,SNR=5.3						
ECAL				Lg	Lg	09 49 20.1	
	47nm,0.2s,SNR=8.7						
EALK	**Alkurruntz**	**2.10**	**84**	Pn	**Pb**	**09 48 52.8**	**+1.5**
EALK	**Alkurruntz**	**2.10**	**84**	Sn	**Sn**	**09 49 15.9**	**+1.6**
EALK	**Alkurruntz**	**2.10**	**84**	Pn	**Pb**	**09 48 51.3**	**0.0**
	14nm,0.4s,SNR=4.7						
EALK				Sn	**Sb**	**09 49 18.4**	**+1.1**
	78nm,0.4s,SNR=7.4						
PBRG	**Braganca**	**2.15**	**236**	*e*Pn	**Pb**	**09 48 51.2**	**-1.0**
PBRG	**Braganca**	**2.15**	**236**	*e*Pg	**Pg**	**09 48 55.9**	**+1.4**
PBRG				*e*Sg	**Sb**	**09 49 20.6**	**+1.8**
PBRG				A	A	09 49 29.1	
	32nm,0.3s						
PBRG	**Braganca**	**2.15**	**236**	Pn	**Pb**	**09 48 51.2**	**-1.0**
PBRG				Pg	**Pg**	**09 48 55.9**	**+1.4**
PBRG				Lg	Lg	09 49 20.6	
	16nm,0.3s						
EORO	**Oroz-Betelu**	**2.25**	**93**	Pn	**Pb**	**09 48 53.7**	**-0.1**
	2.9nm,0.4s,SNR=7.8						
EORO				Sn	**Sb**	**09 49 21.9**	**+0.3**
	18nm,0.3s,SNR=6.3						
EORO				Lg	Lg	09 49 28.5	
	9.7nm,0.2s,SNR=5.0						
SJPF	**Ste Jean**	**2.30**	**87**	*e*Pn	**Pn**	**09 48 53.7**	**+2.7**
SJPF				*e*Sn	**Sn**	**09 49 21.5**	**+2.3**
	11nm,0.3s						
SJPF	**Ste Jean**	**2.30**	**87**	Pn	**Pn**	**09 48 53.7**	**+2.7**
SJPF				Sn	**Sn**	**09 49 21.5**	**+2.3**
	5.3nm,0.3s						
GUD	**Guadarrama**	**2.40**	**176**	Pn	**Pn**	**09 48 53.8**	**+1.4**
	0.3nm,0.2s,SNR=7.9						
GUD				Pg	**Pg**	**09 48 58.8**	**-0.5**
	8.1nm,0.3s,SNR=26						
GUD				Sn	**Sn**	**09 49 22.5**	**+0.7**
	4.0nm,0.5s,SNR=6.1						
GUD				Lg	Lg	09 49 31.1	
	8.8nm,0.2s,SNR=9.5						
ATE	**Arette**	**2.68**	**88**	Pn	**Pb**	**09 49 00.6**	**-0.6**
ATE				Sn	**Sn**	**09 49 31.1**	**+2.4**
ATE	**Arette**	**2.68**	**88**	Pn	**Pb**	**09 49 00.6**	**-0.6**
	2.4nm,0.1s,SNR=7.9						
ATE				Sn	**Sn**	**09 49 30.5**	**+1.8**
	9.7nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**2.73**	**228**	*e*Pn	**Pn**	**09 48 59.1**	**+2.2**
MVO	**Moncorvo**	**2.73**	**228**	*e*Pg	**Pg**	**09 49 06.0**	**+0.4**
MVO				*e*Sg	**Sg**	**09 49 38.8**	**-2.2**
MVO				A	A	09 49 44.5	
	38nm,0.3s						
MVO	**Moncorvo**	**2.73**	**228**	Pn	**Pn**	**09 48 58.3**	**+1.4**
	0.4nm,0.1s,SNR=7.9						
MVO				Pg	**Pg**	**09 49 05.8**	**+0.2**
	11nm,0.2s,SNR=7.9						
MVO				Sn	**Sn**	**09 49 30.1**	**+0.3**
	12nm,0.7s,SNR=7.9						
MVO				Lg	Lg	09 49 39.7	
	55nm,0.3s,SNR=7.9						
EAGO	**Agolada(Pontev**	**2.75**	**266**	Pn	**Pn**	**09 48 59.5**	**+2.3**
	2.7nm,0.1s,SNR=7.9						
EAGO				Sn	**Sn**	**09 49 30.5**	**+0.2**
	14nm,0.4s,SNR=7.9						
EAGO				Lg	Lg	09 49 40.9	
	12nm,0.2s,SNR=7.9						
ETSF	**Etsaut**	**2.79**	**92**	*e*Pn	**Pn**	**09 49 00.7**	**+2.8**
ETSF				*e*Sn	**Sn**	**09 49 33.6**	**+2.1**
	9.0nm,0.3s						
ETSF	**Etsaut**	**2.79**	**92**	Pn	**Pn**	**09 49 00.7**	**+2.8**
ETSF				Sn	**Sn**	**09 49 33.6**	**+2.1**
	4.5nm,0.3s						
ETOR	**Torete**	**2.81**	**141**	Pn	**Pn**	**09 48 59.9**	**+1.9**
	24nm,0.5s,SNR=5.7						
ETOR				Pg	**Pg**	**09 49 07.2**	**+0.1**
	18nm,0.3s,SNR=7.4						
ETOR				Sn	**Sn**	**09 49 33.6**	**+1.8**
	8.1nm,0.3s,SNR=7.9						
ETOR				Lg	Lg	09 49 45.3	
	23nm,0.2s,SNR=7.9						
UCM	**Universidad Co**	**2.85**	**163**	P	**Pg**	**09 49 09.9**	**+2.0**
UCM				S	**Sg**	**09 49 44.8**	**-0.2**
ELOB	**Lobios**	**2.98**	**248**	Pn	**Pn**	**09 49 01.8**	**+1.4**
	5.8nm,0.5s,SNR=4.7						
ELOB				Pg	**Pg**	**09 49 08.9**	**-1.5**
	4.8nm,0.5s,SNR=6.5						
ELOB				Sn	**Sn**	**09 49 36.7**	**+0.7**
	1.4nm,0.3s,SNR=8.4						
ELOB				Lg	Lg	09 49 48.7	
	12nm,0.3s,SNR=6.3						
PCAB	**Cabril**	**3.02**	**245**	*e*Pn	**Pn**	**09 49 04.3**	**+3.3**
PCAB	**Cabril**	**3.02**	**245**	*e*Pg	**Pg**	**09 49 11.5**	**+0.3**
PCAB				*e*Sn	**Sn**	**09 49 34.5**	**-2.6**
PCAB				*e*Sg	**Sg**	**09 49 49.9**	**-0.5**
PCAB				A	A	09 49 52.8	
	21nm,0.3s						
PCAB	**Cabril**	**3.02**	**245**	Pn	**Pn**	**09 49 04.3**	**+3.3**
PCAB				Pg	**Pg**	**09 49 11.5**	**+0.3**
PCAB				Sn	**Sn**	**09 49 34.5**	**-2.6**
PCAB				Lg	Lg	09 49 49.9	
	10nm,0.3s						
POLO	**Lamas de Olo**	**3.04**	**238**	*e*Pn	**Pn**	**09 49 03.5**	**+2.2**
POLO	**Lamas de Olo**	**3.04**	**238**	*e*Pg	**Pg**	**09 49 13.0**	**+1.4**
POLO				*e*Sn	**Sn**	**09 49 38.4**	**+0.7**
POLO				*e*Sg	**Sg**	**09 49 51.6**	**+0.5**
POLO				A	A	09 49 55.7	
	7.0nm,0.6s						
POLO	**Lamas de Olo**	**3.04**	**238**	Pn	**Pn**	**09 49 03.5**	**+2.2**
POLO				Pg	**Pg**	**09 49 13.0**	**+1.4**
POLO				Sn	**Sn**	**09 49 38.4**	**+0.7**
POLO				Lg	Lg	09 49 51.6	
	7.0nm,0.6s						
PVRL	**Vila Real**	**3.05**	**236**	*e*Sg	**Sg**	**09 49 50.4**	**-1.0**
PVRL				A	A	09 49 54.9	
	30nm,0.5s						
PVRL	**Vila Real**	**3.05**	**236**	Lg	Lg	09 49 50.4	
	15nm,0.5s						
PGAV	**Gavieira, Arco**	**3.08**	**251**	*e*Pn	**Pn**	**09 49 04.5**	**+2.7**
PGAV				*e*Sn	**Sn**	**09 49 38.6**	**0.0**
PGAV				*e*Sg	**Sg**	**09 49 52.0**	**-0.3**
PGAV				A	A	09 49 55.8	
	12nm,0.7s						
PGAV	**Gavieira, Arco**	**3.08**	**251**	Pn	**Pn**	**09 49 04.5**	**+2.7**
PGAV				Sn	**Sn**	**09 49 38.6**	**0.0**
PGAV				Lg	Lg	09 49 52.0	
	12nm,0.7s						
EPLA	**Plasencia**	**3.24**	**204**	Pn	**Pn**	**09 49 05.8**	**+1.8**

	7.1nm,0.4s,SNR=13						
EPLA				Pg	Pg	09 49 15.9	+0.6
	23nm,0.7s						
EPLA				Sn	Sn	09 49 42.3	-0.1
	2.4nm,0.4s,SNR=7.9						
EPLA				Lg	Lg	09 49 56.7	
	8.9nm,0.2s,SNR=7.9						
ECHI	Chisagues Biel	3.37	95	P	Pn	09 49 04.2	-1.7
ECHI				Pn	Pb	09 49 09.5	-3.5
ECHI	Chisagues Biel	3.37	95	Pn	Pn	09 49 09.1	+3.3
	1.2nm,0.1s,SNR=7.9						
ECHI				Sn	Sn	09 49 47.8	+2.0
	12nm,0.4s,SNR=7.9						
ESDC	Sonseca Array	3.37	175	Pn	Pn	09 49 07.6	+1.8
	2.2nm,0.4s,baz=350,slow=12,SNR=8.1						
ESDC				Pg	Pg	09 49 16.6	-1.3
	2.3nm,0.4s,baz=352,slow=18,SNR=16						
ESDC				Sn	Sn	09 49 44.6	-1.2
	6.2nm,0.6s,baz=352,slow=17,SNR=6.1						
ESDC				Lg	Lg	09 50 01.8	
	2.6nm,0.4s,baz=355,slow=29,SNR=4.7						
EMAZ	Mazaricos	3.39	270	Pn	Pn	09 49 08.0	+2.0
	4.0nm,0.1s,SNR=7.9						
EMAZ				Sn	Sn	09 49 44.2	-1.8
	5.9nm,0.1s,SNR=7.9						
EPF	Esparros	3.45	89	ePn	Pn	09 49 08.2	+1.4
EPF				eSn	Sn	09 49 49.3	+1.7
	3.9nm,0.3s						
EPF	Esparros	3.45	89	Pn	Pn	09 49 08.2	+1.4
EPF				Sn	Sn	09 49 49.3	+1.7
	1.9nm,0.3s						
PAB	San Pablo	3.49	180	Pn	Pn	09 49 09.4	+2.0
	0.5nm,0.3s,SNR=7.9						
PAB				Pg	Pg	09 49 19.4	-0.7
	4.1nm,0.2s,SNR=7.9						
PAB				Sn	Sn	09 49 49.0	+0.3
	1.1nm,0.6s,SNR=7.9						
PAB				Lg	Lg	09 50 05.1	
	9.1nm,0.2s,SNR=7.9						
PVIS	Viseu	3.51	230	ePn	Pn	09 49 07.4	-0.3
PVIS				eSn	Sn	09 49 48.7	-0.5
PVIS				eSg	Sg	09 50 04.6	-1.5
PVIS				A	A	09 50 07.0	
	12nm,0.4s						
PVIS	Viseu	3.51	230	Pn	Pn	09 49 07.4	-0.3
PVIS				Sn	Sn	09 49 48.7	-0.5
PVIS				Lg	Lg	09 50 04.6	
	5.8nm,0.4s						
MTE	Manteigas	3.55	223	ePg	Pg	09 49 21.7	+0.3
MTE				eSn	Sn	09 49 50.4	+0.2
MTE				eSg	Sg	09 50 06.4	-1.0
MTE				A	A	09 50 15.4	
	24nm,0.4s						
MTE	Manteigas	3.55	223	Pg	Pg	09 49 21.7	+0.3
MTE				Sn	Sn	09 49 50.4	+0.2
MTE				Lg	Lg	09 50 06.4	
	12nm,0.4s						
EMOS	Mosqueruela	3.95	131	Pn	Pn	09 49 16.5	+2.6
	0.8nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	09 50 01.2	+1.0
	3.4nm,0.5s,SNR=7.9						
EMOS				Lg	Lg	09 50 22.1	
	1.9nm,0.3s,SNR=7.9						
PCBR	Castelo Branco	3.96	217	ePg	Pg	09 49 29.8	+0.6
PCBR				eSn	Sn	09 49 59.6	-0.5
PCBR				eSg	Sg	09 50 18.0	-2.5
PCBR				A	A	09 50 26.8	
	12nm,0.5s						
PCBR	Castelo Branco	3.96	217	Pg	Pg	09 49 29.8	+0.6
PCBR				Sn	Sn	09 49 59.6	-0.5
PCBR				Lg	Lg	09 50 18.0	
	5.8nm,0.5s						
MLS	Moulis	4.00	89	Pn	Pn	09 49 19.2	+4.8
MLS				Sn	Sn	09 50 01.9	+0.7
ERTA	Horta de San J	4.07	119	Pn	Pn	09 49 17.7	+2.3
	2.1nm,0.2s,SNR=7.9						
ERTA				Sn	Sn	09 50 04.2	+1.3
	3.4nm,0.3s,SNR=7.9						
ERTA				Lg	Lg	09 50 25.3	
	2.8nm,0.2s,SNR=7.9						
CSOR	Sort	4.10	97	Pn	Pn	09 49 19.1	+3.2
	1.7nm,0.3s,SNR=7.9						
CSOR				Sn	Sn	09 50 05.8	+1.9
	8.4nm,0.4s,SNR=7.9						
LFF	La Frestale	4.14	61	ePn	Pn	09 49 18.4	+2.1
LFF				eSn	Sn	09 50 04.8	+0.2
	9.7nm,0.3s						
LFF	La Frestale	4.14	61	Pn	Pn	09 49 18.4	+2.1
LFF				Sn	Sn	09 50 04.8	+0.2
	4.8nm,0.3s						
CHIF	Chize	4.19	41	Pn	Pn	09 49 18.8	+1.9
CHIF				Sn	Sn	09 50 02.9	-2.8
MONQ	Montcuq	4.24	70	Pn	Pn	09 49 21.0	+3.3
MONQ				Sn	Sn	09 50 05.3	-1.8
PMRV	Marv??o	4.27	213	ePn	Pn	09 49 20.1	+2.0
PMRV	Marv??o	4.27	213	ePg	Pg	09 49 35.3	+0.2
PMRV				eSn	Sn	09 50 07.3	-0.5
PMRV				eSg	Sg	09 50 28.1	-2.3
PMRV				A	A	09 50 42.1	
	10.0nm,0.7s						
PMRV	Marv??o	4.27	213	Pn	Pn	09 49 20.1	+2.0
PMRV				Pg	Pg	09 49 35.3	+0.2
PMRV				Sn	Sn	09 50 07.3	-0.5
PMRV				Lg	Lg	09 50 28.1	
	10.0nm,0.7s						
PCAS	Casmilo, Conde	4.30	228	ePn	Pn	09 49 20.8	+2.2
PCAS				eSn	Sn	09 50 06.9	-1.7
PCAS				eSg	Sg	09 50 29.7	-1.8
PCAS				A	A	09 50 33.7	
	12nm,0.5s						
PCAS	Casmilo, Conde	4.30	228	Pn	Pn	09 49 20.8	+2.2
PCAS				Sn	Sn	09 50 06.9	-1.7
PCAS				Lg	Lg	09 50 29.7	
	12nm,0.5s						
EPOB	Poblet	4.38	111	Pn	Pn	09 49 21.7	+2.1
	0.5nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	09 50 10.4	-0.2
	3.9nm,0.5s,SNR=7.9						
MFF	Saint Martin d	4.66	39	ePn	Pn	09 49 24.9	+1.5
MFF				eSn	Sn	09 50 16.3	-1.0
	12nm,0.3s						
MFF	Saint Martin d	4.66	39	Pn	Pn	09 49 25.3	+1.9
MFF	Saint Martin d	4.66	39	Sn	Sn	09 50 13.8	-3.5
CLLI	Llivia	4.70	95	Pn	Pn	09 49 27.5	+3.4
	0.4nm,0.2s,SNR=7.9						
CLLI				Sn	Sn	09 50 20.4	+1.8
	1.8nm,0.5s,SNR=7.9						
EBAD	Badajoz	4.73	206	Sn	Sn	09 50 17.6	-1.4
	1.5nm,0.5s,SNR=7.9						
EBAD				Lg	Lg	09 50 43.8	
	5.7nm,0.2s,SNR=7.9						
RJF	Les Rejaudoux	4.80	60	ePn	Pn	09 49 27.4	+2.1
RJF				eSn	Sn	09 50 20.0	-0.8
	23nm,0.2s						
MTLF	Montolieu	4.82	84	ePn	Pn	09 49 28.0	+2.4
MTLF	Montolieu	4.82	84	eP	Pn	09 49 31.3	+5.7
MTLF				eSn	Sn	09 50 21.3	-0.1
	2.2nm,0.2s						
MTLF	Montolieu	4.82	84	Pn	Pn	09 49 29.1	+3.4
PESTR	Estremoz	4.83	211	eSn	Sn	09 50 20.6	-1.0
PESTR				eSg	Sg	09 50 44.7	-3.7
PESTR				A	A	09 50 53.9	
	8.2nm,0.6s						
PSBE	So Bento	4.85	225	eSg	Sg	09 50 48.3	-0.8
PSBE				A	A	09 50 54.7	
	12nm,0.7s						
EADA	Adamuz	4.87	182	Pn	Pn	09 49 28.0	+1.7
	1.5nm,0.3s,SNR=7.9						
EADA				Pg	Pg	09 49 44.2	-2.4
	0.8nm,0.2s,SNR=7.9						
EADA				Sn	Sn	09 50 19.4	-3.2
	3.6nm,0.2s,SNR=7.9						
EADA				Lg	Lg	09 50 47.7	
	3.0nm,0.2s,SNR=4.7						
ETOB	Tobarra	4.88	153	Pn	Pn	09 49 28.7	+2.2
	0.8nm,0.1s,SNR=7.9						
ETOB				Lg	Lg	09 50 49.3	
	1.3nm,0.2s,SNR=7.9						
PMTG	Montargil	4.92	218	ePn	Pn	09 49 28.5	+1.4
PMTG				eSn	Sn	09 50 22.7	-1.2
PMTG				eSg	Sg	09 50 51.1	-0.3
PMTG				A	A	09 51 00.4	
	6.1nm,0.6s						
QUIF	Quistinic	4.95	9	ePn	Pn	09 49 28.7	+1.3
QUIF				eSn	Sn	09 50 21.8	-2.7
	8.5nm,0.3s						
CAF	Calviac	5.01	66	ePn	Pn	09 49 30.5	+2.3
CAF				eSn	Sn	09 50 24.8	-1.2
	6.7nm,0.2s						
ECAB	El Cabril	5.02	190	Pn	Pn	09 49 30.4	+2.0
	0.5nm,0.3s,SNR=7.9						
ECAB				Sn	Sn	09 50 25.4	-1.0
	7.9nm,0.6s,SNR=7.9						
ECAB				Lg	Lg	09 50 54.0	
	4.2nm,0.3s,SNR=6.9						
SESP	Santiago Espad	5.10	164	Sn	Sn	09 50 25.3	-3.3
	SNR=7.9						
SESP				Lg	Lg	09 50 55.1	
	3.0nm,0.2s,SNR=7.9						
CFON	Fontmartina	5.19	102	Pn	Pn	09 49 33.5	+2.7
	4.1nm,0.2s,SNR=7.9						
CFON				Sn	Sn	09 50 31.4	+0.8
	6.6nm,0.2s,SNR=7.9						
EVO	Evora	5.29	213	S	Sn	09 50 29.0	-3.8
ROSF	Rostrenen	5.35	8	ePn	Pn	09 49 33.8	+0.9
ROSF				eSn	Sn	09 50 30.3	-4.2
	21nm,0.3s						
SGMF	Saint Gilles	5.37	13	ePn	Pn	09 49 34.4	+1.3
SGMF				eSn	Sn	09 50 31.1	-3.7
	5.9nm,0.2s						
EMIN	Mina Concepcio	5.55	199	Sn	Sn	09 50 36.9	-2.4
	1.3nm,0.5s,SNR=7.9						
EMIN				Lg	Lg	09 51 10.6	
	2.3nm,0.4s,SNR=7.9						
TCF	Toulx Ste Croi	5.70	53	ePn	Pn	09 49 38.9	+1.1
TCF				eSn	Sn	09 50 41.2	-1.9
	14nm,0.2s						
PNCL	Nicolau / Gran	5.85	214	ePn	Pn	09 49 41.8	+2.0
PNCL				eSn	Sn	09 50 44.3	-2.5
GRR	Gorron	5.89	23	ePn	Pn	09 49 40.1	-0.1
GRR				eSn	Sn	09 50 41.4	-6.1
	5.5nm,0.2s						
LBL	Lubilhac	5.90	66	Pn	Pn	09 49 42.3	+1.8
PYM	Petit Puy Mans	5.94	60	Pn	Pn	09 49 42.3	+1.3
PYM	Petit Puy Mans	5.94	60	Sn	Sn	09 50 44.8	-4.1
LASF	Ste Croix	6.06	77	ePn	Pn	09 49 45.4	+2.7
LASF				eSn	Sn	09 50 50.5	-1.5
	1.9nm,0.2s						
PCVE	Castro Verde	6.09	209	eSn	Sn	09 50 51.2	-1.3
PCVE				A	A	09 51 30.6	
	4.1nm,0.6s						
PVAQ	Vaqueiros	6.18	206	eSn	Sn	09 50 52.9	-2.1
PVAQ				eSg	Sg	09 51 30.6	-1.2
PVAQ				A	A	09 51 40.8	
	5.0nm,0.6s						
BGF	Bois d'Agland	6.22	53	ePn	Pn	09 49 45.9	+1.1
BGF				eSn	Sn	09 50 53.5	-2.3
	12nm,0.3s						
LDF	La Druitiere	6.30	27	ePn	Pn	09 49 46.7	+0.8
LDF				eSn	Sn	09 50 53.9	-3.8
	4.0nm,0.3s						
FLN	La Foliniere	6.33	24	ePn	Pn	09 49 47.6	+1.2
	baz=204						
FLN				eSn	Sn	09 50 54.4	-4.1
	4.5nm,0.3s						
HYF	Humbligny	6.51	47	ePn	Pn	09 49 49.7	+0.9
HYF				eSn	Sn	09 51 00.3	-2.7
AVF	Avril sur Loir	6.64	53	ePn	Pn	09 49 51.9	+1.3
AVF				eSn	Sn	09 51 03.5	-2.6
	2.6nm,0.2s						
VIVF	Saint-Julien-l	6.77	71	ePn	Pn	09 49 54.4	+2.0
VIVF				eSn	Sn	09 51 07.1	-2.3
	4.3nm,0.3s						
SMF	Signal de Mont	6.86	55	ePn	Pn	09 49 54.4	+0.8
SMF				eSn	Sn	09 51 09.2	-2.3
	4.0nm,0.3s						
SSF	Saint Saulge	6.87	51	ePn	Pn	09 49 54.4	+0.6
SSF				eSn	Sn	09 51 08.0	-3.8
	3.8nm,0.3s						
LOR	Lormes	7.19	51	ePn	Pn	09 49 59.0	+0.9
	baz=238						
LOR				eSn	Sn	09 51 17.5	-2.1
	4.4nm,0.4s						
ORIF	Oris-en-Rattie	7.62	72	eP	Pn	09 50 11.2	+7.0
CABF	La Chapelle	8.24	61	ePn	Pn	09 50 13.7	+1.0
SFTF	Sexfontaines	8.37	49	eSn	Sn	09 51 44.9	-3.8
	8.2nm,0.4s						
MEZF	Maizieres J'vi	8.55	47	ePn	Pn	09 50 17.1	+0.3
	baz=226						
MEZF				eSn	Sn	09 51 49.8	-3.3
	6.6nm,0.4s						
SAVF	Savonnieres en	8.65	47	eSn	Sn	09 51 52.6	-3.1
	3.8nm,0.3s						
HAU	Haudompre	9.01	53	eSn	Sn	09 51 58.8	-5.6
	5.1nm,0.3s						
BAIF	Baives	9.17	37	ePn	Pn	09 50 26.8	+1.5
BAIF				eSn	Sn	09 52 02.8	-5.5
	1.6nm,0.3s						
HINF	Hinteralfeld	9.22	55	eSn	Sn	09 51 53.7	-16
	5.1nm,0.4s						
CDF	Champ du Feu	9.75	53	ePn	Pn	09 50 34.6	+1.3

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*RSNC **21** 10:08:05.5±1.2, 6°.85N×73°.14W, h151^{km}±5^{km}, ML2.9, Mw3.4*

*IDC **21** 10:08:08.6±6.4, 6°.73N×75°.09W, h155^{km}±109^{km}, mb2.7/1, mb1 3.1/2, mb1mx2.8/30, mbtmp3.3/2, Error ellipse: s-maj=405.4km s-min=46.3km az=85.0*

ISC 21 10:08:03.9±1.0**, 6°.85N**±0°.03×**73°.10W**±0°.04**, h160**^{km}±6^{km}**, n34, σ1^{s}42**/66**, 3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.27	198	⇓eP	Pn	10 08 25.9	0.0
BARC				eS	Sn	10 08 40.5	-2.1
PAMC	Pamplona, Colo	0.62	39	⇓eP	Pn	10 08 28.9	+1.3
PAMC				eS	Sn	10 08 45.8	0.0
PAMC				i		10 08 48.2	
	comp=Z,292nm,0.5s						
BRRC	Barranca, Sant	0.66	293	eP	Pn	10 08 27.8	+0.6
BRRC				eS	Sn	10 08 44.8	-0.3
BRRC				i		10 08 48.3	
	comp=Z,97nm,0.2s						
RUSC	La Rusia	0.95	179	eP	Pn	10 08 29.9	+0.1
RUSC				eS	Sn	10 08 49.0	-0.7
RUSC				eS	Sn	10 08 49.1	-0.7
RUSC				i		10 08 50.0	
	comp=Z,115nm,0.4s						
TAMC	Tame, Arauca	1.36	108	⇓iP	Pn	10 08 34.4	+1.5
TAMC				i		10 08 55.6	
	comp=Z,27nm,0.3s						
TAMC				eS	Sn	10 08 56.1	+0.9
PTBC	PUERTO BERRIO,	1.39	257	eP	Pn	10 08 32.3	-0.8
PTBC				eS	Sn	10 08 53.6	-1.9
PTBC				i		10 08 55.8	
	comp=Z,64nm,0.1s						
OCAC	Ocana	1.40	351	eP	Pn	10 08 33.9	+0.5
OCAC				eS	Sn	10 08 55.9	-0.1
OCAC				i		10 09 01.4	
	comp=Z,167nm,0.3s						
SPBC	San Pablo de B	1.54	219	eP	Pn	10 08 34.7	-0.1
SPBC				eS	Sn	10 08 56.5	-1.9
SPBC				eS	Sn	10 08 56.8	-1.6
SPBC				i		10 08 59.5	
	comp=Z,179nm,0.4s						
ZARC	Zaragoza, Cauc	1.86	290	eP	Pn	10 08 38.1	+0.1
ZARC				ePg		10 08 38.5	
ZARC				eS	Sn	10 09 04.0	-0.4
ZARC				i		10 09 10.1	
	comp=Z,75nm,0.2s						
SMLC	San Martn de	2.16	334	eP	Pn	10 08 42.0	+0.4
SMLC				eS	Sn	10 09 10.2	-0.4
SMLC				i		10 09 18.1	
	comp=Z,86nm,0.1s						
NORC	Norcasia	2.18	234	eP	Pn	10 08 42.1	+0.3
NORC				eS	Sn	10 09 10.4	-0.6
NORC				i		10 09 12.5	
	comp=Z,62nm,0.1s						
CHIC	Chingaza	2.30	196	eP	Pn	10 08 43.9	+0.4
CHIC				eS	Sn	10 09 13.3	-0.8
CHIC				i		10 09 17.0	
	comp=Z,70nm,0.4s						
ROSC	El Rosal	2.34	211	P	Pn	10 08 45.9	+1.9
	comp=Z,24nm,0.3s,baz=74,slow=21,SNR=15						
ROSC				S	Sn	10 09 12.6	-2.4
	comp=Z,10nm,0.3s,baz=128,slow=18,SNR=3.8						
ROSC	El Rosal	2.34	211	eP	Pn	10 08 45.9	+1.9
ROSC				eS	Sn	10 09 14.8	-0.2
ROSC				i		10 09 19.8	
	comp=Z,103nm,0.3s						
HELC	Santa Helena	2.50	255	eP	Pn	10 08 46.8	+0.9
HELC				eS	Sn	10 09 18.4	0.0
HELC				i		10 09 24.0	
	comp=Z,39nm,0.3s						
UREC	San Jos de Ur	2.58	290	eP	Pn	10 08 45.8	-0.6
UREC				ePg		10 08 46.6	
UREC				eS	Sn	10 09 18.5	-0.8
UREC				i		10 09 27.6	
	comp=Z,51nm,0.2s						
SOCV	Socops	2.64	57	eP	Pn	10 08 47.6	+0.4
SOCV				eS	Sn	10 09 19.6	-1.1
GUY2C	Guyana, Caldas	2.78	234	eP	Pn	10 08 50.4	+1.0
GUY2C				eS	Sn	10 09 26.2	+1.7
GUY2C				i		10 09 30.2	
	comp=Z,40nm,0.4s						
PTGC	Puerto Gaitan,	2.81	160	eP	Pn	10 08 49.1	-0.2
PTGC				eS	Sn	10 09 22.3	-2.1
PTGC				i		10 09 27.6	
	comp=Z,77nm,0.3s						
LL6C	La Loma 6 Bece	2.87	357	eP	Pn	10 08 50.2	+0.2
LL6C				eS	Sn	10 09 25.9	0.0
LL6C				i		10 09 32.9	
	comp=Z,25nm,0.3s						
CBOC	Ciudad Bolivar	3.06	251	eP	Pn	10 08 54.2	+1.6
CBOC				eS	Sn	10 09 30.8	+0.5
CBOC				i		10 09 35.5	
	comp=Z,10nm,0.4s						
MOTC	Monteria, Cord	3.18	307	eP	Pn	10 08 53.8	-0.2
MOTC				eS	Sn	10 09 28.9	-3.9
MOTC				i		10 09 45.4	
	comp=Z,19nm,0.3s						
ANIL	Santa Ana	3.28	224	eP	Pn	10 08 57.1	+1.6
ANIL				eP	Pn	10 08 57.6	+2.1
ANIL				eS	Sn	10 09 36.0	+0.4
PRAC	Prado	3.59	210	eP	Pn	10 08 59.5	+0.2
PRAC				ePg		10 09 00.0	
PRAC				eS	Sn	10 09 42.5	+0.2
PRAC				i		10 09 47.1	
	comp=Z,27nm,0.4s						
ORTC	Ortega, Tolima	3.62	216	eP	Pn	10 09 00.3	+0.7
ORTC				eS	Sn	10 09 43.3	+0.3
ORTC				i		10 09 47.3	
SJCC	San Jacinto, C	3.66	326	eP	Pn	10 08 59.8	-0.3
SJCC				eS	Sn	10 09 41.0	-2.9
SJCC				i		10 09 45.9	
	comp=Z,14nm,0.2s						
PLMC	San Jos del P	3.71	239	eP	Pn	10 09 01.5	+0.7
PLMC				eS	Sn	10 09 45.1	0.0
PLMC				i		10 09 49.8	
	comp=Z,13nm,0.2s						
LCBC	Los crdobas,	3.80	302	eS	Sn	10 09 47.1	+0.1
LCBC				i		10 10 02.7	
	comp=Z,19nm,0.3s						
CRJC	Cerrejon, Guaj	4.15	3	eS	Sn	10 09 54.1	-1.1
CRJC				i		10 09 57.2	
	comp=Z,19nm,0.1s						
GUVC	San Jose del G	4.30	174	eS	Sn	10 09 57.0	-1.8
GUVC				i		10 10 02.2	
	comp=Z,36nm,0.2s						
SMRC	Santa Marta, M	4.43	346	eP	Pn	10 09 10.7	+0.7
SMRC				eS	Sn	10 09 59.1	-2.5
MACC	Macarena, Meta	4.74	189	eP	Pn	10 09 13.0	-1.1
MACC				eS	Sn	10 10 03.7	-5.2
MACC				i		10 10 08.3	
	comp=Z,7.0nm,0.5s						
YKA	Yellowknife Ar	63.24	340	P	P	10 18 16.2	+1.2
	comp=Z,0.1nm,0.5s,baz=137,slow=6.5,SNR=5.8						
WRA	Warramunga Arr	150.37	241	PKPbc	PKiKP	10 27 37.8	-0.2
	comp=Z,1.3nm,1.2s,baz=104,slow=3.3,SNR=2.4						

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*IDC **21** 10:20:39.0±1.2, 21°.53S×66°.73W, h215^{km}±12^{km}, mb3.2/3, mb1 3.5/6, mb1mx3.3/36, mbtmp3.8/6, Error ellipse: s-maj=25.9km s-min=14.4km az=115.0*

*GUC **21** 10:20:41.2±0.7, 21°.49S×67°.04W, h240^{km}±7^{km}, ML4.0*

*SCB **21** 10:20:43.6±1.4, 21°.48S×66°.88W, h192^{km}±10^{km}, ML3.9/5, Error ellipse: s-maj=5.7km s-min=4.4km az=0.0*

ISC 21 10:20:39.3±0.8**, 21°.47S**±0°.05×**66°.81W**±0°.05**, h215**^{km}±7^{km}**, n45, σ1^{s}43**/66**, mb3.3**/3**, 6C-3D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.12	79	P	Pn	10 21 13.1	+1.2
MOCB				S	S	10 21 36.2	-0.9
MOCB				IAML		10 21 37.7	
	1μm,0.3s						
YJA	Yavi	1.40	121	P	Pn	10 21 15.1	+1.1
LVC	Limon Verde	2.25	239	P	Pn	10 21 23.1	+1.2
	4.7nm,0.3s,baz=54,slow=7.9,SNR=49						
LVC				S	S	10 21 55.6	+0.7
	22nm,0.3s,baz=240,slow=21,SNR=61						
LVC	Limon Verde	2.25	239	⇓eP	Pn	10 21 23.3	+1.4
LVC				iS	S	10 21 55.8	+0.9
LVC	Limon Verde	2.25	239	P	Pn	10 21 23.0	+1.1
PB09	IPOC Station P	2.28	261	eP	Pn	10 21 23.4	+1.4
PB09				iS	S	10 21 56.1	+1.1
PB09				IAML		10 22 00.3	
	comp=E,108nm,0.4s						
PB09	IPOC Station P	2.28	261	P	Pn	10 21 23.3	+1.3
PB09				S	S	10 21 53.6	-1.5
PB09				IAML		10 21 59.2	
	comp=E,76nm,0.2s						
PB01	IPOC Station P	2.53	279	⇑iP	Pn	10 21 25.6	+1.0
PB01				iS	S	10 21 59.7	+0.1
PB01				IAML		10 22 01.8	
	comp=N,323nm,0.3s						
PB01	IPOC Station P	2.53	279	P	Pn	10 21 25.8	+1.2
PB08	IPOC Station P	2.56	301	⇓iP	Pn	10 21 26.9	+1.7
PB08				iS	S	10 22 01.6	+0.9
PB08				IAML		10 22 05.3	
	comp=E,107nm,0.2s						
PB08	IPOC Station P	2.56	301	P	Pn	10 21 26.8	+1.6
PB03	IPOC Station P	2.79	257	⇑iP	Pn	10 21 28.7	+1.1
PB03				iS	S	10 22 04.1	-0.8
PB03				IAML		10 22 05.4	
	comp=E,333nm,0.2s						
PB03	IPOC Station P	2.79	257	P	Pn	10 21 28.9	+1.3
PB03				S	S	10 22 03.7	-1.3
PB03				IAML		10 22 06.1	
	comp=E,153nm,0.3s						
PB06	IPOC Station P	2.84	244	eP	Pn	10 21 29.0	+0.9
PB06				iS	S	10 22 06.1	+0.1
PB06				IAML		10 22 07.2	
	comp=E,389nm,0.1s						
PB06	IPOC Station P	2.84	244	P	Pn	10 21 29.0	+0.9
PB07	IPOC Station P	2.87	264	⇑iP	Pn	10 21 29.3	+0.8
PB07				iS	S	10 22 05.6	-1.0
PB07				IAML		10 22 06.6	
	comp=E,401nm,0.3s						
PB07	IPOC Station P	2.87	264	P	Pn	10 21 29.3	+0.8
PB15	IPOC Station P	3.01	234	eP	Pn	10 21 31.6	+1.6
PB15				iS	S	10 22 09.8	+0.2
PB15	IPOC Station P	3.01	234	P	Pn	10 21 31.5	+1.4
PB15				S	S	10 22 07.6	-1.9
PB15				IAML		10 22 14.0	
	comp=E,2μm,0.2s						
HMBC	Humberstone	3.11	292	eP	Pn	10 21 31.5	+0.3
HMBC				iS	S	10 22 10.4	-1.0
HMBC				IAML		10 22 14.3	
	comp=N,452nm,0.2s						
HMBC	Humberstone	3.11	292	P	Pn	10 21 31.7	+0.5
PB11	IPOC Station P	3.16	302	⇓eP	Pn	10 21 32.6	+0.8
PB11				iS	S	10 22 12.2	-0.4
PB11	IPOC Station P	3.16	302	P	Pn	10 21 32.6	+0.8
PATCX	Punta Patache	3.18	281	eP	Pn	10 21 32.6	+0.6
PATCX				iS	S	10 22 11.0	-1.9
PB04	IPOC Station P	3.22	254	⇑iP	Pn	10 21 33.1	+0.6
PB04				iS	S	10 22 12.2	-1.5
PB04	IPOC Station P	3.22	254	P	Pn	10 21 33.3	+0.9
PB04				S	S	10 22 10.5	-3.2
PB04				IAML		10 22 15.2	
	comp=N,204nm,0.2s						
TA01	Diego Aracena	3.27	285	⇑eP	Pn	10 21 33.0	+0.1
TA01				iS	S	10 22 12.6	-2.0
TA02	Huaiquique	3.32	290	iS	S	10 22 14.0	-1.7
PB05	IPOC Station P	3.43	246	⇑eP	Pn	10 21 35.6	+0.7
PB05				iS	S	10 22 16.4	-1.8
PB05	IPOC Station P	3.43	246	P	Pn	10 21 36.0	+1.1
PB10	IPOC Station P	4.01	239	eP	Pn	10 21 41.7	-0.1
PB10				iS	S	10 22 28.5	-2.2
PB10	IPOC Station P	4.01	239	P	Pn	10 21 42.5	+0.7
PB12	IPOC Station P	4.36	310	eP	Pn	10 21 46.1	-0.1

PB12				*i* S	**S**	**10 22 35.4**	**-3.2**
BBOE	**La Paz, Chanca**	**4.76**	**346**	P	**Pn**	**10 21 53.8**	**+2.1**
BBOD	**La Paz, Gloria**	**5.09**	**340**	P	**Pn**	**10 21 58.0**	**+2.2**
LPAZ	**La Paz**	**5.30**	**346**	P	**Pn**	**10 22 00.2**	**+1.7**
	comp=N,4.8nm,0.3s,baz=144,slow=8.1,SNR=94						
LPAZ				S	**S**	**10 23 03.3**	**+2.4**
	baz=14,slow=18,SNR=1.2						
LPAZ	**La Paz**	**5.30**	**346**	P	**Pn**	**10 22 00.2**	**+1.7**
SIV	**San Ignacio**	**7.70**	**46**	P	**Pn**	**10 22 27.4**	**-1.4**
	comp=N,3.0nm,0.3s,baz=214,slow=13,SNR=47						
SIV				S	**S**	**10 23 53.0**	**-3.1**
	comp=N,0.3nm,0.3s,baz=139,slow=23,SNR=1.6						
H03N1	**Juan Fernandez**	**16.03**	**219**	T	T	10 36 51.5	
	baz=44,slow=72,SNR=4.2						
H03N2	**Juan Fernandez**	**16.04**	**219**	T	T	10 36 52.3	
	baz=44,slow=72,SNR=4.0						
H03N3	**Juan Fernandez**	**16.05**	**219**	T	T	10 36 47.3	
	baz=44,slow=72,SNR=4.4						
TXAR	**Lajitas Array**	**61.74**	**324**	P	**P**	**10 30 34.3**	**-1.0**
	comp=N,0.6nm,1.1s,baz=129,slow=7.1,SNR=2.1						
TORD	**Torodi Ar. Bea**	**75.51**	**69**	P	**P**	**10 31 59.8**	**-0.7**
	comp=N,1.3nm,0.5s,baz=254,slow=5.1,SNR=7.1						
YKA	**Yellowknife Ar**	**91.82**	**340**	P	**P**	**10 33 22.9**	**+0.6**
	comp=N,0.2nm,0.6s,baz=126,slow=4.6,SNR=5.4						
MKAR	**Makanchi Array**	**144.44**	**37**	PKP	**PKPab**	**10 39 50.1**	**+1.3**
	comp=N,1.3nm,0.7s,baz=307,slow=3.7,SNR=9.8						

IDC 21 10:29:28.8±1.4**, 21°.41N**×**144°.58E, h0^{km}, mb3.5**/5**,**
mb1 3.7/5**, mb1mx3.2**/57**, mbtmp3.5**/5**, Error ellipse:**
s-maj=57.0km s-min=26.2km az=87.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.31**	**194**	P	P	10 37 24.4	-0.1
	0.6nm,0.4s,baz=16,slow=9.3,SNR=2.9						
ASAR	**Alice Springs**	**46.00**	**194**	P	P	10 37 54.0	-0.2
	0.2nm,0.4s,baz=10,slow=7.3,SNR=6.1						
MKAR	**Makanchi Array**	**55.85**	**313**	P	P	10 39 08.4	+0.2
	0.2nm,0.6s,baz=93,slow=9.4,SNR=2.2						
KURBB	**Kurchatov Arra**	**58.62**	**317**	P	P	10 39 27.4	-0.3
	0.8nm,0.4s,baz=93,slow=7.2,SNR=5.9						
YKA	**Yellowknife Ar**	**76.09**	**28**	P	P	10 41 18.1	0.0
	0.1nm,0.5s,baz=290,slow=5.8,SNR=2.3						

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*IDC **21** 10:30:42.3±0.7, 31°.83N×50°.90E, h0^{km}, mb4.0/23,*
mb1 4.1/28, mb1mx4.0/58, mbtmp4.0/28, ML4.0/4, MS3.3/12,
Ms1 3.3/12, ms1mx3.0/68, Error ellipse: s-maj=17.5km
s-min=12.5km az=165.0
*NEIC **21** 10:30:44.0±2.2, 31°.86N±0°.08×50°.97E±0°.06, h8^{km}±1^{km},*
mb4.4/31, mb_Lg4.0(TEH), Error ellipse: s-maj=11.1km
s-min=7.1km az=189.0
*TEH **21** 10:30:43.1, 31°.96N×51°.08E, h8^{km}, ML4.0*
*THR **21** 10:30:45.6±0.7, 31°.91N×51°.05E, h14^{km}±7^{km}, ML3.5*
*OMAN **21** 10:30:48.5±1.0, 31°.60N×50°.95E, h84^{km}±53^{km}, Error*
ellipse: s-maj=27.2km s-min=10.6km az=40.0
*DSN **21** 10:30:51.5±1.6, 31°.22N×50°.91E, h15^{km}, ML3.7/6, Error*
ellipse: s-maj=25.5km s-min=10.2km az=32.0
ISC 21 10:30:43.5±1.1**, 31°.83N**±0°.03×**51°.03E**±0°.03**, h10^{km}**±7^{km}**,**
n210, σ1^{s}95/223**, mb4.3**/42**, MS3.4**/8**, 7C-5D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBRJ	**Brojen**	**0.21**	**68**	*e*Pg	**Pg**	**10 30 47.1**	**-1.0**
IBRJ				*e*Sg	**Pg**	**10 30 48.8**	**+0.7**
IBRJ	**Brojen**	**0.21**	**68**		**Pg**	**10 30 48.7**	**+0.7**
SHK1	**Shahrekord**	**0.51**	**346**	*e*Pg	Pg	10 30 51.3	-2.3
SHK1				*e*Sg	**Sg**	**10 30 57.2**	**-3.2**
IPIR	**Pirpir**	**0.86**	**352**	*e*Pg	**Pb**	**10 30 58.0**	**-2.8**
IPIR	**Pirpir**	**0.86**	**352**	Pg	**Pb**	**10 30 58.0**	**-2.8**
KLNJ	**Kolanjah**	**0.95**	**149**	*e*Pg	**Pb**	**10 31 02.5**	**+0.2**
KLNJ	**Kolanjah**	**0.95**	**149**	Pg	**Pb**	**10 31 02.5**	**+0.2**
IGAR	**Gharneh**	**1.03**	**56**	*e*Pg	**Pb**	**10 31 01.6**	**-2.1**
IGAR				*e*		10 31 18.0	
	comp=Z,51μm,0.2s						
IRAM	**Ramesheh**	**1.15**	**91**	*e*Pg	**Pb**	**10 31 04.8**	**-0.9**
IRAM	**Ramesheh**	**1.15**	**91**		**Pb**	**10 31 04.8**	**-0.9**
AMIS	**Naft Sefid**	**1.49**	**264**	*e*Pg	**Pb**	**10 31 13.1**	**+1.7**
IZEF	**Zefreh**	**1.53**	**46**	*e*Pg	**Pn**	**10 31 10.0**	**-1.2**
IKLH	**Kolahrood**	**1.56**	**17**	*e*Pg	**Pn**	**10 31 10.3**	**-1.3**
IKLH				*e*		10 31 46.9	
	comp=Z,15μm,0.4s						
NASN	**Na'in**	**1.79**	**57**	*e*Pg	**Pn**	**10 31 14.6**	**-0.3**
NASN				*e*Sg	**Sg**	**10 31 40.6**	**-0.6**
NASN				IAML		10 31 47.8	
	comp=E,433nm,0.4s						
NASN				IAML		10 31 48.2	
	comp=N,218nm,0.5s						
NASN	**Na'in**	**1.79**	**57**	*e*Pg	**Pn**	**10 31 14.6**	**-0.3**
QAMS	**Qamsar**	**1.93**	**9**	*e*Pn	**Pn**	**10 31 16.7**	**0.0**
QAMS				*e*		10 31 50.9	
	comp=Z,23μm,0.4s						
AHWZ	**Ahwaz**	**2.10**	**257**	*e*Pn	**Pb**	**10 31 22.4**	**+0.8**
KHMZ	**Khomeyn**	**2.11**	**335**	*e*Pn	**Pn**	**10 31 21.4**	**+2.3**
KHMZ				IAML		10 31 58.2	
	comp=N,354nm,0.5s						
KHMZ	**Khomeyn**	**2.11**	**335**	*e*Pn	**Pn**	**10 31 21.4**	**+2.3**
KAZ1	**Kazerun**	**2.26**	**166**	*e*Pn	**Pb**	**10 31 24.2**	**-0.3**
ISAD	**Sadrabad**	**2.26**	**87**	*e*Pn	**Pn**	**10 31 22.5**	**+1.2**
ISAD				*e*		10 32 04.4	
	comp=Z,5μm,0.8s						
KRSH	**Karshahi**	**2.33**	**23**	*e*Pn	**Pn**	**10 31 22.5**	**+0.4**
KRSH				*e*		10 31 30.8	
	comp=Z,12μm,0.3s						
SHI	**Shiraz**	**2.53**	**149**	*e*Pn	**Pb**	**10 31 27.9**	**-1.2**
SHI				*e*		10 32 23.0	
	comp=Z,4μm,0.7s						
BMDN	**Meydan**	**2.61**	**315**	*e*Pn	**Pn**	**10 31 28.0**	**+2.0**
ANAR	**Anarak**	**2.66**	**59**	*e*Pn	**Pn**	**10 31 27.2**	**+0.7**
GHVR	**GHOM**	**2.66**	**5**	*e*Pn	**Pn**	**10 31 28.9**	**+2.4**
GHVR				IAML		10 32 21.3	
	comp=E,176nm,0.5s						
GHVR				IAML		10 32 30.0	
	comp=N,99nm,0.6s						
GHVR	**GHOM**	**2.66**	**5**	*e*Pn	**Pn**	**10 31 28.9**	**+2.4**
ISFB	**Sefidab**	**2.71**	**22**	*e*Pn	**Pn**	**10 31 28.1**	**+0.8**
ASAO	**Ashtian**	**2.84**	**343**	*e*Pn	**Pn**	**10 31 31.9**	**+2.7**
ASAO				*e*Sg	**Sb**	**10 32 12.3**	**+2.8**
ASAO				IAML		10 32 21.9	
	comp=N,202nm,0.5s						
ASAO				IAML		10 32 23.8	
	comp=E,198nm,0.8s						
ASAO	**Ashtian**	**2.84**	**343**	*e*Pn	**Pn**	**10 31 31.9**	**+2.7**
ICHK	**Chekchek**	**2.90**	**81**	*e*Pn	**Pn**	**10 31 31.3**	**+1.3**
ICHK				*e*		10 32 24.5	
	comp=Z,4μm,0.7s						
AHBU	**AHRAM**	**2.96**	**175**	*e*Pn	**Pb**	**10 31 35.4**	**-1.0**
IQOM	**Qom**	**3.01**	**1**	*e*Pn	**Pn**	**10 31 31.6**	**+0.1**
YZKH	**Yazd**	**3.08**	**79**	*e*Pn	**Pb**	**10 31 35.7**	**-2.7**
YZKH				IAML		10 32 27.6	
	comp=N,63nm,0.4s						
YZKH				IAML		10 32 33.6	
	comp=E,130nm,0.8s						
IDOB	**Doab**	**3.10**	**310**	*e*Pn	**Pn**	**10 31 33.9**	**+1.2**
IKFM	**Kafar-mosalman**	**3.17**	**303**	*e*Pn	**Pn**	**10 31 34.8**	**+1.3**
IVRN	**Varamin**	**3.21**	**10**	*e*Pn	**Pn**	**10 31 35.6**	**+1.4**
DHL1	**Dehloran**	**3.29**	**286**	*e*Pn	**Pn**	**10 31 37.7**	**+2.6**
HAGD	**Aghdareh**	**3.38**	**333**	*e*Pn	**Pn**	**10 31 37.9**	**+1.3**
HAGD				*e*		10 32 43.4	
	comp=Z,4μm,0.7s						
IHSB	**Hasanabad**	**3.61**	**3**	*e*Pn	**Pn**	**10 31 40.6**	**+1.0**
UMR	**Umm Al-Rimmam**	**3.65**	**232**	*e*P	**Pn**	**10 31 42.6**	**+2.6**
IRAZ	**Razeghan**	**3.68**	**346**	*e*Pn	**Pn**	**10 31 42.1**	**+1.3**
IBZA	**Bozab**	**3.74**	**316**	*e*Pn	**Pn**	**10 31 42.8**	**+1.2**
IBZA				*e*		10 32 55.1	
	comp=Z,2μm,0.9s						
MIB	**Mutribah**	**3.76**	**239**	*e*P	**Pn**	**10 31 43.7**	**+2.1**
IDMV	**Damavand**	**3.83**	**12**	*e*Pn	**Pn**	**10 31 43.3**	**+0.4**
DAMV	**Damavand**	**3.87**	**11**	*e*Pn	**Pn**	**10 31 45.8**	**+2.4**
DAMV				IAML		10 32 45.5	
	comp=E,75nm,0.5s						
DAMV				IAML		10 33 04.1	
	comp=N,70nm,0.6s						
DAMV	**Damavand**	**3.87**	**11**	*e*Pn	**Pn**	**10 31 45.8**	**+2.4**
KBD	**Kabd**	**3.91**	**228**	*e*P	**Pn**	**10 31 45.5**	**+1.8**
GHIR	**Ghir-Karzin**	**3.92**	**154**	*e*Pn	**Pn**	**10 31 48.3**	**+4.4**
GHIR				IAML		10 32 47.8	
	comp=N,72nm,0.4s						
GHIR				IAML		10 33 10.8	
	comp=E,54nm,0.8s						
GHIR	**Ghir-Karzin**	**3.92**	**154**	*e*Pn	**Pn**	**10 31 48.3**	**+4.4**
QABG	**Abgarm-Qazvin**	**4.05**	**343**	*e*Pn	**Pn**	**10 31 46.7**	**+0.8**
CHTH	**Charan**	**4.07**	**1**	*e*Pn	**Pn**	**10 31 48.4**	**+2.3**
CHTH				IAML		10 33 14.5	
	comp=E,32nm,0.6s						
CHTH	**Charan**	**4.07**	**1**	*e*Pn	**Pn**	**10 31 48.4**	**+2.3**
THKV	**Tehran--Karaj**	**4.08**	**358**	*e*Pn	**Pb**	**10 31 55.1**	**-0.5**
QRN	**Al-Qurain**	**4.08**	**222**	*e*P	**Pn**	**10 31 48.1**	**+2.0**
KCHF	**Cheshme Sefid,**	**4.14**	**307**	*e*Pn	**Pn**	**10 31 48.4**	**+1.3**
KCHF				*e*		10 32 60.0	
	comp=Z,2μm,0.6s						
RDF	**Al-Radifah**	**4.17**	**227**	*e*P	**Pn**	**10 31 49.9**	**+2.6**
RST	**Umm Al-Ruwaisa**	**4.18**	**237**	*e*P	**Pn**	**10 31 49.5**	**+2.1**
ISHM	**Shahmirzad**	**4.39**	**25**	*e*Pn	**Pn**	**10 31 52.1**	**+1.5**
SNGE	**Sanandaj**	**4.48**	**318**	*e*Pn	**Pn**	**10 31 51.7**	**0.0**
SNGE				IAML		10 32 49.9	
	comp=N,136nm,0.8s						
SNGE	**Sanandaj**	**4.48**	**318**	*e*Pn	**Pn**	**10 31 51.7**	**0.0**
IGHG	**Ghaleghazi**	**4.50**	**305**	*e*Pn	**Pn**	**10 31 53.2**	**+1.2**
ILIN	**Lien**	**4.59**	**313**	*e*Pn	**Pn**	**10 31 54.7**	**+1.4**
IDHR	**Dehrash**	**4.83**	**308**	*e*Pn	**Pn**	**10 31 57.0**	**+0.5**
IDHR				*e*		10 32 59.9	
	comp=Z,2μm,0.4s						
TPRV	**Parvadeh(Tabas**	**4.93**	**74**	*e*Pn	**Pn**	**10 31 59.5**	**+1.7**
JIR1	**Jirandeh**	**4.97**	**349**	*e*Pn	**Pn**	**10 31 59.2**	**+0.8**
TNSJ	**Nastanj**	**5.15**	**64**	*e*Pn	**Pn**	**10 32 02.3**	**+1.4**
ZNJK	**Zanjan**	**5.21**	**339**	*e*Pn	**Pn**	**10 32 02.8**	**+1.1**
ZNJK				IAML		10 33 40.1	
	comp=N,6.2nm,0.6s						
ZNJK				IAML		10 33 44.6	
	comp=E,8.1nm,0.5s						
ZNJK	**Zanjan**	**5.21**	**339**	*e*Pn	**Pn**	**10 32 02.8**	**+1.1**
KRBR	**Kerman**	**5.26**	**109**	*e*Pn	**Pn**	**10 32 06.2**	**+3.7**
KRBR				IAML		10 33 43.7	
	comp=N,18nm,0.6s						
KRBR				IAML		10 33 55.4	
	comp=E,19nm,0.8s						
KRBR	**Kerman**	**5.26**	**109**	*e*Pn	**Pn**	**10 32 06.2**	**+3.7**
NGRK	**Negar Kerman**	**5.37**	**112**	*e*Pn	**Pn**	**10 32 06.4**	**+2.3**
TKDS	**Koohdasht(Taba**	**5.43**	**69**	*e*Pn	**Pn**	**10 32 07.4**	**+2.6**
TABS	**Tabas**	**5.44**	**69**	*e*Pn	**Pn**	**10 32 07.9**	**+3.1**
TABS				IAML		10 33 48.6	
	comp=N,42nm,0.9s						
TABS				IAML		10 33 48.8	
	comp=E,8.4nm,0.8s						
TABS	**Tabas**	**5.44**	**69**	*e*Pn	**Pn**	**10 32 07.9**	**+3.1**
SHRO	**Shahrood**	**5.86**	**44**	*e*Pn	**Pn**	**10 32 13.5**	**+2.9**
SHMA	**Al-Shehemyia**	**5.95**	**181**	S	**Sn**	**10 33 19.5**	**-0.4**
BSRN	**Basiran**	**6.89**	**87**	*e*Pn	**Pn**	**10 32 28.1**	**+3.4**
BSRN	**Basiran**	**6.89**	**87**	*e*Pn	**Pn**	**10 32 28.1**	**+3.4**
KBAM	**BAM**	**6.95**	**111**	*e*Pn	**Pn**	**10 32 27.5**	**+2.0**
TRNA	**Turayna**	**7.07**	**179**	P	**Pn**	**10 32 26.3**	**-0.7**
SBZV	**Sabzevar**	**7.10**	**48**	*e*Pn	**Pn**	**10 32 28.6**	**+0.8**
MRVT	**Maraveh tapeh**	**7.15**	**34**	*e*Pn	**Pn**	**10 32 31.1**	**+2.8**
MRVT	**Maraveh tapeh**	**7.15**	**34**	*e*Pn	**Pn**	**10 32 31.1**	**+2.8**
IHRS	**Heris**	**7.25**	**334**	*e*Pn	**Pn**	**10 32 30.5**	**+0.7**
GRMI	**Germi**	**7.42**	**341**	*e*Pn	**Pn**	**10 32 34.7**	**+2.7**
GRMI	**Germi**	**7.42**	**341**	*e*Pn	**Pn**	**10 32 34.7**	**+2.7**
BANOM	**Banah**	**7.48**	**141**	*i* P	**Pn**	**10 32 35.3**	**+2.5**
	SNR=5.9						
BANOM				S	**Sn**	**10 33 55.5**	**-2.2**
BANOM	**Banah**	**7.48**	**141**	P	**Pn**	**10 32 36.0**	**+3.3**
	SNR=5.7						
BANOM				S	**Sn**	**10 33 56.5**	**-1.2**
ISFR	**Sfrayin**	**7.76**	**46**	*e*Pn	**Pn**	**10 32 39.0**	**+2.1**
MASF	**Masafi**	**7.85**	**144**	P	**Pn**	**10 32 39.1**	**+1.2**
	SNR=9.8						
MASF				S	**Sn**	**10 34 04.4**	**-2.6**
BJRD	**Bojnurd**	**7.86**	**40**	*e*Pn	**Pn**	**10 32 40.8**	**+2.7**
MSFE	**Esma-Masafi**	**7.86**	**144**	*i* P	**Pn**	**10 32 40.4**	**+2.4**
	SNR=6.4						
NAZ	**Nazwa, Dubai**	**7.94**	**148**	P	**Pn**	**10 32 41.5**	**+2.4**
SHRT	**Shahrakht**	**8.01**	**74**	*e*Pn	Pn	10 32 45.3	+5.3
UOSS	**Minazif**	**8.23**	**145**	*i* P	**Pn**	**10 32 42.8**	**-0.3**
	SNR=8.2						
UOSS	**Minazif**	**8.23**	**145**	P	**Pn**	**10 32 42.8**	**-0.3**
UOSS				S	**Sn**	**10 34 13.8**	**-2.4**
UOSS	**Minazif**	**8.23**	**145**	Pn	**Pn**	**10 32 45.3**	**+2.2**
UOSS					**Sn**	**10 34 14.6**	**-1.5**
HATD	**Hatta, Dubai**	**8.30**	**146**	P	**Pn**	**10 32 47.0**	**+3.0**
HATD				S	**Sn**	**10 34 15.9**	**-1.9**
HATD	**Hatta, Dubai**	**8.30**	**146**	P	**Pn**	**10 32 44.1**	**+0.1**
HATD				S	**Sn**	**10 34 15.3**	**-2.6**
ASHO	**Ashiyiah**	**8.38**	**147**	*i* P	**Pn**	**10 32 46.2**	**+1.0**
	SNR=9.4						
ASHO				S	**Sn**	**10 34 18.2**	**-1.8**
ASHO	**Ashiyiah**	**8.38**	**147**	P	**Pn**	**10 32 45.6**	**+0.4**
	SNR=9.5						
ASHO				S	**Sn**	**10 34 17.1**	**-2.8**
TBJM	**Torbat-e-JAM**	**8.49**	**64**	*e*Pn	**Pn**	**10 32 48.9**	**+2.2**
SIRT	**Sirnak**	**9.06**	**311**	Pn	**Pn**	**10 32 55.8**	**+1.3**
SOHO	**SOHO**	**9.08**	**146**	P	**Pn**	**10 32 55.0**	**+0.4**
SOHO	**SOHO**	**9.08**	**146**	P	**Pn**	**10 32 55.2**	**+0.6**
SOHO				S	**Sn**	**10 34 34.5**	**-2.4**
RAYN	**Ar Rayn**	**9.61**	**212**	*i* P	**Pn**	**10 33 01.5**	**-0.6**
	SNR=11						
RAYN	**Ar Rayn**	**9.61**	**212**	P	**Pn**	**10 33 01.2**	**-0.8**
RAYN	**Ar Rayn**	**9.61**	**212**	Pn	**Pn**	**10 33 01.3**	**-0.8**
GNI	**Garni**	**9.74**	**330**	LR	LR	10 36 37.5	
	comp=E,53nm,18.7s,baz=144,slow=37						
HOQ	**Hoqain**	**9.92**	**144**	P	**Pn**	**10 33 07.1**	**+0.8**
BSY	**Bisya**	**10.58**	**147**	P	**Pn**	**10 33 15.5**	**+0.3**
BSY				S	**Sn**	**10 35 11.0**	**-2.9**
SMDO	**Samad**	**10.73**	**143**	P	**Pn**	**10 33 17.5**	**+0.2**
SMDO				S	**Sn**	**10 35 15.6**	**-2.0**
WSAR	**Wadi Sarin**	**10.89**	**140**	Pn	**Pn**	**10 33 20.5**	**+0.9**
	comp=E,0.9nm,0.3s,baz=357,slow=11,SNR=3.7						
WSAR				Sn	**Sn**	**10 35 18.6**	**-2.9**
	comp=E,0.5nm,0.3s,baz=329,slow=22,SNR=5.9						
WSAR				LR	LR	10 38 13.6	
	comp=E,120nm,20.7s,baz=334,slow=41						
WSAR	**Wadi Sarin**	**10.89**	**140**	P	**Pn**	**10 33 20.4**	**+0.9**
WSAR				S	**Sn**	**10 35 19.2**	**-2.3**
JMDO	**Jabal Madar**	**11.33**	**145**	P	**Pn**	**10 33 25.4**	**-0.2**
WBK	**Wadi Bani Khal**	**11.58**	**141**	P	**Pn**	**10 33 29.3**	**+0.3**
WBK				S	**Sn**	**10 35 37.5**	**-0.9**
ASF	**Jabal al Asfar**	**12.00**	**275**	Pn	**Pn**	**10 33 33.9**	**-0.9**
	comp=E,2.1nm,0.3s,baz=105,slow=7.7,SNR=1.9						
ASF				Sn	**Sn**	**10 35 44.1**	**-4.7**
	comp=E,0.4nm,0.3s,baz=334,slow=19,SNR=1.2						
JLN	**Jalan Bani Buh**	**12.19**	**140**	P	**Pn**	**10 33 38.2**	**+0.9**
JLN				S	**Sn**	**10 35 47.6**	**-5.7**
DQM	**DQM**	**13.21**	**152**	P	**Pn**	**10 33 50.8**	**-0.5**
MMAI	**Mount Meron Ar**	**13.26**	**279**	Pn	**Pn**	**10 33 49.8**	**-2.1**
	baz=92,slow=16,SNR=1.5						
DOK	**Doka**	**13.45**	**167**	S	**Sn**	**10 36 18.2**	**-5.9**
WHFO	**Wadi Hawf**	**14.07**	**169**	P	**Pn**	**10 34 01.3**	**-1.7**
	SNR=13						
WHFO				S	**Sn**	**10 36 32.4**	**-6.9**
BNN	**Bunyan**	**14.23**	**304**	P	**P**	**10 34 13.3**	**+0.7**
DMTO	**DMTO**	**14.49**	**165**	P	**Pn**	**10 34 06.7**	**-2.1**
DMTO				S	**Sn**	**10 36 42.0**	**-7.5**
ABTO	**Aybut**	**14.56**	**171**	P	**Pn**	**10 34 07.6**	**-2.1**
ABTO				S	**Sn**	**10 36 46.5**	**-4.7**
BR131	**Keskin Array S**	**16.15**	**304**	P	**P**	**10 34 34.1**	**+0.1**
BR131				IAmb	IAmb	10 34 35.7	
	comp=Z,10nm,0.7s						
BRTR	**Keskin Array B**	**16.15**	**304**	Pn	**Pn**	**10 34 33.2**	**+2.5**
	comp=Z,0.5nm,0.3s,baz=118,slow=13,SNR=11						
BRTR				LR	LR	10 41 41.7	
	comp=Z,69nm,19.7s,baz=345,slow=41						
ELL	**Elmali**	**18.12**	**291**		**Pn**	**10 34 55.9**	**+0.4**
ELL				IAmb	IAmb	10 35 02.5	
	comp=Z,52nm,1.0s						
BORA	**Eskisehir**	**18.49**	**301**	P	**P**	**10 35 00.8**	**+1.0**
ABKAR	**Akbulak array**	**18.66**	**19**	P	**P**	**10 35 01.3**	**-0.1**
KKAR	**Karatay Array**	**19.08**	**48**	P	**Pn**	**10 35 08.2**	**+1.2**
AKTO	**Aktyubinsk**	**19.30**	**14**	P	**P**	**10 35 08.5**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=170,slow=9.5,SNR=5.3						
AKTO				LR	LR	10 44 27.9	
	comp=Z,95nm,20.9s,baz=205,slow=43						
BELG	**Belogornoye**	**20.70**	**354**	P	**P**	**10 35 23.6**	**-0.1**
	comp=Z,16nm,0.8s,baz=177,slow=2.2,SNR=8.5						
BELG				LR	LR	10 45 53.7	
	comp=Z,44nm,19.2s,baz=153,slow=44						
AAK	**Ala-Archa**	**21.51**	**53**	P	**P**	**10 35 35.9**	**+3.1**
	comp=Z,1.0nm,0.7s,baz=209,slow=10,SNR=1.5						
AAK				LR	LR	10 44 05.3	
	comp=Z,73nm,19.7s,baz=268,slow=37						
ATD	**Arta Tunnel**	**21.57**	**202**	LR	LR	10 43 51.7	
	comp=Z,69nm,18.3s,baz=59,slow=37						
KSH	**Kashi**	**21.62**	**62**	P	**P**	**10 35 33.0**	**-1.0**
KSH				pP	pP	10 35 37.3	-0.1
KSH				sP	sP	10 35 40.1	+1.1
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SANT	**Santorini**	**21.63**	**289**	⇑P	**P**	**10 35 34.1**	**+0.2**
SANT	**Santorini**	**21.63**	**289**	P	**P**	**10 35 34.1**	**+0.2**
TPGR	**Topolog**	**21.91**	**313**	⇓P	**P**	**10 35 37.0**	**+0.2**
ALN	**Alexandroupoli**	**22.00**	**301**	P	**P**	**10 35 37.2**	**-0.6**
IDI	**Anoyia**	**22.03**	**286**	P	**P**	**10 35 38.0**	**-0.4**
	comp=Z,6.4nm,0.4s,baz=45,slow=11,SNR=13						
HARR	**Harsova**	**22.13**	**312**	⇓P	**P**	**10 35 40.2**	**+0.9**
CFR	**Carcaliu**	**22.24**	**313**	⇑P	**P**	**10 35 39.1**	**-1.2**
BOOM	**Boomskoye usch**	**22.45**	**55**	P	**P**	**10 35 45.4**	**+2.5**
BOOM				IAmb	IAmb	10 35 59.1	
	comp=Z,10nm,1.5s						
VRI	**Vrincioaia**	**23.43**	**314**	⇑P	**P**	**10 35 52.1**	**-0.8**
PLOR	**Plostina**	**23.48**	**314**	⇓P	**P**	**10 35 53.8**	**+0.4**
TARG	**Taragay, Kyrgy**	**23.53**	**58**	P	**P**	**10 35 56.8**	**+2.5**
TARG				IAmb	IAmb	10 36 00.6	
	comp=Z,3.8nm,0.6s						
MLR	**Muntele Rosu**	**23.75**	**312**	⇑P	**P**	**10 35 59.5**	**+3.4**
MLR	**Muntele Rosu**	**23.75**	**312**	P	**P**	**10 35 56.4**	**+0.3**
	comp=Z,8.2nm,0.7s,baz=166,slow=2.9,SNR=11						
MLR	**Muntele Rosu**	**23.75**	**312**	P	**P**	**10 35 57.7**	**+1.6**
MLR				IAmb	IAmb	10 36 04.0	
	comp=Z,8.9nm,0.7s						
VOIR		**24.30**	**311**	⇑P	**P**	**10 36 02.4**	**+1.2**
DOPR	**Dopca**	**24.31**	**313**	⇓P	**P**	**10 36 02.3**	**+1.0**
AGG	**Agios Georgios**	**24.40**	**295**	P	**P**	**10 36 01.7**	**-0.4**
ITM	**Ithomi**	**24.52**	**291**	IAmb	IAmb	10 36 03.9	
	comp=Z,14nm,0.7s						
ARR	**Arges**	**24.53**	**311**	⇓P	**P**	**10 36 03.3**	**0.0**
AKASG	**Malin Array Be**	**24.82**	**326**	P	**P**	**10 36 05.6**	**-0.2**
	comp=Z,1.8nm,0.4s,baz=135,slow=8.7,SNR=14						
AKASG	**Malin Array Be**	**24.82**	**326**	P	**P**	**10 36 06.8**	**+1.1**
AKBB	**Malin Array Si**	**24.82**	**326**	P	**P**	**10 36 05.7**	**0.0**
AKBB				IAmb	IAmb	10 36 10.2	
	comp=Z,6.4nm,0.5s						
BURAR	**Bucovina Array**	**25.19**	**316**	⇑P	**P**	**10 36 10.7**	**+1.5**
BURAR	**Bucovina Array**	**25.19**	**316**	IAmb	IAmb	10 36 16.3	
	comp=Z,5.0nm,0.8s						
BUR08	**Bucovina Ar. S**	**25.21**	**316**	P	**P**	**10 36 10.0**	**+0.5**
BUR08				IAmb	IAmb	10 36 16.6	
	comp=Z,4.6nm,0.7s						
BVAR	**Borovoye Array**	**25.40**	**28**	P	**P**	**10 36 11.9**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=215,slow=13,SNR=6.2						
BVAR				PcP	**PcP**	**10 39 43.2**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=210,slow=9.3,SNR=4.7						
BOVS	**Bovan**	**25.88**	**305**	⇑P	**P**	**10 36 15.4**	**0.0**
KOLS	**Kolonicke sedl**	**27.55**	**317**	*e*P	**P**	**10 36 33.3**	**+2.8**
KURBB	**Kurchatov Arra**	**27.69**	**39**	P	**P**	**10 36 33.2**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=239,slow=9.1,SNR=4.5						
KURK	**Kurchatov**	**27.78**	**39**	P	**P**	**10 36 33.2**	**+0.7**
KURK	**Kurchatov**	**27.78**	**39**	IAmb	IAmb	10 36 37.8	
	comp=Z,2.4nm,0.9s						
MK31	**Makanchi Array**	**28.21**	**49**	P	**P**	**10 36 37.5**	**+1.1**
MKAR	**Makanchi Array**	**28.21**	**49**	P	**P**	**10 36 37.8**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=240,slow=11,SNR=8.4						
ZAA0	**Zalesovo Array**	**32.70**	**37**	P	**P**	**10 37 16.3**	**+0.3**
ZAA0				IAmb	IAmb	10 37 18.1	
	comp=Z,1.6nm,0.6s						
ZALV	**Zalesovo Beam**	**32.70**	**37**	P	**P**	**10 37 16.0**	**0.0**
	comp=Z,1.2nm,0.5s,baz=253,slow=10,SNR=5.2						
GERES	**GERESS Array B**	**32.74**	**312**	P	**P**	**10 37 15.5**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=112,slow=7.5,SNR=2.8						
WTTA	**Wattenberg**	**33.66**	**309**	*e*P	**P**	**10 37 24.1**	**-0.6**
	comp=Z,3.4nm,0.5s						
WATA	**Walderalm**	**33.72**	**309**	*e*P	**P**	**10 37 24.4**	**-0.8**
	comp=Z,3.6nm,0.5s						
FINES	**FINESS Array B**	**33.79**	**339**	P	**P**	**10 37 25.1**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=142,slow=8.6,SNR=1.5						
SQTA	**Sankt Quirin**	**33.94**	**309**	*e*P	**P**	**10 37 26.3**	**-0.7**
	comp=Z,8.2nm,0.4s						
MOTA	**Moosalm**	**34.03**	**309**	*e*P	**P**	**10 37 27.2**	**-0.7**
	comp=Z,1.9nm,0.3s						
FETA	**Feichten**	**34.22**	**308**	*e*P	**P**	**10 37 28.9**	**-0.5**
	comp=Z,3.6nm,0.4s						
RETA	**Reutte**	**34.29**	**309**	*e*P	**P**	**10 37 29.7**	**-0.4**
	comp=Z,2.0nm,0.3s						
VSL	**Villasalto**	**34.45**	**295**	P	**P**	**10 37 32.4**	**+0.9**
KEST	**Kesra**	**34.68**	**288**	P	**P**	**10 37 33.9**	**+0.4**
	comp=Z,4.5nm,0.4s,baz=11,slow=17,SNR=10						
DAVA	**Damuels**	**34.84**	**308**	*e*P	**P**	**10 37 34.1**	**-0.7**
	comp=Z,14nm,0.4s						
KMBO	**Kilima Mbogo**	**35.28**	**204**	LR	LR	10 52 35.6	
	comp=Z,54nm,21.4s,baz=90,slow=37						
SENIN	**Lac Senin/Sane**	**36.43**	**306**	P	**P**	**10 37 47.6**	**-1.0**
SENIN				IAmb	IAmb	10 37 49.7	
	comp=Z,1.8nm,0.6s						
BNI	**Bardonecchia**	**36.71**	**304**	P	**P**	**10 37 49.7**	**-1.2**
BNI				IAmb	IAmb	10 37 50.8	
	comp=Z,7.0nm,0.7s						
HFS	**Hagfors**	**37.52**	**330**	LR	LR	10 55 50.5	
	comp=Z,104nm,20.4s,baz=294,slow=40						
NC405	**NORSAR Array S**	**38.87**	**331**	P	**P**	**10 38 07.7**	**-1.1**
NOA	**NORSAR Array B**	**39.04**	**330**	P	**P**	**10 38 09.8**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=120,slow=8.3,SNR=3.2						
NAO01	**NORSAR Array S**	**39.08**	**330**	P	**P**	**10 38 10.3**	**-0.3**
KONO	**Kongsberg**	**39.09**	**328**	P	**P**	**10 38 10.0**	**-0.6**
ARCES	**ARCESS Array B**	**40.41**	**346**	P	**P**	**10 38 21.3**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=129,slow=7.2,SNR=2.4						
SONM	**Songino Array**	**44.46**	**52**	P	**P**	**10 38 56.7**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=280,slow=10,SNR=2.4						
ESDC	**Sonseca Array**	**44.72**	**296**	P	**P**	**10 38 54.9**	**-2.1**
	comp=Z,0.6nm,0.5s,baz=71,slow=8.5,SNR=7.9						
ESDC	**Sonseca Array**	**44.72**	**296**	IAmb	IAmb	10 38 58.7	
	comp=Z,3.2nm,1.4s						
XAN	**Xi'an**	**48.08**	**71**	P	**P**	**10 39 24.9**	**+1.4**
XAN				sP	sP	10 39 31.6	+2.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**48.78**	**259**	P	**P**	**10 39 28.8**	**-0.2**
	comp=Z,3.8nm,0.7s,baz=55,slow=8.1,SNR=21						
TORD	**Torodi Ar. Bea**	**48.78**	**259**	P	**P**	**10 39 29.0**	**0.0**
TORD				IAmb	IAmb	10 39 33.3	
	comp=Z,3.9nm,0.9s						
YAK	**Yakutsk**	**57.19**	**33**	LR	LR	11 07 18.0	
	comp=Z,38nm,18.1s,baz=56,slow=38						
DBIC	**Dimbokro**	**57.67**	**257**	P	**P**	**10 40 33.4**	**-1.1**
	comp=Z,3.1nm,0.7s,baz=99,slow=3.3,SNR=3.6						
SUMG	**Summit**	**59.82**	**340**	*i* P	**P**	**10 40 52.0**	**+2.9**
LBTB	**Lobatse**	**61.53**	**206**	P	**P**	**10 41 02.0**	**+1.1**
KSRS	**Korea Array**	**61.87**	**62**	P	**P**	**10 41 03.8**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=287,slow=7.6,SNR=4.3						
KSRS				LR	LR	11 12 13.8	
	comp=Z,38nm,20.2s,baz=347,slow=40						
BOSA	**Boshof**	**64.92**	**205**	P	**P**	**10 41 23.7**	**+0.4**
	comp=Z,3.2nm,0.6s,baz=38,slow=7.0,SNR=7.8						
BOSA				LR	LR	11 11 00.2	
	comp=Z,60nm,18.6s,baz=1.5,slow=37						
BOSA	**Boshof**	**64.92**	**205**	IAmb	IAmb	10 41 27.7	
	comp=Z,4.9nm,0.8s						
A36M	**Sachs Harbour**	**76.44**	**359**	P	**P**	**10 42 33.1**	**+0.2**
A36M				IAmb	IAmb	10 42 37.5	
	comp=Z,7.3nm,0.8s						
TOLK	**Toolik Lake Re**	**78.67**	**8**	P	**P**	**10 42 46.6**	**+1.1**
TOLK				IAmb	IAmb	10 42 50.8	
	comp=Z,4.0nm,0.8s						
ILAR	**Eielson Array**	**82.70**	**8**	P	**P**	**10 43 06.6**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=325,slow=3.9,SNR=6.4						
YKA	**Yellowknife Ar**	**85.30**	**353**	P	**P**	**10 43 20.2**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=9.7,slow=5.2,SNR=7.0						
ASAR	**Alice Springs**	**96.47**	**114**	P	**P**	**10 44 13.3**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=316,slow=5.0,SNR=4.5						

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*NAO **21** 10:31:03.4±1.5, 56°.98N×7°.13E, ML3.2*
*LDG **21** 10:31:04.6±0.1, 56°.98N×6°.86E, h17^{km}, Ml3.8/14, Error*
ellipse: s-maj=4.1km s-min=2.8km az=101.0
*IDC **21** 10:31:05.5±2.2, 57°.35N×6°.75E, h0^{km}, mb1 3.9/4,*
mb1mx3.2/62, mbtmp3.8/4, ML4.0/3, Error ellipse:
s-maj=35.0km s-min=18.4km az=136.0
*DNK **21** 10:31:06.3±2.7, 56°.93N×7°.23E, h40^{km}±14^{km}, ML3.7,*
Probable volcanic
*BGS **21** 10:31:07.3±1.3, 56°.97N×7°.01E, h18^{km}±11^{km}, ML4.0*
*BGR **21** 10:31:07.7±0.8, 56°.86N×7°.32E, h10^{km}, ML3.6/4, Error*
ellipse: s-maj=11.1km s-min=6.7km az=138.0
*BER **21** 10:31:07.0±2.7, 56°.93N×7°.21E, h23^{km}±8^{km}, ML3.1,*
ML4.0(BGS), Confirmed Earthquake
*UPP **21** 10:31:07.4±1.4, 57°.04N×7°.86E, h0^{km}, ML3.1, Suspected*
explosion
*PRU **21** 10:31:20.8±0.0, 56°.35N×8°.85E, h0^{km}*
ISC 21 10:31:01.2±0.5**, 56°.88N**±0°.02×**7°.15E**±0°.02**, h10^{km}, n211,**
σ2^{s}39/323**, 14C, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOET	G??ttrup	1.15	82	i P	Pn	10 31 25.7	+2.5
GOET				i P	Pn	10 31 25.7	+2.5
GOET				i S	Sg	10 31 40.0	+1.9
GOET				i S	Sg	10 31 40.0	+1.9
GOET				IAML		10 31 44.6	
	comp=Z,280nm,0.2s						
GOET				IAML		10 31 44.6	
	comp=Z,280nm,0.2s						
GOET	G??ttrup	1.15	82	i P	Pn	10 31 25.7	+2.5
GOET				i S	Sg	10 31 40.0	+1.9
GOET				IAML		10 31 44.6	
	comp=Z,280nm,0.2s						
MUD	Monsted U'grnd	1.20	110	i P	Pn	10 31 26.0	+2.1
MUD				i P	Pn	10 31 26.0	+2.1
MUD				e		10 31 26.2	
MUD				i P	Pg	10 31 26.7	+2.6
MUD				i P	Pg	10 31 26.7	+2.6
MUD				i S	Sn	10 31 43.1	+3.0
MUD				i S	Sn	10 31 43.1	+3.0
MUD				IAML		10 31 45.5	
	comp=Z,460nm,0.3s						
MUD				IAML		10 31 45.5	
	comp=Z,460nm,0.3s						
MUD	Monsted U'grnd	1.20	110	e	Pn	10 31 26.2	+2.3
MUD				i P	Pg	10 31 26.7	+2.6
MUD				i S	Sn	10 31 43.1	+3.0
MUD				IAML		10 31 45.5	
	comp=Z,460nm,0.3s						
MUD	Monsted U'grnd	1.20	110	ePn	Pg	10 31 26.6	+2.6
MUD				eSg	Sn	10 31 43.4	+3.2
SNART	Snartemo	1.46	1	i P	Pn	10 31 29.0	+1.4
SNART				i P	Pg	10 31 30.3	+1.1
SNART				⇑iP	Pg	10 31 30.3	+1.1
SNART				i S	Sg	10 31 47.9	-0.2
SNART				eS	Sg	10 31 47.9	-0.2
SNART				IAML		10 31 50.8	
	comp=Z,2µm,0.1s						
SNART	Snartemo	1.46	1	⇑iP	Pg	10 31 30.3	+1.1
SNART				eS	Sg	10 31 47.9	-0.2
SNART				IAML		10 31 50.8	
	comp=Z,2µm,0.1s						
HOMB	Homborsund	1.57	27	Pn	Pb	10 31 31.4	+1.1
HOMB				Lg	Lg	10 31 49.9	
HOMB	Homborsund	1.57	27	⇑iP	Pb	10 31 31.4	+1.1
HOMB				i P	Pb	10 31 31.4	+1.1
HOMB				eS	Sn	10 31 49.7	+0.3
HOMB				i S	Sn	10 31 49.8	+0.3
HOMB				IAML		10 31 54.1	
	comp=Z,350nm,0.1s						
HOMB	Homborsund	1.57	27	⇑iP	Pb	10 31 31.4	+1.1
HOMB				eS	Sn	10 31 49.7	+0.3
HOMB				IAML		10 31 54.1	
	comp=Z,350nm,0.1s						
OVD	Ostervraa, Den	1.72	74	i P	Pn	10 31 29.5	-1.7
OVD				i P	Pn	10 31 29.5	-1.7
OVD				i S	Sg	10 31 57.6	+1.1
OVD				i S	Sg	10 31 57.6	+1.1
OVD	Ostervraa, Den	1.72	74	i P	Pn	10 31 29.5	-1.7
OVD				i S	Sg	10 31 57.6	+1.1
STAV	Stavanger	2.20	340	Pn	Pn	10 31 39.8	+2.1
STAV				Sn	Sn	10 32 04.5	-0.4
STAV	Stavanger	2.20	340	i P	Pn	10 31 38.0	+0.3
STAV				eP	Pb	10 31 40.3	-0.7
STAV				i S	Sn	10 32 04.0	-0.8
STAV				eS	Sn	10 32 04.5	-0.4
SKMB	Sankelmark Bun	2.53	148	eSg	Sg	10 32 26.2	+3.9
KMY	Karmoy	2.54	337	eP	Pn	10 31 45.0	+2.5
KMY				eS	Sn	10 32 11.5	-2.0
KMY				IAML		10 32 15.5	
	comp=Z,122nm,0.2s						
KMY	Karmoy	2.54	337	eP	Pn	10 31 45.0	+2.5
KMY				eS	Sn	10 32 11.5	-2.0
KMY				IAML		10 32 15.5	
	comp=Z,122nm,0.2s						
BLS5	Blasjo	2.57	352	eP	Pn	10 31 45.5	+2.6
BLS5				eS	Sn	10 32 13.9	-0.3
BLS5				IAML		10 32 33.0	
	comp=Z,102nm,0.3s						
BLS5	Blasjo	2.57	352	eP	Pn	10 31 45.5	+2.6
BLS5				eS	Sn	10 32 13.9	-0.3
BLS5				IAML		10 32 33.0	
	comp=Z,102nm,0.3s						
ONAU	Onsala	2.65	77	i P	Pn	10 31 45.5	+1.6
ONAU				i P	Pn	10 31 45.5	+1.6
ONAU				i S	Sn	10 32 12.8	-3.2
ONAU				i S	Sn	10 32 12.8	-3.2
ONAU	Onsala	2.65	77	P	Pn	10 31 45.3	+1.5
ONAU				S	Sn	10 32 13.7	-2.3
ONAU	Onsala	2.65	77	i P	Pn	10 31 45.5	+1.6
ONAU				i S	Sn	10 32 12.8	-3.2
TJOU	Tjoern	2.68	63	P	Pn	10 31 46.4	+2.1
TJOU				S	Sn	10 32 14.9	-1.8
HLG	Helgoland	2.74	171	i P	Pb	10 31 52.1	+2.0
HLG				i P	Pb	10 31 52.1	+2.0
HLG				i S	Sn	10 32 18.3	+0.1
HLG				i S	Sn	10 32 18.3	+0.1
HLG	Helgoland	2.74	171	i P	Pb	10 31 52.1	+2.0
HLG				i S	Sn	10 32 18.3	+0.1
HLG	Helgoland	2.74	171	eSg	Sg	10 32 33.2	+4.2
GID	Gilleleje	2.89	103	i P	Pb	10 31 52.7	0.0
GID				i P	Pb	10 31 52.7	0.0
GID				i S	Sn	10 32 23.5	+1.6
GID				i S	Sn	10 32 23.5	+1.6
GID				IAML		10 32 41.2	
	comp=Z,157nm,0.3s						
GID				IAML		10 32 41.2	
	comp=Z,157nm,0.3s						
GID	Gilleleje	2.89	103	i P	Pb	10 31 52.7	0.0
GID				i S	Sn	10 32 23.5	+1.6
GID				IAML		10 32 41.2	
	comp=Z,157nm,0.3s						
STRU	Stroemstad	3.04	43	i P	Pn	10 31 50.9	+1.6
STRU				i P	Pn	10 31 50.9	+1.6
STRU				⇑iP	Pb	10 31 51.1	-4.2
STRU				i S	Sn	10 32 23.8	-1.9
STRU				i S	Sn	10 32 23.8	-1.9
STRU	Stroemstad	3.04	43	P	Pn	10 31 51.1	+1.8
STRU				S	Sn	10 32 23.6	-2.2
STRU	Stroemstad	3.04	43	⇑iP	Pn	10 31 51.1	+1.8
STRU				i S	Sn	10 32 23.8	-1.9
ODD1	Odda	3.05	355	eP	Pn	10 31 52.3	+2.9
ODD1				eS	Sn	10 32 25.6	-0.4
ODD1	Odda	3.05	355	eP	Pn	10 31 52.3	+2.9
ODD1				eS	Sn	10 32 25.6	-0.4
FABU	Falkenberg	3.05	85	i P	Pn	10 31 50.7	+1.2
FABU				i P	Pn	10 31 50.7	+1.2
FABU	Falkenberg	3.05	85	P	Pn	10 31 51.1	+1.7
FABU				S	Sn	10 32 23.3	-2.7
FABU	Falkenberg	3.05	85	i P	Pn	10 31 50.7	+1.2
KON	Kongsberg	3.06	24	Pn	Pn	10 31 51.8	+2.2
KON				Sn	Sn	10 32 24.4	-1.8
KONO	Kongsberg	3.06	24	eP	Pn	10 31 51.5	+2.0
KONO				eS	Sn	10 32 24.6	-1.5
KONO	Kongsberg	3.06	24	eP	Pn	10 31 51.5	+2.0
KONO				eS	Sn	10 32 24.6	-1.5
VANU	Vaenersborg	3.10	57	P	Pn	10 31 52.0	+2.0
VANU				S	Sn	10 32 24.2	-2.8
BORU	Boraas	3.14	74	i P	Pn	10 31 53.0	+2.4
BORU				i P	Pn	10 31 53.0	+2.4
BORU	Boraas	3.14	74	P	Pn	10 31 52.8	+2.1
BORU				S	Sn	10 32 25.6	-2.6
BORU	Boraas	3.14	74	i P	Pn	10 31 53.0	+2.4
BSEG	Bad Segeberg	3.46	147	i P	Pn	10 31 57.8	+2.7
BSEG				i P	Pn	10 31 57.8	+2.7
BSEG	Bad Segeberg	3.46	147	i P	Pn	10 31 57.8	+2.7
BSEG	Bad Segeberg	3.46	147	eSg	Sg	10 32 55.2	+3.0
BER	Bergen	3.64	346	eP	Pn	10 32 00.0	+2.6
BER				eS	Sn	10 32 38.6	-1.7
BER				IAML		10 32 40.1	
	comp=E,49nm,0.3s						
BER				IAML		10 32 40.1	
	comp=N,36nm,0.3s						
BER	Bergen	3.64	346	i P	Pn	10 31 58.6	+1.2
BER				i P	Pn	10 31 58.6	+1.2
BER				⇑iP	Pb	10 32 00.1	-5.4
BER				i S	Sn	10 32 38.4	-2.0
BER				i S	Sn	10 32 38.4	-2.0
BER				eS	Sb	10 32 38.7	-11
BER				IAML		10 32 40.1	
	comp=N,36nm,0.3s						
BER				IAML		10 32 40.1	
	comp=E,49nm,0.3s						
BER				IAML		10 32 41.5	
	comp=Z,55nm,0.2s						
BER	Bergen	3.64	346	⇑iP	Pn	10 32 00.1	+2.6
BER				eS	Sn	10 32 38.7	-1.7
BER				IAML		10 32 41.5	
	comp=Z,55nm,0.2s						
LUNU	Lund	3.73	107	P	Pn	10 32 00.9	+2.2
DEL	Delary	3.73	94	i P	Pn	10 32 01.0	+2.3
DEL				i P	Pn	10 32 01.0	+2.3
DEL				i P	Pb	10 32 01.5	-5.6
DEL				i P	Pb	10 32 01.5	-5.6
DEL				i S	Sn	10 32 40.5	-2.2
DEL				i S	Sn	10 32 40.5	-2.2
DEL	Delary	3.73	94	P	Pn	10 32 01.3	+2.6
DEL				S	Sn	10 32 40.5	-2.2
DEL	Delary	3.73	94	i P	Pn	10 32 01.5	+2.7
DEL				i S	Sn	10 32 40.5	-2.2
ASK	Askoy	3.75	345	⇑iP	Pn	10 32 01.3	+2.3
ASK				eS	Sn	10 32 41.2	-1.9
ASK				IAML		10 33 03.9	
	comp=Z,86nm,0.3s						
ASK	Askoy	3.75	345	⇑iP	Pn	10 32 01.3	+2.3
ASK				eS	Sn	10 32 41.2	-1.9
ASK				IAML		10 33 03.9	
	comp=Z,86nm,0.3s						
FKPU	Falk	3.77	67	P	Pn	10 32 01.9	+2.6
NASU	Vaermlandsnaes	3.82	55	P	Pn	10 32 01.6	+1.6
SKAR	Skarslia	3.85	8	⇑eP	Pn	10 32 03.4	+2.8
SKAR				eS	Sn	10 32 44.6	-1.3
SKAR	Skarslia	3.85	8	⇑eP	Pn	10 32 03.4	+2.8
SKAR				eS	Sn	10 32 44.6	-1.3
RGN	Rugen	4.20	121	eSn	Sn	10 32 55.0	+0.8
VXJU	Vaexsjoe	4.27	86	P	Pn	10 32 08.0	+1.8
HYA	Hoyanger	4.32	354	⇑iP	Pn	10 32 09.7	+2.8
HYA				eS	Sn	10 32 55.8	-1.5
HYA				IAML		10 33 25.6	
	comp=Z,49nm,0.5s						
HYA	Hoyanger	4.32	354	⇑iP	Pn	10 32 09.7	+2.8
HYA				eS	Sn	10 32 55.8	-1.5
HYA				IAML		10 33 25.6	
	comp=Z,49nm,0.5s						
RETH	Rethem/Aller,	4.35	162	ePn	Pn	10 32 11.4	+4.2
RETH				eSn	Sn	10 32 57.1	-0.8
NAO	NORSAR Subarra	4.39	24	Pn	Pn	10 32 09.0	+1.2
NAO	NORSAR Subarra	4.39	24	Pn	Pn	10 32 09.0	+1.2
NAO	NORSAR Subarra	4.39	24	Pn	Pn	10 32 09.0	+1.2
NC6	NORSAR Subarra	4.47	28	Pn	Pn	10 32 09.9	+0.9
NC6	NORSAR Subarra	4.47	28	Pn	Pn	10 32 09.9	+0.9
NC6	NORSAR Subarra	4.47	28	Pn	Pn	10 32 09.9	+0.9
EKSU	Eksjoe	4.48	78	P	Pn	10 32 11.5	+2.4
NRA0	NORESS Array S	4.49	29	Pn	Pn	10 32 10.3	+1.2
	baz=213,slow=14						
NRA0				Sn	Sn	10 32 59.8	-1.6
	baz=214,slow=22						
NRA0	NORESS Array S	4.49	29	Pn	Pn	10 32 10.3	+1.2
	baz=213,slow=14						
NRA0				Sn	Sn	10 32 59.8	-1.6
	baz=214,slow=22						
NRA0	NORESS Array S	4.49	29	Pn	Pn	10 32 10.3	+1.2
	baz=213,slow=14						
NRA0				Sn	Sn	10 32 59.8	-1.6
	baz=214,slow=22						
NBO	NORSAR Subarra	4.56	23	Pn	Pn	10 32 11.7	+1.5
ASKU	Askersund	4.56	61	P	Pn	10 32 12.2	+2.0
IBBN	Ibbenburen	4.60	175	eSn	Sn	10 33 03.7	-0.4
NB2	NORSAR Subarra	4.67	25	Pn	Pn	10 32 13.0	+1.3
	baz=203,slow=14						
NB2	NORSAR Subarra	4.67	25	Pn	Pn	10 32 13.0	+1.3
	baz=203,slow=14						
NB2	NORSAR Subarra	4.67	25	Pn	Pn	10 32 13.0	+1.3
	baz=203,slow=14						
NOA	NORSAR Array B	4.67	25	Pn	Pn	10 32 12.2	+0.6
	comp=Z,0.1nm,0.3s,baz=211,slow=12,SNR=21						
NOA				Sn	Sn	10 33 01.0	-4.9
	comp=Z,0.6nm,0.3s,baz=90,slow=8.4,SNR=7.2						
NOA				Lg	Lg	10 33 21.1	
	comp=Z,0.8nm,0.3s,baz=280,slow=17,SNR=3.4						
UDD	Uddeholm	4.67	44	P	Pn	10 32 13.4	+1.7
LNKU	Linkoeping	4.70	70	P	Pn	10 32 14.2	+2.2
BSD	Bornholm Skovb	4.70	109	i P	Pn	10 32 14.8	+2.7
BSD				i P	Pn	10 32 14.8	+2.7
BSD				i S	Sn	10 33 02.9	-3.8
BSD				i S	Sn	10 33 02.9	-3.8
BSD				IAML		10 33 32.6	
	comp=Z,6.1nm,0.1s						
BSD				IAML		10 33 32.6	
	comp=Z,6.1nm,0.1s						
BSD	Bornholm Skovb	4.70	109	i P	Pn	10 32 14.8	+2.7
BSD				i S	Sn	10 33 02.9	-3.8
BSD				IAML		10 33 32.6	
	comp=Z,6.1nm,0.1s						
BSD	Bornholm Skovb	4.70	109	ePn	Pn	10 32 15.2	+3.1
BSD				ePg	Pg	10 32 37.2	+6.0
BSD				eSn	Sn	10 33 03.6	-3.1
NRDL	Niedersach Rie	4.72	157	eSn	Sn	10 33 05.5	-1.5
HFS	Hagfors	4.73	44	Pn	Pn	10 32 13.9	+1.4
	baz=229,slow=16						
HFS				Sn	Sn	10 33 03.8	-3.6
	baz=222,slow=28						
HFS	Hagfors	4.73	44	Pn	Pn	10 32 13.9	+1.4
	baz=229,slow=16						
HFS				Sn	Sn	10 33 03.8	-3.6
	baz=222,slow=28						
HFS	Hagfors	4.73	44	Pn	Pn	10 32 13.9	+1.4
	baz=229,slow=16						
HFS				Sn	Sn	10 33 03.8	-3.6
	baz=222,slow=28						
NC2	NORSAR Subarra	4.80	22	Pn	Pn	10 32 15.1	+1.5
NC2	NORSAR Subarra	4.80	22	Pn	Pn	10 32 15.1	+1.5
NC2	NORSAR Subarra	4.80	22	Pn	Pn	10 32 15.1	+1.5
BLEU	Blekinge	4.82	93	i P	Pn	10 32 15.8	+2.0
BLEU				i P	Pn	10 32 15.8	+2.0
BLEU	Blekinge	4.82	93	P	Pn	10 32 16.0	+2.2
BLEU	Blekinge	4.82	93	i P	Pn	10 32 15.8	+2.0
NC4	NORSAR Subarra	4.82	27	Pn	Pn	10 32 15.2	+1.4
NC4	NORSAR Subarra	4.82	27	Pn	Pn	10 32 15.2	+1.4
NC4	NORSAR Subarra	4.82	27	Pn	Pn	10 32 15.2	+1.4
FOO	Floro	4.85	348	eP	Pn	10 32 16.8	+2.7
FOO	Floro	4.85	348	eP	Pn	10 32 16.6	+2.4
FOO				eS	Sn	10 33 07.8	-2.4
FOO	Floro	4.85	348	eP	Pn	10 32 16.6	+2.4
FOO				eS	Sn	10 33 07.8	-2.4
NC3	NORSAR Subarra	4.91	25	Pn	Pn	10 32 16.7	+1.8
NC3	NORSAR Subarra	4.91	25	Pn	Pn	10 32 16.7	+1.8
NC3	NORSAR Subarra	4.91	25	Pn	Pn	10 32 16.7	+1.8
GDLE	Glaisdale, N Y	5.14	245	eP	Pn	10 32 21.4	+3.2
GDLE				eS	Sn	10 33 16.3	-1.2
GDLE				IAML		10 33 21.4	
	comp=E,99nm,0.2s						
GDLE				IAML		10 33 25.5	
	comp=N,139nm,0.4s						
GDLE	Glaisdale, N Y	5.14	245	eP	Pn	10 32 21.4	+3.2
GDLE				eS	Sn	10 33 16.3	-1.2
GDLE				IAML		10 33 21.4	
	comp=E,99nm,0.2s						
GDLE				IAML		10 33 25.5	
	comp=N,139nm,0.4s						
GDLE	Glaisdale, N Y	5.14	245	eP	Pn	10 32 21.4	+3.2
GDLE				eS	Sn	10 33 16.3	-1.2
FLTG	Flechtingen	5.14	151	eSn	Sn	10 33 13.4	-4.0
ASSE	Asse, Remlinge	5.19	155	i P	Pn	10 32 22.4	+3.7
ASSE				i P	Pn	10 32 22.4	+3.7
ASSE				i S	Sn	10 33 15.7	-2.8
ASSE				i S	Sn	10 33 15.7	-2.8
ASSE	Asse, Remlinge	5.19	155	i P	Pn	10 32 22.4	+3.7
ASSE				i S	Sn	10 33 15.7	-2.8
DOMB	Dombas	5.27	10	eP	Pn	10 32 23.1	+3.3
DOMB				eS	Sn	10 33 19.3	-1.3
DOMB	Dombas	5.27	10	eP	Pn	10 32 23.1	+3.3
DOMB				eS	Sn	10 33 19.3	-1.3
DRUM	Mains of Drumt	5.29	274	eP	Pn	10 32 23.6	+3.5
DRUM				eS	Sn	10 33 17.5	-3.5
DRUM				IAML		10 33 21.9	
	comp=E,116nm,0.5s						
DRUM				IAML		10 33 22.7	
	comp=N,129nm,0.6s						
DRUM	Mains of Drumt	5.29	274	eP	Pn	10 32 23.6	+3.5
DRUM				eS	Sn	10 33 17.5	-3.5
DRUM				IAML		10 33 21.9	
	comp=E,116nm,0.5s						
DRUM				IAML		10 33 22.7	
	comp=N,129nm,0.6s						
DRUM	Mains of Drumt	5.29	274	eP	Pn	10 32 23.6	+3.5
DRUM				eS	Sn	10 33 17.5	-3.5
AKN	Aaknes	5.31	359	Pn	Pn	10 32 23.3	+2.8
AKN				Sn	Sn	10 33 19.6	-2.1
AKN	Aaknes	5.31	359	Pn	Pn	10 32 23.3	+2.8
AKN				Sn	Sn	10 33 19.6	-2.1
AKN	Aaknes	5.31	359	Pn	Pn	10 32 23.3	+2.8
AKN				Sn	Sn	10 33 19.6	-2.1
CLZ	Clausthal	5.39	158	ePn	Pn	10 32 25.5	+3.8
CLZ				eSn	Sn	10 33 20.5	-3.2
BUG	Bochum--Univer	5.46	179	eSn	Sn	10 33 23.9	-1.3
LMK	Market Rasen	5.49	234	eS	Sn	10 33 24.7	-1.4
LMK				IAML		10 33 30.8	
	comp=E,109nm,0.2s						
LMK				IAML		10 33 31.1	
	comp=N,154nm,0.3s						
LMK	Market Rasen	5.49	234	eS	Sn	10 33 24.7	-1.4
LMK				IAML		10 33 30.8	
	comp=E,109nm,0.2s						
EDMD	Edmundbyers	5.53	252	eP	Pn	10 32 26.2	+2.7
EDMD				IAML		10 33 28.6	
	comp=N,118nm,0.2s						
EDMD				IAML		10 33 29.5	
	comp=E,104nm,0.2s						
EDMD	Edmundbyers	5.53	252	eP	Pn	10 32 26.2	+2.7
EDMD				IAML		10 33 28.6	
	comp=N,118nm,0.2s						
EDMD				IAML		10 33 29.5	
	comp=E,104nm,0.2s						
EDMD	Edmundbyers	5.53	252	eP	Pn	10 32 26.2	+2.7
EDMD				IAML		10 33 28.6	
	comp=N,118nm,0.2s						
GTTG	Gottingen	5.60	162	eSn	Sn	10 33 27.4	-1.4
EDU	Dundee	5.61	271	eP	Pn	10 32 28.2	+3.6
EDU	Dundee	5.61	271	eP	Pn	10 32 28.2	+3.6
WACR	West Acre	5.62	225	eP	Pn	10 32 28.5	+3.7
WACR				eS	Sn	10 33 28.5	-0.8
WACR				IAML		10 33 31.8	
	comp=E,59nm,0.2s						
WACR				IAML		10 33 33.5	
	comp=N,58nm,0.4s						
WACR	West Acre	5.62	225	eP	Pn	10 32 28.5	+3.7
WACR				eS	Sn	10 33 28.5	-0.8
WACR				IAML		10 33 31.8	
	comp=E,59nm,0.2s						
MCD	Coleburn Disti	5.70	281	eP	Pn	10 32 29.1	+3.4
MCD	Coleburn Disti	5.70	281	eP	Pn	10 32 29.1	+3.4
MCD	Coleburn Disti	5.70	281	eP	Pn	10 32 29.1	+3.4
MOL	Molde	5.71	2	eP	Pn	10 32 28.1	+2.2
MOL	Molde	5.71	2	eP	Pn	10 32 28.2	+2.3
MOL				eS	Sn	10 33 28.1	-3.3
MOL	Molde	5.71	2	eP	Pn	10 32 28.2	+2.3
MOL				eS	Sn	10 33 28.1	-3.3
KASTN	Kahler Asten	5.74	172	eSn	Sn	10 33 30.2	-2.2
HPK	Haverah Park	5.79	243	eP	Pn	10 32 30.4	+3.3
HPK				IAML		10 33 36.2	
	comp=E,121nm,0.3s						
HPK				IAML		10 33 36.6	
	comp=N,84nm,0.2s						
HPK	Haverah Park	5.79	243	eP	Pn	10 32 30.4	+3.3
HPK				IAML		10 33 36.2	
	comp=E,121nm,0.3s						
HPK				IAML		10 33 36.6	
	comp=N,84nm,0.2s						
HPK	Haverah Park	5.79	243	eP	Pn	10 32 30.4	+3.3
HPK				IAML		10 33 36.2	
	comp=E,121nm,0.3s						
EKA	Eskdalemuir Ar	5.98	259	Pn	Pn	10 32 32.4	+2.8
	baz=76,slow=13,SNR=33						
EKA				Sn	Sn	10 33 33.2	-4.8
	baz=78,slow=23,SNR=7.4						
EKA	Eskdalemuir Ar	5.98	259	Pn	Pn	10 32 32.5	+2.9
EKA				Sn	Sn	10 33 34.0	-4.0
EKA	Eskdalemuir Ar	5.98	259	Pn	Pn	10 32 32.5	+2.9
EKA				Sn	Sn	10 33 34.0	-4.0
EKA	Eskdalemuir Ar	5.98	259	Pn	Pn	10 32 32.5	+2.9
EKA				Sn	Sn	10 33 34.0	-4.0
ESK	Eskdalemuir	6.01	259	eP	Pn	10 32 32.8	+2.8
ESK				IAML		10 33 40.0	
	comp=N,37nm,0.2s						
ESK				IAML		10 33 41.2	
	comp=E,32nm,0.2s						
ESK	Eskdalemuir	6.01	259	eP	Pn	10 32 32.8	+2.8
ESK				IAML		10 33 40.0	
	comp=N,37nm,0.2s						
ESK				IAML		10 33 41.2	
	comp=E,32nm,0.2s						
ESK	Eskdalemuir	6.01	259	eP	Pn	10 32 32.8	+2.8
ESK				IAML		10 33 40.0	
	comp=N,37nm,0.2s						
BIGH	Upper Bighouse	6.15	290	eP	Pn	10 32 34.5	+2.5
BIGH				eS	Sn	10 33 37.3	-4.9
BIGH				IAML		10 33 41.6	
	comp=N,76nm,0.2s						
BIGH				IAML		10 33 43.4	
	comp=E,70nm,0.2s						
BIGH	Upper Bighouse	6.15	290	eP	Pn	10 32 34.5	+2.5
BIGH				eS	Sn	10 33 37.3	-4.9
BIGH				IAML		10 33 41.6	
	comp=N,76nm,0.2s						
BIGH				IAML		10 33 43.4	
	comp=E,70nm,0.2s						
BIGH	Upper Bighouse	6.15	290	eP	Pn	10 32 34.5	+2.5
BIGH				eS	Sn	10 33 37.3	-4.9
BIGH				IAML		10 33 41.6	
	comp=N,76nm,0.2s						
LBWR	Ladybower, Pea	6.17	239	eP	Pn	10 32 35.5	+3.3
LBWR				IAML		10 33 36.3	
	comp=N,112nm,0.2s						
LBWR				IAML		10 33 44.3	
	comp=E,109nm,0.2s						
LBWR	Ladybower, Pea	6.17	239	eP	Pn	10 32 35.5	+3.3
LBWR				IAML		10 33 36.3	
	comp=N,112nm,0.2s						
LBWR				IAML		10 33 44.3	
	comp=E,109nm,0.2s						
LBWR	Ladybower, Pea	6.17	239	eP	Pn	10 32 35.5	+3.3
LBWR				IAML		10 33 36.3	
	comp=N,112nm,0.2s						
INVG	Invergeldie, C	6.19	270	eP	Pn	10 32 36.0	+3.4
INVG				IAML		10 33 43.9	
	comp=E,21nm,0.3s						
INVG				IAML		10 33 44.4	
	comp=N,25nm,0.2s						
INVG	Invergeldie, C	6.19	270	eP	Pn	10 32 36.0	+3.4
INVG				IAML		10 33 43.9	
	comp=E,21nm,0.3s						
INVG				IAML		10 33 44.4	
	comp=N,25nm,0.2s						
INVG	Invergeldie, C	6.19	270	eP	Pn	10 32 36.0	+3.4
INVG				IAML		10 33 43.9	
	comp=E,21nm,0.3s						
AHRW	Bad Neuenahr-A	6.36	180	eSn	Sn	10 33 47.0	-0.3
CLL	Collm	6.56	146	ePn	Pn	10 32 44.0	+6.4
CLL				e		10 32 50.0	
CLL				eSn	Sn	10 33 46.0	-6.4
CLL				e		10 35 00.0	
NEWG	New Galloway	6.63	259	eP	Pn	10 32 42.0	+3.4
NEWG	New Galloway	6.63	259	eP	Pn	10 32 42.0	+3.4
TNS	Taunus Mts	6.72	173	ePn	Pn	10 32 43.6	+3.8
TNS				eSn	Sn	10 33 54.8	-1.6
KAC	Achnashellach	6.80	280	eP	Pn	10 32 43.4	+2.6
KAC	Achnashellach	6.80	280	eP	Pn	10 32 43.4	+2.6
KAC	Achnashellach	6.80	280	eP	Pn	10 32 43.4	+2.6
GIVF	Givet	6.94	193	eP	Pn	10 32 48.2	+5.4
GIVF				eSn	Sn	10 33 58.2	-3.5
	comp=E,9.0nm,0.3s						
GAL1	Galloway	6.97	258	eP	Pn	10 32 46.0	+2.8
GAL1	Galloway	6.97	258	eP	Pn	10 32 46.0	+2.8
GAL1	Galloway	6.97	258	eP	Pn	10 32 46.0	+2.8
BAIF	Baives	7.06	196	ePn	Pn	10 32 45.8	+1.3
BAIF	Baives	7.06	196	eP	Pn	10 32 49.4	+4.9
BAIF				eSn	Sn	10 34 00.7	-4.0
	comp=E,4.0nm,0.4s						
WLF	Walferdange	7.26	185	eSn	Sn	10 34 08.5	-1.1
NKC	Novy Kostel	7.37	152	ePN	Pn	10 32 56.7	+7.9
NKC				eSN	Sn	10 34 09.0	-3.4
MCH1	Michaelchurch	7.68	235	eP	Pn	10 32 56.0	+3.1
MCH1				IAML		10 34 21.4	
	comp=E,37nm,0.5s						
MCH1				IAML		10 34 21.7	
	comp=N,28nm,0.2s						

MCH1	**Michaelchurch**	**7.68**	**235**	eP	**Pn**	**10 32 56.0**	**+3.1**
MCH1				IAML		10 34 21.4	
	comp=E,37nm,0.5s						
MCH1				IAML		10 34 21.7	
	comp=N,28nm,0.2s						
MCH1	**Michaelchurch**	**7.68**	**235**	eP	**Pn**	**10 32 56.0**	**+3.1**
MCH1				IAML		10 34 21.4	
	comp=E,37nm,0.5s						
CHVC	**Chvalec**	**8.22**	**136**	eSN	Sn	10 34 24.8	-8.5
UPC	**Upice**	**8.27**	**137**	eSN	Sn	10 34 27.5	-6.9
PAGF	**Fort de Pagny**	**8.39**	**187**	eP	Pn	10 33 09.3	+6.6
CDF	**Champ du Feu**	**8.49**	**179**	eP	Pn	10 33 11.8	+7.6
CDF				eSn	**Sn**	**10 34 37.8**	**-2.2**
MEZF	**Maizieres J'vi**	**8.49**	**190**	ePn	**Pn**	**10 33 05.2**	**+1.1**
MEZF				eSn	**Sn**	**10 34 36.8**	**-3.1**
DPC	**Dobruska-Polom**	**8.51**	**136**	eSN	Sn	10 34 32.3	-8.2
HINF	**Hinteralfeld**	**9.08**	**181**	eP	Pn	10 33 18.8	+6.5
FLN	**La Foliniere**	**9.35**	**213**	ePn	**Pn**	**10 33 15.7**	**-0.2**
	baz=34						
FLN				eSn	Sn	10 34 55.2	-5.8
	comp=E,4.6nm,0.2s						
LDF	**La Druitiere**	**9.40**	**211**	ePn	**Pn**	**10 33 17.5**	**+1.0**
LDF				eSn	Sn	10 34 55.9	-6.3
	comp=E,2.1nm,0.2s						
GRR	**Gorron**	**9.80**	**213**	ePn	**Pn**	**10 33 22.2**	**+0.2**
GRR	**Gorron**	**9.80**	**213**	eP	Pn	10 33 28.0	+6.0
GRR				eSn	Sn	10 35 06.1	-5.8
	comp=E,6.8nm,0.3s						
LOR	**Lormes**	**9.84**	**193**	ePn	**Pn**	**10 33 24.3**	**+1.7**
	baz=12						
LOR	**Lormes**	**9.84**	**193**	eP	Pn	10 33 32.3	+10
	baz=21						
LOR				eSn	Sn	10 35 07.6	-5.5
	comp=E,2.6nm,0.4s						
CABF	**La Chapelle**	**10.31**	**184**	eP	Pn	10 33 36.7	+7.6
AVF	**Avril sur Loir**	**10.38**	**195**	ePn	**Pn**	**10 33 30.8**	**+0.9**
AVF	**Avril sur Loir**	**10.38**	**195**	eP	Pn	10 33 35.9	+6.0
AVF				eSn	**Sn**	**10 35 22.1**	**-4.1**
SMF	**Signal de Mont**	**10.46**	**193**	ePn	**Pn**	**10 33 31.8**	**+0.8**
SMF				eSn	Sn	10 35 22.6	-5.6
	comp=E,1.7nm,0.3s						
SGMF	**Saint Gilles**	**10.46**	**218**	ePn	**Pn**	**10 33 30.9**	**-0.2**
SGMF				eSn	Sn	10 35 20.9	-7.3
	comp=E,9.8nm,0.5s						
ROSF	**Rostrenen**	**10.64**	**221**	ePn	**Pn**	**10 33 33.7**	**+0.2**
ROSF				eSn	Sn	10 35 25.5	-7.1
	comp=E,7.9nm,0.3s						
BGF	**Bois d'Agland**	**10.68**	**196**	ePn	**Pn**	**10 33 35.3**	**+1.2**
BGF				eSn	Sn	10 35 28.4	-5.2
	comp=E,8.3nm,0.4s						
FIA0	**FINESS Array S**	**10.72**	**57**	Pn	**Pn**	**10 33 35.1**	**+0.6**
	baz=244,slow=12						
FIA0				Sn	Sn	10 35 25.4	-9.0
	baz=252,slow=22						
FIA0	**FINESS Array S**	**10.72**	**57**	Pn	**Pn**	**10 33 35.1**	**+0.6**
	baz=244,slow=12						
FIA0				Sn	Sn	10 35 25.4	-9.0
	baz=252,slow=22						
FIA0	**FINESS Array S**	**10.72**	**57**	Pn	**Pn**	**10 33 35.1**	**+0.6**
	baz=244,slow=12						
FIA0				Sn	Sn	10 35 25.4	-9.0
	baz=252,slow=22						
FINES	**FINESS Array B**	**10.72**	**57**	Pn	**Pn**	**10 33 35.4**	**+0.9**
	comp=E,3.9nm,0.3s,baz=251,slow=12,SNR=102						
FINES				Sn	Sn	10 35 26.3	-8.0
	comp=E,1.3nm,0.3s,baz=256,slow=21,SNR=5.9						
FINES				Lg	Lg	10 36 41.0	
	comp=E,0.7nm,0.3s,baz=257,slow=26,SNR=3.2						
QUIF	**Quistinic**	**10.96**	**219**	ePn	**Pn**	**10 33 37.9**	**0.0**
QUIF	**Quistinic**	**10.96**	**219**	eP	Pn	10 33 44.9	+7.0
QUIF				eSn	Sn	10 35 33.5	-6.9
	comp=E,3.2nm,0.3s						
TCF	**Toulx Ste Croi**	**11.04**	**198**	ePn	**Pn**	**10 33 40.4**	**+1.3**
MFF	**Saint Martin d**	**11.24**	**207**	ePn	**Pn**	**10 33 42.3**	**+0.6**
MFF				eSn	Sn	10 35 40.1	-7.2
	comp=E,3.5nm,0.4s						
ORIF	**Oris-en-Rattie**	**12.01**	**184**	eP	Pn	10 33 58.7	+6.3
LFF	**La Frestale**	**12.62**	**201**	ePn	**Pn**	**10 34 01.8**	**+1.2**
EPF	**Esparros**	**14.53**	**200**	eSn	Sn	10 36 57.5	-10
ARA0	**ARCESS Array S**	**15.05**	**25**	P	**Pn**	**10 34 32.2**	**-1.4**
	baz=212,slow=14						
ARA0	**ARCESS Array S**	**15.05**	**25**	P	**Pn**	**10 34 32.2**	**-1.4**
	baz=212,slow=14						
ARA0	**ARCESS Array S**	**15.05**	**25**	P	**Pn**	**10 34 32.2**	**-1.4**
	baz=212,slow=14						
ARCES	**ARCESS Array B**	**15.05**	**25**	Pn	**Pn**	**10 34 30.8**	**-2.8**
	baz=211,slow=14,SNR=15						
ARCES				Sn	Sn	10 37 07.2	-13
	baz=209,slow=24,SNR=1.3						

RSNC 21 10:50:41.8±1.2**,6°.84N×73°.17W,h148^{km}**±5^{km}**,ML2.9, Mw3.5,2C-2D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.24**	**184**	eP	Pn	10 51 01.6	-0.6
BARC				⇑iP		10 51 01.7	
BARC				eS	Sn	10 51 16.4	-1.4
BRRC	**Barranca, Sant**	**0.61**	**296**	⇑iP	Pn	10 51 03.5	0.0
BRRC				eS	Sn	10 51 20.3	+0.4
BRRC				i		10 51 24.3	
	comp=Z,136nm,0.3s						
PAMC	**Pamplona, Colo**	**0.68**	**43**	eP	Pn	10 51 04.7	+0.2
PAMC				eS	Sn	10 51 22.0	+0.3
RUSC	**La Rusia**	**0.94**	**175**	eP	Pn	10 51 05.9	-0.5
RUSC				eS	Sn	10 51 24.8	-0.3
RUSC				i		10 51 25.5	
	comp=Z,108nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.32**	**257**	eP	Pn	10 51 08.0	-1.3
PTBC				eS	Sn	10 51 29.5	-0.8
PTBC				i		10 51 36.6	
	comp=Z,114nm,0.3s						
OCAC	**Ocana**	**1.40**	**354**	eP	Pn	10 51 09.8	-0.5
OCAC				eS	Sn	10 51 31.8	-0.4
OCAC				i		10 51 38.2	
	comp=Z,135nm,0.2s						
TAMC	**Tame, Arauca**	**1.42**	**106**	⇓iP	Pn	10 51 10.2	-0.3
TAMC				eS	Sn	10 51 31.9	-0.4
SPBC	**San Pablo de B**	**1.48**	**218**	eS	Sn	10 51 32.3	-1.2
SPBC				i		10 51 39.8	
	comp=Z,158nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.80**	**291**	eP	Pn	10 51 14.0	-0.5
ZARC				eS	Sn	10 51 39.0	-0.6
ZARC				i		10 51 47.6	
	comp=Z,60nm,0.2s						
NORC	**Norcasia**	**2.11**	**233**	eP	Pn	10 51 17.4	-0.8
NORC				eS	Sn	10 51 45.1	-1.0
NORC				i		10 51 50.4	
	comp=Z,84nm,0.2s						
SMLC	**San Martn de**	**2.15**	**335**	eP	Pn	10 51 17.9	-0.7
SMLC				eS	Sn	10 51 46.7	-0.2
SMLC				i		10 51 50.2	
	comp=Z,64nm,0.1s						
CHIC	**Chingaza**	**2.26**	**194**	eP	Pn	10 51 19.7	-0.7
CHIC				eS	Sn	10 51 49.1	-0.9
CHIC				i		10 51 52.7	
	comp=Z,63nm,0.4s						
ROSC	**El Rosal**	**2.29**	**210**	eP	Pn	10 51 21.4	+0.7
ROSC				eS	Sn	10 51 52.0	+1.5
ROSC				i		10 51 56.6	
	comp=Z,105nm,0.3s						
HELC	**Santa Helena**	**2.44**	**255**	eP	Pn	10 51 23.1	+0.7
HELC				eS	Sn	10 51 52.9	-0.6
HELC				i		10 52 01.2	
	comp=Z,44nm,0.2s						
UREC	**San Jos de Ur**	**2.52**	**291**	eP	Pn	10 51 22.1	-1.0
UREC				eS	Sn	10 51 52.3	-2.6
SOCV	**Socops**	**2.70**	**58**	eP	Pn	10 51 23.5	-1.8
SOCV				eS	Sn	10 51 55.9	-3.1
GUY2C	**Guyana, Caldas**	**2.71**	**234**	⇓eP	Pn	10 51 25.7	-0.2
GUY2C				eS	Sn	10 52 00.3	+0.4
GUY2C				i		10 52 07.1	
	comp=Z,36nm,0.2s						
PTGC	**Puerto Gaitan,**	**2.81**	**159**	eP	Pn	10 51 24.7	-2.0
PTGC				ePg		10 51 26.0	
PTGC				eS	Sn	10 51 58.1	-3.4
PTGC				i		10 51 59.6	
	comp=Z,57nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.88**	**358**	eP	Pn	10 51 26.0	-1.6
LL6C				eS	Sn	10 52 01.5	-1.6
LL6C				i		10 52 08.0	
	comp=Z,18nm,0.5s						
CBOC	**Ciudad Bolivar**	**2.99**	**251**	eP	Pn	10 51 29.5	+0.4
CBOC				eS	Sn	10 52 04.6	-1.0
CBOC				i		10 52 21.6	
	comp=Z,16nm,0.4s						
ANIL	**Santa Ana**	**3.22**	**224**	eP	Pn	10 51 33.0	+0.7
ANIL				eS	Sn	10 52 11.4	+0.2
ANIL				i		10 52 18.6	
	comp=Z,114nm,0.3s						
PRAC	**Prado**	**3.54**	**209**	eP	Pn	10 51 35.6	-0.5
PRAC				eS	Sn	10 52 17.2	-1.0
PRAC				i		10 52 21.8	
	comp=Z,36nm,0.3s						
ORTC	**Ortega, Tolima**	**3.57**	**216**	eP	Pn	10 51 36.0	-0.5
ORTC				eS	Sn	10 52 19.5	+0.6
ORTC				i		10 52 25.7	
	comp=Z,21nm,0.3s						
SJCC	**San Jacinto, C**	**3.64**	**327**	eP	Pn	10 51 35.4	-1.9
SJCC				eS	Sn	10 52 17.1	-3.3
SJCC				i		10 52 24.6	
	comp=Z,13nm,0.4s						
PLMC	**San Jos del P**	**3.65**	**238**	eP	Pn	10 51 37.0	-0.4
PLMC				eS	Sn	10 52 20.9	+0.3
PLMC				i		10 52 25.9	
	comp=Z,17nm,0.6s						
CRJC	**Cerrejon, Guaj**	**4.17**	**4**	eP	Pn	10 51 42.2	-2.1
CRJC				eS	Sn	10 52 29.3	-3.6
CRJC				i		10 52 34.2	
	comp=Z,18nm,0.1s						
MACC	**Macarena, Meta**	**4.71**	**188**	eP	Pn	10 51 48.6	-2.8
MACC				eS	Sn	10 52 39.1	-6.5

*SOME **21** 10:53:45.5, 38°.95N×73°.47E, h15^{km}*
*NNC **21** 10:53:50.4±2.5, 39°.19N×73°.51E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=19.0km s-min=11.5km az=174.0*
ISC 21 10:53:51.4±2.7**,39°.1N**±0°.1×**73°.42E**±0°.05**,h10^{km},n19, σ1^{s}.97**/28**,5C-1D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**3.59**	**13**	⇑Pn	**Pn**	**10 54 47.6**	**+0.4**
	6.1nm,0.7s						
AAK				⇑Lg	Lg	10 55 37.5	
	16nm,0.9s						
MRKS	**Merke**	**3.60**	**358**	eP	**Pb**	**10 54 55.8**	**+0.5**
	7.6nm,0.3s						
MRKS				eS	**Sg**	**10 55 46.4**	**-0.7**
	16nm,0.6s						
MRKS	**Merke**	**3.60**	**358**	Pg	**Pb**	**10 54 55.8**	**+0.5**
	7.6nm,0.3s						
MRKS				Lg	Lg	10 55 46.4	
	16nm,0.6s						
IUG	**Iuzhnay**	**3.96**	**320**	eP	**Pb**	**10 55 01.2**	**-0.1**
	108nm,0.5s						
IUG				eS	**Sg**	**10 55 56.2**	**-2.3**
	48nm,1.2s						
IUG	**Iuzhnay**	**3.96**	**320**	Pg	**Pb**	**10 55 01.2**	**-0.1**
	108nm,0.5s						
IUG				Lg	Lg	10 55 56.2	
	48nm,1.2s						
TKM2	**Tokmak 2**	**4.12**	**23**	⇑Pg	**Pb**	**10 55 03.4**	**-0.8**
	3.4nm,0.6s						
TKM2				⇑Lg	Lg	10 55 57.9	
	4.0nm,0.6s						
KST	**Kastek**	**4.35**	**25**	eP	**Pb**	**10 55 09.3**	**+1.4**
	5.1nm,0.8s						
KST				eS	**Sg**	**10 56 09.4**	**-1.6**
	11nm,0.8s						
KST	**Kastek**	**4.35**	**25**	Pg	**Pg**	**10 55 13.5**	**-1.1**
	6.1nm,0.4s						
KST				Lg	Lg	10 56 16.9	
	11nm,0.8s						
SGDS	**Sogindy**	**4.40**	**12**	Pg	**Pb**	**10 55 08.1**	**-0.7**
	6.1nm,0.6s						
SGDS				Lg	Lg	10 56 07.6	
	4.6nm,0.7s						
DGS	**Degeres**	**4.47**	**23**	eP	**Pb**	**10 55 11.6**	**+1.7**
	4.3nm,0.6s						
DGS				eS	**Sg**	**10 56 13.3**	**-1.4**
	4.4nm,0.7s						
KK02	**Karatay Array**	**4.53**	**332**	⇑Pn	**Pn**	**10 55 00.3**	**+0.3**
	2.1nm,0.6s						
KK02				⇓Sn	**Sn**	**10 55 55.7**	**+3.0**
	7.1nm,0.7s						
TNSS	**Tian-Shan**	**4.72**	**33**	eP	**Pb**	**10 55 14.6**	**+0.2**
	3.3nm,0.6s						
TNSS				eS	**Sg**	**10 56 18.7**	**-4.2**
	1.9nm,0.5s						
TNSS	**Tian-Shan**	**4.72**	**33**	Pg	**Pb**	**10 55 14.6**	**+0.2**
	3.3nm,0.6s						
TNSS				Lg	Lg	10 56 18.7	
	1.9nm,0.5s						
BRLS	**Borolday**	**4.74**	**326**	eP	**Pb**	**10 55 12.2**	**-2.2**
	1.8nm,0.5s						
BRLS				eS	**Sb**	**10 56 15.2**	**+3.6**
	6.6nm,0.8s						
BRLS	**Borolday**	**4.74**	**326**	Pg	**Pb**	**10 55 12.2**	**-2.2**
	1.8nm,0.5s						
BRLS				Lg	Lg	10 56 15.2	
	6.6nm,0.8s						
KTBS	**Karatobe**	**5.18**	**27**	eP	**Pb**	**10 55 23.1**	**+0.9**
	2.1nm,0.8s						
KTBS				eS	**Sg**	**10 56 34.4**	**-3.4**
	5.2nm,0.6s						
KTBS	**Karatobe**	**5.18**	**27**	Pg	**Pb**	**10 55 23.1**	**+0.9**
	2.1nm,0.8s						
KTBS				Lg	Lg	10 56 34.4	
	5.2nm,0.6s						
KUU	**Kurty**	**5.23**	**24**	eP	**Pb**	**10 55 25.4**	**+2.6**
	2.9nm,0.6s						
KUU				eS	**Sg**	**10 56 37.4**	**-1.9**
	4.0nm,0.6s						
KUU	**Kurty**	**5.23**	**24**	Pg	**Pb**	**10 55 25.4**	**+2.6**
	2.9nm,0.6s						
KUU				Lg	Lg	10 56 37.4	
	4.0nm,0.6s						

*UCR **21** 11:06:11.1±0.7, 13°.04N×89°.07W, h51^{km}±7^{km}, ML3.7*
*SNET **21** 11:06:11.0±0.7, 13°.05N×89°.07W, h51^{km}±6^{km}, ML3.6*
*INET **21** 11:06:11.5, 13°.03N×89°.04W, h40^{km}, MW3.5*
ISC 21 11:06:11.2±2.2**,13°.0N**±0°.1×**89°.09W**±0°.05**,h42^{km}**±28^{km}**, n54,σ0^{s}.48**/64**,6C-25D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.55**	**335**	⇓iP	**Pn**	**11 06 22.4**	**-0.2**
LALI				eS	**Sn**	**11 06 31.0**	**+0.3**
LALI	**Alcalda de L**	**0.55**	**335**	⇓iP	**Pn**	**11 06 22.4**	**-0.2**
LALI				eS	**Sn**	**11 06 31.0**	**+0.3**
ALJI	**Alcalda de J**	**0.60**	**56**	⇓iP	**Pn**	**11 06 23.2**	**-0.2**
ALJI				IAML		11 06 24.0	
	comp=Z,3μm,0.2s						
ALJI	**Alcalda de J**	**0.60**	**56**	⇓iP	**Pn**	**11 06 23.2**	**-0.2**
ALJI				IAML		11 06 24.0	
	comp=Z,3μm,0.2s						
TECO	**Alcaldia de Te**	**0.62**	**29**	⇓eP	**Pn**	**11 06 23.0**	**-0.7**
SJTE	**Alcalda de S**	**0.63**	**7**	⇓iP	**Pn**	**11 06 23.1**	**-0.7**
SJTE	**Alcalda de S**	**0.63**	**7**	⇓iP	**Pn**	**11 06 23.1**	**-0.7**
LFRS	**El Faro**	**0.63**	**2**	⇓iP	**Pn**	**11 06 23.3**	**-0.6**
LFRS	**El Faro**	**0.63**	**2**	⇓iP	**Pn**	**11 06 23.3**	**-0.6**
SNET	**Serv Nac Est T**	**0.71**	**349**	⇓iP	**Pn**	**11 06 24.4**	**-0.5**
SNET				IAML		11 06 39.6	
	comp=Z,1μm,0.2s						
SNET	**Serv Nac Est T**	**0.71**	**349**	⇓iP	**Pn**	**11 06 24.4**	**-0.5**
SNET				IAML		11 06 39.6	
	comp=Z,1μm,0.2s						
OPAM	**Oficina de Pla**	**0.73**	**352**	⇑iP	**Pn**	**11 06 24.8**	**-0.3**
OPAM	**Oficina de Pla**	**0.73**	**352**	⇑iP	**Pn**	**11 06 24.8**	**-0.3**
PAVA	**Las Pavas**	**0.73**	**11**	⇓iP	**Pn**	**11 06 24.8**	**-0.5**
PAVA	**Las Pavas**	**0.73**	**11**	⇓iP	**Pn**	**11 06 24.8**	**-0.5**
UEES	**Universidad Ev**	**0.74**	**348**	⇓iP	**Pn**	**11 06 24.8**	**-0.5**
UEES	**Universidad Ev**	**0.74**	**348**	⇓iP	**Pn**	**11 06 24.8**	**-0.5**
COEB	**Comit de Eme**	**0.74**	**47**	⇓iP	**Pn**	**11 06 24.8**	**-0.5**
COEB				eS	**Sn**	**11 06 36.2**	**+0.6**
COEB				IAML		11 06 39.7	
	comp=Z,3μm,0.5s						
COEB	**Comit de Eme**	**0.74**	**47**	⇓iP	**Pn**	**11 06 24.8**	**-0.5**
COEB				eS	**Sn**	**11 06 36.2**	**+0.6**
COEB				IAML		11 06 39.7	
	comp=Z,3μm,0.5s						
JAYA	**Jayaque - finc**	**0.75**	**332**	⇓iP	**Pn**	**11 06 25.1**	**-0.5**
JAYA				eS	**Sn**	**11 06 36.0**	**+0.1**
JAYA				IAML		11 06 38.2	
	comp=Z,6μm,0.2s						
JAYA	**Jayaque - finc**	**0.75**	**332**	⇓iP	**Pn**	**11 06 25.1**	**-0.5**
JAYA				eS	**Sn**	**11 06 36.0**	**+0.1**
JAYA				IAML		11 06 38.2	
	comp=Z,6μm,0.2s						
LFU	**La Fuente**	**0.76**	**358**	⇑iP	**Pn**	**11 06 25.2**	**-0.3**
LFU	**La Fuente**	**0.76**	**358**	⇑iP	**Pn**	**11 06 25.2**	**-0.3**
BOQS	**Boqueron**	**0.77**	**346**	⇓iP	**Pn**	**11 06 25.5**	**-0.3**
BOQS				eS	**Sn**	**11 06 37.0**	**+0.6**
BOQS	**Boqueron**	**0.77**	**346**	⇓iP	**Pn**	**11 06 25.5**	**-0.3**
BOQS				eS	**Sn**	**11 06 37.0**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.79**	**26**	⇓iP	**Pn**	**11 06 25.7**	**-0.3**
SCLA				eS	**Sn**	**11 06 37.3**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.79**	**26**	⇓iP	**Pn**	**11 06 25.7**	**-0.3**
SCLA				eS	**Sn**	**11 06 37.3**	**+0.6**
PQSS	**Presa 15 de Se**	**0.81**	**39**	⇑iP	**Pn**	**11 06 25.8**	**-0.4**
CEDA	**San Andres**	**0.86**	**340**	eP	**Pn**	**11 06 26.0**	**-1.0**
CEDA	**San Andres**	**0.86**	**340**	eP	**Pn**	**11 06 26.0**	**-1.0**
PACA	**Pacayal**	**0.88**	**57**	eP	**Pn**	**11 06 27.4**	**+0.1**
PACA	**Pacayal**	**0.88**	**57**	eP	**Pn**	**11 06 27.4**	**+0.1**
LCY	**Lacayo**	**0.89**	**61**	eP	**Pn**	**11 06 27.0**	**-0.4**
LCY	**Lacayo**	**0.89**	**61**	eP	**Pn**	**11 06 27.0**	**-0.4**
CEVE	**Cerro Verde**	**0.98**	**328**	eP	**Pn**	**11 06 28.8**	**0.0**
CEVE	**Cerro Verde**	**0.98**	**328**	eP	**Pn**	**11 06 28.8**	**0.0**
SBLS	**San Blas**	**0.99**	**328**	eP	**Pn**	**11 06 28.8**	**-0.1**
SBLS	**San Blas**	**0.99**	**328**	eP	**Pn**	**11 06 28.8**	**-0.1**
SNJE	**San Jose**	**1.01**	**330**	eP	**Pn**	**11 06 28.9**	**-0.2**
SNJE	**San Jose**	**1.01**	**330**	eP	**Pn**	**11 06 28.9**	**-0.2**
TACO	**Tacachico**	**1.01**	**345**	eP	**Pn**	**11 06 28.3**	**-0.6**
TACO	**Tacachico**	**1.01**	**345**	eP	**Pn**	**11 06 28.3**	**-0.6**
RTR	**El Retiro**	**1.05**	**329**	eP	**Pn**	**11 06 29.8**	**+0.1**
RTR	**El Retiro**	**1.05**	**329**	eP	**Pn**	**11 06 29.8**	**+0.1**
NUBE	**Las Nubes**	**1.13**	**324**	i P	**Pn**	**11 06 30.4**	**-0.3**
NUBE				IAML		11 06 47.5	
	comp=Z,1μm,0.3s						
NUBE	**Las Nubes**	**1.13**	**324**	i P	**Pn**	**11 06 30.4**	**-0.3**
NUBE				IAML		11 06 47.5	
	comp=Z,1μm,0.3s						
LCND	**La Caada**	**1.21**	**75**	⇓eP	**Pn**	**11 06 31.0**	**-0.7**
LCND				IAML		11 06 48.9	
	comp=Z,1μm,0.5s						
LCND	**La Caada**	**1.21**	**75**	⇓eP	**Pn**	**11 06 31.0**	**-0.7**
LCND				IAML		11 06 48.9	
	comp=Z,1μm,0.5s						
SLOZ	**Alcaldia de Sa**	**1.23**	**327**	⇑eP	**Pn**	**11 06 32.0**	**-0.1**
CNCH	**Conchagua**	**1.25**	**77**	eP	**Pn**	**11 06 32.0**	**-0.4**
CNCH	**Conchagua**	**1.25**	**77**	eP	**Pn**	**11 06 32.0**	**-0.4**
MTO3	**Montecristo**	**1.43**	**349**	i P	**Pn**	**11 06 34.3**	**-0.6**
MTO3	**Montecristo**	**1.43**	**349**	i P	**Pn**	**11 06 34.3**	**-0.6**
ESQI	**Esquipulas**	**1.58**	**351**	eP	**Pn**	**11 06 36.6**	**-0.2**

IDC 21 11:12:12.7±999.0**,50°.45N×52°.49E,h0^{km},Error ellipse: s-maj=518.0km s-min=84.5km az=87.0,Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**3.55**	**89**	i		11 35 30.0	
	baz=274,slow=305,SNR=0.9						
I46RU	**ZALESOVO INFRA**	**20.02**	**67**	i		13 17 00.0	
	baz=269,slow=324,SNR=1.2						
I34MN	**SONGINO INFRAS**	**34.74**	**73**	i		14 45 10.0	
	baz=292,slow=342,SNR=1.1						

*NNC **21** 11:20:03.2±2.0, 48°.67N×78°.18E, h0^{km}, mb2.5, mpv2.1, Error ellipse: s-maj=26.4km s-min=4.8km az=67.0, Suspected Mining explosion.*
*IDC **21** 11:20:03.5±3.7, 48°.78N×78°.18E, h0^{km}, mb1 2.4/2, mb1mx2.0/74, mbtmp2.4/2, ML2.0/2, Error ellipse: s-maj=52.4km s-min=11.4km az=70.0*
ISC 21 11:19:54.9±6.8**,48°.5N**±0°.2×**77°.6E**±0°.5**,h0^{km},n7,σ0^{s}.46**/7**, 3C-3D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.21**	**16**	Pg	**Pg**	**11 20 37.0**	**-0.1**
	0.3nm,0.3s,baz=201,slow=16,SNR=5.8						
KURBB				Lg	Lg	11 21 04.3	
	0.4nm,0.3s,baz=182,slow=29,SNR=6.1						
KURK	**Kurchatov**	**2.31**	**16**	⇓Pn	**Pg**	**11 20 39.3**	**+0.1**
	1.2nm,0.4s						
KURK				⇑Sn	**Sb**	**11 21 06.5**	**-0.1**
	8.8nm,0.5s						
MAKZ	**Makanchi**	**3.41**	**118**	⇓Pg	**Pg**	**11 21 00.8**	**+0.5**
	0.4nm,0.6s						
MAKZ				⇑Lg	Lg	11 21 43.0	
	1.4nm,0.5s						
MK31	**Makanchi Array**	**3.60**	**117**	⇑Pg	**Pg**	**11 21 03.8**	**-0.1**
	0.1nm,0.3s,baz=307,slow=16,SNR=6.4						
MK31				⇓Lg	Lg	11 21 52.0	
	0.5nm,0.3s,baz=307,slow=27,SNR=6.6						
MKAR	**Makanchi Array**	**3.60**	**117**	Pn	**Pb**	**11 20 58.9**	**-0.5**
	0.1nm,0.3s,baz=297,slow=12,SNR=5.6						
MKAR				Lg	Lg	11 21 52.2	
	0.5nm,0.3s,baz=309,slow=26,SNR=10						
ZALV	**Zalesovo Beam**	**7.09**	**37**	Pn	**Pn**	**11 21 40.2**	**+0.4**
	0.2nm,0.3s,baz=218,slow=16,SNR=2.4						
I46RU	**ZALESOVO INFRA**	**7.09**	**37**	i		12 02 00.0	
	baz=216,slow=334,SNR=4.0						

*TUL **21** 11:20:10.9±1.0, 36°.22N±0°.01×97°.36W±0°.02, h6^{km}±6^{km}, ML2.7, mb_Lg2.5/8(NEIC), Error ellipse: s-maj=1.9km s-min=1.6km az=72.0*
NEIC 21 11:20:10.8±0.8**,36°.22N**±0°.01×**97°.37W**±0°.01**,h3^{km}**±6^{km}**, Error ellipse: s-maj=1.8km s-min=1.6km az=52.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK033	**Mehan**	**0.39**	**117**	Pg	Pg	11 20 18.6	+0.3
OK033				Sg	Sg	11 20 23.7	+0.2
OK031	**S. Brethren Rd**	**0.51**	**122**		Pg	11 20 20.7	+0.1
OK031				Sg	Sg	11 20 27.4	+0.2
QUOK	**Quay**	**0.54**	**95**	Pg	Pg	11 20 21.2	+0.1
QUOK				Sg	Sg	11 20 28.4	+0.2
BLOK	**Blackwell**	**0.55**	**13**		Pg	11 20 21.6	+0.2
BLOK				Sg	Sg	11 20 28.5	-0.1
OK030	**Cody Creek RV**	**0.56**	**121**		Pg	11 20 21.8	+0.2
OK030				Sg	Sg	11 20 28.6	-0.2
CROK	**Carrier**	**0.57**	**300**	Pg	Pg	11 20 22.0	+0.3
CROK				Sg	Sg	11 20 29.0	-0.1
OK034	**N. Norfolk Rd.**	**0.57**	**111**		Pg	11 20 22.0	+0.2
OK034				Sg	Sg	11 20 29.1	-0.2
BCOK	**Bluff Creek, N**	**0.60**	**199**		Pg	11 20 22.4	+0.2
BCOK				Sg	Sg	11 20 30.2	+0.2
OK025	**Westminster Rd**	**0.64**	**178**		Pg	11 20 23.2	+0.1
OK025				Sg	Sg	11 20 31.1	-0.3
GC02	**Grant County #**	**0.74**	**328**	Pg	Pg	11 20 25.1	+0.1
GC02				Sg	Sg	11 20 35.0	+0.3
KAN13	**South Haven SW**	**0.79**	**354**		Pg	11 20 26.1	0.0
KAN13				Sg	Sg	11 20 36.2	-0.1
OKCFA	**Oklahoma City**	**0.81**	**185**		Pg	11 20 26.2	-0.1
OKCFA				Sg	Sg	11 20 37.3	+0.5
OKCSW	**OKLAHOMA CITY**	**0.82**	**184**		Pg	11 20 26.5	0.0
OKCSW				Sg	Sg	11 20 37.5	+0.4
KAN14	**Manchester OK**	**0.87**	**327**		Pg	11 20 27.5	-0.1
KAN14				Sg	Sg	11 20 39.0	+0.1
KAN17	**Caldwell West**	**0.88**	**339**		Pg	11 20 27.6	-0.1
KAN17				Sg	Sb	11 20 40.6	-0.3
KAN09	**Caldwell North**	**0.93**	**348**	Pg	Pg	11 20 28.5	-0.2
KAN09				Sg	Sg	11 20 40.4	-0.4
FNO	**Franklin**	**0.96**	**181**	Pg	Pg	11 20 29.0	-0.3
FNO				Sg	Sg	11 20 41.8	0.0
KAN05	**Bluff City Nor**	**0.97**	**336**	Pg	Pg	11 20 29.6	+0.2
KAN05				Sg	Sg	11 20 42.6	+0.5
T35A	**Sooner Cattle**	**0.98**	**45**	Pg	Pg	11 20 29.4	-0.2
T35A				Sg	Sg	11 20 42.1	-0.2
KAN01	**Argonia South**	**0.98**	**342**		Pg	11 20 29.4	-0.3
KAN01				Sg	Sg	11 20 42.8	+0.4
KAN10	**Anthony SW Sta**	**1.07**	**327**		Pg	11 20 31.1	-0.3
KAN10				Sg	Sg	11 20 44.9	-0.3
KAN06	**Argonia West S**	**1.10**	**339**		Pg	11 20 31.5	-0.4
KAN06				Sg	Sg	11 20 46.5	+0.4
KAN08	**Anthony NE Sta**	**1.11**	**335**		Pg	11 20 31.8	-0.4
KAN08				Sg	Sg	11 20 46.1	-0.4
W35A	**Tecumseh**	**1.14**	**159**		Pg	11 20 31.7	-1.0
W35A				Sg	Sg	11 20 47.4	-0.1
KAN16	**Harper SW Stat**	**1.15**	**331**	Pg	Pg	11 20 32.4	-0.4
KAN16				Sg	Sg	11 20 46.8	-0.9
KAN12	**Harper NE Stat**	**1.19**	**335**	Pg	Pg	11 20 32.9	-0.7
KAN12					Sn	11 20 51.2	+0.1
TUL1	**Leonard**	**1.32**	**103**	Pn	Pg	11 20 34.6	-1.4

U32A	Winter Ranch,	1.33	277	Pn	Pg	11 20 35.6	-0.6
X34A	Smith Ranch, M	1.66	193		Pb	11 20 41.6	-0.5
WMOK	Wichita Mounta	1.88	218		Pn	11 20 43.5	-0.3
LOOK	Love County	2.23	176	Pn	Pn	11 20 49.4	+0.7
X37A	Clayton	2.31	134	Pn	Pn	11 20 50.4	+0.7
U38A	Gravette	2.42	84	Pn	Pn	11 20 51.5	+0.1
R32A	Long Quarter,	2.44	334	Pn	Pn	11 20 51.7	0.0
HHAR	Hobbs	2.77	88		Pn	11 20 56.0	-0.2
W39A	Magazine	3.09	108	IAmb_Lg		11 21 55.6	
	comp=Z,19nm,0.7s						
CBKS	Cedar Bluff	3.20	325	IAmb_Lg		11 22 00.7	
	comp=Z,11nm,0.9s						
MIAR	Mount Ida	3.52	117		Pn	11 21 07.7	+1.2
Z38A	Mt. Pleasant	3.55	146		Pn	11 21 05.8	-1.0
S39A	Bolivar	3.56	64		Pn	11 21 07.3	+0.3
U40A	Yellville	3.65	87	Pn	Pn	11 21 09.1	+0.8
AMTX	Amarillo	3.76	250		Pn	11 21 10.5	+0.7
X40A	Basin Creek Fa	4.09	114	Pn	Pn	11 21 16.0	+1.7
MGMO	Mountain Grove	4.21	76	Pn	Pn	11 21 16.8	+0.9
FCAR	Ozark Folk Cen	4.26	93	Pn	Pn	11 21 16.2	-0.5
FCAR				IAmb_Lg		11 22 32.2	
	comp=Z,9.1nm,0.9s						
P38A	Dawn	4.55	41		Pn	11 21 18.7	-1.9
R40A	Maddies Statio	4.56	62	Pn	Pn	11 21 19.9	-0.9
CCM	Cathedral Cave	5.23	68	Pn	Pn	11 21 30.4	+0.6
SDCO	Great Sand Dun	6.68	286	Pn	Pn	11 21 49.7	-0.5
UTMT	University of	6.87	86	Pn	Pn	11 21 53.0	+0.4

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*IDC **21** 11:25:00.9±2.4, 4°.45N×123°.31E, h520^{km}±28^{km}, mb3.1/7, mb1 3.2/7, mb1mx2.7/64, mbtmp4.0/7, Error ellipse: s-maj=79.6km s-min=12.4km az=66.0*

*NEIC **21** 11:25:01.0±0.7, 4°.5N±0°.1×123°.4E±0°.2, h520^{km}±9^{km}, mb4.1/13, Error ellipse: s-maj=26.8km s-min=17.9km az=68.0*

ISC 21 11:25:00.1±0.6**, 4°.55N**±0°.10×**123°.4E**±0°.2**, h512^{km}, n28, σ0^s.68**/31**, mb3.9**/13**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	Tolitoli	4.32	218	P	P	11 26 22.7	+0.7
FAKI	Fak Fak	11.52	130	P	P	11 27 34.6	+0.9
KNRA	Kununurra	20.78	165	P	P	11 29 06.6	+1.3
FITZ	Fitzroy Crossi	22.61	175	P	P	11 29 21.4	-0.4
	5.7nm,1.2s,baz=355,slow=10,SNR=7.1						
WB0	Warramunga Arr	26.46	156	P	P	11 29 54.9	-1.1
WB0				IAmb	IAmb	11 30 13.0	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	26.60	157	P	P	11 29 56.4	-0.8
	comp=Z,1.8nm,0.5s,baz=332,slow=10,SNR=38						
WRA	Warramunga Arr	26.60	157	P	P	11 29 56.1	-1.1
WB2	Warramunga Arr	26.60	157	P	P	11 29 56.4	-0.9
WB2				IAmb	IAmb	11 30 25.4	
	comp=Z,12nm,1.4s						
WR0	Warramunga Arr	26.69	156	P	P	11 29 57.6	-0.4
WR0				IAmb	IAmb	11 30 25.0	
	comp=Z,14nm,1.4s						
COEN	Coen	26.87	133	P	P	11 29 59.0	-0.6
AS31	Alice Springs	29.85	160	P	P	11 30 25.2	-0.4
ASAR	Alice Springs	29.85	160	P	P	11 30 25.6	0.0
	comp=Z,1.5nm,0.4s,baz=334,slow=7.7,SNR=51						
ASAR				PcP	PcP	11 33 12.4	-0.6
	comp=Z,0.1nm,0.4s,baz=349,slow=2.7,SNR=1.2						
ASAR				ScP	ScP	11 36 05.2	-1.4
	comp=Z,0.5nm,1.0s,baz=340,slow=3.2,SNR=5.8						
ASAR	Alice Springs	29.85	160	P	P	11 30 25.2	-0.4
MORW	Morawa	34.17	192	P	P	11 31 01.7	-0.6
MORW				IAmb	IAmb	11 31 07.8	
	comp=Z,17nm,1.2s						
FORT	Forrest	35.41	173	P	P	11 31 13.2	+0.6
STKA	Stephens Creek	40.14	156	P	P	11 31 51.6	+0.2
	comp=Z,0.8nm,0.4s,baz=358,slow=7.8,SNR=4.8						
STKA	Stephens Creek	40.14	156	P	P	11 31 50.9	-0.5
STKA				IAmb	IAmb	11 32 11.7	
	comp=Z,2.0nm,1.5s						
SONM	Songino Array	45.54	344	P	P	11 32 33.7	+0.1
	comp=Z,0.6nm,0.6s,baz=161,slow=9.4,SNR=3.7						
MK31	Makanchi Array	55.03	327	P	P	11 33 43.5	+0.4
MKAR	Makanchi Array	55.03	327	P	P	11 33 43.7	+0.7
	comp=Z,0.4nm,0.3s,baz=117,slow=8.3,SNR=12						
MKAR				PcP	PcP	11 34 36.5	-0.5
	comp=Z,0.5nm,0.6s,baz=117,slow=3.4,SNR=6.1						
MKAR	Makanchi Array	55.03	327	P	P	11 33 43.3	+0.2
KURK	Kurchatov	59.31	329	P	P	11 34 12.2	0.0
KURK				IAmb	IAmb	11 34 13.1	
	comp=Z,2.7nm,0.9s						
ABKAR	Akbulak array	69.44	321	P	P	11 35 16.0	-0.6
AKTO	Aktyubinsk	70.98	322	P	P	11 35 25.6	-0.1
	comp=Z,1.1nm,0.6s,baz=112,slow=11,SNR=4.6						
IMAR	Indian Mountai	82.94	24	P	P	11 36 30.9	+0.2
TOLK	Toolik Lake Re	84.70	22	P	P	11 36 39.8	+0.4
TOLK				IAmb	IAmb	11 36 58.1	
	comp=Z,4.8nm,1.5s						
BMAR	Burnt Mountain	86.60	23		P	11 36 49.1	+0.5
BCAR	Beaver Creek A	88.15	27	P	P	11 36 56.4	+0.4

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*ISN **21** 11:32:14.6±0.5, 32°.75N×47°.17E, h15^{km}±3^{km}, ML3.2*

*TEH **21** 11:32:15.5, 32°.78N×47°.19E, h14^{km}, ML3.5*

ISC 21 11:32:15.7±1.0**, 32°.75N**±0°.04×**47°.13E**±0°.03**, h10^{km}, n30, σ0^s.80**/34**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHL1	Dehloran	0.15	117	ePg	Pg	11 32 18.2	-0.8
DHL1				eSg	Sg	11 32 22.2	+0.9
IKFM	Kafar-mosalman	0.98	38	ePg	Pg	11 32 32.9	-1.7
IBDR	Badra	1.07	290	ePg	Pg	11 32 35.0	-1.2
IBDR				eSg	Sg	11 32 50.0	-0.1
RAFI	Al-Rafai	1.33	220	ePg	Pn	11 32 40.0	-0.4
RAFI				eSg	Sb	11 32 58.0	+0.1
RAFI				AML	AML	11 33 16.9	
	comp=E,294nm,0.4s						
IDOB	Doab	1.36	40	ePg	Pn	11 32 40.6	-0.4
KCHF	Cheshme Sefid,	1.52	357	ePg	Pn	11 32 43.6	+0.4
KCHF				e		11 33 07.7	
	comp=Z,7µm,0.4s						
KER	Kermanshah	1.63	0	ePg	Pn	11 32 45.5	+0.8
IGHG	Ghaleghazi	1.64	344	ePn	Pn	11 32 45.9	+1.0
IGHG				e		11 33 29.6	
	comp=Z,6µm,0.7s						
BMDN	Meydan	1.70	57	ePg	Pn	11 32 46.3	+0.7
BMDN				e		11 32 47.8	
	comp=Z,3µm,0.2s						
IBZA	Bozab	1.82	19	ePn	Pn	11 32 47.6	+0.2
IDHR	Dehrash	2.04	343	ePn	Pn	11 32 51.0	+0.7
IDHR				e		11 33 25.1	
	comp=Z,5µm,0.3s						
AMIS	Naft Sefid	2.13	120	ePn	Pn	11 32 52.1	+0.8
ILIN	Lien	2.17	356	ePn	Pn	11 32 53.2	+1.1
BHD	Baghdad	2.36	283	ePn	Pn	11 32 55.0	+0.4
BHD				eSn	Sn	11 33 25.0	+1.4
BHD				AML	AML	11 33 47.5	
	comp=E,295nm,0.4s						
HAGD	Aghdareh	2.66	39	ePn	Pn	11 32 59.5	+0.6
HAGD				e		11 33 35.6	
	comp=Z,995nm,0.3s						
IPIR	Pirpir	3.18	90	e		11 33 49.0	
	comp=Z,1µm,0.4s						
IPIR				ePn	Pn	11 33 07.0	+1.0
IRAZ	Razeghan	3.53	41	ePn	Pn	11 33 12.6	+1.8
QABG	Abgarm-Qazvin	3.59	34	ePn	Pn	11 33 11.7	+0.1
QAMS	Qamsar	3.71	73	ePn	Pn	11 33 13.5	+0.1
IKLH	Kolahrood	3.78	80	ePn	Pn	11 33 15.3	+0.9
IKLH				e		11 33 16.6	
	comp=Z,616nm,0.2s						
IQOM	Qom	3.89	56	ePn	Pn	11 33 15.7	-0.1
IGAR	Gharneh	4.17	93	ePn	Pn	11 33 19.6	0.0
IGAR				e		11 33 22.4	
	comp=Z,1µm,0.2s						
KLNJ	Kolanjah	4.18	113	ePn	Pn	11 33 20.5	+0.7
KRSH	Karshahi	4.37	72	ePn	Pn	11 33 22.6	+0.3
IZEF	Zefreh	4.38	87	ePn	Pn	11 33 23.0	+0.4
IVRN	Varamin	4.44	58	ePn	Pn	11 33 23.6	+0.5
IRAM	Ramesheh	4.55	100	ePn	Pn	11 33 24.8	-0.1
ISFB	Sefidab	4.56	68	ePn	Pn	11 33 24.8	-0.1
ANAR	Anarak	5.57	84	ePn	Pn	11 33 38.5	-0.3
ISHM	Shahmirzad	5.95	57	ePn	Pn	11 33 44.5	+0.4

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*IDC **21** 11:32:29.6±2.2, 73°.32N×7°.51E, h0^{km}, mb1 3.6/5, mb1mx3.3/56, mbtmp3.6/5, ML2.9/5, Error ellipse: s-maj=30.2km s-min=17.3km az=78.0*

*NAO **21** 11:32:30.9±1.8, 73°.44N×8°.00E, ML3.0*

*BER **21** 11:32:34.5±3.2, 73°.52N×7°.88E, h22^{km}±36^{km}, ML2.0, ML3.0(NAO), Confirmed Earthquake*

ISC 21 11:32:29.6±1.0**, 73°.53N**±0°.05×**7°.99E**±0°.08**, h10^{km}, n43, σ2^s.13**/51**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJO1	Bjornoya	3.20	67	eP	Pn	11 33 21.4	+1.6
HSPB	Hornsund (broa	3.99	25	Pn	Pn	11 33 32.9	+2.3
HSPB	Hornsund (broa	3.99	25	eP	Pn	11 33 31.8	+1.1
HSPB				eS	Sn	11 34 15.0	-2.4
BRBA	Barentsburg A	4.81	16	Pn	Pn	11 33 45.4	+3.5
BRBA	Barentsburg A	4.81	16	Pn	Pn	11 33 45.4	+3.5
BRBB	Barentsburg B	4.84	15	Pn	Pn	11 33 46.0	+3.7
BRBB	Barentsburg B	4.84	15	Pn	Pn	11 33 46.0	+3.7
SPA0	Spitsbergen Ar	5.10	20	Pn	Pn	11 33 48.9	+2.8
	baz=190,slow=12						
SPA0	Spitsbergen Ar	5.10	20	eP	Pn	11 33 48.8	+2.8
SPA0				Pn	Pb	11 33 48.9	-10
	baz=190,slow=12						
SPA0				eS	Sn	11 34 40.2	-4.7
SPITS	Spitsbergen Ar	5.10	20	Pn	Pn	11 33 48.8	+2.8
	baz=192,slow=13,SNR=72						
TRO	Tromso	5.22	133	eP	Pn	11 33 49.6	+2.0
TRO				eS	Sn	11 34 44.8	-3.0
TRO				IAML		11 34 46.2	
	comp=Z,4.8nm,0.5s						
KBS	Kingsbay	5.51	8	Pn	Pn	11 33 53.8	+2.3
KBS	Kingsbay	5.51	8	eP	Pn	11 33 53.8	+2.3
KBS				IAML		11 35 00.1	
	comp=Z,2.1nm,0.9s						
JETT	Jettan, Norway	5.60	129	Pn	Pn	11 33 55.2	+2.3
HAMF	Hammerfest	5.63	113	Pn	Pn	11 33 55.3	+2.1
HAMF	Hammerfest	5.63	113	eP	Pn	11 33 55.0	+1.8
HAMF				eS	Sn	11 34 55.6	-2.2
HAMF				IAML		11 35 04.2	
	comp=Z,4.0nm,0.6s						
LOF	Lofoten	5.72	159	eP	Pn	11 33 54.5	0.0
LOF				IAML		11 34 55.1	
	comp=Z,6.0nm,0.6s						
STEI	Steigen	6.11	153	eP	Pn	11 34 02.0	+2.2
STEI				IAML		11 35 16.5	
	comp=Z,2.8nm,0.7s						
KIF	Kilpisjarvi	6.12	131	Pn	Pn	11 34 02.1	+2.1
KIF				Sn	Sn	11 35 07.5	-2.4
KIF	Kilpisjarvi	6.12	131	eP	Pn	11 34 01.5	+1.5
KIF				eS	Sn	11 35 07.7	-2.2
KTK1	Kautokeino	6.66	125	eP	Pn	11 34 10.6	+3.2
KTK1				IAML		11 35 36.6	
	comp=Z,1.7nm,0.9s						
ARA0	ARCESS Array S	6.83	117	eP	Pn	11 34 10.7	+0.9
ARA0				Pn	Pb	11 34 11.8	-17
	baz=315,slow=12						
ARA0				Sn	Sn	11 35 26.3	-1.2
	baz=312,slow=22						
ARCES	ARCESS Array B	6.83	117	Pn	Pn	11 34 11.0	+1.2
	baz=313,slow=12,SNR=21						
ARCES				Sn	Sn	11 35 27.7	+0.2
	baz=305,slow=19,SNR=4.9						
KEV	Kevo	7.07	113	eP	Pn	11 34 14.4	+1.4
HEF	Hetta	7.23	127	eP	Pn	11 34 17.5	+2.3
NBB40	Tonnes	7.25	164	eP	Pn	11 34 16.0	+0.6
NBB40				IAML		11 35 37.6	
	comp=Z,4.1nm,0.6s						
KONS	Konsvik	7.27	164	eP	Pn	11 34 17.0	+1.3
KONS				IAML		11 35 45.9	
	comp=Z,3.5nm,0.9s						
STOK	Stokkvaagen	7.43	164	eP	Pn	11 34 19.1	+1.2
NSS	Namsos	9.15	169	eP	Pn	11 34 42.1	+0.7
SCO	Scoresbysund	9.67	266	i P	Pn	11 34 47.0	-1.6
APA0	Apatity Array	10.14	113	Pn	Pn	11 34 56.2	+1.2
	baz=329,slow=12						
APA0	Apatity Array	10.14	113	Pn	Pn	11 34 56.2	+1.2
	baz=329,slow=12						
NB2	NORSAR Subarra	12.60	173	Pn	Pn	11 35 30.1	+1.4
NB2	NORSAR Subarra	12.60	173	Pn	Pn	11 35 30.1	+1.4
NOA	NORSAR Array B	12.60	173	Pn	Pn	11 35 28.4	-0.3
	comp=Z,0.0nm,0.3s,baz=354,slow=13,SNR=1.7						
NRA0	NORESS Array S	12.92	172	Pn	Pn	11 35 34.0	+1.0
	baz=348,slow=22						
NRA0	NORESS Array S	12.92	172	Pn	Pn	11 35 34.0	+1.0
	baz=348,slow=22						
HFS	Hagfors	13.63	168	Pn	Pn	11 35 42.7	+0.1
	comp=Z,0.2nm,0.3s,baz=358,slow=12,SNR=5.2						
HFS	Hagfors	13.63	168	Pn	Pn	11 35 44.2	+1.6
	baz=344,slow=14						
HFS	Hagfors	13.63	168	Pn	Pn	11 35 44.2	+1.6
	baz=344,slow=14						
FIA0	FINESS Array S	13.87	141	Pn	Pn	11 35 46.4	+0.5
	baz=338,slow=12						
FIA0	FINESS Array S	13.87	141	Pn	Pn	11 35 46.4	+0.5
	baz=338,slow=12						
FINES	FINESS Array B	13.87	141	Pn	Pn	11 35 45.0	-0.9
	comp=Z,0.1nm,0.3s,baz=310,slow=12,SNR=5.4						

IDC 21 11:34:32.3±1.5**, 4°.19S**×**129°.38E, h0^{km}, mb4.0**/1**, mb1 3.9**/4**, mb1mx3.4**/48**, mbtmp3.8**/4**, ML3.4**/3**, MS2.8**/2**, Ms1 2.8**/2**, ms1mx2.4**/36**, Error ellipse: s-maj=55.0km s-min=25.8km az=80.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.80	30	Pn	Pn	11 35 31.9	-0.2
	5.4nm,0.3s,baz=236,slow=21,SNR=33						
SIJI				Sn	Sn	11 36 12.5	-5.1
	10nm,0.3s,baz=236,slow=23,SNR=9.1						
JAY	Jayapura	11.43	82	LR	LR	11 42 47.5	
	comp=Z,51nm,19.1s,baz=72,slow=43						
WRA	Warramunga Arr	16.39	163	Pn	Pn	11 38 21.8	-2.0
	0.1nm,0.3s,baz=344,slow=14,SNR=6.9						
WRA				LR	LR	11 45 28.0	
	comp=Z,37nm,19.8s,baz=110,slow=40						
ASAR	Alice Springs	19.85	168	P	Pn	11 39 05.8	-0.7
	0.2nm,0.3s,baz=347,slow=11,SNR=23						
MKAR	Makanchi Array	65.55	326	P	P	11 45 17.8	0.0
	0.7nm,0.4s,baz=114,slow=7.8,SNR=16						

IDC 21 11:52:03.1±9.6**, 5°.28N**×**93°.53E, h0^{km}, mb3.4**/4**, mb1 3.5**/4**, mb1mx3.3**/44**, mbtmp3.4**/4**, Error ellipse: s-maj=460.7km s-min=26.7km az=58.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	42.48	349	P	P	12 00 00.2	+0.1
	0.2nm,0.3s,baz=158,slow=8.1,SNR=4.8						
WRA	Warramunga Arr	47.31	123	P	P	12 00 38.9	0.0
	0.7nm,1.0s,baz=301,slow=9.7,SNR=2.1						
ASAR	Alice Springs	48.77	128	P	P	12 00 50.0	-0.2
	0.4nm,0.9s,baz=298,slow=8.0,SNR=4.0						
ZALV	Zalesovo Beam	49.04	353	P	P	12 00 51.2	-0.5
	0.4nm,0.4s,baz=154,slow=7.4,SNR=2.5						

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*IDC **21** 12:10:01.0±8.8, 13°.02S×166°.96E, h238^{km}±94^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.1/34, mbtmp3.8/5, Error ellipse: s-maj=95.6km s-min=28.4km az=159.0*

ISC 21 12:09:57.6±1.2**, 12°.8S**±0°.2×**166°.9E**±0°.3**, h200^{km}, n7, σ0^s.93**/7**, mb3.4**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	9.26	183	P	Pn	12 12 07.6	+0.3
	0.2nm,0.3s,baz=129,slow=21,SNR=1.5						
WRA	Warramunga Arr	31.99	253	P	P	12 16 05.0	-0.3
	0.4nm,0.8s,baz=74,slow=9.3,SNR=1.6						
ASAR	Alice Springs	33.07	246	P	P	12 16 14.2	-0.4
	1.1nm,0.6s,baz=72,slow=9.9,SNR=26						
ILAR	Eielson Array	84.79	18	P	P	12 22 08.9	-0.1
	0.6nm,0.6s,baz=238,slow=5.3,SNR=15						
MKAR	Makanchi Array	95.53	317	P	P	12 23 01.2	+1.3
	0.1nm,0.5s,baz=114,slow=6.6,SNR=1.6						
ARCES	ARCESS Array B	118.27	346	PKP	PKiKP	12 28 20.0	-0.5
	2.5nm,0.9s,baz=77,slow=1.7,SNR=12						
FINES	FINESS Array B	123.77	339	PKP	PKPdf	12 28 30.1	-1.1
	4.9nm,1.1s,baz=103,slow=4.4,SNR=3.5						

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*BGR **21** 12:36:53.0±0.0, 18°.08S×174°.71W, h33^{km}*

*MOS **21** 12:37:08.3±1.7, 18°.07S×175°.20W, h161^{km}, mb4.8/19, Error ellipse: s-maj=11.0km s-min=9.0km az=22.6*

*NOU **21** 12:37:12.5, 18°.05S×174°.71W, h224^{km}, MLv5.5/76, Tonga Islands*

*NEIC **21** 12:37:12.3±1.7, 18°.2S±0°.1×174°.91W±0°.08, h198^{km}±3^{km}, mb5.0/62, Error ellipse: s-maj=17.2km s-min=10.9km az=186.0*

*IDC **21** 12:37:13.7±0.6, 18°.21S×175°.01W, h214^{km}±5^{km}, mb4.5/32, mb1 4.5/35, mb1mx4.3/47, mbtmp5.0/35, Error ellipse: s-maj=10.8km s-min=8.0km az=152.0*

*GCMT **21** 12:37:16.3±0.4, 18°.27S±0°.03×174°.78W±0°.03, h242^{km}±4^{km}, MW5.1/66, Moment Tensor Solution. s20,c21; s66,c79; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.01±.24; $M_{\theta\theta}$4.48±.35; $M_{\phi\phi}$-3.47±.30; $M_{r\theta}$0.41±.25; $M_{\theta\phi}$0.72±.19; $M_{\phi r}$-3.80±.16; Best double couple: $M_0$5.42100×10^{16} NP1:ϕ_s46.00000°, δ65.00000°, λ-154.00000°. NP2:ϕ_s304.00000°, δ66.00000°, λ-28.00000°. Principal axes: T 4.5460, Plg1.0000°, Azm355.0000°; N 1.7510, Plg54.0000°, Azm87.0000°; P -6.2970, Plg36.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 12:37:13.7±0.5**, 18°.24S**±0°.06×**174°.90W**±0°.05**, h218^{km}**±4^{km}**, h219^{km}:pP-P, n497, σ1^s.05**/505**, mb5.0**/112**, 34C-35D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.79	101	P	Pn	12 38 24.6	-1.3
	baz=4.9,SNR=22						
NIUE				S	S	12 39 21.3	-1.6
	baz=4.9						
NIUE	Niue	4.79	101		Pn	12 38 24.6	-1.3
NIUE				Sn	S	12 39 19.4	-3.4
NIUE	Niue	4.79	101	P	Pn	12 38 24.6	-1.3
TAVE	Taveuni	5.01	287	P	Pn	12 38 30.3	+1.6
AFI	Afiamalu	5.25	35	P	Pn	12 38 25.6	-6.2
	168nm,0.3s,baz=200,slow=3.2,SNR=229						
AFI				S	S	12 39 20.4	-13
	855nm,0.3s,baz=37,slow=22,SNR=17						
DGTI	Dogotuki	5.47	290	P	Pn	12 38 35.4	+0.8
MSVF	Nonsavu	6.72	273	P	Pn	12 38 51.1	+0.5
	7.5nm,0.3s,baz=122,slow=16,SNR=51						
MSVF	Nonsavu	6.72	273		Pn	12 38 52.4	+1.8
MSVF	Nonsavu	6.72	273	P	Pn	12 38 52.8	+2.1
RAR	Rarotonga	14.55	104	P	Pn	12 40 30.3	+0.5
	2.3nm,0.3s,baz=261,slow=6.0,SNR=19						
RAR	Rarotonga	14.55	104	Pn	Pn	12 40 28.2	-1.6
MARNC	Mare, Loyalty	16.38	256	P	P	12 40 51.0	+0.3
MARNC	Mare, Loyalty	16.38	256	P	Pn	12 40 51.4	-0.4
LIFNC	LIFOU	17.02	259	P	P	12 40 57.2	-0.6
LIFNC	LIFOU	17.02	259	P	P	12 40 57.5	-0.3
PINNC	Pines Island,	17.10	252	P	Pn	12 41 00.2	-0.1
PINNC	Pines Island,	17.10	252	P	Pn	12 41 00.0	-0.4
SANVU	Saraoutou	17.35	277	P	Pn	12 41 03.3	0.0
SANVU				IAmb	IAmb	12 41 08.4	
	comp=Z,178nm,1.3s						
YATNC	Mamie plateau,	17.51	254	P	Pn	12 41 04.2	-1.0
OUENC	Ouen Island, N	17.62	253	P	P	12 41 04.5	+0.3
OUENC				IAmb	IAmb	12 41 13.5	
	comp=Z,80nm,0.9s						
OUENC	Ouen Island, N	17.62	253	P	P	12 41 05.0	+0.7
DZM	Mont Dzumac	17.92	255	eP	P	12 41 07.9	+0.2
	comp=Z,204nm,0.9s						
DZM				eLR	LR	12 45 20.6	
	comp=Z,292nm,28.7s						
DZM	Mont Dzumac	17.92	255	P	P	12 41 06.8	-0.8
	comp=Z,1.9nm,0.3s,baz=78,slow=17,SNR=26						
DZM	Mont Dzumac	17.92	255	P	P	12 41 06.9	-0.8
DZM				IAmb	IAmb	12 41 10.4	
	comp=Z,96nm,0.9s						
DZM	Mont Dzumac	17.92	255	P	P	12 41 07.9	+0.2
ONTNC	Ouen Toro	17.95	254	P	Pn	12 41 09.3	-1.0
ONTNC	Ouen Toro	17.95	254	P	Pn	12 41 11.3	+1.0
OUZ	Omahuta	19.76	209	P	P	12 41 27.8	+0.5
OUZ	Omahuta	19.76	209	P	P	12 41 28.2	+1.0
KOUNC	Koumac, New Ca	19.77	260	P	P	12 41 26.9	-0.6
GRZ	Great Barrier	19.86	203	P	Pn	12 41 32.8	0.0
WCZ	Waipu Caves	20.04	206	P	P	12 41 31.9	+1.7
MXZ	Matakaoa Point	20.16	196	P	P	12 41 33.6	+2.2
KUZ	Kuaotunu	20.20	202	P	P	12 41 34.4	+2.5
WMGZ	Waiomatatini S	20.37	195	P	P	12 41 36.3	+2.5
WMGZ				S	S	12 45 08.0	-1.5
HAZ	Te Kaha	20.48	197	P	P	12 41 35.7	+0.9
HAZ				S	S	12 45 10.0	-1.5
PKGZ	Pakihiroa	20.52	196	P	Pn	12 41 38.6	-2.4
PKGZ				S	S	12 45 11.2	-1.3
PUZ	Puketiti	20.65	195	P	P	12 41 37.3	+0.5
PUZ				S	S	12 45 09.0	-5.7
RUGZ	Raukumara Rang	20.70	197	P	P	12 41 39.0	+1.5
RUGZ				S	S	12 45 13.2	-2.7
TWGZ	Tauwhareparae	20.82	196	P	P	12 41 40.5	+1.9
TWGZ				S	S	12 45 18.1	+0.2
TGRZ	Tauranga	20.91	200	P	P	12 41 42.2	+2.7
OPRZ	Ohinepanea	20.92	199	P	P	12 41 42.7	+3.1
CNGZ	Carnagh Statio	21.05	195	P	P	12 41 43.0	+2.1
MWZ	Matawai	21.09	197	P	P	12 41 42.1	+0.7
MWZ				S	S	12 45 21.4	-1.1
TKGZ	Te Karaka	21.10	196	P	P	12 41 43.6	+2.2
URZ	Urewera	21.14	198	P	P	12 41 41.5	-0.2
	comp=Z,80nm,0.8s,baz=121,slow=23,SNR=51						
URZ				S	S	12 45 22.7	-0.5
	comp=Z,6.1nm,0.7s,baz=114,slow=24,SNR=2.5						
URZ	Urewera	21.14	198	P	P	12 41 40.8	-1.0
URZ				S	S	12 45 20.9	-2.2
URZ	Urewera	21.14	198	P	P	12 41 42.3	+0.5
TOZ	Tahuroa Road	21.16	201	P	P	12 41 43.9	+1.8
OMRZ	Omania	21.22	199	P	P	12 41 44.9	+2.3
RAGZ	Rawiri	21.27	197	P	P	12 41 45.0	+1.7
RIGZ	Rimuhau	21.37	196	P	P	12 41 45.7	+1.4
RIGZ				S	S	12 45 30.8	+3.6
MUGZ	Murupara	21.44	198	P	P	12 41 45.6	+0.8
PRGZ	Paritu Road	21.55	195	P	P	12 41 49.3	+3.3
SNGZ	Shannon Statio	21.56	197	P	P	12 41 47.1	+1.0
ALRZ	Allen Road	21.64	199	P	P	12 41 48.3	+1.3
TLZ	Tolley Road	21.69	201	P	P	12 41 50.0	+2.6
RAHZ	Arahi	21.75	197	P	P	12 41 49.2	+1.2
HATZ	Hinemaiaia	22.02	199	P	P	12 41 51.5	+0.9
HIZ	Hauiti	22.09	202	P	P	12 41 53.5	+2.3
BKZ	Black Stump Fm	22.16	198	P	P	12 41 51.5	-0.3
PAE	Paea	24.09	93	eP	P	12 42 09.9	+0.3
	comp=Z,18nm,1.0s						
PAE	Paea	24.09	93	eT	T	13 06 37.2	
	comp=Z,4.4nm,0.2s						
PPT2	Papeete2	24.10	92	eP	P	12 42 10.1	+0.3
	comp=Z,136nm,1.2s						
PPT2	Papeete2	24.10	92	eT	T	13 06 41.2	
	comp=Z,4.6nm,0.3s						
PPT	Papeete	24.11	92	P	P	12 42 10.4	+0.7
	comp=Z,157nm,1.1s,baz=1.7,slow=2.1,SNR=8.1						
TBI	Tubuai	24.31	106	eP	P	12 42 12.6	+1.1
	comp=Z,336nm,1.3s						
TBI	Tubuai	24.31	106	eT	T	13 06 47.4	
	comp=Z,12nm,0.3s						
TIAR	Tiarei	24.33	92	eP	P	12 42 12.3	+0.6
	comp=Z,0.7nm,0.9s						
QRZ	Quartz Range	24.97	203	P	P	12 42 19.1	+1.8
QRZ	Quartz Range	24.97	203	P	P	12 42 18.9	+1.6
MEH	Mehetia	25.51	93	eT	T	13 09 10.0	
	comp=Z,14nm,0.3s						
HNR	Honiara	25.91	286	P	P	12 42 25.4	-0.6
	comp=Z,55nm,0.8s,baz=202,slow=3.1,SNR=4.2						
KHZ	Kahutara	26.03	200	P	P	12 42 27.4	+0.6
PMOR	Pomariorio Ree	26.07	87	eP	P	12 42 27.8	+0.4
	comp=Z,110nm,1.0s						
RPZ	Rata Peaks	28.03	202	P	P	12 42 45.5	+0.9
ODZ	Otahua Downs	29.33	201	P	P	12 42 56.6	+0.5
EIDS	Eidsvold	32.30	251	P	P	12 43 21.4	-1.0
	baz=32,SNR=9.8						
EIDS	Eidsvold	32.30	251	P	P	12 43 22.1	-0.3
EIDS				IAmb	IAmb	12 43 22.3	
	comp=Z,41nm,1.0s						
EIDS	Eidsvold	32.30	251	P	P	12 43 21.8	-0.6
ARMA	Armidale	32.70	242	P	P	12 43 25.9	0.0
	baz=33,SNR=19						
ARMA	Armidale	32.70	242	P	P	12 43 26.6	+0.7
ARMA				IAmb	IAmb	12 43 26.7	
	comp=Z,50nm,1.3s						
ARMA	Armidale	32.70	242	P	P	12 43 25.9	0.0
RK1H	Rockhampton Ha	32.70	255	P	P	12 43 24.5	-1.3
RMQ	Roma	34.50	250	P	P	12 43 41.2	-0.2
	baz=34,SNR=52						
RMQ	Roma	34.50	250	P	P	12 43 41.4	0.0

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CNB   Canberra Magne   35.91 235   P      P       12 43 53.2 -0.2
      baz=36,SNR=10
CNB   Canberra Magne   35.91 235   P      P       12 43 53.2 -0.2
CAN   Canberra         36.20 235   P      P       12 43 55.9 +0.1
CTA   Charters Tower   36.68 261   P      P       12 43 58.6 -1.4
      comp=Z,13nm,0.5s,baz=86,slow=12,SNR=9.4
CTAO  Charters Tower   36.68 261   P      P       12 43 59.0 -1.1
CTAO                               pmax   pmax
      comp=Z,24nm,1.0s
CTAO  Charters Tower   36.68 261   P      P       12 43 59.0 -1.1
CTAO                               IAmb   IAmb    12 44 01.5
      comp=Z,24nm,1.0s
CTAO  Charters Tower   36.68 261   P      P       12 43 58.9 -1.1
PMG   Port Moresby     37.80 278   P      P       12 44 09.3 -0.1
      comp=Z,55nm,0.8s,baz=88,slow=4.9,SNR=25
PMG   Port Moresby     37.80 278   P      P       12 44 09.1 -0.4
PMG                                pmax   pmax
      comp=Z,60nm,0.9s
PMG   Port Moresby     37.80 278   P      P       12 44 09.1 -0.4
PMG                                IAmb   IAmb    12 44 10.3
      comp=Z,60nm,0.9s
CMSA  Cobar Meteorol   37.91 242   P      P       12 44 09.4 -0.8
      baz=38,SNR=46
CMSA  Cobar Meteorol   37.91 242   P      P       12 44 09.6 -0.6
QLP   Quilpie          38.55 250   P      P       12 44 14.6 -1.0
      baz=38,SNR=69
QLP   Quilpie          38.55 250   P      P       12 44 14.7 -0.9
MTSU  Mount Surprise   38.69 264   P      P       12 44 15.3 -1.5
      baz=39,SNR=10.0
TOO   Toolangi         39.59 233   P      P       12 44 23.3 -0.8
      baz=40,SNR=16
TOO   Toolangi         39.59 233   P      P       12 44 23.2 -0.8
TOO                                pmax   pmax
      comp=Z,26nm,0.8s
TOO   Toolangi         39.59 233   P      P       12 44 23.1 -0.9
TOO                                IAmb   IAmb    12 44 24.3
      comp=Z,26nm,0.8s
TOO   Toolangi         39.59 233   P      P       12 44 23.7 -0.4
TAU   Tasmania Unive   40.28 224   P      P       12 44 29.4 -0.2
TAU                                pmax   pmax
      comp=Z,45nm,1.2s
TAU   Tasmania Unive   40.28 224   P      P       12 44 29.4 -0.2
TAU                                IAmb   IAmb    12 44 57.3
      comp=Z,45nm,1.2s
TAU   Tasmania Unive   40.28 224   P      P       12 44 29.4 -0.2
COEN  Coen             40.44 270   P      P       12 44 30.4 -0.9
COEN                               IAmb   IAmb    12 44 31.7
      comp=Z,27nm,0.8s
COEN  Coen             40.44 270   P      P       12 44 30.4 -0.9
STKA  Stephens Creek   41.41 242   P      P       12 44 38.6 -0.4
      comp=Z,60nm,1.0s,baz=90,slow=9.6,SNR=44
STKA  Stephens Creek   41.41 242   P      P       12 44 38.6 -0.4
      baz=41,SNR=32
STKA  Stephens Creek   41.41 242   P      P       12 44 39.1  0.0
STKA                               pmax   pmax
      comp=Z,10.0nm,0.9s
STKA  Stephens Creek   41.41 242   P      P       12 44 39.1  0.0
STKA  Stephens Creek   41.41 242   P      P       12 44 39.0  0.0
INKA  Innaminka        41.72 249   P      P       12 44 41.9 +0.3
H11N3 WAKE ISLAND Hy   41.73 334   T      T       13 28 56.1
      baz=145,slow=75,SNR=3.4
H11N1 WAKE ISLAND Hy   41.73 334   T      T       13 28 57.5
      baz=145,slow=75,SNR=4.0
H11N2 WAKE ISLAND Hy   41.75 334   T      T       13 29 01.1
      baz=145,slow=75,SNR=2.2
ARPS  Mount Arapiles   42.17 235   P      P       12 44 44.4 -0.7
      baz=42,SNR=9.3
ARPS  Mount Arapiles   42.17 235   P      P       12 44 44.2 -0.9
QIS   Mount Isa        42.87 259   P      P       12 44 49.1 -1.8
      baz=43,SNR=7.9
QIS   Mount Isa        42.87 259   P      P       12 44 51.8 +0.8
HTT   Hallett          43.87 241   P      P       12 44 58.1 -0.7
      baz=44,SNR=24
HTT   Hallett          43.87 241   P      P       12 44 58.5 -0.3
LCRK  Leigh Creek      44.12 245   P      P       12 45 00.6 -0.2
WHYH  Whyalla          44.94 241   P      P       12 45 07.0 -0.2
BBOO  Buckleboo        46.18 242   P      P       12 45 16.1 -0.8
      baz=46,SNR=63
BBOO  Buckleboo        46.18 242   P      P       12 45 15.8 -1.2
BBOO  Buckleboo        46.18 242   P      P       12 45 16.6 -0.3
OOD   Oodnadatta       46.20 249   P      P       12 45 17.0 -0.2
JAY   Jayapura         46.21 284   P      P       12 45 16.1 -1.3
      comp=Z,18nm,0.8s,baz=91,slow=5.4,SNR=5.3
WR0   Warramunga Arr   47.66 259   P      P       12 45 26.9 -1.7
WR0                                IAmb   IAmb    12 45 31.1
      comp=Z,23nm,0.7s
MULG  Mulgathing       47.70 245   P      P       12 45 27.9 -0.8
WC3   Warramunga Arr   47.82 259   P      P       12 45 28.2 -1.6
      baz=48
WB0   Warramunga Arr   47.82 260   P      P       12 45 28.9 -0.9
WB0                                IAmb   IAmb    12 45 29.5
      comp=Z,65nm,0.6s
WB2   Warramunga Arr   47.84 259   P      P       12 45 29.1 -0.9
WB2                                IAmb   IAmb    12 45 29.4
      comp=Z,65nm,0.6s
WRAB  Tennant Creek    47.84 259c iP     P       12 45 28.7 -1.2
WRAB                               pmax   pmax
      comp=Z,40nm,0.6s
WRAB  Tennant Creek    47.84 259   P      P       12 45 28.7 -1.2
WRAB                               IAmb   IAmb    12 45 29.3
      comp=Z,56nm,0.6s
WRAB  Tennant Creek    47.84 259   P      P       12 45 28.6 -1.3
WRA   Warramunga Arr   47.85 259   P      P       12 45 28.4 -1.6
      comp=Z,34nm,0.5s,baz=100,slow=7.9,SNR=746
WRA                                PcP    PcP     12 46 55.6 +0.4
      comp=Z,5.4nm,0.5s,baz=93,slow=3.8,SNR=4.6
WRA   Warramunga Arr   47.85 259   P      P       12 45 29.0 -1.1
WRA                                pmax   pmax
      comp=Z,6.0nm,0.7s
WRA   Warramunga Arr   47.85 259   P      P       12 45 28.9 -1.1
AS31  Alice Springs    47.91 254   P      P       12 45 29.3 -1.1
AS31                               IAmb   IAmb    12 45 30.7
      comp=Z,104nm,0.8s
ASAR  Alice Springs    47.91 254   P      P       12 45 29.5 -1.0
      comp=Z,393nm,0.7s,baz=90,slow=8.2,SNR=4415
ASAR                               PcP    PcP     12 46 55.5 +0.1
      comp=Z,11nm,0.6s,baz=105,slow=3.7,SNR=4.5
ASAR                               S      S       12 52 08.1 -3.2
      comp=Z,2.5nm,0.9s,baz=92,slow=15,SNR=7.7
ASAR  Alice Springs    47.91 254   P      P       12 45 29.8 -0.7
ASPA  Alice Springs    47.91 254   P      P       12 45 29.3 -1.2
      baz=48
KDU   Kakadu           50.88 268   P      P       12 45 51.6 -1.4
      baz=51,SNR=36
KDU   Kakadu           50.88 268   P      P       12 45 51.7 -1.2
MTN   Manton Dam       52.12 268   P      P       12 46 00.4 -1.8
      baz=52,SNR=29
MTN   Manton Dam       52.12 268   P      P       12 46 00.7 -1.4
MTN   Manton Dam       52.12 268   P      P       12 46 00.6 -1.5
DRS   Darwin Rock St   52.44 268   P      P       12 46 03.0 -1.4
FORT  Forrest          52.88 245   P      P       12 46 06.4 -1.2
      baz=53,SNR=10
FORT  Forrest          52.88 245   P      P       12 46 06.5 -1.0
FORT  Forrest          52.88 245   P      P       12 46 06.3 -1.2
WRKA  Warakurna        52.92 252   P      P       12 46 06.9 -1.0
      baz=53,SNR=187
WRKA  Warakurna        52.92 252   P      P       12 46 07.0 -0.9
KNRA  Kununurra        53.77 264   P      P       12 46 12.7 -1.4
      baz=54,SNR=46
KNRA  Kununurra        53.77 264   P      P       12 46 12.9 -1.2
KNRA  Kununurra        53.77 264   P      P       12 46 13.0 -1.2
FAKI  Fak Fak          53.92 280   P      P       12 46 14.3 -1.0
FAKI                               IAmb   IAmb    12 46 20.3
      comp=Z,78nm,1.4s
FAKI  Fak Fak          53.92 280   P      P       12 46 14.6 -0.7
SIJI  Sorong           55.56 282   P      P       12 46 26.4 -0.7
      comp=Z,29nm,0.5s,baz=112,slow=5.5,SNR=28
SWI   Sorong           55.57 282   P      P       12 46 26.6 -0.5
      comp=Z,58nm,0.7s
FITZ  Fitzroy Crossi   56.26 260   P      P       12 46 31.2 -0.8
      comp=Z,22nm,0.6s,baz=113,slow=3.6,SNR=92
FITZ  Fitzroy Crossi   56.26 260   P      P       12 46 31.1 -0.8
      baz=56,SNR=20
SOEI  Soe              59.40 269   P      P       12 46 54.6 +0.6
      comp=Z,3µmcomp=Z,296nm,0.8s
SOEI  Soe              59.40 269   P      P       12 46 54.4 +0.4
SOEI  Soe              59.40 269   P      P       12 46 54.9 +0.9
BATI  Baumata          59.86 269   P      P       12 46 57.5 +0.6
      comp=Z,106nm,0.7s,baz=263,slow=0.7,SNR=12
BATI  Baumata          59.86 269   P      P       12 46 57.8 +0.8
      comp=Z,71nm,0.7s
SBA   Scott Base       60.33 184   P      P       12 47 02.4 +3.3
SBA                                pmax   pmax
      comp=Z,8.0nm,0.9s
SBA   Scott Base       60.33 184   P      P       12 47 02.4 +3.3
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VNDA  Vanda            60.43 186   P      P       12 47 01.1 +1.4
      comp=Z,5.3nm,0.9s,baz=3.8,slow=6.2,SNR=14
VNDA  Vanda            60.43 186   P      P       12 47 02.2 +2.5
VNDA                               pmax   pmax
      comp=Z,6.0nm,0.9s
VNDA  Vanda            60.43 186   P      P       12 47 02.2 +2.5
PSA00 Pilbara Seismi   61.05 255   P      P       12 47 04.3 -0.6
PSA00 Pilbara Seismi   61.05 255   P      P       12 47 03.3 -1.6
PSA00                              IAmb   IAmb    12 47 04.9
      comp=Z,50nm,1.0s
PSA00 Pilbara Seismi   61.05 255   P      P       12 47 04.2 -0.7
MBWA  Marble Bar       61.22 255   P      P       12 47 05.4 -0.7
MEEK  Meekatharra      61.44 249   P      P       12 47 06.0 -1.5
      baz=61,SNR=11
MEEK  Meekatharra      61.44 249   P      P       12 47 06.2 -1.3
MMRI  Maumere          61.63 270   P      P       12 47 08.2 -0.7
      comp=Z,130nm,0.7s
MMRI  Maumere          61.63 270   P      P       12 47 07.6 -1.3
KLBR  Kellerberrin     61.67 243   P      P       12 47 08.1 -0.8
      baz=62,SNR=11
KLBR  Kellerberrin     61.67 243   P      P       12 47 08.0 -0.9
NWAO  Narrogin (SRO)   62.00 242   P      P       12 47 12.3 +1.2
EDFI  Ende, Flores     62.12 270   P      P       12 47 11.1 -1.2
      comp=Z,642nmcomp=Z,72nm,0.9s
BLDU  Ballidu          62.65 244   P      P       12 47 14.3 -1.1
      baz=63,SNR=19
BLDU  Ballidu          62.65 244   P      P       12 47 14.5 -1.0
MUN   Mundaring        62.95 243   P      P       12 47 17.0 -0.4
      baz=63,SNR=7.8
MUN   Mundaring        62.95 243   P      P       12 47 17.1 -0.3
MORW  Morawa           63.40 246   P      P       12 47 19.4 -0.9
      baz=63,SNR=4.6
MORW  Morawa           63.40 246   P      P       12 47 19.5 -0.9
MORW                               IAmb   IAmb    12 47 20.4
      comp=Z,22nm,1.1s
MORW  Morawa           63.40 246   P      P       12 47 19.5 -0.9
BNSI  Bone             64.89 274   P      P       12 47 30.4 +0.1
      comp=Z,195nm,0.9s
PLAI  Plampang         65.82 268   P      P       12 47 35.4 -0.9
      comp=Z,2µmcomp=Z,212nm,1.0s
PLAI  Plampang         65.82 268   P      P       12 47 35.2 -1.1
GIRL  Giralia          65.99 253   P      P       12 47 37.7 +0.5
      baz=66,SNR=3.7
GIRL  Giralia          65.99 253   P      P       12 47 37.9 +0.7
GIRL  Giralia          65.99 253   P      P       12 47 37.2  0.0
TWSI  Taliwang, Sumb   66.69 268   P      P       12 47 40.9 -0.9
      comp=Z,927nmcomp=Z,112nm,0.9s
JHJ   Hachijo jima 2   66.94 320   P      P       12 47 42.7 -0.2
      comp=Z,196nm,0.9s,baz=41,slow=21,SNR=2.9
IGBI  Denpasar         68.32 268   P      P       12 47 51.6 -0.4
      comp=Z,2µmcomp=Z,241nm,1.0s
KBKI  Kotabaru         68.97 274   P      P       12 48 07.4  +11
JAGI  Jajag, Banyuwa   69.36 268   P      P       12 47 56.7 -1.7
      comp=Z,175nm,0.7s
JAGI  Jajag, Banyuwa   69.36 268   P      P       12 47 56.8 -1.5
JAGI  Jajag, Banyuwa   69.36 268   P      P       12 47 56.9 -1.5
ABJI  Asem Bagus       69.47 268   P      P       12 47 59.7 +0.6
      comp=Z,100nm,1.1s
JGF   Kuroka           70.09 320   P      P       12 48 02.2 -0.1
JGF                                IAmb   IAmb    12 48 02.3
      comp=Z,14nm,0.9s
GMJI  Gumukmas         70.09 268   P      P       12 48 02.1 -0.7
      comp=Z,81nm,0.8s
INU   Inuyama          70.13 320   P      P       12 48 02.4 -0.2
INU                                IAmb   IAmb    12 48 03.9
      comp=Z,11nm,0.8s
BBKI  Banjar Baru      70.17 273   P      P       12 48 04.4 +1.0
      comp=Z,61nm,0.8s
MJAR  Matsushiro Arr   70.20 321   P      P       12 48 02.3 -0.7
      comp=Z,23nm,0.7s,baz=158,slow=6.0,SNR=38
MJAR  Matsushiro Arr   70.20 321   P      P       12 48 03.1 +0.1
MJAR                               pmax   pmax
      comp=Z,13nm,0.8s
MJAR  Matsushiro Arr   70.20 321   P      P       12 48 03.1 +0.1
MJAR                               IAmb   IAmb    12 48 03.7
      comp=Z,13nm,0.8s
MAJO  Matsushiro       70.20 321   P      P       12 48 02.5 -0.5
MAJO                               pmax   pmax
      comp=Z,26nm,0.8s
MAJO  Matsushiro       70.20 321   P      P       12 48 02.5 -0.5
MAJO                               IAmb   IAmb    12 48 03.4
      comp=Z,26nm,0.8s
MAJO  Matsushiro       70.20 321   P      P       12 48 02.9 -0.1
MAT   Matsushiro       70.20 321   P      P       12 48 02.4 -0.6
MJB9  Matsu-Tunnel     70.21 321   P      P       12 48 02.7 -0.4
MJB9                               IAmb   IAmb    12 48 03.4
      comp=Z,26nm,0.7s
JOW   Kunigami         71.03 308   P      P       12 48 08.9 +0.7
      comp=Z,16nm,0.8s,baz=176,slow=7.2,SNR=6.6
JWT   Wachi            71.09 319   P      P       12 48 08.5 +0.1
JWT                                IAmb   IAmb    12 48 08.9
      comp=Z,20nm,0.8s
QSPA  South Pole Qui   71.82 180   P      P       12 48 14.8 +2.3
QSPA                               IAmb   IAmb    12 48 15.5
      comp=Z,15nm,0.8s
PCJI  Pacitan          72.26 267   P      P       12 48 15.6 -0.3
      comp=Z,4µmcomp=Z,563nm,0.7s
WOJI  Wonogiri, Jawa   72.61 267   P      P       12 48 17.7 -0.2
      comp=Z,107nm,1.2s
JNU   Nakatsue         72.71 315   P      P       12 48 17.9 -0.3
      comp=Z,44nm,0.7s,baz=270,slow=0.4,SNR=25
JNU   Nakatsue         72.71 315   P      P       12 48 18.2 +0.1
UGM   Wanagama         72.96 267   P      P       12 48 19.8 -0.2
UGM   Wanagama         72.96 267   P      P       12 48 19.7 -0.3
ASAJ  Asahikawa        73.21 329   P      P       12 48 20.6 -0.1
      comp=Z,9.8nm,0.7s,baz=212,slow=4.9,SNR=5.8
PBKI  Pangkalan Bun    73.42 273   P      P       12 48 23.9 +1.2
      comp=Z,166nm,1.1s
YOJ   Yonaguni jima    73.90 303   P      P       12 48 24.9 -0.2
STKI  Sintang          74.47 275   P      P       12 48 29.6 +0.8
      comp=Z,65nm,0.8s
SBUM  Sibu             74.55 278   P      P       12 48 30.0 +0.8
YULB  Yu-li            74.77 301   P      P       12 48 30.1 -0.2
YULB                               IAmb   IAmb    12 48 31.4
      comp=Z,19nm,0.8s
PEA0B Petropavlovsk-   74.90 343   P      P       12 48 29.6 -0.7
PEA0B                              pmax   pmax
      comp=Z,71nm,1.4s
PEA0B Petropavlovsk-   74.90 343   P      P       12 48 29.6 -0.7
PEA0B                              IAmb   IAmb    12 48 40.8
      comp=Z,71nm,1.4s
PETK  Petropavlovsk-   74.90 343   P      P       12 48 29.7 -0.6
      comp=Z,7.9nm,0.8s,baz=113,slow=8.9,SNR=12
PETK  Petropavlovsk-   74.90 343   P      P       12 48 30.0 -0.3
YSS   Yuzh-Sakhalins   75.25 332  eP      P       12 48 32.7 +0.3
YSS                                pmax   pmax
      comp=Z,20nm,0.9s
TPUB  Ta-pu            75.27 301   P      P       12 48 31.9 -1.2
KSM   Kuching          76.03 276   P      P       12 48 37.8 +0.1
KSM   Kuching          76.03 276   P      P       12 48 38.1 +0.4
LEM   Lembang          76.03 267   P      P       12 48 38.4 +0.5
      comp=Z,145nm,0.7s,baz=74,slow=6.1,SNR=25
CBJI  Citeko           76.88 267   P      P       12 48 41.8 -0.6
      comp=Z,139nm,0.6s
DBJI  Dramaga          76.94 267   P      P       12 48 42.9 +0.1
      comp=Z,7µmcomp=Z,148nm,0.8s
SKJI  Sukabumi         76.99 267   P      P       12 48 43.6 +0.6
      comp=Z,170nm,0.6s
KSRS  Korea Array      77.19 317   P      P       12 48 44.6 +1.1
      comp=Z,21nm,1.0s,baz=134,slow=6.5,SNR=54
KSAR  Wonju Array Be   77.21 317   P      P       12 48 45.1 +1.4
KSAR  Wonju Array Be   77.21 317   P      P       12 48 45.1 +1.4
KS19  Wonju Array Si   77.26 317   P      P       12 48 44.7 +0.7
KS19                               IAmb   IAmb    12 48 46.3
      comp=Z,30nm,1.1s
NVAR  Mina Array Bea   77.39  42   P      P       12 48 46.1 +1.2
      comp=Z,3.2nm,0.8s,baz=225,slow=9.4,SNR=25
NVAR                               pP     pP      12 49 37.2 +0.7
      comp=Z,3.0nm,0.9s,baz=230,slow=9.6,SNR=6.2
NVAR  Mina Array Bea   77.39  42   P      P       12 48 46.0 +1.0
CGJI  Cibinong         77.92 267   P      P       12 48 47.4 -0.8
      comp=Z,2µmcomp=Z,182nm,0.6s
KDAK  Kodiak Island    77.97  12   P      P       12 48 48.1 +0.7
      comp=Z,7.3nm,0.9s,baz=238,slow=4.2,SNR=5.3
KDAK  Kodiak Island    77.97  12   P      P       12 48 47.5 +0.1
KDAK                               pmax   pmax
      comp=Z,55nm,1.4s
KDAK  Kodiak Island    77.97  12   P      P       12 48 47.5 +0.1
KDAK                               IAmb   IAmb    12 48 56.1
      comp=Z,55nm,1.4s
USRK  Ussuriysk Ar.    78.80 324   P      P       12 48 52.7 +0.4
      comp=Z,8.6nm,1.0s,baz=104,slow=6.1,SNR=5.5
KASI  Kota Agung       79.38 268   P      P       12 48 55.2 -0.9
      comp=Z,108nm,0.9s
LWLI  Liwa             79.95 268   P      P       12 49 00.1 +0.8
      comp=Z,29µmcomp=Z,131nm,0.7s
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MDSI  Maura Dua        80.00 269   P      P       12 48 58.1 -1.3
      comp=Z,30nm,1.1s
U15A  North Rim        80.29  47   P      P       12 49 01.5 +0.7
MDJ   Mudanjiang       80.40 323   P      P       12 49 02.0 +1.1
MDJ                                pmax   pmax
      comp=Z,23nm,1.3s
MDJ                                pmax   pmax
      comp=Z,110nm,4.7s
MDJ   Mudanjiang       80.40 323   P      P       12 49 01.7 +0.8
MDJ                                IAmb   IAmb    12 49 02.9
      comp=Z,30nm,1.2s
NJ2   Nanjing          80.74 308  eP      P       12 49 03.8 +0.8
NJ2                                pmax   pmax
      comp=Z,17nm,0.5s
DSRI  Dabo             80.84 273   P      P       12 49 05.5 +1.5
      comp=Z,26nm,1.2s
KLR   Kul'dur          82.12 328   P      P       12 49 09.8 -0.1
      comp=Z,1.3nm,0.7s,baz=103,slow=11,SNR=3.9
KLR   Kul'dur          82.12 328⇑eP      P       12 49 10.4 +0.6
KLR                                pmax   pmax
      comp=Z,18nm,2.3s
MASI  Maura Aman, Be   82.25 269   P      P       12 49 13.1 +1.7
      comp=Z,79nm,0.8s
MYKOM Kota Tinggi      82.25 274   P      P       12 49 12.0 +0.7
CN2   Changchun        82.35 321  eP      P       12 49 11.8 +0.7
CN2                                pmax   pmax
      comp=Z,10.0nm,0.6s
PLID  Pearl Lake       82.63  38   P      P       12 49 12.6 -0.3
HLID  Hailey           82.72  40   P      P       12 49 13.4 +0.2
TXAR  Lajitas Array    83.38  56   P      P       12 49 18.8 +1.9
      comp=Z,2.2nm,0.9s,baz=216,slow=8.3,SNR=20
TXAR                               pP     pP      12 50 09.6 +0.4
      comp=Z,1.3nm,1.0s,baz=211,slow=7.1,SNR=3.9
TXAR  Lajitas Array    83.38  56   P      P       12 49 17.3 +0.4
TIA   Tai'an           83.95 311  eP      P       12 49 19.5  0.0
TIA                                pmax   pmax
      comp=Z,20nm,1.2s
JRMM  Jerantut         84.21 276   P      P       12 49 22.0 +0.7
RDMU  Red Mountain     84.22  44   P      P       12 49 21.5 +0.4
MCMT  McKenzie Canyo   84.35  39   P      P       12 49 21.3 -0.3
PDSI  Padang           84.62 271   P      P       12 49 23.4  0.0
      comp=Z,24nm,0.9s
MAW   Mawson           84.66 199   P      P       12 49 23.7 +1.1
      comp=Z,10nm,0.7s,baz=153,slow=12,SNR=12
MAW   Mawson           84.66 199   P      P       12 49 24.0 +1.5
      baz=85,SNR=8.8
MAW   Mawson           84.66 199   P      P       12 49 23.6 +1.1
MAW                                pmax   pmax
      comp=Z,3.0nm,0.9s
MAW   Mawson           84.66 199   P      P       12 49 23.6 +1.1
H03S2 Juan Fernandez   84.83 124   T      T       14 22 52.0
      SNR=98
H03S1 Juan Fernandez   84.85 124   T      T       14 22 54.3
      SNR=134
H03S3 Juan Fernandez   84.85 124   T      T       14 22 53.0
      SNR=130
SEY   Seymchan         84.88 346   P      P       12 49 22.9 -0.5
      comp=Z,1.8nm,0.4s,baz=122,slow=7.0,SNR=12
SEY   Seymchan         84.88 346   P      P       12 49 23.0 -0.5
I21K  Tanana           84.98   9   P      P       12 49 24.4 +0.4
WRH   Wood River Hil   85.00  11   P      P       12 49 23.9 -0.2
MLY   Manley           85.04  10   P      P       12 49 24.0 -0.4
PDAR  Pinedale Array   85.32  42   P      P       12 49 26.9 +0.4
      comp=Z,1.6nm,0.8s,baz=207,slow=3.1,SNR=13
PDAR                               pP     pP      12 50 18.6 -0.5
      comp=Z,1.1nm,0.9s,baz=219,slow=3.1,SNR=3.6
COLA  College          85.40  11d iP     P       12 49 25.5 -0.5
COLA                               pmax   pmax
      comp=Z,15nm,0.8s
IMAR  Indian Mountai   85.47   9   P      P       12 49 27.0 +0.6
IL31                   85.49  12   P      P       12 49 26.0 -0.5
ILAR  Eielson Array    85.49  12   P      P       12 49 26.2 -0.3
      comp=Z,3.2nm,0.5s,baz=223,slow=5.8,SNR=104
ILAR                               pP     pP      12 50 19.2 +0.5
      comp=Z,2.2nm,0.9s,baz=230,slow=5.2,SNR=3.6
ILAR  Eielson Array    85.49  12   P      P       12 49 26.0 -0.6
IPM   Ipoh             85.77 276   P      P       12 49 30.0 +0.9
IPM   Ipoh             85.77 276   P      P       12 49 29.7 +0.6
SISI  Saibi            85.80 270   P      P       12 49 28.6 -0.6
      comp=Z,23nm,1.0s
MNSI  Mandailing Nat   85.99 272   P      P       12 49 29.6 -0.5
      comp=Z,37nm,0.8s
BJT   Baijiatuau       86.38 314   P      P       12 49 31.9 +0.5
BJT                                pmax   pmax
      comp=Z,12nm,1.2s
BJT   Baijiatuau       86.38 314   P      P       12 49 31.9 +0.5
BJT                                IAmb   IAmb    12 49 35.3
      comp=Z,12nm,1.2s
BJI   Beijing          86.38 314   P      P       12 49 32.0 +0.6
BJI                                pmax   pmax
      comp=Z,13nm,1.9s
KULM  Kulim            86.38 277   P      P       12 49 33.0 +0.9
DAWY  Dawson           86.51  15   P      P       12 49 32.5 +0.9
EGAK  Eagle            86.70  14   P      P       12 49 33.1 +0.7
ZEA   Zeya             87.12 330  eP      P       12 49 35.7 +1.0
BILL  Bilibino         87.12 353  eP      P       12 49 33.4 -1.0
BILL                              e*PP    pP      12 50 27.8 +0.9
BILL                              e               12 52 58.4
BILL                               pmax   pmax
      comp=Z,6.0nm,0.7s
ENH   Enshi            87.23 303   P      P       12 49 36.2 +0.4
ENH                                IAmb   IAmb    12 49 37.9
      comp=Z,33nm,1.0s
PSI   Prapat           87.23 274   P      P       12 49 36.4 +0.1
      comp=Z,40nm,0.8s,baz=124,slow=2.7,SNR=41
TSI   Tuntungan        87.79 274   P      P       12 49 40.4 +1.6
      comp=Z,50nm,0.4s
GSI   Gunungsitoli     88.05 272   P      P       12 49 41.4 +1.4
      comp=Z,115nm,1.0s
GYA   Guiyang          88.11 299 ⇓P      P       12 49 48.6 +8.4
GYA                                pmax   pmax
      comp=Z,16nm,0.9s
BMAR  Burnt Mountain   88.29  11   P      P       12 49 40.8 +0.8
KCSI  Kotacane, Aceh   88.55 274   P      P       12 49 43.2 +0.8
      comp=Z,38nm,1.2s
TPTI                   89.03 274   P      P       12 49 45.5 +0.9
      comp=Z,235nmcomp=Z,24nm,1.0s
XAN   Xi'an            89.12 306 ⇓P      P       12 49 46.3 +1.6
XAN                                pP     pP      12 50 34.0 -3.4
XAN                                sP     sP      12 50 59.4 -0.5
XAN                                pmax   pmax
      comp=Z,23nm,1.2s
HHC   Hu-ho-hao-te     89.90 313  eP      P       12 49 49.3 +1.1
HHC                                pmax   pmax
      comp=Z,25nm,1.2s
HHC                                pmax   pmax
      comp=Z,37nm,6.6s
SNAA  Sanae            90.16 177⇓eP      P       12 49 51.2 +2.3
SNAA                               pmax   pmax
      comp=Z,10.0nm,2.1s
VNA3  Neumayer Olymp   90.17 175   P      P       12 49 50.1 +1.2
VNA2  Neumayer--Watz   90.65 176   P      P       12 49 52.8 +1.7
      baz=187,slow=3.9
KMI   Kunming          90.96 296 ⇑P      P       12 49 55.8 +2.1
KMI                                pP     pP      12 50 47.0 +0.7
KMI                                pmax   pmax
      comp=Z,12nm,0.5s
CD2   Chengdu          92.06 302   P      P       12 49 58.6 +0.2
CD2                                pmax   pmax
      comp=Z,20nm,0.8s
CMAR  Chiang Mai Arr   92.14 289   P      P       12 50 00.5 +1.5
      comp=Z,2.0nm,0.3s,baz=113,slow=3.1,SNR=19
YKA   Yellowknife Ar   93.26  24   P      P       12 50 03.6 +0.6
      comp=Z,0.5nm,0.7s,baz=242,slow=4.7,SNR=5.5
YKA                                pP     pP      12 50 56.2 +0.4
      comp=Z,0.6nm,0.9s,baz=237,slow=4.2,SNR=2.9
YKA                                PKKPbc PKKPdf  13 07 08.2 -2.9
      comp=Z,0.2nm,0.6s,baz=26,slow=2.5,SNR=4.0
LZH   Lanzhou          93.75 307 ⇓P      P       12 50 07.4 +1.2
LZH                                pP     pwP     12 51 05.6 +3.5
LZH                                pmax   pmax
      comp=Z,19nm,1.3s
ULN   Ulaanbaatar      95.59 319⇓eP      P       12 50 13.9 -0.4
ULN                                pmax   pmax
      comp=Z,5.0nm,1.3s
SONM  Songino Array    95.99 318   P      P       12 50 16.4 +0.2
      comp=Z,0.8nm,0.8s,baz=117,slow=4.8,SNR=4.9
TIXI  Tiksi            97.34 345   P      P       12 50 20.5 -0.9
      comp=Z,1.3nm,0.5s,baz=113,slow=3.7,SNR=7.8
TIXI  Tiksi            97.34 345⇑eP      P       12 50 20.9 -0.5
TIXI                               pmax   pmax
      comp=Z,4.0nm,1.0s
ZALV  Zalesovo Beam   110.56 322   PKiKP  PKiKP   12 55 18.3 -1.6
      comp=Z,1.4nm,0.5s,baz=266,slow=1.0,SNR=7.1
MK31  Makanchi Array  111.76 314⇓iPKIKP  PKiKP   12 55 22.3 -0.2
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MKAR	**Makanchi Array**	**111.76**	**314**	PKiKP	**PKiKP**	**12 55 21.9**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=126,slow=1.0,SNR=14						
KURK	**Kurchatov**	**114.30**	**318**	PKIKP	PKPdf	12 55 26.9	-0.3
KURBB	**Kurchatov Arra**	**114.35**	**318**	PKP	PKPdf	12 55 26.9	-0.4
	comp=Z,1.7nm,0.7s,baz=120,slow=1.7,SNR=15						
KSH	**Kashi**	**115.97**	**306**	PKP	**PKiKP**	**12 55 33.3**	**+2.3**
BOOM	**Boomskoye usch**	**116.10**	**309**	PKIKP	**PKiKP**	**12 55 31.5**	**+0.3**
BOOM	**Boomskoye usch**	**116.10**	**309**		**PKiKP**	**12 55 31.5**	**+0.3**
AAK	**Ala-Archa**	**117.17**	**309**	PKP	**PKiKP**	**12 55 33.2**	**0.0**
	comp=Z,1.9nm,0.7s,baz=182,slow=2.2,SNR=7.3						
AAK	**Ala-Archa**	**117.17**	**309**	⇓*i*PKIKP	**PKPdf**	**12 55 33.0**	**-0.2**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BRVK	**Borovoye**	**119.26**	**321**	⇑*i*PKIKP	**PKPdf**	**12 55 36.6**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KKAR	**Karatay Array**	**120.09**	**310**	PKIKP	**PKPdf**	**12 55 38.4**	**-0.2**
KKAR	**Karatay Array**	**120.09**	**310**		**PKPdf**	**12 55 38.4**	**-0.2**
CHGR	**Chuyangaron**	**121.26**	**305**		**PKPdf**	**12 55 40.3**	**-0.8**
KBL	**Kabul**	**121.34**	**300**	PKIKP	**PKPdf**	**12 55 41.1**	**-0.4**
KBL	**Kabul**	**121.34**	**300**		**PKPdf**	**12 55 41.1**	**-0.4**
ARU	**Arti**	**124.96**	**327**	*i* PKIKP	**PKiKP**	**12 55 48.0**	**+0.2**
ARU						12 57 37.0	
ARU						13 02 38.1	
ARCES	**ARCESS Array B**	**127.19**	**351**	PKP	**PKPdf**	**12 55 51.5**	**0.0**
	comp=Z,1.3nm,0.4s,baz=49,slow=0.6,SNR=13						
KIRV	**Kirov**	**128.40**	**332**	⇓*i*PKIKP	**PKiKP**	**12 55 55.1**	**+0.5**
BELG	**Belogornoye**	**132.45**	**326**	⇑*i*PKIKP	**PKiKP**	**12 56 02.9**	**-0.1**
FINES	**FINESS Array B**	**134.36**	**346**	PKhKP	PKPpre	12 56 01.4	
	comp=Z,3.6nm,0.7s,baz=126,slow=2.6,SNR=4.9						
FINES				PKP	**PKiKP**	**12 56 06.0**	**-0.6**
	comp=Z,3.5nm,0.7s,baz=56,slow=2.9,SNR=7.5						
FINES	**FINESS Array B**	**134.36**	**346**		**PKPdf**	**12 56 05.1**	**-0.1**
OBN	**Obninsk**	**136.08**	**334**	*e*PKIKP	**PKPdf**	**12 56 08.2**	**-0.3**
OBN				*e*		12 57 02.4	
OBN				pmax	pmax		
	comp=Z,15nm,0.4s						
MNK	**Minsk**	**139.79**	**340**	*i* PKIKP	**PKPdf**	**12 56 12.7**	**-2.7**
MNK				*i*		12 57 09.3	
MNK				*i*		13 03 01.8	
MNK				MLR	MLR		
	comp=N,90nm,13.0s						
MNK				MLR	MLR		
	comp=Z,200nm,21.0s						
MNK				MLR	MLR		
	comp=E,15nm,14.0s						
AKASG	**Malin Array Be**	**142.34**	**335**	PKhKP	PKPpre	12 56 15.2	
	comp=E,2.7nm,0.5s,baz=40,slow=4.4,SNR=15						
AKBB	**Malin Array Si**	**142.34**	**335**	⇑*e*PKHKP	PKPpre	12 56 15.6	
AKBB				*i*		12 56 21.2	
KMBO	**Kilima Mbogo**	**142.98**	**242**	PKP	**PKPdf**	**12 56 20.9**	**-1.8**
	comp=E,1.8nm,0.3s,baz=65,slow=6.2,SNR=9.4						
LVV	**L'vov**	**145.01**	**338**	*e*PKIKP	**PKPdf**	**12 56 24.9**	**+0.1**
MILM	**Milestii Mici**	**145.38**	**331**	*e*PKP2	**PKPdf**	**12 56 25.6**	**+0.1**
MILM				pmax	pmax		
	comp=Z,30nm,0.6s						
NRDL	**Niedersach Rie**	**145.59**	**355**	*e*PKPbc	**PKPab**	**12 56 26.7**	**-0.1**
	baz=11,slow=2.8						
FLTG	**Flechtingen**	**145.64**	**353**	*e*PKPbc	**PKPbc**	**12 56 26.7**	**+0.2**
	baz=11,slow=2.8						
IBBN	**Ibbenburen**	**145.94**	**357**	*e*PKPbc	**PKPab**	**12 56 28.2**	**0.0**
	baz=11,slow=2.8						
KOLS	**Kolonicke sedl**	**146.37**	**339**	*e*PKP2	**PKPab**	**12 56 29.9**	**-0.2**
KOLS	**Kolonicke sedl**	**146.37**	**339**	*e*PKP	**PKPab**	**12 56 29.9**	**-0.2**
BURAR	**Bucovina Array**	**146.39**	**335**	⇓P	**PKPab**	**12 56 30.0**	**-0.3**
BURAR	**Bucovina Array**	**146.39**	**335**	⇓PKP2	**PKPab**	**12 56 30.0**	**-0.3**
CLL	**Collm**	**146.41**	**351**	⇓*i*PKIKP	**PKPbc**	**12 56 29.2**	**+0.3**
CLL				pmax	pmax		
	comp=Z,23nm,0.7s						
CLL	**Collm**	**146.41**	**351**	⇓*i*PKPbc	**PKPbc**	**12 56 29.2**	**+0.3**
	comp=Z,23nm,0.7s						
CLL				*e*pPKiKP	pPKPbc	12 57 24.0	+0.5
CLL				*e*SKPbc	**SKiKP**	**12 59 50.0**	**+3.0**
CLL	**Collm**	**146.41**	**351**	*e*PKPbc	**PKPbc**	**12 56 29.1**	**+0.3**
	baz=11,slow=2.8						
OSTC	**Ostas**	**146.55**	**347**	⇑*e*PKP	**PKPab**	**12 56 30.6**	**-0.2**
CHVC	**Chvalec**	**146.56**	**347**	⇑*e*PKP	**PKPab**	**12 56 30.5**	**-0.3**
NIE	**Niedzica**	**146.56**	**342**	*e*PKP	**PKPab**	**12 56 31.3**	**+0.4**
UZH	**Uzhgorod**	**146.62**	**339**	⇓*i*PKP2	**PKPab**	**12 56 30.3**	**-0.7**
UPC	**Upice**	**146.64**	**347**	⇑*e*PKP	**PKPab**	**12 56 30.7**	**-0.4**
UPC	**Upice**	**146.64**	**347**	*e*PKP2	**PKPab**	**12 56 30.7**	**-0.4**
TLCR		**146.64**	**329**	⇓P	**PKPbc**	**12 56 30.0**	**+0.3**
TLCR		**146.64**	**329**	⇓PKP2	**PKPbc**	**12 56 30.0**	**+0.3**
TESR	**Tescani**	**146.66**	**333**	⇓P	**PKPbc**	**12 56 30.1**	**+0.3**
SCTR	**Scanteiesti**	**146.68**	**330**	⇓P	**PKPbc**	**12 56 30.5**	**+0.7**
BRG	**Berggiesshubel**	**146.68**	**350**	*e*PKPbc	**PKPbc**	**12 56 30.2**	**+0.6**
	baz=11,slow=2.8						
BRG	**Berggiesshubel**	**146.68**	**350**	*e*PKP	**PKPbc**	**12 56 30.3**	**+0.6**
BRG				Amp		12 56 31.3	
	comp=Z,12nm,0.8s						
DPC	**Dobruska-Polom**	**146.72**	**347**	⇑*e*PKP	**PKPab**	**12 56 30.9**	**-0.6**
DPC	**Dobruska-Polom**	**146.72**	**347**	*e*PKP2	**PKPab**	**12 56 30.9**	**-0.6**
FBE	**Freiberg**	**146.73**	**350**	*e*PKPbc	**PKPab**	**12 56 30.7**	**-0.7**
	baz=11,slow=2.8						
KRLC	**Kraliky**	**146.88**	**346**	⇑*e*PKP	**PKPab**	**12 56 31.3**	**-0.8**
KRLC	**Kraliky**	**146.88**	**346**	*e*PKP2	**PKPab**	**12 56 31.3**	**-0.8**
JURR	**Jurilovca**	**146.91**	**328**	⇑P	**PKPbc**	**12 56 30.3**	**-0.1**
TRPA	**Tarpa**	**146.97**	**338**	⇑P	**PKPbc**	**12 56 30.4**	**0.0**
CFR	**Carcaliu**	**146.98**	**329**	⇑P	**PKPbc**	**12 56 31.3**	**+0.7**
CFR	**Carcaliu**	**146.98**	**329**	⇑PKP2	**PKPbc**	**12 56 31.3**	**+0.7**
MORC	**Moravsky Berou**	**146.98**	**345**	⇑P	**PKPab**	**12 56 31.7**	**-0.8**
MORC	**Moravsky Berou**	**146.98**	**345**	*e*PKP	**PKPbc**	**12 56 31.2**	**+0.6**
MORC	**Moravsky Berou**	**146.98**	**345**	⇑PKP2	**PKPab**	**12 56 31.7**	**-0.8**
LANS	**Liptovska Anna**	**147.04**	**343**	*e*PKP2	**PKPab**	**12 56 32.4**	**-0.4**
LANS	**Liptovska Anna**	**147.04**	**343**	*e*PKP	**PKPab**	**12 56 32.4**	**-0.4**
TPGR	**Topolog**	**147.07**	**329**	⇓P	**PKPab**	**12 56 32.0**	**-1.1**
VRI	**Vrincioaia**	**147.12**	**332**	⇑P	**PKPbc**	**12 56 30.5**	**-0.6**
VRI	**Vrincioaia**	**147.12**	**332**	⇑PKIKP	**PKPbc**	**12 56 30.5**	**-0.6**
PLOR	**Plostina**	**147.17**	**332**	⇓P	**PKPbc**	**12 56 31.6**	**+0.4**
PLOR	**Plostina**	**147.17**	**332**	⇓PKP2	**PKPbc**	**12 56 31.6**	**+0.4**
MOX	**Moxa**	**147.25**	**352**	*e*PKPbc	**PKPbc**	**12 56 31.6**	**+0.4**
	baz=11,slow=2.8						
PLN	**Plauen**	**147.33**	**352**	*e*PKPbc	**PKPbc**	**12 56 32.1**	**+0.7**
	baz=11,slow=2.8						
BR131	**Keskin Array S**	**147.34**	**317**	PKP2	**PKPbc**	**12 56 32.6**	**+0.6**
BR131	**Keskin Array S**	**147.34**	**317**		**PKPbc**	**12 56 32.6**	**+0.6**
BRTR	**Keskin Array B**	**147.34**	**317**	PKPbc	**PKPbc**	**12 56 32.3**	**+0.3**
	comp=Z,12nm,0.6s,baz=131,slow=3.6,SNR=25						
BRTR	**Keskin Array B**	**147.34**	**317**	PKP2	**PKPbc**	**12 56 32.6**	**+0.6**
BRTR	**Keskin Array B**	**147.34**	**317**		**PKPbc**	**12 56 32.6**	**+0.6**
TANN	**Tannenbergstha**	**147.36**	**351**	*e*PKPbc	**PKPbc**	**12 56 32.4**	**+0.8**
	baz=11,slow=2.8						
OZUR		**147.36**	**333**	⇓P	**PKiKP**	**12 56 32.8**	**-0.9**
TIRR	**Tirgusor**	**147.36**	**328**	⇓P	**PKPbc**	**12 56 32.0**	**+0.3**
TIRR	**Tirgusor**	**147.36**	**328**	PKP2	**PKPbc**	**12 56 32.3**	**+0.6**
TIRR	**Tirgusor**	**147.36**	**328**		**PKPbc**	**12 56 32.3**	**+0.6**
PRU	**Pruhonice**	**147.43**	**349**	⇑*e*PKP	**PKPbc**	**12 56 32.6**	**+0.9**
PRU	**Pruhonice**	**147.43**	**349**	*e*PKP2	**PKPbc**	**12 56 32.6**	**+0.9**
GUNZ	**Gunzen**	**147.43**	**351**	*e*PKPbc	**PKPbc**	**12 56 32.5**	**+0.8**
	baz=11,slow=2.8						
TLBR	**Topalu**	**147.48**	**329**	⇓P	**PKPbc**	**12 56 32.8**	**+0.8**
NKC	**Novy Kostel**	**147.54**	**351**	⇑*e*PKP	**PKiKP**	**12 56 33.5**	**-0.5**
NKC	**Novy Kostel**	**147.54**	**351**	*e*PKP2	**PKiKP**	**12 56 33.5**	**-0.5**
DOPR	**Dopca**	**147.63**	**333**	⇓P	**PKiKP**	**12 56 33.8**	**-0.6**
VRAC	**Vranov**	**147.64**	**346**	*e*PKP	**PKPab**	**12 56 35.5**	**+0.4**
MEM	**Membach**	**147.69**	**359**	*d*PKiKP	**PKPbc**	**12 56 33.1**	**+0.7**
MLR	**Muntele Rosu**	**147.76**	**332**	⇑P	**PKPbc**	**12 56 33.5**	**+0.6**
MLR	**Muntele Rosu**	**147.76**	**332**	⇑PKP2	**PKPbc**	**12 56 33.5**	**+0.6**
ISR	**Istrita**	**147.78**	**331**	⇑P	**PKPbc**	**12 56 33.7**	**+0.8**
ISR	**Istrita**	**147.78**	**331**	⇑PKP2	**PKPbc**	**12 56 33.7**	**+0.8**
JAVC	**Velka Javorina**	**147.80**	**344**	*e*PKP	**PKiKP**	**12 56 34.8**	**+0.2**
VYHS	**Vyhne**	**147.82**	**343**	*e*PKP2	**PKiKP**	**12 56 33.8**	**-0.8**
VYHS	**Vyhne**	**147.82**	**343**	*e*PKP	**PKiKP**	**12 56 33.8**	**-0.8**
MANZ	**Manzenberg**	**147.83**	**351**	*e*PKPbc	**PKiKP**	**12 56 33.8**	**-0.8**
	baz=11,slow=2.8						
KOLL	**Kolacno**	**147.86**	**343**	*e*PKP	**PKiKP**	**12 56 34.1**	**-0.6**
BCLA	**Clavier**	**147.89**	**360**	*d*PKPdf	**PKPdf**	**12 56 29.4**	**-0.3**
KRUC	**Moravsky**	**147.92**	**346**	*e*PKP	**PKPbc**	**12 56 33.5**	**+0.4**
BGES	**Gesves**	**147.93**	**0**	*d*PKiKP	**PKPbc**	**12 56 33.1**	**+0.1**
TNS	**Taunus Mts**	**147.97**	**356**	*e*PKPbc	**PKiKP**	**12 56 34.7**	**-0.3**
	baz=11,slow=2.8						
BMRD	**Maredsous**	**148.01**	**0**	*d*PKiKP	**PKiKP**	**12 56 34.1**	**-0.7**
ROTZ	**Rotzenmuhle**	**148.03**	**351**	*e*PKPbc	**PKiKP**	**12 56 34.2**	**-0.8**
	baz=11,slow=2.8						
DRGR		**148.04**	**337**	⇓P	**PKPbc**	**12 56 34.2**	**+0.6**
DRGR		**148.04**	**337**	⇓PKP2	**PKPbc**	**12 56 34.2**	**+0.6**
VOIR		**148.20**	**333**	⇑P	**PKiKP**	**12 56 34.9**	**-0.7**
VOIR		**148.20**	**333**	⇑PKP2	**PKiKP**	**12 56 34.9**	**-0.7**
DOU	**Dourbes**	**148.21**	**1**	*d*PKiKP	**PKiKP**	**12 56 34.8**	**-0.5**
MODS	**Modra-Piesok**	**148.34**	**344**	*e*PKIKP	**PKPbc**	**12 56 34.6**	**+0.4**
MODS	**Modra-Piesok**	**148.34**	**344**	*e*PKP	**PKPbc**	**12 56 34.6**	**+0.4**
KHC	**Kasperske Hory**	**148.43**	**349**	⇑*e*PKP	**PKiKP**	**12 56 35.2**	**-0.7**
KHC	**Kasperske Hory**	**148.43**	**349**	PKHKP	PKPpre	12 56 29.6	
KHC				PKP	**PKPbc**	**12 56 32.8**	**-1.6**
KHC	**Kasperske Hory**	**148.43**	**349**		**PKPdf**	**12 56 29.6**	**-1.1**
KHC				PKPbc	**PKPbc**	**12 56 32.8**	**-1.6**
ARR	**Arges**	**148.43**	**333**	⇑P	**PKPbc**	**12 56 34.3**	**-0.3**
CKRC	**Cesky Krumlov**	**148.59**	**348**	⇑*e*PKP	**PKiKP**	**12 56 36.9**	**+0.7**
MBAR	**Mbarara**	**148.60**	**236**	⇑*i*PKP2	**PKiKP**	**12 56 38.4**	**+0.9**
WLF	**Walferdange**	**148.63**	**359**	*d*PKiKP	**PKiKP**	**12 56 36.1**	**-0.1**
GEC2	**GERESS Array S**	**148.68**	**349**	*e*PKPbc	**PKPbc**	**12 56 35.6**	**+0.4**
	baz=11,slow=2.8						
GERES	**GERESS Array B**	**148.68**	**349**	PKPbc	**PKPbc**	**12 56 35.5**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=270,slow=6.7,SNR=12						
SIRR	**Siria**	**148.87**	**338**	⇑P	**PKiKP**	**12 56 36.6**	**-0.2**
CONA	**Conrad Observa**	**149.11**	**346**	*i* P	**PKiKP**	**12 56 37.2**	**-0.1**
	comp=Z,20nm,1.4s						
MOA	**Molln**	**149.53**	**348**	*i* P	**PKiKP**	**12 56 37.7**	**-0.5**
	comp=Z,3.1nm,0.7s						
HERR	**Herculane**	**149.74**	**335**	⇓P	**PKPbc**	**12 56 36.9**	**-0.8**
ARSA	**Arzberg**	**149.82**	**346**	*i* P	**PKPbc**	**12 56 38.2**	**+0.3**
	comp=Z,5.0nm,0.8s						
LEF	**Lefka**	**150.15**	**310**	⇓P	**PKiKP**	**12 56 39.4**	**-0.4**
UBR	**Ueberruh**	**150.35**	**353**	*e*PKPbc	**PKiKP**	**12 56 39.6**	**-0.4**
	baz=11,slow=2.8						
KBA	**Koelnbreinsper**	**150.44**	**349**	*i* P	**PKPbc**	**12 56 39.7**	**+0.1**
	comp=Z,7.3nm,0.5s,SNR=5.7						
RETA	**Reutte**	**150.46**	**352**	*i* P	**PKiKP**	**12 56 40.1**	**0.0**
	comp=Z,7.8nm,0.9s						
SOKA	**Soboth**	**150.47**	**346**	*i* P	**PKPbc**	**12 56 39.5**	**-0.1**
	comp=Z,8.3nm,0.9s						
FRGS	**Fruska Gora**	**150.48**	**339**	⇑P	**PKPbc**	**12 56 38.5**	**-1.1**
FRGS	**Fruska Gora**	**150.48**	**339**	*e*P	**PKiKP**	**12 56 39.9**	**-0.3**
WATA	**Walderalm**	**150.49**	**351**	*i* P	**PKiKP**	**12 56 40.1**	**-0.2**
	comp=Z,7.2nm,0.5s						
MOTA	**Moosalm**	**150.55**	**352**	*i* P	**PKiKP**	**12 56 40.4**	**-0.1**
	comp=Z,9.9nm,1.0s						
WTTA	**Wattenberg**	**150.56**	**351**	*i* P	**PKiKP**	**12 56 40.4**	**-0.1**
	comp=Z,19nm,0.5s,SNR=13						
SQTA	**Sankt Quirin**	**150.66**	**351**	*i* P	**PKiKP**	**12 56 40.5**	**-0.2**
	comp=Z,11nm,0.7s,SNR=4.3						
ZAGS	**Zajecar**	**150.70**	**334**	*e*P	**PKPbc**	**12 56 39.2**	**-0.9**
SVIS	**Svilajnac**	**150.73**	**336**	*e*P	**PKiKP**	**12 56 40.9**	**+0.2**
OBKA	**Obir**	**150.74**	**347**	*i* P	**PKPbc**	**12 56 40.2**	**0.0**
	comp=Z,3.6nm,0.8s						
DAVA	**Damuels**	**150.76**	**353**	*i* P	**PKiKP**	**12 56 40.9**	**0.0**
	comp=Z,12nm,0.7s						
MYKA	**Terra Mystica**	**150.82**	**348**	*i* P	**PKPbc**	**12 56 40.0**	**-0.4**
	comp=Z,8.2nm,0.5s						
ABTA	**Abfaltersbach**	**150.91**	**349**	*i* P	**PKPbc**	**12 56 40.5**	**-0.1**
	comp=Z,16nm,0.6s,SNR=6.7						
FETA	**Feichten**	**150.92**	**352**	*i* P	**PKiKP**	**12 56 41.3**	**+0.1**
	comp=Z,14nm,0.9s,SNR=7.5						
BOVS	**Bovan**	**151.06**	**335**	*e*P	**PKPbc**	**12 56 40.3**	**-0.6**
TRUS	**Trudelj**	**151.07**	**337**	*e*P	**PKiKP**	**12 56 41.4**	**0.0**
VNDS	**Vrh nad Dolski**	**151.09**	**346**	*i* PKPbc	**PKPbc**	**12 56 41.1**	**+0.2**
LJU	**Ljubljana**	**151.19**	**346**	*i* PKPbc	**PKiKP**	**12 56 41.5**	**-0.2**
GRUS	**Gruza**	**151.24**	**336**	*e*P	**PKiKP**	**12 56 41.9**	**+0.1**
DAVOX	**Davos/Dischmat**	**151.26**	**353**	PKPbc	**PKiKP**	**12 56 41.9**	**-0.1**
	baz=333,slow=2.3						
DIVS	**Divibare**	**151.33**	**337**	*e*P	**PKiKP**	**12 56 42.0**	**-0.1**
STAL	**STALIGIAL**	**151.35**	**349**		**PKPbc**	**12 56 40.7**	**-0.8**
SELS	**Selova**	**151.64**	**335**	*e*P	**PKiKP**	**12 56 42.5**	**-0.2**
BOSS	**Bosilegrad**	**151.66**	**332**	*e*P	**PKiKP**	**12 56 42.7**	**0.0**
BARS	**Barje**	**151.69**	**333**	*e*P	**PKiKP**	**12 56 42.8**	**0.0**
IVAS	**Ivanjica**	**151.72**	**337**	*e*P	**PKPbc**	**12 56 42.5**	**0.0**
BBLS	**Lazići**	**151.75**	**338**	*e*P	**PKiKP**	**12 56 43.3**	**+0.4**
FNA	**Florina**	**153.53**	**331**	PKIKP	**PKiKP**	**12 56 46.8**	**+0.1**
FNA	**Florina**	**153.53**	**331**		**PKiKP**	**12 56 46.8**	**+0.1**
ESDC	**Sonseca Array**	**157.24**	**18**	PKPab	**PKPab**	**12 57 16.1**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=337,slow=5.0,SNR=5.2						
TORD	**Torodi Ar. Bea**	**173.97**	**147**	PKP	**PKPdf**	**12 56 56.5**	**-1.5**
	comp=Z,1.0nm,0.9s,baz=310,slow=2.9,SNR=5.5						
TORD				PKPab	**PKPab**	**12 58 29.9**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=228,slow=2.3,SNR=4.6						
TORD	**Torodi Ar. Bea**	**173.97**	**147**		**PKPdf**	**12 56 55.8**	**-2.2**
TORD					**PKPab**	**12 58 28.1**	**-1.8**

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*DJA **21** 12:45:15.3±0.3, 1°N±2°×12°1E±°, h39^{km}±4^{km}, M4.8/23, mb4.9/18, mB5.3/11, MLv5.0/23, Mw(mB)4.7/11*

*NEIC **21** 12:45:15.6±1.6, 1°.23N±0°.06×121°.0E±0°.1, h50^{km}±6^{km}, mb4.7/20, Error ellipse: s-maj=16.3km s-min=6.2km az=66.0*

*IDC **21** 12:45:16.3±5.7, 1°.25N×121°.27E, h64^{km}±55^{km}, mb4.2/6, mb1 4.4/8, mb1mx3.6/57, mbtmp4.5/8, ML4.6/2, MS3.2/8, Ms1 3.2/8, ms1mx2.9/35, Error ellipse: s-maj=80.7km s-min=16.8km az=64.0*

ISC 21 12:45:13.8±0.5, **1°.39N**±0°.04×**121°.11E**±0°.06, **h37**^{km}**, n96,** σ**2**^{s}**.00**/93, **mb4.7**/20, **MS3.0**/4, **4C-2D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	**Tolitoli**	**0.42**	**230**	Pn	**Pn**	**12 45 25.3**	**+2.1**
MRSI	**Marisa**	**1.23**	**137**	P	**Pn**	**12 45 36.6**	**+2.1**
MRSI				S	**Sn**	**12 45 51.4**	**+1.6**
MPSI	**Mapaga**	**1.60**	**229**	P	**Pn**	**12 45 40.1**	**+0.6**
APSI	**Ampana**	**2.34**	**167**	P	**Pn**	**12 45 51.2**	**+1.4**
APSI				S	**Sn**	**12 46 20.2**	**+2.8**
LUWI	**Luwuk**	**2.93**	**145**	P	**Pn**	**12 45 59.9**	**+2.0**
LUWI				S	**Sn**	**12 46 35.6**	**+3.8**
LUWI	**Luwuk**	**2.93**	**145**	Pn	**Pn**	**12 46 00.8**	**+2.9**
KMSI	**Cibinong**	**2.98**	**106**	P	**Pn**	**12 46 00.3**	**+1.7**
SMKI	**Samarinda**	**4.30**	**245**	P	**Pn**	**12 46 18.7**	**+1.9**
MYLDM	**Lahad Datu**	**4.58**	**325**	Pn	**Pn**	**12 46 24.7**	**+4.1**
TTSI	**Tana Toraja**	**4.59**	**196**	P	**Pn**	**12 46 22.4**	**+1.7**
SGSI	**Sangihe**	**4.97**	**63**	P	**Pn**	**12 46 27.0**	**+1.0**
SPSI	**Sidrap Palu**	**5.48**	**194**	P	**Pn**	**12 46 34.6**	**+1.6**
	0.5nm1μm114nm,0.8s						
BNSI	**Bone**	**5.83**	**190**	P	**Pn**	**12 46 39.4**	**+1.6**
	0.7nm2μm176nm,0.8s						
SANI	**Sanana**	**5.95**	**125**	P	**Pn**	**12 46 39.4**	**-0.1**
	0.5nm1μm72nm,1.0s						
SANI	**Sanana**	**5.95**	**125**	P	**Pn**	**12 46 40.6**	**+1.1**
GSPH	**General Santos**	**6.04**	**39**	⇓*e*P	**Pn**	**12 46 42.6**	**+1.8**
KAPI	**Kappang**	**6.50**	**192**	P	**Pn**	**12 46 47.6**	**+0.6**
	2.2nm,0.3s,baz=338,slow=6.1,SNR=8.1						
KAPI	**Kappang**	**6.50**	**192**		**Pn**	**12 46 48.0**	**+1.0**
KAPI	**Kappang**	**6.50**	**192**	P	**Pn**	**12 46 48.0**	**+1.0**
MTKI	**Muara Teweh, K**	**6.63**	**250**	P	**Pn**	**12 46 49.8**	**+1.0**
	1.3nm4μm119nm,0.6s						
LBMI	**Labuha**	**6.70**	**107**	P	**Pn**	**12 46 51.2**	**+1.4**
	0.3nm52nm,0.9s						
KKM	**Kota Kinabalu**	**6.73**	**314**	Pn	**Pn**	**12 46 53.8**	**+3.6**
KKM	**Kota Kinabalu**	**6.73**	**314**	P	**Pn**	**12 46 53.9**	**+3.7**
BKSI	**Bulukumba**	**6.74**	**188**	P	**Pn**	**12 46 52.5**	**+2.3**
	0.3nm717nm65nm,0.7s						
KBKI	**Kotabaru**	**6.79**	**227**	P	**Pn**	**12 46 50.3**	**-0.6**
	0.4nm2μm77nm,0.5s						
PAGZ	**Pagadian**	**6.81**	**19**	⇑*e*P	**Pn**	**12 46 53.7**	**+2.4**
PAGZ				*e*S	**Sn**	**12 48 00.7**	**-6.8**
KCP	**Kidapawan**	**6.85**	**35**	⇓*e*P	**Pn**	**12 46 53.4**	**+1.5**
KCP				*i* S	**Sn**	**12 48 10.3**	**+1.6**
DMPH	**Davao City--Mi**	**7.16**	**38**	⇑*e*P	**Pn**	**12 46 58.2**	**+2.1**
DMPH				*e*S	**Sn**	**12 48 18.4**	**+2.2**
DAV	**Davao City (W)**	**7.19**	**38**	LR	LR	12 49 43.9	
	comp=Z,168nm,21.9s,baz=318,slow=37						
BSSI	**Bau Bau, Buton**	**7.50**	**185**	P	**Pn**	**12 47 02.4**	**+1.6**
	0.3nm46nm,0.7s						
BBKI	**Banjar Baru**	**7.90**	**232**	P	**Pn**	**12 47 07.3**	**+1.0**
	0.6nm30nm,0.8s						
PPR	**Puerto Princes**	**8.66**	**344**	⇑*i*P	**Pn**	**12 47 20.1**	**+3.4**
STKI	**Sintang**	**9.72**	**262**	P	**Pn**	**12 47 33.5**	**+2.3**
RCP	**Roxas**	**10.24**	**9**	⇑*e*P	Pn	12 47 51.3	+13
BLJI	**Banyuglugur**	**11.77**	**219**	P	**Pn**	**12 48 02.2**	**+3.0**
	98nm,1.0s						
BATI	**Baumata**	**11.79**	**168**	LR	LR	12 53 25.4	
	comp=Z,266nm,21.5s,baz=353,slow=42						
PPBI	**Pangkal Pinang**	**15.38**	**257**	P	**P**	**12 48 53.8**	**+1.3**
LEM	**Lembang**	**15.74**	**239**	LR	LR	12 55 24.3	
	comp=Z,164nm,18.4s,baz=23,slow=38						
DRS	**Darwin Rock St**	**16.82**	**145**	P	**P**	**12 49 07.1**	**-1.4**
MTN	**Manton Dam**	**17.29**	**145**	P	**P**	**12 49 12.9**	**-0.7**
MTN	**Manton Dam**	**17.29**	**145**	P	**P**	**12 49 13.1**	**-0.5**
KDU	**Kakadu**	**17.96**	**141**	P	**P**	**12 49 20.1**	**-1.0**
KNRA	**Kununurra**	**18.57**	**156**	P	**Pn**	**12 49 26.9**	**-1.3**
KNRA				IAmb	IAmb	12 49 29.8	
	comp=Z,37nm,0.6s						
KNRA	**Kununurra**	**18.57**	**156**	P	**Pn**	**12 49 27.1**	**-1.1**
RGRI	**Rengat**	**18.85**	**265**	P	**P**	**12 49 25.1**	**-5.8**
FITZ	**Fitzroy Crossi**	**19.87**	**167**	P	**P**	**12 49 41.5**	**-0.4**
	comp=Z,4.0nm,0.3s,baz=11,slow=7.2,SNR=10						
FITZ				LR	LR	12 58 47.1	
	comp=Z,49nm,21.8s,baz=340,slow=41						
BKNI	**Bangkinang**	**20.09**	**267**	P	Pn	12 49 53.4	+6.9
PSI	**Prapat**	**22.21**	**274**	LR	LR	12 59 29.1	
	comp=Z,62nm,19.3s,baz=106,slow=38						
PSA00	**Pilbara Seismi**	**22.85**	**183**	P	**P**	**12 50 12.0**	**-2.1**
WB0	**Warramunga Arr**	**24.73**	**149**	P	**P**	**12 50 29.8**	**-2.3**
WRAB	**Tennant Creek**	**24.85**	**149**	P	**P**	**12 50 31.4**	**-1.6**
WRA	**Warramunga Arr**	**24.85**	**149**	P	**P**	**12 50 30.8**	**-2.3**
	comp=Z,29nm,0.6s,baz=328,slow=11,SNR=122						
WRA	**Warramunga Arr**	**24.85**	**149**	P	**P**	**12 50 30.0**	**-3.1**
WB2	**Warramunga Arr**	**24.86**	**149**	P	**P**	**12 50 31.3**	**-1.9**
WR0	**Warramunga Arr**	**24.97**	**149**	P	**P**	**12 50 32.6**	**-1.5**
JOW	**Kunigami**	**26.22**	**15**	LR	LR	13 00 51.9	
	comp=Z,47nm,18.7s,baz=99,slow=36						
COEN	**Coen**	**26.66**	**126**	P	**P**	**12 50 48.5**	**-0.9**
COEN				IAmb	IAmb	12 51 05.2	
	comp=Z,14nm,1.1s						
COEN	**Coen**	**26.66**	**126**	P	**P**	**12 50 49.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**27.58**	**309**	LR	LR	13 03 08.7	
	comp=Z,26nm,19.9s,baz=177,slow=39						
AS31	**Alice Springs**	**27.84**	**154**	P	**P**	**12 50 58.5**	**-1.5**
ASAR	**Alice Springs**	**27.84**	**154**	P	**P**	**12 50 58.0**	**-2.0**
	comp=Z,5.4nm,0.6s,baz=345,slow=14,SNR=57						
ASAR	**Alice Springs**	**27.84**	**154**	P	**P**	**12 50 59.0**	**-1.0**
MEEK	**Meekatharra**	**27.96**	**185**	P	**P**	**12 50 59.5**	**-1.6**
QIS	**Mount Isa**	**28.35**	**141**	P	**P**	**12 51 03.2**	**-1.4**
MORW	**Morawa**	**30.67**	**189**	P	**P**	**12 51 23.6**	**-1.4**
MORW				IAmb	IAmb	12 51 24.3	
	comp=Z,21nm,1.1s						
MORW	**Morawa**	**30.67**	**189**	P	**P**	**12 51 23.3**	**-1.7**
BLDU	**Ballidu**	**32.10**	**187**	P	**P**	**12 51 35.8**	**-1.8**
FORT	**Forrest**	**32.66**	**169**	P	**P**	**12 51 41.0**	**-1.5**
FORT				IAmb	IAmb	12 51 42.4	
	comp=Z,25nm,0.8s						
FORT	**Forrest**	**32.66**	**169**	P	**P**	**12 51 41.1**	**-1.5**
KLBR	**Kellerberrin**	**32.95**	**185**	P	**P**	**12 51 43.6**	**-1.4**
MULG	**Mulgathing**	**33.83**	**160**	P	**P**	**12 51 51.5**	**-1.2**
NWAO	**Narrogin (SRO)**	**34.32**	**186**	P	**P**	**12 51 55.6**	**-1.4**
KSRS	**Korea Array**	**36.44**	**9**	LR	LR	13 06 57.4	
	comp=Z,20nm,20.4s,baz=201,slow=36						
BBOO	**Buckleboo**	**36.83**	**159**	P	**P**	**12 52 17.3**	**-1.2**
BBOO				IAmb	IAmb	12 52 31.8	
	comp=Z,29nm,1.4s						
STKA	**Stephens Creek**	**38.36**	**151**	P	**P**	**12 52 29.8**	**-1.7**
	comp=Z,12nm,0.9s,baz=307,slow=6.2,SNR=11						
STKA	**Stephens Creek**	**38.36**	**151**	P	**P**	**12 52 29.9**	**-1.7**
HTT	**Hallett**	**38.49**	**156**	P	**P**	**12 52 31.7**	**-0.9**
CMSA	**Cobar Meteorol**	**40.20**	**147**	P	**P**	**12 52 46.3**	**-0.6**
JIRN	**Jiri**	**42.42**	**311**	*e*P	**P**	**12 53 06.9**	**+1.3**
	comp=Z,17nm,0.6s						
GUN	**Gumba**	**42.79**	**311**	*e*P	**P**	**12 53 09.9**	**+1.3**
	comp=Z,24nm,0.7s						
PKI	**Pulchoki**	**42.97**	**311**	*e*P	**P**	**12 53 11.0**	**+1.0**
	comp=Z,8.4nm,0.5s						
PKIN	**Phulchoki**	**42.98**	**311**	*e*P	**P**	**12 53 10.9**	**+0.9**
	comp=Z,11nm,0.5s						
GKN	**Gorkha**	**43.77**	**311**	*e*P	**P**	**12 53 17.6**	**+1.3**
	comp=Z,24nm,0.7s						
DANN	**Dangsing**	**44.62**	**310**	*e*P	**P**	**12 53 24.5**	**+1.3**
	comp=Z,35nm,0.6s						
CAN	**Canberra**	**44.87**	**147**	P	**P**	**12 53 23.6**	**-1.2**
CAN				IAmb	IAmb	12 53 34.5	
	comp=Z,25nm,1.3s						
PYUN	**Piuthan**	**45.08**	**310**	*e*P	**P**	**12 53 28.5**	**+1.7**
	comp=Z,36nm,0.7s						
SONM	**Songino Array**	**47.99**	**347**	P	**P**	**12 53 50.3**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=170,slow=9.8,SNR=7.1						
SONM	**Songino Array**	**47.99**	**347**	P	**P**	**12 53 51.5**	**+2.2**
SONM				IAmb	IAmb	12 54 06.1	
	comp=Z,3.8nm,1.3s						
MK31	**Makanchi Array**	**56.45**	**329**	P	**P**	**12 54 52.4**	**+0.4**
MKAR	**Makanchi Array**	**56.45**	**329**	P	**P**	**12 54 53.0**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=135,slow=7.8,SNR=12						
MKAR	**Makanchi Array**	**56.45**	**329**	P	**P**	**12 54 53.5**	**+1.5**
KURK	**Kurchatov**	**60.84**	**331**	P	**P**	**12 55 23.0**	**+0.6**
KURK				IAmb	IAmb	12 55 24.3	
	comp=Z,5.0nm,0.8s						
BKZ	**Black Stump Fm**	**64.76**	**135**	P	**P**	**12 55 48.6**	**-0.2**
BKZ				IAmb	IAmb	12 56 12.5	
	comp=Z,27nm,1.5s						
ABKAR	**Akbulak array**	**70.49**	**322**	P	**P**	**12 56 23.8**	**-0.8**
VNDA	**Vanda**	**81.88**	**172**	P	**P**	**12 57 27.3**	**-1.6**
	comp=Z,1.9nm,0.7s,baz=309,slow=7.2,SNR=8.3						
VNDA	**Vanda**	**81.88**	**172**	P	**P**	**12 57 27.6**	**-1.3**
VNDA				IAmb	IAmb	12 57 29.1	
	comp=Z,3.6nm,1.1s						

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*EAF **21** 12:56:25.2±53.0, 25°.11S×25°.45E, h13^{km}±600^{km}, MD3.9*

BUL 21 12:56:12.8±2.7, **26°.25S**×**28°.94E, h0**^{km}±441^{km}, **MD4.2, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**3.26**	**292**	*i* P	Pn	12 57 05.9	+0.6
LBTB				*i* Sg	Sb	12 57 54.4	+2.5
LBTB	**Lobatse**	**3.26**	**292**	*i* P	Pn	12 57 05.9	+0.6
LBTB				*i* Sg	Sb	12 57 54.4	+2.5
BOSA	**Boshof**	**4.03**	**233**	*i* P	Pn	12 57 16.6	+0.7
BOSA				*i* Sg	Sb	12 58 16.3	+2.2
BOSA	**Boshof**	**4.03**	**233**	*i* P	Pn	12 57 16.6	+0.7
BOSA				*i* Sg	Sb	12 58 16.3	+2.2
MATP	**Matopo**	**5.81**	**356**	*i* S	Sn	12 58 41.3	-6.6
MATP	**Matopo**	**5.81**	**356**	*i* S	Sn	12 58 41.3	-6.6

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*PNSN **21** 12:59:44.8, 47°.30N×121°.76W, h20^{km}, MD2.6, Fault plane solution: NP1:ϕ_s205.00000°, δ60.00000°, λ30.00000°.*

*SEA **21** 12:59:44.7±1.8, 47°.30N±0°.02×121°.78W±0°.05, h22^{km}±6^{km}, ML2.6/73, ML2.4/32(NEIC), Error ellipse: s-maj=4.4km s-min=2.8km az=86.0*

*ANF **21** 12:59:44.1±0.3, 47°.33N×121°.80W, h20^{km}, ML2.4/6, Error ellipse: s-maj=2.9km s-min=2.0km az=133.0*

*PGC **21** 12:59:44.9, 47°.30N×121°.79W, h20^{km}, ML2.3/15, ML2.3/15, 52km Ese of Seattle, Wa Washington*

*NEIC **21** 12:59:44.4±1.4, 47°.295N±0°.007×121°.76W±0°.03, h20^{km}±3^{km}, Error ellipse: s-maj=3.0km s-min=1.0km az=82.0*

ISC 21 12:59:44.5±0.9, **47°.29N**±0°.01×**121°.79W**±0°.02, **h19**^{km}±2^{km}, **n125,** σ**0**^{s}**.80**/168, **Washington**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSM	**Grass Mountain**	**0.09**	**183**		**Pg**	**12 59 48.5**	**+0.2**
RAW	**Raver**	**0.11**	**294**		**Pg**	**12 59 48.7**	**+0.4**
RAW					**Sg**	**12 59 52.1**	**+1.1**
CDMR	**Cedar Moraine**	**0.13**	**9**		**Pg**	**12 59 48.8**	**+0.2**
CDMR					**Sg**	**12 59 51.9**	**+0.4**
RATT	**Rattlesnake La**	**0.13**	**355**		**Pg**	**12 59 48.7**	**+0.1**
RATT					**Sg**	**12 59 51.8**	**+0.3**
D05A	**Enumclaw**	**0.17**	**233**		**Pg**	**12 59 49.6**	**+0.5**
D05A					**Sg**	**12 59 53.4**	**+1.1**
D05A	**Enumclaw**	**0.17**	**233**	IAML		12 59 53.6	
	comp=N,727nm,0.6s						
D05A				IAML		12 59 53.8	
	comp=E,360nm,0.4s						
D05A	**Enumclaw**	**0.17**	**233**	P	**Pg**	**12 59 49.6**	**+0.5**
D05A				S	**Sg**	**12 59 53.4**	**+1.1**
ELW	**Echo Lake**	**0.21**	**344**		**Pb**	**12 59 49.6**	**+0.4**
ELW					**Sg**	**12 59 53.7**	**+0.5**
FMW	**Mount Fremont**	**0.37**	**168**		**Pg**	**12 59 52.0**	**-0.3**
FMW	**Mount Fremont**	**0.37**	**168**	P	**Pg**	**12 59 52.1**	**-0.3**
FMW				S	**Sg**	**12 59 56.7**	**-1.0**
RVC	**Mount Rainier-**	**0.37**	**200**		**Pg**	**12 59 52.3**	**-0.1**
OBSR	**Observation Ro**	**0.39**	**183**		**Pg**	**12 59 52.8**	**0.0**
OBSR					**Sg**	**12 59 58.7**	**+0.2**
C05A	**Tolt Reservoir**	**0.41**	**9**		**Pg**	**12 59 52.5**	**-0.5**
C05A	**Tolt Reservoir**	**0.41**	**9**	P	**Pg**	**12 59 52.5**	**-0.5**
C05A				S	**Sg**	**12 59 58.3**	**-0.4**
SP2	**Seward Park 2**	**0.41**	**310**		**Pb**	**12 59 53.5**	**+0.3**
SP2					**Sn**	**13 00 00.9**	**-1.6**
GHW	**Garrison Hill**	**0.42**	**233**		**Pg**	**12 59 52.6**	**-0.5**
RCS	**Mount Rainier-**	**0.42**	**175**		**Pg**	**12 59 53.2**	**-0.1**
RCS					**Sg**	**12 59 59.2**	**-0.1**
B941	**Kapowsin**	**0.42**	**224**		**Pg**	**12 59 52.6**	**-0.6**
PANH	**Panhandle Gap,**	**0.45**	**167**		**Pg**	**12 59 53.3**	**-0.4**
REMR	**Mount Rainier-**	**0.47**	**184**		**Pg**	**12 59 53.8**	**-0.4**
HTW	**Haystack Looko**	**0.51**	**1**		**Pb**	**12 59 54.1**	**-0.8**
LON	**Longmire**	**0.54**	**182**		**Pb**	**12 59 54.8**	**-0.6**
LON					**Sb**	**13 00 02.3**	**-0.5**
WPW	**White Pass**	**0.62**	**164**		**Pb**	**12 59 56.2**	**-0.5**
TWW	**Teanaway**	**0.65**	**104**		**Pb**	**12 59 57.2**	**0.0**
D04E	**Lakebay**	**0.68**	**261**	P	**Pb**	**12 59 56.8**	**-0.9**
	baz=79						

D04E				Sb	Sg	13 00 08.0	+1.0
	baz=79						
GMW	Gold Mountain	0.72	291		Pb	12 59 57.8	-0.7
GNW	Green Mountain	0.76	291		Pb	12 59 58.3	-0.7
GNW	Green Mountain	0.76	291	P	Pb	12 59 58.2	-0.8
GNW				S	Sb	13 00 08.9	0.0
LTY	Liberty	0.76	92		Pb	12 59 58.3	-0.9
LTY	Liberty	0.76	92	IAML		13 00 09.2	
	comp=E,121nm,0.4s						
LTY	Liberty	0.76	92	P	Pb	12 59 58.3	-0.9
LTY				S	Sb	13 00 08.2	-0.9
TBM	Table Mountain	0.82	98		Pb	12 59 59.9	-0.3
NAC	Naches	0.86	130		Pb	13 00 00.5	-0.4
C06D	Leavenworth	0.87	43	P	Pb	13 00 00.1	-1.0
	baz=224						
C06D				S	Sb	13 00 11.8	-0.6
	baz=224						
JCW	Jim Creek	0.91	354		Pb	13 00 00.7	-0.9
JCW	Jim Creek	0.91	354	P	Pb	13 00 00.8	-0.9
C04A	Brinnon	0.91	298		Pb	13 00 00.6	-1.0
E04D	Cinebar	0.91	216	P	Pb	13 00 01.0	-0.6
	baz=36,SNR=17						
E04D				S	Sb	13 00 13.7	+0.4
	baz=36						
D03D	Eldon	0.92	286		Pb	13 00 00.7	-1.1
D03D	Eldon	0.92	286	P	Pb	13 00 00.6	-1.1
	baz=104,SNR=13						
D03D				S	Sb	13 00 13.2	-0.4
	baz=104						
EBG	Ellensburg	0.92	114		Pb	13 00 01.6	-0.3
B013	Quilcene	0.92	305		Pb	13 00 00.7	-1.2
HDW	Hoodsport	0.93	293		Pb	13 00 00.9	-1.1
HDW	Hoodsport	0.93	293	P	Pb	13 00 01.0	-1.1
HDW				S	Sb	13 00 13.5	-0.6
SLFW	Sugar Loaf	0.97	61		Pb	13 00 02.4	-0.5
CPW	Capitol Peak	0.97	251	P	Pb	13 00 02.0	-0.8
CPW				S	Sb	13 00 15.1	-0.2
B05A	Bryant	0.99	348		Pb	13 00 02.3	-0.8
B05A	Bryant	0.99	348	P	Pb	13 00 02.0	-1.1
	baz=168,SNR=46						
B05A				S	Sb	13 00 15.4	-0.4
	baz=168						
ETW	Entiat	1.04	72		Pb	13 00 03.4	-0.5
B201	Coldwater, Mou	1.04	199		Pb	13 00 02.9	-1.1
ERK	Elk Rock	1.06	201		Pb	13 00 03.4	-0.9
SMW	South Mountain	1.06	272		Pb	13 00 03.8	-0.4
SMW	South Mountain	1.06	272	P	Pb	13 00 03.8	-0.4
B202	Windy Ridge, M	1.08	193		Pb	13 00 03.4	-1.2
VALT	Mount Saint He	1.11	195		Pn	13 00 04.5	-0.8
SEPW	September Lobe	1.13	194		Pn	13 00 04.8	-0.7
CMW	Cultus Mountai	1.15	349		Pn	13 00 05.3	-0.5
CMW	Cultus Mountai	1.15	349	P	Pn	13 00 05.2	-0.5
CMW				S	Sn	13 00 20.9	-0.2
SQM	Sequim	1.16	313		Pn	13 00 05.2	-0.5
RPW	Rockport	1.17	9		Pn	13 00 05.2	-0.7
RPW	Rockport	1.17	9	P	Pn	13 00 05.2	-0.7
RPW				S	Sb	13 00 20.6	-0.4
NLW	Nelson Butte	1.25	51		Pn	13 00 07.2	+0.1
CBSW	Chelan Butte S	1.29	66		Pn	13 00 07.7	+0.1
WTV	Waterville	1.31	71		Pn	13 00 07.8	0.0
TRW	Toppenish Ridg	1.32	139		Pn	13 00 08.6	+0.6
RVW	Rose Valley	1.32	210		Pn	13 00 07.9	-0.1
WISH	Wishkah	1.36	263	Pn	Pn	13 00 08.3	-0.2
BVW	Beverly	1.39	110		Pb	13 00 09.8	0.0
B04A	Port Angeles	1.39	304		Pn	13 00 08.4	-0.5
B04A	Port Angeles	1.39	304	Pn	Pn	13 00 07.8	-1.0
B04A				IAML		13 00 32.4	
	comp=N,40nm,2.6s						
B04A				IAML		13 00 34.2	
	comp=E,34nm,1.6s						
OSD	Olympics--Snow	1.40	293	P	Pn	13 00 09.2	0.0
NLWA	Neilton Lookou	1.42	275		Pb	13 00 10.3	-0.1
NLWA				IAML		13 00 18.5	
	comp=E,49nm,4.0s						
NLWA				IAML		13 00 47.2	
	comp=E,67nm,2.5s						
F05D	White Salmon	1.43	171	P	Pn	13 00 10.3	+0.9
	baz=351,SNR=5.5						
E03A	Lebam	1.43	239	Pn	Pn	13 00 09.8	+0.5
E03A				IAML		13 00 40.5	
	comp=E,91nm,4.2s						
E03A				IAML		13 00 59.1	
	comp=N,83nm,3.6s						
E03A	Lebam	1.43	239	S	Sn	13 00 27.7	0.0
F04D	Rainier, OR	1.48	215	P	Pn	13 00 10.0	-0.1
	baz=34						
F04D				S	Sb	13 00 30.0	+0.3
	baz=34						
E07A	Sunnyside	1.51	118		Pn	13 00 11.1	+0.5
E07A				IAML		13 00 31.9	
	comp=E,75nm,0.5s						
E07A				IAML		13 00 32.3	
	comp=N,83nm,0.3s						
VGZ	Gonzales	1.53	318		Pn	13 00 10.1	-0.7
VGZ	Gonzales	1.53	318	P	Pn	13 00 10.1	-0.7
VGZ				S	Sn	13 00 29.3	-0.7
DHW2	Dyer Hill 2	1.53	62		Pn	13 00 10.8	0.0
STW	Striped Peak	1.53	305	P	Pn	13 00 10.8	-0.1
MDW	Midway	1.54	115		Pn	13 00 11.8	+0.7
A04D	Lummi Island	1.56	337	P	Pn	13 00 11.1	-0.1
	baz=156						
A04D				S	Sn	13 00 31.3	+0.5
	baz=156						
SHUK	Shuksan-Mt. Ba	1.56	3		Pn	13 00 11.9	+0.5
FHE	Frenchman Hill	1.60	101		Pb	13 00 13.0	-0.4
BENWA	Benson Ranch	1.62	118		Pn	13 00 13.0	+1.0
RADR	Rader Ridge	1.63	238		Pb	13 00 13.5	-0.5
SAW	Saint Andrews	1.67	75		Pn	13 00 12.5	-0.3
SNIWA	Snively Ranch	1.68	119		Pn	13 00 13.9	+1.1
A05A	Maple Falls	1.72	353	P	Pn	13 00 14.3	+0.9
A05A				S	Sb	13 00 35.8	-0.9
VDB	Vedder Mountai	1.75	353		Pn	13 00 14.7	+0.8
VDB	Vedder Mountai	1.75	353	P	Pn	13 00 14.6	+0.8
VDB				S	Sn	13 00 36.4	+0.9
SNB	Saturna Island	1.75	328	P	Pn	13 00 14.4	+0.6
SNB				S	Sn	13 00 36.5	+0.8
RSW	Rattlesnake Hi	1.75	120		Pn	13 00 15.1	+1.1
B011	North Saanich	1.76	321		Pn	13 00 13.9	0.0
B011	North Saanich	1.76	321	P	Pn	13 00 14.1	+0.2
B011				S	Sn	13 00 36.0	+0.2
PA12	PA12 Sannich	1.76	321	P	Pn	13 00 14.1	+0.2
PA12				S	Sn	13 00 36.1	+0.3
B009	North Saanich	1.76	321	P	Pn	13 00 14.1	+0.2
B009				S	Sn	13 00 36.0	+0.3
B010	North Saanich	1.76	321	P	Pn	13 00 14.1	+0.1
B010				S	Sn	13 00 35.9	+0.1
PGC	Sidney	1.76	321		Pn	13 00 14.2	+0.3
PGC	Sidney	1.76	321	P	Pn	13 00 14.0	+0.1
PGC				S	Sn	13 00 36.0	+0.2
HAWA	Hanford	1.79	119		Pn	13 00 15.2	+0.8
REDWA	Red Mountain	1.90	121		Pn	13 00 17.3	+1.4
F07A	Phinny Hill Vi	1.90	137	Pn	Pn	13 00 16.2	+0.4
F07A				IAML		13 00 43.3	
	comp=E,30nm,1.2s						
F07A				IAML		13 00 43.6	
	comp=N,40nm,0.5s						
B08A	Colville Reser	1.97	56	Pn	Pn	13 00 15.9	-0.9
B08A				IAML		13 00 46.1	
	comp=N,33nm,0.2s						
B08A				IAML		13 00 47.2	
	comp=E,24nm,0.2s						
D08A	Wollman Farm,	1.97	96		Pn	13 00 16.3	-0.6
GOBB	Galiano Island	2.02	326	P	Pn	13 00 18.3	+0.8
E08A	Dider Farm, El	2.04	112	Pn	Pn	13 00 17.2	-0.5
E08A				IAML		13 00 47.3	
	comp=N,20nm,0.3s						
E08A				IAML		13 00 54.8	
	comp=E,29nm,3.9s						
HNBB	Haney	2.06	346	P	Pn	13 00 18.9	+0.7
HNBB				S	Sn	13 00 44.9	+1.5
G05D	Wamic, OR	2.08	171	P	Pn	13 00 19.5	+1.1
	baz=351,SNR=9.0						
HOPB	Hope	2.11	7	Sg	Sb	13 00 47.8	-0.1
B926	Mesachie Lake	2.19	315	P	Pn	13 00 21.1	+1.1
B926				S	Sn	13 00 46.7	+0.2
CLRS	Cowichan Lake	2.19	315	P	Pn	13 00 20.2	+0.3
CLRS				S	Sn	13 00 46.7	+0.2
PFB	Port Renfrew	2.19	307	P	Pn	13 00 21.0	+1.0
PFB				S	Sn	13 00 46.7	0.0
BIB	Bowen Island	2.34	335	P	Pn	13 00 23.4	+1.4
BIB				Sg	Sb	13 00 52.8	-1.9
NLLB	Nanaimo Lost L	2.43	324	P	Pn	13 00 24.5	+1.3
NLLB				S	Sn	13 00 53.6	+1.2
C09A	Chrisman Ranch	2.43	77		Pn	13 00 22.8	-0.5
C09A	Chrisman Ranch	2.43	77	P	Pn	13 00 22.8	-0.5
C09A				Sg	Sb	13 00 56.1	-1.1
PNT	Penticton	2.49	35	P	Pb	13 00 26.9	-1.7
PNT				Sg	Sb	13 01 00.3	+1.4
WPB	Watts Point	2.55	339	P	Pn	13 00 25.9	+1.1
WPB				S	Sn	13 00 56.0	+0.7
MGB	Mount Grey	2.59	312	P	Pn	13 00 27.0	+1.5
MGB				S	Sn	13 00 58.5	+2.0
SHB	Sechelt	2.69	330	P	Pn	13 00 28.7	+1.9
SHB				S	Sn	13 01 01.1	+2.1
G08A	Pilot Rock	2.80	135	Pn	Pn	13 00 28.9	+0.5
G08A				IAML		13 01 10.7	
	comp=N,14nm,3.8s						
G08A				IAML		13 01 20.3	
	comp=E,18nm,4.5s						
NEW	Newport	3.29	71	Sb	Sb	13 01 25.2	+3.2
	baz=255						
F10A	Beach Ranch, E	3.41	111	Pn	Pn	13 00 36.9	+0.2

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*IDC **21** 12:59:47.8±3.4, 7°.87N×126°.36E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.4/41, mbtmp3.5/4, Error ellipse: s-maj=352.2km s-min=13.9km az=67.0*

*MAN **21** 12:59:48.2, 7°.96N×127°.15E, h2^{km}, mb4.7, ML3.6, MS3.6*

ISC 21 12:59:48.1±1.4**, 8°.2N**±0°.2×**127°.17E**±0°.08**, h10^{km}, n6, σ1ˢ21**/8**, mb3.6**/4**, 2C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	0.80	268	⇑eP	Pn	13 00 05.2	-0.2
BIPH				eS	Sb	13 00 15.4	+0.4
BUKP	Musuan	2.11	261	⇑eP	Pb	13 00 26.2	-0.3
BUKP				eS	Sg	13 00 56.2	+0.2
WRA	Warramunga Arr	28.85	166	P	P	13 05 48.9	+1.9
	0.8nm,1.0s,baz=350,slow=11,SNR=1.3						
ASAR	Alice Springs	32.36	168	P	P	13 06 16.2	-1.8
	0.3nm,0.9s,baz=338,slow=7.2,SNR=1.7						
MKAR	Makanchi Array	54.20	323	P	P	13 09 14.3	+0.4
	0.6nm,0.8s,baz=107,slow=7.8,SNR=4.2						
KURBB	Kurchatov Arra	58.26	326	P	P	13 09 42.6	-0.2
	1.2nm,0.9s,baz=130,slow=5.9,SNR=6.7						

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*SNET **21** 13:06:08.4±0.6, 13°.66N×89°.75W, h89^{km}±2^{km}, ML3.3*

*GCG **21** 13:06:09.3±0.4, 13°.69N×89°.79W, h104^{km}±14^{km}, MD3.5*

ISC 21 13:06:10.6±1.8**, 13°.6N**±0°.1×**89°.71W**±0°.06**, h78^{km}**±10^{km}**, n19, σ0ˢ90**/28**, 1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEVE	Cerro Verde	0.23	23	eP	Pn	13 06 21.9	-0.8
CEVE				IAML		13 06 34.1	
	comp=Z,3μm,0.3s						
SBLS	San Blas	0.24	22	eP	Pn	13 06 21.9	-0.8
JAYA	Jayaque - finc	0.26	82	eP	Pn	13 06 22.0	-0.7
JAYA				eS	Sn	13 06 32.2	+0.8
RTR	El Retiro	0.29	13	eP	Pn	13 06 22.1	-0.7
LALI	Alcalda de L	0.40	108	eP	Pn	13 06 22.8	-0.6
LALI				eS	Sn	13 06 33.6	+0.8
SLOZ	Alcaldia de Sa	0.41	350	eP	Pn	13 06 22.4	-1.1
SLOZ				eS	Sn	13 06 33.4	+0.4
TACO	Tacachico	0.49	45	eP	Pn	13 06 23.2	-1.0
TACO				eS	Sn	13 06 34.4	+0.2
TACO				IAML		13 06 41.8	
	comp=Z,324nm,0.7s						
LFU	La Fuente	0.60	77	eP	Pn	13 06 24.5	-0.6
LFRS	El Faro	0.63	89	eP	Pn	13 06 24.8	-0.7
SJTE	Alcalda de S	0.69	90	eP	Pn	13 06 25.4	-0.7
SJTE				eS	Sn	13 06 38.6	+1.1
PAVA	Las Pavas	0.76	83	eP	Pn	13 06 26.4	-0.5
MTO3	Montecristo	0.85	24	eP	Pn	13 06 27.0	-1.0
SCLA	Alcaldia de Sa	0.96	85	eP	Pn	13 06 28.3	-0.8
SCLA				eS	Sn	13 06 44.2	+1.2
NBG	Las Nubes	1.14	328	eP	Pn	13 06 31.7	+0.1
NBG				eS	Sn	13 06 48.8	+1.6
COEB	Comit de Eme	1.16	96	eP	Pn	13 06 30.8	-0.8
COEB				⇓eS	Sn	13 06 48.7	+1.4
PCG	Pacaya	1.16	312	eP	Pn	13 06 31.7	-0.1
FUG	Fuego 3	1.37	307	eP	Pn	13 06 33.6	-0.8
FUG				eS	Sn	13 06 53.0	+0.7
LCND	La Caada	1.80	100	eP	Pn	13 06 39.0	-0.9
STG3	Santiaguito 3,	2.10	301	eS	Sn	13 07 09.4	-0.1

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*EAF **21** 13:32:09.8±2.4, 26°.03S×28°.92E, h0^{km}±48^{km}, MD4.6*

BUL 21 13:32:09.8±2.4**, 26°.03S**×**28°.92E, h0^{km}**±48^{km}**, MD5.1, 2C, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	Lobatse	3.17	288	i P	Pn	13 33 02.3	+1.3
LBTB				i Sg	Sb	13 33 48.1	+1.9
LBTB	Lobatse	3.17	288	i P	Pn	13 33 02.3	+1.3
LBTB				i Sg	Sb	13 33 48.1	+1.9
BOSA	Boshof	4.15	231	i P	Pn	13 33 14.9	+0.4
BOSA				i Sg	Sb	13 34 17.2	+2.7
BOSA	Boshof	4.15	231	i P	Pn	13 33 14.9	+0.4
BOSA				i Sg	Sb	13 34 17.2	+2.7
MATP	Matopo	5.59	356	⇑iP	Pn	13 33 32.6	-1.9
MATP				i S	Sn	13 34 34.0	-5.6
MATP	Matopo	5.59	356	⇑iP	Pn	13 33 32.6	-1.9
MATP				i S	Sn	13 34 34.0	-5.6

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*TAP **21** 13:52:11.3, 24°.41N×122°.95E, h69^{km}, ML2.7, C*

*JMA **21** 13:52:11.6±0.1, 24°.45N×122°.95E, h69^{km}±1^{km}, M1.8*

ISC 21 13:52:12.3±1.3**, 24°.36N**±0°.05×**122°.94E**±0°.02**, h63^{km}**±7^{km}**, n64, σ0ˢ72**/107**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.09	4	P	Pn	13 52 21.7	0.0
JYNG				S	Sn	13 52 28.9	+0.4
YOJ	Yonaguni jima	0.12	34	i P	Pn	13 52 21.6	-0.1
	baz=38						
YOJ				S	Sn	13 52 29.0	+0.3
	baz=38						
YOJ	Yonaguni jima	0.12	34	P	Pn	13 52 21.7	-0.1
YOJ				S	Sn	13 52 28.9	+0.3
IRIF	Iriomote-Funau	0.72	92	P	Pn	13 52 26.7	-0.3
IRIF				S	Sn	13 52 37.9	+0.1
HATJ	Hateruma jima	0.85	111	P	Pn	13 52 28.7	+0.2
HATJ				eS	Sn	13 52 41.4	+0.9
JKRS	Kuro-shima	0.98	97	P	Pn	13 52 30.4	+0.2
JKRS				S	Sn	13 52 44.3	+0.7
TWC	Suao	1.02	284	P	Pn	13 52 30.1	-0.6
	baz=281						
TWC				eS	Sn	13 52 43.3	-1.1
	baz=281						
JIJ	Ishigaki jima	1.10	90	P	Pn	13 52 31.2	-0.5
JIJ				S	Sn	13 52 45.4	-0.8
NTC	Toucheng	1.12	296	P	Pn	13 52 31.7	-0.4
	baz=294						
NDS	Dongshan	1.15	284	eP	Pn	13 52 31.9	-0.4
	baz=282						
NDS				S	Sn	13 52 47.0	-0.3
	baz=282						
TIPB	Shuangxi	1.18	301	eP	Pn	13 52 31.8	-1.0
	baz=299						
TWE	Neicheng	1.21	287	P	Pn	13 52 32.8	-0.4
	baz=291						
TWE				S	Sn	13 52 48.2	-0.6
	baz=291						
ETL	Fush Village	1.22	261	eP	Pn	13 52 33.0	-0.3
	baz=260						
ETL				eS	Sn	13 52 48.8	-0.3
	baz=260						
NACB	Ninganchiao	1.24	262	eP	Pn	13 52 33.1	-0.5
	baz=260						
NACB				S	Sn	13 52 49.2	-0.3
	baz=260						
TWD	Chiawan	1.26	257	eP	Pn	13 52 33.6	-0.2
	baz=256						
TWD				eS	Sn	13 52 49.4	-0.5
	baz=256						
JISG	Ishigakijimahi	1.27	80	P	Pn	13 52 33.2	-0.8
JISG				eS	Sn	13 52 48.8	-1.4
ENTT	Nioudou	1.28	283	eP	Pn	13 52 34.5	+0.3
	baz=289						
ENTT				eS	Sn	13 52 51.2	+0.7
	baz=289						
NDT	Datong Townshi	1.32	281	eP	Pn	13 52 35.3	+0.7
	baz=286						
NDT				eS	Sn	13 52 52.0	+0.5
	baz=286						
ETLH	Xiulin Townshi	1.34	264	eP	Pn	13 52 34.6	-0.3
	baz=263						
ETLH				eS	Sn	13 52 51.6	-0.3
	baz=263						
NWLT	Wulai	1.37	288	eP	Pn	13 52 35.9	+0.5
	baz=287						
NWLT				eS	Sn	13 52 52.5	-0.2
	baz=287						
ETM	Tongmen	1.38	254	eP	Pn	13 52 34.8	-0.6
	baz=253						
NNSB	Datong	1.42	273	P	Pn	13 52 35.9	-0.1
	baz=272						
NNSB				eS	Sn	13 52 53.7	-0.3
	baz=272						
NNS	Nan Shan	1.43	273	P	Pn	13 52 36.1	-0.1
	baz=272						
NNS				eS	Sn	13 52 53.5	-0.7
	baz=272						
YHNB	Yeheng	1.46	282	eP	Pn	13 52 36.8	+0.3
	baz=281						
YHNB				eS	Sn	13 52 54.7	-0.1
	baz=281						
NSK	Sanguang	1.47	283	P	Pn	13 52 37.1	+0.4
	baz=287						
ESL	Shilin	1.48	249	eP	Pn	13 52 36.5	-0.3
	baz=241						
ESL				S	Sn	13 52 54.7	-0.5
	baz=241						
WHF	Hehuan Shan	1.54	262	eP	Pn	13 52 37.5	-0.5
	baz=262						
WHF				eS	Sn	13 52 56.4	-0.9
	baz=262						
FUSS	Fushou	1.55	266	eP	Pn	13 52 38.1	+0.2
	baz=265						
TDCB	Techi	1.63	267	eP	Pn	13 52 39.2	+0.3
	baz=266						
TDCB				S	Sn	13 52 58.5	-0.5
	baz=266						
JTJ	Tarama	1.63	80	P	Pn	13 52 38.6	-0.2
JTJ				eS	Sn	13 52 58.6	-0.2
HGSD	Ruisui	1.63	238	eP	Pn	13 52 39.1	+0.2
	baz=238						
CHGB	Renai	1.64	260	eP	Pn	13 52 39.0	-0.1
	baz=250						
CHGB				S	Sn	13 52 58.8	-0.6
	baz=250						
OWD	Renai	1.66	256	eP	Pn	13 52 39.3	0.0
	baz=256						
OWD				S	Sn	13 52 58.7	-1.0
	baz=256						
EHY	Hungye	1.71	240	eP	Pn	13 52 40.0	+0.2
	baz=250						
VWDT	VWDT	1.75	250	eP	Pn	13 52 40.5	+0.1
	baz=250						
VWDT				eS	Sn	13 53 01.6	-0.1
	baz=250						
LIOB	Emei	1.77	280	eP	Pn	13 52 41.3	+0.5
	baz=279						
YULB	Yu-li	1.79	238	eP	Pn	13 52 40.7	-0.2
	baz=249						
YULB				eS	Sn	13 53 01.8	-0.8
	baz=249						
EYUL	Yuli	1.79	236	eP	Pn	13 52 40.9	-0.2
	baz=236						
EYUL				eS	Sn	13 53 02.3	-0.4
	baz=236						
TWF1	Yuli	1.81	237	eP	Pn	13 52 41.0	-0.2
	baz=237						
TWF1				eS	Sn	13 53 02.4	-0.8
	baz=237						
WHP	Taichung City	1.82	268	eP	Pn	13 52 42.5	+1.1
	baz=260						
WHP				eS	Sn	13 53 03.4	-0.1
	baz=260						
DPDB	Guoxing	1.87	260	eP	Pn	13 52 42.4	+0.4
	baz=254						
WCS	Beigang Elemen	1.88	261	eP	Pn	13 52 42.5	+0.4
	baz=255						
FULB	Fuli	1.90	233	eP	Pn	13 52 42.1	-0.4
	baz=233						
FULB				eS	Sn	13 53 04.5	-0.9
	baz=233						
SSLB	Suanglung	1.90	253	eP	Pn	13 52 42.7	+0.2
	baz=260						
SSLB				eS	Sn	13 53 05.0	-0.5
	baz=260						
CHKT	Chengkung	1.91	229	eP	Pn	13 52 42.7	+0.1
	baz=222						
CHKT				eS	Sn	13 53 04.7	-0.9
	baz=222						
SMLT	Sun Moon Lake	1.92	256	eP	Pn	13 52 43.6	+0.8
	baz=256						
TYC	Yuchr	1.96	257	eP	Pn	13 52 44.0	+0.8
	baz=250						
EDH	Donghe	2.04	228	eP	Pn	13 52 43.3	-1.0
	baz=222						
EDH				eS	Sn	13 53 06.8	-1.9
	baz=222						
JIRB	Irabujima	2.09	77	P	Pn	13 52 44.7	-0.3
ELDTW	Lidau	2.11	237	eP	Pn	13 52 45.1	-0.3
	baz=237						
ELDTW				eS	Sn	13 53 09.7	-1.0
	baz=237						
ALS	Alishan	2.13	247	eP	Pn	13 52 46.5	+0.7
	baz=247						
ALS				eS	Sn	13 53 11.4	0.0
	baz=247						
LDUT	Ludao	2.15	219	eP	Pn	13 52 45.6	-0.3
	baz=213						
CHN5	Tsauling	2.20	250	eP	Pn	13 52 47.8	+1.2
	baz=251						
CHN5				eS	Sn	13 53 14.3	+1.4
	baz=251						
JMJ2	Miyako jima3	2.21	80	P	Pn	13 52 47.3	+0.7
JOGS	Gusukube	2.28	79	P	Pn	13 52 48.1	+0.5
TWGBT	Beinan	2.29	228	eP	Pn	13 52 47.8	0.0
	baz=239						
TWGBT				eS	Sn	13 53 14.0	-0.9
	baz=239						
STYH	Taoyuan	2.31	240	eP	Pn	13 52 48.5	+0.5
	baz=240						
STYH				eS	Sn	13 53 15.3	+0.1
	baz=240						
STYT	Tauyuan	2.33	240	eP	Pn	13 52 49.3	+1.0
	baz=240						
STYT				eS	Sn	13 53 17.0	+1.2
	baz=240						
CHN4	Tsaushan	2.37	245	eP	Pn	13 52 50.7	+1.8
	baz=246						
WTP	Ta-pu	2.40	243	eP	Pn	13 52 50.7	+1.4
	baz=249						
WTP				eS	Sn	13 53 20.0	+2.3
	baz=249						
TWK	Hsinying	2.49	245	eP	Pn	13 52 52.7	+2.1
	baz=245						
CHN1	Nanshi	2.50	243	eP	Pn	13 52 51.8	+1.2
	baz=254						
MASBT	Mashibuluo	2.74	231	eP	Pn	13 52 54.4	+0.5
	baz=227						
EAST	Anshuo	2.75	225	eP	Pn	13 52 54.3	+0.2
	baz=232						

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*IDC **21** 14:11:03.5±8.1, 0°.30N×129°.66E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.1/36, mbtmp3.7/3, MS2.9/2, Ms1 2.9/2, ms1mx2.4/34, Error ellipse: s-maj=129.8km s-min=43.1km az=6.0*

ISC 21 14:11:04.1±5.7**, 0°.5N**±0°.7×**129°.9E**±0°.4**, h10^{km}, n7, σ0ˢ82**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SWI	Sorong	1.92	133	P	Pb	14 11 38.9	-0.4
SIJI	Sorong	1.93	133	Pn	Pb	14 11 38.6	-0.8
	37nm,0.3s,baz=291,slow=13,SNR=122						
SIJI				Sn	Sb	14 12 04.0	+0.4
	45nm,0.3s,baz=157,slow=23,SNR=6.5						
FAKI	Fak Fak	4.12	145	P	Pn	14 12 07.8	+0.6
BATI	Baumata	12.27	210	LR	LR	14 19 55.3	
	comp=Z,47nm,18.4s,baz=66,slow=44						
WRA	Warramunga Arr	20.75	168	P	P	14 15 44.3	-0.9
	0.6nm,0.7s,baz=349,slow=11,SNR=6.4						
ASAR	Alice Springs	24.31	171	P	P	14 16 21.7	-0.4
	0.8nm,0.4s,baz=354,slow=8.1,SNR=43						

ASAR				LR	LR	14 28 10.0	
	comp=Z,36nm,18.0s,baz=12,slow=42						
STKA	**Stephens Creek**	**34.03**	**162**	P	**P**	**14 17 49.1**	**+0.6**
	2.2nm,0.8s,baz=320,slow=16,SNR=3.0						

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*DJA **21** 14:11:17.3±2.2, 0°S±6°×13°0E±°, $h31^{km}\pm36^{km}$, M3.8/7, MLv3.8/7*
*IDC **21** 14:11:19.8±1.1, 0°.32S×129°.78E, $h0^{km}$, mb4.0/5, mb1 4.1/6, mb1mx3.6/38, mbtmp4.0/6, ML3.6/1, Error ellipse: s-maj=31.1km s-min=17.5km az=56.0*
ISC 21 14:11:21.5±0.8**, 0°.51S**±0°.09×**129°.64E**±0°.06**, $h10^{km}$, n12,** σ**2**^{s}.**15**/13**, mb4.2**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**1.66**	**102**	Pn	**Pn**	**14 11 49.1**	**-1.6**
	184nm,0.3s,baz=189,slow=19,SNR=52						
SIJI				Sn	**Sn**	**14 12 11.7**	**-0.5**
	45nm,0.3s,baz=150,slow=23,SNR=5.2						
LBMI	**Labuha**	**2.15**	**267**	P	**Pn**	**14 11 55.6**	**-1.8**
LBMI				S	**Sb**	**14 12 27.2**	**0.0**
TNTI	**Ternate**	**2.61**	**299**	P	**Pn**	**14 12 01.4**	**-2.3**
MSAI	**Masohi**	**2.91**	**194**	P	**Pn**	**14 12 04.3**	**-3.6**
SPSI	**Sidrap Palu**	**10.45**	**251**	P	Pn	14 13 58.3	+6.9
FITZ	**Fitzroy Crossi**	**17.92**	**192**	P	**P**	**14 15 34.3**	**+2.7**
	0.1nm,0.3s,baz=25,slow=14,SNR=2.2						
STKI	**Sintang**	**18.17**	**272**	P	**P**	**14 15 37.6**	**+3.1**
WRA	**Warramunga Arr**	**19.86**	**167**	P	**Pn**	**14 15 54.2**	**-0.2**
	1.2nm,0.4s,baz=352,slow=12,SNR=9.1						
ASAR	**Alice Springs**	**23.39**	**170**	P	**P**	**14 16 32.1**	**+1.4**
	3.2nm,0.4s,baz=354,slow=8.3,SNR=19						
STKA	**Stephens Creek**	**33.18**	**161**	P	**P**	**14 17 58.9**	**+0.4**
	2.8nm,0.5s,baz=330,slow=8.2,SNR=11						
SONM	**Songino Array**	**52.23**	**340**	P	**P**	**14 20 33.1**	**+0.2**
	1.2nm,0.8s,baz=148,slow=8.1,SNR=4.9						
MKAR	**Makanchi Array**	**62.67**	**325**	P	**P**	**14 21 44.9**	**-1.6**
	0.8nm,0.6s,baz=119,slow=7.8,SNR=6.4						

IDC 21 14:21:47.3±999.0**, 50°.49N**×**55°.93E, $h0^{km}$, Error ellipse: s-maj=694.7km s-min=34.6km az=92.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**1.35**	**93**	*i*		14 29 40.0	
	baz=275,slow=290,SNR=1.7						
I46RU	**ZALESOVO INFRA**	**17.98**	**68**	*i*		16 15 20.0	
	baz=269,slow=328,SNR=1.9						
I34MN	**SONGINO INFRAS**	**32.62**	**75**	*i*		17 42 10.0	
	baz=292,slow=339,SNR=1.3						

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*NEIC **21** 14:30:54.1±0.7, 37°.01N±0°.04×97°.56W±0°.02, $h6^{km}\pm6^{km}$, mb_Lg2.5/4, ML2.6/21, Error ellipse: s-maj=5.5km s-min=1.7km az=201.0*
NEIC 21 14:30:54.0±0.6**, 36°.98N**±0°.03×**97°.54W**±0°.02**, $h4^{km}\pm5^{km}$, Error ellipse: s-maj=4.8km s-min=1.7km az=201.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN13	**South Haven SW**	**0.06**	**62**		Pg	14 30 55.9	+0.5
KAN09	**Caldwell North**	**0.16**	**338**	Pg	Pg	14 30 57.1	-0.2
KAN09				Sg	Sg	14 30 59.0	-0.4
KAN17	**Caldwell West**	**0.19**	**289**		Pg	14 30 57.7	0.0
KAN17				Sg	Sg	14 31 00.2	+0.1
KAN01	**Argonia South**	**0.24**	**314**		Pg	14 30 58.6	-0.1
KAN01				Sg	Sg	14 31 01.6	-0.3
GC02	**Grant County #**	**0.29**	**242**	Pg	Pg	14 30 59.7	+0.1
KAN05	**Bluff City Nor**	**0.29**	**295**		Pg	14 30 59.6	0.0
KAN05				Sg	Sg	14 31 02.9	-0.6
KAN14	**Manchester OK**	**0.34**	**265**		Pg	14 31 00.6	+0.1
BLOK	**Blackwell**	**0.34**	**130**	Pg	Pg	14 31 01.1	+0.4
KAN06	**Argonia West S**	**0.36**	**316**		Pg	14 31 00.8	-0.3
KAN06				Sg	Sg	14 31 05.3	-0.5
KAN08	**Anthony NE Sta**	**0.42**	**305**		Pg	14 31 02.0	-0.1
KAN08				Sg	Sg	14 31 07.1	-0.5
KAN10	**Anthony SW Sta**	**0.46**	**288**	Pg	Pg	14 31 02.8	-0.1
KAN10					Sg	14 31 09.2	+0.2
KAN12	**Harper NE Stat**	**0.48**	**311**	Pg	Pg	14 31 03.1	-0.2
KAN12				Sg	Sg	14 31 09.3	-0.2
KAN16	**Harper SW Stat**	**0.48**	**300**	Pg	Pg	14 31 03.1	-0.2
CROK	**Carrier**	**0.59**	**217**	Pg	Pg	14 31 06.0	+0.6
T35A	**Sooner Cattle**	**0.83**	**94**	Pg	Pg	14 31 10.0	0.0
T35A				Sg	Sg	14 31 20.4	-0.3
QUOK	**Quay**	**1.05**	**140**	Pg	Pg	14 31 14.2	0.0
OK033	**Mehan**	**1.06**	**152**	Pg	Pg	14 31 14.4	+0.1
OK031	**S. Brethren Rd**	**1.18**	**151**		Pg	14 31 16.6	0.0
OK034	**N. Norfolk Rd.**	**1.18**	**145**		Pg	14 31 16.6	0.0
OK030	**Cody Creek RV**	**1.22**	**150**		Pg	14 31 17.4	0.0
U32A	**Winter Ranch,**	**1.32**	**243**		Pn	14 31 18.5	-0.8
BCOK	**Bluff Creek, N**	**1.33**	**182**		Pn	14 31 19.2	-0.2
OK025	**Westminster Rd**	**1.41**	**173**	Pn	Pn	14 31 20.3	-0.2
R32A	**Long Quarter,**	**1.71**	**328**		Pn	14 31 24.8	+0.1
FNO	**Franklin**	**1.73**	**176**	Pn	Pn	14 31 25.6	+0.7
TUL1	**Leonard**	**1.77**	**127**	Pn	Pn	14 31 25.9	+0.4
TUL1				IAmb_Lg		14 31 55.4	
	comp=Z,24nm,0.9s						
W35A	**Tecumseh**	**1.91**	**163**	Pn	Pn	14 31 28.1	+0.8
WMOK	**Wichita Mounta**	**2.46**	**205**	Pn	Pn	14 31 35.3	+0.3
CBKS	**Cedar Bluff**	**2.52**	**317**	Pn	Pn	14 31 35.9	+0.1
U38A	**Gravette**	**2.59**	**101**	Pn	Pn	14 31 36.7	-0.2
S39A	**Bolivar**	**3.44**	**77**	Pn	Pn	14 31 48.8	+0.4
W39A	**Magazine**	**3.53**	**119**	Pn	Pn	14 31 49.8	+0.1
U40A	**Yellville**	**3.82**	**98**	Pn	Pn	14 31 54.0	+0.3
K38A	**Parkersburg**	**6.74**	**32**	IAmb_Lg		14 34 32.9	
	comp=Z,6.4nm,0.9s						

DJA 21 15:02:12.1±0.9**, 8°S**±3°×**10°7E**±°**, $h18^{km}\pm7^{km}$, M4.0**/13**, mb4.4**/1**, MLv3.8**/13**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	**Cibinong**	**0.88**	**348**	P	Pb	15 02 29.0	+0.1
CNJI				S	Sb	15 02 40.3	-0.1
CMJI	**Cimerak**	**1.19**	**71**	P	Pn	15 02 33.6	-0.3
CMJI				S	Sb	15 02 48.3	-1.0
LEM	**Lembang**	**1.38**	**13**	P	Pn	15 02 37.0	+0.4
LEM				S	Sb	15 02 55.4	+0.6
SKJI	**Sukabumi**	**1.39**	**327**	P	Pn	15 02 36.4	-0.2
SKJI				S	Sn	15 02 53.1	-1.3
DBJI	**Dramaga**	**1.71**	**341**	P	Pn	15 02 40.8	-0.2
CGJI	**Cibinong**	**2.23**	**314**	P	Pn	15 02 47.9	-0.3
CGJI				S	Sn	15 03 12.7	-2.7
UGM	**Wanagama**	**3.19**	**85**	P	Pn	15 03 00.6	-0.9
UGM				S	Sn	15 03 38.6	-0.5
WOJI	**Wonogiri, Jawa**	**3.59**	**85**	P	Pn	15 03 07.9	+0.9
PCJI	**Pacitan**	**3.83**	**90**	P	Pn	15 03 11.3	+1.1
KASI	**Kota Agung**	**3.84**	**313**	P	Pn	15 03 12.1	+1.7
KLSI		**4.31**	**323**	P	Pn	15 03 18.0	+1.2
LWLI	**Liwa**	**4.51**	**314**	P	Pn	15 03 20.7	+1.1
MDSI	**Maura Dua**	**4.81**	**320**	P	Pn	15 03 20.8	-2.9

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*EAF **21** 15:19:18.5±2.7, 24°.76S×23°.81E, $h0^{km}\pm121^{km}$, MD4.4*
BUL 21 15:19:18.5±2.7**, 24°.76S**×**23°.81E, $h0^{km}\pm121^{km}$, MD4.9, Botswana**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**1.65**	**99**	*i* P	Pn	15 19 48.7	-0.1
LBTB	**Lobatse**	**1.65**	**99**	*i* P	Pn	15 19 48.7	-0.1
BOSA	**Boshof**	**4.05**	**162**	*i* P	Pn	15 20 22.8	+0.8
BOSA				*i* Sg	Sb	15 21 23.2	+2.6
BOSA	**Boshof**	**4.05**	**162**	*i* P	Pn	15 20 22.8	+0.8
BOSA				*i* Sg	Sb	15 21 23.2	+2.6
MATP	**Matopo**	**6.11**	**46**	*i* P	Pn	15 20 47.6	-2.7
MATP	**Matopo**	**6.11**	**46**	*i* P	Pn	15 20 47.6	-2.7

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*TUL **21** 15:25:38.7±1.0, 36°.695N±0°.010×97°.99W±0°.02, $h7^{km}\pm3^{km}$, ML2.8, ML2.5/52(NEIC), Error ellipse: s-maj=2.5km s-min=1.3km az=79.0*
NEIC 21 15:25:38.6±0.6**, 36°.69N**±0°.01×**97°.99W**±0°.01**, $h11^{km}\pm3^{km}$, Error ellipse: s-maj=1.8km s-min=1.5km az=171.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.19**	**178**	Pg	Pg	15 25 42.8	+0.1
CROK				Sg	Sg	15 25 45.5	0.0
CROK				IAML		15 25 47.6	
	comp=E,2μm,0.3s						
GC02	**Grant County #**	**0.19**	**33**	Pg	Pg	15 25 42.9	+0.1
OK032	**Salt Plains WL**	**0.21**	**302**		Pg	15 25 43.2	+0.1
OK032				IAML		15 25 48.4	
	comp=E,1μm,0.2s						
KAN14	**Manchester OK**	**0.27**	**5**		Pg	15 25 44.3	+0.2
KAN14				IAML		15 25 48.4	
	comp=E,598nm,0.3s						
KAN14				IAML		15 25 48.4	
	comp=N,777nm,0.2s						
KAN17	**Caldwell West**	**0.40**	**27**		Pg	15 25 46.5	+0.1
KAN17				IAML		15 25 52.4	
	comp=N,549nm,0.2s						
KAN17				IAML		15 25 52.4	
	comp=E,802nm,0.4s						
KAN05	**Bluff City Nor**	**0.43**	**13**	Pg	Pg	15 25 47.0	0.0
KAN05				Sg	Sg	15 25 52.6	-0.1
KAN05				IAML		15 25 54.4	
	comp=N,485nm,0.1s						
KAN10	**Anthony SW Sta**	**0.44**	**349**	Pg	Pg	15 25 47.5	+0.2
KAN01	**Argonia South**	**0.50**	**22**	Pg	Pg	15 25 48.4	0.0
KAN01				IAML		15 25 55.6	
	comp=N,290nm,0.3s						
KAN01				IAML		15 25 59.7	
	comp=E,284nm,0.1s						
KAN13	**South Haven SW**	**0.52**	**52**	Pg	Pg	15 25 48.8	0.0
KAN13				Sg	Sg	15 25 55.5	-0.2
KAN13				IAML		15 25 56.5	
	comp=N,447nm,0.3s						
KAN13				IAML		15 25 58.0	
	comp=E,294nm,0.3s						
KAN08	**Anthony NE Sta**	**0.53**	**2**	Pg	Pg	15 25 49.0	0.0
KAN08				IAML		15 26 01.5	
	comp=N,292nm,0.1s						
KAN09	**Caldwell North**	**0.53**	**34**	Pg	Pg	15 25 49.0	0.0
KAN09				Sg	Sg	15 25 55.5	-0.6
KAN16	**Harper SW Stat**	**0.54**	**354**	Pg	Pg	15 25 49.0	-0.1
KAN06	**Argonia West S**	**0.56**	**11**		Pg	15 25 49.5	-0.1
KAN06				IAML		15 25 57.9	
	comp=E,281nm,0.1s						
KAN06				IAML		15 26 00.9	
	comp=N,251nm,0.1s						
KAN12	**Harper NE Stat**	**0.60**	**359**	Pg	Pg	15 25 50.5	+0.1
KAN12				Sg	Sg	15 25 57.7	-0.6
KAN12				IAML		15 26 00.5	
	comp=N,254nm,0.4s						
KAN12				IAML		15 26 03.0	
	comp=E,337nm,0.3s						
BLOK	**Blackwell**	**0.63**	**84**	Pg	Pg	15 25 50.6	-0.2
BLOK				Sg	Sg	15 25 58.6	-0.4
BLOK				IAML		15 25 59.9	
	comp=N,248nm,0.1s						
BLOK				IAML		15 26 00.4	
	comp=E,379nm,0.2s						
U32A	**Winter Ranch,**	**0.87**	**249**	Pg	Pg	15 25 55.1	-0.4
OK029	**Liberty Lake**	**0.99**	**154**	Pg	Pg	15 25 57.3	-0.5
OK033	**Mehan**	**1.07**	**127**	Pg	Pb	15 25 58.8	-0.3
BCOK	**Bluff Creek, N**	**1.08**	**163**	Pg	Pb	15 25 58.7	-0.5
BCOK				IAML		15 26 18.9	
	comp=E,94nm,0.1s						
BCOK				IAML		15 26 19.4	
	comp=N,101nm,0.1s						
QUOK	**Quay**	**1.16**	**116**	Pg	Pb	15 26 00.3	-0.2
QUOK				Sg	Sb	15 26 15.4	-0.2
OK031	**S. Brethren Rd**	**1.19**	**128**	Pg	Pb	15 26 00.7	-0.4
OK031				IAML		15 26 18.8	
	comp=N,122nm,0.2s						
OK031				IAML		15 26 20.8	
	comp=N,123nm,0.1s						
T35A	**Sooner Cattle**	**1.21**	**79**		Pn	15 26 01.1	-0.3
OK025	**Westminster Rd**	**1.23**	**154**		Pn	15 26 01.5	-0.1
OK025				IAML		15 26 24.4	
	comp=N,165nm,0.2s						
OK034	**N. Norfolk Rd.**	**1.23**	**123**		Pn	15 26 01.6	-0.1
OK030	**Cody Creek RV**	**1.24**	**128**		Pn	15 26 01.6	-0.2
FNO	**Franklin**	**1.51**	**161**	Pn	Pb	15 26 06.1	-0.5
W35A	**Tecumseh**	**1.78**	**149**	Pn	Pn	15 26 10.1	+0.7
TUL1	**Leonard**	**1.94**	**113**	Pn	Pn	15 26 12.2	+0.7
X34A	**Smith Ranch, M**	**2.09**	**176**	Pn	Pn	15 26 14.0	+0.4

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*KRNET **21** 15:32:03.1±0.1, 40°.11N×78°.29E, mb3.1*
*SOME **21** 15:32:03.6, 40°.12N×77°.77E, $h5^{km}$*
*NNC **21** 15:32:06.3±1.0, 40°.20N×77°.70E, $h0^{km}$, mb4.0, mpv3.7, Error ellipse: s-maj=7.1km s-min=6.7km az=7.0*
ISC 21 15:31:58.7±2.9**, 40°.0N**±0°.1×**77°.75E**±0°.05**, $h2^{km}$**$\pm18^{km}$**, n46,** σ**1**^{s}.**20**/70**, 20C-9D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.76**	**1**	⇑*i*P	**Pg**	**15 32 34.0**	**+1.6**
	baz=47						
TARG				⇑*i*S	**Sg**	**15 32 56.6**	**+1.3**
	baz=47						
KDJ	**Kajisay**	**2.20**	**349**	⇑*i*P	**Pg**	**15 32 41.9**	**+1.0**
	baz=38						
KDJ				⇑*i*S	**Sg**	**15 33 10.6**	**+1.1**
	baz=38						
ULHL	**Ulahol**	**2.54**	**334**	⇓*i*P	**Pg**	**15 32 48.3**	**+0.9**
	baz=25						
ULHL				⇓*i*S	**Sg**	**15 33 21.3**	**+0.9**
	baz=25						
PRZ	**Przheval'sk**	**2.56**	**11**	⇓*i*P	**Pb**	**15 32 45.5**	**0.0**
	baz=2.0						
PRZ				⇓*i*S	**Sb**	**15 33 16.2**	**-1.4**
	baz=2.0						
ANVS	**Anan'yevo**	**2.81**	**359**	⇑*i*P	**Pb**	**15 32 49.6**	**-0.2**
	baz=50						
ANVS				⇑*i*S	**Sb**	**15 33 23.2**	**-1.6**
	baz=50						
BOOM	**Boomskoye usch**	**2.87**	**332**	⇑*e*P	**Pg**	**15 32 53.3**	**-0.3**
	baz=24						
BOOM				⇑*i*S	**Sg**	**15 33 29.9**	**-0.8**
	baz=24						
TNSS	**Tian-Shan**	**3.13**	**349**	*e*P	**Pg**	**15 32 59.1**	**+0.5**
	19nm,0.3s						
TNSS				*e*S	**Sg**	**15 33 38.9**	**-0.2**
	15nm,0.4s						
TNSS	**Tian-Shan**	**3.13**	**349**	Pg	**Pg**	**15 32 59.1**	**+0.5**
	19nm,0.3s						
TNSS				Lg	Lg	15 33 38.9	
	15nm,0.4s						
SATY	**Saty**	**3.13**	**9**	*e*P	**Pg**	**15 32 59.5**	**+0.8**
	15nm,0.4s						
SATY				*e*S	**Sg**	**15 33 39.3**	**+0.1**
	17nm,0.5s						
SATY	**Saty**	**3.13**	**9**	Pg	**Pg**	**15 32 59.5**	**+0.8**
	15nm,0.4s						
SATY				Lg	Lg	15 33 39.3	
	17nm,0.5s						
ARLS	**Aral**	**3.21**	**307**	⇑*i*P	**Pg**	**15 32 59.6**	**-0.6**
	baz=1.0						
ARLS				⇑*i*S	**Sg**	**15 33 41.7**	**-0.1**
	baz=1.0						
MDOK	**Medeo**	**3.24**	**351**	*e*P	**Pg**	**15 33 00.9**	**+0.3**
	20nm,0.2s						
MDOK				*e*S	**Sg**	**15 33 42.3**	**-0.4**
	46nm,0.6s						
MDOK	**Medeo**	**3.24**	**351**	⇓Pg	**Pg**	**15 33 00.4**	**-0.3**
	16nm,0.6s						
MDOK				Lg	Lg	15 33 42.3	
	40nm,0.6s						
MDOK	**Medeo**	**3.24**	**351**	Pg	**Pg**	**15 33 00.9**	**+0.3**
	20nm,0.2s						
MDOK				Lg	Lg	15 33 41.7	
	46nm,0.6s						
ZHN	**Zhinishke**	**3.24**	**9**	*e*P	**Pg**	**15 33 01.6**	**+0.8**
	17nm,0.1s						
ZHN				*e*S	**Sg**	**15 33 43.0**	**+0.2**
	28nm,0.2s						
ZHN	**Zhinishke**	**3.24**	**9**	Pg	**Pg**	**15 33 01.6**	**+0.8**
	17nm,0.1s						
ZHN				Lg	Lg	15 33 43.0	
	28nm,0.2s						
AAA	**Alma-Ata**	**3.30**	**349**	*e*P	**Pg**	**15 33 04.0**	**+2.1**
	66nm,0.2s						
AAA				*e*S	**Sg**	**15 33 47.3**	**+2.6**
	60nm,0.2s						
AAA	**Alma-Ata**	**3.30**	**349**	Pg	**Pg**	**15 33 04.1**	**+2.2**
	66nm,0.2s						
AAA				Lg	Lg	15 33 47.3	
	60nm,0.2s						
KOTS	**Kotyrbulak**	**3.30**	**352**	*e*P	**Pg**	**15 33 02.5**	**+0.6**
	14nm,0.3s						
KOTS				*e*S	**Sg**	**15 33 44.7**	**0.0**
	74nm,0.3s						
KOTS	**Kotyrbulak**	**3.30**	**352**	Pg	**Pg**	**15 33 02.5**	**+0.6**
	14nm,0.3s						
KOTS				Lg	Lg	15 33 44.4	
	74nm,0.3s						
KNDC	**Almaty**	**3.30**	**350**	⇑Pg	**Pg**	**15 33 02.3**	**+0.4**
	30nm,0.6s						
KNDC				⇓Lg	Lg	15 33 45.7	
	59nm,0.5s						
MTBS	**Maitube**	**3.31**	**343**	*e*P	**Pg**	**15 33 02.2**	**0.0**
	9.3nm,0.2s						
MTBS				*e*S	**Sg**	**15 33 44.5**	**-0.6**
	22nm,0.4s						
MTBS	**Maitube**	**3.31**	**343**	Pg	**Pg**	**15 33 02.2**	**0.0**
	9.3nm,0.2s						
MTBS				Lg	Lg	15 33 44.5	
	22nm,0.4s						
UZB	**Uzynbulak**	**3.32**	**16**	*e*P	**Pb**	**15 33 01.5**	**+3.1**
	6.4nm,0.2s						
UZB				*e*S	**Sg**	**15 33 43.2**	**-2.1**
	7.8nm,0.4s						
UZB	**Uzynbulak**	**3.32**	**16**	Pg	**Pg**	**15 33 02.6**	**+0.3**
	6.4nm,0.2s						
UZB				Lg	Lg	15 33 44.6	
	7.8nm,0.4s						
UCH	**Uchtor**	**3.33**	**314**	⇓*e*P	**Pg**	**15 33 01.8**	**-0.6**
	baz=8.0						
UCH				⇓*i*S	**Sg**	**15 33 44.4**	**-1.2**
	baz=8.0						
KST	**Kastek**	**3.35**	**337**	*e*P	**Pg**	**15 33 03.7**	**+0.8**
	7.9nm,0.3s						
KST				*e*S	**Sg**	**15 33 47.1**	**+0.7**
	35nm,0.5s						
KST	**Kastek**	**3.35**	**337**	Pg	**Pg**	**15 33 03.7**	**+0.8**
	7.9nm,0.3s						
KST				Lg	Lg	15 33 47.1	
	35nm,0.5s						
TKM2	**Tokmak 2**	**3.37**	**332**	⇑Pn	**Pb**	**15 32 58.9**	**-0.2**
	3.3nm,0.4s						
TKM2				⇑Lg	Lg	15 33 47.3	
	14nm,0.5s						
TKM2	**Tokmak 2**	**3.37**	**332**	⇑*e*P	**Pb**	**15 32 59.7**	**+0.5**
	baz=25						
TKM2				⇑*i*S	**Sb**	**15 33 41.1**	**+0.4**
	baz=25						
KBK	**Karagaybulak**	**3.42**	**323**	⇑*e*P	**Pb**	**15 33 01.8**	**+1.8**
	baz=16						
KBK				⇑*i*S	**Sb**	**15 33 44.4**	**+2.3**
	baz=16						
DGS	**Degeres**	**3.59**	**336**	*e*P	**Pg**	**15 33 08.0**	**+0.5**
	6.7nm,0.4s						
DGS				*e*S	**Sg**	**15 33 54.4**	**+0.4**
	21nm,0.4s						
DGS	**Degeres**	**3.59**	**336**	Pg	**Pg**	**15 33 07.1**	**-0.3**
	6.7nm,0.4s						
DGS				Lg	Lg	15 33 53.9	
	21nm,0.4s						
PDGK	**Podgornoye**	**3.61**	**21**	Pg	**Pg**	**15 33 07.8**	**0.0**
	2.1nm,0.2s						
PDGK				Lg	Lg	15 33 53.3	
	5.5nm,0.5s						
PDGK	**Podgornoye**	**3.61**	**21**	⇑Pn	**Pb**	**15 33 01.7**	**-1.5**
	2.7nm,0.4s						
PDGK				⇑Lg	Lg	15 33 52.7	
	11nm,0.7s						
AAK	**Ala-Archa**	**3.62**	**319**	⇓Pg	**Pg**	**15 33 07.6**	**-0.5**
	1.7nm,0.6s						
AAK				⇑Lg	Lg	15 33 54.9	
	8.6nm,0.5s						
KTBS	**Karatobe**	**3.83**	**348**	*e*P	**Pg**	**15 33 11.0**	**-0.9**
	7.4nm,0.3s						
KTBS				*e*S	**Sg**	**15 33 59.9**	**-1.7**
	23nm,0.3s						
KTBS	**Karatobe**	**3.83**	**348**	Pg	**Pg**	**15 33 11.0**	**-0.9**
	7.4nm,0.3s						
KTBS				Lg	Lg	15 33 59.9	
	23nm,0.3s						
KRBS	**Karabastau**	**4.04**	**338**	*e*P	**Pg**	**15 33 15.3**	**-0.7**
	3.8nm,0.3s						
KRBS				*e*S	**Sg**	**15 34 06.6**	**-1.7**
	12nm,0.4s						
KRBS	**Karabastau**	**4.04**	**338**	Pg	**Pg**	**15 33 14.6**	**-1.3**
	3.8nm,0.3s						
KRBS				Lg	Lg	15 34 06.6	
	12nm,0.4s						
KUU	**Kurty**	**4.06**	**345**	*e*P	**Pg**	**15 33 15.4**	**-1.1**
	2.0nm,0.2s						
KUU				*e*S	**Sg**	**15 34 06.5**	**-2.6**
	16nm,0.6s						
KUU	**Kurty**	**4.06**	**345**	Pg	**Pg**	**15 33 15.4**	**-1.1**
	2.0nm,0.2s						
KUU				Lg	Lg	15 34 06.5	
	16nm,0.6s						
BLB	**Baldybastay**	**4.16**	**7**	Pg	**Pg**	**15 33 18.2**	**-0.2**
	17nm,0.3s						
BLB				Lg	Lg	15 34 10.7	
	15nm,0.3s						
SGDS	**Sogindy**	**4.19**	**327**	Pg	**Pg**	**15 33 17.4**	**-1.6**
	2.1nm,0.5s						
SGDS				Lg	Lg	15 34 11.8	
	6.4nm,0.4s						
ARXS	**Arharly**	**4.25**	**1**	*e*P	**Pg**	**15 33 18.5**	**-1.5**
	4.9nm,0.3s						
ARXS				*e*S	**Sg**	**15 34 12.8**	**-2.2**
	10nm,0.2s						
ARXS	**Arharly**	**4.25**	**1**	Pg	**Pg**	**15 33 18.5**	**-1.5**
	4.9nm,0.3s						
ARXS				Lg	Lg	15 34 12.7	
	10nm,0.2s						

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*FUNV **21** 15:39:18.3, 8°.60N×71°.54W, $h5^{km}$, MW3.0*
ISC 21 15:39:17.6±1.2**, 8°.53N**±0°.03×**71°.43W**±0°.03**, $h2^{km}$**$\pm11^{km}$**, n14,** σ**0**^{s}.**89**/25**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIGV	**El Vigia**	**0.31**	**12**	*e*P	**Pg**	**15 39 24.2**	**+0.6**
VIGV				*e*S	**Sg**	**15 39 28.2**	**+0.5**
SOCV	**Socops**	**0.62**	**114**	*e*P	**Pg**	**15 39 29.3**	**-0.2**
SOCV				*e*S	**Sg**	**15 39 37.2**	**-0.3**
SDV	**Santo Domingo**	**0.86**	**66**	*e*P	**Pg**	**15 39 34.7**	**+0.5**
SDV				*e*S	**Sb**	**15 39 46.5**	**-1.1**
CAPV	**Capacho**	**1.10**	**233**	*e*P	**Pg**	**15 39 38.0**	**-0.7**
CAPV				*e*S	**Sg**	**15 39 53.0**	**0.0**
PAMC	**Pamplona, Colo**	**1.73**	**227**	*e*P	**Pg**	**15 39 50.6**	**-0.2**
PAMC				*e*S	**Sg**	**15 40 14.8**	**+1.5**
OCAC	**Ocana**	**1.89**	**261**	*e*P	**Pb**	**15 39 51.7**	**-1.3**
OCAC				*e*S	**Sb**	**15 40 16.1**	**-1.1**
TAMC	**Tame, Arauca**	**2.12**	**190**	*e*P	**Pg**	**15 39 57.9**	**-0.2**
TAMC				*e*S	**Sb**	**15 40 24.0**	**+0.5**
BARC	**Barichara**	**2.60**	**222**	*e*P	**Pb**	**15 40 04.7**	**-0.4**
BARC				*e*S	**Sg**	**15 40 41.3**	**+0.2**
CRJC	**Cerrejon, Guaj**	**2.86**	**330**	*e*P	**Pn**	**15 40 05.0**	**+0.6**
CRJC				*e*S	**Sn**	**15 40 39.2**	**-0.3**
RUSC	**La Rusia**	**3.09**	**212**	*e*P	**Pn**	**15 40 09.0**	**+1.0**
BAUV	**El Baul**	**3.37**	**83**	*e*P	**Pn**	**15 40 12.4**	**+1.0**
BAUV				*e*S	**Sn**	**15 40 51.2**	**-0.9**
PTBC	**PUERTO BERRIO,**	**3.60**	**237**	*e*P	**Pn**	**15 40 14.0**	**-0.4**
PTBC				*e*S	**Sn**	**15 40 59.4**	**+1.8**
SPBC	**San Pablo de B**	**3.88**	**223**	*e*P	**Pn**	**15 40 19.7**	**+1.2**
BENV	**Beln**	**4.04**	**69**	*e*P	**Pn**	**15 40 20.8**	**+0.2**

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*TAP **21** 15:40:46.0, 23°.47N×121°.49E, $h27^{km}$, ML3.4, C*
*JMA **21** 15:40:45.0, 23°.43N×121°.54E, $h24^{km}\pm1^{km}$, M2.9*
ISC 21 15:40:44.5±0.9**, 23°.43N**±0°.02×**121°.66E**±0°.02**, $h30^{km}$**$\pm6^{km}$**, n89,** σ**1**^{s}.**20**/148**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECBN	**Changbin**	**0.22**	**239**	P	**Pb**	**15 40 51.8**	**+0.8**
	baz=201						
ECBN				S	**Sb**	**15 40 55.9**	**+0.4**
	baz=201						
HGSD	**Ruisui**	**0.22**	**286**	P	**Pb**	**15 40 50.7**	**-0.3**
	baz=294						
HGSD				*e*S	**Sb**	**15 40 56.8**	**+1.3**
	baz=294						
EGFH	**Guangfu**	**0.32**	**318**	P	**Pb**	**15 40 52.1**	**-0.2**
	baz=333						
EHY	**Hungye**	**0.32**	**284**	P	**Pb**	**15 40 51.3**	**-1.0**
	baz=284						
EYUL	**Yuli**	**0.32**	**255**	*e*P	**Pb**	**15 40 52.1**	**-0.2**
	baz=243						

YULB	Yu-li	0.34	263	P	Pb	15 40 51.8	-0.7
	baz=258						
YULB				eS	Sb	15 40 55.9	-2.0
	baz=258						
FULB	Fuli	0.41	235	eP	Pn	15 40 54.5	+0.2
	baz=210						
FULB				eS	Sn	15 41 00.9	0.0
	baz=210						
CHKT	Chengkung	0.43	219	P	Pn	15 40 54.8	+0.2
	baz=188						
CHKT				S	Sn	15 41 01.5	+0.2
	baz=188						
ESL	Shilin	0.43	331	P	Pb	15 40 53.6	-0.3
	baz=342						
ESL				eS	Sb	15 40 59.0	-1.3
	baz=342						
HWA	Hwalien	0.55	355	eP	Pn	15 40 56.7	+0.5
	baz=359						
EDH	Donghe	0.56	216	P	Pn	15 40 56.8	+0.4
	baz=191						
EDH				eS	Sn	15 41 05.1	+0.4
	baz=191						
VWDT	VWDT	0.57	304	P	Pb	15 40 55.4	-0.8
	baz=311						
ELDTW	Lidau	0.64	248	P	Pb	15 40 56.0	-1.2
	baz=241						
ELDTW				eS	Sb	15 41 02.8	-3.2
	baz=241						
TWD	Chiawan	0.65	355	eP	Pn	15 40 58.0	+0.4
	baz=354						
TWD				eS	Sn	15 41 07.7	+0.9
	baz=354						
OWD	Renai	0.68	320	P	Pb	15 40 57.1	-0.9
	baz=336						
LONT	Longtian	0.71	223	eP	Pb	15 40 57.8	-0.7
	baz=212						
ETL	Fush Village	0.72	357	eP	Pn	15 40 59.8	+1.1
	baz=356						
SSLB	Suanglung	0.74	299	P	Pb	15 40 57.5	-1.4
	baz=298						
SSLB				eS	Sb	15 41 05.3	-3.4
	baz=298						
NACB	Ninganchiao	0.74	355	eP	Pn	15 40 58.9	0.0
	baz=353						
NACB				eS	Sb	15 41 08.3	-0.5
	baz=353						
CHGB	Renai	0.77	325	P	Pb	15 40 59.0	-0.6
	baz=338						
CHGB				eS	Sb	15 41 07.5	-2.3
	baz=338						
LDUT	Ludao	0.78	193	P	Pn	15 40 59.8	+0.5
	baz=172						
ALS	Alishan	0.79	276	P	Pb	15 40 58.9	-1.0
	baz=275						
ALS				eS	Sb	15 41 07.7	-2.7
	baz=275						
ETLH	Xiulin Townshi	0.79	348	eP	Pb	15 40 59.4	-0.4
	baz=357						
WHF	Hehuan Shan	0.80	333	eP	Pb	15 40 59.4	-0.7
	baz=349						
TWGBT	Beinan	0.81	221	eP	Pb	15 40 59.0	-1.1
	baz=213						
TWGBT				eS	Sb	15 41 09.4	-1.4
	baz=213						
TWG	Pinlang	0.81	222	eP	Pb	15 40 59.3	-0.9
	baz=213						
TWG				eS	Sb	15 41 09.3	-1.5
	baz=213						
TTN	Taitung	0.82	215	eP	Pn	15 41 01.0	+1.1
	baz=206						
SMLT	Sun Moon Lake	0.83	303	eP	Pb	15 40 59.4	-1.1
	baz=311						
SMLT				eS	Sb	15 41 09.8	-1.6
	baz=311						
STYH	Taoyuan	0.85	252	P	Pb	15 40 59.8	-1.0
	baz=246						
STYH				S	Sb	15 41 09.2	-2.7
	baz=246						
TYC	Yuchr	0.87	303	eP	Pb	15 41 00.1	-1.0
	baz=311						
TYC				eS	Sb	15 41 10.9	-1.5
	baz=311						
FUSS	Fushou	0.90	335	eP	Pb	15 41 01.4	-0.3
	baz=341						
FUSS				eS	Sb	15 41 11.7	-1.7
	baz=341						
CHN5	Tsauling	0.92	281	eP	Pb	15 41 01.4	-0.5
	baz=284						
CHN5				eS	Sb	15 41 12.8	-1.1
	baz=284						
WCS	Beigang Elemen	0.93	312	eP	Pb	15 41 00.2	-1.8
	baz=322						
TWT	Tachien	0.93	332	eP	Pn	15 41 02.0	+0.4
	baz=336						
TWT				eS	Sb	15 41 12.4	-1.9
	baz=336						
TDCB	Techi	0.94	331	eP	Pb	15 41 02.0	-0.3
	baz=336						
TDCB				eS	Sb	15 41 12.1	-2.4
	baz=336						
WJS	Zhushan	0.94	295	eP	Pb	15 41 02.1	-0.2
	baz=297						
WJS				eS	Sb	15 41 13.4	-0.9
	baz=297						
TPUB	Ta-pu	0.95	262	P	Pb	15 41 02.0	-0.5
	baz=260						
TPUB				eS	Sb	15 41 13.8	-1.1
	baz=260						
WTP	Ta-pu	0.98	259	P	Pb	15 41 02.4	-0.5
	baz=256						
WTP				eS	Sb	15 41 14.3	-1.2
	baz=256						
CHN4	Tsaushan	0.98	266	eP	Pb	15 41 02.8	-0.2
	baz=260						
CHN4				eS	Sb	15 41 14.7	-1.0
	baz=260						
ENA	Nanau	0.99	4	eP	Pn	15 41 02.9	+0.5
	baz=358						
WNT	Mingjian	1.00	297	eP	Pn	15 41 03.1	+0.7
	baz=299						
WNT				eS	Sb	15 41 15.5	-0.6
	baz=299						
EWUT	Wuta	1.01	6	eS	Sb	15 41 16.0	-0.5
	baz=356						
NNSB	Datong	1.02	346	eP	Pn	15 41 03.6	+0.7
	baz=350						
NNSB				eS	Sb	15 41 15.3	-1.6
	baz=350						
SLGT	Liugui	1.03	245	eP	Pn	15 41 05.5	+2.7
	baz=242						
SLGT				eS	Sn	15 41 17.3	+1.1
	baz=242						
NNS	Nan Shan	1.04	345	eP	Pn	15 41 03.7	+0.6
	baz=350						
NNS				eS	Sb	15 41 15.9	-1.4
	baz=350						
SGST	Jiashian	1.05	251	eP	Pb	15 41 03.4	-0.7
	baz=247						
SGST				eS	Sb	15 41 16.4	-1.1
	baz=247						
ECL	Taimali	1.05	218	eP	Pn	15 41 02.1	-1.1
	baz=201						
WDLH	Douliu	1.06	284	eP	Pn	15 41 03.5	+0.3
	baz=285						
WDLH				eS	Sb	15 41 17.5	-0.3
	baz=285						
WHP	Taichung City	1.07	322	eP	Pb	15 41 03.9	-0.5
	baz=329						
WHP				eS	Sb	15 41 17.1	-1.0
	baz=329						
CHN1	Nanshi	1.07	257	eP	Pb	15 41 04.3	-0.1
	baz=255						
CHN1				eS	Sn	15 41 18.5	+1.3
	baz=255						
SNST	Tainan City	1.09	259	eP	Pb	15 41 04.7	0.0
	baz=257						
SNST				eS	Sb	15 41 18.4	-0.2
	baz=257						
TWK	Hsinying	1.09	262	eP	Pn	15 41 04.3	+0.6
	baz=259						
TWK				eS	Sb	15 41 17.6	-1.1
	baz=259						
CHN2	Minshiung	1.09	275	eP	Pb	15 41 04.8	0.0
	baz=275						
CHN2				eS	Sb	15 41 18.4	-0.3
	baz=275						
CHY	Chiayi	1.14	274	eP	Pn	15 41 05.2	+0.9
	baz=273						
CHY				eS	Sb	15 41 19.1	-0.9
	baz=273						
TCU	Taichung	1.15	309	eP	Pn	15 41 05.2	+0.8
	baz=311						
TCU				eS	Sb	15 41 20.0	-0.3
	baz=311						
SSD	Sandimen	1.17	234	eP	Pn	15 41 05.4	+0.7
	baz=228						
SSD				eS	Sn	15 41 21.5	+1.9
	baz=228						
TSMG	Majia	1.18	232	eP	Pb	15 41 06.4	+0.1
	baz=224						
TWC	Suao	1.19	8	eP	Pb	15 41 08.8	+2.4
	baz=359						
WCHH	Zhanghua	1.20	303	eP	Pb	15 41 06.1	-0.5
	baz=304						
WCHH				eS	Sb	15 41 20.8	-0.9
	baz=304						
NDS	Dongshan	1.20	2	eP	Pb	15 41 06.1	-0.5
	baz=5.0						
ENTT	Nioudou	1.21	356	eP	Pb	15 41 06.3	-0.5
	baz=359						
TWQ1	Liyutan	1.22	319	eP	Pb	15 41 07.5	+0.5
	baz=321						
TWQ1				eS	Sn	15 41 22.8	+1.8
	baz=321						
CHN3	Shinhua	1.24	254	eS	Sb	15 41 25.0	+2.0
	baz=266						
MASBT	Mashibuluo	1.25	229	eP	Pn	15 41 06.2	+0.4
	baz=227						
MASBT				eS	Sb	15 41 23.5	+0.3
	baz=227						
YHNB	Yeheng	1.26	348	eP	Pb	15 41 08.0	+0.3
	baz=2.0						
YHNB				eS	Sn	15 41 22.8	+0.7
	baz=2.0						
NSK	Sanguang	1.27	348	eP	Pb	15 41 07.5	-0.3
	baz=2.0						
NSK				eS	Sn	15 41 22.6	+0.3
	baz=2.0						
ICHU	Yijhu	1.27	267	eP	Pb	15 41 07.4	-0.4
	baz=266						
ICHU				eS	Sn	15 41 22.7	+0.5
	baz=266						
NSY	Sanyi	1.28	320	eP	Pb	15 41 08.9	+0.9
	baz=322						
NSY				eS	Sb	15 41 25.3	+1.2
	baz=322						
EAST	Anshuo	1.28	216	eP	Pn	15 41 06.8	+0.4
	baz=203						
TWE	Neicheng	1.28	0	eP	Pb	15 41 09.3	+1.2
	baz=3.0						
TWM1	Shoushan	1.29	242	eP	Pb	15 41 10.1	+2.0
	baz=238						
WDJ	Dajia District	1.30	315	eP	Pb	15 41 08.6	+0.2
	baz=316						
WDJ				eS	Sb	15 41 24.6	-0.2
	baz=316						
CHN8	Yiju	1.33	267	eP	Pn	15 41 07.7	+0.7
	baz=266						
CHN8				eS	Sn	15 41 24.3	+0.6
	baz=266						
NSTT	Nanjuang	1.34	333	eP	Pb	15 41 08.5	-0.5
	baz=342						
NSTT				eS	Sn	15 41 24.7	+0.8
	baz=342						
LIOB	Emei	1.34	334	eP	Pb	15 41 09.3	+0.2
	baz=344						
NWLT	Wulai	1.35	354	eP	Pb	15 41 09.3	+0.2
	baz=8.0						
NMLH	Miaoli	1.36	324	eP	Pb	15 41 09.0	-0.3
	baz=325						
NMLH				eS	Sb	15 41 26.1	-0.2
	baz=325						
SSPT	Xinbi	1.38	227	eP	Pb	15 41 09.4	-0.3
	baz=217						
LAY	Lan-yu	1.39	184	eP	Pn	15 41 08.5	+0.6
	baz=169						
LAY				eS	Sb	15 41 27.0	-0.3
	baz=169						
SCZT	Fangliau	1.43	222	eP	Pb	15 41 09.8	-0.6
	baz=219						
SCZT				eS	Sb	15 41 30.0	+1.7
	baz=219						
SLIU	Shizi	1.45	213	eP	Pn	15 41 08.7	+0.1
	baz=200						
TIPB	Shuangxi	1.54	6	eP	Pb	15 41 12.9	+0.5
	baz=356						
YOJ	Yonaguni jima	1.61	50	P	Pb	15 41 14.4	+0.9
YOJ				S	Sb	15 41 35.6	+2.2
HATJ	Hateruma jima	2.06	72	P	Pb	15 41 20.9	-0.4
HATJ				S	Sb	15 41 47.1	+0.6
IRIF	Iriomote-Funau	2.10	64	P	Pb	15 41 21.8	-0.1
IRIF				eS	Sb	15 41 47.9	+0.4
JKRS	Kuro-shima	2.30	69	P	Pb	15 41 24.7	-0.5
JKRS				eS	Sb	15 41 53.1	-0.1
JIJ	Ishigaki jima	2.46	67	P	Pb	15 41 26.3	-1.6
JIJ				eS	Sb	15 41 55.5	-2.3
JISG	Ishigakijimahi	2.68	64	P	Pb	15 41 28.9	-2.9
JISG				S	Sb	15 42 01.0	-3.3
JTJ	Tarama	3.03	66	eS	Sb	15 42 10.6	-3.7

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*MOS **21** 15:43:57.7±0.8, 37°.91N×141°.51E, h47^{km}, mb4.5/2, Error ellipse: s-maj=15.8km s-min=7.5km az=67.6*

*NEIC **21** 15:43:59.7±1.2, 37°.80N±0°.06×141°.49E±0°.08, h56^{km}±6^{km}, mb4.3/7, Error ellipse: s-maj=9.6km s-min=8.6km az=106.0*

*IDC **21** 15:43:59.4±2.2, 37°.82N×141°.45E, h55^{km}±26^{km}, mb3.4/7, mb1 3.8/13, mb1mx3.4/54, mbtmp3.9/13, ML3.0/4, MS2.5/1, Ms1 2.5/1, ms1mx2.2/38, Error ellipse: s-maj=28.5km s-min=21.3km az=94.0*

*NIED **21** 15:44:00.1, 37°.83N×141°.31E, h66^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$3.82; M$_{\theta\theta}$-2.75; M$_{\phi\phi}$-1.07; M$_{r\theta}$1.53; M$_{\theta\phi}$1.68; M$_{\phi r}$-5.36; Fault plane solution: M$_0$6.66000×10^{14} NP1: ϕ_s154.00000°, δ74.00000°, λ107.00000°. NP2: ϕ_s286.00000°, δ23.00000°, λ45.00000°.*

*JMA **21** 15:44:00.0, 37°.83N×141°.31E, h66^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s339.00000°, δ13.00000°, λ50.00000°. NP2: ϕ_s200.00000°, δ80.00000°, λ98.00000°. Principal axes: T Plg54.0000°, Azm120.0000°; N Plg8.0000°, Azm19.0000°; P Plg35.0000°, Azm283.0000°;*

JMA Felt II J1.

ISC 21 15:43:59.2±0.8, **37°.78N**±0°.04×**141°.53E**±0°.05, **h59**^{km}±7^{km}, **n76,** σ**1^{s}.20**/89, **mb3.9**/12, **11C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMST	Minamisoumatoc	0.51	264	⇑P	Pn	15 44 11.1	-0.1
JMST				S	Sn	15 44 19.1	-0.8
JIKH	Ishinomakikobu	0.54	355	⇑P	Pn	15 44 12.5	+1.0
JIKH				S	Sn	15 44 21.4	+1.0
JMM	Marumori	0.59	279	⇑P	Pn	15 44 11.6	-0.5
JMM				S	Sn	15 44 20.1	-1.3
JMM	Marumori	0.59	279		Pn	15 44 11.6	-0.5
JMM				Sn	Sn	15 44 19.8	-1.6
JFK	Kawauchi	0.66	232	⇑P	Pn	15 44 13.3	+0.3
JFK				S	Sn	15 44 23.0	0.0
JIO	Ouri	0.69	348	⇑P	Pn	15 44 13.9	+0.6
JIO				S	Sn	15 44 23.9	+0.3
ONAJ	Iwakimizuishiy	0.89	221	⇑P	Pn	15 44 16.2	+0.3
ONAJ				S	Sn	15 44 28.1	0.0
JOU	Okura	0.90	311	⇑P	Pn	15 44 15.1	-0.9
JOU				S	Sn	15 44 26.4	-1.9
JFT	Otama	0.98	255	⇑P	Pn	15 44 16.5	-0.5
JFT				S	Sn	15 44 28.6	-1.5
JMK	Ichinoseki	1.20	348	⇑P	Pn	15 44 19.9	+0.1
JMK				S	Sn	15 44 34.8	-0.4
JYS	Shirataka	1.24	291	⇑P	Pn	15 44 19.6	-0.8
JYS				S	Sn	15 44 34.5	-1.6
JYK	Kaneyama	1.46	321	P	Pn	15 44 23.0	-0.4
JYK				S	Sn	15 44 40.8	-0.8
JFY	Yanaizu	1.49	256	P	Pn	15 44 23.4	-0.4
JFY				S	Sn	15 44 40.9	-1.4
JYA	Atsumi	1.65	300	P	Pn	15 44 24.9	-1.0
JOM	Ohasama	1.70	354	P	Pn	15 44 27.2	+0.5
JOM				S	Sn	15 44 47.5	+0.1
JNS	Sasagawa	1.75	272	P	Pn	15 44 26.9	-0.4
JRG	Rokugo	1.76	337	⇑P	Pn	15 44 28.0	+0.6
JYT	Yasato	1.88	215		Pn	15 44 28.6	-0.4
JSD	Sado	2.60	277	Pn	Pn	15 44 37.6	-1.2
MJAR	Matsushiro Arr	2.92	246	P	Pn	15 44 43.9	+0.5
	1.0nm,0.3s,baz=64,slow=12,SNR=62						
MJAR				LR	LR	15 45 46.9	
	comp=Z,86nm,18.6s,baz=70,slow=37						
MJAR	Matsushiro Arr	2.92	246		Pn	15 44 43.0	-0.4
MAJO	Matsushiro	2.92	246	P	Pn	15 44 43.8	+0.5
MAJO	Matsushiro	2.92	246		Pn	15 44 43.8	+0.5
MAT	Matsushiro	2.92	246	P	Pn	15 44 43.7	+0.4
MAT				eS	Sn	15 45 19.2	+1.9
MJB9	Matsu-Tunnel	2.92	246	Pn	Pn	15 44 43.8	+0.4
JTM	Tenmabayashi	3.03	353		Pn	15 44 45.8	+1.1
JGF	Kuroka	3.99	238		Pn	15 44 59.2	+1.3
INU	Inuyama	4.36	238		Pn	15 45 03.7	+0.7
ERM	Erimo	4.42	16	P	Pn	15 45 03.5	-0.2
ERM	Erimo	4.42	16	Pn	Pn	15 45 03.5	-0.2
JHJ2	Mitsune	4.86	197	Pn	Pn	15 45 10.0	+0.2
JHJ	Hachijo jima 2	4.86	198	P	Pn	15 45 10.2	+0.4
	33nm,0.3s,baz=146,slow=22,SNR=11						
JHJ				S	Sn	15 46 03.2	-1.6
	30nm,0.3s,baz=258,slow=23,SNR=7.8						
JEW	Eniwo	5.06	359	Pn	Pn	15 45 12.6	+0.1
JWT	Wachi	5.52	245		Pn	15 45 19.8	+0.9
ASAJ	Asahikawa	6.38	7	P	Pn	15 45 29.2	-1.4
	0.9nm,0.3s,baz=198,slow=17,SNR=10						
ASAJ	Asahikawa	6.38	7	P	Pn	15 45 29.6	-1.0
JKA	Kamikawa-asahi	6.38	7		Pn	15 45 29.6	-1.1
NMR	Nemuro--Hokkai	6.44	28	eP	Pn	15 45 29.5	-1.8
NMR				eS	Sn	15 46 37.3	-6.0
GLVR	Golovnino	6.68	26	eP	Pn	15 45 34.8	+0.1
GLVR				eS	Sn	15 46 45.1	-4.3
RUSJ	Misakicho	6.92	23	eP	Pn	15 45 39.3	+1.4
RUSJ				eS	Sn	15 46 53.7	-1.5
YUK	Yuzh-Kuril'sk	7.06	26	eP	Pn	15 45 39.1	-0.8
YUK				pmax	pmax		
	comp=Z,46nm,0.8s						
YUK				pmax	pmax		
	comp=N,25nm,0.7s						
YUK				pmax	pmax		
	comp=E,45nm,0.7s						
SHO	Shikotan	7.29	32	eP	Pn	15 45 41.0	-2.1
SHO				pmax	pmax		
	comp=N,5.0nm,0.7s						
SHO				pmax	pmax		
	comp=E,7.0nm,0.7s						
SHO				pmax	pmax		
	comp=Z,12nm,0.7s						
JHS	Saijyo	7.33	250	Pn	Pn	15 45 43.7	+0.1
USRK	Ussuriysk Ar.	9.65	315	P	Pn	15 46 14.9	-0.4
	baz=120,slow=14,SNR=5.1						
JCJ	Chichijima	10.66	177	P	Pn	15 46 28.8	-0.5
	comp=Z,4.1nm,0.3s,baz=187,slow=23,SNR=10						
JCJ				S	Sn	15 48 17.9	-9.3
	comp=Z,3.1nm,0.3s,baz=0.6,slow=22,SNR=1.5						
JCJ	Chichijima	10.66	177		Pn	15 46 28.5	-0.8
KSRS	Korea Array	10.80	272	P	Pn	15 46 31.6	+0.6
	comp=Z,0.1nm,0.3s,baz=88,slow=14,SNR=8.0						
MA2	Magadan	22.61	12	P	P	15 48 55.7	+0.9
MA2				pmax	pmax		
	comp=Z,25nm,1.5s						
MA2	Magadan	22.61	12	P	P	15 48 55.7	+0.9
MA2				IAmb	IAmb	15 49 08.5	
	comp=Z,25nm,1.5s						
SEY	Seymchan	26.05	11	P	P	15 49 27.3	+0.6
	comp=Z,2.0nm,0.8s,baz=188,slow=0.4,SNR=11						
ENH	Enshi	27.49	264	P	P	15 49 40.0	-0.1
ENH				IAmb	IAmb	15 49 53.9	
	comp=Z,9.1nm,1.2s						
H11N2	WAKE ISLAND Hy	28.46	122	T	T	16 20 09.0	
	baz=315,slow=75,SNR=44						
H11N1	WAKE ISLAND Hy	28.47	122	T	T	16 20 12.1	
	baz=315,slow=75,SNR=46						
H11N3	WAKE ISLAND Hy	28.48	122	T	T	16 20 10.3	
	baz=315,slow=75,SNR=61						
H11S1	WAKE ISLAND Hy	29.19	124	T	T	16 21 05.7	
	baz=317,slow=76,SNR=2.7						
H11S3	WAKE ISLAND Hy	29.20	124	T	T	16 21 06.6	
	baz=317,slow=76,SNR=5.3						
H11S2	WAKE ISLAND Hy	29.21	124	T	T	16 21 10.1	
	baz=317,slow=76,SNR=3.8						
MKAR	Makanchi Array	43.80	301	P	P	15 51 57.7	-1.5
	comp=Z,0.2nm,0.5s,baz=93,slow=9.8,SNR=1.7						
MLY	Manley	47.17	32	P	P	15 52 26.6	+1.0
GHO	Glory Hole Cre	48.06	37	P	P	15 52 32.9	+0.4
GHO				IAmb	IAmb	15 52 53.4	
	comp=Z,14nm,1.5s						
SML	Sawmill	48.34	37	P	P	15 52 35.4	+0.8
ILAR	Eielson Array	48.82	33	P	P	15 52 38.9	+0.7
	comp=Z,0.7nm,0.7s,baz=267,slow=5.9,SNR=11						
BOOM	Boomskoye usch	49.25	297	P	P	15 52 42.8	+0.7
BOOM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BOOM	Boomskoye usch	49.25	297	P	P	15 52 42.8	+0.7
BOOM				IAmb	IAmb	15 53 06.0	
	comp=Z,3.2nm,1.0s						
BMAR	Burnt Mountain	49.64	29	P	P	15 52 45.4	+0.9
BCAR	Beaver Creek A	51.23	35	P	P	15 52 56.9	+0.3
EGAK	Eagle	51.26	32	P	P	15 52 56.6	-0.1
EGAK				IAmb	IAmb	15 53 05.8	
	comp=Z,2.5nm,1.2s						
INK	Inuvik	53.69	27	P	P	15 53 14.7	+0.2
	comp=Z,0.7nm,0.5s,baz=293,slow=7.0,SNR=5.9						
EUNU	Eureka	59.44	9	P	P	15 53 55.0	-0.4
YKA	Yellowknife Ar	63.12	30	P	P	15 54 20.7	+0.4
	comp=Z,0.1nm,0.5s,baz=304,slow=6.5,SNR=5.5						
PDAR	Pinedale Array	77.08	46	P	P	15 55 47.3	+0.8
	comp=Z,0.5nm,0.6s,baz=242,slow=1.0,SNR=6.1						
PDAR	Pinedale Array	77.08	46	P	P	15 55 46.7	+0.2
BURAR	Bucovina Array	77.79	322	P	P	15 55 49.7	-0.4
TXAR	Lajitas Array	89.60	52	P	P	15 56 52.0	+1.2
	comp=Z,0.5nm,0.6s,baz=294,slow=2.5,SNR=6.6						
TXAR	Lajitas Array	89.60	52	P	P	15 56 52.0	+1.2
TXAR	Lajitas Array	89.60	52	P	P	15 56 51.1	+0.3

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*BJI **21** 15:44:01.9±0.0, 4°.43S×152°.36E, h168^{km}, mB5.2/55, mb5.2/81*

*MOS **21** 15:44:02.7±0.9, 4°.40S×151°.94E, h158^{km}, mb5.3/62, Error ellipse: s-maj=6.9km s-min=4.9km az=107.5*

*NEIC **21** 15:44:04.8±1.4, 4°.44S±0°.06×151°.98E±0°.07, h162^{km}±1^{km}, mb5.2/242, Mwb5.7/38, Error ellipse: s-maj=11.8km s-min=9.4km az=120.0*

*DJA **21** 15:44:05.6±0.3, 5°S±2°×15°2E±°, h165^{km}±3^{km}, M5.3/91, mB5.8/66, mb5.3/91, MLv5.6/3, Mw(mB)5.3/66, MwMwp5.2/27, Mwp5.4/27*

*IDC **21** 15:44:05.1±0.4, 4°.50S×151°.98E, h168^{km}±2^{km}, mb4.8/32, mb1 4.9/37, mb1mx4.8/41, mbtmp5.3/37, MS4.4/12, Ms1 4.4/12, ms1mx4.1/40, Error ellipse: s-maj=9.3km s-min=6.9km az=76.0*

*GCMT **21** 15:44:05.8±0.1, 4°.50S±0°.01×151°.98E±0°.01, h163^{km}, MW5.6/140, Moment Tensor Solution. s122,c209; s140,c268; Duration: 1^{s}.6 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.19±.03; M$_{\theta\theta}$1.44±.04; M$_{\phi\phi}$-0.24±.04; M$_{r\theta}$0.32±.03; M$_{\theta\phi}$2.92±.04; M$_{\phi r}$-1.52±.03; Best double couple: M$_0$3.55200×10^{17} NP1: ϕ_s274.00000°, δ61.00000°, λ-19.00000°. NP2: ϕ_s13.00000°, δ73.00000°, λ-149.00000°. Principal axes: T 3.7300, Plg8.0000°, Azm141.0000°; N -0.3550, Plg55.0000°, Azm39.0000°; P -3.3740, Plg33.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **21** 15:44:05, 4°.43S×151°.98E, h164^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.57; M$_{\theta\theta}$1.38; M$_{\phi\phi}$0.19; M$_{r\theta}$0.15; M$_{\theta\phi}$3.32; M$_{\phi r}$-1.41; Fault plane solution: M$_0$3.90000×10^{17} NP1: ϕ_s270.80000°, δ60.33000°, λ-20.10000°. NP2: ϕ_s11.07000°, δ72.62000°, λ-148.76000°. Principal axes: T 4.2682, Plg8.0000°, Azm139.0000°; N -0.8827, Plg55.0000°, Azm37.0000°; P -3.3855, Plg34.0000°, Azm234.0000°;*

ISC 21 15:44:04.9±0.3, **4°.47S**±0°.03×**151°.94E**±0°.03, **h168**^{km}±1^{km}, **h169**^{km}**:pP-P, n994,** σ**1^{s}.14**/1108, **mb5.2**/259, **38C-134D, Fault plane solution: NP1:**ϕ_s279.25546°, δ55.20945°, λ-38.14584°. **NP2:**ϕ_s33.39394°, δ59.51894°, λ-138.54134°. **Principal axes:** T Plg2.5664°, Azm155.4306°; N Plg40.2302°, Azm63.2575°; P Plg49.6534°, Azm248.4552°; **Fault plane solution: NP1:**ϕ_s259.74924°, δ32.98690°, λ-17.37974°. **NP2:**

ϕs4.45952°,δ80.64052°,λ-121.77612°. **Principal axes:** T Plg28.5628°, Azm119.5445°; N Plg31.3048°, Azm10.2121°; P Plg45.0816°, Azm242.6327°; **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	0.19	28	P	Pn	15 44 26.8	-0.6
RABL	Rabaul	0.36	39		Pn	15 44 27.2	-0.7
RABL				Sn	Sn	15 44 43.5	-2.0
RABL	Rabaul	0.36	39	P	Pn	15 44 27.6	-0.3
MANU	Manus Island	5.16	298		Pn	15 45 21.1	+0.3
PMG	Port Moresby	6.82	224	P	Pn	15 45 42.6	-0.1
	153nm,0.3s,baz=62,slow=6.2,SNR=183						
PMG				S	Sn	15 46 59.0	-0.7
	96nm,0.3s,baz=130,slow=23,SNR=11						
PMG	Port Moresby	6.82	224	P	Pn	15 45 42.3	-0.4
PMG	Port Moresby	6.82	224	Pn	Pn	15 45 42.3	-0.4
PMG	Port Moresby	6.82	224	P	Pn	15 45 43.0	+0.3
PMG	Port Moresby	6.82	224	P	Pn	15 45 43.0	+0.3
HNR	Honiara	9.35	122	P	Pn	15 46 14.5	-1.7
	43nm,0.3s,baz=192,slow=3.9,SNR=20						
HNR				LR	LR	15 49 40.1	
	comp=Z,4μm,19.1s,baz=328,slow=36						
HNR	Honiara	9.35	122	Pn	Pn	15 46 14.2	-2.0
JAY	Jayapura	11.38	279	P	Pn	15 46 43.4	+0.6
	3.0nm,0.3s,baz=81,slow=4.4,SNR=25						
JAY	Jayapura	11.38	279	P	Pn	15 46 43.4	+0.6
	3μm262nm,1.2s						
GENI	Genyem	11.90	279	P	Pn	15 46 50.5	+1.0
	5μm12μm865nm,1.0s						
GENI	Genyem	11.90	279	P	Pn	15 46 51.1	+1.6
COEN	Coen	12.79	222	Pn	Pn	15 47 02.1	+1.2
COEN	Coen	12.79	222	P	Pn	15 47 02.5	+1.6
PATS	Pohnpei	12.91	30	P	Pn	15 47 01.5	-1.0
	baz=13,SNR=5.8						
PATS	Pohnpei	12.91	30		Pn	15 47 01.1	-1.3
PATS	Pohnpei	12.91	30	P	Pn	15 47 02.9	+0.4
SMPI	Sarmi	13.44	280	P	Pn	15 47 10.4	+1.3
	12μm1μm,1.2s						
MTSU	Mount Surprise	15.49	208	P	P	15 47 36.6	+1.1
	baz=16,SNR=162						
MTSU	Mount Surprise	15.49	208	P	P	15 47 36.9	+1.4
SRPI	Serui, Papua	15.89	279	P	P	15 47 39.8	-0.1
	5μm429nm,1.2s						
CTA	Charters Tower	16.48	199	P	Pn	15 47 46.8	+0.1
	13nm,0.3s,baz=23,slow=14,SNR=108						
CTA	Charters Tower	16.48	199	P	Pn	15 47 48.2	+1.5
	298nm,1.9s						
CTAO	Charters Tower	16.48	199	P	Pn	15 47 47.2	+0.5
CTAO				pmax	pmax		
	comp=Z,304nm,1.1s						
CTAO	Charters Tower	16.48	199		Pn	15 47 47.2	+0.5
CTAO	Charters Tower	16.48	199	P	Pn	15 47 48.6	+1.9
SANVU	Saraoutou	18.55	127	P	P	15 48 09.2	+0.2
SANVU	Saraoutou	18.55	127	P	Pn	15 48 13.3	+2.0
RK1H	Rockhampton Ha	18.86	184	P	Pn	15 48 13.7	-1.1
	comp=Z,206nm,1.0s						
GUMO	Guam	19.27	339	P	P	15 48 16.9	+0.1
	comp=Z,12nm,0.3s,baz=164,slow=6.9,SNR=14						
GUMO	Guam	19.27	339	P	P	15 48 16.6	-0.2
GUMO	Guam	19.27	339	P	Pn	15 48 19.5	-0.2
	comp=Z,1μm,1.2s						
FAKI	Fak Fak	19.71	274	P	P	15 48 22.7	+1.1
	comp=Z,5μmcomp=Z,12μmcomp=Z,676nm,1.5s						
FAKI	Fak Fak	19.71	274	P	P	15 48 21.3	-0.3
FAKI	Fak Fak	19.71	274	P	P	15 48 22.8	+1.1
QIS	Mount Isa	19.99	216	P	P	15 48 24.9	+0.3
	baz=20,SNR=268						
QIS	Mount Isa	19.99	216	P	P	15 48 25.2	+0.6
KOUNC	Koumac, New Ca	19.99	144	P	P	15 48 26.1	+1.5
EIDS	Eidsvold	20.79	182	P	P	15 48 33.8	+0.7
	baz=21,SNR=14						
EIDS	Eidsvold	20.79	182	P	P	15 48 33.0	-0.1
EIDS				IAmb	IAmb	15 48 36.8	
	comp=Z,114nm,1.0s						
EIDS	Eidsvold	20.79	182	P	P	15 48 34.2	+1.1
SAUI	Saumlaki	20.81	259	P	P	15 48 33.5	+0.2
KDU	Kakadu	20.89	246	P	P	15 48 32.9	-1.3
	baz=21,SNR=264						
KDU	Kakadu	20.89	246	P	P	15 48 33.9	-0.3
SIJI	Sorong	20.95	279	P	P	15 48 35.2	+0.2
	comp=Z,366nm,1.0s,baz=73,slow=6.9,SNR=44						
SIJI				S	S	15 52 21.7	+2.5
	comp=Z,29nm,1.2s,baz=241,slow=23,SNR=6.9						
SWI	Sorong	20.96	279	P	P	15 48 36.1	+1.1
	comp=Z,5μmcomp=Z,6μmcomp=Z,432nm,1.0s						
TARA	Tarawa	21.75	75	P	P	15 48 42.0	-1.4
TARA	Tarawa	21.75	75	P	P	15 48 44.6	+1.2
LIFNC	LIFOU	22.00	139	P	P	15 48 45.6	-0.2
LIFNC	LIFOU	22.00	139	P	P	15 48 47.1	+1.3
RMQ	Roma	22.10	188	P	P	15 48 46.8	0.0
	baz=22,SNR=52						
RMQ	Roma	22.10	188	P	P	15 48 47.2	+0.4
MTN	Manton Dam	22.17	247	P	P	15 48 46.8	-0.7
	baz=22,SNR=66						
MTN	Manton Dam	22.17	247	P	P	15 48 46.5	-1.0
MTN	Manton Dam	22.17	247	P	P	15 48 47.5	-0.1
DRS	Darwin Rock St	22.25	248	P	P	15 48 48.4	+0.1
	comp=Z,289nm,1.1s						
NOUC	Port Laguerre	22.38	143	P	P	15 48 50.5	+1.0
DZM	Mont Dzumac	22.44	143	*e*P	P	15 48 50.8	+0.6
	comp=Z,2μm,1.2s						
DZM	Mont Dzumac	22.44	143	P	P	15 48 50.2	+0.1
	comp=Z,523nm,0.9s,baz=301,slow=6.4,SNR=293						
DZM	Mont Dzumac	22.44	143	P	P	15 48 50.8	+0.6
DZM	Mont Dzumac	22.44	143	P	P	15 48 51.3	+1.1
ONTNC	Ouen Toro	22.63	143	P	P	15 48 52.0	+0.2
ONTNC	Ouen Toro	22.63	143	P	P	15 48 53.1	+1.3
YATNC	Mamie plateau,	22.71	142	P	P	15 48 54.4	+1.9
WB0	Warramunga Arr	22.88	227	P	P	15 48 54.1	0.0
WR0	Warramunga Arr	22.89	226	P	P	15 48 54.3	0.0
OUENC	Ouen Island, N	22.94	142	P	P	15 48 55.5	+0.8
OUENC	Ouen Island, N	22.94	142	P	P	15 48 56.6	+1.9
MSAI	Masohi	22.98	272	P	P	15 49 00.3	+5.2
	comp=Z,217nmcomp=Z,22nm,0.9s						
MARNC	Mare, Loyalty	23.02	139	P	P	15 48 55.6	+0.3
MARNC	Mare, Loyalty	23.02	139	P	P	15 48 56.9	+1.6
WRAB	Tennant Creek	23.02	227	*d i*P	P	15 48 55.1	-0.3
WRAB	Tennant Creek	23.02	227	P	P	15 48 55.3	-0.1
WRAB	Tennant Creek	23.02	227	P	P	15 48 55.7	+0.3
WB2	Warramunga Arr	23.02	227	P	P	15 48 55.6	+0.2
WRA	Warramunga Arr	23.03	227	P	P	15 48 54.9	-0.6
	comp=Z,483nm,0.4s,baz=50,slow=10,SNR=1397						
WRA				S	S	15 52 50.6	-3.0
	comp=Z,104nm,1.0s,baz=57,slow=13,SNR=11						
WRA				ScP	ScP	15 56 01.9	-0.3
	comp=Z,11nm,0.9s,baz=80,slow=1.9,SNR=5.4						
WRA	Warramunga Arr	23.03	227	P	P	15 48 55.5	0.0
WRA				pmax	pmax		
	comp=Z,199nm,1.0s						
WRA	Warramunga Arr	23.03	227	P	P	15 48 55.5	0.0
QLP	Quilpie	23.19	198	P	P	15 48 57.1	+0.3
	baz=23,SNR=134						
QLP	Quilpie	23.19	198	P	P	15 48 57.8	+1.0
PINNC	Pines Island,	23.46	142	P	P	15 49 00.2	+0.8
PINNC	Pines Island,	23.46	142	P	P	15 49 01.2	+1.9
AAI	Ambon	23.70	271	P	P	15 49 01.0	-0.6
	comp=Z,3μmcomp=Z,106nm,0.8s						
LBMI	Labuha	24.70	278	P	P	15 49 12.1	+1.3
	comp=Z,2μmcomp=Z,4μmcomp=Z,259nm,1.2s						
TNTI	Ternate	25.10	281	P	P	15 49 15.0	+0.6
	comp=Z,2μmcomp=Z,2μmcomp=Z,194nm,1.1s						
TNTI	Ternate	25.10	281	P	P	15 49 14.5	+0.1
TNTI	Ternate	25.10	281	P	P	15 49 15.0	+0.6
	comp=Z,196nm,1.1s						
KNRA	Kununurra	25.36	242	P	P	15 49 16.2	-0.5
	baz=25,SNR=328						
KNRA	Kununurra	25.36	242	P	P	15 49 15.9	-0.8
KNRA	Kununurra	25.36	242	P	P	15 49 16.4	-0.2
INKA	Innaminka	25.48	204	P	P	15 49 18.2	+0.6
ARMA	Armidale	25.81	181	P	P	15 49 22.2	+1.4
	baz=26,SNR=17						
ARMA	Armidale	25.81	181	P	P	15 49 21.8	+1.1
ARMA				IAmb	IAmb	15 49 23.9	
	comp=Z,106nm,1.3s						
ARMA	Armidale	25.81	181	P	P	15 49 22.4	+1.7
AS31	Alice Springs	25.82	221	P	P	15 49 20.4	-0.5
AS31				IAmb	IAmb	15 49 26.0	
	comp=Z,34nm,0.5s						
ASAR	Alice Springs	25.82	221	P	P	15 49 20.6	-0.3
	comp=Z,41nm,0.6s,baz=52,slow=8.6,SNR=930						
ASAR				pP	pP	15 49 56.9	+1.0
	comp=Z,123nm,1.1s,baz=29,slow=14,SNR=5.6						
ASAR				S	S	15 53 34.7	-3.3
	comp=Z,5.4nm,0.5s,baz=52,slow=14,SNR=3.1						
ASAR				ScP	ScP	15 56 09.9	+0.1
	comp=Z,13nm,1.0s,baz=41,slow=2.8,SNR=7.3						
ASAR				LR	LR	16 01 20.5	
	comp=Z,712nm,18.6s,baz=33,slow=40						
ASAR	Alice Springs	25.82	221	P	P	15 49 20.3	-0.5
SANI	Sanana	26.02	274	P	P	15 49 24.3	+1.6
	comp=Z,3μmcomp=Z,4μmcomp=Z,278nm,1.1s						
SANI	Sanana	26.02	274	P	P	15 49 23.3	+0.6
CMSA	Cobar Meteorol	27.56	192	P	P	15 49 35.7	-0.5
	baz=28,SNR=118						
CMSA	Cobar Meteorol	27.56	192	P	P	15 49 36.2	0.0
OOD	Oodnadatta	27.88	212	P	P	15 49 38.8	-0.3
SOEI	Soe	27.95	258	P	P	15 49 42.9	+2.9
	comp=Z,65nm,1.4s						
SOEI	Soe	27.95	258	P	P	15 49 40.1	0.0
SOEI				IAmb	IAmb	15 50 03.8	
	comp=Z,92nm,1.3s						
KMSI	Cibinong	28.38	279	P	P	15 49 44.9	+1.2
	comp=Z,2μmcomp=Z,340nm,0.9s						
BATI	Baumata	28.60	257	P	P	15 49 45.5	-0.3
	comp=Z,39nm,0.5s,baz=100,slow=3.1,SNR=10						
BATI				LR	LR	16 05 00.0	
	comp=Z,778nm,19.4s,baz=92,slow=44						
BATI	Baumata	28.60	257	P	P	15 49 47.7	+1.9
	comp=Z,41nm,0.8s						
DAV	Davao City (W)	28.70	293	P	P	15 49 45.9	-0.7
MSVF	Nonsavu	28.75	119	P	P	15 49 45.1	-2.0
	comp=Z,5.5nm,0.3s,baz=143,slow=20,SNR=2.3						
MSVF	Nonsavu	28.75	119	⇓*e*P	P	15 49 48.6	+1.5
LCRK	Leigh Creek	28.90	205	P	P	15 49 48.1	0.0
STKA	Stephens Creek	28.94	198	P	P	15 49 47.9	-0.6
	comp=Z,13nm,0.4s,baz=20,slow=8.5,SNR=24						
STKA				ScP	ScP	15 56 20.6	+1.5
	comp=Z,16nm,1.1s,baz=189,slow=1.1,SNR=5.0						
STKA				LR	LR	16 00 12.3	
	comp=Z,1μm,20.1s,baz=8.7,slow=33						
STKA	Stephens Creek	28.94	198	P	P	15 49 48.0	-0.5
	baz=29,SNR=28						
STKA	Stephens Creek	28.94	198	P	P	15 49 48.2	-0.3
STKA				pmax	pmax		
	comp=Z,12nm,1.3s						
STKA	Stephens Creek	28.94	198	P	P	15 49 48.2	-0.3
STKA	Stephens Creek	28.94	198	P	P	15 49 48.5	0.0
FITZ	Fitzroy Crossi	29.07	240	P	P	15 49 48.7	-1.0
	comp=Z,110nm,0.5s,baz=64,slow=5.7,SNR=324						
FITZ				LR	LR	16 01 12.7	
	comp=Z,1μm,20.0s,baz=40,slow=35						
LUWI	Luwuk	29.33	276	P	P	15 49 51.5	-0.6
DGTI	Dogotuki	29.71	115	P	P	15 49 56.9	+1.4
TAVE	Taveuni	30.17	116	P	P	15 50 04.6	+5.1
EDFI	Ende, Flores	30.34	260	P	P	15 50 01.2	0.0
	comp=Z,1μmcomp=Z,26nm,0.9s						
MRSI	Marisa	30.37	279	P	P	15 50 02.1	+0.7
	comp=Z,2μmcomp=Z,42nm,0.8s						
APSI	Ampana	30.46	276	P	P	15 50 04.2	+2.1
	comp=Z,1μmcomp=Z,1μmcomp=Z,89nm,1.1s						
WRKA	Warakurna	30.56	226	P	P	15 50 02.3	-0.7
	baz=31,SNR=734						
WRKA	Warakurna	30.56	226	P	P	15 50 02.5	-0.5
MULG	Mulgathing	30.72	211	P	P	15 50 03.8	-0.4
CNB	Canberra Magne	30.78	184	P	P	15 50 05.8	+1.0
	baz=31,SNR=9.0						
CNB	Canberra Magne	30.78	184	P	P	15 50 05.6	+0.8
CAN	Canberra	30.82	185	P	P	15 50 05.6	+0.5
CAN				pmax	pmax		
	comp=Z,63nm,1.1s						
CAN	Canberra	30.82	185	P	P	15 50 05.6	+0.5
CAN				IAmb	IAmb	15 50 07.3	
	comp=Z,63nm,1.1s						
CAN	Canberra	30.82	185	P	P	15 50 06.2	+1.2
HTT	Hallett	31.26	201	P	P	15 50 09.0	+0.1
	baz=31,SNR=51						
HTT	Hallett	31.26	201	P	P	15 50 09.1	+0.1
NAPP	Napperby	31.33	203	P	P	15 50 09.8	+0.3
	comp=Z,60nm,1.0s						
WHYH	Whyalla	31.42	204	P	P	15 50 10.0	-0.3
	comp=Z,73nm,1.0s						
TOLI2	Tolitoli	31.62	279	P	P	15 50 12.6	+0.2
TOLI2				IAmb	IAmb	15 50 16.4	
	comp=Z,40nm,0.9s						
TOLI2					PcP	15 52 59.1	-1.6
TOLI2	Tolitoli	31.62	279	P	P	15 50 13.5	+1.2
BNSI	Bone	31.74	269	P	P	15 50 14.6	+1.3
BBOO	Buckleboo	31.86	206	P	P	15 50 13.7	-0.5
	baz=32,SNR=107						
BBOO	Buckleboo	31.86	206	P	P	15 50 13.7	-0.5
BBOO	Buckleboo	31.86	206	P	P	15 50 13.7	-0.5
KAPI	Kappang	32.08	268	P	P	15 50 17.2	+0.8
KAPI	Kappang	32.08	268	P	P	15 50 16.8	+0.4
KAPI	Kappang	32.08	268	P	P	15 50 17.2	+0.8
	comp=Z,47nm,1.1s						
TTSI	Tana Toraja	32.08	271	P	P	15 50 18.1	+1.7
	comp=Z,961nmcomp=Z,31nm,1.3s						
SPSI	Sidrap Palu	32.09	270	P	P	15 50 16.6	+0.2
	comp=Z,680nmcomp=Z,44nm,1.2s						
MPSI	Mapaga	32.37	278	P	P	15 50 18.5	-0.3
	comp=Z,2μmcomp=Z,1μmcomp=Z,54nm,0.7s						
MILA	Mila	32.53	184	P	P	15 50 20.9	+0.9
	baz=33,SNR=6.0						
WBSI	Waikabubak, Su	32.69	259	P	P	15 50 23.2	+1.5
	comp=Z,90nm,0.9s						
GHSS	Government Hou	32.72	201	P	P	15 50 23.0	+1.4
JCJ	Chichijima	32.77	344	P	P	15 50 20.6	-1.5
	comp=Z,44nm,0.7s,baz=277,slow=22,SNR=1.6						
JCJ	Chichijima	32.77	344	P	P	15 50 20.9	-1.3
TWOA	Tennyson Woods	32.83	200	P	P	15 50 23.4	+0.8
	comp=Z,53nm,1.2s						
ARPS	Mount Arapiles	33.45	195	P	P	15 50 28.3	+0.4
	baz=34,SNR=15						
ARPS	Mount Arapiles	33.45	195	P	P	15 50 28.7	+0.7
TOO	Toolangi	33.47	189	P	P	15 50 29.0	+0.9
	baz=34,SNR=6.8						
TOO	Toolangi	33.47	189	P	P	15 50 28.5	+0.4
TOO				pmax	pmax		
	comp=Z,141nm,1.5s						
TOO	Toolangi	33.47	189	P	P	15 50 28.5	+0.4
TOO				IAmb	IAmb	15 50 30.3	
	comp=Z,141nm,1.5s						
TOO	Toolangi	33.47	189	P	P	15 50 29.1	+0.9
BRAT	Ballarat	33.73	192	P	P	15 50 31.7	+1.4
	comp=Z,22nm,1.1s						
GEXS	Deakin Univers	34.29	191	P	P	15 50 38.3	+3.2
	comp=Z,87nm,1.0s						
FORT	Forrest	34.51	218	P	P	15 50 36.7	-0.5
	baz=35,SNR=106						
FORT	Forrest	34.51	218	P	P	15 50 36.5	-0.7
FORT	Forrest	34.51	218	P	P	15 50 36.8	-0.4
TWSI	Taliwang, Sumb	35.07	261	P	P	15 50 42.6	+0.4
	comp=Z,20nm,0.8s						
MBWA	Marble Bar	35.39	239	P	P	15 50 44.3	-0.6
PSA00	Pilbara Seismi	35.46	238	P	P	15 50 44.5	-1.0
PSA00	Pilbara Seismi	35.46	238	P	P	15 50 44.8	-0.7
KBKI	Kotabaru	35.71	271	P	P	15 50 49.1	+1.4
	comp=Z,32nm,1.0s						
JMZ	Minamidaito 2	36.20	327	P	P	15 50 51.6	0.0
JMZ				IAmb	IAmb	15 50 53.1	
	comp=Z,104nm,1.2s						
GLAD	Gladstone	36.52	185	P	P	15 50 57.3	+3.1
	comp=Z,59nm,1.1s						
AFI	Afiamalu	36.97	107	P	P	15 50 57.7	-0.8
	comp=Z,55nm,1.0s,baz=309,slow=10,SNR=4.2						
BBKI	Banjar Baru	37.02	270	P	P	15 51 00.4	+1.6
	comp=Z,2μmcomp=Z,60nm,1.9s						
CORO	Coronation Par	37.07	186	P	P	15 51 02.5	+3.7
	comp=Z,34nm,1.4s						
MTKI	Muara Teweh, K	37.16	274	P	P	15 51 00.8	+0.8
	comp=Z,938nmcomp=Z,4μmcomp=Z,42nm,1.2s						
KKM	Kota Kinabalu	37.17	286	P	P	15 50 59.7	-0.5
KKM				IAmb	IAmb	15 51 02.7	
	comp=Z,67nm,1.3s						
KKM					PcP	15 53 16.9	+0.1
KKM	Kota Kinabalu	37.17	286	P	P	15 51 02.2	+2.0
GLKZ	Green Lake	37.72	134	P	P	15 51 04.8	+0.3
JAGI	Jajag, Banyuwa	37.74	262	P	P	15 51 04.5	-0.4
	comp=Z,49nm,1.1s						
JAGI	Jajag, Banyuwa	37.74	262	P	P	15 51 04.2	-0.7
MOO	Moorlands	38.04	186	P	P	15 51 09.0	+2.1
	baz=38,SNR=5.3						
MOO	Moorlands	38.04	186	P	P	15 51 09.1	+2.1
TAU	Tasmania Unive	38.49	185	P	P	15 51 11.9	+1.2
TAU				pmax	pmax		
	comp=Z,198nm,1.5s						
TAU	Tasmania Unive	38.49	185	P	P	15 51 11.9	+1.2
TAU	Tasmania Unive	38.49	185	P	P	15 51 12.5	+1.8
JOW	Kunigami	38.63	325	P	P	15 51 13.9	+1.8
	comp=Z,87nm,0.7s,baz=136,slow=14,SNR=44						
JOW	Kunigami	38.63	325	P	P	15 51 13.6	+1.5
JOW	Kunigami	38.63	325	P	P	15 51 14.5	+2.4
MEEK	Meekatharra	38.72	232	P	P	15 51 12.6	-0.4
	baz=39,SNR=253						
MEEK	Meekatharra	38.72	232	P	P	15 51 12.8	-0.2
YOJ	Yonaguni jima	40.25	317	P	P	15 51 25.5	0.0
YOJ				pmax	pmax		
	comp=Z,114nm,0.8s						
YOJ	Yonaguni jima	40.25	317	P	P	15 51 25.5	0.0
YOJ	Yonaguni jima	40.25	317	P	P	15 51 28.6	+3.1
SBUM	Sibu	40.28	279	P	P	15 51 28.0	+2.0
SBUM	Sibu	40.28	279	P	P	15 51 26.7	+0.7
SBUM				IAmb	IAmb	15 51 28.8	
	comp=Z,66nm,1.4s						
PCJI	Pacitan	40.67	263	P	P	15 51 28.2	-0.9
	comp=Z,174nm,1.0s						
STKI	Sintang	40.67	275	P	P	15 51 30.9	+1.7
	comp=Z,100nm,1.4s						
HAZ	Te Kaha	40.67	148	P	P	15 51 30.3	+1.4
GIRL	Giralia	40.68	240	P	P	15 51 29.6	+0.5
	baz=41,SNR=20						
GIRL	Giralia	40.68	240	P	P	15 51 28.9	-0.3
GIRL	Giralia	40.68	240	P	P	15 51 29.9	+0.8
URZ	Urewera	40.70	149	P	P	15 51 29.8	+0.8
	comp=Z,31nm,0.8s,baz=122,slow=24,SNR=26						
URZ	Urewera	40.70	149	P	P	15 51 30.3	+1.2
URZ	Urewera	40.70	149	P	P	15 51 29.6	+0.5
URZ				IAmb	IAmb	15 51 31.7	
	comp=Z,41nm,0.9s						
URZ	Urewera	40.70	149	P	P	15 51 30.6	+1.5
YULB	Yu-li	40.75	314	P	P	15 51 29.9	+0.2
YULB				IAmb	IAmb	15 51 33.0	
	comp=Z,41nm,0.7s						
RUGZ	Raukumara Rang	40.77	148	P	P	15 51 31.6	+1.7
RTZ	Ruatahuna	40.91	150	P	P	15 51 33.1	+2.2
PKGZ	Pakihiroa	40.93	148	P	P	15 51 32.8	+1.8
MTHZ	Maungataniwha	41.02	150	P	P	15 51 32.6	+0.9
NACB	Ninganchiao	41.04	315	P	P	15 51 32.9	+0.9
NACB				IAmb	IAmb	15 51 36.8	
	comp=Z,48nm,0.9s						
WMGZ	Waiomatatini S	41.06	147	P	P	15 51 33.2	+1.3
BKZ	Black Stump Fm	41.09	151	P	P	15 51 33.0	+0.7
BKZ	Black Stump Fm	41.09	151	P	P	15 51 32.7	+0.4
BKZ				IAmb	IAmb	15 51 39.7	
	comp=Z,52nm,1.4s						
BKZ	Black Stump Fm	41.09	151	P	P	15 51 33.8	+1.5
TWGZ	Tauwhareparae	41.09	148	P	P	15 51 34.1	+1.7
PUZ	Puketiti	41.16	148	P	P	15 51 33.8	+0.9
TPUB	Ta-pu	41.18	313	P	P	15 51 33.6	+0.4
TPUB				IAmb	IAmb	15 51 44.9	
	comp=Z,64nm,1.1s						
NMHZ	Naumai	41.19	150	P	P	15 51 35.3	+2.2
RAHZ	Arahi	41.19	150	P	P	15 51 35.1	+2.0
SNGZ	Shannon Statio	41.22	149	P	P	15 51 34.5	+1.2
TKGZ	Te Karaka	41.22	149	P	P	15 51 34.5	+1.3
JSU	Suzuyama	41.23	332	P	P	15 51 34.0	+0.5
SSLB	Suanglung	41.24	314	IAmb	IAmb	15 51 37.3	
	comp=Z,41nm,0.9s						
UGM	Wanagama	41.30	263	P	P	15 51 33.8	-0.6
NNZ	Nelson	41.33	155	P	P	15 51 34.2	+0.1
RIGZ	Rimuhau	41.37	149	P	P	15 51 35.5	+0.9
MCHZ	McNeill Hill	41.40	151	P	P	15 51 36.4	+1.6
YHNB	Yeheng	41.51	316	P	P	15 51 38.2	+2.3
THZ	Tophouse	41.59	156	P	P	15 51 36.6	+0.2
THZ				IAmb	IAmb	15 51 41.3	
	comp=Z,32nm,0.9s						
TATO	Taipei	41.63	316	P	P	15 51 37.1	+0.3
JMN	Monobe	41.66	337	P	P	15 51 36.4	-0.5
JMN				IAmb	IAmb	15 51 38.9	
	comp=Z,122nm,1.3s						
TUWZ	Tuamarina	41.74	155	P	P	15 51 37.9	+0.4
MORW	Morawa	41.89	230	P	P	15 51 38.2	-0.7
	baz=42,SNR=42						
MORW	Morawa	41.89	230	P	P	15 51 38.2	-0.7
MORW	Morawa	41.89	230	P	P	15 51 38.3	-0.6
KLBR	Kellerberrin	41.91	226	P	P	15 51 37.7	-1.3
	baz=42,SNR=55						
KLBR	Kellerberrin	41.91	226	P	P	15 51 37.9	-1.2
BSWZ	Blackbirch Sta	41.95	155	P	P	15 51 39.1	-0.1
JYT	Yasato	41.95	346	P	P	15 51 39.2	-0.1
JYT				IAmb	IAmb	15 51 39.7	
	comp=Z,39nm,0.9s						
SNZO	South Karori	41.97	154	P	P	15 51 39.8	+0.5
SNZO				IAmb	IAmb	15 51 48.5	
	comp=Z,96nm,1.1s						
KSM	Kuching	42.02	277	P	P	15 51 41.0	+0.9
KSM	Kuching	42.02	277	P	P	15 51 40.8	+0.6
KSM	Kuching	42.02	277	P	P	15 51 41.4	+1.3
INU	Inuyama	42.02	342	P	P	15 51 37.7	-2.1
BHW	Baring Head	42.12	154	P	P	15 51 41.0	+0.5
JGF	Kuroka	42.15	342	P	P	15 51 41.0	+0.2
BLDU	Ballidu	42.15	228	P	P	15 51 40.1	-0.9
	baz=42,SNR=95						
BLDU	Ballidu	42.15	228	P	P	15 51 39.9	-1.1
BFZ	Birch Farm	42.16	152	pP	pP	15 52 16.1	-0.2
JNU	Nakatsue	42.38	333	P	P	15 51 43.6	+0.8
	comp=Z,60nm,0.8s,baz=116,slow=4.0,SNR=41						
JNU	Nakatsue	42.38	333	P	P	15 51 43.4	+0.6
JNU				IAmb	IAmb	15 51 44.9	
	comp=Z,84nm,0.9s						
JNU	Nakatsue	42.38	333	P	P	15 51 45.2	+2.4
KHZ	Kahutara	42.40	156	P	P	15 51 42.2	-0.5
KHZ				IAmb	IAmb	15 51 45.8	
	comp=Z,36nm,0.9s						
PLWZ	Palliser	42.42	154	pP	pP	15 52 17.7	-0.7
JWT	Wachi	42.49	340	P	P	15 51 43.5	-0.2
OXZ	Oxford	42.59	158	P	P	15 51 42.4	-1.9
OXZ				IAmb	IAmb	15 51 46.3	
	comp=Z,74nm,1.4s						
MJAR	Matsushiro Arr	42.77	344	P	P	15 51 44.3	-1.6
	comp=Z,12nm,0.9s,baz=170,slow=8.4,SNR=17						
MJAR				ScP	ScP	15 57 09.3	-0.2
	comp=Z,11nm,0.9s,baz=164,slow=4.6,SNR=10.0						
MJAR	Matsushiro Arr	42.77	344	P	P	15 51 43.8	-2.1
MJAR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MJAR	Matsushiro Arr	42.77	344	P	P	15 51 43.8	-2.1
MAJO	Matsushiro	42.77	344	*de*P	P	15 51 46.2	+0.3
MAJO				pmax	pmax		
	comp=Z,72nm,3.1s						
MAJO	Matsushiro	42.77	344	P	P	15 51 44.0	-2.0
MAJO				IAmb	IAmb	15 51 48.7	
	comp=Z,40nm,1.4s						
MAJO	Matsushiro	42.77	344	P	P	15 51 46.6	+0.7
MAT	Matsushiro	42.77	344	P	P	15 51 44.3	-1.6
MAT				S	S	15 57 57.6	+0.4
MJB9	Matsu-Tunnel	42.78	344	P	P	15 51 44.0	-2.0
NWAO	Narrogin (SRO)	43.01	225	P	P	15 51 46.7	-1.2
NWAO				S	S	15 57 55.9	-4.9
NWAO	Narrogin (SRO)	43.01	225	P	P	15 51 47.0	-0.9
JHS	Saijyo	43.07	337	P	P	15 51 48.3	-0.1
JHS				IAmb	IAmb	15 51 50.0	
	comp=Z,47nm,0.8s						
MQZ	McQueen's Vall	43.15	158	P	P	15 51 48.8	+0.1
MUN	Mundaring	43.23	226	P	P	15 51 48.7	-1.0
	baz=43,SNR=25						
MUN	Mundaring	43.23	226	P	P	15 51 49.3	-0.4
JMM	Marumori	43.38	347	P	P	15 51 50.4	-0.3
JMM				IAmb	IAmb	15 51 51.2	
	comp=Z,25nm,0.8s						
MTKN	Mount Kenneth	43.52	227	P	P	15 51 53.9	+1.9
	comp=Z,263nm,1.1s						
WHZ	Wether Hill Ro	43.55	164	P	P	15 51 52.3	+0.3
QZH	Quanzhou	43.65	314	*e*P	P	15 51 54.4	+1.3
QZH				sP	sP	15 52 48.5	+0.6
QZH				S	S	15 58 10.5	+0.3
QZH				ScS	SS	16 01 33.4	+1.1
QZH				LR	LR		
	comp=Z,570nm,10.4s						
QZH				LR	LR		
	comp=Z,580nm,15.9s						
QZH				LR	LR		
	comp=Z,880nm,14.3s						
JSD	Sado	44.16	344	P	P	15 51 57.0	+0.1
JSD				IAmb	IAmb	15 52 03.0	
	comp=Z,116nm,1.4s						
CNJI	Cibinong	44.65	264	P	P	15 52 00.6	-0.6
	comp=Z,4μmcomp=Z,433nm,1.3s						
DBJI	Dramaga	45.02	265	P	P	15 52 06.4	+2.2
	comp=Z,4μmcomp=Z,79nm,0.5s						
SKJI	Sukabumi	45.21	265	P	P	15 52 07.5	+1.8
	comp=Z,105nm,0.6s						
PPBI	Pangkal Pinang	45.78	271	P	P	15 52 11.2	+1.0

SSE	**Sheshan**	**45.96**	**322**	P	**P**	**15 52 12.8**	**+1.6**
SSE				S	**S**	**15 58 44.1**	**+0.8**
SSE				sS	**sS**	**15 59 47.3**	**-1.2**
SSE				pmax	pmax		
	comp=Z,47nm,0.8s						
SSE				pmax	pmax		
	comp=Z,160nm,3.4s						
SSE				LR	LR		
	comp=Z,170nm,18.2s						
CGJI	**Cibinong**	**46.07**	**265**	P	**P**	**15 52 11.2**	**-1.2**
	comp=Z,2µmcomp=Z,136nm,1.2s						
JTM	**Tenmabayashi**	**46.13**	**349**	P	**P**	**15 52 12.5**	**+0.1**
JTM				IAmb	IAmb	15 52 13.3	
	comp=Z,79nm,0.9s						
DLV	**T Lat**	**46.18**	**291**	P	**P**	**15 52 13.8**	**+0.3**
DLV	**T Lat**	**46.18**	**291**	P	**P**	**15 52 16.0**	**+2.5**
XMIS	**Christmas Isla**	**46.24**	**260**	P	**P**	**15 52 13.3**	**-0.4**
XMIS				IAmb	IAmb	15 52 14.5	
	comp=Z,114nm,1.1s						
TJN	**Taejon**	**46.69**	**333**	*d i*P	**P**	**15 52 17.9**	**+1.1**
TJN	**Taejon**	**46.69**	**333**	P	**P**	**15 52 18.1**	**+1.3**
	comp=Z,355nm,1.0s						
KLSI		**47.05**	**268**	P	**P**	**15 52 20.2**	**+0.1**
	comp=Z,23nm,1.8s						
KASI	**Kota Agung**	**47.26**	**267**	P	**P**	**15 52 20.5**	**-1.2**
	comp=Z,72nm,0.7s						
KSRS	**Korea Array**	**47.33**	**334**	P	**P**	**15 52 22.9**	**+1.1**
	comp=Z,20nm,0.9s,baz=151,slow=9.2,SNR=58						
KSRS				pP	**pwP**	**15 53 01.3**	**-0.2**
	comp=Z,16nm,1.1s,baz=152,slow=8.9,SNR=3.8						
KSRS				PcP	**PcP**	**15 53 51.4**	**+1.5**
	comp=Z,1.5nm,0.6s,baz=154,slow=3.7,SNR=4.6						
KSRS				ScP	**ScP**	**15 57 27.8**	**-0.4**
	comp=Z,2.1nm,0.9s,baz=132,slow=4.8,SNR=5.3						
KSAR	**Wonju Array Be**	**47.33**	**334**	P	**P**	**15 52 22.0**	**+0.2**
KSAR	**Wonju Array Be**	**47.33**	**334**	P	**P**	**15 52 22.0**	**+0.2**
KS19	**Wonju Array Si**	**47.39**	**334**	P	**P**	**15 52 22.6**	**+0.3**
KS19				IAmb	IAmb	15 52 23.8	
	comp=Z,34nm,1.1s						
DSRI	**Dabo**	**47.47**	**273**	P	**P**	**15 52 24.0**	**+0.7**
	comp=Z,759nmcomp=Z,49nm,1.8s						
QIZ	**Qiongzhong**	**47.56**	**301**	P	**P**	**15 52 23.8**	**-0.1**
QIZ				pP	**pP**	**15 52 58.6**	**-2.2**
QIZ				sP	**sP**	**15 53 17.5**	**-1.8**
QIZ				S	**S**	**15 59 07.8**	**+1.3**
QIZ				sS	**sS**	**16 00 11.8**	**-0.3**
QIZ				LR	LR		
	comp=Z,890nm,14.3s						
QIZ				LR	LR		
	comp=Z,670nm,13.7s						
QIZ				LR	LR		
	comp=Z,690nm,20.4s						
MDSI	**Maura Dua**	**47.61**	**268**	P	**P**	**15 52 23.1**	**-1.3**
	comp=Z,792nmcomp=Z,73nm,1.3s						
LWLI	**Liwa**	**47.71**	**267**	P	**P**	**15 52 24.8**	**-0.5**
	comp=Z,19µmcomp=Z,120nm,1.0s						
INCN	**Inchon**	**47.93**	**333**	P	**P**	**15 52 27.6**	**+1.1**
INCN				pmax	pmax		
	comp=Z,143nm,1.0s						
INCN	**Inchon**	**47.93**	**333**	P	**P**	**15 52 28.4**	**+1.9**
INCN				S	**S**	**15 59 11.1**	**-0.1**
INCN	**Inchon**	**47.93**	**333**	P	**P**	**15 52 27.6**	**+1.1**
INCN	**Inchon**	**47.93**	**333**	P	**P**	**15 52 28.1**	**+1.6**
	comp=Z,175nm,1.1s						
JEW	**Eniwo**	**48.04**	**350**	P	**P**	**15 52 28.0**	**+0.8**
NJ2	**Nanjing**	**48.05**	**321**	*e*P	**P**	**15 52 28.6**	**+1.1**
NJ2				pP	**pP**	**15 53 05.3**	**+1.0**
NJ2				sP	**sP**	**15 53 22.4**	**-0.4**
NJ2				S	**S**	**15 59 15.1**	**+2.1**
NJ2				sS	**sS**	**16 00 22.5**	**+3.8**
NJ2				SS	**SS**	**16 02 40.5**	**-4.0**
NJ2				pmax	pmax		
	comp=Z,22nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,790nm,5.9s						
NJ2				LR	LR		
	comp=Z,580nm,17.1s						
NJ2				LR	LR		
	comp=Z,580nm,19.0s						
NJ2				LR	LR		
	comp=Z,670nm,16.1s						
LHSI	**Lahat**	**48.29**	**269**	P	**P**	**15 52 30.6**	**+1.0**
	comp=Z,61nm,1.2s						
MYKOM	**Kota Tinggi**	**48.45**	**276**	P	**P**	**15 52 32.0**	**+1.1**
MYKOM	**Kota Tinggi**	**48.45**	**276**	P	**P**	**15 52 31.1**	**+0.3**
MYKOM				IAmb	IAmb	15 52 32.5	
	comp=Z,98nm,1.3s						
YUK	**Yuzh-Kuril'sk**	**48.59**	**354**	*e*P	**P**	**15 52 29.2**	**-2.2**
YUK				*e**PP	**pP**	**15 53 07.1**	**-1.7**
YUK				*e*		15 53 51.4	
YUK				*e*PPP	PPP	15 55 29.5	
YUK				*e*S	**S**	**15 59 15.5**	**-4.7**
YUK				*e**SS	sS	16 00 15.0	-11
JKA	**Kamikawa-asahi**	**49.09**	**351**	P	**P**	**15 52 35.0**	**-0.2**
ASAJ	**Asahikawa**	**49.09**	**351**	P	**P**	**15 52 35.8**	**+0.6**
	comp=Z,14nm,0.8s,baz=206,slow=13,SNR=7.2						
ASAJ	**Asahikawa**	**49.09**	**351**	P	**P**	**15 52 35.0**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,18nm,0.8s						
RAR	**Rarotonga**	**49.70**	**114**	LR	LR	16 11 03.4	
	comp=Z,245nm,21.4s,baz=284,slow=33						
RAR	**Rarotonga**	**49.70**	**114**	P	**P**	**15 52 42.8**	**+2.6**
	comp=Z,119nm,1.4s						
UBPT	**Khong Chiam**	**50.03**	**294**	P	**P**	**15 52 42.9**	**+0.1**
UBPT				IAmb	IAmb	15 52 45.3	
	comp=Z,46nm,1.2s						
WHN	**Wuhan**	**50.03**	**317**	⇑P	**P**	**15 52 44.8**	**+2.3**
WHN				S	**S**	**15 59 41.1**	**+0.5**
WHN				pmax	pmax		
	comp=Z,590nm,2.1s						
JRMM	**Jerantut**	**50.11**	**279**	P	**P**	**15 52 44.0**	**+0.6**
KRJI	**Kerinci**	**50.44**	**271**	P	**P**	**15 52 46.4**	**+0.3**
	comp=Z,186nm,0.9s						
VLA	**Vladivostok**	**50.73**	**341**	*de*P	**P**	**15 52 48.2**	**+0.7**
VLA				pmax	pmax		
	comp=Z,78nm,1.5s						
BKNI	**Bangkinang**	**51.07**	**274**	P	**P**	**15 52 51.1**	**+0.4**
	comp=Z,2µmcomp=Z,105nm,1.1s						
BKNI	**Bangkinang**	**51.07**	**274**	P	**P**	**15 52 51.5**	**+0.8**
DL2	**Dalian**	**51.46**	**330**	P	**P**	**15 52 53.8**	**+0.8**
DL2				sP	**sP**	**15 53 48.0**	**-0.8**
DL2				S	**S**	**15 59 59.3**	**-0.7**
DL2				sS	**sS**	**16 01 04.1**	**-2.4**
DL2				pmax	pmax		
	comp=Z,89nm,1.1s						
DL2				pmax	pmax		
	comp=Z,210nm,3.7s						
PDSI	**Padang**	**51.53**	**272**	P	**P**	**15 52 52.3**	**-1.8**
	comp=Z,30nm,0.9s						
IPM	**Ipoh**	**51.63**	**279**	P	**P**	**15 52 55.0**	**+0.1**
IPM	**Ipoh**	**51.63**	**279**	P	**P**	**15 52 54.6**	**-0.2**
IPM				IAmb	IAmb	15 52 55.9	
	comp=Z,56nm,1.2s						
IPM	**Ipoh**	**51.63**	**279**	P	**P**	**15 52 55.6**	**+0.7**
USA0B	**Ussuriysk Arra**	**51.67**	**342**	P	**P**	**15 52 54.8**	**+0.3**
USA0B				pmax	pmax		
	comp=Z,35nm,1.1s						
USA0B	**Ussuriysk Arra**	**51.67**	**342**	P	**P**	**15 52 54.8**	**+0.3**
USA0B				IAmb	IAmb	15 52 56.2	
	comp=Z,35nm,1.1s						
USRK	**Ussuriysk Ar.**	**51.67**	**342**	P	**P**	**15 52 54.5**	**0.0**
	comp=Z,15nm,0.8s,baz=172,slow=9.4,SNR=19						
USRK				pP	**pwP**	**15 53 34.5**	**-0.4**
	comp=Z,10.0nm,0.9s,baz=163,slow=7.2,SNR=3.5						
USRK				ScP	**ScP**	**15 57 46.3**	**-0.3**
	comp=Z,5.1nm,1.0s,baz=202,slow=4.2,SNR=5.5						
USRK	**Ussuriysk Ar.**	**51.67**	**342**	P	**P**	**15 52 54.9**	**+0.4**
YSS	**Yuzh-Sakhalins**	**51.85**	**352**	*e*P	**P**	**15 52 56.0**	**+0.3**
YSS				*e*		15 53 35.4	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,400nm,17.0s						
TIA	**Tai'an**	**51.95**	**324**	⇓P	**P**	**15 52 57.0**	**+0.3**
TIA				S	**S**	**16 00 07.0**	**+0.1**
TIA				sS	**sS**	**16 01 14.4**	**+1.0**
TIA				pmax	pmax		
	comp=Z,22nm,1.2s						
TIA				LR	LR		
	comp=Z,370nm,18.6s						
TIA				LR	LR		
	comp=Z,340nm,21.6s						
TIA				LR	LR		
	comp=Z,550nm,23.5s						
KULM	**Kulim**	**52.13**	**280**	P	**P**	**15 52 59.0**	**+0.5**
KULM	**Kulim**	**52.13**	**280**	P	**P**	**15 52 58.0**	**-0.6**
KULM				IAmb	IAmb	15 52 59.5	
	comp=Z,35nm,1.1s						
MNSI	**Mandailing Nat**	**52.57**	**274**	P	**P**	**15 53 00.8**	**-1.0**
	comp=Z,67nm,1.0s						
MDJ	**Mudanjiang**	**52.82**	**340**	P	**P**	**15 53 03.4**	**+0.4**
MDJ				pP	pwP	15 53 43.9	+0.3
MDJ				sP	sP	15 53 59.3	+0.3
MDJ				PP	**PP**	**15 55 06.4**	**+2.1**
MDJ				PcS	**PcS**	**15 58 06.9**	**-1.9**
MDJ				S	**S**	**16 00 19.8**	**+1.4**
MDJ				pmax	pmax		
	comp=Z,150nm,3.6s						
MDJ				LR	LR		
	comp=Z,420nm,17.5s						
MDJ				LR	LR		
	comp=Z,630nm,16.3s						
MDJ				LR	LR		
	comp=Z,410nm,14.9s						
MDJ	**Mudanjiang**	**52.82**	**340**	P	**P**	**15 53 03.2**	**+0.2**
MDJ				IAmb	IAmb	15 53 04.7	
	comp=Z,39nm,1.2s						
MDJ	**Mudanjiang**	**52.82**	**340**	P	**P**	**15 53 03.4**	**+0.4**
SISI	**Saibi**	**52.86**	**272**	P	**P**	**15 53 03.7**	**-0.2**
	comp=Z,63nm,1.3s						
ENH	**Enshi**	**53.31**	**313**	P	**P**	**15 53 07.2**	**+0.3**
GYA	**Guiyang**	**53.52**	**308**	⇑P	**P**	**15 53 10.5**	**+1.9**
GYA				sP	sP	15 54 06.4	+1.9
GYA				PcP	**PcP**	**15 54 14.8**	**+1.5**
GYA				S	**S**	**16 00 31.3**	**+2.6**
GYA				sS	sS	16 01 39.6	+3.9
GYA				ScS	**ScS**	**16 02 42.8**	**+1.3**
GYA				SS	**SS**	**16 04 15.3**	**+3.6**
GYA				pmax	pmax		
	comp=Z,37nm,1.4s						
GYA				pmax	pmax		
	comp=Z,420nm,4.2s						
GYA				LR	LR		
	comp=Z,360nm,11.6s						
CN2	**Changchun**	**53.65**	**336**	*e*P	**P**	**15 53 09.6**	**+0.5**
CN2				*e*S	**S**	**16 00 26.6**	**-3.1**
CN2				pmax	pmax		
	comp=Z,20nm,1.4s						
CN2				pmax	pmax		
	comp=Z,100nm,5.0s						
CN2				LR	LR		
	comp=Z,500nm,21.0s						
CN2				LR	LR		
	comp=Z,500nm,21.0s						
CN2				LR	LR		
	comp=Z,400nm,22.0s						
SRIT	**Nakonsritamara**	**53.78**	**284**	P	**P**	**15 53 10.6**	**+0.1**
SRIT				IAmb	IAmb	15 53 12.0	
	comp=Z,110nm,1.4s						
GSI	**Gunungsitoli**	**54.62**	**275**	P	**P**	**15 53 15.4**	**-1.3**
	comp=Z,1µmcomp=Z,87nm,1.8s						
GSI	**Gunungsitoli**	**54.62**	**275**	P	**P**	**15 53 15.0**	**-1.6**
GSI	**Gunungsitoli**	**54.62**	**275**	P	**P**	**15 53 16.3**	**-0.4**
KCSI	**Kotacane, Aceh**	**54.70**	**277**	P	**P**	**15 53 17.6**	**+0.3**
	comp=Z,730nmcomp=Z,43nm,1.4s						
COCO	**West Island**	**54.98**	**258**	P	**P**	**15 53 17.9**	**-1.3**
COCO				pmax	pmax		
	comp=Z,143nm,1.5s						
COCO	**West Island**	**54.98**	**258**	P	**P**	**15 53 17.9**	**-1.3**
BJT	**Baijiatuau**	**55.14**	**327**	P	**P**	**15 53 19.3**	**-0.6**
BJT				pmax	pmax		
	comp=Z,15nm,0.9s						
BJT	**Baijiatuau**	**55.14**	**327**	P	**P**	**15 53 19.3**	**-0.6**
BJI	**Beijing**	**55.15**	**327**	P	**P**	**15 53 20.4**	**+0.4**
BJI				pP	**pP**	**15 53 58.3**	**+0.5**
BJI				sP	**sP**	**15 54 16.9**	**+0.9**
BJI				ScP	**ScP**	**15 58 04.8**	**+2.9**
BJI				S	**S**	**16 00 51.5**	**+1.6**
BJI				sS	**sS**	**16 02 01.8**	**+4.1**
BJI				pmax	pmax		
	comp=Z,27nm,1.5s						
BJI				pmax	pmax		
	comp=Z,410nm,4.3s						
BJI				LR	LR		
	comp=Z,700nm,18.7s						
BJI				LR	LR		
	comp=Z,500nm,19.5s						
BJI				LR	LR		
	comp=Z,540nm,18.5s						
TPTI		**55.25**	**277**	P	**P**	**15 53 20.1**	**-1.1**
	comp=Z,214nmcomp=Z,11nm,1.3s						
KIP	**Kipapa**	**55.36**	**60**	P	**P**	**15 53 21.0**	**-0.8**
KIP				pmax	pmax		
	comp=Z,67nm,0.8s						
KIP	**Kipapa**	**55.36**	**60**	P	**P**	**15 53 21.0**	**-0.8**
XAN	**Xi'an**	**55.80**	**317**	⇓P	**P**	**15 53 25.8**	**+1.0**
XAN				pP	pwP	15 54 05.3	-0.6
XAN				PcP	**PcP**	**15 54 22.4**	**+0.6**
XAN				sP	sP	15 54 27.5	+6.6
XAN				S	**S**	**16 00 54.6**	**-4.2**
XAN				ScS	**ScS**	**16 02 53.4**	**-3.9**
XAN				pmax	pmax		
	comp=Z,88nm,1.2s						
XAN				pmax	pmax		
	comp=Z,280nm,3.6s						
XAN				LR	LR		
	comp=Z,300nm,19.9s						
XAN				LR	LR		
	comp=Z,290nm,17.9s						
XAN				LR	LR		
	comp=Z,440nm,20.6s						
KMI	**Kunming**	**56.09**	**304**	⇓P	**P**	**15 53 29.0**	**+1.7**
KMI				pP	pwP	15 54 07.1	-1.1
KMI				sP	sP	15 54 24.8	+1.3
KMI				S	**S**	**16 01 03.3**	**-0.1**
KMI				sS	sS	16 02 10.3	-0.7
KMI				SS	**SS**	**16 04 54.5**	**+2.0**
KMI				pmax	pmax		
	comp=Z,41nm,1.0s						
KMI				pmax	pmax		
	comp=Z,340nm,4.1s						
KMI				LR	LR		
	comp=Z,540nm,17.1s						
KMI				LR	LR		
	comp=Z,500nm,16.6s						
KMI				LR	LR		
	comp=Z,530nm,22.3s						
KLR	**Kul'dur**	**56.30**	**344**	*d i*P	**P**	**15 53 27.8**	**-0.2**
KLR				pmax	pmax		
	comp=Z,59nm,1.7s						
KHU	**Kahuku**	**56.72**	**64**	P	**P**	**15 53 31.1**	**-0.7**
KHU				pmax	pmax		
	comp=Z,208nm,1.1s						
KHU	**Kahuku**	**56.72**	**64**	P	**P**	**15 53 31.1**	**-0.7**
CMAR	**Chiang Mai Arr**	**56.96**	**295**	P	**P**	**15 53 35.3**	**+2.0**
	comp=Z,39nm,0.9s,baz=112,slow=5.2,SNR=193						
CMAR				pP	**pwP**	**15 54 14.3**	**0.0**
	comp=Z,15nm,0.8s,baz=110,slow=5.3,SNR=5.4						
CMAR				PKP2bc		16 23 33.1	
	comp=Z,2.0nm,1.1s,baz=268,slow=3.6,SNR=7.0						
CMAR	**Chiang Mai Arr**	**56.96**	**295**	*i* P	**P**	**15 53 35.2**	**+2.0**
CMAR				pmax	pmax		
	comp=Z,43nm,0.9s						
CMAR	**Chiang Mai Arr**	**56.96**	**295**	P	**P**	**15 53 34.9**	**+1.7**
SDHHI	**Sand Hill**	**57.05**	**64**	P	**P**	**15 53 34.4**	**+0.4**
CHTO	**Chiang Mai**	**57.07**	**296**	P	**P**	**15 53 34.4**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,132nm,1.4s						
CHTO	**Chiang Mai**	**57.07**	**296**	S	**S**	**16 01 18.0**	**+2.0**
CHTO	**Chiang Mai**	**57.07**	**296**	P	**P**	**15 53 34.4**	**+0.4**
CHTO	**Chiang Mai**	**57.07**	**296**	P	**P**	**15 53 35.4**	**+1.4**
PET	**Petropavlovsk**	**57.56**	**5**	*e*P	**P**	**15 53 38.7**	**+2.0**
PET				*e*S	**S**	**16 01 22.2**	**+1.0**
PET				*e*SS	**SS**	**16 05 17.1**	**+2.9**
PET				MLR	MLR		
	comp=Z,400nm,19.0s						
PEA0B	**Petropavlovsk-**	**57.57**	**4**	P	**P**	**15 53 36.6**	**-0.3**
PEA0B				*PP	**pP**	**15 54 14.1**	**-1.0**
PEA0B				pmax	pmax		
	comp=Z,85nm,1.5s						
PEA0B	**Petropavlovsk-**	**57.57**	**4**	P	**P**	**15 53 36.6**	**-0.3**
PEA0B				IAmb	IAmb	15 53 59.2	
	comp=Z,85nm,1.4s						
PEA0B				pP	**pP**	**15 54 14.1**	**-1.0**
PETK	**Petropavlovsk-**	**57.57**	**4**	P	**P**	**15 53 36.9**	**+0.1**
	comp=Z,3.9nm,0.6s,baz=165,slow=8.1,SNR=18						
PETK				pP	**pP**	**15 54 16.4**	**+1.2**
	comp=Z,17nm,0.9s,baz=188,slow=7.9,SNR=5.9						
PETK				LR	LR	16 14 22.7	
	comp=Z,113nm,20.6s,baz=196,slow=32						
PETK	**Petropavlovsk-**	**57.57**	**4**	P	**P**	**15 53 36.3**	**-0.5**
CD2	**Chengdu**	**57.88**	**311**	⇓*i*P	**P**	**15 53 40.3**	**+0.8**
CD2				pP	pP	15 54 16.9	-0.8
CD2				PcP	**PcP**	**15 54 29.1**	**-0.9**
CD2				sP	sP	15 54 35.1	-0.8
CD2				S	**S**	**16 01 28.0**	**+1.8**
CD2				sS	sS	16 02 33.3	+0.2
CD2				SS	**SS**	**16 05 22.9**	**+2.9**
CD2				pmax	pmax		
	comp=Z,110nm,1.0s						
CD2				pmax	pmax		
	comp=Z,270nm,5.2s						
HHC	**Hu-ho-hao-te**	**58.28**	**325**	*e*P	**P**	**15 53 43.3**	**+1.1**
HHC				sP	sP	15 54 36.5	-2.3
HHC				S	**S**	**16 01 33.3**	**+2.0**
HHC				sS	sS	16 02 37.6	-1.2
HHC				SS	**SS**	**16 05 24.3**	**-1.9**
HHC				pmax	pmax		
	comp=Z,52nm,1.0s						
HHC				pmax	pmax		
	comp=Z,220nm,7.6s						
HHC				LR	LR		
	comp=Z,340nm,18.0s						
HHC				LR	LR		
	comp=Z,500nm,16.8s						
HHC				LR	LR		
	comp=Z,580nm,18.0s						
PPT	**Papeete**	**58.64**	**108**	P	**P**	**15 53 45.5**	**+0.5**
	comp=Z,38nm,0.8s,baz=240,slow=20,SNR=2.0						
PPT2	**Papeete2**	**58.64**	**108**	*e*P	**P**	**15 53 47.2**	**+2.1**
	comp=Z,65nm,1.2s						
PPT2				*e*S	**S**	**16 01 36.2**	**-0.4**
	comp=Z,600nm,27.2s						
PAE	**Paea**	**58.65**	**108**	*e*P	**P**	**15 53 46.7**	**+1.7**
	comp=Z,13nm,1.1s						
TIAR	**Tiarei**	**58.86**	**108**	*e*P	**P**	**15 53 48.5**	**+2.0**
	comp=Z,0.4nm,0.8s						
BTO	**Baotou**	**59.03**	**324**	*e*P	**P**	**15 53 49.3**	**+1.9**
BTO				S	**S**	**16 01 43.3**	**+2.4**
BTO				LR	LR		
	comp=Z,1µm,12.7s						
BTO				LR	LR		
	comp=Z,910nm,10.2s						
TBI	**Tubuai**	**59.47**	**114**	*e*S	**S**	**16 01 47.4**	**+0.4**
	comp=Z,418nm,35.0s						
TBI				*e*LR	LR	16 11 39.0	
	comp=Z,574nm,32.5s						
PMOR	**Pomariorio Ree**	**60.05**	**105**	*e*P	**P**	**15 53 56.7**	**+2.0**
	comp=Z,314nm,1.2s						
VAH	**Vaihoa**	**60.32**	**105**	*e*P	**P**	**15 53 58.0**	**+1.5**
	comp=Z,89nm,1.1s						
HIA	**Hailar**	**60.39**	**336**	P	**P**	**15 53 56.0**	**-0.4**
HIA				pmax	pmax		
	comp=Z,23nm,1.0s						
HIA	**Hailar**	**60.39**	**336**	P	**P**	**15 53 56.0**	**-0.4**
HIA				IAmb	IAmb	15 53 58.0	
	comp=Z,23nm,1.0s						
LZH	**Lanzhou**	**60.40**	**316**	⇓P	**P**	**15 53 58.8**	**+1.9**
LZH				pP	PcP	15 54 40.3	+0.1
LZH				sP	sP	15 54 56.8	+3.2
LZH				S	**S**	**16 02 00.0**	**+1.2**
LZH				SS	**SS**	**16 06 05.4**	**+5.7**
LZH				pmax	pmax		
	comp=Z,130nm,1.3s						
LZH				pmax	pmax		
	comp=Z,420nm,6.5s						
LZH				LR	LR		
	comp=Z,410nm,16.2s						
LZH				LR	LR		
	comp=Z,410nm,16.0s						
LZH				LR	LR		
	comp=Z,430nm,17.9s						
ZEA	**Zeya**	**61.59**	**344**	*e*P	**P**	**15 54 05.1**	**+0.8**
ZEA				*e**PP	**pwP**	**15 54 45.5**	**-0.4**
ZEA				*e**SP	**sP**	**15 55 04.1**	**+3.0**
ZEA				*e*S	**S**	**16 02 15.3**	**+2.5**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.7s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,100nm,3.9s						
ZEA				smax	smax		
	comp=N,100nm,12.6s						
MA2	**Magadan**	**63.86**	**359**	*de*P	**P**	**15 54 20.0**	**+0.8**
MA2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MA2	**Magadan**	**63.86**	**359**	P	**P**	**15 54 19.0**	**-0.2**
MA2				IAmb	IAmb	15 54 37.5	
	comp=Z,16nm,1.0s						
GTA	**Gaotai**	**64.84**	**317**	⇓P	**P**	**15 54 27.3**	**+1.1**
GTA				pP	pwP	15 55 09.5	+1.3
GTA				sP	sP	15 55 23.1	-0.1
GTA				S	**S**	**16 02 53.3**	**-0.7**
GTA				sS	sS	16 04 01.3	-1.2
GTA				SS	**SS**	**16 07 12.3**	**+3.5**
GTA				pmax	pmax		
	comp=Z,52nm,1.2s						
GTA				pmax	pmax		
	comp=Z,210nm,8.8s						
GTA				LR	LR		
	comp=Z,270nm,14.7s						
GTA				LR	LR		
	comp=Z,250nm,17.1s						
GTA				LR	LR		
	comp=Z,270nm,17.9s						
ULN	**Ulaanbaatar**	**65.27**	**328**	*d i*P	**P**	**15 54 29.9**	**+1.1**
ULN				pmax	pmax		
	comp=Z,59nm,1.3s						
ULN	**Ulaanbaatar**	**65.27**	**328**	P	**P**	**15 54 30.2**	**+1.4**
ULN	**Ulaanbaatar**	**65.27**	**328**	P	**P**	**15 54 29.0**	**+0.2**
ULN				IAmb	IAmb	15 54 31.6	
	comp=Z,47nm,1.1s						
SHL	**Shillong**	**65.40**	**301**	P	**P**	**15 54 29.9**	**-0.3**
SHL				pmax	pmax		
	comp=Z,186nm,1.2s						
SHL	**Shillong**	**65.40**	**301**	P	**P**	**15 54 29.9**	**-0.3**
SONM	**Songino Array**	**65.59**	**328**	P	**P**	**15 54 32.0**	**+1.1**
	comp=Z,45nm,1.1s,baz=142,slow=5.1,SNR=101						
SONM				pP	**pwP**	**15 55 11.9**	**-1.0**
	comp=Z,9.3nm,1.1s,baz=145,slow=4.8,SNR=2.0						
SONM				LR	LR	16 20 58.2	
	comp=Z,294nm,20.6s,baz=84,slow=34						
SONM	**Songino Array**	**65.59**	**328**	P	**P**	**15 54 31.4**	**+0.5**
SONM				pmax	pmax		
	comp=Z,88nm,1.4s						
SONM	**Songino Array**	**65.59**	**328**	P	**P**	**15 54 31.4**	**+0.5**
SONM				IAmb	IAmb	15 54 33.5	
	comp=Z,88nm,1.4s						
LSA	**Lhasa**	**67.35**	**305**	P	**P**	**15 54 43.9**	**+1.1**
LSA				pmax	pmax		
	comp=Z,180nm,1.1s						
LSA	**Lhasa**	**67.35**	**305**	P	**P**	**15 54 42.9**	**+0.1**
LSA				pmax	pmax		
	comp=Z,55nm,1.1s						
LSA	**Lhasa**	**67.35**	**305**	P	**P**	**15 54 42.9**	**+0.1**
LSA				IAmb	IAmb	15 54 45.3	
	comp=Z,55nm,1.1s						
UNV	**Unalaska Valle**	**67.69**	**25**	P	**P**	**15 54 43.6**	**-0.2**
UNV				IAmb	IAmb	15 55 07.3	
	comp=Z,97nm,1.5s						
CASY	**Casey**	**68.08**	**197**	P	**P**	**15 54 46.2**	**+0.1**
CASY				IAmb	IAmb	15 55 08.1	
	comp=Z,113nm,1.5s						
YAK	**Yakutsk**	**68.49**	**349**	*e*P	**P**	**15 54 47.7**	**-0.9**
YAK				*e*		15 55 11.6	
YAK				*e**PP	**pP**	**15 55 26.7**	**-1.5**
YAK				*e*		15 57 20.4	
YAK				*e*PPP	PPP	15 59 03.2	
YAK				*e*S	**S**	**16 03 37.5**	**+0.8**
YAK				*e*		16 04 23.9	
YAK				pmax	pmax		
	comp=Z,46nm,1.9s						
YAK				pmax	pmax		
	comp=N,13nm,1.5s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.6s						
YAK				pmax	pmax		
	comp=Z,386nm,5.3s						
YAK				pmax	pmax		
	comp=N,257nm,3.8s						
YAK				pmax	pmax		
	comp=E,151nm,3.8s						
YAK				smax	smax		
	comp=E,174nm,4.7s						

YAK				pmax	smax		
	comp=N,271nm,4.7s						
YAK	Yakutsk	68.49	349	P	P	15 54 48.3	-0.3
YAK				IAmb	IAmb	15 54 50.0	
	comp=Z,42nm,1.2s						
BOD	Bodaibo	69.18	339	*e*P	P	15 54 51.9	-1.1
BOD				pmax	pmax		
	comp=Z,25nm,1.4s						
TLY	Talaya	69.37	330	*e*P	P	15 54 54.4	0.0
TLY				*e*		15 55 18.4	
TLY				*e*S	S	16 03 44.1	-3.4
TLY				*e*SS	SS	16 08 22.8	+4.5
TLY				pmax	pmax		
	comp=Z,63nm,1.3s						
TLY				MLR	MLR		
	comp=Z,341nm,13.0s						
TLY	Talaya	69.37	330	P	P	15 54 54.1	-0.2
TLY				IAmb	IAmb	15 54 56.6	
	comp=Z,26nm,1.2s						
FALS	False Pass	69.70	26	P	P	15 54 56.8	+0.6
	baz=228						
MOY	Mondy	70.69	329	*e*P	P	15 55 03.5	+0.9
MOY				pmax	pmax		
	comp=Z,101nm,1.5s						
JIRN	Jiri	70.89	301	*e*P	P	15 55 05.0	+0.5
	comp=Z,31nm,0.5s						
GUN	Gumba	71.22	301	*e*P	P	15 55 07.1	+0.6
	comp=Z,294nm,1.0s						
SDPT	Sand Point	71.31	26	P	P	15 55 07.1	+1.2
	baz=231						
PKI	Pulchoki	71.53	301	*e*P	P	15 55 08.4	0.0
	comp=Z,70nm,0.6s						
PKIN	Phulchoki	71.54	301	*e*P	P	15 55 08.5	+0.1
	comp=Z,48nm,0.5s						
KKN	Kakani	71.70	301	*e*P	P	15 55 09.5	+0.3
	comp=Z,62nm,0.6s						
DMN	Daman	71.80	301	*e*P	P	15 55 10.0	+0.1
	comp=Z,442nm,1.1s						
GKN	Gorkha	72.30	301	*e*P	P	15 55 13.0	+0.3
	comp=Z,464nm,1.2s						
CHGN	Chignik	72.81	26	P	P	15 55 15.6	+0.8
	baz=233						
BILL	Bilibino	73.05	6	*e*P	P	15 55 17.9	+1.8
BILL				*e*		15 55 31.7	
BILL				*e**PP	pP	15 55 56.1	-0.1
BILL				*e**SP	sP	15 56 12.2	-1.8
BILL				*e*		15 58 01.9	
BILL				pmax	pmax		
	comp=Z,22nm,2.5s						
BILL	Bilibino	73.05	6	P	P	15 55 16.7	+0.6
DANN	Dangsing	73.14	301	*e*P	P	15 55 17.7	-0.1
	comp=Z,218nm,1.0s						
VNDA	Vanda	73.19	178	P	P	15 55 17.4	+0.6
	comp=Z,7.1nm,1.0s,baz=333,slow=7.7,SNR=21						
VNDA				LR	LR	16 25 55.1	
	comp=Z,194nm,18.0s,baz=349,slow=34						
VNDA	Vanda	73.19	178	P	P	15 55 17.1	+0.3
VNDA				pmax	pmax		
	comp=Z,43nm,1.5s						
VNDA	Vanda	73.19	178	P	P	15 55 17.1	+0.3
VNDA				IAmb	IAmb	15 55 18.9	
	comp=Z,42nm,1.5s						
PYUN	Piuthan	73.73	301	*e*P	P	15 55 21.1	-0.1
	comp=Z,339nm,1.1s						
SBA	Scott Base	73.75	177	P	P	15 55 21.0	+0.9
SBA				pmax	pmax		
	comp=Z,52nm,1.5s						
SBA	Scott Base	73.75	177	P	P	15 55 21.0	+0.9
SBA				IAmb	IAmb	15 55 22.6	
	comp=Z,52nm,1.4s						
WMQ	Urumqi	74.92	318	P	P	15 55 29.0	+1.4
WMQ				PcP	PcP	15 55 39.9	-0.7
WMQ				pP	pP	15 56 08.3	+0.3
WMQ				sP	sP	15 56 29.0	+3.2
WMQ				S	S	16 04 52.0	+0.8
WMQ				sS	sS	16 06 04.3	+3.5
WMQ				pmax	pmax		
	comp=Z,82nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,360nm,3.7s						
HYB	Hyderabad	75.58	289	*i* P	P	15 55 31.5	-0.3
	comp=Z,86nm,1.2s						
HYB				*e*		15 55 40.5	
HYB				*e*		15 56 16.0	
OHAK	Old Harbor	75.65	27	P	P	15 55 31.3	0.0
OHAK				IAmb	IAmb	15 55 33.0	
	comp=Z,21nm,0.8s						
OHAK	Old Harbor	75.65	27	P	P	15 55 32.4	+1.0
	baz=237						
P18K	Big Mountain,	76.02	25	P	P	15 55 34.1	+0.6
	baz=235						
KDAK	Kodiak Island	76.28	27	P	P	15 55 35.6	+0.8
KDAK				pmax	pmax		
	comp=Z,41nm,1.3s						
KDAK	Kodiak Island	76.28	27	P	P	15 55 35.6	+0.8
KDAK				IAmb	IAmb	15 56 03.6	
	comp=Z,41nm,1.2s						
KDAK	Kodiak Island	76.28	27	P	P	15 55 35.2	+0.4
	baz=238						
Q19K	Cape Douglas,	76.43	26	P	P	15 55 35.5	-0.2
Q19K				IAmb	IAmb	15 55 36.9	
	comp=Z,38nm,0.7s						
Q19K	Cape Douglas,	76.43	26	P	P	15 55 35.7	0.0
	baz=236						
O19K	Port Alsworth	76.85	24	P	P	15 55 38.5	+0.5
	baz=236						
SVW2	Sparrevohn	76.86	23	P	P	15 55 38.7	+0.5
N19K	Bonanza Creek	77.14	24	P	P	15 55 40.1	+0.3
N19K	Bonanza Creek	77.14	24	P	P	15 55 40.5	+0.7
	baz=235						
DGZ	Jazzator, Alta	77.31	323	*d i*P	P	15 55 41.5	+0.5
DGZ				pmax	pmax		
	comp=Z,90nm,0.9s						
TIXI	Tiksi	77.46	353	⇑*e*P	P	15 55 42.5	+1.3
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TIXI	Tiksi	77.46	353	P	P	15 55 40.4	-0.8
O20K	Slope Mountain	77.50	25	P	P	15 55 41.7	-0.1
	baz=237						
HOM	Homer	77.69	26	P	P	15 55 43.0	+0.3
HOM	Homer	77.69	26	P	P	15 55 43.0	+0.3
	baz=238						
TTA	Tatalina	77.78	22	P	P	15 55 43.5	+0.2
TTA				pmax	pmax		
	comp=Z,19nm,1.4s						
TTA	Tatalina	77.78	22	P	P	15 55 43.5	+0.2
TTA	Tatalina	77.78	22	P	P	15 55 43.9	+0.7
	baz=234,SNR=5.7						
CNPM	China Poot	77.80	26	P	P	15 55 43.6	+0.3
CNPM				IAmb	IAmb	15 55 45.7	
	comp=Z,66nm,0.8s						
M19K	Big River Lodg	77.80	23	P	P	15 55 42.9	-0.4
M19K	Big River Lodg	77.80	23	P	P	15 55 43.9	+0.6
	baz=235						
BRLK	Bradley Lake	78.07	26	P	P	15 55 44.3	-0.6
ZSN	Zaisan	78.07	320	*e*P	P	15 55 43.8	-1.3
	comp=Z,29nm,1.2s,baz=320						
ZSN				*i* S	S	16 05 23.7	-1.5
	baz=320						
ZSN	Zaisan	78.07	320	*e*P	P	15 55 43.8	-1.3
ZSN				pmax	pmax		
	comp=Z,29nm,1.2s						
BRSE	Bradley Lake S	78.12	26	P	P	15 55 45.4	+0.2
	baz=239						
SPCR	Spurr Chakacha	78.28	24	P	P	15 55 46.3	+0.2
	baz=237						
L20K	Farewell, AK	78.32	23	P	P	15 55 47.0	+0.8
	baz=236						
CAPN	Captain Cook N	78.48	25	P	P	15 55 47.7	+0.7
	baz=238						
GCSA	Galena City Sc	78.57	20	P	P	15 55 48.3	+0.8
	baz=232,SNR=5.3						
SEW	Seward	78.87	26	P	P	15 55 49.6	+0.4
	baz=240						
RDOG	Red Dog Mine	78.90	16	P	P	15 55 50.1	+0.8
	baz=226						
O22K	Cooper Landing	78.94	25	P	P	15 55 50.1	+0.6
O22K				IAmb	IAmb	15 56 14.0	
	comp=Z,57nm,1.1s						
O22K	Cooper Landing	78.94	25	P	P	15 55 50.3	+0.8
	baz=240						
J20K	Nowinta River	79.19	21	P	P	15 55 51.6	+0.8
J20K	Nowinta River	79.19	21	P	P	15 55 51.7	+0.8
	baz=235						
PPLA	Purkeypile	79.20	23	P	P	15 55 50.6	-0.6
PPLA	Purkeypile	79.20	23	P	P	15 55 51.2	+0.1
	baz=237						
RC01	Rabbit Creek A	79.24	25	P	P	15 55 51.0	-0.3
RC01				IAmb	IAmb	15 55 53.2	
	comp=Z,26nm,1.0s						
RC01	Rabbit Creek A	79.24	25	P	P	15 55 50.9	-0.3
	baz=240,SNR=9.1						
M22K	Willow	79.42	24	P	P	15 55 52.4	+0.3
	baz=239						
MK31	Makanchi Array	79.52	319	P	P	15 55 52.9	-0.2
MK31				pmax	pmax		
	comp=Z,41nm,1.0s						
MK31	Makanchi Array	79.52	319	P	P	15 55 52.9	-0.2
MK31				IAmb	IAmb	15 55 54.9	
	comp=Z,41nm,1.0s						
MKAR	Makanchi Array	79.52	319	P	P	15 55 53.5	+0.4
	comp=Z,37nm,0.9s,baz=101,slow=6.1,SNR=118						
MKAR				pP	pP	15 56 35.0	+1.0
	comp=Z,16nm,1.0s,baz=109,slow=6.6,SNR=3.0						
MKAR				PKKPbc	PKKPbc	16 14 41.0	-1.7
	comp=Z,0.8nm,0.9s,baz=259,slow=2.6,SNR=4.7						
MKAR	Makanchi Array	79.52	319	P	P	15 55 52.9	-0.2
CAST	Castle Rocks	79.53	22	P	P	15 55 52.5	-0.2
CAST	Castle Rocks	79.53	22	P	P	15 55 52.5	-0.2
	baz=237,SNR=7.4						
CHUM	Lake Minchumin	79.69	22	P	P	15 55 54.2	+0.6
	baz=237,SNR=8.3						
CUT	Chulitna	79.69	24	P	P	15 55 53.5	-0.1
	baz=239						
PWL	Port Wells	79.72	25	P	P	15 55 54.0	+0.2
PWL				IAmb	IAmb	15 55 55.9	
	comp=Z,26nm,0.8s						
PWL				pP	pP	15 56 34.1	-0.5
PWL	Port Wells	79.72	25	P	P	15 55 53.8	0.0
	baz=241						
MAKZ	Makanchi	79.73	319	P	P	15 55 54.3	+0.1
MAKZ				pmax	pmax		
	comp=Z,77nm,1.1s						
MAKZ	Makanchi	79.73	319	P	P	15 55 54.3	+0.1
MAKZ				IAmb	IAmb	15 55 55.9	
	comp=Z,77nm,1.1s						
PMR	Palmer	79.75	25		pP	15 56 33.5	-1.2
PMR	Palmer	79.75	25	P	P	15 55 53.8	-0.1
	baz=240,SNR=5.1						
GHO	Glory Hole Cre	79.92	24	P	P	15 55 54.6	-0.4
KNK	Knik Glacier	79.94	25	P	P	15 55 54.6	-0.4
KNK				IAmb	IAmb	15 56 04.3	
	comp=Z,30nm,1.3s						
KNK	Knik Glacier	79.94	25	P	P	15 55 55.3	+0.3
	baz=241						
KTH	Kantishna Hill	80.04	22	P	P	15 55 54.9	-0.7
SML	Sawmill	80.18	25	P	P	15 55 56.4	0.0
SML				IAmb	IAmb	15 55 58.5	
	comp=Z,23nm,0.8s						
SML	Sawmill	80.18	25	P	P	15 55 56.5	+0.2
	baz=241,SNR=9.7						
TRF	Thorofare Moun	80.23	23	P	P	15 55 56.2	-0.5
TRF	Thorofare Moun	80.23	23	P	P	15 55 56.2	-0.5
	baz=239						
GLI	Glacier Island	80.26	26	P	P	15 55 56.4	-0.3
GLI				IAmb	IAmb	15 56 03.2	
	comp=Z,61nm,1.4s						
GLI	Glacier Island	80.26	26	P	P	15 55 56.7	0.0
	baz=242						
IMAR	Indian Mountai	80.36	20	P	P	15 55 57.3	+0.1
ZAA0	Zalesovo Array	80.41	326	P	P	15 55 57.1	-0.5
ZAA0				IAmb	IAmb	15 55 58.3	
	comp=Z,53nm,0.9s						
ZALV	Zalesovo Beam	80.41	326	P	P	15 55 57.0	-0.6
	comp=Z,51nm,0.7s,baz=110,slow=5.7,SNR=180						
ZALV				pP	pP	15 56 38.6	+0.1
	comp=Z,7.4nm,0.7s,baz=96,slow=6.0,SNR=2.1						
ZALV				S	S	16 05 47.2	-2.4
	comp=Z,0.6nm,0.6s,baz=94,slow=14,SNR=6.2						
ZALV				LR	LR	16 31 08.4	
	comp=Z,130nm,21.1s,baz=108,slow=35						
ZALV	Zalesovo Beam	80.41	326	P	P	15 55 57.2	-0.4
PDGK	Podgornoye	80.42	315	P	P	15 55 57.2	-0.9
FID	Port Fidalgo	80.47	26	P	P	15 55 58.2	+0.3
FID				IAmb	IAmb	15 56 11.3	
	comp=Z,39nm,1.2s						
H21K	Melozitna Rive	80.50	20	P	P	15 55 58.0	+0.1
H21K	Melozitna Rive	80.50	20	P	P	15 55 58.6	+0.7
	baz=236						
I21K	Tanana	80.53	21	P	P	15 55 58.7	+0.7
I21K	Tanana	80.53	21	P	P	15 55 58.4	+0.4
	baz=237						
WAT1	Susitna Watana	80.59	24	P	P	15 55 58.4	-0.1
	baz=240						
SCM	Sheep Creek Mo	80.61	25	P	P	15 55 58.9	+0.2
SCM				pmax	pmax		
	comp=Z,29nm,1.3s						
SCM	Sheep Creek Mo	80.61	25	P	P	15 55 58.9	+0.2
SCM				IAmb	IAmb	15 56 12.4	
	comp=Z,29nm,1.3s						
SCM	Sheep Creek Mo	80.61	25	P	P	15 55 58.9	+0.2
	baz=242						
EYAK	Cordova Ski Ar	80.70	26	P	P	15 55 59.3	+0.3
	baz=243						
UZB	Uzynbulak	80.70	315	*e*P	P	15 55 58.3	-1.4
	comp=Z,38nm,1.2s,baz=315						
UZB	Uzynbulak	80.70	315	*e*P	P	15 55 58.3	-1.4
UZB				pmax	pmax		
	comp=Z,38nm,1.2s						
RND	Reindeer	80.76	23	P	P	15 55 58.6	-0.8
RND				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RND	Reindeer	80.76	23	P	P	15 55 58.6	-0.8
WAT6	Susitna Watana	80.80	24	P	P	15 55 59.6	-0.1
	baz=241,SNR=5.2						
MLY	Manley	80.89	21	P	P	15 55 59.9	-0.1
MLY	Manley	80.89	21	P	P	15 56 00.3	+0.3
	baz=238,SNR=10.0						
MCK	McKinley	80.89	23	P	P	15 55 59.6	-0.5
MCK				pmax	pmax		
	comp=Z,31nm,1.2s						
MCK	McKinley	80.89	23	P	P	15 55 59.6	-0.5
MCK				IAmb	IAmb	15 55 60.0	
	comp=Z,31nm,1.2s						
MCK	McKinley	80.89	23	P	P	15 55 59.7	-0.3
	baz=240,SNR=9.6						
DIV	Divide	80.95	26	P	P	15 56 00.6	+0.1
PRZ	Przheval'sk	80.98	314	P	P	15 56 02.4	+1.2
PRZ				pmax	pmax		
	comp=Z,131nm,1.2s						
PRZ	Przheval'sk	80.98	314	P	P	15 56 02.4	+1.2
KAIM	Kayak Island	81.03	27	P	P	15 56 00.6	-0.1
	baz=245						
KLU	Klutina	81.05	25	P	P	15 56 01.5	+0.5
KLU	Klutina	81.05	25	P	P	15 56 01.4	+0.5
	baz=243						
SATY	Saty	81.12	315	*e*P	P	15 56 00.6	-1.2
	comp=Z,24nm,1.2s,baz=315						
SATY	Saty	81.12	315	*e*P	P	15 56 00.6	-1.2
SATY				pmax	pmax		
	comp=Z,24nm,1.2s						
DHY	Denali Highway	81.19	24	P	P	15 56 01.7	-0.1
DHY	Denali Highway	81.19	24	P	P	15 56 01.7	-0.1
	baz=242,SNR=8.2						
M24K	Tolsona, Glenn	81.22	25	P	P	15 56 02.2	+0.4
M24K				IAmb	IAmb	15 56 04.5	
	comp=Z,28nm,0.9s						
M24K					pP	15 56 42.9	0.0
M24K	Tolsona, Glenn	81.22	25	P	P	15 56 02.2	+0.4
	baz=243						
HMT	Hamilton	81.27	27	P	P	15 56 02.2	+0.1
HMT				IAmb	IAmb	15 56 13.5	
	comp=Z,38nm,1.2s						
NEA2	Nenana	81.28	22	P	P	15 56 01.1	-0.9
NEA2	Nenana	81.28	22	P	P	15 56 01.5	-0.5
	baz=240,SNR=8.1						
BMRM	Bremner River	81.39	26	P	P	15 56 03.1	+0.3
BMRM	Bremner River	81.39	26	P	P	15 56 02.0	-0.7
	baz=244						
I23K	Minto, Yukon-K	81.45	21	P	P	15 56 02.5	-0.4
I23K	Minto, Yukon-K	81.45	21	P	P	15 56 03.5	+0.6
	baz=239						
BERG	Berg Lake	81.55	27	P	P	15 56 03.8	+0.2
BERG				IAmb	IAmb	15 56 25.9	
	comp=Z,40nm,1.1s						
WRH	Wood River Hil	81.58	22	P	P	15 56 03.1	-0.5
WRH					pP	15 56 43.6	-1.0
TDK	Taldyqorghan	81.61	317	*e*P	P	15 56 03.4	-0.8
	comp=Z,51nm,0.8s,baz=317						
TDK	Taldyqorghan	81.61	317	*e*P	P	15 56 03.4	-0.8
TDK				pmax	pmax		
	comp=Z,51nm,0.8s						
N25K	Chitina, Valde	81.67	26	P	P	15 56 04.1	-0.1
N25K	Chitina, Valde	81.67	26	P	P	15 56 04.0	-0.2
	baz=244						
KDJ	Kajisay	81.77	314	P	P	15 56 05.5	+0.2
KDJ				pmax	pmax		
	comp=Z,81nm,1.1s						
KDJ	Kajisay	81.77	314	P	P	15 56 05.5	+0.2
KDJ				IAmb	IAmb	15 56 07.6	
	comp=Z,81nm,1.1s						
MDM	Murphy Dome	81.77	22	P	P	15 56 03.2	-1.4
CCB	Clear Creek Bu	81.78	22	P	P	15 56 03.4	-1.2
HARP	HAARP	81.78	25	P	P	15 56 04.9	+0.1
	baz=244						
ARXS	Arharly	81.81	316	*e*P	P	15 56 05.6	+0.2
TCOL	CIGO, UAF Yank	81.86	22	P	P	15 56 04.2	-0.9
TCOL	CIGO, UAF Yank	81.86	22	P	P	15 56 04.7	-0.4
	baz=241						
COLA	College	81.87	22	⇑*i*P	P	15 56 04.5	-0.6
COLA				pmax	pmax		
	comp=Z,30nm,1.7s						
COLA	College	81.87	22	P	P	15 56 04.0	-1.0
COLA	College	81.87	22	P	P	15 56 04.7	-0.4
	baz=241						
PAX	Paxson	81.91	24	P	P	15 56 04.9	-0.6
PAX				pmax	pmax		
	comp=Z,16nm,1.5s						
PAX	Paxson	81.91	24	P	P	15 56 04.9	-0.6
PAX	Paxson	81.91	24	P	P	15 56 05.1	-0.3
	baz=243						
GLB	Gilahina Butte	81.94	26	P	P	15 56 05.3	-0.3
GLB				IAmb	IAmb	15 56 06.6	
	comp=Z,32nm,1.3s						
WAX	Waxell Ridge	81.95	27	P	P	15 56 06.0	+0.3
HDA	Harding Lake	81.99	23	P	P	15 56 05.4	-0.3
HDA	Harding Lake	81.99	23	P	P	15 56 05.4	-0.3
	baz=242						
VRDI	Verde Repeater	82.01	26	P	P	15 56 05.3	-0.8
KSH	Kashi	82.07	311	P	P	15 56 09.6	+2.7
KSH				S	S	16 06 10.9	+3.2
KSH				sS	sS	16 07 21.0	+2.5
KSH				pmax	pmax		
	comp=Z,63nm,1.2s						
TGL	Tana Glacier	82.09	27	P	P	15 56 04.1	-2.4
MDOK	Medeo	82.11	315	*e*P	P	15 56 05.7	-1.3
	baz=314						
MDOK	Medeo	82.11	315	P	P	15 56 07.0	0.0
POKR	Poker Plat Res	82.14	22	P	P	15 56 05.2	-1.4
POKR	Poker Plat Res	82.14	22	P	P	15 56 06.0	-0.5
	baz=241						
TNSS	Tian-Shan	82.15	314	*e*P	P	15 56 06.4	-1.2
	baz=314						
IL31		82.18	22	P	P	15 56 05.4	-1.3
ILAR	Eielson Array	82.18	22	P	P	15 56 05.8	-1.0
	comp=Z,5.6nm,0.7s,baz=248,slow=5.0,SNR=63						
ILAR				pP	pP	15 56 48.0	+0.2
	comp=Z,26nm,0.9s,baz=251,slow=4.6,SNR=13						
ILAR				PKKPbc	PKKPbc	16 14 34.0	-3.4
	comp=Z,0.2nm,0.7s,baz=302,slow=1.0,SNR=6.1						
ILAR	Eielson Array	82.18	22	P	P	15 56 05.2	-1.5
COLD	Coldfoot	82.23	19	P	P	15 56 07.4	+0.4
	baz=238						
MESA	MESA	82.26	27	P	P	15 56 07.4	-0.1
	baz=247						
MCARA	McCarthy VSAT	82.26	26	P	P	15 56 07.7	+0.5
	baz=246						
H24K	Noodor Dome	82.33	21	P	P	15 56 06.9	-0.7
H24K	Noodor Dome	82.33	21	P	P	15 56 07.7	+0.1
	baz=241						
ULHL	Ulahol	82.47	313	P	P	15 56 10.2	+1.1
	SNR=7.2						
RIDG	Independent Ri	82.50	24	P	P	15 56 08.1	-0.4
	baz=244						
J25K	Salcha River,	82.69	23	P	P	15 56 09.3	-0.2
	baz=243						
M26K	Nabesna, AK	82.69	25	P	P	15 56 10.5	+1.0
	baz=246						
A21K	Barrow	82.71	15	P	P	15 56 09.2	-0.1
	baz=232						
TABL	Table Mountain	82.73	27	P	P	15 56 10.4	+0.5
TABL				IAmb	IAmb	15 56 12.0	
	comp=Z,54nm,1.5s						
BARN	Barnard Glacie	82.74	27	P	P	15 56 10.4	+0.5
BARN				IAmb	IAmb	15 56 16.5	
	comp=Z,36nm,1.5s						
BOOM	Boomskoye usch	82.75	314	P	P	15 56 11.1	+0.7
BOOM				pmax	pmax		
	comp=Z,48nm,1.2s						
BOOM	Boomskoye usch	82.75	314	P	P	15 56 11.1	+0.7
BOOM				IAmb	IAmb	15 56 12.8	
	comp=Z,48nm,1.1s						
DOT	Dot Lake	82.78	24	P	P	15 56 10.1	+0.2
KUU	Kurty	82.78	315	*e*P	P	15 56 08.7	-1.6
	baz=315						
KUU	Kurty	82.78	315	*e*P	P	15 56 08.7	-1.6
L26K	Log Cabin Wild	82.80	25	P	P	15 56 09.7	-0.4
L26K	Log Cabin Wild	82.80	25	P	P	15 56 10.5	+0.5
	baz=245						
CTG	Chitna Glacier	82.84	27	P	P	15 56 10.6	+0.1
	baz=247						
SCRK	Sand Creek	82.95	24	P	P	15 56 10.3	-0.6
SCRK	Sand Creek	82.95	24	P	P	15 56 11.0	+0.1
	baz=245						
KURK	Kurchatov	82.98	322	*d i*P	P	15 56 11.1	-0.1
KURK				pmax	pmax		
	comp=Z,107nm,1.3s						
KURK	Kurchatov	82.98	322	P	P	15 56 10.8	-0.4
KURK				IAmb	IAmb	15 56 12.6	
	comp=Z,80nm,1.1s						
PINM	Pinnacle	83.01	28	P	P	15 56 11.0	-0.2
	baz=248						
KURBB	Kurchatov Arra	83.02	322	P	P	15 56 10.8	-0.5
PRP	Porcupine Dome	83.04	22	P	P	15 56 10.7	-0.6
PRP	Porcupine Dome	83.04	22	P	P	15 56 11.2	-0.2
	baz=243						
NIL	Nilore	83.08	305	P	P	15 56 11.3	-0.9
NIL				pmax	pmax		
	comp=Z,163nm,1.1s						
NIL	Nilore	83.08	305	P	P	15 56 11.3	-0.9
TKM2	Tokmak 2	83.09	314	P	P	15 56 12.9	+0.7
	SNR=36						
TKM2	Tokmak 2	83.09	314	P	P	15 56 11.7	-0.5
M27K	Edge Creek, AK	83.15	25	P	P	15 56 12.2	+0.2
M27K				IAmb	IAmb	15 56 14.1	
	comp=Z,56nm,1.5s						
M27K	Edge Creek, AK	83.15	25	P	P	15 56 12.5	+0.5
	baz=247						
TOLK	Toolik Lake Re	83.18	18	P	P	15 56 12.1	+0.2
TOLK	Toolik Lake Re	83.18	18	P	P	15 56 12.5	+0.6
	baz=239						
PNL	Peninsula	83.26	28	P	P	15 56 12.2	-0.3
	baz=249						
J26L	Joseph Creek	83.34	23	P	P	15 56 13.1	+0.3
	baz=245						
L27K	Beaver Creek,	83.45	25	P	P	15 56 12.9	-0.5
L27K	Beaver Creek,	83.45	25	P	P	15 56 13.7	+0.3
	baz=247						
KBK	Karagaybulak	83.50	314	P	P	15 56 15.1	+0.8
	SNR=28						
YUK3	Moose Creek	83.54	26	P	P	15 56 14.3	+0.2
	baz=248						
BVCY	Beaver Creek	83.61	26	P	P	15 56 14.7	+0.5
	baz=248						
FYU	Fort Yukon	83.62	21	P	P	15 56 14.1	0.0
CHMS	Chumysh	83.71	314	P	P	15 56 15.5	+0.3
	SNR=48						
UCH	Uchtor	83.72	313	P	P	15 56 17.1	+1.3
	SNR=61						
AAK	Ala-Archa	83.82	314	P	P	15 56 16.8	+0.9
	SNR=36						
AAK	Ala-Archa	83.82	314	P	P	15 56 16.1	+0.2
AAK				pmax	pmax		
	comp=Z,55nm,1.1s						
AAK	Ala-Archa	83.82	314	P	P	15 56 16.1	+0.2
AAK				IAmb	IAmb	15 56 18.2	
	comp=Z,55nm,1.1s						
SGDS	Sogindy	83.89	314	*e*P	P	15 56 14.6	-1.5
	comp=Z,30nm,1.3s,baz=314						
SGDS				*i* S	S	16 06 20.3	-5.5
	baz=314						
SGDS	Sogindy	83.89	314	*e*P	P	15 56 16.0	-0.1
SGDS				pmax	pmax		
	comp=Z,30nm,1.3s						
USP	Ospenovka	83.95	314	P	P	15 56 16.9	+0.6
	SNR=61						
BMAR	Burnt Mountain	84.24	20	P	P	15 56 17.5	+0.2
AML	Almayashu	84.30	313	P	P	15 56 19.9	+1.3

	SNR=154						
EKS2	**Erkin-Say**	**84.34**	**313**	P	**P**	**15 56 19.6**	**+1.1**
	SNR=70						
EGAK	**Eagle**	**84.40**	**23**	P	**P**	**15 56 18.2**	**+0.1**
EGAK	**Eagle**	**84.40**	**23**	P	**P**	**15 56 18.6**	**+0.5**
	baz=247,SNR=7.9						
SIT	**Sitka**	**84.45**	**32**	P	**P**	**15 56 19.5**	**+1.1**
	baz=253						
BTLS	**Baital**	**84.63**	**316**	*e*P	**P**	**15 56 18.6**	**-1.1**
	comp=Z,54nm,1.3s,baz=316						
BTLS	**Baital**	**84.63**	**316**	*e*P	**P**	**15 56 18.5**	**-1.1**
BTLS				pmax	pmax		
	comp=Z,54nm,1.3s						
DAWY	**Dawson**	**84.84**	**24**	P	**P**	**15 56 20.7**	**+0.3**
DAWY				IAmb	IAmb	15 56 22.6	
	comp=Z,31nm,1.5s						
DAWY	**Dawson**	**84.84**	**24**	P	**P**	**15 56 21.0**	**+0.6**
	baz=249,SNR=9.5						
SKAG	**Skagway**	**85.15**	**29**	P	**P**	**15 56 23.1**	**+1.2**
	baz=253						
NRIK	**Noril'sk**	**85.38**	**341**	P	**P**	**15 56 23.0**	**+0.1**
	comp=Z,13nm,0.6s,baz=119,slow=4.5,SNR=23						
NRIK	**Noril'sk**	**85.38**	**341**	*d* *i*P	**P**	**15 56 22.2**	**-0.7**
NRIK				pmax	pmax		
	comp=Z,38nm,1.5s						
NRIK	**Noril'sk**	**85.38**	**341**	P	**P**	**15 56 22.3**	**-0.5**
NRIK				IAmb	IAmb	15 56 24.0	
	comp=Z,42nm,1.4s						
QSPA	**South Pole Qui**	**85.48**	**180**	P	**P**	**15 56 23.7**	**0.0**
	comp=Z,23nm,0.9s,baz=322,slow=0.8,SNR=63						
QSPA	**South Pole Qui**	**85.48**	**180**	P	**P**	**15 56 22.9**	**-0.8**
QSPA				IAmb	IAmb	15 56 24.4	
	comp=Z,47nm,1.1s						
MAW	**Mawson**	**85.54**	**203**	P	**P**	**15 56 23.8**	**+0.1**
	comp=Z,33nm,0.7s,baz=94,slow=5.7,SNR=38						
MAW	**Mawson**	**85.54**	**203**	P	**P**	**15 56 23.9**	**+0.1**
	baz=86,SNR=31						
MAW	**Mawson**	**85.54**	**203**	P	**P**	**15 56 23.0**	**-0.7**
MAW				pmax	pmax		
	comp=Z,29nm,1.4s						
MAW	**Mawson**	**85.54**	**203**	P	**P**	**15 56 23.0**	**-0.7**
MAW				IAmb	IAmb	15 56 25.1	
	comp=Z,29nm,1.4s						
N31M	**Braeburn, Yuko**	**85.55**	**27**	P	**P**	**15 56 24.5**	**+0.6**
	baz=252						
WHY	**Whitehorse**	**85.72**	**28**	P	**P**	**15 56 25.6**	**+0.7**
	baz=253						
I29M	**Ogilvie Camp,**	**85.74**	**23**	P	**P**	**15 56 25.2**	**+0.4**
	baz=250,SNR=5.2						
WRAK	**Wrangell Islan**	**85.85**	**33**	P	**P**	**15 56 25.8**	**+0.4**
	baz=256						
BTK	**Batken**	**86.08**	**311**	P	**P**	**15 56 26.5**	**-0.6**
BTK				pmax	pmax		
	comp=Z,154nm,1.4s						
BTK	**Batken**	**86.08**	**311**	P	**P**	**15 56 26.5**	**-0.6**
DZA	**Taraz**	**86.16**	**313**	*e*P	**P**	**15 56 26.9**	**-0.5**
	baz=313						
DZA	**Taraz**	**86.16**	**313**	*e*P	**P**	**15 56 26.9**	**-0.5**
M31M	**Drury Creek, Y**	**86.39**	**27**	P	**P**	**15 56 28.1**	**0.0**
	baz=253						
BRZS	**Berezniki**	**86.52**	**321**	*e*P	**P**	**15 56 27.7**	**-1.2**
	baz=321						
BRZS	**Berezniki**	**86.52**	**321**	*e*P	**P**	**15 56 28.6**	**-0.3**
BRZS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
P33M	**Teslin, Yukon**	**86.58**	**29**	P	**P**	**15 56 29.2**	**+0.2**
	baz=255						
KBL	**Kabul**	**86.67**	**305**	P	**P**	**15 56 28.7**	**-1.6**
KBL				pmax	pmax		
	comp=Z,20nm,1.0s						
KBL	**Kabul**	**86.67**	**305**	P	**P**	**15 56 28.7**	**-1.6**
KBL				IAmb	IAmb	15 56 30.5	
	comp=Z,20nm,0.9s						
KKAR	**Karatay Array**	**86.78**	**314**	P	**P**	**15 56 29.8**	**-0.6**
KKAR	**Karatay Array**	**86.78**	**314**	P	**P**	**15 56 29.8**	**-0.6**
FARO	**Faro, Yukon**	**86.87**	**27**	P	**P**	**15 56 31.2**	**+0.8**
	baz=254,SNR=7.6						
IUG	**Iuzhnay**	**86.99**	**312**	*e*P	**P**	**15 56 30.1**	**-1.4**
	baz=312						
IUG				*i* S	**SKSac**	**16 06 40.1**	**-3.0**
	baz=312						
IUG	**Iuzhnay**	**86.99**	**312**	*e*P	**P**	**15 56 31.9**	**+0.4**
IUG				pmax	pmax		
	comp=Z,313nm,1.2s						
CHGR	**Chuyangaron**	**87.14**	**309**	P	**P**	**15 56 31.7**	**-0.6**
BRLS	**Borolday**	**87.26**	**313**	*e*P	**P**	**15 56 32.1**	**-0.6**
	baz=313						
BRLS	**Borolday**	**87.26**	**313**	*e*P	**P**	**15 56 32.1**	**-0.6**
INK	**Inuvik**	**88.46**	**21**	P	**P**	**15 56 37.8**	**+0.1**
	comp=Z,6.9nm,1.1s,baz=293,slow=2.2,SNR=10.0						
INK				pP	**pP**	**15 57 20.9**	**+1.5**
	comp=Z,30nm,1.1s,baz=268,slow=5.7,SNR=13						
INK	**Inuvik**	**88.46**	**21**	P	**P**	**15 56 37.3**	**-0.4**
INK				pmax	pmax		
	comp=Z,16nm,1.3s						
INK	**Inuvik**	**88.46**	**21**	P	**P**	**15 56 37.3**	**-0.4**
INK				IAmb	IAmb	15 56 38.0	
	comp=Z,16nm,1.3s						
INK	**Inuvik**	**88.46**	**21**	P	**P**	**15 56 37.9**	**+0.2**
	baz=254						
WTLY	**Watson Lake, Y**	**88.51**	**29**	P	**P**	**15 56 38.0**	**-0.2**
	baz=258						
BRVK	**Borovoye**	**88.53**	**323**	P	**P**	**15 56 37.1**	**-1.4**
BRVK				pmax	pmax		
	comp=Z,39nm,1.2s						
BRVK	**Borovoye**	**88.53**	**323**	P	**P**	**15 56 37.0**	**-1.4**
BRVK				IAmb	IAmb	15 56 38.9	
	comp=Z,39nm,1.1s						
J01E	**Myrtle Point**	**88.75**	**47**	P	**P**	**15 56 39.9**	**+0.2**
	baz=263						
L02E	**Cave Junction**	**88.87**	**48**	P	**P**	**15 56 40.2**	**-0.1**
	baz=263						
K02D	**Willamette Mer**	**88.89**	**47**	P	**P**	**15 56 40.5**	**+0.1**
	baz=263						
I02E	**Swisshome, OR**	**88.93**	**46**	P	**P**	**15 56 41.2**	**+0.7**
	baz=263						
I03D	**Drain, OR**	**89.24**	**46**	P	**P**	**15 56 42.3**	**+0.3**
	baz=263						
O02D	**Mt. Diablo Mer**	**89.25**	**50**	P	**P**	**15 56 42.7**	**+0.5**
	baz=264,SNR=6.9						
M02C	**Callahan**	**89.33**	**49**	P	**P**	**15 56 43.6**	**+1.1**
	baz=264,SNR=5.4						
HUMO	**Hull Mountain**	**89.39**	**47**	P	**P**	**15 56 44.0**	**+1.3**
HUMO				IAmb	IAmb	15 56 45.6	
	comp=Z,34nm,0.8s						
N02D	**Trinity Center**	**89.40**	**49**	P	**P**	**15 56 43.7**	**+0.8**
	baz=264						
G03D	**McMinnville, O**	**89.48**	**45**	P	**P**	**15 56 43.5**	**+0.5**
	baz=263						
L04D	**Klamath Falls**	**89.83**	**48**	P	**P**	**15 56 45.8**	**+0.9**
	baz=264						
I04A	**Tendick Farm,**	**89.92**	**46**	P	**P**	**15 56 45.8**	**+0.6**
	baz=264						
O03E	**Paynes Creek**	**90.01**	**50**	P	**P**	**15 56 46.1**	**+0.4**
	baz=264,SNR=5.7						
J04D	**Umpqua Nationa**	**90.08**	**47**	P	**P**	**15 56 46.2**	**0.0**
	baz=264						
E04D	**Cinebar**	**90.11**	**43**	P	**P**	**15 56 46.8**	**+0.8**
	baz=264						
M04C	**Macdoel**	**90.13**	**48**	P	**P**	**15 56 47.1**	**+0.7**
	baz=264,SNR=5.8						
ORV	**Oroville**	**90.17**	**51**	P	**P**	**15 56 46.1**	**-0.3**
ORV				pmax	pmax		
	comp=Z,18nm,1.3s						
ORV	**Oroville**	**90.17**	**51**	P	**P**	**15 56 46.1**	**-0.3**
ORV				IAmb	IAmb	15 56 49.0	
	comp=Z,18nm,1.2s						
A04D	**Lummi Island**	**90.26**	**41**	P	**P**	**15 56 47.6**	**+1.0**
	baz=264						
K04D	**Chiloquin, OR**	**90.28**	**47**	P	**P**	**15 56 47.7**	**+0.6**
	baz=264						
B05A	**Bryant**	**90.62**	**42**	P	**P**	**15 56 48.9**	**+0.7**
	baz=264						
J05D	**Fort Rock, OR**	**90.72**	**47**	P	**P**	**15 56 49.6**	**+0.5**
	baz=265,SNR=7.7						
I05D	**Terrebonne, OR**	**90.75**	**46**	P	**P**	**15 56 49.5**	**+0.4**
	baz=264						
F05D	**White Salmon**	**90.81**	**44**	P	**P**	**15 56 50.3**	**+1.0**
	baz=264						
G05D	**Wamic, OR**	**90.85**	**45**	P	**P**	**15 56 50.4**	**+0.9**
	baz=264						
K05A	**Summer Lake**	**90.92**	**47**	P	**P**	**15 56 51.1**	**+1.0**
PKM	**Mcpherson Peak**	**91.09**	**55**	P	**P**	**15 56 51.6**	**+0.6**
	baz=265						
MOD	**Modoc Plateau**	**91.28**	**48**	P	**P**	**15 56 52.3**	**+0.6**
MOD				IAmb	IAmb	15 56 53.6	
	comp=Z,35nm,0.9s						
LTY	**Liberty**	**91.48**	**43**	P	**P**	**15 56 52.7**	**+0.3**
LTY				IAmb	IAmb	15 56 53.6	
	comp=Z,13nm,0.8s						
PAHR	**Pah Rah Range**	**91.81**	**50**	P	**P**	**15 56 53.9**	**-0.3**
PAHR				IAmb	IAmb	15 56 56.1	
	comp=Z,16nm,1.0s						
A36M	**Sachs Harbour**	**92.00**	**18**	P	**P**	**15 56 52.9**	**-1.2**
A36M	**Sachs Harbour**	**92.00**	**18**	P	**P**	**15 56 55.4**	**+1.3**
	baz=262						
CIS	**Catalina Islan**	**92.14**	**57**	P	**P**	**15 56 56.5**	**+0.8**
	baz=266						
HAWA	**Hanford**	**92.19**	**44**	P	**P**	**15 56 55.2**	**-0.4**
HAWA				IAmb	IAmb	15 56 57.4	
	comp=Z,23nm,1.1s						
ISA	**Isabella, Lake**	**92.24**	**55**	P	**P**	**15 56 57.1**	**+0.9**
	baz=266,SNR=6.9						
HRA	**Herat**	**92.25**	**304**	P	**P**	**15 56 55.5**	**-0.9**
HRA				IAmb	IAmb	15 56 57.1	
	comp=Z,39nm,1.1s						
FMP	**Fort Macarthur**	**92.26**	**57**	P	**P**	**15 56 56.4**	**+0.2**
	baz=266						
DECC	**Green Verdugo**	**92.26**	**56**	P	**P**	**15 56 56.4**	**+0.2**
	baz=266						
PASC	**Pasadena Art C**	**92.38**	**56**	P	**P**	**15 56 56.7**	**-0.1**
RYN	**Ryan**	**92.40**	**52**	P	**P**	**15 56 56.3**	**-0.7**
RYN				IAmb	IAmb	15 56 59.1	
	comp=Z,25nm,1.1s						
B08A	**Colville Reser**	**92.46**	**42**	P	**P**	**15 56 56.4**	**-0.5**
B08A				IAmb	IAmb	15 56 58.0	
	comp=Z,8.6nm,0.8s						
E08A	**Dider Farm, El**	**92.52**	**44**	P	**P**	**15 56 56.5**	**-0.6**
E08A				IAmb	IAmb	15 56 59.0	
	comp=Z,21nm,1.0s						
TIN	**Tinemaha, Big**	**92.53**	**53**	P	**P**	**15 56 58.6**	**+1.1**
	baz=266,SNR=5.8						
NVAR	**Mina Array Bea**	**92.56**	**52**	P	**P**	**15 56 58.3**	**+0.5**
	comp=Z,16nm,0.8s,baz=257,slow=6.0,SNR=52						
NVAR	**Mina Array Bea**	**92.56**	**52**	P	**P**	**15 56 58.0**	**+0.2**
WVOR	**Wild Horse Val**	**92.56**	**48**	P	**P**	**15 56 57.4**	**-0.2**
WVOR				pmax	pmax		
	comp=Z,27nm,1.0s						
WVOR	**Wild Horse Val**	**92.56**	**48**	P	**P**	**15 56 57.4**	**-0.2**
WVOR				IAmb	IAmb	15 56 59.5	
	comp=Z,27nm,1.0s						
EDW2	**Edwards Air Fo**	**92.58**	**55**	P	**P**	**15 56 59.0**	**+1.2**
	baz=266,SNR=7.4						
CWC	**Cottonwood Cre**	**92.61**	**54**	P	**P**	**15 56 59.1**	**+1.1**
	baz=266						
D08A	**Wollman Farm,**	**92.65**	**43**	P	**P**	**15 56 58.1**	**+0.4**
D08A				IAmb	IAmb	15 56 59.5	
	comp=Z,14nm,1.0s						
NV11	**Mina Array Sit**	**92.67**	**52**	P	**P**	**15 56 58.0**	**-0.3**
NV11				IAmb	IAmb	15 57 00.2	
	comp=Z,30nm,1.1s						
KVN	**Kaiserville**	**92.76**	**51**	P	**P**	**15 56 58.7**	**0.0**
KVN				pmax	pmax		
	comp=Z,18nm,1.0s						
KVN	**Kaiserville**	**92.76**	**51**	P	**P**	**15 56 58.7**	**0.0**
KVN				IAmb	IAmb	15 57 00.6	
	comp=Z,18nm,1.0s						
BFSC	**Mount Baldy Ra**	**92.82**	**56**	P	**P**	**15 56 59.7**	**+0.7**
	baz=266,SNR=6.6						
LRMC	**Laurel Mtn Rad**	**92.87**	**55**	P	**P**	**15 57 00.5**	**+1.3**
	baz=267,SNR=13						
LCH	**Last Change Ra**	**93.01**	**53**	P	**P**	**15 57 00.2**	**+0.4**
LCH				IAmb	IAmb	15 57 01.6	
	comp=Z,6.7nm,0.9s						
MPMC	**Manual Prospec**	**93.06**	**54**	P	**P**	**15 57 01.0**	**+0.8**
	baz=267,SNR=14						
C09A	**Chrisman Ranch**	**93.14**	**42**	P	**P**	**15 56 59.7**	**-0.3**
C09A				IAmb	IAmb	15 57 01.3	
	comp=Z,9.3nm,0.8s						
E09A	**Wood Farm, Sta**	**93.15**	**44**	P	**P**	**15 57 00.2**	**+0.2**
E09A				IAmb	IAmb	15 57 01.8	
	comp=Z,26nm,1.1s						
MURC	**Murrieta**	**93.17**	**57**	P	**P**	**15 57 01.0**	**+0.6**
	baz=267						
109C	**Camp Elliot, M**	**93.20**	**57**	P	**P**	**15 57 01.4**	**+0.8**
	baz=267						
TPH	**Tonopah**	**93.39**	**52**	P	**P**	**15 57 01.2**	**-0.4**
TPH				pmax	pmax		
	comp=Z,84nm,1.0s						
TPH	**Tonopah**	**93.39**	**52**	P	**P**	**15 57 01.2**	**-0.4**
BBRC	**Big Bear Solar**	**93.43**	**56**	P	**P**	**15 57 02.5**	**+0.6**
	baz=267						
BMN	**Battle Mountai**	**93.51**	**50**	P	**P**	**15 57 01.4**	**-0.6**
BMN				pmax	pmax		
	comp=Z,14nm,0.9s						
BMN	**Battle Mountai**	**93.51**	**50**	P	**P**	**15 57 01.4**	**-0.6**
BMN				IAmb	IAmb	15 57 04.9	
	comp=Z,14nm,0.9s						
GSC	**Goldstone, Bar**	**93.58**	**55**	P	**P**	**15 57 03.3**	**+0.9**
	baz=267,SNR=5.8						
FURC	**Furnace Creek,**	**93.59**	**54**	P	**P**	**15 57 03.1**	**+0.9**
	baz=267,SNR=14						
BMO	**Blue Mountains**	**93.66**	**45**	P	**P**	**15 57 02.6**	**0.0**
BMO				pmax	pmax		
	comp=Z,19nm,1.1s						
BMO	**Blue Mountains**	**93.66**	**45**	P	**P**	**15 57 02.6**	**0.0**
BMO				IAmb	IAmb	15 57 04.1	
	comp=Z,20nm,1.1s						
SYO	**Syowa Base**	**93.69**	**200**	⇓*i*P	**P**	**15 57 01.6**	**-0.4**
SYO	**Syowa Base**	**93.69**	**200**	⇑*e*pP	pP	15 57 42.6	-1.8
F10A	**Beach Ranch, E**	**93.76**	**44**	P	**P**	**15 57 02.6**	**-0.4**
F10A				IAmb	IAmb	15 57 04.4	
	comp=Z,13nm,0.9s						
MONP2	**Monument Peak**	**93.78**	**57**	P	**P**	**15 57 04.6**	**+1.1**
	baz=267,SNR=10						
PFO	**Pinyon Flats O**	**93.78**	**57**	P	**P**	**15 57 02.7**	**-0.7**
PFO				pmax	pmax		
	comp=Z,25nm,1.0s						
PFO	**Pinyon Flats O**	**93.78**	**57**	P	**P**	**15 57 02.7**	**-0.7**
PFO				IAmb	IAmb	15 57 05.8	
	comp=Z,25nm,1.0s						
PFO	**Pinyon Flats O**	**93.78**	**57**	P	**P**	**15 57 04.2**	**+0.8**
	baz=267,SNR=11						
TPFO	**Pinon Flats**	**93.78**	**57**	P	**P**	**15 57 04.2**	**+0.8**
	baz=267,SNR=11						
NEW	**Newport**	**93.93**	**42**	P	**P**	**15 57 03.6**	**0.0**
NEW				pmax	pmax		
	comp=Z,20nm,1.1s						
NEW	**Newport**	**93.93**	**42**	P	**P**	**15 57 03.6**	**0.0**
NEW				IAmb	IAmb	15 57 05.1	
	comp=Z,20nm,1.1s						
NEW	**Newport**	**93.93**	**42**	P	**P**	**15 57 04.0**	**+0.4**
	baz=268,SNR=8.3						
HEC	**Hector,Ludlow**	**93.94**	**56**	P	**P**	**15 57 05.1**	**+1.0**
	baz=267						
IKP	**In-Ko-Pah, Jac**	**94.03**	**58**	P	**P**	**15 57 04.6**	**+0.1**
	baz=267						
SHOC	**Shoshone, Teco**	**94.04**	**54**	P	**P**	**15 57 05.7**	**+1.3**
	baz=267,SNR=6.0						
TPNV	**Topopah Spring**	**94.11**	**53**	P	**P**	**15 57 04.3**	**-0.6**
TPNV				pmax	pmax		
	comp=Z,18nm,1.0s						
TPNV	**Topopah Spring**	**94.11**	**53**	P	**P**	**15 57 04.3**	**-0.6**
TPNV				IAmb	IAmb	15 57 07.0	
	comp=Z,18nm,0.9s						
TPNV	**Topopah Spring**	**94.11**	**53**	P	**P**	**15 57 05.3**	**+0.4**
	baz=268,SNR=33						
BELC	**Belle Mtn. Jos**	**94.18**	**56**	P	**P**	**15 57 06.4**	**+1.2**
	baz=267,SNR=12						
SWSC	**Sam W. Stewart**	**94.30**	**57**	P	**P**	**15 57 07.2**	**+1.6**
	baz=268,SNR=6.3						
TUQ	**Turquoise Moun**	**94.31**	**55**	P	**P**	**15 57 06.6**	**+0.8**
	baz=268,SNR=8.0						
SVE	**Sverdlovsk**	**94.43**	**327**	*e*P	**P**	**15 57 04.5**	**-1.1**
SVE				pmax	pmax		
	comp=Z,18nm,1.3s						
GMRC	**Granite Mounta**	**94.50**	**56**	P	**P**	**15 57 07.7**	**+1.1**
	baz=268,SNR=17						
PLID	**Pearl Lake**	**94.59**	**45**	P	**P**	**15 57 06.5**	**-0.5**
PLID				IAmb	IAmb	15 57 08.2	
	comp=Z,7.3nm,0.8s						
BC3	**Big Chuckawall**	**94.62**	**57**	P	**P**	**15 57 08.7**	**+1.5**
	baz=268,SNR=12						
ABKAR	**Akbulak array**	**94.66**	**319**	P	**P**	**15 57 04.8**	**-2.1**
ABKAR				IAmb	IAmb	15 57 06.4	
	comp=Z,13nm,1.2s						
ABKAR	**Akbulak array**	**94.66**	**319**	P	**P**	**15 57 05.3**	**-1.6**
MFID	**Camas Ranch**	**94.67**	**47**	P	**P**	**15 57 07.2**	**0.0**
MFID				IAmb	IAmb	15 57 09.2	
	comp=Z,24nm,1.4s						
R11A	**Troy Canyon, C**	**94.69**	**52**	P	**P**	**15 57 08.5**	**+1.0**
	baz=268,SNR=23						
IRM	**Iron Mountain**	**94.90**	**56**	P	**P**	**15 57 09.9**	**+1.5**
	baz=268,SNR=15						
SHPR	**Sheep Range**	**94.96**	**54**	P	**P**	**15 57 09.0**	**+0.2**
SHPR				IAmb	IAmb	15 57 11.3	
	comp=Z,23nm,0.9s						
ELK	**Elko**	**95.03**	**50**	P	**P**	**15 57 08.3**	**-0.8**
ELK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ELK	**Elko**	**95.03**	**50**	P	**P**	**15 57 08.3**	**-0.8**
PRN	**Pahroc Range**	**95.08**	**53**	P	**P**	**15 57 09.4**	**+0.2**
GLA	**Glamis**	**95.12**	**57**	P	**P**	**15 57 09.6**	**+0.1**
GLA				pmax	pmax		
	comp=Z,26nm,1.1s						
GLA	**Glamis**	**95.12**	**57**	P	**P**	**15 57 09.6**	**+0.1**
GLA	**Glamis**	**95.12**	**57**	P	**P**	**15 57 11.3**	**+1.9**
	baz=268,SNR=9.8						
YKA	**Yellowknife Ar**	**95.54**	**28**	P	**P**	**15 57 10.6**	**0.0**
	comp=Z,1.8nm,0.7s,baz=269,slow=4.9,SNR=37						
YKA				pP	**pP**	**15 57 53.5**	**+0.8**
	comp=Z,4.5nm,0.9s,baz=267,slow=4.8,SNR=5.5						
YKA				PKiKP	**PKiKP**	**16 01 50.9**	**+1.2**
	comp=Z,0.9nm,0.9s,baz=275,slow=2.1,SNR=4.2						
YKA				PKKPbc	**PKKPbc**	**16 14 04.6**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=78,slow=2.8,SNR=4.2						
YKA	**Yellowknife Ar**	**95.54**	**28**	P	**P**	**15 57 10.3**	**-0.2**
ARU	**Arti**	**95.57**	**326**	LR	LR	16 40 26.9	
	comp=Z,154nm,21.4s,baz=76,slow=35						
ARU	**Arti**	**95.57**	**326**	*d* *i*P	**P**	**15 57 09.0**	**-1.9**
ARU				*PP	**pP**	**15 57 53.8**	**+0.8**
ARU						16 01 02.9	
ARU				S	**SKSac**	**16 07 28.5**	**-2.3**
ARU				SS	**SS**	**16 14 42.6**	**-2.7**
ARU				pmax	pmax		
	comp=Z,23nm,1.1s						
ARU	**Arti**	**95.57**	**326**	P	**P**	**15 57 08.8**	**-2.0**
ARU				IAmb	IAmb	15 57 10.9	
	comp=Z,19nm,1.0s						
HLID	**Hailey**	**95.70**	**47**	P	**P**	**15 57 11.3**	**-0.7**
HLID	**Hailey**	**95.70**	**47**	P	**P**	**15 57 13.8**	**+1.8**
	baz=269						
PDMCI	**Parker Dam,Lak**	**95.73**	**56**	P	**P**	**15 57 13.5**	**+1.3**
	baz=268						
GEYT	**Alibeck**	**95.74**	**308**	P	**P**	**15 57 11.7**	**-0.4**
	comp=Z,4.2nm,0.9s,baz=28,slow=22,SNR=2.9						
GEYT				LR	LR	16 44 29.8	
	comp=Z,96nm,18.1s,baz=50,slow=38						
MSO	**Missoula**	**96.06**	**44**	P	**P**	**15 57 14.1**	**+0.7**
	baz=270						
WALA	**Waterton Lakes**	**96.07**	**41**	P	**P**	**15 57 13.5**	**0.0**
WALA				IAmb	IAmb	15 57 15.7	
	comp=Z,18nm,0.9s						
EDM	**Edmonton**	**96.38**	**37**	P	**P**	**15 57 14.6**	**-0.1**
EDM				pmax	pmax		
	comp=Z,40nm,1.0s						
EDM	**Edmonton**	**96.38**	**37**	P	**P**	**15 57 14.6**	**-0.1**
SZCU	**Shurtz Canyon**	**96.64**	**53**	P	**P**	**15 57 16.0**	**-0.5**
SZCU				IAmb	IAmb	15 57 18.8	
	comp=Z,9.6nm,1.0s						
BGU	**Big Grassy Mou**	**96.71**	**49**	P	**P**	**15 57 15.9**	**-0.7**
DUG	**Dugway, Tooele**	**96.87**	**50**	P	**P**	**15 57 18.2**	**+0.9**
	baz=270						
HVU	**Hansel Valley**	**96.90**	**49**	P	**P**	**15 57 17.2**	**-0.3**
HVU				pmax	pmax		
	comp=Z,12nm,0.9s						
HVU	**Hansel Valley**	**96.90**	**49**	P	**P**	**15 57 17.2**	**-0.3**
HVU				IAmb	IAmb	15 57 19.1	
	comp=Z,12nm,0.9s						
UOSS	**Minazif**	**97.06**	**294**	P	**P**	**15 57 15.9**	**-2.4**
UOSS				IAmb	IAmb	15 57 18.1	
	comp=Z,22nm,1.2s						
ASHO	**Ashiyiah**	**97.19**	**294**	P	**P**	**15 57 17.9**	**-1.1**
NLU	**North Lily Min**	**97.44**	**50**	P	**P**	**15 57 19.4**	**-0.6**
NLU				IAmb	IAmb	15 57 23.0	
	comp=Z,3.6nm,0.8s						
BOZ	**Bozeman (W)**	**97.68**	**45**	P	Pdif	15 57 21.8	+0.9
	baz=272						
HWUT	**Hardware Ranch**	**97.81**	**49**	P	**P**	**15 57 20.1**	**-1.5**
HWUT				IAmb	IAmb	15 57 25.3	
	comp=Z,4.2nm,0.5s						
ASUD	**Al Ashush, Dub**	**97.85**	**294**	P	**P**	**15 57 20.9**	**-1.0**
WUAZ	**Wupatki**	**98.02**	**55**	P	**P**	**15 57 22.2**	**-0.5**
WUAZ	**Wupatki**	**98.02**	**55**	P	Pdif	15 57 24.4	+1.7
	baz=270,SNR=9.0						
AHID	**Auburn Hatcher**	**98.13**	**48**	P	**P**	**15 57 22.6**	**-0.5**
AHID				IAmb	IAmb	15 57 24.3	
	comp=Z,7.2nm,0.9s						
REDW	**Red Top Meadow**	**98.29**	**47**	P	**P**	**15 57 23.6**	**-0.2**
REDW				IAmb	IAmb	15 57 24.8	
	comp=Z,8.8nm,1.2s						
H17A	**Grant Village**	**98.46**	**46**	P	Pdif	15 57 26.5	+2.0
	baz=272						
P17A	**Butcher Ranch,**	**98.47**	**51**	P	**P**	**15 57 24.0**	**-0.6**
P17A				IAmb	IAmb	15 57 26.4	
	comp=Z,6.5nm,0.8s						
EGMT	**Eagleton**	**98.86**	**42**	P	Pdif	15 57 26.5	+0.5
	baz=273						
BW06	**Boulder Array**	**99.26**	**48**	P	**Pdif**	**15 57 28.2**	**0.0**
	baz=272						
PDAR	**Pinedale Array**	**99.26**	**48**	P	**Pdif**	**15 57 27.9**	**-0.2**
	comp=Z,5.5nm,0.8s,baz=246,slow=2.3,SNR=47						
W18A	**Petrified Fore**	**99.36**	**55**	P	**Pdif**	**15 57 30.1**	**+1.4**
	baz=271,SNR=10						
MVCO	**Mesa Verde**	**100.30**	**53**	P	**Pdif**	**15 57 33.9**	**+1.0**
	baz=272,SNR=6.4						
KIRV	**Kirov**	**100.33**	**329**	⇓*i*P	**Pdif**	**15 57 31.3**	**-0.8**
O20A	**White River Ci**	**100.38**	**50**	P	**Pdif**	**15 57 34.1**	**+1.0**
	baz=273						
LAO	**LASA Array**	**101.36**	**43**	P	**Pdif**	**15 57 37.9**	**+0.8**
	baz=276						
K22A	**Casper**	**101.50**	**48**	P	**Pdif**	**15 57 39.2**	**+1.2**
	baz=275						
S22A	**4UR Ranch, Cre**	**101.61**	**53**	P	**Pdif**	**15 57 39.7**	**+0.9**
	baz=273,SNR=6.2						
ANMO	**Albuquerque**	**102.06**	**55**	P	**Pdif**	**15 57 41.5**	**+0.8**
	baz=273						
N23A	**Red Feather La**	**102.07**	**49**	P	**Pdif**	**15 57 41.5**	**+0.8**
	baz=275						
SNAA	**Sanae**	**102.23**	**188**	⇑*e*P	**Pdif**	**15 57 40.4**	**-0.1**
SNAA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ISCO	**Idaho Springs**	**102.41**	**50**	P	**Pdif**	**15 57 42.9**	**+0.6**
	baz=275						
DGMT	**Dagmar**	**102.52**	**41**	P	**Pdif**	**15 57 43.0**	**+0.8**
	baz=278						
SDCO	**Great Sand Dun**	**102.66**	**52**	P	**Pdif**	**15 57 43.6**	**+0.2**
	baz=274						
Q24A	**Divide**	**102.84**	**51**	P	**Pdif**	**15 57 44.2**	**0.0**
	baz=275						
MNTX	**Cornudas Mount**	**103.12**	**59**	P	**Pdif**	**15 57 45.4**	**+0.1**
	baz=273						
RSSD	**Black Hills**	**103.17**	**46**	P	**Pdif**	**15 57 45.4**	**0.0**
	baz=277						
T25A	**Trinidad**	**103.57**	**53**	P	**Pdif**	**15 57 48.1**	**+0.7**
	baz=275						
MAK	**Makhachkala**	**103.59**	**313**	*e*P	**Pdif**	**15 57 44.6**	**-2.4**
MAK				*e*		16 02 03.8	
MAK				*e*		16 08 10.5	
KLMR	**Klimovskoe**	**104.70**	**332**	*e*P	**Pdif**	**15 57 48.0**	**-3.5**
KLMR				*e*		16 02 09.7	
KLMR				pmax	pmax		
	comp=Z,18nm,1.2s						
KLMR	**Klimovskoe**	**104.70**	**332**	*e*Pdif	**Pdif**	**15 57 48.1**	**-3.5**
KLMR				AMP		15 57 50.9	
	comp=Z,18nm,1.2s						
KLMR				*e*PP	**PP**	**16 02 09.8**	**-3.1**
TXAR	**Lajitas Array**	**104.72**	**61**	Pdiff	**Pdif**	**15 57 57.9**	**+5.3**
	comp=Z,0.2nm,0.6s,baz=262,slow=3.4,SNR=2.6						
TXAR				PP	**PP**	**16 02 14.2**	**-0.1**
	comp=Z,1.3nm,1.0s,baz=261,slow=4.9,SNR=6.8						
TXAR				PKKPbc	**PKKPbc**	**16 13 39.2**	**+2.4**
	comp=Z,0.1nm,0.6s,baz=102,slow=5.3,SNR=4.2						
ARCES	**ARCESS Array B**	**106.31**	**343**	PKiKP	**PKiKP**	**16 02 09.3**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=123,slow=1.6,SNR=12						
OBN	**Obninsk**	**107.99**	**327**	*i* P	**Pdif**	**15 58 05.6**	**-0.7**
OBN				*e*		16 02 36.7	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ECSD	**EROS Data Cent**	**108.52**	**45**	P	**PKiKP**	**16 02 13.9**	**0.0**
	baz=282						
FINES	**FINESS Array B**	**110.40**	**335**	Pdiff	**Pdif**	**15 58 17.3**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=50,slow=4.3,SNR=1.5						
FINES				PKiKP	**PKiKP**	**16 02 17.3**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=222,slow=2.6,SNR=8.0						
W41B	**Gary Mavity, V**	**113.58**	**54**	P	**PKiKP**	**16 02 22.4**	**-1.3**
	baz=282						
AKASG	**Malin Array Be**	**113.73**	**324**	PKiKP	**PKiKP**	**16 02 22.9**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=60,slow=2.4,SNR=7.3						

AKASG				PP	PP	16 03 16.9	-1.5
	comp=Z,3.1nm,1.0s,baz=57,slow=7.6,SNR=5.7						
AKASG	Malin Array Be	113.73	324	PKiKP	PKiKP	16 02 22.6	-0.8
AKBB	Malin Array Si	113.73	324	⇓ *i*PKIKP	PKiKP	16 02 21.5	-2.0
KMBO	Kilima Mbogo	114.51	267	*i* PKIKP	PKiKP	16 02 27.2	+0.8
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CSS	Mathiatis	115.87	307		PKPdf	16 02 27.3	-0.8
HFS	Hagfors	116.06	338	PP	PP	16 03 35.0	+0.7
	comp=Z,5.0nm,0.8s,baz=200,slow=7.9,SNR=3.5						
NB2	NORSAR Subarra	116.31	340	PKPdf	PKPdf	16 02 27.9	-0.4
	comp=Z,8.4nm,0.8s,baz=40,slow=1.9						
NB2	NORSAR Subarra	116.31	340	PKPdf	PKPdf	16 02 27.9	-0.4
	baz=40,slow=1.9						
NOA	NORSAR Array B	116.31	340	PKP	PKPdf	16 02 27.8	-0.4
	comp=Z,1.5nm,0.7s,baz=46,slow=1.8,SNR=6.4						
WVT	Waverly	116.86	52	P	PKPdf	16 02 30.0	0.0
	baz=285						
P49A	Miami Univ. Ec	118.22	47	P	PKPdf	16 02 32.4	-0.1
	baz=289						
KOLS	Kolonicke sedl	118.55	325	*e*PKIKP	PKiKP	16 02 34.3	+1.4
KOLS	Kolonicke sedl	118.55	325	*e*PKP	PKiKP	16 02 34.3	+1.4
BOSA	Boshof	119.13	234	PKP	PKPdf	16 02 34.4	-0.3
	comp=Z,5.3nm,1.0s,baz=165,slow=4.3,SNR=3.6						
ACSO	Alum Creek Sta	119.24	46	P	PKPdf	16 02 34.3	-0.1
	baz=291						
LANS	Liptovska Anna	120.03	326	*e*PKIKP	PKiKP	16 02 36.6	+0.8
LANS	Liptovska Anna	120.03	326	*e*PKP	PKiKP	16 02 36.6	+0.8
TZTN	Tazewell	120.06	50	P	PKiKP	16 02 36.3	+0.1
	baz=288						
P52A	Corning	120.06	46	P	PKiKP	16 02 36.2	0.0
	baz=291						
TKL	Tuckaleechee C	120.16	51	PKIKP	PKPdf	16 02 35.2	-1.1
TKL	Tuckaleechee C	120.16	51		PKPdf	16 02 35.2	-1.1
M53A	WI Miller and	120.41	44	P	PKiKP	16 02 36.8	+0.1
	baz=293						
O53A	New Philadelph	120.50	45	P	PKiKP	16 02 37.1	+0.1
	baz=292						
PLCA	Paso Flores	120.55	143	PKP	PKiKP	16 02 37.2	0.0
	comp=Z,2.0nm,0.6s,baz=347,slow=1.7,SNR=3.0						
PLCA				PKKPbc	PKKPab	16 12 46.4	+0.7
	comp=Z,1.4nm,0.7s,baz=69,slow=1.2,SNR=3.3						
MORC	Moravsky Berou	120.74	327	*e*PKP	PKiKP	16 02 37.3	+0.1
MORC	Moravsky Berou	120.74	327	PKIKP	PKPdf	16 02 36.8	-0.3
MORC	Moravsky Berou	120.74	327		PKPdf	16 02 36.8	-0.3
VTS	Vitosha	120.83	318	PKIKP	PKPdf	16 02 36.5	-1.1
VTS	Vitosha	120.83	318	PKPdf	PKPdf	16 02 36.5	-1.1
SCHQ	Schefferville	120.86	25	PKP	PKiKP	16 02 37.5	+0.2
	comp=Z,5.7nm,0.9s,baz=252,slow=3.0,SNR=3.6						
KRLC	Kraliky	120.98	328	*e*PKPDF	PKiKP	16 02 37.8	+0.1
KRLC	Kraliky	120.98	328	*e*PKIKP	PKiKP	16 02 37.8	+0.1
OSTC	Ostas	121.00	329	*e*PKPDF	PKiKP	16 02 38.3	+0.6
MBAR	Mbarara	121.04	267	PKP	PKiKP	16 02 39.4	+0.4
	comp=Z,2.4nm,0.2s,baz=46,slow=3.4,SNR=7.0						
MBAR	Mbarara	121.04	267	*c i*PKIKP	PKiKP	16 02 39.9	+0.9
GOGA	Godfrey	121.06	53	P	PKPdf	16 02 38.0	-0.1
	baz=287						
DPC	Dobruska-Polom	121.06	328	*e*PKPDF	PKiKP	16 02 38.4	+0.6
DPC	Dobruska-Polom	121.06	328	*e*PKIKP	PKiKP	16 02 38.4	+0.6
N54A	Moraine State	121.08	44	P	PKiKP	16 02 38.2	+0.1
	baz=294						
M54A	Oil Creek Stat	121.08	43	P	PKiKP	16 02 38.2	+0.1
	baz=294						
JAVC	Velka Javorina	121.18	326	*e*PKP	PKiKP	16 02 39.3	+1.2
VRAC	Vranov	121.52	327	PKP	PKiKP	16 02 38.9	+0.2
	comp=Z,12nm,1.3s,baz=50,slow=21,SNR=3.9						
VRAC	Vranov	121.52	327	*e*PKP	PKiKP	16 02 38.9	+0.2
MODS	Modra-Piesok	121.67	326	*e*PKIKP	PKPdf	16 02 38.7	-0.2
MODS	Modra-Piesok	121.67	326	*e*PKP	PKPdf	16 02 38.7	-0.2
KRUC	Moravsky	121.77	327	*e*PKP	PKiKP	16 02 39.4	+0.2
BRG	Berggiesshubel	121.96	330	*e*PKP	PKiKP	16 02 39.7	+0.2
BRG				Amp		16 02 41.3	
	comp=Z,7.1nm,1.0s						
R55A	Marlinton	122.02	47		PKPdf	16 02 39.7	-0.3
CLL	Collm	122.15	331	*i* PKIKP	PKiKP	16 02 39.8	-0.1
CLL	Collm	122.15	331	*i* PKPdf	PKiKP	16 02 39.8	-0.1
CLL				*e*PPS	PPS	16 15 36.0	
CLL				*e*SS	SS	16 20 36.0	-5.6
CLL				*e*		16 23 00.0	
CLL				*e*SSS	SSS	16 25 06.0	
CLL				*e*		16 26 24.0	
CLL				*e*(SSSS)		16 29 24.0	
CLL				LmV		16 55 00.0	
	comp=Z,200nm,20.1s						
CLL	Collm	122.15	331		PKPdf	16 02 39.6	-0.1
BLA	Blacksburg	122.19	48	P	PKPdf	16 02 40.2	0.0
	baz=291						
KMSC	Kings Mountain	122.21	51	P	PKiKP	16 02 40.6	+0.1
	baz=289						
DIVS	Divibare	122.27	321		PKPdf	16 02 39.4	-0.9
O56A	Blue Knob Stat	122.35	44	P	PKiKP	16 02 40.8	+0.1
	baz=294						
ATAL	Atalanti	122.57	314	P	PKPdf	16 02 39.6	-1.3
SSPA	Standing Stone	122.66	44	P	PKiKP	16 02 41.2	0.0
	baz=295						
CONA	Conrad Observa	122.70	326	*e*P	PKPdf	16 02 41.1	+0.1
	comp=Z,8.0nm,1.4s						
FNA	Florina	122.87	317	P	PKPdf	16 02 40.4	-1.1
FNA	Florina	122.87	317	PKIKP	PKPdf	16 02 40.4	-1.1
FNA	Florina	122.87	317	PKPdf	PKPdf	16 02 40.4	-1.1
VAM	Vamos	122.90	310	P	PKiKP	16 02 42.6	+0.8
AGG	Agios Georgios	122.94	314	PKIKP	PKPdf	16 02 40.5	-1.1
AGG	Agios Georgios	122.94	314	PKPdf	PKPdf	16 02 40.5	-1.1
LONY	Lake Ozonia	122.97	38	P	PKiKP	16 02 41.8	+0.1
	baz=300						
CKRC	Cesky Krumlov	123.02	328	*e*PKPDF	PKiKP	16 02 42.8	+1.1
MAKR	Makrakomi, Fth	123.08	314	P	PKPdf	16 02 41.7	-0.2
PHP	Peshkopia	123.10	318	P	PKPdf	16 02 41.3	-0.6
NKC	Novy Kostel	123.11	330	*e*PKPDF	PKiKP	16 02 43.0	+1.2
NKC	Novy Kostel	123.11	330	*e*PKIKP	PKiKP	16 02 43.0	+1.2
KHC	Kasperske Hory	123.22	329	*e*PKPDF	PKiKP	16 02 42.1	0.0
KHC	Kasperske Hory	123.22	329	*e*PKIKP	PKiKP	16 02 42.1	0.0
KHC	Kasperske Hory	123.22	329		PKPdf	16 02 41.7	-0.2
BINY	Binghamton	123.25	41	P	PKiKP	16 02 42.6	+0.2
	baz=298						
ARSA	Arzberg	123.28	326	*e*P	PKPdf	16 02 41.6	-0.4
	comp=Z,1.6nm,0.6s						
GEC2	GERESS Array S	123.33	328		PKPdf	16 02 41.3	-0.8
GERES	GERESS Array B	123.33	328	PKP	PKPdf	16 02 42.1	-0.1
	comp=Z,1.9nm,0.4s,baz=79,slow=2.9,SNR=21						
GERES				pPKP	pPKPdf	16 03 24.5	-2.1
	comp=Z,1.3nm,0.7s,baz=93,slow=2.8,SNR=2.4						
GERES	GERESS Array B	123.33	328	PKPdf	PKPdf	16 02 41.8	-0.3
ANX	Ano Chora	123.40	314	P	PKPdf	16 02 42.6	0.0
KLV	Kalavryta, Ach	123.46	313	P	PKPdf	16 02 42.3	-0.4
PDG	Podgorica	123.54	319	PKPdf	PKPdf	16 02 42.0	-0.6
J59A	Piesco	123.59	39	PKPdf	PKPdf	16 02 41.6	-1.2
MOA	Molln	123.62	327	*i* P	PKPdf	16 02 42.3	-0.4
	comp=Z,3.6nm,1.1s						
SOKA	Soboth	123.88	325	*e*P	PKPdf	16 02 43.0	-0.3
	comp=Z,11nm,1.3s						
N59A	State Game Lan	123.98	43	P	PKiKP	16 02 43.9	0.0
	baz=297						
CBN	Corbin Frederi	124.04	46	P	PKiKP	16 02 44.3	+0.3
	baz=294						
MT01	Popeta	124.19	136	PKPdf	PKPdf	16 02 43.3	-0.9
T59A	Double "B" Far	124.40	48	PKPdf	PKPdf	16 02 43.6	-0.8
P60A	Greenville	124.58	44	P	PKiKP	16 02 45.1	+0.1
	baz=297						
KBA	Koelnbreinsper	124.58	327	*i* P	PKPdf	16 02 43.7	-1.0
	comp=Z,8.3nm,1.0s						
MYKA	Terra Mystica	124.69	326	*e*P	PKPdf	16 02 44.2	-0.6
	comp=Z,6.3nm,1.3s						
LBNH	Lisbon	124.79	37	P	PKiKP	16 02 45.7	+0.4
	baz=303						
PAL	Palisades	125.19	42	P	PKiKP	16 02 46.2	+0.1
	baz=299						
Q61A	Milford	125.20	45	P	PKiKP	16 02 46.2	-0.1
	baz=296						
ABTA	Abfaltersbach	125.24	327	*e*P	PKPdf	16 02 44.7	-1.2
	comp=Z,12nm,1.0s						
L61B	Northampton	125.26	40	P	PKiKP	16 02 46.4	+0.1
	baz=301						
WATA	Walderalm	125.38	328	*i* P	PKPdf	16 02 46.2	-0.1
	comp=Z,12nm,1.1s						
WTTA	Wattenberg	125.39	328	*e*P	PKPdf	16 02 46.3	0.0
	comp=Z,19nm,1.0s,SNR=5.5						
STAL	STALIGIAL	125.43	326		PKPdf	16 02 45.6	-0.6
EKA	Eskdalemuir Ar	125.47	343	PKP	PKiKP	16 02 46.3	0.0
	comp=Z,0.7nm,0.3s,baz=31,slow=3.6,SNR=3.2						
PQI	Presque Isle	125.62	33		PKPdf	16 02 45.8	-0.7
MOTA	Moosalm	125.62	328	*e*P	PKPdf	16 02 46.5	-0.2
	comp=Z,17nm,1.0s						
SQTA	Sankt Quirin	125.65	328	*e*P	PKPdf	16 02 46.8	+0.1
	comp=Z,16nm,1.0s						
PKME	Peaks-Kenny Pk	125.76	35	P	PKiKP	16 02 47.1	-0.1
	baz=306						
FETA	Feichten	126.03	328	*i* P	PKiKP	16 02 47.8	-0.2
	comp=Z,16nm,1.0s						
CTI	Castel Tesino	126.14	327	PKIKP	PKPdf	16 02 47.2	-0.5
CTI	Castel Tesino	126.14	327		PKPdf	16 02 47.2	-0.5
CO03	El Pedregal	126.26	134		PKPdf	16 02 47.8	-0.6
DAVA	Damuels	126.30	329	*i* P	PKPdf	16 02 47.8	-0.2
	comp=Z,14nm,1.2s						
DAVOX	Davos/Dischmat	126.63	328	PKP	PKiKP	16 02 49.0	-0.2
	comp=Z,4.9nm,0.6s,baz=339,slow=3.2,SNR=6.9						
DAVOX	Davos/Dischmat	126.63	328	PKIKP	PKiKP	16 02 49.0	-0.2
TIP	Timpagrande	126.76	317	PKPdf	PKPdf	16 02 48.5	-0.5
NRCA	Norcia	127.19	323		PKPdf	16 02 49.2	-0.6
MURB	Monte Urbino	127.30	323	PKPdf	PKPdf	16 02 48.6	-1.3
KEST	Kesra	133.58	317	PKP	PKPdf	16 03 02.6	+0.5
	comp=Z,5.4nm,1.0s,baz=241,slow=7.8,SNR=3.8						
KEST				SKPbc	SKPbc	16 06 14.2	-0.9
	comp=Z,30nm,1.0s,baz=310,slow=2.0,SNR=18						
CMAH	Djebel Manchou	134.36	319	P	SKPbc	16 06 13.4	-4.2
ABSA	Djebel Ababsia	134.53	319	P	SKPbc	16 06 17.3	-0.9
CKFL	Kef-Lekhel	134.94	319	P	SKPbc	16 06 18.7	-0.9
LPAZ	La Paz	135.33	118	PKP	PKPdf	16 03 07.2	+0.7
	comp=Z,3.6nm,0.7s,baz=230,slow=2.3,SNR=11						
LPAZ				pPKP	pPKPdf	16 03 52.2	+1.4
	comp=Z,6.0nm,0.9s,baz=258,slow=4.9,SNR=3.8						
LPAZ				SKP	SKPbc	16 06 25.4	+3.4
	comp=Z,19nm,1.0s,baz=307,slow=1.7,SNR=22						
DFRA	Djebel Bou Aff	135.40	320	P	SKPbc	16 06 20.1	-0.9
CPUP	Villa Florida	138.27	139	PKP	PKPdf	16 03 10.6	-0.4
	comp=Z,5.8nm,1.1s,baz=242,slow=6.7,SNR=3.8						
CPUP				SKPbc	SKPbc	16 06 30.0	+0.3
	comp=Z,5.6nm,1.0s,baz=240,slow=2.1,SNR=4.3						
ESDC	Sonseca Array	138.74	331	PKP	PKiKP	16 03 12.6	-1.1
	comp=Z,1.2nm,1.1s,baz=4.7,slow=4.8,SNR=5.2						
ESDC				PP	PP	16 06 03.9	+0.3
	comp=Z,3.4nm,1.1s,baz=28,slow=5.9,SNR=6.9						
ESDC				SKPbc	SKPbc	16 06 30.7	+0.1
	comp=Z,2.2nm,1.0s,baz=25,slow=1.9,SNR=5.1						
POLO	Lamas de Olo	139.02	337	*e*PKPdf	PKPdf	16 03 09.4	-2.6
ETMB	Extrema	139.43	111	PKPdf	PKPdf	16 03 12.1	-1.2
MTE	Manteigas	139.74	336	*e*PKPdf	PKiKP	16 03 14.6	-1.1
PCBR	Castelo Branco	140.18	335	*e*PKPdf	PKPdf	16 03 15.0	+1.0
PNCL	Nicolau / Gran	142.07	335	*e*PKPdf	PKiKP	16 03 19.0	-1.5
MORF	Marmelete	142.80	334	*e*PKPdf	PKPdf	16 03 19.7	+0.8
PTLB	Pontes e Lacer	143.41	123		PKPbc	16 03 17.7	-0.4
VILB	Vilhena	143.68	119	PKPdf	PKPbc	16 03 19.3	+0.4
MDT	Midelt	144.29	325	PKP	PKPbc	16 03 20.5	+0.2
	comp=Z,4.1nm,0.7s,baz=85,slow=4.2,SNR=9.0						
MDT				SKPbc	SKPbc	16 06 45.0	-0.1
	comp=Z,9.7nm,1.0s,baz=172,slow=1.9,SNR=4.0						
ZHG	ZHG	144.94	328	P	PKiKP	16 03 25.0	-1.6
GOLM	Goulmima	145.30	324	P	PKPab	16 03 25.1	+1.2
TZRR	Tazzarine	146.32	324	P	PKPbc	16 03 27.0	+0.3
SRHM	Skhour des Reh	146.36	328	P	PKPab	16 03 28.0	+0.2
ZGR	Zagora	146.84	323	P	PKPbc	16 03 29.0	+0.8
OUZM	OUZ	146.93	325	P	PKPbc	16 03 29.0	+0.6
OUK	Oukaimeden	147.32	327	P	PKiKP	16 03 31.0	-0.9
TTIG	Tnine Tigouga,	148.14	327	P	PKPbc	16 03 32.1	+0.4
TORD	Torodi Ar. Bea	149.39	288	PKPbc	PKPbc	16 03 34.3	-0.8
	comp=Z,75nm,0.9s,baz=8.2,slow=1.2,SNR=75						
TORD	Torodi Ar. Bea	149.39	288	PKPdf	PKPdf	16 03 29.6	-0.9
TORD				PKPbc	PKPbc	16 03 34.6	-0.5
BDFB	Brasilia	151.90	136	PKP	PKPdf	16 03 34.0	-0.5
	comp=Z,8.8nm,0.9s,baz=278,slow=0.0,SNR=7.1						
BDFB				PKPbc	PKiKP	16 03 41.5	0.0
	comp=Z,16nm,0.4s,baz=204,slow=1.0,SNR=24						
BDFB	Brasilia	151.90	136	PKPdf	PKPdf	16 03 33.8	-0.7
BDFB				PKPbc	PKPbc	16 03 40.6	-0.6
KOWA	Kowa	154.31	294	PKP	PKPdf	16 03 37.2	-0.7
	comp=Z,2.4nm,0.9s,baz=162,slow=0.8,SNR=4.9						
KOWA				PKPbc	PKPbc	16 03 46.1	-0.2
	comp=Z,10nm,0.6s,baz=65,slow=2.7,SNR=21						
KOWA				PKPab	PKPab	16 04 00.9	0.0
	comp=Z,13nm,0.6s,baz=84,slow=3.3,SNR=12						
KOWA				PP	PP	16 07 34.3	-2.4
	comp=Z,16nm,1.1s,baz=22,slow=4.1,SNR=4.9						
KOWA	Kowa	154.31	294		PKPbc	16 03 45.1	-1.2
KOWA	Kowa	154.31	294	P	PKPbc	16 03 45.3	-0.9
KIC	Kosan Boka	156.71	276	*e*PKP1	PKPdf	16 03 40.9	-0.3
	comp=Z,116nm,1.2s						
DBIC	Dimbokro	156.80	276	PKP	PKPdf	16 03 40.4	-0.8
	comp=Z,4.7nm,1.0s,baz=137,slow=4.6,SNR=6.0						
DBIC				PKPbc	PKPbc	16 03 51.1	
	comp=Z,4.8nm,0.7s,baz=97,slow=1.7,SNR=6.7						
DBIC				PKPab	PKPab	16 04 11.7	-0.1
	comp=Z,28nm,1.0s,baz=83,slow=4.5,SNR=14						
TIC	Toumodi	156.97	276	*e*PKP1	PKPdf	16 03 40.1	-1.4
LIC	Lamto	157.00	275	*e*PKP1	PKPdf	16 03 40.0	-1.5
	comp=Z,108nm,1.2s						

SKHL ***21*** *15:46:28.3±0.4, 44°.60N×148°.90E, h64km±3km, mb3.9/3*
JMA ***21*** *15:46:30.1±0.5, 44°.65N×148°.21E, h117km, M3.4*

ISC 21 15:46:25.1±4.0, 44°.9N±0°.2×148°.6E±0°.3, h125km±19km, n13, σ1s.83/19, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	0.61	308	*e*P	Pn	15 46 44.8	+0.5
KUR				AMB	AMB	15 46 47.8	
	60nm,0.3s						
KUR				*e*S	Sn	15 46 57.2	-1.7
KUR				A	A	15 47 08.5	
	100nm,0.3s						
KUR				A	A	15 47 08.5	
	30nm,0.3s						
SHO	Shikotan	1.58	232	*e*P	Pn	15 46 54.7	+0.9
SHO				AMB	AMB	15 46 56.0	
	30nm,0.2s						
SHO				*e*S	Sn	15 47 14.1	-1.5
SHO				A	A	15 47 20.0	
	110nm,0.4s						
SHO				A	A	15 47 20.0	
	280nm,0.4s						
YUK	Yuzh-Kuril'sk	2.09	248	*e*P	Pn	15 47 02.1	+2.2
YUK				AMB	AMB	15 47 02.5	
	20nm,0.3s						
YUK				*e*S	Sn	15 47 27.7	+1.1
YUK				A	A	15 47 33.0	
	150nm,0.4s						
YUK				A	A	15 47 33.0	
	170nm,0.4s						
GLVR	Golovnino	2.44	244	*e*S	Sn	15 47 35.1	+0.6
NEM2	Nemuro 2	2.51	235	P	Pn	15 47 06.3	+1.1
NEM2				*e*S	Sn	15 47 34.0	-2.0
NMR	Nemuro--Hokkai	2.52	235	*e*P	Pn	15 47 07.6	+2.3
NMR				*e*S	Sn	15 47 37.1	+1.0
JNK	Nakash	3.03	247	P	Pn	15 47 13.6	+1.6
JAK	Akkeshi	3.35	238	P	Pn	15 47 16.8	+0.7
JAK				*e*S	Sn	15 47 53.3	-2.1
JAR	Ashorobuto	3.78	247	P	Pn	15 47 23.7	+1.9
JCH	Churui	4.38	241	P	Pn	15 47 30.0	+0.3
JCH				*e*S	Sn	15 48 16.0	-3.9
JNBK	Urakawa-nobuka	4.94	241	P	Pn	15 47 36.9	-0.3
JKB	Kayabe	6.23	244	P	Pn	15 47 54.1	-0.5
JOT	Ohata	6.49	240	P	Pn	15 47 58.5	+0.3

TAP 21 15:51:24.2, 23°.47N×121°.25E, h21km, ML1.2, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHY	Hungye	0.07	57	*e*P	Pb	15 51 27.1	-1.0
	baz=61						
EHY				S	Sb	15 51 30.9	+0.2
	baz=61						
YULB	Yu-li	0.08	151	*e*P	Pb	15 51 27.6	-0.6
	baz=152						
YULB				S	Sb	15 51 30.7	-0.1
	baz=152						
TWF1	Yuli	0.12	161	P	Pb	15 51 28.7	-1.6
	baz=158						
TWF1				*e*S	Sb	15 51 31.6	-2.9
	baz=158						
EYUL	Yuli	0.13	153	*e*P	Pb	15 51 28.6	-1.5
	baz=152						
EYUL				S	Sb	15 51 31.8	-2.4
	baz=152						
HGSD	Ruisui	0.16	81	*e*P	Pb	15 51 27.9	-2.1
	baz=82						
HGSD				S	Sb	15 51 32.8	-1.2
	baz=82						
FULB	Fuli	0.27	172	P	Pb	15 51 30.7	+0.2
	baz=177						
VWDT	VWDT	0.30	340	P	Pb	15 51 31.1	+0.1
	baz=345						
VWDT				S	Sb	15 51 35.8	+0.2
	baz=345						
ELDTW	Lidau	0.35	218	*e*P	Pb	15 51 31.8	0.0
	baz=214						
CHKT	Chengkung	0.38	164	*e*P	Pb	15 51 32.4	+0.2
	baz=149						
CHKT				*e*S	Sb	15 51 38.3	+0.8
	baz=149						
ESL	Shilin	0.38	25	*e*P	Pb	15 51 32.5	+0.3
	baz=34						
ALS	Alishan	0.41	276	*e*P	Pn	15 51 34.2	-1.1
	baz=276						
SSLB	Suanglung	0.42	319	*e*P	Pn	15 51 34.7	-0.5
	baz=320						
SSLB	Suanglung	0.42	319	P	Pn	15 51 35.8	+0.6
SSLB	Suanglung	0.42	319	P	Pn	15 51 34.4	-0.8

IDC 21 15:55:04.3±1.6, 3°.04N×124°.69E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.4/49, mbtmp3.8/5, Error ellipse: s-maj=113.1km s-min=23.3km az=66.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	21.02	177	P	P	15 59 49.0	-0.7
	4.5nm,0.9s,baz=14,slow=7.8,SNR=11						
WRA	Warramunga Arr	24.73	158	P	P	16 00 28.5	+0.9
	1.2nm,0.9s,baz=338,slow=10.0,SNR=10						
ASAR	Alice Springs	28.02	162	P	P	16 00 57.0	-0.3
	0.6nm,0.8s,baz=334,slow=7.4,SNR=5.5						
STKA	Stephens Creek	38.26	156	P	P	16 02 26.1	-0.3
	1.4nm,0.4s,baz=349,slow=7.0,SNR=7.3						
MKAR	Makanchi Array	56.98	326	P	P	16 04 51.6	-0.1
	0.2nm,0.3s,baz=126,slow=8.3,SNR=6.9						

IDC 21 16:10:55.2±5.7, 30°.11S×177°.57W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/22, mbtmp3.7/3, Error ellipse: s-maj=213.6km s-min=55.2km az=150.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	34.91	256	P	P	16 17 49.5	+0.9
	2.4nm,0.8s,baz=95,slow=11,SNR=2.8						
ASAR	Alice Springs	43.50	266	P	P	16 19 00.2	-0.4
	0.3nm,0.6s,baz=108,slow=7.1,SNR=9.2						
WRA	Warramunga Arr	44.46	272	P	P	16 19 07.3	-1.0
	0.7nm,0.5s,baz=111,slow=7.6,SNR=11						
FINES	FINESS Array B	145.00	340	PKPbc	PKPdf	16 30 33.5	-0.2
	3.8nm,0.9s,baz=50,slow=3.0,SNR=4.2						

SCB ***21*** *16:20:51.2±1.9, 18°.35S×63°.44W, h45km±40km, ML4.7/1, Error ellipse: s-maj=8.9km s-min=6.1km az=1.0*

IDC ***21*** *16:21:01.7±0.7, 18°.14S×63°.42W, h0km, mb4.3/10, mb1 4.4/17, mb1mx4.3/37, mbtmp4.2/17, ML4.0/6, MS4.6/32, Ms1 4.6/32, ms1mx4.5/39, Error ellipse: s-maj=17.7km s-min=13.7km az=174.0*

VAO ***21*** *16:21:03.8±0.2, 17°.98S×63°.48W, h10km, mb4.5*

SJA ***21*** *16:21:03.9±3.5, 18°.00S×63°.46W, h10km, ML4.4, MW4.6, MW4.7(GFZ)*

NEIC ***21*** *16:21:05.2±1.7, 18°.07S±0°.07×63°.39W±0°.07, h35km±6km, mb4.9/42, Error ellipse: s-maj=10.5km s-min=9.5km az=128.0*

GCMT ***21*** *16:21:07.2±0.2, 17°.96S±0°.01×63°.36W±0°.01, h14km±1km, MW5.1/99, Moment Tensor Solution. s18,c21; s99,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.75±.20; $M_{\theta\theta}$0.88±.14; $M_{\phi\phi}$-2.62±.18; $M_{r\theta}$-2.31±.44; $M_{\theta\phi}$3.86±.15; $M_{\phi r}$0.20±.34; Best double couple: $M_0$5.01600×10^{16} NP1: ϕ_s188.00000°, δ57.00000°, λ162.00000°. NP2: ϕ_s288.00000°, δ75.00000°, λ34.00000°. Principal axes: T 4.6240, Plg34.0000°, Azm153.0000°; N 0.7900, Plg53.0000°, Azm308.0000°; P -5.4070, Plg12.0000°, Azm55.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 16:21:06.2±0.3, 17°.98S±0°.04×63°.49W±0°.04, h35km, n223, σ1s.87/206, mb4.8/27, MS4.8/30, 1D, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIV	San Ignacio	3.04	50	Pn	Pn	16 21 50.8	-1.1
	20nm,0.3s,baz=252,slow=8.4,SNR=100						
SIV				Sn	Sn	16 22 27.2	0.0
	47nm,0.3s,baz=231,slow=16,SNR=6.4						
SIV				Lg	Lg	16 22 41.9	
	92nm,0.3s,baz=300,slow=20,SNR=6.5						
SIV	San Ignacio	3.04	50	P	Pn	16 21 50.0	-1.9
SIV				S	Sn	16 22 31.6	+4.4
SIV				IAML		16 22 45.9	
	2μm,0.4s						
BBOE	La Paz, Chanca	4.44	284	P	Pn	16 22 10.9	-0.7
YJA	Yavi	4.59	204	P	Pn	16 22 07.3	-6.2
YJA				S	Sn	16 23 02.1	-3.8
YJA	Yavi	4.59	204	*i* P	Pn	16 22 14.0	+0.4
YJA				*e*S	Sn	16 23 14.2	+8.3
LPAZ	La Paz	4.74	290	Pn	Pn	16 22 16.8	+1.1
	5.1nm,0.3s,baz=82,slow=11,SNR=51						
LPAZ				Sn	Sn	16 23 13.5	+3.7
	30nm,0.3s,baz=30,slow=17,SNR=6.2						
LPAZ				Lg	Lg	16 23 39.1	
	34nm,0.3s,baz=212,slow=12,SNR=6.4						
LPAZ				LR	LR	16 24 06.4	
	comp=Z,3μm,18.4s,baz=112,slow=38						
LPAZ	La Paz	4.74	290	P	Pn	16 22 16.4	+0.6
LPAZ	La Paz	4.74	290	*e*P	Pn	16 22 19.4	+3.6
LPAZ	La Paz	4.74	290	*e*P	Pn	16 22 16.1	+0.4
LPAZ	La Paz	4.74	290		Pn	16 22 15.5	-0.2
PTLB	Pontes e Lacer	4.87	60	*e*P	Pn	16 22 16.4	-0.6
PTLB	Pontes e Lacer	4.87	60		Pn	16 22 15.8	-1.2
BBOD	La Paz, Gloria	5.05	284	P	Pn	16 22 21.0	+1.0
HJA	Humahuaca	5.51	199	*e*P	Pn	16 22 25.5	-0.6
HJA				*i* S	Sn	16 23 33.7	+5.3
HJA				IAML		16 24 01.8	
	comp=Z,171nm,0.6s						
PB16	IPOC Station P	5.73	265	P	Pn	16 22 30.1	+0.8
PB16	IPOC Station P	5.73	265		Pn	16 22 29.9	+0.6
PB16	IPOC Station P	5.73	265	*i* P	Pn	16 22 30.6	+1.3
PB16				IAML		16 24 45.1	
	comp=Z,143nm,2.4s						
PB08	IPOC Station P	5.77	247	P	Pn	16 22 28.8	-0.9
PB08	IPOC Station P	5.77	247		Pn	16 22 30.2	+0.5
PB08	IPOC Station P	5.77	247	*i* P	Pn	16 22 32.2	+2.4
VILB	Vilhena	5.92	33	*e*P	Pn	16 22 30.7	-0.8
VILB	Vilhena	5.92	33		Pn	16 22 31.4	0.0
ASTB	Santa Barbara	6.01	188	*e*P	Pn	16 22 31.0	-1.9
PB11	IPOC Station P	6.10	252	P	Pn	16 22 34.3	+0.3
PB11	IPOC Station P	6.10	252		Pn	16 22 33.8	-0.2
PB11	IPOC Station P	6.10	252	*i* P	Pn	16 22 34.0	0.0
AZAP	Zapla	6.39	193	*e*P	Pn	16 22 36.0	-2.1
PB01	IPOC Station P	6.42	241	P	Pn	16 22 38.9	+0.5
PB01	IPOC Station P	6.42	241		Pn	16 22 38.3	-0.1
PB01	IPOC Station P	6.42	241	*i* P	Pn	16 22 38.5	0.0
HMBC	Humberstone	6.46	248	P	Pn	16 22 40.3	+1.3
PB12	IPOC Station P	6.52	263		Pn	16 22 39.6	-0.2
PB09	IPOC Station P	6.61	234	P	Pn	16 22 42.3	+1.2
PB09	IPOC Station P	6.61	234		Pn	16 22 41.2	+0.1
PB09	IPOC Station P	6.61	234	*i* P	Pn	16 22 43.0	+1.9
TA02	Huaiquique	6.68	249		Pn	16 22 41.1	-0.7
TA01	Diego Aracena	6.82	247		Pn	16 22 42.9	-1.0
LVC	Limon Verde	6.86	227	Pn	Pn	16 22 44.9	+0.2
	comp=Z,10nm,0.3s,baz=45,slow=7.8,SNR=29						
LVC				LR	LR	16 26 03.1	
	comp=Z,6μm,21.5s,baz=38,slow=44						
LVC	Limon Verde	6.86	227	P	Pn	16 22 44.8	+0.2
LVC	Limon Verde	6.86	227	*e*P	Pn	16 22 44.9	+0.2
LVC	Limon Verde	6.86	227		Pn	16 22 44.4	-0.3
LVC	Limon Verde	6.86	227	*e*P	Pn	16 22 46.1	+1.4
PB02	IPOC Station P	6.89	240	P	Pn	16 22 45.8	+1.0
PATCX	Punta Patache	6.89	245		Pn	16 22 43.5	-1.3
SLA	San Lorenzo	6.97	195	*i* P	Pn	16 22 44.5	-1.4
PB07	IPOC Station P	7.08	237	P	Pn	16 22 49.7	+2.2
PB07	IPOC Station P	7.08	237		Pn	16 22 46.8	-0.7
PB03	IPOC Station P	7.14	234	P	Pn	16 22 49.7	+1.3
PB03	IPOC Station P	7.14	234	*i* P	Pn	16 22 46.5	-1.9
PB06	IPOC Station P	7.39	229	P	Pn	16 22 53.6	+1.8
PB06	IPOC Station P	7.39	229		Pn	16 22 50.8	-1.1
PB06	IPOC Station P	7.39	229	*i* P	Pn	16 22 51.9	+0.1

PB04	**IPOC Station P**	**7.61**	**234**		**Pn**	**16 22 53.9**	**-0.9**
PB15	**IPOC Station P**	**7.64**	**226**	P	**Pn**	**16 22 57.6**	**+2.3**
PB15	**IPOC Station P**	**7.64**	**226**	*i* P	**Pn**	**16 22 57.4**	**+2.1**
SALV	**Santo Antonio**	**7.75**	**76**	*e*P	**Pn**	**16 22 55.2**	**-1.4**
AQDB	**Aquidauana**	**7.77**	**110**	*e*P	**Pn**	**16 22 56.7**	**-0.2**
AQDB	**Aquidauana**	**7.77**	**110**		**Pn**	**16 22 54.3**	**-2.6**
PB05	**IPOC Station P**	**7.94**	**231**	P	**Pn**	**16 23 03.4**	**+4.1**
PP1B	**Ponte de Pedra**	**8.21**	**89**	*e*S	**Sn**	**16 24 36.6**	**+1.9**
FSA	**Cafayete**	**8.42**	**195**	*e*P	**Pn**	**16 23 03.0**	**-2.9**
ETMB	**Extrema**	**8.53**	**342**	*e*P	**Pn**	**16 23 05.5**	**-1.7**
ETMB	**Extrema**	**8.53**	**342**	Pn	**Pn**	**16 23 05.1**	**-2.2**
PB10	**IPOC Station P**	**8.60**	**229**	Pn	**Pn**	**16 23 08.5**	**+0.3**
SAML	**Samuel**	**8.98**	**2**	Pn	**Pn**	**16 23 12.2**	**-1.2**
PDRB	**Porto dos Gac**	**9.10**	**47**	*e*P	**Pn**	**16 23 15.4**	**+0.3**
CPUP	**Villa Florida**	**10.09**	**147**	Pn	**Pn**	**16 23 26.1**	**-2.5**
	comp=Z,0.6nm,0.3s,baz=321,slow=12,SNR=6.3						
CPUP				Lg	Lg	16 26 21.9	
	comp=Z,0.9nm,0.3s,baz=256,slow=16,SNR=3.0						
CPUP				LR	LR	16 28 10.0	
	comp=Z,2µm,20.7s,baz=338,slow=43						
CPUP	**Villa Florida**	**10.09**	**147**	*e*P	**Pn**	**16 23 27.1**	**-1.5**
CPUP	**Villa Florida**	**10.09**	**147**	Pn	Pn	16 23 23.6	-5.0
AC02	**Maricunga**	**10.24**	**210**		**Pn**	**16 23 29.1**	**-2.0**
CLDB	**Colider**	**10.27**	**48**	*e*P	**Pn**	**16 23 31.6**	**+0.5**
ARAG	**Araguaiana, MT**	**11.41**	**80**	*e*P	**Pn**	**16 23 45.7**	**-1.1**
NPGB	**Novo Progresso**	**13.45**	**37**	*e*P	**Pn**	**16 24 14.7**	**0.0**
CZSB	**Cruzeiro do Su**	**13.57**	**317**	*e*P	**Pn**	**16 24 15.9**	**-0.4**
NNA	**Nana**	**14.20**	**293**	LR	LR	16 30 55.5	
	comp=Z,2µm,20.9s,baz=142,slow=41						
ZON	**Zonda**	**14.30**	**198**	Pn	**Pn**	**16 24 23.5**	**-2.8**
CO03	**El Pedregal**	**14.38**	**206**	P	**P**	**16 24 31.7**	**-2.2**
IPMB	**Ipameri, GO**	**14.54**	**92**	*e*P	**Pn**	**16 24 30.0**	**+0.4**
MACA	**Manacapuru-AM**	**14.98**	**11**	*e*P	**Pn**	**16 24 36.3**	**+0.9**
BDFB	**Brasilia**	**15.00**	**83**	Pn	**Pn**	**16 24 35.0**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=264,slow=17,SNR=4.9						
BDFB				Lg	Lg	16 28 48.8	
	comp=Z,0.4nm,0.3s,baz=354,slow=18,SNR=3.8						
BDFB				LR	LR	16 30 51.5	
	comp=Z,3µm,20.7s,baz=264,slow=39						
TBTG	**Tabatinga, AM**	**15.07**	**335**	*e*P	**Pn**	**16 24 38.4**	**+1.7**
SPB	**Sao Paulo**	**16.02**	**113**	*e*P	**Pn**	**16 24 49.6**	**+0.6**
VA03	**San Esteban**	**16.04**	**202**	Pn	**Pn**	**16 24 45.9**	**-3.4**
PET01	**Itanhaem-SP**	**16.38**	**115**	*e*P	**Pn**	**16 24 54.2**	**+0.7**
PEL	**Peldehue**	**16.43**	**202**		**Pn**	**16 24 54.4**	**+0.3**
MT05	**Renca**	**16.67**	**202**		**Pn**	**16 24 57.6**	**+0.3**
MT05				IAmb	IAmb	16 25 05.7	
	comp=Z,68nm,0.8s						
MT02	**Curacav**	**16.70**	**203**	Pn	**Pn**	**16 24 55.9**	**-1.6**
TER01	**Tubaro-SC**	**16.85**	**131**	*e*P	**Pn**	**16 24 59.9**	**+0.4**
MT09	**Talagante**	**17.11**	**202**		**Pn**	**16 25 01.3**	**-1.5**
MT01	**Popeta**	**17.28**	**202**	Pn	**Pn**	**16 25 02.5**	**-2.3**
MT01				IAmb	IAmb	16 25 09.3	
	comp=Z,42nm,0.8s						
PTGA	**Pitinga**	**17.48**	**12**	Pn	**P**	**16 25 09.3**	**+1.0**
	baz=160,slow=13,SNR=5.1						
PTGA				Lg	Lg	16 30 11.4	
	comp=Z,0.6nm,0.3s,baz=232,slow=8.1,SNR=4.4						
PTGA				LR	LR	16 32 38.1	
	comp=Z,960nm,20.3s,baz=190,slow=40						
LPA	**La Plata**	**17.58**	**165**	*de*P	**Pn**	**16 25 04.7**	**-3.7**
LPA				pPP		16 25 22.8	
LPA				SS	**S**	**16 28 36.2**	**+6.2**
LPA				PCP	**PcP**	**16 29 44.2**	**-2.8**
LPA				PKIKP	**PKiKP**	**16 37 37.7**	**-1.4**
BO01	**Tunca**	**17.70**	**201**		**Pn**	**16 25 07.3**	**-2.6**
PRPB	**Parauapebas**	**17.77**	**50**	*e*P	**P**	**16 25 11.6**	**+0.1**
SMTB	**Santa Maria do**	**17.91**	**62**	*e*P	**P**	**16 25 13.4**	**+0.3**
BO02	**Sierra Bellavi**	**17.96**	**200**		**Pn**	**16 25 10.1**	**-3.2**
ATAH	**Atahualpa**	**18.08**	**305**	P	**P**	**16 25 16.9**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=117,slow=11,SNR=4.2						
ATAH				LR	LR	16 33 15.9	
	comp=Z,3µm,18.1s,baz=169,slow=40						
MALB	**Monte Alegre**	**18.41**	**31**	*e*P	**Pn**	**16 25 20.0**	**+1.3**
JANB	**Januaria**	**18.62**	**84**	*e*P	**Pn**	**16 25 21.6**	**+0.1**
MC01	**Montes Claros**	**18.71**	**89**	*e*P	**P**	**16 25 21.2**	**-0.7**
SDBA	**SAO DESIDERIO**	**18.77**	**75**	*e*P	**Pn**	**16 25 23.1**	**-0.2**
MAN01	**Angra dos Reis**	**18.93**	**108**	*e*P	**Pn**	**16 25 24.9**	**-0.3**
BOAV	**Boa Vista**	**20.45**	**9**	*e*P	**P**	**16 25 42.0**	**+1.1**
BOAV	**Boa Vista**	**20.45**	**9**	P	**P**	**16 25 40.6**	**-0.2**
MCPB	**Macapa, AP**	**20.81**	**34**	*e*P	**P**	**16 25 45.6**	**+0.9**
PTLC	**Puerto Leguiza**	**21.18**	**327**	*e*P	**P**	**16 25 45.4**	**-3.4**
ALF01	**Guarapari-ES**	**21.65**	**101**	*e*P	**P**	**16 25 54.3**	**+0.6**
RIB01	**Linhares ES**	**21.93**	**97**	*e*P	**P**	**16 25 59.1**	**+2.4**
LC01	**Cunco**	**22.09**	**198**	P	**P**	**16 25 56.9**	**-1.4**
LC01				IAmb	IAmb	16 26 15.8	
	comp=Z,37nm,1.1s						
MACC	**Macarena, Meta**	**22.45**	**332**	*e*P	P	16 25 54.2	-8.2
GUA01	**Guaratinga, BA**	**22.66**	**90**	*e*P	**P**	**16 26 05.5**	**+0.9**
FLOC	**Florencia**	**22.83**	**327**	*e*P	**P**	**16 26 03.0**	**-3.4**
CMC01	**Camacan, BA**	**23.11**	**87**	*e*P	**P**	**16 26 11.5**	**+2.3**
NBIT	**Itapeh - BA**	**23.27**	**86**	*e*P	**P**	**16 26 11.8**	**+1.0**
OTAV	**Otavalo**	**23.32**	**319**	*e*P	**P**	**16 26 08.3**	**-3.6**
OTAV	**Otavalo**	**23.32**	**319**	*e*P	**P**	**16 26 13.2**	**+1.3**
CUSE	**Cuicocha Este**	**23.34**	**320**	*e*P	**P**	**16 26 11.0**	**-1.1**
GDU01	**Guandu, BA**	**23.39**	**83**	*e*P	**P**	**16 26 12.9**	**+0.8**
PLCA	**Paso Flores**	**23.48**	**194**	P	**P**	**16 26 10.1**	**-2.7**
	comp=Z,7.3nm,1.0s,baz=30,slow=18,SNR=3.7						
PAC1	**Pacto, Paraso**	**23.56**	**319**	*e*P	P	16 26 04.3	-10
PTGC	**Puerto Gaitan,**	**23.62**	**338**	*e*P	**P**	**16 26 13.6**	**-0.7**
NBPN	**Ponto Novo - B**	**23.63**	**76**	*e*P	**P**	**16 26 15.6**	**+1.2**
SOTA	**Rioblanco**	**23.80**	**326**	*e*P	**P**	**16 26 14.6**	**-1.9**
PCON	**Cinco Dias**	**23.85**	**327**	*e*P	**P**	**16 26 15.0**	**-2.1**
MARP	**Paez Belalcaza**	**24.06**	**328**	*e*P	**P**	**16 26 20.6**	**+1.9**
POPC	**Popayan, Colom**	**24.17**	**326**	*e*P	**P**	**16 26 24.1**	**+4.4**
PRAC	**Prado**	**24.30**	**331**	*e*P	**P**	**16 26 18.9**	**-1.8**
CHIC	**Chingaza**	**24.63**	**335**	*e*P	**P**	**16 26 22.4**	**-1.7**
ORTC	**Ortega, Tolima**	**24.64**	**331**	*e*P	**P**	**16 26 24.1**	**+0.4**
ROSC	**El Rosal**	**25.06**	**334**	P	**P**	**16 26 30.4**	**+2.5**
	comp=Z,6.1nm,0.3s,baz=163,slow=20,SNR=1.1						
ROSC				LR	LR	16 37 37.0	
	comp=Z,1µm,20.4s,baz=210,slow=39						
ROSC	**El Rosal**	**25.06**	**334**	*e*P	**P**	**16 26 29.7**	**+1.8**
ROSC	**El Rosal**	**25.06**	**334**	IAmb	IAmb	16 26 38.5	
	comp=Z,50nm,1.1s						
MDP	**Montagnes des**	**25.31**	**26**	LR	LR	16 36 36.3	
	comp=Z,2µm,21.1s,baz=198,slow=37						
ELOV	**Elorza**	**25.51**	**346**	*e*P	**P**	**16 26 30.9**	**-0.6**
RUSC	**La Rusia**	**25.54**	**337**	*e*P	**P**	**16 26 35.5**	**+3.1**
SPBC	**San Pablo de B**	**25.69**	**335**	*e*P	**P**	**16 26 40.0**	**+6.7**
NBLA	**Lagarto - SE**	**25.82**	**78**	*e*P	**P**	**16 26 35.3**	**+0.9**
GUY2C	**Guyana, Caldas**	**25.86**	**332**	*e*P	**P**	**16 26 36.5**	**+1.2**
NORC	**Norcasia**	**25.94**	**333**	*e*P	**P**	**16 26 34.7**	**-0.9**
PLMC	**San Jos del P**	**26.00**	**330**	*e*P	**P**	**16 26 38.2**	**+2.1**
BARC	**Barichara**	**26.22**	**338**	*e*P	**P**	**16 26 36.5**	**-1.8**
NBMA	**Muriti-CE**	**26.29**	**70**	*e*P	**P**	**16 26 40.0**	**+1.2**
NBPB	**Pedra_Branca-C**	**26.42**	**65**	*e*P	**P**	**16 26 40.9**	**+0.9**
CBOC	**Ciudad Bolivar**	**26.72**	**331**	*e*P	**P**	**16 26 43.5**	**+0.8**
HELC	**Santa Helena**	**26.79**	**333**	*e*P	**P**	**16 26 43.5**	**0.0**
ZARC	**Zaragoza, Cauc**	**27.68**	**335**	*e*P	**P**	**16 26 47.0**	**-4.1**
JTS	**Las Juntas de**	**35.18**	**321**	LR	LR	16 43 01.9	
	comp=Z,834nm,21.4s,slow=37						
SJG	**San Juan**	**35.96**	**356**	LR	LR	16 41 51.5	
	comp=Z,709nm,21.3s,baz=185,slow=35						
MIAR	**Mount Ida**	**59.56**	**331**	P	**P**	**16 31 05.1**	**-1.3**
MIAR				IAmb	IAmb	16 31 11.4	
	comp=Z,10nm,1.1s						
PBMO	**Poplar Bluff**	**60.10**	**335**	P	**P**	**16 31 09.3**	**-0.7**
ACSO	**Alum Creek Sta**	**60.69**	**343**	P	**P**	**16 31 13.8**	**-0.1**
ACSO				IAmb	IAmb	16 31 20.1	
	comp=Z,26nm,1.1s						
TXAR	**Lajitas Array**	**60.95**	**320**	P	**P**	**16 31 18.1**	**+1.9**
	comp=Z,0.8nm,0.9s,baz=133,slow=7.7,SNR=5.5						
TXAR				LR	LR	16 59 19.8	
	comp=Z,158nm,18.6s,baz=0.0,slow=38						
ABTX	**Abilene, Hawle**	**61.05**	**325**	P	**P**	**16 31 16.5**	**-0.1**
ABTX				IAmb	IAmb	16 31 24.1	
	comp=Z,22nm,1.3s						
FVM	**French Village**	**61.15**	**336**	P	**P**	**16 31 14.9**	**-2.2**
FVM				IAmb	IAmb	16 31 19.7	
	comp=Z,8.6nm,1.0s						
CCM	**Cathedral Cave**	**61.53**	**335**	P	**P**	**16 31 18.7**	**-1.1**
CCM				IAmb	IAmb	16 31 28.9	
	comp=Z,15nm,1.4s						
K57A	**Scipio Center**	**61.58**	**349**	P	**P**	**16 31 19.7**	**-0.3**
N49A	**Columbus Grove**	**61.67**	**342**	P	**P**	**16 31 18.5**	**-2.1**
VNA3	**Neumayer Olymp**	**61.84**	**163**	P	**P**	**16 31 21.3**	**-0.1**
J59A	**Piesco**	**61.97**	**351**	P	**P**	**16 31 21.0**	**-1.6**
J59A				IAmb	IAmb	16 31 30.2	
	comp=Z,18nm,1.1s						
S39A	**Bolivar**	**62.08**	**333**	P	**P**	**16 31 21.6**	**-1.9**
S39A				IAmb	IAmb	16 31 28.8	
	comp=Z,17nm,1.2s						
N47A	**Urbana**	**62.08**	**341**	P	**P**	**16 31 21.4**	**-2.0**
R40A	**Maddies Statio**	**62.15**	**335**	P	**P**	**16 31 22.5**	**-1.4**
R40A				IAmb	IAmb	16 31 29.2	
	comp=Z,11nm,1.1s						
J56A	**Wolcott**	**62.17**	**349**	P	**P**	**16 31 23.1**	**-0.8**
WMOK	**Wichita Mounta**	**62.23**	**327**	P	**P**	**16 31 23.5**	**-1.1**
WMOK				IAmb	IAmb	16 31 32.3	
	comp=Z,14nm,1.2s						
VNA2	**Neumayer--Watz**	**62.34**	**162**	P	**P**	**16 31 24.2**	**-0.6**
	baz=313,slow=5.6						
DBIC	**Dimbokro**	**62.83**	**72**	P	**P**	**16 31 31.0**	**+2.1**
	comp=Z,8.6nm,1.2s,baz=203,slow=7.7,SNR=2.6						
DBIC				LR	LR	16 58 53.2	
	comp=Z,556nm,18.2s,baz=252,slow=36						
CROK	**Carrier**	**63.23**	**329**	P	**P**	**16 31 30.5**	**-0.7**
U32A	**Winter Ranch,**	**63.63**	**328**	P	**P**	**16 31 32.8**	**-1.0**
P38A	**Dawn**	**63.80**	**334**	P	**P**	**16 31 32.2**	**-2.6**
P38A				IAmb	IAmb	16 31 39.8	
	comp=Z,27nm,1.4s						
R32A	**Long Quarter,**	**65.11**	**330**	P	**P**	**16 31 43.0**	**-0.4**
CBKS	**Cedar Bluff**	**65.91**	**330**	P	**P**	**16 31 47.4**	**-1.2**
214A	**Organ Pipe Nat**	**68.54**	**316**	P	**P**	**16 32 05.2**	**-0.3**
214A				IAmb	IAmb	16 32 14.2	
	comp=Z,11nm,1.4s						
MVCO	**Mesa Verde**	**69.36**	**323**	P	**P**	**16 32 08.9**	**-1.8**
MVCO				IAmb	IAmb	16 32 36.2	
	comp=Z,20nm,1.4s						
U15A	**North Rim**	**71.08**	**320**	P	**P**	**16 32 20.4**	**-0.9**
U15A				IAmb	IAmb	16 32 47.1	
	comp=Z,13nm,1.4s						
TORD	**Torodi Ar. Bea**	**71.35**	**69**	P	**P**	**16 32 23.0**	**-0.1**
	comp=Z,6.0nm,0.8s,baz=252,slow=5.9,SNR=12						
TORD				LR	LR	17 01 50.9	
	comp=Z,988nm,20.2s,baz=250,slow=34						
TORD	**Torodi Ar. Bea**	**71.35**	**69**	P	**P**	**16 32 22.0**	**-1.0**
TORD				IAmb	IAmb	16 32 30.3	
	comp=Z,8.4nm,1.1s						
AGMN	**Agassiz Nation**	**72.03**	**338**	P	**P**	**16 32 25.8**	**-0.6**
AGMN				IAmb	IAmb	16 32 32.2	
	comp=Z,14nm,1.2s						
QSPA	**South Pole Qui**	**72.20**	**180**	P	**P**	**16 32 26.8**	**-0.6**
QSPA				IAmb	IAmb	16 32 33.8	
	comp=Z,12nm,0.9s						
SCHQ	**Schefferville**	**72.57**	**358**	LR	LR	17 04 49.4	
	comp=Z,245nm,19.8s,baz=176,slow=36						
MDND	**Maddock**	**73.07**	**335**	P	**P**	**16 32 31.6**	**-1.1**
ULM	**Lac du Bonnet**	**73.69**	**339**	P	**P**	**16 32 36.9**	**+0.7**
	comp=Z,5.5nm,0.8s,baz=148,slow=6.9,SNR=4.3						
ULM				LR	LR	17 07 16.2	
	comp=Z,524nm,18.2s,baz=141,slow=38						
ULM	**Lac du Bonnet**	**73.69**	**339**	P	**P**	**16 32 35.0**	**-1.2**
ULM				IAmb	IAmb	16 32 41.8	
	comp=Z,14nm,1.1s						
PD31	**Pinedale Array**	**73.81**	**326**	P	**P**	**16 32 35.9**	**-1.5**
PDAR	**Pinedale Array**	**73.81**	**326**	P	**P**	**16 32 38.9**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=125,slow=8.2,SNR=7.6						
PDAR				LR	LR	17 09 46.5	
	comp=Z,115nm,18.6s,baz=106,slow=40						
PDAR	**Pinedale Array**	**73.81**	**326**	P	**P**	**16 32 37.0**	**-0.5**
BW06	**Boulder Array**	**73.81**	**326**	P	**P**	**16 32 36.9**	**-0.5**
TAOE	**Nuku Hiva Isla**	**74.69**	**266**	*e*LR	LR	16 55 45.0	
	comp=Z,128nm,24.0s						
LOHW	**Long Hollow**	**74.95**	**327**	P	**P**	**16 32 43.8**	**-0.2**
NVAR	**Mina Array Bea**	**76.06**	**319**	P	**P**	**16 32 52.6**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=141,slow=5.0,SNR=4.8						
NVAR				LR	LR	17 07 26.5	
	comp=Z,260nm,18.6s,baz=96,slow=37						
NVAR	**Mina Array Bea**	**76.06**	**319**	P	**P**	**16 32 51.5**	**+1.0**
TBI	**Tubuai**	**79.49**	**249**	*e*LQ	LQ	16 54 33.2	
	comp=Z,331nm,29.2s						
TBI				*e*LR	LR	16 57 59.0	
	comp=Z,536nm,28.0s						
ESDC	**Sonseca Array**	**79.78**	**43**	P	**P**	**16 33 12.5**	**+1.5**
	comp=Z,0.9nm,0.9s,baz=246,slow=6.7,SNR=3.0						
ESDC				LR	LR	17 06 13.7	
	comp=Z,462nm,19.0s,baz=230,slow=34						
BOSA	**Boshof**	**80.54**	**117**	LR	LR	17 04 39.1	
	comp=Z,475nm,19.0s,baz=254,slow=33						
PPT2	**Papeete2**	**81.13**	**254**	*e*LR	LR	16 58 45.7	
	comp=Z,311nm,25.8s						
VNDA	**Vanda**	**81.15**	**189**	LR	LR	17 09 01.6	
	comp=Z,491nm,18.2s,baz=138,slow=36						
EDM	**Edmonton**	**82.88**	**332**	P	**P**	**16 33 26.5**	**-0.5**
EDM				IAmb	IAmb	16 33 33.5	
	comp=Z,25nm,1.3s						
KEST	**Kesra**	**87.13**	**51**	LR	LR	17 11 23.5	
	comp=Z,659nm,21.9s,baz=194,slow=35						
YKA	**Yellowknife Ar**	**89.67**	**339**	P	**P**	**16 34 01.3**	**+1.2**
	comp=Z,6.6nm,1.1s,baz=122,slow=4.2,SNR=24						
YKA				LR	LR	17 16 54.4	
	comp=Z,351nm,19.1s,baz=0.0,slow=37						
YKA	**Yellowknife Ar**	**89.67**	**339**	P	**P**	**16 33 59.6**	**-0.5**
VAE	**Valguarnera**	**91.56**	**51**	LR	LR	17 14 01.7	
	comp=Z,551nm,20.9s,baz=188,slow=35						
DAVOX	**Davos/Dischmat**	**92.04**	**41**	LR	LR	17 12 37.4	
	comp=Z,442nm,21.3s,baz=238,slow=34						
GERES	**GERESS Array B**	**95.22**	**40**	LR	LR	17 16 27.8	
	comp=Z,289nm,19.1s,baz=265,slow=35						
VRAC	**Vranov**	**97.16**	**41**	LR	LR	17 17 16.4	
	comp=Z,272nm,18.9s,baz=246,slow=35						
NOA	**NORSAR Array B**	**98.38**	**28**	LR	LR	17 14 42.0	
	comp=Z,176nm,20.4s,baz=230,slow=33						
IDI	**Anoyia**	**98.89**	**56**	LR	LR	17 21 16.1	
	comp=Z,210nm,20.7s,baz=260,slow=36						
HFS	**Hagfors**	**99.20**	**30**	LR	LR	17 14 43.3	
	comp=Z,258nm,20.1s,baz=264,slow=32						
INK	**Inuvik**	**99.43**	**339**	LR	LR	17 21 18.8	
	comp=Z,366nm,19.2s,baz=104,slow=36						
KMBO	**Kilima Mbogo**	**99.87**	**94**	LR	LR	17 17 45.1	
	comp=Z,481nm,19.3s,baz=270,slow=34						
DZM	**Mont Dzumac**	**116.98**	**233**	*e*LR	LR	17 15 23.0	
	comp=Z,339nm,25.2s						
ASAR	**Alice Springs**	**135.26**	**203**	PKP	**PKiKP**	**16 40 24.7**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=143,slow=2.8,SNR=5.3						
KURBB	**Kurchatov Arra**	**135.59**	**34**	PKP	**PKiKP**	**16 40 24.7**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=301,slow=2.8,SNR=4.7						
ZALV	**Zalesovo Beam**	**136.56**	**27**	PKP	**PKiKP**	**16 40 25.5**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=324,slow=2.3,SNR=5.3						
ZALV	**Zalesovo Beam**	**136.56**	**27**		**PKPdf**	**16 40 21.9**	**-2.5**
AAK	**Ala-Archa**	**136.79**	**46**	PKP	**PKiKP**	**16 40 28.1**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=227,slow=4.5,SNR=3.9						
WRA	**Warramunga Arr**	**138.45**	**206**	PKP	**PKiKP**	**16 40 31.7**	**+0.6**
	comp=Z,2.5nm,1.1s,baz=161,slow=1.6,SNR=5.1						
MKAR	**Makanchi Array**	**139.79**	**37**	PKP	**PKiKP**	**16 40 33.4**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=253,slow=3.3,SNR=4.9						
WMQ	**Urumqi**	**144.62**	**37**	*e*P	**PKPab**	**16 40 37.8**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,180nm,4.1s						
WMQ				LR	LR		
	comp=Z,170nm,20.5s						
SONM	**Songino Array**	**149.09**	**13**	PKPbc	**PKiKP**	**16 40 52.5**	**+0.3**
	comp=Z,2.7nm,1.1s,baz=304,slow=1.5,SNR=8.9						
SONM	**Songino Array**	**149.09**	**13**	PKPbc	**PKPdf**	**16 40 48.6**	**+1.8**
USRK	**Ussuriysk Ar.**	**150.79**	**337**	PKPbc	**PKiKP**	**16 40 55.9**	**+0.3**
	comp=Z,5.7nm,0.8s,baz=299,slow=0.6,SNR=13						
HHC	**Hu-ho-hao-te**	**156.81**	**10**	*e*P	**PKPdf**	**16 40 56.5**	**-1.7**
XAN	**Xi'an**	**162.62**	**22**	PKP	**PKPdf**	**16 41 08.9**	**+3.9**
XAN				sPKP		16 41 24.0	
NJ2	**Nanjing**	**165.82**	**352**	*e*P	**PKPdf**	**16 41 07.0**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						

MOS ***21*** *16:59:24.8±1.0, 38°.20N×141°.97E, h54^{km}, mb4.7/11, Error ellipse: s-maj=8.3km s-min=5.2km az=93.6*

BJI ***21*** *16:59:25.7±0.0, 38°.15N×141°.93E, h71^{km}, mB4.7/12, mb4.4/39, Ms4.0/3, Ms7 3.7/4*

NIED ***21*** *16:59:27.6, 38°.19N×141°.84E, h60^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.03; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-1.93; $M_{r\theta}$-0.06; $M_{\theta\phi}$-0.33; $M_{\phi r}$0.48; Fault plane solution: $M_0$2.07000×10^{15} NP1:ϕ_s6.00000°, δ52.00000°, λ85.00000°. NP2:ϕ_s194.00000°, δ39.00000°, λ96.00000°.*

JMA ***21*** *16:59:27.6, 38°.19N×141°.84E, h60^{km}±1^{km}, M4.2 Broadband fault plane solution: P waves. NP1: ϕ_s171.00000°, δ46.00000°, λ69.00000°. NP2:ϕ_s20.00000°, δ48.00000°, λ110.00000°. Principal axes: T Plg75.0000°, Azm1.0000°; N Plg15.0000°, Azm186.0000°; P Plg1.0000°, Azm96.0000°;*

JMA Felt II J1.

NEIC ***21*** *16:59:27.7±1.9, 38°.20N±0°.06×141°.85E±0°.08, h57^{km}±6^{km}, mb4.6/70 Error ellipse: s-maj=10.3km s-min=7.2km az=127.0*

IDC ***21*** *16:59:28.0±0.6, 38°.15N×141°.89E, h67^{km}±4^{km}, mb3.9/33, mb1 4.0/40, mb1mx3.9/76, mbtmp4.2/40, MS2.8/6, Ms1 2.8/6, ms1mx2.7/54, Error ellipse: s-maj=11.1km s-min=10.1km az=112.0*

ISC 21 16:59:27.2±0.5**, 38°.19N**±0°.04×**141°.99E**±0°.05**, h61^{km}**±4^{km}**, h61^{km}:pP-P, n221,** σ1^{s}**51**/239**, mb4.4**/83**, 6C-25D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.43**	**287**	⇑P	**Pn**	**16 59 37.9**	**-0.7**
JIKH				S	**Sn**	**16 59 45.1**	**-1.8**
JIO	**Ouri**	**0.57**	**298**	⇓P	**Pn**	**16 59 39.3**	**-0.7**
JIO				S	**Sn**	**16 59 47.5**	**-1.9**
JKMT	**Kesennumamotoy**	**0.74**	**327**	⇓P	**Pn**	**16 59 41.7**	**-0.3**
JKMT				*e*S	**Sn**	**16 59 51.7**	**-1.2**
JMK	**Ichinoseki**	**0.97**	**322**	⇓P	**Pn**	**16 59 44.6**	**-0.4**
JMK				*e*S	**Sn**	**16 59 57.0**	**-1.1**
JMM	**Marumori**	**1.00**	**252**	⇓P	**Pn**	**16 59 43.9**	**-1.4**
JMM				S	**Sn**	**16 59 55.9**	**-2.8**
JMM	**Marumori**	**1.00**	**252**		**Pn**	**16 59 43.9**	**-1.4**
JMM				Sn	**Sn**	**16 59 55.7**	**-3.0**
JOU	**Okura**	**1.06**	**280**	⇓P	**Pn**	**16 59 45.1**	**-1.0**
JOU				*e*S	**Sn**	**16 59 58.1**	**-2.0**
JFK	**Kawauchi**	**1.21**	**228**	⇓P	**Pn**	**16 59 47.0**	**-1.0**
JFK				S	**Sn**	**17 00 01.5**	**-2.1**
JOM	**Ohasama**	**1.40**	**337**	⇓P	**Pn**	**16 59 50.5**	**0.0**
JOM				S	**Sn**	**17 00 07.5**	**-0.5**
JFT	**Otama**	**1.47**	**244**	⇓P	**Pn**	**16 59 51.0**	**-0.5**
JFT				S	**Sn**	**17 00 08.3**	**-1.5**
JYK	**Kaneyama**	**1.47**	**300**	⇓P	**Pn**	**16 59 50.9**	**-0.7**
JYS	**Shirataka**	**1.52**	**272**	⇓P	**Pn**	**16 59 51.4**	**-0.8**
JRG	**Rokugo**	**1.61**	**319**	⇓P	**Pn**	**16 59 53.2**	**-0.2**
JYA	**Atsumi**	**1.84**	**283**	⇓P	**Pn**	**16 59 55.7**	**-0.7**
JYT	**Yasato**	**2.43**	**217**	Pn	**Pn**	**17 00 03.4**	**-1.1**
JTM	**Tenmabayashi**	**2.69**	**345**		**Pn**	**17 00 08.6**	**+0.5**
JSD	**Sado**	**2.95**	**268**	Pn	**Pn**	**17 00 09.3**	**-2.2**
MJAR	**Matsushiro Arr**	**3.43**	**243**	P	**Pn**	**17 00 17.8**	**-0.4**
	3.0nm,0.3s,baz=58,slow=19,SNR=108						
MJAR				LR	LR	17 01 46.9	
	comp=Z,238nm,21.8s,baz=40,slow=42						
MJAR	**Matsushiro Arr**	**3.43**	**243**	Pn	**Pn**	**17 00 18.3**	**+0.1**
MAJO	**Matsushiro**	**3.43**	**243**	P	**Pn**	**17 00 18.6**	**+0.3**
MAJO	**Matsushiro**	**3.43**	**243**	Pn	**Pn**	**17 00 18.6**	**+0.3**
MAT	**Matsushiro**	**3.43**	**243**	P	**Pn**	**17 00 18.9**	**+0.6**
MAT				S	**Sn**	**17 00 58.1**	**+0.4**
MJB9	**Matsu-Tunnel**	**3.43**	**243**		**Pn**	**17 00 18.6**	**+0.4**
ERM	**Erimo**	**3.93**	**13**	⇓*i*P	**Pn**	**17 00 25.1**	**+0.2**
ERM	**Erimo**	**3.93**	**13**	Pn	**Pn**	**17 00 24.6**	**-0.3**
JGF	**Kuroka**	**4.52**	**237**		**Pn**	**17 00 33.4**	**+0.2**
JEW	**Eniwo**	**4.67**	**355**	Pn	**Pn**	**17 00 36.9**	**+1.8**
INU	**Inuyama**	**4.90**	**236**	Pn	**Pn**	**17 00 38.5**	**+0.3**
JHJ2	**Mitsune**	**5.37**	**200**	Pn	**Pn**	**17 00 43.2**	**-1.5**
JHJ	**Hachijo jima 2**	**5.37**	**200**	P	**Pn**	**17 00 43.4**	**-1.4**
	58nm,0.3s,baz=328,slow=20,SNR=7.1						
JHJ				S	**Sn**	**17 01 41.3**	**-3.9**
	93nm,0.3s,baz=34,slow=23,SNR=14						
NMR	**Nemuro--Hokkai**	**5.90**	**28**	⇓*i*P	**Pn**	**17 00 50.1**	**-1.9**
NMR				*e*S	**Sn**	**17 01 52.3**	**-5.9**
JKA	**Kamikawa-asahi**	**5.94**	**4**	Pn	**Pn**	**17 00 52.0**	**-0.5**
ASAJ	**Asahikawa**	**5.94**	**4**	P	**Pn**	**17 00 52.8**	**+0.3**
	4.0nm,0.3s,baz=205,slow=12,SNR=25						
ASAJ				LR	LR	17 03 05.7	
	comp=Z,54nm,19.8s,baz=283,slow=36						
JWT	**Wachi**	**6.03**	**243**	Pn	**Pn**	**17 00 54.8**	**+0.9**
GLVR	**Golovnino**	**6.15**	**25**	*e*P	**Pn**	**17 00 55.0**	**-0.4**
GLVR				*e*S	**Sn**	**17 01 59.6**	**-4.8**
GLVR				smax	smax		
	comp=N,488nm,0.2s						
GLVR				smax	smax		
	comp=E,811nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**6.53**	**25**	*e*P	**Pn**	**17 00 59.2**	**-1.4**
YUK				*e*S	**Sn**	**17 02 08.2**	**-5.4**
YUK				pmax	pmax		
	comp=Z,86nm,0.6s						
YUK				pmax	pmax		
	comp=N,29nm,0.2s						
YUK				pmax	pmax		
	comp=E,38nm,0.5s						
YUK				smax	smax		
	comp=E,542nm,0.4s						
YUK				smax	smax		
	comp=N,592nm,0.3s						
SHO	**Shikotan**	**6.75**	**31**	*e*P	**Pn**	**17 01 01.2**	**-2.4**
SHO				*e*S	**Sn**	**17 02 11.9**	**-7.1**
SHO				pmax	pmax		
	comp=Z,20nm,0.6s						
SHO				pmax	pmax		
	comp=E,8.0nm,0.2s						
SHO				pmax	pmax		
	comp=N,14nm,0.3s						
JHS	**Saijyo**	**7.82**	**249**		**Pn**	**17 01 19.0**	**+0.8**
JMN	**Monobe**	**7.94**	**238**	Pn	**Pn**	**17 01 19.6**	**-0.3**
KUR	**Kuril'sk**	**8.30**	**30**	*e*P	**Pn**	**17 01 25.4**	**+0.7**
KUR				*i* S	**Sn**	**17 02 51.9**	**-5.0**
KUR				smax	smax		
	comp=N,164nm,0.6s						
KUR				smax	smax		
	comp=E,100nm,0.6s						
YSS	**Yuzh-Sakhalins**	**8.78**	**3**	*e*P	**Pn**	**17 01 32.5**	**+1.2**
VLA	**Vladivostok**	**9.12**	**306**	⇓*e*P	**Pn**	**17 01 35.8**	**-0.2**
VLA				pmax	pmax		
	comp=Z,37nm,1.8s						
USA0B	**Ussuriysk Arra**	**9.64**	**312**	P	**Pn**	**17 01 43.2**	**+0.2**
USA0B	**Ussuriysk Arra**	**9.64**	**312**	Pn	**Pn**	**17 01 43.2**	**+0.2**
USRK	**Ussuriysk Ar.**	**9.64**	**312**	P	**Pn**	**17 01 42.1**	**-0.9**
	baz=120,slow=14,SNR=40						
USRK	**Ussuriysk Ar.**	**9.64**	**312**	Pn	**Pn**	**17 01 43.2**	**+0.2**
JNU	**Nakatsue**	**10.36**	**244**	P	**Pn**	**17 01 53.4**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=17,slow=20,SNR=1.6						
JCJ	**Chichijima**	**11.06**	**179**	P	**Pn**	**17 02 00.0**	**-2.6**
	comp=Z,4.0nm,0.3s,baz=2.6,slow=20,SNR=8.1						
JCJ				S	Sn	17 03 53.1	-12
	comp=Z,5.0nm,0.3s,baz=294,slow=19,SNR=2.2						
JCJ	**Chichijima**	**11.06**	**179**	Pn	**Pn**	**17 02 03.8**	**+1.2**
KSRS	**Korea Array**	**11.15**	**271**	P	**Pn**	**17 02 04.8**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=81,slow=14,SNR=22						
KSRS				LR	LR	17 06 40.4	
	comp=Z,21nm,18.1s,baz=88,slow=39						
KLR	**Kul'dur**	**13.28**	**330**	P	**Pn**	**17 02 34.0**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=159,slow=17,SNR=2.1						
KLR				LR	LR	17 07 19.5	
	comp=Z,39nm,21.0s,baz=164,slow=36						
KLR	**Kul'dur**	**13.28**	**330**	P	**Pn**	**17 02 34.0**	**+1.3**
PETK	**Petropavlovsk-**	**18.46**	**31**	LR	LR	17 11 56.1	
	comp=Z,49nm,18.5s,baz=167,slow=40						
ZEA	**Zeya**	**18.56**	**332**	*e*P	**Pn**	**17 03 44.4**	**+4.7**
NJ2	**Nanjing**	**19.87**	**259**	*e*P	**P**	**17 03 53.0**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
BJI	**Beijing**	**20.10**	**283**	P	**P**	**17 03 52.8**	**-2.9**
BJI				pP	**pP**	**17 04 05.5**	**-3.4**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TPUB	**Ta-pu**	**23.53**	**237**	P	**P**	**17 04 29.2**	**-2.7**
HHC	**Hu-ho-hao-te**	**23.57**	**286**	*e*P	**P**	**17 04 32.1**	**-0.2**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.6s						
YAK	**Yakutsk**	**25.05**	**346**	P	**P**	**17 04 46.0**	**+0.7**
	comp=Z,4.7nm,0.6s,baz=302,slow=3.4,SNR=7.2						
YAK				LR	LR	17 14 15.2	
	comp=Z,36nm,19.2s,baz=142,slow=35						
YAK	**Yakutsk**	**25.05**	**346**	*e*P	**P**	**17 04 46.1**	**+0.7**
YAK				pmax	pmax		
	comp=Z,11nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.5s						
YAK	**Yakutsk**	**25.05**	**346**	P	**P**	**17 04 45.0**	**-0.4**
YAK				IAmb	IAmb	17 04 47.6	
	comp=Z,10nm,0.8s						
SEY	**Seymchan**	**25.57**	**11**	P	**P**	**17 04 51.7**	**+1.6**
	comp=Z,4.7nm,0.9s,baz=242,slow=1.4,SNR=17						
XAN	**Xi'an**	**26.95**	**271**	P	**P**	**17 05 04.3**	**+1.4**
XAN				pP	pP	17 05 19.3	+1.4
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ULN	**Ulaanbaatar**	**27.11**	**302**	⇑*e*P	**P**	**17 05 05.1**	**+0.7**
ULN				pmax	pmax		
	comp=Z,11nm,2.6s						
SONM	**Songino Array**	**27.54**	**302**	P	**P**	**17 05 08.5**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=100,slow=9.0,SNR=6.4						

SONM	Songino Array	27.54	302	P	P	17 05 06.6	-1.6
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	27.54	302	P	P	17 05 06.5	-1.6
ENH	Enshi	27.91	263	P	P	17 05 09.9	-1.6
ENH				IAmb	IAmb	17 05 19.4	
	comp=Z,11nm,0.6s						
H11N2	WAKE ISLAND Hy	28.37	123	T	T	17 35 36.5	
	baz=316,slow=76,SNR=444						
H11N1	WAKE ISLAND Hy	28.38	123	T	T	17 35 37.2	
	baz=316,slow=76,SNR=944						
H11N3	WAKE ISLAND Hy	28.39	123	T	T	17 35 37.8	
	baz=316,slow=76,SNR=752						
H11S1	WAKE ISLAND Hy	29.12	125	T	T	17 36 31.7	
	baz=318,slow=76,SNR=776						
H11S3	WAKE ISLAND Hy	29.13	125	T	T	17 36 31.8	
	baz=318,slow=76,SNR=1161						
H11S2	WAKE ISLAND Hy	29.14	125	T	T	17 36 32.8	
	baz=318,slow=76,SNR=576						
LZH	Lanzhou	30.34	278	eP	P	17 05 31.5	-1.7
LZH				pP	sP	17 05 53.5	-2.0
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
GTA	Gaotai	32.68	286	⇑P	P	17 05 54.5	+0.8
GTA				pP	pP	17 06 08.6	-0.2
GTA				sP	sP	17 06 16.9	+0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BILL	Bilibino	32.79	17	eP	P	17 05 54.8	+0.6
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TIXI	Tiksi	34.20	353	P	P	17 06 04.8	-1.5
	comp=Z,0.3nm,0.3s,baz=115,slow=3.5,SNR=1.6						
KMI	Kunming	35.60	260	⇓P	P	17 06 21.0	+1.8
KMI				pP	pP	17 06 33.3	-1.1
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
DGZ	Jazzator, Alta	40.10	305	deP	P	17 06 57.4	+0.6
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WMQ	Urumqi	40.74	296	eP	P	17 07 02.9	+0.8
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.3s						
ZALV	Zalesovo Beam	41.49	311	P	P	17 07 07.3	-0.6
	comp=Z,1.5nm,0.5s,baz=89,slow=7.6,SNR=6.7						
ZALV	Zalesovo Beam	41.49	311	P	P	17 07 07.0	-0.9
CMAR	Chiang Mai Arr	42.24	255	P	P	17 07 12.9	-1.6
	comp=Z,0.4nm,0.5s,baz=49,slow=7.2,SNR=4.8						
CMAR				PcP	PcP	17 09 07.9	+0.3
	comp=Z,0.7nm,0.8s,baz=7.8,slow=2.7,SNR=4.3						
CMAR	Chiang Mai Arr	42.24	255	ceP	P	17 07 15.6	+1.1
NRIK	Noril'sk	42.42	335	⇓eP	P	17 07 15.2	-0.1
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.8s						
MK31	Makanchi Array	43.91	301	P	P	17 07 26.8	-0.9
MK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MK31	Makanchi Array	43.91	301	P	P	17 07 26.8	-0.9
MK31				IAmb	IAmb	17 07 28.5	
	comp=Z,4.0nm,0.7s						
MKAR	Makanchi Array	43.91	301	P	P	17 07 27.7	0.0
	comp=Z,4.1nm,0.6s,baz=84,slow=10,SNR=39						
MKAR				pP	pP	17 07 45.7	+2.4
	comp=Z,2.9nm,0.7s,baz=83,slow=8.4,SNR=7.5						
MKAR	Makanchi Array	43.91	301	ceP	P	17 07 28.1	+0.4
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	Makanchi Array	43.91	301	P	P	17 07 27.3	-0.4
MAKZ	Makanchi	44.11	301	P	P	17 07 28.6	-0.8
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAKZ	Makanchi	44.11	301	P	P	17 07 28.6	-0.8
MAKZ				IAmb	IAmb	17 07 30.3	
	comp=Z,4.5nm,0.7s						
KURK	Kurchatov	45.59	307	deP	P	17 07 40.4	-0.6
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	Kurchatov	45.59	307	P	P	17 07 40.4	-0.6
KURK				IAmb	IAmb	17 08 02.5	
	comp=Z,12nm,0.8s						
KURBB	Kurchatov Arra	45.66	307	P	P	17 07 41.2	-0.3
	comp=Z,6.0nm,0.5s,baz=82,slow=8.1,SNR=41						
KURBB				pP	pP	17 08 00.1	+2.8
	comp=Z,11nm,0.8s,baz=81,slow=8.3,SNR=10						
CAST	Castle Rocks	46.02	35	P	P	17 07 45.7	+1.5
KTH	Kantishna Hill	46.54	35	P	P	17 07 49.8	+1.4
KTH				IAmb	IAmb	17 08 17.7	
	comp=Z,3.8nm,1.2s						
MLY	Manley	46.63	33	P	P	17 07 51.0	+1.9
TOLK	Toolik Lake Re	47.24	28	P	P	17 07 55.7	+2.0
RND	Reindeer	47.47	35	P	P	17 07 56.8	+1.2
RND				pmax	pmax		
	comp=Z,2.0nm,0.7s						
RND	Reindeer	47.47	35	P	P	17 07 56.8	+1.2
RND				IAmb	IAmb	17 07 57.6	
	comp=Z,2.4nm,0.7s						
GHO	Glory Hole Cre	47.52	37	P	P	17 07 57.3	+1.3
GHO				IAmb	IAmb	17 08 18.9	
	comp=Z,11nm,1.1s						
MDM	Murphy Dome	47.70	33	P	P	17 07 58.8	+1.5
WRH	Wood River Hil	47.77	33	P	P	17 07 59.4	+1.6
SML	Sawmill	47.80	37	P	P	17 07 59.7	+1.6
SML				IAmb	IAmb	17 08 27.7	
	comp=Z,15nm,1.4s						
DHY	Denali Highway	48.15	35	P	P	17 08 02.9	+1.9
DHY				IAmb	IAmb	17 08 13.7	
	comp=Z,6.5nm,1.3s						
SCM	Sheep Creek Mo	48.27	37	P	P	17 08 03.0	+1.2
SCM				pmax	pmax		
	comp=Z,16nm,1.2s						
SCM	Sheep Creek Mo	48.27	37	P	P	17 08 03.0	+1.2
SCM				IAmb	IAmb	17 08 19.0	
	comp=Z,16nm,1.2s						
IL31		48.28	33	P	P	17 08 02.8	+1.1
IL31				IAmb	IAmb	17 08 08.3	
	comp=Z,2.9nm,0.9s						
ILAR	Eielson Array	48.28	33	P	P	17 08 02.9	+1.1
	comp=Z,1.5nm,0.7s,baz=270,slow=6.7,SNR=15						
ILAR	Eielson Array	48.28	33	P	P	17 08 02.3	+0.6
KDJ	Kajisay	48.63	296	P	P	17 08 04.8	-0.2
KDJ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KDJ	Kajisay	48.63	296	P	P	17 08 04.8	-0.2
KDJ				IAmb	IAmb	17 08 07.2	
	comp=Z,3.0nm,0.6s						
M24K	Tolsona, Glenn	48.79	36	P	P	17 08 07.3	+1.6
PRP	Porcupine Dome	48.81	32	P	P	17 08 08.2	+2.1
PRP				IAmb	IAmb	17 08 08.5	
	comp=Z,2.7nm,0.9s						
KLU	Klutina	48.97	37	P	P	17 08 09.0	+1.8
KLU				IAmb	IAmb	17 08 18.8	
	comp=Z,16nm,1.5s						
BOOM	Boomskoye usch	49.39	297	P	P	17 08 10.4	-0.4
BOOM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BOOM	Boomskoye usch	49.39	297	P	P	17 08 10.4	-0.4
BOOM				IAmb	IAmb	17 08 33.6	
	comp=Z,5.7nm,0.8s						
SCRK	Sand Creek	49.59	34	P	P	17 08 13.6	+1.6
BMRM	Bremner River	49.67	38	P	P	17 08 14.4	+1.9
BMRM				IAmb	IAmb	17 08 15.9	
	comp=Z,2.9nm,0.8s						
BVAR	Borovoye Array	50.14	312	P	P	17 08 16.5	+0.3
	comp=Z,1.2nm,0.5s,baz=88,slow=3.6,SNR=7.1						
BVAR				PcP	PcP	17 09 34.1	-0.7
	comp=Z,1.6nm,0.6s,baz=188,slow=7.3,SNR=6.5						
VRDI	Verde Repeater	50.18	37	P	P	17 08 18.1	+1.6
VRDI				IAmb	IAmb	17 08 31.9	
	comp=Z,19nm,1.5s						
AAK	Ala-Archa	50.35	298	P	P	17 08 18.5	+0.4
	comp=Z,1.4nm,0.5s,baz=97,slow=3.0,SNR=7.1						
AAK	Ala-Archa	50.35	298	⇓eP	P	17 08 18.8	+0.7
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AAK	Ala-Archa	50.35	298	P	P	17 08 18.1	0.0
KSH	Kashi	50.36	293	P	P	17 08 23.8	+5.6
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ISLE	Juniper Island	50.82	38	P	P	17 08 22.7	+1.4
BARN	Barnard Glacie	51.07	37	P	P	17 08 24.5	+1.3
BARN				IAmb	IAmb	17 08 33.2	
	comp=Z,9.6nm,1.2s						
CTGM	Chitina Glacie	51.24	37	P	P	17 08 26.4	+1.9
MTN	Manton Dam	51.77	194	P	P	17 08 28.8	+0.2
COEN	Coen	51.88	179	P	P	17 08 29.7	+0.2
INK	Inuvik	53.15	28	P	P	17 08 39.1	+0.8
	comp=Z,0.5nm,0.4s,baz=310,slow=7.7,SNR=5.3						
INK	Inuvik	53.15	28	IAmb	IAmb	17 08 40.9	
	comp=Z,2.8nm,0.9s						
GSI	Gunungsitoli	54.79	239	P	P	17 08 51.3	+0.4
GSI				IAmb	IAmb	17 09 10.3	
	comp=Z,6.4nm,0.9s						
KNRA	Kununurra	55.00	196	P	P	17 08 52.9	+0.6
CHGR	Chuyangaron	55.59	295	P	P	17 08 56.2	-0.5
ARU	Arti	55.81	318	P	P	17 08 57.5	-0.3
	comp=Z,2.5nm,0.5s,baz=77,slow=4.6,SNR=14						
ARU	Arti	55.81	318	d iP	P	17 08 57.5	-0.3
ARU				*PP	pP	17 09 12.2	-1.6
ARU				S	S	17 16 41.5	+1.5
ARU				SS	SS	17 20 18.8	-6.9
ARU				pmax	pmax		
	comp=Z,14nm,1.3s						
ARU	Arti	55.81	318	P	P	17 08 57.4	-0.3
ABKAR	Akbulak array	57.55	310	P	P	17 09 09.5	-0.7
WB0	Warramunga Arr	58.09	188	P	P	17 09 13.8	-0.4
WB0				IAmb	IAmb	17 09 14.5	
	comp=Z,7.3nm,0.8s						
AKTO	Aktyubinsk	58.25	312	P	P	17 09 15.1	-0.1
	comp=Z,2.6nm,0.8s,baz=74,slow=12,SNR=8.3						
WRAB	Tennant Creek	58.26	188	P	P	17 09 14.8	-0.6
WRAB				pmax	pmax		
	comp=Z,14nm,1.1s						
WRAB	Tennant Creek	58.26	188	P	P	17 09 14.8	-0.6
WR0	Warramunga Arr	58.26	188	P	P	17 09 14.8	-0.6
WR0				IAmb	IAmb	17 09 15.4	
	comp=Z,5.5nm,0.6s						
WB2	Warramunga Arr	58.26	188	P	P	17 09 14.9	-0.5
WB2				IAmb	IAmb	17 09 15.8	
	comp=Z,9.1nm,0.9s						
WRA	Warramunga Arr	58.27	188	P	P	17 09 15.0	-0.5
	comp=Z,3.4nm,0.5s,baz=7.0,slow=6.1,SNR=49						
WRA				pP	pP	17 09 31.2	-0.4
	comp=Z,1.4nm,0.6s,baz=1.9,slow=7.1,SNR=3.9						
WRA	Warramunga Arr	58.27	188	P	P	17 09 14.8	-0.6
EUNU	Eureka	58.98	9	P	P	17 09 20.2	+0.4
KIRV	Kirov	59.61	323	P	P	17 09 24.5	+0.2
	comp=Z,13nm,0.6s,baz=275,slow=1.9,SNR=5.4						
KIRV	Kirov	59.61	323	⇓iP	P	17 09 24.7	+0.4
LVZ	Lovozero	61.25	336	P	P	17 09 35.3	-0.2
LVZ				pmax	pmax		
	comp=Z,38nm,1.5s						
LVZ	Lovozero	61.25	336	P	P	17 09 35.2	-0.2
RES	Resolute Bay	61.37	15	P	P	17 09 35.7	-0.4
	comp=Z,2.6nm,0.7s,baz=333,slow=7.3,SNR=7.7						
RES	Resolute Bay	61.37	15	IAmb	IAmb	17 09 44.2	
	comp=Z,17nm,0.2s						
AS31	Alice Springs	61.99	188	P	P	17 09 40.8	-0.2
ASAR	Alice Springs	61.99	188	P	P	17 09 40.8	-0.1
	comp=Z,3.1nm,0.7s,baz=355,slow=4.6,SNR=59						
ASAR	Alice Springs	61.99	188	P	P	17 09 40.9	0.0
ASAR	Alice Springs	61.99	188	P	P	17 09 40.9	0.0
KEV	Kevo	62.53	339	P	P	17 09 44.1	+0.1
KEV				pmax	pmax		
	comp=Z,58nm,1.5s						
KEV	Kevo	62.53	339	P	P	17 09 44.1	+0.1
YKA	Yellowknife Ar	62.58	31	P	P	17 09 45.2	+0.8
	comp=Z,0.8nm,0.7s,baz=301,slow=6.8,SNR=9.3						
YKA				pP	pP	17 10 01.8	+1.1
	comp=Z,0.8nm,0.9s,baz=300,slow=6.4,SNR=4.6						
YKA				PcP	PcP	17 10 23.6	+0.6
	comp=Z,0.7nm,0.7s,baz=304,slow=4.0,SNR=6.5						
YKA	Yellowknife Ar	62.58	31	P	P	17 09 45.1	+0.6
ARCES	ARCESS Array B	63.08	339	P	P	17 09 47.6	-0.1
	comp=Z,1.3nm,0.5s,baz=64,slow=5.5,SNR=11						
ARCES	ARCESS Array B	63.08	339	P	P	17 09 47.7	0.0
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ARCES	ARCESS Array B	63.08	339	P	P	17 09 47.7	0.0
ARCES				IAmb	IAmb	17 09 48.2	
	comp=Z,4.1nm,1.1s						
BELG	Belogornoye	63.27	317	P	P	17 09 48.6	-0.6
	comp=Z,6.2nm,0.6s,baz=314,slow=5.3,SNR=5.6						
BELG	Belogornoye	63.27	317	⇓eP	P	17 09 48.5	-0.6
BELG				pmax	pmax		
	comp=Z,5.0nm,2.6s						
EIDS	Eidsvold	63.79	171	P	P	17 09 53.6	+0.8
EIDS				IAmb	IAmb	17 10 11.5	
	comp=Z,14nm,1.4s						
FINES	FINESS Array B	68.01	332	P	P	17 10 19.2	-0.3
	comp=Z,3.8nm,0.6s,baz=47,slow=8.1,SNR=16						
SUMG	Summit	69.53	0	P	P	17 10 30.1	+0.7
SUMG				pmax	pmax		
	comp=Z,15nm,1.5s						
SUMG	Summit	69.53	0	P	P	17 10 30.1	+0.7
SUMG				IAmb	IAmb	17 10 52.1	
	comp=Z,16nm,1.5s						
STKA	Stephens Creek	69.71	180	P	P	17 10 31.1	+0.8
	comp=Z,1.0nm,0.4s,baz=20,slow=6.3,SNR=4.1						
STKA	Stephens Creek	69.71	180	P	P	17 10 30.7	+0.4
STKA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
STKA	Stephens Creek	69.71	180	P	P	17 10 30.7	+0.4
FORT	Forrest	69.83	193	P	P	17 10 30.4	-0.7
KIV	Kislovodsk	70.50	311	eP	P	17 10 33.9	-1.5
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,53nm,18.0s						
KBZ	Khabaz	70.50	311	P	P	17 10 35.5	+0.2
	comp=Z,3.7nm,0.9s,baz=34,slow=3.6,SNR=5.5						
JTMT	Jette	70.84	44	P	P	17 10 38.5	+1.0
JTMT				IAmb	IAmb	17 10 56.6	
	comp=Z,4.7nm,1.0s						
BBOO	Buckleboo	70.85	185	P	P	17 10 37.3	0.0
PABE	Paberze	72.80	328	P	P	17 10 48.7	-0.1
LRM	Limekiln Ridge	73.00	45	P	P	17 10 52.0	+1.4
NC405	NORSAR Array S	73.09	337	P	P	17 10 49.6	-0.9
NC405				IAmb	IAmb	17 11 11.4	
	comp=Z,4.7nm,1.2s						
HFS	Hagfors	73.23	336	P	P	17 10 51.6	+0.3
	comp=Z,4.3nm,0.8s,baz=54,slow=7.5,SNR=6.1						
NC204	NORSAR Array S	73.25	338	P	P	17 10 52.0	+0.4
NC204				IAmb	IAmb	17 10 59.0	
	comp=Z,13nm,1.1s						
NB2	NORSAR Subarra	73.30	337	P	P	17 10 51.4	-0.4
	comp=Z,15nm,1.4s,baz=40,slow=6.2						
NOA	NORSAR Array B	73.30	337	P	P	17 10 51.4	-0.4
	comp=Z,1.9nm,0.8s,baz=39,slow=6.0,SNR=4.7						
AKASG	Malin Array Be	73.67	322	P	P	17 10 53.7	-0.3
	comp=Z,2.5nm,0.6s,baz=46,slow=6.1,SNR=14						
AKASG	Malin Array Be	73.67	322	P	P	17 10 53.9	-0.1
AKASG	Malin Array Be	73.67	322	P	P	17 10 53.9	-0.1
AKBB	Malin Array Si	73.67	322	⇓eP	P	17 10 52.8	-1.2
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NVAR	Mina Array Bea	73.93	54	P	P	17 10 56.9	+0.7
	comp=Z,0.8nm,0.7s,baz=297,slow=5.8,SNR=5.0						
R11A	Troy Canyon, C	75.69	52	P	P	17 11 08.1	+1.9
SPUT	South Promonto	75.78	48	P	P	17 11 08.5	+1.8
SPUT				IAmb	IAmb	17 11 13.9	
	comp=Z,10.0nm,1.1s						
DUG	Dugway, Tooele	76.26	50	P	P	17 11 11.0	+1.6
DUG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DUG	Dugway, Tooele	76.26	50	P	P	17 11 11.0	+1.6
GWY	Greenwater Val	76.32	55	P	P	17 11 10.8	+1.0
GWY				IAmb	IAmb	17 11 12.2	
	comp=Z,2.5nm,0.7s						
QSM	Queen of Sheba	76.32	55	P	P	17 11 11.4	+1.7
QSM				IAmb	IAmb	17 11 12.2	
	comp=Z,2.8nm,0.7s						
BW06	Boulder Array	76.53	46	P	P	17 11 11.9	+0.8
PD31	Pinedale Array	76.53	46	P	P	17 11 11.7	+0.7
PDAR	Pinedale Array	76.53	46	P	P	17 11 12.4	+1.4
	comp=Z,1.6nm,0.6s,baz=276,slow=2.4,SNR=18						
PDAR				pP	pP	17 11 29.5	+1.8
	comp=Z,1.0nm,0.6s,baz=247,slow=1.9,SNR=5.5						
PDAR	Pinedale Array	76.53	46	P	P	17 11 11.9	+0.9
BURAR	Bucovina Array	77.69	322	P	P	17 11 16.9	-0.4
RDMU	Red Mountain	77.94	48	P	P	17 11 20.2	+1.3
RDMU				IAmb	IAmb	17 11 21.2	
	comp=Z,4.0nm,0.8s						
U15A	North Rim	78.94	52	P	P	17 11 26.7	+2.2
CLL	Collm	80.33	330	eP	P	17 11 31.0	-0.4
CLL	Collm	80.33	330	eP	P	17 11 31.0	-0.4
MMAI	Mount Meron Ar	81.67	306	P	P	17 11 39.6	+0.6
	comp=Z,0.6nm,0.4s,baz=42,slow=13,SNR=3.5						
KHC	Kasperske Hory	81.80	329	⇑eP	P	17 11 40.2	+0.8
KHC				pmax	pmax		
	comp=Z,68nm,3.9s						
GERES	GERESS Array B	81.97	328	P	P	17 11 40.1	-0.3
	comp=Z,0.5nm,0.5s,baz=59,slow=5.9,SNR=3.5						
MEM	Membach	83.49	334	dP	P	17 11 47.1	-0.9
	comp=Z,7.6nm,1.1s						
TX31	Lajitas Ar. Si	89.06	53	P	P	17 12 17.2	+1.3
TX32	Lajitas Array	89.06	53	P	P	17 12 17.1	+1.2
TX32				IAmb	IAmb	17 12 17.9	
	comp=Z,1.7nm,0.6s						
TXAR	Lajitas Array	89.06	53	P	P	17 12 16.8	+0.9
	comp=Z,1.4nm,0.6s,baz=302,slow=3.1,SNR=22						
TXAR				pP	pP	17 12 35.0	+1.9
	comp=Z,0.5nm,0.7s,baz=299,slow=4.0,SNR=3.6						
ESDC	Sonseca Array	96.46	334	P	P	17 12 48.9	-0.9
	comp=Z,0.3nm,0.8s,baz=64,slow=10,SNR=2.1						
QSPA	South Pole Qui	127.93	180	PKP	PKPdf	17 18 24.2	-0.8
	comp=Z,0.4nm,0.5s,baz=291,slow=1.9,SNR=5.1						
VNA2	Neumayer--Watz	143.55	196	PKPdf	PKPbc	17 18 51.4	+0.1
	baz=120,slow=3.3						
VNA3	Neumayer Olymp	143.80	195	PKPdf	PKPab	17 18 51.9	+0.7
LPAZ	La Paz	145.71	59	PKPbc	PKPdf	17 19 00.6	+0.8
	baz=11,slow=5.2						
SIV	San Ignacio	149.98	49	PKPbc	PKPbc	17 19 11.7	+0.6
	comp=Z,1.3nm,0.5s,baz=194,slow=2.1,SNR=6.9						

SJA ***21*** *17:04:47.2±0.6, 31°.52S×71°.78W, h9^{km}, ML4.0, MW3.7*
NEIC ***21*** *17:04:52.5±1.3, 31°.52S±0°.04×71°.6W±0°.1, h43^{km}±8^{km}, mb4.5/6, ML4.2(GUC), Error ellipse: s-maj=13.7km s-min=6.0km az=96.0*
IDC ***21*** *17:04:52.1±0.9, 31°.47S×71°.38W, h43^{km}±6^{km}, mb4.0/6, mb1 4.0/11, mb1mx3.8/41, mbtmp4.1/11, ML3.9/5, Error ellipse: s-maj=29.1km s-min=17.1km az=107.0*
GUC ***21*** *17:04:52.0±0.8, 31°.53S×71°.42W, h49^{km}±3^{km}, ML4.2*
ISC 21 17:04:51.8±0.6, **31°.53S**±0°.02×**71°.57W**±0°.05, **h45**^{km}±6^{km}, **n109**, σ**2^{s}.15**/133, **mb4.4**/9, **4C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.85	356	⇑eP	Pn	17 05 08.3	+0.9
CO06				eS	Sn	17 05 18.1	-0.7
CO06				IAML		17 05 25.8	
	comp=N,9µm,0.1s						
CO06	Fray Jorge	0.85	356		Pn	17 05 08.4	+0.9
CO03	El Pedregal	1.02	48	eP	Pn	17 05 08.2	-1.6
CO03				eS	Sn	17 05 22.3	-0.8
CO03				IAML		17 05 25.3	
	comp=E,12µm,0.2s						
CO03	El Pedregal	1.02	48		Pn	17 05 09.4	-0.4
CO03	El Pedregal	1.02	48	eP	Pn	17 05 09.6	-0.3
CO03				eS	Sn	17 05 23.6	+0.5
CO03				IAML		17 05 26.2	
	comp=Z,4µm,0.5s						
VA06	Catapilco	1.05	167	⇑iP	Pn	17 05 10.3	+0.2
VA06				eS	Sn	17 05 23.2	-0.5
VA06				IAML		17 05 26.4	
	comp=E,13µm,0.5s						
VA01	Torpederas	1.49	182	eP	Pn	17 05 17.0	+0.9
VA01				eS	Sn	17 05 37.0	+2.7
VA01				IAML		17 05 40.1	
	comp=E,2µm,0.3s						
VA01	Torpederas	1.49	182		Pn	17 05 16.9	+0.8
VA01	Torpederas	1.49	182	eP	Pn	17 05 16.9	+0.9
VA01				eP		17 05 17.1	
VA01				eS	Sn	17 05 37.9	+3.6
VA03	San Esteban	1.51	145	⇓iP	Pn	17 05 16.6	+0.2
VA03				eS	Sn	17 05 34.7	-0.2
VA03				IAML		17 05 38.6	
	comp=N,6µm,0.4s						
VA03	San Esteban	1.51	145		Pn	17 05 16.5	+0.1
VA03	San Esteban	1.51	145	eP	Pn	17 05 16.9	+0.5
VA03				eS	Sn	17 05 37.0	+2.1
VA03				IAML		17 05 41.8	
	comp=Z,3µm,0.2s						
GO04	Tololo Observa	1.51	26	eP	Pn	17 05 17.2	+0.7
GO04				eS	Sn	17 05 36.4	+1.3
GO04				IAML		17 05 40.8	
	comp=N,16µm,0.5s						
GO04	Tololo Observa	1.51	26		Pn	17 05 17.4	+0.9
GO04	Tololo Observa	1.51	26	eP	Pn	17 05 17.4	+0.9
GO04				eS	Sn	17 05 36.6	+1.5
ROCH	El Roble	1.52	162	⇑iP	Pn	17 05 17.3	+0.7
ROCH				eS	Sn	17 05 36.4	+1.1
ROCH				IAML		17 05 39.0	
	comp=N,6µm,0.2s						
ROC1	El Roble	1.52	162	eP	Pn	17 05 17.1	+0.4
ROC1				eS	Sn	17 05 37.0	+1.5
CO05	La Serena	1.63	10	eP	Pn	17 05 19.1	+1.1
CO05				i S	Sn	17 05 39.3	+1.5
CO05				IAML		17 05 45.1	
	comp=N,2µm,0.4s						
CO05	La Serena	1.63	10		Pn	17 05 18.4	+0.4
MT02	Curacav	1.76	168	eP	Pn	17 05 20.5	+0.6
MT02				eS	Sn	17 05 42.5	+1.4
MT02	Curacav	1.76	168		Pn	17 05 20.4	+0.6
MT02	Curacav	1.76	168	eP	Pn	17 05 20.9	+1.0
MT02				eS	Sn	17 05 46.5	+5.4
MT02				IAML		17 05 59.2	
	comp=Z,841nm,0.3s						
PEL	Peldehue	1.78	155	⇓iP	Pn	17 05 20.7	+0.7
PEL				eS	Sn	17 05 42.9	+1.4
PEL				IAML		17 05 45.7	
	comp=E,4µm,0.2s						
PEL	Peldehue	1.78	155		Pn	17 05 20.8	+0.7
PEL	Peldehue	1.78	155	eP	Pn	17 05 20.8	+0.7
PEL				eS	Sn	17 05 33.2	-8.3
RTLS	Leoncito	1.96	98	eP	Pn	17 05 24.8	+2.0
RTLS				IAML		17 05 57.9	
	comp=Z,720nm,0.5s						
AUSP	Uspallata	1.98	111	eP	Pn	17 05 25.0	+1.9
AUSP				eS	Sn	17 05 46.9	0.0
MT05	Renca	1.99	159	eP	Pn	17 05 24.2	+1.2
MT05				eS	Sn	17 05 48.2	+1.5
MT05				IAML		17 05 51.5	
	comp=E,6µm,0.3s						
MT05	Renca	1.99	159		Pn	17 05 23.9	+0.9
MT05	Renca	1.99	159	eP	Pn	17 05 24.2	+1.2
MT05				eS	Sn	17 05 54.4	+7.7
MT05				IAML		17 06 03.3	
	comp=Z,1µm,0.5s						
VA05	Santo Domingo	2.12	181		Pn	17 05 25.5	+0.8
AROD	Rodeo	2.26	54	eP	Pn	17 05 30.0	+3.0
AROD				eS	Sn	17 06 00.2	+6.4
MT09	Talagante	2.29	168	⇑eP	Pn	17 05 28.7	+1.5
MT09				eS	Sn	17 05 56.0	+1.6
MT09				IAML		17 06 09.8	
	comp=N,2µm,0.3s						
MT09	Talagante	2.29	168		Pn	17 05 28.5	+1.3
MT01	Popeta	2.34	173	eP	Pn	17 05 28.9	+1.1
MT01				eS	Sn	17 05 56.7	+1.3
MT01				IAML		17 06 05.5	
	comp=E,1µm,0.4s						
MT01	Popeta	2.34	173		Pn	17 05 28.9	+1.1
MT01	Popeta	2.34	173	eP	Pn	17 05 28.9	+1.1
MT01				eS	Sn	17 05 59.7	+4.3
MT01				IAML		17 06 12.0	
	comp=Z,659nm,0.5s						
ACCO	Cerro Coronel	2.35	67	eP	Pn	17 05 25.4	-2.8
ACCO				eP		17 05 31.3	
ACCO				eS	Sn	17 06 04.9	+8.9
ZON	Zonda	2.47	91		Pn	17 05 31.9	+2.3
ZON	Zonda	2.47	91	eP	Pn	17 05 32.2	+2.6
ZON				eS	Sn	17 06 07.1	+8.5
ZON				IAML		17 06 09.6	
	comp=Z,546nm,0.7s						
ACDV	Cuesta del Vie	2.51	58	eP	Pn	17 05 34.2	+4.0
ACDV				eS	Sn	17 06 07.1	+7.5
ACDV				IAML		17 06 08.9	
	comp=Z,426nm,0.4s						
ASAL	Salagasta	2.56	115	eP	Pn	17 05 33.8	+3.0
ASAL				eS	Sn	17 06 14.9	+14
ASAL				eS		17 06 14.9	
BO04	La Punta	2.58	162	eP	Pn	17 05 32.5	+1.3
BO04				eS	Sn	17 06 02.7	+1.3
BO04				IAML		17 06 14.4	
	comp=E,1µm,0.3s						
LMEL	Las Melosas	2.58	154	eP	Pn	17 05 33.1	+1.8
LMEL				eS	Sn	17 06 02.1	+0.6
LMEL				IAML		17 06 15.6	
	comp=N,2µm,0.2s						

ARCO	CERRO ARCO	2.59	121	eP	Pn	17 05 34.7	+3.3
ARCO				IAML		17 06 16.8	
	comp=Z,583nm,0.3s						
RTCV	Cerro Valdivia	2.61	98	eP	Pn	17 05 34.5	+3.0
RTCV				eS	Sn	17 06 11.8	+10
LCO	Las Campanas	2.62	17⇓	eP	Pn	17 05 33.1	+1.2
LCO				eS	Sn	17 06 03.7	+1.1
LCO	Las Campanas	2.62	17		Pn	17 05 33.2	+1.3
RTLL	Cerro Villicun	2.66	87	eP	Pn	17 05 34.6	+2.5
RTLL				eS	Sn	17 06 12.3	+9.2
AAGR	Agrelo	2.79	124	eP	Pn	17 05 37.1	+3.0
BO01	Tunca	2.88	172	eP	Pn	17 05 36.1	+0.9
BO01				eS	Sn	17 06 09.6	+0.9
BO01				IAML		17 06 30.8	
	comp=E,346nm,0.2s						
BO01	Tunca	2.88	172		Pn	17 05 35.8	+0.5
BO01	Tunca	2.88	172	eP	Pn	17 05 36.4	+1.2
BO01				eS	Sn	17 06 12.9	+4.2
BO01				IAML		17 06 33.4	
	comp=Z,288nm,0.6s						
AVIZ	Vizcacheras	3.23	128	eP	Pn	17 05 37.9	-2.1
BO02	Sierra Bellavi	3.32	169	eP	Pn	17 05 42.2	+0.9
BO02	Sierra Bellavi	3.32	169		Pn	17 05 42.4	+1.1
BO02	Sierra Bellavi	3.32	169	eP	Pn	17 05 43.0	+1.7
BO02				IAML		17 06 34.8	
	comp=Z,500nm,0.2s						
AC04	Llanos de Chal	3.34	8	eP	Pn	17 05 42.3	+0.8
AC04	Llanos de Chal	3.34	8		Pn	17 05 42.1	+0.6
AC04	Llanos de Chal	3.34	8	eP	Pn	17 05 42.6	+1.0
AC04				eS	Sn	17 06 25.4	+5.4
AC04				IAML		17 06 40.2	
	comp=Z,383nm,1.0s						
GO05	Huala	3.48	185		Pn	17 05 43.5	0.0
GO05	Huala	3.48	185	eP	Pn	17 05 43.5	0.0
AVFE	Valle Fertil	3.64	77	eS	Sn	17 06 37.5	+10
AVFE				IAML		17 06 38.4	
	comp=Z,631nm,0.4s						
GO03	Copiap	4.09	17		Pn	17 05 52.8	+0.9
GO03	Copiap	4.09	17	eS	Sn	17 06 46.4	+7.9
ACHE	Chepes	4.22	86	eS	Sn	17 06 49.9	+8.2
ML02	Panimavida	4.22	178		Pn	17 05 55.4	+1.8
AC02	Maricunga	5.14	25		Pn	17 06 07.6	+0.9
AC02	Maricunga	5.14	25	eP	Pn	17 06 07.8	+1.1
AC02				eS	Sn	17 07 14.9	+10
H03N1	Juan Fernandez	6.49	251	T	T	17 13 01.8	
	baz=78,slow=72,SNR=1626						
H03N3	Juan Fernandez	6.50	251	T	T	17 13 07.5	
	baz=78,slow=72,SNR=1817						
H03N2	Juan Fernandez	6.50	251	T	T	17 13 08.1	
	baz=78,slow=72,SNR=1968						
H03S3	Juan Fernandez	6.59	248	T	T	17 13 17.1	
	SNR=28						
H03S1	Juan Fernandez	6.60	248	T	T	17 13 16.7	
	SNR=30						
H03S2	Juan Fernandez	6.61	248	T	T	17 13 17.5	
	SNR=34						
PB14	IPOC Station P	6.95	9	Pn	Pn	17 06 28.0	-3.5
LC01	Cunco	7.36	182		Pn	17 06 35.9	-0.7
PB15	IPOC Station P	8.50	13		Pn	17 06 50.3	-2.2
LVC	Limon Verde	9.20	16	P	Pn	17 06 59.2	-3.0
	comp=Z,0.5nm,0.3s,baz=179,slow=8.3,SNR=6.5						
PLCA	Paso Flores	9.22	175	P	Pn	17 07 03.1	+0.9
	comp=Z,0.2nm,0.3s,baz=4.7,slow=21,SNR=1.5						
PB07	IPOC Station P	9.88	9	Pn	Pn	17 07 08.4	-3.0
PB09	IPOC Station P	9.91	13	Pn	Pn	17 07 08.9	-2.9
PB16	IPOC Station P	13.27	9	Pn	Pn	17 07 55.5	-2.6
CPUP	Villa Florida	13.50	71	P	Pn	17 08 00.2	-0.6
	comp=Z,0.3nm,0.3s,baz=247,slow=13,SNR=2.0						
LPAZ	La Paz	15.49	12	P	Pn	17 08 28.6	+0.7
	comp=Z,0.2nm,0.3s,baz=178,slow=7.0,SNR=4.8						
LPAZ	La Paz	15.49	12	Pn	Pn	17 08 25.4	-2.4
SIV	San Ignacio	18.19	34	P	P	17 09 00.1	-0.9
	comp=Z,0.7nm,0.3s,baz=198,slow=8.9,SNR=19						
ETMB	Extrema	22.17	14	P	P	17 09 43.8	-0.3
ETMB				IAmb	IAmb	17 10 05.0	
	comp=Z,20nm,1.4s						
BDFB	Brasilia	26.68	59	P	P	17 10 25.1	-1.7
	comp=Z,5.5nm,0.8s,baz=214,slow=11,SNR=4.4						
BDFB	Brasilia	26.68	59	IAmb	IAmb	17 10 26.6	
	comp=Z,6.8nm,1.1s						
VNA3	Neumayer Olymp	51.50	159	P	P	17 13 53.3	+0.9
VNA2	Neumayer--Watz	52.14	158	P	P	17 13 58.0	+0.9
	baz=288,slow=10						
SNAA	Sanae	53.73	159	P	P	17 14 09.8	+0.8
QSPA	South Pole Qui	58.70	180	P	P	17 14 45.9	+1.3
	comp=Z,2.7nm,0.9s,baz=156,slow=2.6,SNR=12						
QSPA				pP	pP	17 14 57.9	+0.4
	comp=Z,2.1nm,0.8s,baz=165,slow=2.9,SNR=4.7						
QSPA	South Pole Qui	58.70	180	IAmb	IAmb	17 15 08.6	
	comp=Z,9.1nm,1.4s						
JSC	Jenkinsville	66.09	351	P	P	17 15 32.2	-1.9
TXAR	Lajitas Array	67.79	330	P	P	17 15 46.7	+1.6
	comp=Z,0.3nm,0.5s,baz=147,slow=8.7,SNR=3.9						
LIC	Lamto	73.63	72	eP	P	17 16 20.2	-0.7
	comp=Z,11nm,0.6s						
TIC	Toumodi	73.88	72	eP	P	17 16 21.8	-0.6
KIC	Kosan Boka	73.94	72	eP	P	17 16 22.0	-0.7
	comp=Z,8.3nm,0.6s						
DBIC	Dimbokro	74.02	72	P	P	17 16 22.9	-0.3
	comp=Z,4.4nm,0.5s,baz=223,slow=6.0,SNR=11						
DBIC	Dimbokro	74.02	72	P	P	17 16 22.8	-0.4
DBIC				IAmb	IAmb	17 16 23.6	
	comp=Z,4.9nm,0.6s						
BOSA	Boshof	80.87	118	P	P	17 17 02.0	+0.5
	comp=Z,2.5nm,0.8s,baz=146,slow=3.6,SNR=3.5						
TORD	Torodi Ar. Bea	83.00	70	P	P	17 17 11.9	-0.7
	comp=Z,2.6nm,0.8s,baz=262,slow=4.8,SNR=14						
TORD				pP	pP	17 17 25.0	-1.1
	comp=Z,1.0nm,0.6s,baz=277,slow=5.9,SNR=4.3						
TORD	Torodi Ar. Bea	83.00	70	P	P	17 17 12.1	-0.6
TORD				IAmb	IAmb	17 17 13.2	
	comp=Z,2.8nm,0.8s						
WRA	Warramunga Arr	123.10	209	PKP	PKPdf	17 23 43.4	-0.6
	comp=Z,0.4nm,0.4s,baz=132,slow=1.4,SNR=16						
ZALV	Zalesovo Beam	151.92	30	PKP	PKPdf	17 24 32.6	-2.2
	comp=Z,0.5nm,0.4s,baz=325,slow=7.2,SNR=3.5						
ZALV				PKPbc	PKiKP	17 24 41.8	+0.2
	comp=Z,6.8nm,0.4s,baz=316,slow=3.0,SNR=32						
ZALV				pPKPbc	sPKPdf	17 24 55.1	+1.3
	comp=Z,1.8nm,0.5s,baz=316,slow=2.2,SNR=3.8						
ZALV	Zalesovo Beam	151.92	30		PKiKP	17 24 41.6	0.0
MKAR	Makanchi Array	154.80	45	PKPbc	PKiKP	17 24 48.0	+0.1
	comp=Z,0.3nm,0.5s,baz=348,slow=2.0,SNR=4.9						
MKAR				PKPab	PKPab	17 25 03.7	+0.6
	comp=Z,1.1nm,0.6s,baz=265,slow=5.0,SNR=8.5						

IDC 21 17:17:02.9±4.6, 10°.85S×165°.96E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.2/43, mbtmp3.7/3, Error ellipse: s-maj=238.0km s-min=30.8km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.75	250	P	P	17 23 29.5	+0.5
	1.2nm,1.1s,baz=80,slow=9.4,SNR=8.0						
ASAR	Alice Springs	33.07	243	P	P	17 23 40.1	-0.5
	0.3nm,0.4s,baz=69,slow=10,SNR=9.6						
ILAR	Eielson Array	83.26	18	P	P	17 29 31.1	0.0
	0.5nm,0.6s,baz=240,slow=4.9,SNR=9.9						

TUL 21 17:19:10.7±1.0, 36°.84N±0°.01×97°.88W±0°.02, h6km±2km, ML2.5, ML2.2/38(NEIC), Error ellipse: s-maj=2.4km s-min=2.0km az=71.0

NEIC 21 17:19:10.4±0.6, 36°.80N±0°.01×97°.85W±0°.02, h6km±3km, Error ellipse: s-maj=2.5km s-min=1.9km az=90.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.05	348		Pg	17 19 11.9	0.0
GC02				Sg	Sg	17 19 13.0	0.0
KAN14	Manchester OK	0.18	329		Pg	17 19 13.9	-0.2
KAN14				Sg	Sg	17 19 16.1	-0.5
KAN14				IAML		17 19 16.4	
	comp=N,825nm,0.2s						
KAN17	Caldwell West	0.25	15		Pg	17 19 15.6	+0.2
OK032	Salt Plains WL	0.29	270		Pg	17 19 16.3	+0.1
OK032				Sg	Sg	17 19 20.1	+0.1
OK032				IAML		17 19 20.4	
	comp=N,688nm,0.2s						
OK032				IAML		17 19 24.0	
	comp=N,529nm,0.2s						
CROK	Carrier	0.32	200		Pb	17 19 17.8	-0.7
CROK				IAML		17 19 24.9	
	comp=N,243nm,0.3s						
KAN01	Argonia South	0.36	11		Pg	17 19 17.5	+0.1
KAN13	South Haven SW	0.36	54	Pg	Pg	17 19 17.5	0.0
KAN13				IAML		17 19 23.5	
	comp=E,225nm,0.4s						
KAN13				IAML		17 19 23.5	
	comp=N,241nm,0.2s						
KAN10	Anthony SW Sta	0.38	328	Pg	Pg	17 19 17.5	-0.3
KAN10				Sg	Sg	17 19 22.2	-0.6
KAN10				IAML		17 19 22.5	
	comp=N,277nm,0.2s						
KAN09	Caldwell North	0.38	29		Pg	17 19 18.0	+0.2
KAN09				IAML		17 19 25.2	
	comp=N,349nm,0.2s						
KAN09				IAML		17 19 27.3	
	comp=E,305nm,0.2s						
KAN08	Anthony NE Sta	0.43	347	Pg	Pg	17 19 18.7	-0.2
KAN08				IAML		17 19 24.4	
	comp=E,276nm,0.4s						
KAN06	Argonia West S	0.45	359		Pg	17 19 18.9	-0.1
KAN06				IAML		17 19 24.9	
	comp=E,193nm,0.2s						
KAN16	Harper SW Stat	0.46	338	Pg	Pg	17 19 19.0	-0.3
KAN16				IAML		17 19 25.0	
	comp=E,228nm,0.5s						
KAN16				IAML		17 19 25.1	
	comp=N,254nm,0.2s						
BLOK	Blackwell	0.51	95	Pg	Pg	17 19 20.2	0.0
BLOK				IAML		17 19 30.0	
	comp=N,139nm,0.2s						
BLOK				IAML		17 19 31.1	
	comp=E,192nm,0.2s						
U32A	Winter Ranch,	1.02	246	Pg	Pg	17 19 29.5	-0.5
U32A				IAML		17 19 44.6	
	comp=N,67nm,0.2s						
U32A				IAML		17 19 48.7	
	comp=E,63nm,0.1s						
T35A	Sooner Cattle	1.08	84	Pg	Pg	17 19 31.1	0.0
T35A				IAML		17 19 54.2	
	comp=N,46nm,0.3s						
QUOK	Quay	1.11	124		Pg	17 19 31.9	+0.1
OK034	N. Norfolk Rd.	1.21	131	Pg	Pg	17 19 33.5	-0.1
OK034				IAML		17 19 51.8	
	comp=N,82nm,0.1s						
OK025	Westminster Rd	1.29	161	Pn	Pn	17 19 34.5	-0.4
FNO	Franklin	1.58	167	Pn	Pn	17 19 37.7	-1.4
R32A	Long Quarter,	1.76	337	Pn	Pn	17 19 40.1	-1.3
W35A	Tecumseh	1.82	154	Pn	Pn	17 19 42.4	0.0
WMOK	Wichita Mounta	2.20	201	Pn	Pn	17 19 48.0	+0.6
X34A	Smith Ranch, M	2.20	180	Pn	Pn	17 19 48.2	+0.7
CBKS	Cedar Bluff	2.50	324	Pn	Pn	17 19 49.0	-2.7

IDC 21 17:25:04.0±2.2, 6°.08S×152°.01E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.2/47, mbtmp3.6/4, ML1.6/1, MS3.9/1, Ms1 3.9/1, ms1mx2.8/26, Error ellipse: s-maj=70.4km s-min=18.9km az=113.0

ISC 21 17:25:06.2±1.9, 5°.9S±0°.1×151°.9E±0°.3, h10km, n6, σ1ˢ20/6, mb3.6/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.60	6	Pn	Pb	17 25 35.5	-0.5
KRVT				Sn	Sg	17 25 58.0	+0.2
PMG	Port Moresby	5.81	233	Pn	Pn	17 26 33.1	+0.6
	1.0nm,0.3s,baz=160,slow=22,SNR=3.6						
WRA	Warramunga Arr	22.01	229	P	P	17 30 00.7	-0.2
	1.3nm,0.7s,baz=57,slow=9.3,SNR=7.8						
ASAR	Alice Springs	24.70	223	P	P	17 30 26.1	-1.7
	1.1nm,0.8s,baz=58,slow=9.8,SNR=18						
JNU	Nakatsue	43.63	334	LR	LR	17 50 35.8	
	comp=Z,156nm,19.7s,baz=188,slow=35						
ILAR	Eielson Array	83.53	22	P	P	17 37 35.0	+0.8
	0.4nm,0.9s,baz=229,slow=5.5,SNR=2.5						

IDC 21 17:25:58.7±2.1, 6°.65S×130°.23E, h174km±32km, mb2.8/1, mb1 2.8/4, mb1mx2.4/42, mbtmp3.3/4, Error ellipse: s-maj=73.3km s-min=7.3km az=81.0

ISC 21 17:25:59.1±1.1, 6°.66S±0°.08×130°.9E±0°.4, h200km, n4, σ1ˢ47/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.76	3	P	Pn	17 27 23.7	+0.4
	0.4nm,0.3s,baz=210,slow=20,SNR=12						
SIJI				S	Sn	17 28 29.6	-0.5
	0.2nm,0.3s,baz=64,slow=23,SNR=1.9						
WRA	Warramunga Arr	13.61	166	P	P	17 29 06.9	+0.2
	0.1nm,0.3s,baz=343,slow=11,SNR=8.6						
WRA				S	S	17 31 34.2	-1.7
	0.1nm,0.3s,baz=336,slow=24,SNR=7.3						
ASAR	Alice Springs	17.15	171	P	Pn	17 29 48.9	+1.7
	0.1nm,0.3s,baz=339,slow=9.1,SNR=11						
MKAR	Makanchi Array	68.46	326	P	P	17 36 38.9	-0.6
	0.2nm,0.7s,baz=116,slow=6.2,SNR=1.6						

IDC 21 17:55:15.3±2.1, 5°.75S×130°.25E, h0km, mb3.6/1, mb1 3.9/4, mb1mx3.3/37, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=93.9km s-min=27.2km az=77.0

ISC 21 17:55:30.1±1.0, 6°.35S±0°.07×130°.5E±0°.1, h150km, n11, σ3ˢ05/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	3.85	28	P	Pn	17 56 27.1	-1.3
DRS	Darwin Rock St	6.06	176	P	Pn	17 57 01.7	+4.0
SANI	Sanana	6.17	314	P	Pn	17 56 58.8	-0.3
MTN	Manton Dam	6.49	174	P	Pn	17 57 06.4	+3.0
KDU	Kakadu	6.61	163	P	Pn	17 57 07.6	+2.6
SOEI	Soe	7.00	241	P	Pn	17 57 13.9	+3.6
KNRA	Kununurra	9.42	190	P	Pn	17 57 43.8	+1.3
FITZ	Fitzroy Crossi	12.59	201	Pn	Pn	17 58 24.5	+0.4
	0.2nm,0.3s,baz=23,slow=10,SNR=12						
FITZ				Sn	Sn	18 00 39.0	-4.3
	0.3nm,0.3s,baz=274,slow=23,SNR=9.3						
WRA	Warramunga Arr	14.03	165	Pn	Pn	17 58 43.4	+0.8
	0.3nm,0.3s,baz=345,slow=14,SNR=33						
WRA				Sn	Sn	18 01 12.9	-5.3
	0.5nm,0.3s,baz=336,slow=23,SNR=8.7						
ASAR	Alice Springs	17.54	169	P	Pn	17 59 28.0	+2.5
	0.2nm,0.3s,baz=350,slow=11,SNR=28						
ASAR				S	S	18 02 40.1	+0.7
	0.1nm,0.3s,baz=356,slow=28,SNR=6.0						
MKAR	Makanchi Array	67.93	326	P	P	18 06 12.2	-0.5
	0.3nm,0.4s,baz=112,slow=8.2,SNR=10						

IDC 21 17:58:00.7±999.0, 50°.52N×54°.23E, h0km, Error ellipse: s-maj=851.6km s-min=69.9km az=90.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	2.44	91	*i*		18 13 20.0	
	baz=277,slow=248,SNR=1.5						
I46RU	ZALESOVO INFRA	18.97	68	*i*		19 57 50.0	
	baz=270,slow=332,SNR=1.5						
I34MN	SONGINO INFRAS	33.66	74	*i*		21 23 30.0	
	baz=292,slow=334,SNR=3.4						
I45RU	USSURIYSK INFR	50.79	65	*i*		23 09 10.0	
	baz=298,slow=331,SNR=1.7						

NEIC 21 18:27:44.6±2.7, 28°.6S±0°.1×175°.8W±0°.1, h10km±1km, mb4.7/26, Error ellipse: s-maj=29.0km s-min=2.9km az=133.0

IDC 21 18:27:50.4±3.4, 29°.09S×175°.92W, h59km±28km, mb4.1/11, mb1 4.3/13, mb1mx4.1/28, mbtmp4.3/13, ML4.0/2, MS4.2/12, Ms1 4.2/12, ms1mx3.9/38, Error ellipse: s-maj=40.4km s-min=24.3km az=165.0

ISC 21 18:27:48.1±0.6, 28°.89S±0°.07×175°.81W±0°.08, h38km, n98, σ2ˢ56/97, mb4.5/16, MS4.2/13, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.89	258	P	Pn	18 28 19.6	+1.9
	511nm,0.3s,baz=72,slow=5.3,SNR=9.2						
RAO				S	Sn	18 28 42.2	+2.0
	2µm,0.3s,baz=295,slow=23,SNR=14						
RAO				LR	LR	18 29 08.8	
	comp=Z,2µm,18.8s,baz=82,slow=45						
RAO	Raoul Island	1.89	258		Pn	18 28 18.2	+0.5
GLKZ	Green Lake	1.89	258	P	Pn	18 28 18.8	+1.0
GLKZ				S	Sn	18 28 44.0	+3.6
RIZ	Raoul Island	1.89	259	P	Pn	18 28 18.4	+0.5
RIZ				S	Sn	18 28 42.7	+2.2
MXZ	Matakaoa Point	9.95	208	S	Sn	18 32 02.6	+3.7
WMGZ	Waiomatatini S	10.13	207	P	Pn	18 30 11.4	+0.4
WMGZ				S	Sn	18 32 08.6	+5.4
PKGZ	Pakihiroa	10.32	208	S	Sn	18 32 15.0	+6.9
HAZ	Te Kaha	10.34	210	P	Pn	18 30 12.7	-1.1
HAZ				S	Sn	18 32 13.3	+5.0
PUZ	Puketiti	10.41	207	P	Pn	18 30 12.2	-2.6
PUZ				S	Sn	18 32 12.0	+1.9
RUGZ	Raukumara Rang	10.56	209	P	Pn	18 30 17.8	+0.8
RUGZ				S	Sn	18 32 19.7	+5.7
CNGZ	Carnagh Statio	10.79	206	P	Pn	18 30 19.9	0.0
CNGZ				S	Sn	18 32 24.8	+5.5
OUZ	Omahuta	10.98	232	Pn	Pn	18 30 22.4	-0.2
URZ	Urewera	11.05	210	P	Pn	18 30 22.3	-1.2
	1.9nm,0.3s,baz=300,slow=22,SNR=9.6						
URZ				S	Sn	18 32 29.4	+3.7
	3.7nm,0.3s,baz=7.9,slow=22,SNR=4.3						
NIUE	Niue	11.15	30	Pn	Pn	18 30 19.0	-5.9
BKZ	Black Stump Fm	12.07	210	Pn	Pn	18 30 35.6	-2.0
MRZ	Mangatainoka R	13.70	209	P	Pn	18 31 00.6	+0.8
MRZ				S	Sn	18 33 27.2	-3.4
HOWZ	Holdsworth Sta	13.93	208	P	Pn	18 31 03.3	+0.4
HOWZ				S	Sn	18 33 32.1	-4.0
DUWZ	D’Urville Isla	14.56	213	P	P	18 31 16.4	-0.9
DUWZ				S	Sn	18 33 48.2	-3.3
PLWZ	Palliser	14.60	208	Pn	Pn	18 31 11.2	-0.8
BHW	Baring Head	14.62	209	Pn	Pn	18 31 10.5	-1.7
TCW	Tory Channel	14.72	211	P	Pn	18 31 11.6	-2.0
TCW				S	Sn	18 33 48.4	-6.9
TUWZ	Tuamarina	15.04	211	P	P	18 31 20.4	-2.3
TUWZ				S	Sn	18 33 58.6	-4.7
TUWZ	Tuamarina	15.04	211	Pn	Pn	18 31 19.4	+1.5
NNZ	Nelson	15.14	213	P	P	18 31 22.1	-1.7
NNZ				S	Sn	18 34 00.2	-5.4
NNZ	Nelson	15.14	213	Pn	Pn	18 31 19.5	+0.3
NNZ				IAmb	IAmb	18 31 23.5	
	comp=Z,61nm,1.2s						
CMWZ	Cape Campbell	15.18	210		P	18 31 24.9	+0.7
QRZ	Quartz Range	15.26	216	Pn	Pn	18 31 20.5	-0.3
QRZ				IAmb	IAmb	18 31 32.4	
	comp=Z,50nm,1.3s						
BSWZ	Blackbirch Sta	15.30	211	S	Sn	18 34 05.5	-4.1
BSWZ	Blackbirch Sta	15.30	211	Pn	Pn	18 31 19.4	-1.9
THZ	Tophouse	15.79	213	P	Pn	18 31 26.5	-1.1
THZ				S	Sn	18 34 17.4	-4.0
THZ	Tophouse	15.79	213	Pn	Pn	18 31 27.2	-0.3
KHZ	Kahutara	16.02	210	P	Pn	18 31 26.8	-3.6
KHZ				S	Sn	18 34 20.8	-6.1
KHZ	Kahutara	16.02	210	Pn	Pn	18 31 29.3	-1.2
KHZ				IAmb	IAmb	18 31 42.6	
	comp=Z,55nm,1.1s						
RAR	Rarotonga	16.41	66	LR	LR	18 38 45.4	
	comp=Z,465nm,18.4s,baz=244,slow=40						
LTZ	Lake Taylor	16.87	212	P	Pn	18 31 42.0	+0.6
LTZ	Lake Taylor	16.87	212	Pn	Pn	18 31 40.4	-1.0
DZM	Mont Dzumac	17.40	289	eLR	LR	18 35 59.9	
	comp=Z,914nm,23.9s						
DZM	Mont Dzumac	17.40	289	P	Pn	18 31 48.9	+0.8
	comp=Z,0.3nm,0.3s,baz=99,slow=9.5,SNR=4.7						
DZM				LR	LR	18 36 52.4	
	comp=Z,646nm,20.1s,baz=160,slow=31						
DZM	Mont Dzumac	17.40	289	IAmb	IAmb	18 32 09.9	
	comp=Z,64nm,1.2s						
OXZ	Oxford	17.41	211	P	P	18 31 48.7	-0.2
OXZ	Oxford	17.41	211		Pn	18 31 44.3	-3.7
OXZ				IAmb	IAmb	18 32 10.2	
	comp=Z,62nm,1.3s						
MQZ	McQueen’s Vall	17.44	209	P	P	18 31 49.6	+0.3
MQZ	McQueen’s Vall	17.44	209	Pn	Pn	18 31 45.6	-2.7
MQZ				IAmb	IAmb	18 31 55.2	
	comp=Z,163nm,1.5s						
WVZ	Waitaha Valley	17.82	214	P	P	18 31 60.0	+6.5
RPZ	Rata Peaks	18.16	212	P	P	18 32 00.6	+3.3
RPZ	Rata Peaks	18.16	212		Pn	18 31 54.5	-2.7
RPZ				IAmb	IAmb	18 31 58.3	
	comp=Z,58nm,1.5s						
TBI	Tubuai	24.26	83	eLR	LR	18 38 58.0	
	comp=Z,367nm,22.2s						
PPT2	Papeete2	26.53	71	eLQ	LQ	18 38 44.5	
	comp=Z,559nm,26.0s						
PPT2				eLR	LR	18 39 55.7	
	comp=Z,479nm,29.0s						
PPT	Papeete	26.55	71	LR	LR	18 43 04.3	
	comp=Z,331nm,18.5s,baz=218,slow=34						
ARMA	Armidale	28.29	259		P	18 33 39.2	+0.9
CTA	Charters Tower	35.50	276	P	P	18 34 39.4	-2.0
	comp=Z,3.9nm,0.6s,baz=149,slow=18,SNR=1.8						
CTAO	Charters Tower	35.50	276	P	P	18 34 40.1	-1.4
CTAO				IAmb	IAmb	18 34 47.9	
	comp=Z,16nm,1.2s						
STKA	Stephens Creek	36.70	254	P	P	18 34 50.0	-1.6
	comp=Z,5.9nm,0.9s,baz=92,slow=11,SNR=6.8						
STKA				LR	LR	18 47 53.5	
	comp=Z,185nm,21.7s,baz=84,slow=33						
STKA	Stephens Creek	36.70	254	P	P	18 34 49.7	-1.8
TAOE	Nuku Hiva Isla	38.95	66	eLR	LR	18 45 37.5	
	comp=Z,253nm,22.4s						
AS31	Alice Springs	45.13	264	P	P	18 36 00.4	-0.7
ASAR	Alice Springs	45.13	264	P	P	18 35 59.8	-1.4
	comp=Z,4.9nm,1.0s,baz=99,slow=7.0,SNR=26						
WR0	Warramunga Arr	45.80	270	P	P	18 36 04.9	-1.6
WR0				IAmb	IAmb	18 36 05.7	
	comp=Z,17nm,1.5s						
WB2	Warramunga Arr	45.98	270	P	P	18 36 06.3	-1.5
WRAB	Tennant Creek	45.98	270	P	P	18 36 05.6	-2.2
WRAB				IAmb	IAmb	18 36 07.7	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	45.99	270	P	P	18 36 06.5	-1.5
	comp=Z,3.9nm,0.7s,baz=106,slow=7.9,SNR=30						
WRA	Warramunga Arr	45.99	270	P	P	18 36 06.3	-1.6
WB0	Warramunga Arr	46.00	270	P	P	18 36 06.7	-1.3
WB0				IAmb	IAmb	18 36 26.8	
	comp=Z,20nm,1.4s						
VNDA	Vanda	49.79	186	LR	LR	18 54 11.6	
	comp=Z,134nm,20.2s,baz=29,slow=32						
SBUM	Sibu	75.48	281	P	P	18 39 28.5	-0.3
SBUM				IAmb	IAmb	18 39 29.9	
	comp=Z,6.9nm,1.2s						
KSM	Kuching	76.64	279	P	P	18 39 34.3	-1.1
KSM				IAmb	IAmb	18 39 36.2	
	comp=Z,10nm,0.9s						
MJAR	Matsushiro Arr	78.13	324	P	P	18 39 42.3	-1.0
	comp=Z,6.9nm,1.0s,baz=158,slow=5.7,SNR=6.4						
MJAR	Matsushiro Arr	78.13	324	P	P	18 39 42.4	-0.8
MJAR				IAmb	IAmb	18 39 43.2	
	comp=Z,10nm,1.3s						
MAJO	Matsushiro	78.13	324	P	P	18 39 42.9	-0.3
MJB9	Matsu-Tunnel	78.13	324	P	P	18 39 42.9	-0.4
SNAA	Sanae	79.59	178	P	P	18 39 58.1	+7.2
VNA3	Neumayer Olymp	79.67	175	P	P	18 39 58.2	+6.9
VNA2	Neumayer--Watz	80.12	176	P	P	18 40 01.1	+7.3
	baz=183,slow=3.6						
LPIG	La Paz	82.12	57	LR	LR	19 09 43.6	
	comp=Z,147nm,18.1s,baz=228,slow=30						
PLCA	Paso Flores	82.12	132	LR	LR	19 12 20.3	
	comp=Z,95nm,18.4s,baz=170,slow=32						
PFO	Pinyon Flats O	83.78	46	LR	LR	19 12 32.7	
	comp=Z,207nm,18.3s,baz=224,slow=32						
KSRS	Korea Array	84.47	318	P	P	18 40 17.8	+1.0
	comp=Z,4.8nm,1.1s,baz=148,slow=5.7,SNR=11						
KSAR	Wonju Array Be	84.48	318	P	P	18 40 17.2	+0.4
PETK	Petropavlovsk-	84.86	344	LR	LR	19 15 38.9	
	comp=Z,95nm,18.4s,baz=146,slow=34						
NVAR	Mina Array Bea	85.84	42	P	P	18 40 24.3	+0.3
	comp=Z,1.2nm,0.8s,baz=228,slow=8.4,SNR=5.3						
NVAR				LR	LR	19 14 11.3	
	comp=Z,331nm,18.2s,baz=271,slow=32						
USRK	Ussuriysk Ar.	86.99	325	P	P	18 40 30.1	+1.0
	comp=Z,5.7nm,1.0s,baz=119,slow=2.4,SNR=4.2						
USRK	Ussuriysk Ar.	86.99	325	P	P	18 40 28.9	-0.2
GSI	Gunungsitoli	87.66	273	P	P	18 40 33.8	+0.6
TXAR	Lajitas Array	89.97	56	P	P	18 40 43.5	-0.2
	comp=Z,0.4nm,0.9s,baz=221,slow=9.5,SNR=2.4						
ENH	Enshi	92.35	303	P	P	18 40 54.1	-0.7
PDAR	Pinedale Array	93.73	42	P	P	18 41 00.7	-0.4
	comp=Z,0.3nm,0.7s,baz=129,slow=2.9,SNR=1.2						
PDAR				LR	LR	19 19 15.8	
	comp=Z,185nm,18.4s,baz=256,slow=33						
CMAR	Chiang Mai Arr	94.72	288	P	P	18 41 07.0	+1.2

	comp=Z,1.4nm,0.9s,baz=142,slow=2.5,SNR=8.5						
CMAR	Chiang Mai Arr	94.72	288	P	P	18 41 06.4	+0.5
HDA	Harding Lake	95.70	12	P	P	18 41 09.0	-0.3
CPUP	Villa Florida	99.39	127	LR	LR	19 24 00.5	
	comp=Z,70nm,18.2s,baz=34,slow=34						
MKAR	Makanchi Array	118.26	310	PKP	PKPdf	18 46 31.8	+0.7
	comp=Z,1.0nm,1.0s,baz=113,slow=1.8,SNR=4.6						
MKAR	Makanchi Array	118.26	310		PKPdf	18 46 31.1	0.0
ARCES	ARCESS Array B	137.50	349	PKP	PKPdf	18 47 08.6	+1.7
	comp=Z,3.5nm,0.9s,baz=22,slow=1.3,SNR=4.8						
FINES	FINESS Array B	144.34	342	PKP	PKPab	18 47 17.9	+0.4
	comp=Z,5.6nm,1.0s,baz=52,slow=3.1,SNR=4.6						
FINES	FINESS Array B	144.34	342		PKPbc	18 47 19.3	+1.5
NB2	NORSAR Subarra	147.51	354	PKP	PKPbc	18 47 28.5	+1.0
	comp=Z,1.1nm,0.7s,baz=8.5,slow=2.9						
NOA	NORSAR Array B	147.51	354	PKPbc	PKPdf	18 47 27.5	+2.6
	comp=Z,8.4nm,1.1s,baz=16,slow=4.5,SNR=5.7						
AKASG	Malin Array Be	151.19	326	PKPbc	PKPbc	18 47 38.1	+1.1
	comp=Z,7.0nm,0.3s,baz=45,slow=2.8,SNR=90						

IDC 21 18:40:01.4±5.8**,24°.57N×95°.73E,h0^{km},mb3.2**/3**,**
mb1 3.4/3**,mb1mx2.8**/44**,mbtmp3.2**/3**,Error ellipse:**
s-maj=607.6km s-min=30.6km az=59.0,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	Shillong	3.63	287	*e*PN	Pn	18 40 48.0	-11
SHL				*e*SN	Sn	18 41 17.0	-26
MKAR	Makanchi Array	24.65	337	P	P	18 45 23.7	0.0
	0.2nm,0.7s,baz=147,slow=10.0,SNR=2.2						
WRA	Warramunga Arr	58.05	136	P	P	18 49 56.5	0.0
	0.6nm,0.9s,baz=311,slow=6.6,SNR=7.2						
ASAR	Alice Springs	60.58	139	P	P	18 50 13.9	-0.1
	0.2nm,0.4s,baz=322,slow=6.7,SNR=8.3						

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*IDC **21** 18:55:12.5±0.6,4°.47S×144°.24E,h60^{km}±5^{km},mb4.2/25,*
mb1 4.3/29,mb1mx4.1/48,mbtmp4.5/29,MS3.8/11,
Ms1 3.8/11,ms1mx3.5/34,Error ellipse: s-maj=15.2km
s-min=9.7km az=81.0
*NEIC **21** 18:55:12.6±2.0,4°.45S±0°.06×144°.22E±0°.05,h59^{km}±6^{km},*
mb4.8/49,Error ellipse: s-maj=11.1km s-min=3.5km
az=144.0
*DJA **21** 18:55:15.6±0.4,5°S±3°×14°4E±°,h76^{km}±5^{km},M4.9/44,*
mB5.3/18,mb5.0/44,MLv5.3/6,Mw(mB)4.7/18
ISC 21 18:55:11.9±0.3**,4°.43S**±0°.05×**144°.22E**±0°.06**,h50^{km},n204,**
σ**1^{s}37**/197**,mb4.7**/64**,MS3.8**/10**,1C,Near north coast of**
New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	3.94	53		Pn	18 56 09.9	0.0
JAY	Jayapura	3.99	298	P	Pn	18 56 14.4	+3.7
GENI	Genyem	4.43	294	P	Pn	18 56 19.9	+3.2
PMG	Port Moresby	5.74	150	P	Pn	18 56 35.0	+0.3
	49nm,0.3s,baz=339,slow=5.8,SNR=197						
PMG				LR	LR	18 59 46.2	
	comp=Z,511nm,20.3s,baz=338,slow=48						
PMG	Port Moresby	5.74	150	Pn	Pn	18 56 34.7	+0.1
PMG	Port Moresby	5.74	150	P	Pn	18 56 35.6	+0.9
PMG	Port Moresby	5.74	150	P	Pn	18 56 35.4	+0.7
SMPI	Sarmi	6.01	294	P	Pn	18 56 42.0	+3.7
	1.5nm2µm248nm,0.9s						
RABL	Rabaul	7.93	89		Pn	18 57 06.6	+1.9
SRPI	Serui, Papua	8.36	287	P	Pn	18 57 19.8	+9.2
COEN	Coen	9.52	186	Pn	Pn	18 57 29.1	+2.6
FAKI	Fak Fak	12.04	277	P	Pn	18 58 04.0	+3.1
	109nm,1.1s						
FAKI	Fak Fak	12.04	277	Pn	Pn	18 58 01.6	+0.6
SAUI	Saumlaki	13.31	254	Pn	Pn	18 58 18.5	+0.1
MTSU	Mount Surprise	13.62	180	P	Pn	18 58 25.6	+3.0
	baz=14,SNR=42						
KDU	Kakadu	14.21	234	P	Pn	18 58 30.1	-0.4
	baz=14,SNR=155						
KDU	Kakadu	14.21	234	P	Pn	18 58 30.2	-0.3
MSAI	Masohi	15.29	274	P	P	18 58 57.9	+9.2
DRS	Darwin Rock St	15.38	238	P	Pn	18 58 46.3	+0.5
	104nm,0.9s						
MTN	Manton Dam	15.39	236	P	Pn	18 58 45.7	-0.3
	baz=15,SNR=50						
MTN	Manton Dam	15.39	236	Pn	Pn	18 58 45.4	-0.6
MTN	Manton Dam	15.39	236	P	Pn	18 58 46.3	+0.3
CTA	Charters Tower	15.69	173	P	Pn	18 58 50.5	+0.7
	0.4nm,0.3s,baz=351,slow=10,SNR=2.7						
CTAO	Charters Tower	15.69	173		Pn	18 58 50.5	+0.7
AAI	Ambon	16.00	272	P	P	18 58 57.5	+1.0
	99nm,0.9s						
HNR	Honiara	16.38	108	P	Pn	18 58 59.4	+0.8
	13nm,0.3s,baz=344,slow=4.3,SNR=5.7						
HNR	Honiara	16.38	108		Pn	18 58 59.0	+0.4
QIS	Mount Isa	16.64	195	P	Pn	18 59 01.0	-0.9
	baz=17,SNR=22						
QIS	Mount Isa	16.64	195	P	Pn	18 59 02.1	+0.2
LBMI	Labuha	17.12	282	P	P	18 59 09.4	+0.5
	58nm,1.4s						
TNTI	Ternate	17.61	287	P	P	18 59 14.8	+0.4
	26nm,1.0s						
TNTI	Ternate	17.61	287	P	P	18 59 14.0	-0.4
WB0	Warramunga Arr	18.00	211	P	Pn	18 59 17.1	-1.6
WB0				IAmb	IAmb	18 59 24.4	
	comp=Z,62nm,0.7s						
WR0	Warramunga Arr	18.09	211	P	P	18 59 18.5	-1.1
WR0				IAmb	IAmb	18 59 26.9	
	comp=Z,80nm,0.8s						
WRAB	Tennant Creek	18.16	211	P	P	18 59 19.1	-1.3
WRAB				IAmb	IAmb	18 59 25.5	
	comp=Z,57nm,0.6s						
WRAB	Tennant Creek	18.16	211	P	P	18 59 20.2	-0.2
WB2	Warramunga Arr	18.17	211	P	P	18 59 19.7	-0.8
WRA	Warramunga Arr	18.17	211	P	P	18 59 19.6	-0.9
	comp=Z,4.4nm,0.3s,baz=28,slow=9.8,SNR=213						
WRA				LR	LR	19 06 49.9	
	comp=Z,545nm,18.2s,baz=25,slow=38						
WRA	Warramunga Arr	18.17	211	P	P	18 59 19.3	-1.3
SANI	Sanana	18.35	277	P	Pn	18 59 23.5	+0.5
	comp=Z,558nmcomp=Z,57nm,0.8s						
KNRA	Kununurra	18.86	233	P	P	18 59 27.2	-0.9
	baz=19,SNR=273						
KNRA	Kununurra	18.86	233	P	P	18 59 27.4	-0.7
KNRA	Kununurra	18.86	233	P	P	18 59 28.0	-0.1
RK1H	Rockhampton Ha	19.80	163	P	Pn	18 59 39.5	-0.7
	comp=Z,16nm,0.7s						
SOEI	Soe	20.48	254	P	Pn	18 59 47.7	-0.8
	comp=Z,5µmcomp=Z,536nm,0.9s						
SOEI	Soe	20.48	254	P	P	18 59 46.8	+0.8
KMSI	Cibinong	20.82	283	P	P	18 59 49.9	+0.4
	comp=Z,1µmcomp=Z,139nm,0.7s						
BATI	Baumata	21.17	253	P	P	18 59 54.1	+0.8
	comp=Z,163nm,0.8s,baz=118,slow=1.6,SNR=24						
BATI	Baumata	21.17	253	P	P	18 59 56.8	+3.5
	comp=Z,1µmcomp=Z,126nm,0.8s						
AS31	Alice Springs	21.55	207	P	P	18 59 55.8	-1.5
ASAR	Alice Springs	21.56	207	P	P	18 59 56.2	-1.2
	comp=Z,14nm,0.7s,baz=36,slow=8.6,SNR=93						
ASAR				LR	LR	19 08 56.1	
	comp=Z,452nm,20.1s,baz=37,slow=38						
ASAR	Alice Springs	21.56	207	P	P	18 59 55.7	-1.7
EIDS	Eidsvold	21.84	163	P	P	19 00 01.4	+1.1
	baz=22,SNR=6.6						
EIDS	Eidsvold	21.84	163	P	P	18 59 59.4	-0.9
EIDS	Eidsvold	21.84	163	P	P	18 59 59.7	-0.6
QLP	Quilpie	22.03	180	P	P	19 00 01.7	-0.6
	baz=22,SNR=7.8						
QLP	Quilpie	22.03	180	P	P	19 00 02.1	-0.2
MMRI	Maumere	22.23	258	P	P	19 00 10.4	+5.8
MMRI	Maumere	22.23	258	P	P	19 00 02.9	-1.7
MMRI	Maumere	22.23	258	P	P	19 00 05.8	+1.2
RMQ	Roma	22.36	169	P	P	19 00 07.6	+1.7
	baz=22,SNR=11						
FITZ	Fitzroy Crossi	22.69	232	P	P	19 00 09.7	+0.2
	comp=Z,75nm,0.4s,baz=43,slow=14						
EDFI	Ende, Flores	22.78	258	P	P	19 00 09.8	-0.8
	comp=Z,449nmcomp=Z,33nm,1.4s						
MRSI	Marisa	22.78	282	P	P	19 00 11.7	+1.2
	comp=Z,634nmcomp=Z,66nm,0.6s						
APSI	Ampana	22.81	278	P	P	19 00 11.0	+0.2
	comp=Z,588nmcomp=Z,55nm,0.9s						
INKA	Innaminka	23.41	188	P	P	19 00 17.8	+1.2
BKSI	Bulukumba	24.02	267	P	P	19 00 23.1	+0.6
	comp=Z,62nm,1.0s						
BNSI	Bone	24.04	269	P	P	19 00 25.0	+2.4
	comp=Z,34nm,0.7s						
TOLI2	Tolitoli	24.05	283	P	P	19 00 21.5	-1.3
TOLI2	Tolitoli	24.05	283	P	P	19 00 22.3	-0.5
BASI	Baing, Sumba	24.13	255	P	P	19 00 24.7	+1.3
	comp=Z,3µmcomp=Z,204nm,1.1s						
TTSI	Tana Toraja	24.38	272	P	P	19 00 28.6	+2.8
	comp=Z,34nm,0.7s						
SPSI	Sidrap Palu	24.39	270	P	P	19 00 26.6	+0.8
	comp=Z,24nm,0.7s						
KAPI	Kappang	24.39	268	P	P	19 00 25.8	0.0
	comp=Z,17nm,0.7s,baz=113,slow=2.5,SNR=16						
KAPI	Kappang	24.39	268	P	P	19 00 25.6	-0.2
KAPI				IAmb	IAmb	19 00 35.5	
	comp=Z,21nm,0.7s						
KAPI	Kappang	24.39	268	P	P	19 00 27.0	+1.2
	comp=Z,30nm,0.7s						
OOD	Oodnadatta	24.61	198	P	P	19 00 27.4	-0.3
MPSI	Mapaga	24.75	280	P	P	19 00 30.7	+1.6
	comp=Z,421nmcomp=Z,16nm,0.7s						
WBSI	Waikabubak, Su	25.17	257	P	P	19 00 32.2	-0.7
	comp=Z,1µmcomp=Z,111nm,0.8s						
WRKA	Warakurna	25.57	215	P	P	19 00 35.2	-1.2
	baz=26,SNR=59						
WRKA	Warakurna	25.57	215	P	P	19 00 35.6	-0.9
LCRK	Leigh Creek	26.49	192	P	P	19 00 45.3	+0.6
PLAI	Plampang	26.62	259	P	P	19 00 47.8	+1.8
	comp=Z,38nm,0.8s						
PLAI	Plampang	26.62	259	P	P	19 00 44.9	-1.1
ARMA	Armidale	26.78	166	P	P	19 00 47.2	-0.2
	baz=27,SNR=5.9						
ARMA	Armidale	26.78	166	P	P	19 00 48.7	+1.3
CMSA	Cobar Meteorol	27.00	177	P	P	19 00 49.6	+0.4
	baz=27,SNR=19						
CMSA	Cobar Meteorol	27.00	177	P	P	19 00 50.7	+1.4
STKA	Stephens Creek	27.41	185	P	P	19 00 52.4	-0.6
	comp=Z,2.5nm,0.5s,baz=347,slow=10,SNR=3.8						
STKA				LR	LR	19 13 06.9	
	comp=Z,205nm,18.1s,baz=12,slow=39						
STKA	Stephens Creek	27.41	185	P	P	19 00 53.3	+0.3
	baz=27,SNR=7.9						
STKA	Stephens Creek	27.41	185	P	P	19 00 49.2	-3.8
STKA	Stephens Creek	27.41	185	P	P	19 00 54.1	+1.1
MULG	Mulgathing	27.44	199	P	P	19 00 53.7	+0.4
DZM	Mont Dzumac	27.77	131	*e*P	P	19 00 55.9	-0.5
	comp=Z,12nm,0.6s						
DZM				*e*LR	LR	19 08 12.6	
	comp=Z,694nm,26.4s						
DZM	Mont Dzumac	27.77	131	P	P	19 00 56.7	+0.3
	comp=Z,14nm,1.0s,baz=315,slow=12,SNR=9.3						
DZM	Mont Dzumac	27.77	131	IAmb	IAmb	19 00 58.3	
	comp=Z,25nm,1.1s						
DZM	Mont Dzumac	27.77	131	P	P	19 00 58.8	+2.4
MBWA	Marble Bar	29.02	233	P	P	19 01 06.6	-0.8
PSA00	Pilbara Seismi	29.14	232	P	P	19 01 07.7	-0.9
PSA00	Pilbara Seismi	29.14	232	P	P	19 01 07.2	-1.3
PSA00				IAmb	IAmb	19 01 10.1	
	comp=Z,21nm,0.8s						
PSA00	Pilbara Seismi	29.14	232	P	P	19 01 08.8	+0.3
BBOO	Buckleboo	29.25	194	P	P	19 01 09.6	+0.3
HTT	Hallett	29.27	189	P	P	19 01 10.0	+0.4
	baz=29,SNR=3.4						
HTT	Hallett	29.27	189	P	P	19 01 10.7	+1.1
FORT	Forrest	30.31	208	P	P	19 01 19.0	+0.2
	baz=30,SNR=13						
FORT	Forrest	30.31	208	P	P	19 01 17.7	-1.0
FORT	Forrest	30.31	208	P	P	19 01 18.4	-0.3
MEEK	Meekatharra	32.96	225	P	P	19 01 41.3	-0.8
	baz=33,SNR=51						
MEEK	Meekatharra	32.96	225	P	P	19 01 42.0	-0.2
GIRL	Giralia	34.19	235	P	P	19 01 54.4	+1.6
	baz=34,SNR=15						
GIRL	Giralia	34.19	235	P	P	19 01 55.0	+2.2
JOW	Kunigami	34.70	334	P	P	19 01 58.1	+0.9
	comp=Z,9.0nm,0.6s,baz=119,slow=17,SNR=6.6						
JOW	Kunigami	34.70	334	IAmb	IAmb	19 02 25.1	
	comp=Z,18nm,1.0s						
JOW	Kunigami	34.70	334	P	P	19 01 57.1	0.0
TPUB	Ta-pu	35.91	321	P	P	19 02 07.1	-0.6
TPUB	Ta-pu	35.91	321	P	P	19 02 06.9	-0.8
	comp=Z,35nm,2.4s						
SSLB	Suanglung	36.07	322	P	P	19 02 09.9	+0.9
MORW	Morawa	36.24	224	P	P	19 02 10.1	-0.3
	baz=36,SNR=17						
MORW	Morawa	36.24	224	P	P	19 02 09.7	-0.7
MORW	Morawa	36.24	224	P	P	19 02 10.2	-0.3
YHNB	Yeheng	36.48	324	P	P	19 02 14.8	+2.3
KLBR	Kellerberrin	36.70	220	P	P	19 02 13.6	-0.8
	baz=37,SNR=28						
KLBR	Kellerberrin	36.70	220	P	P	19 02 13.6	-0.8
BLDU	Ballidu	36.75	222	P	P	19 02 14.3	-0.5
	baz=37,SNR=56						
BLDU	Ballidu	36.75	222	P	P	19 02 14.2	-0.5
NWAO	Narrogin (SRO)	37.93	218	P	P	19 02 24.5	-0.2
MUN	Mundaring	37.95	220	P	P	19 02 24.6	-0.3
	baz=38,SNR=20						
MUN	Mundaring	37.95	220	P	P	19 02 24.6	-0.3
JNU	Nakatsue	39.43	342	P	P	19 02 37.6	+0.3
	comp=Z,6.5nm,0.7s,baz=354,slow=0.8,SNR=5.4						
JNU	Nakatsue	39.43	342	IAmb	IAmb	19 02 56.7	
	comp=Z,23nm,1.3s						
MDSI	Maura Dua	39.91	268	P	P	19 02 40.8	-0.8
	comp=Z,14nm,0.9s						
OUZ	Omahuta	40.94	142	P	P	19 02 52.2	+2.5
	comp=Z,29nm,1.0s						
MJAR	Matsushiro Arr	41.15	353	LR	LR	19 18 08.2	
	comp=Z,41nm,19.8s,baz=145,slow=33						
NJ2	Nanjing	43.57	328	*e*P	P	19 03 13.3	+2.1
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
KSRS	Korea Array	44.35	341	P	P	19 03 18.1	+0.8
	comp=Z,7.3nm,0.7s,baz=160,slow=9.2,SNR=27						
KSRS				pP	pP	19 03 33.1	+2.5
	comp=Z,9.7nm,1.0s,baz=162,slow=9.3,SNR=6.5						
KSAR	Wonju Array Be	44.35	341	P	P	19 03 15.8	-1.5
AFI	Afiamalu	44.38	105	LR	LR	19 19 20.2	
	comp=Z,128nm,21.9s,baz=241,slow=33						
KULM	Kulim	44.57	282	P	P	19 03 19.1	-0.4
KULM				IAmb	IAmb	19 03 44.5	
	comp=Z,11nm,1.0s						
URZ	Urewera	45.06	143	P	P	19 03 22.9	-0.1
	comp=Z,5.1nm,0.4s,baz=300,slow=23,SNR=7.6						
URZ	Urewera	45.06	143	IAmb	IAmb	19 03 39.3	
	comp=Z,9.3nm,0.8s						
URZ	Urewera	45.06	143	P	P	19 03 25.4	+2.4
	comp=Z,63nm,1.6s						
BKZ	Black Stump Fm	45.28	144	P	P	19 03 25.8	+0.9
TUWZ	Tuamarina	45.44	148	P	P	19 03 25.9	-0.1
RPZ	Rata Peaks	45.74	153	P	P	19 03 29.4	+1.1
KHZ	Kahutara	45.95	150	P	P	19 03 33.4	+3.4
GSI	Gunungsitoli	46.95	276	P	P	19 03 36.0	-2.3
GSI				IAmb	IAmb	19 03 40.4	
	comp=Z,7.2nm,0.8s						
SLVN	Son La	47.07	305	P	P	19 03 39.8	+0.6
SLVN				IAmb	IAmb	19 03 46.6	
	comp=Z,12nm,1.3s						
ENH	Enshi	47.90	318	P	P	19 03 45.5	0.0
ENH				IAmb	IAmb	19 03 46.6	
	comp=Z,8.5nm,1.0s						
USA0B	Ussuriysk Arra	49.65	348	P	P	19 03 57.6	-0.9
USA0B				IAmb	IAmb	19 03 59.9	
	comp=Z,13nm,1.2s						
USRK	Ussuriysk Ar.	49.65	348	P	P	19 03 58.8	+0.3
	comp=Z,4.4nm,0.6s,baz=168,slow=9.1,SNR=10						
USRK	Ussuriysk Ar.	49.65	348	P	P	19 03 58.0	-0.5
CM31	Chiang Mai Arr	50.07	298	P	P	19 04 00.3	-2.0
CM31				IAmb	IAmb	19 04 05.3	
	comp=Z,5.7nm,0.7s						
CMAR	Chiang Mai Arr	50.07	298	P	P	19 04 02.1	-0.1
	comp=Z,3.8nm,0.7s,baz=123,slow=6.0,SNR=28						
CMAR				LR	LR	19 27 03.5	
	comp=Z,36nm,19.5s,baz=178,slow=38						
CMAR	Chiang Mai Arr	50.07	298	P	P	19 04 01.5	-0.7
CHTO	Chiang Mai	50.21	299	P	P	19 04 03.4	+0.1
CHTO				IAmb	IAmb	19 04 05.3	
	comp=Z,8.5nm,1.2s						
XAN	Xi'an	50.73	322	⇑P	P	19 04 07.4	+0.4
XAN				pP	sP	19 04 25.8	-0.6
XAN				sP	pP	19 04 35.8	+15
XAN				pmax	pmax		
	comp=Z,14nm,1.2s						
BJI	Beijing	51.22	332	P	P	19 04 10.6	+0.1
BJI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
CD2	Chengdu	52.21	315	P	P	19 04 17.5	-0.6
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC	Hu-ho-hao-te	54.07	330	*e*P	P	19 04 33.8	+2.1
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
KLR	Kul'dur	54.53	350	P	P	19 04 34.6	-0.2
	comp=Z,1.7nm,0.6s,baz=146,slow=1.5,SNR=6.8						
LZH	Lanzhou	55.23	320	*e*P	P	19 04 40.3	0.0
LZH				pP	pP	19 04 56.8	+2.7
LZH				sP	sP	19 05 04.3	+4.5
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
RAR	Rarotonga	56.79	112	LR	LR	19 29 09.7	
	comp=Z,125nm,18.1s,baz=178,slow=36						
PETK	Petropavlovsk-	58.45	9	P	P	19 05 02.3	-0.2
	comp=Z,3.1nm,0.8s,baz=175,slow=7.6,SNR=6.3						
PETK				pP	pP	19 05 18.3	+1.9
	comp=Z,3.4nm,0.6s,baz=163,slow=7.1,SNR=3.0						
GTA	Gaotai	59.78	321	*e*P	P	19 05 12.6	+0.4
GTA				pP	pP	19 05 16.8	-9.4
GTA				sP	sP	19 05 19.9	-12
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	Ulaanbaatar	61.43	332	P	P	19 05 23.4	0.0
ULN				IAmb	IAmb	19 05 25.7	
	comp=Z,8.0nm,1.4s						
SONM	Songino Array	61.71	332	P	P	19 05 25.6	+0.4
	comp=Z,1.1nm,0.6s,baz=151,slow=7.0,SNR=9.5						
SONM				LR	LR	19 31 46.7	
	comp=Z,64nm,19.9s,baz=142,slow=36						
SONM	Songino Array	61.71	332	P	P	19 05 24.3	-0.9
SEY	Seymchan	67.47	4	P	P	19 06 01.4	-0.9
	comp=Z,0.7nm,0.4s,baz=136,slow=7.2,SNR=6.6						
WMQ	Urumqi	69.81	320	*e*P	P	19 06 18.8	+1.4
VNDA	Vanda	73.64	176	P	P	19 06 37.6	-2.1
	comp=Z,1.2nm,0.7s,baz=321,slow=6.4,SNR=11						
VNDA				LR	LR	19 37 19.0	
	comp=Z,50nm,18.3s,baz=318,slow=34						
MK31	Makanchi Array	74.54	321	P	P	19 06 44.9	-0.7
MKAR	Makanchi Array	74.54	321	P	P	19 06 45.0	-0.5
	comp=Z,2.8nm,0.7s,baz=98,slow=7.7,SNR=37						
MKAR	Makanchi Array	74.54	321	P	P	19 06 44.8	-0.8
MAKZ	Makanchi	74.74	321	P	P	19 06 45.8	-0.9
ZAA0	Zalesovo Array	76.22	328	P	P	19 06 53.7	-1.3
ZALV	Zalesovo Beam	76.22	328	P	P	19 06 53.6	-1.4
	comp=Z,2.8nm,0.8s,baz=112,slow=5.7,SNR=11						
ZALV				pP	pP	19 07 10.9	+1.6
	comp=Z,4.9nm,0.9s,baz=109,slow=4.6,SNR=6.3						
ZALV				LR	LR	19 40 52.8	
	comp=Z,57nm,19.2s,baz=112,slow=36						
ZALV	Zalesovo Beam	76.22	328	P	P	19 06 53.4	-1.6
TIXI	Tiksi	76.60	355	P	P	19 06 55.7	-1.0
	comp=Z,0.6nm,0.5s,baz=115,slow=1.6,SNR=3.9						
NIL	Nilore	76.77	306	P	P	19 06 58.0	-0.6
AAK	Ala-Archa	78.28	315	P	P	19 07 06.8	-0.2
	comp=Z,1.1nm,0.8s,baz=329,slow=1.7,SNR=4.3						
KURK	Kurchatov	78.31	324	P	P	19 07 05.6	-1.1
KURBB	Kurchatov Arra	78.33	324	P	P	19 07 06.0	-0.8
	comp=Z,2.7nm,1.1s,baz=106,slow=6.2,SNR=13						
MAW	Mawson	82.62	202	P	P	19 07 28.9	-0.7
	comp=Z,11nm,0.7s,baz=96,slow=7.5,SNR=12						
MAW	Mawson	82.62	202	P	P	19 07 29.0	-0.5
	baz=82,SNR=9.8						
NRIK	Noril'sk	82.95	343	P	P	19 07 30.5	-0.7
	comp=Z,3.1nm,0.5s,baz=94,slow=8.3,SNR=5.0						
NRIK	Noril'sk	82.95	343	IAmb	IAmb	19 07 59.6	
	comp=Z,10.0nm,1.2s						
RND	Reindeer	83.84	25	P	P	19 07 34.1	-1.9
RND				IAmb	IAmb	19 07 54.4	
	comp=Z,14nm,1.2s						
BVAR	Borovoye Array	83.88	324	P	P	19 07 35.7	-0.6
	comp=Z,3.6nm,0.5s,baz=150,slow=6.8,SNR=28						
BRVK	Borovoye	83.95	324	P	P	19 07 35.7	-1.0
BRVK				IAmb	IAmb	19 07 36.9	
	comp=Z,4.9nm,0.9s						
DHY	Denali Highway	84.34	25	P	P	19 07 36.6	-2.0
DHY				IAmb	IAmb	19 07 38.0	
	comp=Z,17nm,1.4s						
CCB	Clear Creek Bu	84.74	24	P	P	19 07 38.3	-2.1
CCB				IAmb	IAmb	19 07 59.8	
	comp=Z,5.3nm,0.8s						
IL31		85.15	24	P	P	19 07 40.4	-2.1
IL31				IAmb	IAmb	19 08 01.1	
	comp=Z,7.4nm,1.0s						
ILAR	Eielson Array	85.15	24	P	P	19 07 40.4	-2.2
	comp=Z,2.5nm,0.7s,baz=255,slow=4.9,SNR=34						
ILAR				pP	pP	19 07 57.9	+0.8
	comp=Z,3.9nm,0.8s,baz=253,slow=5.0,SNR=9.8						
DOT	Dot Lake	85.94	25	P	P	19 07 45.4	-1.1
DOT				IAmb	IAmb	19 07 46.8	
	comp=Z,7.3nm,0.9s						
M27K	Edge Creek, AK	86.50	27	P	P	19 07 49.3	-0.1
M27K				IAmb	IAmb	19 08 13.5	
	comp=Z,6.1nm,0.9s						
ABKAR	Akbulak array	89.59	319	P	P	19 08 01.1	-3.1
INK	Inuvik	91.22	22	P	P	19 08 12.3	+1.0
	comp=Z,1.7nm,1.0s,baz=251,slow=10,SNR=3.1						
INK				pP	pP	19 08 28.2	+2.2
	comp=Z,3.8nm,1.1s,baz=243,slow=6.1,SNR=5.2						
LPAZ	La Paz	141.96	124	PKhKP	PKPpre	19 14 35.9	
	comp=Z,1.2nm,0.6s,baz=145,slow=4.4,SNR=4.0						
TORD	Torodi Ar. Bea	142.01	286	PKP	PKPdf	19 14 39.0	-0.6
	comp=Z,0.6nm,0.5s,baz=60,slow=2.6,SNR=6.3						
KIC	Kosan Boka	149.04	275	*e*PKP1	PKPbc	19 14 54.4	-1.3
	comp=Z,7.8nm,0.4s						
DBIC	Dimbokro	149.14	276	PKPbc	PKPbc	19 14 54.8	-1.2
	comp=Z,4.2nm,0.5s,baz=93,slow=2.2,SNR=21						
DBIC	Dimbokro	149.14	276		PKPbc	19 14 54.6	-1.4
TIC	Toumodi	149.31	276	*e*PKP1	PKPbc	19 14 55.0	-1.4
LIC	Lamto	149.33	275	*e*PKP1	PKPbc	19 14 55.1	-1.4
	comp=Z,24nm,0.4s						

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*PRE **21** 19:21:32.2±0.9,27°.01S×26°.62E,h2^{km},ML2.4*
*EAF **21** 19:21:39.8±1.6,27°.03S×26°.24E,h10^{km},MD3.8*
ISC 21 19:21:32.9±1.4**,26°.98S**±0°.04×**26°.61E**±0°.04**,h7^{km}**±12^{km}**,**
n11,σ**1^{s}15**/16**,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	Parys	0.67	86	*e*P	Pg	19 21 46.0	+0.1
PRYS				*e*S	Sg	19 21 54.6	0.0
PRYS				IAML		19 22 01.5	
	comp=Z,77nm,0.9s						
KSR	Koster	1.15	13	*e*P	Pn	19 21 55.1	-0.4
KSR				*e*S	Sn	19 22 10.9	-0.7
KSR				IAML		19 22 16.4	
	comp=Z,198nm,0.2s						
SWZ	Schweizer	1.16	260	*e*P	Pn	19 21 54.7	-0.9
SWZ				*e*S	Sn	19 22 10.6	-1.2
SWZ				IAML		19 22 15.2	
	comp=Z,76nm,0.3s						
SNKL	Senekal, Frees	1.65	142	*e*P	Pn	19 22 02.6	+0.1
SNKL				*e*S	Sn	19 22 24.4	+0.4
SNKL				IAML		19 22 28.8	
	comp=Z,45nm,0.4s						
SLR	Silverton	1.94	51	*e*P	Pb	19 22 07.5	-1.2
SLR				*e*S	Sb	19 22 32.6	-0.6
SLR				IAML		19 22 37.1	
	comp=Z,45nm,0.8s						
BOSA	Boshof	2.02	216	*i* P	Pb	19 22 10.4	+0.3
BOSA	Boshof	2.02	216	*i* P	Pb	19 22 10.4	+0.3
LBTB	Lobatse	2.16	335	*i* P	Pg	19 22 14.8	+0.6
LBTB	Lobatse	2.16	335	*i* P	Pg	19 22 14.8	+0.6
MATP	Matopo	6.75	15	*i* P	Pb	19 23 21.6	-9.0
MATP				*i* S	Sn	19 24 31.9	+2.3
MATP	Matopo	6.75	15	*i* P	Pb	19 23 21.6	-9.0
MATP				*i* S	Sn	19 24 31.9	+2.3

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*NIED **21** 19:31:17.5,36°.49N×126°.45E,h109^{km},MW3.9,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm;
M$_{rr}$2.73; M$_{\theta\theta}$5.02; M$_{\phi\phi}$-7.76; M$_{r\theta}$-4.87; M$_{\theta\phi}$-1.53; M$_{\phi r}$1.30;
Fault plane solution: M$_0$8.56000×10^{14} NP1:
ϕ_s328.00000°,δ68.00000°,λ32.00000°. NP2:
ϕ_s225.00000°,δ60.00000°,λ154.00000°.
*IDC **21** 19:31:23.0±0.6,35°.95N×126°.88E,h0^{km},mb4.0/17,*
mb1 4.1/21,mb1mx3.9/56,mbtmp3.9/21,ML4.0/2,MS3.0/6,
Ms1 3.1/6,ms1mx2.8/54 Error ellipse: s-maj=13.1km
s-min=10.5km az=106.0
*BJI **21** 19:31:23.7±0.0,36°.03N×126°.92E,h12^{km},mB4.7/15,*
mb4.3/29,ML4.4/8,Ms3.9/6,Ms7 3.8/7
*KMA **21** 19:31:24.8±0.0,36°.02N×126°.95E,h12^{km},Error ellipse:*
s-maj=0.3km s-min=0.3km az=285.0

*NEIC **21** 19:31:24.4±1.6,36°.05N±0°.04×126°.97E±0°.06,h10^{km}±1^{km}, mb4.4/28,Error ellipse: s-maj=8.0km s-min=6.6km az=256.0*

ISC 21 19:31:24.6±1.0,**36°.03N**±0°.02×**126°.96E**±0°.02,**h12**^{km}±6^{km}, **n146,**σ**1^{s}.42**/151,**mb4.3**/34,**1C,South Korea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSGUS	GUNSAN	0.14	273	P	Pg	19 31 28.3	+0.4
	SNR=4990						
KSGUS	GUNSAN	0.14	273	P	Pg	19 31 28.3	+0.4
	SNR=4990						
BUYB	Buyeo	0.24	354	P	Pg	19 31 30.2	+0.5
	SNR=2872						
KSJEO	Jeonju	0.29	108	P	Pg	19 31 31.0	+0.5
	SNR=6509						
KSJEO	Jeonju	0.29	108	P	Pg	19 31 31.0	+0.5
	SNR=6509						
KSPUA	Buan	0.36	212	P	Pg	19 31 32.0	+0.2
	SNR=1585						
KSPUA	Buan	0.36	212	P	Pg	19 31 32.0	+0.2
	SNR=1585						
KSMSA	Geumsan	0.43	80	P	Pb	19 31 33.6	-0.6
	SNR=409						
KSMSA	Geumsan	0.43	80	P	Pb	19 31 33.6	-0.6
	SNR=409						
PORA	Boryeong	0.44	313	P	Pg	19 31 33.7	+0.4
	SNR=775						
PORA	Boryeong	0.44	313	P	Pg	19 31 33.7	+0.4
	SNR=775						
KOJ2	Gongju-si	0.47	19	P	Pb	19 31 34.2	-0.6
	SNR=983						
SMKB	Mukjeong-gil	0.47	224	P	Pg	19 31 34.1	+0.3
	SNR=1867						
SMKB	Mukjeong-gil	0.47	224	P	Pg	19 31 34.1	+0.3
	SNR=1867						
MNYD	Munyeodo	0.49	243	P	Pg	19 31 34.2	+0.1
	SNR=2187						
KSJEU	Jeongeup	0.54	182	P	Pg	19 31 35.3	+0.3
	SNR=2212						
KSJEU	Jeongeup	0.54	182	P	Pg	19 31 35.3	+0.3
	SNR=2212						
SUCA	Sunchang	0.67	167	P	Pg	19 31 37.8	+0.2
	SNR=454						
NAWB	Namwon	0.71	149	P	Pg	19 31 38.4	+0.2
	SNR=749						
GOCB	Gochang-gun	0.74	203	P	Pg	19 31 39.1	+0.2
	SNR=2219						
OYDB	Oeyeondo	0.74	286	P	Pg	19 31 38.9	0.0
	SNR=3224						
OKCB	Cheongsan-myeo	0.75	65	P	Pb	19 31 39.3	-0.3
	SNR=3956						
ECDB	Euchungdo	0.80	277	P	Pg	19 31 40.0	0.0
	SNR=3904						
HAMB	Hamyang	0.82	129	P	Pb	19 31 40.7	-0.2
	SNR=595						
KSCEA	Cheonan	0.83	17	P	Pb	19 31 40.9	-0.1
	SNR=1634						
KSBON	Boeun	0.83	55	P	Pb	19 31 41.2	+0.2
	SNR=2419						
YENG	Yeonggwang	0.84	208	P	Pb	19 31 41.0	-0.2
	SNR=46						
KSCPR	CHUPUNGNYEONG	0.84	77	P	Pb	19 31 41.1	-0.2
	SNR=1141						
KSSES	Seosan	0.86	332	P	Pb	19 31 41.4	-0.1
	SNR=1107						
KSKWJ	Gwangju	0.87	178	P	Pg	19 31 41.3	0.0
	SNR=3199						
KSKWJ	Gwangju	0.87	178	P	Pg	19 31 41.3	0.0
	SNR=3354						
KSKWJ	Gwangju	0.87	178	P	Pg	19 31 41.3	0.0
	SNR=711						
KSGIC	Gimchen	0.93	87	P	Pb	19 31 42.6	-0.1
	SNR=613						
PYTK	Pyeongtaek	0.96	7	P	Pb	19 31 43.5	+0.3
	SNR=39						
KSSCH	SUNCHEON	0.99	166	P	Pg	19 31 43.6	-0.1
	SNR=221						
ANMD	Anmado	1.02	228	P	Pg	19 31 44.0	-0.2
	SNR=1787						
KSSAJ	Sangju	1.04	68	P	Pg	19 31 44.6	-0.1
	SNR=497						
HAWB	Hwaseong-si	1.06	352	P	Pn	19 31 45.2	-0.2
	SNR=3966						
KSYSU	YEOSU	1.06	150	P	Pb	19 31 45.0	0.0
	SNR=538						
KSMAN	Muan gun	1.08	211	P	Pg	19 31 45.4	0.0
	SNR=32						
KSMGY	Mungyeong	1.09	55	P	Pb	19 31 45.3	-0.1
	SNR=1733						
KSCIG	Chilgok	1.16	89	P	Pg	19 31 46.7	-0.1
	SNR=27						
KSHAD	HADONG	1.16	145	P	Pn	19 31 46.6	0.0
	SNR=140						
KSCHJ	Chungju	1.18	44	P	Pn	19 31 47.0	0.0
	SNR=925						
GWYB	Gwangyang	1.24	151	P	Pb	19 31 48.0	+0.1
	SNR=282						
KSGBI	Gyogryolbido	1.27	298	P	Pb	19 31 48.7	+0.2
	SNR=42						
KSNAJ	Naju	1.28	141	P	Pn	19 31 43.8	-4.5
	SNR=339						
BOSB	Boseong-gun	1.28	170	P	Pb	19 31 48.6	0.0
	SNR=5211						
EURB	Uiryeong-eup	1.29	123	P	Pb	19 31 49.0	+0.1
	SNR=225						
KSICN	Icheon	1.31	16	P	Pb	19 31 49.3	+0.1
	SNR=658						
SHHB	Siheung-si	1.33	351	P	Pb	19 31 49.3	-0.2
	SNR=169						
EUSB	Uiseong	1.44	76	P	Pb	19 31 51.0	-0.4
	SNR=1289						
KSSEO	Seoul	1.46	359	P	Pb	19 31 51.2	-0.4
	SNR=152						
INCN	Inchon	1.47	350	Pn	Pn	19 31 50.7	-0.4
INCN				Sg	Sb	19 32 11.2	+0.5
HANB	Haenam	1.51	192	P	Pn	19 31 51.6	+0.2
	SNR=1258						
KSAR	Wonju Array Be	1.59	28	Pn	Pn	19 31 52.5	-0.2
KSAR				Sg	Sg	19 32 15.2	-0.7
KSRS	Korea Array	1.62	28	Pn	Pn	19 31 52.8	-0.2
	184nm,0.3s,baz=207,slow=14,SNR=391						
KSRS				Pg	Pb	19 31 54.9	+0.4
	263nm,0.3s,baz=207,slow=17,SNR=353						
KSRS				Lg	Lg	19 32 15.6	
	1μm,0.3s,baz=204,slow=30,SNR=80						
KSRS				LR	LR	19 32 28.8	
	comp=Z,5μm,18.7s,baz=70,slow=39						
KS19	Wonju Array Si	1.64	26	Pn	Pn	19 31 52.9	-0.5
KS19					Sn	19 32 13.4	-1.0
JTU	Tsushima	2.50	126	Pn	Pn	19 32 05.0	-0.1
JNU	Nakatsue	4.35	131	Pn	Pn	19 32 31.6	+1.0
	13nm,0.3s,baz=281,slow=4.7,SNR=35						
JNU				Lg	Lg	19 33 39.8	
	20nm,0.3s,baz=140,slow=21,SNR=12						
JNU	Nakatsue	4.35	131	Pn	Pn	19 32 30.3	-0.2
DL2	Dalian	5.12	306	Pn	Pn	19 32 39.8	-1.3
DL2				Pg	Pb	19 32 57.8	+3.7
DL2				Sn	Sb	19 33 49.9	-5.6
DL2				Sg	Sg	19 34 04.0	-4.9
DL2				smax	smax		
	comp=N,1μm,0.8s						
DL2				smax	smax		
	comp=E,660nm,0.6s						
DL2				LR	LR		
	comp=N,1μm,5.1s						
DL2				LR	LR		
	comp=E,710nm,5.1s						
DL2				LR	LR		
	comp=Z,600nm,6.3s						
JHS	Saijyo	5.13	100	Pn	Pn	19 32 41.5	+0.2
JSU	Suzuyama	5.37	146	Pn	Pn	19 32 45.3	+0.6
JMN	Monobe	6.14	110	Pn	Pn	19 32 54.5	-0.6
JWT	Wachi	6.92	94	Pn	Pn	19 33 06.1	+0.3
CN2	Changchun	7.85	352	*e*Pg	Pg	19 33 49.3	-5.5
CN2				Sg	Sg	19 35 26.8	-10
CN2				smax	smax		
	comp=N,100nm,0.7s						
CN2				smax	smax		
	comp=E,200nm,0.7s						
TIA	Tai'an	7.96	274	P	Pn	19 33 21.6	+1.5
TIA				smax	smax		
	comp=E,73nm,1.1s						
TIA				smax	smax		
	comp=E,55nm,1.1s						
USRK	Ussuriysk Ar.	9.02	24	Pn	Pn	19 33 37.5	+2.9
	baz=198,slow=16,SNR=1.5						
MAT	Matsushiro	9.10	83	P	Pn	19 33 37.4	+1.6
MAT				*e*S	Sn	19 35 21.8	+3.6
MJAR	Matsushiro Arr	9.10	83	Pn	Pn	19 33 38.2	+2.4
	comp=E,0.1nm,0.3s,baz=265,slow=13,SNR=1.9						
MJAR				LR	LR	19 37 18.8	
	comp=E,28nm,18.0s,baz=35,slow=39						
JOW	Kunigami	9.24	173	LR	LR	19 37 37.3	
	comp=E,80nm,18.1s,baz=32,slow=41						
BJT	Baijiatuau	9.39	298	Pn	Pn	19 33 40.0	+0.2
BJI	Beijing	9.40	298	P	Pn	19 33 41.3	+1.5
BJI				S	Sn	19 35 22.8	-2.6
BJI				pmax	pmax		
	comp=E,12nm,0.7s						
BJI				smax	smax		
	comp=E,10.0nm,0.8s						
BJI				smax	smax		
	comp=E,11nm,0.7s						
JTM	Tenmabayashi	12.04	63	Pn	Pn	19 34 11.9	-4.1
YHNB	Yeheng	12.30	205	Pn	Pn	19 34 21.3	+1.6
HHC	Hu-ho-hao-te	12.99	296	*e*P	Pn	19 34 31.0	+1.9
HHC				pmax	pmax		
	comp=E,16nm,0.7s						
HHC				pmax	pmax		
	comp=E,120nm,6.6s						
HHC				LR	LR		
	comp=E,210nm,15.2s						
HHC				LR	LR		
	comp=E,170nm,11.4s						
HHC				LR	LR		
	comp=E,250nm,12.3s						
SSLB	Suanglung	13.26	205	Pn	Pn	19 34 34.1	+1.4
YULB	Yu-li	13.52	203	Pn	Pn	19 34 34.1	-2.1
KLR	Kul'dur	13.65	13	LR	LR	19 39 44.1	
	comp=E,42nm,20.9s,baz=202,slow=36						
TPUB	Ta-pu	13.82	205	Pn	Pn	19 34 40.0	-0.4
XAN	Xi'an	14.91	268	P	P	19 35 04.3	+3.3
XAN				sP	Pn	19 35 11.0	+16
LZH	Lanzhou	18.68	277	*e*P	Pn	19 35 46.1	+2.9
LZH				pP	sP	19 35 50.8	+3.2
LZH				sP	pP	19 35 53.1	+7.0
LZH				pmax	pmax		
	comp=E,17nm,1.1s						
ULN	Ulaanbaatar	18.88	315	P	P	19 35 41.0	-4.0
SONM	Songino Array	19.25	314	P	Pn	19 35 50.8	+0.9
	comp=E,0.3nm,0.3s,baz=131,slow=11,SNR=12						
SONM				LR	LR	19 44 18.4	
	comp=E,64nm,18.9s,baz=140,slow=40						
SONM	Songino Array	19.25	314	P	P	19 35 49.0	+0.1
GTA	Gaotai	21.70	287	*e*P	P	19 36 19.5	+3.9
GTA				pP	sP	19 36 23.8	+3.4
GTA				sP	pP	19 36 27.1	+8.2
GTA				pmax	pmax		
	comp=E,3.0nm,0.9s						
KMI	Kunming	23.45	249	⇑P	P	19 36 34.1	-0.1
KMI				sP	sP	19 36 40.0	+0.9
KMI				pmax	pmax		
	comp=E,12nm,0.5s						
YAK	Yakutsk	26.08	3	P	P	19 36 57.5	-0.3
YAK				IAmb	IAmb	19 36 60.0	
	comp=Z,6.1nm,0.7s						
CMAR	Chiang Mai Arr	30.28	242	P	P	19 37 35.2	-0.6
	comp=Z,0.3nm,0.5s,baz=37,slow=6.5,SNR=4.7						
CMAR				PcP	PcP	19 40 37.5	+1.3
	comp=Z,0.3nm,0.5s,baz=50,slow=2.5,SNR=4.1						
CMAR				LR	LR	19 51 33.3	
	comp=Z,21nm,18.8s,baz=45,slow=40						
WMQ	Urumqi	30.87	297	*e*P	P	19 37 45.1	+4.3
WMQ				sP	sP	19 37 49.3	+3.5
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,88nm,4.9s						
ZALV	Zalesovo Beam	34.14	315	P	P	19 38 10.8	+1.5
	comp=Z,0.6nm,0.4s,baz=86,slow=11,SNR=3.5						
ZALV	Zalesovo Beam	34.14	315	P	P	19 38 07.7	-1.6
MK31	Makanchi Array	34.75	302	P	P	19 38 14.2	-0.5
MKAR	Makanchi Array	34.75	302	P	P	19 38 15.3	+0.6
	comp=Z,0.7nm,0.6s,baz=83,slow=11,SNR=9.0						
MKAR	Makanchi Array	34.75	302	P	P	19 38 13.7	-1.0
MAKZ	Makanchi	34.97	302	P	P	19 38 16.0	-0.6
MAKZ				IAmb	IAmb	19 38 45.1	
	comp=Z,2.8nm,1.1s						
TIXI	Tiksi	35.70	1	P	P	19 38 21.9	-0.6
TIXI				IAmb	IAmb	19 38 25.0	
	comp=Z,3.2nm,0.4s						
KURK	Kurchatov	37.38	309	P	P	19 38 35.4	-1.7
KURK				IAmb	IAmb	19 38 40.1	
	comp=Z,3.0nm,1.1s						
KURBB	Kurchatov Arra	37.43	308	P	P	19 38 37.9	+0.3
	comp=Z,1.8nm,0.6s,baz=94,slow=9.5,SNR=11						
KULM	Kulim	38.99	225	P	P	19 38 50.4	-0.7
KULM				IAmb	IAmb	19 38 58.5	
	comp=Z,16nm,1.2s						
AAK	Ala-Archa	40.56	296	P	P	19 39 02.1	-2.0
BRVK	Borovoye	42.63	312	P	P	19 39 20.4	-0.3
BRVK				IAmb	IAmb	19 39 24.1	
	comp=Z,2.9nm,0.5s						
KKAR	Karatay Array	43.37	297	P	P	19 39 26.2	-0.6
GSI	Gunungsitoli	44.00	225	P	P	19 39 32.0	-0.1
GSI				IAmb	IAmb	19 39 41.3	
	comp=Z,11nm,1.2s						
ABKAR	Akbulak array	49.47	307	P	P	19 40 15.2	+0.5
ABKAR	Akbulak array	49.47	307	P	P	19 40 14.7	+0.1
ABKAR				IAmb	IAmb	19 40 18.3	
	comp=Z,2.4nm,0.9s						
FALS	False Pass	50.14	45	P	P	19 40 19.0	-0.6
IMAR	Indian Mountai	53.42	30	P	P	19 40 43.2	-0.8
M19K	Big River Lodg	53.75	35	P	P	19 40 45.0	-1.4
M19K				IAmb	IAmb	19 40 56.7	
	comp=Z,17nm,1.5s						
PPLA	Purkeypile	54.58	34	P	P	19 40 51.7	-1.0
PPLA				IAmb	IAmb	19 41 05.1	
	comp=Z,9.6nm,1.3s						
KDAK	Kodiak Island	55.50	40	P	P	19 40 59.7	+0.6
	comp=Z,2.7nm,0.6s,baz=314,slow=3.4,SNR=7.1						
KDAK	Kodiak Island	55.50	40	P	P	19 40 59.5	+0.3
CUT	Chulitna	55.55	34	P	P	19 40 58.5	-0.9
WB0	Warramunga Arr	55.94	172	P	P	19 41 02.2	-0.5
WB0				IAmb	IAmb	19 41 21.4	
	comp=Z,5.8nm,1.2s						
WRA	Warramunga Arr	56.10	172	P	P	19 41 03.4	-0.5
	comp=Z,0.8nm,0.5s,baz=352,slow=6.8,SNR=6.0						
WRA	Warramunga Arr	56.10	172	P	P	19 41 04.1	+0.2
IL31		56.47	31	P	P	19 41 08.0	+2.0
IL31				IAmb	IAmb	19 41 09.3	
	comp=Z,3.6nm,1.1s						
ILAR	Eielson Array	56.47	31	P	P	19 41 07.2	+1.1
	comp=Z,0.6nm,0.9s,baz=287,slow=7.9,SNR=4.1						
ILAR	Eielson Array	56.47	31	P	P	19 41 07.6	+1.5
BMAR	Burnt Mountain	56.73	27	P	P	19 41 06.8	-1.1
SCM	Sheep Creek Mo	57.03	34	P	P	19 41 08.6	-1.5
BCAR	Beaver Creek A	59.12	32	P	P	19 41 23.2	-1.5
M27K	Edge Creek, AK	59.31	33	P	P	19 41 25.4	-0.8
M27K				IAmb	IAmb	19 41 34.4	
	comp=Z,8.5nm,1.3s						
AS31	Alice Springs	59.73	173	P	P	19 41 29.8	+0.5
ASAR	Alice Springs	59.73	173	P	P	19 41 29.4	0.0
	comp=Z,0.3nm,0.3s,baz=359,slow=6.7,SNR=11						
ASAR	Alice Springs	59.73	173	P	P	19 41 30.0	+0.7
KEV	Kevo	59.98	337	P	P	19 41 30.7	+0.2
ARCES	ARCESS Array B	60.55	337	P	P	19 41 35.8	+1.4
	comp=Z,2.5nm,0.8s,baz=70,slow=1.4,SNR=3.7						
KBZ	Khabaz	62.34	306	P	P	19 41 46.0	-0.9
	comp=Z,1.3nm,0.7s,baz=110,slow=12,SNR=2.2						
FIA1	FINESS Array S	63.89	328	P	P	19 41 56.7	-0.2
FINES	FINESS Array B	63.89	328	P	P	19 41 56.6	-0.3
	comp=Z,2.8nm,0.5s,baz=64,slow=6.1,SNR=17						
FINES	FINESS Array B	63.89	328	P	P	19 41 56.1	-0.8
MARD	Mardin	66.64	300	P	P	19 42 12.9	-2.3
AKASG	Malin Array Be	67.50	317	P	P	19 42 19.9	-0.5
	comp=Z,0.4nm,0.4s,baz=56,slow=6.8,SNR=3.3						
STKA	Stephens Creek	68.93	167	P	P	19 42 27.8	-1.6
	comp=Z,0.6nm,0.4s,baz=331,slow=9.7,SNR=4.5						
STKA	Stephens Creek	68.93	167	IAmb	IAmb	19 42 28.4	
	comp=Z,0.9nm,1.2s						
RAYN	Ar Rayn	69.94	285	P	P	19 42 36.0	-0.1
RAYN				IAmb	IAmb	19 42 51.3	
	comp=Z,3.5nm,0.9s						
NB2	NORSAR Subarra	70.11	332	P	P	19 42 35.2	-1.3
	comp=Z,1.8nm,0.7s,baz=50,slow=6.2						
NOA	NORSAR Array B	70.11	332	P	P	19 42 35.6	-0.9
	comp=Z,1.2nm,0.6s,baz=50,slow=6.1,SNR=3.3						
YKA	Yellowknife Ar	70.16	26	P	P	19 42 37.9	+1.1
	comp=Z,1.8nm,1.0s,baz=308,slow=6.0,SNR=8.6						
YKA	Yellowknife Ar	70.16	26	P	P	19 42 36.5	-0.2
BRTR	Keskin Array B	70.33	305	P	P	19 42 38.1	-0.2
	comp=Z,2.4nm,0.9s,baz=173,slow=2.0,SNR=4.7						
BRTR	Keskin Array B	70.33	305	P	P	19 42 37.9	-0.5
NVAR	Mina Array Bea	84.49	46	P	P	19 43 59.8	+2.0
	comp=Z,1.0nm,0.6s,baz=294,slow=5.9,SNR=5.5						
PPT	Papeete	95.03	108	LR	LR	20 20 42.7	
	comp=Z,40nm,20.1s,baz=264,slow=31						

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*NAO **21** 19:56:32.7±1.6,73°.44N×7°.35E,ML2.8*

*BER **21** 19:56:36.8±2.9,73°.50N×7°.51E,h20^{km}±36^{km},ML1.9, ML2.8(NAO),Confirmed Earthquake*

ISC 21 19:56:33.4±1.0,**73°.44N**±0°.08×**7°.67E**±0°.07,**h13**^{km}**,n34,** σ**1^{s}.73**/48,**Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	Hornsund (broa	4.11	26	Pn	Pn	19 57 36.0	+0.3
HSPB	Hornsund (broa	4.11	26	*e*P	Pn	19 57 36.1	+0.3
BRBA	Barentsburg A	4.92	16	Pn	Pn	19 57 47.2	+0.3
BRBA	Barentsburg A	4.92	16	Pn	Pn	19 57 47.2	+0.3
BRBB	Barentsburg B	4.95	16	Pn	Pn	19 57 47.5	+0.2
BRBB	Barentsburg B	4.95	16	Pn	Pn	19 57 47.5	+0.2
SPA0	Spitsbergen Ar	5.22	20	Pn	Pn	19 57 51.9	+1.0
	baz=198,slow=14						
SPA0	Spitsbergen Ar	5.22	20	Pn	Pn	19 57 51.9	+1.0
	baz=198,slow=14						
TRO	Tromso	5.23	131	*e*P	Pn	19 57 52.7	+1.6
TRO				*e*S	Sn	19 58 48.4	-2.6
TRO				IAML		19 58 49.8	
	comp=Z,3.5nm,0.5s						
JETT	Jettan, Norway	5.61	128	*e*P	Pn	19 57 58.1	+1.6
JETT				Pn	Pn	19 57 59.2	+2.7
JETT				*e*S	Sn	19 59 00.6	-0.1
JETT				IAML		19 59 03.8	
	comp=Z,2.9nm,1.1s						
KBS	Kingsbay	5.62	8	*e*P	Pn	19 57 57.0	+0.6
KBS				Pn	Pn	19 57 58.1	+1.7
LOF	Lofoten	5.67	157	*e*P	Pn	19 57 58.7	+1.6
LOF				IAML		19 58 58.1	
	comp=Z,5.1nm,0.8s						
HAMF	Hammerfest	5.68	112	Pn	Pn	19 57 58.6	+1.3
HAMF				Sn	Sn	19 58 59.9	-2.3
HAMF	Hammerfest	5.68	112	Pn	Pn	19 57 58.6	+1.3
HAMF				*e*P	Pn	19 57 59.1	+1.8
HAMF				Sn	Sn	19 58 59.9	-2.3
HAMF				IAML		19 59 00.2	
	comp=Z,4.6nm,0.7s						
HAMF				*e*S	Sn	19 59 00.3	-1.9
STEI	Steigen	6.07	152	*e*P	Pn	19 58 05.0	+2.4
STEI				IAML		19 59 09.6	
	comp=Z,2.5nm,0.8s						
KIF	Kilpisjarvi	6.13	130	Pn	Pn	19 58 05.3	+1.8
KIF				Sn	Sn	19 59 10.6	-2.8
KIF	Kilpisjarvi	6.13	130	Pn	Pn	19 58 05.3	+1.8
KIF				*e*P	Pn	19 58 05.3	+1.8
KIF				Sn	Sn	19 59 10.6	-2.8
KTK1	Kautokeino	6.69	124	*e*P	Pn	19 58 13.3	+2.2
KTK1				IAML		19 59 51.5	
	comp=Z,1.7nm,0.7s						
ARA0	ARCESS Array S	6.87	116	Pn	Pn	19 58 15.2	+1.5
	baz=322,slow=12						
ARA0				Sn	Sn	19 59 30.0	-1.7
ARA0	ARCESS Array S	6.87	116	Pn	Pn	19 58 15.2	+1.5
	baz=322,slow=12						
ARA0				*e*P	Pn	19 58 15.8	+2.1
ARA0				IAML		19 59 29.4	
	comp=Z,1.7nm,0.9s						
ARA0				Sn	Sn	19 59 30.0	-1.7
KEV	Kevo	7.12	112	*e*P	Pn	19 58 18.3	+1.2
KONS	Konsvik	7.21	162	*e*P	Pn	19 58 20.0	+1.7
MOR8	Moi Rana	7.66	159	*e*P	Pn	19 58 25.2	+0.8
DBG	Daneborg	7.77	290	Pn	Pn	19 58 24.7	-1.3
DBG	Daneborg	7.77	290	Pn	Pn	19 58 24.7	-1.3
SCO	Scoresbysund	9.58	267	*i* P	Pn	19 58 49.0	-1.7
APA0	Apatity Array	10.19	112	Pn	Pn	19 58 59.2	+0.1
APA0	Apatity Array	10.19	112	Pn	Pn	19 58 59.2	+0.1
NRA0	NORESS Array S	12.84	171	Pn	Pn	19 59 37.4	+2.0
	baz=16,slow=16						
NRA0	NORESS Array S	12.84	171	Pn	Pn	19 59 37.4	+2.0
	baz=16,slow=16						
HFS	Hagfors	13.56	167	Pn	Pn	19 59 47.5	+2.4
	baz=348,slow=16						
HFS	Hagfors	13.56	167	Pn	Pn	19 59 47.5	+2.4
	baz=348,slow=16						
FIA0	FINESS Array S	13.85	141	Pn	Pn	19 59 50.5	+1.4
	baz=336,slow=12						
FIA0	FINESS Array S	13.85	141	Pn	Pn	19 59 50.5	+1.4
	baz=336,slow=12						

KMA 21 20:02:46.7±0.3,**36°.83N**×**126°.90E,h20**^{km}±3^{km},**Error ellipse: s-maj=4.6km s-min=0.9km az=263.0,South Korea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUYB	Buyeo	0.55	178	P	Pn	20 03 03.6	+4.2
IKSA	Iksan Acc Bore	0.78	170	P	Pb	20 03 01.1	-0.4
KSGUS	GUNSAN	0.79	187	P	Pb	20 03 01.8	0.0
	SNR=24						
KSGUS	GUNSAN	0.79	187	P	Pb	20 03 01.8	0.0
	SNR=24						
KSJEO	Jeonju	0.94	160	P	Pb	20 03 04.4	0.0
	SNR=13						
KSJEO	Jeonju	0.94	160	P	Pb	20 03 04.4	0.0
	SNR=13						
KSMUS	Musan	1.07	354	P	Pb	20 03 06.5	0.0
	SNR=5.3						
SMKB	Mukjeong-gil	1.17	194	P	Pn	20 03 07.9	0.0
	SNR=8.3						
SMKB	Mukjeong-gil	1.17	194	P	Pn	20 03 07.9	0.0
	SNR=8.3						
KSJEU	Jeongeup	1.33	179	P	Pn	20 03 08.8	-1.4
	SNR=13						
KSJEU	Jeongeup	1.33	179	P	Pn	20 03 08.8	-1.4
	SNR=13						

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*NAO **21** 20:06:42.7±1.5,73°.42N×7°.18E,ML3.5*

*IDC **21** 20:06:46.0±0.7,73°.34N×7°.88E,h0^{km},mb3.7/10, mb1 3.9/16,mb1mx3.6/60,mbtmp3.7/16,ML3.1/5,MS3.4/10, Ms1 3.4/10,ms1mx3.0/49,Error ellipse: s-maj=18.3km s-min=11.7km az=70.0*

*BER **21** 20:06:48.3±2.9,73°.49N×7°.81E,h22^{km}±40^{km},ML2.2, ML3.5(NAO),Confirmed Earthquake*

ISC 21 20:06:47.2±0.7,**73°.38N**±0°.06×**8°.50E**±0°.08,**h10**^{km}**,n78,** σ**1^{s}.73**/77,**mb3.7**/10,**MS3.2**/7,**Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJO1	Bjornoya	3.13	64	*e*P	Pn	20 07 36.0	-0.3
HSPB	Hornsund (broa	4.06	23	Pn	Pn	20 07 46.7	-2.4
HSPB	Hornsund (broa	4.06	23	*e*P	Pn	20 07 46.8	-2.4
BRBA	Barentsburg A	4.91	14	Pn	Pn	20 07 57.9	-2.9
BRBA	Barentsburg A	4.91	14	*e*P	Pn	20 07 57.9	-2.9
BRBB	Barentsburg B	4.94	14	Pn	Pn	20 07 58.1	-3.1
BRBB	Barentsburg B	4.94	14	*e*P	Pn	20 07 58.5	-2.7
TRO	Tromso	5.02	134	*e*P	Pn	20 08 03.4	+1.1
TRO				*e*S	Sn	20 08 58.4	-1.8
TRO				IAML		20 09 00.2	
	comp=Z,8.8nm,0.5s						
SPA0	Spitsbergen Ar	5.19	18	Pn	Pn	20 08 02.9	-1.8
	baz=194,slow=14						
SPA0	Spitsbergen Ar	5.19	18	Pn	Pn	20 08 02.9	-1.8
	baz=194,slow=14						
SPA0				*e*P	Pn	20 08 03.0	-1.7
SPITS	Spitsbergen Ar	5.19	18	Pn	Pn	20 08 02.7	-2.0
	baz=186,slow=14,SNR=117						
HOPEN	Hopen	5.31	46	Pn	Pn	20 08 05.9	-0.5
HOPEN	Hopen	5.31	46	*e*P	Pn	20 08 05.5	-0.8
JETT	Jettan, Norway	5.40	130	Pn	Pn	20 08 08.9	+1.3
HAMF	Hammerfest	5.44	113	Pn	Pn	20 08 09.3	+1.1
HAMF	Hammerfest	5.44	113	*e*P	Pn	20 08 08.4	+0.2
HAMF				*e*S	Sn	20 09 10.1	-0.6
HAMF				IAML		20 09 34.7	
	comp=Z,6.0nm,0.9s						
LOF	Lofoten	5.54	160	*e*P	Pn	20 08 09.0	-0.4
LOF				IAML		20 09 09.5	
	comp=Z,18nm,0.6s						
KBS	Kingsbay	5.63	7	Pn	Pn	20 08 08.0	-2.8
KBS	Kingsbay	5.63	7	*e*P	Pn	20 08 07.8	-3.0
KBS				IAML		20 09 21.4	
	comp=Z,3.1nm,0.8s						

STEI	Steigen	5.92	154	eP	Pn	20 08 15.1	+0.4
STEI				IAML		20 09 22.8	
	comp=Z,4.7nm,0.5s						
KIF	Kilpisjarvi	5.92	132	Pn	Pn	20 08 15.8	+1.0
KIF				Sn	Sn	20 09 19.4	-3.1
KIF	Kilpisjarvi	5.92	132	Pn	Pn	20 08 15.8	+1.0
KIF				eP	Pn	20 08 15.9	+1.2
KIF				Sn	Sn	20 09 19.4	-3.1
KTK1	Kautokeino	6.46	125	eP	Pn	20 08 24.2	+2.0
KTK1				IAML		20 09 32.8	
	comp=Z,2.4nm,0.7s						
ARA0	ARCESS Array S	6.64	117	Pn	Pn	20 08 25.9	+1.2
	baz=304,slow=10						
ARA0				Sn	Sn	20 09 38.2	-2.0
	baz=320,slow=22						
ARA0	ARCESS Array S	6.64	117	Pn	Pn	20 08 25.9	+1.2
	baz=304,slow=10						
ARA0				eP	Pn	20 08 26.9	+2.3
ARA0				Sn	Sn	20 09 38.2	-2.0
	baz=320,slow=22						
ARA0				IAML		20 09 44.6	
	comp=Z,3.3nm,0.6s						
ARCES	ARCESS Array B	6.64	117	Pn	Pn	20 08 25.6	+1.0
	baz=312,slow=11,SNR=34						
ARCES				Sn	Sn	20 09 38.3	-1.9
	baz=23,slow=32,SNR=5.5						
ARCES				LR	LR	20 11 09.5	
	comp=Z,176nm,18.3s,baz=265,slow=39						
NBB30	Finnes	6.68	162	eP	Pn	20 08 25.4	+0.2
NBB17	Glomfjord B¥r	6.86	162	eP	Pn	20 08 27.3	-0.2
KEV	Kevo	6.88	113	Pn	Pn	20 08 28.8	+0.9
KEV	Kevo	6.88	113	eP	Pn	20 08 28.7	+0.8
KEV				Pn	Pn	20 08 28.8	+0.9
HEF	Hetta	7.03	128	eP	Pn	20 08 31.9	+2.0
NBB40	Tonnes	7.08	165	eP	Pn	20 08 29.7	-0.9
KONS	Konsvik	7.10	165	eP	Pn	20 08 30.6	-0.2
KONS				IAML		20 10 05.9	
	comp=Z,4.4nm,0.7s						
STOK	Stokkvaagen	7.25	165	eP	Pn	20 08 32.3	-0.7
MOR8	Moi Rana	7.53	161	eP	Pn	20 08 36.4	-0.4
DAG	Danmarks Havn	7.72	309	eP	Pn	20 08 32.5	-6.9
DAG				eS	Sn	20 09 47.4	-19
DBG	Daneborg	8.01	290	Pn	Pn	20 08 33.4	-10
DBG				Sn	Sn	20 09 52.1	-22
DBG	Daneborg	8.01	290	i P	Pn	20 08 32.8	-11
DBG	Daneborg	8.01	290	eP	Pn	20 08 33.9	-9.4
DBG				eS	Sn	20 09 52.1	-22
NSS	Namsos	8.98	170	eP	Pn	20 08 54.2	-2.5
SCO	Scoresbysund	9.81	268	i P	Pn	20 09 00.1	-8.0
APA0	Apatity Array	9.96	113	Pn	Pn	20 09 09.4	-0.6
	baz=320,slow=16						
APA0	Apatity Array	9.96	113	Pn	Pn	20 09 09.4	-0.6
	baz=320,slow=16						
ZFI	Zemlya Franca-	11.15	32	eP	Pn	20 09 24.3	-1.9
	comp=Z,184nm,1.3s						
ZFI2	Zemlya Franca-	11.15	32	P	Pn	20 09 23.4	-2.9
NB2	NORSAR Subarra	12.44	174	Pn	Pn	20 09 43.4	-0.7
NB2	NORSAR Subarra	12.44	174	Pn	Pn	20 09 43.4	-0.7
NOA	NORSAR Array B	12.44	174	Pn	Pn	20 09 43.2	-0.9
	comp=Z,0.0nm,0.3s,baz=350,slow=13,SNR=2.4						
NRA0	NORESS Array S	12.76	173	Pn	Pn	20 09 47.6	-0.7
	baz=350,slow=18						
NRA0	NORESS Array S	12.76	173	Pn	Pn	20 09 47.6	-0.7
	baz=350,slow=18						
HFS	Hagfors	13.46	169	Pn	Pn	20 09 57.1	-0.7
	comp=Z,0.2nm,0.3s,baz=347,slow=12,SNR=5.7						
HFS				LR	LR	20 14 24.3	
	comp=Z,108nm,21.1s,baz=332,slow=34						
HFS	Hagfors	13.46	169	Pn	Pn	20 09 56.5	-1.3
	baz=349,slow=10						
HFS	Hagfors	13.46	169	Pn	Pn	20 09 56.5	-1.3
	baz=349,slow=10						
FIA0	FINESS Array S	13.66	142	Pn	Pn	20 10 00.8	+0.2
	baz=346,slow=14						
FIA0	FINESS Array S	13.66	142	Pn	Pn	20 10 00.8	+0.2
	baz=346,slow=14						
FINES	FINESS Array B	13.66	142	Pn	Pn	20 10 00.9	+0.2
	comp=Z,0.2nm,0.3s,baz=342,slow=12,SNR=10.0						
FINES				LR	LR	20 15 01.0	
	comp=Z,137nm,19.3s,baz=260,slow=36						
LSH	Leshukonskoye	15.45	104	P	Pn	20 10 21.1	-3.7
	comp=Z,100nm,2.9s						
KLMR	Klimovskoe	17.10	121	eP	P	20 10 48.0	+0.5
	comp=Z,83nm,3.7s						
KLMR	Klimovskoe	17.10	121	ePn	P	20 10 48.1	+0.5
KLMR				AMP		20 10 54.9	
	comp=Z,31nm,1.4s						
PRGR	Permogore	18.01	111	P	Pn	20 10 55.9	-1.2
EKA	Eskdalemuir Ar	18.74	201	P	P	20 11 05.8	+0.1
	baz=354,slow=16,SNR=3.7						
SFJD	Kangerlussuaq	20.17	282	LR	LR	20 17 59.9	
	comp=Z,87nm,20.6s,baz=84,slow=34						
KIRV	Kirov	21.61	111	LR	LR	20 20 13.1	
	comp=Z,79nm,19.2s,baz=331,slow=37						
VRAC	Vranov	24.42	167	P	P	20 12 05.7	+0.3
	comp=Z,3.4nm,0.8s,baz=2.4,slow=15,SNR=3.8						
AKASG	Malin Array Be	24.46	147	P	P	20 12 05.8	+0.1
	comp=Z,1.3nm,0.5s,baz=346,slow=9.5,SNR=9.2						
GERES	GERESS Array B	24.73	172	P	P	20 12 10.0	+1.6
	comp=Z,0.9nm,0.7s,baz=23,slow=13,SNR=2.6						
ARU	Arti	25.98	104	P	P	20 12 23.0	+3.5
	comp=Z,0.5nm,0.5s,baz=306,slow=9.7,SNR=5.2						
BELG	Belogornoye	26.67	121	LR	LR	20 22 59.3	
	comp=Z,56nm,18.0s,baz=176,slow=36						
MLR	Muntele Rosu	29.10	154	LR	LR	20 25 23.9	
	comp=Z,95nm,18.6s,baz=323,slow=38						
KBZ	Khabaz	33.72	132	LR	LR	20 27 12.5	
	comp=Z,65nm,18.5s,baz=350,slow=36						
ZALV	Zalesovo Beam	35.64	80	LR	LR	20 31 07.7	
	comp=Z,42nm,18.1s,baz=319,slow=41						
YKA	Yellowknife Ar	39.17	322	P	P	20 14 14.8	+0.4
	comp=Z,1.4nm,1.1s,baz=16,slow=8.3,SNR=6.7						
ILAR	Eielson Array	41.13	344	P	P	20 14 30.0	-0.7
	comp=Z,0.4nm,0.4s,baz=356,slow=5.9,SNR=8.3						
SONM	Songino Array	47.07	66	P	P	20 15 22.3	+3.6
	comp=Z,0.7nm,0.9s,baz=319,slow=5.7,SNR=2.9						
TORD	Torodi Ar. Bea	60.35	188	P	P	20 16 55.0	-0.9
	comp=Z,1.3nm,0.8s,baz=347,slow=7.4,SNR=8.0						
NVAR	Mina Array Bea	62.78	315	LR	LR	20 44 17.0	
	comp=Z,67nm,18.5s,baz=274,slow=36						
TXAR	Lajitas Array	68.16	299	P	P	20 17 48.0	+0.8
	comp=Z,0.8nm,1.1s,baz=28,slow=4.7,SNR=3.4						
CMAR	Chiang Mai Arr	72.59	84	P	P	20 18 17.1	+2.8
	comp=Z,0.5nm,0.7s,baz=331,slow=7.2,SNR=2.2						

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*IDC **21** 20:33:12.9±1.0, 58.°63S×25.°07W, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.8/27, mbtmp4.1/3, ML4.5/1, Error ellipse: s-maj=62.7km s-min=31.3km az=90.0*

ISC 21 20:33:14.4±1.1**, 58.°7S**±0.°2×**24.°7W**±0.°4**, h10km, n11, σ0.s78**/11**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	13.82	157	P	Pn	20 36 30.0	-0.1
VNA3	Neumayer Olymp	14.03	160	P	Pn	20 36 32.2	-0.8
VNA2	Neumayer--Watz	14.22	156	P	Pn	20 36 34.8	-0.7
	baz=320,slow=14						
SNAA	Sanae	15.76	154	P	Pn	20 36 56.0	-0.2
SNAA	Sanae	15.76	154	Pn	Pn	20 36 56.2	0.0
	1.9nm,0.3s,baz=320,slow=16,SNR=162						
VNDA	Vanda	43.97	182	P	P	20 41 22.2	+1.2
	0.9nm,0.8s,baz=195,slow=5.1,SNR=3.5						
TORD	Torodi Ar. Bea	74.78	27	P	P	20 44 55.0	+0.5
	1.2nm,0.7s,baz=200,slow=6.3,SNR=9.7						
YKA	Yellowknife Ar	139.02	315	PKP	PKPdf	20 52 39.2	-0.3
	0.6nm,0.6s,baz=132,slow=2.1,SNR=9.9						
INK	Inuvik	148.69	317	PKPbc	PKPbc	20 52 59.5	-0.6
	3.8nm,0.7s,baz=86,slow=2.2,SNR=15						
SONM	Songino Array	149.49	89	PKPbc	PKPbc	20 53 02.9	0.0
	0.5nm,1.0s,baz=222,slow=2.0,SNR=3.8						
ILAR	Eielson Array	152.84	307	PKPbc	PKPbc	20 53 08.8	-1.2
	1.7nm,0.7s,baz=152,slow=2.1,SNR=15						

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*NAO **21** 20:39:10.2±1.5, 73.°41N×7.°20E, ML4.1*

*IDC **21** 20:39:11.8±0.5, 73.°25N×7.°06E, h0km, mb3.9/21, mb1 4.1/26, mb1mx3.8/56, mbtmp4.0/26, ML3.4/4, MS3.7/41, Ms1 3.7/41, ms1mx3.6/56, Error ellipse: s-maj=14.5km s-min=9.9km az=58.0*

*MOS **21** 20:39:11.8±1.5, 73.°42N×7.°45E, h10km, mb4.5/17, Error ellipse: s-maj=21.4km s-min=5.2km az=96.9*

*NEIC **21** 20:39:13.3±2.2, 73.°40N±0.°07×7.°4E±0.°2, h10km±1km, mb4.5/42, Error ellipse: s-maj=13.1km s-min=11.3km az=210.0*

*BER **21** 20:39:14.6±2.8, 73.°52N×7.°55E, h16km, ML2.5, ML1.9(DNK), Confirmed Earthquake*

*DNK **21** 20:39:19.1±4.2, 73.°65N×6.°83E, h38km±136km, ML1.9*

ISC 21 20:39:13.7±0.3**, 73.°40N**±0.°04×**7.°52E**±0.°05**, h13km, n275, σ1.s85**/259**, mb4.3**/63**, MS3.6**/40**, 5C-5D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJO1	Bjornoya	3.38	65	Pn	Pn	20 40 04.2	-1.8
BJO1	Bjornoya	3.38	65	eP	Pn	20 40 03.3	-2.6
HSPB	Hornsund (broa	4.16	26	Pn	Pn	20 40 14.9	-1.8
HSPB	Hornsund (broa	4.16	26	eP	Pn	20 40 14.5	-2.3
BRBA	Barentsburg A	4.97	16	Pn	Pn	20 40 25.5	-2.3
BRBA	Barentsburg A	4.97	16	eP	Pn	20 40 25.5	-2.3
BRBB	Barentsburg B	5.00	16	Pn	Pn	20 40 26.1	-2.2
BRBB	Barentsburg B	5.00	16	eP	Pn	20 40 26.2	-2.0
TRO	Tromso	5.23	131	eP	Pn	20 40 31.2	-0.3
TRO				IAML		20 41 29.9	
	comp=Z,22nm,0.6s						
SPB2	Spitsbergen Ar	5.27	20		Pn	20 40 30.7	-1.2
SPA0	Spitsbergen Ar	5.27	20	Pn	Pn	20 40 30.4	-1.6
	baz=205,slow=16						
SPA0	Spitsbergen Ar	5.27	20	Pn	Pn	20 40 30.4	-1.6
	baz=205,slow=16						
SPITS	Spitsbergen Ar	5.27	20	Pn	Pn	20 40 30.5	-1.5
	baz=192,slow=15,SNR=230						
JMIC	Jan Mayen	5.47	252	LR	LR	20 42 03.3	
	comp=Z,299nm,20.7s,baz=65,slow=32						
HOPEN	Hopen	5.51	47	Pn	Pn	20 40 33.0	-2.2
HOPEN	Hopen	5.51	47	eP	Pn	20 40 32.4	-2.8
JETT	Jettan, Norway	5.63	127	Pn	Pn	20 40 36.5	-0.4
LOF	Lofoten	5.65	156	eP	Pn	20 40 35.9	-1.3
KBS	Kingsbay	5.66	9	Pn	Pn	20 40 35.6	-1.7
KBS	Kingsbay	5.66	9	P	Pn	20 40 35.6	-1.7
KBS	Kingsbay	5.66	9	i P	Pn	20 40 35.2	-2.1
KBS	Kingsbay	5.66	9	eP	Pn	20 40 35.6	-1.7
KBS	Kingsbay	5.66	9		Pn	20 40 35.6	-1.7
HAMF	Hammerfest	5.71	111	Pn	Pn	20 40 36.5	-1.5
HAMF	Hammerfest	5.71	111	eP	Pn	20 40 36.4	-1.6
STEI	Steigen	6.06	151	eP	Pn	20 40 42.0	-0.8
STEI				IAML		20 41 53.7	
	comp=Z,9.2nm,0.5s						
N2RO	R¸st	6.11	163	eP	Pn	20 40 43.1	-0.3
N2IH	Innhavet	6.12	149	eP	Pn	20 40 44.4	+0.7
KIF	Kilpisjarvi	6.14	129	Pn	Pn	20 40 43.5	-0.5
KIF				Sn	Sn	20 41 47.7	-6.2
KIF	Kilpisjarvi	6.14	129	eP	Pn	20 40 43.3	-0.6
FAUS	Fauske	6.58	153	eP	Pn	20 40 50.4	+0.4
KTK1	Kautokeino	6.70	123	eP	Pn	20 40 52.0	+0.3
KTK1				IAML		20 42 11.0	
	comp=Z,4.6nm,0.6s						
NBB30	Finnes	6.79	159	eP	Pn	20 40 52.1	-0.7
ARA0	ARCESS Array S	6.90	115	Pn	Pn	20 40 53.2	-1.1
	baz=319,slow=14						
ARA0				Sn	Sn	20 42 05.1	-7.4
	baz=323,slow=28						
ARA0	ARCESS Array S	6.90	115	Pn	Pn	20 40 53.2	-1.1
	baz=319,slow=14						
ARA0				Sn	Sn	20 42 05.1	-7.4
	baz=323,slow=28						
ARCES	ARCESS Array B	6.90	115	Pn	Pn	20 40 53.8	-0.6
	baz=321,slow=10,SNR=94						
ARCES				Sn	Sn	20 42 06.9	-5.7
	baz=314,slow=21,SNR=5.2						
ARCES	ARCESS Array B	6.90	115	Pn	Pn	20 40 53.6	-0.7
NBB17	Glomfjord B¥r	6.96	159	eP	Pn	20 40 54.0	-1.2
KEV	Kevo	7.15	111	Pn	Pn	20 40 56.8	-0.9
KEV	Kevo	7.15	111	P	Pn	20 40 56.3	-1.4
KEV	Kevo	7.15	111	eP	Pn	20 40 55.6	-2.1
KEV	Kevo	7.15	111		Pn	20 40 56.3	-1.4
KONS	Konsvik	7.19	162	eP	Pn	20 40 58.0	-0.2
HEF	Hetta	7.26	126	eP	Pn	20 40 58.8	-0.6
STOK	Stokkvaagen	7.34	162	eP	Pn	20 41 00.1	-0.3
DAG	Danmarks Havn	7.50	309	P	Pn	20 41 03.0	+0.6
DAG	Danmarks Havn	7.50	309	i P	Pn	20 41 01.0	-1.4
DAG				i S	Sn	20 42 13.1	-14
DAG				IAML		20 42 15.7	
	comp=Z,15nm,0.6s						
DAG	Danmarks Havn	7.50	309	i P	Pn	20 41 01.0	-1.4
DAG				i S	Sn	20 42 13.1	-14
DAG				IAML		20 42 15.7	
	comp=Z,15nm,0.6s						
MOR8	Moi Rana	7.64	158	eP	Pn	20 41 02.9	-1.6
MOR8				IAML		20 42 28.4	
	comp=Z,9.3nm,0.4s						
DBG	Daneborg	7.74	290	Pn	Pn	20 41 00.9	-4.9
DBG				Sn	Sn	20 42 22.2	-11
DBG	Daneborg	7.74	290	i P	Pn	20 41 00.4	-5.5
DBG				IAML		20 41 30.0	
	comp=Z,5.3nm,1.0s						
DBG	Daneborg	7.74	290	i P	Pn	20 41 00.4	-5.5
DBG				IAML		20 41 30.0	
	comp=Z,5.3nm,1.0s						
DBG				eS	Sn	20 42 22.1	-11
NSS	Namsos	9.05	168	eP	Pn	20 41 23.5	-0.3
SCO	Scoresbysund	9.53	267	P	Pn	20 41 28.3	-2.0
SCO	Scoresbysund	9.53	267	i P	Pn	20 41 27.8	-2.6
SCO				IAML		20 41 36.7	
	comp=Z,0.6nm,0.2s						
SCO	Scoresbysund	9.53	267	i P	Pn	20 41 27.8	-2.6
SCO				IAML		20 41 36.7	
	comp=Z,0.6nm,0.2s						
SCO	Scoresbysund	9.53	267	Pn	Pn	20 41 28.3	-2.0
NOR	Nord	9.62	339	i P	Pn	20 41 27.9	-3.7
NOR				IAML		20 41 39.5	
	comp=Z,2.8nm,0.8s						
NOR	Nord	9.62	339	i P	Pn	20 41 27.9	-3.7
NOR				IAML		20 41 39.5	
	comp=Z,2.8nm,0.8s						
APA0	Apatity Array	10.22	112	Pn	Pn	20 41 36.9	-2.9
	baz=316,slow=14						
APA0	Apatity Array	10.22	112	Pn	Pn	20 41 36.9	-2.9
	baz=316,slow=14						
APA	Apatity	10.36	111⇓	iP	Pn	20 41 39.1	-2.6
APA				i		20 43 35.4	
APA				pmax	pmax		
	comp=Z,7.0nm,0.1s						
LVZ	Lovozero	10.46	108⇓	eP	Pn	20 41 40.5	-2.7
LVZ				pmax	pmax		
	comp=Z,40nm,1.0s						
LVZ	Lovozero	10.46	108		Pn	20 41 40.7	-2.5
MSF	Maaselka	10.53	125	P	Pn	20 41 43.5	-0.5
AKN	Aaknes	11.27	181	eP	Pn	20 41 53.0	-1.3
ZFI	Zemlya Franca-	11.29	32	eP	Pn	20 41 49.8	-4.6
	comp=Z,336nm,1.7s						
ZFI2	Zemlya Franca-	11.29	32	eP	Pn	20 41 50.3	-4.0
	comp=Z,284nm,1.6s						
DOMB	Dombas	11.42	176	eP	Pn	20 41 55.2	-1.1
NC204	NORSAR Array S	12.24	173	Pn	Pn	20 42 07.0	-0.4
NC303	NORSAR Array S	12.31	171	Pn	Pn	20 42 08.6	+0.1
NC405	NORSAR Array S	12.44	171	Pn	Pn	20 42 08.8	-1.4
NB201	NORSAR Array S	12.49	171	Pn	Pn	20 42 11.2	+0.3
NB2	NORSAR Subarra	12.49	172	Pn	Pn	20 42 11.3	+0.4
	baz=354,slow=14						
NB2	NORSAR Subarra	12.49	172	Pn	Pn	20 42 11.3	+0.4
	baz=354,slow=14						
NOA	NORSAR Array B	12.49	172	Pn	Pn	20 42 08.5	-2.4
	comp=Z,0.1nm,0.3s,baz=354,slow=13,SNR=13						
NOA				LR	LR	20 46 31.2	
	comp=Z,271nm,20.3s,baz=355,slow=36						
NAO01	NORSAR Array S	12.68	172	Pn	Pn	20 42 11.4	-2.0
NC602	NORSAR Array S	12.81	171	Pn	Pn	20 42 14.6	-0.6
NRA0	NORESS Array S	12.81	171	Pn	Pn	20 42 14.4	-0.8
	baz=353,slow=16						
NRA0	NORESS Array S	12.81	171	Pn	Pn	20 42 14.4	-0.8
	baz=353,slow=16						
BORG	Borgarnes	13.29	244	LR	LR	20 46 02.0	
	comp=Z,213nm,19.9s,baz=356,slow=31						
HFS	Hagfors	13.53	167	Pn	Pn	20 42 23.3	-1.7
	comp=Z,0.6nm,0.3s,baz=2.1,slow=12,SNR=18						
HFS				LR	LR	20 47 04.3	
	comp=Z,386nm,20.3s,baz=339,slow=35						
HFS	Hagfors	13.53	167	Pn	Pn	20 42 24.1	-0.9
	baz=349,slow=16						
HFS	Hagfors	13.53	167	Pn	Pn	20 42 24.1	-0.9
	baz=349,slow=16						
FIA0	FINESS Array S	13.85	140	Pn	Pn	20 42 27.7	-1.7
	baz=334,slow=12						
FIA0	FINESS Array S	13.85	140	Pn	Pn	20 42 27.7	-1.7
	baz=334,slow=12						
FINES	FINESS Array B	13.85	140	Pn	Pn	20 42 27.7	-1.7
	comp=Z,0.7nm,0.3s,baz=336,slow=12,SNR=27						
FINES				LR	LR	20 47 41.2	
	comp=Z,294nm,19.7s,baz=358,slow=37						
FINES	FINESS Array B	13.85	140	P	Pn	20 42 27.9	-1.5
FINES	FINESS Array B	13.85	140	Pn	Pn	20 42 27.9	-1.5
VALR	Valaam	14.88	132	eP	Pn	20 42 44.4	+1.0
VALR				pmax	pmax		
	comp=Z,51nm,0.8s						
LSH	Leshukonskoye	15.73	103	eP	Pn	20 42 49.6	-4.9
	comp=Z,108nm,3.2s						
AMDE	Amderma	16.96	75	P	Pn	20 43 10.9	+0.7
	comp=Z,15nm,1.0s						
KLMR	Klimovskoe	17.35	120	eP	Pn	20 43 14.4	-0.7
KLMR				pmax	pmax		
	comp=Z,47nm,1.3s						
KLMR	Klimovskoe	17.35	120	eP	Pn	20 43 14.6	-0.5
	comp=Z,51nm,1.4s						
KLMR	Klimovskoe	17.35	120	ePn	Pn	20 43 14.4	-0.7
KLMR				AMP		20 43 29.4	
	comp=Z,47nm,1.3s						
UPNV	Upernavik	17.77	299	i P	P	20 43 22.3	+1.4
UPNV				IAML		20 43 35.2	
	comp=Z,5.5nm,1.0s						
UPNV	Upernavik	17.77	299	i P	P	20 43 22.3	+1.4
UPNV				IAML		20 43 35.2	
	comp=Z,5.5nm,1.0s						
PRGR	Permogore	18.28	110	eP	P	20 43 35.3	+8.6
PRGR				pmax	pmax		
	comp=Z,50nm,1.1s						
PRGR	Permogore	18.28	110	eP	Pn	20 43 23.4	-3.2
TULEG	Thule	18.73	315	i P	Pn	20 43 31.9	-0.1
TULEG	Thule	18.73	315	i P	Pn	20 43 31.9	-0.1
TULEG	Thule	18.73	315	P	P	20 43 31.0	-0.6
PABE	Paberze	19.17	151	P	P	20 43 36.7	+0.2
PABE				IAmb	IAmb	20 43 50.0	
	comp=Z,39nm,1.1s						
SFJD	Kangerlussuaq	19.89	281	LR	LR	20 50 26.9	
	comp=Z,404nm,18.8s,baz=26,slow=34						
EUNU	Eureka	19.99	330	P	P	20 43 45.6	+0.2
EUNU				IAmb	IAmb	20 43 52.3	
	comp=Z,37nm,1.2s						
NACGM	Naroch	20.18	146	i P	Pn	20 43 49.5	+0.1
SUW	Suwalki	20.52	153	P	P	20 43 52.3	+1.1
SUW				pmax	pmax		
	comp=Z,50nm,1.1s						
SUW	Suwalki	20.52	153	P	P	20 43 52.3	+1.1
MNK	Minsk	20.74	145	i P	P	20 43 53.4	-0.2
MNK				i PPP	PPP	20 44 19.2	
MNK				i S	S	20 47 45.8	+1.3
MNK				i SS	SnSn	20 48 05.4	+1.5
MNK				i SSS	SSS	20 48 19.0	
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,23nm,1.1s						
MNK				pmax	pmax		
	comp=N,43nm,1.3s						
MNK				MLR	MLR		
	comp=Z,113nm,16.0s						
MNK				MLR	MLR		
	comp=N,90nm,12.0s						
MNK				MLR	MLR		
	comp=E,11nm,11.0s						
MNK	Minsk	20.74	145	i P	P	20 43 53.4	-0.2
	comp=E,2.0nm,0.8s						
MNK				i P	P	20 43 53.4	-0.2
	comp=N,43nm,1.3s						
MNK				i P	P	20 43 53.4	-0.2
	comp=Z,23nm,1.1s,baz=344						
MNK				i PP	PnPn	20 44 11.2	-0.2
MNK				i PPP	PPP	20 44 19.2	
MNK				i S	S	20 47 45.8	+1.3
MNK				i SS	SnSn	20 48 05.5	+1.6
MNK				i SSS	SSS	20 48 19.0	
MNK				i LQ	LQ	20 49 36.4	
MNK				i LR	LR	20 51 19.3	
MNK				i LRM	MLR	20 52 02.7	
	comp=Z,113nm,16.0s						
MNK				i LRM	MLR	20 52 17.1	
	comp=N,90nm,11.8s						
MNK				i LRM	MLR	20 52 22.9	
	comp=E,11nm,10.9s						
MOS	Moscow	21.48	129	eP	P	20 44 00.0	-1.5
MOS				e		20 44 20.3	
MOS				pmax	pmax		
	comp=Z,36nm,0.8s						
OBN	Obninsk	21.82	131	LR	LR	20 52 42.6	
	comp=Z,47nm,18.9s,baz=354,slow=37						
OBN	Obninsk	21.82	131	eP	P	20 44 05.3	+0.1
OBN				ePPP	PPP	20 44 33.8	
OBN				pmax	pmax		
	comp=Z,133nm,3.8s						
OBN	Obninsk	21.82	131	P	P	20 44 05.4	+0.2
KIRV	Kirov	21.88	110	P	P	20 44 05.5	-0.2
	comp=Z,13nm,0.9s,baz=331,slow=18,SNR=4.8						
KIRV				LR	LR	20 52 30.7	
	comp=Z,271nm,20.9s,baz=341,slow=36						
KIRV	Kirov	21.88	110⇓	eP	P	20 44 06.0	+0.2
CLL	Collm	22.30	171	eP	P	20 44 12.0	+1.7
CLL				pmax	pmax		
	comp=Z,11nm,1.2s						
CLL	Collm	22.30	171	eP	P	20 44 12.0	+1.7
	comp=Z,11nm,1.2s						
CLL				ePPP	PPP	20 44 40.0	
CLL				Lm	MLR	20 52 00.0	
	comp=Z,200nm,19.7s						
BRG	Berggiesshubel	22.78	169	eP	P	20 44 17.3	+1.9
BRG				Amp		20 44 25.7	
	comp=Z,7.3nm,1.1s						
NKC	Novy Kostel	23.35	172	eP	P	20 44 24.0	+2.7
NKC	Novy Kostel	23.35	172	eP	P	20 44 24.0	+2.7
DPC	Dobruska-Polom	23.45	166	eP	P	20 44 22.9	+0.6
DPC	Dobruska-Polom	23.45	166	eP	P	20 44 22.9	+0.6
OJC	Ojcow	23.87	160	P	P	20 44 25.7	-0.7
OJC				pmax	pmax		
	comp=Z,21nm,1.3s						
OJC	Ojcow	23.87	160	P	P	20 44 25.7	-0.7
OJC				IAmb	IAmb	20 44 39.7	
	comp=Z,22nm,1.3s						
NRIK	Noril'sk	24.07	59	P	P	20 44 30.1	+2.0
	comp=Z,1.7nm,0.5s,baz=306,slow=12,SNR=3.6						
NRIK	Noril'sk	24.07	59⇑	eP	P	20 44 28.7	+0.6
NRIK				pmax	pmax		
	comp=Z,16nm,1.9s						
NRIK	Noril'sk	24.07	59		P	20 44 26.6	-1.5
MORC	Moravsky Berou	24.11	164	eP	P	20 44 29.5	+0.8
MORC	Moravsky Berou	24.11	164	P	P	20 44 29.6	+0.8
MORC				pmax	pmax		
	comp=Z,14nm,1.1s						
MORC	Moravsky Berou	24.11	164	P	P	20 44 29.6	+0.8
MORC				IAmb	IAmb	20 44 36.7	
	comp=Z,14nm,1.1s						
KHC	Kasperske Hory	24.50	170	eP	P	20 44 35.3	+3.0
KHC	Kasperske Hory	24.50	170	eP	P	20 44 35.3	+3.0
VRAC	Vranov	24.50	166	P	P	20 44 31.9	-0.4
	comp=Z,5.4nm,0.8s,baz=349,slow=10,SNR=7.2						
VRAC				LR	LR	20 54 04.4	
	comp=Z,170nm,19.3s,baz=346,slow=37						
VRAC	Vranov	24.50	166	eP	P	20 44 33.7	+1.4
AKASG	Malin Array Be	24.63	146	P	P	20 44 33.2	-0.2
	comp=Z,3.0nm,0.5s,baz=346,slow=9.6,SNR=18						
AKASG				LR	LR	20 54 07.1	
	comp=Z,315nm,19.3s,baz=330,slow=36						
AKASG	Malin Array Be	24.63	146	P	P	20 44 32.0	-1.3
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.3s						
AKASG	Malin Array Be	24.63	146	P	P	20 44 32.0	-1.3
AKBB	Malin Array Si	24.63	146	P	P	20 44 33.4	0.0
AKBB				pmax	pmax		
	comp=Z,23nm,1.4s						
AKBB	Malin Array Si	24.63	146	P	P	20 44 33.4	0.0
AKBB				IAmb	IAmb	20 44 44.7	
	comp=Z,23nm,1.4s						
LPSR	Galich'ya Gora	24.68	130	eP	P	20 44 35.0	+1.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KRUC	Moravsky	24.73	166	eP	P	20 44 36.2	+1.9
GEC2	GERESS Array S	24.79	170	P	P	20 44 36.0	+1.0
GEC2				IAmb	IAmb	20 45 03.0	
	comp=Z,13nm,1.4s						
GERES	GERESS Array B	24.79	170	P	P	20 44 34.9	0.0
	comp=Z,2.7nm,0.9s,baz=14,slow=6.9,SNR=6.4						
GERES				LR	LR	20 54 38.3	
	comp=Z,167nm,18.8s,baz=65,slow=38						
GERES	GERESS Array B	24.79	170	P	P	20 44 33.7	-1.3
CKRC	Cesky Krumlov	24.84	169	eP	P	20 44 38.4	+3.0
LANS	Liptovska Anna	24.89	161	eP	P	20 44 37.3	+1.4

LANS	Liptovska Anna	24.89	161	*e*P	P	20 44 37.3	+1.4
RES	Resolute Bay	24.92	322	LR	LR	20 54 14.2	
	comp=Z,161nm,19.1s,baz=320,slow=36						
BFO	Black Forest	25.16	179	P	P	20 44 37.0	-1.2
BFO				pmax	pmax		
	comp=Z,21nm,1.4s						
BFO	Black Forest	25.16	179	P	P	20 44 37.0	-1.2
BFO				IAmb	IAmb	20 44 45.6	
	comp=Z,21nm,1.4s						
ECH	Echery	25.27	181	P	P	20 44 39.0	-0.2
ECH				pmax	pmax		
	comp=Z,14nm,1.2s						
ECH	Echery	25.27	181	P	P	20 44 39.0	-0.2
ECH				IAmb	IAmb	20 44 54.0	
	comp=Z,14nm,1.2s						
KOLS	Kolonicke sedl	25.40	157	*e*P	P	20 44 42.4	+2.0
KOLS	Kolonicke sedl	25.40	157	*e*P	P	20 44 42.4	+2.0
MODS	Modra-Piesok	25.48	165	*e*P	P	20 44 44.4	+3.3
MODS	Modra-Piesok	25.48	165	*e*P	P	20 44 44.3	+3.2
VYHS	Vyhne	25.49	162	*e*P	P	20 44 42.7	+1.5
VYHS	Vyhne	25.49	162	*e*P	P	20 44 42.7	+1.5
UZH	Uzhgorod	25.70	157	*e*P	P	20 44 47.8	+4.8
UZH				*e*		20 44 56.2	
CONA	Conrad Observa	25.82	167	*e*P	P	20 44 45.5	+1.1
	comp=Z,13nm,1.4s						
MOTA	Moosalm	26.19	174	*e*P	P	20 44 52.0	+4.3
	comp=Z,4.3nm,0.9s						
WATA	Walderalm	26.21	174	*e*P	P	20 44 51.8	+3.9
	comp=Z,6.5nm,1.2s						
ARU	Arti	26.26	102	P	P	20 44 49.9	+1.8
	comp=Z,1.0nm,0.7s,baz=337,slow=5.9,SNR=7.0						
ARU				LR	LR	20 55 04.9	
	comp=Z,81nm,21.0s,baz=336,slow=36						
ARU	Arti	26.26	102	*c* *i*P	P	20 44 49.7	+1.6
ARU						20 45 26.5	
ARU				S	S	20 49 23.2	+3.4
ARU				SS	SnSn	20 50 21.9	+3.0
ARU	Arti	26.26	102	P	P	20 44 46.7	-1.4
ARU				IAmb	IAmb	20 45 10.8	
	comp=Z,19nm,1.1s						
WTTA	Wattenberg	26.29	174	*e*P	P	20 44 49.8	+1.2
	comp=Z,8.9nm,1.5s						
ARSA	Arzberg	26.48	168	*e*P	P	20 44 52.9	+2.7
	comp=Z,11nm,2.5s						
SVE	Sverdlovsk	26.50	100	*e*P	P	20 44 57.0	+6.7
KBA	Koelnbreinsper	26.54	171	*e*P	P	20 44 54.2	+3.3
	comp=Z,2.8nm,1.0s						
VRH	Novokhopyorsk	26.61	128	*e*P	P	20 44 51.7	+0.4
VRH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
DAVOX	Davos/Dischmat	26.72	176	LR	LR	20 54 26.2	
	comp=Z,108nm,20.5s,baz=332,slow=34						
BELG	Belogornoye	26.92	119	P	P	20 44 54.9	+0.8
	comp=Z,15nm,0.9s,baz=332,slow=5.3,SNR=4.8						
BELG				LR	LR	20 55 26.2	
	comp=Z,207nm,20.0s,baz=340,slow=36						
BELG	Belogornoye	26.92	119	⇑*e*P	P	20 44 55.3	+1.2
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BUR08	Bucovina Ar. S	27.02	153	P	P	20 44 56.6	+1.4
BURAR	Bucovina Array	27.05	153	P	P	20 44 56.5	+1.0
OBKA	Obir	27.16	169	*e*P	P	20 45 00.2	+3.8
	comp=Z,2.9nm,0.9s						
FRB	Frobisher Bay	27.30	290	LR	LR	20 54 31.4	
	comp=Z,145nm,18.1s,baz=1.0,slow=34						
MLR	Muntele Rosu	29.23	153	LR	LR	20 57 00.8	
	comp=Z,311nm,20.4s,baz=359,slow=37						
TIXI	Tiksi	30.56	32	LR	LR	20 57 38.1	
	comp=Z,51nm,19.5s,baz=324,slow=36						
TIXI	Tiksi	30.56	32	⇓*e*P	P	20 45 27.3	+1.0
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TIXI	Tiksi	30.56	32	P	P	20 45 27.0	+0.7
AKTO	Aktyubinsk	31.43	109	LR	LR	20 58 45.7	
	comp=Z,163nm,20.6s,baz=351,slow=37						
BRVK	Borovoye	32.54	94	P	P	20 45 44.3	+0.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	Borovoye	32.54	94	P	P	20 45 44.3	+0.5
BVAR	Borovoye Array	32.60	94	P	P	20 45 45.9	+1.6
	comp=Z,2.9nm,0.8s,baz=289,slow=9.1,SNR=18						
ABKAR	Akbulak array	33.03	108	P	P	20 45 49.3	+1.2
ABKAR	Akbulak array	33.03	108	P	P	20 45 48.6	+0.5
KIV	Kislovodsk	33.67	131	*e*P	P	20 45 54.2	+0.3
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,94nm,15.0s						
KBZ	Khabaz	33.94	131	LR	LR	21 00 55.5	
	comp=Z,54nm,19.0s,baz=356,slow=38						
ESDC	Sonseca Array	34.26	196	P	P	20 45 55.6	-3.5
	comp=Z,0.3nm,0.6s,baz=12,slow=4.3,SNR=1.3						
ESDC	Sonseca Array	34.26	196	IAmb	IAmb	20 46 02.2	
	comp=Z,5.1nm,1.5s						
SCHQ	Schefferville	34.30	279	LR	LR	20 58 07.9	
	comp=Z,155nm,19.2s,baz=44,slow=33						
NCK	Nalchik	34.31	131	⇓*e*P	P	20 46 01.9	+2.5
NCK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
GROC	Groznyy	35.08	128	*e*P	P	20 46 07.4	+1.4
GROC				*e*		20 47 26.2	
GROC				pmax	pmax		
	comp=Z,13nm,0.7s						
ZALV	Zalesovo Beam	35.91	79	P	P	20 46 16.2	+3.2
	comp=Z,0.8nm,0.4s,baz=340,slow=8.2,SNR=3.7						
ZALV				LR	LR	21 03 39.0	
	comp=Z,89nm,20.7s,baz=332,slow=41						
ZALV	Zalesovo Beam	35.91	79	P	P	20 46 11.4	-1.6
BRTR	Keskin Array B	36.02	145	P	P	20 46 14.7	+0.4
	comp=Z,1.5nm,0.8s,baz=353,slow=8.7,SNR=4.8						
BRTR				LR	LR	21 02 18.2	
	comp=Z,125nm,20.5s,baz=21,slow=38						
BRTR	Keskin Array B	36.02	145	*i* P	P	20 46 16.5	+2.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	36.02	145	P	P	20 46 12.8	-1.6
INK	Inuvik	36.29	337	P	P	20 46 16.3	+0.2
	comp=Z,5.3nm,1.2s,baz=356,slow=11,SNR=4.5						
INK	Inuvik	36.29	337	P	P	20 46 16.2	+0.1
INK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
INK	Inuvik	36.29	337	P	P	20 46 16.2	+0.1
INK				IAmb	IAmb	20 46 22.4	
	comp=Z,6.2nm,1.1s						
KURK	Kurchatov	37.01	88	P	P	20 46 23.4	+0.9
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURK	Kurchatov	37.01	88	P	P	20 46 23.4	+0.9
KEST	Kesra	37.75	178	LR	LR	21 00 50.9	
	comp=Z,58nm,21.0s,baz=270,slow=34						
BILL	Bilibino	38.13	13	*e*P	P	20 46 32.5	+0.8
BILL				*e**PP	sP	20 46 36.4	+0.3
BILL				*e*		20 48 01.0	
BILL				*e*PPP	PPP	20 48 20.8	
BILL				*e*		20 48 48.2	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,91nm,20.0s						
BMAR	Burnt Mountain	38.24	343	P	P	20 46 33.1	+0.4
COLD	Coldfoot	38.86	346	P	P	20 46 37.7	-0.2
COLD				IAmb	IAmb	20 46 45.2	
	comp=Z,11nm,1.4s						
YKA	Yellowknife Ar	38.99	321	P	P	20 46 38.8	-0.2
	comp=Z,0.8nm,0.7s,baz=11,slow=7.9,SNR=6.4						
YKA				PcP	PcP	20 48 49.3	+0.4
	comp=Z,0.7nm,0.8s,baz=22,slow=2.9,SNR=4.3						
YKA				LR	LR	21 02 58.6	
	comp=Z,201nm,18.3s,baz=0.0,slow=37						
YKA	Yellowknife Ar	38.99	321	P	P	20 46 39.4	+0.5
YAK	Yakutsk	39.42	39	⇑*e*P	P	20 46 42.1	-0.5
YAK				pmax	pmax		
	comp=Z,15nm,2.2s						
PRP	Porcupine Dome	40.20	343	P	P	20 46 50.4	+1.2
IMAR	Indian Mountai	40.32	348	P	P	20 46 50.1	0.0
ILAR	Eielson Array	41.04	344	P	P	20 46 57.2	+1.2
	comp=Z,2.1nm,0.9s,baz=3.7,slow=7.3,SNR=20						
ILAR	Eielson Array	41.04	344	P	P	20 46 56.5	+0.5
MK31	Makanchi Array	41.60	87	P	P	20 47 00.3	-0.5
MK31				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MK31	Makanchi Array	41.60	87	P	P	20 47 00.3	-0.5
MKAR	Makanchi Array	41.60	87	P	P	20 47 02.8	+2.0
	comp=Z,1.7nm,1.1s,baz=334,slow=9.6,SNR=2.8						
MKAR				LR	LR	21 08 45.9	
	comp=Z,61nm,18.1s,baz=335,slow=42						
MKAR	Makanchi Array	41.60	87	P	P	20 47 00.7	-0.1
KKAR	Karatay Array	41.60	101	P	P	20 47 02.2	+1.3
KKAR	Karatay Array	41.60	101	P	P	20 47 02.2	+1.3
DOT	Dot Lake	41.90	341	P	P	20 47 04.3	+1.1
DOT				IAmb	IAmb	20 47 12.6	
	comp=Z,7.7nm,1.1s						
BCAR	Beaver Creek A	42.26	340	P	P	20 47 07.2	+1.2
DHY	Denali Highway	42.76	343	P	P	20 47 10.9	+0.6
DHY				IAmb	IAmb	20 47 27.7	
	comp=Z,14nm,1.3s						
CAST	Castle Rocks	42.76	347	P	P	20 47 10.7	+0.5
CAST				IAmb	IAmb	20 47 17.5	
	comp=Z,17nm,1.4s						
GEYT	Alibeck	43.06	117	LR	LR	21 07 12.8	
	comp=Z,159nm,19.7s,baz=25,slow=39						
TLY	Talaya	43.08	65	LR	LR	21 08 01.4	
	comp=Z,33nm,18.6s,baz=358,slow=40						
TRQ	Mont Tremblant	44.20	280	P	P	20 47 22.7	+0.7
BMRM	Bremner River	44.59	341	P	P	20 47 24.3	-0.6
WMQ	Urumqi	45.87	84	*e*P	P	20 47 37.4	+2.2
WMQ				pP	pwP	20 47 41.3	-0.6
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.1s						
ULM	Lac du Bonnet	46.24	300	LR	LR	21 05 59.7	
	comp=Z,186nm,19.6s,baz=56,slow=35						
KSH	Kashi	46.48	97	P	P	20 47 45.3	+5.2
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ZEA	Zeya	46.71	45	*e*P	P	20 47 43.0	+1.4
SONM	Songino Array	47.32	65	P	P	20 47 47.7	+1.0
	comp=Z,2.6nm,1.1s,baz=325,slow=8.7,SNR=6.1						
SONM				PcP	PcP	20 49 18.4	+1.1
	comp=Z,0.6nm,0.8s,baz=350,slow=4.8,SNR=3.4						
SONM	Songino Array	47.32	65	P	P	20 47 47.6	+0.9
SONM				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	Songino Array	47.32	65	P	P	20 47 47.5	+0.9
SONM				IAmb	IAmb	20 47 54.3	
	comp=Z,3.0nm,1.1s						
EDM	Edmonton	47.42	315	P	P	20 47 47.0	-0.3
EDM				pmax	pmax		
	comp=Z,16nm,1.3s						
EDM	Edmonton	47.42	315	P	P	20 47 47.0	-0.3
ULN	Ulaanbaatar	47.47	64	⇑*i*P	P	20 47 49.6	+1.8
ULN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ULN	Ulaanbaatar	47.47	64	P	P	20 47 49.6	+1.8
ULN				IAmb	IAmb	20 47 55.7	
	comp=Z,5.9nm,1.1s						
ECSD	EROS Data Cent	52.49	298	P	P	20 48 25.5	-0.3
ECSD				IAmb	IAmb	20 48 37.8	
	comp=Z,8.6nm,1.0s						
NEW	Newport	52.89	316	LR	LR	21 11 20.0	
	comp=Z,228nm,18.6s,baz=50,slow=36						
R49A	Shelbyville	54.52	285	P	P	20 48 40.5	-0.2
HHC	Hu-ho-hao-te	55.17	64	*e*P	P	20 48 46.1	+0.5
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,7.6s						
CCM	Cathedral Cave	56.40	290	P	P	20 48 53.8	-0.5
CCM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CCM	Cathedral Cave	56.40	290	P	P	20 48 53.8	-0.5
CCM				IAmb	IAmb	20 48 59.9	
	comp=Z,5.6nm,0.9s						
PDAR	Pinedale Array	56.52	308	P	P	20 48 55.9	+0.5
	comp=Z,0.8nm,0.9s,baz=4.6,slow=7.4,SNR=4.0						
PDAR				LR	LR	21 12 46.5	
	comp=Z,109nm,18.1s,baz=43,slow=36						
MGMO	Mountain Grove	57.52	291	P	P	20 49 02.8	+0.6
MGMO				IAmb	IAmb	20 49 13.2	
	comp=Z,7.1nm,0.9s						
LZH	Lanzhou	57.59	72	*e*P	P	20 49 05.3	+2.4
LZH				pP	sP	20 49 08.0	+0.6
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,12nm,1.2s						
MOD	Modoc Plateau	59.62	317	P	P	20 49 16.1	-0.9
ELK	Elko	59.70	312	LR	LR	21 16 03.3	
	comp=Z,86nm,19.3s,baz=16,slow=37						
LSA	Lhasa	60.01	87	P	P	20 49 18.5	-1.7
LSA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LSA	Lhasa	60.01	87	P	P	20 49 18.5	-1.7
LSA				IAmb	IAmb	20 49 34.2	
	comp=Z,3.4nm,1.0s						
YBH	Yreka Blue Hor	60.25	319	LR	LR	21 14 54.2	
	comp=Z,154nm,18.6s,baz=8.0,slow=36						
TORD	Torodi Ar. Bea	60.32	187	P	P	20 49 20.5	-1.3
	comp=Z,2.2nm,0.9s,baz=352,slow=7.2,SNR=13						
TORD	Torodi Ar. Bea	60.32	187	P	P	20 49 22.2	+0.3
TORD				IAmb	IAmb	20 49 24.5	
	comp=Z,4.7nm,1.1s						
XAN	Xi'an	60.89	69	P	P	20 49 27.3	+1.7
XAN				sP	pwP	20 49 37.3	+4.7
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KSRS	Korea Array	62.34	51	LR	LR	21 19 47.6	
	comp=Z,34nm,18.1s,baz=5.0,slow=39						
NVAR	Mina Array Bea	62.57	314	P	P	20 49 37.9	+0.8
	comp=Z,0.4nm,0.4s,baz=39,slow=5.8,SNR=1.5						
NVAR				LR	LR	21 16 33.6	
	comp=Z,118nm,18.1s,baz=60,slow=36						
ANMO	Albuquerque	63.24	303	LR	LR	21 17 22.7	
	comp=Z,118nm,18.1s,baz=26,slow=36						
NJ2	Nanjing	65.36	60	*e*P	P	20 49 55.3	+0.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MJAR	Matsushiro Arr	65.36	42	LR	LR	21 24 35.8	
	comp=Z,13nm,18.2s,baz=95,slow=42						
DBIC	Dimbokro	67.08	193	LR	LR	21 23 48.6	
	comp=Z,47nm,18.0s,baz=322,slow=40						
TXAR	Lajitas Array	67.91	299	P	P	20 50 12.2	+0.5
	comp=Z,0.7nm,1.0s,baz=53,slow=3.5,SNR=2.3						
TXAR				LR	LR	21 19 28.9	
	comp=Z,74nm,20.1s,baz=0.0,slow=36						
CHTO	Chiang Mai	72.53	83	P	P	20 50 40.2	+0.2
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CHTO	Chiang Mai	72.53	83	P	P	20 50 40.2	+0.2
CHTO				IAmb	IAmb	20 50 51.8	
	comp=Z,7.0nm,1.1s						
CMAR	Chiang Mai Arr	72.87	83	P	P	20 50 42.8	+0.8
	comp=Z,1.6nm,0.9s,baz=325,slow=7.6,SNR=6.6						
CMAR				LR	LR	21 27 09.9	
	comp=Z,12nm,20.8s,baz=170,slow=39						
CMAR	Chiang Mai Arr	72.87	83	*i* P	P	20 50 45.5	+3.5
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMIG	Matias Romero	77.25	287	LR	LR	21 25 21.1	
	comp=Z,22nm,21.8s,baz=22,slow=36						
ASAR	Alice Springs	122.59	61	PKP	PKPdf	20 58 07.6	-0.7
	comp=Z,0.7nm,0.6s,baz=356,slow=1.6,SNR=11						
VNA1	Neumayer--Stat	144.17	189	PKPdf	PKPdf	20 58 46.2	-0.7
	baz=73,slow=7.4						
VNA3	Neumayer Olymp	144.83	190	PKPbc	PKPab	20 58 47.1	-0.1
	baz=73,slow=7.4						
SNAA	Sanae	144.99	186	PKPbc	PKPdf	20 58 48.7	+0.2
	baz=73,slow=7.4						
MAW	Mawson	145.29	146	PKPbc	PKPab	20 58 50.2	+1.3
	comp=Z,5.9nm,1.0s,baz=324,slow=9.4,SNR=4.3						

IDC 21 20:43:23.2±52.0**,17°.08S**×**176°.42W,h562**^{km}±57^{km}**, mb3.1**/3**,mb1 3.3**/4**,mb1mx2.6**/39**,mbtmp4.1**/4**,Error ellipse: s-maj=853.4km s-min=134.9km az=78.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.32	262	P	P	20 44 56.5	0.0
	1.8nm,0.3s,baz=120,slow=14,SNR=8.8						
STKA	Stephens Creek	40.69	241	P	P	20 50 15.6	+0.1
	2.0nm,0.8s,baz=90,slow=14,SNR=0.8						
WRA	Warramunga Arr	46.65	258	P	P	20 51 01.3	-0.6
	0.5nm,0.5s,baz=96,slow=7.0,SNR=17						
ASAR	Alice Springs	46.84	253	P	P	20 51 03.5	+0.1
	5.1nm,0.5s,baz=89,slow=8.2,SNR=105						

MEX 21 20:49:09.9±0.7**,19°.25N**×**103°.91W,h15**^{km}±2^{km}**,MD3.0, Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R15V		0.10	221	*e*P	Pg	20 49 12.1	-1.2
R15V				*e*S	Sg	20 49 15.1	-0.4
R15V		0.10	221	*e*P	Pg	20 49 12.1	-1.2
R15V				*i* S	Sg	20 49 15.2	-0.3
COIG	Colima	0.22	108	*e*P	Pg	20 49 13.8	-1.2
COIG				*i* S	Sg	20 49 18.1	-0.2
COIG	Colima	0.22	108	*e*P	Pg	20 49 13.7	-1.3
COIG				*i* S	Sg	20 49 18.1	-0.2
CDAR	Ciudad de Arme	0.32	197	*e*P	Pg	20 49 15.8	-0.8
CDAR				*i* S	Sg	20 49 20.5	-0.6

JMA ***21*** *20:52:32.1±0.2,37°.60N×144°.42E,h45*^{km}*,M3.7*

IDC ***21*** *20:52:34.2±2.3,36°.41N×144°.27E,h0*^{km}*,mb3.8/3, mb1 4.0/4,mb1mx3.2/39,mbtmp3.7/4,ML2.5/1,Error ellipse: s-maj=58.6km s-min=27.4km az=52.0*

ISC 21 20:52:30.6±1.4**,37°.62N**±0°.07×**144°.64E**±0°.09**,h35**^{km}**,n17,** σ**1**^{s}**.47**/23**,mb3.9**/3**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.60	286	P	Pn	20 53 10.7	+0.5
JIO	Ouri	2.73	289	P	Pn	20 53 12.8	+0.8
JIO				*e*S	Sn	20 53 42.8	-0.9
OFUJ	Ofunato	2.76	303	P	Pn	20 53 13.1	+0.8
OFUJ				*e*S	Sn	20 53 44.1	-0.3
JKMT	Kesennumamotoy	2.77	297	P	Pn	20 53 13.1	+0.7
JMK	Ichinoseki	3.00	297	P	Pn	20 53 16.8	+1.1
JOM	Ohasama	3.21	306	P	Pn	20 53 20.1	+1.5
JFT	Otama	3.42	270	P	Pn	20 53 22.8	+1.3
JFT				*e*S	Sn	20 54 00.0	-0.9
JYK	Kaneyama	3.61	292	P	Pn	20 53 25.8	+1.7
JRY	Ryogami san	4.88	253	P	Pn	20 53 41.1	-0.4
JRY				*e*S	Sn	20 54 32.8	-3.9
JCH	Churui	5.09	349	P	Pn	20 53 45.4	+1.1
JCH				*e*S	Sn	20 54 40.7	-1.1
MJAR	Matsushiro Arr	5.25	260	Pn	Pn	20 53 48.1	+1.4
	0.2nm,0.3s,baz=90,slow=15,SNR=7.0						
MJAR				Sn	Sn	20 54 45.8	-0.2
	0.1nm,0.3s,baz=118,slow=12,SNR=4.0						
NEM2	Nemuro 2	5.80	8	P	Pn	20 53 53.4	-0.8
JOSM	Okushiri--Mats	5.97	320	P	Pn	20 53 58.6	+2.1
JTKR	Abashiri--Toko	6.37	355	P	Pn	20 54 02.9	+0.9
JTKR				*e*S	Sn	20 55 11.0	-2.4
KURBB	Kurchatov Arra	47.67	308	P	P	21 01 16.2	+13
	0.5nm,0.5s,baz=80,slow=7.8,SNR=7.7						
WRA	Warramunga Arr	58.07	191	P	P	21 02 20.3	0.0
	1.5nm,0.7s,baz=12,slow=6.0,SNR=13						
ASAR	Alice Springs	61.79	191	P	P	21 02 46.4	+0.5
	0.5nm,0.5s,baz=6.5,slow=6.9,SNR=6.9						

NNC 21 21:32:48.1±8.5**,36°.93N**×**70°.46E,h0**^{km}**,mb3.8,mpv3.4, 4C-2D,Error ellipse: s-maj=66.1km s-min=56.7km az=168.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	Karatay Array	6.16	0	⇓P	Pn	21 34 21.5	+1.1
	0.7nm,0.3s,baz=170,slow=12						
KK02				⇑S	Sn	21 35 31.7	+0.1
	3.0nm,0.6s,baz=181,slow=25						
AAK	Ala-Archa	6.49	27	⇓P	Pn	21 34 24.8	-0.2
	0.9nm,0.4s						
AAK				⇑S	Sn	21 35 40.8	+0.9
	1.2nm,0.5s						
TKM2	Tokmak 2	7.17	32	⇑P	Pn	21 34 33.0	-1.4
	3.0nm,0.5s						
TKM2				⇑S	Sn	21 35 59.9	+3.3
	1.0nm,0.9s						

SJA ***21*** *21:57:59.8±0.7,29°.96S×72°.32W,h13*^{km}*±3*^{km}*,ML4.1, MW4.3*

GUC ***21*** *21:58:05.1±0.8,30°.44S×72°.00W,h31*^{km}*±3*^{km}*,ML4.1*

IDC ***21*** *21:58:05.9±1.4,30°.75S×70°.99W,h0*^{km}*,mb3.6/2, mb1 3.9/5,mb1mx3.8/20,mbtmp3.7/5,ML3.7/3,MS2.9/1, Ms1 2.9/1,ms1mx2.7/17,Error ellipse: s-maj=52.4km s-min=33.7km az=90.0*

ISC 21 21:58:04.1±1.0**,30°.42S**±0°.03×**72°.07W**±0°.06**,h10**^{km}**,n38,** σ**1**^{s}**.60**/49**,3C-4D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.45	125	⇓*i*P	Pb	21 58 14.8	+0.6
CO06				*i* S	Sb	21 58 20.8	-0.2
CO06				IAML		21 58 21.9	
	comp=E,13µm,0.3s						
CO05	La Serena	0.87	56	⇓*i*P	Pb	21 58 21.4	+0.1
CO05				*i* S	Sg	21 58 29.4	-2.9
CO05				IAML		21 58 35.6	
	comp=N,10µm,0.4s						
GO04	Tololo Observa	1.12	78	⇓*i*P	Pg	21 58 25.5	-0.2
GO04	Tololo Observa	1.12	78	*e*P	Pg	21 58 25.3	-0.4
GO04				*e*S	Sn	21 58 43.7	+2.0
CO03	El Pedregal	1.26	110	⇓*i*P	Pn	21 58 27.6	-0.3
CO03				*i* S	Sn	21 58 44.7	-0.3
CO03				IAML		21 58 47.8	
	comp=E,4µm,0.3s						
LCO	Las Campanas	1.84	41	⇑*i*P	Pn	21 58 36.4	+0.5
LCO				*e*S	Sg	21 59 01.9	-1.3
VA06	Catapilco	2.24	163	⇑*i*P	Pn	21 58 42.0	+0.8
VA06				*e*S	Sn	21 59 08.4	-0.5
VA06				IAML		21 59 20.4	
	comp=N,2µm,0.4s						
AROD	Rodeo	2.26	84	*e*P	Pn	21 58 43.2	+1.4
AROD				*e*S	Sg	21 59 15.1	-1.5
AC04	Llanos de Chal	2.37	22	*e*P	Pn	21 58 42.9	-0.1
ACCO	Cerro Coronel	2.60	95	*e*P	Pb	21 58 48.9	-2.1
ACCO				IAML		21 59 33.3	
	comp=Z,547nm,0.5s						
VA03	San Esteban	2.67	151	*e*P	Pn	21 58 49.1	+1.8
VA03				*e*S	Sn	21 59 21.9	+2.1
VA03				IAML		21 59 30.5	
	comp=N,1µm,0.5s						
ROCH	El Roble	2.70	161	⇑*i*P	Pn	21 58 48.9	+1.1
ROCH				*e*S	Sn	21 59 21.2	+0.5
ROCH				IAML		21 59 39.0	
	comp=E,1µm,0.5s						
ROC1	El Roble	2.71	161	*e*P	Pb	21 58 52.6	-0.1
RTLS	Leoncito	2.75	121	*e*P	Pb	21 58 53.2	-0.3
RTLS				IAML		21 59 49.8	
	comp=Z,367nm,0.6s						
AUSP	Uspallata	2.92	129	*e*P	Pb	21 58 55.6	-0.8
AUSP				*e*S	Sg	21 59 36.7	-1.2
MT02	Curacav	2.94	165	*e*P	Pn	21 58 51.9	+1.0
MT02				*e*S	Sn	21 59 28.1	+1.8
MT02				IAML		21 59 40.9	
	comp=N,278nm,0.4s						
PEL	Peldehue	2.96	157	*e*P	Pn	21 58 51.9	+0.6
PEL				*e*S	Sn	21 59 28.2	+1.3
PEL				IAML		21 59 40.2	
	comp=E,487nm,0.3s						
MT05	Renca	3.18	159	*e*P	Pn	21 58 55.7	+1.5
MT05				*e*S	Sn	21 59 33.0	+0.8
MT05				IAML		21 59 52.5	
	comp=E,933nm,0.4s						
VA05	Santo Domingo	3.25	173	*e*P	Pn	21 58 56.1	+0.9
VA05				*e*S	Sn	21 59 32.2	-1.8
VA05				IAML		21 59 58.9	
	comp=N,440nm,0.5s						
RTCV	Cerro Valdivia	3.35	116	*e*P	Pb	21 59 00.8	-2.8
RTCV				IAML		22 00 00.3	
	comp=Z,110nm,1.2s						
MT09	Talagante	3.47	165	*e*P	Pn	21 58 59.9	+1.6
MT09				*e*S	Sn	21 59 39.9	+0.2
MT09				IAML		22 00 02.6	
	comp=E,341nm,0.6s						
ARCO	CERRO ARCO	3.60	133	*e*P	Pb	21 59 05.4	-2.6
ARCO				*e*S	Sb	21 59 54.2	+2.3
ARCO				IAML		22 00 12.2	
	comp=Z,352nm,0.7s						
AAGR	Agrelo	3.83	135	*e*P	Pb	21 59 08.6	-3.3
AAGR				*e*S	Sb	21 59 59.9	+1.4
AAGR				IAML		22 00 10.0	
	comp=Z,270nm,0.5s						
ACLC	CERRO LA CRUZ	4.55	79	*e*P	Pn	21 59 13.7	+0.5
ACLC				*e*S	Sn	22 00 08.9	+2.7
ACLC				IAML		22 00 28.6	

	comp=Z,161nm,0.4s						
APLL	PUNTA DE LOS L	4.79	91	eP	Pn	21 59 19.1	+2.8
APLL				IAML		22 00 48.0	
	comp=Z,127nm,0.6s						
H03N1	Juan Fernandez	6.55	241	T	T	22 06 46.2	
	baz=70,slow=72,SNR=1174						
H03N2	Juan Fernandez	6.57	241	T	T	22 06 46.0	
	baz=70,slow=72,SNR=764						
H03N3	Juan Fernandez	6.57	241	T	T	22 06 47.6	
	baz=70,slow=72,SNR=767						
LVC	Limon Verde	8.27	21	Pn	Pn	22 00 03.0	-1.5
	comp=Z,0.4nm,0.3s,baz=174,slow=5.4,SNR=1.7						
LVC				LR	LR	22 03 08.3	
	comp=Z,84nm,20.9s,baz=198,slow=36						
PLCA	Paso Flores	10.37	174	Pn	Pn	22 00 30.7	-2.2
	comp=Z,0.1nm,0.3s,baz=342,slow=16,SNR=1.5						
LPAZ	La Paz	14.52	15	Pn	Pn	22 01 33.1	+2.9
	comp=Z,0.1nm,0.3s,baz=190,slow=6.1,SNR=3.3						
SIV	San Ignacio	17.54	37	P	Pn	22 02 09.3	+0.4
	comp=Z,0.6nm,0.3s,baz=229,slow=12,SNR=8.2						
TXAR	Lajitas Array	66.61	330	P	P	22 09 04.0	+9.1
	comp=Z,0.3nm,0.6s,baz=158,slow=7.8,SNR=4.8						
TORD	Torodi Ar. Bea	83.02	70	P	P	22 10 30.6	+0.5
	comp=Z,0.8nm,0.9s,baz=251,slow=5.7,SNR=3.8						
H11S2	WAKE ISLAND Hy	125.72	272	T	T	00 35 51.8	
	baz=114,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	125.73	272	T	T	00 35 48.0	
	baz=114,slow=75,SNR=54						
H11S3	WAKE ISLAND Hy	125.74	272	T	T	00 35 49.2	
	baz=114,slow=75,SNR=26						
ZALV	Zalesovo Beam	151.16	29	PKPbc	PKiKP	22 17 58.6	+1.0
	comp=Z,2.1nm,0.6s,baz=304,slow=3.9,SNR=13						

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*IDC **21** 21:59:35.4±0.8, 19°.00N×121°.16E, h0^{km}, mb3.6/8, mb1 3.9/10, mb1mx3.7/38, mbtmp3.7/10, ML3.7/2, MS3.1/4, Ms1 3.2/4, ms1mx2.7/47, Error ellipse: s-maj=30.6km s-min=18.2km az=81.0*

*MAN **21** 21:59:42.6, 19°.15N×121°.03E, h35^{km}, mb4.3, ML3.2, MS2.9*

ISC 21 21:59:41.3±0.7**, 19°.03N**±0°.09×**121°.2E**±0°.1**, h39^{km}, n16, σ1ˢ.22**/14**, mb3.5**/8**, MS3.0**/3**, 1C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	1.30	212	⇓eP	Pn	22 00 05.0	+2.0
SIPP				eS	Sn	22 00 26.2	+7.2
BBP	Basco	1.58	28	⇓eP	Pn	22 00 07.8	+0.9
BBP				eS	Sn	22 00 27.2	+1.1
PCPH	Palayan	3.45	181	⇑eP	Pn	22 00 37.1	+4.5
LQP	Lukban	4.91	176	⇓eP	Pn	22 01 09.2	+16
JOW	Kunigami	10.15	39	Pn	Pn	22 02 04.6	+0.1
	1.1nm,0.3s,baz=152,slow=19,SNR=7.0						
KSRS	Korea Array	19.28	16	P	P	22 04 03.0	+0.3
	0.3nm,0.3s,baz=198,slow=11,SNR=4.1						
KSRS				LR	LR	22 10 45.8	
	comp=Z,23nm,19.2s,baz=144,slow=35						
CMAR	Chiang Mai Arr	21.06	272	P	P	22 04 20.8	-1.4
	0.5nm,0.3s,baz=75,slow=9.0,SNR=4.3						
CMAR				LR	LR	22 13 03.8	
	comp=Z,40nm,18.1s,baz=80,slow=38						
ASAJ	Asahikawa	30.78	31	LR	LR	22 17 50.0	
	comp=Z,32nm,19.0s,baz=235,slow=36						
SONM	Songino Array	31.15	341	P	P	22 05 55.7	-0.8
	0.9nm,1.1s,baz=158,slow=8.9,SNR=2.2						
WRA	Warramunga Arr	40.83	161	P	P	22 07 18.1	-1.3
	0.6nm,0.6s,baz=342,slow=8.8,SNR=2.7						
WRA				PcP	PcP	22 09 21.0	+1.1
	0.8nm,1.0s,baz=338,slow=2.6,SNR=4.6						
MKAR	Makanchi Array	42.14	320	P	P	22 07 30.4	+0.4
	0.4nm,0.8s,baz=136,slow=5.4,SNR=2.6						
ASAR	Alice Springs	44.22	163	P	P	22 07 46.1	-0.8
	0.7nm,0.6s,baz=343,slow=6.7,SNR=9.4						
STKA	Stephens Creek	54.28	159	P	P	22 09 03.4	-0.2
	1.4nm,0.6s,baz=319,slow=11,SNR=3.2						
NRIK	Noril'sk	54.36	346	LR	LR	22 36 36.1	
	comp=Z,49nm,18.1s,baz=191,slow=41						
ILAR	Eielson Array	73.79	26	P	P	22 11 09.6	-1.8
	0.5nm,0.9s,baz=276,slow=5.6,SNR=5.3						
YKA	Yellowknife Ar	87.70	23	P	P	22 12 26.4	+0.7
	0.8nm,0.7s,baz=309,slow=4.8,SNR=10						

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*IDC **21** 22:09:09.0±0.6, 7°.70S×129°.40E, h178^{km}±7^{km}, mb3.3/1, mb1 3.5/5, mb1mx2.9/40, mbtmp4.0/5, Error ellipse: s-maj=6.0km s-min=1.8km az=34.0*

ISC 21 22:09:10.7±1.6**, 7°.8S**±0°.1×**129°.4E**±0°.1**, h200^{km}, n5, σ1ˢ.48**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.14	247	P	Pn	22 10 39.8	0.0
	13nm,0.3s,baz=99,slow=3.8,SNR=13						
BATI				S	Sn	22 11 49.5	-0.8
	20nm,0.3s,baz=338,slow=22,SNR=20						
FITZ	Fitzroy Crossi	10.85	199	P	Pn	22 11 41.3	+0.4
	1.1nm,0.3s,baz=20,slow=9.4,SNR=42						
FITZ				S	Sn	22 13 42.5	+0.5
	baz=180,slow=18						
WRA	Warramunga Arr	12.96	159	P	Pn	22 12 08.1	+0.3
	0.7nm,0.3s,baz=341,slow=15,SNR=36						
WRA				S	S	22 14 29.8	-2.7
	2.3nm,0.3s,baz=340,slow=20,SNR=15						
ASAR	Alice Springs	16.34	165	P	Pn	22 12 51.2	+2.1
	0.2nm,0.3s,baz=347,slow=9.6,SNR=12						
ASAR				S	Sn	22 15 53.6	+0.7
	0.6nm,0.3s,baz=326,slow=20,SNR=6.9						
MKAR	Makanchi Array	68.59	327	P	P	22 19 51.8	-0.1
	0.4nm,0.3s,baz=113,slow=8.8,SNR=16						

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*ROM **21** 22:10:51.7±0.2, 44°.066N±0°.010×12°.71E±0°.01, h16^{km}±1^{km}, ML2.2/21, Error ellipse: s-maj=1.4km s-min=0.1km az=230.0*

*VIE **21** 22:10:56.2±1.0, 44°.21N×12°.76E, h10^{km}, mb2.5/2, ml2.2/6, Error ellipse: s-maj=10.3km s-min=4.8km az=148.0 40 km NE of San Marino*

ISC 21 22:10:52.9±0.8**, 44°.01N**±0°.03×**12°.70E**±0°.02**, h15^{km}**±5^{km}**, n44, σ0ˢ.92**/75**, 1C-2D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PESA	Pesaro	0.12	122	⇑P	Pg	22 10 56.2	-0.3
PESA				S	Sg	22 10 59.8	+0.9
PESA				AML	AML		
	comp=N,3185μm,1.3s						
PESA				AML	AML		
	comp=E,4790μm,0.3s						
RSM	Repubblica di	0.19	247	⇓P	Pg	22 10 56.8	-0.7
RSM				S	Sg	22 11 01.2	+0.6
RSM				AML	AML		
	comp=N,530μm,1.2s						
RSM				AML	AML		
	comp=N,530μm,1.2s						
RSM				AML	AML		
	comp=E,653μm,0.6s						
BLLA	Bellaria	0.21	310	P	Pg	22 10 57.0	-0.8
BLLA				S	Sg	22 11 01.0	0.0
BLLA				AML	AML		
	comp=E,1906μm,1.5s						
BLLA				AML	AML		
	comp=N,1380μm,0.4s						
FSSB	Fossombrone	0.32	169	⇓P	Pb	22 10 59.3	-1.1
FSSB				S	Sb	22 11 05.6	+0.3
FSSB				AML	AML		
	comp=E,875μm,0.2s						
FSSB				AML	AML		
	comp=N,989μm,0.8s						
FSSB				AML	AML		
	comp=N,988μm,0.8s						
FSSB				AML	AML		
	comp=E,876μm,0.2s						
CPGN	Carpegna, Ital	0.34	233	P	Pb	22 11 00.0	-0.7
CPGN				AML	AML		
	comp=N,310μm,1.4s						
CPGN				AML	AML		
	comp=E,374μm,0.3s						
PE3	Peglio	0.34	205	P	Pb	22 10 59.6	-1.1
PE3				AML	AML		
	comp=E,12μm,0.1s						
PE3				AML	AML		
	comp=N,646μm,0.6s						
MPAG	Monte Paganucc	0.38	173	P	Pb	22 11 00.3	-1.1
MPAG				S	Sb	22 11 07.3	+0.2
MPAG				AML	AML		
	comp=N,402μm,0.5s						
MPAG				AML	AML		
	comp=E,488μm,0.2s						
NARO	Abbazia di Nar	0.41	192	P	Pg	22 11 00.6	-0.5
NARO				S	Sb	22 11 07.9	+0.1
NARO				AML	AML		
	comp=E,286μm,0.4s						
NARO				AML	AML		
	comp=N,222μm,1.0s						
PIEI	Pieia	0.48	194	P	Pg	22 11 02.0	-0.6
PIEI				S	Sb	22 11 10.4	+0.3
PIEI				AML	AML		
	comp=N,459μm,0.3s						
PIEI				AML	AML		
	comp=N,458μm,0.3s						
PIEI				AML	AML		
	comp=E,466μm,0.3s						
PARC	Parchiule	0.49	223	P	Pg	22 11 01.8	-0.8
PARC				S	Sb	22 11 10.8	+0.6
PARC				AML	AML		
	comp=E,220μm,0.2s						
PARC				AML	AML		
	comp=N,238μm,0.2s						
SSFR	Montelago di S	0.57	174	P	Pb	22 11 03.8	-0.9
SSFR				S	Sb	22 11 13.7	+1.0
SSFR				AML	AML		
	comp=N,1040μm,0.2s						
SSFR				AML	AML		
	comp=N,851μm,0.2s						
SSFR				AML	AML		
	comp=E,749μm,0.3s						
SSFR				AML	AML		
	comp=E,756μm,1.2s						
ATPI	Pietralunga -	0.59	201	P	Pg	22 11 04.0	-0.7
ATPI				AML	AML		
	comp=N,132μm,1.2s						
ATPI				AML	AML		
	comp=E,113μm,1.4s						
BADI	Badiali	0.59	214	P	Pg	22 11 04.1	-0.6
BADI				S	Sb	22 11 14.0	+0.7
BADI				AML	AML		
	comp=E,198μm,0.9s						
BADI				AML	AML		
	comp=N,238μm,0.4s						
SFI	Santa Sofia	0.62	261	P	Pg	22 11 03.6	-1.6
SFI				S	Sb	22 11 13.6	-0.5
SFI				AML	AML		
	comp=E,94μm,1.4s						
SFI				AML	AML		
	comp=N,156μm,1.0s						
ATFO	Monte Foce - G	0.65	188	P	Pb	22 11 05.3	-0.6
ATFO				AML	AML		
	comp=E,236μm,0.5s						
ATFO				AML	AML		
	comp=N,258μm,0.7s						
ATVO	AVT- Monte Val	0.66	199	P	Pg	22 11 05.2	-0.7
ATVO				S	Sb	22 11 16.0	+0.9
ATVO				AML	AML		
	comp=N,177μm,0.8s						
ATVO				AML	AML		
	comp=E,200μm,0.7s						
CRE	Caprese Michel	0.66	235	P	Pg	22 11 04.8	-1.2
CRE				AML	AML		
	comp=E,64μm,0.4s						
CRE				AML	AML		
	comp=N,104μm,1.3s						
ASQU	Asqua	0.69	253	P	Pg	22 11 05.0	-1.4
ASQU				AML	AML		
	comp=E,91μm,1.0s						
ASQU				AML	AML		
	comp=N,96μm,0.4s						
LMD	Lutirano	0.72	276	P	Pg	22 11 05.6	-1.4
LMD				AML	AML		
	comp=N,170μm,0.4s						
LMD				AML	AML		
	comp=E,164μm,0.6s						
EL6	Elcito	0.74	156	P	Pb	22 11 07.7	+0.2
SNTG	Esanatoglia	0.77	167	P	Pb	22 11 07.6	-0.5
SNTG				AML	AML		
	comp=E,121μm,0.7s						
SNTG				AML	AML		
	comp=N,154μm,0.5s						
ATCC	AVT- Casa Cast	0.82	183	P	Pb	22 11 08.4	-0.6
ATCC				AML	AML		
	comp=E,314μm,0.3s						
ATCC				AML	AML		
	comp=N,272μm,0.7s						
ASSB	Assisi San Ben	0.96	182	P	Pg	22 11 10.7	-1.0
ASSB				AML	AML		
	comp=E,126μm,0.3s						
ASSB				AML	AML		
	comp=N,190μm,0.3s						
SMA1	SAN MARTINO	1.45	161	P	Pb	22 11 20.1	+0.3
SMRN	Sveta Marina	1.47	45	ePg	Pn	22 11 18.2	-0.6
SMRN				Sg	Sg	22 11 37.3	-2.9
PII	Pisa	1.60	260	P	Pn	22 11 21.2	+0.6
NVLJ	Novalja	1.66	70	ePg	Pn	22 11 21.2	-0.2
NVLJ				Sg	Sn	22 11 42.4	-0.1
DUGI	Dugi Otok	1.71	90	ePn	Pn	22 11 22.0	-0.1
DUGI				Sg	Sn	22 11 44.2	+0.6
RIY	Rijeka	1.83	43	ePn	Pn	22 11 23.7	-0.2
RIY				Sn	Sn	22 11 47.9	+1.1
ZIRJ	Zirje	2.16	98	ePn	Pn	22 11 28.1	-0.2
ZIRJ				Sn	Sn	22 11 55.1	+0.2
MORI	Morici	2.18	93	ePn	Pn	22 11 29.5	+0.9
MORI				Sn	Sn	22 11 56.7	+1.4
UDBI	Udbina	2.27	76	ePn	Pn	22 11 29.9	+0.1
UDBI				Sn	Sn	22 11 58.6	+1.1
PLIT	Plitvice	2.27	66	ePn	Pn	22 11 29.9	0.0
PLIT				Sn	Sn	22 11 58.0	+0.4
OZLJ	Ozalj	2.54	50	ePn	Pn	22 11 34.2	+0.6
OZLJ				Sn	Sn	22 12 05.0	+0.7
KIJV	Kijevo	2.68	89	ePn	Pn	22 11 35.9	+0.4
KIJV				Sn	Sn	22 12 08.7	+1.0
ABTA	Abfaltersbach	2.74	357	i Pn	Pn	22 11 37.7	+1.2
	comp=N,0.1nm,0.1s						
ABTA				eSn	Sn	22 12 09.4	0.0
	comp=N,1.3nm,0.4s						
OBKA	Obir	2.82	27	Pn	Pn	22 11 38.6	+1.0
	comp=N,0.2nm,0.2s						
OBKA				Pg	Pg	22 11 46.4	-0.6
	comp=N,1.4nm,0.3s						
OBKA				eSg	Sg	22 12 24.0	+0.4
	comp=N,5.3nm,0.4s						
HVAR	Hvar	2.85	106	ePn	Pn	22 11 38.3	+0.4
HVAR				Sn	Sn	22 12 12.3	+0.4
MAKA	Makarska	3.22	101	ePn	Pn	22 11 43.7	+0.8
MAKA				Sn	Sn	22 12 20.4	-0.5
RICI	Ricice	3.26	98	ePn	Pn	22 11 44.4	+1.0
RICI				Sn	Sn	22 12 23.1	+1.2
LSTV	Lastovo	3.30	111	ePn	Pn	22 11 44.3	+0.3
LSTV				Sn	Sn	22 12 22.7	-0.2
SQTA	Sankt Quirin	3.38	343	i Pn	Pn	22 11 47.4	+2.1
	comp=N,0.5nm,0.1s						
SQTA				i Sn	Sn	22 12 25.6	+0.5
	comp=N,1.7nm,0.3s						
MOTA	Moosalm	3.52	342	i Pn	Pn	22 11 50.2	+3.0
	comp=N,0.2nm,0.1s						
STON	Ston	3.82	106	ePn	Pn	22 11 50.9	-0.2
STON				Sn	Sn	22 12 35.3	-0.4

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*NIED **21** 22:18:33.2, 36°.76N×140°.59E, h9^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-5.28; $M_{\theta\theta}$1.34; $M_{\phi\phi}$3.94; $M_{r\theta}$0.84; $M_{\theta\phi}$1.93; $M_{\phi r}$2.13; Fault plane solution: $M_0$5.61000×10^{14} NP1: ϕ_s205.00000°, δ57.00000°, λ-93.00000°. NP2: ϕ_s30.00000°, δ33.00000°, λ-86.00000°.*

*JMA **21** 22:18:33.1, 36°.76N×140°.59E, h9^{km}, M3.9*

JMA Felt III J1.

*IDC **21** 22:18:36.4±3.6, 36°.69N×140°.40E, h33^{km}±28^{km}, mb3.7/13, mb1 3.9/17, mb1mx3.6/58, mbtmp3.9/17, ML3.9/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/32, Error ellipse: s-maj=19.6km s-min=16.6km az=101.0*

*NEIC **21** 22:18:36.6±2.2, 36°.70N±0°.04×140°.56E±0°.09, h35^{km}±2^{km}, mb4.2/11, Error ellipse: s-maj=14.0km s-min=3.0km az=116.0*

ISC 21 22:18:32.9±0.5**, 36°.76N**±0°.03×**140°.61E**±0°.06**, h10^{km}, n61, σ0ˢ.83**/63**, mb4.0**/19**, 3C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.15	192	P	Pg	22 18 36.1	-0.1
JHO	Hitachi	0.15	192	⇑P	Pg	22 18 36.5	+0.3
JHO				S	Sg	22 18 38.7	+0.2
JFFD	Fukushimafurud	0.34	354	P	Pg	22 18 39.3	-0.3
JFFD	Fukushimafurud	0.34	354	⇑P	Pg	22 18 39.7	+0.1
JFFD				S	Sg	22 18 44.1	0.0
JSB	Shiboa	0.59	291	⇑P	Pg	22 18 44.7	+0.4
JYT	Yasato	0.62	212		Pg	22 18 44.6	-0.3
JYT					Sg	22 18 52.9	-0.2
JFT	Otama	0.79	344	P	Pg	22 18 48.3	+0.1
JFT				S	Sg	22 18 58.7	+0.2
JMM	Marumori	1.12	8		Pb	22 18 53.2	-1.1
JMM					Sg	22 19 07.7	-1.2
MJAR	Matsushiro Arr	1.94	264	Pn	Pn	22 19 06.0	+0.1
	5.2nm,0.3s,baz=85,slow=14,SNR=72						
MJAR				Lg	Lg	22 19 31.2	
	9.5nm,0.3s,baz=91,slow=30,SNR=4.9						
MJAR	Matsushiro Arr	1.94	264		Pn	22 19 06.4	+0.5
MAJO	Matsushiro	1.94	264	Pn	Pn	22 19 06.3	+0.3
MAT	Matsushiro	1.94	264	P	Pn	22 19 06.3	+0.4
MAT				S	Sb	22 19 32.1	-0.5
MJB9	Matsu-Tunnel	1.94	265	Pn	Pn	22 19 06.4	+0.4
JSD	Sado	2.26	305	Pn	Pn	22 19 10.6	+0.2
JGF	Kuroka	2.87	247	Pn	Pn	22 19 19.8	+1.1
INU	Inuyama	3.23	245	Pn	Pn	22 19 23.9	+0.3
JTM	Tenmabayashi	4.04	5	Pn	Pn	22 19 34.7	-0.1
JWT	Wachi	4.47	252	Pn	Pn	22 19 42.1	+1.5
ERM	Erimo	5.61	20	Pn	Pn	22 19 56.7	+0.4
JMN	Monobe	6.28	243	Pn	Pn	22 20 07.1	+1.5
JHS	Saijyo	6.33	256	Pn	Pn	22 20 07.9	+1.6
ASAJ	Asahikawa	7.51	11	Pn	Pn	22 20 24.2	+1.8
	2.2nm,0.3s,baz=164,slow=14,SNR=4.6						
JKA	Kamikawa-asahi	7.51	11	Pn	Pn	22 20 22.6	+0.2
JCJ	Chichijima	9.72	172	Pn	Pn	22 20 52.3	-0.5
	3.8nm,0.3s,baz=287,slow=18,SNR=1.7						
USRK	Ussuriysk Ar.	9.91	321	Pn	Pn	22 20 56.9	+1.6
	baz=115,slow=11,SNR=4.3						
KSRS	Korea Array	10.16	278	Pn	Pn	22 20 59.3	+0.6
	0.2nm,0.3s,baz=87,slow=12,SNR=1.6						
KSRS				LR	LR	22 24 24.9	
	comp=Z,57nm,20.6s,baz=61,slow=35						
SEY	Seymchan	27.19	12	P	P	22 24 18.5	+2.1
	3.1nm,0.8s,baz=199,slow=5.2,SNR=4.3						
SONM	Songino Array	27.41	305	P	P	22 24 18.4	-0.3
	1.5nm,0.8s,baz=108,slow=12,SNR=8.4						
SONM	Songino Array	27.41	305	P	P	22 24 18.3	-0.3
WMQ	Urumqi	40.39	297	eP	P	22 26 12.4	+1.4
ZAA0	Zalesovo Array	41.62	313	P	P	22 26 21.4	+0.4
ZAA0				IAmb	IAmb	22 26 21.7	
	comp=Z,1.9nm,0.8s						
ZALV	Zalesovo Beam	41.62	313	P	P	22 26 20.1	-0.8
	comp=Z,2.2nm,0.7s,baz=86,slow=7.0,SNR=9.0						
ZALV	Zalesovo Beam	41.62	313		P	22 26 20.4	-0.6
MK31	Makanchi Array	43.72	302	P	P	22 26 38.1	0.0
MK31				IAmb	IAmb	22 26 42.4	
	comp=Z,4.1nm,1.5s						
MKAR	Makanchi Array	43.72	302	P	P	22 26 37.0	-1.1
	comp=Z,0.4nm,0.7s,baz=81,slow=10,SNR=4.6						
MKAR	Makanchi Array	43.72	302	P	P	22 26 37.9	-0.2
MAKZ	Makanchi	43.93	302	P	P	22 26 39.5	-0.4
MAKZ				IAmb	IAmb	22 26 54.7	
	comp=Z,2.5nm,1.1s						
KURK	Kurchatov	45.59	308	P	P	22 26 52.6	-0.4
KURK				IAmb	IAmb	22 26 56.5	
	comp=Z,5.9nm,1.1s						
TARG	Taragay, Kyrgy	47.94	296	P	P	22 27 11.5	-0.5
TARG				IAmb	IAmb	22 27 15.4	
	comp=Z,4.9nm,1.4s						
ILAR	Eielson Array	50.08	32	P	P	22 27 28.1	+0.6
	comp=Z,0.5nm,0.7s,baz=268,slow=5.9,SNR=3.9						
WB0	Warramunga Arr	56.52	187	P	P	22 28 15.2	-0.2
WR0	Warramunga Arr	56.70	187	P	P	22 28 15.0	-1.6
WR0				IAmb	IAmb	22 28 19.5	
	comp=Z,7.4nm,1.1s						
WB2	Warramunga Arr	56.70	187	P	P	22 28 15.9	-0.8
WRA	Warramunga Arr	56.70	187	P	P	22 28 15.9	-0.7
	comp=Z,1.0nm,0.6s,baz=2.2,slow=7.2,SNR=11						
WRA	Warramunga Arr	56.70	187	P	P	22 28 16.0	-0.6
ABKAR	Akbulak array	57.62	310	P	P	22 28 22.0	-1.0
ASAR	Alice Springs	60.43	187	P	P	22 28 42.4	-0.2
	comp=Z,0.5nm,0.6s,baz=13,slow=9.8,SNR=2.7						
YKA	Yellowknife Ar	64.37	30	P	P	22 29 08.7	+0.1
	comp=Z,0.2nm,0.5s,baz=301,slow=5.1,SNR=5.0						
AKASG	Malin Array Be	74.12	322	P	P	22 30 08.1	-1.0
	comp=Z,1.1nm,0.7s,baz=48,slow=6.1,SNR=5.3						
NVAR	Mina Array Bea	75.67	53	P	P	22 30 20.0	+1.3
	comp=Z,1.1nm,0.5s,baz=298,slow=5.8,SNR=6.4						
PDAR	Pinedale Array	78.32	45	P	P	22 30 34.5	+0.9
	comp=Z,0.6nm,0.6s,baz=273,slow=2.5,SNR=7.6						
PDAR	Pinedale Array	78.32	45	P	P	22 30 34.2	+0.7
CLL	Collm	81.01	330	esP	sP	22 31 02.0	+10
GERES	GERESS Array B	82.60	328	P	P	22 30 55.5	-0.8
	comp=Z,0.6nm,0.5s,baz=19,slow=3.3,SNR=1.7						
TXAR	Lajitas Array	90.80	52	P	P	22 31 37.6	+0.8
	comp=Z,0.7nm,0.6s,baz=302,slow=3.3,SNR=9.6						
TXAR	Lajitas Array	90.80	52	P	P	22 31 37.7	+1.0
LPAZ	La Paz	147.39	59	PKPbc	PKPbc	22 38 18.5	+0.4
	comp=Z,1.0nm,0.6s,baz=48,slow=2.4,SNR=4.4						
LPAZ	La Paz	147.39	59		PKPbc	22 38 17.3	-0.8
H03N2	Juan Fernandez	147.64	96	T	T	01 23 12.3	
	baz=291,slow=76,SNR=42						
H03N3	Juan Fernandez	147.65	96	T	T	01 23 13.4	
	baz=291,slow=76,SNR=40						
H03N1	Juan Fernandez	147.66	96	T	T	01 23 13.8	
	baz=291,slow=76,SNR=46						

JMA 21 22:18:32.7, 36°.76N×140°.59E, h9^{km}, Near east coast of eastern Honshu

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KRSC 21 22:20:38.0±1.6**, 49°.84N×156°.75E, h51^{km}**±25^{km}**, ML3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.93	335	eP	Pn	22 20 55.3	+0.5
SKR				eS	Sn	22 21 07.6	+0.4
KDTR	Khodutka, Kamc	2.14	23	eP	Pn	22 21 14.0	+2.7
KDTR				eS	Sn	22 21 40.4	+3.8
ASAK	Asacha	2.65	16	eP	Pn	22 21 21.3	+3.0
RUS	Russkaya	2.82	23	eP	Pn	22 21 23.9	+3.3
RUS				eS	Sn	22 21 57.6	+4.3
UGLR	Uglovaya	3.61	20	eP	Pn	22 21 35.4	+3.9
AVH	Avacha	3.65	19	eP	Pn	22 21 37.4	+5.4
KOK	Koryaka	3.65	18	eP	Pn	22 21 35.9	+3.9
SMAR	Somma	3.66	20	eP	Pn	22 21 35.7	+3.5
SPN	Mys Shipunski	3.85	31	eP	Pn	22 21 38.3	+3.6
SPN				eS	Sn	22 22 22.9	+4.3
MKZ	Mys Kozlova	5.63	31	eP	Pn	22 22 01.6	+2.6

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*IDC **21** 22:21:08.1±1.6, 24°.15S×179°.75W, h451^{km}±13^{km}, mb3.4/4, mb1 3.6/4, mb1mx2.9/29, mbtmp4.3/4, Error ellipse: s-maj=22.6km s-min=12.0km az=166.0*

*NEIC **21** 22:21:15.1±1.4, 24°.9S±0°.1×180°.0W±0°.2, h511^{km}±5^{km}, mb4.0/14, Error ellipse: s-maj=24.9km s-min=16.5km az=60.0*

ISC 21 22:21:14.3±0.9**, 24°.8S**±0°.1×**180°.0W**±0°.1**, h500^{km}, n37, σ0ˢ.98**/37**, mb4.2**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.26	345		P	22 23 02.8	-0.5
MARNC	Mare, Loyalty	11.50	284	P	P	22 23 48.4	+0.8
PINNC	Pines Island,	11.71	278	P	P	22 23 51.7	+1.9
URZ	Urewera	13.64	190	P	P	22 24 09.6	-0.4
BKZ	Black Stump Fm	14.63	191	P	P	22 24 20.0	-0.5
BHW	Baring Head	17.11	193	P	P	22 24 44.8	-1.3
THZ	Tophouse	17.92	197	P	P	22 24 52.9	-0.8
CTAO	Charters Tower	31.49	272	P	P	22 26 55.3	+0.6
STKA	Stephens Creek	34.40	249	P	P	22 27 19.4	+0.2
	1.1nm,0.3s,baz=83,slow=11,SNR=4.3						
STKA	Stephens Creek	34.40	249	P	P	22 27 19.6	+0.4
COEN	Coen	36.27	280	P	P	22 27 33.2	-1.8
COEN				IAmb	IAmb	22 27 59.1	
	comp=Z,6.7nm,0.9s						
BBOO	Buckleboo	39.10	248	P	P	22 27 57.5	-0.4
BBOO				IAmb	IAmb	22 28 02.5	
	comp=Z,7.9nm,1.0s						
AS31	Alice Springs	41.90	262	P	P	22 28 20.0	-0.5

ASAR	**Alice Springs**	**41.90**	**262**	P	**P**	**22 28 20.4**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=97,slow=7.5,SNR=26						
ASAR	**Alice Springs**	**41.90**	**262**	P	**P**	**22 28 20.0**	**-0.6**
WB2	**Warramunga Arr**	**42.34**	**267**	P	**P**	**22 28 23.4**	**-0.7**
WB2				IAmb	IAmb	22 28 24.2	
	comp=Z,7.0nm,0.8s						
WB0	**Warramunga Arr**	**42.35**	**267**	P	**P**	**22 28 23.5**	**-0.7**
WB0				IAmb	IAmb	22 28 24.6	
	comp=Z,7.0nm,0.8s						
WRA	**Warramunga Arr**	**42.36**	**267**	P	**P**	**22 28 23.2**	**-0.9**
	comp=Z,5.6nm,0.5s,baz=103,slow=8.0,SNR=21						
WRA				ScP	**ScP**	**22 33 12.5**	**+3.4**
	comp=Z,0.8nm,1.0s,baz=105,slow=4.5,SNR=4.6						
WRA	**Warramunga Arr**	**42.36**	**267**	P	**P**	**22 28 23.2**	**-0.9**
WRA				IAmb	IAmb	22 28 24.1	
	comp=Z,0.5nm,0.8s						
FORT	**Forrest**	**46.01**	**250**	P	**P**	**22 28 51.4**	**-0.9**
KNRA	**Kununurra**	**48.69**	**271**	P	**P**	**22 29 12.5**	**-0.2**
KNRA				IAmb	IAmb	22 29 22.3	
	comp=Z,15nm,1.1s						
PSA00	**Pilbara Seismi**	**55.01**	**260**	P	**P**	**22 29 57.4**	**-1.0**
PSA00				IAmb	IAmb	22 30 26.5	
	comp=Z,3.0nm,1.1s						
QSPA	**South Pole Qui**	**65.29**	**180**	P	**P**	**22 31 07.3**	**+1.3**
	comp=Z,0.9nm,0.4s,baz=45,slow=2.9,SNR=4.2						
QSPA	**South Pole Qui**	**65.29**	**180**	P	**P**	**22 31 06.3**	**+0.3**
QSPA				IAmb	IAmb	22 31 10.0	
	comp=Z,3.5nm,1.1s						
USRK	**Ussuriysk Ar.**	**81.52**	**327**	P	**P**	**22 32 39.3**	**+0.4**
SNAA	**Sanae**	**83.77**	**179**	P	**P**	**22 32 50.2**	**+0.2**
SNAA	**Sanae**	**83.77**	**179**	P	**P**	**22 32 49.4**	**-0.6**
SNAA				IAmb	IAmb	22 33 14.3	
	comp=Z,1.6nm,1.1s						
VNA3	**Neumayer Olymp**	**83.98**	**177**	P	**P**	**22 32 51.0**	**0.0**
VNA2	**Neumayer--Watz**	**84.40**	**178**	P	**P**	**22 32 53.6**	**+0.5**
	baz=193,slow=3.9						
HFS	**Hagfors**	**143.42**	**349**	PKP	PKPab	22 39 48.1	-0.9
	comp=Z,4.8nm,0.7s,baz=46,slow=4.2,SNR=12						
PABE	**Paberze**	**144.64**	**336**	PKPbc	**PKPdf**	**22 39 53.4**	**+0.3**
BRTR	**Keskin Array B**	**148.11**	**306**	PKPbc	**PKPbc**	**22 40 03.2**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=72,slow=4.7,SNR=2.7						
BRTR	**Keskin Array B**	**148.11**	**306**		**PKPbc**	**22 40 04.1**	**+0.4**
CSS	**Mathiatis**	**149.50**	**297**	PKPbc	**PKPbc**	**22 40 07.1**	**+0.1**
BUR08	**Bucovina Ar. S**	**149.70**	**325**	PKPbc	**PKiKP**	**22 40 08.4**	**+0.4**
BURAR	**Bucovina Array**	**149.71**	**325**	PKPbc	**PKPbc**	**22 40 06.2**	**-1.0**
BORA	**Eskisehir**	**150.38**	**308**	PKPbc	**PKPbc**	**22 40 08.5**	**-0.5**

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*IDC **21** 22:30:33.9±0.8, 67°.13N×23°.87E, h0^{km}, mb1 3.2/4, mb1mx2.8/42, mbtmp3.2/4, ML2.4/4, Error ellipse: s-maj=16.6km s-min=6.2km az=101.0*
*NAO **21** 22:30:34.3±1.2, 67°.16N×23°.88E, h6^{km}±8^{km}, ML2.6*
*BER **21** 22:30:36.7±1.1, 67°.17N×23°.61E, h12^{km}±3^{km}, ML2.1, ML2.7(HEL), Confirmed Earthquake*
*HEL **21** 22:30:36.7±0.0, 67°.17N×23°.56E, h26^{km}, ML2.7, ML2.0(UPP), Confirmed Earthquake*
*UPP **21** 22:30:36.6±0.2, 67°.17N×23°.49E, h26^{km}, ML2.0, Confirmed Earthquake*
ISC 21 22:30:36.1±0.9, **67°.16N**±0°.02×**23°.54E**±0°.02, **h29**^{km}±6^{km}, **n67**, σ**1^{s}.67**/129, **2C-2D**, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAJU	**Pajala**	**0.21**	**232**	⇑P	**Pb**	**22 30 42.3**	**-0.1**
PAJU				S	**Sb**	**22 30 46.5**	**-0.2**
PAJU	**Pajala**	**0.21**	**232**	*e*P	**Pb**	**22 30 42.3**	**-0.1**
PAJU				*e*S	**Sb**	**22 30 46.4**	**-0.2**
PAJU	**Pajala**	**0.21**	**232**	*e*P	**Pb**	**22 30 42.3**	**-0.1**
PAJU				*e*S	**Sb**	**22 30 46.4**	**-0.2**
MASU	**Masugnsbyn**	**0.67**	**298**	⇓P	**Pb**	**22 30 48.9**	**-0.3**
MASU				S	**Sb**	**22 30 58.2**	**0.0**
MASU	**Masugnsbyn**	**0.67**	**298**	⇓*i*P	**Pb**	**22 30 48.9**	**-0.3**
MASU				*i* S	**Sb**	**22 30 58.2**	**0.0**
ERTU	**Ertsjaerv**	**0.81**	**222**	⇑P	**Pb**	**22 30 51.4**	**-0.2**
ERTU				S	**Sb**	**22 31 02.4**	**+0.3**
ERTU	**Ertsjaerv**	**0.81**	**222**	*e*P	**Pb**	**22 30 51.3**	**-0.2**
ERTU				*e*S	**Sb**	**22 31 02.2**	**+0.2**
ERTU	**Ertsjaerv**	**0.81**	**222**	*e*P	**Pb**	**22 30 51.3**	**-0.2**
ERTU				*e*S	**Sb**	**22 31 02.2**	**+0.2**
LANU	**Lannavaara**	**1.08**	**327**	*e*P	**Pn**	**22 30 55.3**	**+0.2**
LANU				*e*S	**Sn**	**22 31 09.6**	**+0.5**
LANU	**Lannavaara**	**1.08**	**327**	*e*P	**Pn**	**22 30 55.3**	**+0.2**
LANU				*e*S	**Sn**	**22 31 09.6**	**+0.5**
RNF	**Rovaniemi**	**1.12**	**118**	*e*P	**Pn**	**22 30 56.2**	**+0.4**
RNF				*e*S	**Sb**	**22 31 11.1**	**+0.1**
RNF				MSG		22 31 13.2	
	comp=Z,152nm,0.2s						
RNF	**Rovaniemi**	**1.12**	**118**	*e*P	**Pn**	**22 30 56.2**	**+0.4**
RNF				*e*S	**Sb**	**22 31 11.1**	**+0.1**
RNF				MSG		22 31 13.2	
	comp=Z,152nm,0.2s						
TOF	**Tornio**	**1.12**	**163**	*e*P	**Pn**	**22 30 56.6**	**+0.8**
TOF				*e*S	**Sn**	**22 31 11.1**	**+0.9**
TOF				MSG		22 31 11.8	
	comp=Z,77nm,0.2s						
TOF	**Tornio**	**1.12**	**163**	*e*P	**Pn**	**22 30 56.6**	**+0.8**
TOF				*e*S	**Sn**	**22 31 11.1**	**+0.9**
TOF				MSG		22 31 11.8	
	comp=Z,77nm,0.2s						
SGF	**Sodankyl**	**1.20**	**75**	*e*P	**Pn**	**22 30 57.3**	**+0.6**
SGF				*e*S	**Sb**	**22 31 12.6**	**-0.5**
SGF	**Sodankyl**	**1.20**	**75**	*e*P	**Pn**	**22 30 57.3**	**+0.6**
SGF				*e*S	**Sb**	**22 31 12.6**	**-0.5**
HEF	**Hetta**	**1.26**	**2**	Pg	**Pn**	**22 30 58.6**	**+0.9**
HEF				Lg	Lg	22 31 15.0	
HEF	**Hetta**	**1.26**	**2**	*e*P	**Pn**	**22 30 58.5**	**+0.9**
HEF				*e*S	**Sb**	**22 31 14.9**	**-0.1**
HEF				MSG		22 31 16.6	
	comp=Z,102nm,0.2s						
HEF	**Hetta**	**1.26**	**2**	*e*P	**Pn**	**22 30 58.5**	**+0.9**
HEF				*e*S	**Sn**	**22 31 14.5**	**+0.9**
HEF				MSG		22 31 16.6	
	comp=Z,102nm,0.2s						
KALU	**Kalix**	**1.30**	**183**	*e*P	**Pn**	**22 30 59.5**	**+1.3**
KALU				*e*S	**Sb**	**22 31 16.6**	**+0.4**
KALU	**Kalix**	**1.30**	**183**	*e*P	**Pn**	**22 30 59.5**	**+1.3**
KALU				*e*S	**Sb**	**22 31 16.6**	**+0.4**
KTK1	**Kautokeino**	**1.87**	**357**	Pn	**Pn**	**22 31 07.5**	**+1.4**
KTK1				Sn	**Sn**	**22 31 30.2**	**+1.6**
KTK1	**Kautokeino**	**1.87**	**357**	*e*P	**Pn**	**22 31 07.1**	**+1.1**
KTK1				*e*S	**Sn**	**22 31 30.2**	**+1.6**
KTK1				IAML		22 31 35.3	
	comp=Z,41nm,0.3s						
KIF	**Kilpisjarvi**	**2.12**	**332**	Pn	**Pn**	**22 31 11.6**	**+2.1**
KIF				Sn	**Sb**	**22 31 38.2**	**-1.5**
KIF	**Kilpisjarvi**	**2.12**	**332**	*e*P	**Pn**	**22 31 11.6**	**+2.1**
KIF				*e*S	**Sb**	**22 31 38.1**	**-1.5**
KIF	**Kilpisjarvi**	**2.12**	**332**	*e*P	**Pn**	**22 31 11.5**	**+2.0**
OUL	**Oulu**	**2.29**	**154**	Pn	**Pn**	**22 31 13.3**	**+1.5**
OUL				Sn	**Sn**	**22 31 39.9**	**+1.0**
OUL	**Oulu**	**2.29**	**154**	*e*P	**Pn**	**22 31 13.2**	**+1.5**
OUL				*e*S	**Sn**	**22 31 39.7**	**+0.7**
OUL				MSN		22 31 41.5	
	comp=Z,12nm,0.2s						
OUL	**Oulu**	**2.29**	**154**	*e*P	**Pn**	**22 31 13.2**	**+1.5**
OUL				*e*S	**Sn**	**22 31 39.7**	**+0.7**
OUL				MSN		22 31 41.5	
	comp=Z,12nm,0.2s						
OBF3	**Siikajoki**	**2.41**	**168**	MSG		22 31 56.0	
	comp=Z,41nm,0.3s						
VRF	**Varrio**	**2.42**	**73**	*e*P	**Pn**	**22 31 14.4**	**+0.8**
VRF				*e*SB	**Sb**	**22 31 47.7**	**-0.3**
VRF				MSN		22 31 50.1	
	comp=Z,15nm,0.1s						
VRF	**Varrio**	**2.42**	**73**	*e*P	**Pn**	**22 31 14.4**	**+0.8**
VRF				*e*SB	**Sb**	**22 31 47.7**	**-0.3**
VRF				MSN		22 31 50.1	
	comp=Z,15nm,0.1s						
ARA0	**ARCESS Array S**	**2.50**	**16**	Pn	**Pn**	**22 31 15.8**	**+1.2**
	baz=193,slow=14						
ARA0				Pg	**Pb**	**22 31 18.6**	**-1.7**
	baz=189,slow=16						
ARA0				Sn	**Sn**	**22 31 44.1**	**-0.1**
	baz=197,slow=28						
ARA0				Lg	Lg	22 31 49.4	
	baz=194,slow=37						
ARA0	**ARCESS Array S**	**2.50**	**16**	Pn	**Pn**	**22 31 15.8**	**+1.2**
	baz=193,slow=14						
ARA0				Sn	**Sn**	**22 31 44.1**	**-0.1**
	baz=197,slow=28						
ARA0				IAML		22 31 54.3	
	comp=Z,25nm,0.4s						
ARCES	**ARCESS Array B**	**2.50**	**16**	Pn	**Pn**	**22 31 16.5**	**+1.8**
	baz=197,slow=14,SNR=43						
ARCES				Pg	**Pb**	**22 31 18.7**	**-1.6**
	baz=193,slow=16,SNR=5.1						
ARCES				Lg	Lg	22 31 49.5	
	baz=196,slow=26,SNR=11						
MSF	**Maaselka**	**2.53**	**117**	*e*P	**Pn**	**22 31 16.5**	**+1.4**
MSF				*e*S	**Sn**	**22 31 45.9**	**+1.0**
MSF	**Maaselka**	**2.53**	**117**	*e*P	**Pn**	**22 31 16.5**	**+1.4**
MSF				*e*S	**Sn**	**22 31 45.9**	**+1.0**
JETT	**Jettan, Norway**	**2.68**	**336**	Pn	**Pn**	**22 31 18.1**	**+0.9**
JETT	**Jettan, Norway**	**2.68**	**336**	*e*P	**Pn**	**22 31 18.3**	**+1.1**
JETT				*e*SB	**Sb**	**22 31 55.1**	**-0.5**
BURU	**Burvik**	**2.73**	**200**	*e*P	**Pn**	**22 31 19.1**	**+1.2**
BURU				*e*S	**Sn**	**22 31 50.9**	**+1.1**
BURU	**Burvik**	**2.73**	**200**	*e*P	**Pn**	**22 31 19.1**	**+1.2**
BURU				*e*S	**Sn**	**22 31 50.9**	**+1.1**
KEV	**Kevo**	**2.91**	**25**	Pn	**Pn**	**22 31 21.7**	**+1.4**
KEV				Sn	**Sn**	**22 31 56.1**	**+1.9**
KEV	**Kevo**	**2.91**	**25**	*e*P	**Pn**	**22 31 21.7**	**+1.4**
KEV				*e*S	**Sn**	**22 31 55.3**	**+1.2**
KEV	**Kevo**	**2.91**	**25**	*e*P	**Pn**	**22 31 21.8**	**+1.6**
KEV				*e*S	**Sn**	**22 31 55.0**	**+0.8**
TRO	**Tromso**	**3.02**	**328**	Pn	**Pn**	**22 31 23.3**	**+1.5**
TRO				Pg	**Pb**	**22 31 30.3**	**+1.3**
TRO				Sn	**Sn**	**22 31 58.5**	**+1.7**
TRO	**Tromso**	**3.02**	**328**	*e*P	**Pn**	**22 31 23.5**	**+1.8**
TRO				*e*S	**Sn**	**22 31 57.8**	**+0.9**
TRO				IAML		22 32 14.0	
	comp=Z,19nm,0.7s						
TRO	**Tromso**	**3.02**	**328**	*e*P	**Pn**	**22 31 23.3**	**+1.5**
TRO				*e*S	**Sn**	**22 31 57.7**	**+0.9**
FAUS	**Fauske**	**3.21**	**278**	*e*P	**Pn**	**22 31 25.7**	**+1.2**
FAUS				*e*S	**Sn**	**22 32 03.0**	**+1.4**
FAUS				IAML		22 32 19.6	
	comp=Z,13nm,0.6s						
STEI	**Steigen**	**3.28**	**288**	*e*P	**Pn**	**22 31 26.2**	**+0.9**
STEI				*e*S	**Sn**	**22 32 03.7**	**+0.4**
STEI				IAML		22 32 20.6	
	comp=Z,7.3nm,0.6s						
STEI	**Steigen**	**3.28**	**288**	*e*P	**Pn**	**22 31 26.5**	**+1.2**
STEI				*e*S	**Sn**	**22 32 04.4**	**+1.2**
HAMF	**Hammerfest**	**3.50**	**1**	*e*P	**Pn**	**22 31 31.2**	**+2.7**
HAMF				*e*S	**Sn**	**22 32 08.6**	**-0.2**
HAMF				IAML		22 32 26.1	
	comp=Z,11nm,0.4s						
APA0	**Apatity Array**	**3.68**	**79**	Pn	**Pn**	**22 31 30.9**	**0.0**
	baz=268,slow=12						
APA0				Sn	**Sn**	**22 32 12.0**	**-1.2**
	baz=269,slow=22						
APA0				Lg	Lg	22 32 27.9	
	baz=277,slow=18						
APA0	**Apatity Array**	**3.68**	**79**	Pn	**Pn**	**22 31 30.9**	**0.0**
	baz=268,slow=12						
APA0				Sn	**Sn**	**22 32 12.0**	**-1.2**
	baz=269,slow=22						
APA0				Sg	**Sb**	**22 32 27.9**	**+3.5**
	baz=277,slow=18						
NBB30	**Finnes**	**3.84**	**272**	*e*P	**Pn**	**22 31 34.0**	**+0.9**
NBB30				IAML		22 32 43.1	
	comp=Z,12nm,0.7s						
LOF	**Lofoten**	**3.94**	**289**	*e*P	**Pn**	**22 31 34.5**	**0.0**
LOF				*e*S	**Sn**	**22 32 19.0**	**-0.6**
LOF				IAML		22 32 43.2	
	comp=Z,7.1nm,0.6s						
KONS	**Konsvik**	**4.17**	**266**	*e*P	**Pn**	**22 31 39.2**	**+1.6**
KONS				*e*S	**Sn**	**22 32 27.0**	**+1.8**
KONS				IAML		22 32 49.2	
	comp=Z,14nm,0.6s						
FIA0	**FINESS Array S**	**5.84**	**168**	Pn	**Pn**	**22 32 02.5**	**+1.9**
	baz=357,slow=14						
FIA0				Sn	**Sn**	**22 33 05.5**	**-0.9**
	baz=354,slow=28						
FIA0				Lg	Lg	22 33 34.8	
	baz=1.5,slow=28						
FIA0	**FINESS Array S**	**5.84**	**168**	Pn	**Pn**	**22 32 02.5**	**+1.9**
	baz=357,slow=14						
FIA0				Sn	**Sn**	**22 33 05.5**	**-0.9**
	baz=354,slow=28						
FINES	**FINESS Array B**	**5.84**	**168**	Pn	**Pn**	**22 32 02.5**	**+1.9**
	comp=Z,0.7nm,0.3s,baz=358,slow=12,SNR=26						
FINES				Sn	**Sn**	**22 33 05.5**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=350,slow=22,SNR=17						
FINES				Lg	Lg	22 33 35.0	
	comp=Z,1.4nm,0.3s,baz=355,slow=25,SNR=9.4						
NB2	**NORSAR Subarra**	**8.16**	**227**	Pn	**Pn**	**22 32 32.1**	**-0.2**
	baz=30,slow=14						
NB2	**NORSAR Subarra**	**8.16**	**227**	Pn	**Pn**	**22 32 32.1**	**-0.2**
	baz=30,slow=14						
NOA	**NORSAR Array B**	**8.16**	**227**	Pn	**Pn**	**22 32 32.1**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=30,slow=12,SNR=1.3						
NOA				Sn	**Sn**	**22 33 57.2**	**-6.2**
	comp=Z,0.0nm,0.3s,baz=144,slow=18,SNR=1.8						
NOA				Lg	Lg	22 34 50.8	
	comp=Z,0.0nm,0.3s,baz=44,slow=26,SNR=2.5						
HFS	**Hagfors**	**8.29**	**216**	Pn	**Pn**	**22 32 33.4**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=24,slow=14,SNR=6.9						
HFS				Sn	**Sn**	**22 33 59.7**	**-6.8**
	comp=Z,0.3nm,0.3s,baz=33,slow=23,SNR=5.9						
HFS				Lg	Lg	22 34 52.6	
	comp=Z,0.5nm,0.3s,baz=32,slow=27,SNR=3.7						
HFS	**Hagfors**	**8.29**	**216**	Pn	**Pn**	**22 32 32.9**	**-1.2**
	baz=28,slow=12						
HFS				Sn	**Sn**	**22 34 00.1**	**-6.4**
	baz=38,slow=22						
HFS				Lg	Lg	22 34 51.9	
	baz=27,slow=28						
HFS	**Hagfors**	**8.29**	**216**	Pn	**Pn**	**22 32 32.9**	**-1.2**
	baz=28,slow=12						
HFS				Sn	**Sn**	**22 34 00.1**	**-6.4**
	baz=38,slow=22						
HFS				Sg	Sb	22 34 51.9	+15
	baz=27,slow=28						
NRA0	**NORESS Array S**	**8.31**	**225**	Pn	**Pn**	**22 32 34.7**	**+0.2**
	baz=30,slow=14						
NRA0				Sn	**Sn**	**22 34 03.7**	**-3.6**
	baz=43,slow=22						
NRA0				Lg	Lg	22 34 57.5	
	baz=28,slow=37						
NRA0	**NORESS Array S**	**8.31**	**225**	Pn	**Pn**	**22 32 34.7**	**+0.2**
	baz=30,slow=14						
NRA0				Sn	**Sn**	**22 34 03.7**	**-3.6**
	baz=43,slow=22						
NRA0				Sg	Sb	22 34 57.5	+20
	baz=28,slow=37						

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*NIED **21** 22:40:57.6, 31°.19N×131°.90E, h28^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.68; $M_{\theta\theta}$0.05; $M_{\phi\phi}$-0.72; $M_{r\theta}$0.43; $M_{\theta\phi}$-0.67; $M_{\phi r}$0.08; Fault plane solution: $M_0$1.04000×10^{15} NP1:ϕ_s58.00000°, δ62.00000°, λ128.00000°. NP2:ϕ_s179.00000°, δ46.00000°, λ41.00000°.*
*JMA **21** 22:40:57.6±0.2, 31°.19N×131°.90E, h28^{km}±2^{km}, M3.5*
*IDC **21** 22:41:04.1±1.0, 31°.02N×129°.67E, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.5/28, mbtmp3.5/5, ML2.4/1, MS3.4/6, Ms1 3.4/6, ms1mx3.0/27, Error ellipse: s-maj=35.3km s-min=7.4km az=79.0*
ISC 21 22:40:59.1±1.8, **31°.21N**±0°.05×**131°.8E**±0°.1, **h29**^{km}, **n22**, σ**0^{s}.91**/19, **mb3.7**/4, **MS3.4**/5, **8C-2D**, **Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNAR	**Kushima--Naru**	**0.54**	**306**	⇓P	**Pb**	**22 41 09.8**	**-0.3**
JNAR				*e*S	**Sn**	**22 41 19.1**	**+0.2**
JNKG	**Nichinankitago**	**0.57**	**323**	⇓P	**Pb**	**22 41 10.2**	**-0.4**
JNKG				*e*S	**Sn**	**22 41 19.1**	**-0.6**
JTSR	**Tashiro 2**	**0.74**	**267**	⇑P	**Pb**	**22 41 13.1**	**-0.3**
JTN	**Tanegashima 3**	**0.88**	**232**	⇑P	**Pb**	**22 41 15.5**	**-0.4**
JTN				*e*S	**Sn**	**22 41 29.0**	**+1.6**
JTZ	**Takazaki**	**0.91**	**320**	⇑P	**Pn**	**22 41 15.3**	**-0.7**
JTSN	**Tsuno**	**1.06**	**347**	⇑P	**Pn**	**22 41 17.4**	**-0.6**
JTSN				S	**Sb**	**22 41 32.4**	**0.0**
JMTN	**Minamitane**	**1.11**	**223**	P	**Pb**	**22 41 18.8**	**-0.9**
JSU	**Suzuyama**	**1.17**	**285**	⇑P	**Pn**	**22 41 19.5**	**-0.1**
JZO	**Okuchi**	**1.37**	**313**	⇑P	**Pn**	**22 41 22.2**	**-0.1**
JYAK	**Yakushimahirau**	**1.46**	**229**	P	**Pn**	**22 41 23.6**	**+0.1**
JKC	**Kuchinoerabu**	**1.55**	**242**	⇑P	**Pn**	**22 41 24.7**	**-0.1**
JIU3	**Izumi3**	**1.57**	**329**	⇑P	**Pn**	**22 41 25.2**	**+0.2**
KSRS	**Korea Array**	**7.00**	**334**	Pn	**Pn**	**22 42 42.4**	**+2.7**
	0.1nm,0.3s,baz=150,slow=14,SNR=5.1						
KSRS				Lg	Lg	22 44 33.4	
	0.4nm,0.3s,baz=158,slow=26,SNR=2.2						
USRK	**Ussuriysk Ar.**	**12.97**	**1**	LR	LR	22 48 55.8	
	comp=Z,91nm,20.5s,baz=189,slow=36						
SONM	**Songino Array**	**25.50**	**318**	P	**P**	**22 46 24.2**	**-0.8**
	2.1nm,0.9s,baz=131,slow=8.6,SNR=10						
SONM				LR	LR	22 57 51.7	
	comp=Z,121nm,18.8s,baz=148,slow=41						
PETK	**Petropavlovsk-**	**28.84**	**33**	LR	LR	22 59 35.6	
	comp=Z,30nm,20.4s,baz=90,slow=37						
ZALV	**Zalesovo Beam**	**40.40**	**318**	LR	LR	23 07 12.2	
	comp=Z,54nm,18.8s,baz=18,slow=40						
TIXI	**Tiksi**	**40.53**	**359**	LR	LR	23 05 06.3	
	comp=Z,47nm,21.1s,baz=202,slow=36						
MKAR	**Makanchi Array**	**40.80**	**307**	P	**P**	**22 48 38.0**	**+0.1**
	0.2nm,0.7s,baz=84,slow=12,SNR=4.4						
WRA	**Warramunga Arr**	**50.92**	**177**	P	P	22 50 05.5	+7.7
	0.7nm,0.8s,baz=336,slow=5.7,SNR=2.0						
ASAR	**Alice Springs**	**54.60**	**178**	P	P	22 50 34.8	+10
	0.9nm,1.0s,baz=6.8,slow=8.6,SNR=4.1						
FINES	**FINESS Array B**	**70.08**	**331**	LR	LR	23 26 46.0	
	comp=Z,102nm,19.6s,baz=240,slow=40						

IDC 21 22:50:33.0±1.9, **7°.89S**×**116°.67E**, **h0**^{km}, **mb3.2**/3, **mb1 3.4**/3, **mb1mx2.9**/36, **mbtmp3.3**/3, **MS2.8**/1, **Ms1 2.8**/1, **ms1mx2.4**/11, **Error ellipse: s-maj=154.2km s-min=11.4km az=50.0**, **Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.89**	**127**	P	P	22 55 17.3	+0.2
	0.3nm,0.6s,baz=302,slow=12,SNR=4.8						
ASAR	**Alice Springs**	**22.78**	**135**	P	P	22 55 37.2	-0.2
	0.2nm,0.5s,baz=319,slow=9.9,SNR=4.9						
ASAR				LR	LR	23 04 40.9	
	comp=Z,25nm,18.6s,baz=196,slow=37						
MKAR	**Makanchi Array**	**62.44**	**334**	P	P	23 00 58.0	0.0
	0.4nm,0.5s,baz=148,slow=5.9,SNR=7.5						

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*JMA **21** 22:59:52.8±0.4, 45°.02N×146°.65E, h204^{km}±4^{km}, M3.3*
*IDC **21** 22:59:53.2±2.1, 45°.65N×146°.25E, h212^{km}±34^{km}, mb3.1/9, mb1 3.4/10, mb1mx3.1/38, mbtmp3.7/10, Error ellipse: s-maj=63.6km s-min=20.8km az=174.0*
ISC 21 22:59:50.2±0.7, **45°.13N**±0°.10×**146°.6E**±0°.1, **h200**^{km}, **n19**, σ**2^{s}.43**/25, **mb3.4**/9, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.86**	**199**	P	**Pn**	**23 00 29.3**	**+2.0**
NEM2				*e*S	**Sn**	**23 00 58.1**	**+2.0**
JTKR	**Abashiri--Toko**	**2.22**	**240**	P	**Pn**	**23 00 33.9**	**+2.9**
JTKR				*e*S	**Sn**	**23 01 06.3**	**+3.5**
JAK	**Akkeshi**	**2.52**	**213**	P	**Pn**	**23 00 36.6**	**+2.3**
JAK				*e*S	**Sn**	**23 01 10.8**	**+2.1**
JAR	**Ashorobuto**	**2.72**	**229**	P	**Pn**	**23 00 40.0**	**+3.4**
JKK2	**Kamakawa 2**	**3.00**	**247**	P	**Pn**	**23 00 43.1**	**+3.2**
ASAJ	**Asahikawa**	**3.01**	**252**	P	**Pn**	**23 00 43.5**	**+3.6**
	3.9nm,0.3s,baz=82,slow=9.6,SNR=13						
JCH	**Churui**	**3.42**	**224**	P	**Pn**	**23 00 46.9**	**+2.1**
JCH				*e*S	**Sn**	**23 01 28.1**	**+0.6**
JNBK	**Urakawa-nobuka**	**3.97**	**225**	P	**Pn**	**23 00 52.8**	**+1.2**
JNBK				*e*S	**Sn**	**23 01 38.6**	**-1.1**
JOT	**Ohata**	**5.50**	**229**	*e*S	**Sn**	**23 02 11.2**	**-3.5**
JANG	**Nango**	**6.03**	**220**	P	**Pn**	**23 01 17.9**	**0.0**
JANG				*e*S	**Sn**	**23 02 22.5**	**-4.7**
KDAK	**Kodiak Island**	**38.64**	**49**	P	**P**	**23 06 53.7**	**-0.1**
	3.0nm,0.9s,baz=320,slow=7.9,SNR=9.0						
ILAR	**Eielson Array**	**40.63**	**37**	P	**P**	**23 07 10.2**	**0.0**
	0.9nm,0.8s,baz=265,slow=7.9,SNR=8.3						
MKAR	**Makanchi Array**	**43.59**	**296**	P	**P**	**23 07 33.5**	**-0.9**
	0.3nm,0.8s,baz=80,slow=10,SNR=1.6						
INK	**Inuvik**	**45.43**	**31**	P	**P**	**23 07 47.4**	**-1.1**
	0.4nm,0.3s,baz=280,slow=6.5,SNR=6.7						
YKA	**Yellowknife Ar**	**54.89**	**34**	P	**P**	**23 08 59.3**	**-0.2**
	0.2nm,0.5s,baz=306,slow=7.7,SNR=2.0						
FINES	**FINESS Array B**	**63.46**	**332**	P	**P**	**23 09 55.8**	**-2.5**
	5.4nm,1.1s,baz=52,slow=9.9,SNR=4.6						
NOA	**NORSAR Array B**	**68.17**	**338**	P	**P**	**23 10 26.1**	**-2.3**
	0.8nm,0.9s,baz=40,slow=6.9,SNR=3.8						
PDAR	**Pinedale Array**	**69.34**	**50**	P	**P**	**23 10 37.1**	**+0.9**
	0.4nm,0.5s,baz=354,slow=1.9,SNR=6.0						
TXAR	**Lajitas Array**	**82.23**	**56**	P	**P**	**23 11 49.9**	**+0.7**
	0.2nm,0.6s,baz=299,slow=3.7,SNR=2.3						

IDC 21 23:09:07.1±2.2, **3°.80S**×**130°.30E**, **h0**^{km}, **mb3.7**/2, **mb1 4.0**/4, **mb1mx3.7**/33, **mbtmp3.8**/4, **ML3.4**/2, **Error ellipse: s-maj=114.0km s-min=26.5km az=74.0**, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.92**	**197**	Pn	Pn	23 12 39.5	-0.1
	0.1nm,0.3s,baz=20,slow=12,SNR=2.7						
WRA	**Warramunga Arr**	**16.52**	**167**	Pn	Pn	23 12 58.6	-1.8
	0.2nm,0.3s,baz=350,slow=13,SNR=4.9						
ASAR	**Alice Springs**	**20.06**	**170**	P	P	23 13 42.9	+0.8
	2.5nm,0.6s,baz=348,slow=10,SNR=18						
MKAR	**Makanchi Array**	**65.74**	**326**	P	P	23 19 53.9	0.0
	0.3nm,0.4s,baz=117,slow=8.0,SNR=9.6						

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*DJA **21** 23:40:46.3±0.2, 5°S±2°×13°0E±°, h151^{km}±2^{km}, M4.7/29, mB5.1/11, mb4.6/29, MLv5.0/12, Mw(mB)4.4/11*
*NEIC **21** 23:40:47.6±1.9, 4°.68S±0°.07×129°.56E±0°.06, h163^{km}±7^{km}, mb4.6/41, Error ellipse: s-maj=10.3km s-min=9.1km az=201.0*
*IDC **21** 23:40:50.1±2.0, 4°.82S×129°.45E, h191^{km}±17^{km}, mb3.9/8, mb1 4.1/11, mb1mx3.7/37, mbtmp4.5/11, MS2.7/3, Ms1 2.7/3, ms1mx2.5/35, Error ellipse: s-maj=24.0km s-min=8.6km az=67.0*
ISC 21 23:40:45.5±0.4, **4°.75S**±0°.04×**129°.58E**±0°.05, **h150**^{km}, **n160**, σ**1^{s}.72**/170, **mb4.5**/38, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.40**	**56**	P	**Pn**	**23 41 10.1**	**+3.7**
MSAI	**Masohi**	**1.53**	**335**	P	**Pn**	**23 41 17.1**	**+1.6**
MSAI				S	**Sn**	**23 41 38.9**	**+0.5**
AAI	**Ambon**	**1.73**	**307**	P	**Pn**	**23 41 19.6**	**+2.0**
AAI				S	**Sn**	**23 41 42.6**	**+0.4**
FAKI	**Fak Fak**	**3.23**	**56**	P	**Pn**	**23 41 37.2**	**+1.4**
FAKI				S	**Sn**	**23 42 13.6**	**-1.1**
FAKI	**Fak Fak**	**3.23**	**56**		**Pn**	**23 41 36.8**	**+1.0**
FAKI	**Fak Fak**	**3.23**	**56**	P	**Pn**	**23 41 37.2**	**+1.4**
SAUI	**Saumlaki**	**3.64**	**152**	P	**Pn**	**23 41 43.4**	**+2.2**
SAUI				S	**Sn**	**23 42 26.1**	**+1.7**
SAUI	**Saumlaki**	**3.64**	**152**	Pn	**Pn**	**23 41 43.7**	**+2.6**
SAUI	**Saumlaki**	**3.64**	**152**	P	**Pn**	**23 41 44.4**	**+3.2**
SWI	**Sorong**	**4.21**	**24**	P	**Pn**	**23 41 48.9**	**+0.3**
SWI				S	**Sn**	**23 42 33.9**	**-3.7**
SANI	**Sanana**	**4.47**	**307**	P	**Pn**	**23 41 52.6**	**+0.6**
SANI				S	**Sn**	**23 42 40.3**	**-3.5**
SANI	**Sanana**	**4.47**	**307**	P	**Pn**	**23 41 52.9**	**+0.9**
LBMI	**Labuha**	**4.58**	**333**	P	**Pn**	**23 41 55.0**	**+1.6**
TNTI	**Ternate**	**5.91**	**338**	Pn	**Pn**	**23 42 11.1**	**0.0**
SRPI	**Serui, Papua**	**7.24**	**67**	P	**Pn**	**23 42 30.0**	**+1.1**
	2.6nm324nm,0.7s						
SOEI	**Soe**	**7.24**	**226**	Pn	**Pn**	**23 42 31.7**	**+2.7**
BAKI	**Biak**	**7.42**	**62**	P	**Pn**	**23 42 32.8**	**+1.6**
	0.9nm3µm203nm,0.7s						
LUWI	**Luwuk**	**7.73**	**298**	P	**Pn**	**23 42 34.4**	**-0.9**
	0.8nm7µm108nm,0.6s						
DRS	**Darwin Rock St**	**7.75**	**170**	P	**Pn**	**23 42 36.1**	**+0.5**
BATI	**Baumata**	**7.99**	**227**	P	**Pn**	**23 42 42.0**	**+3.1**
	12nm,0.3s,baz=117,slow=4.5,SNR=5.5						
BATI				S	**Sn**	**23 44 11.2**	**+3.3**
	baz=90,slow=12,SNR=1.3						
MTN	**Manton Dam**	**8.19**	**169**	P	**Pn**	**23 42 41.6**	**+0.1**
	baz=8.2,SNR=52						
MTN				S	**Sn**	**23 44 09.3**	**-3.5**
	baz=8.2						
MTN	**Manton Dam**	**8.19**	**169**	Pn	**Pn**	**23 42 42.0**	**+0.4**
MTN	**Manton Dam**	**8.19**	**169**	P	**Pn**	**23 42 42.4**	**+0.9**
KDU	**Kakadu**	**8.39**	**160**	P	**Pn**	**23 42 44.0**	**-0.2**
	baz=8.4,SNR=72						
KDU				S	**Sn**	**23 44 10.7**	**-6.9**
	baz=8.4						
KDU	**Kakadu**	**8.39**	**160**	P	**Pn**	**23 42 44.2**	**0.0**
EDFI	**Ende, Flores**	**8.78**	**243**	P	**Pn**	**23 42 52.0**	**+2.5**
	20nm,1.0s						
MRSI	**Marisa**	**9.22**	**304**	P	**Pn**	**23 42 55.3**	**0.0**
	50nm,1.1s						
BKSI	**Bulukumba**	**9.43**	**266**	P	**Pn**	**23 42 59.1**	**+1.0**
	596nm47nm,1.0s						
BNSI	**Bone**	**9.45**	**272**	P	**Pn**	**23 42 58.9**	**+0.7**

	30nm,0.7s						
KAPI	Kappang	9.79	268	P	Pn	23 43 05.7	+2.9
	0.8nm,0.3s,baz=84,slow=16,SNR=5.5						
KAPI				LR	LR	23 47 05.3	
	comp=Z,12nm,18.5s,baz=148,slow=39						
KAPI	Kappang	9.79	268	Pn	Pn	23 43 05.1	+2.2
SPSI	Sidrap Palu	9.81	274	P	Pn	23 43 04.8	+1.7
	586nm50nm,0.6s						
TTSI	Tana Toraja	9.88	280	P	Pn	23 43 06.9	+2.9
	814nm46nm,0.9s						
TOLI2	Tolitoli	10.54	303	Pn	Pn	23 43 13.9	+1.1
TOLI2	Tolitoli	10.54	303	P	Pn	23 43 14.6	+1.9
KNRA	Kununurra	10.89	184	P	Pn	23 43 15.5	-1.8
	baz=11,SNR=19						
KNRA				S	Sn	23 45 11.3	-6.5
	baz=11						
KNRA	Kununurra	10.89	184	Pn	Pn	23 43 16.7	-0.7
KNRA	Kununurra	10.89	184	P	Pn	23 43 16.9	-0.4
MPSI	Mapaga	10.91	297	P	Pn	23 43 17.8	+0.2
	13nm,1.1s						
PLAI	Plampang	12.40	250	P	Pn	23 43 38.6	+1.6
	35nm,0.6s						
PLAI	Plampang	12.40	250	P	Pn	23 43 38.1	+1.1
DAV	Davao City (W)	12.40	341	LR	LR	23 48 21.9	
	comp=Z,82nm,18.6s,baz=307,slow=36						
KBKI	Kotabaru	13.45	276	P	P	23 43 53.1	-1.6
	40nm,1.0s						
FITZ	Fitzroy Crossi	13.82	196	S	Sn	23 46 21.2	-7.0
	baz=72,slow=20						
BBKI	Banjar Baru	14.75	274	P	P	23 44 10.1	+1.0
	5µm33nm,0.9s						
MYLDM	Lahad Datu	14.82	312	P	P	23 44 11.0	+1.1
WB0	Warramunga Arr	15.65	163	P	Pn	23 44 19.3	+1.2
JAGI	Jajag, Banyuwa	15.76	256	P	Pn	23 44 20.1	+0.6
JAGI				IAmb	IAmb	23 44 28.5	
	comp=Z,20nm,0.8s						
JAGI	Jajag, Banyuwa	15.76	256	P	Pn	23 44 19.0	-0.5
WRAB	Tennant Creek	15.79	163	P	P	23 44 21.2	+0.6
WRAB				IAmb	IAmb	23 44 23.4	
	comp=Z,35nm,0.7s						
WRAB	Tennant Creek	15.79	163	P	Pn	23 44 19.1	-0.8
WRA	Warramunga Arr	15.80	163	P	P	23 44 21.8	+1.1
	comp=Z,12nm,0.3s,baz=341,slow=12,SNR=60						
WRA				S	Sn	23 47 05.2	-11
	comp=Z,4.0nm,0.3s,baz=344,slow=20,SNR=8.1						
WRA	Warramunga Arr	15.80	163	P	Pn	23 44 21.0	+1.1
WB2	Warramunga Arr	15.80	163	P	P	23 44 21.7	+0.9
WB2				IAmb	IAmb	23 44 23.5	
	comp=Z,33nm,0.7s						
WR0	Warramunga Arr	15.88	163		P	23 44 22.6	+1.0
WR0				IAmb	IAmb	23 44 24.2	
	comp=Z,21nm,0.5s						
COEN	Coen	16.23	125	P	P	23 44 26.9	+1.4
COEN	Coen	16.23	125	P	P	23 44 27.5	+2.0
KKM	Kota Kinabalu	17.11	309	P	Pn	23 44 36.0	0.0
KKM	Kota Kinabalu	17.11	309	P	Pn	23 44 36.8	+0.8
QIS	Mount Isa	18.50	149	P	P	23 44 50.7	+0.4
	baz=19,SNR=66						
QIS	Mount Isa	18.50	149	P	P	23 44 52.0	+1.7
SBUM	Sibu	18.76	292	P	P	23 44 54.1	+0.9
SBUM				IAmb	IAmb	23 44 55.0	
	comp=Z,18nm,0.8s						
MBWA	Marble Bar	18.91	210	P	P	23 44 55.0	+0.2
PSA00	Pilbara Seismi	19.20	209	P	P	23 44 58.0	0.0
PSA00				IAmb	IAmb	23 44 58.6	
	comp=Z,18nm,0.4s						
PSA00	Pilbara Seismi	19.20	209	P	P	23 44 57.4	-0.6
PSA00				IAmb	IAmb	23 44 58.7	
	comp=Z,5.5nm,1.0s						
PSA00	Pilbara Seismi	19.20	209	P	P	23 44 58.3	+0.3
AS31	Alice Springs	19.27	168	P	P	23 45 00.6	+1.9
ASAR	Alice Springs	19.27	168	P	P	23 45 00.2	+1.5
	comp=Z,24nm,0.3s,baz=349,slow=11,SNR=1977						
ASAR				S	S	23 48 26.7	-2.3
	comp=Z,0.7nm,0.3s,baz=350,slow=20,SNR=20						
ASAR				ScP	ScP	23 52 34.0	-3.4
	baz=340,slow=2.1,SNR=4.4						
ASAR	Alice Springs	19.27	168	P	P	23 45 00.4	+1.7
MTSU	Mount Surprise	19.62	134	P	P	23 45 02.8	+0.3
	baz=20,SNR=20						
MTSU	Mount Surprise	19.62	134	P	P	23 45 04.4	+1.9
WRKA	Warakurna	20.21	183	P	P	23 45 09.8	+1.0
	baz=20,SNR=72						
WRKA	Warakurna	20.21	183	P	P	23 45 10.1	+1.2
CTA	Charters Tower	22.27	135	P	P	23 45 33.4	+2.8
	comp=Z,16nm,0.8s,baz=313,slow=12,SNR=9.5						
CTAO	Charters Tower	22.27	135	P	P	23 45 32.3	+1.7
CTAO				IAmb	IAmb	23 45 33.7	
	comp=Z,26nm,0.9s						
CTAO	Charters Tower	22.27	135	P	P	23 45 33.6	+3.0
OOD	Oodnadatta	23.65	166	P	P	23 45 43.5	+0.3
MEEK	Meekatharra	24.16	205	P	P	23 45 47.1	-0.9
	baz=24,SNR=4.6						
MEEK	Meekatharra	24.16	205	P	P	23 45 48.5	+0.5
	comp=Z,13nm,1.2s						
MULG	Mulgathing	25.75	171	P	P	23 46 03.2	+0.9
FORT	Forrest	25.93	183	P	P	23 46 04.2	+0.2
	baz=26,SNR=10						
FORT	Forrest	25.93	183	P	P	23 46 04.0	+0.1
FORT	Forrest	25.93	183	P	P	23 46 04.0	+0.1
LCRK	Leigh Creek	26.83	163	P	P	23 46 13.1	+1.1
BLDU	Ballidu	28.45	204	P	P	23 46 26.3	-0.1
BBOO	Buckleboo	28.57	169	P	P	23 46 27.9	+0.5
	baz=29,SNR=46						
BBOO	Buckleboo	28.57	169	P	P	23 46 27.7	+0.3
BBOO	Buckleboo	28.57	169	P	P	23 46 27.8	+0.3
KLBR	Kellerberrin	28.92	201	P	P	23 46 30.4	-0.1
	baz=29,SNR=5.8						
KLBR	Kellerberrin	28.92	201	P	P	23 46 30.7	+0.1
STKA	Stephens Creek	29.25	159	P	P	23 46 34.4	+0.8
	comp=Z,3.9nm,0.4s,baz=343,slow=7.9,SNR=22						
STKA	Stephens Creek	29.25	159	P	P	23 46 34.3	+0.8
	baz=29,SNR=8.8						
STKA	Stephens Creek	29.25	159	P	P	23 46 34.0	+0.6
STKA	Stephens Creek	29.25	159	P	P	23 46 34.3	+0.8
NAPP	Napperby	29.40	165	P	P	23 46 35.7	+0.9
HTT	Hallett	29.84	164	P	P	23 46 39.8	+1.1
	baz=30,SNR=12						
HTT	Hallett	29.84	164	P	P	23 46 39.8	+1.1
CMSA	Cobar Meteorol	30.65	152	P	P	23 46 47.5	+1.7
	baz=31,SNR=11						
CMSA	Cobar Meteorol	30.65	152	P	P	23 46 47.3	+1.5
UBPT	Khong Chiam	31.08	310	P	P	23 46 50.0	+0.2
UBPT				IAmb	IAmb	23 46 59.2	
	comp=Z,7.6nm,1.1s						
TWOA	Tennyson Woods	31.27	166	P	P	23 46 52.5	+1.3
ARMA	Armidale	32.93	143	P	P	23 47 08.6	+2.6
	baz=33,SNR=4.6						
ARMA	Armidale	32.93	143	P	P	23 47 08.1	+2.1
ARMA				IAmb	IAmb	23 47 22.8	
	comp=Z,26nm,1.4s						
ARMA	Armidale	32.93	143	P	P	23 47 08.3	+2.3
ARPS	Mount Arapiles	33.80	162	P	P	23 47 14.7	+1.5
	baz=34,SNR=21						
ARPS	Mount Arapiles	33.80	162	P	P	23 47 14.8	+1.5
CAN	Canberra	35.32	152	P	P	23 47 28.2	+1.8
CAN				IAmb	IAmb	23 47 28.9	
	comp=Z,11nm,0.8s						
CAN	Canberra	35.32	152	P	P	23 47 29.2	+2.7
	comp=Z,26nm,1.5s						
TOO	Toolangi	35.76	158	P	P	23 47 31.3	+1.1
	baz=36,SNR=8.4						
TOO	Toolangi	35.76	158	P	P	23 47 32.4	+2.2
TOO				IAmb	IAmb	23 47 33.3	
	comp=Z,12nm,1.1s						
TOO	Toolangi	35.76	158	P	P	23 47 32.6	+2.4
CMAR	Chiang Mai Arr	37.99	308	P	P	23 47 49.4	+0.2
	comp=Z,4.5nm,0.6s,baz=135,slow=7.2,SNR=6.8						
CMAR				ScP	S	23 53 32.8	+2.3
	comp=Z,0.6nm,0.3s,baz=154,slow=3.2,SNR=4.2						
NJ2	Nanjing	37.99	345	*e*P	P	23 47 49.8	+0.8
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
CHTO	Chiang Mai	38.19	309	P	P	23 47 50.6	-0.3
CHTO				IAmb	IAmb	23 47 51.8	
	comp=Z,11nm,0.8s						
XAN	Xi'an	43.23	335	P	P	23 48 31.1	-0.9
XAN				pP	pP	23 49 04.3	0.0
XAN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
LZH	Lanzhou	47.23	331	*e*P	P	23 49 03.8	+0.1
LZH				pP	pP	23 49 36.3	-0.4
LZH				sP	sP	23 49 51.1	-2.0
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
HHC	Hu-ho-hao-te	48.29	342	*e*P	P	23 49 14.6	+2.9
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,5.7s						
LSA	Lhasa	50.30	315	P	P	23 49 27.8	+0.2
LSA				IAmb	IAmb	23 49 28.5	
	comp=Z,7.0nm,0.8s						
GTA	Gaotai	51.81	331	*e*P	P	23 49 38.1	-0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FOZ	Fox Glacier	52.43	144	P	P	23 49 41.2	-1.4
QRZ	Quartz Range	52.62	139	P	P	23 49 46.1	+2.0
WHZ	Wether Hill Ro	52.80	147	P	P	23 49 46.3	+0.9
JIRN	Jiri	52.81	310	*e*P	P	23 49 45.2	-1.0
	comp=Z,20nm,0.6s						
LBZ	Lake Benmore	53.15	144	P	P	23 49 49.0	+1.1
GUN	Gumba	53.17	310	*e*P	P	23 49 48.0	-0.8
	comp=Z,34nm,0.5s						
PKI	Pulchoki	53.36	310	*e*P	P	23 49 48.9	-1.3
	comp=Z,7.9nm,0.4s						
PKIN	Phulchoki	53.37	310	*e*P	P	23 49 48.9	-1.3
	comp=Z,7.7nm,0.4s						
KKN	Kakani	53.57	310	*e*P	P	23 49 50.6	-0.9
	comp=Z,20nm,0.6s						
DMN	Daman	53.61	309	*e*P	P	23 49 51.1	-0.8
	comp=Z,19nm,0.5s						
TUWZ	Tuamarina	53.85	139	P	P	23 49 53.8	+0.8
GKN	Gorkha	54.17	310	*e*P	P	23 49 54.9	-0.9
	comp=Z,34nm,0.5s						
BKZ	Black Stump Fm	54.48	136	P	P	23 49 58.7	+0.9
BKZ				IAmb	IAmb	23 49 59.9	
	comp=Z,14nm,1.0s						
HYB	Hyderabad	54.97	295	*i* P	P	23 49 59.0	-2.6
DANN	Dangsing	55.01	310	*e*P	P	23 50 01.1	-1.0
	comp=Z,41nm,0.7s						
PYUN	Piuthan	55.49	309	*e*P	P	23 50 04.6	-0.8
	comp=Z,16nm,0.4s						
ULN	Ulaanbaatar	56.01	342	P	P	23 50 09.1	+0.5
ULN				IAmb	IAmb	23 50 09.9	
	comp=Z,5.6nm,1.1s						
SONM	Songino Array	56.19	341	P	P	23 50 10.3	+0.4
	comp=Z,0.8nm,0.5s,baz=157,slow=6.5,SNR=6.5						
SONM	Songino Array	56.19	341	IAmb	IAmb	23 50 11.7	
	comp=Z,2.8nm,1.2s						
WMQ	Urumqi	61.29	327	*e*P	P	23 50 45.4	+0.2
NIL	Nilore	65.44	310	P	P	23 51 12.0	-0.6
NIL				IAmb	IAmb	23 51 12.5	
	comp=Z,6.1nm,0.6s						
KSH	Kashi	66.09	317	P	P	23 51 17.8	+1.0
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK31	Makanchi Array	66.12	326	P	P	23 51 16.4	-0.3
MKAR	Makanchi Array	66.12	326	P	P	23 51 16.6	-0.2
	comp=Z,4.5nm,0.7s,baz=125,slow=8.2,SNR=61						
MKAR	Makanchi Array	66.12	326	P	P	23 51 16.4	-0.4
MAKZ	Makanchi	66.31	326	P	P	23 51 17.5	-0.4
MAKZ				IAmb	IAmb	23 51 18.0	
	comp=Z,3.8nm,0.6s						
AAK	Ala-Archa	68.56	319	P	P	23 51 32.3	-0.1
	baz=124,slow=3.6						
AAK	Ala-Archa	68.56	319	P	P	23 51 32.2	-0.1
KBL	Kabul	69.00	310	P	P	23 51 34.3	-1.0
KBL				IAmb	IAmb	23 51 35.4	
	comp=Z,6.0nm,1.0s						
ZALV	Zalesovo Beam	69.39	334	P	P	23 51 36.4	-0.5
	comp=Z,1.7nm,0.6s,baz=119,slow=5.3,SNR=9.1						
KURK	Kurchatov	70.39	328	P	P	23 51 43.0	-0.2
KURK				IAmb	IAmb	23 51 43.8	
	comp=Z,7.3nm,1.0s						
CHGR	Chuyangaron	70.48	314	P	P	23 51 43.1	-1.0
CHGR				IAmb	IAmb	23 51 44.3	
	comp=Z,7.6nm,1.0s						
KKAR	Karatay Array	71.38	318	P	P	23 51 48.1	-1.2
VNDA	Vanda	74.72	173	P	P	23 52 08.1	-0.2
	comp=Z,0.9nm,0.5s,baz=315,slow=7.3,SNR=10						
VNDA	Vanda	74.72	173	P	P	23 52 08.7	+0.4
SBA	Scott Base	75.61	172	P	P	23 52 14.5	+1.1
SBA				IAmb	IAmb	23 52 15.4	
	comp=Z,17nm,1.4s						
BVAR	Borovoye Array	75.94	328	P	P	23 52 15.7	-0.1
	comp=Z,5.2nm,1.1s,baz=161,slow=9.4,SNR=8.9						
BRVK	Borovoye	76.02	328	P	P	23 52 15.5	-0.7
TIXI	Tiksi	76.25	360	LR	LR	00 26 23.6	
	comp=Z,5.7nm,19.6s,baz=286,slow=36						
RAYN	Ar Rayn	86.45	294	P	P	23 53 11.2	-0.8
CPUP	Villa Florida	148.39	168	PKPbc	PKPbc	00 00 14.2	-0.9
	comp=Z,1.8nm,0.5s,baz=119,slow=1.9,SNR=3.2						

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*TUL **21** 23:49:05.6±1.0, 36°.76N±0°.01×98°.06W±0°.02, h7^{km}±4^{km}, ML2.9, mb_Lg2.6/21(NEIC), Error ellipse: s-maj=2.2km s-min=1.6km az=95.0*

*ANF **21** 23:49:05.9±0.4, 36°.74N×98°.06W, h7^{km}, ML3.0/6, Error ellipse: s-maj=4.4km s-min=3.1km az=167.0*

*NEIC **21** 23:49:05.8±0.7, 36°.74N±0°.01×98°.04W±0°.02, h5^{km}±1^{km}, Error ellipse: s-maj=2.6km s-min=2.0km az=287.0*

ISC 21 23:49:06.1±0.9**, 36°.75N**±0°.02×**98°.05W**±0°.02**, h8**^{km}±8^{km}**, n53,** σ**0.^{s}56**/69**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.14	294		Pg	23 49 08.8	-0.4
OK032				Sg	Sg	23 49 11.0	-0.3
GC02	Grant County #	0.18	55	Pg	Pg	23 49 09.8	-0.1
GC02				Sg	Sg	23 49 12.7	+0.2
KAN14	Manchester OK	0.22	18	Pg	Pg	23 49 10.3	-0.2
KAN14				Sg	Sg	23 49 13.5	-0.1
CROK	Carrier	0.25	168	Pg	Pg	23 49 11.0	0.0
CROK				Sg	Sg	23 49 14.8	+0.5
KAN17	Caldwell West	0.38	37		Pg	23 49 13.1	-0.3
KAN17				Sg	Sg	23 49 18.2	-0.2
KAN10	Anthony SW Sta	0.38	354	Pg	Pg	23 49 13.1	-0.4
KAN10				Sg	Sg	23 49 18.3	-0.2
KAN05	Bluff City Nor	0.39	21	Pg	Pg	23 49 13.4	-0.3
KAN05				Sg	Sg	23 49 18.6	-0.2
KAN01	Argonia South	0.47	30	Pg	Pg	23 49 14.8	-0.4
KAN01				Sg	Sg	23 49 21.1	-0.3
KAN16	Harper SW Stat	0.48	358	Pg	Pg	23 49 15.0	-0.4
KAN16				Sg	Sg	23 49 21.4	-0.3
KAN08	Anthony NE Sta	0.48	7	Pg	Pg	23 49 15.0	-0.5
KAN08				Sg	Sg	23 49 21.6	-0.2
KAN09	Caldwell North	0.52	41	Pg	Pg	23 49 15.7	-0.5
KAN09				Sg	Sg	23 49 22.8	-0.2
KAN13	South Haven SW	0.53	60		Pg	23 49 15.8	-0.5
KAN13				Sg	Sg	23 49 23.1	-0.2
KAN12	Harper NE Stat	0.55	4	Pg	Pg	23 49 16.3	-0.5
KAN12				Sg	Sg	23 49 23.9	-0.2
BLOK	Blackwell	0.67	88	Pg	Pg	23 49 18.4	-0.6
BLOK				Sg	Sg	23 49 27.4	-0.3
U32A	Winter Ranch,	0.85	245	Pg	Pg	23 49 21.5	-0.9
U32A				Sg	Sg	23 49 33.2	-0.3
U32A	Winter Ranch,	0.85	245	P	Pg	23 49 21.6	-0.9
	baz=63						
U32A				S	Sg	23 49 33.4	-0.1
	baz=63						
OK029	Liberty Lake	1.06	153		Pg	23 49 25.8	-0.7
OK033	Mehan	1.14	128		Pg	23 49 27.2	-0.6
BCOK	Bluff Creek, N	1.14	162	Pg	Pg	23 49 26.8	-1.2
BCOK				Sg	Sg	23 49 42.4	-0.4
QUOK	Quay	1.22	118		Pg	23 49 28.5	-1.0
QUOK				Sg	Sb	23 49 45.5	+0.1
T35A	Sooner Cattle	1.24	82	Pn	Pg	23 49 28.9	-1.1
T35B	Sooner Cattle	1.24	82	P	Pg	23 49 28.9	-1.1
	baz=263						
T35B				S	Sb	23 49 46.0	-0.1
	baz=263						
OK031	S. Brethren Rd	1.26	129		Pg	23 49 29.1	-1.0
OK025	Westminster Rd	1.30	153		Pn	23 49 30.0	-0.6
OK034	N. Norfolk Rd.	1.30	124		Pn	23 49 29.9	-0.7
OK030	Cody Creek RV	1.31	128		Pn	23 49 30.0	-0.7
OKCFA	Oklahoma City	1.41	160	Pn	Pn	23 49 31.4	-0.8
OKCFA	Oklahoma City	1.41	160	S	Sn	23 49 51.5	+0.6
	baz=340						
OKCSW	OKLAHOMA CITY	1.43	160	Pn	Pn	23 49 31.9	-0.4
FNO	Franklin	1.57	160	Pn	Pn	23 49 34.5	+0.1
R32A	Long Quarter,	1.75	343		Pn	23 49 37.1	+0.3
R32A	Long Quarter,	1.75	343	P	Pn	23 49 37.4	+0.5
	baz=162						
R32A				S	Sb	23 50 00.8	-0.1
	baz=162						
W35A	Tecumseh	1.85	149	Pn	Pn	23 49 38.3	+0.1
W35A				IAmb_Lg		23 50 07.0	
	comp=Z,23nm,0.8s						
TUL1	Leonard	2.00	114	Pn	Pn	23 49 40.9	+0.7
TUL1				IAmb_Lg		23 50 13.7	
	comp=Z,37nm,0.7s						
TUL1	Leonard	2.00	114	P	Pn	23 49 41.2	+0.9
	baz=296						
TUL1				S	Sb	23 50 08.5	+0.6
	baz=296						
WMOK	Wichita Mounta	2.09	197	Pn	Pn	23 49 41.9	+0.4
WMOK	Wichita Mounta	2.09	197	P	Pn	23 49 41.9	+0.4
	baz=16						
X34A	Smith Ranch, M	2.15	175	Pn	Pn	23 49 42.7	+0.4
X34A				IAmb_Lg		23 50 18.1	
	comp=Z,23nm,0.7s						
CBKS	Cedar Bluff	2.46	328	Pn	Pn	23 49 45.7	-0.9
KSU1	Kansas State U	2.61	25	Pn	Pn	23 49 48.2	-0.5
LOOK	Love County	2.84	165	Pn	Pn	23 49 51.8	+0.1
U38A	Gravette	2.96	95	Pn	Pn	23 49 53.7	+0.3
U38A				IAmb_Lg		23 50 48.0	
	comp=Z,28nm,1.1s						
HHAR	Hobbs	3.34	97	Pn	Pn	23 49 58.8	+0.2
HHAR				IAmb_Lg		23 50 53.6	
	comp=Z,12nm,0.9s						
Z35A	Perchaven, San	3.47	169	Pn	Pn	23 50 00.1	-0.4
AMTX	Amarillo	3.49	239	Pg	Pb	23 50 09.1	+0.9
AMTX				IAmb_Lg		23 50 56.5	
	comp=Z,24nm,1.2s						
W39A	Magazine	3.79	113	Pn	Pn	23 50 06.1	+1.3
S39A	Bolivar	3.89	75	Pn	Pn	23 50 06.3	+0.1
S39A	Bolivar	3.89	75	P	Pn	23 50 05.9	-0.3
	baz=258						
U40A	Yellville	4.20	94	IAmb_Lg		23 51 23.0	
	comp=Z,19nm,0.7s						
MIAR	Mount Ida	4.25	120	IAmb_Lg		23 51 23.4	
	comp=Z,11nm,0.8s						
KSCO	Kaye Shedlock'	4.27	303	IAmb_Lg		23 51 32.0	
	comp=Z,12nm,0.8s						
WLAR	White Oak Lake	5.06	126	IAmb_Lg		23 51 52.4	
	comp=Z,10nm,0.8s						
T25A	Trinidad	5.11	276	IAmb_Lg		23 51 57.3	
	comp=Z,17nm,0.9s						

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*NEIC **21** 23:52:28.7±0.9, 24°.4N±0°.1×90°.58E±0°.09, h14^{km}±6^{km}, mb4.0/12, Error ellipse: s-maj=17.9km s-min=11.7km az=160.0*

*NDI **21** 23:52:31.0±4.1, 25°.01N×90°.43E, h10^{km}, ML3.8, mb4.0(NEIC)*

*IDC **21** 23:52:34.5±2.9, 25°.25N×90°.95E, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.3/41, mbtmp3.5/4, MS2.2/1, Ms1 2.4/1, ms1mx2.2/59, Error ellipse: s-maj=88.8km s-min=26.3km az=66.0*

ISC 21 23:52:31.6±0.6**, 24°.98N**±0°.06×**90°.43E**±0°.04**, h10**^{km}**, n27,** σ**2.^{s}11**/35**, mb3.9**/6**, Bangladesh**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGT	Agartala	1.33	145	*e*S	Sn	23 53 14.0	+0.1
SHL	Shillong	1.44	66	*e*PG	Pn	23 52 57.0	-0.9
SHL				*e*P	Pb	23 52 58.8	+0.2
SHL				*e*SG	Sn	23 53 13.0	-4.0
SHL				*e*S	Sb	23 53 15.3	-1.8
SHL				IAML		23 53 15.8	
	comp=N,4µm,0.3s						
SHL				IAML		23 53 16.0	
	comp=E,2µm,0.2s						
SHL	Shillong	1.44	66		Pn	23 52 58.2	+0.3
SHL					Sn	23 53 15.4	-1.6
KOHI	KOHIMA	3.41	77	*e*P	Pn	23 53 27.2	+2.2
KOHI				*e*S	Sn	23 54 03.6	-2.0
KOHI				IAML		23 54 05.1	
	comp=E,284nm,0.4s						
KOHI				IAML		23 54 05.7	
	comp=N,206nm,0.4s						
ITAN	ITANAGAR	3.66	53	*e*P	Pn	23 53 29.9	+1.6
ITAN				*e*S	Sn	23 54 10.9	-0.7
ITAN				IAML		23 54 11.7	
	comp=N,1µm,0.3s						
ITAN				IAML		23 54 12.7	
	comp=E,959nm,0.3s						
MOKO	MOKOCHONG	3.92	69	*e*S	Sn	23 54 15.3	-2.9
MOKO				IAML		23 54 21.6	
	comp=N,263nm,0.2s						
BOK	Bokaro	4.31	255	*e*P	Pn	23 53 37.5	+0.3
BOK				*e*S	Sn	23 54 24.3	-3.2
BOK				IAML		23 54 27.8	
	comp=E,58nm,0.1s						
BOK				IAML		23 54 28.3	
	comp=N,117nm,0.1s						
LSA	Lhasa	4.74	8		Pn	23 53 47.4	+3.8
LKP	Lekhapani	5.40	63	*e*P	Pn	23 53 52.5	+0.2
LKP				*e*S	Sn	23 54 50.6	-4.0
LKP				IAML		23 54 53.9	
	comp=N,336nm,0.5s						
CMAR	Chiang Mai Arr	10.23	128	Pn	Pn	23 54 58.0	-0.7
	baz=310,slow=13,SNR=5.7						
CMAR				LR	LR	00 00 09.9	
	comp=N,13nm,19.2s,baz=290,slow=45						
BHPL	Bhopal	12.00	264	*e*P	Pn	23 55 20.6	-2.2
BHPL				IAmb	IAmb	23 55 21.2	
	comp=Z,8.2nm,0.4s						
BHPL				*e*S	Sn	23 57 24.7	-12
BHPL				*e*S	Sn	23 57 24.7	-12
HYB	Hyderabad	13.38	238	*i* P	Pn	23 55 40.0	-1.7
HYB				*e*S	Sn	23 58 11.0	+0.3
DHRM	DHARAMSHALA	14.36	303	*e*P	Pn	23 55 51.6	-3.6
KBL	Kabul	20.83	302	P	P	23 57 14.2	+0.6
KBL				IAmb	IAmb	23 57 19.2	
	comp=Z,8.9nm,1.3s						
BOOM	Boomskoye usch	21.16	329	P	P	23 57 19.0	+1.9
BOOM				IAmb	IAmb	23 57 19.7	
	comp=Z,9.4nm,1.2s						
BTK	Batken	22.27	317	P	P	23 57 30.2	+1.2
BTK				IAmb	IAmb	23 57 43.0	
	comp=Z,4.1nm,0.7s						
CHGR	Chuyangaron	22.57	312	P	P	23 57 33.1	+1.0
MK31	Makanchi Array	22.72	345	P	P	23 57 35.5	+2.0
MKAR	Makanchi Array	22.72	345	P	P	23 57 35.6	+2.1
	comp=Z,0.7nm,0.7s,baz=159,slow=11,SNR=7.4						
MAKZ	Makanchi	22.80	345	P	P	23 57 36.1	+1.6
SONM	Songino Array	26.07	25	P	P	23 58 06.3	+0.9
	comp=Z,0.8nm,0.5s,baz=211,slow=8.2,SNR=7.4						
SONM	Songino Array	26.07	25	P	P	23 58 06.1	+0.7
ULN	Ulaanbaatar	26.36	26	P	P	23 58 08.9	+1.0
ULN				IAmb	IAmb	23 58 13.1	
	comp=Z,2.0nm,0.6s						
ABKAR	Akbulak array	33.93	323	P	P	23 59 16.1	+1.3
ELL	Elmali	52.49	298	P	P	00 01 44.0	-1.0
WRA	Warramunga Arr	61.80	132	P	P	00 02 54.9	+4.0
	comp=Z,0.3nm,0.5s,baz=323,slow=7.0,SNR=1.5						
COEN	Coen	64.36	121	P	P	00 03 00.1	-7.9

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*IDC **22** 00:01:55.0±0.7, 3°.59N×117°.51E, h0^{km}, mb4.0/11, mb1 4.1/12, mb1mx3.8/49, mbtmp4.1/12, ML3.9/1, MS3.5/12, Ms1 3.5/12, ms1mx3.3/43, Error ellipse: s-maj=48.5km s-min=14.2km az=62.0*

*NEIC **22** 00:01:56.8±1.7, 3°.60N±0°.05×117°.68E±0°.06, h10^{km}±1^{km}, mb4.5/20, Error ellipse: s-maj=11.6km s-min=8.4km az=60.0*

*KLM **22** 00:01:56, 3°.54N×117°.87E, h6^{km}, mb4.1*

*DJA **22** 00:01:59.6±0.6, 4°N±2°×11°8E±°, h13^{km}±4^{km}, M4.5/18, mb4.5/18, mB5.0/7, MLv4.6/13, Mw(mB)4.3/7, MwMwp5.0/1, Mwp5.3/1*

ISC 22 00:01:56.7±0.5**, 3°.61N**±0°.05×**117°.76E**±0°.07**, h10**^{km}**, n79,** σ**1.^{s}85**/69**, mb4.3**/26**, MS3.4**/10**, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYLDM	Lahad Datu	1.72	25		Pn	00 02 27.7	+1.0
KKM	Kota Kinabalu	2.86	328	Pn	Pn	00 02 43.2	+0.6
MPSI	Mapaga	3.89	147	P	Pn	00 02 56.7	+0.1
MPSI				S	Sn	00 03 41.0	-1.4
TOLI2	Tolitoli	3.91	129	Pn	Pn	00 02 56.8	0.0
SMKI	Samarinda	4.07	188	P	Pb	00 03 04.6	-3.9
BKB	Balikpapan	4.92	190	P	Pb	00 03 22.6	-0.4
BKB	Balikpapan	4.92	190		Pg	00 03 29.5	-1.5
MRSI	Marisa	5.21	127	P	Pn	00 03 16.3	+1.6
	0.6nm2µm141nm,0.6s						
MTKI	Muara Teweh, K	5.36	212	P	Pb	00 03 30.4	0.0
SBUM	Sibu	5.65	258	P	Pn	00 03 21.0	+0.2
SBUM	Sibu	5.65	258	Pn	Pn	00 03 19.8	-1.0

APSI	Ampana	5.94	139	P	Pn	00 03 27.2	+2.4
	0.3nm37nm,1.0s						
LUWI	Luwuk	6.82	133	P	Pn	00 03 42.5	+5.7
	0.9nm6µm97nm,0.7s						
TTSI	Tana Toraja	6.93	163	P	Pn	00 03 41.5	+3.2
	0.4nm1µm132nm,0.8s						
KBKI	Kotabaru	7.05	193	P	Pn	00 03 44.5	+4.5
	0.3nm3µm52nm,0.9s						
BBKI	Banjar Baru	7.61	203	P	Pn	00 03 53.7	+6.0
SPSI	Sidrap Palu	7.79	165	P	Pn	00 03 52.5	+2.3
	0.2nm56nm,1.0s						
BNSI	Bone	8.30	164	P	Pn	00 03 58.5	+1.3
	44nm,1.2s						
DAV	Davao City (W)	8.51	66	LR	LR	00 07 15.3	
	comp=Z,352nm,21.6s,baz=226,slow=37						
KAPI	Kappang	8.80	167	Pn	Pn	00 04 05.2	+1.2
	1.4nm,0.3s,baz=336,slow=11,SNR=7.1						
KAPI				LR	LR	00 08 20.6	
	comp=Z,493nm,21.8s,baz=18,slow=44						
KAPI	Kappang	8.80	167	Pn	Pn	00 04 04.4	+0.3
BKSI	Bulukumba	9.19	165	P	Pn	00 04 12.2	+2.9
	50nm,0.7s						
LEM	Lembang	14.49	224	LR	LR	00 11 24.1	
	comp=Z,414nm,18.2s,baz=97,slow=40						
BATI	Baumata	14.94	157	LR	LR	00 13 22.4	
	comp=Z,217nm,18.2s,baz=16,slow=46						
KLSI		15.41	238	P	P	00 05 40.8	+1.8
	16nm,2.2s						
MDSI	Maura Dua	15.78	239	P	P	00 05 44.1	+1.1
	10nm,1.1s						
PDSI	Padang	17.86	256	P	P	00 06 17.8	+12
MNSI	Mandailing Nat	18.38	262	P	P	00 06 17.8	+5.9
	26nm,1.0s						
PSI	Prapat	18.82	268	LR	LR	00 14 01.5	
	comp=Z,166nm,18.7s,baz=86,slow=39						
SISI	Saibi	19.30	256	P	Pn	00 06 28.3	+5.3
	26nm,1.1s						
KCSI	Kotacane, Aceh	19.95	270	P	Pn	00 06 38.4	+7.6
GSI	Gunungsitoli	20.30	264	P	P	00 06 32.9	0.0
GSI	Gunungsitoli	20.30	264	P	P	00 06 31.8	-1.1
CMAR	Chiang Mai Arr	23.59	310	P	P	00 07 06.6	-1.3
	0.8nm,0.4s,baz=135,slow=7.7,SNR=14						
CMAR				LR	LR	00 17 36.9	
	comp=Z,163nm,18.7s,baz=164,slow=40						
CMAR	Chiang Mai Arr	23.59	310	P	P	00 07 06.8	-1.1
CHTO	Chiang Mai	23.81	311	P	P	00 07 08.2	-1.7
JOW	Kunigami	25.19	23	LR	LR	00 18 28.2	
	comp=Z,69nm,19.4s,baz=175,slow=39						
ENH	Enshi	27.65	344	P	P	00 07 44.5	-0.2
NJ2	Nanjing	28.31	2	eP	P	00 07 52.1	+1.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WB0	Warramunga Arr	28.41	145	P	P	00 07 51.4	-0.2
WRA	Warramunga Arr	28.52	146	P	P	00 07 53.0	+0.4
	comp=Z,1.4nm,0.5s,baz=211,slow=10,SNR=22						
WRA				LR	LR	00 21 26.4	
	comp=Z,84nm,18.6s,baz=350,slow=41						
WRA	Warramunga Arr	28.52	146	IAmb	IAmb	00 07 58.0	
	comp=Z,0.2nm,1.0s						
WB2	Warramunga Arr	28.53	146	P	P	00 07 52.7	0.0
WB2				IAmb	IAmb	00 08 18.6	
	comp=Z,16nm,1.4s						
GUMO	Guam	28.54	68	LR	LR	00 19 23.5	
	comp=Z,54nm,21.5s,baz=152,slow=36						
CD2	Chengdu	30.20	336	P	P	00 08 05.0	-2.4
CD2				LR	LR		
	comp=N,20nm,17.6s						
CD2				LR	LR		
	comp=E,240nm,22.1s						
CD2				LR	LR		
	comp=Z,220nm,22.6s						
ASAR	Alice Springs	31.35	151	P	P	00 08 18.3	+0.6
	comp=Z,1.3nm,0.8s,baz=331,slow=7.7,SNR=9.7						
ASAR				LR	LR	00 21 49.3	
	comp=Z,89nm,21.2s,baz=318,slow=38						
XAN	Xi'an	31.37	346	P	P	00 08 18.8	+1.0
XAN				pP	sP	00 08 29.3	+7.2
XAN				sP	pP	00 08 34.3	+13
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
XAN				LR	LR		
	comp=N,220nm,17.2s						
XAN				LR	LR		
	comp=Z,230nm,17.2s						
LZH	Lanzhou	34.77	340	eP	P	00 08 47.6	0.0
LZH				pP	pP	00 08 50.9	+0.2
LZH				sP	sP	00 08 53.0	+1.0
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				LR	LR		
	comp=N,220nm,13.7s						
LZH				LR	LR		
	comp=E,160nm,14.2s						
LZH				LR	LR		
	comp=Z,170nm,16.8s						
KSRS	Korea Array	34.95	14	LR	LR	00 24 46.4	
	comp=Z,69nm,18.2s,baz=193,slow=39						
BJT	Baijiatuau	36.27	358	P	P	00 09 00.7	+0.5
BJT				IAmb	IAmb	00 09 01.7	
	comp=Z,8.9nm,0.9s						
BJI	Beijing	36.29	358	P	P	00 09 01.0	+0.6
BJI				pP	sP	00 09 05.1	+0.4
BJI				sP	pP	00 09 08.0	+4.5
BJI				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC	Hu-ho-hao-te	37.49	352	eP	P	00 09 11.9	+1.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,79nm,6.6s						
GTA	Gaotai	39.18	338	eP	P	00 09 25.3	+0.3
GTA				pP	sP	00 09 29.5	+0.1
GTA				sP	pP	00 09 32.8	+4.6
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
STKA	Stephens Creek	41.95	149	P	P	00 09 49.3	+1.4
	comp=Z,4.0nm,0.8s,baz=310,slow=10,SNR=5.8						
STKA	Stephens Creek	41.95	149	IAmb	IAmb	00 09 53.1	
	comp=Z,1.6nm,1.0s						
SONM	Songino Array	45.13	349	P	P	00 10 13.2	-0.3
	comp=Z,1.0nm,1.0s,baz=155,slow=6.8,SNR=4.7						
KLR	Kul'dur	46.99	13	P	P	00 10 29.4	+1.5
	comp=Z,1.3nm,0.8s,baz=332,slow=2.4,SNR=4.7						
KLR				LR	LR	00 31 44.1	
	comp=Z,28nm,18.4s,baz=198,slow=38						
WMQ	Urumqi	48.05	331	eP	P	00 10 37.1	+0.7
KSH	Kashi	52.02	319	P	P	00 11 07.3	+0.6
KSH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MK31	Makanchi Array	52.85	330	P	P	00 11 11.4	-1.2
MKAR	Makanchi Array	52.85	330	P	P	00 11 12.0	-0.5
	comp=Z,1.9nm,0.8s,baz=124,slow=9.0,SNR=9.9						
MKAR				PcP	PcP	00 12 21.2	-0.6
	comp=Z,1.3nm,0.7s,baz=137,slow=4.7,SNR=6.8						
MKAR	Makanchi Array	52.85	330	P	P	00 11 11.7	-0.9
KBL	Kabul	54.63	310	P	P	00 11 24.8	-1.3
KBL				IAmb	IAmb	00 11 25.8	
	comp=Z,4.9nm,0.9s						
AAK	Ala-Archa	54.65	322	P	P	00 11 25.0	-1.1
AAK				IAmb	IAmb	00 11 28.2	
	comp=Z,3.6nm,1.1s						
CHGR	Chuyangaron	56.24	315	P	P	00 11 35.6	-1.9
ZAA0	Zalesovo Array	56.93	337	P	P	00 11 40.8	-1.2
ZAA0				IAmb	IAmb	00 11 41.7	
	comp=Z,4.4nm,0.9s						
ZALV	Zalesovo Beam	56.93	337	P	P	00 11 40.8	-1.2
	comp=Z,2.0nm,0.7s,baz=130,slow=6.5,SNR=11						
ZALV	Zalesovo Beam	56.93	337	P	P	00 11 40.1	-1.9
KURK	Kurchatov	57.29	332	P	P	00 11 43.6	-1.0
KURK				IAmb	IAmb	00 11 45.3	
	comp=Z,5.7nm,0.8s						
KKAR	Karatay Array	57.40	320	P	P	00 11 44.4	-1.2
BRVK	Borovoye	62.80	330	P	P	00 12 21.4	-1.0
ABKAR	Akbulak array	66.70	323	P	P	00 12 46.6	-1.2
ABKAR				IAmb	IAmb	00 12 47.9	
	comp=Z,2.5nm,0.9s						
NRIK	Noril'sk	68.61	349	P	P	00 12 59.0	-0.6
	comp=Z,2.4nm,0.8s,baz=113,slow=3.4,SNR=5.0						
NRIK	Noril'sk	68.61	349	IAmb	IAmb	00 12 59.5	
	comp=Z,2.4nm,0.8s						
RAYN	Ar Rayn	72.30	293	P	P	00 13 22.0	-1.1
RAYN				IAmb	IAmb	00 13 23.0	
	comp=Z,5.0nm,0.9s						
BRTR	Keskin Array B	83.18	309	P	P	00 14 23.2	-0.4
	comp=Z,1.1nm,0.8s,baz=137,slow=5.3,SNR=3.6						
BRTR	Keskin Array B	83.18	309	P	P	00 14 22.1	-1.5
AKASG	Malin Array Be	86.30	320	P	P	00 14 37.3	-1.6
	comp=Z,1.3nm,0.7s,baz=72,slow=4.7,SNR=8.2						
NACGM	Naroch	87.63	325	i P	P	00 14 48.3	+3.0

DJA **22** *00:15:36.0±0.6, 6°N±5°×12°5E±°, h10km, M5.3/7, mB5.7/7, mb5.3/6, MLv5.3/7, Mw(mB)5.2/7*
MAN **22** *00:15:47.0, 5°.77N×124°.56E, h22km, mb4.7, ML3.5, MS3.4*
NEIC **22** *00:15:48.0±1.2, 5°.78N±0°.07×124°.5E±0°.1, h60km±5km, mb4.6/4, Error ellipse: s-maj=17.5km s-min=9.0km az=110.0*
IDC **22** *00:15:50.8±2.2, 5°.83N×124°.85E, h103km±21km, mb3.7/14, mb1 3.8/14, mb1mx3.4/57, mbtmp4.0/14, Error ellipse: s-maj=37.5km s-min=12.6km az=75.0*
ISC 22 00:15:47.9±0.8, **5°.76N**±0°.04×**124°.52E**±0°.05, **h73**km±7km, **n39**, σ**1ˢ43**/45, **mb4.0**/16, **3C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	0.54	52	⇓eP	Pn	00 16 00.6	-0.9
GSPH				i S	Sn	00 16 11.2	-0.3
KCP	Kidapawan	1.37	24	⇓iP	Pn	00 16 10.5	-0.8
DMPH	Davao City--Mi	1.64	37	⇓iP	Pn	00 16 14.8	0.0
DMPH				eS	Sn	00 16 34.6	-0.7
DAV	Davao City (W)	1.68	39	P	Pn	00 16 15.9	+0.6
	186nm,0.3s,baz=176,slow=2.2,SNR=14						
DAV	Davao City (W)	1.68	39		Pn	00 16 15.3	0.0
MATI	Mati	2.09	56	⇑iP	Pn	00 16 19.6	-1.2
MATI				i S	Sn	00 16 43.6	-2.4
SGSI	Sangihe	2.29	154	P	Pn	00 16 22.2	-1.4
PAGZ	Pagadian	2.37	331	⇑iP	Pn	00 16 24.2	-0.3
PAGZ				i S	Sn	00 16 52.4	-0.2
ZCP	Zamboanga City	2.70	296	⇑iP	Pn	00 16 30.2	+1.2
ZCP				i S	Sn	00 16 58.6	-2.1
GLSP	General Luna,	4.30	22	⇓eP	Pn	00 16 52.6	+1.6
KMSI	Cibinong	5.18	186	P	Pn	00 17 13.4	+11
GTOI	Gorontalo	5.31	197	P	Pn	00 17 02.5	-2.2
TNTI	Ternate	5.71	150	Pn	Pn	00 17 10.4	+0.2
MRSI	Marisa	5.84	206	P	Pn	00 17 12.0	0.0
	6.6nm5µm300nm,0.7s						
TOLI2	Tolitoli	5.94	219	Pn	Pn	00 17 11.0	-2.2
TOLI2				Sn	Sn	00 18 16.1	-3.8
LUWI	Luwuk	6.98	195	P	Pn	00 17 31.4	+3.9
	1.8nm8µm144nm,0.7s						
LUWI	Luwuk	6.98	195	Pn	Pn	00 17 28.8	+1.3
APSI	Ampana	7.22	204	P	Pn	00 17 33.0	+2.2
	0.7nm1µm60nm,0.4s						
SANI	Sanana	7.89	169	P	Pn	00 17 40.1	+0.1
	38nm,0.7s						
FITZ	Fitzroy Crossi	23.73	177	P	P	00 20 53.7	+0.1
	5.1nm,0.8s,baz=4.3,slow=8.2,SNR=7.0						
WRA	Warramunga Arr	27.30	160	P	P	00 21 25.6	-0.4
	0.9nm,0.6s,baz=334,slow=11,SNR=14						
JHS	Saijyo	30.16	14	P	P	00 21 51.7	+0.5
JHS				IAmb	IAmb	00 22 01.7	
	comp=Z,9.7nm,0.9s						
ASAR	Alice Springs	30.65	163	P	P	00 21 55.8	+0.2
	comp=Z,0.7nm,0.7s,baz=343,slow=7.1,SNR=12						
ASAR				pP	pP	00 22 12.2	+1.1
	comp=Z,0.9nm,0.7s,baz=339,slow=8.4,SNR=4.7						
ASAR	Alice Springs	30.65	163	P	P	00 21 56.6	+1.1
MJAR	Matsushiro Arr	33.11	20	P	P	00 22 15.0	-2.1
	comp=Z,3.5nm,0.6s,baz=201,slow=8.9,SNR=5.5						
BBOO	Buckleboo	39.89	165	P	P	00 23 15.6	+0.9
BBOO				IAmb	IAmb	00 23 18.1	
	comp=Z,13nm,1.0s						
KLR	Kul'dur	43.75	7	P	P	00 23 45.6	-0.5
	comp=Z,0.6nm,0.4s,baz=151,slow=10,SNR=2.0						
SONM	Songino Array	44.70	343	P	P	00 23 54.7	+0.8
	comp=Z,1.1nm,1.0s,baz=156,slow=8.9,SNR=5.0						
SONM	Songino Array	44.70	343	P	P	00 23 54.6	+0.8
MKAR	Makanchi Array	54.65	326	P	P	00 25 10.3	+1.0
	comp=Z,0.8nm,0.5s,baz=121,slow=6.9,SNR=18						
ZALV	Zalesovo Beam	57.80	333	P	P	00 25 31.3	-0.2
	comp=Z,0.6nm,0.5s,baz=122,slow=6.0,SNR=4.0						
KURBB	Kurchatov Arra	58.86	328	P	P	00 25 39.6	+0.6
	comp=Z,1.9nm,0.5s,baz=123,slow=6.6,SNR=15						
KURK	Kurchatov	58.86	328	P	P	00 25 39.8	+0.8
KKAR	Karatay Array	60.26	317	P	P	00 25 50.3	+1.4
BVAR	Borovoye Array	64.43	327	P	P	00 26 16.8	+0.3
	comp=Z,2.0nm,0.7s,baz=196,slow=10,SNR=8.2						
AKTO	Aktyubinsk	70.71	322	P	P	00 26 57.0	+0.9
	comp=Z,1.7nm,0.6s,baz=109,slow=8.3,SNR=10						
ARU	Arti	72.06	328	P	P	00 27 03.5	-0.6
	comp=Z,1.2nm,0.6s,baz=74,slow=0.6,SNR=7.8						
ILAR	Eielson Array	84.23	26	P	P	00 28 09.9	-1.3
	comp=Z,0.2nm,0.5s,baz=240,slow=5.8,SNR=4.1						
FINES	FINESS Array B	89.02	332	P	P	00 28 33.4	-1.2
	comp=Z,1.0nm,0.5s,baz=61,slow=5.4,SNR=12						

IDC **22** *00:18:35.0±0.6, 3°.60N×117°.84E, h0km, mb4.4/20, mb1 4.5/22, mb1mx4.1/60, mbtmp4.4/22, ML4.1/2, MS3.7/16, Ms1 3.7/16, ms1mx3.5/34, Error ellipse: s-maj=30.5km s-min=12.1km az=62.0*
BJI **22** *00:18:36.7±0.0, 3°.54N×117°.88E, h15km, mB5.1/31, mb4.6/60, Ms4.3/25, Ms7 4.0/24*
NEIC **22** *00:18:37.1±2.2, 3°.55N±0°.05×117°.65E±0°.02, h10km±1km, mb4.9/46, Error ellipse: s-maj=9.3km s-min=2.9km az=196.0*
DJA **22** *00:18:40.8±0.5, 4°N±2°×11°8E±°, h32km±5km, M4.8/44, mb4.9/44, mB5.3/16, MLv5.0/15, Mw(mB)4.7/16, MwMwp4.8/1, Mwp5.1/1*
ISC 22 00:18:40.3±0.3, **3°.52N**±0°.04×**117°.73E**±0°.05, **h35**km, **n166**, σ**1ˢ62**/170, **mb4.7**/57, **MS3.8**/20, **5C-5D, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MYLDM	Lahad Datu	1.82	25		Pn	00 19 09.2	-0.1
KKM	Kota Kinabalu	2.93	329	Pn	Pn	00 19 22.4	-2.2
MPSI	Mapaga	3.83	146	P	Pn	00 19 35.6	-1.2
MPSI				S	Sn	00 20 19.5	-1.1
TOLI2	Tolitoli	3.87	128	Pn	Pn	00 19 36.0	-1.4
SMKI	Samarinda	3.97	188	P	Pn	00 19 41.2	+2.4
SMKI				S	Sn	00 20 24.6	+0.5
BKB	Balikpapan	4.82	190	P	Pn	00 19 50.8	+0.4
BKB				S	Sn	00 20 42.5	-2.5
BKB	Balikpapan	4.82	190		Pn	00 19 48.6	-1.8
MRSI	Marisa	5.18	126	P	Pn	00 19 54.6	-0.8
	1.1nm3µm337nm,0.6s						
MRSI				S	Sn	00 20 54.5	+0.6
	1.1nm3µm337nm,0.6s						
BATP	Bataraza	5.25	1	⇓eP	Pn	00 19 59.5	+3.2
BATP				i S	Sn	00 20 57.5	+1.9
MTKI	Muara Teweh, K	5.26	213	P	Pn	00 19 58.9	+2.4
	1.6nm112nm,0.5s						
SBUM	Sibu	5.61	259	Pn	Pn	00 19 58.9	-2.3
APSI	Ampana	5.89	138	P	Pn	00 20 05.7	+0.6
	0.7nm2µm75nm,0.4s						
PPR	Puerto Princes	6.30	9	⇑iP	Pn	00 20 11.1	+0.4
LUWI	Luwuk	6.77	132	P	Pn	00 20 18.3	+1.0
	1.2nm7µm203nm,0.7s						
TTSI	Tana Toraja	6.84	162	P	Pn	00 20 18.8	+0.5
	0.7nm3µm194nm,1.0s						
KMSI	Cibinong	6.89	115	P	Pn	00 20 15.0	-4.0
	1.1nm188nm,0.5s						
KBKI	Kotabaru	6.95	193	P	Pn	00 20 18.4	-1.3
	0.5nm2µm134nm,0.9s						
BBKI	Banjar Baru	7.51	203	P	Pn	00 20 31.0	+3.6
	0.5nm5µm33nm,0.7s						
SPSI	Sidrap Palu	7.70	165	P	Pn	00 20 30.5	+0.4
	0.5nm110nm,0.5s						
BNSI	Bone	8.21	163	P	Pn	00 20 38.8	+1.7
	1µm97nm,0.8s						
KAPI	Kappang	8.71	167	Pn	Pn	00 20 44.8	+0.9
	4.1nm,0.3s,baz=327,slow=10,SNR=11						
KAPI				LR	LR	00 24 57.5	
	comp=Z,784nm,21.6s,baz=5.5,slow=44						
KAPI	Kappang	8.71	167	Pn	Pn	00 20 44.5	+0.6
BKSI	Bulukumba	9.10	165	P	Pn	00 20 50.6	+1.4
	980nm98nm,1.1s						
RCP	Roxas	9.41	32	⇓eP	Pn	00 20 56.1	+2.6
LBMI	Labuha	10.60	113	P	Pn	00 21 08.5	-1.3
	1µm64nm,1.1s						
PLAI	Plampang	12.26	180	P	Pn	00 21 36.3	+3.7
	906nm73nm,1.4s						
JAGI	Jajag, Banyuwa	12.43	197	P	Pn	00 21 39.3	+4.4
	48nm,1.2s						
GMJI	Gumukmas	12.47	200	P	P	00 21 47.6	+0.9
EDFI	Ende, Flores	12.81	162	P	Pn	00 21 42.8	+2.7
	348nm32nm,1.2s						
WBSI	Waikabubak, Su	13.17	173	P	Pn	00 21 44.0	-1.1
	62nm,1.3s						
LEM	Lembang	14.40	225	LR	LR	00 27 51.5	
	comp=Z,428nm,21.5s,baz=64,slow=38						
SOEI	Soe	14.70	154	P	Pn	00 22 07.9	+1.9
	120nm,1.1s						
BATI	Baumata	14.86	157	LR	LR	00 29 29.0	
	comp=Z,647nm,20.9s,baz=349,slow=44						
BATI	Baumata	14.86	157	P	Pn	00 22 07.1	-0.9
	107nm,1.0s						
KLSI		15.34	238	P	Pn	00 22 13.8	-0.5
	21nm,1.4s						
MDSI	Maura Dua	15.70	240	P	Pn	00 22 19.9	+0.8
	24nm,1.4s						
FAKI	Fak Fak	15.85	114	Pn	Pn	00 22 20.6	-0.4
IPM	Ipoh	16.69	274		Pn	00 22 29.2	-2.5
MASI	Maura Aman, Be	16.84	247	P	P	00 22 35.9	+0.5
	120nm,1.2s						
QIZ	Qiongzhong	17.24	334	P	Pn	00 22 37.9	-0.6
QIZ				S	Sn	00 25 50.4	+1.0
QIZ				LR	LR		
	comp=N,380nm,13.1s						
QIZ				LR	LR		
	comp=E,420nm,13.7s						
QIZ				LR	LR		
	comp=Z,430nm,14.7s						
PDSI	Padang	17.81	256	P	P	00 22 47.0	+0.8
	2µm16nm,0.6s						
PSI	Prapat	18.79	268	P	Pn	00 22 58.8	+1.1
	0.3nm,0.3s,baz=96,slow=7.9,SNR=5.5						
SISI	Saibi	19.25	256	P	Pn	00 23 04.5	+1.4
	31nm,0.8s						
TPUB	Ta-pu	19.87	8		P	00 23 08.9	+0.2
TPUB				IAmb	IAmb	00 23 17.5	
	comp=Z,49nm,0.8s						
KCSI	Kotacane, Aceh	19.92	271	P	Pn	00 23 10.9	-0.3
	comp=Z,46nm,1.1s						
YULB	Yu-li	20.06	10	P	Pn	00 23 12.1	-0.6
YULB				IAmb	IAmb	00 23 15.6	
	comp=Z,108nm,1.4s						
GSI	Gunungsitoli	20.26	264	P	P	00 23 12.7	-0.3
	comp=Z,86nm,0.8s						
GSI	Gunungsitoli	20.26	264	P	P	00 23 11.9	-1.1
GSI				IAmb	IAmb	00 23 22.0	
	comp=Z,57nm,0.7s						
LHMI	Lhok Sumawe	20.79	275	P	Pn	00 23 22.1	+0.8
	comp=Z,71nm,1.0s						
MTN	Manton Dam	21.01	141	P	P	00 23 21.6	+0.6
	baz=21,SNR=7.0						
MTN	Manton Dam	21.01	141	P	P	00 23 20.7	-0.4
MTN				IAmb	IAmb	00 23 27.0	
	comp=Z,57nm,1.4s						
YHNB	Yeheng	21.32	9	P	P	00 23 24.3	-0.2
YHNB				IAmb	IAmb	00 23 29.9	
	comp=Z,98nm,1.4s						
KDU	Kakadu	21.76	138	P	P	00 23 27.9	-1.2
	baz=22,SNR=3.4						
KNRA	Kununurra	21.97	150	P	P	00 23 33.2	+1.8
	baz=22,SNR=6.4						
KNRA	Kununurra	21.97	150	P	P	00 23 33.6	+2.3
FITZ	Fitzroy Crossi	22.85	160	P	P	00 23 39.6	-1.0
	comp=Z,4.4nm,0.9s,baz=356,slow=12,SNR=2.7						
FITZ				LR	LR	00 34 37.8	
	comp=Z,126nm,19.4s,baz=28,slow=42						
CMAR	Chiang Mai Arr	23.64	310	P	P	00 23 49.5	+0.9
	comp=Z,2.0nm,0.4s,baz=136,slow=8.1,SNR=22						
CMAR	Chiang Mai Arr	23.64	310	P	P	00 23 48.2	-0.4
CHTO	Chiang Mai	23.85	311	P	P	00 23 50.4	-0.2
PSA00	Pilbara Seismi	25.02	175	P	P	00 24 00.1	-1.1
PSA00	Pilbara Seismi	25.02	175	P	P	00 24 01.4	+0.2
PSA00				IAmb	IAmb	00 24 07.3	
	comp=Z,36nm,1.4s						
GYA	Guiyang	25.16	336	⇓P	P	00 24 04.1	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JOW	Kunigami	25.29	23	LR	LR	00 35 10.3	
	comp=Z,92nm,18.7s,baz=166,slow=40						
KMI	Kunming	25.88	328	⇑P	P	00 24 10.8	+1.5
KMI				pP	pP	00 24 13.8	-5.5
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMI				LR	LR		
	comp=Z,280nm,21.7s						
WHN	Wuhan	27.07	354	⇓P	P	00 24 26.6	+6.9
ENH	Enshi	27.73	345	P	P	00 24 25.8	+0.2
WB0	Warramunga Arr	28.34	145	P	P	00 24 30.6	-0.6
WB0				IAmb	IAmb	00 24 31.8	
	comp=Z,16nm,1.1s						
NJ2	Nanjing	28.41	2	eP	P	00 24 32.0	+0.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
WRAB	Tennant Creek	28.45	146	P	P	00 24 31.4	-0.8
WRAB				IAmb	IAmb	00 24 32.9	
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	28.45	146	P	P	00 24 31.9	-0.3
	comp=Z,5.2nm,0.8s,baz=207,slow=12,SNR=26						
WRA				LR	LR	00 37 43.0	
	comp=Z,159nm,21.1s,baz=345,slow=40						
WRA	Warramunga Arr	28.45	146	P	P	00 24 31.1	-1.2
WB2	Warramunga Arr	28.46	146	P	P	00 24 31.4	-0.9
WB2				IAmb	IAmb	00 24 33.0	
	comp=Z,17nm,1.0s						
WC3	Warramunga Arr	28.48	146	P	P	00 24 31.8	-0.7
	baz=29						
WR0	Warramunga Arr	28.58	145	P	P	00 24 31.8	-1.6
WR0				IAmb	IAmb	00 24 34.0	
	comp=Z,14nm,1.1s						
MEEK	Meekatharra	29.99	178	P	P	00 24 48.2	+2.4
	baz=30,SNR=3.3						
WRKA	Warakurna	30.18	161	P	P	00 24 49.1	+1.6
	baz=30,SNR=4.7						
CD2	Chengdu	30.27	336	P	P	00 24 50.3	+2.0
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
AS31	Alice Springs	31.28	151	P	P	00 24 56.9	-0.3
ASAR	Alice Springs	31.28	151	P	P	00 24 56.8	-0.4
	comp=Z,2.1nm,0.6s,baz=343,slow=13,SNR=28						
ASAR				LR	LR	00 38 36.9	
	comp=Z,178nm,20.6s,baz=328,slow=38						
ASAR	Alice Springs	31.28	151	P	P	00 24 57.9	+0.7
XAN	Xi'an	31.46	346	⇑P	P	00 25 02.4	+3.7
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
XAN				LR	LR		
	comp=Z,280nm,17.2s						
XAN				LR	LR		
	comp=Z,280nm,18.6s						
XAN				LR	LR		
	comp=Z,400nm,18.5s						
QIS	Mount Isa	32.14	139	P	P	00 25 04.6	-0.2
	baz=32,SNR=6.5						
TIA	Tai'an	32.54	359	⇑P	P	00 25 12.6	+4.5
TIA				pmax	pmax		
	comp=Z,12nm,0.9s						
TIA				LR	LR		
	comp=Z,150nm,4.7s						
TIA				LR	LR		
	comp=Z,260nm,14.9s						
LZH	Lanzhou	34.86	340	⇑P	P	00 25 33.3	+4.8
LZH				sP	pP	00 25 40.4	+1.8
LZH				PP	PP	00 26 48.0	0.0
LZH				pmax	pmax		
	comp=Z,43nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
LZH				LR	LR		
	comp=Z,280nm,14.1s						
LZH				LR	LR		
	comp=Z,280nm,14.0s						
LZH				LR	LR		
	comp=Z,230nm,16.7s						
KSRS	Korea Array	35.05	14	LR	LR	00 40 47.4	
	comp=Z,119nm,21.1s,baz=193,slow=38						
BJT	Baijiatuau	36.36	358	P	P	00 25 41.5	+0.3
BJI	Beijing	36.39	358	P	P	00 25 42.0	+0.7
BJI				pP	pP	00 25 46.6	-4.9
BJI				sP	sP	00 25 49.1	-6.6
BJI				pmax	pmax		
	comp=Z,20nm,0.9s						
BJI				pmax	pmax		
	comp=Z,230nm,5.6s						
HHC	Hu-ho-hao-te	37.58	352	eP	P	00 25 57.6	+6.0
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,57nm,6.6s						
HHC				LR	LR		
	comp=Z,310nm,18.0s						

HHC				LR	LR		
	comp=Z,150nm,15.8s						
HHC				LR	LR		
	comp=Z,200nm,17.5s						
MJAR	**Matsushiro Arr**	**37.89**	**27**	LR	LR	00 41 05.9	
	comp=Z,96nm,19.8s,baz=215,slow=36						
JIRN	**Jiri**	**38.49**	**312**	*e*P	**P**	**00 25 59.5**	**-0.4**
	comp=Z,7.0nm,0.4s						
GUN	**Gumba**	**38.86**	**312**	*e*P	**P**	**00 26 02.5**	**-0.4**
	comp=Z,14nm,0.8s						
PKI	**Pulchoki**	**39.03**	**311**	*e*P	**P**	**00 26 03.5**	**-0.8**
	comp=Z,8.6nm,0.5s						
PKIN	**Phulchoki**	**39.04**	**311**	*e*P	**P**	**00 26 03.5**	**-0.8**
	comp=Z,6.9nm,0.5s						
GTA	**Gaotai**	**39.26**	**338**	⇓P	**P**	**00 26 06.0**	**+0.2**
GTA				pP	pP	00 26 10.6	-5.5
GTA				sP	sP	00 26 13.4	-6.9
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
QLP	**Quilpie**	**39.40**	**141**	P	**P**	**00 26 08.1**	**+1.2**
	baz=40,SNR=4.8						
DANN	**Dangsing**	**40.68**	**311**	*e*P	**P**	**00 26 17.8**	**-0.2**
	comp=Z,20nm,1.0s						
CN2	**Changchun**	**40.70**	**9**	*e*P	**P**	**00 26 20.6**	**+3.1**
HYB	**Hyderabad**	**40.81**	**293**	*i* P	**P**	**00 26 22.0**	**+3.1**
PYUN	**Piuthan**	**41.14**	**310**	*e*P	**P**	**00 26 21.3**	**-0.3**
	comp=Z,17nm,0.8s						
HTT	**Hallett**	**41.85**	**153**	P	**P**	**00 26 27.9**	**+0.7**
	baz=42,SNR=7.1						
STKA	**Stephens Creek**	**41.88**	**149**	P	**P**	**00 26 28.0**	**+0.6**
	comp=Z,3.8nm,0.7s,baz=328,slow=12,SNR=6.9						
STKA				LR	LR	00 47 20.1	
	comp=Z,105nm,18.1s,baz=351,slow=41						
STKA	**Stephens Creek**	**41.88**	**149**	P	**P**	**00 26 27.8**	**+0.4**
	baz=42,SNR=5.4						
STKA	**Stephens Creek**	**41.88**	**149**	P	**P**	**00 26 27.2**	**-0.2**
MDJ	**Mudanjiang**	**42.24**	**13**	P	**P**	**00 26 30.1**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,11nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,190nm,4.0s						
MDJ				LR	LR		
	comp=Z,230nm,23.5s						
MDJ	**Mudanjiang**	**42.24**	**13**	P	**P**	**00 26 30.5**	**+0.3**
MDJ				IAmb	IAmb	00 26 36.0	
	comp=Z,14nm,0.9s						
CMSA	**Cobar Meteorol**	**43.85**	**145**	P	**P**	**00 26 44.8**	**+1.4**
	baz=44,SNR=6.2						
ULN	**Ulaanbaatar**	**45.13**	**350**	P	**P**	**00 26 52.8**	**-0.8**
SONM	**Songino Array**	**45.22**	**349**	P	**P**	**00 26 53.9**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=165,slow=8.6,SNR=12						
SONM				LR	LR	00 48 23.1	
	comp=Z,91nm,18.1s,baz=186,slow=40						
SONM	**Songino Array**	**45.22**	**349**	P	**P**	**00 26 53.8**	**-0.5**
SONM				IAmb	IAmb	00 27 04.0	
	comp=Z,9.0nm,1.0s						
KLR	**Kul'dur**	**47.09**	**13**	P	**P**	**00 27 08.5**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=252,slow=8.4,SNR=4.4						
WMQ	**Urumqi**	**48.13**	**331**	*e*P	**P**	**00 27 17.8**	**+0.8**
WMQ				pP	pP	00 27 21.8	-5.6
WMQ				sP	sP	00 27 29.0	-2.6
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.7s						
CAN	**Canberra**	**48.50**	**145**	P	**P**	**00 27 20.8**	**+0.8**
NIL	**Nilore**	**51.12**	**311**	P	**P**	**00 27 39.5**	**-0.5**
KSH	**Kashi**	**52.08**	**319**	P	**P**	**00 27 47.8**	**+0.7**
KSH				pP	pP	00 27 52.4	-5.3
KSH				sP	sP	00 27 54.5	-7.3
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZSN	**Zaisan**	**52.14**	**332**	*e*P	**P**	**00 27 46.5**	**-0.8**
	baz=332						
UZB	**Uzynbulak**	**52.30**	**325**	*e*P	**P**	**00 27 48.2**	**-0.5**
	baz=325						
SATY	**Saty**	**52.60**	**324**	*e*P	**P**	**00 27 50.7**	**-0.2**
	baz=324						
MK31	**Makanchi Array**	**52.92**	**330**	P	**P**	**00 27 52.9**	**-0.2**
MKAR	**Makanchi Array**	**52.92**	**330**	P	**P**	**00 27 53.0**	**-0.1**
	comp=Z,4.3nm,0.7s,baz=131,slow=8.7,SNR=19						
MKAR				PcP	**PcP**	**00 29 01.8**	**0.0**
	comp=Z,1.4nm,0.6s,baz=167,slow=3.1,SNR=6.3						
MKAR	**Makanchi Array**	**52.92**	**330**	P	**P**	**00 27 53.0**	**-0.1**
MAKZ	**Makanchi**	**53.08**	**330**	P	**P**	**00 27 55.0**	**+0.6**
MDOK	**Medeo**	**53.46**	**324**	*e*P	**P**	**00 27 56.8**	**-0.6**
	baz=324						
TDK	**Taldyqorghan**	**53.79**	**326**	*e*P	**P**	**00 27 59.3**	**-0.2**
	comp=Z,7.8nm,0.7s,baz=326						
KUU	**Kurty**	**54.31**	**324**	*e*P	**P**	**00 28 02.9**	**-0.5**
	comp=Z,13nm,0.9s,baz=324						
KBL	**Kabul**	**54.67**	**311**	P	**P**	**00 28 04.9**	**-1.5**
KBL				IAmb	IAmb	00 28 11.4	
	comp=Z,22nm,1.3s						
AAK	**Ala-Archa**	**54.71**	**322**	P	**P**	**00 28 06.9**	**+0.5**
	comp=Z,7.1nm,0.9s,baz=118,slow=7.3,SNR=9.1						
AAK	**Ala-Archa**	**54.71**	**322**	P	**P**	**00 28 05.4**	**-1.0**
AAK				IAmb	IAmb	00 28 12.7	
	comp=Z,13nm,1.0s						
SGDS	**Sogindy**	**55.08**	**323**	*e*P	**P**	**00 28 07.9**	**-1.1**
	baz=323						
BTK	**Batken**	**55.78**	**317**	P	**P**	**00 28 14.8**	**+0.7**
CHGR	**Chuyangaron**	**56.29**	**315**	P	**P**	**00 28 16.5**	**-1.3**
CHGR				IAmb	IAmb	00 28 22.8	
	comp=Z,20nm,0.9s						
BTLS	**Baital**	**56.31**	**324**	*e*P	**P**	**00 28 18.1**	**+0.3**
	baz=324						
SEM	**Semipalatinsk**	**56.38**	**332**	*e*P	**P**	**00 28 17.9**	**-0.5**
	baz=332						
DZA	**Taraz**	**56.83**	**321**	*e*P	**P**	**00 28 21.0**	**-0.5**
	baz=321						
ZAA0	**Zalesovo Array**	**57.01**	**337**	P	**P**	**00 28 21.3**	**-1.2**
ZAA0				IAmb	IAmb	00 28 27.6	
	comp=Z,17nm,1.1s						
ZALV	**Zalesovo Beam**	**57.01**	**337**	P	**P**	**00 28 21.6**	**-0.9**
	comp=Z,2.4nm,0.6s,baz=135,slow=7.6,SNR=21						
ZALV				LR	LR	00 53 49.3	
	comp=Z,44nm,19.1s,baz=154,slow=37						
ZALV	**Zalesovo Beam**	**57.01**	**337**	P	**P**	**00 28 20.9**	**-1.6**
IUG	**Iuzhnay**	**57.30**	**319**	*e*P	**P**	**00 28 24.4**	**-0.5**
	baz=319						
KURBB	**Kurchatov Arra**	**57.34**	**331**	P	**P**	**00 28 24.6**	**-0.2**
	comp=Z,6.1nm,0.7s,baz=133,slow=7.0,SNR=21						
KURK	**Kurchatov**	**57.36**	**332**	P	**P**	**00 28 24.4**	**-0.6**
KKAR	**Karatay Array**	**57.45**	**320**	P	**P**	**00 28 25.4**	**-0.5**
BRLS	**Borolday**	**57.85**	**320**	*e*P	**P**	**00 28 27.5**	**-1.1**
	baz=320						
YAK	**Yakutsk**	**59.06**	**7**	P	**P**	**00 28 37.0**	**+0.3**
PEA0B	**Petropavlovsk-**	**59.35**	**27**	P	**P**	**00 28 39.8**	**+0.9**
PETK	**Petropavlovsk-**	**59.35**	**27**	P	**P**	**00 28 39.2**	**+0.3**
	comp=Z,3.5nm,0.6s,baz=188,slow=9.0,SNR=2.2						
PETK				LR	LR	00 57 18.8	
	comp=Z,36nm,18.1s,baz=229,slow=39						
PETK	**Petropavlovsk-**	**59.35**	**27**	P	**P**	**00 28 39.6**	**+0.7**
BRZS	**Berezniki**	**59.89**	**328**	*e*P	**P**	**00 28 42.3**	**-0.4**
	comp=Z,5.2nm,0.9s,baz=328						
BVAR	**Borovoye Array**	**62.80**	**330**	P	**P**	**00 29 01.8**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=158,slow=12,SNR=15						
BRVK	**Borovoye**	**62.87**	**330**	P	**P**	**00 29 02.4**	**-0.4**
GEYT	**Alibeck**	**64.12**	**311**	P	**P**	**00 29 10.0**	**-1.4**
GEYT				IAmb	IAmb	00 29 17.7	
	comp=Z,10.0nm,1.2s						
GYA0B	**ALIBECK ARRAY**	**64.12**	**311**	P	**P**	**00 29 10.5**	**-0.9**
GYA0B				IAmb	IAmb	00 29 17.6	
	comp=Z,14nm,1.3s						
ABKAR	**Akbulak array**	**66.76**	**323**	P	**P**	**00 29 27.6**	**-0.5**
AKTO	**Aktyubinsk**	**68.36**	**324**	P	**P**	**00 29 38.4**	**+0.1**
	comp=Z,5.8nm,0.9s,baz=80,slow=4.6,SNR=16						
TIXI	**Tiksi**	**68.41**	**4**	P	**P**	**00 29 35.5**	**-2.6**
TIXI				IAmb	IAmb	00 29 44.4	
	comp=Z,7.9nm,1.0s						
NRIK	**Noril'sk**	**68.70**	**349**	P	**P**	**00 29 39.4**	**-0.6**
	comp=Z,4.8nm,0.8s,baz=151,slow=8.9,SNR=4.6						
NRIK				LR	LR	01 02 27.3	
	comp=Z,57nm,18.8s,baz=136,slow=38						
NRIK	**Noril'sk**	**68.70**	**349**	P	**P**	**00 29 39.3**	**-0.7**
NRIK				IAmb	IAmb	00 29 51.0	
	comp=Z,14nm,1.4s						
ARU	**Arti**	**70.44**	**330**	P	**P**	**00 29 50.1**	**-0.9**
	comp=Z,2.2nm,0.7s,baz=55,slow=3.7,SNR=5.9						
ARU	**Arti**	**70.44**	**330**	P	**P**	**00 29 50.5**	**-0.4**
ARU				IAmb	IAmb	00 29 56.0	
	comp=Z,12nm,1.0s						
RAYN	**Ar Rayn**	**72.31**	**293**	P	**P**	**00 30 01.9**	**-1.1**
RAYN				IAmb	IAmb	00 30 09.2	
	comp=Z,8.3nm,1.1s						
BELG	**Belogornoye**	**75.15**	**323**	P	**P**	**00 30 18.8**	**-0.2**
	comp=Z,22nm,0.9s,baz=25,slow=6.5,SNR=3.7						
KLMR	**Klimovskoe**	**81.20**	**331**	*e*P	**P**	**00 30 53.3**	**+0.9**
KLMR				AMP		00 31 00.7	
	comp=Z,28nm,1.4s						
BRTR	**Keskin Array B**	**83.22**	**309**	P	**P**	**00 31 04.0**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=157,slow=5.3,SNR=2.4						
AKASG	**Malin Array Be**	**86.36**	**320**	P	**P**	**00 31 18.1**	**-0.8**
	comp=Z,5.7nm,0.8s,baz=74,slow=4.7,SNR=7.4						
AKASG				LR	LR	01 15 10.3	
	comp=Z,41nm,19.4s,baz=195,slow=39						
MNK	**Minsk**	**87.08**	**324**	*i* P	**P**	**00 31 20.9**	**-1.5**
	comp=E,4.0nm,1.1s						
MNK				*i* P	**P**	**00 31 20.9**	**-1.5**
	comp=N,10.0nm,0.9s						
MNK				*i* P	**P**	**00 31 20.9**	**-1.5**
	comp=Z,19nm,1.0s,baz=269						
MNK				*i* PP	**PP**	**00 34 44.1**	**-1.8**
MNK				*i* PPP	PPP	00 36 38.5	
MNK				*i* S	S	00 41 47.5	-12
MNK				*i* SS	**SS**	**00 47 44.6**	**+2.2**
MNK				*i* SSS	SSS	00 51 28.2	
MNK				*i* LQ	LQ	01 05 15.9	
MNK				*i* LR	LR	01 09 34.1	
MNK				*i* LRM	MLR	01 11 34.1	
	comp=E,13nm,18.3s						
MNK				*i* LRM	MLR	01 12 09.4	
	comp=N,268nm,24.4s						
MNK				*i* LRM	MLR	01 12 13.5	
	comp=Z,93nm,16.9s						
ARCES	**ARCESS Array B**	**87.51**	**339**	P	**P**	**00 31 23.3**	**-0.9**
	comp=Z,3.1nm,0.8s,baz=62,slow=5.6,SNR=6.2						
NACGM	**Naroch**	**87.70**	**325**	*i* P	**P**	**00 31 29.3**	**+3.9**
BOSA	**Boshof**	**93.84**	**242**	LR	LR	01 08 36.7	
	comp=Z,60nm,18.1s,baz=174,slow=32						

IDC 22 00:41:54.8±4.0**,6°.49S**×**152°.06E,h0^{km},mb3.7**/3**,**
mb1 3.9/3**,mb1mx3.6**/26**,mbtmp3.7**/3**,MS3.3**/1**,Ms1 3.3**/1**,**
ms1mx2.5/33**,Error ellipse: s-maj=144.2km**
s-min=35.1km az=113.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.79**	**230**	P	P	00 46 48.8	+0.3
	1.4nm,0.7s,baz=55,slow=9.7,SNR=8.5						
ASAR	**Alice Springs**	**24.41**	**224**	P	P	00 47 15.2	-0.1
	1.0nm,0.6s,baz=57,slow=8.9,SNR=18						
FITZ	**Fitzroy Crossi**	**28.22**	**243**	LR	LR	01 00 55.6	
	comp=Z,59nm,18.8s,baz=282,slow=40						
ZALV	**Zalesovo Beam**	**82.15**	**327**	P	P	00 54 17.5	+0.1
	0.6nm,0.5s,baz=100,slow=5.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**150.08**	**285**	PKPbc	PKPbc	01 01 48.0	-0.6
	0.8nm,0.9s,baz=90,slow=3.7,SNR=2.6						

IDC 22 00:56:55.0±6.6**,5°.99S**×**149°.79E,h183^{km}**±40^{km}**,mb3.0**/2**,**
mb1 3.3/3**,mb1mx2.7**/36**,mbtmp3.7**/3**,MS3.2**/1**,Ms1 3.2**/1**,**
ms1mx2.3/15**,Error ellipse: s-maj=118.2km**
s-min=55.1km az=118.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.28**	**217**	P	Pn	00 57 60.0	+0.2
	5.7nm,0.3s,baz=42,slow=6.4,SNR=7.2						
PMG				S	Sn	00 58 51.3	+0.6
	6.2nm,0.3s,baz=216,slow=22,SNR=6.0						
WRA	**Warramunga Arr**	**20.44**	**226**	P	P	01 01 17.5	-0.9
	1.0nm,0.3s,baz=52,slow=11,SNR=22						
ASAR	**Alice Springs**	**23.30**	**219**	P	P	01 01 47.2	+0.6
	0.4nm,0.4s,baz=57,slow=8.9,SNR=11						
DAV	**Davao City (W)**	**27.42**	**298**	LR	LR	01 11 27.4	
	comp=Z,46nm,19.9s,baz=31,slow=32						
TORD	**Torodi Ar. Bea**	**147.77**	**285**	PKPbc	PKPbc	01 16 18.5	-0.7
	0.3nm,0.9s,baz=55,slow=1.8,SNR=1.5						

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*IDC **22** 01:20:14.9±1.5,2°.57S×13°.12W,h0^{km},mb3.9/6,mb1 4.0/7,*
mb1mx3.7/49,mbtmp3.8/7,ML3.4/1,MS3.5/7,Ms1 3.5/7,
ms1mx3.2/45,Error ellipse: s-maj=92.5km s-min=29.1km
az=111.0

*NEIC **22** 01:20:15.5±0.8,2°.6S±0°.1×13°.03W±0°.10,h10^{km}±2^{km},*
mb4.3/7,Error ellipse: s-maj=25.7km s-min=10.4km
az=146.0

ISC 22 01:20:15.6±0.7**,2°.5S**±0°.1×**13°.2W**±0°.1**,h10^{km},n34,**
σ**1^{s}16**/25**,mb4.3**/9**,MS3.7**/5**,North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**5.41**	**194**	Pn	**Pn**	**01 21 36.5**	**+0.4**
	baz=8.5,slow=12,SNR=91						
H10N2				T	T	01 27 15.6	
	baz=14,slow=74,SNR=227						
H10N1	**ASCENSION HYDR**	**5.42**	**193**	Pn	**Pn**	**01 21 36.7**	**+0.4**
	baz=8.5,slow=12,SNR=222						
H10N1				T	T	01 27 22.3	
	baz=14,slow=74,SNR=253						
H10N3	**ASCENSION HYDR**	**5.42**	**194**	Pn	**Pn**	**01 21 36.7**	**+0.4**
	baz=8.5,slow=12,SNR=142						
H10N3				T	T	01 27 18.4	
	baz=14,slow=74,SNR=239						
ASCN	**Ascension**	**5.48**	**192**	Pn	**Pn**	**01 21 36.8**	**-0.6**
H10S3	**ASCENSION HYDR**	**6.54**	**193**	T	T	01 28 50.2	
	baz=16						
H10S2	**ASCENSION HYDR**	**6.54**	**193**	T	T	01 28 56.0	
	baz=204						
LIC	**Lamto**	**11.94**	**43**	*e*PKP1	**Pn**	**01 23 09.4**	**+3.4**
	54nm,2.0s						
KIC	**Kosan Boka**	**12.23**	**44**	*e*PKP1	**Pn**	**01 23 10.2**	**+0.2**
	34nm,1.5s						
TIC	**Toumodi**	**12.25**	**42**	*e*PKP1	**Pn**	**01 23 09.6**	**-0.6**
DBIC	**Dimbokro**	**12.38**	**42**	LR	LR	01 26 56.1	
	comp=Z,163nm,20.4s,baz=202,slow=32						
DBIC	**Dimbokro**	**12.38**	**42**	Pn	**Pn**	**01 23 10.2**	**-1.8**
KOWA	**Kowa**	**19.22**	**28**	P	**P**	**01 24 40.4**	**+0.4**
	0.1nm,0.3s,baz=216,slow=9.1,SNR=5.2						
KOWA				LR	LR	01 31 18.5	
	comp=Z,147nm,19.2s,baz=203,slow=35						
TORD	**Torodi Ar. Bea**	**21.49**	**43**	P	**P**	**01 25 04.7**	**+0.1**
	1.5nm,0.9s,baz=232,slow=11,SNR=7.0						
TORD				LR	LR	01 32 24.0	
	comp=Z,107nm,20.4s,baz=190,slow=34						
TORD	**Torodi Ar. Bea**	**21.49**	**43**	P	**P**	**01 25 03.1**	**-1.5**
ESDC	**Sonseca Array**	**42.85**	**11**	P	**P**	**01 28 14.9**	**+0.8**
	0.3nm,0.6s,baz=187,slow=11,SNR=4.4						
ESDC	**Sonseca Array**	**42.85**	**11**	P	**P**	**01 28 13.2**	**-0.9**
ESDC				IAmb	IAmb	01 28 32.9	
	comp=Z,1.3nm,1.1s						
KEST	**Kesra**	**43.52**	**27**	P	**P**	**01 28 18.5**	**-1.1**
KEST				IAmb	IAmb	01 28 30.0	
	comp=Z,14nm,1.6s						
BOAV	**Boa Vista**	**47.55**	**276**	P	**P**	**01 28 52.5**	**+0.7**
BOAV				IAmb	IAmb	01 28 53.3	
	comp=Z,4.1nm,0.7s						
CPUP	**Villa Florida**	**48.47**	**237**	LR	LR	01 48 13.8	
	comp=Z,93nm,18.6s,baz=76,slow=35						
SAML	**Samuel**	**50.09**	**261**	P	**P**	**01 29 10.5**	**-0.8**
SAML				IAmb	IAmb	01 29 24.6	
	comp=Z,2.4nm,1.1s						
BIRV	**Birongo**	**54.37**	**285**	P	**P**	**01 29 43.0**	**-0.1**
GERES	**GERESS Array B**	**56.26**	**21**	P	**P**	**01 29 57.8**	**+1.5**
	comp=Z,1.9nm,0.7s,baz=186,slow=6.7,SNR=6.3						
GERES	**GERESS Array B**	**56.26**	**21**	P	**P**	**01 29 55.4**	**-0.8**
VRAC	**Vranov**	**57.71**	**23**	LR	LR	01 54 31.7	
	comp=Z,55nm,19.9s,baz=331,slow=36						
AKASG	**Malin Array Be**	**64.22**	**28**	P	**P**	**01 30 51.7**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=228,slow=7.3,SNR=5.4						
AKASG	**Malin Array Be**	**64.22**	**28**	P	**P**	**01 30 49.3**	**-1.4**
AKASG				IAmb	IAmb	01 30 54.7	
	comp=Z,7.1nm,1.9s						
FINES	**FINESS Array B**	**70.55**	**19**	P	**P**	**01 31 31.4**	**+0.9**
	comp=Z,2.7nm,0.7s,baz=216,slow=5.7,SNR=13						
FINES	**FINESS Array B**	**70.55**	**19**	P	**P**	**01 31 30.6**	**+0.1**
BELG	**Belogornoye**	**74.72**	**34**	LR	LR	02 05 13.4	
	comp=Z,40nm,18.2s,baz=341,slow=36						
ARCES	**ARCESS Array B**	**76.53**	**13**	P	**P**	**01 32 06.3**	**+0.8**
	comp=Z,2.0nm,0.6s,baz=219,slow=1.6,SNR=7.8						
ARCES	**ARCESS Array B**	**76.53**	**13**	P	**P**	**01 32 05.8**	**+0.2**
ARU	**Arti**	**82.12**	**32**	LR	LR	02 09 55.8	
	comp=Z,20nm,19.6s,baz=159,slow=36						
ASAR	**Alice Springs**	**138.74**	**131**	PKhKP	PKPpre	01 39 35.9	
	comp=Z,0.8nm,0.9s,baz=227,slow=2.6,SNR=5.6						
WRA	**Warramunga Arr**	**141.10**	**127**	PKhKP	PKPpre	01 39 42.0	
	comp=Z,0.9nm,0.9s,baz=236,slow=2.3,SNR=4.9						

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*IDC **22** 01:22:07.3±1.6,7°.16N×81°.47W,h0^{km},mb3.8/4,mb1 4.0/5,*
mb1mx3.7/40,mbtmp3.8/5,MS2.3/1,Ms1 2.3/1,
ms1mx2.2/32,Error ellipse: s-maj=63.7km s-min=25.7km
az=48.0

*UPA **22** 01:22:09.0±1.8,7°.16N×81°.40W,h10^{km}±5^{km},MW4.5,*
Hypocentre not reviewed by the ISC

*NEIC **22** 01:22:09.7±1.2,7°.2N±0°.1×81°.44W±0°.06,h10^{km}±1^{km},*
mb4.2/4,Error ellipse: s-maj=18.2km s-min=9.3km
az=196.0

ISC 22 01:22:08.6±0.8**,7°.10N**±0°.09×**81°.42W**±0°.06**,h10^{km},n33,**
σ**1^{s}65**/36**,mb4.0**/5**,9C-18D,Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACAO	**El Cacao, Vera**	**0.60**	**66**	⇑*e*P		01 22 20.1	
MARI3	**Mariato, Verag**	**0.69**	**38**	⇓*i*P		01 22 21.2	
MARI3				*i* S		01 22 31.9	
RSUS3	**Rio de Jesus,**	**0.91**	**16**	⇓*i*P		01 22 24.0	
RSUS3				*i* S		01 22 36.0	
TOSI3	**Tonosi**	**1.01**	**73**	⇑*e*P		01 22 26.8	
TOSI3				*i* S		01 22 39.9	
MESA3	**La Mesa, Verag**	**1.06**	**12**	*e*P		01 22 26.7	
MESA3				*i* S		01 22 40.6	
PESE3	**Pese, Herrera**	**1.13**	**45**	⇓*i*P		01 22 28.4	
PESE3				*i* S		01 22 42.8	
REME3	**Remedios, Chir**	**1.19**	**340**	⇑*i*P		01 22 29.8	
CHIT3	**Chitre**	**1.30**	**49**	⇓*e*P		01 22 31.2	
CHIT3				*i* S		01 22 48.4	
AZU	**Azuero**	**1.32**	**59**	⇓*i*P		01 22 31.9	
AZU				*i* S		01 22 49.3	
CALO3	**Calobre, Verag**	**1.34**	**25**	⇓*i*P		01 22 31.4	
CALO3				*i* S		01 22 49.7	
PCRI3	**Pocri, Los San**	**1.40**	**67**	⇓*i*P		01 22 33.2	
PCRI3				*i* S		01 22 51.1	
LOMA3	**Las Lomas, Chi**	**1.64**	**324**	⇓*e*P		01 22 36.4	
DVD	**David**	**1.67**	**322**	*e*P		01 22 36.5	
PNME	**Penonome**	**1.75**	**38**	⇓*i*P		01 22 38.2	
PNME				*i* S		01 22 58.7	
PTPM	**Petroterminale**	**1.82**	**307**	⇑*e*P		01 22 38.5	
LESP3	**La Esperanza,**	**1.88**	**314**	⇓*e*P		01 22 39.8	
BCO2	**Palmira**	**1.95**	**326**	⇓*e*P		01 22 41.4	
CHGR2	**Aguacate**	**1.96**	**338**	*i* P		01 22 41.4	
CHGR2				*e*S		01 23 06.7	
LNBQ3	**Los Naranjos,**	**1.96**	**329**	⇑*e*P		01 22 41.4	
LNBQ3				*i* S		01 23 04.8	
CDITO	**Canoas**	**2.05**	**315**	Pn	**Pn**	**01 22 42.1**	**-1.1**
CDITO				Sn	**Sn**	**01 23 07.8**	**-1.1**
CDITO	**Canoas**	**2.05**	**315**	*e*P		01 22 42.4	
CDITO				*e*S		01 23 08.7	
BRU2	**Volcan**	**2.10**	**323**	Pn	**Pn**	**01 22 43.5**	**-0.5**
BRU2				Sn	**Sn**	**01 23 08.4**	**-1.9**
BRU2	**Volcan**	**2.10**	**323**	⇑*i*P		01 22 43.7	
BRU2				*e*S		01 23 09.8	
PIRO	**Carate, Puerto**	**2.30**	**304**	⇑*i*P		01 22 44.7	
ZANG	**Zanguenga, Cho**	**2.40**	**40**	⇓*i*P		01 22 48.0	
ZANG				*e*S		01 23 15.2	
CHOR3	**La Chorrera**	**2.42**	**42**	⇓*i*P		01 22 48.5	
TABO3	**Taboga, Panama**	**2.50**	**48**	*e*P		01 22 48.4	
CNI2	**El Empalme, Bo**	**2.53**	**336**	⇑*e*P		01 22 51.8	
ARRA3	**Arraijan, Pana**	**2.54**	**43**	⇓*i*P		01 22 49.4	
ARRA3				*i* S		01 23 19.0	
BCIP	**Isla Barro Col**	**2.58**	**37**	*e*P	**Pn**	**01 22 50.3**	**-0.2**
BCIP				*e*S	**Sn**	**01 23 21.4**	**-0.5**
BCIP	**Isla Barro Col**	**2.58**	**37**		**Pn**	**01 22 50.2**	**-0.2**
BCIP	**Isla Barro Col**	**2.58**	**37**	⇓*i*P		01 22 50.2	
BCIP				*e*S		01 23 20.8	
MFS3	**Miraflores**	**2.61**	**44**	*e*P		01 22 49.1	
GAMB1	**Gamboa**	**2.62**	**40**	⇓*e*P		01 22 51.8	
UPA	**Univ. de Panam**	**2.64**	**45**	⇓*i*P		01 24 08.3	
UPA				*i* S		01 24 40.3	
SRBA	**San Rafael, Bu**	**2.86**	**318**		**Pn**	**01 22 53.9**	**-0.6**
CHPO	**Chepo, Panama**	**3.07**	**48**	⇓*i*P		01 22 56.6	
PEZE	**Perez Zeledon,**	**3.18**	**315**		**Pn**	**01 22 58.9**	**0.0**
PTAC	**Punta Ardita,**	**3.58**	**89**	*e*P	**Pn**	**01 23 02.4**	**-1.9**
PTAC				*e*S	**Sn**	**01 23 40.3**	**-6.3**
PTAC				*i*		01 23 48.2	
	comp=Z,21nm,0.1s						
RIMA	**Rio Macho**	**3.59**	**318**		**Pn**	**01 23 04.4**	**-0.1**
HDC	**Heredia**	**3.92**	**317**	⇑*e*P		01 23 09.0	
HDC	**Heredia**	**3.93**	**317**		**Pn**	**01 23 09.7**	**+0.5**
JTS	**Las Juntas de**	**4.72**	**312**	Pn	**Pn**	**01 23 20.3**	**+0.4**
JTS				LR	LR	01 24 34.4	
	comp=Z,33nm,21.1s,slow=32						
JTS	**Las Juntas de**	**4.72**	**312**		**Pn**	**01 23 19.7**	**-0.2**
JTS	**Las Juntas de**	**4.72**	**312**	*e*P		01 23 21.3	
ORTG	**Ortega, Santa**	**5.14**	**309**		**Pn**	**01 23 26.2**	**+0.4**
DBBC	**Dabeiba**	**5.17**	**91**	*e*P	**Pn**	**01 23 26.2**	**+0.1**
DBBC				*i*		01 24 31.2	
	comp=Z,132nm,0.9s						
CBOC	**Ciudad Bolivar**	**5.51**	**103**	*e*P	**Pn**	**01 23 31.0**	**0.0**
CBOC				*e*S	Sn	01 24 26.6	-7.9
CBOC				*i*		01 24 41.6	
	comp=Z,2.6nm,0.1s						
GUY2C	**Guyana, Caldas**	**6.30**	**107**	*e*P	**Pn**	**01 23 44.4**	**+2.3**
GUY2C				*i*		01 24 10.4	
	comp=Z,4.3nm,0.7s						
ZARC	**Zaragoza, Cauc**	**6.52**	**86**	*e*P	**Pn**	**01 23 44.9**	**+0.2**
ZARC				*i*		01 25 00.6	
	comp=Z,5.5nm,0.5s						
ZARC	**Zaragoza, Cauc**	**6.52**	**86**		**Pn**	**01 23 45.2**	**+0.6**
POPC	**Popayan, Colom**	**6.55**	**134**	*e*P	**Pn**	**01 23 47.2**	**+2.0**
NORC	**Norcasia**	**6.69**	**103**	*e*P	**Pn**	**01 23 49.4**	**+2.4**
SJCC	**San Jacinto, C**	**6.76**	**65**		**Pn**	**01 23 49.3**	**+1.2**
ORTC	**Ortega, Tolima**	**6.91**	**117**	*e*P	**Pn**	**01 23 52.3**	**+2.2**
CHIC	**Chingaza**	**8.03**	**107**	*e*P	**Pn**	**01 24 08.9**	**+3.2**
BOAV	**Boa Vista**	**21.34**	**102**	P	**P**	**01 26 57.8**	**+1.7**
BOAV				IAmb	IAmb	01 27 06.8	
	comp=Z,14nm,1.5s						
ETMB	**Extrema**	**22.62**	**138**	P	**P**	**01 27 11.1**	**+1.2**
SAML	**Samuel**	**24.18**	**131**	P	**P**	**01 27 25.4**	**0.0**
SIV	**San Ignacio**	**30.53**	**139**	P	**P**	**01 28 23.2**	**+0.7**
	comp=Z,1.8nm,0.8s,baz=321,slow=11,SNR=5.1						
YKA	**Yellowknife Ar**	**60.37**	**343**	P	**P**	**01 32 16.7**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=139,slow=6.7,SNR=11						
ILAR	**Eielson Array**	**73.29**	**336**	P	**P**	**01 33 40.1**	**0.0**
	comp=Z,0.4nm,0.8s,baz=108,slow=4.8,SNR=2.1						
ESDC	**Sonseca Array**	**75.85**	**51**	P	**P**	**01 33 56.4**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=275,slow=5.7,SNR=11						
ESDC	**Sonseca Array**	**75.85**	**51**	P	**P**	**01 33 56.0**	**+0.5**
ESDC				IAmb	IAmb	01 33 56.7	
	comp=Z,2.9nm,1.3s						
ASAR	**Alice Springs**	**142.32**	**240**	PKP	**PKPdf**	**01 41 42.7**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=103,slow=2.0,SNR=5.1						
ASAR	**Alice Springs**	**142.32**	**240**		**PKPdf**	**01 41 42.0**	**-0.5**
WRA	**Warramunga Arr**	**143.06**	**246**	PKhKP	PKPpre	01 41 40.3	
	comp=Z,0.6nm,0.8s,baz=100,slow=3.5,SNR=2.5						

WEL 22 01:54:49.5±1.1**,46°S**±6°×**16°6E**±°**,h12^{km},M4.0**/12**,**
ML4.2/14**,MLv4.0**/12**,Error ellipse: s-maj=0.0km**
s-min=0.0km az=67.2,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**0.47**	**78**	P	Pb	01 55 00.0	+0.4
PYZ				S	Sb	01 55 07.6	+1.1
DCZ	**Deep Cove**	**1.12**	**45**	P	Pb	01 55 08.8	-2.0
DCZ				S	Sb	01 55 23.4	-1.9
WHZ	**Wether Hill Ro**	**1.39**	**75**	P	Pn	01 55 14.2	-0.5
WHZ				S	Sn	01 55 32.7	-0.2
APZ	**The Paps**	**1.47**	**114**	P	Pn	01 55 14.9	-0.9
APZ				S	Sn	01 55 33.8	-1.2
MLZ	**Mavora Lakes**	**1.72**	**59**	P	Pn	01 55 19.7	+0.5
MLZ				S	Sg	01 55 43.8	-0.9
SYZ	**Scrubby Hill**	**2.17**	**98**	P	Pn	01 55 25.4	-0.1
EAZ	**Earnscleugh**	**2.52**	**67**	P	Pn	01 55 31.3	+1.1
EAZ				S	Sn	01 56 02.7	+1.9
TUZ	**Tuapeka**	**2.53**	**84**	P	Pn	01 55 30.8	+0.5
WKZ	**Wanaka**	**2.54**	**57**	P	Pn	01 55 32.5	+1.9
JCZ	**Jackson Bay**	**2.93**	**43**	P	Pn	01 55 36.4	+0.4
ODZ	**Otahua Downs**	**3.46**	**71**	P	Pn	01 55 42.2	-0.9
LBZ	**Lake Benmore**	**3.48**	**59**	P	Pn	01 55 43.4	0.0
FOZ	**Fox Glacier**	**3.83**	**46**	P	Pn	01 55 48.9	+0.7
GCSZ	**Gaunt Creek Bo**	**4.25**	**48**	P	Pn	01 55 54.4	+0.4
ARCZ	**Arundel**	**4.32**	**59**	P	Pn	01 55 53.9	-1.0
ARCZ				S	Sn	01 56 44.2	-1.0
RPZ	**Rata Peaks**	**4.38**	**56**	P	Pn	01 55 54.8	-1.0
INZ	**Inchbonnie**	**5.25**	**50**	P	Pn	01 56 06.9	-0.8
LTZ	**Lake Taylor**	**5.66**	**54**	P	Pn	01 56 14.1	+0.7

NNC 22 02:00:15.9±5.5, 38°.57N×69°.49E, h0^{km}, mb4.0, mpv3.7, 7C-5D, Error ellipse: s-maj=51.6km s-min=25.3km az=173.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK07	**Karatay Array**	**4.58**	**9**	⇓Lg	Lg	02 02 40.2	
	16nm,0.5s,baz=191,slow=31						
KK09	**Karatay Array**	**4.61**	**9**	⇑Pn	Pn	02 01 26.5	-0.3
	5.1nm,0.6s,baz=184,slow=13						
KK09				⇑Pg	Pb	02 01 38.7	+1.2
	24nm,0.6s,baz=164,slow=14						
AAK	**Ala-Archa**	**5.56**	**42**	⇑Pn	Pn	02 01 41.0	+1.0
	3.9nm,0.5s						
AAK				⇓Pg	Pg	02 01 59.2	-3.3
	4.9nm,0.5s						
AAK				⇑Sn	Sn	02 02 47.0	+2.2
	4.7nm,0.6s						
AAK				⇓Lg	Lg	02 03 10.0	
	8.4nm,0.7s						
TKM2	**Tokmak 2**	**6.35**	**45**	⇑Pn	Pn	02 01 49.3	-1.6
	2.2nm,0.5s						
TKM2				⇑Pg	Pb	02 02 06.0	-1.4
	3.8nm,0.6s						
TKM2				⇓Sn	Sn	02 03 06.7	+2.5
	2.8nm,0.5s						
AB31	**Akbulak array**	**12.69**	**330**	⇓P	Pn	02 03 15.6	-1.9
	0.4nm,0.4s,baz=156,slow=11,SNR=28						
AKTO	**Aktyubinsk**	**14.39**	**329**	⇑P	P	02 03 46.4	-1.5
	1.8nm,0.5s						

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*IDC **22** 02:27:12.3±3.5, 18°.20S×169°.14E, h239^{km}±42^{km}, mb3.5/6, mb1 3.8/8, mb1mx3.4/30, mbtmp4.1/8, Error ellipse: s-maj=85.3km s-min=16.3km az=158.0*

*NOU **22** 02:27:13.4, 18°.73S×169°.55E, h249^{km}, MLv4.6/15, Vanuatu Islands*

*NEIC **22** 02:27:14.4±1.3, 18°.70S±0°.08×169°.28E±0°.06, h259^{km}±12^{km}, mb4.3/6, Error ellipse: s-maj=14.2km s-min=4.7km az=145.0*

ISC 22 02:27:13.3±0.7, **18°.70S**±0°.06×**169°.35E**±0°.09, **h250^{km}, n37, σ1^{s}.36**/39, **mb3.9**/8, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**1.26**	**316**	P	**Pn**	**02 27 51.7**	**+1.8**
DVP	**Devils Point**	**1.47**	**311**	P	**Pn**	**02 27 52.7**	**+1.3**
LIFNC	**LIFOU**	**2.87**	**224**		**Pn**	**02 28 04.5**	**+0.2**
LIFNC				Sn	**S**	**02 28 45.3**	**+0.6**
LIFNC	**LIFOU**	**2.87**	**224**	P	**Pn**	**02 28 04.6**	**+0.3**
MARNC	**Mare, Loyalty**	**3.03**	**204**		**Pn**	**02 28 05.5**	**-0.5**
MARNC				Sn	**S**	**02 28 46.3**	**-1.6**
MARNC	**Mare, Loyalty**	**3.03**	**204**	P	**Pn**	**02 28 06.1**	**0.0**
SANVU	**Saraoutou**	**3.83**	**327**		**Pn**	**02 28 15.8**	**+0.6**
SANVU	**Saraoutou**	**3.83**	**327**	P	**Pn**	**02 28 16.1**	**+0.9**
YATNC	**Mamie plateau,**	**4.06**	**214**	P	**Pn**	**02 28 18.3**	**+0.5**
DZM	**Mont Dzumac**	**4.32**	**219**	*e*Pn	**Pn**	**02 28 22.2**	**+1.3**
	32nm,0.3s						
DZM	**Mont Dzumac**	**4.32**	**219**	P	**Pn**	**02 28 22.2**	**+1.3**
	5.8nm,0.3s,baz=177,slow=16,SNR=35						
DZM	**Mont Dzumac**	**4.32**	**219**		**Pn**	**02 28 21.8**	**+0.8**
DZM	**Mont Dzumac**	**4.32**	**219**	P	**Pn**	**02 28 22.3**	**+1.3**
OUENC	**Ouen Island, N**	**4.38**	**212**		**Pn**	**02 28 22.6**	**+1.0**
OUENC	**Ouen Island, N**	**4.38**	**212**	P	**Pn**	**02 28 23.0**	**+1.4**
NOUC	**Port Laguerre**	**4.43**	**220**	P	**Pn**	**02 28 23.6**	**+1.5**
ONTNC	**Ouen Toro**	**4.50**	**217**		**Pn**	**02 28 24.2**	**+1.3**
ONTNC	**Ouen Toro**	**4.50**	**217**	P	**Pn**	**02 28 24.5**	**+1.5**
KOUNC	**Koumac, New Ca**	**5.12**	**248**	P	**Pn**	**02 28 33.3**	**+2.8**
MSVF	**Nonsavu**	**8.32**	**85**	P	**Pn**	**02 29 12.8**	**+2.0**
	1.8nm,0.3s,baz=275,slow=16,SNR=9.6						
MSVF	**Nonsavu**	**8.32**	**85**		**Pn**	**02 29 12.5**	**+1.7**
OUZ	**Omahuta**	**16.88**	**168**	P	**P**	**02 30 54.7**	**+1.1**
OUZ				IAmb	IAmb	02 30 58.4	
	comp=Z,16nm,0.9s						
MXZ	**Matakaoa Point**	**20.36**	**159**	P	**P**	**02 31 32.0**	**+0.9**
BKZ	**Black Stump Fm**	**21.31**	**165**	P	**P**	**02 31 41.1**	**+0.2**
BKZ				IAmb	IAmb	02 31 42.0	
	comp=Z,6.8nm,0.8s						
STKA	**Stephens Creek**	**28.23**	**237**	P	**P**	**02 32 44.3**	**+1.0**
	comp=Z,1.1nm,0.4s,baz=53,slow=10,SNR=3.4						
WB0	**Warramunga Arr**	**32.99**	**262**	P	**P**	**02 33 24.2**	**-1.0**
WB0				IAmb	IAmb	02 33 40.4	
	comp=Z,4.8nm,1.1s						
WRA	**Warramunga Arr**	**33.03**	**262**	P	**P**	**02 33 24.6**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=88,slow=6.2,SNR=11						
WRA	**Warramunga Arr**	**33.03**	**262**	P	**P**	**02 33 22.5**	**-3.0**
AS31	**Alice Springs**	**33.36**	**255**	P	**P**	**02 33 28.1**	**-0.3**
AS31				IAmb	IAmb	02 33 28.6	
	comp=Z,4.1nm,0.3s						
ASAR	**Alice Springs**	**33.37**	**255**	P	**P**	**02 33 28.1**	**-0.3**
	comp=Z,3.0nm,0.4s,baz=82,slow=8.9,SNR=56						
ASAR	**Alice Springs**	**33.37**	**255**	P	**P**	**02 33 27.5**	**-0.9**
ILAR	**Eielson Array**	**89.69**	**17**	P	**P**	**02 39 39.9**	**-2.6**
	comp=Z,0.3nm,0.6s,baz=240,slow=4.7,SNR=5.6						
ILAR	**Eielson Array**	**89.69**	**17**	P	**P**	**02 39 41.2**	**-1.3**
TXAR	**Lajitas Array**	**96.41**	**61**	P	**P**	**02 40 14.4**	**0.0**
	comp=Z,0.2nm,0.7s,baz=207,slow=5.3,SNR=3.6						
TXAR	**Lajitas Array**	**96.41**	**61**	P	**P**	**02 40 13.7**	**-0.7**
YKA	**Yellowknife Ar**	**100.14**	**27**	P	**Pdif**	**02 40 30.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=252,slow=4.5,SNR=6.3						
ARCES	**ARCESS Array B**	**124.58**	**345**	PKP	**PKPdf**	**02 45 40.5**	**-1.7**
	comp=Z,2.4nm,0.8s,baz=50,slow=1.7,SNR=5.2						

IDC 22 02:29:07.3±2.6, **4°.30S×130°.27E, h0^{km}, mb3.6**/1, **mb1 3.7**/3, **mb1mx3.2**/32, **mbtmp3.5**/3, **ML3.2**/2, **Error ellipse: s-maj=167.2km s-min=31.0km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.05**	**166**	Pn	Pn	02 32 54.4	-0.2
	0.1nm,0.3s,baz=349,slow=12,SNR=2.2						
ASAR	**Alice Springs**	**19.57**	**170**	P	P	02 33 37.1	+0.1
	0.2nm,0.3s,baz=347,slow=9.5,SNR=8.2						
MKAR	**Makanchi Array**	**66.14**	**326**	P	P	02 39 56.7	0.0
	0.4nm,0.5s,baz=136,slow=7.2,SNR=4.2						

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*DDA **22** 02:32:46.4, 39°.18N×27°.81E, h15^{km}±1^{km}, MW3.6*

*CFUSG **22** 02:32:47.5, 39°.38N×28°.19E, h0^{km}, mb3.1/2, MD3.0/1, Western Turkey Magtype MSH 3.0 from 2 stations*

*SOF **22** 02:32:50.2, 39°.52N×27°.67E, h10^{km}, MD3.5*

ISC 22 02:32:46.7±0.9, **39°.22N**±0°.02×**27°.82E**±0°.02, **h15**^{km}±7^{km}, **n57, σ1^{s}.55**/68, **2C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STEP	**BALIKESIR_Sava**	**0.17**	**334**	*i* P	**Pg**	**02 32 51.4**	**+0.3**
STEP				IAML		02 32 55.0	
	comp=N,27µm,0.5s						
STEP				IAML		02 32 55.0	
	comp=E,26µm,0.5s						
STEP				*i* S	**Sg**	**02 32 55.1**	**+1.1**
AKHS	**Akhisar**	**0.34**	**180**	*i* P	**Pg**	**02 32 53.2**	**-0.6**
AKHS				*i* S	**Sg**	**02 32 57.9**	**-0.7**
AKHS				IAML		02 32 58.0	
	comp=N,7.4nm,0.4s						
AKHS				IAML		02 32 59.0	
	comp=E,17µm,0.2s						
BALY	**Balya**	**0.54**	**344**	*i* P	**Pb**	**02 32 57.9**	**-0.1**
BALY				*i* S	**Sb**	**02 33 05.9**	**+0.4**
BALY				IAML		02 33 07.0	
	comp=N,1µm,0.3s						
BALY				IAML		02 33 07.0	
	comp=E,1µm,0.3s						
ZEDA	**zmir-Bergama**	**0.63**	**246**	*i* P	**Pg**	**02 32 58.6**	**-0.5**
ZEDA				IAML		02 33 07.0	
	comp=E,2µm,0.3s						
ZEDA				*i* S	**Sg**	**02 33 07.4**	**0.0**
ZEDA				IAML		02 33 08.0	
	comp=N,1µm,0.2s						
DURS	**Dursunbey**	**0.64**	**53**	*i* P	**Pb**	**02 32 59.4**	**-0.2**
DURS				*i* S	**Sb**	**02 33 08.9**	**+0.6**
DURS				IAML		02 33 13.0	
	comp=N,2µm,0.2s						
DURS				IAML		02 33 13.0	
	comp=E,1µm,0.2s						
BUHA	**Balikesir, Bur**	**0.64**	**296**	*i* P	**Pb**	**02 32 59.4**	**-0.1**
DEMI	**Demirci**	**0.72**	**104**	*i* P	**Pg**	**02 33 00.3**	**-0.5**
DEMI				*i* S	**Sg**	**02 33 10.0**	**-0.4**
DEMI				IAML		02 33 12.0	
	comp=E,3µm,0.4s						
DEMI				IAML		02 33 15.0	
	comp=N,3µm,0.3s						
AYVA	**Ayvalik**	**0.88**	**276**	*i* P	**Pg**	**02 33 04.2**	**+0.4**
AYVA				*i* S	**Sb**	**02 33 16.4**	**+1.3**
AYVA				IAML		02 33 18.0	
	comp=N,2µm,0.5s						
USAK	**Uak-Merkez**	**1.07**	**118**	*i* P	**Pb**	**02 33 06.8**	**-0.1**
KNL	**Balıkesir**	**1.07**	**348**	*i* P	**Pn**	**02 33 08.2**	**+1.1**
KNL				*i* S	**Sn**	**02 33 22.2**	**+0.4**
KNL				IAML		02 33 29.0	
	comp=N,2µm,0.5s						
KNL				IAML		02 33 29.0	
	comp=E,3µm,0.6s						
BAYC	**CANAKKALE_Bayr**	**1.11**	**298**	*i* P	**Pn**	**02 33 08.1**	**+0.4**
BAYC				*i* S	**Sn**	**02 33 23.2**	**+0.5**
BAYC				IAML		02 33 25.0	
	comp=N,1µm,0.4s						
BAYC				IAML		02 33 25.0	
	comp=E,1µm,0.2s						
URLA	**Izmir**	**1.28**	**228**	*i* P	**Pn**	**02 33 10.2**	**+0.1**
KOCA	**Canakkale, Ayv**	**1.33**	**283**	*i* P	**Pn**	**02 33 11.7**	**+1.0**
ULDT	**Uludag**	**1.37**	**48**	*i* P	**Pg**	**02 33 12.7**	**-0.5**
ULDT				*i* S	**Sn**	**02 33 30.4**	**+0.9**
ULDT				IAML		02 33 34.0	
	comp=N,809nm,0.4s						
ZEYE	**Izmir, Urla-Ze**	**1.42**	**227**	*i* P	**Pn**	**02 33 11.9**	**0.0**
IGD	**Bursa**	**1.49**	**45**	*i* P	**Pg**	**02 33 14.2**	**-1.3**
IGD				*i* S	**Sg**	**02 33 35.0**	**+0.1**
IGD				IAML		02 33 37.0	
	comp=N,262nm,0.6s						
IGD				IAML		02 33 37.0	
	comp=E,346nm,0.4s						
BOZC	**Bozcaada**	**1.50**	**295**	*i* P	**Pb**	**02 33 14.0**	**-0.1**
ECEA	**Canakkale, Ece**	**1.51**	**304**	*i* P	**Pg**	**02 33 14.7**	**-1.1**
AYDN	**Tasoluk**	**1.56**	**178**	*i* P	**Pn**	**02 33 13.7**	**-0.2**
PASA	**Karahalli, USA**	**1.57**	**123**	*i* P	**Pn**	**02 33 15.0**	**+0.9**
ANDZ	**Kutahya, Merke**	**1.64**	**79**	*i* P	**Pn**	**02 33 16.4**	**+1.3**
KESN	**Edirne-Kesan**	**1.82**	**332**	*i* P	**Pg**	**02 33 19.3**	**-2.5**
KESN				*i* S	**Sg**	**02 33 41.1**	**-4.5**
KESN				IAML		02 33 46.0	
	comp=E,751nm,0.4s						
BILE	**Bilecik/Merkez**	**1.85**	**59**	*i* P	**Pb**	**02 33 19.3**	**-0.9**
CAVK	**Edirne/Enez-Ca**	**1.94**	**320**	*i* P	**Pb**	**02 33 21.1**	**-0.6**
TAVA	**DENIZLI_Tavas**	**1.95**	**153**	*i* P	**Pn**	**02 33 19.5**	**+0.1**
MULA	**Mugla, Merkez-**	**2.00**	**168**	*i* P	**Pn**	**02 33 19.8**	**-0.2**
KZIL	**AFYON_Kizioren**	**2.06**	**117**	*i* P	**Pn**	**02 33 22.3**	**+1.5**
BORA	**Eskisehir**	**2.14**	**71**	*i* P	**Pn**	**02 33 23.8**	**+1.8**
GEYV	**SAKARYA_Geyve**	**2.29**	**56**	*i* P	**Pn**	**02 33 25.4**	**+1.5**
BRDR	**BURDUR-Merkez**	**2.33**	**130**	*i* P	**Pn**	**02 33 25.2**	**+0.6**
VIZE	**Kirklareli, Vi**	**2.35**	**0**	*i* P	**Pb**	**02 33 26.1**	**-2.7**
SGAZ	**Eskisehir, Sey**	**2.36**	**82**	*i* P	**Pn**	**02 33 26.4**	**+1.4**
CAEL	**Denizli, Camel**	**2.41**	**150**	*i* P	Pn	02 33 31.2	+5.5
KAYN	**Sakarya, Kayna**	**2.60**	**47**	*i* P	**Pn**	**02 33 29.7**	**+1.5**
ARMN	**Kirklareli, Me**	**2.66**	**354**	*i* P	**Pb**	**02 33 30.4**	**-3.6**
YVAC	**Isparta, Yalva**	**2.84**	**108**	*i* P	**Pn**	**02 33 33.3**	**+1.7**
KDZ	**Kurdzhali**	**3.04**	**324**	P	**Pn**	**02 33 36.2**	**+2.0**
KIBS	**BOLU**	**3.33**	**68**	*i* P	**Pg**	**02 33 49.4**	**-1.2**
JMB	**Yambol**	**3.37**	**344**	P	**Pn**	**02 33 41.0**	**+2.2**
RZN	**Rozhen**	**3.42**	**317**	P	**Pn**	**02 33 41.5**	**+2.0**
MMB	**Musomiste**	**3.92**	**308**	P	**Pn**	**02 33 47.9**	**+1.6**
KKB	**Krupnik**	**4.47**	**308**	P	**Pn**	**02 33 56.0**	**+2.1**
VTS	**Vitosha**	**4.85**	**316**	⇑P	**Pn**	**02 34 02.4**	**+3.1**
VTS	**Vitosha**	**4.85**	**316**	P	**Pn**	**02 34 01.5**	**+2.2**
STIP	**Stip**	**4.95**	**302**	*i* Pn	**Pn**	**02 34 01.2**	**+0.7**
BOSS	**Bosilegrad**	**5.20**	**311**	*e*P	**Pn**	**02 34 07.1**	**+3.2**
ZAGS	**Zajecar**	**6.21**	**319**	*e*P	**Pn**	**02 34 19.5**	**+1.7**
BOVS	**Bovan**	**6.37**	**316**	⇓P	**Pn**	**02 34 21.9**	**+2.0**
BOVS	**Bovan**	**6.37**	**316**	*e*P	**Pn**	**02 34 21.9**	**+2.0**
SELS	**Selova**	**6.44**	**311**	*e*P	**Pn**	**02 34 23.3**	**+2.4**
VOIR		**6.54**	**343**	⇓P	Pn	02 34 27.7	+5.4
COVR	**Voineasa-Covas**	**6.73**	**350**	⇑P	**Pn**	**02 34 27.2**	**+2.3**
SEV	**Sevastopol'**	**6.88**	**37**	*e*P	**Pn**	**02 34 28.0**	**+1.1**
SEV				Pm		02 34 34.8	
	comp=Z,4.0nm,0.4s						
SEV				*e*S	**Sn**	**02 35 44.3**	**-0.6**
SEV				Sm		02 35 45.5	
	comp=N,4.0nm,0.4s						
SEV				Sm		02 35 45.5	
	comp=E,3.0nm,0.3s						
YAL	**Yalta**	**7.08**	**40**	*e*P	**Pn**	**02 34 30.2**	**+0.6**
YAL				Pm		02 34 31.7	
	comp=Z,8.0nm,0.2s						
ALU	**Alushta**	**7.34**	**40**	*e*S	**Sn**	**02 35 57.1**	**+0.9**
ALU				Sm		02 35 58.4	
	comp=N,13nm,0.5s						
ALU				Sm		02 35 58.4	
	comp=E,17nm,0.4s						
TRUS	**Trudelj**	**7.46**	**314**	*e*P	**Pn**	**02 34 34.8**	**-0.1**
DIVS	**Divibare**	**7.62**	**312**	*e*P	**Pn**	**02 34 39.3**	**+2.1**

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*IDC **22** 02:39:04.6±5.2, 30°.13S×177°.92W, h60^{km}±34^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.4/33, mbtmp4.2/3, MS4.2/1, Ms1 4.2/1, ms1mx2.8/24, Error ellipse: s-maj=74.1km s-min=28.9km az=144.0*

*NEIC **22** 02:39:07.3±1.1, 29°.7S±0°.1×178°.2W±0°.2, h62^{km}±6^{km}, mb4.5/8, Error ellipse: s-maj=28.3km s-min=4.4km az=138.0*

ISC 22 02:39:04.1±1.8, **30°.1S**±0°.1×**177°.9W**±0°.2, **h50^{km}, n19, σ1^{s}.64**/20, **mb4.3**/7, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.80**	**359**	P	**Pn**	**02 39 20.9**	**+1.8**
	130nm,0.3s,baz=184,slow=21,SNR=6.1						
RAO				S	**Sn**	**02 39 34.0**	**+4.0**
	860nm,0.3s,baz=84,slow=20,SNR=12						
RAO	**Raoul Island**	**0.80**	**359**	Pn	**Pn**	**02 39 19.5**	**+0.4**
RAO				Sn	**Sn**	**02 39 27.7**	**-2.3**
OUZ	**Omahuta**	**8.82**	**232**	Pn	**Pn**	**02 41 11.8**	**+2.8**
LIFNC	**LIFOU**	**16.27**	**301**	P	**Pn**	**02 42 47.9**	**-1.5**
RAR	**Rarotonga**	**18.55**	**66**	LR	LR	02 48 53.3	
	comp=Z,780nm,20.8s,baz=274,slow=32						
STKA	**Stephens Creek**	**34.64**	**256**	P	**P**	**02 45 48.9**	**+0.2**
	4.8nm,0.7s,baz=94,slow=11,SNR=10						
STKA	**Stephens Creek**	**34.64**	**256**	P	**P**	**02 45 48.5**	**-0.2**
BBOO	**Buckleboo**	**39.14**	**254**	P	**P**	**02 46 26.3**	**-0.7**
BBOO				IAmb	IAmb	02 46 38.2	
	comp=Z,19nm,1.4s						
ASAR	**Alice Springs**	**43.21**	**267**	P	**P**	**02 46 59.2**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=101,slow=7.4,SNR=13						
ASAR	**Alice Springs**	**43.21**	**267**	P	**P**	**02 46 58.9**	**-1.6**
WR0	**Warramunga Arr**	**43.98**	**272**	P	**P**	**02 47 06.5**	**-0.3**
WR0				IAmb	IAmb	02 47 21.0	
	comp=Z,5.5nm,0.3s						
WB2	**Warramunga Arr**	**44.16**	**272**	P	**P**	**02 47 07.0**	**-1.1**
WB2				IAmb	IAmb	02 47 08.5	
	comp=Z,5.7nm,1.0s						
WRA	**Warramunga Arr**	**44.17**	**272**	P	**P**	**02 47 07.1**	**-1.1**
	comp=Z,1.9nm,0.4s,baz=107,slow=7.7,SNR=34						
WRA	**Warramunga Arr**	**44.17**	**272**	P	**P**	**02 47 07.2**	**-1.1**
WB0	**Warramunga Arr**	**44.19**	**272**	P	**P**	**02 47 07.3**	**-1.1**
WB0				IAmb	IAmb	02 47 26.0	
	comp=Z,7.5nm,1.1s						
SOEI	**Soe**	**57.39**	**278**	P	**P**	**02 48 47.9**	**-0.1**
FINES	**FINESS Array B**	**144.84**	**340**	PKP	**PKPab**	**02 58 33.2**	**-0.7**
	comp=Z,4.0nm,0.8s,baz=76,slow=4.0,SNR=8.8						
NOA	**NORSAR Array B**	**148.42**	**352**	PKPbc	**PKPbc**	**02 58 43.5**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=11,slow=3.9,SNR=1.3						
AKASG	**Malin Array Be**	**151.07**	**323**	PKPbc	**PKPbc**	**02 58 50.6**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=50,slow=3.0,SNR=4.7						

IDC 22 02:43:45.2±7.3, **4°.74S×147°.37E, h0^{km}, mb3.5**/1, **mb1 3.9**/2, **mb1mx2.8**/41, **mbtmp3.6**/2, **ML3.8**/1, **MS4.4**/1, **Ms1 4.4**/1, **ms1mx2.7**/22, **Error ellipse: s-maj=305.4km s-min=51.6km az=108.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.64**	**183**	Sn	Sn	02 45 52.3	+1.1
	5.2nm,0.3s,baz=1.9,slow=20,SNR=7.5						
WRA	**Warramunga Arr**	**19.73**	**219**	P	P	02 48 17.1	+0.4
	0.3nm,0.3s,baz=36,slow=10,SNR=8.8						
ASAR	**Alice Springs**	**22.86**	**213**	P	P	02 48 50.0	-0.4
	1.4nm,0.7s,baz=47,slow=9.3,SNR=11						
AFI	**Afiamalu**	**41.27**	**106**	LR	LR	03 08 17.7	
	comp=Z,448nm,19.3s,baz=334,slow=36						
TORD	**Torodi Ar. Bea**	**145.12**	**286**	PKPbc	PKPbc	03 03 24.5	-0.7
	0.3nm,0.8s,baz=63,slow=4.4,SNR=1.9						

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*IDC **22** 02:54:36.5±1.7, 22°.09S×174°.08W, h0^{km}, mb4.1/4, mb1 4.4/5, mb1mx3.8/25, mbtmp4.1/5, ML5.1/1, MS3.6/8, Ms1 3.6/8, ms1mx3.2/36, Error ellipse: s-maj=70.6km s-min=31.5km az=159.0*

*NEIC **22** 02:54:36.2±0.4, 21°.6S±0°.1×173°.80W±0°.10, h10^{km}±1^{km}, mb4.2/4, Error ellipse: s-maj=23.1km s-min=15.1km az=357.0*

ISC 22 02:54:36.1±1.0, **21°.6S**±0°.2×**173°.7W**±0°.1, **h10^{km}, n23, σ1^{s}.78**/15, **mb4.1**/6, **MS3.5**/8, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**4.33**	**56**	Pn	**Pn**	**02 55 43.0**	**+0.9**
NIUE				Sn	**Sn**	**02 56 30.8**	**-1.8**
MSVF	**Nonsavu**	**8.65**	**295**	Pn	**Pn**	**02 56 43.0**	**+1.4**
	0.8nm,0.3s,baz=116,slow=12,SNR=7.9						
MSVF				LR	LR	02 59 26.2	
	comp=Z,721nm,18.6s,baz=91,slow=34						
MSVF	**Nonsavu**	**8.65**	**295**		**Pn**	**02 56 40.1**	**-1.5**
DZM	**Mont Dzumac**	**18.44**	**265**	*e*LR	LR	03 03 12.1	
	comp=Z,142nm,23.2s						
DZM	**Mont Dzumac**	**18.44**	**265**	LR	LR	03 04 48.1	
	comp=Z,166nm,18.8s,baz=128,slow=34						
TBI	**Tubuai**	**22.47**	**99**	*e*LR	LR	03 05 21.4	
	comp=Z,144nm,28.2s						
PPT2	**Papeete2**	**23.07**	**84**	*e*LR	LR	03 05 25.9	
	comp=Z,126nm,25.8s						
PPT	**Papeete**	**23.07**	**84**	LR	LR	03 06 43.1	
	comp=Z,59nm,21.8s,baz=196,slow=31						
ASAR	**Alice Springs**	**48.18**	**257**	P	**P**	**03 03 15.0**	**-2.1**
	1.9nm,0.8s,baz=92,slow=8.2,SNR=17						
ASAR				PcP	**PcP**	**03 04 46.5**	**+2.0**
	0.7nm,0.7s,baz=111,slow=4.2,SNR=4.3						
ASAR				LR	LR	03 22 52.4	
	comp=Z,69nm,18.1s,baz=143,slow=36						
ASAR	**Alice Springs**	**48.18**	**257**	P	**P**	**03 03 15.9**	**-1.2**
WB0	**Warramunga Arr**	**48.41**	**262**	P	**P**	**03 03 17.2**	**-1.7**
WB2	**Warramunga Arr**	**48.41**	**262**	P	**P**	**03 03 17.3**	**-1.6**
WB2				IAmb	IAmb	03 03 23.1	
	comp=Z,4.2nm,1.1s						
WRA	**Warramunga Arr**	**48.43**	**262**	P	**P**	**03 03 16.7**	**-2.3**
	comp=Z,1.1nm,0.8s,baz=101,slow=8.3,SNR=4.0						
WRA	**Warramunga Arr**	**48.43**	**262**	P	**P**	**03 03 16.9**	**-2.1**
JOW	**Kunigami**	**73.96**	**308**	LR	LR	03 33 40.9	
	comp=Z,20nm,19.1s,baz=58,slow=32						
NVAR	**Mina Array Bea**	**79.12**	**41**	P	P	03 06 46.4	+5.1
	comp=Z,1.9nm,1.0s,baz=225,slow=10,SNR=3.8						
KDAK	**Kodiak Island**	**81.00**	**11**	LR	LR	03 40 58.3	
	comp=Z,52nm,19.4s,baz=111,slow=34						
MAW	**Mawson**	**81.88**	**199**	P	**P**	**03 06 55.1**	**-0.3**
MAW				IAmb	IAmb	03 06 59.5	
	comp=Z,1.7nm,1.2s						
KLR	**Kul'dur**	**85.53**	**328**	LR	LR	03 41 48.2	
	comp=Z,20nm,19.2s,baz=112,slow=33						
NEW	**Newport**	**85.95**	**34**	LR	LR	03 43 06.4	
	comp=Z,56nm,19.4s,baz=248,slow=34						
BMAR	**Burnt Mountain**	**91.34**	**11**	P	**P**	**03 07 41.1**	**-0.5**
CMAR	**Chiang Mai Arr**	**94.26**	**288**	P	**P**	**03 07 57.8**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=123,slow=4.8,SNR=4.3						
AKASG	**Malin Array Be**	**145.82**	**334**	PKPbc	**PKPab**	**03 14 17.2**	**+1.4**
	comp=Z,0.9nm,0.5s,baz=38,slow=4.3,SNR=8.5						

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*NNC **22** 03:06:00.9±5.7, 38°.29N×73°.37E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=41.9km s-min=30.4km az=159.0*

*SOME **22** 03:06:01.7, 38°.30N×73°.17E, h10^{km}*

ISC 22 03:06:03.2±2.2, **38°.4N**±0°.1×**73°.15E**±0°.05, **h10^{km}, n15, σ2^{s}.83**/23, **6C-1D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	**Merke**	**4.38**	**1**	*e*P	**Pg**	**03 07 23.6**	**-3.4**
	9.3nm,0.1s						
MRKS				*e*S	**Sg**	**03 08 23.0**	**-0.8**
	42nm,0.6s						
MRKS	**Merke**	**4.38**	**1**	Pg	**Pb**	**03 07 20.0**	**-0.2**
	4.2nm,0.5s						
MRKS				Lg	Lg	03 08 23.0	
	42nm,0.6s						
AAK	**Ala-Archa**	**4.39**	**13**	⇑Pg	**Pb**	**03 07 19.6**	**-0.9**
	8.7nm,0.6s						
AAK				⇑Lg	Lg	03 08 15.7	
	30nm,0.8s						
IUG	**Iuzhnay**	**4.47**	**329**	*e*P	**Pg**	**03 07 25.9**	**-2.9**
	128nm,0.1s						
IUG				*e*S	**Sg**	**03 08 26.6**	**-0.1**
	27nm,0.2s						
IUG	**Iuzhnay**	**4.47**	**329**	Pg	**Pb**	**03 07 22.0**	**+0.2**
	475nm,0.7s						
IUG				Lg	Lg	03 08 26.6	
	136nm,0.9s						
TKM2	**Tokmak 2**	**4.92**	**21**	⇑Pg	**Pg**	**03 07 33.9**	**-3.4**
	6.1nm,0.8s						
TKM2				⇑Lg	Lg	03 08 39.3	
	31nm,1.1s						
KST	**Kastek**	**5.14**	**24**	*e*P	**Pg**	**03 07 38.1**	**-3.5**
	3.3nm,0.3s						
KST				*e*S	**Sg**	**03 08 47.8**	**-0.4**
	24nm,0.5s						
KST	**Kastek**	**5.14**	**24**	Pg	**Pb**	**03 07 34.0**	**+0.8**
	4.7nm,0.7s						
KST				Lg	Lg	03 08 47.8	
	24nm,0.8s						
KK08	**Karatay Array**	**5.15**	**338**	⇑Pn	**Pn**	**03 07 23.0**	**+2.6**
	6.2nm,0.6s,baz=142,slow=12						
KK08				⇑Sn	**Sn**	**03 08 26.1**	**+6.2**
	14nm,0.7s,baz=187,slow=30						
BRLS	**Borolday**	**5.30**	**333**	*e*P	**Pb**	**03 07 39.9**	**+4.0**
	6.1nm,0.0s						
BRLS				*e*S	**Sg**	**03 08 50.2**	**-3.1**
	9.7nm,0.1s						
TNSS	**Tian-Shan**	**5.49**	**30**	*e*P	**Pg**	**03 07 46.6**	**-1.6**
	2.3nm,0.1s						
TNSS				*e*S	**Sg**	**03 09 02.2**	**+2.8**
	9.3nm,0.4s						
KUU	**Kurty**	**6.03**	**23**	*e*P	**Pg**	**03 07 55.1**	**-3.4**
	4.2nm,0.1s						
KUU				*e*S	**Sg**	**03 09 17.2**	**+0.7**
	17nm,0.4s						
SATY	**Saty**	**6.16**	**39**	*e*P	**Pg**	**03 07 58.2**	**-2.9**
	3.0nm,0.3s						
SATY				*e*S	**Sg**	**03 09 22.6**	**+1.7**
	18nm,0.5s						
AB31	**Akbulak array**	**14.45**	**323**	P	**Pn**	**03 09 24.9**	**-2.7**
	1.1nm,0.7s,baz=135,slow=13,SNR=11						
AKTO	**Aktyubinsk**	**16.17**	**323**	⇓P	**P**	**03 09 54.2**	**+0.7**
	6.3nm,0.9s						

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*IDC **22** 03:08:27.1±2.8, 33°.91S×178°.81W, h0^{km}, mb4.3/2, mb1 4.6/3, mb1mx3.5/25, mbtmp4.4/3, ML4.3/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/22, Error ellipse: s-maj=67.6km s-min=35.0km az=122.0*

*NEIC **22** 03:08:28.9±1.3, 34°.00S±0°.08×178°.6W±0°.2, h19^{km}±8^{km}, mb4.5/6, Error ellipse: s-maj=20.1km s-min=8.5km az=117.0*

ISC 22 03:08:30.8±1.1, **33°.99S**±0°.10×**178°.6W**±0°.1, **h37^{km}, n20, σ0^{s}.67**/21, **mb4.3**/6, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.36**	**214**	Pn	**Pn**	**03 09 34.7**	**+0.2**
MXZ				Sn	**Sn**	**03 10 23.4**	**-0.7**
URZ	**Urewera**	**5.50**	**218**	Pn	**Pn**	**03 09 49.9**	**-0.2**
	9.4nm,0.3s,baz=298,slow=24,SNR=58						
URZ				Sn	**Sn**	**03 10 52.6**	**+0.6**
	12nm,0.3s,baz=304,slow=20,SNR=7.0						
URZ	**Urewera**	**5.50**	**218**	Pn	**Pn**	**03 09 50.1**	**0.0**
URZ				Sn	**Sn**	**03 10 53.4**	**+1.4**
BKZ	**Black Stump Fm**	**6.50**	**216**		**Pn**	**03 10 02.7**	**-1.3**
OUZ	**Omahuta**	**6.55**	**257**	Pn	**Pn**	**03 10 04.9**	**+0.2**
HIZ	**Hauiti**	**6.95**	**228**	Pn	**Pn**	**03 10 09.1**	**-1.0**
MSWZ	**Moikau Station**	**8.87**	**212**	Pn	**Pn**	**03 10 35.8**	**-0.6**
DZM	**Mont Dzumac**	**17.73**	**308**	LR	LR	03 18 27.1	
	comp=Z,118nm,18.5s,baz=262,slow=34						
ARMA	**Armidale**	**25.40**	**270**	P	**P**	**03 13 53.9**	**-1.0**
ARMA				IAmb	IAmb	03 14 04.0	
	comp=Z,15nm,1.1s						
STKA	**Stephens Creek**	**33.34**	**262**	LR	LR	03 28 09.0	
	comp=Z,63nm,18.4s,baz=37,slow=36						
AS31	**Alice Springs**	**42.54**	**271**	P	**P**	**03 16 23.5**	**+0.5**
ASAR	**Alice Springs**	**42.54**	**271**	P	**P**	**03 16 23.1**	**0.0**
	comp=Z,3.6nm,0.7s,baz=113,slow=7.3,SNR=38						
WB2	**Warramunga Arr**	**43.84**	**276**	P	**P**	**03 16 33.4**	**-0.2**
WRA	**Warramunga Arr**	**43.85**	**276**	P	**P**	**03 16 33.6**	**-0.1**
	comp=Z,2.6nm,0.5s,baz=117,slow=7.2,SNR=23						

WB0	Warramunga Arr	43.89	276	P	P	03 16 33.8	-0.2
WB0				IAmb	IAmb	03 16 38.3	
	comp=Z,5.8nm,0.8s						
VNDA	Vanda	44.48	186	P	P	03 16 38.4	+0.5
VNDA				IAmb	IAmb	03 16 47.8	
	comp=Z,4.4nm,1.4s						
QSPA	South Pole Qui	56.13	180	P	P	03 18 06.7	+0.3
QSPA				IAmb	IAmb	03 18 08.7	
	comp=Z,8.2nm,1.4s						
FINES	FINESS Array B	148.30	338	PKPbc	PKiKP	03 28 13.4	-0.4
	comp=Z,5.3nm,0.8s,baz=46,slow=3.9,SNR=13						
FINES	FINESS Array B	148.30	338		PKPbc	03 28 12.3	+0.1
CLL	Collm	160.75	337	ePKPab	PKPab	03 29 09.0	+0.5

*INET **22** 03:19:22.9, 11°.18N×85°.87W, h82^{km}, MW4.3*
*UCR **22** 03:19:23.3±1.4, 11°.05N×85°.90W, h82^{km}±4^{km}, MW4.1*
ISC 22 03:19:22.3±4.2**, 11°.2N**±0°.2×**86°.0W**±0°.2**, h76**^{km}±14^{km}**, n27, σ0^{s}87**/39**, 15D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	Horizontes, Gu	0.59	138	⇓iP	Pn	03 19 37.2	+0.6
HZTE				eS	Sn	03 19 48.2	+1.1
GBS3	Finca Las Img	0.65	125	⇓iP	Pn	03 19 37.1	-0.1
GBS3				i S	Sn	03 19 48.2	0.0
LAPC	Finca la Perla	0.68	125	⇓iP	Pn	03 19 37.3	-0.2
LAPC				i S	Sn	03 19 48.4	-0.3
BUEV	Buena Vista	0.68	122	⇓iP	Pn	03 19 37.5	-0.1
BUEV				i S	Sn	03 19 49.2	+0.3
BUAI	Buenos Aires	0.71	113	⇓iP	Pn	03 19 37.7	-0.1
BUAI				i S	Sn	03 19 49.6	+0.3
GPS3	Bodega del ICE	0.74	123	i P	Pn	03 19 38.1	-0.1
GUAB	Guayabo de Bag	0.88	121	i P	Pn	03 19 39.5	-0.2
HORNC	Hornillas	0.92	119	i P	Pn	03 19 40.2	-0.1
COLC	Colonia	0.92	122	⇓iP	Pn	03 19 40.0	-0.2
VMAR	Armenia, Volca	0.93	112	eP	Pn	03 19 40.2	-0.1
CUI	Cuipilapa	0.96	121	⇓iP	Pn	03 19 40.6	-0.1
GUAI	GUAI	1.00	152	⇓iP	Pn	03 19 41.7	+0.5
ACAL	Aguas Claras	1.08	119	i P	Pn	03 19 42.2	0.0
PTEN	Parque Tenorio	1.08	114	⇓iP	Pn	03 19 41.9	-0.3
SAJU	San Juanillo,	1.12	165	⇓iP	Pn	03 19 42.8	+0.2
SAJU				eS	Sn	03 19 56.8	-1.1
JTS	Las Juntas de	1.34	130	⇓iP	Pn	03 19 44.9	-0.6
JTS				eS	Sn	03 20 02.0	-0.8
INDI	Punta indio, G	1.37	159	⇓iP	Pn	03 19 45.9	0.0
INDI				eS	Sn	03 20 01.7	-1.8
ARE1	Arenal 1	1.43	119	eP	Pn	03 19 46.7	+0.1
COVE	Coope Vega, Sa	1.62	105	eP	Pn	03 19 48.3	-0.8
COVE				eS	Sn	03 20 08.3	-1.2
LAFE	Finca La Fe, P	1.71	141	⇓iP	Pn	03 19 50.2	-0.1
LAFE				eS	Sn	03 20 09.9	-1.7
SRA1	San Ramn	1.83	125	eP	Pn	03 19 52.3	+0.2
SRA1				eS	Sn	03 20 17.7	+3.1
HDC	Heredia	2.18	122	eP	Pn	03 19 56.6	-0.1
LCR2	La Lucha 2	2.41	126	⇓iP	Pn	03 19 59.3	-0.6
LCR2				eS	Sn	03 20 28.5	-0.1
RIMA	Rio Macho	2.51	123	eP	Pn	03 20 01.0	-0.2
PEZE	Perez Zeledon,	2.88	127	eP	Pn	03 20 07.5	+1.4
SRBA	San Rafael, Bu	3.22	126	eP	Pn	03 20 11.1	+0.3
PIRO	Carate, Puerto	3.79	136	⇓iP	Pn	03 20 19.7	+1.4

*FUNV **22** 03:37:04.3, 9°.97N×72°.38W, h51^{km}, MW3.4*
ISC 22 03:37:05.7±1.2**, 9°.94N**±0°.04×**72°.13W**±0°.04**, h29**^{km}±15^{km}**, n11, σ1^{s}92**/21**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRJC	Cerrejon, Guaj	1.30	325	eP	Pb	03 37 28.5	-1.1
CRJC				eS	Sb	03 37 45.5	-0.5
VIGV	El Vigia	1.33	145	eP	Pb	03 37 29.0	-1.0
VIGV				eS	Sb	03 37 45.6	-1.1
SDV	Santo Domingo	1.81	125	eP	Pn	03 37 35.7	+0.6
SDV				eS	Sb	03 37 58.7	-1.9
OCAC	Ocana	2.06	215	eP	Pb	03 37 42.3	-0.3
OCAC				eS	Sb	03 38 10.4	+2.5
CAPV	Capacho	2.07	185	eP	Pn	03 37 36.7	-2.1
CAPV				eS	Sn	03 38 00.5	-3.1
SOCV	Socops	2.07	143	eP	Pb	03 37 45.6	+3.0
SOCV				eS	Sb	03 38 06.6	-1.4
SOCV	Socops	2.07	143	eP	Pn	03 37 39.1	+0.5
SOCV				eS	Sn	03 38 03.9	+0.6
CURV	Curarigua	2.13	88	eP	Pn	03 37 40.7	+1.3
CURV				eS	Sn	03 38 07.3	+2.2
SMLC	San Martn de	2.23	240	eP	Pb	03 37 45.8	+0.4
SMLC				eS	Sb	03 38 16.1	+3.6
SANV	Sanarito	2.59	99	eP	Pn	03 37 46.4	+0.6
BAUV	El Baul	4.15	103	eP	Pn	03 38 06.7	-0.5
BAUV				eS	Sn	03 38 53.1	-1.6

IDC 22 03:48:48.1±48.0**, 24°.44S**×**176°.78W, h0**^{km}**, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.7**/26**, mbtmp4.2**/3**, Error ellipse: s-maj=878.5km s-min=176.5km az=89.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.27	249	P	P	03 56 02.9	+1.1
	0.5nm,0.4s,baz=90,slow=12,SNR=3.5						
ASAR	Alice Springs	44.85	260	P	P	03 57 03.8	-0.7
	3.1nm,0.5s,baz=95,slow=8.0,SNR=36						
WRA	Warramunga Arr	45.30	266	P	P	03 57 07.8	-0.3
	3.3nm,0.6s,baz=107,slow=8.1,SNR=42						

*NEIC **22** 03:49:06.0±1.4, 55°.9S±0°.1×28°.1W±0°.2, h112^{km}±6^{km}, mb4.5/10, Error ellipse: s-maj=17.3km s-min=13.1km az=205.0*
*IDC **22** 03:49:07.6±7.1, 55°.89S×27°.92W, h127^{km}±65^{km}, mb4.0/7, mb1 4.1/8, mb1mx3.7/23, mbtmp4.4/8, Error ellipse: s-maj=25.5km s-min=20.1km az=88.0*
ISC 22 03:49:06.5±0.6**, 55°.87S**±0°.10×**28°.22W**±0°.08**, h121**^{km}**, n32, σ0^{s}89**/34**, mb4.3**/8**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.01	285	Pn	Pn	03 50 19.6	+0.2
HOPE				Sn	Sn	03 51 13.7	-2.5
VNA1	Neumayer--Stat	17.19	157	P	P	03 52 57.8	-0.6
VNA3	Neumayer Olymp	17.36	160	P	P	03 52 59.4	-0.9
VNA2	Neumayer--Watz	17.58	157	P	P	03 53 02.2	-0.6
	baz=316,slow=13						
SNAA	Sanae	19.15	156	P	P	03 53 19.0	-0.9
SNAA	Sanae	19.15	156	P	P	03 53 19.0	-0.9
	5.1nm,0.3s,baz=314,slow=12,SNR=387						
SNAA	Sanae	19.15	156	P	P	03 53 19.0	-0.9
SNAA				IAmb	IAmb	03 53 20.0	
	comp=Z,16nm,0.5s						
PMSA	Palmer Station	19.59	228	P	P	03 53 25.0	+0.4
PMSA				IAmb	IAmb	03 53 33.9	
	comp=Z,54nm,1.2s						
QSPA	South Pole Qui	34.38	180	P	P	03 55 42.3	+0.7
MT02	Curacav	37.18	289	P	P	03 56 05.5	-0.1
MAW	Mawson	40.64	144	P	P	03 56 33.7	-0.2
	comp=Z,1.8nm,0.5s,baz=224,slow=8.2,SNR=2.2						
MAW	Mawson	40.64	144	P	P	03 56 33.8	-0.1
BOSA	Boshof	46.49	77	P	P	03 57 20.0	-1.5
	comp=Z,1.8nm,0.6s,baz=226,slow=6.6,SNR=3.6						
BOSA	Boshof	46.49	77	P	P	03 57 19.9	-1.6
BOSA				IAmb	IAmb	03 57 38.9	
	comp=Z,22nm,1.4s						
VNDA	Vanda	46.73	183	P	P	03 57 23.4	+0.9
	comp=Z,6.6nm,0.7s,baz=187,slow=6.7,SNR=52						
VNDA	Vanda	46.73	183	P	P	03 57 22.9	+0.4
VNDA				IAmb	IAmb	03 57 24.3	
	comp=Z,7.0nm,0.8s						
LPAZ	La Paz	49.80	306	P	P	03 57 49.0	+1.5
	comp=Z,1.1nm,0.4s,baz=164,slow=7.4,SNR=10						
LPAZ	La Paz	49.80	306	P	P	03 57 48.5	+1.0
LPAZ				IAmb	IAmb	03 57 53.0	
	comp=Z,2.0nm,0.8s						
LIC	Lamto	64.78	26	eP	P	03 59 31.8	-0.1
	comp=Z,12nm,0.7s						
KIC	Kosan Boka	64.98	26	eP	P	03 59 33.7	+0.5
	comp=Z,8.3nm,0.8s						
TIC	Toumodi	65.18	26	eP	P	03 59 34.1	-0.5
DBIC	Dimbokro	65.25	26	P	P	03 59 35.4	+0.5
	comp=Z,2.4nm,0.6s,baz=194,slow=9.4,SNR=4.9						
DBIC	Dimbokro	65.25	26	P	P	03 59 35.2	+0.2
DBIC				IAmb	IAmb	03 59 35.8	
	comp=Z,2.7nm,0.7s						
TORD	Torodi Ar. Bea	73.19	30	P	P	04 00 24.5	+0.6
	comp=Z,3.9nm,0.6s,baz=201,slow=6.5,SNR=35						
TORD	Torodi Ar. Bea	73.19	30	P	P	04 00 24.4	+0.6
ASAR	Alice Springs	99.33	163	P	Pdif	04 02 34.1	-0.8
	comp=Z,0.9nm,1.0s,baz=186,slow=6.3,SNR=4.4						
FINES	FINESS Array B	124.49	28	PKP	PKPdf	04 07 49.3	-0.4
	comp=Z,2.4nm,0.8s,baz=149,slow=4.4,SNR=5.0						
YKA	Yellowknife Ar	135.65	318	PKP	PKPdf	04 08 10.6	-0.3
	comp=Z,0.3nm,0.5s,baz=132,slow=2.2,SNR=17						
YKA	Yellowknife Ar	135.65	318		PKPdf	04 08 10.8	-0.1
ZALV	Zalesovo Beam	142.81	64	PKP	PKPdf	04 08 25.4	+1.3
	comp=Z,0.8nm,0.5s,baz=223,slow=4.8,SNR=4.2						
ILAR	Eielson Array	149.56	312	PKPbc	PKPbc	04 08 40.0	0.0
	comp=Z,1.2nm,0.7s,baz=136,slow=2.2,SNR=14						
ILAR				pPKPbc	pPKPbc	04 09 11.1	-0.7
	comp=Z,0.7nm,0.8s,baz=187,slow=2.7,SNR=3.1						
ILAR	Eielson Array	149.56	312	PKPbc	PKPbc	04 08 40.4	+0.3

*IDC **22** 04:17:13.6±8.6, 55°.24N×110°.68E, h0^{km}, mb1 3.2/3, mb1mx3.0/39, mbtmp3.2/3, ML2.9/3, Error ellipse: s-maj=109.6km s-min=40.0km az=80.0*
*BYKL **22** 04:17:14.9±0.1, 55°.33N×110°.45E*
ISC 22 04:17:13.9±1.2**, 55°.41N**±0°.02×**110°.57E**±0°.03**, h1**^{km}±10^{km}**, n33, σ2^{s}91**/78**, 4C, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMO	Kumora	0.59	37	ePg	Pb	04 17 27.5	+0.4
KMO				eSg	Sb	04 17 37.2	+1.2
KMO				Pmax			
	145nm,0.3s						
KMO				Smax			
	1µm,0.9s						
YLYR	Ulyunkhan	0.64	147	⇑iPg	Pg	04 17 25.8	-0.3
YLYR				eSg	Sg	04 17 34.7	+0.4
YLYR				Pmax			
	310nm,0.4s						
YLYR				Smax			
	675nm,0.1s						
NIZ	Nizh Angarsk	0.69	302	⇑iPg	Pg	04 17 27.5	+0.5
NIZ				eSg	Sb	04 17 37.2	-1.4
NIZ				Pmax			
	231nm,0.6s						
NIZ				Smax			
	785nm,0.4s						
YOA	Uoyan	0.97	42	ePg	Pn	04 17 34.8	+0.1
YOA				eSg	Sn	04 17 49.5	+0.4
YOA				Pmax			
	227nm,0.2s						
YOA				Smax			
	2µm,0.8s						
UKT	Uakit	1.74	86	⇑iPg	Pb	04 17 47.0	+0.3
UKT				eSg	Sg	04 18 11.0	+1.1
UKT				Pmax			
	136nm,0.8s						
UKT				Smax			
	374nm,0.6s						
SYVR	Suvo	1.79	191	⇑iPg	Pn	04 17 45.2	-0.7
SYVR				eSg	Sn	04 18 08.6	-0.7
SYVR				Pmax			
	125nm,0.6s						
SYVR				Smax			
	499nm,0.8s						
SVKR	Severomuysk	1.83	66	ePn	Pb	04 17 48.7	+0.5
SVKR				ePg	Pg	04 17 50.3	+1.3
SVKR				e		04 17 54.1	
SVKR				eSg	Sg	04 18 15.2	+2.5
SVKR				max			
	177nm,0.5s						
SVKR				Smax			
	816nm,0.7s						
OGRR	Ongureny	2.48	226	ePg	Pn	04 17 57.1	+1.7
OGRR				eSg	Sb	04 18 28.8	-1.4
OGRR				Pmax			
	17nm,0.3s						
OGRR				Smax			
	195nm,0.5s						
KELR	Kotokel	3.04	210	ePn	Pn	04 18 02.0	-1.0
KELR				ePg	Pb	04 18 07.8	-0.9
KELR				eSg	Sb	04 18 46.1	-0.1
BOD	Bodaibo	3.07	37	ePn	Pn	04 18 04.0	+0.5
BOD				ePg	Pg	04 18 11.3	-1.4
BOD				eSn	Sn	04 18 41.5	+0.7
BOD				eSg	Sg	04 18 52.5	+0.1
BOD				Pmax			
	9.0nm,0.3s						
BOD				Smax			
	167nm,1.0s						
NLYR	Nelyaty	3.08	67	ePn	Pn	04 18 05.2	+1.5
NLYR				e		04 18 10.5	
NLYR				ePg	Pg	04 18 12.9	0.0
NLYR				eSn	Sn	04 18 42.2	+1.0
NLYR				eSg	Sg	04 18 53.7	+0.8
NLYR				Pmax			
	50nm,0.9s						
NLYR				Smax			
	186nm,0.8s						
TRG	Tyrgan	3.64	225	ePn	Pn	04 18 10.4	-0.9
TRG				ePg	Pb	04 18 18.2	-0.8
TRG				eSn	Sn	04 18 50.7	-4.2
TRG				eSg	Sb	04 19 04.1	+0.5
TRG				Pmax			
	10.0nm,0.4s						
TRG				Smax			
	137nm,1.1s						
UUDB	Ulan-Yde	3.95	207	ePg	Pb	04 18 24.2	-0.1
UUDB				eSg	Sb	04 19 14.4	+1.9
UUDB				Pmax			
	13nm,0.6s						
UUDB				Smax			
	125nm,1.0s						
FFNB	Fofonovo	4.06	215	ePg	Pb	04 18 26.4	+0.3
FFNB				eSg	Sb	04 19 17.6	+2.0
VTMR	Vitim	4.18	14	eSg	Sg	04 19 26.9	-1.1
HRMR	Khuramsha	4.36	211	ePn	Pn	04 18 20.2	-1.1
HRMR				ePg	Pb	04 18 31.7	+0.4
HRMR				eSn	Sn	04 19 08.6	-4.1
HRMR				eSg	Sb	04 19 26.4	+2.0
HRMR				Pmax			
	27nm,0.5s						
HRMR				Smax			
	299nm,0.5s						
CRS	Chara	4.56	68	ePn	Pn	04 18 24.3	+0.4
CRS				ePg	Pg	04 18 39.1	-2.0
CRS				eSg	Sg	04 19 38.7	-1.4
CRS				Pmax			
	34nm,1.0s						
CRS				Smax			
	110nm,1.9s						
BGT	Bolshoye Golou	4.56	224	eSg	Sb	04 19 31.9	+1.9
BGT				Smax			
	77nm,0.8s						
LSTR	Listvyanka	4.92	226	ePg	Pb	04 18 41.1	+0.2
LSTR				eSg	Sb	04 19 43.3	+2.8
LSTR				Pmax			
	1.0nm,0.2s						
LSTR				Smax			
	46nm,1.4s						
IVK	Ivanovka	5.15	228	ePn	Pn	04 18 32.4	+0.4
IVK				ePg	Pb	04 18 45.6	+0.9
IVK				eSn	Sn	04 19 28.3	-3.8
IVK				eSg	Sb	04 19 51.5	+4.5
IVK				Pmax			
	4.0nm,0.2s						
IVK				Smax			
	73nm,1.6s						
KHNR	Khani	5.47	70	ePn	Pn	04 18 39.3	+2.8
KHNR				ePg	Pg	04 18 55.1	-3.6
KHNR				eSg	Sg	04 20 06.3	-3.2
TUP	Tupik	5.50	96	ePn	Pn	04 18 37.6	+0.7
TUP				e		04 18 46.1	
TUP				ePg	Pb	04 18 54.9	+4.2
TUP				e		04 18 58.7	
TUP				eSg	Sg	04 20 07.1	-3.4
TUP				max			
	7.0nm,0.7s						
TUP				Smax			
	132nm,0.9s						
TLY	Talaya	5.57	231	eSg	Sb	04 20 04.4	+5.4
TLY				Smax			
	53nm,1.1s						
KPC	Khapcheranga	5.82	168	ePn	Pn	04 18 40.1	-1.3
KPC				ePg	Pb	04 18 59.4	+3.2
KPC				eSn	Sn	04 19 46.0	-2.8
KPC				eSg	Sb	04 20 13.5	+7.0
KPC				Pmax			
	11nm,1.1s						
KPC				Smax			
	73nm,1.2s						
ARS	Arshan	5.97	237	ePn	Pn	04 18 43.6	+0.2
ARS				ePg	Pb	04 19 00.0	+1.3
ARS				eSn	Sn	04 19 47.1	-5.3
ARS				eSg	Sb	04 20 16.1	+5.4
ARS				Pmax			
	21nm,0.6s						
ARS				Smax			
	125nm,0.8s						
YKLR	Yuktali	6.33	75	eSg	Sg	04 20 32.6	-4.5
ZAK	Zakamensk	6.69	224	eSg	Sb	04 20 39.9	+8.4
ZAK				Smax			
	59nm,1.2s						
MOY	Mondy	6.83	241	ePn	Pn	04 18 56.2	+1.0
MOY				e		04 20 10.3	
MOY				eSg	Sb	04 20 43.4	+8.1
MOY				max			
	21nm,1.7s						
MOY				Smax			
	71nm,1.4s						
ORL	Orlik	6.97	250	ePn	Pn	04 18 57.2	+0.1
ORL				eSn	Sn	04 20 12.6	-4.4
ORL				eSg	Sb	04 20 47.3	+8.0
ORL				max			
	17nm,1.2s						
ORL				Smax			
	48nm,1.5s						
SONM	Songino Array	8.02	201	Pn	Pn	04 19 09.6	-2.0
	0.3nm,0.3s,baz=22,slow=18,SNR=5.8						
SONM				Lg	Lg	04 21 23.7	
	1.5nm,0.3s,baz=20,slow=32,SNR=14						
IENR	Iengra	8.09	78	ePn	Pn	04 19 13.8	+1.4
IENR				ePg	Pb	04 19 42.0	+7.2
IENR				eSg	Sg	04 21 27.7	-5.8
ZALV	Zalesovo Beam	14.94	275	Pn	Pn	04 20 45.4	-0.5
	0.1nm,0.3s,baz=72,slow=9.3,SNR=4.0						
MKAR	Makanchi Array	19.62	256	P	Pn	04 21 44.2	-0.7
	0.1nm,0.3s,baz=56,slow=11,SNR=2.4						

*ATH **22** 04:35:29.8, 37°.59N×19°.67E, h10^{km}±2^{km}, ML3.0/15, Error ellipse: s-maj=3.4km s-min=2.3km az=89.0*
*IDC **22** 04:35:30.9±1.6, 37°.53N×20°.30E, h0^{km}, mb3.6/3, mb1 3.6/3, mb1mx3.0/52, mbtmp3.6/3, Error ellipse: s-maj=74.9km s-min=29.0km az=127.0*
*THE **22** 04:35:34.3, 37°.70N×19°.80E, h10^{km}, ML3.2/9, Error ellipse: s-maj=1.8km s-min=0.9km az=95.0*
ISC 22 04:35:30.2±1.5**, 37°.63N**±0°.04×**19°.66E**±0°.04**, h11**^{km}±9^{km}**, n73, σ2^{s}04**/101**, mb3.5**/3**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.79	43	P	Pn	04 35 47.7	+0.4
KEF3				S	Sb	04 35 56.0	-0.7
	5µm,0.4s						
KEF3	Kipouria, Keph	0.79	43	P	Pg	04 35 45.7	+0.3
LXRA	Lixouri, Kepha	0.84	47	P	Pg	04 35 46.3	0.0
LXRA				S	Sn	04 35 58.9	-1.4
ARGA	Argostoli. Kep	0.85	50	P	Pb	04 35 47.1	+0.2
KEF4	Livadi, Kephal	0.87	44	P	Pn	04 35 48.4	0.0
KEF4				S	Sb	04 35 58.9	-0.1
	8µm,0.4s						
KEF4	Livadi, Kephal	0.87	44	P	Pg	04 35 46.5	-0.5
PSDA	Pessada-Kefalo	0.88	56	P	Pn	04 35 48.4	-0.1
PSDA				S	Sn	04 35 59.6	-1.7
	188nm,0.3s						
PSDA	Pessada-Kefalo	0.88	56	P	Pg	04 35 46.1	-1.0
PSDA				S	Sn	04 35 59.5	-1.7
VLS	Valsamata	0.92	53	P	Pb	04 35 48.4	+0.3
VLS				S	Sn	04 36 01.3	-1.0
	2µm,0.4s						
VLS	Valsamata	0.92	53	P	Pg	04 35 46.7	-1.1
VLS				S	Sb	04 35 59.3	-1.1
VLS				AML	AML	04 36 01.6	
	comp=E,3037µm,0.5s						
VLS				AML	AML	04 36 03.0	
	comp=N,4345µm,0.4s						
LTHK	Lithakia	0.94	85	P	Pn	04 35 48.9	-0.4
LTHK				S	Sn	04 36 02.1	-0.7
	comp=N,2µm,0.5s						
LTHK	Lithakia	0.94	85	P	Pb	04 35 47.2	-1.2
LTHK				AML	AML	04 36 02.3	
	comp=N,6227µm,0.6s						
LTHK				AML	AML	04 36 07.4	
	comp=E,3078µm,0.5s						
FSK	Fiskardo	1.09	41	P	Pg	04 35 50.4	-0.8
FSK				S	Sb	04 36 05.8	+0.4
FSK				AML	AML	04 36 07.5	
	comp=N,1456µm,0.5s						
FSK				AML	AML	04 36 07.6	
	comp=E,1818µm,0.5s						
EVGI	Lefkada island	1.26	38	P	Pg	04 35 55.2	+0.8
EVGI				S	Sn	04 36 12.4	+1.6
	comp=E,770nm,0.3s						
EVGI	Lefkada island	1.26	38	P	Pn	04 35 53.4	-0.5
EVGI				S	Sb	04 36 10.5	+0.2
DRAG	Dragano-Lefkad	1.27	34	P	Pg	04 35 55.5	+0.8
DRAG				S	Sn	04 36 12.1	+1.0
	comp=E,2µm,0.4s						
DRAG	Dragano-Lefkad	1.27	34	P	Pn	04 35 54.5	+0.5
NYDR	Nydri-Lefkada	1.35	37	P	Pg	04 35 56.7	+0.5
NYDR				S	Sg	04 36 13.9	+0.1
NYDR	Nydri-Lefkada	1.35	37	P	Pb	04 35 56.2	+0.6
LKD2	Lefkada island	1.40	34	P	Pg	04 35 57.5	+0.5
LKD2				S	Sg	04 36 15.2	0.0
	comp=E,482nm,0.5s						
LKD2	Lefkada island	1.40	34	P	Pn	04 35 56.4	+0.7
LKD2				S	Sb	04 36 14.0	-0.3
LKD2				AML	AML	04 36 24.0	
	comp=N,1170µm,0.5s						
LKD2				AML	AML	04 36 26.3	
	comp=E,745µm,0.6s						
TSLK	Tsoukalades, L	1.43	33	P	Pg	04 35 58.2	+0.6
TSLK	Tsoukalades, L	1.43	33	P	Pb	04 35 57.2	+0.3
TSLK				AML	AML	04 36 19.9	
	comp=N,1258µm,0.4s						
TSLK				AML	AML	04 36 24.3	
	comp=E,1499µm,0.8s						
RLS	Riolos of Patr	1.49	73	P	Pg	04 35 58.5	-0.3
RLS				S	Sg	04 36 17.3	-0.9
	comp=E,245nm,0.9s						
RLS	Riolos of Patr	1.49	73	P	Pb	04 35 57.1	-0.8
RLS				AML	AML	04 36 23.8	
	comp=E,466µm,0.5s						
RLS				AML	AML	04 36 29.8	
	comp=N,520µm,0.5s						
DRO	Drossia	1.66	78	P	Pg	04 36 00.4	-1.5
DRO	Drossia	1.66	78	P	Pg	04 36 00.4	-1.5
DRO				AML	AML	04 36 34.0	
	comp=E,1172µm,0.5s						
DRO				AML	AML	04 36 37.8	
	comp=N,1338µm,0.5s						
ITM	Ithomi	1.86	103	P	Pb	04 36 02.7	-1.5
ITM				AML	AML	04 36 45.4	
	comp=N,255µm,0.6s						
ITM				AML	AML	04 36 48.6	
	comp=E,331µm,0.5s						
LAKA	Lakka	1.93	71	P	Pb	04 36 04.8	-0.6
EFP	Efpalio	1.94	65	P	Pb	04 36 04.9	-0.7
EFP	Efpalio	1.94	65	P	Pb	04 36 04.8	-0.9
EFP				AML	AML	04 36 42.4	
	comp=E,305µm,0.4s						
EFP				AML	AML	04 36 45.1	
	comp=N,416µm,0.4s						
KLV	Kalavryta, Ach	2.01	77	P	Pb	04 36 05.8	-1.0
KLV	Kalavryta, Ach	2.01	77	P	Pb	04 36 05.9	-1.0
KLV				AML	AML	04 36 45.7	
	comp=E,247µm,0.8s						
KLV				AML	AML	04 36 51.2	
	comp=N,218µm,1.2s						
ANX	Ano Chora	2.03	61	P	Pb	04 36 06.5	-0.6
ANX	Ano Chora	2.03	61	P	Pb	04 36 06.5	-0.6
ANX				AML	AML	04 36 44.1	
	comp=N,839µm,0.6s						
ANX				AML	AML	04 36 48.1	
	comp=E,594µm,0.6s						
ALIK	Aliki, Aigiali	2.04	71	P	Pb	04 36 06.8	-0.4
TRIZ	Trizonia	2.04	68	P	Pb	04 36 06.3	-1.0
TRIZ	Trizonia	2.04	68	P	Pb	04 36 06.2	-1.0

SERG	Sergoula	2.05	67	P	Pb	04 36 06.5	-1.0
SERG				AML	AML	04 36 41.5	
	comp=E,392μm,0.4s						
SERG				AML	AML	04 36 47.4	
	comp=N,487μm,0.4s						
KEK	Kerkira	2.08	3	P	Pn	04 36 07.0	+1.9
EVR	Evrytania	2.12	52	P	Pb	04 36 08.3	-0.5
EVR	Evrytania	2.12	52	P	Pb	04 36 08.5	-0.3
EVR				AML	AML	04 36 51.6	
	comp=N,275μm,1.0s						
EVR				AML	AML	04 36 52.1	
	comp=E,258μm,0.8s						
MAKR	Makrakomi, Fth	2.38	54	P	Pb	04 36 11.9	-1.2
AGG	Agios Georgios	2.52	56	P	Pn	04 36 13.1	+2.0
AGG	Agios Georgios	2.52	56	P	Pn	04 36 13.0	+2.0
AGG				AML	AML	04 37 02.9	
	comp=N,222μm,0.8s						
AGG				AML	AML	04 37 07.8	
	comp=E,268μm,1.2s						
THL	Klokotos Trika	2.67	43	P	Pn	04 36 15.7	+2.5
KPRO	Kipourio	2.67	29	P	Pb	04 36 16.9	-1.2
KPRO	Kipourio	2.67	29	P	Pb	04 36 16.9	-1.2
KPRO				AML	AML	04 37 09.1	
	comp=N,268μm,0.9s						
KPRO				AML	AML	04 37 24.8	
	comp=E,184μm,1.1s						
TIP	Timpagrande	2.75	305	P	Pn	04 36 17.7	+3.4
VLI	Veliai	2.77	108	P	Pb	04 36 17.2	-2.6
BARS	Barje	5.43	17	*e*Pn	Pn	04 36 53.3	+2.1
STON	Ston	5.44	345	*e*Pn	Pn	04 36 52.3	+1.1
STON				Sn	Sn	04 37 50.3	-3.6
LSTV	Lastovo	5.55	338	*e*Pn	Pn	04 36 53.7	+1.0
LSTV				Sn	Sn	04 37 51.6	-5.0
SJES	Sjenica	5.63	2	*e*Pn	Pn	04 36 57.3	+3.4
SELS	Selova	5.69	11	*e*Pn	Pn	04 36 55.7	+1.0
IVAS	Ivanjica	5.95	3	*e*Pn	Pn	04 36 59.4	+1.1
MAKA	Makarska	6.00	341	*e*Pn	Pn	04 37 00.4	+1.5
MAKA				Sn	Sn	04 38 03.7	-3.8
HVAR	Hvar	6.06	337	*e*Pn	Pn	04 36 59.8	0.0
HVAR				Sn	Sn	04 38 04.0	-5.1
RICI	Ricice	6.16	343	*e*Pn	Pn	04 37 01.5	+0.3
RICI				Sn	Sn	04 38 08.4	-3.3
GRUS	Gruza	6.30	7	*e*Pn	Pn	04 37 02.2	-0.9
DIVS	Divibare	6.46	2	*e*Pn	Pn	04 37 07.0	+1.6
TRUS	Trudelj	6.61	5	*e*Pn	Pn	04 37 08.6	+1.3
ZIRJ	Zirje	6.75	334	*e*Pn	Pn	04 37 09.6	+0.5
ZIRJ				Sn	Sn	04 38 20.9	-5.0
KIJV	Kijevo	6.83	340	*e*Pn	Pn	04 37 11.8	+1.5
KIJV				Sn	Sn	04 38 24.2	-3.9
MORI	Morici	6.91	336	*e*Pn	Pn	04 37 12.5	+1.1
MORI				Sn	Sn	04 38 25.4	-4.7
DUGI	Dugi Otok	7.25	333	*e*Pn	Pn	04 37 17.6	+1.6
DUGI				Sn	Sn	04 38 32.5	-5.9
UDBI	Udbina	7.49	338	*e*Pn	Pn	04 37 20.2	+0.8
UDBI				Sn	Sn	04 38 39.5	-4.9
NVLJ	Novalja	7.81	334	*e*Pn	Pn	04 37 24.6	+0.9
NVLJ				Sn	Sn	04 38 47.1	-5.1
PLIT	Plitvice	7.85	339	*e*Pn	Pn	04 37 26.2	+1.8
PLIT				Sn	Sn	04 38 48.1	-5.2
SMRN	Sveta Marina	8.47	333	*e*Pn	Pn	04 37 32.9	+0.1
SMRN				Sn	Sn	04 39 02.9	-5.6
FINES	FINESS Array B	24.17	8	P	P	04 40 49.0	+2.7
	comp=E,2.8nm,0.9s,baz=179,slow=9.7,SNR=1.6						
TORD	Torodi Ar. Bea	29.18	218	P	P	04 41 36.1	+4.4
	comp=E,0.4nm,0.8s,baz=37,slow=9.3,SNR=4.4						
MKAR	Makanchi Array	46.17	58	P	P	04 43 54.3	-0.6
	comp=E,0.2nm,0.4s,baz=278,slow=8.7,SNR=6.2						

IDC ***22*** *04:43:44.5±0.7, 8°.12S×120°.32E, h0^{km}, mb4.0/8, mb1 4.1/12, mb1mx3.8/58, mbtmp4.0/12, ML3.7/4, MS3.1/7, Ms1 3.1/7, ms1mx2.8/51, Error ellipse: s-maj=40.6km s-min=13.9km az=61.0*

DJA ***22*** *04:43:47.2±0.3, 8°S±3°×12°1E±°, h10^{km}, M5.0/12, mb6.5/1, MLv4.2/12*

ISC 22 04:43:49.4±0.6, **8°.02S**±0°.04×**120°.52E**±0°.05, **h33^{km}, n29, σ1^s.95**/31, **mb4.1**/7, **MS3.1**/4, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	Ende, Flores	1.37	122	P	Pn	04 44 11.8	-0.5
EDFI				S	Sn	04 44 28.2	-1.1
MMRI	Maumere	1.81	110	P	Pn	04 44 18.4	+0.2
BSSI	Bau Bau, Buton	1.87	359	P	Pn	04 44 18.3	-0.8
WBSI	Waikabubak, Su	1.96	215	P	Pn	04 44 21.2	+0.9
BASI	Baing, Sumba	2.18	178	P	Pn	04 44 25.1	+1.7
BKSI	Bulukumba	2.71	352	P	Pn	04 44 30.8	+0.1
PLAI	Plampang	2.83	253	P	Pn	04 44 32.3	0.0
KAPI	Kappang	3.08	346	Pn	Pn	04 44 36.0	+0.2
	31nm,0.3s,baz=171,slow=11,SNR=187						
KAPI				Sn	Sn	04 45 09.1	-2.5
	11nm,0.3s,baz=231,slow=20,SNR=1.7						
KAPI				LR	LR	04 46 15.3	
	comp=Z,286nm,18.9s,baz=178,slow=48						
BNSI	Bone	3.62	353	P	Pn	04 44 43.1	-0.1
TWSI	Taliwang, Sumb	3.67	259	P	Pn	04 44 44.1	+0.3
BATI	Baumata	3.79	125	Pn	Pn	04 44 46.5	+1.0
	4.9nm,0.3s,baz=8.2,slow=15,SNR=1.5						
SOEI	Soe	4.08	115	P	Pb	04 45 04.8	+4.1
SPSI	Sidrap Palu	4.10	349	P	Pn	04 44 50.9	+1.1
TTSI	Tana Toraja	4.99	352	P	Pn	04 45 03.1	+1.0
IGBI	Denpasar	5.37	261	P	Pb	04 45 23.2	+0.6
FITZ	Fitzroy Crossi	11.19	154	Pn	Pn	04 46 27.2	+0.1
	0.1nm,0.3s,baz=324,slow=12,SNR=1.2						
FITZ				Sn	Sn	04 48 23.2	-7.9
	0.2nm,0.3s,baz=310,slow=17,SNR=1.9						
LEM	Lembang	12.85	274	LR	LR	04 53 32.7	
	comp=Z,98nm,18.5s,baz=200,slow=46						
WRA	Warramunga Arr	17.88	133	P	Pn	04 47 55.2	-0.5
	0.3nm,0.3s,baz=295,slow=12,SNR=17						
WRA				LR	LR	04 56 08.4	
	comp=Z,61nm,21.2s,baz=350,slow=41						
ASAR	Alice Springs	20.16	142	P	P	04 48 21.1	-0.1
	2.3nm,0.6s,baz=311,slow=9.4,SNR=22						
ASAR				PcP	PcP	04 52 34.1	-1.2
	0.7nm,0.6s,baz=321,slow=1.9,SNR=6.1						
ASAR				LR	LR	04 55 59.1	
	comp=Z,40nm,20.1s,baz=312,slow=36						
PSI	Prapat	24.07	296	P	P	04 49 01.1	-1.0
	2.1nm,0.4s,baz=153,slow=16,SNR=2.5						
PSI				LR	LR	04 58 23.1	
	comp=Z,62nm,20.0s,baz=100,slow=37						
STKA	Stephens Creek	30.79	143	P	P	04 50 02.5	+0.4
	2.5nm,0.7s,baz=320,slow=9.6,SNR=5.4						
STKA				LR	LR	05 04 53.4	
	comp=Z,38nm,19.8s,baz=10,slow=41						
USRK	Ussuriysk Ar.	53.01	10	P	P	04 53 03.8	+0.9
	1.6nm,0.6s,baz=176,slow=21,SNR=1.6						
SONM	Songino Array	57.00	349	P	P	04 53 33.3	+1.4
	1.0nm,0.7s,baz=158,slow=8.7,SNR=7.6						
MKAR	Makanchi Array	64.29	332	P	P	04 54 22.0	+0.4
	1.7nm,0.6s,baz=145,slow=7.7,SNR=17						
ZALV	Zalesovo Beam	68.68	338	P	P	04 54 49.2	-0.2
	2.4nm,0.5s,baz=139,slow=5.1,SNR=13						
VNDA	Vanda	72.72	171	P	P	04 55 14.2	+0.6
	1.0nm,0.8s,baz=314,slow=9.1,SNR=6.5						
OBN	Obninsk	93.07	325	LR	LR	05 43 01.5	
	comp=Z,8.1nm,19.8s,baz=164,slow=38						
TORD	Torodi Ar. Bea	119.77	281	PKP	PKPdf	05 02 34.9	-2.3
	0.2nm,0.5s,baz=90,slow=1.3,SNR=1.3						
LPAZ	La Paz	154.37	160	PKPab	PKPab	05 04 02.4	+0.2
	0.9nm,0.6s,baz=168,slow=8.7,SNR=7.1						

IDC ***22*** *04:46:17.6±1.2, 43°.05N×142°.96E, h185^{km}±5^{km}, mb3.2/11, mb1 3.3/13, mb1mx3.1/74, mbtmp3.7/13, MS3.0/2, Ms1 3.0/2, ms1mx2.4/24, Error ellipse: s-maj=20.6km s-min=16.4km az=143.0*

JMA ***22*** *04:46:22.6±0.2, 43°.71N×142°.82E, h196^{km}±2^{km}, M3.0*

ISC 22 04:46:22.1±0.7, **43°.67N**±0°.05×**142°.82E**±0°.05, **h198^{km}**±5^{km}, **n35, σ0^s.78**/45, **mb3.3**/11, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKK2	Kamakawa 2	0.21	346	P	Pn	04 46 48.7	+0.5
JKK2				*e*S	S	04 47 08.0	-0.6
JAB	Ashibetsu	0.46	249	P	Pn	04 46 49.7	+0.8
JAB				*e*S	S	04 47 09.7	+0.2
ASAJ	Asahikawa	0.48	341	P	Pn	04 46 48.4	-0.5
	38nm,0.3s,baz=210,slow=4.2,SNR=150						
ASAJ				S	S	04 47 08.9	-0.9
	5.0nm,0.3s,baz=85,slow=28,SNR=18						
ASAJ	Asahikawa	0.48	341	P	Pn	04 46 49.3	+0.4
ASAJ				*e*S	S	04 47 09.3	-0.5
JMP	Maruseppu	0.52	49	P	Pn	04 46 49.5	+0.4
JMP				*e*S	S	04 47 09.6	-0.5
JFR	Furan	0.53	198	P	Pn	04 46 49.8	+0.6
JAR	Ashorobuto	0.79	118	P	Pn	04 46 51.0	+0.6
JAR				*e*S	S	04 47 12.4	+0.3
JHR	Hokuryu	0.80	276	P	Pn	04 46 50.9	+0.5
JHR				*e*S	S	04 47 11.9	-0.3
JTKR	Abashiri--Toko	0.85	69	P	Pn	04 46 51.3	+0.7
JTKR				*e*S	S	04 47 12.7	-0.1
JCH	Churui	1.13	159	P	Pn	04 46 52.4	-0.2
JCH				*e*S	S	04 47 14.9	-1.2
JYG	Yagishiri	1.26	308	P	Pn	04 46 53.2	-0.3
JEW	Eniwo	1.30	231	P	Pn	04 46 54.8	+0.9
JEW				*e*S	S	04 47 18.4	-0.1
JSE	Soyaes	1.30	353	P	Pn	04 46 53.7	-0.2
JNBK	Urakawa-nobuka	1.39	182	P	Pn	04 46 55.3	+0.6
JAK	Akkeshi	1.53	115	P	Pn	04 46 55.7	-0.2
JAK				*e*S	S	04 47 21.1	-0.9
JWK2	Keihoku	1.77	339	P	Pn	04 46 58.2	+0.1
NEM2	Nemuro 2	2.15	97	P	Pn	04 47 01.7	-0.3
NEM2				*e*S	S	04 47 30.5	-2.5
JRBN	Rebuntou	2.16	325	P	Pn	04 47 01.2	-0.8
JKB	Kayabe	2.21	217	P	Pn	04 47 03.0	+0.3
JKB				*e*S	S	04 47 32.7	-1.5
JOT	Ohata	2.63	210	P	Pn	04 47 07.6	+0.2
JOT				*e*S	S	04 47 40.7	-1.9
USRK	Ussuriysk Ar.	7.83	278	P	Pn	04 48 12.4	-0.7
	baz=92,slow=10,SNR=4.4						
MJAR	Matsushiro Arr	7.94	208	P	Pn	04 48 03.3	-11
	0.2nm,0.3s,baz=11,slow=21,SNR=4.0						
KLR	Kul'dur	9.45	310	LR	LR	04 53 14.3	
	comp=Z,34nm,19.9s,baz=34,slow=42						
SONM	Songino Array	25.60	292	P	P	04 51 32.8	-0.3
	0.2nm,0.5s,baz=106,slow=8.1,SNR=2.2						
ZALV	Zalesovo Beam	38.53	306	P	P	04 53 24.6	-0.5
	0.4nm,0.4s,baz=75,slow=12,SNR=4.5						
MKAR	Makanchi Array	41.82	296	P	P	04 53 53.1	+0.8
	0.2nm,0.4s,baz=85,slow=7.7,SNR=4.8						
KURBB	Kurchatov Arra	43.03	303	P	P	04 54 02.5	+0.6
	1.1nm,0.4s,baz=72,slow=8.9,SNR=11						
ILAR	Eielson Array	43.41	36	P	P	04 54 05.5	+0.8
	0.7nm,0.7s,baz=285,slow=8.4,SNR=9.7						
BVAR	Borovoye Array	47.10	308	P	P	04 54 34.3	+0.4
	0.5nm,0.4s,baz=76,slow=6.1,SNR=5.8						
DLBC	Dease Lake	52.84	41	LR	LR	05 18 56.5	
	comp=Z,39nm,18.6s,baz=146,slow=37						
YKA	Yellowknife Ar	57.59	32	P	P	04 55 50.7	0.0
	0.4nm,0.8s,baz=305,slow=6.4,SNR=6.0						
FINES	FINESS Array B	63.48	331	P	P	04 56 30.3	-0.3
	1.3nm,0.5s,baz=42,slow=8.9,SNR=10						
ASAR	Alice Springs	67.50	189	P	P	04 56 48.9	-7.8
	0.3nm,0.8s,baz=20,slow=8.4,SNR=2.1						
HFS	Hagfors	68.50	335	P	P	04 57 02.5	-0.1
	4.0nm,0.9s,baz=11,slow=2.9,SNR=1.8						
AKASG	Malin Array Be	69.74	322	P	P	04 57 10.5	+0.2
	0.3nm,0.3s,baz=46,slow=5.6,SNR=4.2						

PRU ***22*** *04:53:00.8±0.0, 51°.55N×16°.11E, h0^{km}*

IDC ***22*** *04:53:01.1±1.2, 51°.53N×16°.09E, h0^{km}, mb1 3.3/5, mb1mx2.9/57, mbtmp3.1/5, ML2.6/5, Error ellipse: s-maj=17.4km s-min=9.8km az=130.0*

VIE ***22*** *04:53:01.8±0.9, 51°.45N×15°.99E, h0^{km}, mb2.5/3, ml2.6/4, Error ellipse: s-maj=9.1km s-min=5.8km az=55.0   81 km WNW of Wroclaw Suspected Mining induced.*

ISC 22 04:52:58.7±0.9, **51°.59N**±0°.04×**16°.15E**±0°.03, **h0^{km}, n29, σ1^s.21**/57, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.75	173	*e*Pg	Pb	04 53 14.5	-0.2
KSP				*e*Sg	Sb	04 53 24.2	-1.3
CHVC	Chvalec	1.00	183	*e*PG	Pb	04 53 19.3	+0.4
CHVC				*e*SG	Sb	04 53 32.5	-0.2
	comp=Z,40nm,0.4s						
OSTC	Ostas	1.03	178	*e*PG	Pb	04 53 19.8	+0.3
OSTC				*e*SG	Sb	04 53 33.4	-0.2
	comp=Z,57nm,0.7s						
UPC	Upice	1.09	184	*e*PG	Pb	04 53 20.5	+0.2
UPC				*e*SG	Sb	04 53 34.7	-0.3
	comp=Z,61nm,0.3s						
DPC	Dobruska-Polom	1.25	175	*e*PG	Pb	04 53 23.2	+0.1
DPC				*e*SG	Sb	04 53 39.0	-0.7
	comp=Z,58nm,0.8s						
PVCC	Panska Ves	1.46	224	*e*PG	Pb	04 53 27.2	+0.6
PVCC				*e*SG	Sn	04 53 46.6	+0.6
	comp=Z,122nm,0.3s						
KRLC	Kraliky	1.57	165	*e*SG	Sn	04 53 48.9	+0.1
	comp=Z,31nm,0.4s						
PRU	Pruhonice	1.90	213	*e*PG	Pb	04 53 34.4	+0.2
PRU				*e*SG	Sg	04 53 59.1	-0.5
	comp=Z,33nm,0.6s						
CLL	Collm	1.99	263	*i* Pn	Pn	04 53 33.7	+0.2
CLL				*i* Pg	Pb	04 53 36.5	+0.8
CLL				*i*		04 53 40.2	
CLL				*e*Sg	Sg	04 54 03.0	+0.6
	comp=Z,19nm,0.6s						
MORC	Moravsky Berou	2.02	153	*e*PN	Pn	04 53 34.3	+0.3
MORC				*e*SG	Sg	04 54 03.4	-0.1
OKC	Ostrava-Krasne	2.17	143	*e*PG	Pg	04 53 41.2	+1.0
OKC				*e*SG	Sg	04 54 07.7	-0.5
	comp=Z,28nm,0.5s						
VRAC	Vranov	2.30	173	Pn	Pn	04 53 39.3	+1.5
	comp=Z,1.0nm,0.3s,baz=354,slow=15,SNR=6.9						
VRAC				Lg	Lg	04 54 12.0	
	comp=Z,3.1nm,0.3s,baz=261,slow=22,SNR=7.2						
VRAC	Vranov	2.30	173	*e*PN	Pn	04 53 39.1	+1.2
VRAC				*e*SG	Sg	04 54 11.8	-0.7
KRUC	Moravsky	2.54	176	*e*PN	Pn	04 53 42.0	+1.0
KRUC				*e*SG	Sg	04 54 19.1	-0.9
OJC	Ojcow	2.69	119	*e*Pg	Pg	04 53 50.9	+0.7
OJC				*e*Sg	Sg	04 54 26.7	+1.8
NKC	Novy Kostel	2.71	241	*e*PN	Pn	04 53 44.3	+0.9
NKC				*e*PG	Pg	04 53 50.8	+0.3
NKC				*e*SG	Sg	04 54 27.0	+1.5
	comp=Z,40nm,0.7s						
KHC	Kasperske Hory	2.96	215	*e*PN	Pn	04 53 47.2	+0.3
KHC				*e*PG	Pb	04 53 53.6	+1.3
KHC				*e*SG	Sg	04 54 32.9	-0.8
	comp=Z,11nm,0.4s						
CKRC	Cesky Krumlov	3.01	204	*e*PN	Pn	04 53 50.0	+2.4
CKRC				*e*PG	Pg	04 53 56.0	-0.4
CKRC				*e*SG	Sg	04 54 35.6	+0.2
	comp=Z,12nm,0.5s						
GERES	GERESS Array B	3.16	211	Pn	Pn	04 53 51.2	+1.5
	comp=Z,0.9nm,0.3s,baz=30,slow=13,SNR=18						
GERES				Pg	Pb	04 53 57.5	+1.7
	comp=Z,2.1nm,0.3s,baz=31,slow=16,SNR=26						
GERES				Lg	Lg	04 54 38.7	
	comp=Z,2.8nm,0.3s,baz=29,slow=29,SNR=11						
LANS	Liptovska Anna	3.24	138	*e*PG	Pg	04 54 01.4	+0.7
LANS				*e*SG	Sg	04 54 41.4	-1.2
MODS	Modra-Piesok	3.30	167	*e*PG	Pg	04 54 01.7	-0.2
MODS				*e*SG	Sg	04 54 44.8	+0.2
VYHS	Vyhne	3.55	150	*e*PG	Pg	04 54 09.0	+2.3
CONA	Conrad Observa	3.67	183	*i* Pn	Pn	04 53 58.3	+1.6
	comp=Z,1.1nm,0.3s						
CONA				Sg	Sg	04 54 56.4	0.0
	comp=Z,10nm,0.4s						
MOA	Molln	3.94	199	*i* Pn	Pn	04 54 01.4	+1.1
	comp=Z,4.2nm,0.3s						
MOA				*e*Sg	Sg	04 55 05.2	+0.1
	comp=Z,11nm,0.6s						
ARSA	Arzberg	4.36	186	*i* Pn	Pn	04 54 07.9	+1.7
	comp=Z,1.1nm,0.3s						
ARSA				Sg	Sg	04 55 15.5	-3.2
	comp=Z,13nm,1.1s						
KBA	Koelnbreinsper	4.87	203	*i* Pn	Pn	04 54 14.7	+1.4
	comp=Z,2.5nm,0.4s						
KBA				*e*Sg	Sg	04 55 34.4	-0.7
	comp=Z,9.3nm,0.7s						
DAVOX	Davos/Dischmat	6.33	223	Pn	Pn	04 54 35.8	+2.5
	comp=Z,0.1nm,0.3s,baz=357,slow=21,SNR=1.1						
DAVOX				Sn	Sn	04 55 43.4	-2.9
	comp=Z,0.1nm,0.3s,baz=356,slow=19,SNR=1.9						
DAVOX				Lg	Lg	04 56 19.7	
	comp=Z,0.2nm,0.3s,baz=22,slow=19,SNR=2.5						
AKASG	Malin Array Be	8.28	91	Pn	Pn	04 54 59.6	-0.2
	comp=Z,0.5nm,0.3s,baz=278,slow=12,SNR=4.3						
FINES	FINESS Array B	11.28	25	Pn	Pn	04 55 38.7	-2.2
	comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=1.6						

IDC 22 04:53:03.1±3.3, **6°.58S**×**152°.09E, h0^{km}, mb3.8**/2, **mb1 4.1**/3, **mb1mx3.1**/50, **mbtmp3.9**/3, **ML3.6**/1, **Error ellipse: s-maj=105.2km s-min=22.9km az=106.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	2.26	358	Pn	Pb	04 53 43.6	-1.1
	18nm,0.3s,baz=192,slow=22,SNR=1.3						
KRVT				Sn	Sn	04 54 09.7	-0.5
	18nm,0.3s,baz=194,slow=23,SNR=11						
WRA	Warramunga Arr	21.76	231	P	P	04 57 56.0	-0.6
	1.7nm,0.5s,baz=56,slow=10,SNR=25						
ASAR	Alice Springs	24.38	224	P	P	04 58 24.2	+1.0
	1.8nm,0.5s,baz=56,slow=8.6,SNR=29						
TORD	Torodi Ar. Bea	150.13	285	PKPbc	PKPbc	05 12 55.5	-1.5
	0.6nm,0.7s,baz=97,slow=1.0,SNR=6.3						

IDC 22 05:11:41.3±3.1, **27°.69S**×**176°.69W, h0^{km}, mb3.7**/2, **mb1 4.0**/2, **mb1mx3.2**/26, **mbtmp3.7**/2, **MS2.9**/1, **Ms1 2.9**/1, **ms1mx2.5**/26, **Error ellipse: s-maj=77.5km s-min=31.9km az=116.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.90	215	Pn	Pn	05 12 15.1	+0.1
	96nm,0.3s,baz=98,slow=23,SNR=2.3						
RAO				Sn	Sn	05 12 39.2	-0.3
	280nm,0.3s,baz=293,slow=21,SNR=6.7						
PPT	Papeete	26.92	74	LR	LR	05 26 14.0	
	comp=Z,26nm,19.2s,baz=11,slow=32						
ASAR	Alice Springs	44.48	264	P	P	05 19 54.6	0.0
	0.5nm,0.6s,baz=92,slow=6.9,SNR=10						
WRA	Warramunga Arr	45.23	269	P	P	05 20 00.2	-0.5
	0.9nm,0.6s,baz=105,slow=6.1,SNR=9.4						
AKASG	Malin Array Be	149.76	327	PKPbc	PKPbc	05 31 32.8	-0.1
	1.2nm,0.6s,baz=42,slow=3.1,SNR=6.0						

VIE ***22*** *05:24:29.2±0.4, 50°.27N×18°.86E, h0^{km}, mb2.5/3, ml2.6/2, Error ellipse: s-maj=4.5km s-min=2.7km az=154.0   9 km WNW of Katowice Suspected Mining induced.*

IPEC ***22*** *05:24:29.3±0.2, 50°.25N×18°.88E, h1^{km}±1^{km}, ML2.5/3, Error ellipse: s-maj=2.4km s-min=1.1km az=169.0*

PRU ***22*** *05:24:29.5±0.0, 50°.28N×18°.82E, h0^{km}*

IDC ***22*** *05:24:30.8±1.2, 50°.20N×18°.67E, h0^{km}, mb1 3.2/3, mb1mx3.0/41, mbtmp3.0/3, ML2.7/3, Error ellipse: s-maj=27.4km s-min=10.4km az=151.0*

ISC 22 05:24:28.6±0.8, **50°.28N**±0°.04×**18°.87E**±0°.02, **h0^{km}, n30, σ0^s.81**/50, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.60	95	*e*Pg	Pg	05 24 40.7	+0.6
OJC				*e*Sg	Sg	05 24 48.9	+1.0
OKC	Ostrava-Krasne	0.64	227	*e*PG	Pg	05 24 41.9	+1.0
OKC				*e*SG	Sg	05 24 50.4	+1.3
	comp=Z,53nm,0.4s						
MORC	Moravsky Berou	0.99	240	*e*Pg	Pg	05 24 48.0	+0.4
	baz=61						
MORC				*e*Sg	Sg	05 25 00.1	-0.3
	95nm,0.6s,baz=61						
LANS	Liptovska Anna	1.20	161	*e*PG	Pg	05 24 51.9	+0.4
LANS				*e*SG	Sb	05 25 07.8	-0.4
LANS				*e*LG	Lg	05 25 12.1	
NIE	Niedzica	1.27	132	*e*Pg	Pb	05 24 53.6	+0.2
NIE				*e*Sg	Sn	05 25 12.1	+0.7
KRLC	Kraliky	1.35	262	*e*PG	Pg	05 24 54.1	-0.5
KRLC				*e*SG	Sg	05 25 12.3	+0.2
	comp=Z,37nm,0.5s						
JAVC	Velka Javorina	1.62	209	*e*Pn	Pn	05 24 58.7	+0.2
	baz=29						
DPC	Dobruska-Polom	1.63	273	*e*PG	Pn	05 24 58.9	+0.3
DPC				*e*SG	Sb	05 25 20.9	+0.2
	comp=Z,33nm,0.4s						
OSTC	Ostas	1.72	280	*e*PG	Pn	05 25 00.3	+0.5
OSTC				*e*SG	Sg	05 25 23.9	+0.2
	comp=Z,38nm,0.9s						
KSP	Ksiaz	1.73	290	*e*Pg	Pg	05 25 02.4	+0.6
KSP				*e*Sg	Sg	05 25 25.0	+0.7
VRAC	Vranov	1.76	237	*e*Pn	Pn	05 25 00.9	+0.5
	baz=57						
VRAC				*e*Sg	Sn	05 25 23.9	+0.3
	45nm,0.6s,baz=57						
VYHS	Vyhne	1.79	181	*e*PN	Pn	05 25 00.4	-0.3
VYHS				*e*SN	Sb	05 25 24.9	-0.3
VYHS				*e*LG	Lg	05 25 29.8	
CHVC	Chvalec	1.82	281	*e*PG	Pn	05 25 01.6	+0.3
UPC	Upice	1.84	278	*e*PG	Pn	05 25 01.9	+0.4
UPC				*e*SG	Sg	05 25 28.2	+0.5
KRUC	Moravsky	2.02	234	*e*Pn	Pn	05 25 04.5	+0.7
	baz=53						
KRUC				*e*Sg	Sb	05 25 32.1	+0.4
	25nm,0.6s,baz=53						
MODS	Modra-Piesok	2.17	209	*e*PN	Pn	05 25 04.8	-1.2
PSZ	Piszkesteto	2.46	164	*e*PG	Pg	05 25 15.7	0.0
KOLS	Kolonicke sedl	2.59	120	*e*PG	Pb	05 25 17.1	+1.1
PVCC	Panska Ves	2.76	277	*e*SG	Sg	05 25 58.1	+0.9
	comp=Z,26nm,0.5s						
PRU	Pruhonice	2.80	266	*e*PG	Pb	05 25 19.6	+0.2
PRU				*e*SG	Sb	05 25 55.9	+1.7
CONA	Conrad Observa	3.07	221	*e*Pg	Pg	05 25 28.0	+0.5
	1.8nm,0.2s						
CONA				*i* Sn	Sn	05 25 56.9	+1.0
	3.4nm,0.3s						
TRPA	Tarpa	3.23	130	*e*PN	Pn	05 25 19.7	-0.8
MPLH	Magyarpolny	3.23	196	*e*PN	Pn	05 25 20.7	+0.1
CKRC	Cesky Krumlov	3.31	246	*e*SG	Sg	05 26 12.8	-2.0
	comp=Z,10nm,0.6s						
KHC	Kasperske Hory	3.62	253	*e*PN	Pn	05 25 26.0	+0.1
KHC				*e*PG	Pb	05 25 32.8	-0.7
KHC				*e*SG	Sg	05 26 24.5	-0.3
	comp=Z,12nm,0.5s						
GERES	GERESS Array B	3.66	249	Pn	Pn	05 25 27.6	+1.1
	0.3nm,0.3s,baz=62,slow=14,SNR=5.6						
GERES				Pg	Pb	05 25 33.6	-0.5
	1.2nm,0.3s,baz=65,slow=16,SNR=21						
GERES				Lg	Lg	05 26 22.4	
	1.8nm,0.3s,baz=67,slow=29,SNR=10						
CLL	Collm	3.86	288	*e*Pg	Pg	05 25 42.0	-0.5
CLL				*e*Sg	Sg	05 26 34.0	+1.5
	comp=Z,19nm,1.0s						
MOA	Molln	3.88	233	*e*Pn	Pn	05 25 29.6	+0.1
	comp=Z,1.0nm,0.4s						
MOA				*e*Sn	Sn	05 26 15.8	0.0
	comp=Z,1.3nm,0.3s						
AKASG	Malin Array Be	6.62	82	Pn	Pn	05 26 07.8	+0.6
	comp=Z,0.6nm,0.3s,baz=267,slow=14,SNR=2.0						
AKASG				Lg	Lg	05 27 54.8	
	comp=Z,0.4nm,0.3s,baz=266,slow=27,SNR=1.6						
FINES	FINESS Array B	11.89	17	Pn	Pn	05 27 16.9	-2.3
	comp=Z,0.2nm,0.3s,baz=196,slow=12,SNR=9.2						

ROM ***22*** *05:35:09.9±0.1, 37°.777N±0°.004×15°.430E±0°.008, h23^{km}, ML3.5/54, Mw3.4, Error ellipse: s-maj=0.6km s-min=0.5km az=121.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}1.07; $M_{\theta\theta}$-0.56; $M_{\phi\phi}$-0.51; $M_{r\theta}$-0.81; $M_{\theta\phi}$-0.68; $M_{\phi r}$-0.60; Fault plane solution: $M_0$1.51797×10^{14} NP1:ϕ_s40.00000°, δ25.00000°, λ79.00000°.   NP2:ϕ_s231.00000°, δ66.00000°, λ95.00000°.*

ISC 22 05:35:09.7±0.9, **37°.79N**±0°.02×**15°.42E**±0°.03, **h26^{km}**±7^{km}, **n86, σ1^s.09**/104, **7C-27D, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIO	Antillo	0.23	321	P	Pb	05 35 15.7	-0.4
AIO				S	Sb	05 35 20.3	0.0
AIO				AML	AML		
	comp=N,32150μm,0.3s						
AIO				AML	AML		
	comp=E,68350μm,0.4s						
MTTG	Motta San Giov	0.30	45	⇓P	Pb	05 35 16.9	0.0
MTTG				S	Sb	05 35 22.6	+0.8
MTTG				AML	AML		
	comp=N,11670μm,0.9s						
MTTG				AML	AML		
	comp=E,8805μm,0.6s						
MCSR	Castroreale	0.31	334	⇓P	Pb	05 35 16.9	-0.2
MCSR				S	Sb	05 35 22.8	+0.8
MCSR				AML	AML		
	comp=N,35700μm,0.3s						
MCSR				AML	AML		

	comp=E,57100µm,0.3s						
NOV	**Novara**	**0.33**	**317**	⇓P	**Pb**	**05 35 17.2**	**-0.2**
NOV				S	**Sb**	**05 35 22.6**	**+0.1**
NOV				AML	AML		
	comp=E,20500µm,1.1s						
NOV				AML	AML		
	comp=N,11700µm,0.6s						
MPNC	**Port Mandanici**	**0.36**	**351**	⇓P	**Pb**	**05 35 17.6**	**-0.1**
MPNC				S	**Sb**	**05 35 23.7**	**+0.5**
MPNC				AML	AML		
	comp=E,25950µm,0.4s						
MPNC				AML	AML		
	comp=N,14600µm,0.4s						
ESLN	**Serra La Nave**	**0.37**	**255**	⇓P	**Pb**	**05 35 17.9**	**-0.1**
ESLN				AML	AML		
	comp=E,10260µm,1.4s						
ESLN				AML	AML		
	comp=N,6535µm,0.3s						
EMSG	**Monte Spagnolo**	**0.37**	**275**	P	**Pb**	**05 35 18.5**	**+0.4**
EMSG				AML	AML		
	comp=N,21850µm,1.4s						
EMSG				AML	AML		
	comp=E,22200µm,0.4s						
ESML	**S. M. di Licod**	**0.46**	**249**	⇓P	**Pb**	**05 35 19.6**	**+0.2**
ESML				AML	AML		
	comp=N,5015µm,0.8s						
ESML				AML	AML		
	comp=E,5445µm,1.4s						
MSRU	**Castanea**	**0.48**	**8**	⇓P	**Pb**	**05 35 19.6**	**0.0**
MSRU				S	**Sb**	**05 35 27.5**	**+1.1**
MSRU				AML	AML		
	comp=E,10845µm,1.0s						
MSRU				AML	AML		
	comp=N,8430µm,1.6s						
GMB	**Gambarie**	**0.50**	**40**	⇑P	**Pb**	**05 35 20.4**	**+0.4**
GMB				AML	AML		
	comp=N,14750µm,0.4s						
GMB				AML	AML		
	comp=E,18000µm,0.8s						
MUCR	**Ucria**	**0.50**	**301**	⇓P	**Pb**	**05 35 20.3**	**+0.2**
MUCR				AML	AML		
	comp=E,5960µm,0.3s						
MUCR				AML	AML		
	comp=N,5400µm,0.5s						
MILZ	**Milazzo**	**0.51**	**343**	⇓P	**Pb**	**05 35 20.5**	**+0.5**
MILZ				AML	AML		
	comp=N,7710µm,0.4s						
MILZ				AML	AML		
	comp=E,11500µm,1.1s						
MSCL	**Scilla**	**0.53**	**33**	⇑P	**Pb**	**05 35 20.9**	**+0.3**
MSCL				S	**Sb**	**05 35 29.1**	**+1.2**
MSCL				AML	AML		
	comp=E,10185µm,0.6s						
MSCL				AML	AML		
	comp=N,7570µm,0.4s						
HAGA	**Augusta**	**0.55**	**203**	⇑P	**Pb**	**05 35 20.4**	**-0.3**
HAGA				S	**Sb**	**05 35 28.8**	**+0.6**
HAGA				AML	AML		
	comp=N,6525µm,0.7s						
HAGA				AML	AML		
	comp=E,5180µm,0.9s						
AGST	**Augusta-Monte**	**0.55**	**196**	⇑P	**Pb**	**05 35 20.5**	**-0.3**
AGST				S	**Sb**	**05 35 28.9**	**+0.5**
AGST				AML	AML		
	comp=E,9335µm,0.2s						
AGST				AML	AML		
	comp=N,9310µm,1.3s						
AGST				AML	AML		
	comp=E,9330µm,0.2s						
AGST				AML	AML		
	comp=N,9265µm,1.3s						
AGST				AML	AML		
	comp=E,9355µm,0.2s						
SOI	**Samo**	**0.58**	**60**	⇓P	**Pb**	**05 35 21.2**	**-0.1**
SOI				AML	AML		
	comp=N,1600µm,0.6s						
SOI				AML	AML		
	comp=E,2350µm,0.5s						
MNO	**Monte Soro**	**0.59**	**284**	⇓P	**Pb**	**05 35 22.4**	**+0.8**
MNO				AML	AML		
	comp=E,6900µm,1.4s						
MNO				AML	AML		
	comp=N,8725µm,0.8s						
MNO				AML	AML		
	comp=N,8730µm,0.8s						
ECNV	**Catenanuova**	**0.59**	**251**	⇓P	**Pn**	**05 35 22.6**	**0.0**
CEL	**Celeste**	**0.60**	**38**	P	**Pb**	**05 35 22.1**	**+0.3**
CEL				AML	AML		
	comp=N,2105µm,0.5s						
CEL				AML	AML		
	comp=N,2100µm,0.5s						
CEL				AML	AML		
	comp=E,3920µm,0.4s						
CEL				AML	AML		
	comp=E,3275µm,0.4s						
CEL				AML	AML		
	comp=N,2585µm,0.5s						
HLNI	**Lentini**	**0.62**	**225**	⇓P	**Pb**	**05 35 21.5**	**-0.5**
HLNI				S	**Sb**	**05 35 30.6**	**+0.4**
HLNI				AML	AML		
	comp=E,4425µm,0.3s						
HLNI				AML	AML		
	comp=E,4430µm,0.3s						
HLNI				AML	AML		
	comp=N,5150µm,0.2s						
VPL	**Vulcano Piano**	**0.68**	**330**	⇓P	**Pb**	**05 35 23.4**	**+0.3**
VPL				AML	AML		
	comp=N,33600µm,0.5s						
VPL				AML	AML		
	comp=E,24850µm,0.5s						
SSY	**Sortino**	**0.69**	**204**	⇑P	**Pb**	**05 35 22.8**	**-0.5**
SSY				S	**Sb**	**05 35 33.2**	**+0.8**
SSY				AML	AML		
	comp=N,12450µm,0.3s						
SSY				AML	AML		
	comp=E,4925µm,0.2s						
MSFR	**San Fratello**	**0.70**	**291**	⇓P	**Pb**	**05 35 23.9**	**+0.5**
MSFR				AML	AML		
	comp=E,1940µm,0.3s						
MSFR				AML	AML		
	comp=N,1210µm,0.5s						
CAGR	**Agira**	**0.75**	**257**	⇓P	**Pn**	**05 35 25.9**	**+1.2**
CAGR				AML	AML		
	comp=E,3770µm,0.5s						
CAGR				AML	AML		
	comp=N,6065µm,0.7s						
LLI	**Lipari**	**0.75**	**331**	⇓P	**Pn**	**05 35 25.2**	**+0.5**
LLI				AML	AML		
	comp=N,43350µm,0.6s						
LLI				AML	AML		
	comp=E,27500µm,0.6s						
MEU	**Monte Lauro**	**0.79**	**210**	P	**Pb**	**05 35 24.8**	**-0.1**
MEU				S	**Sn**	**05 35 36.8**	**+0.6**
MEU				AML	AML		
	comp=E,13500µm,0.3s						
MEU				AML	AML		
	comp=N,15200µm,0.3s						
HAVL	**Avola**	**0.86**	**196**	P	**Pb**	**05 35 25.4**	**-0.6**
HAVL				S	**Sn**	**05 35 37.9**	**0.0**
HAVL				AML	AML		
	comp=E,7550µm,1.5s						
HAVL				AML	AML		
	comp=N,8550µm,0.3s						
JOPP	**Joppolo**	**0.90**	**24**	⇓P	**Pb**	**05 35 26.8**	**+0.1**
JOPP				S	**Sn**	**05 35 40.4**	**+1.6**
JOPP				AML	AML		
	comp=N,2250µm,0.4s						
JOPP				AML	AML		
	comp=E,1420µm,0.9s						
HMDC	**Modica**	**0.97**	**212**	⇑P	**Pb**	**05 35 27.2**	**-0.7**
HMDC				AML	AML		
	comp=N,3895µm,1.3s						
HMDC				AML	AML		
	comp=E,3470µm,0.4s						
ISTR	**Stromboli Gino**	**1.01**	**350**	⇓P	**Pb**	**05 35 29.1**	**+0.4**
ISTR				AML	AML		
	comp=E,1955µm,0.9s						
ISTR				AML	AML		
	comp=N,1770µm,0.5s						
RAFF	**Raffo Rosso**	**1.01**	**236**	P	**Pn**	**05 35 28.7**	**+0.4**
RAFF				AML	AML		
	comp=E,4865µm,0.5s						
RAFF				AML	AML		
	comp=N,7460µm,0.3s						
IST3	**Stromboli F**	**1.02**	**352**	⇑P	**Pn**	**05 35 28.7**	**+0.4**
IST3				AML	AML		
	comp=N,2215µm,0.8s						
IST3				AML	AML		
	comp=E,1670µm,0.9s						
IFIL	**Filicudi I Eol**	**1.03**	**319**	⇓P	**Pn**	**05 35 28.5**	**0.0**
IFIL				AML	AML		
	comp=N,4645µm,1.0s						
IFIL				AML	AML		
	comp=E,15300µm,0.9s						
PETRA	**Petralia Sopra**	**1.03**	**273**	⇓P	**Pb**	**05 35 29.8**	**+0.7**
PETRA				AML	AML		
	comp=N,1960µm,1.2s						
PETRA				AML	AML		
	comp=E,2155µm,1.4s						
PLAC	**Placanica**	**1.04**	**50**	⇓P	**Pb**	**05 35 29.9**	**+0.8**
PLAC				AML	AML		
	comp=E,1420µm,0.6s						
PLAC				AML	AML		
	comp=E,1945µm,1.0s						
PLAC				AML	AML		
	comp=N,1365µm,0.6s						
PLAC				AML	AML		
	comp=N,1960µm,1.0s						
CSLB	**Castelbuono**	**1.09**	**278**	⇓P	**Pb**	**05 35 30.3**	**+0.3**
CSLB				AML	AML		
	comp=E,495µm,0.8s						
CSLB				AML	AML		
	comp=N,608µm,0.6s						
RESU	**Resuttano**	**1.09**	**263**	P	**Pb**	**05 35 31.0**	**+1.0**
RESU				AML	AML		
	comp=N,1010µm,0.5s						
RESU				AML	AML		
	comp=E,797µm,0.5s						
HPAC	**Pachino**	**1.12**	**193**	⇓P	**Pn**	**05 35 29.6**	**-0.1**
HPAC				AML	AML		
	comp=N,6050µm,0.9s						
HPAC				AML	AML		
	comp=E,5460µm,0.6s						
GIB	**Gibilmanna**	**1.12**	**281**	⇓P	**Pb**	**05 35 31.1**	**+0.6**
GIB				AML	AML		
	comp=E,2055µm,0.6s						
GIB				AML	AML		
	comp=N,2725µm,0.7s						
IACL	**Alicudi**	**1.12**	**312**	⇓P	**Pn**	**05 35 29.8**	**0.0**
IACL				AML	AML		
	comp=E,2260µm,0.3s						
IACL				AML	AML		
	comp=N,1965µm,0.6s						
GRI	**Girifalco**	**1.30**	**37**	P	**Pb**	**05 35 34.3**	**+0.8**
GRI				AML	AML		
	comp=E,1120µm,0.7s						
GRI				AML	AML		
	comp=N,844µm,0.5s						
CMDO	**Montedoro**	**1.31**	**256**	P	**Pb**	**05 35 35.2**	**+1.5**
CLTA	**Licata**	**1.32**	**242**	⇓P	**Pb**	**05 35 34.3**	**+0.5**
CLTA				AML	AML		
	comp=N,8845µm,0.8s						
CLTA				AML	AML		
	comp=E,7630µm,0.7s						
FAVR	**Favara**	**1.49**	**250**	P	**Pb**	**05 35 37.5**	**+0.8**
FAVR				AML	AML		
	comp=N,979µm,1.2s						
FAVR				AML	AML		
	comp=E,856µm,0.7s						
SOLUN	**Solunto**	**1.52**	**282**	P	**Pn**	**05 35 36.0**	**+0.7**
SPS2	**Spezzano della**	**1.67**	**25**	P	**Pn**	**05 35 38.0**	**+0.7**
SPS2				AML	AML		
	comp=E,252µm,0.5s						
SPS2				AML	AML		
	comp=N,266µm,0.8s						
MPG	**Monte Pellegri**	**1.67**	**284**	P	**Pn**	**05 35 38.2**	**+0.9**
CORL	**Corleone**	**1.68**	**274**	P	**Pb**	**05 35 39.2**	**-0.7**
CORL				AML	AML		
	comp=N,486µm,0.8s						
CORL				AML	AML		
	comp=E,674µm,0.5s						
TIP	**Timpagrande**	**1.74**	**37**	P	**Pn**	**05 35 39.8**	**+1.5**
TIP				AML	AML		
	comp=N,238µm,0.6s						
TIP				AML	AML		
	comp=E,326µm,0.9s						
TIP				AML	AML		
	comp=E,262µm,1.0s						
TIP				AML	AML		
	comp=N,271µm,0.6s						
CLTB	**Caltabellotta**	**1.76**	**264**	P	**Pb**	**05 35 41.0**	**-0.4**
CET2	**Cetraro**	**1.79**	**13**	P	**Pn**	**05 35 39.4**	**+0.5**
CELI	**Celico**	**1.82**	**28**	P	**Pn**	**05 35 40.4**	**+0.9**
CELI				AML	AML		
	comp=N,802µm,1.0s						
CELI				AML	AML		
	comp=E,936µm,0.9s						
USI	**Ustica**	**1.99**	**298**	P	**Pn**	**05 35 41.8**	**+0.1**
USI				AML	AML		
	comp=N,657µm,0.6s						
USI				AML	AML		
	comp=E,516µm,0.6s						
TDS	**Terranova Siba**	**2.00**	**21**	P	**Pn**	**05 35 42.2**	**+0.4**
TDS				AML	AML		
	comp=E,184µm,0.9s						
TDS				AML	AML		
	comp=N,172µm,0.8s						
WDD	**Wied Dalam**	**2.08**	**201**	P	**Pn**	**05 35 43.7**	**+0.9**
WDD				AML	AML		
	comp=N,496µm,0.4s						
WDD				AML	AML		
	comp=E,688µm,0.4s						
WDD				AML	AML		
	comp=N,483µm,0.5s						
WDD				AML	AML		
	comp=E,766µm,0.4s						
MMN	**Mormanno**	**2.15**	**12**	AML	AML		
	comp=E,108µm,0.4s						
MMN				AML	AML		
	comp=N,209µm,1.3s						
SALB	**San Lorenzo Be**	**2.21**	**19**	P	**Pn**	**05 35 46.1**	**+1.3**
SALB				AML	AML		
	comp=N,241µm,0.7s						
SALB				AML	AML		
	comp=E,252µm,0.8s						
CUC	**Castrocucco**	**2.22**	**8**	P	**Pn**	**05 35 45.4**	**+0.4**
BULG	**Bulgheria - Ca**	**2.29**	**359**	P	**Pn**	**05 35 45.9**	**+0.1**
BULG				AML	AML		
	comp=E,225µm,0.9s						
BULG				AML	AML		
	comp=N,370µm,1.2s						
MGR	**Morigerati**	**2.35**	**2**	P	**Pn**	**05 35 47.0**	**+0.4**
MGR				AML	AML		
	comp=E,262µm,1.5s						
MGR				AML	AML		
	comp=N,192µm,0.8s						
SIRI	**Monte Sirino -**	**2.42**	**8**	P	**Pn**	**05 35 48.3**	**+0.6**
SIRI				AML	AML		
	comp=E,272µm,0.4s						
SIRI				AML	AML		
	comp=N,282µm,0.5s						
SIRI				AML	AML		
	comp=E,280µm,0.4s						
SIRI				AML	AML		
	comp=N,292µm,0.5s						
SCHR	**S. Chirico Rap**	**2.46**	**12**	P	**Pn**	**05 35 49.5**	**+1.3**
SCHR				AML	AML		
	comp=N,164µm,0.7s						
SCHR				AML	AML		
	comp=E,165µm,0.7s						
MTSN	**Montesano sull**	**2.49**	**6**	P	**Pn**	**05 35 49.3**	**+0.7**
MTSN				AML	AML		
	comp=N,252µm,0.5s						
MTSN				AML	AML		
	comp=E,278µm,0.6s						
CMPR	**Campora**	**2.53**	**358**	P	**Pn**	**05 35 49.6**	**+0.4**
MCEL	**Monticello**	**2.55**	**7**	P	**Pn**	**05 35 51.0**	**+1.5**
MCEL				AML	AML		
	comp=E,176µm,0.5s						
MCEL				AML	AML		
	comp=N,256µm,0.6s						
AG11	**Viggiano (PZ)**	**2.57**	**9**	P	**Pn**	**05 35 51.2**	**+1.4**
COL3	**Colliano**	**2.90**	**359**	P	**Pn**	**05 35 56.7**	**+2.5**
MIGL	**Miglionico**	**2.92**	**15**	P	**Pn**	**05 35 57.3**	**+2.8**
MIGL				AML	AML		
	comp=N,435µm,0.8s						
MIGL				AML	AML		
	comp=E,370µm,0.9s						
MRLC	**Muro Lucano**	**2.96**	**1**	P	**Pn**	**05 35 57.9**	**+2.8**
MCRV	**Calabrutti - M**	**3.00**	**356**	P	**Pn**	**05 35 57.9**	**+2.3**
MATE	**Matera**	**3.03**	**19**	P	**Pn**	**05 35 57.2**	**+1.3**
MATE				AML	AML		
	comp=N,106µm,1.0s						
MATE				AML	AML		
	comp=E,100µm,0.9s						
LIO3	**Lioni**	**3.11**	**357**	P	**Pn**	**05 35 59.7**	**+2.5**
PALZ	**Palazzo San Ge**	**3.18**	**7**	P	**Pn**	**05 35 59.7**	**+1.7**
CAFE	**Carife**	**3.24**	**358**	P	**Pn**	**05 36 00.9**	**+2.0**
AMUR	**Altamura**	**3.25**	**16**	P	**Pn**	**05 36 00.5**	**+1.5**
AMUR				AML	AML		
	comp=E,107µm,1.0s						
AMUR				AML	AML		
	comp=N,104µm,0.5s						
NOCI	**Noci**	**3.26**	**23**	P	**Pn**	**05 35 59.5**	**+0.4**
NOCI				AML	AML		
	comp=N,112µm,1.3s						
NOCI				AML	AML		
	comp=E,77µm,0.9s						
SAMA	**S.Maria delle**	**4.54**	**332**	AML	AML		
	comp=N,562µm,0.1s						
SAMA				AML	AML		
	comp=E,520µm,0.1s						
LSTV	**Lastovo**	**5.10**	**12**	*i* Pn	**Pn**	**05 36 23.7**	**-0.7**
LSTV				Sn	**Sn**	**05 37 19.7**	**-2.7**
STON	**Ston**	**5.37**	**18**	*e*Pn	**Pn**	**05 36 27.4**	**-0.6**
STON				Sn	**Sn**	**05 37 26.0**	**-3.0**
HVAR	**Hvar**	**5.44**	**8**	*e*Pn	**Pn**	**05 36 28.8**	**-0.3**
HVAR				Sn	**Sn**	**05 37 29.2**	**-1.6**
RICI	**Ricice**	**5.85**	**12**	*e*Pn	**Pn**	**05 36 33.9**	**-0.8**
RICI				Sn	**Sn**	**05 37 38.2**	**-2.7**
ZIRJ	**Zirje**	**5.86**	**2**	*e*Pn	**Pn**	**05 36 34.2**	**-0.7**
MORI	**Morici**	**6.08**	**2**	*e*Pn	**Pn**	**05 36 37.1**	**-0.7**
MORI				Sn	**Sn**	**05 37 44.4**	**-2.1**
DUGI	**Dugi Otok**	**6.20**	**358**	*e*Pn	**Pn**	**05 36 39.1**	**-0.5**
KIJV	**Kijevo**	**6.25**	**7**	*e*Pn	**Pn**	**05 36 39.4**	**-0.9**
KIJV				Sn	**Sn**	**05 37 48.5**	**-2.4**
NVLJ	**Novalja**	**6.78**	**357**	*e*Pn	**Pn**	**05 36 47.6**	**+0.1**

IDC ***22*** *05:37:37.9±1.2, 14°85N×52°53E, h0^{km}, mb3.8/10, mb1 3.9/12, mb1mx3.6/58, mbtmp3.8/12, ML3.9/2, MS3.2/8, Ms1 3.2/8, ms1mx2.9/52, Error ellipse: s-maj=30.5km s-min=22.6km az=164.0*

OMAN ***22*** *05:37:40.9±0.4, 15°19N×52°19E, h5^{km}, ml3.4/5, Error ellipse: s-maj=13.3km s-min=3.4km az=278.0*

ISC 22 05:37:39.6±0.8**, 15°0N**±0°1×**52°5E**±0°1**, h10^{km}, n25, σ1ˢ93**/24**, mb3.7**/10**, MS3.1**/7**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABTO	**Aybut**	**2.51**	**18**	P	**Pn**	**05 38 20.8**	**+0.2**
	SNR=31						
ABTO				S	**Sn**	**05 38 50.5**	**-0.9**
RBK	**Rabkut**	**3.03**	**33**	P	**Pn**	**05 38 29.1**	**+1.4**
	SNR=95						
RBK				S	**Sn**	**05 39 05.5**	**+1.5**
WHFO	**Wadi Hawf**	**3.20**	**22**	P	**Pn**	**05 38 30.6**	**+0.5**
	SNR=56						
WHFO				S	**Sn**	**05 39 09.3**	**+1.0**
DMTO	**DMTO**	**3.63**	**40**	P	**Pn**	**05 38 37.3**	**+1.4**
	SNR=30						
DOK	**Doka**	**3.97**	**23**	P	**Pn**	**05 38 41.5**	**+0.9**
	SNR=20						
DOK				S	**Sn**	**05 39 28.7**	**+1.4**
SHAO	**Shalim**	**4.29**	**44**	P	**Pn**	**05 38 47.6**	**+2.5**
ATD	**Arta Tunnel**	**9.98**	**251**	Pn	**Pn**	**05 40 02.2**	**-1.1**
	2.1nm,0.3s,baz=83,slow=23,SNR=3.0						
WSAR	**Wadi Sarin**	**10.08**	**34**	Pn	**Pn**	**05 40 04.2**	**-0.5**
	0.5nm,0.3s,baz=223,slow=16,SNR=1.8						
WSAR				Sn	**Sn**	**05 41 51.1**	**-6.8**
	0.1nm,0.3s,baz=328,slow=21,SNR=1.3						
WSAR				LR	LR	05 44 11.6	
	comp=Z,68nm,18.8s,baz=215,slow=39						
KMBO	**Kilima Mbogo**	**21.96**	**225**	LR	LR	05 50 25.0	
	comp=Z,68nm,19.0s,baz=54,slow=35						
GEYT	**Alibeck**	**23.43**	**11**	LR	LR	05 53 45.0	
	comp=Z,63nm,18.8s,baz=105,slow=41						
GNI	**Garni**	**26.00**	**346**	LR	LR	05 55 46.5	
	comp=Z,25nm,21.2s,baz=88,slow=42						
MBAR	**Mbarara**	**26.48**	**236**	LR	LR	05 52 25.4	
	comp=Z,73nm,18.7s,baz=132,slow=34						
MKAR	**Makanchi Array**	**40.31**	**32**	P	**P**	**05 45 18.9**	**+1.7**
	0.6nm,0.7s,baz=216,slow=9.2,SNR=4.4						
AKASG	**Malin Array Be**	**40.31**	**337**	P	**P**	**05 45 16.9**	**-0.2**
	0.6nm,0.5s,baz=143,slow=7.3,SNR=4.5						
KURBB	**Kurchatov Arra**	**41.34**	**25**	P	**P**	**05 45 27.2**	**+1.6**
	0.2nm,0.3s,baz=224,slow=8.1,SNR=4.2						
CMAR	**Chiang Mai Arr**	**44.54**	**79**	P	**P**	**05 45 52.6**	**+0.6**
	0.8nm,0.3s,baz=277,slow=8.5,SNR=7.7						
CMAR				LR	LR	06 03 51.3	
	comp=Z,8.8nm,19.9s,baz=230,slow=35						
ZALV	**Zalesovo Beam**	**46.41**	**26**	P	**P**	**05 46 06.2**	**0.0**
	1.0nm,0.5s,baz=233,slow=9.4,SNR=5.5						
TORD	**Torodi Ar. Bea**	**49.22**	**275**	P	**P**	**05 46 30.5**	**+1.8**
	0.3nm,0.8s,baz=88,slow=6.7,SNR=2.2						
FINES	**FINESS Array B**	**50.15**	**344**	P	**P**	**05 46 35.2**	**+0.2**
	4.2nm,0.9s,baz=151,slow=17,SNR=4.4						
SONM	**Songino Array**	**55.03**	**42**	P	**P**	**05 47 10.5**	**-1.2**
	0.5nm,0.8s,baz=236,slow=6.8,SNR=2.0						
NRIK	**Noril'sk**	**58.64**	**14**	P	**P**	**05 47 36.5**	**-0.1**
	0.6nm,0.3s,baz=226,slow=4.9,SNR=3.8						
FITZ	**Fitzroy Crossi**	**79.20**	**112**	LR	LR	06 16 16.5	
	comp=Z,21nm,20.5s,baz=180,slow=29						
ASAJ	**Asahikawa**	**79.83**	**47**	LR	LR	06 30 45.1	
	comp=Z,28nm,18.9s,baz=304,slow=40						
ASAR	**Alice Springs**	**88.28**	**115**	P	**P**	**05 50 30.4**	**-1.6**
	0.3nm,0.6s,baz=291,slow=5.1,SNR=6.0						
NVAR	**Mina Array Bea**	**126.21**	**351**	PKP	**PKPdf**	**05 56 43.0**	**-0.3**
	0.3nm,0.6s,baz=266,slow=2.7,SNR=2.6						

WEL 22 05:40:27.2±1.0**, 36°S**±8°×**17°8E**±°**, h144^{km}**±11^{km}**, M3.3**/17**, ML3.6**/20**, MLv3.3**/17**, Error ellipse: s-maj=0.0km s-min=0.0km az=58.7, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.25**	**181**	P	Pn	05 40 53.6	+0.1
MXZ				S	Sn	05 41 15.2	+1.3
WMGZ	**Waiomatatini S**	**1.50**	**178**	P	Pn	05 40 57.3	+1.0
WMGZ				S	Sn	05 41 18.5	-0.1
HAZ	**Te Kaha**	**1.51**	**197**	P	Pn	05 40 55.3	-1.0
HAZ				S	Sn	05 41 18.8	+0.1
PKGZ	**Pakihiroa**	**1.59**	**188**	P	Pn	05 40 57.8	+0.5
RUGZ	**Raukumara Rang**	**1.73**	**198**	P	Pn	05 40 58.8	-0.1
RUGZ				S	Sn	05 41 25.2	+1.9
PUZ	**Puketiti**	**1.76**	**182**	P	Pn	05 40 59.2	+0.1
PUZ				S	Sn	05 41 22.4	-1.2
TWGZ	**Tauwhareparae**	**1.88**	**189**	P	Pn	05 41 00.7	+0.2
OPRZ	**Ohinepanea**	**2.09**	**223**	P	Pn	05 41 03.2	+0.3
MWZ	**Matawai**	**2.12**	**198**	P	Pn	05 41 03.6	+0.2
MWZ				S	Sn	05 41 31.4	+0.2
KUZ	**Kuaotunu**	**2.16**	**258**	P	Pn	05 41 03.0	-0.7
TKGZ	**Te Karaka**	**2.16**	**190**	P	Pn	05 41 04.2	+0.4
TKGZ				S	Sn	05 41 31.3	-0.6
CNGZ	**Carnagh Statio**	**2.17**	**183**	P	Pn	05 41 04.5	+0.7
URZ	**Urewera**	**2.18**	**207**	P	Pn	05 41 03.7	-0.2
URZ				S	Sn	05 41 34.3	+1.9
RAGZ	**Rawiri**	**2.30**	**199**	P	Pn	05 41 06.1	+0.5
GRZ	**Great Barrier**	**2.33**	**271**	P	Pn	05 41 05.3	-0.6
RIGZ	**Rimuhau**	**2.43**	**191**	P	Pn	05 41 07.2	+0.1
RIGZ				S	Sn	05 41 37.8	-0.2
MUGZ	**Murupara**	**2.50**	**210**	P	Pn	05 41 08.3	+0.3
RTZ	**Ruatahuna**	**2.54**	**205**	P	Pn	05 41 08.1	-0.4
SNGZ	**Shannon Statio**	**2.59**	**198**	P	Pn	05 41 09.3	+0.2
SNGZ				S	Sn	05 41 41.5	+0.1
PRGZ	**Paritu Road**	**2.63**	**188**	P	Pn	05 41 09.7	+0.1
TOZ	**Tahuroa Road**	**2.68**	**237**	P	Pn	05 41 10.6	+0.4
KNZ	**Kokohu**	**2.75**	**191**	P	Pn	05 41 10.5	-0.6
RAHZ	**Arahi**	**2.78**	**201**	P	Pn	05 41 11.5	0.0
MTHZ	**Maungataniwha**	**2.80**	**205**	P	Pn	05 41 12.2	+0.4
MHGZ	**Mahia Peninsul**	**2.85**	**187**	P	Pn	05 41 12.3	-0.1
NMHZ	**Naumai**	**3.03**	**203**	P	Pn	05 41 14.7	0.0
ARHZ	**Aropaoanui**	**3.13**	**200**	P	Pn	05 41 15.4	-0.5
BKZ	**Black Stump Fm**	**3.20**	**207**	P	Pn	05 41 16.4	-0.5
MCHZ	**McNeill Hill**	**3.39**	**202**	P	Pn	05 41 18.5	-0.7
KWHZ	**Kaweka Forest**	**3.46**	**206**	P	Pn	05 41 19.3	-0.9
CKHZ	**Cape Kidnapper**	**3.48**	**196**	P	Pn	05 41 19.3	-1.2
TMVZ	**Te Maari**	**3.49**	**216**	P	Pn	05 41 20.8	+0.1
ETVZ	**East Tongariro**	**3.51**	**216**	P	Pn	05 41 21.0	+0.1
WTVZ	**West Tongariro**	**3.55**	**217**	P	Pn	05 41 24.1	+2.7
OTVZ	**Oturere**	**3.55**	**216**	P	Pn	05 41 21.4	-0.1
SNVZ	**South Ngauruho**	**3.58**	**216**	P	Pn	05 41 22.1	+0.3
TWVZ	**Taurewa**	**3.59**	**219**	P	Pn	05 41 24.4	+2.5
BHHZ	**Black Hill Sta**	**3.65**	**209**	P	Pn	05 41 21.6	-1.0

KAHZ	**Kahuranaki**	3.66	198	P	Pn	05 41 22.3	-0.5
KRHZ	**Kereru**	3.67	205	P	Pn	05 41 21.3	-1.6
MOVZ	**Moawhango**	3.71	213	P	Pn	05 41 22.5	-0.9
WNVZ	**Wahianoa**	3.71	215	P	Pn	05 41 24.1	+0.5
PNHZ	**Pukenui**	3.97	205	P	Pn	05 41 24.7	-2.1
TSZ	**Takapari Road**	4.18	206	P	Pn	05 41 27.2	-2.4
BFZ	**Birch Farm**	4.66	200	P	Pn	05 41 33.5	-2.4
TIWZ	**Tintock**	4.85	203	P	Pn	05 41 36.1	-2.4

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*DJA **22** 05:47:01.5±0.4, 8°S±3°×12°0E±°, h186^{km}±6^{km}, M4.2/18, mb4.4/5, mB5.8/1, MLv4.1/18, Mw(mB)5.4/1*

*IDC **22** 05:47:02.3±1.2, 8°.01S×120°.25E, h220^{km}±9^{km}, mb3.5/9, mb1 3.5/13, mb1mx3.3/44, mbtmp4.0/13, Error ellipse: s-maj=32.6km s-min=7.2km az=58.0*

ISC 22 05:46:59.9±0.5**, 8°.26S**±0°.04×**120°.05E**±0°.05**, h200**^{km}**, n49, σ1.^{s}41**/59**, mb4.0**/14**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	1.52	205	P	Pn	05 47 34.0	+0.2
WBSI				S	Sn	05 47 59.2	-1.1
EDFI	**Ende, Flores**	1.70	107	P	Pn	05 47 36.4	+0.9
EDFI				S	Sn	05 48 02.4	-0.8
BASI	**Baing, Sumba**	2.02	165	P	Pn	05 47 39.7	+1.1
BASI				S	Sn	05 48 08.7	-0.1
BSSI	**Bau Bau, Buton**	2.15	12	P	Pn	05 47 40.3	+0.3
MMRI	**Maumere**	2.20	100	P	Pn	05 47 42.0	+1.5
MMRI				S	Sn	05 48 12.7	+0.6
MMRI	**Maumere**	2.20	100	P	Pn	05 47 42.2	+1.7
PLAI	**Plampang**	2.31	256	P	Pn	05 47 42.7	+1.0
PLAI	**Plampang**	2.31	256	P	Pn	05 47 42.6	+0.9
BKSI	**Bulukumba**	2.92	2	P	Pn	05 47 51.2	+2.6
TWSI	**Taliwang, Sumb**	3.17	261	P	Pn	05 47 52.3	+0.8
KAPI	**Kappang**	3.24	355	P	Pn	05 47 53.6	+1.2
	1.8nm,0.3s,baz=173,slow=9.2,SNR=4.6						
KAPI				S	Sn	05 48 33.9	+0.3
	baz=43,slow=22,SNR=5.6						
BNSI	**Bone**	3.83	1	P	Pn	05 48 02.4	+2.7
BATI	**Baumata**	4.06	119	P	Pn	05 48 04.7	+2.1
	27nm,0.3s,baz=269,slow=0.0,SNR=16						
BATI				S	Sn	05 48 48.8	-2.9
	35nm,0.3s,baz=272,slow=5.2,SNR=3.7						
BATI	**Baumata**	4.06	119	P	Pn	05 48 04.6	+2.1
SPSI	**Sidrap Palu**	4.28	356	P	Pn	05 48 06.3	+1.1
SOEI	**Soe**	4.43	110	P	Pn	05 48 08.7	+1.5
SOEI	**Soe**	4.43	110	P	Pn	05 48 08.7	+1.5
IGBI	**Denpasar**	4.88	263	P	Pn	05 48 14.5	+1.7
TTSI	**Tana Toraja**	5.19	357	P	Pn	05 48 19.6	+2.9
	0.2nm18nm,0.5s						
ABJI	**Asem Bagus**	5.77	274	P	Pn	05 48 25.4	+1.1
	0.3nm38nm,0.5s						
JAGI	**Jajag, Banyuwa**	5.83	268	P	Pn	05 48 24.6	-0.5
	0.5nm27nm,0.4s						
JAGI	**Jajag, Banyuwa**	5.83	268	P	Pn	05 48 26.2	+1.1
PCJI	**Pacitan**	8.78	270	P	Pn	05 49 03.0	-0.3
MTKI	**Muara Teweh, K**	8.90	325	P	Pn	05 49 19.7	+15
FITZ	**Fitzroy Crossi**	11.19	151	P	Pn	05 49 37.0	+2.5
	baz=337,slow=10.0						
FITZ				S	Sn	05 51 36.7	-2.7
	0.8nm,0.3s,baz=321,slow=22,SNR=3.9						
MBWA	**Marble Bar**	12.83	181	P	P	05 49 58.6	-0.1
FAKI	**Fak Fak**	13.25	67	P	P	05 50 02.9	-0.6
WRA	**Warramunga Arr**	18.07	131	P	Pn	05 50 58.3	-0.5
	0.4nm,0.3s,baz=297,slow=12,SNR=13						
WRA				S	S	05 54 14.0	+0.7
	1.1nm,0.3s,baz=312,slow=23,SNR=8.5						
WRAB	**Tennant Creek**	18.07	131	P	Pn	05 50 59.3	+0.5
MEEK	**Meekatharra**	18.33	184	P	Pn	05 51 02.3	+0.5
	16nm,1.1s						
WRKA	**Warakurna**	18.45	156	P	Pn	05 51 04.0	+0.7
	8.5nm,2.1s						
ASAR	**Alice Springs**	20.27	141	P	P	05 51 22.1	+1.8
	0.6nm,0.3s,baz=319,slow=9.1,SNR=21						
ASAR				S	S	05 54 59.0	+2.3
	0.9nm,0.8s,baz=318,slow=22,SNR=4.0						
ASAR				ScP	ScP	05 58 41.5	-1.5
	0.9nm,0.6s,baz=331,slow=2.4,SNR=6.4						
STKA	**Stephens Creek**	30.88	142	P	P	05 52 59.7	+1.9
	0.8nm,0.4s,baz=313,slow=9.7,SNR=3.9						
CMAR	**Chiang Mai Arr**	33.74	322	P	P	05 53 23.8	+1.0
	0.7nm,0.3s,baz=145,slow=4.9,SNR=4.8						
JIRN	**Jiri**	48.46	319	*e*P	P	05 55 23.0	+0.1
GUN	**Gumba**	48.83	319	*e*P	P	05 55 25.8	+0.1
	15nm,0.6s						
PKI	**Pulchoki**	48.91	318	*e*P	P	05 55 26.0	-0.3
	4.7nm,0.4s						
PKIN	**Phulchoki**	48.93	318	*e*P	P	05 55 26.5	+0.2
	9.0nm,0.4s						
GKN	**Gorkha**	49.71	318	*e*P	P	05 55 32.1	-0.1
	8.0nm,0.3s						
DANN	**Dangsing**	50.52	317	*e*P	P	05 55 38.0	-0.4
	22nm,0.6s						
PYUN	**Piuthan**	50.88	317	*e*P	P	05 55 40.5	-0.5
	4.7nm,0.4s						
USRK	**Ussuriysk Ar.**	53.32	11	P	P	05 55 56.9	-1.5
	1.6nm,0.6s,baz=196,slow=5.5,SNR=4.5						
SONM	**Songino Array**	57.14	349	P	P	05 56 25.5	-0.3
	1.2nm,0.8s,baz=161,slow=7.6,SNR=8.6						
MKAR	**Makanchi Array**	64.28	332	P	P	05 57 13.7	-0.2
	2.9nm,0.6s,baz=143,slow=7.4,SNR=32						
MKAR				PcP	PcP	05 57 45.5	-1.3
	0.3nm,0.4s,baz=147,slow=4.6,SNR=1.7						
ZALV	**Zalesovo Beam**	68.73	339	P	P	05 57 40.0	-1.8
	2.9nm,0.3s,baz=138,slow=5.5,SNR=16						
PETK	**Petropavlovsk-**	68.99	23	P	P	05 57 41.6	-1.8
	1.2nm,0.7s,baz=204,slow=3.2,SNR=0.9						
VNDA	**Vanda**	72.55	171	P	P	05 58 06.0	+1.4
	0.3nm,0.5s,baz=359,slow=4.6,SNR=1.5						
YKA	**Yellowknife Ar**	113.10	24	PKiKP	PKiKP	06 05 11.5	-1.5
	0.2nm,0.5s,baz=299,slow=1.9,SNR=10						
TKL	**Tuckaleechee C**	145.10	35	PKP	PKPbc	06 06 13.3	-0.5
	2.3nm,0.3s,baz=304,slow=3.6,SNR=9.8						

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*BUG **22** 06:00:11.2±0.0, 50°.98N×6°.63E, h0^{km}±1^{km}, MD3.3/11, ML3.0/11*

*UCC **22** 06:00:11.8±0.7, 50°.98N×6°.66E, h1^{km}±2^{km}, ML2.4*

*LDG **22** 06:00:12.6±0.1, 50°.99N×6°.66E, h1^{km}, Ml2.9/19, Error ellipse: s-maj=1.7km s-min=1.4km az=154.0, Suspected Mining induced.*

*BGR **22** 06:00:12.6±0.3, 50°.96N×6°.63E, h1^{km}, ML2.6/6, Error ellipse: s-maj=4.4km s-min=2.2km az=125.0*

*BNS **22** 06:00:12.0±0.6, 50°.98N×6°.62E, h1^{km}, ML2.4*

*PRU **22** 06:00:16.5±0.0, 50°.91N×6°.60E, h0^{km}*

ISC 22 06:00:11.3±0.7**, 50°.97N**±0°.02×**6°.59E**±0°.02**, h0**^{km}**, n80, σ1.^{s}19**/131**, 6C-24D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLH	**Pulheim**	0.15	76	*e*Pg	Pg	06 00 14.3	+0.1
PLH				*e*Sg	Sg	06 00 16.0	-0.2
GSH	**Grosshau**	0.27	210	*e*Pg	Pg	06 00 17.0	+0.6
GSH				*e*Sg	Sg	06 00 21.1	+1.3
	260nm,0.5s						
KLL	**Kalltalsperre**	0.37	209	*e*Pg	Pg	06 00 19.5	+1.2
DREG	**Dreilaegerbach**	0.38	216	*e*Pg	Pg	06 00 19.7	+1.2
STB	**Steinbach**	0.41	157	*e*Pg	Pg	06 00 19.8	+0.7
STB				*e*Sg	Sg	06 00 26.2	+1.9
	120nm,0.6s						
LAUG	**Laupendahl**	0.45	30	*e*Pg	Pg	06 00 20.2	+0.4
LAUG				*e*Sg	Sg	06 00 26.6	+1.0
	206nm,0.5s						
TDN	**Todenfeld**	0.45	150	*e*Pg	Pg	06 00 20.2	+0.2
TDN				⇓*e*Sg	Sg	06 00 25.8	0.0
	253nm,0.4s						
HGN	**Heimansgroeve**	0.46	244	Pg	Pg	06 00 21.5	+1.4
HOBG	**Hohbusch**	0.47	88	*e*Pg	Pg	06 00 20.9	+0.5
BTNL	**Ternell**	0.48	217	*d*P	Pg	06 00 21.5	+1.0
BTNL				*d*S	Sb	06 00 29.0	-1.2
	comp=N,99nm,0.5s						
OLFT	**Oleftalsperre**	0.49	193	*e*Pg	Pg	06 00 21.1	+0.6
OLFT				*e*Sg	Sg	06 00 27.6	+0.8
MEM	**Membach**	0.51	226	*b*P	Pg	06 00 22.1	+1.0
MEM				*d*S	Sg	06 00 29.9	+2.1
	comp=N,89nm,0.4s						
MEM	**Membach**	0.51	226	*e*Pg	Pg	06 00 22.2	+1.0
MEM				*e*Sg	Sb	06 00 30.0	-1.2
AHRW	**Bad Neuenahr-A**	0.53	144	*e*Pg	Pg	06 00 22.3	+1.0
AHRW				*e*Sg	Sg	06 00 28.5	+0.3
ENTS	**Ennepetalsperr**	0.59	62	*e*Pg	Pg	06 00 22.4	-0.1
ENTS				*e*Sg	Sg	06 00 30.4	+0.2
BKLB	**Ruhr-Universit**	0.64	42	*e*Pg	Pg	06 00 24.0	+0.5
BUG	**Bochum--Univer**	0.64	42	*e*Pg	Pg	06 00 23.9	+0.3
BUG				*e*Sg	Sg	06 00 32.8	+1.0
BULI	**Ruhr-Universit**	0.65	41	Pg	Pg	06 00 24.0	+0.3
BULI				Sg	Sg	06 00 33.4	+1.4
BTEZ	**Ruhr-Universit**	0.65	42	Pg	Pg	06 00 24.1	+0.4
HILG	**Hillesheim**	0.68	175	*e*Pg	Pb	06 00 25.7	-0.3
BLCH	**La Chartreuse**	0.71	243	*b*P	Pb	06 00 27.0	+0.5
BLCH				*d*S	Sb	06 00 36.9	+0.1
	comp=N,76nm,0.7s						
BHOU	**Houvegnez**	0.72	211	*d*P	Pb	06 00 26.5	-0.1
BHOU				*d*S	Sb	06 00 36.3	-0.8
	comp=E,26nm,0.2s						
BHE	**Schloss Buerre**	0.72	148	*e*Pg	Pg	06 00 24.9	-0.2
LOH	**Wallersheim-Lo**	0.79	182	*e*Pg	Pg	06 00 26.6	+0.2
LOH				*e*Sg	Sg	06 00 37.0	+0.5
	comp=E,63nm,0.3s						
BGG	**Burgeitz**	0.90	148	*e*Pg	Pg	06 00 29.0	+0.5
KOE	**Koeppel**	0.91	126	*e*Pg	Pg	06 00 28.6	0.0
LKLB	**Kalborn**	0.92	200	*d*P	Pb	06 00 30.3	+0.2
SORT	**Sorpetalsperre**	0.95	66	*e*Pg	Pg	06 00 29.2	-0.3
SORT				*e*Sg	Sg	06 00 41.8	-0.1
	comp=E,83nm,0.6s						
BMOL	**Mol**	0.98	285	*d*P	Pg	06 00 29.7	-0.3
BMOL				*d*S	Sn	06 00 46.4	-0.4
BCLA	**Clavier**	0.98	237	*b*P	Pb	06 00 31.1	-0.1
BCLA				*d*S	Sn	06 00 47.8	+0.8
	comp=E,45nm,0.8s						
HMES	**Hamm, Michael-**	0.99	46	Sg	Sg	06 00 42.8	-0.4
HMES				Sn	Sn	06 00 46.8	-0.4
WTSB	**Winterswijk**	1.01	7	*e*Pg	Pb	06 00 32.1	+0.5
LVIA	**Vianden**	1.06	194	*b*P	Pn	06 00 33.3	-0.1
LVIA				*d*S	Sn	06 00 49.9	+1.0
	comp=N,37nm,0.6s						
BGES	**Gesves**	1.12	239	*b*P	Pb	06 00 33.9	+0.4
BGES				*d*S	Sn	06 00 49.9	-0.4
	comp=N,46nm,0.3s						
KASTN	**Kahler Asten**	1.18	78	*e*Pg	Pg	06 00 33.7	-0.2
KASTN				*e*Sg	Sb	06 00 49.8	-0.5
KASTN				Sn	Sn	06 00 51.6	-0.2
WLF	**Walferdange**	1.33	192	*d*P	Pg	06 00 36.5	-0.3
WLF				*d*S	Sb	06 00 55.1	+0.4
WLF	**Walferdange**	1.33	192	*e*Pg	Pb	06 00 37.6	+0.4
WLF				*e*Sg	Sb	06 00 55.0	+0.2
BMRD	**Maredsous**	1.34	241	*d*P	Pg	06 00 37.3	+0.4
BMRD				*d*S	Sn	06 00 56.8	+1.2
TNS	**Taunus Mts**	1.40	121	*e*Pg	Pg	06 00 38.1	-0.1
TNS				*e*Sg	Sb	06 00 56.5	-0.3
GIVF	**Givet**	1.42	233	*e*Pn	Pn	06 00 38.6	+0.3
GIVF	**Givet**	1.42	233	*e*P	Pb	06 00 40.4	+1.8
GIVF				*e*Sg	Sn	06 00 58.7	+1.0
	comp=N,67nm,0.4s						
IBBN	**Ibbenburen**	1.53	28	Pg	Pn	06 00 40.0	+0.2
IBBN				Sg	Sg	06 00 59.1	-1.2
IBBE	**Ibbenbueren Ea**	1.53	29	Sg	Sn	06 01 00.6	+0.1
DOU	**Dourbes**	1.54	236	*b*P	Pn	06 00 40.6	+0.6
DOU				*d*S	Sg	06 01 01.5	+0.7
	comp=N,45nm,0.5s						
BAIF	**Baives**	1.77	240	*e*Pn	Pn	06 00 43.2	+0.1
BAIF	**Baives**	1.77	240	*e*Pg	Pg	06 00 46.4	+1.2
BAIF				*e*Sg	Sg	06 01 09.6	+1.5
	comp=N,52nm,0.4s						
UBBA	**Unterbreizbach**	2.17	93	Sn	Sn	06 01 16.4	+0.4
PAGF	**Fort de Pagny**	2.48	193	*e*Pg	Pg	06 00 59.3	+0.5
PAGF				*e*Sg	Sg	06 01 31.5	+0.6
	comp=N,11nm,0.4s						
CLZ	**Clausthal**	2.53	68	Pg	Pg	06 01 00.5	+0.8
CLZ				Sg	Sg	06 01 32.4	0.0
SAVF	**Savonnieres en**	2.54	202	*e*Pn	Pn	06 00 53.6	-0.1
	baz=23						
SAVF	**Savonnieres en**	2.54	202	*e*Pg	Pg	06 01 00.5	+0.6
	baz=16						
SAVF				*e*Sg	Sg	06 01 33.4	+0.6
	comp=N,13nm,0.4s						
CDF	**Champ du Feu**	2.60	170	*e*Pn	Pn	06 00 54.6	0.0
CDF	**Champ du Feu**	2.60	170	*e*Pg	Pg	06 01 01.6	+0.6
CDF				*e*Sn	Sn	06 01 25.0	-1.9
CDF				*e*Sg	Sg	06 01 35.4	+0.7
	comp=N,42nm,0.8s						
MEZF	**Maizieres J'vi**	2.66	203	*e*Pn	Pn	06 00 55.3	-0.1
	baz=18						
MEZF				*e*Sg	Sg	06 01 37.4	+0.7
	comp=N,12nm,0.5s						
SFTF	**Sexfontaines**	2.94	201	*e*P	Pn	06 01 02.0	+2.7
SFTF	**Sexfontaines**	2.94	201	*e*Pg	Pg	06 01 08.1	+0.4
SFTF				*e*Sg	Sg	06 01 46.3	+0.5
	comp=N,6.6nm,0.3s						
HAU	**Haudompre**	2.97	183	*e*Pn	Pn	06 00 59.6	-0.1
HAU	**Haudompre**	2.97	183	*e*Pg	Pg	06 01 08.3	+0.1
HAU				*e*Sg	Sg	06 01 46.8	+0.2
	comp=N,11nm,0.4s						
HINF	**Hinteralfeld**	3.16	177	*e*Pn	Pn	06 01 02.1	-0.2
HINF	**Hinteralfeld**	3.16	177	*e*Pg	Pg	06 01 11.9	+0.1
HINF				*e*Sg	Sg	06 01 52.7	0.0
	comp=N,12nm,0.5s						
CLL	**Collm**	4.05	83	*e*Sg	Sg	06 02 20.0	-1.5
	comp=Z,11nm,1.0s						
LOR	**Lormes**	4.11	207	*e*Pn	Pn	06 01 14.9	-0.5
LOR	**Lormes**	4.11	207	*e*P	Pn	06 01 18.9	+3.5
LOR	**Lormes**	4.11	207	*e*Pg	Pg	06 01 29.6	-0.5
	baz=26						
LOR				*e*Sg	Sg	06 02 22.9	-0.4
	comp=Z,13nm,0.5s,baz=35						
CABF	**La Chapelle**	4.37	185	*e*Pn	Pn	06 01 18.9	-0.1
CABF				*e*Sg	Sg	06 02 30.4	-1.3
	comp=Z,11nm,0.7s						
SSF	**Saint Saulge**	4.40	209	*e*Pn	Pn	06 01 19.4	+0.1
SSF	**Saint Saulge**	4.40	209	*e*Pg	Pg	06 01 35.0	-0.6
SSF				*e*Sg	Sg	06 02 31.6	-1.1
	comp=Z,14nm,0.6s						
SMF	**Signal de Mont**	4.69	204	*e*Pn	Pn	06 01 23.5	+0.2
SMF	**Signal de Mont**	4.69	204	*e*Pg	Pg	06 01 40.4	-0.7
SMF				*e*Sg	Sg	06 02 40.6	-1.3
	comp=Z,3.4nm,0.3s						
AVF	**Avril sur Loir**	4.69	208	*e*Sg	Sg	06 02 40.7	-1.3
	comp=Z,1.2nm,0.4s						
KHC	**Kasperske Hory**	4.87	109	*e*PN	Pn	06 01 29.8	+4.1
KHC				*e*x	x	06 02 28.5	
KHC				*e*SG	Sg	06 02 50.1	+2.6
LDF	**La Druitiere**	4.95	244	*e*Pn	Pn	06 01 26.7	-0.2
LDF				*e*Sg	Sg	06 02 49.1	-1.2
	comp=Z,6.8nm,0.5s						
BGF	**Bois d'Agland**	5.06	211	*e*Pn	Pn	06 01 27.4	-1.0
BGF	**Bois d'Agland**	5.06	211	*e*Pg	Pg	06 01 47.0	-1.2
BGF				*e*Sn	Sn	06 02 24.3	-3.2
BGF				*e*Sg	Sg	06 02 52.1	-1.6
	comp=Z,34nm,0.7s						
FLN	**La Foliniere**	5.08	247	*e*Pn	Pn	06 01 28.5	-0.1
FLN	**La Foliniere**	5.08	247	*e*P	Pn	06 01 32.5	+3.9
	baz=65						
FLN				*e*Sn	Sn	06 02 24.0	-3.9
FLN				*e*Sg	Sg	06 02 52.8	-1.5
	comp=Z,1.8nm,0.3s						
PRU	**Pruhonice**	5.17	98	*e*SG	Sg	06 02 59.9	+2.5
	comp=Z,31nm,1.6s						
LPG	**La Plagne**	5.47	179	*e*P	Pn	06 01 39.5	+5.2
GRR	**Gorron**	5.48	245	*e*Pn	Pn	06 01 34.2	+0.1
GRR				*e*Sn	Sn	06 02 33.5	-4.3
	comp=Z,3.3nm,0.3s						
ORIF	**Oris-en-Rattie**	6.07	185	*e*Pn	Pn	06 01 42.9	+0.5

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*IDC **22** 06:00:49.9±1.6, 19°.70S×177°.59W, h553^{km}±17^{km}, mb3.3/11, mb1 3.5/14, mb1mx3.2/53, mbtmp4.2/14, Error ellipse: s-maj=23.9km s-min=13.9km az=144.0*

ISC 22 06:00:48.7±0.7**, 19°.8S**±0°.1×**177°.5W**±0°.1**, h550**^{km}**, n19, σ2.^{s}27**/21**, mb3.9**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	4.69	295	P	P	06 02 17.9	+1.8
	1.1nm,0.3s,baz=155,slow=22,SNR=5.1						
AFI	**Afiamalu**	7.98	44	P	P	06 02 46.0	-0.5
	10nm,0.3s,baz=25,slow=22,SNR=11						
AFI				S	S	06 04 17.5	-5.4
	4.3nm,0.3s,baz=183,slow=19,SNR=1.9						
DZM	**Mont Dzumac**	15.19	258	P	P	06 04 01.6	+1.3
	0.4nm,0.3s,baz=150,slow=7.2,SNR=2.1						
URZ	**Urewera**	19.02	193	P	P	06 04 32.2	-3.5
	3.7nm,0.3s,baz=282,slow=2.2,SNR=18						
CTA	**Charters Tower**	34.05	263	P	P	06 06 48.2	+0.4
	8.2nm,0.6s,baz=88,slow=8.1,SNR=2.9						
STKA	**Stephens Creek**	38.55	243	P	P	06 07 24.3	-0.4
	4.7nm,0.5s,baz=97,slow=10,SNR=13						
ASAR	**Alice Springs**	45.16	256	P	P	06 08 17.1	+0.1
	2.1nm,0.3s,baz=87,slow=8.6,SNR=58						
ASAR				S	S	06 14 14.3	-2.6
	4.5nm,0.7s,baz=94,slow=16,SNR=26						
WRA	**Warramunga Arr**	45.19	261	P	P	06 08 17.1	0.0
	1.3nm,0.3s,baz=103,slow=5.0,SNR=47						
WRA				S	S	06 14 12.1	-5.2
	1.0nm,0.8s,baz=91,slow=13,SNR=3.8						
FITZ	**Fitzroy Crossi**	53.61	262	P	P	06 09 19.7	+0.6
	4.1nm,1.1s,baz=98,slow=5.7,SNR=6.0						
VNDA	**Vanda**	58.69	185	P	P	06 09 54.5	+1.3
	1.3nm,0.7s,baz=343,slow=6.0,SNR=8.5						
MJAR	**Matsushiro Arr**	69.91	323	P	P	06 11 04.8	-0.1
	2.0nm,0.4s,baz=158,slow=6.2,SNR=4.3						
NVAR	**Mina Array Bea**	80.16	43	P	P	06 12 04.3	+1.9
	0.4nm,0.6s,baz=218,slow=5.7,SNR=2.5						
TXAR	**Lajitas Array**	86.25	57	P	P	06 12 34.8	+2.0
	0.2nm,0.7s,baz=223,slow=8.7,SNR=2.8						
ILAR	**Eielson Array**	87.49	13	P	P	06 12 38.0	+0.4
	0.9nm,0.7s,baz=221,slow=6.0,SNR=13						
CMAR	**Chiang Mai Arr**	90.32	289	P	P	06 12 51.8	-0.1
	1.0nm,0.4s,baz=128,slow=5.8,SNR=4.8						
ARCES	**ARCESS Array B**	128.28	350	PKP	PKPdf	06 18 51.9	-0.3
	3.3nm,1.0s,baz=0.0,slow=0.9,SNR=3.9						
AKASG	**Malin Array Be**	142.60	332	PKhKP	PKPpre	06 19 15.3	
	1.7nm,0.6s,baz=43,slow=4.3,SNR=9.4						
GERES	**GERESS Array B**	149.62	345	PKPbc	PKPbc	06 19 37.4	+0.9
	1.5nm,0.7s,baz=20,slow=4.3,SNR=4.2						
DAVOX	**Davos/Dischmat**	152.38	349	PKPbc	PKPbc	06 19 43.6	+0.6
	0.8nm,0.3s,baz=359,slow=21,SNR=2.6						

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*IDC **22** 06:08:50.4±0.9, 23°.81N×121°.69E, h0^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.6/70, mbtmp3.7/10, ML3.7/1, MS3.2/5, Ms1 3.3/5, ms1mx2.8/44, Error ellipse: s-maj=25.5km s-min=20.3km az=63.0*

*NIED **22** 06:08:54.4, 23°.77N×121°.66E, h24^{km}, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.39; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-0.32; $M_{r\theta}$0.07; $M_{\theta\phi}$-0.64; $M_{\phi r}$0.82; Fault plane solution: $M_0$1.09000×10^{15} NP1:ϕ_s7.00000°, δ77.00000°, λ58.00000°. NP2:ϕ_s258.00000°, δ34.00000°, λ157.00000°.*

*JMA **22** 06:08:54.3±0.1, 23°.77N×121°.66E, h24^{km}±4^{km}, M4.0*

*TAP **22** 06:08:55.4, 23°.82N×121°.59E, h28^{km}, ML4.4, C*

*ASIES **22** 06:08:55.5, 23°.82N×121°.61E, h27^{km}, MW3.9*

*BJI **22** 06:08:55.1±0.0, 23°.94N×121°.62E, h12^{km}, mb4.1/5, ML3.9/3*

ISC 22 06:08:54.6±0.7**, 23°.80N**±0°.01×**121°.63E**±0°.02**, h28**^{km}±5^{km}**, n162, σ1.^{s}14**/257**, mb3.8**/9**, MS3.2**/4**, 9C-21D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESL	**Shilin**	0.18	276	⇓*i*P	Pb	06 09 00.7	+0.3
	baz=268						
ESL				*i* S	Sb	06 09 04.3	-0.1
	baz=268						
HWA	**Hwalien**	0.18	353	⇑*i*P	Pn	06 09 01.2	-0.3
	baz=16						
HWA				S	Sb	06 09 06.2	+1.8
	baz=16						
EGFH	**Guangfu**	0.23	236	⇓*i*P	Pb	06 09 01.6	+0.7
	baz=236						
EGFH				*e*S	Sb	06 09 06.0	+0.9
	baz=236						
TWD	**Chiawan**	0.28	354	⇑*i*P	Pb	06 09 02.2	+0.5
	baz=354						
TWD				*i* S	Sn	06 09 07.6	-0.7
	baz=354						
HGSD	**Ruisui**	0.36	212	P	Pn	06 09 04.0	+0.1
	baz=216						
HGSD				S	Sn	06 09 11.1	+1.1
	baz=216						
ETL	**Fush Village**	0.36	359	P	Pb	06 09 03.1	+0.2
	baz=357						
ETL				*e*S	Sb	06 09 08.2	-0.2
	baz=357						
NACB	**Ninganchiao**	0.38	355	⇓*i*P	Pb	06 09 03.3	+0.2
	baz=353						
NACB				S	Sb	06 09 08.8	0.0
	baz=353						
EHY	**Hungye**	0.40	224	⇑*i*P	Pb	06 09 03.4	-0.1
	baz=225						
EHY				*e*S	Sb	06 09 08.0	-1.4
	baz=225						
ETLH	**Xiulin Townshi**	0.43	342	⇓*i*P	Pb	06 09 04.0	0.0
	baz=338						
ETLH				S	Sb	06 09 09.8	-0.5
	baz=338						
OWD	**Renai**	0.44	291	*i* P	Pb	06 09 04.2	+0.1
	baz=293						
OWD				S	Sb	06 09 10.4	-0.3
	baz=293						
VWDT	**VWDT**	0.45	265	⇓*i*P	Pb	06 09 04.6	+0.5
	baz=256						
VWDT				S	Sb	06 09 10.4	-0.2
	baz=256						
WHF	**Hehuan Shan**	0.48	316	⇓*i*P	Pb	06 09 04.8	-0.2
	baz=317						
WHF				*e*S	Sb	06 09 10.2	-1.8
	baz=317						
CHGB	**Renai**	0.49	302	⇓*i*P	Pb	06 09 05.2	+0.2
	baz=308						
CHGB				*e*S	Sb	06 09 12.2	+0.1
	baz=308						
YULB	**Yu-li**	0.51	217	⇑*i*P	Pb	06 09 04.8	-0.2
	baz=223						
YULB				*e*S	Sb	06 09 12.2	0.0
	baz=223						
EHP	**Heping Village**	0.52	11	*e*P	Pb	06 09 05.7	+0.4
	baz=15						
EHP				*e*S	Sn	06 09 14.3	+0.2
	baz=15						
EYUL	**Yuli**	0.53	213	*e*P	Pb	06 09 05.5	0.0
	baz=221						
EYUL				S	Sb	06 09 13.2	+0.4
	baz=221						
FUSS	**Fushou**	0.57	322	⇓*i*P	Pb	06 09 06.5	+0.1
	baz=323						
FUSS				*e*S	Sb	06 09 13.9	-0.3
	baz=323						
TWT	**Tachien**	0.62	318	⇓*i*P	Pb	06 09 07.3	+0.3
	baz=312						
TWT				*e*S	Sb	06 09 14.0	-1.4
	baz=312						
SSLB	**Suanglung**	0.62	269	⇓*i*P	Pb	06 09 06.9	-0.1
	baz=267						
SSLB				*e*S	Sb	06 09 14.0	-1.4
	baz=267						
SSLB	**Suanglung**	0.62	269	P	Pb	06 09 07.1	+0.2
TDCB	**Techi**	0.63	317	⇓*i*P	Pb	06 09 07.3	+0.2
	baz=312						
TDCB				*e*S	Sb	06 09 15.1	-0.6
	baz=312						
ENA	**Nanau**	0.64	9	P	Pb	06 09 07.5	+0.2
	baz=1.0						
ENA				*e*S	Sb	06 09 16.2	+0.3
	baz=1.0						
EWUT	**Wuta**	0.66	12	*e*P	Pb	06 09 07.9	+0.3
	baz=2.0						
EWUT				*e*S	Sb	06 09 16.8	+0.3
	baz=2.0						
NNSB	**Datong**	0.67	340	⇓*i*P	Pb	06 09 07.7	-0.1
	baz=342						
NNSB				S	Sb	06 09 16.1	-0.8
	baz=342						
FULB	**Fuli**	0.67	207	⇑*i*P	Pb	06 09 08.1	+0.3
	baz=217						
FULB				*e*S	Sn	06 09 18.8	+1.0
	baz=217						
SMLT	**Sun Moon Lake**	0.67	278	⇓*i*P	Pb	06 09 08.0	+0.1
	baz=280						
SMLT				S	Sb	06 09 16.4	-0.6
	baz=280						
NNS	**Nan Shan**	0.68	340	⇓*i*P	Pb	06 09 08.0	-0.1
	baz=342						
NNS				S	Sb	06 09 16.9	-0.4
	baz=342						
WCS	**Beigang Elemen**	0.71	292	P	Pb	06 09 07.4	-1.0
	baz=291						
WCS				S	Sb	06 09 16.5	-1.3
	baz=291						
TYC	**Yuchr**	0.72	279	⇓*i*P	Pb	06 09 08.5	0.0
	baz=282						
TYC				*e*S	Sb	06 09 16.5	-1.5
	baz=282						
CHKT	**Chengkung**	0.73	199	*e*P	Pn	06 09 09.4	+0.3
	baz=210						

CHKT				*e*S	Sn	06 09 20.9	+1.6
	baz=210						
WHP	**Taichung City**	0.79	308	⇓*i*P	Pn	06 09 10.0	+0.1
	baz=303						
WHP				*e*S	Sb	06 09 20.2	+0.1
	baz=303						
ALS	**Alishan**	0.81	250	⇑*i*P	Pn	06 09 10.7	+0.4
	baz=248						
ALS				S	Sb	06 09 21.0	0.0
	baz=248						
NDT	**Datong Townshi**	0.81	352	*e*P	Pb	06 09 10.0	-0.1
	baz=353						
NDT				*e*S	Sb	06 09 20.1	-0.7
	baz=353						
ELDTW	**Lidau**	0.83	223	*e*P	Pn	06 09 09.7	-0.8
	baz=216						
ELDTW				*e*S	Sb	06 09 19.7	-1.6
	baz=216						
WJS	**Zhushan**	0.83	272	*e*P	Pb	06 09 11.6	+1.2
	baz=270						
WJS				*e*S	Sn	06 09 21.6	0.0
	baz=270						
TWC	**Suao**	0.83	14	*e*P	Pb	06 09 10.6	+0.1
	baz=360						
TWC				*e*S	Sn	06 09 22.7	+0.9
	baz=360						
NDS	**Dongshan**	0.84	5	*e*P	Pn	06 09 10.5	0.0
	baz=355						
NDS				*e*S	Sn	06 09 22.1	+0.2
	baz=355						
ENTT	**Nioudou**	0.84	356	*e*P	Pn	06 09 10.3	-0.3
	baz=357						
ENTT				*e*S	Sn	06 09 22.2	+0.1
	baz=357						
WNT	**Mingjian**	0.87	276	P	Pb	06 09 12.1	+1.0
	baz=274						
WNT				S	Sn	06 09 23.8	+1.1
	baz=274						
EDH	**Donghe**	0.87	200	*e*P	Pn	06 09 11.0	0.0
	baz=212						
EDH				*e*S	Sn	06 09 23.4	+0.6
	baz=212						
CHN5	**Tsauling**	0.90	257	*e*P	Pb	06 09 12.3	+0.7
	baz=256						
CHN5				*e*S	Sn	06 09 24.4	+1.0
	baz=256						
YHNB	**Yeheng**	0.90	345	⇓*i*P	Pn	06 09 11.6	+0.1
	baz=356						
YHNB				*e*S	Sb	06 09 21.4	-2.0
	baz=356						
YHNB	**Yeheng**	0.90	345	P	Pn	06 09 11.4	-0.1
NSK	**Sanguang**	0.91	344	⇓*i*P	Pn	06 09 11.8	+0.2
	baz=356						
NSK				*e*S	Sb	06 09 22.4	-1.3
	baz=356						
TWE	**Neicheng**	0.92	2	*e*P	Pn	06 09 11.8	+0.1
	baz=354						
TWE				*e*S	Sb	06 09 23.1	-0.8
	baz=354						
TCU	**Taichung**	0.94	292	*e*P	Pb	06 09 13.3	+1.0
	baz=291						
TCU				*e*S	Sb	06 09 26.0	+1.6
	baz=291						
TWQ1	**Liyutan**	0.96	305	⇓*i*P	Pb	06 09 13.6	+1.0
	baz=304						
TWQ1				S	Sb	06 09 25.8	+0.9
	baz=304						
ILA	**Ilan**	0.97	6	*e*P	Pn	06 09 12.0	-0.4
NWLT	**Wulai**	0.98	353	*e*P	Pn	06 09 12.6	0.0
	baz=353						
NWLT				*e*S	Sn	06 09 25.0	-0.6
	baz=353						
LONT	**Longtian**	1.00	208	*e*P	Pn	06 09 11.6	-1.1
	baz=205						
STYH	**Taoyuan**	1.00	232	*e*P	Pn	06 09 13.2	+0.4
	baz=225						
STYH				*e*S	Sn	06 09 25.7	-0.2
	baz=225						
NSY	**Sanyi**	1.00	308	*e*P	Pb	06 09 14.3	+0.9
	baz=307						
NSY				*e*S	Sb	06 09 28.0	+1.7
	baz=307						
WDLH	**Douliu**	1.01	264	*e*P	Pb	06 09 13.9	+0.5
	baz=263						
WDLH				*e*S	Sb	06 09 28.0	+1.8
	baz=263						
NSTT	**Nanjuang**	1.01	325	⇓*i*P	Pb	06 09 13.9	+0.4
	baz=319						
NSTT				*e*S	Sn	06 09 25.4	-0.8
	baz=319						
LIOB	**Emei**	1.01	327	⇓*i*P	Pb	06 09 14.3	+0.7
	baz=326						
LIOB				*e*S	Sb	06 09 27.1	+0.6
	baz=326						
WCHH	**Zhanghua**	1.02	286	*e*P	Pb	06 09 14.9	+1.2
	baz=285						
WCHH				*e*S	Sb	06 09 28.0	+1.3
	baz=285						
TPUB	**Ta-pu**	1.04	242	⇑*i*P	Pb	06 09 14.5	+0.5
	baz=241						
TPUB				*i* S	Sb	06 09 28.2	+0.9
	baz=241						
TPUB	**Ta-pu**	1.04	242	P	Pb	06 09 14.5	+0.5
CHN4	**Tsaushan**	1.05	245	⇑*i*P	Pb	06 09 14.8	+0.6
	baz=245						
CHN4				*e*S	Sb	06 09 29.3	+1.8
	baz=245						
WDJ	**Dajia District**	1.06	301	*e*P	Pb	06 09 15.2	+0.9
	baz=301						
WDJ				*e*S	Sb	06 09 29.9	+2.1
	baz=301						
NMLH	**Miaoli**	1.06	314	P	Pb	06 09 14.9	+0.5
	baz=313						
NMLH				S	Sb	06 09 29.1	+1.2
	baz=313						
NTC	**Toucheng**	1.07	10	*e*P	Pb	06 09 14.9	+0.5
	baz=356						
NTC				*e*S	Sb	06 09 30.1	+2.0
	baz=356						
WTP	**Ta-pu**	1.08	240	⇑*i*P	Pb	06 09 15.1	+0.4
	baz=239						
WTP				*e*S	Sb	06 09 28.7	+0.2
	baz=239						
CHN2	**Minshiung**	1.09	256	*e*P	Pb	06 09 15.8	+1.0
	baz=255						
CHN2				*e*S	Sb	06 09 30.6	+1.9
	baz=255						
TWG	**Pinlang**	1.10	208	*e*P	Pn	06 09 13.0	-1.1
	baz=191						
TWGBT	**Beinan**	1.10	208	*e*P	Pn	06 09 13.0	-1.1
	baz=207						
TWGBT				*e*S	Sb	06 09 30.3	+1.4
	baz=207						
LDUT	**Ludao**	1.13	188	*e*P	Pn	06 09 13.1	-1.4
	baz=178						
LDUT				*e*S	Sn	06 09 29.1	0.0
	baz=178						
TTN	**Taitung**	1.13	203	*e*P	Pn	06 09 13.9	-0.6
	baz=201						
WTK	**Tuku**	1.14	265	*e*P	Pb	06 09 16.4	+0.7
	baz=264						
WTK				*e*S	Sb	06 09 31.1	+0.9
	baz=264						
CHY	**Chiayi**	1.15	255	*e*P	Pb	06 09 16.0	+0.2
	baz=254						
CHY				*e*S	Sb	06 09 31.2	+0.9
	baz=254						
WRL	**Guolierlin Hig**	1.15	275	*e*P	Pb	06 09 16.3	+0.4
	baz=274						
WRL				*e*S	Sb	06 09 31.1	+0.7
	baz=274						
SBCB	**Hsinchu**	1.15	329	*e*P	Pb	06 09 16.3	+0.4
	baz=314						
SBCB				*e*S	Sb	06 09 31.2	+0.7
	baz=314						
NHDH	**Xindian Distri**	1.17	355	*e*P	Pb	06 09 16.1	0.0
	baz=354						
NHDH				*e*S	Sn	06 09 30.4	+0.4
	baz=354						
HSN	**Hsinchu**	1.17	329	*e*P	Pb	06 09 17.4	+1.3
	baz=316						
HSN				*e*S	Sb	06 09 33.6	+2.6
	baz=316						
TWK	**Hsinying**	1.17	244	*e*P	Pb	06 09 16.5	+0.3
	baz=243						
TWK				*e*S	Sb	06 09 33.0	+1.9
	baz=243						
TWA	**Mucha**	1.18	358	*e*P	Pb	06 09 16.2	-0.2
	baz=357						
TWA				*e*S	Sb	06 09 30.9	-0.4
	baz=357						
CHN1	**Nanshi**	1.18	239	*e*P	Pb	06 09 16.7	+0.3
	baz=239						
CHN1				*e*S	Sb	06 09 32.4	+1.1
	baz=239						
TIPB	**Shuangxi**	1.18	9	*e*P	Pb	06 09 16.3	-0.2
	baz=357						
TIPB				*e*S	Sb	06 09 32.3	+0.9
	baz=357						
SNST	**Tainan City**	1.19	241	*e*P	Pb	06 09 16.9	+0.4
	baz=241						
SNST				*e*S	Sb	06 09 32.9	+1.4
	baz=241						
SGST	**Jiashian**	1.20	234	P	Pn	06 09 16.0	+0.5
	baz=225						
SGST				*e*S	Sb	06 09 32.6	+0.9
	baz=225						
SLGT	**Liugui**	1.21	229	*e*P	Pb	06 09 16.9	+0.1
	baz=220						
SLGT				*e*S	Sb	06 09 31.9	-0.1
	baz=220						
NCUH	**Zhongli**	1.23	341	*e*P	Pb	06 09 17.6	+0.2
	baz=339						
NCUH				*e*S	Sb	06 09 34.0	+1.2
	baz=339						
NCU	**National Centr**	1.24	341	*e*P	Pb	06 09 17.5	+0.2
	baz=339						
NCU				*e*S	Sb	06 09 34.2	+1.3
	baz=339						
WTCT	**Ta-ch'eng**	1.24	273	*e*P	Pn	06 09 16.7	+0.7
	baz=272						
TAP	**Taipei**	1.24	355	*e*P	Pb	06 09 17.5	+0.1
	baz=354						
TAP				*e*S	Sb	06 09 33.8	+0.8
	baz=354						
TWB1	**Santiao Chiao**	1.25	15	*e*P	Pb	06 09 17.7	+0.2
	baz=2.0						
TWB1				*e*S	Sb	06 09 34.9	+1.7
	baz=2.0						
NWF	**Wu-fen Shan**	1.28	6	*e*P	Pb	06 09 17.9	-0.1
	baz=5.0						
NWF				*e*S	Sn	06 09 33.5	+0.6
	baz=5.0						
WSF	**Szhu**	1.30	263	*e*P	Pb	06 09 18.1	-0.3
	baz=262						
WSF				*e*S	Sb	06 09 35.3	+0.6
	baz=262						
ICHU	**Yijhu**	1.31	251	*e*P	Pb	06 09 18.9	+0.2
	baz=251						
ICHU				*e*S	Sb	06 09 35.7	+0.7
	baz=251						
TWS1	**Kuangyinshan**	1.31	352	*e*P	Pb	06 09 18.7	+0.1
	baz=2.0						
TWS1				*e*S	Sb	06 09 35.7	+0.6
	baz=2.0						
YM01	**YM01**	1.34	358	*e*P	Pn	06 09 17.9	+0.4
	baz=359						
CHN3	**Shinhua**	1.36	239	*e*P	Pb	06 09 20.5	+1.0
	baz=239						
CHN3				*e*S	Sb	06 09 39.9	+3.4
	baz=239						
JYNG	**Yonagunijimaku**	1.37	61	P	Pb	06 09 19.3	-0.2
JYNG				*e*S	Sb	06 09 36.8	+0.2
NTST	**Danshui**	1.37	353	*e*P	Pb	06 09 20.0	+0.3
	baz=2.0						
NTST				*e*S	Sb	06 09 38.3	+1.5
	baz=2.0						
CHN8	**Yiju**	1.38	251	*e*P	Pb	06 09 19.1	-0.6
	baz=251						
CHN8				*e*S	Sb	06 09 37.7	+0.8
	baz=251						
ANP	**Anpu**	1.39	356	*e*P	Pb	06 09 20.1	+0.1
	baz=357						
SSD	**Sandimen**	1.39	221	*e*P	Pb	06 09 19.4	-0.5
	baz=222						
SSD				*e*S	Sb	06 09 39.5	+2.2
	baz=222						
TSMG	**Majia**	1.41	220	*e*P	Pn	06 09 19.6	+1.1
	baz=221						
TSMG				*e*S	Sb	06 09 38.7	+0.7
	baz=221						
YOJ	**Yonaguni jima**	1.43	62	*e*P	Pb	06 09 19.9	-0.6
	baz=61						
YOJ				*e*S	Sb	06 09 37.5	-0.8
	baz=61						
YOJ	**Yonaguni jima**	1.43	62	P	Pb	06 09 20.1	-0.4
YOJ				*e*S	Sb	06 09 37.8	-0.5
YOJ	**Yonaguni jima**	1.43	62	P	Pb	06 09 19.9	-0.6
SCLT	**Jiali**	1.46	245	*e*P	Pb	06 09 21.2	+0.1
	baz=245						
SCLT				*e*S	Sb	06 09 39.9	+0.7
	baz=245						
TWM1	**Shoushan**	1.47	229	*e*P	Pb	06 09 22.4	+1.0
	baz=230						
TWM1				*e*S	Sb	06 09 43.1	+3.4
	baz=230						
TWY	**Chenhua**	1.47	359	*e*P	Pb	06 09 20.9	-0.5
MASBT	**Mashibuluo**	1.49	218	*e*P	Pn	06 09 20.1	+0.5
	baz=217						
SGLT	**Jiouru**	1.50	225	*e*P	Pb	06 09 22.6	+1.0
	baz=210						
EAST	**Anshuo**	1.58	207	*e*P	Pn	06 09 20.0	-0.8
	baz=197						
TAW	**Tawu**	1.58	205	*e*P	Pn	06 09 21.6	+0.8
	baz=192						
SSPT	**Xinbi**	1.63	217	*e*P	Pb	06 09 23.9	-0.2
	baz=216						
SCZT	**Fangliau**	1.69	213	*e*P	Pn	06 09 23.6	+1.3
	baz=212						
SLIU	**Shizi**	1.75	206	*e*P	Pn	06 09 24.0	+1.0
	baz=194						
LAY	**Lan-yu**	1.75	182	*e*P	Pn	06 09 22.4	-0.7
	baz=176						
LAY				*e*S	Sn	06 09 43.7	-0.8
	baz=176						
WLCH	**Liuqiu**	1.84	219	*e*P	Pb	06 09 27.2	-0.4
	baz=218						
WDGT	**Dungji**	1.89	254	*e*P	Pn	06 09 25.6	+0.7
	baz=253						
PHUB	**P'eng-hu**	1.91	262	*e*P	Pn	06 09 26.3	+1.0
	baz=261						
PNG	**Penghu**	1.92	264	*e*P	Pn	06 09 26.3	+1.0
	baz=262						
HEN	**Hengchun**	1.96	205	*e*P	Pb	06 09 29.4	-0.3
	baz=195						
IRIF	**Iriomote-Funau**	1.99	74	P	Pn	06 09 28.0	+1.6
IRIF				S	Sn	06 09 52.4	+2.0
TSEB	**Hengchuen, Pin**	2.00	200	*e*P	Pn	06 09 28.1	+1.5
	baz=190						
HATJ	**Hateruma jima**	2.01	82	P	Pn	06 09 28.1	+1.5
HATJ				S	Sn	06 09 52.3	+1.5
VCHM	**Qimei**	2.10	254	*e*P	Pn	06 09 28.3	+0.4
	baz=253						
JKRS	**Kuro-shima**	2.22	78	P	Pn	06 09 31.6	+2.1
JKRS				*e*S	Sn	06 09 58.0	+2.0
JIJ	**Ishigaki jima**	2.37	76	P	Pn	06 09 32.8	+1.3
JIJ				S	Sn	06 10 00.6	+1.0
PTMZ	**Houxiangcun**	2.60	299	*e*P	Pn	06 09 34.9	+0.2
	baz=297						
MATB	**Ma-tsu**	2.80	327	*e*P	Pn	06 09 37.6	+0.1
	baz=325						
JTJ	**Tarama**	2.93	73	P	Pn	06 09 40.9	+1.6
JTJ				S	Sn	06 10 15.8	+2.3
KNM	**Kinmen**	2.98	283	*e*P	Pn	06 09 42.2	+2.2
	baz=280						
QZH	**Quanzhou**	3.00	293	Pn	Pn	06 09 40.8	+0.6
QZH				Sn	Sn	06 10 12.8	-2.4
QZH				smax	smax		
	comp=N,680nm,0.3s						
QZH				smax	smax		
	comp=E,320nm,0.4s						
KNMB	**Chin-men Tao**	3.04	283	*e*P	Pn	06 09 41.0	+0.2
	baz=281						
LYJJ	**Jianjiangzhen**	3.22	329	*e*P	Pn	06 09 43.5	+0.2
	baz=327						
BBP	**Basco**	3.35	175	*e*P	Pn	06 09 44.3	-0.9
BBP				*i* S	Sn	06 10 16.3	-7.7
XPSS	**Dashiqiu**	3.38	338	*e*P	Pn	06 09 45.4	-0.1
	baz=351						
JIRB	**Irabujima**	3.39	72	P	Pn	06 09 47.2	+1.6
JIRB				*e*S	Sn	06 10 26.1	+1.2
JIKM	**Ikemajima**	3.48	70	P	Pn	06 09 48.6	+1.7
JIKM				S	Sn	06 10 29.0	+1.7
JMJ	**Miyako jima 2**	3.49	72	P	Pn	06 09 48.4	+1.4
JMJ2	**Miyako jima3**	3.50	74	P	Pn	06 09 48.3	+1.1
JMJ2				*e*S	Sn	06 10 29.4	+1.7
AXDP	**Jialang**	3.51	289	*e*P	Pn	06 09 47.8	+0.5
	baz=286						
ZPLA	**Ao Xicun**	3.55	273	*e*P	Pn	06 09 48.7	+0.8
	baz=271						
JOGS	**Gusukube**	3.58	74	S	Sn	06 10 32.3	+2.8
JOW	**Kunigami**	6.73	62	Pn	Pn	06 10 31.6	0.0
	3.2nm,0.3s,baz=128,slow=22,SNR=14						
JOW				Sn	Sn	06 11 42.5	-4.8
	0.6nm,0.3s,baz=102,slow=28,SNR=1.1						
JOW	**Kunigami**	6.73	62	P	Pn	06 10 31.8	+0.3
KSRS	**Korea Array**	14.64	20	Pn	P	06 12 23.9	-2.0
	0.3nm,0.3s,baz=198,slow=11,SNR=2.5						
XAN	**Xi'an**	15.09	315	P	Pn	06 12 25.3	-0.5
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MJAR	**Matsushiro Arr**	19.12	45	LR	LR	06 20 57.2	
	comp=Z,38nm,20.2s,baz=95,slow=38						
CMAR	**Chiang Mai Arr**	21.81	260	P	P	06 13 46.5	+1.8
	0.7nm,0.3s,baz=62,slow=8.8,SNR=7.6						
CMAR				LR	LR	06 23 04.7	
	comp=Z,67nm,18.4s,baz=150,slow=39						
GUMO	**Guam**	24.21	111	LR	LR	06 22 56.9	
	comp=Z,40nm,18.8s,baz=136,slow=35						
SONM	**Songino Array**	26.88	337	P	P	06 14 32.4	-0.7
	0.2nm,0.3s,baz=144,slow=11,SNR=2.1						
MKAR	**Makanchi Array**	38.90	316	P	P	06 16 18.2	+0.5
	1.3nm,0.7s,baz=109,slow=12,SNR=7.9						
MKAR				PcP	PcP	06 18 28.1	-0.1
	0.8nm,0.8s,baz=105,slow=2.9,SNR=4.3						
ZALV	**Zalesovo Beam**	40.79	327	P	P	06 16 32.8	-0.5
	0.9nm,0.4s,baz=121,slow=8.8,SNR=4.0						
H11N1	**WAKE ISLAND Hy**	42.10	86	T	T	07 01 54.5	
	baz=283,slow=75,SNR=6.6						
H11N2	**WAKE ISLAND Hy**	42.10	86	T	T	07 01 57.1	
	baz=283,slow=75,SNR=8.6						
H11N3	**WAKE ISLAND Hy**	42.12	86	T	T	07 01 52.1	
	baz=283,slow=75,SNR=8.2						
H11S3	**WAKE ISLAND Hy**	42.22	88	T	T	07 01 54.0	
	baz=284,slow=74,SNR=41						
H11S1	**WAKE ISLAND Hy**	42.23	88	T	T	07 01 53.7	
	baz=284,slow=74,SNR=22						
H11S2	**WAKE ISLAND Hy**	42.24	88	T	T	07 01 54.4	
	baz=284,slow=74,SNR=18						
KURBB	**Kurchatov Arra**	42.67	320	P	P	06 16 48.3	-0.4
	0.5nm,0.4s,baz=111,slow=10.0,SNR=2.3						
AAK	**Ala-Archa**	43.06	308	LR	LR	06 37 19.4	
	comp=Z,35nm,18.9s,baz=93,slow=40						
WRA	**Warramunga Arr**	45.20	163	P	P	06 17 07.7	-1.6
	1.1nm,0.9s,baz=345,slow=8.9,SNR=3.3						
ASAR	**Alice Springs**	48.66	165	P	P	06 17 37.0	+0.6
	0.9nm,0.8s,baz=342,slow=7.2,SNR=6.0						
ILAR	**Eielson Array**	69.37	27	P	P	06 19 59.5	+0.1
	0.2nm,0.5s,baz=292,slow=5.9,SNR=4.5						
NOA	**NORSAR Array B**	78.76	332	LR	LR	06 59 18.8	
	comp=Z,25nm,19.2s,baz=250,slow=38						
YKA	**Yellowknife Ar**	83.17	23	P	P	06 21 18.1	+0.3
	0.4nm,0.5s,baz=310,slow=5.0,SNR=18						

DJA 22 06:28:02.8±0.7,**3°N**±5°×**11°8E**±°,**h33**^{km}±5^{km},**M3.9**/6,
mb4.1/2,**mB5.2**/1,**MLv3.7**/6,**Mw(mB)4.6**/1,**Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MPSI	**Mapaga**	3.71	140	P	Pn	06 28 58.1	+0.2
MRSI	**Marisa**	5.18	121	P	Pn	06 29 20.7	+2.6
	0.1nm2µm34nm,0.6s						
GTOI	**Gorontalo**	6.05	115	P	Pn	06 29 27.6	-2.5
	0.0nm7.0nm,0.9s						
TTSI	**Tana Toraja**	6.62	160	P	Pn	06 29 35.7	-2.2

DDA ***22*** *06:29:55.5, 36°.51N×25°.49E, h2*^{km}*±3*^{km}*, ML3.4*
IDC ***22*** *06:29:57.0±1.0, 36°.48N×25°.64E, h0*^{km}*, mb3.6/6,*
mb1 3.7/7, mb1mx3.5/38, mbtmp3.6/7, ML3.0/1, Error
ellipse: s-maj=34.8km s-min=16.9km az=138.0
ATH ***22*** *06:29:58.0, 36°.59N×25°.57E, h21*^{km}*±2*^{km}*, ML3.7/4, Error*
ellipse: s-maj=2.6km s-min=1.0km az=262.0
ISK ***22*** *06:29:58.6, 36°.60N×25°.60E, h15*^{km}*, ML3.3/26*
THE ***22*** *06:29:59.0, 36°.59N×25°.59E, h7*^{km}*, ML3.5/8, Error ellipse:*
s-maj=1.0km s-min=0.4km az=264.0

ISC 22 06:29:59.0±0.7,**36°.56N**±0°.02×**25°.53E**±0°.02,**h13**^{km}±3^{km},
n113,σ**0^{s}90**/142,**mb3.6**/6,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMBO	**Columbo, Santo**	0.13	229	P	Pb	06 30 02.8	-0.5
CMBO				S	Sb	06 30 06.0	-0.2
	33µm,0.6s						
CMBO	**Columbo, Santo**	0.13	229	P	Pb	06 30 02.8	-0.5
CMBO				S	Sb	06 30 05.8	-0.5
CMBO				AML	AML	06 30 10.3	
	comp=N,80006µm,0.5s						
CMBO				AML	AML	06 30 12.8	
	comp=E,50696µm,0.4s						
THR2	**Thira island,**	0.13	214	P	Pb	06 30 02.9	-0.5
THR2	**Thira island,**	0.13	214	P	Pb	06 30 02.9	-0.5
THT2	**Imerovigli**	0.15	215	P	Pb	06 30 03.2	-0.4
THT2				S	Sb	06 30 06.9	+0.1
	comp=E,11µm,0.5s						
THT2	**Imerovigli**	0.15	215	P	Pb	06 30 03.2	-0.4
THT2				S	Sb	06 30 07.0	+0.3
SAP4	**Santorini-Oia**	0.15	236	P	Pb	06 30 03.2	-0.5
SAP4				S	Sb	06 30 06.8	0.0
	comp=E,43µm,0.2s						
SAP4	**Santorini-Oia**	0.15	236	P	Pb	06 30 03.2	-0.5
SAP4				S	Sb	06 30 06.7	-0.1
THR8	**Santorini-Mono**	0.15	195	P	Pb	06 30 02.9	-0.8
THR8	**Santorini-Mono**	0.15	195	P	Pb	06 30 03.0	-0.8
SFIR	**Foira Santorin**	0.16	211	P	Pb	06 30 03.5	-0.3
SFIR				S	Sb	06 30 06.4	-0.6
	comp=E,29µm,0.3s						
THR3	**Thira Island,**	0.18	215	P	Pb	06 30 03.8	-0.4
THR3	**Thira Island,**	0.18	215	P	Pb	06 30 04.0	-0.2
SNT5	**Nea Kammeni, S**	0.19	215	P	Pb	06 30 04.8	+0.5
STAX	**Taxiarchis Har**	0.19	212	P	Pb	06 30 03.7	-0.6
STAX				S	Sb	06 30 07.8	0.0
STAX	**Taxiarchis Har**	0.19	212	P	Pb	06 30 03.7	-0.6
STAX				S	Sb	06 30 07.8	0.0
STAX				AML	AML	06 30 09.4	
	comp=E,16114µm,0.2s						
STAX				AML	AML	06 30 11.0	
	comp=N,18303µm,0.2s						
SANT	**Santorini**	0.19	197	P	Pb	06 30 03.6	-0.9
SANT				S	Sb	06 30 07.9	-0.2
	comp=N,10µm,0.3s						
SANT	**Santorini**	0.19	197	P	Pb	06 30 03.8	-0.6
SANT				S	Sb	06 30 07.8	-0.2
SANT	**Santorini**	0.19	197	PG	Pb	06 30 04.3	-0.2
SANT				SG	Sb	06 30 08.1	0.0
THR5	**Thira Island,**	0.20	226	P	Pb	06 30 04.1	-0.5
THR5	**Thira Island,**	0.20	226	P	Pb	06 30 04.1	-0.5
THR6	**Thira Island,**	0.23	208	P	Pb	06 30 04.4	-0.6
THR6	**Thira Island,**	0.23	208	P	Pb	06 30 04.4	-0.6
THR9	**Santorini-Faro**	0.24	215	P	Pb	06 30 04.7	-0.5
THR9	**Santorini-Faro**	0.24	215	P	Pb	06 30 04.8	-0.5
APE	**Apeiranthos**	0.51	0	P	Pg	06 30 07.8	-1.3
APE				S	Sg	06 30 16.0	+0.1
	comp=N,4µm,0.3s						
APE	**Apeiranthos**	0.51	0	P	Pg	06 30 07.8	-1.3
APE	**Apeiranthos**	0.51	0	PG	Pg	06 30 07.9	-1.2
MHLO	**Agia Marina, M**	0.92	279	P	Pg	06 30 16.8	+0.1
MHLO				S	Sn	06 30 30.4	-0.2
	comp=N,12µm,0.6s						
MHLO	**Agia Marina, M**	0.92	279	P	Pb	06 30 16.4	-0.4
MHLO				AML	AML	06 30 33.5	
	comp=E,27086µm,0.7s						
MHLO				AML	AML	06 30 33.8	
	comp=N,19499µm,0.6s						
TNSA	**Tinos**	1.02	344	P	Pb	06 30 17.3	-1.3
TNSA				S	Sb	06 30 30.7	-1.2
KOSK	**Kos Island**	1.18	80	PN	Pn	06 30 20.3	-0.9
HRKL	**Herakleio**	1.29	196	PN	Pg	06 30 23.9	+0.1
HRKL				SN	Sg	06 30 41.1	+0.5
NPS	**Neapolis**	1.29	177	P	Pn	06 30 22.1	-0.7
NPS	**Neapolis**	1.29	177	P	Pn	06 30 22.0	-0.8
NPS				AML	AML	06 30 42.8	
	comp=N,3252µm,0.3s						
NPS				AML	AML	06 30 45.0	
	comp=E,4994µm,0.5s						
IDI	**Anoyia**	1.37	202	Pn	Pb	06 30 23.7	-0.8
	baz=20,slow=14						
IDI	**Anoyia**	1.37	202	P	Pn	06 30 23.4	-0.5

IDI				S	Sg	06 30 42.5	-0.6
	comp=E,1µm,0.3s						
IDI	Anoyia	1.37	202	P	Pn	06 30 23.4	-0.5
STIA	Sitia Lasithi	1.43	161	P	Pn	06 30 24.3	-0.3
BODT	Bodrum	1.52	70	P	Pn	06 30 24.5	-1.4
BODT	Bodrum	1.52	70	PN	Pn	06 30 25.1	-0.8
ZKR	Zakros	1.54	159	P	Pn	06 30 26.1	-0.1
ZKR	Zakros	1.54	159	P	Pn	06 30 26.2	-0.1
ZKR	Zakros	1.54	159	PN	Pb	06 30 26.3	-1.2
FRMA	Ierapetra Chan	1.55	174	P	Pb	06 30 26.4	-1.1
SMG	Samos	1.55	42	P	Pn	06 30 24.7	-1.7
VAM	Vamos	1.57	224	P	Pb	06 30 27.0	-1.0
VAM	Vamos	1.57	224	P	Pb	06 30 27.1	-0.9
BDRM	Kayabasi	1.62	71	*i* P	Pn	06 30 25.2	-2.1
BDRM				*i* P	Pb	06 30 25.7	-3.1
BDRM				*i* S	Sb	06 30 50.3	+1.2
BDRM				*i* S	Sg	06 30 50.6	-0.5
BDRM				IAML		06 30 57.0	
	comp=N,314nm,0.5s						
DDIM	Aydin, Didim	1.64	56	*i* P	Pn	06 30 28.0	+0.5
DDIM				*i* S	Sg	06 30 52.4	+0.6
DDIM				IAML		06 30 59.0	
	comp=E,372nm,0.6s						
DAT	Datca	1.66	83	*i* P	Pb	06 30 29.2	-0.2
DAT				*i* S	Sn	06 30 48.9	-0.2
DAT	Datca	1.66	83	PN	Pn	06 30 27.3	-0.6
IMMV	Iera Moni Meta	1.67	229	P	Pb	06 30 29.0	-0.5
IMMV	Iera Moni Meta	1.67	229	PN	Pb	06 30 29.2	-0.3
KARY	Karystos	1.71	330	P	Pn	06 30 27.8	-0.7
RODP	Rodopos	1.75	236	P	Pb	06 30 29.9	-1.0
RODP	Rodopos	1.75	236	PN	Pb	06 30 30.4	-0.5
GCAM	G?zelcaml?	1.78	50	*i* P	Pn	06 30 30.4	+0.9
GCAM				*i* S	Sb	06 30 55.4	+1.8
GCAM				IAML		06 31 01.0	
	comp=E,354nm,0.4s						
GCAM	G?zelcaml?	1.78	50	PN	Pn	06 30 28.7	-0.7
DGB	zmir	1.84	35	*i* P	Pb	06 30 31.9	-0.6
DGB				*i* S	Sb	06 30 57.5	+2.0
ZEYE	Izmir, Urla-Ze	1.85	25	*i* P	Pn	06 30 28.1	-2.4
ZEYE				*i* S	Sb	06 30 55.6	-0.1
ZEYE				IAML		06 31 01.0	
	comp=E,331nm,0.3s						
ZEYE				IAML		06 31 03.0	
	comp=N,340nm,0.6s						
CHOS	Chios island	1.87	13	P	Pn	06 30 29.4	-1.4
CHOS	Chios island	1.87	13	P	Pn	06 30 29.5	-1.4
VLY	Voula,Athens	1.89	314	P	Pn	06 30 30.8	-0.2
ANKY	Antikythira Is	1.93	250	P	Pn	06 30 31.7	+0.2
ANKY	Antikythira Is	1.93	250	P	Pn	06 30 32.0	+0.5
ATHU	Athens Univers	1.98	316	P	Pn	06 30 32.0	-0.2
DION	Dionisos Attik	1.98	321	P	Pn	06 30 32.8	+0.5
URLA	Izmir	1.99	25	*i* P	Pb	06 30 34.5	-0.6
URLA				*i* S	Sb	06 31 01.4	+1.5
URLA				IAML		06 31 06.0	
	comp=E,490nm,0.4s						
URLA	Izmir	1.99	25	PN	Pn	06 30 31.5	-0.9
PTL	Penteli	1.99	319	P	Pn	06 30 32.8	+0.4
KNDR	Palaiochora Ch	2.00	229	PN	Pb	06 30 34.5	-0.6
KTHA	Kythira Island	2.01	262	P	Pn	06 30 33.1	+0.4
KTHA	Kythira Island	2.01	262	P	Pn	06 30 33.1	+0.4
ATH	Athens Observa	2.02	315	P	Pn	06 30 32.5	-0.3
KTHR	Kythira	2.06	262	P	Pn	06 30 33.9	+0.6
GVDS	Gavdos	2.07	215	PN	Pb	06 30 35.4	-1.1
GVD	Gavdhos	2.08	215	PN	Pb	06 30 35.1	-1.4
VLI	Veliai	2.09	275	P	Pn	06 30 34.1	+0.4
ARG	Arkhangelos	2.12	98	P	Pn	06 30 33.8	-0.4
ARG	Arkhangelos	2.12	98	P	Pn	06 30 33.8	-0.4
ARG	Arkhangelos	2.12	98	PN	Pn	06 30 33.7	-0.4
AYDN	Tasoluk	2.18	59	*i* P	Pb	06 30 39.9	+1.5
AYDN				*i* S	Sb	06 31 07.2	+1.9
BLCB	Balcova	2.19	33	PN	Pn	06 30 34.3	-0.8
TURN	Turunc	2.19	84	PN	Pn	06 30 34.9	-0.2
YER	Yerkesik	2.28	75	PN	Pn	06 30 36.1	-0.4
AYDB	Zeytinkoy-Aydi	2.34	53	PN	Pn	06 30 36.6	-0.7
FOCM	Foa	2.35	24	PN	Pn	06 30 36.8	-0.5
SIGR	SIGRI	2.66	5	P	Pn	06 30 40.2	-1.4
ZEDA	zmir-Bergama	2.70	27	*i* P	Pb	06 30 47.9	+0.8
ZEDA				*i* S	Sg	06 31 24.4	-1.4
DKL	Dikili	2.74	23	PN	Pn	06 30 42.7	+0.1
FETY	Fethiye	2.86	87	*i* P	Pn	06 30 45.8	+1.4
FETY	Fethiye	2.86	87	PN	Pn	06 30 44.5	+0.1
ITM	Ithomi	2.95	283	PN	Pn	06 30 47.2	+1.6
CAME	Cameli-Denizli	3.06	82	PN	Pn	06 30 47.1	0.0
KULA	Kula-Manisa	3.17	51	PN	Pn	06 30 48.6	0.0
STEP	BALIKESIR_Sava	3.30	31	*i* P	Pb	06 30 59.7	+2.2
STEP				*i* S	Sg	06 31 43.1	-2.0
AKAS	Kas	3.31	94	*i* P	Pn	06 30 51.1	+0.5
AKAS	Kas	3.31	94	PN	Pn	06 30 51.0	+0.5
BOZC	Bozcaada	3.31	7	PN	Pn	06 30 51.1	+0.7
USAK	Uak-Merkez	3.51	51	*i* P	Pb	06 31 02.2	+1.2
ELL	Elmali	3.53	86	PN	Pn	06 30 53.9	+0.3
AGG	Agios Georgios	3.53	315	PN	Pn	06 30 54.9	+1.3
PASA	Karahalli, USA	3.62	59	*i* P	Pn	06 30 55.2	+0.4
KORT	Korkueli	3.90	82	PN	Pn	06 30 59.2	+0.5
BRTR	Keskin Array B	7.13	61	Pn	Pn	06 31 44.4	+1.3
	comp=E,0.3nm,0.3s,baz=311,slow=38,SNR=1.6						
KBZ	Khabaz	15.08	56	Pn	P	06 33 37.7	+0.8
	comp=E,0.1nm,0.3s,baz=252,slow=9.6,SNR=5.5						
ESDC	Sonseca Array	23.36	287	P	P	06 35 08.0	+0.7
	comp=E,0.2nm,0.3s,baz=86,slow=8.7,SNR=5.3						
FINES	FINESS Array B	24.91	1	P	P	06 35 23.1	+1.6
	comp=E,3.7nm,0.9s,baz=163,slow=14,SNR=3.8						
TORD	Torodi Ar. Bea	31.63	229	P	P	06 36 21.4	-0.4
	comp=E,0.5nm,0.6s,baz=33,slow=9.0,SNR=4.0						
KURBB	Kurchatov Arra	40.02	52	P	P	06 37 33.0	-0.4
	comp=E,0.7nm,0.5s,baz=276,slow=8.7,SNR=5.2						
MKAR	Makanchi Array	42.77	58	P	P	06 37 55.9	-0.2
	comp=E,0.4nm,0.4s,baz=272,slow=8.4,SNR=6.2						
ZALV	Zalesovo Beam	43.83	47	P	P	06 38 03.4	-1.1
	comp=E,0.6nm,0.6s,baz=269,slow=10,SNR=2.2						

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*TEH **22** 07:08:04.1, 36°.04N×53°.22E, h11^{km}, ML3.8*
*THR **22** 07:08:04.6±0.9, 36°.06N×53°.17E, h15^{km}±5^{km}, ML3.5*
*IDC **22** 07:08:05.4±3.0, 36°.29N×53°.18E, h0^{km}, mb3.4/5, mb1 3.7/9, mb1mx3.4/60, mbtmp3.7/9, ML3.4/3, Error ellipse: s-maj=42.7km s-min=23.6km az=1.0*
ISC 22 07:08:03.5±1.2**, 36°.08N**±0°.03×**53°.17E**±0°.02**, h4**^{km}±10^{km}**, n92,** σ**1^{s}72**/102**, mb3.2**/3**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHM	Shahmirzad	0.29	160	*e*Sg	Sg	07 08 14.1	+1.1
ISHM				*e*Pg	Pg	07 08 09.7	+0.6
IFIR	Firoozkooh	0.55	218	*e*Pg	Pg	07 08 14.6	+0.5
IGLO	Ghaloghah	0.68	51	*e*Pg	Pg	07 08 17.0	+0.3
IGLO				*e*		07 08 33.5	
	comp=Z,42µm,0.8s						
IPRN	Peran	0.69	284	*e*Pg	Pg	07 08 17.9	+1.1
IPRN				*e*Sg	Sn	07 08 30.2	-1.4
IPRN				*e*		07 08 34.5	
	comp=Z,45µm,0.2s						
ILAS	Lasjerd	0.71	194	*e*Pg	Pg	07 08 18.1	+0.9
ILAS				*e*Sg	Sb	07 08 28.3	-0.7
IANJ	Anjilo	0.86	135	*e*Pg	Pg	07 08 19.7	-0.3
IANJ				*e*Sg	Sg	07 08 30.2	-0.9
IANJ				*e*		07 08 31.7	
	comp=Z,34µm,0.3s						
IDMV	Damavand	1.05	242	*e*Pg	Pb	07 08 24.1	-0.4
IDMV				*e*Sg	Sn	07 08 39.2	-1.4
IDMV				*e*		07 08 43.7	
	comp=Z,21µm,0.4s						
TEHA	Amirabad Tehra	1.48	258	*e*Pg	Pb	07 08 31.9	+0.1
TEH	Tehran	1.49	257	*e*Pg	Pg	07 08 33.4	+1.3
IVRN	Varamin	1.59	228	*e*Pg	Pb	07 08 33.8	+0.2
IVRN				*e*		07 09 02.5	
	comp=Z,13µm,0.4s						
CHTH	Charan	1.67	265	*e*Pg	Pb	07 08 35.1	+0.1
CHTH				IAML		07 09 03.0	
	comp=E,297nm,0.6s						
CHTH	Charan	1.67	265	*e*Pg	Pb	07 08 35.1	+0.1
IHSB	Hasanabad	1.67	248	*e*Pn	Pb	07 08 35.5	+0.6
THKV	Tehran--Karaj	1.86	266	*e*Pn	Pb	07 08 38.1	-0.2
THKV				*e*Sg	Sg	07 09 03.9	+0.5
THKV				IAML		07 09 10.0	
	comp=N,410nm,0.7s						
THKV				IAML		07 09 11.9	
	comp=E,335nm,0.7s						
THKV	Tehran--Karaj	1.86	266	*e*Pn	Pb	07 08 38.1	-0.2
ISFB	Sefidab	1.88	204	*e*Pn	Pb	07 08 37.9	-0.6
ISFB				*e*		07 09 07.6	
	comp=Z,8µm,0.2s						
IMHD	Mahdasht	2.07	260	*e*Pn	Pb	07 08 41.6	-0.1
IMHD				*e*		07 09 17.5	
	comp=Z,5µm,0.6s						
QALM	Alamut, Qazvin	2.07	281	*e*Pn	Pb	07 08 41.6	-0.2
IQOM	Qom	2.11	235	*e*Pn	Pb	07 08 41.9	-0.6
IQOM				*e*		07 09 14.8	
	comp=Z,11µm,0.2s						
IMND	Minoodasht	2.15	56	*e*Pn	Pn	07 08 41.7	+1.5
GHVR	GHOM	2.21	224	*e*Pn	Pb	07 08 43.5	-0.6
GHVR				*e*Sg	Sg	07 09 14.2	-0.4
GHVR				IAML		07 09 22.8	
	comp=N,301nm,0.6s						
GHVR				IAML		07 09 23.4	
	comp=E,453nm,0.5s						
GHVR	GHOM	2.21	224	*e*Pn	Pb	07 08 43.5	-0.6
KRSH	Karshahi	2.27	202	*e*Pn	Pn	07 08 43.1	+1.1
SHRO	Shahrood	2.30	91	*e*Pn	Pn	07 08 44.0	+1.5
SHRO				*e*Sg	Sg	07 09 17.2	-0.4
SHRO	Shahrood	2.30	91	*e*Pn	Pn	07 08 44.0	+1.5
IGZV	Ghazvin	2.41	278	*e*Pn	Pb	07 08 46.5	-1.1
IRAZ	Razeghan	2.72	257	*e*Pn	Pn	07 08 49.5	+1.2
IRAZ				*e*		07 09 35.2	
	comp=Z,5µm,0.6s						
QAMS	Qamsar	2.75	212	*e*Pn	Pn	07 08 50.1	+1.4
QAMS				*e*		07 09 30.7	
	comp=Z,4µm,0.4s						
JIR1	Jirandeh	2.79	284	*e*Pn	Pb	07 08 52.1	-2.0
MRVT	Maraveh tapeh	2.83	55	*e*Pn	Pn	07 08 50.9	+1.3
MRVT	Maraveh tapeh	2.83	55	*e*Pn	Pn	07 08 50.9	+1.3
ANAR	Anarak	2.92	171	*e*Pn	Pn	07 08 51.8	+0.9
QABG	Abgarm-Qazvin	2.94	264	*e*Pn	Pn	07 08 52.7	+1.5
ASAO	Ashtian	2.99	240	*e*Pn	Pn	07 08 53.9	+1.9
ASAO				IAML		07 09 41.7	
	comp=E,140nm,0.6s						
ASAO				IAML		07 09 42.1	
	comp=N,182nm,0.5s						
ASAO	Ashtian	2.99	240	*e*Pn	Pn	07 08 53.9	+1.9
IKLH	Kolahrood	3.05	206	*e*Pn	Pn	07 08 54.3	+1.5
IKLH				*e*		07 09 00.7	
	comp=Z,2µm,0.6s						
IZEF	Zefreh	3.25	193	*e*Pn	Pn	07 08 57.2	+1.6
IZEF				*e*		07 09 54.6	
	comp=Z,2µm,0.3s						
NASN	Na'in	3.28	185	*e*Pn	Pn	07 08 57.4	+1.3
NASN				IAML		07 10 01.9	
	comp=E,53nm,0.5s						
NASN	Na'in	3.28	185	*e*Pn	Pn	07 08 57.4	+1.3
HAGD	Aghdareh	3.52	250	*e*Pn	Pn	07 09 01.6	+2.3
KHMZ	Khomeyn	3.52	229	*e*Pn	Pb	07 09 03.1	-3.5
KHMZ				IAML		07 10 05.0	
	comp=N,56nm,0.7s						
KHMZ	Khomeyn	3.52	229	*e*Pn	Pb	07 09 03.1	-3.5
TNSJ	Nastanj	3.52	126	*e*Pn	Pn	07 09 00.2	+1.0
SBZV	Sabzevar	3.60	84	*e*Pn	Pn	07 09 02.8	+2.4
ZNJK	Zanjan	3.67	281	*e*Pn	Pn	07 09 04.2	+2.9
ZNJK				*e*Sg	Sg	07 09 58.7	-2.7
ZNJK				IAML		07 10 04.1	
	comp=N,58nm,0.5s						
ZNJK				IAML		07 10 09.1	
	comp=E,39nm,0.5s						
ZNJK	Zanjan	3.67	281	*e*Pn	Pn	07 09 04.2	+2.9
BJRD	Bojnurd	3.77	63	*e*Pn	Pn	07 09 05.0	+2.5
BJRD	Bojnurd	3.77	63	*e*Pn	Pn	07 09 05.1	+2.5
IGAR	Gharneh	3.78	195	*e*Pn	Pn	07 09 04.1	+1.2
YZKH	Yazd	3.86	162	*e*Pn	Pn	07 09 05.2	+1.3
YZKH				IAML		07 10 17.9	
	comp=N,45nm,0.5s						
YZKH				IAML		07 10 23.2	
	comp=E,43nm,0.7s						
YZKH	Yazd	3.86	162	*e*Pn	Pn	07 09 05.2	+1.3
ICHK	Chekchek	3.96	165	*e*Pn	Pn	07 09 06.6	+1.3
ISFR	Sfrayin	4.01	74	*e*Pn	Pn	07 09 08.1	+2.1
TABS	Tabas	4.05	126	*e*Pn	Pn	07 09 08.2	+1.7
TABS				IAML		07 10 22.5	
	comp=E,35nm,0.6s						
TABS				IAML		07 10 24.2	
	comp=N,64nm,0.6s						
TABS	Tabas	4.05	126	*e*Pn	Pn	07 09 08.2	+1.7
TKDS	Koohdasht(Taba	4.08	126	*e*Pn	Pn	07 09 08.0	+1.2
ISAD	Sadrabad	4.17	174	*e*Pn	Pn	07 09 09.2	+0.9
TPRV	Parvadeh(Tabas	4.20	135	*e*Pn	Pn	07 09 10.5	+2.0
BMDN	Meydan	4.30	237	*e*Pn	Pn	07 09 11.9	+1.9
IRAM	Ramesheh	4.31	189	*e*Pn	Pn	07 09 12.1	+2.0
GEYT	Alibeck	4.37	64	Pn	Pn	07 09 09.8	-1.0
	comp=N,0.8nm,0.3s,baz=270,slow=30,SNR=1.8						
GEYT				Sn	Sn	07 10 03.0	+0.8
	comp=N,1.4nm,0.3s,baz=246,slow=32,SNR=3.6						
GEYT				Lg	Lg	07 10 26.8	
	comp=N,0.9nm,0.3s,baz=270,slow=40,SNR=1.3						
IAKL	Akhelmad	4.54	82	*e*Pn	Pn	07 09 15.2	+1.8
IEMG	Emamgholi	4.60	71	*e*Pn	Pn	07 09 15.9	+1.7
IDOB	Doab	4.69	242	*e*Pn	Pn	07 09 17.2	+1.8
ISRB	Sarab	4.74	293	*e*Pn	Pn	07 09 17.9	+1.9
SNGE	Sanandaj	4.84	260	*e*Pn	Pn	07 09 18.8	+1.3
SNGE				IAML		07 10 53.4	
	comp=N,13nm,0.6s						
SNGE	Sanandaj	4.84	260	*e*Pn	Pn	07 09 18.8	+1.3
GRMI	Germi	5.00	305	*e*Pn	Pn	07 09 20.7	+1.1
GRMI				IAML		07 10 22.1	
	comp=N,34nm,0.2s						
GRMI				IAML		07 10 22.3	
	comp=E,31nm,0.3s						
GRMI	Germi	5.00	305	*e*Pn	Pn	07 09 20.7	+1.1
IKFM	Kafar-mosalman	5.07	241	*e*Pn	Pn	07 09 22.7	+2.4
KLNJ	Kolanjah	5.22	195	*e*Pn	Pn	07 09 24.4	+1.6
IBST	Bostanabad	5.29	290	*e*Pn	Pn	07 09 26.0	+2.5
IHRS	Heris	5.38	296	*e*Pn	Pn	07 09 27.5	+2.7
AMIS	Naft Sefid	5.46	217	*e*Pn	Pn	07 09 28.7	+3.0
AFRZ	Afriz	5.49	117	*e*Pn	Pn	07 09 27.9	+1.6
ITEG	Tejag	5.59	123	*e*Pn	Pn	07 09 29.5	+1.8
JRKH	Jarkhoshk	5.82	90	*e*Pn	Pn	07 09 32.0	+1.2
TBJM	Torbat-e-JAM	5.88	96	*e*Pn	Pn	07 09 34.4	+2.7
IMON	Monand	6.08	116	*e*Pn	Pn	07 09 36.1	+1.6
SHRT	Shahrakht	6.34	110	*e*Pn	Pn	07 09 39.9	+2.0
SHRT	Shahrakht	6.34	110	*e*Pn	Pn	07 09 39.9	+2.0
BSRN	Basiran	6.42	128	*e*Pn	Pn	07 09 40.9	+1.8
BSRN	Basiran	6.42	128	*e*Pn	Pn	07 09 40.9	+1.8
IDAH	Dahanechah	6.46	119	*e*Pn	Pn	07 09 40.7	+1.0
GNI	Garni	7.79	304	Pn	Pn	07 10 02.0	+4.2
	comp=E,0.9nm,0.3s,baz=120,slow=20,SNR=4.2						
AKTO	Aktyubinsk	14.78	12	Pn	Pn	07 11 28.5	-4.7
	comp=E,0.1nm,0.3s,baz=210,slow=14,SNR=1.9						
AKTO				Sn	Sn	07 14 07.4	-10
	comp=E,0.6nm,0.3s,baz=97,slow=18,SNR=6.0						
BELG	Belogornoye	16.78	348	Pn	Pn	07 11 58.5	-0.8
	comp=E,0.5nm,0.3s,baz=180,slow=20,SNR=2.9						
ARU	Arti	20.68	8	P	P	07 12 44.5	+0.1
	comp=E,2.3nm,0.2s,baz=269,slow=17,SNR=1.5						
BVAR	Borovoye Array	20.83	30	P	P	07 12 46.3	+0.2
	comp=E,1.6nm,0.7s,baz=202,slow=15,SNR=7.1						
AKASG	Malin Array Be	22.59	318	P	P	07 13 04.9	0.0
	comp=E,1.2nm,0.6s,baz=122,slow=11,SNR=3.2						
KURBB	Kurchatov Arra	23.33	44	P	P	07 13 13.0	+0.3
	comp=E,0.2nm,0.2s,baz=245,slow=10,SNR=1.2						
MKAR	Makanchi Array	24.18	55	P	P	07 13 24.0	+2.9
	comp=E,0.2nm,0.7s,baz=241,slow=11,SNR=1.8						

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*NNC **22** 07:29:24.7±0.3, 50°.03N×78°.77E, h0^{km}, mb2.3, mpv2.1, Error ellipse: s-maj=9.3km s-min=1.7km az=73.0, Suspected Mining explosion.*
*IDC **22** 07:29:26.6±1.1, 50°.11N×78°.79E, h0^{km}, mb1 2.3/2, mb1mx2.3/34, mbtmp2.3/2, ML1.9/2, Error ellipse: s-maj=10.7km s-min=7.3km az=58.0*
ISC 22 07:29:25.3±2.2**, 50°.00N**±0°.08×**78°.5E**±0°.3**, h0**^{km}**, n15,** σ**0^{s}48**/26**, 12C-10D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	Kurchatov Arra	0.58	0	⇓P	Pg	07 29 36.0	-0.5
KUR07				⇑S	Sg	07 29 44.4	+0.5
KUR06	Kurchatov Arra	0.60	1	⇑P	Pg	07 29 36.4	-0.4
KUR06				⇓S	Sg	07 29 45.0	+0.4
KUR14	Kurchatov Arra	0.61	5	⇑P	Pg	07 29 36.4	-0.7
KUR14				⇓S	Sg	07 29 44.6	-0.4
KUR15	Kurchatov Arra	0.62	3	⇑P	Pg	07 29 36.6	-0.5
KUR15				⇑S	Sg	07 29 45.2	+0.1
KURBB	Kurchatov Arra	0.62	1	Pg	Pg	07 29 36.8	-0.4
	0.5nm,0.3s,baz=165,slow=18,SNR=7.0						
KURBB				Lg	Lg	07 29 45.7	
	0.3nm,0.3s,baz=160,slow=34,SNR=2.7						
KURBB	Kurchatov Arra	0.62	1	⇑P	Pg	07 29 36.8	-0.4
	3.4nm,0.3s						
KURBB				⇓S	Sg	07 29 45.5	+0.3
	3.0nm,0.3s						
KUR16	Kurchatov Arra	0.62	359	⇓P	Pg	07 29 37.0	-0.2
KUR16				⇑S	Sg	07 29 45.8	+0.5
KUR17	Kurchatov Arra	0.63	357	⇓P	Pg	07 29 37.2	-0.2
KUR17				⇑S	Sg	07 29 46.5	+1.0
KUR05	Kurchatov Arra	0.64	1	⇑P	Pg	07 29 37.0	-0.6
KUR05				⇓S	Sg	07 29 45.4	-0.4
KUR04	Kurchatov Arra	0.66	2	⇓P	Pg	07 29 37.5	-0.5
KUR04				⇓S	Sg	07 29 46.5	0.0
KURK	Kurchatov	0.72	5	⇑P	Pg	07 29 38.4	-0.7
	1.1nm,0.3s						
KURK				⇓S	Sg	07 29 48.4	+0.1
	2.5nm,0.5s						
MK31	Makanchi Array	4.08	141	⇑Pg	Pb	07 30 38.1	+0.1
	0.1nm,0.3s,baz=325,slow=13,SNR=9.0						
MK31				⇑Lg	Lg	07 31 32.6	
	0.2nm,0.3s,baz=323,slow=26,SNR=3.7						
MKAR	Makanchi Array	4.08	141	Pn	Pn	07 30 28.4	-0.5
	0.1nm,0.3s,baz=326,slow=11,SNR=1.6						
MKAR				Pg	Pb	07 30 38.7	+0.7
	0.2nm,0.3s,baz=323,slow=14,SNR=9.2						
MKAR				Sn	Sn	07 31 17.6	+0.2
	0.0nm,0.3s,baz=331,slow=27,SNR=1.4						
MKAR				Lg	Lg	07 31 29.0	
	0.1nm,0.3s,baz=320,slow=30,SNR=2.2						
I46RU	ZALESOVO INFRA	5.55	42	*i*		08 03 50.0	
	baz=218,slow=314,SNR=0.4						
ZALV	Zalesovo Beam	5.55	42	Pn	Pn	07 30 49.3	+0.2
	0.2nm,0.3s,baz=227,slow=14,SNR=3.2						

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*IDC **22** 07:42:05.1±2.5, 58°.59N×156°.69W, h155^{km}±31^{km}, mb2.8/2, mb1 3.0/5, mb1mx2.6/42, mbtmp3.4/5, MS3.1/1, Ms1 3.2/1, ms1mx2.6/9, Error ellipse: s-maj=34.9km s-min=24.7km az=101.0*
*NEIC **22** 07:42:06.4±1.4, 58°.31N±0°.06×156°.6W±0°.2, h186^{km}±6^{km}, Error ellipse: s-maj=11.6km s-min=8.4km az=100.0*
*AEIC **22** 07:42:07±1.2, 58°.28N±0°.06×156°.6W±0°.1, h186^{km}±5^{km}, ML3.2, ML3.2/50(NEIC), Error ellipse: s-maj=11.3km s-min=8.4km az=99.0*
ISC 22 07:42:06.1±0.9**, 58°.36N**±0°.05×**156°.54W**±0°.06**, h187**^{km}±7^{km}**, n190,** σ**1^{s}31**/193**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KELA	Mount Kelaz	0.43	79		Pn	07 42 31.4	-0.2
ANCK	Angle Creek	0.57	106		Pn	07 42 32.4	+0.3
KJL	Kejulik	0.59	121		Pn	07 42 32.5	+0.3
KVTA	Katmai Vly 10	0.65	88		Pn	07 42 32.6	+0.2
ACHA	Angle Creek He	0.66	103		Pn	07 42 32.6	+0.1
ACHA					Sn	07 42 52.5	-0.4
KBM	Katmai Bkd Mtn	0.71	96		Pn	07 42 33.1	+0.4
CAHL	Cahill	0.72	115		Pn	07 42 33.0	+0.2
KCE	Katmai Mt Cerb	0.72	99		Pn	07 42 33.4	+0.5
KCG	Knife Ck. Glac	0.75	93		Pn	07 42 33.3	+0.3
KAHC	Katmai Hardscr	0.85	70		Pn	07 42 34.0	+0.3
KAHC	Katmai Hardscr	0.85	70	P	Pn	07 42 34.0	+0.3
	baz=246						
KABR	Katmai Barrier	0.86	105		Pn	07 42 33.8	+0.1
KABR					Sn	07 42 55.1	+0.2
P18K	Big Mountain,	1.24	33		Pn	07 42 36.6	+0.2
P18K					Sn	07 42 58.9	-1.0
P18K	Big Mountain,	1.24	33	P	Pn	07 42 36.6	+0.2
	baz=212						
P18K				S	Sn	07 42 58.9	-1.0
	baz=212						
Q19K	Cape Douglas,	1.62	68		Pn	07 42 40.5	+0.8
Q19K					Sn	07 43 06.0	+0.1
Q19K	Cape Douglas,	1.62	68	IAML		07 43 08.7	
	comp=E,337nm,0.7s						
Q19K				IAML		07 43 09.1	
	comp=N,240nm,0.8s						
Q19K	Cape Douglas,	1.62	68	P	Pn	07 42 40.5	+0.8
	baz=248						
Q19K				S	Sn	07 43 06.0	+0.1
	baz=248						
O18K	Koktuh Hills	1.65	24		Pn	07 42 40.8	+0.8
O18K					Sn	07 43 06.4	-0.1
O18K	Koktuh Hills	1.65	24	P	Pn	07 42 40.8	+0.8
	baz=204						
O18K				S	Sn	07 43 06.4	-0.1
	baz=204						
AGU	Augustine-Summ	1.90	57		Pn	07 42 43.9	+1.2
AUL	Augustine Lava	1.91	56		Pn	07 42 43.8	+1.1
OHAK	Old Harbor	2.08	122		Pn	07 42 44.4	-0.1
OHAK					Sn	07 43 11.8	-2.5
OHAK	Old Harbor	2.08	122	IAML		07 43 13.1	
	comp=N,127nm,0.4s						
OHAK				IAML		07 43 13.1	
	comp=E,99nm,0.4s						
OHAK	Old Harbor	2.08	122	P	Pn	07 42 44.4	-0.1
	baz=302						
OHAK				S	Sn	07 43 11.8	-2.5
	baz=302						
OPT	Oil Point	2.15	51		Pn	07 42 46.3	+1.1
OPT	Oil Point	2.15	51	P	Pn	07 42 46.3	+1.1
	baz=233						
P19K	Oil Pt	2.15	51		Pn	07 42 46.3	+1.1
P19K	Oil Pt	2.15	51	P	Pn	07 42 46.3	+1.1
	baz=233						
O19K	Port Alsworth	2.16	31		Pn	07 42 46.1	+0.8
O19K				IAML		07 43 17.2	
	comp=E,84nm,0.7s						
O19K				IAML		07 43 17.0	
	comp=N,107nm,0.5s						
KDAK	Kodiak Island	2.18	104	P	Pn	07 42 45.6	+0.1
	comp=N,4.7nm,0.3s,baz=310,slow=9.7,SNR=644						
KDAK				S	Sn	07 43 14.3	-1.8
	comp=N,12nm,0.3s,baz=229,slow=23,SNR=6.7						
KDAK	Kodiak Island	2.18	104		Pn	07 42 45.7	+0.1
KDAK					Sn	07 43 14.9	-1.3
KDAK	Kodiak Island	2.18	104	IAML		07 43 16.2	
	comp=N,131nm,0.5s						
KDAK	Kodiak Island	2.18	104	S	Sn	07 43 14.9	-1.3
	baz=285						
SII	Sitkinak Islan	2.21	144		Pn	07 42 45.7	-0.3
SII					Sn	07 43 15.0	-1.8
SII	Sitkinak Islan	2.21	144	P	Pn	07 42 45.7	-0.3
	baz=324						
SII				S	Sn	07 43 15.0	-1.8
	baz=324						
ILSW	Iliamna Southw	2.39	46		Pn	07 42 48.7	+0.7
ILS	Iliamna Low So	2.40	47		Pn	07 42 48.8	+0.8
O20K	Slope Mountain	2.65	48		Pn	07 42 52.3	+1.3
O20K	Slope Mountain	2.65	48	P	Pn	07 42 52.3	+1.3
	baz=230						
N19K	Bonanza Creek	2.67	22		Pn	07 42 52.6	+1.4
N19K	Bonanza Creek	2.67	22	P	Pn	07 42 52.6	+1.4
	baz=204						
SVW2	Sparrevohn	2.79	10		Pn	07 42 53.5	+1.0
RED	Redoubt Volcan	2.82	41		Pn	07 42 54.1	+1.1
HOM	Homer	2.85	61	Pn	Pn	07 42 56.6	+3.5
RSO	Redoubt South	2.86	41		Pn	07 42 55.4	+1.8
NCT	North Crescent	2.88	38		Pn	07 42 54.8	+1.2
DFR	Drift River	2.98	40		Pn	07 42 56.1	+1.3
CNPM	China Poot	2.98	65		Pn	07 42 55.8	+0.9
CNPM	China Poot	2.98	65	IAML		07 43 31.8	
	comp=E,51nm,0.5s						
CNPM				IAML		07 44 20.0	
	comp=N,44nm,4.8s						
BRLK	Bradley Lake	3.24	62		Pn	07 42 58.6	+0.7
BRLK	Bradley Lake	3.24	62	IAML		07 43 38.1	
	comp=E,44nm,0.2s						
BRLK				IAML		07 43 38.5	
	comp=N,45nm,0.2s						
BRSE	Bradley Lake S	3.30	63		Pn	07 42 59.5	+0.8
BRSE	Bradley Lake S	3.30	63	P	Pn	07 42 59.4	+0.8
	baz=246						
CAPN	Captain Cook N	3.65	46		Pn	07 43 05.5	+2.6
CAPN	Captain Cook N	3.65	46	P	Pn	07 43 05.5	+2.6
	baz=230						
SDPT	Sand Point	3.71	217		Pn	07 43 02.9	-0.9
SDPT	Sand Point	3.71	217	P	Pn	07 43 02.9	-0.9
	baz=34						
M19K	Big River Lodg	3.71	16		Pn	07 43 05.4	+1.6
M19K	Big River Lodg	3.71	16	IAML		07 44 26.0	
	comp=N,37nm,4.1s						
M19K				IAML		07 44 49.7	
	comp=E,18nm,3.3s						
M19K	Big River Lodg	3.71	16	P	Pn	07 43 05.4	+1.6
	baz=198						
SLKM	Skilak Lake	3.88	54		Pn	07 43 06.4	+0.6
L19K	White Mountain	3.92	12		Pn	07 43 07.7	+1.3

L19K	White Mountain	3.92	12	IAML		07 44 28.1	
	comp=N,29nm,4.8s						
L19K				IAML		07 44 29.9	
	comp=E,24nm,4.6s						
L19K	White Mountain	3.92	12	P	Pn	07 43 07.7	+1.3
	baz=193						
STLK	Strandline Lak	3.94	35		Pn	07 43 08.3	+1.7
SEW	Seward	4.04	61		Pn	07 43 08.8	+1.0
SEW	Seward	4.04	61	P	Pn	07 43 08.7	+1.0
	baz=246						
O22K	Cooper Landing	4.08	56		Pn	07 43 09.3	+1.0
O22K	Cooper Landing	4.08	56	P	Pn	07 43 09.3	+1.0
	baz=241						
PS4A	Pavlof South-4	4.20	226		Pn	07 43 10.3	+0.4
L20K	Farewell, AK	4.34	17		Pn	07 43 13.5	+1.9
L20K	Farewell, AK	4.34	17	P	Pn	07 43 13.5	+1.9
	baz=199						
RC01	Rabbit Creek A	4.40	49		Pn	07 43 12.6	+0.3
RC01	Rabbit Creek A	4.40	49	IAML		07 44 03.1	
	comp=E,28nm,0.5s						
RC01				IAML		07 44 03.7	
	comp=N,32nm,0.3s						
RC01	Rabbit Creek A	4.40	49	P	Pn	07 43 12.6	+0.3
	baz=234						
DT1	Dutton Round H	4.54	227		Pn	07 43 14.0	-0.3
TT01	Tatalina	4.57	3		Pn	07 43 16.1	+1.5
TTA	Tatalina	4.59	3		Pn	07 43 16.3	+1.4
TTA	Tatalina	4.59	3	IAML		07 44 14.1	
	comp=E,34nm,4.5s						
TTA				IAML		07 45 45.9	
	comp=N,31nm,4.4s						
TTA	Tatalina	4.59	3	P	Pn	07 43 16.3	+1.4
	baz=184						
PWL	Port Wells	4.86	55		Pn	07 43 18.1	-0.1
PWL	Port Wells	4.86	55	IAML		07 44 14.3	
	comp=N,32nm,0.5s						
PWL				IAML		07 46 23.8	
	comp=E,32nm,3.9s						
PPLA	Purkeypile	5.03	23		Pn	07 43 23.1	+2.5
PPLA	Purkeypile	5.03	23	P	Pn	07 43 23.1	+2.5
	baz=207						
KNK	Knik Glacier	5.09	50		Pn	07 43 20.6	-0.7
KNK	Knik Glacier	5.09	50	IAML		07 44 19.8	
	comp=E,27nm,2.4s						
KNK				IAML		07 44 30.2	
	comp=N,22nm,3.8s						
KNK	Knik Glacier	5.09	50	P	Pn	07 43 20.6	-0.7
	baz=236						
CUT	Chulitna	5.11	35	Pn	Pn	07 43 22.2	+0.8
GHO	Glory Hole Cre	5.12	45		Pn	07 43 20.7	-1.0
GHO	Glory Hole Cre	5.12	45	IAML		07 44 30.2	
	comp=E,22nm,4.0s						
GHO				IAML		07 46 27.6	
	comp=N,27nm,4.5s						
FALS	False Pass	5.17	230		Pn	07 43 22.0	-0.4
FALS	False Pass	5.17	230	P	Pn	07 43 22.0	-0.4
	baz=45						
SML	Sawmill	5.37	46		Pn	07 43 23.8	-1.0
SML	Sawmill	5.37	46	P	Pn	07 43 23.8	-1.0
	baz=233						
GLI	Glacier Island	5.42	58		Pn	07 43 25.2	-0.2
GLI	Glacier Island	5.42	58	P	Pn	07 43 25.2	-0.2
	baz=246						
CAST	Castle Rocks	5.52	21		Pn	07 43 28.5	+1.7
HIN	Hinchinbrook I	5.52	64		Pn	07 43 27.6	+0.8
FID	Port Fidalgo	5.65	61		Pn	07 43 28.1	-0.3
SCM	Sheep Creek Mo	5.77	49		Pn	07 43 29.7	-0.5
WAT7	Susitna Watana	5.87	37		Pn	07 43 30.1	-1.3
KTH	Kantishna Hill	5.88	25	Pn	Pn	07 43 31.6	+0.1
CHUM	Lake Minchumin	5.91	18		Pn	07 43 33.3	+1.6
CHUM	Lake Minchumin	5.91	18	P	Pn	07 43 33.3	+1.6
	baz=202						
EYAK	Cordova Ski Ar	5.92	64		Pn	07 43 31.9	-0.1
EYAK	Cordova Ski Ar	5.92	64	P	Pn	07 43 31.9	-0.1
	baz=252						
TRF	Thorofare Moun	5.95	28		Pn	07 43 31.8	-0.7
TRF	Thorofare Moun	5.95	28	P	Pn	07 43 31.8	-0.7
	baz=213						
J20K	Nowinta River	5.95	10		Pn	07 43 33.9	+1.5
WAT1	Susitna Watana	5.96	38		Pn	07 43 31.4	-1.2
WAT1	Susitna Watana	5.96	38	P	Pn	07 43 31.3	-1.2
	baz=224						
WAT6	Susitna Watana	6.07	42		Pn	07 43 33.0	-1.1
WAT6	Susitna Watana	6.07	42	P	Pn	07 43 32.9	-1.1
	baz=229						
DIV	Divide	6.11	58	Pn	Pn	07 43 34.9	+0.4
KLU	Klutina	6.19	55		Pn	07 43 35.6	+0.1
KLU	Klutina	6.19	55	P	Pn	07 43 35.6	+0.1
	baz=244						
RND	Reindeer	6.30	33		Pn	07 43 35.5	-1.4
BPAW	Bear Paw Mtn.	6.35	23	Pn	Pn	07 43 39.1	+1.5
M24K	Tolsona, Glenn	6.38	50		Pn	07 43 38.1	0.0
M24K	Tolsona, Glenn	6.38	50	P	Pn	07 43 38.1	0.0
	baz=238						
RAGM	Ragged Mountai	6.39	66	Pn	Pn	07 43 39.6	+1.4
GOAT	Goat Mountain	6.42	65		Pn	07 43 39.2	+0.7
KAIM	Kayak Island	6.43	71	Pn	Pn	07 43 39.6	+1.0
DHY	Denali Highway	6.52	40		Pn	07 43 38.5	-1.5
DHY	Denali Highway	6.52	40	P	Pn	07 43 38.5	-1.5
	baz=227						
MCK	McKinley	6.53	31	Pn	Pn	07 43 40.1	+0.1
HMT	Hamilton	6.58	67	Pn	Pn	07 43 41.6	+1.0
BMRM	Bremner River	6.58	62		Pn	07 43 40.9	+0.2
BMRM	Bremner River	6.58	62	P	Pn	07 43 40.9	+0.2
	baz=251						
SUCK	Suckling Hills	6.77	70	Pn	Pn	07 43 44.7	+1.6
N25K	Chitina, Valde	6.81	56		Pn	07 43 44.3	+0.6
N25K	Chitina, Valde	6.81	56	P	Pn	07 43 44.3	+0.6
	baz=246						
BERG	Berg Lake	6.87	67	Pn	Pn	07 43 45.4	+1.0
HARP	HAARP	6.94	50		Pn	07 43 45.7	+0.4
HARP	HAARP	6.94	50	P	Pn	07 43 45.7	+0.4
	baz=239						
GLB	Gilahina Butte	7.11	59		Pn	07 43 48.2	+0.6
PAX	Paxson	7.13	45		Pn	07 43 49.0	+1.1
UNV	Unalaska Valle	7.18	235		Pn	07 43 47.3	-1.2
UNV	Unalaska Valle	7.18	235	P	Pn	07 43 47.3	-1.2
	baz=47						
VRDI	Verde Repeater	7.20	61		Pn	07 43 49.4	+0.6
CRQM	Cirque	7.22	65		Pn	07 43 50.2	+1.1
MNAT	Makushin Natee	7.23	236		Pn	07 43 48.1	-1.1
MLY	Manley	7.24	20	Pn	Pn	07 43 48.1	-1.1
CRQE	Cirque	7.24	65	P	Pn	07 43 50.2	+0.9
	baz=256						
SNH	Sunshine Point	7.25	70	Pn	Pn	07 43 51.0	+1.6
WAX	Waxell Ridge	7.29	68	Pn	Pn	07 43 51.1	+1.2
WRH	Wood River Hil	7.34	30		Pn	07 43 49.0	-1.5
TGL	Tana Glacier	7.37	65		Pn	07 43 52.0	+1.1
MCARA	McCarthy VSAT	7.44	60		Pn	07 43 53.0	+1.1
MCARA	McCarthy VSAT	7.44	60	P	Pn	07 43 53.0	+1.1
	baz=251						
H21K	Melozitna Rive	7.53	12		Pn	07 43 54.2	+1.2
H21K	Melozitna Rive	7.53	12	P	Pn	07 43 54.2	+1.2
	baz=195						
CCB	Clear Creek Bu	7.56	30		Pn	07 43 51.7	-1.6
ISLE	Juniper Island	7.57	67	Pn	Pn	07 43 54.8	+1.1
HDA	Harding Lake	7.61	33	Pn	Pn	07 43 51.6	-2.4
I23K	Minto, Yukon-K	7.61	23	Pn	Pn	07 43 53.0	-1.0
KIAG	Kiagna River	7.63	64		Pn	07 43 55.5	+1.0
PTPK	Patty Peak	7.64	62		Pn	07 43 56.1	+1.4
BALM	Baldy	7.66	64		Pn	07 43 55.9	+1.0
BAGL	Bagley Icefiel	7.67	68		Pn	07 43 56.6	+1.7
MDM	Murphy Dome	7.70	27	Pn	Pn	07 43 54.0	-1.3
IMAR	Indian Mountai	7.76	8	Pn	Pn	07 43 57.6	+1.6
M26K	Nabesna, AK	7.83	53		Pn	07 43 58.4	+1.3
GRNC	Granite Creek	7.88	66	Pn	Pn	07 43 59.5	+1.7
IL31		7.90	31		Pn	07 43 56.4	-1.5
ILAR	Eielson Array	7.90	31	P	Pn	07 43 55.9	-2.0
	comp=N,0.5nm,0.3s,baz=213,slow=13,SNR=19						
ILAR				S	Sn	07 45 20.2	-6.4
	comp=N,0.0nm,0.3s,baz=188,slow=27,SNR=1.7						
ILAR	Eielson Array	7.90	31		Pn	07 43 56.1	-1.8
L26K	Log Cabin Wild	7.98	49	Pn	Pn	07 43 59.8	+0.9
BARN	Barnard Glacie	7.99	64		Pn	07 44 00.9	+1.6
CTG	Chitna Glacier	8.12	65	P	Pn	07 44 02.1	+1.2
	baz=257						
CTGM	Chitina Glacie	8.13	65		Pn	07 44 02.1	+1.1
TABL	Table Mountain	8.13	69	Pn	Pn	07 44 02.9	+1.9
LOGN	Logan Glacier	8.26	66	Pn	Pn	07 44 03.8	+1.1
SCRK	Sand Creek	8.27	42	Pn	Pn	07 44 02.1	-0.7
M27K	Edge Creek, AK	8.29	55	Pn	Pn	07 44 04.2	+1.1
PCA	Pinnacle	8.53	71	Pn	Pn	07 44 08.4	+2.2
L27K	Beaver Creek,	8.61	51	Pn	Pn	07 44 07.7	+0.6
BC03		8.62	51		Pn	07 44 08.1	+0.8
BCAR	Beaver Creek A	8.62	51	Pn	Pn	07 44 08.4	+1.0
YUK3	Moose Creek	8.73	60		Pn	07 44 10.2	+1.2
YUK3	Moose Creek	8.73	60	P	Pn	07 44 10.2	+1.2
	baz=254						
PRP	Porcupine Dome	8.85	31	Pn	Pn	07 44 09.2	-1.2
EGAK	Eagle	9.73	42	Pn	Pn	07 44 22.6	+0.8
DAWY	Dawson	10.03	48	Pn	Pn	07 44 25.8	0.0
WHY	Whitehorse	11.23	69	Pn	P	07 44 46.5	-1.3
DLBC	Dease Lake	13.87	78	P	P	07 45 21.6	+4.5
	comp=N,0.2nm,0.3s,baz=185,slow=22,SNR=1.9						
DLBC				S	Sn	07 47 48.0	-1.1
	comp=N,0.4nm,0.3s,baz=8.0,slow=27,SNR=6.2						
INK	Inuvik	14.24	36	P	Pn	07 45 17.7	-1.5
	comp=N,0.1nm,0.3s,baz=222,slow=14,SNR=4.3						
YKA	Yellowknife Ar	20.82	61	P	P	07 46 34.3	+1.6
	comp=N,0.3nm,0.5s,baz=277,slow=9.9,SNR=9.9						
NVAR	Mina Array Bea	31.66	112	LR	LR	07 58 33.6	
	comp=N,33nm,19.8s,baz=301,slow=31						
SONM	Songino Array	54.25	305	P	P	07 51 12.4	0.0
	comp=N,0.4nm,0.3s,baz=34,slow=11,SNR=3.3						

IDC 22 07:43:45.1±3.2**, 33.°85S**×**178.°85W, h0**^{km}**, mb3.8**/2**, mb1 4.1**/3**, mb1mx3.5**/37**, mbtmp3.9**/3**, ML4.0**/1**, Error ellipse: s-maj=74.6km s-min=46.6km az=122.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
URZ	Urewera	5.49	215	Pn	Pn	07 45 08.5	+0.4
	4.2nm,0.3s,baz=228,slow=3.9,SNR=30						
URZ				Sn	Sn	07 46 08.6	-3.3
	3.9nm,0.3s,baz=154,slow=15,SNR=4.7						
ASAR	Alice Springs	42.33	271	P	P	07 51 41.0	0.0
	1.0nm,0.7s,baz=115,slow=7.1,SNR=10.0						
WRA	Warramunga Arr	43.63	276	P	P	07 51 51.0	-0.5
	1.0nm,0.7s,baz=119,slow=7.3,SNR=8.1						
FINES	FINESS Array B	148.09	337	PKPbc	PKPbc	08 03 31.3	-0.6
	6.7nm,1.1s,baz=224,slow=3.8,SNR=4.3						

ATH ***22*** *08:21:03.0, 35.°42N×23.°43E, h14*^{km}*±1*^{km}*, ML3.2/13, Error ellipse: s-maj=2.2km s-min=0.9km az=224.0*

THE ***22*** *08:21:02.3, 35.°39N×23.°36E, h1*^{km}*±2*^{km}*, ML3.3/8, Error ellipse: s-maj=2.5km s-min=0.6km az=228.0*

ISK ***22*** *08:21:03.3, 35.°36N×23.°45E, h7*^{km}*, ML3.4/14*

IDC ***22*** *08:21:36.6±7.8, 39.°22N×27.°06E, h0*^{km}*, mb3.6/4, mb1 3.7/5, mb1mx3.2/60, mbtmp3.6/5, ML3.8/1, Error ellipse: s-maj=151.6km s-min=27.4km az=24.0*

ISC 22 08:21:02.8±1.1**, 35.°41N**±0.°03×**23.°42E**±0.°03**, h8**^{km}±8^{km}**, n60,** σ**1^{s}47**/75**, mb3.7**/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.28	128	P	Pg	08 21 07.9	-0.3
KNDR				S	Sg	08 21 11.6	-0.3
	5µm,0.2s						
KNDR	Palaiochora Ch	0.28	128	PG	Pg	08 21 07.9	-0.3
KNDR				SG	Sg	08 21 11.2	-0.7
RODP	Rodopos	0.32	61	P	Pb	08 21 10.1	-0.6
RODP				S	Sb	08 21 15.1	-0.9
	4µm,0.2s						
RODP	Rodopos	0.32	61	PG	Pb	08 21 09.9	-0.8
RODP				SG	Sb	08 21 15.2	-0.8
IMMV	Iera Moni Meta	0.46	83	P	Pg	08 21 11.9	+0.2
IMMV				S	Sb	08 21 19.2	-0.9
	6µm,0.4s						
IMMV	Iera Moni Meta	0.46	83	P	Pg	08 21 12.0	+0.3
IMMV				S	Sg	08 21 17.9	+0.1
IMMV				AML	AML	08 21 23.8	
	comp=N,11748µm,0.3s						
IMMV				AML	AML	08 21 24.1	
	comp=E,11288µm,0.2s						
IMMV	Iera Moni Meta	0.46	83	PG	Pg	08 21 12.1	+0.3
IMMV				SG	Sb	08 21 18.9	-1.2
ANKY	Antikythira Is	0.47	348	P	Pg	08 21 12.0	+0.1
ANKY				S	Sg	08 21 18.9	+0.8
	comp=E,6µm,0.4s						
ANKY	Antikythira Is	0.47	348	P	Pg	08 21 12.1	+0.1
ANKY				S	Sg	08 21 18.0	-0.1
ANKY				AML	AML	08 21 20.1	
	comp=N,13866µm,0.3s						
ANKY				AML	AML	08 21 24.9	
	comp=E,8103µm,0.5s						
VAM	Vamos	0.64	90	P	Pg	08 21 15.0	-0.1
VAM				S	Sb	08 21 26.7	+1.5
	comp=E,4µm,0.3s						
VAM	Vamos	0.64	90	P	Pg	08 21 15.1	+0.1
VAM				S	Sg	08 21 24.0	+0.6
VAM				AML	AML	08 21 28.1	
	comp=E,6961µm,0.3s						
VAM				AML	AML	08 21 30.2	
	comp=N,7188µm,0.3s						
GVDS	Gavdos	0.79	135	P	Pg	08 21 17.3	-0.6
GVDS				S	Sb	08 21 29.4	0.0
	comp=N,2µm,0.5s						
GVDS	Gavdos	0.79	135	PG	Pg	08 21 17.4	-0.5
GVDS				SG	Sg	08 21 28.1	0.0
GVD	Gavdhos	0.79	136	P	Pg	08 21 17.6	-0.3
GVD	Gavdhos	0.79	136	P	Pg	08 21 17.6	-0.3
GVD				AML	AML	08 21 41.7	
	comp=N,5365µm,0.6s						
GVD				AML	AML	08 21 41.9	
	comp=E,5043µm,0.5s						
GVD	Gavdhos	0.79	136	PG	Pg	08 21 17.8	-0.1
PRNS	Prines Rethymn	0.89	92	P	Pg	08 21 18.4	-1.4
KTHA	Kythira Island	0.90	341	P	Pg	08 21 19.7	-0.3
KTHA				S	Sg	08 21 32.5	+0.8
	comp=E,4µm,0.5s						
KTHA	Kythira Island	0.90	341	P	Pg	08 21 19.4	-0.6
KTHA				S	Sg	08 21 31.9	+0.1
KTHA				AML	AML	08 21 35.0	
	comp=E,11292µm,0.4s						
KTHA				AML	AML	08 21 35.6	
	comp=N,3338µm,0.5s						
KTHR	Kythira	0.92	339	P	Pg	08 21 19.6	-0.8
KTHR				S	Sg	08 21 32.5	+0.1
	comp=N,3µm,0.4s						
SIVA	Sivas	1.20	108	P	Pg	08 21 25.0	-0.8
SIVA				AML	AML	08 21 57.8	
	comp=N,2881µm,0.7s						
SIVA				AML	AML	08 22 09.2	
	comp=E,3513µm,0.6s						
IDI	Anoyia	1.21	95	P	Pg	08 21 24.8	-1.1
IDI	Anoyia	1.21	95	P	Pg	08 21 24.5	-1.4
IDI				AML	AML	08 21 51.0	
	comp=N,1347µm,0.6s						
IDI				AML	AML	08 21 52.1	
	comp=E,1059µm,0.3s						
MNVA	Monemvasia	1.32	346	P	Pn	08 21 27.2	-0.2
VLI	Veliai	1.37	344	P	Pn	08 21 27.8	-0.3
VLI	Veliai	1.37	344	P	Pn	08 21 27.8	-0.3
VLI				AML	AML	08 21 49.7	
	comp=E,1853µm,0.6s						
VLI				AML	AML	08 21 55.9	
	comp=N,1188µm,0.9s						
HRKL	Herakleio	1.38	93	PN	Pb	08 21 29.1	+0.4
MHLO	Agia Marina, M	1.51	32	P	Pn	08 21 30.7	+0.6
MHLO				S	Sn	08 21 49.2	-0.7
MHLO				AML	AML	08 21 57.1	
	comp=N,7146µm,0.5s						
MHLO				AML	AML	08 22 02.2	
	comp=E,8365µm,0.5s						
NPS	Neapolis	1.80	94	P	Pb	08 21 36.2	+0.3
THR9	Santorini-Faro	1.84	58	P	Pn	08 21 35.6	+1.0
THR9	Santorini-Faro	1.84	58	P	Pn	08 21 35.6	+1.0
THR5	Thira Island,	1.86	57	P	Pn	08 21 36.1	+1.2
THR5	Thira Island,	1.86	57	P	Pn	08 21 35.7	+0.7
THR6	Thira Island,	1.86	59	P	Pn	08 21 35.6	+0.6
STAX	Taxiarchis Har	1.89	58	P	Pn	08 21 35.8	+0.5
THR3	Thira Island,	1.89	58	P	Pn	08 21 36.1	+0.8
SANT	Santorini	1.92	59	P	Pn	08 21 36.4	+0.7
SANT				AML	AML	08 22 07.2	
	comp=N,448µm,0.3s						
SANT				AML	AML	08 22 07.4	
	comp=E,1310µm,0.5s						
SANT	Santorini	1.92	59	PN	Pb	08 21 37.3	-0.7
THR8	Santorini-Mono	1.95	59	P	Pn	08 21 36.8	+0.7
KRND	KRANIDI	1.98	354	P	Pn	08 21 38.0	+1.4
KRND				AML	AML	08 22 08.6	
	comp=N,554µm,0.3s						
KRND				AML	AML	08 22 13.5	
	comp=E,594µm,0.4s						
ITM	Ithomi	2.14	326	PN	Pb	08 21 41.5	-0.3
ZKR	Zakros	2.31	96	P	Pb	08 21 44.3	-0.3
ZKR	Zakros	2.31	96	PN	Pn	08 21 42.5	+1.4
APE	Apeiranthos	2.38	45	P	Pn	08 21 43.8	+1.7
APE				AML	AML	08 22 21.4	
	comp=E,480µm,0.3s						
APE				AML	AML	08 22 21.8	
	comp=N,407µm,0.3s						
APE	Apeiranthos	2.38	45	PN	Pn	08 21 43.7	+1.6
VLY	Voula,Athens	2.46	7	P	Pb	08 21 45.6	-1.6
KLV	Kalavryta, Ach	2.82	339	P	Pn	08 21 51.1	+2.9
KLV				AML	AML	08 22 46.5	
	comp=N,133µm,0.7s						
KLV				AML	AML	08 22 50.2	
	comp=E,127µm,0.7s						
LAKA	Lakka	3.06	338	P	Pb	08 21 55.3	-2.1
CHOS	Chios island	3.65	35	PN	Pn	08 22 01.9	+2.3
AGG	Agios Georgios	3.71	347	PN	Pn	08 22 03.7	+3.3
URLA	Izmir	3.90	40	PN	Pn	08 22 05.7	+2.8
ARG	Arkhangelos	3.91	77	PN	Pn	08 22 05.4	+2.3
TURN	Turunc	4.14	69	PN	Pn	08 22 08.8	+2.6
SIGR	SIGRI	4.27	26	PN	Pn	08 22 11.1	+3.1
STON	Ston	8.68	331	*e*Pn	Pn	08 23 03.8	-4.7
STON				Sn	Sn	08 24 31.8	-15
GERES	GERESS Array B	15.22	335	Pn	P	08 24 51.5	+8.4
	comp=E,0.2nm,0.3s,baz=134,slow=14,SNR=2.7						
HFS	Hagfors	25.54	349	P	P	08 26 38.1	+6.6
	comp=E,1.5nm,0.6s,baz=155,slow=14,SNR=1.1						
FINES	FINESS Array B	26.11	3	P	P	08 26 34.4	-2.4
	comp=E,1.6nm,0.7s,baz=189,slow=6.4,SNR=1.5						
KURBB	Kurchatov Arra	42.08	51	P	P	08 28 52.5	-2.3
	comp=E,0.5nm,0.4s,baz=281,slow=8.4,SNR=1.9						
MKAR	Makanchi Array	44.83	57	P	P	08 29 15.2	-2.0
	comp=E,0.4nm,0.5s,baz=273,slow=6.8,SNR=6.2						

KMA 22 08:29:11.2±0.1**, 36.°01N**×**126.°96E, h7**^{km}±2^{km}**, Error ellipse: s-maj=1.1km s-min=0.9km az=14.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KSGUS	GUNSAN	0.14	279	P	Pg	08 29 14.2	0.0
	SNR=56						
KSGUS	GUNSAN	0.14	279	P	Pg	08 29 14.2	0.0
	SNR=56						
KSJEO	Jeonju	0.28	105	P	Pg	08 29 16.8	0.0
	SNR=72						
KSJEO	Jeonju	0.28	105	P	Pg	08 29 16.8	0.0
	SNR=72						
KSPUA	Buan	0.35	214	P	Pg	08 29 18.0	-0.1
	SNR=30						
KSPUA	Buan	0.35	214	P	Pg	08 29 18.0	-0.1
	SNR=30						
PORA	Boryeong	0.45	314	P	Pg	08 29 20.0	0.0
	SNR=5.8						
PORA	Boryeong	0.45	314	P	Pg	08 29 20.0	0.0
	SNR=5.8						
SMKB	Mukjeong-gil	0.46	225	P	Pg	08 29 20.0	-0.1
	SNR=90						
SMKB	Mukjeong-gil	0.46	225	P	Pg	08 29 20.0	-0.1
	SNR=90						
MNYD	Munyeodo	0.48	244	P	Pg	08 29 20.3	-0.2
	SNR=8.7						
KSJEU	Jeongeup	0.52	183	P	Pg	08 29 21.2	0.0
	SNR=19						
SUCA	Sunchang	0.66	167	P	Pg	08 29 24.0	+0.1
	SNR=5.5						
GOCB	Gochang-gun	0.73	204	P	Pg	08 29 25.0	-0.1
	SNR=6.1						
OYDB	Oeyeondo	0.75	287	P	Pg	08 29 24.8	-0.7
	SNR=24						
ECDB	Euchungdo	0.80	278	P	Pg	08 29 26.0	-0.6
	SNR=6.8						
HAMB	Hamyang	0.81	128	P	Pg	08 29 26.6	-0.2
	SNR=7.3						
KSBON	Boeun	0.84	54	P	Pg	08 29 27.3	0.0
	SNR=14						
KSCEA	Cheonan	0.84	17	P	Pg	08 29 26.9	-0.5
	SNR=5.4						
KSKWJ	Gwangju	0.85	178	P	Pg	08 29 27.2	-0.4
	SNR=16						
KSKWJ	Gwangju	0.85	178	P	Pg	08 29 27.2	-0.4
	SNR=16						
ANMD	Anmado	1.01	229	P	Pb	08 29 31.0	0.0
	SNR=14						
BOSB	Boseong-gun	1.26	170	P	Pn	08 29 35.0	-0.2
	SNR=12						

NNC 22 08:33:20.5±4.3**, 53.°58N**×**88.°05E, h0**^{km}**, mb3.6, mpv3.2, 2C-7D, Error ellipse: s-maj=40.4km s-min=28.4km az=174.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KURK	Kurchatov	6.47	248	⇓Pn	Pn	08 34 58.3	+1.3
	0.4nm,0.3s						
KURK				⇑Sn	Sn	08 36 13.8	+2.3
	2.6nm,0.8s						
KURK				⇓Lg	Lg	08 36 44.2	
	9.1nm,1.0s						
KURBB	Kurchatov Arra	6.57	247	⇓Pn	Pn	08 34 56.6	-1.7
	2.4nm,0.3s						
KURBB				⇓Sn	Sn	08 36 14.3	+0.5
	7.3nm,0.6s						
KURBB				⇑Lg	Lg	08 36 48.2	
	11nm,0.7s						
MK31	Makanchi Array	7.73	211	⇓Pn	Pn	08 35 14.5	+0.2
	0.4nm,0.6s,baz=35,slow=14,SNR=14						
MK31				⇓Sn	Sn	08 36 44.3	+1.9
	0.5nm,0.5s,baz=39,slow=27,SNR=5.0						
MK31				⇓Lg	Lg	08 37 25.8	
	6.3nm,1.0s						

IDC ***22*** *08:34:08.4±2.3, 6.°46N×126.°32E, h0*^{km}*, mb3.6/4, mb1 3.8/4, mb1mx3.2/50, mbtmp3.6/4, Error ellipse: s-maj=134.9km s-min=27.8km az=68.0*

MAN ***22*** *08:34:26.4, 6.°09N×125.°76E, h123*^{km}*, mb4.0, ML2.8, MS2.4*

ISC 22 08:34:25.4±1.0**, 5.°85N**±0.°08×**125.°7E**±0.°1**, h127**^{km}**, n10,** σ**3^{s}22**/14**, mb3.4**/4**, 4C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GSPH	General Santos	0.77	288	⇓*e*P	Pn	08 34 46.6	+0.4
GSPH				*i* S	Sn	08 35 02.1	+0.2
MATI	Mati	1.23	27	⇓*e*P	Pn	08 34 49.0	-1.4
MATI				*i* S	Sn	08 35 13.0	+3.7
DMPH	Davao City--Mi	1.24	352	⇑*e*P	Pn	08 34 48.9	-1.6
DMPH				*e*S	Sn	08 35 07.0	-2.5
KCP	Kidapawan	1.30	333	⇑*i*P	Pn	08 34 50.5	-0.7
BUKP	Musuan	2.11	343	⇑*i*P	Pn	08 34 59.5	-1.1
BUKP				*i* S	Sn	08 35 28.2	+0.5
BUKP	Musuan	2.11	343	⇑*e*P	Pn	08 35 09.6	+8.9
BUKP				*e*S	Sn	08 35 36.3	+8.7
FITZ	Fitzroy Crossi	23.80	180	P	P	08 39 28.1	+1.4
	1.5nm,0.4s,baz=1.0,slow=11,SNR=11						
WRA	Warramunga Arr	27.01	162	P	P	08 39 56.0	+0.3
	0.3nm,0.4s,baz=347,slow=10,SNR=7.8						
ASAR	Alice Springs	30.41	165	P	P	08 40 26.9	+1.0
	0.5nm,0.4s,baz=342,slow=6.8,SNR=21						
MKAR	Makanchi Array	55.23	325	P	P	08 43 42.3	-3.1
	0.1nm,0.5s,baz=124,slow=9.4,SNR=1.4						

IDC 22 09:02:46.4±5.1**, 27.°29S**×**74.°45E, h0**^{km}**, mb3.6**/2**, mb1 3.8**/2**, mb1mx3.3**/49**, mbtmp3.6**/2**, Error ellipse: s-maj=275.4km s-min=82.7km az=23.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	19.63	354	T	T	09 28 31.5	
	baz=176,slow=76,SNR=7.4						
H08S1	Diego Carcia H	19.63	354	T	T	09 28 33.8	
	baz=176,slow=76,SNR=4.8						
H08S3	Diego Garcia H	19.65	354	T	T	09 28 32.8	
	baz=176,slow=76,SNR=7.5						
ASAR	Alice Springs	53.36	100	P	P	09 12 07.6	-0.4
	0.2nm,0.4s,baz=256,slow=6.9,SNR=7.1						
WRA	Warramunga Arr	54.93	96	P	P	09 12 19.8	+0.4
	1.0nm,1.0s,baz=252,slow=7.6,SNR=2.4						
YKA	Yellowknife Ar	144.29	7	PKP	PKPdf	09 22 23.1	-0.7
	0.3nm,0.8s,baz=339,slow=3.6,SNR=4.3						

NNC **22** *09:14:00.8±3.3, 36°.89N×70°.86E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=29.8km s-min=21.1km az=149.0*
IDC **22** *09:14:01.3±6.7, 36°.47N×71°.38E, h136km±48km, mb3.0/2, mb1 3.1/7, mb1mx2.9/56, mbtmp3.6/7, MS3.0/1, Ms1 3.0/1, ms1mx2.3/21, Error ellipse: s-maj=78.0km s-min=36.3km az=143.0*
ISC 22 09:14:04.1±1.7**, 36°.7N**±0°.1×**71°.1E**±0°.1**, h150km, n20,** σ**1ˢ.62**/23**, 2C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.78	19	P	Pn	09 15 27.0	-1.2
	SNR=86						
UCH	Uchtor	6.12	24	P	Pn	09 15 31.5	-1.2
	SNR=16						
EKS2	Erkin-Say	6.30	18	P	Pn	09 15 34.0	-0.8
	SNR=6.7						
KK08	Karatay Array	6.41	356	⇓P	Pn	09 15 35.4	-0.9
	0.9nm,0.4s,baz=176,slow=12						
KK08				⇓S	Sn	09 16 46.3	-2.1
	2.4nm,0.4s,baz=189,slow=25						
AAK	Ala-Archa	6.48	23	P	Pn	09 15 36.6	-0.7
	6.2nm,0.3s,baz=185,slow=5.8,SNR=75						
AAK				S	Sn	09 16 49.4	-0.8
	1.0nm,0.3s,baz=331,slow=21,SNR=10						
AAK	Ala-Archa	6.48	23	P	Pn	09 15 36.6	-0.7
	SNR=24						
AAK	Ala-Archa	6.48	23	⇓P	Pn	09 15 36.5	-0.8
	7.7nm,0.4s						
AAK				⇑S	Sn	09 16 51.4	+1.2
	6.5nm,0.6s						
CHMS	Chumysh	6.88	23	P	Pn	09 15 42.0	-0.6
	SNR=8.3						
USP	Ospenovka	7.05	21	P	Pn	09 15 43.8	-1.0
	SNR=6.1						
TKM2	Tokmak 2	7.11	28	P	Pn	09 15 44.4	-1.3
	SNR=11						
TKM2	Tokmak 2	7.11	28	⇓P	Pn	09 15 44.1	-1.7
	3.5nm,0.5s						
TKM2				⇓S	Sn	09 17 07.6	+2.2
	1.0nm,0.5s						
MKAR	Makanchi Array	13.08	36	P	Pn	09 17 03.2	-1.0
	0.2nm,0.3s,baz=219,slow=14,SNR=2.4						
KURBB	Kurchatov Arra	14.90	19	P	Pn	09 17 26.1	-1.0
	0.1nm,0.3s,baz=206,slow=11,SNR=1.6						
AB31	Akbulak array	14.95	331	⇓P	Pn	09 17 27.7	0.0
	0.5nm,0.5s,baz=168,slow=51,SNR=17						
AKTO	Aktyubinsk	16.65	330	P	Pn	09 17 51.5	+3.0
	0.2nm,0.3s,baz=144,slow=8.7,SNR=3.0						
AKTO	Aktyubinsk	16.65	330	⇑P	Pn	09 17 52.8	+4.3
	1.5nm,0.7s						
ZALV	Zalesovo Beam	19.70	25	P	P	09 18 21.9	+0.4
	0.8nm,0.3s,baz=215,slow=11,SNR=7.2						
GNI	Garni	20.91	288	LR	LR	09 30 10.9	
	comp=Z,37nm,18.5s,baz=316,slow=46						
TORD	Torodi Ar. Bea	65.81	269	P	P	09 24 33.1	-0.5
	0.3nm,0.7s,baz=57,slow=5.4,SNR=1.2						
YKA	Yellowknife Ar	81.04	3	P	P	09 26 01.6	-0.2
	0.2nm,0.5s,baz=350,slow=5.6,SNR=4.8						

VAO **22** *10:06:48.2±0.6, 20°.29S×69°.02W, h135km±6km, mb4.1*
SJA **22** *10:06:48.5±0.8, 20°.39S×68°.89W, h127km±3km, ML4.0, MW3.8*
NEIC **22** *10:06:49.1±1.5, 20°.32S±0°.07×68°.76W±0°.09, h116km±8km, mb4.1/4, ML4.0(GUC), Error ellipse: s-maj=11.9km s-min=10.2km az=77.0*
GUC **22** *10:06:49.8±0.7, 20°.36S×68°.78W, h117km±3km, ML4.0*
IDC **22** *10:06:50.2±0.9, 20°.49S×68°.48W, h133km±10km, mb3.6/5, mb1 3.7/9, mb1mx3.5/26, mbtmp4.0/9, MS1.9/1, Ms1 1.9/1, ms1mx1.8/20, Error ellipse: s-maj=29.2km s-min=9.5km az=99.0*
ISC 22 10:06:48.6±0.5**, 20°.38S**±0°.03×**68°.93W**±0°.04**, h127km**±5km**, n102,** σ**1ˢ.41**/141**, mb4.0**/6**, 5C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.32	319	eP	Pn	10 07 07.2	+0.3
PB08				eS	Sn	10 07 20.4	-0.4
PB08				IAML		10 07 21.9	
	comp=E,7µm,0.2s						
PB08	IPOC Station P	0.32	319		Pn	10 07 07.0	+0.1
PB08	IPOC Station P	0.32	319	eP	Pn	10 07 07.3	+0.3
PB08				eS	Sn	10 07 21.1	+0.3
PB08				IAML		10 07 22.4	
	comp=Z,3µm,0.2s						
PB01	IPOC Station P	0.84	218	⇑eP	Pn	10 07 10.8	+0.9
PB01				eS	Sn	10 07 26.8	+0.8
PB01				IAML		10 07 27.3	
	comp=N,7µm,0.3s						
PB01	IPOC Station P	0.84	218	eP	Pn	10 07 05.3	-4.6
PB01				eP		10 07 10.8	
PB01				eS	Sn	10 07 27.3	+1.2
PB01				IAML		10 07 29.1	
	comp=Z,3µm,0.2s						
HMBC	Humberstone	0.90	276	eP	Pn	10 07 11.2	+0.7
HMBC				eS	Sn	10 07 28.2	+1.1
HMBC				IAML		10 07 29.4	
	comp=N,3µm,0.6s						
PB11	IPOC Station P	0.92	312	eP	Pn	10 07 11.5	+0.8
PB11				eS	Sn	10 07 28.0	+0.6
PB11				IAML		10 07 30.8	
	comp=E,4µm,0.3s						
PB11	IPOC Station P	0.92	312	eP	Pn	10 07 11.0	+0.3
PB11				eP		10 07 11.6	
PB11				eS	Sn	10 07 28.9	+1.5
PB11				IAML		10 07 30.1	
	comp=Z,1µm,0.2s						
TA02	Huaiquique	1.13	275	⇑eP	Pn	10 07 13.9	+1.4
TA02				eS	Sn	10 07 32.7	+2.1
TA02				IAML		10 07 34.3	
	comp=E,8µm,0.2s						
TA02	Huaiquique	1.13	275		Pn	10 07 13.9	+1.4
TA02	Huaiquique	1.13	275	eP	Pn	10 07 14.0	+1.4
TA02				eP		10 07 14.0	
TA02				eS	Sn	10 07 32.9	+2.2
TA02				IAML		10 07 34.5	
	comp=Z,2µm,0.3s						
TA01	Diego Aracena	1.18	261	⇑eP	Pn	10 07 14.3	+1.2
TA01				eS	Sn	10 07 32.8	+1.2
TA01				IAML		10 07 33.9	
	comp=N,1µm,0.3s						
TA01	Diego Aracena	1.18	261	eP	Pn	10 07 14.0	+1.0
TA01				eS	Sn	10 07 32.3	+0.6
PATCX	Punta Patache	1.22	249	⇑eP	Pn	10 07 14.9	+1.4
PATCX				eS	Sn	10 07 34.1	+1.6
PATCX				IAML		10 07 36.1	
	comp=E,2µm,0.1s						
PATCX	Punta Patache	1.22	249		Pn	10 07 15.0	+1.4
PATCX	Punta Patache	1.22	249	eP	Pn	10 07 14.8	+1.2
PATCX				eP	Pn	10 07 15.0	+1.4
PATCX				eP	Pn	10 07 15.0	+1.4
PATCX				IAML		10 07 38.9	
	comp=Z,1µm,0.4s						
PB09	IPOC Station P	1.44	192	eP	Pn	10 07 17.1	+1.1
PB09				eS	Sn	10 07 37.7	+0.8
PB09				IAML		10 07 43.1	
	comp=E,943nm,0.4s						
PB09	IPOC Station P	1.44	192	eP	Pn	10 07 17.0	+1.1
PB09				eS	Sn	10 07 39.1	+2.2
PB07	IPOC Station P	1.61	213	⇓eP	Pn	10 07 19.0	+1.1
PB07				eS	Sn	10 07 41.4	+1.2
PB07				IAML		10 07 44.4	
	comp=N,2µm,0.2s						
PB07	IPOC Station P	1.61	213	eP	Pn	10 07 18.9	+1.0
PB07				eS	Sn	10 07 41.5	+1.2
PB07				IAML		10 07 46.7	
	comp=Z,1µm,0.3s						
PB03	IPOC Station P	1.83	205	eP	Pn	10 07 21.5	+1.0
PB03				i S	Sn	10 07 45.8	+0.9
PB03				IAML		10 07 47.8	
	comp=E,1µm,0.3s						
PB03	IPOC Station P	1.83	205	eP	Pn	10 07 21.4	+1.0
PB03				eS	Sn	10 07 45.9	+1.0
PB03				IAML		10 07 47.4	
	comp=Z,847nm,0.4s						
PB12	IPOC Station P	2.20	323	⇑eP	Pn	10 07 25.7	+0.7
PB12				i S	Sn	10 07 53.6	+0.7
PB12				IAML		10 08 04.6	
	comp=E,718nm,0.4s						
PB12	IPOC Station P	2.20	323	eP	Pn	10 07 25.8	+0.8
PB12				eS	Sn	10 07 54.8	+1.9
LVC	Limon Verde	2.22	179	P	Pn	10 07 26.8	+1.3
	comp=E,16nm,0.3s,baz=34,slow=12,SNR=183						
LVC				S	Sn	10 07 54.8	+1.1
	comp=E,40nm,0.3s,baz=241,slow=20,SNR=5.8						
LVC				LR	LR	10 07 59.7	
	comp=E,27nm,22.0s,baz=244,slow=32						
LVC	Limon Verde	2.22	179	eP	Pn	10 07 26.7	+1.3
LVC				i S	Sn	10 07 55.0	+1.2
LVC	Limon Verde	2.22	179	eP	Pn	10 07 26.7	+1.3
LVC	Limon Verde	2.22	179	eP	Pn	10 07 26.8	+1.3
LVC				eP		10 07 27.0	
LVC				eS	Sn	10 07 55.6	+1.8
PB04	IPOC Station P	2.25	210	eP	Pn	10 07 27.0	+1.3
PB04				i S	Sn	10 07 54.2	0.0
PB04				IAML		10 07 56.8	
	comp=N,797nm,0.2s						
PB04	IPOC Station P	2.25	210	eP	Pn	10 07 27.0	+1.3
PB04				eP		10 07 27.3	
PB04				eS	Sn	10 07 54.6	+0.5
PB04				IAML		10 07 58.4	
	comp=Z,396nm,0.5s						
PB06	IPOC Station P	2.39	194	eP	Pn	10 07 28.1	+0.6
PB06				eS	Sn	10 07 58.0	+0.8
PB06				IAML		10 08 02.4	
	comp=N,814nm,0.2s						
PB06	IPOC Station P	2.39	194	eP	Pn	10 07 28.0	+0.6
PB06				eP		10 07 28.9	
PB06				eS	Sn	10 07 57.7	+0.5
PB06				IAML		10 08 05.9	
	comp=Z,347nm,0.4s						
AP01	Chacalluta	2.40	326	eP	Pn	10 07 28.3	+0.9
AP01				eS	Sn	10 07 58.5	+1.2
AP01				IAML		10 08 06.0	
	comp=E,2µm,0.5s						
AP01	Chacalluta	2.40	326		Pn	10 07 28.4	+0.9
AP01	Chacalluta	2.40	326	eP	Pn	10 07 29.0	+1.5
AP01				IAML		10 08 05.0	
	comp=Z,609nm,0.5s						
PB05	IPOC Station P	2.73	205	eP	Pn	10 07 32.8	+1.1
PB05				eS	Sn	10 08 04.4	-0.5
PB05				IAML		10 08 15.0	
	comp=E,271nm,0.3s						
PB05	IPOC Station P	2.73	205	eP	Pn	10 07 32.8	+1.1
PB05				eP		10 07 33.0	
PB05				eS	Sn	10 08 05.8	+0.9
PB15	IPOC Station P	2.86	190	eP	Pn	10 07 34.9	+1.4
PB15				eS	Sn	10 08 08.0	-0.1
PB15				IAML		10 08 14.5	
	comp=Z,1µm,0.1s						
PB10	IPOC Station P	3.46	205	eP	Pn	10 07 41.4	+0.3
PB10				eS	Sn	10 08 21.9	0.0
YJA	Yavi	3.65	120	eP	Pn	10 07 45.3	+1.2
LPAZ	La Paz	4.14	11	P	Pn	10 07 53.3	+2.5
	comp=Z,4.2nm,0.3s,baz=185,slow=4.6,SNR=108						
LPAZ				S	Sn	10 08 42.2	+3.3
	comp=Z,1.6nm,0.3s,baz=66,slow=23,SNR=1.8						
LPAZ	La Paz	4.14	11	eP	Pn	10 07 53.0	+2.2
HJA	Humahuaca	4.32	131	eP	Pn	10 07 54.0	+1.1
HJA				eS	Sn	10 08 47.3	+4.6
PB14	IPOC Station P	4.44	198	eP	Pn	10 07 54.0	-0.4
PB14				eP		10 07 54.8	
PB14				eP		10 07 54.9	
PB14				eS	Sn	10 08 44.8	-0.7
PB14				IAML		10 09 01.3	
	comp=Z,93nm,1.3s						
AZAP	Zapla	5.24	138	eP	Pn	10 08 05.3	+0.2
ASTB	Santa Barbara	5.46	131	eP	Pn	10 08 07.6	-0.4
ASTB				eS	Sn	10 09 14.7	+4.8
AC02	Maricunga	6.43	182		Pn	10 08 20.9	-0.4
AC02	Maricunga	6.43	182	eP	Pn	10 08 21.4	+0.1
GO03	Copiap	7.28	189	Pn	Pn	10 08 34.5	+2.1
GO03	Copiap	7.28	189	eS	Sn	10 09 50.6	-3.0
SIV	San Ignacio	8.65	61	P	Pn	10 08 47.8	-3.2
	comp=Z,1.9nm,0.3s,baz=246,slow=11,SNR=25						
SIV				S	Sn	10 10 16.1	-11
	comp=Z,0.1nm,0.3s,baz=304,slow=23,SNR=1.7						
APLL	PUNTA DE LOS L	10.20	168	eP	Pn	10 09 13.0	+1.3
PTLB	Pontes e Lacer	10.54	64	eP	Pn	10 09 15.4	-0.8
ETMB	Extrema	10.83	14	eP	Pn	10 09 17.5	-2.6
ETMB	Extrema	10.83	14	Pn	Pn	10 09 19.1	-1.1
VILB	Vilhena	11.16	50	eP	Pn	10 09 22.8	-1.8
VILB	Vilhena	11.16	50		Pn	10 09 22.6	-2.0
CPUP	Villa Florida	12.19	121	P	Pn	10 09 34.6	-3.4
	comp=Z,0.7nm,0.3s,baz=300,slow=12,SNR=14						
CPUP	Villa Florida	12.19	121		Pn	10 09 36.1	-1.9
AQDB	Aquidauana	12.41	93	eP	Pn	10 09 42.0	+1.1
MT02	Curacav	12.97	188	Pn	Pn	10 09 48.0	-0.2
SALV	Santo Antonio	13.35	73	eP	Pn	10 09 53.3	+0.2
PP1B	Ponte de Pedra	13.58	81	eP	Pn	10 09 56.7	+0.6
BO02	Sierra Bellavi	14.45	186	Pn	Pn	10 10 09.0	+1.8
ITQB	Itaqui	14.48	132	eP	P	10 10 08.7	-2.0
ITQB	Itaqui	14.48	132		P	10 10 12.1	+1.5
PDRB	Porto dos Gac	14.61	55	eP	P	10 10 10.8	-1.3
ITAB	Concordia	16.81	117	P	P	10 10 36.0	-0.5
ARAG	Araguaiana, MT	16.93	77	eP	P	10 10 37.6	-0.3
CPSB	Cacapava Do Su	17.17	129	eP	Pn	10 10 40.6	-0.2
ITRB	Iturama	17.47	91	eP	Pn	10 10 43.3	-1.2
PLTB	Pedras Altas	17.81	133	eP	P	10 10 47.0	-0.5
FRTB	Fartura	18.22	103	eP	Pn	10 10 52.0	-1.4
NPGB	Novo Progresso	18.68	47	eP	P	10 10 56.6	-0.5
SNDB	Serra Nova Dou	18.88	66	eP	P	10 10 58.2	-1.1
MACA	Manacapuru-AM	18.91	26	eP	P	10 10 58.9	-0.7
TIJ01	Guaruva-PR	19.01	109	eP	Pn	10 11 00.8	-2.0
BB19B	Bebedouro	19.10	96	eP	P	10 11 00.5	-1.1
IPMB	Ipameri, GO	19.72	87	eP	P	10 11 07.4	-1.0
TER01	Tubaro-SC	19.75	118	eP	P	10 11 08.6	-0.1
RCLB	Rio Claro- Sao	20.03	100	eP	P	10 11 10.0	-1.7
SPB	Sao Paulo	20.19	103	eP	P	10 11 13.5	+0.1
PLCA	Paso Flores	20.33	184	P	P	10 11 14.8	0.0
	comp=Z,1.6nm,0.5s,baz=293,slow=1.5,SNR=7.9						
PLCA	Paso Flores	20.33	184	eP	P	10 11 14.8	0.0
PLCA	Paso Flores	20.33	184	P	P	10 11 14.1	-0.7
PLCA				IAmb	IAmb	10 11 18.7	
	comp=Z,15nm,1.4s						
PET01	Itanhaem-SP	20.40	105	eP	P	10 11 15.7	0.0
ITTB	Itaituba	20.46	41	eP	P	10 11 14.8	-1.5
PTGA	Pitinga	21.41	25	P	P	10 11 24.4	-2.1
	comp=Z,2.0nm,0.8s,baz=210,slow=23,SNR=2.9						
PARB	Paraibuna	21.83	102	eP	P	10 11 31.6	+0.6
MALB	Monte Alegre	23.33	40	eP	P	10 11 44.1	-1.5
SMTB	Santa Maria do	23.58	64	eP	P	10 11 47.3	-0.7
DIAM	Diamantina, MG	23.92	89	eP	P	10 11 50.8	-0.3
JANB	Januaria	24.03	81	eP	P	10 11 51.8	-0.2
SDBA	SAO DESIDERIO	24.36	75	eP	P	10 11 54.8	-0.3
DUB01	Friburgo-RJ	24.80	99	eP	P	10 11 58.9	-0.1
SNAA	Sanae	63.34	161	P	P	10 17 03.0	-0.9
	comp=Z,0.5nm,0.3s,baz=210,slow=21,SNR=2.4						
DBIC	Dimbokro	68.44	74	P	P	10 17 36.2	-1.1
	comp=Z,3.4nm,0.8s,baz=220,slow=5.1,SNR=3.9						
DBIC	Dimbokro	68.44	74	P	P	10 17 36.9	-0.5
QSPA	South Pole Qui	69.80	180	P	P	10 17 47.8	+2.7
QSPA				IAmb	IAmb	10 18 11.2	
	comp=Z,3.5nm,1.1s						
TORD	Torodi Ar. Bea	77.00	71	P	P	10 18 26.9	-1.1
	comp=Z,1.5nm,0.6s,baz=256,slow=5.0,SNR=13						
TORD	Torodi Ar. Bea	77.00	71	P	P	10 18 27.9	-0.1
YKA	Yellowknife Ar	90.13	341	P	P	10 19 36.1	+2.3
	comp=Z,0.2nm,0.5s,baz=132,slow=4.5,SNR=6.5						
YKA				pP	pP	10 20 07.7	-0.4
	comp=Z,2.1nm,0.8s,baz=135,slow=4.5,SNR=27						
YKA				sP	sP	10 20 21.9	-0.1
	comp=Z,0.6nm,0.8s,baz=137,slow=4.4,SNR=4.2						

IDC **22** *10:06:48.7±0.5, 7°.55S×130°.13E, h0km, mb4.5/14, mb1 4.6/17, mb1mx4.4/30, mbtmp4.5/17, ML4.1/3, MS3.5/11, Ms1 3.5/11, ms1mx3.3/33, Error ellipse: s-maj=19.6km s-min=13.2km az=66.0*
DJA **22** *10:06:51.5±1.4, 8°S±2°×13°0E±°, h12km±11km, M5.0/34, mb5.0/34, mB5.5/17, MLv4.8/6, Mw(mB)5.0/17*
NEIC **22** *10:06:54.9±1.3, 7°.77S±0°.06×130°.13E±0°.06, h47km, mb4.7/47, Error ellipse: s-maj=9.2km s-min=8.4km az=210.0*
ISC 22 10:06:51.7±0.3**, 7°.82S**±0°.04×**130°.15E**±0°.04**, h22km, n186,** σ**2ˢ.10**/181**, mb4.8**/52**, MS3.6**/10**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.15	98	Pn	Pb	10 07 16.1	+3.2
SAUI	Saumlaki	1.15	98	P	Pb	10 07 16.1	+3.2
MSAI	Masohi	4.61	345	P	Pn	10 08 00.4	+0.2
DRS	Darwin Rock St	4.64	171	P	Pn	10 08 02.7	+2.2
MTN	Manton Dam	5.08	169	P	Pn	10 08 07.9	+1.3
	baz=5.1,SNR=239						
MTN				S	Sn	10 09 04.5	-0.1
	baz=5.1						
MTN	Manton Dam	5.08	169	Pn	Pn	10 08 08.7	+2.1
MTN	Manton Dam	5.08	169	P	Pn	10 08 09.4	+2.8
FAKI	Fak Fak	5.30	23	Pn	Pn	10 08 08.9	-0.8
KDU	Kakadu	5.34	155	P	Pn	10 08 11.7	+1.5
	baz=5.4,SNR=194						
KDU				S	Sn	10 09 12.2	+1.1
	baz=5.4						
KDU	Kakadu	5.34	155	P	Pn	10 08 11.9	+1.7
	318nm,0.7s						
SOEI	Soe	6.12	251	Pn	Pn	10 08 23.7	+2.6
BATI	Baumata	6.83	249	Pn	Pn	10 08 33.3	+2.6
	19nm,0.3s,baz=184,slow=3.7,SNR=10						
BATI				Sn	Sn	10 09 52.5	+4.6
	13nm,0.3s,baz=193,slow=20,SNR=1.5						
BATI	Baumata	6.83	249	P	Pn	10 08 33.1	+2.4
	0.4nm108nm,0.7s						
SWI	Sorong	7.00	9	P	Pn	10 08 33.0	0.0
	0.4nm128nm,0.8s						
LBMI	Labuha	7.61	340	P	Pn	10 08 45.1	+3.7
KNRA	Kununurra	7.92	190	P	Pn	10 08 46.3	+0.6
	baz=7.9,SNR=294						
KNRA				S	Sn	10 10 14.1	-0.5
	baz=7.9						
KNRA	Kununurra	7.92	190	Pn	Pn	10 08 46.2	+0.6
KNRA	Kununurra	7.92	190	P	Pn	10 08 47.9	+2.3
	230nm,0.7s						
EDFI	Ende, Flores	8.43	263	P	Pn	10 08 57.0	+4.3
	354nm28nm,0.9s						
WAMI	Wamena	9.37	66	P	Pn	10 09 06.0	+0.5
	236nm,0.9s						
BASI	Baing, Sumba	9.75	255	P	Pn	10 09 14.8	+4.0
	108nm,0.8s						
BKSI	Bulukumba	10.27	283	P	Pn	10 09 21.3	+3.4
	584nm46nm,1.1s						
BNSI	Bone	10.55	288	P	Pn	10 09 26.2	+4.5
	66nm,1.1s						
KAPI	Kappang	10.71	284	Pn	Pn	10 09 26.9	+3.1
	0.3nm,0.3s,baz=226,slow=18,SNR=1.4						
KAPI				LR	LR	10 13 46.6	
	comp=Z,65nm,20.1s,baz=122,slow=39						
KAPI	Kappang	10.71	284	Pn	Pn	10 09 25.9	+2.1
KAPI	Kappang	10.71	284	P	Pn	10 09 34.2	+10
WBSI	Waikabubak, Su	10.79	260	P	Pn	10 09 26.4	+1.4
	1µm172nm,0.8s						
APSI	Ampana	10.91	309	P	Pn	10 09 34.9	+8.3
SPSI	Sidrap Palu	11.02	290	P	Pn	10 09 31.6	+3.5
	775nm36nm,1.1s						
FITZ	Fitzroy Crossi	11.12	203	Pn	Pn	10 09 29.0	-0.4
	9.7nm,0.3s,baz=26,slow=15,SNR=25						
FITZ				Sn	Sn	10 11 26.9	-6.3
	5.5nm,0.3s,baz=11,slow=19,SNR=1.9						
FITZ	Fitzroy Crossi	11.12	203	P	Pn	10 09 28.5	-0.9
	baz=11,SNR=142						
FITZ				S	Sn	10 11 26.4	-6.8
	baz=11						
TTSI	Tana Toraja	11.33	294	P	Pn	10 09 38.8	+6.4
	38nm,1.0s						
MRSI	Marisa	11.62	315	P	Pn	10 09 41.3	+4.9
	97nm,1.0s						
JAY	Jayapura	11.76	64	P	Pn	10 09 36.4	-1.9
	33nm,0.9s						
WRA	Warramunga Arr	12.71	162	Pn	Pn	10 09 48.7	-2.6
	11nm,0.3s,baz=341,slow=13,SNR=266						
WRA				Sn	Sn	10 12 06.7	-5.5
	17nm,0.3s,baz=334,slow=21,SNR=11						
WRA				LR	LR	10 15 26.5	
	comp=Z,390nm,19.9s,baz=335,slow=40						
TOLI2	Tolitoli	12.89	313	Pn	Pn	10 09 55.2	+1.5
TOLI2	Tolitoli	12.89	313	P	P	10 10 05.0	+0.7
TWSI	Taliwang, Sumb	13.16	265	P	Pn	10 09 58.1	+0.6
	24nm,0.7s						
COEN	Coen	14.16	117	Pn	Pn	10 10 09.8	-1.3
QIS	Mount Isa	15.62	145	P	Pn	10 10 27.9	-2.7
	baz=16,SNR=26						
QIS				S	Sn	10 13 10.6	-13
	baz=16						
QIS	Mount Isa	15.62	145	P	Pn	10 10 29.6	-1.0
	38nm,1.2s						
BBKI	Banjar Baru	15.84	285	P	P	10 10 39.3	+2.2
	6µm98nm,0.9s						
JAGI	Jajag, Banyuwa	15.85	267	Pn	Pn	10 10 34.4	+0.7
AS31	Alice Springs	16.16	168	Pn	Pn	10 10 36.5	-1.1
AS31				IAmb	IAmb	10 10 45.7	
	comp=Z,22nm,0.5s						
ASAR	Alice Springs	16.16	168	Pn	Pn	10 10 35.0	-2.7
	comp=Z,7.6nm,0.3s,baz=347,slow=9.6,SNR=235						
ASAR				Sn	Sn	10 13 29.1	-7.2
	comp=Z,5.2nm,0.3s,baz=328,slow=13,SNR=7.6						
ASAR				LR	LR	10 17 22.2	
	comp=Z,216nm,19.5s,baz=342,slow=39						
ASAR	Alice Springs	16.16	168	Pn	Pn	10 10 36.6	-1.0
BLJI	Banyuglugur	16.41	269	P	P	10 10 44.4	+1.0
	comp=Z,2µmcomp=Z,57nm,0.7s						
MTKI	Muara Teweh, K	16.67	293	P	P	10 10 49.0	+2.6
PMG	Port Moresby	16.89	97	Pn	P	10 10 47.6	-1.1
	comp=Z,4.2nm,0.3s,baz=284,slow=6.0,SNR=14						
PMG				LR	LR	10 18 47.1	
	comp=Z,430nm,18.8s,baz=282,slow=42						
PMG	Port Moresby	16.89	97	P	P	10 10 48.7	-0.1
PMG				IAmb	IAmb	10 10 51.5	
	comp=Z,138nm,1.1s						
PMG	Port Moresby	16.89	97	P	P	10 10 49.1	+0.3
PMG	Port Moresby	16.89	97	P	P	10 10 49.0	+0.3
PSA00	Pilbara Seismi	16.90	215		Pn	10 10 47.2	+0.2
PSA00				IAmb	IAmb	10 10 51.8	
	comp=Z,40nm,0.8s						
PSA00	Pilbara Seismi	16.90	215	Pn	Pn	10 10 46.3	-0.7
PSA00				IAmb	IAmb	10 10 51.7	
	comp=Z,21nm,1.1s						
PSA00	Pilbara Seismi	16.90	215	P	P	10 10 50.6	+1.7
	comp=Z,60nm,0.8s						
MTSU	Mount Surprise	17.18	128	P	Pn	10 10 49.4	-1.1
	baz=17,SNR=5.4						
MTSU	Mount Surprise	17.18	128	P	Pn	10 10 49.7	-0.8
	comp=Z,36nm,0.5s						
WRKA	Warakurna	17.21	186	P	Pn	10 10 48.3	-2.6
	baz=17,SNR=252						
MYLDM	Lahad Datu	17.38	318		P	10 10 54.3	+0.1
MYLDM				IAmb	IAmb	10 11 10.9	
	comp=Z,48nm,0.9s						
SPMM	Sapulut	18.48	312	P	Pn	10 11 09.0	+2.4
PCJI	Pacitan	18.79	268	P	Pn	10 11 11.0	+0.6
	comp=Z,74nm,0.9s						
PBKI	Pangkalan Bun	19.09	284	P	Pn	10 11 15.6	+1.6
	comp=Z,8µmcomp=Z,452nm,1.0s						
KKM	Kota Kinabalu	19.57	314	P	P	10 11 18.3	-0.2
KKM				IAmb	IAmb	10 11 31.5	
	comp=Z,103nm,1.5s						
KKM	Kota Kinabalu	19.57	314	P	Pn	10 11 27.7	+7.8
	comp=Z,41nm,1.3s						
CTA	Charters Tower	19.80	130	P	Pn	10 11 23.7	+1.3
	comp=Z,0.7nm,0.3s,baz=301,slow=16,SNR=8.2						
CTAO	Charters Tower	19.80	130	P	P	10 11 21.4	+0.6
STKI	Sintang	20.20	292	P	Pn	10 11 30.5	+3.3
OOD	Oodnadatta	20.54	166	P	Pn	10 11 30.8	-0.3
	comp=Z,116nm,0.7s						
SBUM	Sibu	20.59	299	P	P	10 11 30.0	+0.5
SBUM	Sibu	20.59	299	P	P	10 11 29.3	-0.2
GIRL	Giralia	21.25	224	P	P	10 11 37.1	+0.6
MEEK	Meekatharra	21.69	209	P	P	10 11 42.6	+1.4
	baz=22,SNR=11						
MEEK	Meekatharra	21.69	209	P	P	10 11 43.5	+2.3
	comp=Z,32nm,0.9s						
KSM	Kuching	21.84	294	P	P	10 11 42.0	-0.9
KSM	Kuching	21.84	294	P	P	10 11 41.8	-1.1
KSM				IAmb	IAmb	10 11 46.6	
	comp=Z,27nm,1.0s						
INKA	Innaminka	22.20	154	P	P	10 11 49.5	+2.8
	comp=Z,77nm,0.8s						
LEM	Lembang	22.37	271	LR	LR	10 22 05.0	
	comp=Z,293nm,21.9s,baz=133,slow=41						
MULG	Mulgathing	22.64	171	P	P	10 11 54.6	+3.2
	comp=Z,66nm,1.2s						
FORT	Forrest	22.92	185	P	P	10 11 54.7	+0.5
	baz=23,SNR=19						
FORT	Forrest	22.92	185	P	P	10 11 54.2	-0.1
FORT	Forrest	22.92	185	P	P	10 11 57.4	+3.1
	comp=Z,106nm,0.6s						
QLP	Quilpie	22.96	146	P	P	10 11 57.2	+2.5
	baz=23,SNR=15						
QLP	Quilpie	22.96	146	P	P	10 11 57.2	+2.5
	comp=Z,115nm,1.4s						

LCRK	Leigh Creek	23.74	162	P	P	10 12 04.8	+2.3
	comp=Z,129nm,0.8s						
PPBI	Pangkal Pinang	24.57	282	P	P	10 12 11.8	+1.5
RK1H	Rockhampton Ha	24.91	131	P	P	10 12 15.7	+2.4
	comp=Z,35nm,0.7s						
MORW	Morawa	24.96	210	P	P	10 12 11.8	-1.9
MORW				IAmb	IAmb	10 12 16.7	
	comp=Z,18nm,0.8s						
MORW	Morawa	24.96	210	P	P	10 12 17.2	+3.4
	comp=Z,24nm,1.0s						
BBOO	Buckleboo	25.46	168	P	P	10 12 18.1	-0.1
	baz=26,SNR=18						
BBOO	Buckleboo	25.46	168	P	P	10 12 18.3	+0.1
BBOO				IAmb	IAmb	10 12 44.2	
	comp=Z,21nm,0.8s						
BBOO	Buckleboo	25.46	168	P	P	10 12 21.8	+3.6
	comp=Z,28nm,0.9s						
RMQ	Roma	25.63	139	P	P	10 12 24.8	+4.9
	comp=Z,18nm,0.9s						
BLDU	Ballidu	25.93	207	P	P	10 12 22.3	-0.2
	baz=26,SNR=10.0						
BLDU	Ballidu	25.93	207	P	P	10 12 27.6	+5.1
	comp=Z,27nm,1.1s						
STKA	Stephens Creek	26.20	158	P	P	10 12 26.4	+1.5
	comp=Z,8.1nm,0.5s,baz=353,slow=7.9,SNR=20						
STKA				LR	LR	10 24 01.5	
	comp=Z,229nm,20.3s,baz=9.2,slow=39						
STKA	Stephens Creek	26.20	158	P	P	10 12 26.6	+1.7
	baz=26,SNR=30						
STKA	Stephens Creek	26.20	158	P	P	10 12 25.1	+0.2
STKA	Stephens Creek	26.20	158	P	P	10 12 29.6	+4.7
	comp=Z,7.9nm,0.7s						
KLBR	Kellerberrin	26.32	204	P	P	10 12 27.6	+1.6
	baz=26,SNR=16						
KLBR	Kellerberrin	26.32	204	P	P	10 12 27.9	+1.9
	comp=Z,76nm,0.7s						
EIDS	Eidsvold	26.51	134	P	P	10 12 27.0	-0.8
HTT	Hallett	26.74	164	P	P	10 12 31.7	+1.8
	baz=27,SNR=12						
CMSA	Cobar Meteorol	27.69	151	P	P	10 12 40.7	+2.4
	baz=28,SNR=19						
CMSA	Cobar Meteorol	27.69	151	P	P	10 12 42.3	+4.0
	comp=Z,15nm,0.9s						
MYKOM	Kota Tinggi	27.92	289	P	P	10 12 43.0	+2.4
HNR	Honiara	29.50	95	LR	LR	10 26 00.8	
	comp=Z,64nm,19.2s,baz=270,slow=39						
ARMA	Armidale	30.16	141	P	P	10 12 59.9	-0.6
ARMA				IAmb	IAmb	10 13 14.1	
	comp=Z,35nm,1.5s						
ARPS	Mount Arapiles	30.72	161	P	P	10 13 07.5	+2.4
	baz=31,SNR=8.7						
CAN	Canberra	32.37	150	P	P	10 13 20.1	+0.4
TOO	Toolangi	32.72	157	P	P	10 13 23.5	+0.7
PSI	Prapat	32.89	288	P	P	10 13 23.6	-1.1
	comp=Z,4.9nm,0.5s,baz=202,slow=8.2,SNR=4.8						
SANVU	Saraoutou	37.03	105	P	P	10 14 00.2	0.0
DZM	Mont Dzumac	37.69	116	eLR	LR	10 24 22.8	
	comp=Z,182nm,27.5s						
DZM	Mont Dzumac	37.69	116	P	P	10 14 07.4	+1.4
	comp=Z,5.6nm,0.7s,baz=123,slow=21,SNR=2.8						
DZM	Mont Dzumac	37.69	116	P	P	10 14 05.8	-0.2
CMAR	Chiang Mai Arr	40.38	311	P	P	10 14 26.0	-2.3
	comp=Z,1.7nm,0.4s,baz=141,slow=7.4,SNR=16						
CMAR				PcP	PcP	10 16 31.7	+0.2
	comp=Z,0.9nm,0.3s,baz=178,slow=2.3,SNR=1.5						
CMAR				LR	LR	10 31 38.4	
	comp=Z,65nm,21.1s,baz=130,slow=37						
CMAR	Chiang Mai Arr	40.38	311	P	P	10 14 26.7	-1.6
CHTO	Chiang Mai	40.59	311	P	P	10 14 28.9	-1.2
CHTO				IAmb	IAmb	10 14 29.5	
	comp=Z,12nm,1.2s						
NJ2	Nanjing	41.09	345	eP	P	10 14 35.4	+1.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
JMN	Monobe	41.47	5	P	P	10 14 36.8	-0.4
JMN				IAmb	IAmb	10 15 01.8	
	comp=Z,24nm,1.1s						
JWT	Wachi	43.16	6	P	P	10 14 50.0	-0.8
JWT				IAmb	IAmb	10 15 02.6	
	comp=Z,19nm,0.8s						
MAT	Matsushiro	44.77	9	P	P	10 15 01.8	-2.0
MJAR	Matsushiro Arr	44.77	9	P	P	10 15 01.9	-1.8
	comp=Z,3.0nm,0.8s,baz=183,slow=8.3,SNR=5.3						
MJAR				LR	LR	10 34 26.4	
	comp=Z,22nm,18.6s,baz=195,slow=37						
KSRS	Korea Array	45.09	357	P	P	10 15 03.8	-2.4
	comp=Z,0.9nm,0.6s,baz=173,slow=9.1,SNR=2.9						
XAN	Xi'an	46.25	335	P	P	10 15 13.4	-2.1
XAN				sP	sP	10 15 26.1	+1.4
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SHL	Shillong	49.87	313	P	P	10 15 42.0	-1.9
SHL				IAmb	IAmb	10 15 42.1	
	comp=Z,8.5nm,0.6s						
LZH	Lanzhou	50.20	332	eP	P	10 15 49.5	+3.3
LZH				sP	pP	10 15 53.3	+0.5
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
HHC	Hu-ho-hao-te	51.37	342	eP	P	10 15 56.9	+2.0
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,5.7s						
USRK	Ussuriysk Ar.	51.81	2	P	P	10 15 56.5	-1.4
	comp=Z,1.9nm,0.6s,baz=172,slow=7.7,SNR=4.9						
USRK	Ussuriysk Ar.	51.81	2	P	P	10 15 57.0	-0.9
BKZ	Black Stump Fm	51.91	134	P	P	10 15 58.8	-0.2
JKA	Kamikawa-asahi	52.91	11	P	P	10 16 05.1	-1.0
GTA	Gaotai	54.76	331	eP	P	10 16 18.8	-1.2
GTA				pP	pP	10 16 22.9	-3.8
GTA				sP	sP	10 16 26.1	-3.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	Songino Array	59.27	342	P	P	10 16 50.6	-1.1
	comp=Z,2.2nm,0.7s,baz=158,slow=6.1,SNR=12						
SONM	Songino Array	59.27	342	P	P	10 16 50.8	-0.9
WMQ	Urumqi	64.16	327	eP	P	10 17 26.4	+1.7
PEA0B	Petropavlovsk-	65.06	18	P	P	10 17 30.1	-0.2
PETK	Petropavlovsk-	65.06	18	P	P	10 17 29.6	-0.7
	comp=Z,4.0nm,0.6s,baz=157,slow=3.0,SNR=12						
TARG	Taragay, Kyrgy	68.69	320	P	P	10 17 52.6	-1.6
KSH	Kashi	68.72	318	P	P	10 17 55.5	+1.4
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK31	Makanchi Array	68.99	327	P	P	10 17 55.0	-0.5
MK31				IAmb	IAmb	10 18 06.8	
	comp=Z,6.1nm,0.8s						
MKAR	Makanchi Array	68.99	327	P	P	10 17 54.9	-0.6
	comp=Z,9.3nm,0.5s,baz=116,slow=7.7,SNR=100						
MAKZ	Makanchi	69.17	327	P	P	10 17 56.1	-0.5
MAKZ				IAmb	IAmb	10 18 07.6	
	comp=Z,7.4nm,0.8s						
KDJ	Kajisay	69.30	321	P	P	10 17 56.8	-0.9
KDJ				IAmb	IAmb	10 18 03.5	
	comp=Z,6.1nm,0.8s						
BOOM	Boomskoye usch	70.27	320	P	P	10 18 03.4	-0.2
BOOM				IAmb	IAmb	10 18 16.6	
	comp=Z,7.4nm,0.9s						
AAK	Ala-Archa	71.27	320	P	P	10 18 09.1	-0.6
VNDA	Vanda	71.62	173	P	P	10 18 12.6	+1.5
	comp=Z,1.7nm,0.5s,baz=319,slow=6.9,SNR=12						
VNDA	Vanda	71.62	173	P	P	10 18 10.9	-0.1
ZAA0	Zalesovo Array	72.38	334	P	P	10 18 15.0	-0.9
ZAA0				IAmb	IAmb	10 18 25.2	
	comp=Z,5.5nm,0.8s						
ZALV	Zalesovo Beam	72.38	334	P	P	10 18 14.3	-1.6
	comp=Z,3.0nm,0.6s,baz=127,slow=5.8,SNR=16						
ZALV	Zalesovo Beam	72.38	334	P	P	10 18 14.6	-1.3
KURK	Kurchatov	73.30	329	P	P	10 18 20.4	-1.0
KURK				IAmb	IAmb	10 18 32.0	
	comp=Z,14nm,1.1s						
KKAR	Karatay Array	74.06	319	P	P	10 18 26.2	+0.1
MAW	Mawson	74.24	202	P	P	10 18 29.1	+2.4
	comp=Z,4.7nm,0.7s,baz=82,slow=8.8,SNR=5.0						
MAW	Mawson	74.24	202	P	P	10 18 26.8	+0.1
TBI	Tubuai	78.15	112	eLR	LR	10 43 06.7	
	comp=Z,93nm,30.2s						
SOCY	Socotra	78.27	284	P	P	10 18 49.8	-0.9
PPT2	Papeete2	78.44	106	eLR	LR	10 43 18.0	
	comp=Z,68nm,25.2s						
PPT	Papeete	78.45	106	LR	LR	10 51 39.3	
	comp=Z,23nm,18.1s,baz=203,slow=34						
BRVK	Borovoye	78.91	328	P	P	10 18 52.6	-0.7
BRVK				IAmb	IAmb	10 19 02.2	
	comp=Z,8.9nm,1.1s						
TIXI	Tiksi	79.31	360	P	P	10 18 54.4	-0.7
TIXI				IAmb	IAmb	10 18 55.2	
	comp=Z,6.1nm,0.6s						
VOI	Vohitsoka	80.99	249	P	P	10 19 04.2	-1.4
VOI				IAmb	IAmb	10 19 07.2	
	comp=Z,9.3nm,0.7s						
QSPA	South Pole Qui	82.16	180	P	P	10 19 10.8	0.0
QSPA				IAmb	IAmb	10 19 12.9	
	comp=Z,5.1nm,0.8s						
NRIK	Noril'sk	82.39	346	P	P	10 19 10.9	-0.7
	comp=Z,3.0nm,0.8s,baz=124,slow=4.1,SNR=4.8						
ABKAR	Akbulak array	83.24	322	P	P	10 19 15.3	-1.2
ARU	Arti	86.48	328	P	P	10 19 31.3	-1.4
N19K	Bonanza Creek	89.72	28	P	P	10 19 48.2	+0.1
N19K				IAmb	IAmb	10 19 56.4	
	comp=Z,2.6nm,0.9s						
IMAR	Indian Mountai	91.49	23	P	P	10 19 55.7	-0.5
GNI	Garni	91.50	310	LR	LR	11 04 30.5	
	comp=Z,10nm,21.0s,baz=324,slow=38						
ILAR	Eielson Array	94.02	25	P	P	10 20 04.8	-3.1
	comp=Z,0.5nm,0.7s,baz=259,slow=3.9,SNR=5.8						
ILAR	Eielson Array	94.02	25	P	P	10 20 06.9	-0.9
SNAA	Sanae	94.90	193		P	10 20 11.1	-0.9
SNAA				IAmb	IAmb	10 20 29.3	
	comp=Z,2.5nm,1.0s						
YKA	Yellowknife Ar	108.42	26	PKiKP	PKiKP	10 25 17.9	-0.3
	comp=Z,0.1nm,0.6s,baz=301,slow=1.7,SNR=2.5						
GERES	GERESS Array B	113.15	320	PKiKP	PKiKP	10 25 27.0	-0.7
	comp=Z,0.4nm,0.5s,baz=99,slow=3.3,SNR=1.9						
PDAR	Pinedale Array	117.36	46	PKP	PKiKP	10 25 36.2	+0.1
	comp=Z,0.2nm,0.6s,baz=246,slow=0.9,SNR=3.5						
PDAR	Pinedale Array	117.36	46		PKPdf	10 25 34.5	-1.6
TXAR	Lajitas Array	125.22	60	PKP	PKPdf	10 25 51.3	-0.2
	comp=Z,0.4nm,0.6s,baz=211,slow=3.8,SNR=5.3						
TXAR	Lajitas Array	125.22	60		PKPdf	10 25 50.8	-0.7
TORD	Torodi Ar. Bea	129.11	281	PKP	PKPdf	10 25 59.6	+0.4
	comp=Z,0.6nm,0.7s,baz=91,slow=1.9,SNR=3.9						
TORD	Torodi Ar. Bea	129.11	281		PKPdf	10 25 55.6	-3.6
S39A	Bolivar	130.75	46	PKPdf	PKPdf	10 26 01.3	-0.3
DBIC	Dimbokro	135.37	272	PKP	PKPdf	10 26 11.6	+0.6
	comp=Z,1.0nm,0.5s,baz=181,slow=16,SNR=1.9						
CPUP	Villa Florida	145.28	168	PKPbc	PKPdf	10 26 29.9	+1.3
	comp=Z,10nm,0.8s,baz=193,slow=1.8,SNR=16						
CPUP	Villa Florida	145.28	168		PKPbc	10 26 25.8	-2.4
LPAZ	La Paz	149.98	143	PKPbc	PKiKP	10 26 44.2	+1.1
	comp=Z,4.6nm,0.4s,baz=29,slow=2.8,SNR=36						
LPAZ	La Paz	149.98	143		PKiKP	10 26 44.0	+0.8

IDC 22 10:30:05.4±2.2**, 73°.34N×7°.63E, h0**^{km}**, mb3.3**/2**, mb1 3.4**/4**, mb1mx3.2**/42**, mbtmp3.3**/4**, ML3.2**/2**, Error ellipse: s-maj=44.9km s-min=18.3km az=62.0, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPITS	Spitsbergen Ar	5.32	20	Pn	Pn	10 31 24.1	-1.7
	baz=198,slow=14,SNR=16						
ARCES	ARCESS Array B	6.84	115	Pn	Pn	10 31 46.3	-0.5
	baz=320,slow=10,SNR=13						
ARCES				Sn	Sn	10 32 58.3	-7.0
	baz=316,slow=20,SNR=1.1						
AKASG	Malin Array Be	24.56	146	P	P	10 35 26.3	-0.1
	0.3nm,0.3s,baz=345,slow=9.5,SNR=2.1						
ILAR	Eielson Array	41.11	344	P	P	10 37 50.4	+0.1
	0.5nm,1.1s,baz=12,slow=9.2,SNR=4.5						

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*UPP **22** 10:30:45.1±0.1, 59°.17N×16°.34E, h0^{km}, ML1.6, Explosion*

*IDC **22** 10:30:45.7±1.9, 59°.08N×16°.30E, h0^{km}, mb1 3.5/2, mb1mx3.1/36, mbtmp3.4/2, ML1.8/3, Error ellipse: s-maj=21.3km s-min=7.0km az=13.0*

ISC 22 10:30:44.7±1.0**, 59°.18N**±0°.03×**16°.33E**±0°.04**, h0**^{km}**, n13, σ0**^{s}**.57**/16**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIKU	Vikbolandet	0.71	164	P	Pg	10 30 58.1	-0.1
VIKU				S	Sg	10 31 07.3	0.0
NRAU	Nora	0.77	301	P	Pg	10 30 59.8	+0.4
NRAU				S	Sg	10 31 10.0	+0.6
ASKU	Askersund	0.83	250	P	Pg	10 31 00.5	0.0
UPP	Uppsala	0.95	44	P	Pg	10 31 03.0	+0.1
LNKU	Linkoeping	1.05	205	P	Pg	10 31 04.5	-0.3
OSTU	Oestervaala	1.13	21	P	Pg	10 31 06.2	-0.2
FLYU	Flymyra	1.24	39	P	Pg	10 31 08.2	-0.2
NRTU	Norrtaelje	1.28	66	P	Pg	10 31 08.8	-0.4
FALU	Falun	1.34	349	P	Pg	10 31 10.2	-0.3
HFS	Hagfors	1.65	307	Pg	Pn	10 31 15.4	+0.5
	0.6nm,0.3s,baz=132,slow=17,SNR=39						
HFS				Lg	Lg	10 31 39.5	
	2.3nm,0.3s,baz=126,slow=30,SNR=27						
NOA	NORSAR Array B	3.17	308	Pn	Pn	10 31 36.5	+0.7
	0.0nm,0.3s,baz=125,slow=23,SNR=1.9						
NOA				Lg	Lg	10 32 25.4	
	0.1nm,0.3s,baz=123,slow=21,SNR=6.3						
FINES	FINESS Array B	5.35	61	Pn	Pn	10 32 06.9	+1.2
	0.4nm,0.3s,baz=246,slow=12,SNR=11						
FINES				Sn	Sn	10 33 08.3	+0.4
	0.4nm,0.3s,baz=249,slow=22,SNR=7.5						
ARCES	ARCESS Array B	11.11	17	Pn	Pn	10 33 23.7	-0.9
	baz=198,slow=14,SNR=1.2						

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*JMA **22** 10:41:15.6, 34°.32N×136°.24E, h411^{km}, M2.7*

*IDC **22** 10:41:23.3±6.5, 34°.67N×136°.13E, h340^{km}±51^{km}, mb1 2.7/3, mb1mx2.1/52, mbtmp3.4/3, Error ellipse: s-maj=85.5km s-min=53.0km az=154.0*

ISC 22 10:41:17.5±1.6**, 34°.4N**±0°.2×**136°.49E**±0°.10**, h400**^{km}**, n17, σ1**^{s}**.75**/22**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	Ise	0.18	96	P	Pn	10 42 06.7	-0.2
JKN2	Miekihoku	0.25	226	P	Pn	10 42 06.3	-0.7
JAO	Obara	1.06	36	P	Pn	10 42 09.1	+0.3
JYTA	Yamagatataniai	1.20	10	P	Pn	10 42 09.2	0.0
JNY	Yasuok	1.47	50	P	Pn	10 42 11.1	+0.6
JYN	Shimob	2.00	57	P	Pn	10 42 14.5	+1.0
JRY	Ryogami san	2.54	50	P	Pn	10 42 18.7	+1.6
MAT	Matsushiro	2.55	33	P	Pn	10 42 18.0	+0.9
MJAR	Matsushiro Arr	2.55	33	P	Pn	10 42 18.0	+0.9
	0.2nm,0.3s,baz=218,slow=8.4,SNR=5.8						
MJAR				S	S	10 43 01.8	-3.6
	baz=132,slow=15,SNR=1.9						
JHU	Hanno	2.70	57	P	Pn	10 42 19.4	+1.1
JHU				eS	S	10 43 09.0	+1.5
JAG	Ashikaga	3.15	49	P	Pn	10 42 22.5	+0.7
JAG				S	S	10 43 11.3	-2.7
BSO4	Boso 4	3.22	79	P	Pn	10 42 24.1	+1.7
JYT	Yasato	3.53	58	P	Pn	10 42 25.7	+0.6
JHO	Hitachi	3.98	55	P	Pn	10 42 29.8	+0.5
JHO				eS	S	10 43 24.5	-3.2
JFK	Kawauchi	4.62	49	P	Pn	10 42 36.7	+1.1
JFK				eS	S	10 43 35.9	-3.2
KSRS	Korea Array	7.58	296	P	P	10 43 08.0	-0.1
	0.2nm,0.3s,baz=111,slow=11,SNR=3.1						
USRK	Ussuriysk Ar.	10.38	342	P	Pn	10 43 41.4	+1.7
	baz=154,slow=11,SNR=11						

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*UPP **22** 10:47:55.2±2.7, 64°.47N×31°.03E, h0^{km}, ML1.7, Suspected explosion*

*KOLA **22** 10:47:57.5, 64°.65N×30°.63E, h0^{km}, ML2.5, Kostomuksha, Karelia*

ISC 22 10:47:56.4±2.4**, 64°.6N**±0°.1×**30°.97E**±0°.10**, h10**^{km}**, n15, σ1**^{s}**.24**/19**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA0	Apatity Array	3.16	14	P	Pn	10 48 46.8	+0.7
APA0				S	Sn	10 49 24.9	+1.0
APA	Apatity	3.17	17	P	Pn	10 48 47.2	+0.9
PAJU	Pajala	4.07	311	P	Pn	10 48 58.4	-0.3
PAJU				S	Sn	10 49 48.0	+1.8
SJUU	Sjulsmark	4.08	288	P	Pn	10 48 59.3	+0.6
BURU	Burvik	4.14	275	P	Pn	10 48 58.2	-1.3
BURU				S	Sn	10 49 48.5	+0.6
ERTU	Ertsjaerv	4.16	303	P	Pn	10 49 00.6	+0.8
UMAU	Umeaa	4.55	266	P	Pn	10 49 04.5	-0.6
MASU	Masugnsbyn	4.67	312	P	Pn	10 49 08.3	+1.5
LILU	Lilltraesk	4.79	284	P	Pn	10 49 08.5	+0.1
SVAU	Svanoeiden	4.92	274	P	Pn	10 49 10.5	+0.2
TERR	Teriberka	4.93	17	S	Sn	10 50 06.0	-1.4
DUNU	Dundret	4.98	306	P	Pn	10 49 12.2	+1.1
LANU	Lannavaara	5.03	318	P	Pn	10 49 11.4	-0.4
HUSU	Husum	5.32	262	P	Pn	10 49 15.8	0.0
ARCES	ARCESS Array B	5.43	339	P	Pn	10 49 16.5	-0.7
ARCES				S	Sn	10 50 16.6	-3.1

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*ISK **22** 10:48:57.8, 38°.42N×44°.16E, h5^{km}, ML2.9/9*

*DDA **22** 10:48:57.1, 38°.37N×44°.24E, h0^{km}±1^{km}, ML2.8*

*NSSP **22** 10:49:58.1, 38°.47N×44°.20E, h10^{km}, Ms2.9*

ISC 22 10:48:58.2±1.2**, 38°.39N**±0°.02×**44°.20E**±0°.03**, h4**^{km}±12^{km}**, n29, σ1**^{s}**.11**/46**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.32	330	i P	Pg	10 49 04.4	0.0
OZAP				i S	Sb	10 49 10.9	-1.2
OZAP				IAML		10 49 18.0	
	comp=N,916nm,0.7s						
TVAN	Van	0.64	283	i P	Pg	10 49 09.9	-0.5
TVAN				i S	Sb	10 49 21.5	+0.1
TVAN				IAML		10 49 24.0	
	comp=N,562nm,0.5s						
VANB	Van	0.67	288	PG	Pg	10 49 10.6	-0.4
VANB				SG	Sg	10 49 19.9	+0.2
CLDR	Caldiran	0.79	344	i P	Pg	10 49 12.1	-1.1
CLDR				i S	Sb	10 49 25.0	-0.7
CLDR				IAML		10 49 34.0	
	comp=N,459nm,0.3s						
CLDR	Caldiran	0.79	344	PG	Pb	10 49 13.1	-1.4
YOVA	Hakkari_Yksek	0.80	175	i P	Pg	10 49 13.9	+0.3
YOVA				i S	Sb	10 49 27.5	+1.4
YOVA				IAML		10 49 33.0	
	comp=N,282nm,0.5s						
HAKT	HAKKARI	0.92	205	i P	Pg	10 49 13.7	-2.1
HAKT				i S	Sb	10 49 29.3	0.0
AKDM	Akdamar-Van	0.96	267	PG	Pg	10 49 15.9	-0.7
AKDM				SG	Sb	10 49 30.6	0.0
DYDN	Diyadin	1.22	341	i P	Pn	10 49 22.0	-0.2
ADCV	BITLIS_Adilcev	1.23	290	i P	Pn	10 49 22.0	-0.3
ADCV				i S	Sn	10 49 40.1	+0.7
PERV	Siirt/Pervari-	1.38	252	i P	Pn	10 49 23.5	-0.8
IGDI	IGDIR	1.48	356	i P	Pg	10 49 25.8	-0.8
IGDI				i S	Sg	10 49 47.9	+2.2
MLAZ	Malazgirt-MUS	1.49	301	PN	Pg	10 49 26.5	-0.3
AGRB	Hanur-Agry	1.51	322	PN	Pg	10 49 26.6	-0.6
AGRB				SN	Sg	10 49 47.6	+0.8
KOTA	Agri, Merkez-K	1.61	332	i P	Pg	10 49 28.2	-0.9
BLIS	Bitlis-Merkez	1.64	272	i P	Pg	10 49 30.0	+0.5
BLIS				i S	Sg	10 49 53.6	+2.8
NRKZ	NAREK	1.65	12	i P	Pg	10 49 31.0	+1.2
NRKZ				i S		10 50 52.8	
SIRT	Sirnak	1.65	238	PN	Pb	10 49 28.8	-0.4
SIRT				SN	Sg	10 49 51.5	+0.4
GURO	Guroymak-BITLI	1.71	276	PN	Pb	10 49 29.6	-0.6
METS	Metsamor	1.76	357	i P	Pg	10 49 32.0	+0.1
METS				i S		10 50 56.2	
GNI	Garni	1.81	13	i P	Pg	10 49 33.0	+0.2
GNI				i S	Sg	10 49 56.9	+0.6
GNI	Garni	1.81	13	PN	Pb	10 49 31.4	-0.5
KAPZ	Kaputan	1.97	11	i P	Pg	10 49 34.6	-1.3
KAPZ				i S	Sg	10 50 00.5	-1.0
EATA	Eleskirt	1.98	318	i P	Pg	10 49 35.8	-0.4
EATA				i S	Sg	10 50 05.1	+3.2
MUSM	Mu-Merkez	2.13	280	i P	Pb	10 49 36.8	-0.6
MUSM				i S	Sg	10 50 07.1	+0.4
SVAN	Silvan-Diyarba	2.37	265	i P	Pb	10 49 40.0	-1.5
SVAN				i S	Sg	10 50 13.5	-0.9
SVAN	Silvan-Diyarba	2.37	265	PN	Pn	10 49 39.1	+1.2
KOPR	Koprukoy-ERZUR	2.42	312	PN	Pn	10 49 39.6	+0.9
BNGB	Bingl	2.82	283	PN	Pn	10 49 45.2	+1.1

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*NIED **22** 11:12:25.4, 40°.07N×141°.83E, h7^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.33; $M_{\theta\theta}$1.26; $M_{\phi\phi}$0.06; $M_{r\theta}$-1.32; $M_{\theta\phi}$0.22; $M_{\phi r}$0.04; Fault plane solution: $M_0$1.87000×10^{14} NP1:ϕ_s88.00000°, δ68.00000°, λ-84.00000°. NP2:ϕ_s252.00000°, δ23.00000°, λ-104.00000°.*

*JMA **22** 11:12:25.3, 40°.07N×141°.83E, h7^{km}±1^{km}, M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s290.00000°, δ43.00000°, λ-45.00000°. NP2:ϕ_s56.00000°, δ61.00000°, λ-124.00000°. Principal axes: T Plg10.0000°, Azm169.0000°; N Plg29.0000°, Azm73.0000°; P Plg59.0000°, Azm276.0000°;*

JMA Felt III J1.

*IDC **22** 11:12:28.6±2.8, 40°.10N×141°.98E, h48^{km}±25^{km}, mb3.5/5, mb1 3.5/8, mb1mx3.3/50, mbtmp3.6/8, ML2.7/2 Error ellipse: s-maj=39.2km s-min=21.6km az=82.0*

ISC 22 11:12:25.0±1.0**, 40°.08N**±0°.03×**141°.86E**±0°.05**, h13**^{km}±6^{km}**, n23, σ1**^{s}**.32**/27**, mb3.8**/5**, 7C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.14	180	⇑P	Pg	11 12 28.4	0.0
JTH				S	Sg	11 12 30.5	-0.3
JKEN	Kujiedanarisaw	0.18	318	⇑P	Pg	11 12 28.9	-0.1
JKEN				S	Sb	11 12 31.6	-1.9
JANG	Nango	0.40	318	⇑P	Pb	11 12 33.1	-0.8
JANG				S	Sg	11 12 38.4	0.0
JKZ	Kuzumaki	0.42	258	P	Pg	11 12 33.1	-0.2
JKZ				S	Sg	11 12 38.5	-0.5
JOM	Ohasama	0.74	216	⇑P	Pg	11 12 39.0	-0.4
JOM				S	Sg	11 12 48.5	-0.7
JTM	Tenmabayashi	0.94	320	⇑P	Pg	11 12 42.7	-0.3
JTM				S	Sb	11 12 55.0	-0.4
JAH	Hinai	0.95	277	⇓P	Pg	11 12 42.9	-0.4
JAH				S	Sb	11 12 54.9	-0.8
OFUJ	Ofunato	1.00	189	⇑P	Pg	11 12 43.5	-0.8
OFUJ				eS	Sn	11 12 57.3	-1.5
JARK	Aomorirokkasho	1.01	338	⇑P	Pg	11 12 43.8	-0.6
JARK				S	Sn	11 12 57.1	-1.7
ASAJ	Asahikawa	4.08	7	P	Pn	11 13 27.4	+0.4
	0.7nm,0.3s,baz=196,slow=18,SNR=12						
ASAJ				S	Sn	11 14 17.3	+2.8
	0.7nm,0.3s,baz=37,slow=27,SNR=1.5						
MJAR	Matsushiro Arr	4.55	220	P	Pn	11 13 36.0	+2.4
	0.1nm,0.3s,baz=28,slow=14,SNR=1.7						
KSRS	Korea Array	11.20	261	P	Pn	11 15 08.0	+3.3
	baz=65,slow=15,SNR=2.7						
H11N2	WAKE ISLAND Hy	29.53	126	T	T	11 49 08.8	
	baz=318,slow=75,SNR=92						
H11N1	WAKE ISLAND Hy	29.54	126	T	T	11 49 09.6	
	baz=318,slow=75,SNR=77						
H11N3	WAKE ISLAND Hy	29.54	126	T	T	11 49 10.2	
	baz=318,slow=75,SNR=63						
H11S1	WAKE ISLAND Hy	30.33	128	T	T	11 50 17.1	
	baz=319,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	30.33	128	T	T	11 50 09.3	
	baz=319,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	30.35	128	T	T	11 50 15.0	
	baz=319,slow=76,SNR=12						
MKAR	Makanchi Array	42.87	299	P	P	11 20 22.7	-0.2
	0.5nm,0.8s,baz=74,slow=7.8,SNR=3.2						
KURBB	Kurchatov Arra	44.46	306	P	P	11 20 35.3	-0.3
	2.4nm,0.2s,baz=81,slow=8.4,SNR=6.7						
BVAR	Borovoye Array	48.83	310	P	P	11 21 09.3	-0.5
	0.4nm,0.5s,baz=142,slow=7.2,SNR=2.4						
WRA	Warramunga Arr	60.12	188	P	P	11 22 30.8	-1.2
	0.6nm,1.0s,baz=5.7,slow=7.3,SNR=2.0						
ASAR	Alice Springs	63.84	188	P	P	11 22 56.1	-1.0
	0.9nm,1.2s,baz=0.1,slow=5.9,SNR=5.6						

PRU 22 11:17:21.5±0.0**, 51°.52N×15°.99E, h0**^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.70	164	ePg	Pg	11 17 34.3	-0.6
KSP				eSg	Sg	11 17 44.0	0.0
CHVC	Chvalec	0.93	177	ePG	Pg	11 17 39.1	-0.3
CHVC				eSG	Sg	11 17 52.0	+0.5
OSTC	Ostas	0.97	172	ePG	Pg	11 17 39.9	-0.3
OSTC				eSG	Sg	11 17 53.1	+0.3
	comp=Z,3.3nm,0.3s						
UPC	Upice	1.01	179	ePG	Pg	11 17 41.0	+0.1
UPC				eSG	Sg	11 17 54.6	+0.6
	comp=Z,5.3nm,0.3s						
DPC	Dobruska-Polom	1.19	170	ePG	Pg	11 17 43.1	-1.2
DPC				eSG	Sg	11 17 58.6	-1.1
KHC	Kasperske Hory	2.85	214	eSG	Sg	11 18 51.2	-1.7

BER 22 11:18:13.3±1.4, 60°.92N×10°.72E, h0km, ML0.8, 2C, Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NBO00	**NORSAR Array S**	0.11	14	⇑*i*P	Pg	11 18 14.3	-1.1
NBO00				*e*S	Sg	11 18 16.2	-0.7
NBO00				IAML		11 18 17.4	
	comp=Z,55nm,0.5s						
NAO01	**NORSAR Array S**	0.11	134	⇑*i*P	Pg	11 18 15.4	0.0
NAO01				*e*S	Sg	11 18 17.2	+0.3
NAO01				IAML		11 18 19.7	
	comp=Z,21nm,0.5s						
NB201	**NORSAR Array S**	0.31	65	*e*P	Pg	11 18 18.8	-0.4
NB201				*e*S	Sg	11 18 23.0	-0.1
NB201				IAML		11 18 26.4	
	comp=Z,4.5nm,1.2s						
NC303	**NORSAR Array S**	0.44	46	*e*P	Pg	11 18 21.1	-0.6
NC303				*e*S	Sg	11 18 27.4	+0.1
NC303				IAML		11 18 32.3	
	comp=Z,5.3nm,0.8s						
NC602	**NORSAR Array S**	0.44	115	*e*P	Pg	11 18 21.3	-0.5
NC602				*e*S	Sg	11 18 27.1	-0.5
SKAR	**Skarslia**	1.21	259	*e*P	Pg	11 18 33.8	-2.6
SKAR				*e*S	Sg	11 18 51.3	-0.8
SKAR				IAML		11 18 56.2	
	comp=Z,3.9nm,0.1s						
DOMB	**Dombas**	1.38	325	*e*P	Pg	11 18 38.6	-1.1
DOMB				IAML		11 18 54.7	
	comp=Z,2.6nm,0.8s						
DOMB				*e*S	Sg	11 18 57.4	-0.1

IDC 22 11:23:02.8±3.4, 33°.82S×178°.84W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.5/27, mbtmp3.9/3, ML3.9/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/25, Error ellipse: s-maj=79.0km s-min=37.7km az=116.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	5.51	215	Pn	Pn	11 24 26.7	+0.6
	3.4nm,0.3s,baz=300,slow=23,SNR=46						
URZ				Sn	Sn	11 25 29.9	-0.2
	3.9nm,0.3s,baz=127,slow=23,SNR=3.5						
DZM	**Mont Dzumac**	17.47	308	LR	LR	11 32 14.4	
	comp=Z,42nm,18.6s,baz=242,slow=32						
ASAR	**Alice Springs**	42.34	271	P	P	11 30 59.0	+0.2
	0.4nm,0.7s,baz=110,slow=6.8,SNR=4.7						
WRA	**Warramunga Arr**	43.63	276	P	P	11 31 08.7	-0.6
	0.8nm,0.5s,baz=118,slow=6.9,SNR=5.0						
H03N3	**Juan Fernandez**	79.39	123	T	T	13 02 35.1	
	baz=227						
H03N2	**Juan Fernandez**	79.39	123	T	T	13 02 33.7	
	baz=227						
H03N1	**Juan Fernandez**	79.40	123	T	T	13 02 37.4	
	baz=227						
FINES	**FINESS Array B**	148.07	337	PKPbc	PKPbc	11 42 48.9	-0.7
	4.3nm,1.0s,baz=66,slow=3.5,SNR=1.6						

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*DJA **22** 11:25:10.7±0.3, 11°S±3°×11°9E±°, h10km, M4.5/11, mb4.7/10, mB5.5/1, MLv4.3/11, Mw(mB)4.9/1*

*IDC **22** 11:25:19.8±1.9, 11°.87S×120°.15E, h0km, mb3.7/1, mb1 4.0/5, mb1mx3.5/32, mbtmp3.8/5, ML3.7/4, Error ellipse: s-maj=41.0km s-min=24.4km az=47.0*

ISC 22 11:25:09.4±0.8, 11°.51S±0°.05×119°.47E±0°.06, h10km, n25, σ3ˢ.16/29, South of Sumba

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BASI	**Baing, Sumba**	1.68	41	P	Pb	11 25 41.0	+0.5
WBSI	**Waikabubak, Su**	1.86	358	P	Pn	11 25 42.4	+1.1
WBSI				S	Sn	11 25 59.9	-5.0
EDFI	**Ende, Flores**	3.51	39	P	Pn	11 26 05.1	+1.0
EDFI				S	Sn	11 26 42.5	-3.3
TWSI	**Taliwang, Sumb**	3.75	317	P	Pn	11 26 07.7	+0.4
BATI	**Baumata**	4.32	73	Pn	Pn	11 26 20.7	+5.4
	4.1nm,0.3s,baz=270,slow=9.1,SNR=1.3						
BATI				Sn	Sn	11 27 06.8	+1.0
	52nm,0.3s,baz=279,slow=18,SNR=14						
BSSI	**Bau Bau, Buton**	5.43	11	P	Pn	11 26 31.4	+1.0
BKSI	**Bulukumba**	6.18	6	P	Pn	11 26 42.7	+1.9
	0.1nm25nm,1.2s						
ABJI	**Asem Bagus**	6.34	305	P	Pn	11 26 42.6	-0.4
	0.3nm70nm,0.6s						
GMJI	**Gumukmas**	6.75	298	P	Pn	11 26 46.7	-1.9
	0.3nm50nm,0.4s						
BLJI	**Banyuglugur**	6.89	302	P	Pn	11 26 49.4	-1.1
	0.2nm3µm34nm,0.5s						
PCJI	**Pacitan**	8.81	291	P	Pn	11 27 16.6	-0.2
	100nm,0.5s						
FITZ	**Fitzroy Crossi**	8.86	138	Pn	Pn	11 27 20.1	+2.5
	1.0nm,0.3s,baz=320,slow=10,SNR=34						
FITZ				Sn	Sn	11 28 53.5	-4.1
	1.3nm,0.3s,baz=185,slow=22,SNR=7.9						
MBWA	**Marble Bar**	9.60	179	P	Pn	11 27 29.4	+1.7
KNRA	**Kununurra**	9.94	116	P	Pn	11 27 34.6	+2.2
	30nm,1.6s						
PSA00	**Pilbara Seismi**	10.02	178	P	Pn	11 27 35.6	+2.2
	13nm,1.5s						
MTN	**Manton Dam**	11.48	98	P	Pn	11 27 56.9	+3.3
	25nm,1.4s						
GIRL	**Giralia**	12.15	204	P	Pn	11 28 03.5	+0.9
	140nm,1.4s						
MEEK	**Meekatharra**	15.07	183	P	Pn	11 28 43.5	+0.9
	10nm,2.0s						
WRKA	**Warakurna**	15.84	149	P	Pn	11 28 55.2	+2.5
WRA	**Warramunga Arr**	16.58	122	Pn	Pn	11 29 02.5	+0.3
	0.2nm,0.3s,baz=297,slow=13,SNR=15						
WRA				Sn	Sn	11 31 58.5	-8.0
	0.3nm,0.3s,baz=300,slow=23,SNR=5.1						
WRAB	**Tennant Creek**	16.59	122	P	Pn	11 29 02.8	+0.6
MORW	**Morawa**	17.76	190	P	P	11 29 18.9	+1.2
	11nm,0.9s						
ASAR	**Alice Springs**	18.30	133	P	P	11 29 26.2	+2.5
	0.4nm,0.3s,baz=314,slow=11,SNR=28						
ASAR				S	Sn	11 32 39.5	-8.6
	0.2nm,0.3s,baz=306,slow=22,SNR=5.4						
BLDU	**Ballidu**	19.18	187	P	Pn	11 29 37.6	+3.4
	11nm,2.1s						
MKAR	**Makanchi Array**	66.89	333	P	P	11 36 17.8	+16
	0.5nm,0.7s,baz=148,slow=6.1,SNR=4.4						

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*IDC **22** 11:40:59.5±1.7, 63°.10N×27°.91E, h0km, mb1 3.3/2, mb1mx3.0/29, mbtmp3.2/2, ML2.1/2, Error ellipse: s-maj=26.8km s-min=5.9km az=105.0*

*HEL **22** 11:40:59.7±0.1, 63°.11N×27°.78E, h0km, ML1.9, Explosion*

*UPP **22** 11:40:59.2±2.5, 62°.97N×27°.85E, h0km, ML1.8, Suspected explosion*

ISC 22 11:40:59.1±0.8, 63°.02N±0°.03×27°.77E±0°.04, h0km, n33, σ1ˢ.59/51, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUF	**Sumiainen**	0.80	249	PG	Pg	11 41 14.5	0.0
SUF				SB	Sb	11 41 25.9	-1.4
KAF	**Kangasniemi**	1.13	217	PG	Pb	11 41 21.2	-0.3
KAF				SB	Sn	11 41 37.8	-0.7
KEF	**Keuruu**	1.59	239	PG	Pb	11 41 29.1	-0.2
KEF				MSG		11 41 49.0	
	comp=Z,6.0nm,0.2s						
KEF				SN	Sg	11 41 52.0	+1.8
JOF	**Joensuu**	1.62	92	PN	Pn	11 41 29.1	+0.2
	baz=274						
JOF				SN	Sg	11 41 51.0	-0.2
FIA0	**FINESS Array S**	1.77	207	PG	Pg	11 41 32.8	-0.2
FIA0				SN	Sg	11 41 57.1	+1.2
FINES	**FINESS Array B**	1.77	207	Pg	Pg	11 41 32.8	-0.2
	comp=Z,0.6nm,0.3s,baz=25,slow=17,SNR=18						
FINES				Lg	Lg	11 41 58.1	
	comp=Z,1.3nm,0.3s,baz=25,slow=28,SNR=16						
OUF	**Merijarvi**	1.91	316	PG	Pn	11 41 32.5	-0.4
	baz=132						
OUF				MSG		11 41 54.9	
	comp=Z,9.9nm,0.2s						
OUF				SG	Sn	11 41 57.2	-0.4
OBF0	**Syolatti, Pyha**	2.16	315	PG	Pn	11 41 37.7	+1.4
OBF0				SG	Sb	11 42 06.6	+0.3
OUL	**Oulu**	2.23	339	PG	Pn	11 41 37.7	+0.4
	baz=152						
OUL				SG	Sn	11 42 05.4	-0.1
VAF	**Ylistaro**	2.32	273	PG	Pn	11 41 40.1	+1.6
	baz=87						
VAF				MSG		11 42 08.6	
	comp=Z,7.1nm,0.2s						
VAF				SG	Sb	11 42 10.7	-0.3
VJF	**Virojoki**	2.49	182	PG	Pb	11 41 44.5	-0.2
VJF				MSG		11 42 15.9	
	comp=Z,4.9nm,0.2s						
VJF				SG	Sg	11 42 17.6	-1.5
PVF	**Pernaja**	2.64	201	PG	Pb	11 41 47.2	-0.1
	baz=23						
PVF				MSG		11 42 20.3	
	comp=Z,3.7nm,0.2s						
PVF				SG	Sg	11 42 23.4	-0.5
MSF	**Maaselka**	2.96	10	PN	Pn	11 41 47.6	+0.3
	baz=194						
MSF				SB	Sn	11 42 25.6	+2.2
KU6	**Riekki**	3.15	16	PB	Pn	11 41 50.4	+0.4
	baz=196						
KU6				MSG		11 42 29.6	
	comp=Z,3.6nm,0.2s						
BURU	**Burvik**	3.24	302	P	Pn	11 41 52.1	+0.9
BURU				S	Sn	11 42 31.7	+1.3
BURU	**Burvik**	3.24	302	PB	Pb	11 41 55.0	-2.4
UMAU	**Umeaa**	3.30	288	P	Pn	11 41 52.0	0.0
UMAU				S	Sn	11 42 32.6	+0.8
TOF	**Tornio**	3.41	336	PB	Pn	11 41 54.9	+1.4
	baz=148						
KALU	**Kalix**	3.43	328	P	Pn	11 41 54.2	+0.4
RAF	**Rauma**	3.47	237	PB	Pb	11 41 59.8	-1.5
SJUU	**Sjulsmark**	3.67	316	P	Pn	11 41 58.5	+1.4
RNF	**Rovaniemi**	3.68	349	PB	Pn	11 41 59.7	+2.5
SVAU	**Svanoeiden**	3.93	296	P	Pn	11 42 01.2	+0.6
LILU	**Lilltraesk**	4.15	307	P	Pn	11 42 03.6	+0.1
BREU	**Bredtraesk**	4.22	286	P	Pn	11 42 05.6	+1.0
ERTU	**Ertsjaerv**	4.28	329	P	Pn	11 42 06.1	+0.7
ERTU				S	Sn	11 42 56.6	+0.7
ERTU	**Ertsjaerv**	4.28	329	PN	Pn	11 42 06.3	+0.9
	baz=138						
ERTU				SG	Sb	11 43 12.4	+5.2
HARU	**Harads**	4.30	320	P	Pn	11 42 05.7	0.0
SGF	**Sodankyl**	4.47	354	PN	Pn	11 42 08.1	+0.1
PAJU	**Pajala**	4.48	336	P	Pn	11 42 08.6	+0.4
PAJU	**Pajala**	4.48	336	PN	Pn	11 42 08.6	+0.4
	baz=155						
PAJU				SN	Sn	11 42 59.8	-1.2
ARCES	**ARCESS Array B**	6.61	353	Pn	Pn	11 42 35.8	-1.6
	baz=169,slow=14,SNR=7.9						
ARCES				Sn	Sn	11 43 46.7	-6.6
	baz=173,slow=23,SNR=1.9						
NOA	**NORSAR Array B**	8.03	263	Pn	Pn	11 42 56.6	-0.4
	comp=Z,0.0nm,0.3s,baz=70,slow=16,SNR=1.2						

NEIC 22 12:00:03.9±1.4, 36°.308N±0°.010×98°.23W±0°.02, h8km±6km, mb_Lg2.5/13, Error ellipse: s-maj=2.2km s-min=1.2km az=112.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	0.28	45	Pg	Pg	12 00 10.0	+0.5
CROK				Sg	Sg	12 00 14.5	+1.3
OK035	**E0210 Rd and N**	0.56	316	Pg	Pg	12 00 14.3	-0.3
OK035				Sg	Sg	12 00 21.9	0.0
GC02	**Grant County #**	0.62	29	Pg	Pg	12 00 15.9	+0.1
GC02					Sg	12 00 24.8	+0.8
U32A	**Winter Ranch,**	0.63	277		Pg	12 00 15.3	-0.8
U32A				Sg	Sg	12 00 23.5	-0.8
KAN14	**Manchester OK**	0.68	18		Pg	12 00 17.0	0.0
KAN14				Sg	Sg	12 00 26.8	+0.8
OK029	**Liberty Lake**	0.81	129	Pg	Pg	12 00 19.3	-0.1
OK029				Sg	Sb	12 00 30.8	-0.4
KAN10	**Anthony SW Sta**	0.82	7	Pg	Pg	12 00 19.3	-0.4
KAN10				Sg	Sg	12 00 30.4	+0.1
BCOK	**Bluff Creek, N**	0.82	142		Pg	12 00 19.9	+0.2
BCOK				Sg	Sg	12 00 30.9	+0.5
KAN17	**Caldwell West**	0.82	27		Pg	12 00 19.6	-0.2
KAN17				Sg	Sg	12 00 30.9	+0.4
KAN05	**Bluff City Nor**	0.85	20	Pg	Pg	12 00 20.0	-0.2
KAN05				Sg	Sg	12 00 31.0	-0.3
KAN01	**Argonia South**	0.92	24	Pg	Pg	12 00 21.4	-0.3
KAN01				Sg	Sg	12 00 33.5	-0.2
KAN16	**Harper SW Stat**	0.93	8	Pg	Pg	12 00 21.4	-0.3
KAN16				Sg	Sg	12 00 33.5	-0.2
KAN13	**South Haven SW**	0.93	40	Pg	Pg	12 00 21.5	-0.2
KAN13				Sg	Sg	12 00 34.2	+0.4
BLOK	**Blackwell**	0.93	61	Pg	Pg	12 00 21.9	0.0
BLOK				Sg	Sb	12 00 34.5	-0.4
KAN08	**Anthony NE Sta**	0.94	13		Pg	12 00 21.6	-0.3
KAN08				Sg	Sg	12 00 34.2	0.0
KAN09	**Caldwell North**	0.96	30		Pg	12 00 21.9	-0.5
KAN09				Sg	Sg	12 00 35.0	+0.2
KAN06	**Argonia West S**	0.98	17		Pg	12 00 22.6	-0.2
KAN06				Sg	Sg	12 00 35.3	-0.3
KAN12	**Harper NE Stat**	1.00	11	Pg	Pg	12 00 22.7	-0.5
KAN12				Sg	Sg	12 00 35.7	-0.6
OK025	**Westminster Rd**	1.02	135		Pg	12 00 23.2	-0.4
OK025				Sg	Sb	12 00 37.3	-0.2
OK033	**Mehan**	1.08	104	Pg	Pg	12 00 23.9	-0.6
OK033				Sg	Sg	12 00 38.3	-0.3
OKCFA	**Oklahoma City**	1.09	144	Pg	Pg	12 00 24.3	-0.5
OKCFA					Sn	12 00 41.1	+0.3
OK031	**S. Brethren Rd**	1.18	107		Pg	12 00 26.0	-0.5
OK031				Sg	Sb	12 00 42.2	+0.2
OK030	**Cody Creek RV**	1.23	108		Pb	12 00 26.9	-0.5
QUOK	**Quay**	1.24	96		Pn	12 00 27.1	-0.4
FNO	**Franklin**	1.25	147		Pn	12 00 27.0	-0.6
OK034	**N. Norfolk Rd.**	1.26	103		Pn	12 00 27.4	-0.4
T35A	**Sooner Cattle**	1.51	66	Pn	Pb	12 00 32.0	-0.2
W35A	**Tecumseh**	1.59	136	Pn	Pn	12 00 32.4	-0.1
WMOK	**Wichita Mounta**	1.63	196		Pn	12 00 32.4	-0.6
X34A	**Smith Ranch, M**	1.73	169	Pn	Pn	12 00 34.9	+0.5
TUL1	**Leonard**	2.01	101	Pn	Pn	12 00 38.3	+0.1
TUL1				IAmb_Lg		12 01 11.2	
	comp=Z,20nm,0.9s						
R32A	**Long Quarter,**	2.15	350		Pb	12 00 41.5	-1.5
LOOK	**Love County**	2.46	159	Pn	Pn	12 00 44.8	+0.4
CBKS	**Cedar Bluff**	2.77	335		Pn	12 00 49.5	+0.8
CBKS				IAmb_Lg		12 01 30.6	
	comp=Z,12nm,1.1s						
X37A	**Clayton**	2.90	126		Pn	12 00 51.3	+1.0
KSU1	**Kansas State U**	3.07	24		Pn	12 00 53.4	+0.7
U38A	**Gravette**	3.10	86	Pn	Pn	12 00 54.7	+1.5
AMTX	**Amarillo**	3.15	244		Pb	12 01 00.3	0.0
HHAR	**Hobbs**	3.46	89		Pn	12 00 57.9	-0.2
W39A	**Magazine**	3.78	106		Pn	12 01 03.9	+1.4
ABTX	**Abilene, Hawle**	3.86	198	Pn	Pn	12 01 03.0	-0.6
S39A	**Bolivar**	4.16	69		Pn	12 01 08.9	+1.2
S39A				IAmb_Lg		12 02 19.0	
	comp=Z,13nm,0.7s						
MIAR	**Mount Ida**	4.19	113		Pn	12 01 08.5	+0.5
MIAR				IAmb_Lg		12 02 20.7	
	comp=Z,7.1nm,0.8s						
U40A	**Yellville**	4.34	88		Pn	12 01 11.3	+1.1
WHTX	**Lake Whitney,**	4.35	171	Pn	Pn	12 01 11.6	+1.2
MSTX	**Muleshoe**	4.39	239		Pn	12 01 10.3	-0.8
KSCO	**Kaye Shedlock'**	4.41	309	IAmb_Lg		12 02 28.7	
	comp=Z,14nm,0.8s						
X40A	**Basin Creek Fa**	4.77	111		Pn	12 01 16.9	+0.9
MGMO	**Mountain Grove**	4.86	78	Pn	Pn	12 01 17.6	+0.3
WHAR	**Wooly Hollow**	4.93	100	Pn	Pn	12 01 17.2	-1.1
FCAR	**Ozark Folk Cen**	4.96	93	Pn	Pn	12 01 17.6	-1.1
P38A	**Dawn**	4.97	47	Pn	Pn	12 01 20.2	+1.3
T25A	**Trinidad**	5.04	281	Pn	Pn	12 01 19.6	-0.4
R40A	**Maddies Statio**	5.15	66	Pn	Pn	12 01 21.6	+0.4
CCM	**Cathedral Cave**	5.84	71	Pn	Pn	12 01 30.1	-0.7
CCM				IAmb_Lg		12 03 10.6	
	comp=Z,9.6nm,1.0s						
P40A	**Paris**	5.85	55	Pn	Pn	12 01 31.1	+0.2
SDCO	**Great Sand Dun**	5.99	286	Pn	Pn	12 01 36.0	+2.8
FVM	**French Village**	6.45	73	Pn	Pn	12 01 38.4	-0.8
ISCO	**Idaho Springs**	6.79	303	Pn	Pn	12 01 42.1	-2.0
MNTX	**Cornudas Mount**	7.51	234	Pn	Pn	12 01 52.8	-0.9
PHWY	**Pilot Hill**	7.53	314	IAmb_Lg		12 04 05.6	
	comp=Z,6.5nm,1.0s						

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*MOS **22** 12:01:26.3±1.1, 44°.12N×147°.46E, h98km, mb4.1/2, Error ellipse: s-maj=10.4km s-min=9.9km az=62.1*

*SKHL **22** 12:01:27.1±0.3, 44°.00N×147°.60E, h87km±3km, mb4.9/8, msha5.9/5*

*JMA **22** 12:01:27.0±0.2, 43°.86N×147°.60E, h76km, M4.1*

*IDC **22** 12:01:29.8±3.2, 44°.27N×147°.40E, h108km±30km, mb3.3/11, mb1 3.6/12, mb1mx3.4/32, mbtmp3.7/12, Error ellipse: s-maj=66.9km s-min=18.4km az=175.0*

ISC 22 12:01:26.1±0.9, 44°.02N±0°.06×147°.61E±0°.06, h84km±7km, n62, σ1ˢ.07/79, mb3.5/12, 1C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	0.58	256	⇓*i*PN	Pn	12 01 41.1	+0.2
SHO				*i* S	Sn	12 01 51.5	-0.4
SHO				pmax	pmax		
	comp=Z,845nm,0.3s						
SHO				smax	smax		
	comp=N,1µm,0.2s						
SHO				smax	smax		
	comp=E,1µm,0.2s						
SHO	**Shikotan**	0.58	256	*i* P	Pn	12 01 41.2	+0.3
SHO				AMB	AMB	12 01 42.0	
	comp=E,850nm,0.3s						
SHO				*i* S	Sn	12 01 51.6	-0.4
SHO				A	A	12 01 51.9	
	comp=E,1µm,0.2s						
SHO				A	A	12 01 51.9	
	comp=E,1µm,0.2s						
KUR	**Kuril'sk**	1.23	8	*e*PN	Pn	12 01 48.4	+0.4
KUR				*i* S	Sn	12 02 04.4	-0.2
KUR				pmax	pmax		
	comp=Z,110nm,0.3s						
KUR				smax	smax		
	comp=E,956nm,0.4s						
KUR				smax	smax		
	comp=N,645nm,0.2s						
KUR	**Kuril'sk**	1.23	8	*e*P	Pn	12 01 48.5	+0.4
KUR				AMB	AMB	12 01 49.0	
	comp=N,110nm,0.3s						
KUR				*i* S	Sn	12 02 04.4	-0.2
KUR				A	A	12 02 05.0	
	comp=N,880nm,0.3s						
KUR				A	A	12 02 05.0	
	comp=N,960nm,0.3s						
YUK	**Yuzh-Kuril'sk**	1.26	271	*de*PN	Pn	12 01 48.8	+0.3
YUK				*i* S	Sn	12 02 04.5	-0.9
YUK	**Yuzh-Kuril'sk**	1.26	271	*i* P	Pn	12 01 48.7	+0.3
YUK				AMB	AMB	12 01 49.0	
	comp=N,590nm,0.2s						
YUK				*e*S	Sn	12 02 04.7	-0.7
YUK				A	A	12 02 05.4	
	comp=N,2µm,0.3s						
YUK				A	A	12 02 05.4	
	comp=N,2µm,0.3s						
NEM2	**Nemuro 2**	1.50	245	P	Pn	12 01 51.5	0.0
NEM2				*e*S	Sn	12 02 10.2	-0.6
NMR	**Nemuro--Hokkai**	1.51	245	⇑*i*PN	Pn	12 01 51.6	0.0
NMR				*e*S	Sn	12 02 10.6	-0.4
NMR	**Nemuro--Hokkai**	1.51	245	*i* P	Pn	12 01 51.7	+0.1
NMR				*e*S	Sn	12 02 10.5	-0.4
GLVR	**Golovnino**	1.54	260	⇓*i*PN	Pn	12 01 52.7	+0.7
GLVR				*e*S	Sn	12 02 11.9	+0.3
GLVR				pmax	pmax		
	comp=Z,452nm,0.1s						
GLVR				smax	smax		
	comp=E,2µm,0.3s						
GLVR				smax	smax		
	comp=N,4µm,0.2s						
GLVR	**Golovnino**	1.54	260	*i* P	Pn	12 01 52.5	+0.5
GLVR				AMB	AMB	12 01 53.0	
	comp=N,450nm,0.3s						
GLVR				*e*S	Sn	12 02 11.9	+0.3
GLVR				A	A	12 02 12.0	
	comp=N,4µm,0.4s						
GLVR				A	A	12 02 12.0	
	comp=N,2µm,0.4s						
RUSJ	**Misakicho**	1.71	274	⇓*i*PN	Pn	12 01 55.4	+1.3
RUSJ				*e*S	Sn	12 02 16.5	+1.0
JRA	**Rausu**	1.80	268	P	Pn	12 01 56.5	+1.2
JRA				*e*S	Sn	12 02 18.6	+1.0
JNSB	**Nemuroshibetsu**	1.90	264	P	Pn	12 01 57.9	+1.2
JNSB				*e*S	Sn	12 02 20.8	+0.8
JKHN	**Kushirohamanak**	2.01	243	P	Pn	12 01 58.5	+0.3
JKHN				*e*S	Sn	12 02 22.1	-0.6
JNK	**Nakash**	2.14	259	P	Pn	12 02 00.4	+0.5
JNK				*e*S	Sn	12 02 25.4	-0.3
AKK	**Akkeshi**	2.25	245	*i* P	Pn	12 02 01.3	0.0
AKK				*e*S	Sn	12 02 27.1	-1.2
JAK	**Akkeshi**	2.35	245	P	Pn	12 02 02.8	+0.1
JAK				*e*S	Sn	12 02 29.9	-0.9
JTKR	**Abashiri--Toko**	2.67	270	P	Pn	12 02 08.2	+1.2
JAR	**Ashorobuto**	2.88	257	P	Pn	12 02 11.1	+1.3
JAR				*e*S	Sn	12 02 43.9	+0.4
JOB	**Onbets**	2.97	249	P	Pn	12 02 11.7	+0.8
JMP	**Maruseppu**	3.07	271	P	Pn	12 02 13.8	+1.5
JCH	**Churui**	3.40	247	P	Pn	12 02 17.0	+0.1
JKA	**Kamikawa-asahi**	3.61	273	*e*P	Pn	12 02 21.5	+1.8
ASAJ	**Asahikawa**	3.62	273	P	Pn	12 02 21.5	+1.8
	comp=N,1.5nm,0.3s,baz=59,slow=5.7,SNR=17						
ASAJ				S	Sn	12 03 01.8	+0.5
	comp=N,2.1nm,0.3s,baz=160,slow=26,SNR=1.7						
JSE	**Soyaes**	3.72	286	P	Pn	12 02 22.4	+1.3
JFR	**Furan**	3.74	259	P	Pn	12 02 23.3	+1.8
ERM	**Erimo**	3.83	240	*i* PN	Pn	12 02 24.4	+1.7
JNBK	**Urakawa-nobuka**	3.96	246	P	Pn	12 02 24.4	0.0
JWK2	**Keihoku**	4.28	290	P	Pn	12 02 31.5	+2.8
YSS	**Yuzh-Sakhalins**	4.50	312	*e*PN	Pn	12 02 32.2	+0.4
YSS				*e*S	Sn	12 03 21.6	-1.3
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS	**Yuzh-Sakhalins**	4.50	312	*e*P	Pn	12 02 32.6	+0.8
YSS				AMB	AMB	12 02 34.9	
	comp=Z,40nm,0.5s						
YSS				*e*S	Sn	12 03 22.4	-0.5
YSS				A	A	12 03 25.9	
	comp=Z,50nm,0.7s						
YSS				A	A	12 03 25.9	
	comp=Z,60nm,0.7s						
TYV	**Tymovskoe**	7.63	336	*e*P	Pn	12 03 16.3	+2.0
TYV				AMB	AMB	12 03 21.8	
	comp=Z,40nm,0.9s						
SKR	**Severo-Kuril's**	8.82	38	*i* PN	Pn	12 03 33.4	+2.9
SKR	**Severo-Kuril's**	8.82	38	*e*P	Pn	12 03 32.7	+2.2
SKR				AMB	AMB	12 03 36.9	
	comp=Z,40nm,0.9s						
SKR				*e*S	Sn	12 05 06.3	-1.8
SKR				A	A	12 05 17.2	
	comp=Z,70nm,0.8s						
SKR				A	A	12 05 17.2	
	comp=Z,70nm,0.8s						
USRK	**Ussuriysk Ar.**	11.24	276	P	Pn	12 04 04.6	+1.0
	baz=91,slow=13,SNR=1.5						
KLR	**Kul'dur**	12.08	301	*i* PN	Pn	12 04 13.4	-1.5
KLR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KLR	**Kul'dur**	12.08	301	*e*P	Pn	12 04 15.5	+0.6
ZEA	**Zeya**	16.50	313	*e*P	Pn	12 05 11.3	-0.7
HIA	**Hailar**	19.78	295	*i* P	P	12 05 48.1	-1.3
HIA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YAK	**Yakutsk**	20.89	336	*i* P	P	12 05 59.2	-1.9
BILL	**Bilibino**	26.01	16	*de*P	P	12 06 50.8	+0.1
SONM	**Songino Array**	28.68	292	P	P	12 07 14.5	-0.4
	comp=Z,0.6nm,0.6s,baz=82,slow=9.0,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	29.09	140	T	T	12 38 16.8	
	baz=331,slow=75,SNR=31						
H11N1	**WAKE ISLAND Hy**	29.10	140	T	T	12 38 13.6	
	baz=331,slow=75,SNR=26						
H11N3	**WAKE ISLAND Hy**	29.11	140	T	T	12 38 18.2	
	baz=331,slow=75,SNR=24						
H11S1	**WAKE ISLAND Hy**	30.07	142	T	T	12 39 26.3	
	baz=331,slow=76,SNR=91						
H11S3	**WAKE ISLAND Hy**	30.07	142	T	T	12 39 30.9	
	baz=331,slow=76,SNR=58						
H11S2	**WAKE ISLAND Hy**	30.08	142	T	T	12 39 24.8	
	baz=331,slow=76,SNR=60						
NRIK	**Noril'sk**	39.18	331	*i* P	P	12 08 44.6	-0.6
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ILAR	**Eielson Array**	41.08	36	P	P	12 09 01.3	+0.4
	comp=Z,0.8nm,0.9s,baz=263,slow=5.8,SNR=6.2						
MKAR	**Makanchi Array**	44.76	298	P	P	12 09 30.6	-0.4
	comp=Z,1.4nm,0.6s,baz=76,slow=9.2,SNR=18						
MKAR	**Makanchi Array**	44.76	298	*i* P	P	12 09 30.7	-0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	44.76	298	*e*P	P	12 09 30.7	-0.2
INK	**Inuvik**	46.00	30	P	P	12 09 41.4	+1.0
	comp=Z,0.4nm,0.6s,baz=284,slow=8.8,SNR=5.9						
YKA	**Yellowknife Ar**	55.39	34	P	P	12 10 51.6	+0.6

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
	comp=Z,0.3nm,0.6s,baz=296,slow=6.8,SNR=6.2						
FINES	FINESS Array B	64.79	333	P	P	12 11 53.2	-2.0
	comp=Z,3.3nm,0.9s,baz=48,slow=5.0,SNR=7.4						
NVAR	Mina Array Bea	67.15	58	P	P	12 12 12.4	+1.3
	comp=Z,0.2nm,0.3s,baz=300,slow=4.1,SNR=1.8						
PDAR	Pinedale Array	69.48	50	P	P	12 12 26.0	+0.4
	comp=Z,0.1nm,0.4s,baz=337,slow=3.9,SNR=1.5						
KBZ	Khabaz	69.87	312	P	P	12 12 28.5	+0.9
	comp=Z,0.8nm,0.5s,baz=170,slow=6.1,SNR=1.7						
AKASG	Malin Array Be	71.56	324	P	P	12 12 36.5	-1.2
	comp=Z,0.3nm,0.3s,baz=44,slow=6.6,SNR=2.0						
TXAR	Lajitas Array	82.22	57	P	P	12 13 38.9	+0.7
	comp=Z,0.4nm,0.7s,baz=296,slow=4.4,SNR=6.1						

IDC ***22*** *12:18:53.1±2.1, 36°.15N×140°.16E, h48^{km}±22^{km}, mb3.2/2, mb1 3.6/6, mb1mx3.0/41, mbtmp3.8/6, ML3.0/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/17, Error ellipse: s-maj=27.4km s-min=15.3km az=41.0*

JMA ***22*** *12:18:54.5±0.1, 36°.18N×140°.01E, h51^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1: φ$_s$232.00000°, δ14.00000°, λ101.00000°. NP2: φ$_s$41.00000°, δ76.00000°, λ87.00000°. Principal axes: T Plg59.0000°, Azm307.0000°; N Plg3.0000°, Azm41.0000°; P Plg31.0000°, Azm133.0000°;*

JMA Felt II J1.

ISC 22 12:18:53.1±0.9**, 36°.17N**±0°.05×**140°.11E**±0°.06**, h59**^{km}±8^{km}**, n22, σ1^{s}33**/25**, 1C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	Yasato	0.09	48	⇑P	Pn	12 19 02.8	+0.8
JYT				S	Sn	12 19 08.6	+0.2
JAG	Ashikaga	0.59	296	⇓P	Pn	12 19 06.0	0.0
JAG				S	Sn	12 19 14.0	-1.4
JKT	Katashina	0.92	311	⇓P	Pn	12 19 10.1	0.0
JKT				S	Sn	12 19 21.7	-1.0
JRY	Ryogami san	0.99	262	⇓P	Pn	12 19 11.2	+0.2
JRY				S	Sn	12 19 23.3	-0.9
JOD2	Odawara 2	1.23	223	P	Pn	12 19 15.2	+1.1
JOD2				S	Sn	12 19 30.2	+0.4
JFY	Yanaizu	1.28	345	⇓P	Pn	12 19 15.8	+1.0
JFY				S	Sn	12 19 32.0	+0.9
JFT	Otama	1.36	8	⇓P	Pn	12 19 17.2	+1.3
MJAR	Matsushiro Arr	1.58	284	P	Pn	12 19 19.1	+0.2
	3.5nm,0.3s,baz=101,slow=11,SNR=96						
MJAR				S	Sn	12 19 38.2	-0.1
	2.1nm,0.3s,baz=19,slow=4.2,SNR=4.6						
MAT	Matsushiro	1.58	284	P	Pn	12 19 18.7	-0.2
MAT				*e*S	Sn	12 19 36.0	-2.3
JHJ	Hachijo jima 2	3.05	185	P	Pn	12 19 39.7	+0.8
	17nm,0.3s,baz=113,slow=22,SNR=19						
JHJ				S	Sn	12 20 13.5	-0.7
	16nm,0.3s,baz=12,slow=7.8,SNR=1.3						
ASAJ	Asahikawa	8.16	13	P	Pn	12 20 48.4	-0.4
	0.1nm,0.3s,baz=217,slow=12,SNR=1.0						
ASAJ				S	Sn	12 22 16.1	-3.5
	0.2nm,0.3s,baz=212,slow=27,SNR=2.4						
JCJ	Chichijima	9.21	168	P	Pn	12 21 01.8	-1.4
	2.9nm,0.3s,baz=351,slow=19,SNR=1.3						
KSRS	Korea Array	9.86	281	P	Pn	12 21 13.3	+1.3
	0.2nm,0.3s,baz=96,slow=14,SNR=1.8						
PETK	Petropavlovsk-	20.96	31	LR	LR	12 30 51.7	
	comp=Z,30nm,20.1s,baz=54,slow=34						
SONM	Songino Array	27.42	306	P	P	12 24 35.2	+2.0
	0.2nm,0.6s,baz=101,slow=7.5,SNR=1.8						
H11N2	WAKE ISLAND Hy	28.64	118	T	T	12 54 50.0	
	baz=312						
H11N1	WAKE ISLAND Hy	28.65	118	T	T	12 54 55.9	
	baz=312						
H11N3	WAKE ISLAND Hy	28.66	118	T	T	12 54 56.4	
	baz=312						
H11S1	WAKE ISLAND Hy	29.30	120	T	T	12 55 42.3	
	baz=314,slow=76,SNR=5.4						
H11S3	WAKE ISLAND Hy	29.30	120	T	T	12 55 42.3	
	baz=314,slow=76,SNR=4.4						
H11S2	WAKE ISLAND Hy	29.32	120	T	T	12 55 44.6	
	baz=314,slow=76,SNR=4.7						
WRA	Warramunga Arr	56.07	187	P	P	12 28 26.9	+0.8
	0.7nm,0.8s,baz=0.9,slow=7.6,SNR=8.0						

IDC 22 12:19:52.8±4.0**, 14°.26N**×**91°.71W, h0**^{km}**, mb3.6**/2**, mb1 3.7**/4**, mb1mx3.2**/36**, mbtmp3.3**/4**, ML3.1**/2**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/24**, Error ellipse: s-maj=135.7km s-min=44.6km az=36.0, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	4.16	313	Pn	Pn	12 20 56.1	-1.5
	0.7nm,0.3s,baz=132,slow=8.0,SNR=7.3						
CMIG				Sn	Sn	12 21 49.7	+2.8
	1.3nm,0.3s,baz=68,slow=11,SNR=4.3						
TXAR	Lajitas Array	18.64	326	P	Pn	12 24 13.1	+0.6
	0.0nm,0.3s,baz=135,slow=12,SNR=3.9						
ROSC	El Rosal	19.52	117	LR	LR	12 33 02.0	
	comp=Z,78nm,18.1s,baz=246,slow=40						
YKA	Yellowknife Ar	50.84	347	P	P	12 28 55.1	0.0
	0.9nm,0.7s,baz=152,slow=7.4,SNR=17						
ILAR	Eielson Array	62.72	337	P	P	12 30 18.9	-0.5
	0.3nm,1.0s,baz=126,slow=6.1,SNR=4.2						
CMAR	Chiang Mai Arr	145.84	342	PKPbc	PKPdf	12 39 34.5	-0.1
	1.6nm,0.3s,baz=332,slow=5.1,SNR=4.2						

KMA 22 12:20:59.1±0.5**, 36°.03N**×**126°.96E, h11**^{km}±5^{km}**, Error ellipse: s-maj=4.2km s-min=2.2km az=14.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKSA	Iksan Acc Bore	0.09	73	P	Pg	12 21 01.7	+0.1
KSGUS	GUNSAN	0.14	271	P	Pg	12 21 02.5	0.0
	SNR=78						
KSGUS	GUNSAN	0.14	271	P	Pg	12 21 02.5	0.0
	SNR=78						
BUYB	Buyeo	0.24	352	P	Pg	12 21 04.3	+0.1
	SNR=16						
KSJEO	Jeonju	0.29	109	P	Pg	12 21 05.0	+0.1
	SNR=126						
KSJEO	Jeonju	0.29	109	P	Pg	12 21 05.0	+0.1
	SNR=126						
PORA	Boryeong	0.44	312	P	Pg	12 21 07.8	+0.1
	SNR=9.5						
PORA	Boryeong	0.44	312	P	Pg	12 21 07.8	+0.1
	SNR=9.5						
KOJ2	Gongju-si	0.46	19	P	Pg	12 21 08.3	+0.1
SMKB	Mukjeong-gil	0.48	224	P	Pg	12 21 08.2	-0.2
	SNR=122						
MNYD	Munyeodo	0.49	242	P	Pg	12 21 08.4	-0.3
	SNR=27						
KSJEU	Jeongeup	0.54	183	P	Pg	12 21 09.4	-0.2
	SNR=45						
SUCA	Sunchang	0.68	168	P	Pg	12 21 12.1	-0.1
	SNR=9.2						
OYDB	Oeyeondo	0.74	285	P	Pg	12 21 13.0	-0.4
	SNR=37						
OKCB	Cheongsan-myeo	0.74	65	P	Pg	12 21 13.4	-0.1
	SNR=22						
GOCB	Gochang-gun	0.74	203	P	Pg	12 21 13.2	-0.4
	SNR=18						
ECDB	Euchungdo	0.80	276	P	Pg	12 21 14.1	-0.4
	SNR=8.1						
KSBON	Boeun	0.82	55	P	Pb	12 21 15.3	-0.1
	SNR=44						
KSBON	Boeun	0.82	55	P	Pb	12 21 15.3	-0.1
	SNR=44						
KSCEA	Cheonan	0.82	17	P	Pg	12 21 15.0	0.0
	SNR=8.4						
KSCPR	CHUPUNGNYEONG	0.84	77	P	Pg	12 21 15.2	-0.2
	SNR=9.0						
KSKWJ	Gwangju	0.87	178	P	Pg	12 21 15.5	-0.5
	SNR=14						
KSKWJ	Gwangju	0.87	178	P	Pg	12 21 15.5	-0.5
	SNR=15						
KSGIC	Gimchen	0.93	87	P	Pg	12 21 16.7	-0.3
	SNR=11						
ANMD	Anmado	1.02	228	P	Pg	12 21 18.1	-0.7
	SNR=16						
KSSAJ	Sangju	1.04	69	P	Pb	12 21 18.9	-0.2
	SNR=6.8						
KSMGY	Mungyeong	1.08	55	P	Pn	12 21 20.5	+0.3
	SNR=11						
BOSB	Boseong-gun	1.28	171	P	Pn	12 21 23.0	0.0
	SNR=8.8						

JMA 22 12:35:00.4, 35°.79N×**137°.46E, h9**^{km}**, M2.6, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGF	Kuroka	0.21	204	P	Pg	12 35 04.7	0.0
JGF				S	Sg	12 35 07.6	0.0
JGN	Niukaw	0.45	345	P	Pg	12 35 09.2	0.0
JGN				*i* S	Sg	12 35 15.1	0.0
JYTA	Yamagatataniai	0.62	252	P	Pg	12 35 12.3	-0.1
JYTA				S	Sg	12 35 20.4	-0.2
JTT	Ttatey	0.82	353	S	Sg	12 35 27.2	+0.3
JYN	Shimob	0.93	108	P	Pg	12 35 18.5	+0.2
MAT	Matsushiro	0.96	39	P	Pg	12 35 18.6	-0.4
MAT				S	Sg	12 35 30.9	-0.6

TUL ***22*** *12:46:23.6±0.9, 36°.95N±0°.02×97°.82W±0°.02, h5^{km}±7^{km}, ML2.6, mb_Lg2.5/16(NEIC), Error ellipse: s-maj=2.4km s-min=2.1km az=199.0*

NEIC 22 12:46:23.9±1.2**, 36°.92N**±0°.01×**97°.817W**±0°.009**, h4**^{km}±7^{km}**, Error ellipse: s-maj=2.2km s-min=0.5km az=151.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.07	208	Pg	Pg	12 46 26.1	+0.6
GC02				Sg	Sg	12 46 27.6	+1.1
KAN14	Manchester OK	0.12	289		Pg	12 46 26.4	0.0
KAN14				Sg	Sg	12 46 28.2	+0.1
KAN17	Caldwell West	0.13	18		Pg	12 46 26.6	0.0
KAN17				Sg	Sg	12 46 28.5	+0.1
KAN05	Bluff City Nor	0.20	347	Pg	Pg	12 46 27.6	-0.2
KAN05				Sg	Sg	12 46 29.9	-0.4
KAN01	Argonia South	0.24	11		Pg	12 46 28.5	-0.1
KAN01				Sg	Sg	12 46 31.5	-0.3
KAN09	Caldwell North	0.27	36	Pg	Pg	12 46 29.0	-0.2
KAN09				Sg	Sg	12 46 32.2	-0.5
KAN13	South Haven SW	0.29	70		Pg	12 46 29.8	+0.3
KAN13				Sg	Sg	12 46 33.6	+0.3
KAN10	Anthony SW Sta	0.30	313	Pg	Pg	12 46 29.6	-0.2
KAN10				Sg	Sg	12 46 33.3	-0.6
KAN06	Argonia West S	0.33	354		Pg	12 46 30.1	-0.3
KAN06				Sg	Sg	12 46 34.2	-0.5
KAN08	Anthony NE Sta	0.33	338		Pg	12 46 30.1	-0.3
KAN08				Sg	Sg	12 46 34.2	-0.5
KAN16	Harper SW Stat	0.37	327	Pg	Pg	12 46 30.7	-0.3
KAN16				Sg	Sg	12 46 35.3	-0.5
KAN12	Harper NE Stat	0.41	339	Pg	Pg	12 46 31.4	-0.4
KAN12				Sg	Sg	12 46 36.7	-0.4
CROK	Carrier	0.43	198	Pg	Pg	12 46 32.7	+0.4
CROK				Sg	Sg	12 46 38.6	+0.8
BLOK	Blackwell	0.51	108	Pg	Pg	12 46 33.9	+0.3
BLOK				Sg	Sg	12 46 39.9	-0.4
T35A	Sooner Cattle	1.05	90	Pg	Pg	12 46 43.5	-0.4
T35A				Sg	Sg	12 46 57.3	-0.3
U32A	Winter Ranch,	1.09	241		Pg	12 46 44.6	-0.2
U32A				Sg	Sg	12 46 58.0	-1.0
OK033	Mehan	1.12	141		Pg	12 46 45.4	0.0
OK033				Sg	Sb	12 47 00.6	-0.2
OK029	Liberty Lake	1.16	165		Pg	12 46 45.8	-0.2
OK029				Sg	Sb	12 47 02.1	+0.4
QUOK	Quay	1.16	129		Pg	12 46 45.9	-0.3
QUOK				Sg	Sg	12 47 01.5	+0.3
OK031	S. Brethren Rd	1.24	140		Pg	12 46 47.2	-0.5
OK031				Sg	Sb	12 47 04.4	+0.2
BCOK	Bluff Creek, N	1.27	172	Pn	Pg	12 46 47.7	-0.5
OK034	N. Norfolk Rd.	1.27	135		Pg	12 46 47.8	-0.4
OK030	Cody Creek RV	1.29	140		Pg	12 46 48.2	-0.4
OK025	Westminster Rd	1.39	164		Pn	12 46 50.0	0.0
OKCFA	Oklahoma City	1.53	169	Pn	Pn	12 46 51.7	-0.2
OKCSW	OKLAHOMA CITY	1.54	168	Pn	Pn	12 46 52.4	+0.3
R32A	Long Quarter,	1.66	335		Pn	12 46 54.1	+0.3
FNO	Franklin	1.69	168		Pn	12 46 54.7	+0.5
FNO				IAmb_Lg		12 47 19.0	
	comp=Z,16nm,0.9s						
TUL1	Leonard	1.92	121		Pn	12 46 58.2	+0.9
W35A	Tecumseh	1.92	156		Pn	12 46 58.1	+0.7
WMOK	Wichita Mounta	2.31	200		Pn	12 47 03.4	+0.7
X34A	Smith Ranch, M	2.31	180		Pb	12 47 05.0	-1.1
X34A				IAmb_Lg		12 47 39.1	
	comp=Z,23nm,1.0s						
KSU1	Kansas State U	2.38	23		Pn	12 47 03.1	-0.6
KSU1				IAmb_Lg		12 47 41.3	
	comp=Z,19nm,0.8s						
CBKS	Cedar Bluff	2.43	322		Pn	12 47 04.8	+0.4
U38A	Gravette	2.80	99		Pn	12 47 09.8	+0.3
LOOK	Love County	2.96	170	Pn	Pn	12 47 13.8	+2.1
X37A	Clayton	3.06	139		Pn	12 47 12.7	-0.3
HHAR	Hobbs	3.18	100	Pn	Pn	12 47 15.1	+0.3
Z35A	Perchaven, San	3.61	172	Pn	Pn	12 47 20.5	0.0
S39A	Bolivar	3.67	76		Pn	12 47 21.5	+0.2
W39A	Magazine	3.69	117	Pn	Pn	12 47 23.0	+1.3
AMTX	Amarillo	3.73	238		Pn	12 47 22.0	-0.4
AMTX				IAmb_Lg		12 48 26.1	
	comp=Z,14nm,1.1s						
U40A	Yellville	4.03	96		Pn	12 47 24.8	-1.6
U40A				IAmb_Lg		12 48 31.8	
	comp=Z,7.7nm,0.7s						
MIAR	Mount Ida	4.18	123		Pn	12 47 28.7	+0.3
N35A	Tabor	4.29	23		Pn	12 47 29.6	-0.4
P38A	Dawn	4.32	50		Pn	12 47 30.6	+0.2
MGMO	Mountain Grove	4.45	85	Pn	Pn	12 47 33.4	+1.3
R40A	Maddies Statio	4.62	71	Pn	Pn	12 47 35.0	+0.6
FCAR	Ozark Folk Cen	4.71	101	Pn	Pn	12 47 36.2	+0.6
FCAR				IAmb_Lg		12 48 50.0	
	comp=Z,7.1nm,0.8s						
X40A	Basin Creek Fa	4.72	119	Pn	Pn	12 47 37.0	+1.1
WHAR	Wooly Hollow	4.76	108	Pn	Pn	12 47 37.0	+0.6
P40A	Paris	5.24	58	Pn	Pn	12 47 42.8	-0.1
N38A	Joes South For	5.27	41	IAmb_Lg		12 49 21.4	
	comp=Z,8.2nm,0.8s						
T25A	Trinidad	5.28	274	Pn	Pn	12 47 43.2	-0.5
CCM	Cathedral Cave	5.35	76	Pn	Pn	12 47 42.7	-1.7
LCAR	Lake Charles	5.43	97	Pn	Pn	12 47 46.4	+0.8
PBMO	Poplar Bluff	5.93	89	Pn	Pn	12 47 51.0	-1.4
FVM	French Village	5.98	78	Pn	Pn	12 47 53.5	+0.4
SDCO	Great Sand Dun	6.18	280	Pn	Pn	12 47 55.1	-1.1
ISCO	Idaho Springs	6.77	298	Pn	Pn	12 48 03.9	-0.3
ECSD	EROS Data Cent	6.87	7	Pn	Pn	12 48 04.8	-0.6

IDC 22 13:03:36.9±999.0**, 39°.05N**×**40°.74E, h0**^{km}**, Error ellipse: s-maj=3385.0km s-min=330.5km az=45.0, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	16.69	41	*i*		14 46 00.0	
	baz=234,slow=292,SNR=1.6						
I46RU	ZALESOVO INFRA	33.21	49	*i*		16 28 20.0	
	baz=261,slow=330,SNR=1.4						
I34MN	SONGINO INFRAS	47.18	57	*i*		17 51 00.0	
	baz=285,slow=324,SNR=0.6						

NOU ***22*** *13:05:08.5, 28°.77S×175°.00W, h110^{km}, mb5.0/18, Kermadec Islands Region*

IDC ***22*** *13:05:09.3±0.4, 28°.22S×176°.59W, h0^{km}, mb4.7/23, mb1 4.8/23, mb1mx4.6/36, mbtmp4.7/23, MS4.7/24, Ms1 4.7/24, ms1mx4.6/36, Error ellipse: s-maj=17.2km s-min=16.2km az=48.0*

BJI ***22*** *13:05:09.5±0.0, 27°.75S×175°.78W, h15^{km}, mB5.6/29, mb5.2/42, Ms5.2/21, Ms7 4.8/24*

NEIC ***22*** *13:05:10.8±2.2, 28°.32S±0°.08×176°.42W±0°.09, h10^{km}±1^{km}, mb5.2/64, Error ellipse: s-maj=15.9km s-min=9.7km az=133.0*

MOS ***22*** *13:05:11.3±0.9, 28°.30S×176°.66W, h20^{km}, mb5.1/26, Error ellipse: s-maj=11.6km s-min=9.7km az=123.7*

GCMT ***22*** *13:05:13.8±0.2, 28°.28S±0°.02×176°.03W±0°.01, h17^{km}, MW5.2/110, Moment Tensor Solution. s64,c88; s110,c169; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M$_{rr}$5.02±.20; M$_{θθ}$-0.72±.13; M$_{φφ}$-4.30±.13; M$_{rθ}$1.45±.34; M$_{θφ}$-1.53±.09; M$_{φr}$5.35±.37; Best double couple: M$_0$7.42600×10^{16} NP1:φ$_s$204.00000°, δ21.00000°, λ97.00000°. NP2:φ$_s$17.00000°, δ69.00000°, λ87.00000°. Principal axes: T 7.5140, Plg66.0000°, Azm282.0000°; N -0.1720, Plg2.0000°, Azm17.0000°; P -7.3380, Plg24.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 13:05:12.7±0.7**, 28°.50S**±0°.04×**176°.37W**±0°.05**, h28**^{km}±4^{km}**, n381, σ1^{s}91**/394**, mb5.1**/78**, MS4.7**/31**, 13C-4D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.55	241	Pn	Pb	13 05 41.2	+0.5
	675nm,0.3s,baz=283,slow=22,SNR=18						
RAO				Sn	Sb	13 06 00.6	+0.7
	1μm,0.3s,baz=87,slow=23,SNR=5.5						
RAO	Raoul Island	1.55	241	P	Pb	13 05 40.7	0.0
RAO						13 05 59.4	
RAO	Raoul Island	1.55	241		Pb	13 05 40.7	0.0
RAO				Sn	Sb	13 05 59.4	-0.5
RIZ	Raoul Island	1.55	241	P	Pb	13 05 41.2	+0.4
GLKZ	Green Lake	1.55	241	P	Pb	13 05 40.9	+0.1
WMGZ	Waiomatatini S	10.26	204	P	Pn	13 07 34.7	-3.4
WMGZ				S	Sn	13 09 29.7	-2.6
HAZ	Te Kaha	10.44	206	P	Pn	13 07 36.9	-3.7
HAZ				S	Sn	13 09 36.5	-0.2
PKGZ	Pakihiroa	10.45	205	P	Pn	13 07 35.2	-5.6
PKGZ				S	Sn	13 09 31.2	-5.7
PUZ	Puketiti	10.54	204	P	Pn	13 07 36.5	-5.5
PUZ				S	Sn	13 09 33.1	-6.1
KUZ	Kuaotunu	10.58	217	P	Pn	13 07 44.9	+2.4
RUGZ	Raukumara Rang	10.67	206	P	Pn	13 07 39.6	-4.2
RUGZ				S	Sn	13 09 40.7	-1.6
OUZ	Omahuta	10.84	229	P	Pn	13 07 50.6	+4.6
CNGZ	Carnagh Statio	10.93	203	P	Pn	13 07 42.0	-5.3
CNGZ				S	Sn	13 09 44.7	-3.9
MWZ	Matawai	11.05	206	P	Pn	13 07 44.3	-4.6
MWZ				S	Sn	13 09 49.5	-2.0
NIUE	Niue	11.08	34	P	Pn	13 07 40.8	-8.6
	baz=11,SNR=4.7						
NIUE				S	Sn	13 09 27.9	-25
	baz=11						
URZ	Urewera	11.15	208	Pn	Pn	13 07 45.0	-5.2
	2.0nm,0.3s,baz=120,slow=23,SNR=14						
URZ				Sn	Sn	13 09 51.7	-2.1
	7.0nm,0.3s,baz=160,slow=23,SNR=7.1						
URZ				LR	LR	13 12 02.0	
	comp=Z,5μm,18.1s,baz=31,slow=36						
URZ	Urewera	11.15	208	P	Pn	13 07 45.0	-5.2
URZ				S	Sn	13 09 50.5	-3.4
URZ	Urewera	11.15	208	Pn	Pn	13 07 43.9	-6.3
RIGZ	Rimuhau	11.29	204	P	Pn	13 07 45.8	-6.4
MSVF	Nonsavu	11.88	333	Pn	Pn	13 07 59.1	-1.3
	0.5nm,0.3s,baz=140,slow=15,SNR=4.0						
MSVF				LR	LR	13 11 53.0	
	comp=Z,2μm,19.0s,baz=154,slow=35						
MSVF	Nonsavu	11.88	333	*i* P	Pn	13 08 00.6	+0.1
MSVF	Nonsavu	11.88	333	Pn	Pn	13 07 59.9	-0.6
MSVF	Nonsavu	11.88	333	P	Pn	13 08 04.5	+4.0
BKZ	Black Stump Fm	12.17	207	P	Pn	13 08 03.1	-1.2
HIZ	Hauiti	12.37	214	Pn	Pn	13 08 03.1	-3.9
BHHZ	Black Hill Sta	12.62	208	P	Pn	13 08 08.6	-1.8
BHHZ				S	Sn	13 10 25.4	-4.7
KRHZ	Kereru	12.63	206	P	Pn	13 08 06.7	-3.8
KRHZ				S	Sn	13 10 22.2	-8.1
DGTI	Dogotuki	12.66	343	P	Pn	13 08 13.6	+2.5
PKVZ	Pokaka	12.76	210	P	Pn	13 08 13.9	+1.5
VRZ	Vera Road	12.90	212	P	Pn	13 08 12.9	-1.3
PNHZ	Pukenui	12.93	206	P	Pn	13 08 13.9	-0.7
PNHZ				S	Sn	13 10 30.7	-6.8
DVHZ	Dannevirke	13.27	206	P	Pn	13 08 18.1	-1.3
NEZ	North Egmont	13.33	214	P	Pn	13 08 23.2	+3.1
BFZ	Birch Farm	13.58	205	P	Pn	13 08 20.4	-3.0
TIWZ	Tintock	13.79	205	P	Pn	13 08 23.3	-3.1
HOWZ	Holdsworth Sta	14.04	206	P	Pn	13 08 25.0	-4.7
KIW	Kapiti Island	14.25	208	P	Pn	13 08 27.0	-5.6
MTW	Mount Morrison	14.27	206	P	Pn	13 08 30.7	-2.2
CAW	Cannon Point	14.39	207	P	Pn	13 08 29.3	-5.3
PAWZ	Paruwai Farm	14.49	205	P	Pn	13 08 33.0	-3.0
MSWZ	Moikau Station	14.59	206	P	Pn	13 08 38.2	+1.0
PLWZ	Palliser	14.72	205	P	Pn	13 08 36.0	-3.1
PLWZ	Palliser	14.72	205	Pn	Pn	13 08 36.0	-3.1
TUWZ	Tuamarina	15.13	209	P	Pn	13 08 39.1	-5.4
AFI	Afiamalu	15.14	17	Pn	Pn	13 08 35.9	-8.9
	4.1nm,0.3s,baz=116,slow=15,SNR=5.6						
AFI				Sn	Sn	13 11 14.7	-17
	6.6nm,0.3s,baz=272,slow=22,SNR=6.2						
QRZ	Quartz Range	15.29	214	P	Pn	13 08 43.1	-3.6
PINNC	Pines Island,	15.73	288	P	P	13 08 58.4	+2.2
PINNC				IAmb	IAmb	13 09 26.5	
	comp=Z,255nm,1.4s						
PINNC	Pines Island,	15.73	288	P	P	13 08 59.3	+3.1
MARNC	Mare, Loyalty	15.77	293	P	P	13 08 56.3	-0.2
MARNC	Mare, Loyalty	15.77	293	P	P	13 08 59.4	+2.8
KHZ	Kahutara	16.11	208	P	Pn	13 08 54.0	-3.2
OUENC	Ouen Island, N	16.32	288	P	P	13 09 06.0	+3.3
YATNC	Mamie plateau,	16.43	289	P	P	13 09 06.6	+2.6
ONTNC	Ouen Toro	16.69	288	P	P	13 09 10.5	+3.7
RAR	Rarotonga	16.71	68	Pn	Pn	13 09 01.0	-4.0
	comp=Z,2.2nm,0.3s,baz=265,slow=12,SNR=3.1						
RAR				LR	LR	13 16 02.5	
	comp=Z,2μm,18.4s,baz=252,slow=39						
DZM	Mont Dzumac	16.80	289	*e*Pn	P	13 09 09.0	+0.8
	comp=Z,401nm,1.6s						
DZM				*e*LR	LR	13 13 04.6	
	comp=Z,5μm,25.6s						
DZM	Mont Dzumac	16.80	289	Pn	P	13 09 09.6	+1.4
	comp=Z,0.8nm,0.3s,baz=127,slow=10,SNR=18						
NOUC	Port Laguerre	16.91	288	P	P	13 09 11.0	+1.8
SANVU	Saraoutou	19.99	307	P	P	13 09 42.6	-0.5
TBI	Tubuai	24.72	84	*e*LQ	LQ	13 15 07.7	
	comp=Z,2μm,27.2s						
TBI				*e*LR	LR	13 16 30.5	
	comp=Z,2μm,21.8s,baz=255						
TBI	Tubuai	24.72	84	*e*T	T	13 35 37.8	
	comp=Z,12nm,0.4s						
PAE	Paea	26.84	72	*e*T	T	13 38 06.0	
	comp=Z,5.5nm,0.4s						
PPT2	Papeete2	26.88	72	*e*LQ	LQ	13 16 09.7	
	comp=Z,2μm,23.2s						
PPT2				*e*LR	LR	13 17 25.5	
	comp=Z,1μm,22.2s,baz=233						
PPT2	Papeete2	26.88	72	*e*T	T	13 38 09.6	
	comp=Z,4.4nm,0.4s						
PPT	Papeete	26.89	72	LR	LR	13 20 29.0	
	comp=Z,2μm,18.7s,baz=242,slow=34						
ARMA	Armidale	27.88	258	P	P	13 11 00.9	+0.5
	baz=28,SNR=7.6						
ARMA	Armidale	27.88	258	P	P	13 11 00.6	+0.1
MGCD	Mangrove Creek	28.24	252	P	P	13 11 05.3	+1.8
	baz=29,SNR=4.2						
EIDS	Eidsvold	29.14	268	P	P	13 11 12.4	+0.9
	baz=30,SNR=6.4						
EIDS	Eidsvold	29.14	268	P	P	13 11 11.7	+0.1
EIDS				IAmb	IAmb	13 11 13.2	
	comp=Z,41nm,1.4s						
HNR	Honiara	29.24	306	P	P	13 11 09.4	-3.1
	comp=Z,29nm,0.6s,baz=220,slow=11,SNR=4.0						
HNR				LR	LR	13 22 07.2	
	comp=Z,2μm,18.0s,baz=153,slow=35						
HNR	Honiara	29.24	306	P	P	13 11 10.1	-2.4
HNR				pmax	pmax		
	comp=Z,50nm,0.7s						
HNR	Honiara	29.24	306	P	P	13 11 10.1	-2.4
HNR				IAmb	IAmb	13 11 30.4	
	comp=Z,50nm,0.7s						
VAH	Vaihoa	29.67	70	*e*T	T	13 41 35.7	
	comp=Z,10nm,0.3s						
CNB	Canberra Magne	29.77	248	P	P	13 11 19.9	+2.8
	baz=30,SNR=9.0						
CAN	Canberra	30.06	248	P	P	13 11 19.8	+0.1
CAN				pmax	pmax		
	comp=Z,15nm,0.9s						
CAN	Canberra	30.06	248	P	P	13 11 19.8	+0.1
RMQ	Roma	30.93	265	P	P	13 11 29.4	+2.0
	baz=32,SNR=23						
TAU	Tasmania Unive	32.53	234	P	P	13 11 42.8	+1.6
TAU				pmax	pmax		
	comp=Z,38nm,1.3s						
TAU	Tasmania Unive	32.53	234	P	P	13 11 42.8	+1.6
TAU				IAmb	IAmb	13 11 55.9	
	comp=Z,38nm,1.2s						
CMSA	Cobar Meteorol	32.88	255	P	P	13 11 45.6	+1.1
	baz=33,SNR=34						
TOO	Toolangi	33.04	244	P	P	13 11 47.9	+2.1
	baz=34,SNR=6.0						

TOO	**Toolangi**	**33.04**	**244**	P	**P**	**13 11 46.6**	**+0.8**
TOO				pmax	pmax		
	comp=Z,20nm,1.0s						
TOO	**Toolangi**	**33.04**	**244**	P	**P**	**13 11 46.6**	**+0.8**
TOO				IAmb	IAmb	13 12 01.4	
	comp=Z,20nm,1.0s						
QLP	**Quilpie**	**34.88**	**264**	P	**P**	**13 12 01.9**	**0.0**
	baz=35,SNR=10.0						
CTAO	**Charters Tower**	**34.97**	**275**	P	**P**	**13 12 02.6**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,15nm,0.9s						
CTAO	**Charters Tower**	**34.97**	**275**	P	**P**	**13 12 02.6**	**-0.1**
ARPS	**Mount Arapiles**	**35.92**	**246**	P	**P**	**13 12 11.9**	**+1.2**
	baz=36,SNR=9.4						
STKA	**Stephens Creek**	**36.33**	**254**	P	**P**	**13 12 15.1**	**+0.8**
	comp=Z,10nm,0.7s,baz=101,slow=9.9,SNR=22						
STKA				LR	LR	13 26 36.6	
	comp=Z,2µm,18.1s,baz=91,slow=36						
STKA	**Stephens Creek**	**36.33**	**254**	P	**P**	**13 12 15.0**	**+0.8**
	baz=37,SNR=9.1						
STKA	**Stephens Creek**	**36.33**	**254**	P	**P**	**13 12 14.3**	**+0.1**
STKA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
STKA	**Stephens Creek**	**36.33**	**254**	P	**P**	**13 12 14.3**	**+0.1**
MTSU	**Mount Surprise**	**37.40**	**277**	P	**P**	**13 12 25.6**	**+2.0**
	baz=38,SNR=6.3						
HTT	**Hallett**	**38.42**	**251**	P	**P**	**13 12 32.2**	**+0.1**
	baz=39,SNR=28						
PMG	**Port Moresby**	**39.15**	**292**	LR	LR	13 26 53.0	
	comp=Z,1µm,18.4s,baz=112,slow=34						
TAOE	**Nuku Hiva Isla**	**39.26**	**67**	*e*S	**S**	**13 18 37.7**	**-0.9**
	comp=Z,275nm,25.1s						
TAOE				*e*LR	LR	13 23 05.6	
	comp=Z,1µm,21.2s						
COEN	**Coen**	**40.18**	**283**	P	**P**	**13 12 46.5**	**-0.4**
BBOO	**Buckleboo**	**40.88**	**252**	P	**P**	**13 12 54.8**	**+2.3**
	baz=41,SNR=6.5						
BBOO	**Buckleboo**	**40.88**	**252**	P	**P**	**13 12 51.3**	**-1.2**
MANU	**Manus Island**	**43.45**	**301**	P	**P**	**13 13 12.0**	**-1.6**
MANU				IAmb	IAmb	13 13 35.9	
	comp=Z,42nm,1.4s						
AS31	**Alice Springs**	**44.67**	**264**	P	**P**	**13 13 21.9**	**-1.5**
ASAR	**Alice Springs**	**44.67**	**264**	P	**P**	**13 13 22.4**	**-1.0**
	comp=Z,6.0nm,0.6s,baz=96,slow=7.0,SNR=103						
ASAR				PcP	**PcP**	**13 15 05.8**	**0.0**
	comp=Z,1.3nm,0.6s,baz=82,slow=4.0,SNR=1.7						
ASAR				LR	LR	13 32 07.0	
	comp=Z,2µm,18.0s,baz=105,slow=36						
ASAR	**Alice Springs**	**44.67**	**264**	P	**P**	**13 13 22.2**	**-1.2**
WR0	**Warramunga Arr**	**45.31**	**270**	P	**P**	**13 13 27.2**	**-1.3**
WB2	**Warramunga Arr**	**45.48**	**269**	P	**P**	**13 13 28.4**	**-1.5**
WB2				IAmb	IAmb	13 13 48.1	
	comp=Z,42nm,1.3s						
WRAB	**Tennant Creek**	**45.48**	**269**	*ce*P	**P**	**13 13 28.8**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,50nm,1.7s						
WRAB	**Tennant Creek**	**45.48**	**269**	P	**P**	**13 13 28.2**	**-1.6**
WRAB				IAmb	IAmb	13 13 48.1	
	comp=Z,26nm,1.1s						
WRA	**Warramunga Arr**	**45.49**	**269**	P	**P**	**13 13 28.9**	**-1.1**
	comp=Z,7.3nm,0.6s,baz=109,slow=6.3,SNR=75						
WRA				PcP	**PcP**	**13 15 09.7**	**+1.1**
	comp=Z,2.7nm,0.9s,baz=115,slow=3.7,SNR=2.1						
WRA				ScP	**ScP**	**13 19 01.7**	**+2.1**
	comp=Z,0.5nm,0.8s,baz=103,slow=3.7,SNR=1.8						
WRA				LR	LR	13 31 51.0	
	comp=Z,998nm,18.2s,baz=100,slow=35						
WRA	**Warramunga Arr**	**45.49**	**269**	P	**P**	**13 13 28.0**	**-1.9**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
WRA	**Warramunga Arr**	**45.49**	**269**	P	**P**	**13 13 28.0**	**-1.9**
WB0	**Warramunga Arr**	**45.51**	**270**	P	**P**	**13 13 28.1**	**-2.0**
WB0				IAmb	IAmb	13 13 48.2	
	comp=Z,30nm,1.0s						
FORT	**Forrest**	**47.93**	**253**	P	**P**	**13 13 47.5**	**-1.3**
	baz=48,SNR=7.0						
FORT	**Forrest**	**47.93**	**253**	P	**P**	**13 13 47.2**	**-1.7**
WRKA	**Warakurna**	**49.16**	**260**	P	**P**	**13 13 56.8**	**-1.7**
	baz=50,SNR=14						
KDU	**Kakadu**	**50.03**	**277**	P	**P**	**13 14 05.0**	**-0.2**
	baz=51,SNR=4.3						
VNDA	**Vanda**	**50.12**	**186**	P	**P**	**13 14 08.6**	**+3.6**
	comp=Z,1.6nm,0.6s,baz=357,slow=4.2,SNR=6.0						
VNDA				LR	LR	13 31 34.5	
	comp=Z,627nm,20.9s,baz=26,slow=32						
MTN	**Manton Dam**	**51.14**	**276**	P	**P**	**13 14 11.5**	**-2.0**
MTN				IAmb	IAmb	13 14 15.2	
	comp=Z,32nm,1.1s						
KHLU	**Kahalu`u**	**51.75**	**25**	P	**P**	**13 14 16.0**	**-2.0**
HUH	**Hualalai**	**51.85**	**25**	P	**P**	**13 14 18.4**	**-0.6**
KNRA	**Kununurra**	**52.02**	**272**	P	**P**	**13 14 19.3**	**-0.8**
	baz=53,SNR=6.5						
KNRA	**Kununurra**	**52.02**	**272**	P	**P**	**13 14 18.8**	**-1.3**
KNRA				IAmb	IAmb	13 14 32.9	
	comp=Z,50nm,1.4s						
WMR	**Waimanalo Ridg**	**52.72**	**22**	P	**P**	**13 14 25.0**	**0.0**
FITZ	**Fitzroy Crossi**	**53.82**	**268**	P	**P**	**13 14 32.9**	**-0.4**
	baz=54,SNR=3.9						
FAKI	**Fak Fak**	**55.06**	**288**	P	**P**	**13 14 41.3**	**-1.2**
KLBR	**Kellerberrin**	**56.33**	**249**	P	**P**	**13 14 51.1**	**-0.3**
	baz=57,SNR=6.2						
MEEK	**Meekatharra**	**57.01**	**255**	P	**P**	**13 14 55.6**	**-0.7**
	baz=58,SNR=3.6						
SWI	**Sorong**	**57.01**	**289**	P	**P**	**13 14 55.5**	**-0.9**
	comp=Z,80nm,0.7s						
CASY	**Casey**	**57.47**	**207**	P	**P**	**13 15 01.1**	**+2.2**
MUN	**Mundaring**	**57.49**	**249**	P	**P**	**13 14 58.8**	**-0.8**
	baz=58,SNR=3.5						
PSA00	**Pilbara Seismi**	**57.62**	**261**	P	**P**	**13 14 59.4**	**-1.3**
MORW	**Morawa**	**58.45**	**252**	P	**P**	**13 15 05.8**	**-0.6**
	baz=59,SNR=7.1						
MORW	**Morawa**	**58.45**	**252**	P	**P**	**13 15 04.5**	**-1.9**
SOEI	**Soe**	**58.53**	**276**	P	**P**	**13 15 07.4**	**+0.2**
SOEI				IAmb	IAmb	13 15 33.6	
	comp=Z,31nm,0.9s						
SANI	**Sanana**	**60.81**	**285**	P	**P**	**13 15 22.8**	**0.0**
	comp=Z,20nm,1.1s						
EDFI	**Ende, Flores**	**61.25**	**276**	P	**P**	**13 15 24.6**	**-1.3**
	comp=Z,10nm,1.0s						
QSPA	**South Pole Qui**	**61.60**	**180**	P	**P**	**13 15 30.0**	**+2.5**
QSPA				IAmb	IAmb	13 15 42.5	
	comp=Z,20nm,0.7s						
KAPI	**Kappang**	**64.70**	**278**	*ce*P	**P**	**13 15 49.7**	**+1.0**
TOLI2	**Tolitoli**	**66.89**	**285**	P	**P**	**13 16 00.8**	**-2.0**
TOLI2				IAmb	IAmb	13 16 02.9	
	comp=Z,19nm,1.2s						
JCJ	**Chichijima**	**68.09**	**321**	P	**P**	**13 16 07.8**	**-2.3**
SMAI	**San Martin Ant**	**70.65**	**158**	P	**P**	**13 16 27.2**	**+1.9**
SMAI				IAmb	IAmb	13 16 32.7	
	comp=Z,26nm,1.2s						
SPMM	**Sapulut**	**72.44**	**286**	P	**P**	**13 16 36.0**	**-1.1**
KKM	**Kota Kinabalu**	**73.35**	**287**	P	**P**	**13 16 40.6**	**-2.0**
STKI	**Sintang**	**74.38**	**279**	P	**P**	**13 16 47.9**	**-0.6**
	comp=Z,9µmcomp=Z,20nm,0.5s						
LEM	**Lembang**	**74.49**	**271**	P	**P**	**13 16 49.7**	**+0.3**
	comp=Z,34nm,0.7s						
MAW	**Mawson**	**74.57**	**200**	P	**P**	**13 16 51.4**	**+2.7**
	comp=Z,6.6nm,0.7s,baz=141,slow=8.4,SNR=7.4						
MAW				LR	LR	13 50 30.3	
	comp=Z,1µm,18.1s,baz=106,slow=36						
MAW	**Mawson**	**74.57**	**200**	P	**P**	**13 16 50.5**	**+1.8**
MAW				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MAW	**Mawson**	**74.57**	**200**	P	**P**	**13 16 50.5**	**+1.8**
SBUM	**Sibu**	**74.92**	**281**	P	**P**	**13 16 51.0**	**-0.6**
SBUM	**Sibu**	**74.92**	**281**	P	**P**	**13 16 51.1**	**-0.5**
KSM	**Kuching**	**76.09**	**279**	P	**P**	**13 16 58.0**	**-0.3**
KSM	**Kuching**	**76.09**	**279**	P	**P**	**13 16 57.1**	**-1.2**
JOW	**Kunigami**	**76.47**	**311**	P	**P**	**13 16 58.1**	**-2.0**
	comp=Z,8.9nm,0.6s,baz=126,slow=7.0,SNR=5.8						
JOW	**Kunigami**	**76.47**	**311**	P	**P**	**13 16 57.4**	**-2.8**
JOW				IAmb	IAmb	13 17 01.9	
	comp=Z,17nm,0.8s						
USHA	**Ushuaia**	**76.68**	**146**	P	**P**	**13 17 02.8**	**+1.8**
	comp=Z,4.2nm,0.8s,baz=225,slow=5.7,SNR=3.5						
DSPA	**Despedida**	**77.21**	**145**	P	**P**	**13 17 04.1**	**+0.1**
MJAR	**Matsushiro Arr**	**77.52**	**324**	P	**P**	**13 17 04.9**	**-1.0**
	comp=Z,8.9nm,0.8s,baz=275,slow=34,SNR=12						
MJAR				LR	LR	13 45 52.9	
	comp=Z,104nm,21.6s,baz=45,slow=32						
MJAR	**Matsushiro Arr**	**77.52**	**324**	P	**P**	**13 17 04.9**	**-1.0**
MAJO	**Matsushiro**	**77.52**	**324**	P	**P**	**13 17 04.9**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,25nm,0.9s						
MAJO	**Matsushiro**	**77.52**	**324**	P	**P**	**13 17 04.9**	**-1.0**
MAJO				IAmb	IAmb	13 17 19.2	
	comp=Z,25nm,0.8s						
MAT	**Matsushiro**	**77.52**	**324**	P	**P**	**13 17 04.5**	**-1.4**
MAT				S	**S**	**13 26 53.8**	**-1.5**
JMN	**Monobe**	**77.79**	**319**	P	**P**	**13 17 04.7**	**-2.8**
JMN				IAmb	IAmb	13 17 12.9	
	comp=Z,37nm,1.3s						
KASI	**Kota Agung**	**77.84**	**270**	P	**P**	**13 17 06.0**	**-2.2**
	comp=Z,51nm,0.7s						
PPBI	**Pangkal Pinang**	**77.98**	**274**	P	**P**	**13 17 09.3**	**+0.3**
JWT	**Wachi**	**78.07**	**321**	P	**P**	**13 17 08.6**	**-0.3**
JWT				IAmb	IAmb	13 17 09.1	
	comp=Z,32nm,1.2s						
JSU	**Suzuyama**	**78.25**	**316**	P	**P**	**13 17 08.0**	**-2.0**
JSU				IAmb	IAmb	13 17 11.8	
	comp=Z,27nm,0.8s						
MDSI	**Maura Dua**	**78.61**	**271**	P	**P**	**13 17 11.1**	**-1.4**
	comp=Z,20nm,0.7s						
JHS	**Saijyo**	**79.14**	**320**	P	**P**	**13 17 13.8**	**-1.1**
SYO	**Syowa Base**	**79.27**	**192**	⇑*e*P	**P**	**13 17 15.6**	**+0.5**
SYO	**Syowa Base**	**79.27**	**192**	⇓*e*sP	sP	13 17 20.6	-4.6
SNAA	**Sanae**	**80.00**	**178**	P	**P**	**13 17 21.6**	**+2.5**
SNAA	**Sanae**	**80.00**	**178**	*i* P	**P**	**13 17 21.9**	**+2.7**
SNAA				pmax	pmax		
	comp=Z,15nm,1.6s						
SNAA	**Sanae**	**80.00**	**178**	P	**P**	**13 17 20.1**	**+0.9**
VNA3	**Neumayer Olymp**	**80.09**	**176**	P	**P**	**13 17 21.1**	**+1.5**
DSRI	**Dabo**	**80.15**	**275**	P	**P**	**13 17 20.3**	**-0.6**
	comp=Z,830nmcomp=Z,16nm,1.0s						
KUR	**Kuril'sk**	**80.29**	**335**	*i* P	**P**	**13 17 16.9**	**-3.9**
VNA2	**Neumayer--Watz**	**80.54**	**176**	P	**P**	**13 17 24.0**	**+1.9**
	baz=180,slow=3.9						
VNA1	**Neumayer--Stat**	**80.76**	**176**	P	**P**	**13 17 25.8**	**+2.7**
MASI	**Maura Aman, Be**	**80.94**	**271**	P	**P**	**13 17 24.9**	**-0.3**
	comp=Z,154nm,0.7s						
JKA	**Kamikawa-asahi**	**81.44**	**331**	P	**P**	**13 17 26.9**	**-0.1**
JKA	**Kamikawa-asahi**	**81.44**	**331**	IAmb	IAmb	13 17 45.2	
	comp=Z,34nm,1.2s						
ASAJ	**Asahikawa**	**81.44**	**331**	P	**P**	**13 17 26.9**	**-0.1**
	comp=Z,8.3nm,0.7s,baz=99,slow=2.3,SNR=6.5						
SNCC	**San Nicolas Is**	**81.70**	**45**	P	**P**	**13 17 27.3**	**-1.4**
	baz=228						
MYKOM	**Kota Tinggi**	**81.87**	**276**	P	**P**	**13 17 30.0**	**0.0**
MYKOM	**Kota Tinggi**	**81.87**	**276**	P	**P**	**13 17 29.6**	**-0.4**
MYKOM				IAmb	IAmb	13 17 43.0	
	comp=Z,17nm,0.9s						
QZH	**Quanzhou**	**82.06**	**304**	*e*P	**P**	**13 17 31.6**	**+0.9**
QZH				S	**S**	**13 27 48.3**	**+4.7**
PLCA	**Paso Flores**	**82.75**	**133**	P	**P**	**13 17 37.6**	**+3.3**
	comp=Z,5.4nm,1.0s,baz=64,slow=4.0,SNR=4.3						
PLCA				LR	LR	13 48 58.1	
	comp=Z,569nm,18.2s,baz=243,slow=32						
MURC	**Murrieta**	**83.40**	**46**	P	**P**	**13 17 38.3**	**+0.7**
	baz=230						
MONP2	**Monument Peak**	**83.44**	**47**	P	**P**	**13 17 38.3**	**+0.2**
	baz=230						
TJN	**Taejon**	**83.45**	**318**	*i* P	**P**	**13 17 37.2**	**-0.5**
BFSC	**Mount Baldy Ra**	**83.53**	**45**	P	**P**	**13 17 40.2**	**+1.9**
	baz=229						
YSS	**Yuzh-Sakhalins**	**83.68**	**333**	⇓*e*P	**P**	**13 17 39.3**	**+0.7**
YSS				*e*		13 17 47.6	
YSS				*e*S	**S**	**13 28 05.7**	**+6.5**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				smax	smax		
	comp=N,500nm,11.2s						
YSS				smax	smax		
	comp=E,100nm,10.6s						
YSS				MLR	MLR		
	comp=N,200nm,18.0s						
YSS				MLR	MLR		
	comp=Z,300nm,18.0s						
YSS				MLR	MLR		
	comp=E,100nm,16.0s						
VES	**Vestal, Richgr**	**83.70**	**43**	P	**P**	**13 17 40.5**	**+1.5**
	baz=228						
KSRS	**Korea Array**	**83.85**	**319**	P	**P**	**13 17 39.9**	**+0.2**
	comp=E,4.5nm,0.7s,baz=137,slow=5.8,SNR=22						
KSRS				LR	LR	13 53 38.8	
	comp=E,175nm,18.1s,baz=121,slow=35						
KSAR	**Wonju Array Be**	**83.86**	**319**	P	**P**	**13 17 39.2**	**-0.6**
KSAR	**Wonju Array Be**	**83.86**	**319**	P	**P**	**13 17 39.1**	**-0.6**
TPFO	**Pinon Flats**	**83.88**	**47**	P	**P**	**13 17 41.8**	**+1.7**
	baz=230						
PFO	**Pinyon Flats O**	**83.88**	**47**	*ce*P	**P**	**13 17 43.3**	**+3.2**
KS19	**Wonju Array Si**	**83.91**	**319**	P	**P**	**13 17 39.4**	**-0.6**
KS19				IAmb	IAmb	13 17 42.5	
	comp=Z,20nm,1.2s						
ISA	**Isabella, Lake**	**83.95**	**44**	P	**P**	**13 17 40.0**	**-0.4**
ISA				pmax	pmax		
	comp=Z,23nm,1.4s						
ISA	**Isabella, Lake**	**83.95**	**44**	P	**P**	**13 17 40.0**	**-0.4**
ISA				IAmb	IAmb	13 17 43.0	
	comp=Z,23nm,1.4s						
ISA	**Isabella, Lake**	**83.95**	**44**	P	**P**	**13 17 42.0**	**+1.6**
	baz=228						
PETK	**Petropavlovsk-**	**84.35**	**345**	P	**P**	**13 17 41.6**	**-0.3**
	comp=Z,5.5nm,0.7s,baz=134,slow=4.3,SNR=7.6						
PETK				LR	LR	13 53 01.3	
	comp=Z,277nm,18.3s,baz=152,slow=34						
BELC	**Belle Mtn. Jos**	**84.42**	**47**	P	**P**	**13 17 44.3**	**+1.4**
	baz=230						
O02D	**Mt. Diablo Mer**	**84.53**	**38**	P	**P**	**13 17 45.6**	**+2.4**
	baz=225						
BC3	**Big Chuckawall**	**84.55**	**47**	P	**P**	**13 17 45.2**	**+1.7**
	baz=231						
GLA	**Glamis**	**84.58**	**48**	P	**P**	**13 17 45.8**	**+2.2**
	baz=231						
CWC	**Cottonwood Cre**	**84.71**	**44**	P	**P**	**13 17 46.0**	**+1.7**
	baz=229						
HEC	**Hector,Ludlow**	**84.74**	**46**	P	**P**	**13 17 46.2**	**+1.8**
	baz=230						
GSC	**Goldstone, Bar**	**84.75**	**45**	P	**P**	**13 17 45.3**	**+0.8**
	baz=230						
MPMC	**Manual Prospec**	**84.82**	**44**	P	**P**	**13 17 46.0**	**+1.1**
	baz=229						
IRM	**Iron Mountain**	**85.07**	**47**	P	**P**	**13 17 47.6**	**+1.6**
	baz=231						
GMRC	**Granite Mounta**	**85.14**	**46**	P	**P**	**13 17 48.2**	**+1.7**
	baz=230						
N02D	**Trinity Center**	**85.14**	**38**	P	**P**	**13 17 48.9**	**+2.6**
	baz=225						
MNSI	**Mandailing Nat**	**85.14**	**274**	P	**P**	**13 17 45.8**	**-1.1**
	comp=Z,27nm,0.8s						
214A	**Organ Pipe Nat**	**85.23**	**50**	P	**P**	**13 17 48.8**	**+1.9**
	baz=232						
M02C	**Callahan**	**85.35**	**37**	P	**P**	**13 17 49.5**	**+2.2**
	baz=225						
SHOC	**Shoshone, Teco**	**85.46**	**45**	P	**P**	**13 17 49.8**	**+1.8**
	baz=230						
FURC	**Furnace Creek,**	**85.47**	**44**	P	**P**	**13 17 49.8**	**+1.9**
	baz=230						
PDMCI	**Parker Dam,Lak**	**85.81**	**47**	P	**P**	**13 17 51.5**	**+1.8**
	baz=231						
MT01	**Popeta**	**85.86**	**126**	P	**P**	**13 17 50.1**	**-0.1**
MT01				IAmb	IAmb	13 18 05.2	
	comp=Z,13nm,0.9s						
NVAR	**Mina Array Bea**	**85.89**	**42**	P	**P**	**13 17 51.8**	**+1.6**
	comp=Z,7.1nm,1.0s,baz=223,slow=8.0,SNR=21						
NVAR				LR	LR	13 51 45.6	
	comp=Z,1µm,18.6s,baz=240,slow=33						
NVAR	**Mina Array Bea**	**85.89**	**42**	P	**P**	**13 17 50.7**	**+0.5**
RYN	**Ryan**	**85.89**	**42**	P	**P**	**13 17 50.3**	**+0.1**
RYN				IAmb	IAmb	13 18 07.0	
	comp=Z,18nm,1.5s						
NJ2	**Nanjing**	**86.11**	**310**	*e*P	**P**	**13 17 50.8**	**-0.4**
NJ2				pP	**PcP**	**13 17 54.8**	**+1.0**
NJ2				S	**S**	**13 28 23.3**	**-0.7**
NJ2				sS	**ScS**	**13 28 30.8**	**-2.0**
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,290nm,5.4s						
TPH	**Tonopah**	**86.29**	**43**	P	**P**	**13 17 52.6**	**+0.4**
TPH				pmax	pmax		
	comp=Z,101nm,1.3s						
TPH	**Tonopah**	**86.29**	**43**	P	**P**	**13 17 52.6**	**+0.4**
USA0B	**Ussuriysk Arra**	**86.39**	**326**	P	**P**	**13 17 52.1**	**-0.1**
USA0B				pmax	pmax		
	comp=Z,35nm,1.3s						
USA0B	**Ussuriysk Arra**	**86.39**	**326**	P	**P**	**13 17 52.1**	**-0.1**
USA0B				IAmb	IAmb	13 18 04.1	
	comp=Z,35nm,1.3s						
USRK	**Ussuriysk Ar.**	**86.39**	**326**	P	**P**	**13 17 52.9**	**+0.7**
	comp=Z,4.3nm,0.7s,baz=116,slow=4.4,SNR=13						
USRK				LR	LR	13 54 31.8	
	comp=Z,293nm,18.6s,baz=126,slow=34						
USRK	**Ussuriysk Ar.**	**86.39**	**326**	P	**P**	**13 17 52.6**	**+0.3**
RPSI	**Rantau Prapat**	**86.62**	**275**	P	**P**	**13 17 53.2**	**-1.0**
PSI	**Prapat**	**86.67**	**275**	P	**P**	**13 17 53.2**	**-1.4**
	comp=Z,4.5nm,0.6s,baz=147,slow=7.3,SNR=5.3						
PSI				LR	LR	14 00 02.1	
	comp=Z,490nm,18.2s,baz=136,slow=38						
TUC	**Tucson**	**86.82**	**51**	P	**P**	**13 17 54.8**	**0.0**
TUC				pmax	pmax		
	comp=Z,26nm,1.4s						
TUC	**Tucson**	**86.82**	**51**	P	**P**	**13 17 54.8**	**0.0**
TUC				IAmb	IAmb	13 17 57.9	
	comp=Z,26nm,1.4s						
TYV	**Tymovskoe**	**86.91**	**335**	*e*P	**P**	**13 17 55.1**	**+0.5**
TYV				pmax	pmax		
	comp=Z,12nm,1.4s						
TYV				pmax	pmax		
	comp=Z,200nm,4.4s						
GSI	**Gunungsitoli**	**87.14**	**273**	P	**P**	**13 17 58.4**	**+1.6**
	comp=Z,69nm,0.9s						
GSI	**Gunungsitoli**	**87.14**	**273**	P	**P**	**13 17 56.9**	**+0.1**
R11A	**Troy Canyon, C**	**87.45**	**43**	P	**P**	**13 17 59.5**	**+1.7**
	baz=230						
MDJ	**Mudanjiang**	**87.89**	**325**	P	**P**	**13 17 59.8**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,16nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,320nm,6.6s						
MDJ	**Mudanjiang**	**87.89**	**325**	P	**P**	**13 17 59.1**	**-0.5**
MDJ				IAmb	IAmb	13 18 15.5	
	comp=Z,22nm,1.0s						
WHN	**Wuhan**	**88.36**	**306**	⇓P	**P**	**13 18 02.8**	**+0.7**
121A	**Cookes Peak, D**	**89.01**	**52**	P	**P**	**13 18 07.2**	**+1.9**
	baz=235						
GRNR	**Gornyy**	**89.26**	**332**	⇑*i*P	**P**	**13 18 06.3**	**+0.4**
GRNR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CN2	**Changchun**	**89.51**	**322**	*e*P	**P**	**13 18 07.5**	**+0.3**
CN2				*e*sP	pP	13 18 15.8	+0.9
CN2				*e*S	**S**	**13 28 55.4**	**-0.5**
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,18.0s						
TIA	**Tai'an**	**89.74**	**312**	⇑P	**P**	**13 18 08.8**	**+0.3**
TIA				pmax	pmax		
	comp=Z,17nm,1.2s						
TIA				pmax	pmax		
	comp=Z,180nm,5.6s						
O18K	**Koktuh Hills**	**89.75**	**10**	P	**P**	**13 18 08.8**	**+0.9**
	baz=199						
KLR	**Kul'dur**	**90.13**	**329**	P	**P**	**13 18 10.3**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=98,slow=4.4,SNR=8.8						
KLR	**Kul'dur**	**90.13**	**329**	*i* P	**P**	**13 18 09.4**	**-0.6**
KLR				pmax	pmax		
	comp=Z,23nm,2.0s						
TX31	**Lajitas Ar. Si**	**90.17**	**56**	P	**P**	**13 18 11.4**	**+0.7**
TX32	**Lajitas Array**	**90.17**	**56**	P	**P**	**13 18 10.1**	**-0.7**
TX32				IAmb	IAmb	13 18 38.7	
	comp=Z,18nm,1.5s						
TXAR	**Lajitas Array**	**90.17**	**56**	P	**P**	**13 18 11.9**	**+1.1**
	comp=Z,3.1nm,1.2s,baz=212,slow=4.4,SNR=12						
TXAR				LR	LR	13 52 24.0	
	comp=Z,382nm,19.1s,baz=0.0,slow=31						
TXAR	**Lajitas Array**	**90.17**	**56**	P	**P**	**13 18 11.1**	**+0.4**
O19K	**Port Alsworth**	**90.22**	**11**	P	**P**	**13 18 09.3**	**-0.8**
	baz=199						
BRSE	**Bradley Lake S**	**90.43**	**13**	P	**P**	**13 18 12.2**	**+1.1**
	baz=202						
B05A	**Bryant**	**90.56**	**33**	P	**P**	**13 18 13.7**	**+1.7**
	baz=226						
A04D	**Lummi Island**	**90.59**	**32**	P	**P**	**13 18 13.6**	**+1.5**
	baz=225						
CMIG	**Matias Romero**	**90.81**	**71**	LR	LR	13 50 51.4	
	comp=Z,258nm,19.0s,baz=244,slow=30						
ANMO	**Albuquerque**	**91.28**	**51**	LR	LR	13 50 37.0	
	comp=Z,328nm,21.9s,baz=247,slow=30						
ANMO	**Albuquerque**	**91.28**	**51**	*ce*P	**P**	**13 18 17.4**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,17nm,2.5s						
ANMO	**Albuquerque**	**91.28**	**51**	P	**P**	**13 18 16.0**	**0.0**
ANMO				IAmb	IAmb	13 18 18.5	
	comp=Z,10nm,1.4s						
ENH	**Enshi**	**91.72**	**304**	P	**P**	**13 18 14.5**	**-3.4**
GYA	**Guiyang**	**91.86**	**299**	⇑P	**P**	**13 18 20.6**	**+1.9**
GYA				pmax	pmax		
	comp=Z,13nm,0.9s						
RC01	**Rabbit Creek A**	**91.87**	**13**	P	**P**	**13 18 18.6**	**+0.9**
	baz=203						
L19K	**White Mountain**	**92.01**	**10**	P	**P**	**13 18 17.6**	**-0.9**
	baz=199						
KNK	**Knik Glacier**	**92.42**	**13**	P	**P**	**13 18 20.3**	**0.0**
	baz=204						
PMR	**Palmer**	**92.45**	**13**	P	**P**	**13 18 22.4**	**+2.0**
	baz=204						
TTA	**Tatalina**	**92.56**	**9**	P	**P**	**13 18 21.1**	**+0.1**
	baz=198						
BJT	**Baijiatuau**	**92.58**	**315**	P	**P**	**13 18 19.4**	**-2.2**
BJT				pmax	pmax		
	comp=Z,12nm,0.9s						
BJT	**Baijiatuau**	**92.58**	**315**	P	**P**	**13 18 19.4**	**-2.2**
BJT				IAmb	IAmb	13 18 35.5	
	comp=Z,12nm,0.9s						
BJI	**Beijing**	**92.59**	**315**	P	**P**	**13 18 22.0**	**+0.4**
BJI				sP	**pP**	**13 18 28.8**	**-0.4**
BJI				SKS	**SKSac**	**13 28 56.6**	**+3.4**
BJI				sS	**sS**	**13 29 38.0**	**+1.2**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,290nm,5.1s						
S22A	**4UR Ranch, Cre**	**92.61**	**48**	P	**P**	**13 18 22.0**	**-0.2**
	baz=236						
BMRM	**Bremner River**	**92.83**	**15**	P	**P**	**13 18 22.4**	**+0.1**
	baz=208						
SCM	**Sheep Creek Mo**	**93.03**	**13**	P	**P**	**13 18 24.8**	**+1.6**
	baz=205						
O20A	**White River Ci**	**93.06**	**45**	P	**P**	**13 18 22.8**	**-1.3**
	baz=235						
CTG	**Chitna Glacier**	**93.60**	**16**	P	**P**	**13 18 26.4**	**+0.4**
	baz=210						
PDAR	**Pinedale Array**	**93.78**	**43**	P	**P**	**13 18 28.8**	**+1.4**
	comp=Z,1.8nm,1.0s,baz=213,slow=5.1,SNR=8.3						
PDAR				LR	LR	13 57 08.2	
	comp=Z,845nm,18.4s,baz=252,slow=33						
TRF	**Thorofare Moun**	**93.95**	**11**	P	**P**	**13 18 27.9**	**+0.4**
	baz=203						
XAN	**Xi'an**	**94.11**	**307**	P	**P**	**13 18 29.8**	**+0.9**
XAN				pP	sP	13 18 39.8	+0.9
XAN				SKS	**SKSac**	**13 29 03.1**	**+1.1**
XAN				S	**ScS**	**13 29 44.4**	**+5.0**
XAN				SS	**SS**	**13 36 00.4**	**+0.9**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.6s						
XAN				pmax	pmax		
	comp=Z,150nm,8.4s						
XAN				LR	LR		
	comp=Z,280nm,17.9s						
XAN				LR	LR		
	comp=Z,380nm,17.9s						
CMAR	**Chiang Mai Arr**	**94.13**	**289**	P	**P**	**13 18 30.4**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=146,slow=3.9,SNR=12						
CMAR	**Chiang Mai Arr**	**94.13**	**289**	P	**P**	**13 18 28.1**	**-1.1**
KMI	**Kunming**	**94.25**	**296**	⇓P	**P**	**13 18 29.8**	**-0.1**
KMI				pP	pP	13 18 34.3	-3.3
KMI				PP	**PP**	**13 22 18.9**	**+1.6**
KMI				SKS	**SKSac**	**13 29 00.8**	**-2.7**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,170nm,5.0s						
KMI				LR	LR		
	comp=Z,190nm,15.3s						
KMI				LR	LR		
	comp=Z,170nm,15.3s						
KMI				LR	LR		
	comp=Z,170nm,15.3s						
MCK	**McKinley**	**94.45**	**12**	P	**P**	**13 18 30.4**	**+0.8**
	baz=204						
SEY	**Seymchan**	**94.47**	**346**	P	**P**	**13 18 28.9**	**-0.8**
	comp=Z,2.7nm,0.6s,baz=137,slow=7.4,SNR=8.0						
ZEA	**Zeya**	**95.30**	**330**	*e*P	**P**	**13 18 33.6**	**-0.1**
HDA	**Harding Lake**	**95.43**	**12**	P	**P**	**13 18 33.4**	**-0.7**

	baz=206						
K22A	**Casper**	**95.55**	**44**	P	**P**	**13 18 35.2**	**-0.2**
	baz=236						
SCRK	**Sand Creek**	**95.64**	**14**	P	**P**	**13 18 35.1**	**0.0**
	baz=208						
COLA	**College**	**95.69**	**12**	*i* P	**P**	**13 18 35.6**	**+0.4**
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ILAR	**Eielson Array**	**95.77**	**12**	P	**P**	**13 18 35.0**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=222,slow=5.7,SNR=8.8						
ILAR				LR	LR	13 56 38.8	
	comp=Z,151nm,19.7s,baz=211,slow=32						
HHC	**Hu-ho-hao-te**	**95.95**	**313**	*e*P	**P**	**13 18 37.8**	**+0.6**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,7.6s						
HHC				LR	LR		
	comp=Z,560nm,11.5s						
HHC				LR	LR		
	comp=Z,280nm,9.6s						
HHC				LR	LR		
	comp=Z,180nm,12.9s						
J26L	**Joseph Creek**	**96.19**	**14**	P	**P**	**13 18 38.3**	**+0.6**
	baz=209						
PRP	**Porcupine Dome**	**96.70**	**12**	P	**P**	**13 18 40.4**	**+0.3**
	baz=207						
BILL	**Bilibino**	**97.12**	**354**	⇑*e*P	Pdif	13 18 41.7	0.0
BILL				*e*		13 22 36.6	
BILL				*e*PPP	PPP	13 24 44.4	
BILL				*e*S	**SKSac**	**13 29 09.8**	**-6.4**
BILL				*e*SS	**SS**	**13 36 32.7**	**-7.9**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s						
LPAZ	**La Paz**	**97.60**	**113**	P	Pdif	13 18 48.9	+2.9
	comp=Z,0.9nm,0.6s,baz=225,slow=2.9,SNR=2.1						
LPAZ				LR	LR	13 56 57.4	
	comp=Z,131nm,18.0s,baz=250,slow=32						
YAK	**Yakutsk**	**100.05**	**337**	*i* P	**Pdif**	**13 18 54.3**	**-0.6**
SONM	**Songino Array**	**102.70**	**318**	P	**Pdif**	**13 19 08.4**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=152,slow=6.5,SNR=1.7						
YKA	**Yellowknife Ar**	**103.13**	**25**	P	**Pdif**	**13 19 09.8**	**+1.2**
	comp=Z,0.1nm,0.6s,baz=227,slow=4.3,SNR=1.9						
YKA				PKiKP	**PKiKP**	**13 23 30.9**	**+2.8**
	comp=Z,0.2nm,0.8s,baz=232,slow=1.6,SNR=3.7						
WMQ	**Urumqi**	**113.17**	**308**	*e*PKP	**PKiKP**	**13 23 48.5**	**+1.0**
WMQ				AMB	AMB		
	comp=Z,210nm,4.9s						
ZALV	**Zalesovo Beam**	**117.56**	**319**	PKP	**PKPdf**	**13 23 54.4**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=138,slow=1.6,SNR=5.9						
MK31	**Makanchi Array**	**117.63**	**311**	PKIKP	**PKPdf**	**13 23 54.0**	**-2.0**
MK31	**Makanchi Array**	**117.63**	**311**	PKPdf	**PKPdf**	**13 23 54.0**	**-2.0**
MKAR	**Makanchi Array**	**117.63**	**310**	PKP	**PKPdf**	**13 23 54.9**	**-1.1**
	comp=Z,1.7nm,0.8s,baz=185,slow=1.3,SNR=11						
MKAR	**Makanchi Array**	**117.63**	**310**		**PKPdf**	**13 23 54.0**	**-2.0**
NRIK	**Noril'sk**	**118.48**	**336**	PKP	**PKiKP**	**13 23 57.1**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=110,slow=3.2,SNR=1.9						
NRIK	**Noril'sk**	**118.48**	**336**	*i* PKIKP	**PKiKP**	**13 23 57.3**	**+0.4**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSH	**Kashi**	**120.49**	**301**	PKP	**PKiKP**	**13 24 04.3**	**+2.4**
KURK	**Kurchatov**	**120.75**	**314**	*i* PKIKP	**PKPdf**	**13 24 01.3**	**-0.5**
KURK	**Kurchatov**	**120.75**	**314**		**PKPdf**	**13 24 00.4**	**-1.4**
BOOM	**Boomskoye usch**	**121.15**	**305**	PKIKP	**PKPdf**	**13 24 01.9**	**-1.2**
BOOM	**Boomskoye usch**	**121.15**	**305**		**PKPdf**	**13 24 01.9**	**-1.2**
AAK	**Ala-Archa**	**122.23**	**305**	*i* PKIKP	**PKPdf**	**13 24 04.4**	**-0.7**
KKAR	**Karatay Array**	**125.19**	**304**	PKIKP	**PKPdf**	**13 24 09.3**	**-1.3**
KKAR	**Karatay Array**	**125.19**	**304**		**PKPdf**	**13 24 09.3**	**-1.3**
BRVK	**Borovoye**	**126.09**	**317**	*c i*PKIKP	**PKPdf**	**13 24 12.0**	**0.0**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ARU	**Arti**	**132.50**	**322**	*i* PKIKP	**PKPdf**	**13 24 24.1**	**0.0**
ARU						13 26 47.6	
ARU				SS	SS	13 44 22.6	-3.2
KLMR	**Klimovskoe**	**139.73**	**334**	*e*PKIKP	**PKPdf**	**13 24 37.5**	**+0.2**
KLMR				pmax	pmax		
	comp=Z,17nm,1.1s						
KLMR	**Klimovskoe**	**139.73**	**334**	*e*PKPdf	**PKPdf**	**13 24 37.6**	**+0.2**
KLMR				AMP		13 24 51.0	
	comp=Z,17nm,1.1s						
KLMR				*e*SPP	SPP	13 43 32.5	
BELG	**Belogornoye**	**139.74**	**319**	*i* PKIKP	**PKPdf**	**13 24 37.9**	**+0.3**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MOS	**Moscow**	**143.53**	**328**	*e*PKIKP	**PKiKP**	**13 24 49.3**	**+1.6**
MOS				*e*		13 27 51.1	
FINES	**FINESS Array B**	**143.82**	**342**	PKhKP	PKPpre	13 24 41.6	
	comp=Z,3.3nm,0.5s,baz=64,slow=2.9,SNR=20						
OBN	**Obninsk**	**144.38**	**328**	*ce*PKIKP	PKPbc	13 24 44.5	+0.3
OBN				*e*		13 28 00.4	
OBN				*e*PPP	PPP	13 31 20.0	
OBN				*e*		13 31 47.7	
OBN				pmax	pmax		
	comp=Z,19nm,1.2s						
GNI	**Garni**	**144.41**	**300**	*c i*PKIKP	**PKPdf**	**13 24 48.3**	**+1.7**
GNI				pmax	pmax		
	comp=Z,17nm,1.7s						
ZEI	**Tsey**	**144.65**	**305**	*i* PKIKP	PKiKP	13 25 01.2	+11
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
NCK	**Nalchik**	**144.74**	**306**	*i* PKIKP	**PKPdf**	**13 24 46.6**	**-0.3**
NCK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VSR	**Storozhevoye**	**145.04**	**320**	*e*PKIKP	**PKPbc**	**13 24 44.9**	**-1.6**
VSR				pmax	pmax		
	comp=Z,20nm,1.2s						
VORD	**Divnogorie**	**145.08**	**320**	*e*PKIKP	**PKPbc**	**13 24 45.6**	**-1.0**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KBZ	**Khabaz**	**145.18**	**307**	PKP	**PKPbc**	**13 24 47.0**	**-0.2**
	comp=Z,3.3nm,0.7s,baz=60,slow=5.3,SNR=7.3						
KBZ	**Khabaz**	**145.18**	**307**	*i* PKIKP	**PKPbc**	**13 24 46.0**	**-1.2**
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	**Kislovodsk**	**145.28**	**307**	*i* PKIKP	**PKPdf**	**13 24 48.9**	**+1.0**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
NEY	**Neytrino**	**145.41**	**306**	*c i*PKIKP	**PKiKP**	**13 24 52.5**	**+0.3**
VSU	**Vasula**	**146.03**	**338**	*e*P	**PKPab**	**13 24 51.2**	**+1.2**
GURO	**Guroymak-BITLI**	**146.66**	**298**	PKPdf	**PKPdf**	**13 24 49.6**	**-0.8**
MTSE	**Matsula**	**146.73**	**341**	*e*P	**PKPab**	**13 24 52.6**	**0.0**
NB2	**NORSAR Subarra**	**147.07**	**353**	PKP	**PKPbc**	**13 24 51.9**	**-0.5**
	comp=Z,32nm,1.1s,baz=10,slow=3.2						
NB2	**NORSAR Subarra**	**147.07**	**353**	PKP	**PKPbc**	**13 24 51.9**	**-0.5**
	baz=10,slow=3.2						
NOA	**NORSAR Array B**	**147.07**	**353**	PKPbc	**PKPbc**	**13 24 51.6**	**-0.8**
	comp=Z,7.6nm,0.6s,baz=13,slow=4.4,SNR=18						
UPP	**Uppsala**	**147.23**	**347**	*e*P	**PKPbc**	**13 24 52.3**	**-0.5**
SOC	**Sochi**	**147.46**	**307**	*i* PKP2	**PKPab**	**13 24 55.1**	**-0.9**
SOC				*e*		13 28 15.8	
SOC				*e*SS	SS	13 47 19.8	-2.1
SOC				*e*SSS	SSS	13 52 50.8	
ISAL	**Salakas**	**148.49**	**335**	*e*P	**PKPbc**	**13 24 56.6**	**+0.3**
MNK	**Minsk**	**148.61**	**333**	*i* PKHKP	PKPpre	13 24 49.7	
MNK				*i*		13 28 23.7	
MNK				*i* PPP	PPP	13 31 42.0	
MNK				*i*		13 32 00.2	
MNK				*i* SS	SS	13 47 33.6	+0.2
MNK				*i* SSS	SSS	13 53 09.4	
MNK				pmax	pmax		
	comp=N,26nm,1.0s						
MNK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,5.0nm,1.1s						
MNK				MLR	MLR		
	comp=Z,134nm,15.0s						
MNK				MLR	MLR		
	comp=N,1µm,22.0s						
MNK				MLR	MLR		
	comp=E,129nm,24.0s						
MNK	**Minsk**	**148.61**	**333**	*i* PKP	**PKPdf**	**13 24 49.8**	**-3.2**
	comp=E,5.0nm,1.1s						
MNK				*i* PKP	**PKPdf**	**13 24 49.8**	**-3.2**
	comp=N,26nm,1.0s						
MNK				*i* PKP	**PKPdf**	**13 24 49.8**	**-3.2**
	comp=Z,9.0nm,0.8s,baz=42						
MNK				*i* PP	**PP**	**13 28 23.8**	**-2.5**
MNK				*i* PPP	PPP	13 31 42.0	
MNK				*i* SKS	**SKSdf**	**13 32 00.2**	**+1.1**
MNK				*i* SKKS	SKKSdf	13 41 26.6	+28
MNK				*i* SS	**SS**	**13 47 33.6**	**+0.3**
MNK				*i* SSS	SSS	13 53 09.4	
MNK				*i* LR	LR	14 27 27.8	
MNK				*i* LRM	MLR	14 31 29.2	
	comp=N,1µm,21.7s						
MNK				*i* LRM	MLR	14 31 31.2	
	comp=Z,134nm,15.3s						
MNK				*i* LRM	MLR	14 31 32.4	
	comp=E,129nm,24.3s						
IIGN	**Ignalina**	**148.63**	**335**	*e*P	**PKPbc**	**13 24 56.8**	**+0.1**
NACGM	**Naroch**	**148.75**	**334**	*i* PKP	**PKPbc**	**13 24 57.5**	**+0.5**
PABE	**Paberze**	**149.31**	**337**	*e*P	**PKPbc**	**13 24 58.1**	**-0.3**
PABE	**Paberze**	**149.31**	**337**	PKPbc	**PKPbc**	**13 24 58.0**	**-0.3**
AKASG	**Malin Array Be**	**150.59**	**326**	PKPbc	**PKPbc**	**13 25 01.1**	**-0.6**
	comp=E,12nm,0.7s,baz=43,slow=2.9,SNR=34						
AKASG	**Malin Array Be**	**150.59**	**326**		**PKPbc**	**13 25 00.6**	**-1.0**
AKBB	**Malin Array Si**	**150.59**	**326**	PKIKP	**PKPbc**	**13 25 00.6**	**-1.1**
AKBB	**Malin Array Si**	**150.59**	**326**	PKPbc	**PKPbc**	**13 25 00.6**	**-1.1**
DEL	**Delary**	**151.11**	**348**	*i* P	**PKPbc**	**13 25 02.0**	**-0.7**
BNN	**Bunyan**	**151.40**	**300**		**PKPbc**	**13 25 03.0**	**-1.1**
BRTR	**Keskin Array B**	**152.87**	**302**	PKPbc	**PKPbc**	**13 25 07.5**	**+0.1**
	comp=E,2.2nm,0.6s,baz=136,slow=3.9,SNR=5.0						
BRTR				PKPab	**PKPab**	**13 25 18.9**	**+0.3**
	comp=E,2.0nm,0.6s,baz=116,slow=3.4,SNR=4.6						
LVV	**L'vov**	**153.64**	**329**	*e*PKP2	**PKPab**	**13 25 24.3**	**+3.0**
UZH	**Uzhgorod**	**155.28**	**329**	*e*PKIKP	PKPab	13 25 17.5	-11
UZH				*e*		13 25 19.7	
UZH				*e*		13 25 25.8	
CLL	**Collm**	**156.15**	**345**	*e*PKP2	**PKPab**	**13 25 31.0**	**-0.9**
CLL				pmax	pmax		
	comp=Z,15nm,1.4s						
CLL	**Collm**	**156.15**	**345**	*e*PKPab	**PKPab**	**13 25 31.0**	**-0.9**
	comp=Z,15nm,1.4s						
LIC	**Lamto**	**156.37**	**158**	*e*PKP1	**PKPab**	**13 25 36.6**	**+2.8**
	comp=Z,24nm,0.9s						
KIC	**Kosan Boka**	**156.59**	**159**	*e*PKP1	**PKPab**	**13 25 37.6**	**+2.8**
	comp=Z,16nm,0.9s						
TIC	**Toumodi**	**156.77**	**158**	*e*PKP1	**PKPab**	**13 25 37.8**	**+2.3**
DBIC	**Dimbokro**	**156.85**	**158**	PKPab	**PKPab**	**13 25 37.1**	**+1.3**
	comp=Z,2.9nm,0.8s,baz=227,slow=4.2,SNR=4.0						
KHC	**Kasperske Hory**	**158.03**	**342**	*e*PKPAB	**PKPab**	**13 25 39.5**	**-0.6**
KHC	**Kasperske Hory**	**158.03**	**342**	*e*PKP2	**PKPab**	**13 25 39.5**	**-0.6**
GERES	**GERESS Array B**	**158.26**	**342**	PKPab	**PKPab**	**13 25 38.1**	**-3.1**
	comp=Z,0.8nm,0.7s,baz=27,slow=9.0,SNR=3.9						
CONA	**Conrad Observa**	**158.41**	**337**	*e*P	**PKPab**	**13 25 42.5**	**+0.6**
	comp=Z,23nm,2.0s						
VTS	**Vitosha**	**158.79**	**317**	PKP2	**PKPab**	**13 25 43.4**	**-0.5**
VTS	**Vitosha**	**158.79**	**317**		**PKPab**	**13 25 43.4**	**-0.5**
MOA	**Molln**	**158.99**	**340**	*e*P	**PKPab**	**13 25 45.0**	**+0.6**
	comp=Z,12nm,1.4s						
SOKA	**Soboth**	**159.77**	**337**	*e*P	**PKPab**	**13 25 46.2**	**-1.7**
	comp=Z,9.9nm,1.3s						
OBKA	**Obir**	**160.08**	**337**	*e*P	**PKPab**	**13 25 47.0**	**-2.2**
	comp=Z,9.8nm,1.9s						
WATA	**Walderalm**	**160.20**	**344**	*e*P	**PKPab**	**13 25 48.4**	**-1.4**
	comp=Z,9.3nm,0.9s						
RETA	**Reutte**	**160.25**	**346**	*e*P	**PKPab**	**13 25 49.8**	**0.0**
	comp=Z,6.0nm,0.9s						
MOTA	**Moosalm**	**160.31**	**345**	*e*P	**PKPab**	**13 25 50.1**	**-0.2**
	comp=Z,8.5nm,0.9s						
CRES	**Cresnjev**	**160.35**	**335**	*e*PKPab	**PKPab**	**13 25 49.4**	**-0.9**
ABTA	**Abfaltersbach**	**160.50**	**341**	*e*P	**PKPab**	**13 25 50.4**	**-0.6**
	comp=Z,6.7nm,0.9s						
VISS	**Visnje**	**160.59**	**336**	*i* PKPab	**PKPab**	**13 25 50.3**	**-1.0**
GBAS	**Gorenja Brezov**	**160.62**	**337**	*i* PKPab	**PKPab**	**13 25 50.4**	**-1.0**
CTI	**Castel Tesino**	**161.38**	**342**	PKP2	**PKPab**	**13 25 54.2**	**-0.7**
CTI	**Castel Tesino**	**161.38**	**342**		**PKPab**	**13 25 54.1**	**-0.7**
TORD	**Torodi Ar. Bea**	**164.61**	**173**	PKP	**PKPdf**	**13 25 14.8**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=272,slow=1.3,SNR=9.1						
TORD				PKPab	**PKPab**	**13 26 11.3**	**+1.7**
	comp=Z,6.3nm,0.8s,baz=190,slow=3.5,SNR=18						
TORD	**Torodi Ar. Bea**	**164.61**	**173**		**PKPdf**	**13 25 13.8**	**-0.8**
TORD				PKPab	**PKPab**	**13 26 10.7**	**+1.1**
ESDC	**Sonseca Array**	**167.21**	**27**	PKP	**PKPdf**	**13 25 16.3**	**+0.2**
	comp=Z,1.2nm,1.0s,baz=338,slow=3.3,SNR=4.6						
ESDC				PKPab	**PKPab**	**13 26 19.5**	**-1.1**
	comp=Z,1.1nm,0.9s,baz=318,slow=5.8,SNR=4.8						

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*NEIC **22** 13:23:09.2±1.1, 28°.6S±0°.2×176°.19W±0°.09, h10km±1km, mb4.4/13, Error ellipse: s-maj=29.1km s-min=6.9km az=335.0*

*IDC **22** 13:23:19.7±3.5, 28°.72S×176°.54W, h90km±22km, mb3.6/4, mb1 3.8/6, mb1mx3.6/30, mbtmp4.0/6, Error ellipse: s-maj=41.3km s-min=33.2km az=112.0*

ISC 22 13:23:11.1±1.1**, 28°.6S**±0°.1×**176°.1W**±0°.1**, h35**km**, n25, σ0s.74**/24**, mb4.2**/8**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.75**	**247**	P	Pn	13 23 44.4	+5.5
	131nm,0.3s,baz=317,slow=21,SNR=3.5						
RAO				S	**Sn**	**13 24 00.5**	**+0.6**
	147nm,0.3s,baz=94,slow=20,SNR=4.1						
RAO	**Raoul Island**	**1.75**	**247**	Pn	**Pn**	**13 23 39.0**	**+0.1**
URZ	**Urewera**	**11.20**	**209**	P	**Pn**	**13 25 50.4**	**+1.8**
	0.1nm,0.3s,baz=301,slow=23,SNR=2.1						
URZ				S	**Sn**	**13 27 51.9**	**-0.7**
	0.3nm,0.3s,baz=125,slow=23,SNR=2.1						
URZ	**Urewera**	**11.20**	**209**	Pn	**Pn**	**13 25 49.2**	**+0.6**
BKZ	**Black Stump Fm**	**12.22**	**208**	Pn	**Pn**	**13 26 02.3**	**-0.4**
THZ	**Tophouse**	**15.92**	**211**	Pn	**Pn**	**13 26 52.0**	**-0.5**
THZ				IAmb	IAmb	13 27 17.8	
	comp=Z,14nm,0.9s						
DZM	**Mont Dzumac**	**17.07**	**288**	P	**P**	**13 27 08.0**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=151,slow=17,SNR=1.7						
OXZ	**Oxford**	**17.55**	**210**	Pn	**Pn**	**13 27 11.6**	**-1.4**
OXZ				IAmb	IAmb	13 27 17.2	
	comp=Z,34nm,1.2s						
CTAO	**Charters Tower**	**35.23**	**275**	P	**P**	**13 30 02.4**	**0.0**
STKA	**Stephens Creek**	**36.55**	**254**	P	**P**	**13 30 13.7**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=100,slow=12,SNR=2.9						
AS31	**Alice Springs**	**44.92**	**264**	P	**P**	**13 31 23.0**	**+0.2**
ASAR	**Alice Springs**	**44.92**	**264**	P	**P**	**13 31 22.9**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=110,slow=7.5,SNR=6.0						
WR0	**Warramunga Arr**	**45.57**	**269**	P	**P**	**13 31 27.8**	**-0.1**
WR0				IAmb	IAmb	13 31 28.1	
	comp=Z,14nm,1.5s						
WB2	**Warramunga Arr**	**45.74**	**269**	P	**P**	**13 31 28.9**	**-0.4**
WRAB	**Tennant Creek**	**45.74**	**269**	P	**P**	**13 31 28.8**	**-0.4**
WRAB				IAmb	IAmb	13 31 57.7	
	comp=Z,5.2nm,1.1s						
WRA	**Warramunga Arr**	**45.75**	**269**	P	**P**	**13 31 29.0**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=109,slow=6.1,SNR=16						
WRA	**Warramunga Arr**	**45.75**	**269**	IAmb	IAmb	13 31 30.8	
	comp=Z,0.3nm,1.1s						
WB0	**Warramunga Arr**	**45.77**	**270**	P	**P**	**13 31 29.7**	**+0.2**
WB0				IAmb	IAmb	13 31 34.2	
	comp=Z,9.3nm,1.2s						
VNDA	**Vanda**	**50.07**	**186**	P	**P**	**13 32 01.8**	**-0.1**
VNDA				IAmb	IAmb	13 32 27.6	
	comp=Z,3.9nm,1.3s						
KNRA	**Kununurra**	**52.28**	**272**	P	**P**	**13 32 18.2**	**-1.2**
MJAR	**Matsushiro Arr**	**77.74**	**324**	P	**P**	**13 35 04.4**	**0.0**
	comp=Z,1.7nm,0.8s,baz=157,slow=6.4,SNR=4.2						
MJAR	**Matsushiro Arr**	**77.74**	**324**	IAmb	IAmb	13 35 25.6	
	comp=Z,4.3nm,1.4s						
NOA	**NORSAR Array B**	**147.17**	**353**	PKPbc	**PKiKP**	**13 42 51.9**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=15,slow=4.5,SNR=3.3						
AKASG	**Malin Array Be**	**150.80**	**326**	PKPbc	**PKiKP**	**13 43 01.2**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=52,slow=3.2,SNR=6.2						
AKASG	**Malin Array Be**	**150.80**	**326**		**PKiKP**	**13 43 01.0**	**+1.0**

IDC 22 13:27:43.9±999.0**, 38°.64N**×**39°.81E, h0**km**, Error ellipse: s-maj=3767.0km s-min=331.5km az=45.0, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**17.47**	**42**	*i*		15 14 10.0	
	baz=235,slow=310,SNR=1.7						
I46RU	**ZALESOVO INFRA**	**34.02**	**48**	*i*		16 57 40.0	
	baz=260,slow=332,SNR=1.2						
I34MN	**SONGINO INFRAS**	**48.01**	**56**	*i*		18 20 10.0	
	baz=286,slow=317,SNR=1.1						

IDC 22 13:41:37.8±3.8**, 19°.79S**×**176°.40W, h0**km**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.5**/35**, mbtmp3.9**/3**, Error ellipse: s-maj=173.0km s-min=73.1km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.45**	**244**	P	P	13 49 10.2	+0.2
	1.4nm,0.7s,baz=59,slow=12,SNR=1.8						
ASAR	**Alice Springs**	**46.15**	**256**	P	P	13 50 04.7	+0.1
	1.6nm,0.7s,baz=93,slow=8.1,SNR=48						
ASAR				PcP	PcP	13 51 39.4	-1.3
	0.2nm,0.5s,baz=104,slow=2.9,SNR=5.0						
WRA	**Warramunga Arr**	**46.20**	**261**	P	P	13 50 04.6	-0.3
	0.3nm,0.3s,baz=97,slow=7.5,SNR=29						
AKASG	**Malin Array Be**	**143.10**	**333**	PKP	PKiKP	14 01 15.4	-1.4
	0.6nm,0.5s,baz=40,slow=3.8,SNR=4.2						

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*IDC **22** 13:50:02.4±0.6, 5°.25S×118°.86E, h0km, mb4.3/19, mb1 4.3/21, mb1mx4.1/43, mbtmp4.3/21, ML3.6/2, MS3.5/2, Ms1 3.5/2, ms1mx3.0/38, Error ellipse: s-maj=14.4km s-min=9.6km az=8.0*

*NEIC **22** 13:50:05.4±1.0, 5°.22S±0°.05×118°.97E±0°.04, h16km±4km, mb4.6/30, Error ellipse: s-maj=6.8km s-min=5.5km az=172.0*

*DJA **22** 13:50:05.6±0.6, 5°S±2°×11°9E±°, h14km±5km, M4.6/23, mb4.8/7, mB5.0/5, MLv4.7/23, Mw(mB)4.3/5*

ISC 22 13:50:03.9±0.4**, 5°.29S**±0°.05×**118°.96E**±0°.05**, h10**km**, n95, σ1s.16**/97**, mb4.6**/35**, 2C, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KAPI	**Kappang**	**0.84**	**71**	Pg	**Pb**	**13 50 21.3**	**+0.7**
	1µm,0.3s,baz=299,slow=9.2,SNR=917						
KAPI				Lg	Lg	13 50 32.6	
	4µm,0.3s,baz=74,slow=22,SNR=30						
KAPI	**Kappang**	**0.84**	**71**		**Pb**	**13 50 21.3**	**+0.7**
KAPI				Sg	**Sg**	**13 50 31.1**	**0.0**
BKSI	**Bulukumba**	**1.16**	**91**	P	**Pb**	**13 50 26.7**	**+0.6**
BNSI	**Bone**	**1.45**	**52**	P	**Pg**	**13 50 32.0**	**+0.2**
SPSI	**Sidrap Palu**	**1.55**	**32**	P	**Pn**	**13 50 31.8**	**+0.2**
BSSI	**Bau Bau, Buton**	**1.75**	**119**	P	**Pn**	**13 50 34.8**	**+0.5**
TTSI	**Tana Toraja**	**2.39**	**21**	P	**Pn**	**13 50 45.3**	**+2.1**
KBKI	**Kotabaru**	**3.41**	**305**	P	**Pn**	**13 50 58.9**	**+1.7**
TWSI	**Taliwang, Sumb**	**3.99**	**211**	P	**Pn**	**13 51 05.6**	**+0.4**
WBSI	**Waikabubak, Su**	**4.34**	**174**	P	**Pn**	**13 51 11.1**	**+1.1**
EDFI	**Ende, Flores**	**4.38**	**142**	P	**Pn**	**13 51 11.0**	**+0.4**
BBKI	**Banjar Baru**	**4.49**	**294**	P	**Pn**	**13 51 14.4**	**+2.4**
BKB	**Balikpapan**	**4.50**	**333**	P	**Pn**	**13 51 16.0**	**+3.8**
BKB	**Balikpapan**	**4.50**	**333**	Pn	**Pn**	**13 51 13.2**	**+1.0**
MMRI	**Maumere**	**4.65**	**136**	P	**Pn**	**13 51 14.7**	**+0.4**
MMRI	**Maumere**	**4.65**	**136**	Pn	**Pn**	**13 51 15.2**	**+0.9**
BASI	**Baing, Sumba**	**5.15**	**162**	P	**Pn**	**13 51 21.7**	**+0.6**
	0.8nm2µm195nm,0.8s						
IGBI	**Denpasar**	**5.15**	**227**	P	**Pn**	**13 51 22.1**	**+0.9**
MPSI	**Mapaga**	**5.67**	**10**	P	**Pn**	**13 51 30.2**	**+1.9**
	0.2nm23nm,0.9s						
LUWI	**Luwuk**	**5.69**	**42**	P	**Pn**	**13 51 29.4**	**+0.9**
	0.8nm2µm144nm,0.7s						
LUWI	**Luwuk**	**5.69**	**42**	Pn	**Pn**	**13 51 28.5**	**0.0**
JAGI	**Jajag, Banyuwa**	**5.72**	**236**	P	**Pn**	**13 51 30.3**	**+1.4**
	0.6nm110nm,0.4s						
JAGI	**Jajag, Banyuwa**	**5.72**	**236**	Pn	**Pn**	**13 51 30.1**	**+1.2**
GMJI	**Gumukmas**	**6.22**	**241**	P	**Pn**	**13 51 37.2**	**+1.3**
	0.3nm48nm,2.2s						
TOLI2	**Tolitoli**	**6.62**	**16**	Pn	**Pn**	**13 51 40.9**	**-0.5**
BATI	**Baumata**	**6.75**	**137**	Pn	**Pn**	**13 51 45.0**	**+1.8**
	1.3nm,0.3s,baz=309,slow=6.5,SNR=2.1						
BATI				LR	LR	13 54 44.8	
	comp=Z,580nm,20.9s,baz=268,slow=41						
SANI	**Sanana**	**7.72**	**66**	P	**Pn**	**13 51 57.9**	**+1.4**
UGM	**Wanagama**	**8.77**	**252**	Pn	**Pn**	**13 52 11.7**	**+0.8**
KKM	**Kota Kinabalu**	**11.59**	**346**	Pn	**Pn**	**13 52 49.0**	**-0.6**
KNRA	**Kununurra**	**14.11**	**138**	Pn	**Pn**	**13 53 24.0**	**0.0**
MTN	**Manton Dam**	**14.17**	**123**	Pn	**Pn**	**13 53 24.3**	**-0.5**
FITZ	**Fitzroy Crossi**	**14.30**	**153**	Pn	**Pn**	**13 53 28.2**	**+1.6**
	0.2nm,0.3s,baz=161,slow=18,SNR=2.0						
PSA00	**Pilbara Seismi**	**16.21**	**177**	Pn	**Pn**	**13 53 51.4**	**-0.4**
GIRL	**Giralia**	**17.84**	**194**		**Pn**	**13 54 13.3**	**+0.9**
IPM	**Ipoh**	**20.37**	**298**	P	**P**	**13 54 41.4**	**+0.4**
IPM				IAmb	IAmb	13 54 45.0	
	comp=Z,22nm,0.9s						
WB0	**Warramunga Arr**	**20.80**	**135**	P	**P**	**13 54 46.0**	**+0.4**
WRA	**Warramunga Arr**	**20.88**	**136**	P	**P**	**13 54 46.9**	**+0.4**
	comp=Z,5.0nm,0.8s,baz=313,slow=12,SNR=18						
WRA				PcP	**PcP**	**13 58 54.0**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=313,slow=2.2,SNR=2.3						
WRA				LR	LR	14 04 13.7	
	comp=Z,106nm,19.8s,baz=190,slow=41						
WRA	**Warramunga Arr**	**20.88**	**136**	P	**P**	**13 54 47.1**	**+0.7**
WRAB	**Tennant Creek**	**20.88**	**136**	P	**P**	**13 54 47.0**	**+0.5**
WRAB				IAmb	IAmb	13 54 54.4	
	comp=Z,22nm,1.1s						
WB2	**Warramunga Arr**	**20.89**	**136**		**P**	**13 54 46.7**	**+0.1**
WB2				IAmb	IAmb	13 54 54.4	
	comp=Z,22nm,1.1s						
WR0	**Warramunga Arr**	**21.03**	**135**	P	**P**	**13 54 48.7**	**+0.6**
WR0				IAmb	IAmb	13 54 55.3	
	comp=Z,24nm,1.2s						
KULM	**Kulim**	**21.09**	**300**	P	**P**	**13 54 48.1**	**-0.6**
PSI	**Prapat**	**21.57**	**291**	P	**P**	**13 54 53.3**	**-0.7**
	comp=Z,5.2nm,0.7s,baz=162,slow=13,SNR=1.5						
AS31	**Alice Springs**	**23.26**	**143**	P	**P**	**13 55 12.8**	**+1.0**
ASAR	**Alice Springs**	**23.26**	**143**	P	**P**	**13 55 13.2**	**+1.4**
	comp=Z,2.5nm,0.8s,baz=312,slow=8.3,SNR=33						
ASAR				PcP	**PcP**	**13 58 59.0**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=322,slow=1.4,SNR=5.0						
ASAR	**Alice Springs**	**23.26**	**143**	P	**P**	**13 55 12.8**	**+0.9**
UBPT	**Khong Chiam**	**24.42**	**327**	P	**P**	**13 55 22.3**	**-0.6**
UBPT				IAmb	IAmb	13 55 26.0	
	comp=Z,34nm,1.4s						
COEN	**Coen**	**25.36**	**112**	P	**P**	**13 55 31.0**	**-0.4**
COEN				IAmb	IAmb	13 55 33.9	
	comp=Z,27nm,1.2s						
FORT	**Forrest**	**26.76**	**162**	P	**P**	**13 55 44.0**	**0.0**
FORT				IAmb	IAmb	13 56 11.8	
	comp=Z,21nm,0.8s						
YHNB	**Yeheng**	**29.88**	**4**	P	**P**	**13 56 11.1**	**-0.8**
CMAR	**Chiang Mai Arr**	**30.76**	**321**	P	**P**	**13 56 20.8**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=140,slow=6.9,SNR=14						
CMAR	**Chiang Mai Arr**	**30.76**	**321**	P	**P**	**13 56 19.1**	**-0.7**
STKA	**Stephens Creek**	**33.89**	**144**	P	**P**	**13 56 47.8**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=328,slow=8.9,SNR=10						
STKA	**Stephens Creek**	**33.89**	**144**	P	**P**	**13 56 47.9**	**+0.8**
KMI	**Kunming**	**34.10**	**333**	⇑P	**P**	**13 56 51.5**	**+2.3**
KMI				pP	sP	13 56 56.9	+3.4
KMI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NJ2	**Nanjing**	**37.14**	**360**	*e*P	**P**	**13 57 17.1**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JHS	**Saijyo**	**42.24**	**17**	P	**P**	**13 57 57.1**	**-0.3**
JHS				IAmb	IAmb	13 58 03.5	
	comp=Z,28nm,1.4s						
INCN	**Inchon**	**43.15**	**9**	P	**P**	**13 58 04.0**	**-0.8**
INCN				IAmb	IAmb	13 58 12.7	
	comp=Z,11nm,0.9s						
JWT	**Wachi**	**43.23**	**20**	P	**P**	**13 58 04.2**	**-1.2**
JWT				IAmb	IAmb	13 58 14.8	
	comp=Z,16nm,1.0s						
KSRS	**Korea Array**	**43.34**	**10**	P	**P**	**13 58 05.0**	**-1.3**
	comp=Z,2.4nm,1.0s,baz=191,slow=8.3,SNR=9.0						
LZH	**Lanzhou**	**43.53**	**342**	*e*P	**P**	**13 58 08.1**	**0.0**
LZH				pP	pP	13 58 11.8	+0.6
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
MAT	**Matsushiro**	**45.35**	**22**	P	**P**	**13 58 21.7**	**-0.7**
MJAR	**Matsushiro Arr**	**45.35**	**22**	P	**P**	**13 58 21.2**	**-1.3**
	comp=Z,2.4nm,0.8s,baz=209,slow=11,SNR=3.3						
HHC	**Hu-ho-hao-te**	**46.42**	**352**	*e*P	**P**	**13 58 34.3**	**+3.4**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,6.6s						
GTA	**Gaotai**	**47.87**	**340**	⇑P	**P**	**13 58 43.3**	**+1.0**
GTA				pP	sP	13 58 47.9	+1.3
GTA				sP	pP	13 58 51.0	+5.6
GTA				pmax	pmax		
	comp=Z,11nm,0.8s						
USRK	**Ussuriysk Ar.**	**50.65**	**12**	P	**P**	**13 59 02.1**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=181,slow=4.8,SNR=4.0						
ASAJ	**Asahikawa**	**53.60**	**21**	P	**P**	**13 59 25.6**	**+0.3**
	comp=Z,3.6nm,0.5s,baz=232,slow=7.9,SNR=7.2						
JKA	**Kamikawa-asahi**	**53.60**	**21**	P	**P**	**13 59 25.6**	**+0.3**
SONM	**Songino Array**	**54.05**	**350**	P	**P**	**13 59 28.6**	**-0.1**
	comp=Z,3.4nm,0.9s,baz=170,slow=7.9,SNR=13						
SONM				PcP	**PcP**	**14 00 33.5**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=169,slow=3.1,SNR=4.5						
SONM	**Songino Array**	**54.05**	**350**	IAmb	IAmb	13 59 29.7	
	comp=Z,4.9nm,1.2s						
KLR	**Kul'dur**	**55.43**	**10**	P	**P**	**13 59 38.4**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=189,slow=9.4,SNR=3.8						
WMQ	**Urumqi**	**56.43**	**333**	*e*P	**P**	**13 59 46.6**	**+0.7**
WMQ				pP	sP	13 59 53.3	+3.0
WMQ				pmax	pmax		

```
               comp=Z,18nm,1.1s
MK31   Makanchi Array    61.17 332  P      P        14 00 18.4  -0.3
MK31                                IAmb   IAmb     14 00 19.3
               comp=Z,4.1nm,0.8s
MKAR   Makanchi Array    61.17 332  P      P        14 00 18.4  -0.3
               comp=Z,4.5nm,0.6s,baz=142,slow=7.5,SNR=44
MKAR   Makanchi Array    61.17 332  P      P        14 00 18.3  -0.5
MAKZ   Makanchi          61.33 332  P      P        14 00 19.2  -0.6
MAKZ                                IAmb   IAmb     14 00 20.0
               comp=Z,2.0nm,0.6s
KBL    Kabul             61.47 314  P      P        14 00 20.9  -0.4
AAK    Ala-Archa         62.45 324  P      P        14 00 27.6   0.0
ZAA0   Zalesovo Array    65.59 339  P      P        14 00 45.9  -1.9
ZALV   Zalesovo Beam     65.59 339  P      P        14 00 46.5  -1.3
               comp=Z,10nm,0.8s,baz=141,slow=4.6,SNR=30
ZALV   Zalesovo Beam     65.59 339  P      P        14 00 45.6  -2.2
KURK   Kurchatov         65.68 333  P      P        14 00 47.4  -1.1
KURK                                IAmb   IAmb     14 00 48.7
               comp=Z,8.8nm,1.1s
PEA0B  Petropavlovsk-    66.73  24  P      P        14 00 54.7  -0.5
PETK   Petropavlovsk-    66.73  24  P      P        14 00 56.5  +1.3
               comp=Z,4.7nm,0.9s,baz=222,slow=7.8,SNR=2.9
YAK    Yakutsk           67.64   5  P      P        14 01 00.2  -0.5
               comp=Z,2.5nm,0.4s,baz=278,slow=4.5,SNR=4.7
YAK    Yakutsk           67.64   5  IAmb   IAmb     14 01 01.1
               comp=Z,8.0nm,0.8s
SEY    Seymchan          72.62  15  P      P        14 01 32.2  +1.0
               comp=Z,1.4nm,0.5s,baz=212,slow=9.5,SNR=7.4
ABKAR  Akbulak array     74.53 324  P      P        14 01 42.3  -0.5
NRIK   Noril'sk          77.53 349  P      P        14 01 59.0  -0.4
               comp=Z,3.5nm,0.3s,baz=124,slow=6.0,SNR=5.9
NRIK   Noril'sk          77.53 349  P      P        14 01 58.5  -1.0
NRIK                                IAmb   IAmb     14 02 00.1
               comp=Z,5.7nm,1.0s
ARU    Arti              78.63 330  P      P        14 02 05.8  -0.1
ARU                                 IAmb   IAmb     14 02 07.2
               comp=Z,16nm,1.5s
KBZ    Khabaz            83.64 315  P      P        14 02 33.4  +0.5
               comp=Z,1.2nm,0.3s,baz=122,slow=2.0,SNR=6.4
KLMR   Klimovskoe        89.46 331  eP     P        14 02 57.8  -3.1
KLMR                                AMP             14 03 01.0
               comp=Z,8.0nm,1.0s
AKASG  Malin Array Be    93.89 320  P      P        14 03 20.5  -1.2
               comp=Z,0.2nm,0.3s,baz=82,slow=4.3,SNR=5.0
TORD   Torodi Ar. Bea   117.71 282  PKP    PKPdf    14 08 50.2  -1.3
               comp=Z,0.3nm,0.5s,baz=88,slow=0.6,SNR=1.5
```

IDC ***22*** *13:58:44.2±5.7, 33°.47N×137°.18E, h250^{km}±120^{km}, mb2.7/3, mb1 2.9/4, mb1mx2.3/37, mbtmp3.3/4, Error ellipse: s-maj=217.1km s-min=28.3km az=60.0*
JMA ***22*** *13:58:44.6±0.5, 33°.82N×137°.97E, h323^{km}±5^{km}, M2.5*
ISC 22 13:58:46.2±1.1, **33°.9N**±0°.1×**137°.98E**±0°.09, **h300**^{km}**, n17, σ1^{s}.30**/19, **mb2.7**/3, **Near south coast of eastern Honshu**

```
Code   Station Name        Δ°  AZ°   Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
JIE    Ise                1.15 294  P      Pn       13 59 28.6  +1.4
JNY    Yasuok             1.44 356  P      Pn       13 59 30.5  +1.6
JKN2   Miekihoku          1.45 283  P      Pn       13 59 30.0  +1.1
JYTA   Yamagatataniai     1.96 329  P      Pn       13 59 33.7  +1.2
JTNC   Tanabenakahech     1.97 268  P      Pn       13 59 33.5  +0.8
JHU    Hanno              2.20  29  P      Pn       13 59 36.4  +1.9
JRY    Ryogami san        2.22  20  P      Pn       13 59 36.7  +2.0
JWT    Wachi              2.52 303  P      Pn       13 59 37.9  +0.6
BSO1   Boso 1             2.59  73  P      Pn       13 59 38.7  +1.4
MJAR   Matsushiro Arr     2.62   4  P      Pn       13 59 38.5  +0.3
               0.2nm,0.3s,baz=192,slow=10.0,SNR=12
MAT    Matsushiro         2.62   4  P      Pn       13 59 39.4  +1.2
JAG    Ashikaga           2.77  25  P      Pn       13 59 40.6  +0.9
JYT    Yasato             2.93  38  P      Pn       13 59 42.5  +1.3
JYT                                 S      S        14 00 24.1  -1.0
JHO    Hitachi            3.42  38  P      Pn       13 59 46.6  +0.5
JHO                                 S      S        14 00 32.1  -1.9
MKAR   Makanchi Array    43.47 304  P      P        14 06 20.5  +0.2
               0.3nm,0.7s,baz=105,slow=9.1,SNR=2.2
WRA    Warramunga Arr    53.68 184  P      P        14 07 37.0  -0.7
               0.5nm,0.9s,baz=0.2,slow=7.7,SNR=8.6
ASAR   Alice Springs     57.40 184  P      P        14 08 03.2  -0.8
               0.3nm,0.9s,baz=18,slow=12,SNR=1.6
```

IDC 22 14:04:51.0±999.0, **41°.14N**×**43°.91E, h0**^{km}**, Error ellipse: s-maj=2791.0km s-min=296.4km az=46.0, Turkey-Georgia-Armenia border region**

```
Code   Station Name        Δ°  AZ°   Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
I31KZ  AKTYUBINSK INF    13.51  42  i               15 22 50.0
               baz=232,slow=298,SNR=1.2
I46RU  ZALESOVO INFRA    30.00  51  i               17 10 30.0
               baz=260,slow=330,SNR=1.3
I34MN  SONGINO INFRAS    44.02  59  i               18 34 22.6
               baz=286,slow=324
```

IDC 22 14:24:02.3±59.0, **22°.56S**×**175°.12W, h0**^{km}**, mb3.9**/3, **mb1 4.1**/3, **mb1mx3.4**/37, **mbtmp3.9**/3, **Error ellipse: s-maj=1103.0km s-min=184.6km az=87.0, Tonga Islands region**

```
Code   Station Name        Δ°  AZ°   Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
STKA   Stephens Creek    39.38 247  P      P        14 31 33.9   0.0
               2.4nm,1.1s,baz=67,slow=7.7,SNR=1.5
ASAR   Alice Springs     46.69 258  P      P        14 32 33.0  -0.2
               0.5nm,0.4s,baz=97,slow=7.4,SNR=28
WRA    Warramunga Arr    47.00 263  P      P        14 32 35.5  -0.2
               0.7nm,0.3s,baz=102,slow=8.2,SNR=44
```

SOME ***22*** *15:01:34.2, 39°.75N×74°.88E, h0^{km}*
NNC ***22*** *15:01:39.2±1.6, 39°.89N×75°.00E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=12.5km s-min=8.0km az=158.0*
KRNET ***22*** *15:01:40.8±0.1, 39°.86N×74°.75E, mb3.6*
ISC 22 15:01:39.4±1.1, **39°.87N**±0°.05×**74°.94E**±0°.03, **h10**^{km}**, n68, σ1^{s}.81**/102, **35C-6D, Southern Xinjiang**

```
Code   Station Name        Δ°  AZ°   Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
SFK    Sufi-Kurgan        1.11 278⇓eP  Pb       15 01 59.4  -1.4
               baz=80
SFK                                ⇓eS  Sg       15 02 12.4  -2.8
               baz=80
OHH    Osh                1.77 292⇑iP  Pb       15 02 11.5  -0.5
               baz=94
OHH                                ⇑iS  Sn       15 02 33.5  +0.6
               baz=94
ARLS   Aral               2.05 347⇑eP  Pb       15 02 17.2  +0.4
               baz=51
ARLS                               ⇑iS  Sg       15 02 44.1  -1.1
               baz=51
UCH    Uchtor             2.38 352  P    Pb       15 02 23.0  +0.3
               SNR=65
UCH    Uchtor             2.38 352⇑iP  Pb       15 02 22.7  +0.1
               baz=56
UCH                                ⇑iS  Sb       15 02 53.2  +1.0
               baz=56
AML    Almayashu          2.45 338  P    Pb       15 02 24.1  +0.4
               SNR=18
AML    Almayashu          2.45 338⇑eP  Pb       15 02 23.1  -0.7
               baz=41
AML                                ⇑iS  Sb       15 02 53.9  -0.3
               baz=41
DRK    Karamyk            2.45 262⇑iP  Pn       15 02 21.7  +2.0
               baz=61
DRK                                ⇑iS  Sn       15 02 51.2  +1.3
               baz=61
ULHL   Ulahol             2.57  22  P    Pg       15 02 26.5  -2.2
               SNR=28
ULHL   Ulahol             2.57  22⇑iP  Pb       15 02 26.1  +0.3
               baz=25
ULHL                               ⇑iS  Sg       15 02 59.1  -3.0
               baz=25
BOOM   Boomskoye usch     2.73  16⇑iP  Pb       15 02 27.9  -0.5
               baz=19
BOOM                               ⇑iS  Sb       15 03 02.5  +0.5
               baz=19
KBK    Karagaybulak       2.79   0  P    Pb       15 02 29.1  -0.3
               SNR=22
KBK    Karagaybulak       2.79   0⇑eP  Pb       15 02 28.2  -1.2
               baz=3.0
KBK                                ⇑iS  Sb       15 03 03.0  -0.7
               baz=3.0
AAK    Ala-Archa          2.79 353  P    Pb       15 02 28.8  -0.6
               SNR=22
AAK    Ala-Archa          2.79 353 ⇑Pn  Pb       15 02 28.8  -0.6
               9.2nm,0.4s
AAK                                 ⇓Lg  Lg       15 03 08.9
               44nm,0.7s
KDJ    Kajisay            2.83  36⇑iP  Pb       15 02 30.0  -0.1
               baz=39
KDJ                                ⇑iS  Sb       15 03 05.9  +1.0
               baz=39
TARG   Taragay, Kyrgy     2.87  49⇑eP  Pb       15 02 30.6  -0.3
               baz=50
TARG                               ⇑iS  Sg       15 03 07.8  -3.7
               baz=50
EKS2   Erkin-Say          2.93 343  P    Pb       15 02 29.1  -2.6
               SNR=17
ARK    Arkit              2.97 312⇑iP  Pn       15 02 29.2  +2.5
               baz=13
ARK                                ⇑iS  Sn       15 03 04.7  +2.3
               baz=13
TKM2   Tokmak 2           3.09   9  P    Pb       15 02 32.7  -1.9
               SNR=17
TKM2   Tokmak 2           3.09   9 ⇓Pn  Pb       15 02 32.8  -1.9
               14nm,0.4s
TKM2                                ⇑Lg  Lg       15 03 17.0
               33nm,0.6s
CHMS   Chumysh            3.13 358  P    Sg       15 03 20.2  +0.2
               SNR=5.7
MRKS   Merke              3.15 336 eP    Pb       15 02 34.7  -0.9
               9.4nm,0.6s
MRKS                               eS    Sg       15 03 19.1  -1.5
               30nm,0.5s
MRKS   Merke              3.15 336  Pg   Pb       15 02 34.7  -0.9
               9.4nm,0.6s
MRKS                                Lg   Lg       15 03 19.1
               30nm,0.5s
BTK    Batken             3.17 275⇑iP  Pn       15 02 31.5  +2.1
               baz=75
BTK                                ⇑iS  Sn       15 03 08.5  +1.2
               baz=75
MNAS   Manas              3.20 326⇑eP  Pn       15 02 32.8  +2.9
               baz=28
MNAS                               ⇑iS  Sn       15 03 10.8  +2.7
               baz=28
KST    Kastek             3.27  13 eP    Pb       15 02 37.6   0.0
               56nm,0.4s
KST                                eS    Sg       15 03 23.9  -0.4
               77nm,0.8s
KST    Kastek             3.27  13  Pg   Pb       15 02 37.6   0.0
               56nm,0.4s
KST                                 Lg   Lg       15 03 23.9
               77nm,0.8s
TRKS   Terek-Say          3.33 301⇑eP  Pn       15 02 33.4  +1.7
               baz=2.0
TRKS                               ⇑eS  Sn       15 03 11.6  +0.2
               baz=2.0
USP    Ospenovka          3.41 355  P    Pb       15 02 37.0  -3.0
               SNR=10
DGS    Degeres            3.43  10 eP    Pb       15 02 40.9  +0.6
               28nm,0.5s
DGS                                eS    Sg       15 03 29.0  -0.6
               37nm,0.7s
DGS    Degeres            3.43  10  Pg   Pb       15 02 40.9  +0.6
               28nm,0.5s
DGS                                 Lg   Lg       15 03 29.0
               37nm,0.7s
MTBS   Maitube            3.45  19 eP    Pb       15 02 40.8  +0.2
               8.8nm,0.5s
MTBS                               eS    Sg       15 03 28.5  -1.6
               34nm,0.4s
MTBS   Maitube            3.45  19  Pg   Pb       15 02 40.8  +0.2
               8.8nm,0.5s
MTBS                                Lg   Lg       15 03 28.5
               34nm,0.4s
TNSS   Tian-Shan          3.51  25 eP    Pb       15 02 41.9   0.0
               14nm,0.2s
TNSS                               eS    Sg       15 03 30.2  -1.9
               24nm,0.7s
TNSS   Tian-Shan          3.51  25  Pg   Pb       15 02 41.8   0.0
               14nm,0.6s
TNSS                                Lg   Lg       15 03 30.2
               24nm,0.7s
SGDS   Sogindy            3.59 356  Pg   Pb       15 02 42.8  -0.2
               7.1nm,0.5s
SGDS                                Lg   Lg       15 03 33.0
               20nm,0.8s
AAA    Alma-Ata           3.66  23 eP    Pb       15 02 45.1  +1.0
               21nm,0.2s
AAA                                eS    Sg       15 03 36.4  -0.3
               88nm,0.4s
AAA    Alma-Ata           3.66  23  Pg   Pb       15 02 45.1  +1.0
               21nm,0.2s
AAA                                 Lg   Lg       15 03 36.4
               88nm,0.4s
MDOK   Medeo              3.66  25 eP    Pb       15 02 44.2   0.0
               10nm,0.1s
MDOK                               eS    Sg       15 03 34.4  -2.4
               32nm,0.6s
MDOK   Medeo              3.66  25 ⇑Pg  Pg       15 02 46.2  -3.2
               7.4nm,0.5s
MDOK                                ⇓Lg  Lg       15 03 34.3
               29nm,0.6s
MDOK   Medeo              3.66  25  Pg   Pb       15 02 44.2   0.0
               11nm,0.7s
MDOK                                Lg   Lg       15 03 34.4
               32nm,0.6s
KNDC   Almaty             3.68  24 ⇑Pg  Pg       15 02 46.9  -3.0
               15nm,0.4s
KNDC                                ⇑Lg  Lg       15 03 36.8
               67nm,0.5s
KOTS   Kotyrbulak         3.74  25 eP    Pb       15 02 46.0  +0.3
               6.8nm,0.5s
KOTS                               eS    Sg       15 03 37.6  -1.9
               96nm,0.8s
KOTS   Kotyrbulak         3.74  25  Pg   Pb       15 02 46.0  +0.3
               6.8nm,0.5s
KOTS                                Lg   Lg       15 03 37.6
               96nm,0.8s
KRBS   Karabastau         3.87   8 eP    Pb       15 02 47.9  +0.2
               6.1nm,0.5s
KRBS                               eS    Sg       15 03 40.9  -2.7
               29nm,0.6s
KRBS   Karabastau         3.87   8  Pg   Pb       15 02 47.9  +0.2
               6.1nm,0.5s
KRBS                                Lg   Lg       15 03 40.9
               29nm,0.6s
KTBS   Karatobe           4.06  18 eP    Pb       15 02 51.8  +0.8
               12nm,0.4s
KTBS                               eS    Sg       15 03 47.5  -2.2
               49nm,0.5s
KTBS   Karatobe           4.06  18  Pg   Pb       15 02 51.8  +0.8
               12nm,0.4s
KTBS                                Lg   Lg       15 03 47.5
               49nm,0.5s
SATY   Saty               4.12  38 eP    Pb       15 02 52.5  +0.4
               5.1nm,0.6s
SATY                               eS    Sg       15 03 48.5  -3.2
               21nm,0.5s
SATY   Saty               4.12  38  Pg   Pb       15 02 52.5  +0.4
               5.1nm,0.6s
SATY                                Lg   Lg       15 03 48.5
               21nm,0.5s
KUU    Kurty              4.16  14 eP    Pb       15 02 53.2  +0.6
               9.6nm,0.5s
KUU                                eS    Sg       15 03 50.0  -2.9
               50nm,0.6s
KUU    Kurty              4.16  14  Pg   Pb       15 02 53.2  +0.6
               9.6nm,0.5s
KUU                                 Lg   Lg       15 03 50.0
               50nm,0.6s
ZHN    Zhinishke          4.22  37 eP    Pb       15 02 54.0  +0.3
               5.3nm,0.2s
ZHN                                eS    Sg       15 03 51.2  -3.6
               25nm,0.5s
ZHN    Zhinishke          4.22  37  Pg   Pb       15 02 54.0  +0.3
               5.3nm,0.2s
ZHN                                 Lg   Lg       15 03 51.2
               25nm,0.5s
IUG    Iuzhnay            4.35 303 eP    Pb       15 02 56.1  +0.1
               148nm,0.5s
IUG                                eS    Sg       15 03 55.2  -4.0
               46nm,0.7s
IUG    Iuzhnay            4.35 303  Pg   Pb       15 02 56.1  +0.1
               148nm,0.5s
IUG                                 Lg   Lg       15 03 55.2
               46nm,0.7s
UZB    Uzynbulak          4.49  42 eP    Pb       15 02 59.2  +0.8
               3.4nm,0.4s
UZB                                eS    Sg       15 03 59.9  -3.6
               17nm,0.6s
UZB    Uzynbulak          4.49  42  Pg   Pb       15 02 59.2  +0.8
               3.4nm,0.4s
UZB                                 Lg   Lg       15 03 59.9
               17nm,0.6s
KK08   Karatay Array      4.65 316 ⇑Pn  Pn       15 02 53.6  +3.9
               1.5nm,0.5s
KK08                                ⇓Pg  Pb       15 03 03.5  +2.4
               4.1nm,0.4s
KK08                                ⇑Lg  Lg       15 04 05.4
               8.2nm,0.5s
ARXS   Arharly            4.85  25 eP    Pb       15 03 05.5  +1.0
               10.0nm,0.5s
ARXS                               eS    Sg       15 04 11.4  -3.6
               11nm,0.4s
ARXS   Arharly            4.85  25  Pg   Pb       15 03 05.5  +1.0
               10.0nm,0.5s
ARXS                                Lg   Lg       15 04 11.4
               11nm,0.4s
PDGK   Podgornoye         4.86  43  Pg   Pb       15 03 05.6  +0.9
               1.9nm,0.7s
PDGK                                Lg   Lg       15 04 11.1
               8.8nm,0.8s
BRLS   Borolday           4.97 311 eP    Pb       15 03 06.9  +0.4
               6.4nm,0.1s
BRLS                               eS    Sg       15 04 13.1  -5.7
               16nm,0.1s
BLB    Baldybastay        4.98  31  Pg   Pb       15 03 07.5  +0.7
               11nm,0.5s
BLB                                 Lg   Lg       15 04 14.8
               13nm,0.3s
BTLS   Baital             5.21 353 eP    Pb       15 03 12.5  +1.9
               1.8nm,0.5s
BTLS                               eS    Sg       15 04 22.8  -3.9
               6.1nm,0.9s
BTLS   Baital             5.21 353  Pg   Pb       15 03 12.5  +1.9
               1.8nm,0.5s
BTLS                                Lg   Lg       15 04 22.8
               6.1nm,0.9s
AB31   Akbulak array     14.20 316  P    Pn       15 05 02.0  +1.6
               0.6nm,0.6s,baz=123,slow=13,SNR=12
```

IDC ***22*** *15:12:28.2±3.3, 27°.99S×74°.25E, h0^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.6/52, mbtmp3.9/6, Error ellipse: s-maj=103.9km s-min=30.5km az=50.0*
NEIC ***22*** *15:12:28.7±0.6, 28°.15S±0°.09×74°.0E±0°.2, h10^{km}±2^{km}, mb4.3/12, Error ellipse: s-maj=37.2km s-min=10.6km az=252.0*
ISC 22 15:12:29.7±2.6, **28°.0S**±0°.4×**74°.2E**±0°.4, **h12**^{km}**, n26, σ0^{s}.72**/19, **mb4.2**/12, **Mid-Indian Ridge**

```
Code   Station Name        Δ°  AZ°   Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
H08S2  Diego Garcia H    20.33 355  T      T        15 38 13.1
               baz=176,slow=76,SNR=19
H08S1  Diego Carcia H    20.33 355  T      T        15 38 17.0
               baz=176,slow=76,SNR=16
H08S3  Diego Garcia H    20.35 355  T      T        15 38 14.5
               baz=176,slow=76,SNR=18
H01W2  Cape Leeuwin H    34.60 112  T      T        15 55 42.9
               baz=270
H01W3  Cape Leeuwin H    34.60 112  T      T        15 55 37.1
               baz=270
H01W1  Cape Leeuwin H    34.62 112  T      T        15 55 37.6
               baz=270
CMAR   Chiang Mai Arr    52.06  30  P      P        15 21 40.0  +0.5
               0.3nm,0.3s,baz=220,slow=5.5,SNR=1.7
CMAR   Chiang Mai Arr    52.06  30  P      P        15 21 40.0  +0.5
ASAR   Alice Springs     53.48 100  P      P        15 21 49.8  -0.5
               1.8nm,0.6s,baz=251,slow=6.8,SNR=35
ASAR   Alice Springs     53.48 100  P      P        15 21 49.1  -1.1
AS31   Alice Springs     53.48 100  P      P        15 21 48.7  -1.5
AS31                                IAmb   IAmb     15 21 56.9
               comp=Z,0.7nm,0.7s
WRA    Warramunga Arr    55.10  96  P      P        15 22 01.5  -0.5
               comp=Z,3.0nm,0.7s,baz=252,slow=7.4,SNR=24
WRA    Warramunga Arr    55.10  96  P      P        15 22 01.4  -0.6
WB2    Warramunga Arr    55.11  96  P      P        15 22 01.3  -0.8
WRAB   Tennant Creek     55.11  96  P      P        15 22 01.6  -0.5
WRAB                                IAmb   IAmb     15 22 02.6
               comp=Z,5.3nm,0.9s
WB0    Warramunga Arr    55.21  95  P      P        15 22 02.3  -0.5
WR0    Warramunga Arr    55.27  96  P      P        15 22 02.7  -0.6
STKA   Stephens Creek    57.70 112  P      P        15 22 21.5  +1.1
               comp=Z,2.8nm,1.0s,baz=201,slow=8.6,SNR=3.0
STKA   Stephens Creek    57.70 112  IAmb   IAmb     15 22 24.2
               comp=Z,1.2nm,1.3s
GEYT   Alibeck           67.31 346  P      P        15 23 24.3   0.0
GEYT                                IAmb   IAmb     15 23 35.6
               comp=Z,1.8nm,0.6s
GYA0B  ALIBECK ARRAY     67.31 346  P      P        15 23 24.4   0.0
GYA0B                               IAmb   IAmb     15 23 45.9
               comp=Z,3.0nm,0.6s
MAKZ   Makanchi          74.81   6  P      P        15 24 08.9  -0.7
MAKZ                                IAmb   IAmb     15 24 19.6
               comp=Z,2.5nm,1.1s
MK31   Makanchi Array    74.83   6  P      P        15 24 09.6  -0.1
MK31                                IAmb   IAmb     15 24 13.2
               comp=Z,2.0nm,1.4s
MKAR   Makanchi Array    74.83   6  P      P        15 24 09.6  -0.1
               comp=Z,0.8nm,1.0s,baz=191,slow=10,SNR=3.5
SONM   Songino Array     80.88  21  P      P        15 24 43.5   0.0
               comp=Z,0.3nm,0.8s,baz=210,slow=6.4,SNR=2.5
YKA    Yellowknife Ar   145.05   7  PKPbc  PKPab    15 32 05.7  +0.1
               comp=Z,0.5nm,0.7s,baz=333,slow=3.9,SNR=9.3
```

IDC ***22*** *15:15:59.3±5.1, 28°.00S×74°.38E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.5/54, mbtmp3.9/5, Error ellipse: s-maj=173.7km s-min=35.2km az=42.0*
NEIC ***22*** *15:16:01.1±0.9, 28°.0S±0°.2×74°.3E±0°.1, h10^{km}±2^{km}, mb4.5/9, Error ellipse: s-maj=35.0km s-min=22.0km az=185.0*
ISC 22 15:16:00.4±4.4, **28°.1S**±0°.7×**74°.3E**±0°.8, **h10**^{km}**, n19, σ0^{s}.43**/15, **mb4.1**/7, **Mid-Indian Ridge**

```
Code   Station Name        Δ°  AZ°   Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
H08S2  Diego Garcia H    20.42 355  T      T        15 41 40.2
               baz=172
H08S1  Diego Carcia H    20.42 355  T      T        15 41 49.5
               baz=172
H08S3  Diego Garcia H    20.44 355  T      T        15 41 42.1
               baz=172
BBOO   Buckleboo         52.76 111  P      P        15 25 15.8   0.0
ASAR   Alice Springs     53.32 100  P      P        15 25 20.4  +0.3
               1.5nm,0.7s,baz=252,slow=6.5,SNR=18
ASAR   Alice Springs     53.32 100  P      P        15 25 19.9  -0.2
AS31   Alice Springs     53.32 100  P      P        15 25 19.9  -0.2
AS31                                IAmb   IAmb     15 27 17.8
               comp=Z,1.5nm,0.5s
WRA    Warramunga Arr    54.94  96  P      P        15 25 32.1  +0.2
               comp=Z,2.2nm,0.7s,baz=251,slow=7.5,SNR=13
WB2    Warramunga Arr    54.95  96  P      P        15 25 32.0  +0.1
WRAB   Tennant Creek     54.95  96  P      P        15 25 32.2  +0.2
WB0    Warramunga Arr    55.05  95  P      P        15 25 32.8  +0.1
WB0                                 IAmb   IAmb     15 26 48.7
               comp=Z,8.6nm,1.1s
WR0    Warramunga Arr    55.11  96  P      P        15 25 33.1  -0.1
KKAR   Karatay Array     70.94 357  P      P        15 27 18.7  +0.9
MKAR   Makanchi Array    74.89   6  P      P        15 27 40.2  -0.9
SONM   Songino Array     80.90  21  P      P        15 28 14.5  -0.1
               comp=Z,0.6nm,1.0s,baz=204,slow=3.3,SNR=4.1
SONM   Songino Array     80.90  21  IAmb   IAmb     15 31 16.4
               comp=Z,9.2nm,2.0s
ZALV   Zalesovo Beam     82.21   6  P      P        15 28 21.1  -0.1
               comp=Z,0.3nm,0.3s,baz=174,slow=7.0,SNR=1.7
KSRS   Korea Array       82.32  40  P      P        15 28 22.3  +0.1
               comp=Z,0.4nm,0.5s,baz=210,slow=4.1,SNR=2.2
YKA    Yellowknife Ar   145.10   7  PKPbc  PKPbc    15 35 36.5  -0.4
               comp=Z,0.6nm,0.8s,baz=333,slow=4.1,SNR=8.8
```

IDC 22 15:21:49.2±3.6, **1°.79N**×**99°.46E, h169**^{km}±14^{km}**, mb3.6**/3, **mb1 3.6**/3, **mb1mx2.9**/51, **mbtmp4.1**/3, **MS4.3**/1, **Ms1 4.3**/1, **ms1mx2.9**/38, **Error ellipse: s-maj=115.3km s-min=58.1km az=68.0, Northern Sumatera**

```
Code   Station Name        Δ°  AZ°   Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
PSI    Prapat             1.14 332  P      Pn       15 22 16.5  -0.6
               16nm,0.3s,baz=166,slow=8.3,SNR=29
PSI                                 S      Sn       15 22 37.4  -1.2
               1.5nm,0.3s,baz=247,slow=22,SNR=7.5
SONM   Songino Array     46.26   6  P      P        15 29 57.6  -0.1
```

	0.4nm,0.5s,baz=194,slow=8.7,SNR=4.9						
SONM				PcP	PcP	15 31 29.9	-0.5
	0.2nm,0.4s,baz=198,slow=5.1,SNR=2.9						
MKAR	Makanchi Array	47.26	344	P	P	15 30 05.5	+0.1
	2.3nm,0.3s,baz=159,slow=7.8,SNR=60						
PMG	Port Moresby	48.80	104	LR	LR	15 54 45.1	
	comp=Z,308nm,18.0s,baz=110,slow=40						
ZALV	Zalesovo Beam	53.37	349	P	P	15 30 50.9	-0.2
	2.1nm,0.6s,baz=167,slow=6.8,SNR=10						

*NEIC **22** 15:23:20.4±2.6, 6°.36S±0°.07×130°.18E±0°.09, h153km±3km, mb4.2/13, Error ellipse: s-maj=12.4km s-min=9.6km az=83.0*

*IDC **22** 15:23:22.1±6.7, 6°.56S×130°.11E, h174km±69km, mb3.5/5, mb1 3.5/8, mb1mx3.2/39, mbtmp4.0/8, Error ellipse: s-maj=54.4km s-min=19.4km az=53.0*

ISC 22 15:23:19.0±0.6, **6°.45S**±0°.06×**130°.19E**±0°.07, **h150km, n35,** σ**1^{s}.79**/34, **mb3.9**/9, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.88	144	Pn	Pn	15 23 55.6	+2.9
FAKI	Fak Fak	4.06	30	Pn	Pn	15 24 17.9	-2.2
MTN	Manton Dam	6.42	172		Pn	15 24 52.2	+0.8
SOEI	Soe	6.72	240	Pn	Pn	15 24 56.5	+1.0
BATI	Baumata	7.46	240	P	Pn	15 25 07.6	+2.3
	1.8nm,0.3s,baz=67,slow=9.4,SNR=1.6						
BATI				S	Sn	15 26 29.1	+0.4
	8.2nm,0.3s,baz=126,slow=16,SNR=7.6						
KNRA	Kununurra	9.28	189	Pn	Pn	15 25 29.8	+0.3
FITZ	Fitzroy Crossi	12.40	201	P	Pn	15 26 10.4	-0.1
	0.3nm,0.3s,baz=23,slow=8.9,SNR=10						
FITZ				S	Sn	15 28 20.4	-7.3
	0.6nm,0.3s,baz=150,slow=18,SNR=6.3						
WB0	Warramunga Arr	13.85	163	Pn	Pn	15 26 26.8	-2.4
WRAB	Tennant Creek	14.00	164	Pn	Pn	15 26 29.0	-1.9
WRA	Warramunga Arr	14.01	164	P	Pn	15 26 29.5	-1.5
	0.5nm,0.3s,baz=350,slow=10,SNR=28						
WRA				S	Sn	15 28 57.3	-9.1
	2.0nm,0.3s,baz=352,slow=23,SNR=11						
WRA	Warramunga Arr	14.01	164	Pn	Pn	15 26 28.7	-2.3
WB2	Warramunga Arr	14.01	164	Pn	Pn	15 26 29.1	-2.0
COEN	Coen	14.79	121	Pn	Pn	15 26 42.2	+1.2
COEN	Coen	14.79	121	P	Pn	15 26 42.1	+1.2
JAGI	Jajag, Banyuwa	16.03	262	Pn	Pn	15 26 55.0	-1.2
AS31	Alice Springs	17.49	169		P	15 27 13.9	+1.2
ASAR	Alice Springs	17.49	169	P	P	15 27 15.1	+2.4
	0.9nm,0.3s,baz=344,slow=10,SNR=122						
ASAR				S	S	15 30 21.2	-5.9
	0.3nm,0.3s,baz=354,slow=27,SNR=5.6						
ASAR	Alice Springs	17.49	169		P	15 27 14.8	+2.0
PSA00	Pilbara Seismi	18.06	213	P	P	15 27 17.8	-1.2
PSA00				IAmb	IAmb	15 27 42.5	
	comp=Z,20nm,1.4s						
KKM	Kota Kinabalu	18.67	311	P	P	15 27 25.5	-0.3
KKM				IAmb	IAmb	15 27 37.9	
	comp=Z,17nm,1.0s						
CTAO	Charters Tower	20.66	133	P	P	15 27 48.8	+1.6
CTAO				IAmb	IAmb	15 28 08.3	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	27.45	159	P	P	15 28 50.7	-0.2
	comp=Z,1.7nm,0.9s,baz=344,slow=13,SNR=3.6						
STKA	Stephens Creek	27.45	159	P	P	15 28 50.8	-0.2
CMAR	Chiang Mai Arr	39.53	309	P	P	15 30 36.0	+0.6
	comp=Z,0.4nm,0.5s,baz=127,slow=7.3,SNR=4.6						
JWT	Wachi	41.80	6	P	P	15 30 53.7	-0.1
KS19	Wonju Array Si	43.78	357	P	P	15 31 07.2	-2.6
SONM	Songino Array	57.98	341	P	P	15 32 57.1	+1.1
	comp=Z,0.5nm,0.5s,baz=163,slow=7.2,SNR=8.9						
SONM	Songino Array	57.98	341	IAmb	IAmb	15 32 57.5	
	comp=Z,1.4nm,1.3s						
PETK	Petropavlovsk-	63.74	18	P	P	15 33 35.5	+0.9
	comp=Z,2.2nm,0.8s,baz=210,slow=8.3,SNR=1.4						
PETK	Petropavlovsk-	63.74	18	P	P	15 33 35.4	+0.8
MK31	Makanchi Array	67.87	327	P	P	15 34 02.2	+1.0
MK31				IAmb	IAmb	15 34 03.1	
	comp=Z,2.6nm,1.2s						
MKAR	Makanchi Array	67.87	327	P	P	15 34 02.2	+1.0
	comp=Z,1.7nm,0.3s,baz=115,slow=7.9,SNR=53						
MAKZ	Makanchi	68.05	326	P	P	15 34 03.2	+0.9
MAKZ				IAmb	IAmb	15 34 03.8	
	comp=Z,4.4nm,1.3s						
BOOM	Boomskoye usch	69.25	320	P	P	15 34 09.2	-0.9
BOOM				IAmb	IAmb	15 34 12.2	
	comp=Z,4.8nm,0.9s						
KURK	Kurchatov	72.15	328	P	P	15 34 26.9	-0.3
KURK				IAmb	IAmb	15 34 28.5	
	comp=Z,3.9nm,1.4s						

*NOU **22** 15:30:55.7, 28°.28S×173°.72W, h3km, mB7.8/9, Kermadec Islands Region*

*NEIC **22** 15:31:14.0±2.2, 28°.6S±0°.2×176°.17W±0°.08, h10km±1km, mb4.7/16, Error ellipse: s-maj=27.4km s-min=7.0km az=157.0*

*IDC **22** 15:31:14.3±0.7, 28°.18S×176°.45W, h0km, mb4.3/11, mb1 4.4/12, mb1mx4.2/28, mbtmp4.2/12, ML4.9/1, MS4.0/15, Ms1 4.0/15, ms1mx3.8/34, Error ellipse: s-maj=23.3km s-min=16.9km az=137.0*

ISC 22 15:31:18.0±0.6, **28°.55S**±0°.07×**176°.24W**±0°.09, **h36km, n78,** σ**2^{s}.21**/70, **mb4.5**/16, **MS4.0**/15, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.63	244	Pn	Pn	15 31 46.1	+2.0
	567nm,0.3s,baz=14,slow=2.1,SNR=8.3						
RAO				Sn	Sn	15 32 09.1	+5.2
	1μm,0.3s,baz=268,slow=22,SNR=12						
RAO				LR	LR	15 32 13.7	
	comp=Z,1μm,18.8s,baz=56,slow=36						
RAO	Raoul Island	1.63	244		Pn	15 31 45.8	+1.6
MXZ	Matakaoa Point	10.09	206	Pn	Pn	15 33 39.0	-1.2
OUZ	Omahuta	10.90	230	P	Pn	15 33 58.9	+7.5
URZ	Urewera	11.16	208	Pn	Pn	15 33 50.4	-4.5
	0.5nm,0.3s,baz=117,slow=23,SNR=1.1						
URZ				Sn	Sn	15 35 54.9	-3.6
	2.0nm,0.3s,baz=96,slow=19,SNR=5.2						
URZ				LR	LR	15 37 48.3	
	comp=Z,783nm,18.1s,baz=31,slow=35						
MSVF	Nonsavu	11.97	333	Pn	Pn	15 34 02.9	-3.3
	0.3nm,0.3s,baz=287,slow=19,SNR=1.5						
MSVF				LR	LR	15 37 16.3	
	comp=Z,227nm,20.9s,baz=138,slow=31						
BKZ	Black Stump Fm	12.19	208	Pn	Pn	15 34 04.4	-4.6
BKZ	Black Stump Fm	12.19	208	P	Pn	15 34 09.2	+0.2
HIZ	Hauiti	12.40	214	P	Pn	15 34 14.0	+2.1
BFZ	Birch Farm	13.59	205	P	Pn	15 34 27.1	-1.0
TUWZ	Tuamarina	15.15	209	Pn	Pn	15 34 44.0	-5.2
THZ	Tophouse	15.88	211	P	Pn	15 34 57.0	-1.7
THZ	Tophouse	15.88	211	Pn	Pn	15 34 55.5	-3.2
THZ				IAmb	IAmb	15 35 11.1	
	comp=Z,57nm,1.3s						
KHZ	Kahutara	16.13	208	P	Pn	15 34 56.8	-5.0
KHZ	Kahutara	16.13	208	P	Pn	15 34 59.9	-2.0
GVZ	Greta Valley S	16.80	208	P	Pn	15 35 08.3	-2.0
DZM	Mont Dzumac	16.93	288	*e*Pn	Pn	15 35 12.1	-0.1
	comp=Z,106nm,1.6s						
DZM				*e*LR	LR	15 39 01.7	
	comp=Z,802nm,26.1s						
DZM	Mont Dzumac	16.93	288	Pn	P	15 35 16.1	+2.3
	comp=Z,0.1nm,0.3s,baz=106,slow=18,SNR=5.7						
DZM				LR	LR	15 40 37.3	
	comp=Z,777nm,18.3s,baz=170,slow=34						
DZM	Mont Dzumac	16.93	288		Pn	15 35 12.1	-0.1
LTZ	Lake Taylor	16.97	210	P	Pn	15 35 10.1	-2.5
INZ	Inchbonnie	17.30	212	P	P	15 35 16.8	-1.0
OXZ	Oxford	17.51	210	P	Pn	15 35 16.6	-2.6
MQZ	McQueen's Vall	17.56	208	P	Pn	15 35 17.8	-2.0
WVZ	Waitaha Valley	17.90	212	P	Pn	15 35 20.8	-3.2
RPZ	Rata Peaks	18.25	211	P	Pn	15 35 27.2	-1.1
RPZ	Rata Peaks	18.25	211	P	P	15 35 26.1	-2.2
GCSZ	Gaunt Creek Bo	18.28	213	P	Pn	15 35 28.1	-0.5
ARCZ	Arundel	18.38	210	P	Pn	15 35 29.1	-0.9
TMZ	Timaru	18.80	209	P	P	15 35 32.8	-1.6
KOUNC	Koumac, New Ca	19.40	290	P	Pn	15 35 45.2	+2.8
TBI	Tubuai	24.61	84	*e*LR	LR	15 42 47.0	
	comp=Z,344nm,21.5s,baz=252						
PPT2	Papeete2	26.79	72	*e*LR	LR	15 43 41.4	
	comp=Z,245nm,22.0s						
PPT	Papeete	26.80	72	LR	LR	15 46 51.2	
	comp=Z,337nm,18.1s,baz=194,slow=35						
HNR	Honiara	29.36	306	LR	LR	15 48 12.0	
	comp=Z,314nm,18.1s,baz=150,slow=35						
HNR	Honiara	29.36	306	P	P	15 37 19.0	+1.2
CTA	Charters Tower	35.09	275	P	P	15 38 07.4	-0.5
	comp=Z,7.3nm,0.6s,baz=121,slow=6.4,SNR=3.6						
CTAO	Charters Tower	35.09	275	P	P	15 38 08.1	+0.2
CTAO				IAmb	IAmb	15 38 21.8	
	comp=Z,20nm,1.3s						
STKA	Stephens Creek	36.43	254	P	P	15 38 20.5	+1.2
	comp=Z,3.2nm,0.8s,baz=119,slow=11,SNR=5.9						
STKA				LR	LR	15 51 18.0	
	comp=Z,198nm,19.9s,baz=65,slow=33						
TAOE	Nuku Hiva Isla	39.17	67	*e*LR	LR	15 49 23.1	
	comp=Z,224nm,21.9s						
BBOO	Buckleboo	40.98	252	P	P	15 38 57.0	-0.4
BBOO				IAmb	IAmb	15 38 59.3	
	comp=Z,11nm,1.1s						
AS31	Alice Springs	44.78	264	P	P	15 39 27.3	-1.1
ASAR	Alice Springs	44.78	264	P	P	15 39 27.2	-1.2
	comp=Z,1.4nm,0.6s,baz=98,slow=6.4,SNR=21						
ASAR				PcP	PP	15 41 12.1	-1.2
	comp=Z,0.5nm,0.7s,baz=107,slow=4.4,SNR=1.4						
ASAR				LR	LR	15 57 27.2	
	comp=Z,275nm,18.4s,baz=119,slow=35						
WR0	Warramunga Arr	45.42	269	P	P	15 39 31.5	-2.0
WR0				IAmb	IAmb	15 39 32.1	
	comp=Z,8.8nm,1.2s						
WRAB	Tennant Creek	45.60	269	P	P	15 39 33.7	-1.2
WRAB				IAmb	IAmb	15 39 53.5	
	comp=Z,18nm,1.4s						
WRA	Warramunga Arr	45.61	269	P	P	15 39 33.9	-1.1
	comp=Z,1.8nm,0.4s,baz=110,slow=6.3,SNR=23						
WRA				LR	LR	15 58 23.4	
	comp=Z,229nm,18.2s,baz=90,slow=36						
WRA	Warramunga Arr	45.61	269	P	P	15 39 33.5	-1.5
FORT	Forrest	48.03	253	P	P	15 39 52.1	-1.7
VNDA	Vanda	50.09	186	LR	LR	15 57 49.0	
	comp=Z,124nm,20.3s,baz=13,slow=32						
KNRA	Kununurra	52.14	272	P	P	15 40 23.2	-1.8
KNRA				IAmb	IAmb	15 40 26.8	
	comp=Z,19nm,1.0s						
QSPA	South Pole Qui	61.56	180	P	P	15 41 36.2	+4.8
	comp=Z,6.7nm,1.1s,baz=66,slow=0.6,SNR=12						
KSM	Kuching	76.21	279	P	P	15 43 02.8	-0.3
KSM				IAmb	IAmb	15 43 16.5	
	comp=Z,11nm,1.1s						
JMM	Marumori	77.36	326	P	P	15 43 08.4	-0.5
MJAR	Matsushiro Arr	77.62	324	P	P	15 43 10.1	-0.4
	comp=Z,3.6nm,0.8s,baz=155,slow=6.0,SNR=6.6						
MJAR	Matsushiro Arr	77.62	324	IAmb	IAmb	15 43 23.9	
	comp=Z,8.9nm,1.3s						
VNA3	Neumayer Olymp	80.04	176	P	P	15 43 26.6	+3.2
VNA2	Neumayer--Watz	80.49	176	P	P	15 43 29.4	+3.6
	baz=176,slow=5.1						
VNA1	Neumayer--Stat	80.71	176	P	P	15 43 30.0	+3.0
PLCA	Paso Flores	82.63	132	LR	LR	16 14 43.3	
	comp=Z,101nm,18.2s,baz=296,slow=31						
KSRS	Korea Array	83.96	319	P	P	15 43 45.5	+1.2
	comp=Z,1.0nm,0.8s,baz=140,slow=5.3,SNR=5.1						
KSRS				LR	LR	16 19 34.9	
	comp=Z,52nm,18.8s,baz=102,slow=35						
KSAR	Wonju Array Be	83.97	319	P	P	15 43 44.0	-0.3
PETK	Petropavlovsk-	84.42	345	LR	LR	16 15 56.0	
	comp=Z,39nm,20.7s,baz=130,slow=32						
NVAR	Mina Array Bea	85.84	42	P	P	15 43 55.7	+1.7
	comp=Z,1.3nm,0.8s,baz=228,slow=6.8,SNR=6.1						
NVAR	Mina Array Bea	85.84	42	P	P	15 43 53.6	-0.4
USRK	Ussuriysk Ar.	86.49	326	P	P	15 43 57.5	+0.8
	comp=Z,2.0nm,0.8s,baz=145,slow=3.5,SNR=4.5						
USRK				LR	LR	16 19 39.7	
	comp=Z,67nm,18.4s,baz=95,slow=34						
TXAR	Lajitas Array	90.09	56	P	P	15 44 14.7	+0.2
	comp=Z,0.6nm,1.0s,baz=207,slow=2.5,SNR=4.9						
TXAR	Lajitas Array	90.09	56	P	P	15 44 13.9	-0.6
ENH	Enshi	91.84	304	P	P	15 44 21.4	-1.1
PDAR	Pinedale Array	93.74	43	LR	LR	16 22 45.4	
	comp=Z,168nm,18.2s,baz=296,slow=33						
ILAR	Eielson Array	95.79	12	P	P	15 44 40.9	+1.2
	comp=Z,0.5nm,0.8s,baz=216,slow=5.8,SNR=6.7						
ILAR				LR	LR	16 27 37.3	
	comp=Z,45nm,18.1s,baz=192,slow=35						
MKAR	Makanchi Array	117.75	310	PKP	PKiKP	15 50 00.1	-0.1
	comp=Z,0.6nm,0.9s,baz=214,slow=1.4,SNR=4.1						
FINES	FINESS Array B	143.90	342	PKP	PKPdf	15 50 47.5	-1.3
	comp=Z,1.1nm,0.5s,baz=56,slow=3.5,SNR=15						
KBZ	Khabaz	145.30	307	PKP	PKiKP	15 50 53.8	-1.9
	comp=Z,1.4nm,1.1s,baz=297,slow=4.5,SNR=1.5						
NB2	NORSAR Subarra	147.12	353	PKP	PKPab	15 50 56.6	-1.6
	comp=Z,1.7nm,0.7s,baz=10,slow=3.0						
NOA	NORSAR Array B	147.12	353	PKPbc	PKPab	15 50 56.8	-1.5
	comp=Z,2.5nm,1.0s,baz=59,slow=1.5,SNR=6.8						
AKASG	Malin Array Be	150.69	326	PKPbc	PKiKP	15 51 06.4	-0.1
	comp=Z,5.1nm,0.9s,baz=46,slow=2.9,SNR=10						
AKASG	Malin Array Be	150.69	326		PKiKP	15 51 05.3	-1.3
BRTR	Keskin Array B	152.99	302	PKPbc	PKiKP	15 51 14.8	+2.8
	comp=Z,1.5nm,0.9s,baz=90,slow=0.1,SNR=2.5						
TORD	Torodi Ar. Bea	164.56	172	PKP	PKPdf	15 51 21.0	+2.4
	comp=Z,1.6nm,1.1s,baz=294,slow=1.1,SNR=4.3						
TORD				PKPab	PKPab	15 52 16.4	+3.1
	comp=Z,4.2nm,0.9s,baz=195,slow=3.5,SNR=15						

*NEIC **22** 15:48:27.1±1.6, 5°.36S±0°.08×129°.6E±0°.1, h250km±11km, mb4.3/10, Error ellipse: s-maj=18.2km s-min=11.8km az=79.0*

*IDC **22** 15:48:38.9±7.9, 5°.86S×129°.28E, h373km±95km, mb3.0/2, mb1 3.2/5, mb1mx2.8/36, mbtmp4.0/5, Error ellipse: s-maj=58.5km s-min=33.0km az=62.0*

ISC 22 15:48:26.3±0.8, **5°.44S**±0°.07×**129°.6E**±0°.1, **h250km, n20,** σ**2^{s}.36**/21, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	3.06	146	Pn	Pn	15 49 22.2	+2.7
FAKI	Fak Fak	3.65	47	Pn	Pn	15 49 24.5	-1.6
MTN	Manton Dam	7.52	168	Pn	Pn	15 50 13.6	0.0
KNRA	Kununurra	10.21	184		Pn	15 50 48.8	+1.3
FITZ	Fitzroy Crossi	13.16	197	P	P	15 51 27.7	+1.9
	0.4nm,0.3s,baz=22,slow=9.0,SNR=8.1						
FITZ				S	S	15 53 45.0	-5.5
	baz=90,slow=19						
WB0	Warramunga Arr	15.00	162	P	P	15 51 46.9	+0.7
WB0				IAmb	IAmb	15 52 12.5	
	comp=Z,15nm,1.4s						
WRAB	Tennant Creek	15.14	163	P	P	15 51 48.6	+0.8
WRAB				IAmb	IAmb	15 51 53.4	
	comp=Z,8.9nm,1.3s						
WRA	Warramunga Arr	15.15	163	P	P	15 51 48.8	+0.9
	comp=Z,0.6nm,0.3s,baz=341,slow=11,SNR=52						
WRA				S	S	15 54 29.9	-5.4
	comp=Z,0.1nm,0.3s,baz=334,slow=18,SNR=2.0						
WB2	Warramunga Arr	15.15	163	P	P	15 51 48.4	+0.5
WB2				IAmb	IAmb	15 52 14.1	
	comp=Z,20nm,1.5s						
COEN	Coen	15.85	123	Pn	Pn	15 51 57.7	+0.9
COEN				IAmb	IAmb	15 52 16.6	
	comp=Z,26nm,1.5s						
KKM	Kota Kinabalu	17.55	310	P	Pn	15 52 16.8	0.0
AS31	Alice Springs	18.60	167	P	P	15 52 27.6	+2.1
AS31				IAmb	IAmb	15 52 28.6	
	comp=Z,3.0nm,0.5s						
ASAR	Alice Springs	18.60	167	P	P	15 52 28.2	+2.7
	comp=Z,1.0nm,0.3s,baz=350,slow=12,SNR=147						
ASAR	Alice Springs	18.60	167	P	P	15 52 27.8	+2.3
PSA00	Pilbara Seismi	18.61	210	P	P	15 52 27.3	+1.7
PSA00				IAmb	IAmb	15 52 41.5	
	comp=Z,17nm,1.1s						
UGM	Wanagama	19.08	262	P	P	15 52 30.3	-0.5
STKA	Stephens Creek	28.61	158	P	P	15 54 00.0	+0.2
	comp=Z,1.0nm,0.5s,baz=333,slow=16,SNR=1.5						
STKA	Stephens Creek	28.61	158	IAmb	IAmb	15 54 07.8	
	comp=Z,1.2nm,1.2s						
MKAR	Makanchi Array	66.69	327	P	P	15 58 52.0	+1.4
	comp=Z,0.3nm,0.5s,baz=115,slow=8.1,SNR=6.5						
MKAR	Makanchi Array	66.69	327	P	P	15 58 51.4	+0.8

*NEIC **22** 15:51:15.4±1.6, 17°.8S±0°.2×178°.6W±0°.1, h564km±9km, mb4.4/24, Error ellipse: s-maj=24.3km s-min=16.2km az=143.0*

*IDC **22** 15:51:16.9±1.8, 17°.62S×178°.83W, h572km±18km, mb3.3/9, mb1 3.6/11, mb1mx3.3/26, mbtmp4.2/11, Error ellipse: s-maj=55.6km s-min=15.6km az=147.0*

ISC 22 15:51:14.3±0.6, **17°.8S**±0°.1×**178°.6W**±0°.1, **h550km, n43,** σ**1^{s}.13**/42, **mb4.3**/21, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.22	271	P	P	15 52 33.8	+2.9
	2.3nm,0.3s,baz=85,slow=3.9,SNR=14						
MSVF	Nonsavu	3.22	271	P	P	15 52 33.7	+2.8
AFI	Afiamalu	7.61	60	P	P	15 53 08.2	-0.2
	8.1nm,0.3s,baz=94,slow=8.5,SNR=9.5						
PINNC	Pines Island,	13.96	248	P	P	15 54 14.4	+1.4
DZM	Mont Dzumac	14.71	251	P	P	15 54 21.9	+1.0
	1.1nm,0.3s,baz=145,slow=24,SNR=11						
QRZ	Quartz Range	24.16	197	P	P	15 55 45.6	-1.8
THZ	Tophouse	24.94	195	P	P	15 55 52.4	-2.1
EIDS	Eidsvold	29.15	250	P	P	15 56 30.6	-0.9
EIDS				IAmb	IAmb	15 56 31.8	
	comp=Z,6.8nm,0.8s						
ARMA	Armidale	29.85	240	P	P	15 56 37.9	+0.3
ARMA				IAmb	IAmb	15 56 51.4	
	comp=Z,23nm,1.4s						
CTAO	Charters Tower	33.31	260	P	P	15 57 06.5	-0.6
CTAO				IAmb	IAmb	15 57 32.6	
	comp=Z,21nm,1.4s						
CAN	Canberra	33.63	232	P	P	15 57 09.8	+0.2
CAN				IAmb	IAmb	15 57 35.4	
	comp=Z,19nm,1.4s						
COEN	Coen	36.95	270	P	P	15 57 35.9	-1.6
TOO	Toolangi	37.10	231	P	P	15 57 38.4	0.0
STKA	Stephens Creek	38.53	241	P	P	15 57 50.2	0.0
	comp=Z,5.5nm,0.7s,baz=83,slow=7.8,SNR=8.5						
STKA	Stephens Creek	38.53	241	P	P	15 57 50.0	-0.1
BBOO	Buckleboo	43.31	241	P	P	15 58 27.9	-0.2
WR0	Warramunga Arr	44.30	259	P	P	15 58 35.2	-0.8
WR0				IAmb	IAmb	15 58 39.8	
	comp=Z,14nm,1.5s						
WB0	Warramunga Arr	44.46	260	P	P	15 58 36.3	-0.9
WB2	Warramunga Arr	44.48	259	P	P	15 58 36.5	-0.8
WB2				IAmb	IAmb	15 58 57.1	
	comp=Z,7.5nm,1.3s						
WRAB	Tennant Creek	44.48	259	P	P	15 58 36.0	-1.4
WRA	Warramunga Arr	44.49	259	P	P	15 58 36.5	-0.9
	comp=Z,1.5nm,0.5s,baz=93,slow=6.9,SNR=21						
WRA	Warramunga Arr	44.49	259	IAmb	IAmb	15 58 37.0	
	comp=Z,0.2nm,0.7s						
AS31	Alice Springs	44.66	254	P	P	15 58 38.2	-0.5
AS31				IAmb	IAmb	15 58 38.9	
	comp=Z,6.2nm,0.6s						
ASAR	Alice Springs	44.66	254	P	P	15 58 38.2	-0.5
	comp=Z,22nm,0.6s,baz=89,slow=8.2,SNR=323						
FORT	Forrest	49.90	245	P	P	15 59 16.9	-0.9
FORT				IAmb	IAmb	15 59 30.0	
	comp=Z,21nm,1.1s						
KNRA	Kununurra	50.34	264	P	P	15 59 21.4	+0.1
MORW	Morawa	60.37	246	P	P	16 00 30.0	-0.9
MORW				IAmb	IAmb	16 00 47.6	
	comp=Z,13nm,1.2s						
SBA	Scott Base	60.48	184	P	P	16 00 32.6	+1.9
SBA				IAmb	IAmb	16 00 44.5	
	comp=Z,30nm,1.4s						
QSPA	South Pole Qui	72.22	180	P	P	16 01 43.7	0.0
PETK	Petropavlovsk-	73.57	345	P	P	16 01 51.3	-0.1
	comp=Z,3.3nm,0.9s,baz=146,slow=8.7,SNR=1.8						
NVAR	Mina Array Bea	79.48	44	P	P	16 02 24.6	+0.2
	comp=Z,1.0nm,0.7s,baz=222,slow=8.5,SNR=4.4						
O18K	Koktuh Hills	79.71	12	P	P	16 02 24.5	-0.3
O18K				IAmb	IAmb	16 02 34.7	
	comp=Z,25nm,1.3s						
KVN	Kaiserville	79.95	43	P	P	16 02 27.7	+0.9
N25K	Chitina, Valde	83.67	16	P	P	16 02 44.4	-0.7
N25K				IAmb	IAmb	16 02 45.6	
	comp=Z,8.1nm,0.9s						
ILAR	Eielson Array	85.85	13	P	P	16 02 54.5	-1.0
	comp=Z,0.4nm,0.4s,baz=222,slow=5.2,SNR=20						
TXAR	Lajitas Array	86.08	58	P	P	16 02 59.4	+1.8
	comp=Z,1.0nm,0.8s,baz=216,slow=5.8,SNR=9.7						
TXAR	Lajitas Array	86.08	58	P	P	16 02 57.9	+0.3
PDAR	Pinedale Array	87.40	43	P	P	16 03 03.9	+0.2
	comp=Z,0.6nm,0.6s,baz=210,slow=4.6,SNR=6.2						
PDAR	Pinedale Array	87.40	43	P	P	16 03 02.7	-1.0
YKA	Yellowknife Ar	94.33	25	P	P	16 03 34.2	-0.6
	comp=Z,0.5nm,0.9s,baz=239,slow=4.9,SNR=3.5						
CLL	Collm	145.36	347	*e*PKPbc	PKPbc	16 09 51.0	+0.2
GERES	GERESS Array B	147.50	345	PKPbc	PKPbc	16 09 56.6	-0.3
	comp=Z,0.7nm,0.6s,baz=352,slow=4.0,SNR=6.2						
GERES	GERESS Array B	147.50	345		PKPbc	16 09 56.0	-0.9

*IDC **22** 15:54:04.8±2.2, 33°.84N×139°.16E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.3/37, mbtmp3.4/3, ML2.3/1, Error ellipse: s-maj=129.4km s-min=23.8km az=81.0*

*JMA **22** 15:54:05.9±0.2, 34°.33N×140°.46E, h47km±3km, M3.3*

ISC 22 15:54:06.3±2.2, **34°.32N**±0°.04×**140°.48E**±0°.06, **h38km**±3km, **n24,** σ**0^{s}.79**/26, **5C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	Boso 3	0.49	3	⇓P	Pn	15 54 16.9	+0.4
BSO3				X		15 54 25.5	
BSO1	Boso 1	0.53	50	⇓P	Pn	15 54 17.0	+0.1
BSO1				X		15 54 25.5	
BSO4	Boso 4	0.68	350	⇓P	Pn	15 54 19.7	+0.3
KTR	Katsuura	0.84	351	⇓P	Pn	15 54 21.4	-0.2
KTR				S	Sn	15 54 32.3	-0.5
JMKN	Mikurajimanish	0.85	241	⇑P	Pn	15 54 21.9	+0.1
TATJ	Tateyama 2	0.86	326	P	Pn	15 54 22.3	+0.4
JIM2	Oshima 3	0.96	295	⇑P	Pn	15 54 22.8	-0.4
JTHY	Toshimahigashi	1.01	282	P	Pn	15 54 24.0	+0.1
JKO	Kozu shima	1.12	264	P	Pn	15 54 25.6	+0.2
JKO				*e*S	Sn	15 54 39.3	-0.3
KTJ3	Kamata3	1.32	298	⇑P	Pn	15 54 27.6	-0.5
KTJ3				S	Sn	15 54 42.8	-1.6
JHJ2	Mitsune	1.32	205	⇓P	Pn	15 54 28.6	+0.4
JHJ2				*e*S	Sn	15 54 44.6	0.0
JSMT	Sammumatsuo	1.32	359	P	Pn	15 54 27.8	-0.4
JSMT				S	Sn	15 54 43.7	-0.9
JIZS	Izushimoda	1.38	287	⇑P	Pn	15 54 29.0	0.0
JOD2	Odawara 2	1.49	310	⇑P	Pn	15 54 30.2	-0.3
JOD2				S	Sn	15 54 47.9	-0.8
MJAR	Matsushiro Arr	2.90	321	Pn	Pn	15 54 51.1	+1.2
	0.5nm,0.3s,baz=159,slow=13,SNR=10						
MJAR				Sn	Sn	15 55 25.0	+1.6
	1.8nm,0.3s,baz=89,slow=29,SNR=22						
MAT	Matsushiro	2.90	321	P	Pn	15 54 51.4	+1.5
MAT				S	Sn	15 55 24.3	+0.9
H11N2	WAKE ISLAND Hy	27.55	115	T	T	16 29 44.0	
	baz=308,slow=75,SNR=5.1						
H11N1	WAKE ISLAND Hy	27.55	115	T	T	16 29 41.6	
	baz=308,slow=75,SNR=5.1						
H11N3	WAKE ISLAND Hy	27.57	115	T	T	16 29 42.6	
	baz=308,slow=75,SNR=5.6						
H11S3	WAKE ISLAND Hy	28.15	117	T	T	16 30 26.5	
	baz=310						
H11S1	WAKE ISLAND Hy	28.16	117	T	T	16 30 27.9	
	baz=310						
H11S2	WAKE ISLAND Hy	28.17	117	T	T	16 30 27.6	
	baz=310						
WRA	Warramunga Arr	54.27	187	P	P	16 03 27.9	-0.7
	0.6nm,0.4s,baz=2.2,slow=7.6,SNR=15						
ASAR	Alice Springs	58.00	187	P	P	16 03 55.4	+0.2
	0.3nm,0.9s,baz=5.1,slow=6.3,SNR=1.6						

*EAF **22** 15:59:25.1±1.9, 26°.62S×28°.80E, h10km±43km, MD3.8*

BUL 22 15:59:24.8±2.2, **26°.61S**×**28°.81E, h11km**±42km, **MD4.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	Lobatse	3.30	298	*i* P	Pn	16 00 16.5	-0.1
LBTB				*i* Sg	Sg	16 01 08.1	-2.9
LBTB	Lobatse	3.30	298	*i* P	Pn	16 00 16.5	-0.1
LBTB				*i* Sg	Sg	16 01 08.1	-2.9
BOSA	Boshof	3.74	237	*i* P	Pn	16 00 23.7	+1.1
BOSA				*i* Sg	Sb	16 01 19.5	+3.2
BOSA	Boshof	3.74	237	*i* P	Pn	16 00 23.7	+1.1
BOSA				*i* Sg	Sb	16 01 19.5	+3.2
MATP	Matopo	6.16	357	*i* P	Pn	16 00 55.2	-0.7
MATP				*i* S	Sn	16 01 59.7	-6.8
MATP	Matopo	6.16	357	*i* P	Pn	16 00 55.2	-0.7
MATP				*i* S	Sn	16 01 59.7	-6.8

IDC 22 16:11:38.9±4.8, **7°.80S**×**129°.37E, h219km**±49km, **mb3.1**/1, **mb1 3.0**/5, **mb1mx2.5**/48, **mbtmp3.6**/5, **Error ellipse:**

s-maj=48.7km s-min=21.4km az=53.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.12	247	P	Pn	16 13 07.8	-0.3
	4.1nm,0.3s,baz=162,slow=1.0,SNR=9.3						
BATI				S	S	16 14 19.6	+0.8
	5.0nm,0.3s,baz=80,slow=12,SNR=2.2						
FITZ	Fitzroy Crossi	10.86	199	P	Pn	16 14 10.1	+1.2
	baz=15,slow=8.9						
FITZ				S	S	16 16 09.9	-0.7
	0.5nm,0.3s,baz=320,slow=22,SNR=1.5						
WRA	Warramunga Arr	13.00	159	P	Pn	16 14 35.1	-0.7
	0.1nm,0.3s,baz=336,slow=13,SNR=7.0						
WRA				S	S	16 16 56.0	-3.8
	0.4nm,0.3s,baz=336,slow=23,SNR=9.3						
ASAR	Alice Springs	16.37	165	P	P	16 15 15.7	-0.1
	0.0nm,0.3s,baz=343,slow=14,SNR=1.6						
ASAR				S	S	16 18 18.0	+1.7
	0.1nm,0.3s,baz=345,slow=25,SNR=5.7						
MKAR	Makanchi Array	68.55	327	P	P	16 22 17.9	0.0
	0.4nm,0.5s,baz=115,slow=7.5,SNR=8.2						

NOU ***22*** *16:22:11.1, 30°.95S×176°.00W, h32^{km}, mb4.5/19, Kermadec Islands Region*

NEIC ***22*** *16:22:20.0±2.6, 30°.69S±0°.09×177°.9W±0°.2, h10^{km}±1^{km}, mb4.6/17, Error ellipse: s-maj=23.1km s-min=13.5km az=250.0*

IDC ***22*** *16:22:26.2±2.1, 30°.51S×178°.07W, h56^{km}±17^{km}, mb4.2/6, mb1 4.4/6, mb1mx3.7/27, mbtmp4.5/6, MS3.7/3, Ms1 3.6/3, ms1mx3.1/27, Error ellipse: s-maj=25.5km s-min=16.5km az=115.0*

ISC 22 16:22:21.4±0.7**, 30°.80S**±0°.05×**177°.7W**±0°.1**, h35^{km}, n89, σ2^{s}.40**/77**, mb4.6**/18**, MS3.3**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.54	354	P	Pn	16 22 47.0	+0.6
GLKZ				S	Sn	16 23 02.6	-2.5
RAO	Raoul Island	1.55	354	P	Pn	16 22 47.5	+1.0
	331nm,0.3s,baz=83,slow=9.7,SNR=12						
RAO				LR	LR	16 22 55.6	
	comp=Z,107nm,22.0s,baz=135,slow=23						
RAO				S	Sn	16 23 03.6	-1.8
	1µm,0.3s,baz=275,slow=23,SNR=18						
RAO	Raoul Island	1.55	354		Pn	16 22 46.7	+0.2
RAO	Raoul Island	1.55	354	P	Pn	16 22 47.4	+0.9
RIZ	Raoul Island	1.56	354	P	Pn	16 22 47.4	+0.8
RIZ				S	Sn	16 23 03.5	-2.1
MXZ	Matakaoa Point	7.50	205	P	Pn	16 24 07.6	-0.6
MXZ				S	Sn	16 25 31.2	-0.8
WMGZ	Waiomatatini S	7.69	203	P	Pn	16 24 05.9	-5.0
WMGZ				S	Sn	16 25 36.2	-0.5
PKGZ	Pakihiroa	7.87	205	P	Pn	16 24 10.1	-3.3
PKGZ				S	Sn	16 25 36.6	-4.6
OUZ	Omahuta	8.50	236	P	Pn	16 24 28.6	+6.5
URZ	Urewera	8.57	208	P	Pn	16 24 17.8	-5.1
	0.8nm,0.3s,baz=127,slow=20,SNR=1.7						
URZ				S	Sn	16 25 57.7	-0.6
	5.6nm,0.3s,baz=192,slow=20,SNR=6.5						
URZ	Urewera	8.57	208	Pn	Pn	16 24 18.2	-4.7
URZ	Urewera	8.57	208	P	Pn	16 24 21.1	-1.8
	146nm,1.6s						
BKZ	Black Stump Fm	9.59	208	P	Pn	16 24 35.9	-1.1
MCHZ	McNeill Hill	9.75	206	P	Pn	16 24 37.0	-2.1
MCHZ				S	Sn	16 26 27.3	-0.1
HIZ	Hauiti	9.81	216	P	Pn	16 24 42.4	+2.4
KRHZ	Kereru	10.05	207	P	Pn	16 24 42.3	-1.0
KRHZ				S	Sn	16 26 29.2	-5.6
PNHZ	Pukenui	10.35	207	P	Pn	16 24 43.9	-3.5
PNHZ				S	Sn	16 26 36.6	-5.5
DVHZ	Dannevirke	10.69	206	P	Pn	16 24 49.1	-3.0
DVHZ				S	Sn	16 26 45.2	-5.4
BFZ	Birch Farm	11.00	205	P	Pn	16 24 52.8	-3.5
BFZ				S	Sn	16 26 53.0	-5.0
MRZ	Mangatainoka R	11.23	207	P	Pn	16 24 53.1	-6.3
MRZ				S	Sn	16 26 56.3	-7.4
TUWZ	Tuamarina	12.55	210	Pn	Pn	16 25 15.7	-1.7
QRZ	Quartz Range	12.73	216	P	Pn	16 25 20.8	+0.8
THZ	Tophouse	13.28	212	Pn	Pn	16 25 25.8	-1.7
KHZ	Kahutara	13.53	209	P	Pn	16 25 29.9	-0.9
DGTI	Dogotuki	14.62	350	P	Pn	16 25 42.4	-3.4
	22nm,2.8s						
DZM	Mont Dzumac	16.60	298	*e*LR	LR	16 29 51.1	
	comp=Z,212nm,24.4s						
DZM	Mont Dzumac	16.60	298	P	P	16 26 20.0	+6.2
ODZ	Otahua Downs	16.89	209	P	Pn	16 26 13.0	-2.0
RAR	Rarotonga	18.74	64	LR	LR	16 32 09.9	
	comp=Z,865nm,20.2s,baz=310,slow=31						
TBI	Tubuai	26.21	80	*e*LR	LR	16 34 34.8	
	comp=Z,95nm,27.8s						
TBI	Tubuai	26.21	80	*e*T	T	16 55 36.9	
	30nm,0.3s						
ARMA	Armidale	26.32	263	P	P	16 27 56.0	+1.8
ARMA				IAmb	IAmb	16 28 05.2	
	comp=Z,15nm,1.2s						
CAN	Canberra	28.16	252	P	P	16 28 12.4	+1.9
PAE	Paea	28.73	69	*e*T	T	16 58 39.6	
	comp=Z,9.5nm,0.2s						
PPT2	Papeete2	28.77	69	*e*LR	LR	16 35 25.9	
	comp=Z,97nm,27.2s						
PPT2	Papeete2	28.77	69	*e*T	T	16 58 43.5	
	comp=Z,9.8nm,0.3s						
RMQ	Roma	29.65	270	P	P	16 28 27.7	+3.9
MEH	Mehetia	29.84	71	*e*T	T	17 00 04.5	
	comp=Z,15nm,0.3s						
CORO	Coronation Par	30.10	240	P	P	16 28 29.7	+2.1
	comp=Z,9.3nm,0.9s						
TOO	Toolangi	31.01	247	P	P	16 28 38.0	+2.2
TOO				IAmb	IAmb	16 28 59.0	
	comp=Z,6.4nm,0.9s						
CMSA	Cobar Meteorol	31.20	259	P	P	16 28 39.8	+2.3
	comp=Z,13nm,1.3s						
VAH	Vaihoa	31.62	67	*e*T	T	17 02 15.0	
	comp=Z,44nm,0.2s						
QLP	Quilpie	33.51	268	P	P	16 29 00.8	+3.1
	comp=Z,8.0nm,0.8s						
CTAO	Charters Tower	34.08	280	P	P	16 29 03.8	+1.1
CTAO				IAmb	IAmb	16 29 05.3	
	comp=Z,7.3nm,0.8s						
CTAO	Charters Tower	34.08	280	P	P	16 29 04.6	+1.8
STKA	Stephens Creek	34.60	257	P	P	16 29 09.0	+1.8
	comp=Z,16nm,0.7s,baz=91,slow=9.5,SNR=28						
STKA				LR	LR	16 40 28.7	
	comp=Z,54nm,20.9s,baz=29,slow=32						
STKA	Stephens Creek	34.60	257	P	P	16 29 09.0	+1.8
STKA	Stephens Creek	34.60	257	P	P	16 29 09.3	+2.1
	comp=Z,4.3nm,0.8s						
INKA	Innaminka	36.19	264	P	P	16 29 24.7	+3.8
HTT	Hallett	36.60	254	P	P	16 29 25.4	+1.0
LCRK	Leigh Creek	37.72	259	P	P	16 29 34.4	+0.6
BBOO	Buckleboo	39.07	255	P	P	16 29 45.4	+0.2
BBOO				IAmb	IAmb	16 29 47.9	
	comp=Z,10nm,0.6s						
COEN	Coen	39.59	286	P	P	16 29 51.0	+1.3
COEN				IAmb	IAmb	16 30 13.8	
	comp=Z,26nm,1.4s						
AS31	Alice Springs	43.31	267	P	P	16 30 19.8	-0.3
ASAR	Alice Springs	43.31	267	P	P	16 30 20.2	0.0
	comp=Z,3.0nm,0.5s,baz=105,slow=7.3,SNR=76						
ASAR				PcP	PcP	16 32 08.6	-0.1
	comp=Z,0.3nm,0.6s,baz=118,slow=3.9,SNR=2.2						
ASAR				ScP	ScP	16 35 57.4	0.0
	comp=Z,0.4nm,0.8s,baz=109,slow=4.4,SNR=2.3						
ASAR	Alice Springs	43.31	267	P	P	16 30 19.7	-0.4
WR0	Warramunga Arr	44.15	273	P	P	16 30 26.5	-0.5
WR0				IAmb	IAmb	16 30 53.9	
	comp=Z,10nm,1.4s						
WB2	Warramunga Arr	44.32	272	P	P	16 30 28.0	-0.3
WRAB	Tennant Creek	44.33	272	P	P	16 30 27.9	-0.4
WRAB				IAmb	IAmb	16 30 30.0	
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	44.33	272	P	P	16 30 28.2	-0.2
	comp=Z,3.5nm,0.3s,baz=110,slow=8.0,SNR=110						
WRA	Warramunga Arr	44.33	272	P	P	16 30 27.2	-1.2
WB0	Warramunga Arr	44.36	273	P	P	16 30 28.2	-0.3
WB0				IAmb	IAmb	16 30 30.2	
	comp=Z,8.3nm,0.9s						
FORT	Forrest	46.16	255	P	P	16 30 42.7	-0.1
QSPA	South Pole Qui	59.31	180	P	P	16 32 24.3	+4.8
	comp=Z,2.5nm,0.7s,baz=52,slow=1.8,SNR=19						
QSPA	South Pole Qui	59.31	180	P	P	16 32 24.0	+4.4
DAV	Davao City (W)	65.99	295	LR	LR	16 57 14.5	
	comp=Z,35nm,20.5s,baz=282,slow=32						
MAW	Mawson	72.01	201	P	P	16 33 43.7	+2.4
SNAA	Sanae	77.75	178	P	P	16 34 17.5	+3.0
SNAA				IAmb	IAmb	16 34 24.6	
	comp=Z,5.7nm,1.1s						
H03S2	Juan Fernandez	80.06	123	T	T	18 03 39.8	
	baz=238						
H03S1	Juan Fernandez	80.07	123	T	T	18 03 38.3	
	baz=238						
H03S3	Juan Fernandez	80.08	123	T	T	18 03 43.2	
	baz=238						
H03N3	Juan Fernandez	80.25	123	T	T	18 03 55.6	
	baz=242,slow=72						
H03N2	Juan Fernandez	80.26	123	T	T	18 03 54.1	
	baz=242,slow=72						
H03N1	Juan Fernandez	80.27	123	T	T	18 03 50.6	
	baz=242,slow=72						
PETK	Petropavlovsk-	86.25	345	P	P	16 34 59.2	+0.3
	comp=Z,2.8nm,0.9s,baz=170,slow=9.7,SNR=1.6						
NVAR	Mina Array Bea	88.38	43	P	P	16 35 13.0	+3.1
	comp=Z,0.8nm,0.6s,baz=225,slow=7.8,SNR=4.6						
MKAR	Makanchi Array	118.20	310	PKP	PKiKP	16 41 04.6	0.0
	comp=Z,0.3nm,0.5s,baz=34,slow=0.3,SNR=7.8						
ARCES	ARCESS Array B	139.03	348	PKhKP	PKPpre	16 41 36.5	
	comp=Z,3.7nm,1.0s,baz=72,slow=2.9,SNR=6.9						
KBZ	Khabaz	145.51	303	PKPbc	PKiKP	16 41 56.9	-2.7
	comp=Z,1.9nm,0.7s,baz=53,slow=2.5,SNR=5.1						
FINES	FINESS Array B	145.59	340	PKPbc	PKiKP	16 41 55.8	-3.5
	comp=Z,8.6nm,0.5s,baz=57,slow=4.0,SNR=94						
FINES	FINESS Array B	145.59	340	PKPdf	PKPab	16 41 55.6	-0.1
NB2	NORSAR Subarra	149.18	351	PKP	PKPab	16 42 06.9	-3.1
	comp=Z,1.3nm,0.6s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.18	351	PKPbc	PKiKP	16 42 06.3	-0.4
	comp=Z,1.7nm,0.5s,baz=16,slow=4.2,SNR=6.8						
AKASG	Malin Array Be	151.75	322	PKPbc	PKiKP	16 42 12.4	+0.1
	comp=Z,4.0nm,0.6s,baz=49,slow=2.8,SNR=11						
AKASG	Malin Array Be	151.75	322		PKiKP	16 42 12.6	+0.3
MMAI	Mount Meron Ar	151.84	283	PKPbc	PKiKP	16 42 14.6	+1.4
	comp=Z,2.2nm,0.4s,baz=59,slow=7.0,SNR=11						
BRTR	Keskin Array B	152.98	298	PKPbc	PKiKP	16 42 15.4	-0.1
	comp=Z,1.3nm,0.8s,baz=126,slow=6.8,SNR=3.0						
TORD	Torodi Ar. Bea	162.43	178	PKPab	PKPab	16 43 10.0	+2.4
	comp=Z,1.4nm,0.6s,baz=170,slow=4.6,SNR=7.2						
TORD	Torodi Ar. Bea	162.43	178		PKPab	16 43 10.1	+2.6

IDC ***22*** *16:38:21.3±1.6, 11°.19S×161°.69E, h0^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.5/40, mbtmp3.8/6, ML3.3/1, MS2.9/2, Ms1 2.9/2, ms1mx2.7/30, Error ellipse: s-maj=34.1km s-min=25.9km az=77.0*

ISC 22 16:38:25.7±1.1**, 11°.2S**±0°.1×**161°.7E**±0°.2**, h28^{km}, n6, σ0^{s}.47**/7**, mb3.5**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.46	315	Pn	Pn	16 39 04.2	+0.3
	baz=188,slow=14						
HNR				Sn	Sn	16 39 33.4	+0.3
	46nm,0.3s,baz=163,slow=14,SNR=1.8						
HNR				LR	LR	16 40 11.6	
	comp=Z,148nm,18.6s,baz=194,slow=45						
DZM	Mont Dzumac	11.72	158	Pn	Pn	16 41 11.7	+0.4
	0.2nm,0.3s,baz=2.4,slow=12,SNR=6.2						
WRA	Warramunga Arr	27.71	248	P	P	16 44 11.2	-0.7
	2.0nm,1.1s,baz=78,slow=10.0,SNR=16						
ASAR	Alice Springs	29.20	241	P	P	16 44 24.9	-0.2
	0.3nm,0.6s,baz=68,slow=9.8,SNR=6.3						
ASAR				LR	LR	16 56 33.0	
	comp=Z,38nm,19.8s,baz=110,slow=37						
SONM	Songino Array	76.48	325	P	P	16 50 13.1	-0.1
	0.5nm,0.7s,baz=129,slow=6.8,SNR=4.6						
ILAR	Eielson Array	84.96	20	P	P	16 50 57.6	-0.3
	0.2nm,0.7s,baz=234,slow=4.3,SNR=1.6						

IASPEI ***22*** *16:39:09.2±0.9, 35°.76N±0°.02×97°.37W±0°.03, h11^{km}±7^{km}, Error ellipse: s-maj=4.1km s-min=3.2km az=95.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

NEIC ***22*** *16:39:09.4±0.7, 35°.76N±0°.02×97°.38W±0°.02, h8^{km}±6^{km}, Error ellipse: s-maj=2.7km s-min=2.2km az=76.0*

TUL ***22*** *16:39:09.5±1.1, 35°.74N±0°.01×97°.35W±0°.02, h6^{km}±7^{km}, ML3.5, mb_Lg3.5/105(NEIC), Error ellipse: s-maj=2.8km s-min=2.1km az=98.0*

ANF ***22*** *16:39:09.3±0.3, 35°.78N×97°.38W, h5^{km}, ML4.1/16, Error ellipse: s-maj=3.3km s-min=1.9km az=118.0*

ISC 22 16:39:09.5±0.9**, 35°.76N**±0°.02×**97°.37W**±0°.03**, h9^{km}**±6^{km}**, n120, σ0^{s}.51**/104**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.07	297	Pg	Pg	16 39 11.9	+0.2
OK029				Sg	Sg	16 39 13.5	+0.3
OK005	Luther M Schoo	0.18	126		Pg	16 39 13.1	-0.3
OK025	Westminster Rd	0.18	171		Pg	16 39 13.1	-0.2
OK025				Sg	Sg	16 39 15.6	-0.3
OK009	Oakdale Elemen	0.18	193		Pg	16 39 13.2	-0.2
OK001	Jones High Sch	0.21	161	Pg	Pg	16 39 13.6	-0.3
OK001				Sg	Sg	16 39 16.5	-0.3
BCOK	Bluff Creek, N	0.22	241	Pg	Pg	16 39 14.0	0.0
OKCFA	Oklahoma City	0.35	190		Pg	16 39 16.2	-0.2
OKCFA	Oklahoma City	0.35	190	P	Pg	16 39 16.3	-0.1
	baz=9.5,SNR=36						
OKCFA				S	Sg	16 39 21.4	+0.3
	baz=9.5						
OKCSW	OKLAHOMA CITY	0.36	188		Pg	16 39 16.5	-0.1
OKCSW				Sg	Sg	16 39 21.6	+0.2
OK033	Mehan	0.45	51	Pg	Pg	16 39 18.4	+0.1
OK033				Sg	Sg	16 39 24.3	+0.1
OK031	S. Brethren Rd	0.47	66		Pg	16 39 18.8	0.0
FNO	Franklin	0.50	183		Pg	16 39 19.0	-0.3
OK030	Cody Creek RV	0.51	71		Pg	16 39 19.3	0.0
OK030				Sg	Sg	16 39 25.9	-0.1
OK034	N. Norfolk Rd.	0.59	65		Pg	16 39 20.9	0.0
OK011	Prague	0.62	116	Pg	Pg	16 39 21.4	-0.2
QUOK	Quay	0.68	53		Pg	16 39 22.4	-0.2
QUOK				Sg	Sg	16 39 31.3	-0.1
W35A	Tecumseh	0.73	146	Pg	Pg	16 39 22.6	-1.0
CROK	Carrier	0.89	327		Pg	16 39 26.5	-0.1
CROK				Sg	Sg	16 39 37.6	-0.6
BLOK	Blackwell	1.00	7		Pg	16 39 28.5	-0.3
GC02	Grant County #	1.16	340		Pg	16 39 31.2	-0.5
X34A	Smith Ranch, M	1.22	198	Pg	Pg	16 39 32.2	-0.6
OK032	Salt Plains WL	1.24	327		Pg	16 39 32.6	-0.7
KAN13	South Haven SW	1.25	356		Pg	16 39 33.1	-0.4
KAN14	Manchester OK	1.28	338		Pn	16 39 33.4	-0.3
TUL1	Leonard	1.29	83		Pn	16 39 32.4	-1.3
TUL1	Leonard	1.29	83	P	Pn	16 39 32.5	-1.2
	baz=264,SNR=157						
KAN17	Caldwell West	1.32	346		Pn	16 39 34.1	0.0
T35A	Sooner Cattle	1.34	31		Pn	16 39 34.3	-0.2
T35B	Sooner Cattle	1.34	31	P	Pn	16 39 34.3	-0.1
	baz=212,SNR=73						
T35B				S	Sg	16 39 52.7	-0.1
	baz=212						
KAN09	Caldwell North	1.39	352		Pn	16 39 34.9	-0.1
KAN05	Bluff City Nor	1.40	343	Pn	Pn	16 39 35.0	-0.2
KAN01	Argonia South	1.42	347		Pn	16 39 36.0	+0.5
U32A	Winter Ranch,	1.46	296		Pn	16 39 36.1	+0.1
U32A	Winter Ranch,	1.46	296	P	Pn	16 39 36.3	+0.3
	baz=115						
KAN10	Anthony SW Sta	1.48	337		Pn	16 39 36.6	+0.3
KAN06	Argonia West S	1.53	345		Pn	16 39 37.7	+0.7
KAN08	Anthony NE Sta	1.54	342		Pb	16 39 37.9	-0.3
WMOK	Wichita Mounta	1.54	229		Pn	16 39 37.2	0.0
WMOK	Wichita Mounta	1.54	229	P	Pn	16 39 37.4	+0.3
	baz=48,SNR=136						
KAN16	Harper SW Stat	1.56	339		Pn	16 39 38.1	+0.6
KAN12	Harper NE Stat	1.61	342		Pn	16 39 37.7	-0.4
KAN12				IAmb_Lg		16 40 01.7	
	comp=Z,225nm,1.1s						
LOOK	Love County	1.77	175		Pn	16 39 40.8	+0.5
LOOK				IAmb_Lg		16 40 09.5	
	comp=Z,222nm,0.9s						
X37A	Clayton	2.02	125		Pn	16 39 44.2	+0.6
X37A				IAmb_Lg		16 40 15.3	
	comp=Z,188nm,0.8s						
X37A	Clayton	2.02	125	P	Pn	16 39 44.3	+0.6
	baz=306,SNR=98						
X37A				S	Sn	16 40 10.7	+1.8
	baz=306						
Z35A	Perchaven, San	2.43	178		Pn	16 39 49.5	+0.2
Z35A				IAmb_Lg		16 40 26.4	
	comp=Z,112nm,0.8s						
Z35A	Perchaven, San	2.43	178	P	Pn	16 39 50.2	+0.8
	baz=358,SNR=13						
U38A	Gravette	2.51	74	Pn	Pn	16 39 50.8	+0.3
U38A				IAmb_Lg		16 40 28.9	
	comp=Z,134nm,0.8s						
U38A	Gravette	2.51	74	P	Pn	16 39 51.3	+0.8
	baz=255						
HHAR	Hobbs	2.83	78		Pn	16 39 55.2	+0.3
HHAR	Hobbs	2.83	78	P	Pn	16 39 55.7	+0.8
	baz=260						
W39A	Magazine	2.98	100		Pn	16 39 57.4	+0.4
W39A				IAmb_Lg		16 40 49.5	
	comp=Z,211nm,0.8s						
W39A	Magazine	2.98	100	P	Pn	16 39 57.6	+0.7
	baz=282,SNR=14						
Z38A	Mt. Pleasant	3.18	141		Pn	16 40 00.2	+0.5
Z38A				IAmb_Lg		16 40 58.3	
	comp=Z,84nm,0.8s						
Z38A	Mt. Pleasant	3.18	141	P	Pn	16 40 00.4	+0.7
	baz=322						
MIAR	Mount Ida	3.34	110	Pn	Pn	16 40 02.0	+0.2
MIAR				IAmb_Lg		16 41 02.5	
	comp=Z,167nm,0.8s						
MIAR	Mount Ida	3.34	110	P	Pn	16 40 02.9	+1.0
	baz=292,SNR=32						
MIAR				S	Sn	16 40 42.8	+1.2
	baz=292						
KSU1	Kansas State U	3.39	10	IAmb_Lg		16 41 04.9	
	comp=Z,154nm,0.8s						
CBKS	Cedar Bluff	3.58	329	IAmb_Lg		16 41 06.3	
	comp=Z,105nm,0.8s						
AMTX	Amarillo	3.63	257	IAmb_Lg		16 41 10.1	
	comp=Z,86nm,1.0s						
ABTX	Abilene, Hawle	3.65	212	IAmb_Lg		16 41 08.0	
	comp=Z,90nm,0.9s						
U40A	Yellville	3.71	79		Pn	16 40 06.9	0.0
U40A	Yellville	3.71	79	P	Pn	16 40 07.0	0.0
	baz=262,SNR=24						
U40A				P	Pn	16 40 07.0	0.0
	baz=262,SNR=24						
WHTX	Lake Whitney,	3.76	181	Pn	Pn	16 40 07.9	+0.3
WHTX	Lake Whitney,	3.76	181	P	Pn	16 40 08.1	+0.4
	baz=0.9,SNR=5.7						
S39A	Bolivar	3.78	58		Pn	16 40 08.4	+0.5
S39A				IAmb_Lg		16 41 14.0	
	comp=Z,99nm,0.8s						
S39A	Bolivar	3.78	58	P	Pn	16 40 08.6	+0.6
	baz=241,SNR=17						
X40A	Basin Creek Fa	3.93	108		Pn	16 40 10.4	+0.4
X40A	Basin Creek Fa	3.93	108	P	Pn	16 40 10.8	+0.8
	baz=290,SNR=10.0						
X40A				P	Pn	16 40 10.8	+0.8
	baz=290,SNR=10.0						
237A	Washetta, Mont	3.97	160		Pn	16 40 10.2	-0.3
WLAR	White Oak Lake	4.07	119	IAmb_Lg		16 41 21.1	
	comp=Z,92nm,0.7s						
WHAR	Wooly Hollow	4.17	95		Pn	16 40 13.5	+0.2
WHAR				IAmb_Lg		16 41 22.1	
	comp=Z,124nm,0.8s						
W41B	Gary Mavity, V	4.22	97	P	Pn	16 40 14.4	+0.4
	baz=280,SNR=20						
FCAR	Ozark Folk Cen	4.27	87	Pn	Pn	16 40 14.7	+0.1
FCAR				IAmb_Lg		16 41 30.6	
	comp=Z,101nm,0.7s						
MGMO	Mountain Grove	4.34	70	Pn	Pn	16 40 15.6	-0.1
MGMO				IAmb_Lg		16 41 25.5	
	comp=Z,137nm,0.9s						
NATX	Nacogdoches	4.59	150	Pn	Pn	16 40 19.6	+0.6
MSTX	Muleshoe	4.79	250	Pn	Pn	16 40 21.4	-0.5
R40A	Maddies Statio	4.80	57		Pn	16 40 22.2	+0.2
R40A				IAmb_Lg		16 41 50.0	
	comp=Z,62nm,0.7s						
R40A	Maddies Statio	4.80	57	P	Pn	16 40 22.7	+0.7
	baz=240,SNR=11						
P38A	Dawn	4.91	37	IAmb_Lg		16 41 50.5	
	comp=Z,70nm,0.8s						
435B	Jarrell	4.97	182	IAmb_Lg		16 41 52.1	
	comp=Z,97nm,0.9s						
N33A	J Bar K, Exete	4.97	359	IAmb_Lg		16 41 59.9	
	comp=Z,61nm,0.7s						
LCAR	Lake Charles	5.06	85	Pn	Pn	16 40 24.6	-0.8
LCAR				IAmb_Lg		16 41 55.3	
	comp=Z,126nm,1.2s						
CCM	Cathedral Cave	5.42	63	Pn	Pn	16 40 31.0	+0.5
CCM				IAmb_Lg		16 42 12.2	
	comp=Z,66nm,0.9s						
JCT	Junction City	5.65	202	Pn	Pn	16 40 33.5	-0.1
JCT				IAmb_Lg		16 42 15.3	
	comp=Z,120nm,0.8s						
P40A	Paris	5.66	47	Pn	Pn	16 40 33.5	-0.2
BGNE	Belgrade	5.67	354	Pn	Pn	16 40 34.0	+0.1
BGNE				IAmb_Lg		16 42 24.3	
	comp=Z,85nm,0.8s						
PBMO	Poplar Bluff	5.70	78	IAmb_Lg		16 42 15.8	
	comp=Z,106nm,0.7s						
LPAR	Lepanto	5.76	90	IAmb_Lg		16 42 22.5	
	comp=Z,102nm,0.7s						
143A	Socs Landing,	5.81	120	IAmb_Lg		16 42 23.4	
	comp=Z,60nm,0.9s						
T25A	Trinidad	5.84	286	IAmb_Lg		16 42 22.2	
	comp=Z,92nm,0.9s						
N38A	Joes South For	5.99	32	Pn	Pn	16 40 38.1	-0.1
FVM	French Village	5.99	66	Pn	Pn	16 40 38.3	0.0
FVM				IAmb_Lg		16 42 20.1	
	comp=Z,85nm,0.8s						
SLM	Saint Louis	6.38	61	IAmb_Lg		16 42 38.2	
	comp=Z,43nm,0.8s						
W45A	Hickory Valley	6.71	93	IAmb_Lg		16 42 57.2	
	comp=Z,83nm,0.8s						
Y45A	Yeager Farm, C	6.71	104	IAmb_Lg		16 42 56.4	
	comp=Z,50nm,0.8s						
S44A	Carbondale	6.80	71	Pn	Pn	16 40 49.2	-0.2
S44A				IAmb_Lg		16 42 55.3	
	comp=Z,64nm,0.7s						
SIUC	Southern Illin	6.83	71	IAmb_Lg		16 42 54.8	
	comp=Z,88nm,0.8s						
735A	Kenedy	6.90	183	IAmb_Lg		16 43 02.3	
	comp=Z,71nm,0.8s						
UTMT	University of	6.92	83	IAmb_Lg		16 42 51.1	
	comp=Z,88nm,0.7s						
SCIA	State Center	6.94	27	IAmb_Lg		16 43 02.0	
	comp=Z,88nm,0.8s						
N41A	Harden Midland	7.12	44	Pn	Pn	16 40 53.1	-0.7
T45A	Paducah	7.15	77	IAmb_Lg		16 43 01.2	
	comp=Z,84nm,0.8s						
P43A	Skaggs, Pawnee	7.33	56	IAmb_Lg		16 43 02.1	
	comp=Z,65nm,0.8s						
Q44A	Meyer Farm, Va	7.36	62	IAmb_Lg		16 43 13.9	
	comp=Z,84nm,0.9s						
146A	Union	7.56	112	IAmb_Lg		16 43 30.8	
	comp=Z,31nm,0.7s						
ISCO	Idaho Springs	7.67	304	Pn	Pn	16 41 01.6	0.0
WVT	Waverly	7.75	85	IAmb_Lg		16 43 15.7	
	comp=Z,32nm,1.0s						
L40A	Anamosa	7.91	35	Pn	Pn	16 41 04.2	-0.4
L40A				IAmb_Lg		16 43 20.7	
	comp=Z,64nm,1.1s						
HDIL	Hopedale	7.96	51	Pn	Pn	16 41 04.9	-0.4
OLIL	Olney	7.97	65	IAmb_Lg		16 43 39.3	
	comp=Z,60nm,0.8s						
ECSD	EROS Data Cent	7.98	4	Pn	Pn	16 41 04.8	-0.8
ECSD				IAmb_Lg		16 43 25.4	
	comp=Z,29nm,0.9s						
Z47A	Carrollton	8.10	106	IAmb_Lg		16 43 45.1	
	comp=Z,36nm,1.1s						
L42A	Oliver, Polo	8.65	42		Pn	16 41 14.2	-0.6
I37A	Lemond, Waseca	8.79	19	IAmb_Lg		16 43 56.3	
	comp=Z,59nm,0.9s						
JFWS	Jewell Farm	9.02	36	Pn	Pn	16 41 19.9	0.0
I40A	Norwalk	9.63	31	IAmb_Lg		16 44 31.1	
	comp=Z,39nm,1.0s						
RWWY	Rawlins	9.70	311	IAmb_Lg		16 44 26.2	
	comp=Z,21nm,1.0s						
K43A	Burlington	9.86	43	Pn	Pn	16 41 30.7	-0.6
K22A	Casper	9.88	317	IAmb_Lg		16 44 47.9	
	comp=Z,30nm,1.0s						
I42A	Draeger Farm,	10.40	36	Pn	Pn	16 41 38.1	-0.6

IDC ***22*** *16:41:17.7±1.3, 29°.32N×52°.96E, h0^{km}, mb3.7/11, mb1 3.9/12, mb1mx3.5/62, mbtmp3.7/12, ML3.6/1, Error ellipse: s-maj=34.6km s-min=21.6km az=32.0*

THR ***22*** *16:41:21.4±0.3, 29°.51N×53°.09E, h16^{km}±8^{km}, ML3.4*
TEH ***22*** *16:41:21.7, 29°.41N×53°.10E, h17^{km}, ML3.7*
KISR ***22*** *16:41:23.4±0.6, 29°.34N×52°.69E, h198^{km}±79^{km}, ML4.2*
OMAN ***22*** *16:41:26.8±0.2, 29°.06N×53°.19E, h12^{km}±10^{km}, mb5.4/5, ml3.7/9, ms2.9/2, Error ellipse: s-maj=18.6km s-min=3.1km az=344.0*
DSN ***22*** *16:41:26.2±2.3, 28°.93N×53°.08E, h10^{km}, ML3.4/7, Error ellipse: s-maj=33.2km s-min=10.1km az=15.0*
ISC 22 16:41:19.8±0.5**, 29°.41N**±0°.03×**53°.18E**±0°.03**, h10^{km}, n78, σ2^{s}02**/90**, mb3.6**/12**, 1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHI	Shiraz	0.63	292	*e*Pg	Pg	16 41 31.8	-0.2
SHI				*e*Sg	Sb	16 41 41.8	-0.1
JHRM	Jahrom	0.96	159	*e*Pg	Pn	16 41 40.1	+0.6
JHRM				*e*		16 42 06.2	
	comp=Z,40μm,0.3s						
GHIR	Ghir-Karzin	1.13	189	*e*Pg	Pn	16 41 44.3	+2.5
GHIR				*e*Sg	Sn	16 42 00.8	+3.4
GHIR				IAML		16 42 04.0	
	comp=E,544nm,0.5s						
GHIR				IAML		16 42 04.5	
	comp=N,760nm,0.7s						
GHIR	Ghir-Karzin	1.13	189	*e*Pg	Pn	16 41 44.3	+2.5
KAZ1	Kazerun	1.36	280	*e*Pg	Pg	16 41 46.9	+1.0
KAZ1				*e*Sg	Sg	16 42 04.4	+0.8
KAZ1				*e*		16 42 21.5	
	comp=Z,20μm,0.6s						
AHBU	AHRAM	1.73	252	*e*Pg	Pg	16 41 52.4	-0.7
LAR1	LAR	2.02	148	*e*Pn	Pb	16 41 57.5	+0.7
LMD1	Lamerd	2.06	180	*e*Pn	Pb	16 41 57.3	0.0
LMD1				*e*		16 42 41.7	
	comp=Z,7μm,0.6s						
KLNJ	Kolanjah	2.11	320	*e*Pn	Pb	16 41 57.4	-0.9
KLNJ				*e*		16 42 40.3	
	comp=Z,4μm,0.4s						
IMEH	Mehriz	2.33	32	*e*Pn	Pb	16 42 01.6	-0.6
IRAM	Ramesheh	2.49	344	*e*Pn	Pn	16 42 03.1	+2.4
ISAD	Sadrabad	2.54	10	*e*Pn	Pb	16 42 04.6	-1.1
IBRJ	Brojen	2.99	327	*e*Pn	Pn	16 42 09.5	+1.9
ICHK	Chekchek	3.02	20	*e*Pn	Pn	16 42 11.2	+3.3
KHGB	Koh Gabri	3.02	71	*e*Pn	Pn	16 42 11.3	+3.3
KHGB				*e*		16 42 20.2	
	comp=Z,2μm,0.6s						
NGRK	Negar Kerman	3.10	85	*e*Pn	Pb	16 42 13.2	-2.2
NGRK				*e*		16 43 05.4	
	comp=Z,1μm,0.4s						
IGAR	Gharneh	3.15	342	*e*Pn	Pn	16 42 12.0	+2.4
TVBK	TV Kerman	3.17	79	*e*Pn	Pn	16 42 14.0	+3.9
TVBK				*e*		16 42 23.1	
	comp=Z,3μm,0.5s						
GENO	Geno	3.31	126	*e*Pn	Pn	16 42 15.3	+3.5
SHK1	Shahrekord	3.52	326	*e*Pn	Pn	16 42 16.4	+1.6
IZEF	Zefreh	3.56	348	*e*Pn	Pn	16 42 17.5	+2.2
ANAR	Anarak	3.80	7	*e*Pn	Pn	16 42 21.4	+2.8
IPIR	Pirpir	3.81	330	*e*Pn	Pn	16 42 20.9	+2.0
CHMN	Cheshme madani	3.82	82	*e*Pn	Pn	16 42 23.1	+4.0
CHMN				*e*		16 42 36.8	
	comp=Z,613nm,0.4s						
AMIS	Naft Sefid	4.04	305	*e*Pn	Pn	16 42 22.5	+0.7
SHMA	Al-Shehemyia	4.04	210	P	Pn	16 42 25.3	+3.5
SHMA				S	Sn	16 43 10.5	+1.3
IKLH	Kolahrood	4.13	341	*e*Pn	Pn	16 42 25.5	+2.2
SAKB	Bahrain	4.14	215	P	Pn	16 42 26.3	+3.2
SAKB				S	Sn	16 43 11.9	+0.3
SHME	Shamm	4.25	141	P	Pn	16 42 26.0	+1.4
BANOM	Banah	4.44	141	*i* P	Pn	16 42 29.6	+2.4
	SNR=25						
BANOM				S	Sn	16 43 18.4	-0.6
QAMS	Qamsar	4.58	341	*e*Pn	Pn	16 42 31.3	+1.9
KRSH	Karshahi	4.64	349	*e*Pn	Pn	16 42 31.9	+1.8
QRN	Al-Qurain	4.65	263	*e*P	Pn	16 42 32.0	+1.9
QRN				*e*S	Sn	16 43 23.0	-1.2
QRN				IAML		16 43 25.5	
	comp=Z,356nm,0.4s						
TPRV	Parvadeh(Tabas	4.70	39	*e*Pn	Pn	16 42 33.5	+2.6
UMR	Umm Al-Rimmam	4.76	273	*e*P	Pn	16 42 33.9	+2.2
KBD	Kabd	4.80	269	*e*P	Pn	16 42 33.6	+1.5
KBD				*e*S	Sn	16 43 26.8	-0.9
KBD				IAML		16 43 27.8	
	comp=Z,176nm,0.3s						
MSFE	Esma-Masafi	4.82	146	*i* P	Pn	16 42 35.1	+2.6
	SNR=14						
RDF	Al-Radifah	4.95	266	*e*P	Pn	16 42 35.4	+1.2
RDF				*e*S	Sn	16 43 30.2	-1.3
ISFB	Sefidab	5.00	351	*e*Pn	Pn	16 42 36.5	+1.5
AJN	Ajban	5.09	161	S	Sn	16 43 36.0	+1.1
MIB	Mutribah	5.10	276	*e*P	Pn	16 42 37.8	+1.5
MIB				IAML		16 43 39.7	
	comp=Z,85nm,0.5s						
FAQ	Al Faqa, Dubai	5.12	155	S	Sn	16 43 35.5	-0.2
ASUD	Al Ashush, Dub	5.13	158	*i* P	Pn	16 42 39.8	+3.0
	SNR=38						
ASUD	Al Ashush, Dub	5.13	158	S	Sn	16 43 37.1	+1.0
UOSS	Minazif	5.20	148	P	Pn	16 42 39.5	+1.9
UOSS	Minazif	5.20	148	S	Sn	16 43 37.0	-0.7
HATD	Hatta, Dubai	5.27	149	P	Pn	16 42 41.2	+2.5
ASHO	Ashiyiah	5.36	151	*i* P	Pn	16 42 42.3	+2.4
	SNR=12						
ASHO	Ashiyiah	5.36	151	S	Sn	16 43 40.5	-1.2
TKDS	Koohdasht(Taba	5.38	38	*e*Pn	Pn	16 42 43.0	+2.7
RST	Umm Al-Ruwaisa	5.39	273⇓	*e*P	Pn	16 42 42.1	+1.7
GHWR	Ruwais	5.43	183	S	Sn	16 43 42.5	-0.8
MZWR	Madinat Zayed	5.66	173	P	Pn	16 42 46.4	+2.5
MZWR				S	Sn	16 43 47.0	-2.0
IVRN	Varamin	5.71	348	*e*Pn	Pn	16 42 46.9	+2.2
ASAO	Ashtian	5.79	333	*e*Pn	Pn	16 42 47.3	+1.4
ASAO				IAML		16 43 55.5	
	comp=E,18nm,0.6s						
ASAO				IAML		16 43 56.4	
	comp=N,16nm,0.5s						
ASAO	Ashtian	5.79	333	*e*Pn	Pn	16 42 47.3	+1.4
ALNE	Al Ain	5.80	156	P	Pn	16 42 48.6	+2.6
ALNE				S	Sn	16 43 51.3	-1.4
IKFM	Kafar-mosalman	6.13	313	*e*Pn	Pn	16 42 51.3	+0.8
HSAM	Samen	6.17	322	*e*Pn	Pn	16 42 52.9	+1.6
DAMV	Damavand	6.29	351	*e*Pn	Pn	16 42 54.6	+1.7
DAMV	Damavand	6.29	351	*e*Pn	Pn	16 42 54.6	+1.7
HAGD	Aghdareh	6.39	329	*e*Pn	Pn	16 42 56.2	+1.9
ARQ	Araqi	6.75	153	S	Sn	16 44 11.2	-4.7
WSAR	Wadi Sarin	7.85	140	Pn	Pn	16 43 15.3	+1.2
	comp=N,0.9nm,0.3s,baz=331,slow=12,SNR=1.7						
WSAR				Sn	Sn	16 44 39.6	-3.4
	comp=N,0.6nm,0.3s,baz=240,slow=20,SNR=2.2						
RAYN	Ar Rayn	9.03	231	*i* P	Pn	16 43 30.4	0.0
	SNR=13						
SHAO	Shalim	11.55	168	*i* P	Pn	16 44 05.0	+0.1
	SNR=12						
AKTO	Aktyubinsk	21.32	9	P	P	16 46 10.3	+3.6
	comp=N,0.5nm,0.4s,baz=186,slow=9.2,SNR=2.4						
AKASG	Malin Array Be	27.86	326	P	P	16 47 09.0	-0.4
	comp=N,0.2nm,0.3s,baz=131,slow=9.2,SNR=1.9						
MKAR	Makanchi Array	28.51	44	P	P	16 47 17.0	+1.6
	comp=N,0.2nm,0.8s,baz=236,slow=10,SNR=1.6						
GERES	GERESS Array B	35.74	314	P	P	16 48 18.1	-0.8
	comp=N,0.4nm,0.6s,baz=96,slow=10.0,SNR=1.7						
FINES	FINESS Array B	36.71	339	P	P	16 48 26.0	-0.8
	comp=N,2.1nm,0.9s,baz=141,slow=8.6,SNR=7.4						
HFS	Hagfors	40.54	331	P	P	16 48 58.5	-0.5
	comp=N,1.3nm,0.4s,baz=138,slow=8.2,SNR=16						
NOA	NORSAR Array B	42.05	331	P	P	16 49 10.4	-1.1
	comp=N,0.5nm,0.6s,baz=120,slow=8.2,SNR=1.7						
CMAR	Chiang Mai Arr	42.99	94	P	P	16 49 19.5	-0.1
	comp=N,0.4nm,0.5s,baz=281,slow=9.1,SNR=2.2						
ARCES	ARCESS Array B	43.19	346	P	P	16 49 20.5	-0.1
	comp=N,3.4nm,0.8s,baz=142,slow=8.9,SNR=2.2						
EKA	Eskdalemuir Ar	47.37	320	P	P	16 49 51.9	-2.0
	comp=N,0.3nm,0.4s,baz=97,slow=8.0,SNR=1.5						
TORD	Torodi Ar. Bea	50.23	263	P	P	16 50 14.2	-2.2
	comp=N,0.4nm,0.4s,baz=59,slow=7.0,SNR=4.1						
YKA	Yellowknife Ar	87.90	354	P	P	16 54 09.3	-0.1
	comp=N,0.3nm,0.7s,baz=8.5,slow=5.3,SNR=6.9						

TIF 22 16:44:19.3, 40°.31N×45°.86E, h37^{km}±2^{km}, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDFL	Dedoflistskaro	1.16	10	S	Sn	16 45 01.2	+7.7
DDFL	Dedoflistskaro	1.16	10	P	Pn	16 44 42.4	+3.4
LGD	Lagodekhi	1.56	10	P	Pn	16 44 46.7	+2.3
LGD				S	Sn	16 45 08.0	+4.7
BTNK	Botanikuri	1.59	330	S	Sn	16 45 07.8	+3.4
BTNK	Botanikuri	1.59	330	P	Pn	16 44 46.4	+1.4
DMNI	Dmanisi	1.63	309	S	Sn	16 45 10.8	+5.5
DMNI	Dmanisi	1.63	309	P	Pn	16 44 48.4	+2.8
TRLG	Trialeti	1.82	313	S	Sn	16 45 15.3	+5.3
TRLG	Trialeti	1.82	313	P	Pn	16 44 51.4	+3.3
BRNG	Burnasheti	2.03	311	P	Pn	16 44 56.9	+5.8
PNSH	Pansheti	2.51	338	P	Pn	16 45 01.9	+4.2
PNSH				S	Sn	16 45 34.6	+7.6
MTEO	Meteo	2.58	338	P	Pn	16 45 03.5	+4.7
MTEO				S	Sn	16 45 38.6	+10
ABS	Abastumani	2.73	303	P	Pn	16 45 09.0	+8.4
ABS				S	Sn	16 45 45.9	+14

IDC ***22*** *16:46:08.2±1.4, 27°.78S×176°.93W, h0^{km}, mb3.8/5, mb1 4.1/5, mb1mx3.7/31, mbtmp3.8/5, MS3.5/8, Ms1 3.5/8, ms1mx3.2/30, Error ellipse: s-maj=46.1km s-min=26.8km az=134.0*
NEIC ***22*** *16:46:13.4±0.8, 28°.2S±0°.1×176°.86W±0°.05, h35^{km}±2^{km}, mb4.5/13, Error ellipse: s-maj=21.0km s-min=7.1km az=174.0*
ISC 22 16:46:12.8±0.9**, 28°.0S**±0°.1×**176°.9W**±0°.2**, h35^{km}, n33, σ1^{s}18**/22**, mb4.4**/11**, MS3.4**/6**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.59	215	Pn	Pn	16 46 40.0	+1.5
	210nm,0.3s,baz=120,slow=21,SNR=6.2						
RAO				Sn	Sn	16 46 59.6	+1.9
	260nm,0.3s,baz=102,slow=22,SNR=4.0						
RAO	Raoul Island	1.59	215		Pn	16 46 36.4	-2.0
MSVF	Nonsavu	11.20	334	LR	LR	16 51 53.1	
	comp=Z,50nm,21.1s,baz=97,slow=31						
URZ	Urewera	11.45	205	LR	LR	16 53 17.8	
	comp=Z,306nm,18.4s,baz=31,slow=37						
BKZ	Black Stump Fm	12.47	205	Pn	Pn	16 48 57.5	-10
DZM	Mont Dzumac	16.22	287	*e*LR	LR	16 53 55.4	
	comp=Z,330nm,25.8s						
DZM	Mont Dzumac	16.22	287	LR	LR	16 55 09.1	
	comp=Z,189nm,18.2s,baz=136,slow=34						
KHZ	Kahutara	16.40	206	Pn	Pn	16 49 49.9	-10
KHZ				IAmb	IAmb	16 50 06.5	
	comp=Z,46nm,1.5s						
RAR	Rarotonga	16.92	70	LR	LR	16 55 19.2	
	comp=Z,212nm,18.9s,baz=229,slow=33						
TBI	Tubuai	25.10	86	*e*LR	LR	16 57 05.0	
	comp=Z,120nm,32.0s						
PPT2	Papeete2	27.14	73	*e*LR	LR	16 57 54.5	
	comp=Z,145nm,29.2s						
PPT	Papeete	27.14	73	LR	LR	17 01 26.2	
	comp=Z,93nm,18.7s,baz=206,slow=34						
CAN	Canberra	29.87	247	P	P	16 52 16.6	-0.5
CAN				IAmb	IAmb	16 52 37.6	
	comp=Z,24nm,1.5s						
STKA	Stephens Creek	36.06	253	LR	LR	17 07 14.7	
	comp=Z,102nm,18.3s,baz=153,slow=35						
AS31	Alice Springs	44.29	264	P	P	16 54 19.9	+0.4
ASAR	Alice Springs	44.29	264	P	P	16 54 19.1	-0.3
	comp=Z,0.6nm,0.7s,baz=98,slow=7.2,SNR=11						
ASAR				LR	LR	17 13 02.5	
	comp=Z,110nm,18.0s,baz=126,slow=36						
WR0	Warramunga Arr	44.88	269	P	P	16 54 24.2	+0.1
WR0				IAmb	IAmb	16 54 44.3	
	comp=Z,6.9nm,1.2s						
WB2	Warramunga Arr	45.05	269	P	P	16 54 25.0	-0.6
WB2				IAmb	IAmb	16 54 26.8	
	comp=Z,9.1nm,1.2s						
WRAB	Tennant Creek	45.06	269	P	P	16 54 25.2	-0.3
WRAB				IAmb	IAmb	16 54 49.1	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	45.06	269	P	P	16 54 25.3	-0.3
	comp=Z,0.7nm,0.4s,baz=108,slow=6.1,SNR=16						
WB0	Warramunga Arr	45.08	269	P	P	16 54 25.2	-0.5
WB0				IAmb	IAmb	16 54 26.9	
	comp=Z,6.2nm,1.0s						
VNDA	Vanda	50.62	186	LR	LR	17 12 30.5	
	comp=Z,49nm,21.6s,baz=300,slow=31						
CASY	Casey	57.76	207	P	P	16 55 59.8	-0.1
SOEI	Soe	58.04	276	P	P	16 56 02.8	0.0
QSPA	South Pole Qui	62.15	180	P	P	16 56 28.9	-1.4
QSPA				IAmb	IAmb	16 56 49.0	
	comp=Z,5.5nm,1.1s						
KAPI	Kappang	64.19	278	P	P	16 56 42.5	-1.9
MJAR	Matsushiro Arr	76.82	324	P	P	16 58 01.1	+0.1
	comp=Z,1.3nm,0.8s,baz=152,slow=6.7,SNR=2.7						
KSRS	Korea Array	83.15	319	P	P	16 58 36.9	+1.8
	comp=Z,0.5nm,0.6s,baz=134,slow=7.0,SNR=2.7						
TXAR	Lajitas Array	90.23	57	P	P	16 59 10.6	+0.5
	comp=Z,0.8nm,1.1s,baz=226,slow=7.3,SNR=3.5						
NB2	NORSAR Subarra	146.47	353	PKP	PKPdf	17 05 49.9	+1.6
	comp=Z,0.6nm,0.6s,baz=4.8,slow=2.6						
NOA	NORSAR Array B	146.47	353	PKPbc	PKPdf	17 05 49.6	+1.3
	comp=Z,1.3nm,0.8s,baz=13,slow=4.5,SNR=4.1						
AKASG	Malin Array Be	149.90	326	PKPbc	PKPbc	17 05 57.8	-1.1
	comp=Z,1.4nm,0.7s,baz=42,slow=2.5,SNR=2.1						
MMAI	Mount Meron Ar	151.81	288	PKPbc	PKPbc	17 06 04.8	+0.6
	comp=Z,0.4nm,0.4s,baz=328,slow=5.2,SNR=2.1						

IDC ***22*** *16:51:39.0±0.7, 30°.46N×132°.61E, h0^{km}, mb3.8/13, mb1 4.0/20, mb1mx3.9/60, mbtmp3.9/20, ML3.8/7, MS3.0/3, Ms1 3.0/3, ms1mx2.6/43, Error ellipse: s-maj=18.1km s-min=14.0km az=80.0*
BJI ***22*** *16:51:40.1±0.0, 30°.28N×132°.59E, h20^{km}, mB4.8/14, mb4.2/28, Ms3.8/3, Ms7 3.7/1*
NEIC ***22*** *16:51:41.5±1.2, 30°.47N±0°.06×132°.53E±0°.07, h10^{km}±1^{km}, mb4.5/32, Error ellipse: s-maj=10.8km s-min=9.4km az=85.0*
MOS ***22*** *16:51:41.0±0.8, 30°.47N×132°.55E, h25^{km}, mb4.4/9, Error ellipse: s-maj=14.9km s-min=7.5km az=97.5*
JMA ***22*** *16:51:43.3±0.2, 30°.44N×132°.52E, h72^{km}, M4.0*
NIED ***22*** *16:51:43.4, 30°.44N×132°.52E, h72^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.28; $M_{\theta\theta}$0.31; $M_{\phi\phi}$0.97; $M_{r\theta}$0.01; $M_{\theta\phi}$0.08; $M_{\phi r}$0.75; Fault plane solution: $M_0$1.35000×10^{15} NP1: ϕ_s184.00000°, δ62.00000°, λ-92.00000°. NP2: ϕ_s8.00000°, δ28.00000°, λ-86.00000°.*
ISC 22 16:51:43.4±1.8**, 30°.45N**±0°.04×**132°.58E**±0°.04**, h30^{km}**±13^{km}**, n121, σ1^{s}48**/133**, mb4.3**/37**, 9C, Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTN	Tanegashima 3	1.40	279	P	Pn	16 52 06.3	-0.6
JTN				S	Sn	16 52 23.3	-1.1
JMTN	Minamitane	1.46	268	P	Pn	16 52 07.5	-0.2
JNAR	Kushima--Naru	1.56	314	P	Pn	16 52 09.3	+0.2
JNAR				*e*S	Sn	16 52 28.5	+0.2
JNKG	Nichinankitago	1.59	320	P	Pn	16 52 09.8	+0.2
JNKG				S	Sn	16 52 29.6	+0.4
JTSR	Tashiro 2	1.60	297	P	Pn	16 52 09.2	-0.5
JTSR				S	Sn	16 52 29.4	0.0
JYAK	Yakushimahirau	1.81	264	P	Pn	16 52 11.9	-0.6
JYAK				S	Sn	16 52 32.9	-1.5
JTZ	Takazaki	1.93	319	P	Pn	16 52 14.4	+0.1
JTZ				S	Sn	16 52 37.6	0.0
JSU	Suzuyama	2.11	300		Pn	16 52 16.5	-0.3
JTO	Tosashimizu	2.41	4	P	Pn	16 52 19.2	-1.6
JTO				S	Sn	16 52 44.4	-5.0
JNN	Nakanoshima	2.42	256	P	Pn	16 52 20.8	-0.2
JIU3	Izumi3	2.58	325	P	Pn	16 52 23.6	+0.4
JIU3				S	Sn	16 52 52.9	-0.7
JSJ	Shimokoshiki	2.75	297	P	Pn	16 52 24.4	-1.1
JSJ				S	Sn	16 52 56.5	-1.2
UWA2	Uwa jima 2	2.76	1	P	Pn	16 52 24.7	-0.9
JNU	Nakatsue	3.04	332	Pn	Pn	16 52 29.9	+0.5
	29nm,0.3s,baz=149,slow=3.9,SNR=193						
JNU				Sn	Sn	16 53 05.0	+0.1
	18nm,0.3s,baz=260,slow=13,SNR=10						
JNU	Nakatsue	3.04	332		Pn	16 52 29.7	+0.2
JNA	Nagahama	3.10	358	P	Pn	16 52 29.9	-0.4
JNA				S	Sn	16 53 03.1	-3.3
JMN	Monobe	3.45	18	Pn	Pn	16 52 35.0	-0.2
JHS	Saijyo	4.56	6	Pn	Pn	16 52 50.1	-0.3
JMZ	Minamidaito 2	4.77	195	Pn	Pn	16 52 52.9	-0.3
JOW	Kunigami	5.23	227	Pn	Pn	16 52 58.5	-1.1
	8.4nm,0.3s,baz=116,slow=23,SNR=105						
JOW				Sn	Sn	16 53 55.4	-3.5
	11nm,0.3s,baz=248,slow=30,SNR=8.4						
JOW	Kunigami	5.23	227	Pn	Pn	16 52 58.2	-1.3
JWT	Wachi	5.37	25	Pn	Pn	16 53 01.4	-0.1
INU	Inuyama	6.15	36	Pn	Pn	16 53 12.1	0.0
JGF	Kuroka	6.52	37	Pn	Pn	16 53 16.9	-0.4
JHJ	Hachijo jima 2	6.68	65	Pn	Pn	16 53 18.2	-1.3
	8.3nm,0.3s,baz=90,slow=20,SNR=1.6						
JHJ				LR	LR	16 55 13.8	
	comp=Z,141nm,21.4s,baz=267,slow=32						
TJN	Taejon	7.35	325	c*e*P	Pn	16 53 29.8	+1.2
MAJO	Matsushiro	7.68	36	P	Pn	16 53 33.7	+0.5
MAJO	Matsushiro	7.68	36	Pn	Pn	16 53 33.7	+0.5
MJAR	Matsushiro Arr	7.68	36	Pn	Pn	16 53 32.6	-0.6
	0.2nm,0.3s,baz=205,slow=13,SNR=4.7						
MJAR				LR	LR	16 56 25.8	
	comp=Z,47nm,18.4s,baz=230,slow=37						
MJAR	Matsushiro Arr	7.68	36	P	Pn	16 53 33.7	+0.5
MJAR	Matsushiro Arr	7.68	36	Pn	Pn	16 53 33.7	+0.5
MJB9	Matsu-Tunnel	7.68	36	Pn	Pn	16 53 33.7	+0.5
KSRS	Korea Array	7.99	332	Pn	Pn	16 53 37.6	+0.2
	0.2nm,0.3s,baz=148,slow=15,SNR=4.4						
KS19	Wonju Array Si	8.05	332	Pn	Pn	16 53 36.7	-1.6
JCJ	Chichijima	9.06	109	Pn	Pn	16 53 49.3	-2.9
	6.3nm,0.3s,baz=289,slow=23,SNR=6.0						
JMM	Marumori	10.04	40	Pn	Pn	16 54 07.4	+1.8
YHNB	Yeheng	11.49	243	Pn	Pn	16 54 24.1	-1.4
NJ2	Nanjing	11.86	281	*e*P	Pn	16 54 29.0	-1.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SSLB	Suanglung	12.30	240	Pn	Pn	16 54 33.2	-3.4
ASAJ	Asahikawa	15.78	27	LR	LR	17 00 55.7	
	comp=Z,89nm,21.2s,baz=204,slow=35						
BJI	Beijing	16.45	310	P	Pn	16 55 31.8	-0.1
BJI				pP	P	16 55 36.3	+1.9
BJI				S	Sn	16 58 33.5	-0.1
BJI				PcP	PcP	17 00 22.0	-0.9
BJI				ScP	ScP	17 03 55.5	+0.1
BJI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KLR	Kul'dur	18.77	358	P	P	16 55 59.6	-0.4
	0.2nm,0.3s,baz=164,slow=7.5,SNR=4.8						
KLR	Kul'dur	18.77	358	c*e*P	P	16 55 59.8	-0.2
KLR				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ENH	Enshi	19.93	275	P	P	16 56 12.7	-0.2
ENH				IAmb	IAmb	16 56 17.7	
	comp=Z,36nm,1.5s						
HHC	Hu-ho-hao-te	19.94	307	*e*P	Pn	16 56 14.8	0.0
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,6.6s						
XAN	Xi'an	20.32	286	P	P	16 56 17.9	+0.7
XAN				pP	pP	16 56 23.6	-0.6
XAN				sP	pwP	16 56 27.3	-1.1
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XAN				LR	LR		
	comp=Z,200nm,13.1s						
LZH	Lanzhou	24.63	291	*e*P	P	16 57 04.1	+2.6
LZH				pP	sP	16 57 09.0	-3.0
LZH				sP	pwP	16 57 11.8	-1.5
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
ULN	Ulaanbaatar	26.17	319	c*e*P	P	16 57 14.5	-0.8
ULN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	Songino Array	26.53	318	P	P	16 57 18.2	-0.3
	comp=Z,0.6nm,0.9s,baz=125,slow=12,SNR=3.0						
SONM	Songino Array	26.53	318	IAmb	IAmb	16 57 19.9	
	comp=Z,1.4nm,1.2s						
YAK	Yakutsk	31.65	357	c*e*P	P	16 58 03.6	0.0
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YAK	Yakutsk	31.65	357	P	P	16 58 04.2	+0.6
H11N2	WAKE ISLAND Hy	32.74	101	T	T	17 32 26.9	
	baz=296,slow=74						
H11N1	WAKE ISLAND Hy	32.74	101	T	T	17 32 32.0	
	baz=296						
CMAR	Chiang Mai Arr	32.74	256	P	P	16 58 13.3	-0.5
	comp=Z,0.2nm,0.3s,baz=61,slow=5.6,SNR=1.5						
H11N3	WAKE ISLAND Hy	32.76	101	T	T	17 32 31.9	
	baz=296,slow=74						
FAKI	Fak Fak	33.18	181	P	P	16 58 18.9	+1.3
WMQ	Urumqi	37.74	303	*e*P	P	16 58 58.6	+2.0
TIXI	Tiksi	41.30	358	*i* P	P	16 59 25.0	-0.8
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MKAR	Makanchi Array	41.80	308	P	P	16 59 30.3	0.0
	comp=Z,0.3nm,0.5s,baz=88,slow=10,SNR=6.0						
MKAR	Makanchi Array	41.80	308	c*e*P	P	16 59 30.7	+0.4
MKAR	Makanchi Array	41.80	308	P	P	16 59 30.0	-0.3
BILL	Bilibino	42.48	18	*i* P	P	16 59 36.2	+0.7
BILL				*e*		17 01 13.1	
BILL				*e*S	S	17 05 49.3	-6.1
BILL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BILL				MLR	MLR		
	comp=Z,52nm,16.0s						
BILL	Bilibino	42.48	18	P	P	16 59 36.9	+1.4
BILL				IAmb	IAmb	16 59 37.7	
	comp=Z,2.6nm,0.6s						
NRIK	Noril'sk	46.53	340	*i* P	P	17 00 07.5	-0.3
NRIK				pmax	pmax		
	comp=Z,12nm,3.0s						
BVAR	Borovoye Array	49.82	316	P	P	17 00 34.8	+1.3
	comp=Z,0.7nm,0.5s,baz=123,slow=10,SNR=3.1						
WB0	Warramunga Arr	49.96	178	P	P	17 00 35.2	+0.5
WB0				IAmb	IAmb	17 00 58.9	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	50.13	178	P	P	17 00 36.2	+0.2
	comp=Z,1.3nm,0.9s,baz=355,slow=7.9,SNR=7.8						
WRA	Warramunga Arr	50.13	178	IAmb	IAmb	17 00 36.7	
	comp=Z,0.4nm,1.4s						
WB2	Warramunga Arr	50.13	178	P	P	17 00 36.5	+0.5
WB2				IAmb	IAmb	17 00 55.6	
	comp=Z,5.7nm,1.1s						
WR0	Warramunga Arr	50.15	178	P	P	17 00 37.4	+1.2
WR0				IAmb	IAmb	17 01 01.9	
	comp=Z,10nm,1.4s						
AS31	Alice Springs	53.82	178	P	P	17 01 04.9	+1.4
ASAR	Alice Springs	53.82	179	P	P	17 01 04.0	+0.5
	comp=Z,0.8nm,0.8s,baz=10,slow=13,SNR=12						
ASAR	Alice Springs	53.82	179	P	P	17 01 04.0	+0.5
IMAR	Indian Mountai	55.98	28	P	P	17 01 19.9	+1.3
OHAK	Old Harbor	56.52	39	P	P	17 01 24.3	+1.7
ARU	Arti	56.54	320	c *i*P	P	17 01 25.3	+2.5
ARU						17 03 27.6	
ARU				S	S	17 09 16.6	+4.3
ARU				SS	SS	17 12 52.4	-7.1
ARU				pmax	pmax		
	comp=Z,18nm,2.6s						
RSO	Redoubt South	56.55	35	P	P	17 01 24.1	+1.0
ABKAR	Akbulak array	56.65	312	P	P	17 01 24.1	+0.4
MLY	Manley	57.25	29	P	P	17 01 29.4	+1.6
RND	Reindeer	58.17	31	P	P	17 01 34.9	+0.6
RND				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RND	Reindeer	58.17	31	P	P	17 01 34.9	+0.6
RND				IAmb	IAmb	17 01 35.2	
	comp=Z,3.4nm,0.8s						
MDM	Murphy Dome	58.31	29	P	P	17 01 36.2	+1.0
MDM				IAmb	IAmb	17 01 38.0	
	comp=Z,11nm,1.4s						
ILAR	Eielson Array	58.90	30	P	P	17 01 39.3	0.0
	comp=Z,0.7nm,0.9s,baz=270,slow=6.1,SNR=6.2						
BMAR	Burnt Mountain	59.55	26	P	P	17 01 45.9	+2.1
RIDG	Independent Ri	59.92	31	P	P	17 01 47.5	+1.2
RIDG				IAmb	IAmb	17 01 52.7	
	comp=Z,4.6nm,1.0s						
DOT	Dot Lake	60.27	31	P	P	17 01 49.1	+0.3
DOT				IAmb	IAmb	17 01 49.6	
	comp=Z,1.7nm,0.6s						
BMRM	Bremner River	60.47	34	P	P	17 01 51.5	+1.2
VRDI	Verde Repeater	60.97	33	P	P	17 01 54.8	+1.0
VRDI				IAmb	IAmb	17 01 55.5	
	comp=Z,6.4nm,1.0s						
L27K	Beaver Creek,	61.37	31	P	P	17 01 57.8	+1.5
L27K				IAmb	IAmb	17 02 22.1	
	comp=Z,5.1nm,1.5s						
BCAR	Beaver Creek A	61.39	31	P	P	17 01 56.9	+0.4
M27K	Edge Creek, AK	61.49	32	P	P	17 01 58.1	+0.9
M27K				IAmb	IAmb	17 02 24.3	
	comp=Z,5.2nm,1.3s						
STKA	Stephens Creek	62.57	171	P	P	17 02 05.1	+0.5
	comp=Z,1.6nm,0.6s,baz=350,slow=8.9,SNR=4.9						
STKA	Stephens Creek	62.57	171	P	P	17 02 05.7	+1.1

STKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
STKA	Stephens Creek	62.57	171	P	P	17 02 05.7	+1.1
EPYK	Eagle Plains	62.79	27	P	P	17 02 07.0	+1.2
EPYK				IAmb	IAmb	17 02 19.4	
	comp=Z,5.6nm,1.3s						
INK	Inuvik	63.49	24	P	P	17 02 11.4	+1.1
INK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
INK	Inuvik	63.49	24	P	P	17 02 11.4	+1.1
A36M	Sachs Harbour	65.00	20	P	P	17 02 21.1	+1.0
A36M				IAmb	IAmb	17 02 22.4	
	comp=Z,5.3nm,0.8s						
LVZ	Lovozero	65.06	336	ceP	P	17 02 19.3	-1.4
SPB2	Spitsbergen Ar	65.50	348	P	P	17 02 23.6	+0.3
SPITS	Spitsbergen Ar	65.50	348	P	P	17 02 23.4	+0.1
CAN	Canberra	67.22	165	P	P	17 02 36.6	+1.8
CAN				pmax	pmax		
	comp=Z,19nm,1.4s						
CAN	Canberra	67.22	165	P	P	17 02 36.6	+1.8
ARCES	ARCESS Array B	67.49	339	P	P	17 02 36.4	+0.2
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ARCES	ARCESS Array B	67.49	339	P	P	17 02 36.4	+0.2
ARCES				IAmb	IAmb	17 02 37.3	
	comp=Z,7.5nm,1.2s						
EUNU	Eureka	67.67	7	P	P	17 02 37.9	+0.6
EUNU				IAmb	IAmb	17 02 38.5	
	comp=Z,1.5nm,1.1s						
KIV	Kislovodsk	69.52	310	eP	P	17 02 47.8	-1.6
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RES	Resolute Bay	70.67	12	P	P	17 02 56.5	+0.7
RES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
RES	Resolute Bay	70.67	12	P	P	17 02 56.5	+0.7
FIA1	FINESS Array S	71.08	331	P	P	17 02 58.2	-0.2
FINES	FINESS Array B	71.08	331	P	P	17 02 57.7	-0.7
	comp=Z,1.5nm,0.6s,baz=70,slow=4.9,SNR=7.1						
FINES	FINESS Array B	71.08	331	ceP	P	17 02 59.9	+1.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	71.08	331	P	P	17 02 58.2	-0.2
YKA	Yellowknife Ar	73.07	27	P	P	17 03 10.2	-0.2
	comp=Z,1.1nm,0.9s,baz=302,slow=5.6,SNR=12						
YKA	Yellowknife Ar	73.07	27	ceP	P	17 03 10.8	+0.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	Malin Array Be	74.80	320	P	P	17 03 20.2	-0.5
	comp=Z,0.4nm,0.4s,baz=54,slow=5.6,SNR=1.6						
AKASG	Malin Array Be	74.80	320	IAmb	IAmb	17 03 22.3	
	comp=Z,1.0nm,1.0s						
VOIR		79.93	317	P	P	17 03 49.8	+0.1
NVAR	Mina Array Bea	84.83	48	P	P	17 04 16.2	+0.6
	comp=Z,1.1nm,0.6s,baz=311,slow=4.5,SNR=6.3						
PDAR	Pinedale Array	87.48	41	P	P	17 04 29.3	+0.7
	comp=Z,0.2nm,0.5s,baz=17,slow=0.9,SNR=3.5						

SOME 22 17:30:24.7, 39°.48N×74°.58E, h0km
KRNET 22 17:30:28.6±0.1, 39°.45N×74°.58E, mb3.2
NNC 22 17:30:32.0±6.6, 39°.47N×74°.56E, h0km, mb3.7, mpv3.2, Error ellipse: s-maj=52.6km s-min=36.0km az=153.0
ISC 22 17:30:30.3±1.5, 39°.44N±0°.07×74°.55E±0°.04, h10km, n31, σ2s.25/51, 13C-11D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.99	306	⇑eP	Pg	17 30 47.5	-1.9
	baz=4.0						
SFK				⇑eS	Sb	17 31 02.3	-0.7
	baz=4.0						
OHH	Osh	1.74	309	⇓iP	Pb	17 31 01.2	-1.2
	baz=8.0						
OHH				⇓iS	Sg	17 31 25.2	-1.0
	baz=8.0						
DRK	Karamyk	2.13	272	⇑iP	Pb	17 31 08.0	-1.2
	baz=72						
DRK				⇑iS	Sb	17 31 36.6	+0.8
	baz=72						
ARLS	Aral	2.43	356	⇓eP	Pb	17 31 11.6	-2.6
	baz=56						
ARLS				⇓iS	Sb	17 31 42.9	-1.3
	baz=56						
AML	Almayashu	2.77	347	P	Pb	17 31 19.9	-0.2
	SNR=13						
UCH	Uchtor	2.79	359	P	Pg	17 31 22.3	-1.5
	SNR=9.7						
BTK	Batken	2.94	283	⇑iP	Pn	17 31 19.2	+2.0
	baz=83						
BTK				⇑iS	Sb	17 31 56.0	-3.0
	baz=83						
ARK	Arkit	3.07	321	⇑iP	Pn	17 31 20.9	+1.9
	baz=21						
ARK				⇑iS	Sn	17 31 58.2	+2.3
	baz=21						
AAK	Ala-Archa	3.20	359	P	Pb	17 31 27.3	0.0
	SNR=9.0						
AAK	Ala-Archa	3.20	359	⇑Pg	Pg	17 31 30.2	-1.4
	7.2nm,0.6s						
AAK				⇓Lg	Lg	17 32 17.6	
	17nm,0.8s						
KBK	Karagaybulak	3.23	5	P	Pb	17 31 28.4	+0.6
	SNR=5.7						
EKS2	Erkin-Say	3.27	350	P	Pb	17 31 27.8	-0.7
	SNR=9.7						
TRKS	Terek-Say	3.34	310	⇑eP	Pn	17 31 23.6	+0.9
	baz=9.0						
TRKS				⇑iS	Sn	17 32 03.8	+1.3
	baz=9.0						
MNAS	Manas	3.42	334	⇓eP	Pn	17 31 25.2	+1.4
	baz=33						
MNAS				⇓iS	Sn	17 32 07.1	+2.6
	baz=33						
MRKS	Merke	3.45	344	eP	Pb	17 31 29.6	-2.0
	7.9nm,0.6s						
MRKS				eS	Sb	17 32 16.1	+2.5
	5.8nm,0.7s						
TKM2	Tokmak 2	3.57	12	P	Pb	17 31 32.8	-0.8
	SNR=7.9						
TKM2	Tokmak 2	3.57	12	⇓Pg	Pb	17 31 32.8	-0.8
	3.3nm,0.4s						
TKM2				⇓Lg	Lg	17 32 24.1	
	17nm,0.8s						
KST	Kastek	3.76	16	eP	Pb	17 31 34.8	-2.0
	16nm,0.6s						
KST				eS	Sb	17 32 24.8	+2.4
	21nm,0.5s						
DGS	Degeres	3.91	13	eP	Pb	17 31 37.0	-2.4
	5.8nm,0.4s						
DGS				eS	Sb	17 32 29.2	+2.3
	7.2nm,0.6s						
MTBS	Maitube	3.95	20	eP	Pb	17 31 38.3	-1.8
	3.8nm,0.3s						
MTBS				eS	Sb	17 32 31.2	+3.3
	3.4nm,0.4s						
TNSS	Tian-Shan	4.02	26	eP	Pb	17 31 41.4	-0.1
	1.4nm,0.6s						
TNSS				eS	Sg	17 32 36.6	-3.0
	2.9nm,0.8s						
MDOK	Medeo	4.17	26	eP	Pb	17 31 41.6	-2.3
	1.6nm,0.6s						
MDOK				eS	Sb	17 32 36.7	+2.4
	3.8nm,0.7s						
KOTS	Kotyrbulak	4.25	26	eP	Pb	17 31 42.4	-2.9
	1.2nm,0.5s						
KOTS				eS	Sb	17 32 38.2	+1.5
	6.1nm,0.6s						
KRBS	Karabastau	4.34	11	eP	Pb	17 31 42.9	-3.7
	0.9nm,0.6s						
KRBS				eS	Sb	17 32 39.4	+0.3
	2.7nm,0.5s						
IUG	Iuzhnay	4.37	310	eP	Pb	17 31 48.1	+0.9
	44nm,0.1s						
IUG				eS	Sg	17 32 48.2	-2.4
	26nm,0.2s						
KTBS	Karatobe	4.56	20	eP	Pb	17 31 49.8	-0.6
	0.8nm,0.6s						
KTBS				eS	Sg	17 32 50.7	-6.0
	5.1nm,0.8s						
KUU	Kurty	4.65	16	eP	Pb	17 31 50.7	-1.3
	1.2nm,0.8s						
KUU				eS	Sb	17 32 52.6	+4.6
	2.9nm,0.8s						
KK08	Karatay Array	4.78	321	⇓Pn	Pn	17 31 46.3	+4.0
	1.1nm,0.5s,baz=141,slow=13						
KK08				⇑Lg	Lg	17 33 02.4	
	4.5nm,0.7s,baz=156,slow=28						
BRLS	Borolday	5.05	317	eP	Pb	17 32 00.6	+1.8
	0.9nm,0.0s						
BRLS				eS	Sg	17 33 09.2	-3.2
	5.6nm,0.2s						
PDGK	Podgornoye	5.38	42	⇑Pg	Pg	17 32 12.7	-0.5
	3.6nm,0.7s						
PDGK				⇓Lg	Lg	17 33 23.4	
	13nm,0.9s						
AB31	Akbulak array	14.31	318	P	Pn	17 33 53.5	+0.5
	1.4nm,0.8s,baz=127,slow=12,SNR=10						

DDA 22 17:36:55.1, 37°.35N×26°.58E, h7km±2km, ML2.4
ISK 22 17:36:55.4, 37°.35N×26°.53E, h47km±1km, ML2.4/12
ATH 22 17:36:55.8, 37°.42N×26°.49E, h11km±3km, ML2.5/3, Error ellipse: s-maj=3.5km s-min=1.0km az=118.0
ISC 22 17:36:55.2±1.1, 37°.38N±0°.02×26°.54E±0°.02, h12km±10km, n32, σ0s.80/45, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	Samos	0.41	36	P	Pg	17 37 03.4	+0.2
SMG				S	Sg	17 37 09.4	+0.7
SMG				AML	AML	17 37 10.2	
	comp=N,4546µm,0.3s						
SMG				AML	AML	17 37 10.5	
	comp=E,8423µm,0.4s						
GCAM	G?zelcaml?	0.64	60	i P	Pg	17 37 07.4	-0.2
GCAM				i S	Sg	17 37 16.7	+0.6
GCAM				IAML		17 37 20.0	
	comp=E,207nm,0.3s						
GCAM				IAML		17 37 21.0	
	comp=N,209nm,0.2s						
YKAV	Yalikavak-Bodr	0.65	113	PG	Pb	17 37 08.8	+0.4
BODT	Bodrum	0.69	117	PG	Pb	17 37 09.5	+0.2
BODT				SG	Sb	17 37 19.7	+0.9
KOSK	Kos Island	0.72	150	PG	Pb	17 37 09.6	-0.1
KOSK				SG	Sb	17 37 19.9	+0.4
DGB	zmir	0.73	22	i P	Pg	17 37 09.4	+0.1
DGB				i S	Sb	17 37 20.5	+0.8
DGB				IAML		17 37 23.0	
	comp=E,325nm,0.3s						
DGB				IAML		17 37 23.0	
	comp=N,248nm,0.6s						
ZEYE	Izmir, Urla-Ze	0.86	358	i P	Pg	17 37 11.4	-0.4
ZEYE				i S	Sb	17 37 24.4	+0.9
ZEYE				IAML		17 37 26.0	
	comp=N,212nm,0.4s						
ZEYE				IAML		17 37 26.0	
	comp=E,223nm,0.4s						
APE	Apeiranthos	0.86	249	P	Pg	17 37 11.5	-0.3
APE				S	Sb	17 37 23.3	-0.3
APE				AML	AML	17 37 26.2	
	comp=E,447µm,0.3s						
APE				AML	AML	17 37 26.4	
	comp=N,414µm,0.2s						
APE	Apeiranthos	0.86	249	PG	Pg	17 37 11.6	-0.2
APE				SG	Sb	17 37 23.4	-0.3
NISR	Nisiros	0.90	148	P	Pn	17 37 13.9	+0.2
URLA	Izmir	0.98	3	i P	Pg	17 37 14.2	+0.1
URLA				i S	Sb	17 37 28.6	+1.5
URLA				IAML		17 37 30.0	
	comp=E,119nm,0.7s						
URLA	Izmir	0.98	3	PG	Pg	17 37 13.8	-0.3
URLA				SG	Sg	17 37 27.8	+0.9
DAT	Datca	1.06	128	PG	Pg	17 37 14.4	-1.1
CHOS	Chios island	1.07	339	P	Pb	17 37 14.9	-0.9
CHOS				S	Sb	17 37 28.8	-1.1
CHOS				AML	AML	17 37 32.6	
	comp=E,377µm,0.3s						
CHOS				AML	AML	17 37 35.6	
	comp=N,251µm,0.3s						
CHOS	Chios island	1.07	339	PN	Pb	17 37 15.1	-0.7
CHOS				SN	Sb	17 37 29.4	-0.5
BLCB	Balcova	1.08	22	PN	Pb	17 37 15.3	-0.6
TNSA	Tinos	1.10	279	P	Pb	17 37 15.8	-0.4
AYDN	Tasoluk	1.10	75	i P	Pb	17 37 15.4	-0.9
AYDN				i S	Sn	17 37 33.5	+1.6
AYDB	Zeytinkoy-Aydi	1.22	62	PN	Pn	17 37 16.8	-1.4
THR3	Thira Island,	1.33	224	P	Pb	17 37 19.9	-0.2
STAX	Taxiarchis Har	1.33	223	P	Pb	17 37 20.2	0.0
FOCM	Foa	1.34	7	PN	Pn	17 37 18.9	-0.9
THR5	Thira Island,	1.35	225	P	Pb	17 37 20.4	0.0
YER	Yerkesik	1.42	99	PN	Pn	17 37 19.5	-1.3
TURN	Turunc	1.49	113	PN	Pn	17 37 20.8	-1.0
DKL	Dikili	1.71	10	PN	Pn	17 37 24.3	-0.6
ARG	Arkhangelos	1.73	132	PN	Pn	17 37 23.7	-1.3
KARY	Karystos	1.79	292	P	Pn	17 37 27.0	+1.1
SIGR	SIGRI	1.91	344	PN	Pn	17 37 26.8	-0.7
KULA	Kula-Manisa	2.03	55	PN	Pn	17 37 28.5	-0.8
FETY	Fethiye	2.17	109	PN	Pn	17 37 30.4	-0.8
CAME	Cameli-Denizli	2.25	100	PN	Pn	17 37 32.0	-0.4

IDC 22 17:41:46.8±0.6, 48°.25N×157°.00E, h0km, mb3.7/16, mb1 4.0/20, mb1mx3.9/44, mbtmp3.8/20, ML2.9/3, MS3.3/7, Ms1 3.3/7, ms1mx3.0/51, Error ellipse: s-maj=20.1km s-min=13.1km az=147.0
BJI 22 17:41:48.0±0.0, 48°.30N×157°.00E, h20km, mB4.7/4, mb4.2/8, Ms4.3/1, Ms7 4.0/1
NEIC 22 17:41:49.8±1.4, 48°.27N±0°.09×157°.0E±0°.1, h15km±4km, mb4.6/66, Error ellipse: s-maj=15.9km s-min=10.6km az=133.0
KRSC 22 17:41:49.4±1.7, 48°.48N×157°.69E, h29km±28km, ML4.6
SKHL 22 17:41:50.1±0.2, 48°.30N×157°.00E, h43km±6km, mb4.7/5
MOS 22 17:41:51.5±0.9, 48°.46N×157°.07E, h42km, mb4.2/7, Error ellipse: s-maj=10.9km s-min=4.4km az=85.5
ISC 22 17:41:52.4±0.5, 48°.32N±0°.06×156°.96E±0°.06, h35km, n185, σ1s.54/202, mb4.4/56, MS3.4/6, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.42	347	PN	Pn	17 42 28.4	-1.1
SKR				S	Sn	17 42 57.1	-0.8
SKR	Severo-Kuril's	2.42	347	eP	Pn	17 42 28.4	-1.1
SKR				eS	Sn	17 42 57.1	-0.8
SKR	Severo-Kuril's	2.42	347	eP	Pn	17 42 27.9	-1.6
SKR				AMB	AMB	17 42 33.1	
	100nm,0.3s						
SKR				eS	Sn	17 42 56.2	-1.7
SKR				A	A	17 42 58.0	
	530nm,0.6s						
SKR				A	A	17 42 58.0	
	600nm,0.6s						
PAU	Pauzhetka	3.15	358	PN	Pn	17 42 38.0	-1.5
PAU				S	Sn	17 43 14.8	-1.0
PAU	Pauzhetka	3.15	358	eP	Pn	17 42 38.0	-1.5
PAU				eS	Sn	17 43 14.8	-1.0
PAU	Pauzhetka	3.15	358	eP	Pn	17 42 38.4	-1.1
PAU				AMB	AMB	17 42 41.4	
	150nm,0.4s						
PAU				eS	Sn	17 43 14.8	-1.0
PAU				A	A	17 43 17.6	
	570nm,0.6s						
PAU				A	A	17 43 17.6	
	350nm,0.6s						
KDTR	Khodutka, Kamc	3.56	11	PN	Pn	17 42 43.0	-2.1
KDTR				S	Sn	17 43 22.1	-3.9
KDTR	Khodutka, Kamc	3.56	11	eP	Pn	17 42 43.0	-2.1
KDTR				eS	Sn	17 43 22.1	-3.9
ASAK	Asacha	4.11	8	PN	Pn	17 42 51.5	-1.2
ASAK				S	Sn	17 43 38.4	-1.2
ASAK	Asacha	4.11	8	eP	Pn	17 42 51.5	-1.2
ASAK				eS	Sn	17 43 38.4	-1.2
RUS	Russkaya	4.23	13	PN	Pn	17 42 51.9	-2.4
RUS	Russkaya	4.23	13	eP	Pn	17 42 51.9	-2.4
KRMR	Karymshinskiy	4.57	9	PN	Pn	17 42 58.2	-0.8
KRMR				S	Sn	17 43 51.1	+0.2
KRMR	Karymshinskiy	4.57	9	eP	Pn	17 42 58.2	-0.8
KRMR				eS	Sn	17 43 51.1	+0.2
APC	Apacha	4.61	1	PN	Pn	17 43 00.1	+0.6
APC	Apacha	4.61	1	eP	Pn	17 43 00.1	+0.6
PEA0B	Petropavlovsk-	4.81	5	i PN	Pn	17 43 01.7	-0.7
PEA0B	Petropavlovsk-	4.81	5		Pn	17 43 01.4	-0.9
PETK	Petropavlovsk-	4.81	5	Pn	Pn	17 43 01.2	-1.2
	3.9nm,0.3s,baz=170,slow=12,SNR=44						
PETK				Sn	Sn	17 43 59.0	+2.2
	1.2nm,0.3s,baz=190,slow=15,SNR=1.9						
PETK				LR	LR	17 45 06.8	
	comp=Z,164nm,21.2s,baz=199,slow=41						
PETK	Petropavlovsk-	4.81	5		Pn	17 43 00.5	-1.9
PET	Petropavlovsk	4.83	12	ePN	Pn	17 43 01.5	-1.0
PET				eS	Sn	17 43 54.7	-2.4
PET				pmax	pmax		
	comp=Z,41nm,0.5s						
PET				smax	smax		
	comp=N,237nm,0.5s						
PET				smax	smax		
	comp=E,177nm,0.7s						
PET	Petropavlovsk	4.83	12	eP	Pn	17 43 01.1	-1.4
PET				eS	Sn	17 43 54.5	-2.6
PET	Petropavlovsk	4.83	12	eP	Pn	17 43 01.5	-1.0
PET				AMB	AMB	17 43 02.8	
	comp=E,70nm,0.7s						
PET				eS	Sn	17 43 54.9	-2.2
PET	Petropavlovsk	4.83	12		Pn	17 43 01.0	-1.5
DALK	Dalny	4.85	13	PN	Pn	17 43 00.9	-1.9
DALK				S	Sn	17 43 54.9	-2.7
DALK	Dalny	4.85	13	eP	Pn	17 43 00.9	-1.9
DALK				eS	Sn	17 43 54.9	-2.7
UGLR	Uglovaya	5.03	13	PN	Pn	17 43 04.4	-1.0
UGLR	Uglovaya	5.03	13	eP	Pn	17 43 04.4	-1.0
AVH	Avacha	5.07	12	PN	Pn	17 43 05.2	-0.8
AVH	Avacha	5.07	12	eP	Pn	17 43 05.2	-0.8
SMAR	Somma	5.08	13	PN	Pn	17 43 05.3	-0.9
SMAR	Somma	5.08	13	eP	Pn	17 43 05.3	-0.9
NLC	Nalytchevo	5.08	16	eS	Sn	17 43 59.1	-4.3
KOK	Koryaka	5.09	11	PN	Pn	17 43 05.6	-0.6
KOK	Koryaka	5.09	11	eP	Pn	17 43 05.6	-0.6
KOK	Koryaka	5.09	11	eP	Pn	17 43 05.6	-0.6
SPN	Mys Shipunski	5.16	21	PN	Pn	17 43 05.6	-1.5
SPN	Mys Shipunski	5.16	21	eP	Pn	17 43 05.6	-1.5
SPN				eS	Sn	17 44 01.6	-3.7
GNL	Ganaly	5.41	6	PN	Pn	17 43 10.8	+0.1
GNL	Ganaly	5.41	6	eP	Pn	17 43 10.8	+0.1
MKZ	Mys Kozlova	6.91	24	eS	Sn	17 44 42.3	-6.2
KUR	Kuril'sk	6.97	247	eP	Pn	17 43 32.4	+0.5
KUR				AMB	AMB	17 43 35.2	
	comp=E,80nm,0.6s						
KUR				eS	Sn	17 44 47.0	-2.9
KUR				A	A	17 44 52.7	
	comp=E,60nm,0.6s						
KUR				A	A	17 44 52.7	
	comp=E,70nm,0.6s						
TUMD	Tumrok D	7.21	16	eP	Pn	17 43 34.8	-0.5
TUMR	Tumrok	7.24	15	PN	Pn	17 43 34.8	-1.0
SHO	Shikotan	8.33	241	ePN	Pn	17 43 46.1	-4.5
SHO	Shikotan	8.33	241	eP	Pn	17 43 50.1	-0.5
SHO				AMB	AMB	17 43 52.7	
	comp=E,20nm,0.6s						
SHO				eS	Sn	17 45 19.2	-4.2
SHO				A	A	17 45 33.3	
	comp=E,20nm,0.7s						
SHO				A	A	17 45 33.3	
	comp=E,30nm,0.7s						
JKA	Kamikawa-asahi	10.80	252	eP	Pn	17 44 23.2	-1.3
ASAJ	Asahikawa	10.80	252	Pn	Pn	17 44 23.1	-1.4
	comp=E,0.1nm,0.3s,baz=68,slow=19,SNR=1.8						
ASAJ				LR	LR	17 48 35.8	
	comp=E,62nm,19.3s,baz=186,slow=38						
ERM	Erimo	11.60	242	PN	Pn	17 44 32.2	-3.2
ERM	Erimo	11.60	242	Pn	Pn	17 44 32.2	-3.2
MA2	Magadan	11.84	344	i PN	Pn	17 44 37.4	-1.2
MA2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MA2	Magadan	11.84	344	eP	Pn	17 44 37.4	-1.2
JEW	Eniwo	12.17	249	Pn	Pn	17 44 41.7	-1.4
KLR	Kul'dur	16.62	283	Pn	Pn	17 45 42.5	-0.1
	comp=Z,0.0nm,0.3s,baz=74,slow=16,SNR=5.4						
KLR	Kul'dur	16.62	283	ceP	P	17 45 44.2	-0.5
KLR	Kul'dur	16.62	283	eP	Pn	17 45 38.4	-4.2
USA0B	Ussuriysk Arra	17.73	266	P	P	17 45 58.3	+1.4
USA0B				pmax	pmax		
	comp=Z,4.0nm,0.7s						
USA0B	Ussuriysk Arra	17.73	266		P	17 45 58.3	+1.4
USRK	Ussuriysk Ar.	17.73	266	P	P	17 45 57.4	+0.5
USRK	Ussuriysk Ar.	17.73	266		P	17 45 57.4	+0.5
MJA0	Matsu Arr-Jizo	18.09	236	eP	P	17 46 04.9	+3.8
MJAR	Matsushiro Arr	18.12	236	P	Pn	17 45 59.4	-1.8
	baz=30,slow=9.0,SNR=2.1						
ZEA	Zeya	19.37	297	i P	Pn	17 46 16.2	0.0
ZEA	Zeya	19.37	297	eP	Pn	17 46 16.2	0.0
BILL	Bilibino	20.32	10	i P	Pn	17 46 26.5	-0.8
BILL				e		17 46 43.9	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,103nm,15.0s						
BILL	Bilibino	20.32	10	eP	Pn	17 46 26.5	-0.8
BILL	Bilibino	20.32	10	P	Pn	17 46 26.6	-0.8
YAK	Yakutsk	20.55	322	P	P	17 46 26.5	-1.0
	comp=Z,1.0nm,0.3s,baz=125,slow=2.6,SNR=2.0						
YAK	Yakutsk	20.55	322	i P	P	17 46 25.7	-1.8
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YAK	Yakutsk	20.55	322	eP	P	17 46 25.7	-1.8
YAK	Yakutsk	20.55	322	P	P	17 46 25.7	-1.8
JHS	Saijyo	22.13	242	P	P	17 46 44.1	-0.7
JHS				IAmb	IAmb	17 46 59.9	
	comp=Z,36nm,1.5s						
KSRS	Korea Array	23.75	254	P	P	17 46 59.4	-1.9
	comp=Z,0.7nm,0.7s,baz=49,slow=9.3,SNR=2.8						
KSRS				LR	LR	17 55 51.1	
	comp=Z,21nm,18.6s,baz=350,slow=36						
TIXI	Tiksi	26.77	341	i P	P	17 47 28.9	+0.5
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	Tiksi	26.77	341	P	P	17 47 28.1	-0.3
TTA	Tatalina	29.50	43	P	P	17 47 52.0	-1.1
TTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TTA	Tatalina	29.50	43	P	P	17 47 52.0	-1.1
SVW2	Sparrevohn	29.52	47	P	P	17 47 52.9	-0.3
J20K	Nowinta River	30.50	41	P	P	17 48 01.4	-0.3
H11S1	WAKE ISLAND Hy	30.78	162	T	T	18 20 27.8	
	baz=348						
H11S3	WAKE ISLAND Hy	30.79	162	T	T	18 20 26.4	
	baz=348,slow=74						
H11S2	WAKE ISLAND Hy	30.80	162	T	T	18 20 22.7	
	baz=348,slow=74						
IMAR	Indian Mountai	30.95	37	P	P	17 48 05.2	-0.5
KDAK	Kodiak Island	31.08	53	P	P	17 48 05.8	-1.1
KDAK	Kodiak Island	31.08	53	P	P	17 48 05.8	-1.1
H21K	Melozitna Rive	31.28	38	P	P	17 48 09.0	+0.4
H21K				IAmb	IAmb	17 48 30.4	
	comp=Z,14nm,1.7s						
A21K	Barrow	31.44	27	P	P	17 48 10.1	+0.3
I21K	Tanana	31.55	39	P	P	17 48 10.1	-0.9
I21K				IAmb	IAmb	17 48 41.3	
	comp=Z,11nm,1.6s						
CNPM	China Poot	31.67	50	P	P	17 48 11.6	-0.6
BRLK	Bradley Lake	31.84	49	P	P	17 48 11.9	-1.7
KTH	Kantishna Hill	31.86	42	P	P	17 48 13.9	+0.1
KTH				IAmb	IAmb	17 48 20.0	
	comp=Z,18nm,1.6s						
MLY	Manley	32.06	39	P	P	17 48 14.8	-0.7
MLY				IAmb	IAmb	17 48 36.9	
	comp=Z,9.6nm,1.8s						
O22K	Cooper Landing	32.39	48	P	P	17 48 16.6	-1.8
I23K	Minto, Yukon-K	32.65	39	P	P	17 48 20.9	+0.3
I23K				IAmb	IAmb	17 48 39.5	
	comp=Z,12nm,1.8s						
NEA2	Nenana	32.73	40	P	P	17 48 21.8	+0.4
NEA2				IAmb	IAmb	17 48 29.1	
	comp=Z,9.4nm,1.4s						
SML	Sawmill	33.02	45	P	P	17 48 23.4	-0.6
SML				IAmb	IAmb	17 48 34.4	
	comp=Z,21nm,1.4s						
MDM	Murphy Dome	33.11	40	P	P	17 48 24.1	-0.6
MDM				IAmb	IAmb	17 48 42.7	
	comp=Z,16nm,1.5s						
SONM	Songino Array	33.29	289	P	P	17 48 25.8	-0.8
	comp=Z,0.3nm,0.7s,baz=46,slow=6.2,SNR=1.5						
SONM				PcP	PcP	17 51 08.4	+0.4
	comp=Z,0.4nm,0.7s,baz=70,slow=0.9,SNR=3.0						
SONM				LR	LR	18 03 32.5	
	comp=Z,62nm,18.5s,baz=58,slow=39						
SONM	Songino Array	33.29	289	P	P	17 48 26.6	0.0
SONM				pmax	pmax		
	comp=Z,4.0nm,1.7s						
SONM	Songino Array	33.29	289	P	P	17 48 26.6	0.0
H24K	Noodor Dome	33.32	38	P	P	17 48 26.8	+0.3
H24K				IAmb	IAmb	17 48 54.4	
	comp=Z,18nm,1.8s						

ILAR	Eielson Array	33.68	40	P	P	17 48 28.4	-1.2
	comp=Z,0.5nm,0.6s,baz=244,slow=7.7,SNR=8.6						
FID	Port Fidalgo	33.97	47	P	P	17 48 31.8	-0.4
FYU	Fort Yukon	34.44	37	P	P	17 48 36.6	+0.5
BMAR	Burnt Mountain	34.74	35	P	P	17 48 39.3	+0.5
VRDI	Verde Repeater	35.39	46	P	P	17 48 43.9	-0.8
VRDI				IAmb	IAmb	17 49 09.7	
	comp=Z,29nm,1.7s						
CRQM	Cirque	35.60	47	P	P	17 48 46.3	-0.2
L27K	Beaver Creek,	35.97	43	P	P	17 48 50.0	+0.6
L27K				IAmb	IAmb	17 48 51.0	
	comp=Z,22nm,1.6s						
BCAR	Beaver Creek A	35.98	43	P	P	17 48 49.8	+0.2
BARN	Barnard Glacie	36.28	46	P	P	17 48 52.3	0.0
BARN				IAmb	IAmb	17 49 10.4	
	comp=Z,22nm,1.6s						
YAH	Yahtse	36.34	47	P	P	17 48 53.1	+0.3
CTGM	Chitina Glacie	36.45	46	P	P	17 48 53.6	-0.1
CTGM				IAmb	IAmb	17 49 20.4	
	comp=Z,33nm,1.8s						
LOGN	Logan Glacier	36.63	46	P	P	17 48 54.6	-0.6
LOGN				IAmb	IAmb	17 49 20.4	
	comp=Z,20nm,1.4s						
DAWY	Dawson	36.95	41	P	P	17 48 58.9	+1.1
EPYK	Eagle Plains	37.85	37	P	P	17 49 06.2	+0.8
EPYK				IAmb	IAmb	17 49 25.3	
	comp=Z,15nm,1.4s						
INK	Inuvik	38.91	34	P	P	17 49 14.1	-0.1
	comp=Z,0.9nm,0.5s,baz=289,slow=8.8,SNR=4.2						
INK	Inuvik	38.91	34	P	P	17 49 13.6	-0.5
INK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
INK	Inuvik	38.91	34	P	P	17 49 13.6	-0.5
WHY	Whitehorse	39.61	46	P	P	17 49 21.7	+1.5
WHY				IAmb	IAmb	17 49 39.3	
	comp=Z,16nm,1.6s						
DLBC	Dease Lake	42.61	48	P	P	17 49 46.0	+1.1
DLBC				IAmb	IAmb	17 50 01.7	
	comp=Z,16nm,1.6s						
ZALV	Zalesovo Beam	43.81	306	P	P	17 49 54.4	-0.1
	comp=Z,0.2nm,0.3s,baz=56,slow=8.9,SNR=1.9						
DGZ	Jazzator, Alta	44.12	299	*i* P	P	17 49 59.4	+2.1
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GRNB	Grenville Isla	44.36	54	P	P	17 50 01.2	+2.3
GRNB				IAmb	IAmb	17 50 03.1	
	comp=Z,14nm,0.9s						
WMQ	Urumqi	46.78	292	*e*P	P	17 50 21.3	+3.0
EUNU	Eureka	47.05	12	P	P	17 50 20.5	+0.6
EUNU				IAmb	IAmb	17 50 31.3	
	comp=Z,3.3nm,0.8s						
YKA	Yellowknife Ar	48.08	39	P	P	17 50 28.0	-0.1
	comp=Z,1.6nm,0.7s,baz=297,slow=7.6,SNR=16						
YKA				PcP	PcP	17 51 54.5	-0.8
	comp=Z,0.1nm,0.4s,baz=302,slow=3.5,SNR=2.2						
MK31	Makanchi Array	48.52	298	P	P	17 50 31.9	+0.1
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	Makanchi Array	48.52	298	P	P	17 50 31.9	+0.1
MKAR	Makanchi Array	48.52	298	P	P	17 50 31.4	-0.4
	comp=Z,0.8nm,0.7s,baz=68,slow=5.8,SNR=7.9						
MKAR				PcP	PcP	17 51 57.2	0.0
	comp=Z,0.5nm,0.8s,baz=39,slow=2.8,SNR=2.1						
MKAR				LR	LR	18 13 53.5	
	comp=Z,89nm,20.4s,baz=359,slow=40						
MKAR	Makanchi Array	48.52	298	P	P	17 50 32.0	+0.2
MKAR						17 51 57.9	
MKAR	Makanchi Array	48.52	298	*e*P	P	17 50 32.0	+0.2
MKAR	Makanchi Array	48.52	298	P	P	17 50 32.0	+0.2
MKAR				PcP	PcP	17 51 57.9	+0.7
KURK	Kurchatov	48.66	304	P	P	17 50 32.6	0.0
KURK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KURK	Kurchatov	48.66	304	*e*P	P	17 50 32.6	0.0
KURK	Kurchatov	48.66	304	P	P	17 50 32.6	0.0
KURK				IAmb	IAmb	17 50 46.3	
	comp=Z,4.9nm,1.1s						
BOOM	Boomskoye usch	54.67	296	P	P	17 51 19.7	+1.8
BOOM				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BOOM	Boomskoye usch	54.67	296	P	P	17 51 19.7	+1.8
BOOM				IAmb	IAmb	17 51 52.1	
	comp=Z,10nm,1.3s						
CHTO	Chiang Mai	55.00	259	P	P	17 51 21.2	+0.9
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CHTO	Chiang Mai	55.00	259	P	P	17 51 21.2	+0.9
K05A	Summer Lake	55.20	63	P	P	17 51 23.1	+1.3
CMAR	Chiang Mai Arr	55.26	258	P	P	17 51 22.8	+0.6
	comp=Z,0.9nm,0.7s,baz=34,slow=7.3,SNR=9.7						
CMAR	Chiang Mai Arr	55.26	258	*e*P	P	17 51 23.0	+0.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WALA	Waterton Lakes	55.42	53	P	P	17 51 24.0	+0.9
WALA				IAmb	IAmb	17 51 27.1	
	comp=Z,4.0nm,1.0s						
AAK	Ala-Archa	55.45	297	P	P	17 51 24.2	+0.7
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AAK	Ala-Archa	55.45	297	*e*P	P	17 51 24.2	+0.7
AAK	Ala-Archa	55.45	297	P	P	17 51 24.2	+0.7
AAK				IAmb	IAmb	17 51 35.0	
	comp=Z,3.3nm,0.8s						
ARU	Arti	55.59	318	P	P	17 51 24.3	+0.2
ARU				IAmb	IAmb	17 51 34.7	
	comp=Z,4.1nm,0.7s						
KSH	Kashi	56.44	294	P	P	17 51 35.1	+4.5
KSH				sP	pwP	17 51 45.3	-3.4
KSH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
PLID	Pearl Lake	56.63	58	P	P	17 51 32.0	0.0
PLID				IAmb	IAmb	17 51 32.9	
	comp=Z,3.2nm,0.8s						
KKAR	Karatay Array	57.50	300	P	P	17 51 39.1	+1.2
KKAR	Karatay Array	57.50	300	P	P	17 51 39.0	+1.2
HRY	Holter Researc	57.95	54	P	P	17 51 42.2	+1.0
BOZ	Bozeman (W)	58.75	55	P	P	17 51 46.3	-0.5
BOZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BOZ	Bozeman (W)	58.75	55	P	P	17 51 46.3	-0.5
SUMG	Summit	58.92	5	P	P	17 51 47.2	-0.6
SUMG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SUMG	Summit	58.92	5	P	P	17 51 47.2	-0.6
SUMG				IAmb	IAmb	17 51 58.7	
	comp=Z,5.6nm,1.1s						
BTK	Batken	59.22	297	P	P	17 51 50.7	+0.7
BTK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BTK	Batken	59.22	297	P	P	17 51 50.6	+0.7
BTK				IAmb	IAmb	17 52 01.6	
	comp=Z,6.0nm,0.9s						
ABKAR	Akbulak array	59.39	311	P	P	17 51 51.5	+0.6
ABKAR	Akbulak array	59.39	311	P	P	17 51 51.7	+0.8
ABKAR				IAmb	IAmb	17 52 01.9	
	comp=Z,5.5nm,0.8s						
NVAR	Mina Array Bea	59.40	65	P	P	17 51 51.5	+0.1
	comp=Z,0.7nm,0.6s,baz=288,slow=7.2,SNR=4.1						
REDW	Red Top Meadow	60.60	57	P	P	17 51 59.1	-0.5
REDW				IAmb	IAmb	17 52 02.2	
	comp=Z,4.2nm,1.1s						
CHGR	Chuyangaron	61.10	297	P	P	17 52 03.0	+0.1
PDAR	Pinedale Array	61.71	57	P	P	17 52 07.3	+0.2
	comp=Z,0.7nm,0.8s,baz=338,slow=1.9,SNR=4.5						
COEN	Coen	63.21	195	P	P	17 52 17.7	+0.7
FIA1	FINESS Array S	63.69	336	P	P	17 52 20.8	+1.1
FINES	FINESS Array B	63.69	336	P	P	17 52 20.9	+1.2
	comp=Z,2.5nm,0.8s,baz=52,slow=2.5,SNR=4.8						
FINES	FINESS Array B	63.69	336	*e*P	P	17 52 22.3	+2.6
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	FINESS Array B	63.69	336	P	P	17 52 20.8	+1.0
RSSD	Black Hills	63.80	52	P	P	17 52 22.5	+1.4
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RSSD	Black Hills	63.80	52	P	P	17 52 22.4	+1.4
RSSD				IAmb	IAmb	17 52 22.7	
	comp=Z,3.9nm,0.7s						
NOA	NORSAR Array B	67.54	343	LR	LR	18 26 11.2	
	comp=Z,26nm,19.3s,baz=265,slow=39						
NRS	Narsarsuaq	69.39	11	P	P	17 52 58.0	+1.9
NRS	Narsarsuaq	69.39	11	P	P	17 52 58.0	+1.9
SCHQ	Schefferville	70.81	25	P	P	17 53 08.5	+3.5
SCHQ				IAmb	IAmb	17 53 39.7	
	comp=Z,5.2nm,1.0s						
WB2	Warramunga Arr	70.91	203	P	P	17 53 04.7	-1.2
WB2				IAmb	IAmb	17 53 05.0	
	comp=Z,6.8nm,1.1s						
WRA	Warramunga Arr	70.91	203	P	P	17 53 04.5	-1.4
	comp=Z,0.6nm,0.8s,baz=16,slow=6.5,SNR=5.2						
WRA	Warramunga Arr	70.91	203	*e*P	P	17 53 05.9	0.0
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	71.64	328	P	P	17 53 10.0	0.0
	comp=Z,0.5nm,0.4s,baz=32,slow=5.0,SNR=1.9						
AKASG	Malin Array Be	71.64	328	P	P	17 53 10.0	0.0
TX31	Lajitas Ar. Si	74.45	63	P	P	17 53 26.7	-0.5
TX31				IAmb	IAmb	17 53 55.0	
	comp=Z,20nm,1.8s						
TX32	Lajitas Array	74.45	63	P	P	17 53 26.6	-0.5
TXAR	Lajitas Array	74.45	63	P	P	17 53 26.9	-0.2
	comp=Z,1.2nm,0.6s,baz=299,slow=4.3,SNR=16						
ASAR	Alice Springs	74.59	202	P	P	17 53 27.3	-0.4
	comp=Z,1.1nm,0.8s,baz=11,slow=5.3,SNR=12						
URZ	Urewera	88.05	164	LR	LR	18 24 26.7	
	comp=Z,79nm,21.8s,baz=31,slow=29						

IDC 22 17:59:21.5±4.9**,4°.00S**×**149°.38E,h0^{km},mb3.1**/3**,**
mb1 3.3/3**,mb1mx3.1**/32**,mbtmp3.1**/3**,Error ellipse:**
s-maj=146.3km s-min=38.0km az=100.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.59	222	P	P	18 04 12.1	-1.0
	0.2nm,0.3s,baz=48,slow=11,SNR=7.5						
ASAR	Alice Springs	24.61	216	P	P	18 04 44.6	+0.9
	0.2nm,0.5s,baz=49,slow=8.6,SNR=6.7						
MKAR	Makanchi Array	77.50	320	P	P	18 11 18.9	-0.2
	0.2nm,0.6s,baz=94,slow=4.5,SNR=1.8						

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*UPP **22** 18:06:13.8±0.1,67°.08N×20°.94E,h0^{km},ML2.4,Explosion*
*HEL **22** 18:06:14.6±0.1,67°.09N×20°.97E,h0^{km},ML2.4,*
ML2.4(UPP),Explosion
*NAO **22** 18:06:14.5±0.8,67°.04N×21°.14E,ML2.6*
*IDC **22** 18:06:15.2±0.8,67°.04N×21°.19E,h0^{km},mb1 3.4/5,*
mb1mx3.1/43,mbtmp3.4/5,ML2.1/4,Error ellipse:
s-maj=14.3km s-min=7.2km az=110.0
*BER **22** 18:06:16.4±3.3,67°.07N×20°.90E,h0^{km},ML2.0,*
ML2.6(NAO),Suspected explosion
ISC 22 18:06:13.6±0.7**,67°.08N**±0°.02×**20°.87E**±0°.03**,h0^{km},n63,**
σ0^{s}.98/89**,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERTU	Ertsjaerv	0.74	135	P	Pg	18 06 27.4	-0.3
ERTU	Ertsjaerv	0.74	135	*e*P	Pg	18 06 27.3	-0.5
ERTU				*e*S	Sg	18 06 37.4	+0.1
PAJU	Pajala	0.88	92	P	Pg	18 06 29.9	-0.5
PAJU				S	Sg	18 06 41.7	-0.2
PAJU	Pajala	0.88	92	*e*P	Pg	18 06 29.7	-0.7
PAJU				*e*SB	Sg	18 06 42.0	+0.1
RATU	Laukkuluspa	0.90	327	P	Pg	18 06 30.9	+0.2
RATU	Laukkuluspa	0.90	327	*e*P	Pg	18 06 30.9	+0.2
KUA	Kurravaara	0.90	347	P	Pg	18 06 30.8	0.0
KUA	Kurravaara	0.90	347	*e*P	Pg	18 06 30.8	0.0
HARU	Harads	0.92	177	P	Pg	18 06 30.9	-0.2
HARU	Harads	0.92	177	*e*P	Pg	18 06 30.9	-0.2
SALU	Saltoluokta	0.97	289	P	Pb	18 06 32.5	-0.7
SALU	Saltoluokta	0.97	289	*e*P	Pb	18 06 32.5	-0.7
NIKU	Nikkaluokta	1.06	319	P	Pb	18 06 34.0	-0.8
NIKU	Nikkaluokta	1.06	319	*e*P	Pb	18 06 34.0	-0.8
LANU	Lannavaara	1.07	23	P	Pg	18 06 33.4	-0.5
LANU	Lannavaara	1.07	23	*e*P	Pg	18 06 33.2	-0.7
LANU				*e*SN	Sn	18 06 51.2	-0.1
KOVU	Salmi	1.18	347	P	Pg	18 06 35.9	-0.3
KOVU	Salmi	1.18	347	*e*P	Pg	18 06 35.9	-0.3
KALU	Kalix	1.58	140	*e*P	Pn	18 06 42.3	-0.5
	baz=325						
KALU				*e*SN	Sg	18 07 06.7	+2.5
SJUU	Sjulsmark	1.60	169	P	Pn	18 06 43.1	0.0
SJUU	Sjulsmark	1.60	169	*e*P	Pn	18 06 43.1	0.0
TOF	Tornio	1.71	124	*e*P	Pn	18 06 44.5	0.0
TOF				MSG		18 07 04.8	
	comp=Z,40nm,0.2s						
TOF				*e*SN	Sb	18 07 07.7	0.0
HEF	Hetta	1.71	37	Pn	Pn	18 06 44.6	0.0
HEF				Sn	Sn	18 07 07.3	+0.2
HEF	Hetta	1.71	37	*e*P	Pn	18 06 44.6	0.0
HEF				*e*S	Sn	18 07 07.1	0.0
HEF	Hetta	1.71	37	*e*P	Pn	18 06 44.3	-0.3
	baz=217						
HEF				MSG		18 07 04.3	
	comp=Z,35nm,0.2s						
HEF				*e*SN	Sn	18 07 07.0	0.0
KIF	Kilpisjarvi	1.94	359	Pn	Pb	18 06 49.6	0.0
KIF				Sn	Sg	18 07 16.6	+0.9
KIF	Kilpisjarvi	1.94	359	*e*P	Pb	18 06 49.4	-0.3
KIF	Kilpisjarvi	1.94	359	*e*PB	Pb	18 06 49.3	-0.3
KIF				MSG		18 07 12.8	
	comp=Z,56nm,0.2s						
KIF				*e*SG	Sg	18 07 16.1	+0.4
RNF	Rovaniemi	2.09	101	*e*PB	Pn	18 06 50.7	+0.9
RNF				*e*SG	Sb	18 07 19.3	+0.6
KTK1	Kautokeino	2.14	24	*e*P	Pb	18 06 51.9	-1.2
KTK1				*e*S	Sn	18 07 17.9	+0.2
KTK1				IAML		18 07 26.1	
	comp=Z,15nm,0.2s						
FAUS	Fauske	2.19	281	*e*P	Pb	18 06 53.6	-0.4
FAUS				*e*S	Sg	18 07 23.1	-0.8
FAUS				IAML		18 07 26.4	
	comp=Z,31nm,0.1s						
SGF	Sodankyl	2.23	78	*e*PB	Pn	18 06 52.7	+1.0
	baz=261						
SGF				*e*SG	Sb	18 07 23.6	+0.9
JETT	Jettan, Norway	2.50	356	Pn	Pb	18 06 57.5	-1.7
BURU	Burvik	2.51	175	*e*P	Pn	18 06 56.9	+1.3
	baz=355						
OUL	Oulu	2.86	132	*e*P	Pn	18 07 02.4	+2.0
OBF0	Syolatti, Pyha	2.94	150	*e*SG	Sg	18 07 46.9	-1.0
ARA0	ARCESS Array S	3.01	33	Pn	Pn	18 07 03.0	+0.6
	baz=209,slow=16						
ARA0				Sn	Sn	18 07 41.3	+2.1
	baz=215,slow=22						
ARA0	ARCESS Array S	3.01	33	Pn	Pn	18 07 03.0	+0.6
	baz=209,slow=16						
ARA0	ARCESS Array S	3.01	33	*e*P	Pn	18 07 02.8	+0.4
	baz=214						
ARA0				*e*SB	Sb	18 07 44.0	-1.2
ARCES	ARCESS Array B	3.01	33	Pn	Pn	18 07 03.2	+0.7
	baz=212,slow=14,SNR=100						
ARCES				Sn	Sn	18 07 41.8	+2.6
	baz=218,slow=22,SNR=11						
OUF	Merijarvi	3.15	148	*e*P	Pn	18 07 05.9	+1.5
	baz=337						
OUF				MSG		18 07 47.0	
	comp=Z,4.8nm,0.2s						
VRF	Varrio	3.44	75	*e*P	Pn	18 07 09.2	+0.8
MSF	Maaselka	3.48	106	*e*P	Pn	18 07 10.1	+1.2
KEV	Kevo	3.52	37	Pn	Pn	18 07 09.7	+0.3
KEV				Sn	Sn	18 07 53.1	+1.5
KEV	Kevo	3.52	37	Pn	Pn	18 07 09.7	+0.3
KEV	Kevo	3.52	37	*e*P	Pn	18 07 09.7	+0.3
KU6	Riekki	3.76	102	*e*P	Pn	18 07 14.3	+1.6
HUSU	Husum	3.82	191	*e*P	Pn	18 07 15.3	+1.8
HUSU				*e*S	Sn	18 08 00.2	+1.3
VAF	Ylistaro	4.12	168	*e*P	Pn	18 07 19.1	+1.4
	baz=351						
APA0	Apatity Array	4.72	78	Pn	Pn	18 07 25.5	-0.4
	baz=270,slow=14						
APA0				Sn	Sn	18 08 21.7	+0.5
	baz=274,slow=37						
APA0				Lg	Lg	18 08 38.5	
	baz=265,slow=28						
APA0	Apatity Array	4.72	78	Pn	Pn	18 07 25.5	-0.4
	baz=270,slow=14						
FIA0	FINESS Array S	6.09	156	Pn	Pn	18 07 45.2	+0.5
	baz=343,slow=14						
FIA0				Sn	Sn	18 08 54.7	-0.4
	baz=342,slow=28						
FIA0	FINESS Array S	6.09	156	Pn	Pn	18 07 45.2	+0.5
	baz=343,slow=14						
FIA0				Sn	Sn	18 08 54.7	-0.4
	baz=342,slow=28						
FINES	FINESS Array B	6.09	156	Pn	Pn	18 07 44.9	+0.2
	comp=Z,0.1nm,0.3s,baz=348,slow=12,SNR=8.1						
FINES				Sn	Sn	18 08 54.6	-0.4
	comp=Z,0.5nm,0.3s,baz=347,slow=23,SNR=7.1						
FINES				Lg	Lg	18 09 26.2	
	comp=Z,0.5nm,0.3s,baz=342,slow=28,SNR=5.9						
NB2	NORSAR Subarra	7.38	219	Pn	Pn	18 08 04.6	+2.1
	baz=24,slow=14						
NB2	NORSAR Subarra	7.38	219	Pn	Pn	18 08 04.6	+2.1
	baz=24,slow=14						
NOA	NORSAR Array B	7.38	219	Pn	Pn	18 08 04.1	+1.6
	comp=Z,0.0nm,0.3s,baz=32,slow=12,SNR=1.4						
NOA				Sn	Sn	18 09 25.8	-1.1
	comp=Z,0.0nm,0.3s,baz=38,slow=14,SNR=2.2						
NOA				Lg	Lg	18 10 07.6	
	comp=Z,0.0nm,0.3s,baz=56,slow=22,SNR=2.5						
NRA0	NORESS Array S	7.57	217	Pn	Pn	18 08 03.8	-1.2
	baz=45,slow=12						
NRA0	NORESS Array S	7.57	217	Pn	Pn	18 08 03.8	-1.2
	baz=45,slow=12						
HFS	Hagfors	7.66	208	Pn	Pn	18 08 06.5	+0.3
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=6.4						
HFS				Sn	Sn	18 09 31.0	-2.7
	comp=Z,0.1nm,0.3s,baz=31,slow=25,SNR=1.6						
HFS				Lg	Lg	18 10 10.8	
	comp=Z,0.2nm,0.3s,baz=41,slow=27,SNR=1.8						
HFS	Hagfors	7.66	208	Pn	Pn	18 08 05.6	-0.7
	baz=26,slow=14						
HFS	Hagfors	7.66	208	Pn	Pn	18 08 05.6	-0.7
	baz=26,slow=14						
SPITS	Spitsbergen Ar	11.23	355	Pn	Pn	18 08 55.4	+0.3
	baz=162,slow=20,SNR=1.6						

TAP 22 18:39:01.0,24°.59N×**122°.04E,h63^{km}**±**1^{km},ML1.8,B,**
Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.18	277	P	Pn	18 39 08.6	-2.1
	baz=276						
TWC				S	Sn	18 39 18.2	+0.6
	baz=276						
TWE	Neicheng	0.37	291	*i* P	Pn	18 39 12.7	+0.7
	baz=291						
TIPB	Shuangxi	0.43	333	P	Pn	18 39 12.6	0.0
	baz=332						
ENTT	Nioudou	0.44	277	*i* P	Pn	18 39 13.2	+0.6
	baz=276						
NWLT	Wulai	0.53	291	P	Pn	18 39 14.2	+0.7
	baz=290						
NWLT				S	Sn	18 39 23.8	+1.2
	baz=290						
NWF	Wu-fen Shan	0.54	334	*i* P	Pn	18 39 14.0	+0.3
	baz=333						
NWF				S	Sn	18 39 23.4	+0.5
	baz=333						
WFSB	Wu-fen Shan	0.54	334	P	Pn	18 39 14.0	+0.4
	baz=333						
WFSB				S	Sn	18 39 23.1	+0.4
	baz=333						
NACB	Ninganchiao	0.58	225	*e*P	Pn	18 39 12.7	-1.3
	baz=224						
NACB				S	Sn	18 39 24.3	+0.7
	baz=224						
YHNB	Yeheng	0.61	278	P	Pn	18 39 14.8	+0.3
	baz=277						
YHNB				S	Sn	18 39 25.1	+0.7
	baz=277						
NNSB	Datong	0.62	255	P	Pn	18 39 14.8	+0.2
	baz=255						
NNSB				S	Sn	18 39 25.4	+0.8
	baz=255						
NNS	Nan Shan	0.63	257	*e*P	Pn	18 39 13.5	-1.2
	baz=255						
NNS				S	Sn	18 39 25.4	+0.7
	baz=255						
NSK	Sanguang	0.63	278	*i* P	Pn	18 39 15.1	+0.5
	baz=277						
NSK				*i* S	Sn	18 39 25.4	+0.7
	baz=277						
ETLH	Xiulin Townshi	0.64	234	P	Pn	18 39 14.8	0.0
	baz=233						
ETLH				S	Sn	18 39 24.8	0.0
	baz=233						
FUSS	Fushou	0.80	245	P	Pn	18 39 17.2	+0.2
	baz=244						
FUSS				S	Sn	18 39 29.4	+0.8
	baz=244						
TDCB	Techi	0.87	248	P	Pn	18 39 18.4	+0.7
	baz=247						
TDCB				S	Sn	18 39 30.5	+0.5
	baz=247						
CHGB	Renai	0.95	237	P	Pn	18 39 19.1	+0.4
	baz=236						
CHGB				S	Sn	18 39 31.8	-0.1
	baz=236						
WHP	Taichung City	1.05	253	P	Pn	18 39 20.9	+1.0
	baz=252						
WHP				S	Sn	18 39 34.5	+0.7
	baz=252						
HGSD	Ruisui	1.23	208	P	Pn	18 39 23.0	+0.8
	baz=207						
SSLB	Suanglung	1.27	231	P	Pn	18 39 23.7	+0.9
	baz=231						
SSLB				*e*S	Sn	18 39 41.7	+2.6
	baz=231						

JMA 22 18:39:13.3±0.2**,24°.83N**×**123°.44E,h28^{km},M1.3,**
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.54	227	P	Pb	18 39 23.9	-0.3
YOJ				*e*S	Sb	18 39 31.1	-0.5
IRIF	Iriomote-Funau	0.56	152	P	Pb	18 39 24.3	-0.3
IRIF				S	Sb	18 39 32.0	-0.3
JYNG	Yonagunijimaku	0.59	230	P	Pb	18 39 24.7	-0.4
JYNG				S	Sb	18 39 33.3	+0.2
JKRS	Kuro-shima	0.79	139	P	Pb	18 39 28.2	-0.2
JKRS				S	Sb	18 39 38.3	-0.4
JIJ	Ishigaki jima	0.79	126	P	Pb	18 39 27.8	-0.7
JIJ				S	Sb	18 39 37.2	-1.6

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*NEIC **22** 18:42:17.8±2.6,6°.17S±0°.07×130°.14E±0°.09,h163^{km}±7^{km},*
mb4.1/13,Error ellipse: s-maj=12.5km s-min=10.1km
az=97.0
*IDC **22** 18:42:19.7±3.5,6°.38S×130°.05E,h185^{km}±35^{km},mb3.4/4,*
mb1 3.6/8,mb1mx3.0/38,mbtmp4.1/8,Error ellipse:
s-maj=32.2km s-min=14.0km az=55.0
ISC 22 18:42:16.4±0.6**,6°.23S**±0°.06×**130°.16E**±0°.06**,h150^{km},n56,**
σ1^{s}.60/57**,mb4.1**/13**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.71	351	P	Pn	18 42 52.0	+3.8
SAUI	Saumlaki	2.08	147		Pn	18 42 57.6	+5.2
FAKI	Fak Fak	3.89	32		Pn	18 43 15.3	+0.1
FAKI	Fak Fak	3.89	32	P	Pn	18 43 15.3	+0.1
SANI	Sanana	5.88	315	P	Pn	18 43 44.2	+2.7
	8.5nm,0.8s						
DRS	Darwin Rock St	6.21	173	P	Pn	18 43 47.4	+1.5
	18nm,0.7s						
MTN	Manton Dam	6.65	172		Pn	18 43 53.5	+1.8
MTN	Manton Dam	6.65	172	P	Pn	18 43 53.0	+1.3
	42nm,0.5s						
SOEI	Soe	6.81	239		Pn	18 43 57.2	+3.2
SOEI					Sn	18 45 10.3	-0.3
SOEI	Soe	6.81	239	P	Pn	18 43 58.4	+4.4
KDU	Kakadu	6.81	161	P	Pn	18 43 54.8	+0.8
BATI	Baumata	7.55	238	P	Pn	18 44 06.2	+2.3
	10nm,0.3s,baz=73,slow=3.7,SNR=24						
BATI				S	Sn	18 45 27.0	-1.2
	18nm,0.3s,baz=131,slow=9.9,SNR=9.1						
MMRI	Maumere	8.21	253	Pn	Pn	18 44 12.4	-0.2
MMRI	Maumere	8.21	253	P	Pn	18 44 17.9	+5.2
KNRA	Kununurra	9.49	188		Pn	18 44 30.2	+0.5
FITZ	Fitzroy Crossi	12.60	200	P	Pn	18 45 09.6	-0.8
	1.5nm,0.3s,baz=29,slow=12,SNR=51						
FITZ				S	Sn	18 47 20.1	-10
	3.1nm,0.3s,baz=206,slow=17,SNR=7.8						
WB0	Warramunga Arr	14.08	163	Pn	Pn	18 45 28.2	-1.1
WRAB	Tennant Creek	14.22	164	Pn	Pn	18 45 30.0	-1.2
WRAB	Tennant Creek	14.22	164	P	Pn	18 45 31.0	-0.2
WRA	Warramunga Arr	14.23	164	P	Pn	18 45 30.6	-0.7
	0.8nm,0.3s,baz=346,slow=11,SNR=36						
WRA				S	Sn	18 48 00.8	-8.3
	1.5nm,0.3s,baz=340,slow=20,SNR=9.8						

WB2	Warramunga Arr	14.23	164	Pn	Pn	18 45 30.6	-0.7
WR0	Warramunga Arr	14.30	163	Pn	Pn	18 45 31.7	-0.4
COEN	Coen	14.93	122	Pn	Pn	18 45 40.3	+0.2
COEN	Coen	14.93	122	P	Pn	18 45 41.2	+1.1
	24nm,1.3s						
JAGI	Jajag, Banyuwa	16.03	261	Pn	Pn	18 45 51.4	-2.2
JAGI	Jajag, Banyuwa	16.03	261	P	Pn	18 45 54.8	+1.1
QIS	Mount Isa	16.94	148	P	P	18 46 05.0	+0.9
	9.0nm,0.9s						
AS31	Alice Springs	17.71	169	P	P	18 46 14.2	+1.6
AS31				IAmb	IAmb	18 46 35.1	
	comp=Z,2.0nm,0.4s						
ASAR	Alice Springs	17.71	169	P	P	18 46 13.5	+0.9
	comp=Z,0.6nm,0.3s,baz=350,slow=11,SNR=52						
ASAR				S	S	18 49 25.3	-3.7
	comp=Z,0.5nm,0.3s,baz=353,slow=26,SNR=5.3						
ASAR	Alice Springs	17.71	169	P	P	18 46 13.8	+1.2
MBWA	Marble Bar	17.96	213	P	P	18 46 16.6	+1.3
MTSU	Mount Surprise	18.19	132	P	P	18 46 19.0	+1.1
	comp=Z,4.9nm,0.5s						
PSA00	Pilbara Seismi	18.23	212	P	P	18 46 16.3	-1.9
PSA00				IAmb	IAmb	18 46 16.9	
	comp=Z,30nm,1.4s						
PSA00	Pilbara Seismi	18.23	212	P	P	18 46 16.1	-2.2
PSA00				IAmb	IAmb	18 46 24.5	
	comp=Z,12nm,1.4s						
PSA00	Pilbara Seismi	18.23	212	P	P	18 46 20.1	+1.8
	comp=Z,20nm,1.5s						
KKM	Kota Kinabalu	18.50	311	P	P	18 46 20.7	-0.7
WRKA	Warakurna	18.79	185	P	P	18 46 25.6	+1.2
	comp=Z,15nm,1.3s						
SBUM	Sibu	19.88	295	P	P	18 46 35.5	-0.7
CTA	Charters Tower	20.84	133	P	P	18 46 47.1	+0.7
	comp=Z,5.0nm,0.7s,baz=298,slow=5.4,SNR=1.9						
OOD	Oodnadatta	22.09	167	P	P	18 46 59.8	+0.3
	comp=Z,7.3nm,0.8s						
GIRL	Giralia	22.42	222	P	P	18 47 03.0	+0.2
GIRL	Giralia	22.42	222	P	P	18 47 04.2	+1.4
	comp=Z,97nm,1.5s						
MEEK	Meekatharra	23.09	207	P	P	18 47 10.4	+1.3
	comp=Z,12nm,1.3s						
MULG	Mulgathing	24.21	172	P	P	18 47 22.2	+3.0
	comp=Z,6.1nm,1.1s						
QLP	Quilpie	24.29	148	P	P	18 47 22.0	+2.1
	comp=Z,12nm,2.1s						
MORW	Morawa	26.35	209	P	P	18 47 38.4	-0.2
MORW				IAmb	IAmb	18 47 44.8	
	comp=Z,16nm,1.2s						
BLDU	Ballidu	27.36	206	P	P	18 47 48.1	+0.6
	comp=Z,10nm,1.5s						
STKA	Stephens Creek	27.67	159	P	P	18 47 49.9	-0.5
	comp=Z,1.0nm,0.5s,baz=329,slow=12,SNR=3.3						
KLBR	Kellerberrin	27.78	203	P	P	18 47 52.0	+0.7
	comp=Z,14nm,1.3s						
HNR	Honiara	29.67	98	P	P	18 48 07.1	-1.2
CMAR	Chiang Mai Arr	39.36	309	P	P	18 49 31.4	-0.1
	comp=Z,0.4nm,0.5s,baz=132,slow=7.0,SNR=4.1						
CHTO	Chiang Mai	39.57	310	P	P	18 49 32.8	-0.4
CHTO				IAmb	IAmb	18 49 33.7	
	comp=Z,2.6nm,0.9s						
JWT	Wachi	41.58	6	P	P	18 49 48.8	-0.7
MK31	Makanchi Array	67.67	327	P	P	18 52 56.9	-0.5
MKAR	Makanchi Array	67.67	327	P	P	18 52 57.2	-0.2
	comp=Z,0.7nm,0.4s,baz=119,slow=7.1,SNR=22						
MAKZ	Makanchi	67.85	326	P	P	18 52 57.2	-1.3
MAKZ				IAmb	IAmb	18 53 18.9	
	comp=Z,5.5nm,1.6s						

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*IDC **22** 18:46:31.6±0.7, 30°.89S×71°.30W, h0^{km}, mb4.4/10, mb1 4.4/14, mb1mx4.3/34, mbtmp4.3/14, ML4.0/4, Error ellipse: s-maj=22.7km s-min=18.5km az=95.0*

*VAO **22** 18:46:32.1±0.4, 31°.03S×71°.47W, h10^{km}, mb4.6*

*SJA **22** 18:46:34.9±0.7, 30°.76S×71°.47W, h7^{km}±3^{km}, ML4.0, MW3.8*

*NEIC **22** 18:46:39.8, 30°.81S×71°.32W, h61^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.93; M$_{\theta\theta}$-0.38; M$_{\phi\phi}$-1.55; M$_{r\theta}$0.26; M$_{\theta\phi}$0.57; M$_{\phi r}$-1.48; Fault plane solution: M$_0$2.39000×10^{15} NP1:ϕ_s165.10000°, δ64.59000°, λ95.67000°. NP2:ϕ_s332.07000°, δ26.00000°, λ78.25000°. Principal axes: T 2.4783, Plg70.0000°, Azm87.0000°; N -0.1818, Plg5.0000°, Azm343.0000°; P -2.2966, Plg19.0000°, Azm251.0000°;*

*GUC **22** 18:46:39.9±0.8, 30°.80S×71°.25W, h62^{km}±3^{km}, ML4.6*

*NEIC **22** 18:46:40.1±1.8, 30°.80S±0°.03×71°.30W±0°.06, h53^{km}±2^{km}, mb4.6/31, Mwr4.2/21, ML4.6(GUC), Error ellipse: s-maj=7.8km s-min=4.7km az=91.0*

ISC 22 18:46:38.9±0.6, **30°.78S**±0°.02×**71°.38W**±0°.03, **h51**^{km}±6^{km}, **n216**, σ**2^{s}12**/240, **mb4.6**/21, **5C-6D, Fault plane solution: NP1:**ϕ_s168.69182°, δ57.98421°, λ85.10279°. **NP2:** ϕ_s357.87235°, δ32.34877°, λ97.77477°. **Principal axes:** T Plg76.4690°, Azm63.7405°; N Plg4.1509°, Azm171.2926°; P Plg12.8555°, Azm262.2416°; **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.24	295	⇑iP	Pn	18 46 50.4	+2.8
CO06				iS	Sn	18 46 58.0	+4.2
CO06	Fray Jorge	0.24	295		Pn	18 46 50.4	+2.8
CO06				Sn	Sn	18 46 58.5	+4.7
CO03	El Pedregal	0.60	96	⇓iP	Pn	18 46 51.8	+0.3
CO03				iS	Sn	18 47 00.3	-0.2
CO03	El Pedregal	0.60	96		Pn	18 46 51.7	+0.3
CO03				Sn	Sn	18 47 00.4	-0.2
CO03	El Pedregal	0.60	96	eP	Pn	18 46 39.1	-12
CO03				eS	Sn	18 46 46.0	-14
CO03				IAML		18 47 01.2	
	comp=Z,126μm,0.6s						
GO04	Tololo Observa	0.78	40	⇓iP	Pn	18 46 55.3	+1.4
GO04				iS	Sn	18 47 06.6	+1.7
GO04	Tololo Observa	0.78	40		Pn	18 46 55.1	+1.2
GO04				Sn	Sn	18 47 06.6	+1.7
GO04	Tololo Observa	0.78	40	eP	Pn	18 46 50.0	-3.9
GO04				eS	Sn	18 47 06.9	+2.0
GO04				eP	Sn	18 47 06.9	+2.0
CO05	La Serena	0.86	8	eP	Pn	18 46 56.8	+2.0
CO05				iS	Sn	18 47 08.2	+1.8
CO05				IAML		18 47 09.7	
	comp=E,15μm,0.3s						
CO05	La Serena	0.86	8		Pn	18 46 56.7	+1.9
CO05				Sn	Sn	18 47 07.9	+1.5
AROD	Rodeo	1.75	70	eP	Pn	18 47 09.9	+2.8
AROD				eS	Sn	18 47 34.3	+5.8
VA06	Catapilco	1.78	178	eP	Pn	18 47 08.7	+1.5
VA06				iS	Sn	18 47 30.5	+1.8
VA06				IAML		18 47 35.8	
	comp=N,12μm,0.2s						
LCO	Las Campanas	1.85	19	eP	Pn	18 47 10.0	+1.5
LCO				iS	Sn	18 47 32.8	+1.9
LCO	Las Campanas	1.85	19		Pn	18 47 10.5	+2.0
LCO				Sn	Sn	18 47 33.0	+2.1
LCO	Las Campanas	1.85	19	eP	Pn	18 47 10.0	+1.5
LCO				IAML		18 47 36.6	
	comp=Z,14μm,1.0s						
ACCO	Cerro Coronel	2.00	85	eP	Pn	18 47 13.4	+2.8
ACCO				IAML		18 47 46.0	
	comp=Z,834nm,0.7s						
ACDV	Cuesta del Vie	2.04	73	eP	Pn	18 47 14.0	+3.1
ACDV				IAML		18 47 58.7	
	comp=Z,759nm,1.2s						
RTLS	Leoncito	2.05	120	eP	Pn	18 47 13.8	+2.6
RTLS				eS	Sn	18 47 42.8	+7.0
RTLS				IAML		18 47 47.6	
	comp=Z,825nm,0.5s						
VA03	San Esteban	2.10	161	⇓iP	Pn	18 47 13.0	+1.3
VA03				iS	Sn	18 47 37.7	+1.0
VA03				IAML		18 47 39.8	
	comp=E,13μm,0.2s						
VA03	San Esteban	2.10	161		Pn	18 47 13.0	+1.3
VA03				Sn	Sn	18 47 37.5	+0.8
VA03	San Esteban	2.10	161	eP	Pn	18 47 13.1	+1.4
VA03				eS	Sn	18 47 39.0	+2.3
VA03				IAML		18 47 42.0	
	comp=Z,4μm,0.6s						
ROCH	El Roble	2.21	172	eP	Pn	18 47 14.2	+0.9
ROCH				iS	Sn	18 47 41.1	+1.6
ROCH				IAML		18 47 47.7	
	comp=N,7μm,0.6s						
AUSP	Uspallata	2.23	131	eP	Pn	18 47 16.0	+2.4
AUSP				eS	Sn	18 47 46.3	+6.2
VA01	Torpederas	2.25	186	IAML		18 47 49.5	
	comp=E,3μm,0.6s						
VA01	Torpederas	2.25	186		Pn	18 47 13.9	+0.2
VA01	Torpederas	2.25	186	eP	Pn	18 47 14.0	+0.4
VA01				eS	Sn	18 47 46.5	+6.3
VA01				IAML		18 47 48.1	
	comp=Z,1μm,0.3s						
PEL	Peldehue	2.43	166	eP	Pn	18 47 17.5	+1.3
PEL				IAML		18 47 54.6	
	comp=N,4μm,0.2s						
PEL	Peldehue	2.43	166		Pn	18 47 17.3	+1.1
PEL	Peldehue	2.43	166	eP	Pn	18 47 12.3	-3.9
PEL				eP	Pn	18 47 17.6	+1.3
PEL				eS	Sn	18 47 49.8	+5.0
ZON	Zonda	2.44	109		Pn	18 47 17.0	+0.7
ZON	Zonda	2.44	109	eP	Pn	18 47 19.0	+2.7
ZON				eS	Sn	18 47 50.8	+5.9
ZON				IAML		18 48 09.9	
	comp=Z,1μm,0.4s						
MT02	Curacav	2.48	175	eP	Pn	18 47 17.9	+1.1
MT02				iS	Sn	18 47 46.9	+0.9
MT02				IAML		18 47 50.8	
	comp=E,2μm,0.3s						
MT02	Curacav	2.48	175		Pn	18 47 17.9	+1.1
MT02	Curacav	2.48	175	eP	Pn	18 47 18.0	+1.1
MT02				eS	Sn	18 47 51.1	+5.1
MT02				IAML		18 47 58.6	
	comp=Z,2μm,0.5s						
AC04	Llanos de Chal	2.58	6	eP	Pn	18 47 21.1	+3.0
AC04				IAML		18 48 10.4	
	comp=E,2μm,0.7s						
AC04	Llanos de Chal	2.58	6		Pn	18 47 21.0	+2.9
AC04	Llanos de Chal	2.58	6	eP	Pn	18 47 07.6	-11
AC04				eS	Sn	18 48 00.1	+12
AC04				IAML		18 48 07.3	
	comp=Z,1μm,0.6s						
RTCV	Cerro Valdivia	2.66	115	eP	Pn	18 47 22.0	+2.7
RTCV				IAML		18 48 03.6	
	comp=Z,150nm,0.5s						
MT05	Renca	2.66	168	IAML		18 48 03.4	
	comp=N,5μm,0.5s						
MT05	Renca	2.66	168		Pn	18 47 20.6	+1.2
MT05	Renca	2.66	168	eP	Pn	18 47 21.4	+2.1
MT05				eS	Sn	18 47 56.0	+5.6
MT05				IAML		18 48 08.1	
	comp=Z,2μm,0.3s						
ASAL	Salagasta	2.82	130	eP	Pn	18 47 24.0	+2.4
ASAL				eS	Sn	18 48 00.6	+6.2
ASAL				IAML		18 48 21.7	
	comp=Z,821nm,0.8s						
VA05	Santo Domingo	2.88	184	eP	Pn	18 47 22.8	+0.6
VA05	Santo Domingo	2.88	184		Pn	18 47 22.4	+0.2
ARCO	CERRO ARCO	2.93	135	eP	Pn	18 47 25.9	+2.8
ARCO				eS	Sn	18 48 12.3	+15
ARCO				IAML		18 48 13.9	
	comp=Z,1μm,0.3s						
MT09	Talagante	3.01	174	eP	Pn	18 47 26.1	+1.9
MT09				iS	Sn	18 47 59.3	+0.2
MT09				IAML		18 48 10.1	
	comp=N,3μm,0.1s						
MT09	Talagante	3.01	174	Pn	Pn	18 47 25.4	+1.2
MT01	Popeta	3.08	178	eP	Pn	18 47 26.2	+1.2
MT01				iS	Sn	18 48 01.2	+0.5
MT01				IAML		18 48 11.7	
	comp=N,2μm,0.3s						
MT01	Popeta	3.08	178	Pn	Pn	18 47 25.9	+0.9
MT01	Popeta	3.08	178	eP	Pn	18 47 20.8	-4.2
MT01				eS	Sn	18 48 10.9	+10
MT01				IAML		18 48 13.7	
	comp=Z,2μm,0.5s						
AAGR	Agrelo	3.16	137	eP	Pn	18 47 29.0	+2.8
AAGR				eS	Sn	18 47 51.0	-12
AAGR				IAML		18 48 21.8	
	comp=Z,1μm,0.8s						
LMEL	Las Melosas	3.22	162	eP	Pn	18 47 28.3	+1.2
GO03	Copiap	3.33	18		Pn	18 47 30.4	+2.0
GO03	Copiap	3.33	18	eP	Pn	18 47 30.8	+2.4
GO03				eS	Sn	18 48 11.3	+4.5
AVFE	Valle Fertil	3.38	89	eP	Pn	18 47 30.5	+1.3
BO01	Tunca	3.61	176	eP	Pn	18 47 33.7	+1.4
BO01				iS	Sn	18 48 13.5	-0.3
BO01				IAML		18 48 25.3	
	comp=E,654nm,0.5s						
BO01	Tunca	3.61	176	Pn	Pn	18 47 33.4	+1.1
BO02	Sierra Bellavi	4.04	173	Pn	Pn	18 47 39.2	+1.0
ACLC	CERRO LA CRUZ	4.07	72	eP	Pn	18 47 40.8	+2.1
ACLC				eS	Sn	18 48 32.5	+7.4
ACLC				IAML		18 48 33.5	
	comp=Z,2μm,0.4s						
APLL	PUNTA DE LOS L	4.20	86	eP	Pn	18 47 41.8	+1.4
APLL				eS	Sn	18 48 32.9	+4.7
APLL				IAML		18 48 39.6	
	comp=Z,5μm,3.3s						
GO05	Huala	4.25	186		Pn	18 47 40.7	-0.4
AC02	Maricunga	4.39	27		Pn	18 47 45.7	+2.2
AC02	Maricunga	4.39	27	eP	Pn	18 47 46.0	+2.5
AC02				eS	Sn	18 48 33.8	+0.1
AC02				eS	Sn	18 48 39.5	+5.8
AC02				IAML		18 48 59.8	
	comp=Z,490nm,1.0s						
RFA	San Rafael	4.68	149	eP	Pn	18 47 42.8	-4.2
RFA				eP	Pn	18 47 48.1	+1.1
RFA				IAML		18 49 22.5	
	comp=Z,181nm,0.9s						
ML02	Panimavida	4.97	180		Pn	18 47 50.4	-0.6
PB14	IPOC Station P	6.19	8	Pn	Pn	18 48 08.6	+0.6
AHML	Horco Molle	6.63	55	eP	Pn	18 48 14.0	+0.2
AHML				eS	Sn	18 49 33.8	+5.7
AHML				IAML		18 49 39.5	
	comp=Z,126nm,0.8s						
FSA	Cafayete	6.65	47	eS	Sn	18 49 22.1	-6.5
H03N1	Juan Fernandez	6.92	245	T	T	18 55 13.5	
	baz=66,slow=72						
H03N3	Juan Fernandez	6.94	245	T	T	18 55 11.0	
	baz=66,slow=72						
H03N2	Juan Fernandez	6.94	246	T	T	18 55 13.2	
	baz=66,slow=72						
PB10	IPOC Station P	7.27	6		Pn	18 48 22.8	+0.2
PB10	IPOC Station P	7.27	6	eP	Pn	18 48 22.3	-0.3
PB15	IPOC Station P	7.73	13		Pn	18 48 28.4	-0.6
LC01	Cunco	8.11	183	Pn	Pn	18 48 32.7	-1.3
LC01	Cunco	8.11	183	eP	Pn	18 48 35.0	+1.0
PB06	IPOC Station P	8.20	12		Pn	18 48 33.7	-1.7
LVC	Limon Verde	8.43	16	Pn	Pn	18 48 37.0	-1.7
	comp=Z,1.3nm,0.3s,baz=166,slow=6.3,SNR=13						
LVC	Limon Verde	8.43	16	eP	Pn	18 48 33.9	-4.8
LVC	Limon Verde	8.43	16	Pn	Pn	18 48 37.5	-1.2
PB04	IPOC Station P	8.48	8		Pn	18 48 37.4	-1.9
PB07	IPOC Station P	9.11	9		Pn	18 48 45.6	-2.3
PB09	IPOC Station P	9.15	13		Pn	18 48 46.6	-1.8
PB01	IPOC Station P	9.84	10		Pn	18 48 55.7	-2.1
PLCA	Paso Flores	9.96	176	Pn	Pn	18 48 55.6	-3.7
	comp=Z,0.1nm,0.3s,baz=350,slow=11,SNR=2.3						
PLCA	Paso Flores	9.96	176	eP	Pn	18 48 51.2	-8.1
PLCA	Paso Flores	9.96	176	Pn	Pn	18 48 57.6	-1.7
PATCX	Punta Patache	9.97	7	Pn	Pn	18 48 59.1	-0.6
LL04	Puerto Octay	10.15	184	Pn	Pn	18 49 00.2	-1.6
TA01	Diego Aracena	10.22	6	Pn	Pn	18 49 02.9	-0.1
PB08	IPOC Station P	10.78	11	Pn	Pn	18 49 08.3	-2.6
PB11	IPOC Station P	11.08	8	Pn	Pn	18 49 12.0	-2.8
PB12	IPOC Station P	12.15	5	Pn	Pn	18 49 26.0	-3.3
PB16	IPOC Station P	12.50	8	Pn	Pn	18 49 32.7	-2.0
ITQB	Itaqui	12.81	89	eP	Pn	18 49 35.2	-3.0
ITQB	Itaqui	12.81	89	Pn	Pn	18 49 37.0	-1.2
CPUP	Villa Florida	13.12	74	Pn	Pn	18 49 39.4	-3.0
	comp=Z,0.3nm,0.3s,baz=209,slow=8.3,SNR=3.5						
CPUP				Sn	Sn	18 52 07.1	+0.2
	comp=Z,0.5nm,0.3s,baz=108,slow=20,SNR=2.5						
CPUP	Villa Florida	13.12	74	eP	Pn	18 49 39.8	-2.6
CPUP	Villa Florida	13.12	74	Pn	Pn	18 49 38.9	-3.5
LPAZ	La Paz	14.72	12	Pn	Pn	18 50 07.2	+2.5
	comp=Z,0.4nm,0.3s,baz=183,slow=8.3,SNR=7.9						
LPAZ	La Paz	14.72	12	eP	Pn	18 50 06.5	+1.8
LPAZ	La Paz	14.72	12	Pn	Pn	18 50 05.9	+1.2
PLTB	Pedras Altas	15.23	98	eP	Pn	18 50 07.5	-3.2
PLTB	Pedras Altas	15.23	98	Pn	Pn	18 50 05.2	-5.5
CPSB	Cacapava Do Su	15.46	93	eP	Pn	18 50 11.4	-2.2
ITAB	Concordia	17.20	83	eP	Pn	18 50 34.2	-1.4
ITAB	Concordia	17.20	83		P	18 50 36.0	-0.6
AQDB	Aquidauana	17.45	58	eP	P	18 50 38.6	-0.7
AQDB	Aquidauana	17.45	58	P	Pn	18 50 37.0	-1.6
SIV	San Ignacio	17.48	35	P	Pn	18 50 37.8	-1.3
	comp=Z,1.9nm,0.3s,baz=211,slow=9.8,SNR=46						
PTGB	Pitanga	18.12	75	eP	Pn	18 50 46.7	-0.3
PTLB	Pontes e Lacer	18.94	39	eP	P	18 50 56.0	+0.3
PTLB	Pontes e Lacer	18.94	39	P	P	18 50 54.1	-1.6
TER01	Tubaro-SC	19.46	89	eP	Pn	18 51 02.0	-1.1
PP1B	Ponte de Pedra	19.93	53	eP	P	18 51 06.8	+0.2
PCMB	Pacaembu	20.20	68	eP	P	18 51 09.4	-0.1
TIJ01	Guaruva-PR	20.47	80	eP	P	18 51 09.8	-2.7
VILB	Vilhena	20.52	33	eP	P	18 51 13.5	+0.5
VILB	Vilhena	20.52	33	P	P	18 51 12.4	-0.6
VILB				IAmb	IAmb	18 51 14.4	
	comp=Z,21nm,0.7s						
SALV	Santo Antonio	20.62	48	eP	P	18 51 14.0	0.0
FRTB	Fartura	20.77	74	eP	P	18 51 15.4	-0.2
ETMB	Extrema	21.40	14	eP	P	18 51 24.1	+1.6
ETMB	Extrema	21.40	14	P	P	18 51 23.4	+1.0
ETMB				IAmb	IAmb	18 51 28.1	
	comp=Z,33nm,1.3s						
ITRB	Iturama	21.94	65	eP	P	18 51 27.4	-0.9
PET01	Itanhaem-SP	22.30	79	eP	P	18 51 31.3	-0.8
SPB	Sao Paulo	22.45	77	eP	P	18 51 33.3	-0.4
SPB	Sao Paulo	22.45	77	P	P	18 51 33.0	-0.7
SPB				IAmb	IAmb	18 51 35.0	
	comp=Z,17nm,0.9s						
BB19B	Bebedouro	22.68	70	eP	P	18 51 35.7	-0.5
RCLB	Rio Claro- Sao	22.86	74	eP	P	18 51 37.7	-0.3
CZSB	Cruzeiro do Su	22.96	357	eP	P	18 51 40.8	+1.8
VAO	Valinhos	23.08	76	eP	P	18 51 40.0	-0.3
EFI	East Falkland	23.09	159	P	P	18 51 39.0	-1.0
DSPA	Despedida	23.27	175	P	P	18 51 42.4	+0.6
ARAG	Araguaiana, MT	23.36	54	eP	P	18 51 43.1	+0.1
PDRB	Porto dos Gac	23.41	39	eP	P	18 51 43.8	+0.3
PARB	Paraibuna	24.07	78	eP	P	18 51 49.4	-0.2
USHA	Ushuaia	24.14	176	P	P	18 51 49.1	-0.7
	comp=Z,8.4nm,0.8s,baz=6.1,slow=10,SNR=5.4						
CLDB	Colider	24.52	39	eP	P	18 51 53.1	-0.7
IPMB	Ipameri, GO	24.59	64	eP	P	18 51 53.3	-1.1
MAN01	Angra dos Reis	25.66	79	eP	P	18 52 04.0	-0.1
BSCB	Bom Sucesso	25.78	74	eP	P	18 52 04.5	-0.7
BDFB	Brasilia	26.15	60	P	P	18 52 07.5	-1.1
	comp=Z,16nm,0.7s,baz=231,slow=8.3,SNR=20						
BDFB	Brasilia	26.15	60	P	P	18 52 07.8	-0.9
BDFB				IAmb	IAmb	18 52 08.8	
	comp=Z,15nm,0.7s						
SNDB	Serra Nova Dou	26.37	49	eP	P	18 52 10.2	-0.3
NPGB	Novo Progresso	27.98	36	eP	P	18 52 24.5	-0.4
DIAM	Diamantina, MG	28.02	70	eP	P	18 52 25.2	-0.2
CAM01	Campos-RJ	28.03	79	eP	P	18 52 24.9	-0.4
PEXB	Peixe	28.30	54	eP	P	18 52 27.8	+0.1
MC01	Montes Claros	28.66	67	eP	P	18 52 30.4	-0.7
MACA	Manacapuru-AM	29.27	22	eP	P	18 52 37.0	+0.7
JANB	Januaria	29.32	64	eP	P	18 52 36.3	-0.7
ALF01	Guarapari-ES	29.33	77	eP	P	18 52 36.8	-0.1
SJMB	Sao Joao De Ma	29.84	73	eP	P	18 52 41.0	-0.4
BSFB	Barra de Sao F	30.06	74	eP	P	18 52 42.8	-0.6
RIB01	Linhares ES	30.20	75	eP	P	18 52 44.3	-0.3
SDBA	SAO DESIDERIO	30.53	59	eP	P	18 52 47.2	-0.4
SMTB	Santa Maria do	31.11	50	eP	P	18 52 53.6	+0.9
OTAV	Otavalo	31.57	346	eP	P	18 52 57.6	+0.4
PRPB	Parauapebas	31.76	44	eP	P	18 52 58.0	-0.4
PTGA	Pitinga	31.78	22	P	P	18 52 58.3	-0.2
	comp=Z,2.2nm,0.3s,baz=191,slow=11,SNR=6.8						
GUA01	Guaratinga, BA	32.05	71	eP	P	18 53 00.3	-0.6
CMC01	Camacan, BA	32.94	69	eP	P	18 53 08.3	-0.4
NBIT	Itapeh - BA	33.24	69	eP	P	18 53 11.2	-0.2
GDU01	Guandu, BA	33.81	67	eP	P	18 53 15.4	-0.9
HOPE	Hope Point	34.27	143	P	P	18 53 18.3	-1.6
BOAV	Boa Vista	34.57	19	eP	P	18 53 23.7	+0.8
BOAV	Boa Vista	34.57	19	P	P	18 53 22.5	-0.4
NBPN	Ponto Novo - B	35.06	62	eP	P	18 53 26.3	-0.9
MCPB	Macapa, AP	35.38	35	eP	P	18 53 30.4	+0.5
NBLA	Lagarto - SE	36.83	65	eP	P	18 53 41.0	-1.3
ZARC	Zaragoza, Cauc	38.20	354	P	P	18 53 55.0	+1.2
NBMA	Muriti-CE	38.38	59	eP	P	18 53 55.6	+0.2
NBPS	Pedro II - PI	38.51	53	eP	P	18 53 56.9	+0.3
NBPB	Pedra_Branca-C	39.01	56	eP	P	18 53 59.4	-1.3
BAUV	El Baul	39.62	5	P	P	18 54 05.4	-0.2
BIRV	Birongo	41.31	8	P	P	18 54 20.5	+0.9
CELP	Cerrillos	48.79	6	P	P	18 55 19.0	+0.1
GRTK	Grand Turk	51.99	0	P	P	18 55 43.6	+0.6
VNA3	Neumayer Olymp	52.14	159	P	P	18 55 44.4	+0.7
VNA2	Neumayer--Watz	52.77	158	P	P	18 55 48.6	+0.2
	baz=285,slow=9.0						
SNAA	Sanae	54.37	159	P	P	18 56 00.2	+0.1
SNAA	Sanae	54.37	159	P	P	18 55 59.9	-0.2
QSPA	South Pole Qui	59.45	180	P	P	18 56 36.9	+0.6
QSPA				IAmb	IAmb	18 56 39.3	
	comp=Z,6.9nm,1.2s						
TKL	Tuckaleechee C	67.10	349	P	P	18 57 27.6	+0.6
	comp=Z,2.6nm,0.6s,baz=120,slow=8.1,SNR=2.1						
TKL	Tuckaleechee C	67.10	349	IAmb	IAmb	18 57 30.4	
	comp=Z,26nm,1.6s						
TX31	Lajitas Ar. Si	67.22	330	P	P	18 57 30.2	+2.2
TX32	Lajitas Array	67.22	330	P	P	18 57 30.1	+2.2
TXAR	Lajitas Array	67.22	330	P	P	18 57 30.0	+2.0
	comp=Z,0.6nm,0.6s,baz=159,slow=8.7,SNR=10						
TXAR	Lajitas Array	67.22	330	P	P	18 57 29.9	+2.0
VNDA	Vanda	67.36	191	P	P	18 57 28.9	+0.7
VNDA				IAmb	IAmb	18 57 34.3	
	comp=Z,15nm,1.6s						
LCAR	Lake Charles	69.04	343	P	P	18 57 40.3	+1.2
LCAR				IAmb	IAmb	18 57 41.0	
	comp=Z,7.4nm,0.6s						
U40A	Yellville	69.76	342	P	P	18 57 44.4	+0.9
U40A				IAmb	IAmb	18 57 45.2	
	comp=Z,5.2nm,0.5s						
S39A	Bolivar	71.14	342	P	P	18 57 53.0	+1.1
S39A				IAmb	IAmb	18 57 54.5	
	comp=Z,3.9nm,0.7s						
P40A	Paris	72.54	343	IAmb	IAmb	18 58 02.9	
	comp=Z,7.3nm,0.8s						
LIC	Lamto	73.24	72	eP	P	18 58 04.6	-0.4
	comp=Z,9.3nm,0.6s						
TIC	Toumodi	73.48	72	eP	P	18 58 06.1	-0.4
KIC	Kosan Boka	73.55	72	eP	P	18 58 06.6	-0.3
	comp=Z,12nm,0.8s						
DBIC	Dimbokro	73.63	72	P	P	18 58 07.2	-0.1
	comp=Z,4.3nm,0.5s,baz=227,slow=7.1,SNR=12						
DBIC	Dimbokro	73.63	72	P	P	18 58 07.0	-0.3
DBIC				IAmb	IAmb	18 58 07.7	
	comp=Z,5.5nm,0.7s						
ECSD	EROS Data Cent	77.67	342	P	P	18 58 30.6	+0.9
ECSD				IAmb	IAmb	18 58 31.7	
	comp=Z,7.6nm,0.8s						
KOWA	Kowa	78.80	66	P	P	18 58 36.4	-0.2
KOWA				IAmb	IAmb	18 58 37.7	
	comp=Z,7.2nm,0.7s						
BOSA	Boshof	81.08	118	P	P	18 58 49.0	0.0
	comp=Z,1.9nm,0.6s,baz=254,slow=4.8,SNR=10						
BOSA	Boshof	81.08	118	IAmb	IAmb	18 58 49.9	
	comp=Z,18nm,1.4s						
PDAR	Pinedale Array	81.16	333	P	P	18 58 50.0	+0.9
	comp=Z,0.4nm,0.6s,baz=135,slow=7.3,SNR=4.3						
TORD	Torodi Ar. Bea	82.59	70	P	P	18 58 56.7	-0.2
	comp=Z,5.7nm,0.7s,baz=276,slow=6.2,SNR=46						
TORD	Torodi Ar. Bea	82.59	70	P	P	18 58 56.7	-0.2
TORD				IAmb	IAmb	18 58 57.7	
	comp=Z,3.5nm,0.8s						
YKA	Yellowknife Ar	99.19	341	P	Pdif	19 00 14.2	0.0
	comp=Z,0.2nm,0.5s,baz=144,slow=4.4,SNR=4.7						
FINES	FINESS Array B	120.01	33	PKP	PKPdf	19 05 22.2	-0.8
	comp=Z,2.3nm,1.0s,baz=210,slow=14,SNR=4.2						
ASAR	Alice Springs	120.69	207	PKP	PKPdf	19 05 24.6	-1.2
	comp=Z,0.9nm,1.1s,baz=120,slow=1.6,SNR=2.5						
WRA	Warramunga Arr	123.84	209	PKP	PKPdf	19 05 30.7	-1.2
	comp=Z,0.4nm,0.5s,baz=156,slow=1.7,SNR=9.1						
BVAR	Borovoye Array	144.50	40	PKP	PKPdf	19 06 08.7	-0.4
	comp=Z,1.5nm,0.5s,baz=246,slow=6.1,SNR=6.5						
ZALV	Zalesovo Beam	151.18	30	PKPbc	PKiKP	19 06 25.9	-0.6
	comp=Z,3.4nm,0.5s,baz=301,slow=3.4,SNR=20						
ZALV	Zalesovo Beam	151.18	30		PKPbc	19 06 25.6	-0.4
KSH	Kashi	152.04	63	PKPbc	PKPbc	19 06 25.1	-3.5
KSH				sPKP		19 06 38.3	
MKAR	Makanchi Array	154.15	44	PKPbc	PKiKP	19 06 32.7	-0.3
	comp=Z,0.5nm,0.8s,baz=281,slow=1.0,SNR=3.1						
MKAR				PKPab	PKPab	19 06 47.6	+0.8
	comp=Z,0.9nm,0.7s,baz=274,slow=4.0,SNR=7.3						
MKAR	Makanchi Array	154.15	44	PKPdf	PKPdf	19 06 25.8	+1.0

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*NEIC **22** 19:07:00.8±2.4, 15°.49S±0°.09×167°.72E±0°.10, h124^{km}±5^{km}, mb4.8/21 Error ellipse: s-maj=14.0km s-min=12.9km az=222.0*

*IDC **22** 19:07:01.0±6.9, 15°.46S×167°.62E, h127^{km}±68^{km}, mb3.4/4, mb1 3.7/5, mb1mx3.1/33, mbtmp3.9/5, MS3.4/1, Ms1 3.4/1, ms1mx2.6/16, Error ellipse: s-maj=58.7km s-min=31.9km az=163.0*

*NOU **22** 19:07:02.6, 15°.56S×167°.74E, h107^{km}, MLv4.4/13, Vanuatu Islands*

ISC 22 19:06:58.0±0.6**, 15°.47S**±0°.07×**167°.94E**±0°.09**, h100^{km}, n49,** σ**2.^{s}44**/50**, mb4.7**/15**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.71**	**272**		**Pn**	**19 07 18.4**	**+2.9**
SANVU				Sn	**Sn**	**19 07 33.9**	**+5.2**
SANVU	**Saraoutou**	**0.71**	**272**	P	**Pn**	**19 07 19.8**	**+4.3**
LIFNC	**LIFOU**	**5.32**	**187**	Pn	**Pn**	**19 08 17.2**	**+2.2**
LIFNC	**LIFOU**	**5.32**	**187**	P	**Pn**	**19 08 17.0**	**+2.0**
MARNC	**Mare, Loyalty**	**5.98**	**179**	Pn	**Pn**	**19 08 25.7**	**+1.7**
MARNC	**Mare, Loyalty**	**5.98**	**179**	P	**Pn**	**19 08 26.6**	**+2.6**
KOUNC	**Koumac, New Ca**	**6.13**	**214**	P	**Pn**	**19 08 28.7**	**+2.6**
YATNC	**Mamie plateau,**	**6.63**	**188**	P	**Pn**	**19 08 35.2**	**+2.4**
DZM	**Mont Dzumac**	**6.71**	**192**	P	**Pn**	**19 08 37.5**	**+3.5**
	5.9nm,0.3s,baz=346,slow=8.6,SNR=58						
DZM				S	**Sn**	**19 09 51.2**	**+2.0**
	3.2nm,0.3s,baz=132,slow=21,SNR=6.7						
DZM	**Mont Dzumac**	**6.71**	**192**		**Pn**	**19 08 37.4**	**+3.3**
DZM	**Mont Dzumac**	**6.71**	**192**	P	**Pn**	**19 08 37.6**	**+3.5**
NOUC	**Port Laguerre**	**6.77**	**193**	P	**Pn**	**19 08 38.1**	**+3.3**
ONTNC	**Ouen Toro**	**6.94**	**191**	Pn	**Pn**	**19 08 39.8**	**+2.7**
ONTNC	**Ouen Toro**	**6.94**	**191**	P	**Pn**	**19 08 41.2**	**+4.1**
OUENC	**Ouen Island, N**	**6.99**	**188**	Pn	**Pn**	**19 08 41.0**	**+3.3**
OUENC	**Ouen Island, N**	**6.99**	**188**	P	**Pn**	**19 08 41.3**	**+3.6**
PINNC	**Pines Island,**	**7.12**	**184**	Pn	**Pn**	**19 08 42.4**	**+2.9**
EIDS	**Eidsvold**	**18.60**	**235**	Pn	**P**	**19 11 08.2**	**+0.7**
CTAO	**Charters Tower**	**21.15**	**254**	P	**P**	**19 11 35.2**	**0.0**
CTAO				IAmb	IAmb	19 11 59.6	
	comp=Z,30nm,1.6s						
URZ	**Urewera**	**24.10**	**162**	LR	LR	19 19 52.5	
	comp=Z,99nm,21.3s,baz=211,slow=32						
BKZ	**Black Stump Fm**	**24.77**	**164**	P	**P**	**19 12 11.6**	**+1.2**
BKZ				IAmb	IAmb	19 12 43.4	
	comp=Z,69nm,1.7s						
CAN	**Canberra**	**26.05**	**217**	P	**P**	**19 12 19.3**	**-2.8**
CAN				IAmb	IAmb	19 12 25.5	
	comp=Z,41nm,1.6s						
BFZ	**Birch Farm**	**26.14**	**166**	P	**P**	**19 12 22.2**	**-0.6**
BFZ				IAmb	IAmb	19 12 50.7	
	comp=Z,61nm,1.2s						
THZ	**Tophouse**	**26.55**	**172**	P	**P**	**19 12 28.2**	**+1.8**
THZ				IAmb	IAmb	19 12 55.6	
	comp=Z,62nm,1.5s						
KHZ	**Kahutara**	**27.28**	**171**	P	**P**	**19 12 32.2**	**-0.8**
KHZ				IAmb	IAmb	19 13 05.7	
	comp=Z,73nm,1.7s						
LTZ	**Lake Taylor**	**27.47**	**173**	P	**P**	**19 12 35.0**	**+0.2**
RAR	**Rarotonga**	**31.14**	**105**	P	**P**	**19 13 09.5**	**+2.1**
WR0	**Warramunga Arr**	**32.10**	**257**	P	**P**	**19 13 13.2**	**-2.7**
WR0				IAmb	IAmb	19 13 14.5	
	comp=Z,24nm,1.7s						
WB0	**Warramunga Arr**	**32.23**	**257**	P	**P**	**19 13 14.3**	**-2.8**
WB0				IAmb	IAmb	19 13 44.2	
	comp=Z,12nm,1.3s						
WB2	**Warramunga Arr**	**32.27**	**257**	P	**P**	**19 13 14.9**	**-2.6**
WB2				IAmb	IAmb	19 13 25.6	
	comp=Z,26nm,1.8s						
WRA	**Warramunga Arr**	**32.28**	**257**	P	**P**	**19 13 14.8**	**-2.8**
	comp=Z,0.8nm,0.7s,baz=79,slow=5.9,SNR=13						
AS31	**Alice Springs**	**33.02**	**250**	P	**P**	**19 13 21.9**	**-2.2**
ASAR	**Alice Springs**	**33.03**	**250**	P	**P**	**19 13 21.9**	**-2.1**
	comp=Z,1.2nm,0.5s,baz=78,slow=8.9,SNR=26						
BBOO	**Buckleboo**	**33.65**	**233**	P	**P**	**19 13 27.2**	**-2.0**
BBOO				IAmb	IAmb	19 14 03.4	
	comp=Z,18nm,1.3s						
MTN	**Manton Dam**	**35.76**	**269**	P	**P**	**19 13 44.4**	**-3.3**
KNRA	**Kununurra**	**37.70**	**264**	P	**P**	**19 14 01.7**	**-2.4**
JMM	**Marumori**	**58.87**	**335**	P	**P**	**19 16 46.4**	**0.0**
VNDA	**Vanda**	**62.14**	**181**	P	**P**	**19 17 06.9**	**-1.1**
VNDA				IAmb	IAmb	19 17 43.0	
	comp=Z,14nm,1.6s						
SMY	**Shemya**	**68.13**	**4**	P	**P**	**19 17 49.0**	**+2.0**
SONM	**Songino Array**	**83.48**	**323**	P	**P**	**19 19 14.0**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=148,slow=6.1,SNR=8.7						
SONM	**Songino Array**	**83.48**	**323**	P	**P**	**19 19 13.8**	**-0.9**
ILAR	**Eielson Array**	**87.03**	**18**	P	**P**	**19 19 30.7**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=228,slow=5.8,SNR=1.9						
SNAA	**Sanae**	**92.84**	**183**	P	**P**	**19 19 58.2**	**-1.0**
VNA3	**Neumayer Olymp**	**93.48**	**181**	P	**P**	**19 20 00.8**	**-1.3**
VNA2	**Neumayer--Watz**	**93.76**	**182**	P	**P**	**19 20 02.2**	**-1.1**
	baz=190,slow=4.4						
ARCES	**ARCESS Array B**	**121.13**	**345**	PKP	**PKPdf**	**19 25 37.6**	**-0.9**
	comp=Z,4.3nm,1.0s,baz=61,slow=2.0,SNR=10						
CLL	**Collm**	**138.99**	**336**	*e*PKPdf	**PKPdf**	**19 26 14.0**	**+1.2**
KEST	**Kesra**	**152.19**	**320**	PKPbc	**PKPbc**	**19 26 42.7**	**+0.2**
	comp=Z,3.2nm,0.8s,baz=89,slow=2.0,SNR=4.9						
KEST	**Kesra**	**152.19**	**320**		**PKPbc**	**19 26 42.2**	**-0.3**

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*TUL **22** 19:12:51.4±2.0, 36°.76N±0°.01×98°.07W±0°.02, h7^{km}±6^{km}, ML2.9, mb_Lg2.6/22(NEIC), Error ellipse: s-maj=2.7km s-min=1.8km az=111.0*

NEIC 22 19:12:51.3±1.9**, 36°.74N**±0°.01×**98°.04W**±0°.02**, h5^{km}**±2^{km}**, Error ellipse: s-maj=3.1km s-min=2.9km az=279.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	**Salt Plains WL**	**0.15**	**295**		Pg	19 12 54.3	-0.1
OK032				Sg	Sg	19 12 56.4	-0.1
GC02	**Grant County #**	**0.18**	**52**	Pg	Pg	19 12 55.6	+0.8
GC02				Sg	Sg	19 12 58.7	+1.5
KAN14	**Manchester OK**	**0.23**	**15**		Pg	19 12 56.1	+0.4
KAN14				Sg	Sg	19 12 59.4	+0.7
CROK	**Carrier**	**0.24**	**170**	Pg	Pg	19 12 56.8	+0.9
KAN17	**Caldwell West**	**0.37**	**35**		Pg	19 12 59.0	+0.4
KAN17				Sg	Sg	19 13 04.3	+0.9
KAN10	**Anthony SW Sta**	**0.39**	**353**	Pg	Pg	19 12 58.8	+0.1
KAN10				Sg	Sg	19 13 04.0	+0.2
KAN05	**Bluff City Nor**	**0.39**	**20**	Pg	Pg	19 12 59.1	+0.3
KAN05				Sg	Sg	19 13 04.6	+0.6
KAN01	**Argonia South**	**0.47**	**28**	Pg	Pg	19 13 00.2	-0.1
KAN01				Sg	Sg	19 13 07.3	+0.8
KAN16	**Harper SW Stat**	**0.49**	**357**	Pg	Pg	19 13 00.7	+0.1
KAN16				Sg	Sg	19 13 07.4	+0.4
KAN08	**Anthony NE Sta**	**0.49**	**6**		Pg	19 13 00.9	+0.2
KAN08				Sg	Sg	19 13 07.6	+0.5
KAN09	**Caldwell North**	**0.52**	**40**	Pg	Pg	19 13 01.6	+0.4
KAN09				Sg	Sg	19 13 09.0	+1.0
KAN13	**South Haven SW**	**0.52**	**58**	Pg	Pg	19 13 01.8	+0.5
KAN13				Sg	Sg	19 13 09.4	+1.2
KAN06	**Argonia West S**	**0.53**	**16**		Pg	19 13 01.6	+0.1
KAN06				Sg	Sg	19 13 08.7	+0.4
OK035	**E0210 Rd and N**	**0.54**	**267**	Pg	Pg	19 13 01.5	-0.2
KAN12	**Harper NE Stat**	**0.56**	**3**	Pg	Pg	19 13 02.1	+0.1
KAN12				Sg	Sg	19 13 09.8	+0.5
BLOK	**Blackwell**	**0.66**	**88**	Pg	Pg	19 13 04.5	+0.6
U32A	**Winter Ranch,**	**0.86**	**246**		Pg	19 13 07.2	-0.5
U32A				Sg	Sg	19 13 19.2	+0.4
OK029	**Liberty Lake**	**1.05**	**153**	Pg	Pg	19 13 11.7	+0.2
OK029				Sg	Sb	19 13 26.5	+0.4
OK033	**Mehan**	**1.12**	**128**		Pb	19 13 13.3	+0.1
OK033				Sg	Sb	19 13 28.6	+0.5
BCOK	**Bluff Creek, N**	**1.13**	**162**	Pg	Pg	19 13 12.4	-0.6
BCOK				Sg	Sb	19 13 28.8	+0.5
QUOK	**Quay**	**1.21**	**117**	Pn	Pg	19 13 14.2	-0.2
QUOK				Sg	Sn	19 13 31.2	-0.5
T35A	**Sooner Cattle**	**1.23**	**81**		Pg	19 13 14.9	0.0
T35A				Sn	Sb	19 13 31.6	+0.3
OK031	**S. Brethren Rd**	**1.25**	**129**	Pn	Pg	19 13 14.6	-0.6
OK025	**Westminster Rd**	**1.29**	**154**		Pn	19 13 15.7	-0.2
OK034	**N. Norfolk Rd.**	**1.29**	**124**	Pn	Pn	19 13 15.9	0.0
OK030	**Cody Creek RV**	**1.29**	**128**		Pn	19 13 15.9	-0.1
OKCFA	**Oklahoma City**	**1.40**	**160**	Pn	Pn	19 13 17.3	-0.2
FNO	**Franklin**	**1.57**	**161**	Pn	Pn	19 13 19.6	-0.2
R32A	**Long Quarter,**	**1.76**	**343**		Pn	19 13 20.5	-2.0
W35A	**Tecumseh**	**1.84**	**149**		Pn	19 13 23.3	-0.3
TUL1	**Leonard**	**1.99**	**114**		Pn	19 13 26.3	+0.7
TUL1				IAmb_Lg		19 13 57.0	
	comp=Z,23nm,0.7s						
WMOK	**Wichita Mounta**	**2.09**	**197**		Pn	19 13 26.2	-0.7
X34A	**Smith Ranch, M**	**2.14**	**176**		Pn	19 13 27.5	-0.1
CBKS	**Cedar Bluff**	**2.47**	**327**	Pn	Pn	19 13 31.3	-0.9
KSU1	**Kansas State U**	**2.61**	**25**	Pn	Pn	19 13 32.9	-1.3
KSU1	**Kansas State U**	**2.61**	**25**	IAmb_Lg		19 14 17.0	
	comp=Z,21nm,0.8s						
LOOK	**Love County**	**2.83**	**165**	Pn	Pn	19 13 36.6	-0.5
U38A	**Gravette**	**2.95**	**95**		Pn	19 13 38.3	-0.5
U38A				IAmb_Lg		19 14 28.5	
	comp=Z,12nm,0.7s						
X37A	**Clayton**	**3.05**	**134**	Pn	Pn	19 13 39.7	-0.5
X37A				IAmb_Lg		19 14 35.5	
	comp=Z,16nm,0.8s						
HHAR	**Hobbs**	**3.33**	**97**	Pn	Pn	19 13 44.6	+0.6
AMTX	**Amarillo**	**3.49**	**239**	Pn	Pn	19 13 45.6	-0.7
W39A	**Magazine**	**3.78**	**113**	Pn	Pn	19 13 48.6	-1.5
S39A	**Bolivar**	**3.88**	**74**		Pn	19 13 50.3	-1.3
U40A	**Yellville**	**4.19**	**94**		Pn	19 13 55.7	-0.1
U40A				IAmb_Lg		19 15 04.4	
	comp=Z,12nm,0.8s						
MIAR	**Mount Ida**	**4.24**	**120**	IAmb_Lg		19 15 16.4	
	comp=Z,11nm,0.8s						
Z38A	**Mt. Pleasant**	**4.28**	**143**	Pn	Pn	19 13 56.9	-0.1
Z38A				IAmb_Lg		19 15 08.2	
	comp=Z,14nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.28**	**303**	Pn	Pn	19 13 56.0	-1.3
MGMO	**Mountain Grove**	**4.64**	**83**	Pn	Pn	19 14 02.9	+0.9
BGNE	**Belgrade**	**4.66**	**359**	Pn	Pn	19 14 00.8	-1.6
MSTX	**Muleshoe**	**4.76**	**236**	Pn	Pn	19 14 01.9	-1.8
WHTX	**Lake Whitney,**	**4.76**	**174**	Pn	Pn	19 14 04.0	+0.4
X40A	**Basin Creek Fa**	**4.80**	**116**	Pn	Pn	19 14 03.0	-1.2
X40A				IAmb_Lg		19 15 30.0	
	comp=Z,12nm,0.7s						
R40A	**Maddies Statio**	**4.84**	**70**	Pn	Pn	19 14 03.8	-0.9
R40A				IAmb_Lg		19 15 36.0	
	comp=Z,13nm,1.2s						
FCAR	**Ozark Folk Cen**	**4.85**	**98**	Pn	Pn	19 14 02.9	-2.0
WHAR	**Wooly Hollow**	**4.88**	**106**	Pn	Pn	19 14 03.2	-2.0
T25A	**Trinidad**	**5.12**	**276**	Pn	Pn	19 14 05.4	-3.5
OGNE	**Ogallala**	**5.23**	**325**	Pn	Pn	19 14 07.5	-2.7
P40A	**Paris**	**5.48**	**58**	IAmb_Lg		19 15 50.0	
	comp=Z,11nm,1.1s						
N38A	**Joes South For**	**5.52**	**41**	IAmb_Lg		19 15 45.3	
	comp=Z,9.1nm,0.7s						
CCM	**Cathedral Cave**	**5.56**	**74**	Pn	Pn	19 14 12.5	-2.2
T42A	**Van Buren**	**5.57**	**85**	Pn	Pn	19 14 13.0	-1.8
FVM	**French Village**	**6.19**	**76**	Pn	Pn	19 14 21.7	-1.6
ISCO	**Idaho Springs**	**6.70**	**299**	Pn	Pn	19 14 27.6	-2.9
RSSD	**Black Hills**	**8.68**	**330**	IAmb_Lg		19 17 40.8	
	comp=Z,6.5nm,1.1s						

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*TUL **22** 19:15:53.9±1.9, 36°.76N±0°.01×98°.07W±0°.02, h6^{km}±5^{km}, ML3.0, mb_Lg2.7/35(NEIC), Error ellipse: s-maj=2.4km s-min=1.6km az=101.0*

*ANF **22** 19:15:54.6±0.4, 36°.77N×98°.05W, h7^{km}, ML3.2/7, Error ellipse: s-maj=4.0km s-min=3.7km az=177.0*

*NEIC **22** 19:15:54.2±1.7, 36°.75N±0°.02×98°.04W±0°.02, h12^{km}±6^{km}, Error ellipse: s-maj=2.8km s-min=1.9km az=141.0*

ISC 22 19:15:53.8±0.8**, 36°.75N**±0°.02×**98°.06W**±0°.02**, h11**^{km}±6^{km}**, n73,** σ**1.^{s}07**/105**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	**Salt Plains WL**	**0.13**	**293**	Pg	**Pg**	**19 15 56.8**	**-0.2**
OK032				Sg	**Sg**	**19 15 59.0**	**-0.3**
GC02	**Grant County #**	**0.19**	**59**	Pg	**Pg**	**19 15 58.2**	**+0.2**
GC02				Sg	**Sg**	**19 16 01.2**	**+0.4**
KAN14	**Manchester OK**	**0.22**	**21**		**Pg**	**19 15 58.6**	**+0.1**
KAN14				Sg	**Sg**	**19 16 01.9**	**+0.3**
CROK	**Carrier**	**0.26**	**166**	Pg	**Pg**	**19 15 59.3**	**+0.2**
CROK				Sg	**Sg**	**19 16 03.1**	**+0.5**
KAN10	**Anthony SW Sta**	**0.37**	**356**	Pg	**Pg**	**19 16 01.4**	**+0.2**
KAN10				Sg	**Sg**	**19 16 06.6**	**+0.4**
KAN17	**Caldwell West**	**0.38**	**39**		**Pg**	**19 16 01.2**	**-0.1**
KAN17				Sg	**Sg**	**19 16 06.7**	**+0.4**
KAN05	**Bluff City Nor**	**0.39**	**23**	Pg	**Pg**	**19 16 01.8**	**+0.2**
KAN05				Sg	**Sg**	**19 16 07.0**	**+0.4**
KAN01	**Argonia South**	**0.47**	**31**	Pg	**Pg**	**19 16 02.6**	**-0.4**
KAN01				Sg	**Sg**	**19 16 09.8**	**+0.6**
KAN16	**Harper SW Stat**	**0.47**	**360**	Pg	**Pg**	**19 16 03.4**	**+0.3**
KAN16				Sg	**Sg**	**19 16 10.1**	**+0.7**
KAN08	**Anthony NE Sta**	**0.48**	**9**		**Pg**	**19 16 03.6**	**+0.3**
KAN08				Sg	**Sg**	**19 16 10.1**	**+0.5**
KAN06	**Argonia West S**	**0.52**	**18**		**Pg**	**19 16 04.0**	**-0.1**
KAN06				Sg	**Sg**	**19 16 11.5**	**+0.6**
KAN09	**Caldwell North**	**0.52**	**43**	Pg	**Pg**	**19 16 04.3**	**+0.3**
KAN09				Sg	**Sg**	**19 16 11.6**	**+0.7**
OK035	**E0210 Rd and N**	**0.52**	**265**	Pg	**Pg**	**19 16 04.0**	**0.0**
KAN13	**South Haven SW**	**0.53**	**61**	Pg	**Pg**	**19 16 04.6**	**+0.3**
KAN13				Sg	**Sg**	**19 16 11.9**	**+0.5**
KAN12	**Harper NE Stat**	**0.55**	**5**	Pg	**Pg**	**19 16 04.3**	**-0.2**
KAN12				Sg	**Sg**	**19 16 12.4**	**+0.7**
BLOK	**Blackwell**	**0.68**	**89**	Pg	**Pg**	**19 16 07.0**	**-0.1**
BLOK				Sg	**Sb**	**19 16 16.9**	**-0.1**
U32A	**Winter Ranch,**	**0.84**	**244**	Pg	**Pg**	**19 16 09.8**	**-0.3**
U32A				Sg	**Sg**	**19 16 21.3**	**+0.1**
U32A	**Winter Ranch,**	**0.84**	**244**	P	**Pg**	**19 16 09.8**	**-0.3**
	baz=63						
OK029	**Liberty Lake**	**1.07**	**153**	Pg	**Pb**	**19 16 14.3**	**-0.1**
OK029				Sg	**Sg**	**19 16 28.6**	**+0.2**
OK033	**Mehan**	**1.15**	**128**	Pg	**Pb**	**19 16 15.6**	**-0.1**
OK033				Sg	**Sg**	**19 16 31.0**	**+0.2**
BCOK	**Bluff Creek, N**	**1.15**	**161**	Pg	**Pb**	**19 16 15.5**	**-0.2**
BCOK				Sg	**Sg**	**19 16 31.2**	**+0.2**
QUOK	**Quay**	**1.23**	**118**		**Pb**	**19 16 17.2**	**0.0**
QUOK				Sg	**Sg**	**19 16 33.3**	**-0.3**
T35A	**Sooner Cattle**	**1.25**	**82**		**Pb**	**19 16 17.4**	**0.0**
T35A				Sn	**Sn**	**19 16 34.1**	**-0.1**
T35B	**Sooner Cattle**	**1.25**	**82**	P	**Pn**	**19 16 17.3**	**+0.1**
	baz=263						
T35B				S	**Sg**	**19 16 34.7**	**+0.5**
	baz=263						
OK031	**S. Brethren Rd**	**1.27**	**129**	Pn	**Pn**	**19 16 17.3**	**-0.2**
OK031				Sn	**Sg**	**19 16 34.9**	**+0.2**
OK025	**Westminster Rd**	**1.31**	**153**		**Pb**	**19 16 18.4**	**0.0**
OK025				Sn	**Sg**	**19 16 36.0**	**0.0**
OK034	**N. Norfolk Rd.**	**1.32**	**124**	Pn	**Pn**	**19 16 17.2**	**-0.9**
OK034				Sn	**Sg**	**19 16 36.1**	**-0.1**
OK034				IAmb_Lg		19 16 36.3	
	comp=Z,38nm,0.9s						
OK030	**Cody Creek RV**	**1.32**	**128**	Pn	**Pn**	**19 16 18.0**	**-0.2**
OK030				Sn	**Sg**	**19 16 36.2**	**-0.1**
OKCFA	**Oklahoma City**	**1.42**	**160**	Pn	**Pn**	**19 16 19.4**	**-0.2**
OKCFA				Sn	**Sg**	**19 16 39.4**	**-0.3**
OKCSW	**OKLAHOMA CITY**	**1.44**	**159**	Sn	**Sg**	**19 16 40.8**	**+0.7**
FNO	**Franklin**	**1.59**	**160**	Pn	**Pb**	**19 16 22.9**	**-0.3**
FNO				Sn	**Sg**	**19 16 44.7**	**-0.2**
R32A	**Long Quarter,**	**1.75**	**343**		**Pn**	**19 16 25.1**	**+1.0**
R32A				Sn	**Sb**	**19 16 47.6**	**-0.2**
R32A	**Long Quarter,**	**1.75**	**343**	P	**Pb**	**19 16 25.7**	**-0.2**
	baz=163						
R32A				S	**Sb**	**19 16 48.9**	**+1.0**
	baz=163						
W35A	**Tecumseh**	**1.86**	**149**	Pn	**Pb**	**19 16 27.1**	**-0.9**
W35A				Sn	**Sb**	**19 16 51.8**	**+0.6**
TUL1	**Leonard**	**2.02**	**114**	Pn	**Pb**	**19 16 29.2**	**-1.3**
TUL1					**Sb**	**19 16 56.6**	**+1.0**
TUL1	**Leonard**	**2.02**	**114**	P	**Pn**	**19 16 29.1**	**+1.3**
	baz=296						
TUL1				S	**Sg**	**19 16 57.0**	**-1.6**
	baz=296						
WMOK	**Wichita Mounta**	**2.10**	**196**	Pn	**Pn**	**19 16 29.6**	**+0.7**
WMOK				Sn	**Sb**	**19 16 57.2**	**-0.6**
WMOK	**Wichita Mounta**	**2.10**	**196**	P	**Pn**	**19 16 30.5**	**+1.6**
	baz=16						
WMOK				S	**Sb**	**19 16 58.7**	**+0.8**
	baz=16						
X34A	**Smith Ranch, M**	**2.15**	**175**	Pn	**Pn**	**19 16 31.5**	**+1.8**
X34A					**Sb**	**19 17 00.9**	**+1.3**
X34A				IAmb_Lg		19 17 05.6	
	comp=Z,27nm,0.8s						
CBKS	**Cedar Bluff**	**2.45**	**328**	Pn	**Pn**	**19 16 32.1**	**-1.7**
CBKS	**Cedar Bluff**	**2.45**	**328**	S	**Sn**	**19 17 06.3**	**+2.6**
	baz=147						
KSU1	**Kansas State U**	**2.61**	**26**	Pn	**Pn**	**19 16 34.6**	**-1.4**
KSU1				IAmb_Lg		19 17 19.6	
	comp=Z,26nm,0.8s						
LOOK	**Love County**	**2.85**	**165**	Pn	**Pn**	**19 16 39.0**	**-0.2**
U38A	**Gravette**	**2.97**	**95**	Pn	**Pn**	**19 16 42.1**	**+1.2**
X37A	**Clayton**	**3.08**	**134**	Pn	**Pn**	**19 16 41.6**	**-0.8**
X37A				IAmb_Lg		19 17 37.9	
	comp=Z,22nm,0.7s						
HHAR	**Hobbs**	**3.35**	**97**	Pn	**Pn**	**19 16 47.5**	**+1.4**
AMTX	**Amarillo**	**3.48**	**239**	Pn	**Pn**	**19 16 48.8**	**+0.8**
W39A	**Magazine**	**3.80**	**113**	Pn	**Pn**	**19 16 54.9**	**+2.6**
W39A				IAmb_Lg		19 18 00.3	
	comp=Z,27nm,0.8s						
S39A	**Bolivar**	**3.90**	**75**	Pn	**Pn**	**19 16 54.7**	**+1.1**
S39A	**Bolivar**	**3.90**	**75**	P	**Pn**	**19 16 54.8**	**+1.1**
	baz=258						
U40A	**Yellville**	**4.21**	**94**	Pn	**Pn**	**19 16 59.0**	**+1.1**
U40A				IAmb_Lg		19 18 17.0	
	comp=Z,12nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.26**	**303**	Pn	**Pn**	**19 16 56.9**	**-1.8**
KSCO				IAmb_Lg		19 18 06.2	
	comp=Z,14nm,0.8s						
MIAR	**Mount Ida**	**4.26**	**120**	Pn	**Pn**	**19 16 58.0**	**-0.7**
MIAR				IAmb_Lg		19 18 13.4	
	comp=Z,14nm,0.8s						
Z38A	**Mt. Pleasant**	**4.30**	**143**	Pn	**Pn**	**19 16 58.7**	**-0.5**
Z38A				IAmb_Lg		19 18 15.8	
	comp=Z,26nm,0.8s						
ABTX	**Abilene, Hawle**	**4.32**	**198**	IAmb_Lg		19 18 11.1	
	comp=Z,14nm,1.1s						
MGMO	**Mountain Grove**	**4.66**	**83**	Pn	**Pn**	**19 17 04.3**	**+0.2**
MGMO				IAmb_Lg		19 18 25.4	
	comp=Z,10nm,0.7s						
MSTX	**Muleshoe**	**4.75**	**236**	Pn	**Pn**	**19 17 04.5**	**-0.9**
WHTX	**Lake Whitney,**	**4.78**	**174**	Pn	**Pn**	**19 17 05.9**	**+0.2**
X40A	**Basin Creek Fa**	**4.82**	**116**	Pn	**Pn**	**19 17 03.7**	**-2.6**
X40A				IAmb_Lg		19 18 32.1	
	comp=Z,24nm,0.7s						
R40A	**Maddies Statio**	**4.85**	**70**	Pn	**Pn**	**19 17 04.7**	**-2.1**
R40A				IAmb_Lg		19 18 33.6	
	comp=Z,11nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.87**	**98**	Pn	**Pn**	**19 17 04.9**	**-2.1**
FCAR				IAmb_Lg		19 18 32.3	
	comp=Z,9.2nm,0.8s						
WHAR	**Wooly Hollow**	**4.90**	**106**	Pn	**Pn**	**19 17 05.4**	**-2.1**
T25A	**Trinidad**	**5.10**	**276**	Pn	**Pn**	**19 17 06.8**	**-3.6**
OGNE	**Ogallala**	**5.21**	**325**	Pn	**Pn**	**19 17 09.1**	**-2.6**
P40A	**Paris**	**5.49**	**58**	Pn	**Pn**	**19 17 14.2**	**-1.4**
P40A				IAmb_Lg		19 18 52.6	
	comp=Z,10nm,0.8s						
N38A	**Joes South For**	**5.52**	**42**	IAmb_Lg		19 18 51.8	
	comp=Z,17nm,0.9s						
CCM	**Cathedral Cave**	**5.58**	**74**	Pn	**Pn**	**19 17 14.5**	**-2.3**
CCM				IAmb_Lg		19 18 54.7	
	comp=Z,10.0nm,0.8s						
LCAR	**Lake Charles**	**5.61**	**95**	Pn	**Pn**	**19 17 15.4**	**-1.7**
SDCO	**Great Sand Dun**	**6.02**	**282**	Pn	**Pn**	**19 17 21.7**	**-1.4**
PBMO	**Poplar Bluff**	**6.13**	**87**	IAmb_Lg		19 19 17.2	
	comp=Z,8.7nm,0.8s						
FVM	**French Village**	**6.20**	**76**	Pn	**Pn**	**19 17 23.7**	**-1.6**
ISCO	**Idaho Springs**	**6.67**	**299**	Pn	**Pn**	**19 17 30.1**	**-1.9**
I40A	**Norwalk**	**9.11**	**36**	IAmb_Lg		19 20 56.9	
	comp=Z,9.9nm,1.0s						

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*IDC **22** 19:16:56.6±0.9, 18°.85N×145°.68E, h0^{km}, mb3.6/6, mb1 3.9/6, mb1mx3.3/40, mbtmp3.6/6, Error ellipse: s-maj=53.4km s-min=21.4km az=109.0*

*NEIC **22** 19:17:19.2±1.7, 18°.67N±0°.10×145°.57E±0°.08, h197^{km}±8^{km}, mb4.7/34, Error ellipse: s-maj=14.8km s-min=9.9km az=205.0*

ISC 22 19:17:18.6±0.6**, 18°.57N**±0°.10×**145°.6E**±0°.2**, h200^{km}, n45,** σ**1.^{s}03**/44**, mb4.6**/24**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.00**	**188**	Pn	**Pn**	**19 18 32.3**	**-0.9**
COEN	**Coen**	**32.41**	**184**	P	**P**	**19 23 29.8**	**-0.2**
COEN				IAmb	IAmb	19 23 47.4	
	comp=Z,52nm,1.6s						
WB0	**Warramunga Arr**	**39.66**	**197**	P	**P**	**19 24 32.0**	**+0.7**
WR0	**Warramunga Arr**	**39.80**	**196**	P	**P**	**19 24 33.3**	**+0.8**
WR0				IAmb	IAmb	19 25 35.4	
	comp=Z,43nm,1.9s						
WB2	**Warramunga Arr**	**39.84**	**197**	P	**P**	**19 24 33.4**	**+0.6**
WRA	**Warramunga Arr**	**39.84**	**197**	P	**P**	**19 24 34.0**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=18,slow=8.2,SNR=18						
WRA	**Warramunga Arr**	**39.84**	**197**	P	**P**	**19 24 33.4**	**+0.6**
JOHN	**Johnston Islan**	**42.71**	**85**	P	**P**	**19 24 55.8**	**-0.5**
ASAR	**Alice Springs**	**43.51**	**196**	P	**P**	**19 25 04.6**	**+2.0**
	comp=Z,0.4nm,1.0s,baz=22,slow=11,SNR=5.1						
PSA00	**Pilbara Seismi**	**47.20**	**213**	P	P	19 25 37.6	+6.1
PSA00				IAmb	IAmb	19 25 41.0	
	comp=Z,24nm,1.6s						
MK31	**Makanchi Array**	**58.49**	**314**	P	**P**	**19 26 54.1**	**+0.2**
MKAR	**Makanchi Array**	**58.49**	**314**	P	**P**	**19 26 53.6**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=86,slow=8.7,SNR=2.2						
MAKZ	**Makanchi**	**58.70**	**314**	P	**P**	**19 26 55.5**	**+0.1**
BRLK	**Bradley Lake**	**60.84**	**31**	P	**P**	**19 27 10.1**	**+0.4**
CAST	**Castle Rocks**	**61.25**	**27**	P	**P**	**19 27 13.8**	**+1.5**
IMAR	**Indian Mountai**	**61.37**	**24**	P	**P**	**19 27 14.8**	**+1.7**
TARG	**Taragay, Kyrgy**	**61.44**	**308**	P	**P**	**19 27 13.7**	**-0.8**
TARG				IAmb	IAmb	19 28 06.1	
	comp=Z,3.4nm,0.5s						
H21K	**Melozitna Rive**	**61.63**	**24**	P	**P**	**19 27 16.6**	**+1.7**
H21K				IAmb	IAmb	19 28 48.3	
	comp=Z,22nm,1.9s						
RC01	**Rabbit Creek A**	**61.71**	**30**	P	**P**	**19 27 16.3**	**+0.9**
RC01				IAmb	IAmb	19 27 48.4	
	comp=Z,26nm,1.6s						
BPAW	**Bear Paw Mtn.**	**61.91**	**26**	P	**P**	**19 27 17.1**	**+0.3**
BPAW				IAmb	IAmb	19 28 59.6	
	comp=Z,26nm,2.0s						
TRF	**Thorofare Moun**	**62.03**	**27**	P	**P**	**19 27 17.4**	**-0.4**
TRF				IAmb	IAmb	19 29 01.4	
	comp=Z,43nm,1.8s						
GHO	**Glory Hole Cre**	**62.24**	**29**	P	**P**	**19 27 19.2**	**+0.1**
GHO				IAmb	IAmb	19 27 31.9	
	comp=Z,25nm,1.6s						
MLY	**Manley**	**62.27**	**25**	P	**P**	**19 27 20.0**	**+0.9**
MLY				IAmb	IAmb	19 29 24.0	
	comp=Z,35nm,2.0s						
PWL	**Port Wells**	**62.32**	**30**	P	**P**	**19 27 18.0**	**-1.5**
PWL				IAmb	IAmb	19 27 44.7	
	comp=Z,26nm,1.1s						
KNK	**Knik Glacier**	**62.38**	**30**	P	**P**	**19 27 19.7**	**-0.2**
KNK				IAmb	IAmb	19 28 21.2	
	comp=Z,22nm,1.5s						
SML	**Sawmill**	**62.52**	**29**	P	**P**	**19 27 20.1**	**-0.8**
RND	**Reindeer**	**62.65**	**27**	P	**P**	**19 27 21.3**	**-0.5**
RND				IAmb	IAmb	19 27 34.1	
	comp=Z,22nm,1.7s						
SCM	**Sheep Creek Mo**	**63.00**	**29**	P	**P**	**19 27 23.7**	**-0.3**
MID	**Middleton Isla**	**63.04**	**32**	P	**P**	**19 27 22.2**	**-2.0**
FID	**Port Fidalgo**	**63.20**	**31**	P	**P**	**19 27 26.0**	**+0.7**
WRH	**Wood River Hil**	**63.22**	**26**	P	**P**	**19 27 25.6**	**+0.2**
WRH				IAmb	IAmb	19 28 26.7	
	comp=Z,16nm,1.8s						
MDM	**Murphy Dome**	**63.28**	**26**	P	**P**	**19 27 25.7**	**-0.1**
H24K	**Noodor Dome**	**63.63**	**25**	P	**P**	**19 27 29.2**	**+1.1**
H24K				IAmb	IAmb	19 28 37.9	
	comp=Z,14nm,1.6s						
ILAR	**Eielson Array**	**63.80**	**26**	P	**P**	**19 27 28.3**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=242,slow=5.6,SNR=7.5						
PAX	**Paxson**	**64.06**	**28**	P	**P**	**19 27 31.7**	**+0.7**
PAX				IAmb	IAmb	19 28 37.3	
	comp=Z,27nm,2.0s						
RIDG	**Independent Ri**	**64.47**	**28**	P	**P**	**19 27 35.3**	**+1.7**
RIDG				IAmb	IAmb	19 28 35.8	
	comp=Z,20nm,1.8s						
CRQM	**Cirque**	**64.82**	**31**	P	**P**	**19 27 36.5**	**+0.4**
BMAR	**Burnt Mountain**	**65.27**	**24**	P	**P**	**19 27 40.7**	**+2.0**
L27K	**Beaver Creek,**	**65.72**	**28**	P	**P**	**19 27 41.1**	**-0.5**
L27K				IAmb	IAmb	19 28 44.0	
	comp=Z,14nm,1.6s						
BCAR	**Beaver Creek A**	**65.73**	**28**	P	**P**	**19 27 42.5**	**+0.7**
KKAR	**Karatay Array**	**66.78**	**310**	P	**P**	**19 27 48.5**	**-0.3**
ABKAR	**Akbulak array**	**73.37**	**317**	P	**P**	**19 28 27.6**	**-1.0**
HOLB	**Holberg**	**73.53**	**41**	P	**P**	**19 28 27.9**	**-1.7**
YKA	**Yellowknife Ar**	**78.14**	**28**	P	**P**	**19 28 56.0**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=287,slow=5.5,SNR=7.6						
NVAR	**Mina Array Bea**	**83.28**	**52**	P	**P**	**19 29 24.9**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=257,slow=7.2,SNR=2.0						

IDC 22 19:27:40.2±2.1**, 4°.74S**×**128°.23E, h0^{km}, mb3.4**/1**, mb1 3.4**/3**, mb1mx3.2**/47**, mbtmp3.2**/3**, ML3.1**/2**, Error ellipse: s-maj=136.3km s-min=29.9km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.24**	**159**	Pn	Pn	19 31 27.8	-2.1
	0.1nm,0.3s,baz=337,slow=13,SNR=1.4						
ASAR	**Alice Springs**	**19.60**	**164**	P	Pn	19 32 11.1	-0.4
	0.1nm,0.3s,baz=346,slow=11,SNR=10.0						

MKAR	Makanchi Array	65.38	327	P	P	19 38 24.6	0.0
	0.2nm,0.5s,baz=113,slow=8.2,SNR=5.0						

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*IDC **22** 19:33:30.9±4.0, 35°.73N×71°.67E, h0^{km}, mb3.8/7, mb1 3.9/12, mb1mx3.6/41, mbtmp3.8/12, ML3.5/5, Error ellipse: s-maj=70.5km s-min=26.3km az=155.0*

*NNC **22** 19:33:46.1±4.2, 36°.91N×71°.05E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=37.9km s-min=27.1km az=146.0*

ISC 22 19:33:47.9±1.0, **36°.51N**±0°.08×**71°.6E**±0°.1, **h114**^{km}, **n30, σ1^s.93**/33, **mb3.7**/6, **4C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.84	15	P	Pn	19 35 12.5	+0.2
	SNR=62						
UCH	Uchtor	6.13	20	P	Pn	19 35 16.9	+0.5
	SNR=6.0						
EKS2	Erkin-Say	6.36	14	P	Pn	19 35 19.2	0.0
	SNR=11						
AAK	Ala-Archa	6.51	19	Pn	Pn	19 35 21.2	+0.1
	3.8nm,0.3s,baz=187,slow=5.8,SNR=73						
AAK				Sn	Sn	19 36 33.4	-0.7
	0.7nm,0.3s,baz=344,slow=22,SNR=6.4						
AAK	Ala-Archa	6.51	19	P	Pn	19 35 21.6	+0.4
	SNR=16						
AAK	Ala-Archa	6.51	19	⇑P	Pn	19 35 21.4	+0.2
	6.5nm,0.4s						
AAK				⇑S	Sn	19 36 33.7	-0.4
	2.9nm,0.5s						
KK08	Karatay Array	6.65	353	⇓P	Pn	19 35 20.5	-2.5
	2.9nm,0.6s						
KK08				⇑S	Sn	19 36 32.4	-4.9
	2.1nm,0.3s						
CHMS	Chumysh	6.91	19	P	Pn	19 35 26.8	+0.2
	SNR=9.0						
TKM2	Tokmak 2	7.09	24	⇓P	Pn	19 35 29.1	0.0
	3.0nm,0.6s						
TKM2				⇓S	Sn	19 36 49.8	+1.5
	1.7nm,0.7s						
USP	Ospenovka	7.10	17	P	Pn	19 35 28.9	-0.2
	SNR=12						
GEYT	Alibeck	10.88	282	Pn	Pn	19 36 11.2	-9.1
	0.8nm,0.3s,baz=94,slow=10.0,SNR=6.1						
GEYT				Sn	Sn	19 38 00.6	-19
	0.4nm,0.3s,baz=44,slow=56,SNR=1.5						
PYUN	Piuthan	12.73	128	eP	Pn	19 36 43.1	-2.0
	9.3nm,0.4s						
MKAR	Makanchi Array	12.99	34	Pn	Pn	19 36 47.3	-0.7
	0.1nm,0.3s,baz=231,slow=13,SNR=2.0						
DANN	Dangsing	13.06	125	eP	Pn	19 36 47.4	-2.0
	4.6nm,0.2s						
GKN	Gorkha	13.88	124	eP	Pn	19 36 57.9	-1.9
	7.2nm,0.3s						
PKIN	Phulchoki	14.66	124	eP	Pn	19 37 08.4	-1.6
	8.0nm,0.5s						
PKI	Pulchoki	14.67	123	eP	Pn	19 37 08.4	-1.8
	4.5nm,0.4s						
KURBB	Kurchatov Arra	14.96	17	Pn	Pn	19 37 12.8	-0.4
	0.0nm,0.3s,baz=343,slow=3.0,SNR=2.6						
JIRN	Jiri	15.15	121	eP	Pn	19 37 14.9	-1.3
	7.6nm,0.3s						
AB31	Akbulak array	15.33	330	P	Pn	19 37 12.3	-5.6
	0.7nm,0.4s,baz=140,slow=12,SNR=40						
AKTO	Aktyubinsk	17.04	329	P	Pn	19 37 37.0	-1.9
	0.5nm,0.3s,baz=138,slow=10,SNR=6.5						
AKTO	Aktyubinsk	17.04	329	⇑P	Pn	19 37 37.1	-1.9
	2.5nm,0.5s						
ZALV	Zalesovo Beam	19.70	24	P	P	19 38 08.0	+0.1
	1.0nm,0.3s,baz=213,slow=9.8,SNR=6.7						
ARU	Arti	21.80	340	P	P	19 38 33.4	+3.0
	0.6nm,0.3s,baz=160,slow=7.2,SNR=3.6						
AKASG	Malin Array Be	33.34	309	P	P	19 40 15.6	+0.8
	0.4nm,0.4s,baz=80,slow=7.5,SNR=4.1						
FINES	FINESS Array B	37.77	326	P	P	19 40 52.7	+0.2
	5.4nm,1.0s,baz=119,slow=11,SNR=9.3						
ARCES	ARCESS Array B	41.34	337	P	P	19 41 24.1	+2.1
	6.1nm,0.9s,baz=66,slow=5.9,SNR=8.0						
NB2	NORSAR Subarra	44.69	323	P	P	19 41 50.4	+1.3
	comp=Z,0.7nm,0.5s,baz=99,slow=7.9						
NOA	NORSAR Array B	44.69	323	P	P	19 41 50.3	+1.2
	comp=Z,1.6nm,0.8s,baz=97,slow=7.9,SNR=4.6						
YKA	Yellowknife Ar	81.21	3	P	P	19 45 52.2	+1.6
	comp=Z,0.2nm,0.5s,baz=352,slow=5.4,SNR=4.4						

NOU 22 19:42:02.0, 15°.73S×167°.21E, h13^{km}**, MLv4.5**/8**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.28	359	P	Pb	19 42 09.2	+0.3
DVP	Devils Point	2.19	155	P	Pn	19 42 39.4	+1.2
KOUNC	Koumac, New Ca	5.54	210	P	Pn	19 43 24.3	+0.1
	16nm,1.8s						
DZM	Mont Dzumac	6.35	186	P	Pn	19 43 34.8	-0.6
NOUC	Port Laguerre	6.39	188	P	Pn	19 43 35.4	-0.6
	16nm,1.3s						

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*IDC **22** 19:52:03.6±1.1, 30°.70S×71°.27W, h0^{km}, mb3.9/3, mb1 3.9/8, mb1mx3.8/35, mbtmp3.8/8, ML3.6/5, MS3.0/4, Ms1 3.0/4, ms1mx2.8/33, Error ellipse: s-maj=39.2km s-min=23.3km az=95.0*

*SJA **22** 19:52:03.5±0.6, 30°.25S×71°.99W, h11^{km}±3^{km}, ML4.1, MW4.0*

*GUC **22** 19:52:04.7±0.8, 30°.47S×71°.86W, h24^{km}±3^{km}, ML4.1*

ISC 22 19:52:00.9±1.6, **30°.28S**±0°.02×**72°.09W**±0°.06, **h3**^{km}±9^{km}, **n50, σ2^s.64**/67, **mb4.0**/3, **2C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.56	135	iP	Pg	19 52 12.5	+0.9
CO06				eS	Sg	19 52 17.0	-1.8
CO05	La Serena	0.83	64	⇓iP	Pn	19 52 20.0	+0.6
CO05				iS	Sn	19 52 30.8	-1.3
CO05				IAML		19 52 33.5	
	comp=E,7μm,0.3s						
GO04	Tololo Observa	1.13	85	⇓iP	Pb	19 52 23.7	+0.5
GO04				iS	Sb	19 52 37.7	-0.6
GO04				IAML		19 52 42.2	
	comp=E,12μm,0.5s						
GO04	Tololo Observa	1.13	85	eP	Pb	19 52 23.7	+0.5
GO04				eS	Sn	19 52 38.0	-2.0
CO03	El Pedregal	1.33	115	⇓iP	Pn	19 52 25.4	-1.1
CO03				iS	Sb	19 52 40.9	-3.3
CO03				IAML		19 52 43.3	
	comp=N,4μm,0.5s						
LCO	Las Campanas	1.75	44	⇑iP	Pg	19 52 34.9	+0.3
LCO				iS	Sg	19 52 58.0	+0.7
LCO	Las Campanas	1.75	44	eP	Pg	19 52 35.0	+0.4
AC04	Llanos de Chal	2.25	24	eP	Pb	19 52 41.6	-0.7
AC04	Llanos de Chal	2.25	24	eP	Pb	19 52 42.0	-0.3
AC04				eS	Sg	19 53 14.3	+0.9
AROD	Rodeo	2.27	88	eP	Pb	19 52 43.0	+0.3
AROD				eS	Sb	19 53 11.7	+0.3
VA06	Catapilco	2.37	164	eP	Pn	19 52 40.9	+0.1
VA06				eS	Sn	19 53 09.5	-0.8
VA06				IAML		19 53 23.4	
	comp=N,2μm,0.4s						
ACCO	Cerro Coronel	2.63	97	eP	Pb	19 52 48.0	-0.9
ACCO				eS	Sg	19 53 24.3	-1.3
VA03	San Esteban	2.80	152	eP	Pn	19 52 47.2	+0.5
VA03				eS	Sn	19 53 17.7	-3.4
VA03				IAML		19 53 28.6	
	comp=E,2μm,0.5s						
ROCH	El Roble	2.83	161	⇑eP	Pn	19 52 46.5	-0.8
ROCH				eS	Sn	19 53 19.3	-2.8
ROCH				IAML		19 53 40.0	
	comp=N,2μm,0.5s						
RTLS	Leoncito	2.84	123	eP	Pb	19 52 51.3	-1.1
RTLS				eS	Sb	19 53 28.1	+0.4
RTLS				IAML		19 53 36.1	
	comp=Z,543nm,0.6s						
AUSP	Uspallata	3.02	131	eP	Pn	19 52 53.4	+3.4
AUSP				eS	Sn	19 53 27.8	+1.1
MT02	Curacav	3.08	165	eP	Pn	19 52 51.7	+1.3
MT02				eS	Sn	19 53 26.4	-1.3
MT02				IAML		19 53 39.0	
	comp=E,335nm,0.4s						
PEL	Peldehue	3.09	158	eP	Pn	19 52 51.7	+1.0
PEL				eS	Sn	19 53 26.6	-1.6
PEL				IAML		19 53 37.1	
	comp=N,787nm,0.5s						
PEL	Peldehue	3.09	158	eP	Pn	19 52 55.0	+4.3
PEL				eS	Sb	19 53 35.0	+0.2
ZON	Zonda	3.19	114	eP	Pn	19 52 50.8	-1.3
ZON				eP	Pb	19 52 55.1	-3.2
ZON				eS	Sb	19 53 33.8	-3.9
ZON				IAML		19 53 49.5	
	comp=Z,478nm,1.5s						
MT05	Renca	3.31	160	eP	Pn	19 52 57.9	+4.2
MT05				eS	Sn	19 53 33.1	-0.4
RTCV	Cerro Valdivia	3.43	118	eP	Pn	19 52 58.8	+3.4
RTCV				eS	Sg	19 53 59.2	+8.0
ASAL	Salagasta	3.61	130	eP	Pn	19 53 01.8	+3.9
ASAL				eS	Sb	19 53 46.8	-3.0
ARCO	CERRO ARCO	3.71	134	eP	Pn	19 53 03.4	+4.1
ARCO				eS	Sb	19 53 50.8	-1.9
ARCO				IAML		19 54 03.1	
	comp=Z,285nm,0.6s						
AAGR	Agrelo	3.94	136	eP	Pn	19 53 08.0	+5.5
AAGR				eS	Sb	19 53 58.8	-0.5
AAGR				eS	Sg	19 54 05.9	-1.7
AC02	Maricunga	4.31	38	eP	Pn	19 53 11.8	+3.9
AC02				eS	Sg	19 54 14.8	-4.8
AC02				IAML		19 54 35.1	
	comp=Z,99nm,1.4s						
ACLC	CERRO LA CRUZ	4.55	80	eP	Pn	19 53 14.7	+3.9
ACLC				eS	Sb	19 54 10.8	-6.0
ACLC				IAML		19 54 24.2	
	comp=Z,219nm,0.9s						
APLL	PUNTA DE LOS L	4.81	93	eP	Pn	19 53 11.8	-2.6
APLL				eP	Pb	19 53 17.2	-8.8
APLL				eS	Sn	19 54 15.8	+5.1
APLL				IAML		19 54 23.7	
	comp=Z,237nm,0.8s						
RFA	San Rafael	5.42	147	eP	Pn	19 53 28.0	+5.3
RFA				eS	Sb	19 54 44.3	+2.5
RFA				eS	Sg	19 54 46.8	-8.3
RFA				IAML		19 55 00.6	
	comp=Z,91nm,0.8s						
H03N1	Juan Fernandez	6.60	240	T	T	20 00 40.6	
	baz=71,slow=72,SNR=738						
H03N2	Juan Fernandez	6.61	240	T	T	20 00 39.9	
	baz=71,slow=72,SNR=706						
H03N3	Juan Fernandez	6.61	240	T	T	20 00 40.5	
	baz=71,slow=72,SNR=671						
LVC	Limon Verde	8.16	21	Pn	Pn	19 54 07.3	+6.8
	comp=Z,0.2nm,0.3s,baz=275,slow=2.7,SNR=1.5						
LVC				Sn	Sn	19 55 43.9	+10
	comp=Z,0.3nm,0.3s,baz=326,slow=21,SNR=1.4						
LVC				LR	LR	19 56 59.0	
	comp=Z,70nm,20.4s,baz=187,slow=36						
PLCA	Paso Flores	10.50	174	Pn	Pn	19 54 30.9	-1.6
	comp=Z,0.2nm,0.3s,baz=344,slow=10,SNR=6.3						
PLCA				Sn	Sn	19 56 25.5	-5.1
	comp=Z,0.0nm,0.3s,baz=327,slow=22,SNR=1.5						
CPUP	Villa Florida	13.59	77	Pn	Pn	19 55 11.4	-3.2
	comp=Z,0.2nm,0.3s,baz=234,slow=19,SNR=1.7						
CPUP				LR	LR	20 00 24.7	
	comp=Z,56nm,20.9s,baz=222,slow=38						
LPAZ	La Paz	14.40	15	Pn	P	19 55 31.2	-2.3
	comp=Z,0.1nm,0.3s,baz=207,slow=3.1,SNR=2.2						
SIV	San Ignacio	17.45	38	P	P	19 56 07.7	+1.0
	comp=Z,0.3nm,0.3s,baz=221,slow=9.1,SNR=18						
NNA	Nana	18.73	345	LR	LR	20 01 22.9	
	comp=Z,38nm,19.2s,baz=210,slow=29						
ROSC	El Rosal	34.99	356	LR	LR	20 12 39.6	
	comp=Z,58nm,20.5s,baz=256,slow=35						
TXAR	Lajitas Array	66.49	330	P	P	20 03 01.5	+9.5
	comp=Z,0.5nm,0.9s,baz=148,slow=7.4,SNR=3.4						
DBIC	Dimbokro	74.06	72	P	P	20 03 39.5	+0.9
	comp=Z,2.0nm,0.8s,baz=95,slow=9.7,SNR=2.7						
RAR	Rarotonga	77.69	253	LR	LR	20 27 44.6	
	comp=Z,548nm,19.8s,baz=282,slow=27						
TORD	Torodi Ar. Bea	83.00	70	P	P	20 04 28.2	+0.2
	comp=Z,0.9nm,0.9s,baz=276,slow=4.7,SNR=5.0						
H11S2	WAKE ISLAND Hy	125.69	272	T	T	22 29 47.1	
	baz=318,slow=74,SNR=7.0						
H11S1	WAKE ISLAND Hy	125.70	272	T	T	22 29 49.8	
	baz=11,slow=74,SNR=5.5						
H11S3	WAKE ISLAND Hy	125.71	272	T	T	22 29 47.1	
KURBB	Kurchatov Arra	150.10	39	PKPbc	PKiKP	20 11 54.3	+0.7
	comp=Z,1.5nm,0.8s,baz=301,slow=3.3,SNR=12						
AAK	Ala-Archa	150.63	56	PKPbc	PKiKP	20 11 56.9	+1.7
	comp=Z,3.3nm,0.7s,baz=184,slow=1.9,SNR=13						
ZALV	Zalesovo Beam	151.05	29	PKPbc	PKiKP	20 11 56.8	+1.3
	comp=Z,5.2nm,0.7s,baz=294,slow=3.3,SNR=23						
MKAR	Makanchi Array	154.22	43	PKPbc	PKPbc	20 12 03.2	+1.0
	comp=Z,0.2nm,0.6s,baz=357,slow=2.4,SNR=4.0						

IDC 22 20:08:11.5±7.2, **21°.31S**×**169°.96W, h0**^{km}**, mb3.9**/2**, mb1 4.2**/2**, mb1mx3.7**/30**, mbtmp3.9**/2**, Error ellipse: s-maj=335.1km s-min=59.5km az=145.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	51.64	256	P	P	20 17 19.4	-1.0
	0.9nm,0.4s,baz=90,slow=7.2,SNR=14						
WRA	Warramunga Arr	51.92	261	P	P	20 17 23.3	+0.8
	0.5nm,0.3s,baz=102,slow=8.3,SNR=15						
AKASG	Malin Array Be	147.02	337	PKPbc	PKPbc	20 27 55.2	-0.9
	0.6nm,0.3s,baz=65,slow=2.4,SNR=3.8						

NNC 22 20:11:48.8±8.2, **38°.18N**×**72°.74E, h0**^{km}**, mb3.7, mpv3.4, 5C-3D, Error ellipse: s-maj=65.2km s-min=47.9km az=154.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.65	16	⇓Pg	Pb	20 13 11.5	+0.1
	3.9nm,0.6s						
AAK				⇑Lg	Lg	20 14 11.0	
	4.5nm,0.7s						
KK08	Karatay Array	5.21	342	⇓Pn	Pn	20 13 08.2	+0.2
	1.7nm,0.4s						
KK08				⇑Sn	Sn	20 14 10.9	+2.0
	4.3nm,0.7s						
TKM2	Tokmak 2	5.21	24	⇑Pg	Pg	20 13 27.2	-1.5
	5.1nm,0.9s						
TKM2				⇓Lg	Lg	20 14 37.3	
	5.5nm,1.1s						
AB31	Akbulak array	14.41	324	⇑P	Pn	20 15 08.7	-5.2
	0.1nm,0.3s,baz=140,slow=13,SNR=8.6						
AKTO	Aktyubinsk	16.12	324	⇑P	Pn	20 15 37.8	+1.1
	2.3nm,0.8s						

IDC 22 20:12:28.2±67.0, **20°.20S**×**177°.87W, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/23**, mbtmp3.7**/3**, Error ellipse: s-maj=1223.0km s-min=172.6km az=82.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.03	244	P	P	20 19 48.0	-0.3
	1.0nm,0.6s,baz=61,slow=10,SNR=2.8						
ASAR	Alice Springs	44.71	256	P	P	20 20 43.1	-0.3
	0.8nm,0.6s,baz=100,slow=8.5,SNR=9.0						
WRA	Warramunga Arr	44.77	262	P	P	20 20 44.0	+0.1
	0.3nm,0.3s,baz=95,slow=8.2,SNR=12						

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*CNRM **22** 20:24:38.5, 35°.62N×3°.59W, h7^{km}, ml2.9*

*MDD **22** 20:24:40.8±0.7, 35°.41N×3°.63W, h20^{km}±8^{km}, mbLg2.3/20, Error ellipse: s-maj=8.5km s-min=5.8km az=164.0, PRXIMO*

*SFS **22** 20:24:40.0, 35°.40N×3°.61W, h22^{km}, ML2.3, ALBORAN S.*

*INMG **22** 20:24:42.0±1.5, 35°.52N×3°.63W, h18^{km}±10^{km}, ML2.0, Error ellipse: s-maj=9.4km s-min=3.3km az=161.0*

*IGIL **22** 20:24:43.7, 35°.55N×3°.82W, h3^{km}*

ISC 22 20:24:40.4±1.0, **35°.47N**±0°.03×**3°.63W**±0°.02, **h26**^{km}±11^{km}, **n49, σ1^s.46**/87, **2C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.36	226	P	Pb	20 24 48.1	-0.3
PALE				S	Sb	20 24 54.3	+0.5
GOG	Mont Gurugu	0.57	115	P	Pb	20 24 51.3	-0.5
GOG				S	Sb	20 24 59.0	-0.6
EMEL	Melilla	0.57	107	⇑P	Pb	20 24 51.6	-0.2
	98nm,0.1s,SNR=18						
EMEL				S	Sb	20 24 59.0	-0.6
	812nm,0.2s,SNR=16						
EALB	Alboran	0.67	45	⇑P	Pb	20 24 53.9	+0.3
	66nm,0.2s,SNR=18						
EALB				S	Sn	20 25 03.5	-0.4
	62nm,0.1s,SNR=6.7						
CHAS	Isla Isabel II	1.02	106	P	Pb	20 24 57.8	-1.6
CHAS				S	Sb	20 25 10.5	-1.8
ELGU	Los Guajares,	1.40	360	P	Pn	20 25 04.5	+0.1
	1.4nm,0.2s,SNR=7.9						
ELGU				S	Sn	20 25 21.5	-0.4
	35nm,0.2s,SNR=7.9						
JBK	JBK	1.43	142	P	Pn	20 25 03.8	-1.0
JBK				S	Sb	20 25 26.5	+2.3
EMIJ	Mijas	1.44	320	P	Pn	20 25 04.2	-0.6
	0.9nm,0.3s,SNR=12						
EMIJ				S	Sn	20 25 22.8	0.0
	20nm,0.2s,SNR=16						
EMAL	Malaga-Limoner	1.45	334	P	Pn	20 25 05.0	+0.1
EMAL				S	Sn	20 25 21.7	-1.4
CHEFC	Chefchaouen	1.45	256	P	Pb	20 25 06.7	-0.1
CHEFC				S	Sb	20 25 25.5	+0.8
CEU	Ceuta	1.49	287	P	Pn	20 25 03.6	-1.8
CEU				S	Sn	20 25 20.6	-3.4
ECEU	Ceuta	1.49	287	P	Pn	20 25 04.7	-0.8
	2.7nm,0.2s,SNR=7.9						
ECEU				S	Sn	20 25 22.9	-1.2
	9.2nm,0.1s,SNR=7.9						
EBER	Berja	1.55	22	P	Pn	20 25 06.2	-0.2
	2.8nm,0.2s,SNR=23						
EBER				S	Sn	20 25 25.7	-0.1
	25nm,0.4s,SNR=6.4						
EGOR	Sierra Gorda,	1.69	347	P	Pn	20 25 09.2	+0.8
	0.4nm,0.2s,SNR=7.9						
EGOR				S	Sn	20 25 29.6	+0.4
	7.9nm,0.2s,SNR=7.9						
ENIJ	Nijar	1.89	37	P	Pn	20 25 10.7	-0.3
	2.9nm,0.2s,SNR=7.9						
ENIJ				S	Sn	20 25 34.0	-0.1
	24nm,0.7s,SNR=7.9						
IFR	Ifrane	2.31	213	P	Pb	20 25 20.6	-0.8
IFR				S	Sn	20 25 44.1	-0.5
EQES	Quesada	2.37	11	P	Pb	20 25 20.7	-1.8
	2.5nm,0.1s,SNR=27						
EQES				S	Sb	20 25 49.3	-2.1
	40nm,0.5s,SNR=7.9						
MD31	MD31	2.76	200	P	Pn	20 25 26.7	+3.7
MD31				S	Sb	20 26 03.2	+0.8
TDRA	Tendrara	2.76	151	P	Pn	20 25 25.2	+2.1
TDRA				S	Sb	20 26 02.4	-0.2
SESP	Santiago Espad	2.79	18	P	Pn	20 25 26.3	+2.8
	1.9nm,0.3s,SNR=7.9						
SESP				S	Sn	20 25 56.5	+0.2
	19nm,0.4s,SNR=7.9						
EADA	Adamuz	2.80	344	P	Pn	20 25 25.6	+2.0
	5.9nm,0.5s,SNR=11						
EADA				S	Sn	20 25 57.0	+0.5
	9.6nm,0.4s,SNR=7.5						
EZAR	Zarzadilla de	2.86	32	P	Pn	20 25 25.9	+1.5
	2.2nm,0.3s,SNR=7.9						
EZAR				S	Sn	20 25 58.4	+0.3
	22nm,0.9s,SNR=7.9						
ECAB	El Cabril	2.97	332	P	Pn	20 25 27.2	+1.3
	0.4nm,0.4s,SNR=14						
ECAB				S	Sn	20 25 59.6	-1.2
	2.5nm,0.4s,SNR=7.8						
EMUR	La Murta	3.05	38	S	Sn	20 26 01.4	-1.3
	12nm,0.8s,SNR=7.9						
EMIN	Mina Concepcio	3.36	314	P	Pn	20 25 31.6	+0.5
	3.4nm,0.3s,SNR=7.9						
EMIN				S	Sn	20 26 09.5	-0.7
	1.2nm,0.4s,SNR=7.9						
ETOB	Tobarra	3.58	27	P	Pn	20 25 36.9	+2.6
	1.5nm,0.2s,SNR=7.9						
ETOB				S	Sn	20 26 15.3	-0.5
	4.1nm,0.4s,SNR=7.9						
EGRO	El Granado	3.73	305	P	Pn	20 25 37.1	+0.8
	0.9nm,0.4s,SNR=7.9						
EGRO				S	Sn	20 26 17.5	-1.9
	7.3nm,0.6s,SNR=7.9						
PVAQ	Vaqueiros	3.82	302	ePn	Pn	20 25 38.6	+1.0
PVAQ				eSn	Sn	20 26 21.3	-0.4
PVAQ				A	A	20 26 30.8	
	1.9nm,0.4s						
PVAQ	Vaqueiros	3.82	302	P	Pn	20 25 38.8	+1.2
PVAQ				S	Sn	20 26 21.5	-0.2
PBDV	Barranco-do-Ve	3.90	298	ePn	Pn	20 25 39.5	+0.8
PBDV				eSn	Sn	20 26 22.9	-0.7
PBDV				A	A	20 26 37.9	
	3.1nm,0.7s						
PAB	San Pablo	4.11	352	P	Pn	20 25 43.9	+2.3
	1.6nm,0.5s,SNR=7.9						
PAB				S	Sn	20 26 27.6	-1.3
	2.4nm,0.5s,SNR=7.9						
ESDC	Sonseca Array	4.21	356	S	Sn	20 26 31.4	+0.2
	15nm,1.8s,baz=178,slow=22,SNR=5.1						
EBAD	Badajoz	4.25	321	P	Pn	20 25 44.4	+0.9
	1.8nm,0.4s,SNR=7.9						
EBAD				S	Sn	20 26 31.3	-1.0
	4.7nm,0.2s,SNR=7.9						
MESJ	Messejana	4.39	304	eP	Pn	20 25 46.9	+1.6
MESJ	Messejana	4.39	304	ePn	Pn	20 25 46.9	+1.6
MESJ				eSn	Sn	20 26 35.2	-0.4
MESJ				A	A	20 26 40.9	
	2.1nm,0.4s						
MORF	Marmelete	4.45	296	eP	Pn	20 25 47.7	+1.5
MORF	Marmelete	4.45	296	ePn	Pn	20 25 47.6	+1.4
MORF				eSn	Sn	20 26 36.6	-0.6
MORF				A	A	20 26 51.3	
	2.4nm,0.9s						
PFVI	Vila Bisbo	4.52	293	ePn	Pn	20 25 50.1	+3.0
PFVI				eSn	Sn	20 26 38.6	-0.2
PFVI	Vila Bisbo	4.52	293	S	Sn	20 26 36.0	-2.8
	3.9nm,0.4s,SNR=7.9						
PTEO	Sao Teotonio	4.60	298	eSn	Sn	20 26 42.1	+1.3
PESTR	Estremoz	4.64	318	eSn	Sn	20 26 43.3	+1.4
EVO	Evora	4.66	312	ePn	Pn	20 25 50.9	+1.9
EVO				eSn	Sn	20 26 41.5	-0.7
EVO				A	A	20 26 44.6	
	2.7nm,0.6s						
PNCL	Nicolau / Gran	4.74	305	ePn	Pn	20 25 51.2	+1.1
PNCL				eSn	Sn	20 26 43.3	-0.9
PNCL				A	A	20 26 59.3	
	1.8nm,0.6s						
PMRV	Marv??o	4.96	324	ePn	Pn	20 25 55.2	+2.0
PMRV				eSn	Sn	20 26 49.3	-0.5
PMRV				A	A	20 26 53.8	
	1.5nm,0.5s						
PMTG	Montargil	5.14	316	ePn	Pn	20 25 57.5	+1.9
PMTG				eSn	Sn	20 26 52.0	-2.0
GUD	Guadarrama	5.18	356	S	Sn	20 26 53.7	-1.7
	0.6nm,0.3s,SNR=7.9						
MVO	Moncorvo	6.29	336	ePn	Pn	20 26 14.0	+2.5
MVO	Moncorvo	6.29	336	P	Pn	20 26 13.6	+2.2
	0.6nm,0.4s,SNR=7.9						
PBRG	Braganca	6.78	340	ePn	Pn	20 26 21.4	+3.2

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*IDC **22** 20:29:23.0±1.1, 15°.95N×41°.59E, h0^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.5/51, mbtmp3.8/9, ML3.2/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/47, Error ellipse: s-maj=25.6km s-min=23.5km az=131.0*

ISC 22 20:29:24.5±0.8, **15°.99N**±0°.09×**41°.6E**±0°.2, **h10**^{km}**, n12, σ1^s.43**/10**, mb3.8**/8**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	4.60	164	Pn	Pn	20 30 32.4	-1.9
	1.2nm,0.3s,baz=276,slow=22,SNR=2.6						
ATD				LR	LR	20 31 23.2	
	comp=Z,26nm,19.4s,baz=118,slow=26						
ATD				Sn	Sn	20 31 30.1	+2.3
	baz=205,slow=21,SNR=1.0						
WSAR	Wadi Sarin	17.61	63	LR	LR	20 40 42.4	
	comp=Z,55nm,20.7s,baz=248,slow=39						
MBAR	Mbarara	19.65	214	LR	LR	20 40 50.2	
	comp=Z,73nm,18.6s,baz=354,slow=35						
BRTR	Keskin Array B	24.64	345	P	P	20 34 47.6	+2.1
	2.1nm,0.9s,baz=160,slow=12,SNR=3.8						
TORD	Torodi Ar. Bea	38.65	271	P	P	20 36 48.8	+0.1
	1.5nm,0.8s,baz=82,slow=7.7,SNR=6.4						
GERES	GERESS Array B	39.90	331	P	P	20 36 58.2	-0.5
	0.8nm,0.7s,baz=132,slow=7.9,SNR=7.1						
KOWA	Kowa	43.94	274	P	P	20 37 32.4	+0.3
	1.1nm,0.6s,baz=181,slow=12,SNR=2.8						
MKAR	Makanchi Array	45.60	39	P	P	20 37 44.9	-0.1
	0.4nm,0.9s,baz=215,slow=9.3,SNR=2.3						
NOA	NORSAR Array B	49.98	341	P	P	20 38 17.9	-0.8
	1.8nm,0.9s,baz=137,slow=7.9,SNR=2.9						

ZALV	Zalesovo Beam	50.59	32	P	P	20 38 23.2	-0.2
	1.1nm,0.8s,baz=250,slow=7.7,SNR=4.7						
SONM	Songino Array	61.45	44	P	P	20 39 41.8	+0.3
	2.0nm,1.1s,baz=252,slow=7.1,SNR=5.3						
SADO	Sadowa	99.08	322	LR	LR	21 28 01.7	
	comp=Z,55nm,18.1s,baz=355,slow=36						

IDC ***22*** *20:34:15.7±1.6, 15°.03S×72°.76W, h78^{km}±14^{km}, mb4.3/23, mb1 4.4/30, mb1mx4.3/48, mbtmp4.6/30, MS3.6/8, Ms1 3.6/8, ms1mx3.3/41, Error ellipse: s-maj=16.3km s-min=9.9km az=43.0*

NEIC ***22*** *20:34:16.1±2.4, 15°.15S±0°.06×72°.80W±0°.08, h94^{km}±6^{km}, mb4.9/95, ML5.0(ARE), Error ellipse: s-maj=12.6km s-min=8.3km az=61.0*

VAO ***22*** *20:34:16.8±0.3, 15°.09S×72°.78W, h85^{km}, mb4.8*

ARE ***22*** *20:34:16±6.1, 15°.15S±0°.07×72°.95W±0°.08, h118^{km}±4^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=147.0*

GCMT ***22*** *20:34:24.1±0.3, 15°.21S±0°.03×73°.03W±0°.03, h113^{km}±5^{km}, MW4.9/77, Moment Tensor Solution. s11,c11; s77,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.52±.16; $M_{\theta\theta}$-0.96±.14; $M_{\phi\phi}$2.48±.18; $M_{r\theta}$1.13±.08; $M_{\theta\phi}$0.88±.18; $M_{\phi r}$0.94±.13; Best double couple: $M_0$2.71500×10^{16} NP1:ϕ_s340.00000°,δ41.00000°,λ-145.00000°. NP2: ϕ_s222.00000°,δ68.00000°,λ-55.00000°. Principal axes: T 3.0150, Plg15.0000°, Azm287.0000°; N -0.6030, Plg32.0000°, Azm27.0000°; P -2.4140, Plg53.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 20:34:16.4±0.3**, 15°.19S**±0°.05×**72°.91W**±0°.06**, h101^{km}, n280,** σ1^{s}**99**/290**, mb4.9**/73**, 3C-2D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	Chacalluta	4.01	143	⇓eP	Pn	20 35 16.8	+1.0
AP01				eS	Sn	20 36 01.7	-0.1
AP01	Chacalluta	4.01	143		Pn	20 35 16.7	+1.0
AP01				Sn	Sn	20 36 01.9	+0.1
PB12	IPOC Station P	4.21	144	⇓iP	Pn	20 35 18.5	-0.1
PB12	IPOC Station P	4.21	144		Pn	20 35 18.3	-0.2
PB12				Sn	Sn	20 36 04.4	-2.4
PB16	IPOC Station P	4.52	134		Pn	20 35 24.2	+1.0
LPAZ	La Paz	4.73	104	P	Pn	20 35 27.9	+1.8
	13nm,0.3s,baz=290,slow=12,SNR=156						
LPAZ				LR	LR	20 37 45.9	
	comp=Z,488nm,21.3s,baz=212,slow=45						
LPAZ	La Paz	4.73	104	⇑iP	Pn	20 35 28.6	+2.6
LPAZ	La Paz	4.73	104	Pn	Pn	20 35 28.5	+2.4
NNA	Nana	4.97	309	P	Pn	20 35 28.3	-0.6
	31nm,0.3s,baz=135,slow=12,SNR=60						
NNA				S	Sn	20 36 23.7	-1.6
	188nm,0.3s,baz=38,slow=23,SNR=10						
NNA				LR	LR	20 37 12.0	
	comp=Z,939nm,21.2s,baz=188,slow=35						
PB11	IPOC Station P	5.51	146	Pn	Pn	20 35 35.0	-1.2
TA02	Huaiquique	5.71	153		Pn	20 35 37.7	-1.0
HMBC	Humberstone	5.83	151	eP	Pn	20 35 39.5	-0.9
HMBC				eS	Sn	20 36 41.9	-4.2
TA01	Diego Aracena	5.95	154		Pn	20 35 40.8	-1.2
PB08	IPOC Station P	6.09	145		Pn	20 35 42.9	-1.4
PATCX	Punta Patache	6.19	155		Pn	20 35 44.4	-1.0
PB01	IPOC Station P	6.67	151		Pn	20 35 50.7	-1.3
PB07	IPOC Station P	7.11	157		Pn	20 35 56.3	-1.7
CZSB	Cruzeiro do Su	7.41	2	eP	Pn	20 35 59.1	-2.9
CZSB	Cruzeiro do Su	7.41	2	Pn	Pn	20 35 58.8	-3.2
PB09	IPOC Station P	7.44	153		Pn	20 36 01.8	-0.6
PB04	IPOC Station P	7.58	160		Pn	20 36 02.3	-2.0
PB06	IPOC Station P	8.12	158		Pn	20 36 10.0	-1.7
LVC	Limon Verde	8.30	153	P	Pn	20 36 14.1	-0.2
	6.8nm,0.3s,baz=1.2,slow=8.4,SNR=59						
LVC				S	Sn	20 37 32.3	-14
	9.1nm,0.3s,baz=21,slow=14,SNR=7.3						
LVC				LR	LR	20 39 33.2	
	comp=Z,267nm,20.9s,baz=340,slow=38						
LVC	Limon Verde	8.30	153	eP	Pn	20 36 14.1	-0.2
LVC	Limon Verde	8.30	153	Pn	Pn	20 36 13.0	-1.3
ETMB	Extrema	8.44	52	eP	Pn	20 36 14.7	-1.3
ETMB	Extrema	8.44	52	Pn	Pn	20 36 13.8	-2.1
PB10	IPOC Station P	8.58	165	Pn	Pn	20 36 15.8	-2.0
PB15	IPOC Station P	8.62	158		Pn	20 36 16.8	-1.7
ATAH	Atahualpa	9.64	326	P	Pn	20 36 32.0	-0.6
	0.6nm,0.3s,baz=131,slow=22,SNR=3.9						
ATAH				S	Sn	20 38 11.7	-7.7
	0.8nm,0.3s,baz=314,slow=22,SNR=1.5						
PB14	IPOC Station P	9.68	166	Pn	Pn	20 36 30.9	-2.2
SAML	Samuel	11.35	58		Pn	20 36 51.9	-3.6
SIV	San Ignacio	11.43	96	P	Pn	20 36 55.3	-1.3
	3.4nm,0.3s,baz=278,slow=11,SNR=125						
SIV				S	Sn	20 38 51.1	-11
	0.9nm,0.3s,baz=246,slow=16,SNR=1.7						
AC02	Maricunga	12.12	164	Pn	Pn	20 37 05.9	-0.2
VILB	Vilhena	12.53	81	eP	Pn	20 37 08.0	-3.2
VILB	Vilhena	12.53	81	Pn	Pn	20 37 06.4	-4.8
AC04	Llanos de Chal	13.07	173	Pn	Pn	20 37 09.8	-8.4
PTLB	Pontes e Lacer	13.29	93	Pn	Pn	20 37 15.4	-5.7
LCO	Las Campanas	13.91	172		P	20 37 37.7	+3.4
CO06	Fray Jorge	15.46	176	P	Pn	20 37 47.3	-1.6
CO03	El Pedregal	15.71	173	P	Pn	20 37 47.9	-4.3
OTAV	Otavalo	16.27	340	eP	Pn	20 37 58.6	-1.0
OTAV	Otavalo	16.27	340	P	P	20 38 01.4	+0.7
SALV	Santo Antonio	16.61	95	eP	P	20 38 02.8	-1.2
ZON	Zonda	16.74	167	P	Pn	20 37 59.0	-5.9
FLOC	Florencia	16.88	351	eP	P	20 38 09.7	+2.6
GCUF	Volcan Galeras	16.89	345	eP	P	20 38 08.7	+1.1
MACA	Manacapuru-AM	16.97	46	eP	P	20 38 07.1	-0.9
MACA	Manacapuru-AM	16.97	46	P	Pn	20 38 03.7	-4.0
MACA				IAmb	IAmb	20 38 22.9	
	comp=Z,45nm,0.8s						
AQDB	Aquidauana	17.20	110	eP	Pn	20 38 09.8	-0.7
AQDB	Aquidauana	17.20	110		Pn	20 38 04.7	-5.9
AQDB				IAmb	IAmb	20 38 11.1	
	comp=Z,71nm,1.0s						
CLDB	Colider	17.21	78	eP	P	20 38 10.0	-0.8
PP1B	Ponte de Pedra	17.46	100	eP	Pn	20 38 13.0	-0.8
SOTA	Rioblanco	17.59	348	eP	Pn	20 38 17.3	+1.5
VA03	San Esteban	17.63	173	P	P	20 38 10.3	-4.9
VA03					PcP	20 42 42.6	-6.7
PCON	Cinco Dias	17.74	348	eP	Pn	20 38 20.1	+2.5
VA01	Torpederas	17.80	177	P	P	20 38 11.3	-5.6
PEL	Peldehue	17.99	174	P	P	20 38 11.5	-7.7
POPC	Popayan, Colom	18.00	348	eP	Pn	20 38 23.0	+2.6
MT02	Curacav	18.07	175	P	P	20 38 15.8	-4.1
CPUP	Villa Florida	18.29	130	P	Pn	20 38 23.8	+0.2
	comp=Z,0.3nm,0.3s,baz=310,slow=13,SNR=6.7						
CPUP	Villa Florida	18.29	130	eP	Pn	20 38 22.9	-0.7
CPUP	Villa Florida	18.29	130	P	P	20 38 13.4	-9.0
VA05	Santo Domingo	18.43	177	P	P	20 38 19.7	-4.2
VA05				IAmb	IAmb	20 38 35.3	
	comp=Z,44nm,1.0s						
MT09	Talagante	18.59	175	P	P	20 38 21.8	-4.0
MT01	Popeta	18.66	176	P	P	20 38 22.8	-3.7
PRAC	Prado	18.88	354	eP	P	20 38 28.7	-0.3
H03N1	Juan Fernandez	18.97	196	T	T	20 57 13.1	
	baz=17,slow=74,SNR=410						
H03N2	Juan Fernandez	18.98	196	T	T	20 57 17.8	
	baz=17,slow=74,SNR=370						
H03N3	Juan Fernandez	18.99	196	T	T	20 57 14.6	
	baz=17,slow=74,SNR=531						
NPGB	Novo Progresso	19.02	67	eP	P	20 38 29.9	-0.6
ORTC	Ortega, Tolima	19.11	353	eP	Pn	20 38 32.5	-0.9
BO01	Tunca	19.20	175	P	P	20 38 25.3	-6.9
PTGA	Pitinga	19.23	43	P	Pn	20 38 33.2	-1.6
	comp=Z,1.4nm,0.3s,baz=220,slow=14,SNR=13						
H03S3	Juan Fernandez	19.34	195	T	T	20 59 04.0	
	SNR=5.4						
H03S2	Juan Fernandez	19.35	195	T	T	20 59 05.5	
	SNR=6.1						
H03S1	Juan Fernandez	19.35	195	T	T	20 59 07.3	
	SNR=5.8						
BO02	Sierra Bellavi	19.62	175	P	P	20 38 31.0	-5.9
BO02				IAmb	IAmb	20 38 54.4	
	comp=Z,77nm,1.7s						
CHIC	Chingaza	19.70	358	eP	Pn	20 38 50.7	+10
ANIL	Santa Ana	19.70	353	eP	Pn	20 38 40.2	-0.5
GO05	Huala	19.76	178	P	P	20 38 33.5	-5.0
GO05				IAmb	IAmb	20 38 46.2	
	comp=Z,64nm,1.1s						
ROSC	El Rosal	19.95	356	P	P	20 38 42.1	+1.2
	comp=Z,2.4nm,0.3s,baz=121,slow=22,SNR=1.9						
ROSC				LR	LR	20 46 22.4	
	comp=Z,151nm,20.5s,baz=226,slow=37						
ROSC	El Rosal	19.95	356	P	P	20 38 36.9	-4.1
ITTB	Itaituba	20.03	59	eP	P	20 38 41.0	-0.5
PLMC	San Jos del P	20.24	350	eP	P	20 38 44.0	+0.2
ARAG	Araguaiana, MT	20.34	94	eP	P	20 38 44.2	-0.7
GUY2C	Guyana, Caldas	20.42	353	eP	Pn	20 38 47.8	-1.4
ML02	Panimavida	20.54	177	P	P	20 38 43.4	-3.3
NORC	Norcasia	20.71	354	eP	Pn	20 38 50.7	-1.4
SPBC	San Pablo de B	20.73	357	eP	P	20 38 48.8	-0.4
ITQB	Itaqui	20.81	137	eP	P	20 38 49.9	+0.1
ITQB	Itaqui	20.81	137	P	P	20 38 47.8	-1.9
CBOC	Ciudad Bolivar	21.14	351	eP	P	20 38 53.5	-0.1
SNDB	Serra Nova Dou	21.25	84	eP	P	20 38 54.1	-0.6
BOAV	Boa Vista	21.34	36	eP	P	20 38 57.8	+2.2
BOAV	Boa Vista	21.34	36	P	P	20 38 53.9	-1.7
PCMB	Pacaembu	21.50	110	eP	P	20 38 57.1	-0.2
PTBC	PUERTO BERRIO,	21.64	356	eP	P	20 39 00.2	+1.4
ITRB	Iturama	21.97	105	eP	P	20 39 02.0	-0.3
DBBC	Dabeiba	22.30	351	eP	P	20 39 08.8	+3.0
ZARC	Zaragoza, Cauc	22.61	355	eP	P	20 39 08.8	-0.2
ZARC	Zaragoza, Cauc	22.61	355	P	P	20 39 06.6	-2.4
ITAB	Concordia	22.74	125	eP	P	20 39 11.0	+0.9
ITAB	Concordia	22.74	125	P	P	20 39 05.9	-4.3
ITAB				IAmb	IAmb	20 39 12.3	
	comp=Z,47nm,1.0s						
CPSB	Cacapava Do Su	23.43	134	eP	P	20 39 17.5	+0.8
LC01	Cunco	23.64	178	P	P	20 39 14.2	-4.3
IPMB	Ipameri, GO	23.83	100	eP	P	20 39 20.6	+0.2
SMLC	San Martn de	23.86	357	eP	P	20 39 19.3	-1.4
BB19B	Bebedouro	23.88	108	eP	P	20 39 22.1	+1.2
BDFB	Brasilia	24.00	94	P	P	20 39 22.9	+0.8
	comp=Z,15nm,0.7s,baz=262,slow=13,SNR=20						
BDFB	Brasilia	24.00	94	P	P	20 39 17.2	-4.9
SDV	Santo Domingo	24.02	6	eP	P	20 39 23.3	+1.0
PEXB	Peixe	24.11	86	eP	P	20 39 23.3	+0.4
PLTB	Pedras Altas	24.14	136	eP	P	20 39 24.1	+1.0
PLTB	Pedras Altas	24.14	136	P	P	20 39 18.9	-4.1
PLTB				IAmb	IAmb	20 39 25.1	
	comp=Z,30nm,1.0s						
LR03	Panguipulli	24.36	179	P	P	20 39 22.2	-2.7
PRPB	Parauapebas	24.38	71	eP	P	20 39 25.1	-0.2
BAUV	El Baul	24.45	12	P	P	20 39 25.0	-1.0
BAUV				IAmb	IAmb	20 39 28.9	
	comp=Z,58nm,0.8s						
TIJ01	Guaruva-PR	24.55	118	eP	P	20 39 28.9	+1.8
SJCC	San Jacinto, C	25.02	355	eP	P	20 39 31.7	+0.4
SJCC	San Jacinto, C	25.02	355	P	P	20 39 29.7	-1.5
SJCC				IAmb	IAmb	20 39 36.1	
	comp=Z,31nm,1.0s						
RCLB	Rio Claro- Sao	25.05	111	eP	P	20 39 32.6	+1.0
MCPB	Macapa, AP	25.33	56	eP	P	20 39 35.0	+1.0
SPB	Sao Paulo	25.41	113	eP	P	20 39 37.7	+3.0
SPB	Sao Paulo	25.41	113	P	P	20 39 30.7	-4.0
SPB				IAmb	IAmb	20 39 39.5	
	comp=Z,57nm,0.8s						
SMTB	Santa Maria do	25.54	79	eP	P	20 39 37.4	+1.5
PLCA	Paso Flores	25.54	176	P	P	20 39 38.4	+2.6
	comp=Z,33nm,1.0s,baz=349,slow=9.9,SNR=20						
PLCA				LR	LR	20 50 06.6	
	comp=Z,95nm,18.1s,baz=6.0,slow=37						
PLCA	Paso Flores	25.54	176	eP	P	20 39 38.4	+2.6
PLCA	Paso Flores	25.54	176	P	P	20 39 32.1	-3.7
PLCA				IAmb	IAmb	20 39 39.5	
	comp=Z,52nm,1.1s						
LL04	Puerto Octay	25.63	179	P	P	20 39 33.5	-3.0
LL04				IAmb	IAmb	20 39 39.5	
	comp=Z,56nm,1.0s						
VAO	Valinhos	25.69	112	eP	P	20 39 40.0	+2.6
PET01	Itanhaem-SP	25.73	115	eP	P	20 39 40.8	+3.1
PARB	Paraibuna	26.97	112	eP	P	20 39 50.7	+1.8
SDBA	SAO DESIDERIO	27.33	88	eP	P	20 39 51.9	-0.3
BSCB	Bom Sucesso	27.34	106	eP	P	20 39 54.0	+1.8
TMAB	Tom-Au,PA,Br	27.58	65	eP	P	20 39 55.5	+1.2
JANB	Januaria	27.60	94	eP	P	20 39 54.0	-0.6
MC01	Montes Claros	27.89	97	eP	P	20 39 58.7	+1.6
LL02	Futaleuf	27.93	178	P	P	20 39 57.1	+0.1
DIAM	Diamantina, MG	28.16	100	eP	P	20 40 00.7	+1.1
MAN01	Angra dos Reis	28.37	110	eP	P	20 40 03.0	+1.7
VAS01	Vassouras-RJ	28.75	109	eP	P	20 40 06.1	+1.4
DUB01	Friburgo-RJ	29.70	108	eP	P	20 40 15.0	+1.9
CAM01	Campos-RJ	30.32	107	eP	P	20 40 20.2	+1.7
SJMB	Sao Joao De Ma	30.53	101	eP	P	20 40 21.9	+1.5
BSFB	Barra de Sao F	30.85	101	eP	P	20 40 24.6	+1.3
ROSB	Rosrio	30.88	70	eP	P	20 40 23.8	+0.2
GUA01	Guaratinga, BA	31.85	97	eP	P	20 40 33.6	+1.5
NBPN	Ponto Novo - B	32.14	86	eP	P	20 40 34.9	+0.2
GDU01	Guandu, BA	32.30	92	eP	P	20 40 37.7	+1.7
NBIT	Itapeh - BA	32.31	94	eP	P	20 40 38.3	+2.2
NBPS	Pedro II - PI	32.76	74	eP	P	20 40 41.5	+1.3
CELP	Cerrillos	33.63	11	P	P	20 40 45.4	-2.1
CELP				IAmb	IAmb	20 40 49.3	
	comp=Z,41nm,1.2s						
PDPR	Patillas Dam,	33.69	12	P	P	20 40 46.9	-1.0
PDPR				IAmb	IAmb	20 41 21.4	
	comp=Z,39nm,1.2s						
MTP	Monte Pirata	33.86	13	P	P	20 40 47.4	-2.0
MTP				IAmb	IAmb	20 41 02.9	
	comp=Z,37nm,1.1s						
SEUS	St. Eustatius	33.92	17	P	P	20 40 49.8	-0.1
NBLA	Lagarto - SE	34.44	87	eP	P	20 40 56.1	+1.5
CMIG	Matias Romero	38.71	325	P	P	20 41 32.6	+1.8
	comp=Z,2.5nm,0.8s,baz=162,slow=6.0,SNR=5.8						
S57A	Dark Hollow, R	52.97	354	P	P	20 43 22.9	+0.4
S57A				pP	pP	20 43 49.1	+0.7
TXAR	Lajitas Array	53.30	326	P	P	20 43 27.1	+1.8
	comp=Z,0.8nm,0.7s,baz=150,slow=9.3,SNR=11						
TXAR	Lajitas Array	53.30	326	P	P	20 43 26.5	+1.2
LCAR	Lake Charles	53.82	342	P	P	20 43 27.6	-1.2
LCAR					pP	20 43 53.5	-1.2
LCAR				IAmb	IAmb	20 43 55.9	
	comp=Z,16nm,1.4s						
W39A	Magazine	53.88	339	P	P	20 43 28.6	-0.6
W39A					pP	20 43 54.8	-0.4
W39A				IAmb	IAmb	20 43 59.6	
	comp=Z,8.1nm,1.0s						
PBMO	Poplar Bluff	54.26	343	P	P	20 43 31.1	-0.9
PBMO					pP	20 43 57.3	-0.7
PBMO				IAmb	IAmb	20 43 59.8	
	comp=Z,9.4nm,0.9s						
P57A	Homestead Farm	54.59	355	P	P	20 43 33.9	-0.4
P57A				IAmb	IAmb	20 44 03.7	
	comp=Z,30nm,1.4s						
U40A	Yellville	54.62	340	P	P	20 43 34.1	-0.5
U40A					pP	20 43 58.4	-2.2
U40A				IAmb	IAmb	20 44 02.3	
	comp=Z,22nm,1.5s						
HHAR	Hobbs	54.91	339	P	P	20 43 36.5	-0.3
HHAR					pP	20 43 60.0	-2.8
HHAR				IAmb	IAmb	20 44 05.3	
	comp=Z,30nm,1.6s						
MGMO	Mountain Grove	55.16	341	P	P	20 43 37.3	-1.2
MGMO					pP	20 44 02.8	-1.8
MGMO				IAmb	IAmb	20 44 06.2	
	comp=Z,22nm,1.2s						
FVM	French Village	55.39	343	P	P	20 43 39.5	-0.6
FVM				IAmb	IAmb	20 44 07.6	
	comp=Z,18nm,1.2s						
WMOK	Wichita Mounta	55.40	334	P	P	20 43 40.7	+0.4
SSPA	Standing Stone	55.73	355	P	P	20 43 41.6	-0.9
SSPA					pP	20 44 07.8	-0.8
Q44A	Meyer Farm, Va	55.88	345	P	P	20 43 43.0	-0.6
Q44A				pP	pP	20 44 08.7	-0.9
S39A	Bolivar	55.99	341	P	P	20 43 43.4	-1.0
S39A				pP	pP	20 44 08.3	-2.1
S39A				IAmb	IAmb	20 44 12.1	
	comp=Z,22nm,1.4s						
R40A	Maddies Statio	56.21	342	P	P	20 43 45.1	-0.9
R40A				pP	pP	20 44 10.3	-1.8
R40A				IAmb	IAmb	20 44 14.1	
	comp=Z,23nm,1.4s						
L56A	Greenwood	57.20	356	P	P	20 43 51.8	-1.2
L56A					pP	20 44 19.0	-0.1
P40A	Paris	57.29	342	P	P	20 43 52.9	-0.7
P40A					pP	20 44 17.9	-1.9
P40A				IAmb	IAmb	20 44 21.0	
	comp=Z,20nm,1.4s						
WVNY	West Valley, N	57.54	355	P	P	20 43 54.6	-0.7
WVNY					pP	20 44 21.0	-0.5
MMNY	Mt. Morris Dam	57.81	356	P	P	20 43 56.9	-0.3
MMNY					pP	20 44 20.5	-2.9
L40A	Anamosa	59.41	344	P	P	20 44 08.7	+0.4
L40A					pP	20 44 34.3	-0.3
T25A	Trinidad	59.91	331	P	P	20 44 12.6	+0.4
T25A				IAmb	IAmb	20 44 15.5	
	comp=Z,6.3nm,0.8s						
SADO	Sadowa	59.94	355	P	P	20 44 11.7	-0.2
	comp=Z,5.2nm,0.9s,baz=167,slow=1.4,SNR=4.0						
SADO	Sadowa	59.94	355	IAmb	IAmb	20 44 39.7	
	comp=Z,19nm,1.2s						
G62A	West of Eustis	60.15	2		P	20 44 12.5	-0.8
G62A				pP	pP	20 44 41.0	+1.1
SDCO	Great Sand Dun	60.91	331	P	P	20 44 19.5	+0.5
TRQ	Mont Tremblant	61.14	359	P	P	20 44 21.2	+1.1
TRQ				IAmb	IAmb	20 44 49.1	
	comp=Z,22nm,1.3s						
X16A	Lo Mia Camp, P	61.45	324	P	P	20 44 21.6	-1.0
D62A	Allapoint, All	62.08	3	P	P	20 44 26.0	-0.2
ECSD	EROS Data Cent	62.52	341	P	P	20 44 29.4	+0.1
ECSD				pP	pP	20 44 55.3	-0.6
ECSD				IAmb	IAmb	20 44 57.6	
	comp=Z,28nm,1.4s						
VLDQ	Val d'Or	63.14	357	P	P	20 44 32.1	-1.2
VLDQ					pP	20 44 59.5	-0.4
VLDQ				IAmb	IAmb	20 45 02.1	
	comp=Z,20nm,1.4s						
F36A	Milaca	63.56	344	P	P	20 44 36.3	+0.2
F36A				IAmb	IAmb	20 45 05.0	
	comp=Z,21nm,1.2s						
CCUT	Cedar City	64.79	325		P	20 44 45.5	+0.8
MSU	Marysvale	64.85	327	P	P	20 44 45.7	+0.7
MVU	Marysvale	64.86	327	P	P	20 44 45.8	+0.7
MVU				IAmb	IAmb	20 44 49.3	
	comp=Z,29nm,1.1s						
AGMN	Agassiz Nation	66.43	343	P	P	20 44 54.1	-0.6
AGMN				pP	pP	20 45 21.5	0.0
AGMN				IAmb	IAmb	20 45 23.3	
	comp=Z,16nm,1.0s						
PDAR	Pinedale Array	66.78	331	P	P	20 44 58.2	+0.9
	comp=Z,0.5nm,0.6s,baz=123,slow=6.4,SNR=5.6						
PDAR	Pinedale Array	66.78	331	P	P	20 44 57.1	-0.3
PDAR				pP	pP	20 45 23.1	-1.0
VNA3	Neumayer Olymp	67.23	162	P	P	20 45 02.3	+2.7
VNA1	Neumayer--Stat	67.47	161	P	P	20 45 04.2	+3.2
VNA2	Neumayer--Watz	67.83	161	P	P	20 45 06.0	+2.7
	baz=285,slow=7.2						
NVAR	Mina Array Bea	68.20	323	P	P	20 45 08.9	+2.5
	comp=Z,0.3nm,0.3s,baz=142,slow=7.5,SNR=4.4						
ULM	Lac du Bonnet	68.22	344	P	P	20 45 06.5	+0.5
	comp=Z,2.6nm,0.6s,baz=128,slow=6.4,SNR=3.2						
ULM	Lac du Bonnet	68.22	344	P	P	20 45 05.3	-0.6
ULM				pP	PcP	20 45 32.0	+1.0
ULM				IAmb	IAmb	20 45 34.3	
	comp=Z,21nm,1.2s						
YHH	Holmes Hill	68.93	332	P	P	20 45 11.1	+0.2
YHH				pP	pP	20 45 37.5	-0.4
SNAA	Sanae	69.45	161	P	P	20 45 16.1	+2.6
SNAA	Sanae	69.45	161	P	P	20 45 13.6	+0.1
SCHQ	Schefferville	69.93	4	P	P	20 45 16.8	+0.3
	comp=Z,5.2nm,0.9s,baz=220,slow=6.3,SNR=3.6						
MFID	Camas Ranch	70.31	328	P	P	20 45 18.8	-0.4
MFID				pP	pP	20 45 47.2	+1.0
MFID				IAmb	IAmb	20 45 50.8	
	comp=Z,18nm,1.4s						
LIC	Lamto	70.53	78	eP	P	20 45 20.2	-0.8
	comp=Z,19nm,0.7s						
TIC	Toumodi	70.67	77	eP	P	20 45 21.0	-0.8
DBIC	Dimbokro	70.83	77	P	P	20 45 22.2	-0.6
	comp=Z,5.6nm,1.0s,baz=261,slow=7.4,SNR=5.1						
DBIC	Dimbokro	70.83	77	P	P	20 45 21.2	-1.6
DBIC				IAmb	IAmb	20 45 33.0	
	comp=Z,19nm,1.5s						
KIC	Kosan Boka	70.84	78	eP	P	20 45 22.4	-0.5
	comp=Z,13nm,0.5s						
PPT	Papeete	73.11	256	LR	LR	21 09 12.3	
	comp=Z,39nm,20.2s,baz=52,slow=29						
KOWA	Kowa	74.22	70	P	P	20 45 42.8	0.0
	comp=Z,2.3nm,0.5s,baz=243,slow=4.1,SNR=12						
KOWA	Kowa	74.22	70	P	P	20 45 41.7	-1.1
KOWA				IAmb	IAmb	20 45 44.2	
	comp=Z,24nm,1.6s						
QSPA	South Pole Qui	74.97	180	P	P	20 45 46.6	+0.1
QSPA				IAmb	IAmb	20 45 50.8	
	comp=Z,40nm,1.2s						
EDM	Edmonton	76.47	336	P	P	20 45 55.7	+0.6
EDM				IAmb	IAmb	20 45 57.4	
	comp=Z,16nm,1.0s						
EDM					pP	20 46 22.4	-0.1
FRB	Frobisher Bay	78.75	2	P	P	20 46 08.3	+0.9
	comp=Z,7.6nm,1.0s,baz=173,slow=4.2,SNR=7.7						
TORD	Torodi Ar. Bea	79.00	73	P	P	20 46 09.8	0.0
	comp=Z,16nm,0.8s,baz=259,slow=5.3,SNR=86						
TORD	Torodi Ar. Bea	79.00	73	P	P	20 46 09.1	-0.8
TORD				IAmb	IAmb	20 46 10.9	
	comp=Z,11nm,0.9s						
MORF	Marmelete	79.79	47	eP	P	20 46 15.8	+2.0
MORF				IAmb	IAmb	20 46 17.1	
	comp=Z,18nm,0.9s						
MORF	Marmelete	79.79	47	eP	P	20 46 15.9	+2.2
	comp=Z,64nm,1.7s						
PTEO	Sao Teotonio	79.85	47	eP	P	20 46 15.8	+1.8
	comp=Z,57nm,1.4s						
PNCL	Nicolau / Gran	80.25	46	eP	P	20 46 18.4	+2.3
	comp=Z,27nm,1.9s						
PBDV	Barranco-do-Ve	80.27	47	eP	P	20 46 17.4	+1.1
	comp=Z,76nm,1.9s						
MESJ	Messejana	80.34	47	eP	P	20 46 18.7	+2.1
MESJ				IAmb	IAmb	20 46 20.6	
	comp=Z,52nm,1.6s						
MESJ	Messejana	80.34	47	eP	P	20 46 19.2	+2.6
	comp=Z,40nm,1.4s						
PCVE	Castro Verde	80.37	47	eP	P	20 46 19.6	+2.8
	comp=Z,53nm,1.5s						
PBEJ	Beja	80.67	47	eP	P	20 46 20.4	+2.0
	comp=Z,25nm,1.5s						
PSBE	So Bento	80.73	45	eP	P	20 46 21.1	+2.4
	comp=Z,54nm,2.3s						
MDT	Midelt	80.78	52	P	P	20 46 20.1	+0.8
	comp=Z,7.2nm,1.1s,baz=281,slow=4.9,SNR=9.5						
MDT				LR	LR	21 20 50.7	
	comp=Z,50nm,19.3s,baz=303,slow=35						
EVO	Evora	80.81	46	eP	P	20 46 20.8	+1.7
	comp=Z,21nm,1.8s						
PMTG	Montargil	80.91	45	eP	P	20 46 21.7	+2.1
	comp=Z,21nm,1.3s						
PESTR	Estremoz	81.25	46	eP	P	20 46 24.3	+2.8
	comp=Z,19nm,1.4s						
VNDA	Vanda	82.36	190	P	P	20 46 30.3	+3.6
	comp=Z,5.7nm,0.9s,baz=163,slow=4.4,SNR=9.7						
VNDA	Vanda	82.36	190	P	P	20 46 28.6	+1.9
SYO	Syowa Base	83.70	160	⇑ePcP	PcP	20 46 36.5	-1.1
SYO	Syowa Base	83.70	160	⇑epP	pP	20 46 57.0	-4.5
PAB	San Pablo	83.81	46	P	P	20 46 35.4	+0.6
YKA	Yellowknife Ar	84.02	342	P	P	20 46 36.8	+1.5
	comp=Z,7.3nm,0.9s,baz=136,slow=5.1,SNR=71						
YKA	Yellowknife Ar	84.02	342	P	P	20 46 35.6	+0.4
ESDC	Sonseca Array	84.14	46	P	P	20 46 38.2	+1.8
	comp=Z,16nm,0.9s,baz=253,slow=5.4,SNR=59						
ESDC	Sonseca Array	84.14	46	P	P	20 46 37.3	+0.8
ESDC				IAmb	IAmb	20 46 39.3	
	comp=Z,14nm,0.9s						
ESBB	Sonseca Array	84.14	46	P	P	20 46 37.7	+1.2
ESBB				IAmb	IAmb	20 46 39.3	
	comp=Z,17nm,0.8s						
TSUM	Tsumeb	85.57	109	P	P	20 46 42.1	-2.1
TSUM				IAmb	IAmb	20 46 47.2	
	comp=Z,11nm,0.9s						
DLBC	Dease Lake	86.89	334	P	P	20 46 52.0	+2.3
	comp=Z,6.9nm,0.9s,baz=130,slow=5.0,SNR=12						
DLBC	Dease Lake	86.89	334	P	P	20 46 51.0	+1.3
DLBC				IAmb	IAmb	20 46 53.5	
	comp=Z,9.7nm,0.9s						
SKAG	Skagway	89.74	333	P	P	20 47 05.4	+2.4
BOSA	Boshof	89.80	120	LR	LR	21 25 26.4	
	comp=Z,37nm,21.7s,baz=206,slow=34						
SUMG	Summit	90.48	10	iP	P	20 47 08.0	+1.3
SUMG	Summit	90.48	10	P	P	20 47 08.2	+1.4
MAW	Mawson	91.42	164	P	P	20 47 13.2	+2.3
	comp=Z,9.9nm,1.1s,baz=220,slow=13,SNR=3.8						
A36M	Sachs Harbour	93.66	346	P	P	20 47 21.4	+0.5
DAWY	Dawson	93.69	336	P	P	20 47 21.2	-0.1
DAWY				IAmb	IAmb	20 47 23.8	
	comp=Z,2.7nm,0.9s						
INK	Inuvik	93.76	341	P	P	20 47 22.3	+0.8
	comp=Z,3.1nm,1.0s,baz=114,slow=6.1,SNR=5.5						
INK	Inuvik	93.76	341	P	P	20 47 22.7	+1.2
INK				IAmb	IAmb	20 47 25.1	

	comp=Z,6.4nm,1.3s						
L27K	**Beaver Creek,**	**94.22**	**335**	P	**P**	**20 47 25.1**	**+1.3**
L27K				IAmb	IAmb	20 47 26.4	
	comp=Z,4.9nm,1.1s						
EGAK	**Eagle**	**94.70**	**336**	P	**P**	**20 47 26.5**	**+0.6**
EGAK				IAmb	IAmb	20 47 28.2	
	comp=Z,6.1nm,1.1s						
DAVOX	**Davos/Dischmat**	**96.07**	**43**	P	**P**	**20 47 33.9**	**+1.1**
	comp=Z,3.2nm,0.8s,baz=297,slow=4.5,SNR=6.6						
DAVA	**Damuels**	**96.21**	**43**	*e*P	**P**	**20 47 35.0**	**+1.6**
	comp=Z,3.4nm,0.7s						
ILAR	**Eielson Array**	**96.95**	**335**	P	**P**	**20 47 37.5**	**+1.4**
	comp=Z,1.0nm,0.9s,baz=151,slow=3.5,SNR=8.1						
MOTA	**Moosalm**	**97.03**	**43**	*e*P	**P**	**20 47 38.3**	**+1.2**
	comp=Z,5.9nm,1.0s						
SQTA	**Sankt Quirin**	**97.07**	**43**	*e*P	**P**	**20 47 38.1**	**+0.8**
	comp=Z,8.6nm,1.3s						
WTTA	**Wattenberg**	**97.36**	**43**	*e*P	Pdif	20 47 40.2	+1.5
	comp=Z,5.3nm,0.8s						
MDM	**Murphy Dome**	**97.55**	**335**	P	Pdif	20 47 39.9	+0.9
ABTA	**Abfaltersbach**	**97.82**	**44**	*e*P	Pdif	20 47 41.8	+1.2
	comp=Z,4.3nm,1.0s						
GERES	**GERESS Array B**	**99.08**	**42**	P	Pdif	20 47 46.5	+0.4
	comp=Z,0.7nm,0.7s,baz=250,slow=2.7,SNR=6.5						
CLL	**Collm**	**99.17**	**39**	*e*Pdif	**Pdif**	**20 47 47.0**	**+0.6**
KBZ	**Khabaz**	**118.95**	**48**	PKP	**PKiKP**	**20 52 55.0**	**+1.7**
	comp=Z,3.2nm,0.8s,baz=294,slow=3.3,SNR=7.3						
ASAR	**Alice Springs**	**133.33**	**215**	PKP	**PKiKP**	**20 53 23.3**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=129,slow=2.0,SNR=20						
WRA	**Warramunga Arr**	**135.99**	**218**	PKP	**PKiKP**	**20 53 28.5**	**+0.3**
	comp=Z,6.5nm,0.9s,baz=149,slow=1.9,SNR=24						
ZALV	**Zalesovo Beam**	**137.57**	**19**	PKhKP	PKPpre	20 53 25.6	
	comp=Z,1.0nm,0.7s,baz=119,slow=1.9,SNR=3.7						
ZALV				PKP	**PKiKP**	**20 53 30.6**	**+0.2**
	comp=Z,9.6nm,0.9s,baz=320,slow=2.1,SNR=23						
ZALV	**Zalesovo Beam**	**137.57**	**19**		**PKPdf**	**20 53 29.3**	**+1.0**
MKAR	**Makanchi Array**	**142.31**	**28**	PKhKP	PKPpre	20 53 35.4	
	comp=Z,1.1nm,0.7s,baz=323,slow=3.2,SNR=11						
USRK	**Ussuriysk Ar.**	**144.17**	**329**	PKP	**PKPdf**	**20 53 40.9**	**+0.3**
	comp=Z,6.6nm,0.9s,baz=113,slow=1.9,SNR=8.8						
MJAR	**Matsushiro Arr**	**145.08**	**313**	PKPbc	**PKPdf**	**20 53 43.5**	**+1.1**
	comp=Z,15nm,1.0s,baz=43,slow=0.9,SNR=23						
MJAR	**Matsushiro Arr**	**145.08**	**313**		**PKPdf**	**20 53 43.8**	**+1.4**
SONM	**Songino Array**	**147.44**	**1**	PKPbc	**PKPbc**	**20 53 48.9**	**+0.1**
	comp=Z,7.1nm,0.8s,baz=316,slow=1.8,SNR=35						
KSRS	**Korea Array**	**151.14**	**324**	PKP	**PKPdf**	**20 53 54.5**	**+2.3**
	comp=Z,3.2nm,0.9s,baz=91,slow=0.6,SNR=15						
KSRS				PKPbc	**PKiKP**	**20 54 00.5**	**+1.8**
	comp=Z,16nm,0.9s,baz=14,slow=1.6,SNR=43						
CMAR	**Chiang Mai Arr**	**171.55**	**66**	PKPab	**PKPab**	**20 55 36.7**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=291,slow=6.2,SNR=11						

JMA 22 20:37:39.1±0.2**, 24°.86N**×**123°.46E, h19^{km}, M1.6, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.57**	**226**	P	Pb	20 37 49.9	-0.5
YOJ				S	Sb	20 37 57.2	-0.9
IRIF	**Iriomote-Funau**	**0.58**	**155**	P	Pb	20 37 50.2	-0.3
IRIF				S	Sg	20 37 58.5	+0.1
JYNG	**Yonagunijimaku**	**0.62**	**229**	P	Pb	20 37 51.3	+0.1
JYNG				S	Sb	20 37 59.2	-0.3
JIJ	**Ishigaki jima**	**0.79**	**128**	P	Pb	20 37 54.0	-0.3
JIJ				S	Sb	20 38 03.4	-1.3
JKRS	**Kuro-shima**	**0.80**	**141**	P	Pb	20 37 54.2	-0.1
JKRS				S	Sb	20 38 04.5	-0.2
JISG	**Ishigakijimahi**	**0.82**	**109**	P	Pb	20 37 54.3	-0.4
JISG				S	Sb	20 38 04.6	-0.8
HATJ	**Hateruma jima**	**0.86**	**158**	*e*S	Sb	20 38 06.2	-0.3

TAP 22 20:38:32.5, 24°.30N×**121°.46E, h13^{km}, ML1.0, A, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.09**	**168**	P	Pg	20 38 36.0	+0.6
	baz=168						
ETLH				*e*S	Sg	20 38 37.4	-0.2
	baz=168						
NNSB	**Datong**	**0.15**	**331**	*e*P	Pb	20 38 37.3	+0.1
	baz=331						
NNSB				S	Sb	20 38 39.7	-0.6
	baz=331						
ETL	**Fush Village**	**0.20**	**133**	*e*S	Sg	20 38 40.6	+0.6
	baz=133						
FUSS	**Fushou**	**0.20**	**256**	*e*P	Pb	20 38 38.5	+0.3
	baz=255						
FUSS				*e*S	Sb	20 38 41.3	-0.7
	baz=255						
WHF	**Hehuan Shan**	**0.24**	**229**	*e*P	Pg	20 38 38.0	+0.3
	baz=227						
WHF				*e*S	Sb	20 38 42.3	-0.8
	baz=227						
TWD	**Chiawan**	**0.25**	**150**	*e*P	Pb	20 38 38.6	-0.3
	baz=148						
TWT	**Tachien**	**0.26**	**260**	*e*S	Sb	20 38 43.6	-0.1
	baz=259						
TDCB	**Techi**	**0.28**	**261**	*e*P	Pg	20 38 38.9	+0.5
	baz=260						
TDCB				*e*S	Sb	20 38 43.6	-0.5
	baz=260						
ENA	**Nanau**	**0.29**	**63**	*e*P	Pb	20 38 39.5	+0.1
	baz=64						
EWUT	**Wuta**	**0.32**	**63**	*e*S	Sb	20 38 44.9	-0.3
	baz=63						
ENTT	**Nioudou**	**0.35**	**16**	*e*P	Pb	20 38 41.0	+0.4
	baz=16						
ENTT				*e*S	Sb	20 38 46.1	0.0
	baz=16						
CHGB	**Renai**	**0.35**	**228**	*e*P	Pb	20 38 40.8	+0.1
	baz=227						
CHGB				*e*S	Sb	20 38 45.8	-0.5
	baz=227						
NDS	**Dongshan**	**0.41**	**35**	*e*P	Pb	20 38 41.4	-0.2
	baz=34						
NDS				*e*S	Sb	20 38 47.3	-0.3
	baz=34						
WHP	**Taichung City**	**0.47**	**268**	*e*P	Pb	20 38 42.7	+0.1
	baz=267						
WHP				*e*S	Sb	20 38 50.1	+0.5
	baz=267						
NWLT	**Wulai**	**0.48**	**5**	*e*S	Sb	20 38 49.9	+0.1
	baz=4.0						

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*IDC **22** 21:01:48.7±2.0, 43°.63N×105°.48W, h0^{km}, mb1 3.4/3, mb1mx3.2/38, mbtmp3.2/3, ML2.8/2, Error ellipse: s-maj=47.7km s-min=9.2km az=149.0*

*NEIC **22** 21:01:49.5±1.1, 43°.84N±0°.04×105°.33W±0°.06, h0^{km}±2^{km}, ML3.0/42, Error ellipse: s-maj=8.5km s-min=5.4km az=308.0*

ISC 22 21:01:49.4±1.0**, 43°.82N**±0°.05×**105°.37W**±0°.06**, h0^{km}, n37, σ0^{s}80**/38**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.01**	**72**	Pg	**Pg**	**21 02 08.7**	**0.0**
K22A	**Casper**	**1.44**	**216**	Pn	**Pn**	**21 02 15.2**	**-1.7**
K22A				IAML		21 02 39.3	
	comp=E,232nm,0.3s						
K22A				IAML		21 02 40.0	
	comp=N,329nm,0.3s						
PHWY	**Pilot Hill**	**2.52**	**182**	Pn	**Pn**	**21 02 32.1**	**+0.3**
PHWY				IAML		21 03 08.2	
	comp=N,64nm,0.3s						
PHWY				IAML		21 03 09.0	
	comp=N,52nm,0.3s						
RWWY	**Rawlins**	**2.52**	**213**	Pn	**Pn**	**21 02 32.0**	**+0.2**
RWWY				IAML		21 03 07.5	
	comp=N,78nm,0.7s						
RWWY				IAML		21 03 13.6	
	comp=N,92nm,0.4s						
LAO	**LASA Array**	**2.93**	**348**		**Pn**	**21 02 35.7**	**-1.6**
RLMT	**Red Lodge**	**3.08**	**296**	Pn	**Pn**	**21 02 39.0**	**-0.4**
RLMT				IAML		21 03 37.5	
	comp=N,46nm,0.4s						
RLMT				IAML		21 03 37.6	
	comp=N,26nm,0.6s						
BW06	**Boulder Array**	**3.23**	**252**	Pn	**Pn**	**21 02 42.4**	**+0.8**
BW06				IAML		21 03 32.4	
	comp=N,26nm,0.3s						
BW06				IAML		21 03 34.6	
	comp=N,30nm,0.4s						
PD31	**Pinedale Array**	**3.23**	**252**	Pn	**Pn**	**21 02 41.9**	**+0.3**
PDAR	**Pinedale Array**	**3.23**	**252**	Pn	**Pn**	**21 02 42.4**	**+0.8**
	comp=N,9.3nm,0.3s,baz=72,slow=16,SNR=39						
PDAR				Pg	**Pb**	**21 02 47.5**	**-0.2**
	comp=N,9.3nm,0.3s,baz=75,slow=35,SNR=20						
PDAR				Lg	Lg	21 03 26.5	
	comp=N,7.9nm,0.3s,baz=74,slow=31,SNR=3.9						
PDAR	**Pinedale Array**	**3.23**	**252**		**Pn**	**21 02 41.1**	**-0.5**
YMP	**Mirror Lake Pl**	**3.56**	**287**	Pn	**Pn**	**21 02 46.0**	**-0.1**
GCMT	**Greycliff**	**3.64**	**304**	Pn	**Pn**	**21 02 48.0**	**+0.9**
OGNE	**Ogallala**	**3.79**	**138**		**Pn**	**21 02 49.3**	**+0.2**
H17A	**Grant Village**	**3.79**	**281**	Pn	**Pn**	**21 02 49.5**	**+0.2**
H17A				IAML		21 03 54.3	
	comp=N,18nm,1.3s						
ISCO	**Idaho Springs**	**4.02**	**183**		**Pn**	**21 02 52.7**	**+0.2**
YHH	**Holmes Hill**	**4.05**	**286**		**Pn**	**21 02 53.0**	**+0.1**
YHH				IAML		21 04 05.0	
	comp=N,15nm,3.0s						
FXWY	**Fox Creek**	**4.10**	**269**		**Pn**	**21 02 55.2**	**+1.6**
AHID	**Auburn Hatcher**	**4.31**	**258**		**Pn**	**21 02 57.7**	**+1.3**
AHID				IAML		21 04 22.5	
	comp=N,19nm,1.6s						
AHID				IAML		21 05 07.1	
	comp=N,17nm,5.0s						
ECR	**Eagle Creek**	**4.44**	**262**	Pn	**Pn**	**21 02 58.8**	**+0.7**
QLMT	**Earthquake Lak**	**4.46**	**285**	Pn	**Pn**	**21 03 00.0**	**+1.5**
RDMU	**Red Mountain**	**4.50**	**225**		**Pn**	**21 03 00.2**	**+1.2**
RDMU				IAML		21 04 17.4	
	comp=N,14nm,0.9s						
RDMU				IAML		21 04 26.1	
	comp=E,15nm,1.3s						
DGMT	**Dagmar**	**4.72**	**10**		**Pn**	**21 03 01.1**	**-0.7**
BOZ	**Bozeman (W)**	**4.80**	**294**	Pn	**Pn**	**21 03 01.6**	**-1.5**
BOZ				IAML		21 04 25.2	
	comp=E,8.7nm,1.2s						
BOZ				IAML		21 04 26.4	
	comp=E,12nm,0.8s						
HWUT	**Hardware Ranch**	**5.07**	**246**		**Pn**	**21 03 06.8**	**0.0**
EGMT	**Eagleton**	**5.20**	**326**	Pn	**Pn**	**21 03 09.1**	**+0.6**
KSCO	**Kaye Shedlock'**	**5.23**	**156**		**Pn**	**21 03 08.6**	**-0.3**
HRY	**Holter Researc**	**5.40**	**305**	Pn	**Pn**	**21 03 11.9**	**+0.6**
LRM	**Limekiln Ridge**	**5.42**	**294**	Pn	**Pn**	**21 03 11.4**	**-0.2**
P18A	**Preston Nutter**	**5.55**	**223**		**Pn**	**21 03 13.5**	**0.0**
HVU	**Hansel Valley**	**5.82**	**252**	Pn	**Pn**	**21 03 17.9**	**+0.9**
P17A	**Butcher Ranch,**	**5.92**	**225**	Pn	**Pn**	**21 03 19.0**	**+0.5**
SDCO	**Great Sand Dun**	**6.07**	**181**	Pn	**Pn**	**21 03 20.8**	**+0.2**
SRU	**San Rafael Swe**	**6.09**	**221**	Pn	**Pn**	**21 03 21.3**	**+0.5**
ECSD	**EROS Data Cent**	**6.34**	**88**	Pn	**Pn**	**21 03 23.4**	**-0.7**
BGU	**Big Grassy Mou**	**6.37**	**246**	Pn	**Pn**	**21 03 24.7**	**+0.1**
ULM	**Lac du Bonnet**	**9.13**	**42**	Pn	**Pn**	**21 04 02.5**	**+0.3**
	comp=E,1.0nm,0.3s,baz=231,slow=11,SNR=4.9						
ULM				Pg		21 04 36.6	
	comp=E,0.8nm,0.3s,baz=234,slow=17,SNR=3.3						
ULM				Lg	Lg	21 06 33.9	
	comp=E,0.3nm,0.3s,baz=140,slow=19,SNR=1.5						
YKA	**Yellowknife Ar**	**19.47**	**347**	P	**Pn**	**21 06 19.2**	**+0.6**
	comp=E,0.1nm,0.3s,baz=169,slow=12,SNR=4.2						

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*IDC **22** 21:02:43.3±10.0, 53°.38N×171°.62W, h0^{km}, mb3.5/4, mb1 3.7/5, mb1mx3.4/45, mbtmp3.4/5, ML3.1/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/36, Error ellipse: s-maj=196.4km s-min=52.4km az=86.0*

*AEIC **22** 21:03:09±2.1, 53°.4N±0°.2×167°.8W±0°.2, h97^{km}±7^{km}, ML3.4, mb3.8/20(NEIC), ML3.6/6(NEIC), Error ellipse: s-maj=31.2km s-min=5.6km az=150.0*

*NEIC **22** 21:03:09.7±1.8, 53°.41N±0°.09×167°.8W±0°.2, h105^{km}±8^{km}, Error ellipse: s-maj=18.8km s-min=1.5km az=135.0*

ISC 22 21:03:09.1±1.1**, 53°.4N**±0°.2×**167°.9W**±0°.1**, h110^{km}**±9^{km}**, n80, σ1^{s}11**/72**, mb3.4**/4**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**0.04**	**304**		**Pn**	**21 03 24.0**	**-0.2**
OKTU	**Okmok Mt. Tuli**	**0.12**	**269**		**Pn**	**21 03 24.1**	**-0.2**
OKNC	**Okmok New Cone**	**0.18**	**293**		**Pn**	**21 03 24.3**	**-0.1**
OKCE	**Okmok Cone E**	**0.19**	**282**		**Pn**	**21 03 24.5**	**0.0**
OKSP	**Okmok Steeple**	**0.30**	**243**		**Pn**	**21 03 24.8**	**-0.1**
MAPS	**Pakushin South**	**0.69**	**52**		**Pn**	**21 03 27.1**	**-0.2**
NIKH	**Nikolski High**	**0.73**	**236**		**Pn**	**21 03 28.0**	**+0.3**
NIKH	**Nikolski High**	**0.73**	**236**	Sn	**Sn**	**21 03 42.1**	**+0.5**
MSW	**Makushin Switc**	**0.83**	**50**		**Pn**	**21 03 28.3**	**-0.3**
MNAT	**Makushin Natee**	**0.85**	**54**		**Pn**	**21 03 28.5**	**-0.3**
MTBL	**Makushin Table**	**0.91**	**50**		**Pn**	**21 03 29.3**	**-0.1**
UNV	**Unalaska Valle**	**0.92**	**60**		**Pn**	**21 03 29.3**	**-0.1**
UNV	**Unalaska Valle**	**0.92**	**60**	Sn	**Sn**	**21 03 44.1**	**-0.7**
AKRB	**Akutan Reef Bi**	**1.29**	**54**		**Pn**	**21 03 33.9**	**+0.5**
AKMO	**Akutan Morgan**	**1.30**	**56**		**Pn**	**21 03 33.9**	**+0.4**
AKBBA	**Akutan Broad B**	**1.34**	**57**		**Pn**	**21 03 34.5**	**+0.5**
AKLV	**Akutan Long Va**	**1.37**	**55**		**Pn**	**21 03 34.5**	**+0.2**
AKGG	**Akutan Green G**	**1.37**	**53**		**Pn**	**21 03 34.4**	**0.0**
AKUT	**Akutan**	**1.44**	**58**		**Pn**	**21 03 35.6**	**+0.5**
AKUT	**Akutan**	**1.44**	**58**	Sn	**Sn**	**21 03 55.6**	**+0.7**
AKUT				IAML		21 03 56.7	
	comp=N,396nm,0.9s						
AKSA	**Akutan Strait**	**1.48**	**59**		**Pn**	**21 03 36.1**	**+0.5**
WECS	**Westdahl Cape**	**2.15**	**56**		**Pn**	**21 03 44.6**	**+0.7**
WESP	**Westdahl Peak**	**2.16**	**58**		**Pn**	**21 03 44.6**	**+0.5**
FALS	**False Pass**	**3.00**	**59**	Pn	**Pn**	**21 03 55.8**	**+0.9**
DT1	**Dutton Round H**	**3.69**	**60**		**Pn**	**21 04 05.3**	**+1.1**
SDPT	**Sand Point**	**4.74**	**63**	Pn	**Pn**	**21 04 17.9**	**-0.4**
SDPT				IAML		21 05 11.7	
	comp=E,68nm,2.8s						
CHGN	**Chignik**	**6.18**	**58**	Pn	**Pn**	**21 04 38.6**	**+0.9**
OHAK	**Old Harbor**	**9.15**	**59**	Pn	**Pn**	**21 05 16.4**	**-1.5**
Q19K	**Cape Douglas,**	**9.67**	**49**	Pn	**Pn**	**21 05 25.3**	**+0.3**
N19K	**Bonanza Creek**	**10.39**	**39**	Pn	**Pn**	**21 05 36.9**	**+2.1**
L19K	**White Mountain**	**11.19**	**33**	Pn	**Pn**	**21 05 47.2**	**+1.5**
PPLA	**Purkeypile**	**12.58**	**35**	Pn	**Pn**	**21 06 06.4**	**+2.4**
CAST	**Castle Rocks**	**12.97**	**33**	Pn	**Pn**	**21 06 10.3**	**+1.2**
SML	**Sawmill**	**13.39**	**43**	Pn	**Pn**	**21 06 14.4**	**-0.1**
KTH	**Kantishna Hill**	**13.45**	**34**	Pn	**Pn**	**21 06 16.4**	**+1.1**
TRF	**Thorofare Moun**	**13.60**	**35**		**P**	**21 06 20.8**	**-1.6**
BPAW	**Bear Paw Mtn.**	**13.80**	**32**	Pn	**Pn**	**21 06 21.4**	**+1.6**
RAGM	**Ragged Mountai**	**14.42**	**52**	Pn	**Pn**	**21 06 28.4**	**+0.6**
M24K	**Tolsona, Glenn**	**14.43**	**44**	Pn	**Pn**	**21 06 28.6**	**+0.7**
DHY	**Denali Highway**	**14.44**	**40**	Pn	**Pn**	**21 06 29.7**	**+1.7**
MLY	**Manley**	**14.53**	**30**	Pn	**Pn**	**21 06 30.3**	**+1.2**
BMRM	**Bremner River**	**14.65**	**50**	Pn	**Pn**	**21 06 32.1**	**+1.4**
BERG	**Berg Lake**	**14.88**	**52**	Pn	**Pn**	**21 06 34.3**	**+0.7**
N25K	**Chitina, Valde**	**14.89**	**47**	Pn	**Pn**	**21 06 32.1**	**-1.7**
GLB	**Gilahina Butte**	**15.18**	**48**	Pn	**Pn**	**21 06 35.5**	**-1.9**
GLB				IAmb	IAmb	21 06 40.2	
	comp=Z,8.0nm,1.3s						
SNH	**Sunshine Point**	**15.23**	**54**	P	**P**	**21 06 41.9**	**+1.4**
CRQM	**Cirque**	**15.26**	**51**		**P**	**21 06 40.0**	**-0.9**
WAX	**Waxell Ridge**	**15.30**	**53**	Pn	**Pn**	**21 06 38.0**	**-0.9**
HDA	**Harding Lake**	**15.35**	**36**	Pn	**Pn**	**21 06 40.0**	**+0.6**
ISLE	**Juniper Island**	**15.59**	**52**	Pn	**Pn**	**21 06 42.3**	**-0.2**
ISLE				IAmb	IAmb	21 06 43.5	
	comp=Z,10nm,1.1s						
ILAR	**Eielson Array**	**15.59**	**35**	Pn	**Pn**	**21 06 40.7**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=222,slow=11,SNR=2.0						
RIDG	**Independent Ri**	**15.76**	**40**	Pn	**Pn**	**21 06 45.1**	**+0.5**
M26K	**Nabesna, AK**	**15.90**	**46**	Pn	**Pn**	**21 06 44.9**	**-1.5**
M26K				IAmb	IAmb	21 07 13.5	
	comp=Z,6.8nm,1.4s						
H24K	**Noodor Dome**	**15.95**	**31**	Pn	**Pn**	**21 06 46.7**	**-0.3**
BARN	**Barnard Glacie**	**16.04**	**51**		**P**	**21 06 49.7**	**+0.1**
BARN				IAmb	IAmb	21 07 01.5	
	comp=Z,10nm,1.3s						
TABL	**Table Mountain**	**16.11**	**53**		**P**	**21 06 49.9**	**-0.6**
CTGM	**Chitina Glacie**	**16.16**	**51**	Pn	**Pn**	**21 06 49.8**	**+0.1**
CTGM				IAmb	IAmb	21 06 59.9	
	comp=Z,14nm,1.4s						
SCRK	**Sand Creek**	**16.20**	**40**	Pn	**Pn**	**21 06 49.5**	**-0.7**
LOGN	**Logan Glacier**	**16.28**	**52**		**P**	**21 06 51.6**	**-0.5**
LOGN				IAmb	IAmb	21 07 18.5	
	comp=Z,9.5nm,1.1s						
M27K	**Edge Creek, AK**	**16.37**	**46**	Pn	**Pn**	**21 06 51.9**	**-0.3**
M27K				IAmb	IAmb	21 06 55.5	
	comp=Z,11nm,1.5s						
PRP	**Porcupine Dome**	**16.50**	**34**		**Pn**	**21 06 53.8**	**-0.1**
L27K	**Beaver Creek,**	**16.66**	**44**		**Pn**	**21 06 55.2**	**-0.4**
BCAR	**Beaver Creek A**	**16.68**	**44**	Pn	**Pn**	**21 06 54.5**	**-1.5**
EGAK	**Eagle**	**17.67**	**39**	P	**P**	**21 07 07.7**	**+0.4**
EGAK				IAmb	IAmb	21 07 18.9	
	comp=Z,11nm,1.5s						
BMAR	**Burnt Mountain**	**17.99**	**30**	P	**P**	**21 07 10.8**	**0.0**
WHY	**Whitehorse**	**19.20**	**55**	P	**P**	**21 07 24.7**	**+0.6**
WHY				IAmb	IAmb	21 07 36.3	
	comp=Z,8.9nm,1.4s						
EPYK	**Eagle Plains**	**20.03**	**37**	P	**P**	**21 07 31.8**	**-1.2**
DLBC	**Dease Lake**	**21.58**	**61**	P	**P**	**21 07 54.3**	**+4.6**
	comp=Z,1.3nm,0.6s,baz=273,slow=17,SNR=3.4						
INK	**Inuvik**	**21.99**	**34**	P	**P**	**21 07 52.1**	**-1.6**
	comp=Z,1.5nm,0.5s,baz=224,slow=4.8,SNR=8.6						
INK	**Inuvik**	**21.99**	**34**	P	**P**	**21 07 52.3**	**-1.4**
YKA	**Yellowknife Ar**	**28.88**	**50**	P	**P**	**21 08 57.1**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=274,slow=8.1,SNR=6.2						
YKA	**Yellowknife Ar**	**28.88**	**50**	P	**P**	**21 08 56.4**	**-0.6**
H11N2	**WAKE ISLAND Hy**	**38.83**	**220**	T	T	21 51 34.3	
	baz=250,slow=74,SNR=7.6						
H11N3	**WAKE ISLAND Hy**	**38.83**	**220**	T	T	21 51 38.5	
	baz=24,slow=74,SNR=8.5						
H11N1	**WAKE ISLAND Hy**	**38.84**	**220**	T	T	21 51 37.7	
H11S1	**WAKE ISLAND Hy**	**40.01**	**219**	T	T	21 53 02.6	
	baz=23,slow=76,SNR=9.7						
H11S2	**WAKE ISLAND Hy**	**40.03**	**219**	T	T	21 53 03.9	
	baz=23,slow=76,SNR=7.6						
H11S3	**WAKE ISLAND Hy**	**40.03**	**219**	T	T	21 53 05.1	
	baz=23,slow=76,SNR=3.5						
PFO	**Pinyon Flats O**	**41.14**	**98**	LR	LR	21 25 22.2	
	comp=Z,51nm,18.8s,baz=167,slow=31						
TXAR	**Lajitas Array**	**51.82**	**91**	P	P	21 12 10.8	+5.0
	comp=Z,0.2nm,0.4s,baz=307,slow=6.3,SNR=5.0						

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*IDC **22** 21:39:42.2±2.5, 3°.96S×129°.84E, h0^{km}, mb3.4/1, mb1 3.6/3, mb1mx3.3/23, mbtmp3.4/3, ML3.2/2, Error ellipse: s-maj=164.9km s-min=29.3km az=70.0*

*DJA **22** 21:39:46.9±1.0, 4°S±6°×12°9E±°, h15^{km}±7^{km}, M3.4/6, MLv3.4/6*

ISC 22 21:39:47.9±1.0**, 4°.15S**±0°.09×**129°.38E**±0°.05**, h36^{km}, n8, σ1^{s}30**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.91**	**331**	P	**Pn**	**21 40 02.8**	**-1.4**
MSAI				S	**Sn**	**21 40 15.2**	**-1.0**
AAI	**Ambon**	**1.27**	**291**	P	**Pn**	**21 40 09.6**	**+0.6**
AAI				S	**Sn**	**21 40 25.1**	**+0.3**
FAKI	**Fak Fak**	**3.12**	**67**	P	**Pn**	**21 40 35.0**	**+0.5**
FAKI				S	**Sn**	**21 41 11.0**	**+0.5**
SWI	**Sorong**	**3.77**	**30**	P	**Pn**	**21 40 44.2**	**+0.7**
SANI	**Sanana**	**3.97**	**302**	P	**Pn**	**21 40 47.9**	**+1.6**
WRA	**Warramunga Arr**	**16.43**	**163**	Pn	**Pn**	**21 43 33.4**	**-2.4**
	0.1nm,0.3s,baz=348,slow=13,SNR=2.6						
ASAR	**Alice Springs**	**19.89**	**168**	P	**P**	**21 44 17.1**	**+0.7**
	0.3nm,0.3s,baz=347,slow=9.2,SNR=12						
MKAR	**Makanchi Array**	**65.52**	**326**	P	**P**	**21 50 28.2**	**+0.5**
	0.2nm,0.5s,baz=112,slow=7.7,SNR=5.9						

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*DDA **22** 22:11:12.9, 41°.12N×44°.42E, h7^{km}±3^{km}, ML2.3*

*ISK **22** 22:11:13.5, 41°.13N×44°.37E, h6^{km}, ML2.3/7*

*TIF **22** 22:11:13.1, 41°.14N×44°.42E, h8^{km}*

*NORS **22** 22:11:15.1±0.0, 41°.35N×44°.29E, h1^{km}, MPVA3.3*

ISC 22 22:11:13.9±1.0**, 41°.14N**±0°.02×**44°.39E**±0°.02**, h7^{km}**±9^{km}**, n38, σ0^{s}89**/67**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMNI	**Dmanisi**	**0.24**	**322**	P	**Pg**	**22 11 19.1**	**+0.3**
DMNI				S	**Sg**	**22 11 22.9**	**+0.8**
KZRT	**Kazreti**	**0.25**	**1**	P	**Pg**	**22 11 18.9**	**+0.1**
KZRT	**Kazreti**	**0.25**	**1**	*i* P	**Pg**	**22 11 19.0**	**+0.1**
KZRT				*i* S	**Sg**	**22 11 22.5**	**+0.2**
TRLG	**Trialeti**	**0.46**	**332**	P	**Pg**	**22 11 22.8**	**0.0**
TRLG				S	**Sg**	**22 11 29.2**	**+0.4**
BGD	**Bogdanovka**	**0.61**	**282**	P	**Pg**	**22 11 26.1**	**+0.4**
BGD				S	**Sb**	**22 11 35.2**	**-0.7**
BTNK	**Botanikuri**	**0.62**	**29**	P	**Pg**	**22 11 24.7**	**-1.3**
BTNK				S	**Sg**	**22 11 33.5**	**-0.6**
BTNK	**Botanikuri**	**0.62**	**29**	*i* P	**Pg**	**22 11 24.7**	**-1.3**
BTNK				*i* S	**Sg**	**22 11 33.6**	**-0.6**
BRNG	**Burnasheti**	**0.64**	**319**	P	**Pb**	**22 11 26.9**	**-0.7**
BRNG				S	**Sb**	**22 11 36.4**	**-0.4**
SEAG	**Tbilisi Sea**	**0.70**	**26**	P	**Pg**	**22 11 27.3**	**-0.1**
SEAG				S	**Sb**	**22 11 37.1**	**-1.2**
AKH	**Akhalkalaki**	**0.73**	**292**	P	**Pg**	**22 11 28.0**	**0.0**
AKH				S	**Sg**	**22 11 38.0**	**+0.6**
AKH	**Akhalkalaki**	**0.73**	**292**	PG	**Pg**	**22 11 27.8**	**-0.2**
AKH				SG	**Sg**	**22 11 38.1**	**+0.6**
DGRG	**David-gareji**	**0.80**	**67**	P	**Pb**	**22 11 29.6**	**-0.6**
DGRG				S	**Sn**	**22 11 42.2**	**-1.7**
GNI	**Garni**	**1.02**	**165**	PG	**Pb**	**22 11 33.3**	**-0.8**
GNI				SG	**Sb**	**22 11 47.9**	**+0.2**
DIGO	**Kars**	**1.06**	**227**	*i* P	**Pg**	**22 11 33.8**	**-0.4**
DIGO				*i* S	**Sg**	**22 11 48.3**	**+0.3**
KARS	**Kars**	**1.12**	**243**	PN	**Pg**	**22 11 34.9**	**-0.5**
KARS				SN	**Sb**	**22 11 50.4**	**0.0**
TASB	**TASBURUN-IGDIR**	**1.16**	**186**	PN	**Pb**	**22 11 35.9**	**-0.4**
TASB				SN	**Sn**	**22 11 52.1**	**-0.6**
IGDI	**IGDIR**	**1.29**	**191**	*i* P	**Pn**	**22 11 37.4**	**-1.1**
IGDI				*i* S	**Sb**	**22 11 54.9**	**-0.4**
IGDI				IAML		22 11 57.0	
	comp=E,39nm,0.3s						
IGDI				IAML		22 11 57.0	
	comp=N,46nm,0.2s						
EPOS	**Posof**	**1.30**	**287**	*i* P	**Pn**	**22 11 38.5**	**-0.2**
EPOS				*i* S	**Sn**	**22 11 56.5**	**+0.2**
EPOS				IAML		22 11 58.0	
	comp=N,48nm,0.7s						
GUDG	**Gudauri**	**1.33**	**3**	P	**Pg**	**22 11 40.6**	**+1.2**
ABS	**Abastumani**	**1.34**	**298**	P	**Pn**	**22 11 39.0**	**-0.1**
ABS				S	**Sn**	**22 11 57.2**	**0.0**
DDFL	**Dedoflistskaro**	**1.34**	**76**	P	**Pg**	**22 11 40.9**	**+1.3**
DDFL	**Dedoflistskaro**	**1.34**	**76**	*i* P	**Pg**	**22 11 41.0**	**+1.3**
DDFL				*i* S	**Sn**	**22 12 01.6**	**+4.5**
PNSH	**Pansheti**	**1.50**	**6**	P	**Pb**	**22 11 41.8**	**-0.5**
PNSH				S	**Sg**	**22 12 02.2**	**-0.1**
MTEO	**Meteo**	**1.54**	**4**	P	**Pb**	**22 11 42.6**	**-0.4**
LGD	**Lagodekhi**	**1.56**	**63**	P	**Pb**	**22 11 42.2**	**-0.8**
LGD				S	**Sg**	**22 12 03.7**	**-0.2**
TKB	**Tkibuli**	**1.60**	**320**	P	**Pb**	**22 11 43.6**	**-0.2**
TKB				S	**Sg**	**22 12 04.9**	**-0.4**
KOTA	**Agri, Merkez-K**	**1.61**	**214**	*i* P	**Pg**	**22 11 45.3**	**+0.4**
SENK	**Senkaya-Erzuru**	**1.65**	**250**	PN	**Pn**	**22 11 43.5**	**0.0**
ZEI	**Tsey**	**1.69**	**348**	*e*Pg	**Pb**	**22 11 45.1**	**-0.3**
ZEI				*e*Sg	**Sg**	**22 12 08.1**	**-0.1**
LACR	**Lac**	**1.69**	**358**	*e*Pg	**Pb**	**22 11 45.2**	**-0.2**
LACR				*e*Sg	**Sg**	**22 12 08.6**	**+0.4**
DIGR	**Digorskoe uzhe**	**1.86**	**341**	*e*Pg	**Pb**	**22 11 48.5**	**+0.2**
DIGR				*e*Sg	**Sg**	**22 12 14.1**	**+0.4**
AGRB	**Hanur-Agry**	**1.89**	**215**	PN	**Pn**	**22 11 46.9**	**+0.1**
KMGR	**Komgaron**	**1.95**	**10**	*e*Pg	**Pg**	**22 11 50.6**	**-0.7**
KMGR				*e*Sg	**Sg**	**22 12 18.3**	**+1.8**
KORR	**Kora**	**1.96**	**353**	*e*Pg	**Pg**	**22 11 50.9**	**-0.6**
KORR				*e*Sg	**Sg**	**22 12 18.4**	**+1.5**
CLDR	**Caldiran**	**2.03**	**190**	PN	**Pn**	**22 11 49.0**	**+0.3**
ARNR	**Ardon**	**2.04**	**358**	*e*Pg	**Pg**	**22 11 52.0**	**-1.0**
ARNR				*e*Sg	**Sg**	**22 12 19.4**	**-0.1**
KOPR	**Koprukoy-ERZUR**	**2.25**	**240**	PN	**Pn**	**22 11 52.1**	**+0.5**
NEY	**Neytrino**	**2.44**	**330**	*e*Pg	**Pb**	**22 11 58.8**	**+0.5**
NEY				*e*Sg	**Sb**	**22 12 29.4**	**+0.7**

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*SOME **22** 22:20:58.9, 40°.02N×77°.30E, h5^{km}*

*NNC **22** 22:21:01.7±1.5, 40°.12N×77°.35E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=9.9km s-min=7.8km az=164.0*

*IDC **22** 22:21:02.1±1.6, 40°.03N×77°.24E, h0^{km}, mb3.5/3, mb1 3.7/7, mb1mx3.3/54, mbtmp3.6/7, ML3.0/4, Error ellipse: s-maj=23.3km s-min=20.4km az=141.0*

*KRNET **22** 22:21:06.3±0.1, 40°.34N×77°.29E, mb3.6*

ISC 22 22:21:03.6±1.9**, 40°.22N**±0°.06×**77°.27E**±0°.04**, h3^{km}**±11^{km}**, n82, σ1^{s}36**/109**, mb3.8**/3**, 20C-15D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.56**	**15**	⇓*i*P	**Pn**	**22 21 33.1**	**+0.4**
	baz=15						
TARG				⇓*i*S	**Sg**	**22 21 53.4**	**-0.3**
	baz=15						
KDJ	**Kajisay**	**1.91**	**358**	⇑*i*P	**Pb**	**22 21 39.6**	**+0.4**
	baz=58						
KDJ				⇑*i*S	**Sg**	**22 22 03.6**	**-1.3**
	baz=58						
ULHL	**Ulahol**	**2.16**	**339**	P	**Pg**	**22 21 45.0**	**-0.1**
	SNR=10						
ULHL	**Ulahol**	**2.16**	**339**	⇑*e*P	**Pb**	**22 21 44.1**	**+0.5**
	baz=38						
ULHL				⇑*i*S	**Sg**	**22 22 11.7**	**-1.4**
	baz=38						

PRZ	Przheval'sk baz=21	2.42	20	⇓*i*P	Pb	22 21 47.9	+0.1
PRZ	baz=21			⇓*i*S	Sb	22 22 17.9	-0.2
BOOM	Boomskoye usch baz=35	2.48	337	⇓*i*P	Pb	22 21 48.8	-0.1
BOOM	baz=35			⇓*i*S	Sb	22 22 19.3	-0.6
ANVS	Anan'yevo baz=7.0	2.58	7	⇑*i*P	Pb	22 21 49.6	-1.0
ANVS	baz=7.0			⇑*e*S	Sb	22 22 21.5	-1.3
ARLS	Aral baz=5.0	2.76	307	⇓*i*P	Pb	22 21 53.0	-0.8
ARLS	baz=5.0			⇓*i*S	Sb	22 22 27.0	-1.1
TNSS	Tian-Shan 57nm,0.6s	2.82	355	*e*P	Pb	22 21 55.1	+0.1
TNSS	128nm,0.8s			*e*S	Sg	22 22 35.6	+1.3
TNSS	Tian-Shan baz=355	2.82	355	*e*Pb	Pb	22 21 53.4	-1.5
TNSS	baz=355			*e*Lg	Lg	22 22 35.3	
TNSS	Tian-Shan 57nm,0.6s	2.82	355	Pg	Pb	22 21 55.1	+0.1
TNSS	128nm,0.8s			Lg	Lg	22 22 35.6	
UCH	Uchtor SNR=23	2.88	315	P	Pb	22 21 55.4	-0.7
UCH	Uchtor baz=13	2.88	315	⇑*i*P	Pb	22 21 54.9	-1.1
UCH	baz=13			⇑*i*S	Sb	22 22 30.0	-1.9
SFK	Sufi-Kurgan baz=65	2.89	267	⇓*i*P	Pb	22 21 55.8	-0.2
SFK	baz=65			⇓*i*S	Sb	22 22 32.1	+0.2
MDOK	Medeo 45nm,0.8s	2.94	357	*e*P	Pb	22 21 56.7	-0.1
MDOK	151nm,0.6s			*e*S	Sg	22 22 38.6	+0.5
MDOK	Medeo baz=357	2.94	357	*e*Pb	Pb	22 21 55.4	-1.5
MDOK	baz=357			*e*Lg	Lg	22 22 38.8	
MDOK	Medeo 36nm,0.7s	2.94	357	Pg	Pb	22 21 58.6	+1.7
MDOK	135nm,0.7s			Lg	Lg	22 22 38.6	
MDOK	Medeo 45nm,0.8s	2.94	357	Pg	Pb	22 21 56.7	-0.1
MDOK	151nm,0.6s			Lg	Lg	22 22 38.6	
SATY	Saty 30nm,0.3s	2.96	16	*e*P	Pb	22 21 56.8	-0.3
SATY	157nm,0.5s			*e*S	Sg	22 22 38.7	0.0
SATY	Saty baz=15	2.96	16	*e*Pg	Pb	22 21 57.3	+0.2
SATY	Saty 32nm,0.7s	2.96	16	Pg	Pb	22 21 56.8	-0.3
SATY	157nm,0.5s			Lg	Lg	22 22 38.7	
MTBS	Maitube 46nm,0.5s	2.97	348	*e*P	Pb	22 21 57.2	-0.1
MTBS	57nm,0.7s			*e*S	Sg	22 22 39.4	+0.4
MTBS	Maitube 46nm,0.5s	2.97	348	Pg	Pb	22 21 57.2	-0.1
MTBS	57nm,0.7s			Lg	Lg	22 22 39.4	
TKM2	Tokmak 2 SNR=22	2.97	336	P	Pb	22 21 59.3	+1.9
TKM2	Tokmak 2 10nm,0.5s	2.97	336	⇑Pg	Pb	22 21 58.3	+0.9
TKM2	44nm,0.5s			⇑Lg	Lg	22 22 41.5	
TKM2	Tokmak 2 baz=34	2.97	336	⇑*i*P	Pb	22 21 55.6	-1.8
TKM2	baz=34			⇑*i*S	Sb	22 22 31.4	-2.8
KST	Kastek 23nm,0.8s	2.98	341	*e*P	Pb	22 21 57.9	+0.4
KST	135nm,0.9s			*e*S	Sg	22 22 41.0	+1.6
KST	Kastek 23nm,0.8s	2.98	341	Pg	Pb	22 21 57.9	+0.4
KST	135nm,0.9s			Lg	Lg	22 22 41.0	
KBK	Karagaybulak SNR=25	2.99	325	P	Pg	22 22 00.8	-0.1
KBK	Karagaybulak baz=24	2.99	325	⇑*i*P	Pb	22 21 56.1	-1.6
KBK	baz=24			⇑*i*S	Sb	22 22 32.2	-2.5
AAA	Alma-Ata 53nm,0.1s	3.00	355	*e*P	Pb	22 21 59.6	+1.9
AAA	288nm,0.2s			*e*S	Sg	22 22 43.3	+3.4
AAA	Alma-Ata	3.00	355	Pg	Pb	22 21 59.6	+1.9
AAA				Lg	Lg	22 22 43.3	
KNDC	Almaty 87nm,0.8s	3.00	356	⇓Pg	Pg	22 21 59.9	-1.2
KNDC	264nm,0.5s			⇓Lg	Lg	22 22 41.5	
KOTS	Kotyrbulak 36nm,0.1s	3.01	358	*e*P	Pb	22 21 57.9	-0.1
KOTS	373nm,0.6s			*e*S	Sg	22 22 41.5	+1.2
KOTS	Kotyrbulak 38nm,0.7s	3.01	358	Pg	Pb	22 21 57.9	-0.1
KOTS	373nm,0.6s			Lg	Lg	22 22 41.5	
ZHN	Zhinishke 8.4nm,0.4s	3.07	16	*e*P	Pb	22 21 58.4	-0.6
ZHN	131nm,0.7s			*e*S	Sg	22 22 41.3	-0.9
ZHN	Zhinishke 8.4nm,0.4s	3.07	16	Pg	Pb	22 21 58.4	-0.6
ZHN	131nm,0.7s			Lg	Lg	22 22 41.3	
AAK	Ala-Archa 2.4nm,0.3s,baz=120,slow=7.8,SNR=29	3.19	320	Pn	Pb	22 21 59.5	-1.5
AAK	2.5nm,0.3s,baz=16,slow=19,SNR=3.9			Lg	Lg	22 22 45.2	
AAK	Ala-Archa SNR=19	3.19	320	P	Pb	22 22 03.6	+2.6
AAK	Ala-Archa 18nm,0.6s	3.19	320	⇑Pg	Pb	22 22 03.8	+2.8
AAK	114nm,0.7s			⇑Lg	Lg	22 22 47.5	
UZB	Uzynbulak 36nm,0.7s	3.21	24	*e*P	Pb	22 22 01.0	-0.3
UZB	63nm,0.6s			*e*S	Sg	22 22 45.7	-0.8
UZB	Uzynbulak baz=22	3.21	24	*e*Pb	Pb	22 21 59.2	-2.0
UZB	baz=22			*e*Lg	Lg	22 22 46.3	
UZB	Uzynbulak 36nm,0.7s	3.21	24	Pg	Pb	22 22 01.0	-0.3
UZB	63nm,0.6s			Lg	Lg	22 22 45.7	
DGS	Degeres 32nm,0.7s	3.22	340	*e*P	Pb	22 22 01.8	+0.3
DGS	99nm,0.6s			*e*S	Sg	22 22 47.8	+0.9
DGS	Degeres 32nm,0.7s	3.22	340	Pg	Pb	22 22 01.8	+0.3
DGS	99nm,0.6s			Lg	Lg	22 22 47.8	
AML	Almayashu SNR=21	3.30	306	P	Pb	22 22 01.1	-2.0
AML	Almayashu baz=5.0	3.30	306	⇑*i*P	Pb	22 22 01.0	-2.0
AML	baz=5.0			⇑*i*S	Sb	22 22 40.6	-3.3
CHMS	Chumysh SNR=24	3.35	327	P	Pb	22 22 02.4	-1.4
KPKS	Kokpek baz=16	3.41	18	*e*Pb	Pb	22 22 03.2	-1.6
KTBS	Karatobe 17nm,0.6s	3.51	353	*e*P	Pb	22 22 05.9	-0.6
KTBS	75nm,0.7s			*e*S	Sg	22 22 55.0	-1.5
KTBS	Karatobe 17nm,0.6s	3.51	353	Pg	Pb	22 22 05.9	-0.6
KTBS	75nm,0.7s			Lg	Lg	22 22 55.0	
PDGK	Podgornoye 9.1nm,0.5s	3.52	27	Pg	Pb	22 22 06.7	0.0
PDGK	43nm,0.7s			Lg	Lg	22 22 55.9	
PDGK	Podgornoye 26nm,0.7s	3.52	27	⇑Pg	Pg	22 22 10.2	-0.9
PDGK	98nm,0.8s			⇓Lg	Lg	22 22 54.9	
EKS2	Erkin-Say SNR=21	3.58	314	P	Pb	22 22 05.0	-2.6
KRBS	Karabastau 28nm,0.7s	3.67	342	*e*P	Pb	22 22 10.1	+0.9
KRBS	68nm,0.8s			*e*S	Sg	22 23 01.7	+0.3
KRBS	Karabastau 28nm,0.7s	3.67	342	Pg	Pb	22 22 10.1	+0.9
KRBS	68nm,0.8s			Lg	Lg	22 23 01.7	
USP	Ospenovka SNR=14	3.68	327	P	Pg	22 22 14.2	+0.1
KUU	Kurty 8.0nm,0.8s	3.73	350	*e*P	Pb	22 22 10.4	+0.3
KUU	198nm,0.8s			*e*S	Sg	22 23 02.3	-1.2
KUU	Kurty baz=350	3.73	350	*e*Pg	Pb	22 22 11.2	+1.0
KUU	Kurty 8.0nm,0.8s	3.73	350	Pg	Pb	22 22 10.4	+0.3
KUU	198nm,0.8s			Lg	Lg	22 23 02.3	
SGDS	Sogindy baz=330	3.78	329	*e*Pg	Pb	22 22 12.1	+1.1
SGDS	Sogindy 20nm,0.6s	3.78	329	Pg	Pb	22 22 11.9	+0.8
SGDS	18nm,0.8s			Lg	Lg	22 23 04.4	
MRKS	Merke 5.0nm,0.6s	3.94	311	*e*P	Pb	22 22 14.1	+0.2
MRKS	18nm,0.6s			*e*S	Sg	22 23 08.4	-1.9
MRKS	Merke 5.0nm,0.6s	3.94	311	Pg	Pb	22 22 14.1	+0.2
MRKS	18nm,0.6s			Lg	Lg	22 23 08.4	
BLB	Baldybastay 21nm,0.4s	3.98	13	Pg	Pb	22 22 14.5	+0.1
BLB	98nm,0.4s			Lg	Lg	22 23 08.8	
ARXS	Arharly 18nm,0.7s	4.01	6	*e*P	Pb	22 22 15.8	+0.9
ARXS	50nm,0.5s			*e*S	Sg	22 23 11.2	-1.2
ARXS	Arharly 18nm,0.7s	4.01	6	Pg	Pb	22 22 15.8	+0.9
ARXS	50nm,0.5s			Lg	Lg	22 23 11.1	
TDK	Taldyqorghan baz=9.0	4.85	10	*e*Pb	Pb	22 22 28.6	-0.6
TDK	baz=9.0			*e*Pg	Pg	22 22 31.6	-5.0
DZA	Taraz baz=304	5.19	303	*e*Pb	Pb	22 22 32.9	-2.2
BTLS	Baital baz=335	5.37	335	*e*Pg	Pb	22 22 40.6	+2.6
IUG	Iuzhnay baz=293	5.79	292	*e*Pg	Pb	22 22 47.0	+1.7
KK08	Karatay Array 4.2nm,0.7s,baz=123,slow=15	5.84	302	⇓Pg	Pg	22 22 55.7	+0.3
KK08	5.8nm,0.8s,baz=76,slow=36			⇓Lg	Lg	22 24 10.7	
BRLS	Borolday baz=298	6.23	299	*e*Pg	Pb	22 22 55.3	+2.5
MK31	Makanchi Array 3.2nm,0.7s	7.51	27	⇑Lg	Lg	22 25 04.4	
MKAR	Makanchi Array 0.2nm,0.3s,baz=204,slow=15,SNR=8.1	7.51	27	Pn	Pn	22 22 56.1	+2.0
MKAR	0.2nm,0.3s,baz=207,slow=22,SNR=3.6			Sn	Sn	22 24 20.3	+0.5
MKAR	0.2nm,0.3s,baz=254,slow=26,SNR=4.0			Lg	Lg	22 25 03.5	
KURBB	Kurchatov Arra 0.2nm,0.3s,baz=192,slow=12,SNR=5.4	10.44	4	Pn	Pn	22 23 36.0	+1.8
KURBB	0.1nm,0.3s,baz=182,slow=24,SNR=3.1			Lg	Lg	22 26 34.2	
BVAR	Borovoye Array 0.1nm,0.3s,baz=165,slow=20,SNR=2.6	13.64	342	Pn	Pn	22 24 20.8	+2.9
BVAR	0.1nm,0.3s,baz=145,slow=24,SNR=5.9			Lg	Lg	22 28 17.3	
ZALV	Zalesovo Beam 0.1nm,0.3s,baz=185,slow=12,SNR=4.1	14.65	18	Pn	Pn	22 24 33.7	+2.1
AKTO	Aktyubinsk 0.1nm,0.3s,baz=160,slow=15,SNR=2.2	16.91	314	Pn	Pn	22 25 02.6	+1.5
SONM	Songino Array 0.6nm,0.8s,baz=269,slow=12,SNR=2.2	22.19	60	P	P	22 26 01.9	+0.8
TORD	Torodi Ar. Bea 0.6nm,0.5s,baz=52,slow=5.7,SNR=12	70.66	271	P	P	22 32 19.5	-1.4
YKA	Yellowknife Ar 0.5nm,0.6s,baz=344,slow=5.7,SNR=5.8	77.19	6	P	P	22 32 57.1	-1.2

TEH ***22*** *22:21:36.5, 36°.06N×53°.21E, h8^{km}, ML3.5*
THR ***22*** *22:21:37.3±0.9, 36°.08N×53°.16E, h14^{km}±7^{km}, ML3.1*
ISC 22 22:21:37.0±0.9**, 36°.07N**±0°.03×**53°.19E**±0°.02**, h10**^{km}**, n74,**
σ**1^{s}76**/77**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISHM	Shahmirzad	0.27	163	*e*Pg	Pg	22 21 42.2	-0.4
ISHM				*e*Sg	Sg	22 21 46.3	0.0
ISHM	comp=Z,74μm,0.2s			*e*		22 21 46.9	
IFIR	Firoozkooh	0.56	220	*e*Pg	Pg	22 21 47.7	-0.1
IGLO	Ghaloghah	0.67	50	*e*Pg	Pg	22 21 49.8	-0.3
IGLO	comp=Z,28μm,0.4s			*e*		22 22 06.0	
ILAS	Lasjerd	0.71	196	*e*Pg	Pb	22 21 50.7	-0.9
IPRN	Peran	0.71	284	*e*Pg	Pg	22 21 50.9	+0.1
IANJ	Anjilo	0.84	135	*e*Pg	Pg	22 21 52.1	-1.0
IDMV	Damavand	1.06	243	*e*Pg	Pg	22 21 57.1	-0.3
IDMV	comp=Z,9μm,0.4s			*e*		22 22 16.7	
DAMV	Damavand	1.08	247	*e*Pg	Pg	22 21 57.5	-0.4
DAMV	Damavand	1.08	247	*e*Pg	Pg	22 21 57.5	-0.4
TEHA	Amirabad Tehra	1.50	258	*e*Pg	Pg	22 22 05.8	0.0
IVRN	Varamin comp=Z,6μm,0.3s	1.60	229	*e*		22 22 35.3	
IVRN				*e*Pg	Pb	22 22 06.8	+0.1
IHSB	Hasanabad comp=Z,3μm,0.3s	1.68	249	*e*		22 22 35.9	
IHSB				*e*Pg	Pg	22 22 08.7	-0.5
CHTH	Charan	1.69	265	*e*Pg	Pb	22 22 08.0	-0.2
CHTH	Charan	1.69	265	*e*Pg	Pb	22 22 08.0	-0.2
ISFB	Sefidab	1.88	205	*e*Pn	Pb	22 22 10.8	-0.6
ISFB	comp=Z,3μm,0.2s			*e*		22 22 39.4	
THKV	Tehran--Karaj	1.88	266	*e*Pn	Pb	22 22 10.9	-0.6
THKV	comp=N,136nm,0.5s			IAML		22 22 44.0	
THKV	Tehran--Karaj	1.88	266	*e*Pn	Pb	22 22 11.0	-0.6
IMHD	Mahdasht	2.09	260	*e*Pn	Pb	22 22 15.0	0.0
IMHD	comp=Z,1μm,0.6s			*e*		22 22 50.5	
QALM	Alamut, Qazvin	2.09	281	*e*Pn	Pb	22 22 14.6	-0.6
QALM	comp=Z,6μm,0.4s			*e*		22 22 47.4	
IQOM	Qom	2.12	235	*e*Pn	Pb	22 22 14.6	-1.1
IQOM	comp=Z,5μm,0.2s			*e*		22 22 45.9	
IMND	Minoodasht	2.14	56	*e*Pn	Pb	22 22 13.8	-2.0
IMND	comp=Z,2μm,0.2s			*e*		22 22 44.8	
GHVR	GHOM	2.22	225	*e*Pn	Pb	22 22 16.7	-0.5
GHVR				*e*Sg	Sg	22 22 47.5	-0.7
GHVR	comp=N,93nm,0.5s			IAML		22 22 55.7	
GHVR	comp=E,184nm,0.4s			IAML		22 22 55.9	
GHVR	GHOM	2.22	225	*e*Pn	Pb	22 22 16.7	-0.5
KRSH	Karshahi	2.27	203	*e*Pn	Pb	22 22 16.2	-1.9
KRSH	comp=Z,5μm,0.6s			*e*		22 22 48.9	
SHRO	Shahrood	2.28	91	*e*Pn	Pb	22 22 17.0	-1.4
SHRO	Shahrood	2.28	91	*e*Pn	Pb	22 22 17.0	-1.4
IGZV	Ghazvin	2.43	278	*e*Pn	Pb	22 22 19.7	-1.2
IGZV	comp=Z,3μm,0.3s			*e*		22 22 23.1	
IRAZ	Razeghan	2.74	257	*e*Pn	Pb	22 22 23.7	-2.4
QAMS	Qamsar	2.75	213	*e*Pn	Pn	22 22 23.1	+1.7
QAMS	comp=Z,2μm,0.4s			*e*		22 23 03.4	
JIR1	Jirandeh	2.81	284	*e*Pn	Pb	22 22 24.8	-2.6
MRVT	Maraveh tapeh	2.81	55	*e*Pn	Pn	22 22 23.7	+1.6
MRVT	comp=N,48nm,0.3s			IAML		22 23 05.4	
MRVT	Maraveh tapeh	2.81	55	*e*Pn	Pn	22 22 23.7	+1.6
ANAR	Anarak	2.90	171	*e*Pn	Pn	22 22 24.7	+1.3
QABG	Abgarm-Qazvin	2.95	264	*e*Pn	Pn	22 22 25.5	+1.3
ASAO	Ashtian	3.00	241	*e*Pn	Pn	22 22 26.8	+2.0
ASAO				*e*Sg	Sg	22 23 10.5	-3.0
ASAO	comp=E,41nm,0.6s			IAML		22 23 14.7	
ASAO	comp=N,58nm,0.5s			IAML		22 23 15.1	
ASAO	Ashtian	3.00	241	*e*Pn	Pn	22 22 26.8	+2.0
IKLH	Kolahrood	3.05	206	*e*Pn	Pn	22 22 27.3	+1.8
IKLH	comp=Z,1μm,0.2s			*e*		22 23 22.0	
IZEF	Zefreh	3.24	193	*e*Pn	Pn	22 22 29.8	+1.6
IZEF	comp=Z,784nm,0.3s			*e*		22 23 27.5	
NASN	Na'in	3.27	186	*e*Pn	Pn	22 22 30.7	+2.0
NASN	Na'in	3.27	186	*e*Pn	Pn	22 22 30.7	+2.0
TNSJ	Nastanj	3.50	126	*e*Pn	Pn	22 22 33.4	+1.8
KHMZ	Khomeyn	3.53	230	*e*Pn	Pb	22 22 37.1	-2.5
KHMZ	comp=N,19nm,0.5s			IAML		22 23 38.2	
HAGD	Aghdareh	3.54	251	*e*Pn	Pn	22 22 34.5	+2.3
SBZV	Sabzevar	3.58	84	*e*Pn	Pn	22 22 34.9	+2.1
ZNJK	Zanjan	3.69	281	*e*Pn	Pn	22 22 35.5	+1.2
ZNJK	Zanjan	3.69	281	*e*Pn	Pn	22 22 35.5	+1.2
BJRD	Bojnurd	3.75	63	*e*Pn	Pn	22 22 37.8	+2.7
BJRD	Bojnurd	3.75	63	*e*Pn	Pn	22 22 37.8	+2.7
YZKH	Yazd	3.84	162	*e*Pn	Pn	22 22 38.1	+1.8
YZKH	comp=N,19nm,0.5s			IAML		22 23 50.8	
YZKH	comp=E,18nm,0.4s			IAML		22 23 51.0	
YZKH	Yazd	3.84	162	*e*Pn	Pn	22 22 38.1	+1.8
ICHK	Chekchek	3.94	165	*e*Pn	Pn	22 22 39.5	+1.7
ICHK	comp=Z,489nm,0.6s			*e*		22 23 49.3	
ISFR	Sfrayin	3.99	74	*e*Pn	Pn	22 22 40.4	+1.9
TABS	Tabas	4.03	126	*e*Pn	Pn	22 22 41.4	+2.6
TABS	comp=E,16nm,0.6s			IAML		22 23 55.3	
TABS	comp=N,24nm,0.7s			IAML		22 23 57.0	
TABS	Tabas	4.03	126	*e*Pn	Pn	22 22 41.4	+2.6
TKDS	Koohdasht(Taba	4.05	126	*e*Pn	Pn	22 22 41.0	+1.8
TKDS	comp=Z,392nm,0.4s			*e*		22 23 59.2	
ISAD	Sadrabad	4.16	174	*e*Pn	Pn	22 22 42.5	+1.7
TPRV	Parvadeh(Tabas	4.18	135	*e*Pn	Pn	22 22 43.3	+2.4
SHK1	Shahrekord	4.19	208	*e*Pn	Pn	22 22 43.8	+2.6
IRAM	Ramesheh	4.30	189	*e*Pn	Pn	22 22 44.8	+2.1
BMDN	Meydan	4.31	238	*e*Pn	Pn	22 22 45.7	+2.9
IMEH	Mehriz	4.81	165	*e*Pn	Pn	22 22 51.6	+1.9
SNGE	Sanandaj	4.86	260	*e*Pn	Pn	22 22 51.9	+1.5
SNGE	Sanandaj	4.86	260	*e*Pn	Pn	22 22 51.9	+1.5
GRMI	Germi	5.03	305	*e*Pn	Pn	22 22 53.7	+1.1
GRMI	Germi	5.03	305	*e*Pn	Pn	22 22 53.7	+1.1
ITEG	Tejag	5.57	123	*e*Pn	Pn	22 23 02.3	+2.2
JRKH	Jarkhoshk	5.80	89	*e*Pn	Pn	22 23 05.5	+2.3
IKOO	Kooshah	6.03	125	*e*Pn	Pn	22 23 08.4	+1.9
IMON	Monand	6.06	116	*e*Pn	Pn	22 23 08.7	+1.9
SHRT	Shahrakht	6.31	110	*e*Pn	Pn	22 23 13.2	+3.0
SHRT	Shahrakht	6.31	110	*e*Pn	Pn	22 23 13.2	+3.0
BSRN	Basiran	6.40	128	*e*Pn	Pn	22 23 13.6	+2.1
BSRN	Basiran	6.40	128	*e*Pn	Pn	22 23 13.6	+2.1
IDAH	Dahanechah	6.44	119	*e*Pn	Pn	22 23 14.3	+2.2

IDC ***22*** *22:23:49.8±1.8, 17°.99S×167°.46E, h0^{km}, mb4.1/5, mb1 4.3/6, mb1mx3.8/35, mbtmp4.0/6, ML3.3/1, MS2.7/2, Ms1 2.7/2, ms1mx2.6/22, Error ellipse: s-maj=50.6km s-min=30.3km az=130.0*
NEIC ***22*** *22:23:51.4±1.3, 17°.87S±0°.03×167°.3E±0°.2, h10^{km}±1^{km}, mb4.3/5, Error ellipse: s-maj=28.6km s-min=4.8km az=92.0*
NOU ***22*** *22:23:55.1, 17°.79S×167°.43E, h24^{km}, MLv4.3/17, Vanuatu Islands*
ISC 22 22:23:53.2±0.7**, 17°.92S**±0°.04×**167°.35E**±0°.07**, h23**^{km}**, n29,**
σ**2^{s}09**/29**, mb4.2**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.82	76	P	Pn	22 24 09.6	+0.3
RTV	Rentapao	1.03	83	P	Pb	22 24 12.8	+0.5
SANVU	Saraoutou	2.46	357		Pn	22 24 31.2	-0.7
SANVU				Sn	Sn	22 24 58.5	-2.9
SANVU	Saraoutou	2.46	357	P	Pn	22 24 31.8	-0.2
LIFNC	LIFOU	2.84	182	Pn	Pn	22 24 37.8	+0.6
LIFNC	LIFOU	2.84	182	P	Pb	22 24 41.8	-1.5
MARNC	Mare, Loyalty	3.60	170		Pn	22 24 47.0	-0.6
MARNC	Mare, Loyalty	3.60	170	P	Pn	22 24 50.6	+3.0
KOUNC	Koumac, New Ca	3.91	227	P	Pn	22 24 54.2	+2.4
YATNC	Mamie plateau,	4.14	186	P	Pb	22 25 00.1	-5.3
DZM	Mont Dzumac 2.0nm,0.3s,baz=60,slow=12,SNR=20	4.22	192	Pn	Pn	22 24 56.0	-0.2
DZM	2.2nm,0.3s,baz=135,slow=20,SNR=1.5			Sn	Sn	22 25 38.9	-5.9
DZM	comp=Z,33nm,18.7s,baz=314,slow=28			LR	LR	22 25 48.0	
DZM	Mont Dzumac	4.22	192		Pn	22 24 55.8	-0.4
DZM	Mont Dzumac	4.22	192	P	Pn	22 24 58.1	+1.9
NOUC	Port Laguerre	4.28	193	P	Pb	22 25 02.2	-5.5
ONTNC	Ouen Toro	4.45	191	Pn	Pn	22 24 59.4	+0.2
ONTNC	Ouen Toro	4.45	191	P	Pn	22 25 03.0	+3.8
OUENC	Ouen Island, N	4.50	186	P	Pn	22 25 03.7	+3.7
PINNC	Pines Island,	4.67	179	Pn	Pn	22 25 02.4	+0.1
WB0	Warramunga Arr	31.22	261	P	P	22 30 09.8	-1.4
WB0	comp=Z,14nm,1.4s			IAmb	IAmb	22 30 12.4	
WRA	Warramunga Arr comp=Z,1.0nm,0.8s,baz=82,slow=6.4,SNR=2.6	31.27	261	P	P	22 30 12.2	+0.6
AS31	Alice Springs	31.74	254	P	P	22 30 13.5	-2.3
ASAR	Alice Springs comp=Z,1.3nm,0.8s,baz=81,slow=8.5,SNR=12	31.74	254	P	P	22 30 15.2	-0.6
ASAR	comp=Z,37nm,18.4s,baz=207,slow=36			LR	LR	22 42 46.0	
FITZ	Fitzroy Crossi comp=Z,5.1nm,0.9s,baz=68,slow=5.4,SNR=2.9	39.61	263	P	P	22 31 23.6	+0.3
VNDA	Vanda	59.69	181	P	P	22 33 55.5	+0.1
CMAR	Chiang Mai Arr comp=Z,0.8nm,0.3s,baz=132,slow=4.3,SNR=7.1	76.33	295	P	P	22 35 43.9	+3.0
CAST	Castle Rocks	87.00	17	P	P	22 36 36.5	+0.3
CAST	comp=Z,1.7nm,0.8s			IAmb	IAmb	22 36 39.0	
J20K	Nowinta River	87.05	16	P	P	22 36 38.0	+1.5
J20K	comp=Z,0.3nm,0.3s			IAmb	IAmb	22 36 40.4	
ILAR	Eielson Array comp=Z,0.8nm,0.6s,baz=240,slow=4.9,SNR=14	89.52	18	P	P	22 36 47.8	-0.4
ILAR	Eielson Array	89.52	18	P	P	22 36 48.5	+0.3

IDC 22 22:38:00.4±2.4**, 3°.66S**×**130°.36E, h0**^{km}**, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.4**/32**, mbtmp3.4**/3**, ML2.8**/1**, Error ellipse: s-maj=132.5km s-min=30.5km az=71.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.0nm,0.3s,baz=347,slow=11,SNR=2.5	16.64	167	Pn	Pn	22 41 56.5	+1.2
ASAR	Alice Springs 0.7nm,0.6s,baz=349,slow=10,SNR=8.6	20.18	171	P	P	22 42 36.3	-0.5
MKAR	Makanchi Array 0.3nm,0.8s,baz=134,slow=6.9,SNR=4.0	65.66	326	P	P	22 48 46.7	0.0

IDC ***22*** *23:16:10.8±1.4, 16°.72N×147°.37E, h0^{km}, mb3.8/9, mb1 4.0/9, mb1mx3.8/36, mbtmp3.8/9, Error ellipse: s-maj=44.3km s-min=21.7km az=90.0*
NEIC ***22*** *23:16:16.8±1.0, 16°.7N±0°.1×147°.5E±0°.2, h37^{km}±11^{km}, mb4.4/14, Error ellipse: s-maj=26.8km s-min=15.7km az=110.0*

ISC 22 23:16:15.5±1.2**, 16°.68N**±0°.10×**147°.6E**±0°.2**, h35km, n30, σ1ˢ13**/27**, mb4.0**/15**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.07	221	Pn	Pn	23 17 15.4	+0.1
JGF	Kuroka	20.96	336	P	P	23 20 56.5	+1.0
JGF				IAmb	IAmb	23 20 56.8	
	comp=Z,6.7nm,0.8s						
MJAR	Matsushiro Arr	21.48	339	P	P	23 21 00.6	-0.5
	comp=Z,3.0nm,0.8s,baz=166,slow=10.0,SNR=5.4						
MJAR	Matsushiro Arr	21.48	339	P	P	23 21 01.2	+0.1
MAJO	Matsushiro	21.48	339	P	P	23 21 01.2	+0.1
MJB9	Matsu-Tunnel	21.49	339	P	P	23 21 01.4	+0.2
MJB9				IAmb	IAmb	23 21 29.1	
	comp=Z,7.3nm,1.0s						
JNU	Nakatsue	22.29	320	P	P	23 21 13.9	+4.0
SOEI	Soe	34.99	223	P	P	23 23 05.3	+0.5
WB0	Warramunga Arr	38.48	200	P	P	23 23 33.9	-0.5
WB0				IAmb	IAmb	23 23 37.0	
	comp=Z,4.9nm,1.1s						
WRAB	Tennant Creek	38.65	200	P	P	23 23 35.4	-0.4
WRAB				IAmb	IAmb	23 23 39.6	
	comp=Z,23nm,1.4s						
WRA	Warramunga Arr	38.66	200	P	P	23 23 35.7	-0.3
	comp=Z,0.6nm,0.8s,baz=26,slow=9.2,SNR=5.1						
ASAR	Alice Springs	42.28	199	P	P	23 24 06.4	+0.5
	comp=Z,0.3nm,0.7s,baz=20,slow=9.1,SNR=2.7						
ASAR	Alice Springs	42.28	199	P	P	23 24 05.7	-0.2
SONM	Songino Array	45.87	322	P	P	23 24 32.1	-2.4
	comp=Z,0.6nm,0.5s,baz=130,slow=7.4,SNR=3.6						
SONM	Songino Array	45.87	322	P	P	23 24 35.1	+0.6
CMAR	Chiang Mai Arr	46.35	280	P	P	23 24 36.6	-1.9
	comp=Z,1.8nm,0.3s,baz=71,slow=6.0,SNR=10						
CMAR	Chiang Mai Arr	46.35	280	P	P	23 24 38.5	-0.1
MORW	Morawa	54.77	214	P	P	23 25 42.0	+0.1
ZALV	Zalesovo Beam	60.73	323	P	P	23 26 23.2	-0.3
	comp=Z,0.5nm,0.5s,baz=116,slow=9.2,SNR=2.3						
MKAR	Makanchi Array	61.19	315	P	P	23 26 26.4	-0.4
	comp=Z,0.2nm,0.4s,baz=90,slow=6.8,SNR=4.2						
MAKZ	Makanchi	61.40	315	P	P	23 26 28.0	-0.2
MAKZ				IAmb	IAmb	23 26 44.7	
	comp=Z,2.6nm,1.1s						
KURK	Kurchatov	64.00	319	P	P	23 26 44.5	-0.9
KURK				IAmb	IAmb	23 27 01.0	
	comp=Z,1.8nm,0.8s						
NRIK	Noril'sk	64.13	340	P	P	23 26 46.0	+0.1
	comp=Z,1.9nm,0.6s,baz=98,slow=14,SNR=5.8						
KKAR	Karatay Array	69.47	310	P	P	23 27 21.1	+0.6
CHGR	Chuyangaron	70.89	306	P	P	23 27 29.5	+0.2
CHGR				IAmb	IAmb	23 27 30.2	
	comp=Z,7.9nm,0.8s						
ABKAR	Akbulak array	76.07	318	P	P	23 27 59.1	-0.4
YKA	Yellowknife Ar	78.90	28	P	P	23 28 15.9	+0.9
	comp=Z,0.2nm,0.5s,baz=282,slow=6.0,SNR=3.2						
H03S2	Juan Fernandez	134.96	121	T	T	02 05 17.8	
	SNR=24						
H03S1	Juan Fernandez	134.97	121	T	T	02 05 13.3	
	SNR=24						
H03S3	Juan Fernandez	134.97	121	T	T	02 05 10.0	
	SNR=42						

IDC 22 23:31:49.0±5.8**, 36°.58N**×**82°.35E, h0km, mb3.0**/1**,
mb1 3.3**/4**, mb1mx2.8**/51**, mbtmp3.3**/4**, ML3.0**/3**, MS3.2**/1**,
Ms1 3.2**/1**, ms1mx2.5**/21**, 1C-1D, Error ellipse:
s-maj=73.6km s-min=32.3km az=25.0, Southern
Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	8.56	317	Pn	Pn	23 33 55.9	+1.6
	0.1nm,0.3s,baz=47,slow=23,SNR=2.1						
AAK				Pg	Pg	23 34 29.0	-4.0
	0.2nm,0.3s,baz=154,slow=23,SNR=2.1						
AAK				Lg	Lg	23 36 22.2	
	0.3nm,0.3s,baz=335,slow=21,SNR=3.7						
MK31	Makanchi Array	10.21	360	⇑Pn	Pn	23 34 18.6	+1.9
	0.4nm,0.3s,baz=190,slow=13,SNR=25						
MK31				⇓Sn	Sn	23 36 17.3	+5.4
	0.5nm,0.5s,baz=187,slow=24						
MKAR	Makanchi Array	10.21	360	Pn	Pn	23 34 18.5	+1.8
	0.3nm,0.3s,baz=188,slow=13,SNR=20						
MKAR				Sn	Sn	23 36 09.7	-2.2
	0.2nm,0.3s,baz=188,slow=23,SNR=1.7						
ZALV	Zalesovo Beam	17.45	5	P	Pn	23 35 52.1	-1.6
	0.1nm,0.3s,baz=185,slow=13,SNR=4.2						
SONM	Songino Array	20.98	50	P	P	23 36 34.1	+0.3
	0.6nm,0.8s,baz=227,slow=10.0,SNR=5.1						
AKTO	Aktyubinsk	22.30	316	LR	LR	23 46 08.1	
	comp=Z,70nm,21.2s,baz=318,slow=38						

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*BJI **22** 23:32:16.0±0.0, 37°.22N×135°.45E, h365km, mB4.4/5,
mb4.4/15*
*IDC **22** 23:32:18.8±0.9, 37°.05N×135°.27E, h355km±10km,
mb3.4/17, mb1 3.5/23, mb1mx3.2/59, mbtmp4.1/23, Error
ellipse: s-maj=12.7km s-min=11.3km az=1.0*
*JMA **22** 23:32:18.6±0.1, 37°.09N×135°.35E, h353km±2km, M3.4*
ISC 22 23:32:18.3±0.6**, 37°.12N**±0°.07×**135°.39E**±0°.06**, h350km**±6km**,
n52, σ1ˢ21**/61**, mb3.7**/24**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKG	Kaga	1.13	138	P	Pn	23 33 05.4	+0.7
JKG				*e*S	S	23 33 42.3	+0.5
JSZ	Suzu	1.61	77	P	Pn	23 33 08.3	+1.3
JWT	Wachi	1.83	180	P	Pn	23 33 09.2	+0.6
JWT				S	S	23 33 48.2	-0.7
JYTA	Yamagatataniai	1.87	144	P	Pn	23 33 09.6	+0.8
JYTA				S	S	23 33 48.9	-0.4
JOI	OKI	1.91	245	P	Pn	23 33 09.8	+0.8
MAT	Matsushiro	2.33	103	P	Pn	23 33 13.2	+1.1
MAT				S	S	23 33 55.9	+0.6
MAT	Matsushiro	2.33	103	P	Pn	23 33 13.1	+1.0
MJAR	Matsushiro Arr	2.33	103	P	Pn	23 33 13.6	+1.4
	2.4nm,0.3s,baz=285,slow=9.5,SNR=160						
JSD	Sado	2.46	67	P	Pn	23 33 14.3	+1.3
JHS	Saijyo	2.80	222	P	Pn	23 33 16.2	+0.1
JWY	Kouya	2.90	177	P	Pn	23 33 17.3	+0.3
JWY				S	S	23 34 02.8	-1.3
JIE	Ise	2.92	158	P	Pn	23 33 18.1	+1.0
JIE				S	S	23 34 04.1	-0.2
JYN	Shimob	3.02	121	P	Pn	23 33 18.5	+0.5
JRY	Ryogami san	3.03	110	P	Pn	23 33 19.0	+1.0
JGT2	ShimaneMisato	3.11	230	P	Pn	23 33 19.1	+0.4
JTNC	Tanabenakahech	3.29	177	P	Pn	23 33 20.4	-0.1
JOD2	Odawara 2	3.52	121	P	Pn	23 33 23.1	+0.5
JOD2				S	S	23 34 14.2	-0.1
JTO	Tosashimizu	4.75	207	P	Pn	23 33 35.6	+0.3
JMK	Ichinoseki	4.95	67	P	Pn	23 33 38.3	+1.0
BSO1	Boso 1	5.16	117	P	Pn	23 33 38.8	-0.3
BSO1				*e*S	S	23 34 43.5	-1.1
JNU	Nakatsue	5.44	224	P	Pn	23 33 42.8	-0.1
	4.3nm,0.3s,baz=16,slow=3.2,SNR=13						
KSRS	Korea Array	5.96	275	P	Pn	23 33 49.9	+1.2
	2.6nm,0.3s,baz=96,slow=12,SNR=79						
USRK	Ussuriysk Ar.	7.53	341	P	P	23 34 08.5	+0.4
	baz=150,slow=10.0,SNR=9.0						
ASAJ	Asahikawa	8.88	36	P	Pn	23 34 23.1	+0.3
	4.2nm,0.3s,baz=197,slow=10.0,SNR=9.6						
ASAJ				S	S	23 35 57.5	-7.0
	3.4nm,0.3s,baz=352,slow=29,SNR=14						
CN2	Changchun	10.09	314	*e*P	Pn	23 34 32.5	-4.7
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
JCJ	Chichijima	11.53	148	S	S	23 36 51.5	-12
	9.6nm,0.3s,baz=282,slow=23,SNR=1.5						
KLR	Kul'dur	12.39	349	P	P	23 35 04.2	+0.1
	0.6nm,0.3s,baz=167,slow=13,SNR=12						
XAN	Xi'an	21.72	270	P	P	23 36 40.9	-1.1
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SONM	Songino Array	23.79	306	P	P	23 37 01.1	+0.5
	1.9nm,0.6s,baz=113,slow=9.4,SNR=12						
LZH	Lanzhou	25.29	277	*e*P	P	23 37 13.4	-1.0
LZH				pmax	pmax		
	comp=Z,21nm,1.6s						
GTA	Gaotai	27.92	286	*e*P	P	23 37 37.1	-0.5
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ZALV	Zalesovo Beam	38.30	313	P	P	23 39 05.2	-1.0
	0.7nm,0.3s,baz=107,slow=8.9,SNR=5.8						
ZALV				ScP	ScP	23 44 24.3	-1.2
	0.8nm,0.5s,baz=101,slow=4.7,SNR=4.8						
MKAR	Makanchi Array	39.98	301	P	P	23 39 19.2	-0.8
	1.0nm,0.5s,baz=85,slow=11,SNR=22						
KURBB	Kurchatov Arra	42.14	307	P	P	23 39 36.8	-0.5
	2.9nm,0.7s,baz=84,slow=8.3,SNR=21						
GUN	Gumba	42.34	272	*e*P	P	23 39 40.3	+0.6
	14nm,0.4s						
GKN	Gorkha	43.30	273	*e*P	P	23 39 47.4	+0.3
	7.6nm,0.3s						
DANN	Dangsing	43.85	274	*e*P	P	23 39 51.4	-0.2
	17nm,0.4s						
PYUN	Piuthan	44.57	274	*e*P	P	23 39 56.7	-0.5
	19nm,0.5s						
BVAR	Borovoye Array	46.93	311	P	P	23 40 14.4	-0.4
	1.2nm,0.4s,baz=125,slow=5.8,SNR=7.8						
KDAK	Kodiak Island	50.24	42	P	P	23 40 40.6	+0.9
	8.1nm,1.0s,baz=265,slow=3.3,SNR=5.9						
ILAR	Eielson Array	52.00	32	P	P	23 40 53.1	+0.7
	1.3nm,0.6s,baz=265,slow=6.0,SNR=22						
ARU	Arti	53.07	317	P	P	23 41 00.2	-0.2
	1.1nm,0.5s,baz=49,slow=4.7,SNR=8.8						
INK	Inuvik	56.48	26	P	P	23 41 25.7	+1.3
	1.4nm,0.4s,baz=315,slow=7.9,SNR=4.4						
WRA	Warramunga Arr	56.76	181	P	P	23 41 26.3	-0.6
	0.3nm,0.4s,baz=358,slow=7.6,SNR=10.0						
ASAR	Alice Springs	60.47	182	P	P	23 41 51.5	-0.8
	0.2nm,0.6s,baz=15,slow=12,SNR=1.5						
YKA	Yellowknife Ar	66.10	29	P	P	23 42 28.8	+0.5
	0.6nm,0.6s,baz=294,slow=6.5,SNR=12						
YKA				PcP	PcP	23 42 56.6	+1.0
	0.3nm,0.6s,baz=308,slow=4.1,SNR=4.0						
FINES	FINESS Array B	66.43	330	P	P	23 42 29.9	-0.5
	3.9nm,1.0s,baz=62,slow=7.1,SNR=9.3						
SUMG	Summit	70.52	358	*i* P	P	23 42 56.0	+0.2
PDAR	Pinedale Array	80.95	42	P	P	23 43 55.6	+0.8
	0.8nm,0.7s,baz=131,slow=0.6,SNR=6.7						
ULM	Lac du Bonnet	81.98	30	P	P	23 44 00.1	+0.5
	2.8nm,0.6s,baz=355,slow=6.8,SNR=3.1						
SCHQ	Schefferville	86.45	13	P	P	23 44 22.7	+0.8
	2.0nm,0.8s,baz=58,slow=8.6,SNR=1.7						
TXAR	Lajitas Array	93.79	49	P	P	23 44 57.6	+1.1
	0.2nm,0.6s,baz=128,slow=15,SNR=7.0						

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*CNRM **22** 23:45:58.1, 36°.29N×8°.09W, h54km, ml2.6*
*INMG **22** 23:46:00.4±1.7, 36°.51N×8°.02W, h14km±6km, ML1.4, Error
ellipse: s-maj=7.0km s-min=6.8km az=148.0*
*IGIL **22** 23:46:00.4, 36°.51N×8°.03W, h14km, ML1.4*
*MDD **22** 23:46:00.1±1.3, 36°.49N×8°.03W, h20km±7km, mbLg1.7/4,
Error ellipse: s-maj=10.2km s-min=7.6km az=7.0, PRXIMO*
ISC 22 23:45:57.1±1.4**, 36°.44N**±0°.05×**7°.97W**±0°.04**, h19km**±4km**,
n49, σ1ˢ17**/76**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	0.80	2	*e*S	Sn	23 46 24.5	-0.3
PBDV	Barranco-do-Ve	0.80	2	S	Sn	23 46 24.5	-0.3
PFVI	Vila Bisbo	0.98	315	*e*P	Pg	23 46 16.4	+0.2
PFVI				*e*S	Sn	23 46 28.5	-0.6
PFVI				A	A	23 46 32.4	
	7.1nm,0.5s						
PFVI	Vila Bisbo	0.98	315	P	Pb	23 46 16.0	+0.6
	2.5nm,0.1s,SNR=7.9						
PFVI				S	Sg	23 46 28.1	-1.0
	3.1nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	0.98	315	P	Pb	23 46 16.3	+0.9
PFVI				S	Sn	23 46 31.1	+2.1
PVAQ	Vaqueiros	0.98	12	*e*P	Pn	23 46 17.8	+1.9
PVAQ				*e*S	Sn	23 46 29.3	+0.1
PVAQ				A	A	23 46 30.3	
	3.5nm,0.3s						
PVAQ	Vaqueiros	0.98	12	P	Pn	23 46 17.8	+1.9
PVAQ				S	Sn	23 46 29.3	+0.1
	3.5nm,0.3s						
PVAQ	Vaqueiros	0.98	12	P	Pg	23 46 16.8	+0.5
PVAQ				S	Sn	23 46 32.6	+3.5
MORF	Marmelete	1.02	328	*e*P	Pg	23 46 16.9	-0.1
MORF	Marmelete	1.02	328	*e*P	Pg	23 46 17.0	-0.1
MORF				*e*S	Sn	23 46 29.7	-0.6
MORF				A	A	23 46 30.7	
	4.5nm,0.1s						
MORF	Marmelete	1.02	328	P	Pg	23 46 17.0	-0.1
MORF				S	Sn	23 46 29.7	-0.6
	4.5nm,0.1s						
EGRO	El Granado	1.16	19	P	Pb	23 46 18.8	+0.3
	0.2nm,0.1s,SNR=7.9						
EGRO				S	Sn	23 46 34.1	+0.6
	1.7nm,0.1s,SNR=10						
PCVE	Castro Verde	1.19	357	*e*P	Pg	23 46 20.2	0.0
PCVE				*e*S	Sn	23 46 34.5	+0.1
PCVE				A	A	23 46 35.6	
	3.0nm,0.1s						
PCVE	Castro Verde	1.19	357	P	Pg	23 46 20.2	0.0
PCVE				S	Sn	23 46 34.5	+0.1
	3.0nm,0.1s						
PTEO	Sao Teotonio	1.26	331	*e*P	Pb	23 46 20.5	+0.3
PTEO				*e*S	Sg	23 46 36.0	-2.0
PTEO				A	A	23 46 42.9	
	4.5nm,0.7s						
PTEO	Sao Teotonio	1.26	331	P	Pb	23 46 20.5	+0.3
PTEO				S	Sg	23 46 36.0	-2.0
	2.2nm,0.7s						
MESJ	Messejana	1.41	352	*e*P	Pn	23 46 22.9	+1.1
MESJ				*e*S	Sn	23 46 39.5	-0.3
MESJ				IAML		23 46 41.1	
	comp=N,4.8nm,0.1s						
MESJ	Messejana	1.41	352	*e*P	Pb	23 46 23.2	+0.4
MESJ				*e*S	Sn	23 46 39.8	0.0
MESJ				A	A	23 46 40.4	
	comp=N,3.9nm,0.2s						
MESJ	Messejana	1.41	352	P	Pb	23 46 23.2	+0.4
MESJ				S	Sn	23 46 39.8	0.0
	comp=N,3.9nm,0.2s						
PBEJ	Beja	1.58	3	*e*S	Sb	23 46 44.4	-1.0
PBEJ	Beja	1.58	3	S	Sb	23 46 44.4	-1.0
EMIN	Mina Concepcio	1.68	38	S	Sn	23 46 46.6	+0.2
	comp=N,0.8nm,0.3s,SNR=7.9						
PNCL	Nicolau / Gran	1.73	345	*e*Pn	Pn	23 46 26.9	+0.8
PNCL				*e*Sn	Sn	23 46 46.5	-1.1
PNCL				A	A	23 46 50.5	
	comp=N,4.0nm,0.7s						
PNCL	Nicolau / Gran	1.73	345	P	Pn	23 46 26.9	+0.8
PNCL				S	Sn	23 46 46.5	-1.1
	comp=N,4.0nm,0.7s						
EVO	Evora	2.09	359	*e*Pn	Pn	23 46 32.3	+1.2
EVO				*e*Sn	Sn	23 46 56.0	-0.5
EVO	Evora	2.09	359	P	Pn	23 46 32.3	+1.2
EVO				S	Sn	23 46 56.0	-0.5
EBAD	Badajoz	2.43	18	S	Sn	23 47 04.5	-0.5
	comp=N,1.1nm,0.2s,SNR=7.9						
PESTR	Estremoz	2.44	7	*e*Sn	Sn	23 47 05.0	-0.2
PESTR	Estremoz	2.44	7	P	Pn	23 46 36.9	+1.0
PESTR				S	Sb	23 47 08.9	-1.2
ECAB	El Cabril	2.61	51	P	Pn	23 46 40.5	+2.3
	comp=N,0.3nm,0.2s,SNR=7.3						
ECAB				S	Sn	23 47 07.6	-1.8
	comp=N,0.6nm,0.3s,SNR=5.6						
PMTG	Montargil	2.63	356	*e*Pn	Pn	23 46 39.6	+1.1
PMTG				*e*Sn	Sn	23 47 09.4	-0.5
PMTG				A	A	23 47 10.0	
	comp=N,3.3nm,0.1s						
PMTG	Montargil	2.63	356	P	Pn	23 46 39.6	+1.1
PMTG				S	Sn	23 47 09.4	-0.5
	comp=N,3.3nm,0.1s						
PMAFR	Mafra	2.72	338	*e*Pn	Pn	23 46 41.4	+1.7
PMAFR				*e*Sn	Sn	23 47 12.2	+0.1
PMAFR	Mafra	2.72	338	P	Pn	23 46 41.3	+1.5
	comp=N,1.2nm,0.1s,SNR=7.9						
PMAFR				S	Sn	23 47 11.5	-0.5
	comp=N,3.6nm,0.3s,SNR=7.9						
PMRV	Marv??o	3.02	8	*e*Pn	Pn	23 46 45.7	+1.8
PMRV				*e*Sn	Sn	23 47 19.2	-0.2
PMRV				A	A	23 47 20.4	
	comp=N,2.0nm,0.7s						
PMRV	Marv??o	3.02	8	P	Pn	23 46 45.7	+1.8
PMRV				S	Sn	23 47 19.2	-0.2
	comp=N,2.0nm,0.7s						
PSBE	So Bento	3.14	348	*e*Pn	Pn	23 46 47.3	+1.8
PSBE				*e*Sn	Sn	23 47 22.0	-0.4
EADA	Adamuz	3.21	56	P	Pn	23 46 48.5	+2.0
	comp=N,0.6nm,0.2s,SNR=7.9						
EADA				S	Sn	23 47 23.1	-1.0
	comp=N,1.0nm,0.3s,SNR=7.9						
PCBR	Castelo Branco	3.42	6	*e*Sn	Sn	23 47 29.0	-0.2
PCBR	Castelo Branco	3.42	6	S	Sn	23 47 29.0	-0.2
PCAS	Casmilo, Conde	3.63	354	*e*Sn	Sn	23 47 33.5	-1.1
PCAS	Casmilo, Conde	3.63	354	S	Sn	23 47 33.5	-1.1
AKLM	AKL	3.86	119	P	Pn	23 46 53.8	-1.8
AKLM				S	Sn	23 47 38.1	-2.4
EPLA	Plasencia	3.91	22	S	Sn	23 47 40.1	-1.4
	comp=N,0.3nm,0.2s,SNR=7.9						
MD31	MD31	4.44	143	P	Pn	23 47 03.4	-0.1
MD31				S	Sn	23 47 51.4	-3.2
MDT	Midelt	4.56	142	P	Pn	23 47 06.1	+1.0
MDT				S	Sn	23 47 54.2	-3.4
MVO	Moncorvo	4.77	9	*e*Sn	Sn	23 48 00.2	-2.6
OUK	Oukaimeden	5.22	179	P	Pn	23 47 11.9	-2.6
OUK				S	Sn	23 48 09.3	-5.0
OUZM	OUZ	5.61	169	P	Pn	23 47 19.5	-0.1
OUZM				S	Sn	23 48 21.4	-2.2

IDC 22 23:48:18.8±3.8**, 6°.42S**×**146°.10E, h0km, mb3.6**/2**,
mb1 3.9**/4**, mb1mx3.6**/32**, mbtmp3.8**/4**, ML3.0**/2**, Error
ellipse: s-maj=57.5km s-min=35.1km az=43.0, Eastern
New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.15	161	Pn	Pn	23 49 10.0	+0.4
	20nm,0.3s,baz=52,slow=4.8,SNR=15						
PMG				Sn	Sn	23 49 50.9	+3.0
	11nm,0.3s,baz=346,slow=12,SNR=6.2						
WRA	Warramunga Arr	17.64	219	P	Pn	23 52 26.4	+0.3
	0.2nm,0.3s,baz=45,slow=12,SNR=12						
ASAR	Alice Springs	20.77	213	P	P	23 53 00.6	-1.0
	0.6nm,0.5s,baz=53,slow=8.3,SNR=9.3						
FITZ	Fitzroy Crossi	23.08	238	P	P	23 53 25.8	-0.5
	3.7nm,0.7s,baz=52,slow=8.2,SNR=6.4						
TORD	Torodi Ar. Bea	144.32	284	PKP	PKPdf	00 07 59.0	+1.0
	1.2nm,1.0s,baz=73,slow=4.8,SNR=2.5						

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*IDC **23** 00:04:27.2±2.3, 2°.06S×139°.46E, h0km, mb4.0/4,
mb1 4.3/5, mb1mx3.9/22, mbtmp4.1/5, ML4.4/1, MS3.5/4,
Ms1 3.5/4, ms1mx3.0/30, Error ellipse: s-maj=72.3km
s-min=19.7km az=91.0*
*DJA **23** 00:04:28.0±0.6, 2°S±9°×13°9E±°, h10km, M4.3/5, mb4.6/1,
MLv4.2/5*
*NEIC **23** 00:04:36.0±0.8, 2°.2S±0°.1×138°.68E±0°.10, h35km±11km,
mb4.2/11, Error ellipse: s-maj=20.8km s-min=12.1km
az=206.0*
ISC 23 00:04:32.5±0.8**, 2°.09S**±0°.08×**138°.87E**±0°.05**, h29km, n36,
σ2ˢ06**/30**, mb4.1**/5**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.18	302	P	Pb	00 04 36.7	-1.7
GENI	Genyem	1.40	111	P	Pn	00 04 55.8	-0.2
JAY	Jayapura	1.89	103	P	Pn	00 05 01.1	-1.7
JAY				S	Sb	00 05 26.8	-2.7
SRPI	Serui, Papua	2.63	275	P	Pn	00 05 11.9	-1.1
BAKI	Biak	2.90	288	P	Pn	00 05 13.3	-3.4
FAKI	Fak Fak	6.66	263	P	Pn	00 06 08.4	-0.1
FAKI	Fak Fak	6.66	263	Pn	Pn	00 06 08.6	+0.1
PMG	Port Moresby	10.99	132	LR	LR	00 11 41.4	
	comp=Z,144nm,18.4s,baz=198,slow=41						
MTN	Manton Dam	13.14	215	Pn	Pn	00 07 38.2	+0.9
SOEI	Soe	16.39	242		P	00 08 23.0	-0.3
GUMO	Guam	16.68	21	LR	LR	00 14 26.4	
	comp=Z,75nm,20.6s,baz=125,slow=36						
KNRA	Kununurra	16.78	216	Pn	Pn	00 08 25.4	-0.1
KNRA				IAmb	IAmb	00 08 35.4	
	comp=Z,50nm,1.1s						
WB0	Warramunga Arr	18.11	194		P	00 08 42.6	+0.4
WB0				IAmb	IAmb	00 08 52.9	
	comp=Z,11nm,0.8s						
WR0	Warramunga Arr	18.26	193	P	P	00 08 45.5	+1.7
WR0				IAmb	IAmb	00 08 47.6	
	comp=Z,11nm,0.7s						
WRAB	Tennant Creek	18.28	194	P	Pn	00 08 44.0	-0.1
WRAB				IAmb	IAmb	00 08 50.2	
	comp=Z,14nm,0.7s						
WB2	Warramunga Arr	18.29	194	P	Pn	00 08 45.1	+0.9
WB2				IAmb	IAmb	00 08 50.3	
	comp=Z,17nm,0.6s						
WRA	Warramunga Arr	18.29	194	P	Pn	00 08 45.0	+0.8
	comp=Z,1.2nm,0.3s,baz=18,slow=11,SNR=36						
WRA				S	Sn	00 12 02.9	-4.8
	comp=Z,0.3nm,0.3s,baz=13,slow=22,SNR=7.6						
WRA	Warramunga Arr	18.29	194	P	Pn	00 08 44.5	+0.2
FITZ	Fitzroy Crossi	20.53	218	P	Pn	00 09 12.7	+1.6
	comp=Z,6.5nm,0.9s,baz=41,slow=12,SNR=9.7						
FITZ				S	S	00 12 53.7	-3.4
	comp=Z,11nm,0.8s,baz=156,slow=9.5,SNR=6.7						
AS31	Alice Springs	21.98	192	P	P	00 09 26.0	+1.7
ASAR	Alice Springs	21.98	192	P	P	00 09 25.7	+1.3
	comp=Z,11nm,0.9s,baz=21,slow=9.2,SNR=77						
ASAR				S	S	00 13 30.4	+4.7
	comp=Z,2.0nm,0.6s,baz=12,slow=24,SNR=5.9						
ASAR	Alice Springs	21.98	192	P	P	00 09 25.0	+0.7
EIDS	Eidsvold	25.97	154	P	P	00 10 04.6	+1.9
PSA00	Pilbara Seismi	26.79	222	P	P	00 10 10.2	0.0
PSA00				IAmb	IAmb	00 10 21.9	
	comp=Z,5.8nm,1.1s						
STKA	Stephens Creek	29.74	175	P	P	00 10 35.0	-1.4
	comp=Z,0.7nm,0.3s,baz=348,slow=14,SNR=2.8						
STKA				LR	LR	00 23 31.9	
	comp=Z,90nm,20.6s,baz=18,slow=38						
H11S3	WAKE ISLAND Hy	34.18	52	T	T	00 47 02.8	
	baz=236,slow=75,SNR=118						
H11S2	WAKE ISLAND Hy	34.19	52	T	T	00 47 03.6	
	baz=236,slow=75,SNR=236						
H11S1	WAKE ISLAND Hy	34.19	52	T	T	00 47 03.5	
	baz=236,slow=75,SNR=109						
H11N1	WAKE ISLAND Hy	35.02	50	T	T	00 48 10.0	
	baz=229,slow=75,SNR=7.7						
H11N2	WAKE ISLAND Hy	35.03	50	T	T	00 48 24.0	
	baz=229,slow=75,SNR=9.4						
H11N3	WAKE ISLAND Hy	35.04	50	T	T	00 48 23.9	
	baz=229,slow=75,SNR=8.5						
MKAR	Makanchi Array	69.39	322	P	P	00 15 38.7	+0.9
	comp=Z,0.3nm,0.6s,baz=104,slow=7.9,SNR=4.5						
MKAR	Makanchi Array	69.39	322	P	P	00 15 40.0	+2.2
MAKZ	Makanchi	69.59	322	P	P	00 15 41.5	+2.5
MAKZ				IAmb	IAmb	00 15 57.8	
	comp=Z,1.4nm,0.8s						
VNDA	Vanda	76.38	175	LR	LR	00 50 37.3	
	comp=Z,103nm,18.2s,baz=310,slow=36						
ABKAR	Akbulak array	84.35	320	P	P	00 17 03.9	+1.9

TAP 23 00:13:26.4, 24°.43N×121°.91E, h21km, ML1.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	Wuta	0.12	276	P	Pb	00 13 31.0	-1.9
	baz=276						
EWUT				S	Sb	00 13 34.4	-3.1
	baz=276						
ENA	Nanau	0.15	269	*e*P	Pb	00 13 31.4	-1.0
	baz=267						
ENA				S	Sb	00 13 35.0	-1.8
	baz=267						
TWC	Suao	0.18	343	P	Pb	00 13 31.9	-0.4
	baz=346						
TWC				*e*S	Sb	00 13 35.5	-1.0
	baz=346						
NDS	Dongshan	0.27	319	P	Pb	00 13 33.2	+0.5
	baz=319						
NDS				*e*S	Sb	00 13 38.2	+1.1
	baz=319						
NACB	Ninganchiao	0.38	228	*e*P	Pb	00 13 34.5	+0.2
	baz=227						
NACB				*e*S	Sb	00 13 41.0	+1.2
	baz=227						
EGS		0.41	3	P	Pb	00 13 35.5	+0.7
	baz=4.0						
ETLH	Xiulin Townshi	0.45	240	*e*P	Pb	00 13 36.4	+0.8
	baz=239						
ETLH				S	Sb	00 13 43.3	+1.5
	baz=239						
TWD	Chiawan	0.45	219	*e*P	Pb	00 13 35.9	+0.4
	baz=218						
NWLT	Wulai	0.50	313	*e*P	Pb	00 13 37.2	+0.6
	baz=313						
NWLT				*e*S	Sb	00 13 44.7	+1.2
	baz=313						
YHNB	Yeheng	0.54	296	*e*P	Pb	00 13 37.9	+0.6
	baz=296						
YHNB				*e*S	Sb	00 13 45.7	+1.1

	baz=296						
TIPB	**Shuangxi**	**0.54**	**352**	*e*P	Pb	00 13 37.9	+0.5
	baz=352						
TIPB				*e*S	Sb	00 13 45.9	+1.2
	baz=352						
NSK	**Sanguang**	**0.56**	**296**	*e*P	Pb	00 13 38.3	+0.7
	baz=296						
FUSS	**Fushou**	**0.63**	**253**	*e*P	Pn	00 13 39.9	-0.5
	baz=253						
FUSS				*e*S	Sn	00 13 49.1	-0.8
	baz=253						
WHF	**Hehuan Shan**	**0.65**	**244**	*e*P	Pb	00 13 39.9	+0.5
	baz=243						
WHF				*e*S	Sn	00 13 49.7	-0.9
	baz=243						

JMA 23 00:14:04.1±0.1**, 24°.31N**×**123°.22E, h52**^{km}±2^{km}**, M2.3, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.24**	**308**	P	Pn	00 14 13.0	0.0
YOJ				S	Sn	00 14 18.9	-0.4
JYNG	**Yonagunijimaku**	**0.29**	**299**	P	Pn	00 14 13.2	-0.1
JYNG				S	Sn	00 14 19.6	-0.3
IRIF	**Iriomote-Funau**	**0.47**	**87**	P	Pn	00 14 14.9	-0.2
IRIF				S	Sn	00 14 23.5	+0.5
HATJ	**Hateruma jima**	**0.59**	**115**	P	Pn	00 14 16.5	-0.1
HATJ				S	Sn	00 14 25.4	-0.2
JKRS	**Kuro-shima**	**0.72**	**96**	P	Pn	00 14 18.5	+0.3
JKRS				S	Sn	00 14 28.8	+0.3
JIJ	**Ishigaki jima**	**0.84**	**86**	P	Pn	00 14 19.7	-0.1
JIJ				S	Sn	00 14 31.1	-0.2
JISG	**Ishigakijimahi**	**1.03**	**74**	P	Pn	00 14 22.5	+0.2
JISG				S	Sn	00 14 36.4	+0.7
JTJ	**Tarama**	**1.39**	**76**	P	Pn	00 14 27.7	+0.6
JTJ				S	Sn	00 14 45.2	+0.8

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*IDC **23** 00:29:25.8±8.1, 2°.20N×127°.26E, h193^{km}±79^{km}, mb3.2/6, mb1 3.4/6, mb1mx2.9/54, mbtmp3.7/6, Error ellipse: s-maj=83.8km s-min=17.4km az=66.0*

*DJA **23** 00:29:28.4±1.6, 3°N±9°×12°8E±1°1, h220^{km}±11^{km}, M4.4/13, mb4.3/7, mB5.2/3, MLv4.5/13, Mw(mB)4.6/3, MwMwp6.2/1, Mwp6.2/1*

ISC 23 00:29:25.8±1.1**, 2°.8N**±0°.1×**128°.5E**±0°.1**, h200**^{km}**, n17, σ1**^{s}**.50**/17**, mb3.8**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.29**	**210**	P	**Pn**	**00 30 11.0**	**+3.6**
SGSI	**Sangihe**	**3.13**	**287**	P	**Pn**	**00 30 17.9**	**+0.9**
LBMI	**Labuha**	**3.53**	**197**	P	**Pn**	**00 30 24.3**	**+2.5**
KMSI	**Cibinong**	**5.03**	**244**	P	**Pn**	**00 30 41.1**	**+0.4**
SANI	**Sanana**	**5.41**	**208**	P	**Pn**	**00 30 46.0**	**+0.5**
	1.6nm8μm357nm,0.8s						
GTOI	**Gorontalo**	**5.90**	**249**	P	**Pn**	**00 30 53.6**	**+1.8**
	0.1nm10nm,0.5s						
LUWI	**Luwuk**	**6.88**	**237**	P	**Pn**	**00 31 05.8**	**+1.3**
	0.8nm3μm116nm,0.6s						
MRSI	**Marisa**	**6.96**	**251**	P	**Pn**	**00 31 06.9**	**+1.3**
	0.2nm16nm,0.5s						
APSI	**Ampana**	**7.78**	**242**	P	**Pn**	**00 31 16.5**	**+0.2**
	0.2nm37nm,0.5s						
SPSI	**Sidrap Palu**	**11.01**	**233**	P	**Pn**	**00 31 57.1**	**-1.0**
	24nm,0.7s						
BNSI	**Bone**	**11.02**	**230**	P	**Pn**	**00 31 58.2**	**0.0**
FITZ	**Fitzroy Crossi**	**20.92**	**188**	P	P	00 33 45.1	-8.0
	5.5nm,1.1s,baz=21,slow=8.6,SNR=3.6						
WRA	**Warramunga Arr**	**23.28**	**166**	P	**P**	**00 34 14.7**	**-1.1**
	0.9nm,0.3s,baz=342,slow=10,SNR=20						
ASAR	**Alice Springs**	**26.79**	**169**	P	**P**	**00 34 46.4**	**-1.1**
	0.8nm,0.5s,baz=354,slow=8.1,SNR=15						
ASAR				PcP	**PcP**	**00 38 04.2**	**-1.1**
	0.6nm,0.4s,baz=353,slow=2.4,SNR=9.7						
STKA	**Stephens Creek**	**36.62**	**161**	P	**P**	**00 36 12.7**	**-0.4**
	1.8nm,0.3s,baz=333,slow=9.0,SNR=9.3						
SONM	**Songino Array**	**48.79**	**340**	P	**P**	**00 37 51.2**	**+0.4**
	0.3nm,0.6s,baz=153,slow=7.7,SNR=2.8						
MKAR	**Makanchi Array**	**59.37**	**325**	P	**P**	**00 39 06.7**	**-0.4**
	0.3nm,0.4s,baz=114,slow=8.8,SNR=8.4						

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*JMA **23** 00:33:55.6±0.1, 36°.35N×140°.94E, h47^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves. NP1: φ$_s$338.00000°, δ59.00000°, λ30.00000°. NP2: φ$_s$232.00000°, δ65.00000°, λ145.00000°. Principal axes: T Plg42.0000°, Azm193.0000°; N Plg48.0000°, Azm20.0000°; P Plg4.0000°, Azm286.0000°;*

JMA Felt II J1.

*NIED **23** 00:33:55.6, 36°.35N×140°.94E, h47^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$5.31; M$_{\theta\theta}$-0.09; M$_{\phi\phi}$-5.22; M$_{r\theta}$-1.63; M$_{\theta\phi}$-1.39; M$_{\phi r}$1.06; Fault plane solution: M$_0$5.78000×10^{14} NP1: φ$_s$357.00000°, δ51.00000°, λ67.00000°. NP2: φ$_s$211.00000°, δ44.00000°, λ116.00000°.*

*NEIC **23** 00:33:57.2±2.6, 36°.39N±0°.06×140°.91E±0°.03, h36^{km}±10^{km}, mb4.1/8 Error ellipse: s-maj=9.1km s-min=3.5km az=167.0*

*IDC **23** 00:34:09.0±0.8, 35°.69N×139°.01E, h104^{km}±6^{km}, mb3.5/9, mb1 3.7/11, mb1mx3.3/57, mbtmp3.8/11, Error ellipse: s-maj=26.2km s-min=8.5km az=67.0*

ISC 23 00:33:55.9±1.1**, 36°.37N**±0°.04×**141°.01E**±0°.06**, h38**^{km}±1^{km}**, n50, σ1**^{s}**.19**/47**, mb3.8**/13**, 3C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.34**	**265**	⇓P	**Pn**	**00 34 04.4**	**+0.1**
JHYU				S	**Sn**	**00 34 10.3**	**-0.8**
JHO	**Hitachi**	**0.43**	**304**	⇑P	**Pn**	**00 34 05.2**	**-0.2**
JHO				S	**Sn**	**00 34 11.7**	**-0.6**
JYT	**Yasato**	**0.67**	**258**	⇓P	**Pn**	**00 34 08.0**	**-1.0**
JYT				S	**Sn**	**00 34 16.9**	**-1.4**
JYT	**Yasato**	**0.67**	**258**	Pn	**Pn**	**00 34 07.9**	**-1.0**
JYT				Sn	**Sn**	**00 34 16.7**	**-1.5**
ONAJ	**Iwakimizuishiy**	**0.75**	**347**	⇑P	**Pn**	**00 34 09.5**	**-0.5**
ONAJ				S	**Sn**	**00 34 19.2**	**-1.0**
JSMT	**Sammumatsuo**	**0.86**	**212**	P	**Pn**	**00 34 11.4**	**0.0**
JSMT				*e*S	**Sn**	**00 34 22.5**	**-0.2**
JFK	**Kawauchi**	**1.00**	**354**	⇑P	**Pn**	**00 34 12.8**	**-0.6**
JAG	**Ashikaga**	**1.26**	**273**	⇓P	**Pn**	**00 34 16.4**	**-0.5**
JMM	**Marumori**	**1.50**	**353**	Pn	**Pn**	**00 34 20.7**	**+0.4**
MJAR	**Matsushiro Arr**	**2.27**	**275**	P	**Pn**	**00 34 30.7**	**-0.1**
	6.5nm,0.3s,baz=101,slow=8.8,SNR=179						
MJAR				S	Sn	00 34 46.3	-11
	5.2nm,0.3s,baz=46,slow=16,SNR=7.3						
MJAR	**Matsushiro Arr**	**2.27**	**275**		**Pn**	**00 34 31.2**	**+0.4**
MAJO	**Matsushiro**	**2.27**	**275**	Pn	**Pn**	**00 34 31.0**	**+0.2**
MAT	**Matsushiro**	**2.27**	**275**	P	**Pn**	**00 34 31.4**	**+0.6**
MAT				*e*S	**Sn**	**00 34 59.8**	**+2.3**
MJB9	**Matsu-Tunnel**	**2.27**	**275**	Pn	**Pn**	**00 34 31.0**	**+0.1**
JSD	**Sado**	**2.75**	**308**	Pn	**Pn**	**00 34 37.7**	**+0.2**
JGF	**Kuroka**	**3.06**	**257**	Pn	**Pn**	**00 34 42.9**	**+1.1**
JHJ	**Hachijo jima 2**	**3.40**	**198**	P	**Pn**	**00 34 48.4**	**+2.1**
	34nm,0.3s,baz=95,slow=22,SNR=5.2						
JHJ				S	**Sn**	**00 35 23.8**	**-1.6**
	21nm,0.3s,baz=68,slow=21,SNR=1.6						
INU	**Inuyama**	**3.40**	**254**	Pn	**Pn**	**00 34 47.8**	**+1.4**
JTM	**Tenmabayashi**	**4.41**	**1**	Pn	**Pn**	**00 35 01.6**	**+1.3**
JWT	**Wachi**	**4.68**	**258**	Pn	**Pn**	**00 35 05.0**	**+1.0**
ERM	**Erimo**	**5.88**	**16**	Pn	**Pn**	**00 35 20.2**	**-0.2**
JHS	**Saijyo**	**6.57**	**260**	Pn	**Pn**	**00 35 30.5**	**+0.6**
USRK	**Ussuriysk Ar.**	**10.42**	**321**	P	Pn	00 36 29.8	+7.2
	baz=126,slow=13,SNR=5.7						
KSRS	**Korea Array**	**10.54**	**280**	P	**Pn**	**00 36 28.4**	**+4.1**
	0.3nm,0.3s,baz=92,slow=14,SNR=6.9						
SONM	**Songino Array**	**27.89**	**305**	P	**P**	**00 39 41.8**	**-0.5**
	1.3nm,0.5s,baz=107,slow=8.5,SNR=14						
SONM	**Songino Array**	**27.89**	**305**	P	**P**	**00 39 43.2**	**+0.9**
H11N2	**WAKE ISLAND Hy**	**28.10**	**119**	T	T	01 09 49.6	
	baz=312,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**28.11**	**119**	T	T	01 09 50.1	
	baz=312,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**28.11**	**119**	T	T	01 09 51.0	
	baz=312,slow=75,SNR=9.7						
H11S1	**WAKE ISLAND Hy**	**28.78**	**121**	T	T	01 10 34.4	
	baz=314,slow=75,SNR=36						
H11S3	**WAKE ISLAND Hy**	**28.78**	**121**	T	T	01 10 38.5	
	baz=314,slow=75,SNR=23						
H11S2	**WAKE ISLAND Hy**	**28.80**	**121**	T	T	01 10 38.9	
	baz=314,slow=75,SNR=19						
ZALV	**Zalesovo Beam**	**42.12**	**313**	P	**P**	**00 41 44.7**	**+0.5**
	0.6nm,0.4s,baz=99,slow=7.0,SNR=2.0						
MK31	**Makanchi Array**	**44.20**	**303**	P	**P**	**00 42 02.3**	**+1.2**
MK31				IAmb	IAmb	00 42 13.4	
	comp=Z,2.6nm,1.3s						
MKAR	**Makanchi Array**	**44.20**	**303**	P	**P**	**00 42 00.6**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=83,slow=9.9,SNR=4.3						
MKAR	**Makanchi Array**	**44.20**	**303**	P	**P**	**00 42 03.9**	**+2.7**
MAKZ	**Makanchi**	**44.41**	**303**	P	**P**	**00 42 03.3**	**+0.5**
MAKZ				IAmb	IAmb	00 42 06.3	
	comp=Z,1.4nm,0.9s						
KURK	**Kurchatov**	**46.09**	**309**	P	**P**	**00 42 16.0**	**0.0**
KURK				IAmb	IAmb	00 42 21.1	
	comp=Z,1.8nm,0.6s						
KURBB	**Kurchatov Arra**	**46.16**	**308**	P	**P**	**00 42 16.2**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=85,slow=8.1,SNR=8.6						
ILAR	**Eielson Array**	**50.23**	**32**	P	P	00 42 59.8	+12
	comp=Z,0.5nm,0.8s,baz=271,slow=5.8,SNR=4.2						
WB0	**Warramunga Arr**	**56.18**	**188**	P	**P**	**00 43 31.1**	**-0.9**
WB2	**Warramunga Arr**	**56.36**	**188**	P	**P**	**00 43 32.1**	**-1.1**
WRA	**Warramunga Arr**	**56.36**	**188**	P	**P**	**00 43 32.4**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=4.7,slow=7.5,SNR=17						
WRA	**Warramunga Arr**	**56.36**	**188**	P	**P**	**00 43 32.1**	**-1.1**
ABKAR	**Akbulak array**	**58.12**	**310**	P	**P**	**00 43 44.7**	**-0.8**
ASAR	**Alice Springs**	**60.09**	**188**	P	**P**	**00 43 59.0**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=20,slow=5.8,SNR=6.6						
ASAR	**Alice Springs**	**60.09**	**188**	P	**P**	**00 43 59.3**	**0.0**
NVAR	**Mina Array Bea**	**75.65**	**53**	P	P	00 45 52.6	+15
	comp=Z,0.3nm,0.3s,baz=291,slow=5.6,SNR=2.0						
PDAR	**Pinedale Array**	**78.36**	**45**	P	P	00 46 07.0	+14
	comp=Z,0.4nm,0.6s,baz=351,slow=0.8,SNR=4.0						
TXAR	**Lajitas Array**	**90.78**	**52**	P	P	00 47 09.6	+14
	comp=Z,0.4nm,0.8s,baz=284,slow=2.0,SNR=3.7						

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*ANF **23** 00:45:32.4±0.4, 36°.77N×98°.07W, h7^{km}, ML3.5/8, Error ellipse: s-maj=4.6km s-min=3.0km az=161.0*

*TUL **23** 00:45:32.1±0.5, 36°.76N±0°.01×98°.07W±0°.02, h6^{km}±4^{km}, ML3.3, mb_Lg2.9/59(NEIC), Error ellipse: s-maj=2.3km s-min=1.9km az=117.0*

*NEIC **23** 00:45:32.8±0.5, 36°.76N±0°.01×98°.07W±0°.02, h5^{km}±4^{km}, Error ellipse: s-maj=2.2km s-min=1.5km az=112.0*

ISC 23 00:45:32.1±0.9**, 36°.73N**±0°.02×**98°.06W**±0°.02**, h10**^{km}±7^{km}**, n82, σ0**^{s}**.69**/84**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	**Salt Plains WL**	**0.14**	**301**		**Pg**	**00 45 35.0**	**-0.3**
OK032				Sg	**Sg**	**00 45 37.1**	**-0.5**
GC02	**Grant County #**	**0.20**	**54**	Pg	**Pg**	**00 45 36.4**	**0.0**
GC02				Sg	**Sg**	**00 45 39.4**	**+0.2**
CROK	**Carrier**	**0.23**	**164**	Pg	**Pg**	**00 45 37.5**	**+0.6**
CROK				Sg	**Sg**	**00 45 41.4**	**+1.2**
KAN14	**Manchester OK**	**0.24**	**19**		**Pg**	**00 45 36.9**	**-0.2**
KAN14				Sg	**Sg**	**00 45 40.1**	**-0.3**
KAN10	**Anthony SW Sta**	**0.39**	**356**	Pg	**Pg**	**00 45 39.5**	**-0.3**
KAN10				Sg	**Sg**	**00 45 45.0**	**-0.1**
KAN17	**Caldwell West**	**0.39**	**37**		**Pg**	**00 45 39.8**	**-0.1**
KAN17				Sg	**Sg**	**00 45 45.0**	**-0.1**
KAN05	**Bluff City Nor**	**0.41**	**22**	Pg	**Pg**	**00 45 39.8**	**-0.3**
KAN05				Sg	**Sg**	**00 45 45.2**	**-0.3**
KAN01	**Argonia South**	**0.49**	**30**	Pg	**Pg**	**00 45 41.4**	**-0.2**
KAN01				Sg	**Sg**	**00 45 47.8**	**-0.2**
KAN16	**Harper SW Stat**	**0.49**	**360**	Pg	**Pg**	**00 45 41.4**	**-0.3**
KAN16				Sg	**Sg**	**00 45 47.9**	**-0.3**
KAN08	**Anthony NE Sta**	**0.50**	**8**		**Pg**	**00 45 41.6**	**-0.3**
KAN08				Sg	**Sg**	**00 45 48.2**	**-0.3**
OK035	**E0210 Rd and N**	**0.52**	**268**	Pg	**Pg**	**00 45 41.8**	**-0.4**
OK035				Sg	**Sg**	**00 45 49.4**	**+0.3**
KAN09	**Caldwell North**	**0.54**	**41**	Pg	**Pg**	**00 45 42.3**	**-0.3**
KAN09				Sg	**Sg**	**00 45 49.5**	**-0.2**
KAN06	**Argonia West S**	**0.54**	**18**		**Pg**	**00 45 42.4**	**-0.3**
KAN06				Sg	**Sg**	**00 45 49.5**	**-0.3**
KAN13	**South Haven SW**	**0.55**	**59**	Pg	**Pg**	**00 45 42.5**	**-0.3**
KAN13				Sg	**Sg**	**00 45 50.1**	**+0.1**
KAN12	**Harper NE Stat**	**0.57**	**5**	Pg	**Pg**	**00 45 42.8**	**-0.4**
KAN12				Sg	**Sg**	**00 45 50.1**	**-0.6**
BLOK	**Blackwell**	**0.68**	**87**	Pg	**Pg**	**00 45 45.1**	**-0.2**
BLOK				Sg	**Sb**	**00 45 54.9**	**-0.7**
U32A	**Winter Ranch,**	**0.83**	**245**		**Pg**	**00 45 47.8**	**-0.4**
U32A	**Winter Ranch,**	**0.83**	**245**	P	**Pg**	**00 45 48.0**	**-0.2**
	baz=63						
U32A				S	**Sb**	**00 45 59.9**	**-0.1**
	baz=63						
OK029	**Liberty Lake**	**1.05**	**152**		**Pb**	**00 45 52.2**	**-0.3**
BCOK	**Bluff Creek, N**	**1.13**	**161**		**Pg**	**00 45 53.4**	**-0.5**
OK033	**Mehan**	**1.14**	**127**		**Pg**	**00 45 53.6**	**-0.4**
OK033				Sg	**Sb**	**00 46 09.1**	**+0.4**
QUOK	**Quay**	**1.23**	**117**		**Pg**	**00 45 55.2**	**-0.5**
OK031	**S. Brethren Rd**	**1.26**	**128**		**Pg**	**00 45 55.6**	**-0.6**
T35A	**Sooner Cattle**	**1.26**	**81**		**Pg**	**00 45 55.4**	**-0.9**
T35B	**Sooner Cattle**	**1.26**	**81**	P	**Pg**	**00 45 55.5**	**-0.8**
	baz=263						
T35B				S	**Sb**	**00 46 12.6**	**+0.3**
	baz=263						
OK025	**Westminster Rd**	**1.29**	**153**	Pg	**Pn**	**00 45 56.4**	**+0.2**
OK034	**N. Norfolk Rd.**	**1.30**	**123**		**Pb**	**00 45 56.7**	**0.0**
OK030	**Cody Creek RV**	**1.31**	**127**		**Pb**	**00 45 56.8**	**0.0**
OKCFA	**Oklahoma City**	**1.40**	**159**		**Pn**	**00 45 58.0**	**+0.1**
OKCFA	**Oklahoma City**	**1.40**	**159**	P	**Pn**	**00 45 58.1**	**+0.3**
	baz=340						
OKCSW	**OKLAHOMA CITY**	**1.42**	**159**		**Pn**	**00 45 58.3**	**+0.3**
FNO	**Franklin**	**1.57**	**160**		**Pb**	**00 46 01.0**	**-0.2**
R32A	**Long Quarter,**	**1.77**	**343**		**Pn**	**00 46 03.8**	**+0.9**
R32A	**Long Quarter,**	**1.77**	**343**	P	**Pn**	**00 46 03.7**	**+0.9**
	baz=163						
R32A				S	**Sn**	**00 46 26.8**	**+1.5**
	baz=163						
W35A	**Tecumseh**	**1.85**	**148**		**Pb**	**00 46 05.3**	**-0.7**
W35A				IAmb_Lg		00 46 31.0	
	comp=Z,38nm,0.9s						
TUL1	**Leonard**	**2.01**	**113**	P	**Pn**	**00 46 07.4**	**+1.3**
	baz=296						
TUL1				S	**Sg**	**00 46 35.3**	**-1.4**
	baz=296						
WMOK	**Wichita Mounta**	**2.07**	**197**	Pn	**Pn**	**00 46 08.5**	**+1.4**
WMOK	**Wichita Mounta**	**2.07**	**197**	P	**Pn**	**00 46 08.2**	**+1.1**
	baz=16						
WMOK				S	**Sg**	**00 46 37.0**	**-1.7**
	baz=16						
X34A	**Smith Ranch, M**	**2.13**	**175**	Pn	**Pb**	**00 46 09.5**	**-1.4**
X34A				IAmb_Lg		00 46 45.0	
	comp=Z,48nm,0.8s						
CBKS	**Cedar Bluff**	**2.47**	**328**	Pn	**Pn**	**00 46 12.9**	**+0.5**
CBKS	**Cedar Bluff**	**2.47**	**328**	P	**Pn**	**00 46 13.1**	**+0.6**
	baz=147						
KSU1	**Kansas State U**	**2.63**	**25**	IAmb_Lg		00 46 57.8	
	comp=Z,46nm,0.8s						
LOOK	**Love County**	**2.83**	**165**	Pn	**Pn**	**00 46 18.6**	**+1.3**
U38A	**Gravette**	**2.97**	**95**		**Pn**	**00 46 20.6**	**+1.2**
U38A	**Gravette**	**2.97**	**95**	P	**Pn**	**00 46 20.6**	**+1.2**
	baz=277						
X37A	**Clayton**	**3.06**	**134**	Pn	**Pn**	**00 46 21.8**	**+1.2**
X37A				IAmb_Lg		00 47 16.1	
	comp=Z,39nm,0.7s						
HHAR	**Hobbs**	**3.35**	**96**	Pn	**Pn**	**00 46 25.6**	**+1.0**
AMTX	**Amarillo**	**3.47**	**239**	Pn	**Pn**	**00 46 27.6**	**+1.2**
S39A	**Bolivar**	**3.90**	**74**	Pn	**Pn**	**00 46 32.8**	**+0.6**
S39A				IAmb_Lg		00 47 36.1	
	comp=Z,19nm,0.8s						
S39A	**Bolivar**	**3.90**	**74**	P	**Pn**	**00 46 32.5**	**+0.3**
	baz=258						
N33A	**J Bar K, Exete**	**4.03**	**7**	IAmb_Lg		00 47 46.8	
	comp=Z,23nm,0.8s						
U40A	**Yellville**	**4.21**	**94**		**Pn**	**00 46 36.9**	**+0.5**
MIAR	**Mount Ida**	**4.25**	**120**	Pn	**Pn**	**00 46 38.1**	**+1.1**
MIAR				IAmb_Lg		00 47 51.6	
	comp=Z,25nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.27**	**304**	IAmb_Lg		00 47 43.3	
	comp=Z,22nm,0.8s						
ABTX	**Abilene, Hawle**	**4.30**	**198**	IAmb_Lg		00 47 51.4	
	comp=Z,19nm,0.8s						
P38A	**Dawn**	**4.59**	**50**	Pn	**Pn**	**00 46 41.6**	**0.0**
P38A				IAmb_Lg		00 47 58.9	
	comp=Z,26nm,0.7s						
MGMO	**Mountain Grove**	**4.66**	**83**		**Pn**	**00 46 43.2**	**+0.6**
BGNE	**Belgrade**	**4.67**	**359**	IAmb_Lg		00 48 11.9	
	comp=Z,28nm,0.9s						
MSTX	**Muleshoe**	**4.73**	**236**	Pn	**Pn**	**00 46 44.0**	**+0.3**
WHTX	**Lake Whitney,**	**4.75**	**174**	Pn	**Pn**	**00 46 44.0**	**+0.1**
WHTX				IAmb_Lg		00 48 14.8	
	comp=Z,14nm,1.1s						
X40A	**Basin Creek Fa**	**4.81**	**116**	Pn	**Pn**	**00 46 45.1**	**+0.4**
R40A	**Maddies Statio**	**4.86**	**70**	Pn	**Pn**	**00 46 45.2**	**-0.1**
R40A				IAmb_Lg		00 48 09.6	
	comp=Z,15nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.87**	**98**	IAmb_Lg		00 48 09.6	
	comp=Z,16nm,0.9s						
WHAR	**Wooly Hollow**	**4.90**	**105**	Pn	**Pn**	**00 46 46.3**	**+0.5**
WHAR				IAmb_Lg		00 48 17.4	
	comp=Z,18nm,1.0s						
WLAR	**White Oak Lake**	**5.06**	**125**	IAmb_Lg		00 48 26.4	
	comp=Z,24nm,0.8s						
T25A	**Trinidad**	**5.10**	**276**	IAmb_Lg		00 48 15.6	
	comp=Z,29nm,0.8s						
OGNE	**Ogallala**	**5.22**	**325**	Pn	**Pn**	**00 46 50.1**	**-0.3**
P40A	**Paris**	**5.50**	**58**	IAmb_Lg		00 48 30.1	
	comp=Z,19nm,0.9s						
N38A	**Joes South For**	**5.54**	**41**	IAmb_Lg		00 48 41.3	
	comp=Z,29nm,0.7s						
CCM	**Cathedral Cave**	**5.59**	**74**	Pn	**Pn**	**00 46 55.1**	**-0.2**
CCM				IAmb_Lg		00 48 33.7	
	comp=Z,17nm,0.8s						
LCAR	**Lake Charles**	**5.61**	**95**	Pn	**Pn**	**00 46 56.8**	**+1.2**
LCAR				IAmb_Lg		00 48 33.6	
	comp=Z,15nm,0.9s						
K31A	**O'Neill**	**5.91**	**355**	IAmb_Lg		00 48 49.6	
	comp=Z,27nm,0.7s						
435B	**Jarrell**	**5.95**	**176**	IAmb_Lg		00 48 56.4	
	comp=Z,12nm,0.8s						
FVM	**French Village**	**6.21**	**76**	IAmb_Lg		00 48 50.1	
	comp=Z,16nm,0.9s						
SCIA	**State Center**	**6.39**	**35**	IAmb_Lg		00 49 11.3	
	comp=Z,22nm,0.7s						
S44A	**Carbondale**	**7.09**	**80**	Pn	**Pn**	**00 47 16.3**	**+0.3**
SIUC	**Southern Illin**	**7.12**	**79**	IAmb_Lg		00 49 24.6	
	comp=Z,13nm,0.7s						
L40A	**Anamosa**	**7.51**	**43**	IAmb_Lg		00 49 40.3	
	comp=Z,14nm,0.8s						
OLIL	**Olney**	**8.14**	**73**	IAmb_Lg		00 49 55.6	
	comp=Z,20nm,0.9s						
O44A	**Mansfield**	**8.27**	**63**	IAmb_Lg		00 49 55.4	
	comp=Z,15nm,0.8s						
RWWY	**Rawlins**	**8.65**	**308**	IAmb_Lg		00 50 15.1	
	comp=Z,12nm,1.1s						
K22A	**Casper**	**8.80**	**315**	IAmb_Lg		00 50 25.0	
	comp=Z,14nm,1.1s						

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*NIED **23** 00:54:32.4, 31°.38N×128°.68E, h15^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.92; M$_{\theta\theta}$3.50; M$_{\phi\phi}$-2.59; M$_{r\theta}$0.30; M$_{\theta\phi}$3.02; M$_{\phi r}$-1.21; Fault plane solution: M$_0$4.52000×10^{14} NP1:φ$_s$24.00000°, δ77.00000°, λ-164.00000°. NP2:φ$_s$291.00000°, δ75.00000°, λ-13.00000°.*

JMA 23 00:54:32.3±0.3**, 31°.38N**×**128°.68E, h15**^{km}±3^{km}**, M3.8, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.93**	**71**	P	Pb	00 54 49.5	-0.7
JSJ				S	Sb	00 55 01.9	-0.5
JFU	**Fukue jima 2**	**1.27**	**3**	P	Pn	00 54 55.3	-0.3
JFU				S	Sb	00 55 11.7	-0.5
JSU	**Suzuyama**	**1.52**	**85**	P	Pb	00 54 59.7	-0.6
JYAK	**Yakushimahirau**	**1.94**	**125**	P	Pn	00 55 04.4	-0.4
JTN	**Tanegashima 3**	**2.10**	**110**	P	Pn	00 55 07.2	+0.2
JTZ	**Takazaki**	**2.12**	**75**	P	Pn	00 55 08.0	+0.8
JMTN	**Minamitane**	**2.15**	**117**	P	Pn	00 55 08.6	+1.0
JIU3	**Izumi3**	**2.15**	**57**	P	Pn	00 55 08.7	+1.0

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*IDC **23** 01:03:11.9±1.4, 28°.13S×74°.19E, h0^{km}, mb4.1/8, mb1 4.3/8, mb1mx3.8/35, mbtmp4.1/8, MS3.4/2, Ms1 3.5/2, ms1mx3.0/40, Error ellipse: s-maj=47.1km s-min=24.5km az=33.0*

*NEIC **23** 01:03:14.9±0.6, 28°.1S±0°.1×74°.3E±0°.2, h10^{km}±1^{km}, mb4.6/9, Error ellipse: s-maj=25.6km s-min=20.3km az=93.0*

ISC 23 01:03:14.2±1.0**, 28°.1S**±0°.2×**74°.3E**±0°.2**, h10**^{km}**, n27, σ0**^{s}**.61**/23**, mb4.3**/12**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**20.41**	**355**	T	T	01 28 55.5	
	baz=176,slow=76,SNR=12						
H08S1	**Diego Carcia H**	**20.41**	**355**	T	T	01 28 55.7	
	baz=176,slow=76,SNR=8.2						
H08S3	**Diego Garcia H**	**20.43**	**355**	T	T	01 28 58.0	
	baz=176,slow=76,SNR=9.8						
PSI	**Prapat**	**38.76**	**42**	LR	LR	01 22 47.4	
	comp=Z,74nm,19.4s,baz=209,slow=30						
LSZ	**Lusaka**	**44.50**	**277**	P	**P**	**01 11 27.4**	**+1.1**
LSZ				IAmb	IAmb	01 11 28.0	
	comp=Z,3.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**52.04**	**30**	P	**P**	**01 12 24.6**	**+0.4**
	comp=Z,1.7nm,0.4s,baz=206,slow=7.7,SNR=5.3						
CMAR				LR	LR	01 31 48.9	
	comp=Z,26nm,20.6s,baz=200,slow=33						
CMAR	**Chiang Mai Arr**	**52.04**	**30**	P	**P**	**01 12 25.1**	**+0.9**
ASAR	**Alice Springs**	**53.32**	**100**	P	**P**	**01 12 33.6**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=247,slow=6.9,SNR=24						
ASAR	**Alice Springs**	**53.32**	**100**	P	**P**	**01 12 33.4**	**-0.5**
WRA	**Warramunga Arr**	**54.94**	**96**	P	**P**	**01 12 45.9**	**+0.1**
	comp=Z,5.2nm,0.8s,baz=252,slow=7.5,SNR=26						
WRA	**Warramunga Arr**	**54.94**	**96**	P	**P**	**01 12 46.0**	**+0.3**
WB2	**Warramunga Arr**	**54.95**	**96**	P	**P**	**01 12 46.0**	**+0.2**
WRAB	**Tennant Creek**	**54.95**	**96**	P	**P**	**01 12 46.1**	**+0.3**
WRAB				IAmb	IAmb	01 12 46.6	
	comp=Z,7.2nm,0.8s						
WB0	**Warramunga Arr**	**55.05**	**95**	P	**P**	**01 12 46.2**	**-0.3**
WR0	**Warramunga Arr**	**55.11**	**96**	P	**P**	**01 12 47.0**	**0.0**
WR0				IAmb	IAmb	01 12 48.1	
	comp=Z,9.4nm,1.1s						
STKA	**Stephens Creek**	**57.53**	**112**	P	**P**	**01 13 04.4**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=244,slow=8.0,SNR=3.8						
KKAR	**Karatay Array**	**70.93**	**357**	P	**P**	**01 14 32.0**	**+0.5**
MKAR	**Makanchi Array**	**74.88**	**6**	P	**P**	**01 14 54.1**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=190,slow=6.2,SNR=4.7						
MKAR	**Makanchi Array**	**74.88**	**6**	P	**P**	**01 14 54.4**	**-0.5**
ABKAR	**Akbulak array**	**78.06**	**350**	P	**P**	**01 15 12.8**	**0.0**
BRVK	**Borovoye**	**80.88**	**358**	P	**P**	**01 15 28.5**	**+0.4**
BRVK				IAmb	IAmb	01 15 29.4	
	comp=Z,4.1nm,0.8s						
SONM	**Songino Array**	**80.88**	**21**	P	**P**	**01 15 28.2**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=204,slow=8.8,SNR=4.6						
TORD	**Torodi Ar. Bea**	**81.33**	**290**	P	**P**	**01 15 30.1**	**-1.3**
	comp=Z,0.9nm,0.9s,baz=116,slow=3.7,SNR=6.7						
TORD	**Torodi Ar. Bea**	**81.33**	**290**	P	**P**	**01 15 30.8**	**-0.6**
ZALV	**Zalesovo Beam**	**82.20**	**6**	P	**P**	**01 15 34.4**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=212,slow=5.1,SNR=2.4						
YKA	**Yellowknife Ar**	**145.09**	**7**	PKPbc	**PKPbc**	**01 22 49.9**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=334,slow=4.1,SNR=18						
YKA	**Yellowknife Ar**	**145.09**	**7**		**PKPbc**	**01 22 50.2**	**-0.5**

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*IDC **23** 01:18:34.5±1.8, 10°.24S×116°.89E, h0^{km}, mb3.6/3, mb1 3.7/6, mb1mx3.2/46, mbtmp3.6/6, ML3.3/2, MS2.8/1, Ms1 2.8/1, ms1mx2.5/32, Error ellipse: s-maj=63.3km s-min=21.7km az=55.0*

*DJA **23** 01:18:41.6±0.5, 10°S±6°×11°7E±°, h10^{km}, M3.9/7, MLv3.9/7*

ISC 23 01:18:39.0±1.1**, 9°.98S**±0°.08×**117°.43E**±0°.04**, h10**^{km}**, n14, σ1**^{s}**.85**/18**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**1.34**	**336**	P	**Pg**	**01 19 05.1**	**+0.3**
TWSI				S	**Sb**	**01 19 20.3**	**-1.3**
WBSI	**Waikabubak, Su**	**1.96**	**80**	P	**Pn**	**01 19 13.8**	**+1.4**
WBSI				S	**Sn**	**01 19 38.8**	**+1.7**
IGBI	**Denpasar**	**2.53**	**297**	P	**Pn**	**01 19 22.1**	**+1.9**
IGBI				S	**Sn**	**01 19 51.7**	**+0.6**
DNP	**Denpasar**	**2.54**	**300**	P	**Pn**	**01 19 23.2**	**+2.9**
DNP				S	**Sn**	**01 19 52.6**	**+1.2**
JAGI	**Jajag, Banyuwa**	**3.56**	**295**	P	**Pn**	**01 19 36.9**	**+2.5**
GMJI	**Gumukmas**	**4.28**	**293**	P	**Pn**	**01 19 45.5**	**+1.2**
EDFI	**Ende, Flores**	**4.38**	**74**	P	**Pn**	**01 19 47.6**	**+1.9**
BKSI	**Bulukumba**	**5.34**	**30**	P	**Pn**	**01 19 59.6**	**+0.8**
KAPI	**Kappang**	**5.44**	**25**	Pn	**Pn**	**01 20 02.8**	**+2.6**
	1.7nm,0.3s,baz=214,slow=12,SNR=4.7						
KAPI				Sn	**Sn**	**01 21 04.1**	**+1.2**
	3.7nm,0.3s,baz=140,slow=21,SNR=11						
KAPI				LR	LR	01 22 34.3	
	comp=Z,81nm,18.0s,baz=240,slow=41						

FITZ	Fitzroy Crossi	11.34	136	Pn	Pn	01 21 19.4	-1.7
	baz=300,slow=20						
WRA	Warramunga Arr	19.09	123	P	P	01 23 02.4	+0.3
	0.1nm,0.3s,baz=298,slow=14,SNR=4.7						
ASAR	Alice Springs	20.80	133	P	P	01 23 20.4	-0.2
	1.3nm,0.8s,baz=302,slow=9.6,SNR=11						
SONM	Songino Array	58.38	351	P	P	01 28 33.1	-1.6
	0.7nm,0.5s,baz=166,slow=8.6,SNR=7.3						
MKAR	Makanchi Array	64.63	334	P	P	01 29 13.9	-2.9
	0.7nm,0.8s,baz=145,slow=7.2,SNR=5.2						

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*NEIC **23** 01:19:15.8±1.0, 6°.9S±0°.1×155°.82E±0°.10, h43^{km}±8^{km}, mb4.1/9, Error ellipse: s-maj=22.8km s-min=11.0km az=207.0*

*IDC **23** 01:19:29.7±7.3, 7°.16S×155°.53E, h168^{km}±58^{km}, mb3.8/7, mb1 3.9/8, mb1mx3.3/48, mbtmp4.2/8, Error ellipse: s-maj=53.1km s-min=25.4km az=94.0*

ISC 23 01:19:16.1±0.8, **6°.9S**±0°.1×**155°.8E**±0°.2, **h50**^{km}, **n25**, σ**0^{s}.88**/24, **mb4.1**/11, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	4.49	307	Pn	Pn	01 20 21.0	-0.7
PMG	Port Moresby	8.88	253	P	Pn	01 21 30.7	+8.9
	3.3nm,0.3s,baz=51,slow=8.5,SNR=4.5						
WR0	Warramunga Arr	24.34	236	P	P	01 24 29.6	+0.1
WR0				IAmb	IAmb	01 24 32.2	
	comp=Z,4.7nm,0.8s						
WB0	Warramunga Arr	24.37	236	P	P	01 24 29.6	-0.2
WB0				IAmb	IAmb	01 24 31.3	
	comp=Z,4.3nm,0.8s						
WB2	Warramunga Arr	24.49	236	P	P	01 24 30.9	0.0
WB2				IAmb	IAmb	01 24 32.1	
	comp=Z,5.3nm,1.0s						
WRA	Warramunga Arr	24.50	236	P	P	01 24 30.6	-0.4
	comp=Z,3.4nm,0.7s,baz=60,slow=9.9,SNR=18						
WRA	Warramunga Arr	24.50	236	P	P	01 24 30.5	-0.4
ASAR	Alice Springs	26.80	229	P	P	01 24 51.1	-0.7
	comp=Z,0.4nm,0.4s,baz=60,slow=10,SNR=5.8						
ASAR	Alice Springs	26.80	229	P	P	01 24 51.9	+0.1
FITZ	Fitzroy Crossi	31.39	246	P	P	01 25 32.4	-0.2
	comp=Z,3.8nm,0.8s,baz=83,slow=16,SNR=2.0						
TUWZ	Tuamarina	37.99	158	P	P	01 26 28.1	-1.1
CMAR	Chiang Mai Arr	61.44	295	P	P	01 29 29.1	+1.2
	comp=Z,1.1nm,0.3s,baz=113,slow=5.1,SNR=5.4						
SONM	Songino Array	69.69	327	P	P	01 30 22.0	+1.2
	comp=Z,2.9nm,0.7s,baz=143,slow=6.8,SNR=19						
SONM	Songino Array	69.69	327	P	P	01 30 21.5	+0.8
SONM				IAmb	IAmb	01 30 23.0	
	comp=Z,2.1nm,0.8s						
VNDA	Vanda	70.64	179	P	P	01 30 27.7	+1.7
DOT	Dot Lake	83.49	23	P	P	01 31 38.2	-0.1
DOT				IAmb	IAmb	01 31 48.6	
	comp=Z,1.2nm,1.0s						
MK31	Makanchi Array	83.85	319	P	P	01 31 40.1	-0.4
MKAR	Makanchi Array	83.85	319	P	P	01 31 40.8	+0.3
	comp=Z,2.0nm,0.7s,baz=102,slow=5.6,SNR=22						
MKAR	Makanchi Array	83.85	319	P	P	01 31 40.5	0.0
MAKZ	Makanchi	84.06	318	P	P	01 31 42.1	+0.5
ZALV	Zalesovo Beam	84.54	326	P	P	01 31 42.9	-0.9
	comp=Z,0.8nm,0.3s,baz=117,slow=4.8,SNR=5.5						
ZALV	Zalesovo Beam	84.54	326	P	P	01 31 42.6	-1.2
BDFB	Brasilia	147.49	134	PKPbc	PKPbc	01 38 55.3	-0.6
	comp=Z,2.1nm,0.7s,baz=315,slow=2.9,SNR=3.9						
BDFB	Brasilia	147.49	134		PKPdf	01 38 53.9	+0.6
TORD	Torodi Ar. Bea	153.74	286	PKPbc	PKPbc	01 39 08.8	-2.0
	comp=Z,0.4nm,0.8s,baz=59,slow=2.5,SNR=2.2						

GUC 23 01:29:58.3±0.6, **30°.60S**×**71°.29W**, **h54**^{km}±3^{km}, **ML3.6**, **1C-2D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.31	256	⇑*i*P	Pn	01 30 07.7	-0.2
CO06				IAML		01 30 17.8	
	comp=E,6μm,0.3s						
CO03	El Pedregal	0.57	115	⇓*i*P	Pn	01 30 10.8	+0.1
CO03				*e*S	Sn	01 30 19.8	+0.1
CO03				IAML		01 30 20.6	
	comp=E,10μm,0.1s						
GO04	Tololo Observa	0.60	45	⇓*i*P	Pn	01 30 11.4	+0.2
GO04				*e*S	Sn	01 30 20.7	+0.1
CO05	La Serena	0.68	4	*e*P	Pn	01 30 12.1	+0.1
CO05				*e*S	Sn	01 30 21.7	-0.2
CO05				IAML		01 30 22.9	
	comp=E,3μm,0.2s						
LCO	Las Campanas	1.66	18	*e*P	Pn	01 30 23.4	-2.0
LCO				*e*S	Sn	01 30 45.4	-0.4
VA06	Catapilco	1.96	180	*e*P	Pn	01 30 29.8	+0.7
VA06				IAML		01 31 01.2	
	comp=E,501nm,0.5s						
VA03	San Esteban	2.25	164	*e*P	Pn	01 30 34.0	+0.9
VA03				IAML		01 31 05.9	
	comp=E,583nm,0.2s						
ROCH	El Roble	2.38	174	*e*P		01 30 35.8	
ROCH				*e*P	Pn	01 30 35.6	+0.5
ROCH				IAML		01 31 13.7	
	comp=N,366nm,0.3s						
AC04	Llanos de Chal	2.39	5	*e*P	Pn	01 30 36.1	+1.1
AC04				IAML		01 31 19.0	
	comp=N,212nm,0.2s						
PEL	Peldehue	2.59	169	*e*P	Pn	01 30 38.7	+0.9
PEL				IAML		01 31 17.4	
	comp=N,166nm,0.2s						
MT02	Curacav	2.65	177	*e*P	Pn	01 30 39.0	+0.3
MT05	Renca	2.82	171	*e*P	Pn	01 30 43.2	+2.2
MT05				IAML		01 31 23.2	
	comp=E,323nm,0.4s						
FCH	Farellones	2.85	163	*e*P	Pn	01 30 43.6	+2.0
FCH				IAML		01 31 25.4	
	comp=E,142nm,0.2s						
GO03	Copiap	3.13	17	*e*P	Pn	01 30 46.3	+1.0
GO03				IAML		01 31 38.5	
	comp=E,122nm,0.4s						
MT09	Talagante	3.18	175	*e*P	Pn	01 30 46.8	+0.9
MT09				IAML		01 31 36.7	
	comp=N,134nm,0.3s						
MT01	Popeta	3.25	179	*e*P	Pn	01 30 47.2	+0.3
LMEL	Las Melosas	3.37	164	*e*P	Pn	01 30 50.5	+2.0
LMEL				IAML		01 31 38.7	
	comp=N,169nm,0.3s						
BO04	La Punta	3.43	171	*e*P	Pn	01 30 50.3	+1.0
BO04				IAML		01 31 37.8	
	comp=N,89nm,0.5s						
BO01	Tunca	3.79	177	*e*P	Pn	01 30 54.7	+0.5
BO02	Sierra Bellavi	4.20	174	*e*P	Pn	01 31 00.6	+0.7
AC02	Maricunga	4.20	27	*e*P	Pn	01 31 02.0	+1.7

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*IDC **23** 01:40:00.9±2.2, 32°.61S×71°.70W, h0^{km}, mb3.9/1, mb1 4.0/2, mb1mx3.7/23, mbtmp3.9/2, ML4.2/1, Error ellipse: s-maj=117.4km s-min=42.8km az=93.0*

*GUC **23** 01:40:04.2±0.8, 32°.68S×71°.80W, h32^{km}±4^{km}, ML3.8*

*NEIC **23** 01:40:04.7±1.9, 32°.70S±0°.04×71°.75W±0°.04, h23^{km}±6^{km}, mb4.3/3, ML3.8(GUC), Error ellipse: s-maj=7.2km s-min=3.2km az=223.0*

ISC 23 01:40:04.2±1.1, **32°.68S**±0°.03×**71°.78W**±0°.05, **h26**^{km}±7^{km}, **n46**, σ**0^{s}.74**/64, **mb4.2**/4, **3C-3D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA01	Torpederas	0.36	161	*e*P	Pb	01 40 12.0	-0.2
VA01				*e*S	Sb	01 40 17.7	0.0
VA01				IAML		01 40 18.8	
	comp=N,17μm,0.1s						
VA01	Torpederas	0.36	161	Pg	Pb	01 40 12.2	0.0
VA01				Sg	Sb	01 40 17.5	-0.2
VA06	Catapilco	0.43	74	⇓*e*P	Pb	01 40 13.5	+0.2
VA06				*e*S	Sb	01 40 19.8	+0.4
VA06				IAML		01 40 20.5	
	comp=N,23μm,0.2s						
ROCH	El Roble	0.71	114	⇑*e*P	Pn	01 40 18.2	-0.7
ROCH				⇓*e*P	Pb	01 40 18.0	-0.2
ROCH				*e*S	Sn	01 40 28.1	-1.0
ROCH				*e*S	Sn	01 40 28.1	-1.0
ROCH				IAML		01 40 29.5	
	comp=N,5μm,0.6s						
ROCH				IAML		01 40 32.2	
	comp=N,6μm,0.2s						
MT02	Curacav	0.79	137	*e*P	Pb	01 40 19.2	-0.2
MT02				*i* S	Sn	01 40 29.9	-0.9
MT02				IAML		01 40 30.3	
	comp=N,3μm,0.1s						
MT02	Curacav	0.79	137		Pb	01 40 19.0	-0.4
MT02				Sg	Sb	01 40 29.8	0.0
PEL	Peldehue	1.03	117	⇑*e*P	Pn	01 40 22.6	-0.5
PEL				*e*S	Sn	01 40 37.3	+0.5
PEL				IAML		01 40 41.0	
	comp=N,9μm,0.2s						
PEL	Peldehue	1.03	117		Pn	01 40 22.9	-0.3
VA03	San Esteban	1.04	95	⇓*e*P	Pb	01 40 23.2	-0.5
VA03				*e*S	Sn	01 40 37.5	+0.4
VA03				IAML		01 40 38.3	
	comp=E,7μm,0.1s						
VA03	San Esteban	1.04	95	Pn	Pn	01 40 23.0	-0.3
MT05	Renca	1.13	129	⇑*e*P	Pb	01 40 24.9	-0.3
MT05				*i* S	Sn	01 40 39.8	+0.6
MT05				IAML		01 40 45.5	
	comp=E,11μm,0.5s						
MT05	Renca	1.13	129	Pn	Pb	01 40 24.7	-0.5
MT01	Popeta	1.26	159	*e*P	Pn	01 40 26.2	0.0
MT01				*e*S	Sb	01 40 42.9	-0.3
MT01				IAML		01 40 46.3	
	comp=E,2μm,0.2s						
MT01	Popeta	1.26	159	Pn	Pn	01 40 26.2	0.0
MT09	Talagante	1.28	149	*e*P	Pn	01 40 26.7	+0.1
MT09				*e*S	Sb	01 40 43.6	-0.3
MT09				IAML		01 40 47.4	
	comp=N,3μm,0.4s						
MT09	Talagante	1.28	149	Pn	Pn	01 40 26.9	+0.2
FCH	Farellones	1.41	118	*e*P	Pb	01 40 29.5	-0.6
FCH				*e*S	Sb	01 40 48.5	+0.8
FCH				IAML		01 40 51.6	
	comp=N,3μm,0.3s						
BO04	La Punta	1.64	143	*e*P	Pb	01 40 32.5	-1.2
BO04				*e*S	Sb	01 40 53.8	-0.2
BO04				IAML		01 41 02.7	
	comp=E,2μm,0.2s						
LMEL	Las Melosas	1.77	132	*e*P	Pb	01 40 34.9	-1.1
LMEL				*i* S	Sb	01 40 57.8	+0.1
LMEL				IAML		01 41 03.4	
	comp=N,4μm,0.4s						
BO01	Tunca	1.81	161	*e*P	Pn	01 40 34.4	+0.7
BO01				*i* S	Sb	01 40 57.8	-1.0
BO01				IAML		01 41 07.3	
	comp=E,579nm,0.3s						
BO01	Tunca	1.81	161		Pn	01 40 34.2	+0.5
CO06	Fray Jorge	2.00	4	Pn	Pn	01 40 36.2	-0.1
CO03	El Pedregal	2.06	27	*e*P	Pn	01 40 38.0	+0.8
CO03				*e*S	Sb	01 41 04.3	-1.8
CO03				IAML		01 41 14.0	
	comp=E,863nm,0.1s						
CO03	El Pedregal	2.06	27	Pn	Pn	01 40 37.7	+0.4
BO02	Sierra Bellavi	2.27	159	Pn	Pn	01 40 41.0	+0.9
GO05	Huala	2.33	183	Pn	Pn	01 40 40.1	-0.8
GO04	Tololo Observa	2.64	19		Pn	01 40 45.4	0.0
CO05	La Serena	2.79	10	Pn	Pn	01 40 49.9	+2.7
ZON	Zonda	2.87	68	Pn	Pn	01 40 49.6	+1.3
ML02	Panimavida	3.09	174	Pn	Pn	01 40 51.6	+0.3
AC04	Llanos de Chal	4.50	8	Pn	Pn	01 41 09.3	-1.5
GO03	Copiap	5.24	15	Pn	Pn	01 41 20.8	-0.2
LC01	Cunco	6.21	181	Pn	Pn	01 41 33.3	-0.9
AC02	Maricunga	6.26	22	Pn	Pn	01 41 35.5	0.0
PLCA	Paso Flores	8.10	173	Pn	Pn	01 42 00.7	+0.5
	comp=E,0.7nm,0.3s,baz=336,slow=13,SNR=24						
PLCA	Paso Flores	8.10	173	Pn	Pn	01 42 01.2	+1.0
BOAV	Boa Vista	36.48	19	P	P	01 47 07.3	0.0
BOAV				IAmb	IAmb	01 47 32.0	
	comp=Z,4.9nm,1.1s						
SNAA	Sanae	52.73	158	P	P	01 49 16.6	+0.2
SNAA				IAmb	IAmb	01 49 42.5	
	comp=Z,3.0nm,1.2s						
QSPA	South Pole Qui	57.55	180	P	P	01 49 51.0	-0.3
QSPA				IAmb	IAmb	01 49 59.3	
	comp=Z,6.7nm,1.4s						
TXAR	Lajitas Array	68.69	330	P	P	01 51 06.6	+1.0
TORD	Torodi Ar. Bea	83.56	70	P	P	01 52 30.6	+0.2
	comp=Z,0.7nm,0.7s,baz=252,slow=6.2,SNR=5.5						
BVAR	Borovoye Array	146.16	42	PKPbc	PKPab	01 59 42.6	+0.2
	comp=Z,0.8nm,0.6s,baz=270,slow=5.9,SNR=5.3						
KURBB	Kurchatov Arra	151.75	42	PKPbc	PKPbc	01 59 56.4	+0.3
	comp=Z,1.2nm,0.5s,baz=302,slow=3.1,SNR=9.6						
KURK	Kurchatov	151.76	42		PKPbc	01 59 55.3	-0.8
ZALV	Zalesovo Beam	152.99	31	PKPbc	PKPbc	01 59 58.9	+0.2
	comp=Z,1.4nm,0.6s,baz=299,slow=2.9,SNR=7.5						
ZALV	Zalesovo Beam	152.99	31		PKPbc	01 59 58.5	-0.2

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*IDC **23** 01:40:08.5±1.6, 0°.47N×122°.11E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.3/40, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=140.7km s-min=25.2km az=63.0*

*DJA **23** 01:40:31.9±1.3, 0°N±9°×12°2E±°, h181^{km}±11^{km}, M3.1/7, MLv3.1/7*

ISC 23 01:40:29.8±1.0, **0°.3N**±0°.1×**122°.1E**±0°.1, **h201**^{km}±9^{km}, **n9**, σ**0^{s}.92**/10, **mb3.4**/3, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	Marisa	0.25	311	P	Pn	01 40 56.2	-0.1
GTOI	Gorontalo	0.94	70	P	Pn	01 40 59.7	+0.5
GTOI				S	S	01 41 21.3	-0.5
APSI	Ampana	1.31	202	P	Pn	01 41 02.6	+0.7
LUWI	Luwuk	1.49	155	P	Pn	01 41 04.2	+0.7
MPSI	Mapaga	2.23	271	P	Pn	01 41 11.0	+0.2
FITZ	Fitzroy Crossi	18.62	169	P	P	01 44 31.0	-1.4
	0.1nm,0.3s,baz=350,slow=9.9,SNR=1.2						
WRA	Warramunga Arr	23.41	150	P	P	01 45 19.9	-1.1
	0.9nm,0.5s,baz=325,slow=11,SNR=13						
ASAR	Alice Springs	26.44	155	P	P	01 45 48.9	+0.5
	0.4nm,0.5s,baz=341,slow=14,SNR=6.4						
MKAR	Makanchi Array	57.90	329	P	P	01 50 01.4	+0.6
	0.3nm,0.4s,baz=123,slow=8.8,SNR=4.3						

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*IDC **23** 02:04:32.7±1.7, 0°.29N×123°.74E, h0^{km}, mb4.0/7, mb1 4.2/8, mb1mx3.6/53, mbtmp4.0/8, ML4.4/1, Error ellipse: s-maj=87.3km s-min=17.0km az=82.0*

*NEIC **23** 02:04:47.2±1.6, 0°.08N±0°.06×123°.20E±0°.09, h141^{km}±9^{km}, mb4.0/9, Error ellipse: s-maj=14.4km s-min=6.0km az=63.0*

*DJA **23** 02:04:48.6±0.4, 0°S±4°×12°3E±°, h133^{km}±6^{km}, M4.3/11, mb4.6/2, MLv4.2/11*

ISC 23 02:04:47.4±0.6, **0°.04S**±0°.06×**123°.18E**±0°.06, **h150**^{km}, **n36**, σ**1^{s}.15**/39, **mb3.9**/13, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.00	53	P	Pn	02 05 13.0	+0.8
LUWI	Luwuk	1.08	202	P	Pn	02 05 12.9	0.0
LUWI				S	Sn	02 05 31.4	-0.9
LUWI	Luwuk	1.08	202	Pn	Pn	02 05 12.8	0.0
LUWI				Sn	Sn	02 05 31.2	-1.1
MRSI	Marisa	1.34	292	P	Pn	02 05 15.6	+0.3
MRSI				S	Sn	02 05 36.0	-0.7
APSI	Ampana	1.76	241	P	Pn	02 05 19.9	+0.1
TOLI2	Tolitoli	2.66	295	Pn	Pn	02 05 31.0	+0.5
MPSI	Mapaga	3.31	277	P	Pn	02 05 40.8	+2.2
SANI	Sanana	3.44	125	P	Pn	02 05 38.8	-1.6
TNTI	Ternate	4.26	79	P	Pn	02 05 51.0	-0.1
TNTI	Ternate	4.26	79		Sn	02 06 42.1	+1.5
LBMI	Labuha	4.36	98	P	Pn	02 05 51.8	-0.5
FAKI	Fak Fak	9.50	108	P	Pn	02 07 00.5	-0.4
FAKI	Fak Fak	9.50	108	Pn	Pn	02 06 59.8	-1.1
MTN	Manton Dam	14.97	149	Pn	Pn	02 08 11.9	+0.5
KNRA	Kununurra	16.49	161		P	02 08 31.6	+1.5
FITZ	Fitzroy Crossi	18.11	172	P	Pn	02 08 49.0	-0.5
	0.9nm,0.3s,baz=8.0,slow=9.6,SNR=7.6						
WB0	Warramunga Arr	22.47	151	P	P	02 09 34.2	-0.1
WB0				IAmb	IAmb	02 09 35.6	
	comp=Z,5.6nm,0.5s						
WRA	Warramunga Arr	22.60	152	P	P	02 09 35.6	0.0
	comp=Z,3.8nm,0.5s,baz=332,slow=10,SNR=89						
WRA	Warramunga Arr	22.60	152	P	P	02 09 36.5	+0.9
WB2	Warramunga Arr	22.60	152	P	P	02 09 36.1	+0.5
WB2				IAmb	IAmb	02 10 04.9	
	comp=Z,6.2nm,1.1s						
ASAR	Alice Springs	25.69	157	P	P	02 10 06.0	+2.2
	comp=Z,0.4nm,0.4s,baz=346,slow=13,SNR=8.3						
ASAR	Alice Springs	25.69	157	P	P	02 10 05.1	+1.4
STKA	Stephens Creek	36.14	153	P	P	02 11 36.5	+1.3
	comp=Z,1.1nm,0.4s,baz=326,slow=9.8,SNR=3.2						
STKA	Stephens Creek	36.14	153	P	P	02 11 36.0	+0.7
MJAR	Matsushiro Arr	38.98	19	P	P	02 11 57.5	-1.5
	comp=Z,0.8nm,0.3s,baz=190,slow=8.5,SNR=4.8						
CAN	Canberra	42.56	148	P	P	02 12 31.0	+2.5
CAN				IAmb	IAmb	02 12 41.9	
	comp=Z,4.7nm,0.9s						
USRK	Ussuriysk Ar.	44.74	9	P	P	02 12 45.7	0.0
	comp=Z,1.3nm,0.5s,baz=193,slow=7.9,SNR=1.8						
USRK	Ussuriysk Ar.	44.74	9	P	P	02 12 45.9	+0.2
SONM	Songino Array	49.87	345	P	P	02 13 26.1	+0.6
	comp=Z,0.5nm,0.5s,baz=159,slow=9.1,SNR=3.7						
SONM	Songino Array	49.87	345	P	P	02 13 25.3	-0.2
MK31	Makanchi Array	58.74	328	P	P	02 14 28.9	-0.7
MK31				IAmb	IAmb	02 14 42.4	
	comp=Z,1.8nm,1.1s						
MKAR	Makanchi Array	58.74	328	P	P	02 14 29.1	-0.5
	comp=Z,0.5nm,0.4s,baz=159,slow=8.7,SNR=13						
MKAR	Makanchi Array	58.74	328	P	P	02 14 29.0	-0.5
MAKZ	Makanchi	58.92	328	P	P	02 14 29.4	-1.4
MAKZ				IAmb	IAmb	02 14 54.4	
	comp=Z,1.2nm,0.9s						
PETK	Petropavlovsk-	60.25	23	P	P	02 14 37.1	-2.6
	comp=Z,6.3nm,1.0s,baz=210,slow=7.8,SNR=3.1						
PETK	Petropavlovsk-	60.25	23	P	P	02 14 38.5	-1.2

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*IDC **23** 02:06:07.4±2.4, 2°.65N×96°.09E, h0^{km}, mb3.7/3, mb1 3.7/4, mb1mx3.3/58, mbtmp3.6/4, ML2.7/1, Error ellipse: s-maj=62.7km s-min=24.8km az=38.0*

*DJA **23** 02:06:12.6±1.1, 3°N±8°×9°6E±°, h10^{km}, M3.5/6, MLv3.5/6*

ISC 23 02:06:13.0±1.3, **2°.93N**±0°.08×**96°.37E**±0°.10, **h33**^{km}, **n10**, σ**1^{s}.40**/13, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	Sinabang, Aceh	0.52	185	P	Pb	02 06 22.8	-1.1
TPTI		0.87	68	P	Pn	02 06 27.4	-1.5
TPTI				S	Sn	02 06 38.7	-1.7
KCSI	Kotacane, Aceh	1.52	67	P	Pn	02 06 38.5	+0.7
KCSI				S	Sb	02 06 58.1	-1.3
GSI	Gunungsitoli	2.02	143	P	Pn	02 06 44.6	-0.1
TSI	Tuntungan	2.26	76	P	Pn	02 06 48.8	+0.8
PSI	Prapat	2.55	93	Pn	Pn	02 06 53.3	+1.1
	1.2nm,0.3s,baz=261,slow=17,SNR=2.4						
PSI				Sn	Sb	02 07 31.8	+2.6
	2.3nm,0.3s,baz=223,slow=6.6,SNR=4.5						
PBSI	Pulau Batu	3.53	147	P	Pn	02 07 06.0	+0.5
MNSI	Mandailing Nat	3.85	123	P	Pn	02 07 09.6	-0.3
WRA	Warramunga Arr	43.66	123	P	P	02 14 14.8	-0.2
	0.6nm,0.8s,baz=303,slow=9.0,SNR=4.6						
ZALV	Zalesovo Beam	51.73	351	P	P	02 15 18.4	+1.4
	0.4nm,0.4s,baz=181,slow=6.5,SNR=1.6						

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*TEH **23** 02:18:48.6, 32°.61N×50°.06E, h8^{km}, ML3.9*

*IDC **23** 02:18:48.5±0.9, 32°.66N×50°.03E, h0^{km}, mb3.8/13, mb1 4.0/19, mb1mx3.7/49, mbtmp3.9/19, ML3.8/6, MS3.2/2, Ms1 3.2/2, ms1mx2.7/33, Error ellipse: s-maj=20.5km s-min=15.7km az=146.0*

*KISR **23** 02:18:50.5±0.4, 32°.35N×49°.85E, h202^{km}±34^{km}, ML4.4*

*NEIC **23** 02:18:51.6±1.7, 32°.58N±0°.04×50°.05E±0°.04, h10^{km}±1^{km}, mb4.1/8, mb_Lg3.9(TEH), Error ellipse: s-maj=6.0km s-min=5.1km az=199.0*

*THR **23** 02:18:51.4±0.6, 32°.64N×50°.06E, h17^{km}±6^{km}, ML3.6*

*DSN **23** 02:18:53.2±2.4, 32°.14N×50°.06E, h10^{km}, ML3.9/6, Error ellipse: s-maj=35.2km s-min=14.4km az=17.0*

*OMAN **23** 02:18:54.8±0.9, 32°.50N×50°.34E, h116^{km}±5^{km}, mb4.7/9, Error ellipse: s-maj=18.3km s-min=11.2km az=327.0*

ISC 23 02:18:50.0±1.2, **32°.57N**±0°.03×**50°.07E**±0°.03, **h11**^{km}±8^{km}, **n245**, σ**1^{s}.98**/257, **mb4.1**/22, **5C-4D**, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPIR	Pirpir	0.70	80	*e*Sg	Sg	02 19 14.6	+1.7
IPIR				*e*Pg	Pg	02 19 03.3	-0.3
IPIR				*e*		02 19 18.8	
	comp=Z,88μm,0.3s						
SHK1	Shahrekord	0.73	109	*e*		02 19 18.8	
	comp=Z,65μm,0.4s						
SHK1				*e*Pg	Pg	02 19 03.6	-0.5
AMIS	Naft Sefid	1.12	217	*e*Pg	Pb	02 19 10.7	-0.7
KHMZ	Khomeyn	1.17	355	*e*Pg	Pb	02 19 09.8	-2.6
KHMZ				IAML		02 19 37.2	
	comp=N,703nm,0.6s						
KHMZ	Khomeyn	1.17	355	*e*Pg	Pb	02 19 09.8	-2.6
IBRJ	Brojen	1.21	123	*e*Pg	Pb	02 19 12.2	-0.8
IBRJ				*e*		02 19 39.7	
	comp=Z,17μm,0.4s						
IBRJ	Brojen	1.21	123		Pb	02 19 12.2	-0.8
IKLH	Kolahrood	1.47	59	*e*Pg	Pn	02 19 16.6	-0.1
IKLH				*e*Sg	Sn	02 19 37.5	+1.3
IKLH				*e*		02 19 44.5	
	comp=Z,22μm,0.4s						
IKLH	Kolahrood	1.47	59		Pn	02 19 16.6	-0.1
IKLH					Sn	02 19 37.5	+1.3
QAMS	Qamsar	1.61	43	*e*Pg	Pn	02 19 18.3	-0.3
QAMS	Qamsar	1.61	43		Pn	02 19 18.3	-0.3
IGAR	Gharneh	1.68	95	*e*Pg	Pn	02 19 21.0	+1.5
IGAR	Gharneh	1.68	95		Pn	02 19 21.0	+1.5
AHWZ	Ahwaz	1.73	225	*e*Pg	Pn	02 19 22.0	+2.0
AHWZ				*e*Sg	Sg	02 19 47.6	+1.9
AHWZ	Ahwaz	1.73	225		Pn	02 19 22.0	+2.0
AHWZ				Sg	Sg	02 19 47.5	+1.9
IZEF	Zefreh	1.93	80	*e*Pn	Pn	02 19 24.6	+1.5
IZEF				*e*		02 19 27.5	
	comp=Z,9μm,0.3s						
IZEF	Zefreh	1.93	80	Pn	Pn	02 19 24.6	+1.5
ABEH	Behbahan	1.97	175	*e*Pn	Pn	02 19 24.3	+1.0
ASAO	Ashtian	1.97	359	*e*Pn	Pn	02 19 24.9	+1.3
ASAO				*e*Sg	Sb	02 19 51.7	+0.9
ASAO				IAML		02 19 59.5	
	comp=N,514nm,0.6s						
ASAO				IAML		02 20 04.8	
	comp=E,445nm,0.5s						
ASAO	Ashtian	1.97	359	*e*Pn	Pn	02 19 25.0	+1.3
ASAO	Ashtian	1.97	359	Pn	Pn	02 19 24.9	+1.3
IDOB	Doab	2.00	308	*e*Pn	Pn	02 19 25.0	+1.1
IDOB	Doab	2.00	308	Pn	Pn	02 19 25.0	+1.1
KLNJ	Kolanjah	2.03	140	*e*Pn	Pn	02 19 26.3	+1.8
KLNJ				*e*		02 20 04.2	
	comp=Z,15μm,0.4s						
KLNJ	Kolanjah	2.03	140	Pn	Pn	02 19 26.2	+1.8
HSAM	Samen	2.05	324	*e*Pn	Pn	02 19 26.0	+1.4
HSAM				*e*		02 20 00.7	
	comp=Z,6μm,0.8s						
HSAM	Samen	2.05	324	Pn	Pn	02 19 26.0	+1.4
IKFM	Kafar-mosalman	2.10	298	*e*Pn	Pn	02 19 26.4	+1.4
IKFM				*e*		02 20 05.9	
	comp=Z,15μm,0.4s						
IKFM	Kafar-mosalman	2.10	298	Pn	Pn	02 19 26.3	+1.3
IRAM	Ramesheh	2.10	111	*e*Pn	Pn	02 19 27.5	+2.1
IRAM	Ramesheh	2.10	111	Pn	Pn	02 19 27.4	+2.1
GHVR	GHOM	2.16	28	*e*Pn	Pn	02 19 27.7	+1.6
GHVR				IAML		02 20 14.0	
	comp=N,195nm,0.6s						
GHVR	GHOM	2.16	28	*e*Pn	Pn	02 19 27.7	+1.6
GHVR	GHOM	2.16	28	Pn	Pn	02 19 27.7	+1.6
KRSH	Karshahi	2.22	51	*e*Pn	Pn	02 19 29.7	+2.7
KRSH				*e*		02 20 06.0	
	comp=Z,11μm,0.3s						
KRSH	Karshahi	2.22	51	Pn	Pn	02 19 29.6	+2.6
NASN	Na'in	2.32	84	*e*Pn	Pn	02 19 31.2	+2.7
NASN				*e*Sg	Sg	02 20 04.8	+0.2
NASN				IAML		02 20 09.5	
	comp=E,202nm,0.5s						
NASN	Na'in	2.32	84	*e*Pn	Pn	02 19 31.2	+2.7
NASN	Na'in	2.32	84	Pn	Pn	02 19 31.1	+2.7
HAGD	Aghdareh	2.38	341	*e*Pn	Pn	02 19 30.7	+1.5
HAGD				*e*		02 20 11.3	
	comp=Z,8μm,0.6s						
HAGD	Aghdareh	2.38	341	Pn	Pn	02 19 30.7	+1.5
IQOM	Qom	2.42	20	*e*Pn	Pn	02 19 31.6	+1.9
IQOM				*e*		02 19 35.3	
	comp=Z,5μm,0.5s						
IQOM	Qom	2.42	20	Pn	Pn	02 19 31.6	+1.9
ISFB	Sefidab	2.54	45	*e*Pn	Pn	02 19 33.5	+2.2
ISFB				*e*		02 20 17.3	
	comp=Z,3μm,0.5s						
ISFB	Sefidab	2.54	45	Pn	Pn	02 19 33.4	+2.2
IBZA	Bozab	2.65	316	*e*Pn	Pn	02 19 34.5	+1.6

IBZA				*e*		02 20 23.8	
	comp=Z,3µm,0.5s						
IBZA	Bozab	2.65	316	Pn	Pn	02 19 34.4	+1.6
IVRN	Varamin	2.79	29	*e*Pn	Pn	02 19 37.1	+2.5
IVRN				*e*		02 19 49.0	
	comp=Z,4µm,0.4s						
IVRN	Varamin	2.79	29	Pn	Pn	02 19 37.1	+2.5
IRAZ	Razeghan	2.83	358	*e*Pn	Pn	02 19 37.5	+2.1
IRAZ				*e*		02 20 27.5	
	comp=Z,6µm,0.7s						
IRAZ	Razeghan	2.83	358	Pn	Pn	02 19 37.5	+2.1
IHSB	Hasanabad	3.03	19	*e*Pn	Pn	02 19 41.0	+3.0
IHSB	Hasanabad	3.03	19	Pn	Pn	02 19 41.0	+3.0
KCHF	Cheshme Sefid,	3.05	305	*e*Pn	Pn	02 19 39.0	+0.6
KCHF				*e*		02 20 38.2	
	comp=Z,4µm,0.5s						
KCHF	Cheshme Sefid,	3.05	305	Pn	Pn	02 19 38.9	+0.6
KER	Kermanshah	3.05	307	*e*Pn	Pn	02 19 39.3	+1.0
ISAD	Sadrabad	3.13	101	*e*Pn	Pn	02 19 41.4	+1.8
ISAD	Sadrabad	3.13	101	Pn	Pn	02 19 41.4	+1.8
ANAR	Anarak	3.14	78	*e*Pn	Pn	02 19 42.0	+2.4
ANAR	Anarak	3.14	78	Pn	Pn	02 19 42.0	+2.4
IMHD	Mahdasht	3.15	9	*e*Pn	Pn	02 19 41.1	+1.5
IMHD				*e*		02 19 57.3	
	comp=Z,3µm,0.4s						
IMHD	Mahdasht	3.15	9	Pn	Pn	02 19 41.1	+1.5
QABG	Abgarm-Qazvin	3.16	353	*e*Pn	Pn	02 19 41.8	+1.9
QABG	Abgarm-Qazvin	3.16	353	Pn	Pn	02 19 41.7	+1.9
KAZ1	Kazerun	3.23	155	*e*Pn	Pn	02 19 42.6	+1.8
KAZ1	Kazerun	3.23	155	Pn	Pn	02 19 42.5	+1.8
SNGE	Sanandaj	3.39	319	*e*Pn	Pn	02 19 42.2	-0.9
SNGE				IAML		02 20 46.3	
	comp=N,104nm,0.5s						
SNGE	Sanandaj	3.39	319	*e*Pn	Pn	02 19 42.2	-0.9
SNGE	Sanandaj	3.39	319	Pn	Pn	02 19 42.1	-0.9
THKV	Tehran--Karaj	3.40	11	*e*Pn	Pn	02 19 45.3	+2.1
THKV	Tehran--Karaj	3.40	11	*e*Pn	Pn	02 19 45.3	+2.1
THKV	Tehran--Karaj	3.40	11	Pn	Pn	02 19 45.3	+2.1
IDMV	Damavand	3.41	28	*e*Pn	Pn	02 19 45.4	+1.9
IDMV	Damavand	3.41	28	Pn	Pn	02 19 45.4	+1.9
IGHG	Ghaleghazi	3.41	302	*e*Pn	Pn	02 19 43.8	+0.4
IGHG				*e*		02 20 55.9	
	comp=Z,3µm,1.0s						
IGHG	Ghaleghazi	3.41	302	Pn	Pn	02 19 43.8	+0.4
DAMV	Damavand	3.44	27	*e*Pn	Pn	02 19 46.2	+2.4
DAMV	Damavand	3.44	27	*e*Pn	Pn	02 19 46.2	+2.4
DAMV	Damavand	3.44	27	Pn	Pn	02 19 46.1	+2.4
CHTH	Charan	3.44	14	*e*Pn	Pn	02 19 45.8	+2.0
CHTH	Charan	3.44	14	*e*Pn	Pn	02 19 45.8	+2.0
CHTH	Charan	3.44	14	Pn	Pn	02 19 45.8	+2.0
ILIN	Lien	3.49	313	*e*Pn	Pn	02 19 45.5	+1.0
ILIN				*e*		02 21 01.8	
	comp=Z,1µm,0.9s						
ILIN	Lien	3.49	313	Pn	Pn	02 19 45.4	+1.0
MIB	Mutribah	3.62	221	*e*P	Pn	02 19 47.6	+1.6
MIB				*e*S	Sn	02 20 30.1	+1.4
MIB				IAML		02 20 32.2	
	comp=Z,648nm,0.6s						
UMR	Umm Al-Rimmam	3.62	214	*e*P	Pn	02 19 47.6	+1.6
ICHK	Chekchek	3.68	94	*e*Pn	Pn	02 19 49.5	+2.4
ICHK				*e*		02 20 02.8	
	comp=Z,2µm,0.6s						
ICHK	Chekchek	3.68	94	Pn	Pn	02 19 49.5	+2.4
ILAS	Lasjerd	3.69	40	*e*Pn	Pn	02 19 49.5	+2.2
ILAS	Lasjerd	3.69	40	Pn	Pn	02 19 49.4	+2.2
IDHR	Dehrash	3.73	306	*e*Pn	Pn	02 19 48.0	+0.2
IDHR				*e*		02 21 02.0	
	comp=Z,2µm,0.9s						
IDHR	Dehrash	3.73	306	Pn	Pn	02 19 48.0	+0.2
IFIR	Firoozkooh	3.79	35	*e*Pn	Pn	02 19 51.5	+2.9
IFIR				*e*		02 20 05.6	
	comp=Z,2µm,0.6s						
IFIR	Firoozkooh	3.79	35	Pn	Pn	02 19 51.5	+2.9
YZKH	Yazd	3.83	91	*e*Pn	Pn	02 19 51.8	+2.8
YZKH				IAML		02 21 03.5	
	comp=N,54nm,0.6s						
YZKH				IAML		02 21 07.6	
	comp=E,76nm,0.6s						
AHBU	AHRAM	3.84	164	*e*Pn	Pn	02 19 52.8	+3.7
QALM	Alamut, Qazvin	3.88	7	*e*Pn	Pn	02 19 51.5	+1.6
QALM	Alamut, Qazvin	3.88	7	Pn	Pn	02 19 51.4	+1.6
KBD	Kabd	3.95	212	*e*P	Pn	02 19 51.8	+1.2
IMEH	Mehriz	4.04	106	*e*Pn	Pn	02 19 53.6	+1.6
IMEH	Mehriz	4.04	106	Pn	Pn	02 19 53.6	+1.6
RST	Umm Al-Ruwaisa	4.04	222	*e*P	Pn	02 19 52.8	+1.0
JIR1	Jirandeh	4.13	357	*e*Pn	Pn	02 19 54.3	+1.0
JIR1	Jirandeh	4.13	357	Pn	Pn	02 19 54.2	+1.0
ISHM	Shahmirzad	4.19	39	*e*Pn	Pn	02 19 56.3	+2.1
ISHM	Shahmirzad	4.19	39	Pn	Pn	02 19 56.2	+2.1
RDF	Al-Radifah	4.23	212	*e*P	Pn	02 19 55.5	+1.1
QRN	Al-Qurain	4.24	206	*e*P	Pn	02 19 55.4	+0.9
ZNJK	Zanjan	4.25	345	*e*Pn	Pn	02 19 57.2	+2.3
ZNJK	Zanjan	4.25	345	*e*Pn	Pn	02 19 57.2	+2.3
ZNJK	Zanjan	4.25	345	Pn	Pn	02 19 57.1	+2.3
IANJ	Anjilo	4.31	47	*e*Pn	Pn	02 19 57.5	+1.8
IANJ	Anjilo	4.31	47	Pn	Pn	02 19 57.4	+1.8
GHIR	Ghir-Karzin	4.96	149	*e*Pn	Pn	02 20 04.1	-0.4
GHIR				IAML		02 21 06.2	
	comp=N,40nm,0.6s						
GHIR				IAML		02 21 16.4	
	comp=E,42nm,0.3s						
GHIR	Ghir-Karzin	4.96	149	*e*Pn	Pn	02 20 04.1	-0.4
GHIR	Ghir-Karzin	4.96	149	Pn	Pn	02 20 04.1	-0.4
TPRV	Parvadeh(Tabas	5.59	84	*e*Pn	Pn	02 20 15.4	+2.2
TPRV	Parvadeh(Tabas	5.59	84	Pn	Pn	02 20 15.4	+2.2
TNSJ	Nastanj	5.65	74	*e*Pn	Pn	02 20 16.0	+1.9
TNSJ	Nastanj	5.65	74	Pn	Pn	02 20 15.9	+1.9
SHRO	Shahrood	5.98	54	*e*Pn	Pn	02 20 21.2	+2.5
SHRO	Shahrood	5.98	54	*e*Pn	Pn	02 20 21.2	+2.5
SHRO	Shahrood	5.98	54	Pn	Pn	02 20 21.1	+2.5
TKDS	Koohdasht(Taba	6.01	78	*e*Pn	Pn	02 20 21.1	+2.1
TKDS	Koohdasht(Taba	6.01	78	Pn	Pn	02 20 21.1	+2.1
TABS	Tabas	6.01	78	*e*Pn	Pn	02 20 21.6	+2.6
TABS	Tabas	6.01	78	*e*Pn	Pn	02 20 21.6	+2.6
TABS	Tabas	6.01	78	Pn	Pn	02 20 21.6	+2.6
LAR1	LAR	6.14	142	*e*Pn	Pn	02 20 20.7	-0.1
LAR1	LAR	6.14	142	Pn	Pn	02 20 20.7	-0.1
TVBK	TV Kerman	6.28	112	*e*Pn	Pn	02 20 24.3	+1.4
TVBK	TV Kerman	6.28	112	Pn	Pn	02 20 24.3	+1.4
KRBR	Kerman	6.28	112	*e*Pn	Pn	02 20 24.4	+1.5
KRBR	Kerman	6.28	112	*e*Pn	Pn	02 20 24.4	+1.5
KRBR	Kerman	6.28	112	Pn	Pn	02 20 24.3	+1.5
NGRK	Negar Kerman	6.41	115	*e*Pn	Pn	02 20 26.9	+2.1
NGRK	Negar Kerman	6.41	115	Pn	Pn	02 20 26.8	+2.0
GRMI	Germi	6.47	345	*e*Pn	Pn	02 20 27.5	+2.1
GRMI	Germi	6.47	345	*e*Pn	Pn	02 20 27.5	+2.1
GRMI	Germi	6.47	345	Pn	Pn	02 20 27.4	+2.1
SAKB	Bahrain	6.58	176	P	Pn	02 20 28.8	+2.1
SAKB				S	Sn	02 21 42.1	+0.3
SHMA	Al-Shehemyia	6.74	173	P	Pn	02 20 30.0	+1.2
SHMA				S	Sn	02 21 45.1	-0.4
MRVT	Maraveh tapeh	7.08	42	*e*Pn	Pn	02 20 36.2	+2.6
MRVT	Maraveh tapeh	7.08	42	*e*Pn	Pn	02 20 36.2	+2.6
MRVT	Maraveh tapeh	7.08	42	Pn	Pn	02 20 36.2	+2.6
SBZV	Sabzevar	7.30	56	*e*Pn	Pn	02 20 39.0	+2.2
SBZV	Sabzevar	7.30	56	Pn	Pn	02 20 39.0	+2.2
ITEG	Tejag	7.32	85	*e*Pn	Pn	02 20 39.1	+2.0
ITEG	Tejag	7.32	85	Pn	Pn	02 20 39.0	+2.0
GENO	Geno	7.38	133	*e*Pn	Pn	02 20 38.6	+0.6
GENO	Geno	7.38	133	Pn	Pn	02 20 38.5	+0.6
IKOO	Kooshah	7.55	89	*e*Pn	Pn	02 20 42.2	+1.9
IKOO	Kooshah	7.55	89	Pn	Pn	02 20 42.1	+1.8
BSRN	Basiran	7.69	92	*e*Pn	Pn	02 20 44.8	+2.6
BSRN	Basiran	7.69	92	*e*Pn	Pn	02 20 44.8	+2.6
BSRN	Basiran	7.69	92	Pn	Pn	02 20 44.7	+2.6
TRNA	Turayna	7.87	172	P	Pn	02 20 45.0	+0.6
TRNA				S	Sn	02 22 12.6	-1.0
ISFR	Sfrayin	7.91	53	*e*Pn	Pn	02 20 47.9	+2.7
ISFR	Sfrayin	7.91	53	Pn	Pn	02 20 47.9	+2.7
SIRT	Sirnak	7.96	310		Pn	02 20 44.4	-1.4
SHME	Shamm	8.38	139	P	Pn	02 20 50.0	-1.5
GEYT	Alibeck	8.48	49	Pn	Pn	02 20 53.0	+0.2
	comp=E,0.3nm,0.3s,baz=236,slow=14,SNR=1.6						
GEYT	Alibeck	8.48	49	Pn	Pn	02 20 54.9	+2.1
BANOM	Banah	8.57	139	*i* P	Pn	02 20 52.3	-1.8
	SNR=18						
BANOM				S	Sn	02 22 27.4	-3.4
BANOM	Banah	8.57	139	P	Pn	02 20 52.8	-1.3
	SNR=19						
SHRT	Shahrakht	8.64	80	*e*Pn	Pn	02 20 58.7	+3.6
SHRT	Shahrakht	8.64	80	*e*Pn	Pn	02 20 58.7	+3.6
SHRT	Shahrakht	8.64	80	Pn	Pn	02 20 58.7	+3.6
MASF	Masafi	8.94	142	P	Pn	02 20 58.1	-1.0
	SNR=7.9						
MASF				S	Sn	02 22 35.6	-4.2
MSFE	Esma-Masafi	8.95	142	*i* P	Pn	02 20 58.0	-1.2
	SNR=7.9						
NAZ	Nazwa, Dubai	9.01	146	P	Pn	02 21 00.1	+0.1
AJN	Ajban	9.07	150	P	Pn	02 21 00.7	-0.3
ASUD	Al Ashush, Dub	9.16	148	*i* P	Pn	02 21 02.7	+0.5
	SNR=22						
UOSS	Minazif	9.31	143	*i* P	Pn	02 21 02.8	-1.3
	SNR=13						
UOSS	Minazif	9.31	143	Pn	Pn	02 21 02.8	-1.3
HATD	Hatta, Dubai	9.37	144	*i* P	Pn	02 21 04.3	-0.7
	SNR=6.0						
ASHO	Ashiyiah	9.45	145	*i* P	Pn	02 21 04.6	-1.6
	SNR=20						
RAYN	Ar Rayn	9.87	205	*i* P	Pn	02 21 09.3	-2.6
	SNR=18						
RAYN	Ar Rayn	9.87	205		Pn	02 21 09.3	-2.6
SOHO	SOHO	10.15	144	P	Pn	02 21 12.7	-3.0
ARQ	Araqi	10.82	147	P	Pn	02 21 24.0	-0.9
	SNR=10.0						
ASF	Jabal al Asfar	11.15	271	Pn	Pn	02 21 27.0	-2.4
	comp=E,1.5nm,0.3s,baz=16,slow=14,SNR=7.2						
WSAR	Wadi Sarin	11.98	139	Pn	Pn	02 21 39.7	-1.1
	comp=E,1.2nm,0.3s,baz=356,slow=11,SNR=19						
WSAR				LR	LR	02 26 28.0	
	comp=E,43nm,18.2s,baz=312,slow=38						
JMDO	Jabal Madar	12.41	143	P	Pn	02 21 45.5	-1.1
	SNR=6.6						
WBK	Wadi Bani Khal	12.67	139	P	Pn	02 21 47.3	-2.9
	SNR=9.7						
EIL	Elat	13.27	261	Pn	Pn	02 21 56.9	-1.5
	comp=E,0.5nm,0.3s,baz=162,slow=4.3,SNR=5.7						
DOK	Doka	14.37	164	P	Pn	02 22 11.6	-1.8
	SNR=7.9						
WHFO	Wadi Hawf	14.96	166	P	Pn	02 22 19.0	-2.6
	SNR=19						
ABTO	Aybut	15.43	168	P	Pn	02 22 25.7	-2.1
	SNR=11						
DMTO	DMTO	15.43	162	P	Pn	02 22 25.4	-2.4
	SNR=9.9						
CHGR	Chuyangaron	16.66	63	P	P	02 22 46.8	+0.9
CHGR				IAmb	IAmb	02 23 03.0	
	comp=Z,13nm,1.1s						
ELL	Elmali	17.10	290	P	Pn	02 22 50.7	+1.6
ABKAR	Akbulak array	18.23	21	P	Pn	02 23 03.9	+0.9
AKTO	Aktyubinsk	18.80	16	P	P	02 23 09.2	-0.1
	comp=Z,0.1nm,0.3s,baz=210,slow=16,SNR=2.5						
BELG	Belogornoye	19.89	356	P	P	02 23 20.9	-0.3
	comp=Z,0.5nm,0.3s,baz=150,slow=20,SNR=1.5						
ALN	Alexandroupoli	20.93	300	P	P	02 23 33.9	+1.3
ALN				IAmb	IAmb	02 23 49.4	
	comp=Z,9.1nm,1.1s						
IDI	Anoyia	21.05	284	P	P	02 23 33.5	-0.6
	comp=Z,21nm,0.8s,baz=192,slow=14,SNR=3.2						
SORM	Soroca	22.59	320	⇑P	P	02 23 52.3	+1.9
MLR	Muntele Rosu	22.65	312	⇑P	P	02 23 57.3	+6.1
MLR	Muntele Rosu	22.65	312	P	P	02 23 51.1	-0.1
	comp=Z,1.0nm,0.5s,baz=163,slow=14,SNR=1.7						
MLR	Muntele Rosu	22.65	312	P	P	02 23 50.6	-0.7
MLR				IAmb	IAmb	02 23 56.5	
	comp=Z,9.6nm,1.3s						
VOIR		23.20	311	⇑P	P	02 23 57.9	+1.1
PRAR	RASCA	23.37	316	⇓P	P	02 23 54.9	-3.6
ARR	Arges	23.43	310	⇓P	P	02 24 01.1	+1.9
AKASG	Malin Array Be	23.75	326	P	P	02 24 02.4	+0.2
	comp=Z,0.4nm,0.4s,baz=137,slow=8.9,SNR=5.8						
BURAR	Bucovina Array	24.09	316	P	P	02 24 07.2	+1.6
BUR08	Bucovina Ar. S	24.12	316	P	P	02 24 06.9	+1.0
BUR08				IAmb	IAmb	02 24 15.8	
	comp=Z,6.5nm,1.4s						
ZAGS	Zajecar	24.48	305	*e*P	P	02 24 09.7	+0.7
BARS	Barje	24.48	303	*e*P	P	02 24 13.4	+4.3
GZR	Gura Zlata	24.65	309	⇓P	P	02 24 12.6	+2.0
HERR	Herculane	24.70	308	⇑P	P	02 24 10.6	-0.5
BOVS	Bovan	24.79	305	⇑P	P	02 24 13.7	+1.9
BOVS	Bovan	24.79	305	*e*P	P	02 24 14.9	+3.0
SELS	Selova	25.08	303	*e*P	P	02 24 09.6	-5.0
DRGR		25.24	312	⇓P	P	02 24 18.7	+2.7
GRUS	Gruza	25.55	305	*e*P	P	02 24 22.1	+3.4
TRUS	Trudelj	25.86	305	*e*P	P	02 24 25.5	+3.9
SJES	Sjenica	25.90	303	*e*P	P	02 24 26.1	+4.0
DIVS	Divibare	26.11	305	*e*P	P	02 24 27.3	+3.4
BBLS	Lazići	26.45	304	*e*P	P	02 24 33.5	+6.4
KURBB	Kurchatov Arra	27.64	41	P	P	02 24 37.6	+0.1
	comp=Z,0.6nm,0.6s,baz=246,slow=9.0,SNR=2.0						
MKAR	Makanchi Array	28.35	50	P	P	02 24 44.4	+0.4
	comp=Z,0.4nm,0.6s,baz=248,slow=6.1,SNR=2.8						
MKAR	Makanchi Array	28.35	50	P	P	02 24 44.7	+0.7
MOA	Molln	30.99	310	*e*P	P	02 25 07.4	0.0
	comp=Z,1.0nm,0.5s						
KBA	Koelnbreinsper	31.39	308	*e*P	P	02 25 11.1	+0.1
	comp=Z,2.5nm,0.5s						
GERES	GERESS Array B	31.64	312	P	P	02 25 11.4	-1.8
	comp=Z,0.5nm,0.4s,baz=110,slow=10,SNR=8.4						
GERES	GERESS Array B	31.64	312	P	P	02 25 13.5	+0.3
WTTA	Wattenberg	32.57	308	*e*P	P	02 25 20.8	-0.6
	comp=Z,4.2nm,0.5s						
ZALV	Zalesovo Beam	32.62	39	P	P	02 25 20.6	-0.9
	comp=Z,0.7nm,0.3s,baz=217,slow=7.0,SNR=2.9						
FINES	FINESS Array B	32.80	339	P	P	02 25 22.2	-0.8
	comp=Z,5.3nm,1.0s,baz=165,slow=7.9,SNR=5.1						
FINES	FINESS Array B	32.80	339	P	P	02 25 22.7	-0.4
SQTA	Sankt Quirin	32.84	308	*e*P	P	02 25 23.5	-0.3
	comp=Z,5.9nm,0.5s						
MOTA	Moosalm	32.94	308	*e*P	P	02 25 23.1	-1.5
	comp=Z,4.5nm,0.9s						
FETA	Feichten	33.12	307	*e*P	P	02 25 25.5	-0.7
	comp=Z,3.0nm,0.7s						
RETA	Reutte	33.20	308	*e*P	P	02 25 25.2	-1.6
	comp=Z,1.9nm,0.8s						
DAVA	Damuels	33.74	308	*e*P	P	02 25 30.0	-1.7
	comp=Z,5.9nm,0.5s						
ESDC	Sonseca Array	43.66	295	P	P	02 26 55.8	+1.0
	comp=Z,0.5nm,0.9s,baz=80,slow=10,SNR=2.1						
TORD	Torodi Ar. Bea	48.13	258	P	P	02 27 29.8	-0.5
	comp=Z,1.2nm,0.8s,baz=50,slow=7.6,SNR=8.5						
TORD	Torodi Ar. Bea	48.13	258	P	P	02 27 30.4	+0.1
DBIC	Dimbokro	57.06	256	P	P	02 28 37.2	+0.7
	comp=Z,1.6nm,0.5s,baz=51,slow=6.5,SNR=3.7						
BOSA	Boshof	65.25	204	P	P	02 29 33.5	+1.7
	comp=Z,1.2nm,0.6s,baz=53,slow=5.1,SNR=3.0						
MJAR	Matsushiro Arr	70.14	59	LR	LR	03 03 42.5	
	comp=Z,42nm,19.8s,baz=140,slow=38						
IMAR	Indian Mountai	80.06	10	P	P	02 30 58.8	-0.5
YKA	Yellowknife Ar	84.47	353	P	P	02 31 20.9	-1.6
	comp=Z,0.1nm,0.3s,baz=29,slow=6.3,SNR=4.3						
YKA	Yellowknife Ar	84.47	353	P	P	02 31 23.1	+0.7

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*NEIC **23** 02:34:23.6±1.7, 5°.79S±0°.06×74°.65W±0°.03, h26^{km}±4^{km}, mb4.6/36, Error ellipse: s-maj=9.1km s-min=4.4km az=172.0*

*IDC **23** 02:34:24.6±0.8, 5°.76S×74°.51W, h43^{km}±6^{km}, mb3.7/7, mb1 4.0/12, mb1mx3.8/27, mbtmp4.0/12, ML4.0/5, MS3.5/6, Ms1 3.5/6, ms1mx3.1/41, Error ellipse: s-maj=24.5km s-min=17.4km az=46.0*

*VAO **23** 02:34:29.2±0.7, 6°.00S×74°.02W, h10^{km}, mbR4.0*

ISC 23 02:34:24.2±0.4, **5°.80S**±0°.05×**74°.67W**±0°.06, **h35**^{km}**, n111,** σ1^{s}**23**/112, **mb4.5**/23, **MS4.1**/3, **Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	2.74	135	Pn	Pn	02 35 07.9	+2.2
ATAH	Atahualpa	3.93	250	P	Pn	02 35 23.3	+0.9
	14nm,0.3s,baz=68,slow=6.2,SNR=96						
ATAH				S	Sn	02 36 09.2	+1.6
	17nm,0.3s,baz=237,slow=18,SNR=9.7						
ATAH				LR	LR	02 37 17.1	
	comp=Z,285nm,19.1s,baz=57,slow=42						
TBTG	Tabatinga, AM	5.01	72	*e*P	Pn	02 35 40.9	+4.0
TBTG	Tabatinga, AM	5.01	72	*e*P	Pn	02 35 37.3	+0.4
TBTG	Tabatinga, AM	5.01	72		Pn	02 35 38.9	+1.9
NNA	Nana	6.51	199	P	Pn	02 35 58.1	+0.5
	2.6nm,0.3s,baz=30,slow=5.5,SNR=6.7						
NNA				S	Sn	02 37 08.0	-2.8
	11nm,0.3s,baz=25,slow=23,SNR=6.0						
NNA				LR	LR	02 39 07.6	
	comp=Z,146nm,19.9s,baz=26,slow=43						
NNA	Nana	6.51	199	Pn	Pn	02 35 58.4	+0.7
OTAV	Otavalo	7.08	328	Pn	Pn	02 36 06.8	+0.9
FLOC	Florencia	7.40	352	*e*P	Pn	02 36 09.5	-0.3
FLOC	Florencia	7.40	352	Pn	Pn	02 36 09.5	-0.3
GCUF	Volcan Galeras	7.47	339	*e*P	Pn	02 36 12.6	+1.3
MACC	Macarena, Meta	7.93	6	*e*P	Pn	02 36 16.2	-0.9
SOTA	Rioblanco	8.11	346	*e*P	Pn	02 36 18.7	-1.3
POPC	Popayan, Colom	8.52	346	*e*P	Pn	02 36 25.8	+0.4
ETMB	Extrema	9.28	116	*e*P	Pn	02 36 35.5	-0.2
ETMB	Extrema	9.28	116	Pn	Pn	02 36 35.5	-0.2
PRAC	Prado	9.45	359	*e*P	Pn	02 36 38.6	+0.6
VILC	Villavicencio,	9.89	6	*e*P	Pn	02 36 43.8	-0.4
ANIL	Santa Ana	10.25	356	*e*P	Pn	02 36 55.5	+6.4
CHIC	Chingaza	10.40	5	*e*P	Pn	02 36 52.1	+0.8
GUY2C	Guyana, Caldas	10.97	356	*e*P	Pn	02 37 01.0	+1.8
SAML	Samuel	11.82	106	Pn	Pn	02 37 09.6	-0.8
LPAZ	La Paz	12.24	149	P	Pn	02 37 15.5	-1.2
	0.5nm,0.3s,baz=350,slow=5.3,SNR=11						
LPAZ	La Paz	12.24	149	*e*P	Pn	02 37 15.9	-0.8
LPAZ	La Paz	12.24	149		Pn	02 37 15.7	-1.0
PTBC	PUERTO BERRIO,	12.26	1	*e*P	Pn	02 37 15.6	-0.8
DBBC	Dabeiba	12.82	353	*e*P	Pn	02 37 26.3	+2.1
MACA	Manacapuru-AM	14.19	80	*e*P	Pn	02 37 40.6	-2.2
MACA	Manacapuru-AM	14.19	80	Pn	Pn	02 37 40.3	-2.5
SDV	Santo Domingo	15.13	15	*e*P	P	02 38 03.8	+3.3
PB08	IPOC Station P	15.23	160	P	P	02 38 01.5	-0.3
PTGA	Pitinga	15.52	72	P	Pn	02 37 58.3	-2.3
	1.0nm,0.3s,baz=280,slow=20,SNR=7.6						
PTGA				LR	LR	02 44 29.4	
	comp=Z,135nm,19.7s,baz=263,slow=39						
VILB	Vilhena	15.95	118	*e*P	Pn	02 38 06.0	-0.1
BAUV	El Baul	16.07	24	P	P	02 38 10.4	-0.3
BOAV	Boa Vista	16.31	60	*e*P	P	02 38 11.9	-1.5
BOAV	Boa Vista	16.31	60	P	P	02 38 11.8	-1.6
SIV	San Ignacio	16.75	128	P	Pn	02 38 15.8	-0.6
	0.4nm,0.3s,baz=292,slow=14,SNR=6.9						
SIV				LR	LR	02 45 01.5	
	comp=Z,134nm,21.0s,baz=272,slow=38						
PB09	IPOC Station P	16.75	162	P	P	02 38 17.6	-0.8
LVC	Limon Verde	17.62	162	*e*P	P	02 38 29.9	+1.8
PTLB	Pontes e Lacer	18.02	123	*e*P	P	02 38 31.5	-0.8
PTLB	Pontes e Lacer	18.02	123	P	P	02 38 31.7	-0.5
BIRV	Birongo	18.20	27	P	P	02 38 35.8	+1.5
BIRV				IAmb	IAmb	02 38 58.8	
	comp=Z,61nm,1.5s						
PDRB	Porto dos Gac	18.65	109	*e*P	Pn	02 38 40.0	+0.3
ITTB	Itaituba	18.92	87	*e*P	Pn	02 38 44.1	+1.1
NPGB	Novo Progresso	19.23	95	*e*P	Pn	02 38 46.2	-0.6
CLDB	Colider	19.34	106	*e*P	Pn	02 38 48.4	+0.2
MALB	Monte Alegre	20.73	80	*e*P	Pn	02 39 03.3	-1.2
SALV	Santo Antonio	21.15	120	*e*P	P	02 39 08.5	+2.0
MCPB	Macapa, AP	23.21	77	*e*P	P	02 39 29.4	+1.0
AQDB	Aquidauana	23.50	130	*e*P	P	02 39 31.4	+0.3
SNDB	Serra Nova Dou	23.89	106	*e*P	P	02 39 36.3	+1.4
ARAG	Araguaiana, MT	24.50	116	*e*P	P	02 39 41.9	+1.4
BB19B	Bebedouro	29.54	123	*e*P	P	02 40 28.8	+3.0
ITAB	Concordia	30.25	137	*e*P	P	02 40 34.9	+3.0
LC01	Cunco	33.05	176	P	P	02 40 56.6	+0.1
LC01				IAmb	IAmb	02 40 57.3	
	comp=Z,5.2nm,0.7s						
SJMB	Sao Joao De Ma	35.07	114	*e*P	P	02 41 17.1	+2.9
HODGE	Hodges	40.45	350	P	P	02 42 00.0	+0.6
HODGE				IAmb	IAmb	02 42 17.7	
	comp=Z,17nm,1.4s						
Y49A	Blount Mountai	40.98	345	P	P	02 42 03.4	-0.4
Y49A				IAmb	IAmb	02 42 24.1	
	comp=Z,18nm,1.3s						
FPAL	Fort Paine	41.43	346	P	P	02 42 07.4	-0.1
FPAL				IAmb	IAmb	02 42 27.4	
	comp=Z,20nm,1.4s						
W50A	Signal Mountai	41.99	347	P	P	02 42 12.4	+0.2
W50A				IAmb	IAmb	02 42 12.7	
	comp=Z,6.9nm,0.7s						
CPCT	Cooper Cave	42.06	348	P	P	02 42 12.5	-0.2
CPCT				IAmb	IAmb	02 42 25.4	
	comp=Z,8.9nm,1.2s						
U54A	Nelsons Funny	42.62	351	P	P	02 42 17.2	-0.1
U54A				IAmb	IAmb	02 42 18.6	
	comp=Z,14nm,1.1s						
V48A	Smith Brothers	42.87	345	P	P	02 42 18.8	-0.4
S54A	Dingess, Beckl	43.81	352	P	P	02 42 27.0	+0.1
S54A				IAmb	IAmb	02 42 27.9	
	comp=Z,12nm,0.8s						
TX31	Lajitas Ar. Si	44.69	323	P	P	02 42 34.9	+0.8
TX31				IAmb	IAmb	02 42 50.7	
	comp=Z,14nm,1.4s						
TX32	Lajitas Array	44.69	323	P	P	02 42 35.2	+1.1
TXAR	Lajitas Array	44.69	323	P	P	02 42 35.1	+1.1
	comp=Z,0.8nm,0.6s,baz=152,slow=8.7,SNR=12						
TXAR				pP	sP	02 42 46.9	-1.8
	comp=Z,0.5nm,0.5s,baz=152,slow=7.9,SNR=6.8						
TXAR				PcP	PcP	02 44 16.4	+0.1
	comp=Z,0.3nm,0.8s,baz=151,slow=2.1,SNR=2.7						
TXAR	Lajitas Array	44.69	323	P	P	02 42 34.9	+0.8
Q54A	Coxs Mills	44.92	353	P	P	02 42 36.0	+0.3
Q54A				IAmb	IAmb	02 42 36.6	
	comp=Z,7.5nm,0.8s						
P53A	Whipple	45.48	353	P	P	02 42 40.2	+0.1
O56A	Blue Knob Stat	45.98	356	P	P	02 42 44.6	+0.5
BLO	Bloomington	46.07	347	P	P	02 42 43.6	-1.1
N53A	Lisbon	46.72	354	P	P	02 42 50.0	+0.2
M54A	Oil Creek Stat	47.30	355	P	P	02 42 54.7	+0.4
N47A	Urbana	47.54	349	P	P	02 42 54.8	-1.5
L56A	Greenwood	47.78	357	P	P	02 42 57.7	-0.4
L56A				IAmb	IAmb	02 42 59.2	
	comp=Z,10nm,1.2s						
J57A	Williamstown	48.99	359	P	P	02 43 07.2	-0.2
J57A				IAmb	IAmb	02 43 07.9	
	comp=Z,8.3nm,0.8s						
ANMO	Albuquerque	50.39	326	P	P	02 43 19.8	+1.4
ANMO				IAmb	IAmb	02 43 20.2	
	comp=Z,3.6nm,0.8s						
VLDQ	Val d'Or	53.74	358	P	P	02 43 42.9	0.0
VLDQ				IAmb	IAmb	02 43 43.5	
	comp=Z,7.5nm,0.8s						
RDMU	Red Mountain	56.18	328	P	P	02 44 01.8	+0.8
RDMU				IAmb	IAmb	02 44 02.5	
	comp=Z,4.7nm,0.9s						
PDAR	Pinedale Array	57.78	330	P	P	02 44 11.5	-0.8
	comp=Z,0.4nm,0.7s,baz=134,slow=6.4,SNR=4.8						
PDAR				pP	pP	02 44 24.4	+1.4
	comp=Z,0.7nm,0.9s,baz=157,slow=9.6,SNR=3.8						
PDAR	Pinedale Array	57.78	330	P	P	02 44 12.2	-0.1
ULM	Lac du Bonnet	58.76	344	P	P	02 44 16.3	-2.4
	comp=Z,2.4nm,0.6s,baz=166,slow=3.0,SNR=3.1						
YBH	Yreka Blue Hor	64.44	322	LR	LR	03 13 30.8	
	comp=Z,52nm,19.1s,baz=27,slow=36						
DBIC	Dimbokro	70.77	81	P	P	02 45 36.1	-1.5
	comp=Z,2.1nm,0.6s,baz=298,slow=3.8,SNR=5.3						
DBIC	Dimbokro	70.77	81	P	P	02 45 36.6	-1.1
DBIC				IAmb	IAmb	02 45 36.6	
	comp=Z,4.4nm,1.0s						
KOWA	Kowa	72.89	73	P	P	02 45 49.0	-1.4
YKA	Yellowknife Ar	74.61	342	P	P	02 45 59.1	-0.4
	comp=Z,0.9nm,0.6s,baz=139,slow=5.7,SNR=24						
YKA				pP	pP	02 46 11.3	+0.8
	comp=Z,0.6nm,0.5s,baz=140,slow=6.2,SNR=10						
VNA3	Neumayer Olymp	76.65	162	P	P	02 46 10.8	-0.3
VNA1	Neumayer--Stat	76.86	162	P	P	02 46 11.8	-0.5
VNA2	Neumayer--Watz	77.23	162	P	P	02 46 14.5	+0.1
	baz=300,slow=6.8						
TORD	Torodi Ar. Bea	78.13	75	P	P	02 46 18.4	-2.1
	comp=Z,0.9nm,0.7s,baz=273,slow=4.9,SNR=6.9						
TORD	Torodi Ar. Bea	78.13	75	P	P	02 46 18.9	-1.6
SNAA	Sanae	78.85	162	P	P	02 46 23.5	0.0
SNAA	Sanae	78.85	162	P	P	02 46 23.8	+0.3
SUMG	Summit	81.60	10	P	P	02 46 38.1	-0.5
A36M	Sachs Harbour	84.19	346	P	P	02 46 51.0	-0.5
INK	Inuvik	84.36	341	P	P	02 46 52.4	0.0
INK				IAmb	IAmb	02 47 05.4	
	comp=Z,8.7nm,1.4s						
ILAR	Eielson Array	87.73	336	P	P	02 47 08.4	-0.7
	comp=Z,0.4nm,0.8s,baz=131,slow=2.5,SNR=3.3						
ILAR				pP	pP	02 47 21.1	+0.8
	comp=Z,0.6nm,0.8s,baz=130,slow=4.1,SNR=4.8						
ILAR	Eielson Array	87.73	336	P	P	02 47 08.1	-1.1
DAVOX	Davos/Dischmat	90.46	43	LR	LR	03 23 28.5	
	comp=Z,83nm,21.2s,baz=326,slow=33						
A21K	Barrow	92.87	341	P	P	02 47 34.0	+1.0
ZALV	Zalesovo Beam	129.18	15	PKP	PKPdf	02 53 28.2	-0.5
	comp=Z,0.9nm,0.5s,baz=297,slow=1.0,SNR=6.8						
ZALV	Zalesovo Beam	129.18	15		PKPdf	02 53 27.4	-1.3
MKAR	Makanchi Array	134.59	22	PKP	PKPdf	02 53 38.8	-0.4
	comp=Z,0.7nm,0.8s,baz=357,slow=2.4,SNR=5.4						
MKAR				pPKP	pPKPdf	02 53 52.0	+1.2
	comp=Z,0.2nm,0.4s,baz=296,slow=2.7,SNR=3.1						
MKAR	Makanchi Array	134.59	22	PKPdf	PKPdf	02 53 39.0	-0.2
ASAR	Alice Springs	139.56	223	PKhKP	PKPpre	02 53 42.9	

	comp=Z,0.4nm,0.8s,baz=140,slow=2.2,SNR=5.9						
ASAR				PKP	PKiKP	02 53 50.2	-1.2
	comp=Z,0.2nm,0.4s,baz=99,slow=2.6,SNR=4.7						
ASAR	**Alice Springs**	139.56	223		PKPpre	02 53 43.1	
WRA	**Warramunga Arr**	141.68	227	PKhKP	PKPpre	02 53 48.0	
	comp=Z,0.6nm,0.6s,baz=116,slow=2.9,SNR=6.8						
WRA				PKP	PKiKP	02 53 54.2	-1.6
	comp=Z,0.4nm,0.4s,baz=120,slow=2.1,SNR=11						
WRA				pPKP	sPKPdf	02 54 07.2	-1.3
	comp=Z,0.8nm,0.5s,baz=121,slow=2.2,SNR=3.0						
WRA	**Warramunga Arr**	141.68	227		PKPpre	02 53 47.1	
GTA	**Gaotai**	146.17	8	PKPbc	PKPab	02 54 01.3	-0.7
GTA				LR	LR		
	comp=N,150nm,16.3s						
GTA				LR	LR		
	comp=E,290nm,20.3s						
GTA				LR	LR		
	comp=Z,130nm,16.7s						

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*TUL **23** 02:40:07.5±1.2, 36°.76N±0°.01×98°.068W±0°.007, h6^{km}±5^{km}, ML2.7, mb_Lg2.2/9(NEIC), Error ellipse: s-maj=1.7km s-min=0.7km az=198.0*

NEIC 23 02:40:07.6±1.0, 36°.74N±0°.01×98°.07W±0°.02, h5^{km}±1^{km}, Error ellipse: s-maj=3.0km s-min=2.3km az=331.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	**Salt Plains WL**	0.13	298		Pg	02 40 10.4	+0.1
OK032				Sg	Sg	02 40 12.5	+0.4
GC02	**Grant County #**	0.20	57	Pg	Pg	02 40 11.8	+0.2
GC02				Sg	Sg	02 40 14.9	+0.7
KAN14	**Manchester OK**	0.23	21		Pg	02 40 12.3	+0.1
KAN14				Sg	Sg	02 40 15.5	+0.3
CROK	**Carrier**	0.25	164	Pg	Pg	02 40 12.9	+0.5
CROK				Sg	Sg	02 40 16.7	+1.1
KAN10	**Anthony SW Sta**	0.38	357	Pg	Pg	02 40 14.9	-0.1
KAN10				Sg	Sg	02 40 20.2	+0.2
KAN17	**Caldwell West**	0.39	39		Pg	02 40 15.2	0.0
KAN17				Sg	Sg	02 40 20.5	+0.3
KAN05	**Bluff City Nor**	0.40	23	Pg	Pg	02 40 15.4	+0.1
KAN05				Sg	Sg	02 40 20.7	+0.1
KAN01	**Argonia South**	0.48	31		Pg	02 40 16.8	-0.1
KAN01				Sg	Sg	02 40 23.2	+0.1
KAN16	**Harper SW Stat**	0.48	0	Pg	Pg	02 40 16.9	-0.1
KAN16				Sg	Sg	02 40 23.4	+0.1
KAN08	**Anthony NE Sta**	0.49	9	Pg	Pg	02 40 17.0	-0.1
KAN08				Sg	Sg	02 40 23.2	-0.2
OK035	**E0210 Rd and N**	0.52	266	Pg	Pg	02 40 17.5	-0.1
OK035				Sg	Sg	02 40 24.9	+0.6
KAN06	**Argonia West S**	0.53	18	Pg	Pg	02 40 17.7	-0.2
KAN06					Sg	02 40 24.9	+0.1
KAN09	**Caldwell North**	0.53	42	Pg	Pg	02 40 17.6	-0.3
KAN09				Sg	Sg	02 40 24.9	+0.1
KAN13	**South Haven SW**	0.54	60	Pg	Pg	02 40 17.9	-0.2
KAN12	**Harper NE Stat**	0.56	6	Pg	Pg	02 40 18.0	-0.3
KAN12				Sg	Sg	02 40 25.6	0.0
BLOK	**Blackwell**	0.68	88	Pg	Pg	02 40 20.3	-0.5
BLOK				Sg	Sg	02 40 30.2	+0.5
U32A	**Winter Ranch,**	0.83	245	Pg	Pg	02 40 23.3	-0.4
U32A				Sg	Sg	02 40 34.8	+0.4
OK029	**Liberty Lake**	1.06	152	Pg	Pg	02 40 27.4	-0.7
BCOK	**Bluff Creek, N**	1.14	161	Pg	Pg	02 40 28.7	-0.8
OK033	**Mehan**	1.15	127	Pg	Pg	02 40 29.2	-0.4
QUOK	**Quay**	1.23	117	Pg	Pg	02 40 30.4	-0.9
T35A	**Sooner Cattle**	1.26	82	Pn	Pg	02 40 30.8	-1.0
OK031	**S. Brethren Rd**	1.27	128	Pn	Pg	02 40 31.1	-0.8
OK025	**Westminster Rd**	1.30	153	Pn	Pn	02 40 31.9	-0.6
OK034	**N. Norfolk Rd.**	1.31	123	Pn	Pn	02 40 31.6	-1.1
OK030	**Cody Creek RV**	1.32	128	Pn	Pn	02 40 32.2	-0.5
OKCFA	**Oklahoma City**	1.41	159	Pn	Pn	02 40 32.8	-1.3
FNO	**Franklin**	1.58	160	Pn	Pn	02 40 36.1	-0.1
R32A	**Long Quarter,**	1.75	343	Pn	Pn	02 40 39.0	+0.2
W35A	**Tecumseh**	1.86	148	Pn	Pn	02 40 40.1	-0.1
W35A				IAmb_Lg		02 41 06.3	
	comp=Z,11nm,0.8s						
TUL1	**Leonard**	2.02	114	IAmb_Lg		02 41 13.2	
	comp=Z,14nm,0.8s						
X34A	**Smith Ranch, M**	2.15	175	IAmb_Lg		02 41 16.2	
	comp=Z,9.5nm,1.0s						
CBKS	**Cedar Bluff**	2.46	328	Pn	Pn	02 40 48.8	+0.4
U38A	**Gravette**	2.98	95	Pn	Pn	02 40 54.0	-1.6
HHAR	**Hobbs**	3.36	97	Pn	Pn	02 40 59.5	-1.2
S39A	**Bolivar**	3.90	75	Pn	Pn	02 41 08.2	0.0
KSCO	**Kaye Shedlock'**	4.26	304	IAmb_Lg		02 42 26.4	
	comp=Z,7.9nm,0.8s						
MGMO	**Mountain Grove**	4.66	83	Pn	Pn	02 41 18.0	-0.7
T25A	**Trinidad**	5.10	276	Pn	Pn	02 41 21.6	-3.3

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*IDC **23** 03:03:53.8±2.4, 36°.66N×96°.32W, h0^{km}, mb3.4/2, mb1 3.7/7, mb1mx3.4/61, mbtmp3.3/7, ML3.3/5, Error ellipse: s-maj=43.8km s-min=13.6km az=110.0*

*IASPEI **23** 03:04:00.4±0.9, 36°.94N±0°.03×97°.84W±0°.03, h9^{km}±6^{km}, Error ellipse: s-maj=3.9km s-min=3.5km az=140.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*TUL **23** 03:04:00.3±0.9, 36°.95N±0°.03×97°.85W±0°.05, h3^{km}±7^{km}, ML3.3, mb_Lg3.0/67(NEIC), Error ellipse: s-maj=5.7km s-min=3.0km az=61.0*

*ANF **23** 03:04:00.8±0.2, 36°.93N×97°.85W, h5^{km}, ML3.8/17, Error ellipse: s-maj=2.8km s-min=2.6km az=149.0*

*NEIC **23** 03:04:00.7±1.1, 36°.92N±0°.04×97°.82W±0°.06, h5^{km}±7^{km}, Error ellipse: s-maj=8.5km s-min=1.7km az=53.0*

ISC 23 03:04:00.4±0.8, 36°.93N±0°.02×97°.86W±0°.02, h10^{km}±5^{km}, n104, σ0^{s}.99/97, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	0.08	183	Pg	Pg	03 04 02.8	0.0
GC02				Sg	Sg	03 04 04.4	0.0
KAN14	**Manchester OK**	0.09	286		Pg	03 04 02.8	-0.1
KAN14				Sg	Sg	03 04 04.3	-0.3
KAN17	**Caldwell West**	0.13	33		Pg	03 04 03.3	-0.2
KAN17				Sg	Sg	03 04 05.2	-0.5
KAN05	**Bluff City Nor**	0.18	356	Pg	Pg	03 04 04.2	-0.1
KAN05				Sg	Sg	03 04 06.6	-0.2
KAN01	**Argonia South**	0.23	19		Pg	03 04 05.2	-0.1
KAN01				Sg	Sg	03 04 08.3	-0.2
KAN10	**Anthony SW Sta**	0.27	315	Pg	Pg	03 04 06.1	+0.1
KAN10				Sg	Sg	03 04 09.8	+0.1
KAN09	**Caldwell North**	0.28	43	Pg	Pg	03 04 06.0	0.0
KAN09				Sg	Sg	03 04 09.3	-0.5
KAN08	**Anthony NE Sta**	0.31	343		Pg	03 04 06.7	+0.1
KAN08				Sg	Sg	03 04 10.8	0.0
OK032	**Salt Plains WL**	0.31	246		Pg	03 04 06.9	+0.3
KAN13	**South Haven SW**	0.31	75	Pg	Pg	03 04 06.8	+0.1
KAN06	**Argonia West S**	0.32	360		Pg	03 04 06.8	0.0
KAN06				Sg	Sg	03 04 10.9	-0.1
KAN16	**Harper SW Stat**	0.34	330	Pg	Pg	03 04 07.2	+0.1
KAN12	**Harper NE Stat**	0.38	343	Pg	Pg	03 04 08.0	0.0
CROK	**Carrier**	0.44	194	Pg	Pg	03 04 09.5	+0.5
BLOK	**Blackwell**	0.54	108	Pg	Pg	03 04 11.0	+0.1
U32A	**Winter Ranch,**	1.07	239	Pg	Pb	03 04 20.9	-0.2
U32A	**Winter Ranch,**	1.07	239	P	Pb	03 04 21.0	-0.2
	baz=58,SNR=20						
U32A				S	Sn	03 04 35.7	-0.9
	baz=58						
T35A	**Sooner Cattle**	1.08	90	Pg	Pb	03 04 20.6	-0.5
T35B	**Sooner Cattle**	1.08	90	P	Pb	03 04 20.5	-0.7
	baz=272,SNR=96						
T35B				S	Sb	03 04 34.6	-0.8
	baz=272						
OK033	**Mehan**	1.15	140	Pg	Pb	03 04 22.3	-0.2
OK029	**Liberty Lake**	1.18	164	Pg	Pg	03 04 22.8	-0.2
QUOK	**Quay**	1.20	129	Pg	Pn	03 04 23.0	-0.2
OK031	**S. Brethren Rd**	1.27	140	Pg	Pb	03 04 24.2	-0.3
BCOK	**Bluff Creek, N**	1.29	171		Pb	03 04 24.6	-0.1
OK034	**N. Norfolk Rd.**	1.30	135		Pb	03 04 24.8	-0.2
OK025	**Westminster Rd**	1.41	163		Pb	03 04 26.9	0.0
OKCFA	**Oklahoma City**	1.55	168		Pb	03 04 29.0	-0.3
OKCFA	**Oklahoma City**	1.55	168	P	Pb	03 04 29.1	-0.1
	baz=348,SNR=9.7						
OKCFA				S	Sg	03 04 50.7	+0.5
	baz=348						
OKCSW	**OKLAHOMA CITY**	1.56	167		Pb	03 04 29.3	-0.1
R32A	**Long Quarter,**	1.64	336		Pb	03 04 30.4	-0.4
R32A	**Long Quarter,**	1.64	336	P	Pb	03 04 30.6	-0.2
	baz=155,SNR=122						
R32A				S	Sb	03 04 51.6	+0.1
	baz=155						
FNO	**Franklin**	1.71	167		Pb	03 04 31.6	-0.4
W35A	**Tecumseh**	1.94	156	Pn	Pn	03 04 34.4	+0.9
TUL1	**Leonard**	1.95	121	Pn	Pn	03 04 34.3	+0.6
TUL1	**Leonard**	1.95	121	P	Pb	03 04 34.7	-1.4
	baz=302,SNR=48						
TUL1				S	Sg	03 05 01.7	-1.4
	baz=302						
WMOK	**Wichita Mounta**	2.31	199	Pn	Pn	03 04 39.4	+0.8
WMOK	**Wichita Mounta**	2.31	199	P	Pn	03 04 39.7	+1.0
	baz=19,SNR=52						
X34A	**Smith Ranch, M**	2.33	180		Pn	03 04 40.2	+1.4
X34A				IAmb_Lg		03 05 17.6	
	comp=Z,59nm,1.1s						
KSU1	**Kansas State U**	2.38	24		Pn	03 04 39.7	+0.2
KSU1	**Kansas State U**	2.38	24	P	Pn	03 04 40.6	+1.1
	baz=205,SNR=19						
KSU1				S	Sb	03 05 12.9	+0.1
	baz=205						
CBKS	**Cedar Bluff**	2.40	322		Pn	03 04 40.9	+1.0
CBKS	**Cedar Bluff**	2.40	322	P	Pn	03 04 41.0	+1.1
	baz=141,SNR=52						
CBKS				S	Sb	03 05 13.9	+0.5
	baz=141						
U38A	**Gravette**	2.83	99	Pn	Pn	03 04 47.0	+1.3
U38A	**Gravette**	2.83	99	P	Pn	03 04 47.6	+1.9
	baz=281,SNR=26						
LOOK	**Love County**	2.98	169	Pn	Pn	03 04 49.1	+1.3
X37A	**Clayton**	3.09	138	Pn	Pn	03 04 49.6	+0.4
HHAR	**Hobbs**	3.22	100		Pn	03 04 52.5	+1.5
HHAR				IAmb_Lg		03 05 46.7	
	comp=Z,59nm,1.0s						
Z35A	**Perchaven, San**	3.63	172		Pn	03 04 57.6	+0.9
Z35A	**Perchaven, San**	3.63	172	P	Pn	03 04 58.1	+1.4
	baz=352,SNR=6.8						
S39A	**Bolivar**	3.69	77	Pn	Pn	03 04 58.1	+0.5
S39A				IAmb_Lg		03 05 58.3	
	comp=Z,33nm,0.8s						
S39A	**Bolivar**	3.69	77	P	Pn	03 04 58.6	+1.0
	baz=260,SNR=18						
AMTX	**Amarillo**	3.72	238	IAmb_Lg		03 06 08.5	
	comp=Z,64nm,0.8s						
N33A	**J Bar K, Exete**	3.81	5	Pn	Pn	03 04 59.3	0.0
N33A				IAmb_Lg		03 06 10.5	
	comp=Z,37nm,0.7s						
U40A	**Yellville**	4.06	97		Pn	03 05 04.3	+1.6
U40A	**Yellville**	4.06	97	P	Pn	03 05 03.8	+1.1
	baz=280,SNR=11						
U40A				P	Pn	03 05 03.8	+1.1
	baz=280,SNR=11						
MIAR	**Mount Ida**	4.22	123		Pn	03 05 05.5	+0.7
MIAR				IAmb_Lg		03 06 16.4	
	comp=Z,37nm,0.8s						
N35A	**Tabor**	4.29	23	Pn	Pn	03 05 06.8	+1.1
N35A	**Tabor**	4.29	23	P	Pn	03 05 06.9	+1.1
	baz=204						
KSCO	**Kaye Shedlock'**	4.30	300	Pn	Pn	03 05 07.5	+1.3
KSCO				IAmb_Lg		03 06 27.9	
	comp=Z,32nm,0.9s						
P38A	**Dawn**	4.34	50		Pn	03 05 06.9	+0.5
P38A				IAmb_Lg		03 06 17.9	
	comp=Z,24nm,0.8s						
P38A	**Dawn**	4.34	50	P	Pn	03 05 07.2	+0.8
	baz=233,SNR=7.7						
Z38A	**Mt. Pleasant**	4.35	146	Pn	Pn	03 05 07.0	+0.3
Z38A				IAmb_Lg		03 06 21.9	
	comp=Z,43nm,0.9s						
MGMO	**Mountain Grove**	4.47	85		Pn	03 05 09.2	+0.8
MGMO				IAmb_Lg		03 06 21.4	
	comp=Z,25nm,0.8s						
BGNE	**Belgrade**	4.48	357	Pn	Pn	03 05 08.7	+0.3
BGNE	**Belgrade**	4.48	357	P	Pn	03 05 09.3	+0.9
	baz=177,SNR=14						
ABTX	**Abilene, Hawle**	4.54	199	P	Pn	03 05 10.6	+1.3
	baz=18						
R40A	**Maddies Statio**	4.64	71	Pn	Pn	03 05 11.4	+0.8
R40A	**Maddies Statio**	4.64	71	P	Pn	03 05 11.5	+1.0
	baz=255,SNR=13						
FCAR	**Ozark Folk Cen**	4.74	101	Pn	Pn	03 05 12.6	+0.7
FCAR				IAmb_Lg		03 06 32.4	
	comp=Z,24nm,0.8s						
X40A	**Basin Creek Fa**	4.76	119		Pn	03 05 13.2	+1.0
X40A				IAmb_Lg		03 06 38.3	
	comp=Z,40nm,1.1s						
WHAR	**Wooly Hollow**	4.79	108	Pn	Pn	03 05 13.7	+0.9
WHAR				IAmb_Lg		03 06 34.6	
	comp=Z,40nm,0.7s						
WHTX	**Lake Whitney,**	4.94	176	Pn	Pn	03 05 15.3	+0.6
WHTX	**Lake Whitney,**	4.94	176	P	Pn	03 05 15.4	+0.7
	baz=356,SNR=15						
WLAR	**White Oak Lake**	5.05	128	IAmb_Lg		03 06 49.7	
	comp=Z,34nm,1.0s						
L34A	**Svendsen Farm,**	5.16	12	Pn	Pn	03 05 17.2	-0.5
OGNE	**Ogallala**	5.16	322	Pn	Pn	03 05 18.9	+1.0
OGNE				IAmb_Lg		03 06 56.3	
	comp=Z,34nm,0.7s						
T25A	**Trinidad**	5.25	274	Pn	Pn	03 05 20.2	+1.0
T25A				IAmb_Lg		03 07 00.6	
	comp=Z,18nm,0.8s						
P40A	**Paris**	5.26	59	IAmb_Lg		03 06 45.2	
	comp=Z,17nm,0.8s						
N38A	**Joes South For**	5.28	42	IAmb_Lg		03 06 56.0	
	comp=Z,25nm,0.7s						
LCAR	**Lake Charles**	5.47	97	Pn	Pn	03 05 22.9	+0.9
K31A	**O'Neill**	5.73	353	IAmb_Lg		03 07 15.7	
	comp=Z,38nm,0.7s						
PBMO	**Poplar Bluff**	5.96	89	IAmb_Lg		03 07 09.0	
	comp=Z,26nm,0.7s						
HBAR	**Harrisburg**	5.98	101	IAmb_Lg		03 07 16.8	
	comp=Z,37nm,0.8s						
435B	**Jarrell**	6.14	178	IAmb_Lg		03 07 18.2	
	comp=Z,19nm,0.8s						
SLM	**Saint Louis**	6.27	72	IAmb_Lg		03 07 24.0	
	comp=Z,17nm,0.8s						
JCT	**Junction City**	6.64	195	IAmb_Lg		03 07 35.5	
	comp=Z,19nm,1.1s						
N41A	**Harden Midland**	6.64	53	IAmb_Lg		03 07 38.1	
	comp=Z,23nm,0.9s						
ECSD	**EROS Data Cent**	6.86	8	IAmb_Lg		03 07 40.0	
	comp=Z,16nm,0.9s						
S44A	**Carbondale**	6.90	81	IAmb_Lg		03 07 43.9	
	comp=Z,21nm,0.7s						
W45A	**Hickory Valley**	7.24	102	IAmb_Lg		03 07 53.0	
	comp=Z,24nm,0.8s						
ANMO	**Albuquerque**	7.25	257	Pn	Pb	03 05 58.4	-8.1
	comp=Z,0.1nm,0.3s,baz=86,slow=16,SNR=1.6						
ANMO				Sn	Sg	03 07 47.1	-6.1
	comp=Z,0.8nm,0.3s,baz=346,slow=18,SNR=9.1						
Q44A	**Meyer Farm, Va**	7.26	72	IAmb_Lg		03 08 02.9	
	comp=Z,23nm,0.8s						
PHWY	**Pilot Hill**	7.34	309	IAmb_Lg		03 08 06.1	
	comp=Z,12nm,0.7s						
T45A	**Paducah**	7.37	87	IAmb_Lg		03 08 09.7	
	comp=Z,27nm,0.7s						
I37A	**Lemond, Waseca**	7.85	24	IAmb_Lg		03 08 22.8	
	comp=Z,17nm,0.9s						
O44A	**Mansfield**	8.03	64	IAmb_Lg		03 08 35.3	
	comp=Z,16nm,0.7s						
L42A	**Oliver, Polo**	8.11	49	IAmb_Lg		03 08 18.5	
	comp=Z,15nm,0.8s						
K22A	**Casper**	8.78	313	IAmb_Lg		03 08 57.7	
	comp=Z,15nm,0.9s						
TXAR	**Lajitas Array**	9.01	214	Pn	Pn	03 06 10.8	+0.2
	comp=Z,0.3nm,0.3s,baz=44,slow=11,SNR=16						
TXAR				Lg	Lg	03 08 45.9	
	comp=Z,0.4nm,0.3s,baz=36,slow=31,SNR=4.0						
PDAR	**Pinedale Array**	10.71	307	Pn	Pn	03 06 45.5	+11
	comp=Z,0.1nm,0.3s,baz=124,slow=16,SNR=3.1						
ULM	**Lac du Bonnet**	13.39	5	Pn	Pn	03 07 03.6	-6.8
	comp=Z,0.3nm,0.3s,baz=158,slow=6.9,SNR=3.7						
NVAR	**Mina Array Bea**	16.26	281	P	P	03 08 01.1	+8.9
	comp=Z,0.1nm,0.3s,baz=80,slow=12,SNR=2.2						
YKA	**Yellowknife Ar**	27.61	343	P	P	03 09 47.5	-0.2
	comp=Z,0.2nm,0.5s,baz=149,slow=9.0,SNR=3.1						
ILAR	**Eielson Array**	40.03	330	P	P	03 11 36.6	+1.4
	comp=Z,0.5nm,0.7s,baz=108,slow=7.4,SNR=6.2						

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*MAN **23** 03:08:46.4, 11°.47N×125°.41E, h56^{km}, mb4.8, ML3.7, MS3.6*

*NEIC **23** 03:08:51.5±1.7, 11°.4N±0°.1×125°.4E±0°.2, h103^{km}±7^{km}, mb4.3/10, Error ellipse: s-maj=24.9km s-min=17.4km az=73.0*

*IDC **23** 03:08:52.1±5.8, 11°.32N×125°.33E, h108^{km}±52^{km}, mb3.7/17, mb1 3.8/17, mb1mx3.6/54, mbtmp4.1/17, MS2.8/2, Ms1 2.8/2, ms1mx2.5/34, Error ellipse: s-maj=31.6km s-min=11.7km az=68.0*

ISC 23 03:08:46.1±0.5, 11°.51N±0°.06×125°.51E±0°.08, h53^{km}, n47, σ1^{s}.46/49, mb4.2/21, 5C-2D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	1.51	205⇑	*e*P	Pn	03 09 11.6	+0.8
MSLP				*e*S	Sn	03 09 31.0	+1.6
SCPH	**Surigao**	1.71	181⇓	*e*P	Pn	03 09 14.2	+0.6
SCPH				*e*S	Sn	03 09 34.7	+0.3
LLP	**Lapu-Lapu**	1.92	232⇑	*e*P	Pn	03 09 16.1	-0.4
LLP				*e*S	Sn	03 09 38.3	-1.2
TBP	**Tagbilaran**	2.43	222⇑	*i*P	Pn	03 09 23.4	+0.1
TBP				*i* S	Sn	03 09 55.5	+3.7
RCP	**Roxas**	2.71	271⇑	*e*P	Pn	03 09 28.2	+0.9
CNOP	**Candoni, Negro**	3.28	240⇓	*e*P	Pn	03 09 34.9	-0.1
BUKP	**Musuan**	3.63	187⇑	*e*P	Pn	03 09 43.1	+3.2
DAV	**Davao City (W)**	4.41	179	LR	LR	03 11 41.7	
	comp=Z,63nm,19.8s,baz=344,slow=40						
MYLDM	**Lahad Datu**	9.36	228	Pn	Pn	03 11 01.2	+2.7
KSRS	**Korea Array**	25.93	4	LR	LR	03 26 31.9	
	comp=Z,32nm,18.1s,baz=345,slow=41						
CMAR	**Chiang Mai Arr**	26.56	288	P	P	03 14 19.7	+0.3
	1.2nm,0.4s,baz=102,slow=7.6,SNR=8.6						
CMAR	**Chiang Mai Arr**	26.56	288	P	P	03 14 18.6	-0.8
WB0	**Warramunga Arr**	32.28	164	P	P	03 15 07.6	-2.5
WB0				IAmb	IAmb	03 15 17.5	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	32.44	164	P	P	03 15 10.9	-0.5
	comp=Z,0.3nm,0.4s,baz=348,slow=9.4,SNR=1.4						
WRA				PcP	PcP	03 17 56.8	-1.1
	comp=Z,1.4nm,0.8s,baz=336,slow=2.9,SNR=5.4						
USRK	**Ussuriysk Ar.**	33.05	9	P	P	03 15 19.0	+2.5
	comp=Z,2.0nm,0.6s,baz=203,slow=11,SNR=4.2						
ASAR	**Alice Springs**	35.91	167	P	P	03 15 40.0	-1.4
	comp=Z,0.7nm,0.4s,baz=351,slow=8.3,SNR=17						
ASAR				PcP	PcP	03 18 06.9	-0.9
	comp=Z,0.6nm,0.4s,baz=341,slow=2.8,SNR=6.3						
ASAR	**Alice Springs**	35.91	167	P	P	03 15 40.1	-1.4
ASAR				PcP	PcP	03 18 06.4	-1.4
SONM	**Songino Array**	39.61	340	P	P	03 16 14.2	+1.6
	comp=Z,2.2nm,0.6s,baz=157,slow=9.8,SNR=18						
SONM	**Songino Array**	39.61	340	P	P	03 16 13.3	+0.7
SONM				IAmb	IAmb	03 16 15.0	
	comp=Z,2.0nm,0.8s						
H11N1	**WAKE ISLAND Hy**	40.59	73	T	T	03 59 51.1	
	baz=265,slow=74,SNR=43						
H11N2	**WAKE ISLAND Hy**	40.60	73	T	T	03 59 47.6	
	baz=265,slow=74,SNR=39						
H11N3	**WAKE ISLAND Hy**	40.61	73	T	T	03 59 49.0	
	baz=265,slow=74,SNR=54						
STKA	**Stephens Creek**	45.81	161	P	P	03 17 02.7	-0.1
	comp=Z,1.8nm,0.5s,baz=344,slow=8.9,SNR=7.8						
STKA	**Stephens Creek**	45.81	161	P	P	03 17 02.7	-0.1
MK31	**Makanchi Array**	50.60	322	P	P	03 17 40.2	+0.5
MK31				IAmb	IAmb	03 17 41.2	
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	50.60	322	P	P	03 17 40.5	+0.8
	comp=Z,1.9nm,0.6s,baz=121,slow=8.0,SNR=23						
MKAR	**Makanchi Array**	50.60	322	P	P	03 17 40.4	+0.7
ZALV	**Zalesovo Beam**	53.19	331	P	P	03 17 59.1	+0.3
	comp=Z,1.8nm,0.7s,baz=118,slow=7.8,SNR=6.7						
KURK	**Kurchatov**	54.63	325	P	P	03 18 09.9	+0.5
KURK				IAmb	IAmb	03 18 11.8	
	comp=Z,5.9nm,1.2s						
KURBB	**Kurchatov Arra**	54.64	325	P	P	03 18 10.0	+0.6
	comp=Z,1.6nm,0.5s,baz=125,slow=7.1,SNR=12						
BVAR	**Borovoye Array**	60.23	325	P	P	03 18 49.5	+0.7
	comp=Z,1.4nm,0.9s,baz=144,slow=10,SNR=5.5						
BRVK	**Borovoye**	60.30	325	P	P	03 18 49.0	-0.3
BRVK				IAmb	IAmb	03 18 51.1	
	comp=Z,2.4nm,0.8s						
NRIK	**Noril'sk**	62.64	346	P	P	03 19 06.1	+1.3
	comp=Z,1.8nm,0.3s,baz=130,slow=7.4,SNR=5.2						
NRIK	**Noril'sk**	62.64	346	P	P	03 19 04.9	+0.1
NRIK				IAmb	IAmb	03 19 06.6	
	comp=Z,5.6nm,0.9s						
ARU	**Arti**	67.79	326	P	P	03 19 37.8	-0.5
	comp=Z,0.5nm,0.3s,baz=107,slow=7.1,SNR=4.9						
ILAR	**Eielson Array**	78.66	26	P	P	03 20 43.0	+0.7
	comp=Z,0.4nm,0.8s,baz=244,slow=6.1,SNR=2.3						
ARCES	**ARCESS Array B**	82.78	340	P	P	03 21 04.5	+0.3
	comp=Z,3.0nm,0.8s,baz=78,slow=6.0,SNR=7.6						
ARCES	**ARCESS Array B**	82.78	340	P	P	03 21 04.3	0.0
FINES	**FINESS Array B**	84.46	332	P	P	03 21 12.8	-0.1
	comp=Z,1.0nm,0.4s,baz=77,slow=4.6,SNR=13						
FINES	**FINESS Array B**	84.46	332	P	P	03 21 12.7	-0.3
AKASG	**Malin Array Be**	85.14	321	P	P	03 21 15.6	-1.0
	comp=Z,1.4nm,0.7s,baz=66,slow=4.5,SNR=8.1						
AKASG	**Malin Array Be**	85.14	321	P	P	03 21 15.0	-1.6
YKA	**Yellowknife Ar**	92.94	24	P	P	03 21 54.1	+0.8
	comp=Z,0.3nm,0.8s,baz=297,slow=4.1,SNR=3.4						
TORD	**Torodi Ar. Bea**	119.12	292	PKP	PKPdf	03 27 27.5	-2.6
	comp=Z,0.1nm,0.4s,baz=88,slow=1.4,SNR=4.7						
TORD	**Torodi Ar. Bea**	119.12	292		PKPdf	03 27 26.7	-3.5
PLCA	**Paso Flores**	147.63	157	PKPbc	PKPbc	03 28 24.8	-0.4
	comp=Z,1.4nm,0.5s,baz=246,slow=6.9,SNR=4.5						
PLCA	**Paso Flores**	147.63	157		PKPdf	03 28 19.6	-2.7

KMA 23 03:10:16.6±99.0, 34°.21N×130°.35E, h0^{km}±999^{km}, Error ellipse: s-maj=30.2km s-min=8.5km az=319.0, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSGWL	**Sabuk**	3.24	338	P	Pg	03 11 17.6	-1.1
	SNR=6.3						
SMKB	**Mukjeong-gil**	3.45	296	P	Pn	03 11 11.5	0.0
	SNR=14						
OKEB	**Okgye-meyeon**	3.58	342	P	Pn	03 11 13.0	-0.4
	SNR=6.7						
OKEB	**Okgye-meyeon**	3.58	342	P	Pn	03 11 13.0	-0.4
	SNR=6.7						
KSCEA	**Cheonan**	3.63	317	P	Pn	03 11 13.9	-0.1
	SNR=12						
KSWJU	**Wonju**	3.69	330	P	Pg	03 11 26.0	-1.4
	SNR=6.9						
KSDGY	**Daegwallycong**	3.73	339	P	Pn	03 11 16.0	+0.5
	SNR=21						
KSDGY	**Daegwallycong**	3.73	339	P	Pn	03 11 16.0	+0.5
	SNR=21						
KSJMJ	**Jumunjin**	3.89	341	P	Pn	03 11 17.7	+0.1
	SNR=14						
KSJMJ	**Jumunjin**	3.89	341	P	Pn	03 11 17.7	+0.1
	SNR=14						
KSCHC	**Chuncheon**	4.11	331	P	Pb	03 11 30.0	+0.2
	SNR=6.6						

WEL 23 03:11:21.6±1.3, 34°S±27°×17°9W±3°4, h218^{km}±44^{km}, M4.0/6, ML4.3/8, MLv4.0/6, Error ellipse: s-maj=0.1km s-min=0.0km az=124.9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	4.13	212	P	Pn	03 12 24.6	-0.8
MXZ				S	S	03 13 16.8	+1.1
WMGZ	**Waiomatatini S**	4.30	209	P	Pn	03 12 28.3	+0.7
WMGZ				S	S	03 13 20.0	+0.4
PKGZ	**Pakihiroa**	4.50	211	P	Pn	03 12 27.9	-2.2
PKGZ				S	S	03 13 24.0	-0.2
HAZ	**Te Kaha**	4.53	215	P	Pn	03 12 29.9	-0.5
HAZ				S	S	03 13 25.9	+1.4
PUZ	**Puketiti**	4.58	208	P	Pn	03 12 31.8	+0.7
RUGZ	**Raukumara Rang**	4.74	214	P	Pn	03 12 33.4	+0.2
RUGZ				S	S	03 13 31.3	+1.6
TWGZ	**Tauwhareparae**	4.79	210	P	Pn	03 12 34.3	+0.6
TWGZ				S	S	03 13 31.0	+0.4
CNGZ	**Carnagh Statio**	4.96	206	P	Pn	03 12 35.8	-0.1
MWZ	**Matawai**	5.11	213	P	Pn	03 12 38.4	+0.6
MWZ				S	S	03 13 37.7	-0.3
URZ	**Urewera**	5.25	216	P	Pn	03 12 39.8	+0.3
URZ				S	S	03 13 40.9	0.0
RIGZ	**Rimuhau**	5.33	209	P	Pn	03 12 40.6	+0.1
RIGZ				S	S	03 13 43.4	+0.5

IDC 23 03:14:09.4±2.0, 27°.41N×84°.84E, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.2/56, mbtmp3.5/5, ML3.6/1, Error

ellipse: s-maj=59.1km s-min=18.2km az=65.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	19.45	355	P	P	03 18 37.9	+0.4
	0.2nm,0.3s,baz=176,slow=10.0,SNR=5.9						
KURBB	**Kurchatov Arra**	23.68	350	P	P	03 19 21.5	-1.0
	0.4nm,0.3s,baz=168,slow=8.7,SNR=2.1						
SONM	**Songino Array**	26.43	34	P	P	03 19 47.4	-0.5
	0.5nm,0.8s,baz=228,slow=10,SNR=3.2						
ZALV	**Zalesovo Beam**	26.51	360	P	P	03 19 49.0	+0.6
	0.5nm,0.3s,baz=190,slow=6.9,SNR=2.0						
WRA	**Warramunga Arr**	67.17	129	P	P	03 25 05.7	+0.2
	0.7nm,0.9s,baz=309,slow=5.1,SNR=2.4						

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*HEL **23** 03:15:26.7±0.4, 67°.63N×33°.83E, h0^{km}, ML1.9, Explosion*
*NAO **23** 03:15:26.0±1.6, 67°.62N×33°.86E, ML2.5*
*KOLA **23** 03:15:27.2, 67°.65N×33°.74E, h0^{km}, ML1.7, Error ellipse: s-maj=4.5km s-min=1.4km az=130.0, Khibiny, mines Kirovsk, Yukspor*
ISC 23 03:15:27.3±1.3, **67°.67N**±0°.04×**33°.72E**±0°.06, **h0**^{km}, **n28**, σ**1^s.24**/53, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	**Apatity**	0.16	229	P	Pg	03 15 29.9	-0.4
APA				S	Sg	03 15 32.1	-0.3
APZ9	**Apatity**	0.16	229	Pg	Pg	03 15 29.9	-0.4
APZ9				Lg	Lg	03 15 32.5	
APZ9	**Apatity**	0.16	229	Pg	Pg	03 15 29.9	-0.4
APZ9				Sg	Sg	03 15 32.5	+0.2
APA0	**Apatity Array**	0.29	257	Pg	Pg	03 15 32.4	-0.3
	baz=87,slow=16						
APA0				Lg	Lg	03 15 37.5	
	baz=82,slow=37						
APA0	**Apatity Array**	0.29	257	Pg	Pg	03 15 32.4	-0.3
	baz=87,slow=16						
APA0				Sg	Sg	03 15 37.5	+1.1
	baz=82,slow=37						
APA0	**Apatity Array**	0.29	257	P	Pg	03 15 32.2	-0.5
APA0				S	Sg	03 15 36.4	0.0
VRF	**Varrio**	1.57	275	PG	Pn	03 15 55.2	-1.2
VRF				MSG		03 16 15.2	
	comp=Z,9.5nm,0.2s						
VRF				SG	Sn	03 16 15.7	-1.7
TERR	**Teriberka**	1.62	18	P	Pn	03 15 56.3	-0.7
TERR				S	Sn	03 16 17.3	-1.3
KU6	**Riekki**	2.24	224	PG	Pn	03 16 06.4	+0.8
KU6				MSG		03 16 33.0	
	comp=Z,4.5nm,0.2s						
KU6				SG	Sb	03 16 36.2	-0.7
MSF	**Maaselka**	2.56	228	PB	Pn	03 16 11.2	+1.2
MSF				SG	Sb	03 16 45.8	-0.3
RNF	**Rovaniemi**	3.19	254	PN	Pn	03 16 18.4	-0.2
	baz=69						
KEV	**Kevo**	3.22	314	Pn	Pn	03 16 19.6	+0.6
KEV				Sn	Sn	03 16 57.6	-0.4
KEV				Lg	Lg	03 17 06.8	
KEV	**Kevo**	3.22	314	Pn	Pn	03 16 19.6	+0.6
KEV				Sn	Sn	03 16 57.6	-0.4
KEV				Sg	Sb	03 17 06.8	+1.8
KEV	**Kevo**	3.22	314	PN	Pn	03 16 19.3	+0.4
	baz=125						
KEV				SN	Sn	03 16 57.5	-0.5
ARA0	**ARCESS Array S**	3.54	306	Pn	Pn	03 16 23.2	-0.3
	baz=122,slow=16						
ARA0				Pg	Pb	03 16 31.4	+0.7
	baz=111,slow=16						
ARA0				Sn	Sn	03 17 03.5	-2.5
	baz=118,slow=28						
ARA0				Lg	Lg	03 17 15.4	
	baz=113,slow=37						
ARA0	**ARCESS Array S**	3.54	306	Pn	Pn	03 16 23.2	-0.3
	baz=122,slow=16						
ARA0				Pg	Pb	03 16 31.4	+0.7
	baz=111,slow=16						
ARA0				Sn	Sn	03 17 03.5	-2.5
	baz=118,slow=28						
ARA0				Sg	Sb	03 17 15.4	+1.1
	baz=113,slow=37						
ARA0	**ARCESS Array S**	3.54	306	PN	Pn	03 16 23.2	-0.3
	baz=119						
ARA0				SN	Sn	03 17 07.2	+1.2
ARCES	**ARCESS Array B**	3.54	306	P	Pn	03 16 23.0	-0.4
ARCES				S	Sn	03 17 04.7	-1.3
HEF	**Hetta**	3.85	286	Pn	Pn	03 16 26.7	-1.0
HEF				Sn	Sn	03 17 11.2	-2.3
HEF				Lg	Lg	03 17 25.2	
HEF	**Hetta**	3.85	286	Pn	Pn	03 16 26.7	-1.0
HEF				Sn	Sn	03 17 11.2	-2.3
HEF				Sg	Sb	03 17 25.2	+2.1
HEF	**Hetta**	3.85	286	PG	Pb	03 16 38.1	+2.1
	baz=98						
HEF				SN	Sn	03 17 12.7	-0.9
TOF	**Tornio**	4.04	251	PG	Pb	03 16 40.3	+1.2
OUL	**Oulu**	4.08	234	PG	Pb	03 16 41.4	+1.5
KTK1	**Kautokeino**	4.11	294	ePg	Pb	03 16 40.8	+0.4
KTK1				eS	Sn	03 17 16.4	-3.6
KTK1				IAML		03 17 40.8	
	comp=Z,5.6nm,0.5s						
PAJU	**Pajala**	4.16	266	PG	Pb	03 16 41.5	+0.4
PAJU				SN	Sn	03 17 20.5	-0.6
LANU	**Lannavaara**	4.46	280	PG	Pb	03 16 46.9	+0.6
LANU				SN	Sn	03 17 27.9	-0.6
ERTU	**Ertsjaerv**	4.64	261	SN	Sn	03 17 31.1	-1.9
FIA0	**FINESS Array S**	7.06	211	Lg	Lg	03 19 03.4	
	baz=18,slow=37						

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*IDC **23** 03:21:07.6±6.8, 16°.12N×61°.84W, h122^{km}±70^{km}, mb3.7/11, mb1 3.9/13, mb1mx3.6/38, mbtmp4.1/13, Error ellipse: s-maj=35.2km s-min=13.6km az=22.0*
*TRN **23** 03:21:09.1, 16°.28N×61°.68W, h149^{km}, MD4.2*
*NEIC **23** 03:21:10.9±1.2, 16°.21N±0°.06×61°.74W±0°.09, h144^{km}±7^{km}, mb4.4/5, Error ellipse: s-maj=13.0km s-min=6.7km az=63.0*
ISC 23 03:21:10.4±0.6, **16°.23N**±0°.03×**61°.73W**±0°.05, **h148**^{km}±5^{km}, **n94**, σ**1^s.04**/121, **mb4.2**/13, **10C**, **Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBE	**Ff, Capester**	0.20	142	eP	Pn	03 21 31.1	+0.6
CBE				eS	Sn	03 21 46.4	+0.7
TBG	**Guadaloupe-3**	0.38	167	eP	Pn	03 21 31.5	+0.5
TDBA	**Terre de Bas,**	0.39	166	eP	Pn	03 21 31.6	+0.6
TDBA				eS	Sn	03 21 47.0	+0.3
MAGL	**Barre de l’ile**	0.52	122	eP	Pn	03 21 31.9	+0.3
MAGL				eS	Sn	03 21 47.3	-0.4
H05N1	**Guadeloupe/Mar**	0.66	82	P	Pn	03 21 32.3	-0.1
H05N1				S	Sn	03 21 48.1	-1.0
MDCT	**Cottage Hill,**	0.66	157	eP	Pn	03 21 32.8	+0.4
MDCT				eS	Sn	03 21 49.6	+0.4
MDVC	**Dominica, Viel**	0.69	153	eP	Pn	03 21 32.9	+0.3
MDVC				eS	Sn	03 21 49.0	-0.4
ANBD	**Bethesda, Anti**	0.82	358	eP	Pn	03 21 33.4	-0.1
ANBD				eS	Sn	03 21 50.1	-1.0
DSLB	**Salisbury**	0.84	159	eP	Pn	03 21 34.2	+0.4
DSLB				eS	Sn	03 21 51.7	+0.2
MDN	**Morne-Daniel**	0.96	160	eP	Pn	03 21 35.6	+0.9
MDN				eS	Sn	03 21 54.3	+1.1
DLPL	**La Plaine**	1.01	152	eP	Pn	03 21 35.5	+0.4
DLPL				eS	Sn	03 21 54.7	+0.8
DLPL	**La Plaine**	1.01	152	Pn	Pn	03 21 35.7	+0.6
SKOC	**St. Kitts, UWI**	1.43	318	eP	Pn	03 21 39.5	+0.4
SKOC				eS	Sn	03 22 00.7	-0.2
ANWB	**Willy Bob**	1.43	358	eP	Pn	03 21 38.9	-0.3
ANWB				eS	Sn	03 21 59.4	-1.8
ANWB	**Willy Bob**	1.43	358		Pn	03 21 39.0	-0.1
ANWB				Sn	Sn	03 21 59.8	-1.3
SKI	**Saint Kitts**	1.46	319	eP	Pn	03 21 39.8	+0.3
SKI				eS	Sn	03 22 01.0	-0.7
SVN	**Savane Anatole**	1.48	158	⇑eP	Pn	03 21 39.8	+0.1
SVN	**Savane Anatole**	1.48	158	Pn	Pn	03 21 39.8	+0.1
SVN				Sn	Sn	03 21 57.4	-4.7
PCM	**Pelee Case Pet**	1.49	160	⇑eP	Pn	03 21 39.8	0.0
PCM	**Pelee Case Pet**	1.49	160	eP	Pn	03 21 40.4	+0.6
BAMF	**Morne Balai**	1.51	158	⇑eP	Pn	03 21 40.4	+0.3
GBMF	**Grand Be**	1.52	159	⇑eP	Pn	03 21 40.3	+0.1
PML	**Morne Lenard**	1.53	160	eP	Pn	03 21 40.3	0.0
FDF	**Fort de France**	1.59	159	eP	Pn	03 21 40.8	-0.1
FDF				eS	Sn	03 22 04.4	+0.3
FDF	**Fort de France**	1.59	159		Pn	03 21 40.8	-0.1
FDF				Sn	Sn	03 22 02.1	-2.0
ILAM	**Ilet Lapin Mar**	1.67	150	⇑iP	Pn	03 21 41.5	-0.2
ILAM				eS	Sn	03 22 04.8	-0.7
SEUS	**St. Eustatius**	1.73	317	eP	Pn	03 21 42.5	+0.2
SEUS				eS	Sn	03 22 06.8	0.0
SEUS	**St. Eustatius**	1.73	317		Pn	03 21 42.9	+0.5
ZAM	**Aeronautique**	1.78	157	⇑eP	Pn	03 21 42.9	0.0
LPMF	**Morne Lapointe**	1.80	156	⇑eP	Pn	03 21 42.8	-0.3
TRMF	**Trois Ilets**	1.81	159	eP	Pn	03 21 43.4	+0.1
BIM	**Bigot**	1.82	159	⇑iP	Pn	03 21 43.5	+0.1
BIM				eS	Sn	03 22 09.5	+0.8
MVM	**Montagne Vaucl**	1.85	154	eP	Pn	03 21 43.7	-0.1
MPOM	**Morne Pois Mar**	1.96	154	⇑iP	Pn	03 21 44.7	-0.3
MPOM				eS	Sn	03 22 10.7	-0.8
MPOM	**Morne Pois Mar**	1.96	154		Pn	03 21 45.0	0.0
SABA	**Saba**	2.00	314	eP	Pn	03 21 45.8	+0.4
SABA				eS	Sn	03 22 12.3	0.0
SABA	**Saba**	2.00	314	Pn	Pn	03 21 45.8	+0.4
SMRT	**St. Maarten**	2.22	325	eP	Pn	03 21 47.1	-0.9
SMRT				eS	Sn	03 22 14.7	-2.3
SMRT	**St. Maarten**	2.22	325		Sn	03 22 15.2	-1.8
SLBI	**Saint Lucia, B**	2.31	161	⇑iP	Pn	03 21 48.7	-0.5
SLBI				eS	Sn	03 22 17.9	-1.0
SLCP	**Castries, St.**	2.32	162	eP	Pn	03 21 49.2	-0.1
SLCP				eS	Sn	03 22 19.0	-0.2
MCLT	**Moule a Chique**	2.62	163	eP	Pn	03 21 54.2	+1.3
MCLT				eS	Sn	03 22 26.8	+1.0
SSV	**Crater Summit**	2.93	170	eP	Pn	03 21 57.9	+1.0
SVV	**Soufriere Volc**	2.94	170	eP	Pn	03 21 58.6	+1.6
SVB	**Belmont**	2.98	171	eP	Pn	03 21 56.7	-0.8
SVB				eS	Sn	03 22 33.6	-0.2
SVB	**Belmont**	2.98	171	Pn	Pn	03 21 57.5	+0.1
CDVI	**St. Croix**	3.27	298	eP	Pn	03 22 01.2	0.0
CDVI				eS	Sn	03 22 40.6	+0.2
CDVI	**St. Croix**	3.27	298	Pn	Pn	03 22 00.7	-0.5
BCHC	**Barbados, Cave**	3.69	146	eP	Pn	03 22 07.7	+1.1
BCHC				eS	Sn	03 22 49.4	-0.8
BBGH	**Gun Hill**	3.72	145	eP	Pn	03 22 07.7	+0.7
BBGH				eS	Sn	03 22 48.9	-2.0
BBGH	**Gun Hill**	3.72	145	Pn	Pn	03 22 07.7	+0.7
GCMP	**Grenada, Carri**	3.73	175	eP	Pn	03 22 06.9	-0.3
GCMP				eS	Sn	03 22 50.2	-0.9
BBSP	**Saint Philip**	3.81	144	eP	Pn	03 22 08.7	+0.6
BBSP				eS	Sn	03 22 50.7	-2.2
GRGR	**Grenville**	4.07	179	eP	Pn	03 22 11.6	-0.1
GRGR	**Grenville**	4.07	179	eS	Sn	03 22 58.1	-1.1
GRGR	**Grenville**	4.07	179	Pn	Pn	03 22 11.6	-0.1
GRFF	**Grenada Fort F**	4.15	180	eP	Pn	03 22 12.5	-0.2
GRFF	**Grenada Fort F**	4.15	180	eS	Sn	03 22 59.5	-1.6
CBYP	**Canovanas**	4.43	298	Pn	Pn	03 22 16.9	+0.5
SJG	**San Juan**	4.62	295	eP	Pn	03 22 18.9	+0.2
SJG	**San Juan**	4.62	295	Pn	Pn	03 22 18.9	+0.2
TOSP	**Speyside**	5.04	166	eP	Pn	03 22 23.8	-0.5
TOSP	**Speyside**	5.04	166	eS	Sn	03 23 19.3	-2.6
AOPR	**Arecibo Observ**	5.24	294	eP	Pn	03 22 27.3	+0.3
AOPR	**Arecibo Observ**	5.24	294	eS	Sn	03 23 23.9	-2.9
TRN	**Trinidad (W)**	5.56	177	e	Pn	03 22 32.4	+1.1
TRN	**Trinidad (W)**	5.56	177	eS	Sn	03 23 31.2	-3.2
BIRV	**Birongo**	7.22	218	Pn	Pn	03 22 53.4	-0.1
BAUV	**El Baul**	9.50	221	Pn	Pn	03 23 24.4	+0.5
SDDR	**Presa de Saban**	9.51	288	eP	Pn	03 23 23.0	-1.1
MDP	**Montagnes des**	14.21	140	P	Pn	03 24 22.4	-2.8
	0.8nm,0.3s,baz=325,slow=15,SNR=16						
MDP				S	Sn	03 26 49.9	-13
	8.4nm,0.3s,baz=275,slow=18,SNR=28						
MTDJ	**Mount Denham**	15.23	280		P	03 24 40.5	+1.0
PTGA	**Pitinga**	16.94	174	P	P	03 24 57.5	-0.9
	baz=336,slow=19,SNR=0.9						
X40A	**Basin Creek Fa**	33.28	309	P	P	03 27 34.6	+0.7
X40A				IAmb	IAmb	03 27 35.1	
	comp=Z,6.1nm,0.7s						
HHAR	**Hobbs**	34.87	311	P	P	03 27 48.1	+0.4
HHAR				IAmb	IAmb	03 27 48.4	
	comp=Z,7.6nm,0.8s						
SCHQ	**Schefferville**	38.73	355	P	P	03 28 20.8	+0.8
	comp=Z,2.8nm,0.5s,baz=175,slow=7.7,SNR=14						
TXAR	**Lajitas Array**	40.59	296	P	P	03 28 35.4	-0.5
	comp=Z,0.5nm,0.4s,baz=122,slow=7.7,SNR=19						
ULM	**Lac du Bonnet**	43.67	329	P	P	03 28 59.7	-0.6
	comp=Z,2.3nm,0.3s,baz=121,slow=8.5,SNR=7.4						
ULM	**Lac du Bonnet**	43.67	329	P	P	03 28 59.8	-0.5
ULM				IAmb	IAmb	03 29 01.7	
	comp=Z,8.7nm,1.4s						
PDAR	**Pinedale Array**	48.48	313	P	P	03 29 38.5	0.0
	comp=Z,3.3nm,0.7s,baz=118,slow=10.0,SNR=29						
H10N3	**ASCENSION HYDR**	52.51	114	T	T	04 26 40.5	
	baz=298,slow=75,SNR=5.7						
H10N2	**ASCENSION HYDR**	52.51	114	T	T	04 26 41.3	
	baz=298,slow=75,SNR=15						
H10N1	**ASCENSION HYDR**	52.53	114	T	T	04 26 39.6	
	baz=298,slow=75,SNR=17						
H10S3	**ASCENSION HYDR**	52.88	115	T	T	04 27 08.5	
	baz=293,slow=74,SNR=10						
H10S2	**ASCENSION HYDR**	52.90	115	T	T	04 27 09.2	
	baz=287,slow=74,SNR=5.5						
NVAR	**Mina Array Bea**	54.01	306	P	P	03 30 19.8	+0.1
	comp=Z,1.2nm,0.6s,baz=97,slow=7.5,SNR=8.9						
ESDC	**Sonseca Array**	55.11	53	P	P	03 30 28.9	+1.5
	comp=Z,0.4nm,1.0s,baz=276,slow=7.0,SNR=4.2						
DBIC	**Dimbokro**	56.39	93	P	P	03 30 37.6	+0.7
	comp=Z,1.6nm,0.6s,baz=289,slow=7.4,SNR=3.8						
YKA	**Yellowknife Ar**	58.99	334	P	P	03 30 53.8	-0.4
	comp=Z,1.8nm,0.5s,baz=106,slow=7.3,SNR=35						
TORD	**Torodi Ar. Bea**	61.23	84	P	P	03 31 09.9	-0.3
	comp=Z,1.3nm,0.6s,baz=280,slow=7.2,SNR=15						
TORD	**Torodi Ar. Bea**	61.23	84	P	P	03 31 10.8	+0.5
KEST	**Kesra**	65.49	58	P	P	03 31 40.2	+2.2
	comp=Z,1.6nm,0.5s,baz=248,slow=5.4,SNR=7.6						
ILAR	**Eielson Array**	73.40	334	P	P	03 32 25.9	-0.1
	comp=Z,0.6nm,0.8s,baz=78,slow=5.3,SNR=6.1						
ILAR	**Eielson Array**	73.40	334	P	P	03 32 26.1	0.0

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*IDC **23** 03:22:45.2±1.5, 10°.20S×116°.98E, h0^{km}, mb4.0/5, mb1 4.0/8, mb1mx3.7/34, mbtmp3.9/8, ML3.5/3, MS3.3/9, Ms1 3.3/9, ms1mx3.2/43, Error ellipse: s-maj=51.8km s-min=19.8km az=54.0*
*DJA **23** 03:22:51.7±0.4, 10°S±5°×11°7E±°, h10^{km}, M4.6/15, mb4.8/3, mB4.6/2, MLv4.5/15, Mw(mB)3.8/2*
ISC 23 03:22:49.5±0.8, **10°.12S**±0°.07×**117°.46E**±0°.04, **h10**^{km}, **n32**, σ**2^s.10**/30, **mb4.2**/4, **MS3.3**/5, **South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	1.48	337	P	Pn	03 23 16.3	+0.1
WBSI	**Waikabubak, Su**	1.96	76	P	Pn	03 23 25.0	+2.2
IGBI	**Denpasar**	2.62	299	P	Pn	03 23 33.3	+1.4
DNP	**Denpasar**	2.64	303	P	Pn	03 23 34.6	+2.4
DNP				S	Sn	03 24 04.6	+0.3
SRBI	**Singaraja**	3.00	312	P	Pn	03 23 39.9	+2.8
SRBI				S	Sn	03 24 14.1	+0.9
BASI	**Baing, Sumba**	3.07	92	P	Pn	03 23 38.9	+0.8
JAGI	**Jajag, Banyuwa**	3.65	296	P	Pn	03 23 46.3	+0.2
JAGI				S	Sn	03 24 27.2	-2.1
ABJI	**Asem Bagus**	3.94	306	P	Pn	03 23 53.3	+3.3
ABJI				S	Sn	03 24 38.0	+1.8
GMJI	**Gumukmas**	4.37	294	P	Pn	03 23 59.9	+3.9
GMJI				S	Sn	03 24 46.1	-0.9
EDFI	**Ende, Flores**	4.39	72	P	Pn	03 23 58.1	+1.8
BLJI	**Banyuglugur**	4.49	301	P	Pn	03 24 01.0	+3.4
BLJI				S	Sn	03 24 50.6	+0.7
MMRI	**Maumere**	4.94	73	P	Pb	03 24 15.4	-0.7
BSSI	**Bau Bau, Buton**	4.96	37	P	Pn	03 24 06.3	+2.3
BKSI	**Bulukumba**	5.44	29	P	Pn	03 24 13.2	+2.5
	0.2nm793nm48nm,0.6s						
BKSI				S	Sn	03 25 16.5	+3.0
	0.2nm793nm48nm,0.6s						
KAPI	**Kappang**	5.55	24	Pn	Pn	03 24 13.4	+1.1
	1.6nm,0.3s,baz=232,slow=17,SNR=14						
KAPI				Sn	Sn	03 25 14.8	-1.3
	7.5nm,0.3s,baz=100,slow=21,SNR=12						
KAPI				LR	LR	03 26 45.6	
	comp=Z,227nm,18.3s,baz=236,slow=41						
BATI	**Baumata**	6.11	91	LR	LR	03 27 15.0	
	comp=Z,237nm,21.9s,baz=288,slow=41						
BNSI	**Bone**	6.25	25	P	Pn	03 24 29.1	+7.2
PCJI	**Pacitan**	6.49	287	P	Pn	03 24 27.9	+2.7
UGM	**Wanagama**	7.20	287	P	Pn	03 24 35.3	+0.4
KPJI	**Karang Pucung**	8.87	287	P	Pn	03 25 14.0	+16
CBJI	**Citeko**	11.12	288	P	Pn	03 25 42.1	+13
FITZ	**Fitzroy Crossi**	11.22	136	Pn	Pn	03 25 30.3	+0.3
	0.4nm,0.3s,baz=318,slow=12,SNR=13						
FITZ				Sn	Sn	03 27 28.8	-6.8
	0.7nm,0.3s,baz=185,slow=13,SNR=3.6						
FITZ				LR	LR	03 29 28.9	
	comp=Z,98nm,19.9s,baz=0.0,slow=35						
WRA	**Warramunga Arr**	18.99	123	P	P	03 27 11.8	+0.4
	0.1nm,0.3s,baz=296,slow=13,SNR=4.9						
WRA				S	Sn	03 30 35.6	-9.3
	0.1nm,0.3s,baz=280,slow=22,SNR=4.6						
WRA				LR	LR	03 34 41.7	
	comp=Z,61nm,20.6s,baz=215,slow=37						
ASAR	**Alice Springs**	20.68	133	P	P	03 27 31.2	+1.3
	4.5nm,0.8s,baz=301,slow=9.8,SNR=32						
ASAR				LR	LR	03 35 13.2	
	comp=Z,69nm,20.6s,baz=241,slow=36						
CMAR	**Chiang Mai Arr**	33.77	327	LR	LR	03 44 42.5	
	comp=Z,61nm,18.9s,baz=186,slow=39						
MJAR	**Matsushiro Arr**	50.35	22	LR	LR	03 55 01.4	
	comp=Z,22nm,19.1s,baz=60,slow=38						
USRK	**Ussuriysk Ar.**	55.64	13	P	P	03 32 23.6	-2.0
	1.7nm,0.6s,baz=196,slow=7.3,SNR=5.9						
SONM	**Songino Array**	58.52	351	P	P	03 32 43.1	-3.1
	1.9nm,0.7s,baz=169,slow=8.1,SNR=17						
ASAJ	**Asahikawa**	58.60	21	LR	LR	03 58 58.4	
	comp=Z,43nm,19.6s,baz=136,slow=37						
MKAR	**Makanchi Array**	64.77	334	P	P	03 33 24.9	-3.3
	1.0nm,0.7s,baz=151,slow=7.7,SNR=12						
KURBB	**Kurchatov Arra**	69.31	335	P	P	03 33 53.9	-3.0
	0.5nm,0.5s,baz=148,slow=5.5,SNR=7.1						
TSUM	**Tsumeb**	95.89	249	LR	LR	04 12 17.0	
	comp=Z,31nm,19.4s,baz=172,slow=31						

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*IDC **23** 04:08:15.7±1.2, 29°.91N×70°.24E, h0^{km}, mb3.8/15, mb1 4.0/17, mb1mx3.7/61, mbtmp3.8/17, ML3.9/2, Error ellipse: s-maj=26.1km s-min=21.3km az=169.0*
ISC 23 04:08:16.9±1.0, **29°.9N**±0°.1×**70°.40E**±0°.08, **h10**^{km}, **n19**, σ**1^s.09**/19, **mb3.8**/16, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDI	**New Delhi**	6.08	100	eP	Pb	04 09 59.0	-3.9
NDI				eS	Sg	04 11 30.0	-2.0
AAK	**Ala-Archa**	13.13	13	Pn	Pn	04 11 23.0	-0.5
	1.6nm,0.3s,baz=233,slow=4.4,SNR=6.0						
MKAR	**Makanchi Array**	19.23	25	P	Pn	04 12 41.7	-0.5
	0.1nm,0.3s,baz=206,slow=12,SNR=6.0						
KURBB	**Kurchatov Arra**	21.58	14	P	P	04 13 06.4	-0.2
	0.8nm,0.3s,baz=208,slow=9.1,SNR=2.5						
AKTO	**Aktyubinsk**	22.53	339	P	P	04 13 17.1	+0.3
	1.9nm,0.6s,baz=166,slow=8.1,SNR=6.7						
BVAR	**Borovoye Array**	23.10	360	P	P	04 13 23.2	+0.5
	2.0nm,0.7s,baz=181,slow=14,SNR=8.1						
KBZ	**Khabaz**	25.84	310	P	P	04 13 48.8	+0.4
	1.5nm,0.9s,baz=192,slow=7.6,SNR=4.7						
ZALV	**Zalesovo Beam**	26.21	19	P	P	04 13 52.3	+0.6
	1.3nm,0.3s,baz=210,slow=11,SNR=8.4						
KIRV	**Kirov**	32.09	339	P	P	04 14 43.8	-0.1
	9.7nm,0.6s,baz=160,slow=4.9,SNR=4.4						
SONM	**Songino Array**	32.87	47	P	P	04 14 53.1	+2.0
	0.5nm,0.6s,baz=237,slow=9.9,SNR=4.4						
AKASG	**Malin Array Be**	37.02	316	P	P	04 15 26.1	-0.6
	0.3nm,0.3s,baz=92,slow=6.8,SNR=6.7						
GERES	**GERESS Array B**	46.58	311	P	P	04 16 45.4	+0.4
	0.2nm,0.5s,baz=115,slow=6.6,SNR=2.0						
ARCES	**ARCESS Array B**	47.10	340	P	P	04 16 49.2	+0.5
	2.7nm,0.7s,baz=138,slow=7.4,SNR=11						
NOA	**NORSAR Array B**	49.47	327	P	P	04 17 06.3	-0.9
	1.1nm,0.7s,baz=123,slow=7.4,SNR=0.9						
EKA	**Eskdalemuir Ar**	56.80	319	P	P	04 18 00.3	-0.8
	1.4nm,0.5s,baz=97,slow=7.4,SNR=13						
TORD	**Torodi Ar. Bea**	65.21	271	P	P	04 18 57.4	-1.5
	0.4nm,0.6s,baz=57,slow=5.1,SNR=4.4						
ASAR	**Alice Springs**	80.96	124	P	P	04 20 34.0	+2.2
	0.6nm,0.8s,baz=311,slow=5.6,SNR=3.4						
ILAR	**Eielson Array**	81.25	15	P	P	04 20 32.2	-0.6
	0.3nm,0.6s,baz=314,slow=4.9,SNR=11						
YKA	**Yellowknife Ar**	87.84	2	P	P	04 21 06.3	+0.2
	0.7nm,0.5s,baz=348,slow=4.9,SNR=26						

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*ARE **23** 04:14:42±2.3, 15°.21S±0°.09×74°.94W±0°.09, h59^{km}±6^{km}, Error ellipse: s-maj=14.5km s-min=9.0km az=221.0*
*NEIC **23** 04:14:42.6±1.4, 15°.15S±0°.07×74°.90W±0°.10, h52^{km}±7^{km}, mb4.4/7, ML4.9(ARE), Error ellipse: s-maj=14.5km s-min=9.3km az=63.0*
*IDC **23** 04:14:44.8±2.3, 14°.97S×74°.75W, h73^{km}±18^{km}, mb3.6/4, mb1 3.9/9, mb1mx3.7/32, mbtmp4.0/9, MS2.8/2, Ms1 2.8/2, ms1mx2.6/23, Error ellipse: s-maj=45.3km s-min=18.0km az=38.0*
ISC 23 04:14:41.8±0.8, **15°.18S**±0°.09×**74°.8W**±0°.1, **h44**^{km}, **n31**, σ**1^s.94**/34, **mb4.2**/7, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	3.74	328	P	Pn	04 15 37.0	0.0
	34nm,0.3s,baz=175,slow=11,SNR=42						
NNA				S	Sn	04 16 25.3	+5.4
	312nm,0.3s,baz=215,slow=15,SNR=11						
NNA				LR	LR	04 16 57.5	
	comp=Z,86nm,18.4s,baz=113,slow=37						
NNA	**Nana**	3.74	328		Pn	04 15 36.3	-0.8
NNA				Sn	Sn	04 16 19.9	0.0
LPAZ	**La Paz**	6.52	101	P	Pn	04 16 19.8	+4.0
	0.9nm,0.3s,baz=284,slow=11,SNR=14						
LPAZ	**La Paz**	6.52	101		Pn	04 16 20.2	+4.4
PB11	**IPOC Station P**	6.70	134		Pn	04 16 18.6	+0.7
TA02	**Huaiquique**	6.75	139	Pn	Pn	04 16 20.3	+2.0
PATCX	**Punta Patache**	7.15	142	Pn	Pn	04 16 25.0	+1.1
PB08	**IPOC Station P**	7.31	133		Pn	04 16 28.0	+1.6
CZSB	**Cruzeiro do Su**	7.68	16	Pn	Pn	04 16 31.6	+0.4
ATAH	**Atahualpa**	8.73	336	P	Pn	04 16 48.0	+2.0
	1.4nm,0.3s,baz=187,slow=3.9,SNR=24						
ATAH				S	Sn	04 18 35.8	+12
	2.6nm,0.3s,baz=54,slow=17,SNR=3.7						
LVC	**Limon Verde**	9.26	144	P	Pn	04 16 57.5	+4.4
	1.0nm,0.3s,baz=358,slow=7.8,SNR=8.3						
LVC				LR	LR	04 19 45.8	
	comp=Z,67nm,19.7s,baz=308,slow=32						
LVC	**Limon Verde**	9.26	144		Pn	04 16 54.2	+1.1
ETMB	**Extrema**	9.93	59		Pn	04 17 02.8	+0.7
TBTG	**Tabatinga, AM**	11.94	24		Pn	04 17 29.2	-0.3
SAML	**Samuel**	12.94	63		Pn	04 17 41.9	-1.2
SIV	**San Ignacio**	13.26	95	P	Pn	04 17 48.2	+0.7
	0.3nm,0.3s,baz=283,slow=12,SNR=8.3						
MACA	**Manacapuru-AM**	18.33	51	P	Pn	04 18 53.1	+0.1
MACA				IAmb	IAmb	04 19 24.5	
	comp=Z,22nm,1.3s						
PTGA	**Pitinga**	20.51	47	P	P	04 19 15.5	-0.9
	comp=Z,1.8nm,0.3s,baz=321,slow=23,SNR=2.1						
BOAV	**Boa Vista**	22.46	40	P	P	04 19 37.8	+0.3
BOAV				IAmb	IAmb	04 20 03.8	
	comp=Z,28nm,1.8s						
TX32	**Lajitas Array**	52.30	328	P	P	04 23 48.5	-0.8
TX32				IAmb	IAmb	04 24 41.8	
	comp=Z,9.4nm,1.8s						
TXAR	**Lajitas Array**	52.30	328	P	P	04 23 48.2	-1.1
	comp=Z,1.5nm,0.6s,baz=153,slow=9.0,SNR=22						
TXAR	**Lajitas Array**	52.30	328	P	P	04 23 47.9	-1.4
TX31	**Lajitas Ar. Si**	52.30	328	P	P	04 23 48.4	-0.9
SDCO	**Great Sand Dun**	60.03	332	P	P	04 24 43.5	-1.1
SDCO				IAmb	IAmb	04 24 44.4	
	comp=Z,1.8nm,0.8s						
SNAA	**Sanae**	70.04	161	P	P	04 25 49.3	+0.4
SNAA				IAmb	IAmb	04 26 57.5	
	comp=Z,13nm,1.8s						
TORD	**Torodi Ar. Bea**	80.75	74	P	P	04 26 49.9	-1.3
	comp=Z,0.7nm,0.7s,baz=261,slow=3.5,SNR=4.6						
TORD				pP	pP	04 27 06.3	+1.6
	comp=Z,1.1nm,0.8s,baz=261,slow=5.1,SNR=6.1						
TORD	**Torodi Ar. Bea**	80.75	74	P	P	04 26 50.3	-0.9
YKA	**Yellowknife Ar**	83.45	343	P	P	04 27 02.7	-1.6
	comp=Z,0.6nm,0.7s,baz=138,slow=5.3,SNR=14						
YKA	**Yellowknife Ar**	83.45	343	P	P	04 27 03.6	-0.7
ZALV	**Zalesovo Beam**	138.15	18	PKP	PKPdf	04 34 01.0	-0.9
	comp=Z,0.5nm,0.3s,baz=327,slow=2.5,SNR=4.0						
SONM	**Songino Array**	147.42	358	PKPbc	PKPbc	04 34 20.0	-1.1
	comp=Z,1.1nm,0.5s,baz=350,slow=2.3,SNR=10						

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*IDC **23** 04:35:09.4±2.5, 10°.94N×86°.29W, h88^{km}±26^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.1/45, mbtmp3.9/4, MS3.6/1, Ms1 3.5/1, ms1mx2.6/31, Error ellipse: s-maj=99.3km s-min=15.5km*

az=41.0

UCR ***23*** *04:35:09.5±2.4, 11°.27N×86°.14W, h81^{km}±11^{km}, ML4.3, MW4.0*

INET ***23*** *04:35:10.0, 11°.27N×86°.05W, h92^{km}, MW4.3*

SNET ***23*** *04:35:13.5±1.3, 11°.34N×86°.37W, h88^{km}±84^{km}, ML4.6*

ISC 23 04:35:09.9±0.9**, 11°.23N**±0°.09×**86°.09W**±0°.08**, h100**^{km}**, n65, σ1^{s}38**/80**, mb3.6**/4**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HZTE	Horizontes, Gu	0.71	137	eP	Pn	04 35 27.3	-0.2
SAJU	San Juanillo,	1.22	162	eP	Pn	04 35 32.3	-0.6
JTS	Las Juntas de	1.46	130	P	Pn	04 35 34.7	-1.0
JTS				S	Sn	04 35 53.5	-1.8
JTS	Las Juntas de	1.46	130	eP	Pn	04 35 34.8	-1.0
ARE1	Arenal 1	1.55	119	eP	Pn	04 35 36.6	-0.3
COVE	Coope Vega, Sa	1.74	107	eP	Pn	04 35 38.0	-1.2
LAFE	Finca La Fe, P	1.83	141	eP	Pn	04 35 40.1	-0.2
RIMA	Rio Macho	2.63	123	eP	Pn	04 35 51.1	+0.1
CNCH	Conchagua	2.65	320	eP	Pn	04 35 50.9	-0.2
CNCH				eS	Sn	04 36 21.2	-1.6
CNCH	Conchagua	2.65	320	eP	Pn	04 35 50.9	-0.2
CNCH				eS	Sn	04 36 21.2	-1.6
LCND	La Caada	2.71	320	eP	Pn	04 35 51.7	-0.1
LCND				eS	Sn	04 36 22.6	-1.5
LCND				IAML		04 36 25.8	
	comp=Z,4µm,0.4s						
LCND	La Caada	2.71	320	eP	Pn	04 35 51.7	-0.1
LCND				eS	Sn	04 36 22.2	-1.9
LCND				eS	Sn	04 36 22.6	-1.5
LCND				IAML		04 36 25.8	
	comp=Z,4µm,0.4s						
CNRM	Centro Naciona	3.01	318	eS	Sn	04 36 29.9	-1.4
CNRM	Centro Naciona	3.01	318	eS	Sn	04 36 29.9	-1.4
TGUH	Tegucigalpa,Un	3.03	338	i P	Pn	04 35 56.8	+0.5
TGUH	Tegucigalpa,Un	3.03	338	i P	Pn	04 35 56.8	+0.5
PACA	Pacayal	3.11	316	eP	Pn	04 35 58.3	+0.9
PACA	Pacayal	3.11	316	eP	Pn	04 35 58.3	+0.9
ALJI	Alcalda de J	3.19	311	eP	Pn	04 35 58.7	+0.4
ALJI				eS	Sn	04 36 33.0	-2.6
ALJI				IAML		04 36 36.6	
	comp=Z,1µm,0.3s						
ALJI	Alcalda de J	3.19	311	eP	Pn	04 35 58.7	+0.4
ALJI				eS	Sn	04 36 33.0	-2.6
ALJI				IAML		04 36 36.6	
	comp=Z,1µm,0.3s						
COEB	Comit de Eme	3.28	314	eP	Pn	04 36 00.2	+0.7
COEB				eS	Sn	04 36 35.6	-2.2
COEB	Comit de Eme	3.28	314	eP	Pn	04 36 00.2	+0.7
COEB				eS	Sn	04 36 35.6	-2.2
PQSS	Presa 15 de Se	3.38	315	eP	Pn	04 36 01.5	+0.7
PQSS				eS	Sn	04 36 38.6	-1.6
EDPN	Palmar Norte	3.44	131	eP	Pn	04 36 01.0	-0.6
EDBA	Buenos Aires	3.45	126	eP	Pn	04 36 01.8	-0.1
TECO	Alcaldia de Te	3.48	311	eP	Pn	04 36 01.4	-0.8
SCLA	Alcaldia de Sa	3.56	314	eS	Sn	04 36 44.0	-0.4
SCLA	Alcaldia de Sa	3.56	314	eS	Sn	04 36 44.0	-0.4
PAVA	Las Pavas	3.71	312	eP	Pn	04 36 05.8	+0.4
PAVA				eS	Sn	04 36 46.2	-2.1
PAVA	Las Pavas	3.71	312	eP	Pn	04 36 05.8	+0.4
PAVA				eS	Sn	04 36 46.2	-2.1
LFRS	El Faro	3.75	310	eP	Pn	04 36 06.3	+0.5
LFRS				eS	Sn	04 36 46.5	-2.6
LFRS	El Faro	3.75	310	eP	Pn	04 36 06.3	+0.5
LFRS				eS	Sn	04 36 46.5	-2.6
LALI	Alcalda de L	3.87	306	eS	Sn	04 36 49.0	-2.9
LALI	Alcalda de L	3.87	306	eS	Sn	04 36 49.0	-2.9
UDBS	Universidad Do	3.88	310	IAML		04 36 55.8	
	comp=Z,1µm,0.8s						
UDBS	Universidad Do	3.88	310	IAML		04 36 55.8	
	comp=Z,1µm,0.8s						
EDSV	San Vito	3.90	128	eP	Pn	04 36 08.9	+1.0
OPAM	Oficina de Pla	3.91	309	eS	Sn	04 36 50.7	-2.2
OPAM				IAML		04 36 54.9	
	comp=Z,880nm,0.3s						
OPAM	Oficina de Pla	3.91	309	eS	Sn	04 36 50.7	-2.2
OPAM				IAML		04 36 54.9	
	comp=Z,880nm,0.3s						
PIRO	Carate, Puerto	3.91	136	eP	Pn	04 36 08.9	+1.0
SNET	Serv Nac Est T	3.92	309	IAML		04 36 54.5	
	comp=Z,883nm,0.3s						
SNET	Serv Nac Est T	3.92	309	IAML		04 36 54.5	
	comp=Z,883nm,0.3s						
BOQS	Boqueron	3.98	309	eS	Sn	04 36 54.7	-0.3
BOQS	Boqueron	3.98	309	eS	Sn	04 36 54.7	-0.3
PMON	Piamonte	4.00	308	eP	Pn	04 36 10.4	+1.2
PMON	Piamonte	4.00	308	eP	Pn	04 36 10.4	+1.2
JAYA	Jayaque - finc	4.07	307	eP	Pn	04 36 10.7	+0.5
JAYA				eS	Sn	04 36 54.4	-2.5
JAYA				IAML		04 36 59.6	
	comp=Z,1µm,0.3s						
JAYA	Jayaque - finc	4.07	307	eP	Pn	04 36 10.7	+0.5
JAYA				eS	Sn	04 36 54.4	-2.5
JAYA				IAML		04 36 59.6	
	comp=Z,1µm,0.3s						
TACO	Tacachico	4.19	311	eP	Pn	04 36 11.7	0.0
TACO	Tacachico	4.19	311	eP	Pn	04 36 11.7	0.0
CEVE	Cerro Verde	4.31	307	eP	Pn	04 36 13.6	+0.1
CEVE				eS	Sn	04 37 02.1	-0.7
CEVE	Cerro Verde	4.31	307	eP	Pn	04 36 13.6	+0.1
CEVE				eS	Sn	04 37 02.1	-0.7
SBLS	San Blas	4.31	307	eP	Pn	04 36 14.8	+1.3
SBLS	San Blas	4.31	307	eP	Pn	04 36 14.8	+1.3
NUBE	Las Nubes	4.47	307	eP	Pn	04 36 16.6	+0.9
NUBE				eS	Sn	04 37 04.3	-2.4
NUBE	Las Nubes	4.47	307	eP	Pn	04 36 16.6	+0.9
NUBE				eS	Sn	04 37 04.3	-2.4
SLOZ	Alcaldia de Sa	4.55	308	eP	Pn	04 36 16.3	-0.3
CMIG	Matias Romero	10.32	305	P	Pn	04 37 35.4	+0.3
	comp=Z,0.8nm,0.3s,baz=152,slow=13,SNR=14						
TXAR	Lajitas Array	24.35	320	P	P	04 40 19.6	+0.9
	comp=Z,1.0nm,0.5s,baz=147,slow=9.9,SNR=26						
SIV	San Ignacio	36.67	137	P	P	04 42 07.2	-0.2
	comp=Z,2.9nm,0.7s,baz=305,slow=8.7,SNR=13						
NVAR	Mina Array Bea	39.49	319	P	P	04 42 33.0	+1.9
	comp=Z,0.4nm,0.6s,baz=125,slow=8.9,SNR=3.5						
SCHQ	Schefferville	46.08	15	LR	LR	05 01 55.9	
	comp=Z,59nm,19.1s,baz=76,slow=35						
YKA	Yellowknife Ar	55.13	344	pP	pP	04 44 55.6	-0.5
	comp=Z,0.7nm,0.9s,baz=137,slow=8.1,SNR=7.6						
ASAR	Alice Springs	140.03	247	PKP	PKPdf	04 54 28.1	+0.6
	comp=Z,0.5nm,0.6s,baz=91,slow=1.6,SNR=8.3						
WRA	Warramunga Arr	140.19	252	PKP	PKPdf	04 54 27.7	-0.2
	comp=Z,0.5nm,0.8s,baz=104,slow=3.0,SNR=1.7						

NNC 23 04:36:12.0±3.0**, 38°.79N×73°.57E, h0**^{km}**, mb4.0, mpv3.5, 3C-3D, Error ellipse: s-maj=23.5km s-min=14.7km az=164.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	3.91	10	⇓Pn	Pn	04 37 15.7	+2.3
	5.7nm,0.7s						
AAK				⇑Lg	Lg	04 38 13.5	
	17nm,1.1s						
IUG	Iuzhnay	4.30	322	Pg	Pn	04 37 17.6	-1.2
	96nm,0.4s						
IUG				Lg	Lg	04 38 10.5	
	24nm,0.4s						
TKM2	Tokmak 2	4.40	20	⇓Pg	Pb	04 37 31.0	+0.7
	7.8nm,1.2s						
TKM2				⇑Lg	Lg	04 38 30.2	
	11nm,1.2s						
KST	Kastek	4.62	22	Pg	Pb	04 37 35.4	+1.5
	5.1nm,0.6s						
KST				Lg	Lg	04 38 40.9	
	6.2nm,0.6s						
DGS	Degeres	4.75	20	Pg	Pb	04 37 37.7	+1.6
	5.9nm,0.6s						
DGS				Lg	Lg	04 38 44.7	
	4.9nm,0.8s						
IZV	Izvestkoviy	4.83	28	Pg	Pb	04 37 38.5	+1.0
	4.2nm,0.5s						
IZV				Lg	Lg	04 38 46.0	
	7.8nm,0.8s						
KK09	Karatay Array	4.91	333	⇓Pn	Pn	04 37 25.7	-1.4
	1.8nm,0.6s,baz=152,slow=13						
KK09				⇑Sn	Sn	04 38 26.1	+1.6
	3.7nm,0.6s,baz=150,slow=23						
KOTS	Kotyrbulak	5.18	30	Pg	Pb	04 37 47.0	+3.4
	4.0nm,0.5s						
KOTS				Lg	Lg	04 39 01.1	
	15nm,1.0s						
KUU	Kurty	5.50	21	Pg	Pb	04 37 50.8	+1.8
	1.4nm,0.6s						
KUU				Lg	Lg	04 39 07.9	
	4.2nm,0.5s						

NEIC ***23*** *04:39:34.9±1.4, 57°.74N±0°.05×156°.28W±0°.10, h142^{km}±6^{km}, Error ellipse: s-maj=8.5km s-min=7.2km az=140.0*

IDC ***23*** *04:39:34.4±3.2, 58°.00N×156°.59W, h109^{km}±26^{km}, mb3.1/4, mb1 3.4/8, mb1mx3.0/56, mbtmp3.6/8, Error ellipse: s-maj=42.5km s-min=23.3km az=23.0*

AEIC ***23*** *04:39:37±2.3, 57°.77N±0°.03×156°.31W±0°.06, h111^{km}±6^{km}, ML3.5, ML3.5/35(NEIC), Error ellipse: s-maj=6.8km s-min=2.3km az=225.0*

ISC 23 04:39:35.3±0.8**, 57°.84N**±0°.04×**156°.19W**±0°.05**, h139**^{km}±7^{km}**, n208, σ1^{s}39**/219**, mb3.4**/3**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KJL	Kejulik	0.40	56		Pn	04 39 56.4	+1.3
ANCK	Angle Creek	0.52	45		Pn	04 39 57.2	+1.6
CAHL	Cahill	0.52	65		Pn	04 39 57.0	+1.4
ACHA	Angle Creek He	0.59	50		Pn	04 39 57.8	+1.7
KELA	Mount Kelaz	0.65	21		Pn	04 39 57.8	+1.4
KELA					Sn	04 40 12.6	+0.1
KCE	Katmai Mt Cerb	0.67	52		Pn	04 39 58.1	+1.5
KABR	Katmai Barrier	0.71	65		Pn	04 39 58.3	+1.5
KABR					Sn	04 40 14.1	+0.9
KCG	Knife Ck. Glac	0.74	50		Pn	04 39 58.9	+1.8
P18K	Big Mountain,	1.64	17		Pn	04 40 05.7	+0.1
P18K	Big Mountain,	1.64	17	P	Pn	04 40 05.6	-0.1
	baz=199						
P18K				S	Sn	04 40 27.6	-1.2
	baz=199						
OHAK	Old Harbor	1.68	110		Pn	04 40 05.8	-0.3
OHAK	Old Harbor	1.68	110	IAML		04 40 29.4	
	comp=E,604nm,0.4s						
OHAK	Old Harbor	1.68	110	P	Pn	04 40 05.7	-0.3
	baz=289						
OHAK				S	Sn	04 40 27.7	-1.9
	baz=289						
SII	Sitkinak Islan	1.68	139		Pn	04 40 05.6	-0.6
SII	Sitkinak Islan	1.68	139	P	Pn	04 40 05.6	-0.6
	baz=317,SNR=8.6						
SII				S	Sn	04 40 27.7	-1.9
	baz=317						
Q19K	Cape Douglas,	1.73	50		Pn	04 40 07.4	+0.7
Q19K	Cape Douglas,	1.73	50	IAML		04 40 34.3	
	comp=E,685nm,1.0s						
Q19K				IAML		04 40 34.3	
	comp=N,634nm,0.8s						
Q19K	Cape Douglas,	1.73	50	P	Pn	04 40 07.4	+0.7
	baz=230,SNR=27						
Q19K				S	Sn	04 40 30.8	+0.1
	baz=230						
KDAK	Kodiak Island	1.93	90	P	Pn	04 40 09.0	+0.1
	comp=N,53nm,0.3s,baz=297,slow=6.8,SNR=1051						
KDAK				S	Sn	04 40 33.1	-1.6
	comp=N,57nm,0.3s,baz=49,slow=23,SNR=34						
KDAK	Kodiak Island	1.93	90		Pn	04 40 09.4	+0.4
KDAK				IAML		04 40 34.7	
	comp=N,555nm,0.5s						
KDAK				IAML		04 40 35.2	
	comp=N,416nm,0.2s						
KDAK	Kodiak Island	1.93	90	Sn	Sn	04 40 33.9	-0.8
KDAK	Kodiak Island	1.93	90	P	Pn	04 40 09.3	+0.4
	baz=270						
KDAK				S	Sn	04 40 33.4	-1.2
	baz=270						
CHGN	Chignik	1.96	219		Pn	04 40 08.0	-1.3
CHGN					Sn	04 40 31.3	-4.0
CHGN	Chignik	1.96	219	IAML		04 40 32.4	
	comp=N,320nm,0.6s						
CHGN	Chignik	1.96	219	P	Pn	04 40 08.0	-1.3
	baz=38,SNR=7.4						
CHGN				S	Sn	04 40 31.5	-3.8
	baz=38						
CHIR	Chirikof Islan	2.04	171		Pn	04 40 08.8	-1.5
CHIR	Chirikof Islan	2.04	171	IAML		04 40 34.9	
	comp=N,545nm,0.5s						
CHIR				IAML		04 40 35.0	
	comp=E,549nm,0.9s						
CHIR	Chirikof Islan	2.04	171	P	Pn	04 40 08.9	-1.5
	baz=349						
CHIR				S	Sn	04 40 33.8	-3.3
	baz=349						
AUQ	Augustine Qik’	2.10	42		Pn	04 40 12.2	+1.2
OPT	Oil Point	2.39	39		Pn	04 40 15.6	+1.2
IVE	Iliamna Volcan	2.74	36		Pn	04 40 19.9	+0.9
O20K	Slope Mountain	2.91	38		Pn	04 40 22.6	+1.4
O20K	Slope Mountain	2.91	38	P	Pn	04 40 22.3	+1.2
	baz=220						
HOM	Homer	2.99	50		Pn	04 40 23.8	+1.7
HOM	Homer	2.99	50	P	Pn	04 40 23.6	+1.5
	baz=234						
HOM				S	Sn	04 40 58.4	+0.2
	baz=234						
CNPM	China Poot	3.09	55		Pn	04 40 24.6	+1.1
CNPM	China Poot	3.09	55	IAML		04 41 01.7	
	comp=N,101nm,0.6s						
N19K	Bonanza Creek	3.11	16		Pn	04 40 24.7	+0.9
N19K	Bonanza Creek	3.11	16	P	Pn	04 40 24.7	+0.9
	baz=198						
RDWB	Redoubt West	3.17	32		Pn	04 40 25.7	+1.1
RSO	Redoubt South	3.17	32		Pn	04 40 26.1	+1.5
NCT	North Crescent	3.21	30		Pn	04 40 26.0	+1.0
SVW2	Sparrevohn	3.29	5		Pn	04 40 26.2	+0.3
DFR	Drift River	3.30	32		Pn	04 40 27.5	+1.3
BRLK	Bradley Lake	3.37	53		Pn	04 40 27.1	+0.1
BRLK	Bradley Lake	3.37	53	IAML		04 41 06.1	
	comp=E,72nm,0.5s						
BRLK				IAML		04 41 07.2	
	comp=N,122nm,0.2s						
BRSE	Bradley Lake S	3.42	54		Pn	04 40 28.0	+0.4
BRSE	Bradley Lake S	3.42	54	P	Pn	04 40 27.9	+0.3
	baz=238						
BRSE				S	Sn	04 41 06.0	-2.1
	baz=238						
SDPT	Sand Point	3.44	225	P	Pn	04 40 26.6	-1.3
	baz=42						
SDPT				S	Sn	04 41 04.7	-3.8
	baz=42						
CKL	Chakachamna La	3.90	29		Pn	04 40 35.2	+1.2
CAPN	Captain Cook N	3.91	39	S	Sn	04 41 20.6	+1.0
	baz=223						
SPU	Mount Spurr	3.96	30		Pn	04 40 35.8	+1.0
SLKM	Skilak Lake	4.08	46		Pn	04 40 37.1	+0.9
SEW	Seward	4.16	54		Pn	04 40 38.5	+1.2
SEW	Seward	4.16	54	P	Pn	04 40 37.7	+0.4
	baz=239						
SEW				S	Sn	04 41 23.1	-2.3
	baz=239						
O22K	Cooper Landing	4.26	49		Pn	04 40 40.0	+1.4
O22K	Cooper Landing	4.26	49	P	Pn	04 40 39.0	+0.5
	baz=234						
O22K				S	Sn	04 41 25.8	-1.9
	baz=234						
STLK	Strandline Lak	4.29	29		Pn	04 40 41.0	+2.0
DT1	Dutton Round H	4.35	234		Pn	04 40 37.9	-1.9
L19K	White Mountain	4.41	8		Pn	04 40 41.6	+0.9
L19K	White Mountain	4.41	8	IAML		04 41 47.5	
	comp=N,30nm,4.8s						
L19K				IAML		04 42 00.6	
	comp=E,29nm,1.1s						
L19K	White Mountain	4.41	8	P	Pn	04 40 41.0	+0.3
	baz=190						
RC01	Rabbit Creek A	4.63	43		Pn	04 40 44.3	+0.7
RC01	Rabbit Creek A	4.63	43	IAML		04 41 35.4	
	comp=N,46nm,0.3s						
RC01				IAML		04 41 35.7	
	comp=E,65nm,0.4s						
RC01	Rabbit Creek A	4.63	43	P	Pn	04 40 44.2	+0.7
	baz=228						
RC01				S	Sn	04 41 33.9	-2.8
	baz=228						
L20K	Farewell, AK	4.80	13	P	Pn	04 40 46.8	+1.0
	baz=195						
M22K	Willow	4.98	35	S	Sn	04 41 42.5	-2.4
	baz=220						
PWL	Port Wells	5.03	50		Pn	04 40 48.9	0.0
PWL	Port Wells	5.03	50	IAML		04 41 49.7	
	comp=E,43nm,0.4s						
PWL	Port Wells	5.03	50	P	Pn	04 40 48.9	0.0
	baz=236						
PWL				S	Sn	04 41 42.7	-3.6
	baz=236						
TT01	Tatalina	5.09	1		Pn	04 40 50.4	+0.8
TTA	Tatalina	5.11	1		Pn	04 40 50.7	+0.7
TTA	Tatalina	5.11	1	IAML		04 42 33.5	
	comp=E,24nm,4.3s						
TTA	Tatalina	5.11	1	P	Pn	04 40 50.5	+0.5
	baz=182						
PMR	Palmer	5.19	41	Pn	Pn	04 40 50.8	-0.2
PMR				IAML		04 41 46.9	
	comp=E,28nm,4.2s						
PMR				IAML		04 42 00.9	
	comp=N,20nm,3.5s						
PMR	Palmer	5.19	41	P	Pn	04 40 51.3	+0.4
	baz=226						
PMR				S	Sn	04 41 45.9	-4.0
	baz=226						
KNK	Knik Glacier	5.32	44		Pn	04 40 52.5	-0.2
KNK	Knik Glacier	5.32	44	P	Pn	04 40 52.6	-0.1
	baz=231						
KNK				S	Sn	04 41 48.4	-4.6
	baz=231						
Q23K	Middleton Isla	5.38	69	P	Pn	04 40 53.9	+0.4
	baz=256						
GHO	Glory Hole Cre	5.39	40		Pn	04 40 53.5	-0.1
PPLA	Purkeypile	5.45	20	Pn	Pn	04 40 57.1	+2.5
PPLA	Purkeypile	5.45	20	P	Pn	04 40 57.3	+2.8
	baz=203						
CUT	Chulitna	5.45	30	S	Sn	04 41 53.8	-2.4
	baz=215						
GLI	Glacier Island	5.56	53		Pn	04 40 55.7	-0.2
GLI	Glacier Island	5.56	53	P	Pn	04 40 55.6	-0.4
	baz=240						
GLI				S	Sn	04 41 54.1	-4.7
	baz=240						
HIN	Hinchinbrook I	5.61	59		Pn	04 40 57.6	+0.9
SML	Sawmill	5.62	42	P	Pn	04 40 55.9	-0.8
	baz=228						
SML				S	Sn	04 41 55.8	-4.4
	baz=228						
FID	Port Fidalgo	5.77	56		Pn	04 40 58.4	-0.3
JPK	Jack Peak	5.86	53		Pn	04 41 00.9	+1.0
CAST	Castle Rocks	5.95	18		Pn	04 41 03.0	+1.9
CAST	Castle Rocks	5.95	18	P	Pn	04 41 02.5	+1.3
	baz=202,SNR=10						
SCM	Sheep Creek Mo	6.00	44		Pn	04 41 01.7	-0.2
SCM	Sheep Creek Mo	6.00	44	P	Pn	04 41 01.8	0.0
	baz=232						
EYAK	Cordova Ski Ar	6.01	59		Pn	04 41 02.5	+0.6
EYAK	Cordova Ski Ar	6.01	59	P	Pn	04 41 02.3	+0.4
	baz=247,SNR=6.3						
WAT7	Susitna Watana	6.20	33		Pn	04 41 04.2	-0.2
DIV	Divide	6.25	54		Pn	04 41 05.8	+0.6
WAT1	Susitna Watana	6.28	34		Pn	04 41 05.1	-0.4
WAT1	Susitna Watana	6.28	34	P	Pn	04 41 05.0	-0.6
	baz=220						
KTH	Kantishna Hill	6.29	22		Pn	04 41 06.3	+0.6
TRF	Thorofare Moun	6.33	25		Pn	04 41 07.0	+0.6
TRF	Thorofare Moun	6.33	25	P	Pn	04 41 06.8	+0.5
	baz=210						
WAT6	Susitna Watana	6.35	38		Pn	04 41 05.8	-0.8
WAT6	Susitna Watana	6.35	38	P	Pn	04 41 06.0	-0.6
	baz=225						
CHUM	Lake Minchumin	6.35	16		Pn	04 41 07.5	+1.0
CHUM	Lake Minchumin	6.35	16	P	Pn	04 41 07.6	+1.2
	baz=199						
KLU	Klutina	6.36	51		Pn	04 41 07.1	+0.4
KLU	Klutina	6.36	51	P	Pn	04 41 06.9	+0.2
	baz=239,SNR=12						
J20K	Nowinta River	6.44	8		Pn	04 41 09.1	+1.5
J20K	Nowinta River	6.44	8	P	Pn	04 41 08.2	+0.6
	baz=190						
KAIM	Kayak Island	6.45	66	P	Pn	04 41 09.0	+1.1
	baz=256						
RAGM	Ragged Mountai	6.46	62		Pn	04 41 09.1	+1.1
M24K	Tolsona, Glenn	6.60	45		Pn	04 41 10.4	+0.6
M24K	Tolsona, Glenn	6.60	45	P	Pn	04 41 09.8	-0.1
	baz=234						
HMT	Hamilton	6.64	63		Pn	04 41 11.7	+1.3
RND	Reindeer	6.65	30		Pn	04 41 10.6	0.0
BMRM	Bremner River	6.69	57		Pn	04 41 11.6	+0.5
BMRM	Bremner River	6.69	57	P	Pn	04 41 11.3	+0.1
	baz=247,SNR=7.1						
NICHA	Nichawak Mount	6.75	64		Pn	04 41 12.9	+1.0
BPAW	Bear Paw Mtn.	6.77	20		Pn	04 41 12.3	+0.2
BPAW	Bear Paw Mtn.	6.77	20	P	Pn	04 41 12.2	0.0
	baz=204,SNR=5.1						
DHY	Denali Highway	6.82	36		Pn	04 41 11.9	-1.0
DHY	Denali Highway	6.82	36	P	Pn	04 41 11.9	-1.0
	baz=224						
MCK	McKinley	6.89	28		Pn	04 41 13.4	-0.3
MCK	McKinley	6.89	28	P	Pn	04 41 13.1	-0.7
	baz=214						
BERG	Berg Lake	6.92	63		Pn	04 41 14.8	+0.7
GCSA	Galena City Sc	6.94	358	P	Pn	04 41 14.3	0.0
	baz=177						
N25K	Chitina, Valde	6.97	52		Pn	04 41 15.8	+0.9
N25K	Chitina, Valde	6.97	52	P	Pn	04 41 15.5	+0.7
	baz=242,SNR=7.7						
UNV	Unalaska Valle	7.05	240	P	Pn	04 41 14.5	-1.4
	baz=52						
GRIN	Grindle Hills	7.07	64		Pn	04 41 17.2	+1.0
KHIT	Khitrov Hills	7.15	63		Pn	04 41 18.1	+0.9
GLB	Gilahina Butte	7.24	55		Pn	04 41 19.1	+0.6
CRQM	Cirque	7.29	61		Pn	04 41 20.4	+1.1
VRDI	Verde Repeater	7.31	57		Pn	04 41 20.1	+0.6
CRQE	Cirque	7.31	61	P	Pn	04 41 19.8	+0.3
	baz=252						
WAX	Waxell Ridge	7.34	63		Pn	04 41 21.1	+1.3
PAX	Paxson	7.39	41		Pn	04 41 21.4	+1.0
PAX	Paxson	7.39	41	P	Pn	04 41 20.5	0.0
	baz=230,SNR=7.1						
TGL	Tana Glacier	7.44	61		Pn	04 41 22.1	+1.0
MCARA	McCarthy VSAT	7.56	56		Pn	04 41 23.6	+0.9
MCARA	McCarthy VSAT	7.56	56	P	Pn	04 41 22.9	+0.2
	baz=247						
NEA2	Nenana	7.59	24		Pn	04 41 22.4	-0.8
NEA2	Nenana	7.59	24	P	Pn	04 41 21.9	-1.3
	baz=210,SNR=11						
ISLE	Juniper Island	7.63	63		Pn	04 41 24.9	+1.2
I21K	Tanana	7.64	13		Pn	04 41 24.8	+1.2
I21K	Tanana	7.64	13	P	Pn	04 41 24.0	+0.3
	baz=197						
MLY	Manley	7.67	18		Pn	04 41 24.1	-0.2
MLY	Manley	7.67	18	P	Pn	04 41 23.8	-0.5
	baz=202						
KIAG	Kiagna River	7.71	61		Pn	04 41 25.8	+1.0
MESA	MESA	7.72	66		Pn	04 41 25.8	+0.9
MESA	MESA	7.72	66	P	Pn	04 41 24.8	-0.1
	baz=258						
WRH	Wood River Hil	7.72	27		Pn	04 41 24.1	-0.7
BAGL	Bagley Icefiel	7.72	64		Pn	04 41 25.7	+0.9
PTPK	Patty Peak	7.74	59		Pn	04 41 26.2	+0.9
BALM	Baldy	7.75	60		Pn	04 41 26.3	+1.0
YAH	Yahtse	7.86	65		Pn	04 41 28.2	+1.3
CCB	Clear Creek Bu	7.93	27		Pn	04 41 27.0	-0.6
HDA	Harding Lake	7.96	30		Pn	04 41 27.1	-0.9
HDA	Harding Lake	7.96	30	P	Pn	04 41 26.9	-1.2
	baz=218						
H21K	Melozitna Rive	8.01	10		Pn	04 41 30.1	+1.5
H21K	Melozitna Rive	8.01	10	P	Pn	04 41 29.4	+0.7
	baz=193						
MENT	Mentasta	8.01	45		Pn	04 41 29.4	+0.7
M26K	Nabesna, AK	8.02	50		Pn	04 41 30.1	+1.3
M26K	Nabesna, AK	8.02	50	P	Pn	04 41 29.7	+0.9
	baz=241						
I23K	Minto, Yukon-K	8.03	21		Pn	04 41 29.0	+0.2
I23K	Minto, Yukon-K	8.03	21	P	Pn	04 41 28.0	-0.9
	baz=207,SNR=6.0						
ANM	Nome	8.07	331		Pn	04 41 31.1	+1.6
ANM	Nome	8.07	331	P	Pn	04 41 29.6	+0.1
	baz=143						
BARN	Barnard Glacie	8.07	60		Pn	04 41 30.9	+1.2
MDM	Murphy Dome	8.10	25		Pn	04 41 28.8	-1.1
RIDG	Independent Ri	8.11	38		Pn	04 41 30.8	+0.8
RIDG	Independent Ri	8.11	38	P	Pn	04 41 30.1	0.0
	baz=228						
CHX	Chaix Hills	8.11	68		Pn	04 41 31.4	+1.3
TCOL	CIGO, UAF Yank	8.11	26	P	Pn	04 41 29.5	-0.4
	baz=213						
COLA	College	8.11	26		Pn	04 41 29.8	-0.2
COLA	College	8.11	26	P	Pn	04 41 29.3	-0.7
	baz=213						
TABL	Table Mountain	8.16	65		Pn	04 41 32.8	+1.8
CTG	Chitna Glacier	8.20	61	P	Pn	04 41 32.7	+1.3

	baz=254,SNR=9.2						
CTGM	Chitina Glacie	8.20	61		Pn	04 41 32.9	+1.5
IMAR	Indian Mountai	8.26	7		Pn	04 41 33.4	+1.5
IL31		8.26	29		Pn	04 41 30.7	-1.3
ILAR	Eielson Array	8.26	29	P	Pn	04 41 30.6	-1.5
	comp=N,1.2nm,0.3s,baz=221,slow=14,SNR=90						
ILAR				S	Sn	04 42 59.3	-4.4
	comp=N,1.5nm,0.3s,baz=346,slow=22,SNR=18						
ILAR	Eielson Array	8.26	29	Pn	Pn	04 41 31.0	-1.1
LOGN	Logan Glacier	8.32	63		Pn	04 41 33.8	+0.8
POKR	Poker Plat Res	8.41	26		Pn	04 41 33.1	-1.0
POKR	Poker Plat Res	8.41	26	P	Pn	04 41 33.2	-0.8
	baz=214,SNR=5.9						
M27K	Edge Creek, AK	8.46	52	P	Pn	04 41 35.4	+0.6
	baz=244						
PINM	Pinnacle	8.54	68	P	Pn	04 41 36.5	+0.6
	baz=261						
SCRK	Sand Creek	8.55	39	P	Pn	04 41 35.3	-0.7
	baz=229						
L27K	Beaver Creek,	8.81	48		Pn	04 41 39.6	+0.1
L27K	Beaver Creek,	8.81	48	P	Pn	04 41 40.0	+0.5
	baz=240						
YUK3	Moose Creek	8.85	57	P	Pn	04 41 40.6	+0.5
	baz=250,SNR=8.0						
PNL	Peninsula	8.92	71	P	Pn	04 41 41.8	+0.9
	baz=265						
H24K	Noodor Dome	8.93	23	P	Pn	04 41 39.8	-1.2
	baz=210						
J26L	Joseph Creek	9.03	37	P	Pn	04 41 42.0	-0.5
	baz=228						
PRP	Porcupine Dome	9.21	29	P	Pn	04 41 43.8	-1.1
	baz=218						
DAWY	Dawson	10.26	46	P	Pn	04 41 59.7	+0.9
	baz=240						
DLBC	Dease Lake	13.80	76	P	P	04 42 47.9	-0.9
	comp=N,0.2nm,0.3s,baz=261,slow=15,SNR=4.3						
DLBC	Dease Lake	13.80	76	P	P	04 42 48.4	-0.5
INK	Inuvik	14.56	35	P	Pn	04 42 53.9	-0.5
	comp=N,0.2nm,0.3s,baz=215,slow=11,SNR=7.5						
INK	Inuvik	14.56	35	P	Pn	04 42 53.6	-0.8
YKA	Yellowknife Ar	20.92	60	P	Pn	04 44 09.4	-1.2
	comp=N,0.3nm,0.4s,baz=278,slow=9.9,SNR=7.6						
YKA				pP	pP	04 44 30.7	-0.7
	comp=N,0.5nm,0.7s,baz=275,slow=10.0,SNR=6.2						
YKA				PcP	PcP	04 48 10.2	+2.1
	comp=N,0.2nm,0.6s,baz=291,slow=1.8,SNR=5.0						
YKA	Yellowknife Ar	20.92	60	P	Pn	04 44 09.2	-1.5
PDAR	Pinedale Array	32.64	97	P	P	04 45 57.9	+4.0
	comp=N,0.4nm,0.6s,baz=314,slow=4.1,SNR=4.8						
PDAR	Pinedale Array	32.64	97	P	P	04 45 58.1	+4.2
SONM	Songino Array	54.70	305	P	P	04 48 51.1	+1.3
	comp=N,0.9nm,0.5s,baz=48,slow=5.3,SNR=7.0						
MKAR	Makanchi Array	65.05	320	P	P	04 49 59.2	-1.1
	comp=N,0.3nm,0.7s,baz=40,slow=5.5,SNR=2.7						

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*VAO **23** 04:40:44.4±0.7, 21°.35S×69°.84W, h10^{km}, mb4.6*

*NEIC **23** 04:41:03.5±1.3, 21°.06S±0°.04×68°.85W±0°.07, h108^{km}±3^{km}, mb4.3/7, Mwr4.1/19, ML4.3(GUC), Error ellipse: s-maj=9.0km s-min=5.1km az=84.0*

*NEIC **23** 04:41:03.4, 21°.06S×68°.85W, h108^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.21; M$_{\theta\theta}$0.35; M$_{\phi\phi}$-0.56; M$_{r\theta}$1.15; M$_{\theta\phi}$0.16; M$_{\phi r}$-1.61; Fault plane solution: M$_0$2.05000×10^{15} NP1:ϕ_s32.27000°, δ11.60000°, λ158.06000°. NP2:ϕ_s143.80000°, δ85.69000°, λ79.22000°. Principal axes: T 1.9440, Plg48.0000°, Azm42.0000°; N 0.1909, Plg11.0000°, Azm145.0000°; P -2.1349, Plg40.0000°, Azm244.0000°;*

*GUC **23** 04:41:04.1±0.6, 21°.06S×68°.86W, h108^{km}±3^{km}, ML4.3*

*IDC **23** 04:41:04.6±0.7, 21°.13S×68°.57W, h116^{km}±6^{km}, mb4.0/5, mb1 3.9/8, mb1mx3.6/32, mbtmp4.3/8, MS2.7/1, Ms1 2.7/1, ms1mx2.4/28, Error ellipse: s-maj=28.1km s-min=8.2km az=106.0*

ISC 23 04:41:03.0±0.6**, 21°.05S**±0°.03×**68°.84W**±0°.06**, h109**^{km}±5^{km}**, n95, σ0^s.84**/116**, mb4.5**/7**, 3C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.61	270	eP	Pn	04 41 20.8	+0.2
PB01				eS	Sn	04 41 33.7	-0.3
PB01				IAML		04 41 35.3	
	comp=N,8µm,0.3s						
PB01	IPOC Station P	0.61	270		Pn	04 41 19.8	-0.9
PB01				Sn	Sn	04 41 33.4	-0.5
PB09	IPOC Station P	0.83	207	eP	Pn	04 41 23.5	+0.7
PB09				eS	Sn	04 41 38.6	+1.1
PB09				IAML		04 41 40.8	
	comp=E,6µm,0.4s						
PB09	IPOC Station P	0.83	207		Pn	04 41 22.9	+0.1
PB09				Sn	Sn	04 41 38.3	+0.8
PB08	IPOC Station P	0.95	342	eP	Pn	04 41 25.1	+1.0
PB08				eS	Sn	04 41 41.0	+1.1
PB08	IPOC Station P	0.95	342		Pn	04 41 24.8	+0.6
PB08				Sn	Sn	04 41 40.7	+0.8
PB07	IPOC Station P	1.19	235	eP	Pn	04 41 26.6	+0.2
PB07				eS	Sn	04 41 43.7	-0.3
PB07				IAML		04 41 46.2	
	comp=N,5µm,0.2s						
PB07	IPOC Station P	1.19	235		Pn	04 41 25.9	-0.5
PB07				Sn	Sn	04 41 44.2	+0.2
HMBC	Humberstone	1.25	308⇑	eP	Pn	04 41 27.2	+0.3
HMBC				eS	Sn	04 41 44.9	-0.2
HMBC				IAML		04 41 45.8	
	comp=N,6µm,0.4s						
PATCX	Punta Patache	1.25	280	eP	Pn	04 41 27.4	+0.5
PATCX				eS	Sn	04 41 45.4	+0.3
PATCX				IAML		04 41 47.1	
	comp=E,10µm,0.2s						
PATCX	Punta Patache	1.25	280		Pn	04 41 27.2	+0.3
PB03	IPOC Station P	1.31	220⇑	eP	Pn	04 41 28.1	+0.3
PB03				eS	Sn	04 41 46.3	-0.2
PB03				IAML		04 41 48.1	
	comp=E,8µm,0.2s						
TA02	Huaiquique	1.44	302⇑	eP	Pn	04 41 29.2	+0.1
TA02				i S	Sn	04 41 48.7	-0.1
TA02				IAML		04 41 52.0	
	comp=N,5µm,0.3s						
TA02	Huaiquique	1.44	302		Pn	04 41 29.3	+0.3
PB11	IPOC Station P	1.49	329	eP	Pn	04 41 30.6	+0.6
PB11				eS	Sn	04 41 50.7	+0.4
PB11				IAML		04 41 51.9	
	comp=E,4µm,0.3s						
PB11	IPOC Station P	1.49	329	Pn	Pn	04 41 30.0	+0.1
LVC	Limon Verde	1.56	182	P	Pn	04 41 32.1	+1.3
	comp=E,81nm,0.3s,baz=16,slow=10,SNR=496						
LVC				S	Sn	04 41 52.9	+1.0
	comp=E,290nm,0.3s,baz=324,slow=9.0,SNR=57						
LVC	Limon Verde	1.56	182⇓	eP	Pn	04 41 31.5	+0.6
LVC				eS	Sn	04 41 53.2	+1.3
LVC	Limon Verde	1.56	182	Pn	Pn	04 41 31.1	+0.3
PB04	IPOC Station P	1.77	223	eP	Pn	04 41 33.3	+0.1
PB04				eS	Sn	04 41 55.9	-0.3
PB04				IAML		04 42 01.3	
	comp=N,4µm,0.2s						
PB04	IPOC Station P	1.77	223		Pn	04 41 32.6	-0.6
PB06	IPOC Station P	1.78	202	eP	Pn	04 41 33.9	+0.5
PB06				eS	Sn	04 41 57.0	+0.5
PB06				IAML		04 41 57.8	
	comp=E,7µm,0.4s						
PB06	IPOC Station P	1.78	202		Pn	04 41 34.0	+0.6
PB05	IPOC Station P	2.20	215	eP	Pn	04 41 38.4	-0.2
PB05				eS	Sn	04 42 04.7	-1.1
PB05				IAML		04 42 14.8	
	comp=E,2µm,0.2s						
PB15	IPOC Station P	2.23	195	eP	Pn	04 41 39.6	+0.4
PB15				eS	Sn	04 42 07.5	+0.7
PB15	IPOC Station P	2.23	195		Pn	04 41 39.5	+0.4
PB14	IPOC Station P	3.84	202	Pn	Pn	04 41 59.8	-0.8
LPAZ	La Paz	4.78	8	P	Pn	04 42 16.1	+2.5
	comp=E,3.9nm,0.3s,baz=228,slow=5.3,SNR=41						
LPAZ	La Paz	4.78	8		Pn	04 42 13.6	+0.1
AC02	Maricunga	5.77	183	Pn	Pn	04 42 26.2	-0.5
SIV	San Ignacio	8.92	57	P	Pn	04 43 07.1	-2.0
	comp=E,3.7nm,0.3s,baz=241,slow=9.8,SNR=70						
SIV				LR	LR	04 46 22.4	
	comp=E,48nm,21.6s,baz=269,slow=36						
PTLB	Pontes e Lacer	10.77	60	eP	Pn	04 43 32.0	-2.1
PTLB	Pontes e Lacer	10.77	60	Pn	Pn	04 43 32.9	-1.2
VILB	Vilhena	11.53	47	eP	Pn	04 43 41.7	-2.7
VILB	Vilhena	11.53	47	Pn	Pn	04 43 42.6	-1.8
AQDB	Aquidauana	12.30	90	Pn	Pn	04 43 52.8	-1.8
PDRB	Porto dos Gac	14.93	53	eP	Pn	04 44 28.1	-0.4
PTGB	Pitanga	15.88	106	eP	Pn	04 44 40.6	+0.1
CLDB	Colider	16.10	53	eP	P	04 44 44.0	-0.4
PCMB	Pacaembu	16.39	95	eP	P	04 44 47.7	+0.1
ARAG	Araguaiana, MT	17.01	75	eP	P	04 44 54.9	+0.5
ITRB	Iturama	17.38	89	eP	Pn	04 44 59.0	+0.2
FRTB	Fartura	18.00	101	eP	Pn	04 45 05.7	-0.6
TIJ01	Guaruva-PR	18.72	107	eP	P	04 45 12.8	-0.5
BB19B	Bebedouro	18.96	94	eP	P	04 45 15.6	-0.3
SNDB	Serra Nova Dou	19.07	65	eP	P	04 45 16.5	-0.6
NPGB	Novo Progresso	19.08	45	eP	P	04 45 15.4	-1.7
MACA	Manacapuru-AM	19.47	25	eP	P	04 45 20.6	-0.9
MACA	Manacapuru-AM	19.47	25	P	P	04 45 20.2	-1.3
PLCA	Paso Flores	19.68	184	P	P	04 45 23.5	0.0
	comp=E,0.2nm,0.3s,baz=340,slow=23,SNR=8.5						
PLCA	Paso Flores	19.68	184	P	P	04 45 23.6	0.0
PLCA				IAmb	IAmb	04 45 29.7	
	comp=Z,5.1nm,0.8s						
IPMB	Ipameri, GO	19.68	85	eP	P	04 45 23.8	0.0
RCLB	Rio Claro- Sao	19.84	98	eP	P	04 45 25.1	-0.4
SPB	Sao Paulo	19.96	101	eP	P	04 45 26.6	-0.1
PET01	Itanhaem-SP	20.16	103	eP	P	04 45 27.9	-0.8
VAO	Valinhos	20.37	100	eP	P	04 45 30.0	-1.2
BDFB	Brasilia	20.48	78	P	P	04 45 30.4	-2.0
	comp=Z,5.9nm,0.4s,baz=249,slow=11,SNR=16						
BDFB	Brasilia	20.48	78	P	P	04 45 32.1	-0.3
BDFB				IAmb	IAmb	04 45 35.9	
	comp=Z,7.4nm,0.5s						
ITTB	Itaituba	20.91	39	eP	P	04 45 35.7	-1.2
PEXB	Peixe	21.58	69	eP	P	04 45 43.2	-0.9
PARB	Paraibuna	21.61	100	eP	P	04 45 44.5	-0.1
PTGA	Pitinga	21.97	24	P	P	04 45 47.0	-1.3
	comp=Z,6.7nm,0.3s,baz=330,slow=22,SNR=14						
BSCB	Bom Sucesso	22.46	94	eP	P	04 45 53.6	+0.2
VAS01	Vassouras-RJ	23.63	98	eP	P	04 46 03.8	-0.6
PRPB	Parauapebas	23.63	54	eP	P	04 46 04.2	-0.3
MALB	Monte Alegre	23.79	39	eP	P	04 46 05.4	-0.5
SMTB	Santa Maria do	23.80	63	eP	P	04 46 05.7	-0.3
DIAM	Diamantina, MG	23.85	88	eP	P	04 46 06.9	+0.3
MC01	Montes Claros	23.94	84	eP	P	04 46 07.1	-0.3
JANB	Januaria	24.05	80	eP	P	04 46 08.0	-0.3
SDBA	SAO DESIDERIO	24.45	73	eP	P	04 46 10.8	-1.2
BOAV	Boa Vista	24.68	20	P	P	04 46 13.9	0.0
BOAV				IAmb	IAmb	04 46 15.2	
	comp=Z,12nm,0.6s						
SJMB	Sao Joao De Ma	26.10	90	eP	P	04 46 27.4	+0.6
MCPB	Macapa, AP	26.30	41	eP	P	04 46 29.6	+1.0
BSFB	Barra de Sao F	26.39	90	eP	P	04 46 29.8	+0.4
RIB01	Linhares ES	26.74	91	eP	P	04 46 32.5	-0.1
NAN01	Guarapari, ES	27.25	88	eP	P	04 46 37.2	+0.1
GUA01	Guaratinga, BA	27.82	86	eP	P	04 46 42.9	+0.7
NBIT	Itapeh - BA	28.59	83	eP	P	04 46 49.2	0.0
SDV	Santo Domingo	29.80	356	eP	P	04 46 54.1	-5.8
NBPS	Pedro II - PI	31.34	62	eP	P	04 47 14.3	+0.8
NBLA	Lagarto - SE	31.42	76	eP	P	04 47 14.0	-0.1
NBMO	Morrinhos-CE	33.10	62	eP	P	04 47 29.7	+0.9
SNAA	Sanae	62.68	161	P	P	04 51 16.4	+0.6
LIC	Lamto	68.20	74	eP	P	04 51 51.9	-0.4
	comp=Z,14nm,0.6s						
TIC	Toumodi	68.39	74	eP	P	04 51 53.3	-0.1
KIC	Kosan Boka	68.51	74	eP	P	04 51 54.2	0.0
	comp=Z,19nm,0.7s						
DBIC	Dimbokro	68.54	74	P	P	04 51 53.8	-0.6
	comp=Z,9.2nm,0.7s,baz=241,slow=5.4,SNR=16						
DBIC	Dimbokro	68.54	74	P	P	04 51 53.4	-1.0
DBIC				IAmb	IAmb	04 51 55.3	
	comp=Z,11nm,0.8s						
TORD	Torodi Ar. Bea	77.14	70	P	P	04 52 45.0	-0.1
	comp=Z,2.2nm,0.5s,baz=258,slow=5.3,SNR=35						
TORD				pP	pP	04 53 14.6	+0.3
	comp=Z,1.6nm,0.7s,baz=255,slow=5.4,SNR=3.0						
TORD	Torodi Ar. Bea	77.14	70	P	P	04 52 45.0	-0.1
TORD				IAmb	IAmb	04 52 46.6	
	comp=Z,3.1nm,1.1s						
YKA	Yellowknife Ar	90.79	341	P	P	04 53 54.3	+0.9
	comp=Z,0.3nm,0.6s,baz=130,slow=4.4,SNR=4.9						
YKA				pP	pP	04 54 23.4	+0.3
	comp=Z,1.0nm,0.8s,baz=134,slow=4.5,SNR=7.1						
ZALV	Zalesovo Beam	141.52	25	PKP	PKPdf	05 00 22.8	+1.7
	comp=Z,0.6nm,0.4s,baz=290,slow=4.2,SNR=1.9						
MKAR	Makanchi Array	145.23	36	PKPbc	PKPab	05 00 29.2	+1.2
	comp=Z,7.4nm,1.1s,baz=324,slow=4.2,SNR=9.8						
MKAR				pPKPbc	pPKPdf	05 00 59.7	+0.6
	comp=Z,2.7nm,0.8s,baz=315,slow=2.6,SNR=8.2						
MKAR	Makanchi Array	145.23	36	PKPbc	PKPbc	05 00 28.6	+0.8

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*PGC **23** 05:23:20.5±1.3, 50°.05N×130°.22W, h10^{km}, MLSn3.0/8, Mw3.6/8, 211km Wsw of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **23** 05:23:21.3±4.5, 50°.12N×130°.00W, h0^{km}, mb3.5/2, mb1 3.6/5, mb1mx3.1/35, mbtmp3.4/5, ML3.0/3, Error ellipse: s-maj=68.6km s-min=18.3km az=87.0*

ISC 23 05:23:22.3±3.1**, 50°.17N**±0°.07×**129°.88W**±0°.08**, h11**^{km}±17^{km}**, n25, σ0^s.98**/33**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.21	66	Pn	Pb	05 23 45.0	-0.3
HOLB				Sn	Sg	05 24 01.9	+0.5
PACB	Port Alice, BC	1.55	79	Pn	Pn	05 23 48.8	-1.1
PACB				Sn	Sb	05 24 09.7	-1.0
PHC	Port Hardy	1.66	70	Pn	Pn	05 23 50.8	-0.5
PHC				Sn	Sb	05 24 12.9	-0.8
MAYB	Maynard	1.75	81	Pn	Pn	05 23 51.8	-1.0
MAYB				Sn	Sb	05 24 16.5	-0.1
EDB	Eliza Dome	1.81	98	Pn	Pn	05 23 52.5	-0.8
TLCB	Telegraph Cove	1.99	78	Pn	Pn	05 23 55.9	+0.1
TLCB				Sn	Sb	05 24 21.3	-1.9
WOSB	Woss	2.13	89	Pn	Pn	05 23 57.4	-0.5
BBB	Bella Bella	2.30	28	Pn	Pn	05 24 00.2	0.0
	2.7nm,0.3s,baz=223,slow=5.6,SNR=54						
BBB				Sn	Sn	05 24 28.0	-0.5
	9.8nm,0.3s,baz=319,slow=21,SNR=14						
BBB	Bella Bella	2.30	28	Pn	Pn	05 24 00.5	+0.3
BBB				Sn	Sn	05 24 28.4	-0.1
NCRB	Newcastle Ridg	2.46	83	Pn	Pn	05 24 02.7	+0.2
BTB	Buttle Lake	2.91	102	Pn	Pn	05 24 08.0	-0.7
CBB	Campbell River	2.91	91	Pn	Pn	05 24 08.3	-0.2
BUTB	Butedale	3.03	16	Pn	Pn	05 24 10.8	+0.5
BUTB				Sn	Sn	05 24 47.4	+0.9
BNKB	Banks Island	3.17	360	Pn	Pn	05 24 10.8	-1.3
BNKB				Sn	Sn	05 24 49.3	-0.5
HWKB	Hawksbury Isla	3.46	7	Pn	Pn	05 24 16.2	0.0
HWKB				Sn	Sn	05 24 57.8	+0.6
TXB	Texada	3.55	96	Pn	Pn	05 24 18.2	+0.8
GRNB	Grenville Isla	3.68	359	Pn	Pn	05 24 18.5	-0.6
GRNB				Sn	Sn	05 25 02.2	-0.4
SHB	Sechelt	3.92	96	Pn	Pn	05 24 23.7	+1.1
YKA	Yellowknife Ar	14.92	28	Pn	Pn	05 26 52.7	-0.2
	0.0nm,0.3s,baz=217,slow=12,SNR=3.0						
PDAR	Pinedale Array	15.81	110	Pn	P	05 27 08.7	-0.2
	0.0nm,0.3s,baz=300,slow=12,SNR=7.6						
ULM	Lac du Bonnet	21.66	77	P	P	05 28 16.0	+3.4
	2.3nm,0.6s,baz=292,slow=10,SNR=3.6						
TXAR	Lajitas Array	28.72	127	P	P	05 29 18.9	-0.7
	0.3nm,0.8s,baz=324,slow=5.9,SNR=2.1						
H11N2	WAKE ISLAND Hy	58.00	263	T	T	06 35 53.5	
	baz=42,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	58.00	263	T	T	06 35 53.6	
	baz=42,slow=75,SNR=9.9						
H11N1	WAKE ISLAND Hy	58.02	263	T	T	06 35 54.7	
	baz=42,slow=75,SNR=7.4						

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*THE **23** 05:23:46.7, 38°.37N×20°.44E, h9^{km}, ML2.4/12, Error ellipse: s-maj=1.2km s-min=0.4km az=275.0*

*ATH **23** 05:23:46.7, 38°.37N×20°.48E, h11^{km}±1^{km}, ML2.5/8, Error ellipse: s-maj=2.1km s-min=0.7km az=281.0*

ISC 23 05:23:44.8±0.9**, 38°.38N**±0°.02×**20°.35E**±0°.03**, h17**^{km}±6^{km}**, n54, σ1^s.10**/91**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.13	155	P	Pb	05 23 49.4	+0.5
KEF4				S	Sb	05 23 51.8	+0.3
KEF4	Livadi, Kephal	0.13	155	P	Pb	05 23 49.3	+0.5
KEF4				S	Sb	05 23 51.9	+0.3
DMLN	Damoulianata-K	0.14	173	P	Pb	05 23 50.0	+1.0
DMLN				S	Sb	05 23 52.7	+0.9
DMLN	Damoulianata-K	0.14	173	P	Pb	05 23 50.0	+1.0
DMLN				S	Sb	05 23 52.8	+0.9
KEF3	Kipouria, Keph	0.18	181	P	Pb	05 23 50.2	+0.6
KEF3				S	Sb	05 23 53.0	+0.2
KEF3	Kipouria, Keph	0.18	181	P	Pb	05 23 50.2	+0.6
KEF3				S	Sb	05 23 53.2	+0.5
FSK	Fiskardo	0.18	64	P	Pg	05 23 49.6	+0.2
FSK				S	Sg	05 23 51.6	-0.9
FSK	Fiskardo	0.18	64	P	Pg	05 23 49.6	+0.2
FSK				S	Sg	05 23 51.7	-0.9
FSK				AML	AML	05 23 52.1	
	comp=E,13986µm,0.3s						
FSK				AML	AML	05 23 52.2	
	comp=N,7498µm,0.2s						
LXRA	Lixouri, Kepha	0.19	159	P	Pb	05 23 50.6	+0.7
ARGA	Argostoli. Kep	0.23	154	P	Pb	05 23 51.5	+1.1
VLS	Valsamata	0.28	137	P	Pg	05 23 51.0	+0.1
VLS				S	Sg	05 23 54.3	-0.7
	comp=N,2µm,0.2s						
VLS	Valsamata	0.28	137	P	Pb	05 23 51.1	-0.2
VLS				S	Sg	05 23 54.2	-0.8
VLS				AML	AML	05 23 57.5	
	comp=E,4108µm,0.1s						
VLS				AML	AML	05 23 59.5	
	comp=N,3320µm,0.2s						
PSDA	Pessada-Kefalo	0.32	145	P	Pb	05 23 52.1	0.0
PSDA				S	Sb	05 23 57.0	0.0
PSDA	Pessada-Kefalo	0.32	145	P	Pb	05 23 52.1	0.0
EVGI	Lefkada island	0.34	45	P	Pb	05 23 52.6	+0.2
EVGI				S	Sb	05 23 57.9	+0.4
EVGI	Lefkada island	0.34	45	P	Pb	05 23 52.6	+0.2
EVGI				S	Sg	05 23 57.2	+0.4
DRAG	Dragano-Lefkad	0.35	30	P	Pb	05 23 52.9	+0.3
DRAG				S	Sb	05 23 58.5	+0.6
DRAG	Dragano-Lefkad	0.35	30	P	Pb	05 23 53.1	+0.5
DRAG				S	Sb	05 23 58.0	+0.1
NYDR	Nydri-Lefkada	0.43	39	P	Pb	05 23 54.1	+0.2
NYDR				S	Sb	05 24 00.5	+0.4
NYDR	Nydri-Lefkada	0.43	39	P	Pb	05 23 54.0	0.0
LKD2	Lefkada island	0.47	30	P	Pb	05 23 55.0	+0.3
LKD2				S	Sb	05 24 02.2	+0.7
	comp=N,362nm,0.2s						
LKD2	Lefkada island	0.47	30	P	Pb	05 23 55.0	+0.3
TSLK	Tsoukalades, L	0.51	28	P	Pb	05 23 55.6	+0.4
TSLK				S	Sb	05 24 03.8	+1.5
	comp=N,602nm,0.5s						
TSLK	Tsoukalades, L	0.51	28	P	Pb	05 23 55.9	+0.7
LTHK	Lithakia	0.77	150	P	Pb	05 23 59.7	0.0
LTHK				S	Sn	05 24 11.8	-0.2
	comp=N,560nm,0.4s						
LTHK	Lithakia	0.77	150	P	Pg	05 23 59.9	+0.1
RLS	Riolos of Patr	0.94	110	P	Pb	05 24 02.7	+0.2
RLS				S	Sg	05 24 15.7	+0.4
	comp=N,142nm,0.6s						
DRO	Drossia	1.15	111	P	Pg	05 24 06.9	-0.2
DRO				S	Sg	05 24 22.3	+0.1
	comp=N,285nm,0.5s						
DRO	Drossia	1.15	111	P	Pb	05 24 06.6	+0.3
DRO				AML	AML	05 24 29.1	
	comp=N,461µm,0.3s						
DRO				AML	AML	05 24 30.3	
	comp=E,660µm,0.5s						
EFP	Efpalio	1.22	87	P	Pb	05 24 07.5	+0.1
EFP				S	Sg	05 24 25.4	+1.0
	comp=E,162nm,1.0s						
EFP	Efpalio	1.22	87	P	Pb	05 24 07.6	+0.1
EFP				AML	AML	05 24 32.2	
	comp=N,272µm,0.4s						
EFP				AML	AML	05 24 32.4	
	comp=E,304µm,0.5s						
ANX	Ano Chora	1.25	80	P	Pb	05 24 08.0	0.0
ANX				S	Sg	05 24 26.5	+1.2
	comp=E,202nm,0.5s						
ANX	Ano Chora	1.25	80	P	Pb	05 24 08.0	0.0
ANX				AML	AML	05 24 33.8	
	comp=E,361µm,0.6s						
ANX				AML	AML	05 24 35.3	
	comp=N,468µm,0.4s						
EVR	Evrytania	1.26	64	P	Pb	05 24 08.6	+0.4
EVR				S	Sg	05 24 27.0	+1.4
	comp=N,85nm,0.5s						
LAKA	Lakka	1.29	96	P	Pb	05 24 08.4	-0.2
LAKA				S	Sg	05 24 26.4	-0.1
	comp=N,248nm,0.7s						
LAKA	Lakka	1.29	96	P	Pb	05 24 08.4	-0.2
LAKA				AML	AML	05 24 32.2	
	comp=E,589µm,0.7s						
LAKA				AML	AML	05 24 39.6	
	comp=N,448µm,0.7s						
SERG	Sergoula	1.34	88	P	Pn	05 24 09.2	+0.5
SERG				S	Sg	05 24 28.6	+0.5
	comp=N,112nm,0.5s						
SERG	Sergoula	1.34	88	P	Pn	05 24 09.3	+0.5
SERG				AML	AML	05 24 36.5	
	comp=E,271µm,0.4s						
SERG				AML	AML	05 24 37.9	
	comp=N,299µm,0.6s						
TRIZ	Trizonia	1.35	90	P	Pb	05 24 09.5	-0.2
TRIZ	Trizonia	1.35	90	P	Pb	05 24 09.4	-0.2
ALIK	Aliki, Aigiali	1.39	94	P	Pb	05 24 10.7	+0.4
ALIK				S	Sb	05 24 28.5	+0.8
KEK	Kerkira	1.40	342	P	Pg	05 24 13.5	+1.7
KLV	Kalavryta, Ach	1.46	103	P	Pb	05 24 11.4	-0.1
KLV				S	Sg	05 24 31.0	-0.8
	comp=N,48nm,0.5s						
KLV	Kalavryta, Ach	1.46	103	P	Pb	05 24 11.3	-0.1
KLV				AML	AML	05 24 40.2	
	comp=E,108µm,0.6s						
KLV				AML	AML	05 24 52.8	
	comp=N,76µm,0.8s						
MAKR	Makrakomi, Fth	1.53	65	P	Pb	05 24 13.4	+0.6
STON	Ston	4.92	337	ePn	Pn	05 24 59.8	+1.9
STON				Sn	Sn	05 25 54.0	-0.4
LSTV	Lastovo	5.12	330	ePn	Pn	05 25 00.7	+0.1
LSTV				Sn	Sn	05 25 56.6	-2.7
MAKA	Makarska	5.52	334	ePn	Pn	05 25 07.0	+0.9
MAKA				Sn	Sn	05 26 07.1	-2.0
HVAR	Hvar	5.63	330	ePn	Pn	05 25 08.4	+0.7
HVAR				Sn	Sn	05 26 09.4	-2.6
RICI	Ricice	5.66	336	ePn	Pn	05 25 09.4	+1.3
RICI				Sn	Sn	05 26 11.0	-1.8
KIJV	Kijevo	6.36	333	ePn	Pn	05 25 18.6	+0.8
KIJV				Sn	Sn	05 26 27.5	-2.4
ZIRJ	Zirje	6.36	327	ePn	Pn	05 25 18.3	+0.7
ZIRJ				Sn	Sn	05 26 26.0	-3.9
MORI	Morici	6.51	329	ePn	Pn	05 25 20.4	+0.7
MORI				Sn	Sn	05 26 30.7	-2.8
DUGI	Dugi Otok	6.88	326	ePn	Pn	05 25 25.2	+0.4
DUGI				Sn	Sn	05 26 38.2	-4.5

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*ISK **23** 05:32:56.8, 39°.19N×27°.82E, h10^{km}, ML3.5/43*

*THE **23** 05:32:57.5, 39°.20N×27°.86E, h7^{km}±3^{km}, ML3.1/11, Error ellipse: s-maj=3.0km s-min=0.9km az=116.0*

*DDA **23** 05:32:57.1, 39°.17N×27°.82E, h7^{km}±2^{km}, MW3.3*

ISC 23 05:32:57.4±0.9**, 39°.19N**±0°.02×**27°.82E**±0°.02**, h13**^{km}±7^{km}**, n91, σ0^s.64**/111**, 9C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.20	337	i P	Pg	05 33 01.8	-0.1
STEP				i S	Sg	05 33 05.5	+0.5
STEP				IAML		05 33 06.0	
	comp=N,10µm,0.7s						
STEP				IAML		05 33 06.0	
	comp=E,12µm,0.5s						
AKHS	Akhisar	0.31	181	i P	Pn	05 33 08.9	+1.3
AKS	Akhisar	0.31	181	PG	Pg	05 33 03.3	-0.4
AKS				SG	Sg	05 33 08.5	+0.5
BALB	Balikesir	0.45	6	PG	Pg	05 33 06.4	+0.1
GOMA	Golmarmara-Man	0.49	171	PG	Pg	05 33 06.7	-0.3
GOMA				SG	Sb	05 33 14.2	-0.7
BALY	Balya	0.57	344	i P	Pg	05 33 08.5	-0.1
BALY				IAML		05 33 21.0	
	comp=N,1µm,0.4s						
BALY				IAML		05 33 21.0	
	comp=E,854nm,0.5s						
ZEDA	zmir-Bergama	0.62	249	i P	Pb	05 33 09.8	-0.3
ZEDA				i S	Sg	05 33 18.1	+0.4
ZEDA				IAML		05 33 21.0	
	comp=N,818nm,0.4s						
ZEDA				IAML		05 33 21.0	
	comp=E,446nm,0.4s						
DURS	Dursunbey	0.65	51	i P	Pg	05 33 09.9	-0.2
DURS				IAML		05 33 23.0	

	comp=N,881nm,0.4s						
DURS				IAML		05 33 23.0	
	comp=E,1µm,0.4s						
BUHA	Balikesir, Bur	0.66	299	*i* P	Pb	05 33 10.4	-0.3
BUHA				*i* S	Sg	05 33 18.6	-0.2
BUHA				IAML		05 33 24.0	
	comp=E,792nm,0.3s						
BUHA				IAML		05 33 25.0	
	comp=N,608nm,0.5s						
DEMI	Demirci	0.71	102	*i* P	Pg	05 33 11.1	-0.1
DEMI				*i* S	Sg	05 33 20.6	0.0
DEMI				IAML		05 33 25.0	
	comp=N,1µm,0.4s						
DEMI				IAML		05 33 25.0	
	comp=E,2µm,0.4s						
DKL	Dikili	0.72	261	PG	Pg	05 33 11.5	+0.1
DST	Dursunbey	0.74	56	PG	Pg	05 33 11.8	0.0
CAND	Candarli	0.83	254	PG	Pg	05 33 13.1	-0.3
GONE	Gonen-Balikesi	0.86	353	PG	Pg	05 33 14.0	-0.1
AYVA	Ayvalik	0.89	278	*i* P	Pb	05 33 15.0	+0.4
AYVA				IAML		05 33 29.0	
	comp=E,729nm,0.5s						
AYVA				IAML		05 33 35.0	
	comp=N,532nm,0.8s						
SMAA	Simav-Kutahya	0.91	95	PG	Pg	05 33 14.8	-0.1
SIMA	Simav-Kutahya	0.91	96	PG	Pg	05 33 14.8	-0.1
KULA	Kula-Manisa	0.94	136	P	Pg	05 33 15.1	-0.4
KULA				S	Sg	05 33 27.6	-0.2
KULA	Kula-Manisa	0.94	136	PG	Pg	05 33 15.2	-0.3
FOCM	Foa	0.97	241	PG	Pg	05 33 15.9	-0.3
BLCB	Balcova	1.01	217	P	Pg	05 33 16.2	-0.6
BLCB				S	Sg	05 33 29.8	-0.2
BLCB	Balcova	1.01	217	PG	Pg	05 33 16.6	-0.2
USAK	Uak-Merkez	1.05	117	*i* P	Pg	05 33 17.2	-0.3
USAK				IAML		05 33 32.0	
	comp=E,181nm,0.4s						
USAK				IAML		05 33 34.0	
	comp=N,323nm,0.5s						
SHAP	Saphane-Kutahy	1.10	98	PN	Pb	05 33 18.6	+0.2
KCTX	Karacabey (Bur	1.15	21	PN	Pg	05 33 19.0	-0.6
EDC	Edincik	1.16	2	PN	Pg	05 33 19.3	-0.4
ORLT	Orhaneli	1.19	44	PN	Pn	05 33 20.2	+0.4
PRK	Paraskevi	1.21	273	P	Pn	05 33 21.2	+1.2
PRK				S	Sn	05 33 36.9	+0.7
	comp=N,1µm,0.5s						
AYDB	Zeytinkoy-Aydi	1.24	177	PN	Pg	05 33 20.3	-1.0
GEDZ	Gediz	1.24	96	PN	Pn	05 33 21.1	+0.5
URLA	Izmir	1.27	230	*i* P	Pn	05 33 20.7	-0.2
URLA				IAML		05 33 43.0	
	comp=E,522nm,0.8s						
URLA	Izmir	1.27	230	PN	Pn	05 33 20.7	-0.2
KRBG	Karabiga-Canak	1.27	342	PN	Pn	05 33 21.0	+0.2
TVSB	Tavsanli	1.30	78	PN	Pb	05 33 21.9	+0.2
EZN	Ezine	1.32	299	P	Pn	05 33 21.7	+0.2
EZN				S	Sn	05 33 39.8	+0.8
	comp=E,730nm,0.4s						
EZN	Ezine	1.32	299	PN	Pn	05 33 21.9	+0.4
DGB	zmir	1.35	213	*i* P	Pn	05 33 22.3	+0.3
DGB				IAML		05 33 41.0	
	comp=E,464nm,0.5s						
DGB				IAML		05 33 42.0	
	comp=N,639nm,0.7s						
MDNY	Mudanya-Bursa	1.43	34	PN	Pn	05 33 23.3	+0.2
LPK	Lapseki	1.44	326	PN	Pn	05 33 23.8	+0.6
BOZC	Bozcaada	1.52	296	PN	Pn	05 33 24.6	+0.4
SIGR	SIGRI	1.53	271	P	Pn	05 33 24.3	-0.1
SIGR				S	Sb	05 33 45.8	+0.9
	comp=N,1µm,0.5s						
SIGR	SIGRI	1.53	271	PN	Pn	05 33 24.9	+0.5
GCAM	G?zelcaml?	1.56	197	PN	Pn	05 33 25.2	+0.4
MAR6	Marsite Statio	1.57	344	PN	Pn	05 33 25.7	+0.7
MAR2	Marsite Statio	1.57	346	PN	Pn	05 33 25.5	+0.5
RKY	Sarkoy-Tekirda	1.58	342	PN	Pn	05 33 25.5	+0.4
KHL	Karahalli	1.59	123	PN	Pn	05 33 25.9	+0.6
GELI	Tayfur-Gelibol	1.59	320	PN	Pn	05 33 25.9	+0.6
GZKV	Gazikoy-Tekird	1.60	346	PN	Pn	05 33 26.0	+0.6
MAR3	Marsite Statio	1.60	346	PN	Pn	05 33 26.1	+0.6
GEMT	Gemlik	1.63	40	PN	Pn	05 33 25.9	+0.1
MAR4	Marsite Statio	1.65	346	PN	Pn	05 33 26.7	+0.6
SMG	Samos	1.67	208	P	Pb	05 33 27.9	-0.1
SMG				S	Sn	05 33 48.6	+1.0
	comp=N,832nm,0.4s						
IZI	Iznik	1.71	47	PN	Pn	05 33 27.6	+0.6
TRML	Termal-Yalova	1.76	36	PN	Pn	05 33 27.6	0.0
ERIK	Erikli-Kesan	1.79	326	PN	Pn	05 33 28.8	+0.8
GADA	Gvkgeada	1.79	305	P	Pn	05 33 28.2	+0.2
GADA				S	Sn	05 33 50.7	+0.1
	comp=N,230nm,0.5s						
GADA	Gvkgeada	1.79	305	PN	Pn	05 33 28.4	+0.4
TKR	Tekirdag	1.81	353	PN	Pn	05 33 29.2	+0.9
YLV	Yalova	1.82	40	PN	Pn	05 33 28.6	+0.1
CAVI	Cavuskoy	1.86	56	PN	Pn	05 33 29.6	+0.6
ENZZ	Sultanice-Enez	1.92	318	PN	Pn	05 33 30.6	+0.9
ADVT	Abdulvahap	1.93	49	PN	Pn	05 33 30.7	+0.8
ENEZ	Enez	2.01	321	P	Pn	05 33 31.5	+0.5
ENEZ				S	Sn	05 33 56.9	+0.9
YER	Yerkesik	2.08	170	P	Pn	05 33 31.9	-0.2
YER				S	Sn	05 33 58.2	+0.2
YER	Yerkesik	2.08	170	PN	Pn	05 33 32.9	+0.8
ISK	Istanbul-Kandi	2.10	26	P	Pn	05 33 32.0	-0.3
ISK				S	Sn	05 33 57.4	-0.9
	comp=N,128nm,0.5s						
BASM	Basmaki-Afyon	2.16	125	PN	Pn	05 33 33.9	+0.7
LIA	Limnos Island	2.16	290	P	Pn	05 33 33.6	+0.5
LIA				S	Sn	05 34 00.0	+0.3
	comp=N,160nm,0.4s						
BODT	Bodrum	2.16	191	P	Pn	05 33 32.4	-0.7
BODT				S	Sn	05 33 59.8	0.0
BODT	Bodrum	2.16	191	PN	Pn	05 33 33.9	+0.8
SMTH	Samothraki Isl	2.18	307	P	Pn	05 33 33.8	+0.4
SMTH				S	Sn	05 34 00.4	+0.1
	comp=N,218nm,0.4s						
ALN	Alexandroupoli	2.18	322	P	Pn	05 33 34.0	+0.6
ALN				S	Sn	05 34 01.0	+0.7
	comp=N,245nm,0.4s						
SHUT	Suhut-Afyon	2.22	106	PN	Pn	05 33 34.9	+0.8
TURN	Turunc	2.43	172	PN	Pn	05 33 37.0	+0.2
DAT	Datca	2.46	185	PN	Pn	05 33 38.3	+0.9
KOSK	Kos Island	2.52	196	PN	Pn	05 33 39.2	+1.1
RDO	Rodhopi	2.62	319	P	Pn	05 33 40.4	+0.9
RDO				S	Sn	05 34 11.2	0.0
	comp=N,158nm,0.8s						
THAS	Thassos island	2.77	302	P	Pn	05 33 41.6	+0.1
THAS				S	Sn	05 34 13.5	-1.4
	comp=N,55nm,0.6s						
EDRB	Edirne	2.78	343	P	Pn	05 33 41.5	-0.1
APE	Apeiranthos	2.78	221	⇓P	Pg	05 33 49.5	-1.2
NVR	Nevrokopi	3.72	307	P	Pn	05 33 55.1	+0.5
RAZG	Razgrad	4.48	348	⇑P	Pb	05 34 13.2	-2.8
VTS	Vitosha	4.88	316	⇑P	Pn	05 34 11.6	+1.0
TIRR	Tirgusor	5.28	5	⇑P	Pn	05 34 23.0	+7.0
CFR	Carcaliu	5.99	2	⇑P	Pn	05 34 26.2	+0.5
BOVS	Bovan	6.39	316	⇑P	Pn	05 34 31.9	+0.7
MLR	Muntele Rosu	6.45	348	⇑P	Pn	05 34 33.7	+1.5
VOIR		6.57	343	⇑P	Pn	05 34 34.5	+0.7
PLOR	Plostina	6.71	353	⇑P	Pn	05 34 36.4	+0.7
GZR	Gura Zlata	7.24	331	⇑P	Pn	05 34 37.6	-5.4

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*IDC **23** 05:44:10.8±2.2, 3°.92S×130°.35E, h0^{km}, mb3.9/2, mb1 4.1/4, mb1mx3.7/39, mbtmp3.9/4, ML3.7/2, MS3.6/3, Ms1 3.6/3, ms1mx2.9/38, Error ellipse: s-maj=158.5km s-min=26.1km az=71.0*

*DJA **23** 05:44:15.8±0.9, 4°S±4°×12°9E±°, h17^{km}±8^{km}, M4.0/9, MLv4.0/9*

ISC 23 05:44:14.2±0.7,**4°.15S**±0°.06×**129°.46E**±0°.05,**h10**^{km},**n23**, σ**1^{s}.28**/22,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.58	130	P	Pg	05 44 25.8	+0.4
MSAI	Masohi	0.96	326	P	Pg	05 44 33.2	+0.6
MSAI				S	Sb	05 44 46.1	+0.5
AAI	Ambon	1.34	290	P	Pn	05 44 39.4	+0.4
AAI				S	Sb	05 44 56.3	-0.4
FAKI	Fak Fak	3.04	66	P	Pn	05 45 03.2	+0.8
FAKI	Fak Fak	3.04	66	P	Pn	05 45 03.7	+1.3
SWI	Sorong	3.73	29	P	Pn	05 45 12.3	+0.5
LBMI	Labuha	4.00	331	P	Pn	05 45 15.8	+0.2
SANI	Sanana	4.04	301	P	Pn	05 45 17.0	+0.8
SANI	Sanana	4.04	301	P	Pb	05 45 25.5	-0.1
SAUI	Saumlaki	4.23	154	P	Pn	05 45 19.5	+0.8
KNRA	Kununurra	11.48	183	P	Pn	05 46 59.8	+1.5
WRA	Warramunga Arr	16.40	164	Pn	Pn	05 48 00.8	-3.9
	0.2nm,0.3s,baz=350,slow=13,SNR=12						
COEN	Coen	16.67	127	P	Pn	05 48 06.1	-2.1
PMG	Port Moresby	18.33	107	LR	LR	05 57 09.2	
	comp=Z,35nm,21.6s,baz=271,slow=44						
QIS	Mount Isa	19.07	150	P	P	05 48 37.3	+0.3
MBWA	Marble Bar	19.37	208	P	P	05 48 41.9	+1.6
PSA00	Pilbara Seismi	19.68	207	P	P	05 48 44.7	+1.1
	25nm,0.9s						
ASAR	Alice Springs	19.87	168	P	P	05 48 45.2	-0.5
	0.6nm,0.3s,baz=351,slow=11,SNR=33						
WRKA	Warakurna	20.80	183	P	P	05 48 56.2	+0.4
	22nm,1.0s						
RAO	Raoul Island	55.66	123	LR	LR	06 15 09.7	
	comp=Z,114nm,19.2s,baz=38,slow=34						
MKAR	Makanchi Array	65.56	326	P	P	05 54 58.5	+0.4
	0.6nm,0.6s,baz=121,slow=7.8,SNR=7.9						
KURBB	Kurchatov Arra	69.82	328	P	P	05 55 24.8	-0.1
	0.8nm,0.6s,baz=131,slow=5.8,SNR=7.3						
BELG	Belogornoye	88.28	323	LR	LR	06 40 42.7	
	comp=Z,89nm,18.5s,baz=326,slow=38						

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*IDC **23** 05:56:16.1±7.4, 14°.96N×92°.33W, h0^{km}, mb3.4/2, mb1 3.6/4, mb1mx3.4/40, mbtmp3.2/4, ML3.4/2, MS2.4/1, Ms1 2.4/1, ms1mx2.3/21, Error ellipse: s-maj=190.2km s-min=47.8km az=25.0*

*MEX **23** 05:56:21.2±0.5, 14°.53N×92°.77W, h17^{km}±46^{km}, MD4.1*

*GCG **23** 05:56:21.5±0.5, 14°.58N×92°.51W, h29^{km}±999^{km}, MD3.9*

ISC 23 05:56:16.5±1.9,**14°.59N**±0°.07×**92°.69W**±0°.05,**h13**^{km}±12^{km}, **n14**,σ**0^{s}.87**/23,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.52	52	*e*P	Pn	05 56 31.0	+1.3
THIG				*e*S	Sn	05 56 38.5	+0.1
PATR	El Naranjo	0.69	40	*e*P	Pn	05 56 32.8	+0.7
PATR				*e*S	Sn	05 56 43.7	+0.8
CHUJ	Union Juarez	0.75	48	*e*P	Pn	05 56 34.0	+0.9
CHUJ				*e*S	Sn	05 56 45.1	+0.5
PAVE	Pavencul	0.78	40	*e*P	Pn	05 56 34.4	+0.9
PAVE				*e*S	Sn	05 56 45.6	+0.4
STG3	Santiaguito 3,	1.09	84	*e*P	Pn	05 56 39.0	+1.3
PCIG		1.22	335	*i* P	Pg	05 56 40.3	+0.4
PCIG				*i* S	Sb	05 56 54.7	-0.5
CCIG	Comitan	1.77	18	*e*P	Pg	05 56 50.5	+0.1
CCIG				*e*S	Sb	05 57 11.4	+0.4
FUG	Fuego 3	1.80	94	*e*P	Pb	05 56 48.6	-0.8
FUG				*e*S	Sn	05 57 09.6	-0.6
PCG	Pacaya	2.03	95	*e*S	Sn	05 57 16.4	+0.3
TGIG		2.21	349	*e*P	Pb	05 56 55.7	-0.8
TGIG				*e*S	Sb	05 57 22.3	-1.6
CMIG	Matias Romero	3.26	320	Pn	Pn	05 57 08.8	+1.4
	3.7nm,0.3s,baz=157,slow=14,SNR=112						
CMIG				Sn	Sn	05 57 46.7	+0.6
	9.0nm,0.3s,baz=166,slow=7.3,SNR=7.6						
CMIG				LR	LR	05 58 31.4	
	comp=Z,59nm,20.1s,baz=92,slow=42						
TXAR	Lajitas Array	17.84	327	P	P	06 00 25.1	-0.3
	0.0nm,0.3s,baz=155,slow=13,SNR=1.6						
YKA	Yellowknife Ar	50.30	347	P	P	06 05 11.8	-0.8
	0.6nm,0.6s,baz=151,slow=7.1,SNR=11						
ILAR	Eielson Array	62.04	337	P	P	06 06 36.6	+0.1
	0.2nm,0.9s,baz=128,slow=5.6,SNR=5.2						

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*IDC **23** 06:08:21.8±4.2, 6°.16S×147°.94E, h30^{km}±27^{km}, mb3.8/10, mb1 4.1/12, mb1mx3.8/41, mbtmp4.0/12, ML3.5/2, MS3.2/5, Ms1 3.2/5, ms1mx2.9/41, Error ellipse: s-maj=43.3km s-min=16.5km az=101.0*

ISC 23 06:08:23.0±0.8,**6°.00S**±0°.07×**147°.9E**±0°.2,**h35**^{km},**n25**, σ**1^{s}.59**/25,**mb4.0**/12,**MS3.2**/3,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.46	192	Pn	Pn	06 09 13.7	-0.8
	40nm,0.3s,baz=5.6,slow=7.4,SNR=79						
PMG				Sn	Sn	06 09 57.6	+3.3
	39nm,0.3s,baz=19,slow=13,SNR=4.4						
PMG	Port Moresby	3.46	192	P	Pn	06 09 15.0	+0.5
PMG	Port Moresby	3.46	192	P	Pn	06 09 15.0	+0.5
WRA	Warramunga Arr	19.12	222	P	P	06 12 40.0	-3.2
	0.7nm,0.3s,baz=48,slow=11,SNR=28						
WRA				LR	LR	06 21 14.6	
	comp=Z,48nm,20.7s,baz=225,slow=41						
EIDS	Eidsvold	19.50	171	P	Pn	06 12 48.9	+0.2
	12nm,0.7s						
GUMO	Guam	19.69	351	LR	LR	06 20 33.5	
	comp=Z,34nm,18.7s,baz=110,slow=37						
RMQ	Roma	20.39	178	P	P	06 12 58.0	+1.0
	21nm,0.9s						
QLP	Quilpie	20.77	189	P	P	06 13 00.6	-0.4
	66nm,1.0s						
ASAR	Alice Springs	22.13	216	P	P	06 13 14.2	-1.6
	6.2nm,0.5s,baz=50,slow=8.9,SNR=99						
ASAR				ScP	ScP	06 20 47.9	+0.5
	0.9nm,0.8s,baz=37,slow=2.9,SNR=6.4						
ASAR				LR	LR	06 21 22.1	
	comp=Z,98nm,20.1s,baz=50,slow=35						
INKA	Innaminka	22.67	197	P	P	06 13 20.8	-0.6
	27nm,0.7s						
FITZ	Fitzroy Crossi	24.82	239	P	P	06 13 41.0	-1.2
	8.3nm,0.7s						
LCRK	Leigh Creek	25.97	199	P	P	06 13 52.1	-0.3
	36nm,0.8s						
STKA	Stephens Creek	26.41	192	P	P	06 13 55.1	-1.3
	5.1nm,0.7s,baz=2.2,slow=9.1,SNR=9.4						
STKA				LR	LR	06 24 15.9	
	comp=Z,70nm,18.6s,baz=30,slow=36						
STKA	Stephens Creek	26.41	192	P	P	06 13 57.0	+0.6
	1.7nm,1.0s						
JCJ	Chichijima	33.36	351	LR	LR	06 26 33.6	
	comp=Z,89nm,19.9s,baz=121,slow=33						
MJAR	Matsushiro Arr	43.28	349	P	P	06 16 23.1	+1.8
	1.3nm,0.5s,baz=170,slow=8.3,SNR=2.2						
KSRS	Korea Array	47.07	338	P	P	06 16 53.9	+2.5
	1.2nm,0.6s,baz=154,slow=7.4,SNR=2.7						
SONM	Songino Array	64.84	330	P	P	06 19 00.2	+1.6
	0.6nm,0.8s,baz=139,slow=6.8,SNR=4.0						
MKAR	Makanchi Array	78.06	320	P	P	06 20 18.3	0.0
	0.5nm,0.7s,baz=94,slow=7.5,SNR=6.4						
ZALV	Zalesovo Beam	79.48	328	P	P	06 20 25.2	-0.6
	0.7nm,0.4s,baz=114,slow=5.6,SNR=4.5						
ILAR	Eielson Array	85.13	23	P	P	06 20 54.8	-0.4
	0.3nm,0.5s,baz=256,slow=4.9,SNR=14						
BVAR	Borovoye Array	87.29	324	P	P	06 21 05.2	-0.9
	0.3nm,0.4s,baz=109,slow=11,SNR=2.2						
LPAZ	La Paz	138.04	122	PKP	PKPdf	06 27 42.6	-3.3
	0.4nm,0.5s,baz=180,slow=2.0,SNR=1.7						
TORD	Torodi Ar. Bea	145.95	285	PKPbc	PKPab	06 28 00.2	-0.4
	2.7nm,0.6s,baz=72,slow=4.0,SNR=18						
DBIC	Dimbokro	152.91	273	PKPbc	PKPbc	06 28 16.6	-1.0
	1.0nm,0.5s,baz=153,slow=4.0,SNR=3.9						

IDC 23 06:12:14.9±3.1,**14°.46S**×**65°.86E**,**h0**^{km},**mb3.4**/3, **mb1 3.6**/3,**mb1mx3.1**/57,**mbtmp3.4**/3,**MS3.4**/1,**Ms1 3.4**/1, **ms1mx2.9**/22,**Error ellipse: s-maj=124.0km s-min=42.1km az=51.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	9.38	44	T	T	06 23 45.2	
	baz=224,slow=76,SNR=52						
H08S2	Diego Garcia H	9.39	45	T	T	06 23 40.4	
	baz=224,slow=76,SNR=56						
H08S3	Diego Garcia H	9.40	44	T	T	06 23 40.8	
	baz=224,slow=76,SNR=56						
PSI	Prapat	36.98	65	LR	LR	06 32 44.3	
	comp=Z,54nm,18.1s,baz=278,slow=33						
H01W3	Cape Leeuwin H	47.84	124	T	T	07 12 04.0	
	baz=283,slow=75,SNR=17						
H01W2	Cape Leeuwin H	47.84	124	T	T	07 12 04.2	
	baz=283,slow=75,SNR=6.3						
H01W1	Cape Leeuwin H	47.85	124	T	T	07 12 05.3	
	baz=283,slow=75,SNR=18						
MKAR	Makanchi Array	62.73	13	P	P	06 22 41.6	-0.1
	0.2nm,0.6s,baz=215,slow=12,SNR=1.8						
ASAR	Alice Springs	64.46	110	P	P	06 22 53.2	-0.6
	0.2nm,0.4s,baz=270,slow=6.4,SNR=1.5						
WRA	Warramunga Arr	65.27	106	P	P	06 22 59.6	+0.6
	0.6nm,0.8s,baz=266,slow=6.0,SNR=2.3						
PDAR	Pinedale Array	151.51	353	PKPbc	PKPbc	06 32 11.4	-0.1
	0.6nm,0.8s,baz=57,slow=3.3,SNR=5.1						

DJA 23 06:13:32.4±0.4,**9°S**±2°×**12°0E**±°,**h19**^{km}±6^{km},**M2.8**/7, **MLv2.8**/7,**Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.55	227	P	Pg	06 13 44.3	+0.7
BASI	Baing, Sumba	1.22	141	P	Pn	06 13 54.5	0.0
BASI				S	Sn	06 14 11.2	+0.7
EDFI	Ende, Flores	1.94	75	P	Pn	06 14 04.8	+0.4
EDFI				S	Sn	06 14 27.6	-0.7
TWSI	Taliwang, Sumb	2.93	280	P	Pn	06 14 18.3	+0.3
BSSI	Bau Bau, Buton	3.17	13	P	Pn	06 14 21.3	0.0

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*IDC **23** 06:21:18.1±3.1, 27°.39N×141°.10E, h101^{km}±27^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.2/47, mbtmp3.8/5, Error ellipse: s-maj=56.8km s-min=18.6km az=106.0*

ISC 23 06:21:17.9±1.1,**27°.4N**±0°.2×**141°.1E**±0°.1,**h100**^{km},**n6**, σ**0^{s}.09**/7,**mb3.5**/5,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.05	106	P	Pn	06 21 39.0	+0.1
	494nm,0.3s,baz=279,slow=19,SNR=337						
JCJ				S	Sn	06 21 54.6	-0.1
	512nm,0.3s,baz=308,slow=22,SNR=30						
WRA	Warramunga Arr	47.51	189	P	P	06 29 43.1	0.0
	2.8nm,0.4s,baz=8.8,slow=8.5,SNR=67						
ASAR	Alice Springs	51.23	188	P	P	06 30 11.4	0.0
	0.2nm,0.4s,baz=10,slow=7.2,SNR=5.0						
ILAR	Eielson Array	57.93	29	P	P	06 30 59.4	0.0
	0.4nm,0.9s,baz=251,slow=5.6,SNR=7.9						
YKA	Yellowknife Ar	72.35	28	P	P	06 32 32.6	0.0
	0.4nm,0.6s,baz=296,slow=6.3,SNR=9.2						
FINES	FINESS Array B	77.23	333	P	P	06 33 00.7	0.0
	2.2nm,0.8s,baz=83,slow=5.7,SNR=3.4						

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*REN **23** 06:22:36.1±1.2, 39°.43N±0°.03×119°.79W±0°.04, h9^{km}±6^{km}, ML3.2/11, ML3.0/42(NEIC), Error ellipse: s-maj=5.2km s-min=2.6km az=126.0*

NEIC 23 06:22:36.1±1.6,**39°.46N**±0°.03×**119°.82W**±0°.05,**h8**^{km}±6^{km}, **Error ellipse: s-maj=6.3km s-min=4.1km az=56.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCNR	Virginia City	0.21	141	Pg	Pg	06 22 40.0	-0.5
MPK	Martis Peak	0.23	225		Pg	06 22 41.2	+0.3
DONR	Donner Summit	0.40	255		Pg	06 22 44.4	+0.4
PNTR	Pine Nut	0.41	155		Pg	06 22 43.6	-0.6
PNTR				IAML		06 22 52.7	
	comp=E,2µm,0.6s						
PAHR	Pah Rah Range	0.42	54	Pg	Pg	06 22 44.1	-0.2
RUBR	Rubicon Trail	0.48	212		Pg	06 22 45.4	-0.1
RUBR				IAML		06 22 52.7	
	comp=N,1µm,0.5s						
RUBR				IAML		06 22 53.8	
	comp=E,1µm,0.4s						
EMB	Emerald Bay	0.53	204		Pg	06 22 46.2	-0.2
EMB				IAML		06 22 54.2	
	comp=N,756nm,0.6s						
GNO	Genoa	0.53	183		Pg	06 22 46.0	-0.4
BFC	Buffalo Canyon	0.59	163		Pg	06 22 47.0	-0.5
YERR	Yerington	0.66	136		Pg	06 22 47.9	-0.9
YERR				IAML		06 22 56.8	
	comp=N,698nm,0.4s						
YERR				IAML		06 22 57.0	
	comp=E,1µm,0.6s						
ORV	Oroville	1.30	275		Pn	06 23 00.1	-0.5
ORV	Oroville	1.30	275	Pn	Pn	06 23 00.0	-0.6
RYN	Ryan	1.31	129		Pn	06 22 59.7	-1.2
RYN				IAML		06 23 19.9	
	comp=E,402nm,0.6s						
RYN				IAML		06 23 20.5	
	comp=N,319nm,0.9s						
KVN	Kaiserville	1.40	106	Pn	Pn	06 23 01.1	-1.0
KVN				IAML		06 23 21.8	
	comp=N,320nm,0.5s						
CMB	Columbia Colle	1.49	197		Pn	06 23 02.8	-0.5
CMB				IAML		06 23 23.6	
	comp=E,160nm,0.5s						
CMB				IAML		06 23 27.3	
	comp=N,192nm,0.5s						
NVAR	Mina Array Bea	1.57	130		Pn	06 23 03.8	-0.7
LHV	Little Huntoon	1.59	139		Pn	06 23 04.7	+0.2
LHV				IAML		06 23 30.7	
	comp=N,266nm,0.6s						
NV11	Mina Array Sit	1.66	128		Pn	06 23 05.2	-0.5
NV11				IAML		06 23 29.0	
	comp=N,153nm,0.5s						
Q09A	Carvers	2.15	106		Pb	06 23 14.1	-1.2
BMN	Battle Mountai	2.22	63		Pn	06 23 12.1	-1.3
GDXM	Geysers	2.40	255		Pn	06 23 17.4	+1.6
GDXM				IAML		06 24 12.9	
	comp=N,55nm,5.0s						
TPH	Tonopah	2.46	123		Pn	06 23 18.2	+1.6
LCH	Last Change Ra	2.81	142	Pn	Pn	06 23 23.3	+1.9
R11A	Troy Canyon, C	3.49	107	Pn	Pn	06 23 31.3	+0.5
R11A				IAML		06 24 25.6	
	comp=N,47nm,0.7s						
TPNV	Topopah Spring	3.77	131	Pn	Pn	06 23 36.2	+1.6
TPNV				IAML		06 24 40.8	
	comp=N,23nm,1.2s						
TPNV				IAML		06 24 42.0	
	comp=N,22nm,0.7s						
ISA	Isabella, Lake	3.94	164	Pn	Pn	06 23 37.1	+0.2
ISA				IAML		06 24 48.0	
	comp=E,34nm,1.3s						
ISA				IAML		06 25 13.0	
	comp=N,16nm,3.2s						
GWY	Greenwater Val	4.11	142	Pn	Pn	06 23 38.8	-0.6
SPR3	Spring Creek 3	4.29	94		Pn	06 23 42.8	+0.8
SPR3				IAML		06 24 52.1	
	comp=N,26nm,0.7s						
PINE	Pine Mountain	4.41	349	Pn	Pn	06 23 43.7	+0.2
SHPR	Sheep Range	4.72	127	Pn	Pn	06 23 48.3	+0.6
BGU	Big Grassy Mou	5.40	72		Pn	06 23 57.1	-0.1
DUG	Dugway, Tooele	5.45	80	Pn	Pn	06 23 59.2	+1.5
HLID	Hailey	5.77	43	Pn	Pn	06 24 02.7	+0.5

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*SKO **23** 06:30:35.8, 40°.67N×21°.20E, h18^{km}*

*TIR **23** 06:30:36.5, 40°.77N×21°.17E, h6^{km}±36^{km}, Md2.9, Ml1.8*

*THE **23** 06:30:37.1, 40°.74N×21°.21E, h11^{km}±3^{km}, ML2.0/5, Error ellipse: s-maj=3.2km s-min=0.7km az=1.0*

*ATH **23** 06:30:37.4, 40°.71N×21°.28E, h14^{km}±3^{km}, ML2.1/4, Error ellipse: s-maj=4.4km s-min=1.3km az=328.0*

ISC 23 06:30:36.5±0.9,**40°.72N**±0°.02×**21°.18E**±0°.02,**h12**^{km}±6^{km}, **n22**,σ**1^{s}.53**/39,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	Florina	0.16	65	P	Pg	06 30 40.5	+0.2
FNA				S	Sg	06 30 43.0	0.0
	3µm,0.2s						
FNA	Florina	0.16	65	P	Pg	06 30 40.5	+0.2
FNA				S	Sg	06 30 42.9	-0.1
FNA				AML	AML	06 30 43.3	
	comp=E,6125µm,0.3s						
FNA				AML	AML	06 30 43.6	
	comp=N,5356µm,0.2s						
FNA	Florina	0.16	65	*i* Pg	Pg	06 30 40.5	+0.2
FNA				*i* Sg	Sg	06 30 43.0	0.0
FNA	Florina	0.16	65	P	Pg	06 30 40.5	+0.2
	baz=84						
FNA				S	Sg	06 30 42.6	-0.3
	baz=84						
KBN	Korca	0.31	253	P	Pg	06 30 44.1	+1.1
KBN				S	Sg	06 30 48.6	+1.4
	comp=N,140nm,0.3s						
KBN	Korca	0.31	253	P	Pg	06 30 44.0	+1.1
	baz=244						
KBN				S	Sg	06 30 48.0	+0.7
	baz=244						
KBN				AMP			
	comp=E,0.5nm,0.2s,baz=244						
NEST	Nestorio	0.32	199	P	Pg	06 30 44.0	+1.0
NEST				S	Sg	06 30 49.3	+2.0
	comp=E,678nm,0.5s						
NEST	Nestorio	0.32	199	P	Pg	06 30 44.1	+1.0
NEST				S	Sg	06 30 49.3	+2.0
NEST				AML	AML	06 30 50.3	

	comp=E,1863µm,0.3s						
NEST				AML	AML	06 30 50.4	
	comp=N,1360µm,0.2s						
OHR	**Ohrid**	**0.49**	**324**	*i* Pg	**Pg**	**06 30 46.6**	**+0.4**
OHR				*i* Sg	**Sb**	**06 30 54.6**	**+0.3**
OHR				*e*Lg	Lg	06 30 55.2	
	comp=E,80nm,0.4s						
PENT	**Pentalofos**	**0.52**	**184**	P	**Pg**	**06 30 47.7**	**+0.9**
PENT				S	**Sg**	**06 30 55.3**	**+1.6**
PENT	**Pentalofos**	**0.52**	**184**	P	**Pg**	**06 30 47.8**	**+1.1**
KZN	**Kozani**	**0.61**	**132**	P	**Pg**	**06 30 48.7**	**+0.3**
KZN				S	**Sg**	**06 30 57.2**	**+0.8**
	comp=E,128nm,0.4s						
KZN	**Kozani**	**0.61**	**132**	P	**Pg**	**06 30 48.6**	**+0.2**
KZN				S	**Sg**	**06 30 55.4**	**-1.0**
KZN				AML	AML	06 30 59.5	
	comp=N,258µm,0.4s						
KZN				AML	AML	06 31 00.3	
	comp=E,249µm,0.4s						
LSK	**Leskovik**	**0.72**	**218**	P	**Pg**	**06 30 47.7**	**-2.8**
	baz=216						
LSK				S	**Sb**	**06 31 02.7**	**+1.8**
	baz=216						
KPRO	**Kipourio**	**0.77**	**170**	P	**Pg**	**06 30 51.9**	**+0.4**
KPRO				S	**Sn**	**06 31 04.4**	**-0.5**
	comp=E,85nm,0.6s						
KPRO	**Kipourio**	**0.77**	**170**	P	**Pg**	**06 30 51.5**	**0.0**
KPRO				AML	AML	06 31 10.2	
	comp=N,148µm,0.3s						
KPRO				AML	AML	06 31 12.3	
	comp=E,170µm,0.4s						
KTI	**Kastanea**	**0.78**	**114**	P	**Pg**	**06 30 51.7**	**0.0**
GRG	**Griva**	**0.96**	**75**	*i* Pg	**Pb**	**06 30 54.6**	**-0.5**
PHP	**Peshkopia**	**1.12**	**330**	P	**Pb**	**06 30 54.5**	**-3.3**
	baz=330						
PHP				S	**Sg**	**06 31 13.2**	**+0.6**
	baz=330						
PHP				AMP			
	comp=N,0.2nm,0.4s,baz=330						
VAY	**Valandovo**	**1.21**	**60**	*i* Pg	**Pg**	**06 30 59.8**	**-0.1**
VAY				*e*Sg	**Sg**	**06 31 16.3**	**+0.7**
VAY				*e*Lg	Lg	06 31 19.4	
	comp=N,8.8nm,0.4s						
VAY				*e*Lg	Lg	06 31 20.7	
	comp=E,11nm,0.6s						
STIP	**Stip**	**1.24**	**37**	*i* Pg	**Pg**	**06 31 02.5**	**+2.2**
STIP				*i* Sg	**Sg**	**06 31 22.0**	**+5.6**
THL	**Klokotos Trika**	**1.31**	**151**	P	**Pn**	**06 31 00.3**	**-0.4**

REN ***23*** *06:36:30.1±0.7, 39°.43N±0°.02×119°.78W±0°.05, h9^{km}±4^{km}, ML3.0/11, ML2.7/34(NEIC), Error ellipse: s-maj=6.4km s-min=2.1km az=65.0*

NEIC 23 06:36:29.6±1.3**, 39°.46N**±0°.01×**119°.83W**±0°.01**, h10**^{km}±3^{km}**, Error ellipse: s-maj=2.0km s-min=1.6km az=191.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PEAR	**Peavine Mounta**	**0.18**	**326**		Pg	06 36 32.9	-0.8
VCNR	**Virginia City**	**0.22**	**139**		Pg	06 36 33.9	-0.4
MPK	**Martis Peak**	**0.23**	**223**	Pg	Pg	06 36 35.2	+0.7
DONR	**Donner Summit**	**0.39**	**254**		Pg	06 36 36.4	-1.1
PNTR	**Pine Nut**	**0.41**	**154**	Pg	Pg	06 36 37.5	-0.4
PNTR				IAML		06 36 46.6	
	comp=E,968nm,0.5s						
PAHR	**Pah Rah Range**	**0.42**	**55**		Pg	06 36 38.2	+0.1
PAHR				IAML		06 36 44.4	
	comp=N,498nm,0.5s						
PAHR				IAML		06 36 44.7	
	comp=E,540nm,0.2s						
RUBR	**Rubicon Trail**	**0.48**	**211**	Pg	Pg	06 36 39.5	+0.4
RUBR				IAML		06 36 46.8	
	comp=N,429nm,0.4s						
RUBR				IAML		06 36 46.8	
	comp=E,477nm,0.3s						
WVA	**Winnemucca Val**	**0.48**	**1**		Pb	06 36 40.0	-0.3
EMB	**Emerald Bay**	**0.53**	**203**	Pg	Pg	06 36 40.2	+0.2
EMB				IAML		06 36 47.8	
	comp=E,478nm,0.2s						
GNO	**Genoa**	**0.53**	**182**		Pg	06 36 40.0	0.0
BFC	**Buffalo Canyon**	**0.59**	**163**		Pg	06 36 40.8	-0.4
YERR	**Yerington**	**0.66**	**136**		Pg	06 36 41.8	-0.7
YERR				IAML		06 36 51.8	
	comp=E,685nm,0.3s						
YERR				IAML		06 36 54.2	
	comp=N,319nm,0.6s						
ORV	**Oroville**	**1.29**	**275**		Pb	06 36 54.2	+0.1
ORV	**Oroville**	**1.29**	**275**	Pn	Pb	06 36 54.0	0.0
ORV	**Oroville**	**1.29**	**275**	IAML		06 37 14.0	
	comp=N,74nm,0.7s						
RYN	**Ryan**	**1.32**	**129**	Pn	Pn	06 36 53.8	-0.4
RYN				IAML		06 37 13.7	
	comp=E,178nm,0.5s						
RYN				IAML		06 37 13.9	
	comp=N,124nm,0.7s						
KVN	**Kaiserville**	**1.41**	**106**		Pn	06 36 55.0	-0.5
KVN				IAML		06 37 15.2	
	comp=N,174nm,0.5s						
KVN				IAML		06 37 15.7	
	comp=E,198nm,0.6s						
CMB	**Columbia Colle**	**1.49**	**197**		Pn	06 36 56.9	+0.4
LUL	**Lundy Lake**	**1.50**	**160**		Pg	06 36 58.1	-0.3
NVAR	**Mina Array Bea**	**1.58**	**130**		Pn	06 36 57.7	-0.1
LHV	**Little Huntoon**	**1.59**	**139**		Pb	06 36 58.7	-0.4
LHV				IAML		06 37 26.4	
	comp=N,117nm,0.6s						
LHV				IAML		06 37 30.8	
	comp=E,127nm,0.7s						
NV11	**Mina Array Sit**	**1.67**	**128**		Pn	06 36 59.0	0.0
NV11				IAML		06 37 23.0	
	comp=N,55nm,0.4s						
BMN	**Battle Mountai**	**2.23**	**63**		Pn	06 37 06.0	-0.7
POCCA	**Poleta Canyon**	**2.43**	**149**		Pn	06 37 08.6	-0.9
R11A	**Troy Canyon, C**	**3.50**	**107**	Pn	Pn	06 37 24.1	-0.1
R11A				IAML		06 38 19.5	
	comp=N,15nm,0.7s						

KRSC ***23*** *06:43:20.4±2.3, 49°.36N×156°.86E, h7^{km}±36^{km}, ML5.2*

BJI ***23*** *06:43:20.5±0.0, 49°.31N×155°.87E, h71^{km}, mB5.0/38, mb4.9/55, Ms4.5/38, Ms7 4.3/38*

MOS ***23*** *06:43:21.3±1.1, 49°.30N×155°.72E, h60^{km}, mb5.1/42, MS3.8/9, Error ellipse: s-maj=6.9km s-min=3.3km az=76.9*

MOS Felt (II-III) at Severo-Kuril'sk.

NEIC ***23*** *06:43:22.0±2.0, 49°.31N±0°.09×155°.7E±0°.1, h48^{km}±6^{km}, mb5.0/207, Error ellipse: s-maj=16.9km s-min=9.2km az=133.0*

BGR ***23*** *06:43:22.4±0.0, 48°.82N×155°.59E, h58^{km}, mb4.6*

IDC ***23*** *06:43:22.3±0.6, 49°.42N×155°.58E, h50^{km}±5^{km}, mb4.3/32, mb1 4.5/38, mb1mx4.4/54, mbtmp4.6/38, MS4.0/30, Ms1 4.1/30, ms1mx4.0/39, Error ellipse: s-maj=13.0km s-min=8.8km az=145.0*

GCMT ***23*** *06:43:23.0±0.3, 49°.21N±0°.02×156°.12E±0°.04, h45^{km}±1^{km}, MW4.9/73, Moment Tensor Solution. s39,c45; s73,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.70±.19; M$_{\theta\theta}$-1.10±.12; M$_{\phi\phi}$-1.59±.14; M$_{r\theta}$0.44±.12; M$_{\theta\phi}$-1.80±.08; M$_{\phi r}$1.04±.10; Best double couple: M$_0$3.14500×10^{16} NP1:φ$_s$230.00000°, δ36.00000°, λ103.00000°. NP2: φ$_s$33.00000°, δ56.00000°, λ81.00000°. Principal axes: T 2.9390, Plg77.0000°, Azm272.0000°; N 0.4230, Plg8.0000°, Azm39.0000°; P -3.3520, Plg10.0000°, Azm130.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 06:43:22.4±0.5**, 49°.31N**±0°.05×**155°.73E**±0°.04**, h55**^{km}±4^{km}**, h55**^{km}**:pP-P, n651,** σ1^{s}.**21**/573**, mb4.9**/225**, MS4.2**/34**, 21C-33D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.40**	**10**	PN	**Pn**	**06 43 44.9**	**-0.6**
SKR				S	**Sn**	**06 44 02.4**	**-0.5**
SKR	**Severo-Kuril's**	**1.40**	**10**	*e*P	**Pn**	**06 43 44.9**	**-0.6**
SKR				*e*S	**Sn**	**06 44 02.4**	**-0.5**
PAU	**Pauzhetka**	**2.27**	**17**	PN	**Pn**	**06 43 57.2**	**-0.2**
PAU	**Pauzhetka**	**2.27**	**17**	*e*P	**Pn**	**06 43 57.2**	**-0.2**
KDTR	**Khodutka, Kamc**	**2.91**	**30**	PN	**Pn**	**06 44 05.1**	**-1.1**
KDTR				S	**Sn**	**06 44 37.9**	**-2.0**
KDTR	**Khodutka, Kamc**	**2.91**	**30**	*e*P	**Pn**	**06 44 05.1**	**-1.1**
KDTR				*e*S	**Sn**	**06 44 37.9**	**-2.0**
MIPR	**Malaya Ipel'ka**	**3.04**	**12**	PN	**Pn**	**06 44 09.6**	**+1.6**
MIPR	**Malaya Ipel'ka**	**3.04**	**12**	*e*P	**Pn**	**06 44 09.6**	**+1.6**
ASAK	**Asacha**	**3.37**	**23**	PN	**Pn**	**06 44 13.5**	**+1.0**
ASAK	**Asacha**	**3.37**	**23**	*e*P	**Pn**	**06 44 13.5**	**+1.0**
RUS	**Russkaya**	**3.59**	**28**	PN	**Pn**	**06 44 15.2**	**-0.2**
RUS				S	**Sn**	**06 44 54.6**	**-1.9**
RUS	**Russkaya**	**3.59**	**28**	*e*P	**Pn**	**06 44 15.2**	**-0.2**
RUS				*e*S	**Sn**	**06 44 54.6**	**-1.9**
APC	**Apacha**	**3.73**	**13**	PN	**Pn**	**06 44 19.5**	**+2.1**
APC	**Apacha**	**3.73**	**13**	*e*P	**Pn**	**06 44 19.5**	**+2.1**
KRMR	**Karymshinskiy**	**3.83**	**22**	PN	**Pn**	**06 44 20.4**	**+1.6**
KRMR	**Karymshinskiy**	**3.83**	**22**	*e*P	**Pn**	**06 44 20.4**	**+1.6**
PEA0B	**Petropavlovsk-**	**4.00**	**17**	*ce*PN	**Pn**	**06 44 22.4**	**+1.3**
PEA0B	**Petropavlovsk-**	**4.00**	**17**		**Pn**	**06 44 22.3**	**+1.2**
PETK	**Petropavlovsk-**	**4.00**	**17**	P	**Pn**	**06 44 21.9**	**+0.8**
	12nm,0.3s,baz=184,slow=13,SNR=101						
PETK				LR	LR	06 46 13.3	
	comp=Z,3µm,20.0s,baz=201,slow=44						
PETK	**Petropavlovsk-**	**4.00**	**17**	PN	**Pn**	**06 44 22.6**	**+1.5**
PETK	**Petropavlovsk-**	**4.00**	**17**		**Pn**	**06 44 22.6**	**+1.5**
PET	**Petropavlovsk**	**4.15**	**25**	PN	**Pn**	**06 44 24.0**	**+0.9**
PET				S	**Sn**	**06 45 10.8**	**+0.6**
PET	**Petropavlovsk**	**4.15**	**25**	*e*P	**Pn**	**06 44 24.0**	**+0.9**
PET				*e*S	**Sn**	**06 45 10.8**	**+0.6**
PET	**Petropavlovsk**	**4.15**	**25**		**Pn**	**06 44 23.6**	**+0.6**
PET	**Petropavlovsk**	**4.15**	**25**	P	**Pn**	**06 44 23.8**	**+0.7**
DALK	**Dalny**	**4.18**	**26**	PN	**Pn**	**06 44 24.3**	**+0.7**
DALK				S	**Sn**	**06 45 11.9**	**+0.8**
DALK	**Dalny**	**4.18**	**26**	*e*P	**Pn**	**06 44 24.3**	**+0.7**
DALK				*e*S	**Sn**	**06 45 11.9**	**+0.8**
UGLR	**Uglovaya**	**4.36**	**25**	PN	**Pn**	**06 44 27.5**	**+1.4**
UGLR	**Uglovaya**	**4.36**	**25**	*e*P	**Pn**	**06 44 27.5**	**+1.4**
KOK	**Koryaka**	**4.38**	**23**	PN	**Pn**	**06 44 28.5**	**+2.1**
KOK	**Koryaka**	**4.38**	**23**	*e*P	**Pn**	**06 44 28.5**	**+2.1**
AVH	**Avacha**	**4.38**	**24**	PN	**Pn**	**06 44 28.6**	**+2.2**
AVH	**Avacha**	**4.38**	**24**	*e*P	**Pn**	**06 44 28.6**	**+2.2**
SMAR	**Somma**	**4.40**	**25**	PN	**Pn**	**06 44 28.5**	**+1.7**
SMAR	**Somma**	**4.40**	**25**	*e*P	**Pn**	**06 44 28.5**	**+1.7**
NLC	**Nalytchevo**	**4.48**	**29**	PN	**Pn**	**06 44 26.5**	**-1.2**
NLC	**Nalytchevo**	**4.48**	**29**	*e*P	**Pn**	**06 44 26.5**	**-1.2**
GNL	**Ganaly**	**4.60**	**17**	PN	**Pn**	**06 44 31.9**	**+2.5**
GNL	**Ganaly**	**4.60**	**17**	*e*P	**Pn**	**06 44 31.9**	**+2.5**
SPN	**Mys Shipunski**	**4.65**	**34**	PN	**Pn**	**06 44 29.5**	**-0.5**
SPN	**Mys Shipunski**	**4.65**	**34**	*e*P	**Pn**	**06 44 29.5**	**-0.5**
KII	**Karymskiy**	**5.26**	**25**	PN	**Pn**	**06 44 39.9**	**+1.4**
KII	**Karymskiy**	**5.26**	**25**	*e*P	**Pn**	**06 44 39.9**	**+1.4**
MKZ	**Mys Kozlova**	**6.43**	**33**	PN	**Pn**	**06 44 52.8**	**-1.5**
MKZ	**Mys Kozlova**	**6.43**	**33**	*e*P	**Pn**	**06 44 52.8**	**-1.5**
TUMD	**Tumrok D**	**6.56**	**24**	*e*P	**Pn**	**06 44 57.0**	**+0.9**
TUMR	**Tumrok**	**6.56**	**23**	PN	**Pn**	**06 44 57.0**	**+0.7**
KUR	**Kuril'sk**	**6.73**	**236**	*e*PN	**Pn**	**06 45 00.3**	**+1.8**
KUR				*i* S	**Sn**	**06 46 15.4**	**+1.7**
KUR				pmax	pmax		
	comp=N,55nm,0.6s						
KUR				pmax	pmax		
	comp=Z,269nm,0.6s						
KUR				pmax	pmax		
	comp=E,118nm,0.5s						
KUR				smax	smax		
	comp=N,1µm,1.5s						
KUR				smax	smax		
	comp=E,578nm,1.3s						
KUR				MLR	MLR		
	comp=Z,2µm,12.0s						
BDR	**Baidarnaya**	**7.98**	**22**	PN	**Pn**	**06 45 18.2**	**+2.5**
BDR	**Baidarnaya**	**7.98**	**22**	*e*P	**Pn**	**06 45 18.2**	**+2.5**
SRKR	**Sorokina**	**8.05**	**22**	PN	**Pn**	**06 45 17.9**	**+1.3**
SRKR	**Sorokina**	**8.05**	**22**	*e*P	**Pn**	**06 45 17.9**	**+1.3**
SMKR	**Semkarok**	**8.06**	**23**	PN	**Pn**	**06 45 18.6**	**+1.8**
SMKR	**Semkarok**	**8.06**	**23**	*e*P	**Pn**	**06 45 18.6**	**+1.8**
KBTR	**Krutoberegovo**	**8.13**	**29**	PN	**Pn**	**06 45 16.8**	**-0.8**
KBTR	**Krutoberegovo**	**8.13**	**29**	*e*P	**Pn**	**06 45 16.8**	**-0.8**
KBG	**Krutoberegovo**	**8.13**	**29**	PN	**Pn**	**06 45 19.0**	**+1.3**
KBG	**Krutoberegovo**	**8.13**	**29**	*e*P	**Pn**	**06 45 19.0**	**+1.3**
SHO	**Shikotan**	**8.20**	**232**	*e*PN	**Pn**	**06 45 15.6**	**-3.0**
SHO				pmax	pmax		
	comp=Z,62nm,0.4s						
SHO				pmax	pmax		
	comp=E,17nm,0.2s						
SHO				pmax	pmax		
	comp=N,32nm,0.3s						
TYV	**Tymovskoe**	**8.55**	**285**	*e*PN	**Pn**	**06 45 27.7**	**+4.3**
TYV				*e*S	**Sn**	**06 47 02.8**	**+4.4**
TYV				pmax	pmax		
	comp=Z,22nm,1.4s						
TYV				pmax	pmax		
	comp=Z,300nm,2.5s						
TYV				smax	smax		
	comp=N,12nm,1.8s						
TYV				smax	smax		
	comp=E,18nm,1.8s						
TYV				smax	smax		
	comp=N,300nm,3.0s						
TYV				MLR	MLR		
	comp=Z,2µm,15.0s						
YUK	**Yuzh-Kuril'sk**	**8.59**	**236**	*d i*PN	**Pn**	**06 45 24.0**	**0.0**
YUK				pmax	pmax		
	comp=Z,646nm,0.5s						
YUK				pmax	pmax		
	comp=E,68nm,0.3s						
YUK				pmax	pmax		
	comp=N,52nm,0.4s						
YUK				pmax	pmax		
	comp=Z,566nm,1.6s						
RUSJ	**Misakicho**	**8.89**	**238**	⇓*i*PN	**Pn**	**06 45 30.8**	**+2.8**
UGL	**Uglegorsk**	**8.96**	**274**	*e*PN	Pn	06 45 34.1	+5.2
UGL				*e*S	**Sn**	**06 47 16.5**	**+8.3**
UGL				pmax	pmax		
	comp=Z,600nm,0.7s						
UGL				MLR	MLR		
	comp=N,2µm,11.0s						
UGL				MLR	MLR		
	comp=E,1µm,11.0s						
UGL				MLR	MLR		
	comp=Z,2µm,18.0s						
GLVR	**Golovnino**	**8.98**	**235**	PN	**Pn**	**06 45 28.4**	**-0.8**
YSS	**Yuzh-Sakhalins**	**8.99**	**260**	*αe*PN	**Pn**	**06 45 32.4**	**+2.9**
YSS				pmax	pmax		
	comp=Z,400nm,5.0s						
YSS				pmax	pmax		
	comp=N,300nm,3.4s						
YSS				pmax	pmax		
	comp=Z,80nm,0.8s						
YSS				pmax	pmax		
	comp=N,30nm,0.9s						
YSS				pmax	pmax		
	comp=E,60nm,0.9s						
YSS				MLR	MLR		
	comp=Z,1µm,17.0s						
YSS				MLR	MLR		
	comp=E,600nm,14.0s						
YSS	**Yuzh-Sakhalins**	**8.99**	**260**	Pn	**Pn**	**06 45 31.4**	**+1.9**
YSS	**Yuzh-Sakhalins**	**8.99**	**260**	P	**Pn**	**06 45 30.4**	**+0.9**
NMR	**Nemuro--Hokkai**	**9.12**	**233**	⇓*i*PN	**Pn**	**06 45 28.0**	**-3.2**
JKA	**Kamikawa-asahi**	**10.40**	**245**	Pn	**Pn**	**06 45 50.9**	**+2.1**
ASAJ	**Asahikawa**	**10.40**	**245**	P	**Pn**	**06 45 50.0**	**+1.2**
	comp=E,10nm,0.3s,baz=82,slow=15,SNR=26						
ASAJ				LR	LR	06 49 21.0	
	comp=E,1µm,21.6s,baz=96,slow=35						
ASAJ	**Asahikawa**	**10.40**	**245**	PN	**Pn**	**06 45 50.9**	**+2.1**
MA2	**Magadan**	**10.68**	**346**	*de*PN	**Pn**	**06 45 52.9**	**+0.4**
MA2				pmax	pmax		
	comp=Z,114nm,2.5s						
MA2	**Magadan**	**10.68**	**346**	Pn	**Pn**	**06 45 52.9**	**+0.4**
MA2	**Magadan**	**10.68**	**346**	P	**Pn**	**06 45 53.4**	**+1.0**
ERM	**Erimo**	**11.42**	**235**	PN	**Pn**	**06 46 01.6**	**-1.1**
ERM	**Erimo**	**11.42**	**235**	Pn	**Pn**	**06 46 01.6**	**-1.1**
ERM	**Erimo**	**11.42**	**235**	P	**Pn**	**06 46 01.9**	**-0.7**
SHEM	**Shemya Is, Ala**	**12.06**	**67**	LR	LR	06 50 24.7	
	comp=Z,463nm,21.8s,baz=285,slow=35						
GRNR	**Gornyy**	**12.50**	**284**	⇑*i*PN	**Pn**	**06 46 21.3**	**+4.0**
GRNR				*e*S	Sn	06 48 44.4	+10
GRNR				pmax	pmax		
	comp=E,10.0nm,0.5s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.5s						
GRNR				smax	smax		
	comp=E,2.0nm,0.5s						
GRNR				MLR	MLR		
	comp=E,560nm,16.0s						
GRNR				MLR	MLR		
	comp=N,210nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,690nm,15.0s						
SEY	**Seymchan**	**13.78**	**354**	P	**Pn**	**06 46 34.7**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=160,slow=13,SNR=9.9						
SEY				LR	LR	06 52 39.5	
	comp=Z,493nm,18.1s,baz=157,slow=41						
KLR	**Kul'dur**	**15.64**	**279**	P	**P**	**06 47 01.2**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=82,slow=11,SNR=28						
JSD	**Sado**	**16.89**	**235**	Pn	**Pn**	**06 47 10.2**	**-4.6**
USA0B	**Ussuriysk Arra**	**17.02**	**262**	P	**P**	**06 47 17.1**	**-0.5**
USA0B				pmax	pmax		
	comp=Z,63nm,1.2s						
USA0B	**Ussuriysk Arra**	**17.02**	**262**		**P**	**06 47 17.1**	**-0.5**
USRK	**Ussuriysk Ar.**	**17.02**	**262**	P	**Pn**	**06 47 16.6**	**+0.1**
	baz=69,slow=11,SNR=18						
USRK				LR	LR	06 53 31.9	
	comp=Z,388nm,19.8s,baz=34,slow=36						
MJB9	**Matsu-Tunnel**	**18.04**	**232**	P	**P**	**06 47 26.9**	**-2.0**
MAJO	**Matsushiro**	**18.04**	**232**	P	**P**	**06 47 26.6**	**-2.3**
MAJO				pmax	pmax		
	comp=Z,37nm,0.7s						
MAJO	**Matsushiro**	**18.04**	**232**		**P**	**06 47 26.6**	**-2.3**
MAJO	**Matsushiro**	**18.04**	**232**	P	**P**	**06 47 28.8**	**-0.1**
MAT	**Matsushiro**	**18.04**	**232**	P	**P**	**06 47 26.2**	**-2.7**
MJAR	**Matsushiro Arr**	**18.04**	**232**	P	**P**	**06 47 27.2**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=18,slow=12,SNR=15						
MJAR				LR	LR	06 54 58.4	
	comp=Z,473nm,20.6s,baz=40,slow=39						
MJAR	**Matsushiro Arr**	**18.04**	**232**	P	**P**	**06 47 26.9**	**-2.0**
ZEA	**Zeya**	**18.20**	**295**	*e*P	**Pn**	**06 47 32.5**	**+1.6**
ZEA				*e*S	**Sn**	**06 50 44.2**	**-8.9**
ZEA				pmax	pmax		
	comp=Z,200nm,11.3s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.2s						
ZEA				smax	smax		
	comp=N,200nm,15.7s						
ZEA				MLR	MLR		
	comp=E,300nm,18.0s						
MDJ	**Mudanjiang**	**18.41**	**265**	P	**P**	**06 47 31.8**	**-1.0**
MDJ				S	**Sn**	**06 50 55.8**	**-2.3**
MDJ				pmax	pmax		
	comp=E,23nm,0.9s						
MDJ				pmax	pmax		
	comp=E,290nm,4.9s						
MDJ				LR	LR		
	comp=E,370nm,10.6s						
MDJ				LR	LR		
	comp=E,550nm,20.2s						
MDJ				LR	LR		
	comp=E,860nm,21.1s						
MDJ	**Mudanjiang**	**18.41**	**265**	P	**Pn**	**06 47 33.2**	**-0.2**
MDJ	**Mudanjiang**	**18.41**	**265**	P	**Pn**	**06 47 33.2**	**-0.2**
JGF	**Kuroka**	**19.20**	**231**	P	**P**	**06 47 40.6**	**-1.1**
YAK	**Yakutsk**	**19.27**	**321**	P	**P**	**06 47 40.5**	**-1.6**
	comp=E,0.2nm,0.3s,baz=21,slow=1.5,SNR=1.9						
YAK	**Yakutsk**	**19.27**	**321**	*e*P	**P**	**06 47 41.7**	**-0.3**
YAK				*e*S	**Sn**	**06 51 18.3**	**-0.2**
YAK				pmax	pmax		
	comp=Z,65nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,20nm,1.2s						
YAK				smax	smax		
	comp=E,183nm,3.0s						
YAK				smax	smax		
	comp=N,107nm,1.5s						
YAK				MLR	MLR		
	comp=Z,528nm,20.0s						
YAK				MLR	MLR		
	comp=E,232nm,17.0s						
YAK				MLR	MLR		
	comp=N,227nm,15.0s						
YAK	**Yakutsk**	**19.27**	**321**		**P**	**06 47 41.2**	**-0.8**
YAK				IAmb	IAmb	06 47 57.9	
	comp=Z,58nm,0.8s						
BILL	**Bilibino**	**19.51**	**12**	*c i*P	**P**	**06 47 44.6**	**-0.1**
BILL				pmax	pmax		
	comp=Z,11nm,0.8s						
BILL				MLR	MLR		
	comp=Z,433nm,17.0s						
BILL	**Bilibino**	**19.51**	**12**		**P**	**06 47 43.9**	**-0.8**
INU	**Inuyama**	**19.57**	**232**	P	**P**	**06 47 44.8**	**-0.8**
INU				IAmb	IAmb	06 47 47.2	
	comp=Z,39nm,0.7s						
INU	**Inuyama**	**19.57**	**232**	P	**P**	**06 47 46.3**	**+0.7**
JWT	**Wachi**	**20.47**	**234**	P	**P**	**06 47 54.5**	**-0.9**
JWT					Pn	06 47 55.1	-2.9
CN2	**Changchun**	**21.45**	**267**	*e*P	**P**	**06 48 04.5**	**-1.4**
CN2				*e*S	**S**	**06 51 54.8**	**-5.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,200nm,22.0s						
CN2				LR	LR		
	comp=Z,400nm,22.0s						
CN2				LR	LR		
	comp=Z,500nm,21.0s						
JHS	**Saijyo**	**21.92**	**238**	P	**P**	**06 48 11.4**	**+0.4**
JHS				IAmb	IAmb	06 48 21.1	
	comp=Z,43nm,1.1s						
NIKH	**Nikolski High**	**22.37**	**67**	P	**P**	**06 48 15.8**	**+0.2**
	baz=275						
GAMB	**Gambell**	**22.72**	**38**	P	**P**	**06 48 19.3**	**+0.2**
	baz=246						
KSRS	**Korea Array**	**23.29**	**250**	P	**P**	**06 48 25.4**	**+0.3**
	comp=Z,20nm,1.0s,baz=55,slow=8.3,SNR=50						
KSRS				LR	LR	06 56 52.6	
	comp=Z,390nm,19.8s,baz=53,slow=35						
KS19	**Wonju Array Si**	**23.29**	**250**	P	**P**	**06 48 25.3**	**+0.1**
KSAR	**Wonju Array Be**	**23.32**	**250**	P	**P**	**06 48 24.1**	**-1.4**
KSAR	**Wonju Array Be**	**23.32**	**250**	P	**P**	**06 48 24.1**	**-1.4**
UNV	**Unalaska Valle**	**23.70**	**65**	P	**P**	**06 48 28.2**	**-0.6**
	baz=274						
TJN	**Taejon**	**24.32**	**249**	*ce*P	**P**	**06 48 32.9**	**-1.8**
TJN	**Taejon**	**24.32**	**249**	P	**P**	**06 48 35.5**	**+0.8**
JNU	**Nakatsue**	**24.56**	**238**	P	**P**	**06 48 37.5**	**+0.6**
	comp=Z,48nm,1.0s,baz=40,slow=11,SNR=7.3						
JNU	**Nakatsue**	**24.56**	**238**	IAmb	IAmb	06 48 39.7	
	comp=Z,48nm,1.0s						
JNU	**Nakatsue**	**24.56**	**238**	P	**P**	**06 48 38.4**	**+1.5**
TNA	**Tin City**	**24.92**	**36**		**P**	**06 48 40.6**	**+0.7**
TNA				IAmb	IAmb	06 48 43.0	
	comp=Z,42nm,0.9s						
TNA	**Tin City**	**24.92**	**36**	P	**P**	**06 48 41.1**	**+1.2**
	baz=247,SNR=20						
FALS	**False Pass**	**25.43**	**62**	P	**P**	**06 48 45.2**	**+0.7**
	baz=274						
TIXI	**Tiksi**	**25.57**	**341**	P	**P**	**06 48 44.0**	**-1.6**
	comp=Z,5.8nm,0.7s,baz=125,slow=9.9,SNR=12						
TIXI				LR	LR	06 59 45.6	
	comp=Z,297nm,20.3s,baz=195,slow=39						
TIXI	**Tiksi**	**25.57**	**341**	⇑*e*P	**P**	**06 48 43.3**	**-2.3**
TIXI				pmax	pmax		
	comp=Z,25nm,1.2s						
TIXI	**Tiksi**	**25.57**	**341**	P	**P**	**06 48 43.1**	**-2.5**
ANM	**Nome**	**25.59**	**39**	IAmb	IAmb	06 48 49.8	
	comp=Z,42nm,1.2s						
ANM	**Nome**	**25.59**	**39**	P	**P**	**06 48 46.3**	**+0.4**
	baz=252						
BOD	**Bodaibo**	**25.83**	**305**	*e*P	**P**	**06 48 50.1**	**+1.9**
BOD				pmax	pmax		
	comp=Z,14nm,2.0s						
SDPT	**Sand Point**	**27.07**	**60**	P	**P**	**06 48 59.8**	**+0.5**
	baz=276						
CHNA	**Chernabura Isl**	**27.63**	**61**	P	**P**	**06 49 05.4**	**+1.0**
	baz=277						
RDOG	**Red Dog Mine**	**27.71**	**32**	P	P	06 49 13.8	+8.8
	baz=248,SNR=7.3						
GCSA	**Galena City Sc**	**29.18**	**40**	P	**P**	**06 49 18.7**	**+0.6**
	baz=261						
TTA	**Tatalina**	**29.34**	**44**	P	**P**	**06 49 20.0**	**+0.3**
TTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TTA	**Tatalina**	**29.34**	**44**		**P**	**06 49 20.0**	**+0.3**
TTA	**Tatalina**	**29.34**	**44**	P	**P**	**06 49 20.4**	**+0.7**
	baz=265,SNR=5.6						
O18K	**Koktuh Hills**	**29.64**	**50**	P	**P**	**06 49 23.0**	**+0.8**
	baz=271						
P18K	**Big Mountain,**	**29.64**	**51**	P	**P**	**06 49 22.9**	**+0.6**
	baz=272						
L19K	**White Mountain**	**29.83**	**46**	P	**P**	**06 49 24.7**	**+0.8**
	baz=268						
N19K	**Bonanza Creek**	**29.98**	**48**	P	**P**	**06 49 26.0**	**+0.7**

	baz=270						
O19K	Port Alsworth	30.07	50	P	P	06 49 26.8	+0.8
	baz=272						
J20K	Nowinta River	30.29	42	IAmb	IAmb	06 49 29.8	
	comp=Z,30nm,1.3s						
J20K	Nowinta River	30.29	42	P	P	06 49 28.4	+0.6
	baz=265						
L20K	Farewell, AK	30.30	45	P	P	06 49 28.5	+0.5
	baz=268						
IMAR	Indian Mountai	30.66	38	P	P	06 49 30.2	-0.9
H11N2	WAKE ISLAND Hy	30.84	159	T	T	07 22 05.0	
	baz=346,slow=76,SNR=31						
H11N1	WAKE ISLAND Hy	30.86	159	T	T	07 22 04.4	
	baz=346,slow=76,SNR=37						
H11N3	WAKE ISLAND Hy	30.86	159	T	T	07 22 07.6	
	baz=346,slow=76,SNR=51						
A21K	Barrow	30.93	28	IAmb	IAmb	06 49 34.6	
	comp=Z,16nm,0.8s						
A21K	Barrow	30.93	28	P	P	06 49 33.5	+0.1
	baz=250,SNR=7.4						
H21K	Melozitna Rive	31.01	39	P	P	06 49 34.9	+0.7
	baz=264						
CHUM	Lake Minchumin	31.07	42	P	P	06 49 35.5	+0.8
	baz=267						
PPLA	Purkeypile	31.09	44	P	P	06 49 36.4	+1.2
	baz=269						
CAST	Castle Rocks	31.15	43	P	P	06 49 36.4	+0.8
	baz=268,SNR=8.7						
I21K	Tanana	31.30	40	P	P	06 49 37.8	+1.0
	baz=265						
BPAW	Bear Paw Mtn.	31.66	42	IAmb	IAmb	06 49 42.1	
	comp=Z,13nm,0.8s						
BPAW	Bear Paw Mtn.	31.66	42	P	P	06 49 40.8	+0.8
	baz=268,SNR=10						
KTH	Kantishna Hill	31.68	43	IAmb	IAmb	06 49 42.6	
	comp=Z,32nm,1.1s						
ULN	Ulaanbaatar	31.79	286	⇓*e*P	P	06 49 41.3	-0.2
ULN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MLY	Manley	31.82	40	P	P	06 49 42.2	+0.8
	baz=267,SNR=12						
BRSE	Bradley Lake S	31.90	50	P	P	06 49 42.4	+0.3
	baz=275						
HHC	Hu-ho-hao-te	31.92	272	*e*P	P	06 49 42.4	-0.3
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.5s						
HHC				LR	LR		
	comp=Z,380nm,14.7s						
HHC				LR	LR		
	comp=Z,330nm,14.3s						
HHC				LR	LR		
	comp=Z,590nm,14.4s						
TRF	Thorofare Moun	31.96	43	IAmb	IAmb	06 49 44.6	
	comp=Z,11nm,0.8s						
TRF	Thorofare Moun	31.96	43	P	P	06 49 43.4	+0.6
	baz=270,SNR=5.6						
H11S1	WAKE ISLAND Hy	31.98	160	T	T	07 23 50.8	
	baz=347,slow=76,SNR=1466						
H11S3	WAKE ISLAND Hy	31.99	160	T	T	07 23 51.5	
	baz=347,slow=76,SNR=1809						
H11S2	WAKE ISLAND Hy	32.00	160	T	T	07 23 29.6	
	baz=347,slow=76,SNR=1072						
M22K	Willow	32.07	47	P	P	06 49 43.5	-0.1
	baz=272						
SONM	Songino Array	32.22	287	P	P	06 49 44.0	-1.2
	comp=Z,1.1nm,0.8s,baz=95,slow=8.2,SNR=5.9						
SONM				PcP	PcP	06 52 33.0	+0.5
	comp=Z,1.6nm,0.9s,baz=89,slow=2.3,SNR=4.3						
SONM				LR	LR	07 04 05.9	
	comp=Z,453nm,18.6s,baz=80,slow=39						
SONM	Songino Array	32.22	287	P	P	06 49 44.0	-1.2
SONM						06 52 33.0	
SONM	Songino Array	32.22	287	IAmb	IAmb	06 49 49.5	
	comp=Z,4.2nm,1.4s						
COLD	Coldfoot	32.22	36	P	P	06 49 45.5	+0.7
	baz=264						
RC01	Rabbit Creek A	32.29	48	P	P	06 49 45.6	+0.1
	baz=274						
O22K	Cooper Landing	32.34	49	P	P	06 49 46.1	+0.1
	baz=275						
I23K	Minto, Yukon-K	32.41	40	P	P	06 49 47.1	+0.7
	baz=268,SNR=8.9						
NJ2	Nanjing	32.45	252	*e*P	P	06 49 46.1	-1.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NEA2	Nenana	32.51	41	IAmb	IAmb	06 49 50.2	
	comp=Z,24nm,0.7s						
NEA2	Nenana	32.51	41	P	P	06 49 48.1	+0.6
	baz=269,SNR=21						
PMR	Palmer	32.55	47	P	P	06 49 48.1	+0.4
	baz=274						
MCK	McKinley	32.57	43	IAmb	IAmb	06 49 50.1	
	comp=Z,25nm,1.0s						
MCK	McKinley	32.57	43	P	P	06 49 48.3	+0.4
	baz=270,SNR=13						
RND	Reindeer	32.61	43	P	P	06 49 48.0	-0.3
RND				pmax	pmax		
	comp=Z,23nm,0.8s						
RND	Reindeer	32.61	43	P	P	06 49 48.0	-0.3
RND				IAmb	IAmb	06 49 49.6	
	comp=Z,23nm,0.8s						
TOLK	Toolik Lake Re	32.64	34	P	P	06 49 49.0	+0.4
TOLK				IAmb	IAmb	06 49 49.9	
	comp=Z,14nm,0.7s						
TOLK	Toolik Lake Re	32.64	34	P	P	06 49 48.9	+0.4
	baz=262,SNR=15						
TLY	Talaya	32.64	294	P	P	06 49 48.0	-0.8
	comp=Z,6.6nm,0.7s,baz=94,slow=8.5,SNR=4.4						
TLY				LR	LR	07 04 17.3	
	comp=Z,293nm,18.2s,baz=78,slow=39						
TLY	Talaya	32.64	294	*e*P	P	06 49 48.8	+0.1
TLY				pmax	pmax		
	comp=Z,19nm,0.8s						
TLY				MLR	MLR		
	comp=Z,830nm,15.0s						
TLY	Talaya	32.64	294	IAmb	IAmb	06 49 50.5	
	comp=Z,12nm,1.0s						
WAT1	Susitna Watana	32.76	45	P	P	06 49 49.8	+0.1
	baz=272						
MDM	Murphy Dome	32.88	41	IAmb	IAmb	06 49 53.2	
	comp=Z,20nm,0.8s						
KNK	Knik Glacier	32.88	47	IAmb	IAmb	06 49 52.1	
	comp=Z,23nm,0.8s						
KNK	Knik Glacier	32.88	47	P	P	06 49 51.0	+0.3
	baz=274,SNR=8.3						
SML	Sawmill	32.91	46	P	P	06 49 51.5	+0.4
	baz=274,SNR=18						
WRH	Wood River Hil	32.94	41	IAmb	IAmb	06 49 53.8	
	comp=Z,22nm,1.0s						
PWL	Port Wells	32.99	48	P	P	06 49 51.5	-0.2
	baz=275						
TCOL	CIGO, UAF Yank	33.04	41	P	P	06 49 53.0	+1.0
	baz=270,SNR=18						
COLA	College	33.04	41	*c i*P	P	06 49 52.8	+0.8
COLA				*i* *PP	pP	06 50 07.2	+1.3
COLA				pmax	pmax		
	comp=Z,35nm,0.8s						
COLA	College	33.04	41	P	P	06 49 51.9	0.0
COLA	College	33.04	41	P	P	06 49 52.8	+0.8
	baz=270						
H24K	Noodor Dome	33.05	39	P	P	06 49 53.4	+1.2
	baz=268,SNR=8.9						
CCB	Clear Creek Bu	33.06	41	IAmb	IAmb	06 49 54.0	
	comp=Z,19nm,0.9s						
WAT6	Susitna Watana	33.14	45	P	P	06 49 53.5	+0.3
	baz=273						
POKR	Poker Plat Res	33.22	40	P	P	06 49 54.3	+0.7
	baz=270,SNR=22						
ZAK	Zakamensk	33.26	292	*e*P	P	06 49 53.9	-0.3
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DHY	Denali Highway	33.29	44	IAmb	IAmb	06 49 55.7	
	comp=Z,23nm,1.1s						
DHY	Denali Highway	33.29	44	P	P	06 49 54.2	-0.1
	baz=273,SNR=8.7						
SCM	Sheep Creek Mo	33.39	46	IAmb	IAmb	06 49 58.0	
	comp=Z,39nm,1.2s						
SCM	Sheep Creek Mo	33.39	46	P	P	06 49 55.6	+0.4
	baz=275						
HDA	Harding Lake	33.43	42	IAmb	IAmb	06 49 57.3	
	comp=Z,16nm,0.6s						
HDA	Harding Lake	33.43	42	P	P	06 49 55.7	+0.2
	baz=271						
IL31		33.45	41	IAmb	IAmb	06 49 57.1	
	comp=Z,18nm,0.9s						
ILAR	Eielson Array	33.45	41	P	P	06 49 55.9	+0.3
	comp=Z,9.1nm,0.8s,baz=253,slow=5.8,SNR=126						
ILAR				LR	LR	07 03 23.1	
	comp=Z,115nm,21.9s,baz=262,slow=36						
PRP	Porcupine Dome	34.02	40		P	06 50 01.0	+0.3
PRP	Porcupine Dome	34.02	40	P	P	06 50 01.2	+0.5
	baz=271,SNR=43						
KLU	Klutina	34.09	47	P	P	06 50 02.1	+0.8
KLU				IAmb	IAmb	06 50 03.8	
	comp=Z,37nm,1.4s						
KLU	Klutina	34.09	47	P	P	06 50 01.3	0.0
	baz=276,SNR=5.5						
PAX	Paxson	34.16	44	P	P	06 50 02.1	+0.2
	baz=275						
DIV	Divide	34.20	47	IAmb	IAmb	06 50 03.8	
	comp=Z,12nm,0.7s						
EYAK	Cordova Ski Ar	34.29	48	P	P	06 50 03.2	+0.4
	baz=278						
HARP	HAARP	34.35	45	P	P	06 50 04.1	+0.6
	baz=276						
RIDG	Independent Ri	34.38	43	P	P	06 50 03.7	-0.1
	baz=274,SNR=18						
N25K	Chitina, Valde	34.70	46	IAmb	IAmb	06 50 08.5	
	comp=Z,8.2nm,0.7s						
N25K					pP	06 50 19.3	-1.2
N25K	Chitina, Valde	34.70	46	P	P	06 50 06.5	-0.1
	baz=277,SNR=6.3						
DOT	Dot Lake	34.74	43	IAmb	IAmb	06 50 07.6	
	comp=Z,11nm,0.8s						
SCRK	Sand Creek	34.75	42	IAmb	IAmb	06 50 08.1	
	comp=Z,26nm,1.1s						
SCRK	Sand Creek	34.75	42	P	P	06 50 06.9	-0.1
	baz=274,SNR=20						
BMRM	Bremner River	34.79	48	IAmb	IAmb	06 50 09.2	
	comp=Z,22nm,1.1s						
BMRM	Bremner River	34.79	48	P	P	06 50 07.7	+0.5
	baz=278						
J26L	Joseph Creek	34.89	41	P	P	06 50 08.0	-0.2
	baz=274						
MENT	Mentasta	34.96	44	IAmb	IAmb	06 50 25.1	
	comp=Z,9.0nm,0.7s						
KAIM	Kayak Island	35.04	49	P	P	06 50 09.6	+0.2
	baz=280						
L26K	Log Cabin Wild	35.12	44	P	P	06 50 10.9	+0.8
	baz=276,SNR=6.7						
M26K	Nabesna, AK	35.35	45	IAmb	IAmb	06 50 15.0	
	comp=Z,23nm,1.1s						
M26K	Nabesna, AK	35.35	45	P	P	06 50 12.8	+0.7
	baz=277						
CRQE	Cirque	35.55	48	P	P	06 50 15.1	+1.1
	baz=280						
TGL	Tana Glacier	35.68	48	IAmb	IAmb	06 50 44.6	
	comp=Z,14nm,0.9s						
WAX	Waxell Ridge	35.72	48	IAmb	IAmb	06 50 17.3	
	comp=Z,21nm,0.8s						
L27K	Beaver Creek,	35.80	44	P	P	06 50 17.4	+1.4
	baz=277						
M27K	Edge Creek, AK	35.88	45	IAmb	IAmb	06 50 19.6	
	comp=Z,24nm,1.1s						
M27K	Edge Creek, AK	35.88	45	P	P	06 50 18.2	+1.4
	baz=278						
EGAK	Eagle	35.90	41	P	P	06 50 16.9	+0.1
	baz=276,SNR=31						
BARN	Barnard Glacie	36.19	47	IAmb	IAmb	06 50 33.1	
	comp=Z,19nm,0.8s						
MESA	MESA	36.21	49	P	P	06 50 19.6	-0.1
	baz=281						
WHN	Wuhan	36.30	254	⇑*i*P	P	06 50 20.3	-0.1
WHN				pmax	pmax		
	comp=Z,86nm,0.7s						
BVCY	Beaver Creek	36.34	45	P	P	06 50 21.6	+1.1
	baz=279,SNR=11						
CTG	Chitna Glacier	36.36	47	P	P	06 50 21.8	+1.0
	baz=281,SNR=7.0						
CTGM	Chitina Glacie	36.36	47	IAmb	IAmb	06 50 23.3	
	comp=Z,25nm,0.9s						
YUK3	Moose Creek	36.63	46	P	P	06 50 24.0	+0.7
	baz=280						
DAWY	Dawson	36.75	42	P	P	06 50 24.9	+0.8
	baz=278,SNR=9.2						
I29M	Ogilvie Camp,	37.04	39	P	P	06 50 26.9	+0.5
	baz=277,SNR=18						
PINM	Pinnacle	37.06	48	P	P	06 50 27.6	+0.9
	baz=283						
J29M	Klondike Camp	37.20	41	P	P	06 50 28.5	+0.7
	baz=278						
NRIK	Noril'sk	37.51	327	LR	LR	07 06 53.0	
	comp=Z,265nm,18.1s,baz=52,slow=38						
NRIK	Noril'sk	37.51	327	⇑*e*P	P	06 50 28.7	-1.7
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
XAN	Xi'an	37.51	264	P	P	06 50 30.6	-0.2
XAN				pP	pP	06 50 45.5	+0.6
XAN				sP	sP	06 50 53.0	+1.6
XAN				PcP	PcP	06 52 49.6	+1.6
XAN				pmax	pmax		
	comp=Z,11nm,1.4s						
XAN				LR	LR		
	comp=Z,250nm,23.4s						
XAN				LR	LR		
	comp=Z,420nm,20.6s						
XAN				LR	LR		
	comp=Z,480nm,21.3s						
EPYK	Eagle Plains	37.56	38	IAmb	IAmb	06 50 33.4	
	comp=Z,24nm,0.9s						
EPYK	Eagle Plains	37.56	38	P	P	06 50 32.1	+1.2
	baz=277,SNR=12						
TPUB	Ta-pu	37.85	240	pP	pP	06 50 47.0	-0.8
TPUB	Ta-pu	37.85	240	P	P	06 50 35.4	+1.7
INK	Inuvik	38.54	34	P	P	06 50 39.6	+0.6
	comp=Z,16nm,0.9s,baz=282,slow=6.8,SNR=50						
INK	Inuvik	38.54	34	IAmb	IAmb	06 50 41.4	
	comp=Z,18nm,0.9s						
INK	Inuvik	38.54	34	P	P	06 50 40.3	+1.3
	baz=278,SNR=16						
N31M	Braeburn, Yuko	38.88	45	P	P	06 50 43.0	+1.1
	baz=284						
M31M	Drury Creek, Y	39.34	44	P	P	06 50 46.5	+0.7
	baz=284						
WHY	Whitehorse	39.51	46	P	P	06 50 48.7	+1.3
	baz=286,SNR=5.1						
LZH	Lanzhou	39.59	271	⇓P	P	06 50 48.8	+0.4
LZH				pP	pP	06 51 02.6	0.0
LZH				sP	sP	06 51 09.6	+0.6
LZH				pmax	pmax		
	comp=Z,42nm,1.3s						
LZH				pmax	pmax		
	comp=Z,150nm,5.4s						
LZH				LR	LR		
	comp=Z,370nm,13.5s						
LZH				LR	LR		
	comp=Z,360nm,13.2s						
LZH				LR	LR		
	comp=Z,400nm,16.3s						
SKAG	Skagway	39.63	48	P	P	06 50 49.1	+0.9
	baz=287						
GTA	Gaotai	40.34	278	*e*P	P	06 50 54.5	0.0
GTA				pP	pP	06 51 09.5	+0.8
GTA				sP	sP	06 51 17.3	+2.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,120nm,9.6s						
GTA				LR	LR		
	comp=Z,290nm,17.1s						
GTA				LR	LR		
	comp=Z,550nm,17.9s						
GTA				LR	LR		
	comp=Z,640nm,15.9s						
P33M	Teslin, Yukon	40.62	47	P	P	06 50 57.9	+1.4
	baz=288						
A36M	Sachs Harbour	40.77	28	P	P	06 50 58.2	+0.8
A36M	Sachs Harbour	40.77	28	P	P	06 50 58.6	+1.2
	baz=280,SNR=69						
WRAK	Wrangell Islan	42.14	52	P	P	06 51 10.0	+1.1
	baz=292						
DLBC	Dease Lake	42.56	48	P	P	06 51 12.1	-0.3
	comp=Z,5.7nm,0.9s,baz=246,slow=7.8,SNR=7.6						
ZALV	Zalesovo Beam	42.58	304	P	P	06 51 11.0	-1.5
	comp=Z,0.8nm,0.3s,baz=60,slow=8.8,SNR=5.1						
ZALV				PcP	PcP	06 53 04.6	+0.8
	comp=Z,8.4nm,0.9s,baz=64,slow=3.4,SNR=18						
ZALV				LR	LR	07 10 21.7	
	comp=Z,223nm,18.3s,baz=48,slow=38						
CD2	Chengdu	42.86	264	P	P	06 51 14.9	-0.2
CD2				S	S	06 57 33.8	-1.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CD2				pmax	pmax		
	comp=Z,170nm,9.9s						
CD2				LR	LR		
	comp=Z,200nm,19.2s						
CD2				LR	LR		
	comp=Z,270nm,23.5s						
DGZ	Jazzator, Alta	42.93	298	⇑*e*P	P	06 51 16.3	+0.7
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GYA	Guiyang	43.99	257	⇓P	P	06 51 24.5	+0.2
GYA				pP	pP	06 51 40.6	+1.9
GYA				sP	sP	06 51 47.9	+2.8
GYA				S	S	06 57 50.4	-2.0
GYA				pmax	pmax		
	comp=Z,18nm,0.9s						
GYA				pmax	pmax		
	comp=Z,78nm,3.5s						
GYA				LR	LR		
	comp=Z,93nm,8.0s						
WMQ	Urumqi	45.66	290	*e*P	P	06 51 38.8	+1.4
MK31	Makanchi Array	47.35	296	*d i*P	P	06 51 49.5	-1.0
MKAR	Makanchi Array	47.35	296	P	P	06 51 49.6	-0.9
	comp=Z,2.8nm,0.8s,baz=63,slow=8.3,SNR=20						
MKAR				PcP	PcP	06 53 20.6	+0.1
	comp=Z,3.3nm,0.9s,baz=64,slow=5.5,SNR=5.2						
MKAR				LR	LR	07 12 54.5	
	comp=Z,670nm,18.8s,baz=32,slow=38						
KURK	Kurchatov	47.43	303	*de*P	P	06 51 50.3	-0.7
KURK				pmax	pmax		
	comp=Z,14nm,1.0s						
KURK	Kurchatov	47.43	303	P	P	06 51 49.5	-1.5
KURK				IAmb	IAmb	06 51 52.0	
	comp=Z,10nm,0.8s						
KMI	Kunming	47.44	259	⇓P	P	06 51 52.3	+0.6
KMI				pmax	pmax		
	comp=Z,29nm,1.0s						
YKA	Yellowknife Ar	47.82	39	P	P	06 51 54.6	+0.7
	comp=Z,4.5nm,0.8s,baz=297,slow=7.4,SNR=24						
YKA				pP	pP	06 52 06.7	-1.7
	comp=Z,6.9nm,0.9s,baz=298,slow=7.9,SNR=11						
YKA				PcP	PcP	06 53 23.0	+1.2
	comp=Z,1.3nm,0.7s,baz=303,slow=3.9,SNR=4.6						
YKA				LR	LR	07 13 19.6	
	comp=Z,86nm,21.1s,baz=0.0,slow=38						
RES	Resolute Bay	47.84	20	P	P	06 51 54.1	+0.3
	comp=Z,4.1nm,0.7s,baz=294,slow=8.3,SNR=20						
RES	Resolute Bay	47.84	20	P	P	06 51 53.6	-0.2
RES				pmax	pmax		
	comp=Z,11nm,1.2s						
RES	Resolute Bay	47.84	20	P	P	06 51 53.6	-0.2
RES				IAmb	IAmb	06 51 55.5	
	comp=Z,11nm,1.2s						
SLVN	Son La	49.42	255	P	P	06 52 07.3	+0.6
BRVK	Borovoye	50.64	309	*ce*P	P	06 52 15.2	-0.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	Borovoye	50.64	309	P	P	06 52 15.0	-0.5
NEEM	North Greenlan	52.41	7	*i* P	P	06 52 26.3	-2.5
NEEM				IAmb	IAmb	06 52 28.2	
	comp=Z,15nm,0.8s						
UBPT	Khong Chiam	53.00	248	P	P	06 52 34.7	+1.2
BAKI	Biak	53.08	205	P	P	06 52 34.4	+0.3
	comp=Z,62nm,1.3s						
EDM	Edmonton	53.28	49	P	P	06 52 36.3	+1.0
EDM				pmax	pmax		
	comp=Z,36nm,1.0s						
EDM	Edmonton	53.28	49	P	P	06 52 36.3	+1.0
GENI	Genyem	53.43	199	P	P	06 52 37.9	+1.3
	comp=Z,55nm,0.6s						
TNTI	Ternate	54.13	216	P	P	06 52 42.7	+0.9
	comp=Z,43nm,1.0s						
SHL	Shillong	54.19	269	P	P	06 52 42.5	+0.1
SHL				pmax	pmax		
	comp=Z,37nm,0.8s						
AAK	Ala-Archa	54.28	296	⇑*e*P	P	06 52 42.0	-0.8
AAK				pmax	pmax		
	comp=Z,12nm,1.4s						
ARU	Arti	54.32	317	*d i*P	P	06 52 41.7	-1.0
ARU				*PP	pP	06 52 56.1	-1.4
ARU				S	S	07 00 16.2	+0.1
ARU				pmax	pmax		
	comp=Z,22nm,0.8s						
ARU	Arti	54.32	317	P	P	06 52 41.9	-0.7
CHTO	Chiang Mai	54.41	257	P	P	06 52 44.8	+0.9
CHTO				pmax	pmax		
	comp=Z,93nm,0.9s						
CHTO	Chiang Mai	54.41	257	P	P	06 52 44.8	+0.9
CHTO	Chiang Mai	54.41	257	P	P	06 52 44.7	+0.9
CMAR	Chiang Mai Arr	54.68	257	P	P	06 52 47.1	+1.3
	comp=Z,45nm,0.9s,baz=29,slow=7.4,SNR=143						
CMAR				LR	LR	07 16 59.9	
	comp=Z,108nm,19.3s,baz=73,slow=37						
J05D	Fort Rock, OR	54.93	62	P	P	06 52 48.6	+1.0
	baz=308						
L04D	Klamath Falls	54.96	64	P	P	06 52 48.7	+1.0
	baz=308						
YBH	Yreka Blue Hor	55.02	65	P	P	06 52 49.4	+1.3
	comp=Z,8.1nm,1.1s,baz=358,slow=4.2,SNR=5.9						
YBH	Yreka Blue Hor	55.02	65	IAmb	IAmb	06 52 57.8	
	comp=Z,28nm,1.4s						
KSH	Kashi	55.31	292	P	P	06 52 54.3	+4.0
ARCES	ARCESS Array B	56.00	341	P	P	06 52 54.3	-0.4
	comp=Z,3.6nm,0.8s,baz=39,slow=7.8,SNR=7.2						
ARCES				PcP	PcP	06 53 52.9	+0.5
	comp=Z,2.3nm,0.7s,baz=2.7,slow=1.9,SNR=4.0						
ARCES				LR	LR	07 20 02.8	
	comp=Z,182nm,21.3s,baz=265,slow=39						
JIRN	Jiri	56.49	275	*e*P	P	06 52 59.5	+0.3
	comp=Z,31nm,0.8s						
GUN	Gumba	56.53	275	*e*P	P	06 52 59.5	+0.1
	comp=Z,17nm,0.5s						
KIRV	Kirov	56.78	323	⇓*e*P	P	06 53 00.2	-0.1
PLID	Pearl Lake	56.79	58	P	P	06 53 02.1	+1.2
PLID				IAmb	IAmb	06 53 03.2	
	comp=Z,12nm,0.8s						
MSO	Missoula	56.83	55	IAmb	IAmb	06 53 03.4	
	comp=Z,17nm,1.1s						
MSO	Missoula	56.83	55	P	P	06 53 01.8	+0.8
	baz=309,SNR=6.4						
KKN	Kakani	57.00	275	*e*P	P	06 53 03.1	+0.5
	comp=Z,20nm,0.6s						
PKI	Pulchoki	57.06	275	*e*P	P	06 53 02.9	-0.3
PKIN	Phulchoki	57.07	275	*e*P	P	06 53 03.1	0.0
DMN	Daman	57.23	275	*e*P	P	06 53 04.7	+0.4
	comp=Z,41nm,0.9s						
GKN	Gorkha	57.27	276	*e*P	P	06 53 04.7	+0.3
	comp=Z,26nm,0.6s						
DANN	Dangsing	57.61	277	*e*P	P	06 53 07.5	+0.5
	comp=Z,22nm,0.6s						
SUMG	Summit	58.01	5	P	P	06 53 09.3	+0.1
SUMG				pmax	pmax		
	comp=Z,20nm,0.9s						
SUMG	Summit	58.01	5	*i* P	P	06 53 09.0	-0.2
SUMG				IAmb	IAmb	06 53 09.7	
	comp=Z,13nm,0.7s						
SUMG	Summit	58.01	5	P	P	06 53 09.3	+0.1
ABKAR	Akbulak array	58.13	310	IAmb	IAmb	06 53 09.9	
	comp=Z,5.4nm,0.6s						
EGMT	Eagleton	58.27	52	P	P	06 53 11.4	+0.3
	baz=310						
PYUN	Piuthan	58.28	277	*e*P	P	06 53 11.8	+0.2
	comp=Z,34nm,0.9s						
HLID	Hailey	58.64	58	P	P	06 53 15.0	+1.2
HLID	Hailey	58.64	58	P	P	06 53 14.6	+0.8
	baz=310						
KLMR	Klimovskoe	58.82	329	*e*P	P	06 53 11.8	-2.7
KLMR				*e*		06 54 02.4	
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KLMR	Klimovskoe	58.82	329	*e*P	P	06 53 11.8	-2.7
KLMR				AMP		06 53 13.9	
	comp=Z,7.0nm,0.7s						
KLMR				*e*PcP	PcP	06 54 02.4	-1.1
BOZ	Bozeman (W)	58.85	55	IAmb	IAmb	06 53 18.0	
	comp=Z,26nm,1.4s						
BOZ	Bozeman (W)	58.85	55	P	P	06 53 15.8	+0.6
	baz=310,SNR=8.4						
NVAR	Mina Array Bea	59.72	65	LR	LR	07 14 56.5	
	comp=Z,60nm,20.3s,baz=320,slow=32						
YHH	Holmes Hill	59.80	55	IAmb	IAmb	06 53 24.7	
	comp=Z,14nm,1.1s						
YMR	Madison River	59.81	55	IAmb	IAmb	06 53 25.0	
	comp=Z,25nm,1.4s						
YMP	Mirror Lake Pl	60.20	55	IAmb	IAmb	06 53 27.9	
	comp=Z,18nm,1.2s						
H17A	Grant Village	60.20	56	IAmb	IAmb	06 53 29.1	

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      comp=Z,21nm,1.1s
H17A  Grant Village     60.20  56    P      P      06 53 25.7 +1.0
      baz=311,SNR=5.2
RLMT  Red Lodge         60.42  54    P      P      06 53 26.8 +0.7
      baz=312,SNR=13
LOHW  Long Hollow       60.70  56    IAmb   IAmb   06 53 32.1
      comp=Z,16nm,1.2s
NIL   Nilore            60.76 289    P      P      06 53 27.6 -0.8
NIL                                  pmax   pmax
      comp=Z,20nm,1.1s
NIL   Nilore            60.76 289    P      P      06 53 27.6 -0.8
NIL                                  IAmb   IAmb   06 53 30.8
      comp=Z,20nm,1.1s
DGMT  Dagmar            60.78  49    P      P      06 53 29.1 +0.9
      baz=312,SNR=5.4
LAO   LASA Array        60.96  51    P      P      06 53 30.2 +0.6
      baz=312
ICESG Greenland Ices    61.37   6  i P      P      06 53 31.0 -1.4
ICESG                                IAmb   IAmb   06 53 32.3
      comp=Z,13nm,1.0s
R11A  Troy Canyon, C    61.38  64    P      P      06 53 33.3 +0.7
      baz=312
DUG   Dugway, Tooele    61.75  60    IAmb   IAmb   06 53 37.8
      comp=Z,21nm,1.5s
DUG   Dugway, Tooele    61.75  60    P      P      06 53 36.3 +1.2
      baz=312
MPMC  Manual Prospec    61.78  67    P      P      06 53 36.4 +0.9
      baz=312
BELG  Belogornoye       61.78 319d iP      P      06 53 34.0 -0.9
BELG                                 pmax   pmax
      comp=Z,4.0nm,0.9s
BW06  Boulder Array     61.84  56    IAmb   IAmb   06 53 39.0
      comp=Z,15nm,1.1s
BW06  Boulder Array     61.84  56    P      P      06 53 36.9 +1.1
      baz=312,SNR=8.3
PD31  Pinedale Array    61.84  56    IAmb   IAmb   06 53 38.9
      comp=Z,13nm,1.1s
PDAR  Pinedale Array    61.84  56    P      P      06 53 37.0 +1.3
      comp=Z,12nm,1.1s,baz=329,slow=2.6,SNR=17
PDAR                                 pP     pP     06 53 49.7 -1.0
      comp=Z,3.1nm,0.8s,baz=334,slow=1.5,SNR=6.1
PDAR                                 LR     LR     07 22 16.2
      comp=Z,72nm,18.1s,baz=354,slow=38
FURC  Furnace Creek,    61.88  66    P      P      06 53 37.0 +1.2
      baz=312
STKI  Sintang           61.99 232    P      P      06 53 38.7 +1.9
EDW2  Edwards Air Fo    62.26  68    P      P      06 53 39.5 +1.0
      baz=313
FINES FINESS Array B    62.46 335    P      P      06 53 37.9 -1.4
      comp=Z,2.2nm,0.4s,baz=38,slow=7.3,SNR=24
FINES                                LR     LR     07 22 50.5
      comp=Z,417nm,18.5s,baz=6.0,slow=38
FINES FINESS Array B    62.46 335  i P      P      06 53 39.0 -0.3
FINES                                pmax   pmax
      comp=Z,2.0nm,0.4s
SHOC  Shoshone, Teco    62.61  66    P      P      06 53 40.6 -0.2
      baz=313
RDMU  Red Mountain      63.32  58    IAmb   IAmb   06 53 49.2
      comp=Z,21nm,1.0s
DY2G  Dye2              63.33  10  e P      P      06 53 43.9 -1.4
BBKI  Banjar Baru       63.35 227    P      P      06 53 46.4 +0.6
      comp=Z,2µmcomp=Z,26nm,1.0s
MDND  Maddock           63.43  47    P      P      06 53 46.7 +0.6
      baz=315,SNR=6.7
ULM   Lac du Bonnet     63.44  43    P      P      06 53 45.9 -0.1
      comp=Z,6.4nm,1.0s,baz=309,slow=5.6,SNR=4.3
GMRC  Granite Mounta    63.74  67    P      P      06 53 49.2 +0.8
      baz=313
KULM  Kulim             63.75 246    P      P      06 53 48.7 +0.2
KULM                                 IAmb   IAmb   06 53 50.8
      comp=Z,19nm,0.9s
RSSD  Black Hills       63.84  52    P      P      06 53 49.9 +0.8
RSSD                                 pmax   pmax
      comp=Z,25nm,1.0s
RSSD  Black Hills       63.84  52    P      P      06 53 49.9 +0.8
RSSD  Black Hills       63.84  52    P      P      06 53 50.1 +1.0
      baz=314
IRM   Iron Mountain     64.48  67    P      P      06 53 53.9 +0.8
      baz=314
BC3   Big Chuckawall    64.64  67    P      P      06 53 55.0 +0.7
      baz=314
AGMN  Agassiz Nation    64.86  44    IAmb   IAmb   06 53 57.4
      comp=Z,19nm,1.3s
AGMN  Agassiz Nation    64.86  44    P      P      06 53 56.1 +0.7
      baz=317
N23A  Red Feather La    65.08  56    P      P      06 53 57.8 +0.5
      baz=315
LPSR  Galich'ya Gora    65.22 323  e P      P      06 53 56.4 -1.2
LPSR                                 pmax   pmax
      comp=Z,10.0nm,0.8s
ISCO  Idaho Springs     66.03  56    IAmb   IAmb   06 54 06.4
      comp=Z,15nm,1.2s
ISCO  Idaho Springs     66.03  56    P      P      06 54 04.7 +1.2
      baz=315,SNR=7.6
DSRI  Dabo              66.16 238    P      P      06 54 07.0 +2.9
      comp=Z,2µmcomp=Z,24nm,1.2s
VSR   Storozhevoye      66.19 322  e P      P      06 54 02.9 -0.9
VSR                                  pmax   pmax
      comp=Z,6.0nm,0.5s
MVCO  Mesa Verde        66.25  60    P      P      06 54 05.6 +0.8
      baz=315
NB2   NORSAR Subarra    66.35 342    P      P      06 54 03.9 -0.9
      comp=Z,1.0nm,0.5s,baz=24,slow=6.5
NOA   NORSAR Array B    66.35 342    P      P      06 54 03.7 -1.1
      comp=Z,4.5nm,1.0s,baz=25,slow=6.4,SNR=5.9
NOA                                  LR     LR     07 27 27.8
      comp=Z,157nm,20.0s,baz=30,slow=40
F33A  5 Mile Ranch,     66.45  46    IAmb   IAmb   06 54 06.8
      comp=Z,15nm,1.1s
PSI   Prapat            66.76 245    LR     LR     07 23 54.5
      comp=Z,63nm,19.1s,baz=31,slow=36
GEYT  Alibeck           66.78 301    LR     LR     07 25 14.2
      comp=Z,186nm,19.0s,baz=195,slow=38
S22A  4UR Ranch, Cre    66.81  59    P      P      06 54 10.0 +1.5
      baz=315,SNR=10
Q24A  Divide            66.88  57    P      P      06 54 09.7 +0.9
      baz=316
W18A  Petrified Fore    67.01  63    P      P      06 54 10.6 +1.0
      baz=315
OGNE  Ogallala          67.14  53           pP     06 54 24.1 -1.2
OGNE  Ogallala          67.14  53    P      P      06 54 11.1 +0.9
      baz=316,SNR=6.9
SDCO  Great Sand Dun    67.55  58    P      P      06 54 14.0 +0.9
      baz=316,SNR=7.1
ECSD  EROS Data Cent    67.85  48    IAmb   IAmb   06 54 16.0
      comp=Z,15nm,0.9s
ECSD  EROS Data Cent    67.85  48    P      P      06 54 14.8 +0.3
      baz=318,SNR=10.0
SPMN  Marine on St.     68.55  45    IAmb   IAmb   06 54 20.3
      comp=Z,12nm,0.9s
SPMN  Marine on St.     68.55  45    P      P      06 54 19.3 +0.4
      baz=319
T25A  Trinidad          68.59  58    IAmb   IAmb   06 54 21.9
      comp=Z,23nm,1.4s
T25A  Trinidad          68.59  58    P      P      06 54 20.6 +1.0
      baz=316,SNR=6.2
HYB   Hyderabad         68.68 272  i P      P      06 54 20.5 +0.4
BGNE  Belgrade          68.81  51    P      P      06 54 20.6  0.0
      baz=318
ANMO  Albuquerque       69.02  61    P      P      06 54 22.5 +0.3
      comp=Z,2.1nm,0.8s,baz=309,slow=7.5,SNR=4.2
ANMO  Albuquerque       69.02  61    IAmb   IAmb   06 54 25.4
      comp=Z,4.3nm,1.1s
ANMO  Albuquerque       69.02  61    P      P      06 54 22.6 +0.4
      baz=316
I37A  Lemond, Waseca    69.19  46    IAmb   IAmb   06 54 24.9
      comp=Z,31nm,1.0s
MDSI  Maura Dua         69.70 236    P      P      06 54 26.4 +0.1
      comp=Z,8.6nm,1.7s
CBKS  Cedar Bluff       69.90  54    P      P      06 54 27.9 +0.5
      baz=318
121A  Cookes Peak, D    69.99  63    P      P      06 54 29.1 +0.9
      baz=316
LGD   Lagodekhi         70.17 312    P      P      06 54 29.6 +0.6
KIV   Kislovodsk        70.25 315  e P      P      06 54 29.7 +0.2
KIV                                  pmax   pmax
      comp=Z,11nm,1.0s
KIV                                  MLR    MLR
      comp=Z,114nm,17.0s
SCHQ  Schefferville     70.25  25    P      P      06 54 29.4 +0.2
      comp=Z,7.7nm,0.8s,baz=334,slow=5.7,SNR=11
SCHQ  Schefferville     70.25  25    P      P      06 54 29.4 +0.2
SCHQ                                 IAmb   IAmb   06 54 30.7
      comp=Z,10nm,0.8s
KBZ   Khabaz            70.32 315    P      P      06 54 29.4 -0.4
      comp=Z,5.6nm,0.7s,baz=60,slow=8.0,SNR=12
KBZ                                  LR     LR     07 30 10.6
      comp=Z,160nm,20.3s,baz=5.5,slow=40
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KBZ   Khabaz            70.32 315ceP      P      06 54 30.4 +0.6
KBZ                                  pmax   pmax
      comp=Z,6.0nm,0.9s
AKASG Malin Array Be    70.37 327    P      P      06 54 28.6 -1.3
      comp=Z,2.6nm,0.4s,baz=32,slow=6.4,SNR=16
AKASG                                LR     LR     07 28 31.9
      comp=Z,208nm,18.5s,baz=5.0,slow=39
N35A  Tabor             70.47  50    IAmb   IAmb   06 54 32.2
      comp=Z,14nm,0.8s
DDFL  Dedoflistskaro    70.52 311    P      P      06 54 34.6 +3.4
GUDG  Gudauri           70.55 313    P      P      06 54 34.6 +3.1
SCIA  State Center      70.87  48    P      P      06 54 33.8 +0.5
      baz=320
POO   Poona             70.94 276  e x      x      06 54 32.0
WB0   Warramunga Arr    71.34 201    IAmb   IAmb   06 54 37.0
      comp=Z,14nm,1.1s
WRAB  Tennant Creek     71.51 201⇓e P      P      06 54 37.3 +0.1
WRAB                                 pmax   pmax
      comp=Z,8.0nm,1.0s
WRA   Warramunga Arr    71.52 201    P      P      06 54 36.8 -0.4
      comp=Z,5.6nm,0.9s,baz=16,slow=6.4,SNR=18
WRA                                  LR     LR     07 28 56.9
      comp=Z,26nm,18.9s,baz=235,slow=38
WRA   Warramunga Arr    71.52 201  i P      P      06 54 37.4 +0.2
WRA                                  pmax   pmax
      comp=Z,6.0nm,0.9s
DZM   Mont Dzumac       71.70 170  e LR     LR     07 16 41.7
      comp=Z,194nm,27.9s
MSTX  Muleshoe          71.81  59    P      P      06 54 40.2 +1.1
      baz=318
AKH   Akhalkalaki       71.83 313    P      P      06 54 41.8 +2.6
MNTX  Cornudas Mount    71.99  62    P      P      06 54 41.3 +1.1
      baz=317
P40A  Paris             73.27  48    IAmb   IAmb   06 54 49.0
      comp=Z,19nm,1.1s
OK029 Liberty Lake      73.36  54    IAmb   IAmb   06 54 49.7
      comp=Z,16nm,0.9s
WMOK  Wichita Mounta    73.44  56    P      P      06 54 49.5 +0.8
      baz=319,SNR=7.7
HDIL  Hopedale          73.79  46    IAmb   IAmb   06 54 52.0
      comp=Z,24nm,0.9s
FNO   Franklin          73.79  55    IAmb   IAmb   06 54 52.7
      comp=Z,27nm,1.0s
OJC   Ojcow             73.90 332    IAmb   IAmb   06 54 51.9
      comp=Z,9.8nm,0.7s
R40A  Maddies Statio    74.12  49    IAmb   IAmb   06 54 53.6
      comp=Z,14nm,0.9s
R40A                                 pP     pP     06 55 04.0 -3.9
TUL1  Leonard           74.15  53    P      P      06 54 53.2 +0.4
TUL1                                 IAmb   IAmb   06 54 54.3
      comp=Z,26nm,1.4s
TUL1  Leonard           74.15  53    P      P      06 54 52.8  0.0
      baz=320
W35A  Tecumseh          74.15  54    IAmb   IAmb   06 54 54.5
      comp=Z,15nm,0.9s
KOLS  Kolonicke sedl    74.24 330  e P      P      06 54 53.7 +0.5
KOLS                                 pmax   pmax
      comp=Z,13nm,0.8s
KOLS  Kolonicke sedl    74.24 330  e P      P      06 54 53.7 +0.5
FLTG  Flechtingen       74.33 338  e P      P      06 54 54.2 +0.7
      comp=Z,6.2nm,0.9s,baz=23,slow=5.6
BURAR Bucovina Array    74.39 328  ⇓ P      P      06 54 53.8 -0.4
ABTX  Abilene, Hawle    74.56  58    P      P      06 54 55.9 +0.6
      baz=319
TX31  Lajitas Ar. Si    74.73  63    IAmb   IAmb   06 55 12.2
      comp=Z,22nm,0.8s
TXAR  Lajitas Array     74.73  63    P      P      06 54 57.5 +1.1
      comp=Z,4.8nm,0.7s,baz=300,slow=4.1,SNR=37
TXAR                                 pP     pP     06 55 11.4 -0.2
      comp=Z,6.8nm,0.7s,baz=300,slow=4.4,SNR=15
UPC   Upice             74.75 335  e P      P      06 54 57.1 +1.1
UPC   Upice             74.75 335  e P      P      06 54 57.1 +1.1
DPC   Dobruska-Polom    74.80 334  e P      P      06 54 56.5 +0.1
DPC   Dobruska-Polom    74.80 334  e P      P      06 54 56.5 +0.1
CCM   Cathedral Cave    74.81  49    P      P      06 54 56.4 -0.2
      baz=322
CLL   Collm             74.83 337  i P      P      06 54 56.3 -0.2
CLL                                  pmax   pmax
      comp=Z,9.0nm,0.9s
CLL   Collm             74.83 337  i P      P      06 54 56.3 -0.2
      comp=Z,9.0nm,0.9s
CLL   Collm             74.83 337  e P      P      06 54 56.8 +0.3
      comp=Z,6.6nm,0.9s,baz=23,slow=5.6
TRPA  Tarpa             74.86 330  ⇑ P      P      06 54 56.8 +0.1
TRPA  Tarpa             74.86 330  e P      P      06 54 56.5 -0.1
KRLC  Kraliky           74.92 334  e P      P      06 54 57.1  0.0
KRLC  Kraliky           74.92 334  e P      P      06 54 57.1  0.0
LANS  Liptovska Anna    74.94 332  e P      P      06 54 58.3 +1.1
LANS                                 pmax   pmax
      comp=Z,8.0nm,0.7s
LANS  Liptovska Anna    74.94 332  e P      P      06 54 58.3 +1.1
AAM   Ann Arbor         74.94  41    P      P      06 54 57.5 +0.3
      baz=324
SFIN  Lafayette         74.95  45    P      P      06 54 56.9 -0.5
      baz=323
MORC  Moravsky Berou    74.96 333  ⇓ P      P      06 54 57.7 +0.4
MORC  Moravsky Berou    74.96 333  e P      P      06 54 57.5 +0.2
MORC  Moravsky Berou    74.96 333    P      P      06 54 58.3 +1.0
MORC                                 pmax   pmax
      comp=Z,14nm,0.9s
MORC  Moravsky Berou    74.96 333    IAmb   IAmb   06 54 59.0
      comp=Z,9.8nm,0.9s
BRG   Berggiesshubel    74.98 336  e P      P      06 54 57.6 +0.3
      comp=Z,1.6nm,0.8s,baz=23,slow=5.6
CLZ   Clausthal         74.99 339  e P      P      06 54 57.9 +0.5
      baz=23,slow=5.6
FBE   Freiberg          75.09 336  e P      P      06 54 58.9 +0.9
      comp=Z,2.5nm,0.8s,baz=23,slow=5.6
AS31  Alice Springs     75.21 201    P      P      06 54 59.0 +0.1
ASAR  Alice Springs     75.21 201    P      P      06 54 59.8 +0.8
      comp=Z,4.3nm,0.8s,baz=13,slow=5.4,SNR=22
ASAR                                 pP     pP     06 55 15.0 +0.7
      comp=Z,2.4nm,0.5s,baz=13,slow=5.7,SNR=7.5
ASAR  Alice Springs     75.21 201    P      P      06 54 59.0 +0.1
U40A  Yellville         75.32  51    P      P      06 54 59.5 -0.1
      baz=321,SNR=9.8
IZAB  Izabela           75.38 332  e P      P      06 55 00.6 +0.9
CFR   Carcaliu          75.40 325  ⇓ P      P      06 54 59.3 -0.5
P46A  Rosedale          75.51  45    IAmb   IAmb   06 55 01.9
      comp=Z,14nm,0.8s
COVR  Voineasa-Covas    75.55 326  ⇑ P      P      06 55 00.4 -0.4
TPGR  Topolog           75.56 324  ⇓ P      P      06 55 01.3 +0.5
PRU   Pruhonice         75.62 335  e P      P      06 55 01.4 +0.3
PRU   Pruhonice         75.62 335  e P      P      06 55 01.4 +0.3
VRAC  Vranov            75.66 334  ⇓ P      P      06 55 01.0 -0.3
VRAC  Vranov            75.66 334  e P      P      06 55 01.7 +0.4
VYHS  Vyhne             75.72 332  e P      P      06 55 02.1 +0.4
VYHS                                 pmax   pmax
      comp=Z,6.0nm,0.6s
VYHS  Vyhne             75.72 332  e P      P      06 55 02.1 +0.4
W39A  Magazine          75.74  52    IAmb   IAmb   06 55 03.4
      comp=Z,13nm,1.1s
W39A  Magazine          75.74  52    P      P      06 55 02.3 +0.3
      baz=321
JAVC  Velka Javorina    75.75 333  e P      P      06 55 03.1 +1.2
TANN  Tannenbergstha    75.79 337  e P      P      06 55 02.4 +0.4
      comp=Z,1.9nm,0.8s,baz=23,slow=5.6
MOX   Moxa              75.79 337  e P      P      06 55 02.6 +0.6
      comp=Z,3.3nm,0.9s,baz=23,slow=5.6
GUNZ  Gunzen            75.87 337  e P      P      06 55 03.0 +0.5
      comp=Z,3.2nm,0.8s,baz=23,slow=5.6
PSZ   Piszkesteto       75.90 331  ⇓ P      P      06 55 02.8  0.0
WERN  Wernitzgruen      75.92 337  e P      P      06 55 03.5 +0.6
      comp=Z,7.3nm,1.0s,baz=23,slow=5.6
KRUC  Moravsky          75.94 334  e P      P      06 55 03.4 +0.5
MLR   Muntele Rosu      75.95 326  ⇑ P      P      06 55 03.1 -0.1
MLR   Muntele Rosu      75.95 326    P      P      06 55 03.4 +0.2
MLR                                  pmax   pmax
      comp=Z,6.0nm,0.7s
MLR   Muntele Rosu      75.95 326    P      P      06 55 03.4 +0.2
FCAR  Ozark Folk Cen    76.06  51    IAmb   IAmb   06 55 04.6
      comp=Z,13nm,0.9s
S44A  Carbondale        76.06  48    IAmb   IAmb   06 55 05.2
      comp=Z,12nm,0.8s
JCT   Junction City     76.09  59    IAmb   IAmb   06 55 05.8
      comp=Z,15nm,1.2s
JCT   Junction City     76.09  59    P      P      06 55 04.2 +0.2
      baz=319,SNR=5.3
PBMO  Poplar Bluff      76.21  49    IAmb   IAmb   06 55 05.6
      comp=Z,12nm,1.1s
WHTX  Lake Whitney,     76.24  57    P      P      06 55 05.5 +0.6
      baz=320
MANZ  Manzenberg        76.27 337  e P      P      06 55 05.4 +0.6
      comp=Z,0.9nm,0.9s,baz=23,slow=5.6
MODS  Modra-Piesok      76.30 333  e P      P      06 55 05.2 +0.2
MODS                                 pmax   pmax
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      comp=Z,8.0nm,0.9s
MODS  Modra-Piesok      76.30 333  e P      P      06 55 05.2 +0.2
VOIR                    76.32 327  ⇓ P      P      06 55 05.6 +0.4
VOIR                    76.32 327    P      P      06 55 06.0 +0.8
VOIR                                 pmax   pmax
      comp=Z,15nm,0.9s
MIAR  Mount Ida         76.35  53    IAmb   IAmb   06 55 07.1
      comp=Z,13nm,0.9s
MIAR  Mount Ida         76.35  53    P      P      06 55 05.7 +0.2
      baz=321,SNR=5.9
WHAR  Wooly Hollow      76.44  51    IAmb   IAmb   06 55 07.9
      comp=Z,35nm,1.4s
ROTZ  Rotzenmuhle       76.45 337  e P      P      06 55 06.3 +0.6
      comp=Z,0.8nm,0.8s,baz=23,slow=5.6
SRO   Srobarova         76.48 332  e P      P      06 55 07.2 +1.2
SRO   Srobarova         76.48 332  e P      P      06 55 07.1 +1.1
SRO2  Moca              76.50 332  e P      P      06 55 06.2 +0.1
SRO2  Moca              76.50 332  e P      P      06 55 06.2 +0.1
ARR   Arges             76.53 327  ⇓ P      P      06 55 06.8 +0.4
W41B  Gary Mavity, V    76.55  51    P      P      06 55 06.9 +0.3
      baz=322,SNR=7.4
ERPA  Erie              76.65  39    P      P      06 55 07.1 +0.1
      baz=326
KHC   Kasperske Hory    76.66 336  e P      P      06 55 07.6 +0.6
KHC                                e x      x      06 55 40.9
KHC   Kasperske Hory    76.66 336c iP      P      06 55 07.3 +0.2
KHC                                  pmax   pmax
      comp=Z,18nm,0.9s
KHC   Kasperske Hory    76.66 336    IAmb   IAmb   06 55 10.3
      comp=Z,8.1nm,0.8s
P49A  Miami Univ. Ec    76.72  44    P      P      06 55 07.5 +0.1
      baz=324
CKRC  Cesky Krumlov     76.75 335  e P      P      06 55 09.1 +1.6
GRF   Grafenberg Arr    76.77 337  e P      P      06 55 08.1 +0.5
      comp=Z,12nm,1.0s,baz=23,slow=5.6
X40A  Basin Creek Fa    76.78  52    P      P      06 55 07.9  0.0
      baz=321
WET   Wettzell          76.84 336  e P      P      06 55 08.5 +0.5
      comp=Z,6.0nm,0.9s,baz=23,slow=5.6
GEC2  GERESS Array S    76.89 335  e P      P      06 55 08.7 +0.3
      comp=Z,2.9nm,0.7s,baz=23,slow=5.6
GERES GERESS Array B    76.89 335    P      P      06 55 08.7 +0.3
      comp=Z,2.9nm,0.6s,baz=38,slow=5.8,SNR=20
GERES                                LR     LR     07 32 42.2
      comp=Z,379nm,19.8s,baz=33,slow=39
M53A  WI Miller and     76.92  40    P      P      06 55 08.8 +0.2
      baz=326
ACSO  Alum Creek Sta    76.92  42    P      P      06 55 08.8 +0.1
      baz=325
TNS   Taunus Mts        76.95 339  e P      P      06 55 09.1 +0.5
      comp=Z,8.0nm,0.7s,baz=23,slow=5.6
AHRW  Bad Neuenahr-A    76.97 340  e P      P      06 55 09.2 +0.6
      comp=Z,10nm,0.8s,baz=23,slow=5.6
WCI   Wyandotte Cave    77.05  46    P      P      06 55 10.3 +1.0
WCI                                  pmax   pmax
      comp=Z,17nm,0.9s
WCI   Wyandotte Cave    77.05  46    P      P      06 55 10.3 +1.0
WCI                                  IAmb   IAmb   06 55 10.9
      comp=Z,17nm,0.9s
WCI   Wyandotte Cave    77.05  46    P      P      06 55 09.6 +0.3
      baz=324
CONA  Conrad Observa    77.11 334  e P      P      06 55 10.7 +1.0
      comp=Z,8.2nm,0.7s,SNR=6.3
SOP   Sopron            77.13 333  e P      P      06 55 10.1 +0.5
BTNL  Ternell           77.13 341  d P      P      06 55 08.8 -0.8
      comp=Z,12nm,1.1s
MEM   Membach           77.14 341  d P      P      06 55 10.3 +0.7
      comp=Z,16nm,0.9s
GZR   Gura Zlata        77.16 328  ⇑ P      P      06 55 09.9  0.0
M54A  Oil Creek Stat    77.29  39    P      P      06 55 10.7 +0.1
      baz=327
MPLH  Magyarpolny       77.29 332  e P      P      06 55 10.8 +0.3
BZS   Buzias            77.36 329  ⇓ P      P      06 55 10.9  0.0
N54A  Moraine State     77.61  40    P      P      06 55 12.8 +0.3
      baz=326
O53A  New Philadelph    77.68  41    P      P      06 55 13.0 +0.1
      baz=326
BMRD  Maredsous         77.69 341  d P      P      06 55 13.1 +0.4
      comp=Z,14nm,1.0s
BRTR  Keskin Array B    77.69 318    P      P      06 55 13.6 +0.5
      comp=Z,4.0nm,0.8s,baz=163,slow=2.1,SNR=7.0
BRTR                                 LR     LR     07 35 53.6
      comp=Z,129nm,18.0s,baz=351,slow=41
BRTR  Keskin Array B    77.69 318    P      P      06 55 12.8 -0.3
HERR  Herculane         77.73 328  ⇓ P      P      06 55 12.7 -0.4
ARSA  Arzberg           77.82 334  e P      P      06 55 14.4 +0.8
      comp=Z,4.9nm,0.7s
DOU   Dourbes           77.92 341  d P      P      06 55 12.9 -1.1
      comp=Z,9.3nm,1.2s
PKME  Peaks-Kenny Pk    77.96  31    P      P      06 55 14.3  0.0
      baz=332
WVT   Waverly           78.00  48    P      P      06 55 15.0 +0.4
      baz=323
PUNG  Punghina          78.07 327  ⇓ P      P      06 55 14.9 -0.1
KOVH  Kovagotottos      78.09 331  e P      P      06 55 14.2 -0.8
STU   Stuttgart         78.12 338  e P      P      06 55 15.6 +0.5
      comp=Z,25nm,0.8s,baz=23,slow=5.6
RJOB  Jochberg          78.15 335  e P      P      06 55 15.6 +0.1
      comp=Z,3.9nm,0.8s,baz=23,slow=5.6
FUR   Furstenfeldbru    78.16 337  e P      P      06 55 15.7 +0.2
      comp=Z,13nm,0.7s,baz=23,slow=5.6
BINY  Binghamton        78.19  37    P      P      06 55 15.8 +0.1
      baz=328
FRGS  Fruska Gora       78.37 330  ⇓ P      P      06 55 16.5 -0.1
FRGS  Fruska Gora       78.37 330  e P      P      06 55 16.4 -0.2
SOKA  Soboth            78.48 334  e P      P      06 55 17.9 +0.6
      comp=Z,15nm,0.8s,SNR=10
GROS  Grobnik           78.54 333  i P      P      06 55 17.6 -0.1
KBA   Koelnbreinsper    78.60 335  i P      P      06 55 18.8 +0.7
      comp=Z,30nm,0.6s,SNR=16
HKT   Hockley           78.70  57⇑ e P      P      06 55 17.2 -1.3
HKT                                  pmax   pmax
      comp=Z,6.0nm,1.3s
T50A  Nancy             78.70  45    IAmb   IAmb   06 55 20.2
      comp=Z,9.6nm,0.9s
ZAGS  Zajecar           78.73 328  e P      P      06 55 17.4 -1.2
BFO   Black Forest      78.75 338    P      P      06 55 18.9 +0.3
BFO                                  pmax   pmax
      comp=Z,7.0nm,0.8s
BFO   Black Forest      78.75 338  e P      P      06 55 19.1 +0.5
      comp=Z,4.7nm,0.7s,baz=23,slow=5.6
BFO   Black Forest      78.75 338    P      P      06 55 18.9 +0.3
CLTN  Cedars of Leba    78.75  47    IAmb   IAmb   06 55 20.5
      comp=Z,12nm,0.9s
OBKA  Obir              78.78 334  i P      P      06 55 19.4 +0.4
      comp=Z,11nm,0.7s,SNR=5.3
MIB   Mutribah          78.79 303  e P      P      06 55 19.2 +0.1
WATA  Walderalm         78.85 336  e P      P      06 55 20.2 +0.9
      comp=Z,7.4nm,0.6s,SNR=5.4
WTTA  Wattenberg        78.90 336  i P      P      06 55 20.7 +1.1
      comp=Z,18nm,0.8s,SNR=11
UBR   Ueberruh          78.91 337  e P      P      06 55 19.8 +0.2
      comp=Z,3.1nm,0.8s,baz=23,slow=5.6
RETA  Reutte            78.92 337  i P      P      06 55 20.3 +0.7
      comp=Z,7.6nm,0.8s
MYKA  Terra Mystica     78.93 334  i P      P      06 55 19.9 +0.1
      comp=Z,12nm,1.0s
MOTA  Moosalm           78.96 336  i P      P      06 55 20.7 +0.7
      comp=Z,30nm,1.2s,SNR=8.9
TRUS  Trudelj           78.99 329  e P      P      06 55 19.5 -0.5
GCIS  Gornji Cirnik     79.04 333  i P      P      06 55 20.1 -0.2
SQTA  Sankt Quirin      79.05 336  i P      P      06 55 21.3 +0.9
      comp=Z,17nm,0.9s,SNR=6.5
LEGS  Legarje           79.06 333  i P      P      06 55 19.9 -0.5
BOVS  Bovan             79.07 328  ⇓ P      P      06 55 19.5 -1.0
BOVS  Bovan             79.07 328  e P      P      06 55 19.4 -1.0
ECH   Echery            79.13 339    IAmb   IAmb   06 55 21.7
      comp=Z,16nm,1.0s
ABTA  Abfaltersbach     79.14 335  i P      P      06 55 21.1 +0.3
      comp=Z,11nm,0.7s,SNR=6.6
ZOU   Zoufplan          79.18 335    IAmb   IAmb   06 55 42.3
      comp=Z,17nm,1.5s
GRUS  Gruza             79.18 329  e P      P      06 55 21.1  0.0
RST   Umm Al-Ruwaisa    79.21 303  e P      P      06 55 21.0 -0.4
DIVS  Divibare          79.24 329    IAmb   IAmb   06 55 21.9
      comp=Z,16nm,0.7s
DIVS  Divibare          79.24 329  e P      P      06 55 21.3 -0.2
DAVA  Damuels           79.33 337  e P      P      06 55 22.6 +0.6
      comp=Z,19nm,1.1s
RDF   Al-Radifah        79.35 302  e P      P      06 55 22.2  0.0
FETA  Feichten          79.36 336  i P      P      06 55 23.0 +0.8
      comp=Z,12nm,0.9s,SNR=6.0
N59A  State Game Lan    79.36  37    P      P      06 55 22.5 +0.4
      baz=329
VTS   Vitosha           79.41 326  ⇓ P      P      06 55 22.8 +0.3
VTS   Vitosha           79.41 326    IAmb   IAmb   06 55 23.5
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	comp=Z,18nm,0.7s						
STAL	STALIGIAL	79.53	335	IAmb	IAmb	06 55 22.9	
	comp=Z,11nm,0.8s						
SELS	Selova	79.64	328	*e*P	P	06 55 22.0	-1.6
BBLS	Lazići	79.64	329	*e*P	P	06 55 23.7	0.0
TZTN	Tazewell	79.69	45	P	P	06 55 24.3	+0.4
	baz=325						
BARS	Barje	79.75	327	*e*P	P	06 55 16.0	-8.2
BARS	Barje	79.75	327	*e*P	P	06 55 23.4	-0.8
BOSS	Bosilegrad	79.79	327	*e*P	P	06 55 24.3	-0.1
ALN	Alexandroupoli	79.84	324	IAmb	IAmb	06 55 25.5	
	comp=Z,16nm,0.9s						
PRVS	Prvonek	79.92	327	*e*P	P	06 55 24.8	-0.4
SJES	Sjenica	79.99	329	*e*P	P	06 55 25.5	-0.1
PAL	Palisades	80.01	36	P	P	06 55 25.5	0.0
	baz=330						
CTI	Castel Tesino	80.01	335	IAmb	IAmb	06 55 26.1	
	comp=Z,13nm,1.0s						
TKL	Tuckaleechee C	80.31	45	P	P	06 55 27.1	-0.2
	comp=Z,8.3nm,1.0s,baz=142,slow=2.8,SNR=4.8						
TAOE	Nuku Hiva Isla	80.41	116	*e*LR	LR	07 20 25.8	
	comp=Z,368nm,23.5s						
BLA	Blacksburg	80.54	42	P	P	06 55 28.6	0.0
	baz=327						
PDG	Podgorica	80.97	329	⇑P	P	06 55 30.9	+0.2
PDG	Podgorica	80.97	329	IAmb	IAmb	06 55 31.0	
	comp=Z,24nm,0.8s						
SSF	Saint Saulge	81.03	341	*e*P	P	06 55 31.0	0.0
SSF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FNA	Florina	81.69	327	IAmb	IAmb	06 55 34.8	
	comp=Z,10nm,0.8s						
ZCCA	Zocca	81.76	335	IAmb	IAmb	06 55 59.7	
	comp=Z,29nm,1.1s						
LPL	La Plagne	81.77	339	*e*P	P	06 55 35.9	+0.7
LPL				pmax	pmax		
	comp=Z,20nm,0.7s						
STKA	Stephens Creek	81.80	192	P	P	06 55 35.7	+0.7
	comp=Z,2.3nm,0.8s,baz=163,slow=24,SNR=4.1						
STKA				LR	LR	07 30 38.8	
	comp=Z,70nm,21.0s,baz=29,slow=35						
LEF	Lefka	81.83	316	⇓P	P	06 55 35.5	+0.1
KMSC	Kings Mountain	81.86	44	P	P	06 55 35.5	-0.1
	baz=326						
MFF	Saint Martin d	82.19	343	*e*P	P	06 55 37.6	+0.5
MFF				pmax	pmax		
	comp=Z,26nm,1.1s						
BNI	Bardonecchia	82.21	338	P	P	06 55 38.2	+0.8
BNI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BNI	Bardonecchia	82.21	338	P	P	06 55 38.2	+0.8
BNI				IAmb	IAmb	06 55 39.0	
	comp=Z,10nm,0.8s						
OSSC	Osservatorio P	82.45	335	IAmb	IAmb	06 55 39.3	
	comp=Z,20nm,1.0s						
SSB	Saint Sauveur	82.50	340	IAmb	IAmb	06 55 40.4	
	comp=Z,18nm,0.9s						
CAF	Calviac	83.37	342	*e*P	P	06 55 44.0	+0.7
CAF				pmax	pmax		
	comp=Z,33nm,1.1s						
FORT	Forrest	83.46	204	P	P	06 55 44.7	+1.1
LFF	La Frestale	83.62	342	*e*P	P	06 55 45.2	+0.7
LFF				pmax	pmax		
	comp=Z,31nm,1.0s						
TIGA	Tifton	83.86	48	P	P	06 55 45.8	-0.1
	baz=326						
RAYN	Ar Rayn	84.70	300	P	P	06 55 50.5	+0.1
RAYN				pmax	pmax		
	comp=Z,15nm,0.8s						
RAYN	Ar Rayn	84.70	300	P	P	06 55 50.5	+0.1
RAYN				IAmb	IAmb	06 55 51.2	
	comp=Z,15nm,0.8s						
VSL	Villasalto	86.71	335	P	P	06 55 59.4	-0.7
TBI	Tubuai	87.21	131	*e*LR	LR	07 23 41.6	
	comp=Z,196nm,30.5s						
POLO	Lamas de Olo	88.54	348	*e*P	P	06 56 06.7	-2.2
	comp=Z,25nm,1.6s						
PVRL	Vila Real	88.62	348	*e*P	P	06 56 09.1	-0.1
	comp=Z,71nm,1.9s						
MVO	Moncorvo	88.63	347	*e*P	P	06 56 08.8	-0.5
	comp=Z,36nm,1.7s						
PVIS	Viseu	89.20	348	*e*P	P	06 56 09.4	-2.6
	comp=Z,44nm,1.6s						
ESDC	Sonseca Array	89.59	344	P	P	06 56 13.5	-0.4
	comp=Z,3.5nm,0.8s,baz=5.4,slow=4.3,SNR=19						
ESDC				LR	LR	07 41 01.7	
	comp=Z,104nm,20.6s,baz=280,slow=39						
KEST	Kesra	90.22	333	P	P	06 56 17.1	+0.3
	comp=Z,5.3nm,0.6s,baz=323,slow=1.0,SNR=9.3						
PMTG	Montargil	90.86	348	*e*P	P	06 56 18.6	-1.1
	comp=Z,39nm,1.6s						
DBIC	Dimbokro	121.73	337	PKP	PKPdf	07 02 10.3	0.0
	comp=Z,4.6nm,1.0s,baz=2.5,slow=4.4,SNR=5.1						
H03N2	Juan Fernandez	136.99	89	T	T	09 34 54.1	
	baz=313,slow=77,SNR=19						
H03N1	Juan Fernandez	137.00	89	T	T	09 34 53.7	
	baz=313,slow=77,SNR=17						
H03N3	Juan Fernandez	137.00	89	T	T	09 34 52.8	
	baz=313,slow=77,SNR=17						
CPUP	Villa Florida	145.67	60	PKPbc	PKPbc	07 02 54.9	+0.2
	comp=Z,8.5nm,1.0s,baz=335,slow=4.6,SNR=6.6						
CPUP	Villa Florida	145.67	60		PKPdf	07 02 54.0	-0.3
PLCA	Paso Flores	146.63	93	PKPbc	PKPbc	07 02 57.3	0.0
	comp=Z,8.1nm,0.9s,baz=304,slow=2.6,SNR=7.7						
SNAA	Sanae	155.51	196	PKPab	PKPab	07 03 34.3	-0.1
VNA3	Neumayer Olymp	156.97	192	PKPab	PKPab	07 03 40.1	-0.5

REN ***23*** *06:45:49.3±0.8,39°.43N±0°.01×119°.78W±0°.02,h10^{km}±3^{km}, ML3.5/11,ML3.0/18(NEIC),Error ellipse: s-maj=2.4km s-min=1.8km az=118.0*

NEIC 23 06:45:49.5±1.7**,39°.45N**±0°.01×**119°.83W**±0°.02**,h8**^{km}±6^{km}**, Error ellipse: s-maj=2.5km s-min=1.1km az=125.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PEAR	Peavine Mounta	0.19	327		Pg	06 45 54.1	+0.6
VCNR	Virginia City	0.20	138	Pg	Pg	06 45 53.2	-0.6
VCNR				Sg	Sg	06 45 56.0	-0.7
VCNR				IAML		06 45 56.2	
	comp=N,6µm,0.5s						
VCNR				IAML		06 45 56.2	
	comp=E,10µm,0.4s						
MPK	Martis Peak	0.22	226	Pg	Pg	06 45 54.4	+0.3
MPK				Sg	Sg	06 45 58.1	+1.0
MPK				IAML		06 45 58.2	
	comp=N,4µm,0.2s						
DONR	Donner Summit	0.39	256		Pg	06 45 57.6	+0.3
PNTR	Pine Nut	0.40	154		Pg	06 45 56.8	-0.6
PNTR				IAML		06 46 05.5	
	comp=N,1µm,0.7s						
PAHR	Pah Rah Range	0.43	53	Pg	Pg	06 45 57.4	-0.5
PAHR				Sg	Sg	06 46 03.4	-0.1
RUBR	Rubicon Trail	0.47	213		Pg	06 45 58.7	0.0
RUBR				IAML		06 46 06.1	
	comp=N,726nm,0.4s						
RUBR				IAML		06 46 06.9	
	comp=E,744nm,0.4s						
WVA	Winnemucca Val	0.49	0		Pg	06 45 59.2	0.0
EMB	Emerald Bay	0.52	204		Pg	06 45 59.4	-0.3
GNO	Genoa	0.52	182		Pg	06 45 59.2	-0.4
BFC	Buffalo Canyon	0.58	163		Pg	06 46 00.2	-0.6
YERR	Yerington	0.65	135		Pg	06 46 01.1	-1.0
ORV	Oroville	1.30	275	Pn	Pn	06 46 13.3	-0.6
RYN	Ryan	1.30	128	Pn	Pn	06 46 13.1	-1.0
KVN	Kaiserville	1.40	106		Pn	06 46 14.7	-0.8
CMB	Columbia Colle	1.48	197		Pn	06 46 16.2	-0.2
NVAR	Mina Array Bea	1.56	130		Pn	06 46 16.2	-1.5
LHV	Little Huntoon	1.58	139		Pb	06 46 18.6	-0.4
NV11	Mina Array Sit	1.65	127		Pn	06 46 18.9	0.0
Q09A	Carvers	2.15	106		Pn	06 46 27.2	+1.4
BMN	Battle Mountai	2.23	63		Pn	06 46 25.9	-1.0
WDC	Whiskeytown Da	2.37	299	Pn	Pb	06 46 32.0	-0.5
POCCA	Poleta Canyon	2.41	149		Pn	06 46 27.6	-1.8
TPH	Tonopah	2.46	123	Pn	Pb	06 46 32.5	-1.5
KBO	Bosley Butte	4.33	311	Pn	Pn	06 46 59.3	+3.6
BGU	Big Grassy Mou	5.41	72	Pn	Pn	06 47 12.6	+2.0
SZCU	Shurtz Canyon	5.60	107	Pn	Pn	06 47 11.9	-1.4
BAR	Barrett	7.22	158	Pn	Pn	06 47 35.1	-0.2
MCMT	McKenzie Canyo	7.47	42	Pn	Pn	06 47 39.0	+0.1

REN ***23*** *06:46:07.3±1.8,39°.43N±0°.04×119°.78W±0°.05,h10^{km}±6^{km}, ML4.4/8,mb4.4/3(NEIC),ML4.3/46(NEIC),Mwr4.3/95(NEIC), Error ellipse: s-maj=6.4km s-min=5.3km az=58.0*

ANF ***23*** *06:46:07.1±0.2,39°.48N×119°.78W,h0^{km},ML4.7/21,Error ellipse: s-maj=4.8km s-min=1.7km az=58.0*

NEIC ***23*** *06:46:07.3,39°.43N×119°.79W,h10^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-3.24; M$_{\theta\theta}$-0.50; M$_{\phi\phi}$3.74; M$_{r\theta}$1.11; M$_{\theta\phi}$-0.23; M$_{\phi r}$0.80; Fault plane solution: M$_0$3.78000×10^{15} NP1:φ$_s$338.14000°, δ42.31000°,λ-119.43000°. NP2:φ$_s$195.48000°, δ54.11000°,λ-65.90000°. Principal axes: T 3.8349, Plg6.0000°, Azm269.0000°; N -0.1121, Plg19.0000°, Azm1.0000°; P -3.7228, Plg70.0000°, Azm162.0000°;*

IDC ***23*** *06:46:07.7±0.7,39°.45N×119°.79W,h0^{km},mb3.9/10, mb1 4.1/16,mb1mx3.8/54,mbtmp3.9/16,ML3.5/6,MS3.6/10, Ms1 3.6/10,ms1mx3.4/44 Error ellipse: s-maj=14.2km s-min=5.0km az=49.0*

NEIC ***23*** *06:46:08.1±2.2,39°.41N±0°.04×119°.76W±0°.05,h5^{km}±5^{km}, Error ellipse: s-maj=6.1km s-min=5.2km az=78.0*

ISC 23 06:46:08.7±0.5**,39°.43N**±0°.02×**119°.76W**±0°.03**,h10**^{km}**,n75, σ1^{s}69**/83**,mb3.9**/8**,MS3.6**/5**,Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCNR	Virginia City	0.16	147	Pg	Pg	06 46 11.2	-1.2
VCNR				Sg	Sg	06 46 13.9	-1.0
MPK	Martis Peak	0.25	237	Pg	Pg	06 46 12.3	-1.5
MPK				Sg	Sg	06 46 15.8	-1.5
PNTR	Pine Nut	0.36	159	Pg	Pg	06 46 15.1	-0.8
PNTR				Sg	Sg	06 46 20.1	-0.7
PNTR				IAML		06 46 23.6	
	comp=N,47µm,0.8s						
PNTR				IAML		06 46 25.1	
	comp=E,42µm,0.7s						
PAHR	Pah Rah Range	0.40	47	Pg	Pg	06 46 15.7	-1.0
PAHR				IAML		06 46 22.4	
	comp=E,19µm,0.8s						
RUBR	Rubicon Trail	0.48	219	Pg	Pg	06 46 16.6	-1.6
RUBR				IAML		06 46 23.9	
	comp=N,19µm,0.8s						
RUBR				IAML		06 46 24.4	
	comp=E,24µm,0.7s						
EMB	Emerald Bay	0.53	210	Pg	Pg	06 46 17.5	-1.5
EMB				IAML		06 46 25.1	
	comp=E,16µm,0.8s						
EMB				IAML		06 46 25.5	
	comp=N,15µm,0.8s						
YERR	Yerington	0.60	137	Pg	Pg	06 46 19.4	-1.0
YERR				IAML		06 46 28.2	
	comp=E,20µm,0.7s						
YERR				IAML		06 46 29.8	
	comp=N,10µm,0.5s						
RYN	Ryan	1.25	129	Pn	Pn	06 46 31.4	-1.1
RYN				IAML		06 46 51.1	
	comp=E,8µm,0.6s						
RYN				IAML		06 46 51.8	
	comp=N,7µm,0.9s						
KVN	Kaiserville	1.35	106	Pn	Pn	06 46 32.6	-1.1
KVN				IAML		06 46 53.1	
	comp=E,7µm,0.6s						
ORV	Oroville	1.35	276	Pn	Pn	06 46 31.9	-1.7
ORV				IAML		06 46 51.5	
	comp=N,4µm,0.9s						
CMB	Columbia Colle	1.48	199	Pn	Pn	06 46 34.2	-1.2
CMB				IAML		06 46 54.8	
	comp=E,3µm,0.6s						
CMB				IAML		06 46 58.3	
	comp=N,4µm,0.5s						
NVAR	Mina Array Bea	1.51	131	Pg	Pn	06 46 35.4	-0.7
	comp=N,832nm,0.3s,baz=300,slow=16,SNR=704						
NVAR				Lg	Lg	06 46 57.1	
	comp=N,761nm,0.3s,baz=261,slow=12,SNR=24						
NVAR	Mina Array Bea	1.51	131	Pn	Pb	06 46 35.7	-1.3
LHV	Little Huntoon	1.53	140	Pn	Pb	06 46 36.4	-0.7
LHV				IAML		06 47 00.1	
	comp=N,5µm,0.7s						
LHV				IAML		06 47 03.5	
	comp=E,5µm,0.8s						
NV11	Mina Array Sit	1.60	128	Pn	Pn	06 46 36.9	-0.3
NV11				IAML		06 47 00.2	
	comp=N,3µm,0.6s						
O03E	Paynes Creek	1.79	299	P	Pn	06 46 39.1	-0.6
	baz=119						
O03E				S	Sn	06 47 02.4	-0.2
	baz=119						
MLAC	Mammoth, Mammo	1.94	158	P	Pn	06 46 41.9	0.0
	baz=338						
WDC	Whiskeytown Da	2.42	299	Pn	Pn	06 46 50.0	+1.6
WDC				IAML		06 47 32.0	
	comp=N,1µm,0.8s						
GDXM	Geysers	2.44	256	Pn	Pn	06 46 49.1	+0.5
O02D	Mt. Diablo Mer	2.45	289	P	Pn	06 46 48.9	+0.1
	baz=107,SNR=57						
HOPS	Hopland Field	2.61	261		Pn	06 46 51.7	+0.8
HOPS				IAML		06 47 44.5	
	comp=E,790nm,1.5s						
TIN	Tinemaha, Big	2.66	153	P	Pn	06 46 51.6	-0.2
	baz=333						
N02D	Trinity Center	2.73	305	P	Pn	06 46 51.5	-1.1
	baz=124,SNR=43						
N02D				Sb	Sb	06 47 32.0	+0.8
	baz=124						
MCCM	Marconi Confer	2.75	243	Pn	Pn	06 46 53.2	+0.4
MCCM				IAML		06 47 44.1	
	comp=N,1µm,1.0s						
M04C	Macdoel	2.83	327	Pb	Pb	06 46 57.5	-1.9
	baz=146,SNR=46						
M04C				Sb	Sb	06 47 36.3	+2.1
	baz=146						
KCPM	Cahto Peak	2.96	276	Pn	Pn	06 46 57.5	+1.6
KCPM				IAML		06 47 53.3	
	comp=N,1µm,1.5s						
KCPM				IAML		06 47 54.4	
	comp=E,1µm,1.0s						
M02C	Callahan	3.07	311	P	Pn	06 46 57.2	-0.1
	baz=129,SNR=27						
M02C				Sb	Sb	06 47 41.8	+0.8
	baz=129						
VOG	Valley Oaks Go	3.12	174	P	Pn	06 46 58.0	+0.1
	baz=354						
VOG				Sb	Sg	06 47 45.6	-3.2
	baz=354						
YBH	Yreka Blue Hor	3.21	317	Pn	Pn	06 47 01.0	+1.7
	comp=E,6.6nm,0.3s,baz=54,slow=6.5,SNR=52						
YBH				Lg	Lg	06 47 47.5	
	comp=E,10nm,0.3s,baz=52,slow=23,SNR=7.3						
CWC	Cottonwood Cre	3.27	155	Pb	Pb	06 47 06.9	+0.1
	baz=336						
L04D	Klamath Falls	3.39	326	Pb	Pb	06 47 06.6	-2.3
	baz=145,SNR=20						
L04D				Sb	Sb	06 47 52.2	+2.0
	baz=145						
R11A	Troy Canyon, C	3.43	107	Pn	Pn	06 47 02.9	+0.5
R11A	Troy Canyon, C	3.43	107	Pb	Pb	06 47 08.9	-0.8
	baz=290						
R11A				Sb	Sg	06 47 54.8	-4.2
	baz=290						
K04D	Chiloquin, OR	3.53	335	Pb	Pb	06 47 09.6	-1.7
	baz=154,SNR=15						
K04D				Sb	Sb	06 47 56.2	+1.9
	baz=154						
JCC	Jacoby Creek,	3.55	294		Pn	06 47 03.9	+0.1
JCC				IAML		06 48 19.1	
	comp=E,383nm,1.6s						
VES	Vestal, Richgr	3.62	171	Pb	Pb	06 47 12.7	-0.1
	baz=351						
VES				Sb	Sg	06 48 00.5	-4.5
	baz=351						
TPNV	Topopah Spring	3.71	131	P	Pn	06 47 06.5	+0.2
	baz=313						
TPNV				Sb	Sg	06 48 03.9	-4.1
	baz=313						
FURC	Furnace Creek,	3.74	141	Pb	Pb	06 47 15.4	+0.6
	baz=323						
FURC				Sb	Sg	06 48 05.4	-3.5
	baz=323						
MPMC	Manual Prospec	3.82	151	Pb	Pb	06 47 17.7	+1.4
	baz=332						
ISA	Isabella, Lake	3.90	164	Pb	Pb	06 47 18.3	+0.8
	baz=345						
ISA				Sb	Sg	06 48 09.7	-4.1
	baz=345						
HUMO	Hull Mountain	3.99	324		Pn	06 47 10.6	+0.7
J05D	Fort Rock, OR	4.01	344	Sb	Sb	06 48 12.1	+4.0
	baz=164						
J04D	Umpqua Nationa	4.20	336	Pb	Pb	06 47 21.1	-1.6
	baz=155,SNR=23						
J04D				Sb	Sb	06 48 16.0	+2.4
	baz=155						
ARVC	Arvin	4.36	170	P	Pn	06 47 15.4	+0.4
	baz=350						
ARVC				Sb	Sb	06 48 21.9	+3.9
	baz=350						
PKM	Mcpherson Peak	4.53	181	Pb	Pb	06 47 29.1	+0.7
	baz=0.3						
BUCK	Buck Mountain	5.34	334	Pn	Pn	06 47 27.9	-0.6
CCUT	Cedar City	5.36	108	Pn	Pn	06 47 29.9	+0.9
MSU	Marysvale	5.98	96		Pn	06 47 38.3	+0.8
MTPU	Mount Pierson	6.08	101		Pn	06 47 40.1	+1.0
CTU	Camp Tracy	6.28	76		Pn	06 47 40.8	-0.7
PFO	Pinyon Flats O	6.39	154	Pn	Pn	06 47 44.3	+1.3
	comp=E,0.4nm,0.3s,baz=281,slow=5.3,SNR=6.7						
PFO				Lg	Lg	06 49 36.1	
	comp=E,1.6nm,0.3s,baz=355,slow=3.2,SNR=8.3						
PFO				LR	LR	06 50 41.6	
	comp=E,534nm,18.6s,baz=22,slow=43						
JLU	Jordanelle	6.49	77		Pn	06 47 43.5	-0.9
PDAR	Pinedale Array	8.39	63	Pn	Pn	06 48 12.7	+2.0
	comp=E,0.2nm,0.3s,baz=249,slow=12,SNR=29						
PDAR				Lg	Lg	06 50 35.3	
	comp=E,0.5nm,0.3s,baz=251,slow=25,SNR=3.3						
PDAR				LR	LR	06 51 39.2	
	comp=E,135nm,20.5s,baz=274,slow=39						
PDAR	Pinedale Array	8.39	63		Pn	06 48 09.8	-0.8
NEW	Newport	9.04	11	Pn	Pn	06 48 21.8	+2.6
	comp=E,0.1nm,0.3s,baz=178,slow=13,SNR=6.5						
ANMO	Albuquerque	11.52	109	Pn	Pn	06 48 55.4	+2.1
	comp=E,0.1nm,0.3s,baz=286,slow=9.5,SNR=3.1						
ANMO				LR	LR	06 52 41.3	
	comp=E,82nm,21.1s,baz=299,slow=34						
TXAR	Lajitas Array	16.65	122	Pn	P	06 50 05.2	+0.6
	comp=E,0.0nm,0.3s,baz=308,slow=6.2,SNR=15						
TXAR				LR	LR	06 57 05.3	
	comp=E,240nm,19.4s,baz=0.0,slow=39						
TXAR	Lajitas Array	16.65	122	P	Pn	06 50 01.8	-0.5
LPIG	La Paz	17.25	150	LR	LR	06 56 04.9	
	comp=E,126nm,21.5s,baz=352,slow=35						
ULM	Lac du Bonnet	20.01	49	P	Pn	06 50 43.6	+0.5
	comp=E,2.3nm,0.5s,baz=265,slow=4.9,SNR=2.5						
ULM	Lac du Bonnet	20.01	49	IAmb	IAmb	06 50 49.3	
	comp=Z,22nm,1.5s						
DLBC	Dease Lake	20.14	344	P	Pn	06 50 44.2	-0.4
	comp=Z,2.1nm,1.1s,baz=201,slow=14,SNR=1.6						
DLBC				LR	LR	06 58 51.4	
	comp=Z,310nm,20.1s,baz=151,slow=38						
DLBC	Dease Lake	20.14	344	IAmb	IAmb	06 51 18.2	
	comp=Z,31nm,1.8s						
YKA	Yellowknife Ar	23.31	6	P	P	06 51 15.8	-0.7
	comp=Z,1.4nm,0.7s,baz=188,slow=9.6,SNR=15						
TKL	Tuckaleechee C	28.66	86	LR	LR	07 04 00.9	
	comp=Z,131nm,18.0s,baz=293,slow=37						
ILAR	Eielson Array	29.89	337	P	P	06 52 17.4	+1.2
	comp=Z,0.8nm,0.7s,baz=152,slow=7.4,SNR=6.1						
INK	Inuvik	29.90	350	LR	LR	07 04 44.6	
	comp=Z,154nm,20.5s,baz=230,slow=37						
SCHQ	Schefferville	38.18	48	P	P	06 53 29.7	+1.5
	comp=Z,2.0nm,0.6s,baz=267,slow=11,SNR=3.8						
SHEM	Shemya Is, Ala	46.16	310	LR	LR	07 11 41.6	
	comp=Z,48nm,19.6s,baz=92,slow=33						
LPAZ	La Paz	73.42	128	P	P	06 57 41.3	-0.6
	comp=Z,2.2nm,0.7s,baz=351,slow=1.8,SNR=7.5						
FINES	FINESS Array B	75.71	16	P	P	06 57 53.0	-0.9
	comp=Z,4.5nm,1.0s,baz=336,slow=4.2,SNR=4.4						
SONM	Songino Array	83.92	331	P	P	06 58 38.8	-0.1
	comp=Z,0.4nm,0.6s,baz=23,slow=4.7,SNR=3.1						
ZALV	Zalesovo Beam	84.61	346	P	P	06 58 43.0	+0.9
	comp=Z,0.4nm,0.4s,baz=0.0,slow=5.8,SNR=2.1						
AKASG	Malin Array Be	86.21	19	P	P	06 58 50.6	+0.5
	comp=Z,0.2nm,0.4s,baz=336,slow=3.3,SNR=5.1						
KEST	Kesra	91.70	39	LR	LR	07 39 54.5	
	comp=Z,259nm,19.8s,baz=298,slow=35						

REN ***23*** *06:58:15.5±0.9,39°.43N±0°.02×119°.78W±0°.03,h10^{km}±4^{km}, ML2.8/7,ML2.7/38(NEIC),Error ellipse: s-maj=2.8km s-min=2.3km az=88.0*

NEIC 23 06:58:15.3±1.1**,39°.47N**±0°.02×**119°.78W**±0°.02**,h8**^{km}±5^{km}**, Error ellipse: s-maj=3.0km s-min=2.4km az=52.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PEAR	Peavine Mounta	0.20	316		Pg	06 58 20.2	+0.9
VCNR	Virginia City	0.20	149		Pg	06 58 19.3	-0.2
VCNR				Sg	Sg	06 58 22.3	0.0
MPK	Martis Peak	0.26	228		Pg	06 58 20.6	+0.1
MPK				Sg	Sg	06 58 24.4	+0.4
PAHR	Pah Rah Range	0.39	52	Pg	Pg	06 58 23.5	+0.5
PAHR				IAML		06 58 29.7	
	comp=N,818nm,0.3s						
PAHR				IAML		06 58 30.0	
	comp=E,586nm,0.2s						
PNTR	Pine Nut	0.40	159		Pg	06 58 23.0	-0.2
PNTR				IAML		06 58 31.6	
	comp=N,834nm,0.7s						
PNTR				IAML		06 58 32.0	
	comp=E,816nm,0.6s						
DONR	Donner Summit	0.43	255		Pg	06 58 23.8	0.0
RUBR	Rubicon Trail	0.51	215	Pg	Pg	06 58 24.9	-0.2
RUBR				IAML		06 58 32.8	
	comp=E,520nm,0.2s						
RUBR				IAML		06 58 32.9	
	comp=N,528nm,0.3s						
GNO	Genoa	0.54	186		Pg	06 58 25.5	-0.3
EMB	Emerald Bay	0.55	207		Pg	06 58 25.5	-0.5
EMB				IAML		06 58 33.3	
	comp=E,576nm,0.4s						
BFC	Buffalo Canyon	0.59	167		Pg	06 58 26.3	-0.4
YERR	Yerington	0.64	139		Pg	06 58 27.3	-0.4
YERR				IAML		06 58 36.1	
	comp=N,384nm,0.4s						
YERR				IAML		06 58 37.1	
	comp=E,808nm,0.3s						
RYN	Ryan	1.29	130		Pn	06 58 39.1	-0.7
RYN				IAML		06 58 56.6	
	comp=N,171nm,0.3s						
RYN				IAML		06 58 58.3	
	comp=E,199nm,0.3s						
ORV	Oroville	1.33	274		Pn	06 58 39.5	-0.7
ORV				Sn	Sb	06 58 57.5	-0.2
KVN	Kaiserville	1.37	107		Pn	06 58 40.5	-0.5
KVN				IAML		06 59 01.1	
	comp=N,190nm,0.4s						
KVN				IAML		06 59 01.1	
	comp=E,174nm,0.6s						
LUL	Lundy Lake	1.49	161		Pb	06 58 43.4	0.0
CMB	Columbia Colle	1.51	198		Pn	06 58 42.2	-0.5
CMB				IAML		06 59 03.9	
	comp=E,86nm,0.3s						
CMB				IAML		06 59 06.4	
	comp=N,78nm,0.3s						
NVAR	Mina Array Bea	1.55	131		Pn	06 58 43.2	-0.3
LHV	Little Huntoon	1.57	140		Pb	06 58 44.1	-0.5
LHV				IAML		06 59 09.0	
	comp=N,145nm,0.3s						
LHV				IAML		06 59 35.7	
	comp=E,102nm,0.8s						
NV11	Mina Array Sit	1.64	129		Pn	06 58 44.8	+0.2
NV11				IAML		06 59 08.5	
	comp=N,82nm,0.4s						
Q09A	Carvers	2.12	107		Pb	06 58 53.4	-0.7
BMN	Battle Mountai	2.19	63		Pn	06 58 51.2	-1.0
WDC	Whiskeytown Da	2.39	299	Pn	Pb	06 58 57.5	-1.1
TPH	Tonopah	2.44	124	Pn	Pb	06 58 58.6	-0.9
MOD	Modoc Plateau	2.46	351	Pn	Pb	06 59 00.4	+0.4
MOD				IAML		07 00 00.2	
	comp=E,35nm,4.4s						
HOPS	Hopland Field	2.60	261	Pn	Pn	06 58 58.5	+0.9

IDC ***23*** *07:00:08.9±1.1,32°.51S×179°.09W,h0^{km},mb4.3/6, mb1 4.5/7,mb1mx3.9/36,mbtmp4.4/7,ML5.0/1,MS3.1/2, Ms1 3.1/2,ms1mx2.9/25,Error ellipse: s-maj=32.9km s-min=25.7km az=27.0*

WEL ***23*** *07:00:10.1±0.9,33°S±6°×17°8W±1°7,h140^{km}±18^{km}, M4.8/56,mB5.3/56,ML5.5/55,MLv5.4/56,Mw(mB)4.7/56, Error ellipse: s-maj=0.0km s-min=0.0km az=107.9*

NEIC ***23*** *07:00:15.8±2.8,32°.87S±0°.08×179°.3W±0°.2,h35^{km}±2^{km}, mb4.6/17,Error ellipse: s-maj=24.3km s-min=10.4km*

az=113.0

*NOU **23** 07:00:30.5, 34°.14S×179°.73W, h216km, mb4.5/9, South of Kermadec Islands*

ISC 23 07:00:14.9±0.6**, 32°.97S**±0°.05×**178°.85W**±0°.10**, h45**km**,**
n148, σ2ˢ.12/142**, mb4.4**/13**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.79	12	P	Pn	07 01 09.9	-0.8
GLKZ				S	Sn	07 01 53.8	-0.2
RAO	Raoul Island	3.80	12	Pn	Pn	07 01 10.7	-0.1
	22nm,0.3s,baz=72,slow=22,SNR=1.8						
RAO				Sn	Sn	07 01 53.1	-1.1
	56nm,0.3s,baz=90,slow=20,SNR=1.5						
RAO				LR	LR	07 02 22.2	
	comp=Z,156nm,21.4s,baz=28,slow=39						
RIZ	Raoul Island	3.80	12	S	Sn	07 01 57.0	+2.7
MXZ	Matakaoa Point	5.13	206	P	Pn	07 01 29.5	+0.3
MXZ				S	Sn	07 02 29.1	+1.9
MXZ	Matakaoa Point	5.13	206		Pn	07 01 29.9	+0.7
WMGZ	Waiomatatini S	5.33	204	P	Pn	07 01 33.1	+1.3
HAZ	Te Kaha	5.51	209	P	Pn	07 01 35.8	+1.5
PKGZ	Pakihiroa	5.51	206	P	Pn	07 01 35.0	+0.6
PUZ	Puketiti	5.61	204	P	Pn	07 01 36.0	+0.3
PUZ				S	Sn	07 02 39.2	+0.3
TWGZ	Tauwhareparae	5.80	206	P	Pn	07 01 38.7	+0.4
TWGZ				S	Sn	07 02 44.7	+1.1
WHRZ	Whale Island	5.94	214	P	Pn	07 01 42.5	+2.2
CNGZ	Carnagh Statio	6.00	203	P	Pn	07 01 41.5	+0.5
TKGZ	Te Karaka	6.08	205	P	Pn	07 01 41.8	-0.3
TKGZ				S	Sn	07 02 50.4	0.0
MWZ	Matawai	6.11	208	P	Pn	07 01 42.4	-0.2
MWZ				S	Sn	07 02 51.8	+0.7
OPRZ	Ohinepanea	6.14	216	P	Pn	07 01 44.7	+1.7
MARZ	Manawahe	6.19	215	P	Pn	07 01 45.5	+1.8
URZ	Urewera	6.21	211	Pn	Pn	07 01 44.1	+0.1
	29nm,0.3s,baz=121,slow=24,SNR=82						
URZ				Sn	Sn	07 02 53.3	-0.4
	24nm,0.3s,baz=227,slow=3.2,SNR=7.4						
URZ	Urewera	6.21	211	P	Pn	07 01 44.0	+0.1
URZ	Urewera	6.21	211	P	Pn	07 01 44.4	+0.4
EDRZ	Edgecumbe	6.26	214	P	Pn	07 01 47.6	+3.0
RAGZ	Rawiri	6.29	208	P	Pn	07 01 45.1	0.0
RAGZ				S	Sn	07 02 55.9	+0.2
RIGZ	Rimuhau	6.35	205	P	Pn	07 01 45.4	-0.4
TARZ	Mount Tarawera	6.47	214	P	Pn	07 01 49.8	+2.2
PRGZ	Paritu Road	6.50	203	P	Pn	07 01 47.6	-0.4
MUGZ	Murupara	6.54	212	P	Pn	07 01 48.4	-0.1
RRRZ	Republican Roa	6.55	214	P	Pn	07 01 51.3	+2.7
HLRZ	Highlands Stat	6.56	215	P	Pn	07 01 50.8	+2.1
SNGZ	Shannon Statio	6.57	207	P	Pn	07 01 48.8	-0.1
OUZ	Omahuta	6.65	248	P	Pn	07 01 52.6	+2.6
HRRZ	Handcock Road	6.70	215	P	Pn	07 01 53.9	+3.2
MHGZ	Mahia Peninsul	6.70	202	P	Pn	07 01 49.7	-1.0
ALRZ	Allen Road	6.81	214	P	Pn	07 01 53.0	+0.8
MTHZ	Maungataniwha	6.83	210	P	Pn	07 01 52.6	+0.2
WPRZ	Whakapapatarin	6.86	215	P	Pn	07 01 55.7	+2.8
KUTZ	Kaahu Road	7.00	217	P	Pn	07 01 58.0	+3.2
TLZ	Tolley Road	7.03	219	P	Pn	07 01 59.0	+3.8
NMHZ	Naumai	7.05	209	P	Pn	07 01 55.2	-0.3
ARHZ	Aropaoanui	7.12	207	P	Pn	07 01 55.5	-0.9
HATZ	Hinemaiaia	7.19	213	P	Pn	07 01 58.7	+1.3
WATZ	Wairara	7.21	216	P	Pn	07 02 00.3	+2.5
BKZ	Black Stump Fm	7.24	210	P	Pn	07 01 56.6	-1.4
BKZ	Black Stump Fm	7.24	210		Pn	07 01 56.8	-1.3
BKZ	Black Stump Fm	7.24	210	P	Pn	07 01 56.6	-1.5
RATZ	Rangitukua	7.32	215	P	Pn	07 02 01.7	+2.5
RITZ	Rihia Road	7.37	214	P	Pn	07 02 01.7	+1.9
MCHZ	McNeill Hill	7.39	208	P	Pn	07 01 58.6	-1.6
CKHZ	Cape Kidnapper	7.43	205	P	Pn	07 01 59.8	-0.9
KATZ	Kakaramea	7.44	215	P	Pn	07 02 03.4	+2.4
KWHZ	Kaweka Forest	7.48	209	P	Pn	07 01 59.5	-2.0
HIZ	Hauiti	7.53	221	P	Pn	07 02 05.2	+3.1
HIZ	Hauiti	7.53	221	P	Pn	07 02 00.6	-1.4
NTVZ	North Tongarir	7.55	214	P	Pn	07 02 02.2	-0.2
TMVZ	Te Maari	7.55	214	P	Pn	07 02 02.0	-0.5
ETVZ	East Tongariro	7.56	214	P	Pn	07 02 02.8	+0.2
KRVZ	Karewarewa	7.56	215	P	Pn	07 02 04.5	+1.9
WTVZ	West Tongariro	7.60	215	P	Pn	07 02 04.4	+1.3
NNVZ	North Ngauruho	7.60	215	P	Pn	07 02 03.6	+0.4
OTVZ	Oturere	7.61	214	P	Pn	07 02 02.5	-0.7
KAHZ	Kahuranaki	7.63	206	P	Pn	07 02 00.8	-2.6
SNVZ	South Ngauruho	7.63	214	P	Pn	07 02 03.0	-0.6
TWVZ	Taurewa	7.64	216	P	Pn	07 02 05.6	+1.9
NGZ	Ngauruhoe	7.64	214	P	Pn	07 02 03.3	-0.5
BHHZ	Black Hill Sta	7.69	211	P	Pn	07 02 03.4	-0.9
KRHZ	Kereru	7.69	209	P	Pn	07 02 01.6	-2.7
TUVZ	Tukino	7.69	214	P	Pn	07 02 05.6	+1.2
WHVZ	Whangaehu Hut	7.74	214	P	Pn	07 02 06.2	+1.1
DRZ	Dome Shelter	7.74	214	P	Pn	07 02 07.1	+1.9
MOVZ	Moawhango	7.76	213	P	Pn	07 02 04.0	-1.3
WNVZ	Wahianoa	7.77	214	P	Pn	07 02 04.4	-1.0
TRVZ	Turoa	7.77	214	P	Pn	07 02 06.4	+0.9
PXZ	Pawanui	7.84	205	P	Pn	07 02 03.7	-2.6
PKVZ	Pokaka	7.86	215	P	Pn	07 02 07.2	+0.6
PNHZ	Pukenui	7.99	209	P	Pn	07 02 05.9	-2.5
VRZ	Vera Road	8.03	218	P	Pn	07 02 11.2	+2.3
WPHZ	Waipukurau	8.03	207	P	Pn	07 02 07.5	-1.4
PRHZ	Porangahau	8.13	205	P	Pn	07 02 08.0	-2.3
TSZ	Takapari Road	8.21	209	P	Pn	07 02 10.0	-1.4
DVHZ	Dannevirke	8.33	207	P	Pn	07 02 10.9	-2.1
ANWZ	Angora Road	8.36	205	P	Pn	07 02 11.1	-2.3
WAZ	Wanganui	8.39	215	P	Pn	07 02 14.1	+0.2
NEZ	North Egmont	8.48	220	P	Pn	07 02 18.5	+3.2
PKE	Pukeiti	8.49	221	P	Pn	07 02 18.2	+2.9
KHEZ	Kahui Hut	8.55	220	P	Pn	07 02 18.7	+2.6
POWZ	Post Office Ro	8.57	209	P	Pn	07 02 15.1	-1.2
NBEZ	Newall Road No	8.61	221	P	Pn	07 02 20.1	+3.3
PRWZ	Pori Road	8.63	207	P	Pn	07 02 15.9	-1.2
BFZ	Birch Farm	8.64	206	P	Pn	07 02 13.9	-3.3
BFZ	Birch Farm	8.64	206	P	Pn	07 02 13.2	-4.0
TIWZ	Tintock	8.85	207	P	Pn	07 02 17.5	-2.7
MRZ	Mangatainoka R	8.87	209	P	Pn	07 02 16.9	-3.6
HOWZ	Holdsworth Sta	9.10	208	P	Pn	07 02 20.1	-3.5
TMWZ	Te Maipa	9.14	206	P	Pn	07 02 20.6	-3.5
OGWZ	Otaki Gorge	9.17	210	P	Pn	07 02 21.7	-2.9
MTW	Mount Morrison	9.33	207	P	Pn	07 02 21.9	-4.8
CAW	Cannon Point	9.46	209	P	Pn	07 02 24.1	-4.4
TRWZ	Traveller	9.47	206	P	Pn	07 02 24.5	-4.1
PAWZ	Paruwai Farm	9.55	207	P	Pn	07 02 26.3	-3.4
MSWZ	Moikau Station	9.65	207	P	Pn	07 02 26.7	-4.3
MSWZ	Moikau Station	9.65	207		Pn	07 02 28.9	-2.2
DUWZ	D'Urville Isla	9.72	214	P	Pn	07 02 29.0	-3.0
PLWZ	Palliser	9.78	207		Pn	07 02 30.8	-2.1
SNZO	South Karori	9.78	210	P	Pn	07 02 27.3	-5.5
TUWZ	Tuamarina	10.21	212		Pn	07 02 34.7	-4.0
CMWZ	Cape Campbell	10.35	210	P	Pn	07 02 38.6	-2.0
QRZ	Quartz Range	10.44	219	P	Pn	07 02 37.4	-4.5
BSWZ	Blackbirch Sta	10.47	211	P	Pn	07 02 38.3	-4.0
THZ	Tophouse	10.95	214		Sn	07 04 45.4	-4.5
KHZ	Kahutara	11.18	210	P	Pn	07 02 46.6	-5.4
GVZ	Greta Valley S	11.85	210	P	Pn	07 02 56.3	-4.8
MLZ	Mavora Lakes	15.95	215	P	Pn	07 03 52.8	-3.3
DZM	Mont Dzumac	16.95	306	LR	LR	07 09 12.1	
	comp=Z,110nm,18.6s,baz=326,slow=33						
TAU	Tasmania Unive	28.30	240	P	P	07 06 04.6	+0.6
STKA	Stephens Creek	33.27	261	P	P	07 06 46.1	-1.9
	1.2nm,0.6s,baz=334,slow=19,SNR=3.1						
CTAO	Charters Tower	33.59	284	P	P	07 06 50.0	-0.9
CTAO				IAmb	IAmb	07 07 17.9	
	comp=Z,15nm,1.4s						
BBOO	Buckleboo	37.64	258	P	P	07 07 23.7	-1.9
BBOO				IAmb	IAmb	07 07 39.5	
	comp=Z,19nm,1.4s						
COEN	Coen	39.36	290	P	P	07 07 37.6	-2.5
COEN				IAmb	IAmb	07 07 45.1	
	comp=Z,16nm,1.3s						
AS31	Alice Springs	42.32	270	P	P	07 08 04.5	0.0
ASAR	Alice Springs	42.32	270	P	P	07 08 03.8	-0.8
	comp=Z,1.8nm,0.7s,baz=108,slow=7.5,SNR=25						
WR0	Warramunga Arr	43.36	275	P	P	07 08 10.8	-2.1
WR0				IAmb	IAmb	07 08 23.8	
	comp=Z,9.5nm,1.2s						
WB2	Warramunga Arr	43.53	275	P	P	07 08 13.3	-1.1
WRA	Warramunga Arr	43.54	275	P	P	07 08 12.5	-1.9
	comp=Z,1.2nm,0.3s,baz=114,slow=7.8,SNR=36						
WB0	Warramunga Arr	43.57	276	P	P	07 08 12.9	-1.7
WB0				IAmb	IAmb	07 08 18.9	
	comp=Z,6.5nm,0.9s						
FORT	Forrest	44.74	258	P	P	07 08 22.3	-1.6
VNDA	Vanda	45.47	186	P	P	07 08 31.9	+2.9
VNDA				IAmb	IAmb	07 08 47.5	
	comp=Z,5.5nm,1.3s						
KNRA	Kununurra	50.23	277	P	P	07 09 04.7	-2.0
FITZ	Fitzroy Crossi	51.68	272	P	P	07 09 16.8	-0.8
	comp=Z,4.3nm,0.8s,baz=117,slow=7.3,SNR=2.5						
CASY	Casey	52.54	209	P	P	07 09 22.8	-0.4
MORW	Morawa	55.14	255	P	P	07 09 40.6	-2.2
MORW				IAmb	IAmb	07 09 40.8	
	comp=Z,7.3nm,0.9s						
QSPA	South Pole Qui	57.14	180	P	P	07 10 00.7	+3.9
	comp=Z,7.7nm,0.7s,baz=54,slow=2.2						
QSPA	South Pole Qui	57.14	180	P	P	07 10 00.1	+3.3
QSPA				IAmb	IAmb	07 10 01.2	
	comp=Z,8.0nm,0.8s						
SNAA	Sanae	75.61	179	P	P	07 11 44.8	-10
SNAA	Sanae	75.61	179	PcP	P	07 11 56.7	+2.1
VNA3	Neumayer Olymp	75.79	176	P	P	07 11 47.7	-7.9
VNA3	Neumayer Olymp	75.79	176	PcP	P	07 11 57.4	+1.8
VNA2	Neumayer--Watz	76.22	177	P	P	07 11 49.5	-8.5
VNA2	Neumayer--Watz	76.22	177	PcP	P	07 11 58.0	0.0
	baz=179,slow=4.8						
H03S2	Juan Fernandez	79.65	124	T	T	08 40 49.2	
	baz=236,SNR=43						
H03S1	Juan Fernandez	79.66	124	T	T	08 40 50.3	
	baz=236,SNR=35						
H03S3	Juan Fernandez	79.67	124	T	T	08 40 49.2	
	baz=236,SNR=39						
H03N3	Juan Fernandez	79.86	123	T	T	08 40 54.3	
	baz=240,slow=72,SNR=49						
H03N2	Juan Fernandez	79.86	123	T	T	08 40 53.1	
	baz=240,slow=72,SNR=35						
H03N1	Juan Fernandez	79.88	123	T	T	08 40 53.0	
	baz=240,slow=72,SNR=67						
PLCA	Paso Flores	81.28	133	P	P	07 12 30.2	+3.7
	comp=Z,2.4nm,0.7s,baz=219,slow=6.5,SNR=3.7						
PLCA	Paso Flores	81.28	133	IAmb	IAmb	07 12 30.7	
	comp=Z,8.3nm,1.2s						
FINES	FINESS Array B	147.28	338	PKPbc	PKPdf	07 19 49.9	-0.3
	comp=Z,3.0nm,0.7s,baz=25,slow=5.2,SNR=9.5						
NB2	NORSAR Subarra	151.16	350	PKP	PKPbc	07 20 02.7	+0.3
	comp=Z,0.4nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.16	350	PKPbc	PKPbc	07 20 00.8	-1.6
	comp=Z,1.1nm,0.6s,baz=17,slow=4.2,SNR=2.1						
AKASG	Malin Array Be	152.83	319	PKPbc	PKiKP	07 20 07.7	+1.0
	comp=Z,0.3nm,0.4s,baz=62,slow=2.1,SNR=4.7						

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*REN **23** 07:05:36.3±0.8, 39°.44N±0°.01×119°.78W±0°.02, h10km±3km, ML3.1/11, ML3.0/40(NEIC), Error ellipse: s-maj=2.3km s-min=1.9km az=95.0*

NEIC 23 07:05:36.2±1.2**, 39°.45N**±0°.01×**119°.80W**±0°.02**, h8**km±5km**,**
Error ellipse: s-maj=2.2km s-min=1.9km az=79.0,
Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCNR	Virginia City	0.19	144		Pg	07 05 40.1	-0.1
VCNR				Sg	Sg	07 05 43.0	0.0
PEAR	Peavine Mounta	0.20	321		Pg	07 05 41.0	+0.6
MPK	Martis Peak	0.24	230		Pg	07 05 41.4	+0.3
PNTR	Pine Nut	0.39	157	Pg	Pg	07 05 43.8	-0.1
PNTR				IAML		07 05 52.5	
	comp=N,2μm,0.7s						
PNTR				IAML		07 05 52.9	
	comp=E,1μm,0.6s						
PAHR	Pah Rah Range	0.41	51		Pg	07 05 44.3	+0.1
PAHR				Sg	Sg	07 05 49.8	+0.2
PAHR				IAML		07 05 50.4	
	comp=N,1μm,0.3s						
PAHR				IAML		07 05 50.9	
	comp=E,1μm,0.5s						
RUBR	Rubicon Trail	0.49	215	Pg	Pg	07 05 45.8	+0.1
RUBR				Sg	Sg	07 05 52.3	+0.2
RUBR				IAML		07 05 53.0	
	comp=N,1μm,0.5s						
RUBR				IAML		07 05 53.8	
	comp=E,2μm,0.3s						
WVA	Winnemucca Val	0.49	357		Pg	07 05 45.3	-0.5
GNO	Genoa	0.52	185		Pg	07 05 46.2	-0.1
EMB	Emerald Bay	0.53	207		Pg	07 05 46.6	0.0
EMB				IAML		07 05 54.2	
	comp=E,1μm,0.4s						
EMB				IAML		07 05 54.7	
	comp=N,798nm,0.3s						
BFC	Buffalo Canyon	0.57	165		Pg	07 05 47.1	-0.2
YERR	Yerington	0.63	137		Pg	07 05 48.0	-0.5
YERR				Sg	Sg	07 05 56.6	-0.2
YERR				IAML		07 05 58.4	
	comp=N,664nm,0.3s						
RYN	Ryan	1.29	129	Pn	Pn	07 05 59.9	-0.7
RYN				Sn	Sb	07 06 16.9	-0.6
RYN				IAML		07 06 17.4	
	comp=N,334nm,0.3s						
RYN				IAML		07 06 19.1	
	comp=E,259nm,0.3s						
ORV	Oroville	1.32	275	Pn	Pn	07 06 00.4	-0.6
ORV				Sn	Sb	07 06 18.0	-0.4
ORV				IAML		07 06 19.1	
	comp=N,175nm,0.2s						
KVN	Kaiserville	1.38	106	Pn	Pn	07 06 01.3	-0.5
KVN				IAML		07 06 21.4	
	comp=N,173nm,0.4s						
LUL	Lundy Lake	1.48	161		Pb	07 06 04.0	0.0
CMB	Columbia Colle	1.49	198	Pn	Pn	07 06 03.0	-0.3
CMB				IAML		07 06 27.0	
	comp=E,135nm,0.4s						
CMB				IAML		07 06 27.6	
	comp=N,189nm,0.6s						
NVAR	Mina Array Bea	1.55	131		Pn	07 06 03.0	-1.3
LHV	Little Huntoon	1.57	140		Pn	07 06 04.5	+0.2
LHV				IAML		07 06 27.7	
	comp=N,199nm,0.3s						
LHV				IAML		07 06 28.3	
	comp=E,178nm,0.3s						
NV11	Mina Array Sit	1.63	128	Pn	Pn	07 06 05.0	-0.4
NV11				IAML		07 06 29.3	
	comp=N,112nm,0.5s						
BMN	Battle Mountai	2.21	63		Pn	07 06 11.9	-1.4
WDC	Whiskeytown Da	2.39	299	Pn	Pb	07 06 18.7	-0.8
MOD	Modoc Plateau	2.48	351	Pn	Pb	07 06 20.9	-0.1
HOPS	Hopland Field	2.59	261	Pn	Pn	07 06 20.1	+1.8
LCH	Last Change Ra	2.79	142	Pn	Pb	07 06 26.1	-0.2
ISA	Isabella, Lake	3.92	164		Pb	07 06 46.4	+0.7
ISA				IAML		07 07 42.8	
	comp=E,20nm,1.4s						
SPR3	Spring Creek 3	4.27	94	Pn	Pn	07 06 43.1	+1.3
BGU	Big Grassy Mou	5.39	72		Pn	07 06 57.8	+0.8
NLU	North Lily Min	5.97	83	Pn	Pn	07 07 06.5	+1.4

IDC 23 07:32:16.2±2.0**, 6°.02S**×**154°.87E, h0**km**, mb3.9**/5**,**
mb1 4.2/6**, mb1mx3.5**/42**, mbtmp4.0**/6**, ML2.4**/1**, Error**
ellipse: s-maj=63.8km s-min=25.4km az=126.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.35	246	Pn	Pn	07 34 20.3	+1.7
	2.4nm,0.3s,baz=181,slow=6.3,SNR=3.2						
WRA	Warramunga Arr	24.28	233	P	P	07 37 35.6	+0.1
	4.2nm,0.8s,baz=57,slow=9.9,SNR=28						
ASAR	Alice Springs	26.73	227	P	P	07 37 57.2	-0.6
	1.3nm,0.4s,baz=57,slow=9.1,SNR=23						
H11S3	WAKE ISLAND Hy	27.00	25	T	T	08 06 08.9	
	baz=205,slow=76,SNR=5.0						
H11S2	WAKE ISLAND Hy	27.01	25	T	T	08 06 04.1	
	baz=205,slow=76,SNR=7.2						
H11S1	WAKE ISLAND Hy	27.02	25	T	T	08 06 06.8	
	baz=205,slow=76,SNR=6.0						
CMAR	Chiang Mai Arr	60.25	295	P	P	07 42 27.3	+0.4
	1.0nm,0.3s,baz=120,slow=6.1,SNR=4.7						
ILAR	Eielson Array	82.52	22	P	P	07 44 40.4	-0.2
	0.3nm,0.9s,baz=241,slow=4.8,SNR=6.2						
MKAR	Makanchi Array	82.59	319	P	P	07 44 41.4	0.0
	0.3nm,0.4s,baz=104,slow=6.9,SNR=6.2						

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*TUL **23** 07:35:11.2±1.3, 36°.71N±0°.02×97°.57W±0°.01, h6km±7km, ML3.0, mb_Lg2.8/33(NEIC), Error ellipse: s-maj=2.1km s-min=1.4km az=188.0*

NEIC 23 07:35:11.2±0.9**, 36°.69N**±0°.01×**97°.57W**±0°.02**, h2**km±7km**,**
Error ellipse: s-maj=2.1km s-min=1.8km az=173.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.28	305		Pg	07 35 16.7	+0.1
GC02				Sg	Sg	07 35 21.0	+0.7
BLOK	Blackwell	0.29	76		Pg	07 35 17.1	+0.2
KAN13	South Haven SW	0.33	13		Pg	07 35 17.5	0.0
KAN13				Sg	Sg	07 35 22.3	+0.5
CROK	Carrier	0.38	241		Pg	07 35 19.0	+0.6
KAN17	Caldwell West	0.39	336		Pg	07 35 18.6	0.0
KAN14	Manchester OK	0.41	310		Pg	07 35 19.3	+0.2
KAN14				Sg	Sg	07 35 24.7	+0.3
KAN09	Caldwell North	0.45	355		Pg	07 35 18.8	-1.0
KAN01	Argonia South	0.49	342		Pg	07 35 20.2	-0.3
OK032	Salt Plains WL	0.53	283		Pg	07 35 20.9	-0.3
OK032				Sg	Sg	07 35 29.1	+1.1
KAN06	Argonia West S	0.60	338		Pg	07 35 22.5	-0.3
KAN08	Anthony NE Sta	0.62	329		Pg	07 35 22.8	-0.4
KAN16	Harper SW Stat	0.67	324		Pg	07 35 22.9	-1.0
KAN12	Harper NE Stat	0.70	331	Pg	Pg	07 35 25.0	+0.4
OK033	Mehan	0.82	141		Pg	07 35 27.2	+0.3
QUOK	Quay	0.87	126		Pg	07 35 27.7	-0.1
T35A	Sooner Cattle	0.88	75	Pg	Pg	07 35 27.8	-0.2
OK029	Liberty Lake	0.90	174		Pg	07 35 28.4	0.0
OK031	S. Brethren Rd	0.94	141	Pg	Pg	07 35 29.2	-0.1
OK034	N. Norfolk Rd.	0.97	134	Pg	Pg	07 35 29.7	0.0
OK030	Cody Creek RV	0.99	140	Pg	Pg	07 35 30.2	0.0
BCOK	Bluff Creek, N	1.03	182		Pg	07 35 31.0	+0.1
OK025	Westminster Rd	1.12	170		Pg	07 35 32.7	0.0
U32A	Winter Ranch,	1.19	255	Pg	Pg	07 35 33.6	-0.4
OKCFA	Oklahoma City	1.28	176		Pg	07 35 35.3	-0.3
OKCSW	OKLAHOMA CITY	1.29	175		Pg	07 35 35.4	-0.4
FNO	Franklin	1.44	174		Pn	07 35 38.0	-0.2
TUL1	Leonard	1.64	118	Pn	Pn	07 35 40.7	-0.3
TUL1				IAmb_Lg		07 36 05.8	
	comp=Z,48nm,0.9s						
W35A	Tecumseh	1.64	160		Pn	07 35 41.0	+0.1
R32A	Long Quarter,	1.95	333	Pn	Pb	07 35 46.7	-0.8
X34A	Smith Ranch, M	2.10	186	Pn	Pn	07 35 47.5	+0.2
X34A				IAmb_Lg		07 36 22.5	
	comp=Z,45nm,0.7s						
WMOK	Wichita Mounta	2.18	207	Pn	Pn	07 35 48.8	+0.3
WMOK				IAmb_Lg		07 36 21.8	
	comp=Z,35nm,1.0s						
KSU1	Kansas State U	2.52	17	Pn	Pn	07 35 53.3	+0.1
U38A	Gravette	2.58	95	Pn	Pn	07 35 55.0	+1.0
X37A	Clayton	2.76	139	IAmb_Lg		07 36 44.4	
	comp=Z,29nm,0.9s						
HHAR	Hobbs	2.96	97		Pn	07 35 59.3	+0.2
W39A	Magazine	3.42	115	IAmb_Lg		07 37 00.1	
	comp=Z,17nm,0.8s						
Z38A	Mt. Pleasant	4.03	147	IAmb_Lg		07 37 23.6	
	comp=Z,22nm,0.7s						
MGMO	Mountain Grove	4.28	82	IAmb_Lg		07 37 27.0	
	comp=Z,16nm,0.8s						
P38A	Dawn	4.33	46	IAmb_Lg		07 37 29.9	
	comp=Z,20nm,0.8s						
X40A	Basin Creek Fa	4.44	118	IAmb_Lg		07 37 33.0	
	comp=Z,14nm,1.0s						
N38A	Joes South For	5.32	38	IAmb_Lg		07 38 12.1	
	comp=Z,15nm,0.7s						
L34A	Svendsen Farm,	5.35	10	IAmb_Lg		07 38 02.6	
	comp=Z,10nm,0.8s						
OGNE	Ogallala	5.49	322	IAmb_Lg		07 38 17.1	
	comp=Z,14nm,0.7s						
T25A	Trinidad	5.50	277	IAmb_Lg		07 38 08.9	
	comp=Z,12nm,1.1s						
FVM	French Village	5.84	75	IAmb_Lg		07 38 14.7	
	comp=Z,15nm,0.8s						
K31A	O'Neill	6.00	352	IAmb_Lg		07 38 31.0	
	comp=Z,15nm,0.7s						
N41A	Harden Midland	6.61	51	IAmb_Lg		07 38 43.4	
	comp=Z,16nm,0.8s						
Q44A	Meyer Farm, Va	7.12	69	IAmb_Lg		07 39 08.6	
	comp=Z,14nm,0.9s						

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*SOF **23** 07:44:54.5, 40°.01N×21°.03E, h5km, MD3.7*
*IDC **23** 07:44:57.7±1.2, 40°.23N×21°.41E, h0km, mb3.4/6, mb1 3.6/11, mb1mx3.5/40, mbtmp3.5/11, ML3.5/5, Error ellipse: s-maj=20.7km s-min=17.0km az=86.0*
*SKO **23** 07:44:57.9, 40°.17N×21°.02E, h6km*
*ATH **23** 07:44:59.7, 40°.27N×21°.07E, h13km±1km, ML3.6/11, Error ellipse: s-maj=1.9km s-min=1.2km az=75.0*
*TIR **23** 07:44:59.8, 40°.33N×21°.02E, h6km±2km, Md3.7, Ml3.7*
*THE **23** 07:44:59.8, 40°.29N×21°.10E, h0km±1km, ML3.5/18, Error ellipse: s-maj=1.5km s-min=0.6km az=324.0*
*BEO **23** 07:44:59.4±1.7, 40°.15N×21°.15E, h18km±8km, ML3.3/13*
*IASPEI **23** 07:44:59.5±0.8, 40°.27N±0°.02×21°.11E±0°.02, h14km±5km, mb3.5/5, Error ellipse: s-maj=3.2km s-min=2.7km az=82.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*PDG **23** 07:45:00.1±0.6, 40°.29N×21°.12E, h8km, ML3.5/13, Error ellipse: s-maj=0.6km s-min=1.0km az=0.0*

ISC 23 07:44:59.8±0.7**, 40°.27N**±0°.01×**21°.09E**±0°.01**, h11**km±4km**,**
n190, σ1ˢ.51/269**, mb3.5**/5**, 22C-11D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PENT	Pentalofos	0.08	155	P	Pg	07 45 02.6	+0.2
PENT				S	Sg	07 45 04.0	-0.3
PENT	Pentalofos	0.08	155	P	Pg	07 45 02.6	+0.2
PENT				S	Sg	07 45 04.8	+0.6
PENT				AML	AML	07 45 05.8	
PENT				AML	AML	07 45 05.8	
NEST	Nestorio	0.15	347	P	Pg	07 45 03.4	+0.1
NEST				S	Sg	07 45 04.8	-1.0
NEST	Nestorio	0.15	347	P	Pg	07 45 03.5	+0.2
NEST				AML	AML	07 45 08.3	
	comp=E,91396μm,0.3s						
NEST				AML	AML	07 45 08.5	
	comp=N,94020μm,0.5s						
KPRO	Kipourio	0.38	147	P	Pg	07 45 06.9	-0.4
KPRO				S	Sb	07 45 13.8	-0.6
	comp=N,15μm,0.5s						
KPRO	Kipourio	0.38	147	P	Pg	07 45 07.1	-0.3
KPRO				S	Sb	07 45 13.9	-0.6
KPRO				AML	AML	07 45 18.5	
	comp=E,28735μm,0.5s						
KPRO				AML	AML	07 45 20.4	
	comp=N,31507μm,0.5s						
LSK	Leskovik	0.40	252	P	Pg	07 45 06.9	-0.8
LSK				S	Sg	07 45 12.9	0.0
	comp=N,11μm,0.4s						
LSK	Leskovik	0.40	252	P	Pg	07 45 07.0	-0.6
	baz=242						
LSK				S	Sg	07 45 13.0	0.0
	baz=242						
LSK				AMP			
	comp=E,36nm,0.3s,baz=242						
KBN	Korca	0.42	327	P	Pg	07 45 07.6	-0.6
KBN				S	Sg	07 45 13.2	-0.6
	comp=E,11μm,0.5s						
KBN	Korca	0.42	327	P	Pg	07 45 07.7	-0.5
	baz=330						
KBN				S	Sg	07 45 12.2	-1.6
	baz=330						
KBN				AMP			
	comp=E,26nm,0.6s,baz=330						
KZN	Kozani	0.52	86	P	Pg	07 45 09.2	-0.8
KZN				S	Sb	07 45 18.3	-0.3
	comp=E,5μm,0.5s						
KZN	Kozani	0.52	86	P	Pg	07 45 09.4	-0.6
KZN				S	Sb	07 45 18.5	0.0
KZN				AML	AML	07 45 23.8	
	comp=E,11507μm,0.5s						
KZN				AML	AML	07 45 23.9	
	comp=N,10360μm,0.5s						
FNA	Florina	0.56	23	P	Pg	07 45 09.9	-0.7
FNA				S	Sg	07 45 18.8	+0.8
	comp=N,7μm,0.5s						
FNA	Florina	0.56	23	P	Pg	07 45 10.0	-0.7
FNA				S	Sb	07 45 19.1	-0.5
FNA				AML	AML	07 45 20.6	
	comp=E,19606μm,0.5s						
FNA				AML	AML	07 45 23.1	
	comp=N,8292μm,0.5s						
FNA	Florina	0.56	23	*i* Pg	Pg	07 45 10.0	-0.7
FNA				*i* Sg	Sb	07 45 19.7	0.0

FNA	Florina	0.56	23	P	Pg	07 45 10.0	-0.7
	baz=31						
FNA				S	Sb	07 45 19.6	0.0
	baz=31						
JAN	Janina	0.64	197	P	Pg	07 45 11.2	-1.1
JAN				S	Sg	07 45 21.1	+0.4
	comp=N,6μm,0.5s						
JAN	Janina	0.64	197	P	Pg	07 45 11.1	-1.1
JAN				S	Sg	07 45 19.6	-1.0
JAN				AML	AML	07 45 24.3	
	comp=N,9154μm,0.3s						
JAN				AML	AML	07 45 25.6	
	comp=E,13100μm,0.3s						
KTI	Kastanea	0.79	81	P	Pg	07 45 14.1	-1.0
OHR	Ohrid	0.87	345	i Pg	Pg	07 45 15.6	-1.0
OHR				i Sg	Sb	07 45 29.4	+0.8
OHR				eLg	Lg	07 45 31.3	
	comp=E,2μm,0.8s						
OHR				eLg	Lg	07 45 32.2	
	comp=N,1μm,0.6s						
OHR	Ohrid	0.87	345	ePg	Pg	07 45 16.2	-0.4
OHR				eSg	Sb	07 45 30.0	+1.4
SRN	Sarande	0.93	245	P	Pg	07 45 16.9	-0.7
SRN	Sarande	0.93	245	P	Pg	07 45 17.5	-0.1
	baz=241						
SRN				S	Sb	07 45 30.7	+0.6
	baz=241						
SRN				AMP			
	comp=N,15nm,0.4s,baz=241						
THL	Klokotos Trika	1.00	135	P	Pg	07 45 17.4	-1.6
THL				S	Sb	07 45 33.3	+1.0
	comp=N,2μm,0.6s						
THL	Klokotos Trika	1.00	135	P	Pg	07 45 17.5	-1.5
THL				S	Sb	07 45 32.7	+0.4
THL				AML	AML	07 45 35.3	
	comp=N,4900μm,0.6s						
THL				AML	AML	07 45 39.9	
	comp=E,2481μm,0.5s						
KASA	Kassiopi	1.03	240	P	Pg	07 45 18.7	-0.9
KEK	Kerkira	1.14	241	P	Pg	07 45 20.9	-0.8
KEK				S	Sn	07 45 39.5	+2.2
	comp=E,2μm,1.1s						
KEK	Kerkira	1.14	241	P	Pg	07 45 21.1	-0.6
KEK				AML	AML	07 45 42.3	
	comp=N,3032μm,1.5s						
KEK				AML	AML	07 45 47.4	
	comp=E,3873μm,0.7s						
GRG	Griva	1.21	55	P	Pg	07 45 21.7	-1.4
GRG				S	Sn	07 45 40.6	+1.5
	comp=E,1μm,0.8s						
GRG	Griva	1.21	55	i Pg	Pg	07 45 21.6	-1.4
GRG				i Sg	Sn	07 45 41.0	+1.9
VLO	Vlora	1.24	280	P	Pn	07 45 24.5	+1.5
	baz=278						
VLO				S	Sn	07 45 40.6	+0.9
	baz=278						
VLO				AMP			
	comp=E,12nm,0.5s,baz=278						
TIR	Tirane	1.42	319	⇑P	Pb	07 45 26.9	+0.5
TIR				⇑S	Sg	07 45 48.5	+2.8
TIR	Tirane	1.42	319	P	Pb	07 45 26.6	+0.3
TIR				S	Sg	07 45 47.1	+1.5
	comp=E,888nm,0.8s						
TIR	Tirane	1.42	319	P	Pb	07 45 26.7	+0.3
	baz=320						
TIR				S	Sb	07 45 44.0	-0.5
	baz=320						
TIR				AMP			
	comp=E,3.0nm,0.6s,baz=320						
TIR	Tirane	1.42	319	ePn	Pg	07 45 27.1	0.0
TIR				eSg	Sg	07 45 50.0	+4.4
EVR	Evrytania	1.46	158	P	Pn	07 45 25.9	-0.3
EVR				S	Sg	07 45 47.6	+0.8
	comp=E,1μm,0.8s						
EVR	Evrytania	1.46	158	P	Pn	07 45 26.0	-0.2
EVR				AML	AML	07 45 56.4	
	comp=E,2778μm,0.6s						
EVR				AML	AML	07 45 57.8	
	comp=N,2202μm,0.9s						
THE	Thessaloniki	1.47	75	i Pg	Pn	07 45 25.7	-0.6
THE	Thessaloniki	1.47	75	P	Pg	07 45 28.1	0.0
	baz=77						
THE				S	Sg	07 45 51.5	+4.3
	baz=77						
TSLK	Tsoukalades, L	1.48	193	P	Pn	07 45 27.3	+0.9
TSLK				S	Sg	07 45 48.6	+1.1
	comp=N,1μm,0.8s						
MAKR	Makrakomi, Fth	1.49	147	P	Pn	07 45 26.6	0.0
MAKR				S	Sg	07 45 49.0	+1.3
	comp=N,3μm,0.9s						
MAKR	Makrakomi, Fth	1.49	147	P	Pn	07 45 26.7	+0.1
MAKR				AML	AML	07 45 53.6	
	comp=N,6316μm,0.8s						
MAKR				AML	AML	07 45 57.5	
	comp=E,5106μm,0.7s						
PHP	Peshkopia	1.50	341	P	Pn	07 45 26.3	-0.4
PHP				S	Sg	07 45 48.1	+0.1
PHP	Peshkopia	1.50	341	P	Pn	07 45 26.5	-0.1
	baz=343						
PHP				S	Sg	07 45 47.9	-0.1
	baz=343						
PHP				AMP			
	comp=N,3.2nm,0.6s,baz=343						
LKD2	Lefkada island	1.52	193	P	Pb	07 45 28.1	+0.1
LKD2				S	Sg	07 45 49.7	+1.1
	comp=N,1μm,0.9s						
LKD2	Lefkada island	1.52	193	P	Pg	07 45 29.6	+0.7
	baz=191						
LKD2				S	Sg	07 45 52.9	+4.2
	baz=191						
VAY	Valandovo	1.54	46	i Pg	Pn	07 45 27.4	+0.2
VAY				i Sg	Sg	07 45 50.9	+1.7
VAY				eLg	Lg	07 45 52.2	
	comp=E,362nm,0.9s						
VAY				eLg	Lg	07 45 55.9	
	comp=N,685nm,1.0s						
VAY	Valandovo	1.54	46	ePg	Pb	07 45 28.2	-0.1
VAY				eSg	Sg	07 45 51.2	+2.0
HORT	Hortiatis	1.57	77	P	Pn	07 45 26.9	-0.8
HORT				S	Sb	07 45 49.0	+0.3
NYDR	Nydri-Lefkada	1.58	191	P	Pn	07 45 28.6	+0.8
NYDR	Nydri-Lefkada	1.58	191	P	Pb	07 45 29.0	-0.1
DRAG	Dragano-Lefkad	1.64	194	P	Pn	07 45 29.2	+0.7
DRAG				S	Sg	07 45 54.3	+1.9
	comp=N,3μm,0.4s						
DRAG	Dragano-Lefkad	1.64	194	P	Pb	07 45 30.2	+0.2
STIP	Stip	1.65	30	i Pg	Pg	07 45 31.9	+0.5
STIP				i Sg	Sg	07 45 58.2	+5.4
EVGI	Lefkada island	1.68	192	P	Pb	07 45 30.5	-0.3
EVGI				S	Sg	07 45 53.9	0.0
	comp=N,1μm,0.5s						
EVGI	Lefkada island	1.68	192	P	Pb	07 45 30.9	+0.1
SKO	Skopje	1.72	9	i Pg	Pn	07 45 30.6	+0.8
SKO				i Sg	Sg	07 45 55.1	0.0
ANX	Ano Chora	1.79	159	P	Pn	07 45 32.0	+1.2
ANX	Ano Chora	1.79	159	P	Pb	07 45 32.3	-0.4
PLG	Polygyros	1.80	86	P	Pn	07 45 30.8	-0.1
PLG				S	Sn	07 45 54.0	+0.3
PLG	Polygyros	1.80	86	P	Pn	07 45 31.4	+0.6
SOH	Sokhos	1.81	72	P	Pn	07 45 31.2	+0.3
SOH	Sokhos	1.81	72	P	Pn	07 45 31.2	+0.3
SOH				AML	AML	07 46 06.9	
	comp=N,917μm,0.7s						
SOH				AML	AML	07 46 08.0	
	comp=E,1187μm,0.6s						
SOH	Sokhos	1.81	72	i Pg	Pn	07 45 31.3	+0.3
FSK	Fiskardo	1.85	193	P	Pb	07 45 33.1	-0.6
FSK	Fiskardo	1.85	193	P	Pb	07 45 33.2	-0.6
NEO	Neokhori	1.90	120	P	Pn	07 45 32.3	+0.1
NEO				S	Sb	07 45 58.1	-0.2
	comp=E,1μm,0.7s						
EFP	Efpalio	1.95	161	P	Pb	07 45 35.0	-0.3
SERG	Sergoula	2.00	158	P	Pn	07 45 34.5	+1.0
SERG	Sergoula	2.00	158	P	Pn	07 45 34.6	+1.0
SCTE	Santa Cesarea	2.02	265	P	Pn	07 45 34.9	+1.0
	baz=264						
TRIZ	Trizonia	2.05	158	P	Pn	07 45 34.9	+0.7
TRIZ	Trizonia	2.05	158	P	Pn	07 45 35.2	+1.0
KEF4	Livadi, Kephal	2.08	195	P	Pn	07 45 35.7	+1.1
DMLN	Damoulianata-K	2.10	196	P	Pn	07 45 35.1	+0.1
VLS	Valsamata	2.13	191	P	Pn	07 45 36.5	+1.2
VLS	Valsamata	2.13	191	P	Pn	07 45 36.5	+1.2
LAKA	Lakka	2.14	161	P	Pb	07 45 38.6	-0.1
ATAL	Atalanti	2.17	136	P	Pn	07 45 35.7	-0.2
ATAL				S	Sn	07 46 04.5	+1.7
	comp=E,265nm,0.9s						
LKR	Lokris	2.19	137	P	Pn	07 45 36.0	-0.1
PSDA	Pessada-Kefalo	2.19	191	P	Pn	07 45 37.1	+1.0
PSDA				S	Sb	07 46 06.6	+0.1
PSDA	Pessada-Kefalo	2.19	191	P	Pn	07 45 37.3	+1.2
KKB	Krupnik	2.19	43	eP	Pn	07 45 36.5	+0.3
ULC	Ulcinj	2.19	321	i Pn	Pb	07 45 38.5	-1.0
ULC	Ulcinj	2.19	321	⇑iPn	Pn	07 45 37.8	+1.6
ULC				i Sn	Sb	07 46 07.6	+0.9
OUR	Ouranopolis	2.21	87	P	Pn	07 45 36.0	-0.4
RLS	Riolos of Patr	2.23	172	P	Pn	07 45 38.0	+1.3
BCI	Bajram Curri	2.23	340	P	Pb	07 45 39.9	-0.3
	baz=342						
BCI				S	Sg	07 46 10.0	-1.6
	baz=342						
BCI				AMP			
	comp=E,2.0nm,0.8s,baz=342						
PRVS	Prvonek	2.35	18	ePn	Pn	07 45 38.8	+0.3
NVR	Nevrokopi	2.36	62	P	Pn	07 45 38.2	-0.4
DRO	Drossia	2.36	168	P	Pb	07 45 41.3	-1.2
KLV	Kalavryta, Ach	2.37	159	P	Pn	07 45 39.9	+1.2
MMB	Musomiste	2.39	56	eP	Pn	07 45 38.4	-0.6
DRME	Dracevica, Mon	2.40	324	ePn	Pn	07 45 39.8	+0.8
DRME	Dracevica, Mon	2.40	324	⇓iPn	Pn	07 45 40.8	+1.8
DRME				i Sn	Sb	07 46 12.5	0.0
BOSS	Bosilegrad	2.46	25	ePn	Pn	07 45 40.5	+0.7
PVY	Plav	2.47	340	⇓iPn	Pn	07 45 41.8	+1.6
PVY				i Sn	Sb	07 46 14.9	0.0
PDG	Podgorica	2.56	328	⇓P	Pn	07 45 43.4	+2.1
PDG				⇑S	Sb	07 46 16.5	-0.8
PDG	Podgorica	2.56	328	ePn	Pn	07 45 42.8	+1.5
TTG	Podgorica	2.56	328	⇑iPn	Pn	07 45 42.8	+1.5
TTG				i Sn	Sb	07 46 16.1	-1.2
BARS	Barje	2.60	12	i Pn	Pn	07 45 42.1	+0.2
BARS	Barje	2.60	12	ePn	Pn	07 45 42.3	+0.5
BARS	Barje	2.60	12	ePn	Pg	07 45 58.8	+9.2
BUM	Brajici-Budva	2.62	321	⇓iPn	Pn	07 45 43.8	+1.7
BUM				i Sn	Sb	07 46 18.2	-0.8
IVA	Berane	2.75	341	⇓iPn	Pn	07 45 45.6	+1.6
IVA				i Sn	Sb	07 46 21.0	-1.8
THAS	Thassos island	2.79	82	P	Pn	07 45 43.4	-0.9
CEME	Cevo	2.80	325	⇓iPn	Pn	07 45 46.2	+1.6
CEME				eSn	Sn	07 46 22.0	+3.6
KOME	Kolasin	2.84	336	⇑iPn	Pn	07 45 47.0	+1.9
KOME				i Sn	Sn	07 46 22.7	+3.3
VTS	Vitosha	2.84	34	⇑P	Pn	07 45 46.0	+0.8
VTS				⇑S	Sn	07 46 21.1	+1.5
VTS	Vitosha	2.84	34	eP	Pn	07 45 45.8	+0.5
VTS	Vitosha	2.84	34	ePn	Pn	07 45 46.1	+0.8
HCY	Herceg Novi	2.92	319	ePn	Pn	07 45 46.3	0.0
HCY	Herceg Novi	2.92	319	⇓iPn	Pn	07 45 48.2	+1.9
HCY				i Sn	Sn	07 46 25.3	+3.9
SELS	Selova	2.95	0	ePn	Pn	07 45 46.2	-0.4
NKY	Niksic	2.99	329	⇓iPn	Pn	07 45 49.1	+1.9
NKY				eSn	Sn	07 46 27.0	+3.9
RZN	Rozhen	3.09	62	eP	Pn	07 45 49.2	+0.5
SJES	Sjenica	3.10	345	ePn	Pn	07 45 49.9	+1.1
TREB	Trebinje	3.20	321	ePn	Pn	07 45 50.7	+0.7
BRY	Bratogost	3.25	325	ePn	Pn	07 45 52.6	+1.7
BRY	Bratogost	3.25	325	⇓iPn	Pn	07 45 53.4	+2.5
BRY				eSn	Sn	07 46 33.1	+3.4
PLE	Pljevlja	3.31	338	⇓iPn	Pn	07 45 53.3	+1.6
PLE				i Sn	Sn	07 46 34.3	+3.2
UPM	Unac-Piva	3.36	332	ePn	Pn	07 45 54.0	+1.6
UPM	Unac-Piva	3.36	332	⇑iPn	Pn	07 45 54.3	+1.9
UPM				eSn	Sn	07 46 35.6	+3.3
MATE	Matera	3.37	278	⇑P	Pn	07 45 54.3	+2.0
MATE				⇑S	Sn	07 46 34.2	+1.9
BOVS	Bovan	3.39	8	ePn	Pn	07 45 52.2	-0.5
TIP	Timpagrande	3.52	253	⇑P	Pn	07 45 55.8	+1.3
TIP				⇓S	Sn	07 46 37.6	+1.5
BLKB	Belogradchik	3.55	19	⇑S	Sn	07 46 38.5	+1.6
RUDO	Rudo	3.58	340	ePn	Pb	07 46 01.4	-1.8
GRUS	Gruza	3.63	356	ePn	Pn	07 45 56.3	+0.4
STON	Ston	3.64	317	ePn	Pn	07 45 56.0	0.0
STON	Ston	3.64	317	ePn	Pn	07 45 56.2	+0.2
STON				Sn	Sn	07 46 36.8	-2.1
ZAGS	Zajecar	3.64	13	ePn	Pn	07 45 56.1	0.0
BBLS	Lazići	3.81	341	ePn	Pn	07 46 00.3	+1.9
BBLS	Lazići	3.81	341	ePn	Pn	07 46 00.9	+2.5
DIVS	Divibare	3.91	348	ePn	Pn	07 45 59.8	-0.1
DIVS	Divibare	3.91	348	ePn	Pn	07 46 00.2	+0.3
TRUS	Trudelj	3.98	353	ePn	Pn	07 46 00.9	+0.1
LSTV	Lastovo	4.02	310	ePn	Pn	07 46 01.4	+0.1
LSTV				Sn	Sn	07 46 46.8	-1.6
MAKA	Makarska	4.29	316	ePn	Pn	07 46 04.6	-0.3
MAKA				Sn	Sn	07 46 52.3	-2.6
RICI	Ricice	4.37	319	ePn	Pn	07 46 06.0	-0.1
RICI				Sn	Sn	07 46 53.1	-4.0
HVAR	Hvar	4.53	311	ePn	Pn	07 46 08.0	-0.3
HVAR				Sn	Sn	07 46 58.6	-2.4
HERR	Herculane	4.71	12	⇑P	Pn	07 46 11.7	+1.0
APE	Apeiranthos	4.72	131	⇑P	Pn	07 46 07.2	-3.8
FRGS	Fruska Gora	4.97	349	ePn	Pn	07 46 13.8	-0.6
FRGS	Fruska Gora	4.97	349	ePn	Pn	07 46 14.0	-0.4
MGRS	Mrkonjic Grad	5.10	326	ePn	Pn	07 46 17.0	+0.9
KIJV	Kijevo	5.11	318	ePn	Pn	07 46 16.2	0.0
KIJV				Sn	Sn	07 47 12.8	-2.4
GZR	Gura Zlata	5.27	13	⇑P	Pn	07 46 18.8	+0.3
ZIRJ	Zirje	5.29	312	ePn	Pn	07 46 18.1	-0.6
ZIRJ				Sn	Sn	07 47 16.3	-3.2
MORI	Morici	5.38	314	ePn	Pn	07 46 19.3	-0.7
MORI				Sn	Sn	07 47 19.5	-2.5
MRAK	Mrakovica	5.66	328	ePn	Pn	07 46 23.8	-0.1
ARR	Arges	5.72	26	⇑P	Pn	07 46 25.2	+0.4
IDI	Anoyia	5.81	148	Pn	Pn	07 46 24.1	-1.9
	comp=E,0.6nm,0.3s,baz=257,slow=17,SNR=1.1						
IDI				Sn	Sn	07 47 32.7	0.0
	comp=E,0.9nm,0.3s,baz=302,slow=19,SNR=1.7						
DUGI	Dugi Otok	5.83	312	ePn	Pn	07 46 26.5	+0.3
DUGI				Sn	Sn	07 47 30.2	-2.7
VOIR		5.92	28	⇑P	Pn	07 46 27.1	-0.4
MORH	Mrgy, Hungar	6.21	344	ePN	Pn	07 46 32.0	+0.7
MORH	Mrgy, Hungar	6.21	344	eP	Pn	07 46 37.4	+6.2
MORH	Mrgy, Hungar	6.21	344	eSN	Sn	07 47 37.2	-5.0
MORH	Mrgy, Hungar	6.21	344	ePn	Pn	07 46 30.7	-0.6
KOVH	Kovagotottos	6.21	340	ePN	Pn	07 46 31.6	+0.2
NVLJ	Novalja	6.29	315	ePn	Pn	07 46 32.7	+0.2
NVLJ				Sn	Sn	07 47 40.7	-3.7
MLR	Muntele Rosu	6.32	33	⇑P	Pn	07 46 33.0	0.0
MLR	Muntele Rosu	6.32	33	Pn	Pn	07 46 32.4	-0.6
	comp=E,0.6nm,0.3s,baz=30,slow=8.1,SNR=2.6						
PLOR	Plostina	6.90	34	⇑P	Pn	07 46 41.7	+0.8
CRES	Cresnjev	6.92	325	ePn	Pn	07 46 38.6	-2.5
VRI	Vrincioaia	6.95	35	⇑P	Pn	07 46 42.1	+0.6
SMRN	Sveta Marina	6.99	315	ePn	Pn	07 46 41.1	-0.9
SMRN				Sn	Sn	07 47 58.3	-3.1
BRJN	Brijuni	7.13	313	ePn	Pn	07 46 43.6	-0.4
BRJN				Sn	Sn	07 48 02.1	-2.7
CEY	Cerknica	7.33	320	ePn	Pn	07 46 45.5	-1.3
MPLH	Magyarpolny	7.36	341	ePN	Pn	07 46 48.9	+1.7
PSZ	Piszkesteto	7.69	354	⇑P	Pn	07 46 52.4	+0.6
PSZ	Piszkesteto	7.69	354	ePN	Pn	07 46 51.4	-0.5
PSZ	Piszkesteto	7.69	354	eP	Pn	07 46 55.8	+4.0
PSZ	Piszkesteto	7.69	354	eSN	Sn	07 48 16.9	-2.0
OBKA	Obir	7.85	325	ePn	Pn	07 46 56.2	+2.3
	comp=E,0.3nm,0.2s						
OBKA				eSn	Sn	07 48 25.1	+2.4
	comp=E,6.0nm,0.6s						
ARSA	Arzberg	8.06	332	ePn	Pn	07 46 57.4	+0.7
	comp=E,0.6nm,0.2s						
MOA	Molln	9.03	329	ePn	Pn	07 47 11.2	+1.2
	comp=E,0.4nm,0.2s						
MOA				eSn	Sn	07 48 53.8	+2.1
	comp=E,1.7nm,0.5s						
WTTA	Wattenberg	9.78	319	ePn	Pn	07 47 22.6	+2.1
	comp=E,0.8nm,0.4s						
WTTA				eSn	Sn	07 49 08.5	-1.8
	comp=E,7.5nm,0.7s						
GERES	GERESS Array B	10.06	331	Pn	Pn	07 47 27.8	+3.6
	comp=E,0.1nm,0.3s,baz=152,slow=15,SNR=4.1						
FETA	Feichten	10.09	315	ePn	Pn	07 47 33.5	+8.7
	comp=E,1.2nm,0.5s						
KHC	Kasperske Hory	10.34	331	eP	Pn	07 47 39.5	+11
DAVOX	Davos/Dischmat	10.42	312	Pn	Pn	07 47 32.0	+2.7
	comp=E,0.3nm,0.3s,baz=146,slow=15,SNR=2.3						
ESDC	Sonseca Array	19.20	276	P	P	07 49 24.0	+0.3
	comp=E,0.1nm,0.3s,baz=77,slow=11,SNR=6.1						
HFS	Hagfors	20.42	349	P	P	07 49 35.8	-0.8
	comp=E,1.6nm,0.6s,baz=175,slow=18,SNR=3.4						
FINES	FINESS Array B	21.42	7	P	P	07 49 46.0	-1.4
	comp=E,2.6nm,0.9s,baz=198,slow=8.7,SNR=1.3						
NB2	NORSAR Subarra	21.67	347	P	P	07 49 50.8	+0.6
	comp=Z,2.1nm,0.8s,baz=159,slow=11						
NOA	NORSAR Array B	21.67	347	P	P	07 49 49.8	-0.4
	comp=Z,1.2nm,0.8s,baz=160,slow=8.6,SNR=3.9						
EKA	Eskdalemuir Ar	22.03	321	P	P	07 49 56.2	+2.2
	comp=Z,1.3nm,0.7s,baz=114,slow=8.6,SNR=1.8						
TORD	Torodi Ar. Bea	31.95	218	P	P	07 51 26.1	+0.4
	comp=Z,0.3nm,0.5s,baz=32,slow=7.6,SNR=2.5						
MKAR	Makanchi Array	43.85	60	P	P	07 53 03.3	-2.7
	comp=Z,0.2nm,0.6s,baz=280,slow=5.8,SNR=1.4						

IDC ***23*** *07:56:02.9±2.8, 8.°78S×119.°54E, h0^{km}, mb3.2/2, mb1 3.6/3, mb1mx3.4/44, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=257.6km s-min=28.2km az=51.0*

DJA ***23*** *07:56:07.6±0.8, 8°S±2°×12°1E±°, h25^{km}±8^{km}, M3.6/9, MLv3.6/9*

ISC 23 07:56:09.1±1.0**, 7.°98S**±0.°04×**120.°58E**±0.°05**, h35^{km}, n13, σ0.^{s}60**/17**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	1.33	125	P	Pn	07 56 31.1	-0.3
EDFI				S	Sn	07 56 48.3	+0.3
MMRI	Maumere	1.76	112	P	Pn	07 56 37.7	+0.5
MMRI				S	Sn	07 56 57.3	-1.1
BSSI	Bau Bau, Buton	1.83	357	P	Pn	07 56 37.6	-0.5
BSSI				S	Sn	07 56 59.7	-0.4
WBSI	Waikabubak, Su	2.02	215	P	Pn	07 56 40.5	-0.3
WBSI				S	Sn	07 57 05.4	+0.5
BASI	Baing, Sumba	2.22	180	P	Pn	07 56 42.4	-1.1
BKSI	Bulukumba	2.68	350	P	Pn	07 56 50.1	+0.2
BNSI	Bone	3.59	352	P	Pn	07 57 02.2	-0.1
TWSI	Taliwang, Sumb	3.74	258	P	Pn	07 57 04.7	+0.4
SOEI	Soe	4.04	116	P	Pn	07 57 09.4	+0.7
SPSI	Sidrap Palu	4.07	349	P	Pn	07 57 08.6	-0.4
WRA	Warramunga Arr	17.86	133	P	P	08 00 15.4	0.0
	0.1nm,0.3s,baz=299,slow=12,SNR=6.0						
ASAR	Alice Springs	20.16	142	P	P	08 00 40.1	-0.5
	0.3nm,0.4s,baz=317,slow=10,SNR=3.1						
MKAR	Makanchi Array	64.29	332	P	P	08 06 41.6	+0.6
	0.4nm,0.6s,baz=144,slow=5.6,SNR=3.3						

IDC ***23*** *08:08:01.6±3.0, 33.°83S×178.°91W, h0^{km}, mb3.7/2, mb1 4.0/3, mb1mx3.5/33, mbtmp3.8/3, ML3.8/1, Error ellipse: s-maj=70.4km s-min=36.1km az=118.0*

WEL ***23*** *08:08:04.1±0.8, 34°S±12°×17°9W±2°6, h33^{km}, M4.2/7, mB4.5/1, ML4.4/13, MLv4.2/7, Mw(mB)3.7/1, Error ellipse: s-maj=0.0km s-min=0.0km az=113.3*

ISC 23 08:08:02.6±2.2**, 33.°9S**±0.°1×**178.°4W**±0.°3**, h35^{km}, n21, σ1.^{s}31**/33**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.55	215	P	Pn	08 09 09.8	+0.9
MXZ				S	Sn	08 10 00.4	-0.2
GLKZ	Green Lake	4.62	5	S	Sn	08 10 00.4	-1.9
HAZ	Te Kaha	4.96	218	P	Pn	08 09 14.9	+0.3
HAZ				S	Sn	08 10 11.9	+1.2
PUZ	Puketiti	4.99	212	P	Pn	08 09 14.3	-0.7
PUZ				S	Sn	08 10 10.3	-1.2
RUGZ	Raukumara Rang	5.18	217	P	Pn	08 09 18.2	+0.5
RUGZ				S	Sn	08 10 16.9	+0.7
TWGZ	Tauwhareparae	5.20	213	P	Pn	08 09 18.9	+1.0
TWGZ				S	Sn	08 10 17.7	+1.0
CNGZ	Carnagh Statio	5.36	210	P	Pn	08 09 20.3	+0.3
MWZ	Matawai	5.54	215	P	Pn	08 09 23.6	+1.0
URZ	Urewera	5.69	218	Pn	Pn	08 09 24.6	+0.1
	3.2nm,0.3s,baz=119,slow=23,SNR=14						
URZ				Sn	Sn	08 10 26.2	-2.4
	2.9nm,0.3s,baz=126,slow=23,SNR=4.7						
URZ	Urewera	5.69	218	P	Pn	08 09 24.6	+0.1
URZ				S	Sn	08 10 26.8	-1.9
OPRZ	Ohinepanea	5.70	225	P	Pn	08 09 26.2	+1.6
RIGZ	Rimuhau	5.73	212	P	Pn	08 09 24.1	-1.1
SNGZ	Shannon Statio	5.98	214	P	Pn	08 09 28.8	+0.1
SNGZ				S	Sn	08 10 34.9	-1.1
RAHZ	Arahi	6.21	215	P	Pn	08 09 32.9	+1.1
RAHZ				S	Sn	08 10 41.9	+0.4
MTHZ	Maungataniwha	6.28	216	P	Pn	08 09 34.0	+1.3
MTHZ				S	Sn	08 10 42.7	-0.6
NMHZ	Naumai	6.49	215	P	Pn	08 09 36.9	+1.3
BKZ	Black Stump Fm	6.69	216	P	Pn	08 09 38.3	-0.1
BKZ				S	Sn	08 10 51.3	-2.1
OTVZ	Oturere	7.12	220	P	Pn	08 09 45.0	+0.6
OTVZ				S	Sn	08 11 00.3	-3.8
ASAR	Alice Springs	42.70	271	P	P	08 15 57.2	+0.8
	0.6nm,0.7s,baz=112,slow=7.7,SNR=7.6						
WRA	Warramunga Arr	44.01	276	P	P	08 16 07.5	+0.6
	0.6nm,0.5s,baz=116,slow=8.2,SNR=16						
FINES	FINESS Array B	148.25	338	PKPbc	PKPab	08 27 47.4	+0.2
	3.4nm,0.9s,baz=44,slow=6.2,SNR=5.8						

JMA ***23*** *08:10:18.8±0.1, 23.°91N×122.°01E, h31^{km}±3^{km}, M2.6*

TAP ***23*** *08:10:19.2, 23.°92N×122.°00E, h26^{km}, ML3.1, C*

ISC 23 08:10:19.2±1.0**, 23.°91N**±0.°02×**122.°01E**±0.°02**, h31^{km}**±10^{km}**, n93, σ0.^{s}59**/166**, 6D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.37	280	i P	Pn	08 10 28.0	-0.4
	baz=278						
HWA				eS	Sn	08 10 34.2	-0.4
	baz=278						
TEYL	Yanliau Villag	0.38	264	P	Pn	08 10 28.4	0.0
	baz=266						
TWD	Chiawan	0.41	294	⇓iP	Pb	08 10 28.4	+0.1
	baz=293						
TWD				i S	Sn	08 10 34.9	-0.6
	baz=293						
ETL	Fush Village	0.43	305	P	Pb	08 10 28.6	0.0
	baz=304						
ETL				S	Sn	08 10 35.7	-0.4
	baz=304						
NACB	Ninganchiao	0.46	305	⇓P	Pb	08 10 28.9	-0.1
	baz=304						
NACB				S	Sn	08 10 36.0	-0.7
	baz=304						
TEGC	Jichi Village	0.47	245	P	Pn	08 10 30.0	+0.2
	baz=242						
TEGC				S	Sn	08 10 36.7	-0.3
	baz=242						
ETM	Tongmen	0.47	277	P	Pn	08 10 29.4	-0.4
	baz=275						
ETM				S	Sn	08 10 37.0	-0.1
	baz=275						
ESL	Shilin	0.54	260	i P	Pb	08 10 29.9	-0.4
	baz=257						
ESL				i S	Sn	08 10 38.3	-0.3
	baz=257						
ETLH	Xiulin Townshi	0.56	302	P	Pb	08 10 30.6	-0.1
	baz=301						
ETLH				S	Sn	08 10 39.1	-0.3
	baz=301						
ENA	Nanau	0.57	335	⇓iP	Pb	08 10 30.8	0.0
	baz=335						
ENA				i S	Sn	08 10 39.0	-0.4
	baz=335						
EWUT	Wuta	0.57	339	P	Pn	08 10 31.0	-0.2
	baz=339						
EWUT				S	Sn	08 10 39.7	+0.2
	baz=339						
EGFH	Guangfu	0.58	246	i P	Pn	08 10 31.4	+0.1
	baz=243						
EGFH				i S	Sn	08 10 40.9	+1.1
	baz=243						
HGSD	Ruisui	0.68	232	P	Pn	08 10 32.6	0.0
	baz=230						
HGSD				S	Sn	08 10 42.5	+0.4
	baz=230						
TWC	Suao	0.71	348	i P	Pn	08 10 33.2	+0.2
	baz=349						
TWC				i S	Sn	08 10 43.2	+0.3
	baz=349						
WHF	Hehuan Shan	0.72	289	i P	Pb	08 10 33.2	-0.3
	baz=288						
WHF				i S	Sn	08 10 43.3	-0.4
	baz=288						
OWD	Renai	0.76	273	P	Pb	08 10 33.7	-0.4
	baz=272						

OWD	baz=272			S	Sn	08 10 44.5	+0.1
NDS	Dongshan baz=340	0.77	340	P	Pn	08 10 34.2	+0.3
NDS	baz=340			S	Sn	08 10 44.8	+0.4
NNSB	Datong baz=311	0.77	312	P	Pb	08 10 33.8	-0.4
NNSB	baz=311			S	Sn	08 10 44.4	-0.2
FUSS	Fushou baz=295	0.78	296	*i* P	Pn	08 10 34.3	+0.1
FUSS	baz=295			S	Sn	08 10 45.0	+0.1
CHGB	Renai baz=280	0.78	281	⇓P	Pn	08 10 34.1	0.0
CHGB	baz=280			S	Sn	08 10 45.3	+0.4
NNS	Nan Shan baz=312	0.78	312	*i* P	Pn	08 10 34.2	0.0
NNS	baz=312			S	Sn	08 10 44.9	0.0
VWDT	VWDT baz=257	0.81	259	⇓P	Pn	08 10 34.8	+0.4
VWDT	baz=257			S	Sn	08 10 45.9	+0.6
NDT	Datong Townshi baz=326	0.82	327	*i* P	Pb	08 10 34.8	-0.3
NDT	baz=326			S	Sn	08 10 46.1	+0.4
ENTT	Nioudou baz=331	0.83	331	*i* P	Pb	08 10 34.9	-0.2
ENTT	baz=331			*i* S	Sb	08 10 45.7	-0.4
YULB	Yu-li baz=230	0.83	232	P	Pn	08 10 34.6	-0.1
YULB	baz=230			S	Sb	08 10 46.0	-0.1
TWT	Tachien baz=293	0.83	294	*i* P	Pb	08 10 35.3	0.0
TWT	baz=293			S	Sn	08 10 47.2	+1.0
EYUL	Yuli baz=227	0.84	229	*e*S	Sn	08 10 47.7	+1.5
TDCB	Techi baz=293	0.85	294	⇓P	Pb	08 10 35.3	-0.2
TDCB	baz=293			S	Sn	08 10 47.2	+0.7
TWE	Neicheng baz=340	0.86	339	P	Pb	08 10 35.4	-0.4
TWE	baz=340			S	Sn	08 10 47.0	+0.3
ILA	Ilan baz=345	0.88	345	*e*P	Pb	08 10 35.8	-0.2
ILA	baz=345			*e*S	Sn	08 10 48.0	+0.8
YHNB	Yeheng baz=322	0.95	323	P	Pn	08 10 36.5	+0.1
YHNB	baz=322			*e*S	Sb	08 10 48.7	-0.8
NTC	Toucheng baz=350	0.95	350	*e*P	Pn	08 10 36.5	+0.2
NTC	baz=350			*e*S	Sb	08 10 49.9	+0.4
FULB	Fuli baz=221	0.96	223	*e*P	Pb	08 10 37.4	0.0
FULB	baz=221			*e*S	Sn	08 10 49.6	+0.3
NSK	Sanguang baz=322	0.96	322	*i* P	Pb	08 10 37.1	-0.4
NSK	baz=322			*i* S	Sn	08 10 49.3	0.0
SSLB	Suanglung baz=261	0.97	263	P	Pb	08 10 37.1	-0.4
NWLT	Wulai baz=332	0.98	332	*e*P	Pb	08 10 37.4	-0.3
NWLT	baz=332			*e*S	Sb	08 10 49.7	-0.5
CHKT	Chengkung baz=214	1.00	216	P	Pn	08 10 36.9	-0.1
CHKT	baz=214			S	Sb	08 10 51.3	+0.5
JYNG	Yonagunijimaku	1.01	58	P	Pb	08 10 37.7	-0.5
JYNG				*e*S	Sb	08 10 50.9	-0.2
WCS	Beigang Elemen baz=277	1.01	279	*e*P	Pb	08 10 37.6	-0.5
WCS	baz=277			*e*S	Sb	08 10 51.2	0.0
SMLT	Sun Moon Lake baz=267	1.01	269	*i* P	Pb	08 10 38.1	-0.2
SMLT	baz=267			S	Sb	08 10 51.9	+0.6
WHP	Taichung City baz=290	1.04	291	P	Pb	08 10 38.6	0.0
WHP	baz=290			S	Sb	08 10 51.7	-0.2
TYC	Yuchr baz=268	1.05	270	*i* P	Pb	08 10 38.4	-0.5
TYC	baz=268			*i* S	Sb	08 10 52.2	-0.1
YOJ	Yonaguni jima baz=59	1.07	59	P	Pb	08 10 38.6	-0.5
YOJ	baz=59			S	Sb	08 10 52.4	-0.4
YOJ	Yonaguni jima	1.07	59	P	Pn	08 10 37.0	-1.0
YOJ				*e*S	Sn	08 10 51.5	-0.2
TIPB	Shuangxi baz=351	1.07	351	*i* P	Pb	08 10 38.9	-0.3
TIPB	baz=351			*i* S	Sb	08 10 52.8	-0.1
TWB1	Santiao Chiao	1.09	359	P	Pn	08 10 38.5	+0.2
TWB1				S	Sn	08 10 52.4	0.0
TWA	Mucha baz=340	1.13	340	S	Sb	08 10 54.7	+0.1
EDH	Donghe baz=213	1.14	215	*e*P	Pn	08 10 39.1	+0.2
EDH	baz=213			S	Sn	08 10 53.1	-0.3
NHDH	Xindian Distri baz=337	1.14	337	P	Pb	08 10 40.3	+0.1
NHDH	baz=337			S	Sb	08 10 54.9	+0.2
ELDTW	Lidau baz=230	1.16	232	*i* P	Pn	08 10 39.4	0.0
ELDTW	baz=230			*i* S	Sn	08 10 54.2	0.0
LIOB	Emei baz=308	1.16	309	*i* P	Pb	08 10 41.1	+0.3
LIOB	baz=308			S	Sb	08 10 55.3	-0.3
NSTT	Nanjuang baz=307	1.17	308	*i* P	Pb	08 10 40.6	-0.1
NSTT	baz=307			S	Sb	08 10 55.4	-0.2
ALS	Alishan baz=249	1.17	250	*i* P	Pb	08 10 41.0	-0.1
ALS	baz=249			S	Sb	08 10 56.3	+0.3
NWF	Wu-fen Shan baz=350	1.17	350	*i* P	Pb	08 10 41.0	0.0
NWF	baz=350			S	Sb	08 10 55.8	-0.1
WJS	Zhushan baz=265	1.18	266	P	Pn	08 10 39.9	+0.4
WJS	baz=265			*e*S	Sb	08 10 55.6	-0.2
TWQ1	Liyutan baz=290	1.21	291	P	Pb	08 10 41.9	+0.4
TWQ1	baz=290			S	Sb	08 10 57.7	+0.9
WNT	Mingjian baz=267	1.21	269	P	Pb	08 10 40.8	-0.8
WNT	baz=267			*e*S	Sb	08 10 56.5	-0.4
TCU	Taichung baz=280	1.24	281	*e*P	Pn	08 10 40.8	+0.4
TCU	baz=280			*e*S	Sb	08 10 57.1	-0.6
NSY	Sanyi baz=293	1.25	294	P	Pn	08 10 40.6	+0.2
NSY	baz=293			S	Sn	08 10 56.3	+0.2
NMLH	Miaoli baz=299	1.27	300	*e*P	Pn	08 10 40.6	-0.2
NMLH	baz=299			*e*S	Sn	08 10 57.5	+0.7
LONT	Longtian baz=218	1.28	219	*e*S	Sb	08 10 58.6	-0.3
NCUH	Zhongli baz=324	1.29	325	*e*P	Pb	08 10 42.1	-0.8
NCUH	baz=324			*e*S	Sb	08 10 59.1	0.0
NCU	National Centr baz=324	1.29	325	*e*P	Pb	08 10 42.2	-0.7
NCU	baz=324			*e*S	Sb	08 10 58.3	-0.9
YM01	YM01 baz=342	1.29	342	P	Pb	08 10 42.5	-0.5
YM01	baz=342			S	Sb	08 10 58.5	-0.7
TWS1	Kuangyinshan baz=336	1.30	336	*e*S	Sb	08 10 59.0	-0.4
LDUT	Ludao baz=201	1.33	202	*e*P	Pb	08 10 42.7	-0.8
WCHH	Zhanghua baz=276	1.34	278	*e*P	Pn	08 10 42.1	+0.5
WCHH	baz=276			*e*S	Sb	08 10 59.6	-0.8
NTST	Danshui baz=338	1.35	338	*e*P	Pn	08 10 41.5	-0.3
STYH	Taoyuan baz=236	1.35	237	*e*P	Pn	08 10 41.9	+0.1
STYH	baz=236			*e*S	Sb	08 11 00.5	-0.2
WDLH	Douliu baz=260	1.36	261	*e*P	Pb	08 10 43.2	-0.9
TWGBT	Beinan baz=217	1.38	218	*e*P	Pn	08 10 42.1	-0.2
TWGBT	baz=217			*e*S	Sn	08 10 59.9	+0.4
TWG	Pinlang baz=217	1.38	219	*e*P	Pn	08 10 42.1	-0.2
TWG	baz=217			S	Sn	08 10 60.0	+0.4
TPUB	Ta-pu baz=243	1.40	245	*e*P	Pb	08 10 44.6	-0.1
TPUB	baz=243			*e*S	Sb	08 11 01.3	-1.0
CHN4	Tsaushan baz=246	1.41	247	P	Pb	08 10 44.6	-0.3
WTP	Ta-pu baz=241	1.44	243	P	Pb	08 10 45.3	-0.2
WTP	baz=241			*e*S	Sb	08 11 02.9	-0.5
WRL	Guolierlin Hig baz=269	1.49	270	*e*P	Pn	08 10 44.6	+0.8
WRL	baz=269			*e*S	Sn	08 11 02.9	+0.7
TWK	Hsinying baz=244	1.53	246	*e*P	Pb	08 10 46.5	-0.6
CHN1	Nanshi baz=241	1.54	242	P	Pb	08 10 46.8	-0.3
CHN1	baz=241			*e*S	Sb	08 11 05.5	-0.7
SGST	Jiashian baz=236	1.55	238	*e*P	Pn	08 10 45.3	+0.7
SNST	Tainan City baz=242	1.55	244	*e*P	Pb	08 10 46.0	-1.2
SLGT	Liugui baz=233	1.55	234	*e*P	Pb	08 10 46.2	-1.0
SLGT	baz=233			*e*S	Sb	08 11 05.9	-0.6
IRIF	Iriomote-Funau	1.63	75	P	Pn	08 10 46.4	+0.7
IRIF				S	Sn	08 11 06.2	+0.6
HATJ	Hateruma jima	1.65	85	P	Pn	08 10 46.6	+0.6
HATJ				*e*S	Sn	08 11 06.9	+0.8
TSMG	Majia baz=225	1.73	227	*e*P	Pb	08 10 49.0	-1.4
MASBT	Mashibuluo baz=223	1.81	225	*e*P	Pb	08 10 50.1	-1.5
MASBT	baz=223			*e*S	Sn	08 11 11.5	+1.5
EAST	Anshuo baz=214	1.86	215	*e*P	Pb	08 10 50.9	-1.7
JKRS	Kuro-shima	1.86	80	P	Pn	08 10 50.0	+1.2
JKRS				S	Sn	08 11 12.7	+1.5
JIJ	Ishigaki jima	2.00	77	P	Pn	08 10 51.1	+0.3
JIJ				S	Sn	08 11 14.1	-0.7
KAU	Kaohsiung baz=228	2.06	230	*e*P	Pn	08 10 52.9	+1.4
WDGT	Dungji baz=252	2.25	254	P	Pn	08 10 55.8	+1.6
PHUB	P'eng-hu baz=259	2.27	260	*e*P	Pn	08 10 55.8	+1.3
PNG	Penghu baz=260	2.27	262	*e*P	Pn	08 10 55.7	+1.2
VCHM	Qimei baz=253	2.47	254	*e*P	Pn	08 10 58.6	+1.4

IDC 23 08:11:12.0±2.0, 15°.19S×178°.35W, h0^{km}, mb3.8/3, mb1 4.1/4, mb1mx3.6/39, mbtmp3.8/4, ML5.3/1, MS3.6/13, Ms1 3.6/13, ms1mx3.4/46, Error ellipse: s-maj=125.2km s-min=28.3km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu 6.2nm,0.3s,baz=270,slow=22,SNR=19	4.28	233	Pn	Pn	08 12 17.8	-0.7
MSVF	comp=Z,1µm,18.5s,baz=15,slow=38			LR	LR	08 13 57.2	
AFI	Afiamalu comp=Z,391nm,21.6s,baz=238,slow=31	6.49	80	LR	LR	08 14 32.6	
RAO	Raoul Island comp=Z,346nm,21.4s,baz=314,slow=31	14.00	178	LR	LR	08 18 32.1	
DZM	Mont Dzumac comp=Z,237nm,18.8s,baz=108,slow=34	15.95	242	LR	LR	08 20 12.8	
HNR	Honiara comp=Z,166nm,19.4s,baz=88,slow=34	21.96	283	LR	LR	08 23 33.1	
URZ	Urewera comp=Z,160nm,19.0s,baz=31,slow=33	23.33	189	LR	LR	08 23 53.4	
PPT	Papeete comp=Z,26nm,18.9s,baz=143,slow=34	27.69	99	LR	LR	08 26 38.7	
STKA	Stephens Creek comp=Z,55nm,19.5s,baz=40,slow=34	40.05	238	LR	LR	08 33 35.3	
ASAR	Alice Springs 1.3nm,0.7s,baz=81,slow=8.0,SNR=14	45.64	252	P	P	08 19 34.9	+0.2
ASAR	comp=Z,106nm,19.9s,baz=87,slow=34			LR	LR	08 36 53.1	
MJAR	Matsushiro Arr comp=Z,16nm,19.1s,baz=15,slow=34	65.79	323	LR	LR	08 48 58.8	
PETK	Petropavlovsk- comp=Z,47nm,22.0s,baz=156,slow=30	71.08	345	LR	LR	08 46 40.9	
PFO	Pinyon Flats O comp=Z,64nm,19.5s,baz=196,slow=31	76.34	49	LR	LR	08 51 11.1	
ILAR	Eielson Array 0.5nm,1.0s,baz=207,slow=7.8,SNR=2.4	83.24	13	P	P	08 23 39.8	-0.2
ANMO	Albuquerque comp=Z,44nm,18.1s,baz=272,slow=32	84.37	52	LR	LR	08 56 23.1	
TXAR	Lajitas Array 0.5nm,0.9s,baz=216,slow=4.3,SNR=3.4	84.50	58	P	P	08 23 47.4	+0.1

*IDC **23** 08:17:00.9±1.8, 10°.12S×117°.09E, h0^{km}, mb3.8/3, mb1 3.9/6, mb1mx3.3/46, mbtmp3.8/6, ML3.5/3, MS2.6/1, Ms1 2.6/1, ms1mx2.2/40, Error ellipse: s-maj=63.2km s-min=21.5km az=56.0*

*DJA **23** 08:17:07.5±0.8, 10°S±6°×11°7E±°, h18^{km}±7^{km}, M4.2/14, mb4.7/3, MLv4.0/14*

ISC 23 08:17:04.5±1.9, 10°.03S±0°.07×117°.36E±0°.04, h16^{km}±12^{km}, n20, σ2^{s}.31/28, mb4.2/3, 1C-1D, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	1.37	340	P	Pg	08 17 31.1	+0.2
TWSI				S	Sn	08 17 46.3	-0.5
WBSI	Waikabubak, Su	2.04	79	P	Pn	08 17 39.8	+1.6
WBSI				S	Sn	08 18 05.5	+2.1
IGBI	Denpasar	2.50	299	P	Pb	08 17 48.0	-1.0
IGBI				S	Sb	08 18 18.1	-1.4
DNP	Denpasar	2.51	302	P	Pb	08 17 49.5	+0.2
DNP				S	Sb	08 18 18.7	-1.3
SRBI	Singaraja	2.87	312	P	Pb	08 17 55.5	+0.1
SRBI				S	Sb	08 18 28.6	-1.7
BASI	Baing, Sumba	3.17	94	P	Pn	08 17 56.4	+2.6
JAGI	Jajag, Banyuwa	3.53	296	P	Pn	08 18 01.9	+3.2
JAGI				S	Sb	08 18 44.6	-4.7
ABJI	Asem Bagus	3.81	305	P	Pn	08 18 05.6	+3.1
GMJI	Gumukmas	4.24	294	P	Pn	08 18 11.4	+2.8
GMJI				S	Sn	08 19 02.6	+4.8
BLJI	Banyuglugur	4.36	301	P	Pn	08 18 12.5	+2.3
EDFI	Ende, Flores	4.46	74	P	Pn	08 18 13.2	+1.6
EDFI				S	Sn	08 19 04.7	+1.5
BSSI	Bau Bau, Buton	4.95	39	P	Pn	08 18 20.8	+2.5
BKSI	Bulukumba	5.42	31	P	Pn	08 18 26.9	+2.2
KAPI	Kappang 1.5nm,0.3s,baz=230,slow=17,SNR=5.5	5.52	26	Pn	Pn	08 18 28.6	+2.5
KAPI	3.3nm,0.3s,baz=304,slow=23,SNR=8.9			Sn	Sn	08 19 30.5	+1.3
KAPI	comp=Z,52nm,19.3s,baz=222,slow=40			LR	LR	08 20 50.0	
FITZ	Fitzroy Crossi 0.7nm,0.3s,baz=323,slow=8.2,SNR=7.3	11.35	136	Pn	Pn	08 19 45.1	-1.0
FITZ	0.2nm,0.3s,baz=182,slow=18,SNR=2.2			Sn	Sn	08 21 42.9	-10
WRA	Warramunga Arr 0.1nm,0.3s,baz=298,slow=13,SNR=3.7	19.11	123	P	P	08 21 26.9	-0.1
ASAR	Alice Springs 1.8nm,0.6s,baz=319,slow=12,SNR=25	20.81	133	P	Pn	08 21 46.6	-1.3
SONM	Songino Array 1.2nm,0.5s,baz=170,slow=7.4,SNR=7.8	58.43	351	P	P	08 26 58.6	-1.0
MKAR	Makanchi Array 0.6nm,0.7s,baz=144,slow=7.3,SNR=5.3	64.65	334	P	P	08 27 40.0	-1.6
AKTO	Aktyubinsk 7.9nm,1.4s	79.16	326	⇓Pg	P	08 29 08.0	-0.6
AKTO	7.1nm,1.4s			⇑Lg	Lg	08 29 50.7	

NOU 23 08:23:15.3, 15°.00S×165°.77E, h5^{km}, MLv4.6/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.45	108	P	Pn	08 23 41.6	-0.6
DVP	Devils Point	3.57	140	P	Pn	08 24 11.4	+0.1
KOUNC	Koumac, New Ca	5.70	194	P	Pn	08 24 40.8	+0.1
DZM	Mont Dzumac	7.06	175	P	Pn	08 24 58.8	-0.7
NOUC	Port Laguerre	7.08	176	P	Pn	08 25 00.0	+0.3
YATNC	Mamie plateau,	7.10	172	P	Pn	08 24 59.1	-0.8
ONTNC	Ouen Toro	7.30	175	P	Pn	08 25 03.3	+0.7

*DJA **23** 08:24:23.4±0.3, 3°N±2°×9°7E±°, h10^{km}±5^{km}, M4.5/15, mb4.8/5, mB5.9/1, MLv4.4/15, Mw(mB)5.5/1*

*NEIC **23** 08:24:24.2±1.3, 2°.53N±0°.07×96°.72E±0°.08, h40^{km}±9^{km}, mb4.5/19, Error ellipse: s-maj=14.5km s-min=5.1km az=51.0*

*IDC **23** 08:24:25.2±4.7, 2°.52N×96°.80E, h56^{km}±39^{km}, mb3.9/17, mb1 4.0/19, mb1mx3.7/60, mbtmp4.2/19, ML4.0/2, MS3.0/2, Ms1 3.2/2, ms1mx2.8/51, Error ellipse: s-maj=44.5km s-min=13.6km az=56.0*

ISC 23 08:24:24.8±0.9, 2°.60N±0°.04×96°.73E±0°.05, h49^{km}±9^{km}, n68, σ1^{s}.37/68, mb4.4/34, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.45	245	P	Pn	08 24 36.4	+1.0
SNSI				S	Sn	08 24 43.5	+0.5
TPTI		0.80	34	P	Pn	08 24 37.9	-1.9
TPTI				S	Sn	08 24 48.3	-2.4
KCSI	Kotacane, Aceh	1.39	48	P	Pn	08 24 46.9	-0.9
KCSI				S	Sn	08 25 05.0	0.0
GSI	Gunungsitoli	1.54	147	P	Pn	08 24 48.6	-1.2
GSI				S	Sn	08 25 07.4	-1.3
GSI	Gunungsitoli	1.54	147		Pn	08 24 48.6	-1.2
TSI	Tuntungan	2.04	64	P	Pn	08 24 56.1	-0.6
TSI				S	Sn	08 25 20.9	0.0
RPSI	Rantau Prapat	2.19	87		Pn	08 24 58.8	0.0
RPSI					Sn	08 25 31.2	+6.5
PSI	Prapat 9.2nm,0.3s,baz=317,slow=9.4,SNR=19	2.20	85	P	Pn	08 24 58.8	-0.2
PSI	18nm,0.3s,baz=323,slow=16,SNR=6.3			S	Sn	08 25 31.2	+6.1
PSI	comp=Z,213nm,18.2s,baz=280,slow=50			LR	LR	08 26 11.1	
LHMI	Lhok Sumawe	2.62	5	P	Pn	08 25 05.3	+0.6
LHMI	Lhok Sumawe	2.62	5	Pn	Pn	08 25 05.3	+0.6
PBSI	Pulau Batu	3.06	150	P	Pn	08 25 10.0	-0.6
MNSI	Mandailing Nat	3.36	122	P	Pn	08 25 14.3	-0.5
IPM	Ipoh	4.67	66	Pn	Pn	08 25 32.4	-0.5
KULM	Kulim	4.74	55	Pn	Pn	08 25 33.0	-0.7
PPI	Padang Panjang	4.76	130	P	Pn	08 25 33.3	-0.7
PPSI	Pulau Pagai 0.6nm136nm,1.4s	6.25	148	P	Pn	08 25 54.3	-0.2
KRJI	Kerinci	6.64	135	P	Pn	08 25 59.0	-0.9
MASI	Maura Aman, Be 0.7nm80nm,2.0s	7.92	136	P	Pn	08 26 17.1	-0.4
LHSI	Lahat	9.32	133	P	Pn	08 26 36.1	-0.4
CMAR	Chiang Mai Arr 0.7nm,0.3s,baz=196,slow=11,SNR=16	15.91	8	P	P	08 28 07.5	-0.9
CMAR	comp=Z,94nm,19.1s,baz=196,slow=38			LR	LR	08 34 40.7	
H08S2	Diego Garcia H baz=69,slow=76,SNR=97	26.24	247	T	T	08 56 38.4	
H08S3	Diego Garcia H baz=69,slow=76,SNR=88	26.24	247	T	T	08 56 39.9	
H08S1	Diego Carcia H baz=69,slow=76,SNR=44	26.25	247	T	T	08 56 40.5	
JIRN	Jiri 30nm,0.8s	26.88	339	*e*P	P	08 30 02.2	+0.6
PKI	Pulchoki 7.8nm,0.5s	27.09	337	*e*P	P	08 30 03.9	+0.5
PKIN	Phulchoki 8.4nm,0.5s	27.10	337	*e*P	P	08 30 03.6	+0.1
GUN	Gumba	27.22	339	*e*P	P	08 30 05.4	+0.8
DMN	Daman	27.24	337	*e*P	P	08 30 05.3	+0.6
KKN	Kakani 14nm,0.5s	27.34	337	*e*P	P	08 30 06.3	+0.8
GKN	Gorkha 5.8nm,0.3s	27.78	337	*e*P	P	08 30 09.5	+0.1
DANN	Dangsing 12nm,0.4s	28.44	335	*e*P	P	08 30 15.9	+0.4
PYUN	Piuthan 5.2nm,0.4s	28.55	334	*e*P	P	08 30 17.0	+0.7
FITZ	Fitzroy Crossi 4.3nm,0.8s,baz=299,slow=10,SNR=2.7	35.13	127	P	P	08 31 11.7	-2.2
H01W3	Cape Leeuwin H baz=334,slow=76,SNR=3.1	40.71	158	T	T	09 15 30.7	
H01W2	Cape Leeuwin H baz=334,slow=76,SNR=3.1	40.72	158	T	T	09 15 33.7	
H01W1	Cape Leeuwin H baz=334,slow=76,SNR=4.0	40.72	158	T	T	09 15 31.8	
TARG	Taragay, Kyrgy	42.51	339	P	P	08 32 16.9	+1.0
TARG	comp=Z,6.9nm,0.6s			IAmb	IAmb	08 32 18.5	
WB0	Warramunga Arr	43.14	123	P	P	08 32 20.3	-0.6
WB0	comp=Z,8.8nm,1.2s			IAmb	IAmb	08 32 31.0	
WRA	Warramunga Arr comp=Z,1.7nm,0.6s,baz=301,slow=9.1,SNR=29	43.17	123	P	P	08 32 20.6	-0.5
WB2	Warramunga Arr	43.19	123	P	P	08 32 20.8	-0.4
WB2	comp=Z,11nm,1.2s			IAmb	IAmb	08 32 21.2	
WR0	Warramunga Arr	43.35	123	P	P	08 32 22.1	-0.4
WR0	comp=Z,22nm,1.5s			IAmb	IAmb	08 32 41.0	
BOOM	Boomskoye usch	43.86	338	P	P	08 32 27.4	+0.9
BOOM	comp=Z,5.8nm,0.8s			IAmb	IAmb	08 32 28.8	
ASAR	Alice Springs comp=Z,0.5nm,0.5s,baz=325,slow=9.8,SNR=5.4	44.61	128	P	P	08 32 30.9	-1.8
FORT	Forrest	44.64	140	P	P	08 32 32.3	-0.4
MK31	Makanchi Array	45.78	346	P	P	08 32 41.7	+0.2
MK31	comp=Z,3.5nm,0.8s			IAmb	IAmb	08 32 42.9	
MKAR	Makanchi Array comp=Z,2.3nm,0.4s,baz=161,slow=8.6,SNR=58	45.78	346	P	P	08 32 41.9	+0.4
MKAR	Makanchi Array	45.78	346	P	P	08 32 41.5	0.0
SONM	Songino Array comp=Z,2.6nm,0.4s,baz=190,slow=9.0,SNR=27	45.83	9	P	P	08 32 41.7	-0.4
SONM	comp=Z,0.6nm,0.4s,baz=189,slow=3.8,SNR=5.5			PcP	PcP	08 34 19.4	+0.6
SONM	Songino Array comp=Z,1.3nm,0.7s	45.83	9	IAmb	IAmb	08 32 43.2	
MAKZ	Makanchi	45.87	346	P	P	08 32 42.4	+0.1
MAKZ	comp=Z,5.2nm,0.5s			IAmb	IAmb	08 32 43.8	
TLY	Talaya comp=Z,3.8nm,0.6s,baz=243,slow=24,SNR=3.6	49.26	6	P	P	08 33 08.6	+0.2
KURBB	Kurchatov Arra comp=Z,1.1nm,0.5s,baz=167,slow=6.8,SNR=8.4	50.27	345	P	P	08 33 16.1	0.0
KURK	Kurchatov	50.33	345	P	P	08 33 16.1	-0.5
KURK	Kurchatov comp=Z,9.0nm,1.5s	50.33	345	IAmb	IAmb	08 33 17.1	
ZAA0	Zalesovo Array	52.11	351	P	P	08 33 30.3	+0.4
ZAA0	comp=Z,12nm,1.1s			IAmb	IAmb	08 33 30.7	
ZALV	Zalesovo Beam	52.11	351	P	P	08 33 30.5	+0.6

	comp=Z,7.0nm,0.4s,baz=170,slow=7.1,SNR=32						
ZALV	Zalesovo Beam	52.11	351	P	P	08 33 29.7	-0.1
STKA	Stephens Creek	54.64	133	P	P	08 33 47.9	-0.9
	comp=Z,0.4nm,0.4s,baz=287,slow=5.2,SNR=2.9						
BVAR	Borovoye Array	54.78	341	P	P	08 33 49.4	-0.1
	comp=Z,1.9nm,0.6s,baz=170,slow=11,SNR=8.9						
KLR	Kul'dur	55.23	27	P	P	08 33 52.4	-0.4
	comp=Z,0.3nm,0.4s,baz=240,slow=9.3,SNR=5.6						
ABKAR	Akbulak array	56.07	332	P	P	08 33 58.9	+0.1
ABKAR				IAmb	IAmb	08 34 12.2	
	comp=Z,2.1nm,0.8s						
ABKAR	Akbulak array	56.07	332	P	P	08 33 59.3	+0.5
AKTO	Aktyubinsk	57.79	332	P	P	08 34 10.7	-0.3
	comp=Z,0.7nm,0.3s,baz=113,slow=7.7,SNR=2.9						
KBZ	Khabaz	62.72	319	P	P	08 34 46.5	+1.7
	comp=Z,1.2nm,0.5s,baz=144,slow=14,SNR=1.6						
BELG	Belogornoye	64.13	329	P	P	08 34 53.4	-0.5
	comp=Z,4.8nm,0.6s,baz=336,slow=4.0,SNR=4.8						
AKASG	Malin Array Be	73.87	322	P	P	08 35 54.2	-0.2
	comp=Z,0.3nm,0.3s,baz=87,slow=5.4,SNR=5.3						
FINES	FINESS Array B	78.55	332	P	P	08 36 21.2	+0.4
	comp=Z,6.0nm,1.0s,baz=104,slow=5.9,SNR=12						
ARCES	ARCESS Array B	81.07	340	P	P	08 36 35.1	+0.8
	comp=Z,0.9nm,0.4s,baz=94,slow=5.2,SNR=21						

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*REN **23** 08:29:20.6±0.7, 39°.43N±0°.01×119°.78W±0°.02, h8^{km}±1^{km}, ML2.5/8, ML2.4/38(NEIC), Error ellipse: s-maj=2.4km s-min=1.5km az=90.0*

NEIC 23 08:29:20.5±0.9**, 39°.42N**±0°.01×**119°.79W**±0°.02**, h9**^{km}±2^{km}**, Error ellipse: s-maj=1.9km s-min=1.5km az=99.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCNR	Virginia City	0.17	139		Pg	08 29 24.4	+0.1
VCNR				Sg	Sg	08 29 26.4	-0.4
MPK	Martis Peak	0.22	235		Pg	08 29 25.6	+0.4
PEAR	Peavine Mounta	0.23	325		Pg	08 29 25.4	+0.1
PNTR	Pine Nut	0.37	156		Pg	08 29 27.9	+0.1
PNTR				IAML		08 29 37.0	
	comp=E,325nm,0.6s						
PAHR	Pah Rah Range	0.42	48		Pg	08 29 28.6	-0.3
PAHR				Sg	Sg	08 29 34.5	0.0
PAHR				IAML		08 29 34.8	
	comp=N,357nm,0.3s						
RUBR	Rubicon Trail	0.47	217		Pg	08 29 29.9	+0.2
RUBR				Sg	Sg	08 29 35.0	-0.8
RUBR				IAML		08 29 37.1	
	comp=N,219nm,0.5s						
RUBR				IAML		08 29 37.8	
	comp=E,273nm,0.3s						
GNO	Genoa	0.49	185		Pg	08 29 30.5	+0.3
EMB	Emerald Bay	0.51	208		Pg	08 29 30.6	+0.2
EMB				IAML		08 29 38.8	
	comp=E,186nm,0.2s						
WVA	Winnemucca Val	0.52	357		Pg	08 29 30.5	-0.2
BFC	Buffalo Canyon	0.55	165		Pg	08 29 31.3	+0.1
YERR	Yerington	0.61	135		Pg	08 29 32.3	-0.1
YERR				IAML		08 29 41.2	
	comp=E,241nm,0.3s						
YERR				IAML		08 29 41.5	
	comp=N,237nm,0.2s						
RYN	Ryan	1.27	128		Pn	08 29 44.3	-0.3
RYN				IAML		08 30 03.1	
	comp=E,43nm,0.3s						
RYN				IAML		08 30 04.8	
	comp=N,66nm,0.6s						
ORV	Oroville	1.33	276		Pn	08 29 44.7	-0.5
ORV				IAML		08 30 03.0	
	comp=N,44nm,0.2s						
KVN	Kaiserville	1.37	105		Pn	08 29 45.6	-0.4
KVN				Sn	Sb	08 30 03.9	-0.2
KVN				IAML		08 30 06.1	
	comp=E,71nm,0.5s						
KVN				IAML		08 30 06.1	
	comp=N,66nm,0.4s						
CMB	Columbia Colle	1.46	199		Pn	08 29 47.5	+0.4
CMB				Sn	Sn	08 30 06.4	-0.1
NVAR	Mina Array Bea	1.53	130		Pn	08 29 48.1	-0.1
LHV	Little Huntoon	1.54	139		Pb	08 29 49.2	0.0
LHV				IAML		08 30 14.9	
	comp=N,48nm,0.6s						
LHV				IAML		08 30 20.9	
	comp=E,35nm,2.1s						
NV11	Mina Array Sit	1.62	127		Pn	08 29 50.0	+0.6
BMN	Battle Mountai	2.22	62	Pn	Pn	08 29 56.3	-1.4
WDC	Whiskeytown Da	2.41	300	Pn	Pn	08 30 00.2	+0.1
WDC				IAML		08 30 30.3	
	comp=E,21nm,4.8s						
WDC				IAML		08 31 32.0	
	comp=N,25nm,4.6s						
MOD	Modoc Plateau	2.51	351	Pn	Pn	08 30 03.0	+1.4
MOD				IAML		08 30 46.0	
	comp=E,24nm,5.0s						
MOD				IAML		08 31 00.0	
	comp=N,18nm,3.6s						
HOPS	Hopland Field	2.58	261	Pn	Pn	08 30 04.5	+2.0

IDC 23 08:32:01.1±2.1**, 0°.91N**×**126°.44E, h0**^{km}**, mb3.2**/3**, mb1 3.5**/3**, mb1mx2.7**/55**, mbtmp3.2**/3**, Error ellipse: s-maj=186.1km s-min=26.3km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.12	160	P	P	08 36 57.1	-1.3
	0.8nm,0.7s,baz=338,slow=11,SNR=3.0						
ASAR	Alice Springs	25.48	164	P	P	08 37 32.2	+1.0
	0.1nm,0.3s,baz=347,slow=12,SNR=4.3						
MKAR	Makanchi Array	59.71	326	P	P	08 42 07.5	-0.1
	0.1nm,0.3s,baz=125,slow=7.1,SNR=2.9						

IDC 23 08:36:25.9±9.8**, 6°.80S**×**129°.72E, h104**^{km}±102^{km}**, mb2.9**/1**, mb1 3.4**/4**, mb1mx2.9**/48**, mbtmp3.5**/4**, ML3.7**/3**, Error ellipse: s-maj=71.1km s-min=38.8km az=51.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.91	199	P	Pn	08 39 14.0	+1.6
	0.2nm,0.3s,baz=74,slow=7.4,SNR=10.0						
FITZ				S	Sn	08 41 22.2	-1.3
	baz=68,slow=19						
WRA	Warramunga Arr	13.82	161	P	Pn	08 39 36.4	-1.0
	0.5nm,0.3s,baz=337,slow=14,SNR=24						
WRA				S	Sn	08 42 09.3	-0.3
	0.4nm,0.3s,baz=333,slow=20,SNR=7.1						
ASAR	Alice Springs	17.25	167	P	P	08 40 19.4	-0.9
	0.2nm,0.3s,baz=341,slow=8.7,SNR=15						
ASAR				S	S	08 43 34.4	-0.3
	0.1nm,0.3s,baz=351,slow=35,SNR=2.6						
MKAR	Makanchi Array	67.90	327	P	P	08 47 13.3	0.0
	0.2nm,0.8s,baz=141,slow=5.5,SNR=1.5						

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*IDC **23** 08:56:09.9±5.3, 4°.86S×151°.13E, h74^{km}±45^{km}, mb3.8/4, mb1 4.1/5, mb1mx3.4/33, mbtmp4.2/5, ML2.4/1, Error ellipse: s-maj=64.1km s-min=29.5km az=133.0*

ISC 23 08:56:11.5±1.4**, 4°.9S**±0°.4×**151°.2E**±0°.4**, h100**^{km}**, n7, σ1^{s}.41**/8**, mb4.0**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.96	222	P	Pn	08 57 36.6	-0.7
	6.2nm,0.3s,baz=47,slow=5.9,SNR=9.7						
PMG				S	Sn	08 58 44.3	+0.1
	15nm,0.3s,baz=135,slow=22,SNR=18						
WRA	Warramunga Arr	22.16	226	P	P	09 00 59.5	+0.1
	3.6nm,0.6s,baz=50,slow=10,SNR=30						
ASAR	Alice Springs	24.98	220	P	P	09 01 26.8	+0.8
	6.8nm,0.6s,baz=55,slow=8.8,SNR=51						
FITZ	Fitzroy Crossi	28.18	240	P	P	09 01 56.0	+1.3
	3.2nm,0.7s,baz=49,slow=9.3,SNR=8.9						
ILAR	Eielson Array	82.90	22	P	P	09 08 25.7	+0.9
	0.3nm,0.6s,baz=251,slow=4.8,SNR=9.6						
PTGA	Pitinga	148.38	99	PKPbc	PKiKP	09 15 48.3	-0.7
	1.6nm,0.6s,baz=272,slow=8.3,SNR=7.0						
TORD	Torodi Ar. Bea	148.81	287	PKPbc	PKPab	09 15 50.1	-2.4
	0.6nm,0.8s,baz=59,slow=4.8,SNR=3.6						

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*IDC **23** 09:09:39.4±1.6, 29°.41S×70°.40W, h0^{km}, mb3.5/2, mb1 3.8/3, mb1mx3.6/27, mbtmp3.5/3, ML3.9/1, Error ellipse: s-maj=69.3km s-min=38.9km az=9.0*

*GUC **23** 09:09:53.0±0.7, 28°.82S×69°.52W, h103^{km}±11^{km}, ML3.6*

ISC 23 09:09:54.0±0.9**, 28°.82S**±0°.05×**69°.61W**±0°.09**, h112**^{km}±10^{km}**, n12, σ0^{s}.67**/17**, 3C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.97	258	eP	Pn	09 10 14.9	-0.5
LCO				eS	Sn	09 10 32.4	+0.9
GO03	Copiap	1.34	336	⇑iP	Pn	09 10 18.6	-0.6
GO03				eS	Sn	09 10 37.6	-0.5
GO03				IAML		09 10 40.2	
	comp=N,2µm,0.2s						
AC04	Llanos de Chal	1.42	295	⇑iP	Pn	09 10 20.0	0.0
AC04				eS	Sn	09 10 39.9	0.0
AC04				IAML		09 10 41.7	
	comp=E,758nm,0.1s						
GO04	Tololo Observa	1.70	217	eP	Pn	09 10 23.2	-0.4
GO04				eS	Sn	09 10 46.4	+0.3
AC02	Maricunga	2.02	12	i P	Pn	09 10 27.3	-0.5
AC02				eS	Sn	09 10 53.5	-0.2
AC02				IAML		09 10 55.5	
	comp=E,216nm,0.4s						
CO03	El Pedregal	2.22	205	⇑iP	Pn	09 10 29.6	-0.4
CO03				eS	Sn	09 10 57.6	0.0
CO03				IAML		09 11 00.6	
	comp=E,561nm,0.3s						
CO06	Fray Jorge	2.55	223	i P	Pn	09 10 32.9	-1.3
CO06				IAML		09 11 06.3	
	comp=E,241nm,0.3s						
CPUP	Villa Florida	11.18	80	Pn	Pn	09 12 31.1	+0.6
	comp=E,0.2nm,0.3s,baz=255,slow=16,SNR=1.5						
TXAR	Lajitas Array	66.35	328	P	P	09 20 31.6	+0.8
	comp=E,0.3nm,0.6s,baz=161,slow=8.6,SNR=4.5						
TORD	Torodi Ar. Bea	80.47	69	P	P	09 21 59.0	+5.1
	comp=E,0.3nm,0.7s,baz=252,slow=4.2,SNR=2.4						
WRA	Warramunga Arr	126.29	208	PKP	PKPdf	09 28 43.2	-0.9
	comp=E,0.2nm,0.5s,baz=152,slow=1.7,SNR=6.0						
ZALV	Zalesovo Beam	148.73	29	PKPbc	PKPbc	09 29 27.8	+0.1
	comp=E,1.0nm,0.5s,baz=300,slow=3.2,SNR=2.4						

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*VAO **23** 09:15:34.1±0.5, 31°.07S×71°.26W, h10^{km}, mb4.3*

*SJA **23** 09:15:35.1±0.8, 31°.01S×71°.66W, h66^{km}±6^{km}, ML4.3, MW4.3*

*IDC **23** 09:15:37.8±0.7, 31°.04S×71°.26W, h49^{km}±5^{km}, mb3.8/7, mb1 4.0/12, mb1mx3.8/33, mbtmp4.0/12, MS3.1/3, Ms1 3.1/3, ms1mx3.0/20, Error ellipse: s-maj=24.4km s-min=18.9km az=104.0*

*GUC **23** 09:15:37.9±0.7, 31°.06S×71°.34W, h57^{km}±3^{km}, ML4.5*

*NEIC **23** 09:15:38.0±2.0, 31°.05S±0°.04×71°.44W±0°.08, h44^{km}±5^{km}, mb4.6/20, ML4.5(GUC), Error ellipse: s-maj=10.4km s-min=5.3km az=94.0*

ISC 23 09:15:37.4±0.6**, 31°.08S**±0°.03×**71°.48W**±0°.04**, h48**^{km}±5^{km}**, n165, σ2^{s}.13**/191**, mb4.5**/13**, 1C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.43	341	⇓iP	Pn	09 15 49.2	+1.5
CO06				i S	Sn	09 15 57.2	+2.2
CO06				IAML		09 15 58.3	
	comp=E,59µm,0.2s						
CO06	Fray Jorge	0.43	341		Pn	09 15 49.3	+1.5
CO03	El Pedregal	0.72	71	⇓iP	Pn	09 15 51.0	-0.4
CO03				eS	Sn	09 16 00.2	-1.3
CO03	El Pedregal	0.72	71		Pn	09 15 51.0	-0.4
CO03					Sn	09 16 00.5	-1.1
CO03	El Pedregal	0.72	71	eP	Pn	09 15 51.0	-0.4
CO03				eS	Sn	09 16 00.6	-0.9
CO03				IAML		09 16 01.1	
	comp=Z,9µm,0.5s						
GO04	Tololo Observa	1.08	33	⇓iP	Pn	09 15 56.3	0.0
GO04				eS	Sn	09 16 08.6	-1.8
GO04	Tololo Observa	1.08	33		Pn	09 15 56.4	+0.1
GO04	Tololo Observa	1.08	33	eP	Pn	09 15 56.2	-0.1
CO05	La Serena	1.18	10		Pn	09 15 57.9	+0.4
VA06	Catapilco	1.48	174	eP	Pn	09 16 03.1	+1.5
VA06				eS	Sn	09 16 20.5	+0.7
VA06				IAML		09 16 25.4	
	comp=E,10µm,0.5s						
VA03	San Esteban	1.85	155	eP	Pn	09 16 07.8	+1.0
VA03				eS	Sn	09 16 30.6	+1.5
VA03				IAML		09 16 37.2	
	comp=E,6µm,0.2s						
VA03	San Esteban	1.85	155		Pn	09 16 08.1	+1.3
VA03	San Esteban	1.85	155	eP	Pn	09 16 08.2	+1.4
VA03				eS	Sn	09 16 36.9	+7.8
VA03				IAML		09 16 41.4	
	comp=Z,3µm,0.3s						
ROCH	El Roble	1.93	168	eP	Pn	09 16 09.2	+1.2
ROCH				eP	Pn	09 16 09.0	+1.1
ROCH				eS	Sn	09 16 33.5	+2.4
ROCH				IAML		09 16 37.5	
	comp=N,4µm,0.5s						
ROCH				IAML		09 16 38.0	
	comp=N,5µm,0.3s						
ROC1	El Roble	1.93	168	eP	Pn	09 16 09.1	+1.1
ROC1				eS	Sn	09 16 35.2	+4.0
VA01	Torpederas	1.94	184	eP	Pn	09 16 08.8	+0.9
VA01	Torpederas	1.94	184	Pn	Pn	09 16 08.6	+0.7
VA01	Torpederas	1.94	184	eP	Pn	09 16 09.0	+1.1
VA01				eS	Sn	09 16 38.4	+7.3
VA01				IAML		09 16 39.2	
	comp=Z,1µm,0.3s						
AROD	Rodeo	1.95	63	eP	Pn	09 16 10.0	+1.6
AROD				eS	Sn	09 16 35.4	+3.6
RTLS	Leoncito	2.00	112	eP	Pn	09 16 11.0	+2.1
RTLS				IAML		09 16 42.0	
	comp=Z,1µm,0.3s						
AUSP	Uspallata	2.11	123	eP	Pn	09 16 13.0	+2.5
ACCO	Cerro Coronel	2.13	77	eP	Pn	09 16 13.0	+2.2
PEL	Peldehue	2.16	162	eP	Pn	09 16 12.2	+1.3
PEL				IAML		09 16 46.1	
	comp=E,2µm,0.2s						
PEL	Peldehue	2.16	162		Pn	09 16 12.3	+1.3
PEL	Peldehue	2.16	162	eP	Pn	09 16 12.0	+1.0
PEL				eP	Pn	09 16 12.4	+1.4
PEL				eS	Sn	09 16 29.0	-7.7
LCO	Las Campanas	2.17	18	eP	Pn	09 16 12.1	+0.7
LCO	Las Campanas	2.17	18	Pn	Pn	09 16 12.3	+1.0
LCO	Las Campanas	2.17	18	eP	Pn	09 16 12.0	+0.7
MT02	Curacav	2.19	173	eP	Pn	09 16 12.2	+0.9
MT02	Curacav	2.19	173		Pn	09 16 12.3	+0.9
MT02	Curacav	2.19	173	eP	Pn	09 16 12.0	+0.7
MT02				eP	Pn	09 16 12.4	+1.1
MT02				eP	Pn	09 16 12.4	+1.1
MT02				eS	Sn	09 16 43.2	+5.9
MT02				IAML		09 16 45.7	
	comp=Z,1µm,0.2s						
ACDV	Cuesta del Vie	2.22	67	eP	Pn	09 16 14.0	+2.1
ACDV				eS	Sn	09 16 37.7	-0.6
ACDV				eS	Sn	09 16 43.3	+5.0
ACDV				IAML		09 16 44.5	
	comp=Z,1µm,0.4s						
MT05	Renca	2.39	165	eP	Pn	09 16 15.5	+1.4
MT05				IAML		09 16 57.1	
	comp=E,6µm,0.5s						
MT05	Renca	2.39	165		Pn	09 16 15.7	+1.6
MT05	Renca	2.39	165	eP	Pn	09 16 15.7	+1.6
MT05				eP	Pn	09 16 16.0	+1.9
MT05				eS	Sn	09 16 31.8	-10
MT05				IAML		09 16 57.0	
	comp=Z,2µm,1.3s						
ZON	Zonda	2.44	102		Pn	09 16 17.6	+2.8
ZON	Zonda	2.44	102	eP	Pn	09 16 11.7	-3.1
ZON				eP	Pn	09 16 17.0	+2.2
ZON				eS	Sn	09 16 37.6	-5.8
ZON				IAML		09 16 50.4	
	comp=Z,871nm,0.6s						
FCH	Farellones	2.46	156	eP	Pn	09 16 16.9	+1.6
FCH				IAML		09 16 57.8	
	comp=E,2µm,0.2s						
RTCV	Cerro Valdivia	2.63	108	eP	Pn	09 16 20.0	+2.7
ASAL	Salagasta	2.71	124	eP	Pn	09 16 21.7	+3.2
ASAL				eS	Sn	09 16 39.9	-10
MT09	Talagante	2.72	171	eP	Pn	09 16 20.1	+1.4
MT09				IAML		09 17 05.4	
	comp=E,2µm,0.7s						
MT09	Talagante	2.72	171		Pn	09 16 20.5	+1.8
MT01	Popeta	2.78	176	eP	Pn	09 16 20.3	+0.9
MT01	Popeta	2.78	176	Pn	Pn	09 16 21.0	+1.6
MT01	Popeta	2.78	176	eP	Pn	09 16 20.0	+0.6
MT01				eP	Pn	09 16 20.8	+1.3
MT01				eS	Sn	09 16 55.9	+4.1
MT01				eS	Sn	09 16 56.2	+4.4
MT01				IAML		09 17 07.9	
	comp=Z,813nm,0.7s						
ARCO	CERRO ARCO	2.79	130	eP	Pn	09 16 23.0	+3.4
ARCO				eS	Sn	09 16 40.0	-12
ARCO				IAML		09 17 18.8	
	comp=Z,870nm,0.9s						
AC04	Llanos de Chal	2.89	7	eP	Pn	09 16 21.7	+0.8
AC04				IAML		09 17 09.9	
	comp=E,2µm,0.3s						
AC04	Llanos de Chal	2.89	7	Pn	Pn	09 16 22.1	+1.2
LMEL	Las Melosas	2.96	159	eP	Pn	09 16 24.6	+2.6
LMEL				IAML		09 17 19.1	
	comp=N,1µm,0.2s						
BO04	La Punta	2.99	166	eP	Pn	09 16 23.9	+1.6
BO04				IAML		09 17 16.1	
	comp=E,1µm,0.4s						
AAGR	Agrelo	3.01	132	eP	Pn	09 16 26.0	+3.4
AAGR				eS	Sn	09 17 12.4	+15
BO01	Tunca	3.32	174	eP	Pn	09 16 27.7	+0.9
BO01	Tunca	3.32	174	Pn	Pn	09 16 27.9	+1.2
BO01	Tunca	3.32	174	eP	Pn	09 16 28.0	+1.2
BO01				eS	Sn	09 17 04.2	-0.8
BO01				IAML		09 17 25.1	
	comp=Z,460nm,1.1s						
AVFE	Valle Fertil	3.48	84	eP	Pn	09 16 30.5	+1.3
AVFE				eS	Sn	09 17 13.1	+3.9
AVFE				IAML		09 17 17.3	
	comp=Z,631nm,0.7s						
GO03	Copiap	3.64	18	eP	Pn	09 16 31.6	+0.3
GO03	Copiap	3.64	18	Pn	Pn	09 16 32.7	+1.4
GO03	Copiap	3.64	18	eP	Pn	09 16 32.0	+0.7
GO03				eS	Sn	09 17 11.7	-1.3
BO02	Sierra Bellavi	3.75	171	eP	Pn	09 16 34.0	+1.2
BO02	Sierra Bellavi	3.75	171		Pn	09 16 34.3	+1.5
BO02	Sierra Bellavi	3.75	171	eP	Pn	09 16 34.2	+1.5
BO02				eS	Sn	09 17 20.7	+5.0
BO02				IAML		09 17 27.4	
	comp=Z,543nm,0.6s						
GO05	Huala	3.94	185	eP	Pn	09 16 35.2	-0.1
GO05	Huala	3.94	185		Pn	09 16 35.7	+0.3
GO05	Huala	3.94	185	eP	Pn	09 16 35.6	+0.3
GO05				eS	Sn	09 17 34.7	+14
ACHE	Chepes	4.13	92	eP	Pn	09 16 39.3	+1.2
ACHE				eS	Sn	09 17 27.8	+2.6
ACLC	CERRO LA CRUZ	4.25	68	eP	Pn	09 16 41.1	+1.4
ACLC				eS	Sn	09 17 30.1	+1.9
ACLC				IAML		09 17 39.0	
	comp=Z,1µm,0.5s						
APLL	PUNTA DE LOS L	4.31	82	eP	Pn	09 16 41.7	+1.2
APLL				eS	Sn	09 17 36.9	+7.3
ML02	Panimavida	4.67	179	eP	Pn	09 16 45.3	0.0
ML02	Panimavida	4.67	179	Pn	Pn	09 16 46.3	+0.9
AC02	Maricunga	4.70	27	⇑iP	Pn	09 16 47.3	+1.0
AC02	Maricunga	4.70	27	Pn	Pn	09 16 47.5	+1.3
AC02	Maricunga	4.70	27	eS	Sn	09 17 49.2	+9.4
AC02				IAML		09 18 01.1	
	comp=Z,486nm,1.3s						
H03N1	Juan Fernandez	6.72	248	T	T	09 24 06.3	
	baz=74,slow=72,SNR=2290						
H03N3	Juan Fernandez	6.74	247	T	T	09 24 07.2	
	baz=74,slow=72,SNR=1397						
H03N2	Juan Fernandez	6.74	248	T	T	09 24 06.6	
	baz=74,slow=72,SNR=1788						
H03S3	Juan Fernandez	6.85	245	T	T	09 24 16.8	
	baz=73,SNR=10						
H03S1	Juan Fernandez	6.86	244	T	T	09 24 17.8	
	baz=73,SNR=10						
H03S2	Juan Fernandez	6.87	244	T	T	09 24 16.1	
	baz=73,SNR=14						
AHML	Horco Molle	6.88	53	eS	Sn	09 18 37.7	+5.0
LC01	Cunco	7.80	182		Pn	09 17 27.8	-0.5
PB15	IPOC Station P	8.04	13		Pn	09 17 30.8	-1.0
LVC	Limon Verde	8.74	16	P	Pn	09 17 39.6	-2.0
	comp=Z,0.8nm,0.3s,baz=168,slow=11,SNR=10						
LVC				S	Sn	09 19 25.5	+6.6
	baz=114,slow=20,SNR=2.0						
LVC				LR	LR	09 21 19.3	
	comp=Z,100nm,19.8s,baz=212,slow=40						
LVC	Limon Verde	8.74	16	eP	Pn	09 17 39.4	-2.2
LVC	Limon Verde	8.74	16		Pn	09 17 40.1	-1.5
PB09	IPOC Station P	9.46	13	eP	Pn	09 17 49.9	-1.3
PLCA	Paso Flores	9.66	176	P	Pn	09 17 54.9	+1.1
	comp=Z,0.3nm,0.3s,baz=354,slow=11,SNR=3.6						
PLCA				LR	LR	09 21 32.6	
	comp=Z,97nm,19.2s,baz=347,slow=37						
PLCA	Paso Flores	9.66	176	eP	Pn	09 17 53.6	-0.1
PLCA	Paso Flores	9.66	176	Pn	Pn	09 17 53.8	0.0
LL04	Puerto Octay	9.84	184	Pn	Pn	09 17 55.0	-1.1
PB01	IPOC Station P	10.15	11		Pn	09 18 01.8	+1.2
ITQB	Itaqui	12.90	88	eP	Pn	09 18 35.3	-2.8
ITQB	Itaqui	12.90	88	Pn	Pn	09 18 35.7	-2.3
CPUP	Villa Florida	13.29	73	P	Pn	09 18 41.2	-2.1
	comp=Z,0.5nm,0.3s,baz=236,slow=9.8,SNR=4.6						
CPUP				LR	LR	09 24 10.3	
	comp=Z,144nm,20.8s,baz=220,slow=39						
CPUP	Villa Florida	13.29	73	eP	Pn	09 18 41.4	-1.9
CPUP	Villa Florida	13.29	73	Pn	Pn	09 18 41.7	-1.6
LPAZ	La Paz	15.04	12	P	Pn	09 19 08.3	+0.9
	comp=Z,0.2nm,0.3s,baz=191,slow=5.5,SNR=11						
LPAZ	La Paz	15.04	12		Pn	09 19 08.7	+1.2
LPAZ	La Paz	15.04	12		Pn	09 19 08.9	+1.5
PLTB	Pedras Altas	15.28	97	eP	Pn	09 19 06.4	-3.5
PLTB	Pedras Altas	15.28	97	Pn	Pn	09 19 07.3	-2.6
CPSB	Cacapava Do Su	15.53	92	eP	Pn	09 19 10.6	-2.6
ITAB	Concordia	17.32	82	eP	Pn	09 19 33.0	-2.7
ITAB	Concordia	17.32	82	P	Pn	09 19 35.6	-0.1
ITAB				IAmb	IAmb	09 20 24.6	
	comp=Z,78nm,1.7s						
AQDB	Aquidauana	17.68	57	eP	Pn	09 19 38.9	-1.3
SIV	San Ignacio	17.77	35	P	Pn	09 19 39.4	-2.0
	comp=Z,0.5nm,0.3s,baz=210,slow=9.0,SNR=27						
PTLB	Pontes e Lacer	19.23	39	eP	P	09 19 57.5	0.0
PTLB	Pontes e Lacer	19.23	39	P	P	09 19 57.0	-0.5
TER01	Tubaro-SC	19.55	88	eP	P	09 20 00.9	-0.3
PP1B	Ponte de Pedra	20.18	52	eP	P	09 20 07.3	-0.7
PCMB	Pacaembu	20.40	67	eP	P	09 20 09.6	-0.8
TIJ01	Guaruva-PR	20.60	79	eP	P	09 20 11.8	-0.9
VILB	Vilhena	20.82	32	eP	P	09 20 14.5	-0.6
VILB	Vilhena	20.82	32	P	P	09 20 14.4	-0.6
SALV	Santo Antonio	20.88	47	eP	P	09 20 15.5	-0.1
FRTB	Fartura	20.93	74	eP	P	09 20 15.1	-1.0
ETMB	Extrema	21.72	14	eP	P	09 20 25.6	+1.1
ETMB	Extrema	21.72	14	P	P	09 20 24.8	+0.2
ITRB	Iturama	22.14	64	eP	P	09 20 27.8	-1.4
PET01	Itanhaem-SP	22.45	78	eP	P	09 20 31.7	-0.7
SPB	Sao Paulo	22.59	77	eP	P	09 20 33.1	-0.9
BB19B	Bebedouro	22.86	70	eP	P	09 20 33.9	-2.9
VAO	Valinhos	23.23	76	eP	P	09 20 40.3	-0.2
CZSB	Cruzeiro do Su	23.26	357	eP	P	09 20 42.3	+1.5
CZSB	Cruzeiro do Su	23.26	357	P	P	09 20 42.0	+1.3
CZSB				IAmb	IAmb	09 21 04.7	
	comp=Z,31nm,1.5s						
SAML	Samuel	23.34	21	P	P	09 20 41.7	+0.2
ARAG	Araguaiana, MT	23.60	54	eP	P	09 20 43.8	-0.2
PDRB	Porto dos Gac	23.70	38	eP	P	09 20 44.4	-0.5
USHA	Ushuaia	23.84	176	P	P	09 20 46.4	+0.6
	comp=Z,4.0nm,0.7s,baz=23,slow=12,SNR=5.0						
BDFB	Brasilia	26.38	60	P	P	09 21 08.1	-1.3
	comp=Z,4.8nm,0.6s,baz=224,slow=7.2,SNR=6.8						
BDFB	Brasilia	26.38	60	P	P	09 21 08.7	-0.7
BDFB				IAmb	IAmb	09 21 09.6	
	comp=Z,15nm,1.3s						
SNDB	Serra Nova Dou	26.63	49	eP	P	09 21 11.9	+0.3
TBTG	Tabatinga, AM	26.79	3	eP	P	09 21 13.5	+0.5
TBTG	Tabatinga, AM	26.79	3	P	P	09 21 13.0	0.0
TBTG				IAmb	IAmb	09 21 15.7	
	comp=Z,18nm,0.9s						
DIAM	Diamantina, MG	28.20	70	eP	P	09 21 25.3	-0.5
MACA	Manacapuru-AM	29.58	22	P	P	09 21 35.5	-2.4
MACA				IAmb	IAmb	09 22 35.1	
	comp=Z,13nm,1.1s						
NBPN	Ponto Novo - B	35.27	62	eP	P	09 22 26.5	-1.3
BIRV	Birongo	41.62	8	P	P	09 23 22.1	+1.2
VNA3	Neumayer Olymp	51.89	159	P	P	09 24 40.2	-0.4
SNAA	Sanae	54.11	159	P	P	09 24 57.7	+0.6
SNAA	Sanae	54.11	159	P	P	09 24 57.9	+0.9
SNAA				IAmb	IAmb	09 25 18.9	

	comp=Z,4.9nm,0.9s						
W52A	Murphy	66.86	349	P	P	09 26 24.7	+0.5
TXAR	Lajitas Array	67.44	330	P	P	09 26 29.7	+1.5
	comp=Z,0.3nm,0.8s,baz=159,slow=7.4,SNR=3.5						
TXAR				pP	pP	09 26 42.2	+0.3
	comp=Z,0.2nm,0.6s,baz=153,slow=6.7,SNR=2.4						
TXAR	Lajitas Array	67.44	330	P	P	09 26 29.0	+0.9
P51A	Williamsport	71.03	351	P	P	09 26 50.7	+0.7
DBIC	Dimbokro	73.80	72	P	P	09 27 06.2	-1.0
	comp=Z,2.0nm,0.4s,baz=247,slow=4.8,SNR=7.0						
DBIC	Dimbokro	73.80	72	P	P	09 27 06.6	-0.5
DBIC				IAmb	IAmb	09 28 36.7	
	comp=Z,20nm,1.8s						
ISCO	Idaho Springs	77.32	334	P	P	09 27 28.2	+1.2
ISCO				IAmb	IAmb	09 27 30.0	
	comp=Z,15nm,2.0s						
KOWA	Kowa	79.00	66	P	P	09 27 36.4	-0.1
	comp=Z,1.7nm,0.5s,baz=221,slow=9.3,SNR=5.8						
KOWA	Kowa	79.00	66	P	P	09 27 36.1	-0.5
PDAR	Pinedale Array	81.39	333	P	P	09 27 49.3	+0.2
	comp=Z,0.1nm,0.4s,baz=187,slow=6.9,SNR=1.5						
PDAR	Pinedale Array	81.39	333	P	P	09 27 49.7	+0.7
NVAR	Mina Array Bea	81.78	325	P	P	09 27 49.9	-1.4
RYN	Ryan	82.04	325	P	P	09 27 54.8	+2.3
RYN				IAmb	IAmb	09 28 37.5	
	comp=Z,18nm,1.8s						
TORD	Torodi Ar. Bea	82.77	70	P	P	09 27 56.4	-0.3
	comp=Z,1.5nm,0.5s,baz=281,slow=5.2,SNR=15						
TORD				pP	pP	09 28 10.2	-0.8
	comp=Z,3.3nm,1.0s,baz=268,slow=5.3,SNR=7.1						
TORD	Torodi Ar. Bea	82.77	70	P	P	09 27 56.0	-0.7
TORD				IAmb	IAmb	09 28 18.0	
	comp=Z,5.2nm,1.2s						
HAWA	Hanford	88.50	329	P	P	09 28 26.9	+2.5
WRA	Warramunga Arr	123.53	209	PKP	PKPdf	09 34 30.0	-0.1
	comp=Z,0.3nm,0.5s,baz=158,slow=1.7,SNR=5.0						
WRA				pPKP	pPKPdf	09 34 45.0	+0.1
	comp=Z,0.5nm,0.7s,baz=169,slow=1.5,SNR=2.3						
H11S2	WAKE ISLAND Hy	126.24	271	T	T	11 53 32.9	
	baz=115,slow=75,SNR=239						
H11S1	WAKE ISLAND Hy	126.26	271	T	T	11 53 34.1	
	baz=115,slow=75,SNR=229						
H11S3	WAKE ISLAND Hy	126.26	271	T	T	11 53 29.1	
	baz=115,slow=75,SNR=233						
H11N3	WAKE ISLAND Hy	126.58	272	T	T	11 53 53.8	
	baz=116,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	126.60	272	T	T	11 54 01.6	
	baz=116,slow=75,SNR=7.0						
H11N2	WAKE ISLAND Hy	126.60	272	T	T	11 53 59.3	
	baz=116,slow=75,SNR=56						
ZALV	Zalesovo Beam	151.49	30	PKPbc	PKiKP	09 35 25.9	0.0
	comp=Z,1.3nm,0.5s,baz=300,slow=3.3,SNR=6.2						
ZALV				pPKPbc	pPKPbc	09 35 41.5	+1.1
	comp=Z,1.9nm,0.4s,baz=302,slow=3.1,SNR=6.9						
MKAR	Makanchi Array	154.43	45	PKPbc	PKPbc	09 35 31.1	-1.2
	comp=Z,0.2nm,0.7s,baz=302,slow=4.3,SNR=3.4						
MKAR				pPKPbc	PKPab	09 35 46.4	-0.4
	comp=Z,0.3nm,0.6s,baz=270,slow=0.9,SNR=3.7						

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*KRNET **23** 09:16:50.5±0.1, 39.°02N×73.°48E, h7^{km}, mb2.9*
*SOME **23** 09:16:52.5, 39.°27N×72.°82E, h0^{km}*
*NNC **23** 09:16:55.6±1.2, 39.°14N×73.°32E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=9.3km s-min=6.0km az=166.0*
ISC 23 09:16:52.0±2.1, **39.°15N**±0.°09×**73.°26E**±0.°04, **h4**^{km}±12^{km}, **n32**, σ**2.^{s}13**/52, **13C-7D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.89	12	⇓eP	Pg	09 17 08.6	-0.4
	baz=1.0						
SFK				⇓eS	Sb	09 17 22.1	-0.3
	baz=1.0						
DRK	Karamyk	1.18	287	⇑iP	Pn	09 17 16.2	+0.6
	baz=90						
DRK				⇑iS	Sn	09 17 34.7	+2.4
	baz=90						
OHH	Osh	1.43	345	⇑iP	Pg	09 17 19.8	+0.5
	baz=41						
OHH				⇑iS	Sg	09 17 41.8	+4.0
	baz=41						
BTK	Batken	2.10	297	⇓iP	Pb	09 17 30.3	-0.3
	baz=97						
BTK				⇓iS	Sg	09 17 59.3	0.0
	baz=97						
ARK	Arkit	2.83	340	⇑iP	Pn	09 17 40.4	+2.3
	baz=38						
ARK				⇑iS	Sb	09 18 16.1	-2.1
	baz=38						
ARLS	Aral	2.83	16	⇑iP	Pn	09 17 39.1	+1.0
	baz=13						
ARLS				⇑iS	Sn	09 18 14.5	+1.7
	baz=13						
TRKS	Terek-Say	2.88	326	⇓iP	Pn	09 17 40.4	+1.6
	baz=25						
TRKS				⇓iS	Sb	09 18 16.8	-2.9
	baz=25						
MRKS	Merke	3.60	360	eP	Pg	09 18 00.7	-0.1
	4.3nm,0.5s						
MRKS				eS	Sg	09 18 49.8	+2.3
	9.1nm,0.4s						
MRKS	Merke	3.60	360	Pg	Pg	09 18 00.7	-0.1
	4.3nm,0.5s						
MRKS				Lg	Lg	09 18 49.8	
	9.1nm,0.4s						
AAK	Ala-Archa	3.61	15	⇑Pn	Pb	09 17 52.8	-3.7
	4.1nm,0.6s						
AAK				⇑Lg	Lg	09 18 48.2	
	11nm,0.8s						
IUG	Iuzhnay	3.88	322	eP	Pb	09 17 59.2	-1.8
	38nm,0.4s						
IUG				eS	Sb	09 18 47.1	-1.1
	18nm,0.0s						
IUG	Iuzhnay	3.88	322	Pg	Pb	09 17 59.2	-1.8
	38nm,0.4s						
IUG				Lg	Lg	09 18 47.1	
	18nm,0.0s						
DZA	Taraz	4.02	339	eP	Pb	09 18 01.4	-1.9
	31nm,0.1s						
DZA				eS	Sb	09 18 50.6	-1.7
	74nm,0.3s						
TKM2	Tokmak 2	4.17	24	⇑Pg	Pg	09 18 10.3	-1.5
	2.7nm,0.6s						
TKM2				⇑Lg	Lg	09 19 06.6	
	3.1nm,0.6s						
KST	Kastek	4.40	27	eP	Pg	09 18 15.5	-0.7
	4.1nm,0.3s						
KST				eS	Sg	09 19 15.2	+2.0
	6.6nm,0.4s						
KST	Kastek	4.40	27	Pg	Pg	09 18 15.5	-0.7
	4.1nm,0.3s						
KST				Lg	Lg	09 19 15.2	
	6.6nm,0.4s						
KK09	Karatay Array	4.49	333	⇓Pn	Pn	09 18 05.2	+4.5
	1.5nm,0.5s,baz=155,slow=14						
KK09				⇑Sn	Sb	09 18 59.9	-5.8
	3.0nm,0.6s,baz=151,slow=22						
DGS	Degeres	4.51	24	eP	Pg	09 18 17.1	-1.3
	3.3nm,0.5s						
DGS				eS	Sg	09 19 18.4	+1.6
	4.5nm,0.7s						
DGS	Degeres	4.51	24	Pg	Pg	09 18 17.1	-1.3
	3.3nm,0.5s						
DGS				Lg	Lg	09 19 18.4	
	4.5nm,0.7s						
BRLS	Borolday	4.67	327	eP	Pb	09 18 11.4	-2.9
	0.9nm,0.2s						
BRLS				eS	Sb	09 19 08.1	-2.8
	2.0nm,0.4s						
TNSS	Tian-Shan	4.78	34	eP	Pg	09 18 22.9	-0.7
	2.5nm,0.6s						
TNSS				eS	Sg	09 19 27.8	+2.3
	2.9nm,0.9s						
TNSS	Tian-Shan	4.78	34	Pg	Pg	09 18 22.9	-0.7
	2.5nm,0.6s						
TNSS				Lg	Lg	09 19 27.8	
	2.9nm,0.9s						
KRBS	Karabastau	4.90	21	eP	Pg	09 18 24.1	-1.6
	1.5nm,0.5s						
KRBS				eS	Sg	09 19 30.1	+1.0
	2.8nm,0.6s						
KRBS	Karabastau	4.90	21	Pg	Pg	09 18 24.1	-1.6
	1.5nm,0.5s						
KRBS				Lg	Lg	09 19 30.2	
	2.8nm,0.6s						
MDOK	Medeo	4.93	34	eP	Pg	09 18 26.6	+0.2
	2.5nm,0.5s						
MDOK				eS	Sg	09 19 34.6	+4.4
	6.2nm,1.0s						
MDOK	Medeo	4.93	34	Pg	Pg	09 18 26.6	+0.2
	2.5nm,0.5s						
MDOK				Lg	Lg	09 19 34.6	
	6.2nm,1.0s						
KTBS	Karatobe	5.24	28	eP	Pg	09 18 30.7	-1.5
	2.1nm,0.4s						
KTBS				eS	Sg	09 19 41.6	+1.5
	7.1nm,0.8s						
KTBS	Karatobe	5.24	28	Pg	Pg	09 18 30.7	-1.5
	2.1nm,0.4s						
KTBS				Lg	Lg	09 19 41.6	
	7.1nm,0.8s						
KUU	Kurty	5.28	25	eP	Pg	09 18 31.2	-1.8
	0.9nm,0.3s						
KUU				eS	Sg	09 19 42.3	+1.0
	4.6nm,0.5s						
KUU	Kurty	5.28	25	Pg	Pg	09 18 31.2	-1.8
	0.9nm,0.3s						
KUU				Lg	Lg	09 19 42.3	
	4.6nm,0.5s						
BTLS	Baital	5.92	5	eP	Pg	09 18 44.0	-1.3
	1.2nm,0.3s						
BTLS				eS	Sg	09 20 04.1	+2.0
	2.4nm,1.0s						
BTLS	Baital	5.92	5	Pg	Pg	09 18 44.1	-1.3
	1.2nm,0.3s						
BTLS				Lg	Lg	09 20 04.1	
	2.4nm,1.0s						

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*NDI **23** 09:22:05.8±1.7, 26.°28N×93.°07E, h35^{km}, ML4.2, mb4.3(NEIC)*
*IDC **23** 09:22:05.7±0.5, 26.°25N×93.°18E, h44^{km}±4^{km}, mb3.8/12, mb1 4.0/13, mb1mx3.5/77, mbtmp4.1/13, MS2.8/1, Ms1 3.0/1, ms1mx2.6/37, Error ellipse: s-maj=16.1km s-min=9.4km az=88.0*
*NEIC **23** 09:22:06.4±2.1, 26.°26N±0.°07×93.°09E±0.°06, h48^{km}±6^{km}, mb4.3/26, Error ellipse: s-maj=9.9km s-min=7.8km az=198.0*
ISC 23 09:22:05.6±0.4, **26.°29N**±0.°04×**93.°04E**±0.°03, **h47**^{km}±3^{km}, **n69**, σ**1.^{s}33**/94, **mb4.3**/26, **Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITAN	ITANAGAR	1.05	36	eP	Pn	09 22 24.9	+1.0
ITAN				eS	Sn	09 22 39.1	+1.6
KOHI	KOHIMA	1.12	120	eP	Pn	09 22 25.4	+0.4
KOHI				IAML		09 22 40.8	
	comp=E,13μm,0.6s						
KOHI				IAML		09 22 40.9	
	comp=N,4μm,0.3s						
JORH	JORHAT	1.18	67	eP	Pn	09 22 25.9	+0.2
JORH				eS	Sn	09 22 40.3	-0.3
JORH				IAML		09 22 41.2	
	comp=N,18μm,0.3s						
SHL	Shillong	1.26	235	eP	Pn	09 22 28.1	+1.1
SHL				eS	Sn	09 22 43.4	+0.5
SHL	Shillong	1.26	235		Pn	09 22 28.1	+1.1
SHL				Sn	Sn	09 22 43.4	+0.5
MOKO	MOKOCHONG	1.33	88	eP	Pn	09 22 28.0	+0.2
MOKO				eS	Sn	09 22 43.5	-1.0
MOKO				IAML		09 22 44.8	
	comp=N,14μm,0.5s						
MOKO				IAML		09 22 45.0	
	comp=E,12μm,0.4s						
SILR	SILCHAR	1.52	188	eP	Pn	09 22 31.9	+1.6
IMP	Imphal	1.67	150	eP	Pn	09 22 33.4	+0.9
IMP				eS	Sn	09 22 52.9	+0.1
IMP				IAML		09 22 53.9	
	comp=N,718nm,0.4s						
LKP	Lekhapani	2.72	67	eP	Pn	09 22 47.0	+0.3
LKP				eS	Sn	09 23 16.1	-2.3
LKP				IAML		09 23 19.0	
	comp=E,2μm,0.3s						
LKP				IAML		09 23 19.4	
	comp=N,5μm,0.4s						
LSA	Lhasa	3.78	334		Pn	09 23 00.2	-1.6
BRDH	Bariadhala	3.82	200	P	Pn	09 23 02.6	+0.8
	comp=N,0.3nm,0.3s,baz=55,slow=24,SNR=12						
BRDH				S	Sn	09 23 46.0	+0.5
	comp=N,0.4nm,0.3s,baz=310,slow=24,SNR=16						
GTK	Tadong	4.09	285	eP	Pn	09 23 05.1	-0.7
GTK				eS	Sn	09 23 51.8	-0.7
GTK				IAML		09 23 54.4	
	comp=E,275nm,0.5s						
GTK				IAML		09 23 55.3	
	comp=N,276nm,0.5s						
JIRN	Jiri	6.26	284	ePn	Pn	09 23 36.8	+1.1
JIRN				eSn	Sn	09 24 45.8	-0.3
	comp=N,215nm,0.4s						
GUN	Gumba	6.58	286	ePn	Pn	09 23 40.6	+0.5
GUN				eSn	Sn	09 24 52.4	-1.6
	comp=N,414nm,0.6s						
PKI	Pulchoki	6.92	282	ePn	Pn	09 23 45.4	+0.6
PKI				eSn	Sn	09 25 01.5	-1.0
	comp=N,97nm,0.5s						
PKIN	Phulchoki	6.94	282	ePn	Pn	09 23 45.5	+0.6
PKIN				eSn	Sn	09 25 01.7	-1.0
	comp=N,121nm,0.5s						
KKN	Kakani	7.08	284	ePn	Pn	09 23 47.6	+0.8
KKN				eSn	Sn	09 25 05.5	-0.5
DMN	Daman	7.20	282	ePn	Pn	09 23 49.2	+0.7
DMN				eSn	Sn	09 25 08.3	-0.8
	comp=N,112nm,0.6s						
GKN	Gorkha	7.67	285	ePn	Pn	09 23 54.3	-0.6
GKN				eSn	Sn	09 25 18.7	-1.9
DANN	Dangsing	8.50	286	ePn	Pn	09 24 05.2	-1.2
DANN				eSn	Sn	09 25 36.6	-4.5
	comp=N,97nm,0.5s						
PYUN	Piuthan	9.12	284	ePn	Pn	09 24 13.8	-1.1
CHTO	Chiang Mai	9.23	143		Pn	09 24 16.2	+0.1
CMAR	Chiang Mai Arr	9.52	144	P	Pn	09 24 18.8	-1.4
	comp=N,0.8nm,0.3s,baz=320,slow=13,SNR=23						
CMAR				LR	LR	09 28 36.9	
	comp=N,57nm,19.0s,baz=335,slow=42						
CMAR	Chiang Mai Arr	9.52	144		Pn	09 24 20.2	0.0
SLVN	Son La	11.11	114	Pn	Pn	09 24 40.1	-1.8
ENH	Enshi	15.03	71	P	P	09 25 39.0	-0.6
UBPT	Khong Chiam	15.96	131		Pn	09 25 45.8	-1.2
UBPT				IAmb	IAmb	09 25 49.5	
	comp=Z,21nm,0.8s						
HYB	Hyderabad	16.07	240	i P	Pn	09 25 46.0	-2.5
HYB				e		09 28 32.0	
HYB				eS	Sn	09 28 44.0	-1.8
NIL	Nilore	18.63	298	P	P	09 26 18.7	-0.7
NIL				IAmb	IAmb	09 26 33.3	
	comp=Z,15nm,0.9s						
TARG	Taragay, Kyrgy	19.86	325	P	P	09 26 34.6	+1.4
TARG				IAmb	IAmb	09 26 57.0	
	comp=Z,19nm,1.4s						
DRK	Karamyk	22.09	312	P	P	09 26 58.8	+1.7
DRK				IAmb	IAmb	09 27 39.3	
	comp=Z,8.9nm,0.7s						
MK31	Makanchi Array	22.17	340	P	P	09 26 57.9	+0.3
MKAR	Makanchi Array	22.17	340	P	P	09 26 57.5	0.0
	comp=Z,3.4nm,0.5s,baz=146,slow=13,SNR=32						
MKAR	Makanchi Array	22.17	340	P	P	09 26 57.7	+0.2
KBL	Kabul	22.23	297	P	P	09 27 02.9	+4.4
KBL				IAmb	IAmb	09 27 12.8	
	comp=Z,15nm,0.8s						
PALK	Pallekele	22.26	214	P	P	09 26 56.5	-2.3
PALK				IAmb	IAmb	09 27 29.6	
	comp=Z,35nm,1.6s						
AAK	Ala-Archa	22.27	322	P	P	09 27 02.0	+3.1
AAK				IAmb	IAmb	09 27 21.1	
	comp=Z,6.7nm,0.8s						
MAKZ	Makanchi	22.28	340	P	P	09 27 01.3	+2.6
BTK	Batken	23.03	312	P	P	09 27 08.6	+1.8
BTK				IAmb	IAmb	09 27 20.9	
	comp=Z,9.9nm,0.8s						
CHGR	Chuyangaron	23.54	307	P	P	09 27 13.9	+2.2
CHGR				IAmb	IAmb	09 27 27.1	
	comp=Z,21nm,1.2s						
SONM	Songino Array	23.93	23	P	P	09 27 15.6	+0.2
	comp=Z,0.7nm,0.5s,baz=185,slow=9.2,SNR=7.7						
SONM	Songino Array	23.93	23	P	P	09 27 15.5	+0.2
ULN	Ulaanbaatar	24.19	23	P	P	09 27 18.1	+0.3
KKAR	Karatay Array	24.86	318	P	P	09 27 23.7	-0.1
TLY	Talaya	26.60	15	P	P	09 27 40.7	+1.3
TLY				IAmb	IAmb	09 28 02.7	
	comp=Z,11nm,1.4s						
KURBB	Kurchatov Arra	26.72	339	P	P	09 27 42.9	+2.5
	comp=Z,1.6nm,0.2s,baz=152,slow=10.0,SNR=3.8						
KURK	Kurchatov	26.77	339	P	P	09 27 40.0	-0.9
KURK				IAmb	IAmb	09 27 57.6	
	comp=Z,22nm,1.9s						
ZALV	Zalesovo Beam	28.29	350	P	P	09 27 55.2	+0.7
	comp=Z,1.4nm,0.4s,baz=171,slow=7.3,SNR=7.3						
ZALV				sP	sP	09 28 13.3	+1.0
	comp=Z,1.3nm,0.5s,baz=177,slow=5.6,SNR=3.1						
SBUM	Sibu	30.02	139	P	P	09 28 08.6	-1.6
ABKAR	Akbulak array	34.35	321	P	P	09 28 48.9	+1.1
ABKAR				IAmb	IAmb	09 29 07.5	
	comp=Z,3.1nm,0.7s						
MJAR	Matsushiro Arr	39.57	64	P	P	09 29 32.0	-0.3
	comp=Z,0.7nm,0.4s,baz=276,slow=11,SNR=4.1						
AKASG	Malin Array Be	53.70	315	P	P	09 31 24.2	+1.5
	comp=Z,0.5nm,0.5s,baz=81,slow=7.3,SNR=2.3						
AKASG				sP	sP	09 31 40.9	-0.2
	comp=Z,3.3nm,0.5s,baz=80,slow=6.4,SNR=6.7						
FINES	FINESS Array B	56.28	328	pP	pP	09 31 54.8	+0.6
	comp=Z,1.5nm,0.6s,baz=106,slow=15,SNR=1.4						
FINES				sP	sP	09 31 60.0	+0.4
	comp=Z,2.2nm,0.6s,baz=111,slow=11,SNR=2.4						
WRA	Warramunga Arr	60.98	135	P	P	09 32 13.6	-0.8
	comp=Z,4.0nm,0.6s,baz=322,slow=7.6,SNR=55						
WRA				pP	pP	09 32 27.5	-0.1
	comp=Z,1.5nm,0.7s,baz=322,slow=7.4,SNR=2.3						
VRAC	Vranov	61.91	314	pP	pP	09 32 34.5	+0.9
	comp=Z,2.7nm,0.6s,baz=91,slow=8.9,SNR=3.6						
VRAC				sP	sP	09 32 39.7	+0.7
	comp=Z,4.1nm,0.6s,baz=69,slow=9.2,SNR=3.7						
HFS	Hagfors	62.32	326	P	P	09 32 25.0	+2.1
	comp=Z,4.5nm,1.1s,baz=84,slow=15,SNR=1.6						
HFS				pP	pP	09 32 36.7	+0.6
	comp=Z,2.8nm,0.6s,baz=116,slow=6.8,SNR=2.9						
HFS				sP	sP	09 32 41.8	+0.3
	comp=Z,1.9nm,0.6s,baz=73,slow=6.5,SNR=1.8						
ASAR	Alice Springs	63.47	138	P	P	09 32 30.4	-0.7
	comp=Z,1.5nm,0.5s,baz=322,slow=6.7,SNR=49						
ASAR				sP	sP	09 32 49.9	+0.2
	comp=Z,1.1nm,0.5s,baz=328,slow=6.9,SNR=5.1						
GERES	GERESS Array B	63.86	314	pP	pP	09 32 47.2	+0.5
	comp=Z,2.9nm,0.6s,baz=80,slow=6.5,SNR=12						
GERES				sP	sP	09 32 52.6	+0.5
	comp=Z,2.2nm,0.6s,baz=77,slow=7.0,SNR=6.9						
GERES	GERESS Array B	63.86	314	P	P	09 32 34.3	+0.8
MURB	Monte Urbino	65.86	308	P	P	09 32 45.4	-1.1
DAVOX	Davos/Dischmat	66.82	312	pP	pP	09 33 05.8	-0.3
	comp=Z,2.7nm,0.7s,baz=49,slow=10,SNR=3.6						
STKA	Stephens Creek	74.10	138	P	P	09 33 35.9	-1.1
	comp=Z,1.3nm,0.7s,baz=297,slow=4.5,SNR=3.8						
STKA	Stephens Creek	74.10	138	P	P	09 33 36.1	-0.9
H21K	Melozitna Rive	75.60	23	P	P	09 33 46.0	+0.7
BPAW	Bear Paw Mtn.	77.11	24	P	P	09 33 55.2	+1.4
ILAR	Eielson Array	78.16	22	P	P	09 33 59.6	0.0
	comp=Z,0.3nm,0.7s,baz=299,slow=4.2,SNR=6.3						
ILAR				sP	sP	09 34 17.4	-1.1
	comp=Z,0.4nm,0.8s,baz=303,slow=4.1,SNR=2.4						
A36M	Sachs Harbour	78.50	11	P	P	09 34 02.0	+0.7
A36M				IAmb	IAmb	09 35 01.9	
	comp=Z,11nm,1.8s						
INK	Inuvik	79.66	16	P	P	09 34 08.4	+0.6
TORD	Torodi Ar. Bea	85.46	282	P	P	09 34 39.5	+0.5
	comp=Z,0.5nm,0.5s,baz=47,slow=4.6,SNR=2.5						
TORD				pP	pP	09 34 53.2	+0.4
	comp=Z,1.8nm,0.8s,baz=56,slow=4.1,SNR=8.3						

IDC 23 09:27:10.8±1.4, **0.°36N**×**126.°44E**, **h0**^{km}, **mb3.5**/4, **mb1 3.8**/5, **mb1mx3.4**/47, **mbtmp3.6**/5, **Error ellipse: s-maj=106.8km s-min=21.8km az=72.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	18.36	182	P	Pn	09 31 25.7	-1.3
	baz=352,slow=10						
WRA	Warramunga Arr	21.61	159	P	P	09 32 02.6	0.0
	1.6nm,0.8s,baz=341,slow=11,SNR=6.6						
ASAR	Alice Springs	24.96	164	P	P	09 32 36.8	+0.6
	0.7nm,0.7s,baz=339,slow=7.4,SNR=5.0						
SONM	Songino Array	50.40	343	P	P	09 36 11.0	+1.0
	0.7nm,1.0s,baz=147,slow=8.2,SNR=4.1						
MKAR	Makanchi Array	60.17	327	P	P	09 37 19.1	-1.3
	0.3nm,0.6s,baz=125,slow=9.1,SNR=2.7						

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*EAF **23** 09:44:07.2±1.0, 25.°82S×29.°41E, h13^{km}±31^{km}, MD3.8*
BUL 23 09:44:04.5±1.5, **25.°90S**×**29.°23E**, **h0**^{km}±54^{km}, **MD4.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNG	Changalane	2.69	99	i P	Pn	09 44 48.2	-0.8
CNG	Changalane	2.69	99	i P	Pn	09 44 48.2	-0.8
MOPA	Mopani	3.08	40	i P	Pn	09 44 52.3	-2.2
MOPA				i Sg	Sb	09 45 38.3	-0.2
MOPA	Mopani	3.08	40	i P	Pn	09 44 52.3	-2.2
MOPA				i Sg	Sb	09 45 38.3	-0.2
MSNA	Messina	3.61	12	i P	Pn	09 45 01.1	-0.7
MSNA				i Sg	Sb	09 45 55.9	+2.2
MSNA	Messina	3.61	12	i P	Pn	09 45 01.1	-0.7
MSNA				i Sg	Sb	09 45 55.9	+2.2
MATP	Matopo	5.49	353	i P	Pn	09 45 28.0	+0.3
MATP	Matopo	5.49	353	i P	Pn	09 45 28.0	+0.3

BUC 23 09:47:32.4±0.2, **45.°09N**×**28.°24E**, **h5**^{km}, **ml1.4**/4, **5C-4D, Error ellipse: s-maj=2.2km s-min=1.4km az=54.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFR	Carcaliu	0.11	320	⇑P	Pg	09 47 34.2	-0.6
CFR				⇑S	Sg	09 47 36.4	+0.1
TPGR	Topolog	0.27	151	⇑P	Pg	09 47 37.4	-0.2
TPGR				⇓S	Sg	09 47 41.5	+0.4
TLCR		0.42	77	⇓S	Sg	09 47 46.6	+0.7
HARR	Harsova	0.46	209	⇓P	Pg	09 47 41.5	+0.3
TIRR	Tirgusor	0.64	169	⇑P	Pg	09 47 44.6	-0.2
TIRR				⇓S	Sg	09 47 53.7	+0.5
ISR	Istrita	1.20	272	⇑P	Pn	09 47 56.1	+0.2

KRSZO 23 09:50:29.3±1.6, **48.°56N**×**20.°69E**, **h10**^{km}±9^{km}, **M2.0**/4, **Error ellipse: s-maj=10.4km s-min=7.8km az=90.0, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KECS	Kecovo	0.16	240	Pg	Pg	09 50 32.5	-0.2
KECS				Lg	Lg	09 50 36.6	
KECS	Kecovo	0.16	240	ePG	Pg	09 50 32.4	-0.4
KECS				eSG	Sg	09 50 36.4	+1.2
IZAB	Izabela	0.65	271	Pg	Pn	09 50 51.9	+7.3
PSZ	Piszkesteto	0.84	220	eSG	Sn	09 50 58.5	-1.1
PSZ	Piszkesteto	0.84	220	Lg	Lg	09 50 58.5	
NIE	Niedzica	0.89	343	Lg	Lg	09 50 58.9	
LANS	Liptovska Anna	1.00	307	Pg	Pg	09 50 48.4	-0.1
LANS				Lg	Lg	09 51 03.1	
LANS	Liptovska Anna	1.00	307	ePG	Pg	09 50 48.2	-0.3
LANS				eSG	Sn	09 51 02.9	-0.7
VYHS	Vyhne	1.23	267	Pg	Pg	09 50 53.4	+0.4
VYHS				Sn	Sn	09 51 10.1	+0.8
VYHS	Vyhne	1.23	267	ePG	Pg	09 50 53.2	+0.2
VYHS				eSG	Sn	09 51 11.0	+1.7
TRPA	Tarpa	1.31	109	ePG	Pn	09 50 53.4	-0.2
TRPA	Tarpa	1.31	109	Pn	Pn	09 50 53.4	-0.2

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*IDC **23** 10:02:48.4±10.0, 16.°06N×92.°73W, h0^{km}, mb3.3/4, mb1 3.7/6, mb1mx3.3/37, mbtmp3.3/6, ML3.4/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/15, Error ellipse: s-maj=172.0km s-min=57.4km az=173.0*
*MEX **23** 10:02:59.0±0.7, 15.°70N×93.°62W, h86^{km}±10^{km}, MD4.1*
ISC 23 10:02:58.1±1.1, **15.°71N**±0.°08×**93.°61W**±0.°07, **h81**^{km}±9^{km}, **n13**, σ**0.^{s}92**/21, **mb3.2**/4, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.38	91	i P	Pn	10 03 10.8	-0.2
PCIG				i S	Sn	10 03 21.3	+0.7
TGIG		1.16	24	i P	Pn	10 03 19.6	+0.3
TGIG				i S	Sn	10 03 34.3	-0.9
PATR	El Naranjo	1.46	114	eP	Pn	10 03 22.6	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PATR				*e*S	Sn	10 03 42.0	0.0
CCIG	Comitan	1.53	68	*e*P	Pn	10 03 24.3	+0.2
CCIG				*e*S	Sn	10 03 43.2	-0.5
CHUJ	Union Juarez	1.58	113	*e*P	Pn	10 03 24.1	-0.6
CHUJ				*e*S	Sn	10 03 45.2	+0.4
UXUV	UXUV	1.68	342	*i* P	Pn	10 03 26.5	+0.7
UXUV				*i* S	Sn	10 03 46.0	-0.8
CMIG	Matias Romero	1.84	319	Pn	Pn	10 03 27.5	-0.4
	9.4nm,0.3s,baz=157,slow=11,SNR=191						
CMIG				Sn	Sn	10 03 50.6	+0.1
	52nm,0.3s,baz=43,slow=17,SNR=99						
CMIG	Matias Romero	1.84	319	*i* P	Pn	10 03 27.5	-0.4
CMIG				*i* S	Sn	10 03 49.9	-0.6
TXAR	Lajitas Array	16.42	327	Pn	P	10 06 45.4	+0.3
	0.0nm,0.3s,baz=144,slow=13,SNR=5.3						
ANMO	Albuquerque	22.36	331	P	P	10 07 48.7	-1.0
	0.4nm,0.6s,baz=142,slow=14,SNR=3.5						
ANMO				LR	LR	10 17 15.8	
	comp=Z,28nm,20.3s,baz=1.5,slow=39						
PDAR	Pinedale Array	30.23	336	P	P	10 09 03.0	+1.6
	0.2nm,0.6s,baz=139,slow=12,SNR=1.6						
NVAR	Mina Array Bea	31.37	321	P	P	10 09 13.4	+1.9
	0.4nm,0.5s,baz=130,slow=8.4,SNR=3.0						
YKA	Yellowknife Ar	49.02	347	P	P	10 11 34.9	-1.6
	0.3nm,0.6s,baz=152,slow=7.5,SNR=5.4						

DDA ***23*** *10:06:04.1, 36°.10N×30°.31E, h22km, ML2.8*
ISK ***23*** *10:06:06.2, 36°.27N×30°.16E, h22km, ML3.1/28*
ISC 23 10:06:04.4±1.2**, 36°.13N**±0°.05×**30°.25E**±0°.03**, h17**km±7km**,**
n45, σ1ˢ.19/55**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.21	22	*i* P	Pg	10 06 09.9	+0.5
AKUM				*i* S	Sg	10 06 14.3	+1.6
AKUM				IAML		10 06 15.0	
	comp=N,1μm,0.3s						
AKUM				IAML		10 06 15.0	
	comp=E,1μm,0.4s						
DEMR	Demre-Antalya	0.30	291	PG	Pb	10 06 11.9	+0.7
AKAS	Kas	0.53	281	*i* P	Pn	10 06 16.1	-1.2
AKAS				*i* S	Sn	10 06 24.9	-1.0
AKAS				IAML		10 06 29.0	
	comp=N,1μm,0.4s						
AKAS				IAML		10 06 30.0	
	comp=E,1μm,0.6s						
AKAS	Kas	0.53	281	PG	Pb	10 06 15.9	+0.6
KEMT	Kemer-ANTALYA	0.53	28	PG	Pn	10 06 15.9	-1.3
KEMT				SG	Sb	10 06 23.2	+0.6
ELL	Elmali	0.67	336	PG	Pb	10 06 17.4	-0.3
ANTB	Antalya	0.83	23	PG	Pn	10 06 21.2	-0.1
KORT	Korkueli	0.87	5	PG	Pb	10 06 20.9	-0.2
FETY	Fethiye	1.07	298	*i* P	Pn	10 06 25.0	+0.4
FETY				*i* S	Sn	10 06 40.1	+1.1
FETY				IAML		10 06 42.0	
	comp=N,142nm,0.5s						
FETY				IAML		10 06 52.0	
	comp=E,140nm,0.7s						
FETY	Fethiye	1.07	298	PG	Pn	10 06 24.7	+0.2
FETY				SG	Sb	10 06 38.3	+0.3
CAME	Cameli-Denizli	1.11	317	PG	Pn	10 06 25.2	-0.1
BUCA	Burdur, Bucak-	1.22	12	*i* P	Pg	10 06 26.1	-1.9
BUCA				*i* S	Sn	10 06 45.1	+2.3
BUCA				IAML		10 06 48.0	
	comp=N,118nm,0.7s						
BUCA				IAML		10 06 53.0	
	comp=E,114nm,0.6s						
GOLH	Golhisar	1.23	334	*i* P	Pn	10 06 27.6	+0.7
GOLH				*i* S	Sn	10 06 46.5	+3.3
GOLH				IAML		10 06 54.0	
	comp=N,217nm,0.8s						
GOLH				IAML		10 06 56.0	
	comp=E,308nm,0.7s						
CAEL	Denizli, Camel	1.24	323	*i* P	Pn	10 06 27.5	+0.4
CAEL				IAML		10 06 51.0	
	comp=E,325nm,0.6s						
CAEL				IAML		10 06 55.0	
	comp=N,431nm,1.0s						
BCK	Bucak	1.35	12	PN	Pg	10 06 29.2	-1.3
BRDR	BURDUR-Merkez	1.57	355	*i* P	Pb	10 06 32.4	-0.6
BRDR				*i* S	Sg	10 06 53.7	-1.3
BRDR				IAML		10 06 55.0	
	comp=E,120nm,0.4s						
BRDR				IAML		10 06 55.0	
	comp=N,100nm,0.4s						
ISP	Isparta	1.70	7	PN	Pb	10 06 34.3	-1.0
TAVA	DENIZLI_Tavas	1.71	322	*i* P	Pb	10 06 34.5	-0.9
TAVA				*i* S	Sg	10 06 57.0	-2.5
TAVA				IAML		10 06 59.0	
	comp=E,324nm,0.4s						
TAVA				IAML		10 07 00.0	
	comp=N,263nm,0.4s						
ARG	Arkhangelos	1.72	273	PN	Pn	10 06 33.7	+0.2
BASM	Basmaki-Afyon	1.79	355	PN	Pn	10 06 34.9	+0.3
SEYD	Seydisehir-KON	1.80	45	PN	Pn	10 06 35.5	+0.8
YER	Yerkesik	1.87	303	PN	Pn	10 06 36.1	+0.5
HDMB	Hadim	1.98	65	PN	Pb	10 06 40.2	+0.1
KZIL	AFYON_Kizioren	2.12	358	*i* P	Pn	10 06 39.4	+0.3
KZIL				*i* S	Sn	10 07 06.3	+1.1
KZIL				IAML		10 07 08.0	
	comp=E,88nm,0.8s						
KZIL				IAML		10 07 09.0	
	comp=N,46nm,0.9s						
DAT	Datca	2.23	286	PN	Pn	10 06 41.0	+0.3
PASA	Karahalli, USA	2.29	345	*i* P	Pn	10 06 42.2	+0.7
PASA				IAML		10 07 12.0	
	comp=E,73nm,0.3s						
PASA				IAML		10 07 14.0	
	comp=N,43nm,0.4s						
TEKE	Tekeli-Mersin	2.32	89	PN	Pb	10 06 45.3	-0.4
LEF	Lefka	2.38	114	PN	Pb	10 06 46.5	-0.2
BERE	Bereket-Mersin	2.41	84	PN	Pb	10 06 46.4	-1.0
SHUT	Suhut-Afyon	2.43	6	PN	Pn	10 06 43.9	+0.5
KONT	Konya--Tatoy	2.48	42	PN	Pb	10 06 46.1	-2.3
BODT	Bodrum	2.54	292	PN	Pn	10 06 45.7	+0.9
AYDB	Zeytinkoy-Aydi	2.62	315	PN	Pn	10 06 46.9	+1.0
LADK	Ladik-KONYA	2.67	39	PN	Pn	10 06 48.3	+1.6
AKKU	Akkuyu-Mersin	2.67	88	PN	Pb	10 06 50.6	-1.1
KULA	Kula-Manisa	2.69	332	PN	Pn	10 06 46.9	-0.1
USAK	Uak-Merkez	2.76	340	*i* P	Pn	10 06 48.5	+0.6
USAK				IAML		10 07 21.0	
	comp=E,72nm,1.0s						
USAK				IAML		10 07 25.0	
	comp=N,29nm,0.5s						
IKL	Isikli	2.78	87	PN	Pb	10 06 51.9	-1.7
KEBE	Keben-Mersin	2.82	83	PN	Pb	10 06 52.7	-1.5
GCAM	G?zelcaml?	2.88	304	PN	Pn	10 06 49.7	+0.3
KIZT	Kizilcal	3.04	25	PN	Pn	10 06 52.9	+1.2
SIMA	Simav-Kutahya	3.11	342	PN	Pn	10 06 53.5	+0.8
CHBY	Cihanbeyli	3.23	40	PN	Pn	10 06 56.8	+2.5
CIFT	Cifteler, Eski	3.29	11	PN	Pn	10 06 56.3	+1.2
TVSB	Tavsanli	3.37	350	PN	Pn	10 06 56.7	+0.4

BJI ***23*** *10:08:44.4±0.0, 6°.48S×155°.12E, h6km, mB5.1/22, mb4.8/39, Ms4.7/11, Ms7 4.3/12*
IDC ***23*** *10:08:47.3±3.1, 6°.80S×155°.04E, h19km±19km, mb4.5/24, mb1 4.6/27, mb1mx4.4/45, mbtmp4.6/27, ML3.5/3, MS4.0/20, Ms1 4.0/20, ms1mx3.9/38, Error ellipse: s-maj=14.9km s-min=11.8km az=91.0*
NEIC ***23*** *10:08:49.8±1.2, 6°.87S±0°.07×155°.05E±0°.07, h34km±5km, mb5.0/106, Error ellipse: s-maj=11.3km s-min=9.8km az=224.0*
GCMT ***23*** *10:08:51.8±0.2, 7°.11S±0°.02×154°.97E±0°.02, h28km, MW5.0/79, Moment Tensor Solution. s51,c68; s79,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.63±.19; $M_{\theta\theta}$-2.37±.11; $M_{\phi\phi}$-1.26±.12; $M_{r\theta}$1.58±.18; $M_{\theta\phi}$1.77±.07; $M_{\phi r}$-2.00±.18; Best double couple: $M_0$4.45200×10^{16} NP1:ϕ_s298.00000°, δ29.00000°, λ75.00000°. NP2: ϕ_s135.00000°, δ63.00000°, λ98.00000°. Principal axes: T 4.4750, Plg71.0000°, Azm63.0000°; N -0.0460, Plg7.0000°, Azm311.0000°; P -4.4290, Plg17.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***23*** *10:08:56.7±0.5, 7°S±4°×15°5E±°, h78km±6km, M4.9/15, mB4.8/4, mb4.8/15, MLv5.3/3, Mw(mB)4.1/4*
ISC 23 10:08:45.6±0.3**, 6°.86S**±0°.05×**155°.08E**±0°.05**, h10**km**, n316,**
σ**0ˢ.92**/316**, mb5.0**/95**, MS4.1**/26**, 2C-2D,**

Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.93	312		Pn	10 09 47.3	+1.2
KRVT	Keravat (AS076	3.96	310	Pn	Pn	10 09 50.5	+4.1
	baz=232,slow=20						
KRVT				Sn	Sn	10 10 34.9	+2.0
	baz=142,slow=19						
HNR	Honiara	5.46	118	Pn	Pn	10 10 13.0	+6.0
	16nm,0.3s,baz=253,slow=3.2,SNR=3.1						
HNR				Sn	Sb	10 11 26.3	-0.3
	27nm,0.3s,baz=317,slow=11,SNR=4.6						
HNR				LR	LR	10 12 21.6	
	comp=Z,4μm,19.0s,baz=278,slow=39						
HNR	Honiara	5.46	118	Pn	Pn	10 10 09.2	+2.1
PMG	Port Moresby	8.24	252	Pn	Pn	10 10 47.2	+2.0
	3.4nm,0.3s,baz=70,slow=10,SNR=9.0						
PMG				Sn	Sn	10 12 18.8	+0.3
	0.5nm,0.3s,baz=172,slow=14,SNR=1.7						
PMG				LR	LR	10 13 57.3	
	comp=Z,2μm,20.0s,baz=51,slow=38						
PMG	Port Moresby	8.24	252	Pn	Pn	10 10 45.9	+0.6
COEN	Coen	13.66	238	Pn	Pn	10 11 60.0	+0.4
PATS	Pohnpei	13.98	13		Pn	10 12 05.9	+2.0
SANVU	Saraoutou	14.63	127	Pn	Pn	10 12 15.4	+2.5
CTA	Charters Tower	15.69	212	Pn	Pn	10 12 28.9	+2.0
	0.2nm,0.3s,baz=32,slow=16,SNR=2.3						
CTAO	Charters Tower	15.69	212	Pn	Pn	10 12 28.3	+1.3
DZM	Mont Dzumac	18.68	145	P	Pn	10 13 06.8	+2.3
	1.0nm,0.3s,baz=206,slow=7.1,SNR=11						
DZM				LR	LR	10 19 25.7	
	comp=Z,646nm,20.3s,baz=314,slow=34						
DZM	Mont Dzumac	18.68	145	*e*P	Pn	10 13 06.8	+2.3
	75nm,1.2s						
DZM				*e*S	Sn	10 16 30.9	-2.8
	322nm,23.8s						
DZM				*e*LR	LR	10 17 28.7	
	comp=Z,904nm,24.9s						
DZM	Mont Dzumac	18.68	145	P	Pn	10 13 05.2	+0.7
EIDS	Eidsvold	18.80	191	P	P	10 13 05.7	+0.3
MARNC	Mare, Loyalty	19.18	141	P	P	10 13 09.8	+0.2
GUMO	Guam	22.70	333	LR	LR	10 21 32.3	
	comp=Z,114nm,21.6s,baz=44,slow=34						
FAKI	Fak Fak	23.08	279	P	P	10 13 53.9	+2.2
	42nm,1.0s						
ARMA	Armidale	23.66	187	P	P	10 13 57.8	+0.4
WR0	Warramunga Arr	23.81	235	P	P	10 13 58.2	-0.7
WR0				IAmb	IAmb	10 14 00.5	
	comp=Z,36nm,0.8s						
WB0	Warramunga Arr	23.83	235	P	P	10 13 58.8	-0.3
WB0				IAmb	IAmb	10 14 00.8	
	comp=Z,75nm,1.5s						
WRAB	Tennant Creek	23.95	235	P	P	10 13 60.0	-0.3
WB2	Warramunga Arr	23.95	235	P	P	10 14 00.2	-0.1
WB2				IAmb	IAmb	10 14 12.6	
	comp=Z,27nm,0.8s						
WRA	Warramunga Arr	23.96	235	P	P	10 14 00.8	+0.4
	comp=Z,16nm,0.8s,baz=58,slow=9.6,SNR=82						
WRA				PcP	PcP	10 17 43.4	+0.5
	comp=Z,2.5nm,0.6s,baz=56,slow=2.3,SNR=7.9						
WRA				ScP	ScP	10 21 20.0	-1.6
	comp=Z,1.0nm,0.8s,baz=67,slow=3.3,SNR=2.7						
WRA				LR	LR	10 22 54.3	
	comp=Z,570nm,21.4s,baz=55,slow=35						
WRA	Warramunga Arr	23.96	235	P	P	10 13 59.9	-0.5
MSVF	Nonsavu	24.88	118	P	P	10 14 09.9	+1.0
	comp=Z,32nm,0.6s,baz=272,slow=13,SNR=21						
MSVF				LR	LR	10 23 16.7	
	comp=Z,510nm,18.1s,baz=304,slow=35						
MSVF	Nonsavu	24.88	118	P	P	10 14 09.8	+1.0
MSVF				IAmb	IAmb	10 14 12.3	
	comp=Z,51nm,0.8s						
AS31	Alice Springs	26.32	228	P	P	10 14 21.9	+0.1
ASAR	Alice Springs	26.32	228	P	P	10 14 21.7	-0.2
	comp=Z,9.5nm,0.7s,baz=61,slow=8.6,SNR=120						
ASAR				ScP	ScP	10 21 27.8	-0.5
	comp=Z,2.1nm,1.0s,baz=54,slow=3.1,SNR=10						
ASAR				LR	LR	10 24 05.4	
	comp=Z,606nm,19.9s,baz=110,slow=35						
ASAR	Alice Springs	26.32	228	P	P	10 14 21.5	-0.4
KNRA	Kununurra	27.23	249	P	P	10 14 30.1	+0.1
KNRA				IAmb	IAmb	10 14 42.5	
	comp=Z,44nm,1.1s						
H11S3	WAKE ISLAND Hy	27.67	24	T	T	10 42 57.0	
	baz=203,slow=75,SNR=47						
H11S2	WAKE ISLAND Hy	27.68	24	T	T	10 42 56.5	
	baz=203,slow=75,SNR=46						
H11S1	WAKE ISLAND Hy	27.69	24	T	T	10 42 58.8	
	baz=203,slow=75,SNR=37						
STKA	Stephens Creek	27.89	205	P	P	10 14 35.6	-0.2
	comp=Z,14nm,0.7s,baz=19,slow=12,SNR=23						
STKA				LR	LR	10 25 49.3	
	comp=Z,764nm,18.7s,baz=26,slow=37						
STKA	Stephens Creek	27.89	205	P	P	10 14 36.0	+0.1
H11N1	WAKE ISLAND Hy	28.85	24	T	T	10 44 39.3	
	baz=192,slow=76,SNR=5.4						
H11N3	WAKE ISLAND Hy	28.86	24	T	T	10 44 39.7	
	baz=192,slow=76,SNR=7.3						
H11N2	WAKE ISLAND Hy	28.87	24	T	T	10 44 44.9	
	baz=192,slow=76,SNR=5.6						
CAN	Canberra	28.87	190	P	P	10 14 44.3	-0.3
FITZ	Fitzroy Crossi	30.78	246	P	P	10 15 01.6	0.0
	comp=Z,6.1nm,0.6s,baz=67,slow=8.0,SNR=10						
BBOO	Buckleboo	31.30	212	P	P	10 15 05.5	-0.6
FORT	Forrest	34.74	223	P	P	10 15 35.8	-0.4
TAU	Tasmania Unive	36.55	190	P	P	10 15 52.0	+0.5
TAU				IAmb	IAmb	10 16 06.3	
	comp=Z,18nm,0.9s						
PSA00	Pilbara Seismi	37.03	243	P	P	10 15 55.5	-0.5
PSA00				IAmb	IAmb	10 16 01.8	
	comp=Z,31nm,1.3s						
URZ	Urewera	37.08	151	P	P	10 15 57.5	+1.4
	comp=Z,11nm,1.0s,baz=308,slow=20,SNR=2.2						
TUWZ	Tuamarina	38.30	157	P	P	10 16 06.4	0.0
KHZ	Kahutara	39.00	158	P	P	10 16 12.3	+0.1
KHZ				IAmb	IAmb	10 16 27.0	
	comp=Z,29nm,1.2s						
YULB	Yu-li	44.65	313	P	P	10 16 58.9	+0.1
YULB				IAmb	IAmb	10 17 01.2	
	comp=Z,13nm,0.7s						
TPUB	Ta-pu	45.08	313	P	P	10 17 02.2	0.0
SSLB	Suanglung	45.14	314	P	P	10 17 02.7	0.0
SSLB				IAmb	IAmb	10 17 17.0	
	comp=Z,13nm,0.8s						
JNU	Nakatsue	45.93	331	P	P	10 17 08.3	-0.5
	comp=Z,12nm,0.6s,baz=138,slow=1.7,SNR=2.6						
MJAR	Matsushiro Arr	45.98	341	P	P	10 17 08.5	-0.6
	comp=Z,1.1nm,0.5s,baz=193,slow=1.5,SNR=2.7						
MAT	Matsushiro	45.98	341	P	P	10 17 07.5	-1.6
JHS	Saijyo	46.51	335	P	P	10 17 12.7	-0.6
JHS				IAmb	IAmb	10 17 15.1	
	comp=Z,20nm,1.2s						
KSRS	Korea Array	50.86	332	P	P	10 17 46.1	-0.6
	comp=Z,2.2nm,0.8s,baz=141,slow=7.9,SNR=7.4						
KSRS				LR	LR	10 36 11.6	
	comp=Z,99nm,21.9s,baz=134,slow=32						
QIZ	Qiongzhong	51.46	301	P	P	10 17 51.1	-0.5
QIZ				S	S	10 25 10.4	-1.6
QIZ				LR	LR		
	comp=Z,150nm,13.5s						
QIZ				LR	LR		
	comp=Z,220nm,21.8s						
QIZ				LR	LR		
	comp=Z,230nm,17.5s						
NJ2	Nanjing	51.86	320	*e*P	P	10 17 56.8	+2.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ASAJ	Asahikawa	51.98	349	P	P	10 17 55.4	+0.5
	comp=Z,6.8nm,0.8s,baz=217,slow=16,SNR=5.5						
PPT	Papeete	54.96	107	LR	LR	10 39 24.3	
	comp=Z,95nm,18.1s,baz=271,slow=33						
PPT2	Papeete2	54.96	107	*e*LR	LR	10 34 22.3	
	comp=Z,162nm,24.2s						
TBI	Tubuai	55.66	114	*e*LR	LR	10 34 40.9	
	comp=Z,205nm,33.5s						
ENH	Enshi	57.21	313	P	P	10 18 33.9	+0.6
ENH				IAmb	IAmb	10 18 48.1	
	comp=Z,11nm,0.8s						
GYA	Guiyang	57.44	307	⇑P	P	10 18 36.5	+1.4
GYA				pmax	pmax		
	comp=Z,21nm,0.7s						
KLR	Kul'dur	59.46	342	P	P	10 18 48.1	-0.5
	comp=Z,1.7nm,0.7s,baz=194,slow=5.3,SNR=6.5						
KLR				LR	LR	10 44 21.3	
	comp=Z,52nm,19.8s,baz=184,slow=36						
XAN	Xi'an	59.67	316	P	P	10 18 50.8	+0.4
XAN				pmax	pmax		
	comp=Z,13nm,0.6s						
XAN				LR	LR		
	comp=Z,270nm,19.2s						
XAN				LR	LR		
	comp=Z,360nm,18.6s						
PET	Petropavlovsk	59.73	2	P	P	10 18 50.1	-0.3
PETK	Petropavlovsk-	59.78	2	P	P	10 18 51.5	+0.8
	comp=Z,9.0nm,0.6s,baz=187,slow=10,SNR=7.9						
PETK				LR	LR	10 40 27.9	
	comp=Z,124nm,21.8s,baz=173,slow=32						
PETK	Petropavlovsk-	59.78	2	P	P	10 18 50.3	-0.5
KMI	Kunming	60.01	304	⇓P	P	10 18 54.8	+1.6
KMI				pmax	pmax		
	comp=Z,22nm,1.2s						
KMI				LR	LR		
	comp=Z,120nm,6.2s						
KMI				LR	LR		
	comp=Z,120nm,6.9s						
KMI				LR	LR		
	comp=Z,210nm,18.7s						
CM31	Chiang Mai Arr	60.80	295	P	P	10 19 00.0	+1.6
CMAR	Chiang Mai Arr	60.80	295	P	P	10 19 00.0	+1.6
	comp=Z,12nm,0.7s,baz=113,slow=5.0,SNR=50						
CMAR				LR	LR	10 45 29.0	
	comp=Z,41nm,19.4s,baz=168,slow=36						
CMAR	Chiang Mai Arr	60.80	295	P	P	10 18 59.3	+0.9
CHTO	Chiang Mai	60.92	296	P	P	10 18 57.8	-1.4
CHTO				IAmb	IAmb	10 19 01.2	
	comp=Z,10nm,0.8s						
CD2	Chengdu	61.79	310	P	P	10 19 04.5	-0.5
CD2				S	S	10 27 26.3	-2.2
CD2				pmax	pmax		
	comp=Z,40nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,5.1s						
CD2				LR	LR		
	comp=Z,230nm,16.9s						
CD2				LR	LR		
	comp=Z,200nm,16.5s						
HHC	Hu-ho-hao-te	62.03	324	*e*P	P	10 19 08.8	+2.3
HHC				pmax	pmax		
	comp=Z,11nm,1.2s						
HHC				pmax	pmax		
	comp=Z,97nm,5.8s						
HHC				LR	LR		
	comp=Z,190nm,19.2s						
HHC				LR	LR		
	comp=Z,200nm,17.9s						
HHC				LR	LR		
	comp=Z,220nm,17.8s						
ADK	Adak	63.31	19	P	P	10 19 14.7	+0.1
TAOE	Nuku Hiva Isla	64.13	97	*e*LR	LR	10 38 29.4	
	comp=Z,197nm,22.4s						
LZH	Lanzhou	64.28	315	*e*P	P	10 19 20.9	-0.7
LZH				pP	sP	10 19 31.8	+7.2
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				LR	LR		
	comp=Z,270nm,16.5s						
LZH				LR	LR		
	comp=Z,250nm,16.3s						
LZH				LR	LR		
	comp=Z,240nm,18.6s						
UNV	Unalaska Valle	68.57	23	P	P	10 19 48.2	-0.2
GTA	Gaotai	68.70	317	*e*P	P	10 19 50.5	+0.7
GTA				pP	sP	10 19 54.9	+2.1
GTA				sP	pP	10 19 57.9	+5.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SONM	Songino Array	69.27	327	P	P	10 19 53.3	+0.1
	comp=Z,2.9nm,0.6s,baz=136,slow=6.1,SNR=19						
SONM				PKPPKP	P'P'df	10 47 58.7	-3.1
	comp=Z,0.2nm,0.4s,baz=345,slow=5.1,SNR=1.8						
SONM	Songino Array	69.27	327	P	P	10 19 53.2	+0.1
SHL	Shillong	69.30	300	P	P	10 19 54.6	+0.7
SEY	Seymchan	69.62	359	P	P	10 19 54.4	-0.4
	comp=Z,1.2nm,0.5s,baz=231,slow=14,SNR=4.3						
SEY				LR	LR	10 46 44.8	
	comp=Z,59nm,21.8s,baz=198,slow=33						
FALS	False Pass	70.54	24	P	P	10 19 59.4	-1.2
	baz=224						
VNDA	Vanda	70.71	178	P	P	10 20 01.9	+0.5
	comp=Z,1.6nm,0.8s,baz=326,slow=6.0,SNR=3.7						
VNDA				LR	LR	10 44 37.5	
	comp=Z,85nm,21.5s,baz=326,slow=30						
VNDA	Vanda	70.71	178	P	P	10 20 01.6	+0.2
LSA	Lhasa	71.27	304	P	P	10 20 07.3	+1.1
LSA				IAmb	IAmb	10 20 08.1	
	comp=Z,12nm,0.7s						
YAK	Yakutsk	71.44	348	P	P	10 20 06.9	+1.0
YAK				IAmb	IAmb	10 20 17.3	
	comp=Z,10nm,0.6s						
SDPT	Sand Point	72.09	25	P	P	10 20 09.3	-0.7
	baz=227						
JIRN	Jiri	74.78	301	*e*P	P	10 20 27.0	0.0
	comp=Z,24nm,0.5s						
GUN	Gumba	75.12	301	*e*P	P	10 20 28.9	0.0
	comp=Z,69nm,0.7s						
BILL	Bilibino	75.14	4	P	P	10 20 27.4	-0.2
BILL				IAmb	IAmb	10 20 28.8	
	comp=Z,12nm,0.9s						
PKI	Pulchoki	75.43	301	*e*P	P	10 20 30.3	-0.3
PKIN	Phulchoki	75.44	301	*e*P	P	10 20 30.2	-0.4
	comp=Z,18nm,0.5s						
KKN	Kakani	75.60	301	*e*P	P	10 20 31.7	+0.3
	comp=Z,11nm,0.4s						
DMN	Daman	75.70	301	*e*P	P	10 20 32.1	0.0
	comp=Z,83nm,0.9s						
GKN	Gorkha	76.20	301	*e*P	P	10 20 34.6	-0.2
	comp=Z,80nm,1.1s						
OHAK	Old Harbor	76.37	26	P	P	10 20 34.9	0.0
	baz=233						
P18K	Big Mountain,	76.89	24	P	P	10 20 37.7	-0.2
	baz=231						
KDAK	Kodiak Island	77.01	26	P	P	10 20 38.5	0.0
	baz=234						
DANN	Dangsing	77.04	301	*e*P	P	10 20 39.1	-0.6
	comp=Z,31nm,0.9s						
ANM	Nome	77.08	16	P	P	10 20 39.6	+0.9
ANM	Nome	77.08	16	P	P	10 20 39.2	+0.4
	baz=220						
TNA	Tin City	77.17	15	P	P	10 20 38.9	-0.3
	baz=218						
O18K	Koktuh Hills	77.19	23	P	P	10 20 39.2	-0.4
	baz=231						
Q19K	Cape Douglas,	77.25	25	P	P	10 20 39.7	-0.2
Q19K	Cape Douglas,	77.25	25	P	P	10 20 39.3	-0.5
	baz=233						
PYUN	Piuthan	77.63	301	*e*P	P	10 20 42.4	-0.6
	comp=Z,35nm,1.0s						
O19K	Port Alsworth	77.76	23	P	P	10 20 42.1	-0.6
	baz=232						
SVW2	Sparrevohn	77.84	22	P	P	10 20 44.4	+1.3
SVW2				IAmb	IAmb	10 20 44.7	
	comp=Z,8.2nm,0.7s						
CNPM	China Poot	78.60	25	P	P	10 20 48.0	+0.6
WMQ	Urumqi	78.78	317	*e*P	P	10 20 50.3	+1.5
L19K	White Mountain	78.80	22	P	P	10 20 49.6	+1.2
L19K				IAmb	IAmb	10 20 50.1	
	comp=Z,18nm,0.8s						
TTA	Tatalina	78.87	21	P	P	10 20 49.3	+0.5
TTA				IAmb	IAmb	10 20 50.0	
	comp=Z,7.8nm,0.7s						
TTA	Tatalina	78.87	21	P	P	10 20 49.5	+0.6
	baz=230,SNR=6.7						
BRSE	Bradley Lake S	78.93	25	P	P	10 20 49.5	+0.3
	baz=235						
HYB	Hyderabad	79.30	289	*i* P	P	10 20 51.5	-0.7
L20K	Farewell, AK	79.34	22	P	P	10 20 52.2	+0.8
	baz=232						
SEW	Seward	79.67	25	P	P	10 20 53.3	+0.1
	baz=236						
GCSA	Galena City Sc	79.77	19	P	P	10 20 54.1	+0.5
	baz=229,SNR=7.3						
O22K	Cooper Landing	79.77	24	P	P	10 20 54.1	+0.4
O22K	Cooper Landing	79.77	24	P	P	10 20 53.8	+0.1
	baz=236						
RC01	Rabbit Creek A	80.11	24	P	P	10 20 55.8	+0.2
RC01	Rabbit Creek A	80.11	24	P	P	10 20 55.4	-0.1
	baz=236,SNR=11						
PPLA	Purkeypile	80.22	22	P	P	10 20 56.1	-0.2
PPLA				IAmb	IAmb	10 21 23.9	
	comp=Z,14nm,1.1s						
PPLA	Purkeypile	80.22	22	P	P	10 20 56.2	-0.1
	baz=233						

TIXI	Tiksi	80.23	352	PKKP	PKKPdf	10 39 31.2	-0.9
	comp=Z,3.6nm,0.6s,baz=82,slow=7.1,SNR=6.6						
J20K	Nowinta River	80.31	20	P	P	10 20 57.7	+1.1
J20K				IAmb	IAmb	10 20 58.3	
	comp=Z,9.7nm,0.7s						
J20K	Nowinta River	80.31	20	P	P	10 20 57.1	+0.5
	baz=231						
M22K	Willow	80.33	23	P	P	10 20 56.3	-0.4
	baz=235						
PWL	Port Wells	80.55	24	P	P	10 20 58.4	+0.5
PWL	Port Wells	80.55	24	P	P	10 20 57.7	-0.3
	baz=237,SNR=8.5						
CAST	Castle Rocks	80.57	21	P	P	10 20 57.8	-0.2
CAST				IAmb	IAmb	10 20 58.5	
	comp=Z,12nm,0.7s						
CAST	Castle Rocks	80.57	21	P	P	10 20 57.5	-0.5
	baz=233,SNR=15						
PMR	Palmer	80.63	24	P	P	10 20 58.5	+0.1
PMR				IAmb	IAmb	10 20 59.0	
	comp=Z,12nm,0.7s						
PMR	Palmer	80.63	24	P	P	10 20 58.0	-0.3
	baz=236,SNR=6.2						
CUT	Chulitna	80.65	23	P	P	10 20 57.8	-0.6
	baz=235						
CHUM	Lake Minchumin	80.76	21	P	P	10 20 59.1	+0.1
	baz=233,SNR=7.4						
KNK	Knik Glacier	80.80	24	P	P	10 20 59.6	+0.3
KNK				IAmb	IAmb	10 21 12.5	
	comp=Z,15nm,1.0s						
KNK	Knik Glacier	80.80	24	P	P	10 20 59.4	0.0
	baz=237						
GHO	Glory Hole Cre	80.81	24	P	P	10 20 59.7	+0.2
GHO				IAmb	IAmb	10 21 00.3	
	comp=Z,17nm,0.7s						
KTH	Kantishna Hill	81.07	22	P	P	10 21 00.2	-0.5
KTH				IAmb	IAmb	10 21 00.8	
	comp=Z,12nm,0.9s						
SML	Sawmill	81.07	24	P	P	10 21 01.3	+0.6
SML	Sawmill	81.07	24	P	P	10 21 00.6	-0.1
	baz=237,SNR=10						
GLI	Glacier Island	81.07	25	P	P	10 21 00.4	-0.3
	baz=238						
TRF	Thorofare Moun	81.24	22	P	P	10 21 01.3	-0.5
TRF				IAmb	IAmb	10 21 03.2	
	comp=Z,9.6nm,0.6s						
TRF	Thorofare Moun	81.24	22	P	P	10 21 01.0	-0.8
	baz=235						
BPAW	Bear Paw Mtn.	81.36	21	P	P	10 21 01.8	-0.5
BPAW	Bear Paw Mtn.	81.36	21	P	P	10 21 01.4	-0.9
	baz=234						
SCM	Sheep Creek Mo	81.48	24	P	P	10 21 03.5	+0.5
SCM				IAmb	IAmb	10 21 04.3	
	comp=Z,15nm,0.8s						
SCM	Sheep Creek Mo	81.48	24	P	P	10 21 02.8	-0.2
	baz=238						
WAT1	Susitna Watana	81.54	23	P	P	10 21 03.0	-0.2
	baz=237						
IMAR	Indian Mountai	81.57	19	P	P	10 21 03.9	+0.6
I21K	Tanana	81.66	20	P	P	10 21 04.7	+1.0
I21K	Tanana	81.66	20	P	P	10 21 04.3	+0.6
	baz=233						
H21K	Melozitna Rive	81.68	19	P	P	10 21 04.5	+0.7
H21K	Melozitna Rive	81.68	19	P	P	10 21 04.2	+0.3
	baz=232						
WAT6	Susitna Watana	81.72	23	P	P	10 21 04.0	-0.4
	baz=238						
RND	Reindeer	81.75	22	P	P	10 21 04.1	-0.3
RND				IAmb	IAmb	10 21 04.7	
	comp=Z,14nm,0.7s						
DIV	Divide	81.76	25	P	P	10 21 04.9	+0.4
DIV				IAmb	IAmb	10 21 05.7	
	comp=Z,14nm,0.8s						
KLU	Klutina	81.88	25	P	P	10 21 05.8	+0.7
KLU	Klutina	81.88	25	P	P	10 21 05.4	+0.2
	baz=239,SNR=8.9						
MCK	McKinley	81.90	22	P	P	10 21 04.8	-0.3
MCK	McKinley	81.90	22	P	P	10 21 04.4	-0.7
	baz=236,SNR=10						
MLY	Manley	82.00	20	P	P	10 21 06.0	+0.3
MLY				IAmb	IAmb	10 21 06.4	
	comp=Z,7.6nm,0.6s						
MLY	Manley	82.00	20	P	P	10 21 05.3	-0.3
	baz=234,SNR=9.9						
M24K	Tolsona, Glenn	82.09	24	P	P	10 21 07.0	+0.8
M24K	Tolsona, Glenn	82.09	24	P	P	10 21 07.0	+0.8
	baz=239,SNR=10						
DHY	Denali Highway	82.13	23	P	P	10 21 06.7	+0.2
DHY				IAmb	IAmb	10 21 15.6	
	comp=Z,8.1nm,0.7s						
DHY	Denali Highway	82.13	23	P	P	10 21 06.3	-0.2
	baz=238,SNR=6.6						
BMRM	Bremner River	82.17	25	P	P	10 21 06.4	-0.2
	baz=241						
NEA2	Nenana	82.33	21	P	P	10 21 07.0	-0.3
NEA2				IAmb	IAmb	10 21 07.4	
	comp=Z,8.4nm,0.7s						
NEA2	Nenana	82.33	21	P	P	10 21 06.3	-1.0
	baz=236,SNR=6.8						
N25K	Chitina, Valde	82.48	25	P	P	10 21 09.2	+0.9
N25K				IAmb	IAmb	10 21 09.4	
	comp=Z,7.5nm,0.7s						
N25K	Chitina, Valde	82.48	25	P	P	10 21 08.7	+0.4
	baz=240						
I23K	Minto, Yukon-K	82.54	21	P	P	10 21 08.4	0.0
I23K	Minto, Yukon-K	82.54	21	P	P	10 21 08.1	-0.2
	baz=236						
WRH	Wood River Hil	82.62	21	P	P	10 21 08.1	-0.7
HARP	HAARP	82.65	24	P	P	10 21 09.4	+0.3
	baz=240						
CRQM	Cirque	82.69	26	P	P	10 21 10.2	+0.7
CRQE	Cirque	82.71	26	P	P	10 21 09.6	0.0
	baz=242						
GLB	Gilahina Butte	82.73	25	P	P	10 21 10.3	+0.7
VRDI	Verde Repeater	82.78	25	P	P	10 21 10.6	+0.6
VRDI				IAmb	IAmb	10 21 10.7	
	comp=Z,11nm,0.8s						
PAX	Paxson	82.82	23	P	P	10 21 09.8	-0.2
	baz=240						
CCB	Clear Creek Bu	82.82	21	IAmb	IAmb	10 21 09.2	
	comp=Z,5.1nm,0.6s						
CCB				P	P	10 21 09.3	-0.5
MDM	Murphy Dome	82.84	21	P	P	10 21 09.4	-0.6
TCOL	CIGO, UAF Yank	82.92	21	P	P	10 21 09.3	-1.0
	baz=237,SNR=6.6						
COLA	College	82.92	21	P	P	10 21 09.5	-0.8
	baz=237						
ISLE	Juniper Island	82.97	26	P	P	10 21 11.4	+0.5
ISLE				IAmb	IAmb	10 21 12.1	
	comp=Z,16nm,0.8s						
HDA	Harding Lake	83.00	22	P	P	10 21 10.2	-0.6
HDA				IAmb	IAmb	10 21 11.9	
	comp=Z,8.3nm,1.0s						
HDA	Harding Lake	83.00	22	P	P	10 21 10.3	-0.6
	baz=238						
MCARA	McCarthy VSAT	83.04	25	P	P	10 21 11.0	-0.1
	baz=242						
QSPA	South Pole Qui	83.11	180	P	P	10 21 12.5	+0.9
QSPA				IAmb	IAmb	10 21 19.0	
	comp=Z,14nm,0.9s						
POKR	Poker Plat Res	83.21	21	P	P	10 21 11.2	-0.7
POKR	Poker Plat Res	83.21	21	P	P	10 21 11.5	-0.3
	baz=238						
IL31		83.22	21	P	P	10 21 10.7	-1.1
ILAR	Eielson Array	83.22	21	P	P	10 21 10.6	-1.3
	comp=Z,3.9nm,0.7s,baz=239,slow=5.7,SNR=83						
ILAR				LR	LR	10 55 12.3	
	comp=Z,194nm,19.7s,baz=252,slow=34						
ILAR	Eielson Array	83.22	21	P	P	10 21 11.3	-0.7
MK31	Makanchi Array	83.36	319	P	P	10 21 12.2	-0.9
MKAR	Makanchi Array	83.36	319	P	P	10 21 13.0	-0.1
	comp=Z,3.8nm,0.7s,baz=102,slow=6.0,SNR=18						
MKAR	Makanchi Array	83.36	319	P	P	10 21 12.6	-0.5
H24K	Noodor Dome	83.44	20	P	P	10 21 12.5	-0.6
H24K	Noodor Dome	83.44	20	P	P	10 21 12.8	-0.3
	baz=237						
RIDG	Independent Ri	83.45	23	P	P	10 21 13.2	0.0
RIDG				IAmb	IAmb	10 21 17.3	
	comp=Z,8.3nm,0.6s						
RIDG	Independent Ri	83.45	23	P	P	10 21 13.0	-0.2
	baz=240,SNR=6.8						
COLD	Coldfoot	83.46	19	P	P	10 21 13.8	+0.7
COLD	Coldfoot	83.46	19	P	P	10 21 13.3	+0.2
	baz=235						
BARN	Barnard Glacie	83.47	26	P	P	10 21 14.5	+0.9
MENT	Mentasta	83.50	24	P	P	10 21 13.8	+0.4
MENT				IAmb	IAmb	10 21 20.2	
	comp=Z,7.2nm,0.6s						
M26K	Nabesna, AK	83.53	24	P	P	10 21 14.4	+0.8
M26K				IAmb	IAmb	10 21 27.5	
	comp=Z,9.3nm,1.1s						
M26K	Nabesna, AK	83.53	24	P	P	10 21 14.3	+0.7
	baz=242						
MAKZ	Makanchi	83.57	319	P	P	10 21 13.9	-0.2
MAKZ				IAmb	IAmb	10 21 14.8	
	comp=Z,5.5nm,0.8s						
CTG	Chitna Glacier	83.57	26	P	P	10 21 14.4	+0.4
	baz=244,SNR=12						
CTGM	Chitina Glacie	83.58	26	P	P	10 21 15.0	+1.0
LOGN	Logan Glacier	83.66	26	P	P	10 21 15.3	+0.9
PCA	Pinnacle	83.67	27	P	P	10 21 15.3	+0.9
PINM	Pinnacle	83.67	27	P	P	10 21 14.8	+0.4
	baz=245						
L26K	Log Cabin Wild	83.69	24	P	P	10 21 14.9	+0.5
L26K				IAmb	IAmb	10 21 15.7	
	comp=Z,7.4nm,0.7s						
L26K	Log Cabin Wild	83.69	24	P	P	10 21 14.9	+0.5
	baz=242,SNR=8.5						
DOT	Dot Lake	83.71	23	P	P	10 21 14.7	+0.2
PNL	Peninsula	83.88	28	P	P	10 21 15.5	+0.1
	baz=245						
SCRK	Sand Creek	83.90	23	P	P	10 21 15.2	-0.3
SCRK				IAmb	IAmb	10 21 16.2	
	comp=Z,6.5nm,0.7s						
SCRK	Sand Creek	83.90	23	P	P	10 21 15.6	0.0
	baz=241,SNR=6.9						
M27K	Edge Creek, AK	83.97	25	P	P	10 21 16.9	+0.8
M27K	Edge Creek, AK	83.97	25	P	P	10 21 16.8	+0.8
	baz=243,SNR=16						
PRP	Porcupine Dome	84.10	21	P	P	10 21 14.5	-2.1
PRP	Porcupine Dome	84.10	21	P	P	10 21 16.2	-0.4
	baz=239						
ZAA0	Zalesovo Array	84.11	326	P	P	10 21 15.3	-1.5
ZALV	Zalesovo Beam	84.11	326	P	P	10 21 15.1	-1.6
	comp=Z,2.5nm,0.7s,baz=120,slow=6.0,SNR=10						
ZALV				LR	LR	11 00 29.6	
	comp=Z,72nm,19.0s,baz=155,slow=37						
ZALV	Zalesovo Beam	84.11	326	P	P	10 21 15.2	-1.5
A21K	Barrow	84.23	14	P	P	10 21 17.0	0.0
	baz=228						
YUK3	Moose Creek	84.31	26	P	P	10 21 17.9	+0.1
	baz=244,SNR=10.0						
J26L	Joseph Creek	84.31	22	P	P	10 21 17.9	+0.2
	baz=241,SNR=12						
L27K	Beaver Creek,	84.32	24	P	P	10 21 18.7	+1.0
L27K				IAmb	IAmb	10 21 19.4	
	comp=Z,7.6nm,0.9s						
L27K	Beaver Creek,	84.32	24	P	P	10 21 18.1	+0.4
	baz=243						
BCAR	Beaver Creek A	84.34	24	P	P	10 21 18.2	+0.4
BVCY	Beaver Creek	84.42	25	P	P	10 21 18.9	+0.8
	baz=244						
TOLK	Toolik Lake Re	84.47	18	P	P	10 21 18.8	+0.5
TOLK				IAmb	IAmb	10 21 19.6	
	comp=Z,7.9nm,0.7s						
TOLK	Toolik Lake Re	84.47	18	P	P	10 21 18.8	+0.5
	baz=235						
MAW	Mawson	84.55	203	P	P	10 21 18.0	-0.7
	comp=Z,4.5nm,0.7s,baz=96,slow=7.7,SNR=3.6						
MAW				LR	LR	10 55 15.2	
	comp=Z,92nm,20.4s,baz=64,slow=33						
FYU	Fort Yukon	84.74	20	P	P	10 21 20.4	+0.8
FYU				IAmb	IAmb	10 21 38.1	
	comp=Z,13nm,1.3s						
EGAK	Eagle	85.36	23	P	P	10 21 23.3	+0.5
EGAK				IAmb	IAmb	10 21 24.7	
	comp=Z,8.8nm,0.7s						
EGAK	Eagle	85.36	23	P	P	10 21 23.3	+0.5
	baz=243,SNR=8.6						
BMAR	Burnt Mountain	85.40	20	P	P	10 21 23.7	+0.7
DAWY	Dawson	85.74	24	P	P	10 21 25.6	+0.8
DAWY				IAmb	IAmb	10 21 27.6	
	comp=Z,5.9nm,0.7s						
DAWY	Dawson	85.74	24	P	P	10 21 25.5	+0.8
	baz=245,SNR=8.1						
KSH	Kashi	85.99	310	P	P	10 21 28.6	+1.9
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
N31M	Braeburn, Yuko	86.24	27	P	P	10 21 28.1	+0.8
	baz=248						
WHY	Whitehorse	86.35	28	P	P	10 21 28.6	+0.7
WHY				IAmb	IAmb	10 21 29.5	
	comp=Z,7.4nm,1.1s						
WHY	Whitehorse	86.35	28	P	P	10 21 28.4	+0.4
	baz=249						
J29M	Klondike Camp	86.37	24	P	P	10 21 29.1	+1.2
	baz=246,SNR=15						
I29M	Ogilvie Camp,	86.70	23	P	P	10 21 29.9	+0.4
	baz=246						
NIL	Nilore	87.00	304	P	P	10 21 30.8	-0.8
M31M	Drury Creek, Y	87.11	26	P	P	10 21 31.8	+0.3
	baz=250						
EPYK	Eagle Plains	87.70	22	P	P	10 21 34.8	+0.5
EPYK	Eagle Plains	87.70	22	P	P	10 21 35.0	+0.6
	baz=247,SNR=29						
NRIK	Noril'sk	88.64	341	P	P	10 21 36.5	-2.2
	comp=Z,1.2nm,0.3s,baz=108,slow=6.4,SNR=2.1						
O03E	Paynes Creek	89.17	49	P	P	10 21 42.2	+0.3
	baz=260						
INK	Inuvik	89.56	21	P	P	10 21 42.9	0.0
INK				IAmb	IAmb	10 21 44.0	
	comp=Z,16nm,1.5s						
INK	Inuvik	89.56	21	P	P	10 21 42.7	-0.3
	baz=250,SNR=7.0						
J05D	Fort Rock, OR	90.08	47	P	P	10 21 45.3	-0.9
	baz=261						
CWC	Cottonwood Cre	91.49	54	P	P	10 21 52.2	-0.7
	baz=263						
NVAR	Mina Array Bea	91.57	52	P	P	10 21 54.3	+1.0
	comp=Z,3.6nm,0.9s,baz=250,slow=6.4,SNR=12						
NVAR				LR	LR	10 55 18.8	
	comp=Z,138nm,21.6s,baz=305,slow=30						
KVN	Kaiserville	91.81	51	P	P	10 21 55.3	+0.9
KVN				IAmb	IAmb	10 21 56.0	
	comp=Z,7.6nm,1.2s						
MPMC	Manual Prospec	91.92	54	P	P	10 21 56.0	+1.0
	baz=263						
BBRC	Big Bear Solar	92.17	56	P	P	10 21 56.7	+0.5
	baz=263						
SYO	Syowa Base	92.48	199⇑	eP	P	10 21 56.4	-0.2
SYO	Syowa Base	92.48	199⇓	ePcP	P	10 21 58.3	+1.7
BELC	Belle Mtn. Jos	92.90	56	P	P	10 21 59.7	+0.2
	baz=264						
TPNV	Topopah Spring	93.01	53	P	P	10 22 00.5	+0.6
	baz=264						
A36M	Sachs Harbour	93.29	18	P	P	10 22 01.1	+1.0
	baz=258,SNR=7.5						
NEW	Newport	93.60	42	P	P	10 22 02.4	+0.1
	baz=264						
IRM	Iron Mountain	93.62	56	P	P	10 22 03.0	+0.3
	baz=264						
R11A	Troy Canyon, C	93.68	52	P	P	10 22 03.3	+0.2
	baz=264						
SPR3	Spring Creek 3	94.72	51	P	P	10 22 08.4	+0.4
SPR3				IAmb	IAmb	10 22 09.2	
	comp=Z,4.2nm,1.0s						
YKA	Yellowknife Ar	96.18	28	P	P	10 22 13.6	0.0
	comp=Z,7.6nm,0.9s,baz=265,slow=4.7,SNR=93						
YKA				PKiKP	PKiKP	10 26 51.3	-0.6
	comp=Z,0.3nm,0.6s,baz=270,slow=1.6,SNR=9.0						
YKA				PKKPbc	PKKPbc	10 38 58.9	-4.1
	comp=Z,0.2nm,0.6s,baz=89,slow=2.6,SNR=5.6						
YKA	Yellowknife Ar	96.18	28	P	P	10 22 13.2	-0.4
PDAR	Pinedale Array	98.55	48	P	P	10 22 24.6	-0.5
	comp=Z,0.8nm,0.8s,baz=222,slow=2.0,SNR=7.1						
PDAR				LR	LR	11 02 21.8	
	comp=Z,90nm,18.7s,baz=322,slow=33						
S22A	4UR Ranch, Cre	100.55	53	P	Pdif	10 22 33.8	-0.5
	baz=270						
N23A	Red Feather La	101.23	50	P	Pdif	10 22 34.8	-2.4
	baz=271						
W39A	Magazine	111.18	55	P	PKiKP	10 27 18.2	-2.0
	baz=277						
MIAR	Mount Ida	111.43	56	P	PKiKP	10 27 19.3	-1.3
	baz=277						
U40A	Yellville	111.79	54	P	PKiKP	10 27 20.6	-0.7
	baz=278						
CCM	Cathedral Cave	112.81	52	P	PKiKP	10 27 22.0	-1.1
	baz=280						
L44A	Lake County Fo	114.49	47	P	PKPdf	10 27 25.9	-0.3
	baz=284						
GLMI	Grayling	116.10	43	P	PKPdf	10 27 28.8	-0.5
	baz=288						
PLCA	Paso Flores	116.78	143	PKP	PKPdf	10 27 30.6	-0.3
	comp=Z,1.0nm,0.5s,baz=317,slow=1.9,SNR=4.8						
AKASG	Malin Array Be	117.48	324	PKP	PKPdf	10 27 30.7	-1.1
	comp=Z,1.3nm,0.6s,baz=59,slow=2.6,SNR=6.7						
AKASG	Malin Array Be	117.48	324		PKPdf	10 27 30.9	-0.8
BRTR	Keskin Array B	118.36	312	PKP	PKPdf	10 27 33.2	-0.8
	comp=Z,0.8nm,0.6s,baz=150,slow=3.7,SNR=1.8						
BOSA	Boshof	120.17	231	PKP	PKiKP	10 27 38.0	+0.1
	comp=Z,1.6nm,0.8s,baz=50,slow=3.3,SNR=4.9						
TIGA	Tifton	120.19	58	P	PKPdf	10 27 36.2	-1.4
	baz=281						
N54A	Moraine State	120.53	46	P	PKPdf	10 27 37.0	-1.0
	baz=289						
M54A	Oil Creek Stat	120.58	45	P	PKPdf	10 27 37.0	-1.1
	baz=290						
BLA	Blacksburg	121.36	50	P	PKPdf	10 27 38.7	-1.0
	baz=287						
SCHQ	Schefferville	121.62	27	PKP	PKPdf	10 27 39.1	-0.5
	comp=Z,5.0nm,1.0s,baz=258,slow=6.2,SNR=6.4						
O56A	Blue Knob Stat	121.79	46	P	PKPdf	10 27 39.6	-0.8
	baz=290						
SSPA	Standing Stone	122.15	46	P	PKPdf	10 27 40.3	-0.8
	baz=291						
LONY	Lake Ozonia	122.82	40	P	PKPdf	10 27 41.6	-0.6
	baz=296						
BINY	Binghamton	122.89	43	P	PKPdf	10 27 41.7	-0.8
	baz=293						
N59A	State Game Lan	123.54	45	P	PKPdf	10 27 42.7	-1.1
	baz=293						
CNNC	Cliffs of the	123.89	52	P	PKPdf	10 27 43.2	-1.3
	baz=287						
P60A	Greenville	124.05	46	P	PKPdf	10 27 43.9	-0.8
	baz=292						
PAL	Palisades	124.80	44	P	PKPdf	10 27 45.7	-0.4
	baz=294						
L61B	Northampton	125.02	42	P	PKPdf	10 27 45.9	-0.6
	baz=296						
PKME	Peaks-Kenny Pk	125.82	38	P	PKPdf	10 27 47.5	-0.4
	baz=301						
GERES	GERESS Array B	126.98	329	PKP	PKPdf	10 27 50.3	+0.1
	comp=Z,0.9nm,0.5s,baz=56,slow=2.4,SNR=9.7						
LPAZ	La Paz	131.45	119	PKP	PKiKP	10 28 01.0	-0.2
	comp=Z,2.5nm,0.6s,baz=286,slow=2.0,SNR=7.1						
CPUP	Villa Florida	134.42	138	PKP	PKPdf	10 28 05.3	+0.5
	comp=Z,4.3nm,0.9s,baz=224,slow=8.4,SNR=3.7						
PMRV	Marv??o	143.94	337	ePKP	PKPbc	10 28 19.9	+0.4
PBEJ	Beja	145.33	336	ePKP	PKPdf	10 28 24.8	+0.5
PNCL	Nicolau / Gran	145.52	337	ePKP	PKPab	10 28 25.2	+0.4
BDFB	Brasilia	148.01	134	PKP	PKPdf	10 28 30.0	+0.4
	comp=Z,18nm,0.7s,baz=222,slow=1.3,SNR=21						
BDFB				PKPbc	pPKPdf	10 28 32.2	+0.3
	comp=Z,18nm,0.7s,baz=339,slow=1.9,SNR=14						
TORD	Torodi Ar. Bea	153.07	286	PKP	PKPdf	10 28 36.5	-0.7
	comp=Z,0.8nm,0.7s,baz=0.6,slow=0.4,SNR=4.9						
TORD				PKPbc	PKPbc	10 28 44.1	-0.5
	comp=Z,3.6nm,0.4s,baz=33,slow=2.0,SNR=26						

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*IDC **23** 10:13:31.5±2.1, 7°.00S×155°.45E, h0^{km}, mb3.8/5, mb1 4.1/5, mb1mx3.3/39, mbtmp3.8/5, Error ellipse: s-maj=75.4km s-min=30.9km az=127.0*

ISC 23 10:13:33.1±2.1, **7°.0S**±0°.4×**155°.4E**±0°.4, **h10^{km}, n6,** σ**0^{s}.72**/6, **mb3.8**/5, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.18	236	P	P	10 18 49.8	-0.1
	1.5nm,0.6s,baz=58,slow=9.2,SNR=4.1						
ASAR	Alice Springs	26.50	229	P	P	10 19 11.0	0.0
	1.0nm,0.7s,baz=59,slow=9.8,SNR=3.8						
CMAR	Chiang Mai Arr	61.18	295	P	P	10 23 49.2	+0.7
	1.2nm,0.3s,baz=122,slow=5.3,SNR=4.9						
ILAR	Eielson Array	83.21	21	P	P	10 25 59.7	+0.3
	0.4nm,0.8s,baz=239,slow=5.6,SNR=5.5						
MKAR	Makanchi Array	83.69	319	P	P	10 26 01.3	-1.0
	0.6nm,0.7s,baz=101,slow=7.8,SNR=3.3						
TORD	Torodi Ar. Bea	153.45	285	PKPbc	PKiKP	10 33 33.1	0.0
	0.4nm,0.4s,baz=51,slow=1.3,SNR=4.3						

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*FUNV **23** 10:29:08.1, 8°.53N×71°.54W, h5^{km}, MW3.1*

ISC 23 10:29:06.9±1.5, **8°.56N**±0°.06×**71°.48W**±0°.03, **h6^{km}**±12^{km}, **n12,** σ**0^{s}.92**/23, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.68	114	eP	Pg	10 29 19.6	-0.3
SOCV				eS	Sg	10 29 28.7	+0.1
SDV	Santo Domingo	0.90	69	eP	Pg	10 29 19.8	-4.4
SDV				eS	Sb	10 29 37.2	-0.2
CAPV	Capacho	1.08	230	eP	Pb	10 29 26.8	-1.3
CAPV				eS	Sb	10 29 41.3	-1.3
TORV	Torococo	1.58	51	eP	Pb	10 29 37.0	+0.3
TORV				eS	Sb	10 29 57.1	+0.1
PAMC	Pamplona, Colo	1.71	225	eP	Pb	10 29 39.1	0.0
PAMC				eS	Sg	10 30 02.2	+0.2
OCAC	Ocana	1.85	260	eP	Pb	10 29 40.5	-0.7
OCAC				eS	Sb	10 30 05.1	+0.4
SANV	Sanarito	2.13	64	eP	Pn	10 29 43.8	+0.5
SANV				eS	Sb	10 30 12.0	-1.0
ELOV	Elorza	2.51	128	eP	Pn	10 29 49.6	+1.3
ELOV				eS	Sn	10 30 19.5	+0.2
SMLC	San Martn de	2.57	276	eP	Pn	10 29 50.0	+0.8
SMLC				eS	Sb	10 30 26.0	+0.6
BAUV	El Baul	3.42	83	eP	Pn	10 30 01.4	+0.6
BAUV				eS	Sn	10 30 41.5	-0.2
BENV	Beln	4.08	70	eP	Pn	10 30 10.9	+1.0
BENV				eS	Sn	10 30 56.6	-1.4
CHIC	Chingaza	4.50	210	i P	Pn	10 30 18.0	+1.9
CHIC				eS	Sn	10 31 08.0	-1.0

NOU 23 10:49:48.6, 17°.14S×167°.08E, h10^{km}, MLv3.8/14, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.21	119	P	Pb	10 50 11.6	+0.1
SANVU	Saraoutou	1.69	4	P	Pn	10 50 17.4	-0.8
LIFNC	LIFOU	3.62	178	P	Pn	10 50 43.5	-1.3
KOUNC	Koumac, New Ca	4.30	218	P	Pn	10 50 55.0	+0.9
MARNC	Mare, Loyalty	4.41	168	P	Pn	10 50 55.9	+0.3
YATNC	Mamie plateau,	4.90	182	P	Pn	10 51 01.0	-1.3
DZM	Mont Dzumac	4.94	187	P	Pn	10 51 03.0	0.0
NOUC	Port Laguerre	4.99	188	P	Pn	10 51 03.8	+0.2
OUENC	Ouen Island, N	5.26	182	P	Pn	10 51 08.4	+1.1

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*AEIC **23** 10:55:08±1.3, 64°.76N±0°.04×155°.1W±0°.1, h17^{km}±7^{km}, ML3.5, ML3.5/70(NEIC), Error ellipse: s-maj=7.4km s-min=5.8km az=131.0*

*NEIC **23** 10:55:09.9±1.8, 64°.73N±0°.05×155°.1W±0°.1, h37^{km}±27^{km}, Error ellipse: s-maj=8.5km s-min=6.8km az=113.0*

ISC 23 10:55:08.3±1.1, **64°.79N**±0°.03×**155°.06W**±0°.03, **h16^{km}**±10^{km}, **n85,** σ**0^{s}.61**/85, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
J20K	Nowinta River	0.73	147		Pg	10 55 22.5	0.0
J20K				IAML		10 55 34.8	
	comp=E,2µm,0.6s						
J20K				IAML		10 55 34.8	
	comp=N,2µm,0.6s						
J20K	Nowinta River	0.73	147	P	Pg	10 55 22.5	0.0
	baz=326						
J20K				S	Sg	10 55 32.3	+0.2
	baz=326						
GCSA	Galena City Sc	0.78	268		Pg	10 55 23.2	-0.1
GCSA	Galena City Sc	0.78	268	P	Pg	10 55 23.2	-0.1
	baz=88						
GCSA				S	Sg	10 55 33.8	+0.1
	baz=88						
H21K	Melozitna Rive	1.29	47		Pg	10 55 32.3	-0.7
H21K				IAML		10 55 51.2	
	comp=N,939nm,0.7s						
H21K				IAML		10 55 53.8	
	comp=E,955nm,0.5s						
H21K	Melozitna Rive	1.29	47	P	Pg	10 55 32.4	-0.6
	baz=228						
H21K				S	Sg	10 55 50.1	+0.2
	baz=228						
IM03		1.32	24		Pn	10 55 32.6	+0.6
IMAR	Indian Mountai	1.32	24	Pn	Pn	10 55 32.2	+0.2
I21K	Tanana	1.37	72		Pn	10 55 32.6	-0.1
I21K				IAML		10 55 54.6	
	comp=N,835nm,0.3s						

I21K	Tanana	1.37	72	P	Pn	10 55 32.5	-0.1
	baz=254						
I21K				S	Sg	10 55 52.9	+0.6
	baz=254						
CHUM	Lake Minchumin	1.50	126		Pn	10 55 35.0	+0.4
CHUM	Lake Minchumin	1.50	126	P	Pn	10 55 35.0	+0.4
	baz=307						
MLY	Manley	1.86	81		Pn	10 55 39.4	-0.1
MLY				IAML		10 56 09.1	
	comp=E,399nm,0.6s						
MLY	Manley	1.86	81	P	Pn	10 55 39.4	-0.1
	baz=264						
BPAW	Bear Paw Mtn.	1.90	110		Pn	10 55 39.7	-0.3
BPAW				IAML		10 56 15.9	
	comp=N,442nm,0.5s						
BPAW	Bear Paw Mtn.	1.90	110	P	Pn	10 55 40.2	+0.2
	baz=292						
BPAW				S	Sn	10 56 04.2	+0.5
	baz=292						
CAST	Castle Rocks	1.90	135		Pn	10 55 40.0	0.0
CAST	Castle Rocks	1.90	135	P	Pn	10 55 40.0	0.0
	baz=317						
TTA	Tatalina	1.91	193		Pn	10 55 39.8	-0.5
TTA				IAML		10 56 08.1	
	comp=N,438nm,0.6s						
TTA				IAML		10 56 12.1	
	comp=E,528nm,0.9s						
TTA	Tatalina	1.91	193	P	Pn	10 55 39.8	-0.5
	baz=12						
TTA				S	Sn	10 56 03.3	-0.8
	baz=12						
TT01	Tatalina	1.94	193		Pn	10 55 40.0	-0.5
KTH	Kantishna Hill	2.20	123		Pn	10 55 44.3	+0.1
PPLA	Purkeypile	2.29	145		Pn	10 55 45.4	-0.1
PPLA	Purkeypile	2.29	145	P	Pn	10 55 46.5	+1.0
	baz=327						
L20K	Farewell, AK	2.38	167		Pn	10 55 47.6	+1.0
L20K	Farewell, AK	2.38	167	P	Pn	10 55 47.6	+1.0
	baz=347						
I23K	Minto, Yukon-K	2.45	79		Pn	10 55 47.4	-0.2
I23K	Minto, Yukon-K	2.45	79	P	Pn	10 55 47.2	-0.3
	baz=263						
TRF	Thorofare Moun	2.49	121		Pn	10 55 48.9	+0.6
TRF	Thorofare Moun	2.49	121	P	Pn	10 55 49.5	+1.2
	baz=304						
BWN	Browne	2.50	102		Pn	10 55 49.2	+0.9
NEA2	Nenana	2.58	92		Pn	10 55 49.0	-0.4
NEA2				IAML		10 56 31.7	
	comp=N,197nm,0.5s						
NEA2				IAML		10 56 32.3	
	comp=E,169nm,0.5s						
NEA2	Nenana	2.58	92	P	Pn	10 55 49.4	0.0
	baz=276						
L19K	White Mountain	2.62	178		Pn	10 55 49.0	-1.0
L19K				IAML		10 56 35.1	
	comp=E,235nm,0.6s						
PS05	TAPS Pump Stn5	2.72	40		Pn	10 55 52.8	+1.5
MCK	McKinley	2.88	109		Pn	10 55 53.5	+0.1
MCK				IAML		10 56 43.5	
	comp=N,141nm,1.0s						
MCK	McKinley	2.88	109	P	Pn	10 55 53.7	+0.2
	baz=294						
MDM	Murphy Dome	2.92	84		Pn	10 55 53.5	-0.6
MDM				IAML		10 56 42.6	
	comp=E,199nm,0.8s						
WRH	Wood River Hil	3.02	93		Pn	10 55 55.0	-0.4
WRH				IAML		10 56 45.0	
	comp=N,164nm,0.5s						
WRH				IAML		10 56 46.6	
	comp=E,120nm,0.5s						
RND	Reindeer	3.06	114		Pn	10 55 56.5	+0.4
TCOL	CIGO, UAF Yank	3.08	85		Pn	10 55 55.8	-0.4
TCOL	CIGO, UAF Yank	3.08	85	P	Pn	10 55 55.8	-0.4
	baz=271						
COLA	College	3.08	85		Pn	10 55 55.8	-0.4
COLA	College	3.08	85		Pn	10 55 56.0	-0.3
COLA				IAML		10 56 48.4	
	comp=E,2µm,0.5s						
COLA				IAML		10 56 51.5	
	comp=E,1µm,0.6s						
CCB	Clear Creek Bu	3.12	89		Pn	10 55 56.2	-0.5
CCB				IAML		10 56 47.6	
	comp=E,163nm,0.4s						
CCB				IAML		10 56 48.4	
	comp=N,176nm,0.4s						
COLD	Coldfoot	3.15	37		Pn	10 55 57.7	+0.4
COLD	Coldfoot	3.15	37	P	Pn	10 55 58.1	+0.9
	baz=221						
H24K	Noodor Dome	3.19	68	Pn	Pn	10 55 57.2	-0.6
H24K				IAML		10 56 55.7	
	comp=N,143nm,0.5s						
H24K				IAML		10 56 57.8	
	comp=E,116nm,0.9s						
POKR	Poker Plat Res	3.26	81		Pn	10 55 58.5	-0.2
POKR	Poker Plat Res	3.26	81	IAML		10 56 54.6	
	comp=N,151nm,0.7s						
POKR	Poker Plat Res	3.26	81	P	Pn	10 55 59.2	+0.5
	baz=267						
IL31		3.50	87		Pn	10 56 01.5	-0.5
ILAR	Eielson Array	3.50	87	Pn	Pn	10 56 01.0	-1.0
HDA	Harding Lake	3.52	93		Pn	10 56 01.4	-0.8
STLK	Strandline Lak	3.61	155		Pn	10 56 04.6	+1.0
SVW2	Sparrevohn	3.71	184		Pn	10 56 05.6	+0.6
SVW2				IAML		10 57 05.8	
	comp=N,84nm,0.4s						
SVW2				IAML		10 57 05.9	
	comp=E,99nm,0.5s						
DHY	Denali Highway	3.80	113	P	Pn	10 56 06.9	+0.6
	baz=300						
SPU	Mount Spurr	3.87	158	Pn	Pn	10 56 05.9	-1.2
WAT6	Susitna Watana	3.94	121		Pn	10 56 08.7	+0.5
WAT6	Susitna Watana	3.94	121	P	Pn	10 56 08.7	+0.5
	baz=307						
N19K	Bonanza Creek	4.00	176		Pn	10 56 08.6	-0.3
N19K				IAML		10 57 21.0	
	comp=E,70nm,1.1s						
N19K				IAML		10 57 22.1	
	comp=N,84nm,0.9s						
N19K	Bonanza Creek	4.00	176	P	Pn	10 56 09.4	+0.5
	baz=356						
PRP	Porcupine Dome	4.09	75	Pn	Pn	10 56 09.8	-0.5
PRP	Porcupine Dome	4.09	75	P	Pn	10 56 09.7	-0.5
	baz=264						
GHO	Glory Hole Cre	4.11	135		Pn	10 56 12.0	+1.6
GHO				IAML		10 57 24.3	
	comp=N,48nm,0.6s						
PMR	Palmer	4.18	137	Pn	Pn	10 56 10.4	-1.0
SML	Sawmill	4.26	132		Pn	10 56 13.4	+0.9
SML				IAML		10 57 31.0	
	comp=E,58nm,0.8s						
SML				IAML		10 57 42.7	
	comp=N,46nm,0.9s						
SML	Sawmill	4.26	132	P	Pn	10 56 13.6	+1.1
	baz=317						
ANM	Nome	4.43	272		Pn	10 56 15.0	+0.2
ANM				IAML		10 57 30.7	
	comp=N,36nm,0.6s						
TOLK	Toolik Lake Re	4.44	27		Pn	10 56 14.9	0.0
TOLK				IAML		10 57 38.5	
	comp=N,46nm,1.0s						
TOLK				IAML		10 57 41.5	
	comp=E,45nm,1.1s						
TOLK	Toolik Lake Re	4.44	27	P	Pn	10 56 15.4	+0.5
	baz=212						
PAX	Paxson	4.62	109	Pn	Pn	10 56 16.9	-0.6
SCRK	Sand Creek	4.88	95	Pn	Pn	10 56 21.6	+0.6
SCRK				IAML		10 57 44.9	
	comp=N,31nm,0.9s						
DOT	Dot Lake	4.94	98	Pn	Pn	10 56 21.3	-0.4
O18K	Koktuh Hills	4.96	181	Pn	Pn	10 56 21.9	-0.1
O18K				IAML		10 57 53.9	
	comp=E,39nm,1.5s						
BMAR	Burnt Mountain	5.02	53		Pn	10 56 23.3	+0.4
KLU	Klutina	5.30	124		Pn	10 56 27.4	+0.5
MENT	Mentasta	5.35	105		Pn	10 56 27.5	+0.1
MENT				IAML		10 58 03.0	
	comp=N,29nm,1.1s						
MENT				IAML		10 58 13.3	
	comp=E,27nm,0.9s						
EGAK	Eagle	5.95	84		Pn	10 56 36.1	+0.6
L27K	Beaver Creek,	6.09	101		Pn	10 56 36.9	-0.7
BCAR	Beaver Creek A	6.11	100	Pn	Pn	10 56 37.1	-0.7
MCARA	McCarthy VSAT	6.44	117	Pn	Pn	10 56 40.0	-2.4
HMT	Hamilton	6.69	127	Pn	Pn	10 56 45.2	-0.6
CTGM	Chitina Glacie	7.35	115	Pn	Pn	10 56 52.5	-2.4
INK	Inuvik	9.26	58	Pn	Pn	10 57 20.3	-0.5

IDC ***23*** *11:07:07.2±2.9, 17°.84S×178°.20W, h574^{km}±21^{km}, mb2.8/4, mb1 3.2/5, mb1mx2.9/28, mbtmp3.7/5, Error ellipse: s-maj=97.5km s-min=22.6km az=148.0*

ISC 23 11:07:04.6±1.7**, 18°.3S**±0°.6×**177°.8W**±0°.3**, h550**^{km}**, n6, σ2**^{s}**.03**/8**, mb3.2**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.95	278	P	P	11 08 28.0	+1.7
	1.0nm,0.3s,baz=145,slow=11,SNR=10.0						
WRA	Warramunga Arr	45.09	260	P	P	11 14 31.1	-1.2
	0.3nm,0.4s,baz=97,slow=7.2,SNR=13						
WRA				PcP	PcP	11 15 60.0	-1.4
	0.7nm,0.9s,baz=90,slow=3.7,SNR=5.0						
ASAR	Alice Springs	45.20	255	P	P	11 14 32.5	-0.7
	2.3nm,0.6s,baz=88,slow=8.7,SNR=52						
ASAR				PcP	PcP	11 16 00.8	-0.9
	0.5nm,0.6s,baz=100,slow=3.6,SNR=8.5						
TXAR	Lajitas Array	85.75	57	P	P	11 18 46.9	+0.6
	0.3nm,0.8s,baz=229,slow=6.9,SNR=3.5						
ILAR	Eielson Array	86.15	13	P	P	11 18 45.4	-1.9
	0.6nm,1.0s,baz=220,slow=5.2,SNR=8.7						
GERES	GERESS Array B	148.12	346	PKPbc	PKPdf	11 25 47.8	+3.0
	0.6nm,0.5s,baz=32,slow=3.5,SNR=4.5						

ISK ***23*** *11:08:33.6, 37°.18N×28°.71E, h9^{km}, ML2.5/11*

DDA ***23*** *11:08:35.6, 37°.25N×28°.65E, h7^{km}±5^{km}, ML2.4*

ISC 23 11:08:34.5±1.0**, 37°.18N**±0°.03×**28°.69E**±0°.02**, h12**^{km}±9^{km}**, n21, σ1**^{s}**.66**/33**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MULA	Mugla, Merkez-	0.30	285	*i* P	Pg	11 08 40.3	-0.4
MULA				*i* S	Sb	11 08 46.1	-0.8
YER	Yerkesik	0.32	262	PG	Pg	11 08 40.8	-0.3
YER				SG	Sg	11 08 46.2	+0.7
TAVA	DENIZLI_Tavas	0.34	32	*i* P	Pg	11 08 40.8	-0.6
TAVA				*i* S	Sb	11 08 46.8	-1.3
CAEL	Denizli, Camel	0.51	96	*e*P	Pn	11 08 46.8	-1.0
CAEL				*i* S	Sb	11 08 55.5	+2.5
CAEL				IAML		11 08 59.0	
	comp=E,412nm,0.7s						
TURN	Turunc	0.54	221	PG	Pg	11 08 44.0	-1.0
TURN				SG	Sb	11 08 52.8	-0.7
CAME	Cameli-Denizli	0.55	115	PG	Pg	11 08 43.9	-1.3
CAME				SG	Sb	11 08 52.3	-1.7
FETY	Fethiye	0.63	149	PG	Pg	11 08 46.0	-0.8
GOLH	Golhisar	0.70	85	*i* P	Pb	11 08 47.5	-1.3
GOLH				*i* S	Sn	11 08 59.6	-1.7
AYDN	Tasoluk	0.80	307	*i* P	Pb	11 08 50.0	-0.5
AYDN				*i* S	Sb	11 09 00.9	-0.5
AYDN				IAML		11 09 08.0	
	comp=E,84nm,0.4s						
AYDB	Zeytinkoy-Aydi	0.99	321	PG	Pb	11 08 53.6	-0.2
DAT	Datca	0.99	243	PG	Pg	11 08 52.8	-0.9
DAT				SG	Sn	11 09 08.3	-0.2
ARG	Arkhangelos	1.06	205	PG	Pn	11 08 54.7	-0.5
BODT	Bodrum	1.10	264	PN	Pn	11 08 55.7	-0.2
AKAS	Kas	1.20	142	*i* P	Pn	11 08 59.0	+1.7
AKAS				*i* S	Sn	11 09 19.1	+5.5
AKAS				IAML		11 09 21.0	
	comp=E,143nm,0.5s						
AKAS	Kas	1.20	142	PN	Pn	11 08 56.9	-0.4
GCAM	G?zelcaml?	1.27	295	PN	Pg	11 08 58.2	-0.7
PASA	Karahalli, USA	1.33	28	*i* P	Pg	11 08 59.0	-1.1
PASA				*i* S	Sg	11 09 21.4	+4.0
KULA	Kula-Manisa	1.33	359	PN	Pb	11 08 59.0	-0.6
KORT	Korkueli	1.34	97	PN	Pg	11 08 59.2	-1.2
USAK	Uak-Merkez	1.56	10	*i* P	Pb	11 09 02.1	-1.2
USAK				*i* S	Sg	11 09 25.9	+1.3
USAK				IAML		11 09 56.0	
	comp=E,50nm,2.4s						
URLA	Izmir	2.03	306	PN	Pn	11 09 09.1	+0.4

NEIC ***23*** *11:15:07.0±1.9, 13°.55N±0°.07×90°.41W±0°.06, h58^{km}±8^{km}, mb4.5/20, Md4.4(SNET), Error ellipse: s-maj=11.0km s-min=7.5km az=201.0*

SNET ***23*** *11:15:06.2±1.1, 13°.53N×90°.45W, h42^{km}±14^{km}, ML4.4*

UCR ***23*** *11:15:06.3±1.1, 13°.54N×90°.45W, h42^{km}±14^{km}, ML4.3, mb4.5(NEIC)*

IDC ***23*** *11:15:07.4±2.3, 13°.76N×90°.20W, h70^{km}±23^{km}, mb3.4/6, mb1 3.7/9, mb1mx3.4/41, mbtmp3.7/9, MS3.4/3, Ms1 3.4/3, ms1mx3.0/24, Error ellipse: s-maj=35.9km s-min=15.2km az=41.0*

INET ***23*** *11:15:07.0, 13°.50N×90°.36W, h19^{km}, MW4.1*

ISC 23 11:15:06.1±0.9**, 13°.57N**±0°.05×**90°.43W**±0°.04**, h62**^{km}±8^{km}**, n122, σ0**^{s}**.89**/159**, mb4.4**/15**, 2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.71	62	⇓*i*P	Pn	11 15 20.5	-0.3
NUBE				*e*S	Sn	11 15 31.5	-0.1
NUBE	Las Nubes	0.71	62	⇓*i*P	Pn	11 15 20.5	-0.3
NUBE				*e*S	Sn	11 15 31.5	-0.1
LOAL	Lomas de Alarc	0.76	56	*e*P	Pn	11 15 21.5	+0.2
LOAL				*e*S	Sn	11 15 33.5	+1.1
SLOZ	Alcaldia de Sa	0.78	54	*i* P	Pn	11 15 21.4	0.0
SLOZ				*e*S	Sn	11 15 33.6	+0.9
CEVE	Cerro Verde	0.82	71	*e*P	Pn	11 15 22.2	0.0
CEVE				*e*S	Sn	11 15 35.0	+0.9
CEVE				IAML		11 15 35.8	
	comp=Z,24µm,0.2s						
CEVE	Cerro Verde	0.82	71	*e*P	Pn	11 15 22.2	0.0
CEVE				*e*S	Sn	11 15 35.0	+0.9
CEVE				IAML		11 15 35.8	
	comp=Z,24µm,0.2s						
RTR	El Retiro	0.83	66	*e*P	Pn	11 15 22.4	+0.2
RTR	El Retiro	0.83	66	*e*P	Pn	11 15 22.4	+0.2
SBLS	San Blas	0.83	71	*e*P	Pn	11 15 22.0	-0.3
SBLS	San Blas	0.83	71	*e*P	Pn	11 15 22.0	-0.3
SNJE	San Jose	0.85	69	*i* P	Pn	11 15 22.4	-0.1
SNJE	San Jose	0.85	69	*i* P	Pn	11 15 22.4	-0.1
UNIC	Universidad Ca	0.95	64	*e*P	Pn	11 15 23.8	+0.1
UNIC	Universidad Ca	0.95	64	*e*P	Pn	11 15 23.8	+0.1
JAYA	Jayaque - finc	0.96	85	*e*P	Pn	11 15 23.3	-0.5
JAYA				*e*S	Sn	11 15 37.2	+0.3
JAYA	Jayaque - finc	0.96	85	*e*P	Pn	11 15 23.3	-0.5
JAYA				*e*S	Sn	11 15 37.2	+0.3
CEDA	San Andres	1.03	77	*e*P	Pn	11 15 24.7	+0.1
CEDA				*e*S	Sn	11 15 39.0	+0.6
CEDA				*e*S	Sn	11 15 39.3	+0.9
CEDA				IAML		11 15 42.2	
	comp=Z,14µm,0.7s						
CEDA	San Andres	1.03	77	*e*P	Pn	11 15 24.7	+0.1
CEDA				*e*S	Sn	11 15 39.0	+0.6
CEDA				*e*S	Sn	11 15 39.3	+0.9
CEDA				IAML		11 15 42.2	
	comp=Z,14µm,0.7s						
LALI	Alcalda de L	1.08	94	*e*P	Pn	11 15 24.9	-0.3
LALI				*e*S	Sn	11 15 39.3	-0.2
LALI	Alcalda de L	1.08	94	*e*P	Pn	11 15 24.9	-0.3
LALI				*e*S	Sn	11 15 39.3	-0.2
PMON	Piamonte	1.09	82	*e*P	Pn	11 15 25.7	+0.2
PMON				*e*S	Sn	11 15 41.0	+1.0
PMON	Piamonte	1.09	82	*e*P	Pn	11 15 25.7	+0.2
PMON				*e*S	Sn	11 15 41.0	+1.0
MAGS	Ministerio de	1.12	84	*e*P	Pn	11 15 26.0	+0.2
MAGS				*e*S	Sn	11 15 40.8	+0.2
TACO	Tacachico	1.12	69	*e*P	Pn	11 15 26.2	+0.4
TACO				*e*S	Sn	11 15 41.6	+1.1
TACO	Tacachico	1.12	69	*e*P	Pn	11 15 26.2	+0.4
TACO				*e*S	Sn	11 15 41.6	+1.1
ITCA	Escuela Especi	1.12	84	*e*P	Pn	11 15 26.0	+0.1
ITCA				*e*S	Sn	11 15 41.2	+0.5
ITCA	Escuela Especi	1.12	84	*e*P	Pn	11 15 26.0	+0.1
ITCA				*e*S	Sn	11 15 41.2	+0.5
BOQS	Boqueron	1.13	81	*e*P	Pn	11 15 26.2	+0.1
BOQS				*e*S	Sn	11 15 42.3	+1.3
BOQS	Boqueron	1.13	81	*e*P	Pn	11 15 26.2	+0.1
BOQS				*e*S	Sn	11 15 42.3	+1.3
UEES	Universidad Ev	1.17	82	IAML		11 15 47.1	
	comp=Z,6µm,0.4s						
UEES	Universidad Ev	1.17	82	IAML		11 15 47.1	
	comp=Z,6µm,0.4s						
SNET	Serv Nac Est T	1.17	84	*e*P	Pn	11 15 26.8	+0.3
SNET				*e*S	Sn	11 15 42.6	+0.9
SNET				IAML		11 15 44.1	
	comp=Z,7µm,0.3s						
SNET	Serv Nac Est T	1.17	84	*e*P	Pn	11 15 26.8	+0.3
SNET				*e*S	Sn	11 15 42.6	+0.9
SNET				IAML		11 15 44.1	
	comp=Z,7µm,0.3s						
SNET	Serv Nac Est T	1.17	84		Pn	11 15 26.7	+0.1
OPAM	Oficina de Pla	1.21	83	*e*P	Pn	11 15 27.6	+0.7
OPAM				*e*S	Sn	11 15 43.9	+1.4
OPAM	Oficina de Pla	1.21	83	*e*P	Pn	11 15 27.6	+0.7
OPAM				*e*S	Sn	11 15 43.9	+1.4
IGN	Direccin Gen	1.23	83	*e*P	Pn	11 15 28.0	+0.6
IGN	Direccin Gen	1.23	83	*e*P	Pn	11 15 28.0	+0.6
UDBS	Universidad Do	1.25	83	IAML		11 15 47.6	
	comp=Z,6µm,0.3s						
UDBS	Universidad Do	1.25	83	IAML		11 15 47.6	
	comp=Z,6µm,0.3s						
AEIL	Aeropuerto Ilo	1.28	84	*e*P	Pn	11 15 29.1	+1.1
AEIL				*e*S	Sn	11 15 45.4	+1.0
AEIL				IAML		11 15 50.5	
	comp=Z,4µm,0.5s						
AEIL	Aeropuerto Ilo	1.28	84	*e*P	Pn	11 15 29.1	+1.1
AEIL				*e*S	Sn	11 15 45.4	+1.0
AEIL				IAML		11 15 50.5	
	comp=Z,4µm,0.5s						
LFU	La Fuente	1.29	82	*e*P	Pn	11 15 29.0	+0.9
LFU	La Fuente	1.29	82	*e*P	Pn	11 15 29.0	+0.9
MTO3	Montecristo	1.33	51	*e*P	Pn	11 15 29.0	+0.3
MTO3				*e*S	Sn	11 15 46.9	+1.2
MTO3	Montecristo	1.33	51	*e*P	Pn	11 15 29.0	+0.3
MTO3				*e*S	Sn	11 15 46.9	+1.2
MTO3	Montecristo	1.33	51		Pn	11 15 28.9	+0.1
MTO3				Sn	Sn	11 15 46.9	+1.2
LFRS	El Faro	1.33	87	*e*P	Pn	11 15 28.8	+0.1
LFRS	El Faro	1.33	87	*e*P	Pn	11 15 28.8	+0.1
ESQI	Esquipulas	1.45	47	*e*P	Pn	11 15 30.9	+0.7
ESQI				*e*S	Sn	11 15 50.7	+2.4
ESQI	Esquipulas	1.45	47		Pn	11 15 31.1	+0.9
ESQI				Sn	Sn	11 15 50.5	+2.2
PAVA	Las Pavas	1.46	84	*e*P	Pn	11 15 30.9	+0.6
PAVA	Las Pavas	1.46	84	*e*P	Pn	11 15 30.9	+0.6
RTAL	Retalhuleu	1.56	308	*e*P	Pn	11 15 31.4	-0.1
RTAL				*e*S	Sn	11 15 50.8	0.0
RTAL	Retalhuleu	1.56	308		Pn	11 15 31.5	-0.1
LLGN	La Laguna	1.56	67	*e*S	Sn	11 15 52.5	+1.5
LLGN	La Laguna	1.56	67	*e*S	Sn	11 15 52.5	+1.5
TECO	Alcaldia de Te	1.60	91	*e*P	Pn	11 15 32.6	+0.4
TECO				*e*S	Sn	11 15 52.7	+0.7
SCLA	Alcaldia de Sa	1.66	85	*e*P	Pn	11 15 33.6	+0.6
SCLA	Alcaldia de Sa	1.66	85	*e*P	Pn	11 15 33.6	+0.6
PQSS	Presa 15 de Se	1.82	88	*e*P	Pn	11 15 35.5	+0.4
PQSS				*e*S	Sn	11 15 58.5	+1.4
ALJI	Alcalda de J	1.82	97	*e*P	Pn	11 15 35.5	+0.3
ALJI				*e*S	Sn	11 15 58.6	+1.3
ALJI	Alcalda de J	1.82	97	*e*P	Pn	11 15 35.5	+0.3
ALJI				*e*S	Sn	11 15 58.6	+1.3
COEB	Comit de Eme	1.85	92	*i* P	Pn	11 15 36.1	+0.5
COEB				*e*S	Sn	11 15 58.7	+0.7
COEB				IAML		11 16 04.0	
	comp=Z,1µm,0.4s						
COEB	Comit de Eme	1.85	92	*i* P	Pn	11 15 36.1	+0.5
COEB				*e*S	Sn	11 15 58.7	+0.7
COEB				IAML		11 16 04.0	
	comp=Z,1µm,0.4s						
HUEH	Huehuetenango	2.03	329	*e*P	Pn	11 15 39.5	+1.3
HUEH	Huehuetenango	2.03	329		Pn	11 15 39.5	+1.3
PACA	Pacayal	2.05	92	*e*P	Pn	11 15 40.0	+1.6
PACA	Pacayal	2.05	92	*e*P	Pn	11 15 40.0	+1.6
CNCH	Conchagua	2.54	96	*e*P	Pn	11 15 45.4	+0.4
CNCH	Conchagua	2.54	96	*e*P	Pn	11 15 45.4	+0.4
TGUH	Tegucigalpa,Un	3.10	81		Pn	11 15 52.6	-0.1
CCIG	Comitan	3.17	329		Pn	11 15 54.9	+1.2
PETF	Flores	3.38	9		Pn	11 15 58.3	+2.0
CRIN	San Cristobal	3.40	104		Pn	11 15 57.5	+0.7
BOAB	BOACO BROADBAN	4.77	103		Pn	11 16 14.6	-0.9
ACON	Acoyapa	5.37	107	Pn	Pn	11 16 23.3	-0.3
HZTE	Horizontes, Gu	5.51	120		Pn	11 16 26.7	+1.1
CMIG	Matias Romero	5.55	310	P	Pn	11 16 27.3	+1.2
	comp=Z,3.6nm,0.3s,baz=109,slow=11,SNR=24						
CMIG				S	Sn	11 17 30.6	+2.1
	comp=Z,3.8nm,0.3s,baz=256,slow=20,SNR=6.4						
CMIG				LR	LR	11 18 54.9	
	comp=Z,167nm,18.1s,baz=124,slow=41						
ORTG	Ortega, Santa	5.81	123		Pn	11 16 30.7	+0.9
DUNO	Dulce Nombre,	5.95	125		Pn	11 16 32.5	+1.0
ESPN	Las Esperanzas	6.13	102		Pn	11 16 32.7	-1.4
JTS	Las Juntas de	6.27	121	P	Pn	11 16 37.1	+1.1
JTS	Las Juntas de	6.27	121		Pn	11 16 37.0	+0.9
RIMA	Rio Macho	7.46	120		Pn	11 16 53.9	+1.4
PEZE	Perez Zeledon,	7.81	121		Pn	11 16 57.9	+0.7
SRBA	San Rafael, Bu	8.16	121		Pn	11 17 03.0	+1.0
TLIG	Tlapa	8.79	298	Pn	Pn	11 17 11.5	+0.8
PRVC	Isla de Provid	8.82	90	Pn	Pn	11 17 11.4	+0.5
CDITO	Canoas	8.92	123	Pn	Pn	11 17 12.5	+0.1
BRU2	Volcan	8.95	121	Pn	Pn	11 17 13.3	+0.4
NATX	Nacogdoches	18.52	349	P	Pn	11 19 18.4	+0.2
JCT	Junction City	18.93	334	P	P	11 19 21.7	-0.3
WHTX	Lake Whitney,	19.44	342	P	P	11 19 26.4	-1.2
TXAR	Lajitas Array	19.92	324	P	Pn	11 19 34.7	-0.3
	comp=Z,0.1nm,0.3s,baz=144,slow=12,SNR=7.8						
TKL	Tuckaleechee C	22.80	14	P	P	11 20 03.2	-0.5
	comp=Z,4.7nm,0.9s,baz=198,slow=8.7,SNR=4.5						
TKL				LR	LR	11 29 19.2	
	comp=Z,143nm,18.6s,baz=230,slow=38						
T47A	Sharon Grove	23.52	7	P	P	11 20 10.3	-0.3
T47A				IAmb	IAmb	11 20 28.3	
	comp=Z,14nm,0.8s						
V55A	Taylorsville	23.69	19	P	P	11 20 11.9	-0.3
V55A				IAmb	IAmb	11 20 29.1	
	comp=Z,13nm,1.1s						
T35A	Sooner Cattle	23.88	348	P	P	11 20 12.8	-1.1
T35A				IAmb	IAmb	11 20 31.1	
	comp=Z,8.8nm,0.9s						
BLOK	Blackwell	23.89	346	P	P	11 20 12.8	-1.1
BLOK				IAmb	IAmb	11 20 29.8	
	comp=Z,23nm,1.1s						
WCI	Wyandotte Cave	24.84	8	P	P	11 20 23.0	+0.4
WCI				IAmb	IAmb	11 20 24.8	
	comp=Z,14nm,0.7s						
I42A	Draeger Farm,	30.25	2	P	P	11 21 11.3	+0.3
I42A				IAmb	IAmb	11 21 27.2	
	comp=Z,25nm,1.3s						
TRNY	Table Rock, Ra	30.91	24	P	P	11 21 16.0	-0.8
TRNY				IAmb	IAmb	11 21 18.5	
	comp=Z,8.1nm,0.9s						
PAGB	Antelope Grade	34.72	315	P	P	11 21 50.6	+0.3
NVAR	Mina Array Bea	34.97	320	P	P	11 21 55.0	+2.4
	comp=Z,1.6nm,0.7s,baz=120,slow=8.7,SNR=9.2						
NVAR	Mina Array Bea	34.97	320	P	P	11 21 52.5	-0.1
ULM	Lac du Bonnet	36.85	354	LR	LR	11 40 28.3	
	comp=Z,65nm,18.4s,baz=349,slow=42						
PLID	Pearl Lake	38.20	330	P	P	11 22 21.0	+1.1
VILB	Vilhena	39.90	130	P	P	11 22 34.6	+0.4
VILB				IAmb	IAmb	11 22 57.1	
	comp=Z,6.0nm,0.6s						
SIV	San Ignacio	41.29	134	P	P	11 22 45.4	-0.3
	comp=Z,0.7nm,0.5s,baz=306,slow=10,SNR=4.2						
SCHQ	Schefferville	45.12	19	P	P	11 23 13.5	-2.6
	comp=Z,3.0nm,0.8s,baz=214,slow=5.6,SNR=6.2						
SCHQ	Schefferville	45.12	19	P	P	11 23 13.8	-2.3
SCHQ				IAmb	IAmb	11 23 36.0	
	comp=Z,10nm,1.2s						
YKA	Yellowknife Ar	51.81	346	P	P	11 24 06.0	-1.4
	comp=Z,0.3nm,0.6s,baz=148,slow=8.1,SNR=6.5						
LC01	Cunco	54.99	162	P	P	11 24 31.1	0.0
LC01				IAmb	IAmb	11 24 32.2	
	comp=Z,8.0nm,1.1s						
SPB	Sao Paulo	55.96	131	P	P	11 24 37.0	-1.2
PLCA	Paso Flores	57.08	162	P	P	11 24 47.1	+1.1
GO07	Milladeo Hill,	58.46	166	P	P	11 24 56.5	+1.0
HLP	Hilina Pali	62.19	285	P	P	11 25 21.9	+0.3
ILAR	Eielson Array	63.84	337	P	P	11 25 30.7	-1.0
	comp=Z,0.1nm,0.7s,baz=178,slow=5.4,SNR=5.2						
PVAQ	Vaqueiros	76.16	54	P	P	11 26 48.4	+0.7
WRA	Warramunga Arr	136.76	255	PKP	PKPdf	11 34 23.0	+0.6
	comp=Z,0.9nm,1.1s,baz=86,slow=2.7,SNR=2.7						
CMAR	Chiang Mai Arr	146.87	344	PKPbc	PKPdf	11 34 41.6	+1.2
	comp=Z,0.5nm,0.4s,baz=346,slow=4.2,SNR=5.0						

ISK 23 11:18:38.4, 39°.74N×35°.71E, h11^{km}**, ML1.8**/3**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOZ	Yozgat	0.32	253	PG	Pg	11 18 45.1	+0.3
YOZ				SG	Sb	11 18 50.5	-0.9
CORM	Corum	0.94	298	PG	Pb	11 18 57.1	+0.3
CORM				SG	Sb	11 19 10.3	+0.9
SVSK	Karacayir	1.01	79	PG	Pn	11 18 58.2	-0.3
BRTR	Keskin Array B	1.60	270	PN	Pn	11 19 07.3	+0.5
BRTR				SN	Sb	11 19 28.5	+0.2

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*NORS **23** 11:20:08.7±0.0, 40°.81N×46°.23E, h15km, MPVA3.3*
*DRS **23** 11:20:11.3±0.0, 41°.13N×46°.20E, h10km*
*TIF **23** 11:20:11.8, 40°.86N×45°.93E, h27km±3km*
ISC 23 11:20:07.3±2.1, **40°.8N**±0°.1×**46°.04E**±0°.05, **h7**km±15km, **n12**, σ**0ˢ.67**/21, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDFL	Dedoflistskaro	0.69	5	P	Pn	11 20 24.4	+0.7
DGRG	David-gareji	0.86	324	P	Pn	11 20 26.2	+0.2
DGRG				S	Sn	11 20 38.9	0.0
LGD	Lagodekhi	1.09	8	P	Pb	11 20 28.5	0.0
LGD				S	Sb	11 20 42.5	-0.5
BTNK	Botanikuri	1.32	315	P	Pn	11 20 31.8	-0.4
BTNK				S	Sg	11 20 48.9	-0.9
AKT	Akhty	1.47	60	ePg	Pn	11 20 34.9	+0.6
	13nm,0.2s						
AKT				eSg	Sb	11 20 53.3	-0.6
DMNI	Dmanisi	1.52	293	P	Pg	11 20 36.9	+0.5
DMNI				S	Sg	11 20 56.4	+0.4
BTLR	Botlikh	1.91	4	ePg	Pb	11 20 41.9	-0.7
	7.2nm,0.2s						
BTLR				eSg	Sb	11 21 06.9	+0.2
PNSH	Pansheti	2.16	331	S	Sb	11 21 14.3	+0.3
PNSH	Pansheti	2.16	331	P	Pb	11 20 46.5	-0.4
MTEO	Meteo	2.23	330	P	Pb	11 20 48.1	-0.2
MTEO				S	Sb	11 21 17.0	+0.8
ZEI	Tsey	2.59	322	ePn	Pb	11 20 53.5	-0.7
	2.4nm,0.4s						
ZEI				eSn	Sb	11 21 27.2	+0.9
DIGR	Digorskoe uzhe	2.83	320	ePn	Pb	11 20 56.8	-1.4
DIGR				eSn	Sb	11 21 33.2	+0.1

WEL 23 11:25:25.0±1.2, **33°S**±13°×**17°9W**±3°2, **h87**km±96km, **M4.2**/8, **mB4.7**/4, **ML4.5**/12, **MLv4.3**/8, **Mw(mB)3.9**/4, **Error ellipse: s-maj=0.0km s-min=0.0km az=110.6, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.83	16	P	Pn	11 26 21.7	0.0
GLKZ				S	Sn	11 27 05.3	-0.3
MXZ	Matakaoa Point	5.05	204	P	Pn	11 26 38.6	+0.4
MXZ				S	Sn	11 27 35.9	+0.8
WMGZ	Waiomatatini S	5.25	202	P	Pn	11 26 41.1	+0.2
WMGZ				S	Sn	11 27 42.3	+2.3
HAZ	Te Kaha	5.41	207	P	Pn	11 26 43.2	+0.1
HAZ				S	Sn	11 27 46.5	+2.5
PKGZ	Pakihiroa	5.42	204	P	Pn	11 26 44.6	+1.3
PKGZ				S	Sn	11 27 43.7	-0.7
PUZ	Puketiti	5.53	202	P	Pn	11 26 43.8	-0.9
PUZ				S	Sn	11 27 46.5	-0.4
RUGZ	Raukumara Rang	5.63	207	P	Pn	11 26 46.6	+0.3
RUGZ				S	Sn	11 27 49.1	-0.6
CNGZ	Carnagh Statio	5.92	201	P	Pn	11 26 49.4	-0.7
TKGZ	Te Karaka	5.99	203	P	Pn	11 26 52.3	+1.2
TKGZ				S	Sn	11 27 57.4	-0.9
OPRZ	Ohinepanea	6.01	215	P	Pn	11 26 53.7	+2.4
MWZ	Matawai	6.01	206	P	Pn	11 26 50.8	-0.6
MWZ				S	Sn	11 27 59.9	+1.1
URZ	Urewera	6.11	209	P	Pn	11 26 51.9	-0.7
URZ				S	Sn	11 27 60.0	-1.1
RIGZ	Rimuhau	6.26	203	P	Pn	11 26 54.8	0.0
MUGZ	Murupara	6.43	210	P	Pn	11 26 57.2	0.0
MUGZ				S	Sn	11 28 08.8	-0.2
RTZ	Ruatahuna	6.46	208	P	Pn	11 26 57.7	+0.1
SNGZ	Shannon Statio	6.47	205	P	Pn	11 26 58.3	+0.6
SNGZ				S	Sn	11 28 09.8	-0.3
RAHZ	Arahi	6.69	206	P	Pn	11 27 01.3	+0.7
RAHZ				S	Sn	11 28 14.7	-0.6
MTHZ	Maungataniwha	6.72	208	P	Pn	11 27 01.2	+0.1
MTHZ				S	Sn	11 28 17.8	+1.6
NMHZ	Naumai	6.95	207	P	Pn	11 27 04.3	+0.1
NMHZ				S	Sn	11 28 22.4	+0.7

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*IDC **23** 11:33:21.4±1.1, 28°.01N×104°.65E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.6/38, mbtmp3.7/8, ML3.4/1, MS3.1/3, Ms1 3.2/3, ms1mx2.8/44, Error ellipse: s-maj=35.4km s-min=19.5km az=68.0*
ISC 23 11:33:24.8±0.8, **28°.30N**±0°.04×**104°.90E**±0°.07, **h10**km, **n15**, σ**2ˢ.26**/22, **mb3.7**/7, **1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GYA	Guiyang	2.41	139	⇓Pn	Pn	11 34 04.8	+0.3
GYA				Pg	Pg	11 34 11.1	0.0
GYA				Sn	Sn	11 34 35.5	+1.3
GYA				smax	smax		
	comp=N,310nm,0.9s						
GYA				smax	smax		
	comp=E,200nm,0.8s						
GYA				LR	LR		
	comp=N,650nm,3.8s						
GYA				LR	LR		
	comp=E,570nm,3.8s						
GYA				LR	LR		
	comp=Z,190nm,2.6s						
CD2	Chengdu	2.79	339	Pn	Pn	11 34 10.9	+1.3
CD2				Pg	Pg	11 34 18.8	+0.6
CD2				Sn	Sb	11 34 47.0	-2.0
CD2				Sg	Sg	11 34 58.0	+3.7
CD2				smax	smax		
	comp=N,60nm,1.1s						
CD2				smax	smax		
	comp=E,1µm,1.1s						
XAN	Xi'an	6.68	30	Pn	Pn	11 35 04.8	+1.7
XAN				Pg	Pg	11 35 33.3	+0.5
XAN				Sn	Sn	11 36 15.0	-4.3
XAN				Sg	Sg	11 37 01.8	+2.5
XAN				smax	smax		
	comp=N,170nm,1.2s						
XAN				smax	smax		
	comp=E,110nm,1.4s						
XAN				LR	LR		
	comp=N,440nm,5.1s						
XAN				LR	LR		
	comp=E,300nm,5.5s						
XAN				LR	LR		
	comp=Z,430nm,11.0s						
LZH	Lanzhou	7.82	354	ePn	Pn	11 35 22.4	+3.6
LZH				Pg	Pb	11 35 47.4	+6.9
LZH				Sn	Sb	11 37 02.0	-12
LZH				Sg	Sg	11 37 32.3	-3.4
LZH				smax	smax		
	comp=N,51nm,1.2s						
LZH				smax	smax		
	comp=E,80nm,1.1s						
LZH				LR	LR		
	comp=N,200nm,6.8s						
LZH				LR	LR		
	comp=E,370nm,6.5s						
LZH				LR	LR		
	comp=Z,180nm,7.6s						
CMAR	Chiang Mai Arr	11.22	210	LR	LR	11 40 48.8	
	comp=Z,60nm,18.0s,baz=5.5,slow=41						
SONM	Songino Array	19.54	3	P	Pn	11 37 53.9	0.0
	comp=Z,0.1nm,0.3s,baz=185,slow=11,SNR=4.4						
WMQ	Urumqi	20.75	323	eP	P	11 38 06.4	+0.6
JOW	Kunigami	20.77	89	LR	LR	11 47 32.3	
	comp=Z,65nm,18.2s,baz=302,slow=40						
KSRS	Korea Array	21.34	59	P	P	11 38 12.3	+0.3
	comp=Z,0.8nm,0.5s,baz=237,slow=11,SNR=5.2						
KSRS				LR	LR	11 47 46.2	
	comp=Z,63nm,18.5s,baz=318,slow=40						
MKAR	Makanchi Array	25.58	322	P	P	11 38 53.3	-0.7
	comp=Z,0.5nm,0.5s,baz=121,slow=8.7,SNR=6.6						
USRK	Ussuriysk Ar.	26.84	47	P	P	11 39 08.1	+2.7
	comp=Z,1.2nm,0.5s,baz=252,slow=14,SNR=4.7						
ZALV	Zalesovo Beam	29.55	336	P	P	11 39 29.0	-0.5
	comp=Z,0.7nm,0.6s,baz=120,slow=8.5,SNR=2.6						
WRA	Warramunga Arr	55.77	146	P	P	11 42 59.5	-2.6
	comp=Z,1.0nm,0.7s,baz=334,slow=8.2,SNR=9.0						
ASAR	Alice Springs	58.74	149	P	P	11 43 20.4	-2.7
	comp=Z,0.8nm,0.7s,baz=332,slow=6.5,SNR=16						
YKA	Yellowknife Ar	84.16	17	P	P	11 45 55.1	-0.8
	comp=Z,0.4nm,0.8s,baz=326,slow=5.4,SNR=6.5						

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*IDC **23** 11:45:03.8±3.1, 5°.75N×125°.30E, h148km±42km, mb3.0/4, mb1 3.2/4, mb1mx2.6/42, mbtmp3.4/4, Error ellipse: s-maj=137.0km s-min=8.7km az=67.0*
*MAN **23** 11:45:03.7, 5°.82N×125°.98E, h143km, mb4.1, ML2.9, MS2.6*
ISC 23 11:45:04.0±1.3, **5°.8N**±0°.1×**125°.7E**±0°.2, **h154**km±10km, **n9**, σ**0ˢ.88**/14, **mb3.2**/4, **4C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	0.80	289	⇑iP	Pn	11 45 27.7	-0.1
GSPH				iS	Sn	11 45 45.6	-0.3
DAV	Davao City (W)	1.24	354	P	Pn	11 45 31.1	-0.3
	37nm,0.3s,baz=0.0,slow=9.1,SNR=1.2						
DAV				S	Sn	11 45 53.0	+0.6
	100nm,0.3s,baz=295,slow=22,SNR=7.4						
DMPH	Davao City--Mi	1.27	351	⇑eP	Pn	11 45 30.2	-1.4
DMPH				eS	Sn	11 45 52.9	0.0
KCP	Kidapawan	1.33	332	⇑iP	Pn	11 45 32.7	+0.4
KCP				iS	Sn	11 45 54.3	+0.4
BUKP	Musuan	2.14	343	⇑eP	Pn	11 45 41.5	+0.4
BUKP				eS	Sn	11 46 11.1	+1.4
WRA	Warramunga Arr	26.98	162	P	P	11 50 32.4	+0.9
	0.4nm,0.9s,baz=342,slow=9.7,SNR=3.6						
ASAR	Alice Springs	30.38	165	P	P	11 51 02.5	+0.7
	0.2nm,0.4s,baz=342,slow=6.9,SNR=6.7						
MKAR	Makanchi Array	55.27	325	P	P	11 54 20.6	-0.8
	0.2nm,0.4s,baz=110,slow=7.5,SNR=2.0						
KURBB	Kurchatov Arra	59.44	327	P	P	11 54 49.5	-0.9
	0.3nm,0.3s,baz=124,slow=7.0,SNR=5.1						

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*IDC **23** 11:52:16.9±2.7, 36°.31N×70°.41E, h180km±17km, mb3.0/2, mb1 3.0/6, mb1mx2.6/43, mbtmp3.6/6, Error ellipse: s-maj=29.2km s-min=12.8km az=16.0*
*NNC **23** 11:52:18.9±11.0, 37°.16N×69°.67E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=85.2km s-min=73.4km az=176.0*
ISC 23 11:52:18.7±1.7, **36°.6N**±0°.1×**70°.3E**±0°.2, **h200**km, **n14**, σ**1ˢ.42**/17, **2C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.12	24	P	Pn	11 53 48.9	+0.9
	SNR=42						
UCH	Uchtor	6.50	29	P	Pn	11 53 54.0	+1.1
	SNR=9.0						
KK09	Karatay Array	6.53	1	⇓Pn	Pn	11 53 50.3	-2.5
	2.9nm,0.6s,baz=195,slow=13						
KK09				⇑Sn	Sn	11 55 00.9	-6.6
	2.3nm,0.5s,baz=191,slow=25						
EKS2	Erkin-Say	6.63	23	P	Pn	11 53 55.6	+1.4
	SNR=5.9						
AAK	Ala-Archa	6.85	27	P	Pn	11 53 57.9	+0.8
	2.1nm,0.3s,baz=170,slow=2.4,SNR=24						
AAK				S	Sn	11 55 14.5	-0.6
	1.0nm,0.3s,baz=6.9,slow=21,SNR=20						
AAK	Ala-Archa	6.85	27	P	Pn	11 53 58.5	+1.4
	SNR=7.7						
AAK	Ala-Archa	6.85	27	⇓Pn	Pn	11 53 57.9	+0.8
	1.8nm,0.3s						
AAK				⇓Sn	Sn	11 55 14.2	-1.0
	15nm,0.8s						
TKM2	Tokmak 2	7.52	31	P	Pn	11 54 07.2	+1.3
	SNR=16						
TKM2	Tokmak 2	7.52	31	⇓Pn	Pn	11 54 06.2	+0.4
	7.2nm,0.5s						
TKM2				⇑Sn	Sn	11 55 29.6	-1.4
	5.0nm,0.9s						
MKAR	Makanchi Array	13.55	37	P	P	11 55 24.4	-1.1
	0.1nm,0.3s,baz=218,slow=10,SNR=7.1						
KURBB	Kurchatov Arra	15.23	20	P	Pn	11 55 43.5	0.0
	0.0nm,0.3s,baz=208,slow=9.4,SNR=1.6						
AKTO	Aktyubinsk	16.44	331	P	Pn	11 55 59.9	+1.7
	0.2nm,0.3s,baz=134,slow=13,SNR=9.5						
ZALV	Zalesovo Beam	20.07	26	P	P	11 56 38.7	+2.1
	0.9nm,0.3s,baz=226,slow=12,SNR=5.6						
ASAR	Alice Springs	84.75	124	P	P	12 04 29.6	-1.0
	0.1nm,0.6s,baz=323,slow=3.8,SNR=1.6						

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*FUNV **23** 11:54:30.8, 8°.55N×71°.46W, h5km, MW3.4*
ISC 23 11:54:30.4±1.2, **8°.51N**±0°.05×**71°.41W**±0°.04, **h4**km±11km, **n9**, σ**0ˢ.80**/16, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIGV	El Vigia	0.33	8	eP	Pg	11 54 36.8	-0.1
VIGV				eS	Sg	11 54 41.1	0.0
SDV	Santo Domingo	0.85	64	eP	Pg	11 54 46.8	0.0
SDV				eS	Sg	11 54 58.8	+0.9
CAPV	Capacho	1.10	234	eP	Pg	11 54 51.6	-0.1
CAPV				eS	Sg	11 55 06.1	+0.2
OCAC	Ocana	1.91	262	eP	Pb	11 55 05.3	-0.6
OCAC				eS	Sg	11 55 31.1	-0.8
SANV	Sanarito	2.09	62	eS	Sn	11 55 33.3	+0.4
BARC	Barichara	2.59	223	eP	Pb	11 55 18.5	+0.8
BARC				eS	Sg	11 55 53.0	-0.9
SMLC	San Martn de	2.65	276	eP	Pn	11 55 14.8	+0.9
SMLC				eS	Sn	11 55 46.6	+0.2
BAUV	El Baul	3.36	82	eP	Pn	11 55 24.4	+0.8
BAUV				eS	Sn	11 56 02.8	-1.2
BENV	Beln	4.03	69	eP	Pn	11 55 31.7	-1.2

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*MEX **23** 12:16:16.6±1.3, 18°.13N×101°.67W, h50km, MD4.3*
*IDC **23** 12:16:22.0±5.8, 18°.48N×101°.09W, h115km±44km, mb3.2/5, mb1 3.5/8, mb1mx3.4/37, mbtmp3.5/8, MS2.9/1, Ms1 2.9/1, ms1mx2.6/13, Error ellipse: s-maj=91.6km s-min=25.7km az=37.0*
ISC 23 12:16:15.3±1.0, **18°.21N**±0°.05×**101°.57W**±0°.04, **h31**km±10km, **n27**, σ**1ˢ.56**/37, **mb3.5**/5, **Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UON	La Union	0.33	225	eP	Pb	12 16 22.8	-0.5
UON				iS	Sb	12 16 29.8	+1.2
ZIIG	Zihuatanejo	0.60	171	iP	Pb	12 16 26.6	-0.9
ZIIG				iS	Sb	12 16 35.6	-0.2
ARIG	Puente Sto Nin	1.16	86	iP	Pb	12 16 36.0	-0.9
ARIG				iS	Sn	12 16 52.0	+1.6
URUA	Uruapan	1.30	338	iP	Pn	12 16 37.4	-0.2
URUA				iS	Sn	12 16 53.8	-0.2
CAIG	El Cayaco	1.69	133	iP	Pn	12 16 42.1	-0.7
CAIG				iS	Sn	12 17 02.8	-0.7
MEIG	Mezcala	1.88	98	eP	Pn	12 16 46.1	+0.7
MEIG				eS	Sb	12 17 10.6	-1.5
PLIG	Platanillo	1.97	84	iP	Pn	12 16 47.5	+0.8
PLIG				iS	Sb	12 17 12.3	-2.5
DAIG	Los Arroyos	2.18	123	eP	Pn	12 16 49.3	-0.2
DAIG				iS	Sn	12 17 16.7	+1.3
CRIG	Cruz Grande	2.75	122	iP	Pn	12 16 58.0	+0.6
CRIG				iS	Sn	12 17 28.9	-0.6
TLIG	Tlapa	2.93	102	iP	Pn	12 17 01.3	+1.3
TLIG				iS	Sn	12 17 35.7	+1.5
MGIG	Malinaltepec	2.96	109	iP	Pn	12 17 01.9	+1.5
MGIG				eS	Sn	12 17 34.3	-0.7
FTIG	Fresnillo de T	3.28	95	iP	Pn	12 17 06.2	+1.4
FTIG				iS	Sn	12 17 44.3	+1.4
HLIG	Huajuapan de L	3.60	95	iP	Pn	12 17 10.9	+1.6
HLIG				iS	Sn	12 17 52.7	+1.8
TXIG	Tlaxiaco	3.75	104	iP	Pn	12 17 13.0	+1.7
TXIG				iS	Sn	12 17 57.5	+2.9
PNIG	Pinotepa	3.75	118	eP	Pn	12 17 11.3	+0.1
YOIG	Yosondua	4.07	109	eP	Pn	12 17 16.9	+1.2
YOIG				iS	Sn	12 18 04.4	+1.9
CMIG	Matias Romero	6.47	99	P	Pn	12 17 50.1	+1.6
	1.8nm,0.3s,baz=272,slow=14,SNR=32						
CMIG				S	Sn	12 18 57.6	-3.7
	0.7nm,0.3s,baz=312,slow=15,SNR=1.8						
CMIG				LR	LR	12 20 31.5	
	comp=Z,100nm,20.7s,baz=292,slow=41						
TXAR	Lajitas Array	11.24	351	P	Pn	12 18 56.1	+2.1
	0.0nm,0.3s,baz=160,slow=15,SNR=6.4						
ANMO	Albuquerque	17.23	346	P	P	12 20 15.2	0.0
	0.1nm,0.3s,baz=124,slow=11,SNR=2.0						
NVAR	Mina Array Bea	24.88	327	P	P	12 21 34.1	-1.5
	2.1nm,0.7s,baz=150,slow=10,SNR=15						
PDAR	Pinedale Array	25.41	346	P	P	12 21 38.1	-2.3
	0.3nm,0.6s,baz=154,slow=8.8,SNR=2.8						
YKA	Yellowknife Ar	45.17	352	P	P	12 24 25.0	-4.0
	0.3nm,0.8s,baz=158,slow=7.4,SNR=4.0						
INK	Inuvik	53.97	346	P	P	12 25 32.3	-3.7
	1.6nm,1.1s,baz=113,slow=5.2,SNR=3.2						
ILAR	Eielson Array	55.45	338	P	P	12 25 44.1	-2.7
	0.4nm,0.9s,baz=140,slow=5.7,SNR=4.5						
H03N2	Juan Fernandez	55.72	157	T	T	13 25 55.0	
	baz=335,slow=77,SNR=9.3						
H03N1	Juan Fernandez	55.73	157	T	T	13 25 55.0	
	baz=335,slow=77,SNR=7.6						
H03N3	Juan Fernandez	55.74	157	T	T	13 25 54.8	
	baz=335,slow=77,SNR=12						

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*PRE **23** 12:17:38.0±1.2, 24°.14S×29°.25E, h2km, ML2.0*
*EAF **23** 12:17:47.1±1.9, 23°.87S×29°.26E, h0km±182km, MD3.8*
*BUL **23** 12:17:47.1±1.3, 23°.93S×29°.39E, h10km±49km, MD3.9*
ISC 23 12:17:37.1±1.0, **24°.12S**±0°.05×**28°.97E**±0°.07, **h10**km, **n9**, σ**1ˢ.11**/14, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	2.01	29	eP	Pn	12 18 11.7	+0.5
MSNA				eS	Sn	12 18 35.4	-1.0
MSNA				IAML		12 18 44.6	
	comp=Z,21nm,0.1s						
MSNA	Messina	2.01	29	iP	Pg	12 18 15.3	-0.4
MSNA				iSg	Sb	12 18 39.6	+0.6
MSNA	Messina	2.01	29	iP	Pg	12 18 15.3	-0.4
MSNA				iSg	Sb	12 18 39.6	+0.6
HRAO	HartRAO	2.12	213	eP	Pg	12 18 17.6	-0.1
HRAO				eS	Sg	12 18 45.4	+0.2
HRAO				IAML		12 18 58.7	
	comp=Z,8.8nm,2.3s						
MOPA	Mopani	2.30	75	eP	Pn	12 18 15.5	+0.3
MOPA				eS	Sn	12 18 40.4	-3.1
MOPA				IAML		12 19 07.0	
	comp=Z,26nm,2.2s						
MOPA	Mopani	2.30	75	iP	Pg	12 18 22.0	+0.8
MOPA	Mopani	2.30	75	iP	Pg	12 18 22.0	+0.8
MATP	Matopo	3.70	353	iP	Pb	12 18 43.1	+0.3
MATP	Matopo	3.70	353	iP	Pb	12 18 43.1	+0.3

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*EAF **23** 12:34:03.1±1.3, 25°.53S×30°.17E, h13km±218km, MD4.1*
BUL 23 12:33:59.5±1.6, **25°.69S**×**29°.94E**, **h1**km±999km, **MD4.4**, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	Changalane	2.11	107	iP	Pn	12 34 35.1	-0.8
CNG				iSg	Sb	12 35 04.9	-0.4
CNG	Changalane	2.11	107	iP	Pn	12 34 35.1	-0.8
CNG				iSg	Sb	12 35 04.9	-0.4
MOPA	Mopani	2.54	32	iP	Pn	12 34 40.9	-0.9
MOPA				iSg	Sn	12 35 14.0	+0.5
MOPA	Mopani	2.54	32	iP	Pn	12 34 40.9	-0.9
MOPA				iSg	Sn	12 35 14.0	+0.5
MATP	Matopo	5.41	346	iS	Sn	12 36 19.1	-5.3
MATP	Matopo	5.41	346	iS	Sn	12 36 19.1	-5.3

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*SOF **23** 12:35:49.2, 41°.93N×26°.80E, h7km, MD2.5*
*DDA **23** 12:35:49.0, 41°.94N×26°.84E, h11km±1km, ML1.7*
*ISK **23** 12:35:49.3, 41°.90N×26°.89E, h8km, ML2.0/11*
ISC 23 12:35:49.4±1.0, **41°.95N**±0°.03×**26°.87E**±0°.03, **h11**km±7km, **n23**, σ**0ˢ.69**/31, **Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDRB	Edirne	0.14	222	PG	Pg	12 35 52.5	-0.1
EDRB				SG	Sg	12 35 54.9	0.0
KIRK	Kırklareli	0.24	134	iP	Pg	12 35 54.5	+0.2
KIRK				iS	Sg	12 35 58.6	+0.9
KIRK				IAML		12 36 00.0	
	comp=N,151nm,0.5s						
KIRK				IAML		12 36 00.0	
	comp=E,84nm,0.8s						
ARMN	Kirklareli, Me	0.43	101	iP	Pg	12 35 58.0	+0.1
ARMN				iS	Sb	12 36 04.7	-0.8
ARMN				IAML		12 36 07.0	
	comp=N,34nm,0.3s						
ARMN				IAML		12 36 08.0	
	comp=E,31nm,0.5s						
JMB	Yambol	0.56	338	iP	Pb	12 36 01.0	-0.2
VIZE	Kirklareli, Vi	0.82	116	iP	Pg	12 36 05.0	-0.1
VIZE				IAML		12 36 21.0	
	comp=E,29nm,0.2s						
VIZE				iS	Sn	12 36 21.1	+2.3
VIZE				IAML		12 36 22.0	
	comp=N,53nm,0.2s						
KDZ	Kurdzhali	1.12	255	iP	Pg	12 36 11.7	+0.7
KESN	Edirne-Kesan	1.13	187	iP	Pb	12 36 10.6	-0.5
KESN				iS	Sn	12 36 27.0	-0.1
KESN				IAML		12 36 28.0	
	comp=E,37nm,0.4s						
KESN				IAML		12 36 30.0	
	comp=N,31nm,0.3s						
ALN	Alexandroupoli	1.22	211	PN	Pb	12 36 12.2	-0.2
ALN				SN	Sg	12 36 29.2	+0.7
MAR3	Marsite Statio	1.25	165	PN	Pb	12 36 12.5	-0.4
GZKV	Gazikoy-Tekird	1.25	164	PN	Pg	12 36 13.1	-0.2
RDO	Rodhopi	1.28	232	PN	Pb	12 36 13.1	-0.3
ERIK	Erikli-Kesan	1.30	192	PN	Pb	12 36 13.7	-0.1
PRD	Provadia	1.31	17	iP	Pg	12 36 14.9	+0.3
ENEZ	Enez	1.32	204	PN	Pb	12 36 14.0	-0.2
CAVK	Edirne/Enez-Ca	1.36	203	iP	Pb	12 36 14.2	-0.6
CAVK				iS	Sg	12 36 33.9	+0.8
CAVK				IAML		12 36 37.0	
	comp=E,18nm,0.3s						
CAVK				IAML		12 37 03.0	
	comp=N,14nm,0.8s						
ELBA	Catalca	1.42	124	iP	Pb	12 36 15.4	-0.5
ELBA				iS	Sg	12 36 35.2	+0.1
ELBA				IAML		12 36 39.0	
	comp=E,18nm,0.2s						
ELBA				IAML		12 36 41.0	
	comp=N,13nm,0.5s						
MRMT	Marmara Adasi	1.45	157	PN	Pb	12 36 15.7	-0.7
SZH	Strazhica	1.49	333	iP	Pg	12 36 17.3	-0.6
LPK	Lapseki	1.57	183	PN	Pb	12 36 17.5	-1.0
GELI	Tayfur-Gelibol	1.58	191	PN	Pb	12 36 17.8	-0.7
KRBG	Karabiga-Canak	1.59	168	PN	Pn	12 36 16.6	-0.8
RZN	Rozhen	1.63	262	iP	Pb	12 36 18.8	-0.7
GADA	Gvkgeada	1.90	203	PN	Pn	12 36 21.9	+0.2

MAN 23 12:54:12.5, 13°.81N×120°.87E, h18km, mb3.9, ML2.6, MS2.2, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.30	13	eP	Pb	12 54 20.1	+0.7
PGP	Puerto Galera	0.31	164	⇑eP	Pn	12 54 25.6	+3.3
PGP				iS	Sn	12 54 36.0	+7.7
LUBP	Lubang	0.61	263	⇑eP	Pg	12 54 25.3	+0.7
LUBP				eS	Sb	12 54 33.8	+1.0

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*IDC **23** 13:03:26.1±2.4, 62°.87S×151°.39E, h0km, mb3.6/2, mb1 4.0/3, mb1mx3.8/14, mbtmp3.8/3, ML3.9/1, MS2.8/1, Ms1 2.9/1, ms1mx2.7/18, Error ellipse: s-maj=170.9km s-min=34.1km az=76.0*
ISC 23 13:03:26.6±1.5, **62°.7S**±0°.2×**152°.9E**±0°.8, **h10**km, **n6**, σ**1ˢ.27**/6, **mb3.3**/3, **Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	15.19	173	Pn	Pn	13 06 59.5	-1.2
	0.5nm,0.3s,baz=337,slow=12,SNR=22						
VNDA				Sn	Sn	13 09 34.6	-14
	1.8nm,0.3s,baz=201,slow=9.9,SNR=15						
VNDA				LR	LR	13 12 04.6	
	comp=Z,37nm,19.0s,baz=318,slow=34						
QSPA	South Pole Qui	27.41	180	P	P	13 09 13.8	+1.7
	0.6nm,1.0s,baz=308,slow=12,SNR=1.4						
ASAR	Alice Springs	41.04	333	P	P	13 11 09.8	-0.1
	0.6nm,0.9s,baz=164,slow=9.6,SNR=7.0						
WRA	Warramunga Arr	44.57	335	P	P	13 11 38.4	-0.1
	0.9nm,0.7s,baz=164,slow=6.9,SNR=13						

YKA	Yellowknife Ar	142.67	50	PKP	PKiKP	13 23 01.6	+0.3
	0.3nm,0.6s,baz=235,slow=3.2,SNR=7.7						
GERES	GERESS Array B	153.73	257	PKPbc	PKiKP	13 23 24.2	-0.5
	0.8nm,0.6s,baz=194,slow=2.0,SNR=6.5						

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*LDG **23** 13:10:15.8±0.1, 42°.98N×0°.20E, h2^{km}, Md2.5/2, Ml2.5/13, Error ellipse: s-maj=1.2km s-min=0.8km az=159.0*

*STR **23** 13:10:15.3±0.3, 43°N±2°×°±°, h1^{km}, MLv1.5/7, preliminary*

*MRB **23** 13:10:15.8±0.3, 42°.98N×0°.21E, h4^{km}±5^{km}, ML1.7/17, Error ellipse: s-maj=1.4km s-min=1.2km az=131.0*

ISC 23 13:10:15.5±0.8**, 43°.01N**±0°.02×**0°.22E**±0°.02**, h12**^{km}±5^{km}**, n47, σ0^{s}.91**/84**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPF	Esparros	0.09	74	*e*Pg	Pg	13 10 18.1	-0.2
EPF				*e*Sg	Sg	13 10 20.0	-0.4
	470nm,0.2s						
EPF	Esparros	0.09	74	Pg	Pg	13 10 18.1	-0.2
EPF				Sg	Sg	13 10 20.0	-0.4
FMON	Montouss	0.16	68	P	Pg	13 10 19.0	-0.2
FMON				S	Sg	13 10 21.7	-0.1
VIEF	Viey	0.19	230	Pg	Pg	13 10 19.2	-0.6
VIEF				Sg	Sg	13 10 21.9	-0.8
PYLO	Lourdes	0.22	295	Pg	Pg	13 10 19.8	-0.3
PYLO				Sg	Sg	13 10 23.2	-0.2
ECHI	Chisagues Biel	0.34	183	Pg	Pg	13 10 21.9	-0.6
ECHI				Sg	Sg	13 10 26.2	-0.8
ECHI	Chisagues Biel	0.34	183	P	Pg	13 10 22.0	-0.5
ECHI				S	Sg	13 10 26.3	-0.8
	191nm,0.1s						
CARA	Val d'Aran	0.53	124	P	Pg	13 10 25.8	-0.2
CARA				S	Sg	13 10 33.1	+0.1
	57nm,0.2s						
ETSF	Etsaut	0.58	260	*e*Pg	Pg	13 10 26.4	-0.5
ETSF				*e*Sg	Sg	13 10 34.0	-0.6
	68nm,0.3s						
ETSF	Etsaut	0.58	260	Pg	Pg	13 10 26.4	-0.5
ETSF				Sg	Sg	13 10 34.0	-0.6
MLS	Moulis	0.64	94	Pg	Pg	13 10 27.6	-0.5
MLS	Moulis	0.64	94	P	Pg	13 10 27.6	-0.5
MLS				S	Sg	13 10 37.2	+0.6
ATE	Arette	0.68	277	Pg	Pg	13 10 28.5	-0.3
ATE				Sg	Sg	13 10 37.9	+0.2
ATE	Arette	0.68	277	P	Pg	13 10 28.5	-0.3
ATE				S	Sg	13 10 37.7	+0.1
	9.5nm,0.1s						
CTRE	Tremp	0.80	149	P	Pg	13 10 30.4	-0.6
CTRE				S	Sg	13 10 41.0	-0.3
CEST	Esterri de Car	0.86	118	P	Pg	13 10 31.5	-0.7
CEST				S	Sg	13 10 43.5	0.0
	8.8nm,0.1s						
CSOR	Sort	0.92	133	P	Pg	13 10 32.8	-0.5
CSOR				S	Sg	13 10 45.0	-0.3
	5.8nm,0.3s						
SJPF	Ste Jean	1.06	276	*e*Pg	Pg	13 10 35.6	-0.4
SJPF				*e*Sg	Sg	13 10 49.4	-0.5
	5.1nm,0.3s						
SJPF	Ste Jean	1.06	276	Pg	Pg	13 10 35.6	-0.4
CORG	Organya	1.12	133	P	Pg	13 10 36.5	-0.6
CORG				S	Sb	13 10 51.9	+0.5
	3.9nm,0.3s						
ARBS	La Rabassa	1.13	119	P	Pg	13 10 36.5	-0.8
ARBS				S	Sb	13 10 52.0	+0.1
	7.7nm,0.3s						
CAVN	Les Avellanes	1.19	160	P	Pb	13 10 37.4	-0.6
CAVN				S	Sg	13 10 53.6	-0.2
	30nm,0.1s						
FNEB	Nbias	1.39	94	S	Sg	13 11 00.6	+0.3
CLLI	Llivia	1.40	112	P	Pb	13 10 41.7	0.0
CLLI				S	Sn	13 10 59.9	+0.5
	2.3nm,0.3s						
MTLF	Montolieu	1.50	76	*e*Pg	Pb	13 10 44.0	+0.7
MTLF				*e*Sg	Sb	13 11 03.1	+0.8
	11nm,0.2s						
MTLF	Montolieu	1.50	76	Pg	Pg	13 10 44.2	-0.2
MTLF				Sg	Sb	13 11 03.0	+0.8
MTLF	Montolieu	1.50	76	Pg	Pb	13 10 44.0	+0.7
MONQ	Montcuq	1.53	27	Pg	Pb	13 10 44.7	+0.8
MONQ				Sg	Sg	13 11 05.1	+0.2
CORI	Orista	1.70	127	P	Pb	13 10 46.2	-0.5
EPOB	Poblet	1.77	159	P	Pn	13 10 46.7	+0.7
EPOB				S	Sb	13 11 09.9	-0.3
	5.4nm,0.5s						
CBEU	Beuda	1.96	112	P	Pn	13 10 49.7	+1.0
LFF	La Frestale	1.97	11	*e*Pn	Pn	13 10 49.5	+0.8
LFF	La Frestale	1.97	11	*e*Pg	Pb	13 10 52.7	+1.4
LFF				*e*Sg	Sg	13 11 19.9	+1.1
	17nm,0.4s						
SJAF	Saint Jean de	2.03	104	S	Sn	13 11 16.3	+1.4
CFON	Fontmartina	2.06	126	P	Pn	13 10 50.8	+0.8
CFON				S	Sb	13 11 17.4	-1.0
	13nm,0.3s						
CCAS	Cassa de la Se	2.28	119	S	Sn	13 11 22.6	+1.6
	2.1nm,0.6s						
CAF	Calviac	2.34	34	*e*Pn	Pn	13 10 54.4	+0.6
CAF	Calviac	2.34	34	*e*Pg	Pb	13 10 59.5	+1.9
CAF				*e*Sn	Sn	13 11 22.2	-0.2
CAF				*e*Sg	Sg	13 11 30.4	-0.2
	4.1nm,0.2s						
RJF	Les Rejaudoux	2.48	22	*e*Pg	Pb	13 11 01.7	+1.7
RJF				*e*Sg	Sg	13 11 34.7	-0.5
	4.5nm,0.2s						
LASF	Ste Croix	2.85	67	*e*Pn	Pn	13 11 01.2	+0.3
LASF	Ste Croix	2.85	67	*e*Pg	Pg	13 11 09.3	-0.9
LASF				*e*Sn	Sn	13 11 33.6	-1.6
LASF				*e*Sg	Sg	13 11 45.9	-1.3
	2.7nm,0.3s						
TCF	Toulx Ste Croi	3.58	23	*e*Pg	Pg	13 11 22.7	-1.3
TCF				*e*Sg	Sg	13 12 09.1	-1.2
	1.5nm,0.2s						
MFF	Saint Martin d	3.60	356	*e*Pn	Pn	13 11 11.5	+0.3
MFF	Saint Martin d	3.60	356	*e*Pg	Pg	13 11 23.1	-1.5
MFF				*e*Sg	Sg	13 12 08.9	-2.4
	1.5nm,0.3s						
VIVF	Saint-Julien-l	3.71	59	*e*Pg	Pg	13 11 25.0	-1.6
VIVF				*e*Sg	Sg	13 12 12.5	-2.1
	1.5nm,0.3s						
BGF	Bois d'Agland	4.01	27	*e*Pg	Pg	13 11 30.3	-2.1
BGF				*e*Sg	Sg	13 12 22.7	-1.7
	5.3nm,0.3s						
AVF	Avril sur Loir	4.39	29	*e*Pn	Pn	13 11 22.3	+0.3
AVF				*e*Sg	Sg	13 12 34.4	-2.0
	0.5nm,0.2s						

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*MDD **23** 13:18:29.9±1.2, 36°.76N×9°.85W, h18^{km}±6^{km}, mbLg2.8/13, Error ellipse: s-maj=10.9km s-min=6.8km az=35.0, PRXIMO*

*IGIL **23** 13:18:29.9, 36°.68N×9°.80W, h15^{km}, ML2.1*

*CNRM **23** 13:18:30.8, 36°.52N×9°.62W, h52^{km}, ml2.5*

*INMG **23** 13:18:30.5±1.3, 36°.72N×9°.79W, h16^{km}±5^{km}, ML2.2, Error ellipse: s-maj=5.3km s-min=3.8km az=43.0*

ISC 23 13:18:27.8±1.8**, 36°.67N**±0°.05×**9°.86W**±0°.07**, h32**^{km}±12^{km}**, n72, σ1^{s}.47**/134**, 3D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.95	60	⇓*i*P	Pn	13 18 46.3	+1.3
PFVI				*e*S	Sb	13 18 58.1	+0.1
PFVI				A	A	13 18 58.7	
	45nm,0.3s						
PFVI	Vila Bisbo	0.95	60	⇓P	Pn	13 18 46.3	+1.3
	7.2nm,0.1s,SNR=18						
PFVI				S	Sb	13 18 58.2	+0.1
	64nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	0.95	60	P	Pn	13 18 46.1	+1.1
PFVI				S	Sn	13 18 58.9	+1.5
MORF	Marmelete	1.16	56	*e*P	Pb	13 18 49.4	+0.1
MORF				*e*S	Sb	13 19 03.4	-0.7
MORF				IAML		13 19 04.7	
	comp=N,54nm,0.1s						
MORF	Marmelete	1.16	56	⇓*i*P	Pb	13 18 49.4	+0.1
MORF				*e*S	Sb	13 19 03.5	-0.6
MORF				A	A	13 19 05.4	
	comp=N,37nm,0.2s						
MORF	Marmelete	1.16	56	P	Pb	13 18 49.4	+0.1
MORF				S	Sb	13 19 03.4	-0.7
PTEO	Sao Teotonio	1.26	46	*e*P	Pb	13 18 50.8	-0.2
PTEO				*e*S	Sn	13 19 06.1	+0.9
PTEO				A	A	13 19 07.2	
	comp=N,19nm,0.1s						
PTEO	Sao Teotonio	1.26	46	P	Pb	13 18 50.8	-0.2
PTEO				S	Sn	13 19 06.1	+0.9
	comp=N,9.5nm,0.1s						
PBDV	Barranco-do-Ve	1.65	69	*e*P	Pn	13 18 56.4	+1.8
PBDV				*e*S	Sn	13 19 15.3	+0.6
PBDV				A	A	13 19 22.0	
	comp=N,9.0nm,0.3s						
PBDV	Barranco-do-Ve	1.65	69	P	Pn	13 18 56.4	+1.8
PBDV				S	Sn	13 19 15.3	+0.6
	comp=N,9.0nm,0.3s						
PCVE	Castro Verde	1.75	56	*e*Pn	Pn	13 18 57.7	+1.8
PCVE				*e*Sn	Sn	13 19 17.8	+0.7
PCVE				A	A	13 19 20.8	
	comp=N,10nm,0.2s						
PCVE	Castro Verde	1.75	56	P	Pn	13 18 57.7	+1.8
PCVE				S	Sn	13 19 17.8	+0.7
	comp=N,10nm,0.2s						
MESJ	Messejana	1.76	48	*e*P	Pn	13 18 57.5	+1.4
MESJ				*e*S	Sn	13 19 17.8	+0.4
MESJ				IAML		13 19 19.4	
	comp=E,8.5nm,0.1s						
MESJ	Messejana	1.76	48	*e*Pn	Pn	13 18 57.5	+1.4
MESJ				*e*Sn	Sn	13 19 18.1	+0.8
MESJ				A	A	13 19 24.9	
	comp=E,6.9nm,0.4s						
MESJ	Messejana	1.76	48	P	Pn	13 18 57.5	+1.4
MESJ				S	Sn	13 19 17.8	+0.4
PNCL	Nicolau / Gran	1.79	36	*e*Pn	Pn	13 18 58.0	+1.5
PNCL				*e*Sn	Sn	13 19 18.4	+0.2
PNCL				A	A	13 19 21.9	
	comp=E,10nm,0.8s						
PNCL	Nicolau / Gran	1.79	36	P	Pn	13 18 58.0	+1.5
PNCL				S	Sn	13 19 18.4	+0.2
	comp=E,10nm,0.8s						
PVAQ	Vaqueiros	1.87	66	*e*Pn	Pn	13 18 59.3	+1.7
PVAQ				*e*Sn	Sn	13 19 20.4	+0.4
PVAQ				A	A	13 19 30.6	
	comp=E,12nm,0.3s						
PVAQ	Vaqueiros	1.87	66	P	Pn	13 18 59.3	+1.7
PVAQ				S	Sn	13 19 20.4	+0.4
	comp=E,12nm,0.3s						
PVAQ	Vaqueiros	1.87	66	P	Pb	13 19 00.2	-1.0
PVAQ				S	Sn	13 19 21.4	+1.4
EGRO	El Granado	2.09	65	P	Pn	13 19 02.4	+1.8
	comp=E,0.9nm,0.1s,SNR=7.6						
EGRO				S	Sn	13 19 25.5	0.0
	comp=E,12nm,0.1s,SNR=9.1						
PBEJ	Beja	2.09	49	*e*Pn	Pn	13 19 01.9	+1.2
PBEJ				*e*Sn	Sn	13 19 25.9	+0.3
PBEJ				A	A	13 19 28.1	
	comp=E,5.6nm,0.1s						
PBEJ	Beja	2.09	49	P	Pn	13 19 01.9	+1.2
PBEJ				S	Sn	13 19 25.9	+0.3
	comp=E,2.8nm,0.1s						
PMST	Lisbon--Monsan	2.14	14	*e*Sn	Sn	13 19 26.9	+0.2
PMAFR	Mafra	2.33	11	*e*Pn	Pn	13 19 05.1	+1.1
PMAFR				*e*Sn	Sn	13 19 31.0	-0.5
PMAFR				A	A	13 19 32.1	
	comp=E,28nm,0.2s						
PMAFR	Mafra	2.33	11	P	Pn	13 19 04.6	+0.7
	comp=E,4.6nm,0.1s,SNR=7.9						
PMAFR				S	Sn	13 19 30.8	-0.7
	comp=E,16nm,0.1s,SNR=7.9						
PBAR	Barrancos	2.70	55	*e*Sn	Sn	13 19 41.3	+0.6
PBAR	Barrancos	2.70	55	S	Sn	13 19 41.3	+0.6
PMTG	Montargil	2.73	28	*e*Pn	Pn	13 19 11.0	+1.6
PMTG				*e*Sn	Sn	13 19 41.1	-0.2
PMTG				A	A	13 19 43.4	
	comp=E,6.6nm,0.1s						
PMTG	Montargil	2.73	28	P	Pn	13 19 11.0	+1.6
PMTG				S	Sn	13 19 41.1	-0.2
	comp=E,6.6nm,0.1s						
EMIN	Mina Concepcio	2.77	66	P	Pn	13 19 11.3	+1.3
	comp=E,1.1nm,0.1s,SNR=14						
EMIN				S	Sn	13 19 42.8	+0.4
	comp=E,4.7nm,0.1s,SNR=11						
PESTR	Estremoz	2.84	39	*e*Pn	Pn	13 19 12.3	+1.3
PESTR				*e*Sn	Sn	13 19 44.4	+0.3
PESTR				A	A	13 19 46.1	
	comp=E,2.4nm,0.3s						
PESTR	Estremoz	2.84	39	P	Pn	13 19 13.3	+2.3
PESTR				S	Sn	13 19 45.5	+1.4
PSBE	So Bento	2.96	16	*e*Pn	Pn	13 19 14.3	+1.6
PSBE				*e*Sn	Sn	13 19 47.1	-0.1
PSBE				A	A	13 19 48.0	
	comp=E,8.0nm,0.7s						
EBAD	Badajoz	3.07	46	P	Pn	13 19 15.1	+0.9
	comp=E,5.1nm,0.1s,SNR=32						
EBAD				S	Sn	13 19 49.5	-0.4
	comp=E,4.6nm,0.1s,SNR=7.5						
ESPR	Espera	3.22	85	P	Pn	13 19 18.0	+1.8
	comp=E,2.4nm,0.2s						
ESPR				S	Sn	13 19 53.4	-0.1
	comp=E,23nm,0.3s,SNR=8.6						
PMRV	Marv??o	3.38	34	*e*Pn	Pn	13 19 19.7	+1.3
PMRV				*e*Sn	Sn	13 19 56.3	-1.1
PMRV				A	A	13 19 57.6	
	comp=E,3.2nm,0.4s						
PMRV	Marv??o	3.38	34	P	Pn	13 19 19.7	+1.3
PMRV				S	Sn	13 19 56.3	-1.1
	comp=E,3.2nm,0.4s						
PCAS	Casmilo, Conde	3.55	17	*e*Pn	Pn	13 19 21.5	+0.8
PCAS				*e*Sn	Sn	13 20 00.8	-0.7
PCAS	Casmilo, Conde	3.55	17	P	Pn	13 19 21.5	+0.8
PCAS				S	Sn	13 20 00.8	-0.7
PCBR	Castelo Branco	3.68	30	*e*Pn	Pn	13 19 24.3	+1.8
PCBR				*e*Sn	Sn	13 20 05.2	+0.4
PCBR	Castelo Branco	3.68	30	P	Pn	13 19 24.3	+1.8
PCBR				S	Sn	13 20 05.2	+0.4
ECAB	El Cabril	3.81	67	P	Pn	13 19 26.0	+1.7
	comp=E,0.8nm,0.1s,SNR=18						
ECAB				S	Sn	13 20 07.0	-1.0
	comp=E,4.0nm,0.1s,SNR=9.4						
MTE	Manteigas	4.15	25	*e*Pn	Pn	13 19 30.6	+1.6
MTE				*e*Sn	Sn	13 20 15.7	-0.7
MTE	Manteigas	4.15	25	P	Pn	13 19 30.6	+1.6
MTE				S	Sn	13 20 15.7	-0.7
ZHG	ZHG	4.16	140	P	Pn	13 19 28.5	-0.7
ZHG				S	Sn	13 20 17.1	+0.4
PVIS	Viseu	4.33	20	*e*Pn	Pn	13 19 32.7	+1.3
PVIS				*e*Sn	Sn	13 20 20.7	-0.1
PVIS				A	A	13 20 22.0	
	comp=E,3.1nm,0.3s						
PVIS	Viseu	4.33	20	P	Pn	13 19 32.7	+1.3
PVIS				S	Sn	13 20 20.7	-0.1
	comp=E,1.6nm,0.3s						
EADA	Adamuz	4.46	69	P	Pn	13 19 35.2	+1.8
	comp=E,0.7nm,0.1s,SNR=7.9						
EADA				S	Sn	13 20 22.0	-2.2
	comp=E,4.3nm,0.1s,SNR=7.9						
EPLA	Plasencia	4.51	40	P	Pn	13 19 34.8	+0.8
	comp=E,0.5nm,0.1s,SNR=7.9						
EPLA				S	Sn	13 20 24.1	-1.2
	comp=E,1.9nm,0.1s,SNR=7.9						
EGOR	Sierra Gorda,	4.63	83	S	Sn	13 20 29.1	+0.6
	comp=E,0.5nm,0.1s,SNR=4.0						
POLO	Lamas de Olo	4.97	18	*e*Pn	Pn	13 19 41.5	+1.2
POLO				*e*Sn	Sn	13 20 35.0	-1.7
POLO				A	A	13 20 37.1	
	comp=E,1.1nm,0.6s						
POLO	Lamas de Olo	4.97	18	P	Pn	13 19 41.5	+1.2
POLO				S	Sn	13 20 35.0	-1.7
	comp=E,1.1nm,0.6s						
MVO	Moncorvo	5.00	25	*e*Pn	Pn	13 19 42.0	+1.2
MVO				*e*Sn	Sn	13 20 36.4	-1.2
MVO				A	A	13 20 38.1	
	comp=E,2.5nm,0.1s						
MVO	Moncorvo	5.00	25	P	Pn	13 19 41.6	+0.8
	comp=E,2.3nm,0.1s,SNR=7.9						
MVO				S	Sn	13 20 34.5	-3.1
	comp=E,1.7nm,0.2s,SNR=7.9						
PAB	San Pablo	5.21	55	P	Pn	13 19 44.5	+0.9
	comp=E,1.3nm,0.1s,SNR=7.9						
PAB				S	Sn	13 20 40.4	-2.3
	comp=E,0.6nm,0.2s,SNR=7.9						
PCAB	Cabril	5.24	15	*e*Pn	Pn	13 19 45.1	+1.2
PCAB	Cabril	5.24	15	P	Pn	13 19 45.1	+1.2
ELOB	Lobios	5.38	14	P	Pn	13 19 46.8	+0.9
	comp=E,0.3nm,0.1s,SNR=7.9						
ELOB				S	Sn	13 20 42.9	-3.9
	comp=E,1.6nm,0.3s,SNR=7.9						
PGAV	Gavieira, Arco	5.43	13	*e*Pn	Pn	13 19 47.9	+1.2
PGAV	Gavieira, Arco	5.43	13	P	Pn	13 19 47.9	+1.2
ESDC	Sonseca Array	5.53	55	P	Pn	13 19 49.1	+1.1
	comp=E,1.9nm,0.2s,baz=242,slow=13,SNR=14						
ESDC				S	Sn	13 20 48.7	-1.9
	comp=E,1.6nm,0.2s,baz=240,slow=23,SNR=8.9						
MD31	MD31	5.66	131	P	Pn	13 19 50.7	+1.0
MD31				S	Sn	13 20 50.4	-3.3
OUK	Oukaimeden	5.69	163	P	Pn	13 19 51.5	+1.0
OUK				S	Sn	13 20 51.4	-3.5
MDT	Midelt	5.78	130	P	Pn	13 19 52.8	+1.3
MDT				S	Sn	13 20 53.2	-3.6
ECAL	Calabor	5.80	24	P	Pn	13 19 52.5	+0.9
	comp=E,0.3nm,0.0s,SNR=5.6						
ECAL				S	Sn	13 20 54.6	-2.6
	comp=E,1.4nm,0.2s,SNR=7.9						
GUD	Guadarrama	5.97	47	P	Pn	13 19 55.7	+1.5
	comp=E,0.2nm,0.1s,SNR=7.9						
GUD				S	Sn	13 20 59.1	-2.4
	comp=E,0.9nm,0.3s,SNR=7.9						
SESP	Santiago Espad	6.00	74	S	Sn	13 21 00.4	-1.9
	comp=E,1.7nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	6.28	12	P	Pn	13 19 58.7	+0.4
	comp=E,2.3nm,0.1s,SNR=7.9						
EAGO				S	Sn	13 21 04.7	-4.2
	comp=E,0.5nm,0.1s,SNR=4.0						
OUZM	OUZ	6.29	155	P	Pn	13 20 00.7	+2.1
OUZM				S	Sn	13 21 06.3	-3.1
ETOB	Tobarra	6.88	71	S	Sn	13 21 21.3	-2.5
	comp=E,0.3nm,0.1s,SNR=4.0						
ETOR	Torete	7.38	53	P	Pn	13 20 14.7	+1.3
	comp=E,3.6nm,0.2s,SNR=7.9						
ETOR				S	Sn	13 21 32.8	-3.1
	comp=E,1.6nm,0.2s,SNR=7.9						

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*NDI **23** 13:27:10.2±2.9, 25°.68N×94°.92E, h30^{km}, ML4.2*

*IDC **23** 13:27:13.0±3.8, 25°.83N×95°.08E, h88^{km}±36^{km}, mb3.4/7, mb1 3.6/8, mb1mx3.2/48, mbtmp3.7/8, MS2.7/1, Ms1 2.9/1, ms1mx2.6/39, Error ellipse: s-maj=71.8km s-min=15.0km az=55.0*

ISC 23 13:27:11.5±1.0**, 25°.76N**±0°.06×**94°.70E**±0°.06**, h73**^{km}±8^{km}**, n28, σ1^{s}.68**/40**, mb3.6**/7**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOHI	KOHIMA	0.53	266	*e*P	Pn	13 27 25.5	+0.3
KOHI				*e*S	Sn	13 27 37.0	+1.8
KOHI				IAML		13 27 40.2	
	comp=E,7µm,0.4s						
KOHI				IAML		13 27 40.6	
	comp=N,4µm,0.3s						
MOKO	MOKOCHONG	0.58	344	*e*P	Pn	13 27 23.3	-2.4
MOKO				*e*S	Sn	13 27 33.6	-2.4
MOKO				IAML		13 27 35.9	
	comp=E,16µm,0.2s						
MOKO				IAML		13 27 36.0	
	comp=N,12µm,0.3s						
JORH	JORHAT	1.06	338	*e*P	Pn	13 27 30.5	-0.5
JORH				*e*S	Sn	13 27 46.0	+0.6
JORH				IAML		13 27 47.3	
	comp=E,24µm,0.3s						
ITAN	ITANAGAR	1.63	328	*e*P	Pn	13 27 39.5	+1.1
ITAN				*e*S	Sn	13 28 03.3	+4.6
DIBR	DIBRUGARH	1.71	6	*e*P	Pn	13 27 39.3	-0.2
DIBR				*e*S	Sn	13 28 02.0	+1.5
DIBR				IAML		13 28 03.5	
	comp=E,9µm,0.4s						
LKP	Lekhapani	1.87	33	*e*P	Pn	13 27 40.2	-1.3
LKP				*e*S	Sn	13 28 03.0	-1.4
LKP				IAML		13 28 07.2	
	comp=N,4µm,0.4s						
LKP				IAML		13 28 07.2	
	comp=E,5µm,0.5s						
ZIRO	ZIRO	1.92	337	*e*P	Pn	13 27 44.4	+2.1
SILR	SILCHAR	1.97	241	*e*P	Pn	13 27 44.8	+1.9
SHL	Shillong	2.55	266	*e*P	Pn	13 27 51.5	+0.7
SHL				IAML		13 28 37.8	
	comp=E,1µm,0.4s						
SHL				IAML		13 28 38.1	
	comp=N,2µm,0.2s						
GTK	Tadong	5.68	287	*e*P	Pn	13 28 33.4	0.0
GTK				*e*S	Sn	13 29 37.4	+0.1
GTK				IAML		13 29 40.9	
	comp=E,120nm,0.2s						
GTK				IAML		13 29 41.1	
	comp=N,146nm,0.2s						
JIRN	Jiri	7.84	286	*e*Pn	Pn	13 29 02.2	-1.0
JIRN				*e*Sn	Sn	13 30 28.8	-1.9
	comp=N,61nm,0.2s						
GUN	Gumba	8.16	287	*e*Pn	Pn	13 29 07.0	-0.6
GUN				*e*Sn	Sn	13 30 35.2	-3.3
	comp=N,62nm,0.3s						
BOK	Bokaro	8.24	258	*e*P	Pn	13 29 09.2	+0.7
CMAR	Chiang Mai Arr	8.26	151	P	Pn	13 29 08.8	0.0
	comp=N,0.8nm,0.3s,baz=324,slow=13,SNR=29						
CMAR				LR	LR	13 32 55.7	
	comp=N,48nm,18.6s,baz=3.5,slow=42						
PKI	Pulchoki	8.50	284	*e*Pn	Pn	13 29 11.3	-1.0
PKI				*e*Sn	Sn	13 30 45.3	-1.5
	comp=N,35nm,0.3s						
PKIN	Phulchoki	8.52	284	*e*Pn	Pn	13 29 11.3	-1.1
PKIN				*e*Sn	Sn	13 30 46.2	-0.9
	comp=N,32nm,0.3s						
KKN	Kakani	8.66	286	*e*Pn	Pn	13 29 13.4	-0.9
KKN				*e*Sn	Sn	13 30 48.3	-2.1
	comp=N,28nm,0.3s						
DMN	Daman	8.78	284	*e*Pn	Pn	13 29 15.0	-0.9
GKN	Gorkha	9.26	286	*e*Pn	Pn	13 29 21.5	-0.9
DANN	Dangsing	10.09	287	*e*Pn	Pn	13 29 31.3	-2.5
PYUN	Piuthan	10.71	285	*e*Pn	Pn	13 29 40.3	-1.9
MKAR	Makanchi Array	23.20	338	P	P	13 32 13.4	+1.4
	comp=N,0.4nm,0.5s,baz=138,slow=11,SNR=3.2						
KURBB	Kurchatov Arra	27.76	338	P	P	13 32 53.5	+0.2
	comp=N,0.8nm,0.3s,baz=145,slow=8.9,SNR=5.1						
BVAR	Borovoye Array	32.77	333	P	P	13 33 38.5	+1.1
	comp=N,0.3nm,0.4s,baz=161,slow=15,SNR=2.8						
WRA	Warramunga Arr	59.55	136	P	P	13 37 06.2	-1.6
	comp=N,1.9nm,0.7s,baz=321,slow=7.6,SNR=20						
ASAR	Alice Springs	62.09	139	P	P	13 37 23.6	-1.3
	comp=N,1.7nm,0.7s,baz=322,slow=6.8,SNR=24						
GERES	GERESS Array B	65.31	314	P	P	13 37 46.8	+0.8
	comp=N,0.3nm,0.4s,baz=76,slow=5.6,SNR=6.4						
TORD	Torodi Ar. Bea	87.04	283	P	P	13 39 51.0	+1.4
	comp=N,0.3nm,0.6s,baz=82,slow=2.7,SNR=1.8						

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*EAF **23** 13:31:40.5±1.6, 26°.17S×29°.95E, h0^{km}±31^{km}, MD3.6*

BUL 23 13:31:41.3±1.4**, 26°.17S×29°.97E, h2**^{km}±28^{km}**, MD3.7, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	Changalane	2.00	94	*i* P	Pn	13 32 15.5	-0.5
CNG				*i* Sg	Sb	13 32 42.9	-0.8
CNG	Changalane	2.00	94	*i* P	Pn	13 32 15.5	-0.5
CNG				*i* Sg	Sb	13 32 42.9	-0.8
MOPA	Mopani	2.94	27	*i* P	Pn	13 32 26.9	-2.1
MOPA	Mopani	2.94	27	*i* P	Pn	13 32 26.9	-2.1
MSNA	Messina	3.81	1	*i* P	Pn	13 32 40.5	-0.5
MSNA				*i* S	Sn	13 33 24.1	-2.3
MSNA	Messina	3.81	1	*i* P	Pn	13 32 40.5	-0.5
MSNA				*i* S	Sn	13 33 24.1	-2.3
MATP	Matopo	5.87	346	*i* S	Sn	13 34 10.9	-6.5
MATP	Matopo	5.87	346	*i* S	Sn	13 34 10.9	-6.5

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*MOS **23** 13:39:54.4±1.1, 42°.52N×144°.41E, h60^{km}, mb4.4/4, Error ellipse: s-maj=17.8km s-min=8.2km az=63.1*

*JMA **23** 13:39:55.0±0.1, 42°.57N×144°.31E, h62^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s117.00000°, δ10.00000°, λ-56.00000°. NP2: ϕ_s262.00000°, δ81.00000°, λ-96.00000°. Principal axes: T Plg36.0000°, Azm357.0000°; N Plg6.0000°, Azm263.0000°; P Plg53.0000°, Azm165.0000°;*

JMA Felt I J1.

*SKHL **23** 13:39:55.6±0.1, 42°.50N×144°.40E, h66^{km}±3^{km}, mb4.8/5*

*NIED **23** 13:39:55.0, 42°.57N×144°.31E, h62^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.96; $M_{\theta\theta}$0.47; $M_{\phi\phi}$0.50; $M_{r\theta}$1.54; $M_{\theta\phi}$-1.04; $M_{\phi r}$0.26; Fault plane solution: $M_0$2.03000×10^{14} NP1: ϕ_s279.00000°, δ73.00000°, λ-122.00000°. NP2: ϕ_s165.00000°, δ36.00000°, λ-29.00000°.*

*IDC **23** 13:40:09.8±3.8, 42°.54N×144°.27E, h195^{km}±41^{km}, mb3.2/7, mb1 3.4/8, mb1mx3.0/52, mbtmp3.7/8, MS2.8/1, Ms1 2.8/1,* *ms1mx2.4/21 Error ellipse: s-maj=26.5km s-min=20.3km az=157.0*

ISC 23 13:39:55.3±0.9**, 42°.52N**±0°.05×**144°.35E**±0°.03**, h50**^{km}±8^{km}**, n55,** σ**0**^{s}**.88**/71**, mb3.9**/11**, 12C-11D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAK	Akkeshi	0.54	28	⇓P	Pn	13 40 07.1	+0.2
JAK				*e*S	Sn	13 40 15.9	+0.6
JOB	Onbets	0.54	315	⇓P	Pn	13 40 07.2	+0.2
JOB				*e*S	Sn	13 40 16.0	+0.6
AKK	Akkeshi	0.61	36	*e*P	Pn	13 40 08.1	+0.2
AKK				*e*S	Sn	13 40 17.4	+0.4
JCH	Churui	0.74	278	⇓P	Pn	13 40 09.5	+0.1
JCH				*e*S	Sn	13 40 19.4	-0.4
JTHR	Tokachihiroo	0.81	254	⇑P	Pn	13 40 10.9	+0.5
JTHR				*e*S	Sn	13 40 22.1	+0.6
JKHN	Kushirohamanak	0.82	46	⇓P	Pn	13 40 11.0	+0.5
JAR	Ashorobuto	0.89	331	⇓P	Pn	13 40 11.1	-0.3
JAR				*e*S	Sn	13 40 22.7	-0.6
ERM	Erimo	1.02	241	*ce*PN	Pn	13 40 14.1	+0.9
JEM	Erimo	1.02	241	P	Pn	13 40 13.4	+0.2
JNK	Nakash	1.10	14	⇓P	Pn	13 40 13.8	-0.5
JNK				*e*S	Sn	13 40 27.8	-0.6
JNBK	Urakawa-nobuka	1.21	259	P	Pn	13 40 15.3	-0.5
JNBK				*e*S	Sn	13 40 30.5	-0.5
NMR	Nemuro--Hokkai	1.32	50	⇓*i*PN	Pn	13 40 16.8	-0.5
NMR				*i* S	Sn	13 40 32.5	-1.2
NMR	Nemuro--Hokkai	1.32	50	*i* P	Pn	13 40 16.8	-0.5
NMR				*i* S	Sn	13 40 32.5	-1.2
NEM2	Nemuro 2	1.33	50	P	Pn	13 40 16.8	-0.5
NEM2				*e*S	Sn	13 40 32.8	-1.1
JFR	Furan	1.44	297	P	Pn	13 40 18.5	-0.5
JFR				*e*S	Sn	13 40 36.2	-0.6
JTKR	Abashiri--Toko	1.48	348	⇓P	Pn	13 40 20.0	+0.5
JTKR				*e*S	Sn	13 40 38.4	+0.6
GLVR	Golovnino	1.49	35	*c i*PN	Pn	13 40 19.9	+0.3
GLVR				*i* S	Sn	13 40 38.8	+1.0
GLVR				pmax	pmax		
	comp=N,44nm,0.1s						
GLVR				pmax	pmax		
	comp=E,25nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,396nm,0.1s						
GLVR				smax	smax		
	comp=E,4µm,0.3s						
GLVR				smax	smax		
	comp=N,2µm,0.2s						
GLVR	Golovnino	1.49	35	*i* P	Pn	13 40 19.9	+0.3
GLVR				AMB	AMB	13 40 20.0	
	comp=N,400nm,0.3s						
GLVR				*i* S	Sn	13 40 38.0	+0.2
GLVR				A	A	13 40 39.0	
	comp=N,2µm,0.4s						
GLVR				A	A	13 40 39.0	
	comp=N,4µm,0.4s						
JBT2	Biratori 2	1.49	281	⇓P	Pn	13 40 18.6	-1.0
JRA	Rausu	1.52	21	P	Pn	13 40 20.2	+0.1
JRA				*e*S	Sn	13 40 39.1	+0.4
JMP	Maruseppu	1.65	334	⇑P	Pn	13 40 21.8	-0.1
JMP				*e*S	Sn	13 40 41.7	-0.3
RUSJ	Misakicho	1.71	22	⇑*i*PN	Pn	13 40 23.4	+0.8
RUSJ				*e*S	Sn	13 40 44.0	+0.6
YUK	Yuzh-Kuril'sk	1.87	36	*d i*PN	Pn	13 40 25.2	+0.4
YUK				*i* S	Sn	13 40 47.4	+0.1
YUK				pmax	pmax		
	comp=N,50nm,0.2s						
YUK				pmax	pmax		
	comp=Z,615nm,0.2s						
YUK				pmax	pmax		
	comp=E,66nm,0.1s						
YUK				smax	smax		
	comp=N,1µm,0.6s						
YUK				smax	smax		
	comp=E,2µm,0.5s						
YUK	Yuzh-Kuril'sk	1.87	36	*i* P	Pn	13 40 25.2	+0.4
YUK				AMB	AMB	13 40 25.9	
	comp=E,600nm,0.3s						
YUK				*i* S	Sn	13 40 47.4	+0.1
YUK				A	A	13 40 48.0	
	comp=E,1µm,0.6s						
YUK				A	A	13 40 48.0	
	comp=E,2µm,0.6s						
SHO	Shikotan	2.26	53	*c i*PN	Pn	13 40 29.7	-0.4
SHO				*i* S	Sn	13 40 55.3	-1.4
SHO				pmax	pmax		
	comp=Z,82nm,0.2s						
SHO				smax	smax		
	comp=N,164nm,0.2s						
SHO				smax	smax		
	comp=E,459nm,0.3s						
SHO	Shikotan	2.26	53	*i* P	Pn	13 40 29.7	-0.4
SHO				AMB	AMB	13 40 30.0	
	comp=E,70nm,0.2s						
SHO				*i* S	Sn	13 40 55.3	-1.4
SHO				A	A	13 40 56.7	
	comp=E,280nm,0.3s						
SHO				A	A	13 40 56.7	
	comp=E,350nm,0.3s						
KUR	Kuril'sk	3.72	42	*e*PN	Pn	13 40 52.3	+2.2
KUR				*e*S	Sn	13 41 33.7	+1.1
KUR				pmax	pmax		
	comp=Z,46nm,0.7s						
KUR				pmax	pmax		
	comp=E,22nm,0.3s						
KUR				pmax	pmax		
	comp=N,21nm,0.2s						
KUR				smax	smax		
	comp=E,61nm,0.3s						
KUR				smax	smax		
	comp=N,45nm,0.2s						
KUR	Kuril'sk	3.72	42	*e*P	Pn	13 40 51.6	+1.5
KUR				AMB	AMB	13 40 55.0	
	comp=N,50nm,0.5s						
KUR				*e*S	Sn	13 41 32.9	+0.3
KUR				A	A	13 41 39.5	
	comp=N,50nm,0.2s						
KUR				A	A	13 41 39.5	
	comp=N,60nm,0.2s						
MJAR	Matsushiro Arr	7.62	220	P	Pn	13 41 57.8	+14
	comp=N,0.1nm,0.3s,baz=42,slow=12,SNR=4.2						
PEA0B	Petropavlovsk-	13.85	36	⇑*e*P	Pn	13 43 06.8	-1.9
PETK	Petropavlovsk-	13.85	36	LR	LR	13 48 03.6	
	comp=N,40nm,19.2s,baz=44,slow=34						
PET	Petropavlovsk	14.21	37	⇑*e*P	Pn	13 43 13.2	-0.4
PET	Petropavlovsk	14.21	37	*e*P	Pn	13 43 13.2	-0.4
PET				AMB	AMB	13 43 15.7	
	comp=N,50nm,0.9s						
SONM	Songino Array	27.08	294	P	P	13 45 33.6	+0.4
	comp=N,0.3nm,0.6s,baz=94,slow=8.7,SNR=2.1						
H11N2	WAKE ISLAND Hy	29.64	133	T	T	14 17 13.8	
	baz=326,slow=75,SNR=77						
H11N1	WAKE ISLAND Hy	29.65	133	T	T	14 17 19.2	
	baz=326,slow=75,SNR=55						
H11N3	WAKE ISLAND Hy	29.65	133	T	T	14 17 19.6	
	baz=326,slow=75,SNR=53						
H11S1	WAKE ISLAND Hy	30.54	135	T	T	14 18 24.0	
	baz=327,slow=76,SNR=94						
H11S3	WAKE ISLAND Hy	30.54	135	T	T	14 18 24.0	
	baz=327,slow=76,SNR=59						
H11S2	WAKE ISLAND Hy	30.55	135	T	T	14 18 24.3	
	baz=327,slow=76,SNR=52						
DGZ	Jazzator, Alta	39.27	301	⇑*e*P	P	13 47 19.7	+0.6
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
COLA	College	43.26	35	⇑*e*P	P	13 47 52.0	+0.6
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ILAR	Eielson Array	43.68	35	P	P	13 47 54.7	-0.1
	comp=Z,1.3nm,0.8s,baz=273,slow=9.0,SNR=26						
KURK	Kurchatov	44.52	304	P	P	13 48 01.9	+0.2
KURBB	Kurchatov Arra	44.60	304	P	P	13 48 01.9	-0.5
	comp=Z,0.6nm,0.4s,baz=71,slow=8.6,SNR=2.4						
BVAR	Borovoye Array	48.70	309	P	P	13 48 33.5	-0.8
	comp=Z,0.8nm,0.3s,baz=92,slow=5.9,SNR=8.1						
AAK	Ala-Archa	50.03	295	⇓*e*P	P	13 48 44.5	-0.4
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
AAK	Ala-Archa	50.03	295	*e*P	P	13 48 44.5	-0.4
ARU	Arti	53.84	317	⇑*e*P	P	13 49 14.5	+1.7
ARU				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ARU	Arti	53.84	317	*e*P	P	13 49 14.5	+1.7
YKA	Yellowknife Ar	57.95	33	P	P	13 49 41.5	-0.5
	comp=Z,0.2nm,0.8s,baz=306,slow=7.9,SNR=3.9						
WRAB	Tennant Creek	62.82	191	⇑*e*P	P	13 50 18.0	+2.3
WRA	Warramunga Arr	62.83	191	P	P	13 50 14.7	-1.2
	comp=Z,1.2nm,1.2s,baz=6.9,slow=6.9,SNR=2.2						
FINES	FINESS Array B	65.02	332	P	P	13 50 28.1	-1.6
	comp=Z,4.6nm,1.1s,baz=64,slow=4.8,SNR=7.8						
FINES	FINESS Array B	65.02	332	*i* P	P	13 50 28.2	-1.5
FINES				pmax	pmax		
	comp=Z,5.0nm,1.1s						

IASPEI ***23*** *13:45:30.6±0.8, 44°.64N±0°.01×6°.81E±0°.02, h12*^{km}*±5*^{km}*, Error ellipse: s-maj=2.8km s-min=2.0km az=76.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ROM ***23*** *13:45:30.6±0.2, 44°.651N±0°.006×6°.84E±0°.02, h7*^{km}*, Md2.2/8, Error ellipse: s-maj=1.3km s-min=0.2km az=65.0*

GEN ***23*** *13:45:30, 44°.64N×6°.81E, h5*^{km}*±1*^{km}*, ML2.1*

STR ***23*** *13:45:31.0±0.2, 44°.7N±0°.9×°±°, h6*^{km}*±3*^{km}*, MLv2.1/13, preliminary*

LDG ***23*** *13:45:31.0±0.0, 44°.64N×6°.80E, h6*^{km}*, Md2.6/2, Ml2.5/22, Error ellipse: s-maj=1.2km s-min=0.8km az=58.0*

ISC 23 13:45:30.7±0.8**, 44°.64N**±0°.01×**6°.80E**±0°.02**, h14**^{km}±5^{km}**, n80,** σ**1**^{s}**.25**/134**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBDF	Montbardon	0.09	348	*e*Pg	Pg	13 45 33.4	-0.5
MBDF				*e*Sg	Sg	13 45 35.2	-0.8
	598nm,0.2s						
SURF	Saint Ours	0.16	176	P	Pg	13 45 34.5	-0.3
SURF				Sg	Sg	13 45 37.0	-0.6
OGAG	Argentiere	0.26	224	Pg	Pg	13 45 36.0	-0.3
OGAG				Sg	Sg	13 45 39.6	-0.5
PZZ	Stroppo	0.27	121	P	Pg	13 45 36.2	-0.2
PZZ				S	Sg	13 45 40.0	-0.3
PZZ	Stroppo	0.27	121	P	Pg	13 45 36.2	-0.2
PZZ				S	Sg	13 45 40.0	-0.3
PZZ				END			
RRL	Rocca Remolon	0.28	359	P	Pg	13 45 36.9	+0.2
RRL				S	Sg	13 45 41.1	+0.3
RRL	Rocca Remolon	0.28	359	P	Pg	13 45 36.9	+0.2
RRL				S	Sg	13 45 41.2	+0.3
RRL				END			
BHB	Bricherasio	0.39	59	P	Pg	13 45 38.8	+0.2
BHB				S	Sg	13 45 43.8	0.0
BHB	Bricherasio	0.39	59	P	Pg	13 45 38.7	+0.2
BHB				S	Sg	13 45 43.8	0.0
BNI	Bardonecchia	0.42	348	P	Pg	13 45 39.5	+0.3
BNI				S	Sg	13 45 45.7	+0.8
BNI				END			
ISO	Isola	0.49	158	Pg	Pg	13 45 40.4	-0.1
ISO				Sg	Sg	13 45 46.7	-0.4
OGMO	Fort Saint-Gob	0.57	352	Pg	Pg	13 45 40.2	-1.7
OGMO				Sg	Sg	13 45 50.3	+0.8
RSP	Reno Superiore	0.60	33	P	Pg	13 45 43.0	+0.4
RSP				S	Sg	13 45 50.8	+0.1
RSP	Reno Superiore	0.60	33	P	Pg	13 45 43.0	+0.4
RSP				S	Sg	13 45 51.0	+0.4
ENR	Entracque	0.61	133	P	Pg	13 45 42.4	-0.2
ENR				S	Sg	13 45 50.7	-0.1
ENR	Entracque	0.61	133	P	Pg	13 45 42.4	-0.2
ENR				S	Sg	13 45 50.9	+0.1
ENR				END			
OGDI	Digne	0.64	214	Pg	Pn	13 45 45.4	0.0
SPIF	crte de Spivo	0.67	152	Pg	Pg	13 45 43.8	+0.1
ORIF	Oris-en-Rattie	0.71	293	*e*Pg	Pg	13 45 44.5	0.0
ORIF				*e*Sg	Sg	13 45 53.6	-0.3
	40nm,0.2s						
ORIF	Oris-en-Rattie	0.71	293	Pg	Pg	13 45 44.6	0.0
GDM	Grand'Maison	0.74	320	Pg	Pg	13 45 45.3	+0.2
MVIF	Mont Vial	0.79	161	Pg	Pg	13 45 46.3	+0.2
TURF	col de Turini	0.79	147	Pg	Pg	13 45 46.0	-0.1
GBOS	Grotte di Boss	0.85	118	P	Pg	13 45 46.7	-0.5
GBOS				S	Sg	13 45 58.1	-0.2
LSD	Lago del Serru	0.85	16	P	Pg	13 45 47.2	-0.1
LSD				S	Sg	13 45 59.0	+0.5
LSD	Lago del Serru	0.85	16	P	Pg	13 45 47.2	-0.1
LSD				S	Sg	13 45 58.9	+0.5
LSD				END			
SAOF	Saorge	0.85	140	Pg	Pg	13 45 47.0	-0.2
SAOF	Saorge	0.85	140	P	Pg	13 45 47.0	-0.2
SAOF				S	Sb	13 45 58.8	+0.2
SAOF				END			
LPG	La Plagne	0.86	358	*e*Pg	Pg	13 45 47.4	+0.1
LPG				*e*Sg	Sg	13 45 58.7	+0.1
	30nm,0.3s						
LPL	La Plagne	0.88	357	*e*Pg	Pg	13 45 47.8	+0.1
LPL				*e*Sg	Sg	13 45 59.5	+0.3
	48nm,0.4s						
BLAF	les Blancs	0.88	218	Pg	Pn	13 45 49.9	+1.3
CALF	Calern	0.90	174	Pg	Pg	13 45 48.3	+0.3
SBF	Sospel	0.91	149	*e*Pg	Pg	13 45 48.1	-0.1
SBF				*e*Sg	Sg	13 45 59.9	-0.1
	106nm,0.4s						
ESCA	l'Escarene	0.91	153	Pg	Pb	13 45 48.3	+0.1
MGRO	Montegrosso	0.94	129	P	Pb	13 45 48.4	-0.5
MGRO				S	Sg	13 46 01.5	+0.3
GRN	Grenoble	0.96	309	Pg	Pg	13 45 49.8	+0.6
BURY	Giardini Botan	1.02	147	P	Pb	13 45 50.4	+0.3
BURY				S	Sg	13 46 03.9	+0.3
BURY	Giardini Botan	1.02	147	P	Pb	13 45 50.3	+0.2
BURY				END			
RSL	Roselend	1.05	353	Pg	Pb	13 45 51.1	+0.3
IMI	Imperia	1.08	133	P	Pb	13 45 50.8	-0.3
IMI				S	Sb	13 46 04.8	-0.2
IMI	Imperia	1.08	133	P	Pb	13 45 50.8	-0.3
IMI				S	Sb	13 46 05.5	+0.5
IMI				END			
FRF	La Foret Royal	1.09	186	*e*Pg	Pb	13 45 51.5	+0.2
FRF				*e*Sg	Sb	13 46 05.5	+0.2
	43nm,0.3s						
TRAV	Traversella	1.10	37	P	Pb	13 45 52.0	+0.5
TRAV				S	Sg	13 46 06.5	+0.3
SMRF	Simiane la Rot	1.10	233	*e*P	Pg	13 45 53.0	+1.1
SMRF				*e*Sg	Sb	13 46 05.9	+0.2
	37nm,0.4s						
CIRO	Champorcher	1.10	29	P	Pg	13 45 52.7	+0.7
CIRO				S	Sb	13 46 06.1	0.0
CANO	Canova, Maglio	1.12	112	P	Pb	13 45 51.5	-0.3
CANO				S	Sb	13 46 06.0	-0.3
BSTF	la Bastide-des	1.12	228	Pn	Pg	13 45 54.4	+2.1
QLNO	Quiliano	1.15	105	P	Pb	13 45 51.3	-1.1
QLNO				S	Sb	13 46 07.8	+0.6
RUSF	Rustrel	1.18	234	Pn	Pg	13 45 54.6	+1.3
OGSM	Saint Maurice	1.24	322	Pn	Pg	13 45 54.9	+0.4
PCP	Piancastagn	1.25	94	P	Pn	13 45 53.9	+0.1
PCP				S	Sb	13 46 10.4	+0.2
ARTF	Artigues	1.27	214	Pn	Pg	13 45 55.9	+0.7
LMR	La Mourre	1.32	189	*e*Pg	Pb	13 45 56.0	+0.7
LMR				*e*Sg	Sn	13 46 12.9	+0.7
	23nm,0.2s						
VIVF	Saint-Julien-l	1.53	279	*e*Pg	Pb	13 45 59.2	+0.4
VIVF				*e*Sg	Sg	13 46 19.7	-0.2
	11nm,0.4s						
OG35	Corcelles	1.65	329	Pn	Pb	13 46 01.6	+0.7
CABF	La Chapelle	2.03	346	*e*P	Pb	13 46 06.6	-0.8
CABF	La Chapelle	2.03	346	*e*Pg	Pg	13 46 09.8	+0.2
CABF				*e*Sg	Sg	13 46 35.0	-1.0
	9.8nm,0.5s						
LASF	Ste Croix	2.18	256	*e*Pn	Pn	13 46 07.3	+0.7
LASF				*e*Sn	Sn	13 46 32.4	-1.0
	1.4nm,0.2s						
LBL	Lubilhac	2.59	284	Pn	Pn	13 46 13.9	+1.7
PGF	Pioggiola	2.63	142	*e*Pn	Pn	13 46 13.8	+0.9
PGF	Pioggiola	2.63	142	*e*Pg	Pg	13 46 19.9	-1.3
PGF				*e*Sn	Sn	13 46 44.3	-0.4
	4.7nm,0.2s						
PGF	Pioggiola	2.63	142	Pn	Pn	13 46 13.9	+1.0
SMF	Signal de Mont	2.88	315	*e*P	Pn	13 46 18.4	+2.2
SMF	Signal de Mont	2.88	315	*e*Pg	Pg	13 46 24.4	-1.5
SMF				*e*Sn	Sn	13 46 49.1	-1.5
SMF				*e*Sg	Sg	13 47 01.8	-1.4
	3.7nm,0.2s						
HINF	Hinteralfeld	3.17	1	*e*P	Pn	13 46 22.6	+2.4
HINF				*e*Sn	Sn	13 46 55.8	-2.1
	1.2nm,0.3s						
AVF	Avril sur Loir	3.23	313	*e*P	Pn	13 46 23.4	+2.5
AVF				*e*Sg	Sg	13 47 12.3	-2.1
	1.8nm,0.3s						
LOR	Lormes	3.33	323	*e*P	Pn	13 46 25.0	+2.7
	baz=143						
LOR				*e*Sn	Sn	13 46 59.5	-2.2
LOR				*e*Sg	Sg	13 47 15.5	-2.1
	2.6nm,0.3s						
SSF	Saint Saulge	3.34	318	*e*P	Pn	13 46 24.9	+2.5
SSF				*e*Sn	Sn	13 47 00.0	-1.8
SSF				*e*Sg	Sg	13 47 15.9	-1.9
	4.1nm,0.4s						
BGF	Bois d'Agland	3.37	306	*e*P	Pn	13 46 25.4	+2.5
BGF	Bois d'Agland	3.37	306	*e*Pg	Pg	13 46 33.4	-1.8
BGF				*e*Sg	Sg	13 47 16.5	-2.4
	6.8nm,0.4s						
HAU	Haudompre	3.38	355	*e*P	Pn	13 46 24.3	+1.3
HAU				*e*Sn	Sn	13 47 00.6	-2.3
	2.4nm,0.2s						
CAF	Calviac	3.38	276	*e*P	Pn	13 46 24.9	+1.8
CAF				*e*Sn	Sn	13 47 00.6	-2.4
	1.2nm,0.3s						
MTLF	Montolieu	3.55	250	*e*P	Pn	13 46 27.4	+2.0
MTLF				*e*Sn	Sn	13 47 04.6	-2.5
	1.3nm,0.2s						
TCF	Toulx Ste Croi	3.62	299	*e*P	Pn	13 46 29.1	+2.7
TCF				*e*Sg	Sg	13 47 24.6	-2.4
	1.0nm,0.2s						
SFTF	Sexfontaines	3.77	342	*e*P	Pn	13 46 31.0	+2.7
CDF	Champ du Feu	3.79	5	*e*P	Pn	13 46 31.3	+2.6
CDF				*e*Sn	Sn	13 47 10.6	-2.4
	0.7nm,0.2s						
RJF	Les Rejaudoux	3.81	282	*e*P	Pn	13 46 31.6	+2.7
PAGF	Fort de Pagny	3.98	350	*e*P	Pn	13 46 34.1	+2.8
MFF	Saint Martin d	5.25	294	*e*P	Pn	13 46 51.4	+2.7
LDF	La Druitiere	6.19	312	*e*P	Pn	13 47 04.4	+2.8

IDC 23 13:54:57.9±11.0**, 15°.73S**×**174°.19W, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/19**, mbtmp3.5**/3**, Error ellipse: s-maj=528.2km s-min=36.8km az=140.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.03	257	P	P	14 03 46.5	-0.4
	0.3nm,0.8s,baz=86,slow=7.8,SNR=6.5						
ASAR	Alice Springs	49.28	252	P	P	14 03 49.0	+0.1
	0.5nm,0.4s,baz=89,slow=8.1,SNR=13						
ILAR	Eielson Array	82.92	11	P	P	14 07 24.1	0.0
	0.4nm,1.1s,baz=223,slow=5.8,SNR=5.9						

IDC 23 14:03:12.9±902.0**, 52°.47N**×**33°.55E, h0**^{km}**, Error ellipse: s-maj=363.4km s-min=108.0km az=30.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.76	25	*i*		14 34 40.0	
	baz=208,slow=315,SNR=0.4						
I31KZ	AKTYUBINSK INF	15.39	88	*i*		15 41 00.0	
	baz=288,slow=309,SNR=1.1						
I34MN	SONGINO INFRAS	45.11	65	*i*		18 36 20.0	
	baz=305,slow=326,SNR=0.3						

NNC ***23*** *14:17:39.7±3.2, 39°.41N×73°.89E, h0*^{km}*, mb3.7, mpv3.4, Error ellipse: s-maj=23.4km s-min=14.8km az=159.0*

SOME ***23*** *14:17:39.1, 39°.32N×73°.90E, h15*^{km}

KRNET ***23*** *14:17:42.0±0.1, 39°.42N×74°.39E, mb2.8*

ISC 23 14:17:48.2±2.1**, 39°.62N**±0°.09×**74°.07E**±0°.06**, h8**^{km}±12^{km}**, n18,** σ**2**^{s}**.02**/29**, 8C-8D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.59	312	⇑*e*P	Pg	14 17 59.3	-0.4
	baz=12						
SFK				⇑*e*S	Sn	14 18 12.4	-0.6
	baz=12						
OHH	Osh	1.34	313	⇓*i*P	Pn	14 18 13.2	-0.1
	baz=12						
OHH				⇓*i*S	Sg	14 18 36.3	+5.0
	baz=12						
DRK	Karamyk	1.76	266	⇑*i*P	Pn	14 18 19.7	+0.4
	baz=73						
DRK				⇑*i*S	Sg	14 18 46.3	+1.5
	baz=73						
ARLS	Aral	2.25	5	⇓*i*P	Pn	14 18 25.5	-0.4
	baz=59						
ARLS				⇓*i*S	Sb	14 18 57.0	-0.2
	baz=59						
BTK	Batken	2.54	281	⇓*i*P	Pn	14 18 30.9	+1.1
	baz=84						
BTK				⇓*i*S	Sb	14 19 05.2	-0.4
	baz=84						
TRKS	Terek-Say	2.94	312	⇑*i*P	Pn	14 18 36.3	+1.0
	baz=11						
TRKS				⇑*i*S	Sb	14 19 15.9	-1.1
	baz=11						
AAK	Ala-Archa	3.04	6	⇑Pg	Pb	14 18 40.2	-2.3
	4.6nm,0.9s						
AAK				⇓Lg	Lg	14 19 24.2	
	16nm,1.1s						
MRKS	Merke	3.19	349	*e*P	Pb	14 18 43.3	-1.9
	3.6nm,0.4s						
MRKS				*e*S	Sb	14 19 26.9	+2.7
	4.0nm,0.4s						
MRKS	Merke	3.19	349	Pg	Pn	14 18 41.3	+2.5
	3.6nm,0.6s						
MRKS				Lg	Lg	14 19 26.7	
	3.9nm,0.6s						
TKM2	Tokmak 2	3.50	19	⇓Pg	Pn	14 18 45.3	+2.2
	4.1nm,0.7s						
TKM2				⇑Lg	Lg	14 19 36.4	
	5.9nm,0.6s						
KST	Kastek	3.71	22	*e*P	Pb	14 18 54.4	+0.4
	2.0nm,0.3s						
KST				*e*S	Sg	14 19 46.1	-1.2
	7.4nm,0.6s						
KST	Kastek	3.71	22	Pg	Pb	14 18 52.2	-1.8
	2.7nm,0.4s						
KST				Lg	Lg	14 19 45.4	
	6.7nm,0.5s						
DGS	Degeres	3.84	19	*e*P	Pb	14 18 57.1	+0.8
	3.3nm,0.4s						
DGS				*e*S	Sg	14 19 50.5	-1.1
	7.0nm,0.7s						
DGS	Degeres	3.84	19	Pg	Pb	14 18 55.4	-0.9
	6.2nm,0.7s						
DGS				Lg	Lg	14 19 50.5	
	7.0nm,0.7s						
IUG	Iuzhnay	3.97	311	*e*P	Pb	14 18 54.5	-4.0
	45nm,0.3s						
IUG				*e*S	Sb	14 19 46.2	-0.4
	11nm,0.7s						
IUG	Iuzhnay	3.97	311	Pg	Pn	14 18 52.6	+3.2
	71nm,0.7s						
IUG				Lg	Lg	14 19 46.2	
	7.1nm,0.5s						
KUU	Kurty	4.60	21	*e*P	Pb	14 19 10.6	+1.4
	1.8nm,0.5s						
KUU				*e*S	Sg	14 20 13.3	-2.5
	4.6nm,0.6s						
KUU	Kurty	4.60	21	Pg	Pb	14 19 08.8	-0.3
	1.2nm,0.4s						
KUU				Lg	Lg	14 20 13.5	
	3.7nm,0.6s						

IDC 23 14:24:20.4±1.8**, 26°.03N**×**142°.13E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.3**/54**, mbtmp3.7**/3**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.5**/41**, Error ellipse: s-maj=81.1km s-min=18.8km az=95.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.06	3	Pn	Pn	14 24 42.4	-0.2
	12nm,0.3s,baz=292,slow=22,SNR=15						
JCJ				Sn	Sn	14 24 60.0	+1.9
	30nm,0.3s,baz=299,slow=23,SNR=11						
WRA	Warramunga Arr	46.32	190	P	P	14 32 48.3	0.0
	0.7nm,0.6s,baz=8.6,slow=8.2,SNR=11						
PSI	Prapat	47.45	248	LR	LR	14 55 37.5	
	comp=Z,48nm,18.2s,baz=208,slow=40						
MKAR	Makanchi Array	51.12	310	P	P	14 33 25.5	+0.5
	0.2nm,0.5s,baz=72,slow=4.7,SNR=1.7						
FINES	FINESS Array B	78.88	334	P	P	14 36 24.6	-0.6
	2.2nm,0.9s,baz=64,slow=8.7,SNR=4.9						

EAF ***23*** *14:47:20.8±1.9, 26°.19S×29°.50E, h10^{km}, MD3.6*

BUL 23 14:47:19.1±2.3**, 26°.30S×29°.36E, h10^{km}, MD3.8, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNG	Changalane	2.54	91	iP	Pn	14 48 01.1	+0.7
CNG				iS	Sn	14 48 28.1	-3.3
CNG	Changalane	2.54	91	iP	Pn	14 48 01.1	+0.7
CNG				iS	Sn	14 48 28.1	-3.3
MOPA	Mopani	3.33	34	iP	Pn	14 48 09.7	-1.5
MOPA				iS	Sn	14 48 46.7	-4.2
MOPA	Mopani	3.33	34	iP	Pn	14 48 09.7	-1.5
MOPA				iS	Sn	14 48 46.7	-4.2
MSNA	Messina	3.98	9	iP	Pn	14 48 20.3	0.0
MSNA				iS	Sn	14 49 04.3	-2.7
MSNA	Messina	3.98	9	iP	Pn	14 48 20.3	0.0
MSNA				iS	Sn	14 49 04.3	-2.7
MATP	Matopo	5.90	352	iS	Sn	14 49 47.1	-7.3
MATP	Matopo	5.90	352	iS	Sn	14 49 47.1	-7.3

NIED ***23*** *14:57:07.6, 31°.38N×128°.70E, h12^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.77; $M_{\theta\theta}$1.30; $M_{\phi\phi}$-0.53; $M_{r\theta}$-0.01; $M_{\theta\phi}$1.50; $M_{\phi r}$-0.76; Fault plane solution: $M_0$2.00000×10^{14} NP1:ϕ_s21.00000°, δ73.00000°, λ-150.00000°. NP2:ϕ_s281.00000°, δ61.00000°, λ-20.00000°.*

JMA 23 14:57:07.6±0.3**, 31°.38N×128°.70E, h12^{km}**±2^{km}**, M3.5, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.92	71	P	Pg	14 57 24.5	-0.8
JSJ				eS	Sg	14 57 36.7	-0.6
JFU	Fukue jima 2	1.27	2	P	Pn	14 57 31.0	-0.2
JFU				eS	Sn	14 57 48.2	0.0
JSU	Suzuyama	1.50	85	P	Pn	14 57 34.7	+0.3
JYAK	Yakushimahirau	1.93	126	P	Pn	14 57 39.8	-0.4
JTN	Tanegashima 3	2.09	110	P	Pn	14 57 42.4	0.0
JTZ	Takazaki	2.10	75	P	Pn	14 57 43.3	+0.7
JMTN	Minamitane	2.13	117	P	Pn	14 57 43.8	+0.8
JIU3	Izumi3	2.14	56	P	Pn	14 57 43.7	+0.5

NEIC ***23*** *14:59:50.6±1.8, 24°.40S±0°.06×66°.99W±0°.09, h148^{km}±5^{km}, mb4.8/54, Md4.7(SJA), Error ellipse: s-maj=11.8km s-min=8.5km az=81.0*

SJA ***23*** *14:59:50.7±0.7, 24°.42S×67°.22W, h187^{km}±4^{km}, ML4.7, MW4.5*

IDC ***23*** *14:59:51.6±0.9, 24°.34S×66°.94W, h160^{km}±7^{km}, mb4.3/24, mb1 4.4/30, mb1mx4.3/44, mbtmp4.8/30, MS2.3/1, Ms1 2.3/1, ms1mx2.3/24, Error ellipse: s-maj=11.2km s-min=8.1km az=65.0*

VAO ***23*** *14:59:52.6±0.4, 24°.31S×67°.02W, h178^{km}, mb4.9*

BJI ***23*** *14:59:54.0±0.0, 24°.40S×67°.00W, h148^{km}, mB5.3/3*

GUC ***23*** *14:59:54.3±0.7, 24°.24S×67°.85W, h219^{km}±8^{km}, ML5.5, MW4.9*

ISC 23 14:59:51.3±0.6**, 24°.40S**±0°.03×**67°.21W**±0°.03**, h165**^{km}±5^{km}**, n246, σ1§66**/285**, mb4.7**/44**, 23C-22D, Fault plane solution: NP1:**ϕ_s204.00420°**,** δ56.40404°**,** λ-63.31047°. **NP2:**ϕ_s341.74817°**,** δ41.90860°**,** λ-124.06408°. **Principal axes:** T Plg7.7570°**,** Azm275.3090°**;** N Plg21.9705°**,** Azm8.4592°**;** P Plg66.5636°**,** Azm166.9944°**; Fault plane solution: NP1:**ϕ_s320.14407°**,** δ80.54895°**,** λ-114.82253°. **NP2:**ϕ_s210.59894°**,** δ26.45394°**,** λ-21.62954°. **Principal axes:** T Plg31.1284°**,** Azm70.4347°**;** N Plg24.4633°**,** Azm324.4875°**;** P Plg48.5192°**,** Azm203.5181°**; Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.58	102	eP	Pn	15 00 25.2	+2.2
SLA				eS	Sn	15 00 50.2	+2.6
SLA				IAML		15 00 50.9	
	comp=Z,3μm,0.8s						
AZAP	Zapla	1.96	85	eP	Pn	15 00 28.7	+1.5
AZAP				eS	Sn	15 00 57.1	+2.3
AZAP				IAML		15 01 00.5	
	comp=Z,2μm,1.0s						
HJA	Humahuaca	2.03	55	eP	Pn	15 00 30.2	+2.1
HJA				IAML		15 01 11.2	
	comp=Z,245nm,0.6s						
FSA	Cafayete	2.03	147	eP	Pn	15 00 29.6	+1.6
LVC	Limon Verde	2.37	318	P	Pn	15 00 34.3	+2.2
	comp=Z,142nm,0.3s,baz=147,slow=7.5,SNR=1623						
LVC				S	Sn	15 01 05.6	+2.2
	comp=Z,1μm,0.3s,baz=253,slow=19,SNR=16						
LVC				LR	LR	15 01 05.9	
	comp=Z,63nm,20.3s,baz=158,slow=30						
LVC	Limon Verde	2.37	318	⇓iP	Pn	15 00 34.0	+1.9
LVC				iS	Sn	15 01 05.7	+2.2
LVC	Limon Verde	2.37	318	eP	Pn	15 00 34.1	+2.1
LVC	Limon Verde	2.37	318	Pn	Pn	15 00 34.1	+2.1
LVC	Limon Verde	2.37	318	eP	Pn	15 00 33.9	+1.8
LVC				eS	Sn	15 01 05.1	+1.6
LVC				IAML		15 01 10.8	
	comp=Z,3μm,0.5s						
PB15	IPOC Station P	2.39	299	⇑iP	Pn	15 00 34.2	+2.0
PB15				iS	Sn	15 01 04.3	+0.7
PB15	IPOC Station P	2.39	299		Pn	15 00 33.9	+1.8
PB15	IPOC Station P	2.39	299	eP	Pn	15 00 34.1	+2.0
PB15				eS	Sn	15 01 04.6	+1.0
PB15				IAML		15 01 10.0	
	comp=Z,28μm,0.2s						
ASTB	Santa Barbara	2.56	80	eP	Pn	15 00 35.3	+1.2
ASTB				IAML		15 01 21.1	
	comp=Z,46nm,1.0s						
YJA	Yavi	2.71	35	eP	Pn	15 00 38.1	+1.9
YJA				eS	Sn	15 01 13.6	+2.7
YJA				IAML		15 01 18.3	
	comp=Z,167nm,0.8s						
PB06	IPOC Station P	2.75	307	⇑iP	Pn	15 00 38.2	+1.8
PB06				iS	Sn	15 01 11.2	0.0
PB06				IAML		15 01 13.9	
	comp=E,12μm,0.3s						
PB06	IPOC Station P	2.75	307		Pn	15 00 38.0	+1.6
PB06	IPOC Station P	2.75	307	eP	Pn	15 00 38.0	+1.6
PB06				eS	Sn	15 01 12.1	+0.8
PB06				IAML		15 01 16.8	
	comp=Z,9μm,0.9s						
AHML	Horco Molle	2.92	145	eP	Pn	15 00 39.5	+1.3
AHML				eP	Pn	15 00 39.6	+1.3
AHML				eS	Sn	15 01 14.9	+0.1
AHML				IAML		15 01 18.3	
	comp=Z,168nm,0.9s						
PB14	IPOC Station P	2.92	265	⇑iP	Pn	15 00 39.6	+0.9
PB14				iS	Sn	15 01 14.7	-0.6
PB14	IPOC Station P	2.92	265	Pn	Pn	15 00 39.5	+0.9
PB14	IPOC Station P	2.92	265	eP	Pn	15 00 37.3	-1.3
PB14				eP	Pn	15 00 39.6	+0.9
PB14				eS	Sn	15 01 15.8	+0.6
PB14				IAML		15 01 17.7	
	comp=Z,2μm,0.4s						
AC02	Maricunga	2.98	215	Pn	Pn	15 00 41.1	+1.7
AC02	Maricunga	2.98	215	eP	Pn	15 00 41.2	+1.7
AC02				eS	Sn	15 01 28.4	+11
AC02				IAML		15 01 42.2	
	comp=Z,283nm,0.2s						
ALOL	LOMAS DE OLMED	3.00	79	eP	Pn	15 00 40.5	+1.1
ALOL				eS	Sn	15 01 33.4	+17
ALOL				eS	Sn	15 01 34.1	+17
PB05	IPOC Station P	3.15	299	⇑iP	Pn	15 00 42.4	+1.1
PB05				iS	Sn	15 01 18.3	-1.8
PB05				IAML		15 01 22.9	
	comp=N,7μm,0.3s						
PB05	IPOC Station P	3.15	299	eP	Pn	15 00 42.4	+1.1
PB05				eS	Sn	15 01 20.6	+0.6
PB05				IAML		15 01 23.9	
	comp=Z,3μm,0.7s						
PB09	IPOC Station P	3.20	324	⇓iP	Pn	15 00 44.0	+2.0
PB09				iS	Sn	15 01 21.8	+0.5
PB09				IAML		15 01 27.3	
	comp=E,7μm,0.5s						
PB09	IPOC Station P	3.20	324		Pn	15 00 43.9	+2.0
PB09	IPOC Station P	3.20	324	eP	Pn	15 00 44.0	+2.0
PB09				eS	Sn	15 01 22.0	+0.7
PB09				IAML		15 01 23.3	
	comp=Z,4μm,0.9s						
PB03	IPOC Station P	3.31	314	⇑iP	Pn	15 00 44.6	+1.2
PB03				iS	Sn	15 01 22.7	-1.1
PB03				IAML		15 01 24.2	
	comp=E,8μm,0.3s						
PB03	IPOC Station P	3.31	314	eP	Pn	15 00 44.5	+1.2
PB03				eP	Pn	15 00 44.6	+1.2
PB03				eS	Sn	15 01 23.8	0.0
PB03				IAML		15 01 26.4	
	comp=Z,6μm,0.2s						
PB04	IPOC Station P	3.40	307	⇑iP	Pn	15 00 45.4	+0.9
PB04				iS	Sn	15 01 24.0	-1.7
PB04				IAML		15 01 31.1	
	comp=E,8μm,0.4s						
PB04	IPOC Station P	3.40	307		Pn	15 00 45.1	+0.7
PB04	IPOC Station P	3.40	307	eP	Pn	15 00 45.4	+0.9
PB04				eS	Sn	15 01 25.1	-0.6
PB04				IAML		15 01 27.6	
	comp=Z,7μm,0.4s						
PB07	IPOC Station P	3.63	317	⇑iP	Pn	15 00 48.4	+1.0
PB07				iS	Sn	15 01 29.6	-1.5
PB07	IPOC Station P	3.63	317		Pn	15 00 48.3	+1.0
PB07	IPOC Station P	3.63	317	eP	Pn	15 00 48.5	+1.1
PB07				eS	Sn	15 01 24.5	-6.5
PB07				eS	Sn	15 01 30.6	-0.4
PB07				IAML		15 01 33.7	
	comp=Z,8μm,0.4s						
PB01	IPOC Station P	3.95	327	⇓iP	Pn	15 00 52.0	+0.5
PB01				iS	Sn	15 01 37.2	-1.0
PB01	IPOC Station P	3.95	327		Pn	15 00 51.9	+0.5
PB01	IPOC Station P	3.95	327	eP	Pn	15 00 52.1	+0.7
PB01				eS	Sn	15 01 31.0	-7.3
PB01				eS	Sn	15 01 37.3	-1.0
PB01				IAML		15 01 40.2	
	comp=Z,2μm,0.2s						
GO03	Copiap	4.19	220	⇑iP	Pn	15 00 54.2	-0.3
GO03				iS	Sn	15 01 42.3	-1.4
GO03	Copiap	4.19	220	Pn	Pn	15 00 54.0	-0.4
VCA	Vinchina	4.41	191	eP	Pn	15 00 55.0	-2.4
VCA				eP	Pn	15 00 59.3	+1.9
VCA				eS	Sn	15 01 47.5	-1.6
VCA				IAML		15 02 12.2	
	comp=Z,209nm,1.4s						
PB08	IPOC Station P	4.61	337	⇓iP	Pn	15 01 01.3	+1.1
PB08				iS	Sn	15 01 53.0	-1.1
PB08	IPOC Station P	4.61	337		Pn	15 01 01.2	+0.9
PB08	IPOC Station P	4.61	337	eP	Pn	15 01 00.4	+0.1
PB08				eS	Sn	15 01 53.6	-0.5
PB08				IAML		15 02 01.9	
	comp=Z,640nm,0.5s						
TA02	Huaiquique	4.92	326		Pn	15 01 03.0	-0.9
ACLC	CERRO LA CRUZ	5.01	177	eP	Pn	15 01 05.8	+0.5
ACLC				eS	Sn	15 01 58.0	-5.2
ACLC				IAML		15 02 34.2	
	comp=Z,68nm,1.1s						
AC04	Llanos de Chal	5.14	222	Pn	Pn	15 01 05.6	-1.2
AC04	Llanos de Chal	5.14	222	eP	Pn	15 01 05.4	-1.4
AC04				eS	Sn	15 02 04.3	-1.5
AC04				IAML		15 02 08.0	
	comp=Z,696nm,1.3s						
PB11	IPOC Station P	5.14	333	Pn	Pn	15 01 06.3	-0.8
PB11	IPOC Station P	5.14	333	IAML		15 02 10.4	
	comp=Z,1μm,0.5s						
LCO	Las Campanas	5.55	213	eP	Pn	15 01 11.0	-1.5
LCO				IAML		15 02 21.1	
	comp=Z,3μm,0.8s						
AROD	Rodeo	6.09	199	eS	Sn	15 02 24.5	-4.3
AVFE	Valle Fertil	6.24	182	eP	Pn	15 01 21.2	-0.2
AVFE				IAML		15 02 55.5	
	comp=Z,60nm,0.8s						
CO05	La Serena	6.56	212		Pn	15 01 23.3	-2.2
GO04	Tololo Observa	6.58	208		Pn	15 01 24.1	-1.9
GO04	Tololo Observa	6.58	208	eP	Pn	15 01 25.0	-1.0
GO04				eS	Sn	15 02 37.8	-2.6
GO04				eS	Sn	15 02 37.8	-2.6
ACHE	Chepes	6.75	176	eP	Pn	15 01 27.7	-0.5
CO03	El Pedregal	7.12	205		Pn	15 01 30.7	-2.3
ZON	Zonda	7.24	190	Pn	Pn	15 01 33.9	-0.7
CO06	Fray Jorge	7.38	211		Pn	15 01 35.2	-1.2
LPAZ	La Paz	8.12	354	P	Pn	15 01 47.6	+0.8
	comp=Z,20nm,0.3s,baz=130,slow=8.5,SNR=217						
LPAZ				S	Sn	15 03 13.5	-4.5
	comp=Z,2.3nm,0.3s,baz=338,slow=17,SNR=7.1						
LPAZ	La Paz	8.12	354	eP	Pn	15 01 47.3	+0.4
LPAZ	La Paz	8.12	354		Pn	15 01 47.4	+0.4
VA03	San Esteban	8.83	199		Pn	15 01 53.4	-2.4
CPUP	Villa Florida	9.14	104	P	Pn	15 01 57.7	-2.1
	comp=Z,0.9nm,0.3s,baz=286,slow=11,SNR=45						
CPUP	Villa Florida	9.14	104	eP	Pn	15 01 58.4	-1.3
CPUP	Villa Florida	9.14	104		Pn	15 01 58.3	-1.5
MT02	Curacav	9.47	200		Pn	15 02 00.4	-3.7
MT09	Talagante	9.91	199		Pn	15 02 08.9	-1.0
MT01	Popeta	10.07	200		Pn	15 02 07.7	-4.2
SIV	San Ignacio	10.15	36	P	Pn	15 02 10.9	-2.4
	comp=Z,12nm,0.3s,baz=216,slow=11,SNR=333						
SIV				S	Sn	15 03 51.1	-15
	baz=224,slow=15,SNR=7.1						
BO01	Tunca	10.51	198		Pn	15 02 16.9	-0.8
ITQB	Itaqui	10.79	121	eP	Pn	15 02 21.0	-0.5
BO02	Sierra Bellavi	10.81	196		Pn	15 02 20.5	-1.2
PTLB	Pontes e Lacer	11.70	42	eP	Pn	15 02 31.4	-1.9
PTLB	Pontes e Lacer	11.70	42		Pn	15 02 31.4	-1.9
ML02	Panimavida	11.89	197		Pn	15 02 34.6	-1.1
VILB	Vilhena	13.18	31	eP	Pn	15 02 51.2	-1.1
VILB	Vilhena	13.18	31		Pn	15 02 52.5	+0.1
PP1B	Ponte de Pedra	13.35	62	eP	Pn	15 02 52.6	-1.9
CPSB	Cacapava Do Su	13.61	119	eP	Pn	15 02 56.9	-0.8
SALV	Santo Antonio	13.72	54	eP	Pn	15 02 57.2	-1.9
PLTB	Pedras Altas	14.06	124	eP	Pn	15 03 01.4	-2.1
PLTB	Pedras Altas	14.06	124		Pn	15 02 59.8	-3.6
ETMB	Extrema	14.54	4	eP	Pn	15 03 07.9	-1.5
ETMB	Extrema	14.54	4	Pn	Pn	15 03 08.6	-0.8
PCMB	Pacaembu	14.95	82	eP	Pn	15 03 13.0	-1.5
LC01	Cunco	14.99	194	Pn	Pn	15 03 14.2	-0.6
LC01				IAmb	IAmb	15 03 18.1	
	comp=Z,42nm,0.8s						
SAML	Samuel	15.84	15	P	Pn	15 03 24.2	-1.2
SAML				IAmb	IAmb	15 03 26.5	
	comp=Z,35nm,0.8s						
PDRB	Porto dos Gac	16.14	40	eP	Pn	15 03 27.8	-1.4
ITRB	Iturama	16.30	77	eP	P	15 03 29.5	-1.5
PLCA	Paso Flores	16.53	189	P	Pn	15 03 34.6	+0.9
	comp=Z,0.7nm,0.3s,baz=8.6,slow=12,SNR=24						
PLCA	Paso Flores	16.53	189	eP	Pn	15 03 34.8	+1.1
PLCA	Paso Flores	16.53	189	P	Pn	15 03 33.0	-0.7
PLCA				IAmb	IAmb	15 03 43.0	
	comp=Z,47nm,0.7s						
TIJ01	Guaruva-PR	16.55	97	eP	P	15 03 32.9	-0.9
TER01	Tubaro-SC	16.70	108	eP	P	15 03 34.5	-0.8
ARAG	Araguaiana, MT	16.84	62	eP	P	15 03 36.2	-0.7
LL04	Puerto Octay	17.03	194	P	Pn	15 03 38.7	-0.9
LL04				IAmb	IAmb	15 03 42.8	
	comp=Z,51nm,0.8s						
LL03	Petrohue	17.25	193	P	Pn	15 03 41.6	-0.6
CLDB	Colider	17.28	41	eP	P	15 03 40.6	-1.2
CZSB	Cruzeiro do Su	17.39	341	eP	Pn	15 03 45.2	+1.0
CZSB	Cruzeiro do Su	17.39	341	P	Pn	15 03 44.1	-0.1
CZSB				IAmb	IAmb	15 03 53.4	
	comp=Z,35nm,1.1s						
BB19B	Bebedouro	17.55	83	eP	P	15 03 44.5	-0.2
LL05	Los Muermos	17.75	196	P	P	15 03 46.5	-0.1
SPB	Sao Paulo	18.09	92	eP	P	15 03 49.8	-0.7
PET01	Itanhaem-SP	18.17	94	eP	P	15 03 50.3	-1.1
RCLB	Rio Claro- Sao	18.17	88	eP	P	15 03 50.3	-1.2
VAO	Valinhos	18.59	90	eP	P	15 03 54.4	-1.7
IPMB	Ipameri, GO	18.82	74	eP	P	15 03 57.3	-1.3
GO07	Milladeo Hill,	19.41	194	P	P	15 04 05.3	+0.7
SNDB	Serra Nova Dou	19.50	53	eP	P	15 04 04.6	-1.4
PARB	Paraibuna	19.77	91	eP	P	15 04 08.2	-0.6
BDFB	Brasilia	20.01	68	P	P	15 04 10.3	-1.2
	comp=Z,7.7nm,0.3s,baz=243,slow=11,SNR=55						
BDFB	Brasilia	20.01	68	P	P	15 04 10.3	-1.2
TBTG	Tabatinga, AM	20.27	352	eP	P	15 04 14.4	+0.3
TBTG	Tabatinga, AM	20.27	352	P	P	15 04 14.7	+0.6
NPGB	Novo Progresso	20.66	35	eP	P	15 04 15.6	-2.7
BSCB	Bom Sucesso	20.97	85	eP	P	15 04 20.6	-1.1
MAN01	Angra dos Reis	21.35	91	eP	P	15 04 24.9	-0.8
COYC	Coyhaique	21.49	189	P	P	15 04 27.1	+0.2
COYC				IAmb	IAmb	15 04 28.3	
	comp=Z,50nm,1.0s						
PEXB	Peixe	21.69	59	eP	P	15 04 27.4	-2.0
VAS01	Vassouras-RJ	21.92	89	eP	P	15 04 30.5	-1.1
MACA	Manacapuru-AM	22.03	18	eP	P	15 04 31.0	-1.8
MACA	Manacapuru-AM	22.03	18	P	P	15 04 30.3	-2.5
DIAM	Diamantina, MG	22.73	79	eP	P	15 04 38.3	-1.3
ITTB	Itaituba	22.78	31	eP	P	15 04 37.3	-2.5
DUB01	Friburgo-RJ	22.93	89	eP	P	15 04 39.7	-1.5
MC01	Montes Claros	23.07	75	eP	P	15 04 40.2	-2.3
JANB	Januaria	23.44	71	eP	P	15 04 43.9	-2.1
CAM01	Campos-RJ	23.63	89	eP	P	15 04 46.8	-0.8
SDBA	SAO DESIDERIO	24.25	65	eP	P	15 04 51.6	-1.7
SMTB	Santa Maria do	24.28	54	eP	P	15 04 52.1	-1.5
PTGA	Pitinga	24.55	18	P	P	15 04 55.0	-1.0
	comp=Z,10nm,0.4s,baz=202,slow=13,SNR=51						
PRPB	Parauapebas	24.64	45	eP	P	15 04 54.3	-2.5
ALF01	Guarapari-ES	24.74	87	eP	P	15 04 56.0	-1.7
SJMB	Sao Joao De Ma	24.84	82	eP	P	15 04 56.7	-1.9
BSFB	Barra de Sao F	25.11	82	eP	P	15 04 59.1	-1.9
RIB01	Linhares ES	25.38	84	eP	P	15 05 02.0	-1.4
MALB	Monte Alegre	25.67	31	eP	P	15 05 04.2	-1.9
GUA01	Guaratinga, BA	26.79	78	eP	P	15 05 14.4	-1.7
BOAV	Boa Vista	27.42	15	eP	P	15 05 20.7	-1.0
BOAV	Boa Vista	27.42	15	P	P	15 05 21.4	-0.3
BOAV				IAmb	IAmb	15 05 22.0	
	comp=Z,16nm,0.6s						
NBIT	Itapeh - BA	27.75	75	eP	P	15 05 23.6	-1.1
GDU01	Guandu, BA	28.14	73	eP	P	15 05 26.2	-1.9
NBPN	Ponto Novo - B	28.98	67	eP	P	15 05 33.3	-2.4
USHA	Ushuaia	30.41	181	P	P	15 05 48.3	+0.6
	comp=Z,8.4nm,0.8s,baz=7.0,slow=9.2,SNR=7.7						
ROSB	Rosrio	30.88	50	eP	P	15 05 51.2	-1.1
NBLA	Lagarto - SE	30.95	70	eP	P	15 05 51.5	-1.6
NBPS	Pedro II - PI	31.79	55	eP	P	15 05 57.8	-2.7
NBMA	Muriti-CE	32.06	63	eP	P	15 06 00.9	-1.9
NBPB	Pedra_Branca-C	32.49	59	eP	P	15 06 04.5	-2.0
ZARC	Zaragoza, Cauc	32.57	346	P	P	15 06 07.9	+0.8
ZARC				IAmb	IAmb	15 06 21.3	
	comp=Z,12nm,0.4s						
MDP	Montagnes des	32.58	28	P	P	15 06 06.0	-1.2
	comp=Z,22nm,0.7s,baz=202,slow=10.0,SNR=24						
NBAN	Anadia - AL	32.90	69	eP	P	15 06 07.7	-2.4
BAUV	El Baul	33.15	358	P	P	15 06 11.0	-1.1
BAUV				IAmb	IAmb	15 06 11.8	
	comp=Z,14nm,0.7s						
NBLV	Livramento - P	33.58	65	eP	P	15 06 14.2	-1.8
PLCV	Puerto La Cruz	34.45	5	P	P	15 06 22.2	-1.1
PCRV	Puerto La Cruz	34.46	4	P	P	15 06 22.2	-1.3
	comp=Z,7.3nm,0.5s,baz=231,slow=7.4,SNR=2.6						
NBPV	Pedro Velho	35.44	65	eP	P	15 06 30.2	-1.7
ORCD	Orcadas	39.49	163	P	P	15 07 04.0	-1.4
PMSA	Palmer Station	40.42	178	P	P	15 07 14.2	+1.2
	comp=Z,18nm,1.1s,baz=10,slow=9.6,SNR=2.1						
MTO3	Montecristo	44.22	328	P	P	15 07 45.4	+0.9
CMIG	Matias Romero	49.29	324	P	P	15 08 25.1	+1.5
	comp=Z,2.7nm,0.7s,baz=142,slow=6.6,SNR=6.7						
VNA3	Neumayer Olymp	56.84	161	P	P	15 09 18.7	+0.5
VNA1	Neumayer--Stat	57.04	160	P	P	15 09 20.4	+0.9
VNA2	Neumayer--Watz	57.41	160	P	P	15 09 22.7	+0.5
	baz=284,slow=8.4						
SNAA	Sanae	59.04	161	P	P	15 09 33.8	+0.3
SNAA	Sanae	59.04	161	P	P	15 09 34.0	+0.4
	comp=Z,9.8nm,0.7s,baz=279,slow=8.0,SNR=37						
SNAA				PcP	PcP	15 10 21.4	+0.8
	comp=Z,3.8nm,0.5s,baz=263,slow=5.1,SNR=7.2						
SNAA	Sanae	59.04	161	P	P	15 09 33.6	+0.1
JCT	Junction City	62.88	329	P	P	15 10 01.1	+1.1
JCT				IAmb	IAmb	15 10 01.8	
	comp=Z,9.4nm,0.7s						
TX32	Lajitas Array	63.89	325	P	P	15 10 07.9	+1.2
TXAR	Lajitas Array	63.89	325	P	P	15 10 08.1	+1.4
	comp=Z,1.5nm,0.8s,baz=151,slow=8.9,SNR=13						
TXAR				PcP	PcP	15 10 41.4	+0.6
	comp=Z,0.6nm,0.8s,baz=141,slow=6.4,SNR=4.3						
TX31	Lajitas Ar. Si	63.89	325	P	P	15 10 08.1	+1.4
TX31				IAmb	IAmb	15 10 43.2	
	comp=Z,14nm,1.2s						
QSPA	South Pole Qui	65.81	180	P	P	15 10 19.7	+1.1
	comp=Z,19nm,0.7s,baz=298,slow=0.4,SNR=182						
QSPA	South Pole Qui	65.81	180	P	P	15 10 19.7	+1.1
QSPA				IAmb	IAmb	15 10 20.7	
	comp=Z,20nm,0.9s						
R40A	Maddies Statio	66.65	339	P	P	15 10 25.9	+1.9
MNTX	Cornudas Mount	66.66	325	P	P	15 10 25.3	+1.0
P40A	Paris	67.70	339	P	P	15 10 31.5	+0.8
P40A				IAmb	IAmb	15 11 11.9	
	comp=Z,26nm,1.2s						
LIC	Lamto	67.74	72	eP	P	15 10 29.8	-1.7
	comp=Z,19nm,0.7s						
TIC	Toumodi	67.95	71	eP	P	15 10 31.1	-1.8
KIC	Kosan Boka	68.06	72	eP	P	15 10 32.0	-1.5
	comp=Z,29nm,0.6s						
DBIC	Dimbokro	68.11	71	P	P	15 10 32.5	-1.3
	comp=Z,10nm,0.6s,baz=236,slow=5.5,SNR=25						
DBIC	Dimbokro	68.11	71	P	P	15 10 32.2	-1.5
DBIC				IAmb	IAmb	15 10 33.3	
	comp=Z,12nm,0.8s						
319A	Douglas	68.53	322	P	P	15 10 37.7	+1.5
319A				IAmb	IAmb	15 10 39.3	
	comp=Z,9.5nm,0.7s						
121A	Cookes Peak, D	68.59	324	P	P	15 10 38.3	+1.7
121A				IAmb	IAmb	15 10 40.0	
	comp=Z,11nm,0.9s						
BNM	Barren Site	69.23	326	P	P	15 10 42.9	+2.2
SADO	Sadowa	69.69	351	P	P	15 10 43.4	+0.6
	comp=Z,2.7nm,0.7s,baz=225,slow=2.9,SNR=3.5						
ANMO	Albuquerque	69.77	326	P	P	15 10 46.1	+2.3
	comp=Z,5.6nm,0.8s,baz=151,slow=7.8,SNR=15						
ANMO	Albuquerque	69.77	326	P	P	15 10 45.8	+1.9
SDCO	Great Sand Dun	71.53	329	P	P	15 10 56.4	+1.9
KOWA	Kowa	72.78	65	P	P	15 11 01.6	-0.5
KOWA				IAmb	IAmb	15 11 02.9	
	comp=Z,22nm,0.6s						
U15A	North Rim	73.96	324	P	P	15 11 11.7	+2.8
VNDA	Vanda	74.28	190	P	P	15 11 11.6	+1.8
	comp=Z,6.7nm,0.9s,baz=132,slow=5.2,SNR=10.0						
VNDA	Vanda	74.28	190	IAmb	IAmb	15 11 13.2	
	comp=Z,10.0nm,1.0s						
LCMT	Little Creek M	74.91	323	P	P	15 11 16.6	+2.4
SRU	San Rafael Swe	75.05	326	P	P	15 11 17.1	+2.0
SRU				IAmb	IAmb	15 11 17.7	
	comp=Z,11nm,0.7s						
MTPU	Mount Pierson	75.10	325	P	P	15 11 17.7	+2.1
RSSD	Black Hills	76.08	334	P	P	15 11 21.9	+1.1
TORD	Torodi Ar. Bea	76.89	69	P	P	15 11 24.7	-1.0
	comp=Z,14nm,0.5s,baz=256,slow=5.4,SNR=93						
TORD	Torodi Ar. Bea	76.89	69	P	P	15 11 24.8	-1.0
TORD				IAmb	IAmb	15 11 26.5	
	comp=Z,19nm,1.2s						
SPR3	Spring Creek 3	76.94	324	P	P	15 11 27.6	+1.7
BW06	Boulder Array	77.39	329	P	P	15 11 28.9	+0.7
PDAR	Pinedale Array	77.39	329	P	P	15 11 29.7	+1.5
	comp=Z,2.0nm,0.8s,baz=134,slow=7.8,SNR=16						
PDAR	Pinedale Array	77.39	329	P	P	15 11 29.4	+1.2
TSUM	Tsumeb	77.73	106	P	P	15 11 29.9	-0.6
ULM	Lac du Bonnet	78.55	342	P	P	15 11 34.4	+0.3
	comp=Z,1.7nm,0.6s,baz=161,slow=10,SNR=3.9						
MOOW	Moose Ponds	78.70	329	P	P	15 11 36.8	+1.4
NVAR	Mina Array Bea	78.73	321	P	P	15 11 38.0	+2.3
	comp=Z,2.1nm,0.7s,baz=151,slow=6.0,SNR=12						
SCHQ	Schefferville	78.91	0	P	P	15 11 36.2	+0.3
	comp=Z,2.8nm,0.9s,baz=220,slow=9.1,SNR=4.8						
KVN	Kaiserville	79.05	322	P	P	15 11 38.9	+1.5
KVN				IAmb	IAmb	15 11 40.0	
	comp=Z,9.0nm,0.7s						
LAO	LASA Array	79.07	334	P	P	15 11 38.5	+1.4
LAO				IAmb	IAmb	15 11 39.4	
	comp=Z,9.5nm,0.8s						
YHH	Holmes Hill	79.55	330	P	P	15 11 42.4	+2.4
YHH				IAmb	IAmb	15 11 43.4	
	comp=Z,9.1nm,0.8s						
HLID	Hailey	80.32	327	P	P	15 11 46.3	+2.2
HLID				IAmb	IAmb	15 11 47.5	
	comp=Z,11nm,0.8s						
BOSA	Boshof	80.72	117	P	P	15 11 46.6	0.0
	comp=Z,5.8nm,0.5s,baz=249,slow=2.0,SNR=6.2						
MAW	Mawson	81.11	163	P	P	15 11 48.7	+1.0
	comp=Z,11nm,0.7s,baz=219,slow=4.9,SNR=13						
PLID	Pearl Lake	82.21	327	P	P	15 11 55.8	+1.7
PLID				IAmb	IAmb	15 11 56.6	
	comp=Z,11nm,0.8s						
J08A	Circle Bar Ran	82.24	325	P	P	15 11 56.4	+2.3
J08A				IAmb	IAmb	15 11 57.0	
	comp=Z,10nm,0.7s						
JTMT	Jette	83.34	330	P	P	15 12 01.3	+1.6
JTMT				IAmb	IAmb	15 12 01.7	
	comp=Z,5.9nm,0.6s						

NEW	Newport	85.03	329	P	P	15 12 09.2	+1.1
	comp=Z,2.2nm,0.6s,baz=100,slow=11,SNR=4.7						
PAB	San Pablo	86.50	44	P	P	15 12 16.4	+0.8
PAB				IAmb	IAmb	15 12 17.2	
	comp=Z,24nm,1.3s						
ESDC	Sonseca Array	86.82	44	P	P	15 12 18.6	+1.5
	comp=Z,4.3nm,1.0s,baz=230,slow=4.4,SNR=12						
CASY	Casey	89.59	179	P	P	15 12 31.4	+1.7
YKA	Yellowknife Ar	94.43	340	P	P	15 12 52.9	+0.9
	comp=Z,2.5nm,0.6s,baz=133,slow=4.4,SNR=58						
DLBC	Dease Lake	97.49	332	P	Pdif	15 13 07.6	+1.5
	comp=Z,2.0nm,0.8s,baz=106,slow=11,SNR=4.3						
INK	Inuvik	104.19	339	Pdiff	Pdif	15 13 37.2	+1.7
	comp=Z,0.9nm,1.1s,baz=90,slow=3.0,SNR=1.3						
ARCES	ARCESS Array B	113.56	23	PKKPbc	PKKPbc	15 28 54.4	-1.2
	comp=Z,2.6nm,0.9s,baz=69,slow=3.0,SNR=5.1						
ASAR	Alice Springs	128.01	205	PKhKP	PKPpre	15 18 25.5	
	comp=Z,0.2nm,0.7s,baz=134,slow=1.0,SNR=4.3						
ASAR				PKP	PKiKP	15 18 38.5	-0.4
	comp=Z,4.5nm,0.7s,baz=138,slow=1.9,SNR=38						
WRA	Warramunga Arr	131.18	207	PKhKP	PKPpre	15 18 29.7	
	comp=Z,0.5nm,0.8s,baz=138,slow=1.1,SNR=6.9						
WRA				PKP	PKiKP	15 18 44.7	-0.7
	comp=Z,2.4nm,0.5s,baz=156,slow=1.8,SNR=42						
WRA				SKPbc	SKPbc	15 21 53.3	-0.6
	comp=Z,1.0nm,0.8s,baz=164,slow=6.4,SNR=7.4						
SEY	Seymchan	133.37	336	PKP	PKiKP	15 18 48.9	+0.6
	comp=Z,2.3nm,0.7s,baz=87,slow=4.4,SNR=5.7						
PETK	Petropavlovsk-	135.81	322	PKP	PKiKP	15 18 52.6	-1.0
	comp=Z,2.7nm,0.6s,baz=132,slow=1.5,SNR=9.6						
ZALV	Zalesovo Beam	143.84	28	PKP	PKPdf	15 19 05.3	-1.1
	comp=Z,3.3nm,0.7s,baz=313,slow=4.6,SNR=14						
ZALV				SKPbc	SKiKP	15 22 30.0	-0.7
	comp=Z,4.2nm,0.9s,baz=298,slow=3.2,SNR=8.7						
KSH	Kashi	145.58	55	PKPbc	PKPab	15 19 11.6	+0.4
MKAR	Makanchi Array	146.95	40	PKPbc	PKPbc	15 19 13.3	-1.1
	comp=Z,5.5nm,0.6s,baz=300,slow=1.6,SNR=50						
MKAR	Makanchi Array	146.95	40		PKPbc	15 19 13.1	-1.2
HYB	Hyderabad	147.33	96	*i* P	PKPab	15 19 19.0	+0.5
USRK	Ussuriysk Ar.	154.78	326	PKPbc	PKiKP	15 19 33.2	+0.3
	comp=Z,1.3nm,0.6s,baz=15,slow=2.9,SNR=5.9						
MJAR	Matsushiro Arr	155.06	305	PKPbc	PKPdf	15 19 33.5	+8.7
	comp=Z,1.9nm,0.6s,baz=84,slow=1.5,SNR=5.5						
MJAR				PKPab	PKPab	15 19 51.6	+1.5
	comp=Z,8.3nm,0.8s,baz=78,slow=2.6,SNR=14						
MAT	Matsushiro	155.06	305	PKP	PKPdf	15 19 34.4	+10
MJB9	Matsu-Tunnel	155.06	305		PKPab	15 19 50.9	+0.8
SONM	Songino Array	156.07	11	PKP	PKPdf	15 19 27.3	+1.3
	comp=Z,0.6nm,0.8s,baz=275,slow=1.8,SNR=5.6						
SONM				PKPab	PKPab	15 19 52.1	-2.0
	comp=Z,0.6nm,0.6s,baz=323,slow=2.1,SNR=3.7						
SONM	Songino Array	156.07	11	PKPdf	PKPdf	15 19 27.2	+1.2
SNY	Shenyang	160.44	335	⇑PKP	PKPdf	15 19 43.8	+13
SNY				sPKP		15 20 40.0	
SNY				PP	PP	15 23 06.3	-49
KSRS	Korea Array	161.65	319	PKPab	PKPab	15 20 20.8	+2.3
	comp=Z,1.8nm,0.8s,baz=61,slow=3.0,SNR=5.9						
CMAR	Chiang Mai Arr	165.82	112	PKPab	PKPab	15 20 38.0	+0.6
	comp=Z,0.8nm,0.7s,baz=256,slow=4.5,SNR=6.4						

TAP ***23*** *15:25:04.9, 23°.99N×122°.43E, h26^{km}, ML2.7, D*
JMA ***23*** *15:25:04.1±0.2, 23°.90N×122°.43E, h12^{km}, M2.4*
ISC 23 15:25:04.0±1.1, **23°.91N**±0°.02×**122°.43E**±0°.02, **h18**^{km}±3^{km}, **n90, σ0^{s}60**/152, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.72	41	P	Pb	15 25 17.9	0.0
JYNG				S	Sb	15 25 26.4	-1.0
EHP	Heping Village	0.74	302	*e*P	Pb	15 25 18.2	-0.1
	baz=297						
HWA	Hwalien	0.76	275	*e*S	Sn	15 25 30.5	-0.1
	baz=256						
TEYL	Yanliau Villag	0.76	267	*e*P	Pn	15 25 19.6	-0.1
	baz=250						
TEYL				S	Sn	15 25 31.0	+0.2
	baz=250						
YOJ	Yonaguni jima	0.76	44	P	Pb	15 25 18.8	+0.1
	baz=56						
YOJ				S	Sb	15 25 28.9	+0.1
	baz=56						
YOJ	Yonaguni jima	0.76	44	P	Pg	15 25 19.0	0.0
YOJ				*e*S	Sb	15 25 28.2	-0.6
ETL	Fush Village	0.78	289	*e*S	Sg	15 25 29.8	+0.3
	baz=267						
TWD	Chiawan	0.78	283	*i* S	Sg	15 25 29.8	+0.2
	baz=276						
EWUT	Wuta	0.80	312	P	Pb	15 25 18.6	-0.7
	baz=307						
EWUT				S	Sg	15 25 30.3	+0.1
	baz=307						
NACB	Ninganchiao	0.80	289	P	Pb	15 25 19.6	+0.2
	baz=269						
NACB				S	Sg	15 25 31.0	+0.6
	baz=269						
ENA	Nanau	0.81	310	P	Pb	15 25 19.2	-0.4
	baz=305						
ENA				S	Sg	15 25 30.4	-0.2
	baz=305						
TEGC	Jichi Village	0.84	256	*e*S	Sn	15 25 32.9	+0.2
	baz=250						
ETM	Tongmen	0.86	274	P	Pb	15 25 20.2	-0.1
	baz=258						
ETM				S	Sn	15 25 33.0	-0.2
	baz=258						
TWC	Suao	0.87	323	*i* P	Pb	15 25 19.3	-1.3
	baz=320						
TWC				S	Sb	15 25 30.3	-1.6
	baz=320						
ETLH	Xiulin Townshi	0.91	289	P	Pb	15 25 21.6	+0.3
	baz=271						
ETLH				S	Sg	15 25 34.1	+0.2
	baz=271						
ESL	Shilin	0.92	264	P	Pb	15 25 20.7	-0.6
	baz=249						
ESL				*e*S	Sb	15 25 33.5	+0.3
	baz=249						
NDS	Dongshan	0.97	318	P	Pb	15 25 22.0	-0.2
	baz=314						
NDS				S	Sb	15 25 34.8	+0.1
	baz=314						
HGSD	Ruisui	1.01	246	P	Pb	15 25 22.7	-0.2
	baz=241						
EGS		1.03	334	P	Pg	15 25 24.6	+0.5
	baz=332						
ILA	Ilan	1.05	324	P	Pb	15 25 23.4	-0.2
	baz=321						
ILA				S	Sb	15 25 37.0	-0.1
	baz=321						
TWE	Neicheng	1.06	319	P	Pn	15 25 24.1	+0.2
	baz=316						
ENTT	Nioudou	1.07	313	*i* P	Pn	15 25 24.1	+0.1
	baz=294						
ENTT				S	Sg	15 25 38.8	0.0
	baz=294						
NDT	Datong Townshi	1.08	310	P	Pn	15 25 24.6	+0.4
	baz=306						
NDT				S	Sn	15 25 38.4	-0.3
	baz=306						
NNSB	Datong	1.08	299	P	Pb	15 25 24.0	-0.2
	baz=282						
NNSB				S	Sb	15 25 38.3	+0.2
	baz=282						
NTC	Toucheng	1.08	330	*e*P	Pb	15 25 23.9	-0.3
	baz=327						
NTC				*e*S	Sb	15 25 37.7	-0.3
	baz=327						
WHF	Hehuan Shan	1.09	283	P	Pb	15 25 24.2	-0.3
	baz=264						
WHF				S	Sb	15 25 38.9	+0.4
	baz=264						
EHY	Hungye	1.09	248	P	Pb	15 25 23.9	-0.4
	baz=259						
EHY				S	Sb	15 25 38.1	-0.1
	baz=259						
NNS	Nan Shan	1.10	299	*i* P	Pb	15 25 24.5	0.0
	baz=282						
NNS				S	Sn	15 25 39.0	-0.3
	baz=282						
FUSS	Fushou	1.13	287	P	Pn	15 25 24.9	-0.2
	baz=282						
FUSS				*e*S	Sn	15 25 40.5	+0.1
	baz=282						
OWD	Renai	1.15	272	*e*P	Pn	15 25 24.9	-0.3
	baz=267						
OWD				S	Sb	15 25 39.6	-0.3
	baz=267						
CHGB	Renai	1.16	278	P	Pn	15 25 25.2	-0.2
	baz=261						
CHGB				S	Sg	15 25 41.5	-0.1
	baz=261						
YULB	Yu-li	1.16	244	P	Pn	15 25 25.2	-0.1
	baz=239						
YULB				S	Sn	15 25 40.7	0.0
	baz=239						
EYUL	Yuli	1.16	241	*e*P	Pn	15 25 25.4	+0.1
	baz=237						
EYUL				*e*S	Sn	15 25 40.8	+0.1
	baz=237						
TWB1	Santiao Chiao	1.16	340	*e*P	Pg	15 25 26.4	-0.1
	baz=356						
TWB1				S	Sb	15 25 40.0	-0.3
	baz=356						
VWDT	VWDT	1.19	263	P	Pb	15 25 26.1	+0.2
	baz=258						
VWDT				*e*S	Sb	15 25 41.2	+0.2
	baz=258						
TIPB	Shuangxi	1.19	333	P	Pb	15 25 26.2	+0.2
	baz=330						
TIPB				S	Sb	15 25 40.3	-0.7
	baz=330						
TWT	Tachien	1.19	287	P	Pb	15 25 26.7	+0.6
	baz=269						
TWT				S	Sn	15 25 42.1	+0.4
	baz=269						
NWLT	Wulai	1.21	316	*e*P	Pb	15 25 26.5	+0.2
	baz=312						
NWLT				*e*S	Sn	15 25 42.1	+0.2
	baz=312						
TDCB	Techi	1.21	287	*e*P	Pb	15 25 26.7	+0.3
	baz=270						
TDCB				*e*S	Sn	15 25 42.1	0.0
	baz=270						
YHNB	Yeheng	1.22	308	P	Pb	15 25 26.8	+0.3
	baz=291						
YHNB				S	Sb	15 25 42.0	0.0
	baz=291						
NSK	Sanguang	1.24	308	*i* P	Pb	15 25 26.7	-0.1
	baz=304						
NSK				*i* S	Sb	15 25 42.2	-0.3
	baz=304						
FULB	Fuli	1.26	236	*e*P	Pn	15 25 26.2	-0.4
	baz=220						
FULB				*e*S	Sb	15 25 43.0	0.0
	baz=220						
IRIF	Iriomote-Funau	1.26	70	P	Pg	15 25 28.2	-0.2
IRIF				*e*S	Sg	15 25 44.3	-0.6
CHKT	Chengkung	1.27	231	P	Pn	15 25 26.4	-0.4
	baz=227						
CHKT				*e*S	Sn	15 25 41.8	-1.5
	baz=227						
HATJ	Hateruma jima	1.27	83	*e*S	Sg	15 25 45.4	+0.3
NWF	Wu-fen Shan	1.30	333	*i* P	Pn	15 25 27.3	+0.1
	baz=331						
NWF				*i* S	Sb	15 25 44.8	+0.6
	baz=331						
TWA	Mucha	1.31	324	*e*P	Pb	15 25 27.9	-0.2
	baz=322						
TWA				*e*S	Sn	15 25 44.4	-0.1
	baz=322						
NHDH	Xindian Distri	1.33	322	*e*S	Sg	15 25 46.2	-0.9
	baz=319						
SSLB	Suanglung	1.35	265	*e*P	Pb	15 25 28.6	-0.2
	baz=261						
EDH	Donghe	1.39	228	*e*P	Pn	15 25 28.4	-0.1
	baz=215						
EDH				*e*S	Sn	15 25 45.2	-1.2
	baz=215						
WCS	Beigang Elemen	1.39	276	*e*P	Pn	15 25 29.1	+0.6
	baz=263						
WCS				*e*S	Sn	15 25 46.0	-0.4
	baz=263						
SMLT	Sun Moon Lake	1.40	269	P	Pb	15 25 29.3	-0.3
	baz=264						
SMLT				S	Sn	15 25 46.5	-0.2
	baz=264						
TAP	Taipei	1.40	323	P	Pn	15 25 27.8	-0.8
	baz=320						
WHP	Taichung City	1.40	285	P	Pg	15 25 31.0	-0.1
	baz=269						
WHP				*e*S	Sg	15 25 48.8	-0.5
	baz=269						
TYC	Yuchr	1.44	270	*e*P	Pb	15 25 29.9	-0.3
	baz=265						
TYC				*e*S	Sn	15 25 47.1	-0.4
	baz=265						
YM01	YM01	1.46	328	P	Pb	15 25 31.0	+0.4
	baz=325						
YM01				S	Sb	15 25 49.7	+0.9
	baz=325						
ELDTW	Lidau	1.48	241	P	Pn	15 25 29.7	-0.1
	baz=237						
ELDTW				S	Sn	15 25 48.0	-0.7
	baz=237						
LIOB	Emei	1.48	300	*i* P	Pb	15 25 31.6	+0.6
	baz=296						
LIOB				S	Sg	15 25 51.4	-0.4
	baz=296						
JKRS	Kuro-shima	1.48	77	P	Pb	15 25 31.4	+0.4
JKRS				*e*S	Sg	15 25 52.2	+0.3
NSTT	Nanjuang	1.48	299	P	Pb	15 25 31.8	+0.8
	baz=283						
NSTT				S	Sb	15 25 49.9	+0.3
	baz=283						
LDUT	Ludao	1.52	216	*e*P	Pn	15 25 29.7	-0.5
	baz=213						
LDUT				*e*S	Sn	15 25 48.1	-1.3
	baz=213						
ALS	Alishan	1.54	255	P	Pb	15 25 31.8	-0.3
	baz=252						
WJS	Zhushan	1.56	267	*e*P	Pg	15 25 33.4	-0.7
	baz=263						
JIJ	Ishigaki jima	1.63	74	P	Pb	15 25 32.8	-0.7
JIJ				S	Sb	15 25 55.1	+1.4
CHN5	Tsauling	1.63	259	P	Pb	15 25 33.6	0.0
	baz=244						
CHN5				*e*S	Sb	15 25 54.8	+0.9
	baz=244						
TWGBT	Beinan	1.65	229	*e*P	Pn	15 25 30.9	-1.2
	baz=239						
TWGBT				*e*S	Sn	15 25 52.5	-0.2
	baz=239						
STYH	Taoyuan	1.69	244	*e*P	Pn	15 25 32.8	+0.3
	baz=231						
STYH				*e*S	Sb	15 25 55.0	-0.3
	baz=231						
WDLH	Douliu	1.74	263	*e*P	Pb	15 25 35.7	+0.3
	baz=260						
TPUB	Ta-pu	1.76	250	*e*P	Pb	15 25 35.5	-0.2
	baz=246						
TPUB				*e*S	Sb	15 25 58.1	+0.7
	baz=246						
CHN4	Tsaushan	1.77	252	*e*P	Pb	15 25 36.4	+0.5
	baz=248						
CHN4				*e*S	Sb	15 25 58.7	+0.8
	baz=248						
WTP	Ta-pu	1.79	249	*e*P	Pb	15 25 35.6	-0.7
	baz=234						
WTP				*e*S	Sb	15 25 58.7	+0.3
	baz=234						
JISG	Ishigakijimahi	1.85	68	P	Pn	15 25 35.4	+0.7
JISG				*e*S	Sn	15 25 58.7	+1.1
SLGT	Liugui	1.87	241	*e*P	Pb	15 25 37.6	-0.1
	baz=229						
SLGT				*e*S	Sb	15 26 00.6	-0.2
	baz=229						
WRL	Guolierlin Hig	1.88	270	*e*P	Pb	15 25 37.0	-0.7
	baz=267						
WTK	Tuku	1.88	264	*e*P	Pb	15 25 37.7	0.0
	baz=260						
ECL	Taimali	1.88	226	P	Pn	15 25 35.1	-0.1
	baz=235						
SGST	Jiashian	1.88	244	*e*P	Pb	15 25 38.2	+0.4
	baz=231						
SGST				*e*S	Sb	15 26 01.6	+0.6
	baz=231						
CHN1	Nanshi	1.89	248	*e*P	Pb	15 25 37.4	-0.5
	baz=244						
CHN1				*e*S	Sb	15 26 02.6	+1.4
	baz=244						
TWK	Hsinying	1.89	251	*e*P	Pb	15 25 37.5	-0.5
	baz=247						
TWK				*e*S	Sb	15 26 02.1	+0.8
	baz=247						
SNST	Tainan City	1.90	249	*e*P	Pb	15 25 38.3	+0.2
	baz=246						
TSMG	Majia	2.03	234	*e*P	Pb	15 25 39.7	-0.6
	baz=223						
MASBT	Mashibuluo	2.10	232	*e*P	Pn	15 25 39.1	+1.0
	baz=222						
EAST	Anshuo	2.10	224	*e*P	Pn	15 25 39.3	+0.9
	baz=222						
JTJ	Tarama	2.20	70	*e*S	Sb	15 26 09.0	-1.1
SSPT	Xinbi	2.22	231	*e*P	Pn	15 25 41.5	+1.6
	baz=222						
SLIU	Shizi	2.26	222	*e*P	Pb	15 25 43.3	-0.9
	baz=220						
SCZT	Fangliau	2.26	228	*e*P	Pn	15 25 41.6	+1.2
	baz=218						
SCZT				*e*S	Sn	15 26 10.1	+2.3
	baz=218						
WDGT	Dungji	2.62	256	*e*P	Pn	15 25 46.6	+1.2
	baz=254						
PHUB	P'eng-hu	2.65	262	*e*P	Pn	15 25 46.8	+1.1
	baz=260						
PNG	Penghu	2.65	263	*e*P	Pn	15 25 47.0	+1.1
	baz=261						

NOU ***23*** *15:36:52.1, 21°.01S×168°.41E, h0^{km}, mb5.1/60, Loyalty Islands*
MOS ***23*** *15:36:53.1±0.9, 21°.07S×168°.36E, h20^{km}, mb5.2/28, Error ellipse: s-maj=9.9km s-min=9.0km az=133.7*
NEIC ***23*** *15:36:53.5±2.4, 21°.03S±0°.05×168°.29E±0°.06, h9^{km}±3^{km}, mb5.1/54, Error ellipse: s-maj=9.4km s-min=5.4km az=131.0*
IDC ***23*** *15:36:56.3±0.5, 21°.14S×168°.43E, h32^{km}±2^{km}, mb4.5/18, mb1 4.7/21, mb1mx4.4/36, mbtmp4.7/21, ML5.0/3, MS3.9/18, Ms1 3.9/18, ms1mx3.8/34, Error ellipse: s-maj=14.7km s-min=12.1km az=135.0*
GCMT ***23*** *15:36:57.5±0.3, 21°.02S±0°.03×168°.32E±0°.02, h19^{km}, MW5.0/83, Moment Tensor Solution. s31,c38; s83,c125; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.62±.23; $M_{\theta\theta}$0.15±.15; $M_{\phi\phi}$3.47±.14; $M_{r\theta}$1.08±.35; $M_{\theta\phi}$-1.53±.09; $M_{\phi r}$2.05±.28; Best double couple: $M_0$4.50000×10^{16} NP1:ϕ_s318.00000°, δ38.00000°, λ-126.00000°. NP2: ϕ_s181.00000°, δ60.00000°, λ-65.00000°. Principal axes: T 4.3800, Plg12.0000°, Azm253.0000°; N 0.2390, Plg21.0000°, Azm348.0000°; P -4.6200, Plg66.0000°, Azm136.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***23*** *15:37:08.8±0.0, 20°.58S×169°.09E, h36^{km}±1^{km}*
ISC 23 15:36:55.1±0.3, **21°.04S**±0°.04×**168°.33E**±0°.04, **h24**^{km}±2^{km}, **h24**^{km}**:pP-P, n411, σ1^{s}25**/407, **mb5.1**/82, **MS4.1**/17, **47C-46D, Fault plane solution: NP1:**ϕ_s172.31653°, δ75.27215°, λ-86.40244°. **NP2:**ϕ_s338.42569°, δ15.15142°, λ-103.42575°. **Principal axes:** T Plg30.1828°, Azm259.3743°; N Plg3.4792°, Azm351.4008°; P Plg59.5750°, Azm87.3430°; **Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	0.52	213	Pg	Pb	15 37 03.9	-1.7
MARNC				Sg	Sb	15 37 10.6	-2.0
MARNC	Mare, Loyalty	0.52	213	P	Pb	15 37 04.4	-1.1
LIFNC	LIFOU	1.06	284	Pg	Pb	15 37 12.6	-2.0
LIFNC	LIFOU	1.06	284	P	Pb	15 37 12.9	-1.8
YATNC	Mamie plateau,	1.68	233	P	Pn	15 37 21.0	-2.0
PINNC	Pines Island,	1.77	208	Pn	Pn	15 37 22.0	-2.2
PINNC	Pines Island,	1.77	208	P	Pn	15 37 22.9	-1.3
OUENC	Ouen Island, N	1.95	225		Pn	15 37 25.8	-0.9
OUENC	Ouen Island, N	1.95	225	P	Pn	15 37 26.8	+0.1
DZM	Mont Dzumac	2.03	240	Pn	Pn	15 37 26.8	-1.2
	762nm,0.3s,baz=107,slow=4.7,SNR=5400						
DZM				Sn	Sn	15 37 54.0	+1.4
	636nm,0.3s,baz=293,slow=23,SNR=4.7						
DZM				LR	LR	15 37 55.2	
	comp=Z,3μm,19.5s,baz=3.0,slow=29						
DZM	Mont Dzumac	2.03	240	*e*Pn	Pn	15 37 26.7	-1.2
	5μm,0.7s						
DZM				*e*Sn	Sn	15 37 50.0	-2.7
	2μm,0.2s						
DZM	Mont Dzumac	2.03	240	Pn	Pn	15 37 26.9	-1.1
DZM	Mont Dzumac	2.03	240	P	Pn	15 37 27.9	-0.1
ONTNC	Ouen Toro	2.15	234	Pn	Pn	15 37 28.8	-0.7
ONTNC	Ouen Toro	2.15	234	P	Pn	15 37 29.8	+0.3
NOUC	Port Laguerre	2.16	241	P	Pn	15 37 30.0	+0.4
RTV	Rentapao	3.24	2	P	Pn	15 37 46.7	+2.3
DVP	Devils Point	3.31	358	P	Pn	15 37 43.8	-1.6
KOUNC	Koumac, New Ca	3.82	277	P	Pn	15 37 53.7	+1.3
SANVU	Saraoutou	5.67	349	Pn	Pn	15 38 15.1	-2.8
SANVU	Saraoutou	5.67	349	P	Pn	15 38 17.5	-0.4
NFK	Norfolk Island	7.97	182	P	Pn	15 38 48.3	-1.2
	baz=8.0,SNR=28						
NFK	Norfolk Island	7.97	182	P	Pn	15 38 48.5	-1.0
MSVF	Nonsavu	9.74	72	Pn	Pn	15 39 15.6	+1.7
	0.9nm,0.3s,baz=252,slow=9.7,SNR=5.6						
MSVF	Nonsavu	9.74	72	Pn	Pn	15 39 15.3	+1.4
MSVF	Nonsavu	9.74	72	P	Pn	15 39 14.0	+0.1
HNR	Honiara	14.09	324	LR	LR	15 44 07.9	
	comp=Z,262nm,21.7s,baz=204,slow=30						
OUZ	Omahuta	14.86	163		Pn	15 40 24.2	+0.5
OUZ	Omahuta	14.86	163	P	Pn	15 40 23.9	+0.2
RAO	Raoul Island	14.88	126	LR	LR	15 44 38.7	
	comp=Z,396nm,21.5s,baz=254,slow=31						
RAO	Raoul Island	14.88	126	P	Pn	15 40 25.5	+1.5
RAO	Raoul Island	14.88	126	Pn	Pn	15 40 25.5	+1.5
EIDS	Eidsvold	16.43	252	P	P	15 40 46.7	-0.1
	baz=17,SNR=16						
EIDS	Eidsvold	16.43	252	P	P	15 40 46.6	-0.2
EIDS	Eidsvold	16.43	252	P	P	15 40 46.2	-0.6
	48nm,1.1s						
RK1H	Rockhampton Ha	16.68	259	P	P	15 40 50.9	+1.3
	54nm,0.8s						
ARMA	Armidale	17.69	235	P	P	15 41 02.2	+1.4
	baz=18,SNR=9.0						
ARMA	Armidale	17.69	235	P	P	15 41 01.7	+0.8
ARMA	Armidale	17.69	235	P	P	15 41 03.1	+2.3
	62nm,1.5s						
HIZ	Hauiti	18.30	164	P	Pn	15 41 07.0	-0.3
HAZ	Te Kaha	18.56	156	P	Pn	15 41 11.9	+1.5
RUGZ	Raukumara Rang	18.70	156	P	Pn	15 41 13.3	+1.0
RMQ	Roma	18.71	249	P	Pn	15 41 15.2	+2.7
	baz=19,SNR=37						
RMQ	Roma	18.71	249	P	Pn	15 41 14.7	+2.2
	44nm,0.7s						
URZ	Urewera	18.76	158	P	Pn	15 41 12.9	0.0
	1.0nm,0.3s,baz=298,slow=23,SNR=9.9						
URZ				LR	LR	15 47 17.5	
	comp=Z,861nm,18.8s,baz=31,slow=33						
URZ	Urewera	18.76	158	P	Pn	15 41 13.5	+0.6
URZ	Urewera	18.76	158	P	P	15 41 12.4	+0.1
URZ	Urewera	18.76	158	P	Pn	15 41 13.1	+0.2
	178nm,1.7s						
MUGZ	Murupara	18.84	159	P	Pn	15 41 21.7	+7.8
WMGZ	Waiomatatini S	18.86	155	P	Pn	15 41 15.3	+1.1
MWZ	Matawai	18.97	157	P	Pn	15 41 16.9	+1.3
TWGZ	Tauwhareparae	19.00	156	P	Pn	15 41 16.6	+0.6
PUZ	Puketiti	19.02	155	P	Pn	15 41 16.4	+0.3
RTZ	Ruatahuna	19.03	159	P	Pn	15 41 17.3	+1.0
MRHZ	Matea Rd	19.05	160	P	Pn	15 41 20.4	+4.0
RAGZ	Rawiri	19.07	158	P	Pn	15 41 18.2	+1.4
NNVZ	North Ngauruho	19.08	162	P	Pn	15 41 24.1	+7.1
TMVZ	Te Maari	19.09	162	P	Pn	15 41 21.9	+4.8
ETVZ	East Tongariro	19.11	162	P	Pn	15 41 19.3	+2.0
OTVZ	Oturere	19.13	162	P	Pn	15 41 21.2	+3.6
SNVZ	South Ngauruho	19.14	162	P	Pn	15 41 19.9	+2.2
TKGZ	Te Karaka	19.18	157	P	Pn	15 41 18.4	+0.4
MTHZ	Maungataniwha	19.20	159	P	Pn	15 41 18.2	-0.1
WNVZ	Wahianoa	19.26	163	P	Pn	15 41 21.2	+2.1
SNGZ	Shannon Statio	19.30	158	P	Pn	15 41 19.5	0.0
RAHZ	Arahi	19.34	159	P	P	15 41 16.2	-2.5
BKZ	Black Stump Fm	19.37	161	P	P	15 41 18.7	-0.5
BKZ	Black Stump Fm	19.37	161	P	P	15 41 18.4	-0.8
BKZ				IAmb	IAmb	15 41 22.4	
	comp=Z,85nm,1.0s						
BKZ	Black Stump Fm	19.37	161	P	P	15 41 18.4	-0.8
RIGZ	Rimuhau	19.39	157	P	P	15 41 19.9	+0.6
NMHZ	Naumai	19.41	160	P	P	15 41 15.9	-3.7
MGCD	Mangrove Creek	19.51	228	P	Pn	15 41 23.4	+1.4
	baz=20,SNR=5.2						
KWHZ	Kaweka Forest	19.59	161	P	P	15 41 19.0	-2.6
KRHZ	Kereru	19.77	161	P	P	15 41 24.2	+0.6

RIV	Riverview	19.83	226	P	Pn	15 41 26.4	+0.7
	baz=20,SNR=7.0						
SYDH	Sydney Hard Ro	20.07	227	P	Pn	15 41 29.3	+0.6
	comp=Z,115nm,0.8s						
WPHZ	Waipukurau	20.18	162	P	P	15 41 29.0	+1.0
AFI	Afiamalu	20.24	73	LR	LR	15 48 54.7	
	comp=Z,130nm,18.4s,baz=224,slow=36						
CTA	Charters Tower	20.70	269	P	Pn	15 41 35.5	-0.6
	comp=Z,39nm,0.8s,baz=91,slow=14,SNR=23						
CTA	Charters Tower	20.70	269	P	Pn	15 41 35.9	-0.2
	baz=21						
CTAO	Charters Tower	20.70	269	P	Pn	15 41 36.0	-0.1
CTAO				pmax	pmax		
	comp=Z,67nm,0.9s						
CTAO	Charters Tower	20.70	269	P	Pn	15 41 36.0	-0.1
CTAO				IAmb	IAmb	15 41 40.8	
	comp=Z,67nm,0.9s						
CTAO	Charters Tower	20.70	269	P	Pn	15 41 36.6	+0.5
BFZ	Birch Farm	20.70	163	P	P	15 41 31.9	-1.7
BFZ	Birch Farm	20.70	163	P	P	15 41 34.2	+0.6
SNZO	South Karori	20.91	166	P	Pn	15 41 37.7	-0.7
THZ	Tophouse	21.01	170	P	P	15 41 36.5	-0.5
THZ				IAmb	IAmb	15 41 41.9	
	comp=Z,142nm,1.4s						
KHZ	Kahutara	21.75	170	P	P	15 41 43.8	-1.1
KHZ	Kahutara	21.75	170	P	P	15 41 44.9	+0.1
CNB	Canberra Magne	21.89	225	P	P	15 41 48.2	+1.6
	baz=22,SNR=16						
CNB	Canberra Magne	21.89	225	P	P	15 41 48.8	+2.2
	comp=Z,50nm,1.2s						
LTZ	Lake Taylor	21.93	172	P	P	15 41 44.9	-1.9
CAN	Canberra	22.14	226	P	P	15 41 50.4	+1.2
CAN				pmax	pmax		
	comp=Z,38nm,1.1s						
CAN	Canberra	22.14	226	P	P	15 41 50.4	+1.2
CAN	Canberra	22.14	226	P	P	15 41 51.9	+2.7
QLP	Quilpie	22.71	251	P	P	15 41 56.4	+1.1
	baz=23,SNR=39						
QLP	Quilpie	22.71	251	P	P	15 41 56.1	+0.8
	comp=Z,179nm,1.1s						
RPZ	Rata Peaks	22.72	175	P	P	15 41 56.9	+1.7
CMSA	Cobar Meteorol	22.79	238	P	P	15 41 57.0	+0.9
	baz=23,SNR=51						
CMSA	Cobar Meteorol	22.79	238	P	P	15 41 56.8	+0.7
	comp=Z,67nm,1.1s						
MTSU	Mount Surprise	22.81	273	P	P	15 41 58.0	+1.6
	baz=23,SNR=117						
MTSU	Mount Surprise	22.81	273	P	P	15 41 57.4	+1.0
	comp=Z,154nm,0.9s						
PMG	Port Moresby	23.44	296	P	P	15 42 04.4	+1.6
	comp=Z,37nm,0.8s,baz=132,slow=4.8,SNR=19						
PMG				LR	LR	15 49 38.9	
	comp=Z,650nm,20.0s,baz=134,slow=32						
PMG	Port Moresby	23.44	296	P	P	15 42 03.0	+0.2
PMG				pmax	pmax		
	comp=Z,49nm,1.0s						
PMG	Port Moresby	23.44	296	P	P	15 42 03.0	+0.2
PMG				IAmb	IAmb	15 42 17.3	
	comp=Z,49nm,0.9s						
PMG	Port Moresby	23.44	296	P	P	15 42 03.6	+0.8
PMG	Port Moresby	23.44	296	P	P	15 42 03.6	+0.8
ODZ	Otahua Downs	24.01	176	P	P	15 42 06.7	-1.3
ODZ				IAmb	IAmb	15 42 29.2	
	comp=Z,55nm,1.5s						
ODZ	Otahua Downs	24.01	176	P	P	15 42 06.9	-1.1
COEN	Coen	24.99	282	P	P	15 42 17.3	+0.1
COEN				IAmb	IAmb	15 42 30.4	
	comp=Z,30nm,1.0s						
COEN	Coen	24.99	282	P	P	15 42 18.8	+1.6
	comp=Z,31nm,0.9s						
TOO	Toolangi	25.74	225	P	P	15 42 25.1	+1.2
	baz=26,SNR=6.1						
TOO	Toolangi	25.74	225	P	P	15 42 24.5	+0.6
TOO				pmax	pmax		
	comp=Z,49nm,1.2s						
TOO	Toolangi	25.74	225	P	P	15 42 24.5	+0.6
TOO				IAmb	IAmb	15 42 35.7	
	comp=Z,49nm,1.1s						
TOO	Toolangi	25.74	225	P	P	15 42 24.8	+0.9
	comp=Z,47nm,1.2s						
INKA	Innaminka	25.96	250	P	P	15 42 27.8	+1.9
	comp=Z,88nm,0.9s						
STKA	Stephens Creek	26.19	240	P	P	15 42 29.1	+1.1
	comp=Z,10nm,0.8s,baz=84,slow=11,SNR=28						
STKA				LR	LR	15 52 13.2	
	comp=Z,692nm,19.8s,baz=65,slow=35						
STKA	Stephens Creek	26.19	240	P	P	15 42 29.1	+1.2
	baz=26,SNR=18						
STKA	Stephens Creek	26.19	240	P	P	15 42 28.9	+0.9
STKA				pmax	pmax		
	comp=Z,14nm,1.3s						
STKA	Stephens Creek	26.19	240	P	P	15 42 28.9	+0.9
STKA	Stephens Creek	26.19	240	P	P	15 42 29.4	+1.4
	comp=Z,8.1nm,1.5s						
KNTN	Kanton	26.59	50	P	P	15 42 29.3	-2.4
QIS	Mount Isa	26.85	266	P	P	15 42 34.6	+0.5
	baz=27,SNR=6.7						
ARPS	Mount Arapiles	27.86	230	P	P	15 42 44.6	+1.6
	baz=28,SNR=5.8						
LCRK	Leigh Creek	28.62	245	P	P	15 42 50.2	+0.4
	comp=Z,31nm,0.8s						
HTT	Hallett	28.81	238	P	P	15 42 52.3	+0.8
	baz=29,SNR=7.5						
HTT	Hallett	28.81	238	P	P	15 42 51.9	+0.4
	comp=Z,34nm,1.1s						
RAR	Rarotonga	29.73	96	LR	LR	15 52 20.4	
	comp=Z,196nm,21.6s,baz=254,slow=31						
OOD	Oodnadatta	30.41	251	P	P	15 43 06.5	+0.8
	comp=Z,93nm,0.9s						
BBOO	Buckleboo	30.95	241	P	P	15 43 09.6	-0.8
	baz=31,SNR=7.3						
BBOO	Buckleboo	30.95	241	P	P	15 43 10.1	-0.3
BBOO				IAmb	IAmb	15 43 20.8	
	comp=Z,24nm,0.9s						
BBOO	Buckleboo	30.95	241	P	P	15 43 10.6	+0.2
	comp=Z,33nm,1.0s						
WR0	Warramunga Arr	31.64	266	P	P	15 43 15.3	-1.3
WR0				IAmb	IAmb	15 43 17.0	
	comp=Z,21nm,0.9s						
WB0	Warramunga Arr	31.80	266	P	P	15 43 17.1	-1.0
WB0				IAmb	IAmb	15 43 28.2	
	comp=Z,24nm,0.9s						
WB2	Warramunga Arr	31.82	266	P	P	15 43 17.0	-1.2
WB2				IAmb	IAmb	15 43 27.8	
	comp=Z,39nm,1.2s						
WRAB	Tennant Creek	31.82	266	*c i*P	P	15 43 17.1	-1.1
WRAB				pmax	pmax		
	comp=Z,26nm,1.3s						
WRAB	Tennant Creek	31.82	266	P	P	15 43 17.1	-1.1
WRAB				IAmb	IAmb	15 43 28.4	
	comp=Z,24nm,1.1s						
WRAB	Tennant Creek	31.82	266	P	P	15 43 20.6	+2.4
WRA	Warramunga Arr	31.83	266	P	P	15 43 17.5	-0.8
	comp=Z,11nm,0.9s,baz=98,slow=7.8,SNR=37						
WRA				LR	LR	15 56 26.7	
	comp=Z,596nm,19.0s,baz=95,slow=37						
WRA	Warramunga Arr	31.83	266	P	P	15 43 16.6	-1.7
WRA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
WRA	Warramunga Arr	31.83	266	P	P	15 43 16.6	-1.7
AS31	Alice Springs	31.90	259	P	P	15 43 19.2	+0.2
AS31				IAmb	IAmb	15 43 19.7	
	comp=Z,18nm,0.7s						
ASAR	Alice Springs	31.90	259	P	P	15 43 19.0	0.0
	comp=Z,55nm,0.8s,baz=84,slow=9.0,SNR=600						
ASAR				LR	LR	15 55 52.7	
	comp=Z,770nm,18.6s,baz=96,slow=36						
ASAR	Alice Springs	31.90	259	P	P	15 43 18.9	0.0
MULG	Mulgathing	32.13	246	P	P	15 43 20.8	0.0
	comp=Z,55nm,1.1s						
MTN	Manton Dam	36.44	277	P	P	15 43 58.6	+0.3
	baz=37,SNR=5.0						
MTN	Manton Dam	36.44	277	P	P	15 43 58.1	-0.2
MTN				IAmb	IAmb	15 44 11.1	
	comp=Z,38nm,0.9s						
MTN	Manton Dam	36.44	277	P	P	15 43 58.3	0.0
	comp=Z,43nm,0.7s						
WRKA	Warakurna	36.97	256	P	P	15 44 02.6	-0.2
	baz=37,SNR=20						
WRKA	Warakurna	36.97	256	P	P	15 44 02.2	-0.6
	comp=Z,37nm,1.1s						
FORT	Forrest	37.33	247	P	P	15 44 05.9	+0.1
	baz=38,SNR=10						
FORT	Forrest	37.33	247	P	P	15 44 05.3	-0.5
FORT	Forrest	37.33	247	P	P	15 44 05.3	-0.5
	comp=Z,79nm,0.9s						
KNRA	Kununurra	37.86	271	P	P	15 44 10.4	0.0
	baz=38,SNR=11						
KNRA	Kununurra	37.86	271	P	P	15 44 09.9	-0.5
KNRA	Kununurra	37.86	271	P	P	15 44 09.9	-0.5
	comp=Z,109nm,0.9s						
TBI	Tubuai	39.05	101	*e*S	S	15 50 24.4	+6.0
	comp=Z,95nm,27.5s						
TBI				*e*LQ	LQ	15 53 09.5	
	comp=Z,870nm,31.5s						
TBI				*e*LR	LR	15 55 02.0	
	comp=Z,405nm,29.8s						
PPT2	Papeete2	39.79	92	*e*S	S	15 50 31.3	+1.5
	comp=Z,145nm,25.8s						
PPT2				*e*LQ	LQ	15 53 44.5	
	comp=Z,1µm,27.2s						
PPT2				*e*LR	LR	15 55 21.6	
	comp=Z,691nm,28.0s						
FITZ	Fitzroy Crossi	40.25	267	P	P	15 44 31.0	+0.6
	comp=Z,49nm,0.7s,baz=111,slow=7.8,SNR=67						
FITZ				pP	pwP	15 44 40.5	-0.9
	comp=Z,78nm,0.9s,baz=98,slow=8.0,SNR=21						
FITZ	Fitzroy Crossi	40.25	267	P	P	15 44 30.8	+0.5
	baz=40,SNR=34						
BATI	Baumata	44.21	277	pP	pP	15 45 13.8	+4.9
	comp=Z,38nm,0.8s,baz=86,slow=17,SNR=3.8						
PSA00	Pilbara Seismi	45.03	260	P	P	15 45 08.6	-0.6
PSA00				IAmb	IAmb	15 45 20.6	
	comp=Z,46nm,1.2s						
PSA00	Pilbara Seismi	45.03	260	P	P	15 45 09.5	+0.3
	comp=Z,67nm,1.1s						
MBWA	Marble Bar	45.20	261	P	P	15 45 11.4	+0.9
MEEK	Meekatharra	45.59	253	P	P	15 45 13.6	-0.1
	baz=46,SNR=14						
MEEK	Meekatharra	45.59	253	P	P	15 45 13.1	-0.6
	comp=Z,51nm,1.1s						
KLBR	Kellerberrin	46.19	246	P	P	15 45 18.1	-0.1
	baz=46,SNR=5.8						
NWAO	Narrogin (SRO)	46.65	244	P	P	15 45 22.0	+0.2
BLDU	Ballidu	47.09	247	P	P	15 45 24.7	-0.6
	comp=Z,39nm,1.0s						
MUN	Mundaring	47.51	245	P	P	15 45 28.9	+0.3
	baz=48,SNR=4.6						
MORW	Morawa	47.72	249	P	P	15 45 30.7	+0.5
	baz=48,SNR=3.0						
MORW	Morawa	47.72	249	P	P	15 45 28.8	-1.5
MORW	Morawa	47.72	249	P	P	15 45 30.8	+0.5
	comp=Z,30nm,1.1s						
KAPI	Kappang	49.71	282	pP	pP	15 45 56.7	+4.8
	comp=Z,19nm,0.9s,baz=155,slow=5.7,SNR=4.8						
KAPI				LR	LR	16 09 17.9	
	comp=Z,85nm,19.6s,baz=146,slow=39						
DAV	Davao City (W)	50.42	299	LR	LR	16 07 44.6	
	comp=Z,97nm,18.2s,baz=173,slow=37						
TAOE	Nuku Hiva Isla	51.02	84	*e*LR	LR	16 00 34.7	
	comp=Z,674nm,29.1s						
VNDA	Vanda	56.61	182	P	P	15 46 34.3	-1.3
	comp=Z,7.2nm,1.0s,baz=358,slow=8.9,SNR=10						
VNDA				LR	LR	16 07 21.0	
	comp=Z,87nm,18.8s,baz=349,slow=32						
VNDA	Vanda	56.61	182	P	P	15 46 35.0	-0.6
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VNDA	Vanda	56.61	182	P	P	15 46 35.0	-0.6
SBA	Scott Base	56.86	180	P	P	15 46 37.7	+0.4
SBA				pmax	pmax		
	comp=Z,57nm,1.1s						
SBA	Scott Base	56.86	180	P	P	15 46 37.7	+0.4
LEM	Lembang	60.27	274	LR	LR	16 13 30.1	
	comp=Z,129nm,18.4s,baz=97,slow=36						
LEM	Lembang	60.27	274	P	P	15 47 03.5	+1.2
LEM				pmax	pmax		
	comp=Z,39nm,1.2s						
MJAR	Matsushiro Arr	63.96	333	P	P	15 47 26.5	+0.1
	comp=Z,1.1nm,0.5s,baz=171,slow=9.9,SNR=2.9						
MJAR				pP	pwP	15 47 36.0	-2.1
	comp=Z,5.4nm,0.8s,baz=164,slow=7.4,SNR=7.4						
MJAR				LR	LR	16 15 43.8	
	comp=Z,20nm,18.6s,baz=165,slow=36						
MAJO	Matsushiro	63.96	333	⇑*e*P	P	15 47 27.4	+1.0
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MAT	Matsushiro	63.96	333	P	P	15 47 24.3	-2.1
TPUB	Ta-pu	64.05	311	P	P	15 47 25.9	-1.4
YHNB	Yeheng	64.41	313	P	P	15 47 30.0	+0.3
JSD	Sado	65.21	334	P	P	15 47 33.9	-0.6
JSD				IAmb	IAmb	15 47 48.2	
	comp=Z,16nm,0.9s						
KUR	Kuril'sk	68.55	345	⇑*e*P	P	15 47 55.8	+0.3
KUR				pmax	pmax		
	comp=Z,94nm,1.0s						
QSPA	South Pole Qui	69.02	180	P	P	15 47 57.5	-1.1
KSRS	Korea Array	69.52	327	P	P	15 48 03.2	+1.4
	comp=Z,1.1nm,0.8s,baz=131,slow=6.8,SNR=4.3						
KSRS				pP	pwP	15 48 13.0	-0.5
	comp=Z,1.4nm,0.8s,baz=153,slow=5.7,SNR=4.0						
NJ2	Nanjing	70.92	317	*e*P	P	15 48 12.9	+2.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
UBPT	Khong Chiam	71.48	295	P	P	15 48 14.7	+0.5
YSS	Yuzh-Sakhalins	71.51	342	⇓*e*P	P	15 48 15.8	+2.1
YSS				pmax	pmax		
	comp=Z,19nm,1.0s						
PSI	Prapat	71.89	280	LR	LR	16 20 54.6	
	comp=Z,34nm,20.0s,baz=116,slow=37						
WHN	Wuhan	72.94	313	⇓P	P	15 48 33.8	+11
USA0B	Ussuriysk Arra	72.95	334	P	P	15 48 22.8	+0.3
USA0B				pmax	pmax		
	comp=Z,28nm,1.0s						
USA0B	Ussuriysk Arra	72.95	334	P	P	15 48 22.8	+0.3
USA0B				IAmb	IAmb	15 48 34.8	
	comp=Z,28nm,1.0s						
USRK	Ussuriysk Ar.	72.95	334	P	P	15 48 23.8	+1.4
	comp=Z,7.7nm,0.8s,baz=138,slow=3.6,SNR=20						
USRK				pP	pwP	15 48 33.8	-0.4
	comp=Z,15nm,0.8s,baz=139,slow=4.5,SNR=19						
USRK	Ussuriysk Ar.	72.95	334	P	P	15 48 22.8	+0.3
MDJ	Mudanjiang	74.31	332	P	P	15 48 31.8	+1.4
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,130nm,5.2s						
PEA0B	Petropavlovsk-	74.42	353	P	P	15 48 31.3	+0.5
PEA0B				pmax	pmax		
	comp=Z,132nm,1.5s						
PEA0B	Petropavlovsk-	74.42	353	P	P	15 48 31.3	+0.5
PETK	Petropavlovsk-	74.42	353	P	P	15 48 31.7	+0.9
	comp=Z,20nm,0.9s,baz=186,slow=13,SNR=14						
PETK				pP	pwP	15 48 41.4	-1.2
	comp=Z,18nm,0.9s,baz=190,slow=15,SNR=9.6						
PETK				LR	LR	16 17 07.5	
	comp=Z,87nm,18.8s,baz=139,slow=32						
PETK	Petropavlovsk-	74.42	353	P	P	15 48 30.8	0.0
TYV	Tymovskoe	75.09	343	*e*P	P	15 48 46.8	+12
TYV				*e*S	S	15 58 38.0	+27
TYV				pmax	pmax		
	comp=Z,22nm,1.2s						
TYV				pmax	pmax		
	comp=Z,100nm,3.8s						
TYV				smax	smax		
	comp=N,10.0nm,1.3s						
TYV				smax	smax		
	comp=N,900nm,8.2s						
TYV				smax	smax		
	comp=E,700nm,8.2s						
CN2	Changchun	75.56	329	*e*P	P	15 48 37.6	-0.1
CN2				pmax	pmax		
	comp=E,10.0nm,1.6s						
GYA	Guiyang	76.16	306	⇓P	P	15 48 43.5	+1.8
GYA				pmax	pmax		
	comp=E,8.0nm,0.8s						
ENH	Enshi	76.17	310	P	P	15 48 41.7	+0.1
MAW	Mawson	76.45	202	P	P	15 48 42.8	+0.4
	comp=E,6.0nm,0.7s,baz=130,slow=9.5,SNR=7.4						
MAW				pP	pwP	15 48 52.0	-1.3
	comp=E,6.9nm,0.9s,baz=91,slow=6.9,SNR=3.7						
MAW	Mawson	76.45	202	P	P	15 48 42.3	-0.1
MAW				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MAW	Mawson	76.45	202	P	P	15 48 42.3	-0.1
KLR	Kul'dur	77.17	336	*d i*P	P	15 48 47.7	+1.1
KLR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CM31	Chiang Mai Arr	78.48	295	P	P	15 48 56.9	+2.3
CM31				IAmb	IAmb	15 49 07.5	
	comp=Z,17nm,1.0s						
CMAR	Chiang Mai Arr	78.48	295	P	P	15 48 56.5	+1.8
	comp=Z,5.1nm,0.7s,baz=133,slow=4.5,SNR=37						
CMAR				pP	pwP	15 49 06.3	+0.2
	comp=Z,10.0nm,0.9s,baz=136,slow=4.4,SNR=17						
CMAR				LR	LR	16 24 42.2	
	comp=Z,33nm,20.5s,baz=185,slow=36						
CMAR	Chiang Mai Arr	78.48	295	P	P	15 48 55.7	+1.0
KMI	Kunming	78.51	303	⇓P	P	15 48 56.9	+1.9
KMI				pP	pP	15 49 01.1	-0.3
KMI				sP	sP	15 49 02.1	-1.6
KMI				PcP	pwP	15 49 07.3	+0.8
KMI				pmax	pmax		
	comp=Z,14nm,0.7s						
CHTO	Chiang Mai	78.64	295	P	P	15 48 56.0	+0.5
CHTO				pmax	pmax		
	comp=Z,18nm,1.0s						
CHTO	Chiang Mai	78.64	295	P	P	15 48 56.0	+0.5
CHTO				IAmb	IAmb	15 49 08.1	
	comp=Z,18nm,0.9s						
HHC	Hu-ho-hao-te	81.04	320	*e*P	P	15 49 11.3	+3.1
HHC				sP	pwP	15 49 19.5	-0.6
HHC				PP	PP	15 52 11.6	-2.0
HHC				S	S	15 59 14.1	-2.2
HHC				pmax	pmax		
	comp=Z,11nm,1.2s						
HHC				pmax	pmax		
	comp=Z,190nm,5.3s						
MA2	Magadan	81.61	351	⇓*e*P	P	15 49 11.9	+1.3
MA2				pmax	pmax		
	comp=Z,45nm,2.4s						
HIA	Hailar	82.24	330	⇑*e*P	P	15 49 14.7	+0.4
HIA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SMAI	San Martin Ant	82.39	162	P	P	15 49 14.1	-0.7
ZEA	Zeya	82.47	337	*e*P	P	15 49 16.2	+0.9
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SYO	Syowa Base	82.97	196	⇑*i*P	P	15 49 17.0	-0.8
SYO	Syowa Base	82.97	196	⇑*e*pP	pP	15 49 21.5	-3.0
LZH	Lanzhou	83.31	313	⇑P	P	15 49 32.3	+12
LZH				pP	pwP	15 49 38.5	+6.7
LZH				sP	sP	15 49 42.3	+13
LZH				pmax	pmax		
	comp=Z,30nm,1.4s						
SEY	Seymchan	84.64	353	P	P	15 49 26.6	+0.4
	comp=Z,6.2nm,1.0s,baz=158,slow=6.7,SNR=9.3						
SEY				pP	pwP	15 49 36.8	-1.2
	comp=Z,11nm,1.1s,baz=166,slow=4.5,SNR=8.7						
SEY	Seymchan	84.64	353	⇑*i*P	P	15 49 26.1	-0.1
SNAA	Sanae	87.33	183	P	P	15 49 38.3	-1.5
SNAA	Sanae	87.33	183	P	P	15 49 38.0	-1.8
SNAA				pmax	pmax		
	comp=Z,19nm,1.0s						
SNAA	Sanae	87.33	183	P	P	15 49 38.0	-1.8
SNAA				IAmb	IAmb	15 49 49.5	
	comp=Z,19nm,1.0s						
GTA	Gaotai	87.75	314	*e*P	P	15 49 43.3	+1.0
GTA				pP	pP	15 49 47.6	-1.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ULN	Ulaanbaatar	87.81	324	P	P	15 49 42.7	+0.3
ULN				pmax	pmax		
	comp=Z,14nm,0.9s						
ULN	Ulaanbaatar	87.81	324	P	P	15 49 42.7	+0.3
ULN				IAmb	IAmb	15 49 54.5	
	comp=Z,14nm,0.9s						
VNA3	Neumayer Olymp	87.95	181	P	P	15 49 40.7	-2.0
SONM	Songino Array	88.15	323	P	P	15 49 44.8	+0.8
	comp=Z,3.4nm,0.8s,baz=148,slow=4.8,SNR=22						
SONM				pP	pwP	15 49 54.4	-1.1
	comp=Z,7.4nm,0.9s,baz=145,slow=4.9,SNR=20						
SONM	Songino Array	88.15	323	P	P	15 49 43.9	-0.1
SONM				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SONM	Songino Array	88.15	323	P	P	15 49 43.9	-0.1
SONM				IAmb	IAmb	15 49 55.9	
	comp=Z,9.9nm,0.9s						
VNA2	Neumayer--Watz	88.23	181	P	P	15 49 42.4	-1.6
	baz=180,slow=4.4						
YAK	Yakutsk	88.33	343	*e*P	P	15 49 44.6	+0.3
YAK				*e*		15 49 54.6	
YAK				pmax	pmax		
	comp=Z,18nm,1.1s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.6s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
YAK	Yakutsk	88.33	343	P	P	15 49 44.1	-0.2
VNA1	Neumayer--Stat	88.52	181	P	P	15 49 43.6	-1.7
BILL	Bilibino	88.83	359	⇑*i*P	P	15 49 46.2	-0.4
BILL				*i*		15 49 56.2	
BILL				pmax	pmax		
	comp=Z,25nm,1.3s						
BILL	Bilibino	88.83	359	P	P	15 49 46.0	-0.6
BOD	Bodaibo	90.58	334	*e*P	P	15 49 54.7	-0.2
BOD				pmax	pmax		
	comp=Z,14nm,1.5s						
NVAR	Mina Array Bea	90.63	49	P	P	15 49 55.5	-0.5
	comp=Z,1.2nm,0.6s,baz=228,slow=6.9,SNR=6.8						
NVAR				pP	pwP	15 50 06.1	-1.6
	comp=Z,3.9nm,0.8s,baz=234,slow=8.2,SNR=6.3						
NV11	Mina Array Sit	90.73	49	P	P	15 49 55.5	-0.9
NV11				IAmb	IAmb	15 49 56.6	
	comp=Z,24nm,1.6s						
KVN	Kaiserville	91.05	48	P	P	15 49 56.9	-1.0
KVN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KVN	Kaiserville	91.05	48	P	P	15 49 56.9	-1.0
KVN				IAmb	IAmb	15 50 12.8	
	comp=Z,6.8nm,0.9s						
ZAK	Zakamensk	91.26	325	*e*P	P	15 50 08.2	+10
ZAK				pmax	pmax		
	comp=Z,16nm,1.4s						
COLA	College	92.01	17	⇑*e*P	P	15 50 02.2	+0.8
COLA				pmax	pmax		
	comp=Z,8.0nm,1.9s						
IL31		92.20	18	P	P	15 50 00.1	-2.2
IL31				IAmb	IAmb	15 50 17.4	
	comp=Z,24nm,1.9s						
ILAR	Eielson Array	92.20	18	P	P	15 50 00.8	-1.5
	comp=Z,0.9nm,0.7s,baz=236,slow=4.9,SNR=9.3						
ILAR	Eielson Array	92.20	18	P	P	15 50 00.6	-1.7
PRN	Pahroc Range	92.51	51	P	P	15 50 03.4	-1.2
PRN				IAmb	IAmb	15 50 20.1	
	comp=Z,5.5nm,0.9s						
EGAK	Eagle	93.90	19	P	P	15 50 08.8	-1.4
EGAK				IAmb	IAmb	15 50 10.0	
	comp=Z,7.0nm,0.9s						
A21K	Barrow	95.25	11	P	P	15 50 15.7	-0.5
A21K				IAmb	IAmb	15 50 28.0	
	comp=Z,8.7nm,0.9s						
WMQ	Urumqi	97.84	314	*e*P	Pdif	15 50 30.0	+1.2
TXAR	Lajitas Array	98.37	62	P	P	15 50 30.2	-1.3
	comp=Z,0.4nm,1.0s,baz=286,slow=4.3,SNR=2.4						
DGZ	Jazzator, Alta	100.11	319	⇓*e*P	Pdif	15 50 39.4	+0.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MKAR	Makanchi Array	102.42	315	PKKPbc	PKKPbc	16 06 48.8	-2.8
	comp=Z,3.1nm,0.8s,baz=277,slow=3.4,SNR=16						
MKAR				PKKP	PKKPdf	16 06 58.5	-0.8
	comp=Z,1.5nm,0.8s,baz=277,slow=3.7,SNR=6.4						
YKA	Yellowknife Ar	102.66	28	Pdiff	Pdif	15 50 48.6	-1.0
	comp=Z,0.4nm,0.6s,baz=254,slow=4.8,SNR=7.5						
CPUP	Villa Florida	115.36	135	PKP	PKiKP	15 55 34.0	-1.4
	comp=Z,1.8nm,0.6s,baz=179,slow=3.7,SNR=3.1						
CPUP	Villa Florida	115.36	135	*i* PKIKP	PKiKP	15 55 34.5	-0.9
CPUP	Villa Florida	115.36	135		PKiKP	15 55 34.5	-0.9
ARU	Arti	118.19	324	*i* PKIKP	PKPdf	15 55 39.8	0.0
ARU						15 56 57.3	
ARU						16 02 51.7	
ARU				SS	SS	16 13 16.0	+6.5
KIRV	Kirov	122.73	327	⇑*i*PKIKP	PKPdf	15 55 48.7	+0.2
ARCES	ARCESS Array B	126.58	345	PKP	PKPdf	15 55 55.2	-0.4
	comp=Z,6.5nm,0.5s,baz=77,slow=2.0,SNR=54						
ARCES				pPKP	sPKPdf	15 56 06.0	+1.4
	comp=Z,7.9nm,0.6s,baz=70,slow=1.3,SNR=8.0						
KLMR	Klimovskoe	126.72	332	*e*PKIKP	PKPdf	15 55 54.5	-1.5
KLMR				pmax	pmax		
	comp=Z,25nm,1.4s						
KLMR	Klimovskoe	126.72	332	*e*PKPdf	PKPdf	15 55 54.6	-1.5
KLMR				AMP		15 55 56.3	
	comp=Z,25nm,1.4s						
BDFB	Brasilia	128.99	133	PKP	PKPdf	15 56 01.2	-0.8
	comp=Z,12nm,0.9s,baz=116,slow=3.2,SNR=10						
BDFB				pPKP	sPKPdf	15 56 12.1	+1.3
	comp=Z,8.2nm,0.9s,baz=34,slow=2.3,SNR=4.2						

BDFB	**Brasilia**	**128.99**	**133**	PKPdf	**PKPdf**	**15 56 00.8**	**-1.2**
HUMP	**Col San Antoni**	**129.07**	**83**	PKPdf	**PKPdf**	**15 56 00.5**	**-1.3**
KIV	**Kislovodsk**	**129.80**	**310**	*i* PKIKP	**PKPdf**	**15 56 02.0**	**-0.6**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FINES	**FINESS Array B**	**131.91**	**337**	PKP	**PKPdf**	**15 56 05.1**	**-0.8**
	comp=Z,3.0nm,0.8s,baz=17,slow=2.0,SNR=4.3						
FINES				pPKP	**sPKPdf**	**15 56 16.6**	**+1.8**
	comp=Z,3.7nm,0.9s,baz=8.5,slow=3.9,SNR=2.3						
FINES	**FINESS Array B**	**131.91**	**337**	*c i*PKIKP	**PKiKP**	**15 56 07.3**	**+0.3**
FINES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
FINES	**FINESS Array B**	**131.91**	**337**		**PKPdf**	**15 56 06.2**	**+0.3**
AKASG	**Malin Array Be**	**136.43**	**323**	PKP	**PKPdf**	**15 56 14.1**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=68,slow=2.5,SNR=5.2						
AKASG				pPKP	**sPKPdf**	**15 56 24.6**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=53,slow=2.2,SNR=3.9						
AKASG	**Malin Array Be**	**136.43**	**323**	*c i*PKIKP	**PKPdf**	**15 56 13.6**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**136.43**	**323**	PKPdf	**PKPdf**	**15 56 13.6**	**-1.1**
NB2	**NORSAR Subarra**	**136.95**	**344**	PKPdf	**PKPdf**	**15 56 16.5**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**136.95**	**344**	PKP	**PKPdf**	**15 56 14.7**	**-0.8**
	comp=Z,4.4nm,1.0s,baz=36,slow=2.0,SNR=7.2						
NOA				pPKP	**sPKPdf**	**15 56 25.6**	**+1.2**
	comp=Z,2.6nm,0.7s,baz=32,slow=2.0,SNR=5.2						
BURAR	**Bucovina Array**	**140.21**	**321**	⇑P	**PKPdf**	**15 56 21.2**	**-0.8**
KOLS	**Kolonicke sedl**	**141.21**	**324**	*e*PKIKP	**PKPdf**	**15 56 21.2**	**-2.4**
KOLS	**Kolonicke sedl**	**141.21**	**324**	*e*PKP	**PKPdf**	**15 56 21.2**	**-2.4**
GZR	**Gura Zlata**	**142.76**	**319**	⇑P	**PKPdf**	**15 56 27.0**	**+0.4**
GZR	**Gura Zlata**	**142.76**	**319**	⇑PKIKP	**PKPdf**	**15 56 27.0**	**+0.4**
SIRR	**Siria**	**142.99**	**321**	⇑P	**PKPdf**	**15 56 23.9**	**-3.0**
OSTC	**Ostas**	**143.28**	**330**	*e*PKP	PKPbc	15 56 24.6	+0.3
OSTC				*e*x	x	15 56 37.8	
BZS	**Buzias**	**143.36**	**320**	⇑P	**PKiKP**	**15 56 35.1**	**+4.3**
BZS	**Buzias**	**143.36**	**320**	⇑PKIKP	**PKiKP**	**15 56 35.1**	**+4.3**
DPC	**Dobruska-Polom**	**143.37**	**330**	*e*PKP	PKPbc	15 56 25.3	+0.7
DPC	**Dobruska-Polom**	**143.37**	**330**	*e*PKIKP	PKPbc	15 56 25.3	+0.7
UPC	**Upice**	**143.41**	**330**	*e*PKP	PKPbc	15 56 24.9	+0.2
UPC	**Upice**	**143.41**	**330**	*e*PKIKP	PKPbc	15 56 24.9	+0.2
VTS	**Vitosha**	**143.74**	**314**	⇓P	PKPbc	15 56 27.1	+1.0
VTS	**Vitosha**	**143.74**	**314**	PKIKP	PKPbc	15 56 27.4	+1.3
VTS	**Vitosha**	**143.74**	**314**	PKPdf	PKPbc	15 56 27.4	+1.4
ZAPS	**Zavoj**	**143.85**	**316**	*e*P	**PKPdf**	**15 56 28.4**	**-0.1**
BRG	**Berggiesshubel**	**144.09**	**332**	*e*PKPbc	PKPbc	15 56 27.0	+0.4
	baz=39,slow=3.0						
FLTG	**Flechtingen**	**144.09**	**336**	*e*PKPbc	PKPbc	15 56 26.8	+0.3
	baz=39,slow=3.0						
CLL	**Collm**	**144.17**	**333**	⇓*i*PKIKP	**PKPab**	**15 56 26.7**	**+0.3**
CLL				*i*		15 56 37.4	
CLL				pmax	pmax		
	comp=Z,21nm,1.0s						
CLL	**Collm**	**144.17**	**333**	⇓*i*PKPdf	**PKPab**	**15 56 26.7**	**+0.3**
	comp=Z,21nm,1.0s						
CLL				⇓*i*		15 56 37.4	
	comp=Z,17nm,1.0s						
CLL	**Collm**	**144.17**	**333**	*e*PKPbc	PKPbc	15 56 27.0	+0.2
	baz=39,slow=3.0						
CLL	**Collm**	**144.17**	**333**	PKPdf	PKPbc	15 56 27.2	+0.4
MODS	**Modra-Piesok**	**144.20**	**327**	*e*PKIKP	PKPbc	15 56 27.2	+0.1
MODS	**Modra-Piesok**	**144.20**	**327**	*e*PKP	PKPbc	15 56 27.2	+0.1
BOVS	**Bovan**	**144.28**	**317**	⇓P	**PKPab**	**15 56 27.2**	**0.0**
BOVS	**Bovan**	**144.28**	**317**	*e*P	**PKPab**	**15 56 27.1**	**0.0**
FBE	**Freiberg**	**144.31**	**333**	*e*PKPbc	PKPbc	15 56 27.8	+0.5
	baz=39,slow=3.0						
NRDL	**Niedersach Rie**	**144.38**	**337**	*e*PKPbc	PKPbc	15 56 28.1	+0.7
	baz=39,slow=3.0						
PRU	**Pruhonice**	**144.45**	**331**	*e*PKP	**PKPab**	**15 56 27.8**	**+0.3**
PRU				*e*x	x	15 56 38.6	
PRU	**Pruhonice**	**144.45**	**331**	*e*PKIKP	**PKPab**	**15 56 27.8**	**+0.3**
PRU				*e*		15 56 38.6	
PRVS	**Prvonek**	**144.56**	**315**	*e*P	PKPbc	15 56 28.8	+0.3
BARS	**Barje**	**144.59**	**316**	*e*P	**PKPab**	**15 56 28.6**	**+0.3**
FRGS	**Fruska Gora**	**144.68**	**320**	⇓P	**PKPab**	**15 56 28.7**	**+0.1**
FRGS	**Fruska Gora**	**144.68**	**320**	*e*P	**PKPab**	**15 56 28.6**	**0.0**
NEUB	**Neuenburg**	**144.75**	**334**	*e*PKPbc	PKPbc	15 56 29.1	+0.4
	baz=39,slow=3.0						
NEUB				*e*pPKPbc	sPKPdf	15 56 40.1	+1.4
MORH	**Mrgy, Hungar**	**144.77**	**323**	⇑P	PKPbc	15 56 29.5	+0.6
GRUS	**Gruza**	**144.78**	**318**	*e*P	PKPbc	15 56 29.4	+0.3
CLZ	**Clausthal**	**144.80**	**336**	*e*PKPbc	PKPbc	15 56 29.3	+0.4
	baz=39,slow=3.0						
CLZ				*e*pPKPbc	sPKPdf	15 56 40.2	+1.4
TRUS	**Trudelj**	**144.81**	**319**	*e*P	**PKPab**	**15 56 28.4**	**-0.7**
SELS	**Selova**	**144.85**	**317**	*e*P	**PKPab**	**15 56 29.5**	**+0.2**
TANN	**Tannenbergstha**	**145.06**	**333**	*e*PKPbc	**PKPdf**	**15 56 30.4**	**0.0**
	baz=39,slow=3.0						
TANN				*e*pPKPbc	**sPKPdf**	**15 56 40.9**	**+1.6**
WERD	**Werda**	**145.10**	**333**	*e*PKPbc	**PKPab**	**15 56 30.3**	**+0.4**
	baz=39,slow=3.0						
WERD				*e*pPKPbc	**sPKPdf**	**15 56 41.3**	**+2.0**
DIVS	**Divibare**	**145.13**	**319**	*e*P	**PKPbc**	**15 56 30.5**	**+0.2**
GUNZ	**Gunzen**	**145.16**	**333**	*e*PKPbc	**PKPdf**	**15 56 30.7**	**+0.2**
	baz=39,slow=3.0						
GUNZ				*e*pPKPbc	**sPKPdf**	**15 56 41.4**	**+2.0**
GTTG	**Gottingen**	**145.19**	**336**	*e*PKPbc	**PKPdf**	**15 56 30.7**	**+0.2**
	baz=39,slow=3.0						
GTTG				*e*pPKPbc	**sPKPdf**	**15 56 41.5**	**+2.1**
ESK	**Eskdalemuir**	**145.19**	**352**	PKIKP	**PKPbc**	**15 56 29.3**	**-0.7**
ESK	**Eskdalemuir**	**145.19**	**352**		**PKPbc**	**15 56 29.3**	**-0.7**
WERN	**Wernitzgruen**	**145.19**	**333**	*e*PKPbc	**PKPdf**	**15 56 31.0**	**+0.4**
	baz=39,slow=3.0						
WERN				*e*pPKPbc	**sPKPdf**	**15 56 41.5**	**+1.9**
NKC	**Novy Kostel**	**145.20**	**333**	*e*PKP	**PKPdf**	**15 56 31.0**	**+0.4**
NKC				*e*x	x	15 56 41.3	
NKC	**Novy Kostel**	**145.20**	**333**	*e*PKIKP	**PKPdf**	**15 56 31.0**	**+0.4**
NKC				*e*		15 56 41.3	
CONA	**Conrad Observa**	**145.21**	**327**	*i* P	**PKPdf**	**15 56 31.3**	**+0.5**
	comp=Z,14nm,0.9s,SNR=7.4						
CONA				*e*P	**sPKPdf**	**15 56 41.2**	**+1.5**
	comp=Z,13nm,0.9s						
MOX	**Moxa**	**145.24**	**334**	*e*PKPbc	**PKPdf**	**15 56 31.0**	**+0.3**
	baz=39,slow=3.0						
IVAS	**Ivanjica**	**145.29**	**318**	*e*P	**PKPbc**	**15 56 30.8**	**0.0**
IBBN	**Ibbenburen**	**145.35**	**339**	*e*PKPbc	**PKPdf**	**15 56 31.5**	**+0.7**
	baz=39,slow=3.0						
CKRC	**Cesky Krumlov**	**145.38**	**329**	*e*PKP	**PKPab**	**15 56 32.3**	**+1.3**
CKRC				*e*x	x	15 56 42.5	
KHC	**Kasperske Hory**	**145.50**	**330**	*e*PKP	**PKPdf**	**15 56 30.9**	**-0.3**
KHC				*e*x	x	15 56 41.8	
KHC	**Kasperske Hory**	**145.50**	**330**	*e*PKIKP	**PKPdf**	**15 56 30.9**	**-0.3**
KHC				*e*		15 56 41.8	
KHC	**Kasperske Hory**	**145.50**	**330**		**PKPab**	**15 56 31.7**	**+0.2**
MANZ	**Manzenberg**	**145.53**	**333**	*e*PKPbc	**PKPbc**	**15 56 31.5**	**+0.2**
	baz=39,slow=3.0						
SJES	**Sjenica**	**145.56**	**317**	*e*P	**PKPab**	**15 56 32.5**	**+0.5**
BBLS	**Lazići**	**145.61**	**319**	*e*P	**PKPab**	**15 56 32.4**	**+0.3**
GEC2	**GERESS Array S**	**145.65**	**330**	*e*PKPbc	**PKPab**	**15 56 32.3**	**+0.1**
	baz=39,slow=3.0						
GERES	**GERESS Array B**	**145.65**	**330**	PKPbc	**PKPdf**	**15 56 31.1**	**-0.4**
	comp=Z,8.3nm,0.7s,baz=43,slow=3.2,SNR=88						
GERES				pPKPbc	sPKPbc	15 56 42.0	+1.3
	comp=Z,12nm,0.7s,baz=49,slow=3.2,SNR=21						
GERES	**GERESS Array B**	**145.65**	**330**		**PKPdf**	**15 56 31.4**	**-0.1**
ROTZ	**Rotzenmuhle**	**145.65**	**332**	*e*PKPbc	**PKPab**	**15 56 32.1**	**+0.1**
	baz=39,slow=3.0						
WET	**Wettzell**	**145.81**	**331**	*e*PKPbc	**PKPab**	**15 56 32.8**	**+0.1**
	baz=39,slow=3.0						
ARSA	**Arzberg**	**145.83**	**326**	*i* P	**PKPab**	**15 56 33.6**	**+0.8**
	comp=Z,16nm,1.9s,SNR=5.7						
ARSA				*e*P	sPKPab	15 56 43.2	+1.6
	comp=Z,24nm,1.6s						
MOA	**Molln**	**146.07**	**328**	*e*P	**PKPab**	**15 56 34.6**	**+0.9**
	comp=Z,17nm,1.4s						
MOA				*e*P	sPKPab	15 56 43.7	+1.2
	comp=Z,27nm,1.4s						
PDG	**Podgorica**	**146.43**	**317**		**PKPdf**	**15 56 33.4**	**+0.5**
SOKA	**Soboth**	**146.46**	**326**	*e*P	**PKPbc**	**15 56 34.1**	**-0.2**
	comp=Z,4.6nm,0.8s						
SOKA				*e*P	sPKPab	15 56 44.4	+0.3
	comp=Z,8.3nm,0.9s						
OBKA	**Obir**	**146.82**	**326**	*e*P	**PKPbc**	**15 56 35.4**	**0.0**
	comp=Z,2.1nm,0.8s						
OBKA				*e*P	sPKPab	15 56 44.4	-1.1
	comp=Z,10nm,1.2s						
TNS	**Taunus Mts**	**146.83**	**336**	*e*PKPbc	**PKPbc**	**15 56 35.6**	**+0.4**
	baz=39,slow=3.0						
RJOB	**Jochberg**	**146.86**	**329**	*e*PKPbc	**PKPab**	**15 56 36.4**	**-0.3**
	baz=39,slow=3.0						
KBA	**Koelnbreinsper**	**147.05**	**328**	*e*P	**PKPbc**	**15 56 37.0**	**+0.9**
	comp=Z,12nm,1.2s						
KBA				*e*P	**sPKPab**	**15 56 45.6**	**-0.9**
	comp=Z,9.3nm,0.8s						
AHRW	**Bad Neuenahr-A**	**147.07**	**338**	*e*PKPbc	**PKPbc**	**15 56 36.7**	**+0.9**
	baz=39,slow=3.0						
LJU	**Ljubljana**	**147.14**	**325**	*i* PKPdf	**PKPdf**	**15 56 34.0**	**-0.1**
LJU				*i* PKPbc	**PKPbc**	**15 56 36.2**	**0.0**
LJU				*e*		15 56 46.6	
MYKA	**Terra Mystica**	**147.21**	**327**	*e*P	**PKPbc**	**15 56 35.7**	**-0.7**
	comp=Z,4.0nm,0.6s						
MYKA				*e*P	**sPKPab**	**15 56 46.2**	**-0.8**
	comp=Z,6.2nm,0.8s						
CRNS	**Crni Vrh**	**147.25**	**326**	*i* PKPbc	**PKPbc**	**15 56 36.2**	**-0.3**
GBRS	**Gornja Briga**	**147.31**	**325**	*i* PKPbc	**PKPbc**	**15 56 36.9**	**+0.1**
BTNL	**Ternell**	**147.35**	**339**	*d*PKP	**PKPbc**	**15 56 37.0**	**+0.3**
BTNL				*d*x	x	15 56 47.1	
MEM	**Membach**	**147.38**	**339**	*d*PKP	**PKPbc**	**15 56 36.6**	**-0.1**
MEM				*d*x	x	15 56 47.0	
BSTI	**Sart Tilman**	**147.54**	**339**	*d*PKP	**PKPbc**	**15 56 36.9**	**-0.2**
BSTI				*d*x	x	15 56 48.0	
BHOU	**Houvegnez**	**147.59**	**339**	*d*PKPab	**PKPbc**	**15 56 37.9**	**+0.6**
BHOU				*d*x	x	15 56 48.4	
ZOU	**Zoufplan**	**147.59**	**328**	PKPbc	**PKPbc**	**15 56 37.6**	**-0.1**
STU	**Stuttgart**	**147.69**	**334**	PKP2	**PKPbc**	**15 56 37.8**	**+0.2**
STU	**Stuttgart**	**147.69**	**334**	*e*PKPbc	**PKPbc**	**15 56 38.3**	**+0.7**
	baz=39,slow=3.0						
STU	**Stuttgart**	**147.69**	**334**	PKPbc	**PKPbc**	**15 56 37.8**	**+0.2**
ABTA	**Abfaltersbach**	**147.69**	**328**	*e*P	**PKPdf**	**15 56 34.0**	**-1.0**
	comp=Z,9.2nm,1.2s						
ABTA				*e*P	**sPKPab**	**15 56 47.4**	**-1.5**
	comp=Z,7.9nm,0.7s						
WATA	**Walderalm**	**147.72**	**330**	*e*P	**PKPbc**	**15 56 38.4**	**+0.4**
	comp=Z,15nm,1.2s						
WATA				*e*P	**sPKPab**	**15 56 48.3**	**-0.8**
	comp=Z,21nm,1.0s						
WTTA	**Wattenberg**	**147.75**	**330**	*i* P	**PKPbc**	**15 56 38.3**	**+0.2**
	comp=Z,26nm,1.4s,SNR=5.5						
WTTA				*e*P	**sPKPab**	**15 56 48.6**	**-0.7**
	comp=Z,31nm,1.4s						
BCLA	**Clavier**	**147.77**	**340**	*d*PKPdf	**PKPdf**	**15 56 34.0**	**-0.9**
BCLA				*d*PKP	**PKPbc**	**15 56 37.8**	**0.0**
BCLA				*d*x	x	15 56 47.9	
BGES	**Gesves**	**147.87**	**340**	*d*PKP	**PKPbc**	**15 56 37.8**	**-0.2**
STAL	**STALIGIAL**	**147.93**	**327**	PKPdf	**PKPdf**	**15 56 33.9**	**-1.5**
MOTA	**Moosalm**	**147.94**	**330**	*i* P	**PKPbc**	**15 56 38.4**	**-0.1**
	comp=Z,20nm,1.2s,SNR=5.5						
MOTA				*e*P	**sPKPab**	**15 56 47.8**	**-2.2**
	comp=Z,20nm,1.0s						
SQTA	**Sankt Quirin**	**147.98**	**330**	*i* P	**PKPbc**	**15 56 38.6**	**0.0**
	comp=Z,7.8nm,0.7s,SNR=6.3						
SQTA				*e*P	**sPKPab**	**15 56 48.6**	**-1.4**
	comp=Z,12nm,0.6s						
RETA	**Reutte**	**147.99**	**331**	*e*P	**PKPbc**	**15 56 38.8**	**+0.3**
	comp=Z,5.5nm,0.8s						
RETA				*e*P	**sPKPab**	**15 56 49.0**	**-1.1**
	comp=Z,14nm,1.1s						
SNF	**Seneffe**	**148.02**	**341**	*d*PKP	**PKPbc**	**15 56 38.3**	**-0.1**
SNF				*d*x	x	15 56 48.6	
RCHB	**Rochefort**	**148.02**	**339**	*d*PKP	**PKPbc**	**15 56 38.3**	**-0.1**
RCHB				*d*x	x	15 56 49.0	
BMRD	**Maredsous**	**148.05**	**340**	*d*PKP	**PKPbc**	**15 56 38.1**	**-0.4**
BMRD				*d*x	x	15 56 48.7	
WLF	**Walferdange**	**148.13**	**338**	*d*PKP	**PKPbc**	**15 56 39.8**	**+1.1**
WLF				*d*x	x	15 56 49.8	
WLF	**Walferdange**	**148.13**	**338**	PKP2	**PKPbc**	**15 56 39.8**	**+1.1**
WLF	**Walferdange**	**148.13**	**338**	*e*PKPbc	**PKPbc**	**15 56 39.8**	**+1.1**
	baz=39,slow=3.0						
WLF				*e*pPKPbc	**sPKPab**	**15 56 50.5**	**0.0**
WLF	**Walferdange**	**148.13**	**338**	PKPbc	**PKPbc**	**15 56 39.8**	**+1.1**
UBR	**Ueberruh**	**148.14**	**332**	*e*PKPbc	**PKPbc**	**15 56 39.3**	**+0.4**
	baz=39,slow=3.0						
UBR				*e*pPKPbc	**sPKPab**	**15 56 49.7**	**-1.0**
DOU	**Dourbes**	**148.28**	**340**	*d*PKP	**PKPbc**	**15 56 38.2**	**-0.9**
DOU				*d*x	x	15 56 49.8	
FETA	**Feichten**	**148.35**	**330**	*i* P	**PKPbc**	**15 56 39.7**	**+0.1**
	comp=Z,22nm,1.2s,SNR=6.8						
FETA				*e*P	**pPKPbc**	**15 56 46.4**	**+0.2**
	comp=Z,23nm,1.1s						
BFO	**Black Forest**	**148.39**	**334**	PKIKP	**PKPdf**	**15 56 36.6**	**+0.5**
BFO	**Black Forest**	**148.39**	**334**	*e*PKPbc	**PKPbc**	**15 56 39.9**	**+0.4**
	baz=39,slow=3.0						
BFO				*e*pPKPbc	**sPKPab**	**15 56 50.3**	**-1.3**
BFO	**Black Forest**	**148.39**	**334**	PKPdf	**PKPdf**	**15 56 36.6**	**+0.5**
DAVA	**Damuels**	**148.54**	**331**	*e*P	**PKPbc**	**15 56 39.8**	**-0.3**
	comp=Z,16nm,1.4s						
CTI	**Castel Tesino**	**148.61**	**328**	PKP2	**PKPbc**	**15 56 39.1**	**-1.2**
CTI	**Castel Tesino**	**148.61**	**328**		**PKPbc**	**15 56 39.1**	**-1.2**
ECH	**Echery**	**148.95**	**335**	PKP2	**PKPbc**	**15 56 40.4**	**-0.6**
ECH	**Echery**	**148.95**	**335**	PKPbc	**PKPbc**	**15 56 40.4**	**-0.6**
SGRT	**San Giovanni R**	**149.01**	**318**	PKPbc	**PKPbc**	**15 56 40.4**	**-1.1**
SALO	**Salr**	**149.47**	**329**	PKPbc	**PKPbc**	**15 56 41.4**	**-1.0**
TIP	**Timpagrande**	**149.67**	**313**	⇓P	**PKiKP**	**15 56 44.4**	**+0.3**
SSB	**Saint Sauveur**	**152.39**	**335**	PKIKP	**PKPbc**	**15 56 48.9**	**-0.3**
SSB	**Saint Sauveur**	**152.39**	**335**	PKPbc	**PKPbc**	**15 56 48.9**	**-0.3**
ESDC	**Sonseca Array**	**160.29**	**342**	PKPab	**PKPab**	**15 57 33.5**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=25,slow=4.3,SNR=9.2						
ESDC	**Sonseca Array**	**160.29**	**342**		**PKPab**	**15 57 33.7**	**+0.4**
LIC	**Lamto**	**163.92**	**205**	*e*PKP2	**PKPab**	**15 57 49.4**	**-0.4**
	comp=Z,28nm,1.0s						
KIC	**Kosan Boka**	**163.94**	**206**	*e*PKP2	**PKPab**	**15 57 49.4**	**-0.4**
	comp=Z,11nm,0.9s						
DBIC	**Dimbokro**	**164.26**	**206**	PKPab	**PKPab**	**15 57 51.1**	**-0.1**
	comp=Z,3.5nm,0.9s,baz=139,slow=3.0,SNR=6.4						
TIC	**Toumodi**	**164.31**	**205**	*e*PKP2	**PKPab**	**15 57 51.0**	**-0.5**
TORD	**Torodi Ar. Bea**	**165.01**	**241**	PKPab	**PKPab**	**15 57 54.0**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=119,slow=2.5,SNR=4.8						

NEIC ***23*** *15:44:59.3±2.0, 20°.34S±0°.04×68°.94W±0°.08, h107km±5km, mb4.4/15, ML4.5(GUC) Error ellipse: s-maj=11.0km s-min=5.6km az=87.0*

VAO ***23*** *15:44:59.4±0.5, 20°.28S×68°.84W, h107km, mb4.6*

GUC ***23*** *15:45:00.1±0.8, 20°.36S×68°.95W, h106km±4km, ML4.5*

IDC ***23*** *15:45:00.6±1.7, 20°.35S×68°.64W, h116km±15km, mb4.1/6, mb1 4.1/10, mb1mx3.8/35, mbtmp4.5/10, Error ellipse: s-maj=26.7km s-min=15.9km az=110.0*

ISC 23 15:44:58.9±0.6**, 20°.35S**±0°.04×**68°.94W**±0°.06**, h108**km±6km**, n110,** σ1s09/128**, mb4.4**/10**, 6C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.29**	**316**	⇓*i*P	**Pn**	**15 45 15.6**	**+0.7**
PB08				*i* S	**Sn**	**15 45 27.5**	**+0.7**
PB08				IAML		15 45 28.9	
	comp=E,22μm,0.2s						
PB08	**IPOC Station P**	**0.29**	**316**		**Pn**	**15 45 15.2**	**+0.4**
PB08				Sn	**Sn**	**15 45 27.4**	**+0.6**
PB01	**IPOC Station P**	**0.86**	**216**	⇑*i*P	**Pn**	**15 45 19.2**	**+0.6**
PB01				*e*S	**Sn**	**15 45 33.9**	**+0.4**
PB01				IAML		15 45 35.9	
	comp=E,16μm,0.2s						
PB01	**IPOC Station P**	**0.86**	**216**	Pn	**Pn**	**15 45 19.2**	**+0.6**
PB01				Sn	**Sn**	**15 45 34.1**	**+0.7**
PB11	**IPOC Station P**	**0.89**	**311**	⇓*i*P	**Pn**	**15 45 19.6**	**+0.6**
PB11				*i* S	**Sn**	**15 45 34.7**	**+0.6**
PB11				IAML		15 45 36.1	
	comp=N,28μm,0.2s						
PB11	**IPOC Station P**	**0.89**	**311**	Pn	**Pn**	**15 45 19.4**	**+0.5**
PB11				Sn	**Sn**	**15 45 34.4**	**+0.3**
TA02	**Huaiquique**	**1.12**	**274**	⇑*i*P	**Pn**	**15 45 21.7**	**+0.5**
TA02				*i* S	**Sn**	**15 45 38.2**	**+0.1**
TA02				IAML		15 45 40.2	
	comp=N,14μm,0.5s						
TA02	**Huaiquique**	**1.12**	**274**		**Pn**	**15 45 21.6**	**+0.5**
TA02				Sn	**Sn**	**15 45 38.1**	**+0.1**
PB09	**IPOC Station P**	**1.47**	**191**	⇑*i*P	**Pn**	**15 45 26.6**	**+1.2**
PB09				*e*S	**Sn**	**15 45 46.6**	**+1.2**
PB09				IAML		15 45 48.3	
	comp=N,5μm,0.5s						
PB09	**IPOC Station P**	**1.47**	**191**		**Pn**	**15 45 26.5**	**+1.1**
PB09				Sn	**Sn**	**15 45 47.0**	**+1.5**
PB07	**IPOC Station P**	**1.63**	**213**	⇑*i*P	**Pn**	**15 45 27.8**	**+0.4**
PB07				*i* S	**Sn**	**15 45 48.9**	**-0.1**
PB07				IAML		15 45 53.6	
	comp=E,5μm,0.4s						
PB07	**IPOC Station P**	**1.63**	**213**		**Pn**	**15 45 27.7**	**+0.4**
PB03	**IPOC Station P**	**1.85**	**204**	⇑*i*P	**Pn**	**15 45 30.5**	**+0.5**
PB03				*i* S	**Sn**	**15 45 53.6**	**-0.3**
PB03				IAML		15 45 54.7	
	comp=E,3μm,0.1s						
LVC	**Limon Verde**	**2.25**	**179**	P	**Pn**	**15 45 37.1**	**+1.8**
	comp=E,74nm,0.3s,baz=4.6,slow=11,SNR=218						
LVC				S	**Sn**	**15 46 04.7**	**+1.5**
	comp=E,306nm,0.3s,baz=228,slow=21,SNR=48						
LVC	**Limon Verde**	**2.25**	**179**	⇑*e*P	**Pn**	**15 45 36.9**	**+1.6**
LVC				*i* S	**Sn**	**15 46 04.9**	**+1.7**
LVC	**Limon Verde**	**2.25**	**179**	*e*P	**Pn**	**15 45 37.1**	**+1.8**
LVC	**Limon Verde**	**2.25**	**179**	Pn	**Pn**	**15 45 36.8**	**+1.5**
PB04	**IPOC Station P**	**2.27**	**209**	*e*P	**Pn**	**15 45 35.6**	**+0.2**
PB04				*e*S	**Sn**	**15 46 02.1**	**-1.3**
PB04				IAML		15 46 15.8	
	comp=E,2μm,0.7s						
PB04	**IPOC Station P**	**2.27**	**209**	Pn	**Pn**	**15 45 35.6**	**+0.2**
PB06	**IPOC Station P**	**2.42**	**194**	*e*P	**Pn**	**15 45 37.5**	**+0.2**
PB06				*i* S	**Sn**	**15 46 06.1**	**-0.7**
PB06				IAML		15 46 08.4	
	comp=E,4μm,0.1s						
PB06	**IPOC Station P**	**2.42**	**194**		**Pn**	**15 45 37.6**	**+0.2**
PB05	**IPOC Station P**	**2.75**	**205**	*e*P	**Pn**	**15 45 41.5**	**-0.2**
PB05				*e*S	**Sn**	**15 46 11.3**	**-3.3**
PB05				IAML		15 46 14.2	
	comp=E,1μm,0.5s						
PB15	**IPOC Station P**	**2.89**	**190**	*e*P	**Pn**	**15 45 44.3**	**+0.8**
PB15				*e*S	**Sn**	**15 46 17.2**	**-0.7**
PB15	**IPOC Station P**	**2.89**	**190**	Pn	**Pn**	**15 45 44.8**	**+1.2**
LPAZ	**La Paz**	**4.11**	**11**	P	**Pn**	**15 46 03.2**	**+3.0**
	comp=E,8.1nm,0.3s,baz=146,slow=2.3,SNR=74						
LPAZ	**La Paz**	**4.11**	**11**	Pn	**Pn**	**15 46 03.1**	**+2.8**
PB14	**IPOC Station P**	**4.47**	**197**	Pn	**Pn**	**15 46 02.8**	**-1.9**
AC02	**Maricunga**	**6.46**	**181**	Pn	**Pn**	**15 46 31.1**	**-0.7**
GO03	**Copiap**	**7.31**	**189**	Pn	**Pn**	**15 46 40.5**	**-2.5**
SIV	**San Ignacio**	**8.64**	**61**	P	**Pn**	**15 46 59.3**	**-1.9**
	comp=E,6.3nm,0.3s,baz=248,slow=11,SNR=78						
PTLB	**Pontes e Lacer**	**10.53**	**64**	*e*P	**Pn**	**15 47 25.5**	**-1.2**
PTLB	**Pontes e Lacer**	**10.53**	**64**	Pn	**Pn**	**15 47 24.4**	**-2.3**
CO06	**Fray Jorge**	**10.56**	**193**	Pn	**Pn**	**15 47 25.2**	**-1.9**
ETMB	**Extrema**	**10.80**	**15**	*e*P	**Pn**	**15 47 29.8**	**-0.5**
ETMB	**Extrema**	**10.80**	**15**	Pn	**Pn**	**15 47 28.5**	**-1.9**
VILB	**Vilhena**	**11.14**	**50**	*e*P	**Pn**	**15 47 34.4**	**-0.7**
VILB	**Vilhena**	**11.14**	**50**	Pn	**Pn**	**15 47 34.0**	**-1.0**
CPUP	**Villa Florida**	**12.21**	**121**	P	**Pn**	**15 47 47.5**	**-1.6**
	comp=E,0.3nm,0.3s,baz=308,slow=13,SNR=9.3						
CPUP	**Villa Florida**	**12.21**	**121**	*e*P	**Pn**	**15 47 48.0**	**-1.1**
CPUP	**Villa Florida**	**12.21**	**121**	Pn	**Pn**	**15 47 48.2**	**-1.0**
MT02	**Curacav**	**13.01**	**188**	Pn	**Pn**	**15 47 59.1**	**-0.4**
SALV	**Santo Antonio**	**13.35**	**73**	*e*P	**Pn**	**15 48 03.3**	**-0.8**
MT09	**Talagante**	**13.50**	**187**	Pn	**Pn**	**15 48 05.6**	**-0.5**
PP1B	**Ponte de Pedra**	**13.58**	**81**	*e*P	**Pn**	**15 48 07.0**	**-0.1**
BO01	**Tunca**	**14.12**	**187**	Pn	**Pn**	**15 48 14.0**	**+0.1**
BO02	**Sierra Bellavi**	**14.48**	**186**		**Pn**	**15 48 18.9**	**+0.2**
PDRB	**Porto dos Gac**	**14.60**	**55**	*e*P	**Pn**	**15 48 20.3**	**0.0**
ML02	**Panimavida**	**15.51**	**188**	Pn	**Pn**	**15 48 30.3**	**-1.3**
ITAB	**Concordia**	**16.83**	**117**		**P**	**15 48 48.8**	**+0.5**
ITAB				IAmb	IAmb	15 48 49.5	
	comp=Z,13nm,0.7s						
ARAG	**Araguaiana, MT**	**16.93**	**77**	*e*P	**Pn**	**15 48 49.5**	**+0.3**
CPSB	**Cacapava Do Su**	**17.20**	**129**	*e*P	**Pn**	**15 48 52.6**	**+0.1**
ITRB	**Iturama**	**17.48**	**91**	*e*P	**Pn**	**15 48 56.2**	**+0.3**
LC01	**Cunco**	**18.66**	**187**		**P**	**15 49 09.1**	**+0.8**
NPGB	**Novo Progresso**	**18.66**	**47**	*e*P	**P**	**15 49 07.3**	**-1.2**
SNDB	**Serra Nova Dou**	**18.87**	**67**	*e*P	**P**	**15 49 10.2**	**-0.6**
MACA	**Manacapuru-AM**	**18.89**	**26**	*e*P	**P**	**15 49 10.7**	**-0.3**
MACA	**Manacapuru-AM**	**18.89**	**26**	P	**P**	**15 49 10.7**	**-0.3**
BB19B	**Bebedouro**	**19.11**	**96**	*e*P	**P**	**15 49 13.4**	**-0.1**
IPMB	**Ipameri, GO**	**19.72**	**87**	*e*P	**P**	**15 49 19.3**	**-0.9**
RCLB	**Rio Claro- Sao**	**20.04**	**100**	*e*P	**P**	**15 49 22.8**	**-0.7**
PLCA	**Paso Flores**	**20.36**	**184**	P	**P**	**15 49 28.1**	**+1.2**
	comp=Z,14nm,0.9s,baz=5.3,slow=12,SNR=14						
PLCA	**Paso Flores**	**20.36**	**184**	*e*P	**P**	**15 49 28.3**	**+1.4**
PLCA	**Paso Flores**	**20.36**	**184**	P	**P**	**15 49 27.9**	**+1.0**
PLCA				IAmb	IAmb	15 49 31.9	
	comp=Z,20nm,1.0s						
ITTB	**Itaituba**	**20.44**	**41**	*e*P	**P**	**15 49 26.5**	**-1.2**
BDFB	**Brasilia**	**20.44**	**80**	P	**P**	**15 49 26.8**	**-1.1**
	comp=Z,8.1nm,0.4s,baz=256,slow=12,SNR=10						
BDFB	**Brasilia**	**20.44**	**80**	P	**P**	**15 49 27.7**	**-0.2**
VAO	**Valinhos**	**20.59**	**101**	*e*P	**P**	**15 49 28.4**	**-1.1**
LL04	**Puerto Octay**	**20.71**	**187**	P	**P**	**15 49 30.9**	**+0.5**
LL04				IAmb	IAmb	15 49 35.7	
	comp=Z,17nm,0.8s						
PTGA	**Pitinga**	**21.38**	**25**	P	**P**	**15 49 35.8**	**-2.1**
	comp=Z,8.4nm,0.3s,baz=195,slow=18,SNR=20						
PEXB	**Peixe**	**21.43**	**71**	*e*P	**P**	**15 49 37.3**	**-1.1**
PARB	**Paraibuna**	**21.84**	**102**	*e*P	**P**	**15 49 41.6**	**-1.2**
BSCB	**Bom Sucesso**	**22.62**	**96**	*e*P	**P**	**15 49 50.6**	**-0.3**
PRPB	**Parauapebas**	**23.31**	**55**	*e*P	**P**	**15 49 55.5**	**-2.0**
SMTB	**Santa Maria do**	**23.57**	**64**	*e*P	**P**	**15 49 59.3**	**-0.6**
DIAM	**Diamantina, MG**	**23.93**	**89**	*e*P	**P**	**15 50 02.4**	**-0.8**
MC01	**Montes Claros**	**23.97**	**85**	*e*P	**P**	**15 50 02.6**	**-0.9**
JANB	**Januaria**	**24.03**	**81**	*e*P	**P**	**15 50 03.0**	**-1.1**
BOAV	**Boa Vista**	**24.07**	**21**	*e*P	**P**	**15 50 04.2**	**0.0**
BOAV	**Boa Vista**	**24.07**	**21**	P	**P**	**15 50 04.0**	**-0.3**
BOAV				IAmb	IAmb	15 50 04.9	
	comp=Z,19nm,1.1s						
SDBA	**SAO DESIDERIO**	**24.36**	**75**	*e*P	**P**	**15 50 06.2**	**-0.9**
MCPB	**Macapa, AP**	**25.84**	**42**	*e*P	**P**	**15 50 19.4**	**-1.0**
ALF01	**Guarapari-ES**	**26.42**	**96**	*e*P	**P**	**15 50 26.1**	**+0.4**
BSFB	**Barra de Sao F**	**26.50**	**92**	*e*P	**P**	**15 50 26.2**	**-0.1**
GUA01	**Guaratinga, BA**	**27.87**	**87**	*e*P	**P**	**15 50 39.0**	**+0.3**
ZARC	**Zaragoza, Cauc**	**28.27**	**348**	P	**P**	**15 50 41.0**	**-1.1**
CMC01	**Camacan, BA**	**28.42**	**85**	*e*P	**P**	**15 50 42.8**	**-0.7**
NBIT	**Itapeh - BA**	**28.61**	**84**	*e*P	**P**	**15 50 45.0**	**-0.1**
GDU01	**Guandu, BA**	**28.81**	**81**	*e*P	**P**	**15 50 46.4**	**-0.6**
NBPN	**Ponto Novo - B**	**29.21**	**75**	*e*P	**P**	**15 50 49.7**	**-0.8**
NBPS	**Pedro II - PI**	**31.10**	**63**	*e*P	**P**	**15 51 06.5**	**-0.8**
NBLA	**Lagarto - SE**	**31.35**	**77**	*e*P	**P**	**15 51 08.3**	**-1.1**
NBMA	**Muriti-CE**	**31.94**	**70**	*e*P	**P**	**15 51 14.9**	**+0.2**
NBPB	**Pedra_Branca-C**	**32.09**	**67**	*e*P	**P**	**15 51 16.6**	**+0.6**
NBAN	**Anadia - AL**	**33.23**	**76**	*e*P	**P**	**15 51 25.3**	**-0.6**
BIRD	**Birdtown, Kers**	**55.78**	**349**	P	**P**	**15 54 25.3**	**+0.7**
SNAA	**Sanae**	**63.37**	**161**	P	**P**	**15 55 16.7**	**+0.3**
SNAA				IAmb	IAmb	15 55 18.4	
	comp=Z,5.1nm,1.0s						
LONY	**Lake Ozonia**	**64.86**	**356**	P	**P**	**15 55 27.6**	**+1.3**
LONY				IAmb	IAmb	15 55 37.5	
	comp=Z,4.0nm,1.1s						
LIC	**Lamto**	**68.10**	**74**	*e*P	**P**	**15 55 46.6**	**-1.0**
	comp=Z,13nm,0.6s						
TIC	**Toumodi**	**68.28**	**74**	*e*P	**P**	**15 55 47.8**	**-0.9**
KIC	**Kosan Boka**	**68.42**	**74**	*e*P	**P**	**15 55 48.8**	**-0.8**
	comp=Z,5.3nm,0.2s						
DBIC	**Dimbokro**	**68.44**	**74**	P	**P**	**15 55 49.1**	**-0.6**
	comp=Z,3.8nm,0.4s,baz=239,slow=6.7,SNR=15						
DBIC	**Dimbokro**	**68.44**	**74**	P	**P**	**15 55 49.0**	**-0.7**
DBIC				IAmb	IAmb	15 55 49.9	
	comp=Z,7.5nm,0.8s						
QSPA	**South Pole Qui**	**69.84**	**180**	P	**P**	**15 55 59.3**	**+1.6**
QSPA				IAmb	IAmb	15 55 59.9	
	comp=Z,2.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**77.00**	**71**	P	**P**	**15 56 39.6**	**-0.7**
	comp=Z,3.8nm,0.4s,baz=256,slow=5.3,SNR=50						
TORD	**Torodi Ar. Bea**	**77.00**	**71**	P	**P**	**15 56 39.6**	**-0.7**
TORD				IAmb	IAmb	15 56 41.3	
	comp=Z,2.6nm,0.6s						
YKA	**Yellowknife Ar**	**90.10**	**341**	P	**P**	**15 57 48.0**	**+1.8**
	comp=Z,0.3nm,0.5s,baz=130,slow=4.7,SNR=4.0						
ASAR	**Alice Springs**	**130.91**	**208**	PKP	**PKPdf**	**16 03 58.9**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=120,slow=1.6,SNR=7.8						
WRA	**Warramunga Arr**	**133.92**	**211**	PKP	**PKPdf**	**16 04 04.8**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=155,slow=1.7,SNR=5.8						
MKAR	**Makanchi Array**	**144.72**	**35**	PKP	**PKPab**	**16 04 22.5**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=340,slow=3.7,SNR=5.0						
MKAR	**Makanchi Array**	**144.72**	**35**		**PKPab**	**16 04 21.5**	**-0.5**

IDC ***23*** *15:54:57.4±6.1, 18°.40S×176°.56W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/35, mbtmp4.1/3, Error ellipse: s-maj=311.5km s-min=49.1km az=148.0*

NEIC ***23*** *15:55:12.2±2.8, 17°.4S±0°.2×176°.6W±0°.2, h126km±17km, mb4.3/18, Error ellipse: s-maj=32.7km s-min=22.5km az=214.0*

ISC 23 15:55:04.5±1.0**, 17°.1S**±0°.1×**177°.1W**±0°.1**, h35**km**, n26,** σ1s56/26**, mb4.3**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**7.06**	**107**	Pn	**Pn**	**15 56 46.3**	**+1.0**
RAO	**Raoul Island**	**12.11**	**184**	Pn	**Pn**	**15 57 56.9**	**+2.4**
BKZ	**Black Stump Fm**	**22.68**	**193**	P	**P**	**16 00 02.5**	**-0.4**
BKZ				IAmb	IAmb	16 00 12.4	
	comp=Z,9.2nm,1.2s						
QRZ	**Quartz Range**	**25.28**	**199**	P	**P**	**16 00 27.3**	**-0.2**
QRZ				IAmb	IAmb	16 00 29.4	
	comp=Z,6.2nm,0.9s						
THZ	**Tophouse**	**26.03**	**197**	P	**P**	**16 00 32.7**	**-1.7**
THZ				IAmb	IAmb	16 00 35.2	
	comp=Z,5.9nm,0.9s						

FOZ	Fox Glacier	28.59	200	P	P	16 00 56.8	-0.4
MLZ	Mavora Lakes	30.78	201	P	P	16 01 16.3	-0.4
MLZ				IAmb	IAmb	16 01 43.2	
	comp=Z,20nm,1.1s						
WHZ	Wether Hill Ro	31.30	200	P	P	16 01 20.6	-0.6
WHZ				IAmb	IAmb	16 01 21.5	
	comp=Z,10nm,0.7s						
CTAO	Charters Tower	34.85	259	P	P	16 01 54.4	+1.9
CTAO				IAmb	IAmb	16 01 55.7	
	comp=Z,5.8nm,0.8s						
COEN	Coen	38.40	269	P	P	16 02 26.6	+3.8
COEN				IAmb	IAmb	16 02 27.3	
	comp=Z,8.8nm,0.9s						
WR0	Warramunga Arr	45.85	259	P	P	16 03 23.0	-0.6
WR0				IAmb	IAmb	16 03 41.2	
	comp=Z,3.6nm,1.1s						
WB0	Warramunga Arr	46.01	259	P	P	16 03 24.6	-0.3
WB0				IAmb	IAmb	16 03 43.5	
	comp=Z,4.8nm,1.1s						
WB2	Warramunga Arr	46.03	259	P	P	16 03 24.5	-0.5
WB2				IAmb	IAmb	16 03 26.4	
	comp=Z,3.6nm,0.9s						
WRAB	Tennant Creek	46.04	259	P	P	16 03 24.3	-0.8
WRA	Warramunga Arr	46.05	259	P	P	16 03 24.6	-0.5
	comp=Z,0.7nm,0.4s,baz=97,slow=6.7,SNR=30						
WRA	Warramunga Arr	46.05	259	P	P	16 03 24.5	-0.7
AS31	Alice Springs	46.25	253	P	P	16 03 25.7	-1.0
ASAR	Alice Springs	46.25	253	P	P	16 03 25.9	-0.8
	comp=Z,5.2nm,0.6s,baz=88,slow=8.5,SNR=112						
ASAR	Alice Springs	46.25	253	P	P	16 03 25.0	-1.8
MTN	Manton Dam	50.11	267	P	P	16 03 57.2	+0.6
KNRA	Kununurra	51.85	263	P	P	16 04 09.0	-0.7
FITZ	Fitzroy Crossi	54.43	260	P	P	16 04 28.4	-0.3
	comp=Z,1.7nm,0.8s,baz=106,slow=7.4,SNR=1.0						
PSA00	Pilbara Seismi	59.36	255	P	P	16 05 01.2	-2.4
QSPA	South Pole Qui	72.94	180	P	P	16 06 26.4	-3.8
CLL	Collm	144.96	349	*e*PKPbc	PKPdf	16 14 38.0	+0.2
GERES	GERESS Array B	147.16	347	PKPbc	PKPab	16 14 45.7	+0.1
	comp=Z,0.5nm,0.6s,baz=44,slow=3.0,SNR=5.8						

IDC 23 16:03:52.5±2.4, 0°.12N×125°.27E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/37, mbtmp3.4/3, Error ellipse: s-maj=294.8km s-min=26.4km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.83	156	P	P	16 08 45.9	-0.7
	1.0nm,0.6s,baz=334,slow=9.7,SNR=16						
ASAR	Alice Springs	25.09	161	P	P	16 09 19.6	+0.6
	0.7nm,0.6s,baz=344,slow=12,SNR=16						
MKAR	Makanchi Array	59.73	327	P	P	16 13 58.9	-0.2
	0.3nm,0.8s,baz=118,slow=8.4,SNR=4.3						

IDC 23 16:11:12.6±2.5, 30°.46S×177°.18W, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.7/22, mbtmp3.7/3, Error ellipse: s-maj=52.0km s-min=26.7km az=87.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.36	332	Pn	Pb	16 11 39.3	+0.4
	308nm,0.3s,baz=93,slow=11,SNR=9.8						
RAO				Sn	Sn	16 11 58.2	+0.6
	149nm,0.3s,baz=96,slow=23,SNR=9.3						
STKA	Stephens Creek	35.16	257	P	P	16 18 09.8	+1.6
	1.4nm,0.6s,baz=118,slow=11,SNR=4.8						
ASAR	Alice Springs	43.81	267	P	P	16 19 19.8	-0.7
	0.3nm,0.6s,baz=104,slow=6.9,SNR=13						
ASAR				PcP	PcP	16 21 06.7	-0.5
	0.3nm,0.9s,baz=119,slow=4.0,SNR=4.4						
WRA	Warramunga Arr	44.81	272	P	P	16 19 27.2	-1.2
	1.0nm,0.8s,baz=111,slow=6.2,SNR=16						
FINES	FINESS Array B	145.44	340	PKPbc	PKPbc	16 30 51.6	-0.2
	3.9nm,1.0s,baz=46,slow=6.0,SNR=4.6						

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*MOS **23** 16:17:49.4±0.9, 45°.04N×28°.06W, h10^{km}, mb4.9/31, MS4.3/6, Error ellipse: s-maj=11.2km s-min=5.4km az=146.8*

*IDC **23** 16:17:49.9±0.4, 45°.09N×28°.07W, h0^{km}, mb4.4/27, mb1 4.5/28, mb1mx4.3/55, mbtmp4.3/28, ML4.1/1, MS4.3/35, Ms1 4.3/35, ms1mx4.2/54, Error ellipse: s-maj=13.6km s-min=10.5km az=29.0*

*BJI **23** 16:17:50.0±0.0, 45°.10N×28°.10W, h10^{km}, mB5.4/12, mb4.7/34, Ms5.3/4, Ms7 5.0/5*

*NEIC **23** 16:17:51.6±1.7, 45°.11N±0°.10×28°.1W±0°.1, h10^{km}±1^{km}, mb5.0/211, Error ellipse: s-maj=16.7km s-min=14.6km az=8.0*

*GCMT **23** 16:17:51.6±0.2, 45°.14N±0°.03×28°.00W±0°.02, h12^{km}, MW5.0/111, Moment Tensor Solution. s37,c45; s111,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.91±.10; M$_{\theta\theta}$0.54±.12; M$_{\phi\phi}$3.37±.08; M$_{r\theta}$1.75±.44; M$_{\theta\phi}$0.50±.08; M$_{\phi r}$0.08±.33; Best double couple: M$_0$3.99700×10^{16} NP1:φ$_s$353.00000°,δ45.00000°, λ-117.00000°. NP2:φ$_s$209.00000°,δ51.00000°, λ-66.00000°. Principal axes: T 3.4760, Plg3.0000°, Azm282.0000°; N 1.0400, Plg19.0000°, Azm13.0000°; P -4.5170, Plg71.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 16:17:52.0±0.3, 45°.11N±0°.06×28°.03W±0°.05, h14^{km}, n601, σ1^{s}.00/522, mb4.9/194, MS4.3/43, 49C-18D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGAV	Gavieira, Arco	14.67	95	*e*P	Pn	16 21 17.7	-1.4
	175nm,1.8s						
PMOZ	Porto Moniz, M	14.86	142	*e*T	T	16 36 10.2	
PMOZ	Porto Moniz, M	14.86	142	P	P	16 21 26.6	-0.9
PMAR	Madeira	15.07	141	*e*T	T	16 36 15.6	
POLO	Lamas de Olo	15.21	97	*e*P	P	16 21 31.4	+0.1
	36nm,1.7s						
MTE	Manteigas	15.76	100	*e*P	P	16 21 36.9	-0.4
	86nm,1.7s						
PBRG	Braganca	15.80	95	*e*P	Pn	16 21 33.0	-1.0
	65nm,1.6s						
MVO	Moncorvo	15.82	97	*e*P	Pn	16 21 31.7	-2.6
	36nm,2.2s						
PMTG	Montargil	15.88	105	*e*P	Pn	16 21 31.8	-3.1
	82nm,1.5s						
PCBR	Castelo Branco	16.04	102	*e*P	Pn	16 21 38.2	+1.2
	84nm,1.7s						
PMRV	Marv??o	16.28	103	*e*P	Pn	16 21 38.8	-1.3
	62nm,1.6s						
PESTR	Estremoz	16.41	105	*e*P	Pn	16 21 40.6	-1.2
	64nm,1.5s						
PESTR	Estremoz	16.41	105		Pn	16 21 42.1	+0.4
PFVI	Vila Bisbo	16.49	112		P	16 21 44.3	-1.1
MESJ	Messejana	16.50	109	*e*P	P	16 21 49.5	+3.9
	54nm,1.6s						
PCVE	Castro Verde	16.74	110	*e*P	Pn	16 21 43.8	-2.1
	57nm,1.4s						
PAB	San Pablo	18.34	99	P	Pn	16 22 04.9	-1.1
PAB				pmax	pmax		
	comp=Z,35nm,1.5s						
PAB	San Pablo	18.34	99		Pn	16 22 04.9	-1.1
ESBB	Sonseca Array	18.56	99	P	P	16 22 07.4	-0.9
ESDC	Sonseca Array	18.56	99	P	P	16 22 08.1	-0.2
	comp=Z,0.1nm,0.3s,baz=291,slow=12,SNR=14						
ESDC				LR	LR	16 27 58.3	
	comp=Z,893nm,19.2s,baz=280,slow=33						
ESDC	Sonseca Array	18.56	99	P	P	16 22 07.9	-0.4
MFF	Saint Martin d	19.44	76	*e*P	Pn	16 22 19.3	+0.2
MFF				pmax	pmax		
	comp=Z,142nm,1.8s						
CHEFC	Chefchaouen	19.96	112	P	Pn	16 22 26.1	+0.6
SRHM	Skhour des Reh	20.07	122	P	Pn	16 22 26.0	-0.8
ZHG	ZHG	20.18	118	P	Pn	16 22 28.0	0.0
LFF	La Frestale	20.30	80	*e*P	P	16 22 27.5	+0.3
LFF				pmax	pmax		
	comp=Z,108nm,1.5s						
CLF	Chambon-Foret	20.96	71	P	P	16 22 35.2	+0.8
OUK	Oukaimeden	20.99	124	P	P	16 22 36.0	+0.7
TTIG	Tnine Tigouga,	21.15	127	P	P	16 22 36.0	-0.7
CAF	Calviac	21.22	80	*e*P	P	16 22 36.9	-0.4
CAF				pmax	pmax		
	comp=Z,19nm,1.1s						
AKLM	AKL	21.29	111	P	P	16 22 40.0	+1.8
GOG	Mont Gurugu	21.45	109	P	P	16 22 44.0	+4.1
OUZM	OUZ	21.86	123	P	P	16 22 45.0	+0.7
MDT	Midelt	21.88	116	P	P	16 22 44.9	+0.4
	comp=Z,9.8nm,1.0s,baz=327,slow=8.5,SNR=9.2						
MDT				LR	LR	16 29 24.9	
	comp=Z,469nm,21.1s,baz=343,slow=32						
SSF	Saint Saulge	21.89	74	*e*P	P	16 22 43.8	-0.6
SSF				pmax	pmax		
	comp=Z,137nm,1.5s						
SNF	Seneffe	22.25	64	*d*P	P	16 22 48.1	-0.1
	comp=Z,20nm,1.3s						
JBK	JBK	22.26	110	P	P	16 22 51.0	+2.3
UCC	Uccle	22.31	64	P	P	16 22 49.0	+0.2
UCC				pmax	pmax		
	comp=Z,24nm,1.4s						
UCC	Uccle	22.31	64	P	P	16 22 49.0	+0.2
DOU	Dourbes	22.44	65	*d*P	P	16 22 50.4	+0.1
	comp=Z,22nm,1.2s						
BMRD	Maredsous	22.56	65	*d*P	P	16 22 51.3	-0.2
	comp=Z,20nm,1.3s						
BGES	Gesves	22.76	65	*d*P	P	16 22 53.6	0.0
	comp=Z,24nm,1.2s						
RCHB	Rochefort	22.85	65	*d*P	P	16 22 54.5	-0.1
	comp=Z,13nm,1.3s						
SSB	Saint Sauveur	22.87	78	P	P	16 22 54.0	-1.0
SSB				pmax	pmax		
	comp=Z,40nm,1.3s						
SSB	Saint Sauveur	22.87	78	P	P	16 22 54.0	-1.0
BCLA	Clavier	22.90	65	*b*P	P	16 22 55.4	+0.3
	comp=Z,20nm,1.3s						
BSTI	Sart Tilman	23.07	64	*d*P	P	16 22 57.9	+1.0
	comp=Z,4.2nm,1.2s						
ZGR	Zagora	23.11	123	P	P	16 22 58.0	+0.4
BHOU	Houvegnez	23.35	65	*d*P	P	16 23 00.3	+0.5
TDRA	Tendrara	23.40	112	P	P	16 23 02.0	+1.4
WLF	Walferdange	23.46	66	*d*P	P	16 23 00.5	-0.3
	comp=Z,10nm,1.4s						
WLF	Walferdange	23.46	66	P	P	16 23 00.1	-0.7
WLF				pmax	pmax		
	comp=Z,30nm,1.2s						
WLF	Walferdange	23.46	66	P	P	16 23 00.1	-0.7
ECH	Echery	24.22	70	P	P	16 23 08.3	+0.2
ECH				pmax	pmax		
	comp=Z,26nm,1.3s						
ECH	Echery	24.22	70	P	P	16 23 08.3	+0.2
BNI	Bardonecchia	24.40	78	P	P	16 23 09.4	-0.5
BNI				pmax	pmax		
	comp=Z,25nm,1.5s						
BNI	Bardonecchia	24.40	78	P	P	16 23 09.4	-0.5
SENIN	Lac Senin/Sane	24.57	74	P	P	16 23 11.0	-0.6
BFO	Black Forest	24.98	69	P	P	16 23 14.8	-0.3
BFO				pmax	pmax		
	comp=Z,40nm,1.5s						
BFO	Black Forest	24.98	69	P	P	16 23 14.8	-0.3
BFO				IAmb	IAmb	16 23 19.1	
	comp=Z,40nm,1.5s						
SFJD	Kangerlussuaq	25.01	339	LR	LR	16 30 49.0	
	comp=Z,958nm,19.8s,baz=134,slow=31						
STU	Stuttgart	25.51	68	P	P	16 23 19.8	0.0
STU				pmax	pmax		
	comp=Z,52nm,1.3s						
STU	Stuttgart	25.51	68	P	P	16 23 19.8	0.0
STU				IAmb	IAmb	16 23 23.1	
	comp=Z,52nm,1.3s						
DAVA	Damuels	26.16	72	*i* P	P	16 23 27.0	+1.1
	comp=Z,30nm,1.3s,SNR=7.6						
DAVOX	Davos/Dischmat	26.25	73	P	P	16 23 27.9	+1.2
	comp=Z,1.5nm,0.8s,baz=296,slow=3.3,SNR=3.1						
DAVOX				LR	LR	16 32 26.4	
	comp=Z,718nm,21.6s,baz=282,slow=33						
SCHQ	Schefferville	26.47	306	P	P	16 23 29.1	+0.7
	comp=Z,6.9nm,0.9s,baz=99,slow=14,SNR=5.2						
SCHQ				LR	LR	16 31 59.9	
	comp=Z,960nm,20.4s,baz=88,slow=32						
RETA	Reutte	26.72	71	*e*P	P	16 23 31.8	+0.9
	comp=Z,7.4nm,1.2s						
GRFO	Grafenberg	26.74	66	P	P	16 23 30.8	-0.1
GRFO				pmax	pmax		
	comp=Z,104nm,1.8s						
GRFO	Grafenberg	26.74	66	P	P	16 23 30.8	-0.1
GRA1	Grafenberg Arr	26.74	66	P	P	16 23 30.8	-0.2
GRF	Grafenberg Arr	26.74	66	P	P	16 23 30.8	-0.2
GRF				pmax	pmax		
	comp=Z,118nm,1.9s						
FETA	Feichten	26.78	72	*e*P	P	16 23 32.5	+1.0
	comp=Z,18nm,1.6s						
MOTA	Moosalm	26.97	71	*i* P	P	16 23 33.5	+0.3
	comp=Z,26nm,1.4s,SNR=7.8						
SQTA	Sankt Quirin	27.07	71	*i* P	P	16 23 35.3	+1.3
	comp=Z,28nm,1.3s,SNR=8.3						
WATA	Walderalm	27.29	71	*i* P	P	16 23 37.2	+1.1
	comp=Z,21nm,1.2s,SNR=6.1						
WTTA	Wattenberg	27.34	71	*i* P	P	16 23 38.0	+1.4
	comp=Z,30nm,1.6s,SNR=8.2						
CTI	Castel Tesino	27.59	74	P	P	16 23 38.4	-0.3
CTI				pmax	pmax		
	comp=Z,24nm,1.3s						
CTI	Castel Tesino	27.59	74	P	P	16 23 38.4	-0.3
CLL	Collm	27.75	62	*i* P	P	16 23 40.7	+0.7
CLL				pmax	pmax		
	comp=Z,35nm,1.6s						
CLL				MLR	MLR		
	comp=Z,700nm,21.1s						
CLL	Collm	27.75	62	*i* P	P	16 23 40.7	+0.7
	comp=Z,35nm,1.6s						
CLL				*e*PPPP		16 24 42.0	
CLL				Lm	MLR	16 33 00.0	
	comp=N,400nm,19.5s						
CLL				Lm	MLR	16 33 00.0	
	comp=E,800nm,19.5s						
CLL				Lm	MLR	16 33 00.0	
	comp=Z,700nm,21.1s						
CLL	Collm	27.75	62	P	P	16 23 40.2	+0.2
TEOL	Teolo	27.77	75	P	P	16 23 38.9	-1.3
NOA	NORSAR Array B	27.91	41	LR	LR	16 33 59.3	
	comp=Z,242nm,18.4s,baz=255,slow=35						
ABTA	Abfaltersbach	28.03	72	*e*P	P	16 23 43.5	+0.9
	comp=Z,9.7nm,1.3s						
STAL	STALIGIAL	28.27	73	P	P	16 23 43.2	-1.4
STAL				IAmb	IAmb	16 23 47.0	
	comp=Z,40nm,1.4s						
KHC	Kasperske Hory	28.34	67	*e*P	P	16 23 46.1	+0.8
KHC				AMS	AMS	16 33 20.0	
	comp=Z,800nm,22.0s						
KHC	Kasperske Hory	28.34	67	⇑*e*P	P	16 23 46.0	+0.8
KHC				pmax	pmax		
	comp=Z,35nm,1.5s						
KHC	Kasperske Hory	28.34	67	P	P	16 23 44.3	-0.9
ZOU	Zoufplan	28.38	72	P	P	16 23 46.0	+0.2
ZOU				IAmb	IAmb	16 23 55.3	
	comp=Z,29nm,1.4s						
GEC2	GERESS Array S	28.46	67	P	P	16 23 45.7	-0.7
GERES	GERESS Array B	28.46	67	P	P	16 23 45.9	-0.5
	comp=Z,4.1nm,1.1s,baz=284,slow=5.4,SNR=16						
GERES				LR	LR	16 33 54.7	
	comp=Z,642nm,20.3s,baz=267,slow=34						
KBA	Koelnbreinsper	28.52	71	*i* P	P	16 23 49.2	+2.1
	comp=Z,25nm,1.4s,SNR=5.5						
MYKA	Terra Mystica	28.82	72	*e*P	P	16 23 50.5	+0.9
	comp=Z,18nm,1.6s						
PRU	Pruhonice	28.85	65	*e*P	P	16 23 51.6	+1.9
PRU				AMS	AMS	16 34 20.0	
	comp=Z,1μm,18.3s						
PRU	Pruhonice	28.85	65	*e*P	P	16 23 51.6	+1.9
PRU				MLR	MLR		
	comp=Z,1μm,18.3s						
CKRC	Cesky Krumlov	28.86	67	*e*P	P	16 23 51.1	+1.2
PKME	Peaks-Kenny Pk	28.86	285	P	P	16 23 49.3	-0.6
	baz=75						
HFS	Hagfors	28.86	44	LR	LR	16 33 05.5	
	comp=Z,419nm,20.0s,baz=273,slow=32						
F62A	Pittston Farm,	29.16	287	P	P	16 23 53.2	+0.6
F62A				IAmb	IAmb	16 23 56.8	
	comp=Z,36nm,1.4s						
FRB	Frobisher Bay	29.33	324	P	P	16 23 54.0	+0.2
	comp=Z,14nm,1.0s,baz=105,slow=8.4,SNR=20						
FRB				LR	LR	16 32 30.9	
	comp=Z,647nm,20.5s,baz=82,slow=30						
OBKA	Obir	29.45	72	*i* P	P	16 23 55.4	+0.2
	comp=Z,23nm,1.7s,SNR=6.6						
UPC	Upice	29.72	64	*e*P	P	16 23 58.1	+0.6
UPC	Upice	29.72	64	*e*P	P	16 23 58.1	+0.6
KEST	Kesra	29.73	95	P	P	16 23 58.1	+0.3
	comp=Z,15nm,0.9s,baz=289,slow=8.2,SNR=14						
KEST				LR	LR	16 34 04.2	
	comp=Z,915nm,21.9s,baz=232,slow=33						
KEST	Kesra	29.73	95	P	P	16 23 57.1	-0.7
CHVC	Chvalec	29.74	63	*e*P	P	16 23 58.0	+0.3
SOKA	Soboth	29.74	71	*e*P	P	16 23 57.0	-0.7
	comp=Z,7.8nm,1.1s						
AQU	L'Aquila	29.83	80	P	P	16 23 58.4	-0.2
AQU				pmax	pmax		
	comp=Z,33nm,1.3s						
AQU	L'Aquila	29.83	80	P	P	16 23 58.4	-0.2
AQU				IAmb	IAmb	16 24 00.4	
	comp=Z,33nm,1.3s						
OSTC	Ostas	29.85	63	*e*P	P	16 23 59.0	+0.4
DPC	Dobruska-Polom	29.94	64	*e*P	P	16 23 58.6	-0.9
DPC				AMS	AMS	16 35 20.0	
	comp=Z,1μm,15.6s						
DPC	Dobruska-Polom	29.94	64	*e*P	P	16 23 58.6	-0.9
DPC				MLR	MLR		
	comp=Z,1μm,15.6s						
ARSA	Arzberg	29.94	70	*i* P	P	16 23 59.5	0.0
	comp=Z,8.8nm,1.2s,SNR=5.2						
CONA	Conrad Observa	30.03	69	*e*P	P	16 24 01.1	+0.8
	comp=Z,15nm,1.5s						
KRUC	Moravsky	30.18	66	*e*P	P	16 24 01.2	-0.3
VRAC	Vranov	30.26	66	P	P	16 24 03.5	+1.2
	comp=Z,1.5nm,0.5s,baz=285,slow=8.9,SNR=4.3						
VRAC				LR	LR	16 35 32.5	
	comp=Z,1μm,18.5s,baz=290,slow=35						
VRAC	Vranov	30.26	66	*e*P	P	16 24 03.1	+0.8
SOP	Sopron	30.54	69	*e*P	P	16 24 03.8	-0.9
MORC	Moravsky Berou	30.80	65	⇓P	P	16 24 07.8	+0.7
MORC	Moravsky Berou	30.80	65	*e*P	P	16 24 06.9	-0.1
MORC	Moravsky Berou	30.80	65	P	P	16 24 07.0	-0.1
MORC				pmax	pmax		
	comp=Z,15nm,1.3s						
MORC	Moravsky Berou	30.80	65	P	P	16 24 07.0	-0.1
MODS	Modra-Piesok	30.88	67	*e*P	P	16 24 07.7	0.0
MODS	Modra-Piesok	30.88	67	*e*P	P	16 24 07.7	0.0
LBNH	Lisbon	30.94	284	P	P	16 24 08.6	+0.3
	baz=73						
EGYH	Egyhazaskeszo	31.11	69	*e*P	P	16 24 09.1	-0.7
HRV	Adam Dziewonsk	31.24	281	P	P	16 24 11.8	+0.8
	baz=70						
MPLH	Magyarpolny	31.30	70	*e*P	P	16 24 10.7	-0.7
CLTB	Caltabellotta	31.59	89	P	P	16 24 14.2	0.0
KOVH	Kovagotottos	31.94	71	*e*P	P	16 24 16.3	-0.9
L61B	Northampton	32.04	281	P	P	16 24 18.5	+0.5
	baz=70						
LANS	Liptovska Anna	32.15	65	*e*P	P	16 24 20.8	+1.9
LANS	Liptovska Anna	32.15	65	*e*P	P	16 24 20.8	+1.9
OJC	Ojcow	32.16	63	P	P	16 24 18.5	-0.5
OJC				pmax	pmax		
	comp=Z,23nm,1.3s						
OJC	Ojcow	32.16	63	P	P	16 24 18.5	-0.5
OJC				IAmb	IAmb	16 24 21.2	
	comp=Z,23nm,1.3s						
MORH	Mrgy, Hungar	32.27	71	⇑P	P	16 24 20.1	+0.1
MORH	Mrgy, Hungar	32.27	71	*e*P	P	16 24 19.3	-0.7
RAFF	Raffo Rosso	32.57	89	P	P	16 24 22.6	0.0
RAFF				IAmb	IAmb	16 24 24.1	
	comp=Z,23nm,1.2s						
NCB	Newcomb	32.60	285	P	P	16 24 23.3	+0.3
NCB				IAmb	IAmb	16 24 27.3	
	comp=Z,20nm,1.2s						
LONY	Lake Ozonia	32.65	286	P	P	16 24 24.1	+0.7
	baz=72						
PSZ	Piszkesteto	32.68	68	⇓P	P	16 24 26.8	+3.2
PSZ	Piszkesteto	32.68	68	*e*P	P	16 24 24.3	+0.6
PSZ	Piszkesteto	32.68	68	P	P	16 24 24.4	+0.7
PSZ				pmax	pmax		
	comp=Z,29nm,1.4s						
PSZ	Piszkesteto	32.68	68	P	P	16 24 24.4	+0.7
PSZ				IAmb	IAmb	16 24 27.8	
	comp=Z,29nm,1.4s						
J59A	Piesco	32.96	284	P	P	16 24 26.8	+0.7
J59A				IAmb	IAmb	16 24 30.6	
	comp=Z,23nm,1.3s						
FRGS	Fruska Gora	33.36	73	⇑P	P	16 24 30.0	+0.5
TIP	Timpagrande	33.40	84	⇑P	P	16 24 30.2	+0.2
TIP	Timpagrande	33.40	84	P	P	16 24 29.7	-0.3
TIP				IAmb	IAmb	16 24 39.0	
	comp=Z,19nm,1.3s						
J58A	Remsen	33.53	284	P	P	16 24 30.9	-0.2
J58A				IAmb	IAmb	16 24 36.3	
	comp=Z,31nm,1.4s						
DIVS	Divibare	33.81	74	P	P	16 24 32.8	-0.8
DIVS				IAmb	IAmb	16 24 35.2	
	comp=Z,25nm,1.5s						
KOLS	Kolonicke sedl	34.00	65	*e*P	P	16 24 33.9	-1.1
KOLS	Kolonicke sedl	34.00	65	*e*P	P	16 24 33.8	-1.2
UZH	Uzhgorod	34.08	66	*e*P	P	16 24 36.1	+0.4
UZH				*i*		16 24 37.1	
UZH				*e*		16 24 40.7	
KWP	Kalwaria Pacla	34.12	64	P	P	16 24 36.8	+0.7
KWP	Kalwaria Pacla	34.12	64	P	P	16 24 36.8	+0.7
SIRR	Siria	34.27	70	⇑P	P	16 24 38.3	+0.8
TRPA	Tarpa	34.36	66	⇓P	P	16 24 40.0	+1.9
BINY	Binghamton	34.42	283	P	P	16 24 40.0	+1.2
	baz=68						
BZS	Buzias	34.44	71	⇑P	P	16 24 39.9	+1.1
BZS	Buzias	34.44	71	⇑P	P	16 24 39.9	+1.1
K57A	Scipio Center	34.59	284	P	P	16 24 41.4	+1.1
N59A	State Game Lan	34.76	280	P	P	16 24 42.3	+0.5
N59A				IAmb	IAmb	16 24 47.0	
	comp=Z,32nm,1.4s						
N59A	State Game Lan	34.76	280	P	P	16 24 42.3	+0.5
	baz=67						
DRGR		34.82	69	⇑P	P	16 24 43.5	+1.2
DRGR		34.82	69	⇑P	P	16 24 43.5	+1.2
LVV	L'vov	34.92	63	*e*P	P	16 24 43.2	+0.2
MORS	Morshin	34.99	64	P	P	16 24 45.1	+1.5
WUPA	West Chester U	35.04	279	P	P	16 24 44.6	+0.5
WUPA				IAmb	IAmb	16 24 48.5	
	comp=Z,19nm,1.2s						
FINES	FINESS Array B	35.04	43	P	P	16 24 44.9	+1.0
	comp=Z,2.7nm,0.9s,baz=256,slow=7.7,SNR=6.8						
FINES				LR	LR	16 36 58.3	
	comp=Z,342nm,20.8s,baz=270,slow=33						
P60A	Greenville	35.11	278	P	P	16 24 45.2	+0.5
	baz=65						
BOVS	Bovan	35.13	74	⇑P	P	16 24 45.2	+0.3
HERR	Herculane	35.20	72	⇑P	P	16 24 46.4	+1.0
GZR	Gura Zlata	35.28	71	⇑P	P	16 24 47.1	+0.9
CJR	Cluj-Napoca	35.43	69	⇑P	P	16 24 48.7	+1.2
CJR	Cluj-Napoca	35.43	69	⇑P	P	16 24 48.7	+1.2
N58A	Sunbury	35.45	281	P	P	16 24 48.4	+0.8
N58A				IAmb	IAmb	16 24 52.0	
	comp=Z,26nm,1.1s						
MVL	Millersville	35.53	279	P	P	16 24 48.9	+0.5
MVL				IAmb	IAmb	16 24 53.4	
	comp=Z,20nm,1.1s						
KBN	Korca	35.62	80	P	P	16 24 49.9	+0.6
KBN				pmax	pmax		
	comp=Z,61nm,1.5s						
KBN	Korca	35.62	80	P	P	16 24 49.9	+0.6
SADO	Sadowa	35.69	288	LR	LR	16 39 00.6	
	comp=Z,1μm,18.4s,baz=3.0,slow=36						
TULEG	Thule	35.71	345	P	P	16 24 48.4	-1.0
LOT	Lotru	35.93	71	⇓P	P	16 24 52.5	+0.6
FNA	Florina	35.97	79	P	P	16 24 51.7	-0.5
FNA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
FNA	Florina	35.97	79	P	P	16 24 51.7	-0.5
ARCES	ARCESS Array B	36.00	29	LR	LR	16 36 37.9	
	comp=Z,296nm,19.5s,baz=250,slow=31						
BUR08	Bucovina Ar. S	36.21	66	P	P	16 24 54.6	+0.3
BUR08				IAmb	IAmb	16 24 59.8	
	comp=Z,35nm,1.5s						
BURAR	Bucovina Array	36.23	67	⇑P	P	16 24 57.3	+2.9
BURAR	Bucovina Array	36.23	67	⇑P	P	16 24 57.3	+2.9
BURAR	Bucovina Array	36.23	67	P	P	16 24 55.2	+0.7
SSPA	Standing Stone	36.34	281	P	P	16 24 54.7	-0.6
SSPA	Standing Stone	36.34	281	P	P	16 24 55.3	-0.1
	baz=66						
VTS	Vitosha	36.54	75	⇓P	P	16 24 57.7	+0.5
VTS	Vitosha	36.54	75	P	P	16 24 55.3	-1.9
VTS				pmax	pmax		
	comp=Z,13nm,1.4s						
VTS	Vitosha	36.54	75	P	P	16 24 55.3	-1.9
KOWA	Kowa	36.66	139	P	P	16 24 57.8	-0.4
	comp=Z,11nm,0.9s,baz=334,slow=7.2,SNR=25						
KOWA	Kowa	36.66	139	P	P	16 24 57.2	-1.1
KOWA	Kowa	36.66	139	P	P	16 24 58.0	-0.2
VOIR		36.78	70	⇑P	P	16 24 59.8	+0.7
VOIR		36.78	70	⇑P	P	16 24 59.8	+0.7
DOPR	Dopca	36.84	69	⇓P	P	16 25 00.8	+1.3

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O56A  Blue Knob Stat    36.97 281    P      P       16 25 00.8 +0.1
      baz=65
MLR   Muntele Rosu      37.36  70  ⇑P      P       16 25 06.0 +1.9
MLR   Muntele Rosu      37.36  70    P      P       16 25 03.1 -1.0
MLR                                  pmax   pmax
      comp=Z,30nm,1.3s
MLR   Muntele Rosu      37.36  70    P      P       16 25 03.1 -1.0
MLR                                  IAmb   IAmb    16 25 07.9
      comp=Z,30nm,1.3s
N54A  Moraine State     37.67 283    P      P       16 25 07.5 +0.9
      baz=66
PLOR  Plostina          37.71  69  ⇑P      P       16 25 08.9 +2.0
PLOR  Plostina          37.71  69  ⇑P      P       16 25 08.9 +2.0
VRI   Vrincioaia        37.76  69  ⇑P      P       16 25 08.9 +1.6
VRI                                ⇑P      pwP     16 25 13.6 -0.3
VRI   Vrincioaia        37.76  69  ⇑P      P       16 25 13.6 +6.3
Q56A  Snyder Ridge,     37.93 279    P      P       16 25 09.7 +0.9
Q56A                                 IAmb   IAmb    16 25 14.2
      comp=Z,34nm,1.1s
M53A  WI Miller and     37.95 284    P      P       16 25 09.3 +0.3
      baz=66
AKASG Malin Array Be    37.95  60    P      P       16 25 08.9  0.0
      comp=Z,2.9nm,0.8s,baz=281,slow=8.3,SNR=10
AKASG                                LR     LR      16 39 49.5
      comp=Z,342nm,20.8s,baz=270,slow=35
AKASG Malin Array Be    37.95  60  i P      P       16 25 10.1 +1.2
AKASG                                pmax   pmax
      comp=Z,3.0nm,0.8s
AKBB  Malin Array Si    37.95  60⇑eP      P       16 25 08.7 -0.2
SORM  Soroca            38.10  65  ⇑P      P       16 25 10.0 -0.2
SORM  Soroca            38.10  65  ⇑P      P       16 25 10.0 -0.2
RAZG  Razgrad           38.41  72  ⇑P      P       16 25 13.0 +0.1
APA   Apatity           38.56  33⇓iP      P       16 25 07.7 -6.1
APA                                  pmax   pmax
      comp=Z,12nm,1.1s
APA                                  MLR    MLR
      comp=Z,2µm,11.0s
O53A  New Philadelph    38.81 282    IAmb   IAmb    16 25 21.2
      comp=Z,50nm,1.4s
O53A  New Philadelph    38.81 282    P      P       16 25 17.4 +1.2
      baz=65
CFR   Carcaliu          38.92  69  ⇑P      P       16 25 16.9 -0.1
CFR   Carcaliu          38.92  69  ⇑P      P       16 25 16.9 -0.1
HARR  Harsova           38.96  70  ⇑P      P       16 25 18.6 +1.2
HARR  Harsova           38.96  70  ⇑P      P       16 25 18.6 +1.2
ALN   Alexandroupoli    39.15  76    P      P       16 25 19.9 +0.9
ALN                                  pmax   pmax
      comp=Z,53nm,1.6s
ALN   Alexandroupoli    39.15  76    P      P       16 25 19.9 +0.9
ALN                                  IAmb   IAmb    16 25 23.1
      comp=Z,53nm,1.6s
P53A  Whipple           39.27 281    IAmb   IAmb    16 25 32.1
      comp=Z,36nm,1.4s
O52A  Adamsville        39.30 282    P      P       16 25 20.1 -0.2
O52A                                 IAmb   IAmb    16 25 25.8
      comp=Z,45nm,1.3s
TIRR  Tirgusor          39.36  70  ⇑P      P       16 25 20.1 -0.6
TIRR  Tirgusor          39.36  70  ⇑P      P       16 25 20.1 -0.6
BLA   Blacksburg        39.63 277    IAmb   IAmb    16 25 28.6
      comp=Z,27nm,1.1s
BLA   Blacksburg        39.63 277    P      P       16 25 24.2 +1.0
      baz=62
P52A  Corning           39.72 282    P      P       16 25 24.4 +0.6
      baz=64
U56A  King              40.02 276    IAmb   IAmb    16 25 31.5
      comp=Z,46nm,1.3s
ACSO  Alum Creek Sta    40.04 283    P      P       16 25 27.0 +0.5
      baz=64
Q52A  Bidwell           40.11 281    IAmb   IAmb    16 25 32.0
      comp=Z,33nm,1.1s
R53A  Hurricane         40.18 280    P      P       16 25 26.2 -1.4
TORD  Torodi Ar. Bea    40.66 132    P      P       16 25 30.9 -0.8
      comp=Z,18nm,1.1s,baz=327,slow=5.1,SNR=52
TORD                                 LR     LR      16 41 23.5
      comp=Z,924nm,18.2s,baz=325,slow=35
TORD  Torodi Ar. Bea    40.66 132    P      P       16 25 30.1 -1.7
Q51A  Peebles           40.83 282    P      P       16 25 33.6 +0.6
Q51A                                 IAmb   IAmb    16 25 38.2
      comp=Z,51nm,1.6s
V55A  Taylorsville      40.85 276    P      P       16 25 34.5 +1.3
V55A                                 IAmb   IAmb    16 25 35.9
      comp=Z,31nm,1.2s
RES   Resolute Bay      41.01 338    P      P       16 25 34.6 +0.6
      comp=Z,3.3nm,0.9s,baz=70,slow=7.0,SNR=8.7
RES                                  LR     LR      16 40 07.3
      comp=Z,180nm,19.6s,baz=44,slow=33
OBN   Obninsk           41.20  52⇑eP      P       16 25 36.9 +1.1
OBN                                i                16 25 45.3
OBN                                e                16 27 12.5
OBN                                  pmax   pmax
      comp=Z,45nm,1.7s
OBN                                  MLR    MLR
      comp=Z,485nm,19.0s
KMSC  Kings Mountain    41.29 275    P      P       16 25 37.2 +0.3
      baz=59
KLMR  Klimovskoe        41.58  43  eP      P       16 25 33.4 -5.4
KLMR                               e                16 27 32.3
KLMR                                 pmax   pmax
      comp=Z,22nm,1.4s
KLMR  Klimovskoe        41.58  43  eP      P       16 25 33.5 -5.3
KLMR                                 AMP            16 25 50.3
      comp=Z,22nm,1.4s
KLMR                               ePcP    PcP     16 27 32.4 -3.3
R50A  Paris             41.85 281    IAmb   IAmb    16 25 46.0
      comp=Z,45nm,1.4s
TZTN  Tazewell          42.15 278    P      P       16 25 44.5 +0.7
      baz=60
V52A  Sevierville       42.53 278    P      P       16 25 46.9 -0.1
V52A                                 IAmb   IAmb    16 25 51.9
      comp=Z,30nm,1.4s
TKL   Tuckaleechee C    42.74 277    LR     LR      16 43 36.0
      comp=Z,288nm,18.0s,baz=80,slow=36
BLO   Bloomington       42.96 283    P      P       16 25 50.6 +0.2
BLO                                  pmax   pmax
      comp=Z,18nm,0.8s
BLO   Bloomington       42.96 283    P      P       16 25 50.6 +0.2
BLO                                  IAmb   IAmb    16 25 54.8
      comp=Z,18nm,0.8s
TIC   Toumodi           43.23 145  eP      P       16 25 52.3 -0.5
LPSR  Galich'ya Gora    43.23  55  eP      P       16 25 52.4  0.0
LPSR                                 pmax   pmax
      comp=Z,30nm,1.3s
DBIC  Dimbokro          43.27 145    P      P       16 25 53.1  0.0
      comp=Z,8.3nm,0.9s,baz=354,slow=8.6,SNR=12
DBIC                                 LR     LR      16 41 54.7
      comp=Z,508nm,21.7s,baz=346,slow=33
DBIC  Dimbokro          43.27 145    P      P       16 25 52.1 -1.0
DBIC                                 pmax   pmax
      comp=Z,62nm,1.8s
DBIC  Dimbokro          43.27 145    P      P       16 25 52.1 -1.0
DBIC                                 IAmb   IAmb    16 25 54.6
      comp=Z,62nm,1.8s
CPCT  Cooper Cave       43.38 278    P      P       16 25 54.6 +0.8
KIC   Kosan Boka        43.60 145  eP      P       16 25 55.3 -0.5
      comp=Z,12nm,1.0s
LIC   Lamto             43.61 146  eP      P       16 25 55.2 -0.6
      comp=Z,47nm,1.3s
GOGA  Godfrey           43.70 274    P      P       16 25 56.6 +0.2
      baz=58
VSR   Storozhevoye      43.82  57  eP      P       16 25 57.2  0.0
VSR                                  pmax   pmax
      comp=Z,20nm,1.3s
JFWS  Jewell Farm       43.82 290    P      P       16 25 57.2 -0.1
      baz=65
VORD  Divnogorie        43.98  57  eP      P       16 25 58.7 +0.3
VORD                                 pmax   pmax
      comp=Z,10.0nm,1.0s
W50A  Signal Mountai    44.06 278    IAmb   IAmb    16 26 04.5
      comp=Z,39nm,1.2s
ULM   Lac du Bonnet     44.54 302    LR     LR      16 42 57.5
      comp=Z,937nm,18.8s,baz=82,slow=34
Q44A  Meyer Farm, Va    44.80 284    IAmb   IAmb    16 26 09.4
      comp=Z,24nm,1.0s
V48A  Smith Brothers    44.84 279    IAmb   IAmb    16 26 10.2
      comp=Z,15nm,0.7s
BRTR  Keskin Array B    44.88  74    LR     LR      16 45 29.0
      comp=Z,286nm,18.7s,baz=302,slow=37
BRTR  Keskin Array B    44.88  74    P      P       16 26 05.9 -0.1
BRTR  Keskin Array B    44.88  74    P      P       16 26 05.9 -0.1
MDP   Montagnes des     45.28 216    LR     LR      16 40 17.4
      comp=Z,190nm,19.0s,baz=44,slow=30
VRH   Novokhopyorsk     45.33  56  eP      P       16 26 09.6 +0.4
VRH                                  pmax   pmax
      comp=Z,20nm,1.5s
WVT   Waverly           45.34 280    P      P       16 26 08.8 -0.8
WVT                                  pmax   pmax
      comp=Z,29nm,1.5s
WVT   Waverly           45.34 280    P      P       16 26 08.8 -0.8
WVT                                  IAmb   IAmb    16 26 11.4
      comp=Z,29nm,1.5s
WVT   Waverly           45.34 280    P      P       16 26 10.2 +0.6
      baz=59
SLM   Saint Louis       45.76 285    P      P       16 26 13.6 +0.7
SLM                                  pmax   pmax
      comp=Z,23nm,0.5s
SLM   Saint Louis       45.76 285    P      P       16 26 13.6 +0.7
FVM   French Village    46.21 284    IAmb   IAmb    16 26 20.5
      comp=Z,22nm,1.1s
CCM   Cathedral Cave    46.74 285    P      P       16 26 20.3 -0.2
CCM                                  pmax   pmax
      comp=Z,22nm,1.1s
CCM   Cathedral Cave    46.74 285    P      P       16 26 20.3 -0.2
CCM   Cathedral Cave    46.74 285    P      P       16 26 20.5 -0.1
      baz=60
BNN   Bunyan            46.80  74    P      P       16 26 20.9 -0.3
ECSD  EROS Data Cent    47.64 294    P      P       16 26 27.0 -0.5
ECSD                                 IAmb   IAmb    16 26 36.3
      comp=Z,16nm,1.4s
ECSD  EROS Data Cent    47.64 294    P      P       16 26 27.0 -0.5
      baz=63
LCAR  Lake Charles      47.68 282    P      P       16 26 27.3 -0.6
LCAR                                 IAmb   IAmb    16 26 28.7
      comp=Z,17nm,1.5s
MDND  Maddock           47.73 300    P      P       16 26 27.5 -0.7
      baz=65
MALT  Malatya           48.82  73    P      P       16 26 39.2 +2.4
KIV   Kislovodsk        48.91  65  eP      P       16 26 38.0 +0.6
KIV                                  pmax   pmax
      comp=Z,7.0nm,1.0s
KIV                                  MLR    MLR
      comp=Z,175nm,16.0s
E28A  Huff              48.95 299    P      P       16 26 37.8 +0.2
KBZ   Khabaz            49.15  65    LR     LR      16 47 22.0
      comp=Z,299nm,21.8s,baz=308,slow=36
BGNE  Belgrade          49.73 292    P      P       16 26 44.1 +0.4
      baz=61
YKA   Yellowknife Ar    49.84 323    P      P       16 26 43.8 -0.2
      comp=Z,1.1nm,1.0s,baz=68,slow=7.1,SNR=8.5
YKA                                  PcP    PcP     16 28 04.0 -0.4
      comp=Z,1.4nm,1.0s,baz=66,slow=3.6,SNR=6.0
YKA                                  LR     LR      16 45 01.2
      comp=Z,299nm,19.8s,baz=0.0,slow=33
YKA   Yellowknife Ar    49.84 323  i P      P       16 26 44.4 +0.3
YKA                                  pmax   pmax
      comp=Z,1.0nm,1.0s
YKA   Yellowknife Ar    49.84 323    P      P       16 26 43.1 -1.0
BAUV  El Baul           49.84 236    P      P       16 26 44.7  0.0
KSU1  Kansas State U    49.85 289    P      P       16 26 44.4 -0.2
      baz=60
A36M  Sachs Harbour     49.96 336    P      P       16 26 44.6 -0.2
A36M  Sachs Harbour     49.96 336    P      P       16 26 44.1 -0.8
      baz=67
W39A  Magazine          49.96 283    P      P       16 26 45.7 +0.2
      baz=57
MCPB  Macapa, AP        50.03 212  eP      P       16 26 46.5 +0.5
MIAR  Mount Ida         50.17 282    P      P       16 26 47.9 +0.9
      baz=57
DGMT  Dagmar            50.23 303    P      P       16 26 48.2 +0.9
DGMT                                 IAmb   IAmb    16 26 48.9
      comp=Z,27nm,1.2s
DGMT  Dagmar            50.23 303    P      P       16 26 47.9 +0.5
      baz=63
ZEI   Tsey              50.24  66  eP      P       16 26 46.4 -1.3
ZEI                                  pmax   pmax
      comp=Z,7.0nm,1.2s
Z41A  Richland Creek    50.34 280    P      P       16 26 48.8 +0.6
      baz=56
TMAB  Tom-Au,PA,Br      50.54 206  eP      P       16 26 50.1 +0.2
AKH   Akhalkalaki       50.65  67    P      P       16 26 54.9 +4.1
NBPS  Pedro II - PI     50.72 197  eP      P       16 26 51.6 +0.2
BOAV  Boa Vista         51.24 223  eP      P       16 26 55.9 +0.7
SDV   Santo Domingo     51.43 239  eP      P       16 26 57.5 +0.6
NBPB  Pedra_Branca-C    51.48 195  eP      P       16 26 57.9 +1.0
NBPV  Pedro Velho       51.70 189  eP      P       16 26 59.0 +0.4
RSSD  Black Hills       52.18 298    P      P       16 27 01.7 -0.6
      baz=60
MALB  Monte Alegre      52.25 214  eP      P       16 27 04.3 +1.5
LAO   LASA Array        52.27 302    P      P       16 27 02.2 -0.6
      baz=61,SNR=6.0
DDFL  Dedoflistskaro    52.34  66    P      P       16 27 08.4 +5.1
ARU   Arti              52.38  44c iP      P       16 27 04.2 +1.0
ARU                                                 16 29 00.5
ARU                                  S      S       16 34 32.7 +4.4
ARU                                  SS     SS      16 38 05.6 +0.2
ARU                                  pmax   pmax
      comp=Z,14nm,1.4s
ARU   Arti              52.38  44    P      P       16 27 03.8 +0.5
ARU                                  IAmb   IAmb    16 27 09.8
      comp=Z,18nm,1.4s
MAK   Makhachkala       52.46  64  eP      P       16 27 00.2 -3.8
MAK                                eS      S       16 34 24.7 -5.0
MAK                                eSS     SS      16 38 06.1 -1.2
MAK                                eSSS    SSS     16 39 45.9
MAK                                  MLR    MLR
      comp=Z,307nm,17.0s
NBLV  Livramento - P    52.84 191  eP      P       16 27 07.6 +0.5
SJCC  San Jacinto, C    53.48 244    IAmb   IAmb    16 27 14.4
      comp=Z,21nm,1.1s
WMOK  Wichita Mounta    53.65 285    P      P       16 27 13.0  0.0
      baz=56
EGMT  Eagleton          53.72 305    P      P       16 27 13.3 -0.1
      baz=60
H10N2 ASCENSION HYDR54.08 163    T      T       17 25 08.7
      baz=349,slow=75,SNR=22
H10N3 ASCENSION HYDR54.09 163    T      T       17 25 08.7
      baz=349,slow=75,SNR=19
H10N1 ASCENSION HYDR54.10 163    T      T       17 25 09.1
      baz=349,slow=75,SNR=23
INK   Inuvik            54.19 334    P      P       16 27 15.8 -0.6
      comp=Z,5.9nm,1.0s,baz=53,slow=6.9,SNR=11
INK                                  LR     LR      16 47 11.0
      comp=Z,255nm,19.6s,baz=57,slow=32
INK   Inuvik            54.19 334    P      P       16 27 15.4 -0.9
      baz=57,SNR=8.5
K22A  Casper            54.49 297    P      P       16 27 18.8 -0.4
      baz=58,SNR=8.4
PRPB  Parauapebas       54.66 207  eP      P       16 27 20.7 +0.2
GCMT  Greycliff         54.80 302    P      P       16 27 21.6 +0.3
RLMT  Red Lodge         54.90 301    IAmb   IAmb    16 27 27.0
      comp=Z,23nm,1.2s
RLMT  Red Lodge         54.90 301    P      P       16 27 22.2  0.0
      baz=59,SNR=7.7
N23A  Red Feather La    55.05 295    P      P       16 27 22.9 -0.5
      baz=58,SNR=11
ZARC  Zaragoza, Cauc    55.12 242    IAmb   IAmb    16 27 25.8
      comp=Z,13nm,1.0s
ITTB  Itaituba          55.13 214  eP      P       16 27 24.0 +0.2
H10S3 ASCENSION HYDR55.14 164    T      T       17 26 28.8
      baz=232,slow=74,SNR=16
H10S2 ASCENSION HYDR55.15 164    T      T       17 26 27.4
      baz=348,slow=74,SNR=4.9
ISCO  Idaho Springs     55.43 294    P      P       16 27 26.3 +0.1
      baz=57
AMTX  Amarillo          55.54 287    IAmb   IAmb    16 27 30.4
      comp=Z,21nm,1.2s
AMTX  Amarillo          55.54 287    P      P       16 27 27.7 +0.9
      baz=55
Q24A  Divide            55.58 293    P      P       16 27 27.1 -0.2
      baz=57
YMP   Mirror Lake Pl    55.64 301    P      P       16 27 27.9 +0.2
YMP                                  IAmb   IAmb    16 27 29.4
      comp=Z,14nm,1.0s
BOZ   Bozeman (W)       56.07 303    IAmb   IAmb    16 27 32.0
      comp=Z,19nm,1.1s
BOZ   Bozeman (W)       56.07 303    P      P       16 27 30.1 -0.4
      baz=58,SNR=13
H17A  Grant Village     56.07 301    P      P       16 27 32.3 +1.6
      baz=58
T25A  Trinidad          56.10 291    P      P       16 27 30.0 -1.0
      baz=56
MACA  Manacapuru-AM     56.18 220  eP      P       16 27 32.0 +0.6
BW06  Boulder Array     56.32 299    P      P       16 27 31.1 -1.4
      baz=57,SNR=9.7
PDAR  Pinedale Array    56.32 299    P      P       16 27 31.8 -0.7
      comp=Z,5.2nm,1.0s,baz=65,slow=8.4,SNR=22
PDAR                                 LR     LR      16 50 20.1
      comp=Z,688nm,18.5s,baz=58,slow=35
SDCO  Great Sand Dun    56.48 292    P      P       16 27 34.1 +0.3
      baz=56
LOHW  Long Hollow       56.51 300    IAmb   IAmb    16 27 35.8
      comp=Z,11nm,1.1s
MOOW  Moose Ponds       56.52 300    IAmb   IAmb    16 27 35.3
      comp=Z,15nm,1.2s
NRIK  Noril'sk          56.52  23    P      P       16 27 33.6 +0.4
      comp=Z,2.7nm,0.9s,baz=352,slow=2.5,SNR=3.9
NRIK  Noril'sk          56.52  23⇑eP      P       16 27 35.1 +1.9
NRIK                                 pmax   pmax
      comp=Z,7.0nm,1.2s
NRIK  Noril'sk          56.52  23    P      P       16 27 33.6 +0.4
NBLA  Lagarto - SE      56.53 192  eP      P       16 27 34.6 +0.8
SMTB  Santa Maria do    56.54 203  eP      P       16 27 34.6 +0.7
DLMT  Dillon            56.77 303    IAmb   IAmb    16 27 38.0
      comp=Z,15nm,1.1s
NBPN  Ponto Novo - B    56.77 194  eP      P       16 27 35.9 +0.4
JCT   Junction City     56.80 281    P      P       16 27 35.5 -0.3
      baz=53
MSTX  Muleshoe          56.80 287    P      P       16 27 35.8  0.0
MSTX  Muleshoe          56.80 287    P      P       16 27 36.0 +0.1
      baz=55
ROSC  El Rosal          56.85 239    LR     LR      16 48 32.1
      comp=Z,155nm,20.7s,baz=49,slow=32
O20A  White River Ci    56.93 296    IAmb   IAmb    16 27 45.4
      comp=Z,15nm,1.4s
O20A  White River Ci    56.93 296    P      P       16 27 36.2 -0.7
      baz=56
MCMT  McKenzie Canyo    57.21 303    P      P       16 27 38.9 +0.2
AHID  Auburn Hatcher    57.28 300    IAmb   IAmb    16 28 01.9
      comp=Z,11nm,1.1s
S22A  4UR Ranch, Cre    57.35 293    P      P       16 27 39.5 -0.4
      baz=56
NPGB  Novo Progresso    57.43 213  eP      P       16 27 39.9 -0.4
I29M  Ogilvie Camp,     57.44 332    P      P       16 27 39.4 -0.4
      baz=52,SNR=13
RDMU  Red Mountain      57.53 297    IAmb   IAmb    16 27 42.9
      comp=Z,17nm,1.1s
833A  Chaparral WMA,    57.81 279    P      P       16 27 42.8 -0.1
      baz=52
M31M  Drury Creek, Y    57.98 328    P      P       16 27 43.0 -0.7
      baz=53
BMAR  Burnt Mountain    58.05 336    P      P       16 27 43.3 -0.8
A21K  Barrow            58.26 343    IAmb   IAmb    16 27 53.6
      comp=Z,18nm,1.2s
A21K  Barrow            58.26 343    P      P       16 27 45.5 +0.1
      baz=41
P18A  Preston Nutter    58.49 296    IAmb   IAmb    16 27 49.4
      comp=Z,11nm,1.1s
TOLK  Toolik Lake Re    58.58 339    P      P       16 27 47.8  0.0
TOLK                                 IAmb   IAmb    16 27 55.5
      comp=Z,25nm,1.4s
TOLK  Toolik Lake Re    58.58 339    P      P       16 27 47.5 -0.3
      baz=45,SNR=5.7
DAWY  Dawson            58.62 331    P      P       16 27 47.3 -0.8
      baz=50,SNR=9.3
ANMO  Albuquerque       58.71 290    LR     LR      16 52 29.3
      comp=Z,216nm,20.0s,baz=48,slow=35
ANMO  Albuquerque       58.71 290    P      P       16 27 48.9 -0.5
      baz=54
EGAK  Eagle             58.75 333    P      P       16 27 48.3 -0.6
EGAK                                 IAmb   IAmb    16 27 50.0
      comp=Z,17nm,1.4s
EGAK  Eagle             58.75 333    P      P       16 27 48.6 -0.4
      baz=50
MVCO  Mesa Verde        58.75 293    P      P       16 27 50.0 +0.3
      baz=55
FYU   Fort Yukon        58.82 335    P      P       16 27 50.0 +0.7
HLID  Hailey            58.85 302    IAmb   IAmb    16 27 52.4
      comp=Z,11nm,1.2s
HLID  Hailey            58.85 302    P      P       16 27 50.4 +0.2
      baz=56,SNR=8.2
HVU   Hansel Valley     58.86 300    P      P       16 27 49.9 -0.3
HVU                                  pmax   pmax
      comp=Z,12nm,1.1s
HVU   Hansel Valley     58.86 300    P      P       16 27 49.9 -0.3
HVU                                  IAmb   IAmb    16 27 51.8
      comp=Z,12nm,1.1s
P17A  Butcher Ranch,    58.90 296    IAmb   IAmb    16 27 52.1
      comp=Z,13nm,1.3s
PLID  Pearl Lake        58.93 304    IAmb   IAmb    16 28 16.1
      comp=Z,11nm,1.4s
N31M  Braeburn, Yuko    58.94 328    P      P       16 27 49.7 -0.7
      baz=52
B08A  Colville Reser    58.98 309    IAmb   IAmb    16 27 51.6
      comp=Z,20nm,1.4s
WHY   Whitehorse        59.11 327    P      P       16 27 51.4 -0.3
      baz=52
SDBA  SAO DESIDERIO     59.25 199  eP      P       16 27 53.3 +0.3
BNM   Barren Site       59.29 289    P      P       16 27 54.4 +0.9
TMUT  Trail Mountain    59.29 296    IAmb   IAmb    16 27 55.2
      comp=Z,16nm,1.0s
GDU01 Guandu, BA        59.48 193  eP      P       16 27 54.8 +0.3
Q16A  Castle Valley     59.49 296    IAmb   IAmb    16 27 56.2
      comp=Z,14nm,1.4s
JTS   Las Juntas de     59.62 253    LR     LR      16 48 35.2
      comp=Z,189nm,20.7s,slow=31
PRP   Porcupine Dome    59.63 335    IAmb   IAmb    16 27 57.1
      comp=Z,21nm,1.4s
PRP   Porcupine Dome    59.63 335    P      P       16 27 55.2  0.0
      baz=47,SNR=6.9
J26L  Joseph Creek      59.71 333    P      P       16 27 55.0 -0.7
      baz=48,SNR=5.2
MTO3  Montecristo       59.76 260    IAmb   IAmb    16 28 04.3
      comp=Z,16nm,1.3s
COLD  Coldfoot          59.76 338    IAmb   IAmb    16 27 57.6
      comp=Z,14nm,1.2s
COLD  Coldfoot          59.76 338    P      P       16 27 55.8 -0.2
      baz=44,SNR=8.0
MFID  Camas Ranch       59.78 303    P      P       16 27 56.1 -0.4
DUG   Dugway, Tooele    59.79 298    P      P       16 27 56.7  0.0
      baz=55,SNR=12
PEXB  Peixe             59.83 203  eP      P       16 27 57.6 +0.6
BRVK  Borovoye          59.92  44⇑eP      P       16 27 58.5 +1.3
BRVK                                 pmax   pmax
      comp=Z,9.0nm,1.7s
BRVK  Borovoye          59.92  44    P      P       16 27 57.2  0.0
L27K  Beaver Creek,     60.10 331    P      P       16 27 57.7 -0.7
      baz=48
H24K  Noodor Dome       60.11 336    IAmb   IAmb    16 28 00.2
      comp=Z,12nm,1.2s
H24K  Noodor Dome       60.11 336    P      P       16 27 58.3  0.0
      baz=45,SNR=5.5
TXAR  Lajitas Array     60.16 283    P      P       16 27 59.8 +0.4
      comp=Z,5.1nm,1.1s,baz=79,slow=6.5,SNR=18
TXAR                                 LR     LR      16 53 09.0
      comp=Z,729nm,21.9s,baz=0.0,slow=35
TXAR  Lajitas Array     60.16 283    P      P       16 27 58.9 -0.5
TXAR  Lajitas Array     60.16 283    P      P       16 27 58.9 -0.5
BVCY  Beaver Creek      60.20 330    P      P       16 27 58.9 -0.1
      baz=49
SCRK  Sand Creek        60.20 333    P      P       16 27 59.2 +0.1
SCRK                                 IAmb   IAmb    16 28 00.9
      comp=Z,13nm,1.2s
SCRK  Sand Creek        60.20 333    P      P       16 27 58.2 -1.0
      baz=47,SNR=8.3
DOT   Dot Lake          60.45 333    IAmb   IAmb    16 28 02.4
      comp=Z,13nm,1.2s
YUK3  Moose Creek       60.48 330    P      P       16 28 00.1 -1.1
      baz=49
POKR  Poker Plat Res    60.48 335    P      P       16 28 01.4 +0.5
POKR  Poker Plat Res    60.48 335    P      P       16 28 00.3 -0.7
      baz=45,SNR=8.0
ILAR  Eielson Array     60.56 334    P      P       16 28 01.5 +0.1
      comp=Z,3.5nm,1.0s,baz=42,slow=4.4,SNR=19
ILAR                                 LR     LR      16 55 08.3
      comp=Z,73nm,18.4s,baz=86,slow=37
ILAR  Eielson Array     60.56 334    P      P       16 28 00.7 -0.7
ILAR  Eielson Array     60.56 334    P      P       16 28 00.7 -0.7
M27K  Edge Creek, AK    60.59 331    P      P       16 28 01.8 -0.1
      baz=48
A04D  Lummi Island      60.61 311    P      P       16 28 00.6 -1.3
      baz=54
L26K  Log Cabin Wild    60.64 332    IAmb   IAmb    16 28 03.8
      comp=Z,10.0nm,1.1s
L26K  Log Cabin Wild    60.64 332    P      P       16 28 01.5 -0.5
      baz=47
RIDG  Independent Ri    60.64 333    IAmb   IAmb    16 28 04.0
      comp=Z,18nm,1.3s
RIDG  Independent Ri    60.64 333    P      P       16 28 01.4 -0.6
      baz=46
COLA  College           60.78 335⇑iP      P       16 28 03.5 +0.6
COLA                                 pmax   pmax
      comp=Z,6.0nm,1.1s
W18A  Petrified Fore    60.78 292    P      P       16 28 03.8 +0.2
      baz=53
MENT  Mentasta          60.83 332    P      P       16 28 03.4 +0.1
MDM   Murphy Dome       60.84 335    IAmb   IAmb    16 28 05.4
      comp=Z,17nm,1.2s
HDA   Harding Lake      60.84 334    IAmb   IAmb    16 28 04.7
      comp=Z,17nm,1.2s
HDA   Harding Lake      60.84 334    P      P       16 28 03.1 -0.2
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	baz=45						
CCB	Clear Creek Bu	60.93	335	IAmb	IAmb	16 28 05.2	
	comp=Z,16nm,1.4s						
I23K	Minto, Yukon-K	61.03	336	P	P	16 28 04.3	-0.3
	baz=44,SNR=12						
121A	Cookes Peak, D	61.03	288	P	P	16 28 05.3	-0.1
	baz=53						
CLDB	Colider	61.11	212	eP	P	16 28 06.2	+0.6
CTG	Chitna Glacier	61.34	329	P	P	16 28 06.5	-0.4
	baz=48						
NEA2	Nenana	61.35	335	P	P	16 28 06.3	-0.5
	baz=44,SNR=12						
PAX	Paxson	61.38	332	IAmb	IAmb	16 28 08.7	
	comp=Z,20nm,1.4s						
PAX	Paxson	61.38	332	P	P	16 28 06.7	-0.5
	baz=46,SNR=5.3						
SPR3	Spring Creek 3	61.44	298	P	P	16 28 07.6	-0.5
SPR3				IAmb	IAmb	16 28 10.6	
	comp=Z,12nm,1.2s						
SZCU	Shurtz Canyon	61.48	296	IAmb	IAmb	16 28 12.8	
	comp=Z,14nm,1.1s						
MLY	Manley	61.52	336	IAmb	IAmb	16 28 09.5	
	comp=Z,13nm,1.2s						
MLY	Manley	61.52	336	P	P	16 28 07.8	-0.2
	baz=43,SNR=6.3						
WUAZ	Wupatki	61.62	293	P	P	16 28 08.1	-1.2
	baz=53						
H21K	Melozitna Rive	61.63	337	IAmb	IAmb	16 28 12.9	
	comp=Z,9.0nm,1.1s						
H21K	Melozitna Rive	61.63	337	P	P	16 28 08.5	-0.1
	baz=41,SNR=6.9						
IMAR	Indian Mountai	61.64	338	P	P	16 28 08.6	-0.1
TBTG	Tabatinga, AM	61.66	229	eP	P	16 28 09.8	+0.3
HARP	HAARP	61.68	332	P	P	16 28 07.9	-1.2
	baz=46						
CCUT	Cedar City	61.69	296	IAmb	IAmb	16 28 14.2	
	comp=Z,13nm,1.1s						
I21K	Tanana	61.76	337	IAmb	IAmb	16 28 11.2	
	comp=Z,15nm,1.2s						
I21K	Tanana	61.76	337	P	P	16 28 08.6	-1.0
	baz=42						
DHY	Denali Highway	61.92	333	P	P	16 28 09.0	-1.9
	baz=44						
MCK	McKinley	61.94	334	P	P	16 28 09.1	-1.6
	baz=44						
GEYT	Alibeck	61.98	63	LR	LR	16 55 27.2	
	comp=Z,90nm,21.1s,baz=35,slow=36						
N25K	Chitina, Valde	62.05	331	P	P	16 28 10.3	-1.4
	baz=46						
CRQE	Cirque	62.11	330	P	P	16 28 10.4	-1.7
	baz=46						
PDRB	Porto dos Gac	62.13	212	eP	P	16 28 13.3	+0.7
M24K	Tolsona, Glenn	62.22	332	P	P	16 28 11.6	-1.2
	baz=45						
BPAW	Bear Paw Mtn.	62.28	335	P	P	16 28 11.8	-1.3
	baz=42						
BMN	Battle Mountai	62.37	301	IAmb	IAmb	16 28 16.2	
	comp=Z,14nm,1.0s						
TIXI	Tiksi	62.39	8	⇑eP	P	16 28 14.9	+1.2
TIXI	Tiksi	62.39	8	P	P	16 28 13.0	-0.6
TIXI				IAmb	IAmb	16 28 21.7	
	comp=Z,11nm,1.2s						
WAT6	Susitna Watana	62.40	333	P	P	16 28 13.3	-0.8
	baz=44,SNR=5.3						
WAT1	Susitna Watana	62.47	334	P	P	16 28 14.1	-0.3
	baz=43						
BMRM	Bremner River	62.49	331	P	P	16 28 14.2	-0.4
	baz=46						
TRF	Thorofare Moun	62.55	335	P	P	16 28 13.9	-1.3
	baz=42						
KLU	Klutina	62.58	331	P	P	16 28 14.9	-0.3
	baz=45						
R11A	Troy Canyon, C	62.61	298	IAmb	IAmb	16 28 17.2	
	comp=Z,12nm,1.4s						
R11A	Troy Canyon, C	62.61	298	P	P	16 28 16.1	+0.2
	baz=53						
CHUM	Lake Minchumin	62.83	336	P	P	16 28 16.7	0.0
	baz=41,SNR=5.2						
PRN	Pahroc Range	62.84	297	IAmb	IAmb	16 28 19.5	
	comp=Z,8.3nm,1.1s						
OTAV	Otavalo	62.99	240	P	P	16 28 17.6	-1.4
OTAV				pmax	pmax		
	comp=Z,27nm,1.5s						
OTAV	Otavalo	62.99	240	eP	P	16 28 19.7	+0.7
OTAV	Otavalo	62.99	240	P	P	16 28 17.6	-1.4
J05D	Fort Rock, OR	63.03	305	P	P	16 28 18.2	-0.4
	baz=52						
CAST	Castle Rocks	63.12	335	P	P	16 28 17.7	-0.9
	baz=41,SNR=5.4						
BDFB	Brasilia	63.13	202	P	P	16 28 20.1	+0.7
	comp=Z,9.7nm,1.0s,baz=16,slow=7.9,SNR=5.9						
BDFB	Brasilia	63.13	202	P	P	16 28 19.2	-0.1
BDFB				pmax	pmax		
	comp=Z,14nm,1.2s						
BDFB	Brasilia	63.13	202	P	P	16 28 19.2	-0.1
BDFB				IAmb	IAmb	16 28 22.6	
	comp=Z,14nm,1.2s						
J20K	Nowinta River	63.13	337	IAmb	IAmb	16 28 20.0	
	comp=Z,12nm,1.3s						
J20K	Nowinta River	63.13	337	P	P	16 28 18.1	-0.6
	baz=40						
H04D	Lebanon	63.14	307	P	P	16 28 18.7	-0.3
	baz=52						
SML	Sawmill	63.15	333	P	P	16 28 18.5	-0.5
	baz=43						
TUC	Tucson	63.18	290	P	P	16 28 20.4	+0.7
	baz=52						
MOD	Modoc Plateau	63.33	303	IAmb	IAmb	16 28 22.5	
	comp=Z,14nm,1.1s						
KNK	Knik Glacier	63.48	332	P	P	16 28 20.8	-0.3
	baz=43,SNR=6.0						
PMR	Palmer	63.57	333	IAmb	IAmb	16 28 29.4	
	comp=Z,12nm,0.9s						
PMR	Palmer	63.57	333	P	P	16 28 21.1	-0.5
	baz=43						
K04D	Chiloquin, OR	63.74	305	P	P	16 28 22.9	-0.3
	baz=52						
KVN	Kaiserville	63.75	300	P	P	16 28 23.1	-0.4
KVN				pmax	pmax		
	comp=Z,21nm,1.0s						
KVN	Kaiserville	63.75	300	P	P	16 28 23.1	-0.4
M22K	Willow	63.76	333	P	P	16 28 22.7	-0.2
	baz=42						
PWL	Port Wells	63.84	332	P	P	16 28 22.7	-0.8
	baz=43						
TPNV	Topopah Spring	63.88	297	P	P	16 28 24.7	+0.4
	baz=52						
TLIG	Tlapa	64.10	269	P	P	16 28 26.0	+0.1
NV11	Mina Array Sit	64.16	299	IAmb	IAmb	16 28 38.8	
	comp=Z,17nm,1.3s						
NVAR	Mina Array Bea	64.25	299	P	P	16 28 26.9	+0.1
	comp=Z,1.8nm,0.9s,baz=54,slow=6.6,SNR=9.0						
NVAR				LR	LR	16 55 33.2	
	comp=Z,392nm,18.4s,baz=84,slow=35						
NVAR	Mina Array Bea	64.25	299	P	P	16 28 26.7	-0.2
ARAG	Araguaiana, MT	64.27	206	eP	P	16 28 27.5	+0.8
M04C	Macdoel	64.31	304	P	P	16 28 26.8	-0.2
	baz=52						
L04D	Klamath Falls	64.31	305	P	P	16 28 26.7	-0.3
	baz=52						
LHV	Little Huntoon	64.49	299	IAmb	IAmb	16 28 30.4	
	comp=Z,16nm,1.1s						
FURC	Furnace Creek,	64.57	297	P	P	16 28 28.4	-0.2
	baz=52						
LCH	Last Change Ra	64.58	298	IAmb	IAmb	16 28 30.5	
	comp=Z,12nm,1.1s						
ETMB	Extrema	64.60	222	eP	P	16 28 28.4	-0.5
ETMB	Extrema	64.60	222	IAmb	IAmb	16 28 29.0	
	comp=Z,11nm,1.1s						
TTA	Tatalina	64.63	336	P	P	16 28 28.5	-0.2
	baz=38						
VILB	Vilhena	64.72	215	eP	P	16 28 30.1	+0.4
VILB	Vilhena	64.72	215	P	P	16 28 29.2	-0.5
GMRC	Granite Mounta	64.84	295	P	P	16 28 30.1	-0.6
	baz=51						
QSM	Queen of Sheba	64.88	296	IAmb	IAmb	16 28 39.1	
	comp=Z,12nm,1.2s						
IRM	Iron Mountain	64.90	294	P	P	16 28 30.3	-0.6
	baz=51						
TIN	Tinemaha, Big	65.06	298	P	P	16 28 31.5	-0.5
	baz=51						
O03E	Paynes Creek	65.22	303	P	P	16 28 32.9	0.0
	baz=51						
MPMC	Manual Prospec	65.22	297	P	P	16 28 33.6	+0.5
	baz=51,SNR=7.3						
GSC	Goldstone, Bar	65.26	296	P	P	16 28 33.6	+0.4
	baz=51						
TNA	Tin City	65.37	343	P	P	16 28 32.7	-0.7
	baz=30						
KURK	Kurchatov	65.42	42	P	P	16 28 34.2	+0.3
KURK				pmax	pmax		
	comp=Z,14nm,1.4s						
KURK	Kurchatov	65.42	42	P	P	16 28 34.2	+0.3
KURK				IAmb	IAmb	16 28 36.2	
	comp=Z,14nm,1.4s						
SALV	Santo Antonio	65.72	209	eP	P	16 28 37.4	+1.3
CMB	Columbia Colle	65.78	300	P	P	16 28 36.2	-0.4
CMB				pmax	pmax		
	comp=Z,13nm,1.2s						
CMB	Columbia Colle	65.78	300	P	P	16 28 36.2	-0.4
CMB				IAmb	IAmb	16 28 38.3	
	comp=Z,12nm,1.1s						
O20K	Slope Mountain	65.83	333	P	P	16 28 36.1	-0.4
	baz=40						
ZAA0	Zalesovo Array	65.98	37	P	P	16 28 38.3	+0.8
ZALV	Zalesovo Beam	65.98	37	P	P	16 28 37.9	+0.4
	comp=Z,0.4nm,0.3s,baz=303,slow=8.0,SNR=4.8						
ZALV				LR	LR	16 56 40.5	
	comp=Z,190nm,20.6s,baz=274,slow=35						
ZALV	Zalesovo Beam	65.98	37	i P	P	16 28 39.5	+2.0
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	65.98	37	P	P	16 28 37.0	-0.5
ISA	Isabella, Lake	66.09	297	IAmb	IAmb	16 28 40.2	
	comp=Z,20nm,1.5s						
ISA	Isabella, Lake	66.09	297	P	P	16 28 38.7	+0.2
	baz=51						
SWSC	Sam W. Stewart	66.09	293	P	P	16 28 38.4	-0.1
	baz=51						
CZSB	Cruzeiro do Su	66.13	230	eP	P	16 28 37.4	-1.5
CZSB	Cruzeiro do Su	66.13	230	P	P	16 28 37.0	-1.9
EDW2	Edwards Air Fo	66.28	296	P	P	16 28 39.8	0.0
	baz=50						
IKP	In-Ko-Pah, Jac	66.48	293	P	P	16 28 41.1	0.0
	baz=50						
PTLB	Pontes e Lacer	66.56	213	eP	P	16 28 42.4	+0.9
PTLB	Pontes e Lacer	66.56	213	P	P	16 28 42.0	+0.4
PTLB				IAmb	IAmb	16 28 43.2	
	comp=Z,14nm,1.1s						
BILL	Bilibino	66.67	354	i P	P	16 28 41.3	-0.3
BILL				i		16 28 47.5	
BILL				i		16 29 06.5	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
PP1B	Ponte de Pedra	67.02	208	eP	P	16 28 45.2	+0.8
Q19K	Cape Douglas,	67.06	333	P	P	16 28 43.5	-0.8
	baz=39						
P18K	Big Mountain,	67.20	334	P	P	16 28 44.2	-1.0
	baz=38						
BSCB	Bom Sucesso	67.54	197	eP	P	16 28 47.5	-0.3
AAK	Ala-Archa	68.70	51	⇓eP	P	16 28 57.8	+2.7
AAK				pmax	pmax		
	comp=Z,28nm,1.7s						
AAK	Ala-Archa	68.70	51	P	P	16 28 54.6	-0.6
MBAR	Mbarara	68.91	114	ceP	P	16 28 58.7	+1.9
LODK	Lodwar	68.99	107	P	P	16 28 55.0	-2.2
LODK				IAmb	IAmb	16 29 00.9	
	comp=Z,14nm,1.4s						
MK31	Makanchi Array	69.88	43	⇑eP	P	16 29 02.0	-0.2
MKAR	Makanchi Array	69.88	43	P	P	16 29 02.8	+0.6
	comp=Z,3.5nm,1.1s,baz=330,slow=4.6,SNR=9.1						
MKAR				LR	LR	17 00 59.1	
	comp=Z,159nm,18.2s,baz=302,slow=37						
MKAR	Makanchi Array	69.88	43	i P	P	16 29 03.7	+1.5
MKAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MKAR	Makanchi Array	69.88	43	P	P	16 29 01.3	-0.9
DGZ	Jazzator, Alta	70.17	39	⇑eP	P	16 29 04.8	+0.8
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.3s						
LPAZ	La Paz	71.13	221	P	P	16 29 10.8	+0.1
	comp=Z,8.7nm,1.1s,baz=3.8,slow=6.4,SNR=11						
LPAZ	La Paz	71.13	221	P	P	16 29 09.9	-0.9
LPAZ	La Paz	71.13	221	eP	P	16 29 11.0	+0.2
LPAZ	La Paz	71.13	221	P	P	16 29 09.8	-0.9
KSH	Kashi	71.64	52	P	P	16 29 16.4	+3.2
KSH				pP	pwP	16 29 21.1	+1.3
KSH				pmax	pmax		
	comp=Z,14nm,1.2s						
KSH				LR	LR		
	comp=Z,450nm,13.1s						
KSH				LR	LR		
	comp=Z,390nm,15.1s						
KSH				LR	LR		
	comp=Z,540nm,14.8s						
YAK	Yakutsk	71.71	11	eP	P	16 29 12.9	-0.1
YAK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
YAK	Yakutsk	71.71	11	P	P	16 29 12.0	-1.0
YAK				IAmb	IAmb	16 29 19.6	
	comp=Z,21nm,1.4s						
NNA	Nana	71.91	231	ceP	P	16 29 15.9	+1.1
NNA				pmax	pmax		
	comp=Z,49nm,1.7s						
BOD	Bodaibo	72.68	20	eP	P	16 29 18.3	-0.6
BOD				pmax	pmax		
	comp=Z,23nm,1.5s						
KMBO	Kilima Mbogo	73.60	109	P	P	16 29 27.1	+1.8
	comp=Z,0.8nm,0.3s,baz=351,slow=7.6,SNR=3.8						
KMBO	Kilima Mbogo	73.60	109	P	P	16 29 26.0	+0.7
KMBO				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KMBO	Kilima Mbogo	73.60	109	P	P	16 29 25.9	+0.7
WMQ	Urumqi	74.65	43	eP	P	16 29 33.5	+2.7
WMQ				pP	pwP	16 29 37.9	+0.6
WMQ				sP	PcP	16 29 42.8	-2.3
WMQ				pmax	pmax		
	comp=Z,15nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,270nm,4.9s						
PB08	IPOC Station P	74.96	220	IAmb	IAmb	16 29 33.7	
	comp=Z,19nm,1.0s						
CPUP	Villa Florida	75.95	207	P	P	16 29 37.8	-0.3
	comp=Z,7.3nm,1.1s,baz=344,slow=6.8,SNR=5.6						
LVC	Limon Verde	77.01	218	eP	P	16 29 45.3	+0.6
CPSB	Cacapava Do Su	78.64	202	eP	P	16 29 53.9	+0.7
SONM	Songino Array	79.18	29	P	P	16 29 57.0	+0.7
	comp=Z,3.9nm,1.1s,baz=326,slow=5.4,SNR=13						
SONM	Songino Array	79.18	29	P	P	16 29 55.6	-0.7
SONM				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SONM	Songino Array	79.18	29	P	P	16 29 55.6	-0.7
ZEA	Zeya	79.29	15	eP	P	16 29 57.1	+0.5
ULN	Ulaanbaatar	79.38	29	ceP	P	16 29 58.3	+0.9
ULN				pmax	pmax		
	comp=Z,23nm,2.5s						
ULN	Ulaanbaatar	79.38	29	P	P	16 29 56.4	-1.0
ULN				IAmb	IAmb	16 30 05.1	
	comp=Z,20nm,1.4s						
GTA	Gaotai	83.69	38	eP	P	16 30 20.6	+0.2
GTA				pP	sP	16 30 25.3	-0.2
GTA				sP	pwP	16 30 27.9	+0.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KLR	Kul'dur	84.40	13	⇑eP	P	16 30 24.2	+0.6
KLR				pmax	pmax		
	comp=Z,11nm,1.4s						
HHC	Hu-ho-hao-te	87.08	29	eP	P	16 30 35.8	-1.4
HHC				pmax	pmax		
	comp=Z,13nm,1.2s						
HHC				pmax	pmax		
	comp=Z,77nm,6.2s						
NJ2	Nanjing	97.51	28	eP	P	16 31 24.8	-0.8
GYA	Guiyang	97.68	40	⇓P	P	16 31 25.0	-1.6
GYA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SYO	Syowa Base	124.16	156	⇑ePdiff	Pdif	16 33 24.8	+1.9
VNDA	Vanda	147.24	184	PKPbc	PKPab	16 37 35.0	-0.1
	comp=Z,4.2nm,1.0s,baz=243,slow=4.5,SNR=3.6						
VNDA	Vanda	147.24	184	PKP2	PKPab	16 37 35.0	-0.1
VNDA	Vanda	147.24	184		PKPab	16 37 35.0	-0.1
WRAB	Tennant Creek	150.96	36	c iPKIKP	PKPbc	16 37 44.3	-0.1
WRAB				pmax	pmax		
	comp=Z,25nm,2.5s						
WRA	Warramunga Arr	150.96	36	PKPbc	PKPbc	16 37 43.6	-0.8
	comp=Z,6.0nm,1.0s,baz=337,slow=3.0,SNR=11						
WRA	Warramunga Arr	150.96	36	PKIKP	PKPbc	16 37 42.9	-1.6
WRA	Warramunga Arr	150.96	36		PKPbc	16 37 42.9	-1.6
ASAR	Alice Springs	154.04	41	PKPbc	PKPbc	16 37 50.5	-0.8
	comp=Z,2.3nm,1.0s,baz=359,slow=2.3,SNR=12						
ASAR	Alice Springs	154.04	41	PKIKP	PKPbc	16 37 49.9	-1.4
ASAR	Alice Springs	154.04	41		PKPbc	16 37 49.9	-1.4

ATH 23 16:22:32.6,38°.28N×22°.18E,h13^{km}±4^{km},ML1.5/1,Error ellipse: s-maj=5.2km s-min=1.3km az=266.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	Trizonia	0.12	316	P	Pg	16 22 35.5	-0.3
TRIZ				S	Sg	16 22 38.0	-0.1
LAKA	Lakka	0.16	257	P	Pg	16 22 36.4	-0.1
LAKA				S	Sg	16 22 38.9	-0.2
SERG	Sergoula	0.17	324	P	Pg	16 22 36.3	-0.2
SERG				AML	AML	16 22 39.4	
	comp=E,492μm,0.2s						
SERG				S	Sg	16 22 39.5	+0.2
SERG				AML	AML	16 22 39.7	
	comp=N,373μm,0.2s						
KLV	Kalavryta, Ach	0.23	186	P	Pg	16 22 37.3	-0.3
KLV				S	Sg	16 22 41.4	+0.3
EFP	Efpalio	0.26	305	P	Pg	16 22 38.1	+0.1
ANX	Ano Chora	0.38	327	P	Pg	16 22 40.0	-0.1

BUL 23 16:44:02.4±1.7,26°.07S×29°.07E,h1^{km}±24^{km},MD3.7

EAF 23 16:44:04.0±1.6,26°.06S×29°.15E,h12^{km}±22^{km},MD3.6

IDC 23 16:44:14.1±7.8,26°.43S×28°.24E,h0^{km},mb1 2.6/1, mb1mx2.6/29,mbtmp2.6/1,ML1.8/1,Error ellipse: s-maj=73.8km s-min=52.1km az=140.0

ISC 23 16:43:49.6±1.3,25°.77S±0°.05×28°.59E±0°.06,h9^{km},n11, σ1^s.10/15,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNG	Changalane	3.28	100	i P	Pb	16 44 47.7	-0.4
CNG				i Sg	Sb	16 45 29.1	+1.0
CNG	Changalane	3.28	100	i P	Pb	16 44 47.7	-0.4
CNG				i Sg	Sb	16 45 29.1	+1.0
MOPA	Mopani	3.40	49	i P	Pg	16 44 55.1	+0.3
MOPA				i S	Sb	16 45 30.8	-0.7
MOPA	Mopani	3.40	49	i P	Pg	16 44 55.1	+0.3
MOPA				i S	Sb	16 45 30.8	-0.7
MSNA	Messina	3.65	21	i P	Pg	16 45 01.4	+1.8
MSNA				i S	Sg	16 45 45.5	-1.4
MSNA	Messina	3.65	21	i P	Pg	16 45 01.4	+1.8
MSNA				i S	Sg	16 45 45.5	-1.4
BOSA	Boshof	4.11	226	Pn	Pb	16 45 10.3	+8.1
	0.1nm,0.3s,baz=54,slow=17,SNR=1.2						
BOSA				Pg	Pg	16 45 15.2	+6.9
	0.2nm,0.3s,baz=56,slow=18,SNR=5.2						
BOSA				Sn	Sb	16 45 51.2	-0.7
	0.1nm,0.3s,baz=188,slow=16,SNR=1.5						
BOSA				Lg	Lg	16 46 03.4	
	0.6nm,0.3s,baz=161,slow=20,SNR=7.7						
I47ZA	BOSHOF INFRASO	4.12	226	i		17 07 40.0	
	baz=51,slow=313,SNR=2.4						
MATP	Matopo	5.32	359	i S	Sb	16 46 27.0	+0.2
MATP	Matopo	5.32	359	i S	Sb	16 46 27.0	+0.2
I35NA	TSUMEB INFRASO	12.10	301	i		18 00 10.0	
	baz=124,slow=310,SNR=1.5						

IDC 23 16:45:37.5±0.8,6°.26S×152°.16E,h0^{km},mb4.3/13, mb1 4.5/14,mb1mx4.3/32,mbtmp4.3/14,ML2.5/1,MS3.4/9, Ms1 3.4/9,ms1mx3.3/28,Error ellipse: s-maj=28.3km s-min=12.1km az=115.0

DJA 23 16:45:39.9±0.6,6°S±4°×15°2E±1°0,h10^{km},M4.7/6, mB4.8/2,mb4.5/6,MLv4.7/3,Mw(mB)4.0/2

NEIC 23 16:45:40.2±1.6,6°.38S±0°.06×152°.3E±0°.1,h15^{km}±3^{km}, mb4.7/41,Error ellipse: s-maj=16.5km s-min=8.0km az=92.0

ISC 23 16:45:39.0±0.6,6°.41S±0°.06×152°.34E±0°.10,h10^{km},n90, σ1^s.40/86,mb4.7/37,MS3.1/9,1D,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.12	352	Pn	Pn	16 46 13.9	-0.5
	baz=127,slow=20						
KRVT				Sn	Sn	16 46 38.7	-2.2
	baz=270,slow=20						
RABL	Rabaul	2.21	355	Pn	Pn	16 46 15.8	-0.1
RABL	Rabaul	2.21	355	P	Pn	16 46 15.6	-0.2
PMG	Port Moresby	5.93	240	Pn	Pn	16 47 06.0	-0.9
	7.6nm,0.3s,baz=61,slow=9.0,SNR=34						
PMG				Sn	Sn	16 48 13.1	-1.9
	12nm,0.3s,baz=96,slow=17,SNR=6.7						
PMG				LR	LR	16 49 34.0	
	comp=Z,323nm,18.7s,baz=54,slow=40						
PMG	Port Moresby	5.93	240	Pn	Pn	16 47 06.8	-0.1
PMG	Port Moresby	5.93	240	P	Pn	16 47 06.6	-0.3
PMG	Port Moresby	5.93	240	P	Pn	16 47 06.6	-0.3
MANU	Manus Island	6.59	311	Pn	Pn	16 47 18.6	+2.6
HNR	Honiara	8.11	112	Pn	Pn	16 47 33.4	-3.5
COEN	Coen	11.72	230	Pn	Pn	16 48 25.8	-0.7
CTAO	Charters Tower	14.82	203	Pn	Pn	16 49 08.6	-0.3
QIS	Mount Isa	18.71	220	P	Pn	16 50 01.7	+3.4
	20nm,1.0s						
EIDS	Eidsvold	18.89	184	P	P	16 49 59.8	+0.1
RMQ	Roma	20.25	189	P	Pn	16 50 19.7	+3.1
	28nm,1.0s						
KDU	Kakadu	20.55	251	P	P	16 50 16.2	-1.8
	32nm,1.0s						
DZM	Mont Dzumac	20.69	140	LR	LR	16 57 13.4	
	comp=Z,302nm,21.1s,baz=328,slow=33						
GUMO	Guam	21.21	340	LR	LR	16 58 53.5	
	comp=Z,52nm,19.6s,baz=83,slow=38						
QLP	Quilpie	21.49	200	P	P	16 50 29.9	+1.9
	59nm,1.7s						
SIJI	Sorong	21.73	284	LR	LR	17 00 11.8	
	comp=Z,76nm,19.2s,baz=109,slow=41						
MTN	Manton Dam	21.85	251	P	P	16 50 31.6	-0.4
MTN				IAmb	IAmb	16 50 46.7	
	comp=Z,38nm,0.8s						
MTN	Manton Dam	21.85	251	P	P	16 50 34.2	+2.2
	comp=Z,64nm,1.6s						
WR0	Warramunga Arr	21.91	230	P	P	16 50 31.7	-0.9
WB0	Warramunga Arr	21.91	231	P	P	16 50 31.5	-1.2
WRAB	Tennant Creek	22.04	231	P	P	16 50 32.9	-1.2
WRAB				IAmb	IAmb	16 50 38.2	
	comp=Z,18nm,0.8s						
WB2	Warramunga Arr	22.05	231	P	P	16 50 32.6	-1.5
WRA	Warramunga Arr	22.06	231	P	P	16 50 32.5	-1.6
	comp=Z,11nm,0.9s,baz=53,slow=9.7,SNR=28						
WRA				PcP	PcP	16 54 32.9	+0.6
	comp=Z,2.0nm,0.8s,baz=56,slow=2.1,SNR=6.3						
WRA				LR	LR	16 59 07.1	
	comp=Z,146nm,18.6s,baz=65,slow=37						
WRA	Warramunga Arr	22.06	231	P	P	16 50 32.0	-2.2
ARMA	Armidale	23.89	182	P	P	16 50 52.8	-0.3
ARMA				IAmb	IAmb	16 50 55.4	
	comp=Z,20nm,1.2s						
AS31	Alice Springs	24.66	224	P	P	16 50 59.4	-0.8
ASAR	Alice Springs	24.67	224	P	P	16 51 00.1	-0.2
	comp=Z,11nm,0.9s,baz=56,slow=9.1,SNR=64						
ASAR				S	S	16 55 26.4	+4.4
	comp=Z,0.7nm,0.9s,baz=43,slow=19,SNR=4.7						
ASAR				LR	LR	17 00 28.0	
	comp=Z,61nm,19.7s,baz=73,slow=36						
ASAR	Alice Springs	24.67	224	P	P	16 50 59.4	-0.8
KNRA	Kununurra	24.88	246	P	P	16 51 01.1	-1.1
STKA	Stephens Creek	27.25	200	P	P	16 51 23.4	-0.1
	comp=Z,5.0nm,0.9s,baz=21,slow=12,SNR=7.2						
STKA				LR	LR	17 02 18.7	
	comp=Z,170nm,18.4s,baz=20,slow=37						
STKA	Stephens Creek	27.25	200	P	P	16 51 21.6	-1.9
MSVF	Nonsavu	27.50	116	LR	LR	17 02 27.3	
	comp=Z,5.2nm,20.5s,baz=169,slow=36						
FITZ	Fitzroy Crossi	28.51	244	P	P	16 51 33.4	-1.5
	comp=Z,12nm,0.6s,baz=64,slow=8.8,SNR=9.0						
FITZ				LR	LR	17 03 32.2	
	comp=Z,76nm,18.5s,baz=162,slow=38						
DAV	Davao City (W)	29.87	296	LR	LR	17 01 13.9	
	comp=Z,45nm,20.2s,baz=123,slow=32						
FORT	Forrest	33.26	220	P	P	16 52 15.6	-1.1
PSA00	Pilbara Seismi	34.84	241	P	P	16 52 29.0	-1.5
JAGI	Jajag, Banyuwa	37.91	264	P	P	16 52 55.9	-1.0
JAGI				IAmb	IAmb	16 53 12.0	
	comp=Z,16nm,0.9s						
NJ2	Nanjing	49.81	322	eP	P	16 54 35.1	+2.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	Chiang Mai Arr	58.16	296	P	P	16 55 32.1	-1.4
	comp=Z,1.0nm,0.8s,baz=109,slow=5.0,SNR=2.5						
PETK	Petropavlovsk-	59.47	4	P	P	16 55 40.9	-1.1
	comp=Z,2.7nm,0.9s,baz=173,slow=8.3,SNR=7.2						
PETK	Petropavlovsk-	59.47	4	P	P	16 55 42.1	+0.1

HHC	Hu-ho-hao-te	60.09	325	eP	P	16 55 49.3	+2.6
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.3s						
LZH	Lanzhou	62.07	317	eP	P	16 55 52.3	-8.0
LZH				pP	sP	16 56 05.6	+3.2
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
SONM	Songino Array	67.44	328	P	P	16 56 34.2	-0.8
	comp=Z,3.2nm,1.3s,baz=130,slow=2.3,SNR=5.8						
SONM	Songino Array	67.44	328	P	P	16 56 34.4	-0.6
WMQ	Urumqi	76.61	318	eP	P	16 57 31.6	+1.5
ANM	Nome	77.44	17	P	P	16 57 36.2	+2.0
ANM				IAmb	IAmb	16 57 36.6	
	comp=Z,5.8nm,1.1s						
Q19K	Cape Douglas,	78.00	25	P	P	16 57 38.8	+1.4
CNPM	China Poot	79.36	26	P	P	16 57 46.5	+1.6
L19K	White Mountain	79.41	22	P	P	16 57 46.9	+1.7
L19K				IAmb	IAmb	16 57 53.1	
	comp=Z,14nm,1.3s						
TTA	Tatalina	79.43	21	P	P	16 57 47.0	+1.7
TTA				IAmb	IAmb	16 57 52.7	
	comp=Z,11nm,1.3s						
J20K	Nowinta River	80.85	21	P	P	16 57 54.3	+1.4
J20K				IAmb	IAmb	16 57 55.2	
	comp=Z,7.9nm,1.0s						
CAST	Castle Rocks	81.16	22	P	P	16 57 55.6	+1.0
CAST				IAmb	IAmb	16 57 56.3	
	comp=Z,8.3nm,1.1s						
MKAR	Makanchi Array	81.23	319	P	P	16 57 52.9	-2.5
	comp=Z,0.8nm,0.8s,baz=116,slow=5.6,SNR=4.9						
MKAR	Makanchi Array	81.23	319	P	P	16 57 53.1	-2.3
KTH	Kantishna Hill	81.67	22	P	P	16 57 56.7	-0.6
KTH				IAmb	IAmb	16 58 10.1	
	comp=Z,7.9nm,1.1s						
SML	Sawmill	81.77	24	P	P	16 57 59.0	+1.1
TRF	Thorofare Moun	81.86	22	P	P	16 57 58.3	-0.2
IMAR	Indian Mountai	82.05	20	P	P	16 58 00.4	+1.2
H21K	Melozitna Rive	82.17	20	P	P	16 58 01.3	+1.4
I21K	Tanana	82.19	21	P	P	16 58 00.6	+0.7
I21K				IAmb	IAmb	16 58 02.6	
	comp=Z,7.6nm,1.1s						
ZALV	Zalesovo Beam	82.23	327	P	P	16 57 58.5	-1.9
	comp=Z,1.5nm,0.5s,baz=107,slow=5.1,SNR=6.9						
RND	Reindeer	82.38	23	P	P	16 58 01.2	+0.1
RND				IAmb	IAmb	16 58 22.1	
	comp=Z,12nm,1.2s						
MLY	Manley	82.54	21	P	P	16 58 02.4	+0.5
MLY				IAmb	IAmb	16 58 03.7	
	comp=Z,6.8nm,1.1s						
M24K	Tolsona, Glenn	82.81	25	P	P	16 58 05.0	+1.6
I23K	Minto, Yukon-K	83.10	21	P	P	16 58 05.8	+1.2
I23K				IAmb	IAmb	16 58 12.1	
	comp=Z,6.4nm,1.4s						
WRH	Wood River Hil	83.22	22	P	P	16 58 05.5	+0.2
WRH				IAmb	IAmb	16 58 21.5	
	comp=Z,12nm,1.5s						
CCB	Clear Creek Bu	83.41	22	P	P	16 58 06.3	0.0
QSPA	South Pole Qui	83.56	180	P	P	16 58 08.3	+1.0
	comp=Z,2.8nm,0.8s,baz=339,slow=2.4,SNR=9.1						
QSPA	South Pole Qui	83.56	180	P	P	16 58 07.7	+0.4
QSPA				IAmb	IAmb	16 58 10.4	
	comp=Z,5.2nm,1.1s						
VRDI	Verde Repeater	83.56	26	P	P	16 58 08.7	+1.3
HDA	Harding Lake	83.61	22	P	P	16 58 07.7	+0.3
HDA				IAmb	IAmb	16 58 08.8	
	comp=Z,6.7nm,1.4s						
IL31		83.82	22	P	P	16 58 08.1	-0.2
IL31				IAmb	IAmb	16 58 09.2	
	comp=Z,4.3nm,0.8s						
ILAR	Eielson Array	83.82	22	P	P	16 58 08.3	-0.1
	comp=Z,3.4nm,0.9s,baz=245,slow=5.1,SNR=36						
ILAR	Eielson Array	83.82	22	P	P	16 58 08.4	0.0
H24K	Noodor Dome	83.99	21	P	P	16 58 09.7	+0.4
H24K				IAmb	IAmb	16 58 14.2	
	comp=Z,5.8nm,1.3s						
DOT	Dot Lake	84.38	24	P	P	16 58 12.5	+1.2
DOT				IAmb	IAmb	16 58 13.0	
	comp=Z,4.3nm,0.8s						
SCRK	Sand Creek	84.56	23	P	P	16 58 13.5	+1.2
SCRK				IAmb	IAmb	16 58 34.5	
	comp=Z,8.4nm,1.3s						
M27K	Edge Creek, AK	84.72	25	P	P	16 58 15.3	+2.1
NRIK	Noril'sk	87.33	341	P	P	16 58 25.0	-0.8
	comp=Z,1.2nm,0.4s,baz=165,slow=12,SNR=2.1						
SYO	Syowa Base	92.00	199	⇓eP	P	16 58 48.5	+0.7
YKA	Yellowknife Ar	97.06	28	P	P	16 59 11.9	+0.9
	comp=Z,0.5nm,0.9s,baz=271,slow=4.9,SNR=6.1						
GERES	GERESS Array B	125.17	328	PKP	PKPdf	17 04 39.8	-0.3
	comp=Z,0.6nm,0.7s,baz=90,slow=1.3,SNR=5.7						
GERES	GERESS Array B	125.17	328		PKPdf	17 04 40.1	-0.1
LPAZ	La Paz	134.04	120	PKP	PKPdf	17 04 59.0	+0.4
	comp=Z,0.5nm,0.4s,baz=174,slow=4.5,SNR=3.7						
TORD	Torodi Ar. Bea	150.33	285	PKPbc	PKPbc	17 05 31.0	-0.7
	comp=Z,1.8nm,0.6s,baz=83,slow=2.6,SNR=12						
TORD	Torodi Ar. Bea	150.33	285		PKPbc	17 05 30.8	-0.9

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*MOS **23** 16:55:08.4±1.7, 54°.07S×1°.58W, h10^{km}, mb5.3/5, MS5.9/13, Error ellipse: s-maj=16.8km s-min=10.6km az=81.1*

*NEIC **23** 16:55:08.4, 54°.18S×1°.46W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.60; $M_{\theta\theta}$2.54; $M_{\phi\phi}$-3.14; $M_{r\theta}$0.17; $M_{\theta\phi}$-5.18; $M_{\phi r}$-1.93; Fault plane solution: $M_0$6.24000×10^{17} NP1:ϕ_s165.87000°, δ89.99000°, λ18.00000°. NP2:ϕ_s75.87000°, δ72.00000°, λ179.99000°. Principal axes: T 5.8599, Plg13.0000°, Azm32.0000°; N 0.6947, Plg72.0000°, Azm166.0000°; P -6.5546, Plg13.0000°, Azm299.0000°;*

*IDC **23** 16:55:08.4±0.4, 54°.14S×1°.59W, h0^{km}, mb4.8/25, mb1 4.8/26, mb1mx4.8/28, mbtmp4.8/26, ML4.8/1, MS5.6/26, Ms1 5.6/26, ms1mx5.6/26 Error ellipse: s-maj=14.5km s-min=10.6km az=133.0*

*NEIC **23** 16:55:09.5±2.1, 54°.2S±0°.1×1°.5W±0°.2, h10^{km}±1^{km}, mb5.5/70, Ms_20 5.8/270, Mwb5.8/25, Mww5.8, Error ellipse: s-maj=17.3km s-min=16.5km az=144.0*

*NEIC **23** 16:55:12, 54°.23S×1°.50W, h24^{km}, Moment Tensor Solution. Duration: 4s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.48; $M_{\theta\theta}$4.21; $M_{\phi\phi}$-3.73; $M_{r\theta}$0.02; $M_{\theta\phi}$-5.59; $M_{\phi r}$0.65; Fault plane solution: $M_0$6.90000×10^{17} NP1: ϕ_s252.00000°, δ85.00000°, λ-177.00000°. NP2: ϕ_s162.00000°, δ88.00000°, λ-5.00000°. Principal axes: T 7.1092, Plg2.0000°, Azm207.0000°; N -0.4321, Plg84.0000°, Azm319.0000°; P -6.6770, Plg5.0000°, Azm117.0000°;*

*GCMT **23** 16:55:14.5±0.1, 54°.18S×1°.17W, h12^{km}, MW5.9/161, Moment Tensor Solution. s145,c272; s161,c496; Duration: 2s.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.90±.05; $M_{\theta\theta}$4.74±.05; $M_{\phi\phi}$-3.85±.05; $M_{r\theta}$0.11±.14; $M_{\theta\phi}$-6.77±.04; $M_{\phi r}$0.45±.13; Best double couple: $M_0$8.03300×10^{17} NP1:ϕ_s254.00000°, δ87.00000°, λ-178.00000°. NP2:ϕ_s164.00000°, δ88.00000°, λ-3.00000°. Principal axes: T 8.4640, Plg1.0000°, Azm209.0000°; N -0.8690, Plg86.0000°, Azm310.0000°; P -7.6020, Plg4.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 23 16:55:09.7±0.2**, 54°.13S**±0°.05×**1°.58W**±0°.05**, h10^{km}, n476,** σ**1s.58**/333**, mb5.4**/66**, MS5.8**/188**, 7C-8D, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	16.84	188	P	P	16 59 07.5	+0.1
VNA1				S	Sn	17 02 11.2	-0.9
VNA2	Neumayer--Watz	17.05	187	P	P	16 59 09.0	-0.7
	baz=6.8,slow=14						
VNA3	Neumayer Olymp	17.54	189	P	Pn	16 59 14.2	+0.3
SNAA	Sanae	17.61	181	P	P	16 59 15.9	-0.1
SNAA	Sanae	17.61	181	P	Pn	16 59 14.9	-0.1
	2.9nm,0.3s,baz=355,slow=13,SNR=62						
SNAA				S	S	17 02 37.8	-0.8
	baz=262,slow=19,SNR=1.3						
SNAA				LR	LR	17 04 34.3	
	comp=Z,27µm,19.6s,baz=10.0,slow=32						
SNAA	Sanae	17.61	181		Pn	16 59 14.7	-0.3
SNAA				IAmb	IAmb	16 59 22.1	
	comp=Z,412nm,1.4s						
NVL	N'lazarevskaya	17.73	165	⇓iP	P	16 59 24.3	+7.2
NVL				eS	S	17 02 42.1	+1.4
NVL				pmax	pmax		
	comp=Z,242nm,1.6s						
NVL				MLR	MLR		
	comp=N,12µm,17.0s						
NVL				MLR	MLR		
	comp=E,15µm,17.0s						
NVL				MLR	MLR		
	comp=Z,9µm,17.0s						
HOPE	Hope Point	20.30	255	P	P	16 59 46.1	+0.8
HOPE				pmax	pmax		
	comp=Z,323nm,1.4s						
HOPE				MLR	MLR		
	comp=Z,7µm,20.0s						
HOPE	Hope Point	20.30	255	P	P	16 59 46.1	+0.8
HOPE				IAmb	IAmb	16 59 56.8	
	comp=Z,323nm,1.4s						
ORCD	Orcadas	23.78	236	P	P	17 00 21.4	-0.6
SYO	Syowa Base	23.96	144	⇑eP	P	17 00 18.6	-5.1
SYO	Syowa Base	23.96	144	⇓ipP	P	17 00 23.0	-0.7
SYO	Syowa Base	23.96	144	⇑isP	P	17 00 24.1	+0.4
SUR	Sutherland	26.96	45	P	P	17 00 51.5	0.0
	comp=Z,10nm,0.8s,baz=207,slow=9.0,SNR=4.8						
SUR				S	S	17 05 32.2	+3.5
	comp=Z,4.9nm,1.0s,baz=252,slow=20,SNR=1.4						
SUR				LR	LR	17 09 18.1	
	comp=Z,29µm,18.4s,baz=208,slow=32						
SUR	Sutherland	26.96	45	P	P	17 00 51.0	-0.5
SUR				IAmb	IAmb	17 01 01.0	
	comp=Z,121nm,1.4s						
SUR	Sutherland	26.96	45	IAMs_20	IAMs_20	17 08 49.6	
	comp=Z,27µm,19.0s						
PMSA	Palmer Station	32.10	226	eP	P	17 01 40.3	+3.7
BOSA	Boshof	32.13	48	P	P	17 01 38.5	+1.2
	comp=Z,5.2nm,0.9s,baz=222,slow=9.0,SNR=5.7						
BOSA				LR	LR	17 12 28.5	
	comp=Z,16µm,18.5s,baz=211,slow=32						
BOSA	Boshof	32.13	48	P	P	17 01 34.5	-2.8
BOSA				pmax	pmax		
	comp=Z,22nm,1.2s						
BOSA	Boshof	32.13	48	P	P	17 01 34.5	-2.8
MAW	Mawson	32.43	140	P	P	17 01 40.8	+1.5
	comp=Z,5.8nm,1.0s,baz=257,slow=11,SNR=5.6						
MAW				LR	LR	17 12 13.0	
	comp=Z,8µm,21.7s,baz=272,slow=32						
MAW	Mawson	32.43	140	P	P	17 01 40.3	+0.9
	baz=32,SNR=13						
MAW	Mawson	32.43	140	P	P	17 01 37.1	-2.3
SMAI	San Martin Ant	32.76	219	P	P	17 01 40.7	-1.6
EFI	East Falkland	33.38	251	P	P	17 01 47.3	-0.6
EFI				pmax	pmax		
	comp=Z,182nm,1.5s						
EFI				MLR	MLR		
	comp=Z,4µm,19.0s						
EFI	East Falkland	33.38	251	P	P	17 01 47.3	-0.6
WIN	Windhoek	34.53	31	P	P	17 01 57.5	-0.9
WIN				pmax	pmax		
	comp=Z,45nm,1.2s						
WIN	Windhoek	34.53	31	P	P	17 01 57.5	-0.9
WIN				IAmb	IAmb	17 02 09.2	
	comp=Z,45nm,1.2s						
LBTB	Lobatse	35.42	46	P	P	17 02 05.5	-0.4
	comp=Z,4.9nm,0.8s,baz=235,slow=10,SNR=6.1						
LBTB	Lobatse	35.42	46	P	P	17 02 03.6	-2.3
LBTB				pmax	pmax		
	comp=Z,33nm,1.3s						
LBTB	Lobatse	35.42	46	P	P	17 02 03.5	-2.3
QSPA	South Pole Qui	36.11	180	P	P	17 02 09.9	-1.6
	comp=Z,22nm,0.9s,baz=236,slow=2.9,SNR=56						
QSPA				LR	LR	17 16 08.4	
	comp=Z,11µm,18.0s,baz=214,slow=35						
QSPA	South Pole Qui	36.11	180	P	P	17 02 09.6	-1.9
QSPA	South Pole Qui	36.11	180	IAMs_20	IAMs_20	17 16 37.3	
	comp=Z,14µm,18.0s						
USHA	Ushuaia	37.51	241	P	P	17 02 24.1	+0.8
	comp=Z,20nm,0.9s,baz=131,slow=7.2,SNR=10						
TSUM	Tsumeb	37.85	30	P	P	17 02 26.1	-0.6
	comp=Z,30nm,0.9s,baz=198,slow=8.4,SNR=28						
TSUM	Tsumeb	37.85	30	P	P	17 02 25.2	-1.4
TSUM				IAmb	IAmb	17 02 37.5	
	comp=Z,107nm,1.1s						
TSUM	Tsumeb	37.85	30	IAMs_20	IAMs_20	17 14 42.5	
	comp=Z,15µm,20.0s						
MATP	Matopo	40.70	46	P	P	17 02 49.4	-1.1
	comp=Z,3.7nm,0.8s,baz=209,slow=14,SNR=6.2						
TER01	Tubaro-SC	42.80	287	eP	P	17 03 09.5	+2.0
PLTB	Pedras Altas	42.95	280	eP	P	17 03 10.5	+1.8
PLTB	Pedras Altas	42.95	280	P	P	17 03 08.7	0.0
PLTB				IAmb	IAmb	17 03 19.4	
	comp=Z,107nm,1.4s						
LPA	La Plata	43.23	273	deP	P	17 03 03.9	-7.0
LPA				pPP		17 05 00.3	
LPA				PPP	PPP	17 05 41.6	
LPA				S	S	17 09 38.5	+0.9
LPA				SS	ScS	17 13 10.6	-0.4
CPSB	Cacapava Do Su	43.85	281	eP	P	17 03 17.1	+1.2
DUB01	Friburgo-RJ	44.32	300	eP	P	17 03 20.7	+0.8
COYC	Coyhaique	44.48	251	P	P	17 03 21.3	+0.4
COYC				IAmb	IAmb	17 03 28.8	
	comp=Z,67nm,1.3s						
MAN01	Angra dos Reis	44.49	297	eP	P	17 03 21.1	-0.1
VAS01	Vassouras-RJ	44.71	299	eP	P	17 03 22.1	-0.8
ALF01	Guarapari-ES	44.72	303	eP	P	17 03 23.1	+0.1
PARB	Paraibuna	44.98	295	eP	P	17 03 25.2	0.0
PET01	Itanhaem-SP	45.10	293	eP	P	17 03 27.6	+1.6
LSZ	Lusaka	45.20	42	P	P	17 03 25.4	-1.6
	comp=Z,7.7nm,1.0s,baz=179,slow=11,SNR=6.3						
LSZ	Lusaka	45.20	42	P	P	17 03 24.9	-2.0
LSZ				pmax	pmax		
	comp=Z,20nm,1.1s						
LSZ				MLR	MLR		
	comp=Z,37µm,19.0s						
LSZ	Lusaka	45.20	42	P	P	17 03 24.9	-2.0
ITAB	Concordia	45.49	285	eP	P	17 03 30.1	+1.0
ITAB	Concordia	45.49	285	P	P	17 03 28.1	-1.0
RIB01	Linhares ES	45.66	304	eP	P	17 03 30.7	+0.2
SPB	Sao Paulo	45.75	293	eP	P	17 03 32.1	+1.0
SPB	Sao Paulo	45.75	293	P	P	17 03 29.5	-1.6
SPB				IAmb	IAmb	17 03 41.2	
	comp=Z,69nm,1.2s						
SPB				IAMs_20	IAMs_20	17 17 52.5	
	comp=Z,10µm,21.0s						
VAO	Valinhos	45.97	294	eP	P	17 03 34.4	+1.3
ITQB	Itaqui	46.24	279	eP	P	17 03 34.8	-0.1
ITQB	Itaqui	46.24	279	P	P	17 03 33.3	-1.7
ITQB				IAmb	IAmb	17 03 45.0	
	comp=Z,83nm,1.4s						
BSFB	Barra de Sao F	46.30	304	eP	P	17 03 34.9	-0.5
BSCB	Bom Sucesso	46.46	298	eP	P	17 03 37.2	+0.4
SJMB	Sao Joao De Ma	46.57	304	eP	P	17 03 36.9	-0.7
PLCA	Paso Flores	46.68	257	P	P	17 03 38.1	-0.3
	comp=Z,3.7nm,1.0s,baz=157,slow=7.5,SNR=7.5						
PLCA				LR	LR	17 23 32.7	
	comp=Z,1µm,18.4s,baz=142,slow=36						
PLCA	Paso Flores	46.68	257	P	P	17 03 38.7	+0.3
PLCA				pmax	pmax		
	comp=Z,27nm,1.2s						
PLCA	Paso Flores	46.68	257	eP	P	17 03 38.5	+0.1
PLCA	Paso Flores	46.68	257	P	P	17 03 38.7	+0.3
RCLB	Rio Claro- Sao	46.75	294	eP	P	17 03 40.5	+1.4
FRTB	Fartura	47.11	291	eP	P	17 03 44.5	+2.6
PTGB	Pitanga	47.41	288	eP	P	17 03 45.9	+1.6
LL03	Petrohue	47.48	255	P	P	17 03 43.8	-0.7
LL04	Puerto Octay	47.63	256	P	P	17 03 44.9	-0.8
LL04				IAmb	IAmb	17 03 51.3	
	comp=Z,50nm,1.1s						
GUA01	Guaratinga, BA	47.73	307	eP	P	17 03 46.6	-0.1
SBA	Scott Base	48.08	177	P	P	17 03 49.1	+0.4
SBA				pmax	pmax		
	comp=Z,55nm,1.1s						
SBA				MLR	MLR		
	comp=Z,12µm,20.0s						
SBA	Scott Base	48.08	177	P	P	17 03 49.1	+0.4
SBA				IAmb	IAmb	17 03 57.2	
	comp=Z,55nm,1.1s						
SBA	Scott Base	48.08	177	IAMs_20	IAMs_20	17 22 49.5	
	comp=Z,12µm,20.0s						
DIAM	Diamantina, MG	48.15	301	eP	P	17 03 49.5	-0.6
VNDA	Vanda	48.21	175	P	P	17 03 49.4	-0.3
	comp=Z,25nm,0.9s,baz=218,slow=6.0,SNR=32						
VNDA				LR	LR	17 23 30.9	
	comp=Z,20µm,20.4s,baz=190,slow=35						
VNDA	Vanda	48.21	175	P	P	17 03 49.2	-0.5
VNDA				pmax	pmax		
	comp=Z,40nm,1.0s						
VNDA	Vanda	48.21	175	P	P	17 03 49.2	-0.5
VNDA				IAmb	IAmb	17 03 54.1	
	comp=Z,40nm,1.0s						
BB19B	Bebedouro	48.38	294	eP	P	17 03 53.4	+1.6
VOI	Vohitsoka	48.48	68	P	P	17 03 59.3	+6.7
CMC01	Camacan, BA	48.66	308	eP	P	17 03 54.1	+0.2
NBIT	Itapeh - BA	48.99	308	eP	P	17 03 56.3	-0.1
CPUP	Villa Florida	49.16	281	P	P	17 03 57.3	-0.3
	comp=Z,26nm,1.0s,baz=126,slow=6.6,SNR=20						
CPUP				LR	LR	17 21 05.9	
	comp=Z,3µm,21.2s,baz=148,slow=32						
CPUP	Villa Florida	49.16	281	P	P	17 03 56.6	-1.0
CPUP				pmax	pmax		
	comp=Z,117nm,1.3s						
CPUP	Villa Florida	49.16	281	eP	P	17 03 56.6	-1.0
CPUP	Villa Florida	49.16	281	P	P	17 03 56.6	-1.0
PCMB	Pacaembu	49.43	291	eP	P	17 04 01.0	+1.2
CASY	Casey	49.48	150	IAMs_20	IAMs_20	17 22 41.6	
	comp=Z,8µm,20.0s						
MC01	Montes Claros	49.63	302	eP	P	17 04 00.7	-0.7
GDU01	Guandu, BA	50.12	309	eP	P	17 04 04.7	-0.4
ITRB	Iturama	50.48	293	eP	P	17 04 08.9	+1.1
ML02	Panimavida	50.55	261	P	P	17 04 07.5	-0.6
IPMB	Ipameri, GO	50.75	297	eP	P	17 04 09.7	-0.1
BO02	Sierra Bellavi	50.86	263	P	P	17 04 10.0	-0.6
BO02				IAmb	IAmb	17 04 35.0	
	comp=Z,49nm,1.2s						
ABPO	Ambohimpanom	51.06	66	P	P	17 04 10.1	-2.2
ABPO				pmax	pmax		
	comp=Z,17nm,1.2s						
ABPO				MLR	MLR		
	comp=Z,5µm,18.0s						
ABPO	Ambohimpanom	51.06	66	P	P	17 04 10.1	-2.2
JANB	Januaria	51.22	303	eP	P	17 04 13.1	-0.3
BO01	Tunca	51.32	263	P	P	17 04 12.7	-1.2
BO01				IAmb	IAmb	17 04 27.7	
	comp=Z,88nm,1.4s						
GO05	Huala	51.38	262	P	P	17 04 13.9	-0.5
OPO	Ambohidratompo	51.40	66	P	P	17 04 15.1	+0.2
	comp=Z,3.3nm,0.3s,baz=225,slow=7.1,SNR=1.8						
MT09	Talagante	51.70	264	P	P	17 04 16.6	-0.4
MT09				IAmb	IAmb	17 04 34.9	
	comp=Z,44nm,0.9s						
NBLA	Lagarto - SE	51.73	312	eP	P	17 04 16.5	-0.6
MT01	Popeta	51.79	263	P	P	17 04 16.2	-1.3
MT01				IAmb	IAmb	17 04 34.9	
	comp=Z,37nm,0.9s						
ZON	Zonda	51.94	267	P	P	17 04 18.9	+0.2
ZON				pmax	pmax		
	comp=Z,105nm,1.5s						
ZON	Zonda	51.94	267	P	P	17 04 18.9	+0.2
ZON				IAmb	IAmb	17 04 29.9	
	comp=Z,104nm,1.5s						
PEL	Peldehue	51.97	264	P	P	17 04 17.9	-1.0
PEL				pmax	pmax		
	comp=Z,69nm,1.1s						
PEL	Peldehue	51.97	264	P	P	17 04 17.9	-1.0
PEL				IAmb	IAmb	17 04 31.9	
	comp=Z,69nm,1.1s						
VA03	San Esteban	52.16	265	P	P	17 04 19.8	-0.6
VA03				IAmb	IAmb	17 04 36.0	
	comp=Z,51nm,1.2s						
NBAN	Anadia - AL	52.27	315	eP	P	17 04 21.0	-0.1
BDFB	Brasilia	52.60	299	P	P	17 04 23.9	+0.1
	comp=Z,16nm,0.9s,baz=137,slow=5.4,SNR=13						
BDFB				LR	LR	17 22 12.0	
	comp=Z,11µm,21.1s,baz=152,slow=31						
BDFB	Brasilia	52.60	299	P	P	17 04 23.1	-0.7
BDFB				pmax	pmax		
	comp=Z,97nm,1.2s						
BDFB	Brasilia	52.60	299	P	P	17 04 23.1	-0.7
BDFB				IAmb	IAmb	17 04 34.0	
	comp=Z,97nm,1.2s						
NBRF	Rio Formoso -	52.69	317	eP	P	17 04 25.4	+1.1
AQDB	Aquidauana	52.80	288	eP	P	17 04 25.6	+0.4
AQDB	Aquidauana	52.80	288	P	P	17 04 24.2	-0.9
NBPN	Ponto Novo - B	52.92	310	eP	P	17 04 24.7	-1.4
SDBA	SAO DESIDERIO	53.78	304	eP	P	17 04 32.2	-0.2
ARAG	Araguaiana, MT	54.54	295	eP	P	17 04 40.0	+2.1
NBLV	Livramento - P	54.62	315	eP	P	17 04 37.6	-1.0
PP1B	Ponte de Pedra	54.66	290	eP	P	17 04 39.2	+0.5
NBPV	Pedro Velho	54.81	318	eP	P	17 04 39.8	0.0
NBMA	Muriti-CE	55.39	313	eP	P	17 04 44.3	+0.3
RCBR	Riachuelo	55.59	317	P	P	17 04 46.9	+1.4
RCBR				pmax	pmax		
	comp=Z,46nm,1.3s						
RCBR	Riachuelo	55.59	317	P	P	17 04 46.9	+1.4
RCBR				IAmb	IAmb	17 04 54.6	
	comp=Z,46nm,1.2s						
AC02	Maricunga	55.68	271	P	P	17 04 47.4	+0.8
AC02				IAmb	IAmb	17 04 56.8	
	comp=Z,68nm,1.4s						
PEXB	Peixe	55.73	301	eP	P	17 04 46.6	+0.1
SALV	Santo Antonio	56.49	291	eP	P	17 04 52.8	+0.9
NBPB	Pedra_Branca-C	57.37	313	eP	P	17 04 58.2	0.0
SNDB	Serra Nova Dou	57.38	298	eP	P	17 04 59.3	+1.0
NBCL	Cascavel-CE	58.02	315	eP	P	17 05 03.2	+0.6
PB14	IPOC Station P	58.09	271	IAMs_20	IAMs_20	17 26 20.4	
	comp=Z,6µm,21.0s						
SMTB	Santa Maria do	58.15	303	eP	P	17 05 03.8	+0.1
PB15	IPOC Station P	58.63	273	P	P	17 05 07.9	+0.7
PB15				IAmb	IAmb	17 05 25.1	
	comp=Z,49nm,1.3s						
PB15				IAMs_20	IAMs_20	17 28 02.7	
	comp=Z,5µm,19.0s						
LVC	Limon Verde	58.76	274	LR	LR	17 28 31.6	
	comp=Z,3µm,19.1s,baz=150,slow=34						
LVC	Limon Verde	58.76	274	eP	P	17 05 07.2	-1.1
LVC	Limon Verde	58.76	274	eP	P	17 05 10.6	+2.3
LVC	Limon Verde	58.76	274	P	P	17 05 07.2	-1.1
LVC				IAmb	IAmb	17 05 19.0	
	comp=Z,37nm,1.0s						
PTLB	Pontes e Lacer	58.77	288	eP	P	17 05 06.9	-1.0
PTLB	Pontes e Lacer	58.77	288	P	P	17 05 06.7	-1.2
PB06	IPOC Station P	59.07	274	P	P	17 05 08.6	-1.6
PB06				IAmb	IAmb	17 05 21.2	
	comp=Z,59nm,1.2s						
NBPS	Pedro II - PI	59.21	312	eP	P	17 05 11.4	+0.4
SIV	San Ignacio	59.42	286	LR	LR	17 26 48.7	
	comp=Z,7µm,21.1s,baz=148,slow=32						
NBMO	Morrinhos-CE	59.57	314	eP	P	17 05 14.0	+0.5
PB09	IPOC Station P	59.58	275	P	P	17 05 13.7	-0.1
MBAR	Mbarara	59.62	38	P	P	17 05 15.0	+1.0
	comp=Z,3.4nm,0.3s,baz=152,slow=4.5,SNR=9.1						
MBAR	Mbarara	59.62	38	P	P	17 05 12.0	-2.0
MBAR				pmax	pmax		
	comp=Z,30nm,1.4s						
MBAR				MLR	MLR		
	comp=Z,12µm,21.0s						
MBAR	Mbarara	59.62	38	P	P	17 05 12.0	-2.0
MBAR				IAmb	IAmb	17 05 32.3	
	comp=Z,30nm,1.4s						
LIC	Lamto	60.20	356	eP	P	17 05 17.7	-0.1
	comp=Z,374nm,1.1s						
PB01	IPOC Station P	60.30	275	P	P	17 05 18.3	-0.4
PB01				IAMs_20	IAMs_20	17 30 08.2	
	comp=Z,5µm,19.0s						
KIC	Kosan Boka	60.33	356	eP	P	17 05 18.3	-0.3
	comp=Z,68nm,1.0s						
PDRB	Porto dos Gac	60.58	293	eP	P	17 05 21.0	+0.6
TIC	Toumodi	60.62	356	eP	P	17 05 20.6	0.0
DBIC	Dimbokro	60.64	356	P	P	17 05 20.0	-0.7
	comp=Z,80nm,1.0s,baz=176,slow=7.9,SNR=54						
DBIC				LR	LR	17 25 03.6	
	comp=Z,3µm,21.0s,baz=186,slow=30						
DBIC	Dimbokro	60.64	356	P	P	17 05 20.1	-0.6
DBIC				pmax	pmax		
	comp=Z,93nm,1.0s						
DBIC	Dimbokro	60.64	356	P	P	17 05 20.1	-0.6
CLDB	Colider	60.69	294	eP	P	17 05 21.2	0.0
KIBK	Kibwezi	60.94	47	P	P	17 05 21.2	-1.8
VILB	Vilhena	61.39	289	eP	P	17 05 26.0	0.0
VILB	Vilhena	61.39	289	P	P	17 05 25.1	-0.9
PB11	IPOC Station P	61.40	276	P	P	17 05 26.1	-0.1
PB11				IAmb	IAmb	17 05 48.7	
	comp=Z,36nm,1.1s						
PRPB	Parauapebas	61.57	303	eP	P	17 05 28.0	+0.8
KMBO	Kilima Mbogo	61.70	45	P	P	17 05 29.6	+1.4
	comp=Z,1.2nm,0.5s,baz=200,slow=10,SNR=6.1						
KMBO				LR	LR	17 30 03.8	
	comp=Z,19µm,19.9s,baz=187,slow=34						
KMBO	Kilima Mbogo	61.70	45	P	P	17 05 28.8	+0.5
KMBO				pmax	pmax		

	comp=Z,15nm,1.5s						
KMBO				MLR	MLR		
	comp=Z,18µm,20.0s						
KMBO	**Kilima Mbogo**	**61.70**	**45**	P	**P**	**17 05 28.8**	**+0.5**
ROSB	**Rosrio**	**61.73**	**310**	*e*P	**P**	**17 05 28.8**	**+0.6**
LPAZ	**La Paz**	**63.24**	**279**	P	**P**	**17 05 39.2**	**+0.2**
	comp=Z,10nm,0.9s,baz=104,slow=8.0,SNR=18						
LPAZ				LR	LR	17 30 13.6	
	comp=Z,2µm,21.1s,baz=130,slow=33						
LPAZ	**La Paz**	**63.24**	**279**	*e*P	**P**	**17 05 39.3**	**+0.2**
LPAZ	**La Paz**	**63.24**	**279**	P	**P**	**17 05 38.6**	**-0.5**
NPGB	**Novo Progresso**	**63.66**	**297**	*e*P	**P**	**17 05 41.0**	**-0.2**
TMAB	**Tom-Au,PA,Br**	**64.03**	**306**	*e*P	**P**	**17 05 43.9**	**+0.4**
LODK	**Lodwar**	**65.07**	**41**	P	**P**	**17 05 49.6**	**-0.7**
ITTB	**Itaituba**	**66.12**	**298**	*e*P	**P**	**17 05 57.9**	**+0.8**
SAML	**Samuel**	**66.33**	**288**	IAMs_20	IAMs_20	17 30 20.7	
	comp=Z,7µm,22.0s						
TORD	**Torodi Ar. Bea**	**67.07**	**3**	P	**P**	**17 06 03.1**	**0.0**
	comp=Z,8.9nm,0.9s,baz=188,slow=6.3,SNR=22						
TORD				LR	LR	17 29 01.2	
	comp=Z,8µm,21.9s,baz=165,slow=30						
TORD	**Torodi Ar. Bea**	**67.07**	**3**	P	**P**	**17 06 02.0**	**-1.0**
ETMB	**Extrema**	**67.33**	**285**	*e*P	**P**	**17 06 04.2**	**-0.6**
ETMB	**Extrema**	**67.33**	**285**	P	**P**	**17 06 03.6**	**-1.3**
ETMB				IAmb	IAmb	17 06 12.6	
	comp=Z,40nm,1.2s						
MALB	**Monte Alegre**	**67.51**	**301**	*e*P	**P**	**17 06 07.2**	**+1.2**
MCPB	**Macapa, AP**	**67.69**	**304**	*e*P	**P**	**17 06 08.3**	**+1.2**
KOWA	**Kowa**	**68.39**	**357**	P	**P**	**17 06 11.8**	**+0.4**
	comp=Z,53nm,1.1s,baz=191,slow=4.4,SNR=34						
KOWA	**Kowa**	**68.39**	**357**	P	**P**	**17 06 10.9**	**-0.5**
MBO	**M'Bour**	**69.50**	**344**	IAMs_20	IAMs_20	17 30 10.1	
	comp=Z,6µm,20.0s						
MACA	**Manacapuru-AM**	**69.75**	**294**	*e*P	**P**	**17 06 20.5**	**+0.5**
MACA	**Manacapuru-AM**	**69.75**	**294**	P	**P**	**17 06 19.7**	**-0.3**
MACA				IAmb	IAmb	17 06 30.0	
	comp=Z,37nm,1.0s						
CZSB	**Cruzeiro do Su**	**72.74**	**281**	*e*P	**P**	**17 06 40.1**	**+2.0**
CZSB	**Cruzeiro do Su**	**72.74**	**281**	P	**P**	**17 06 37.0**	**-1.1**
TBTG	**Tabatinga, AM**	**74.02**	**285**	*e*P	**P**	**17 06 46.6**	**+1.0**
TBTG	**Tabatinga, AM**	**74.02**	**285**	P	**P**	**17 06 44.1**	**-1.5**
TBTG				IAmb	IAmb	17 06 52.9	
	comp=Z,64nm,1.1s						
BOAV	**Boa Vista**	**74.35**	**297**	*e*P	**P**	**17 06 48.9**	**+1.4**
BOAV	**Boa Vista**	**74.35**	**297**	P	**P**	**17 06 48.0**	**+0.4**
BOAV				IAmb	IAmb	17 06 57.0	
	comp=Z,41nm,1.3s						
H01W2	**Cape Leeuwin H**	**75.49**	**130**	T	T	18 30 27.8	
	baz=212,slow=75,SNR=41						
H01W1	**Cape Leeuwin H**	**75.50**	**130**	T	T	18 30 36.6	
	baz=212,slow=75,SNR=36						
H01W3	**Cape Leeuwin H**	**75.50**	**130**	T	T	18 30 31.5	
	baz=212,slow=75,SNR=36						
NWAO	**Narrogin (SRO)**	**78.53**	**131**	IAMs_20	IAMs_20	17 37 56.0	
	comp=Z,4µm,20.0s						
PYZ	**Puysegur Point**	**79.58**	**172**	IAMs_20	IAMs_20	17 38 02.3	
	comp=Z,4µm,22.0s						
TAU	**Tasmania Unive**	**79.73**	**157**	P	**P**	**17 07 17.1**	**-0.3**
TAU				pmax	pmax		
	comp=Z,43nm,1.2s						
TAU				MLR	MLR		
	comp=Z,3µm,18.0s						
TAU	**Tasmania Unive**	**79.73**	**157**	P	**P**	**17 07 17.1**	**-0.3**
TAU				IAmb	IAmb	17 07 21.8	
	comp=Z,43nm,1.1s						
TAU	**Tasmania Unive**	**79.73**	**157**	IAMs_20	IAMs_20	17 44 15.5	
	comp=Z,3µm,18.0s						
DCZ	**Deep Cove**	**80.31**	**172**	IAMs_20	IAMs_20	17 38 11.8	
	comp=Z,5µm,22.0s						
WKZ	**Wanaka**	**81.09**	**173**	IAMs_20	IAMs_20	17 40 54.3	
	comp=Z,4µm,20.0s						
OTAV	**Otavalo**	**82.51**	**281**	P	**P**	**17 07 33.1**	**-0.1**
OTAV				pmax	pmax		
	comp=Z,64nm,1.5s						
OTAV				MLR	MLR		
	comp=Z,2µm,19.0s						
OTAV	**Otavalo**	**82.51**	**281**	*e*P	**P**	**17 07 34.8**	**+1.6**
OTAV	**Otavalo**	**82.51**	**281**	P	**P**	**17 07 33.1**	**-0.1**
OTAV				IAmb	IAmb	17 07 44.0	
	comp=Z,64nm,1.4s						
BAUV	**El Baul**	**83.84**	**294**	P	**P**	**17 07 39.1**	**-0.3**
ROSC	**El Rosal**	**83.90**	**287**	P	**P**	**17 07 40.3**	**+0.1**
	comp=Z,6.3nm,0.3s,baz=139,slow=8.5,SNR=3.8						
ROSC				LR	LR	17 43 26.7	
	comp=Z,11µm,18.7s,baz=177,slow=34						
ROSC	**El Rosal**	**83.90**	**287**	P	**P**	**17 07 40.8**	**+0.6**
ROSC				pmax	pmax		
	comp=Z,47nm,1.5s						
ROSC	**El Rosal**	**83.90**	**287**	P	**P**	**17 07 40.8**	**+0.6**
ROSC				IAmb	IAmb	17 07 58.8	
	comp=Z,48nm,1.4s						
BIRV	**Birongo**	**84.18**	**297**	P	**P**	**17 07 40.7**	**-0.4**
THZ	**Tophouse**	**84.36**	**176**	P	**P**	**17 07 41.9**	**0.0**
THZ				IAmb	IAmb	17 07 45.8	
	comp=Z,42nm,1.1s						
MEEK	**Meekatharra**	**84.51**	**129**	P	**P**	**17 07 42.5**	**-0.3**
	baz=84,SNR=4.8						
SNZO	**South Karori**	**84.88**	**177**	IAMs_20	IAMs_20	17 40 42.6	
	comp=Z,5µm,21.0s						
BKZ	**Black Stump Fm**	**87.06**	**179**	P	**P**	**17 07 55.1**	**-0.2**
BKZ				IAMs_20	IAMs_20	17 44 44.3	
	comp=Z,5µm,21.0s						
RAYN	**Ar Rayn**	**87.31**	**42**	P	**P**	**17 07 56.7**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,16nm,1.3s						
RAYN				MLR	MLR		
	comp=Z,14µm,20.0s						
RAYN	**Ar Rayn**	**87.31**	**42**	P	**P**	**17 07 56.7**	**+0.2**
CAN	**Canberra**	**87.35**	**156**	P	**P**	**17 07 55.7**	**-1.2**
CAN				pmax	pmax		
	comp=Z,42nm,1.2s						
CAN				MLR	MLR		
	comp=Z,4µm,18.0s						
CAN	**Canberra**	**87.35**	**156**	P	**P**	**17 07 55.7**	**-1.2**
CAN				IAmb	IAmb	17 08 01.8	
	comp=Z,42nm,1.2s						
CAN				IAMs_20	IAMs_20	17 45 03.4	
	comp=Z,4µm,18.0s						
CNB	**Canberra Magne**	**87.44**	**157**	P	**P**	**17 08 00.3**	**+3.0**
	baz=87,SNR=5.8						
HIZ	**Hauiti**	**87.67**	**177**	IAMs_20	IAMs_20	17 42 41.6	
	comp=Z,3µm,20.0s						
PMPS	**Porto Santo**	**87.77**	**348**	*e*P	P	17 08 03.7	+5.3
	comp=Z,113nm,1.1s						
PMPST	**Porto Santo, M**	**87.79**	**348**	*e*P	**P**	**17 08 02.3**	**+3.8**
	comp=Z,130nm,0.4s						
URZ	**Urewera**	**87.97**	**179**	IAMs_20	IAMs_20	17 43 25.5	
	comp=Z,4µm,20.0s						
STKA	**Stephens Creek**	**88.62**	**149**	P	**P**	**17 08 02.9**	**+0.1**
	comp=Z,11nm,1.0s,baz=178,slow=4.1,SNR=12						
STKA				LR	LR	17 46 15.8	
	comp=Z,760nm,18.1s,baz=196,slow=35						
STKA	**Stephens Creek**	**88.62**	**149**	P	**P**	**17 08 03.0**	**+0.1**
	baz=88,SNR=8.3						
STKA	**Stephens Creek**	**88.62**	**149**	P	**P**	**17 08 01.6**	**-1.2**
STKA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
STKA	**Stephens Creek**	**88.62**	**149**	P	**P**	**17 08 01.6**	**-1.2**
MXZ	**Matakaoa Point**	**88.67**	**180**	IAMs_20	IAMs_20	17 42 14.1	
	comp=Z,3µm,22.0s						
SABA	**Saba**	**88.67**	**303**	IAMs_20	IAMs_20	17 45 36.1	
	comp=Z,3µm,20.0s						
KEST	**Kesra**	**90.00**	**9**	P	**P**	**17 08 09.2**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=0.0,slow=2.0,SNR=2.7						
KEST				LR	LR	17 46 17.7	
	comp=Z,3µm,18.7s,baz=146,slow=34						
WRKA	**Warakurna**	**90.11**	**136**	P	**P**	**17 08 10.6**	**+0.6**
	baz=90,SNR=8.7						
BCIP	**Isla Barro Col**	**90.56**	**285**	IAMs_20	IAMs_20	17 49 41.6	
	comp=Z,2µm,19.0s						
MORF	**Marmelete**	**91.28**	**354**	*e*P	P	17 08 23.6	+8.8
	comp=Z,45nm,1.8s						
PVAQ	**Vaqueiros**	**91.32**	**355**	*e*P	P	17 08 21.6	+6.6
	comp=Z,27nm,1.3s						
PVAQ	**Vaqueiros**	**91.32**	**355**	*e*LQ	LQ	17 32 43.1	
PVAQ	**Vaqueiros**	**91.32**	**355**	*e*LR	LR	17 42 55.6	
	comp=Z,2µm,20.0s						
PALK	**Pallekele**	**91.33**	**80**	LR	LR	17 39 39.3	
	comp=Z,2µm,21.4s,baz=315,slow=29						
CART	**Cartagena**	**91.35**	**0**	IAMs_20	IAMs_20	17 42 28.6	
	comp=Z,3µm,18.0s						
PTEO	**Sao Teotonio**	**91.52**	**354**	*e*P	P	17 08 27.5	+12
	comp=Z,41nm,1.6s						
PCVE	**Castro Verde**	**91.57**	**355**	*e*P	P	17 08 21.4	+5.3
	comp=Z,35nm,1.6s						
CEL	**Celeste**	**93.25**	**14**	IAMs_20	IAMs_20	17 49 18.2	
	comp=Z,3µm,20.0s						
PMRV	**Marv??o**	**93.33**	**355**	*e*LQ	LQ	17 35 19.9	
PMRV				*e*LR	LR	17 42 48.1	
	comp=Z,2µm,22.0s						
ESDC	**Sonseca Array**	**93.46**	**358**	P	**P**	**17 08 26.3**	**+1.4**
	comp=Z,6.9nm,1.1s,baz=183,slow=4.7,SNR=11						
ESDC				LR	LR	17 47 55.6	
	comp=Z,2µm,18.9s,baz=220,slow=34						
ESDC	**Sonseca Array**	**93.46**	**358**	P	**P**	**17 08 25.8**	**+1.0**
ASAR	**Alice Springs**	**93.56**	**140**	P	**P**	**17 08 25.6**	**-0.4**
	comp=Z,2.0nm,0.9s,baz=196,slow=4.4,SNR=12						
ASAR				PKKPbc	**PKKPbc**	**17 25 30.6**	**+1.8**
	comp=Z,0.9nm,1.1s,baz=31,slow=2.9,SNR=4.1						
ASAR				LR	LR	17 43 26.6	
	comp=Z,2µm,21.6s,baz=210,slow=31						
ASAR	**Alice Springs**	**93.56**	**140**	P	**P**	**17 08 24.2**	**-1.8**
VSL	**Villasalto**	**93.73**	**8**	IAMs_20	IAMs_20	17 47 42.2	
	comp=Z,3µm,20.0s						
SDDR	**Presa de Saban**	**93.91**	**297**	IAMs_20	IAMs_20	17 47 33.1	
	comp=Z,3µm,20.0s						
TIP	**Timpagrande**	**94.28**	**14**	IAMs_20	IAMs_20	17 53 55.3	
	comp=Z,2µm,18.0s						
MTE	**Manteigas**	**94.30**	**355**	*e*P	P	17 08 41.4	+13
	comp=Z,80nm,1.5s						
MTE	**Manteigas**	**94.30**	**355**	*e*LQ	LQ	17 33 24.4	
MTE	**Manteigas**	**94.30**	**355**	*e*LR	LR	17 44 13.7	
	comp=Z,3µm,18.0s						
MVO	**Moncorvo**	**95.04**	**356**	*e*P	P	17 08 39.6	+7.5
	comp=Z,40nm,1.9s						
MVO	**Moncorvo**	**95.04**	**356**	*e*LR	LR	17 45 46.7	
	comp=Z,2µm,20.0s						
FITZ	**Fitzroy Crossi**	**95.10**	**130**	LR	LR	17 46 23.9	
	comp=Z,3µm,19.4s,baz=244,slow=32						
LEM	**Lembang**	**95.55**	**110**	LR	LR	17 42 38.6	
	comp=Z,5µm,20.8s,baz=220,slow=30						
ISP	**Isparta**	**95.68**	**25**	IAMs_20	IAMs_20	17 57 10.5	
	comp=Z,3µm,18.0s						
PGAV	**Gavieira, Arco**	**95.90**	**355**	*e*LR	LR	17 44 20.3	
	comp=Z,3µm,22.0s						
GRTK	**Grand Turk**	**95.93**	**299**	IAMs_20	IAMs_20	17 47 12.3	
	comp=Z,4µm,22.0s						
UGM	**Wanagama**	**96.25**	**113**	IAMs_20	IAMs_20	17 45 12.3	
	comp=Z,3µm,20.0s						
BOAB	**BOACO BROADBAN**	**96.54**	**282**	IAMs_20	IAMs_20	17 48 49.1	
	comp=Z,4µm,22.0s						
MTDJ	**Mount Denham**	**96.64**	**292**	IAMs_20	IAMs_20	17 50 26.1	
	comp=Z,3µm,20.0s						
GTBY	**Guantanamo Bay**	**96.72**	**295**	IAMs_20	IAMs_20	17 49 27.2	
	comp=Z,3µm,20.0s						
TIR	**Tirane**	**96.88**	**16**	IAMs_20	IAMs_20	17 56 02.0	
	comp=Z,3µm,19.0s						
SMRI	**Semarang**	**96.92**	**112**	IAMs_20	IAMs_20	17 45 13.2	
	comp=Z,3µm,20.0s						
WRA	**Warramunga Arr**	**97.10**	**139**	LR	LR	17 49 55.3	
	comp=Z,1µm,18.2s,baz=210,slow=34						
WRA	**Warramunga Arr**	**97.10**	**139**	P	Pdif	17 08 42.2	-0.1
WRA				pmax	pmax		
	comp=Z,1.0nm,1.5s						
WRA	**Warramunga Arr**	**97.10**	**139**	P	**P**	**17 08 42.2**	**0.0**
WRAB	**Tennant Creek**	**97.11**	**139**	IAMs_20	IAMs_20	17 57 12.0	
	comp=Z,2µm,18.0s						
BKNI	**Bangkinang**	**97.65**	**100**	IAMs_20	IAMs_20	17 43 25.6	
	comp=Z,3µm,20.0s						
JAGI	**Jajag, Banyuwa**	**97.73**	**116**	IAMs_20	IAMs_20	17 45 31.4	
	comp=Z,3µm,20.0s						
PDG	**Podgorica**	**97.83**	**15**	IAMs_20	IAMs_20	17 57 11.5	
	comp=Z,2µm,20.0s						
TBI	**Tubuai**	**98.02**	**210**	*e*PS	PS	17 21 36.8	+0.3
	comp=Z,577nm,37.2s						
TBI				*e*SS	SS	17 26 53.3	+0.2
	comp=Z,1µm,30.2s						
TBI	**Tubuai**	**98.02**	**210**	*e*LR	LR	17 40 32.5	
	comp=Z,4µm,23.8s						
ANTO	**Ankara**	**98.19**	**26**	IAMs_20	IAMs_20	17 54 13.4	
	comp=Z,3µm,19.0s						
BRTR	**Keskin Array B**	**98.27**	**27**	PP	**PP**	**17 12 47.1**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=163,slow=5.4,SNR=3.5						
BRTR				LR	LR	17 53 04.2	
	comp=Z,4µm,21.2s,baz=200,slow=35						
PSI	**Prapat**	**98.42**	**97**	LR	LR	17 45 12.2	
	comp=Z,1µm,19.8s,baz=220,slow=30						
VLC	**Villacollemand**	**98.45**	**9**	IAMs_20	IAMs_20	17 49 39.0	
	comp=Z,3µm,20.0s						
TGUH	**Tegucigalpa,Un**	**98.76**	**282**	IAMs_20	IAMs_20	17 52 31.8	
	comp=Z,3µm,20.0s						
SENIN	**Lac Senin/Sane**	**100.41**	**6**	IAMs_20	IAMs_20	17 48 42.8	
	comp=Z,3µm,19.0s						
CTAO	**Charters Tower**	**101.08**	**149**	IAMs_20	IAMs_20	17 54 40.2	
	comp=Z,2µm,19.0s						
SOEI	**Soe**	**101.75**	**125**	IAMs_20	IAMs_20	17 47 03.4	
	comp=Z,4µm,22.0s						
MLR	**Muntele Rosu**	**101.98**	**19**	IAMs_20	IAMs_20	17 51 26.1	
	comp=Z,2µm,20.0s						
DZM	**Mont Dzumac**	**103.41**	**169**	*e*LR	LR	17 43 04.6	
	comp=Z,6µm,20.8s						
GERES	**GERESS Array B**	**103.41**	**10**	PP	**PP**	**17 13 24.5**	**-1.5**
	comp=Z,1.2nm,1.0s,baz=148,slow=5.8,SNR=2.8						
PPT2	**Papeete2**	**103.48**	**211**	*e*PS	PS	17 22 35.3	+0.1
	comp=Z,660nm,25.5s						
PPT2				*e*SS	SS	17 28 13.9	+4.4
	comp=Z,1µm,26.2s						
PPT2	**Papeete2**	**103.48**	**211**	*e*LR	LR	17 43 04.5	
	comp=Z,3µm,23.0s						
KSM	**Kuching**	**103.89**	**107**	IAMs_20	IAMs_20	17 46 24.2	
	comp=Z,2µm,22.0s						
KIV	**Kislovodsk**	**104.77**	**31**	IAMs_20	IAMs_20	17 54 47.4	
	comp=Z,3µm,21.0s						
BKB	**Balikpapan**	**105.24**	**114**	IAMs_20	IAMs_20	17 48 11.1	
	comp=Z,2µm,20.0s						
MAK	**Makhachkala**	**105.43**	**35**	*e*P	**Pdif**	**17 09 13.0**	**-5.5**
MAK				*e*		17 13 37.2	
MAK				*e*		17 19 57.2	
MAK				*e*		17 20 43.4	
MAK				*e*PS	PS	17 23 00.8	+5.1
MAK				*e*SS	SS	17 28 34.9	-2.8
MAK				*e*SSS	SSS	17 32 29.7	
MAK				MLR	MLR		
	comp=Z,5µm,18.0s						
CLL	**Collm**	**105.78**	**9**	*e*P	**Pdif**	**17 09 26.0**	**+6.2**
CLL	**Collm**	**105.78**	**9**	*e*(Pdif)		17 09 26.0	
CLL				*e*PS	PS	17 22 56.0	-3.1
CLL				*e*PPS	PPS	17 23 56.0	
CLL				*e*SS	SS	17 28 36.0	-6.2
CLL				*e*		17 29 35.0	
CLL				*e*SSS	SSS	17 33 18.0	
CLL				LmH		17 53 00.0	
	comp=N,800nm,20.6s						
CLL				LmH		17 53 00.0	
	comp=E,2µm,20.7s						
AKASG	**Malin Array Be**	**107.61**	**20**	PP	**PP**	**17 13 52.0**	**-4.9**
	comp=E,0.1nm,0.3s,baz=208,slow=7.3,SNR=2.4						
TAOE	**Nuku Hiva Isla**	**108.20**	**224**	*e*S	**Sdif**	**17 21 27.9**	**-11**
	comp=E,4µm,32.3s						
TAOE				*e*SS	**SS**	**17 29 18.0**	**+3.6**
	comp=E,930nm,27.0s						
TAOE	**Nuku Hiva Isla**	**108.20**	**224**	*e*LR	LR	17 45 16.9	
	comp=E,4µm,30.1s						
NIL	**Nilore**	**108.51**	**58**	IAMs_20	IAMs_20	18 04 07.8	
	comp=Z,2µm,19.0s						
TOLI2	**Tolitoli**	**109.30**	**117**	IAMs_20	IAMs_20	17 53 34.1	
	comp=Z,2µm,20.0s						
NHSC	**New Hope**	**109.99**	**299**	IAMs_20	IAMs_20	17 54 09.7	
	comp=Z,3µm,22.0s						
SANVU	**Saraoutou**	**110.04**	**168**	IAMs_20	IAMs_20	17 58 03.9	
	comp=Z,2µm,19.0s						
CNNC	**Cliffs of the**	**110.51**	**302**	IAMs_20	IAMs_20	17 55 06.5	
	comp=Z,3µm,20.0s						
CMAR	**Chiang Mai Arr**	**110.88**	**87**	PP	**PP**	**17 14 18.6**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=231,slow=6.2,SNR=4.7						
KKM	**Kota Kinabalu**	**110.95**	**110**	IAMs_20	IAMs_20	17 58 06.2	
	comp=Z,2µm,19.0s						
DLV	**T Lat**	**111.34**	**99**	IAMs_20	IAMs_20	17 50 40.5	
	comp=Z,2µm,22.0s						
GOGA	**Godfrey**	**111.94**	**297**	IAMs_20	IAMs_20	18 00 38.5	
	comp=Z,2µm,19.0s						
CBN	**Corbin Frederi**	**112.59**	**304**	IAMs_20	IAMs_20	17 55 38.8	
	comp=Z,3µm,20.0s						
BCX	**Boston College**	**112.97**	**311**	IAMs_20	IAMs_20	17 57 08.9	
	comp=Z,2µm,22.0s						
P60A	**Greenville**	**113.02**	**306**	IAMs_20	IAMs_20	17 57 07.1	
	comp=Z,2µm,21.0s						
PAL	**Palisades**	**113.16**	**308**	IAMs_20	IAMs_20	17 53 23.7	
	comp=Z,2µm,22.0s						
HRV	**Adam Dziewonsk**	**113.28**	**311**	IAMs_20	IAMs_20	17 53 09.1	
	comp=Z,2µm,20.0s						
BLA	**Blacksburg**	**113.32**	**301**	IAMs_20	IAMs_20	17 57 05.0	
	comp=Z,2µm,20.0s						
QUA2	**Belchertown**	**113.46**	**310**	IAMs_20	IAMs_20	17 54 58.7	
	comp=Z,2µm,20.0s						
N59A	**State Game Lan**	**113.95**	**307**	IAMs_20	IAMs_20	17 57 03.8	
	comp=Z,3µm,22.0s						
TZTN	**Tazewell**	**114.40**	**299**	IAMs_20	IAMs_20	18 01 38.5	
	comp=Z,2µm,20.0s						
KSH	**Kashi**	**114.47**	**56**	PKP	**PKiKP**	**17 13 51.8**	**+2.5**
KSH				LR	LR		
	comp=Z,3µm,17.5s						
KSH				LR	LR		
	comp=Z,1µm,18.2s						
KSH				LR	LR		
	comp=Z,2µm,26.8s						
SSPA	**Standing Stone**	**114.74**	**306**	IAMs_20	IAMs_20	17 51 46.6	
	comp=Z,2µm,21.0s						
HNR	**Honiara**	**114.78**	**160**	IAMs_20	IAMs_20	17 59 35.5	
	comp=Z,2µm,20.0s						
VBMS	**Vicksburg**	**114.82**	**291**	IAMs_20	IAMs_20	18 00 27.6	
	comp=Z,2µm,19.0s						
LSA	**Lhasa**	**115.02**	**74**	IAMs_20	IAMs_20	17 58 25.0	
	comp=Z,2µm,21.0s						
BINY	**Binghamton**	**115.06**	**308**	IAMs_20	IAMs_20	17 57 05.0	
	comp=Z,2µm,22.0s						
PLAL	**Pickwick Lake**	**115.59**	**295**	IAMs_20	IAMs_20	18 03 33.1	
	comp=Z,2µm,18.0s						
N54A	**Moraine State**	**116.00**	**304**	IAMs_20	IAMs_20	17 57 33.1	
	comp=Z,3µm,22.0s						
O53A	**New Philadelph**	**116.06**	**303**	IAMs_20	IAMs_20	17 58 31.4	
	comp=Z,2µm,21.0s						
HKT	**Hockley**	**116.07**	**286**	IAMs_20	IAMs_20	18 01 43.0	
	comp=Z,2µm,22.0s						
AAK	**Ala-Archa**	**116.18**	**53**	PKIKP	**PKiKP**	**17 13 53.0**	**+0.4**
AAK				MLR	MLR		
	comp=Z,3µm,20.0s						
AAK	**Ala-Archa**	**116.18**	**53**		**PKiKP**	**17 13 53.0**	**+0.4**
AAK	**Ala-Archa**	**116.18**	**53**	IAMs_20	IAMs_20	18 05 17.7	
	comp=Z,3µm,20.0s						
M54A	**Oil Creek Stat**	**116.27**	**305**	IAMs_20	IAMs_20	17 57 19.0	
	comp=Z,2µm,22.0s						
WVT	**Waverly**	**116.32**	**296**	IAMs_20	IAMs_20	18 01 55.6	
	comp=Z,2µm,21.0s						
M53A	**WI Miller and**	**116.70**	**304**	IAMs_20	IAMs_20	18 00 52.6	
	comp=Z,2µm,21.0s						
DAV	**Davao City (W)**	**116.85**	**118**	IAMs_20	IAMs_20	18 00 27.1	
	comp=Z,2µm,20.0s						
ERPA	**Erie**	**116.89**	**305**	IAMs_20	IAMs_20	17 57 37.5	
	comp=Z,3µm,22.0s						
ACSO	**Alum Creek Sta**	**116.92**	**302**	IAMs_20	IAMs_20	17 56 42.3	
	comp=Z,2µm,21.0s						
WCI	**Wyandotte Cave**	**117.10**	**298**	IAMs_20	IAMs_20	17 57 43.9	
	comp=Z,2µm,20.0s						
P49A	**Miami Univ. Ec**	**117.27**	**300**	IAMs_20	IAMs_20	17 56 38.5	
	comp=Z,3µm,22.0s						
435B	**Jarrell**	**117.69**	**285**	IAMs_20	IAMs_20	18 02 34.6	
	comp=Z,2µm,19.0s						
QIZ	**Qiongzhong**	**117.74**	**96**	PKP	**PKiKP**	**17 13 56.3**	**+0.2**
QIZ				PP	**PP**	**17 15 09.4**	**+0.1**
QIZ				SS	SS	17 31 23.3	+1.4
QIZ				LR	LR		
	comp=Z,850nm,20.6s						
QIZ				LR	LR		
	comp=Z,690nm,21.6s						
QIZ				LR	LR		
	comp=Z,1µm,22.6s						
KMI	**Kunming**	**118.25**	**86**	⇓PKP	**PKPdf**	**17 13 56.9**	**-0.3**
KMI				LR	LR		
	comp=Z,740nm,23.8s						
KMI				LR	LR		
	comp=Z,440nm,23.8s						
KMI				LR	LR		
	comp=Z,950nm,23.8s						
AAM	**Ann Arbor**	**118.81**	**303**	IAMs_20	IAMs_20	17 59 55.3	
	comp=Z,2µm,21.0s						
KLMR	**Klimovskoe**	**119.20**	**22**	*e*PKIKP	**PKiKP**	**17 13 57.9**	**+0.3**
KLMR				*e*		17 15 18.5	
KLMR				pmax	pmax		
	comp=Z,18nm,1.4s						
KLMR	**Klimovskoe**	**119.20**	**22**	*e*PKPdf	**PKiKP**	**17 13 57.9**	**+0.3**
KLMR				AMP		17 14 05.7	
	comp=Z,18nm,1.4s						
KLMR				*e*PP	**PP**	**17 15 18.6**	**-0.5**
KLMR				*e*SKP		17 17 33.6	
KLMR				LQ	LQ	17 55 55.4	
KLMR				LQ	LQ	17 55 55.4	
KLMR				LR	LR	17 58 02.0	
X37A	**Clayton**	**119.27**	**289**	IAMs_20	IAMs_20	18 02 11.6	
	comp=Z,3µm,21.0s						
CCM	**Cathedral Cave**	**119.58**	**295**	IAMs_20	IAMs_20	18 00 44.6	
	comp=Z,3µm,22.0s						
KIRV	**Kirov**	**119.65**	**28**	⇑*i*PKIKP	**PKiKP**	**17 14 00.0**	**+1.5**
TXAR	**Lajitas Array**	**120.11**	**279**	PKP	**PKiKP**	**17 14 02.5**	**+1.9**
	comp=Z,1.3nm,0.9s,baz=132,slow=1.9,SNR=6.4						
TXAR	**Lajitas Array**	**120.11**	**279**		**PKPdf**	**17 14 00.1**	**-0.3**
HDIL	**Hopedale**	**120.38**	**298**	IAMs_20	IAMs_20	18 00 50.8	
	comp=Z,3µm,22.0s						
L44A	**Lake County Fo**	**120.86**	**300**	IAMs_20	IAMs_20	18 03 49.3	
	comp=Z,3µm,22.0s						
OK030	**Cody Creek RV**	**121.04**	**289**	IAMs_20	IAMs_20	18 05 14.8	
	comp=Z,3µm,20.0s						
OK025	**Westminster Rd**	**121.09**	**289**	IAMs_20	IAMs_20	18 05 06.2	
	comp=Z,3µm,20.0s						
SCHQ	**Schefferville**	**121.13**	**322**	PKP	**PKiKP**	**17 14 02.5**	**+0.9**
	comp=Z,2.6nm,0.8s,baz=236,slow=1.6,SNR=4.2						
SCHQ	**Schefferville**	**121.13**	**322**		**PKPdf**	**17 14 01.2**	**-0.3**
GLMI	**Grayling**	**121.15**	**304**	IAMs_20	IAMs_20	17 59 14.2	
	comp=Z,3µm,22.0s						
WMOK	**Wichita Mounta**	**121.29**	**287**	IAMs_20	IAMs_20	18 05 21.9	
	comp=Z,2µm,20.0s						
PRGR	**Permogore**	**121.30**	**24**	*e*PKIKP	**PKPdf**	**17 14 00.5**	**-1.0**
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
OK029	**Liberty Lake**	**121.32**	**289**	IAMs_20	IAMs_20	18 05 01.1	
	comp=Z,3µm,21.0s						
GYA	**Guiyang**	**121.56**	**88**	⇓PKP	**PKiKP**	**17 14 04.6**	**+1.1**
GYA				PP	**PP**	**17 15 40.1**	**+4.2**
GYA				AMB	AMB		
	comp=Z,110nm,7.8s						
GYA				LR	LR		
	comp=Z,310nm,18.9s						
GYA				LR	LR		
	comp=Z,460nm,16.9s						
GYA				LR	LR		
	comp=Z,840nm,17.6s						
BRVK	**Borovoye**	**122.28**	**43**	PKIKP	**PKiKP**	**17 14 04.2**	**+0.3**
BRVK				MLR	MLR		
	comp=Z,3µm,22.0s						
BRVK	**Borovoye**	**122.28**	**43**	PKPdf	**PKiKP**	**17 14 04.2**	**+0.3**
BRVK	**Borovoye**	**122.28**	**43**	IAMs_20	IAMs_20	18 07 07.4	
	comp=Z,3µm,22.0s						
OK032	**Salt Plains WL**	**122.47**	**289**	IAMs_20	IAMs_20	18 06 37.7	
	comp=Z,3µm,19.0s						
U32A	**Winter Ranch,**	**122.60**	**288**	IAMs_20	IAMs_20	18 05 33.6	
	comp=Z,3µm,20.0s						
MAKZ	**Makanchi**	**122.84**	**54**	IAMs_20	IAMs_20	18 09 36.8	
	comp=Z,2µm,20.0s						
MNTX	**Cornudas Mount**	**122.85**	**280**	IAMs_20	IAMs_20	18 01 50.9	
	comp=Z,2µm,21.0s						
MK31	**Makanchi Array**	**122.98**	**55**	⇑*i*PKIKP	**PKiKP**	**17 14 07.2**	**+1.7**
MKAR	**Makanchi Array**	**122.98**	**55**	PKP	**PKPdf**	**17 14 05.4**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=256,slow=4.9,SNR=14						
MKAR	**Makanchi Array**	**122.98**	**55**	PKPdf	**PKPdf**	**17 14 03.9**	**-1.5**
AMTX	**Amarillo**	**123.03**	**285**	IAMs_20	IAMs_20	18 06 35.0	
	comp=Z,2µm,21.0s						
CD2	**Chengdu**	**123.17**	**82**	PKP	**PKPdf**	**17 14 06.0**	**-0.2**
CD2				LR	LR		
	comp=Z,60nm,20.6s						
CD2				LR	LR		
	comp=Z,530nm,23.1s						
CD2				LR	LR		
	comp=Z,890nm,22.4s						
KSU1	**Kansas State U**	**123.23**	**292**	IAMs_20	IAMs_20	18 07 52.3	
	comp=Z,1µm,18.0s						
SCIA	**State Center**	**123.40**	**297**	IAMs_20	IAMs_20	18 05 41.0	
	comp=Z,2µm,20.0s						
WMQ	**Urumqi**	**123.54**	**60**	*e*PKP	**PKiKP**	**17 14 09.3**	**+2.5**
WMQ				LR	LR		
	comp=Z,1µm,18.5s						
WMQ				LR	LR		
	comp=Z,2µm,20.3s						
WMQ				LR	LR		
	comp=Z,2µm,20.3s						
KURK	**Kurchatov**	**124.09**	**49**	PKIKP	**PKiKP**	**17 14 07.7**	**+0.2**
KURK				MLR	MLR		
	comp=Z,4µm,19.0s						
KURK	**Kurchatov**	**124.09**	**49**	PKPdf	**PKiKP**	**17 14 07.7**	**+0.2**
APA	**Apatity**	**124.17**	**15**	⇓*i*PKIKP	**PKPdf**	**17 14 06.2**	**-0.7**
APA				pmax	pmax		

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        comp=Z,9.0nm,1.2s
CBKS   Cedar Bluff       124.75 290   IAMs_20  IAMs_20   18 05 25.4
        comp=Z,2µm,21.0s
DY2G   Dye2              124.93 340  i P       PKPdf     17 14 08.2  -0.5
ARCES  ARCESS Array B    124.93  11   PKP      PKiKP     17 14 09.6  +0.9
        comp=Z,11nm,0.8s,baz=338,slow=1.3,SNR=9.7
Y22D   IRIS PASSCAL I    125.46 281   IAMs_20  IAMs_20   18 06 21.0
        comp=Z,2µm,18.0s
ANMO   Albuquerque       125.81 282   IAMs_20  IAMs_20   18 07 08.4
        comp=Z,2µm,19.0s
ICESG  Greenland Ices    126.04 344  i P       PKPdf     17 14 08.6  -2.3
T25A   Trinidad          126.19 285   IAMs_20  IAMs_20   18 07 22.2
        comp=Z,2µm,22.0s
ECSD   EROS Data Cent    126.47 296   PKPdf    PKPdf     17 14 11.7  -0.4
ECSD   EROS Data Cent    126.47 296   IAMs_20  IAMs_20   18 04 32.1
        comp=Z,2µm,22.0s
KNMB   Chin-men Tao      126.93  99   IAMs_20  IAMs_20   17 58 56.6
        comp=Z,2µm,22.0s
LZH    Lanzhou           126.94  78  ePKP      PKiKP     17 14 14.8  +0.9
LZH                                   sPKP               17 14 22.4
LZH                                   SS       SS        17 33 22.3  +2.9
LZH                                   LR       LR
        comp=Z,1µm,17.9s
LZH                                   LR       LR
        comp=Z,900nm,18.4s
LZH                                   LR       LR
        comp=Z,750nm,19.6s
GTA    Gaotai            126.97  72   PKP      PKiKP     17 14 15.3  +1.5
GTA                                   LR       LR
        comp=Z,650nm,16.7s
GTA                                   LR       LR
        comp=Z,740nm,21.9s
GTA                                   LR       LR
        comp=Z,850nm,22.3s
SDCO   Great Sand Dun    127.23 285   PKPdf    PKPdf     17 14 14.1   0.0
SDCO                                  IAMs_20  IAMs_20   18 09 05.2
        comp=Z,2µm,19.0s
DGZ    Jazzator, Alta    127.47  55⇑iPKIKP     PKiKP     17 14 16.0  +1.5
OGNE   Ogallala          127.49 290   IAMs_20  IAMs_20   18 04 58.2
        comp=Z,2µm,22.0s
F33A   5 Mile Ranch,     127.73 298   PKPdf    PKPdf     17 14 13.7  -0.7
XAN    Xi'an             128.44  83   PKP      PKiKP     17 14 17.8  +1.0
XAN                                   SKS      SKSdf     17 21 24.5  -3.2
XAN                                   SS       SS        17 33 38.6  +0.8
XAN                                   AMB      AMB
        comp=Z,370nm,7.6s
XAN                                   LR       LR
        comp=Z,730nm,20.6s
XAN                                   LR       LR
        comp=Z,1µm,19.2s
XAN                                   LR       LR
        comp=Z,1µm,17.9s
FRB    Frobisher Bay     128.44 328   PKP      PKPdf     17 14 14.6  -0.6
        comp=Z,6.5nm,0.9s,baz=116,slow=4.5,SNR=8.8
MVCO   Mesa Verde        128.58 282   IAMs_20  IAMs_20   18 11 01.7
        comp=Z,2µm,20.0s
DBG    Daneborg          128.77 354  i P       PKPdf     17 14 15.6   0.0
SUMG   Summit            128.99 347   PKIKP    PKPdf     17 14 16.8  +0.3
SUMG   Summit            128.99 347  i P       PKiKP     17 14 18.0  +0.8
SUMG   Summit            128.99 347   PKPdf    PKPdf     17 14 16.8  +0.3
ZALV   Zalesovo Beam     129.07  49   PKP      PKPdf     17 14 17.0  +0.3
        comp=Z,2.2nm,0.8s,baz=242,slow=3.2,SNR=8.1
ZALV   Zalesovo Beam     129.07  49   PKIKP    PKPdf     17 14 17.0  +0.3
ZALV   Zalesovo Beam     129.07  49   PKPdf    PKPdf     17 14 16.8  +0.1
AGMN   Agassiz Nation    129.14 301   IAMs_20  IAMs_20   18 06 25.5
        comp=Z,2µm,21.0s
ULM    Lac du Bonnet     130.41 303   PKP      PKiKP     17 14 20.7  +0.6
        comp=Z,5.6nm,0.9s,baz=111,slow=2.3,SNR=4.4
ULM    Lac du Bonnet     130.41 303   PKPdf    PKPdf     17 14 18.9  -0.4
RSSD   Black Hills       130.72 292   IAMs_20  IAMs_20   18 07 42.0
        comp=Z,2µm,20.0s
RWWY   Rawlins           130.88 287   PKPdf    PKiKP     17 14 21.4  -0.4
UPNV   Upernavik         132.08 341  i P       PKiKP     17 14 22.5  -0.4
NJ2    Nanjing           132.85  93  ePKP      PKiKP     17 14 26.8  +1.1
NJ2                                   PP       PP        17 16 57.4  +7.2
NJ2                                   AMB      AMB
        comp=Z,320nm,4.7s
NJ2                                   LR       LR
        comp=Z,750nm,19.4s
NJ2                                   LR       LR
        comp=Z,610nm,16.6s
NJ2                                   LR       LR
        comp=Z,1µm,18.0s
PDAR   Pinedale Array    132.90 287   PKP      PKiKP     17 14 25.3  -0.5
        comp=Z,1.6nm,1.0s,baz=93,slow=3.0,SNR=8.1
PDAR                                  PP       PP        17 16 50.0  -0.8
        comp=Z,0.9nm,0.9s,baz=110,slow=8.0,SNR=2.4
PDAR   Pinedale Array    132.90 287   PKPdf    PKPdf     17 14 24.5  -0.2
DUG    Dugway, Tooele    133.08 282   IAMs_20  IAMs_20   18 08 42.8
        comp=Z,2µm,22.0s
SSE    Sheshan           133.53  96   PKP      PKPdf     17 14 23.8  -2.0
SSE                                   SS       SS        17 34 38.9  -1.0
SSE                                   LR       LR
        comp=Z,450nm,22.6s
SSE                                   LR       LR
        comp=Z,260nm,20.2s
SSE                                   LR       LR
        comp=Z,540nm,21.6s
LAO    LASA Array        133.54 293   IAMs_20  IAMs_20   18 09 14.1
        comp=Z,2µm,22.0s
DGMT   Dagmar            133.55 296   IAMs_20  IAMs_20   18 06 23.4
        comp=Z,2µm,22.0s
LOHW   Long Hollow       134.03 287   IAMs_20  IAMs_20   18 07 49.6
        comp=Z,2µm,22.0s
MOOW   Moose Ponds       134.20 287   IAMs_20  IAMs_20   18 10 40.0
        comp=Z,2µm,21.0s
HHC    Hu-ho-hao-te      134.61  78  ePKP      PKPdf     17 14 25.4  -2.3
HHC                                   SKKS               17 23 59.4
HHC                                   AMB      AMB
        comp=Z,490nm,8.0s
HHC                                   LR       LR
        comp=Z,900nm,20.3s
HHC                                   LR       LR
        comp=Z,800nm,19.6s
HHC                                   LR       LR
        comp=Z,1µm,21.1s
NEEM   North Greenlan    134.85 346  i P       PKiKP     17 14 28.5  -0.3
NVAR   Mina Array Bea    135.10 276   PKP      PKiKP     17 14 30.3   0.0
        comp=Z,0.2nm,0.3s,baz=62,slow=4.2,SNR=2.2
NOR    Nord              135.74 357  i P       PKPdf     17 14 26.4  -2.1
SONM   Songino Array     136.04  67   PKhKP    PKPpre    17 14 18.5
        comp=Z,0.5nm,1.0s,baz=176,slow=4.3,SNR=1.8
SONM                                  PKP      PKPdf     17 14 30.4  +0.2
        comp=Z,1.0nm,0.9s,baz=200,slow=3.9,SNR=6.7
SONM   Songino Array     136.04  67            PKPdf     17 14 29.6  -0.6
ULN    Ulaanbaatar       136.42  68⇓iPKIKP     PKiKP     17 14 32.5  -0.1
ULN                                   pmax     pmax
        comp=Z,5.0nm,1.7s
TULEG  Thule             137.11 341   PKPdf    PKPdf     17 14 32.0  +0.9
WVOR   Wild Horse Val    137.88 281   IAMs_20  IAMs_20   18 12 15.3
        comp=Z,2µm,19.0s
NRIK   Noril'sk          138.83  33   PKP      PKiKP     17 14 37.2  +0.6
        comp=Z,0.9nm,0.3s,baz=193,slow=1.8,SNR=4.9
NRIK   Noril'sk          138.83  33⇑iPKIKP     PKiKP     17 14 38.5  +1.8
DL2    Dalian            139.22  88   PKP      PKPdf     17 14 31.6  -4.5
DL2                                   PP       PP        17 17 32.3  +2.1
DL2                                   AMB      AMB
        comp=Z,210nm,6.5s
DL2                                   LR       LR
        comp=Z,770nm,18.2s
DL2                                   LR       LR
        comp=Z,470nm,19.0s
DL2                                   LR       LR
        comp=Z,870nm,21.8s
RES    Resolute Bay      142.04 334   PKP      PKPdf     17 14 38.8  -1.4
        comp=Z,6.3nm,1.1s,baz=80,slow=4.7,SNR=4.2
CIT    Chita             142.20  66  ePKIKP    PKPdf     17 14 37.1  -4.1
SNY    Shenyang          142.23  86 ⇓PKP       PKPdf     17 14 38.3  -3.2
SNY                                   SKKS               17 24 35.8
SNY                                   SS       SS        17 36 24.6  +1.6
SNY                                   AMB      AMB
        comp=Z,370nm,9.8s
SNY                                   LR       LR
        comp=Z,990nm,20.1s
SNY                                   LR       LR
        comp=Z,500nm,25.0s
SNY                                   LR       LR
        comp=Z,1µm,21.6s
HIA    Hailar            144.22  73   PKIKP    PKPbc     17 14 43.1   0.0
HIA                                   MLR      MLR
        comp=Z,3µm,22.0s
HIA    Hailar            144.22  73   PKPdf    PKPbc     17 14 43.1   0.0
CN2    Changchun         144.51  85  ePKP      PKPdf     17 14 45.5   0.0
CN2                                   PP       PP        17 18 09.3  +6.9
CN2                                   SS       SS        17 36 51.5  +2.1
CN2                                   LR       LR
        comp=Z,1µm,18.0s
CN2                                   LR       LR
        comp=Z,1µm,18.0s
CN2                                   LR       LR
        comp=Z,1µm,16.5s
BOD    Bodaibo           144.99  57  ePKIKP    PKPbc     17 14 43.9  -1.3
BOD                                   pmax     pmax
        comp=Z,53nm,1.8s
YKA    Yellowknife Ar    145.38 311   PKPbc    PKPbc     17 14 44.2  -2.1
        comp=Z,26nm,1.0s,baz=105,slow=3.2,SNR=76
MAJO   Matsushiro        147.27 106⇑iPKP2      PKiKP     17 14 55.3  +0.2
MAT    Matsushiro        147.27 106   PKP      PKPdf     17 14 51.2  +0.8
MJAR   Matsushiro Arr    147.27 106   PKPbc    PKPbc     17 14 52.4  -0.5
        comp=Z,25nm,1.2s,baz=226,slow=3.0,SNR=22
MDJ    Mudanjiang        147.42  87   PKPbc    PKPbc     17 14 52.0  -0.9
MDJ                                   PP       PP        17 18 27.9  +8.3
MDJ                                   LR       LR
        comp=Z,2µm,20.6s
MDJ                                   LR       LR
        comp=Z,1µm,19.1s
MDJ                                   LR       LR
        comp=Z,2µm,20.2s
MDJ    Mudanjiang        147.42  87   IAMs_20  IAMs_20   18 30 47.3
        comp=Z,2µm,21.0s
JSD    Sado              148.35 104            PKiKP     17 14 56.5  -0.7
USRK   Ussuriysk Ar.     148.59  89   PKPbc    PKiKP     17 14 57.8  +0.3
        comp=Z,1.7nm,0.7s,baz=186,slow=2.9,SNR=3.4
ZEA    Zeya              150.41  70  ePKIKP    PKiKP     17 15 02.5  +1.5
ZEA                                   pmax     pmax
        comp=E,20nm,1.0s
ZEA                                   pmax     pmax
        comp=N,20nm,1.6s
ZEA                                   pmax     pmax
        comp=Z,30nm,1.3s
ZEA                                   pmax     pmax
        comp=E,100nm,4.9s
ZEA                                   pmax     pmax
        comp=N,200nm,5.7s
ZEA                                   pmax     pmax
        comp=Z,400nm,6.2s
A36M   Sachs Harbour     150.44 328            PKPdf     17 14 53.0  -1.4
A36M                                           PKPbc     17 14 59.5  -0.3
TEY    Ternei            151.78  91  ePKIKP    PKiKP     17 15 08.0  +4.0
TIXI   Tiksi             152.60  32   PKIKP    PKPbc     17 15 03.6  -1.1
TIXI                                  MLR      MLR
        comp=Z,2µm,22.0s
TIXI   Tiksi             152.60  32            PKPbc     17 15 03.6  -1.1
YAK    Yakutsk           153.64  53  ePKIKP    PKiKP     17 15 07.5  +0.1
YAK                                   pmax     pmax
        comp=Z,24nm,1.0s
YAK                                   pmax     pmax
        comp=E,7.0nm,1.4s
YAK    Yakutsk           153.64  53   PKPdf    PKPdf     17 14 59.4  -0.1
YAK                                            PKiKP     17 15 07.4  +0.1
YAK                                   IAMs_20  IAMs_20   18 27 26.3
        comp=Z,2µm,22.0s
INK    Inuvik            153.74 321   PKP      PKPdf     17 15 00.2  +0.8
        comp=Z,1.2nm,1.1s,baz=66,slow=4.8,SNR=2.3
INK                                   PKPbc    PKiKP     17 15 08.0  +0.6
        comp=Z,9.0nm,0.9s,baz=85,slow=2.6,SNR=24
YSS    Yuzh-Sakhalins    156.43  93  ePKP2     PKPab     17 15 34.0  +1.6
YSS                                  e                   17 39 06.0
YSS    Yuzh-Sakhalins    156.43  93   IAMs_20  IAMs_20   18 36 26.5
        comp=Z,2µm,20.0s
LOGN   Logan Glacier     157.49 304   IAMs_20  IAMs_20   18 26 04.2
        comp=Z,2µm,21.0s
CTGM   Chitina Glacie    157.65 304   IAMs_20  IAMs_20   18 25 40.5
        comp=Z,1µm,20.0s
BCAR   Beaver Creek A    157.78 310   PKPdf    PKPdf     17 15 05.3  +0.2
L27K   Beaver Creek,     157.80 310   PKPdf    PKPdf     17 15 05.4  +0.3
ISLE   Juniper Island    158.14 303   IAMs_20  IAMs_20   18 22 20.5
        comp=Z,2µm,21.0s
KUR    Kuril'sk          158.47 102  ePKP2     PKPab     17 15 26.4   -15
KUR                                  e                   17 19 21.0
KUR                                  ePPP      PPP       17 23 03.7
FYU    Fort Yukon        158.53 320   PKPdf    PKPdf     17 15 04.9  -0.9
FYU                                   IAMs_20  IAMs_20   18 16 51.0
        comp=Z,2µm,22.0s
SCRK   Sand Creek        158.63 312   PKPab    PKPab     17 15 42.4  +0.7
VRDI   Verde Repeater    158.68 305   IAMs_20  IAMs_20   18 31 47.5
        comp=Z,2µm,21.0s
GLB    Gilahina Butte    158.84 305   IAMs_20  IAMs_20   18 25 45.8
        comp=Z,2µm,22.0s
PRP    Porcupine Dome    158.94 317   IAMs_20  IAMs_20   18 33 02.1
        comp=Z,1µm,20.0s
BMRM   Bremner River     159.25 304   IAMs_20  IAMs_20   18 29 39.6
        comp=Z,2µm,21.0s
A21K   Barrow            159.60 337   IAMs_20  IAMs_20   18 22 48.4
        comp=Z,2µm,22.0s
IL31                     159.69 315   PKPab    PKPab     17 15 46.3  +0.2
ILAR   Eielson Array     159.69 315   PKP      PKPdf     17 15 05.7  -1.5
        comp=Z,1.3nm,1.1s,baz=17,slow=3.5,SNR=5.8
ILAR                                  PKPab    pPKPab    17 15 47.8  -0.9
        comp=Z,4.2nm,1.0s,baz=78,slow=2.9,SNR=18
ILAR                                  PP       PP        17 19 26.4  -2.1
        comp=Z,0.7nm,1.0s,baz=63,slow=2.4,SNR=2.6
ILAR   Eielson Array     159.69 315   PKPdf    PKPdf     17 15 05.6  -1.7
ILAR                                  PKPab    PKPab     17 15 46.7  +0.6
H24K   Noodor Dome       159.78 319   IAMs_20  IAMs_20   18 33 11.9
        comp=Z,2µm,21.0s
KLU    Klutina           159.85 306   IAMs_20  IAMs_20   18 27 30.4
        comp=Z,2µm,20.0s
WRH    Wood River Hil    160.28 315   PKPab    PKPab     17 15 48.2  -0.5
BWN    Browne            160.94 315   PKPab    PKPab     17 15 51.3  -0.2
BILL   Bilibino          164.91  18  i PKIKP   PKPdf     17 15 11.2  -1.2
BILL                                  pmax     pmax
        comp=Z,3.0nm,1.4s
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JMA ***23*** *17:16:48.6±0.1, 44°.84N×145°.31E, h11^{km}±2^{km}, M2.7*
SKHL ***23*** *17:16:49.1±0.3, 44°.90N×145°.50E, h35^{km}±4^{km}, mb4.1/3*
ISC 23 17:16:45.2±2.7**, 44°.9N**±0°.1×**145°.57E**±0°.06**, h19**^{km}±4^{km}**,**
n12, σ0^{s}.44/21**, Hokkaido region**

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Code   Station Name         Δ°  AZ°    Phase ID           Time       Res
                                      Op       ISC        h  m  s    ISC
YUK    Yuzh-Kuril'sk       0.93 167  i P       Pg        17 17 03.7  +0.5
YUK                                   AMB      AMB       17 17 04.0
        70nm,0.1s
YUK                                  i S       Sb        17 17 14.5   0.0
YUK                                   A        A         17 17 15.2
        460nm,0.1s
YUK                                   A        A         17 17 15.2
        320nm,0.1s
JRA    Rausu               1.05 198   P        Pg        17 17 05.9  +0.4
JRA                                  eS        Sb        17 17 18.2  +0.1
GLVR   Golovnino           1.20 182  i P       Pg        17 17 08.3  -0.1
GLVR                                  AMB      AMB       17 17 08.8
        60nm,0.3s
GLVR                                 i S       Sn        17 17 22.9  +0.2
GLVR                                  A        A         17 17 23.0
        190nm,0.3s
GLVR                                  A        A         17 17 23.0
        500nm,0.3s
JNSB   Nemuroshibetsu      1.23 199   P        Pg        17 17 08.8  -0.2
JNSB                                 eS        Sn        17 17 23.8  +0.3
SHO    Shikotan            1.40 139  i P       Pg        17 17 12.1  -0.1
SHO                                   AMB      AMB       17 17 13.2
        20nm,0.2s
SHO                                  i S       Sb        17 17 28.9  +0.8
SHO                                   A        A         17 17 29.9
        190nm,0.2s
SHO                                   A        A         17 17 29.9
        210nm,0.2s
JNK    Nakash              1.48 205  eS        Sn        17 17 29.9  +0.2
JTKR   Abashiri--Toko      1.53 231   P        Pb        17 17 12.8  -0.2
NMR    Nemuro--Hokkai      1.57 176  i P       Pb        17 17 13.4  -0.2
NMR                                  i S       Sn        17 17 31.5  -0.4
NEM2   Nemuro 2            1.58 175   P        Pb        17 17 13.3  -0.4
NEM2                                 eS        Sn        17 17 31.5  -0.5
JMP    Maruseppu           1.84 240   P        Pb        17 17 17.7  -0.5
JMP                                  eS        Sn        17 17 38.9  +0.4
AKK    Akkeshi             1.99 196  i P       Pb        17 17 20.0  -0.8
AKK                                  eS        Sn        17 17 42.8  +0.6
JAK    Akkeshi             2.04 198   P        Pb        17 17 21.4  -0.2
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VAO ***23*** *17:19:47.6±1.0, 1°.26N×79°.63W, h10^{km}, mb4.5*
NEIC ***23*** *17:19:53.5±2.6, 1°.01N±0°.06×79°.52W±0°.08, h41^{km}±8^{km}, mb4.4/25, Error ellipse: s-maj=12.9km s-min=7.6km az=66.0*
IDC ***23*** *17:19:56.1±2.7, 1°.02N×79°.62W, h70^{km}±26^{km}, mb3.9/11, mb1 4.1/14, mb1mx3.9/29, mbtmp4.2/14, Error ellipse: s-maj=22.0km s-min=13.9km az=63.0*
ISC 23 17:19:47.7±2.1**, 1°.11N**±0°.04×**79°.63W**±0°.04**, h3**^{km}±12^{km}**,**
n109, σ2^{s}.20/117**, mb4.3**/20**, Near coast of Ecuador**

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Code   Station Name         Δ°  AZ°    Phase ID           Time       Res
                                      Op       ISC        h  m  s    ISC
TUMC   Tumaco              1.15  52  i P       Pn        17 20 12.4  +1.7
TUMC                                 eS        Sn        17 20 43.4   +16
TUMC   Tumaco              1.15  52   Pn       Pn        17 20 12.6  +1.9
OTAV   Otavalo             1.46 126  eP        Pn        17 20 15.1  -0.4
OTAV                                 eS        Sn        17 20 35.7  +0.4
OTAV   Otavalo             1.46 126  eP        Pn        17 20 15.0  -0.4
OTAV   Otavalo             1.46 126   Pn       Pn        17 20 14.9  -0.5
OTAV                                  Sn       Sg        17 20 30.7  -4.1
CCUFI  Cufio, Nario        2.29  87  eP        Pb        17 20 29.7  -0.3
CCUFI                                eS        Sg        17 21 03.2  +1.8
GCUF   Volcan Galeras      2.29  87  eP        Pb        17 20 29.4  -0.5
GCUF                                 eS        Sg        17 21 04.0  +2.6
CPAS1  Pasto               2.31  88  eP        Pb        17 20 30.1  -0.1
CPAS1  Pasto               2.31  88  eS        Sg        17 21 05.0  +2.9
CPAS2  Pasto               2.38  87  eP        Pn        17 20 28.7  +0.8
CPAS2  Pasto               2.38  87  eS        Sg        17 21 04.8  +0.4
BBAC   Balboa, Cauca       2.55  69  eP        Pn        17 20 32.4  +2.2
BBAC                                 eS        Sb        17 21 08.2  +2.1
SOTA   Rioblanco           3.19  71  eP        Pn        17 20 42.4  +3.2
SOTA                                 eS        Sb        17 21 25.4  +0.6
POPC   Popayan, Colom      3.28  64  eP        Pn        17 20 42.7  +2.5
POPC                                 eS        Sb        17 21 28.1  +1.0
PCON   Cinco Dias          3.45  69  eP        Pn        17 20 46.7  +3.8
PCON                                 eS        Sb        17 21 35.1  +2.7
FLOC   Florencia           4.01  83  eP        Pn        17 20 53.4  +3.4
FLOC                                 eS        Sb        17 21 49.5  +1.7
MARP   Paez Belalcaza      4.06  65  eP        Pn        17 20 54.3  +3.4
MARP                                 eS        Sb        17 21 48.3  -1.3
GARC   Garzon, Huila       4.28  75  eP        Pn        17 20 56.2  +2.3
GARC                                 eS        Sb        17 21 55.2  -0.6
YOTC   Yotoco, Valle       4.35  49  i P       Pn        17 21 00.0  +5.2
YOTC                                 eS        Sb        17 21 54.7  -3.2
BETC   Betania             4.47  69  eP        Pn        17 21 00.2  +3.8
BETC                                 eS        Sb        17 22 02.7  +1.4
PTLC   Puerto Leguiza      4.92 101  eP        Pn        17 21 05.7  +3.1
PLMC   San Jos del P       5.04  41  eP        Pn        17 21 10.5  +6.2
PLMC                                 eS        Sb        17 22 13.4  -4.3
ORTC   Ortega, Tolima      5.19  58  eP        Pb        17 21 14.3  -4.9
ORTC                                 eS        Sn        17 22 14.7  +7.9
ANIL   Santa Ana           5.40  51  eP        Pn        17 21 16.3  +6.9
ANIL                                 eS        Sb        17 22 26.3  -1.9
PRAC   Prado               5.40  61  eP        Pn        17 21 13.4  +4.1
MACC   Macarena, Meta      5.87  80  eP        Pn        17 21 20.0  +4.3
GUY2C  Guyana, Caldas      5.91  46  eP        Pn        17 21 21.9  +5.4
GUY2C                                eS        Sb        17 22 40.4  -2.6
GUY2C                                eS        Sb        17 22 41.0  -1.9
CBOC   Ciudad Bolivar      5.95  37  eP        Pn        17 21 25.7  +8.9
CBOC                                 eS        Sb        17 22 43.1  -0.8
ROSC   El Rosal            6.47  55   P        Pn        17 21 31.3  +7.1
        5.8nm,0.3s,baz=170,slow=3.3,SNR=5.1
ROSC                                  S        Sn        17 22 48.8   +10
        1.9nm,0.3s,baz=246,slow=20,SNR=1.2
ROSC   El Rosal            6.47  55            Pn        17 21 25.9  +1.7
NORC   Norcasia            6.50  47  eP        Pn        17 21 31.5  +7.2
NORC                                 eS        Sb        17 22 53.3  -6.3
HELC   Santa Helena        6.50  39  eP        Pb        17 21 37.2  -4.5
HELC                                 eS        Sb        17 22 56.2  -3.8
VILC   Villavicencio,      6.64  63  eP        Pn        17 21 33.1  +6.8
VILC                                 eS        Sb        17 22 59.7  -4.1
CHIC   Chingaza            6.85  59  eP        Pn        17 21 32.9  +3.4
CHIC                                 eS        Sn        17 22 55.5  +7.2
SPBC   San Pablo de B      7.15  51  i P       Pn        17 21 40.0  +6.7
PTBC   PUERTO BERRIO,      7.47  44  eP        Pn        17 21 46.7  +9.1
PTBC                                 eS        Sn        17 23 12.5   +10
UREC   San Jos de Ur       7.76  32  i P       Pn        17 21 44.8  +3.1
ZARC   Zaragoza, Cauc      7.93  37  i P       Pn        17 21 54.3   +10
ZARC   Zaragoza, Cauc      7.93  37            Pn        17 21 46.6  +2.7
RUSC   La Rusia            8.08  54  eP        Pn        17 21 51.8  +5.3
ATAH   Atahualpa           8.28 171   P        Pn        17 21 50.7  +1.6
        1.0nm,0.3s,baz=173,slow=19,SNR=5.5
ATAH                                  S        Sn        17 23 25.3  +1.9
        0.8nm,0.3s,baz=13,slow=19,SNR=1.9
SRBA   San Rafael, Bu      8.88 335            Pn        17 22 00.7  +3.5
SMLC   San Martn de        9.44  36  eP        Pn        17 22 08.2  +3.6
ORTG   Ortega, Santa      10.87 328   Pn       Pn        17 22 25.6  +1.3
CZSB   Cruzeiro do Su     11.17 142  eP        Pn        17 22 29.7  +1.3
CZSB   Cruzeiro do Su     11.17 142            Pn        17 22 28.8  +0.4
ETMB   Extrema            17.21 129            Pn        17 23 46.9  -2.4
BOAV   Boa Vista          19.14  86  eP        P         17 24 11.4  -0.8
SAML   Samuel             19.19 122   P        P         17 24 12.7  -0.1
SAML                                  IAmb     IAmb      17 24 15.6
        comp=Z,11nm,0.9s
MACA   Manacapuru-AM      19.41 103   P        P         17 24 13.3  -1.9
PTGA   Pitinga            19.75  95   P        Pn        17 24 20.3   0.0
        comp=Z,0.8nm,0.3s,baz=270,slow=12,SNR=9.4
LPAZ   La Paz             20.68 147   P        Pn        17 24 30.4  -1.5
        comp=Z,4.8nm,0.7s,baz=320,slow=11,SNR=15
LPAZ   La Paz             20.68 147  eP        Pn        17 24 30.2  -1.7
LPAZ   La Paz             20.68 147   P        P         17 24 29.8  +0.2
PB11   IPOC Station P     22.93 155   P        P         17 24 53.6  +0.3
PB11                                  IAmb     IAmb      17 24 59.7
        comp=Z,13nm,0.8s
VILB   Vilhena            23.81 127  eP        P         17 25 02.1   0.0
VILB   Vilhena            23.81 127   P        P         17 25 01.8  -0.2
VILB                                  IAmb     IAmb      17 25 12.3
        comp=Z,14nm,0.8s
ITTB   Itaituba           24.49 103  eP        P         17 25 06.8  -1.6
SIV    San Ignacio        25.00 134   P        P         17 25 12.6  -0.3
        comp=Z,5.2nm,0.7s,baz=297,slow=9.3,SNR=28
MALB   Monte Alegre       25.53  97  eP        P         17 25 17.5  -0.3
PDRB   Porto dos Gac      26.03 120  eP        P         17 25 22.3   0.0
PTLB   Pontes e Lacer     26.10 130  eP        P         17 25 22.6  -0.4
PTLB   Pontes e Lacer     26.10 130   P        P         17 25 22.5  -0.4
CLDB   Colider            26.53 117  eP        P         17 25 25.7  -1.1
MCPB   Macapa, AP         27.61  93  eP        P         17 25 36.1  -0.6
AQDB   Aquidauana         31.77 134  eP        P         17 26 12.7  -0.7
ARAG   Araguaiana, MT     32.17 122  eP        P         17 26 15.7  -1.3
SMTB   Santa Maria do     33.43 108  eP        P         17 26 27.2  -0.9
PEXB   Peixe              33.77 114  eP        P         17 26 30.1  -1.0
CPCT   Cooper Cave        34.47 353   P        P         17 26 37.2  +0.3
CPCT                                  IAmb     IAmb      17 26 38.0
        comp=Z,4.7nm,0.7s
V48A   Smith Brothers     35.10 350   P        P         17 26 42.4  +0.1
TXAR   Lajitas Array      36.23 323   P        P         17 26 54.2  +2.0
        comp=Z,0.5nm,0.9s,baz=131,slow=11,SNR=3.1
TXAR                                  PcP      PcP       17 29 17.2  -0.5
        comp=Z,0.9nm,0.7s,baz=144,slow=6.4,SNR=8.2
IPMB   Ipameri, GO        36.28 123  eP        P         17 26 51.5  -1.2
SDBA   SAO DESIDERIO      37.00 112  eP        P         17 26 58.0  -0.9
BB19B  Bebedouro          37.56 128  eP        P         17 27 02.6  -1.0
CCM    Cathedral Cave     38.29 345   P        P         17 27 08.9  -0.5
CCM                                   IAmb     IAmb      17 27 09.2
        comp=Z,5.4nm,0.8s
JANB   Januaria           38.45 116  eP        P         17 27 10.8  -0.4
P48A   Milroy             38.54 353   P        P         17 27 10.8  -0.7
MC01   Montes Claros      39.40 118  eP        P         17 27 18.4  -0.8
ANMO   Albuquerque        41.94 326   P        P         17 27 41.4  +1.4
PLCA   Paso Flores        42.46 170   P        P         17 27 43.7  -0.3
        comp=Z,4.4nm,0.5s,baz=338,slow=9.5,SNR=11
PLCA   Paso Flores        42.46 170  eP        P         17 27 44.0   0.0
PLCA   Paso Flores        42.46 170   P        P         17 27 43.8  -0.3
PLCA                                  IAmb     IAmb      17 27 49.4
        comp=Z,14nm,1.3s
NBIT   Itapeh - BA        42.84 113  eP        P         17 27 47.3   0.0
CMC01  Camacan, BA        42.89 114  eP        P         17 27 47.0  -0.8
BSFB   Barra de Sao F     42.95 119  eP        P         17 27 46.7  -1.6
NBLA   Lagarto - SE       43.30 107  eP        P         17 27 49.7  -1.6
SDCO   Great Sand Dun     43.54 330   P        P         17 27 54.7  +1.5
SDCO                                  IAmb     IAmb      17 27 55.7
        comp=Z,4.6nm,1.0s
W18A   Petrified Fore     43.94 324   P        P         17 27 58.2  +1.9
X16A   Lo Mia Camp, P     44.50 322   P        P         17 28 01.6  +0.7
X16A                                  IAmb     IAmb      17 28 03.2
        comp=Z,4.3nm,0.7s
WUAZ   Wupatki            45.19 323   P        P         17 28 07.7  +1.5
ULM    Lac du Bonnet      50.88 347   P        P         17 28 48.4  -1.4
        comp=Z,4.0nm,0.6s,baz=151,slow=7.9,SNR=4.7
ULM    Lac du Bonnet      50.88 347   P        P         17 28 49.0  -0.8
ULM                                   IAmb     IAmb      17 28 49.1
        comp=Z,4.5nm,0.8s
NV11   Mina Array Sit     51.23 321   P        P         17 28 53.6  +0.7
NVAR   Mina Array Bea     51.32 321   P        P         17 28 55.0  +1.3
        comp=Z,3.8nm,0.9s,baz=135,slow=7.2,SNR=8.7
NVAR                                  PcP      PcP       17 30 08.5  -0.2
        comp=Z,1.0nm,0.7s,baz=104,slow=3.8,SNR=2.5
KVN    Kaiserville        51.57 322   P        P         17 28 56.2  +0.7
KVN                                   IAmb     IAmb      17 28 56.8
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	comp=Z,4.1nm,0.8s						
BOZ	Bozeman (W)	52.48	332	P	P	17 29 02.7	+0.6
BOZ				IAmb	IAmb	17 29 03.7	
	comp=Z,3.3nm,0.8s						
MFID	Camas Ranch	53.05	327	P	P	17 29 07.2	+0.9
MFID				IAmb	IAmb	17 29 08.1	
	comp=Z,4.8nm,1.0s						
YKA	Yellowknife Ar	66.58	343	P	P	17 30 38.4	-0.6
	comp=Z,2.2nm,0.7s,baz=139,slow=5.9,SNR=48						
YKA	Yellowknife Ar	66.58	343	P	P	17 30 37.9	-1.0
DBIC	Dimbokro	74.75	83	P	P	17 31 29.1	-0.7
	comp=Z,1.4nm,0.7s,baz=319,slow=4.5,SNR=3.1						
ESDC	Sonseca Array	78.28	50	P	P	17 31 49.7	+0.4
	comp=Z,1.8nm,0.7s,baz=260,slow=6.2,SNR=11						
ESDC	Sonseca Array	78.28	50	IAmb	IAmb	17 31 50.0	
	comp=Z,1.0nm,1.2s						
IL31		79.45	336	P	P	17 31 54.6	-0.5
IL31				IAmb	IAmb	17 31 55.7	
	comp=Z,3.2nm,1.0s						
ILAR	Eielson Array	79.45	336	P	P	17 31 54.9	-0.3
	comp=Z,1.3nm,0.9s,baz=124,slow=4.1,SNR=13						
TORD	Torodi Ar. Bea	81.30	77	P	P	17 32 05.2	-0.9
	comp=Z,1.2nm,0.8s,baz=283,slow=2.5,SNR=4.7						
TORD	Torodi Ar. Bea	81.30	77	IAmb	IAmb	17 32 14.0	
	comp=Z,1.7nm,1.1s						
ASAR	Alice Springs	140.51	233	PKhKP	PKPpre	17 39 10.8	
	comp=Z,0.5nm,0.7s,baz=123,slow=3.1,SNR=4.6						
ASAR				PKP	PKPdf	17 39 17.8	-1.7
	comp=Z,0.7nm,0.7s,baz=109,slow=2.5,SNR=5.6						
WRA	Warramunga Arr	141.87	238	PKP	PKPdf	17 39 19.4	-2.5
	comp=Z,0.9nm,0.6s,baz=124,slow=1.8,SNR=6.6						

IDC 23 17:24:14.8±2.4**, 5°.97S**×**132°.08E, h0^{km}, mb3.3**/1**, mb1 3.6**/5**, mb1mx3.3**/32**, mbtmp3.4**/5**, ML3.3**/4**, Error ellipse: s-maj=107.4km s-min=25.3km az=84.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.13	351	Pn	Pn	17 25 31.7	-1.3
	0.9nm,0.3s,baz=207,slow=23,SNR=11						
SIJI				Sn	Sn	17 26 24.3	-8.7
	0.5nm,0.3s,baz=229,slow=20,SNR=1.7						
FITZ	Fitzroy Crossi	13.60	207	Pn	Pn	17 27 27.4	-1.8
	0.2nm,0.3s,baz=37,slow=12,SNR=13						
FITZ				Sn	Sn	17 29 50.2	-11
	0.1nm,0.3s,baz=288,slow=20,SNR=1.3						
WRA	Warramunga Arr	14.07	171	Pn	Pn	17 27 34.9	-0.7
	0.1nm,0.3s,baz=356,slow=13,SNR=14						
WRA				Sn	Sn	17 30 06.2	-6.4
	0.1nm,0.3s,baz=352,slow=23,SNR=2.0						
ASAR	Alice Springs	17.69	174	P	P	17 28 23.9	0.0
	0.1nm,0.3s,baz=351,slow=9.3,SNR=12						
MKAR	Makanchi Array	68.52	326	P	P	17 35 19.9	+0.7
	0.1nm,0.5s,baz=129,slow=8.2,SNR=1.6						

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*IDC **23** 17:29:22.8±11.0, 54°.32S×2°.72W, h0^{km}, mb4.2/2, mb1 4.2/2, mb1mx3.5/22, mbtmp4.2/2, Error ellipse: s-maj=521.8km s-min=81.3km az=120.0*

ISC 23 17:29:25.7±1.1**, 54°.0S**±0°.1×°±°**, h10^{km}, n6, σ0^{s}.48**/6**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	16.73	183	P	P	17 33 22.6	+0.5
VNA3	Neumayer Olymp	17.39	185	P	Pn	17 33 27.8	-0.2
SNAA	Sanae	17.74	177	P	Pn	17 33 32.1	-0.4
DBIC	Dimbokro	60.47	1	P	P	17 39 35.2	-0.3
	4.1nm,0.7s,baz=179,slow=8.0,SNR=3.2						
TORD	Torodi Ar. Bea	67.18	7	P	P	17 40 20.0	+0.3
	0.9nm,0.7s,baz=188,slow=5.5,SNR=4.5						
YKA	Yellowknife Ar	143.65	312	PKPbc	PKPdf	17 48 59.2	-0.1
	1.0nm,0.7s,baz=107,slow=3.1,SNR=18						

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*IDC **23** 17:32:12.0±1.4, 4°.53S×129°.86E, h0^{km}, mb3.7/2, mb1 4.1/6, mb1mx3.6/37, mbtmp3.9/6, ML3.7/4, Error ellipse: s-maj=55.8km s-min=22.8km az=84.0*

ISC 23 17:32:15.6±0.9**, 4°.55S**±0°.07×**130°.4E**±0°.3**, h35^{km}, n6, σ1^{s}.33**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.76	13	Pn	Pn	17 33 11.9	+0.7
	9.2nm,0.3s,baz=210,slow=23,SNR=89						
SIJI				Sn	Sn	17 33 53.2	-1.1
	11nm,0.3s,baz=233,slow=23,SNR=13						
FITZ	Fitzroy Crossi	14.24	199	Pn	Pn	17 35 34.9	0.0
	0.1nm,0.3s,baz=14,slow=12,SNR=1.5						
WRA	Warramunga Arr	15.77	166	Pn	P	17 35 57.7	-1.0
	0.5nm,0.3s,baz=342,slow=10,SNR=31						
WRA				Sn	Sn	17 38 49.3	+0.3
	0.0nm,0.3s,baz=353,slow=27,SNR=2.8						
ASAR	Alice Springs	19.30	170	P	Pn	17 36 39.1	+0.2
	0.8nm,0.3s,baz=349,slow=11,SNR=112						
MKAR	Makanchi Array	66.42	326	P	P	17 42 59.8	-1.6
	0.4nm,0.5s,baz=121,slow=8.3,SNR=6.1						
ZALV	Zalesovo Beam	69.59	333	P	P	17 43 22.9	+1.9
	0.4nm,0.3s,baz=116,slow=6.7,SNR=1.8						

IDC 23 17:33:35.9±7.9**, 6°.88N**×**121°.21E, h0^{km}, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.3**/42**, mbtmp3.7**/3**, Error ellipse: s-maj=400.2km s-min=28.0km az=48.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	24.55	300	P	P	17 38 57.6	0.0
	0.5nm,0.6s,baz=137,slow=8.0,SNR=5.4						
WRA	Warramunga Arr	29.62	154	P	P	17 39 42.4	-0.8
	1.2nm,0.6s,baz=333,slow=9.5,SNR=2.8						
ASAR	Alice Springs	32.80	158	P	P	17 40 11.7	+0.5
	0.6nm,0.6s,baz=340,slow=12,SNR=9.2						

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*ANF **23** 17:45:40.4±0.1, 33°.63N×117°.88W, h17^{km}±1^{km}, ML2.9/20, Error ellipse: s-maj=1.2km s-min=0.9km az=46.0*

*PAS **23** 17:45:41.1±1.5, 33°.62N±0°.02×117°.90W±0°.02, h10^{km}±4^{km}, ML3.0/156, ML2.8/30(NEIC), Error ellipse: s-maj=2.9km s-min=1.5km az=215.0*

*NEIC **23** 17:45:41.3±1.8, 33°.64N±0°.02×117°.88W±0°.01, h14^{km}±3^{km}, Error ellipse: s-maj=2.8km s-min=0.5km az=213.0*

ISC 23 17:45:40.7±0.9**, 33°.63N**±0°.02×**117°.89W**±0°.02**, h14^{km}**±8^{km}**, n40, σ0^{s}.73**/52**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FMP	Fort Macarthur	0.35	284	P	Pg	17 45 47.9	+0.1
	baz=106						
FMP				S	Sg	17 45 52.1	-0.6
	baz=106						
GVRC	Garvey Reservo	0.46	335		Pg	17 45 50.5	+0.6
CIS	Catalina Islan	0.49	243	P	Pg	17 45 50.4	-0.1
	baz=62,SNR=5.2						
CIS				S	Sg	17 45 57.6	+0.5
	baz=62						
MURC	Murrieta	0.58	93	P	Pg	17 45 52.0	0.0
	baz=272,SNR=21						
MURC				S	Sg	17 46 00.1	+0.4
	baz=272						
RSBC	Riverside Bore	0.58	54		Sg	17 45 59.6	-0.2
RSBC	Riverside Bore	0.58	54		Pg	17 45 52.3	+0.2
PASC	Pasadena Art C	0.59	336		Sg	17 45 59.7	-0.6
PASC	Pasadena Art C	0.59	336	Pg	Pg	17 45 51.7	-0.7
PASC	Pasadena Art C	0.59	336	IAML		17 46 03.4	
	comp=N,164nm,0.3s						
PASC				IAML		17 46 06.9	
	comp=E,150nm,0.4s						
MWC	Mount Wilson	0.61	347		Pg	17 45 52.1	-0.7
MWC				IAML		17 46 04.5	
	comp=N,508nm,0.2s						
BFSC	Mount Baldy Ra	0.64	17	P	Pg	17 45 53.1	-0.1
	baz=198,SNR=36						
BFSC				S	Sg	17 46 01.7	0.0
	baz=198						
DJJ	Donna J Jenkin	0.67	315		Pg	17 45 54.0	+0.2
DECC	Green Verdugo	0.72	329	P	Pg	17 45 54.7	-0.2
	baz=150						
DECC				S	Sg	17 46 04.8	+0.4
	baz=150						
SCI2	San Clemente I	0.85	221	S	Sg	17 46 09.4	+1.1
	baz=40						
109C	Camp Elliot, M	0.99	138		Pb	17 45 59.0	-0.5
109C				IAML		17 46 15.4	
	comp=E,358nm,0.2s						
109C	Camp Elliot, M	0.99	138	P	Pb	17 45 59.1	-0.4
	baz=318						
109C				S	Sb	17 46 12.3	-0.2
	baz=318						
BBRC	Big Bear Solar	1.02	52	Pb	Pb	17 45 59.9	-0.4
	baz=232						
BBRC				Sb	Sb	17 46 13.8	+0.1
	baz=232						
PFO	Pinyon Flats O	1.19	90		Pn	17 46 02.7	-0.4
PFO				IAML		17 46 21.6	
	comp=E,101nm,0.5s						
PFO				IAML		17 46 21.9	
	comp=E,158nm,0.4s						
PFO	Pinyon Flats O	1.19	90	Pb	Pn	17 46 02.5	-0.6
	baz=271,SNR=18						
PFO				S	Sb	17 46 18.3	-0.1
	baz=271						
OSI	Osito Audit: C	1.20	325		Pn	17 46 02.6	-0.6
OSI				IAML		17 46 20.6	
	comp=E,91nm,0.8s						
OSI				IAML		17 46 27.7	
	comp=N,146nm,0.6s						
OSI	Osito Audit: C	1.20	325	Pb	Pn	17 46 02.9	-0.3
	baz=145						
OSI				S	Sb	17 46 18.7	0.0
	baz=145						
EDW2	Edwards Air Fo	1.25	356	Pb	Pn	17 46 03.7	-0.1
	baz=177,SNR=22						
EDW2				S	Sb	17 46 20.4	+0.2
	baz=177						
BAR	Barrett	1.39	133		Pn	17 46 05.1	-0.7
BAR				IAML		17 46 27.0	
	comp=E,160nm,0.1s						
MONP2	Monument Peak	1.43	120	Pb	Pn	17 46 06.5	+0.1
	baz=301						
MONP2				Sb	Sn	17 46 25.4	+0.2
	baz=301						
RRX	Edison Barstow	1.45	30	P	Pn	17 46 05.8	-0.7
	baz=211						
RRX				Sb	Sg	17 46 26.8	-0.5
	baz=211						
TKX	Tecate	1.51	134	Pn	Pn	17 46 06.4	-0.9
TKX				IAML		17 46 28.9	
	comp=N,168nm,0.2s						
TKX				IAML		17 46 31.0	
	comp=E,132nm,0.2s						
BELC	Belle Mtn. Jos	1.62	76	Pb	Pn	17 46 09.4	+0.5
	baz=257,SNR=15						
BELC				Sb	Sb	17 46 31.4	+0.7
	baz=257						
ARVC	Arvin	1.69	333	Pb	Pn	17 46 11.1	+1.3
	baz=153						
HEC	Hector,Ludlow	1.76	47	Pb	Pn	17 46 12.0	+1.2
	baz=228						
IKP	In-Ko-Pah, Jac	1.78	123	Pb	Pn	17 46 12.4	+1.3
	baz=303						
LRMC	Laurel Mtn Rad	1.85	5	S	Sn	17 46 35.0	-0.5
	baz=186						
GSC	Goldstone, Bar	1.89	28		Pn	17 46 13.2	+0.5
GSC	Goldstone, Bar	1.89	28	Sb	Sb	17 46 39.6	+0.9
	baz=209						
ISA	Isabella, Lake	2.09	347		Pn	17 46 14.5	-0.8
ISA	Isabella, Lake	2.09	347	S	Sn	17 46 40.9	-0.2
	baz=167						
QSM	Queen of Sheba	2.48	20		Pg	17 46 27.1	-1.1
QSM				IAML		17 47 01.8	
	comp=E,58nm,0.4s						
GWY	Greenwater Val	2.74	21		Pn	17 46 25.4	+1.0
GWY				IAML		17 47 11.3	
	comp=N,51nm,0.5s						
TPNV	Topopah Spring	3.57	22		Pn	17 46 37.4	+1.6
TPNV				IAML		17 47 36.4	
	comp=N,22nm,0.6s						
TPNV				IAML		17 47 38.0	
	comp=N,18nm,0.5s						
LCH	Last Change Ra	3.60	3		Pn	17 46 38.0	+1.7
LCH				IAML		17 48 12.6	
	comp=N,9.4nm,5.0s						
SHPR	Sheep Range	3.64	37	Pn	Pn	17 46 38.4	+1.6

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*MOS **23** 17:46:17.8±0.0, 42°.44N×46°.32E, h38^{km}, MPVA3.6*

*NORS **23** 17:46:18.5±0.0, 42°.51N×46°.39E, h48^{km}, MPVA3.6*

*DRS **23** 17:46:18.1±0.0, 42°.38N×46°.03E, h20^{km}*

*TIF **23** 17:46:18.0, 42°.54N×46°.24E, h15^{km}±2^{km}*

ISC 23 17:46:20.9±1.0**, 42°.48N**±0°.03×**46°.35E**±0°.02**, h32^{km}**±4^{km}**, n29, σ1^{s}.14**/58**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	Botlikh	0.20	334	*e*Pg	Pn	17 46 26.2	-1.6
BTLR				*e*Sg	Sn	17 46 32.2	+0.1
XNZR	Khunzakh	0.27	77	*e*Pg	Pn	17 46 28.1	-0.7
XNZR				*e*Sg	Sn	17 46 35.0	+1.1
UNCR	Uncukul	0.41	55	*e*Pg	Pb	17 46 29.4	-0.7
UNCR				*e*Sg	Sb	17 46 37.8	+1.5
GNBR	Gunib	0.47	101	*e*Pg	Pb	17 46 30.2	-0.7
GNBR				*e*Sg	Sb	17 46 39.1	+1.2
ARKR	Arakani	0.49	76	*e*Pg	Pb	17 46 30.2	-1.1
ARKR				*e*Sg	Sb	17 46 39.8	+1.2
KRNR	Karanay	0.54	50	*e*Pg	Pn	17 46 30.8	-1.6
KRNR				*e*Sg	Sb	17 46 40.3	+0.4
DLMR	Dylym	0.62	19	*e*Pg	Pn	17 46 32.3	-1.2
DLMR				*e*Sg	Sn	17 46 42.7	+0.3
DBC	Dubki	0.65	33	*e*Pg	Pn	17 46 32.9	-1.0
DBC				*e*Sg	Sn	17 46 43.2	+0.2
LGD	Lagodekhi	0.65	187	P	Pn	17 46 32.0	-1.9
LGD				S	Sn	17 46 42.4	-0.6
KMKR	Kumukh	0.66	122	*e*Pg	Pn	17 46 32.6	-1.5
KMKR				*e*Sg	Sn	17 46 43.4	-0.1
BUJR	Buynaksk	0.66	58	*e*Pg	Pn	17 46 33.1	-0.9
BUJR				*e*Sg	Sn	17 46 44.1	+0.9
GROC	Groznyy	0.83	331	*e*Pg	Pn	17 46 35.3	-1.0
	81nm,0.2s						
GROC				*e*Sg	Sn	17 46 48.7	+1.3
SGKR	Sergokala	0.97	91	*e*Pg	Pn	17 46 37.5	-0.8
SGKR				*e*Sg	Sn	17 46 52.1	+1.1
URKR	Urkarakh	1.01	108	*e*Pg	Pn	17 46 37.3	-1.5
URKR				*e*Sg	Sn	17 46 51.9	-0.1
DDFL	Dedoflistskaro	1.05	189	P	Pn	17 46 40.1	+0.7
DDFL				S	Sn	17 46 54.5	+1.6
DGRG	David-gareji	1.26	215	P	Pn	17 46 41.1	-1.2
DGRG				S	Sn	17 46 58.7	+0.6
PNSH	Pansheti	1.29	277	P	Pn	17 46 40.9	-1.9
PNSH				S	Sn	17 46 58.2	-0.8
MTEO	Meteo	1.35	279	P	Pn	17 46 42.3	-1.6
MTEO				S	Sn	17 46 59.8	-1.1
AKT	Akhty	1.44	134	*e*Pg	Pn	17 46 44.6	-0.2
AKT				*e*Sg	Sn	17 47 03.1	+0.6
DRN	Derbent	1.54	106	*e*Pg	Pn	17 46 45.8	-0.2
DRN				*e*Sg	Sn	17 47 06.3	+1.4
LACR	Lac	1.55	284	*e*Pg	Pn	17 46 45.6	-0.8
	51nm,0.2s						
LACR				*e*Sg	Sn	17 47 06.2	+0.8
KSMR	Kasumkent	1.59	123	*e*Pg	Pn	17 46 46.6	-0.2
KSMR				*e*Sg	Sn	17 47 08.0	+1.7
BTKR	Batakoyurt	1.60	305	*e*Pg	Pn	17 46 46.7	-0.2
BTKR				*e*Sg	Sn	17 47 08.1	+1.6
ARNR	Ardon	1.67	295	*e*Pg	Pn	17 46 46.7	-1.2
ARNR				*e*Sg	Sn	17 47 08.9	+0.7
TRKR	Terskaya	1.71	317	*e*Pg	Pn	17 46 47.5	-1.0
TRKR				*e*Sg	Sn	17 47 10.2	+1.0
KORR	Kora	1.78	291	*e*Pg	Pn	17 46 49.3	-0.1
	5.8nm,0.4s						
KORR				*e*Sg	Sn	17 47 11.3	+0.2
ZEI	Tsey	1.83	280	*e*Pg	Pn	17 46 50.9	+0.6
	2.2nm,0.3s						
ZEI				*e*Sg	Sn	17 47 13.9	+1.5
STDR	Stavd-Durt	1.90	299	*e*Pg	Pn	17 46 52.9	+1.9
STDR				*e*Sg	Sn	17 47 15.9	+2.2
DIGR	Digorskoe uzhe	2.08	283	*e*Pg	Pn	17 46 53.1	-0.5
	2.3nm,0.5s						
DIGR				*e*Sg	Sn	17 47 20.0	+1.4

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*IDC **23** 18:03:01.4±2.3, 6°.05S×147°.22E, h0^{km}, mb3.8/3, mb1 3.9/5, mb1mx3.6/29, mbtmp3.8/5, ML3.6/1, MS4.1/1, Ms1 4.0/1, ms1mx3.3/32, Error ellipse: s-maj=50.1km s-min=33.5km az=85.0*

ISC 23 18:03:07.9±2.2**, 6°.1S**±0°.2×**147°.2E**±0°.3**, h50^{km}, n7, σ0^{s}.45**/7**, mb4.1**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.29	181	Pn	Pn	18 03 56.6	-0.4
	4.5nm,0.3s,baz=48,slow=5.7,SNR=21						
PMG				Sn	Sn	18 04 35.3	+0.5
	4.2nm,0.3s,baz=233,slow=20,SNR=4.5						
WRA	Warramunga Arr	18.59	221	P	P	18 07 20.8	-0.4
	0.2nm,0.3s,baz=45,slow=12,SNR=15						
ASAR	Alice Springs	21.65	215	P	P	18 07 54.0	-0.3
	0.3nm,0.3s,baz=50,slow=8.2,SNR=20						
FITZ	Fitzroy Crossi	24.18	239	P	P	18 08 20.2	+0.4
	8.1nm,1.1s,baz=45,slow=11,SNR=2.6						
STKA	Stephens Creek	26.18	191	LR	LR	18 21 17.0	
	comp=Z,358nm,18.7s,baz=348,slow=42						
VNDA	Vanda	71.80	177	P	P	18 14 24.9	+0.1
	2.7nm,1.1s,baz=350,slow=3.7,SNR=2.3						
TORD	Torodi Ar. Bea	145.31	284	PKPbc	PKPbc	18 22 41.3	+0.2
	0.6nm,0.6s,baz=72,slow=4.3,SNR=5.8						

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*NEIC **23** 18:17:54.9±2.4, 8°.88S±0°.04×105°.55E±0°.07, h33^{km}±1^{km}, mb4.6/28, Error ellipse: s-maj=10.7km s-min=5.1km az=90.0*

*DJA **23** 18:17:55.8±2.0, 9°S±9°×10°6E±°, h21^{km}±24^{km}, M4.5/10, mb4.9/2, MLv4.3/10*

*IDC **23** 18:18:01.4±3.4, 8°.48S×105°.78E, h72^{km}±30^{km}, mb3.9/15, mb1 4.0/16, mb1mx3.8/35, mbtmp4.2/16, Error ellipse: s-maj=25.3km s-min=14.0km az=55.0*

ISC 23 18:17:53.3±0.5**, 8°.63S**±0°.06×**105°.57E**±0°.05**, h10^{km}, n100, σ1^{s}.49**/84**, mb4.5**/42**, 1C, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XMIS	Christmas Isla	1.84	178		Pn	18 18 21.6	-3.4
XMIS					Sn	18 18 43.3	-5.1
SKJI	Sukabumi	1.89	31	P	Pn	18 18 26.3	+0.7
CGJI	Cibinong	2.01	3	P	Pn	18 18 26.0	-1.3
CNJI	Cibinong	2.02	50	P	Pn	18 18 26.4	-1.1
CNJI				S	Sn	18 18 52.1	-0.8
DBJI	Dramaga	2.37	30	P	Pn	18 18 32.0	-0.3
SBJI	Serang	2.55	13	P	Pg	18 18 45.8	+3.5
TNG	Tangerang	2.66	24	P	Pg	18 18 51.8	+7.4
TNG				P	Pb	18 18 49.9	+8.8
LEM	Lembang	2.71	49	P	Pn	18 18 39.4	+2.4
	28nm,0.3s,baz=190,slow=14,SNR=32						
LEM				S	Sg	18 19 21.9	+1.5
	24nm,0.3s,baz=323,slow=22,SNR=6.6						
CMJI	Cimerak	2.97	74	P	Pn	18 18 40.4	-0.1
BLSI	Bandar Lampung	3.26	354	P	Pg	18 18 55.9	+0.1
KASI	Kota Agung	3.27	341	P	Pn	18 18 43.5	-1.1
KLI	Kotabumi	3.81	349	P	Pn	18 18 52.5	+0.4
LWLI	Liwa	3.89	337	P	Pn	18 18 53.2	-0.1
KLSI		4.00	348	P	Pn	18 18 55.0	+0.3
UGM	Wanagama	4.95	82	Pn	Pn	18 19 06.4	-1.4
SMRI	Semarang	5.07	72	P	Pb	18 19 23.3	+1.1
SMRI	Semarang	5.07	72		Pn	18 19 08.4	-1.0
WOJI	Wonogiri, Jawa	5.36	82	P	Pb	18 19 24.5	-2.5
PCJI	Pacitan	5.56	86	P	Pn	18 19 17.1	+0.9
	0.4nm109nm,1.1s						
JAGI	Jajag, Banyuwa	8.49	90	P	Pn	18 19 58.9	+2.5
JAGI	Jajag, Banyuwa	8.49	90	Pn	Pn	18 19 54.6	-1.8
COCO	West Island	9.29	247		Pn	18 20 03.6	-3.9
GSI	Gunungsitoli	12.69	321	Pn	Pn	18 20 48.3	-5.6
APSI	Ampana	17.75	65	P	P	18 22 15.0	+13
FITZ	Fitzroy Crossi	21.65	118	P	P	18 22 45.6	+1.4
	6.2nm,0.9s,baz=276,slow=8.7,SNR=2.8						
LBMI	Labuha	23.24	71	P	P	18 23 11.1	+10
KNRA	Kununurra	23.71	109	P	P	18 23 01.4	-4.3
H01W3	Cape Leeuwin H	27.29	165	T	T	18 52 18.4	
	baz=345,slow=75,SNR=7.5						
H01W1	Cape Leeuwin H	27.30	164	T	T	18 52 20.8	
	baz=345,slow=75,SNR=7.3						
H01W2	Cape Leeuwin H	27.30	165	T	T	18 52 19.1	
	baz=345,slow=75,SNR=9.2						
CM31	Chiang Mai Arr	27.70	346	P	P	18 23 40.9	-1.0
CM31				IAmb	IAmb	18 23 43.8	
	comp=Z,12nm,1.0s						
CMAR	Chiang Mai Arr	27.70	346	P	P	18 23 42.0	+0.2
	comp=Z,6.2nm,0.9s,baz=181,slow=8.4,SNR=36						
CMAR	Chiang Mai Arr	27.70	346	P	P	18 23 41.7	-0.2
CHTO	Chiang Mai	28.04	347	P	P	18 23 44.8	-0.2
CHTO				IAmb	IAmb	18 23 46.6	
	comp=Z,7.1nm,1.0s						
WB0	Warramunga Arr	30.00	115	P	P	18 23 59.5	-3.0
WB0				IAmb	IAmb	18 24 22.0	
	comp=Z,8.2nm,1.1s						
WRA	Warramunga Arr	30.00	115	P	P	18 24 02.4	-0.1
	comp=Z,0.8nm,0.7s,baz=288,slow=12,SNR=6.9						
WRA	Warramunga Arr	30.00	115	P	P	18 23 59.2	-3.3
WRAB	Tennant Creek	30.01	115	P	P	18 24 01.1	-1.4
WRAB				IAmb	IAmb	18 24 16.1	
	comp=Z,8.7nm,1.1s						
ASAR	Alice Springs	30.96	122	P	P	18 24 10.4	-0.5
	comp=Z,1.4nm,1.0s,baz=297,slow=8.6,SNR=7.5						
H08S2	Diego Garcia H	32.76	269	T	T	19 00 04.9	
	baz=90,slow=75,SNR=30						
H08S3	Diego Garcia H	32.77	269	T	T	19 00 11.9	
	baz=90,slow=75,SNR=34						
H08S1	Diego Carcia H	32.77	269	T	T	19 00 06.4	
	baz=90,slow=75,SNR=18						
SHL	Shillong	36.51	339	P	P	18 24 59.2	-0.1
SHL				IAmb	IAmb	18 25 01.4	
	comp=Z,7.0nm,0.8s						
COEN	Coen	37.22	102	P	P	18 25 02.4	-3.0
STKA	Stephens Creek	40.65	130	P	P	18 25 33.8	-0.1
	comp=Z,2.9nm,0.7s,baz=314,slow=7.4,SNR=6.9						
STKA	Stephens Creek	40.65	130	P	P	18 25 29.1	-4.8
JIRN	Jiri	40.66	333	*e*P	P	18 25 35.2	+0.8
	comp=Z,35nm,1.0s						
PKI	Pulchoki	40.94	332	*e*P	P	18 25 37.0	+0.3
PKIN	Phulchoki	40.95	332	*e*P	P	18 25 36.9	+0.2
GUN	Gumba	41.02	333	*e*P	P	18 25 38.1	+0.8
	comp=Z,21nm,0.8s						
DMN	Daman	41.12	332	*e*P	P	18 25 38.6	+0.6
KKN	Kakani	41.19	332	*e*P	P	18 25 39.0	+0.4
GKN	Gorkha	41.67	332	*e*P	P	18 25 43.1	+0.7
	comp=Z,34nm,1.1s						
DANN	Dangsing	42.38	331	*e*P	P	18 25 48.5	+0.1
	comp=Z,38nm,0.9s						
NJ2	Nanjing	42.40	17	*e*P	P	18 25 50.3	+2.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PYUN	Piuthan	42.55	330	*e*P	P	18 25 50.2	+0.6
	comp=Z,38nm,0.9s						
XAN	Xi'an	42.55	4	⇑P	P	18 25 49.3	-0.1
XAN				pP	pwP	18 25 57.0	-1.6
XAN				sP	sP	18 26 00.8	+10
XAN				PcP	PcP	18 27 42.3	+0.4
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LZH	Lanzhou	44.51	358	*e*P	P	18 26 05.6	+0.3
LZH				pP	pwP	18 26 15.4	+0.9
LZH				sP	sP	18 26 21.0	+14
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
GTA	Gaotai	48.09	354	*e*P	P	18 26 34.3	+0.9
GTA				pP	pwP	18 26 43.4	+0.8
GTA				sP	sP	18 26 47.3	+12
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,160nm,7.2s						
GTA				LR	LR		
	comp=N,330nm,17.1s						
GTA				LR	LR		
	comp=E,350nm,16.7s						
GTA				LR	LR		
	comp=Z,500nm,16.7s						
HHC	Hu-ho-hao-te	49.54	6	*e*P	P	18 26 47.0	+2.5
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,550nm,5.9s						
KSRS	Korea Array	50.39	23	P	P	18 26 49.4	-1.4
	comp=Z,1.8nm,0.9s,baz=214,slow=9.2,SNR=7.3						
NIL	Nilore	52.06	326	P	P	18 27 02.3	-1.2
NIL				IAmb	IAmb	18 27 17.9	
	comp=Z,7.1nm,0.9s						
WMQ	Urumqi	54.67	344	*e*P	P	18 27 23.8	+1.2
WMQ				pP	pwP	18 27 32.0	+0.3
WMQ				sP	sP	18 27 37.4	+13
WMQ				pmax	pmax		
	comp=Z,30nm,1.1s						
WMQ				pmax	pmax		

	comp=Z,270nm,5.9s						
KBL	Kabul	55.12	323	P	P	18 27 25.8	-0.5
KBL				IAmb	IAmb	18 27 53.9	
	comp=Z,5.0nm,1.1s						
KSH	Kashi	55.21	332	P	P	18 27 25.9	-0.7
KSH				sP	pwP	18 27 38.9	+3.2
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CN2	Changchun	55.21	17	*e*P	P	18 27 25.4	-1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SONM	Songino Array	56.22	1	P	P	18 27 34.0	+0.3
	comp=Z,2.6nm,1.1s,baz=171,slow=5.1,SNR=8.6						
SONM	Songino Array	56.22	1	P	P	18 27 33.2	-0.6
ULN	Ulaanbaatar	56.26	1	P	P	18 27 34.3	+0.2
OPO	Ambohidratompo	57.39	254	P	P	18 27 45.5	+2.8
	comp=Z,0.5nm,0.4s,baz=79,slow=10,SNR=3.6						
CHGR	Chuyangaron	57.97	327	P	P	18 27 44.5	-1.8
CHGR				IAmb	IAmb	18 28 09.0	
	comp=Z,7.0nm,0.8s						
BTK	Batken	58.13	329	P	P	18 27 47.3	-0.1
BTK				IAmb	IAmb	18 27 48.5	
	comp=Z,4.5nm,0.9s						
MK31	Makanchi Array	58.95	342	P	P	18 27 51.4	-1.5
MK31				IAmb	IAmb	18 28 05.5	
	comp=Z,3.6nm,0.9s						
MKAR	Makanchi Array	58.95	342	P	P	18 27 53.0	+0.1
	comp=Z,2.9nm,0.8s,baz=148,slow=7.1,SNR=13						
MKAR	Makanchi Array	58.95	342	P	P	18 27 49.5	-3.4
CRZF	Crozet Islands	59.17	220	P	P	18 27 49.7	-4.7
KURK	Kurchatov	63.56	341	P	P	18 28 23.1	-0.9
KURK				IAmb	IAmb	18 28 25.1	
	comp=Z,4.8nm,0.9s						
GEYT	Alibeck	64.06	320	P	P	18 28 28.3	+0.7
	comp=Z,1.5nm,0.5s,baz=141,slow=5.0,SNR=2.6						
ZAA0	Zalesovo Array	64.77	347	P	P	18 28 28.4	-3.5
ZAA0				IAmb	IAmb	18 28 55.4	
	comp=Z,6.0nm,1.1s						
ZALV	Zalesovo Beam	64.77	347	P	P	18 28 31.1	-0.8
	comp=Z,2.0nm,0.8s,baz=125,slow=4.2,SNR=7.1						
ZALV	Zalesovo Beam	64.77	347	P	P	18 28 29.1	-2.7
ABKAR	Akbulak array	70.10	330	P	P	18 29 05.3	-0.5
ABKAR	Akbulak array	70.10	330	P	P	18 29 05.2	-0.5
ABKAR				IAmb	IAmb	18 29 07.2	
	comp=Z,11nm,1.1s						
YAK	Yakutsk	72.90	12	P	P	18 29 20.6	-1.7
ONI	Oni	76.06	318	P	P	18 29 38.7	-2.6
ONI				IAmb	IAmb	18 29 43.2	
	comp=Z,7.4nm,1.1s						
KBZ	Khabaz	76.92	319	P	P	18 29 46.0	0.0
	comp=Z,3.1nm,0.9s,baz=146,slow=7.3,SNR=4.9						
BOSA	Boshof	77.45	243	P	P	18 29 51.4	+1.9
	comp=Z,3.4nm,0.9s,baz=124,slow=3.6,SNR=4.1						
NRIK	Noril'sk	78.79	354	P	P	18 29 55.1	-0.8
BRTR	Keskin Array B	81.86	312	P	P	18 30 12.9	-0.3
	comp=Z,2.0nm,0.8s,baz=142,slow=6.3,SNR=4.1						
SNAA	Sanae	87.56	197	P	P	18 30 43.5	+2.1
AKASG	Malin Array Be	88.09	322	P	P	18 30 42.2	-1.9
	comp=Z,0.7nm,0.7s,baz=95,slow=4.3,SNR=5.5						
MLR	Muntele Rosu	88.89	316	P	P	18 30 47.5	-0.7
VNA2	Neumayer--Watz	89.20	198	P	P	18 30 52.1	+3.1
	baz=106,slow=5.6						
VNA1	Neumayer--Stat	89.58	198	P	P	18 30 53.6	+2.8
VNA3	Neumayer Olymp	89.73	197	P	P	18 30 55.0	+3.4
YKA	Yellowknife Ar	118.87	20	PKP	PKPdf	18 36 40.8	-1.0
	comp=Z,0.3nm,0.8s,baz=330,slow=2.0,SNR=5.1						
BDFB	Brasilia	144.42	227	PKP	PKPab	18 37 31.2	+1.9
	comp=Z,3.3nm,0.7s,baz=110,slow=4.3,SNR=4.8						
BDFB	Brasilia	144.42	227		PKPab	18 37 27.2	-2.0
TXAR	Lajitas Array	145.70	49	PKPbc	PKPdf	18 37 32.2	-0.8
	comp=Z,1.3nm,0.9s,baz=302,slow=2.4,SNR=10						
TXAR	Lajitas Array	145.70	49		PKPdf	18 37 30.9	-2.0

NNC 23 18:30:33.8±2.6**,38.°81N**×**73.°38E,h0^{km},mb4.0,mpv3.5,
3C-3D,Error ellipse: s-maj=18.9km s-min=9.9km
az=171.0,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	3.92	12	⇓Pg	Pg	18 31 46.8	-2.1
	5.8nm,0.8s						
AAK				⇑Lg	Lg	18 32 35.9	
	10.0nm,0.9s						
IUG	Iuzhnay	4.20	324	Pg	Pb	18 31 50.0	+1.4
	724nm,0.6s						
IUG				Lg	Lg	18 32 49.0	
	43nm,1.2s						
TKM2	Tokmak 2	4.44	22	⇓Pg	Pb	18 31 55.4	+2.7
	3.1nm,0.8s						
TKM2				⇑Lg	Lg	18 32 52.3	
	7.2nm,0.8s						
KK09	Karatay Array	4.83	334	⇑Pn	Pn	18 31 46.7	-1.1
	1.6nm,0.5s,baz=152,slow=13						
KK09				⇓Sn	Sn	18 32 45.4	+1.0
	7.2nm,0.7s,baz=149,slow=24						
BRLS	Borolday	5.00	329	Pg	Pb	18 32 01.9	-0.2
	3.4nm,0.6s						
BRLS				Lg	Lg	18 33 09.7	
	7.3nm,0.9s						
KRBS	Karabastau	5.18	19	Pg	Pb	18 32 07.8	+2.6
	1.8nm,0.6s						
KRBS				Lg	Lg	18 33 19.6	
	4.4nm,0.9s						
KOTS	Kotyrbulak	5.24	31	Pg	Pb	18 32 09.6	+3.2
	3.9nm,0.7s						
KOTS				Lg	Lg	18 33 22.6	
	13nm,0.9s						
KTBS	Karatobe	5.49	26	Pg	Pb	18 32 14.4	+3.8
	2.5nm,0.6s						
KTBS				Lg	Lg	18 33 31.2	
	5.5nm,0.8s						
KUU	Kurty	5.54	23	Pg	Pb	18 32 14.4	+3.0
	1.6nm,0.5s						
KUU				Lg	Lg	18 33 31.2	
	7.3nm,1.2s						

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*IDC **23** 18:35:19.3±0.9, 49.°89N×178.°26W, h0^{km}, mb3.7/11,
mb1 4.0/12, mb1mx3.6/52, mbtmp3.7/12, ML3.1/1, Error
ellipse: s-maj=29.6km s-min=19.3km az=158.0*

*AEIC **23** 18:35:23±2.4, 49.°94N±0.°09×178.°16W±0.°09, h9^{km}±5^{km},
Error ellipse: s-maj=13.8km s-min=6.7km az=153.0*

*NEIC **23** 18:35:25.2±1.7, 50.°26N±0.°04×178.°16W±0.°09, h25^{km}±7^{km},
mb4.2/6, Error ellipse: s-maj=8.4km s-min=5.2km
az=106.0*

ISC 23 18:35:22.1±4.4**,50.°09N**±0.°08×**178.°15W**±0.°06**,
h16**^{km}±28^{km}**,n42,**σ1.^{s}**22**/41**,mb3.8**/11**,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAEA	Gareloi East	1.74	348		Pn	18 35 52.1	+0.4
GAEA					Sn	18 36 12.9	-0.7
TASE	Tanaga Southea	1.75	2		Pn	18 35 51.9	0.0
TASE					Sn	18 36 14.1	+0.1
KIMD	Kanaga Island	1.78	19		Pn	18 35 52.6	+0.5
TAFP	Tanaga Falls P	1.82	3		Pn	18 35 52.3	-0.5
TAFP					Sn	18 36 15.0	-0.5
KIWB	Kanaga Island	1.88	19		Pn	18 35 52.9	-0.7
KIKV	Kanaga Island	1.90	19		Pn	18 35 54.2	+0.3
KIKV					Sn	18 36 17.4	-0.1
ADK	Adak	2.03	27		Pn	18 35 55.1	-0.4
ADK					Sn	18 36 19.1	-1.4
GSTD	Great Sitkin T	2.34	32		Pn	18 36 00.2	+0.2
GSTD					Sn	18 36 27.6	-0.9
GSMY	Great Sitkin M	2.37	33		Pn	18 36 00.5	+0.3
GSTR	Great Sitkin T	2.41	32	Pn	Pn	18 36 00.4	-0.4
ATKA	Atka Island	3.27	48		Pn	18 36 12.4	-0.2
SMY	Shemya	5.53	302	Pn	Pn	18 36 42.6	-1.0
NIKH	Nikolski High	6.48	60	Pn	Pn	18 36 57.7	+1.0
UNV	Unalaska Valle	8.12	58	Pn	Pn	18 37 20.7	+1.5
SDPT	Sand Point	11.93	57	Pn	Pn	18 38 10.4	-0.9
PEA0B	Petropavlovsk-	15.29	291	Pn	Pn	18 38 58.6	+1.6
PETK	Petropavlovsk-	15.29	291	Pn	Pn	18 38 58.2	+1.2
	0.4nm,0.3s,baz=98,slow=18,SNR=16						
KDAK	Kodiak Island	16.83	53	P	Pn	18 39 13.1	-3.7
	0.3nm,0.3s,baz=299,slow=2.5,SNR=14						
KDAK				S	Sn	18 42 23.7	+0.5
	0.2nm,0.3s,baz=313,slow=19,SNR=1.8						
KDAK	Kodiak Island	16.83	53	IAmb	IAmb	18 39 37.8	
	comp=Z,46nm,1.4s						
CNPM	China Poot	18.04	48		Pn	18 39 31.4	-0.5
CNPM				IAmb	IAmb	18 39 57.0	
	comp=Z,23nm,1.2s						
PPLA	Purkeypile	19.05	38	P	P	18 39 41.7	-1.8
PPLA				IAmb	IAmb	18 39 52.1	
	comp=Z,20nm,1.5s						
KTH	Kantishna Hill	19.88	37	P	P	18 39 49.6	-2.8
IMAR	Indian Mountai	20.29	29	P	P	18 39 56.1	-0.6
H11N2	WAKE ISLAND Hy	32.55	207	T	T	19 16 03.1	
	baz=18,slow=76,SNR=3.6						
H11N3	WAKE ISLAND Hy	32.55	207	T	T	19 16 09.0	
	baz=18,slow=76,SNR=4.2						
H11N1	WAKE ISLAND Hy	32.56	207	T	T	19 16 03.5	
	baz=18,slow=76,SNR=2.8						
H11S1	WAKE ISLAND Hy	33.76	207	T	T	19 17 34.7	
	baz=17						
H11S2	WAKE ISLAND Hy	33.77	206	T	T	19 17 35.3	
	baz=17						
H11S3	WAKE ISLAND Hy	33.78	207	T	T	19 17 37.6	
	baz=17						
YKA	Yellowknife Ar	35.84	45	P	P	18 42 22.3	+1.8
	comp=Z,0.9nm,0.8s,baz=280,slow=7.3,SNR=11						
RES	Resolute Bay	40.76	24	P	P	18 43 03.6	+1.9
	comp=Z,1.3nm,0.5s,baz=270,slow=5.2,SNR=11						
PDAR	Pinedale Array	46.32	71	P	P	18 43 47.9	+0.6
	comp=Z,0.4nm,0.8s,baz=316,slow=4.1,SNR=4.2						
SONM	Songino Array	47.61	298	P	P	18 43 57.5	+0.5
	comp=Z,0.4nm,0.7s,baz=55,slow=5.5,SNR=2.9						
SONM	Songino Array	47.61	298	IAmb	IAmb	18 43 58.3	
	comp=Z,1.4nm,1.2s						
TXAR	Lajitas Array	58.45	81	P	P	18 45 17.5	+0.3
	comp=Z,0.1nm,0.5s,baz=310,slow=4.4,SNR=1.5						
ARCES	ARCESS Array B	59.44	351	P	P	18 45 23.8	+0.4
	comp=Z,2.6nm,0.7s,baz=17,slow=5.1,SNR=5.7						
MKAR	Makanchi Array	61.17	309	P	P	18 45 35.5	-0.1
	comp=Z,0.9nm,0.8s,baz=44,slow=5.6,SNR=6.0						
NOA	NORSAR Array B	68.97	355	P	P	18 46 26.8	+0.8
	comp=Z,0.8nm,0.7s,baz=6.0,slow=6.0,SNR=1.6						
CMAR	Chiang Mai Arr	71.57	277	P	P	18 46 41.9	-0.6
	comp=Z,0.4nm,0.3s,baz=33,slow=7.3,SNR=4.1						
WRA	Warramunga Arr	81.37	225	P	P	18 47 36.9	-1.0
	comp=Z,0.5nm,0.8s,baz=31,slow=5.7,SNR=2.0						
ASAR	Alice Springs	84.82	223	P	P	18 47 55.2	-0.4
	comp=Z,0.5nm,0.8s,baz=23,slow=5.9,SNR=8.2						
TORD	Torodi Ar. Bea	117.04	0	PKP	PKPdf	18 54 04.3	-2.1
	comp=Z,0.2nm,0.4s,baz=332,slow=2.5,SNR=1.4						

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*IDC **23** 18:39:53.5±2.2, 23.°88N×121.°48E, h0^{km}, mb3.4/3,
mb1 3.7/4, mb1mx3.1/40, mbtmp3.6/4, ML3.6/1, MS4.4/1,
Ms1 4.4/1, ms1mx3.2/35, Error ellipse: s-maj=72.9km
s-min=30.8km az=104.0*

*NEIC **23** 18:39:59.7±1.3, 23.°80N±0.°02×121.°66E±0.°06, h38^{km}±9^{km},
mb4.0/3, ML4.3(TAP), Error ellipse: s-maj=7.9km
s-min=1.9km az=108.0*

*JMA **23** 18:39:59.4±0.1, 23.°80N×121.°64E, h40^{km}±2^{km}, M3.5*

*TAP **23** 18:40:00.6, 23.°85N×121.°64E, h37^{km}, ML3.9, B*

ISC 23 18:39:59.9±0.9**,23.°82N**±0.°02×**121.°66E**±0.°02**,h33**^{km}±2^{km}**,
n151,**σ1.^{s}**07**/229**,mb3.4**/4**,1C-34D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEYL	Yanliau Villag	0.07	306	*e*P	Pb	18 40 07.0	+1.4
	baz=328						
TEYL				S	Sb	18 40 12.0	+2.5
	baz=328						
HWA	Hwalien	0.16	341	*e*P	Pb	18 40 07.2	+1.1
	baz=348						
HWA				*e*S	Sb	18 40 11.9	+1.5
	baz=348						
ESL	Shilin	0.21	267	⇓*i*P	Pb	18 40 07.3	+0.7
	baz=270						
ESL				*i* S	Sb	18 40 11.9	+0.7
	baz=270						
TWD	Chiawan	0.26	346	⇑*i*P	Pn	18 40 07.8	+0.6
	baz=351						
TWD				S	Sb	18 40 13.6	+1.4
	baz=351						
EGFH	Guangfu	0.27	235	⇓*i*P	Pn	18 40 08.0	+0.8
	baz=236						
ETL	Fush Village	0.34	354	P	Pb	18 40 08.6	+0.4
	baz=351						
ETL				S	Sb	18 40 15.1	+1.2
	baz=351						
NACB	Ninganchiao	0.35	350	⇓*i*P	Pb	18 40 08.7	+0.2
	baz=341						
NACB				S	Sn	18 40 14.5	+0.1
	baz=341						
NACB	Ninganchiao	0.35	350		Pb	18 40 08.6	+0.2
HGSD	Ruisui	0.40	214	P	Pn	18 40 10.2	+0.8
	baz=222						
HGSD				*e*S	Sn	18 40 17.8	+2.2
	baz=222						
ETLH	Xiulin Townshi	0.42	336	*i* P	Pb	18 40 09.4	0.0
	baz=338						
ETLH				*e*S	Sb	18 40 15.6	-0.2
	baz=338						
EHY	Hungye	0.45	225	⇓*i*P	Pb	18 40 09.7	0.0
	baz=222						
EHY				*e*S	Sb	18 40 16.4	0.0
	baz=222						
OWD	Renai	0.47	286	⇓*i*P	Pb	18 40 10.5	+0.4
	baz=290						
OWD				*e*S	Sb	18 40 17.4	+0.3
	baz=290						
VWDT	VWDT	0.48	262	⇓*i*P	Pb	18 40 10.9	+0.7
	baz=254						
VWDT				*i* S	Sb	18 40 17.1	-0.3
	baz=254						
WHF	Hehuan Shan	0.48	311	⇓*i*P	Pb	18 40 10.6	0.0
	baz=305						
WHF				S	Sb	18 40 18.1	0.0
	baz=305						
CHGB	Renai	0.51	298	⇓*i*P	Pb	18 40 11.2	+0.4
	baz=302						
CHGB				S	Sb	18 40 19.1	+0.8
	baz=302						
YULB	Yu-li	0.55	218	⇓*i*P	Pn	18 40 11.0	-0.3
	baz=225						
YULB				*e*S	Sb	18 40 18.5	-0.6
	baz=225						
YULB	Yu-li	0.55	218		Pn	18 40 10.4	-0.9
EYUL	Yuli	0.57	214	*e*P	Pn	18 40 11.6	0.0
	baz=223						
EYUL				*e*S	Sb	18 40 19.7	0.0
	baz=223						
FUSS	Fushou	0.57	318	⇓*i*P	Pn	18 40 12.1	+0.2
	baz=325						
FUSS				S	Sb	18 40 20.3	+0.3
	baz=325						
ENA	Nanau	0.61	7	⇓*i*P	Pn	18 40 12.3	+0.1
	baz=358						
ENA				*e*S	Sn	18 40 20.4	-0.4
	baz=358						
TWT	Tachien	0.62	314	⇓*i*P	Pn	18 40 12.9	+0.4
	baz=312						
TWT				*e*S	Sb	18 40 21.3	+0.1
	baz=312						
EWUT	Wuta	0.63	10	*e*P	Pn	18 40 12.5	+0.1
	baz=17						
EWUT				*e*S	Sn	18 40 21.2	-0.1
	baz=17						
TDCB	Techi	0.63	313	⇓*i*P	Pn	18 40 13.0	+0.4
	baz=312						
TDCB				*e*S	Sn	18 40 21.0	-0.6
	baz=312						
SSLB	Suanglung	0.65	267	⇓*i*P	Pn	18 40 12.9	+0.2
	baz=270						
SSLB				*e*S	Sn	18 40 21.8	-0.2
	baz=270						
SSLB	Suanglung	0.65	267		Pn	18 40 12.4	-0.4
SSLB	Suanglung	0.65	267	P	Pn	18 40 13.0	+0.2
NNSB	Datong	0.65	337	⇓*i*P	Pn	18 40 12.9	0.0
	baz=337						
NNSB				*e*S	Sn	18 40 21.5	-0.7
	baz=337						
NNS	Nan Shan	0.67	337	⇓P	Pn	18 40 13.1	-0.1
	baz=337						
NNS				*e*S	Sn	18 40 22.1	-0.5
	baz=337						
SMLT	Sun Moon Lake	0.70	275	⇓*i*P	Pn	18 40 14.0	+0.4
	baz=276						
SMLT				*e*S	Sb	18 40 24.9	+1.5
	baz=276						
FULB	Fuli	0.71	209	*e*P	Pn	18 40 13.9	+0.3
	baz=217						
FULB				*e*S	Sn	18 40 24.1	+0.7
	baz=217						
WCS	Beigang Elemen	0.73	289	*e*P	Pn	18 40 14.2	+0.4
	baz=285						
WCS				*e*S	Sn	18 40 22.7	-1.1
	baz=285						
TYC	Yuchr	0.74	276	⇓*i*P	Pn	18 40 14.4	+0.3
	baz=281						
TYC				*e*S	Sn	18 40 23.6	-0.6
	baz=281						
CHKT	Chengkung	0.77	201	*e*P	Pn	18 40 14.8	+0.3
	baz=189						
CHKT				*e*S	Sb	18 40 26.5	+1.3
	baz=189						
NDT	Datong Townshi	0.79	350	*e*P	Pn	18 40 14.7	0.0
	baz=341						
NDT				*e*S	Sn	18 40 24.0	-1.3
	baz=341						
WHP	Taichung City	0.80	305	*e*P	Pn	18 40 15.5	+0.6
	baz=310						
WHP				*e*S	Sn	18 40 26.6	+1.0
	baz=310						
TWC	Suao	0.80	12	*e*P	Pn	18 40 15.4	+0.5
	baz=20						
TWC				*e*S	Sb	18 40 27.3	+1.3
	baz=20						
NDS	Dongshan	0.81	3	*e*P	Pn	18 40 14.9	-0.1
	baz=351						
NDS				*e*S	Sn	18 40 26.5	+0.7
	baz=351						
ENTT	Nioudou	0.82	354	⇓P	Pn	18 40 15.3	+0.1
	baz=354						
ENTT				*e*S	Sn	18 40 24.7	-1.3
	baz=354						
ALS	Alishan	0.85	249	⇓*i*P	Pn	18 40 16.5	+0.8
	baz=248						
ALS				*e*S	Sn	18 40 27.3	+0.1
	baz=248						
WJS	Zhushan	0.86	270	*e*P	Pn	18 40 16.9	+1.3
	baz=268						
ELDTW	Lidau	0.87	223	*e*P	Pn	18 40 15.9	+0.1
	baz=216						
ELDTW				*e*S	Sn	18 40 26.4	-1.0
	baz=216						
YHNB	Yeheng	0.88	343	⇓*i*P	Pn	18 40 16.4	+0.3
	baz=342						
YHNB				*e*S	Sn	18 40 27.0	-0.7
	baz=342						
YHNB	Yeheng	0.88	343		Pn	18 40 16.1	0.0
YHNB	Yeheng	0.88	343	P	Pn	18 40 16.5	+0.4
NSK	Sanguang	0.89	342	⇓*i*P	Pn	18 40 16.5	+0.3
	baz=341						
NSK				S	Sn	18 40 27.6	-0.4
	baz=341						
TWE	Neicheng	0.89	0	⇓P	Pn	18 40 16.3	+0.2
	baz=353						
WNT	Mingjian	0.90	274	⇓*i*P	Pb	18 40 17.7	+0.6
	baz=273						
WNT				*e*S	Sb	18 40 30.2	+1.4
	baz=273						
EDH	Donghe	0.91	201	*e*P	Pn	18 40 16.5	+0.2
	baz=191						
EDH				*e*S	Sb	18 40 29.9	+0.8
	baz=191						
CHN5	Tsauling	0.93	256	⇓*i*P	Pn	18 40 17.9	+1.2
	baz=256						
CHN5				*e*S	Sb	18 40 30.6	+0.8
	baz=256						
ILA	Ilan	0.94	5	*e*P	Pn	18 40 17.4	+0.6
	baz=354						
TCU	Taichung	0.96	290	⇓P	Pb	18 40 18.9	+0.8
	baz=289						
TCU				*e*S	Sb	18 40 33.0	+2.6
	baz=289						
NWLT	Wulai	0.96	351	⇓*i*P	Pn	18 40 17.3	+0.2
	baz=344						
NWLT				*e*S	Sn	18 40 29.4	-0.2
	baz=344						
TWQ1	Liyutan	0.97	303	⇓P	Pb	18 40 18.7	+0.4
	baz=302						
TWQ1				*e*S	Sb	18 40 32.1	+1.3
	baz=302						
NSTT	Nanjuang	1.01	323	⇓*i*P	Pn	18 40 19.2	+1.5
	baz=308						
NSTT				*e*S	Sn	18 40 31.6	+0.8
	baz=308						
LIOB	Emei	1.01	324	⇓P	Pb	18 40 19.4	+0.4
	baz=323						
LIOB				*e*S	Sn	18 40 32.1	+1.3
	baz=323						
NSY	Sanyi	1.01	306	⇓*i*P	Pb	18 40 19.5	+0.5
	baz=305						
NSY				*e*S	Sb	18 40 33.4	+1.3
	baz=305						
LONT	Longtian	1.04	208	*e*P	Pn	18 40 17.5	-0.6
	baz=209						
LONT				*e*S	Sn	18 40 30.8	-0.7
	baz=209						
WDLH	Douliu	1.04	263	*e*P	Pn	18 40 19.5	+1.3
	baz=262						
WDLH				*e*S	Sb	18 40 33.7	+0.9
	baz=262						
STYH	Taoyuan	1.04	232	*e*P	Pn	18 40 19.4	+1.3
	baz=228						
STYH				*e*S	Sn	18 40 32.4	+0.8
	baz=228						
WCHH	Zhanghua	1.04	284	P	Pb	18 40 20.0	+0.5
	baz=283						
WCHH				*e*S	Sb	18 40 34.2	+1.4
	baz=283						
EGS		1.05	13	*e*P	Pb	18 40 20.0	+0.4
	baz=14						
NMLH	Miaoli	1.07	312	⇓*i*P	Pn	18 40 19.9	+1.3
	baz=310						
NMLH				*e*S	Sn	18 40 34.0	+1.8
	baz=310						
WDJ	Dajia District	1.07	299	*e*P	Pn	18 40 19.9	+1.4
	baz=298						
WDJ				*e*S	Sn	18 40 34.1	+1.8
	baz=298						
TPUB	Ta-pu	1.08	241	⇓P	Pn	18 40 20.3	+1.5
	baz=242						
TPUB				*e*S	Sn	18 40 34.1	+1.4
	baz=242						
TPUB	Ta-pu	1.08	241		Pn	18 40 20.2	+1.4
TPUB	Ta-pu	1.08	241	P	Pb	18 40 20.5	+0.3
CHN4	Tsaushan	1.09	245	*e*P	Pb	18 40 20.6	+0.4
	baz=245						
CHN4				*e*S	Sb	18 40 35.4	+1.2
	baz=245						
WTP	Ta-pu	1.12	239	⇓*i*P	Pn	18 40 20.9	+1.6
	baz=240						
WTP				*e*S	Sb	18 40 36.2	+1.0
	baz=240						
CHN2	Minshiung	1.13	255	*e*P	Pb	18 40 21.5	+0.5
	baz=254						
TWGBT	Beinan	1.14	208	*e*P	Pn	18 40 18.7	-0.8
	baz=197						
TWG	Pinlang	1.14	209		Pn	18 40 18.8	-0.7
SBCB	Hsinchu	1.15	327	*e*P	Pb	18 40 21.4	+0.2
	baz=326						
SBCB				*e*S	Sb	18 40 36.1	+0.2
	baz=326						
TIPB	Shuangxi	1.15	7	*e*P	Pn	18 40 20.6	+0.9
	baz=353						
TWA	Mucha	1.15	356	*e*P	Pn	18 40 20.6	+0.8
	baz=355						
TATO	Taipei	1.16	352		Pn	18 40 20.5	+0.7
LDUT	Ludao	1.16	189	*e*P	Pn	18 40 19.1	-0.7
	baz=181						
LDUT				*e*S	Sb	18 40 36.9	+0.7
	baz=181						
HSN	Hsinchu	1.16	327	*e*P	Pb	18 40 21.6	+0.1
	baz=327						
HSN				*e*S	Sb	18 40 37.2	+1.0
	baz=327						
TTN	Taitung	1.17	204	*e*P	Pn	18 40 21.2	+1.3
	baz=204						
WTK	Tuku	1.18	264	*e*P	Pn	18 40 21.8	+1.8
	baz=264						
WTK				*e*S	Sb	18 40 37.4	+0.7
	baz=264						
WRL	Guolierlin Hig	1.18	274	P	Pn	18 40 21.5	+1.4
	baz=274						
WRL				*e*S	Sn	18 40 36.8	+1.8
	baz=274						
CHY	Chiayi	1.18	254	*e*P	Pb	18 40 22.0	+0.2
	baz=253						
TWK	Hsinying	1.21	243	*e*P	Pn	18 40 22.3	+1.7
	baz=243						
TWK				*e*S	Sb	18 40 38.9	+1.1
	baz=243						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=13	**1.22**	**14**	*e*P	**Pn**	**18 40 22.1**	**+1.5**
TAP	**Taipei** baz=352	**1.22**	**353**	*e*P	**Pn**	**18 40 21.8**	**+1.2**
NCUH	**Zhongli** baz=337	**1.22**	**339**	*e*P	**Pn**	**18 40 21.9**	**+1.3**
CHN1	**Nanshi** baz=240	**1.22**	**239**	*e*P	**Pb**	**18 40 22.6**	**+0.1**
CHN1	baz=240			*e*S	**Sb**	**18 40 38.3**	**+0.3**
NCU	**National Centr** baz=337	**1.22**	**339**	*e*P	**Pn**	**18 40 22.1**	**+1.5**
SNST	**Tainan City** baz=242	**1.23**	**241**	*e*P	**Pb**	**18 40 22.7**	**+0.1**
SNST	baz=242			*e*S	**Sb**	**18 40 38.9**	**+0.7**
SGST	**Jiashian** baz=234	**1.24**	**234**	P	**Pn**	**18 40 22.1**	**+1.3**
SGST	baz=234			*e*S	**Sn**	**18 40 38.1**	**+1.7**
NWF	**Wu-fen Shan** baz=350	**1.25**	**5**	*e*P	**Pn**	**18 40 22.1**	**+1.0**
NWF	baz=350			*e*S	**Sn**	**18 40 36.8**	**0.0**
SLGT	**Liugui** baz=239	**1.25**	**229**	*e*P	**Pb**	**18 40 24.5**	**+1.6**
SLGT	baz=239			*e*S	**Sb**	**18 40 40.1**	**+1.4**
WTCT	**Ta-ch'eng** baz=271	**1.27**	**272**	*e*P	**Pn**	**18 40 22.8**	**+1.6**
TWS1	**Kuangyinshan** baz=348	**1.29**	**350**	*e*P	**Pn**	**18 40 23.2**	**+1.6**
YM01	**YM01** baz=354	**1.32**	**356**	*e*P	**Pn**	**18 40 22.1**	**+0.1**
JYNG	**Yonagunijimaku**	**1.33**	**62**	P	**Pn**	**18 40 23.0**	**+0.9**
JYNG				S	**Sn**	**18 40 39.9**	**+1.3**
WSF	**Szhu** baz=263	**1.33**	**262**	*e*P	**Pn**	**18 40 23.8**	**+1.6**
WSF	baz=263			*e*S	**Sb**	**18 40 41.5**	**+0.4**
NTST	**Danshui** baz=350	**1.35**	**352**	*e*P	**Pn**	**18 40 23.1**	**+0.6**
ICHU	**Yijhu** baz=249	**1.35**	**250**	*e*P	**Pn**	**18 40 24.0**	**+1.5**
ANP	**Anpu** baz=353	**1.36**	**355**	*e*P	**Pn**	**18 40 22.8**	**+0.1**
ECL	**Taimali** baz=200	**1.39**	**208**	*e*P	**Pn**	**18 40 22.5**	**-0.4**
YOJ	**Yonaguni jima** baz=65	**1.39**	**62**	*e*P	**Pn**	**18 40 23.5**	**+0.6**
YOJ	**Yonaguni jima**	**1.39**	**62**	P	**Pn**	**18 40 23.8**	**+0.9**
YOJ				S	**Sn**	**18 40 40.7**	**+0.6**
YOJ	**Yonaguni jima**	**1.39**	**62**		**Pn**	**18 40 23.8**	**+0.9**
YOJ	**Yonaguni jima**	**1.39**	**62**	P	**Pn**	**18 40 24.3**	**+1.4**
CHN3	**Shinhua** baz=238	**1.41**	**238**	*e*P	**Pb**	**18 40 26.3**	**+0.7**
CHN8	**Yiju** baz=250	**1.42**	**251**	*e*P	**Pb**	**18 40 26.2**	**+0.4**
SSD	**Sandimen** baz=221	**1.43**	**222**	*e*P	**Pn**	**18 40 25.1**	**+1.5**
SSHA	**Shanhua** baz=241	**1.44**	**242**	*e*P	**Pb**	**18 40 26.3**	**+0.2**
TWY	**Chenhua** baz=356	**1.45**	**358**	*e*P	**Pn**	**18 40 25.2**	**+1.4**
TSMG	**Majia** baz=220	**1.46**	**220**	*e*P	**Pb**	**18 40 26.3**	**-0.2**
TWM1	**Shoushan** baz=229	**1.51**	**229**	*e*P	**Pb**	**18 40 28.3**	**+0.8**
MASBT	**Mashibuluo** baz=219	**1.53**	**218**	*e*P	**Pn**	**18 40 26.3**	**+1.3**
EAST	**Anshuo** baz=202	**1.62**	**208**	*e*P	**Pn**	**18 40 26.2**	**0.0**
TAW	**Tawu** baz=198	**1.62**	**206**	*e*P	**Pn**	**18 40 27.5**	**+1.3**
SSPT	**Xinbi** baz=205	**1.67**	**217**	*e*P	**Pn**	**18 40 29.3**	**+2.5**
SCZT	**Fangliau** baz=215	**1.73**	**214**	*e*P	**Pn**	**18 40 29.8**	**+2.1**
LAY	**Lan-yu** baz=183	**1.78**	**183**	*e*P	**Pn**	**18 40 27.6**	**-0.7**
SLIU	**Shizi** baz=199	**1.79**	**207**	*e*P	**Pn**	**18 40 28.7**	**+0.2**
LYUB	**Lan-yu** baz=182	**1.81**	**182**	*e*P	**Pn**	**18 40 27.5**	**-1.4**
WLCH	**Liuqiu** baz=220	**1.88**	**219**	*e*P	**Pb**	**18 40 32.8**	**-0.9**
WDGT	**Dungji** baz=253	**1.92**	**253**	*e*P	**Pn**	**18 40 31.1**	**+0.8**
PHUB	**P'eng-hu** baz=260	**1.94**	**261**	*e*P	**Pn**	**18 40 31.3**	**+0.8**
PNG	**Penghu** baz=262	**1.95**	**263**	*e*P	**Pn**	**18 40 31.6**	**+0.9**
IRIF	**Iriomote-Funau**	**1.96**	**75**	P	**Pn**	**18 40 31.9**	**+1.2**
IRIF				*e*S	**Sn**	**18 40 55.7**	**+1.5**
HATJ	**Hateruma jima**	**1.97**	**83**	P	**Pn**	**18 40 32.1**	**+1.1**
HATJ				S	**Sn**	**18 40 55.9**	**+1.3**
HEN	**Hengchun** baz=195	**2.00**	**205**	*e*P	**Pn**	**18 40 34.1**	**+2.7**
TWK1	**Hengchun** baz=194	**2.03**	**203**	*e*P	**Pn**	**18 40 33.3**	**+1.5**
TWKBT	**Hengchun** baz=194	**2.03**	**203**	*e*P	**Pn**	**18 40 33.1**	**+1.3**
VCHM	**Qimei** baz=253	**2.14**	**254**	*e*P	**Pn**	**18 40 34.1**	**+0.8**
JKRS	**Kuro-shima**	**2.18**	**79**	P	**Pn**	**18 40 35.5**	**+1.6**
JKRS				*e*S	**Sn**	**18 41 01.5**	**+1.7**
JIJ	**Ishigaki jima**	**2.33**	**76**	P	**Pn**	**18 40 36.6**	**+0.7**
JIJ				S	**Sn**	**18 41 03.7**	**+0.3**
JISG	**Ishigakijimahi**	**2.53**	**72**	P	**Pn**	**18 40 39.5**	**+0.8**
JISG				S	**Sn**	**18 41 08.4**	**0.0**
PTMZ	**Houxiangcun** baz=296	**2.62**	**298**	*e*P	**Pn**	**18 40 39.7**	**-0.1**
JTJ	**Tarama**	**2.89**	**73**	P	**Pn**	**18 40 44.7**	**+1.1**
JTJ				S	**Sn**	**18 41 18.4**	**+1.2**
KNM	**Kinmen** baz=280	**3.01**	**282**	*e*P	**Pn**	**18 40 47.0**	**+1.8**
KNMB	**Chin-men Tao** baz=281	**3.06**	**283**	*e*P	**Pn**	**18 40 45.5**	**-0.5**
KNMB	**Chin-men Tao**	**3.06**	**283**	Pn	**Pn**	**18 40 45.8**	**-0.1**
KNMB					**Sn**	**18 41 19.1**	**-2.3**
JIRB	**Irabujima**	**3.35**	**72**	P	**Pn**	**18 40 51.0**	**+1.0**
JIRB				*e*S	**Sn**	**18 41 29.7**	**+1.0**
JIKM	**Ikemajima**	**3.45**	**71**	P	**Pn**	**18 40 52.9**	**+1.6**
JIKM				*e*S	**Sn**	**18 41 31.9**	**+0.9**
JMJ	**Miyako jima 2**	**3.46**	**73**	P	**Pn**	**18 40 54.1**	**+2.7**
JMJ2	**Miyako jima3**	**3.47**	**74**	P	**Pn**	**18 40 53.2**	**+1.7**
JMJ2				*e*S	**Sn**	**18 41 32.5**	**+1.1**
AXDP	**Jialang** baz=287	**3.53**	**288**	*e*P	**Pn**	**18 40 52.2**	**-0.3**
ZPLA	**Ao Xicun** baz=271	**3.58**	**272**	*e*P	**Pn**	**18 40 53.2**	**0.0**
JOW	**Kunigami** 2.4nm,0.3s,baz=164,slow=12,SNR=29	**6.69**	**62**	Pn	**Pn**	**18 41 35.0**	**-0.8**
JOW	0.4nm,0.3s,baz=90,slow=17,SNR=1.8			Sn	**Sn**	**18 42 47.2**	**-3.8**
JWT	**Wachi**	**16.51**	**43**	Pn	**Pn**	**18 43 47.0**	**-2.0**
JWT	comp=Z,26nm,1.4s			IAmb	IAmb	18 43 48.1	
KLR	**Kul'dur** comp=Z,706nm,18.7s,baz=38,slow=38	**26.57**	**15**	LR	LR	18 56 49.0	
WRA	**Warramunga Arr** comp=Z,0.7nm,0.9s,baz=346,slow=8.9,SNR=5.0	**45.22**	**163**	P	**P**	**18 48 13.0**	**-1.1**
WRA	**Warramunga Arr** comp=Z,0.5nm,1.4s	**45.22**	**163**	IAmb	IAmb	18 48 38.1	
WR0	**Warramunga Arr**	**45.29**	**163**	P	**P**	**18 48 12.4**	**-2.3**
WR0	comp=Z,7.4nm,1.4s			IAmb	IAmb	18 48 30.9	
ASAR	**Alice Springs** comp=Z,0.3nm,0.8s,baz=339,slow=6.7,SNR=4.3	**48.68**	**165**	P	**P**	**18 48 40.6**	**-0.5**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.5s,baz=314,slow=5.6,SNR=5.2	**83.13**	**23**	P	**P**	**18 52 21.1**	**-1.1**

IDC 23 18:49:05.6±6.2**, 17°.21S**×**69°.84W, h151**^{km}±36^{km}**, mb3.5**/3**, mb1 3.6**/3**, mb1mx3.2**/18**, mbtmp3.9**/3**, Error ellipse: s-maj=100.5km s-min=41.3km az=12.0, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz** 3.4nm,0.3s,baz=309,slow=3.8,SNR=57	**1.88**	**61**	P	Pn	18 49 40.1	0.0
LPAZ	3.6nm,0.3s,baz=2.8,slow=15,SNR=8.6			S	Sn	18 50 06.7	+0.3
H03N1	**Juan Fernandez** baz=27,slow=73,SNR=3.4	**18.11**	**205**	T	T	19 10 43.5	
H03N2	**Juan Fernandez** baz=27,slow=73,SNR=3.6	**18.11**	**205**	T	T	19 10 42.9	
H03N3	**Juan Fernandez** baz=27,slow=73,SNR=3.5	**18.12**	**205**	T	T	19 10 41.9	
DBIC	**Dimbokro** 1.5nm,0.6s,baz=246,slow=6.9,SNR=4.8	**68.44**	**75**	P	P	18 59 51.7	0.0
TORD	**Torodi Ar. Bea** 0.8nm,0.4s,baz=251,slow=5.3,SNR=6.4	**76.80**	**72**	P	P	19 00 41.3	+0.2
YKA	**Yellowknife Ar** 0.1nm,0.5s,baz=138,slow=5.1,SNR=5.6	**86.87**	**341**	P	P	19 01 32.9	+0.2
SONM	**Songino Array** 0.2nm,0.4s,baz=6.3,slow=4.8,SNR=1.6	**149.30**	**5**	PKPbc	PKPbc	19 08 35.6	-1.0

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*IDC **23** 18:55:13.2±3.7, 36°.49N×142°.75E, h0^{km}, mb3.5/2, mb1 3.6/5, mb1mx2.9/40, mbtmp3.7/5, ML2.9/2, Error ellipse: s-maj=58.6km s-min=27.8km az=113.0*

*JMA **23** 18:55:20.2±0.4, 36°.70N×142°.19E, h37^{km}, M3.4*

ISC 23 18:55:17.8±3.6**, 36°.69N**±0°.05×**142°.20E**±0°.09**, h7**^{km}±23^{km}**, n22,** σ**1**^{s}**33**/28**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.20**	**291**	P	**Pn**	**18 55 40.4**	**-0.6**
JFK	**Kawauchi**	**1.26**	**303**	P	**Pb**	**18 55 42.0**	**+0.2**
JHO	**Hitachi**	**1.31**	**267**	P	**Pn**	**18 55 42.6**	**+0.1**
JHYU	**Hitachinakayam**	**1.34**	**256**	P	**Pb**	**18 55 43.6**	**+0.4**
JHYU				*e*S	**Sb**	**18 56 00.7**	**+0.1**
JFFD	**Fukushimafurud**	**1.37**	**288**	P	**Pn**	**18 55 43.5**	**+0.1**
JMM	**Marumori**	**1.62**	**317**	P	**Pn**	**18 55 46.7**	**-0.1**
JFT	**Otama**	**1.70**	**300**	P	**Pb**	**18 55 48.8**	**-0.6**
JFT				S	**Sb**	**18 56 10.0**	**-1.0**
JIO	**Ouri**	**1.89**	**339**	P	**Pn**	**18 55 50.8**	**+0.4**
JIO				*e*S	**Sn**	**18 56 14.3**	**-0.2**
JOU	**Okura**	**2.07**	**324**	P	**Pb**	**18 55 54.5**	**-1.2**
JOU				*e*S	**Sn**	**18 56 19.4**	**+0.3**
JAG	**Ashikaga**	**2.22**	**264**	P	**Pn**	**18 55 56.2**	**+1.1**
JAG				*e*S	**Sn**	**18 56 22.6**	**-0.2**
JMK	**Ichinoseki**	**2.39**	**341**	P	**Pn**	**18 55 58.4**	**+1.1**
JYK	**Kaneyama**	**2.66**	**327**	P	**Pn**	**18 56 02.1**	**+1.0**
JRY	**Ryogami san**	**2.74**	**257**	P	**Pn**	**18 56 03.2**	**+1.0**
JRY				*e*S	**Sn**	**18 56 35.6**	**-0.1**
MJAR	**Matsushiro Arr** 1.1nm,0.3s,baz=86,slow=8.9,SNR=32	**3.21**	**269**	Pn	**Pn**	**18 56 11.1**	**+2.4**
MJAR	0.4nm,0.3s,baz=236,slow=26,SNR=5.3			Sn	**Sb**	**18 56 54.8**	**+0.3**
MAT	**Matsushiro**	**3.21**	**269**	P	**Pn**	**18 56 11.2**	**+2.5**
MAT				*e*S	**Sb**	**18 56 52.5**	**-2.0**
JHJ	**Hachijo jima 2** baz=43,slow=18,SNR=2.4	**4.08**	**210**	Pn	**Pn**	**18 56 18.3**	**-2.2**
JHJ	36nm,0.3s,baz=84,slow=23,SNR=6.7			Sn	**Sn**	**18 57 05.5**	**-2.9**
ASAJ	**Asahikawa** 0.2nm,0.3s,baz=270,slow=4.0,SNR=1.0	**7.43**	**2**	Pn	**Pn**	**18 57 04.7**	**-1.9**
H11N2	**WAKE ISLAND Hy** baz=313,slow=75,SNR=5.2	**27.43**	**121**	T	T	19 29 48.8	
H11N1	**WAKE ISLAND Hy** baz=313,slow=75,SNR=5.2	**27.44**	**121**	T	T	19 29 55.0	
H11N3	**WAKE ISLAND Hy** baz=313,slow=75,SNR=4.6	**27.45**	**121**	T	T	19 29 50.0	
SONM	**Songino Array** 0.8nm,0.7s,baz=103,slow=9.9,SNR=6.1	**28.50**	**304**	P	**P**	**19 01 14.6**	**+0.9**
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=78,slow=9.6,SNR=2.0	**44.83**	**303**	P	**P**	**19 03 32.7**	**+0.3**

IDC 23 19:08:12.5±1.8**, 0°.30N**×**123°.23E, h0**^{km}**, mb3.2**/3**, mb1 3.6**/4**, mb1mx3.2**/45**, mbtmp3.4**/4**, ML3.5**/1**, Error ellipse: s-maj=130.2km s-min=26.8km az=64.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=8.7,slow=13,SNR=1.2	**18.43**	**173**	P	P	19 12 30.4	+0.8
WRA	**Warramunga Arr** 0.6nm,0.9s,baz=330,slow=11,SNR=11	**22.87**	**152**	P	P	19 13 17.0	-0.9
ASAR	**Alice Springs** 0.5nm,0.9s,baz=342,slow=15,SNR=4.1	**25.98**	**157**	P	P	19 13 47.5	+0.4
MKAR	**Makanchi Array** 0.3nm,0.8s,baz=123,slow=7.7,SNR=1.5	**58.48**	**328**	P	P	19 18 10.6	0.0

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*NOU **23** 19:08:16.7, 14°.56S×167°.17E, h83^{km}, mb4.7/23, Vanuatu Islands*

*IDC **23** 19:08:17.8±4.9, 14°.74S×167°.24E, h107^{km}±43^{km}, mb3.7/8, mb1 3.9/9, mb1mx3.7/39, mbtmp4.1/9, Error ellipse: s-maj=30.0km s-min=27.9km az=172.0*

*NEIC **23** 19:08:17.5±1.3, 14°.7S±0°.1×167°.2E±0°.2, h92^{km}±8^{km}, mb4.3/10, Error ellipse: s-maj=26.9km s-min=14.5km az=91.0*

ISC 23 19:08:16.9±0.8**, 14°.65S**±0°.08×**167°.2E**±0°.1**, h100**^{km}**, n69,** σ**1**^{s}**19**/68**, mb4.2**/17**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.80**	**181**		**Pn**	**19 08 34.0**	**-1.2**
SANVU	**Saraoutou**	**0.80**	**181**	P	**Pn**	**19 08 34.3**	**-1.0**
SANVU	**Saraoutou**	**0.80**	**181**	P	**Pn**	**19 08 34.2**	**-1.0**
DVP	**Devils Point**	**3.20**	**163**	P	**Pn**	**19 09 08.2**	**+2.9**
DVP	**Devils Point**	**3.20**	**163**	P	**Pn**	**19 09 07.2**	**+1.9**
RTV	**Rentapao**	**3.34**	**160**	P	**Pn**	**19 09 10.2**	**+3.1**
LIFNC	**LIFOU**	**6.10**	**180**	Pn	**Pn**	**19 09 44.3**	**-0.2**
LIFNC	**LIFOU**	**6.10**	**180**	P	**Pn**	**19 09 44.2**	**-0.3**
KOUNC	**Koumac, New Ca**	**6.51**	**205**	P	**Pn**	**19 09 51.3**	**+1.2**
KOUNC	**Koumac, New Ca**	**6.51**	**205**	P	**Pn**	**19 09 50.8**	**+0.7**
MARNC	**Mare, Loyalty**	**6.84**	**174**	Pn	**Pn**	**19 09 53.5**	**-1.1**
MARNC	**Mare, Loyalty**	**6.84**	**174**	P	**Pn**	**19 09 54.5**	**-0.1**
YATNC	**Mamie plateau,**	**7.38**	**182**	P	**Pn**	**19 10 01.7**	**-0.3**
YATNC	**Mamie plateau,**	**7.38**	**182**	P	**Pn**	**19 10 00.6**	**-1.4**
DZM	**Mont Dzumac** 7.1nm,0.3s,baz=320,slow=7.4,SNR=51	**7.42**	**186**	P	**Pn**	**19 10 02.9**	**+0.2**
DZM	**Mont Dzumac** 79nm,1.1s	**7.42**	**186**	*e*Pn	**Pn**	**19 10 02.7**	**0.0**
DZM	126nm,0.8s			*e*Sn	**Sn**	**19 11 25.0**	**-0.3**
DZM	**Mont Dzumac**	**7.42**	**186**		**Pn**	**19 10 02.6**	**0.0**
DZM	**Mont Dzumac**	**7.42**	**186**	P	**Pn**	**19 10 02.8**	**+0.2**
DZM	**Mont Dzumac**	**7.42**	**186**	P	**Pn**	**19 10 02.5**	**-0.1**
DZM	**Mont Dzumac**	**7.42**	**186**	P	**Pn**	**19 10 02.4**	**-0.2**
NOUC	**Port Laguerre**	**7.47**	**187**	P	**Pn**	**19 10 03.4**	**+0.2**
NOUC	**Port Laguerre**	**7.47**	**187**	P	**Pn**	**19 10 03.4**	**+0.2**
NOUC	**Port Laguerre**	**7.47**	**187**	P	**Pn**	**19 10 03.5**	**+0.3**
ONTNC	**Ouen Toro**	**7.66**	**185**		**Pn**	**19 10 05.8**	**+0.1**
ONTNC	**Ouen Toro**	**7.66**	**185**	P	**Pn**	**19 10 06.5**	**+0.7**
ONTNC	**Ouen Toro**	**7.66**	**185**	P	**Pn**	**19 10 06.4**	**+0.7**
ONTNC	**Ouen Toro**	**7.66**	**185**	P	**Pn**	**19 10 07.0**	**+1.3**
OUENC	**Ouen Island, N**	**7.74**	**183**		**Pn**	**19 10 07.0**	**+0.1**
OUENC					**Sn**	**19 11 31.7**	**-1.2**
OUENC	**Ouen Island, N**	**7.74**	**183**	P	**Pn**	**19 10 08.1**	**+1.2**
OUENC	**Ouen Island, N**	**7.74**	**183**	P	**Pn**	**19 10 10.3**	**+3.4**
OUENC	**Ouen Island, N**	**7.74**	**183**	P	**Pn**	**19 10 07.5**	**+0.6**
PINNC	**Pines Island,**	**7.93**	**179**		**Pn**	**19 10 09.2**	**-0.2**
PINNC	**Pines Island,**	**7.93**	**179**	P	**Pn**	**19 10 09.6**	**+0.2**
EIDS	**Eidsvold**	**18.52**	**232**	P	**Pn**	**19 12 27.4**	**+0.4**
EIDS	comp=Z,15nm,0.7s			IAmb	IAmb	19 12 28.5	
EIDS	**Eidsvold** comp=Z,22nm,0.7s	**18.52**	**232**	P	**Pn**	**19 12 27.9**	**+1.0**
CTA	**Charters Tower** comp=Z,6.5nm,0.6s,baz=69,slow=14,SNR=6.7	**20.73**	**252**	P	**P**	**19 12 49.5**	**0.0**
CTAO	**Charters Tower**	**20.73**	**252**	P	**P**	**19 12 50.8**	**+1.3**
CTAO	comp=Z,14nm,0.8s			IAmb	IAmb	19 12 52.0	
CTAO	**Charters Tower**	**20.73**	**252**	P	**P**	**19 12 51.1**	**+1.6**
RMQ	**Roma** comp=Z,20nm,0.9s	**20.89**	**233**	P	**P**	**19 12 53.1**	**+1.9**
OUZ	**Omahuta**	**21.27**	**165**	P	**P**	**19 12 56.1**	**+0.8**
OUZ	comp=Z,22nm,0.9s			IAmb	IAmb	19 12 58.3	
MTSU	**Mount Surprise** comp=Z,12nm,0.9s	**22.24**	**258**	P	**P**	**19 13 07.6**	**+1.9**
QLP	**Quilpie** comp=Z,20nm,0.7s	**24.53**	**237**	P	**P**	**19 13 27.9**	**+0.7**
CMSA	**Cobar Meteorol** comp=Z,9.4nm,1.1s	**25.90**	**226**	P	**P**	**19 13 40.3**	**+0.7**
INKA	**Innaminka** comp=Z,26nm,0.7s	**27.84**	**238**	P	**P**	**19 13 58.8**	**+1.7**
STKA	**Stephens Creek** comp=Z,17nm,0.6s,baz=46,slow=8.5,SNR=66	**29.01**	**229**	P	**P**	**19 14 08.2**	**+0.8**
STKA	**Stephens Creek**	**29.01**	**229**	P	**P**	**19 14 08.0**	**+0.5**
STKA	comp=Z,3.7nm,0.7s			IAmb	IAmb	19 14 09.0	
STKA	**Stephens Creek** comp=Z,6.7nm,0.9s	**29.01**	**229**	P	**P**	**19 14 08.1**	**+0.6**
HTT	**Hallett** comp=Z,15nm,1.0s	**31.74**	**229**	P	**P**	**19 14 33.3**	**+1.7**
WRA	**Warramunga Arr** comp=Z,0.4nm,0.6s,baz=84,slow=8.4,SNR=4.7	**31.80**	**256**	P	**P**	**19 14 31.1**	**-1.2**
WRA	**Warramunga Arr** comp=Z,0.4nm,1.4s	**31.80**	**256**	IAmb	IAmb	19 14 31.2	
AS31	**Alice Springs**	**32.66**	**249**	P	**P**	**19 14 38.8**	**-1.0**
AS31	comp=Z,1.4nm,0.9s			IAmb	IAmb	19 14 40.1	
ASAR	**Alice Springs** comp=Z,3.1nm,0.7s,baz=80,slow=8.9,SNR=32	**32.66**	**249**	P	**P**	**19 14 38.6**	**-1.1**
BBOO	**Buckleboo**	**33.59**	**232**	P	**P**	**19 14 47.9**	**+0.2**
BBOO	**Buckleboo** comp=Z,25nm,1.4s	**33.59**	**232**	P	**P**	**19 14 48.6**	**+0.9**
MULG	**Mulgathing** comp=Z,19nm,1.0s	**34.21**	**237**	P	**P**	**19 14 53.4**	**+0.3**
FORT	**Forrest**	**39.30**	**239**	P	**P**	**19 15 36.0**	**-0.3**
VNDA	**Vanda** comp=Z,1.9nm,0.7s,baz=27,slow=11,SNR=6.9	**62.94**	**181**	P	**P**	**19 18 31.8**	**-0.6**
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.9s,baz=122,slow=1.7,SNR=4.7	**74.88**	**294**	P	**P**	**19 19 48.5**	**+1.3**
CMAR	**Chiang Mai Arr**	**74.88**	**294**	P	**P**	**19 19 47.9**	**+0.6**
QSPA	**South Pole Qui**	**75.38**	**180**	P	**P**	**19 19 48.9**	**-0.6**
QSPA	comp=Z,4.8nm,0.8s			IAmb	IAmb	19 19 49.5	
SONM	**Songino Array** comp=Z,0.4nm,0.8s,baz=142,slow=7.3,SNR=2.7	**82.40**	**324**	P	**P**	**19 20 29.6**	**+1.6**
SONM	**Songino Array** comp=Z,1.5nm,1.4s	**82.40**	**324**	IAmb	IAmb	19 20 33.1	
ILAR	**Eielson Array** comp=Z,0.7nm,0.8s,baz=235,slow=6.2,SNR=5.8	**86.46**	**18**	P	**P**	**19 20 47.4**	**-0.6**
SNAA	**Sanae**	**93.63**	**183**	P	**P**	**19 21 19.9**	**-1.8**
VNA3	**Neumayer Olymp**	**94.30**	**181**	P	**P**	**19 21 22.4**	**-2.4**
VNA2	**Neumayer--Watz** baz=178,slow=5.5	**94.56**	**182**	P	**P**	**19 21 24.3**	**-1.6**
MKAR	**Makanchi Array** comp=Z,0.3nm,0.6s,baz=88,slow=8.5,SNR=4.8	**97.11**	**316**	P	Pdif	19 21 39.2	+1.2
ARCES	**ARCESS Array B** comp=Z,3.1nm,0.8s,baz=62,slow=2.5,SNR=4.2	**120.16**	**345**	PKP	**PKPdf**	**19 26 54.6**	**-0.9**
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.8s,baz=102,slow=5.0,SNR=3.0	**165.87**	**266**	PKPab	**PKPab**	**19 29 11.2**	**0.0**

MEX 23 19:10:03.7±1.2**, 15°.35N**×**96°.51W, h16**^{km}±64^{km}**, MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.57**	**42**	*e*P	Pg	19 10 13.1	-1.9
HUIG				*e*S	Sg	19 10 19.9	-2.8
HUIG	**Huatulco**	**0.57**	**42**	*e*P	Pg	19 10 13.1	-1.9
HUIG				*i* S	Sg	19 10 20.3	-2.4
PEIG	**Puerto Escondi**	**0.90**	**317**	*e*P	Pb	19 10 17.4	-3.5
PEIG				*e*S	Sb	19 10 26.4	-6.2
PEIG	**Puerto Escondi**	**0.90**	**317**	*e*P	Pb	19 10 17.4	-3.5
PEIG				*i* S	Sb	19 10 27.2	-5.4
VHO	**Vista Hermosa**	**1.73**	**353**	*e*P	Pn	19 10 30.8	-2.6
VHO				*i* S	Sn	19 10 50.3	-5.0
YOIG	**Yosondua**	**1.80**	**327**	*e*P	Pn	19 10 30.9	-3.6
YOIG				*i* S	Sn	19 10 54.7	-2.4
YOIG	**Yosondua**	**1.80**	**327**	*e*P	Pn	19 10 31.8	-2.7
YOIG				*i* S	Sn	19 10 53.4	-3.7
PNIG	**Pinotepa**	**1.87**	**304**	*e*P	Pn	19 10 31.6	-3.5
PNIG				*e*S	Sn	19 10 52.4	-6.1
PNIG	**Pinotepa**	**1.87**	**304**	*e*P	Pn	19 10 32.5	-2.6
PNIG				*e*S	Sn	19 10 52.4	-6.1
CMIG	**Matias Romero**	**2.33**	**42**	*e*P	Pn	19 10 39.1	-2.4
CMIG				*e*S	Sn	19 11 07.1	-2.8
CMIG	**Matias Romero**	**2.33**	**42**	*e*P	Pn	19 10 39.1	-2.4
CMIG				*i* S	Sn	19 11 06.2	-3.7
UXUV	**UXUV**	**3.00**	**49**	*e*P	Pn	19 10 47.7	-2.9
UXUV				*i* S	Sn	19 11 22.5	-3.8

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*IDC **23** 19:18:35.4±6.6, 6°.74S×153°.49E, h74^{km}±53^{km}, mb3.4/4, mb1 3.7/5, mb1mx3.4/31, mbtmp3.7/5, ML1.9/1, Error ellipse: s-maj=64.0km s-min=29.7km az=122.0*

ISC 23 19:18:32.0±1.7**, 6°.8S**±0°.3×**153°.8E**±0°.2**, h50**^{km}**, n6,** σ**0**^{s}**37**/7**, mb3.5**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby** 1.5nm,0.3s,baz=42,slow=9.5,SNR=8.2	**7.01**	**248**	P	**Pn**	**19 20 12.5**	**+0.4**
PMG	0.9nm,0.3s,baz=30,slow=20,SNR=3.3			S	**Sn**	**19 21 30.5**	**-0.1**
WRA	**Warramunga Arr** 1.9nm,0.8s,baz=58,slow=11,SNR=3.3	**22.91**	**233**	P	**P**	**19 23 31.6**	**-0.3**
ASAR	**Alice Springs** 0.9nm,0.7s,baz=58,slow=9.3,SNR=17	**25.37**	**227**	P	**P**	**19 23 54.6**	**-0.1**
SONM	**Songino Array** 0.3nm,0.5s,baz=145,slow=5.3,SNR=2.5	**68.55**	**328**	P	**P**	**19 29 29.3**	**-0.3**
ILAR	**Eielson Array** 0.6nm,0.6s,baz=254,slow=5.5,SNR=7.4	**83.69**	**22**	P	**P**	**19 30 55.5**	**+0.4**
TORD	**Torodi Ar. Bea** 0.8nm,0.6s,baz=108,slow=1.7,SNR=5.8	**151.80**	**285**	PKPbc	**PKPbc**	**19 38 22.0**	**-0.3**

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*IDC **23** 19:26:53.9±2.2, 7°.28S×129°.40E, h154^{km}±29^{km}, mb2.7/1, mb1 3.4/6, mb1mx3.0/33, mbtmp3.8/6, Error ellipse: s-maj=34.9km s-min=21.5km az=95.0*

ISC 23 19:26:52.3±0.9**, 7°.37S**±0°.06×**129°.53E**±0°.10**, h150**^{km}**, n6,** σ**3**^{s}**05**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata** 7.5nm,0.3s,baz=125,slow=1.6,SNR=16	**6.45**	**244**	P	**Pn**	**19 28 26.5**	**+1.5**
BATI	6.9nm,0.3s,baz=33,slow=17,SNR=3.1			S	**Sn**	**19 29 34.8**	**-2.9**
SIJI	**Sorong** 0.5nm,0.3s,baz=323,slow=20,SNR=1.9	**6.68**	**15**	P	**Pn**	**19 28 29.4**	**+1.2**
SIJI	1.3nm,0.3s,baz=227,slow=23,SNR=9.1			S	**Sn**	**19 29 39.8**	**-3.6**
FITZ	**Fitzroy Crossi** 0.7nm,0.3s,baz=13,slow=9.9,SNR=36	**11.32**	**199**	P	**Pn**	**19 29 30.2**	**+0.5**
FITZ	0.6nm,0.3s,baz=114,slow=18,SNR=2.6			S	Sn	19 31 28.4	-6.6
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=338,slow=13,SNR=21	**13.34**	**160**	P	**Pn**	**19 29 58.2**	**+2.2**
WRA	1.1nm,0.3s,baz=332,slow=22,SNR=14			S	**Sn**	**19 32 19.7**	**-4.1**
ASAR	**Alice Springs** 0.4nm,0.3s,baz=346,slow=9.5,SNR=43	**16.74**	**166**	P	**Pn**	**19 30 42.4**	**+4.2**
ASAR	0.3nm,0.3s,baz=316,slow=15,SNR=11			S	**S**	**19 33 43.6**	**-0.9**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=125,slow=9.6,SNR=1.5	**68.28**	**327**	P	**P**	**19 37 37.1**	**0.0**

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*CNRM **23** 19:34:36.3, 36°.16N×7°.81W, h30^{km}, ml2.7*

*MDD **23** 19:34:39.0±0.9, 36°.56N×7°.58W, h27^{km}±11^{km}, mbLg2.6/19, Error ellipse: s-maj=8.7km s-min=3.2km az=29.0, PRXIMO*

*IGIL **23** 19:34:38.9, 36°.52N×7°.62W, h26^{km}, ML2.3*

*INMG **23** 19:34:39.5±1.5, 36°.53N×7°.60W, h31^{km}±7^{km}, ML2.3, Error ellipse: s-maj=3.2km s-min=2.1km az=46.0*

ISC 23 19:34:36.6±1.2**, 36°.49N**±0°.03×**7°.58W**±0°.03**, h35**^{km}**, n85,** σ**1**^{s}**62**/146**, 2D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTAV	**Tavira**	**0.64**	**355**	*e*S	**Sn**	**19 34 59.5**	**+1.3**
PBDV	**Barranco-do-Ve**	**0.81**	**340**	⇓*e*P	**Pn**	**19 34 52.7**	**+1.2**
PBDV				*e*S	**Sn**	**19 35 02.9**	**+0.6**
PBDV	34nm,0.2s			A	A	19 35 07.3	
PBDV	**Barranco-do-Ve**	**0.81**	**340**	P	**Pn**	**19 34 52.7**	**+1.2**
PBDV	34nm,0.2s			S	**Sn**	**19 35 02.9**	**+0.6**
PVAQ	**Vaqueiros**	**0.92**	**353**	*e*P	**Pn**	**19 34 54.4**	**+1.3**
PVAQ				*e*S	**Sn**	**19 35 05.6**	**+0.5**
PVAQ	77nm,0.4s			A	A	19 35 06.9	
PVAQ	**Vaqueiros**	**0.92**	**353**	P	**Pn**	**19 34 54.4**	**+1.3**
PVAQ	77nm,0.4s			S	**Sn**	**19 35 05.6**	**+0.5**
PVAQ	**Vaqueiros**	**0.92**	**353**	P	**Pn**	**19 34 56.7**	**+3.6**
EGRO	**El Granado** 2.3nm,0.1s,SNR=25	**1.05**	**4**	P	**Pn**	**19 34 56.1**	**+1.2**
EGRO	101nm,0.2s,SNR=35			S	**Sn**	**19 35 08.6**	**+0.4**
MORF	**Marmelete**	**1.19**	**314**	*e*P	**Pn**	**19 34 57.6**	**+0.8**
MORF				*e*S	**Sn**	**19 35 11.4**	**-0.3**
MORF				IAML		19 35 11.9	

	comp=N,45nm,0.2s						
MORF	Marmelete	1.19	314	eP	Pn	19 34 57.5	+0.8
MORF				eS	Sn	19 35 11.6	-0.1
MORF				A	A	19 35 11.9	
	comp=N,22nm,0.2s						
MORF	Marmelete	1.19	314	P	Pn	19 34 57.6	+0.8
MORF				S	Sn	19 35 11.4	-0.3
PFVI	Vila Bisbo	1.19	303	eP	Pn	19 34 57.6	+0.8
PFVI				eS	Sn	19 35 11.7	-0.1
PFVI				A	A	19 35 17.1	
	comp=N,19nm,0.3s						
PFVI	Vila Bisbo	1.19	303	P	Pn	19 34 57.5	+0.8
	comp=N,3.6nm,0.1s,SNR=7.9						
PFVI				S	Sn	19 35 11.7	-0.1
	comp=N,22nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	1.19	303	P	Pn	19 34 57.4	+0.7
PFVI				S	Sn	19 35 11.9	+0.1
PCVE	Castro Verde	1.20	342	eP	Pn	19 34 59.6	+2.7
PCVE				eS	Sn	19 35 12.7	+0.7
PCVE				A	A	19 35 13.6	
	comp=N,33nm,0.2s						
PCVE	Castro Verde	1.20	342	P	Pn	19 34 59.6	+2.7
PCVE				S	Sn	19 35 12.7	+0.7
	comp=N,33nm,0.2s						
PTEO	Sao Teotonio	1.40	319	⇓eP	Pn	19 35 00.9	+1.3
PTEO				eS	Sn	19 35 17.1	+0.2
PTEO				A	A	19 35 18.4	
	comp=N,19nm,0.3s						
PTEO	Sao Teotonio	1.40	319	P	Pn	19 35 00.9	+1.3
PTEO				S	Sn	19 35 17.1	+0.2
	comp=N,9.6nm,0.3s						
ESPR	Espera	1.44	74	P	Pn	19 35 01.8	+1.6
	comp=N,6.4nm,0.1s,SNR=24						
ESPR				S	Sn	19 35 19.0	+1.2
	comp=N,56nm,0.2s,SNR=9.7						
MESJ	Messejana	1.44	339	eP	Pn	19 35 01.5	+1.3
MESJ				eS	Sn	19 35 17.7	-0.3
MESJ				IAML		19 35 20.9	
	comp=E,33nm,0.1s						
MESJ	Messejana	1.44	339	eP	Pn	19 35 01.6	+1.3
MESJ				eS	Sn	19 35 18.3	+0.3
MESJ				A	A	19 35 22.3	
	comp=E,23nm,0.5s						
MESJ	Messejana	1.44	339	P	Pn	19 35 01.5	+1.3
MESJ				S	Sn	19 35 17.7	-0.3
EMIN	Mina Concepcio	1.47	29	P	Pn	19 35 01.8	+1.2
	comp=E,0.7nm,0.1s,SNR=7.0						
EMIN				S	Sn	19 35 18.6	0.0
	comp=E,8.9nm,0.1s,SNR=12						
PBEJ	Beja	1.55	352	eP	Pn	19 35 03.7	+1.9
PBEJ				eS	Sn	19 35 20.7	0.0
PBEJ				A	A	19 35 21.4	
	comp=E,20nm,0.3s						
PBEJ	Beja	1.55	352	P	Pn	19 35 03.7	+1.9
PBEJ				S	Sn	19 35 20.7	0.0
	comp=E,9.9nm,0.3s						
EJIF	Jimena Fronter	1.70	91	P	Pn	19 35 05.9	+2.1
	comp=E,20µm,0.2s,SNR=7.9						
EJIF				S	Sn	19 35 25.1	+0.7
	comp=E,9µm,0.2s,SNR=4.0						
PBAR	Barrancos	1.74	14	eS	Sn	19 35 26.3	+1.0
PBAR	Barrancos	1.74	14	S	Sn	19 35 26.3	+1.0
PNCL	Nicolau / Gran	1.79	335	ePn	Pn	19 35 06.2	+1.2
PNCL				eSn	Sn	19 35 26.3	-0.2
PNCL				A	A	19 35 30.8	
	comp=E,11nm,0.8s						
PNCL	Nicolau / Gran	1.79	335	P	Pn	19 35 06.2	+1.2
PNCL				S	Sn	19 35 26.3	-0.2
	comp=E,11nm,0.8s						
ECEU	Ceuta	1.88	108	P	Pn	19 35 08.5	+2.3
	comp=E,17nm,0.1s,SNR=7.0						
SMIR	Smir Dam	1.95	114	S	Sn	19 35 35.6	+5.0
EMIJ	Mijas	2.26	87	P	Pn	19 35 13.1	+1.5
	comp=E,0.9nm,0.2s,SNR=7.5						
EMIJ				S	Sn	19 35 39.1	+0.8
	comp=E,2.2nm,0.2s,SNR=5.0						
CHEFC	Chefchaouen	2.28	126	P	Pn	19 35 14.0	+2.1
CHEFC				S	Sn	19 35 37.2	-1.7
EBAD	Badajoz	2.31	11	P	Pn	19 35 13.1	+1.0
	comp=E,1.0nm,0.1s,SNR=18						
EBAD				S	Sn	19 35 38.6	-0.8
	comp=E,7.4nm,0.2s,SNR=6.8						
ECAB	El Cabril	2.34	47	P	Pn	19 35 13.9	+1.2
	comp=E,2.0nm,0.2s,SNR=15						
ECAB				S	Sn	19 35 38.8	-1.5
	comp=E,3.1nm,0.1s,SNR=7.6						
PESTR	Estremoz	2.38	360	ePn	Pn	19 35 14.3	+1.2
PESTR				eSn	Sn	19 35 40.0	-1.0
PESTR				A	A	19 35 42.1	
	comp=E,4.7nm,0.3s						
PMTG	Montargil	2.63	349	ePn	Pn	19 35 18.2	+1.6
PMTG				eSn	Sn	19 35 46.1	-1.1
PMTG				A	A	19 35 49.9	
	comp=E,7.5nm,0.4s						
PMTG	Montargil	2.63	349	P	Pn	19 35 18.2	+1.6
PMTG				S	Sn	19 35 46.1	-1.1
	comp=E,7.5nm,0.4s						
PMAFR	Mafra	2.81	332	ePn	Pn	19 35 21.0	+1.9
PMAFR				eSn	Sn	19 35 50.7	-1.0
PMAFR				A	A	19 35 52.9	
	comp=E,19nm,0.2s						
PMAFR	Mafra	2.81	332	P	Pn	19 35 20.3	+1.2
	comp=E,3.7nm,0.2s,SNR=7.9						
PMAFR				S	Sn	19 35 50.0	-1.7
	comp=E,32nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	2.85	76	P	Pn	19 35 21.9	+2.1
	comp=E,0.8nm,0.2s,SNR=7.9						
EGOR				S	Sn	19 35 53.7	+0.7
	comp=E,1.9nm,0.1s,SNR=7.9						
EADA	Adamuz	2.92	54	P	Pn	19 35 21.9	+1.3
	comp=E,1.4nm,0.2s,SNR=7.9						
EADA				S	Sn	19 35 54.1	-0.4
	comp=E,20nm,0.1s,SNR=22						
PMRV	Marv??o	2.94	3	ePn	Pn	19 35 22.1	+1.2
PMRV				eSn	Sn	19 35 53.4	-1.6
PMRV				A	A	19 36 06.0	
	comp=E,4.9nm,0.4s						
PMRV	Marv??o	2.94	3	P	Pn	19 35 22.1	+1.2
PMRV				S	Sn	19 35 53.4	-1.6
	comp=E,4.9nm,0.4s						
ZHG	ZHG	3.13	165	P	Pn	19 35 25.0	+1.4
ZHG				S	Sn	19 35 56.5	-3.2
PSBE	So Bento	3.17	343	ePn	Pn	19 35 25.8	+1.7
PSBE				eSn	Sn	19 36 00.7	0.0
PSBE				A	A	19 36 03.3	
	comp=E,6.7nm,0.4s						
ELGU	Los Guajares,	3.20	82	P	Pn	19 35 25.8	+1.2
	comp=E,0.8nm,0.1s,SNR=7.9						
ELGU				S	Sn	19 36 02.4	+0.9
	comp=E,2.3nm,0.1s,SNR=7.9						
PALE	Palemas	3.22	112	P	Pn	19 35 25.9	+1.2
PALE				S	Sn	19 36 02.8	+1.0
PCBR	Castelo Branco	3.35	1	ePn	Pn	19 35 27.9	+1.4
PCBR				eSn	Sn	19 36 03.9	-1.1
PCBR				A	A	19 36 06.0	
	comp=E,6.8nm,0.5s						
PCBR	Castelo Branco	3.35	1	P	Pn	19 35 27.9	+1.4
PCBR				S	Sn	19 36 03.9	-1.1
	comp=E,3.4nm,0.5s						
LCRM	LCR	3.58	141	P	Pn	19 35 29.0	-0.7
LCRM				S	Sn	19 36 08.5	-2.4
AKLM	AKL	3.62	122	P	Pn	19 35 32.5	+2.2
AKLM				S	Sn	19 36 09.2	-2.6
PCAS	Casmilo, Conde	3.63	349	eSn	Sn	19 36 11.5	-0.5
PCAS				A	A	19 36 31.0	
	comp=E,4.9nm,0.8s						
PCAS	Casmilo, Conde	3.63	349	S	Sn	19 36 11.5	-0.5
	comp=E,4.9nm,0.8s						
EPLA	Plasencia	3.76	18	P	Pn	19 35 33.2	+1.0
	comp=E,0.9nm,0.1s,SNR=6.1						
EPLA				S	Sn	19 36 12.7	-2.5
	comp=E,3.8nm,0.2s						
GORA	Gorafe	3.77	73	P	Pn	19 35 34.5	+2.2
	comp=E,4.6nm,0.1s,SNR=4.0						
GORA				S	Sn	19 36 14.2	-1.3
	comp=E,101nm,0.1s,SNR=7.9						
EBER	Berja	3.79	82	P	Pn	19 35 34.9	+2.1
	comp=E,0.3nm,0.2s,SNR=6.2						
EBER				S	Sn	19 36 16.5	+0.3
	comp=E,0.7nm,0.1s,SNR=4.0						
EQES	Quesada	3.83	69	P	Pn	19 35 35.0	+1.7
	comp=E,0.1nm,0.2s,SNR=7.9						
EQES				S	Sn	19 36 15.8	-1.3
	comp=E,1.9nm,0.1s,SNR=7.9						
MTE	Manteigas	3.91	0	ePn	Pn	19 35 35.0	+0.8
MTE				eSn	Sn	19 36 17.3	-1.6
PAB	San Pablo	3.98	39	P	Pn	19 35 36.6	+1.4
	comp=E,0.9nm,0.2s,SNR=7.9						
PAB				S	Sn	19 36 17.3	-3.4
	comp=E,0.9nm,0.2s,SNR=7.9						
SRHM	Skhour des Reh	4.01	184	P	Pn	19 35 37.1	+1.4
PVIS	Viseu	4.23	357	eSn	Sn	19 36 26.0	-0.8
ESDC	Sonseca Array	4.27	41	P	Pn	19 35 40.5	+1.2
	comp=E,0.2nm,0.2s,baz=225,slow=13,SNR=6.7						
ESDC				S	Sn	19 36 25.7	-2.2
	comp=E,3.0nm,1.2s,baz=225,slow=23,SNR=6.4						
MD31	MD31	4.29	146	P	Pn	19 35 38.9	-0.7
SESP	Santiago Espad	4.33	66	P	Pn	19 35 41.8	+1.7
	comp=E,0.9nm,0.1s,SNR=7.9						
SESP				S	Sn	19 36 26.1	-3.4
	comp=E,3.1nm,0.1s,SNR=7.9						
MDT	Midelt	4.41	145	P	Pn	19 35 41.5	+0.4
JBK	JBK	4.62	116	P	Pn	19 35 43.5	-0.7
JBK				S	Sn	19 36 33.2	-3.6
MVO	Moncorvo	4.69	5	ePn	Pn	19 35 46.3	+1.3
MVO				eSn	Sn	19 36 36.5	-1.7
MVO				A	A	19 36 38.5	
	comp=E,6.6nm,0.3s						
MVO	Moncorvo	4.69	5	P	Pn	19 35 45.8	+0.9
	comp=E,1.3nm,0.1s,SNR=7.9						
MVO				S	Sn	19 36 35.5	-2.7
	comp=E,3.9nm,0.1s,SNR=7.9						
PVRL	Vila Real	4.78	359	eSn	Sn	19 36 39.4	-1.0
POLO	Lamas de Olo	4.88	358	eSn	Sn	19 36 42.7	-0.3
EZAR	Zarzadilla de	4.90	72	P	Pn	19 35 49.7	+1.8
	comp=E,1.0nm,0.1s,SNR=7.9						
EZAR				S	Sn	19 36 42.3	-1.1
	comp=E,0.7nm,0.1s,SNR=7.9						
GUD	Guadarrama	4.94	32	P	Pn	19 35 49.8	+1.3
	comp=E,0.7nm,0.2s,SNR=7.2						
GUD				S	Sn	19 36 42.3	-2.2
	comp=E,0.6nm,0.3s						
PCAB	Cabril	5.23	356	eSn	Sn	19 36 50.8	-0.6
ETOB	Tobarra	5.25	64	P	Pn	19 35 53.2	+0.5
	comp=E,0.5nm,0.1s,SNR=7.9						
ETOB				S	Sn	19 36 49.2	-2.9
	comp=E,1.8nm,0.2s,SNR=6.0						
OUK	Oukaimeden	5.27	183	P	Pn	19 35 50.3	-3.0
PBRG	Braganca	5.35	7	ePn	Pn	19 35 54.0	0.0
PBRG				eSn	Sn	19 36 51.2	-3.2
PBRG				A	A	19 36 54.9	
	comp=E,2.4nm,0.2s						
ELOB	Lobios	5.39	356	S	Sn	19 36 51.6	-3.8
	comp=E,6.4nm,0.2s,SNR=7.1						
ECAL	Calabor	5.49	7	P	Pn	19 35 56.8	+0.9
	comp=E,0.9nm,0.2s,SNR=7.9						
ECAL				S	Sn	19 36 54.3	-3.5
	comp=E,1.4nm,0.1s,SNR=6.9						
PGAV	Gavieira, Arco	5.50	355	eSn	Sn	19 36 56.1	-2.0
OUZM	OUZ	5.61	173	P	Pn	19 35 56.3	-1.4
TZRR	Tazzarine	5.93	163	P	Pn	19 36 01.7	-0.4
TTIG	Tnine Tigouga,	5.97	187	P	Pn	19 35 59.5	-3.1
ETOR	Torete	6.12	43	P	Pn	19 36 06.2	+1.6
	comp=E,0.2nm,0.0s,SNR=6.4						
ETOR				S	Sn	19 37 10.9	-2.5
	comp=E,4.3nm,0.2s,SNR=7.9						
EAGO	Agolada(Pontev	6.32	357	S	Sn	19 37 14.3	-3.9
	comp=E,0.9nm,0.1s,SNR=4.0						

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*BGR **23** 19:46:46.1±0.0, 42°.89N×91°.15E, h22^{km}±1^{km}, mb4.5*
*IDC **23** 19:47:05.0±0.4, 43°.81N×87°.74E, h0^{km}, mb4.5/35, mb1 4.5/41, mb1mx4.4/53, mbtmp4.5/41, ML4.1/6, MS3.6/21, Ms1 3.7/21, ms1mx3.5/49, Error ellipse: s-maj=11.7km s-min=8.7km az=31.0*
*MOS **23** 19:47:05.4±1.0, 43°.80N×87°.65E, h13^{km}, mb4.8/23, MS4.0/4, Error ellipse: s-maj=5.7km s-min=3.9km az=31.2*
*SOME **23** 19:47:05.4, 44°.07N×86°.18E, h0^{km}*
*NEIC **23** 19:47:07.2±1.5, 43°.90N±0°.07×87°.69E±0°.09, h10^{km}±1^{km}, mb4.8/104, Error ellipse: s-maj=12.3km s-min=11.1km az=218.0*
*BJI **23** 19:47:07.1±0.0, 43°.85N×87°.75E, h10^{km}, mB4.7/29, mb4.6/51, ML4.8/10, Ms4.2/45, Ms7 4.0/40*
*NNC **23** 19:47:09.1±2.0, 43°.98N×87°.49E, h0^{km}, mb5.1, mpv4.8, Error ellipse: s-maj=15.0km s-min=11.0km az=96.0*
ISC 23 19:47:07.9±0.5**, 43°.82N**±0°.03×**87°.58E**±0°.03**, h17**^{km}±2^{km}**, h17**^{km}**:pP-P, n484, σ1^{s}41**/515**, mb4.7**/142**, MS3.9**/23**, 50C-23D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	0.08	89	⇑iPg	Pg	19 47 10.8	-0.6
WMQ				Sg	Sg	19 47 13.3	-0.5
WMQ				smax	smax		
	comp=N,299µm,0.5s						
WMQ				smax	smax		
	comp=E,205µm,0.5s						
ZSN	Zaisan	4.10	333	eP	Pn	19 48 12.6	+2.8
	512nm,0.6s						
ZSN				eS	Sn	19 49 01.3	+4.0
	384nm,0.5s						
ZSN	Zaisan	4.10	333	ePn	Pn	19 48 11.1	+1.4
	baz=334						
ZSN				ePg	Pg	19 48 23.5	-2.9
	baz=334						
ZSN				eLg	Lg	19 49 18.4	
	baz=334						
ZSN	Zaisan	4.10	333	eP	Pn	19 48 11.1	+1.4
MK31	Makanchi Array	4.77	310	P	Pn	19 48 21.2	+2.2
MK31				SN	Sn	19 49 15.4	+1.5
MK31	Makanchi Array	4.77	310	Pn	Pn	19 48 21.0	+2.0
	21nm,0.3s,baz=123,slow=14,SNR=1573						
MK31				⇑Sn	Sn	19 49 15.4	+1.5
	330nm,0.7s,baz=223,slow=25,SNR=8.3						
MK31				⇑Lg	Lg	19 49 33.3	
	503nm,0.6s,baz=128,slow=27						
MK31	Makanchi Array	4.77	310	Pn	Pn	19 48 20.9	+1.9
MKAR	Makanchi Array	4.77	310	Pn	Pn	19 48 21.1	+2.2
	25nm,0.3s,baz=124,slow=14,SNR=1369						
MKAR				Sn	Sn	19 49 16.6	+2.8
	59nm,0.3s,baz=117,slow=26,SNR=12						
MKAR				LR	LR	19 50 34.7	
	comp=Z,434nm,18.1s,baz=215,slow=43						
MAKZ	Makanchi	4.95	309	P	Pn	19 48 23.3	+1.8
MAKZ				SN	Sn	19 49 19.6	+1.2
MAKZ	Makanchi	4.95	309	⇓Pn	Pn	19 48 23.3	+1.8
	68nm,0.5s						
MAKZ				⇑Sn	Sn	19 49 19.6	+1.2
	171nm,0.6s						
MAKZ				⇓Lg	Lg	19 49 41.9	
	365nm,0.7s						
MAKZ	Makanchi	4.95	309	Pn	Pn	19 48 23.6	+2.1
KTMS	Ketmen	5.26	268	eP	Pn	19 48 28.2	+2.4
	25nm,0.2s						
KTMS				eS	Sn	19 49 28.1	+2.0
	177nm,0.6s						
KTMS	Ketmen	5.26	268	Pg	Pg	19 48 45.7	-2.9
	38nm,0.3s						
KTMS				Lg	Lg	19 49 55.8	
	322nm,0.7s						
DGZ	Jazzator, Alta	5.88	359	diP	Pn	19 48 36.6	+2.2
PDGK	Podgornoye	5.90	268	P	Pn	19 48 36.6	+2.0
PDGK	Podgornoye	5.90	268	Pg	Pg	19 48 55.7	-5.1
	26nm,0.6s						
PDGK				Lg	Lg	19 50 12.8	
	132nm,0.9s						
PDGK	Podgornoye	5.90	268	⇑Pn	Pn	19 48 36.6	+2.0
	49nm,0.5s						
PDGK				⇑Lg	Lg	19 50 12.7	
	435nm,0.8s						
SHLS	Shalkode	5.94	266	eP	Pn	19 48 33.6	-1.6
	36nm,0.5s						
SHLS				eS	Sn	19 49 36.9	-6.0
	155nm,0.6s						
SHLS	Shalkode	5.94	266	ePn	Pn	19 48 32.6	-2.6
	baz=266						
SHLS				eLg	Lg	19 50 06.9	
	baz=266						
SHLS	Shalkode	5.94	266	eP	Pn	19 48 32.6	-2.6
KAPS	Kapalarasan	6.06	287	eP	Pn	19 48 39.0	+2.3
	63nm,0.5s						
KAPS				eS	Sn	19 49 46.1	+0.5
	538nm,0.6s						
KAPS	Kapalarasan	6.06	287	Pg	Pg	19 49 02.0	-1.8
	37nm,0.2s						
KAPS				Lg	Lg	19 50 23.4	
	555nm,0.7s						
UZB	Uzynbulak	6.26	267	eP	Pn	19 48 42.2	+2.6
	112nm,0.3s						
UZB				eS	Sn	19 49 52.3	+1.5
	111nm,0.6s						
UZB	Uzynbulak	6.26	267	ePn	Pn	19 48 40.8	+1.2
	baz=266						
UZB	Uzynbulak	6.26	267	eP	Pn	19 48 40.8	+1.2
KPKS	Kokpek	6.46	270	eP	Pn	19 48 44.2	+1.9
	52nm,0.3s						
KPKS				eS	Sn	19 49 55.5	-0.2
	254nm,0.7s						
KPKS	Kokpek	6.46	270	ePn	Pn	19 48 43.1	+0.8
	baz=270						
KPKS	Kokpek	6.46	270	eP	Pn	19 48 43.1	+0.8
BLB	Baldybastay	6.58	276	Pg	Pg	19 49 08.3	-5.5
	90nm,0.5s						
BLB				Lg	Lg	19 50 34.7	
	313nm,0.8s						
TDK	Taldyqorghan	6.68	283	eP	Pn	19 48 48.1	+3.0
	186nm,0.6s						
TDK				eS	Sn	19 50 02.5	+1.8
	1µm,1.2s						
TDK	Taldyqorghan	6.68	283	ePn	Pn	19 48 46.7	+1.6
	baz=283						
TDK				eSn	Sn	19 50 02.6	+1.8
	baz=283						
TDK	Taldyqorghan	6.68	283	eP	Pn	19 48 46.7	+1.6
TDK				e		19 50 02.5	
ZHN	Zhinishke	6.68	268	eP	Pn	19 48 47.4	+2.1
	46nm,0.2s						
ZHN				eS	Sn	19 50 00.7	-0.4
	108nm,0.3s						
ZHN	Zhinishke	6.68	268	ePn	Pn	19 48 46.2	+0.9
	baz=267						
ZHN	Zhinishke	6.68	268	eP	Pn	19 48 46.2	+0.9
SATY	Saty	6.72	267	ePn	Pn	19 48 46.6	+0.7
	baz=266						
SATY	Saty	6.72	267	eP	Pn	19 48 46.6	+0.7
ARXS	Arharly	7.04	277	Pg	Pg	19 49 18.6	-4.0
	34nm,0.6s						
ARXS				Lg	Lg	19 50 52.0	
	421nm,1.1s						
TARG	Taragay, Kyrgy	7.49	257	Pn	Pn	19 48 58.7	+2.0
KOTS	Kotyrbulak	7.63	269	Pg	Pb	19 49 28.2	+8.4
	30nm,0.4s						
KOTS				Lg	Lg	19 51 08.6	
	353nm,0.9s						
MDOK	Medeo	7.69	269	ePn	Pn	19 49 00.0	+0.8
	baz=268						
MDOK	Medeo	7.69	269	P	Pn	19 49 00.8	+1.6
MDOK	Medeo	7.69	269	⇑Pn	Pn	19 49 00.8	+1.6
	36nm,0.6s						
MDOK				⇓Lg	Lg	19 51 09.1	
	167nm,0.8s						
MDOK	Medeo	7.69	269	Pg	Pb	19 49 31.4	+11
	32nm,0.6s						
MDOK				Lg	Lg	19 51 13.9	
	141nm,0.6s						
AAA	Alma-Ata	7.78	269	ePn	Pn	19 49 03.3	+3.0
	baz=269						
AAA	Alma-Ata	7.78	269	eP	Pn	19 49 03.3	+3.0
TNSS	Tian-Shan	7.78	268	ePn	Pn	19 49 01.8	+1.1
	baz=268						
KDJ	Kajisay	7.81	261	P	Pn	19 49 02.8	+1.9
KDJ	Kajisay	7.81	261	Pn	Pn	19 49 02.8	+1.9
KUU	Kurty	8.13	274	ePn	Pn	19 49 04.8	-0.3
	8.7nm,0.7s,baz=274						
KUU	Kurty	8.13	274	eP	Pn	19 49 04.7	-0.3
KUU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MTBS	Maitube	8.14	269	Pg	Pb	19 49 38.0	+10
	comp=Z,22nm,0.7s						
MTBS				Lg	Lg	19 51 25.9	
	comp=Z,86nm,0.8s						
SEM	Semipalatinsk	8.27	325	ePn	Pn	19 49 07.4	+0.3
	baz=326						
SEM	Semipalatinsk	8.27	325	eP	Pn	19 49 07.4	+0.3
SEM	Semipalatinsk	8.27	325	Pg	Pb	19 49 41.8	+11
	comp=Z,102nm,0.8s						
SEM				Lg	Lg	19 51 31.9	
	comp=Z,303nm,1.2s						
ULHL	Ulahol	8.45	263	P	Pn	19 49 12.5	+2.8
	SNR=12						
BOOM	Boomskoye usch	8.61	265	P	Pn	19 49 13.0	+1.1
BOOM	Boomskoye usch	8.61	265	Pn	Pn	19 49 13.0	+1.1
TKM2	Tokmak 2	8.78	268	P	Pn	19 49 15.7	+1.5
	SNR=14						
TKM2	Tokmak 2	8.78	268	P	Pn	19 49 15.5	+1.3
TKM2	Tokmak 2	8.78	268	⇑Pn	Pn	19 49 15.5	+1.3
	comp=Z,16nm,0.5s						
TKM2				⇓Lg	Lg	19 51 46.8	
	comp=Z,120nm,0.8s						
KURBB	Kurchatov Arra	9.17	321	Pn	Pn	19 49 19.1	-0.2
	comp=Z,3.8nm,0.3s,baz=132,slow=12,SNR=122						
KURBB				Sn	Sn	19 51 01.2	-0.8
	comp=Z,2.5nm,0.3s,baz=120,slow=29,SNR=5.6						
KURBB	Kurchatov Arra	9.17	321	P	Pn	19 49 18.8	-0.5
KURBB				SN	Sn	19 51 00.9	-1.1
KURBB	Kurchatov Arra	9.17	321	⇓Pn	Pn	19 49 18.8	-0.5
	comp=Z,51nm,0.7s						
KURBB				⇑Sn	Sn	19 51 01.0	-1.1
	comp=Z,182nm,0.6s						
KURBB				⇓Lg	Lg	19 51 55.6	
	comp=Z,500nm,0.7s						
KURK	Kurchatov	9.20	322	P	Pn	19 49 19.2	-0.4
KURK						19 51 01.2	
KURK	Kurchatov	9.20	322	⇓Pn	Pn	19 49 18.6	-1.1
	comp=Z,27nm,0.6s						
KURK				⇑Sn	Sn	19 51 06.8	+4.1
	comp=Z,147nm,0.8s						
KURK				⇑Lg	Lg	19 51 53.3	
	comp=Z,368nm,0.8s						
KURK	Kurchatov	9.20	322	Pn	Pn	19 49 19.2	-0.4
KBK	Karagaybulak	9.30	267	P	Pn	19 49 23.5	+2.3
	SNR=16						
CHMS	Chumysh	9.38	269	P	Pn	19 49 23.6	+1.5
	SNR=8.5						
SGDS	Sogindy	9.40	272	ePn	Pn	19 49 23.5	+1.0
	baz=272						
SGDS	Sogindy	9.40	272	eP	Pn	19 49 23.7	+1.2
USP	Ospenovka	9.52	271	P	Pn	19 49 25.9	+1.8
	SNR=10						
AAK	Ala-Archa	9.63	267	Pn	Pn	19 49 26.9	+1.1
	comp=Z,1.2nm,0.3s,baz=112,slow=7.4,SNR=24						
AAK				LR	LR	19 53 52.4	
	comp=Z,190nm,19.9s,baz=78,slow=42						
AAK	Ala-Archa	9.63	267	P	Pn	19 49 27.4	+1.6
	SNR=9.4						
AAK	Ala-Archa	9.63	267	deP	Pn	19 49 27.3	+1.6
AAK				pmax	pmax		
	comp=Z,19nm,0.8s						
AAK	Ala-Archa	9.63	267	⇓Pn	Pn	19 49 27.0	+1.3
	comp=Z,6.7nm,0.6s						
AAK				⇓Lg	Lg	19 52 12.0	
	comp=Z,120nm,1.1s						
AAK	Ala-Archa	9.63	267	Pn	Pn	19 49 26.1	+0.3
KSH	Kashi	9.69	248	P	Pn	19 49 35.8	+9.2
KSH				pP		19 49 40.6	
KSH				sP		19 49 44.9	
KSH				S	Sn	19 51 27.8	+13
KSH				pmax	pmax		
	comp=Z,26nm,0.7s						
KSH				LR	LR		
	comp=Z,710nm,12.0s						
KSH				LR	LR		
	comp=Z,880nm,12.0s						
KSH				LR	LR		
	comp=Z,1µm,12.8s						
UCH	Uchtor	9.70	265	P	Pn	19 49 29.2	+2.2
	SNR=16						
BTLS	Baital	9.76	282	ePn	Pn	19 49 27.0	-0.4
	comp=Z,6.0nm,0.8s,baz=282						
BTLS	Baital	9.76	282	eP	Pn	19 49 27.0	-0.4
BTLS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
EKS2	Erkin-Say	10.14	268	P	Pn	19 49 34.2	+1.5
	SNR=5.7						
GTA	Gaotai	10.16	112	eP	Pn	19 49 32.1	-1.0
GTA				pP		19 49 36.3	
GTA				sP		19 49 39.6	
GTA				S	Sn	19 51 23.8	-2.8
GTA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,89nm,6.0s						
GTA				LR	LR		
	comp=Z,830nm,13.9s						
GTA				LR	LR		
	comp=Z,750nm,14.7s						

GTA				LR	LR		
	comp=Z,400nm,10.8s						
ZAA0	Zalesovo Array	10.30	351	Pn	Pn	19 49 33.0	-1.7
ZALV	Zalesovo Beam	10.30	351	Pn	Pn	19 49 33.5	-1.2
	comp=Z,2.7nm,0.3s,baz=170,slow=14,SNR=26						
ZALV				Sn	Sn	19 51 24.6	-5.0
	comp=Z,14nm,0.3s,baz=170,slow=24,SNR=9.5						
ZALV				LR	LR	19 53 35.3	
	comp=Z,91nm,19.9s,baz=132,slow=38						
ZALV	Zalesovo Beam	10.30	351	Pn	Pn	19 49 33.1	-1.6
DZA	Taraz	11.87	271	*e*Pn	Pn	19 49 57.6	+1.3
	comp=Z,4.9nm,0.7s,baz=271						
DZA	Taraz	11.87	271	*e*P	Pn	19 49 57.6	+1.3
DZA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRZS	Berezniki	11.90	306	*e*Pn	Pn	19 49 58.0	+1.3
	comp=Z,3.0nm,0.7s,baz=306						
BRZS	Berezniki	11.90	306	*e*P	Pn	19 49 58.0	+1.3
BRZS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKAR	Karatay Array	12.43	273	P	Pn	19 50 05.5	+1.6
KKAR	Karatay Array	12.43	273	Pn	Pn	19 50 05.5	+1.6
DRK	Karamyk	12.57	255		Pn	19 50 07.0	+0.9
BRLS	Borolday	12.93	273	*e*Pn	Pn	19 50 14.7	+4.0
	comp=Z,4.6nm,0.9s,baz=272						
BRLS	Borolday	12.93	273	*e*P	Pn	19 50 14.7	+4.0
BRLS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
IUG	Iuzhnay	12.96	269	*e*Pn	Pn	19 50 12.8	+1.4
	baz=268						
IUG	Iuzhnay	12.96	269	*e*P	Pn	19 50 12.7	+1.4
BTK	Batken	13.03	259	P	Pn	19 50 11.9	-0.4
BTK	Batken	13.03	259		Pn	19 50 11.9	-0.4
TLY	Talaya	13.35	48	Lg	Lg	19 53 49.4	
	comp=Z,0.0nm,0.3s,baz=234,slow=19,SNR=2.4						
TLY				LR	LR	19 55 36.0	
	comp=Z,366nm,18.1s,baz=230,slow=38						
SONM	Songino Array	13.71	66	Pn	Pn	19 50 21.2	-0.3
	comp=Z,0.2nm,0.3s,baz=252,slow=14,SNR=15						
SONM				Lg	Lg	19 54 02.8	
	comp=Z,0.8nm,0.3s,baz=273,slow=27,SNR=4.0						
SONM				LR	LR	19 54 53.4	
	comp=Z,34nm,19.3s,baz=276,slow=34						
SONM	Songino Array	13.71	66	P	Pn	19 50 21.7	+0.1
SONM	Songino Array	13.71	66		Pn	19 50 21.7	+0.1
ULN	Ulaanbaatar	14.16	67	⇑*e*P	Pn	19 50 29.3	+1.7
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	Ulaanbaatar	14.16	67	Pn	Pn	19 50 27.0	-0.6
LSA	Lhasa	14.38	167	P	P	19 50 41.0	+3.0
LSA				pmax	pmax		
	comp=Z,79nm,0.6s						
BVAR	Borovoye Array	14.63	315	Pn	Pn	19 50 33.0	-1.0
	comp=Z,2.6nm,0.3s,baz=115,slow=13,SNR=29						
BVAR	Borovoye Array	14.63	315	P	Pn	19 50 33.0	-1.0
LZH	Lanzhou	14.65	116	*e*P	Pn	19 50 36.1	+1.6
LZH				pP	P	19 50 42.0	+1.3
LZH				sP		19 50 46.4	
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
LZH				LR	LR		
	comp=Z,1µm,11.0s						
LZH				LR	LR		
	comp=Z,820nm,10.8s						
LZH				LR	LR		
	comp=Z,920nm,13.6s						
BRVK	Borovoye	14.70	315	P	Pn	19 50 34.0	-0.9
BRVK	Borovoye	14.70	315	Pn	Pn	19 50 34.0	-0.9
CHGR	Chuyangaron	14.78	256	P	Pn	19 50 35.5	-0.7
CHGR	Chuyangaron	14.78	256	Pn	Pn	19 50 35.5	-0.7
CHCP	Chirah Chowk	15.07	232	P	Pn	19 50 39.3	-0.7
NIL	Nilore	15.08	233	P	Pn	19 50 37.5	-2.7
NIL				pmax	pmax		
	comp=Z,81nm,0.8s						
NIL	Nilore	15.08	233	Pn	Pn	19 50 37.5	-2.7
DANN	Dangsing	15.74	193	*e*P	Pn	19 50 49.3	+0.3
	comp=Z,7.1nm,0.4s						
CEP	Cherat	15.75	236	P	Pn	19 50 48.3	-0.7
CEP				S	Sn	19 53 42.0	-1.1
GUN	Gumba	15.93	185	*e*P	P	19 50 53.8	-1.4
	comp=Z,31nm,0.4s						
GKN	Gorkha	15.96	190	*e*P	Pn	19 50 52.3	+0.6
	comp=Z,28nm,0.4s						
KKN	Kakani	16.10	187	*e*P	Pn	19 50 53.8	+0.2
	comp=Z,124nm,0.6s						
PYUN	Piuthan	16.12	195	*e*P	Pn	19 50 50.7	-3.1
	comp=Z,45nm,0.8s						
JIRN	Jiri	16.16	184	*e*P	Pn	19 50 55.1	+0.5
	comp=Z,18nm,0.4s						
DMN	Daman	16.30	188	*e*P	Pn	19 50 54.9	-1.3
	comp=Z,9.4nm,0.4s						
PKIN	Phulchoki	16.30	187	*e*P	Pn	19 50 55.3	-0.9
	comp=Z,55nm,0.6s						
PKI	Pulchoki	16.31	187	*e*P	Pn	19 50 55.9	-0.5
	comp=Z,68nm,0.6s						
THW	Thamme Wali	16.57	234	P	Pn	19 50 58.0	-1.4
BTO	Baotou	16.92	93	*e*P	Pn	19 51 01.1	-2.8
BTO				S	Sn	19 54 08.8	-2.7
BTO				LR	LR		
	comp=Z,1µm,5.5s						
BTO				LR	LR		
	comp=Z,1µm,5.1s						
KBL	Kabul	17.07	243	P	Pn	19 51 04.2	-1.6
KBL				pmax	pmax		
	comp=Z,18nm,0.8s						
KBL	Kabul	17.07	243		Pn	19 51 04.2	-1.6
NDI	New Delhi	17.24	212	*e*P	P	19 51 10.0	+0.8
HHC	Hu-ho-hao-te	17.96	91	*e*P	P	19 51 18.0	+0.7
HHC				sP	sP	19 51 26.3	+1.5
HHC				S	Sn	19 54 35.0	-1.7
HHC				SS	SnSn	19 54 55.8	+5.7
HHC				pmax	pmax		
	comp=Z,38nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,4.0s						
HHC				LR	LR		
	comp=Z,330nm,8.5s						
HHC				LR	LR		
	comp=Z,310nm,11.3s						
HHC				LR	LR		
	comp=Z,440nm,11.2s						
CD2	Chengdu	18.16	130	P	Pn	19 51 18.8	-0.4
CD2				pmax	pmax		
	comp=Z,160nm,10.0s						
CD2				LR	LR		
	comp=Z,480nm,15.1s						
CD2				LR	LR		
	comp=Z,470nm,12.9s						
SHL	Shillong	18.55	168	P	P	19 51 23.0	-0.8
SHL				pmax	pmax		
	comp=Z,82nm,1.0s						
SHL	Shillong	18.55	168	P	P	19 51 23.0	-0.8
SHL				IAmb	IAmb	19 51 31.9	
	comp=Z,82nm,1.0s						
XAN	Xi'an	19.21	113	⇑P	P	19 51 30.6	-0.4
XAN				pP	sP	19 51 37.0	-1.5
XAN				sP	pP	19 51 42.3	+6.1
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
XAN				LR	LR		
	comp=Z,280nm,14.4s						
XAN				LR	LR		
	comp=Z,380nm,11.7s						
XAN				LR	LR		
	comp=Z,580nm,11.7s						
ABKAR	Akbulak array	19.71	296	P	P	19 51 36.7	+0.4
AKTO	Aktyubinsk	21.08	299	P	P	19 51 52.1	+1.0
	comp=Z,4.4nm,0.4s,baz=96,slow=11,SNR=25						
SVE	Sverdlovsk	21.40	317	*e*P	P	19 51 54.8	+0.4
SVE				*e*S	S	19 55 51.6	+0.5
SVE				pmax	pmax		
	comp=Z,51nm,0.8s						
BJI	Beijing	21.56	90	P	P	19 51 57.4	+1.1
BJI				pP	sP	19 52 06.6	+2.7
BJI				sP	pP	19 52 10.6	+9.1
BJI				pmax	pmax		
	comp=Z,14nm,0.6s						
BJT	Baijiatuau	21.56	90	P	P	19 51 55.5	-0.8
BJT				pmax	pmax		
	comp=Z,15nm,1.0s						
BJT	Baijiatuau	21.56	90	P	P	19 51 55.5	-0.8
BOD	Bodaibo	21.60	40	*e*P	P	19 51 56.7	0.0
BOD				pmax	pmax		
	comp=Z,22nm,1.4s						
HRA	Herat	21.73	253	P	P	19 51 59.8	+1.4
ENH	Enshi	22.02	121	P	P	19 51 59.9	-1.4
ENH				IAmb	IAmb	19 52 11.3	
	comp=Z,18nm,0.6s						
ARU	Arti	22.28	315	P	P	19 52 04.8	+0.9
	comp=Z,5.1nm,0.3s,baz=98,slow=2.5,SNR=41						
ARU				LR	LR	20 01 22.6	
	comp=Z,304nm,18.0s,baz=120,slow=38						
ARU	Arti	22.28	315*c*	*i*P	P	19 52 06.1	+2.2
ARU						19 52 29.0	
ARU				SS	Sn	19 56 42.8	+23
ARU				pmax	pmax		
	comp=Z,23nm,0.9s						
ARU	Arti	22.28	315	P	P	19 52 04.4	+0.5
KMI	Kunming	22.39	142	⇓P	P	19 52 05.4	-0.1
KMI				pP	sP	19 52 15.3	+2.2
KMI				pmax	pmax		
	comp=Z,23nm,0.9s						
KMI				LR	LR		
	comp=Z,220nm,12.4s						
KMI				LR	LR		
	comp=Z,220nm,8.0s						
KMI				LR	LR		
	comp=Z,240nm,13.1s						
GEYT	Alibeck	22.97	265	P	P	19 52 12.2	+0.7
	comp=Z,9.8nm,0.8s,baz=75,slow=2.3,SNR=15						
GEYT				LR	LR	20 01 21.0	
	comp=Z,67nm,20.5s,baz=270,slow=37						
GYA	Guiyang	23.22	132	⇓P	P	19 52 14.9	+0.7
GYA				pP	sP	19 52 23.6	+1.8
GYA				S	S	19 56 24.1	-1.4
GYA				pmax	pmax		
	comp=Z,28nm,0.9s						
GYA				pmax	pmax		
	comp=Z,110nm,4.6s						
GYA				LR	LR		
	comp=Z,180nm,10.7s						
GYA				LR	LR		
	comp=Z,240nm,13.0s						
GYA				LR	LR		
	comp=Z,240nm,11.2s						
TIA	Tai'an	23.78	99	⇑P	P	19 52 19.4	-0.1
TIA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WHN	Wuhan	24.98	113	⇑*i*P	P	19 52 30.4	-0.1
NRIK	Noril'sk	25.59	360	P	P	19 52 35.8	+0.1
	comp=Z,11nm,0.7s,baz=165,slow=9.0,SNR=14						
NRIK				LR	LR	20 04 36.9	
	comp=Z,122nm,19.2s,baz=150,slow=41						
NRIK	Noril'sk	25.59	360*c*	*i*P	P	19 52 35.6	-0.1
NRIK				pmax	pmax		
	comp=Z,11nm,0.7s						
NRIK	Noril'sk	25.59	360	P	P	19 52 35.3	-0.4
NRIK				IAmb	IAmb	19 52 42.1	
	comp=Z,18nm,0.6s						
SLVN	Son La	26.21	144	P	P	19 52 42.1	+0.3
CHTO	Chiang Mai	26.70	155	P	P	19 52 46.0	-0.2
CHTO				pmax	pmax		
	comp=Z,20nm,0.9s						
CHTO	Chiang Mai	26.70	155	P	P	19 52 46.0	-0.2
CHTO				IAmb	IAmb	19 52 48.5	
	comp=Z,20nm,0.9s						
CHTO	Chiang Mai	26.70	155	P	P	19 52 47.3	+1.1
CM31	Chiang Mai Arr	27.04	156	P	P	19 52 49.0	-0.2
CM31				IAmb	IAmb	19 52 51.3	
	comp=Z,34nm,1.1s						
CMAR	Chiang Mai Arr	27.04	156	P	P	19 52 49.6	+0.5
	comp=Z,12nm,0.9s,baz=333,slow=9.2,SNR=83						
CMAR				LR	LR	20 05 21.4	
	comp=Z,38nm,18.2s,baz=330,slow=41						
CMAR	Chiang Mai Arr	27.04	156	*i* P	P	19 52 50.2	+1.0
CMAR				pmax	pmax		
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	27.04	156	P	P	19 52 49.4	+0.2
NJ2	Nanjing	27.16	105	*e*P	P	19 52 51.3	+1.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CN2	Changchun	27.17	77	*e*P	P	19 52 51.5	+1.2
CN2				S	S	19 57 25.3	-2.7
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,100nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,12.0s						
CN2				LR	LR		
	comp=Z,400nm,14.4s						
HYB	Hyderabad	27.41	199	*i* P	P	19 52 53.0	+0.4
ZEA	Zeya	27.62	55	*e*P	P	19 52 59.3	+5.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.3s						
ZEA				MLR	MLR		
	comp=E,200nm,8.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,11.0s						
KIRV	Kirov	27.64	316	P	P	19 52 55.3	+1.0
	comp=Z,7.9nm,0.6s,baz=54,slow=3.4,SNR=3.9						
KIRV				LR	LR	20 04 46.9	
	comp=Z,298nm,18.4s,baz=204,slow=38						
KIRV	Kirov	27.64	316	⇓*e*P	P	19 52 54.9	+0.6
MAK	Makhachkala	28.94	282	*e*P	P	19 53 03.6	-2.4
MAK				*e*S	S	19 57 54.3	-1.5
MAK				pmax	pmax		
	comp=Z,62nm,0.7s						
MAK				MLR	MLR		
	comp=Z,153nm,9.0s						
GROC	Groznyy	30.08	284	*e*P	P	19 53 16.2	+0.1
GROC				*e*		19 54 15.3	
GROC				*e*		19 56 19.5	
GROC				*e*S	S	19 58 17.7	+3.9
GROC				pmax	pmax		
	comp=Z,17nm,0.8s						
PRGR	Permogore	30.31	321	*e*P	P	19 53 21.2	+3.2
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
DDFL	Dedoflistskaro	30.37	280	P	P	19 53 24.6	+5.8
YAK	Yakutsk	30.50	39	P	P	19 53 19.0	-0.6
	comp=Z,11nm,0.3s,baz=236,slow=5.4,SNR=14						
YAK	Yakutsk	30.50	39	*e*P	P	19 53 18.7	-0.9
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.2s						
YAK	Yakutsk	30.50	39	P	P	19 53 18.4	-1.2
KLR	Kul'dur	30.53	64	P	P	19 53 19.5	-0.6
	comp=N,2.0nm,0.6s,baz=279,slow=10,SNR=8.7						
KLR	Kul'dur	30.53	64	⇑*e*P	P	19 53 18.8	-1.2
KLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
QIZ	Qiongzhong	30.98	136	P	P	19 53 25.1	+0.8
QIZ				S	S	19 58 29.8	+1.6
QIZ				LR	LR		
	comp=Z,260nm,12.0s						
QIZ				LR	LR		
	comp=Z,220nm,10.4s						
QIZ				LR	LR		
	comp=Z,200nm,11.6s						
KSRS	Korea Array	31.04	88	P	P	19 53 23.1	-1.4
	comp=Z,1.7nm,0.7s,baz=290,slow=8.3,SNR=7.6						
KSRS				LR	LR	20 06 34.6	
	comp=Z,113nm,19.1s,baz=316,slow=38						
VRH	Novokhopyorsk	31.41	300	*e*P	P	19 53 28.5	+0.7
VRH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NCK	Nalchik	31.54	285	⇓*e*P	P	19 53 30.5	+1.4
NCK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GNI	Garni	31.79	278	P	P	19 53 33.0	+1.5
	comp=Z,5.6nm,0.6s,baz=338,slow=9.8,SNR=6.5						
GNI	Garni	31.79	278	P	P	19 53 32.1	+0.6
GNI				pmax	pmax		
	comp=Z,11nm,0.9s						
GNI	Garni	31.79	278	P	P	19 53 32.1	+0.6
GNI				IAmb	IAmb	19 53 35.3	
	comp=Z,11nm,0.9s						
ONI	Oni	31.91	283	P	P	19 53 34.9	+2.6
ONI				pmax	pmax		
	comp=Z,19nm,0.7s						
ONI	Oni	31.91	283	P	P	19 53 34.9	+2.6
ONI				IAmb	IAmb	19 53 35.7	
	comp=Z,19nm,0.7s						
KBZ	Khabaz	31.97	286	P	P	19 53 33.9	+1.1
	comp=Z,5.4nm,0.7s,baz=95,slow=5.8,SNR=14						
KBZ				LR	LR	20 09 13.9	
	comp=Z,259nm,19.2s,baz=60,slow=41						
KBZ	Khabaz	31.97	286*c*	*e*P	P	19 53 33.7	+1.0
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NEY	Neytrino	32.23	285	⇓*e*P	P	19 53 37.3	+2.0
NEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
UBPT	Khong Chiam	32.27	146	P	P	19 53 34.8	-0.9
UBPT				IAmb	IAmb	19 53 35.7	
	comp=Z,12nm,0.7s						
VORD	Divnogorie	32.96	300	*e*P	P	19 53 41.4	+0.1
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	Storozhevoye	33.01	300	*e*P	P	19 53 42.5	+0.7
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
KLMR	Klimovskoe	33.02	318	*e*P	P	19 53 41.6	-0.2
KLMR				pmax	pmax		
	comp=Z,28nm,0.6s						
KLMR	Klimovskoe	33.02	318	*e*P	P	19 53 41.7	-0.1
KLMR				AMP		19 53 49.0	
	comp=Z,28nm,0.6s						
LPSR	Galich'ya Gora	33.03	303	*e*P	P	19 53 42.4	+0.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SSLB	Suanglung	33.85	115	P	P	19 53 49.4	0.0
SSLB				IAmb	IAmb	19 53 50.8	
	comp=Z,20nm,0.8s						
SSLB	Suanglung	33.85	115	P	P	19 53 50.6	+1.1
TIXI	Tiksi	34.24	22	⇑*e*P	P	19 53 51.6	-0.6
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TIXI	Tiksi	34.24	22	P	P	19 53 50.8	-1.5
TIXI				IAmb	IAmb	19 53 58.7	
	comp=Z,8.2nm,1.1s						
OBN	Obninsk	34.27	308	⇑*e*P	P	19 53 54.0	+1.3
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,304nm,18.0s						
GURO	Guroymak-BITLI	34.34	277	P	P	19 53 53.8	0.0
MARD	Mardin	35.76	276	P	P	19 54 07.9	+2.0
SRIT	Nakonsritamara	36.62	160	P	P	19 54 14.0	+0.7
PALK	Pallekele	36.90	191	P	P	19 54 16.6	+0.9
	comp=Z,6.3nm,0.8s,baz=30,slow=8.1,SNR=2.3						
MALT	Malatya	37.02	279	P	P	19 54 19.8	+3.1
GAZ	Gaziantep	38.38	278	P	P	19 54 29.5	+1.3
GAZ				IAmb	IAmb	19 54 30.3	
	comp=Z,13nm,0.8s						
MJAR	Matsushiro Arr	38.85	83	LR	LR	20 10 24.3	
	comp=Z,41nm,19.4s,baz=130,slow=36						
ASAJ	Asahikawa	38.96	70	P	P	19 54 31.7	-1.2
	comp=Z,10nm,0.9s,baz=322,slow=12,SNR=2.5						
ILGA	Ilgaz	39.27	285	P	P	19 54 36.8	+1.1
ILGA				IAmb	IAmb	19 54 38.8	
	comp=Z,34nm,0.8s						
AKASG	Malin Array Be	39.29	301	P	P	19 54 35.5	+0.1
	comp=Z,0.8nm,0.5s,baz=64,slow=9.0,SNR=7.6						
AKASG	Malin Array Be	39.29	301	*i* P	P	19 54 36.0	+0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	39.29	301	P	P	19 54 35.3	-0.2
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKBB	Malin Array Si	39.29	301	P	P	19 54 35.3	-0.2
LHMI	Lhok Sumawe	39.31	165	P	P	19 54 36.6	+0.6
VSU	Vasula	39.44	314	*e*P	P	19 54 37.0	+0.4
FINES	FINESS Array B	39.55	318	P	P	19 54 38.2	+0.6
	comp=Z,3.7nm,0.7s,baz=84,slow=8.2,SNR=18						
FINES	FINESS Array B	39.55	318	*i* P	P	19 54 38.4	+0.8
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BR131	Keskin Array S	39.84	283	P	P	19 54 40.8	+0.4
BR131				pmax	pmax		
	comp=Z,15nm,0.9s						
BR131	Keskin Array S	39.84	283	P	P	19 54 40.8	+0.4
BR131				IAmb	IAmb	19 54 43.5	
	comp=Z,15nm,0.8s						
BRTR	Keskin Array B	39.84	283	P	P	19 54 41.7	+1.2
	comp=Z,7.5nm,0.8s,baz=98,slow=7.6,SNR=16						
BRTR				LR	LR	20 15 18.9	
	comp=Z,101nm,19.0s,baz=60,slow=42						
BRTR	Keskin Array B	39.84	283	*i* P	P	19 54 42.0	+1.5
BRTR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRTR	Keskin Array B	39.84	283	P	P	19 54 41.0	+0.5
RAYN	Ar Rayn	39.92	253	P	P	19 54 41.8	+0.7
RAYN				pmax	pmax		
	comp=Z,12nm,0.8s						
RAYN	Ar Rayn	39.92	253	P	P	19 54 41.8	+0.7
RAYN				IAmb	IAmb	19 54 43.0	
	comp=Z,12nm,0.8s						
KULM	Kulim	40.06	160	P	P	19 54 43.0	+0.7
KULM	Kulim	40.06	160	P	P	19 54 42.4	+0.1
ARA0	ARCESS Array S	40.08	331	*e*P	P	19 54 42.3	+0.4
ARCES	ARCESS Array B	40.08	331	P	P	19 54 43.3	+1.4
	comp=Z,2.8nm,0.7s,baz=104,slow=5.1,SNR=9.4						
ARCES				PcP	PcP	19 56 45.8	-0.4
	comp=Z,0.9nm,0.4s,baz=92,slow=3.4,SNR=9.2						
ARCES				LR	LR	20 13 25.6	
	comp=Z,415nm,19.3s,baz=245,slow=39						
ANTO	Ankara	40.38	284	P	P	19 54 45.7	+0.9
ANTO				pmax	pmax		
	comp=Z,12nm,0.9s						
ANTO	Ankara	40.38	284	P	P	19 54 45.7	+0.9
ANTO				IAmb	IAmb	19 54 52.9	
	comp=Z,12nm,0.9s						
BR231	Keskin MP Arra	40.40	284	P	P	19 54 46.2	+1.1
BR231				IAmb	IAmb	19 54 47.8	
	comp=Z,12nm,0.8s						
MA2	Magadan	40.53	44*d*	*e*P	P	19 54 45.9	+0.2
MA2				pmax	pmax		
	comp=Z,18nm,2.5s						
KTK1	Kautokeino	40.84	330	*e*P	P	19 54 49.7	+1.5
MTSE	Matsula	40.93	314	*e*P	P	19 54 49.8	+0.8
IPM	Ipoh	40.94	159	P	P	19 54 48.8	-0.8
IPM	Ipoh	40.94	159	P	P	19 54 49.3	-0.2
SEY	Seymchan	41.02	39	⇑*e*P	P	19 54 48.9	-0.8
MDUB	Mudurnu	41.25	286	P	P	19 54 53.8	+1.8
PABE	Paberze	41.37	310	*e*P	P	19 54 53.3	+0.7
TPGR	Topolog	41.50	293	⇓P	P	19 54 55.3	+1.3
CFR	Carcaliu	41.58	293	⇑P	P	19 54 55.5	+1.0
TIRR	Tirgusor	41.65	292	⇑P	P	19 54 56.0	+0.9
TIRR	Tirgusor	41.65	292	P	P	19 54 54.8	-0.3
TIRR				pmax	pmax		
	comp=Z,11nm,1.0s						
TIRR	Tirgusor	41.65	292	P	P	19 54 54.8	-0.3
JETT	Jettan, Norway	41.87	331	*e*P	P	19 54 57.5	+0.8
HARR	Harsova	41.89	293	⇑P	P	19 54 58.3	+1.3
BORA	Eskisehir	42.02	285	P	P	19 54 59.9	+1.7
PSI	Prapat	42.07	163	P	P	19 54 58.2	-0.6
	comp=Z,6.3nm,0.7s,baz=344,slow=7.1,SNR=8.2						
PRAR	RASCA	42.10	297	⇑P	P	19 55 00.1	+1.3
TESR	Tescani	42.11	296	⇑P	P	19 54 59.8	+1.0
RPSI	Rantau Prapat	42.17	163	P	P	19 54 58.2	-1.3
VRI	Vrincioaia	42.27	295	⇑P	P	19 55 01.5	+1.3
PLOR	Plostina	42.33	295	⇑P	P	19 55 02.6	+1.9
TRO	Tromso	42.39	331	*e*P	P	19 55 01.2	+0.4
COVR	Voineasa-Covas	42.63	295	⇑P	P	19 55 05.1	+2.0
ISR	Istrita	42.66	294	⇑P	P	19 55 05.0	+1.6
BURAR	Bucovina Array	42.67	298	⇓P	P	19 55 05.3	+1.7
BUR08	Bucovina Ar. S	42.67	298	P	P	19 55 04.1	+0.5
NEHR	Nehoiu	42.71	294	⇑P	P	19 55 06.3	+2.4
ISP	Isparta	42.86	282	P	P	19 55 06.0	+0.8
ISP				pmax	pmax		
	comp=Z,19nm,0.8s						
ISP	Isparta	42.86	282	P	P	19 55 06.0	+0.8
ISP				IAmb	IAmb	19 55 07.8	
	comp=Z,19nm,0.8s						
MLR	Muntele Rosu	42.92	295	⇑P	P	19 55 07.7	+2.1
MLR	Muntele Rosu	42.92	295	P	P	19 55 06.6	+1.0
MLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MLR	Muntele Rosu	42.92	295	P	P	19 55 06.6	+1.0
DOPR	Dopca	43.12	295	⇑P	P	19 55 08.5	+1.4
RAZG	Razgrad	43.25	292	⇑P	P	19 55 09.3	+1.1
GSI	Gunungsitoli	43.26	165	P	P	19 55 08.3	-0.1
GSI	Gunungsitoli	43.26	165	P	P	19 55 09.2	+0.8
ARCR	ARCALIA	43.40	297	⇓P	P	19 55 11.8	+2.4
VOIR		43.53	295	⇓P	P	19 55 11.9	+1.5
KWP	Kalwaria Pacla	43.61	301	P	P	19 55 11.6	+0.6
KWP	Kalwaria Pacla	43.61	301	P	P	19 55 11.6	+0.6
SPA0	Spitsbergen Ar	43.68	344	*e*P	P	19 55 11.2	-0.1

ELL	Elmali	43.79	281	P	P	19 55 14.0	+1.3
ELL				pmax	pmax		
	comp=Z,47nm,1.0s						
ELL	Elmali	43.79	281	P	P	19 55 14.0	+1.3
STEI	Steigen	43.80	329	eP	P	19 55 12.4	+0.2
ARR	Arges	43.83	295	⇑P	P	19 55 14.8	+1.9
FAUS	Fauske	43.83	328	eP	P	19 55 12.4	0.0
UPP	Uppsala	43.87	317	eP	P	19 55 13.1	+0.2
HUMR	Humele	43.91	294	⇑P	P	19 55 15.0	+1.6
TRPA	Tarpa	44.20	299	⇑P	P	19 55 17.2	+1.4
TRPA	Tarpa	44.20	299	eP	P	19 55 16.4	+0.7
MYKOM	Kota Tinggi	44.28	156	P	P	19 55 18.0	+1.4
MOR8	Moi Rana	44.30	326	eP	P	19 55 15.5	-0.8
LOT	Lotru	44.36	295	⇑P	P	19 55 18.4	+1.2
KONS	Konsvik	44.78	327	eP	P	19 55 20.5	+0.5
BKNI	Bangkinang	44.94	161	P	P	19 55 21.4	-0.5
BKNI	Bangkinang	44.94	161	P	P	19 55 22.5	+0.6
GZR	Gura Zlata	45.03	296	⇓P	P	19 55 23.7	+1.2
OJC	Ojcow	45.20	303	P	P	19 55 22.5	-1.2
OJC				pmax	pmax		
	comp=Z,12nm,1.0s						
OJC	Ojcow	45.20	303	P	P	19 55 22.5	-1.2
OJC				IAmb	IAmb	19 55 26.4	
	comp=Z,12nm,1.0s						
SIRR	Siria	45.43	297	⇑P	P	19 55 27.5	+1.9
HERR	Herculane	45.46	295	⇑P	P	19 55 26.7	+0.9
PPI	Padang Panjang	45.55	162	P	P	19 55 26.6	-0.1
	comp=Z,6.0nm,0.7s						
NSS	Namsos	45.58	324	eP	P	19 55 26.5	0.0
PETK	Petropavlovsk-	45.66	52	P	P	19 55 26.3	-1.0
	comp=Z,5.4nm,1.0s,baz=260,slow=5.4,SNR=3.6						
PETK				LR	LR	20 15 43.2	
	comp=Z,72nm,20.1s,baz=336,slow=38						
VTS	Vitosha	45.83	292	⇑P	P	19 55 30.8	+1.9
VTS	Vitosha	45.83	292	P	P	19 55 30.2	+1.2
VTS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VTS	Vitosha	45.83	292	P	P	19 55 30.2	+1.2
PSZ	Piszkesteto	45.94	300	⇑P	P	19 55 31.9	+2.2
ZAPS	Zavoj	45.96	293	eP	P	19 55 37.1	+7.3
ZAGS	Zajecar	46.01	294	eP	P	19 55 30.4	+0.3
BILL	Bilibino	46.16	31	i P	P	19 55 32.4	+1.4
BILL				i		19 57 04.3	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,119nm,16.0s						
BOSS	Bosilegrad	46.39	292	eP	P	19 55 34.9	+1.7
BOVS	Bovan	46.43	294	⇑P	P	19 55 33.9	+0.4
BOVS	Bovan	46.43	294	eP	P	19 55 33.7	+0.2
SPMM	Sapulut	46.53	138	P	P	19 55 35.0	+0.4
NC602	NORSAR Array S	46.63	319	eP	P	19 55 35.2	+0.4
NC602	NORSAR Array S	46.63	319	P	P	19 55 35.6	+0.8
SBUM	Sibu	46.63	145	P	P	19 55 37.0	+1.7
SBUM	Sibu	46.63	145	P	P	19 55 36.0	+0.7
SBUM				IAmb	IAmb	19 55 37.6	
	comp=Z,12nm,0.9s						
PRVS	Prvonek	46.65	292	eP	P	19 55 36.6	+1.3
BARS	Barje	46.70	293	eP	P	19 55 30.6	-5.0
BARS	Barje	46.70	293	eP	P	19 55 36.7	+1.1
NB2	NORSAR Subarra	46.70	319	P	P	19 55 35.4	0.0
	comp=Z,5.2nm,0.7s,baz=72,slow=7.9						
NB2	NORSAR Subarra	46.70	319	P	P	19 55 35.4	0.0
	baz=72,slow=7.9						
NOA	NORSAR Array B	46.70	319	P	P	19 55 35.6	+0.2
	comp=Z,3.0nm,0.8s,baz=75,slow=7.7,SNR=5.2						
NOA				LR	LR	20 17 13.4	
	comp=Z,85nm,19.5s,baz=295,slow=39						
MORC	Moravsky Berou	46.72	303	⇑P	P	19 55 37.7	+1.9
KSM	Kuching	46.76	148	P	P	19 55 37.0	+0.7
KSM	Kuching	46.76	148	P	P	19 55 36.2	-0.1
KSM				IAmb	IAmb	19 55 38.0	
	comp=Z,10nm,0.8s						
GRUS	Gruza	46.98	295	eP	P	19 55 40.6	+2.8
SELS	Selova	46.99	294	eP	P	19 55 38.3	+0.4
FRGS	Fruska Gora	47.05	297	⇑P	P	19 55 39.2	+0.8
FRGS	Fruska Gora	47.05	297	eP	P	19 55 39.3	+0.9
MYLDM	Lahad Datu	47.13	136	P	P	19 55 41.0	+1.8
CSKK	Cskako	47.17	300	eP	P	19 55 36.2	-3.0
DPC	Dobruska-Polom	47.25	304	eP	P	19 55 41.8	+1.9
DPC	Dobruska-Polom	47.25	304	eP	P	19 55 41.8	+1.9
CHVC	Chvalec	47.33	305	eP	P	19 55 42.6	+2.2
DIVS	Divibare	47.37	295	P	P	19 55 41.0	+0.1
DIVS				IAmb	IAmb	19 55 42.7	
	comp=Z,5.9nm,0.8s						
DIVS	Divibare	47.37	295	eP	P	19 55 41.5	+0.6
MORH	Mrgy, Hungar	47.38	298	⇑P	P	19 55 41.8	+0.9
MORH	Mrgy, Hungar	47.38	298	eP	P	19 55 40.6	-0.2
UPC	Upice	47.38	305	eP	P	19 55 42.4	+1.6
UPC	Upice	47.38	305	eP	P	19 55 42.4	+1.6
MODS	Modra-Piesok	47.40	301	eP	P	19 55 42.5	+1.5
MODS	Modra-Piesok	47.40	301	eP	P	19 55 42.5	+1.5
DOMB	Dombas	47.43	321	eP	P	19 55 40.7	-0.4
VRAC	Vranov	47.47	303	⇑P	P	19 55 43.3	+1.7
IVAS	Ivanjica	47.48	294	eP	P	19 55 41.7	-0.1
MPLH	Magyarpolny	47.70	300	eP	P	19 55 43.1	-0.2
BBLS	Lazići	47.85	295	eP	P	19 55 45.2	+0.6
KONO	Kongsberg	47.86	318	eP	P	19 55 44.2	-0.2
FNA	Florina	47.88	290	P	P	19 55 45.4	+0.5
FNA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FNA	Florina	47.88	290	P	P	19 55 45.4	+0.5
FNA				IAmb	IAmb	19 55 46.1	
	comp=Z,4.1nm,0.7s						
SKAR	Skarslia	48.17	320	eP	P	19 55 47.3	+0.4
PVCC	Panska Ves	48.23	305	eP	P	19 55 49.3	+1.9
PVCC	Panska Ves	48.23	305	eP	P	19 55 49.3	+1.9
CONA	Conrad Observa	48.45	301	i P	P	19 55 51.4	+2.2
	comp=Z,7.8nm,1.0s,SNR=6.1						
PRU	Pruhonice	48.45	304	eP	P	19 55 51.0	+1.9
PRU	Pruhonice	48.45	304	eP	P	19 55 51.0	+1.9
BRG	Berggiesshubel	48.47	306	eP	P	19 55 50.5	+1.3
	comp=Z,2.6nm,0.8s,baz=65,slow=7.4						
BRG				epP	sP	19 55 56.2	-0.9
PDG	Podgorica	48.57	293	⇑P	P	19 55 51.2	+1.1
FBE	Freiberg	48.80	306	eP	P	19 55 52.9	+1.2
	comp=Z,4.2nm,0.8s,baz=65,slow=7.4						
FBE				epP	sP	19 55 58.9	-0.7
CLL	Collm	48.86	307	eP	P	19 55 53.0	+0.8
CLL				e		19 55 59.0	
CLL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CLL	Collm	48.86	307	eP	P	19 55 53.0	+0.8
	comp=Z,7.0nm,0.7s						
CLL				e		19 55 59.0	
CLL	Collm	48.86	307	eP	P	19 55 53.2	+1.0
	comp=Z,5.7nm,0.7s,baz=65,slow=7.4						
CLL				epP	sP	19 55 59.0	-1.0
CLL	Collm	48.86	307	P	P	19 55 52.6	+0.4
CLL				IAmb	IAmb	19 55 54.3	
	comp=Z,7.5nm,0.8s						
ARSA	Arzberg	48.93	301	eP	P	19 55 54.5	+1.7
	comp=Z,5.1nm,1.1s						
CKRC	Cesky Krumlov	49.04	303	eP	P	19 55 56.7	+3.0
KHC	Kasperske Hory	49.36	304	eP	P	19 55 57.1	+0.9
KHC	Kasperske Hory	49.36	304	eP	P	19 55 57.1	+0.9
GERES	GERESS Array B	49.40	303	P	P	19 55 57.5	+1.0
	comp=Z,0.7nm,0.6s,baz=63,slow=7.8,SNR=7.9						
DAV	Davao City (W)	49.42	126	LR	LR	20 18 57.4	
	comp=Z,66nm,18.5s,baz=322,slow=39						
MOA	Molln	49.46	302	i P	P	19 55 59.3	+2.4
	comp=Z,9.4nm,1.8s,SNR=10						
SOKA	Soboth	49.47	300	i P	P	19 55 58.4	+1.3
	comp=Z,6.6nm,1.1s,SNR=5.8						
TANN	Tannenbergstha	49.52	306	eP	P	19 55 58.8	+1.4
	comp=Z,3.8nm,0.9s,baz=65,slow=7.4						
TANN				epP	sP	19 56 04.5	-0.7
WERD	Werda	49.60	306	eP	P	19 55 59.1	+1.2
	comp=Z,3.8nm,0.8s,baz=65,slow=7.4						
WERD				epP	sP	19 56 05.2	-0.6
NEUB	Neuenburg	49.61	307	eP	P	19 55 58.7	+0.8
	baz=65,slow=7.4						
NEUB				epP	sP	19 56 04.6	-1.2
GUNZ	Gunzen	49.61	306	eP	P	19 55 59.3	+1.2
	comp=Z,4.3nm,0.7s,baz=65,slow=7.4						
WET	Wettzell	49.78	304	eP	P	19 56 00.5	+1.2
	comp=Z,1.8nm,0.8s,baz=65,slow=7.4						
WET				epP	sP	19 56 06.5	-0.6
OBKA	Obir	49.84	300	i P	P	19 56 01.2	+1.3
	comp=Z,6.5nm,0.9s,SNR=6.6						
MANZ	Manzenberg	49.90	305	eP	P	19 56 01.7	+1.4
	baz=65,slow=7.4						
MANZ				epP	sP	19 56 07.6	-0.5
MOX	Moxa	49.92	306	eP	P	19 56 01.4	+1.1
	baz=65,slow=7.4						
MOX				epP	sP	19 56 07.4	-0.9
NRDL	Niedersach Rie	50.06	309	eP	P	19 56 02.0	+0.7
	comp=Z,4.8nm,0.8s,baz=65,slow=7.4						
RJOB	Jochberg	50.41	302	eP	P	19 56 05.5	+1.3
	comp=Z,5.8nm,0.8s,baz=65,slow=7.4						
GTTG	Gottingen	50.52	308	eP	P	19 56 06.2	+1.4
	comp=Z,12nm,0.8s,baz=65,slow=7.4						
GRF	Grafenberg Arr	50.54	305	eP	P	19 56 07.0	+1.9
	comp=Z,6.3nm,0.7s,baz=65,slow=7.4						
GRF				epP	sP	19 56 12.5	-0.5
ABTA	Abfaltersbach	51.01	301	eP	P	19 56 09.4	+0.6
	comp=Z,5.5nm,1.2s						
FUR	Furstenfeldbru	51.15	303	eP	P	19 56 11.6	+1.9
	comp=Z,6.0nm,0.7s,baz=65,slow=7.4						
WTTA	Wattenberg	51.32	302	eP	P	19 56 12.6	+1.4
	comp=Z,16nm,0.7s						
WATA	Walderalm	51.33	302	eP	P	19 56 12.6	+1.4
	comp=Z,8.1nm,0.9s						
SQTA	Sankt Quirin	51.60	302	i P	P	19 56 14.4	+1.2
	comp=Z,17nm,1.0s,SNR=9.7						
MOTA	Moosalm	51.61	302	i P	P	19 56 14.4	+1.1
	comp=Z,8.6nm,1.0s,SNR=6.5						
RETA	Reutte	51.76	303	eP	P	19 56 15.8	+1.5
	comp=Z,7.1nm,0.9s						
TIP	Timpagrande	51.76	291	⇑P	P	19 56 15.4	+0.9
TOLI2	Tolitoli	51.77	136	P	P	19 56 14.3	-0.3
TOLI2				IAmb	IAmb	19 56 15.2	
	comp=Z,10nm,0.7s						
CTI	Castel Tesino	51.85	301	P	P	19 56 15.4	+0.3
CTI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CTI	Castel Tesino	51.85	301	P	P	19 56 15.4	+0.3
TNS	Taunus Mts	51.94	307	eP	P	19 56 16.9	+1.3
	comp=Z,2.6nm,0.9s,baz=65,slow=7.4						
FETA	Feichten	51.99	302	eP	P	19 56 17.1	+1.0
	comp=Z,8.6nm,0.9s						
UBR	Ueberruh	52.07	303	eP	P	19 56 18.4	+1.7
	comp=Z,7.4nm,0.8s,baz=65,slow=7.4						
STU	Stuttgart	52.13	305	P	P	19 56 17.6	+0.6
STU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
STU	Stuttgart	52.13	305	P	P	19 56 17.6	+0.6
TEOL	Teolo	52.15	300	P	P	19 56 17.6	+0.4
DAVA	Damuels	52.38	303	eP	P	19 56 18.1	-1.0
	comp=Z,5.4nm,0.9s						
NRCA	Norcia	52.41	297	P	P	19 56 19.9	+0.7
NRCA				IAmb	IAmb	19 56 21.4	
	comp=Z,9.1nm,0.9s						
BFO	Black Forest	52.85	305	P	P	19 56 22.1	-0.2
BFO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BFO	Black Forest	52.85	305	eP	P	19 56 22.9	+0.5
	comp=Z,3.0nm,0.8s,baz=65,slow=7.4						
BFO				epP	sP	19 56 29.1	-1.1
BFO	Black Forest	52.85	305	P	P	19 56 22.1	-0.2
ZCCA	Zocca	53.06	299	P	P	19 56 26.2	+2.2
ZCCA				IAmb	IAmb	19 56 34.7	
	comp=Z,13nm,0.9s						
CDF	Champ du Feu	53.44	305	eP	P	19 56 27.1	+0.4
CDF				pmax	pmax		
	comp=Z,20nm,1.5s						
VLC	Villacollemand	53.52	299	P	P	19 56 28.5	+1.1
VLC				IAmb	IAmb	19 56 30.2	
	comp=Z,16nm,0.9s						
LPL	La Plagne	55.14	302	eP	P	19 56 40.4	+1.0
LPL				pmax	pmax		
	comp=Z,27nm,0.8s						
BNI	Bardonecchia	55.40	302	P	P	19 56 41.7	+0.6
BNI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BNI	Bardonecchia	55.40	302	P	P	19 56 41.7	+0.6
BNI				IAmb	IAmb	19 56 42.8	
	comp=Z,7.0nm,0.8s						
SPSI	Sidrap Palu	55.68	140	P	P	19 56 42.9	-0.3
	comp=Z,41nm,0.8s						
SSF	Saint Saulge	56.31	305	eP	P	19 56 47.3	-0.2
SSF				pmax	pmax		
	comp=Z,117nm,2.8s						
EUNU	Eureka	56.34	359	P	P	19 56 47.7	+0.4
SANI	Sanana	57.16	132	P	P	19 56 54.2	+0.4
	comp=Z,32nm,1.3s						
SANI	Sanana	57.16	132	P	P	19 56 53.6	-0.2
KEST	Kesra	58.59	291	P	P	19 57 04.5	+0.7
	comp=Z,3.6nm,0.7s,baz=204,slow=1.5,SNR=6.3						
KEST	Kesra	58.59	291	P	P	19 57 04.3	+0.5
KEST				IAmb	IAmb	19 57 10.1	
	comp=Z,14nm,1.4s						
TOLK	Toolik Lake Re	60.12	21	P	P	19 57 13.8	0.0
TOLK				IAmb	IAmb	19 57 14.5	
	comp=Z,9.6nm,0.6s						
IMAR	Indian Mountai	60.83	24	P	P	19 57 18.4	-0.3
COLD	Coldfoot	60.97	22	P	P	19 57 19.8	+0.3
COLD				IAmb	IAmb	19 57 31.3	
	comp=Z,7.2nm,0.8s						
H21K	Melozitna Rive	61.34	24	P	P	19 57 22.2	0.0
H21K				IAmb	IAmb	19 57 24.6	
	comp=Z,8.7nm,1.4s						
FAKI	Fak Fak	61.37	127	P	P	19 57 22.2	-0.7
J20K	Nowinta River	61.96	26	P	P	19 57 26.8	+0.5
J20K				IAmb	IAmb	19 57 33.5	
	comp=Z,7.7nm,1.1s						
BMAR	Burnt Mountain	62.29	20	P	P	19 57 29.1	+0.6
MLY	Manley	62.40	24	P	P	19 57 29.4	+0.1
H24K	Noodor Dome	62.62	22	P	P	19 57 30.9	+0.1
BPAW	Bear Paw Mtn.	62.99	25	P	P	19 57 33.2	0.0
BPAW				IAmb	IAmb	19 57 44.1	
	comp=Z,11nm,1.2s						
CAST	Castle Rocks	63.15	26	P	P	19 57 34.7	+0.5
CAST				IAmb	IAmb	19 57 40.8	
	comp=Z,4.1nm,1.0s						
KMBO	Kilima Mbogo	63.35	239	P	P	19 57 37.3	+0.8
	comp=Z,4.9nm,0.8s,baz=31,slow=11,SNR=12						
KMBO	Kilima Mbogo	63.35	239	P	P	19 57 37.3	+0.8
KMBO				IAmb	IAmb	19 57 38.4	
	comp=Z,7.1nm,0.9s						
KTH	Kantishna Hill	63.41	25	P	P	19 57 36.2	+0.1
KTH				IAmb	IAmb	19 57 47.1	
	comp=Z,13nm,1.1s						
PPLA	Purkeypile	63.49	26	P	P	19 57 36.9	+0.2
PPLA				IAmb	IAmb	19 57 40.3	
	comp=Z,13nm,1.2s						
IL31		63.70	23	P	P	19 57 36.3	-1.5
ILAR	Eielson Array	63.70	23	P	P	19 57 37.0	-0.8
	comp=Z,1.9nm,0.7s,baz=314,slow=5.3,SNR=24						
ILAR				LR	LR	20 27 24.8	
	comp=Z,128nm,18.6s,baz=206,slow=38						
ILAR	Eielson Array	63.70	23	P	P	19 57 36.5	-1.3
KIBK	Kibwezi	63.81	238	P	P	19 57 39.8	+0.4
KIBK				IAmb	IAmb	19 57 40.8	
	comp=Z,5.8nm,0.7s						
INK	Inuvik	64.04	16	P	P	19 57 40.1	+0.1
	comp=Z,2.0nm,0.5s,baz=359,slow=6.5,SNR=8.5						
DHY	Denali Highway	64.84	24	P	P	19 57 45.1	-0.5
DHY				IAmb	IAmb	19 57 56.0	
	comp=Z,9.3nm,1.0s						
ESBB	Sonseca Array	64.93	302	P	P	19 57 47.0	+0.6
ESBB				IAmb	IAmb	19 57 47.9	
	comp=Z,9.1nm,0.9s						
ESDC	Sonseca Array	64.93	302	P	P	19 57 47.2	+0.8
	comp=Z,4.2nm,0.6s,baz=51,slow=6.5,SNR=36						
ESDC	Sonseca Array	64.93	302	P	P	19 57 46.6	+0.2
RIDG	Independent Ri	65.06	23	P	P	19 57 44.7	-2.2
RIDG				IAmb	IAmb	19 57 57.1	
	comp=Z,5.3nm,0.8s						
SCRK	Sand Creek	65.12	22	P	P	19 57 46.5	-0.8
EGAK	Eagle	65.24	21	P	P	19 57 47.3	-0.6
EGAK				IAmb	IAmb	19 57 53.8	
	comp=Z,4.3nm,0.9s						
SCM	Sheep Creek Mo	65.80	25	P	P	19 57 51.5	-0.2
SCM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SCM	Sheep Creek Mo	65.80	25		P	19 57 51.5	-0.2
SCM				IAmb	IAmb	19 58 15.9	
	comp=Z,8.9nm,0.9s						
CNPM	China Poot	66.26	28	P	P	19 57 54.9	+0.2
L27K	Beaver Creek,	66.44	22	P	P	19 57 56.2	+0.5
L27K				IAmb	IAmb	19 58 07.5	
	comp=Z,5.8nm,1.1s						
BCAR	Beaver Creek A	66.45	22	P	P	19 57 55.7	-0.1
M27K	Edge Creek, AK	66.99	23	P	P	19 58 00.1	+0.7
KDAK	Kodiak Island	67.06	30	LR	LR	20 29 47.6	
	comp=Z,141nm,19.2s,baz=33,slow=38						
MBAR	Mbarara	67.13	245	deP	P	19 58 01.4	+0.5
KNRA	Kununurra	70.15	138	P	P	19 58 18.9	-0.5
YKA	Yellowknife Ar	72.55	11	P	P	19 58 32.9	-0.6
	comp=Z,3.3nm,0.8s,baz=336,slow=5.9,SNR=28						
YKA	Yellowknife Ar	72.55	11	P	P	19 58 32.5	-0.9
ABPO	Ambohimpanom	72.64	220	P	P	19 58 34.7	+0.1
ABPO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ABPO	Ambohimpanom	72.64	220	P	P	19 58 34.7	+0.1
ABPO				IAmb	IAmb	19 58 36.7	
	comp=Z,8.7nm,1.2s						
VOI	Vohitsoka	75.34	219	P	P	19 58 50.5	+0.2
WB0	Warramunga Arr	76.43	135	P	P	19 58 55.9	-0.6
WB0				IAmb	IAmb	19 58 56.7	
	comp=Z,16nm,0.9s						
WRAB	Tennant Creek	76.55	135	P	P	19 58 56.5	-0.6
WRAB	Tennant Creek	76.55	135	P	P	19 58 56.5	-0.6
WRA	Warramunga Arr	76.55	135	P	P	19 58 56.7	-0.5
	comp=Z,13nm,0.7s,baz=323,slow=3.5,SNR=150						
WRA	Warramunga Arr	76.55	135	P	P	19 58 56.4	-0.7
WB2	Warramunga Arr	76.56	135	P	P	19 58 56.7	-0.5
COEN	Coen	76.60	125	P	P	19 58 57.0	-0.5
COEN				IAmb	IAmb	19 59 24.0	
	comp=Z,28nm,1.4s						
WR0	Warramunga Arr	76.67	135	P	P	19 58 57.2	-0.6
MORW	Morawa	77.08	155	P	P	19 58 59.6	-0.3
TORD	Torodi Ar. Bea	78.08	277	P	P	19 59 05.6	-0.4
	comp=Z,4.2nm,0.8s,baz=36,slow=5.3,SNR=26						
TORD	Torodi Ar. Bea	78.08	277	P	P	19 59 05.5	-0.4
SCHQ	Schefferville	79.34	345	P	P	19 59 11.2	-1.1
	comp=Z,2.5nm,0.5s,baz=20,slow=6.5,SNR=11						
SCHQ	Schefferville	79.34	345	P	P	19 59 11.5	-0.8
SCHQ				IAmb	IAmb	19 59 22.1	
	comp=Z,10nm,1.3s						
AS31	Alice Springs	79.46	138	P	P	19 59 13.0	-0.3
ASAR	Alice Springs	79.46	138	P	P	19 59 12.8	-0.5
	comp=Z,8.2nm,0.7s,baz=326,slow=4.9,SNR=106						
KOWA	Kowa	81.25	282	P	P	19 59 23.3	+0.1
KOWA				IAmb	IAmb	19 59 24.3	
	comp=Z,12nm,0.7s						
DBIC	Dimbokro	87.19	276	P	P	19 59 53.0	-0.5
	comp=Z,13nm,0.7s,baz=49,slow=6.3,SNR=22						
DBIC	Dimbokro	87.19	276	P	P	19 59 52.9	-0.5
DBIC				pmax	pmax		
	comp=Z,16nm,0.9s						
DBIC	Dimbokro	87.19	276	P	P	19 59 52.9	-0.5
KIC	Kosan Boka	87.32	276	eP	P	19 59 53.4	-0.6
	comp=Z,28nm,0.6s						
TIC	Toumodi	87.32	277	eP	P	19 59 53.4	-0.7
LIC	Lamto	87.62	276	eP	P	19 59 54.7	-0.8
	comp=Z,28nm,0.7s						
PLID	Pearl Lake	89.02	16	P	P	20 00 01.6	-0.4
PLID				IAmb	IAmb	20 00 05.2	
	comp=Z,8.0nm,1.4s						
STKA	Stephens Creek	90.04	136	P	P	20 00 05.2	-1.2
	comp=Z,3.0nm,0.7s,baz=344,slow=6.0,SNR=10						
PDAR	Pinedale Array	92.44	13	P	P	20 00 17.4	-0.5
	comp=Z,0.3nm,0.6s,baz=66,slow=3.7,SNR=3.7						
PDAR				LR	LR	20 45 41.2	
	comp=Z,79nm,18.3s,baz=326,slow=38						
NVAR	Mina Array Bea	94.84	20	P	P	20 00 30.4	+1.4
	comp=Z,0.1nm,0.3s,baz=354,slow=7.3,SNR=2.0						
LPAZ	La Paz	145.68	316	PKPbc	PKPdf	20 06 45.4	-0.9
	comp=Z,1.0nm,0.5s,baz=358,slow=0.7,SNR=6.1						
CPUP	Villa Florida	146.71	290	PKPbc	PKPdf	20 06 47.8	+0.8
	comp=Z,12nm,0.7s,baz=59,slow=2.2,SNR=21						

NOU ***23*** *19:53:37.0, 32°.63S×178°.50W, h276^{km}, mb4.6/10, South of Kermadec Islands*

IDC ***23*** *19:53:58.8±2.8, 33°.77S×179°.77E, h266^{km}±27^{km}, mb3.8/3, mb1 3.8/6, mb1mx3.4/27, mbtmp4.4/6, Error ellipse: s-maj=38.3km s-min=28.7km az=111.0*

WEL ***23*** *19:54:02.5±0.9, 34°S±9°×18°0E±1°1, h303^{km}±10^{km}, M4.5/72, mB5.1/49, ML5.1/76, MLv5.0/72, Mw(mB)4.5/49, Error ellipse: s-maj=0.0km s-min=0.0km az=80.2*

NEIC ***23*** *19:54:03.4±0.7, 33°.6S±0°.2×179°.6E±0°.2, h300^{km}±2^{km}, mb4.2/16, Error ellipse: s-maj=30.5km s-min=29.9km az=131.0*

ISC 23 19:53:59.3±1.1**, 33°.96S**±0°.07×**180°.0E**±0°.1**, h300^{km}, n163, σ1^{s}65**/173**, mb4.2**/9**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.83	200	P	Pn	19 55 03.4	-0.1
MXZ				S	S	19 55 53.8	-1.2
MXZ	Matakaoa Point	3.83	200	Pn	Pn	19 55 03.5	-0.1
WMGZ	Waiomatatini S	4.05	197	P	Pn	19 55 07.0	+1.1
WMGZ				S	S	19 56 01.1	+1.8
HAZ	Te Kaha	4.18	204	P	Pn	19 55 08.4	+1.1
HAZ				S	S	19 55 59.7	-2.1
PKGZ	Pakihiroa	4.20	201	P	Pn	19 55 07.8	+0.1
PKGZ				S	S	19 56 03.4	+0.9
PUZ	Puketiti	4.33	198	P	Pn	19 55 09.1	+0.1
PUZ				S	S	19 56 05.0	0.0
RUGZ	Raukumara Rang	4.40	204	P	Pn	19 55 11.5	+1.5
RUGZ				S	S	19 56 02.8	-3.9
TWGZ	Tauwhareparae	4.50	200	P	Pn	19 55 11.5	+0.5
TWGZ				S	S	19 56 08.6	+0.1
WHRZ	Whale Island	4.58	211	P	Pn	19 55 14.8	+2.9
WHRZ				S	S	19 56 10.6	+0.5
CNGZ	Carnagh Statio	4.73	197	P	Pn	19 55 14.3	+0.8
OPRZ	Ohinepanea	4.75	214	P	Pn	19 55 16.2	+2.3
TKGZ	Te Karaka	4.78	200	P	Pn	19 55 14.1	0.0
TKGZ				S	S	19 56 14.5	+0.2
MWZ	Matawai	4.78	203	P	Pn	19 55 14.1	-0.1
MWZ				S	S	19 56 12.6	-1.9
URZ	Urewera	4.87	207	P	Pn	19 55 16.3	+1.1
	42nm,0.3s,baz=300,slow=24,SNR=178						
URZ				S	S	19 56 14.5	-1.6
	39nm,0.3s,baz=123,slow=23,SNR=12						
URZ	Urewera	4.87	207	P	Pn	19 55 14.7	-0.4
URZ				S	S	19 56 13.3	-2.8
URZ	Urewera	4.87	207	Pn	Pn	19 55 14.8	-0.4
URZ				Sn	S	19 56 14.3	-1.8
URZ	Urewera	4.87	207	P	Pn	19 55 14.5	-0.6
EDRZ	Edgecumbe	4.89	211	P	Pn	19 55 17.8	+2.3
RAGZ	Rawiri	4.97	204	P	Pn	19 55 16.5	+0.1
RAGZ				S	S	19 56 18.0	-0.4
WCZ	Waipu Caves	5.01	245	P	Pn	19 55 15.4	-1.4
KARZ	Kaharoa	5.04	215	P	Pn	19 55 19.7	+2.5
OMRZ	Omania	5.05	214	P	Pn	19 55 20.6	+3.2
RIGZ	Rimuhau	5.05	200	S	S	19 56 20.3	+0.1
KMRZ	Kaimai	5.06	219	P	Pn	19 55 20.1	+2.6
TARZ	Mount Tarawera	5.10	212	P	Pn	19 55 20.7	+2.7
RRRZ	Republican Roa	5.18	211	P	Pn	19 55 21.8	+2.9
MUGZ	Murupara	5.19	209	P	Pn	19 55 18.4	-0.5
MUGZ				S	S	19 56 21.6	-1.4
PRGZ	Paritu Road	5.22	198	P	Pn	19 55 19.5	+0.1
RTZ	Ruatahuna	5.23	206	P	Pn	19 55 18.4	-1.1
RTZ				S	S	19 56 21.6	-2.3
HRRZ	Handcock Road	5.32	213	P	Pn	19 55 23.5	+3.0
PRRZ	Plateau Road	5.36	211	P	Pn	19 55 23.0	+2.0
GRRZ	Galatos Road	5.37	214	P	Pn	19 55 23.9	+2.9
KNZ	Kokohu	5.37	199	P	Pn	19 55 20.8	-0.3
OUZ	Omahuta	5.39	255	P	Pn	19 55 17.9	-3.3
OUZ	Omahuta	5.39	255		Pn	19 55 18.2	-3.1
OUZ	Omahuta	5.39	255	P	Pn	19 55 18.0	-3.3
MHGZ	Mahia Peninsul	5.44	197	P	Pn	19 55 22.0	+0.2
ALRZ	Allen Road	5.44	211	P	Pn	19 55 24.0	+2.2
RAHZ	Arahi	5.46	204	P	Pn	19 55 22.0	-0.1
MTHZ	Maungataniwha	5.49	206	P	Pn	19 55 22.2	-0.2
KUTZ	Kaahu Road	5.62	215	P	Pn	19 55 26.8	+2.9
TLZ	Tolley Road	5.63	218	P	Pn	19 55 27.2	+3.1
MRHZ	Matea Rd	5.64	209	P	Pn	19 55 24.9	+0.7
WHTZ	Whakaora	5.70	213	P	Pn	19 55 27.9	+3.0
NMHZ	Naumai	5.72	205	P	Pn	19 55 25.1	-0.1
ARHZ	Aropaoanui	5.80	203	P	Pn	19 55 27.7	+1.6
HATZ	Hinemaiaia	5.82	211	P	Pn	19 55 28.1	+1.7
WATZ	Wairara	5.83	214	P	Pn	19 55 28.9	+2.4
BKZ	Black Stump Fm	5.89	207	P	Pn	19 55 26.8	-0.5
BKZ	Black Stump Fm	5.89	207	Pn	Pn	19 55 25.9	-1.3
BKZ	Black Stump Fm	5.89	207	P	Pn	19 55 26.5	-0.8
RATZ	Rangitukua	5.94	213	P	Pn	19 55 29.6	+1.8
RITZ	Rihia Road	5.99	212	P	Pn	19 55 30.5	+2.0
KATZ	Kakaramea	6.07	213	P	Pn	19 55 31.2	+1.8
MCHZ	McNeill Hill	6.07	205	P	Pn	19 55 31.1	+1.8
HIZ	Hauiti	6.13	221	P	Pn	19 55 33.6	+3.5
HIZ	Hauiti	6.13	221	Pn	Pn	19 55 31.7	+1.7
HIZ	Hauiti	6.13	221	P	Pn	19 55 31.7	+1.7
CKHZ	Cape Kidnapper	6.14	201	P	Pn	19 55 32.4	+2.3
KWHZ	Kaweka Forest	6.14	206	P	Pn	19 55 29.4	-0.9

NTVZ	North Tongarir	6.17	213	P	Pn	19 55 31.5	+0.8
TMVZ	Te Maari	6.18	212	P	Pn	19 55 30.0	-0.7
KRVZ	Karewarewa	6.19	213	P	Pn	19 55 32.7	+1.8
ETVZ	East Tongariro	6.19	212	P	Pn	19 55 30.1	-0.8
WTVZ	West Tongariro	6.23	213	P	Pn	19 55 32.5	+1.2
NNVZ	North Ngauruho	6.23	213	P	Pn	19 55 33.1	+1.7
OTVZ	Oturere	6.23	212	P	Pn	19 55 30.7	-0.7
TWVZ	Taurewa	6.26	214	P	Pn	19 55 33.4	+1.7
SNVZ	South Ngauruho	6.26	212	P	Pn	19 55 31.2	-0.7
NGZ	Ngauruhoe	6.27	213	P	Pn	19 55 32.9	+1.0
KAHZ	Kahuranaki	6.32	202	P	Pn	19 55 32.2	-0.2
TUVZ	Tukino	6.32	212	P	Pn	19 55 33.4	+0.9
BHHZ	Black Hill Sta	6.34	208	P	Pn	19 55 32.2	-0.4
FWVZ	Far West T-bar	6.36	213	P	Pn	19 55 33.5	+0.5
KRHZ	Kereru	6.36	206	P	Pn	19 55 31.5	-1.3
WHVZ	Whangaehu Hut	6.36	212	P	Pn	19 55 34.4	+1.3
DRZ	Dome Shelter	6.37	212	P	Pn	19 55 34.8	+1.5
TRVZ	Turoa	6.39	212	P	Pn	19 55 33.8	+0.4
MOVZ	Moawhango	6.40	211	P	Pn	19 55 33.0	-0.3
WNVZ	Wahianoa	6.40	212	P	Pn	19 55 33.0	-0.5
PKVZ	Pokaka	6.48	213	P	Pn	19 55 35.6	+1.3
MTVZ	Mangateitei	6.50	212	P	Pn	19 55 36.1	+1.5
PXZ	Pawanui	6.54	201	P	Pn	19 55 36.4	+1.4
VRZ	Vera Road	6.63	218	P	Pn	19 55 38.1	+2.0
PNHZ	Pukenui	6.66	206	P	Pn	19 55 35.0	-1.4
WPHZ	Waipukurau	6.71	204	P	Pn	19 55 37.5	+0.5
PRHZ	Porangahau	6.83	202	P	Pn	19 55 39.3	+0.8
TSZ	Takapari Road	6.87	206	P	Pn	19 55 37.4	-1.6
DREZ	Durham Road	6.97	220	P	Pn	19 55 43.6	+3.4
DVHZ	Dannevirke	7.01	204	P	Pn	19 55 39.0	-1.7
WAZ	Wanganui	7.02	213	P	Pn	19 55 41.6	+0.8
ANWZ	Angora Road	7.05	202	P	Pn	19 55 42.2	+1.0
LREZ	Lake Rotokare	7.07	217	P	Pn	19 55 43.4	+2.0
NEZ	North Egmont	7.09	220	P	Pn	19 55 43.9	+2.2
PKE	Pukeiti	7.09	221	P	Pn	19 55 44.9	+3.2
PREZ	Palmer Road	7.11	219	P	Pn	19 55 45.2	+3.3
KHEZ	Kahui Hut	7.15	220	P	Pn	19 55 45.0	+2.6
POWZ	Post Office Ro	7.23	206	P	Pn	19 55 43.7	+0.4
OHWZ	Ohakea	7.25	209	P	Pn	19 55 44.5	+1.0
PRWZ	Pori Road	7.31	205	P	Pn	19 55 45.2	+1.0
NMEZ	Namu Road	7.31	220	P	Pn	19 55 47.0	+2.8
BFZ	Birch Farm	7.33	203	P	Pn	19 55 42.9	-1.6
BFZ	Birch Farm	7.33	203		Pn	19 55 42.9	-1.6
BFZ	Birch Farm	7.33	203	P	Pn	19 55 42.6	-1.9
TIWZ	Tintock	7.53	204	P	Pn	19 55 46.5	-0.5
CPWZ	Castlepoint	7.55	202	P	Pn	19 55 49.4	+2.2
TMWZ	Te Maipa	7.83	203	P	Pn	19 55 49.1	-1.5
MTW	Mount Morrison	8.01	205	P	Pn	19 55 51.6	-1.2
TRWZ	Traveller	8.16	203	P	Pn	19 55 54.5	-0.1
PAWZ	Paruwai Farm	8.23	204	P	Pn	19 55 55.0	-0.6
MSWZ	Moikau Station	8.32	205	P	Pn	19 55 56.3	-0.4
MSWZ	Moikau Station	8.32	205		Pn	19 55 54.4	-2.3
WEL	Wellington	8.38	208	P	Pn	19 55 57.0	-0.4
SNZO	South Karori	8.43	208		Pn	19 55 55.9	-2.1
SNZO	South Karori	8.43	208	P	Pn	19 55 56.6	-1.4
BHW	Baring Head	8.45	207	P	Pn	19 55 57.5	-0.8
BHW	Baring Head	8.45	207	Pn	Pn	19 55 56.0	-2.3
PLWZ	Palliser	8.46	205	Pn	Pn	19 55 56.4	-2.0
TUWZ	Tuamarina	8.84	211		Pn	19 56 02.1	-1.0
NNZ	Nelson	8.92	214	Pn	Pn	19 56 02.2	-1.8
CMWZ	Cape Campbell	9.00	209	P	Pn	19 56 05.2	+0.2
CMWZ	Cape Campbell	9.00	209	Pn	Pn	19 56 03.7	-1.3
QRZ	Quartz Range	9.04	219	P	Pn	19 56 06.0	+0.5
BSWZ	Blackbirch Sta	9.11	210		Pn	19 56 04.9	-1.4
KHZ	Kahutara	9.83	209	Pn	Pn	19 56 13.4	-1.8
KHZ	Kahutara	9.83	209	P	Pn	19 56 14.7	-0.5
LTZ	Lake Taylor	10.67	212		Pn	19 56 23.9	-1.6
OXZ	Oxford	11.21	211		Pn	19 56 29.8	-2.2
MQZ	McQueen's Vall	11.27	208	Pn	Pn	19 56 30.3	-2.4
RPZ	Rata Peaks	11.95	213	Pn	Pn	19 56 39.8	-1.2
RPZ	Rata Peaks	11.95	213	P	Pn	19 56 40.8	-0.3
FOZ	Fox Glacier	12.40	217	Pn	Pn	19 56 44.1	-2.3
LBZ	Lake Benmore	12.86	213	P	Pn	19 56 50.4	-1.7
ODZ	Otahua Downs	13.18	210	Pn	Pn	19 56 55.7	-0.2
ODZ	Otahua Downs	13.18	210	P	P	19 56 56.1	-0.1
MLZ	Mavora Lakes	14.57	215		Pn	19 57 12.2	-0.3
WHZ	Wether Hill Ro	15.04	214		P	19 57 14.4	-2.2
MSVF	Nonsavu	16.25	354	P	P	19 57 29.2	-1.0
	0.6nm,0.3s,baz=214,slow=19,SNR=5.3						
MSVF	Nonsavu	16.25	354	P	P	19 57 29.0	-1.2
DZM	Mont Dzumac	16.79	311	P	P	19 57 34.2	-1.8
	0.3nm,0.3s,baz=128,slow=18,SNR=3.2						
DZM	Mont Dzumac	16.79	311	IAmb	IAmb	19 57 47.5	
	comp=Z,9.3nm,1.1s						
SANVU	Saraoutou	21.73	325	P	P	19 58 26.2	-0.7
EIDS	Eidsvold	26.44	281	P	P	19 59 10.1	+0.8
EIDS				IAmb	IAmb	19 59 26.7	
	comp=Z,14nm,1.4s						
STKA	Stephens Creek	32.14	263	P	P	20 00 04.5	+5.1
CTA	Charters Tower	32.88	286	P	P	20 00 07.0	+1.1
	comp=Z,3.4nm,0.6s,baz=111,slow=7.1,SNR=1.5						
CTAO	Charters Tower	32.88	286	P	P	20 00 07.1	+1.2
CTAO				IAmb	IAmb	20 00 09.9	
	comp=Z,14nm,1.5s						
COEN	Coen	38.77	292	P	P	20 00 56.2	+0.5
COEN				IAmb	IAmb	20 01 12.7	
	comp=Z,16nm,1.4s						
AS31	Alice Springs	41.33	272	P	P	20 01 18.0	+1.4
ASAR	Alice Springs	41.33	272	P	P	20 01 17.9	+1.3
	comp=Z,3.6nm,0.6s,baz=109,slow=7.6,SNR=20						
ASAR	Alice Springs	41.33	272	P	P	20 01 17.5	+0.9
WR0	Warramunga Arr	42.47	277	P	P	20 01 26.5	+0.7
WR0				IAmb	IAmb	20 01 28.3	
	comp=Z,16nm,1.5s						
WB2	Warramunga Arr	42.64	277	P	P	20 01 27.8	+0.7
WB2				IAmb	IAmb	20 01 54.7	
	comp=Z,20nm,1.4s						
WRAB	Tennant Creek	42.64	277	P	P	20 01 27.7	+0.6
WRAB				IAmb	IAmb	20 01 51.1	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	42.65	277	P	P	20 01 27.9	+0.7
	comp=Z,3.5nm,0.6s,baz=115,slow=7.6,SNR=16						
WRA	Warramunga Arr	42.65	277	P	P	20 01 26.3	-0.9
WB0	Warramunga Arr	42.69	277	P	P	20 01 28.2	+0.7
FORT	Forrest	43.56	259	P	P	20 01 36.4	+2.1
FORT				IAmb	IAmb	20 01 40.6	
	comp=Z,21nm,1.1s						
KNRA	Kununurra	49.37	279	P	P	20 02 21.2	+2.0
SNAA	Sanae	74.64	179	P	P	20 05 14.3	+8.7
VNA3	Neumayer Olymp	74.87	177	P	P	20 05 15.9	+9.0
VNA2	Neumayer--Watz	75.28	178	P	P	20 05 18.6	+9.5
	baz=188,slow=4.7						
VNA1	Neumayer--Stat	75.52	177	P	P	20 05 19.8	+9.3
FINES	FINESS Array B	147.80	337	PKPbc	PKiKP	20 13 09.8	+0.1
	comp=Z,1.5nm,0.7s,baz=36,slow=5.2,SNR=7.8						

NOU ***23*** *20:00:54.1, 21°.58S×177°.89W, h437^{km}, mb4.0/14, Fiji Islands Region*
IDC ***23*** *20:00:56.6±2.6, 21°.64S×178°.34W, h434^{km}±25^{km}, mb3.3/8, mb1 3.5/10, mb1mx3.3/24, mbtmp4.1/10, Error ellipse: s-maj=27.0km s-min=18.8km az=146.0*
NEIC ***23*** *20:00:57.3±1.5, 21°.7S±0°.2×178°.3W±0°.2, h438^{km}±9^{km}, mb4.1/10, Error ellipse: s-maj=24.2km s-min=20.1km az=135.0*
ISC 23 20:00:57.4±0.7**, 21°.6S**±0°.1×**178°.3W**±0°.1**, h450**^{km}**, n45, σ1^{s}15**/42**, mb3.8**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVE	Taveuni	5.10	343	P	P	20 02 20.6	-2.2
MSVF	Nonsavu	5.15	318	P	P	20 02 21.4	-2.0
	3.3nm,0.3s,baz=132,slow=13,SNR=11						
MSVF	Nonsavu	5.15	318	P	P	20 02 20.9	-2.5
MSVF	Nonsavu	5.15	318	P	P	20 02 21.3	-2.1
AFI	Afiamalu	9.87	40	P	P	20 03 05.4	-7.8
	4.3nm,0.3s,baz=252,slow=3.2,SNR=5.5						
AFI				S	S	20 04 49.8	-15
	9.3nm,0.3s,baz=83,slow=15,SNR=5.8						
PINNC	Pines Island,	13.23	263	P	P	20 03 50.8	+1.1
YATNC	Mamie plateau,	13.75	265	P	P	20 03 55.9	+0.7
OUENC	Ouen Island, N	13.79	264	P	P	20 03 57.0	+1.3
DZM	Mont Dzumac	14.16	265	P	P	20 04 00.5	+0.8
	1.6nm,0.3s,baz=100,slow=23,SNR=15						
DZM	Mont Dzumac	14.16	265	P	P	20 04 00.2	+0.4
DZM	Mont Dzumac	14.16	265	P	P	20 04 01.7	+1.9
NOUC	Port Laguerre	14.29	265	P	P	20 04 02.6	+1.6
OUZ	Omahuta	15.31	206	P	P	20 04 11.1	-0.6
BKZ	Black Stump Fm	18.06	193	P	P	20 04 38.9	-1.8
QRZ	Quartz Range	20.68	200	P	P	20 05 03.4	-1.4
OXZ	Oxford	23.11	198	P	P	20 05 26.4	-0.3
HNR	Honiara	24.15	297	P	P	20 05 36.9	+0.5
	106nm,0.4s,baz=112,slow=11,SNR=6.0						
CTA	Charters Tower	33.10	266	P	P	20 06 54.7	0.0
	5.4nm,0.8s,baz=107,slow=4.7,SNR=1.8						
CTAO	Charters Tower	33.10	266	P	P	20 06 55.9	+1.2
	7.6nm,1.4s						
TOO	Toolangi	35.02	235	P	P	20 07 10.4	-0.3
TOO				IAmb	IAmb	20 07 11.8	
	comp=Z,21nm,1.3s						
TOO	Toolangi	35.02	235	P	P	20 07 10.4	-0.3
	comp=Z,14nm,1.0s						
STKA	Stephens Creek	37.05	245	P	P	20 07 27.5	-0.2
	comp=Z,5.0nm,0.7s,baz=97,slow=11,SNR=13						
STKA	Stephens Creek	37.05	245	P	P	20 07 28.1	+0.4
STKA	Stephens Creek	37.05	245	P	P	20 07 27.9	+0.2
	comp=Z,1.8nm,0.9s						
LCRK	Leigh Creek	39.84	248	P	P	20 07 51.2	+0.6
	comp=Z,10nm,1.3s						
BBOO	Buckleboo	41.80	245	P	P	20 08 05.6	-0.7
BBOO				IAmb	IAmb	20 08 06.4	
	comp=Z,8.7nm,0.8s						
AS31	Alice Springs	43.99	258	P	P	20 08 24.4	+0.7
AS31				IAmb	IAmb	20 08 24.6	
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	43.99	258	P	P	20 08 23.6	-0.1
	comp=Z,2.1nm,0.6s,baz=96,slow=7.8,SNR=42						
ASAR				PcP	PcP	20 10 00.2	+0.2
	comp=Z,0.3nm,0.5s,baz=117,slow=3.9,SNR=2.1						
WRA	Warramunga Arr	44.17	263	P	P	20 08 24.1	-1.0
	comp=Z,1.1nm,0.5s,baz=92,slow=8.2,SNR=22						
WRA	Warramunga Arr	44.17	263	IAmb	IAmb	20 08 25.7	
	comp=Z,0.2nm,0.8s						
FORT	Forrest	48.59	248	P	P	20 08 58.1	-0.6
VNDA	Vanda	56.79	185	P	P	20 09 57.6	+0.7
	comp=Z,1.8nm,0.9s,baz=26,slow=7.2,SNR=1.8						
VNDA	Vanda	56.79	185	IAmb	IAmb	20 09 59.0	
	comp=Z,6.8nm,1.2s						
PSA00	Pilbara Seismi	57.14	258	P	P	20 10 00.0	-0.2
PSA00				IAmb	IAmb	20 10 25.7	
	comp=Z,17nm,1.5s						
QSPA	South Pole Qui	68.47	180	P	P	20 11 13.6	+0.4
QSPA				IAmb	IAmb	20 11 14.7	
	comp=Z,7.2nm,1.1s						
NVAR	Mina Array Bea	82.03	43	P	P	20 12 30.6	+0.9
	comp=Z,0.1nm,0.3s,baz=226,slow=11,SNR=3.6						
SNAA	Sanae	86.92	179	P	P	20 12 52.1	-1.0
VNA3	Neumayer Olymp	87.06	176	P	P	20 12 52.9	-0.8
VNA2	Neumayer--Watz	87.50	177	P	P	20 12 54.7	-1.1
	baz=148,slow=3.6						
TXAR	Lajitas Array	87.90	57	P	P	20 12 59.4	+0.9
	comp=Z,0.5nm,0.8s,baz=256,slow=5.0,SNR=4.1						
TXAR	Lajitas Array	87.90	57	P	P	20 12 58.8	+0.4
CMAR	Chiang Mai Arr	90.20	290	P	P	20 13 11.6	+2.3
	comp=Z,0.9nm,0.7s,baz=148,slow=4.0,SNR=6.8						
AKASG	Malin Array Be	143.82	330	PKP	PKPab	20 19 38.7	-0.3
	comp=Z,0.2nm,0.3s,baz=46,slow=4.4,SNR=4.3						
GERES	GERESS Array B	151.17	343	PKPbc	PKiKP	20 19 59.2	-0.1
	comp=Z,0.3nm,0.5s,baz=18,slow=4.1,SNR=2.6						
TORD	Torodi Ar. Bea	171.59	180	PKPab	PKPab	20 21 38.1	-0.2
	comp=Z,0.3nm,0.5s,baz=188,slow=4.1,SNR=5.2						

IDC ***23*** *20:01:45.5±1.7, 44°.35N×105°.38W, h0^{km}, mb1 3.4/3, mb1mx3.2/40, mbtmp3.1/3, ML2.9/3, Error ellipse: s-maj=47.1km s-min=9.3km az=144.0*
NEIC ***23*** *20:01:47.9±1.8, 44°.36N±0°.02×105°.43W±0°.06, h0^{km}±2^{km}, ML3.3/46, Error ellipse: s-maj=8.0km s-min=3.4km az=287.0*
ISC 23 20:01:46.1±0.9**, 44°.51N**±0°.04×**105°.37W**±0°.05**, h0**^{km}**, n36, σ1^{s}86**/36**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.03	112	Pn	Pn	20 02 09.2	+1.2
K22A	Casper	2.04	205	Pn	Pn	20 02 20.5	-1.4
K22A				IAML		20 02 50.5	
	comp=E,206nm,1.0s						
K22A				IAML		20 02 51.0	
	comp=N,402nm,0.8s						
LAO	LASA Array	2.26	345	Pn	Pb	20 02 27.1	-0.7
LAO				IAML		20 03 14.1	
	comp=N,196nm,0.8s						
RLMT	Red Lodge	2.84	284	Pn	Pn	20 02 34.5	+1.5
RLMT				IAML		20 03 30.5	
	comp=N,63nm,1.0s						
RWWY	Rawlins	3.13	206		Pn	20 02 37.0	0.0
RWWY				IAML		20 03 21.7	
	comp=N,63nm,0.6s						
RWWY				IAML		20 03 22.3	
	comp=N,112nm,0.9s						
PHWY	Pilot Hill	3.21	181	Pn	Pn	20 02 37.6	-0.5
PHWY				IAML		20 03 42.7	
	comp=N,68nm,0.7s						
GCMT	Greycliff	3.30	294	Pn	Pn	20 02 40.8	+1.6
YMP	Mirror Lake Pl	3.43	275	Pn	Pn	20 02 42.3	+1.2
YMP				IAML		20 03 41.0	
	comp=N,104nm,1.0s						
YMP				IAML		20 03 43.5	
	comp=E,117nm,0.8s						
BW06	Boulder Array	3.51	242	Pn	Pn	20 02 43.7	+1.6
BW06				IAML		20 03 38.6	
	comp=E,46nm,0.9s						
BW06				IAML		20 03 43.7	
	comp=E,62nm,0.9s						
PD31	Pinedale Array	3.51	242	Pn	Pn	20 02 42.5	+0.4
PDAR	Pinedale Array	3.51	242	Pn	Pn	20 02 44.0	+1.9
	comp=E,1.1nm,0.3s,baz=67,slow=16,SNR=17						
PDAR				Pg	Pb	20 02 50.9	+1.6
	comp=E,3.1nm,0.3s,baz=67,slow=19,SNR=36						
PDAR				Lg	Lg	20 03 31.2	
	comp=E,5.3nm,0.3s,baz=64,slow=37,SNR=14						
PDAR	Pinedale Array	3.51	242		Pn	20 02 43.2	+1.1
H17A	Grant Village	3.73	270	Pn	Pn	20 02 44.3	-1.0
LOHW	Long Hollow	3.88	258	Pn	Pn	20 02 47.2	0.0
YHH	Holmes Hill	3.92	276	Pn	Pn	20 02 50.6	+2.7
YHH				IAML		20 03 54.7	
	comp=N,40nm,1.1s						
MOOW	Moose Ponds	3.95	261		Pb	20 02 59.2	+2.5
YMR	Madison River	4.00	274		Pb	20 02 58.0	+0.3
YMR				IAML		20 04 10.1	
	comp=E,65nm,0.9s						
YMR				IAML		20 04 44.5	
	comp=N,67nm,0.6s						
DGMT	Dagmar	4.04	11	Pn	Pn	20 02 49.4	+0.2
REDW	Red Top Meadow	4.13	256		Pb	20 03 01.0	+1.3
REDW				IAML		20 04 08.0	
	comp=N,38nm,1.1s						
REDW				IAML		20 04 13.0	
	comp=N,48nm,1.2s						
OGNE	Ogallala	4.33	144		Pb	20 03 05.8	+2.7
QLMT	Earthquake Lak	4.34	276		Pb	20 02 59.8	-3.5
AHID	Auburn Hatcher	4.51	249		Pb	20 03 05.5	-0.8
AHID				IAML		20 04 12.9	
	comp=N,29nm,0.8s						
AHID				IAML		20 04 20.3	
	comp=N,31nm,1.9s						
ECR	Eagle Creek	4.59	254		Pb	20 03 03.3	-4.3
EGMT	Eagleton	4.65	321		Pn	20 03 01.1	+3.5
ISCO	Idaho Springs	4.71	182		Pn	20 03 01.9	+3.1
ISCO				IAML		20 03 57.6	
	comp=N,16nm,0.8s						
ISCO				IAML		20 04 30.9	
	comp=N,20nm,0.9s						
O20A	White River Ci	4.87	207	Pn	Pn	20 03 02.7	+1.9
O20A				IAML		20 04 33.8	
	comp=E,37nm,1.2s						
O20A				IAML		20 04 36.6	
	comp=N,41nm,1.3s						
RDMU	Red Mountain	5.01	220		Pb	20 03 13.6	-1.3
RDMU				IAML		20 04 22.3	
	comp=N,24nm,1.0s						
RDMU				IAML		20 04 32.6	
	comp=E,34nm,0.9s						
HRY	Holter Researc	5.04	298		Pb	20 03 12.7	-2.6
DLMT	Dillon	5.20	282		Pg	20 03 23.8	-2.1
MDND	Maddock	5.21	48		Pg	20 03 25.5	-0.5
HVU	Hansel Valley	6.07	246	Pn	Pn	20 03 18.3	+1.1
P18A	Preston Nutter	6.08	218	Pn	Pn	20 03 19.0	+1.4
P17A	Butcher Ranch,	6.43	220		Pn	20 03 23.9	+1.6
MSO	Missoula	6.44	294	Pn	Pn	20 03 24.4	+2.1
ULM	Lac du Bonnet	8.62	45	Pn	Pn	20 03 49.9	-2.2
	comp=E,0.4nm,0.3s,baz=230,slow=12,SNR=1.7						
ULM				Lg	Lg	20 06 16.8	
	comp=E,0.2nm,0.3s,baz=179,slow=20,SNR=1.3						
YKA	Yellowknife Ar	18.80	347	P	Pn	20 06 09.1	+1.9
	comp=E,0.0nm,0.3s,baz=162,slow=12,SNR=3.8						

NOU ***23*** *20:09:50.7, 30°.11S×178°.08W, h223^{km}, mb4.9/38, Kermadec Islands, New Zealand*
NEIC ***23*** *20:09:55.4±1.6, 29°.85S±0°.08×178°.9W±0°.1, h236^{km}±5^{km}, mb4.9/104, Error ellipse: s-maj=13.7km s-min=11.1km az=122.0*
IDC ***23*** *20:09:55.7±0.5, 29°.73S×178°.82W, h239^{km}±4^{km}, mb4.3/22, mb1 4.5/24, mb1mx4.2/41, mbtmp4.9/24, Error ellipse: s-maj=12.8km s-min=11.1km az=145.0*
GCMT ***23*** *20:09:57.4±0.4, 29°.84S±0°.02×178°.66W±0°.03, h252^{km}±3^{km}, MW5.2/71, Moment Tensor Solution. s35,c37; s71,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.41±.24; $M_{\theta\theta}$-2.24±.27; $M_{\phi\phi}$3.65±.25; $M_{r\theta}$-4.34±.22; $M_{\theta\phi}$3.81±.20; $M_{\phi r}$-1.12±.23; Best double couple: $M_0$6.69100×10^{16} NP1:ϕ_s165.00000°, δ47.00000°, λ-168.00000°. NP2:ϕ_s67.00000°, δ81.00000°, λ-44.00000°. Principal axes: T 6.7250, Plg22.0000°, Azm124.0000°; N -0.0690, Plg45.0000°, Azm238.0000°; P -6.6560, Plg36.0000°, Azm16.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 20:09:55.4±0.3**, 30°.06S**±0°.04×**178°.76W**±0°.06**, h250**^{km}**, n473, σ1^{s}71**/492**, mb4.8**/76**, 37C-22D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.08	43	P	Pn	20 10 30.2	-0.7
RIZ	Raoul Island	1.09	42	P	Pn	20 10 30.9	0.0
RAO	Raoul Island	1.09	42	P	Pn	20 10 29.8	-1.2
	1µm,0.3s,baz=105,slow=3.9,SNR=48						
RAO				S	S	20 10 54.6	-4.3
	baz=50,slow=20,SNR=3.9						
RAO	Raoul Island	1.09	42		Pn	20 10 29.5	-1.5
GRZ	Great Barrier	7.85	217	P	Pn	20 11 50.6	+4.0
MXZ	Matakaoa Point	7.87	197	P	Pn	20 11 44.2	-2.7
MXZ				S	S	20 13 14.2	-2.5
MXZ	Matakaoa Point	7.87	197	Pn	Pn	20 11 43.9	-3.0
WMGZ	Waiomatatini S	8.09	196	P	Pn	20 11 47.7	-2.0
WMGZ				S	S	20 13 21.1	-0.7
HAZ	Te Kaha	8.20	200	P	Pn	20 11 48.9	-2.2
PKGZ	Pakihiroa	8.24	198	P	Pn	20 11 48.7	-2.9
PKGZ				S	S	20 13 21.5	-3.9
OUZ	Omahuta	8.24	229	Pn	Pn	20 11 50.2	-1.5
PUZ	Puketiti	8.36	196	P	Pn	20 11 50.0	-3.2
PUZ				S	S	20 13 25.4	-2.8
RUGZ	Raukumara Rang	8.42	200	P	Pn	20 11 51.7	-2.4
RUGZ				S	S	20 13 26.5	-3.2
TWGZ	Tauwhareparae	8.53	198	P	Pn	20 11 52.9	-2.5
TWGZ				S	S	20 13 30.2	-2.0
WHRZ	Whale Island	8.54	203	P	Pn	20 11 56.7	+1.2
OPRZ	Ohinepanea	8.68	205	P	Pn	20 11 56.0	-1.3
MARZ	Manawahe	8.76	204	P	Pn	20 11 59.5	+1.3
CNGZ	Carnagh Statio	8.77	196	P	Pn	20 11 55.3	-3.0
MWZ	Matawai	8.80	199	P	Pn	20 11 56.0	-2.9
MWZ				S	S	20 13 35.0	-3.6
TKGZ	Te Karaka	8.81	198	P	Pn	20 11 56.1	-2.8
TKGZ				S	S	20 13 35.8	-2.9
URZ	Urewera	8.86	202	P	Pn	20 11 57.7	-1.7
	2.7nm,0.3s,baz=171,slow=2.7,SNR=22						
URZ				S	S	20 13 34.2	-5.6
	48nm,0.3s,baz=238,slow=2.3,SNR=7.9						
URZ	Urewera	8.86	202	P	Pn	20 11 57.8	-1.7
URZ	Urewera	8.86	202	Pn	Pn	20 11 56.5	-3.0
RAGZ	Rawiri	8.99	200	P	Pn	20 11 58.9	-2.3
RAGZ				S	S	20 13 37.0	-5.8
TARZ	Mount Tarawera	9.05	204	P	Pn	20 12 03.9	+2.0
RIGZ	Rimuhau	9.09	197	P	Pn	20 11 59.9	-2.5
RIGZ				S	S	20 13 39.7	-5.4
MUGZ	Murupara	9.17	203	P	Pn	20 12 00.6	-2.8
MUGZ				S	S	20 13 43.8	-3.2
RTZ	Ruatahuna	9.23	201	P	Pn	20 12 01.1	-3.1
PRGZ	Paritu Road	9.26	196	P	Pn	20 12 01.5	-3.1
SNGZ	Shannon Statio	9.28	199	P	Pn	20 12 02.3	-2.5
SNGZ				S	S	20 13 45.9	-3.6
PRRZ	Plateau Road	9.32	204	P	Pn	20 12 06.6	+1.3
ALRZ	Allen Road	9.39	204	P	Pn	20 12 04.3	-2.0
RAHZ	Arahi	9.47	200	P	Pn	20 12 04.9	-2.4
RAHZ				S	S	20 13 49.7	-4.3
MHGZ	Mahia Peninsul	9.47	196	P	Pn	20 12 04.2	-3.1
MHGZ				S	S	20 13 48.4	-5.6
MTHZ	Maungataniwha	9.49	201	P	Pn	20 12 04.5	-3.0
MTHZ				S	S	20 13 51.5	-3.0
TLZ	Tolley Road	9.50	208	P	Pn	20 12 10.8	+3.2
MRHZ	Matea Rd	9.61	203	P	Pn	20 12 06.3	-2.7
NMHZ	Naumai	9.72	201	P	Pn	20 12 07.7	-2.8
ARHZ	Aropaoanui	9.82	200	P	Pn	20 12 08.4	-3.1
BKZ	Black Stump Fm	9.89	202	Pn	Pn	20 12 08.6	-3.9
BKZ	Black Stump Fm	9.89	202	P	Pn	20 12 09.0	-3.5
HIZ	Hauiti	9.95	210	Pn	Pn	20 12 14.2	+1.0
HIZ	Hauiti	9.95	210	P	Pn	20 12 14.2	+1.0
MCHZ	McNeill Hill	10.08	201	P	Pn	20 12 11.0	-3.8
KWHZ	Kaweka Forest	10.14	202	P	Pn	20 12 11.9	-3.8
BFZ	Birch Farm	11.35	200	Pn	Pn	20 12 25.8	-5.0
NFK	Norfolk Island	11.63	272	P	P	20 12 38.7	+0.8
	294nm,1.1s						
LKBA	Tubou, Lakemba	11.78	360	P	Pn	20 12 31.9	-4.4
MSWZ	Moikau Station	12.33	202	Pn	Pn	20 12 37.6	-5.3
SNZO	South Karori	12.41	204	Pn	Pn	20 12 38.8	-5.2
PLWZ	Palliser	12.46	201	Pn	Pn	20 12 41.5	-3.2
MSVF	Nonsavu	12.61	346	P	Pn	20 12 44.4	-2.4
	10nm,0.3s,baz=153,slow=11,SNR=46						
MSVF	Nonsavu	12.61	346	Pn	Pn	20 12 44.3	-2.5
MSVF	Nonsavu	12.61	346	P	Pn	20 12 45.5	-1.3
TUWZ	Tuamarina	12.79	206		Pn	20 12 43.3	-5.3
NNZ	Nelson	12.83	208	Pn	Pn	20 12 45.2	-3.8
QRZ	Quartz Range	12.87	211	Pn	Pn	20 12 46.5	-3.1
QRZ	Quartz Range	12.87	211	P	Pn	20 12 47.1	-2.5
BSWZ	Blackbirch Sta	13.06	205	P	Pn	20 12 48.1	-3.8
TAVE	Taveuni	13.33	355	P	Pn	20 12 54.7	-0.8
THZ	Tophouse	13.48	208	Pn	Pn	20 12 53.8	-3.3
NIUE	Niue	13.56	38	Pn	Pn	20 12 57.4	-0.9
DGTI	Dogotuki	13.77	354	P	Pn	20 12 58.2	-2.6
KHZ	Kahutara	13.80	205	Pn	Pn	20 12 57.1	-3.8
PINNC	Pines Island,	14.41	298	Pn	P	20 13 09.7	+0.9
PINNC	Pines Island,	14.41	298	P	P	20 13 10.1	+1.3
LTZ	Lake Taylor	14.59	207		Pn	20 13 07.6	-3.0
MARNC	Mare, Loyalty	14.64	303	P	P	20 13 09.3	-2.0
MARNC	Mare, Loyalty	14.64	303	P	Pn	20 13 14.5	+3.2
OUENC	Ouen Island, N	14.99	297		Pn	20 13 15.4	-0.1
OUENC	Ouen Island, N	14.99	297	P	Pn	20 13 17.5	+2.0
OXZ	Oxford	15.14	207	P	P	20 13 12.8	-3.8
OXZ				IAmb	IAmb	20 13 17.3	
	comp=Z,30nm,0.5s						
YATNC	Mamie plateau,	15.15	298	P	Pn	20 13 19.6	+2.1
MQZ	McQueen's Vall	15.24	204		P	20 13 13.5	-4.2
MQZ				IAmb	IAmb	20 13 17.6	
	comp=Z,98nm,1.5s						
ONTNC	Ouen Toro	15.35	297		P	20 13 17.2	-1.9
ONTNC	Ouen Toro	15.35	297	P	Pn	20 13 22.4	+2.6
DZM	Mont Dzumac	15.48	297	P	Pn	20 13 22.7	+1.1
	comp=Z,11nm,0.3s,baz=132,slow=13,SNR=110						
DZM	Mont Dzumac	15.48	297	P	Pn	20 13 21.3	-0.3
DZM	Mont Dzumac	15.48	297	P	Pn	20 13 24.1	+2.5
NOUC	Port Laguerre	15.58	297	P	Pn	20 13 24.0	+1.4
LIFNC	LIFOU	15.65	303	P	P	20 13 21.3	-1.2
LIFNC	LIFOU	15.65	303	P	Pn	20 13 25.0	+1.5
FOZ	Fox Glacier	16.24	211		P	20 13 26.3	-2.4
FOZ				IAmb	IAmb	20 13 42.3	
	comp=Z,58nm,1.3s						
LBZ	Lake Benmore	16.77	208	P	P	20 13 33.7	-0.8
ODZ	Otahua Downs	17.13	206	P	P	20 13 37.8	-0.6
ODZ	Otahua Downs	17.13	206	P	P	20 13 38.6	+0.2
AFI	Afiamalu	17.32	23	P	P	20 13 37.9	-2.9
	comp=Z,24nm,0.3s,baz=234,slow=18,SNR=11						
AFI				S	S	20 16 33.0	-15
	comp=Z,7.7nm,0.3s,baz=81,slow=22,SNR=6.4						
WKZ	Wanaka	17.62	210	P	P	20 13 42.0	-1.7
WKZ				IAmb	IAmb	20 14 03.7	
	comp=Z,80nm,1.5s						
KOUNC	Koumac, New Ca	18.00	298	P	Pn	20 13 50.9	-0.2
MLZ	Mavora Lakes	18.43	210	P	P	20 13 51.6	-0.9
MLZ				IAmb	IAmb	20 14 07.3	
	comp=Z,33nm,1.4s						
WHZ	Wether Hill Ro	18.92	210	P	P	20 13 56.4	-1.4
WHZ				IAmb	IAmb	20 14 01.8	
	comp=Z,48nm,1.4s						
DCZ	Deep Cove	18.94	212	P	Pn	20 14 00.0	-1.8

DCZ				IAmb	IAmb	20 14 29.0	
	comp=Z,39nm,1.5s						
SANVU	Saraoutou	19.44	315	P	P	20 14 00.3	-3.2
SANVU				IAmb	IAmb	20 14 24.3	
	comp=Z,37nm,0.8s						
SANVU	Saraoutou	19.44	315	P	P	20 14 05.3	+1.7
ARMA	Armidale	25.55	262	P	P	20 15 03.3	+1.5
EIDS	Eidsvold	27.06	273	P	P	20 15 15.9	+0.8
TARA	Tarawa	32.23	344	P	P	20 15 59.7	-0.9
TARA	Tarawa	32.23	344	P	P	20 15 59.1	-1.6
CTA	Charters Tower	33.09	279	P	P	20 16 09.8	+1.6
	comp=Z,13nm,0.7s,baz=100,slow=11,SNR=12						
CTAO	Charters Tower	33.09	279	P	P	20 16 09.3	+1.1
CTAO				IAmb	IAmb	20 16 15.7	
	comp=Z,18nm,0.8s						
CTAO	Charters Tower	33.09	279	P	P	20 16 10.8	+2.6
STKA	Stephens Creek	33.91	257	P	P	20 16 16.9	+1.8
	comp=Z,5.8nm,0.6s,baz=92,slow=8.8,SNR=14						
STKA				ScP	ScP	20 22 09.1	+0.9
	comp=Z,1.5nm,0.7s,baz=104,slow=5.1,SNR=3.5						
STKA	Stephens Creek	33.91	257	P	P	20 16 16.4	+1.2
STKA	Stephens Creek	33.91	257	P	P	20 16 18.4	+3.3
	comp=Z,2.7nm,0.9s						
LCRK	Leigh Creek	37.00	258	P	P	20 16 43.6	+2.3
	comp=Z,23nm,0.8s						
PMG	Port Moresby	37.87	296	ScP	ScP	20 22 24.2	+1.3
	comp=Z,8.5nm,0.8s,baz=127,slow=5.1,SNR=4.3						
BBOO	Buckleboo	38.43	254	P	P	20 16 54.2	+0.9
COEN	Coen	38.55	286	P	P	20 16 54.1	-0.3
OOD	Oodnadatta	39.73	262	P	P	20 17 07.7	+3.7
	comp=Z,18nm,0.7s						
AS31	Alice Springs	42.47	267	P	P	20 17 26.1	-0.3
ASAR	Alice Springs	42.47	267	P	P	20 17 26.1	-0.2
	comp=Z,1.4nm,0.4s,baz=104,slow=6.7,SNR=33						
ASAR				PcP	PcP	20 19 14.9	+0.6
	comp=Z,3.7nm,0.7s,baz=114,slow=4.7,SNR=6.4						
ASAR				ScP	ScP	20 22 41.5	+0.6
	comp=Z,6.8nm,0.9s,baz=117,slow=4.5,SNR=17						
ASAR				S	S	20 23 27.4	-1.9
	comp=Z,2.0nm,1.1s,baz=113,slow=16,SNR=5.7						
ASAR	Alice Springs	42.47	267	P	P	20 17 25.4	-0.9
ASAR				ScP	ScP	20 22 40.8	-0.1
WR0	Warramunga Arr	43.25	272	P	P	20 17 31.6	-1.0
WB2	Warramunga Arr	43.42	272	P	P	20 17 33.4	-0.6
WB2				IAmb	IAmb	20 17 36.1	
	comp=Z,24nm,0.6s						
WRAB	Tennant Creek	43.42	272	P	P	20 17 33.3	-0.7
WRAB				IAmb	IAmb	20 17 36.1	
	comp=Z,22nm,0.7s						
WRAB	Tennant Creek	43.42	272	P	P	20 17 35.3	+1.3
WRA	Warramunga Arr	43.43	272	P	P	20 17 33.6	-0.4
	comp=Z,13nm,0.5s,baz=112,slow=6.4,SNR=139						
WRA				PcP	PcP	20 19 18.3	+0.7
	comp=Z,6.9nm,0.7s,baz=114,slow=3.3,SNR=8.9						
WRA				ScP	ScP	20 22 45.2	+0.4
	comp=Z,7.1nm,1.0s,baz=110,slow=4.3,SNR=13						
WRA				S	S	20 23 39.4	-3.9
	comp=Z,3.4nm,1.0s,baz=108,slow=14,SNR=5.3						
WRA	Warramunga Arr	43.43	272	P	P	20 17 33.3	-0.8
WRA				ScP	ScP	20 22 45.1	+0.2
WB0	Warramunga Arr	43.45	272	P	P	20 17 33.5	-0.7
WB0				IAmb	IAmb	20 17 36.3	
	comp=Z,21nm,0.7s						
FORT	Forrest	45.50	255	P	P	20 17 50.0	-0.2
VNDA	Vanda	48.37	186	P	P	20 18 16.4	+4.8
	comp=Z,1.5nm,0.6s,baz=31,slow=7.7,SNR=9.2						
VNDA	Vanda	48.37	186	P	P	20 18 12.2	+0.6
MTN	Manton Dam	49.28	279	P	P	20 18 16.7	-2.7
MTN				IAmb	IAmb	20 18 18.9	
	comp=Z,86nm,1.4s						
KNRA	Kununurra	50.02	274	P	P	20 18 24.5	-0.5
KNRA				IAmb	IAmb	20 18 48.9	
	comp=Z,50nm,1.3s						
FITZ	Fitzroy Crossi	51.70	270	P	P	20 18 38.6	+1.2
	comp=Z,6.3nm,0.8s,baz=74,slow=4.2,SNR=9.0						
HMH	Humu‘ula Sheep	54.23	27	P	P	20 18 56.6	+0.5
SIJI	Sorong	55.60	292	P	P	20 19 06.0	+0.3
	comp=Z,7.5nm,0.5s,baz=23,slow=7.7,SNR=5.4						
MORW	Morawa	56.00	253	P	P	20 19 08.4	+0.1
QSPA	South Pole Qui	60.05	180	P	P	20 19 40.2	+4.3
	comp=Z,14nm,0.6s,baz=344,slow=0.7						
QSPA	South Pole Qui	60.05	180	IAmb	IAmb	20 19 41.3	
	comp=Z,49nm,1.5s						
SBUM	Sibu	73.20	283	P	P	20 20 59.5	0.0
JOW	Kunigami	75.95	313	P	P	20 21 14.7	-0.2
JSG	Sagara	76.12	325	P	P	20 21 15.7	0.0
JYT	Yasato	76.39	327	P	P	20 21 16.8	-0.3
MDSI	Maura Dua	76.57	273	P	P	20 21 17.3	-1.5
	comp=Z,656nmcomp=Z,19nm,0.6s						
INU	Inuyama	77.24	324	P	P	20 21 20.6	-1.3
INU	Inuyama	77.24	324	P	P	20 21 21.5	-0.5
JGF	Kuroka	77.27	325	P	P	20 21 21.4	-0.8
JGF				IAmb	IAmb	20 21 22.2	
	comp=Z,30nm,0.8s						
SYO	Syowa Base	77.29	193	⇓*e*P	P	20 21 22.4	+0.6
SYO	Syowa Base	77.29	193	⇑*e*PcP	PcP	20 21 32.0	+0.7
MJAR	Matsushiro Arr	77.59	326	P	P	20 21 23.2	-0.7
	comp=Z,34nm,0.9s,baz=160,slow=5.1,SNR=42						
MJAR	Matsushiro Arr	77.59	326	P	P	20 21 22.8	-1.1
MJAR				IAmb	IAmb	20 21 24.1	
	comp=Z,46nm,1.0s						
MAJO	Matsushiro	77.59	326	P	P	20 21 22.8	-1.1
MAJO	Matsushiro	77.59	326	P	P	20 21 23.4	-0.5
MAT	Matsushiro	77.59	326	P	P	20 21 22.8	-1.1
MJB9	Matsu-Tunnel	77.60	326	P	P	20 21 22.7	-1.2
JSU	Suzuyama	77.94	317	P	P	20 21 24.9	-1.0
JWT	Wachi	78.02	323	P	P	20 21 25.5	-0.8
TWG	Pinlang	78.13	305	P	P	20 21 24.1	-3.0
TWG				IAmb	IAmb	20 21 25.9	
	comp=Z,20nm,0.6s						
YULB	Yu-li	78.33	306	P	P	20 21 26.8	-1.5
YULB				IAmb	IAmb	20 21 27.5	
	comp=Z,14nm,0.8s						
SNAA	Sanae	78.51	179	P	P	20 21 30.9	+2.3
SNAA	Sanae	78.51	179	pP	pP	20 22 30.1	+2.9
SNAA	Sanae	78.51	179	P	P	20 21 30.8	+2.2
NACB	Ninganchiao	78.63	306	P	P	20 21 29.1	-0.7
NACB				IAmb	IAmb	20 21 30.0	
	comp=Z,29nm,1.0s						
VNA3	Neumayer Olymp	78.68	176	P	P	20 21 31.7	+2.2
VNA3	Neumayer Olymp	78.68	176	pP	pP	20 22 30.2	+2.1
TPUB	Ta-pu	78.75	305	P	P	20 21 28.6	-1.9
TPUB	Ta-pu	78.75	305	P	P	20 21 29.1	-1.4
JSD	Sado	78.76	327	P	P	20 21 30.0	-0.2
SSLB	Suanglung	78.83	306	P	P	20 21 28.8	-2.2
JNU	Nakatsue	78.87	319	P	P	20 21 30.7	-0.3
	comp=Z,37nm,1.0s,baz=76,slow=5.8,SNR=4.9						
JNU	Nakatsue	78.87	319	P	P	20 21 30.3	-0.7
JHS	Saijyo	79.02	321	P	P	20 21 31.3	-0.4
YHNB	Yeheng	79.10	307	P	P	20 21 31.1	-1.4
YHNB				IAmb	IAmb	20 21 33.9	
	comp=Z,32nm,1.2s						
VNA2	Neumayer--Watz	79.11	177	P	P	20 21 34.4	+2.6
	baz=181,slow=5.0						
VNA1	Neumayer--Stat	79.34	177	P	P	20 21 35.7	+2.7
VNA1	Neumayer--Stat	79.34	177	pP	pP	20 22 34.3	+2.6
JTM	Tenmabayashi	79.71	330	P	P	20 21 35.1	-0.1
H03S2	Juan Fernandez	81.20	124	T	T	21 52 04.2	
	baz=241						
H03S1	Juan Fernandez	81.21	124	T	T	21 52 06.0	
	baz=241						
H03S3	Juan Fernandez	81.22	124	T	T	21 52 00.2	
	baz=241						
H03N3	Juan Fernandez	81.39	124	T	T	21 51 52.4	
	baz=235,slow=74						
H03N2	Juan Fernandez	81.39	124	T	T	21 51 54.8	
	baz=235						
H03N1	Juan Fernandez	81.41	124	T	T	21 51 51.0	
	baz=235,slow=74						
JKA	Kamikawa-asahi	81.84	333	P	P	20 21 46.5	+0.1
ASAJ	Asahikawa	81.84	333	P	P	20 21 47.3	+0.9
	comp=Z,35nm,0.8s,baz=218,slow=6.4,SNR=27						
TJN	Taejon	83.22	319	P	P	20 21 54.3	+0.6
PLCA	Paso Flores	83.22	133	P	P	20 21 57.4	+3.4
	comp=Z,3.5nm,0.9s,baz=267,slow=8.1,SNR=3.5						
PLCA	Paso Flores	83.22	133	IAmb	IAmb	20 21 58.4	
	comp=Z,14nm,1.2s						
KSRS	Korea Array	83.67	320	P	P	20 21 56.8	+0.9
	comp=Z,14nm,0.8s,baz=144,slow=5.9,SNR=39						
KSAR	Wonju Array Be	83.68	320	P	P	20 21 55.2	-0.8
KS19	Wonju Array Si	83.73	320	P	P	20 21 55.9	-0.4
KS19				IAmb	IAmb	20 21 57.6	
	comp=Z,34nm,1.1s						
YSS	Yuzh-Sakhalins	84.16	335	P	P	20 21 58.8	+0.6
YSS	Yuzh-Sakhalins	84.16	335	P	P	20 21 59.8	+1.6
GSI	Gunungsitoli	85.16	274	P	P	20 22 05.0	+0.9
PETK	Petropavlovsk-	85.32	346	P	P	20 22 04.1	+0.2
	comp=Z,11nm,0.6s,baz=142,slow=7.4,SNR=8.8						
NJ2	Nanjing	85.53	311	⇓P	P	20 22 04.4	-1.0
NJ2				pmax	pmax		
	comp=Z,24nm,0.8s						
UBPT	Khong Chiam	85.69	290	P	P	20 22 07.5	+1.0
UBPT				IAmb	IAmb	20 22 08.6	
	comp=Z,15nm,1.0s						
ARVC	Arvin	85.95	45	P	P	20 22 08.1	+0.7
	baz=229						
MURC	Murrieta	85.98	47	P	P	20 22 08.0	+0.3
	baz=230						
MONP2	Monument Peak	86.03	48	P	P	20 22 09.1	+1.0
	baz=230						
IKP	In-Ko-Pah, Jac	86.08	49	P	P	20 22 08.8	+0.6
	baz=230						
BFSC	Mount Baldy Ra	86.10	47	P	P	20 22 08.8	+0.4
	baz=230						
EDW2	Edwards Air Fo	86.31	46	P	P	20 22 10.1	+0.8
	baz=229,SNR=5.2						
PFO	Pinyon Flats O	86.46	48	P	P	20 22 10.4	+0.3
	baz=230						
TPFO	Pinon Flats	86.46	48	P	P	20 22 10.3	+0.2
	baz=230						
SWSC	Sam W. Stewart	86.47	49	P	P	20 22 11.1	+1.1
	baz=231						
USA0B	Ussuriysk Arra	86.52	327	P	P	20 22 10.8	+0.9
USRK	Ussuriysk Ar.	86.52	327	P	P	20 22 10.8	+0.9
	comp=Z,26nm,0.8s,baz=130,slow=3.8,SNR=28						
USRK	Ussuriysk Ar.	86.52	327	P	P	20 22 10.0	+0.1
ISA	Isabella, Lake	86.52	45		P	20 22 12.0	+1.7
ISA				IAmb	IAmb	20 22 12.8	
	comp=Z,22nm,0.9s						
ISA	Isabella, Lake	86.52	45	P	P	20 22 11.5	+1.2
	baz=229,SNR=6.0						
LRMC	Laurel Mtn Rad	86.89	46	P	P	20 22 13.2	+1.1
	baz=229						
CMB	Columbia Colle	86.95	42		P	20 22 13.1	+0.8
CMB				IAmb	IAmb	20 22 14.1	
	comp=Z,11nm,0.9s						
BELC	Belle Mtn. Jos	87.01	48	P	P	20 22 13.8	+1.1
	baz=230,SNR=6.6						
O02D	Mt. Diablo Mer	87.05	39	P	P	20 22 14.6	+1.8
	baz=226						
BC3	Big Chuckawall	87.14	48	P	P	20 22 14.7	+1.3
	baz=231,SNR=5.5						
GLA	Glamis	87.17	49	P	P	20 22 15.1	+1.7
GLA				IAmb	IAmb	20 22 16.7	
	comp=Z,28nm,1.1s						
GLA	Glamis	87.17	49	P	P	20 22 15.0	+1.6
	baz=231						
CWC	Cottonwood Cre	87.27	45	P	P	20 22 14.6	+0.6
	baz=229						
HEC	Hector,Ludlow	87.32	47	P	P	20 22 14.7	+0.6
	baz=230						
GSC	Goldstone, Bar	87.32	46	P	P	20 22 14.6	+0.5
GSC				IAmb	IAmb	20 22 16.6	
	comp=Z,23nm,1.0s						
GSC	Goldstone, Bar	87.32	46	P	P	20 22 15.0	+0.8
	baz=230,SNR=8.2						
ORV	Oroville	87.34	41	P	P	20 22 14.9	+0.9
MPMC	Manual Prospec	87.39	45	P	P	20 22 15.1	+0.5
	baz=230,SNR=6.3						
WHN	Wuhan	87.62	307	⇓P	P	20 22 15.8	+0.3
WHN				pmax	pmax		
	comp=Z,34nm,0.9s						
IRM	Iron Mountain	87.65	48	P	P	20 22 17.1	+1.4
	baz=231,SNR=8.1						
O03E	Paynes Creek	87.68	40	P	P	20 22 16.4	+0.7
	baz=227						
QSM	Queen of Sheba	87.71	46		P	20 22 17.3	+1.4
QSM				IAmb	IAmb	20 22 18.2	
	comp=Z,15nm,1.2s						
GMRC	Granite Mounta	87.72	47	P	P	20 22 17.5	+1.4
	baz=231						
214A	Organ Pipe Nat	87.83	51	P	P	20 22 18.4	+1.9
214A				IAmb	IAmb	20 22 20.8	
	comp=Z,31nm,1.4s						
214A	Organ Pipe Nat	87.83	51	P	P	20 22 17.4	+0.8
	baz=232						
TUQ	Turquoise Moun	87.96	47	P	P	20 22 17.9	+0.7
	baz=230,SNR=5.4						
GWY	Greenwater Val	87.98	46		P	20 22 18.3	+1.0
MDJ	Mudanjiang	87.98	326	P	P	20 22 18.0	+1.1
MDJ				sP	sP	20 23 39.0	-3.2
MDJ	Mudanjiang	87.98	326	S	S	20 32 41.3	+2.9
MDJ	Mudanjiang	87.98	326	SS	SS	20 38 35.4	+2.0
MDJ				pmax	pmax		
	comp=Z,36nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,150nm,4.9s						
MDJ	Mudanjiang	87.98	326	P	P	20 22 16.2	-0.7
MDJ				IAmb	IAmb	20 22 18.7	
	comp=Z,28nm,0.9s						
MDJ	Mudanjiang	87.98	326	P	P	20 22 17.7	+0.8
L02E	Cave Junction	87.99	38	P	P	20 22 18.2	+1.2
	baz=225						
FURC	Furnace Creek,	88.04	45	P	P	20 22 18.5	+1.2
	baz=230						
SHOC	Shoshone, Teco	88.04	46	P	P	20 22 18.0	+0.6
	baz=230						
LCH	Last Change Ra	88.05	44	P	P	20 22 18.5	+0.9
PNTR	Pine Nut	88.11	42	P	P	20 22 19.3	+1.3
PNTR				IAmb	IAmb	20 22 20.1	
	comp=Z,21nm,1.0s						
LHV	Little Huntoon	88.20	43	P	P	20 22 19.7	+1.7
LHV				IAmb	IAmb	20 22 20.6	
	comp=Z,19nm,1.0s						
YERR	Yerington	88.25	42	P	P	20 22 19.7	+1.1
NEE2	Needles Airpor	88.37	48	P	P	20 22 20.2	+1.2
	baz=231						
PDMCI	Parker Dam,Lak	88.39	48	P	P	20 22 19.7	+0.7
	baz=232,SNR=7.9						
NVAR	Mina Array Bea	88.44	43	P	P	20 22 20.8	+1.3
	comp=Z,10nm,0.9s,baz=222,slow=8.9,SNR=39						
NVAR	Mina Array Bea	88.44	43	P	P	20 22 20.1	+0.6
RYN	Ryan	88.44	43	P	P	20 22 20.6	+1.1
RYN				IAmb	IAmb	20 22 21.4	
	comp=Z,12nm,1.1s						
PAHR	Pah Rah Range	88.65	42	P	P	20 22 20.7	+0.3
PAHR				IAmb	IAmb	20 22 22.4	
	comp=Z,12nm,1.1s						
TPNV	Topopah Spring	88.72	45		P	20 22 21.9	+1.1
TPNV	Topopah Spring	88.72	45	P	P	20 22 21.5	+0.7
	baz=230						
L04D	Klamath Falls	88.73	38	P	P	20 22 21.9	+1.2
	baz=226						
TPH	Tonopah	88.85	44	P	P	20 22 22.1	+0.7
KVN	Kaiserville	88.97	43		P	20 22 22.5	+0.5
KVN				IAmb	IAmb	20 22 23.8	
	comp=Z,16nm,1.2s						
TIA	Tai'an	89.26	313	P	P	20 22 23.8	+0.7
TIA				pmax	pmax		
	comp=Z,43nm,1.0s						
CN2	Changchun	89.48	323	*e*P	P	20 22 23.8	-0.1
CN2	Changchun	89.48	323	*e*S	S	20 32 53.1	+0.7
CN2				pmax	pmax		
	comp=Z,40nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,11.0s						
CN2				LR	LR		
	comp=E,200nm,11.0s						
CN2				LR	LR		
	comp=Z,400nm,14.4s						
J04D	Umpqua Nationa	89.54	38	P	P	20 22 25.5	+1.0
	baz=226						
MOD	Modoc Plateau	89.60	40	P	P	20 22 25.7	+0.9
MOD				IAmb	IAmb	20 22 26.2	
	comp=Z,12nm,1.1s						
PRN	Pahroc Range	89.75	46		P	20 22 26.4	+0.9
PRN				IAmb	IAmb	20 22 28.5	
	comp=Z,22nm,1.1s						
R11A	Troy Canyon, C	90.02	45	P	P	20 22 27.6	+0.8
	baz=231						
J05D	Fort Rock, OR	90.03	38	P	P	20 22 27.9	+1.2
	baz=227						
SLVN	Son La	90.18	295	P	P	20 22 28.7	+0.9
SLVN				IAmb	IAmb	20 22 30.4	
	comp=Z,12nm,1.1s						
BMN	Battle Mountai	90.38	42	P	P	20 22 29.5	+1.0
BMN				IAmb	IAmb	20 22 30.5	
	comp=Z,19nm,1.3s						
KLR	Kul'dur	90.41	330	P	P	20 22 29.3	+1.1
	comp=Z,14nm,0.9s,baz=105,slow=3.6,SNR=38						
PINE	Pine Mountain	90.53	38	P	P	20 22 30.4	+1.3
LCMT	Little Creek M	90.64	47	P	P	20 22 31.2	+1.6
LCMT				IAmb	IAmb	20 22 32.4	
	comp=Z,9.7nm,1.0s						
I05D	Terrebonne, OR	90.70	37	P	P	20 22 31.0	+1.4
	baz=227						
GYA	Guiyang	90.81	300	⇓P	P	20 22 32.1	+1.4
GYA				pmax	pmax		
	comp=Z,17nm,1.2s						
ENH	Enshi	90.87	305	P	P	20 22 30.8	0.0
WVOR	Wild Horse Val	90.88	40	P	P	20 22 31.4	+0.7
WVOR				IAmb	IAmb	20 22 50.5	
	comp=Z,12nm,1.1s						
U15A	North Rim	90.89	48	P	P	20 22 32.7	+1.6
U15A				IAmb	IAmb	20 22 34.0	
	comp=Z,13nm,0.8s						
CCUT	Cedar City	90.89	46	P	P	20 22 32.7	+1.7
CCUT					pP	20 23 22.6	-8.7
KNB	Kanab	90.91	47	P	P	20 22 32.8	+1.8
KNB				IAmb	IAmb	20 22 34.3	
	comp=Z,15nm,1.1s						
WUAZ	Wupatki	90.93	49	P	P	20 22 31.8	+0.7
WUAZ				IAmb	IAmb	20 22 33.9	
	comp=Z,13nm,0.8s						
WUAZ	Wupatki	90.93	49	P	P	20 22 31.3	+0.2
	baz=233						
SZCU	Shurtz Canyon	91.09	46	P	P	20 22 33.4	+1.5
SPR3	Spring Creek 3	91.19	45	P	P	20 22 33.0	+0.5
MTPU	Mount Pierson	91.93	46	P	P	20 22 37.8	+1.8
MTPU				IAmb	IAmb	20 22 39.1	
	comp=Z,11nm,1.1s						
O19K	Port Alsworth	92.15	12	P	P	20 22 37.3	+1.4
	baz=201						
MVU	Marysvale	92.19	46	P	P	20 22 38.0	+1.0
BJT	Baijiatuau	92.21	316	P	P	20 22 36.5	-0.2
BJT				IAmb	IAmb	20 22 38.3	
	comp=Z,11nm,0.7s						
MSU	Marysvale	92.22	46	P	P	20 22 38.6	+1.5
BJI	Beijing	92.22	316	P	P	20 22 37.3	+0.6
BJI	Beijing	92.22	316	S	S	20 33 20.4	+3.0
BJI				pmax	pmax		
	comp=Z,19nm,0.9s						
G08A	Pilot Rock	92.59	38	P	P	20 22 39.5	+1.0
G08A				IAmb	IAmb	20 22 40.6	
	comp=Z,15nm,1.2s						
CMAR	Chiang Mai Arr	92.67	290	P	P	20 22 41.1	+1.8
	comp=Z,5.0nm,0.9s,baz=141,slow=3.3,SNR=26						
CMAR	Chiang Mai Arr	92.67	290	P	P	20 22 40.6	+1.3
TXAR	Lajitas Array	92.76	58	P	P	20 22 41.2	+1.6
	comp=Z,1.2nm,0.8s,baz=211,slow=8.5,SNR=11						
CHTO	Chiang Mai	92.85	290	P	P	20 22 41.5	+1.4
CHTO				IAmb	IAmb	20 22 42.4	
	comp=Z,7.9nm,1.0s						
CHTO	Chiang Mai	92.85	290	P	P	20 22 41.6	+1.4
KMI	Kunming	93.08	297	⇑P	P	20 22 42.9	+1.5
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
MFID	Camas Ranch	93.09	41	P	P	20 22 41.5	+0.7
MFID				IAmb	IAmb	20 22 42.6	
	comp=Z,6.2nm,0.8s						
CAPN	Captain Cook N	93.28	13	P	P	20 22 41.9	+0.9
	baz=204						
XAN	Xi'an	93.39	308	P	P	20 22 43.8	+1.5
XAN				pP	pP	20 23 34.3	-7.8
XAN				sP	pwP	20 23 51.6	+6.2
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
XAN				LR	LR		
	comp=N,190nm,15.1s						
XAN				LR	LR		
	comp=Z,200nm,15.1s						
GAMB	Gambell	93.69	3	P	P	20 22 44.2	+1.4
	baz=186						
D08A	Wollman Farm,	93.78	36	P	P	20 22 45.0	+1.2
D08A				IAmb	IAmb	20 22 46.7	
	comp=Z,9.3nm,0.9s						
HVU	Hansel Valley	93.84	43	P	P	20 22 45.3	+0.9
HVU				IAmb	IAmb	20 22 46.2	
	comp=Z,8.8nm,0.8s						
L19K	White Mountain	93.92	11	P	P	20 22 45.1	+1.1
	baz=201						
HLID	Hailey	93.98	41	P	P	20 22 46.2	+1.2
HLID	Hailey	93.98	41	P	P	20 22 46.0	+1.0
	baz=232						
PLID	Pearl Lake	94.05	39	P	P	20 22 45.2	-0.1
PLID				IAmb	IAmb	20 22 46.7	
	comp=Z,7.2nm,1.1s						
TTA	Tatalina	94.44	10	P	P	20 22 47.4	+0.9
	baz=200						
CUT	Chulitna	94.95	13	P	P	20 22 49.9	+1.2
	baz=205						
PPLA	Purkeypile	95.04	12	P	P	20 22 50.1	+0.7
	baz=203						
CRQE	Cirque	95.06	17	P	P	20 22 50.7	+1.2
	baz=211						
CD2	Chengdu	95.35	303	P	P	20 22 53.1	+1.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SEY	Seymchan	95.50	347	P	P	20 22 51.1	-0.1
	comp=Z,2.1nm,0.7s,baz=165,slow=3.7,SNR=5.4						
HHC	Hu-ho-hao-te	95.53	314	*e*P	P	20 22 52.8	+0.8
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,6.1s						
TNA	Tin City	95.68	5	P	P	20 22 52.8	+0.9
	baz=190						
CTG	Chitna Glacier	95.69	17	P	P	20 22 53.5	+1.2
	baz=212						
TRF	Thorofare Moun	95.90	12	P	P	20 22 54.6	+1.3
	baz=205						
BW06	Boulder Array	96.34	44	P	P	20 22 56.1	+0.3
	baz=235						
PDAR	Pinedale Array	96.34	44	P	P	20 22 56.1	+0.3
	comp=Z,0.9nm,0.8s,baz=205,slow=2.3,SNR=7.9						
YUK3	Moose Creek	96.61	17	P	P	20 22 58.1	+1.6
	baz=213						
BOZ	Bozeman (W)	96.80	41	P	P	20 22 58.7	+0.9
	baz=234						
NEA2	Nenana	97.17	12	P	Pdif	20 23 00.3	+1.6
	baz=206						
HDA	Harding Lake	97.41	13	P	Pdif	20 23 02.0	+2.1
	baz=208						
ILAR	Eielson Array	97.75	13	P	Pdif	20 23 02.1	+0.8
	comp=Z,0.9nm,0.9s,baz=244,slow=6.2,SNR=5.6						
ILAR				PP	PP	20 26 56.9	-6.5
	comp=Z,2.2nm,1.1s,baz=220,slow=7.7,SNR=5.8						
LZH	Lanzhou	97.99	307	⇑P	Pdif	20 23 04.8	+1.4
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
COLD	Coldfoot	99.36	11	P	Pdif	20 23 10.4	+1.9
	baz=205						
I29M	Ogilvie Camp,	100.13	16	P	Pdif	20 23 12.8	+0.9
	baz=215						
SONM	Songino Array	102.45	318	P	Pdif	20 23 23.4	+0.5
	comp=Z,0.6nm,0.7s,baz=144,slow=4.5,SNR=5.2						
SONM				PP	PP	20 27 34.0	-5.5
	comp=Z,0.5nm,0.8s,baz=116,slow=9.8,SNR=2.6						
YKA	Yellowknife Ar	105.42	26	PKiKP	PKiKP	20 27 47.2	-0.4
	comp=Z,0.2nm,0.5s,baz=255,slow=1.7,SNR=5.8						
WMQ	Urumqi	112.50	309	*e*P	PKiKP	20 28 02.9	+1.2
WMQ				pmax	pmax		
	comp=Z,240nm,4.3s						
BDFB	Brasilia	114.31	127	PKKPbc	PKKPbc	20 38 45.0	-0.5
	comp=Z,1.3nm,0.4s,baz=101,slow=2.2,SNR=3.4						
MKAR	Makanchi Array	117.05	310	PKP	PKPdf	20 28 09.8	-0.4
	comp=Z,0.8nm,0.5s,baz=227,slow=1.7,SNR=17						
MKAR				PKKPbc	PKKPbc	20 38 36.8	+0.1
	comp=Z,0.4nm,0.7s,baz=276,slow=3.5,SNR=4.8						
MKAR	Makanchi Array	117.05	310	PKPdf	PKPdf	20 28 09.7	-0.5
ZALV	Zalesovo Beam	117.34	319	PKP	PKPdf	20 28 09.8	-0.7
	comp=Z,0.6nm,0.3s,baz=194,slow=1.2,SNR=4.5						
NRIK	Noril'sk	119.06	336	PKP	PKiKP	20 28 14.4	+1.0
	comp=Z,2.4nm,0.6s,baz=123,slow=3.5,SNR=3.9						
NRIK				PKKPbc	PKKPbc	20 38 31.4	+1.2
	comp=Z,3.5nm,0.3s,baz=55,slow=7.5,SNR=9.5						
KSH	Kashi	119.50	301	PKP	PKiKP	20 28 17.1	+1.7
SUMG	Summit	132.55	15	*i* P	SKPbc	20 31 42.8	0.0
GEYT	Alibeck	132.82	295	PKP	PKiKP	20 28 42.7	+0.8
	comp=Z,3.5nm,0.7s,baz=220,slow=8.8,SNR=4.2						
GEYT				SKPbc	SKPbc	20 31 44.6	+0.2
	comp=Z,12nm,0.9s,baz=40,slow=2.5,SNR=12						
KMBO	Kilima Mbogo	133.74	234	SKPbc	SKPbc	20 31 49.5	+1.0
	comp=Z,3.4nm,0.8s,baz=37,slow=2.2,SNR=10						
ARA0	ARCESS Array S	138.12	347	*e*	PKPpre	20 28 41.5	

ARCES	**ARCESS Array B**	**138.12**	**347**	PKhKP	PKPpre	20 28 41.0	
	comp=Z,1.9nm,0.7s,baz=51,slow=2.0,SNR=18						
ARCES				PKP	**PKPdf**	**20 28 47.8**	**-1.8**
	comp=Z,2.7nm,0.7s,baz=17,slow=1.1,SNR=7.8						
ARCES				SKPbc	**SKPbc**	**20 31 59.5**	**-0.3**
	comp=Z,8.7nm,1.0s,baz=300,slow=1.8,SNR=4.0						
KTK1	**Kautokeino**	**138.99**	**348**	*e*	PKPpre	20 28 42.6	
KTK1				*e*PKPdf	**PKiKP**	**20 28 52.3**	**-1.1**
KLMR	**Klimovskoe**	**140.15**	**332**	*e*PKPdf	**PKPdf**	**20 28 53.2**	**-0.3**
KLMR				AMP		20 28 54.7	
	comp=Z,14nm,1.1s						
KLMR				*e*PP	**PP**	**20 31 46.4**	**-7.6**
KBZ	**Khabaz**	**144.38**	**304**	PKP	**PKPdf**	**20 29 01.2**	**-0.3**
	comp=Z,18nm,0.9s,baz=134,slow=1.7,SNR=26						
KIV	**Kislovodsk**	**144.49**	**305**	⇑P	PKPbc	20 29 01.1	0.0
FINES	**FINESS Array B**	**144.60**	**340**	PKP	**PKPab**	**20 28 59.9**	**-0.9**
	comp=Z,32nm,0.5s,baz=60,slow=4.1,SNR=369						
NSS	**Namsos**	**144.86**	**352**	*e*PKPbc	PKPbc	20 29 01.2	-0.2
VSU	**Vasula**	**146.65**	**336**	*e*P	**PKPbc**	**20 29 07.6**	**+0.7**
DOMB	**Dombas**	**147.60**	**353**	*e*PKPbc	**PKPbc**	**20 29 09.4**	**-0.1**
AKN	**Aaknes**	**147.66**	**355**	*e*PKPbc	**PKPbc**	**20 29 10.3**	**+0.7**
NB2	**NORSAR Subarra**	**148.31**	**351**	PKP	**PKPbc**	**20 29 11.1**	**-0.3**
	comp=Z,6.0nm,0.6s,baz=13,slow=2.6						
NB2	**NORSAR Subarra**	**148.31**	**351**	PKPbc	**PKPbc**	**20 29 11.1**	**-0.3**
	baz=13,slow=2.6						
NOA	**NORSAR Array B**	**148.31**	**351**	PKPbc	**PKPbc**	**20 29 11.3**	**-0.2**
	comp=Z,7.6nm,0.6s,baz=14,slow=4.2,SNR=31						
NC602	**NORSAR Array S**	**148.56**	**350**	*e*PKPbc	**PKPbc**	**20 29 11.8**	**-0.2**
IDID	**Didziasalis**	**148.90**	**332**	*e*P	**PKiKP**	**20 29 14.0**	**-0.2**
MNK	**Minsk**	**148.96**	**330**	*i* PKP	**PKPdf**	**20 29 07.2**	**-1.6**
	comp=E,2.0nm,0.9s						
MNK				*i* PKP	**PKPdf**	**20 29 07.2**	**-1.6**
	comp=N,15nm,0.9s						
MNK				*i* PKP	**PKPdf**	**20 29 07.2**	**-1.6**
	comp=Z,40nm,0.9s,baz=49						
MNK				*i* pPKP	**pPKPdf**	**20 30 11.2**	**-0.9**
MNK				*i* SKP		20 32 04.5	
MNK				*i* PKS	**PKSdf**	**20 32 42.2**	**-1.3**
MNK				*i* PP	**PP**	**20 32 45.4**	**-1.0**
MNK				*i* SKS	SKSdf	20 35 05.3	-47
MNK				*i* PPP	PPP	20 36 31.6	
MNK				*i* SKKS		20 40 48.5	
MNK				*i* SS	**SS**	**20 51 36.7**	**+0.6**
MNK				*i* SSS	SSS	20 58 25.5	
ISAL	**Salakas**	**148.97**	**332**	*e*P	**PKiKP**	**20 29 14.4**	**0.0**
SKAR	**Skarslia**	**149.02**	**353**	*e*PKPbc	**PKiKP**	**20 29 13.8**	**-0.5**
IIGN	**Ignalina**	**149.09**	**332**	*e*P	**PKiKP**	**20 29 14.4**	**-0.2**
NACGM	**Naroch**	**149.16**	**331**	*i* PKP	**PKPbc**	**20 29 14.2**	**+0.5**
ASK	**Askoy**	**149.46**	**356**	*e*PKPdf	**PKPdf**	**20 29 10.3**	**+0.8**
BER	**Bergen**	**149.55**	**356**	*e*PKPbc	**PKPbc**	**20 29 14.8**	**+0.4**
PABE	**Paberze**	**149.86**	**334**	*e*P	**PKiKP**	**20 29 16.2**	**0.0**
KONO	**Kongsberg**	**149.88**	**352**	*e*PKPbc	**PKiKP**	**20 29 15.7**	**-0.4**
AKASG	**Malin Array Be**	**150.63**	**323**	PKPbc	**PKPbc**	**20 29 17.5**	**+0.2**
	comp=Z,10nm,0.6s,baz=50,slow=2.7,SNR=45						
SUW	**Suwalki**	**151.28**	**333**	*e*P	**PKiKP**	**20 29 19.1**	**0.0**
HOMB	**Homborsund**	**151.35**	**352**	*i* P	**PKPbc**	**20 29 18.0**	**-0.7**
HOMB	**Homborsund**	**151.35**	**352**	*e*PKPbc	**PKiKP**	**20 29 19.6**	**+0.5**
BRTR	**Keskin Array B**	**151.86**	**299**	PKPbc	**PKiKP**	**20 29 20.9**	**-0.1**
	comp=Z,3.9nm,0.6s,baz=123,slow=4.6,SNR=11						
BRTR				PKPab	**PKPab**	**20 29 30.1**	**-0.8**
	comp=Z,6.1nm,0.7s,baz=119,slow=3.7,SNR=9.4						
BRTR	**Keskin Array B**	**151.86**	**299**		**PKPbc**	**20 29 20.3**	**-0.4**
SORM	**Soroca**	**152.50**	**319**	⇑P	**PKPbc**	**20 29 21.6**	**-0.1**
MILM	**Milestii Mici**	**152.83**	**316**	⇑P	**PKPbc**	**20 29 22.4**	**0.0**
TLCR		**153.62**	**313**	⇑P	**PKPab**	**20 29 39.0**	**+1.1**
JURR	**Jurilovca**	**153.75**	**312**	⇑P	**PKPab**	**20 29 38.9**	**+0.4**
VLDR	**Vladesti**	**153.78**	**314**	⇓P	**PKPab**	**20 29 39.4**	**+0.8**
BIR	**Birlad**	**153.86**	**316**	⇑P	**PKPab**	**20 29 40.5**	**+1.6**
SCTR	**Scanteiesti**	**153.92**	**314**	⇑P	**PKPab**	**20 29 40.0**	**+0.8**
TPGR	**Topolog**	**154.01**	**312**	⇑P	**PKPab**	**20 29 40.3**	**+0.7**
CFR	**Carcaliu**	**154.05**	**313**	⇑P	**PKPab**	**20 29 40.0**	**+0.3**
IZVR	**Izvoarele**	**154.12**	**314**	⇓P	**PKPab**	**20 29 41.4**	**+1.4**
TIRR	**Tirgusor**	**154.18**	**311**	⇓P	**PKPab**	**20 29 40.9**	**+0.6**
TESR	**Tescani**	**154.33**	**317**	⇑P	**PKPab**	**20 29 41.0**	**+0.1**
HARR	**Harsova**	**154.40**	**312**	⇓P	**PKPab**	**20 29 42.3**	**+1.0**
ODBI	**Odobesti**	**154.45**	**315**	⇑P	**PKPab**	**20 29 43.8**	**+2.3**
BURAR	**Bucovina Array**	**154.55**	**320**	⇑P	**PKPab**	**20 29 42.4**	**+0.4**
VRI	**Vrincioaia**	**154.60**	**315**	⇑P	**PKPab**	**20 29 43.8**	**+1.6**
PLOR	**Plostina**	**154.66**	**316**	⇑P	**PKPab**	**20 29 42.9**	**+0.5**
ICOR	**Ion Corvin**	**154.72**	**311**	⇓P	**PKPab**	**20 29 43.4**	**+0.7**
BISRR	**Bisoca**	**154.77**	**315**	⇑P	**PKPab**	**20 29 44.8**	**+1.8**
COVR	**Voineasa-Covas**	**154.93**	**316**	⇓P	**PKPab**	**20 29 43.9**	**+0.3**
OZUR		**155.05**	**317**	⇑P	**PKPab**	**20 29 45.1**	**+1.0**
ISR	**Istrita**	**155.08**	**314**	⇑P	**PKPab**	**20 29 45.4**	**+1.1**
NEHR	**Nehoiu**	**155.08**	**315**	⇑P	**PKPab**	**20 29 46.9**	**+2.6**
MLR	**Muntele Rosu**	**155.27**	**315**	⇑P	**PKPab**	**20 29 46.2**	**+1.0**
KOLS	**Kolonicke sedl**	**155.27**	**326**	*e*PKP	**PKPab**	**20 29 45.8**	**+0.9**
ARCR	**ARCALIA**	**155.33**	**320**	⇓P	**PKPab**	**20 29 46.6**	**+1.4**
DOPR	**Dopca**	**155.36**	**317**	⇑P	**PKPab**	**20 29 46.4**	**+1.0**
SECR		**155.41**	**314**	⇑P	**PKPab**	**20 29 46.8**	**+1.2**
SULR		**155.47**	**313**	⇑P	**PKPab**	**20 29 46.4**	**+0.5**
TRPA	**Tarpa**	**155.66**	**324**	⇓P	**PKPab**	**20 29 47.4**	**+0.8**
VOIR		**155.84**	**316**	⇓P	**PKPab**	**20 29 48.0**	**+0.4**
SGRR	**Singureni**	**155.86**	**313**	⇑P	**PKPab**	**20 29 47.8**	**+0.2**
ARR	**Arges**	**156.12**	**316**	⇓P	**PKPab**	**20 29 50.1**	**+1.3**
HUMR	**Humele**	**156.34**	**314**	⇑P	**PKPab**	**20 29 49.9**	**+0.3**
COPA	**Copaceanca**	**156.38**	**313**	⇓P	**PKPab**	**20 29 50.3**	**+0.5**
LANS	**Liptovska Anna**	**156.43**	**329**	*e*PKP	**PKPab**	**20 29 51.3**	**+1.4**
FLTG	**Flechtingen**	**156.56**	**344**	*e*PKPab	**PKPab**	**20 29 49.8**	**-0.4**
	baz=19,slow=4.5						
LOT	**Lotru**	**156.59**	**317**	⇑P	**PKPab**	**20 29 51.4**	**+0.5**
OSTC	**Ostas**	**156.64**	**335**	*e*PKPAB	**PKPab**	**20 29 51.7**	**+1.0**
CHVC	**Chvalec**	**156.68**	**336**	*e*PKPAB	**PKPab**	**20 29 51.2**	**+0.3**
MORC	**Moravsky Berou**	**156.77**	**333**	⇑P	**PKPab**	**20 29 52.1**	**+0.8**
MORC	**Moravsky Berou**	**156.77**	**333**	*e*PKP	**PKPab**	**20 29 51.1**	**-0.2**
DPC	**Dobruska-Polom**	**156.78**	**335**	*e*PKPAB	**PKPab**	**20 29 51.5**	**+0.2**
KRLC	**Kraliky**	**156.83**	**334**	*e*PKPAB	**PKPab**	**20 29 52.6**	**+1.0**
DEV	**Deva**	**156.85**	**319**	⇑P	**PKPab**	**20 29 52.9**	**+1.1**
VLAD	**Vladila**	**156.96**	**314**	⇑P	**PKPab**	**20 29 53.1**	**+0.8**
CLL	**Collm**	**157.03**	**341**	*e*PKPab	**PKPab**	**20 29 51.0**	**-1.3**
	comp=Z,14nm,1.3s						
CLL	**Collm**	**157.03**	**341**	*e*PKPab	**PKPab**	**20 29 52.4**	**+0.1**
	baz=19,slow=4.5						
PSZ	**Piszkesteto**	**157.12**	**326**	⇓P	**PKPab**	**20 29 53.5**	**+0.6**
BRG	**Berggiesshubel**	**157.14**	**339**	*e*PKPab	**PKPab**	**20 29 53.2**	**+0.4**
	baz=19,slow=4.5						
VYHS	**Vyhne**	**157.20**	**329**	*e*PKP	**PKPab**	**20 29 53.8**	**+0.6**
GZR	**Gura Zlata**	**157.20**	**318**	⇑P	**PKPab**	**20 29 53.5**	**+0.1**
CLZ	**Clausthal**	**157.21**	**345**	*e*PKPab	**PKPab**	**20 29 52.6**	**-0.5**
	baz=19,slow=4.5						
IBBN	**Ibbenburen**	**157.26**	**350**	*e*PKPab	**PKPab**	**20 29 53.1**	**-0.1**
	baz=19,slow=4.5						
FBE	**Freiberg**	**157.28**	**340**	*e*PKPab	**PKPab**	**20 29 53.8**	**+0.4**
	baz=19,slow=4.5						
SIRR	**Siria**	**157.31**	**321**	⇓P	**PKPab**	**20 29 54.3**	**+0.5**
JAVC	**Velka Javorina**	**157.43**	**331**	*e*PKP	**PKPab**	**20 29 55.0**	**+0.8**
NEUB	**Neuenburg**	**157.46**	**343**	*e*PKPab	**PKPab**	**20 29 54.1**	**0.0**
	baz=19,slow=4.5						
VRAC	**Vranov**	**157.52**	**333**	⇓P	**PKPab**	**20 29 55.2**	**+0.6**
VRAC	**Vranov**	**157.52**	**333**	*e*PKP	**PKPab**	**20 29 54.5**	**0.0**
GTTG	**Gottingen**	**157.58**	**346**	*e*PKPab	**PKPab**	**20 29 54.3**	**-0.4**
	baz=19,slow=4.5						
BAIL	**Bailesti**	**157.61**	**315**	⇑P	**PKPab**	**20 29 57.3**	**+2.2**
HERR	**Herculane**	**157.70**	**317**	⇓P	**PKPab**	**20 29 56.0**	**+0.5**
PRU	**Pruhonice**	**157.71**	**337**	*e*PKPAB	**PKPab**	**20 29 56.5**	**+1.2**
BZS	**Buzias**	**157.73**	**320**	⇓P	**PKPab**	**20 29 54.9**	**-0.6**
KRUC	**Moravsky**	**157.79**	**333**	*e*PKP	**PKPab**	**20 29 55.4**	**-0.3**
SRO	**Srobarova**	**157.94**	**328**	*e*PKP	**PKPab**	**20 29 57.3**	**+0.9**
MODS	**Modra-Piesok**	**157.97**	**331**	*e*PKP	**PKPab**	**20 29 57.0**	**+0.5**
TANN	**Tannenbergstha**	**157.99**	**341**	*e*PKPab	**PKPab**	**20 29 56.6**	**0.0**
	baz=19,slow=4.5						
MOX	**Moxa**	**158.01**	**342**	*e*PKPab	**PKPab**	**20 29 56.4**	**-0.2**
	baz=19,slow=4.5						
GUNZ	**Gunzen**	**158.07**	**341**	*e*PKPab	**PKPab**	**20 29 57.1**	**+0.2**
	baz=19,slow=4.5						
WERN	**Wernitzgruen**	**158.12**	**341**	*e*PKPab	**PKPab**	**20 29 57.5**	**+0.3**
	baz=19,slow=4.5						
BUG	**Bochum--Univer**	**158.17**	**350**	*e*PKPab	**PKPab**	**20 29 57.4**	**+0.2**
	baz=19,slow=4.5						
ZST	**Bratislava**	**158.18**	**331**	*e*PKP	**PKPab**	**20 29 58.1**	**+0.7**
UBBA	**Unterbreizbach**	**158.25**	**345**	*e*PKPab	**PKPab**	**20 29 57.5**	**0.0**
	baz=19,slow=4.5						
VTS	**Vitosha**	**158.37**	**311**	⇑P	**PKPab**	**20 29 59.7**	**+1.0**
MANZ	**Manzenberg**	**158.47**	**341**	*e*PKPab	**PKPab**	**20 29 58.9**	**+0.3**
	baz=19,slow=4.5						
ROTZ	**Rotzenmuhle**	**158.64**	**340**	*e*PKPab	**PKPab**	**20 29 59.6**	**+0.3**
	baz=19,slow=4.5						
KHC	**Kasperske Hory**	**158.77**	**337**	*e*PKPAB	**PKPab**	**20 29 59.9**	**-0.1**
CKRC	**Cesky Krumlov**	**158.78**	**336**	*e*PKPAB	**PKPab**	**20 30 01.2**	**+1.2**
BOVS	**Bovan**	**158.82**	**315**	⇓P	**PKPab**	**20 30 00.4**	**0.0**
CONA	**Conrad Observa**	**158.91**	**332**	*e*P	**PKPab**	**20 30 01.4**	**+0.7**
	comp=Z,15nm,1.3s						
MORH	**Mrgy, Hungar**	**158.92**	**325**	⇓P	**PKPab**	**20 30 00.6**	**-0.1**
GEC2	**GERESS Array S**	**158.97**	**337**	*e*PKPab	**PKPab**	**20 30 01.9**	**+1.0**
	baz=19,slow=4.5						
GERES	**GERESS Array B**	**158.97**	**337**	PKPab	**PKPab**	**20 30 00.5**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=38,slow=5.0,SNR=11						
WET	**Wettzell**	**158.98**	**338**	*e*PKPab	**PKPab**	**20 30 01.5**	**+0.6**
	baz=19,slow=4.5						
GRF	**Grafenberg Arr**	**158.99**	**342**	*e*PKPab	**PKPab**	**20 30 00.9**	**0.0**
	baz=19,slow=4.5						
FRGS	**Fruska Gora**	**159.01**	**321**	⇑P	**PKPab**	**20 30 01.2**	**-0.1**
TNS	**Taunus Mts**	**159.14**	**347**	*e*PKPab	**PKPab**	**20 30 01.4**	**-0.2**
	baz=19,slow=4.5						
ARSA	**Arzberg**	**159.59**	**331**	*e*P	**PKPab**	**20 30 04.0**	**+0.4**
	comp=Z,8.9nm,1.8s						
MOA	**Molln**	**159.60**	**334**	*e*P	**PKPab**	**20 30 03.9**	**+0.2**
	comp=Z,13nm,1.3s						
RJOB	**Jochberg**	**160.23**	**336**	*e*PKPab	**PKPab**	**20 30 07.8**	**+1.3**
	baz=19,slow=4.5						
SOKA	**Soboth**	**160.25**	**331**	*i* P	**PKPab**	**20 30 06.1**	**-0.5**
	comp=Z,11nm,1.0s,SNR=8.3						
FUR	**Furstenfeldbru**	**160.35**	**340**	*e*PKPab	**PKPab**	**20 30 07.3**	**+0.4**
	baz=19,slow=4.5						
STU	**Stuttgart**	**160.35**	**344**	*e*PKPab	**PKPab**	**20 30 06.9**	**0.0**
	baz=19,slow=4.5						
OBKA	**Obir**	**160.58**	**331**	*e*P	**PKPab**	**20 30 07.8**	**-0.3**
	comp=Z,4.9nm,1.1s						
KBA	**Koelnbreinsper**	**160.59**	**334**	*e*P	**PKPab**	**20 30 08.5**	**+0.4**
	comp=Z,2.5nm,0.7s						
MYKA	**Terra Mystica**	**160.85**	**333**	*e*P	**PKPab**	**20 30 08.7**	**-0.5**
	comp=Z,8.6nm,1.0s						
BFO	**Black Forest**	**160.96**	**345**	*e*PKPab	**PKPab**	**20 30 09.4**	**-0.1**
	baz=19,slow=4.5						
PDG	**Podgorica**	**160.98**	**315**	⇑P	**PKPab**	**20 30 10.0**	**+0.2**
WATA	**Walderalm**	**160.99**	**338**	*e*P	**PKPab**	**20 30 10.1**	**+0.3**
	comp=Z,11nm,1.2s						
WTTA	**Wattenberg**	**161.03**	**338**	*e*P	**PKPab**	**20 30 10.4**	**+0.3**
	comp=Z,11nm,1.4s						
RETA	**Reutte**	**161.11**	**340**	*e*P	**PKPab**	**20 30 10.6**	**+0.3**
	comp=Z,13nm,1.2s						
UBR	**Ueberruh**	**161.12**	**341**	*e*PKPab	**PKPab**	**20 30 11.5**	**+1.2**
	baz=19,slow=4.5						
MOTA	**Moosalm**	**161.13**	**339**	*i* P	**PKPab**	**20 30 10.7**	**+0.2**
	comp=Z,15nm,1.4s,SNR=5.5						
ABTA	**Abfaltersbach**	**161.18**	**335**	*e*P	**PKPab**	**20 30 10.0**	**-0.6**
	comp=Z,8.0nm,1.1s						
SQTA	**Sankt Quirin**	**161.21**	**339**	*e*P	**PKPab**	**20 30 11.0**	**+0.2**
	comp=Z,8.7nm,0.9s						
FETA	**Feichten**	**161.54**	**339**	*e*P	**PKPab**	**20 30 12.7**	**+0.4**
	comp=Z,7.7nm,1.0s						
DAVA	**Damuels**	**161.55**	**341**	*e*P	**PKPab**	**20 30 12.5**	**+0.2**
	comp=Z,5.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**163.16**	**182**	PKP	**PKPdf**	**20 29 29.1**	**+0.6**
	comp=Z,1.2nm,0.9s,baz=253,slow=1.5,SNR=6.4						
TORD				PKPab	**PKPab**	**20 30 21.6**	**+1.8**
	comp=Z,2.5nm,0.6s,baz=176,slow=3.4,SNR=12						
TORD				pPKPab	**pPKPab**	**20 31 21.8**	**+1.6**
	comp=Z,2.1nm,0.9s,baz=185,slow=3.3,SNR=3.9						
TIP	**Timpagrande**	**164.34**	**310**	⇑P	**PKPab**	**20 30 25.6**	**+0.7**
ESDC	**Sonseca Array**	**169.50**	**23**	PKP	**PKPdf**	**20 29 33.8**	**+1.0**
	comp=Z,1.5nm,1.1s,baz=336,slow=3.3,SNR=4.8						
ESDC				PKPab	**PKPab**	**20 30 47.6**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=338,slow=4.6,SNR=5.8						
ESDC	**Sonseca Array**	**169.50**	**23**		**PKPab**	**20 30 47.7**	**+0.3**
KEST	**Kesra**	**171.15**	**312**	PKPab	**PKPab**	**20 30 55.7**	**+0.7**
	comp=Z,7.3nm,0.9s,baz=33,slow=2.6,SNR=9.5						
KEST	**Kesra**	**171.15**	**312**	PKPab	**PKPab**	**20 30 55.6**	**+0.6**

ATH 23 20:27:27.7, 37°.81N×21°.94E, h19^{km}±4^{km}, ML1.8/5, Error ellipse: s-maj=4.0km s-min=1.4km az=314.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DRO	**Drossia**	**0.23**	**308**	P	Pb	20 27 32.8	-0.1
DRO				S	Sg	20 27 37.0	+0.1
DRO				AML	AML	20 27 37.2	
	comp=N,891µm,0.3s						
DRO				AML	AML	20 27 39.0	
	comp=E,1081µm,0.2s						
KLV	**Kalavryta, Ach**	**0.28**	**36**	P	Pg	20 27 33.7	-0.4
KLV				S	Sb	20 27 38.7	+0.2
KLV				AML	AML	20 27 39.0	
	comp=N,264µm,0.1s						
KLV				AML	AML	20 27 39.3	
	comp=E,476µm,0.2s						
LAKA	**Lakka**	**0.43**	**4**	P	Pg	20 27 36.1	-0.5
LAKA				S	Sb	20 27 42.7	-0.2
RLS	**Riolos of Patr**	**0.45**	**303**	P	Pg	20 27 36.2	-0.6
RLS				S	Sb	20 27 43.4	+0.1
TRIZ	**Trizonia**	**0.56**	**11**	P	Pb	20 27 38.3	-0.6
SERG	**Sergoula**	**0.61**	**9**	P	Pb	20 27 39.1	-0.6
SERG				AML	AML	20 27 50.1	
	comp=E,163µm,0.2s						
SERG				AML	AML	20 27 50.2	
	comp=N,247µm,0.2s						
EFP	**Efpalio**	**0.61**	**357**	P	Pb	20 27 39.4	-0.3
EFP				AML	AML	20 27 50.4	
	comp=N,103µm,0.2s						
EFP				AML	AML	20 27 51.2	
	comp=E,171µm,0.2s						
ITM	**Ithomi**	**0.63**	**181**	P	Pb	20 27 40.0	0.0
ANX	**Ano Chora**	**0.78**	**359**	P	Pb	20 27 42.3	-0.4
ANX				AML	AML	20 27 56.0	
	comp=N,258µm,0.5s						
ANX				AML	AML	20 27 57.9	
	comp=E,188µm,0.4s						
PYL	**PYLOS**	**0.93**	**190**	P	Pb	20 27 44.7	-0.4

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*NIED **23** 20:30:17.2, 46°.62N×142°.45E, h12^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.66; M$_{\theta\theta}$-0.28; M$_{\phi\phi}$-0.38; M$_{r\theta}$0.25; M$_{\theta\phi}$-0.51; M$_{\phi r}$0.81; Fault plane solution: M$_0$1.14000×10^{15} NP1:ϕ_s23.00000°, δ70.00000°, λ73.00000°. NP2:ϕ_s245.00000°, δ26.00000°, λ130.00000°.*

*JMA **23** 20:30:17.2±0.5, 46°.61N×142°.45E, h12^{km}, M4.3*

*IDC **23** 20:30:18.6±0.7, 46°.48N×142°.13E, h0^{km}, mb3.8/11, mb1 4.1/13, mb1mx3.9/36, mbtmp3.8/13, ML3.0/3, MS3.2/4, Ms1 3.2/4, ms1mx2.9/45, Error ellipse: s-maj=18.7km s-min=16.5km az=84.0*

*SKHL **23** 20:30:18.4±0.3, 46°.30N×142°.40E, h10^{km}±3^{km}, mb4.6/11*

*MOS **23** 20:30:19.3±1.1, 46°.45N×142°.28E, h18^{km}, mb4.1/2, Error ellipse: s-maj=15.7km s-min=8.1km az=103.5*

*NEIC **23** 20:30:21.5±2.0, 46°.55N±0°.04×142°.3E±0°.1, h10^{km}±1^{km}, mb4.3/16, Error ellipse: s-maj=12.5km s-min=6.6km az=111.0*

ISC 23 20:30:19.4±1.1, 46°.37N±0°.02×142°.32E±0°.04, h6^{km}±8^{km}, n69, σ1^{s}29/78, mb4.1/19, 1C, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.66**	**27**	*e*PN	**Pg**	**20 30 31.3**	**-0.9**
YSS				*e*		20 30 40.9	
YSS				pmax	pmax		
	comp=N,210nm,0.5s						
YSS				pmax	pmax		
	comp=Z,360nm,0.5s						
YSS				pmax	pmax		
	comp=Z,1µm,4.0s						
YSS				pmax	pmax		
	comp=N,900nm,3.5s						
YSS				smax	smax		
	comp=N,2µm,0.5s						
YSS				smax	smax		
	comp=E,620nm,0.6s						
YSS	**Yuzh-Sakhalins**	**0.66**	**27**	*e*Pg	**Pg**	**20 30 31.2**	**-0.9**
YSS				AMB	AMB	20 30 33.6	
	comp=E,300nm,0.8s						
YSS				*e*Sg	**Sg**	**20 30 40.9**	**+0.2**
YSS				A	A	20 30 43.3	
	comp=E,2µm,0.5s						
YSS				A	A	20 30 43.3	
	comp=E,700nm,0.5s						
YSS	**Yuzh-Sakhalins**	**0.66**	**27**		**Pg**	**20 30 31.0**	**-1.1**
KHLM	**Kholmsk**	**0.71**	**345**	*i* Pg	**Pg**	**20 30 33.8**	**+0.7**
KHLM				AMB	AMB	20 30 35.8	
	comp=E,800nm,0.6s						
KHLM				*e*Sg	**Sn**	**20 30 46.5**	**-0.7**
KHLM				A	A	20 30 49.3	
	comp=E,6µm,0.4s						
KHLM				A	A	20 30 49.3	
	comp=E,4µm,0.4s						
JWK2	**Keihoku**	**1.09**	**196**	P	**Pn**	**20 30 41.6**	**+0.5**
JRBN	**Rebuntou**	**1.29**	**223**	P	**Pn**	**20 30 43.5**	**-0.3**
JRBN				*e*S	**Sn**	**20 31 02.3**	**+1.0**
JRR	**Rishiri**	**1.42**	**210**	P	**Pg**	**20 30 46.6**	**+0.1**
JRR				*e*S	**Sg**	**20 31 09.0**	**+4.1**
JSE	**Soyaes**	**1.42**	**172**	P	**Pb**	**20 30 46.1**	**-0.1**
JSE				*e*S	**Sg**	**20 31 06.7**	**+1.7**
ASAJ	**Asahikawa**	**2.26**	**175**	Pn	**Pn**	**20 30 58.1**	**+0.9**
	comp=E,11nm,0.3s,baz=4.3,slow=13,SNR=72						
ASAJ				Sn	**Sb**	**20 31 27.3**	**-1.4**
	comp=E,20nm,0.3s,baz=309,slow=17,SNR=5.9						
ASAJ	**Asahikawa**	**2.26**	**175**	P	**Pn**	**20 30 58.0**	**+0.9**
ASAJ	**Asahikawa**	**2.26**	**175**	PN	**Pb**	**20 30 59.3**	**-1.2**
ASAJ						20 31 27.3	
JKA	**Kamikawa-asahi**	**2.26**	**175**		**Pb**	**20 30 59.3**	**-1.3**
JKA	**Kamikawa-asahi**	**2.26**	**175**		**Sb**	**20 31 27.3**	**-1.4**
JMP	**Maruseppu**	**2.47**	**162**	P	**Pn**	**20 30 59.8**	**-0.3**
JKK2	**Kamakawa 2**	**2.51**	**173**	P	**Pn**	**20 31 01.6**	**+0.9**
JTKR	**Abashiri--Toko**	**2.65**	**154**	P	**Pn**	**20 31 02.2**	**-0.3**
JTKR				*e*S	**Sn**	**20 31 35.1**	**+0.3**
UGL	**Uglegorsk**	**2.72**	**356**	*e*PN	**Pb**	**20 31 10.1**	**+1.7**
UGL				pmax	pmax		
	comp=Z,100nm,0.8s						
UGL	**Uglegorsk**	**2.72**	**356**	*e*P	**Pn**	**20 31 03.6**	**+0.1**
UGL				AMB	AMB	20 31 11.0	
	comp=Z,60nm,0.7s						
UGL				*e*S	**Sn**	**20 31 36.8**	**+0.2**
RUSJ	**Misakicho**	**3.06**	**136**	PN	**Pn**	**20 31 08.6**	**+0.3**
RUSJ				*e*S	**Sn**	**20 31 45.9**	**+0.7**
YUK	**Yuzh-Kuril'sk**	**3.42**	**132**	*e*PN	**Pn**	**20 31 13.6**	**+0.4**
YUK				S	**Sn**	**20 31 54.3**	**+0.3**
YUK				pmax	pmax		
	comp=Z,25nm,0.1s						
YUK				smax	smax		
	comp=N,106nm,0.4s						
YUK				smax	smax		
	comp=E,34nm,0.4s						
GLVR	**Golovnino**	**3.47**	**138**	PN	**Pn**	**20 31 15.0**	**+1.2**
GLVR				S	**Sn**	**20 31 57.6**	**+2.4**
JEW	**Eniwo**	**3.58**	**190**		**Pb**	**20 31 19.3**	**-3.8**
AKK	**Akkeshi**	**3.80**	**151**	*e*P	**Pn**	**20 31 18.4**	**0.0**
AKK				*e*Pg	**Pg**	**20 31 32.2**	**0.0**
NMR	**Nemuro--Hokkai**	**3.85**	**140**	PN	**Pn**	**20 31 20.5**	**+1.4**
NMR	**Nemuro--Hokkai**	**3.85**	**140**	*e*P	**Pn**	**20 31 19.2**	**+0.1**
NMR				*e*Pg	**Pg**	**20 31 34.5**	**+1.3**
SHO	**Shikotan**	**4.05**	**126**	*e*PN	**Pn**	**20 31 22.7**	**+0.9**
SHO				*i* S	**Sn**	**20 32 10.9**	**+1.4**
SHO				pmax	pmax		
	comp=N,4.0nm,0.4s						
SHO				pmax	pmax		
	comp=Z,16nm,0.4s						
SHO				pmax	pmax		
	comp=E,5.0nm,0.3s						
SHO				smax	smax		
	comp=N,10.0nm,0.3s						
SHO				smax	smax		
	comp=E,26nm,0.3s						
ERM	**Erimo**	**4.39**	**172**	PN	Pb	20 31 32.1	-4.8
ERM	**Erimo**	**4.39**	**172**	Pn	Pb	20 31 32.0	-4.8
JTM	**Tenmabayashi**	**5.65**	**190**	Pn	**Pn**	**20 31 47.5**	**+3.7**
GRNR	**Gornyy**	**5.89**	**321**	⇑*i*PN	Pn	20 31 38.9	-8.2
GRNR				pmax	pmax		
	comp=E,2.0nm,0.4s						
GRNR				pmax	pmax		
	comp=N,2.0nm,0.5s						
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,290nm,14.0s						
GRNR				MLR	MLR		
	comp=N,110nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,250nm,15.0s						
USRK	**Ussuriysk Ar.**	**7.60**	**257**	LR	LR	20 35 12.7	
	comp=Z,113nm,20.3s,baz=81,slow=39						
KLR	**Kul'dur**	**7.67**	**296**	Pn	**Pn**	**20 32 10.6**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=114,slow=17,SNR=1.4						
KLR				Lg	Lg	20 34 16.0	
	comp=Z,0.1nm,0.3s,baz=126,slow=22,SNR=1.4						
KLR				LR	LR	20 35 26.4	
	comp=Z,206nm,18.6s,baz=85,slow=41						
MJAR	**Matsushiro Arr**	**10.29**	**199**	Pn	**Pn**	**20 32 50.6**	**+3.2**
	comp=Z,0.0nm,0.3s,baz=8.5,slow=17,SNR=4.6						
PETK	**Petropavlovsk-**	**12.01**	**50**	LR	LR	20 37 05.2	
	comp=Z,57nm,21.9s,baz=155,slow=34						
SONM	**Songino Array**	**24.37**	**287**	P	**P**	**20 35 36.5**	**-1.6**
	comp=Z,3.3nm,1.0s,baz=85,slow=7.8,SNR=12						
SONM				LR	LR	20 45 47.3	
	comp=Z,101nm,19.5s,baz=134,slow=38						
SONM	**Songino Array**	**24.37**	**287**	P	**P**	**20 35 39.1**	**+1.0**
SONM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	**Songino Array**	**24.37**	**287**	P	**P**	**20 35 39.1**	**+1.0**
BILL	**Bilibino**	**24.97**	**21**	*i* P	**P**	**20 35 43.2**	**-0.1**
BILL				*i* *PP	sP	20 36 12.5	+26
BILL				*i*		20 39 16.2	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL	**Bilibino**	**24.97**	**21**	P	**P**	**20 35 44.5**	**+1.2**
BILL				IAmb	IAmb	20 35 46.5	
	comp=Z,8.6nm,1.3s						
TIXI	**Tiksi**	**26.15**	**350**	P	**P**	**20 35 52.0**	**-1.9**
	comp=Z,1.4nm,0.3s,baz=149,slow=5.9,SNR=1.6						
J20K	**Nowinta River**	**38.40**	**39**	P	**P**	**20 37 42.1**	**+1.2**
J20K				IAmb	IAmb	20 37 44.3	
	comp=Z,5.9nm,0.9s						
IMAR	**Indian Mountai**	**38.48**	**36**	P	**P**	**20 37 41.7**	**0.0**
CAST	**Castle Rocks**	**39.37**	**40**	P	**P**	**20 37 50.9**	**+1.7**
CAST				IAmb	IAmb	20 38 02.0	
	comp=Z,4.9nm,1.0s						
COLD	**Coldfoot**	**39.84**	**34**	P	**P**	**20 37 54.1**	**+1.1**
COLD				IAmb	IAmb	20 38 17.9	
	comp=Z,9.1nm,1.4s						
TOLK	**Toolik Lake Re**	**40.02**	**32**	P	**P**	**20 37 56.1**	**+1.5**
MKAR	**Makanchi Array**	**40.37**	**293**	P	**P**	**20 37 57.9**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=71,slow=11,SNR=3.0						
NEA2	**Nenana**	**40.55**	**38**	P	**P**	**20 38 00.1**	**+1.1**
NEA2				IAmb	IAmb	20 38 01.9	
	comp=Z,8.9nm,1.1s						
TCOL	**CIGO, UAF Yank**	**41.03**	**38**	P	**P**	**20 38 03.6**	**+0.8**
COLA	**College**	**41.03**	**38**	P	**P**	**20 38 03.4**	**+0.5**
COLA	**College**	**41.03**	**38**	P	**P**	**20 38 03.4**	**+0.5**
CCB	**Clear Creek Bu**	**41.09**	**38**	P	**P**	**20 38 04.7**	**+1.3**
IL31		**41.46**	**38**	P	**P**	**20 38 06.6**	**+0.2**
IL31				IAmb	IAmb	20 38 08.9	
	comp=Z,9.5nm,1.3s						
ILAR	**Eielson Array**	**41.46**	**38**	P	**P**	**20 38 06.8**	**+0.3**
	comp=Z,2.9nm,0.9s,baz=277,slow=7.4,SNR=23						
ILAR	**Eielson Array**	**41.46**	**38**	P	**P**	**20 38 06.9**	**+0.5**
ILAR	**Eielson Array**	**41.46**	**38**	P	**P**	**20 38 06.9**	**+0.5**
PRP	**Porcupine Dome**	**41.91**	**36**	P	**P**	**20 38 11.5**	**+1.2**
BMAR	**Burnt Mountain**	**41.99**	**34**	P	**P**	**20 38 11.7**	**+0.9**
SCRK	**Sand Creek**	**42.84**	**39**	P	**P**	**20 38 17.9**	**+0.1**
EGAK	**Eagle**	**43.86**	**37**	P	**P**	**20 38 25.6**	**-0.3**
L27K	**Beaver Creek,**	**44.00**	**39**	P	**P**	**20 38 28.4**	**+1.3**
L27K				IAmb	IAmb	20 38 30.8	
	comp=Z,7.4nm,1.2s						
BCAR	**Beaver Creek A**	**44.02**	**39**	P	**P**	**20 38 28.6**	**+1.3**
ABKAR	**Akbulak array**	**52.76**	**305**	P	**P**	**20 39 34.8**	**0.0**
ABKAR				IAmb	IAmb	20 39 36.4	
	comp=Z,2.8nm,1.1s						
YKA	**Yellowknife Ar**	**55.51**	**33**	P	**P**	**20 39 54.7**	**0.0**
	comp=Z,0.5nm,0.5s,baz=304,slow=6.9,SNR=9.2						
FINES	**FINESS Array B**	**60.95**	**330**	P	**P**	**20 40 32.4**	**-0.2**
	comp=Z,4.9nm,1.1s,baz=47,slow=8.4,SNR=3.6						
WRA	**Warramunga Arr**	**66.39**	**188**	P	**P**	**20 41 08.9**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=4.3,slow=7.3,SNR=2.9						
AKASG	**Malin Array Be**	**67.42**	**321**	P	**P**	**20 41 13.7**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=46,slow=7.3,SNR=4.4						
NVAR	**Mina Array Bea**	**69.03**	**56**	P	**P**	**20 41 26.8**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=298,slow=3.2,SNR=3.8						
ASAR	**Alice Springs**	**70.12**	**188**	P	**P**	**20 41 33.5**	**+1.1**
	comp=Z,1.6nm,0.9s,baz=1.6,slow=5.1,SNR=8.5						
TXAR	**Lajitas Array**	**83.94**	**53**	P	**P**	**20 42 51.1**	**+0.7**
	comp=Z,0.5nm,0.9s,baz=312,slow=5.7,SNR=2.9						

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*ATH **23** 20:31:10.9, 38°.70N×26°.71E, h58^{km}±4^{km}, ML3.0/4, Error ellipse: s-maj=7.0km s-min=1.6km az=251.0*

*ISK **23** 20:31:12.1, 38°.62N×26°.62E, h8^{km}, ML2.8/26*

*THE **23** 20:31:13.7, 38°.62N×26°.53E, h19^{km}±2^{km}, ML2.5/6, Error ellipse: s-maj=2.1km s-min=0.5km az=62.0*

ISC 23 20:31:11.5±1.1, 38°.59N±0°.02×26°.53E±0°.03, h7^{km}±9^{km}, n46, σ0^{s}67/65, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	Foa	0.20	53	PG	Pg	20 31 15.2	-0.3
FOCM				SG	Sg	20 31 17.3	-1.0
CAND	Candarli	0.42	31	PG	Pg	20 31 20.0	+0.3
CAND				SG	Sg	20 31 25.2	-0.1
BLCB	Balcova	0.45	117	PG	Pg	20 31 21.1	+0.8
BLCB				SG	Sg	20 31 26.6	+0.4
DKL	Dikili	0.56	31	PG	Pg	20 31 22.1	-0.3
DKL				SG	Sg	20 31 29.7	0.0
PRK	Paraskevi	0.68	343	P	Pb	20 31 26.4	+0.7
PRK				S	Sb	20 31 35.9	+0.6
	732nm,0.3s						
PRK	Paraskevi	0.68	343	P	Pb	20 31 26.2	+0.5
PRK				S	Sb	20 31 36.0	+0.6
PRK				AML	AML	20 31 37.5	
	comp=E,1395µm,0.4s						
PRK				AML	AML	20 31 40.2	
	comp=N,1535µm,0.2s						
PSRA	Psara	0.76	267	P	Pn	20 31 29.9	+1.4
PSRA				AML	AML	20 31 43.8	
	comp=N,2712µm,0.2s						
PSRA				AML	AML	20 31 44.2	
	comp=E,1721µm,0.2s						
SIGR	SIGRI	0.81	320	P	Pb	20 31 28.0	+0.1
SIGR				S	Sb	20 31 39.5	+0.5
	comp=E,492nm,0.5s						
SIGR	SIGRI	0.81	320	P	Pb	20 31 28.2	+0.3
SIGR				S	Sn	20 31 40.1	-1.5
SIGR				AML	AML	20 31 41.9	
	comp=N,1183µm,0.6s						
SIGR				AML	AML	20 31 42.5	
	comp=E,782µm,0.4s						
SIGR	SIGRI	0.81	320	PG	Pn	20 31 29.2	-0.1
SIGR				SG	Sn	20 31 40.5	-1.1
SMG	Samos	0.92	164	P	Pn	20 31 30.3	-0.4
SMG				S	Sn	20 31 44.4	+0.3
	comp=E,958nm,0.3s						
SMG	Samos	0.92	164	P	Pn	20 31 30.5	-0.3
SMG				S	Sn	20 31 44.5	+0.4
SMG				AML	AML	20 31 46.8	
	comp=N,1775µm,0.5s						
SMG				AML	AML	20 31 47.0	
	comp=E,1981µm,0.3s						
AKS	Akhisar	1.04	74	PG	Pb	20 31 31.6	-0.3
AKS				SG	Sg	20 31 44.7	-0.4
EZN	Ezine	1.24	353	PN	Pn	20 31 35.2	0.0
AYDB	Zeytinkoy-Aydi	1.25	121	PN	Pn	20 31 35.5	0.0
AYDB				SN	Sg	20 31 52.3	+0.5
BALB	Balikesir	1.48	45	PN	Pn	20 31 38.9	+0.3
BALB				SN	Sn	20 31 58.2	0.0
BODT	Bodrum	1.65	158	PN	Pb	20 31 42.0	-0.2
GADA	Gvkgeada	1.67	343	PN	Pn	20 31 41.6	+0.5
LIA	Limnos Island	1.67	322	P	Pn	20 31 41.7	+0.6
LIA				S	Sn	20 32 01.9	-0.9
	comp=E,65nm,0.4s						
LIA	Limnos Island	1.67	322	P	Pn	20 31 41.7	+0.6
KULA	Kula-Manisa	1.67	92	P	Pn	20 31 40.7	-0.6
KULA	Kula-Manisa	1.67	92	PN	Pn	20 31 41.2	-0.1
GONE	Gonen-Balikesi	1.71	31	PN	Pn	20 31 42.0	+0.4
APE	Apeiranthos	1.71	208	P	Pb	20 31 42.1	-1.2
APE				S	Sn	20 32 03.2	-0.7
LPK	Lapseki	1.79	6	PN	Pn	20 31 43.4	+0.7
GELI	Tayfur-Gelibol	1.80	359	PN	Pn	20 31 43.7	+0.7
KRBG	Karabiga-Canak	1.90	18	PN	Pn	20 31 44.1	-0.1
SIMA	Simav-Kutahya	1.98	75	PN	Pn	20 31 45.9	+0.4
YER	Yerkesik	2.01	136	P	Pn	20 31 46.2	+0.3
YER				S	Sn	20 32 10.8	-0.5
YER	Yerkesik	2.01	136	PN	Pn	20 31 46.5	+0.6
SMTH	Samothraki Isl	2.03	338	P	Pn	20 31 46.0	-0.1
SMTH				S	Sn	20 32 10.6	-1.1
	comp=E,25nm,0.3s						
SMTH	Samothraki Isl	2.03	338	P	Pn	20 31 46.1	0.0
EDC	Edincik	2.04	30	PN	Pn	20 31 46.5	+0.3
ERIK	Erikli-Kesan	2.08	360	PN	Pn	20 31 47.0	+0.3
RKY	Sarkoy-Tekirda	2.15	13	PN	Pn	20 31 48.7	+0.9
ENEZ	Enez	2.16	352	PN	Pn	20 31 48.1	+0.2
MRMT	Marmara Adasi	2.17	22	PN	Pn	20 31 47.9	-0.2
MAR6	Marsite Statio	2.19	15	PN	Pn	20 31 49.1	+0.9
KCTX	Karacabey (Bur	2.19	40	PN	Pn	20 31 48.8	+0.5
MAR3	Marsite Statio	2.23	15	PN	Pn	20 31 49.9	+1.1
GZKV	Gazikoy-Tekird	2.24	16	PN	Pn	20 31 50.1	+1.2
MAR4	Marsite Statio	2.27	15	PN	Pn	20 31 50.5	+1.0
ALN	Alexandroupoli	2.33	351	P	Pn	20 31 49.8	-0.4
ALN				S	Sn	20 32 17.5	-1.6
	comp=E,30nm,0.6s						
ALN	Alexandroupoli	2.33	351	P	Pn	20 31 50.1	-0.1
ALN	Alexandroupoli	2.33	351	PN	Pn	20 31 51.4	+1.2
TVSB	Tavsanli	2.44	69	PN	Pn	20 31 52.4	+0.6

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*IASPEI **23** 20:34:38.7±0.9, 36°.57N±0°.02×89°.62W±0°.03, h15^{km}±5^{km}, Error ellipse: s-maj=4.0km s-min=3.3km az=114.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **23** 20:34:38.3±0.5, 36°.57N×89°.62W, h5^{km}±5^{km}, ML2.8/8, Error ellipse: s-maj=3.7km s-min=3.4km az=141.0*

*SLM **23** 20:34:38.9±1.5, 36°.57N±0°.01×89°.61W±0°.04, h7^{km}±5^{km}, Md2.5/8, mb_Lg2.4/18(NEIC), Error ellipse: s-maj=5.1km s-min=1.3km az=103.0*

*NEIC **23** 20:34:39.0±0.9, 36°.56N±0°.01×89°.63W±0°.04, h12^{km}±4^{km}, Error ellipse: s-maj=4.6km s-min=1.5km az=99.0*

ISC 23 20:34:39.0±0.8, **36°.56N**±0°.02×**89°.63W**±0°.02, **h14**^{km}±4^{km}, **n59**, σ**0^{s}64**/63, **New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NMEM	New Madrid Sch	0.04	72		Pg	20 34 40.5	-1.0
MARMO	Marston	0.04	224		Pg	20 34 40.9	-0.7
CATM	Catron	0.05	345		Pg	20 34 42.6	+0.9
NMMO	New Madrid	0.07	68		Pg	20 34 42.5	+0.7
WALK	Watson Lake	0.07	108		Pg	20 34 42.6	+0.8
PENMO	Penman	0.11	179		Pg	20 34 41.8	-0.5
PENMO	Penman	0.11	179		Sg	20 34 44.1	-0.4
PGVM	Portageville	0.13	218		Pg	20 34 42.3	-0.2
PGVM					Sg	20 34 44.9	0.0
KEWM	Kewanee	0.14	13		Pg	20 34 42.2	-0.4
KEWM					Sg	20 34 44.5	-0.6
PARMO	Parma	0.14	316		Pg	20 34 42.5	-0.2
PARMO					Sg	20 34 45.1	0.0
SJMO	Saint John's B	0.14	62		Pg	20 34 42.0	-0.7
SJMO					Sg	20 34 44.5	-0.6
POBM	Portage Bay	0.16	189		Pg	20 34 42.6	-0.3
POBM					Sg	20 34 45.5	+0.1
PVMO	Portageville	0.16	201	Pg	Pg	20 34 42.6	-0.3
PPLM	Point Pleasant	0.16	166		Pg	20 34 42.6	-0.3
PPLM					Sg	20 34 45.7	0.0
COKM	Charter Oak	0.17	332		Pb	20 34 45.8	+2.0
HENM	Henderson Moun	0.20	40		Pg	20 34 43.1	-0.5
HENM					Sg	20 34 46.2	-0.4
TOPM	Tallapoosa	0.21	260		Pg	20 34 43.7	0.0
MATM	Matthews	0.21	6		Pg	20 34 43.5	-0.2
MATM					Sg	20 34 46.9	-0.1
HICK	Hickman	0.32	94	Pg	Pg	20 34 45.0	-0.6
GLAT	Glass	0.40	136	Pg	Pg	20 34 46.9	-0.2
LNXT	Lenox	0.47	166	Pg	Pg	20 34 48.4	+0.1
LNXT	Lenox	0.47	166	P	Pg	20 34 48.5	+0.1
	baz=348						
PEBM	Pemiscott Bayo	0.49	203	Pg	Pg	20 34 48.7	+0.1
UTMT	University of	0.66	109	Pg	Pg	20 34 51.4	-0.4
GNAR	Gosnell	0.67	208	Pg	Pg	20 34 52.2	+0.1
PBMO	Poplar Bluff	0.68	289		Pg	20 34 51.9	-0.2
PBMO	Poplar Bluff	0.68	289	P	Pg	20 34 52.0	-0.2
	baz=108						
PBMO				S	Sg	20 35 00.9	-0.3
	baz=108						
HALT	Halls	0.69	160	Pg	Pg	20 34 52.0	-0.4
T45B	Paducah	0.91	60	P	Pg	20 34 55.6	-1.0
	baz=240						
T45A	Paducah	0.91	60	Pg	Pg	20 34 55.8	-0.8
LPAR	Lepanto	1.10	210	Pg	Pb	20 34 59.8	0.0
S44A	Carbondale	1.17	15	S	Sb	20 35 15.2	-0.7
	baz=194						
HBAR	Harrisburg	1.30	220	S	Sg	20 35 20.9	-0.2
	baz=40						
LCAR	Lake Charles	1.32	249		Pn	20 35 03.0	+0.1
LCAR	Lake Charles	1.32	249	P	Pn	20 35 03.1	+0.1
	baz=68						
W45A	Hickory Valley	1.45	165	Pn	Pn	20 35 05.0	+0.3
W45A	Hickory Valley	1.45	165	P	Pn	20 35 04.8	+0.1
	baz=346						
W45A				S	Sb	20 35 24.9	+1.0
	baz=346						
WVT	Waverly	1.52	106		Pn	20 35 05.7	+0.1
WVT	Waverly	1.52	106	P	Pn	20 35 05.9	+0.3
	baz=287						
FVM	French Village	1.55	336		Pn	20 35 06.7	+0.5
FVM				IAmb_Lg		20 35 27.3	
	comp=Z,24nm,0.8s						
FVM	French Village	1.55	336	P	Pn	20 35 06.8	+0.6
	baz=155						
CCM	Cathedral Cave	1.97	320		Pn	20 35 13.4	+1.5
CCM				IAmb_Lg		20 35 44.7	
	comp=Z,14nm,0.7s						
CCM	Cathedral Cave	1.97	320	P	Pb	20 35 13.5	-1.0
	baz=138						
PLAL	Pickwick Lake	2.02	141	Pn	Pn	20 35 13.3	+0.7
T47A	Sharon Grove	2.07	77		Pn	20 35 14.4	+1.1
T47A	Sharon Grove	2.07	77	P	Pn	20 35 14.4	+1.1
	baz=259						
FCAR	Ozark Folk Cen	2.12	252		Pb	20 35 16.6	-0.6
MGMO	Mountain Grove	2.20	286		Pb	20 35 17.9	-0.6
Q44A	Meyer Farm, Va	2.39	12	Pn	Pn	20 35 17.8	+0.2
V48A	Smith Brothers	2.42	109	Pn	Pn	20 35 18.9	+0.9
WHAR	Wooly Hollow	2.50	240		Pn	20 35 18.6	-0.6
U40A	Yellville	2.61	266	Pn	Pn	20 35 20.2	-0.4
R40A	Maddies Statio	2.72	310	IAmb_Lg		20 36 06.4	
	comp=Z,15nm,0.9s						
U49A	Red Boiling Sp	3.10	90	IAmb_Lg		20 36 24.9	
	comp=Z,14nm,0.9s						
S39A	Bolivar	3.16	292	Pn	Pn	20 35 29.0	+0.8
S39A				IAmb_Lg		20 36 25.9	
	comp=Z,8.0nm,0.7s						
SWET	Sewanee	3.29	113	IAmb_Lg		20 36 30.4	
	comp=Z,15nm,1.2s						
Y49A	Blount Mountai	3.77	135	IAmb_Lg		20 36 44.4	
	comp=Z,8.2nm,0.9s						
MIAR	Mount Ida	3.79	239	IAmb_Lg		20 36 39.1	
	comp=Z,7.9nm,0.9s						
R49A	Shelbyville	3.95	63	IAmb_Lg		20 36 52.4	
	comp=Z,12nm,1.1s						

NNC 23 20:44:30.2±3.2, **38°.76N**×**72°.53E**, **h0**^{km}, **mb3.9, mpv3.4, 2C-3D, Error ellipse: s-maj=24.1km s-min=16.6km az=10.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	Iuzhnay	3.88	331	Pg	Pb	20 45 40.8	+1.2
	144nm,1.0s						
IUG				Lg	Lg	20 46 32.6	
	65nm,1.1s						
MRKS	Merke	4.02	7	Pg	Pg	20 45 45.0	-2.3
	5.9nm,0.6s						
MRKS				Lg	Lg	20 46 39.6	
	14nm,0.8s						
AAK	Ala-Archa	4.16	20	⇑Pn	Pn	20 45 35.3	+0.3
	4.1nm,0.6s						
AAK				⇓Lg	Lg	20 46 41.9	
	11nm,0.8s						
KK09	Karatay Array	4.62	341	⇓Pn	Pn	20 45 39.4	-2.0
	1.5nm,0.5s,baz=148,slow=12						
KK09				⇑Sn	Sn	20 46 36.8	+1.1
	6.1nm,0.6s						
KK09				⇓Lg	Lg	20 46 56.5	
	9.6nm,0.7s						
BRLS	Borolday	4.73	335	Pg	Pb	20 45 54.7	+0.7
	2.5nm,0.6s						
BRLS				Lg	Lg	20 46 56.5	
	11nm,0.9s						
KST	Kastek	5.01	30	Pg	Pb	20 46 02.3	+3.4
	4.2nm,0.9s						
KST				Lg	Lg	20 47 08.9	
	7.6nm,1.3s						
KRBS	Karabastau	5.47	25	Pg	Pg	20 46 11.0	-4.1
	2.6nm,0.7s						
KRBS				Lg	Lg	20 47 23.8	
	2.3nm,0.6s						
KTBS	Karatobe	5.86	31	Pg	Pb	20 46 17.4	+4.2
	2.2nm,0.7s						
KTBS				Lg	Lg	20 47 35.0	
	5.5nm,1.1s						

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*IDC **23** 21:02:08.5±4.1, 7°.12S×77°.06W, h55^{km}±37^{km}, mb3.0/2, mb1 3.6/3, mb1mx3.3/31, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=41.9km s-min=12.9km az=50.0*

ISC 23 21:02:08.0±1.2, **7°.1S**±0°.1×**77°.0W**±0°.1, **h50**^{km}, **n7**, σ**1^{s}47**/9, **Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	1.34	268	P	Pn	21 02 30.6	-0.2
	3.8nm,0.3s,baz=46,slow=13,SNR=13						
ATAH				S	Sn	21 02 47.9	+0.2
	42nm,0.3s,baz=85,slow=3.0,SNR=8.7						
NNA	Nana	4.88	178	P	Pn	21 03 19.2	+0.2
	2.9nm,0.3s,baz=300,slow=11,SNR=2.6						
NNA				S	Sn	21 04 14.6	+0.3
	8.2nm,0.3s,baz=151,slow=17,SNR=5.7						
TXAR	Lajitas Array	44.35	326	P	P	21 10 15.1	+1.4
	0.2nm,0.5s,baz=147,slow=11,SNR=2.4						
YKA	Yellowknife Ar	75.12	343	P	P	21 13 44.0	-0.5
	0.2nm,0.4s,baz=140,slow=6.0,SNR=5.8						
ASAR	Alice Springs	137.02	224	PKP	PKPdf	21 21 23.3	-3.1
	0.4nm,0.8s,baz=131,slow=2.6,SNR=2.5						
WRA	Warramunga Arr	139.08	228	PKP	PKPdf	21 21 29.9	-0.3
	0.3nm,0.4s,baz=121,slow=2.1,SNR=8.1						
FITZ	Fitzroy Crossi	146.43	222	PKPbc	PKPdf	21 21 44.2	+1.0
	5.0nm,0.9s,baz=100,slow=15,SNR=2.2						

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*IDC **23** 21:10:59.3±2.7, 43°.48N×105°.21W, h0^{km}, mb1 3.5/3, mb1mx3.3/42, mbtmp3.3/3, ML3.3/3, Error ellipse: s-maj=59.9km s-min=9.6km az=152.0*

*NEIC **23** 21:11:02.0±0.8, 43°.78N±0°.05×105°.25W±0°.04, h0^{km}±2^{km}, ML3.2/48, Error ellipse: s-maj=9.7km s-min=3.1km az=335.0*

ISC 23 21:11:01.5±1.0, **43°.79N**±0°.06×**105°.23W**±0°.05, **h0**^{km}, **n37**, σ**0^{s}56**/38, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.93	69		Pb	21 11 19.9	-0.7
K22A	Casper	1.48	220		Pn	21 11 27.9	-1.6
K22A				IAML		21 11 51.3	
	comp=E,376nm,0.3s						
PHWY	Pilot Hill	2.49	184	Pn	Pn	21 11 43.6	0.0
PHWY				IAML		21 12 23.3	
	comp=E,117nm,0.3s						
RWWY	Rawlins	2.56	215		Pn	21 11 44.3	-0.1
RWWY				IAML		21 12 26.3	
	comp=E,116nm,0.9s						
LAO	LASA Array	2.98	347	Pn	Pn	21 11 50.0	-0.1
RLMT	Red Lodge	3.18	296	Pn	Pn	21 11 53.0	0.0
RLMT				IAML		21 12 47.4	
	comp=E,53nm,0.7s						
RLMT				IAML		21 12 51.2	
	comp=E,73nm,0.8s						
BW06	Boulder Array	3.32	254		Pn	21 11 54.9	0.0
BW06				IAML		21 12 47.6	
	comp=E,44nm,0.4s						
BW06				IAML		21 12 52.8	
	comp=E,44nm,0.7s						
PD31	Pinedale Array	3.32	254		Pn	21 11 54.9	0.0
PDAR	Pinedale Array	3.32	254	Pn	Pn	21 11 54.7	-0.2
	comp=E,3.4nm,0.3s,baz=73,slow=16,SNR=62						
PDAR				Pg	Pb	21 12 01.6	+0.2
	comp=E,15nm,0.3s,baz=68,slow=18,SNR=47						
PDAR				Lg	Lg	21 12 41.8	
	comp=E,14nm,0.3s,baz=68,slow=32,SNR=20						
PDAR	Pinedale Array	3.32	254		Pn	21 11 55.0	0.0
YMP	Mirror Lake Pl	3.66	287		Pn	21 12 00.0	+0.3
OGNE	Ogallala	3.70	139	Pn	Pn	21 12 00.6	+0.6
GCMT	Greycliff	3.74	304		Pn	21 12 01.2	+0.7
LKWY	Lake	3.80	284	Pn	Pn	21 12 02.1	+0.6
LKWY				IAML		21 13 12.1	
	comp=E,29nm,1.5s						
LKWY				IAML		21 13 31.7	
	comp=E,36nm,2.8s						
H17A	Grant Village	3.90	281	Pn	Pn	21 12 03.7	+0.8
H17A				IAML		21 13 21.7	
	comp=E,21nm,3.8s						
LOHW	Long Hollow	3.90	269		Pn	21 12 03.3	+0.4
LOHW				IAML		21 13 08.6	
	comp=E,26nm,0.8s						
MOOW	Moose Ponds	3.99	271		Pn	21 12 04.4	+0.3
ISCO	Idaho Springs	4.00	184		Pn	21 12 04.7	+0.4
REDW	Red Top Meadow	4.11	266		Pn	21 12 05.6	-0.1
REDW				IAML		21 13 23.1	
	comp=E,44nm,1.2s						
YHH	Holmes Hill	4.16	286		Pn	21 12 06.5	0.0
YHH				IAML		21 13 25.9	
	comp=N,17nm,2.0s						
O20A	White River Ci	4.29	213		Pn	21 12 08.4	+0.3
AHID	Auburn Hatcher	4.41	259		Pn	21 12 10.2	+0.4
AHID				IAML		21 13 24.6	
	comp=N,34nm,1.0s						
AHID				IAML		21 13 49.3	
	comp=N,21nm,1.0s						
DGMT	Dagmar	4.74	8		Pn	21 12 15.7	+1.5
SMCO	Snowmass	4.79	196	Pn	Pn	21 12 15.5	+0.3
SMCO				IAML		21 13 39.3	
	comp=N,28nm,1.0s						
SMCO				IAML		21 13 52.9	
	comp=N,21nm,0.6s						
BOZ	Bozeman (W)	4.91	294		Pn	21 12 15.7	-0.9
BOZ				IAML		21 13 32.5	
	comp=N,15nm,3.6s						
BOZ				IAML		21 14 09.2	
	comp=N,14nm,4.0s						
KSCO	Kaye Shedlock'	5.16	157		Pn	21 12 20.3	+0.2
EGMT	Eagleton	5.28	325		Pn	21 12 21.3	-0.4
HRY	Holter Researc	5.50	304	Pn	Pn	21 12 24.8	0.0
LRM	Limekiln Ridge	5.53	294	Pn	Pn	21 12 25.3	+0.1
P18A	Preston Nutter	5.60	224		Pn	21 12 25.8	-0.5
BGNE	Belgrade	5.74	112	Pn	Pn	21 12 27.8	-0.2
HVU	Hansel Valley	5.90	253		Pn	21 12 29.9	-0.4
SDCO	Great Sand Dun	6.04	182	Pn	Pn	21 12 32.3	-0.1
SRU	San Rafael Swe	6.14	222	Pn	Pn	21 12 33.8	+0.3
ECSD	EROS Data Cent	6.24	88	Pn	Pn	21 12 36.1	+1.3
ULM	Lac du Bonnet	9.08	41	Pn	Pn	21 13 13.6	-0.1
	comp=N,0.7nm,0.3s,baz=223,slow=14,SNR=2.8						
ULM				Lg	Lg	21 15 44.7	
	comp=N,0.5nm,0.3s,baz=137,slow=15,SNR=3.7						
YKA	Yellowknife Ar	19.52	347	P	P	21 15 30.1	-0.1
	comp=N,0.1nm,0.3s,baz=158,slow=13,SNR=5.2						

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*KNET **23** 21:16:02.2±0.4, 42°.58N×75°.14E, h10^{km}±4^{km}, ml2.7, Error ellipse: s-maj=3.0km s-min=2.3km az=152.0*

*KRNET **23** 21:16:02.9±0.1, 42°.58N×75°.15E, h13^{km}, mb3.4*

*NNC **23** 21:16:03.5±0.3, 42°.65N×75°.12E, h0^{km}, mb4.0, mpv3.8, Error ellipse: s-maj=4.5km s-min=0.9km az=162.0*

*SOME **23** 21:16:03.3, 42°.60N×75°.12E, h10^{km}*

ISC 23 21:16:03.2±0.9, **42°.58N**±0°.02×**75°.13E**±0°.01, **h7**^{km}±7^{km}, **n88**, σ**1^{s}31**/159, **44C-40D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBK	Karagaybulak	0.16	300	⇓P	Pg	21 16 06.8	+0.3
	594nm,0.1s,SNR=3803						
KBK				⇓S	Sg	21 16 09.6	+0.7
	5µm,0.1s						
KBK	Karagaybulak	0.16	300	⇓*i*P	Pg	21 16 06.8	+0.3
	baz=96						
KBK				⇓*i*S	Sg	21 16 09.0	+0.2
	baz=96						
FRU1	Bishkek	0.44	302	⇑*i*P	Pg	21 16 12.0	+0.3
	baz=3.0						
FRU1				⇑*i*S	Sg	21 16 18.3	+0.9
	baz=3.0						
AAK	Ala-Archa	0.47	277	⇑P	Pg	21 16 12.5	0.0
	60nm,0.2s,SNR=130						
AAK				⇓S	Sg	21 16 19.3	+0.6
	461nm,0.3s						
AAK	Ala-Archa	0.47	277	⇓P	Pg	21 16 12.4	0.0
	59nm,0.6s						
AAK				⇑S	Sg	21 16 19.2	+0.5
	352nm,0.7s						
AAK	Ala-Archa	0.47	277	⇑*i*P	Pg	21 16 12.4	0.0
	baz=77						
AAK				⇑*i*S	Sg	21 16 19.4	+0.8
	baz=77						
TKM2	Tokmak 2	0.48	45	⇓P	Pg	21 16 12.1	-0.6
	50nm,0.1s,SNR=140						
TKM2				⇑S	Sg	21 16 18.3	-0.7
	666nm,0.2s						
TKM2	Tokmak 2	0.48	45	⇑P	Pg	21 16 12.0	-0.6
	47nm,0.4s						
TKM2				⇓S	Sg	21 16 18.3	-0.7
	283nm,0.5s						
TKM2	Tokmak 2	0.48	45	⇑*i*P	Pg	21 16 12.1	-0.6
	baz=44						
TKM2				⇑*i*S	Sg	21 16 18.6	-0.4
	baz=44						
CHMS	Chumysh	0.50	326	⇓P	Pg	21 16 12.8	-0.2
	288nm,0.2s,SNR=225						
CHMS				⇑S	Sg	21 16 19.7	+0.1
	429nm,0.2s						
CHMS	Chumysh	0.50	326	⇑*i*P	Pg	21 16 12.8	-0.2
	baz=25						
CHMS				⇑*i*S	Sg	21 16 19.8	+0.2
	baz=25						
UCH	Uchtor	0.58	233	P	Pg	21 16 14.4	0.0
	50nm,0.2s,SNR=119						
UCH				⇓S	Sg	21 16 22.0	0.0
	191nm,0.1s						
UCH	Uchtor	0.58	233	⇓*i*P	Pg	21 16 14.4	0.0
	baz=33						
UCH				⇓*i*S	Sg	21 16 22.5	+0.5
	baz=33						
BOOM	Boomskoye usch	0.60	98	⇓*i*P	Pg	21 16 14.4	-0.5
	baz=99						
BOOM				⇓*i*S	Sg	21 16 22.5	-0.3
	baz=99						
KST	Kastek	0.77	53	⇓*e*P	Pg	21 16 17.4	-0.6
	9.7nm,0.2s						
KST				*e*S	Sg	21 16 27.4	-0.6
	160nm,0.6s						
KST	Kastek	0.77	53	P	Pg	21 16 17.4	-0.6
	14nm,0.1s						
KST				S	Sg	21 16 27.4	-0.6
	160nm,0.6s						
KST	Kastek	0.77	53	⇓*e*P	Pg	21 16 17.4	-0.6
	baz=52						
KST				⇓*e*S	Sg	21 16 27.4	-0.6
	baz=52						
DGS	Degeres	0.81	35	*e*P	Pg	21 16 18.2	-0.6
	36nm,0.3s						
DGS				*e*S	Sg	21 16 29.1	-0.4
	106nm,0.4s						
DGS	Degeres	0.81	35	P	Pg	21 16 18.2	-0.6
	36nm,0.3s						
DGS				S	Sg	21 16 29.1	-0.4
	106nm,0.4s						
DGS	Degeres	0.81	35	*e*P	Pg	21 16 18.3	-0.6
	baz=35						
DGS				*e*S	Sg	21 16 29.1	-0.4
	baz=35						
USP	Ospenovka	0.83	326	P	Pg	21 16 18.6	-0.6
	166nm,0.2s,SNR=147						
USP				⇓S	Sg	21 16 29.7	-0.2
	199nm,0.3s						
USP	Ospenovka	0.83	326	⇓*i*P	Pg	21 16 18.5	-0.6
	baz=25						
USP				⇓*i*S	Sg	21 16 29.9	-0.1
	baz=25						
ULHL	Ulahol	0.89	112	⇓P	Pg	21 16 19.6	-0.7
	28nm,0.2s,SNR=38						
ULHL				⇑S	Sg	21 16 31.4	-0.4
	52nm,0.2s						
ULHL	Ulahol	0.89	112	⇓*i*P	Pg	21 16 19.4	-0.9
	baz=12						
ULHL				⇓*i*S	Sg	21 16 31.4	-0.4
	baz=12						
ARLS	Aral	0.94	220	⇓*i*P	Pg	21 16 21.0	-0.2
	baz=20						
ARLS				⇓*i*S	Sg	21 16 33.7	+0.4
	baz=20						
SGDS	Sogindy	0.95	337	P	Pg	21 16 20.6	-0.8
	33nm,0.1s						
SGDS				S	Sg	21 16 32.7	-1.0
	52nm,0.2s						
EKS2	Erkin-Say	1.00	275	⇑P	Pg	21 16 22.6	+0.1
	20nm,0.2s,SNR=124						
EKS2				⇓S	Sn	21 16 36.7	-1.5
	74nm,0.2s						

EKS2	Erkin-Say	1.00	275	⇓iP	Pb	21 16 22.1	-0.9
	baz=75						
EKS2				⇓iS	Sg	21 16 36.1	+0.6
	baz=75						
MTBS	Maitube	1.10	60	⇑eP	Pb	21 16 23.6	-1.1
	9.5nm,0.5s						
MTBS				eS	Sg	21 16 38.2	-0.5
	124nm,0.3s						
MTBS	Maitube	1.10	60	P	Pb	21 16 23.6	-1.1
	28nm,0.2s						
MTBS				S	Sg	21 16 38.2	-0.5
	124nm,0.3s						
MTBS	Maitube	1.10	60	⇑eP	Pb	21 16 23.6	-1.1
	baz=59						
MTBS				⇑eS	Sg	21 16 38.2	-0.5
	baz=59						
AML	Almayashu	1.16	248	⇑P	Pb	21 16 25.2	-0.6
	21nm,0.1s,SNR=51						
AML				⇓S	Sn	21 16 41.3	-1.2
	160nm,0.3s						
AML	Almayashu	1.16	248	⇓iP	Pb	21 16 25.0	-0.8
	baz=48						
AML				⇓iS	Sg	21 16 41.0	+0.6
	baz=48						
KRBS	Karabastau	1.19	19	eP	Pb	21 16 25.0	-1.1
	22nm,0.1s						
KRBS				eS	Sb	21 16 40.5	-1.2
	80nm,0.4s						
KRBS	Karabastau	1.19	19	P	Pb	21 16 24.9	-1.2
	20nm,0.2s						
KRBS				S	Sb	21 16 40.5	-1.2
	80nm,0.4s						
TNSS	Tian-Shan	1.41	70	eP	Pg	21 16 29.9	-0.5
	11nm,0.2s						
TNSS				eS	Sg	21 16 49.0	+0.3
	42nm,0.6s						
TNSS	Tian-Shan	1.41	70	P	Pg	21 16 29.9	-0.5
	11nm,0.2s						
TNSS				S	Sg	21 16 49.0	+0.3
	42nm,0.6s						
TNSS	Tian-Shan	1.41	70	eP	Pg	21 16 29.9	-0.5
	baz=70						
TNSS				eS	Sg	21 16 49.0	+0.3
	baz=70						
MRKS	Merke	1.42	277	eP	Pg	21 16 30.0	-0.3
	46nm,0.2s						
MRKS				eS	Sg	21 16 48.9	+0.2
	228nm,0.3s						
AAA	Alma-Ata	1.45	64	eP	Pg	21 16 32.0	+0.9
	69nm,0.4s						
AAA				eS	Sg	21 16 52.1	+2.1
	156nm,0.5s						
AAA	Alma-Ata	1.45	64	P	Pg	21 16 32.0	+0.9
	69nm,0.4s						
AAA				S	Sg	21 16 52.1	+2.1
	156nm,0.5s						
KNDC	Almaty	1.49	64	⇑P	Pg	21 16 31.4	-0.4
	38nm,0.3s						
KNDC				⇓S	Sg	21 16 51.1	-0.1
	52nm,0.3s						
MDOK	Medeo	1.52	67	eP	Pg	21 16 31.9	-0.6
	31nm,0.4s						
MDOK				eS	Sg	21 16 52.1	-0.2
	50nm,0.5s						
MDOK	Medeo	1.52	67	⇑P	Pg	21 16 31.5	-1.0
	20nm,0.5s						
MDOK				⇓S	Sg	21 16 51.6	-0.7
	38nm,0.6s						
MDOK	Medeo	1.52	67	Pg	Pg	21 16 31.9	-0.6
	31nm,0.4s						
MDOK				Lg	Lg	21 16 52.1	
	50nm,0.5s						
MDOK	Medeo	1.52	67	eP	Pg	21 16 31.9	-0.6
	baz=67						
MDOK				eS	Sg	21 16 52.1	-0.2
	baz=67						
KDJ	Kajisay	1.58	106	⇑iP	Pb	21 16 32.3	-0.6
	baz=6.0						
KDJ				⇑iS	Sg	21 16 53.4	-0.7
	baz=6.0						
KUU	Kurty	1.58	33	eP	Pb	21 16 32.3	-0.5
	41nm,0.4s						
KUU				eS	Sg	21 16 53.4	-0.8
	100nm,0.3s						
KUU	Kurty	1.58	33	P	Pb	21 16 32.3	-0.5
	41nm,0.4s						
KUU				S	Sg	21 16 53.4	-0.8
	100nm,0.3s						
KUU	Kurty	1.58	33	eP	Pb	21 16 32.3	-0.5
	baz=33						
KUU				eS	Sg	21 16 53.3	-0.8
	baz=33						
KOTS	Kotyrbulak	1.60	65	eP	Pg	21 16 33.5	-0.4
	26nm,0.2s						
KOTS				eS	Sg	21 16 55.1	+0.6
	112nm,0.5s						
KOTS	Kotyrbulak	1.60	65	P	Pg	21 16 33.5	-0.4
	26nm,0.2s						
KOTS				S	Sg	21 16 55.1	+0.6
	112nm,0.5s						
KTBS	Karatobe	1.60	45	eP	Pb	21 16 32.4	-0.8
	74nm,0.6s						
KTBS				eS	Sg	21 16 53.5	-1.3
	160nm,0.5s						
KTBS	Karatobe	1.60	45	P	Pb	21 16 32.4	-0.8
	74nm,0.6s						
KTBS				S	Sg	21 16 53.5	-1.3
	160nm,0.5s						
KTBS	Karatobe	1.60	45	eP	Pb	21 16 32.4	-0.8
	baz=44						
KTBS				eS	Sg	21 16 53.5	-1.3
	baz=44						
ANVS	Anan'yevo	1.88	83	⇑iP	Pb	21 16 37.3	-0.7
	baz=83						
ANVS				⇑iS	Sg	21 17 02.6	-1.1
	baz=83						
MNAS	Manas	1.94	268	⇓iP	Pb	21 16 38.9	-0.1
	baz=68						
MNAS				⇓iS	Sg	21 17 05.1	-0.6
	baz=68						
PRZ	Przheval'sk	2.42	91	⇑iP	Pb	21 16 45.2	-2.0
	baz=91						
PRZ				⇑iS	Sb	21 17 15.9	-1.3
	baz=91						
SATY	Saty	2.46	78	eP	Pg	21 16 48.5	-1.8
	51nm,0.4s						
SATY				eS	Sg	21 17 20.8	-1.3
	202nm,0.6s						
SATY	Saty	2.46	78	Pg	Pg	21 16 48.5	-1.8
	51nm,0.4s						
SATY				Lg	Lg	21 17 20.8	
	202nm,0.6s						
ARK	Arkit	2.48	253	⇑iP	Pb	21 16 46.4	-1.8
	baz=53						
ARK				⇑iS	Sb	21 17 18.0	-1.0
	baz=53						
ZHN	Zhinishke	2.50	75	eP	Pb	21 16 48.9	+0.4
	55nm,0.4s						
ZHN				eS	Sg	21 17 21.8	-1.7
	102nm,0.3s						
ZHN	Zhinishke	2.50	75	Pg	Pb	21 16 48.9	+0.4
	55nm,0.4s						
ZHN				Lg	Lg	21 17 21.8	
	102nm,0.3s						
ARXS	Arharly	2.56	49	eP	Pg	21 16 51.1	-1.0
	40nm,0.6s						
ARXS				eS	Sg	21 17 24.8	-0.5
	124nm,0.7s						
ARXS	Arharly	2.56	49	Pg	Pb	21 16 48.2	-1.2
	40nm,0.6s						
ARXS				Lg	Lg	21 17 20.4	
	124nm,0.7s						
BTLS	Baital	2.58	343	eP	Pb	21 16 50.1	+0.3
	23nm,0.2s						
BTLS				eS	Sg	21 17 23.4	-2.8
	77nm,0.5s						
BTLS	Baital	2.58	343	Pg	Pb	21 16 50.1	+0.3
	23nm,0.2s						
BTLS				Lg	Lg	21 17 23.4	
	77nm,0.5s						
OHH	Osh	2.71	221	⇑iP	Pb	21 16 49.5	-2.5
	baz=22						
OHH				⇑iS	Sb	21 17 23.5	-1.9
	baz=22						
KPKS	Kokpek	2.75	70	eP	Pg	21 16 53.7	-2.2
	27nm,0.3s						
KPKS				eS	Sg	21 17 29.6	-2.1
	85nm,0.6s						
DZA	Taraz	2.82	278	eP	Pb	21 16 55.0	+1.1
	22nm,0.3s						
DZA				eS	Sg	21 17 31.8	-1.8
	266nm,0.5s						
SFK	Sufi-Kurgan	2.84	206	⇑eP	Pb	21 16 51.4	-3.0
	baz=6.0						
SFK				⇑eS	Sb	21 17 26.6	-2.9
	baz=6.0						
BLB	Baldybastay	2.88	57	Pg	Pb	21 16 54.8	-0.1
	50nm,0.4s						
BLB				Lg	Lg	21 17 31.6	
	86nm,0.9s						
UZB	Uzynbulak	2.92	77	eP	Pb	21 16 56.4	+0.7
	29nm,0.6s						
UZB				eS	Sg	21 17 34.3	-2.6
	85nm,0.5s						
UZB	Uzynbulak	2.92	77	Pg	Pb	21 16 56.3	+0.7
	29nm,0.6s						
UZB				Lg	Lg	21 17 34.3	
	85nm,0.5s						
TRKS	Terek-Say	3.15	252	⇑iP	Pn	21 16 55.8	+2.4
	baz=51						
TRKS				⇑iS	Sb	21 17 34.3	-4.0
	baz=51						
SHLS	Shalkode	3.24	78	eP	Pg	21 17 08.1	+2.9
	6.2nm,0.5s						
SHLS				eS	Sg	21 17 54.3	+7.1
	28nm,0.7s						
SHLS	Shalkode	3.24	78	Pg	Pg	21 17 08.1	+2.9
	6.2nm,0.5s						
SHLS				Lg	Lg	21 17 54.3	
	28nm,0.7s						
PDGK	Podgornoye	3.29	75	Pg	Pb	21 17 02.1	+0.2
	7.5nm,0.5s						
PDGK				Lg	Lg	21 17 43.9	
	23nm,0.7s						
PDGK	Podgornoye	3.29	75	⇑Pg	Pb	21 17 02.1	+0.2
	10nm,0.5s						
PDGK				⇑Lg	Lg	21 17 47.6	
	36nm,0.7s						
TDK	Taldyqorghan	3.39	43	Pg	Pg	21 17 06.4	-1.8
	38nm,0.5s						
TDK				Lg	Lg	21 17 51.2	
	80nm,1.3s						
KK09	Karatay Array	3.45	281	⇑Pg	Pg	21 17 07.7	-1.6
	6.2nm,0.4s						
KK09				⇑Lg	Lg	21 17 50.0	
	26nm,0.5s						
IUG	Iuzhnay	3.80	265	eP	Pg	21 17 13.6	-2.5
	292nm,0.9s						
IUG				eS	Sg	21 18 04.1	-1.2
	51nm,0.7s						
DRK	Karamyk	3.99	220	⇑iP	Pn	21 17 07.3	+2.2
	baz=20						
DRK				⇑iS	Sn	21 17 54.2	+1.9
	baz=20						
BTK	Batken	4.11	234	⇓iP	Pn	21 17 09.1	+2.6
	baz=34						
BTK				⇓iS	Sn	21 17 57.3	+2.4
	baz=34						
MAKZ	Makanchi	6.46	47	⇓Pn	Pn	21 17 38.0	-0.7
	6.2nm,1.4s						
MAKZ				⇓Lg	Lg	21 19 28.9	
	5.7nm,0.8s						
MK31	Makanchi Array	6.62	48	Pn	Pn	21 17 42.6	+1.8
	4.2nm,0.6s,baz=229,slow=15,SNR=42						
MK31				⇓Sn	Sn	21 18 57.9	+1.3
	1.4nm,0.5s						
MK31				⇑Lg	Lg	21 19 30.7	
	7.6nm,0.8s,baz=226,slow=29						
KURBB	Kurchatov Arra	8.38	15	⇑Lg	Lg	21 20 26.5	
	24nm,0.9s						
KURK	Kurchatov	8.48	15	⇑Lg	Lg	21 20 29.5	
	12nm,0.8s						

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*IDC **23** 21:22:26.7±1.7, 4°.15S×129°.27E, h0km, mb3.3/1, mb1 3.5/4, mb1mx3.4/35, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=56.4km s-min=27.5km az=84.0*

*DJA **23** 21:22:30.0±1.1, 4°S±7°×12°9E±°, h23km±10km, M3.1/6, MLv3.1/6*

ISC 23 21:22:31.3±1.1**, 4°.07S**±0°.08×**129°.49E**±0°.06**, h36km, n7, σ0s.66**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.91	322	P	Pn	21 22 46.8	-0.8
MSAI				S	Sn	21 22 59.5	-0.1
AAI	Ambon	1.35	286	P	Pn	21 22 53.2	-0.4
AAI				S	Sn	21 23 10.3	+0.1
FAKI	Fak Fak	2.98	68	P	Pn	21 23 15.7	-0.4
SIJI	Sorong	3.64	29	Pn	Pn	21 23 25.3	+0.1
	1.4nm,0.3s,baz=242,slow=23,SNR=9.0						
SIJI				Sn	Sn	21 24 06.5	-0.5
	2.6nm,0.3s,baz=233,slow=23,SNR=8.4						
WRA	Warramunga Arr	16.47	164	Pn	Pn	21 26 19.9	+0.2
	0.1nm,0.3s,baz=339,slow=12,SNR=7.2						
ASAR	Alice Springs	19.94	168	P	P	21 26 59.6	-0.7
	0.1nm,0.3s,baz=349,slow=9.9,SNR=12						
MKAR	Makanchi Array	65.52	326	P	P	21 33 12.2	+1.1
	0.2nm,0.6s,baz=111,slow=7.7,SNR=1.9						

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*BGR **23** 21:22:13.1±0.0, 24°.83S×179°.77W, h33km*

*NEIC **23** 21:23:14.7±2.4, 23°.9S±0°.1×179°.9W±0°.1, h513km±6km, mb4.7/58, Error ellipse: s-maj=17.5km s-min=16.1km az=105.0*

*IDC **23** 21:23:14.2±0.8, 23°.82S×179°.96W, h510km±8km, mb4.0/21, mb1 4.1/26, mb1mx3.9/47, mbtmp4.9/26, Error ellipse: s-maj=12.4km s-min=9.7km az=165.0*

*NOU **23** 21:23:15.0, 23°.86S×179°.76W, h541km, mb4.7/62, South of Fiji Islands*

ISC 23 21:23:14.5±0.3**, 23°.91S**±0°.05×**179°.90W**±0°.07**, h518km, n348, σ1s.26**/369**, mb4.7**/75**, 43C-3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	5.60	162	P	P	21 24 48.5	+0.8
RAO	Raoul Island	5.61	162	P	P	21 24 49.2	+1.4
	195nm,0.3s,baz=85,slow=8.8,SNR=6.2						
RAO				S	S	21 26 04.9	+0.7
	70nm,0.3s,baz=95,slow=23,SNR=3.7						
RAO	Raoul Island	5.61	162	P	P	21 24 46.8	-1.0
RAO	Raoul Island	5.61	162	P	P	21 24 50.2	+2.4
GLKZ	Green Lake	5.62	162	P	P	21 24 47.2	-0.7
GLKZ				S	S	21 26 03.1	-1.3
MSVF	Nonsavu	6.43	342	P	P	21 24 54.1	-1.8
	4.2nm,0.3s,baz=213,slow=10,SNR=29						
MSVF	Nonsavu	6.43	342	P	P	21 24 56.0	+0.1
MSVF	Nonsavu	6.43	342	P	P	21 24 56.5	+0.5
TAVE	Taveuni	7.16	360	P	P	21 25 04.2	+1.2
DGTI	Dogotuki	7.58	357	P	P	21 25 07.9	+0.7
MARNC	Mare, Loyalty	11.40	280	P	P	21 25 46.5	-0.2
PINNC	Pines Island,	11.70	274	P	P	21 25 51.5	+1.6
OUENC	Ouen Island, N	12.29	274	P	P	21 25 57.5	+1.5
OUENC	Ouen Island, N	12.29	274	P	P	21 25 57.7	+1.7
LIFNC	LIFOU	12.30	282	P	P	21 25 56.9	+0.7
LIFNC	LIFOU	12.30	282	P	P	21 25 57.5	+1.3
YATNC	Mamie plateau,	12.30	276	P	P	21 25 58.5	+2.2
AFI	Afiamalu	12.56	39	P	P	21 25 58.4	-0.7
	6.1nm,0.3s,baz=215,slow=22,SNR=3.7						
OUZ	Omahuta	12.61	205	P	P	21 26 01.4	+2.2
OUZ	Omahuta	12.61	205	P	P	21 26 01.4	+2.2
OUZ	Omahuta	12.61	205	P	P	21 26 01.6	+2.4
DZM	Mont Dzumac	12.71	276	P	P	21 26 00.8	+0.2
	1.0nm,0.3s,baz=52,slow=23,SNR=14						
DZM	Mont Dzumac	12.71	276	P	P	21 26 02.4	+1.8
DVP	Devils Point	12.72	297	P	P	21 26 02.8	+2.2
	221µm,0.8s						
NOUC	Port Laguerre	12.83	275	P	P	21 26 03.2	+1.4
MXZ	Matakaoa Point	13.70	186	P	P	21 26 12.0	+1.4
RUGZ	Raukumara Rang	14.17	188	P	P	21 26 17.1	+1.4
RUGZ				S	S	21 28 40.3	-4.8
KMRZ	Kaimai	14.34	193	P	P	21 26 19.3	+1.9
KARZ	Kaharoa	14.45	192	P	P	21 26 22.0	+3.5
OMRZ	Omania	14.51	192	P	P	21 26 22.0	+2.9
URZ	Urewera	14.53	189	P	P	21 26 18.6	-0.8
	9.7nm,0.3s,baz=300,slow=22,SNR=52						
URZ				S	S	21 28 49.3	-2.5
	2.5nm,0.3s,baz=96,slow=23,SNR=5.0						
URZ	Urewera	14.53	189	P	P	21 26 18.6	-0.8
URZ	Urewera	14.53	189	P	P	21 26 18.0	-1.3
URZ	Urewera	14.53	189	P	P	21 26 18.5	-0.8
NGRZ	Ngongotaha	14.54	192	P	P	21 26 23.6	+4.1
MWZ	Matawai	14.55	188	P	P	21 26 20.6	+1.0
TARZ	Mount Tarawera	14.61	191	P	P	21 26 22.2	+1.9
CNGZ	Carnagh Statio	14.62	186	P	P	21 26 21.3	+1.0
CNGZ				S	S	21 28 53.0	-0.5
RRRZ	Republican Roa	14.71	191	P	P	21 26 22.8	+1.6
RAGZ	Rawiri	14.72	188	P	P	21 26 20.9	-0.6
SANVU	Saraoutou	14.77	302	P	P	21 26 22.6	+0.4
GRRZ	Galatos Road	14.79	192	P	P	21 26 24.5	+2.4
MUGZ	Murupara	14.80	190	P	P	21 26 22.3	+0.1
PRRZ	Plateau Road	14.89	191	P	P	21 26 24.7	+1.7
RIGZ	Rimuhau	14.89	187	P	P	21 26 24.6	+1.5
RIGZ				S	S	21 28 57.2	-1.5
RTZ	Ruatahuna	14.90	190	P	P	21 26 22.9	-0.4
KUTZ	Kaahu Road	14.99	193	P	P	21 26 27.3	+3.1
MTHZ	Maungataniwha	15.15	190	P	P	21 26 23.7	-2.2
RAHZ	Arahi	15.18	189	P	P	21 26 25.6	-0.6
RAHZ				S	S	21 29 09.3	+5.1
WATZ	Wairara	15.22	193	P	P	21 26 28.6	+2.1
HIZ	Hauiti	15.23	196	P	P	21 26 29.8	+3.2
HIZ	Hauiti	15.23	196	P	P	21 26 28.7	+2.0
RATZ	Rangitukua	15.36	193	P	P	21 26 29.2	+1.1
NMHZ	Naumai	15.40	190	P	P	21 26 28.6	+0.1
RITZ	Rihia Road	15.45	192	P	P	21 26 30.5	+1.5
KATZ	Kakaramea	15.48	193	P	P	21 26 30.8	+1.4
BKZ	Black Stump Fm	15.52	191	P	P	21 26 27.9	-1.8
BKZ	Black Stump Fm	15.52	191	P	P	21 26 28.2	-1.5
BKZ	Black Stump Fm	15.52	191	P	P	21 26 29.5	-0.2
NTVZ	North Tongarir	15.60	193	P	P	21 26 31.1	+0.5
KRVZ	Karewarewa	15.61	193	P	P	21 26 32.3	+1.6
TMVZ	Te Maari	15.62	193	P	P	21 26 30.8	0.0
TWVZ	Taurewa	15.63	194	P	P	21 26 31.3	+0.5
ETVZ	East Tongariro	15.63	193	P	P	21 26 31.0	0.0
WTVZ	West Tongariro	15.64	193	P	P	21 26 30.8	-0.2
NNVZ	North Ngauruho	15.65	193	P	P	21 26 31.7	+0.6
OTVZ	Oturere	15.67	193	P	P	21 26 30.2	-1.2
NGZ	Ngauruhoe	15.69	193	P	P	21 26 31.7	+0.1
SNVZ	South Ngauruho	15.70	193	P	P	21 26 30.9	-0.8
TUVZ	Tukino	15.77	193	P	P	21 26 32.3	-0.1
FWVZ	Far West T-bar	15.78	193	P	P	21 26 32.5	0.0
KWHZ	Kaweka Forest	15.78	191	P	P	21 26 31.3	-1.1
TRVZ	Turoa	15.82	193	P	P	21 26 32.9	-0.2
VRZ	Vera Road	15.83	195	P	P	21 26 35.6	+2.7
WNVZ	Wahianoa	15.84	193	P	P	21 26 31.6	-1.5
BHHZ	Black Hill Sta	15.91	191	P	P	21 26 31.5	-2.2
KRHZ	Kereru	16.00	190	P	P	21 26 33.5	-1.1
KAHZ	Kahuranaki	16.07	189	P	P	21 26 35.2	-0.2
NEZ	North Egmont	16.14	197	P	P	21 26 40.4	+4.3
KHEZ	Kahui Hut	16.18	197	P	P	21 26 41.6	+5.0
LREZ	Lake Rotokare	16.24	196	P	P	21 26 40.8	+3.8
PNHZ	Pukenui	16.30	191	P	P	21 26 36.3	-1.3
PXZ	Pawanui	16.31	189	P	P	21 26 36.3	-1.4
TSZ	Takapari Road	16.48	191	P	P	21 26 37.8	-1.7
PRHZ	Porangahau	16.57	189	P	P	21 26 40.3	-0.1
DVHZ	Dannevirke	16.68	191	P	P	21 26 40.1	-1.3
ANWZ	Angora Road	16.79	190	P	P	21 26 42.9	+0.4
PRWZ	Pori Road	16.96	191	P	P	21 26 44.6	+0.5
BFZ	Birch Farm	17.04	190	P	P	21 26 43.1	-1.8
BFZ	Birch Farm	17.04	190	P	P	21 26 43.0	-1.9
MRZ	Mangatainoka R	17.13	192	P	P	21 26 42.6	-3.2
TIWZ	Tintock	17.19	191	P	P	21 26 46.1	-0.2
OGWZ	Otaki Gorge	17.36	193	P	P	21 26 42.4	-5.5
HOWZ	Holdsworth Sta	17.37	192	P	P	21 26 47.4	-0.7
KIW	Kapiti Island	17.46	193	P	P	21 26 47.5	-1.3
TMWZ	Te Maipa	17.51	191	P	P	21 26 49.1	-0.2
MTW	Mount Morrison	17.63	192	P	P	21 26 48.9	-1.4
CAW	Cannon Point	17.66	193	P	P	21 26 49.5	-1.2
TRWZ	Traveller	17.83	191	P	P	21 26 50.5	-1.7
PAWZ	Paruwai Farm	17.86	192	P	P	21 26 52.1	-0.4
MSWZ	Moikau Station	17.93	192	P	P	21 26 52.5	-0.6
SNZO	South Karori	17.93	193	P	P	21 26 53.6	+0.5
QRZ	Quartz Range	18.03	199	P	P	21 26 54.0	0.0
PLWZ	Palliser	18.07	192	P	P	21 26 53.9	-0.5
NNZ	Nelson	18.16	196	P	P	21 26 54.8	-0.4
KHZ	Kahutara	19.25	195	P	P	21 27 04.9	-0.1
KHZ	Kahutara	19.25	195	P	P	21 27 05.1	0.0
RPZ	Rata Peaks	21.11	198	P	P	21 27 22.0	0.0
RPZ				IAmb	IAmb	21 27 32.8	
	comp=Z,40nm,1.5s						
RPZ	Rata Peaks	21.11	198	P	P	21 27 22.1	0.0
ODZ	Otahua Downs	22.45	198	P	P	21 27 34.1	+0.1
ARMA	Armidale	26.11	249	P	P	21 28 08.6	+1.7
	baz=26,SNR=14						
ARMA	Armidale	26.11	249	P	P	21 28 08.2	+1.3
ARMA				IAmb	IAmb	21 28 09.1	
	comp=Z,26nm,0.8s						
ARMA	Armidale	26.11	249	P	P	21 28 07.9	+1.0
	comp=Z,40nm,1.9s						
EIDS	Eidsvold	26.40	261	P	P	21 28 09.6	+0.3
	baz=27,SNR=22						
EIDS	Eidsvold	26.40	261	P	P	21 28 09.8	+0.4
EIDS	Eidsvold	26.40	261	P	P	21 28 09.5	+0.1
	comp=Z,42nm,0.7s						
MGCD	Mangrove Creek	27.02	243	P	P	21 28 16.5	+1.7
	baz=28,SNR=7.5						
MGCD	Mangrove Creek	27.02	243	P	P	21 28 15.8	+1.0
	comp=Z,44nm,0.6s						
RK1H	Rockhampton Ha	27.10	265	P	P	21 28 17.2	+1.6
	comp=Z,14nm,0.8s						
RMQ	Roma	28.44	258	P	P	21 28 28.7	+1.4
	baz=29,SNR=23						
RMQ	Roma	28.44	258	P	P	21 28 28.2	+0.9
	comp=Z,39nm,0.8s						
CNB	Canberra Magne	28.93	240	P	P	21 28 32.8	+1.3
	baz=29,SNR=16						
CNB	Canberra Magne	28.93	240	P	P	21 28 32.4	+0.9
	comp=Z,36nm,1.0s						
CAN	Canberra	29.22	240	P	P	21 28 34.7	+0.7
CAN				IAmb	IAmb	21 28 35.8	
	comp=Z,20nm,0.7s						
CAN	Canberra	29.22	240	P	P	21 28 34.9	+0.9
MILA	Mila	29.57	236	P	P	21 28 38.3	+1.2
	baz=30,SNR=4.1						
CMSA	Cobar Meteorol	31.30	248	P	P	21 28 52.4	+0.5
	baz=32,SNR=38						
CMSA	Cobar Meteorol	31.30	248	P	P	21 28 51.7	-0.2
	comp=Z,32nm,0.9s						
CTA	Charters Tower	31.57	270	P	P	21 28 54.9	+0.5
	comp=Z,56nm,0.5s,baz=94,slow=12,SNR=70						
CTA	Charters Tower	31.57	270	P	P	21 28 54.5	+0.1
	comp=Z,101nm,0.6s						
CTAO	Charters Tower	31.57	270	P	P	21 28 54.9	+0.5
CTAO	Charters Tower	31.57	270	P	P	21 28 54.9	+0.5
QLP	Quilpie	32.48	258	P	P	21 29 02.3	+0.2
	baz=33,SNR=10						
QLP	Quilpie	32.48	258	P	P	21 29 02.1	0.0
	comp=Z,55nm,0.9s						
TOO	Toolangi	32.52	237	P	P	21 29 03.1	+0.8
	baz=33,SNR=15						
TOO	Toolangi	32.52	237	P	P	21 29 03.2	+0.8
TOO				IAmb	IAmb	21 29 03.5	
	comp=Z,10nm,0.6s						
TOO	Toolangi	32.52	237	P	P	21 29 02.6	+0.3
	comp=Z,16nm,0.7s						
TAU	Tasmania Unive	33.00	227	P	P	21 29 07.1	+0.9
TAU				IAmb	IAmb	21 29 28.1	
	comp=Z,31nm,1.4s						
TAU	Tasmania Unive	33.00	227	P	P	21 29 07.2	+0.9
MTSU	Mount Surprise	33.83	273	P	P	21 29 14.1	+0.5
	baz=34,SNR=75						
MTSU	Mount Surprise	33.83	273	P	P	21 29 13.7	0.0
	comp=Z,55nm,0.7s						
PMG	Port Moresby	34.58	289	P	P	21 29 19.8	-0.1
	comp=Z,52nm,0.7s,baz=103,slow=5.7,SNR=28						
PMG	Port Moresby	34.58	289	P	P	21 29 20.0	+0.1
STKA	Stephens Creek	34.80	248	P	P	21 29 22.1	+0.4
	comp=Z,5.2nm,0.4s,baz=101,slow=11,SNR=17						
STKA	Stephens Creek	34.80	248	P	P	21 29 22.1	+0.4
	baz=35,SNR=11						
STKA	Stephens Creek	34.80	248	P	P	21 29 22.0	+0.4
STKA	Stephens Creek	34.80	248	P	P	21 29 21.6	0.0
	comp=Z,2.4nm,0.7s						
ARPS	Mount Arapiles	35.19	240	P	P	21 29 25.2	+0.4
	baz=36,SNR=5.7						
ARPS	Mount Arapiles	35.19	240	P	P	21 29 25.0	+0.2
	comp=Z,20nm,0.9s						
INKA	Innaminka	35.53	255	P	P	21 29 28.6	+0.9
	comp=Z,39nm,1.1s						
COEN	Coen	36.20	279	P	P	21 29 33.6	+0.1
COEN	Coen	36.20	279	P	P	21 29 33.3	-0.2
	comp=Z,13nm,0.9s						
HTT	Hallett	37.15	246	P	P	21 29 41.1	0.0
	baz=38,SNR=20						
HTT	Hallett	37.15	246	P	P	21 29 40.5	-0.6

	comp=Z,31nm,0.8s						
QIS	Mount Isa	37.54	267	P	P	21 29 44.6	+0.1
	baz=38,SNR=7.6						
QIS	Mount Isa	37.54	267	P	P	21 29 43.8	-0.7
	comp=Z,9.7nm,0.9s						
LCRK	Leigh Creek	37.66	251	P	P	21 29 44.7	-0.6
	comp=Z,41nm,0.7s						
BBOO	Buckleboo	39.52	247	P	P	21 29 59.8	-0.6
	baz=40,SNR=31						
BBOO	Buckleboo	39.52	247	P	P	21 29 59.8	-0.6
BBOO				IAmb	IAmb	21 30 00.5	
	comp=Z,16nm,0.9s						
BBOO	Buckleboo	39.52	247	P	P	21 29 59.1	-1.3
	comp=Z,23nm,0.7s						
OOD	Oodnadatta	39.99	255	P	P	21 30 04.2	0.0
	comp=Z,57nm,0.8s						
MULG	Mulgathing	41.26	251	P	P	21 30 13.1	-1.2
	comp=Z,53nm,0.8s						
AS31	Alice Springs	42.12	261	P	P	21 30 21.0	-0.2
ASAR	Alice Springs	42.12	261	P	P	21 30 21.1	-0.2
	comp=Z,24nm,0.7s,baz=100,slow=6.7,SNR=170						
ASAR				ScP	ScP	21 35 06.2	+1.2
	comp=Z,7.6nm,0.7s,baz=109,slow=4.1,SNR=26						
ASAR				S	S	21 36 01.4	-2.0
	comp=Z,1.5nm,0.9s,baz=97,slow=14,SNR=5.2						
WB0	Warramunga Arr	42.49	266	P	P	21 30 23.4	-0.8
WRAB	Tennant Creek	42.49	266	P	P	21 30 23.4	-0.8
WRAB				IAmb	IAmb	21 30 24.0	
	comp=Z,36nm,0.8s						
WRAB	Tennant Creek	42.49	266	P	P	21 30 23.3	-0.9
WRA	Warramunga Arr	42.50	266	P	P	21 30 23.4	-0.8
	comp=Z,42nm,0.6s,baz=102,slow=8.6,SNR=518						
WRA				ScP	ScP	21 35 09.2	+2.6
	comp=Z,7.2nm,0.9s,baz=102,slow=4.0,SNR=15						
WRA				S	S	21 36 02.9	-5.9
	comp=Z,0.9nm,0.6s,baz=98,slow=13,SNR=2.6						
WRA	Warramunga Arr	42.50	266	P	P	21 30 22.4	-1.8
JAY	Jayapura	43.60	293	P	P	21 30 32.5	-0.4
	comp=Z,19nm,0.5s,baz=131,slow=6.0,SNR=11						
KDU	Kakadu	46.38	275	P	P	21 30 53.3	-0.9
	baz=47,SNR=15						
KDU	Kakadu	46.38	275	P	P	21 30 52.7	-1.5
	comp=Z,45nm,1.3s						
FORT	Forrest	46.39	250	P	P	21 30 53.3	-0.8
	baz=47,SNR=84						
FORT	Forrest	46.39	250	P	P	21 30 53.3	-0.8
FORT	Forrest	46.39	250	P	P	21 30 52.6	-1.5
	comp=Z,139nm,0.6s						
WRKA	Warakurna	46.92	257	P	P	21 30 57.9	-0.4
	baz=47,SNR=47						
WRKA	Warakurna	46.92	257	P	P	21 30 57.1	-1.2
	comp=Z,52nm,2.0s						
MTN	Manton Dam	47.55	274	P	P	21 31 02.4	-0.7
DRS	Darwin Rock St	47.90	275	P	P	21 31 04.4	-1.3
	comp=Z,30nm,1.2s						
KNRA	Kununurra	48.78	270	P	P	21 31 12.0	-0.2
	baz=49,SNR=32						
KNRA	Kununurra	48.78	270	P	P	21 31 11.8	-0.4
KNRA				IAmb	IAmb	21 31 12.8	
	comp=Z,45nm,0.8s						
KNRA	Kununurra	48.78	270	P	P	21 31 11.3	-0.9
	comp=Z,64nm,1.2s						
FAKI	Fak Fak	50.67	287	P	P	21 31 25.1	-1.1
FAKI				IAmb	IAmb	21 31 29.4	
	comp=Z,59nm,1.2s						
FAKI	Fak Fak	50.67	287	P	P	21 31 25.6	-0.6
SIJI	Sorong	52.52	288	P	P	21 31 39.2	-0.4
	comp=Z,55nm,0.8s,baz=87,slow=7.5,SNR=15						
KLBR	Kellerberrin	55.07	247	P	P	21 31 57.1	-0.3
	baz=55,SNR=8.7						
MEEK	Meekatharra	55.20	253	P	P	21 31 57.5	-0.9
	baz=56,SNR=3.7						
MEEK	Meekatharra	55.20	253	P	P	21 31 57.2	-1.2
PSA00	Pilbara Seismi	55.25	260	P	P	21 31 57.9	-1.0
PSA00				IAmb	IAmb	21 32 11.9	
	comp=Z,36nm,1.4s						
PSA00	Pilbara Seismi	55.25	260	P	P	21 31 57.2	-1.6
PSA00				IAmb	IAmb	21 31 58.9	
	comp=Z,5.8nm,0.9s						
NWAO	Narrogin (SRO)	55.31	246	P	P	21 31 58.8	-0.3
BATI	Baumata	55.32	274	P	P	21 31 60.0	+0.6
	comp=Z,33nm,0.5s,baz=160,slow=0.6,SNR=8.7						
MBWA	Marble Bar	55.46	260	P	P	21 31 59.7	-0.6
BLDU	Ballidu	56.11	248	P	P	21 32 04.0	-0.7
	baz=56,SNR=20						
MUN	Mundaring	56.31	247	P	P	21 32 05.6	-0.4
	baz=57,SNR=4.6						
MUN	Mundaring	56.31	247	P	P	21 32 05.3	-0.7
	comp=Z,14nm,0.9s						
MORW	Morawa	56.96	250	P	P	21 32 10.0	-0.5
	baz=57,SNR=6.8						
MORW	Morawa	56.96	250	P	P	21 32 09.8	-0.8
MORW				IAmb	IAmb	21 32 10.4	
	comp=Z,15nm,0.6s						
MORW	Morawa	56.96	250	P	P	21 32 09.5	-1.0
	comp=Z,29nm,0.6s						
GIRL	Giralia	60.00	257	P	P	21 32 32.4	+1.2
	comp=Z,73nm,1.1s						
TOLI2	Tolitoli	62.67	285	P	P	21 32 47.9	-0.9
TOLI2				IAmb	IAmb	21 32 50.0	
	comp=Z,13nm,0.7s						
TOLI2	Tolitoli	62.67	285	P	P	21 32 47.8	-0.9
JAGI	Jajag, Banyuwa	64.66	272	P	P	21 33 00.3	-1.2
JAGI				IAmb	IAmb	21 33 00.5	
	comp=Z,7.7nm,0.6s						
QSPA	South Pole Qui	66.18	180	P	P	21 33 11.6	+1.3
	comp=Z,4.0nm,0.8s,baz=46,slow=1.7,SNR=9.4						
UGM	Wanagama	68.19	271	P	P	21 33 22.9	-0.6
UGM	Wanagama	68.19	271	P	P	21 33 23.0	-0.5
KKM	Kota Kinabalu	68.99	287	P	P	21 33 27.9	-0.5
KKM				IAmb	IAmb	21 33 40.7	
	comp=Z,23nm,1.2s						
JOW	Kunigami	71.06	312	P	P	21 33 40.5	+0.2
JOW	Kunigami	71.06	312	P	P	21 33 40.9	+0.6
LEM	Lembang	71.27	271	P	P	21 33 41.8	-0.2
	comp=Z,23nm,0.6s,baz=146,slow=22,SNR=6.4						
MJAR	Matsushiro Arr	71.95	326	P	P	21 33 44.9	-0.4
	comp=Z,0.7nm,0.4s,baz=82,slow=24,SNR=2.7						
KSM	Kuching	72.20	280	P	P	21 33 47.2	0.0
KSM				IAmb	IAmb	21 33 47.9	
	comp=Z,17nm,0.8s						
ADK	Adak	75.51	2	P	P	21 34 04.6	-0.5
MYKOM	Kota Tinggi	78.17	277	P	P	21 34 20.0	-0.6
UNV	Unalaska Valle	78.29	8	P	P	21 34 19.4	-0.8
PEA0B	Petropavlovsk-	79.13	346	P	P	21 34 24.7	0.0
PEA0B				IAmb	IAmb	21 34 44.5	
	comp=Z,73nm,1.4s						
PETK	Petropavlovsk-	79.13	346	P	P	21 34 23.9	-0.9
	comp=Z,4.3nm,0.7s,baz=123,slow=7.4,SNR=5.5						
PETK	Petropavlovsk-	79.13	346	P	P	21 34 24.1	-0.7
NJ2	Nanjing	80.73	311	*e*P	P	21 34 34.9	+1.2
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
USRK	Ussuriysk Ar.	80.82	327	P	P	21 34 34.2	+0.4
	comp=Z,1.9nm,0.7s,baz=153,slow=4.7,SNR=2.8						
USRK	Ussuriysk Ar.	80.82	327	P	P	21 34 34.6	+0.7
SLBS	Sierra La Lagu	82.73	60	P	P	21 34 45.3	+1.1
SLBS				IAmb	IAmb	21 34 46.2	
	comp=Z,15nm,0.9s						
CMB	Columbia Colle	83.14	43	P	P	21 34 46.3	+0.4
ORV	Oroville	83.39	42	P	P	21 34 47.7	+0.7
GSI	Gunungsitoli	83.69	274	P	P	21 34 49.5	+0.4
GSI	Gunungsitoli	83.69	274	P	P	21 34 49.2	0.0
GLA	Glamis	83.96	50	P	P	21 34 51.0	+0.8
GLA				IAmb	IAmb	21 34 52.8	
	comp=Z,13nm,0.9s						
YBH	Yreka Blue Hor	84.03	39	P	P	21 34 50.8	+0.4
	comp=Z,5.2nm,0.7s,baz=158,slow=4.6,SNR=4.8						
PNTR	Pine Nut	84.27	43	P	P	21 34 52.4	+0.7
PNTR				IAmb	IAmb	21 34 54.2	
	comp=Z,15nm,0.9s						
SNAA	Sanae	84.66	179	P	P	21 34 52.5	-0.4
SNAA	Sanae	84.66	179	P	P	21 34 52.6	-0.4
NVAR	Mina Array Bea	84.69	44	P	P	21 34 54.8	+1.0
	comp=Z,2.6nm,0.7s,baz=222,slow=7.5,SNR=12						
NVAR	Mina Array Bea	84.69	44	P	P	21 34 54.1	+0.3
VNA3	Neumayer Olymp	84.86	177	P	P	21 34 53.3	-0.6
TPNV	Topopah Spring	85.17	46	P	P	21 34 56.1	0.0
KVN	Kaiserville	85.19	44	P	P	21 34 56.2	+0.1
VNA2	Neumayer--Watz	85.28	178	P	P	21 34 55.7	-0.2
	baz=171,slow=3.3						
TUC	Tucson	86.45	52	P	P	21 35 03.4	+1.2
TUC				IAmb	IAmb	21 35 05.2	
	comp=Z,11nm,0.9s						
BMN	Battle Mountai	86.54	43	P	P	21 35 03.0	+0.4
BRLK	Bradley Lake	86.70	14	P	P	21 35 02.2	-0.4
BRLK				IAmb	IAmb	21 35 03.1	
	comp=Z,13nm,0.9s						
N19K	Bonanza Creek	86.91	12	P	P	21 35 02.7	-1.0
N19K				IAmb	IAmb	21 35 30.3	
	comp=Z,12nm,1.3s						
319A	Douglas	87.08	54	P	P	21 35 06.3	+1.1
319A				IAmb	IAmb	21 35 08.3	
	comp=Z,18nm,1.0s						
ELK	Elko	87.96	43	P	P	21 35 09.4	+0.1
	comp=Z,1.5nm,0.5s,baz=264,slow=5.7,SNR=7.4						
G08A	Pilot Rock	88.38	38	P	P	21 35 11.9	+0.9
G08A				IAmb	IAmb	21 35 13.6	
	comp=Z,18nm,1.2s						
MTPU	Mount Pierson	88.47	47	P	P	21 35 13.3	+1.4
MTPU				IAmb	IAmb	21 35 14.7	
	comp=Z,6.3nm,0.8s						
HMT	Hamilton	88.83	17	P	P	21 35 12.6	0.0
GHO	Glory Hole Cre	88.94	14	P	P	21 35 12.9	-0.2
GHO				IAmb	IAmb	21 35 14.3	
	comp=Z,14nm,0.8s						
SEY	Seymchan	89.30	348	P	P	21 35 14.6	-0.1
	comp=Z,8.3nm,0.3s,baz=138,slow=0.4,SNR=8.5						
CMAR	Chiang Mai Arr	89.61	290	P	P	21 35 18.8	+1.6
	comp=Z,1.0nm,0.9s,baz=156,slow=2.7,SNR=7.1						
CMAR				PP	PP	21 39 01.8	+3.2
	comp=Z,0.2nm,0.3s,baz=126,slow=7.3,SNR=4.2						
CMAR	Chiang Mai Arr	89.61	290	P	P	21 35 18.2	+1.0
CAST	Castle Rocks	89.76	12	P	P	21 35 16.0	-0.8
CAST				IAmb	IAmb	21 35 16.8	
	comp=Z,9.7nm,0.9s						
HLID	Hailey	90.04	41	P	P	21 35 20.0	+1.1
HLID				IAmb	IAmb	21 35 20.9	
	comp=Z,6.4nm,1.1s						
HVU	Hansel Valley	90.08	44	P	P	21 35 20.1	+1.0
HVU				IAmb	IAmb	21 35 20.4	
	comp=Z,6.6nm,0.8s						
TRF	Thorofare Moun	90.14	13	P	P	21 35 18.0	-0.8
TRF				IAmb	IAmb	21 35 19.2	
	comp=Z,7.7nm,0.8s						
TX31	Lajitas Ar. Si	90.36	58	P	P	21 35 21.9	+1.3
TXAR	Lajitas Array	90.36	58	P	P	21 35 22.1	+1.6
	comp=Z,4.1nm,0.7s,baz=213,slow=6.3,SNR=45						
TXAR	Lajitas Array	90.36	58	P	P	21 35 21.7	+1.1
HHC	Hu-ho-hao-te	90.49	315	*e*P	P	21 35 22.0	+1.1
HHC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,120nm,5.5s						
CCB	Clear Creek Bu	91.71	13	P	P	21 35 24.6	-1.2
ILAR	Eielson Array	92.02	14	P	P	21 35 25.9	-1.4
	comp=Z,1.0nm,0.8s,baz=224,slow=5.6,SNR=6.7						
PDAR	Pinedale Array	92.63	44	P	P	21 35 31.1	+0.2
	comp=Z,1.8nm,0.7s,baz=221,slow=3.5,SNR=16						
YKA	Yellowknife Ar	100.33	25	P	Pdif	21 36 05.2	+0.5
	comp=Z,0.1nm,0.6s,baz=240,slow=5.0,SNR=4.2						
MKAR	Makanchi Array	112.22	313	PKiKP	PKiKP	21 40 49.6	-1.4
	comp=Z,0.6nm,0.7s,baz=228,slow=1.6,SNR=12						
KKAR	Karatay Array	119.94	307		PKPdf	21 41 05.0	-1.0
ARCES	ARCESS Array B	131.91	348	PKP	PKPdf	21 41 26.8	-1.2
	comp=Z,1.4nm,0.5s,baz=207,slow=1.4,SNR=12						
ARCES				SKPbc	SKPab	21 44 06.2	-0.8
	comp=Z,6.0nm,1.0s,baz=36,slow=6.4,SNR=3.8						
ARCES	ARCESS Array B	131.91	348		PKPdf	21 41 27.0	-1.0
KMBO	Kilima Mbogo	136.17	241	PKP	PKiKP	21 41 39.8	0.0
	comp=Z,0.6nm,0.3s,baz=43,slow=23,SNR=2.0						
KMBO				SKPbc	SKPbc	21 44 22.8	+1.4
	comp=Z,1.1nm,0.6s,baz=206,slow=3.6,SNR=3.6						
FINES	FINESS Array B	138.48	341	PKhKP	PKPpre	21 41 30.4	
	comp=Z,2.1nm,0.8s,baz=174,slow=19,SNR=5.0						
FINES				PKP	PKPdf	21 41 40.4	0.0
	comp=Z,3.3nm,0.9s,baz=143,slow=19,SNR=5.9						
FINES				SKPbc	SKPbc	21 44 26.2	+0.1
	comp=Z,7.3nm,0.9s,baz=52,slow=4.0,SNR=9.0						
NB2	NORSAR Subarra	142.10	351	PKP	PKPdf	21 41 42.7	-4.3
	comp=Z,1.1nm,0.6s,baz=12,slow=3.0						
NOA	NORSAR Array B	142.10	351	PKhKP	PKPpre	21 41 42.1	
	comp=Z,2.0nm,0.8s,baz=9.3,slow=2.3,SNR=6.1						
PABE	Paberze	143.86	337		PKPbc	21 41 49.1	-0.2
AKASG	Malin Array Be	145.03	327	PKP	PKPdf	21 41 52.0	-0.3
	comp=Z,1.6nm,0.4s,baz=42,slow=4.4,SNR=18						
AKASG				SKPbc	SKiKP	21 44 43.2	-0.1
	comp=Z,2.8nm,0.7s,baz=44,slow=2.8,SNR=8.5						
AKASG	Malin Array Be	145.03	327	PKPdf	PKPdf	21 41 52.5	+0.2
AKBB	Malin Array Si	145.03	327		PKPdf	21 41 51.4	-0.9
BNN	Bunyan	146.28	305		PKPbc	21 41 57.1	-0.2
SORM	Soroca	147.06	324	⇑P	PKPbc	21 41 58.5	-0.4
MILM	Milestii Mici	147.52	322	⇑P	PKPdf	21 41 57.8	+1.2
BRTR	Keskin Array B	147.65	307	PKPbc	PKPdf	21 41 58.4	+1.1
	comp=Z,1.3nm,0.5s,baz=98,slow=6.0,SNR=3.1						
TLCR		148.49	319	⇑P	PKPdf	21 41 59.5	+1.2
JURR	Jurilovca	148.68	319	⇑P	PKPbc	21 42 02.4	-0.6
GHRR		148.81	322	⇑P	PKiKP	21 42 03.9	-0.5
KWP	Kalwaria Pacla	148.82	331		PKPbc	21 42 03.1	-0.1
CFR	Carcaliu	148.90	320	⇑P	PKPbc	21 42 03.4	-0.2
TPGR	Topolog	148.90	319	⇑P	PKPbc	21 42 03.9	+0.3
TESR	Tescani	148.97	323	⇑P	PKiKP	21 42 04.2	-0.5
BURAR	Bucovina Array	149.03	326	⇑P	PKiKP	21 42 04.9	0.0
BURAR	Bucovina Array	149.03	326		PKiKP	21 42 04.5	-0.4
TIRR	Tirgusor	149.12	319	⇑P	PKPbc	21 42 04.2	+0.1
HARR	Harsova	149.28	319	⇑P	PKPbc	21 42 04.8	+0.3
VRI	Vrincioaia	149.31	322	⇑P	PKPbc	21 42 04.2	-0.4
PLOR	Plostina	149.36	322	⇑P	PKiKP	21 42 05.7	+0.1
KOLS	Kolonicke sedl	149.52	331	*e*PKP	PKiKP	21 42 06.2	+0.4
OJC	Ojcow	149.58	335		PKPbc	21 42 04.6	-0.5
COVR	Voineasa-Covas	149.62	323	⇑P	PKPbc	21 42 04.8	-0.5
NEHR	Nehoiu	149.81	322	⇑P	PKPbc	21 42 05.7	-0.1
ARCR	ARCALIA	149.82	326	⇑P	PKPbc	21 42 04.6	-1.2
BMR	Baia Mare	149.85	328	⇑P	PKPbc	21 42 04.2	-1.6
BORA	Eskisehir	149.89	309		PKPbc	21 42 05.8	-0.5
MLR	Muntele Rosu	149.97	322	⇑P	PKPbc	21 42 05.9	-0.5
MLR	Muntele Rosu	149.97	322		PKPbc	21 42 05.8	-0.6
TRPA	Tarpa	149.98	329	⇑P	PKPbc	21 42 05.7	-0.4
DOPR	Dopca	149.99	323	⇑P	PKiKP	21 42 06.5	-0.3
SECR		150.18	321	⇑P	PKPbc	21 42 06.8	+0.1
FLTG	Flechtingen	150.37	346	*e*PKPbc	PKPbc	21 42 06.8	-0.1
	baz=23,slow=2.2						
CBBR	Cluj-Babes-Bol	150.44	326	⇑P	PKPbc	21 42 06.6	-0.6
CJR	Cluj-Napoca	150.45	326	⇑P	PKiKP	21 42 07.6	-0.2
NRDL	Niedersach Rie	150.45	348	*e*PKPbc	PKiKP	21 42 07.6	+0.1
	baz=23,slow=2.2						
VOIR		150.51	323	⇑P	PKPbc	21 42 07.2	-0.4
OKC	Ostrava-Krasne	150.52	336	⇑*e*PKP	PKPbc	21 42 07.4	+0.1
LANS	Liptovska Anna	150.56	334	*e*PKP	PKiKP	21 42 08.8	+0.8
OSTC	Ostas	150.60	339	⇑*e*PKP	PKiKP	21 42 08.0	0.0
CHVC	Chvalec	150.62	339	⇑*e*PKP	PKiKP	21 42 07.9	-0.1
UPC	Upice	150.71	339	⇑*e*PKP	PKPbc	21 42 07.6	-0.1
DPC	Dobruska-Polom	150.74	339	⇑*e*PKP	PKiKP	21 42 08.3	0.0
DPC				*e*PKPAB	PKPab	21 42 17.9	+0.7
ARR	Arges	150.78	323	⇑P	PKiKP	21 42 09.0	+0.4
MORC	Moravsky Berou	150.79	337	⇑P	PKiKP	21 42 08.3	-0.1
MORC	Moravsky Berou	150.79	337	*e*PKP	PKPbc	21 42 08.1	+0.1
MORC	Moravsky Berou	150.79	337		PKPbc	21 42 08.0	-0.1
KRLC	Kraliky	150.81	338	⇑*e*PKP	PKPbc	21 42 07.9	-0.1
KRLC				*e*PKPAB	PKPab	21 42 18.0	+0.4
CLL	Collm	150.89	343	⇑*i*PKPbc	PKPbc	21 42 08.1	0.0
	comp=Z,18nm,0.9s						
CLL				⇓*i*PKPab	PKPab	21 42 17.4	-0.3
	comp=Z,5.0nm,0.8s						
CLL	Collm	150.89	343	*e*PKPbc	PKiKP	21 42 08.2	-0.3
	baz=23,slow=2.2						
CLL	Collm	150.89	343		PKPbc	21 42 07.3	-0.8
CLZ	Clausthal	151.01	347	*e*PKPbc	PKiKP	21 42 08.9	+0.1
	baz=23,slow=2.2						
BRG	Berggiesshubel	151.02	342	*e*PKPbc	PKPbc	21 42 08.5	+0.1
	baz=23,slow=2.2						
PVCC	Panska Ves	151.14	341	⇑*e*PKP	PKiKP	21 42 09.2	+0.2
FBE	Freiberg	151.14	343	*e*PKPbc	PKiKP	21 42 09.0	-0.1
	baz=23,slow=2.2						
COPA	Copaceanca	151.20	321	⇑P	PKPbc	21 42 08.3	-0.7
PRU	Pruhonice	151.63	340	⇑*e*PKP	PKPbc	21 42 09.8	0.0
PRU				*e*PKPAB	PKPab	21 42 20.8	-0.1
SIRR	Siria	151.73	327	⇓P	PKiKP	21 42 10.4	-0.1
GZR	Gura Zlata	151.76	325	⇑P	PKPbc	21 42 09.7	-0.6
KRUC	Moravsky	151.80	337	*e*PKP	PKPbc	21 42 10.0	-0.2
TANN	Tannenbergstha	151.84	343	*e*PKPbc	PKiKP	21 42 10.6	0.0
	baz=23,slow=2.2						
MOX	Moxa	151.85	344	*e*PKPbc	PKPbc	21 42 10.3	0.0
	baz=23,slow=2.2						
BZS	Buzias	152.21	326	⇓P	PKPbc	21 42 10.0	-1.2
HERR	Herculane	152.29	325	⇑P	PKPbc	21 42 10.8	-0.6
MANZ	Manzenberg	152.33	343	*e*PKPbc	PKiKP	21 42 11.6	0.0
	baz=23,slow=2.2						
KHC	Kasperske Hory	152.68	341	⇑*e*PKP	PKPbc	21 42 12.1	-0.1
KHC				*e*PKPAB	PKPab	21 42 25.8	+0.4
CKRC	Cesky Krumlov	152.72	339	⇑*e*PKP	PKiKP	21 42 13.2	+0.8
WET	Wettzell	152.88	341	*e*PKPbc	PKiKP	21 42 12.8	0.0
	baz=23,slow=2.2						
GEC2	GERESS Array S	152.89	340	*e*PKPbc	PKPbc	21 42 12.7	-0.1
	baz=23,slow=2.2						
GERES	GERESS Array B	152.89	340	PKPbc	PKPbc	21 42 12.1	-0.7
	comp=Z,1.1nm,0.7s,baz=40,slow=2.3,SNR=9.8						
GERES	GERESS Array B	152.89	340		PKPbc	21 42 12.3	-0.5
GERES				PKPab	PKPab	21 42 26.9	+0.4
TNS	Taunus Mts	152.94	348	*e*PKPbc	PKiKP	21 42 12.7	-0.1
	baz=23,slow=2.2						
MORH	Mrgy, Hungar	153.19	331	⇑P	PKPbc	21 42 12.8	-0.5
VTS	Vitosha	153.26	320	⇑P	PKPab	21 42 29.5	+1.1
BOVS	Bovan	153.50	323	⇑P	PKPbc	21 42 13.2	-0.9
ESDC	Sonseca Array	163.91	11	PKPab	PKPab	21 43 13.6	-0.9
	comp=Z,2.4nm,1.1s,baz=349,slow=4.5,SNR=6.8						
TORD	Torodi Ar. Bea	169.19	188	PKP	PKPdf	21 42 21.7	-1.1
	comp=Z,1.2nm,0.8s,baz=332,slow=1.5,SNR=5.6						
TORD				PKPab	PKPab	21 43 38.0	-0.2
	comp=Z,0.7nm,0.6s,baz=183,slow=2.9,SNR=5.0						

IDC 23 21:33:21.0±1.6**, 7°.16S**×**126°.28E, h0**km**, mb3.8**/2**, mb1 4.0**/6**, mb1mx3.6**/37**, mbtmp3.9**/6**, ML3.7**/4**, Error ellipse: s-maj=50.7km s-min=24.0km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	3.98	220	Pn	Pn	21 34 23.8	+0.4
	8.7nm,0.3s,baz=74,slow=4.8,SNR=5.7						
BATI				Sn	Sn	21 35 07.8	-3.0
	6.9nm,0.3s,baz=110,slow=20,SNR=2.4						
KAPI	Kappang	6.83	288	Sn	Sn	21 36 15.2	-5.8
	1.2nm,0.3s,baz=127,slow=20,SNR=1.4						
FITZ	Fitzroy Crossi	10.89	183	Pn	Pn	21 35 56.5	-1.8
	0.3nm,0.3s,baz=99,slow=13,SNR=1.7						
FITZ				Sn	Sn	21 37 48.1	-13
	0.5nm,0.3s,baz=146,slow=13,SNR=2.3						
WRA	Warramunga Arr	14.92	149	Pn	Pn	21 36 52.5	-0.9
	0.3nm,0.3s,baz=314,slow=14,SNR=12						
WRA				Sn	Sn	21 39 29.4	-10
	0.3nm,0.3s,baz=330,slow=23,SNR=5.1						
ASAR	Alice Springs	17.97	157	P	P	21 37 33.1	-0.1
	0.4nm,0.3s,baz=334,slow=11,SNR=31						
ASAR				S	Sn	21 40 44.0	-10
	0.1nm,0.3s,baz=344,slow=32,SNR=2.3						
STKA	Stephens Creek	28.44	152	P	P	21 39 18.1	+0.4
	0.5nm,0.3s,baz=309,slow=13,SNR=1.6						
MKAR	Makanchi Array	66.39	329	P	P	21 44 11.9	0.0
	0.3nm,0.5s,baz=113,slow=8.1,SNR=7.0						

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*NEIC **23** 21:39:01.6±1.3, 7°.40S±0°.06×125°.77E±0°.07, h24km±5km, mb4.8/60, Error ellipse: s-maj=9.7km s-min=8.5km az=81.0*

*DJA **23** 21:39:01.4±0.5, 7°S±3°×12°6E±°, h10km, M4.6/13, mb4.9/10, mB5.0/7, MLv4.7/13, Mw(mB)4.4/7*

*IDC **23** 21:39:05.2±1.7, 7°.28S×125°.71E, h49km±18km, mb4.2/17, mb1 4.3/20, mb1mx4.1/38, mbtmp4.5/20, ML4.2/3, MS3.6/16, Ms1 3.7/16, ms1mx3.4/39, Error ellipse: s-maj=15.1km s-min=12.0km az=82.0*

ISC 23 21:38:59.1±0.3**, 7°.44S**±0°.03×**125°.79E**±0°.05**, h10**km**, n168,** σ1ˢ68/174**, mb4.7**/66**, MS3.7**/12**, 2C-4D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	2.74	213	P	Pb	21 39 47.4	-0.9
SOEI				S	Sg	21 40 29.9	+2.6
SOEI	Soe	2.74	213		Pn	21 39 45.0	+1.7
SOEI	Soe	2.74	213	P	Pb	21 39 47.6	-0.7
BATI	Baumata	3.45	217	P	Pn	21 39 57.3	+4.3
	100nm,0.3s,baz=88,slow=1.5,SNR=64						
BATI				S	Sn	21 40 39.6	+5.5
	49nm,0.3s,baz=266,slow=22,SNR=11						
BATI	Baumata	3.45	217	P	Pn	21 39 57.0	+4.0
BATI				S	Sb	21 40 41.0	-1.5
MMRI	Maumere	3.71	251	P	Pn	21 39 57.9	+1.5
MMRI	Maumere	3.71	251	Pn	Pn	21 39 57.0	+0.6
MMRI	Maumere	3.71	251	P	Pn	21 39 57.8	+1.4
EDFI	Ende, Flores	4.26	252	P	Pn	21 40 05.4	+1.3
SANI	Sanana	5.36	2	P	Pn	21 40 19.1	-0.1
BSSI	Bau Bau, Buton	5.41	283	P	Pn	21 40 20.1	+0.2
	0.5nm2μm85nm,0.4s						
BASI	Baing, Sumba	5.84	241	P	Pn	21 40 29.2	+3.4
	0.7nm2μm224nm,0.8s						
BKSI	Bulukumba	6.01	290	P	Pn	21 40 28.6	+0.5
	0.7nm2μm174nm,0.9s						
BNSI	Bone	6.41	298	P	Pn	21 40 34.5	+0.9
	0.4nm1μm158nm,0.9s						
KAPI	Kappang	6.46	292	P	Pn	21 40 35.5	+1.1
	2.7nm,0.3s,baz=171,slow=3.6,SNR=8.1						
KAPI				S	Sn	21 41 46.4	-1.8
	4.6nm,0.3s,baz=14,slow=21,SNR=1.9						
WBSI	Waikabubak, Su	6.69	250	P	Pn	21 40 35.1	-2.4
SPSI	Sidrap Palu	6.91	300	P	Pn	21 40 41.7	+1.2
	0.3nm1μm85nm,1.2s						
LBMI	Labuha	6.97	14	P	Pn	21 40 43.4	+2.0
	0.2nm40nm,0.9s						
LUWI	Luwuk	7.03	335	Pn	Pn	21 40 41.8	-0.4
LUWI	Luwuk	7.03	335	P	Pn	21 40 42.7	+0.5
DRS	Darwin Rock St	7.07	135	P	Pn	21 40 44.7	+2.1
	60nm,0.7s						
TTSI	Tana Toraja	7.37	306	P	Pn	21 40 49.4	+2.5
	0.2nm756nm72nm,0.9s						
MTN	Manton Dam	7.52	136	Pn	Pn	21 40 51.3	+2.5
MTN	Manton Dam	7.52	136	P	Pn	21 40 51.4	+2.6
	98nm,0.5s						
APSI	Ampana	7.69	327	P	Pn	21 40 51.5	+0.3
	0.2nm633nm48nm,0.9s						
FAKI	Fak Fak	7.85	55	Pn	Pn	21 40 53.6	+0.2
KDU	Kakadu	8.40	129	P	Pn	21 41 01.5	+0.6
	53nm,1.7s						
SIJI	Sorong	8.52	40	P	Pn	21 41 04.4	+1.9
	1.6nm,0.3s,baz=318,slow=9.4,SNR=6.5						
KNRA	Kununurra	8.69	161	Pn	Pn	21 41 05.5	+0.6
KNRA	Kununurra	8.69	161	P	Pn	21 41 05.5	+0.6
	82nm,0.8s						
MPSI	Mapaga	9.71	323	P	Pn	21 41 18.9	0.0
TOLI2	Tolitoli	9.86	329		Pn	21 41 21.8	+0.9
TOLI2	Tolitoli	9.86	329	P	Pn	21 41 23.7	+2.8
FITZ	Fitzroy Crossi	10.59	181	P	Pn	21 41 30.2	-0.8
FITZ				S	Sn	21 43 23.6	-6.2
	3.3nm,0.3s,baz=223,slow=12,SNR=7.3						
JAGI	Jajag, Banyuwa	11.57	264	Pn	Pn	21 41 45.5	+1.1
DAV	Davao City (W)	14.42	359	LR	LR	21 48 03.8	
	comp=Z,310nm,21.1s,baz=190,slow=38						
WRA	Warramunga Arr	14.94	147	P	Pn	21 42 26.6	-3.9
	1.5nm,0.3s,baz=313,slow=13,SNR=22						
WRA				S	Sn	21 45 05.1	-11
	1.3nm,0.3s,baz=316,slow=24,SNR=9.0						
WRA				LR	LR	21 49 18.7	
	comp=Z,432nm,18.2s,baz=320,slow=41						
WRA	Warramunga Arr	14.94	147	Pn	Pn	21 42 27.0	-3.5
WR0	Warramunga Arr	15.06	147		Pn	21 42 28.5	-3.7
PSA00	Pilbara Seismi	15.17	202	Pn	Pn	21 42 32.6	-1.0
PSA00	Pilbara Seismi	15.17	202	Pn	Pn	21 42 32.6	-1.0
PSA00				IAmb	IAmb	21 42 45.6	
	comp=Z,10nm,1.1s						
JAY	Jayapura	15.64	73	LR	LR	21 49 46.8	
	comp=Z,89nm,21.9s,baz=358,slow=41						
SBUM	Sibu	16.73	305		Pn	21 42 54.4	+0.7
KSM	Kuching	17.80	299		Pn	21 43 06.6	-0.5
AS31	Alice Springs	17.91	155		Pn	21 43 06.4	-2.2
ASAR	Alice Springs	17.91	155	P	Pn	21 43 09.1	+0.5
	comp=Z,3.5nm,0.3s,baz=325,slow=10,SNR=49						
ASAR				S	Sn	21 46 20.6	-7.8
	comp=Z,0.3nm,0.3s,baz=234,slow=21,SNR=2.8						
ASAR				LR	LR	21 50 43.1	
	comp=Z,498nm,21.5s,baz=354,slow=39						
ASAR	Alice Springs	17.91	155	Pn	Pn	21 43 06.7	-1.8
LEM	Lembang	18.04	271	LR	LR	21 50 54.8	
	comp=Z,242nm,18.5s,baz=39,slow=40						
COEN	Coen	18.27	112	P	Pn	21 43 11.7	-1.2
COEN	Coen	18.27	112	P	Pn	21 43 12.5	-0.4
	comp=Z,23nm,1.1s						
QIS	Mount Isa	18.68	136	P	Pn	21 43 19.1	+1.2
	comp=Z,29nm,0.9s						
GIRL	Giralia	18.76	215	P	P	21 43 19.4	+0.9
MEEK	Meekatharra	20.27	199	P	P	21 43 36.0	+1.0
	comp=Z,76nm,0.8s						
PMG	Port Moresby	21.23	97	P	P	21 43 49.3	+3.9
	comp=Z,6.2nm,0.3s,baz=266,slow=7.9,SNR=6.9						
PMG				LR	LR	21 53 02.6	
	comp=Z,118nm,20.1s,baz=250,slow=39						

PMG	Port Moresby	21.23	97	P	P	21 43 45.6	+0.2
PMG				IAmb	IAmb	21 43 51.9	
	comp=Z,30nm,1.1s						
OOD	Oodnadatta	22.31	156	P	P	21 43 57.9	+1.0
	comp=Z,62nm,1.2s						
FORT	Forrest	23.31	175	P	P	21 44 07.8	+0.5
FORT				IAmb	IAmb	21 44 17.9	
	comp=Z,25nm,0.7s						
FORT	Forrest	23.31	175	P	P	21 44 07.5	+0.1
	comp=Z,42nm,1.0s						
MORW	Morawa	23.39	202	P	P	21 44 08.3	+0.2
MORW				IAmb	IAmb	21 44 16.9	
	comp=Z,30nm,0.8s						
MORW	Morawa	23.39	202	P	P	21 44 08.3	+0.2
	comp=Z,45nm,0.9s						
CTAO	Charters Tower	23.48	124	P	P	21 44 09.5	+0.3
MYKOM	Kota Tinggi	23.73	292	P	P	21 44 11.9	+0.3
MYKOM				IAmb	IAmb	21 44 16.4	
	comp=Z,32nm,1.4s						
MULG	Mulgathing	24.01	162	P	P	21 44 15.5	+1.3
	comp=Z,42nm,1.2s						
BLDU	Ballidu	24.57	199	P	P	21 44 21.4	+2.1
	comp=Z,30nm,1.7s						
INKA	Innaminka	24.66	147	P	P	21 44 22.3	+2.1
	comp=Z,98nm,1.0s						
LCRK	Leigh Creek	25.68	155	P	P	21 44 31.1	+1.7
	comp=Z,36nm,0.6s						
DLV	T Lat	25.82	318	P	P	21 44 32.7	+1.7
QLP	Quilpie	25.88	140	P	P	21 44 33.3	+2.0
	comp=Z,38nm,0.7s						
NWAO	Narrogin (SRO)	26.57	196	P	P	21 44 39.5	+2.1
BBOO	Buckleboo	26.98	161	P	P	21 44 41.8	+0.7
BBOO	Buckleboo	26.98	161	P	P	21 44 42.2	+1.1
	comp=Z,12nm,1.7s						
KULM	Kulim	28.09	296	P	P	21 44 51.1	-0.1
KULM				IAmb	IAmb	21 45 01.3	
	comp=Z,11nm,0.9s						
STKA	Stephens Creek	28.43	151	P	P	21 44 55.5	+1.5
	comp=Z,3.1nm,0.5s,baz=326,slow=9.7,SNR=10						
STKA				LR	LR	21 57 35.1	
	comp=Z,260nm,19.1s,baz=341,slow=39						
STKA	Stephens Creek	28.43	151	P	P	21 44 54.7	+0.6
STKA	Stephens Creek	28.43	151	P	P	21 44 55.3	+1.2
	comp=Z,2.8nm,1.1s						
HTT	Hallett	28.58	157	P	P	21 44 56.9	+1.4
	comp=Z,10nm,1.3s						
PSI	Prapat	28.67	290	P	P	21 44 57.6	+1.0
	comp=Z,3.6nm,0.5s,baz=120,slow=7.0,SNR=6.0						
PSI				LR	LR	21 58 01.6	
	comp=Z,34nm,20.9s,baz=114,slow=40						
GSI	Gunungsitoli	29.45	286	P	P	21 45 03.0	-0.4
CMSA	Cobar Meteorol	30.33	145	P	P	21 45 12.4	+1.4
	comp=Z,7.9nm,1.1s						
ARPS	Mount Arapiles	32.65	156	P	P	21 45 33.8	+2.4
	comp=Z,28nm,0.8s						
TOO	Toolangi	34.92	152	P	P	21 45 52.4	+1.3
SLVN	Son La	35.77	324	P	P	21 45 58.1	-0.5
CM31	Chiang Mai Arr	36.93	314	P	P	21 46 08.0	-0.5
CM31				IAmb	IAmb	21 46 18.5	
	comp=Z,11nm,1.0s						
CMAR	Chiang Mai Arr	36.93	314	P	P	21 46 09.1	+0.6
	comp=Z,5.0nm,0.9s,baz=143,slow=7.0,SNR=27						
CMAR				LR	LR	22 02 34.6	
	comp=Z,86nm,18.9s,baz=228,slow=38						
CMAR	Chiang Mai Arr	36.93	314	P	P	21 46 08.1	-0.4
CHTO	Chiang Mai	37.16	315	P	P	21 46 09.9	-0.6
CHTO				IAmb	IAmb	21 46 12.2	
	comp=Z,20nm,1.4s						
GYA	Guiyang	38.47	332	⇓P	P	21 46 22.6	+1.0
GYA				pmax	pmax		
	comp=Z,13nm,1.0s						
KMI	Kunming	39.39	326	⇓P	P	21 46 31.5	+2.1
KMI				pmax	pmax		
	comp=Z,12nm,1.3s						
NJ2	Nanjing	39.83	351	*e*P	P	21 46 35.3	+2.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ENH	Enshi	40.63	338	P	P	21 46 38.7	-0.8
ENH				IAmb	IAmb	21 46 40.8	
	comp=Z,25nm,1.5s						
XAN	Xi'an	44.24	340	P	P	21 47 08.4	-0.4
XAN				pP	pwP	21 47 21.3	+5.1
XAN				sP	sP	21 47 27.1	+16
XAN				PcP	PcP	21 48 54.3	+0.9
XAN				pmax	pmax		
	comp=Z,12nm,1.2s						
KSRS	Korea Array	44.71	2	P	P	21 47 12.3	-0.1
	comp=Z,1.9nm,0.9s,baz=183,slow=9.6,SNR=7.8						
KSRS				PcP	PP	21 48 55.8	-1.1
	comp=Z,1.0nm,0.7s,baz=204,slow=2.7,SNR=4.4						
KSRS				LR	LR	22 05 52.6	
	comp=Z,47nm,20.4s,baz=248,slow=36						
MJAR	Matsushiro Arr	45.28	14	P	P	21 47 16.1	-1.0
	comp=Z,8.2nm,1.1s,baz=191,slow=7.7,SNR=7.9						
MJAR				LR	LR	22 03 43.6	
	comp=Z,39nm,21.8s,baz=225,slow=33						
MAT	Matsushiro	45.28	14	P	P	21 47 15.3	-1.7
SHL	Shillong	46.51	316	P	P	21 47 26.0	-1.1
SHL				IAmb	IAmb	21 47 27.0	
	comp=Z,14nm,1.3s						
LZH	Lanzhou	47.96	336	⇓P	P	21 47 38.8	+0.5
LZH				pP	pwP	21 47 47.3	+1.6
LZH				sP	sP	21 47 52.1	+11
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				LR	LR		
	comp=N,260nm,15.2s						
LZH				LR	LR		
	comp=E,280nm,14.8s						
LZH				LR	LR		
	comp=Z,220nm,17.4s						
BJT	Baijiatuau	48.05	350	P	P	21 47 37.7	-1.0
BJT				IAmb	IAmb	21 47 38.7	
	comp=Z,12nm,1.3s						
BJI	Beijing	48.07	350	P	P	21 47 37.9	-0.9
BJI				PcP	PcP	21 49 03.0	-3.6
BJI				sS	sS	21 54 44.3	+4.0
BJI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LSA	Lhasa	49.72	320	P	P	21 47 52.3	0.0
LSA				pmax	pmax		
	comp=Z,29nm,1.1s						
LSA	Lhasa	49.72	320	P	P	21 47 51.7	-0.6
LSA				IAmb	IAmb	21 47 53.8	
	comp=Z,16nm,1.4s						
HHC	Hu-ho-hao-te	49.80	346	*e*P	P	21 47 54.8	+2.5
HHC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,170nm,4.7s						
USRK	Ussuriysk Ar.	51.71	6	P	P	21 48 06.3	-0.1
	comp=Z,2.9nm,0.6s,baz=189,slow=6.7,SNR=9.2						
USRK	Ussuriysk Ar.	51.71	6	P	P	21 48 05.7	-0.7
MDJ	Mudanjiang	51.93	3	P	P	21 48 08.8	+0.7
MDJ				pmax	pmax		
	comp=Z,61nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,140nm,3.5s						
MDJ	Mudanjiang	51.93	3	P	P	21 48 07.5	-0.5
MDJ				IAmb	IAmb	21 48 09.2	
	comp=Z,13nm,1.0s						
GUN	Gumba	52.17	314	*e*P	P	21 48 10.1	-0.5
	comp=Z,56nm,1.1s						
PKI	Pulchoki	52.31	313	*e*P	P	21 48 10.7	-0.9
	comp=Z,12nm,0.6s						
PKIN	Phulchoki	52.32	313	*e*P	P	21 48 10.7	-1.0
	comp=Z,11nm,0.5s						
GTA	Gaotai	52.46	335	⇑P	P	21 48 12.3	0.0
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KKN	Kakani	52.53	314	*e*P	P	21 48 12.5	-0.6
DMN	Daman	52.55	313	*e*P	P	21 48 12.7	-0.6
GKN	Gorkha	53.12	313	*e*P	P	21 48 16.7	-0.7
RPZ	Rata Peaks	53.51	140	P	P	21 48 21.0	+1.1
DANN	Dangsing	53.95	313	*e*P	P	21 48 22.8	-0.9
PYUN	Piuthan	54.37	312	*e*P	P	21 48 26.2	-0.4
	comp=Z,93nm,1.0s						
HIA	Hailar	56.72	355	P	P	21 48 42.7	-0.2
HIA				IAmb	IAmb	21 48 43.8	
	comp=Z,15nm,1.3s						
ULN	Ulaanbaatar	57.50	345	P	P	21 48 48.2	-0.4
ULN				IAmb	IAmb	21 48 49.6	
	comp=Z,7.6nm,0.9s						
SONM	Songino Array	57.65	345	P	P	21 48 49.2	-0.4
	comp=Z,4.9nm,1.0s,baz=165,slow=7.6,SNR=23						
SONM				PcP	PcP	21 49 42.5	-0.2
	comp=Z,2.6nm,1.0s,baz=169,slow=3.8,SNR=5.0						
SONM				LR	LR	22 16 18.8	
	comp=Z,43nm,18.0s,baz=112,slow=39						
SONM	Songino Array	57.65	345	P	P	21 48 49.2	-0.4
SONM				IAmb	IAmb	21 48 50.5	
	comp=Z,9.3nm,1.2s						
WMQ	Urumqi	61.57	329	*e*P	P	21 49 16.9	+0.2
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,210nm,5.5s						
NIL	Nilore	64.39	313	P	P	21 49 34.9	-0.8
NIL				IAmb	IAmb	21 49 37.1	
	comp=Z,6.0nm,0.6s						
KSH	Kashi	65.58	320	P	P	21 49 43.4	0.0
KSH				pP	pwP	21 49 54.0	+3.5
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PEA0B	Petropavlovsk-	66.12	20	P	P	21 49 47.1	+0.7
PETK	Petropavlovsk-	66.12	20	P	P	21 49 47.1	+0.7
	comp=Z,15nm,1.0s,baz=191,slow=7.2,SNR=8.6						
PETK	Petropavlovsk-	66.12	20	P	P	21 49 46.4	0.0
MK31	Makanchi Array	66.37	329	P	P	21 49 47.4	-0.8
MK31				IAmb	IAmb	21 49 56.8	
	comp=Z,8.7nm,1.2s						
MKAR	Makanchi Array	66.37	329	P	P	21 49 47.4	-0.8
	comp=Z,2.1nm,0.5s,baz=123,slow=8.1,SNR=23						
BOOM	Boomskoye usch	67.27	322	P	P	21 49 53.6	-0.6
BOOM				IAmb	IAmb	21 50 14.8	
	comp=Z,10nm,1.2s						
KBL	Kabul	67.89	312	P	P	21 49 57.6	-0.8
AAK	Ala-Archa	68.24	322	P	P	21 50 00.0	-0.3
AAK				IAmb	IAmb	21 50 22.5	
	comp=Z,8.2nm,1.3s						
DRK	Karamyk	68.30	318	P	P	21 50 00.4	-0.6
DRK				IAmb	IAmb	21 50 01.1	
	comp=Z,4.1nm,0.7s						
YAK	Yakutsk	69.33	2	P	P	21 50 06.2	-0.3
CHGR	Chuyangaron	69.69	316	P	P	21 50 08.0	-1.3
ZAA0	Zalesovo Array	70.19	336	P	P	21 50 10.6	-1.4
ZAA0				IAmb	IAmb	21 50 12.1	
	comp=Z,12nm,1.1s						
ZALV	Zalesovo Beam	70.19	336	P	P	21 50 10.6	-1.3
	comp=Z,7.0nm,0.9s,baz=116,slow=3.4,SNR=22						
ZALV	Zalesovo Beam	70.19	336	P	P	21 50 10.4	-1.6
KURK	Kurchatov	70.78	330	P	P	21 50 14.7	-0.9
KURK				IAmb	IAmb	21 50 16.4	
	comp=Z,12nm,1.2s						
KKAR	Karatay Array	70.97	320	P	P	21 50 15.8	-1.1
VNDA	Vanda	72.54	172	P	P	21 50 27.2	+1.3
	comp=Z,1.8nm,0.7s,baz=326,slow=8.3,SNR=7.3						
VNDA				LR	LR	22 21 43.9	
	comp=Z,96nm,18.5s,baz=320,slow=35						
VNDA	Vanda	72.54	172	P	P	21 50 26.5	+0.6
VNDA				IAmb	IAmb	21 50 40.9	
	comp=Z,8.2nm,1.2s						
HRA	Herat	72.96	309	P	P	21 50 27.7	-1.6
MAW	Mawson	73.03	201	P	P	21 50 29.4	+0.5
SEY	Seymchan	73.07	12	P	P	21 50 29.6	+0.5
	comp=Z,5.7nm,0.7s,baz=183,slow=0.7,SNR=12						
SOCY	Socotra	73.98	285	P	P	21 50 35.0	-0.6
BRVK	Borovoye	76.33	329	P	P	21 50 48.2	0.0
BRVK				IAmb	IAmb	21 50 56.1	
	comp=Z,6.0nm,1.1s						
GEYT	Alibeck	77.34	311	P	P	21 50 53.5	-0.8
	comp=Z,2.5nm,0.8s,baz=65,slow=14,SNR=3.7						
GEYT				LR	LR	22 35 59.4	
	comp=Z,72nm,18.5s,baz=320,slow=44						
TIXI	Tiksi	78.95	1	P	P	21 51 02.0	-0.5
TIXI				IAmb	IAmb	21 51 03.0	
	comp=Z,9.1nm,1.2s						
ABKAR	Akbulak array	80.29	323	P	P	21 51 09.5	-0.7
ABKAR	Akbulak array	80.29	323	P	P	21 51 09.3	-0.9
NRIK	Noril'sk	81.02	347	P	P	21 51 13.2	-0.5
	comp=Z,3.8nm,0.8s,baz=140,slow=8.8,SNR=5.7						
NRIK	Noril'sk	81.02	347	P	P	21 51 13.3	-0.5
NRIK				IAmb	IAmb	21 51 14.6	
	comp=Z,9.0nm,1.1s						
SYO	Syowa Base	81.73	201	⇓*e*P	P	21 51 20.7	+3.1
SYO	Syowa Base	81.73	201	⇑*e*pP	pP	21 51 26.8	+7.2
AKTO	Aktyubinsk	81.89	323	LR	LR	22 30 32.9	
	comp=Z,38nm,19.3s,baz=81,slow=38						
QSPA	South Pole Qui	82.54	180	P	P	21 51 22.1	0.0
QSPA				IAmb	IAmb	21 51 37.0	
	comp=Z,10nm,1.0s						
ARU	Arti	83.90	329	P	P	21 51 28.7	-0.3
RAYN	Ar Rayn	84.11	295	P	P	21 51 30.4	-0.6
SIRT	Sirnak	89.23	308	P	P	21 51 55.3	-0.4
GURO	Guroymak-BITLI	89.73	309	P	P	21 51 58.1	0.0
GURO				IAmb	IAmb	21 52 08.0	
	comp=Z,7.2nm,1.0s						
KBZ	Khabaz	89.98	314	P	P	21 51 58.8	-0.1
	comp=Z,2.7nm,0.9s,baz=57,slow=1.9,SNR=4.2						
KBZ				LR	LR	22 38 58.3	
	comp=Z,40nm,18.1s,baz=346,slow=40						
MLY	Manley	93.94	25	P	P	21 52 16.3	-0.6
MLY				IAmb	IAmb	21 52 17.5	
	comp=Z,4.2nm,1.1s						
I23K	Minto, Yukon-K	94.53	25	P	P	21 52 19.1	-0.4
KLMR	Klimovskoe	94.62	331	*e*P	P	21 52 16.8	-3.2
KLMR				AMP		21 52 20.2	
	comp=Z,21nm,1.5s						
CCB	Clear Creek Bu	95.13	26	P	P	21 52 20.9	-1.3
H24K	Noodor Dome	95.23	24	P	P	21 52 22.6	-0.2
ILAR	Eielson Array	95.54	25	P	P	21 52 22.6	-1.6
	comp=Z,0.8nm,0.8s,baz=280,slow=5.9,SNR=7.7						
BMAR	Burnt Mountain	96.68	23	P	P	21 52 29.7	+0.4
ANMO	Albuquerque	124.91	52	PKP	PKiKP	21 58 01.0	+0.4
	comp=Z,0.9nm,0.8s,baz=179,slow=4.1,SNR=3.3						

IDC 23 22:17:00.9±2.3, 5°.64N×121°.54E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.0/59, mbtmp3.5/3, Error ellipse: s-maj=372.7km s-min=29.4km az=62.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	28.36	154	P	P	22 22 57.8	+0.7
	0.8nm,0.7s,baz=332,slow=9.7,SNR=6.2						
ASAR	Alice Springs	31.52	158	P	P	22 23 24.2	-0.8
	0.4nm,0.9s,baz=348,slow=13,SNR=4.4						
MKAR	Makanchi Array	53.10	327	P	P	22 26 20.3	-0.1
	0.6nm,0.9s,baz=109,slow=7.8,SNR=3.0						

NOU 23 22:23:34.0, 14°.71S×167°.40E, h119km, MLv4.4/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.76	195	P	Pn	22 23 54.2	+0.5
DVP	Devils Point	3.09	166	P	Pn	22 24 21.9	+0.4
KOUNC	Koumac, New Ca	6.52	207	P	Pn	22 25 07.5	0.0
YATNC	Mamie plateau,	7.33	184	P	Pn	22 25 16.7	-1.7
NOUC	Port Laguerre	7.42	188	P	Pn	22 25 19.6	-0.1
ONTNC	Ouen Toro	7.61	187	P	Pn	22 25 23.3	+1.1
OUENC	Ouen Island, N	7.69	184	P	Pn	22 25 23.6	+0.4

IDC ***23*** *22:28:16.9±0.6, 17°.10S×174°.12W, h0km, mb4.4/13, mb1 4.7/13, mb1mx4.5/24, mbtmp4.4/13, MS4.4/24, Ms1 4.4/24, ms1mx4.4/25, Error ellipse: s-maj=27.7km s-min=16.8km az=141.0*

NEIC ***23*** *22:28:18.5±2.1, 17°.3S±0°.1×173°.73W±0°.07, h10km±1km, mb5.3/96, Error ellipse: s-maj=18.9km s-min=11.4km az=176.0*

MOS ***23*** *22:28:18.1±1.8, 17°.05S×174°.01W, h10km, mb4.9/5, Error ellipse: s-maj=13.4km s-min=9.8km az=150.5*

GCMT ***23*** *22:28:23.5±0.2, 16°.91S±0°.02×173°.70W±0°.01, h12km, MW5.1/119, Moment Tensor Solution. s54,c72; s119,c183; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.05±.15; $M_{\theta\theta}$-0.38±.11; $M_{\phi\phi}$-4.66±.11; $M_{r\theta}$-0.73±.30; $M_{\theta\phi}$-1.02±.08; $M_{\phi r}$-1.36±.27; Best double couple: $M_0$5.20400×10^{16} NP1:ϕ_s8.00000°, δ37.00000°, λ83.00000°. NP2:ϕ_s197.00000°, δ53.00000°, λ95.00000°. Principal axes: T 5.2990, Plg81.0000°, Azm130.0000°; N -0.1820, Plg4.0000°, Azm14.0000°; P -5.1100, Plg8.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***23*** *22:28:25.3±0.0, 15°.83S×172°.61W, h33km*

BJI ***23*** *22:28:32.9±0.0, 17°.32S×174°.38W, h127km, mB5.5/16, mb4.7/19*

ISC 23 22:28:17.9±0.3, 17°.16S±0°.07×173°.79W±0°.06, h10km, n461, $\sigma 1^{s}26$/427, mb5.2/72, MS4.5/27, 58C-19D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.77	31	Pn	Pn	22 29 14.5	-1.7
	11nm,0.3s,baz=64,slow=12,SNR=5.0						
AFI				Sn	Sn	22 29 56.0	-4.7
	13nm,0.3s,baz=59,slow=23,SNR=4.5						
NIUE	Niue	4.13	118	Pn	Pn	22 29 20.0	-1.2
MSVF	Nonsavu	7.81	265	LR	LR	22 32 30.4	
	comp=Z,3μm,21.2s,baz=93,slow=34						
MSVF	Nonsavu	7.81	265	P	Pn	22 30 13.0	+1.2
MSVF	Nonsavu	7.81	265		Pn	22 30 13.0	+1.2
RAO	Raoul Island	12.62	197	LR	LR	22 35 15.8	
	comp=Z,571nm,18.3s,baz=2.5,slow=33						
LIFNC	LIFOU	18.30	256	P	Pn	22 32 31.5	-0.6
LIFNC				IAmb	IAmb	22 32 39.0	
	comp=Z,475nm,1.5s						
SANVU	Saraoutou	18.33	273	P	P	22 32 32.3	-0.2
SANVU				IAmb	IAmb	22 32 41.5	
	comp=Z,390nm,1.8s						
PINNC	Pines Island,	18.46	250	P	P	22 32 32.8	-1.1
YATNC	Mamie plateau,	18.84	252	P	Pn	22 32 44.6	+5.9
OUENC	Ouen Island, N	18.96	251	P	P	22 32 38.3	-1.2
OUENC				IAmb	IAmb	22 32 46.6	
	comp=Z,307nm,1.6s						
OUENC	Ouen Island, N	18.96	251	P	Pn	22 32 44.3	+4.2
DZM	Mont Dzumac	19.25	252	P	Pn	22 32 43.2	-0.5
	comp=Z,0.2nm,0.3s,baz=78,slow=17,SNR=8.4						
DZM				LR	LR	22 38 56.4	
	comp=Z,3μm,20.5s,baz=92,slow=34						
DZM	Mont Dzumac	19.25	252	*e*LR	LR	22 37 24.9	
	comp=Z,5μm,25.6s						
DZM	Mont Dzumac	19.25	252	P	P	22 32 42.3	-0.4
DZM				IAmb	IAmb	22 32 52.5	
	comp=Z,309nm,1.8s						
DZM	Mont Dzumac	19.25	252	P	Pn	22 32 44.5	+0.8
ONTNC	Ouen Toro	19.29	251	P	P	22 32 42.2	-0.8
ONTNC				IAmb	IAmb	22 32 50.2	
	comp=Z,330nm,1.8s						
ONTNC	Ouen Toro	19.29	251	P	Pn	22 32 45.4	+1.4
NOUC	Port Laguerre	19.38	252	P	Pn	22 32 49.4	+4.2
OUZ	Omahuta	21.21	210	P	P	22 33 03.1	-0.8
URZ	Urewera	22.48	199	P	P	22 33 18.0	+0.5
	comp=Z,12nm,0.7s,baz=299,slow=23,SNR=7.1						
URZ				LR	LR	22 41 06.4	
	comp=Z,1μm,18.1s,baz=31,slow=34						
URZ	Urewera	22.48	199	P	P	22 33 16.6	-0.9
PAE	Paea	23.10	95	*e*T	T	22 57 05.3	
	comp=Z,15nm,0.4s						
PPT2	Papeete2	23.11	95	*e*LR	LR	22 38 55.8	
	comp=Z,3μm,25.8s						
PPT2	Papeete2	23.11	95	*e*T	T	22 57 04.4	
	comp=Z,29nm,0.3s						
PPT	Papeete	23.11	95	LR	LR	22 39 49.0	
	comp=Z,1μm,21.6s,baz=274,slow=30						
TIAR	Tiarei	23.33	95	*e*T	T	22 57 30.3	
	comp=Z,1.5nm,0.2s						
BKZ	Black Stump Fm	23.51	199	P	P	22 33 28.2	+0.1
TBI	Tubuai	23.62	109	*e*LR	LR	22 39 16.5	
	comp=Z,4μm,27.2s						
TBI	Tubuai	23.62	109	*e*T	T	22 57 54.2	
	comp=Z,54nm,0.3s						
PMOR	Pomariorio Ree	24.97	89	*e*T	T	22 59 34.0	
	comp=Z,27nm,0.4s						
VAH	Vaihoa	25.19	89	*e*T	T	22 59 50.5	
	comp=Z,49nm,0.3s						
HNR	Honiara	26.67	283	LR	LR	22 42 45.9	
	comp=Z,4μm,19.7s,baz=127,slow=33						
HNR	Honiara	26.67	283	P	P	22 33 57.7	+0.4
HNR	Honiara	26.67	283	P	P	22 33 57.7	+0.4
EIDS	Eidsvold	33.66	250	P	P	22 34 58.2	-1.0
EIDS				IAmb	IAmb	22 35 04.0	
	comp=Z,50nm,1.9s						
TAOE	Nuku Hiva Isla	33.75	80	*e*LR	LR	22 43 42.0	
	comp=Z,2μm,27.8s						
TAOE	Nuku Hiva Isla	33.75	80	*e*T	T	23 10 31.5	
	comp=Z,202nm,0.2s						
CTAO	Charters Tower	37.92	259	P	P	22 35 35.1	-0.7
CTAO				pmax	pmax		
	comp=Z,72nm,2.0s						
CTAO	Charters Tower	37.92	259	P	P	22 35 35.1	-0.7
CTAO				IAmb	IAmb	22 35 39.3	
	comp=Z,72nm,1.9s						
PMG	Port Moresby	38.72	276	P	P	22 35 42.5	-0.1
PMG				pmax	pmax		
	comp=Z,89nm,2.0s						
PMG	Port Moresby	38.72	276	P	P	22 35 42.5	-0.1
PMG				IAmb	IAmb	22 35 52.5	
	comp=Z,89nm,2.0s						
H11S2	WAKE ISLAND Hy	40.29	331	T	T	23 18 27.4	
	baz=150,slow=74,SNR=4865						
H11S3	WAKE ISLAND Hy	40.31	331	T	T	23 18 28.7	
	baz=150,slow=74,SNR=1822						
H11S1	WAKE ISLAND Hy	40.31	331	T	T	23 18 26.7	
	baz=150,slow=74,SNR=2126						
H11N3	WAKE ISLAND Hy	41.27	332	T	T	23 19 36.4	
	baz=151,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	41.27	332	T	T	23 19 40.5	
	baz=151,slow=76,SNR=526						
H11N2	WAKE ISLAND Hy	41.28	332	T	T	23 19 37.5	
	baz=151,slow=76,SNR=41						
STKA	Stephens Creek	42.85	241	P	P	22 36 15.2	-1.3
	comp=Z,8.4nm,0.9s,baz=94,slow=7.9,SNR=13						
STKA				LR	LR	22 53 06.5	
	comp=Z,468nm,18.1s,baz=67,slow=35						
STKA	Stephens Creek	42.85	241	P	P	22 36 14.3	-2.2
STKA				pmax	pmax		
	comp=Z,25nm,2.0s						
STKA	Stephens Creek	42.85	241	P	P	22 36 14.3	-2.2
BBOO	Buckleboo	47.62	241	P	P	22 36 52.4	-2.0
WB2	Warramunga Arr	49.09	258	P	P	22 37 03.4	-2.5
WB2				IAmb	IAmb	22 37 31.3	
	comp=Z,77nm,1.9s						
WRAB	Tennant Creek	49.09	258	⇑*e*P	P	22 37 04.5	-1.4
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WRA	Warramunga Arr	49.10	258	P	P	22 37 03.6	-2.4
	comp=Z,1.6nm,0.7s,baz=99,slow=7.0,SNR=9.2						
WRA				LR	LR	22 56 51.2	
	comp=Z,927nm,19.0s,baz=100,slow=35						
WRA	Warramunga Arr	49.10	258	P	P	22 37 03.6	-2.4
AS31	Alice Springs	49.23	253	P	P	22 37 04.2	-2.8
ASAR	Alice Springs	49.23	253	P	P	22 37 04.8	-2.2
	comp=Z,12nm,0.8s,baz=86,slow=8.3,SNR=56						
ASAR				LR	LR	22 57 05.2	
	comp=Z,931nm,18.4s,baz=96,slow=35						
ASAR	Alice Springs	49.23	253	P	P	22 37 04.4	-2.6
ASAR	Alice Springs	49.23	253	P	P	22 37 04.4	-2.6
FORT	Forrest	54.30	244	P	P	22 37 43.2	-1.5
TNTI	Ternate	60.62	281	P	P	22 38 29.0	-0.5
TNTI				IAmb	IAmb	22 38 44.7	
	comp=Z,23nm,0.9s						
VNDA	Vanda	61.59	186	LR	LR	23 00 33.6	
	comp=Z,86nm,21.0s,baz=357,slow=31						
TOLI2	Tolitoli	66.94	279	P	P	22 39 10.5	-0.7
TOLI2				IAmb	IAmb	22 39 15.3	
	comp=Z,43nm,1.6s						
MJAR	Matsushiro Arr	70.05	320	P	P	22 39 31.1	+0.9
	comp=Z,1.0nm,0.4s,baz=159,slow=6.1,SNR=4.6						
MJAR				LR	LR	23 04 24.4	
	comp=Z,177nm,21.9s,baz=120,slow=31						
H06S1	SOCORRO T	71.33	63	T	T	23 57 31.1	
	SNR=29						
H06E1	SOCORRO T-PHAS	71.38	63	T	T	23 57 30.1	
	SNR=35						
QSPA	South Pole Qui	72.89	180	P	P	22 39 46.4	-0.7
QSPA				IAmb	IAmb	22 39 53.4	
	comp=Z,26nm,1.2s						
BFSC	Mount Baldy Ra	73.91	46	P	P	22 39 56.3	+2.7
	baz=236						
MONP2	Monument Peak	74.02	47	P	P	22 39 57.4	+3.0
	baz=237						
EDW2	Edwards Air Fo	74.04	45	P	P	22 39 57.4	+3.1
	baz=235						
IKP	In-Ko-Pah, Jac	74.11	48	P	P	22 39 57.2	+2.5
	baz=237						
ISA	Isabella, Lake	74.17	44	P	P	22 39 55.8	+0.8
ISA				pmax	pmax		
	comp=Z,44nm,1.6s						
ISA	Isabella, Lake	74.17	44	P	P	22 39 55.8	+0.8
ISA				IAmb	IAmb	22 40 02.4	
	comp=Z,44nm,1.6s						

ISA	**Isabella, Lake**	**74.17**	**44**	P	**P**	**22 39 57.9**	**+2.9**
	baz=235						
O02D	**Mt. Diablo Mer**	**74.19**	**38**	P	**P**	**22 39 58.2**	**+3.1**
	baz=231						
PETK	**Petropavlovsk-**	**74.19**	**343**	P	**P**	**22 39 54.0**	**-0.6**
	comp=Z,4.8nm,0.9s,baz=157,slow=8.8,SNR=3.0						
PETK				LR	LR	23 05 08.1	
	comp=Z,62nm,22.0s,baz=150,slow=30						
CHGN	**Chignik**	**74.32**	**9**	P	**P**	**22 39 57.8**	**+2.6**
	baz=196						
PFO	**Pinyon Flats O**	**74.39**	**47**	P	**P**	**22 39 59.3**	**+2.9**
	baz=237						
TPFO	**Pinon Flats**	**74.39**	**47**	P	**P**	**22 39 59.3**	**+2.9**
	baz=237						
SWSC	**Sam W. Stewart**	**74.49**	**48**	P	**P**	**22 39 59.1**	**+2.2**
	baz=237						
ORV	**Oroville**	**74.57**	**39**	P	**P**	**22 39 57.2**	**0.0**
ORV				pmax	pmax		
	comp=Z,32nm,1.9s						
ORV	**Oroville**	**74.57**	**39**	P	**P**	**22 39 57.2**	**0.0**
LRMC	**Laurel Mtn Rad**	**74.59**	**45**	P	**P**	**22 39 59.9**	**+2.3**
	baz=235						
N02D	**Trinity Center**	**74.74**	**38**	P	**P**	**22 40 00.3**	**+2.1**
	baz=230						
O03E	**Paynes Creek**	**74.85**	**39**	P	**P**	**22 40 00.9**	**+2.1**
	baz=231						
CWC	**Cottonwood Cre**	**74.88**	**44**	P	**P**	**22 40 01.1**	**+1.9**
	baz=235						
M02C	**Callahan**	**74.92**	**37**	P	**P**	**22 40 00.9**	**+1.6**
	baz=230						
BELC	**Belle Mtn. Jos**	**74.92**	**47**	P	**P**	**22 40 01.4**	**+1.9**
	baz=237						
L02E	**Cave Junction**	**74.99**	**36**	P	**P**	**22 40 02.0**	**+2.4**
	baz=230						
MPMC	**Manual Prospec**	**75.05**	**44**	P	**P**	**22 40 02.4**	**+2.2**
	baz=235,SNR=9.8						
MLAC	**Mammoth, Mammo**	**75.07**	**42**	P	**P**	**22 40 02.3**	**+1.9**
	baz=234						
GSC	**Goldstone, Bar**	**75.08**	**45**	P	**P**	**22 40 01.4**	**+1.0**
GSC				pmax	pmax		
	comp=Z,19nm,1.4s						
GSC	**Goldstone, Bar**	**75.08**	**45**	P	**P**	**22 40 01.4**	**+1.0**
GSC	**Goldstone, Bar**	**75.08**	**45**	P	**P**	**22 40 02.4**	**+2.0**
	baz=236						
BC3	**Big Chuckawall**	**75.12**	**47**	P	**P**	**22 40 02.6**	**+2.0**
	baz=237						
HEC	**Hector,Ludlow**	**75.14**	**46**	P	**P**	**22 40 03.2**	**+2.5**
	baz=236						
GLA	**Glamis**	**75.24**	**48**	P	**P**	**22 40 02.5**	**+1.3**
GLA				pmax	pmax		
	comp=Z,18nm,1.2s						
GLA	**Glamis**	**75.24**	**48**	P	**P**	**22 40 02.5**	**+1.3**
GLA	**Glamis**	**75.24**	**48**	P	**P**	**22 40 03.3**	**+2.1**
	baz=238						
K02D	**Willamette Mer**	**75.30**	**36**	P	**P**	**22 40 04.0**	**+2.6**
	baz=229						
QSM	**Queen of Sheba**	**75.41**	**45**	P	**P**	**22 40 03.2**	**+1.1**
QSM				IAmb	IAmb	22 40 08.3	
	comp=Z,42nm,1.5s						
SBUM	**Sibu**	**75.47**	**277**	P	**P**	**22 40 03.5**	**+0.6**
GMRC	**Granite Mounta**	**75.58**	**46**	P	**P**	**22 40 05.2**	**+1.9**
	baz=237						
IRM	**Iron Mountain**	**75.60**	**47**	P	**P**	**22 40 06.2**	**+2.9**
	baz=238						
LCH	**Last Change Ra**	**75.62**	**43**	P	**P**	**22 40 04.9**	**+1.5**
GWY	**Greenwater Val**	**75.67**	**45**	P	**P**	**22 40 05.0**	**+1.1**
GWY				IAmb	IAmb	22 40 09.9	
	comp=Z,43nm,1.7s						
FURC	**Furnace Creek,**	**75.70**	**44**	P	**P**	**22 40 05.7**	**+2.0**
	baz=236						
M04C	**Macdoel**	**75.76**	**37**	P	**P**	**22 40 06.5**	**+2.3**
	baz=231						
TUQ	**Turquoise Moun**	**75.76**	**46**	P	**P**	**22 40 06.4**	**+2.1**
	baz=237						
L04D	**Klamath Falls**	**75.76**	**37**	P	**P**	**22 40 06.8**	**+2.7**
	baz=231						
NVAR	**Mina Array Bea**	**75.88**	**42**	P	**P**	**22 40 07.5**	**+2.4**
	comp=Z,4.1nm,0.9s,baz=224,slow=8.7,SNR=9.1						
NVAR				LR	LR	23 06 31.8	
	comp=Z,323nm,19.0s,baz=256,slow=30						
NVAR	**Mina Array Bea**	**75.88**	**42**	P	**P**	**22 40 06.5**	**+1.5**
NV11	**Mina Array Sit**	**75.98**	**42**	P	**P**	**22 40 06.3**	**+0.8**
NV11				IAmb	IAmb	22 40 12.6	
	comp=Z,58nm,1.8s						
214A	**Organ Pipe Nat**	**76.12**	**50**	P	**P**	**22 40 08.3**	**+2.0**
	baz=239						
TPH	**Tonopah**	**76.37**	**43**	P	**P**	**22 40 09.0**	**+1.2**
TPH	**Tonopah**	**76.37**	**43**	P	**P**	**22 40 09.0**	**+1.2**
TPNV	**Topopah Spring**	**76.38**	**44**	P	**P**	**22 40 08.2**	**+0.4**
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TPNV	**Topopah Spring**	**76.38**	**44**	P	**P**	**22 40 08.2**	**+0.4**
TPNV	**Topopah Spring**	**76.38**	**44**	P	**P**	**22 40 09.6**	**+1.7**
	baz=236						
PDMCI	**Parker Dam,Lak**	**76.38**	**47**	P	**P**	**22 40 09.6**	**+1.9**
	baz=238						
TEY	**Ternei**	**76.56**	**326**	*e*P	P	22 40 00.9	-7.5
SHPR	**Sheep Range**	**76.86**	**45**	P	**P**	**22 40 11.3**	**+0.7**
SHPR				IAmb	IAmb	22 40 18.1	
	comp=Z,35nm,1.7s						
KSM	**Kuching**	**76.98**	**276**	P	**P**	**22 40 11.7**	**+0.1**
J05D	**Fort Rock, OR**	**77.05**	**37**	P	**P**	**22 40 13.7**	**+2.2**
	baz=231						
KSRS	**Korea Array**	**77.16**	**316**	P	**P**	**22 40 11.8**	**-0.1**
	comp=Z,3.3nm,0.9s,baz=120,slow=5.3,SNR=8.4						
KSRS				LR	LR	23 10 24.6	
	comp=Z,109nm,19.2s,baz=128,slow=33						
KSAR	**Wonju Array Be**	**77.18**	**316**	P	**P**	**22 40 13.4**	**+1.3**
KSAR	**Wonju Array Be**	**77.18**	**316**	P	**P**	**22 40 13.4**	**+1.3**
PINE	**Pine Mountain**	**77.53**	**36**	P	**P**	**22 40 16.2**	**+2.0**
PINE				IAmb	IAmb	22 40 20.7	
	comp=Z,37nm,1.2s						
R11A	**Troy Canyon, C**	**77.59**	**43**	P	**P**	**22 40 15.8**	**+1.2**
R11A	**Troy Canyon, C**	**77.59**	**43**	P	**P**	**22 40 16.0**	**+1.3**
	baz=236						
I05D	**Terrebonne, OR**	**77.65**	**36**	P	**P**	**22 40 17.1**	**+2.4**
	baz=231						
P18K	**Big Mountain,**	**77.77**	**10**	P	**P**	**22 40 16.3**	**+1.3**
	baz=198						
TUC	**Tucson**	**77.79**	**51**	P	**P**	**22 40 18.0**	**+2.2**
TUC				pmax	pmax		
	comp=Z,61nm,1.9s						
TUC	**Tucson**	**77.79**	**51**	P	**P**	**22 40 18.0**	**+2.2**
TUC				IAmb	IAmb	22 40 22.7	
	comp=Z,61nm,1.9s						
TUC	**Tucson**	**77.79**	**51**	P	**P**	**22 40 17.0**	**+1.2**
	baz=241						
QZH	**Quanzhou**	**78.03**	**301**	⇓*i*P	**P**	**22 40 20.3**	**+3.2**
QZH				pmax	pmax		
	comp=Z,530nm,5.8s						
QZH				LR	LR		
	comp=Z,200nm,17.1s						
QZH				LR	LR		
	comp=Z,180nm,20.6s						
F05D	**White Salmon**	**78.57**	**34**	P	**P**	**22 40 21.0**	**+1.3**
	baz=231						
USRK	**Ussuriysk Ar.**	**78.57**	**323**	LR	LR	23 10 01.6	
	comp=Z,232nm,20.2s,baz=99,slow=32						
O19K	**Port Alsworth**	**78.68**	**10**	P	**P**	**22 40 20.3**	**+0.4**
O19K	**Port Alsworth**	**78.68**	**10**	P	**P**	**22 40 21.0**	**+1.1**
	baz=199						
U15A	**North Rim**	**78.78**	**46**	P	**P**	**22 40 22.2**	**+0.7**
U15A				IAmb	IAmb	22 40 29.2	
	comp=Z,46nm,1.7s						
O20K	**Slope Mountain**	**78.86**	**11**	P	**P**	**22 40 22.2**	**+1.2**
	baz=201						
BRSE	**Bradley Lake S**	**78.89**	**12**	P	**P**	**22 40 22.4**	**+1.3**
	baz=203						
N19K	**Bonanza Creek**	**79.25**	**9**	P	**P**	**22 40 23.5**	**+0.3**
N19K				IAmb	IAmb	22 40 27.4	
	comp=Z,29nm,1.1s						
N19K	**Bonanza Creek**	**79.25**	**9**	P	**P**	**22 40 24.5**	**+1.3**
	baz=199,SNR=5.7						
HPIG		**79.29**	**57**	P	**P**	**22 40 25.2**	**+0.9**
HPIG				IAmb	IAmb	22 41 34.7	
	comp=Z,13nm,0.4s						
PKCU	**Pink Cliffs**	**79.29**	**45**	P	**P**	**22 40 25.6**	**+1.4**
SEW	**Seward**	**79.48**	**12**	P	**P**	**22 40 25.7**	**+1.4**
	baz=204						
121A	**Cookes Peak, D**	**80.13**	**52**	P	**P**	**22 40 29.6**	**+0.9**
	baz=242						
ZAIG	**Zacatecas**	**80.14**	**62**	P	**P**	**22 40 30.2**	**+1.1**
MDJ	**Mudanjiang**	**80.19**	**323**	P	**P**	**22 40 31.0**	**+2.5**
MDJ				pmax	pmax		
	comp=Z,17nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,740nm,6.0s						
BMO	**Blue Mountains**	**80.25**	**37**	P	**P**	**22 40 30.2**	**+1.2**
BMO				pmax	pmax		
	comp=Z,22nm,1.7s						
BMO	**Blue Mountains**	**80.25**	**37**	P	**P**	**22 40 30.2**	**+1.2**
RC01	**Rabbit Creek A**	**80.33**	**12**	P	**P**	**22 40 29.8**	**+0.8**
	baz=204						
DUG	**Dugway, Tooele**	**80.40**	**43**	P	**P**	**22 40 31.0**	**+1.0**
DUG				pmax	pmax		
	comp=Z,13nm,1.6s						
DUG	**Dugway, Tooele**	**80.40**	**43**	P	**P**	**22 40 31.0**	**+1.0**
DUG	**Dugway, Tooele**	**80.40**	**43**	P	**P**	**22 40 30.9**	**+1.0**
	baz=238						
PWL	**Port Wells**	**80.40**	**12**	P	**P**	**22 40 30.2**	**+0.9**
	baz=205						
GAMB	**Gambell**	**80.69**	**1**	P	**P**	**22 40 31.3**	**+0.5**
GAMB				IAmb	IAmb	22 40 36.1	
	comp=Z,38nm,1.4s						
GAMB	**Gambell**	**80.69**	**1**	P	**P**	**22 40 32.0**	**+1.3**
	baz=182						
M22K	**Willow**	**80.88**	**11**	P	**P**	**22 40 33.1**	**+1.4**
	baz=203						
KNK	**Knik Glacier**	**80.88**	**12**	P	**P**	**22 40 32.7**	**+0.8**
	baz=205						
PMR	**Palmer**	**80.91**	**12**	P	**P**	**22 40 31.9**	**-0.1**
PMR				pmax	pmax		
	comp=Z,27nm,1.3s						
PMR	**Palmer**	**80.91**	**12**	P	**P**	**22 40 31.9**	**-0.1**
PMR				IAmb	IAmb	22 40 34.7	
	comp=Z,27nm,1.3s						
PMR	**Palmer**	**80.91**	**12**	P	**P**	**22 40 33.0**	**+1.1**
	baz=204						
NJ2	**Nanjing**	**80.93**	**307**	*e*P	**P**	**22 40 32.1**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,11nm,0.8s						
TTA	**Tatalina**	**81.04**	**8**	P	**P**	**22 40 34.1**	**+1.3**
TTA				pmax	pmax		
	comp=Z,46nm,1.3s						
TTA	**Tatalina**	**81.04**	**8**	P	**P**	**22 40 34.1**	**+1.3**
TTA				IAmb	IAmb	22 40 38.2	
	comp=Z,46nm,1.3s						
TTA	**Tatalina**	**81.04**	**8**	P	**P**	**22 40 34.0**	**+1.2**
	baz=197,SNR=10						
GHO	**Glory Hole Cre**	**81.12**	**12**	P	**P**	**22 40 33.4**	**+0.2**
PLID	**Pearl Lake**	**81.14**	**37**	P	**P**	**22 40 35.0**	**+1.1**
PLID				IAmb	IAmb	22 40 39.5	
	comp=Z,55nm,2.0s						
HLID	**Hailey**	**81.22**	**39**	P	**P**	**22 40 34.5**	**+0.2**
HLID	**Hailey**	**81.22**	**39**	P	**P**	**22 40 35.4**	**+1.1**
	baz=236						
CUT	**Chulitna**	**81.45**	**11**	P	**P**	**22 40 36.3**	**+1.4**
CUT	**Chulitna**	**81.45**	**11**	P	**P**	**22 40 35.4**	**+0.6**
	baz=203						
CRQE	**Cirque**	**81.48**	**15**	P	**P**	**22 40 35.8**	**+0.6**
	baz=210						
KLU	**Klutina**	**81.48**	**13**	P	**P**	**22 40 36.0**	**+0.8**
	baz=207						
SCM	**Sheep Creek Mo**	**81.49**	**12**	P	**P**	**22 40 36.0**	**+0.8**
	baz=206						
MNTX	**Cornudas Mount**	**81.57**	**53**	P	**P**	**22 40 37.7**	**+1.5**
MNTX	**Cornudas Mount**	**81.57**	**53**	P	**P**	**22 40 37.9**	**+1.7**
	baz=244						
PPLA	**Purkeypile**	**81.58**	**10**	P	**P**	**22 40 35.8**	**+0.1**
	baz=201						
PINM	**Pinnacle**	**81.64**	**16**	P	**P**	**22 40 36.1**	**+0.1**
	baz=212						
TLIG	**Tlapa**	**81.68**	**69**	P	**P**	**22 40 38.1**	**+0.8**
MA2	**Magadan**	**81.73**	**343**	⇑*e*P	**P**	**22 40 37.1**	**+0.7**
MA2				pmax	pmax		
	comp=Z,18nm,1.7s						
ANM	**Nome**	**81.73**	**4**	P	**P**	**22 40 37.1**	**+0.8**
	baz=188						
BNM	**Barren Site**	**81.73**	**51**	P	**P**	**22 40 38.4**	**+1.1**
KLR	**Kul'dur**	**81.79**	**327**	⇓*i*P	**P**	**22 40 35.9**	**-1.1**
KLR				pmax	pmax		
	comp=Z,19nm,3.3s						
MVCO	**Mesa Verde**	**81.81**	**47**	P	**P**	**22 40 37.1**	**-0.5**
	baz=241						
N25K	**Chitina, Valde**	**81.88**	**14**	P	**P**	**22 40 37.6**	**+0.3**
	baz=208						
TX31	**Lajitas Ar. Si**	**81.90**	**56**	P	**P**	**22 40 38.9**	**+0.8**
TXAR	**Lajitas Array**	**81.90**	**56**	P	**P**	**22 40 39.4**	**+1.2**
	comp=Z,4.2nm,1.1s,baz=216,slow=6.2,SNR=17						
TXAR				LR	LR	23 08 48.4	
	comp=Z,224nm,21.9s,baz=0.0,slow=30						
TXAR	**Lajitas Array**	**81.90**	**56**	P	**P**	**22 40 38.5**	**+0.3**
TXAR	**Lajitas Array**	**81.90**	**56**	P	**P**	**22 40 38.5**	**+0.3**
M24K	**Tolsona, Glenn**	**81.98**	**13**	P	**P**	**22 40 38.0**	**+0.2**
	baz=207						
CAST	**Castle Rocks**	**82.09**	**10**	P	**P**	**22 40 38.6**	**+0.4**
CAST	**Castle Rocks**	**82.09**	**10**	P	**P**	**22 40 38.6**	**+0.4**
	baz=201						
WAT6	**Susitna Watana**	**82.09**	**12**	P	**P**	**22 40 39.0**	**+0.6**
	baz=205,SNR=7.7						
WAT1	**Susitna Watana**	**82.16**	**11**	P	**P**	**22 40 38.6**	**-0.1**
	baz=204						
CN2	**Changchun**	**82.20**	**320**	*e*P	**P**	**22 40 40.8**	**+1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ANMO	**Albuquerque**	**82.22**	**50**	P	**P**	**22 40 39.7**	**-0.1**
ANMO				pmax	pmax		
	comp=Z,41nm,1.8s						
ANMO	**Albuquerque**	**82.22**	**50**	P	**P**	**22 40 39.7**	**-0.1**
ANMO				IAmb	IAmb	22 40 46.6	
	comp=Z,41nm,1.8s						
ANMO	**Albuquerque**	**82.22**	**50**	P	**P**	**22 40 40.3**	**+0.5**
	baz=243						
SNY	**Shenyang**	**82.33**	**318**	⇑P	**P**	**22 40 38.9**	**-1.0**
SNY				pmax	pmax		
	comp=Z,570nm,6.3s						
KTH	**Kantishna Hill**	**82.40**	**10**	P	**P**	**22 40 40.3**	**+0.3**
TRF	**Thorofare Moun**	**82.42**	**10**	P	**P**	**22 40 39.8**	**-0.3**
TRF				IAmb	IAmb	22 40 45.5	
	comp=Z,19nm,1.0s						
TRF	**Thorofare Moun**	**82.42**	**10**	P	**P**	**22 40 40.8**	**+0.7**
	baz=203,SNR=6.7						
J20K	**Nowinta River**	**82.49**	**9**	P	**P**	**22 40 40.5**	**+0.2**
J20K				IAmb	IAmb	22 40 45.4	
	comp=Z,37nm,1.2s						
SKAG	**Skagway**	**82.52**	**19**	P	**P**	**22 40 41.3**	**+0.8**
	baz=217						
TNA	**Tin City**	**82.59**	**2**	P	**P**	**22 40 41.5**	**+0.8**
TNA				IAmb	IAmb	22 40 46.2	
	comp=Z,36nm,1.4s						
TNA	**Tin City**	**82.59**	**2**	P	**P**	**22 40 41.5**	**+0.8**
	baz=186						
DHY	**Denali Highway**	**82.61**	**12**	P	**P**	**22 40 41.5**	**+0.3**
	baz=206						
AHID	**Auburn Hatcher**	**82.84**	**41**	P	**P**	**22 40 43.2**	**+0.3**
AHID				IAmb	IAmb	22 40 48.7	
	comp=Z,41nm,1.7s						
MCMT	**McKenzie Canyo**	**82.85**	**39**	P	**P**	**22 40 43.3**	**+0.3**
PAX	**Paxson**	**82.90**	**13**	P	**P**	**22 40 42.5**	**0.0**
	baz=207						
BPAW	**Bear Paw Mtn.**	**82.90**	**10**	P	**P**	**22 40 42.5**	**+0.1**
	baz=202						
MCK	**McKinley**	**82.92**	**11**	P	**P**	**22 40 42.6**	**0.0**
MCK				pmax	pmax		
	comp=Z,25nm,1.0s						
MCK	**McKinley**	**82.92**	**11**	P	**P**	**22 40 42.6**	**0.0**
MCK				IAmb	IAmb	22 40 45.1	
	comp=Z,25nm,1.0s						
MCK	**McKinley**	**82.92**	**11**	P	**P**	**22 40 42.9**	**+0.4**
	baz=204,SNR=13						
M26K	**Nabesna, AK**	**82.94**	**14**	P	**P**	**22 40 43.3**	**+0.6**
M26K				IAmb	IAmb	22 40 47.9	
	comp=Z,28nm,1.3s						
YUK3	**Moose Creek**	**83.01**	**15**	P	**P**	**22 40 44.1**	**+0.7**
	baz=212						
QIZ	**Qiongzhong**	**83.22**	**292**	P	**P**	**22 40 44.8**	**-0.3**
QIZ				S	S	22 50 53.3	-13
QIZ				sS	ScS	22 51 47.9	+28
QIZ				LR	LR		
	comp=Z,130nm,17.2s						
QIZ				LR	LR		
	comp=Z,230nm,19.2s						
QIZ				LR	LR		
	comp=Z,260nm,18.2s						
BWN	**Browne**	**83.23**	**10**	P	**P**	**22 40 45.3**	**+1.2**
S22A	**4UR Ranch, Cre**	**83.23**	**47**	P	**P**	**22 40 45.7**	**+0.6**
	baz=242						
REDW	**Red Top Meadow**	**83.31**	**41**	P	**P**	**22 40 46.3**	**+1.0**
REDW				IAmb	IAmb	22 40 52.2	
	comp=Z,46nm,1.6s						
MSO	**Missoula**	**83.31**	**37**	P	**P**	**22 40 46.0**	**+0.9**
MSO				IAmb	IAmb	22 40 50.2	
	comp=Z,34nm,1.8s						
L26K	**Log Cabin Wild**	**83.41**	**13**	P	**P**	**22 40 46.6**	**+1.5**
L26K				IAmb	IAmb	22 40 50.4	
	comp=Z,28nm,1.6s						
L26K	**Log Cabin Wild**	**83.41**	**13**	P	**P**	**22 40 46.1**	**+1.0**
	baz=209						
WHY	**Whitehorse**	**83.62**	**18**	P	**P**	**22 40 47.4**	**+1.0**
	baz=217						
NEA2	**Nenana**	**83.68**	**10**	P	**P**	**22 40 47.5**	**+1.0**
	baz=204						
RIDG	**Independent Ri**	**83.71**	**13**	P	**P**	**22 40 47.7**	**+1.0**
	baz=208						
WRH	**Wood River Hil**	**83.74**	**11**	P	**P**	**22 40 47.4**	**+0.6**
I21K	**Tanana**	**83.75**	**9**	P	**P**	**22 40 47.8**	**+1.0**
I21K				IAmb	IAmb	22 40 51.7	
	comp=Z,25nm,1.4s						
BCAR	**Beaver Creek A**	**83.80**	**14**	P	**P**	**22 40 48.4**	**+1.2**
MLY	**Manley**	**83.81**	**10**	P	**P**	**22 40 47.6**	**+0.4**
MLY				IAmb	IAmb	22 40 51.4	
	comp=Z,18nm,1.2s						
MLY	**Manley**	**83.81**	**10**	P	**P**	**22 40 48.0**	**+0.8**
	baz=202,SNR=8.0						
BW06	**Boulder Array**	**83.82**	**42**	P	**P**	**22 40 48.5**	**+0.5**
PDAR	**Pinedale Array**	**83.82**	**42**	P	**P**	**22 40 49.5**	**+1.5**
	comp=Z,3.4nm,0.9s,baz=204,slow=3.3,SNR=16						
PDAR				LR	LR	23 11 02.5	
	comp=Z,255nm,20.3s,baz=272,slow=30						
PDAR	**Pinedale Array**	**83.82**	**42**	P	**P**	**22 40 48.5**	**+0.6**
YHL	**Hebgen Lake**	**83.87**	**39**	P	**P**	**22 40 49.5**	**+1.2**
P33M	**Teslin, Yukon**	**83.90**	**19**	P	**P**	**22 40 48.5**	**+0.7**
	baz=219						
HDA	**Harding Lake**	**83.90**	**11**	P	**P**	**22 40 48.1**	**+0.6**
HDA	**Harding Lake**	**83.90**	**11**	P	**P**	**22 40 48.8**	**+1.2**
	baz=206						
BOZ	**Bozeman (W)**	**83.99**	**39**	P	**P**	**22 40 49.4**	**+0.7**
BOZ				pmax	pmax		
	comp=Z,36nm,1.6s						
BOZ	**Bozeman (W)**	**83.99**	**39**	P	**P**	**22 40 49.4**	**+0.7**
BOZ				IAmb	IAmb	22 40 55.6	
	comp=Z,36nm,1.6s						
BOZ	**Bozeman (W)**	**83.99**	**39**	P	**P**	**22 40 49.0**	**+0.3**
	baz=238,SNR=9.7						
N31M	**Braeburn, Yuko**	**84.02**	**17**	P	**P**	**22 40 49.1**	**+0.8**
	baz=216						
SCRK	**Sand Creek**	**84.10**	**13**	P	**P**	**22 40 49.5**	**+0.7**
	baz=209						
SEY	**Seymchan**	**84.12**	**345**	⇓*e*P	**P**	**22 40 50.0**	**+1.3**
I23K	**Minto, Yukon-K**	**84.14**	**10**	P	**P**	**22 40 49.8**	**+1.0**
	baz=204						
TCOL	**CIGO, UAF Yank**	**84.15**	**11**	P	**P**	**22 40 49.4**	**+0.6**
	baz=205						
COLA	**College**	**84.15**	**11**	*d i*P	**P**	**22 40 48.9**	**0.0**
COLA				pmax	pmax		
	comp=Z,30nm,1.0s						
COLA	**College**	**84.15**	**11**	P	**P**	**22 40 48.8**	**0.0**
COLA	**College**	**84.15**	**11**	P	**P**	**22 40 49.2**	**+0.4**
	baz=205						
MDM	**Murphy Dome**	**84.16**	**11**	P	**P**	**22 40 48.9**	**0.0**
SDCO	**Great Sand Dun**	**84.17**	**48**	P	**P**	**22 40 50.7**	**+0.7**
SDCO				IAmb	IAmb	22 40 56.0	
	comp=Z,20nm,1.6s						
SDCO	**Great Sand Dun**	**84.17**	**48**	P	**P**	**22 40 50.0**	**0.0**
	baz=243						
IL31		**84.24**	**11**	P	**P**	**22 40 49.1**	**-0.1**
ILAR	**Eielson Array**	**84.24**	**11**	P	**P**	**22 40 49.3**	**0.0**
	comp=Z,8.2nm,1.1s,baz=207,slow=5.4,SNR=20						
ILAR				LR	LR	23 10 07.3	
	comp=Z,77nm,20.2s,baz=196,slow=30						
ILAR	**Eielson Array**	**84.24**	**11**	P	**P**	**22 40 49.5**	**+0.2**
ILAR	**Eielson Array**	**84.24**	**11**	P	**P**	**22 40 49.5**	**+0.2**
IMAR	**Indian Mountai**	**84.26**	**8**	P	**P**	**22 40 49.1**	**-0.3**
POKR	**Poker Plat Res**	**84.45**	**11**	P	**P**	**22 40 50.3**	**-0.1**
POKR	**Poker Plat Res**	**84.45**	**11**	P	**P**	**22 40 50.7**	**+0.3**
	baz=206,SNR=9.8						
HRY	**Holter Researc**	**84.46**	**38**	P	**P**	**22 40 51.8**	**+0.7**
MSTX	**Muleshoe**	**84.53**	**52**	P	**P**	**22 40 52.1**	**+0.4**
MSTX	**Muleshoe**	**84.53**	**52**	P	**P**	**22 40 52.8**	**+1.1**
	baz=245						
H03S2	**Juan Fernandez**	**84.54**	**124**	T	T	00 14 21.0	
	SNR=9.8						
H03S1	**Juan Fernandez**	**84.56**	**124**	T	T	00 14 23.0	
	SNR=9.2						
H03S3	**Juan Fernandez**	**84.56**	**124**	T	T	00 14 21.8	
	SNR=6.8						
M30M	**Minto, Yukon**	**84.63**	**16**	P	**P**	**22 40 52.0**	**+0.6**
	baz=216						
J26L	**Joseph Creek**	**84.65**	**13**	P	**P**	**22 40 52.3**	**+0.8**
	baz=209,SNR=12						
M31M	**Drury Creek, Y**	**84.99**	**17**	P	**P**	**22 40 54.7**	**+1.5**
	baz=218						
H24K	**Noodor Dome**	**85.03**	**10**	P	**P**	**22 40 54.1**	**+0.8**
	baz=205						
PRP	**Porcupine Dome**	**85.17**	**11**	P	**P**	**22 40 54.6**	**+0.4**
PRP	**Porcupine Dome**	**85.17**	**11**	P	**P**	**22 40 54.6**	**+0.4**
	baz=207,SNR=10						
DAWY	**Dawson**	**85.21**	**14**	P	**P**	**22 40 54.9**	**+0.6**
	baz=213						
N23A	**Red Feather La**	**85.29**	**45**	P	**P**	**22 40 56.4**	**+0.8**
	baz=243						
EGAK	**Eagle**	**85.41**	**13**	P	**P**	**22 40 56.6**	**+1.4**
	baz=211						
AMTX	**Amarillo**	**85.73**	**52**	P	**P**	**22 40 59.1**	**+1.5**
COLD	**Coldfoot**	**85.93**	**9**	P	**P**	**22 40 58.4**	**+0.7**
COLD				IAmb	IAmb	22 41 03.5	
	comp=Z,38nm,1.7s						
COLD	**Coldfoot**	**85.93**	**9**	P	**P**	**22 40 58.5**	**+0.7**
	baz=203						
MAW	**Mawson**	**86.01**	**199**	LR	LR	23 17 00.4	
	comp=Z,210nm,19.6s,baz=64,slow=34						
BILL	**Bilibino**	**86.20**	**353**	*c i*P	**P**	**22 40 59.7**	**+0.7**
BILL				pmax	pmax		
	comp=Z,20nm,1.3s						
BILL	**Bilibino**	**86.20**	**353**	P	**P**	**22 40 59.5**	**+0.5**
BILL				IAmb	IAmb	22 41 03.5	
	comp=Z,17nm,1.2s						
ABTX	**Abilene, Hawle**	**86.39**	**54**	P	**P**	**22 41 01.1**	**+0.3**
ABTX				IAmb	IAmb	22 41 04.5	
	comp=Z,19nm,1.1s						
ABTX	**Abilene, Hawle**	**86.39**	**54**	P	**P**	**22 41 02.0**	**+1.2**
	baz=247						
BJT	**Baijiatuau**	**86.41**	**314**	P	**P**	**22 40 59.9**	**-0.8**
BJT				pmax	pmax		
	comp=Z,27nm,1.6s						
BJT	**Baijiatuau**	**86.41**	**314**	P	**P**	**22 40 59.9**	**-0.8**
BJT				IAmb	IAmb	22 41 05.8	
	comp=Z,26nm,1.6s						
BJI	**Beijing**	**86.41**	**314**	P	**P**	**22 41 04.8**	**+4.1**
BJI				S	S	22 51 26.4	-10
BJI				pmax	pmax		
	comp=Z,11nm,1.4s						
BMAR	**Burnt Mountain**	**87.04**	**11**	P	**P**	**22 41 03.5**	**+0.2**
TOLK	**Toolik Lake Re**	**87.33**	**9**	P	**P**	**22 41 04.4**	**-0.3**
TOLK				IAmb	IAmb	22 41 11.5	
	comp=Z,18nm,1.4s						
TOLK	**Toolik Lake Re**	**87.33**	**9**	P	**P**	**22 41 05.9**	**+1.3**
	baz=203						
ENH	**Enshi**	**87.55**	**303**	P	**P**	**22 41 05.1**	**-1.4**
PLCA	**Paso Flores**	**88.61**	**132**	LR	LR	23 13 04.3	
	comp=Z,219nm,19.8s,baz=236,slow=30						
SLVN	**Son La**	**89.24**	**292**	P	**P**	**22 41 13.2**	**-1.6**
SLVN				IAmb	IAmb	22 41 21.0	
	comp=Z,22nm,1.7s						
XAN	**Xi'an**	**89.36**	**306**	P	**P**	**22 41 17.6**	**+2.5**
XAN				pmax	pmax		
	comp=Z,11nm,1.7s						
XAN				pmax	pmax		
	comp=Z,470nm,6.2s						
DGMT	**Dagmar**	**89.83**	**39**	P	**P**	**22 41 17.6**	**+0.7**
	baz=244						
HHC	**Hu-ho-hao-te**	**89.95**	**313**	*e*P	**P**	**22 41 18.0**	**+0.3**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
INK	**Inuvik**	**90.06**	**14**	P	**P**	**22 41 18.5**	**+1.0**
	baz=218						
SYO	**Syowa Base**	**90.81**	**191**	⇑*e*P	**P**	**22 41 20.4**	**-0.7**
SYO	**Syowa Base**	**90.81**	**191**	⇓*e*sP	sP	22 41 25.0	-0.1
VNA3	**Neumayer Olymp**	**91.14**	**175**	P	**P**	**22 41 22.5**	**-0.3**
SNAA	**Sanae**	**91.17**	**177**	P	**P**	**22 41 23.7**	**+0.8**
SNAA	**Sanae**	**91.17**	**177**	P	**P**	**22 41 22.4**	**-0.5**
SNAA				pmax	pmax		
	comp=Z,16nm,1.4s						
SNAA	**Sanae**	**91.17**	**177**	P	**P**	**22 41 22.4**	**-0.5**
SNAA				IAmb	IAmb	22 41 28.1	
	comp=Z,16nm,1.4s						
VNA2	**Neumayer--Watz**	**91.63**	**176**	P	**P**	**22 41 26.8**	**+1.8**
YKA	**Yellowknife Ar**	**91.85**	**24**	P	**P**	**22 41 26.1**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=46,slow=45,SNR=6.9						

YKA				LR	LR	23 15 13.0	
	comp=Z,120nm,21.8s,baz=0.0,slow=31						
YKA	Yellowknife Ar	91.85	24	P	P	22 41 26.3	+0.4
YKA	Yellowknife Ar	91.85	24	P	P	22 41 26.3	+0.4
CD2	Chengdu	92.41	301	P	P	22 41 27.5	-1.8
CD2				S	S	22 52 21.3	-12
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,350nm,6.5s						
CD2				LR	LR		
	comp=Z,20nm,18.2s						
CD2				LR	LR		
	comp=Z,190nm,13.3s						
CD2				LR	LR		
	comp=Z,190nm,18.0s						
CMAR	Chiang Mai Arr	92.81	288	P	P	22 41 29.1	-2.3
	comp=Z,0.3nm,0.3s,baz=119,slow=2.3,SNR=1.5						
CMAR				LR	LR	23 19 13.7	
	comp=Z,143nm,21.2s,baz=164,slow=33						
CMAR	Chiang Mai Arr	92.81	288	P	P	22 41 30.3	-1.1
CMAR	Chiang Mai Arr	92.81	288	P	P	22 41 30.3	-1.1
R40A	Maddies Statio	94.02	51	P	P	22 41 34.7	-1.8
SONM	Songino Array	95.91	318	LR	LR	23 19 29.7	
	comp=Z,114nm,21.6s,baz=136,slow=32						
TIXI	Tiksi	96.59	344	⇑eP	P	22 41 47.0	-0.5
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
EYMN	Ely	97.52	42	P	P	22 41 52.2	0.0
	baz=253						
GTA	Gaotai	97.99	309	eP	Pdif	22 41 55.0	+0.2
GOGA	Godfrey	99.51	58	P	Pdif	22 42 00.7	-0.8
	baz=256						
LPAZ	La Paz	99.56	110	LR	LR	23 17 12.4	
	comp=Z,284nm,21.6s,baz=247,slow=29						
BRVK	Borovoye	119.09	322	⇑iPKIKP	PKiKP	22 47 07.8	+0.8
ARU	Arti	124.63	328	i PKIKP	PKiKP	22 47 18.6	+0.8
ARU						22 49 04.3	
ARU						22 54 18.7	
KMBO	Kilima Mbogo	144.41	242	PKP	PKPbc	22 47 54.9	+0.6
	comp=Z,2.3nm,0.8s,baz=164,slow=5.6,SNR=6.6						
KMBO	Kilima Mbogo	144.41	242	PKIKP	PKPab	22 47 53.9	-0.1
KMBO	Kilima Mbogo	144.41	242		PKPab	22 47 53.9	-0.1
CLL	Collm	145.51	352	ePKIKP	PKPab	22 47 58.0	+1.5
CLL				pmax	pmax		
	comp=Z,11nm,0.9s						
CLL	Collm	145.51	352	ePKPbc	PKPab	22 47 58.0	+1.5
	comp=Z,11nm,0.9s						
CLL	Collm	145.51	352		PKPdf	22 47 56.2	-0.1
KOLS	Kolonicke sedl	145.72	341	ePKIKP	PKPab	22 47 58.9	+1.5
KOLS	Kolonicke sedl	145.72	341	ePKP	PKPab	22 47 58.9	+1.5
CHVC	Chvalec	145.73	349	ePKP	PKPab	22 47 58.1	+0.7
OSTC	Ostas	145.73	349	ePKP	PKPab	22 47 57.4	0.0
UPC	Upice	145.82	349	ePKP	PKPdf	22 47 57.1	+0.2
UPC	Upice	145.82	349	ePKIKP	PKPdf	22 47 57.1	+0.2
BUR08	Bucovina Ar. S	145.83	337		PKPdf	22 47 56.5	-0.6
BURAR	Bucovina Array	145.85	337	⇑P	PKPbc	22 47 57.9	+0.2
BURAR	Bucovina Array	145.85	337	⇑PKIKP	PKPbc	22 47 57.9	+0.2
DPC	Dobruska-Polom	145.91	348	ePKP	PKPbc	22 47 57.7	0.0
DPC	Dobruska-Polom	145.91	348	ePKP2	PKPbc	22 47 57.7	0.0
UZH	Uzhgorod	145.98	341	ePKHKP	PKPpre	22 47 53.6	
UZH				i		22 47 54.2	
UZH				e		22 47 56.2	
PVCC	Panska Ves	146.05	350	ePKP	PKPbc	22 47 58.2	+0.2
PVCC	Panska Ves	146.05	350	ePKP2	PKPbc	22 47 58.2	+0.2
KRLC	Kraliky	146.08	348	ePKP	PKPab	22 48 00.2	+1.4
KRLC	Kraliky	146.08	348	ePKP2	PKPab	22 48 00.2	+1.4
TESR	Tescani	146.18	334	⇑P	PKPbc	22 47 58.3	-0.3
MORC	Moravsky Berou	146.20	347	⇑P	PKPbc	22 47 58.3	-0.3
MORC	Moravsky Berou	146.20	347	ePKP	PKPab	22 47 59.3	0.0
GHRR		146.22	333	⇑P	PKPbc	22 47 58.3	-0.3
TLCR		146.26	331	⇑P	PKPdf	22 47 57.9	+0.2
TLCR		146.26	331	⇑PKIKP	PKPdf	22 47 57.9	+0.2
SCTR	Scanteiesti	146.26	332	⇑P	PKPbc	22 47 58.9	+0.1
TATR	Tatarca	146.29	332	⇑P	PKPab	22 47 59.4	-0.3
BNN	Bunyan	146.31	316		PKPdf	22 47 57.8	-0.4
LANS	Liptovska Anna	146.33	344	ePKP2	PKPab	22 48 00.4	+0.6
LANS	Liptovska Anna	146.33	344	ePKP	PKPab	22 48 00.4	+0.6
TRPA	Tarpa	146.34	340	⇑P	PKPdf	22 47 57.3	-0.4
BMR	Baia Mare	146.42	339	⇑P	PKPab	22 48 00.3	+0.2
BMR	Baia Mare	146.42	339	⇑PKP2	PKPab	22 48 00.3	+0.2
SLCR	Slobozia Conac	146.43	332	⇓P	PKPdf	22 47 58.3	+0.3
BEBN	Eben Emael	146.44	1	dPKiKP	PKiKP	22 48 01.5	-0.7
IZVR	Izvoarele	146.46	332	⇑P	PKPbc	22 47 59.6	+0.1
SCHL	Schela	146.47	332	⇑P	PKPbc	22 47 58.9	-0.5
JURR	Jurilovca	146.54	330	⇑P	PKPbc	22 47 59.2	-0.4
PRU	Pruhonice	146.57	350	ePKP	PKPbc	22 47 59.2	-0.4
PRU	Pruhonice	146.57	350	ePKP2	PKPbc	22 47 59.2	-0.4
CFR	Carcaliu	146.58	331	⇑P	PKPdf	22 47 58.0	-0.3
CFR	Carcaliu	146.58	331	⇑PKIKP	PKPdf	22 47 58.0	-0.3
ARCR	ARCALIA	146.61	337	⇑P	PKPab	22 48 00.9	0.0
NKC	Novy Kostel	146.63	353	ePKP	PKiKP	22 48 02.6	-0.1
NKC	Novy Kostel	146.63	353	ePKP2	PKiKP	22 48 02.6	-0.1
BSTI	Sart Tilman	146.66	1	dPKiKP	PKiKP	22 48 02.3	-0.4
BTNL	Ternell	146.66	0	dPKiKP	PKiKP	22 48 02.8	+0.1
VRI	Vrincioaia	146.66	334	⇑P	PKPdf	22 47 58.7	+0.3
VRI	Vrincioaia	146.66	334	⇑PKIKP	PKPdf	22 47 58.7	+0.3
TPGR	Topolog	146.69	331	⇑P	PKPbc	22 47 59.8	-0.4
SNF	Seneffe	146.70	2	dPKiKP	PKPab	22 48 01.8	+0.7
PLOR	Plostina	146.71	334	⇑P	PKPbc	22 47 59.8	-0.4
PLOR	Plostina	146.71	334	⇑PKP2	PKPbc	22 47 59.8	-0.4
BCLA	Clavier	146.82	1	dPKiKP	PKPab	22 48 01.6	+0.1
VRAC	Vranov	146.85	348	⇑P	PKPbc	22 48 00.8	+0.4
VRAC	Vranov	146.85	348	ePKP	PKPab	22 48 01.2	-0.5
VRAC	Vranov	146.85	348	⇑PKP2	PKPbc	22 48 00.8	+0.4
OZUR		146.87	335	⇓P	PKPab	22 48 02.6	+0.6
BHOU	Houvegnez	146.89	0	dPKiKP	PKPab	22 48 01.4	-0.4
COVR	Voineasa-Covas	146.90	334	⇑P	PKPdf	22 47 59.9	+1.0
BMRD	Maredsous	146.92	2	dPKiKP	PKPab	22 48 02.3	+0.4
TIRR	Tirgusor	146.99	330	⇑P	PKPab	22 48 02.8	+0.4
TIRR	Tirgusor	146.99	330	⇑PKP2	PKPab	22 48 02.8	+0.4
JAVC	Velka Javorina	147.04	346	ePKP	PKPab	22 48 02.6	+0.1
HARR	Harsova	147.04	331	⇑P	PKPbc	22 48 00.3	-0.8
HARR	Harsova	147.04	331	⇑PKP2	PKPbc	22 48 00.3	-0.8
RCHB	Rochefort	147.08	1	dPKiKP	PKPab	22 48 02.2	-0.3
VYHS	Vyhne	147.09	344	ePKP2	PKPab	22 48 03.1	+0.3
VYHS	Vyhne	147.09	344	ePKP	PKPab	22 48 03.0	+0.3
DOU	Dourbes	147.12	2	dPKiKP	PKPab	22 48 03.1	+0.4
KRUC	Moravsky	147.12	348	ePKP	PKPbc	22 48 02.1	+0.9
DOPR	Dopca	147.14	335	⇑P	PKPdf	22 48 00.3	+1.0
CJR	Cluj-Napoca	147.20	338	⇑P	PKPdf	22 48 00.3	+0.9
CJR	Cluj-Napoca	147.20	338	⇑PKIKP	PKPdf	22 48 00.3	+0.9
BRTR	Keskin Array B	147.26	319	PKPbc	PKPdf	22 48 00.7	+0.9
	comp=Z,6.6nm,0.9s,baz=132,slow=1.8,SNR=13						
BRTR	Keskin Array B	147.26	319	PKIKP	PKPdf	22 47 58.5	-1.3
BRTR	Keskin Array B	147.26	319		PKPdf	22 47 58.5	-1.3
MLR	Muntele Rosu	147.29	334	⇑P	PKPbc	22 48 01.6	-0.4
MLR	Muntele Rosu	147.29	334	⇑PKP2	PKPbc	22 48 01.6	-0.4
MLR	Muntele Rosu	147.29	334		PKPdf	22 47 59.0	-0.7
GRF	Grafenberg Arr	147.30	354	ePKPbc	PKiKP	22 48 05.9	+1.8
	baz=7.9,slow=3.3						
ISR	Istrita	147.34	333	⇓P	PKPbc	22 48 01.9	-0.1
ISR	Istrita	147.34	333	⇓PKP2	PKPbc	22 48 01.9	-0.1
PSZ	Piszkesteto	147.34	343	⇑P	PKPbc	22 48 02.9	+1.0
PSZ	Piszkesteto	147.34	343	⇑PKP2	PKPbc	22 48 02.9	+1.0
KHC	Kasperske Hory	147.56	351	ePKP	PKPbc	22 48 02.4	-0.1
KHC				ex	x	22 48 06.6	
KHC	Kasperske Hory	147.56	351	ePKP2	PKPbc	22 48 02.4	-0.1
KHC	Kasperske Hory	147.56	351		PKPbc	22 48 01.9	-0.6
WLF	Walferdange	147.58	0	dPKiKP	PKPab	22 48 03.7	-0.9
MODS	Modra-Piesok	147.58	346	ePKP2	PKPab	22 48 04.0	-0.7
MODS	Modra-Piesok	147.58	346	ePKP	PKPab	22 48 04.0	-0.7
VOIR		147.71	335	⇑P	PKPbc	22 48 03.1	0.0
VOIR		147.71	335	⇑PKP2	PKPbc	22 48 03.1	0.0
CKRC	Cesky Krumlov	147.74	350	ePKP	PKPbc	22 48 03.9	+0.9
GEC2	GERESS Array S	147.82	351		PKPdf	22 47 59.1	-1.3
GERES	GERESS Array B	147.82	351	PKPbc	PKPbc	22 48 02.7	-0.6
	comp=Z,4.4nm,0.9s,baz=31,slow=3.1,SNR=20						
GERES	GERESS Array B	147.82	351	PKIKP	PKPdf	22 47 59.9	-0.5
GERES	GERESS Array B	147.82	351		PKPdf	22 47 59.9	-0.5
ARR	Arges	147.93	335	⇑P	PKPbc	22 48 04.2	+0.5
SIRR	Siria	148.27	339	⇑P	PKPbc	22 48 03.1	-1.4
MDUB	Mudurnu	148.29	322		PKPdf	22 48 01.3	-0.1
CONA	Conrad Observa	148.31	348	eP	PKiKP	22 48 07.0	+0.7
	comp=Z,12nm,1.2s						
RAZG	Razgrad	148.56	331	⇑P	PKPbc	22 48 04.6	-0.7
GZR	Gura Zlata	148.63	337	⇑P	PKPbc	22 48 04.4	-1.1
GZR	Gura Zlata	148.63	337	⇑PKIKP	PKPbc	22 48 04.4	-1.1
MOA	Molln	148.69	350	eP	PKiKP	22 48 07.6	+0.6
	comp=Z,13nm,1.3s						
BZS	Buzias	148.85	339	⇑P	PKPbc	22 48 05.2	-0.8
BZS	Buzias	148.85	339	⇑PKP2	PKPbc	22 48 05.2	-0.8
BFO	Black Forest	148.87	357	PKIKP	PKPbc	22 48 05.0	-1.0
BFO	Black Forest	148.87	357		PKPbc	22 48 05.0	-1.0
ARSA	Arzberg	149.03	348	eP	PKiKP	22 48 07.6	-0.1
	comp=Z,10.0nm,1.2s						
HERR	Herculane	149.20	337	⇑P	PKPdf	22 48 04.4	+1.8
RETA	Reutte	149.53	354	eP	PKiKP	22 48 09.0	+0.2
	comp=Z,20nm,1.7s						
WATA	Walderalm	149.59	353	eP	PKiKP	22 48 09.8	+0.8
	comp=Z,15nm,1.5s						
KBA	Koelnbreinsper	149.59	350	eP	PKiKP	22 48 09.5	+0.5
	comp=Z,6.9nm,1.1s						
MOTA	Moosalm	149.63	353	eP	PKiKP	22 48 10.1	+1.0
	comp=Z,24nm,1.2s						
WTTA	Wattenberg	149.65	353	eP	PKiKP	22 48 09.4	+0.2
	comp=Z,14nm,1.0s						
SOKA	Soboth	149.67	348	i P	PKiKP	22 48 09.8	+0.6
	comp=Z,12nm,1.1s,SNR=10.0						
SQTA	Sankt Quirin	149.74	353	eP	PKiKP	22 48 10.8	+1.5
	comp=Z,23nm,1.4s						
DAVA	Damuels	149.81	355	eP	PKiKP	22 48 10.5	+1.0
	comp=Z,15nm,1.0s						
FRGS	Fruska Gora	149.85	341	⇑P	PKiKP	22 48 09.3	-0.2
OBKA	Obir	149.93	348	eP	PKiKP	22 48 10.2	+0.5
	comp=Z,11nm,1.3s						
MYKA	Terra Mystica	149.98	350	eP	PKiKP	22 48 10.1	+0.3
	comp=Z,13nm,1.4s						
FETA	Feichten	149.99	354	eP	PKiKP	22 48 09.8	-0.1
	comp=Z,11nm,1.0s						
ABTA	Abfaltersbach	150.04	351	i P	PKiKP	22 48 10.8	+0.9
	comp=Z,18nm,1.0s,SNR=6.4						
BOVS	Bovan	150.53	337	⇑P	PKPbc	22 48 08.9	-1.3
DIVS	Divibare	150.74	339		PKPbc	22 48 09.7	-1.1
VTS	Vitosha	150.77	334	⇑P	PKiKP	22 48 11.9	+0.3
VTS	Vitosha	150.77	334	⇑PKIKP	PKiKP	22 48 11.9	+0.3
CTI	Castel Tesino	150.84	352	PKIKP	PKPbc	22 48 10.2	-0.8
CTI	Castel Tesino	150.84	352		PKPbc	22 48 10.2	-0.8
ESDC	Sonseca Array	155.89	19	PKPab	PKPab	22 48 40.4	+0.9
	comp=Z,2.3nm,1.1s,baz=332,slow=4.1,SNR=6.3						
DBIC	Dimbokro	164.97	133	PKP	PKPdf	22 48 25.7	+2.3
	comp=Z,0.9nm,0.6s,baz=201,slow=3.2,SNR=3.6						
TORD	Torodi Ar. Bea	174.09	132	PKP	PKPdf	22 48 29.9	+1.1
	comp=Z,2.0nm,1.2s,baz=30,slow=0.4,SNR=5.6						
TORD				PKPab	pPKPab	22 50 01.7	-1.3
	comp=Z,2.1nm,1.0s,baz=242,slow=4.1,SNR=7.7						
TORD	Torodi Ar. Bea	174.09	132		PKPdf	22 48 26.2	-2.6
TORD					PKPab	22 50 00.0	0.0

FUNV ***23*** *22:30:03.2, 11°.31N×72°.08W, h12km, MW3.6*
RSNC ***23*** *22:30:05.7±0.8, 11°.24N×72°.03W, h66km±8km, ML3.3, Mw3.4*

ISC 23 22:30:04.6±1.5**, 11°.26N**±0°.06×**72°.04W**±0°.03**, h78**km±13km**, n35, σ1^{s}.24**/69**, 1C-1D, Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URIC	Uribia, Colomb	0.44	6	⇑eP	Pn	22 30 16.9	-0.8
URIC				eS	Sn	22 30 26.4	-0.8
URIC				i		22 30 26.6	
	comp=Z,2µm,0.2s						
CRJC	Cerrejon, Guaj	0.86	254	⇓iP	Pn	22 30 22.1	+0.2
CRJC				eS	Sn	22 30 35.6	+0.8
CRJC				i		22 30 37.0	
	comp=Z,896nm,0.2s						
MCQV	Machiques	1.30	202	eP	Pn	22 30 27.5	+0.3
MCQV				eS	Sn	22 30 45.5	+1.3
CVALL	Valledupar, Ce	1.41	238	eP	Pn	22 30 28.5	-0.2
CVALL				eS	Sn	22 30 46.5	-0.3
CVALL				i		22 30 51.4	
	comp=Z,269nm,0.1s						
DABV	Dabajuro	1.42	104	eP	Pn	22 30 29.4	+0.6
DABV				eS	Sn	22 30 48.1	+1.1
MONV	Montecano	2.14	71	eP	Pn	22 30 38.0	-0.3
MONV				eS	Sn	22 31 04.7	+0.6
LL5C	La Loma 5 El P	2.23	228	eP	Pn	22 30 39.6	+0.1
LL5C				eS	Sn	22 31 06.7	+0.4
LL1C	La Loma 1 Cana	2.27	221	eP	Pn	22 30 39.8	-0.2
LL1C				eS	Sn	22 31 07.2	+0.1
LL1C				i		22 31 12.7	
	comp=Z,491nm,0.4s						
SIQV	Siquisique	2.28	105	eP	Pn	22 30 40.9	+0.7
VIGV	El Vigia	2.50	164	eP	Pn	22 30 43.9	+0.8
VIGV				eS	Sn	22 31 14.4	+1.7
ARGC	Ariguani, Magd	2.58	237	eP	Pn	22 30 44.9	+0.7
ARGC				eS	Sn	22 31 14.5	-0.1
ARGC				i		22 31 18.1	
	comp=Z,58nm,0.2s						
SDV	Santo Domingo	2.74	149	eP	Pn	22 30 47.2	+0.6
SDV				eS	Sn	22 31 18.7	-0.1
SDV				i		22 31 20.5	
	comp=Z,104nm,0.5s						
SMLC	San Martn de	3.16	219	eP	Pn	22 30 50.9	-1.2
SMLC				eS	Sn	22 31 26.6	-2.1
SMLC				i		22 31 29.8	
	comp=Z,121nm,0.2s						
SOCV	Socops	3.18	158	eP	Pn	22 30 52.4	0.0
SOCV				eS	Sn	22 31 29.6	+0.3
SOCV	Socops	3.18	158	eP	Pn	22 30 52.5	0.0
SOCV				eS	Sn	22 31 29.7	+0.4
OCAC	Ocana	3.26	203	eP	Pn	22 30 53.2	-0.3
OCAC				eS	Sn	22 31 30.8	-0.5
SJCC	San Jacinto, C	3.37	247	eP	Pn	22 30 56.5	+1.5
SJCC				eS	Sn	22 31 34.4	+0.4
CAPV	Capacho	3.38	185	eP	Pn	22 30 55.8	+0.4
CAPV				eS	Sn	22 31 34.0	-0.5
PAMC	Pamplona, Colo	3.95	190	eP	Pn	22 31 04.4	+1.1
PAMC				eS	Sn	22 31 48.6	0.0
PAMC				i		22 31 53.3	
	comp=Z,42nm,0.6s						
BRRC	Barranca, Sant	4.44	202	eP	Pn	22 31 10.6	+1.0
BRRC				eS	Sn	22 32 00.3	+0.2
BRRC				i		22 32 04.3	
	comp=Z,33nm,0.3s						
BENV	Beln	4.55	106	eP	Pn	22 31 11.5	+0.4
BENV				eS	Sn	22 32 01.9	-1.0
BAUV	El Baul	4.56	120	eP	Pn	22 31 11.4	+0.2
BAUV				eS	Sn	22 32 02.2	-0.8
ZARC	Zaragoza, Cauc	4.66	217	eP	Pn	22 31 12.4	-0.2
ZARC				eS	Sn	22 32 04.8	-0.7
ZARC				i		22 32 10.6	
	comp=Z,30nm,0.4s						
BARC	Barichara	4.77	194	eP	Pn	22 31 15.7	+1.4
BARC				eS	Sn	22 32 09.3	+0.8
BARC				i		22 32 13.2	
	comp=Z,40nm,0.3s						
TAMC	Tame, Arauca	4.80	177	eP	Pn	22 31 15.3	+0.8
TAMC				eS	Sn	22 32 07.9	-1.0
TAMC				i		22 32 17.0	
	comp=Z,38nm,0.5s						
UREC	San Jos de Ur	4.90	225	eP	Pn	22 31 17.9	+2.1
UREC				eS	Sn	22 32 11.3	0.0
UREC				i		22 32 17.7	
	comp=Z,15nm,0.2s						
ELOV	Elorza	4.93	149	eP	Pn	22 31 16.5	+0.3
ELOV				eS	Sn	22 32 10.7	-1.2
PTBC	PUERTO BERRIO,	5.26	207	eP	Pn	22 31 21.8	+1.0
PTBC				eS	Sn	22 32 16.0	-4.1
PTBC				i		22 32 26.4	
	comp=Z,20nm,0.4s						
RUSC	La Rusia	5.43	191	eP	Pn	22 31 24.0	+0.5
RUSC				eS	Sn	22 32 24.4	-0.5
RUSC				i		22 32 35.1	
	comp=Z,8.2nm,0.3s						
SPBC	San Pablo de B	5.92	200	eP	Pn	22 31 29.6	-0.3
SPBC				eS	Sn	22 32 35.6	-0.8
SPBC				i		22 32 49.0	
	comp=Z,13nm,0.3s						
HELC	Santa Helena	6.10	215	eP	Pn	22 31 34.9	+2.4
HELC				eS	Sn	22 32 39.9	-1.3
HELC				i		22 32 56.2	
	comp=Z,9.2nm,0.3s						
NORC	Norcasia	6.31	207	eP	Pn	22 31 36.5	+1.4
NORC				eS	Sn	22 32 44.2	-1.8
NORC				i		22 32 56.8	
	comp=Z,14nm,0.4s						
CHIC	Chingaza	6.80	194	eP	Pn	22 31 43.0	+0.9
CHIC				eS	Sn	22 32 60.0	+1.7
CHIC				i		22 33 11.6	
	comp=Z,8.0nm,0.8s						
GUY2C	Guyana, Caldas	6.84	209	eP	Pn	22 31 44.2	+1.5
GUY2C				eS	Sn	22 32 57.2	-2.2
GUY2C				i		22 33 15.6	
	comp=Z,8.7nm,0.5s						
PTGC	Puerto Gaitan,	7.02	181	eP	Pn	22 31 43.5	-1.3
PTGC				eS	Sn	22 32 58.5	-4.6
PTGC				i		22 33 06.0	
	comp=Z,24nm,0.3s						

ANF ***23*** *23:03:57.0±0.4, 37°.32N×98°.91W, h6km, ML3.1/8, Error ellipse: s-maj=4.8km s-min=2.7km az=78.0*
NEIC ***23*** *23:03:57.5±1.4, 37°.33N±0°.05×98°.82W±0°.06, h8km±7km, mb_Lg2.5/9, Error ellipse: s-maj=9.1km s-min=3.4km az=223.0*

ISC 23 23:03:56.9±1.3**, 37°.32N**±0°.03×**98°.84W**±0°.03**, h3**km±14km**, n52, σ0^{s}.48**/60**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK035	E0210 Rd and N	0.62	170	Pg	Pg	23 04 08.5	-0.2
OK035				Sg	Sg	23 04 17.1	+0.4
KAN10	Anthony SW Sta	0.63	108	Pg	Pg	23 04 09.1	+0.2
KAN10				Sg	Sg	23 04 17.1	+0.1
KAN16	Harper SW Stat	0.63	98	Pg	Pg	23 04 08.9	0.0
KAN08	Anthony NE Sta	0.70	97		Pg	23 04 10.3	0.0
KAN08				Sg	Sg	23 04 19.8	+0.4
OK032	Salt Plains WL	0.72	135		Pg	23 04 10.6	-0.1
OK032				Sg	Sg	23 04 20.4	+0.4
KAN14	Manchester OK	0.79	117		Pg	23 04 11.8	-0.2
KAN05	Bluff City Nor	0.80	105	Pg	Pg	23 04 12.1	-0.1
KAN17	Caldwell West	0.90	107		Pg	23 04 14.0	-0.2
GC02	Grant County #	0.91	120	Pg	Pg	23 04 14.1	-0.3
U32A	Winter Ranch,	0.94	188	Pg	Pg	23 04 14.5	-0.6
U32A	Winter Ranch,	0.94	188	P	Pg	23 04 14.4	-0.6
	baz=7.4,SNR=13						
KAN09	Caldwell North	0.99	100	Pg	Pg	23 04 15.6	-0.3
CROK	Carrier	1.06	139	Pg	Pg	23 04 16.9	-0.4
R32A	Long Quarter,	1.11	5		Pg	23 04 17.8	-0.4
R32A	Long Quarter,	1.11	5	P	Pg	23 04 17.8	-0.4
	baz=186,SNR=6.9						
R32A				S	Sg	23 04 32.9	+0.4
	baz=186						
KAN13	South Haven SW	1.13	105	Pg	Pg	23 04 18.0	-0.5
BLOK	Blackwell	1.42	113		Pn	23 04 22.9	-0.6
CBKS	Cedar Bluff	1.65	335		Pn	23 04 27.2	+0.4
CBKS	Cedar Bluff	1.65	335	P	Pn	23 04 27.0	+0.2
	baz=154,SNR=18						
CBKS				S	Sb	23 04 49.2	-0.1
	baz=154						
T35A	Sooner Cattle	1.91	101	Pn	Pn	23 04 30.9	+0.7
T35A				IAmb_Lg		23 04 59.9	
	comp=Z,27nm,0.8s						
T35B	Sooner Cattle	1.91	101	P	Pn	23 04 30.8	+0.5
	baz=283,SNR=23						
T35B				S	Sb	23 04 56.5	+0.1
	baz=283						
BCOK	Bluff Creek, N	1.93	149	Pn	Pn	23 04 30.4	-0.2
OK033	Mehan	1.99	129	Pn	Pn	23 04 31.8	+0.4
QUOK	Quay	2.06	123	Pn	Pn	23 04 32.2	-0.2
OK025	Westminster Rd	2.12	145	Pn	Pn	23 04 33.8	+0.7
OK030	Cody Creek RV	2.16	129	Pn	Pn	23 04 33.4	-0.3
KSU1	Kansas State U	2.50	44	Pn	Pn	23 04 39.1	+0.6
KSU1				IAmb_Lg		23 05 14.3	
	comp=Z,16nm,0.8s						
KSU1	Kansas State U	2.50	44	P	Pn	23 04 39.4	+0.9
	baz=226,SNR=5.3						
KSU1				S	Sb	23 05 12.3	-1.4
	baz=226						
WMOK	Wichita Mounta	2.58	179	Pn	Pn	23 04 39.9	+0.5
WMOK	Wichita Mounta	2.58	179	P	Pn	23 04 40.0	+0.5
	baz=359						
W35A	Tecumseh	2.68	143	Pn	Pn	23 04 41.1	+0.1
TUL1	Leonard	2.83	119		Pn	23 04 42.9	-0.1
X34A	Smith Ranch, M	2.83	163	Pn	Pn	23 04 43.2	+0.2
KSCO	Kaye Shedlock'	3.43	301		Pn	23 04 51.8	+0.5
LOOK	Love County	3.58	157	Pn	Pn	23 04 53.8	+0.4
N33A	J Bar K, Exete	3.58	17	Pn	Pn	23 04 52.4	-0.9
U38A	Gravette	3.68	102	Pn	Pn	23 04 54.9	+0.3
X37A	Clayton	3.92	133	Pn	Pn	23 04 58.0	+0.1
X37A	Clayton	3.92	133	P	Pn	23 04 58.0	+0.1
	baz=315,SNR=9.5						
HHAR	Hobbs	4.07	103	Pn	Pn	23 05 00.2	+0.2
HHAR				IAmb_Lg		23 06 16.3	
	comp=Z,8.1nm,0.9s						
BGNE	Belgrade	4.12	7	Pn	Pn	23 05 00.4	-0.3
N35A	Tabor	4.33	34	Pn	Pn	23 05 04.4	+0.9
N35A				IAmb_Lg		23 06 22.6	
	comp=Z,14nm,0.8s						
OGNE	Ogallala	4.39	327	Pn	Pn	23 05 05.0	+0.5
S39A	Bolivar	4.40	83	Pn	Pn	23 05 04.9	+0.3
W39A	Magazine	4.60	116	Pn	Pn	23 05 07.5	+0.2
P38A	Dawn	4.76	59	Pn	Pn	23 05 09.9	+0.4
U40A	Yellville	4.90	99	Pn	Pn	23 05 11.4	0.0
U40A	Yellville	4.90	99	P	Pn	23 05 11.6	+0.2
	baz=283,SNR=10						
U40A				P	Pn	23 05 11.6	+0.2
	baz=283,SNR=10						
MIAR	Mount Ida	5.09	121	Pn	Pn	23 05 14.1	+0.1
K31A	O'Neill	5.30	1	Pn	Pn	23 05 17.9	+1.0
ISCO	Idaho Springs	5.86	297	Pn	Pn	23 05 25.7	+0.9
CCM	Cathedral Cave	6.07	81	IAmb_Lg		23 07 09.2	
	comp=Z,7.4nm,0.9s						

IDC 23 23:25:18.2±1.6**, 4°.26S**×**129°.40E, h0**km**, mb3.6**/1**, mb1 3.5**/4**, mb1mx3.1**/35**, mbtmp3.4**/4**, ML3.1**/3**, MS3.5**/3**, Ms1 3.4**/3**, ms1mx2.8**/42**, Error ellipse: s-maj=57.2km s-min=26.8km az=80.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.85	29	Pn	Pn	23 26 19.0	+0.2
	1.8nm,0.3s,baz=130,slow=20,SNR=7.8						
SIJI				Sn	Sn	23 26 56.5	-8.3
	0.9nm,0.3s,baz=235,slow=23,SNR=2.0						
FITZ	Fitzroy Crossi	14.23	195	LR	LR	23 35 29.7	
	comp=Z,28nm,19.2s,baz=9.0,slow=43						
WRA	Warramunga Arr	16.31	163	Pn	Pn	23 29 06.7	-2.1
	0.0nm,0.3s,baz=347,slow=12,SNR=1.1						
ASAR	Alice Springs	19.78	168	P	Pn	23 29 51.0	-0.5
	0.2nm,0.3s,baz=348,slow=11,SNR=8.1						
AFI	Afiamalu	58.74	104	LR	LR	00 00 41.0	
	comp=Z,77nm,18.1s,baz=62,slow=36						
MKAR	Makanchi Array	65.62	326	P	P	23 36 04.1	-0.1
	0.3nm,0.4s,baz=111,slow=8.1,SNR=9.7						
KBZ	Khabaz	90.38	314	LR	LR	00 24 13.1	
	comp=Z,50nm,18.9s,baz=319,slow=39						

IDC 23 23:50:57.4±3.2**, 30°.32N**×**84°.69E, h0**km**, mb3.3**/3**, mb1 3.6**/5**, mb1mx3.2**/58**, mbtmp3.4**/5**, ML3.2**/2**, Error ellipse: s-maj=180.1km s-min=25.3km az=63.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	14.76	329	Pn	Pn	23 54 27.8	+0.2
	0.1nm,0.3s,baz=110,slow=21,SNR=1.8						
MKAR	Makanchi Array	16.56	354	Pn	Pn	23 54 49.4	-1.5
	0.1nm,0.3s,baz=190,slow=11,SNR=2.4						
KURBB	Kurchatov Arra	20.80	349	P	P	23 55 39.8	-0.3
	0.2nm,0.5s,baz=176,slow=11,SNR=2.0						
WRA	Warramunga Arr	69.12	130	P	P	00 02 06.3	+0.7
	0.6nm,0.5s,baz=322,slow=6.2,SNR=11						
ASAR	Alice Springs	71.49	133	P	P	00 02 19.4	-0.7
	0.3nm,0.4s,baz=313,slow=5.8,SNR=7.1						

JMA 23 23:51:33.3, 34°.64N×**137°.09E, h8**km±1km**, M2.7, 4D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAA	Atsumi	0.04	101	⇓P	Pg	23 51 34.9	0.0
JAA				S	Sg	23 51 35.9	-0.2
JIE	Ise	0.40	232	⇓P	Pg	23 51 41.1	0.0
JIE				S	Sg	23 51 47.0	+0.6
TSUJ	Tsu 2	0.56	277	⇓P	Pg	23 51 43.9	-0.2
TTO5	TONANKAI O.B.S	0.65	127	⇓P	Pn	23 51 47.8	-0.8
MAT	Matsushiro	2.10	25	P	Pb	23 52 10.8	-0.9
MAT				S	Sb	23 52 37.6	-0.5

NEIC ***23*** *23:53:33.9±1.8, 20°.56S±0°.04×69°.18W±0°.03, h106km±4km, mb4.2/13, ML4.4(GUC), Error ellipse: s-maj=6.3km s-min=3.3km az=220.0*

GUC ***23*** *23:53:34.5±0.8, 20°.54S×69°.22W, h112km±3km, ML4.4*
IDC ***23*** *23:53:34.2±0.7, 20°.49S×69°.04W, h109km±6km, mb3.7/6, mb1 3.9/9, mb1mx3.6/35, mbtmp4.1/9, Error ellipse: s-maj=19.0km s-min=8.3km az=95.0*
VAO ***23*** *23:53:35.7±0.4, 20°.55S×69°.08W, h122km, mb4.4*
ISC 23 23:53:33.7±0.5**, 20°.52S**±0°.03×**69°.19W**±0°.05**, h109**km±4km**, n126, σ1s.29**/141**, mb4.2**/9**, 8C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.37	5	⇓iP	Pn	23 53 51.3	+1.1
PB08				iS	Sn	23 54 03.9	+1.5
PB08				IAML		23 54 05.3	
	comp=E,24µm,0.1s						
PB08	IPOC Station P	0.37	5		Pn	23 53 50.6	+0.4
PB08				Sn	Sn	23 54 03.9	+1.5
PB01	IPOC Station P	0.60	208	⇑iP	Pn	23 53 51.6	+0.4
PB01				iS	Sn	23 54 04.8	+0.5
PB01				IAML		23 54 06.2	
	comp=E,27µm,0.2s						
PB01	IPOC Station P	0.60	208		Pn	23 53 51.3	+0.1
PB01				Sn	Sn	23 54 04.6	+0.3
PB11	IPOC Station P	0.87	330	Pn	Pn	23 53 53.8	+0.1
PB11				Sn	Sn	23 54 09.6	+1.0
TA02	Huaiquique	0.92	285	⇑iP	Pn	23 53 54.3	+0.4
TA02				iS	Sn	23 54 09.5	+0.3
TA02	Huaiquique	0.92	285		Pn	23 53 54.2	+0.3
TA02				Sn	Sn	23 54 09.6	+0.4
PB09	IPOC Station P	1.28	182	⇑iP	Pn	23 53 58.8	+0.8
PB09				iS	Sn	23 54 17.2	+0.8
PB09	IPOC Station P	1.28	182		Pn	23 53 58.5	+0.5
PB09				Sn	Sn	23 54 17.1	+0.7
PB07	IPOC Station P	1.37	208	⇑iP	Pn	23 53 59.3	+0.2
PB07				iS	Sn	23 54 17.7	-0.7
PB07				IAML		23 54 21.5	
	comp=E,4µm,0.4s						
PB07	IPOC Station P	1.37	208		Pn	23 53 58.9	-0.2
PB07				Sn	Sn	23 54 17.3	-1.0
PB03	IPOC Station P	1.61	199	⇑iP	Pn	23 54 02.2	+0.2
PB03				iS	Sn	23 54 22.8	-0.7
PB03				IAML		23 54 24.3	
	comp=E,4µm,0.6s						
PB04	IPOC Station P	2.02	206	⇑iP	Pn	23 54 06.9	-0.2
PB04				iS	Sn	23 54 30.6	-1.9
PB04				IAML		23 54 31.4	
	comp=N,6µm,0.2s						
PB04	IPOC Station P	2.02	206	Pn	Pn	23 54 06.8	-0.2
PB04				Sn	Sn	23 54 30.4	-2.1
LVC	Limon Verde	2.10	173	P	Pn	23 54 09.4	+1.1
	comp=N,25nm,0.3s,baz=33,slow=6.0,SNR=242						
LVC				S	Sn	23 54 35.9	+1.2
	comp=N,163nm,0.3s,baz=337,slow=23,SNR=40						
LVC	Limon Verde	2.10	173	eP	Pn	23 54 09.0	+0.7
LVC				iS	Sn	23 54 35.9	+1.2
LVC	Limon Verde	2.10	173	eP	Pn	23 54 09.6	+1.3
PB06	IPOC Station P	2.21	189	⇑iP	Pn	23 54 09.5	0.0
PB06				iS	Sn	23 54 35.5	-1.3
PB06				IAML		23 54 38.5	
	comp=N,2µm,0.3s						
PB06	IPOC Station P	2.21	189		Pn	23 54 09.4	0.0
PB05	IPOC Station P	2.51	202	⇑iP	Pn	23 54 12.8	-0.5
PB05				iS	Sn	23 54 40.7	-3.0
PB05				IAML		23 54 42.1	
	comp=E,2µm,0.6s						
PB15	IPOC Station P	2.69	186	eP	Pn	23 54 16.1	+0.2
PB15				iS	Sn	23 54 46.9	-1.3
PB15	IPOC Station P	2.69	186		Pn	23 54 15.9	+0.1
PB14	IPOC Station P	4.24	195	Pn	Pn	23 54 34.7	-1.9
LPAZ	La Paz	4.32	14	P	Pn	23 54 41.2	+3.2
	comp=E,5.0nm,0.3s,baz=199,slow=5.1,SNR=109						
LPAZ				S	Sn	23 55 23.1	-4.6
	comp=E,3.5nm,0.3s,baz=209,slow=13,SNR=3.7						
LPAZ	La Paz	4.32	14	eP	Pn	23 54 41.1	+3.2
AC02	Maricunga	6.29	180	Pn	Pn	23 55 03.4	-1.0
GO03	Copiap	7.11	188	Pn	Pn	23 55 11.8	-3.4
AC04	Llanos de Chal	7.85	192	Pn	Pn	23 55 20.0	-5.1
SIV	San Ignacio	8.93	61	P	Pn	23 55 38.1	-1.8
	comp=E,6.4nm,0.3s,baz=245,slow=12,SNR=112						
SIV				S	Sn	23 57 13.2	-5.5
	comp=E,0.3nm,0.3s,baz=310,slow=17,SNR=3.1						
PTLB	Pontes e Lacer	10.81	64	Pn	Pn	23 56 03.4	-2.0
ETMB	Extrema	11.02	16	eP	Pn	23 56 09.3	+1.1
NNA	Nana	11.22	318	S	Sn	23 58 08.6	-5.8
	comp=E,1.5nm,0.3s,baz=301,slow=13,SNR=1.8						
VILB	Vilhena	11.43	50	eP	Pn	23 56 13.4	-0.3
VILB	Vilhena	11.43	50	Pn	Pn	23 56 12.7	-1.0
CPUP	Villa Florida	12.33	120	P	Pn	23 56 23.9	-1.6
	comp=E,0.2nm,0.3s,baz=288,slow=13,SNR=3.7						
CPUP	Villa Florida	12.33	120	eP	Pn	23 56 25.2	-0.3
AQDB	Aquidauana	12.64	92	eP	Pn	23 56 30.0	+0.3
AQDB	Aquidauana	12.64	92	Pn	Pn	23 56 29.8	+0.1
MT02	Curacav	12.81	187	Pn	Pn	23 56 31.1	-0.8
SAML	Samuel	12.88	28	Pn	Pn	23 56 32.9	0.0
CZSB	Cruzeiro do Su	13.16	345	eP	Pn	23 56 38.5	+2.0
MT09	Talagante	13.31	187	Pn	Pn	23 56 37.6	-0.9
MT01	Popeta	13.42	187	Pn	Pn	23 56 39.1	-0.7
PP1B	Ponte de Pedra	13.84	80	eP	Pn	23 56 44.7	-0.6
BO02	Sierra Bellavi	14.29	185	Pn	Pn	23 56 50.8	-0.3
PDRB	Porto dos Gac	14.88	55	eP	Pn	23 56 59.1	+0.4
H03N1	Juan Fernandez	15.51	212	T	T	00 12 30.5	
	baz=34,slow=72,SNR=11						
H03N2	Juan Fernandez	15.52	212	T	T	00 12 30.8	
	baz=34,slow=72,SNR=11						
H03N3	Juan Fernandez	15.53	212	T	T	00 12 35.8	
	baz=34,slow=72,SNR=18						
CLDB	Colider	16.05	55	eP	Pn	23 57 12.3	-1.0
PCMB	Pacaembu	16.77	97	eP	P	23 57 22.4	-0.1
ITAB	Concordia	16.97	116	eP	P	23 57 24.6	0.0
ITAB	Concordia	16.97	116		Pn	23 57 23.6	-0.8
ARAG	Araguaiana, MT	17.19	77	eP	Pn	23 57 27.0	-0.3
CPSB	Cacapava Do Su	17.28	128	eP	Pn	23 57 27.7	-0.6
ITRB	Iturama	17.70	91	eP	P	23 57 33.1	+0.2
PLTB	Pedras Altas	17.90	132	eP	P	23 57 33.7	-1.2
PLTB	Pedras Altas	17.90	132	P	P	23 57 32.9	-2.0
FRTB	Fartura	18.42	102	eP	P	23 57 40.4	-0.3
LC01	Cunco	18.47	187	P	P	23 57 40.8	-0.3
LC01				IAmb	IAmb	23 57 43.3	
	comp=Z,12nm,0.9s						
MACA	Manacapuru-AM	19.14	27	eP	P	23 57 48.5	0.0
MACA	Manacapuru-AM	19.14	27	P	P	23 57 47.9	-0.6
SNDB	Serra Nova Dou	19.15	66	eP	P	23 57 48.5	-0.2
TIJ01	Guaruva-PR	19.19	108	eP	P	23 57 49.3	+0.1
BB19B	Bebedouro	19.33	95	eP	P	23 57 49.6	-1.0
TER01	Tubaro-SC	19.90	118	eP	P	23 57 55.2	-1.5
IPMB	Ipameri, GO	19.96	86	eP	P	23 57 57.2	-0.4
PLCA	Paso Flores	20.19	183	P	P	23 57 59.9	+0.1
	comp=Z,10nm,0.9s,baz=1.6,slow=12,SNR=12						
PLCA	Paso Flores	20.19	183	eP	P	23 58 00.7	+1.0
PLCA	Paso Flores	20.19	183	P	P	23 57 57.9	-1.9
PLCA				IAmb	IAmb	23 58 01.5	
	comp=Z,13nm,0.9s						
RCLB	Rio Claro- Sao	20.25	99	eP	P	23 58 00.2	-0.3
SPB	Sao Paulo	20.39	103	eP	P	23 58 02.0	0.0
LL04	Puerto Octay	20.52	187	P	P	23 58 02.3	-0.9
BDFB	Brasilia	20.70	80	P	P	23 58 04.9	-0.6
	comp=Z,5.5nm,0.6s,baz=259,slow=12,SNR=7.8						
BDFB	Brasilia	20.70	80	P	P	23 58 04.7	-0.9
ITTB	Itaituba	20.71	41	eP	P	23 58 04.3	-1.2
VAO	Valinhos	20.79	101	eP	P	23 58 06.2	-0.2
PTGA	Pitinga	21.63	26	P	P	23 58 13.6	-1.7
	comp=Z,4.3nm,0.4s,baz=204,slow=17,SNR=11						
PEXB	Peixe	21.70	71	eP	P	23 58 15.3	-0.8
PARB	Paraibuna	22.04	102	eP	P	23 58 18.2	-1.5
BSCB	Bom Sucesso	22.83	96	eP	P	23 58 27.4	-0.4
MALB	Monte Alegre	23.59	40	eP	P	23 58 34.7	-0.1
PRPB	Parauapebas	23.59	56	eP	P	23 58 34.7	-0.1
SMTB	Santa Maria do	23.85	64	eP	P	23 58 37.8	+0.6
VAS01	Vassouras-RJ	24.03	99	eP	P	23 58 38.7	0.0
DIAM	Diamantina, MG	24.16	89	eP	P	23 58 40.6	+0.5
MC01	Montes Claros	24.22	85	eP	P	23 58 40.4	-0.2
JANB	Januaria	24.29	81	eP	P	23 58 40.0	-1.2
BOAV	Boa Vista	24.30	21	eP	P	23 58 42.0	+0.8
BOAV	Boa Vista	24.30	21	P	P	23 58 40.6	-0.7
BOAV				IAmb	IAmb	23 58 42.8	
	comp=Z,20nm,1.4s						
SDBA	SAO DESIDERIO	24.62	75	eP	P	23 58 43.7	-0.5
MCPB	Macapa, AP	26.11	42	eP	P	23 58 59.2	+1.5
SJMB	Sao Joao De Ma	26.43	91	eP	P	23 59 01.3	+0.8
NAN01	Guarapari, ES	27.56	89	eP	P	23 59 11.3	+0.6
GUA01	Guaratinga, BA	28.11	87	eP	P	23 59 16.4	+0.8
NBIT	Itapeh - BA	28.86	84	eP	P	23 59 22.8	+0.6
GDU01	Guandu, BA	29.07	81	eP	P	23 59 24.4	+0.3
NBPN	Ponto Novo - B	29.47	75	eP	P	23 59 28.0	+0.3
NBPS	Pedro II - PI	31.38	63	eP	P	23 59 45.6	+1.0
NBMA	Muriti-CE	32.22	70	eP	P	23 59 53.0	+1.1
NBPB	Pedra_Branca-C	32.37	67	eP	P	23 59 53.8	+0.6
NBAN	Anadia - AL	33.49	76	eP	P	00 00 03.4	+0.5
NBLV	Livramento - P	33.85	72	eP	P	00 00 06.7	+0.5
NBPV	Pedro Velho	35.72	72	eP	P	00 00 23.7	+1.6
TXAR	Lajitas Array	59.67	325	P	P	00 03 27.3	+0.4
	comp=Z,0.2nm,0.6s,baz=152,slow=7.8,SNR=2.2						
SNAA	Sanae	63.29	161	P	P	00 03 51.3	+0.7
SNAA				IAmb	IAmb	00 04 17.9	
	comp=Z,5.5nm,1.5s						
QSPA	South Pole Qui	69.67	180	P	P	00 04 32.4	+1.0
QSPA				IAmb	IAmb	00 04 34.2	
	comp=Z,2.9nm,0.9s						
CCUT	Cedar City	71.16	324	P	P	00 04 42.5	+1.5
CCUT				IAmb	IAmb	00 04 44.7	
	comp=Z,3.4nm,1.0s						
KOWA	Kowa	72.87	67	P	P	00 04 51.6	+0.2
KOWA				IAmb	IAmb	00 05 16.7	
	comp=Z,6.0nm,1.4s						
TORD	Torodi Ar. Bea	77.27	71	P	P	00 05 17.5	+0.9
	comp=Z,0.8nm,0.3s,baz=255,slow=5.6,SNR=20						
TORD				pP	pP	00 05 45.0	-0.6
	comp=Z,2.2nm,0.8s,baz=252,slow=5.3,SNR=5.2						
TORD	Torodi Ar. Bea	77.27	71	P	P	00 05 16.6	0.0
YKA	Yellowknife Ar	90.17	341	P	P	00 06 22.0	+0.7
	comp=Z,0.9nm,0.8s,baz=135,slow=4.4,SNR=14						
YKA				pP	pP	00 06 50.5	+0.2
	comp=Z,1.5nm,0.8s,baz=134,slow=4.5,SNR=9.1						
H11S2	WAKE ISLAND Hy	127.49	278	T	T	02 32 21.3	
	baz=101,slow=75,SNR=178						
H11S1	WAKE ISLAND Hy	127.50	278	T	T	02 32 21.1	
	baz=101,slow=75,SNR=127						
H11S3	WAKE ISLAND Hy	127.51	278	T	T	02 32 21.8	
	baz=101,slow=75,SNR=146						
H11N3	WAKE ISLAND Hy	127.55	280	T	T	02 32 23.3	
	baz=102,slow=74,SNR=38						
H11N2	WAKE ISLAND Hy	127.56	280	T	T	02 32 24.4	
	baz=102,slow=74,SNR=38						
H11N1	WAKE ISLAND Hy	127.56	280	T	T	02 32 23.0	
	baz=102,slow=74,SNR=30						
ASAR	Alice Springs	130.66	208	PKP	PKPdf	00 12 31.8	-0.9
	comp=Z,0.4nm,0.6s,baz=126,slow=1.7,SNR=5.4						
ASAR	Alice Springs	130.66	208		PKPdf	00 12 32.2	-0.5
WRA	Warramunga Arr	133.66	211	PKP	PKPdf	00 12 37.6	-0.9
	comp=Z,0.7nm,0.8s,baz=143,slow=1.5,SNR=7.1						
KSH	Kashi	144.68	50	PKP	PKPdf	00 12 58.8	+0.8
MKAR	Makanchi Array	144.99	35	PKP	PKPbc	00 12 57.9	+0.2
	comp=Z,2.1nm,1.0s,baz=331,slow=2.7,SNR=11						
MKAR				pPKP	pPKPdf	00 13 28.0	-0.8
	comp=Z,0.5nm,0.7s,baz=305,slow=4.3,SNR=2.8						
MKAR	Makanchi Array	144.99	35		PKPbc	00 12 58.0	+0.3
SONM	Songino Array	152.51	6	PKPbc	PKPbc	00 13 18.3	+0.9
	comp=Z,0.9nm,0.4s,baz=295,slow=1.4,SNR=16						
SONM				pPKPbc	pPKPbc	00 13 46.5	-1.1
	comp=Z,0.4nm,0.5s,baz=306,slow=1.4,SNR=3.1						
SONM	Songino Array	152.51	6		PKPbc	00 13 18.0	+0.6

WEL 24 00:06:13.0, 39°S±9°×**17°6E**±1°8**, h96**km±18km**, M2.9**/25**, ML2.9**/9**, MLv2.9**/25**, Error ellipse: s-maj=0.0km s-min=0.0km az=83.7, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TMVZ	Te Maari	0.16	257	P	Pn	00 06 26.6	-0.2
ETVZ	East Tongariro	0.16	250	P	Pn	00 06 26.8	+0.1
NTVZ	North Tongarir	0.18	264	P	Pn	00 06 26.9	+0.1
OTVZ	Oturere	0.21	246	P	Pn	00 06 27.3	+0.3
SNVZ	South Ngauruho	0.23	243	P	Pn	00 06 27.3	+0.3
WNVZ	Wahianoa	0.34	224	P	Pn	00 06 28.3	+0.7
BHHZ	Black Hill Sta	0.43	164	P	Pn	00 06 28.8	+0.8
MRHZ	Matea Rd	0.47	58	P	Pn	00 06 24.4	-3.8
KRHZ	Kereru	0.67	148	P	Pn	00 06 30.5	+0.7
MTHZ	Maungataniwha	0.76	73	P	Pn	00 06 25.9	-4.8
VRZ	Vera Road	0.90	267	P	Pn	00 06 30.5	-1.5
RTZ	Ruatahuna	0.96	61	P	Pn	00 06 25.0	-7.7
OMRZ	Omania	1.04	21	P	Pn	00 06 30.6	-3.1
WPHZ	Waipukurau	1.07	157	P	Pn	00 06 26.6	-7.3
DVHZ	Dannevirke	1.23	171	P	Pn	00 06 36.3	+0.5
URZ	Urewera	1.25	49	P	Pn	00 06 24.9	-11
RAGZ	Rawiri	1.31	64	P	Pn	00 06 39.6	+2.8
MWZ	Matawai	1.47	60	P	Pn	00 06 39.7	+1.0
PRWZ	Pori Road	1.47	178	P	Pn	00 06 39.4	+0.6
RIGZ	Rimuhau	1.50	76	P	Pn	00 06 36.0	-3.0
PRGZ	Paritu Road	1.55	85	P	Pn	00 06 39.4	-0.3
MRZ	Mangatainoka R	1.60	189	P	Pn	00 06 40.2	0.0
TKGZ	Te Karaka	1.65	68	P	Pn	00 06 36.4	-4.5
TIWZ	Tintock	1.69	181	P	Pn	00 06 41.6	+0.1
RUGZ	Raukumara Rang	1.78	52	P	Pn	00 06 44.5	+1.8
OGWZ	Otaki Gorge	1.82	198	P	Pn	00 06 43.0	-0.2
HOWZ	Holdsworth Sta	1.84	189	P	Pn	00 06 42.9	-0.5
KIW	Kapiti Island	1.94	203	P	Pn	00 06 43.8	-0.8
HAZ	Te Kaha	1.98	49	P	Pn	00 06 48.8	+3.6
MTW	Mount Morrison	2.10	188	P	Pn	00 06 45.6	-1.1
CAW	Cannon Point	2.12	197	P	Pn	00 06 46.1	-0.9
MSWZ	Moikau Station	2.39	192	P	Pn	00 06 48.7	-1.8
MXZ	Matakaoa Point	2.42	52	P	Pn	00 06 52.1	+1.2
PLWZ	Palliser	2.54	191	P	Pn	00 06 50.6	-1.9

IDC 24 00:23:58.3±0.9**, 27°.51N**×**140°.14E, h0**km**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.4**/27**, mbtmp3.7**/3**, Error ellipse: s-maj=41.7km s-min=21.2km az=89.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	47.51	187	P	P	00 32 35.2	-0.1
	0.4nm,0.8s,baz=6.6,slow=8.0,SNR=1.3						
YKA	Yellowknife Ar	72.64	28	P	P	00 35 27.4	+0.1
	0.4nm,0.6s,baz=297,slow=5.9,SNR=4.7						
FINES	FINESS Array B	76.77	333	P	P	00 35 51.4	0.0
	1.6nm,0.8s,baz=60,slow=5.8,SNR=9.6						

IDC 24 01:24:32.5±3.0**, 21°.70S**×**179°.74W, h0**km**, mb3.8**/3**, mb1 4.2**/3**, mb1mx3.8**/19**, mbtmp3.8**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.7**/32**, Error ellipse: s-maj=295.7km s-min=35.0km az=163.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	16.73	189	LR	LR	01 33 54.5	
	comp=Z,100nm,18.7s,baz=212,slow=34						
ASAR	Alice Springs	42.68	258	P	P	01 32 30.7	-0.7
	0.6nm,0.4s,baz=97,slow=7.5,SNR=9.5						
WRA	Warramunga Arr	42.84	264	P	P	01 32 33.1	+0.4
	1.0nm,0.4s,baz=97,slow=8.5,SNR=40						
TXAR	Lajitas Array	89.06	58	P	P	01 37 30.0	0.0
	0.2nm,0.8s,baz=231,slow=7.9,SNR=3.9						

NNC ***24*** *01:40:11.4±4.0, 37°.44N×72°.09E, h1km±36km, mb3.8, mpv3.5, Error ellipse: s-maj=43.2km s-min=26.1km az=158.0*
IDC ***24*** *01:40:13.9±1.2, 37°.81N×72°.56E, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.5/29, mbtmp3.7/7, ML2.8/2, Error ellipse: s-maj=20.4km s-min=18.8km az=164.0*
ISC 24 01:40:13.2±1.3**, 37°.6N**±0°.1×**72°.1E**±0°.1**, h10**km**, n12, σ2s.57**/15**, mb3.6**/5**, 6C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.39	19	⇑Pn	Pn	01 41 33.5	-0.3
	3.0nm,0.8s						
AAK				⇑Sn	Sn	01 42 40.4	+4.3
	14nm,1.0s						
KK02	Karatay Array	5.67	348	⇓Pn	Pn	01 41 39.2	+1.6
	1.7nm,0.3s						
KK02				⇑Sn	Sn	01 42 45.6	+2.9
	5.9nm,0.7s						
TKM2	Tokmak 2	5.99	25	⇑Pn	Pn	01 41 42.8	+0.8
	4.4nm,0.8s						
TKM2				⇑Lg	Lg	01 43 25.8	
	22nm,1.6s						
MKAR	Makanchi Array	11.92	36	Pn	Pn	01 42 59.5	-3.7
	0.0nm,0.3s,baz=228,slow=14,SNR=2.6						
AB31	Akbulak array	14.64	327	Pn	Pn	01 43 39.9	-0.4
	0.7nm,0.7s,baz=125,slow=14,SNR=11						
AB31				Sn	Sn	01 46 18.5	-3.9
	1.1nm,0.7s,baz=142,slow=23,SNR=4.5						
AKTO	Aktyubinsk	16.35	326	⇑Pn	P	01 44 05.1	-0.6
	3.2nm,1.2s						
ZALV	Zalesovo Beam	18.59	24	P	P	01 44 27.5	-2.8
	0.4nm,0.3s,baz=218,slow=12,SNR=5.8						
SONM	Songino Array	27.01	57	P	P	01 45 54.2	-1.2
	0.5nm,0.8s,baz=259,slow=9.0,SNR=4.9						
FINES	FINESS Array B	37.12	325	P	P	01 47 26.1	+2.5
	4.3nm,1.0s,baz=110,slow=8.0,SNR=1.9						
ARCES	ARCESS Array B	40.52	337	P	P	01 47 53.5	+1.6
	4.4nm,1.1s,baz=98,slow=10,SNR=1.3						
YKA	Yellowknife Ar	80.15	3	P	P	01 52 23.6	+0.5
	0.1nm,0.5s,baz=347,slow=5.6,SNR=4.1						
WRA	Warramunga Arr	81.80	123	P	P	01 52 33.8	+1.2
	0.6nm,1.0s,baz=316,slow=3.6,SNR=1.8						

TUL ***24*** *01:57:59.2±1.3, 36°.76N±0°.02×98°.07W±0°.06, h6km±7km, ML2.8, mb_Lg2.6/24(NEIC), Error ellipse: s-maj=6.3km s-min=2.6km az=88.0*
NEIC 24 01:57:59.5±0.7**, 36°.74N**±0°.02×**98°.03W**±0°.05**, h8**km±5km**, Error ellipse: s-maj=6.3km s-min=2.6km az=88.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.16	294		Pg	01 58 02.3	-0.5
OK032				Sg	Sg	01 58 04.3	-0.8
GC02	Grant County #	0.18	51	Pg	Pg	01 58 03.5	+0.3
GC02				Sg	Sg	01 58 06.5	+0.8
KAN14	Manchester OK	0.23	14		Pg	01 58 03.8	-0.2
KAN14				Sg	Sg	01 58 07.3	+0.2
CROK	Carrier	0.24	170	Pg	Pg	01 58 04.6	+0.3
CROK				Sg	Sg	01 58 08.0	+0.5
KAN17	Caldwell West	0.37	35		Pg	01 58 06.9	+0.1
KAN10	Anthony SW Sta	0.39	353	Pg	Pg	01 58 06.6	-0.5
KAN10				Sg	Sg	01 58 12.0	-0.2
KAN05	Bluff City Nor	0.39	19	Pg	Pg	01 58 07.1	0.0
KAN01	Argonia South	0.47	28		Pg	01 58 08.5	0.0
KAN16	Harper SW Stat	0.49	357	Pg	Pg	01 58 08.3	-0.6
KAN08	Anthony NE Sta	0.49	6		Pg	01 58 08.8	-0.2
KAN09	Caldwell North	0.52	40	Pg	Pg	01 58 09.5	0.0
KAN13	South Haven SW	0.52	58	Pg	Pg	01 58 09.5	0.0
OK035	E0210 Rd and N	0.55	267	Pg	Pg	01 58 09.1	-0.9
KAN12	Harper NE Stat	0.56	3	Pg	Pg	01 58 09.9	-0.4
BLOK	Blackwell	0.66	88	Pg	Pg	01 58 12.2	+0.1
U32A	Winter Ranch,	0.86	246	Pg	Pg	01 58 15.1	-0.9
OK029	Liberty Lake	1.05	153		Pg	01 58 19.4	-0.2
OK033	Mehan	1.12	128		Pg	01 58 21.0	0.0
BCOK	Bluff Creek, N	1.13	162		Pg	01 58 20.5	-0.7
QUOK	Quay	1.21	118	Pn	Pb	01 58 22.4	-0.2
T35A	Sooner Cattle	1.23	81		Pn	01 58 22.5	-0.4
OK031	S. Brethren Rd	1.24	129	Pn	Pn	01 58 22.8	-0.3
OK025	Westminster Rd	1.28	154	Pn	Pn	01 58 23.6	-0.1
OK034	N. Norfolk Rd.	1.29	124		Pn	01 58 23.6	-0.1
OK030	Cody Creek RV	1.29	128		Pn	01 58 23.7	-0.1
OKCFA	Oklahoma City	1.40	160		Pn	01 58 25.3	0.0
OKCSW	OKLAHOMA CITY	1.42	160		Pn	01 58 25.3	-0.2
FNO	Franklin	1.56	161		Pn	01 58 27.7	+0.1
R32A	Long Quarter,	1.77	342		Pn	01 58 30.4	+0.1
W35A	Tecumseh	1.84	149		Pn	01 58 32.0	+0.7
TUL1	Leonard	1.99	114	Pn	Pn	01 58 34.1	+0.7
TUL1				IAmb_Lg		01 59 03.8	
	comp=Z,24nm,0.8s						
WMOK	Wichita Mounta	2.09	197		Pn	01 58 35.6	+0.8
X34A	Smith Ranch, M	2.14	176		Pn	01 58 35.2	-0.2
CBKS	Cedar Bluff	2.47	327	Pn	Pn	01 58 39.3	-0.8
KSU1	Kansas State U	2.61	25	IAmb_Lg		01 59 27.4	
	comp=Z,16nm,0.8s						
LOOK	Love County	2.83	165	Pn	Pn	01 58 45.1	+0.2
U38A	Gravette	2.95	95	Pn	Pn	01 58 47.5	+1.0
U38A				IAmb_Lg		01 59 41.6	
	comp=Z,18nm,1.1s						
X37A	Clayton	3.05	134	Pn	Pn	01 58 48.7	+0.8
X37A				IAmb_Lg		01 59 38.9	
	comp=Z,10nm,1.1s						
AMTX	Amarillo	3.50	239	Pn	Pn	01 58 54.5	+0.3
S39A	Bolivar	3.88	74	Pn	Pn	01 58 59.9	+0.5
S39A				IAmb_Lg		02 00 11.0	
	comp=Z,8.2nm,0.7s						
U40A	Yellville	4.19	94	IAmb_Lg		02 00 16.4	
	comp=Z,16nm,0.8s						
ABTX	Abilene, Hawle	4.31	198	IAmb_Lg		02 00 20.9	
	comp=Z,9.8nm,0.8s						
P38A	Dawn	4.57	50	Pn	Pn	01 59 09.5	+0.7
P38A				IAmb_Lg		02 00 35.5	
	comp=Z,11nm,0.7s						
X40A	Basin Creek Fa	4.79	116	IAmb_Lg		02 00 38.4	
	comp=Z,16nm,0.8s						
FCAR	Ozark Folk Cen	4.84	98	IAmb_Lg		02 00 37.3	
	comp=Z,8.4nm,0.7s						
T25A	Trinidad	5.12	276	IAmb_Lg		02 00 43.7	
	comp=Z,14nm,0.7s						
JCT	Junction City	6.42	194	IAmb_Lg		02 01 31.6	
	comp=Z,9.9nm,1.0s						

JMA ***24*** *02:14:43.4±0.1, 24°.32N×122°.96E, h47km±1km, M3.0*
TAP ***24*** *02:14:43.4, 24°.33N×122°.96E, h44km, ML3.3, C*
ISC 24 02:14:43.8±1.2**, 24°.29N**±0°.05×**122°.97E**±0°.03**, h43**km±7km**, n66, σ0s.82**/90**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.16	351	P	Pn	02 14 51.0	-0.1
JYNG				S	Sn	02 14 56.2	-0.1
YOJ	Yonaguni jima	0.17	12	P	Pn	02 14 51.1	-0.1
	baz=15						
YOJ				S	Sn	02 14 56.5	+0.1
	baz=15						
YOJ	Yonaguni jima	0.17	12	P	Pn	02 14 51.2	0.0
YOJ				S	Sn	02 14 56.5	+0.1
IRIF	Iriomote-Funau	0.69	86	P	Pn	02 14 56.9	-0.3
IRIF				S	Sn	02 15 07.0	+0.2
HATJ	Hateruma jima	0.80	107	P	Pn	02 14 58.7	+0.1
HATJ				eS	Sn	02 15 09.7	+0.4
JKRS	Kuro-shima	0.95	93	P	Pn	02 15 01.0	+0.3
JKRS				S	Sn	02 15 13.8	+0.8
JIJ	Ishigaki jima	1.07	86	P	Pn	02 15 02.0	-0.3
JIJ				S	Sn	02 15 15.4	-0.6
EWUT	Wuta	1.10	278	eP	Pn	02 15 02.2	-0.5
	baz=287						
EWUT				eS	Sn	02 15 16.0	-0.7
	baz=287						
ENA	Nanau	1.13	277	P	Pn	02 15 02.9	-0.3
	baz=275						
TWB1	Santiao Chiao	1.14	309	P	Pn	02 15 02.7	-0.6
	baz=316						
NTC	Toucheng	1.18	298	P	Pn	02 15 03.4	-0.4
	baz=297						
NDS	Dongshan	1.19	287	eP	Pn	02 15 03.6	-0.4
	baz=294						
NDS				eS	Sn	02 15 17.7	-1.3
	baz=294						
TIPB	Shuangxi	1.24	303	P	Pn	02 15 04.2	-0.5
	baz=302						
NACB	Ninganchiao	1.26	265	eP	Pn	02 15 04.7	-0.2
	baz=249						
NACB				eS	Sn	02 15 20.6	-0.1
	baz=249						
TWE	Neicheng	1.26	290	P	Pn	02 15 04.7	-0.2
	baz=289						
TWD	Chiawan	1.27	261	P	Pn	02 15 05.2	+0.1
	baz=245						
TWD				S	Sn	02 15 20.8	-0.3
	baz=245						
TEYL	Yanliau Villag	1.32	252	eP	Pn	02 15 06.0	+0.2
	baz=240						
ENTT	Nioudou	1.33	285	eP	Pn	02 15 06.2	+0.3
	baz=292						
WFSB	Wu-fen Shan	1.33	306	P	Pn	02 15 05.6	-0.3
	baz=293						
ETLH	Xiulin Townshi	1.36	267	eP	Pn	02 15 06.4	-0.1
	baz=265						
ETLH				eS	Sn	02 15 23.0	-0.3
	baz=265						
NDT	Datong Townshi	1.36	283	eP	Pn	02 15 07.0	+0.7
	baz=290						
ETM	Tongmen	1.39	257	eP	Pn	02 15 06.8	+0.1
	baz=255						
NWLT	Wulai	1.42	290	eP	Pn	02 15 07.6	+0.4
	baz=289						
NWLT				S	Sn	02 15 24.1	-0.6
	baz=289						
TEGC	Jichi Village	1.43	246	eP	Pn	02 15 07.8	+0.5
	baz=245						

NNSB	Datong	1.46	276	*e*P	Pn	02 15 08.3	+0.6
	baz=274						
YHNB	Yeheng	1.50	285	*e*P	Pn	02 15 08.6	+0.3
	baz=292						
NSK	Sanguang	1.52	285	P	Pn	02 15 08.9	+0.3
	baz=292						
YM01	YM01	1.53	304	P	Pn	02 15 08.6	-0.1
	baz=303						
YM01				*e*S	Sn	02 15 26.4	-1.0
	baz=303						
PCYT	Pengchaiyu	1.56	329	P	Pn	02 15 09.2	+0.2
	baz=318						
WHF	Hehuan Shan	1.57	265	P	Pn	02 15 09.6	+0.1
	baz=264						
FUSS	Fushou	1.58	269	P	Pn	02 15 09.8	+0.3
	baz=267						
JTJ	Tarama	1.61	77	P	Pn	02 15 09.8	0.0
JTJ				S	Sn	02 15 29.3	-0.1
HGSD	Ruisui	1.63	241	*e*P	Pn	02 15 09.1	-0.9
	baz=240						
TDCB	Techi	1.66	269	*e*P	Pn	02 15 11.2	+0.7
	baz=258						
CHGB	Renai	1.66	262	*e*P	Pn	02 15 10.9	+0.3
	baz=249						
CHGB				S	Sn	02 15 30.5	-0.3
	baz=249						
OWD	Renai	1.68	259	*e*P	Pn	02 15 10.8	0.0
	baz=258						
VWDT	VWDT	1.76	253	*e*P	Pn	02 15 12.2	+0.4
	baz=251						
VWDT				*e*S	Sn	02 15 33.2	+0.2
	baz=251						
YULB	Yu-li	1.78	240	P	Pn	02 15 11.4	-0.6
	baz=239						
EYUL	Yuli	1.78	238	*e*P	Pn	02 15 12.5	+0.4
	baz=237						
TWF1	Yuli	1.80	239	*e*P	Pn	02 15 12.1	-0.2
	baz=237						
TWF1				S	Sn	02 15 33.6	-0.4
	baz=237						
LIOB	Emei	1.82	282	*e*P	Pn	02 15 13.7	+1.1
	baz=281						
WHP	Taichung City	1.85	270	*e*P	Pn	02 15 14.5	+1.4
	baz=258						
WHP				S	Sn	02 15 36.3	+1.0
	baz=258						
FULB	Fuli	1.89	235	*e*P	Pn	02 15 12.5	-1.0
	baz=224						
WCS	Beigang Elemen	1.90	263	*e*P	Pn	02 15 15.1	+1.4
	baz=254						
SSLB	Suanglung	1.91	255	*e*P	Pn	02 15 14.2	+0.3
	baz=254						
SSLB				*e*S	Sn	02 15 36.6	-0.2
	baz=254						
SMLT	Sun Moon Lake	1.94	258	*e*P	Pn	02 15 14.9	+0.5
	baz=257						
TYC	Yuchr	1.97	259	*e*P	Pn	02 15 15.3	+0.7
	baz=248						
TYC				*e*S	Sn	02 15 38.5	+0.3
	baz=248						
EDH	Donghe	2.02	230	*e*P	Pn	02 15 14.1	-1.2
	baz=220						
EDH				*e*S	Sn	02 15 36.3	-3.1
	baz=220						
ELDTW	Lidau	2.10	239	*e*P	Pn	02 15 16.0	-0.6
	baz=238						
ALS	Alishan	2.13	249	*e*P	Pn	02 15 18.1	+1.0
	baz=248						
STYH	Taoyuan	2.30	241	*e*P	Pn	02 15 20.1	+0.8
	baz=232						
STYH				*e*S	Sn	02 15 46.6	+0.3
	baz=232						
STYT	Tauyuan	2.32	241	*e*P	Pn	02 15 20.1	+0.5
	baz=231						
TPUB	Ta-pu	2.36	246	*e*P	Pn	02 15 21.4	+1.4
	baz=244						
TPUB				*e*S	Sn	02 15 49.5	+1.6
	baz=244						
WTP	Ta-pu	2.40	245	*e*P	Pn	02 15 22.0	+1.4
	baz=244						
WRL	Guolierlin Hig	2.40	261	*e*P	Pn	02 15 22.3	+1.7
	baz=261						
SLGT	Liugui	2.50	239	*e*P	Pn	02 15 23.1	+1.2
	baz=231						
CHN1	Nanshi	2.50	244	*e*P	Pn	02 15 24.1	+2.2
	baz=243						
LAY	Lan-yu	2.60	211	*e*P	Pn	02 15 22.5	-0.8
	baz=210						
LYUB	Lan-yu	2.61	210	*e*P	Pn	02 15 21.7	-1.9
	baz=218						
TSMG	Majia	2.66	234	*e*P	Pn	02 15 25.6	+1.5
	baz=227						
MASBT	Mashibuluo	2.72	233	*e*P	Pn	02 15 25.7	+0.7
	baz=224						
EAST	Anshuo	2.73	226	*e*P	Pn	02 15 25.7	+0.6
	baz=225						
SLIU	Shizi	2.88	224	*e*P	Pn	02 15 28.0	+0.9
	baz=215						
SCZT	Fangliau	2.89	229	*e*P	Pn	02 15 28.6	+1.3
	baz=222						
WDGT	Dungji	3.20	252	*e*P	Pn	02 15 31.8	+0.2
	baz=252						
XPSS	Dashiqiu	3.63	317	*e*P	Pn	02 15 37.4	-0.1
	baz=317						

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*IDC **24** 02:16:41.9±1.9, 6°.81S×130°.95E, h56^{km}±22^{km}, mb4.0/4, mb1 4.5/10, mb1mx3.8/46, mbtmp4.6/10, ML4.9/6, Error ellipse: s-maj=18.1km s-min=15.5km az=132.0*

*DJA **24** 02:16:42.6±1.0, 7°S±5°×13°1E±1°0, h140^{km}±14^{km}, M4.9/8, mb5.0/6, mB5.3/6, MLv5.0/8, Mw(mB)4.7/6, MwMwp4.9/1, Mwp5.2/1*

*NEIC **24** 02:16:44.5±1.1, 6°.69S±0°.07×131°.04E±0°.09, h93^{km}±10^{km}, mb4.1/10, Error ellipse: s-maj=13.5km s-min=11.0km az=92.0*

ISC 24 02:16:44.2±0.5**, 6°.65S**±0°.04×**131°.03E**±0°.05**, h100**^{km}**, n66, σ2^{s}11**/70**, mb4.3**/12**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.35	168	P	Pn	02 17 09.7	+1.0
SAUI				S	Sn	02 17 29.2	+2.1
SAUI	Saumlaki	1.35	168		Pn	02 17 07.9	-0.8
SAUI					Sn	02 17 25.7	-1.5
SAUI	Saumlaki	1.35	168	P	Pn	02 17 09.3	+0.6
BNDI	Bandanaira	2.39	332	P	Pn	02 17 23.3	+1.3
MSAI	Masohi	3.90	327	P	Pn	02 17 44.5	+2.5
FAKI	Fak Fak	3.90	18	P	Pn	02 17 42.9	+0.7
FAKI				S	Sn	02 18 25.3	-1.8
FAKI	Fak Fak	3.90	18		Pn	02 17 42.9	+0.7
FAKI	Fak Fak	3.90	18	P	Pn	02 17 42.6	+0.4
DRS	Darwin Rock St	5.74	181	P	Pn	02 18 06.1	-1.0
	207nm,0.5s						
SIJI	Sorong	5.75	2	P	Pn	02 18 07.0	-0.3
	101nm,0.3s,baz=202,slow=10.0,SNR=110						
SIJI				S	Sn	02 19 07.5	-4.4
	25nm,0.3s,baz=273,slow=23,SNR=12						
SWI	Sorong	5.76	2	P	Pn	02 18 06.8	-0.5
MTN	Manton Dam	6.15	179		Pn	02 18 11.8	-0.8
MTN	Manton Dam	6.15	179	P	Pn	02 18 11.3	-1.3
	426nm,0.4s						
KDU	Kakadu	6.16	167	P	Pn	02 18 11.0	-1.8
LBMI	Labuha	6.93	329	P	Pn	02 18 25.0	+1.7
	0.4nm1µm84nm,0.4s						
SOEI	Soe	7.37	245	P	Pn	02 18 29.3	0.0
	1.2nm2µm141nm,0.8s						
SOEI	Soe	7.37	245		Pn	02 18 29.5	+0.2
SOEI	Soe	7.37	245	P	Pn	02 18 29.5	+0.2
BATI	Baumata	8.10	244	P	Pn	02 18 36.7	-2.4
	32nm,0.3s,baz=62,slow=3.4,SNR=11						
BATI				S	Sn	02 20 04.6	-4.4
	28nm,0.3s,baz=275,slow=23,SNR=8.5						
BATI	Baumata	8.10	244	P	Pn	02 18 39.6	+0.5
KNRA	Kununurra	9.24	194	Pn	Pn	02 18 52.8	-1.8
KNRA	Kununurra	9.24	194	P	Pn	02 18 52.5	-2.1
	298nm,0.7s						
JAY	Jayapura	10.48	67	P	Pn	02 19 11.9	+0.2
	2.9nm,0.3s,baz=215,slow=12,SNR=9.8						
JAY				S	Sn	02 21 09.6	+2.3
	1.1nm,0.3s,baz=125,slow=3.1,SNR=3.7						
FITZ	Fitzroy Crossi	12.53	204	P	Pn	02 19 33.8	-5.2
	2.0nm,0.3s,baz=28,slow=9.2,SNR=42						
FITZ				S	Sn	02 21 44.2	-13
	8.6nm,0.3s,baz=150,slow=21,SNR=7.8						
TOLI2	Tolitoli	12.81	307	Pn	Pn	02 19 43.2	+0.5
WB0	Warramunga Arr	13.44	166		Pn	02 19 46.4	-4.5
WRAB	Tennant Creek	13.59	167		Pn	02 19 48.6	-4.3
WRA	Warramunga Arr	13.60	167	P	Pn	02 19 48.9	-4.1
	6.2nm,0.3s,baz=345,slow=14,SNR=100						
WRA				S	Sn	02 22 10.9	-12
	7.8nm,0.3s,baz=352,slow=21,SNR=9.8						
WRA	Warramunga Arr	13.60	167	Pn	Pn	02 19 47.9	-5.1
WB2	Warramunga Arr	13.60	167	Pn	Pn	02 19 48.9	-4.2
WR0	Warramunga Arr	13.66	166		Pn	02 19 49.8	-4.0
COEN	Coen	13.98	122		Pn	02 19 55.5	-2.5
COEN					Sn	02 22 21.4	-11
COEN	Coen	13.98	122	P	Pn	02 19 55.8	-2.2
	25nm,0.8s						
QIS	Mount Isa	16.13	150	P	Pn	02 20 23.2	-2.0
	15nm,1.7s						
PMG	Port Moresby	16.20	101	P	P	02 20 28.5	+1.0
	1.7nm,0.3s,baz=125,slow=21,SNR=4.2						
PMG	Port Moresby	16.20	101	P	Pn	02 20 24.0	-2.2
PMG				IAmb	IAmb	02 20 31.2	
	comp=Z,12nm,0.8s						
JAGI	Jajag, Banyuwa	16.83	263	Pn	Pn	02 20 32.4	-1.4
JAGI				IAmb	IAmb	02 20 37.7	
	comp=Z,16nm,1.0s						
JAGI	Jajag, Banyuwa	16.83	263	P	P	02 20 35.7	+1.3
AS31	Alice Springs	17.14	171	Pn	Pn	02 20 35.2	-2.4
AS31				IAmb	IAmb	02 20 42.4	
	comp=Z,8.7nm,0.8s						
ASAR	Alice Springs	17.14	171	P	Pn	02 20 35.5	-2.1
	comp=Z,4.4nm,0.3s,baz=358,slow=13,SNR=123						
ASAR				S	Sn	02 23 36.4	-12
	comp=Z,1.4nm,0.3s,baz=339,slow=14,SNR=9.8						
ASAR	Alice Springs	17.14	171	Pn	Pn	02 20 35.9	-1.8
MTSU	Mount Surprise	17.27	133	P	P	02 20 41.0	+1.8
	comp=Z,7.4nm,0.6s						
MBWA	Marble Bar	18.10	216	P	Pn	02 20 49.0	-0.2
PSA00	Pilbara Seismi	18.36	215	P	P	02 20 51.1	0.0
PSA00				IAmb	IAmb	02 20 55.9	
	comp=Z,14nm,1.1s						
PSA00	Pilbara Seismi	18.36	215	P	Pn	02 20 51.4	-0.9
PSA00				IAmb	IAmb	02 20 54.7	
	comp=Z,7.3nm,1.4s						
PSA00	Pilbara Seismi	18.36	215	P	Pn	02 20 53.2	+0.9
	comp=Z,9.0nm,0.7s						
WRKA	Warakurna	18.47	188	P	P	02 20 52.0	-0.4
	comp=Z,64nm,0.6s						
CTAO	Charters Tower	19.92	134	P	P	02 21 08.5	+0.3
CTAO				IAmb	IAmb	02 21 13.5	
	comp=Z,10nm,1.1s						
OOD	Oodnadatta	21.49	169	P	P	02 21 26.9	+2.0
	comp=Z,35nm,0.7s						
MULG	Mulgathing	23.68	173	P	P	02 21 48.6	+1.8
	comp=Z,34nm,1.1s						
FORT	Forrest	24.16	186	P	P	02 21 51.7	+0.5
FORT	Forrest	24.16	186	P	P	02 21 52.7	+1.5
	comp=Z,46nm,0.7s						
LCRK	Leigh Creek	24.61	165	P	P	02 21 57.6	+2.3
	comp=Z,85nm,0.8s						
BBOO	Buckleboo	26.44	170	P	P	02 22 12.1	+0.2
BBOO	Buckleboo	26.44	170	P	P	02 22 13.2	+1.3
	comp=Z,9.8nm,1.7s						
STKA	Stephens Creek	26.97	160	P	P	02 22 17.7	+1.2
	comp=Z,1.3nm,0.5s,baz=335,slow=13,SNR=7.1						
STKA	Stephens Creek	26.97	160	P	P	02 22 16.4	-0.1
HTT	Hallett	27.63	166	P	P	02 22 25.0	+2.4
	comp=Z,10nm,2.0s						
CMSA	Cobar Meteorol	28.30	153	P	P	02 22 31.9	+3.4
	comp=Z,6.5nm,0.9s						
CMAR	Chiang Mai Arr	40.30	309	P	P	02 24 14.0	+2.0
	comp=Z,2.4nm,0.3s,baz=145,slow=7.5,SNR=6.4						
CMAR	Chiang Mai Arr	40.30	309	P	P	02 24 11.9	-0.1
MJAR	Matsushiro Arr	43.49	8	P	P	02 24 39.4	+1.7
	comp=Z,1.4nm,0.4s,baz=198,slow=7.9,SNR=4.4						
MJAR	Matsushiro Arr	43.49	8	P	P	02 24 38.0	+0.3
MJAR				IAmb	IAmb	02 24 42.0	
	comp=Z,3.1nm,1.1s						
SONM	Songino Array	58.45	341	P	P	02 26 34.0	+4.3
	comp=Z,0.2nm,0.4s,baz=166,slow=6.7,SNR=5.3						
MKAR	Makanchi Array	68.50	326	P	P	02 27 39.0	+3.1
	comp=Z,1.8nm,0.4s,baz=114,slow=7.9,SNR=67						
MKAR	Makanchi Array	68.50	326	P	P	02 27 38.1	+2.2

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*IDC **24** 02:24:01.3±5.1, 22°.44N×144°.59E, h43^{km}±41^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.1/74, mbtmp3.8/8, ML4.0/1, Error ellipse: s-maj=110.3km s-min=18.9km az=76.0*

ISC 24 02:24:01.1±2.4**, 22°.4N**±0°.2×**144°.3E**±0°.8**, h35**^{km}**, n8, σ0^{s}39**/8**, mb3.8**/6**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.07	338	P	Pn	02 25 15.0	+0.4
	6.0nm,0.3s,baz=13,slow=20,SNR=7.8						
JCJ				S	Sn	02 26 11.7	-0.2
	18nm,0.3s,baz=301,slow=24,SNR=10						
KSRS	Korea Array	20.61	320	P	Pn	02 28 40.0	+0.2
	1.5nm,0.7s,baz=134,slow=11,SNR=5.2						
SONM	Songino Array	39.48	319	P	P	02 31 27.9	-0.4
	0.7nm,0.8s,baz=130,slow=7.4,SNR=5.0						
WRA	Warramunga Arr	43.18	194	P	P	02 31 58.4	-0.3
	0.4nm,0.3s,baz=15,slow=8.4,SNR=14						
ASAR	Alice Springs	46.88	193	P	P	02 32 28.4	+0.3
	0.4nm,0.7s,baz=13,slow=8.7,SNR=1.6						
STKA	Stephens Creek	54.02	183	P	P	02 33 22.0	+0.1
	1.1nm,0.7s,baz=347,slow=13,SNR=3.0						
MKAR	Makanchi Array	55.00	312	P	P	02 33 29.3	+0.3
	1.0nm,0.5s,baz=88,slow=8.6,SNR=15						
FINES	FINESS Array B	83.00	335	P	P	02 36 22.1	-0.3
	1.5nm,0.8s,baz=55,slow=2.8,SNR=5.7						

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*IDC **24** 02:31:00.1±0.9, 34°.17N×25°.11E, h0^{km}, mb4.0/16, mb1 4.1/25, mb1mx3.8/54, mbtmp4.0/25, ML4.1/8, MS3.3/3, Ms1 3.3/3, ms1mx2.7/46, Error ellipse: s-maj=16.8km s-min=14.4km az=1.0*

*NEIC **24** 02:31:02.7±1.9, 34°.11N±0°.04×25°.14E±0°.05, h10^{km}±1^{km}, mb4.0/16, ML3.5(THE), ML3.6(ATH), Error ellipse: s-maj=7.3km s-min=6.7km az=95.0*

*THE **24** 02:31:04.8, 34°.10N×25°.07E, h6^{km}±1^{km}, ML3.5/6, Error ellipse: s-maj=2.0km s-min=0.7km az=178.0*

*ATH **24** 02:31:04.7, 34°.13N×25°.07E, h10^{km}±31^{km}, ML3.6/7, Error ellipse: s-maj=31.6km s-min=3.8km az=0.0*

*ISK **24** 02:31:04.1, 34°.17N×25°.09E, h12^{km}, ML3.6/7*

*HLW **24** 02:31:07.3, 33°.95N×25°.48E, h23^{km}±24^{km}, Md3.9*

ISC 24 02:31:02.2±1.4**, 34°.04N**±0°.04×**25°.16E**±0°.04**, h16**^{km}±9^{km}**, n143, σ1^{s}52**/150**, mb4.0**/17**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	1.02	343	P	Pn	02 31 22.2	+0.4
SIVA				S	Sn	02 31 36.5	+0.7
	13µm,0.6s						
SIVA	Sivas	1.02	343	P	Pn	02 31 22.6	+0.7
SIVA				AML	AML	02 31 46.8	
	comp=E,33520µm,0.6s						
SIVA				AML	AML	02 31 54.7	
	comp=N,11920µm,0.6s						
SIVA	Sivas	1.02	343		Pn	02 31 22.2	+0.4
SIVA					Sn	02 31 36.5	+0.7
FRMA	Ierapetra Chan	1.08	26	P	Pn	02 31 25.4	+2.7
FRMA	Ierapetra Chan	1.08	26		Pn	02 31 25.4	+2.7
TMBK	Timbaki Herakl	1.08	342	P	Pn	02 31 23.4	+0.7
TMBK				S	Sn	02 31 37.8	+0.4
	comp=N,3µm,0.5s						
TMBK	Timbaki Herakl	1.08	342		Pn	02 31 23.4	+0.7
TMBK					Sn	02 31 37.8	+0.4
GVD	Gavdhos	1.20	312	P	Pn	02 31 25.1	+0.8
GVD				S	Sn	02 31 40.7	+0.5
	comp=N,5µm,0.6s						
GVD	Gavdhos	1.20	312	P	Pn	02 31 25.3	+1.0
GVD				AML	AML	02 31 50.2	
	comp=E,9959µm,0.4s						
GVD				AML	AML	02 31 55.0	
	comp=N,8779µm,0.8s						
GVD	Gavdhos	1.20	312	PG	Pn	02 31 25.0	+0.8
GVD				SG	Sn	02 31 40.2	0.0
GVD	Gavdhos	1.20	312		Pn	02 31 25.1	+0.8
GVD					Sn	02 31 40.7	+0.5
GVDS	Gavdos	1.20	313	P	Pn	02 31 25.4	+1.1
GVDS				S	Sn	02 31 41.4	+1.2
	comp=N,2µm,0.7s						
GVDS	Gavdos	1.20	313	PN	Pn	02 31 25.1	+0.8
GVDS	Gavdos	1.20	313		Pn	02 31 25.4	+1.1
GVDS					Sn	02 31 41.4	+1.2
KSTL	Kastelli Herak	1.27	357	P	Pb	02 31 25.4	-0.3
KSTL				S	Sn	02 31 41.7	-0.2
	comp=N,835nm,0.7s						
KSTL	Kastelli Herak	1.27	357		Pb	02 31 25.4	-0.3
KSTL					Sn	02 31 41.7	-0.2
IDI	Anoyia	1.27	350	Pn	Pb	02 31 25.4	-0.4
	comp=N,45nm,0.3s,baz=250,slow=11,SNR=252						
IDI				Sn	Sg	02 31 41.3	-2.0
	comp=N,108nm,0.3s,baz=209,slow=19,SNR=8.4						
IDI				LR	LR	02 31 47.1	
	comp=N,102nm,21.5s,baz=107,slow=42						
IDI	Anoyia	1.27	350	P	Pg	02 31 26.1	-0.6
IDI				S	Sn	02 31 43.4	+1.3
	comp=N,2µm,0.5s						
IDI	Anoyia	1.27	350	P	Pg	02 31 26.2	-0.5
IDI				AML	AML	02 31 57.5	
	comp=N,2252µm,0.5s						
IDI				AML	AML	02 32 00.0	
	comp=E,3858µm,0.5s						
HRKL	Herakleio	1.27	358	P	Pg	02 31 26.7	-0.1
HRKL	Herakleio	1.27	358	PN	Pg	02 31 26.5	-0.3
NPS	Neapolis	1.28	17	P	Pg	02 31 27.1	+0.3
NPS	Neapolis	1.28	17	P	Pg	02 31 27.2	+0.3
NPS				AML	AML	02 31 58.1	
	comp=N,2033µm,0.6s						
NPS				AML	AML	02 32 00.6	
	comp=E,3175µm,0.6s						
ZKR	Zakros	1.38	39	P	Pg	02 31 29.7	+0.8
ZKR				AML	AML	02 32 05.9	
	comp=E,2684µm,0.7s						
ZKR				AML	AML	02 32 08.0	
	comp=N,960µm,0.7s						
ZKR	Zakros	1.38	39	PN	Pg	02 31 29.3	+0.4
STIA	Sitia Lasithi	1.39	33	P	Pg	02 31 29.9	+0.9
PRNS	Prines Rethymn	1.43	338	P	Pb	02 31 28.3	-0.2
VAM	Vamos	1.58	330	P	Pb	02 31 30.4	-0.6
VAM	Vamos	1.58	330	P	Pb	02 31 30.4	-0.6
VAM				AML	AML	02 32 10.0	
	comp=N,3682µm,0.9s						
VAM				AML	AML	02 32 11.3	
	comp=E,5279µm,0.7s						
KNDR	Palaiochora Ch	1.71	315	P	Pb	02 31 33.2	+0.1
KNDR	Palaiochora Ch	1.71	315	PN	Pb	02 31 33.3	+0.1
IMMV	Iera Moni Meta	1.72	326	P	Pb	02 31 32.6	-0.9
IMMV	Iera Moni Meta	1.72	326	P	Pb	02 31 32.8	-0.7
IMMV				AML	AML	02 32 12.2	
	comp=E,7138µm,0.8s						
IMMV				AML	AML	02 32 16.2	
	comp=N,3117µm,0.8s						
IMMV	Iera Moni Meta	1.72	326	PN	Pb	02 31 32.6	-0.9
RODP	Rodopos	1.91	323	PN	Pn	02 31 35.3	+1.2
THR6	Thira Island,	2.32	5	P	Pn	02 31 40.7	+1.0
SANT	Santorini	2.34	6	PN	Pn	02 31 41.6	+1.5
SANT	Santorini	2.34	6		Pn	02 31 40.3	+0.3
SANT				Sn	Sn	02 32 06.6	-1.9
THR3	Thira Island,	2.38	5	P	Pn	02 31 41.0	+0.5
ANKY	Antikythira Is	2.38	321	P	Pn	02 31 41.9	+1.3
SLUM	Salum	2.54	179	P	Pn	02 31 45.9	+3.2
	baz=186						
KTHR	Kythira	2.84	322	P	Pn	02 31 48.1	+1.2
YER	Yerkesik	4.00	39	P	Pn	02 32 05.3	+2.4
ITM	Ithomi	4.10	321	Pn	Pn	02 32 01.2	-3.0
ELL	Elmali	4.73	54		Pn	02 32 15.2	+2.2
SWA2		4.79	177	P	Pn	02 32 16.3	+2.7
	baz=181						
CSS	Mathiatis	6.81	80	Pn	Pn	02 32 43.7	+2.3
ALN	Alexandroupoli	6.88	6	Pn	Pn	02 32 43.6	+1.2
FNA	Florina	7.38	337		Pn	02 32 50.1	+0.8
HFRF	Wahat Farafira	7.38	158	P	Pn	02 32 51.3	+2.0
	baz=159						
HFRF				S	Sn	02 34 07.7	-5.0
	baz=159						
KBN	Korca	7.44	333	Pn	Pn	02 32 51.5	+1.3
SUZ	Suez	7.74	121	P	Pn	02 32 55.5	+1.2
	baz=121						
TAMRE	El Minia	8.03	140	P	Pn	02 33 00.7	+2.5
	baz=141						
TIP	Timpagrande	8.48	310	Pn	Pn	02 33 04.0	-0.4
CEL	Celeste	8.60	302	Pn	Pn	02 33 06.0	0.0
MMAI	Mount Meron Ar	8.61	94	Pn	Pn	02 33 06.2	0.0
	comp=N,1.1nm,0.3s,baz=270,slow=11,SNR=15						
MMAI				Sn	Sn	02 34 38.7	-4.3
	comp=N,1.8nm,0.3s,baz=276,slow=14,SNR=1.9						
GRB	Gharib	8.70	129	P	Pn	02 33 09.4	+2.0
	baz=130						
VTS	Vitosha	8.70	351	Pn	Pn	02 33 08.4	+0.9
BRTR	Keskin Array B	8.85	48	Pn	Pn	02 33 10.9	+1.3
	comp=N,0.1nm,0.3s,baz=213,slow=11,SNR=1.9						
BRTR				LR	LR	02 37 46.6	
	comp=N,153nm,18.3s,baz=238,slow=46						
GHAJ	Ghor Haditha	9.18	104		Pn	02 33 16.6	+2.7
HDK1	Dakhla	9.23	155	P	Pn	02 33 17.6	+2.9
	baz=156						
TR2	Tor 2	9.24	125	P	Pn	02 33 15.7	+0.9
	baz=126						
RAFF	Raffo Rosso	9.35	293		Pn	02 33 15.9	-0.3
VAE	Valguarnera	9.39	295	Pn	Pn	02 33 16.8	0.0
	comp=N,2.0nm,0.3s,baz=355,slow=11,SNR=2.8						
EIL	Elat	9.39	115	Pn	Pn	02 33 18.1	+1.2
	comp=N,1.6nm,0.3s,baz=287,slow=2.0,SNR=33						
PDG	Podgorica	9.58	333	Pn	Pn	02 33 17.8	-1.5
CLTB	Caltabellotta	10.33	293	Pn	Pn	02 33 30.4	+0.7
CORL	Corleone	10.35	295		Pn	02 33 30.7	+0.7
STON	Ston	10.58	329	*e*Pn	Pn	02 33 28.6	-4.5
STON				Sn	Sn	02 35 13.3	-18
LSTV	Lastovo	10.86	326	*e*Pn	Pn	02 33 32.0	-4.9
LSTV				Sn	Sn	02 35 19.7	-18
MAKA	Makarska	11.21	328	*e*Pn	Pn	02 33 36.8	-4.9
MAKA				Sn	Sn	02 35 28.4	-18
RICI	Ricice	11.33	329	*e*Pn	Pn	02 33 38.6	-4.7
RICI				Sn	Sn	02 35 32.6	-17
MLR	Muntele Rosu	11.46	3	LR	LR	02 38 36.4	
	comp=N,134nm,18.5s,baz=172,slow=40						
KIJV	Kijevo	12.05	328	*e*Pn	Pn	02 33 49.4	-3.8
KIJV				Sn	Sn	02 35 50.2	-17
ZIRJ	Zirje	12.13	325	*e*Pn	Pn	02 33 49.7	-4.5
ZIRJ				Sn	Sn	02 35 50.3	-19
MORI	Morici	12.26	326	*i* Pn	Pn	02 33 51.4	-4.6
MORI				Sn	Sn	02 35 53.4	-19
DUGI	Dugi Otok	12.66	325	*e*Pn	Pn	02 33 57.2	-4.4
DUGI				Sn	Sn	02 36 03.6	-18
UDBI	Udbina	12.75	328	*e*Pn	Pn	02 33 59.0	-3.8
UDBI				Sn	Sn	02 36 07.2	-17
NRCA	Norcia	12.89	316		Pn	02 34 05.5	+0.8
PLIT	Plitvice	13.09	329	*e*Pn	Pn	02 34 02.7	-4.7
PLIT				Sn	Sn	02 36 14.4	-18
NVLJ	Novalja	13.18	326	*e*Pn	Pn	02 34 04.0	-4.6
NVLJ				Sn	Sn	02 36 16.4	-18
SMRN	Sveta Marina	13.87	326	*e*Pn	Pn	02 34 13.8	-4.2
SMRN				Sn	Sn	02 36 33.8	-18
OBKA	Obir	14.84	330	*e*Pn	P	02 34 38.3	+1.1
	comp=N,1.5nm,0.4s						
ARSA	Arzberg	15.07	334	*e*Pn	P	02 34 39.8	+0.1
	comp=N,1.4nm,0.5s						
STAL	STALIGIAL	15.46	326		Pn	02 34 39.4	-0.1
STAL				IAmb	IAmb	02 34 44.5	
	comp=Z,20nm,1.5s						
ZOU	Zoufplan	15.56	327	P	P	02 34 44.0	-1.2
ZOU				IAmb	IAmb	02 34 52.8	
	comp=Z,10nm,0.8s						
KBA	Koelnbreinsper	15.80	329	*e*Pn	P	02 34 48.0	+0.1
	comp=Z,1.8nm,0.5s						
CTI	Castel Tesino	15.82	323	P	Pn	02 34 44.8	+0.5
CTI				IAmb	IAmb	02 34 49.5	
	comp=Z,10nm,1.3s						
ABTA	Abfaltersbach	15.91	327	*i* Pn	P	02 34 49.6	+0.5
	comp=Z,7.1nm,0.5s,SNR=13						
MOA	Molln	16.04	333	*e*Pn	P	02 34 50.4	0.0
	comp=Z,2.9nm,0.5s						
VRAC	Vranov	16.53	340	Pn	Pn	02 34 53.3	0.0
	comp=Z,0.4nm,0.3s,baz=160,slow=13,SNR=7.9						
WTTA	Wattenberg	16.70	326	*e*Pn	Pn	02 34 54.5	-1.0
	comp=Z,3.3nm,0.7s						
WATA	Walderalm	16.78	326	*e*Pn	Pn	02 34 55.4	-1.1
	comp=Z,1.3nm,0.5s						
KBZ	Khabaz	16.83	50	Pn	Pn	02 34 58.8	+1.7
	comp=Z,0.2nm,0.3s,baz=213,slow=9.4,SNR=7.2						
CKRC	Cesky Krumlov	16.84	335	*e*P	Pn	02 34 58.6	+1.5
SQTA	Sankt Quirin	16.86	325	*e*Pn	Pn	02 34 57.2	-0.5
	comp=Z,1.9nm,0.4s						
AKASG	Malin Array Be	16.92	9	Pn	Pn	02 34 58.2	+0.2
	comp=Z,1.2nm,0.3s,baz=200,slow=10,SNR=9.1						
AKASG	Malin Array Be	16.92	9	P	Pn	02 34 58.2	+0.2
FETA	Feichten	16.95	324	*e*Pn	P	02 35 02.0	+1.3
	comp=Z,1.0nm,0.5s						
MOTA	Moosalm	17.00	326	*e*Pn	P	02 35 01.7	+0.5

	comp=Z,1.1nm,0.4s						
GEC2	**GERESS Array S**	17.08	333	P	Pn	02 34 59.9	-0.3
GEC2				IAmb	IAmb	02 35 03.8	
	comp=Z,13nm,1.2s						
GERES	**GERESS Array B**	17.08	333	Pn	Pn	02 34 59.4	-0.8
	comp=Z,1.2nm,0.3s,baz=145,slow=12,SNR=52						
GERES	**GERESS Array B**	17.08	333	P	Pn	02 35 01.4	+1.1
KRLC	**Kraliky**	17.17	341	*e*P	P	02 35 03.1	+0.2
DAVOX	**Davos/Dischmat**	17.21	322	P	Pn	02 35 01.3	-0.7
	comp=Z,0.1nm,0.3s,baz=168,slow=20,SNR=1.9						
RETA	**Reutte**	17.27	325	*e*Pn	P	02 35 04.1	0.0
	comp=Z,1.1nm,0.4s						
KHC	**Kasperske Hory**	17.36	334	*e*P	Pn	02 35 01.8	-1.9
KHC	**Kasperske Hory**	17.36	334	P	P	02 35 05.0	0.0
DPC	**Dobruska-Polom**	17.55	341	*e*P	Pn	02 35 07.0	+1.0
DAVA	**Damuels**	17.55	323	*e*Pn	Pn	02 35 06.4	+0.1
	comp=Z,1.5nm,0.4s						
NKC	**Novy Kostel**	18.69	334	*e*P	Pn	02 35 20.6	+0.6
GRA1	**Grafenberg Arr**	18.73	331	P	P	02 35 20.1	+0.1
GRA1				IAmb	IAmb	02 35 34.3	
	comp=Z,14nm,1.1s						
BFO	**Black Forest**	19.03	324	P	P	02 35 23.7	+0.3
BFO				IAmb	IAmb	02 35 32.3	
	comp=Z,14nm,1.5s						
CLL	**Collm**	19.39	337	*e*P	P	02 35 28.0	+0.7
DEL	**Delary**	23.74	344	*i* P	P	02 36 10.0	-3.4
ESDC	**Sonseca Array**	23.92	292	P	P	02 36 14.8	-0.6
	comp=Z,1.0nm,0.6s,baz=86,slow=9.8,SNR=9.2						
ESDC	**Sonseca Array**	23.92	292	P	P	02 36 14.4	-1.0
MDT	**Midelt**	24.84	276	P	P	02 36 24.1	+0.2
	comp=Z,0.7nm,0.5s,baz=88,slow=6.2,SNR=3.8						
HFS	**Hagfors**	27.17	347	P	P	02 36 43.5	-1.0
	comp=Z,2.6nm,0.7s,baz=152,slow=9.6,SNR=8.5						
FINES	**FINESS Array B**	27.43	1	P	P	02 36 44.8	-2.1
	comp=Z,1.1nm,0.5s,baz=170,slow=11,SNR=5.9						
NB2	**NORSAR Subarra**	28.48	346	P	P	02 36 54.8	-1.6
	comp=Z,0.7nm,0.5s,baz=156,slow=10						
NOA	**NORSAR Array B**	28.48	346	P	P	02 36 54.6	-1.8
	comp=Z,0.6nm,0.6s,baz=146,slow=10,SNR=6.9						
NBO00	**NORSAR Array S**	28.57	345	P	P	02 36 55.4	-1.7
AKTO	**Aktyubinsk**	29.02	46	LR	LR	02 53 34.6	
	comp=Z,70nm,20.0s,baz=339,slow=47						
TORD	**Torodi Ar. Bea**	29.78	231	P	P	02 37 09.8	+1.5
	comp=Z,2.9nm,0.5s,baz=32,slow=8.6,SNR=53						
TORD	**Torodi Ar. Bea**	29.78	231	P	P	02 37 09.8	+1.5
KOWA	**Kowa**	32.77	241	P	P	02 37 35.6	+1.0
KOWA				IAmb	IAmb	02 37 54.3	
	comp=Z,2.8nm,1.0s						
ARCES	**ARCESS Array B**	35.55	0	P	P	02 37 55.5	-2.6
	comp=Z,1.9nm,0.8s,baz=169,slow=8.2,SNR=11						
MK31	**Makanchi Array**	44.40	56	P	P	02 39 12.6	+0.7
MKAR	**Makanchi Array**	44.40	56	P	P	02 39 13.1	+1.1
	comp=Z,2.3nm,0.5s,baz=274,slow=7.2,SNR=51						
MKAR	**Makanchi Array**	44.40	56	P	P	02 39 12.9	+1.0
SPITS	**Spitsbergen Ar**	44.41	357	P	P	02 39 11.1	-0.5
	comp=Z,23nm,1.1s,baz=144,slow=10,SNR=6.4						
ZALV	**Zalesovo Beam**	45.78	45	P	P	02 39 22.9	0.0
	comp=Z,1.5nm,0.5s,baz=274,slow=8.5,SNR=8.3						
SONM	**Songino Array**	60.20	50	P	P	02 41 09.9	+0.5
	comp=Z,0.9nm,0.7s,baz=285,slow=8.1,SNR=8.6						
SONM	**Songino Array**	60.20	50	P	P	02 41 10.7	+1.3
SONM				IAmb	IAmb	02 41 20.6	
	comp=Z,0.8nm,0.8s						
BOSA	**Boshof**	62.31	180	P	P	02 41 25.1	+1.4
SCHQ	**Schefferville**	64.04	320	P	P	02 41 34.3	-0.6
	comp=Z,2.1nm,0.6s,baz=44,slow=5.9,SNR=8.0						
SCHQ	**Schefferville**	64.04	320	P	P	02 41 34.8	-0.1
INK	**Inuvik**	76.73	352	P	P	02 42 51.5	-0.6
	comp=Z,0.5nm,0.6s,baz=356,slow=5.3,SNR=4.2						
USRK	**Ussuriysk Ar.**	77.63	45	P	P	02 42 57.7	0.0
	comp=Z,1.1nm,0.6s,baz=280,slow=3.9,SNR=4.5						
YKA	**Yellowknife Ar**	78.52	342	P	P	02 43 01.9	-0.4
	comp=Z,0.3nm,0.5s,baz=31,slow=5.4,SNR=13						
ILAR	**Eielson Array**	81.32	357	P	P	02 43 17.6	+0.2
	comp=Z,0.2nm,0.6s,baz=4.8,slow=4.2,SNR=4.9						
ILAR	**Eielson Array**	81.32	357	P	P	02 43 18.0	+0.5

ATH 24 02:36:45.4, 38°.53N×20°.53E, $h14^{km}\pm3^{km}$, ML1.0/1, Error ellipse: s-maj=3.5km s-min=0.6km az=84.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EVGI	**Lefkada island**	0.13	48	P	Pg	02 36 48.7	-0.3
EVGI				S	Sg	02 36 51.2	-0.1
DRAG	**Dragano-Lefkad**	0.16	13	P	Pg	02 36 49.0	-0.3
DRAG				S	Sg	02 36 51.9	0.0
NYDR	**Nydri-Lefkada**	0.23	36	P	Pg	02 36 50.1	-0.2
NYDR				S	Sg	02 36 53.5	-0.1
LKD2	**Lefkada island**	0.28	22	P	Pg	02 36 51.1	-0.1
LKD2				S	Sg	02 36 55.6	+0.4
KEF4	**Livadi, Kephal**	0.29	197	P	Pg	02 36 51.2	-0.1
KEF4				S	Sg	02 36 55.6	+0.3
TSLK	**Tsoukalades, L**	0.31	19	P	Pg	02 36 51.8	0.0
TSLK				S	Sg	02 36 56.4	+0.2
DMLN	**Damoulianata-K**	0.32	203	P	Pg	02 36 51.7	-0.2
DMLN				S	Sg	02 36 56.6	+0.2
KEF3	**Kipouria, Keph**	0.36	203	P	Pg	02 36 51.9	-0.7
KEF3				S	Sg	02 36 57.1	-0.5
VLS	**Valsamata**	0.36	172	P	Pg	02 36 52.2	-0.4
VLS				S	Sg	02 36 57.8	+0.3
VLS				AML	AML	02 36 58.4	
	comp=N,65µm,0.1s						
VLS				AML	AML	02 36 58.7	
	comp=E,74µm,0.1s						
PSDA	**Pessada-Kefalo**	0.42	174	P	Pg	02 36 53.7	0.0
PSDA				S	Sg	02 36 59.8	+0.4

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*VIE **24** 02:37:40.6±0.1, 47°.64N×13°.74E, $h2^{km}$, mb2.3/19, ml2.7/18, Error ellipse: s-maj=1.0km s-min=0.9km az=2.0*
5 km NW of Bad Aussee felt 3 ems98 at Altaussee / Styria
*KRSZO **24** 02:37:41.4±1.2, 47°.68N×13°.72E, $h7^{km}\pm6^{km}$, ML3.1/21, Error ellipse: s-maj=2.6km s-min=2.2km az=148.0*
*LDG **24** 02:37:41.2±0.1, 47°.63N×13°.83E, $h10^{km}$, Ml2.5/12, Error ellipse: s-maj=3.7km s-min=2.3km az=150.0*
*PRU **24** 02:37:41.5±0.0, 47°.65N×13°.82E, $h0^{km}$, Bad Aussee*
*IPEC **24** 02:37:42.5±0.1, 47°.64N×13°.75E, $h13^{km}$, MB-1.0, ML2.6/12, MS-1.0, Error ellipse: s-maj=1.3km s-min=0.7km az=73.0*
*BGR **24** 02:37:42.2±0.2, 47°.63N×13°.82E, $h5^{km}$, ML2.5/11, Error ellipse: s-maj=3.3km s-min=3.3km az=128.0*
ISC 24 02:37:41.5±1.0, **47°.64N**±0°.02×**13°.72E**±0°.01, **$h18^{km}$**$\pm6^{km}$, **n98, σ1ˢ.79**/152, **Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MOA	**Molln**	0.42	60	*e*Pg	Pg	02 37 48.5	-1.6
	1.4nm,0.2s						
MOA				*e*Sg	Sg	02 37 54.3	-1.7
	34nm,0.3s						
MOA	**Molln**	0.42	60	*e*Pg	Pg	02 37 48.5	-1.6
KBA	**Koelnbreinsper**	0.62	204	*e*Pg	Pg	02 37 52.7	-1.1
	11nm,0.4s,SNR=9.6						
KBA				*e*Sg	Sg	02 38 01.9	-0.2
	63nm,0.6s						
KBA	**Koelnbreinsper**	0.62	204	*e*Pg	Pg	02 37 52.7	-1.1
KBA				*e*Sg	Sb	02 38 02.5	+0.2
MYKA	**Terra Mystica**	1.01	183	*e*Pg	Pb	02 38 00.7	+0.1
	2.4nm,0.3s						
MYKA				*e*Sg	Sn	02 38 15.2	+0.4
	4.0nm,0.2s						
GEC2	**GERESS Array S**	1.20	359	*e*Pn	Pn	02 38 03.8	+0.3
GEC2				*e*Sg	Sg	02 38 22.2	+1.7
ABTA	**Abfaltersbach**	1.22	223	*e*Pg	Pn	02 38 03.9	+0.2
	7.4nm,0.5s,SNR=12						
ABTA				*e*Sg	Sg	02 38 21.8	+0.9
	23nm,0.6s						
CKRC	**Cesky Krumlov**	1.24	18	*e*PN	Pg	02 38 05.5	0.0
CKRC				*e*SN	Sg	02 38 23.3	+1.6
CKRC	**Cesky Krumlov**	1.24	18	*e*Pn	Pg	02 38 05.7	+0.2
CKRC	**Cesky Krumlov**	1.24	18	Pg	Pg	02 38 05.8	+0.3
	comp=Z,0.4nm,SNR=2.7						
CKRC				Lg	Lg	02 38 22.8	
OBKA	**Obir**	1.27	153	*e*Pg	Pb	02 38 04.8	-0.1
	comp=Z,7.3nm,0.2s,SNR=9.2						
OBKA				*e*Sg	Sg	02 38 23.1	+0.6
	comp=Z,12nm,0.5s						
OBKA	**Obir**	1.27	153	*e*Pn	Pb	02 38 04.9	-0.1
OBKA	**Obir**	1.27	153	Pg	Pb	02 38 04.8	-0.1
	comp=Z,0.2nm,SNR=3.9						
OBKA				Sn	Sg	02 38 24.6	+2.1
ARSA	**Arzberg**	1.29	107	*e*Pg	Pn	02 38 04.8	+0.2
	comp=Z,1.8nm,0.3s,SNR=11						
ARSA				*e*Sg	Sn	02 38 22.0	+0.6
	comp=Z,4.2nm,0.2s						
ARSA	**Arzberg**	1.29	107	*e*Pn	Pg	02 38 07.4	+1.1
ARSA	**Arzberg**	1.29	107	Pg	Pg	02 38 06.8	+0.5
	comp=Z,0.2nm,SNR=2.0						
ARSA				Lg	Lg	02 38 26.7	
SOKA	**Soboth**	1.32	137	*e*Pg	Pb	02 38 05.5	-0.2
	comp=Z,0.9nm,0.2s,SNR=7.1						
SOKA				*e*Sg	Sg	02 38 23.3	-0.8
	comp=Z,6.9nm,0.3s						
GORS	**Gorjuse**	1.34	172	*i* Pg	Pg	02 38 06.8	-0.5
GORS				*i* Sg	Sg	02 38 25.3	+0.5
GORS				IAML		02 38 31.2	
	comp=Z,28nm,0.7s						
ROBS	**Robic**	1.41	186	*i* Pg	Pg	02 38 09.3	+0.7
CADS	**Cadrg**	1.42	180	*i* Pg	Pg	02 38 08.5	-0.2
CADS				*i* Sg	Sg	02 38 29.3	+2.1
CADS				IAML		02 38 33.7	
	comp=Z,20nm,0.3s						
MOZS	**Mozjanca**	1.44	160	*i* Pg	Pg	02 38 09.1	-0.1
WTTA	**Wattenberg**	1.46	256	*e*Pg	Pb	02 38 09.1	+0.8
	comp=Z,12nm,0.4s,SNR=14						
WTTA				*e*Sg	Sg	02 38 30.4	+1.6
	comp=Z,38nm,0.4s						
WTTA	**Wattenberg**	1.46	256	*e*Pn	Pg	02 38 09.3	-0.4
WTTA				*e*Sg	Sg	02 38 31.7	+2.9
CONA	**Conrad Observa**	1.47	78	*e*Pg	Pb	02 38 08.3	-0.1
	comp=Z,2.5nm,0.2s,SNR=8.2						
CONA				*e*Sg	Sg	02 38 28.6	-0.4
	comp=Z,16nm,0.3s						
WATA	**Walderalm**	1.48	259	*e*Pg	Pg	02 38 09.8	-0.3
	comp=Z,0.8nm,0.2s						
WATA				*e*Sg	Sg	02 38 30.8	+1.4
	comp=Z,28nm,0.2s						
KHC	**Kasperske Hory**	1.49	356	*e*PN	Pb	02 38 09.1	+0.4
KHC				*e*SG	Sg	02 38 29.7	0.0
KHC	**Kasperske Hory**	1.49	356	*e*Pn	Pb	02 38 09.1	+0.4
KHC				*e*Sg	Sg	02 38 29.9	+0.2
WET	**Wettzell**	1.60	340	*e*Pn	Pb	02 38 11.2	+0.6
WET				*e*Sg	Sg	02 38 33.7	+0.5
VOJS	**Vojsko**	1.61	176	*i* Pn	Pg	02 38 12.2	-0.4
FUR	**Furstenfeldbru**	1.73	289	*e*Pn	Pg	02 38 14.1	-0.6
FUR				*e*Sg	Sg	02 38 38.2	+1.1
SQTA	**Sankt Quirin**	1.76	257	*e*Pg	Pb	02 38 13.8	+0.6
	comp=Z,0.5nm,0.1s,SNR=8.4						
SQTA				*e*Sg	Sg	02 38 39.2	+1.1
	comp=Z,15nm,0.4s						
MOTA	**Moosalm**	1.80	261	*e*Pg	Pb	02 38 14.6	+0.6
	comp=Z,2.3nm,0.1s						
MOTA				*e*Sg	Sg	02 38 40.3	+0.8
	comp=Z,20nm,0.4s						
SOP	**Sopron**	1.92	88	*e*P	Pb	02 38 16.6	+0.6
SOP				*e*S	Sg	02 38 42.1	-1.1
SOP	**Sopron**	1.92	88	Pg	Pb	02 38 16.6	+0.6
	comp=Z,0.1nm,SNR=1.5						
SOP				Sn	Sg	02 38 42.1	-1.1
RETA	**Reutte**	2.01	267	*e*Pg	Pb	02 38 18.5	+1.0
	comp=Z,1.3nm,0.2s						
RETA				*e*Sg	Sg	02 38 47.1	+1.0
	comp=Z,14nm,0.3s						
TREC	**Trest**	2.03	35	*e*PN	Pn	02 38 16.2	+1.4
TREC				*e*SG	Sb	02 38 44.3	+1.5
	comp=Z,20nm,0.3s						
TREC	**Trest**	2.03	35	*e*Sg	Sg	02 38 45.8	-0.9
TREC	**Trest**	2.03	35	Pg	Pn	02 38 16.3	+1.5
	comp=Z,0.1nm,SNR=2.3						
TREC				Sn	Sb	02 38 43.4	+0.6
KOGS	**Kog**	2.10	124	Pn	Pb	02 38 18.6	-0.5
	comp=Z,0.2nm,SNR=1.3						
FETA	**Feichten**	2.13	254	*e*Pn	Pn	02 38 17.6	+1.3
	comp=Z,0.5nm,0.2s						
FETA				*e*Sg	Sg	02 38 50.4	+0.5
	comp=Z,4.8nm,0.4s						
CRES	**Cresnjev**	2.17	146	Pn	Pb	02 38 19.0	-1.3
	comp=Z,0.4nm,SNR=3.0						
KRUC	**Moravsky**	2.28	50	*e*Pn	Pn	02 38 19.2	+0.9
	baz=232						
KRUC				*e*Sn	Sb	02 38 48.3	-1.7
	comp=Z,33nm,0.8s,baz=232						
KRUC	**Moravsky**	2.28	50	Pg	Pn	02 38 19.9	+1.6
	comp=Z,0.2nm,SNR=2.2						
KRUC				Lg	Lg	02 38 49.7	
PTJ	**Puntijarka**	2.32	138	Pn	Pb	02 38 21.9	-1.1
	comp=Z,0.1nm,SNR=1.5						
NORI	**Noerdlinger Ri**	2.33	299	*e*Pg	Pg	02 38 27.4	+1.1
ZST	**Bratislava**	2.34	75	Pn	Pn	02 38 21.0	+1.9
	comp=Z,1.5nm,SNR=1.4						
ZST	**Bratislava**	2.34	75	*e*PN	Pn	02 38 21.1	+2.0
ZST				*e*SG	Sg	02 38 54.3	-2.5
PRU	**Pruhonice**	2.41	13	Pn	Pn	02 38 22.4	+2.4
	comp=Z,0.1nm,SNR=2.3						
PRU				Sn	Sb	02 38 52.7	-1.0
EGYH	**Egyhazaskeszo**	2.46	94	*e*P	Pb	02 38 23.5	-1.6
EGYH	**Egyhazaskeszo**	2.46	94	Pn	Pb	02 38 23.5	-1.6
	comp=Z,0.2nm,SNR=1.5						
MODS	**Modra-Piesok**	2.50	72	*e*PN	Pn	02 38 22.3	+1.0
MODS				*e*SG	Sb	02 38 57.7	+1.4
VRAC	**Vranov**	2.54	48	*e*Pn	Pn	02 38 22.8	+1.0
	baz=230						
VRAC				*e*Sn	Sn	02 38 54.7	+2.4
	comp=Z,23nm,0.9s,baz=230						
VRAC	**Vranov**	2.54	48	*e*Sg	Sb	02 38 60.0	+2.6
VRAC	**Vranov**	2.54	48	Pn	Pn	02 38 23.1	+1.3
	comp=Z,0.1nm,SNR=1.8						
VRAC				Sn	Sb	02 38 56.8	-0.6
DAVA	**Damuels**	2.63	264	*e*Pn	Pn	02 38 24.0	+0.8
	comp=Z,0.4nm,0.2s						
DAVA				*e*Sg	Sg	02 39 07.1	+1.1
	comp=Z,4.3nm,0.3s						
GRF	**Grafenberg Arr**	2.64	322	*e*Pg	Pg	02 38 32.5	+0.5
MPLH	**Magyarpolny**	2.64	99	*e*P	Pn	02 38 25.5	+2.3
MPLH	**Magyarpolny**	2.64	99	Pn	Pn	02 38 25.5	+2.3
	comp=Z,0.2nm,SNR=1.4						
A263A	**Hollad**	2.65	111	Pn	Pb	02 38 28.2	-0.3
	comp=Z,0.5nm,SNR=4.1						
NKC	**Novy Kostel**	2.73	343	*e*Pn	Pn	02 38 26.4	+2.0
JAVC	**Velka Javorina**	2.91	64	Pg	Pg	02 38 35.6	-1.6
	comp=Z,0.2nm,SNR=2.1						
PVCC	**Panska Ves**	2.94	11	*e*Pn	Pn	02 38 29.2	+1.8
A269A	**Baj**	3.15	88	Pg	Pb	02 38 37.7	+0.7
	comp=Z,0.1nm,SNR=2.2						
KRLC	**Kraliky**	3.17	39	*e*PN	Pn	02 38 31.4	+0.9
DPC	**Dobruska-Polom**	3.21	31	*e*PN	Pn	02 38 31.9	+0.9
DPC				*e*SG	Sg	02 39 22.1	-2.3
	comp=Z,23nm,0.8s						
DPC	**Dobruska-Polom**	3.21	31	*e*Pn	Pn	02 38 32.0	+1.0
UPC	**Upice**	3.24	27	*e*SN	Sn	02 39 11.9	+2.3
MOX	**Moxa**	3.31	336	*e*Pn	Pn	02 38 33.8	+1.4
MORC	**Moravsky Berou**	3.31	48	*e*Pn	Pn	02 38 33.7	+1.2
	baz=231						
MORC				*e*Sg	Sg	02 39 26.0	-1.8
	comp=Z,27nm,0.9s,baz=231						
MORC	**Moravsky Berou**	3.31	48	Pg	Pb	02 38 41.6	+1.9
	comp=Z,0.2nm,SNR=2.4						
MORC				Lg	Lg	02 39 26.0	
A267A	**Kaloz**	3.31	100	Pn	Pn	02 38 34.5	+2.1
	comp=Z,0.1nm,SNR=2.0						
CHVC	**Chvalec**	3.32	27	*e*PN	Pn	02 38 33.8	+1.2
KOVH	**Kovagotottos**	3.38	116	*e*P	Pn	02 38 34.7	+1.3
KOVH	**Kovagotottos**	3.38	116	Pn	Pn	02 38 34.7	+1.3
	comp=Z,0.1nm,SNR=1.8						
SLE	**Schleitheim**	3.53	274	*e*Pn	Pn	02 38 37.3	+1.8
OKC	**Ostrava-Krasne**	3.66	52	Lg	Lg	02 39 34.3	
MORH	**Mrgy, Hungar**	3.66	111	*e*P	Pn	02 38 38.5	+1.3
MORH	**Mrgy, Hungar**	3.66	111	Pn	Pn	02 38 38.5	+1.3
	comp=Z,0.1nm,SNR=1.4						
BFO	**Black Forest**	3.69	283	*e*Pn	Pn	02 38 39.0	+1.4
CLL	**Collm**	3.70	353	*e*Pn	Pn	02 38 39.0	+1.3
CLL				*e*Pg	Pg	02 38 54.0	+1.7
CLL				*e*(Sn)	Sn	02 39 22.0	+1.2
CLL				*e*Sg	Sg	02 39 40.0	-0.2
	comp=Z,16nm,0.9s						
CDF	**Champ du Feu**	4.39	282	*e*P	Pn	02 38 51.1	+3.7
CDF	**Champ du Feu**	4.39	282	*e*Pg	Pg	02 39 04.2	-1.4
CDF				*e*Sn	Sn	02 39 36.4	-1.7
CDF				*e*Sg	Sg	02 40 01.7	-0.7
	comp=Z,2.0nm,0.3s						
HINF	**Hinteralfeld**	4.64	275	*e*P	Pn	02 38 53.8	+3.1
HINF	**Hinteralfeld**	4.64	275	*e*Pg	Pg	02 39 09.3	-0.9
HINF				*e*Sn	Sn	02 39 42.9	-1.2
HINF				*e*Sg	Sg	02 40 09.0	-1.3
	comp=Z,1.6nm,0.4s						
HAU	**Haudompre**	4.98	277	*e*P	Pn	02 38 58.7	+3.3
HAU				*e*Sn	Sn	02 39 50.6	-1.9
HAU				*e*Sg	Sg	02 40 19.9	-1.3
	comp=Z,3.2nm,0.4s						
LPG	**La Plagne**	5.26	249	*e*P	Pn	02 39 03.6	+4.1
LPG				*e*Sn	Sn	02 39 56.3	-3.5
	comp=Z,0.6nm,0.3s						
LPL	**La Plagne**	5.26	249	*e*P	Pn	02 39 03.4	+3.9
LPL				*e*Sn	Sn	02 39 56.8	-3.0
	comp=Z,2.0nm,0.6s						
CABF	**La Chapelle**	5.31	262	*e*Pn	Pn	02 39 04.8	+4.8
PAGF	**Fort de Pagny**	5.43	283	*e*Pn	Pn	02 39 01.2	-0.4
	baz=105						
PAGF	**Fort de Pagny**	5.43	283	*e*Pg	Pg	02 39 21.9	-3.5
PAGF				*e*Sg	Sg	02 40 34.7	-1.1
MBDF	**Montbardon**	5.64	241	*e*P	Pn	02 39 08.6	+4.1
MBDF				*e*Sn	Sn	02 40 05.3	-3.6
	comp=Z,0.7nm,0.4s						
SAVF	**Savonnieres en**	5.84	283	*e*Pn	Pn	02 39 07.0	-0.1
SFTF	**Sexfontaines**	5.86	279	*e*Pn	Pn	02 39 08.1	+0.6
	baz=100						
SFTF				*e*Sg	Sg	02 40 45.1	-4.4
	comp=Z,2.0nm,0.3s						
ORIF	**Oris-en-Rattie**	6.08	246	*e*P	Pn	02 39 13.9	+3.4
ORIF				*e*Sn	Sn	02 40 16.2	-3.4
	comp=Z,0.3nm,0.2s						
BAIF	**Baives**	6.73	295	*e*Pg	Pg	02 39 46.6	-3.5
BAIF				*e*Sg	Sg	02 41 15.1	-2.0
	comp=Z,0.6nm,0.3s						
SMRF	**Simiane la Rot**	6.77	240	*e*P	Pn	02 39 22.7	+2.7
SMRF				*e*Sn	Sn	02 40 32.4	-4.2
	comp=Z,0.5nm,0.4s						
SMF	**Signal de Mont**	6.81	265	*e*P	Pn	02 39 24.5	+4.0
SMF				*e*Sn	Sn	02 40 33.7	-3.9
	comp=Z,0.5nm,0.3s						
LASF	**Ste Croix**	7.75	246	*e*P	Pn	02 39 38.3	+4.9
LASF				*e*Sn	Sn	02 40 55.9	-4.9
	comp=Z,0.5nm,0.3s						

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*ROM **24** 02:38:15.9±0.3, 42°.47N±0°.02×15°.37E±0°.02, $h8^{km}$, ML2.5/26, Error ellipse: s-maj=2.2km s-min=1.2km az=42.0*
ISC 24 02:38:16.1±1.1, **42°.46N**±0°.02×**15°.27E**±0°.02, **$h2^{km}$**$\pm10^{km}$, **n51, σ0ˢ.99**/75, **5C-2D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TREM	**Isole Tremiti**	0.38	152	P	Pb	02 38 24.1	-1.4
TREM				S	Sg	02 38 29.4	+1.2
FRES	**Fresagrandinar**	0.66	223	P	Pg	02 38 28.4	-0.2
MELA	**Melanico ??? S**	0.76	188	P	Pg	02 38 30.1	-0.4
MELA				S	Sb	02 38 41.6	-1.1
MELA				AML	AML		
	comp=E,866µm,0.4s						
MELA				AML	AML		
	comp=N,657µm,1.2s						
MELA				AML	AML		
	comp=E,901µm,0.4s						
MELA				AML	AML		
	comp=N,600µm,0.2s						
SGRT	**San Giovanni R**	0.79	153	P	Pb	02 38 31.7	-0.7
SGRT				S	Sn	02 38 45.3	-1.3
SGRT				AML	AML		
	comp=E,787µm,0.8s						
SGRT				AML	AML		
	comp=N,462µm,0.4s						
TRIV	**Trivento**	0.87	218	P	Pg	02 38 32.5	-0.3
TRIV				S	Sb	02 38 46.8	+0.7
MSAG	**Monte S. Angel**	0.88	147	P	Pb	02 38 34.0	-0.1
MSAG				AML	AML		
	comp=E,998µm,0.5s						
MSAG				AML	AML		
	comp=N,1225µm,0.5s						
MSAG				AML	AML		
	comp=N,1235µm,0.5s						
MSAG				AML	AML		
	comp=N,1224µm,0.5s						
MSAG				AML	AML		
	comp=E,998µm,0.5s						
MSAG				AML	AML		
	comp=E,1010µm,0.5s						
LPEL	**Lama dei Pelig**	0.91	243	P	Pg	02 38 32.8	-0.7
LPEL				S	Sn	02 38 48.8	-0.7
LPEL				AML	AML		
	comp=E,426µm,0.2s						
LPEL				AML	AML		
	comp=N,391µm,0.2s						
LPEL				AML	AML		
	comp=N,390µm,0.2s						
GATE	**Gambatesa**	0.98	196	P	Pb	02 38 35.7	0.0
GATE				AML	AML		
	comp=E,308µm,0.4s						
GATE				AML	AML		
	comp=N,230µm,0.9s						
GATE				AML	AML		
	comp=N,174µm,1.6s						
GATE				AML	AML		
	comp=N,230µm,0.9s						
GATE				AML	AML		
	comp=E,179µm,0.6s						
BSSO	**Busso**	1.04	209	P	Pg	02 38 35.7	-0.3
BSSO				AML	AML		
	comp=E,61µm,0.4s						
BSSO				AML	AML		
	comp=E,61µm,0.4s						
BSSO				AML	AML		
	comp=N,73µm,0.5s						
VCEL	**Villa Celiera**	1.06	267	P	Pg	02 38 36.2	-0.2
VCEL				S	Sn	02 38 53.6	+0.2
VCEL				AML	AML		
	comp=E,368µm,0.4s						
VCEL				AML	AML		
	comp=N,320µm,0.7s						
VCEL				AML	AML		
	comp=N,319µm,0.7s						
VCEL				AML	AML		
	comp=E,368µm,0.4s						
TRTR	**Tortoreto Alta**	1.06	290	P	Pn	02 38 37.9	-0.1
MOCO	**Biccari - m.te**	1.09	184	P	Pg	02 38 36.6	-0.3
MOCO				S	Sn	02 38 54.7	+0.7
MIDA	**Miranda**	1.11	223	P	Pg	02 38 36.5	-0.9
MIDA				S	Sg	02 38 52.7	+0.9
MIDA				AML	AML		
	comp=E,136µm,0.4s						
MIDA				AML	AML		
	comp=N,146µm,0.4s						
T0110	**Collepietro**	1.13	259	P	Pg	02 38 37.7	0.0
T0110				S	Sn	02 38 55.7	+0.7
T0110				AML	AML		
	comp=E,224µm,0.4s						
T0110				AML	AML		
	comp=E,224µm,0.4s						
T0110				AML	AML		
	comp=N,225µm,0.6s						
ZIRJ	**Zirje**	1.23	13	*e*Pg	Pn	02 38 41.0	+0.8
ZIRJ				Sg	Sn	02 38 58.4	+1.1
LSTV	**Lastovo**	1.24	75	*e*Pg	Pn	02 38 42.3	+2.0
LSTV				Sg	Sn	02 38 59.6	+2.1
TERO	**Teramo**	1.24	278	P	Pg	02 38 39.6	-0.3
TERO				S	Sn	02 38 58.3	+0.5
TERO				AML	AML		
	comp=E,41µm,1.5s						
TERO				AML	AML		
	comp=N,52µm,0.4s						
TERO				AML	AML		
	comp=E,41µm,1.5s						
TERO				AML	AML		
	comp=N,52µm,0.4s						
OFFI	**Offida**	1.26	293	P	Pn	02 38 41.4	+0.7
FAGN	**Fagnano**	1.27	262	P	Pg	02 38 40.4	+0.1
FAGN				S	Sn	02 38 59.1	+0.7
FAGN				AML	AML		
	comp=E,326µm,0.6s						
FAGN				AML	AML		
	comp=N,265µm,0.5s						
FAGN				AML	AML		
	comp=E,326µm,0.6s						
SGTA	**Sant Agata di**	1.32	177	P	Pg	02 38 41.1	-0.3
MRB1	**Monte Rocchett**	1.35	190	P	Pg	02 38 41.5	-0.4
MRB1				AML	AML		
	comp=E,118µm,0.5s						
MRB1				AML	AML		
	comp=N,187µm,1.1s						
VITU	**Vitulano (BN)**	1.36	201	P	Pb	02 38 42.2	-0.1
VITU				AML	AML		
	comp=N,148µm,0.7s						
VITU				AML	AML		

	comp=E,128µm,0.3s						
SMA1	**SAN MARTINO**	**1.44**	**278**	P	**Pn**	**02 38 42.5**	**-0.8**
SMA1				AML	AML		
	comp=E,118µm,0.6s						
SMA1				AML	AML		
	comp=N,100µm,0.9s						
SMA1				AML	AML		
	comp=N,100µm,0.9s						
SMA1				AML	AML		
	comp=E,119µm,0.6s						
MORI	**Morici**	**1.44**	**13**	*e*Pn	**Pg**	**02 38 44.0**	**+0.2**
MORI				Sg	**Sn**	**02 39 04.5**	**+1.8**
RM33	**Pellescritta (**	**1.52**	**273**	P	**Pn**	**02 38 44.0**	**-0.4**
RM33				AML	AML		
	comp=E,77µm,0.7s						
RM33				AML	AML		
	comp=N,70µm,1.2s						
RM33				AML	AML		
	comp=N,70µm,1.2s						
RM33				AML	AML		
	comp=E,78µm,0.7s						
MAKA	**Makarska**	**1.53**	**57**	*e*Pn	**Pg**	**02 38 45.8**	**+0.4**
MAKA				Sn	**Sg**	**02 39 07.5**	**+2.3**
SNAL	**S. Angelo Dei**	**1.53**	**182**	P	**Pn**	**02 38 43.2**	**-1.3**
SNAL				AML	AML		
	comp=N,75µm,0.6s						
SNAL				AML	AML		
	comp=N,75µm,0.6s						
SNAL				AML	AML		
	comp=E,78µm,0.4s						
DUGI	**Dugi Otok**	**1.54**	**354**	*e*Pn	**Pg**	**02 38 45.5**	**-0.1**
DUGI				Sn	**Sg**	**02 39 07.2**	**+1.6**
FIAM	**Fiamignano**	**1.61**	**264**	P	**Pn**	**02 38 46.0**	**+0.4**
FIAM				AML	AML		
	comp=E,65µm,1.2s						
FIAM				AML	AML		
	comp=N,49µm,0.5s						
FIAM				AML	AML		
	comp=E,65µm,1.2s						
NRCA	**Norcia**	**1.64**	**284**	P	**Pn**	**02 38 46.2**	**+0.3**
NRCA				AML	AML		
	comp=E,87µm,0.7s						
NRCA				AML	AML		
	comp=N,124µm,0.3s						
NRCA				AML	AML		
	comp=E,87µm,0.7s						
LNSS	**Leonessa**	**1.66**	**276**	P	**Pn**	**02 38 46.4**	**+0.2**
LNSS				S	**Sg**	**02 39 10.1**	**+0.9**
LNSS				AML	AML		
	comp=E,117µm,0.4s						
LNSS				AML	AML		
	comp=N,75µm,0.4s						
LNSS				AML	AML		
	comp=N,75µm,0.4s						
LNSS				AML	AML		
	comp=E,117µm,0.4s						
FDMO	**Fiordimonte**	**1.71**	**291**	P	**Pn**	**02 38 47.3**	**+0.4**
FDMO				AML	AML		
	comp=E,72µm,1.3s						
FDMO				AML	AML		
	comp=N,74µm,0.3s						
FDMO				AML	AML		
	comp=N,74µm,0.3s						
RICI	**Ricice**	**1.71**	**52**	*e*Pn	**Pg**	**02 38 48.2**	**-0.8**
RICI				Sn	**Sg**	**02 39 11.6**	**+0.4**
KIJV	**Kijevo**	**1.75**	**28**	*e*Pn	**Pg**	**02 38 49.0**	**-0.7**
KIJV				Sn	**Sg**	**02 39 12.1**	**-0.4**
CERT	**Cerreto**	**1.77**	**254**	P	**Pn**	**02 38 48.6**	**+0.8**
CERT				AML	AML		
	comp=E,43µm,1.5s						
CERT				AML	AML		
	comp=N,28µm,1.4s						
CERT				AML	AML		
	comp=E,43µm,1.5s						
CERT				AML	AML		
	comp=N,28µm,1.4s						
EL6	**Elcito**	**1.82**	**299**	P	**Pn**	**02 38 48.6**	**+0.2**
STON	**Ston**	**1.84**	**76**	*e*Pn	**Pg**	**02 38 51.1**	**-0.2**
STON				Sn	**Sg**	**02 39 15.4**	**+0.3**
STON	**Ston**	**1.84**	**76**	P	**Pn**	**02 38 44.8**	**-3.8**
AMUR	**Altamura**	**1.84**	**147**	⇑P	**Pn**	**02 38 48.5**	**-0.2**
AMUR				AML	AML		
	comp=N,85µm,0.6s						
AMUR				AML	AML		
	comp=E,79µm,0.5s						
ARVD	**Arcevia**	**2.00**	**302**	P	**Pn**	**02 38 50.9**	**0.0**
SSFR	**Montelago di S**	**2.07**	**299**	⇑P	**Pn**	**02 38 52.2**	**+0.3**
SSFR				AML	AML		
	comp=E,78µm,0.2s						
SSFR				AML	AML		
	comp=N,63µm,1.0s						
UDBI	**Udbina**	**2.10**	**10**	*e*Pn	**Pb**	**02 38 54.5**	**-0.4**
UDBI				Sn	**Sb**	**02 39 21.6**	**+0.1**
NVLJ	**Novalja**	**2.13**	**352**	*i* Pn	**Pb**	**02 38 53.8**	**-1.4**
NVLJ				Sn	**Sb**	**02 39 21.7**	**-0.3**
NOCI	**Noci**	**2.14**	**141**	⇓P	**Pn**	**02 38 53.1**	**+0.3**
NOCI				AML	AML		
	comp=E,45µm,0.8s						
NOCI				AML	AML		
	comp=N,83µm,1.3s						
FSSB	**Fossombrone**	**2.21**	**305**	⇑P	**Pn**	**02 38 54.0**	**+0.3**
FSSB				AML	AML		
	comp=N,76µm,0.6s						
FSSB				AML	AML		
	comp=E,62µm,0.4s						
NARO	**Abbazia di Nar**	**2.29**	**301**	⇑P	**Pn**	**02 38 55.0**	**+0.3**
PE3	**Peglio**	**2.38**	**302**	⇑P	**Pn**	**02 38 56.9**	**+0.8**
PE3				AML	AML		
	comp=E,3µm,0.9s						
PE3				AML	AML		
	comp=N,70µm,0.6s						
PLIT	**Plitvice**	**2.43**	**6**	*e*Pn	**Pb**	**02 38 59.0**	**-1.5**
PLIT				Sn	**Sb**	**02 39 29.4**	**-1.6**
SMRN	**Sveta Marina**	**2.70**	**343**	*e*Pn	**Pn**	**02 39 01.1**	**+0.7**
SMRN				Sn	**Sn**	**02 39 34.4**	**+0.8**
SPS2	**Spezzano della**	**3.26**	**165**	P	**Pg**	**02 39 20.3**	**+1.8**
BOSI	**Bolzano**	**4.93**	**326**	⇓P	**Pg**	**02 39 48.8**	**-1.7**

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*TEH **24** 02:41:27.8, 37°.56N×48°.63E, h6^{km}, ML3.5*
*THR **24** 02:41:27.9±0.7, 37°.52N×48°.63E, h14^{km}±6^{km}, ML3.3*
*NNC **24** 02:41:36.6±2.5, 38°.34N×49°.36E, h0^{km}, mb3.9, Error ellipse: s-maj=23.0km s-min=10.0km az=49.0*
ISC 24 02:41:27.6±1.1**, 37°.56N**±0°.03×**48°.63E**±0°.03**, h12**^{km}±9^{km}**, n58, σ2^{s}37**/64**, 2C-4D, Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSN1	**Caspian**	**0.37**	**89**	*e*Pg	**Pg**	**02 41 35.3**	**+0.3**
CSN1				*e*Sg	**Sg**	**02 41 40.4**	**+0.4**
ISRB	**Sarab**	**0.81**	**289**	*e*Pg	**Pg**	**02 41 43.3**	**+0.1**
ISRB				*e*Sg	**Sb**	**02 41 55.0**	**+0.3**
ZNJK	**Zanjan**	**0.89**	**177**	*e*Pg	**Pg**	**02 41 44.2**	**-0.6**
ZNJK				*e*Sg	**Sg**	**02 41 55.8**	**-0.7**
ZNJK				IAML		02 41 56.8	
	comp=E,530nm,0.3s						
ZNJK	**Zanjan**	**0.89**	**177**	*e*Pg	**Pg**	**02 41 44.2**	**-0.6**
GRMI	**Germi**	**1.37**	**335**	*e*Pg	**Pb**	**02 41 53.9**	**+0.6**
GRMI				*e*Sg	**Sn**	**02 42 12.9**	**+2.0**
GRMI				IAML		02 42 14.6	
	comp=E,2µm,0.2s						
GRMI				IAML		02 42 14.9	
	comp=N,2µm,0.2s						
GRMI	**Germi**	**1.37**	**335**	*e*Pn	**Pb**	**02 41 53.9**	**+0.6**
IBST	**Bostanabad**	**1.38**	**276**	*e*Pg	**Pn**	**02 41 53.6**	**+0.6**
IBST				*e*Sg	**Sb**	**02 42 11.7**	**+0.4**
IBST				*e*		02 42 15.3	
	comp=Z,10µm,0.2s						
IHRS	**Heris**	**1.46**	**302**	*e*Pg	**Pn**	**02 41 55.0**	**+0.9**
IHRS				*e*		02 41 57.6	
	comp=Z,8µm,0.3s						
IHRS				*e*Sg	**Sg**	**02 42 15.7**	**+0.9**
QCNT	**Qazvin**	**1.68**	**138**	*e*Pn	**Pb**	**02 41 59.3**	**+0.7**
IGZV	**Ghazvin**	**1.73**	**132**	*e*Pn	**Pb**	**02 41 59.5**	**0.0**
IGZV				*e*		02 42 25.2	
	comp=Z,15µm,0.4s						
QALM	**Alamut, Qazvin**	**1.97**	**124**	*e*Pn	**Pn**	**02 42 02.6**	**+1.5**
QABG	**Abgarm-Qazvin**	**2.00**	**157**	*e*Pn	**Pn**	**02 42 02.9**	**+1.4**
IAZR	**Azarshahr**	**2.10**	**274**	*e*		02 42 12.2	
	comp=Z,6µm,0.3s						
IAZR				*e*Pn	**Pb**	**02 42 06.8**	**+0.9**
IRAZ	**Razeghan**	**2.39**	**154**	*e*		02 42 11.1	
	comp=Z,5µm,0.4s						
IRAZ				*e*Pn	**Pn**	**02 42 09.5**	**+2.6**
THKV	**Tehran--Karaj**	**2.44**	**132**	*e*Pn	**Pn**	**02 42 08.9**	**+1.4**
THKV	**Tehran--Karaj**	**2.44**	**132**	*e*Pn	**Pn**	**02 42 09.0**	**+1.4**
MAHB	**Mahabad**	**2.46**	**252**	*e*Pn	**Pb**	**02 42 11.3**	**-0.6**
ISHB	**Shabestar**	**2.49**	**288**	*e*Pn	**Pb**	**02 42 11.1**	**-1.3**
ISHB				*e*		02 42 15.6	
	comp=Z,2µm,0.4s						
IMHD	**Mahdasht**	**2.49**	**138**	*e*Pn	**Pn**	**02 42 10.6**	**+2.5**
IMHD				*e*		02 42 16.6	
	comp=Z,2µm,0.3s						
IMRD	**Marand**	**2.58**	**297**	*e*Pn	**Pb**	**02 42 12.7**	**-1.2**
IMRD				*e*		02 43 04.3	
	comp=Z,3µm,0.3s						
CHTH	**Charan**	**2.60**	**129**	*e*Pn	**Pn**	**02 42 11.7**	**+2.0**
CHTH	**Charan**	**2.60**	**129**	*e*Pn	**Pn**	**02 42 11.7**	**+2.0**
SNGE	**Sanandaj**	**2.67**	**203**	*e*Pn	**Pn**	**02 42 12.7**	**+2.0**
SNGE				IAML		02 42 58.5	
	comp=N,42nm,0.5s						
SNGE	**Sanandaj**	**2.67**	**203**	*e*Pn	**Pn**	**02 42 12.7**	**+2.0**
IALM	**Almabolaq**	**2.72**	**188**	*e*Pn	**Pb**	**02 42 14.9**	**-1.5**
HAGD	**Aghdareh**	**2.76**	**171**	*e*Pn	**Pn**	**02 42 14.8**	**+2.8**
ILIN	**Lien**	**2.96**	**208**	*e*Pn	**Pb**	**02 42 18.5**	**-2.0**
IBZA	**Bozab**	**3.15**	**192**	*e*Pn	**Pn**	**02 42 20.7**	**+3.4**
IBZA				*e*		02 43 12.9	
	comp=Z,831nm,0.5s						
ASAO	**Ashtian**	**3.21**	**159**	*e*Pn	**Pn**	**02 42 21.1**	**+2.9**
ASAO				IAML		02 43 12.1	
	comp=N,23nm,0.6s						
ASAO	**Ashtian**	**3.21**	**159**	*e*Pn	**Pn**	**02 42 21.1**	**+2.9**
IPRN	**Peran**	**3.25**	**113**	*e*	**Sb**	**02 43 06.1**	**+1.1**
	comp=Z,2µm,0.3s						
DAMV	**Damavand**	**3.31**	**125**	*e*Pn	**Pb**	**02 42 25.4**	**-1.0**
IQOM	**Qom**	**3.36**	**143**	*e*Pn	**Pn**	**02 42 22.8**	**+2.7**
IQOM				*e*		02 43 13.0	
	comp=Z,1µm,0.3s						
MAKU	**Maku**	**3.58**	**301**	*e*Pn	**Pn**	**02 42 26.8**	**+3.7**
MAKU	**Maku**	**3.58**	**301**	*e*Pn	**Pn**	**02 42 26.8**	**+3.7**
IVRN	**Varamin**	**3.58**	**135**	*e*Pn	**Pn**	**02 42 25.9**	**+2.8**
IVRN				*e*		02 42 36.8	
	comp=Z,767nm,0.4s						
IGHG	**Ghaleghazi**	**3.63**	**208**	*e*		02 43 41.3	
	comp=E,976nm,1.1s						
GHVR	**GHOM**	**3.76**	**144**	*e*Pn	**Pn**	**02 42 28.9**	**+3.4**
GHVR				IAML		02 43 36.7	
	comp=N,17nm,0.4s						
GHVR				IAML		02 43 41.6	
	comp=E,41nm,0.9s						
GHVR	**GHOM**	**3.76**	**144**	*e*Pn	**Pn**	**02 42 28.9**	**+3.4**
IDOB	**Doab**	**3.78**	**186**	*e*Pn	**Pn**	**02 42 29.9**	**+3.9**
IFIR	**Firoozkooh**	**3.83**	**119**	*e*Pn	**Pn**	**02 42 29.9**	**+3.2**
BMDN	**Meydan**	**3.88**	**178**	*e*Pn	**Pn**	**02 42 31.4**	**+4.1**
ISHM	**Shahmirzad**	**4.14**	**114**	*e*Pn	**Pn**	**02 42 33.5**	**+2.6**
ISHM				*e*		02 42 49.1	
	comp=Z,628nm,0.4s						
IGLO	**Ghaloghah**	**4.30**	**103**	*e*Pn	**Pn**	**02 42 35.1**	**+2.1**
ISFB	**Sefidab**	**4.34**	**136**	*e*Pn	**Pn**	**02 42 36.2**	**+2.7**
QAMS	**Qamsar**	**4.43**	**149**	*e*Pn	**Pn**	**02 42 38.0**	**+3.1**
KRSH	**Karshahi**	**4.58**	**140**	*e*Pn	**Pn**	**02 42 40.1**	**+3.2**
IKLH	**Kolahrood**	**4.87**	**149**	*e*Pn	**Pn**	**02 42 44.1**	**+3.1**
IZEF	**Zefreh**	**5.55**	**146**	*e*Pn	**Pn**	**02 42 54.0**	**+3.6**
ANAR	**Anarak**	**6.03**	**135**	*e*Pn	**Pn**	**02 42 59.6**	**+2.8**
IRAM	**Ramesheh**	**6.52**	**151**	*e*Pn	**Pn**	**02 43 06.8**	**+3.2**
SBZV	**Sabzevar**	**7.29**	**97**	*e*Pn	**Pn**	**02 43 16.3**	**+2.2**
ISFR	**Sfrayin**	**7.49**	**91**	*e*Pn	**Pn**	**02 43 18.8**	**+1.9**
GYA0B	**ALIBECK ARRAY**	**7.53**	**84**	⇓Pn	**Pn**	**02 43 19.8**	**+2.5**
GYA0B				⇓Sn	**Sn**	**02 44 39.5**	**-3.0**
IAKL	**Akhelmad**	**8.15**	**94**	*e*Pn	**Pn**	**02 43 28.9**	**+2.8**
IKRD	**Kardeh**	**8.73**	**92**	*e*Pn	**Pn**	**02 43 35.7**	**+1.8**
AB31	**Akbulak array**	**14.27**	**31**	⇓Pn	**Pn**	**02 44 45.9**	**-3.5**
	comp=Z,0.4nm,0.5s,baz=216,slow=12,SNR=14						
AB31				⇓Sn	Sn	02 47 17.5	-10
	comp=Z,0.4nm,0.5s,baz=216,slow=22,SNR=3.6						
AKTO	**Aktyubinsk**	**14.52**	**25**	⇑Pn	**Pn**	**02 44 49.9**	**-2.9**
	comp=Z,4.8nm,1.0s						
AKTO				⇑Sn	Sn	02 47 23.5	-10
	comp=Z,2.9nm,1.0s						

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*TUL **24** 02:43:01.8±1.3, 36°.76N±0°.02×98°.07W±0°.03, h6^{km}±6^{km}, ML2.6, mb_Lg2.3/5(NEIC), Error ellipse: s-maj=4.0km s-min=2.3km az=115.0*
NEIC 24 02:43:02.4±0.7**, 36°.75N**±0°.04×**98°.00W**±0°.05**, h9**^{km}±3^{km}**, Error ellipse: s-maj=6.2km s-min=5.0km az=110.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.15**	**47**	Pg	Pg	02 43 05.9	+0.2
GC02				Sg	Sg	02 43 09.2	+1.2
OK032	**Salt Plains WL**	**0.18**	**288**	Pg	Pg	02 43 04.8	-1.3
OK032				Sg	Sg	02 43 06.9	-1.9
KAN14	**Manchester OK**	**0.21**	**8**		Pg	02 43 06.5	-0.3
KAN14				Sg	Sg	02 43 09.9	+0.2
CROK	**Carrier**	**0.24**	**177**	Pg	Pg	02 43 07.3	0.0
CROK				Sg	Sg	02 43 11.2	+0.5
KAN17	**Caldwell West**	**0.35**	**32**		Pg	02 43 09.5	+0.3
KAN05	**Bluff City Nor**	**0.37**	**16**	Pg	Pg	02 43 09.8	+0.1
KAN10	**Anthony SW Sta**	**0.38**	**348**	Pg	Pg	02 43 08.3	-1.6
KAN10				Sg	Sg	02 43 14.6	-0.4
KAN01	**Argonia South**	**0.45**	**25**		Pg	02 43 11.1	0.0
KAN08	**Anthony NE Sta**	**0.48**	**3**		Pg	02 43 11.4	-0.2
KAN16	**Harper SW Stat**	**0.48**	**354**	Pg	Pg	02 43 11.2	-0.5
KAN09	**Caldwell North**	**0.49**	**38**	Pg	Pg	02 43 12.0	0.0
KAN13	**South Haven SW**	**0.49**	**58**	Pg	Pg	02 43 12.1	+0.2
OK029	**Liberty Lake**	**1.05**	**155**	Pg	Pg	02 43 21.9	-0.6
BCOK	**Bluff Creek, N**	**1.14**	**164**	Pn	Pb	02 43 23.2	-0.9
QUOK	**Quay**	**1.19**	**119**	Pn	Pb	02 43 25.0	0.0
T35A	**Sooner Cattle**	**1.20**	**82**		Pb	02 43 25.3	0.0
OK031	**S. Brethren Rd**	**1.23**	**130**		Pn	02 43 25.4	-0.3
OK034	**N. Norfolk Rd.**	**1.27**	**125**	Pn	Pn	02 43 26.1	-0.1
OK030	**Cody Creek RV**	**1.28**	**130**		Pb	02 43 26.6	0.0
OK025	**Westminster Rd**	**1.28**	**155**		Pn	02 43 26.2	-0.2
R32A	**Long Quarter,**	**1.76**	**341**		Pn	02 43 33.1	0.0
W35A	**Tecumseh**	**1.84**	**150**		Pn	02 43 34.7	+0.7
TUL1	**Leonard**	**1.97**	**115**	Pn	Pn	02 43 36.2	+0.3
WMOK	**Wichita Mounta**	**2.11**	**198**		Pn	02 43 38.1	+0.4
X34A	**Smith Ranch, M**	**2.15**	**176**	Pn	Pn	02 43 38.3	0.0
CBKS	**Cedar Bluff**	**2.48**	**327**	Pn	Pn	02 43 41.9	-1.0
HHAR	**Hobbs**	**3.30**	**97**	Pn	Pn	02 43 54.1	-0.1
AMTX	**Amarillo**	**3.52**	**239**	Pn	Pn	02 43 56.1	-1.3
S39A	**Bolivar**	**3.85**	**74**	Pn	Pn	02 44 02.2	+0.5
U40A	**Yellville**	**4.16**	**94**	Pn	Pn	02 44 06.0	0.0
U40A				IAmb_Lg		02 45 14.8	
	comp=Z,5.1nm,0.8s						
X40A	**Basin Creek Fa**	**4.77**	**117**	Pn	Pn	02 44 14.4	0.0
N41A	**Harden Midland**	**6.84**	**53**	IAmb_Lg		02 46 56.7	
	comp=Z,7.3nm,0.8s						

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*IDC **24** 03:25:23.1±0.9, 21°.58S×69°.35W, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.7/17, mbtmp3.9/4, ML4.3/1, Error ellipse: s-maj=23.3km s-min=3.4km az=79.0*
*GUC **24** 03:25:41.7±0.7, 20°.36S×68°.95W, h102^{km}±4^{km}, ML3.6*
*NEIC **24** 03:25:41.4±1.3, 20°.32S±0°.03×68°.97W±0°.07, h102^{km}±3^{km}, mb4.0/3, ML3.6(GUC), Error ellipse: s-maj=9.6km s-min=4.2km az=75.0*
ISC 24 03:25:40.8±0.7**, 20°.35S**±0°.04×**68°.98W**±0°.07**, h105**^{km}±7^{km}**, n37, σ0^{s}99**/49**, mb3.9**/4**, 5C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.26**	**322**	⇓*i*P	**Pn**	**03 25 56.8**	**+0.5**
PB08				*e*S	**Sn**	**03 26 08.2**	**+0.4**
PB08				IAML		03 26 09.2	
	comp=E,4µm,0.2s						
PB08	**IPOC Station P**	**0.26**	**322**		**Pn**	**03 25 56.1**	**-0.2**
PB08				Sn	**Sn**	**03 26 08.1**	**+0.4**
PB01	**IPOC Station P**	**0.84**	**214**	⇑*i*P	**Pn**	**03 26 00.3**	**+0.3**
PB01				*e*S	**Sn**	**03 26 14.8**	**+0.3**
PB01				IAML		03 26 16.9	
	comp=N,3µm,0.2s						
PB01	**IPOC Station P**	**0.84**	**214**		**Pn**	**03 26 00.0**	**0.0**
PB01				Sn	**Sn**	**03 26 14.9**	**+0.4**
PB11	**IPOC Station P**	**0.86**	**313**	⇑*i*P	**Pn**	**03 26 00.7**	**+0.4**
PB11				*e*S	**Sn**	**03 26 15.6**	**+0.6**
PB11	**IPOC Station P**	**0.86**	**313**		**Pn**	**03 26 00.0**	**-0.3**
PB11				Sn	**Sn**	**03 26 15.7**	**+0.7**
TA02	**Huaiquique**	**1.08**	**274**	*i* P	**Pn**	**03 26 02.8**	**+0.4**
TA02				*e*S	**Sn**	**03 26 19.1**	**+0.4**
TA02	**Huaiquique**	**1.08**	**274**		**Pn**	**03 26 02.8**	**+0.4**
TA02				Sn	**Sn**	**03 26 19.2**	**+0.5**
PB09	**IPOC Station P**	**1.46**	**189**	⇑*i*P	**Pn**	**03 26 07.8**	**+0.9**
PB09				*e*S	**Sn**	**03 26 27.9**	**+1.0**
PB09				IAML		03 26 31.8	
	comp=E,598nm,0.3s						
PB09	**IPOC Station P**	**1.46**	**189**		**Pn**	**03 26 07.9**	**+0.9**
PB09				Sn	**Sn**	**03 26 28.0**	**+1.1**
PB07	**IPOC Station P**	**1.61**	**211**	⇑*i*P	**Pn**	**03 26 08.9**	**+0.1**
PB07				*e*S	**Sn**	**03 26 29.8**	**-0.3**
PB07				IAML		03 26 31.9	
	comp=E,621nm,0.3s						
PB07	**IPOC Station P**	**1.61**	**211**		**Pn**	**03 26 08.9**	**+0.1**
PB03	**IPOC Station P**	**1.84**	**203**	⇑*i*P	**Pn**	**03 26 11.9**	**+0.2**
PB03				*e*S	**Sn**	**03 26 34.3**	**-0.9**
PB03				IAML		03 26 41.3	
	comp=E,464nm,0.3s						
LVC	**Limon Verde**	**2.25**	**178**	*e*P	**Pn**	**03 26 18.0**	**+0.9**
LVC	**Limon Verde**	**2.25**	**178**		**Pn**	**03 26 18.1**	**+0.9**
PB04	**IPOC Station P**	**2.25**	**209**	*e*P	**Pn**	**03 26 17.5**	**+0.5**
PB04				IAML		03 26 53.5	
	comp=E,464nm,0.6s						
PB04	**IPOC Station P**	**2.25**	**209**		**Pn**	**03 26 17.2**	**+0.2**
PB06	**IPOC Station P**	**2.41**	**193**	*e*P	**Pn**	**03 26 19.1**	**+0.1**
PB06				IAML		03 26 55.7	
	comp=E,441nm,0.5s						
PB06	**IPOC Station P**	**2.41**	**193**		**Pn**	**03 26 19.8**	**+0.8**
PB05	**IPOC Station P**	**2.74**	**204**	*e*P	**Pn**	**03 26 23.2**	**-0.1**
PB05				IAML		03 27 06.1	
	comp=E,200nm,0.7s						
PB15	**IPOC Station P**	**2.88**	**189**	*e*P	**Pn**	**03 26 26.9**	**+1.6**
PB15	**IPOC Station P**	**2.88**	**189**		**Pn**	**03 26 26.6**	**+1.3**
LPAZ	**La Paz**	**4.12**	**11**	Pn	**Pn**	**03 26 45.4**	**+3.1**
	comp=E,5.7nm,0.3s,baz=199,slow=6.6,SNR=61						
LPAZ	**La Paz**	**4.12**	**11**		**Pn**	**03 26 44.9**	**+2.7**
PB14	**IPOC Station P**	**4.46**	**197**		**Pn**	**03 26 47.1**	**+0.6**
AC02	**Maricunga**	**6.46**	**181**	Pn	**Pn**	**03 27 14.1**	**+0.3**
CO06	**Fray Jorge**	**10.56**	**193**	Pn	**Pn**	**03 28 10.5**	**+1.5**
ETMB	**Extrema**	**10.81**	**15**	Pn	**Pn**	**03 28 11.2**	**-1.2**
VILB	**Vilhena**	**11.17**	**50**		**Pn**	**03 28 17.6**	**+0.1**
ITQB	**Itaqui**	**14.54**	**132**	P	**Pn**	**03 28 59.6**	**-1.8**
BDFB	**Brasilia**	**20.48**	**80**	P	**P**	**03 30 08.8**	**-1.8**
	comp=E,1.7nm,0.6s,baz=263,slow=8.1,SNR=3.4						
BDFB	**Brasilia**	**20.48**	**80**	P	**P**	**03 30 10.4**	**-0.2**
BDFB				IAmb	IAmb	03 30 13.8	
	comp=Z,2.8nm,0.8s						
BOAV	**Boa Vista**	**24.08**	**21**	P	**P**	**03 30 46.8**	**+0.2**
BOAV				IAmb	IAmb	03 31 05.2	
	comp=Z,16nm,1.4s						
SNAA	**Sanae**	**63.38**	**161**	P	**P**	**03 36 00.2**	**+1.4**
SNAA				IAmb	IAmb	03 36 12.9	
	comp=Z,2.5nm,1.2s						
TORD	**Torodi Ar. Bea**	**77.04**	**71**	P	**P**	**03 37 22.7**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=254,slow=5.2,SNR=18						
YKA	**Yellowknife Ar**	**90.08**	**341**	P	**P**	**03 38 29.1**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=132,slow=4.7,SNR=5.9						
YKA	**Yellowknife Ar**	**90.08**	**341**	P	**P**	**03 38 28.1**	**-0.3**

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*ISK **24** 03:55:26.1, 35°.81N×30°.99E, h20^{km}, ML2.7/17*
*NIC **24** 03:55:28.9±0.0, 35°.88N×30°.97E, h32^{km}±27^{km}, Ml2.9/5*
*DDA **24** 03:55:28.4, 36°.03N×31°.08E, h40^{km}±1^{km}, ML2.6*
*HLW **24** 03:55:35.9, 35°.31N×30°.72E, h25^{km}±16^{km}, Md3.9*
ISC 24 03:55:26.9±1.0**, 35°.82N**±0°.02×**31°.03E**±0°.02**, h32**^{km}±12^{km}**, n64, σ1^{s}86**/90**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	**Antalya-Kumluc**	**0.74**	**312**	*i* P	**Pn**	**03 55 42.0**	**+0.8**
AKUM				*i* S	**Sn**	**03 55 53.1**	**+1.7**
AKUM				IAML		03 55 54.0	
	comp=E,178nm,0.5s						
AKUM				IAML		03 55 55.0	
	comp=N,194nm,0.6s						
KEMT	**Kemer-ANTALYA**	**0.87**	**334**	PG	**Pn**	**03 55 43.7**	**+0.9**
KEMT				SG	**Sn**	**03 55 55.9**	**+1.5**
ANTB	**Antalya**	**1.11**	**344**	PN	**Pb**	**03 55 47.4**	**-0.2**
GAZI	**Gazipasa**	**1.12**	**68**	*i* P	**Pb**	**03 55 47.9**	**+0.1**
GAZI				*i* S	**Sn**	**03 55 58.9**	**-1.9**
GAZI				IAML		03 56 03.0	
	comp=E,193nm,0.3s						
GAZI				IAML		03 56 04.0	
	comp=N,159nm,0.6s						
GAZI	**Gazipasa**	**1.12**	**68**	PN	**Pb**	**03 55 47.6**	**-0.1**
GAZI				SN	**Sn**	**03 56 01.2**	**+0.5**
KEPZ	**Antalya-Kepez**	**1.17**	**23**	*i* P	**Pb**	**03 55 47.9**	**-0.7**
KEPZ				*i* S	**Sn**	**03 56 00.8**	**-1.2**
KEPZ				IAML		03 56 03.0	
	comp=N,194nm,0.6s						
KEPZ				IAML		03 56 03.0	
	comp=E,112nm,0.5s						
KSL	**Kastellorizon**	**1.22**	**286**	P	**Pb**	**03 55 48.7**	**-0.6**
KSL				S	**Sn**	**03 56 03.7**	**+0.7**
KSL				AML	AML	03 56 11.6	
	comp=E,0.1nm,0.3s						
KSL				AML	AML	03 56 11.6	
	comp=E,0.1nm,0.3s						
KSL				AML	AML	03 56 12.0	
	comp=E,0.1nm,0.9s						
KSL				AML	AML	03 56 12.0	
	comp=E,0.1nm,0.9s						
AKAS	**Kas**	**1.22**	**290**	*i* P	**Pb**	**03 55 48.7**	**-0.8**
AKAS				*i* S	**Sb**	**03 56 05.6**	**+0.6**
AKAS				IAML		03 56 19.0	
	comp=N,91nm,0.5s						
AKAS	**Kas**	**1.22**	**290**	PN	**Pn**	**03 55 48.4**	**+0.5**
ELL	**Elmali**	**1.29**	**316**	PN	**Pn**	**03 55 49.6**	**+0.8**
ELL				SN	**Sb**	**03 56 06.8**	**-0.2**
ELL	**Elmali**	**1.29**	**316**	P	**Pb**	**03 55 49.8**	**-0.8**
ELL				S	**Sb**	**03 56 06.7**	**-0.2**
KORT	**Korkueli**	**1.29**	**335**	*i* P	**Pb**	**03 55 50.2**	**-0.5**
KORT				*i* S	**Sb**	**03 56 06.6**	**-0.5**
KORT	**Korkueli**	**1.29**	**335**	PN	**Pb**	**03 55 49.9**	**-0.8**
AKMS	**Akamas**	**1.34**	**127**	P	**Pb**	**03 55 52.0**	**+0.6**
AKMS				S	**Sb**	**03 56 10.3**	**+2.1**
AKMS				AML	AML	03 56 10.8	
	comp=N,0.6nm,0.4s						
AKMS				AML	AML	03 56 10.8	
	comp=N,0.6nm,0.4s						
AKMS				AML	AML	03 56 19.4	
	comp=N,0.4nm,0.3s						
AKMS				AML	AML	03 56 19.4	
	comp=N,0.4nm,0.3s						
ALFC	**Alefka**	**1.45**	**117**	P	**Pb**	**03 55 53.5**	**+0.3**
ALFC				AML	AML	03 56 12.1	
	comp=N,0.7nm,0.2s						
ALFC				AML	AML	03 56 12.1	
	comp=N,0.7nm,0.2s						
ALFC				S	**Sb**	**03 56 12.5**	**+1.2**
ALFC				AML	AML	03 56 14.7	
	comp=N,0.5nm,0.2s						
ALFC				AML	AML	03 56 14.7	
	comp=N,0.5nm,0.2s						
BUCA	**Burdur, Bucak-**	**1.55**	**346**	*i* P	**Pn**	**03 55 53.0**	**+0.7**
BUCA				*i* S	**Sn**	**03 56 11.9**	**+0.6**
BOZY	**Bozyazi-Mersin**	**1.61**	**79**	PN	**Pb**	**03 55 54.7**	**-1.2**
HDMB	**Hadim**	**1.64**	**46**	PN	**Pb**	**03 55 55.2**	**-1.4**
NATA	**Nata**	**1.64**	**129**	P	**Pb**	**03 55 56.7**	**+0.2**
NATA				AML	AML	03 56 30.3	
	comp=N,0.9nm,0.6s						
NATA				AML	AML	03 56 32.7	
	comp=N,1.0nm,0.6s						
BCK	**Bucak**	**1.67**	**348**	PN	**Pn**	**03 55 55.2**	**+1.2**
SEYD	**Seydisehir-KON**	**1.71**	**22**	PN	**Pb**	**03 55 56.1**	**-1.6**
TEKE	**Tekeli-Mersin**	**1.72**	**79**	PN	**Pb**	**03 55 56.3**	**-1.6**
SEDI	**Konya, Seydise**	**1.73**	**20**	*i* P	**Pn**	**03 55 56.1**	**+1.3**
SEDI				*i* S	**Sn**	**03 56 14.2**	**-1.6**
SEDI				IAML		03 56 18.0	
	comp=E,64nm,0.5s						
ERMK	**Ermenek**	**1.73**	**61**	*i* P	**Pb**	**03 55 58.5**	**+0.3**
ERMK				IAML		03 56 31.0	
	comp=N,61nm,0.3s						
FETY	**Fethiye**	**1.77**	**298**	*i* P	**Pn**	**03 55 56.4**	**+1.1**
FETY				IAML		03 56 18.0	
	comp=N,50nm,0.7s						
FETY				IAML		03 56 18.0	
	comp=E,55nm,0.2s						
FETY	**Fethiye**	**1.77**	**298**	PN	**Pn**	**03 55 55.4**	**+0.1**
CAME	**Cameli-Denizli**	**1.78**	**309**	PN	**Pn**	**03 55 56.8**	**+1.2**
GOLH	**Golhisar**	**1.84**	**320**	*i* P	**Pb**	**03 55 58.6**	**-1.3**
BERE	**Bereket-Mersin**	**1.85**	**73**	PN	**Pb**	**03 55 58.3**	**-1.9**
CAEL	**Denizli, Camel**	**1.89**	**314**	*i* P	**Pn**	**03 55 58.6**	**+1.5**
CAEL				IAML		03 56 23.0	
	comp=N,63nm,0.7s						
CAEL				IAML		03 56 26.0	
	comp=E,60nm,0.8s						

BRDR	BURDUR-Merkez	2.02	338	*i* P	Pn	03 56 00.7	+1.9
ISP	Isparta	2.04	349	PN	Pn	03 56 00.6	+1.6
CSS	Mathiatis	2.07	114	P	Pb	03 56 02.0	-1.8
GULN	MERSIN_Gulnar	2.07	79	*i* P	Pb	03 56 02.0	-1.8
GULN				*i* S	Sn	03 56 23.8	-0.3
KKBE	Karaman, Kazim	2.08	47	*i* P	Pb	03 56 02.5	-1.4
KKBE				*i* S	Sn	03 56 24.2	-0.2
ASGA	Asgata	2.09	119	P	Pb	03 56 03.6	-0.6
ASGA				AML	AML	03 56 38.5	
	comp=E,0.2nm,0.4s						
ASGA				AML	AML	03 56 45.9	
	comp=E,0.2nm,0.6s						
BAGO	Egridir - ISPA	2.17	355	*i* P	Pn	03 56 02.5	+1.6
BAGO				*i* S	Sn	03 56 26.5	-0.2
KMER	Konya-Meram	2.22	29	*i* P	Pn	03 56 03.4	+1.9
KMER				*i* S	Sn	03 56 24.1	-3.9
KMER				IAML		03 56 30.0	
	comp=N,38nm,0.5s						
BASM	Basmaki-Afyon	2.23	340	PN	Pn	03 56 03.1	+1.4
OSC1	CSNet OBS 1	2.33	175	P	Pb	03 56 06.2	-1.9
OSC1				S	Sb	03 56 34.5	-1.9
DOGA	KONYA_Doganhis	2.33	13	*i* P	Pn	03 56 04.8	+1.6
DOGA				*i* S	Sn	03 56 30.0	-0.8
DOGA				IAML		03 56 33.0	
	comp=N,44nm,0.3s						
KONT	Konya--Tatoy	2.37	26	*i* P	Pn	03 56 05.5	+1.9
KONT	Konya--Tatoy	2.37	26	PN	Pn	03 56 05.8	+2.2
ARG	Arkhangelos	2.38	280	PN	Pn	03 56 04.8	+1.1
ARG	Arkhangelos	2.38	280	P	Pn	03 56 04.7	+1.1
TURN	Turunc	2.44	294	PN	Pn	03 56 05.7	+1.2
YVAC	Isparta, Yalva	2.45	4	*i* P	Pn	03 56 05.9	+1.2
YVAC				*i* S	Sn	03 56 32.4	-1.2
KZIL	AFYON_Kizioren	2.53	344	*i* P	Pn	03 56 06.9	+1.0
YER	Yerkesik	2.57	301	PN	Pn	03 56 07.8	+1.5
LADK	Ladik-KONYA	2.60	24	PN	Pn	03 56 08.4	+1.6
KIZK	Mersin	2.61	75	*i* P	Pn	03 56 08.6	+1.9
KIZK				*i* S	Sn	03 56 37.7	+0.4
KIZK				IAML		03 57 08.0	
	comp=N,42nm,1.6s						
KIZK				IAML		03 57 15.0	
	comp=E,53nm,1.6s						
SHUT	Suhut-Afyon	2.75	352	PN	Pn	03 56 10.6	+1.7
KDHN	Kadinhani	2.83	18	*i* P	Pn	03 56 10.6	+0.7
ALIN	Konya, Altinte	2.88	30	*i* P	Pn	03 56 08.0	-2.6
ALIN				*i* S	Sn	03 56 38.1	-6.1
OSC2	CSNet OBS 4	2.93	159	P	Pn	03 56 14.6	+3.4
OSC2				S	Sb	03 56 51.0	-2.7
KERG	Konya-Eregli	2.96	57	*i* P	Pn	03 56 14.0	+2.3
KERG				*i* S	Sn	03 56 47.0	+0.8
KERG				IAML		03 57 57.0	
	comp=N,54nm,3.7s						
KOT	Kottamia	5.92	173	P	Pn	03 56 56.0	+3.6
	baz=169						
HHAG	Hagoal	5.92	171	P	Pn	03 56 56.2	+3.8
	baz=167						
SUZ	Suez	6.16	165	P	Pn	03 56 58.9	+3.3
	baz=161						
HSAF	As Saff	6.20	176	P	Pn	03 56 59.1	+2.9
	baz=172						
GLL	Jalalah	6.26	175	P	Pn	03 57 00.0	+3.0
	baz=171						
GLL				S	Sn	03 58 01.6	-5.8
	baz=171						
RYAN	Fayoum	6.75	186	P	Pn	03 57 06.3	+2.6
	baz=184						
TR2	Tor 2	7.76	162	P	Pn	03 57 19.5	+1.9
	baz=158						
HFRF	Wahat Farafira	8.95	196	P	Pn	03 57 35.9	+1.9
	baz=195						

IDC 24 03:55:49.3±1.6**, 44°.69N**×**28°.14W, h0km, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.3**/47**, mbtmp3.3**/3**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.9**/21**, Error ellipse: s-maj=108.7km s-min=31.2km az=38.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORD	Torodi Ar. Bea	40.43	132	P	P	04 03 29.3	-0.1
	0.8nm,0.9s,baz=326,slow=7.2,SNR=3.6						
YKA	Yellowknife Ar	50.12	323	P	P	04 04 45.6	-0.2
	0.1nm,0.4s,baz=79,slow=7.0,SNR=1.9						
YKA				LR	LR	04 25 04.8	
	comp=Z,100nm,18.6s,baz=0.0,slow=35						
TXAR	Lajitas Array	60.18	283	P	P	04 05 59.1	0.0
	0.4nm,0.9s,baz=75,slow=5.9,SNR=4.2						

IDC ***24*** *03:58:10.4±1.1, 44°.87N×28°.06W, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.6/48, mbtmp3.6/9, ML3.7/1, MS3.7/10, Ms1 3.7/10, ms1mx3.4/31, Error ellipse: s-maj=36.4km s-min=19.2km az=19.0*

ISC 24 03:58:12.5±1.0**, 44°.9N**±0°.2×**28°.0W**±0°.1**, h14km, n14, σ0ˢ.93**/9**, mb3.5**/8**, MS3.7**/9**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	Sonseca Array	18.53	98	P	P	04 02 27.8	-0.7
	0.1nm,0.3s,baz=306,slow=11,SNR=2.6						
ESDC				LR	LR	04 08 21.3	
	comp=Z,156nm,18.4s,baz=285,slow=33						
SCHQ	Schefferville	26.61	306	LR	LR	04 12 33.0	
	comp=Z,122nm,19.3s,baz=92,slow=32						
GERES	GERESS Array B	28.56	67	P	P	04 04 08.6	+0.8
	0.2nm,0.7s,baz=289,slow=9.2,SNR=1.4						
GERES				LR	LR	04 13 55.0	
	comp=Z,115nm,18.8s,baz=316,slow=33						
KEST	Kesra	29.72	95	LR	LR	04 14 14.6	
	comp=Z,107nm,20.7s,baz=279,slow=32						
AKASG	Malin Array Be	38.09	60	P	P	04 05 29.3	-1.2
	0.6nm,0.7s,baz=275,slow=8.7,SNR=2.5						
TORD	Torodi Ar. Bea	40.50	132	P	P	04 05 51.1	+0.2
	2.4nm,0.9s,baz=327,slow=7.2,SNR=11						
TORD				LR	LR	04 21 03.2	
	comp=Z,166nm,19.8s,baz=325,slow=34						
BRTR	Keskin Array B	44.95	74	LR	LR	04 26 04.6	
	comp=Z,38nm,18.3s,baz=329,slow=37						
YKA	Yellowknife Ar	50.03	323	P	P	04 07 05.6	-0.4
	0.4nm,0.8s,baz=66,slow=7.3,SNR=4.4						
PDAR	Pinedale Array	56.43	299	P	P	04 07 53.5	-0.2
	0.4nm,0.9s,baz=71,slow=8.8,SNR=2.3						
PDAR				LR	LR	04 30 11.6	
	comp=Z,142nm,19.1s,baz=54,slow=34						
TXAR	Lajitas Array	60.21	283	P	P	04 08 20.3	+0.2
	1.0nm,0.8s,baz=76,slow=6.4,SNR=11						
TXAR				LR	LR	04 33 40.6	
	comp=Z,86nm,20.4s,baz=0.0,slow=35						
ILAR	Eielson Array	60.78	335	P	P	04 08 23.1	-0.3
	0.3nm,0.8s,baz=47,slow=6.5,SNR=4.1						
ZALV	Zalesovo Beam	66.19	37	LR	LR	04 36 34.5	
	comp=Z,41nm,18.5s,baz=23,slow=35						
SONM	Songino Array	79.40	29	P	P	04 10 19.5	+1.5
	0.7nm,0.8s,baz=307,slow=3.2,SNR=5.4						
BOSA	Boshof	87.78	135	LR	LR	04 49 19.8	
	comp=Z,57nm,18.2s,baz=63,slow=35						

IDC ***24*** *04:03:46.6±0.8, 37°.26S×52°.29E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.7/34, mbtmp3.9/6, MS3.6/5, Ms1 3.5/5, ms1mx3.2/32, Error ellipse: s-maj=30.3km s-min=28.1km az=109.0*

NEIC ***24*** *04:03:48.9±0.6, 37°.31S±0°.07×52°.3E±0°.3, h10km±1km, mb4.3/6, Error ellipse: s-maj=34.9km s-min=10.4km az=80.0*

ISC 24 04:03:48.4±0.7**, 37°.3S**±0°.1×**52°.4E**±0°.2**, h10km, n25, σ0ˢ.68**/17**, mb4.1**/8**, MS3.5**/5**, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	Boshof	24.28	283	LR	LR	04 16 21.8	
	comp=Z,94nm,20.0s,baz=86,slow=31						
LBTB	Lobatse	25.88	291	LR	LR	04 18 27.5	
	comp=Z,68nm,19.3s,baz=113,slow=34						
LSZ	Lusaka	30.67	309	LR	LR	04 19 33.5	
	comp=Z,121nm,19.0s,baz=160,slow=31						
MAW	Mawson	30.95	172	LR	LR	04 19 11.9	
	comp=Z,105nm,21.0s,baz=74,slow=30						
MAW	Mawson	30.95	172	P	P	04 10 04.0	-1.1
MAW				IAmb	IAmb	04 10 10.1	
	comp=Z,9.1nm,2.0s						
SNAA	Sanae	44.26	202	P	P	04 11 57.3	-0.4
	comp=Z,2.7nm,0.9s,baz=90,slow=20,SNR=6.9						
SNAA	Sanae	44.26	202	P	P	04 11 58.0	+0.3
SNAA				IAmb	IAmb	04 12 00.6	
	comp=Z,5.5nm,1.2s						
VNA2	Neumayer--Watz	45.44	203	P	P	04 12 08.5	+1.5
	baz=154,slow=3.7						
VNA3	Neumayer Olymp	46.24	203	P	P	04 12 14.3	+1.0
H01W2	Cape Leeuwin H	49.18	107	T	T	05 05 36.8	
H01W3	Cape Leeuwin H	49.18	107	T	T	05 05 37.9	
	baz=359,slow=74,SNR=17						
H01W1	Cape Leeuwin H	49.19	107	T	T	05 05 40.3	
	baz=249,slow=74,SNR=16						
QSPA	South Pole Qui	52.91	180	P	P	04 13 04.5	+0.1
	comp=Z,1.3nm,0.9s,baz=292,slow=19,SNR=2.7						
QSPA	South Pole Qui	52.91	180	P	P	04 13 04.7	+0.3
QSPA				IAmb	IAmb	04 13 11.4	
	comp=Z,5.0nm,1.2s						
VNDA	Vanda	57.94	166	LR	LR	04 36 11.0	
	comp=Z,88nm,18.9s,baz=290,slow=34						
TORD	Torodi Ar. Bea	69.14	306	P	P	04 14 54.8	-0.3
	comp=Z,0.7nm,1.0s,baz=112,slow=3.7,SNR=4.1						
TORD	Torodi Ar. Bea	69.14	306	P	P	04 14 54.5	-0.6
ASAR	Alice Springs	69.61	105	P	P	04 14 58.3	+0.2
	comp=Z,0.8nm,0.7s,baz=234,slow=6.3,SNR=7.8						
CMAR	Chiang Mai Arr	70.69	47	P	P	04 15 04.8	+0.3
	comp=Z,1.3nm,0.3s,baz=232,slow=7.4,SNR=4.7						
CMAR	Chiang Mai Arr	70.69	47	P	P	04 15 04.5	0.0
WRA	Warramunga Arr	71.98	102	P	P	04 15 12.9	+0.4
	comp=Z,1.1nm,1.0s,baz=232,slow=5.3,SNR=6.2						
WRA	Warramunga Arr	71.98	102	P	P	04 15 12.6	+0.1
MLR	Muntele Rosu	85.77	342	P	P	04 16 28.1	+0.5
MLR				IAmb	IAmb	04 16 41.0	
	comp=Z,3.5nm,1.3s						
ILAR	Eielson Array	150.19	17	PKPbc	PKPbc	04 23 38.1	-0.5
	comp=Z,1.4nm,0.8s,baz=314,slow=2.8,SNR=15						
YKA	Yellowknife Ar	153.51	346	PKPbc	PKPbc	04 23 45.6	-0.5
	comp=Z,0.9nm,0.8s,baz=18,slow=1.9,SNR=14						

TUL ***24*** *04:10:47.9±1.1, 36°.76N±0°.02×98°.07W±0°.06, h7km±6km, ML3.3, mb_Lg2.8/51(NEIC), Error ellipse: s-maj=6.4km s-min=2.5km az=89.0*

ANF ***24*** *04:10:47.6±0.4, 36°.75N×98°.05W, h1km±2km, ML3.5/11, Error ellipse: s-maj=2.2km s-min=1.7km az=14.0*

NEIC ***24*** *04:10:48.0±1.3, 36°.724N±0°.007×98°.03W±0°.03, h5km±7km, Error ellipse: s-maj=4.0km s-min=1.0km az=84.0*

ISC 24 04:10:48.0±1.1**, 36°.73N**±0°.02×**98°.05W**±0°.02**, h4**km±10km**, n80, σ0ˢ.57**/67**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.15	299		Pg	04 10 50.9	-0.1
OK032				Sg	Sg	04 10 53.0	0.0
GC02	Grant County #	0.19	51	Pg	Pg	04 10 52.2	+0.4
GC02				Sg	Sg	04 10 55.2	+0.9
CROK	Carrier	0.23	167	Pg	Pg	04 10 53.4	+0.9
KAN14	Manchester OK	0.23	17		Pg	04 10 52.7	+0.1
KAN17	Caldwell West	0.39	36		Pg	04 10 54.9	-0.5
KAN10	Anthony SW Sta	0.39	354	Pg	Pg	04 10 54.9	-0.7
KAN05	Bluff City Nor	0.40	20	Pg	Pg	04 10 55.5	-0.3
KAN01	Argonia South	0.48	29		Pg	04 10 57.1	-0.1
KAN16	Harper SW Stat	0.49	358	Pg	Pg	04 10 57.2	-0.3
KAN08	Anthony NE Sta	0.50	7		Pg	04 10 57.6	0.0
KAN09	Caldwell North	0.53	40	Pg	Pg	04 10 58.1	-0.1
OK035	E0210 Rd and N	0.53	268	Pg	Pg	04 10 57.8	-0.5
KAN13	South Haven SW	0.54	58	Pg	Pg	04 10 58.0	-0.3
KAN06	Argonia West S	0.54	16		Pg	04 10 58.2	-0.2
KAN12	Harper NE Stat	0.57	4	Pg	Pg	04 10 58.7	-0.2
BLOK	Blackwell	0.67	87	Pg	Pg	04 11 01.0	+0.2
U32A	Winter Ranch,	0.84	246		Pg	04 11 03.8	-0.4
U32A	Winter Ranch,	0.84	246	P	Pg	04 11 03.8	-0.4
	baz=66,SNR=139						
OK029	Liberty Lake	1.05	153		Pg	04 11 07.8	-0.3
OK033	Mehan	1.13	127		Pg	04 11 09.4	-0.1
BCOK	Bluff Creek, N	1.13	162	Pg	Pg	04 11 09.4	-0.3
QUOK	Quay	1.22	117	Pn	Pg	04 11 10.8	-0.5
T35A	Sooner Cattle	1.25	81		Pg	04 11 10.9	-1.0
T35B	Sooner Cattle	1.25	81	P	Pg	04 11 11.3	-0.6
	baz=261						
T35B				S	Sb	04 11 28.6	+0.2
	baz=261						
OK031	S. Brethren Rd	1.25	128		Pg	04 11 11.2	-0.7
OK025	Westminster Rd	1.28	153		Pn	04 11 11.3	-1.4
OK034	N. Norfolk Rd.	1.29	123		Pn	04 11 12.0	-0.8
OK030	Cody Creek RV	1.30	128		Pn	04 11 11.8	-1.1
OKCFA	Oklahoma City	1.40	160		Pn	04 11 13.2	-1.1
OKCFA	Oklahoma City	1.40	160	P	Pn	04 11 14.0	-0.2
	baz=340,SNR=12						
OKCSW	OKLAHOMA CITY	1.41	159		Pn	04 11 14.2	-0.2
FNO	Franklin	1.56	160		Pn	04 11 15.9	-0.5
R32A	Long Quarter,	1.77	343		Pn	04 11 19.7	+0.3
R32A	Long Quarter,	1.77	343	P	Pn	04 11 19.6	+0.2
	baz=162,SNR=57						
R32A				S	Sb	04 11 43.0	-0.6
	baz=162						
W35A	Tecumseh	1.84	149		Pn	04 11 21.0	+0.7
TUL1	Leonard	2.00	114		Pn	04 11 23.2	+0.7
TUL1	Leonard	2.00	114	P	Pn	04 11 22.9	+0.4
	baz=295,SNR=35						
TUL1				Sb	Sg	04 11 51.1	-1.0
	baz=295						
WMOK	Wichita Mounta	2.08	197		Pn	04 11 23.8	+0.2
WMOK	Wichita Mounta	2.08	197	P	Pn	04 11 23.9	+0.3
	baz=17						
X34A	Smith Ranch, M	2.13	175		Pn	04 11 25.6	+1.2
CBKS	Cedar Bluff	2.47	328	Pn	Pn	04 11 29.3	+0.2
CBKS	Cedar Bluff	2.47	328	P	Pn	04 11 29.0	0.0
	baz=147,SNR=15						
CBKS				S	Sn	04 12 00.5	+0.8
	baz=147						
KSU1	Kansas State U	2.62	25	IAmb_Lg		04 12 14.1	
	comp=Z,41nm,0.7s						
KSU1	Kansas State U	2.62	25	S	Sn	04 12 04.3	+0.9
	baz=206						
U38A	Gravette	2.96	95		Pn	04 11 35.9	+0.2
U38A	Gravette	2.96	95	P	Pn	04 11 36.5	+0.7
	baz=277,SNR=13						
X37A	Clayton	3.05	134		Pn	04 11 37.3	+0.3
X37A				IAmb_Lg		04 12 33.9	
	comp=Z,36nm,0.9s						
X37A	Clayton	3.05	134	P	Pn	04 11 37.6	+0.6
	baz=315,SNR=13						
HHAR	Hobbs	3.34	96		Pn	04 11 41.0	+0.1
Z35A	Perchaven, San	3.46	169	Pn	Pn	04 11 42.6	+0.1
AMTX	Amarillo	3.48	239	Pn	Pn	04 11 42.9	0.0
AMTX				IAmb_Lg		04 12 39.7	
	comp=Z,21nm,0.8s						
W39A	Magazine	3.78	113	Pn	Pn	04 11 47.2	+0.2
S39A	Bolivar	3.89	74		Pn	04 11 48.0	-0.6
S39A	Bolivar	3.89	74	P	Pn	04 11 48.5	0.0
	baz=257,SNR=16						
N33A	J Bar K, Exete	4.03	6	Pn	Pn	04 11 49.2	-1.2
N33A				IAmb_Lg		04 13 03.6	
	comp=Z,18nm,0.7s						
U40A	Yellville	4.20	94		Pn	04 11 52.5	-0.2
U40A				IAmb_Lg		04 13 11.3	
	comp=Z,20nm,0.8s						
U40A	Yellville	4.20	94	P	Pn	04 11 53.0	+0.2
	baz=277,SNR=5.6						
U40A				P	Pn	04 11 53.0	+0.2
	baz=277,SNR=5.6						
MIAR	Mount Ida	4.24	120	IAmb_Lg		04 13 07.3	
	comp=Z,24nm,0.8s						
Z38A	Mt. Pleasant	4.28	143	IAmb_Lg		04 13 09.8	
	comp=Z,35nm,0.8s						
ABTX	Abilene, Hawle	4.30	198	IAmb_Lg		04 13 07.2	
	comp=Z,17nm,0.8s						
P38A	Dawn	4.58	50	Pn	Pn	04 11 58.6	+0.6
P38A				IAmb_Lg		04 13 15.8	
	comp=Z,20nm,0.7s						
MGMO	Mountain Grove	4.65	83		Pn	04 11 59.0	0.0
BGNE	Belgrade	4.67	359	IAmb_Lg		04 13 23.9	
	comp=Z,23nm,0.8s						
R40A	Maddies Statio	4.85	70	Pn	Pn	04 12 01.7	0.0
WHAR	Wooly Hollow	4.88	105	Pn	Pn	04 12 01.8	-0.4
WHAR				IAmb_Lg		04 13 26.8	
	comp=Z,15nm,0.7s						
WLAR	White Oak Lake	5.05	125	IAmb_Lg		04 13 36.8	
	comp=Z,14nm,0.8s						
T25A	Trinidad	5.11	276	IAmb_Lg		04 13 33.8	
	comp=Z,28nm,0.7s						
OGNE	Ogallala	5.23	325	IAmb_Lg		04 13 42.8	
	comp=Z,25nm,0.8s						
P40A	Paris	5.49	58	IAmb_Lg		04 13 53.4	
	comp=Z,14nm,0.8s						
N38A	Joes South For	5.53	41	IAmb_Lg		04 13 49.6	
	comp=Z,25nm,0.8s						
CCM	Cathedral Cave	5.58	74	IAmb_Lg		04 14 00.3	
	comp=Z,14nm,0.7s						
LCAR	Lake Charles	5.60	95	IAmb_Lg		04 13 49.4	
	comp=Z,14nm,1.0s						
K31A	O'Neill	5.91	355	IAmb_Lg		04 14 01.4	
	comp=Z,22nm,0.8s						
435B	Jarrell	5.95	176	IAmb_Lg		04 14 03.8	
	comp=Z,15nm,1.0s						
PBMO	Poplar Bluff	6.12	87	IAmb_Lg		04 14 10.9	
	comp=Z,16nm,0.7s						
FVM	French Village	6.20	76	IAmb_Lg		04 14 06.5	
	comp=Z,12nm,0.9s						
JCT	Junction City	6.41	194	IAmb_Lg		04 14 18.0	
	comp=Z,16nm,0.8s						
PHWY	Pilot Hill	7.35	311	IAmb_Lg		04 14 52.4	
	comp=Z,9.7nm,1.0s						
L40A	Anamosa	7.50	43	IAmb_Lg		04 14 49.5	
	comp=Z,13nm,0.8s						
K22A	Casper	8.81	315	IAmb_Lg		04 15 31.1	
	comp=Z,9.9nm,1.1s						

IDC ***24*** *04:32:10.8±7.3, 20°.59S×178°.39W, h511km±47km, mb2.9/4, mb1 3.1/5, mb1mx2.7/41, mbtmp3.8/5, Error ellipse: s-maj=156.5km s-min=24.3km az=138.0*

ISC 24 04:32:09.3±1.7**, 20°.8S**±0°.3×**178°.2W**±0°.3**, h500km, n8, σ1ˢ.05**/8**, mb3.5**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.62	310	P	P	04 33 33.2	+0.1
	6.0nm,0.3s,baz=116,slow=8.3,SNR=21						
STKA	Stephens Creek	37.48	244	P	P	04 38 40.2	+0.4
	1.1nm,0.6s,baz=84,slow=10,SNR=3.5						
ASAR	Alice Springs	44.25	257	P	P	04 39 33.6	-0.4
	0.8nm,0.6s,baz=100,slow=7.7,SNR=14						
WRA	Warramunga Arr	44.35	262	P	P	04 39 34.5	-0.3
	0.4nm,0.5s,baz=97,slow=7.3,SNR=6.1						
ILAR	Eielson Array	88.61	13	P	P	04 44 08.2	+0.2
	0.3nm,0.4s,baz=216,slow=5.1,SNR=8.2						
AKASG	Malin Array Be	143.13	331	PKP	PKPdf	04 50 44.0	-1.8
	0.3nm,0.4s,baz=40,slow=4.4,SNR=6.5						
BRTR	Keskin Array B	146.85	312	PKPbc	PKPdf	04 50 54.1	+1.4
	0.4nm,0.6s,baz=64,slow=3.7,SNR=2.2						
GERES	GERESS Array B	150.38	344	PKPbc	PKPbc	04 51 03.9	+0.1
	0.2nm,0.5s,baz=350,slow=4.0,SNR=2.1						

IDC ***24*** *04:35:53.1±1.6, 52°.83N×132°.62W, h0km, mb3.8/3, mb1 3.6/9, mb1mx3.3/41, mbtmp3.4/9, ML3.1/6, MS3.2/5, Ms1 3.3/5, ms1mx3.0/50, Error ellipse: s-maj=27.0km s-min=11.9km az=37.0*

PGC ***24*** *04:35:55.3±1.7, 53°.03N×132°.69W, h23km, ML3.6/18, 62km Wsw of Sandspit, Bc Queen Charlotte Islands Region*

ISC 24 04:35:56.2±1.0**, 53°.04N**±0°.03×**132°.50W**±0°.04**, h17**km±6km**, n45, σ1ˢ.60**/64**, mb3.9**/3**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DIB	Dawson Inlet,	0.16	4	P	Pg	04 36 00.6	+0.1
DIB				S	Sg	04 36 03.9	+0.5
H02S1	DAWSON INLET T	0.16	4	Pg	Pg	04 36 00.5	0.0
H02S1				Lg	Lg	04 36 03.8	
HG1B	Mitchell Dam	0.24	116	P	Pb	04 36 02.7	+0.6
HG1B				S	Sb	04 36 07.8	+1.7
BNB	Barry Inlet	0.65	136	P	Pb	04 36 09.1	+0.1
BNB				S	Sn	04 36 19.8	-0.7
NDB	Naden	0.95	344	P	Pg	04 36 12.6	-2.1
NDB				S	Sg	04 36 25.3	-2.0
MASB	Masset	1.02	16	P	Pn	04 36 15.2	-0.4
MASB				S	Sn	04 36 30.1	+0.7
HG4B	Hotspring	1.09	133	P	Pg	04 36 15.8	-1.5
HG4B				S	Sn	04 36 32.3	+1.0
BNAB	Bonilla	1.21	67	P	Pn	04 36 17.8	-0.3
BNAB				S	Sn	04 36 35.8	+1.8
LIB	Langara Island	1.26	345	P	Pn	04 36 17.2	-1.7
LIB				S	Sb	04 36 34.1	-1.3
BNKB	Banks Island	1.59	78	Pn	Pn	04 36 23.1	-0.4
BNKB				Pg	Pg	04 36 25.7	-1.0
BNKB				Sg	Sg	04 36 47.5	+0.1
GRNB	Grenville Isla	1.72	61	Pn	Pn	04 36 24.9	-0.3
GRNB				Pg	Pg	04 36 27.9	-1.3
GRNB				Sg	Sg	04 36 51.1	-0.5
RUBB	Prince Rupert	1.85	45	Pn	Pn	04 36 26.9	-0.2
RUBB				Pg	Pg	04 36 30.3	-1.5
RUBB				Sg	Sb	04 36 54.0	+1.6
HWKB	Hawksbury Isla	2.08	73	Pn	Pn	04 36 30.5	+0.2
HWKB				Pg	Pg	04 36 34.7	-1.4
HWKB				Sg	Sg	04 37 01.6	-1.5
BUTB	Butedale	2.43	88	Pn	Pn	04 36 35.0	-0.2
BUTB				Sg	Sg	04 37 12.6	-1.8
KITB	Kitimat	2.53	64	Pn	Pn	04 36 36.2	0.0
KITB				Sg	Sg	04 37 15.9	-1.4
BBB	Bella Bella	2.81	106	Pn	Pn	04 36 39.6	-0.6
	1.5nm,0.3s,baz=262,slow=6.8,SNR=19						
BBB				Sn	Sn	04 37 13.1	-0.4
	6.1nm,0.3s,baz=155,slow=24,SNR=14						
BBB	Bella Bella	2.81	106	Pn	Pn	04 36 39.6	-0.6
BBB				Sn	Sn	04 37 12.8	-0.7
BBB				Sg	Sg	04 37 24.1	-2.2
HOLB	Holberg	3.62	130	Pn	Pn	04 36 50.2	-1.2
HOLB				Sn	Sn	04 37 31.8	-1.9
PHC	Port Hardy	3.91	125	Pn	Pn	04 36 54.6	-0.8
PHC				Sn	Sn	04 37 39.6	-1.2
PACB	Port Alice, BC	4.06	128	Sn	Sn	04 37 44.7	+0.3
BPBC	Brooks Peninsu	4.12	133	Pn	Pn	04 36 58.2	-0.2
BPBC				Sn	Sn	04 37 47.0	+0.9
MAYB	Maynard	4.24	126	Pn	Pn	04 36 58.8	-1.2
TLCB	Telegraph Cove	4.31	123	Sn	Sn	04 37 50.6	-0.1
WOSB	Woss	4.69	126	Pn	Pn	04 37 07.5	+1.4
NCRB	Newcastle Ridg	4.80	121	Pn	Pn	04 37 09.2	+1.6
FSB	Fort Saint Jam	5.06	70	Pn	Pn	04 37 13.1	+2.0
FSB				Sg	Sg	04 38 34.2	-4.1
FSJB	Fort St James	5.07	70	Pn	Pn	04 37 13.1	+1.7
FSJB				Sg	Sg	04 38 34.9	-3.9
DLBC	Dease Lake	5.59	13	Pn	Pn	04 37 20.4	+2.0
	0.6nm,0.3s,baz=224,slow=4.5,SNR=12						
DLBC				LR	LR	04 39 29.6	
	comp=Z,289nm,20.6s,baz=158,slow=37						
DLBC	Dease Lake	5.59	13	Pn	Pn	04 37 20.7	+2.3
DLBC				Sg	Sg	04 38 51.1	-4.2
BESE	Bessie Mountai	5.71	347	Sn	Sn	04 38 22.5	-2.6
YKA	Yellowknife Ar	13.40	38	Pn	Pn	04 39 04.8	-0.4
	0.0nm,0.3s,baz=219,slow=12,SNR=12						
ILAR	Eielson Array	13.86	334	Pn	Pn	04 39 12.9	+1.4
	0.0nm,0.3s,baz=162,slow=14,SNR=4.4						
ILAR				LR	LR	04 44 23.6	
	comp=Z,76nm,18.9s,baz=234,slow=36						
INK	Inuvik	15.33	359	Pn	Pn	04 39 33.1	+1.8
	0.0nm,0.3s,baz=146,slow=9.3,SNR=4.5						
INK				LR	LR	04 46 20.5	
	comp=Z,55nm,21.0s,baz=46,slow=40						
PDAR	Pinedale Array	18.42	115	P	P	04 40 08.2	-2.4
	0.0nm,0.3s,baz=312,slow=9.4,SNR=1.6						
ANMO	Albuquerque	25.81	124	LR	LR	04 52 32.1	
	comp=Z,80nm,21.4s,baz=314,slow=39						
TXAR	Lajitas Array	31.74	127	LR	LR	04 56 44.9	
	comp=Z,80nm,19.4s,baz=0.0,slow=40						
H11N2	WAKE ISLAND Hy	56.86	259	T	T	05 47 15.5	
	baz=38,slow=76,SNR=550						
H11N3	WAKE ISLAND Hy	56.86	259	T	T	05 47 17.4	
	baz=38,slow=76,SNR=529						
H11N1	WAKE ISLAND Hy	56.88	259	T	T	05 47 16.2	
	baz=38,slow=76,SNR=297						
H11S1	WAKE ISLAND Hy	57.93	258	T	T	05 48 34.5	
	baz=38,slow=76,SNR=52						
H11S2	WAKE ISLAND Hy	57.94	258	T	T	05 48 34.3	
	baz=38,slow=76,SNR=77						
H11S3	WAKE ISLAND Hy	57.94	258	T	T	05 48 35.0	
	baz=38,slow=76,SNR=82						
ZALV	Zalesovo Beam	68.96	337	P	P	04 46 59.8	0.0
	0.9nm,0.6s,baz=26,slow=3.8,SNR=4.5						
AKASG	Malin Array Be	75.49	12	P	P	04 47 41.7	+2.9
	0.1nm,0.3s,baz=8.8,slow=6.7,SNR=1.8						
MKAR	Makanchi Array	76.20	336	P	P	04 47 43.5	+0.5
	0.8nm,0.7s,baz=37,slow=6.0,SNR=8.2						

TUL ***24*** *04:38:53.5±1.1, 36°.42N±0°.02×98°.13W±0°.02, h5km±7km, ML2.7, mb_Lg2.5/14(NEIC), Error ellipse: s-maj=2.5km s-min=2.0km az=167.0*

NEIC 24 04:38:53.6±0.7**, 36°.39N**±0°.02×**98°.10W**±0°.01**, h5**km±2km**,**

Error ellipse: s-maj=3.1km s-min=2.8km az=334.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.15	41	Pg	Pg	04 38 57.1	+0.5
OK032	Salt Plains WL	0.42	348		Pg	04 39 01.5	-0.2
GC02	Grant County #	0.50	23	Pg	Pg	04 39 03.2	0.0
GC02				Sg	Sg	04 39 10.0	+0.3
KAN14	Manchester OK	0.57	11		Pg	04 39 04.5	-0.2
KAN14				Sg	Sg	04 39 12.2	+0.1
OK035	E0210 Rd and N	0.58	303	Pg	Pg	04 39 04.4	-0.4
OK035				Sg	Sg	04 39 12.1	-0.3
KAN17	Caldwell West	0.70	23		Pg	04 39 06.9	-0.2
KAN17				Sg	Sg	04 39 16.4	+0.1
U32A	Winter Ranch,	0.72	269	Pg	Pg	04 39 07.0	-0.6
KAN10	Anthony SW Sta	0.73	0	Pg	Pg	04 39 07.2	-0.4
KAN13	South Haven SW	0.80	39	Pg	Pg	04 39 08.8	-0.2
BLOK	Blackwell	0.80	63	Pg	Pg	04 39 09.2	+0.1
KAN01	Argonia South	0.81	20	Pg	Pg	04 39 08.7	-0.4
BCOK	Bluff Creek, N	0.84	151		Pg	04 39 09.9	+0.2
KAN09	Caldwell North	0.84	28	Pg	Pg	04 39 09.4	-0.3
KAN12	Harper NE Stat	0.91	5	Pg	Pg	04 39 10.4	-0.6
OK025	Westminster Rd	1.02	142		Pg	04 39 13.3	+0.1
OK031	S. Brethren Rd	1.11	113		Pg	04 39 15.0	0.0
OKCSW	OKLAHOMA CITY	1.12	151	Pg	Pg	04 39 15.0	-0.1
QUOK	Quay	1.15	101		Pg	04 39 15.7	0.0
OK030	Cody Creek RV	1.16	113		Pg	04 39 16.0	0.0
OK034	N. Norfolk Rd.	1.19	108		Pg	04 39 16.3	-0.1
FNO	Franklin	1.27	153	Pn	Pg	04 39 17.4	-0.5
T35A	Sooner Cattle	1.38	67		Pn	04 39 19.5	-0.1
W35A	Tecumseh	1.59	141		Pn	04 39 22.6	+0.2
WMOK	Wichita Mounta	1.74	199		Pn	04 39 24.6	0.0
X34A	Smith Ranch, M	1.80	173		Pb	04 39 26.8	-0.4
TUL1	Leonard	1.93	104		Pn	04 39 27.6	+0.5
R32A	Long Quarter,	2.08	347		Pn	04 39 30.4	+1.1
LOOK	Love County	2.51	162	Pn	Pn	04 39 35.6	+0.5
CBKS	Cedar Bluff	2.74	332	Pn	Pn	04 39 38.3	0.0
X37A	Clayton	2.87	128	Pn	Pn	04 39 39.4	-0.6
KSU1	Kansas State U	2.95	23	IAmb_Lg		04 40 32.2	
	comp=Z,12nm,0.8s						
U38A	Gravette	3.00	88	Pn	Pn	04 39 41.1	-0.7
AMTX	Amarillo	3.28	244	Pn	Pn	04 39 45.3	-0.5
HHAR	Hobbs	3.36	91	Pn	Pn	04 39 46.9	+0.1
W39A	Magazine	3.71	108	Pn	Pn	04 39 52.0	+0.4
W39A				IAmb_Lg		04 40 56.0	
	comp=Z,12nm,1.0s						
S39A	Bolivar	4.04	70	Pn	Pn	04 39 56.5	+0.3
S39A				IAmb_Lg		04 41 02.3	
	comp=Z,10nm,0.8s						
MIAR	Mount Ida	4.13	115	IAmb_Lg		04 41 08.9	
	comp=Z,7.6nm,0.7s						
KSCO	Kaye Shedlock'	4.44	307	IAmb_Lg		04 41 24.1	
	comp=Z,12nm,1.0s						
X40A	Basin Creek Fa	4.70	112	IAmb_Lg		04 41 28.3	
	comp=Z,9.6nm,1.0s						
JCT	Junction City	6.07	194	IAmb_Lg		04 42 09.9	
	comp=Z,12nm,1.2s						
ISCO	Idaho Springs	6.83	302	IAmb_Lg		04 42 42.6	
	comp=Z,5.6nm,0.9s						

TUL ***24*** *04:40:37.5±1.3, 36°.49N±0°.02×98°.50W±0°.02, h4^{km}±7^{km}, ML3.3, mb_Lg3.2/68(NEIC), Error ellipse: s-maj=3.4km s-min=2.2km az=153.0*

ANF ***24*** *04:40:37.8±0.3, 36°.44N×98°.46W, h5^{km}, ML3.7/7, Error ellipse: s-maj=2.7km s-min=2.4km az=15.0*

NEIC ***24*** *04:40:37.6±1.2, 36°.48N±0°.01×98°.50W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.9km az=288.0*

ISC 24 04:40:37.9±1.1**, 36°.48N**±0°.02×**98°.49W**±0°.02**, h6**^{km}±10^{km}**, n83, σ0^{s}.71**/70**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK035	E0210 Rd and N	0.29	323	Pg	Pg	04 40 43.5	0.0
OK035				Sg	Sg	04 40 47.6	+0.2
OK032	Salt Plains WL	0.40	34		Pg	04 40 45.4	-0.2
OK032				Sg	Sg	04 40 50.6	-0.2
CROK	Carrier	0.41	86	Pg	Pg	04 40 46.0	+0.2
CROK				Sg	Sg	04 40 52.1	+0.9
U32A	Winter Ranch,	0.42	257	Pg	Pg	04 40 45.7	-0.3
U32A				Sg	Sg	04 40 51.8	+0.2
U32A	Winter Ranch,	0.42	257	P	Pg	04 40 45.8	-0.3
	baz=79						
U32A				S	Sg	04 40 51.8	+0.2
	baz=79						
GC02	Grant County #	0.63	53	Pg	Pg	04 40 49.9	-0.1
GC02				Sg	Sg	04 40 58.9	+0.7
KAN14	Manchester OK	0.64	41		Pg	04 40 50.0	-0.2
KAN14				Sg	Sg	04 40 59.0	+0.5
KAN10	Anthony SW Sta	0.72	26	Pg	Pg	04 40 51.4	-0.3
KAN05	Bluff City Nor	0.80	38	Pg	Pg	04 40 52.8	-0.5
KAN17	Caldwell West	0.81	46		Pg	04 40 53.0	-0.5
KAN16	Harper SW Stat	0.82	24	Pg	Pg	04 40 53.1	-0.6
KAN08	Anthony NE Sta	0.86	29		Pg	04 40 53.7	-0.7
KAN01	Argonia South	0.90	41		Pg	04 40 54.6	-0.5
KAN12	Harper NE Stat	0.91	26	Pg	Pg	04 40 54.8	-0.6
KAN06	Argonia West S	0.92	33		Pg	04 40 55.2	-0.3
KAN09	Caldwell North	0.96	46	Pg	Pg	04 40 55.8	-0.5
KAN13	South Haven SW	0.97	56	Pg	Pg	04 40 56.1	-0.5
BLOK	Blackwell	1.06	74	Pg	Pg	04 40 57.7	-0.6
OK029	Liberty Lake	1.08	129	Pg	Pg	04 40 58.0	-0.5
BCOK	Bluff Creek, N	1.08	139	Pg	Pg	04 40 58.0	-0.6
OK025	Westminster Rd	1.29	133	Pn	Pn	04 41 01.7	-0.8
OK033	Mehan	1.33	109	Pn	Pn	04 41 02.4	-0.6
OKCFA	Oklahoma City	1.35	141		Pn	04 41 02.6	-0.7
OKCFA	Oklahoma City	1.35	141	P	Pn	04 41 02.8	-0.5
	baz=323						
OKCFA				S	Sb	04 41 21.2	0.0
	baz=323						
OKCSW	OKLAHOMA CITY	1.37	141		Pn	04 41 03.0	-0.6
OK031	S. Brethren Rd	1.43	111	Pn	Pn	04 41 04.1	-0.3
QUOK	Quay	1.47	101	Pn	Pn	04 41 04.9	-0.1
OK030	Cody Creek RV	1.48	111		Pn	04 41 04.8	-0.4
FNO	Franklin	1.50	144		Pn	04 41 05.3	-0.1
OK034	N. Norfolk Rd.	1.51	107	Pn	Pn	04 41 05.2	-0.3
T35A	Sooner Cattle	1.65	74	Pn	Pn	04 41 07.8	+0.4
T35B	Sooner Cattle	1.65	74	P	Pn	04 41 07.8	+0.4
	baz=254						
T35B				Sb	Sb	04 41 30.2	+0.4
	baz=254						
WMOK	Wichita Mounta	1.75	188	Pn	Pn	04 41 08.6	-0.2
WMOK	Wichita Mounta	1.75	188	P	Pn	04 41 08.7	-0.2
	baz=8.7						
WMOK				S	Sb	04 41 32.3	-0.4
	baz=8.7						
W35A	Tecumseh	1.86	135		Pn	04 41 10.5	+0.2
X34A	Smith Ranch, M	1.95	164		Pn	04 41 12.4	+0.9
R32A	Long Quarter,	1.95	355		Pn	04 41 12.2	+0.6
R32A	Long Quarter,	1.95	355	P	Pn	04 41 12.2	+0.6
	baz=174						
R32A				S	Sb	04 41 38.0	-0.5
	baz=174						
TUL1	Leonard	2.25	104		Pn	04 41 16.0	+0.3
TUL1				IAmb_Lg		04 41 48.8	
	comp=Z,94nm,0.9s						
TUL1	Leonard	2.25	104	P	Pn	04 41 15.9	+0.1
	baz=285						
TUL1				Sb	Sb	04 41 47.8	+0.7
	baz=285						
CBKS	Cedar Bluff	2.54	337	Pn	Pn	04 41 19.9	+0.3
CBKS	Cedar Bluff	2.54	337	S	Sb	04 41 55.1	-0.2
	baz=156						
LOOK	Love County	2.70	156	Pn	Pn	04 41 21.9	0.0
LOOK				IAmb_Lg		04 42 10.5	
	comp=Z,57nm,0.8s						
KSU1	Kansas State U	3.01	29	Pn	Pn	04 41 26.3	+0.1
KSU1	Kansas State U	3.01	29	S	Sn	04 42 03.3	+0.7
	baz=210						
AMTX	Amarillo	3.04	239	Pn	Pn	04 41 27.5	+0.8
X37A	Clayton	3.16	126	Pn	Pn	04 41 27.4	-0.8
X37A				IAmb_Lg		04 42 22.1	
	comp=Z,42nm,0.7s						
Z35A	Perchaven, San	3.30	162	Pn	Pn	04 41 30.7	+0.6
U38A	Gravette	3.31	89	IAmb_Lg		04 42 26.6	
	comp=Z,96nm,1.1s						
ABTX	Abilene, Hawle	3.96	194	Pn	Pn	04 41 40.6	+1.4
W39A	Magazine	4.03	107	Pn	Pn	04 41 40.5	+0.4
KSCO	Kaye Shedlock'	4.14	309	IAmb_Lg		04 42 56.7	
	comp=Z,50nm,0.9s						
MSTX	Muleshoe	4.31	236	IAmb_Lg		04 42 58.5	
	comp=Z,41nm,0.8s						
S39A	Bolivar	4.31	72	IAmb_Lg		04 42 53.2	
	comp=Z,61nm,1.0s						
Z38A	Mt. Pleasant	4.31	137	IAmb_Lg		04 42 56.3	
	comp=Z,37nm,0.8s						
N33A	J Bar K, Exete	4.33	11		Pn	04 41 43.5	-0.8
N33A				IAmb_Lg		04 43 03.1	
	comp=Z,37nm,0.7s						
U40A	Yellville	4.55	90	IAmb_Lg		04 43 11.2	
	comp=Z,47nm,0.9s						
T25A	Trinidad	4.80	280	IAmb_Lg		04 43 12.3	
	comp=Z,57nm,0.9s						
BGNE	Belgrade	4.93	3		Pn	04 41 52.2	-0.3
BGNE				IAmb_Lg		04 43 20.4	
	comp=Z,53nm,0.7s						
237A	Washetta, Mont	4.99	153	IAmb_Lg		04 43 28.1	
	comp=Z,27nm,0.8s						
P38A	Dawn	5.02	50	IAmb_Lg		04 43 21.9	
	comp=Z,34nm,0.8s						
X40A	Basin Creek Fa	5.02	112	IAmb_Lg		04 43 29.2	
	comp=Z,24nm,0.7s						
MGMO	Mountain Grove	5.04	80		Pn	04 41 53.9	-0.1
MGMO				IAmb_Lg		04 43 18.3	
	comp=Z,30nm,0.7s						
WHAR	Wooly Hollow	5.17	101	IAmb_Lg		04 43 36.1	
	comp=Z,24nm,0.7s						
WLAR	White Oak Lake	5.21	121	IAmb_Lg		04 43 36.4	
	comp=Z,29nm,0.9s						
OGNE	Ogallala	5.25	329	Pn	Pn	04 41 55.9	-1.1
L34A	Svendsen Farm,	5.72	16	Pn	Pn	04 42 00.2	-3.2
L34A				IAmb_Lg		04 43 55.5	
	comp=Z,38nm,0.8s						
435B	Jarrell	5.73	172	IAmb_Lg		04 43 48.6	
	comp=Z,26nm,0.8s						
CCM	Cathedral Cave	5.99	73	Pn	Pn	04 42 05.5	-1.5
CCM				IAmb_Lg		04 43 51.6	
	comp=Z,32nm,0.8s						
JCT	Junction City	6.08	191	Pn	Pn	04 42 06.6	-1.7
JCT				IAmb_Lg		04 43 57.9	
	comp=Z,19nm,0.8s						
K31A	O'Neill	6.14	358	IAmb_Lg		04 44 05.7	
	comp=Z,40nm,0.9s						
ISCO	Idaho Springs	6.52	303	Pn	Pn	04 42 14.1	-0.5
ISCO				IAmb_Lg		04 44 07.1	
	comp=Z,21nm,0.8s						
FVM	French Village	6.61	74	IAmb_Lg		04 44 14.6	
	comp=Z,22nm,0.8s						
SCIA	State Center	6.79	35	IAmb_Lg		04 44 19.0	
	comp=Z,35nm,0.7s						
PHWY	Pilot Hill	7.26	314	IAmb_Lg		04 44 44.8	
	comp=Z,21nm,0.8s						
S44A	Carbondale	7.48	78	IAmb_Lg		04 44 35.3	
	comp=Z,27nm,0.8s						
SIUC	Southern Illin	7.51	78	IAmb_Lg		04 44 36.3	
	comp=Z,29nm,0.8s						
K38A	Parkersburg	7.58	34	IAmb_Lg		04 44 50.4	
	comp=Z,31nm,0.8s						
L40A	Anamosa	7.93	43	IAmb_Lg		04 44 53.9	
	comp=Z,21nm,0.8s						
RSSD	Black Hills	8.73	333	IAmb_Lg		04 45 28.1	
	comp=Z,18nm,1.0s						
K22A	Casper	8.74	317	IAmb_Lg		04 45 25.1	
	comp=Z,29nm,1.1s						
L42A	Oliver, Polo	8.79	48	IAmb_Lg		04 45 17.2	
	comp=Z,30nm,0.8s						
JFWS	Jewell Farm	9.03	42	IAmb_Lg		04 45 38.9	
	comp=Z,22nm,0.8s						

BUL ***24*** *04:59:25.9±1.2, 24°.23S×28°.59E, h0^{km}±63^{km}, MD3.8*

EAF 24 04:59:27.0±0.3**, 24°.13S×28°.42E, h5**^{km}±19^{km}**, MD3.7, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	2.30	40	*i* P	Pn	05 00 05.3	-0.4
MSNA	Messina	2.30	40	*i* P	Pn	05 00 05.3	-0.4
MOPA	Mopani	2.79	78	*i* P	Pn	05 00 12.0	-0.4
MOPA				*i* Sg	Sb	05 00 53.7	+1.7
MOPA	Mopani	2.79	78	*i* P	Pn	05 00 12.0	-0.4
MOPA				*i* Sg	Sb	05 00 53.7	+1.7
MATP	Matopo	3.68	1	*i* P	Pn	05 00 24.3	-0.5
MATP	Matopo	3.68	1	*i* P	Pn	05 00 24.3	-0.5

NEIC ***24*** *05:08:56.6±1.3, 23°.91S±0°.10×179°.6W±0°.1, h494^{km}±9^{km}, mb4.9/32, Error ellipse: s-maj=18.6km s-min=13.8km az=80.0*

BJI ***24*** *05:08:57.8±0.0, 24°.23S×179°.74W, h536^{km}, mB4.8/7, mb4.4/7*

IDC ***24*** *05:08:58.7±1.5, 23°.93S×179°.82W, h507^{km}±15^{km}, mb4.3/11, mb1 4.3/14, mb1mx3.8/38, mbtmp5.2/14, Error ellipse: s-maj=18.7km s-min=14.9km az=26.0*

NOU ***24*** *05:08:58.0, 23°.83S×179°.47W, h536^{km}, mb4.8/58, South of Fiji Islands*

ISC 24 05:08:57.2±0.4**, 23°.86S**±0°.06×**179°.52W**±0°.07**, h512**^{km}**, n177, σ1^{s}.35**/188**, mb4.9**/50**, 30C-3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.56	165	P	P	05 10 31.1	+1.3
	187nm,0.3s,baz=108,slow=10,SNR=8.0						
RAO				S	S	05 11 46.9	+1.4
	85nm,0.3s,baz=101,slow=22,SNR=2.1						
RAO	Raoul Island	5.56	165	P	P	05 10 27.3	-2.4
RAO				S	S	05 11 43.4	-2.1
GLKZ	Green Lake	5.56	165	P	P	05 10 30.7	+0.9
GLKZ				S	S	05 11 47.6	+1.9
MSVF	Nonsavu	6.51	339	P	P	05 10 40.1	+0.9
	37nm,0.3s,baz=196,slow=4.1,SNR=98						
MSVF	Nonsavu	6.51	339	P	P	05 10 38.0	-1.2
MSVF	Nonsavu	6.51	339	P	P	05 10 39.9	+0.7
TAVE	Taveuni	7.13	357	P	P	05 10 47.7	+2.5
DGTI	Dogotuki	7.55	355	P	P	05 10 51.6	+2.1
NIUE	Niue	10.12	64	P	P	05 11 14.4	-1.6
MARNC	Mare, Loyalty	11.74	279	P	P	05 11 29.8	-3.2
MARNC	Mare, Loyalty	11.74	279	P	P	05 11 33.1	+0.1
PINNC	Pines Island,	12.05	273	P	P	05 11 35.5	-0.8
AFI	Afiamalu	12.31	38	P	P	05 11 38.3	-0.9
	15nm,0.3s,baz=136,slow=8.4,SNR=8.4						
AFI				S	S	05 13 49.5	-3.2
	14nm,0.3s,baz=68,slow=19,SNR=6.7						
OUENC	Ouen Island, N	12.63	274	P	P	05 11 41.5	-0.9
OUENC	Ouen Island, N	12.63	274	P	P	05 11 43.3	+0.8
	59nm,0.9s						
LIFNC	LIFOU	12.63	281	P	P	05 11 40.5	-2.0
LIFNC	LIFOU	12.63	281	P	P	05 11 43.1	+0.6
YATNC	Mamie plateau,	12.65	275	P	P	05 11 44.3	+1.6
OUZ	Omahuta	12.80	206	P	P	05 11 45.8	+1.7
OUZ	Omahuta	12.80	206	P	P	05 11 45.8	+1.8
ONTNC	Ouen Toro	13.01	274	P	P	05 11 44.7	-1.7
DZM	Mont Dzumac	13.06	275	P	P	05 11 46.3	-0.7
	1.8nm,0.3s,baz=249,slow=24,SNR=20						
DZM	Mont Dzumac	13.06	275	P	P	05 11 45.8	-1.3
DZM	Mont Dzumac	13.06	275	P	P	05 11 48.1	+1.1
URZ	Urewera	14.64	191	P	P	05 11 58.7	-4.6
	7.9nm,0.3s,baz=115,slow=22,SNR=24						
URZ				S	S	05 14 36.0	-0.7
	7.1nm,0.3s,baz=51,slow=22,SNR=7.6						
HIZ	Hauiti	15.37	197	P	P	05 12 09.8	-1.1
HIZ	Hauiti	15.37	197	P	P	05 12 13.1	+2.2
	289nm,1.2s						
BKZ	Black Stump Fm	15.63	192	P	P	05 12 13.2	-0.5
BFZ	Birch Farm	17.15	191	P	P	05 12 27.3	-1.6
SNZO	South Karori	18.06	194	P	P	05 12 37.3	0.0
QRZ	Quartz Range	18.18	200	P	P	05 12 38.1	-0.4
TUWZ	Tuamarina	18.35	196	P	P	05 12 38.4	-1.6
BSWZ	Blackbirch Sta	18.64	196	P	P	05 12 42.8	+0.2
DSZ	Denniston Nort	19.25	200	P	P	05 12 47.1	-1.2
LTZ	Lake Taylor	20.06	198	P	P	05 12 53.7	-1.9
INZ	Inchbonnie	20.25	200	P	P	05 12 55.5	-1.7
OXZ	Oxford	20.63	198	P	P	05 12 58.8	-1.9
WVZ	Waitaha Valley	20.79	200	P	P	05 13 02.2	0.0
MQZ	McQueen's Vall	20.82	196	P	P	05 13 01.0	-1.3
RPZ	Rata Peaks	21.27	199	P	P	05 13 06.7	+0.2
RPZ	Rata Peaks	21.27	199	P	P	05 13 06.7	+0.2
RPZ				IAmb	IAmb	05 13 09.2	
	comp=Z,32nm,0.7s						
RPZ	Rata Peaks	21.27	199	P	P	05 13 06.4	-0.1
ARMA	Armidale	26.45	249	P	P	05 13 52.7	-0.3
ARMA				IAmb	IAmb	05 13 54.5	
	comp=Z,19nm,0.7s						
ARMA	Armidale	26.45	249	P	P	05 13 53.3	+0.3
	comp=Z,35nm,0.7s						
EIDS	Eidsvold	26.75	261	P	P	05 13 55.1	-0.4
EIDS				IAmb	IAmb	05 13 56.2	
	comp=Z,21nm,0.6s						
EIDS	Eidsvold	26.75	261	P	P	05 13 54.9	-0.7
	comp=Z,32nm,0.8s						
MGCD	Mangrove Creek	27.36	243	P	P	05 14 01.1	+0.3
	comp=Z,77nm,0.7s						
RK1H	Rockhampton Ha	27.46	265	P	P	05 14 02.4	+0.6
	comp=Z,10nm,0.6s						
SYDH	Sydney Hard Ro	27.78	242	P	P	05 14 04.9	+0.4
	comp=Z,25nm,0.5s						
RMQ	Roma	28.79	258	P	P	05 14 13.8	+0.3
	comp=Z,34nm,0.8s						
CNB	Canberra Magne	29.25	240	P	P	05 14 17.7	+0.3
	comp=Z,41nm,1.4s						
CAN	Canberra	29.54	240	P	P	05 14 20.2	+0.3
CAN				IAmb	IAmb	05 14 21.2	
	comp=Z,23nm,0.8s						
CAN	Canberra	29.54	240	P	P	05 14 20.4	+0.5
CMSA	Cobar Meteorol	31.64	248	P	P	05 14 37.1	-0.9
	comp=Z,39nm,0.8s						
CTA	Charters Tower	31.92	270	P	P	05 14 40.6	+0.1
	comp=Z,46nm,0.3s,baz=92,slow=11,SNR=97						
CTA	Charters Tower	31.92	270	P	P	05 14 40.1	-0.4
	comp=Z,101nm,0.6s						
CTAO	Charters Tower	31.92	270	P	P	05 14 40.7	+0.1
CTAO	Charters Tower	31.92	270	P	P	05 14 40.6	+0.1
QLP	Quilpie	32.84	258	P	P	05 14 47.9	-0.3
	comp=Z,46nm,0.9s						
TOO	Toolangi	32.84	237	P	P	05 14 47.8	-0.4
TOO	Toolangi	32.84	237	P	P	05 14 47.7	-0.4
	comp=Z,24nm,0.6s						
TAU	Tasmania Unive	33.28	227	P	P	05 14 51.3	-0.5
TAU				IAmb	IAmb	05 14 56.1	
	comp=Z,85nm,1.5s						
TAU	Tasmania Unive	33.28	227	P	P	05 14 52.0	+0.2
BRAT	Ballarat	34.04	238	P	P	05 14 58.4	+0.2
	comp=Z,21nm,0.6s						
MTSU	Mount Surprise	34.18	273	P	P	05 14 59.3	-0.4
	comp=Z,48nm,0.8s						
PMG	Port Moresby	34.90	289	P	P	05 15 05.6	-0.1
	comp=Z,33nm,0.6s,baz=126,slow=5.7,SNR=12						
PMG	Port Moresby	34.90	289	P	P	05 15 05.6	-0.1
PMG				IAmb	IAmb	05 15 06.4	
	comp=Z,39nm,0.8s						
STKA	Stephens Creek	35.15	248	P	P	05 15 06.7	-0.9
	comp=Z,6.0nm,0.4s,baz=94,slow=10,SNR=30						
STKA	Stephens Creek	35.15	248	P	P	05 15 07.2	-0.4
STKA	Stephens Creek	35.15	248	P	P	05 15 07.0	-0.6
	comp=Z,2.5nm,0.9s						
ARPS	Mount Arapiles	35.52	240	P	P	05 15 09.9	-0.7
	comp=Z,32nm,0.8s						
INKA	Innaminka	35.88	255	P	P	05 15 15.1	+1.4
	comp=Z,34nm,1.1s						
COEN	Coen	36.55	279	P	P	05 15 19.0	-0.4
COEN	Coen	36.55	279	P	P	05 15 19.0	-0.4
	comp=Z,25nm,1.4s						
HTT	Hallett	37.49	246	P	P	05 15 25.9	-1.1
	comp=Z,35nm,0.8s						
QIS	Mount Isa	37.90	267	P	P	05 15 29.2	-1.3
	comp=Z,7.2nm,0.6s						
LCRK	Leigh Creek	38.01	251	P	P	05 15 30.1	-1.2
	comp=Z,40nm,0.8s						
BBOO	Buckleboo	39.87	247	P	P	05 15 45.4	-0.9
BBOO				IAmb	IAmb	05 15 45.6	
	comp=Z,19nm,0.5s						
BBOO	Buckleboo	39.87	247	P	P	05 15 44.5	-1.8
	comp=Z,28nm,1.0s						
OOD	Oodnadatta	40.34	255	P	P	05 15 49.7	-0.5
	comp=Z,46nm,1.8s						
MULG	Mulgathing	41.61	251	P	P	05 15 58.6	-1.6
	comp=Z,58nm,0.7s						
AS31	Alice Springs	42.48	260	P	P	05 16 06.8	-0.4
ASAR	Alice Springs	42.48	260	P	P	05 16 06.7	-0.6
	comp=Z,18nm,0.5s,baz=96,slow=7.1,SNR=216						
ASAR	Alice Springs	42.48	260	P	P	05 16 06.8	-0.4
WR0	Warramunga Arr	42.66	266	P	P	05 16 07.7	-0.9
WR0				IAmb	IAmb	05 16 08.0	
	comp=Z,26nm,0.5s						
WB2	Warramunga Arr	42.84	266	P	P	05 16 09.2	-0.8
WRAB	Tennant Creek	42.84	266	P	P	05 16 09.2	-0.9
WRAB	Tennant Creek	42.84	266	P	P	05 16 09.0	-1.1
WB0	Warramunga Arr	42.84	266	P	P	05 16 09.2	-0.9
WRA	Warramunga Arr	42.85	266	P	P	05 16 08.6	-1.5
	comp=Z,39nm,0.5s,baz=104,slow=8.5,SNR=29						
WRA	Warramunga Arr	42.85	266	P	P	05 16 09.3	-0.8
JAY	Jayapura	43.91	293	P	P	05 16 17.8	-0.6
	comp=Z,20nm,0.7s,baz=166,slow=2.8,SNR=7.9						
JAY	Jayapura	43.91	293	P	P	05 16 17.9	-0.6
	comp=Z,18nm,1.1s						
KDU	Kakadu	46.72	275	P	P	05 16 38.8	-1.2
	comp=Z,49nm,0.7s						
FORT	Forrest	46.74	249	P	P	05 16 38.8	-1.1
FORT	Forrest	46.74	249	P	P	05 16 38.1	-1.8
	comp=Z,135nm,0.7s						
MTN	Manton Dam	47.89	274	P	P	05 16 47.8	-1.0
MTN				IAmb	IAmb	05 16 48.2	
	comp=Z,34nm,0.8s						
DRS	Darwin Rock St	48.25	275	P	P	05 16 50.1	-1.4
KNRA	Kununurra	49.13	270	P	P	05 16 57.4	-0.6
KNRA				IAmb	IAmb	05 16 58.4	
	comp=Z,44nm,0.8s						
KNRA	Kununurra	49.13	270	P	P	05 16 57.2	-0.8
	comp=Z,70nm,0.8s						
FAKI	Fak Fak	50.99	287	P	P	05 17 11.1	-0.6
FAKI				IAmb	IAmb	05 17 24.9	
	comp=Z,115nm,1.5s						
FITZ	Fitzroy Crossi	51.27	265	P	P	05 17 13.5	-0.2
	comp=Z,14nm,0.4s,baz=136,slow=4.1,SNR=14						
SIJI	Sorong	52.84	288	P	P	05 17 24.9	-0.2
	comp=Z,37nm,0.6s,baz=57,slow=9.8,SNR=9.0						
KLBR	Kellerberrin	55.41	247	P	P	05 17 41.7	-1.3
MEEK	Meekatharra	55.55	253	P	P	05 17 42.8	-1.3
PSA00	Pilbara Seismi	55.60	259	P	P	05 17 43.7	-0.8
PSA00	Pilbara Seismi	55.60	259	P	P	05 17 43.1	-1.4
NWAO	Narrogin (SRO)	55.65	245	P	P	05 17 44.7	0.0
BATI	Baumata	55.66	274	P	P	05 17 46.4	+1.4
	comp=Z,44nm,0.5s,baz=203,slow=2.2,SNR=5.0						
MBWA	Marble Bar	55.81	260	P	P	05 17 45.6	-0.3
MUN	Mundaring	56.65	246	P	P	05 17 50.7	-0.9
MORW	Morawa	57.30	250	P	P	05 17 55.8	-0.3
MORW				IAmb	IAmb	05 17 56.2	
	comp=Z,24nm,0.6s						
MORW	Morawa	57.30	250	P	P	05 17 55.3	-0.8
CASY	Casey	60.34	206	P	P	05 18 15.9	+0.1
GIRL	Giralia	60.35	257	P	P	05 18 17.6	+0.9
TOLI2	Tolitoli	63.00	284	P	P	05 18 33.3	-0.8
TOLI2				IAmb	IAmb	05 18 35.8	
	comp=Z,24nm,0.8s						
JAGI	Jajag, Banyuwa	65.01	272	P	P	05 18 46.1	-0.8
JAGI				IAmb	IAmb	05 18 46.4	
	comp=Z,34nm,1.1s						
QSPA	South Pole Qui	66.22	180	P	P	05 18 55.6	+1.8
	comp=Z,1.9nm,0.6s,baz=73,slow=3.4,SNR=8.0						
QSPA	South Pole Qui	66.22	180	P	P	05 18 52.8	-1.0
UGM	Wanagama	68.54	271	P	P	05 19 08.7	-0.2
KKM	Kota Kinabalu	69.31	287	P	P	05 19 14.2	+0.6
KKM				IAmb	IAmb	05 19 14.6	
	comp=Z,13nm,0.5s						
KSM	Kuching	72.53	280	P	P	05 19 33.2	+0.8
KSM				IAmb	IAmb	05 19 33.5	
	comp=Z,19nm,0.7s						
NJ2	Nanjing	80.97	311	*e*P	P	05 20 19.0	+0.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
QIZ	Qiongzhong	80.98	295	P	P	05 20 16.9	-1.7
QIZ				pP	pP	05 22 10.4	+2.3
QIZ				S	S	05 29 44.5	-1.0
QIZ				pmax	pmax		
	comp=Z,130nm,4.2s						
SNAA	Sanae	84.70	179	P	P	05 20 37.2	+0.7
VNA3	Neumayer Olymp	84.89	177	P	P	05 20 38.3	+1.0
VNA2	Neumayer--Watz	85.31	177	P	P	05 20 40.6	+1.2
	baz=196,slow=4.3						
VNA1	Neumayer--Stat	85.55	177	P	P	05 20 41.7	+1.2
XAN	Xi'an	89.06	308	⇑P	P	05 21 00.8	+3.1
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CMAR	Chiang Mai Arr	89.93	290	P	P	05 21 04.5	+2.5
	comp=Z,1.5nm,0.3s,baz=141,slow=3.4,SNR=12						
TXAR	Lajitas Array	90.04	58	P	P	05 21 05.8	+3.4
	comp=Z,0.3nm,0.7s,baz=199,slow=5.1,SNR=5.0						
HHC	Hu-ho-hao-te	90.70	315	*e*P	P	05 21 03.8	-1.4
HHC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,87nm,7.4s						
KKAR	Karatay Array	120.19	307		PKiKP	05 26 50.3	+0.4

ARCES	ARCESS Array B	131.94	348	PKP	PKiKP	05 27 12.9	+0.4
	comp=Z,2.7nm,0.8s,baz=41,slow=3.9,SNR=7.2						
FINES	FINESS Array B	138.55	342	PKhKP	PKPpre	05 27 19.1	
	comp=Z,3.4nm,0.9s,baz=126,slow=2.6,SNR=4.8						
MARD	Mardin	143.09	301	PKPdf	PKPbc	05 27 31.9	+0.9
AKASG	Malin Array Be	145.18	328	PKPbc	PKPab	05 27 37.5	-0.3
	comp=Z,4.1nm,0.7s,baz=42,slow=4.3,SNR=15						
SORM	Soroca	147.23	325	⇑P	PKiKP	05 27 43.6	-0.8
BRTR	Keskin Array B	147.91	307	PKPbc	PKiKP	05 27 45.8	-0.5
	comp=Z,2.0nm,0.6s,baz=158,slow=4.2,SNR=6.3						
CFR	Carcaliu	149.09	320	⇑P	PKiKP	05 27 48.7	+0.4
TPGR	Topolog	149.10	320	⇑P	PKiKP	05 27 48.6	+0.2
BUR08	Bucovina Ar. S	149.17	327		PKPbc	05 27 47.7	0.0
BURAR	Bucovina Array	149.18	326	⇑P	PKiKP	05 27 50.7	+2.1
HARR	Harsova	149.48	320	⇑P	PKiKP	05 27 50.3	+1.1
MANR	Mangalia	149.56	318	⇑P	PKiKP	05 27 50.1	+0.7
LEF	Lefka	149.77	299	⇑P	PKiKP	05 27 50.6	+0.6
TRPA	Tarpa	150.12	330	⇑P	PKiKP	05 27 51.0	+0.7
DOPR	Dopca	150.16	324	⇑P	PKiKP	05 27 51.3	+0.8
CJR	Cluj-Napoca	150.61	327	⇑P	PKiKP	05 27 52.6	+1.1
LANS	Liptovska Anna	150.67	334	*e*PKP	PKiKP	05 27 53.9	+2.4
OSTC	Ostas	150.68	339	⇑*e*PKP	PKiKP	05 27 52.6	+1.1
VOIR		150.68	323	⇑P	PKiKP	05 27 52.2	+0.5
CHVC	Chvalec	150.71	340	⇑*e*PKP	PKiKP	05 27 53.0	+1.5
UPC	Upice	150.79	339	⇑*e*PKP	PKiKP	05 27 53.3	+1.6
DPC	Dobruska-Polom	150.82	339	⇑*e*PKP	PKiKP	05 27 53.1	+1.3
MORC	Moravsky Berou	150.89	337	⇑P	PKiKP	05 27 53.1	+1.1
KRLC	Kraliky	150.91	338	⇑*e*PKP	PKiKP	05 27 52.9	+0.9
KRLC				*e*PKPAB	PKPab	05 28 02.3	+1.1
CLL	Collm	150.94	344	*e*PKPdf	PKPdf	05 27 45.0	-0.3
CLL				*i* PKPbc	PKiKP	05 27 53.4	+1.5
	comp=Z,8.0nm,0.7s						
CLL				*e*pPKPab	pPKPab	05 29 55.0	-0.9
CLL	Collm	150.94	344		PKiKP	05 27 53.7	+1.8
ARR	Arges	150.95	324	⇑P	PKiKP	05 27 54.5	+2.3
DRGR		150.99	328	⇑P	PKiKP	05 27 53.1	+0.7
PVCC	Panska Ves	151.22	341	⇑*e*PKP	PKiKP	05 27 54.4	+1.9
VRAC	Vranov	151.62	338	⇑P	PKPab	05 28 06.4	+2.1
SIRR	Siria	151.88	328	⇑P	PKiKP	05 27 55.3	+1.2
GZR	Gura Zlata	151.92	325	⇑P	PKiKP	05 27 54.6	+0.3
BZS	Buzias	152.36	327	⇑P	PKiKP	05 27 56.4	+1.3
HERR	Herculane	152.46	325	⇑P	PKiKP	05 27 56.0	+0.7
KHC	Kasperske Hory	152.75	341	⇑*e*PKP	PKiKP	05 27 57.0	+1.2
KHC				*e*PKPAB	PKPab	05 28 11.3	+2.2
CKRC	Cesky Krumlov	152.80	340	⇑*e*PKP	PKiKP	05 27 58.5	+2.6
GERES	GERESS Array B	152.97	341	PKPbc	PKiKP	05 27 57.5	+1.1
	comp=Z,0.5nm,0.6s,baz=42,slow=2.2,SNR=5.1						
BCLA	Clavier	153.22	353	*d*PKiKP	PKPbc	05 27 56.2	-0.4
VTS	Vitosha	153.46	320	⇑P	PKPab	05 28 14.8	+2.4
RCHB	Rochefort	153.49	353	*d*PKiKP	PKiKP	05 27 58.4	+1.2
DOU	Dourbes	153.62	354	*d*PKiKP	PKPbc	05 27 56.5	-1.0
TIP	Timpagrande	159.42	322	⇑P	PKPdf	05 27 50.8	-6.3
TORD	Torodi Ar. Bea	169.28	186	PKP	PKPdf	05 28 06.5	+0.2
	comp=Z,0.8nm,1.0s,baz=323,slow=1.8,SNR=4.6						
TORD				PKPab	PKPab	05 29 23.1	+1.1
	comp=Z,1.1nm,0.6s,baz=180,slow=3.9,SNR=7.6						
TORD	Torodi Ar. Bea	169.28	186		PKPdf	05 28 07.3	+1.1
TORD				PKPab	PKPab	05 29 23.4	+1.4

IDC ***24*** *05:11:51.4±1.7, 5°.53S×129°.95E, h0^{km}, mb4.1/6, mb1 4.2/9, mb1mx3.9/41, mbtmp4.1/9, ML3.9/3, MS3.3/6, Ms1 3.3/6, ms1mx3.1/30, Error ellipse: s-maj=48.4km s-min=28.2km az=97.0*

NEIC ***24*** *05:11:56.1±1.3, 5°.12S±0°.03×129°.85E±0°.07, h11^{km}±5^{km}, mb4.5/33, Error ellipse: s-maj=9.8km s-min=3.4km az=100.0*

DJA ***24*** *05:11:59.0±2.5, 5°S±13°×13°0E±°, h20^{km}±24^{km}, M4.3/7, mb4.7/4, mB4.8/3, MLv4.1/7, Mw(mB)4.1/3*

ISC 24 05:11:58.9±0.4, **5°.17S**±0°.05×**129°.92E**±0°.06, **h35^{km}, n73, σ2^{s}20**/66, **mb4.4**/20, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.64	359	P	Pn	05 12 14.4	+2.8
MSAI	Masohi	2.06	331	P	Pn	05 12 32.8	+1.7
SAUI	Saumlaki	3.11	154	Pn	Pn	05 12 46.7	+1.2
FAKI	Fak Fak	3.22	46	P	Pn	05 12 47.7	+0.6
FAKI	Fak Fak	3.22	46	Pn	Pn	05 12 46.3	-0.8
FAKI	Fak Fak	3.22	46	P	Pn	05 12 47.5	+0.4
SIJI	Sorong	4.48	18	Pn	Pn	05 13 04.5	+0.2
	8.9nm,0.3s,baz=215,slow=22,SNR=14						
SIJI				Sn	Sn	05 13 57.9	+2.6
	9.3nm,0.3s,baz=129,slow=23,SNR=5.8						
SIJI				LR	LR	05 15 27.8	
	comp=Z,624nm,18.8s,baz=90,slow=45						
SWI	Sorong	4.48	17	P	Pn	05 13 05.1	+0.7
SANI	Sanana	5.00	308	P	Pn	05 13 13.6	+2.1
	0.2nm881nm78nm,0.9s						
SANI	Sanana	5.00	308	P	Pn	05 13 13.3	+1.8
TNTI	Ternate	6.43	337	Pn	Pn	05 13 29.5	-1.6
SOEI	Soe	7.22	231	Pn	Pn	05 13 40.6	-1.6
MTN	Manton Dam	7.72	171		Pn	05 13 49.5	+0.6
BATI	Baumata	7.97	231	LR	LR	05 16 11.2	
	comp=Z,213nm,19.9s,baz=40,slow=33						
LUWI	Luwuk	8.23	300	Pn	Pn	05 13 53.7	-2.2
GTOI	Gorontalo	8.99	310	P	Pn	05 14 10.5	+4.1
	234nm24nm,0.9s						
MRSI	Marisa	9.75	305	P	Pn	05 14 19.4	+2.7
KAPI	Kappang	10.13	270	LR	LR	05 18 01.2	
	comp=Z,229nm,20.9s,baz=114,slow=36						
TOLI2	Tolitoli	11.06	304	Pn	Pn	05 14 32.3	-2.4
FITZ	Fitzroy Crossi	13.51	198	Pn	Pn	05 15 00.3	-7.9
	0.6nm,0.3s,baz=18,slow=11,SNR=9.8						
FITZ				LR	LR	05 20 57.8	
	comp=Z,153nm,18.3s,baz=62,slow=42						
WB0	Warramunga Arr	15.15	164		Pn	05 15 30.7	+0.3
WRAB	Tennant Creek	15.29	164		Pn	05 15 31.1	-1.2
WRA	Warramunga Arr	15.30	164	Pn	Pn	05 15 23.1	-9.3
	0.4nm,0.3s,baz=339,slow=13,SNR=17						
WRA				LR	LR	05 21 42.6	
	comp=Z,112nm,22.0s,baz=30,slow=40						
WRA	Warramunga Arr	15.30	164		Pn	05 15 33.8	+1.4
WB2	Warramunga Arr	15.30	164		Pn	05 15 33.3	+0.9
WB2				IAmb	IAmb	05 15 48.7	
	comp=Z,11nm,0.7s						
MYLDM	Lahad Datu	15.36	312	Pn	Pn	05 15 31.8	-1.3
MYLDM				IAmb	IAmb	05 15 56.9	
	comp=Z,45nm,1.4s						
WR0	Warramunga Arr	15.37	163		Pn	05 15 34.0	+0.7
WR0				IAmb	IAmb	05 15 36.5	
	comp=Z,14nm,1.0s						
COEN	Coen	15.71	125	Pn	Pn	05 15 36.6	-1.1
COEN				IAmb	IAmb	05 15 49.4	
	comp=Z,42nm,1.4s						
JAGI	Jajag, Banyuwa	15.99	257		Pn	05 15 42.7	+1.3
JAGI				IAmb	IAmb	05 16 06.7	
	comp=Z,63nm,1.4s						
PMG	Port Moresby	17.61	105	Pn	P	05 16 01.2	-1.2
KKM	Kota Kinabalu	17.64	309		Pn	05 16 01.6	-0.6
QIS	Mount Isa	17.96	149	P	P	05 16 12.1	+5.8
	comp=Z,19nm,1.1s						
ASAR	Alice Springs	18.79	169	S	Sn	05 19 37.7	-7.7
	baz=348,slow=20,SNR=4.0						
SBUM	Sibu	19.23	293	P	P	05 16 17.8	-2.5
WRKA	Warakurna	19.82	184	P	Pn	05 16 32.9	+4.5
KSM	Kuching	20.67	288	P	P	05 16 34.5	-1.5
KSM				IAmb	IAmb	05 16 41.0	
	comp=Z,21nm,1.1s						
CTAO	Charters Tower	21.73	134	P	P	05 16 47.3	-0.1
CTAO				IAmb	IAmb	05 16 57.4	
	comp=Z,16nm,0.9s						
CTAO	Charters Tower	21.73	134	P	P	05 16 54.1	+6.7
INKA	Innaminka	24.70	157	P	P	05 17 23.6	+6.8
	comp=Z,72nm,1.1s						
QLP	Quilpie	25.30	149	P	P	05 17 28.8	+6.4
	comp=Z,28nm,1.0s						
LCRK	Leigh Creek	26.33	164	P	P	05 17 38.9	+7.3
	comp=Z,26nm,0.8s						
BLDU	Ballidu	28.20	205	P	P	05 17 48.8	+0.4
NWAO	Narrogin (SRO)	30.05	202	P	P	05 18 03.8	-1.0
NWAO				IAmb	IAmb	05 18 30.3	
	comp=Z,5.4nm,0.8s						
CMSA	Cobar Meteorol	30.12	152	P	P	05 18 11.6	+6.2
	comp=Z,17nm,0.9s						
ARMA	Armidale	32.39	143	P	P	05 18 25.9	+0.3
LHI	Lord Howe Isla	37.86	137	P	P	05 19 12.8	+0.2
CMAR	Chiang Mai Arr	38.52	308	P	P	05 19 17.1	-1.2
	comp=Z,1.6nm,0.3s,baz=142,slow=7.7,SNR=22						
CMAR	Chiang Mai Arr	38.52	308	P	P	05 19 17.3	-1.0
CHTO	Chiang Mai	38.72	309	P	P	05 19 19.1	-0.9
CHTO				IAmb	IAmb	05 19 21.5	
	comp=Z,11nm,0.8s						
MJAR	Matsushiro Arr	42.21	10	P	P	05 19 48.8	+0.2
	comp=Z,0.9nm,0.2s,baz=181,slow=7.2,SNR=1.4						
MJAR	Matsushiro Arr	42.21	10	P	P	05 19 47.5	-1.0
KSRS	Korea Array	42.45	358	LR	LR	05 37 09.7	
	comp=Z,23nm,20.5s,baz=185,slow=36						
INCN	Inchon	42.54	356	P	P	05 19 51.1	-0.2
SHL	Shillong	47.92	311	P	P	05 20 33.9	-0.5
SHL				IAmb	IAmb	05 20 35.0	
	comp=Z,6.6nm,0.9s						
SONM	Songino Array	56.69	341	P	P	05 21 39.1	0.0
	comp=Z,1.6nm,1.1s,baz=162,slow=4.9,SNR=5.2						
SONM	Songino Array	56.69	341	P	P	05 21 39.7	+0.6
KAAM	Kaadhehdhoo	57.13	274	P	P	05 21 42.9	+0.2
CASY	Casey	62.49	189	P	P	05 22 19.2	+0.7
PET	Petropavlovsk	62.86	19	P	P	05 22 20.6	-0.6
NIL	Nilore	65.97	310	P	P	05 22 41.4	-0.6
NIL				IAmb	IAmb	05 22 42.5	
	comp=Z,4.1nm,0.8s						
MK31	Makanchi Array	66.66	326	P	P	05 22 46.1	0.0
MK31				IAmb	IAmb	05 22 47.6	
	comp=Z,4.0nm,1.1s						
MKAR	Makanchi Array	66.66	326	P	P	05 22 46.7	+0.5
	comp=Z,1.2nm,0.6s,baz=138,slow=7.5,SNR=11						
MKAR	Makanchi Array	66.66	326	P	P	05 22 46.0	-0.2
MAKZ	Makanchi	66.84	326	P	P	05 22 47.4	+0.1
MAKZ				IAmb	IAmb	05 23 11.8	
	comp=Z,3.3nm,0.9s						
KBL	Kabul	69.54	310	P	P	05 23 04.2	-0.5
KBL				IAmb	IAmb	05 23 05.3	
	comp=Z,3.2nm,0.7s						
ZAA0	Zalesovo Array	69.92	334	P	P	05 23 06.2	-0.2
ZAA0				IAmb	IAmb	05 23 22.2	
	comp=Z,3.8nm,1.2s						
ZALV	Zalesovo Beam	69.92	334	P	P	05 23 06.5	+0.2
	comp=Z,0.3nm,0.3s,baz=118,slow=8.6,SNR=3.8						
ZALV	Zalesovo Beam	69.92	334	P	P	05 23 06.3	0.0
KURBB	Kurchatov Arra	70.92	328	P	P	05 23 12.5	0.0
	comp=Z,1.8nm,0.8s,baz=128,slow=5.3,SNR=19						
KURK	Kurchatov	70.93	328	P	P	05 23 12.7	+0.1
KURK				IAmb	IAmb	05 23 28.4	
	comp=Z,5.9nm,1.0s						
CHGR	Chuyangaron	71.02	314	P	P	05 23 13.4	-0.2
KKAR	Karatay Array	71.92	318	P	P	05 23 19.0	+0.2
VNDA	Vanda	74.26	173	P	P	05 23 34.4	+2.4

IDC ***24*** *05:11:52.4±1.9, 32°.85S×178°.53W, h0^{km}, mb4.0/3, mb1 4.2/4, mb1mx3.7/32, mbtmp4.1/4, ML4.1/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/29, Error ellipse: s-maj=47.1km s-min=37.4km az=74.0*

WEL ***24*** *05:11:55.6±0.7, 32°S±13°×18°0W±3°2, h33^{km}, M4.3/11, mB4.8/7, ML4.7/12, MLv4.6/11, Mw(mB)4.0/7, Error ellipse: s-maj=0.0km s-min=0.0km az=111.7*

ISC 24 05:12:02.4±1.3, **32°.9S**±0°.1×**179°.4W**±0°.2, **h35^{km}, n26, σ3^{s}06**/36, **mb3.9**/3, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.88	20	S	Sn	05 13 29.9	-14
MXZ	Matakaoa Point	4.97	201	P	Pn	05 13 11.8	-2.8
MXZ				S	Sn	05 14 14.3	+3.5
WMGZ	Waiomatatini S	5.18	199	P	Pn	05 13 16.7	-0.7
WMGZ				S	Sn	05 14 19.7	+3.8
HAZ	Te Kaha	5.32	205	P	Pn	05 13 18.8	-0.5
HAZ				S	Sn	05 14 25.9	+6.5
PKGZ	Pakihiroa	5.34	202	P	Pn	05 13 15.7	-4.1
PUZ	Puketiti	5.46	200	P	Pn	05 13 18.3	-3.0
PUZ				S	Sn	05 14 23.8	+0.9
RUGZ	Raukumara Rang	5.54	204	P	Pn	05 13 21.1	-1.5
RUGZ				S	Sn	05 14 29.4	+4.3
TWGZ	Tauwhareparae	5.64	201	P	Pn	05 13 23.1	-0.7
TWGZ				S	Sn	05 14 28.5	+1.2
CNGZ	Carnagh Statio	5.86	198	P	Pn	05 13 21.4	-5.3
CNGZ				S	Sn	05 14 35.5	+2.8
TKGZ	Te Karaka	5.92	201	P	Pn	05 13 25.7	-1.9
TKGZ				S	Sn	05 14 35.8	+1.7
MWZ	Matawai	5.93	204	P	Pn	05 13 25.5	-2.2
MWZ				S	Sn	05 14 36.3	+1.9
URZ	Urewera	6.01	207	Pn	Pn	05 13 27.7	-1.1
	4.5nm,0.3s,baz=290,slow=6.3,SNR=9.9						
URZ	Urewera	6.01	207	P	Pn	05 13 27.8	-1.1
URZ				S	Sn	05 14 32.8	-3.6
RIGZ	Rimuhau	6.19	201	P	Pn	05 13 29.2	-2.2
RIGZ				S	Sn	05 14 40.0	-1.0
RAHZ	Arahi	6.60	204	P	Pn	05 13 35.5	-1.4
RAHZ				S	Sn	05 14 48.0	-3.0
MTHZ	Maungataniwha	6.63	206	P	Pn	05 13 36.8	-0.6
NMHZ	Naumai	6.86	205	P	Pn	05 13 39.0	-1.6
NMHZ				S	Sn	05 14 51.0	-6.4
DZM	Mont Dzumac	16.54	307	LR	LR	05 21 10.4	
	comp=Z,134nm,18.0s,baz=142,slow=33						
ASAR	Alice Springs	41.83	270	P	P	05 19 50.5	+1.4
	1.2nm,0.5s,baz=110,slow=8.3,SNR=4.7						
WRA	Warramunga Arr	43.05	276	P	P	05 20 00.1	+1.1
	1.5nm,0.4s,baz=114,slow=7.9,SNR=6.8						
QSPA	South Pole Qui	57.18	180	P	P	05 21 41.4	-4.3
	0.4nm,0.4s,baz=18,slow=3.2,SNR=1.3						
SNAA	Sanae	75.66	179	P	P	05 23 46.9	+3.3
VNA3	Neumayer Olymp	75.86	177	P	P	05 23 48.8	+4.1
VNA2	Neumayer--Watz	76.28	177	P	P	05 23 50.9	+3.9
	baz=199,slow=3.5						
VNA1	Neumayer--Stat	76.51	177	P	P	05 23 52.1	+3.7
FINES	FINESS Array B	147.06	338	PKPbc	PKPdf	05 31 36.2	-2.4
	1.7nm,0.5s,baz=33,slow=2.6,SNR=13						

NEIC ***24*** *05:18:42.6±1.8, 9°.9S±0°.1×67°.18E±0°.04, h10^{km}±1^{km}, mb4.6/26, Error ellipse: s-maj=19.6km s-min=5.8km az=174.0*

IDC ***24*** *05:18:42.2±0.8, 9°.96S×67°.14E, h0^{km}, mb3.9/10, mb1 4.0/10, mb1mx3.7/38, mbtmp3.9/10, MS4.1/28, Ms1 4.1/28, ms1mx4.0/47, Error ellipse: s-maj=31.0km s-min=20.0km az=167.0*

GCMT ***24*** *05:18:46.6±0.1, 9°.33S±0°.01×66°.85E±0°.01, h22^{km}±1^{km}, MW5.2/132, Moment Tensor Solution. s65,c94; s132,c209; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.07±.02; M$_{\theta\theta}$-0.86±.02; M$_{\phi\phi}$0.92±.02; M$_{r\theta}$-0.15±.03; M$_{\theta\phi}$0.20±.02; M$_{\phi r}$0.07±.03; Best double couple: M$_{0}$0.93300×10^{17} NP1:φ$_{s}$51.00000°, δ80.00000°, λ-6.00000°. NP2:φ$_{s}$142.00000°, δ84.00000°, λ-170.00000°. Principal axes: T 0.9530, Plg3.0000°, Azm276.0000°; N -0.0410, Plg79.0000°, Azm171.0000°; P -0.9120, Plg11.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 05:18:42.6±0.5, **9°.88S**±0°.10×**67°.14E**±0°.07, **h10^{km}, n69, σ1^{s}56**/43, **mb4.4**/20, **MS4.2**/28, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	Diego Garcia	5.80	65	Pn	Pn	05 20 07.4	-1.3
MSEY	Mahe Island	12.66	293	Pn	Pn	05 21 40.9	-2.1
OPO	Ambohidratompo	21.16	244	P	P	05 23 27.8	-0.5
	3.4nm,0.9s,baz=72,slow=14,SNR=3.6						
ABPO	Ambohimpanom	21.29	243	P	P	05 23 28.6	-1.2
ABPO				IAmb	IAmb	05 23 39.1	
	comp=Z,44nm,1.1s						
PALK	Pallekele	21.75	39	LR	LR	05 29 50.6	
	comp=Z,616nm,19.2s,baz=323,slow=31						
VOI	Vohitsoka	22.89	236	P	P	05 23 46.3	-0.5
VOI				IAmb	IAmb	05 24 02.4	
	comp=Z,24nm,1.4s						
AIS	Amsterdam Isla	29.34	163	P	P	05 24 43.8	-1.8
KIBK	Kibwezi	29.86	283	P	P	05 24 49.4	-1.2
KMBO	Kilima Mbogo	30.96	284	P	P	05 24 56.4	-4.2
KMBO				IAmb	IAmb	05 25 00.2	
	comp=Z,9.8nm,1.6s						
ATD	Arta Tunnel	32.18	311	LR	LR	05 35 23.5	
	comp=Z,621nm,20.1s,baz=123,slow=31						
PBA	Port Blair	33.25	51	P	P	05 25 15.6	-4.7
LODK	Lodwar	34.30	291	P	P	05 25 28.9	-0.7
LSZ	Lusaka	38.35	258	P	P	05 26 04.0	-0.3
	comp=Z,11nm,0.8s,baz=72,slow=14,SNR=7.5						
LSZ	Lusaka	38.35	258	P	P	05 26 03.8	-0.5
LSZ				IAmb	IAmb	05 26 08.9	
	comp=Z,13nm,0.9s						
LEM	Lembang	40.15	89	LR	LR	05 40 35.8	
	comp=Z,224nm,19.0s,baz=238,slow=33						
CMAR	Chiang Mai Arr	42.17	48	P	P	05 26 36.6	+0.9
	comp=Z,1.4nm,0.3s,baz=236,slow=10,SNR=5.1						
CMAR				LR	LR	05 42 10.3	
	comp=Z,120nm,18.2s,baz=276,slow=33						
BOSA	Boshof	43.43	239	LR	LR	05 42 36.0	
	comp=Z,232nm,19.8s,baz=80,slow=33						
LSA	Lhasa	45.65	30	P	P	05 27 04.0	-0.1
SBUM	Sibu	46.54	77	P	P	05 27 08.9	-1.9
SBUM				IAmb	IAmb	05 27 14.8	
	comp=Z,8.0nm,1.5s						
GEYT	Alibeck	48.30	350	LR	LR	05 45 40.4	
	comp=Z,167nm,18.2s,baz=205,slow=33						
H01W3	Cape Leeuwin H	49.49	128	T	T	06 21 22.2	
	baz=289,slow=75,SNR=130						
H01W2	Cape Leeuwin H	49.50	128	T	T	06 21 22.7	
	baz=289,slow=75,SNR=144						
MORW	Morawa	49.50	120	P	P	05 27 34.0	+0.3
H01W1	Cape Leeuwin H	49.51	128	T	T	06 21 23.9	
	baz=289,slow=75,SNR=133						
BTK	Batken	49.80	4	P	P	05 27 36.9	+1.2
BTK				IAmb	IAmb	05 27 53.1	
	comp=Z,9.0nm,1.2s						
NWAO	Narrogin (SRO)	51.40	124	P	P	05 27 47.1	-0.8
NWAO				IAmb	IAmb	05 27 51.7	
	comp=Z,6.9nm,0.8s						
FITZ	Fitzroy Crossi	57.16	105	LR	LR	05 49 14.1	
	comp=Z,137nm,21.0s,baz=311,slow=32						
MAW	Mawson	57.72	182	LR	LR	05 47 24.6	
	comp=Z,209nm,21.5s,baz=40,slow=30						
KBZ	Khabaz	57.73	339	LR	LR	05 52 58.8	
	comp=Z,86nm,18.6s,baz=172,slow=36						
MK31	Makanchi Array	58.02	12	P	P	05 28 36.3	+0.7
MKAR	Makanchi Array	58.02	12	P	P	05 28 35.7	+0.1
	comp=Z,0.3nm,0.4s,baz=223,slow=9.8,SNR=1.8						
MKAR	Makanchi Array	58.02	12	P	P	05 28 35.5	-0.2
BRTR	Keskin Array B	58.32	330	LR	LR	05 52 01.1	
	comp=Z,301nm,20.0s,baz=146,slow=34						
ABKAR	Akbulak array	59.22	355	P	P	05 28 41.4	-2.6
KURK	Kurchatov	61.17	8	P	P	05 28 57.3	+0.1
KURK				IAmb	IAmb	05 28 59.1	
	comp=Z,4.1nm,1.2s						
TIRR	Tirgusor	64.44	330	P	P	05 29 18.7	-0.4
ASAR	Alice Springs	64.89	111	P	P	05 29 24.3	+1.6
	comp=Z,0.6nm,0.9s,baz=280,slow=6.1,SNR=3.4						
ASAR				LR	LR	05 56 39.9	
	comp=Z,153nm,18.3s,baz=298,slow=35						
ASAR	Alice Springs	64.89	111	P	P	05 29 21.2	-1.4
AS31	Alice Springs	64.89	111	P	P	05 29 22.6	-0.1
ZALV	Zalesovo Beam	65.33	11	LR	LR	05 55 37.6	
	comp=Z,175nm,21.6s,baz=102,slow=34						
WRA	Warramunga Arr	65.36	107	P	P	05 29 27.2	+1.5
	comp=Z,2.3nm,1.1s,baz=272,slow=6.0,SNR=4.3						
WRA				LR	LR	05 54 18.0	
	comp=Z,294nm,21.9s,baz=310,slow=33						
KBN	Korca	65.97	323	P	P	05 29 29.5	+0.2
KBN				IAmb	IAmb	05 29 49.3	
	comp=Z,10nm,1.3s						
SONM	Songino Array	67.17	28	P	P	05 29 38.3	+1.4
	comp=Z,1.2nm,0.9s,baz=220,slow=5.5,SNR=6.6						
SONM				LR	LR	05 58 25.0	
	comp=Z,156nm,20.2s,baz=226,slow=35						
SONM	Songino Array	67.17	28	P	P	05 29 36.2	-0.7
SONM				IAmb	IAmb	05 29 47.2	
	comp=Z,9.3nm,1.6s						
BURAR	Bucovina Array	68.25	331	P	P	05 29 43.6	-0.1
AKASG	Malin Array Be	68.73	335	P	P	05 29 49.2	+2.8
	comp=Z,0.4nm,0.4s,baz=142,slow=5.5,SNR=1.5						
AKASG				LR	LR	05 58 16.2	
	comp=Z,73nm,21.4s,baz=145,slow=34						
AKBB	Malin Array Si	68.73	335	P	P	05 29 46.9	+0.4
AKBB				IAmb	IAmb	05 30 07.0	
	comp=Z,11nm,1.4s						
TORD	Torodi Ar. Bea	68.88	288	P	P	05 29 51.0	+2.9
	comp=Z,1.2nm,1.1s,baz=121,slow=3.3,SNR=3.8						
TORD				LR	LR	05 57 58.8	
	comp=Z,358nm,20.2s,baz=95,slow=34						
KEST	Kesra	70.84	313	LR	LR	05 59 42.9	
	comp=Z,121nm,18.5s,baz=326,slow=35						
STKA	Stephens Creek	71.69	120	LR	LR	05 59 09.6	
	comp=Z,174nm,18.6s,baz=241,slow=34						
MORC	Moravsky Berou	73.48	329	P	P	05 30 16.2	+0.8
MORC				IAmb	IAmb	05 30 19.4	
	comp=Z,10.0nm,1.6s						
KSRS	Korea Array	73.77	46	LR	LR	06 03 14.8	
	comp=Z,100nm,18.6s,baz=243,slow=36						
KLMR	Klimovskoe	73.81	346	*e*	P	05 30 17.3	+0.3
KLMR				AMP		05 30 20.9	
	comp=Z,15nm,1.2s						
GERES	GERESS Array B	74.94	327	LR	LR	06 02 43.1	
	comp=Z,54nm,18.6s,baz=144,slow=35						
VNA1	Neumayer--Stat	75.90	199	P	P	05 30 38.5	+9.4
VNA3	Neumayer Olymp	76.46	199	P	P	05 30 35.4	+3.1
FINES	FINESS Array B	78.03	341	LR	LR	06 05 13.2	
	comp=Z,208nm,18.8s,baz=136,slow=36						
MDJ	Mudanjiang	78.11	40	P	P	05 30 42.0	+0.1
NRIK	Noril'sk	80.31	7	LR	LR	06 08 14.6	
	comp=Z,200nm,18.2s,baz=196,slow=37						
MJAR	Matsushiro Arr	81.01	50	LR	LR	06 06 30.2	
	comp=Z,30nm,19.6s,baz=215,slow=35						
VNDA	Vanda	81.44	167	LR	LR	06 03 45.2	
	comp=Z,142nm,19.1s,baz=292,slow=33						
ESDC	Sonseca Array	82.07	313	P	P	05 31 06.8	+3.3
	comp=Z,0.4nm,0.7s,baz=90,slow=5.1,SNR=2.7						
ESDC				LR	LR	06 05 29.3	
	comp=Z,66nm,19.2s,baz=210,slow=34						
NOA	NORSAR Array B	83.12	336	LR	LR	06 09 07.6	
	comp=Z,47nm,18.2s,baz=0.0,slow=36						
ARCES	ARCESS Array B	84.29	346	LR	LR	06 08 52.0	
	comp=Z,94nm,20.0s,baz=285,slow=36						
YSS	Yuzh-Sakhalins	87.51	42	P	P	05 31 29.5	-1.1
PETK	Petropavlovsk-	98.16	38	LR	LR	06 17 37.5	
	comp=Z,48nm,21.8s,baz=257,slow=36						
YKA	Yellowknife Ar	127.47	1	PKP	PKiKP	05 37 50.0	+1.9
	comp=Z,0.3nm,0.9s,baz=337,slow=2.5,SNR=3.9						
PDAR	Pinedale Array	147.11	356	PKPbc	PKPbc	05 38 26.9	+0.4
	comp=Z,0.2nm,0.6s,baz=359,slow=3.6,SNR=2.0						
NVAR	Mina Array Bea	151.16	9	PKPbc	PKPbc	05 38 36.9	0.0
	comp=Z,1.0nm,0.8s,baz=301,slow=1.2,SNR=5.7						

IDC ***24*** *05:24:31.4±1.8, 9°.11S×67°.90E, h0^{km}, mb3.8/6, mb1 4.0/6, mb1mx3.5/39, mbtmp3.8/6, MS3.5/1, Ms1 3.5/1, ms1mx2.9/46, Error ellipse: s-maj=57.8km s-min=31.5km az=60.0*

NEIC ***24*** *05:24:33.8±1.6, 7°.5S±0°.1×67°.22E±0°.06, h10^{km}±2^{km}, mb4.5/9, Error ellipse: s-maj=22.6km s-min=4.5km az=155.0*

ISC 24 05:24:33.5±0.7, **7°.6S**±0°.2×**67°.17E**±0°.07, **h10^{km}, n25, σ1^{s}59**/17, **mb4.1**/11, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	Diego Garcia	5.24	88	Pn	Pn	05 25 50.9	-1.2
DGAR				Sn	Sn	05 26 52.8	+0.2
MSEY	Mahe Island	11.98	283		Pn	05 27 25.3	+0.8
RER	Riviere de l’E	17.43	218	P	P	05 28 39.3	+1.0
VOI	Vohitsoka	24.26	232	P	P	05 29 51.7	+0.5
VOI				IAmb	IAmb	05 29 58.3	
	comp=Z,28nm,1.6s						
RPSI	Rantau Prapat	33.29	73	P	P	05 31 10.4	-1.3
RPSI				IAmb	IAmb	05 31 20.4	
	comp=Z,2.9nm,0.8s						
PSI	Prapat	33.32	73	LR	LR	05 43 16.6	
	comp=Z,70nm,19.6s,baz=306,slow=34						
LODK	Lodwar	33.57	288	P	P	05 31 13.8	-0.4
KULM	Kulim	35.77	70	P	P	05 31 31.7	-1.5
KULM				IAmb	IAmb	05 31 38.3	
	comp=Z,9.8nm,1.1s						
IPM	Ipoh	35.85	72	P	P	05 31 32.3	-1.6
IPM				IAmb	IAmb	05 31 53.5	
	comp=Z,12nm,1.2s						
MBAR	Mbarara	36.97	279	P	P	05 31 42.3	-1.3
RAYN	Ar Rayn	37.48	326	P	P	05 31 45.3	-2.4
RAYN				IAmb	IAmb	05 31 48.8	
	comp=Z,7.0nm,1.3s						
CMAR	Chiang Mai Arr	40.66	50	P	P	05 32 18.2	+4.0
	comp=Z,0.7nm,0.3s,baz=242,slow=10.0,SNR=4.9						
TSUM	Tsumeb	49.44	251	P	P	05 33 24.2	-0.2
H01W3	Cape Leeuwin H	50.88	129	T	T	06 27 03.3	
	baz=290,slow=75,SNR=47						
H01W2	Cape Leeuwin H	50.89	129	T	T	06 27 03.7	
	baz=290,slow=75,SNR=53						
H01W1	Cape Leeuwin H	50.90	129	T	T	06 27 04.6	
	baz=290,slow=75,SNR=49						
MKAR	Makanchi Array	55.80	13	P	P	05 34 18.7	+7.8
	comp=Z,0.4nm,0.6s,baz=176,slow=5.6,SNR=2.5						
ABKAR	Akbulak array	56.96	354	P	P	05 34 20.1	+1.0
ZALV	Zalesovo Beam	63.09	12	P	P	05 35 09.1	+8.0

	comp=Z,0.8nm,0.7s,baz=211,slow=8.2,SNR=2.0						
SONM	Songino Array	65.14	28	P	P	05 35 20.1	+5.2
	comp=Z,0.5nm,0.7s,baz=207,slow=8.1,SNR=2.5						
ASAR	Alice Springs	65.71	112	P	P	05 35 09.9	-9.0
	comp=Z,1.3nm,0.9s,baz=265,slow=6.5,SNR=7.3						
WRA	Warramunga Arr	66.02	108	P	P	05 35 13.1	-7.9
	comp=Z,1.2nm,1.0s,baz=287,slow=5.3,SNR=3.4						
YKA	Yellowknife Ar	125.19	1	PKP	PKiKP	05 43 35.6	+1.1
	comp=Z,0.3nm,0.8s,baz=1.7,slow=2.4,SNR=4.4						
PDAR	Pinedale Array	144.85	356	PKPbc	PKiKP	05 44 15.6	+0.3
	comp=Z,0.3nm,0.6s,baz=51,slow=2.9,SNR=3.1						
NVAR	Mina Array Bea	148.91	8	PKPbc	PKPab	05 44 25.5	-0.7
	comp=Z,0.7nm,0.8s,baz=316,slow=1.0,SNR=5.9						

DJA ***24*** *05:38:41.9±1.1, 4°S±4°×12°9E±°, h11^{km}±9^{km}, M4.5/7, mb4.7/3, mB4.5/1, MLv4.4/7, Mw(mB)3.7/1*

NEIC ***24*** *05:38:43.0±1.9, 4°.20S±0°.06×129°.54E±0°.07, h21^{km}±5^{km}, mb4.6/42, Error ellipse: s-maj=10.2km s-min=8.7km az=55.0*

IDC ***24*** *05:38:46.4±1.7, 4°.16S×129°.61E, h50^{km}±16^{km}, mb4.0/10, mb1 4.3/16, mb1mx4.0/37, mbtmp4.4/16, ML4.1/6, MS3.3/1, Ms1 3.3/1, ms1mx2.7/38, Error ellipse: s-maj=17.4km s-min=10.6km az=93.0*

ISC 24 05:38:41.3±0.4, **4°.20S**±0°.04×**129°.49E**±0°.05, **h10^{km}, n107, σ1^{s}37**/111, **mb4.7**/33, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.52	128	P	Pg	05 38 53.2	+1.8
MSAI	Masohi	1.02	326	P	Pg	05 39 00.3	-0.6
MSAI				S	Sb	05 39 14.1	-0.4
AAI	Ambon	1.39	292	P	Pn	05 39 06.2	-0.6
AAI				S	Sb	05 39 23.4	-1.8
FAKI	Fak Fak	3.03	65	P	Pn	05 39 30.3	+1.0
FAKI	Fak Fak	3.03	65	Pn	Pn	05 39 28.4	-1.0
FAKI	Fak Fak	3.03	65	P	Pn	05 39 30.3	+1.0
SIJI	Sorong	3.75	28	P	Pn	05 39 40.6	+1.3
	23nm,0.3s,baz=97,slow=1.8,SNR=55						
SIJI				S	Sn	05 40 23.0	-0.6
	36nm,0.3s,baz=257,slow=23,SNR=7.9						
SIJI				LR	LR	05 41 31.5	
	comp=Z,452nm,21.5s,baz=26,slow=45						
SWI	Sorong	3.76	28	P	Pn	05 39 39.8	+0.5
LBMI	Labuha	4.06	331	P	Pn	05 39 43.6	+0.1
SANI	Sanana	4.10	301	P	Pn	05 39 43.7	-0.3
SANI	Sanana	4.10	301	P	Pn	05 39 45.7	+1.7
SAUI	Saumlaki	4.16	155	Pn	Pn	05 39 44.4	-0.5
TNTI	Ternate	5.38	337	Pn	Pn	05 40 00.2	-1.4
LUWI	Luwuk	7.41	295	Pn	Pn	05 40 28.2	-1.4
BATI	Baumata	8.31	224	P	Pn	05 40 46.1	+4.2
	12nm,0.3s,baz=104,slow=3.6,SNR=6.4						
MTN	Manton Dam	8.74	169	Pn	Pn	05 40 46.7	-1.1
KDU	Kakadu	8.93	161	P	Pn	05 40 51.0	+0.6
	61nm,1.0s						
KAPI	Kappang	9.74	265	P	Pn	05 41 06.6	+5.0
	0.3nm,0.3s,baz=87,slow=19,SNR=2.0						
TOLI2	Tolitoli	10.18	301	Pn	Pn	05 41 06.8	-0.8
JAY	Jayapura	11.32	82	P	Pn	05 41 25.1	+1.9
	0.6nm,0.3s,baz=10,slow=10.0,SNR=2.0						
KNRA	Kununurra	11.43	184	Pn	Pn	05 41 23.4	-1.3
KNRA	Kununurra	11.43	184	P	Pn	05 41 26.2	+1.6
	45nm,1.2s						
BKB	Balikpapan	12.91	283	Pn	Pn	05 41 44.6	-0.5
FITZ	Fitzroy Crossi	14.32	195	P	Pn	05 42 05.8	+1.6
	0.4nm,0.3s,baz=20,slow=14,SNR=8.7						
MYLDM	Lahad Datu	14.40	310	Pn	Pn	05 42 08.1	+2.7
JAGI	Jajag, Banyuwa	15.82	254	Pn	Pn	05 42 23.5	-0.8
JAGI				IAmb	IAmb	05 42 43.1	
	comp=Z,30nm,1.1s						
WB0	Warramunga Arr	16.19	163		Pn	05 42 27.5	-1.6
WRAB	Tennant Creek	16.34	164	Pn	Pn	05 42 28.0	-2.9
WRAB				IAmb	IAmb	05 42 28.8	
	comp=Z,36nm,1.4s						
WRA	Warramunga Arr	16.34	164	P	Pn	05 42 26.8	-4.2
	comp=Z,0.6nm,0.3s,baz=351,slow=12,SNR=33						
WRA	Warramunga Arr	16.34	164	Pn	Pn	05 42 28.6	-2.4
WB2	Warramunga Arr	16.35	164	Pn	Pn	05 42 28.1	-3.0
WR0	Warramunga Arr	16.42	163	Pn	Pn	05 42 29.9	-2.0
COEN	Coen	16.62	127	Pn	Pn	05 42 34.6	+0.1
COEN				IAmb	IAmb	05 42 37.9	
	comp=Z,30nm,1.1s						
COEN	Coen	16.62	127	P	Pn	05 42 32.4	-2.1
	comp=Z,30nm,1.0s						
PMG	Port Moresby	18.28	107		Pn	05 42 54.4	-0.9
SBUM	Sibu	18.48	291	P	P	05 42 57.6	0.0
QIS	Mount Isa	19.00	150	P	P	05 43 03.4	+0.1
	comp=Z,34nm,0.8s						
UGM	Wanagama	19.22	258	P	Pn	05 43 10.1	+3.4
MBWA	Marble Bar	19.34	209	P	Pn	05 43 08.8	+0.7
PSA00	Pilbara Seismi	19.64	208		P	05 43 10.7	+0.4
PSA00	Pilbara Seismi	19.64	208	P	Pn	05 43 11.6	-0.1
	comp=Z,82nm,0.8s						
AS31	Alice Springs	19.81	168	P	P	05 43 12.9	+0.7
AS31				IAmb	IAmb	05 43 16.5	
	comp=Z,14nm,0.7s						
ASAR	Alice Springs	19.81	168	P	P	05 43 13.0	+0.8
	comp=Z,2.2nm,0.3s,baz=352,slow=12,SNR=147						
ASAR				S	S	05 46 53.2	-2.4
	baz=352,slow=27,SNR=3.6						
ASAR				PcP	PcP	05 47 29.5	-0.8
	comp=Z,0.3nm,0.3s,baz=5.9,slow=1.8,SNR=6.8						
ASAR	Alice Springs	19.81	168	P	P	05 43 12.6	+0.4
KSM	Kuching	19.98	286	P	P	05 43 13.9	-0.2
KSM				IAmb	IAmb	05 43 16.5	
	comp=Z,21nm,1.0s						
MTSU	Mount Surprise	20.05	135	P	P	05 43 15.3	+0.5
	comp=Z,22nm,0.9s						
WRKA	Warakurna	20.75	183	P	P	05 43 23.2	+0.9
	comp=Z,95nm,1.0s						
CTA	Charters Tower	22.71	135	P	P	05 43 43.3	-0.2
	comp=Z,9.5nm,0.7s,baz=316,slow=14,SNR=18						
CTAO	Charters Tower	22.71	135	P	P	05 43 43.4	-0.1
CTAO				IAmb	IAmb	05 43 44.6	
	comp=Z,18nm,0.8s						
CTAO	Charters Tower	22.71	135	P	P	05 43 44.0	+0.5
GIRL	Giralia	23.54	217	P	P	05 43 53.0	+1.1
GIRL	Giralia	23.54	217	P	P	05 43 53.5	+1.6
	comp=Z,106nm,1.5s						
OOD	Oodnadatta	24.19	167	P	P	05 43 57.6	-0.5
	comp=Z,39nm,0.8s						
INKA	Innaminka	25.75	157	P	P	05 44 14.5	+2.3
	comp=Z,30nm,1.2s						
FORT	Forrest	26.47	183	P	P	05 44 18.4	-0.3
FORT	Forrest	26.47	183	P	P	05 44 18.4	-0.3
	comp=Z,39nm,0.8s						
LCRK	Leigh Creek	27.37	163	P	P	05 44 28.0	+1.2
	comp=Z,19nm,0.8s						
BBOO	Buckleboo	29.12	169	P	P	05 44 42.0	-0.3
BBOO				IAmb	IAmb	05 44 48.8	
	comp=Z,7.8nm,1.1s						
BBOO	Buckleboo	29.12	169	P	P	05 44 45.6	+3.2
EIDS	Eidsvold	29.54	138	P	P	05 44 46.1	-0.1
IPM	Ipoh	29.72	287	P	P	05 44 48.3	+0.3
IPM				IAmb	IAmb	05 45 05.7	
	comp=Z,14nm,0.9s						
STKA	Stephens Creek	29.78	159	P	P	05 44 48.6	+0.3
	comp=Z,2.9nm,0.6s,baz=333,slow=8.5,SNR=8.4						
STKA	Stephens Creek	29.78	159	P	P	05 44 48.5	+0.1
JOW	Kunigami	30.87	358	P	P	05 44 57.5	-0.4
ARPS	Mount Arapiles	34.34	162	P	P	05 45 29.9	+1.7
	comp=Z,9.4nm,0.6s						
SLVN	Son La	35.68	316	P	P	05 45 40.8	+0.8
CAN	Canberra	35.84	152	P	P	05 45 40.7	-0.6
CAN				IAmb	IAmb	05 45 45.2	
	comp=Z,20nm,1.3s						
CAN	Canberra	35.84	152	P	P	05 45 42.5	+1.2
TOO	Toolangi	36.30	158	P	P	05 45 44.7	-0.4
TOO				IAmb	IAmb	05 46 12.6	
	comp=Z,9.3nm,1.2s						
JNU	Nakatsue	37.14	2	P	P	05 45 51.4	-1.0
NJ2	Nanjing	37.45	345	*e*P	P	05 45 57.3	+2.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CMAR	Chiang Mai Arr	37.59	308	P	P	05 45 57.1	+0.8
	comp=Z,2.5nm,0.7s,baz=134,slow=6.9,SNR=9.2						
CMAR	Chiang Mai Arr	37.59	308	P	P	05 45 56.4	0.0
CHTO	Chiang Mai	37.79	308	P	P	05 45 57.5	-0.6
CHTO				IAmb	IAmb	05 46 18.9	
	comp=Z,6.5nm,0.8s						
SANVU	Saraoutou	38.73	109	P	P	05 46 04.0	-2.0
MJAR	Matsushiro Arr	41.34	11	P	P	05 46 26.5	-0.9
	comp=Z,3.4nm,0.5s,baz=190,slow=9.8,SNR=7.9						
MAJO	Matsushiro	41.34	11	P	P	05 46 26.6	-0.9
MAJO				IAmb	IAmb	05 46 35.0	
	comp=Z,14nm,0.8s						
MAT	Matsushiro	41.34	11	P	P	05 46 26.4	-1.0
MAT				*e*S	S	05 52 32.2	-10
MJB9	Matsu-Tunnel	41.35	11	P	P	05 46 26.7	-0.8
MJB9				IAmb	IAmb	05 46 35.0	
	comp=Z,15nm,0.8s						
KSRS	Korea Array	41.47	358	P	P	05 46 28.0	-0.4
	comp=Z,1.8nm,0.6s,baz=178,slow=11,SNR=4.7						
TAU	Tasmania Unive	41.67	160	P	P	05 46 29.7	-0.3
HHC	Hu-ho-hao-te	47.75	342	*e*P	P	05 47 21.9	+3.2
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,98nm,4.8s						
ULN	Ulaanbaatar	55.47	342	P	P	05 48 16.2	-0.2
ULN				IAmb	IAmb	05 48 27.5	
	comp=Z,3.5nm,0.7s						
MCQ	Macquarie Isla	55.55	160	P	P	05 48 15.8	-0.9
SONM	Songino Array	55.65	341	P	P	05 48 17.4	-0.2
	comp=Z,0.8nm,0.7s,baz=146,slow=7.7,SNR=6.4						
WMQ	Urumqi	60.79	326	*e*P	P	05 48 55.9	+2.2
MK31	Makanchi Array	65.63	326	P	P	05 49 25.6	0.0
MK31				IAmb	IAmb	05 49 28.4	
	comp=Z,3.1nm,0.7s						
MKAR	Makanchi Array	65.63	326	P	P	05 49 25.4	-0.2
	comp=Z,2.7nm,0.4s,baz=119,slow=8.3,SNR=27						
MAKZ	Makanchi	65.81	326	P	P	05 49 26.6	-0.2
MAKZ				IAmb	IAmb	05 49 33.9	
	comp=Z,4.4nm,0.6s						
ZAA0	Zalesovo Array	68.87	334	P	P	05 49 45.1	-0.9
ZAA0				IAmb	IAmb	05 49 48.7	
	comp=Z,6.0nm,1.1s						
ZALV	Zalesovo Beam	68.87	334	P	P	05 49 45.4	-0.6
	comp=Z,5.0nm,0.9s,baz=109,slow=5.0,SNR=9.7						
ZALV	Zalesovo Beam	68.87	334	P	P	05 49 45.2	-0.8
KURK	Kurchatov	69.88	328	P	P	05 49 52.1	-0.3
VNDA	Vanda	75.27	173	P	P	05 50 23.2	-0.8
	comp=Z,2.7nm,0.8s,baz=325,slow=6.8,SNR=10.0						
VNDA	Vanda	75.27	173	P	P	05 50 23.9	-0.1
VNDA				IAmb	IAmb	05 50 37.4	
	comp=Z,7.9nm,1.2s						
BRVK	Borovoye	75.52	328	P	P	05 50 25.5	-0.3
BRVK				IAmb	IAmb	05 50 34.0	
	comp=Z,9.1nm,1.2s						
ABKAR	Akbulak array	80.02	321	P	P	05 50 50.5	-0.5
ABKAR				IAmb	IAmb	05 50 53.8	
	comp=Z,11nm,1.4s						
RAYN	Ar Rayn	86.16	294	P	P	05 51 23.7	+0.2
TTA	Tatalina	86.72	26	P	P	05 51 25.1	-0.2
TTA				IAmb	IAmb	05 51 52.3	
	comp=Z,3.7nm,1.0s						
MLY	Manley	89.47	25	P	P	05 51 38.0	-0.3
MLY				IAmb	IAmb	05 51 45.7	
	comp=Z,5.7nm,1.4s						
ILAR	Eielson Array	91.05	25	P	P	05 51 44.1	-1.5
	comp=Z,0.4nm,0.7s,baz=266,slow=4.2,SNR=6.8						
ILAR	Eielson Array	91.05	25	P	P	05 51 43.8	-1.9
TXAR	Lajitas Array	123.89	57	PKP	PKPdf	05 57 39.2	-1.3
	comp=Z,0.5nm,0.8s,baz=202,slow=2.4,SNR=4.3						
TORD	Torodi Ar. Bea	127.73	283	PKP	PKPdf	05 57 47.2	-0.9
	comp=Z,0.8nm,0.7s,baz=42,slow=1.7,SNR=6.5						
CPUP	Villa Florida	148.94	168	PKPbc	PKPbc	05 58 30.0	-0.2
	comp=Z,5.6nm,0.9s,baz=146,slow=3.1,SNR=5.9						
LPAZ	La Paz	153.20	140	PKPbc	PKPbc	05 58 41.5	+0.2
	comp=Z,1.0nm,0.6s,baz=150,slow=7.4,SNR=5.3						
LPAZ	La Paz	153.20	140	PKPbc	PKPbc	05 58 42.0	+0.7

IDC 24 05:45:53.0±0.8, **2°.90S**×**138°.87E, h0**^{km}**, mb3.5**/2, **mb1 3.9**/3, **mb1mx3.5**/29, **mbtmp3.7**/3, **ML3.8**/2, **Error ellipse: s-maj=16.5km s-min=2.3km az=139.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.87	78	Pn	Pn	05 46 26.3	-0.1
	6.5nm,0.3s,baz=247,slow=11,SNR=16						
JAY				Sn	Sg	05 46 52.9	-0.3
	7.8nm,0.3s,baz=50,slow=22,SNR=4.1						
WRA	Warramunga Arr	17.51	194	P	Pn	05 49 58.8	0.0
	0.5nm,0.3s,baz=17,slow=13,SNR=16						
FITZ	Fitzroy Crossi	19.91	220	P	P	05 50 26.7	+0.3
	0.1nm,0.3s,baz=46,slow=14,SNR=1.1						
ASAR	Alice Springs	21.20	193	P	P	05 50 40.5	+0.1
	4.7nm,1.1s,baz=27,slow=9.8,SNR=11						
MKAR	Makanchi Array	70.04	322	P	P	05 57 07.4	+0.5
	0.3nm,0.6s,baz=120,slow=8.5,SNR=2.1						

IDC ***24*** *06:03:35.0±0.6, 4°.46S×129°.47E, h0^{km}, mb4.2/12, mb1 4.4/17, mb1mx4.3/38, mbtmp4.3/17, ML4.3/4, MS3.5/13, Ms1 3.5/13, ms1mx3.3/43, Error ellipse: s-maj=25.4km s-min=13.0km az=67.0*

NEIC ***24*** *06:03:36.0±2.0, 4°.43S±0°.06×129°.48E±0°.06, h10^{km}±1^{km}, mb4.6/40, Error ellipse: s-maj=10.7km s-min=10.3km az=182.0*

DJA ***24*** *06:03:37.1±0.8, 4°S±8°×13°0E±°, h10^{km}, M4.3/7, MLv4.3/7*

ISC 24 06:03:35.7±0.3, **4°.46S**±0°.04×**129°.53E**±0°.05, **h10^{km}, n93, σ1^{s}65**/90, **mb4.6**/31, **MS3.6**/8, **1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.25	332	P	Pb	06 03 58.0	-1.5
MSAI				S	Sb	06 04 13.8	-1.9
AAI	Ambon	1.53	300	P	Pn	06 04 02.7	-0.5
FAKI	Fak Fak	3.12	61	P	Pn	06 04 25.3	+0.3
FAKI	Fak Fak	3.12	61	Pn	Pn	06 04 25.3	+0.3
SIJI	Sorong	3.96	26	Pn	Pn	06 04 36.3	-0.4
	42nm,0.3s,baz=212,slow=12,SNR=65						
SIJI				Sn	Sn	06 05 18.8	-4.6
	16nm,0.3s,baz=261,slow=22,SNR=5.8						
SIJI				LR	LR	06 06 31.5	
	comp=Z,598nm,18.6s,baz=112,slow=44						
SWI	Sorong	3.97	26	P	Pn	06 04 36.0	-0.7
SANI	Sanana	4.26	304	P	Pn	06 04 41.4	+0.6
LBMI	Labuha	4.30	332	P	Pn	06 04 41.1	-0.2
TNTI	Ternate	5.62	337	Pn	Pn	06 04 58.0	-1.5
SOEI	Soe	7.41	224	Pn	Pn	06 05 20.8	-3.3
LUWI	Luwuk	7.55	297	Pn	Pn	06 05 24.8	-1.2
BATI	Baumata	8.15	225	LR	LR	06 09 06.1	
	comp=Z,456nm,21.2s,baz=40,slow=41						
MMRI	Maumere	8.35	240	Pn	Pn	06 05 32.5	-4.4
MTN	Manton Dam	8.48	169	Pn	Pn	06 05 38.3	-0.5
KAPI	Kappang	9.76	266	Pn	Pn	06 05 57.0	+0.7
	1.0nm,0.3s,baz=99,slow=13,SNR=2.0						
KAPI				LR	LR	06 09 58.7	
	comp=Z,194nm,20.9s,baz=112,slow=40						
TOLI2	Tolitoli	10.34	302	Pn	Pn	06 05 59.9	-4.3
KNRA	Kununurra	11.18	184	Pn	Pn	06 06 16.9	+1.3
DAV	Davao City (W)	12.11	341	LR	LR	06 10 27.1	
	comp=Z,68nm,21.9s,baz=132,slow=34						
BKB	Balikpapan	13.01	284	Pn	Pn	06 06 38.6	-2.2
FITZ	Fitzroy Crossi	14.08	195	Pn	Pn	06 06 56.8	+1.4
	0.9nm,0.3s,baz=57,slow=12,SNR=19						
FITZ				LR	LR	06 13 15.9	
	comp=Z,82nm,18.6s,baz=0.0,slow=41						
JAGI	Jajag, Banyuwa	15.79	255	Pn	Pn	06 07 16.9	-1.4
JAGI				IAmb	IAmb	06 07 36.0	
	comp=Z,24nm,0.9s						
WB0	Warramunga Arr	15.94	163		Pn	06 07 19.3	-1.1
WB0				IAmb	IAmb	06 07 33.7	
	comp=Z,52nm,1.2s						
WRAB	Tennant Creek	16.09	163		Pn	06 07 20.2	-1.9
WRAB				IAmb	IAmb	06 07 35.3	
	comp=Z,40nm,1.2s						
WRA	Warramunga Arr	16.09	163	Pn	Pn	06 07 20.3	-1.9
	comp=Z,0.3nm,0.3s,baz=344,slow=13,SNR=24						
WRA				LR	LR	06 13 48.9	
	comp=Z,180nm,19.1s,baz=340,slow=38						
WRA	Warramunga Arr	16.09	163	Pn	Pn	06 07 22.0	-0.3
WB2	Warramunga Arr	16.09	163	Pn	Pn	06 07 21.5	-0.8
WB2				IAmb	IAmb	06 07 35.4	
	comp=Z,56nm,1.3s						
WR0	Warramunga Arr	16.16	163	Pn	Pn	06 07 22.8	-0.4
COEN	Coen	16.44	126	Pn	Pn	06 07 26.2	-0.6
COEN				IAmb	IAmb	06 07 32.3	
	comp=Z,49nm,1.1s						
KKM	Kota Kinabalu	16.89	308	P	Pn	06 07 32.4	-0.2
PMG	Port Moresby	18.18	107	P	Pn	06 07 49.3	+0.8
	baz=304,slow=13,SNR=3.7						
PMG	Port Moresby	18.18	107		Pn	06 07 47.8	-0.6
SBUM	Sibu	18.60	291	P	P	06 07 52.6	-0.8
SMRI	Semarang	19.16	261	P	P	06 07 58.2	-1.4
PSA00	Pilbara Seismi	19.43	208	P	P	06 08 02.5	0.0
AS31	Alice Springs	19.56	168		P	06 08 04.6	+0.7
ASAR	Alice Springs	19.56	168	P	P	06 08 05.2	+1.3
	comp=Z,1.4nm,0.3s,baz=348,slow=8.3,SNR=157						
ASAR				S	S	06 11 44.6	-0.3
	baz=353,slow=24,SNR=5.6						
LEM	Lembang	21.93	263	LR	LR	06 17 32.8	
	comp=Z,160nm,18.8s,baz=132,slow=38						
CTA	Charters Tower	22.51	135	P	P	06 08 36.8	+1.0
	comp=Z,20nm,0.8s,baz=321,slow=15,SNR=18						
CTAO	Charters Tower	22.51	135	P	P	06 08 35.0	-0.9
CTAO				IAmb	IAmb	06 08 39.1	
	comp=Z,26nm,0.8s						
FORT	Forrest	26.22	183	P	P	06 09 10.5	-0.4
FORT				IAmb	IAmb	06 09 35.8	
	comp=Z,22nm,1.1s						
BBOO	Buckleboo	28.86	169	P	P	06 09 34.6	0.0
BBOO				IAmb	IAmb	06 09 43.8	
	comp=Z,15nm,1.4s						
YOJ	Yonaguni jima	29.43	348	P	P	06 09 38.8	-0.9
STKA	Stephens Creek	29.54	159	P	P	06 09 42.1	+1.5
	comp=Z,6.7nm,0.9s,baz=334,slow=10,SNR=16						
STKA				LR	LR	06 22 15.2	
	comp=Z,133nm,20.8s,baz=2.2,slow=38						
STKA	Stephens Creek	29.54	159	P	P	06 09 40.1	-0.5
IPM	Ipoh	29.82	287	P	P	06 09 41.1	-2.3
IPM				IAmb	IAmb	06 09 46.5	
	comp=Z,18nm,1.2s						
NJ2	Nanjing	37.70	345	*e*P	P	06 10 53.9	+2.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CMAR	Chiang Mai Arr	37.77	308	P	P	06 10 52.9	+0.5
	comp=Z,2.8nm,0.7s,baz=142,slow=7.7,SNR=11						
CMAR				LR	LR	06 27 22.4	
	comp=Z,46nm,19.8s,baz=178,slow=38						
CMAR	Chiang Mai Arr	37.77	308	P	P	06 10 52.5	+0.1
CHTO	Chiang Mai	37.97	308	P	P	06 10 54.1	0.0
CHTO				IAmb	IAmb	06 10 59.2	
	comp=Z,12nm,0.8s						
SANVU	Saraoutou	38.61	109	P	P	06 10 58.7	-0.8
KMI	Kunming	39.27	320	⇓P	P	06 11 09.9	+4.8
KMI				pP	pwP	06 11 16.9	+5.1
KMI				sP	sP	06 11 22.0	+14
KMI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
MJAR	Matsushiro Arr	41.59	11	LR	LR	06 27 10.1	
	comp=Z,38nm,21.8s,baz=190,slow=34						
KSRS	Korea Array	41.72	358	P	P	06 11 27.5	+2.6
	comp=Z,0.8nm,0.4s,baz=193,slow=10,SNR=5.4						
XAN	Xi'an	42.95	335	P	P	06 11 37.3	+2.2
XAN				pP	pwP	06 11 46.4	+6.5
XAN				pmax	pmax		
	comp=Z,6.0nm,1.6s						
LZH	Lanzhou	46.96	331	*e*P	P	06 12 10.9	+3.8
LZH				pP	pwP	06 12 16.3	+4.4
LZH				sP	sP	06 12 18.4	+7.6
LZH				pmax	pmax		
	comp=Z,26nm,1.4s						
SHL	Shillong	47.16	311	P	P	06 12 08.5	-0.4
SHL				IAmb	IAmb	06 12 12.8	
	comp=Z,4.7nm,0.6s						
HHC	Hu-ho-hao-te	48.00	342	*e*P	P	06 12 16.8	+1.7
HHC				S	S	06 19 21.4	+8.2
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,5.2s						
HHC				LR	LR		
	comp=N,100nm,16.1s						
HHC				LR	LR		
	comp=E,250nm,16.2s						
HHC				LR	LR		
	comp=Z,150nm,15.7s						
USRK	Ussuriysk Ar.	48.48	2	P	P	06 12 20.9	+2.3
	comp=Z,1.7nm,0.6s,baz=196,slow=9.1,SNR=2.5						
GTA	Gaotai	51.53	331	*e*P	P	06 12 39.3	-2.8
GTA				pP	pP	06 12 43.8	-0.9
GTA				sP	sP	06 12 46.5	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	Ulaanbaatar	55.72	342	P	P	06 13 12.7	+0.1
ULN				IAmb	IAmb	06 13 22.1	
	comp=Z,13nm,1.4s						
SONM	Songino Array	55.90	341	P	P	06 13 14.7	+0.8
	comp=Z,2.1nm,0.8s,baz=167,slow=6.4,SNR=11						
SONM				LR	LR	06 38 33.3	
	comp=Z,58nm,19.0s,baz=316,slow=38						
SONM	Songino Array	55.90	341	P	P	06 13 15.0	+1.1
DGAR	Diego Garcia	56.81	264	P	P	06 13 20.3	-0.6
NIUE	Niue	60.74	109	P	P	06 13 48.2	0.0
WMQ	Urumqi	61.02	327	*e*P	P	06 13 52.9	+3.2
PETK	Petropavlovsk-	62.08	19	P	P	06 13 55.9	-0.7
CASY	Casey	63.13	188	P	P	06 14 02.5	-0.8
MK31	Makanchi Array	65.86	326	P	P	06 14 21.4	-0.2
MK31				IAmb	IAmb	06 14 25.6	
	comp=Z,2.2nm,0.8s						
MKAR	Makanchi Array	65.86	326	P	P	06 14 22.0	+0.4
	comp=Z,2.5nm,0.6s,baz=125,slow=8.2,SNR=15						
MKAR	Makanchi Array	65.86	326	P	P	06 14 21.7	+0.1
MAKZ	Makanchi	66.04	326	P	P	06 14 23.0	+0.2
MAKZ				IAmb	IAmb	06 14 43.3	
	comp=Z,5.2nm,1.3s						
YAK	Yakutsk	66.30	0	P	P	06 14 24.4	+0.3
KBL	Kabul	68.78	310	P	P	06 14 39.8	-0.9
ZAA0	Zalesovo Array	69.11	334	P	P	06 14 41.8	-0.2
ZAA0				IAmb	IAmb	06 14 51.2	
	comp=Z,6.3nm,1.2s						
ZALV	Zalesovo Beam	69.11	334	P	P	06 14 41.5	-0.4
	comp=Z,1.9nm,0.6s,baz=123,slow=5.5,SNR=7.5						
ZALV				LR	LR	06 46 30.0	
	comp=Z,47nm,19.4s,baz=22,slow=37						
KURBB	Kurchatov Arra	70.11	328	P	P	06 14 48.6	+0.3
	comp=Z,3.2nm,0.6s,baz=130,slow=5.8,SNR=33						
KURK	Kurchatov	70.12	328	P	P	06 14 47.9	-0.4
KURK				IAmb	IAmb	06 14 57.5	
	comp=Z,7.0nm,0.9s						
RAR	Rarotonga	70.42	111	P	P	06 14 49.6	-1.1
KKAR	Karatay Array	71.13	318	P	P	06 14 54.9	+0.2
MSEY	Mahe Island	73.78	266	P	P	06 15 09.9	-1.2
VNDA	Vanda	75.01	173	P	P	06 15 16.8	-0.2
	comp=Z,3.8nm,1.2s,baz=18,slow=3.2,SNR=2.3						
VNDA				LR	LR	06 47 38.4	
	comp=Z,40nm,18.3s,baz=348,slow=35						
VNDA	Vanda	75.01	173	P	P	06 15 17.2	+0.2
VNDA				IAmb	IAmb	06 15 27.7	
	comp=Z,11nm,1.4s						
BRVK	Borovoye	75.75	328	P	P	06 15 21.6	0.0
BRVK				IAmb	IAmb	06 15 31.0	
	comp=Z,5.7nm,1.1s						
NRIK	Noril'sk	78.99	346	P	P	06 15 39.5	+0.1
NRIK				IAmb	IAmb	06 15 44.0	
	comp=Z,4.3nm,1.0s						
ABKAR	Akbulak array	80.24	321	P	P	06 15 46.8	+0.1
QSPA	South Pole Qui	85.50	180	P	P	06 16 13.4	-0.4
	comp=Z,0.6nm,0.7s,baz=340,slow=1.5,SNR=1.8						
TTA	Tatalina	86.93	26	P	P	06 16 20.6	-0.3
TTA				IAmb	IAmb	06 16 39.0	
	comp=Z,6.7nm,1.3s						
ILAR	Eielson Array	91.26	25	P	P	06 16 40.8	-0.3
	comp=Z,0.5nm,1.0s,baz=263,slow=4.3,SNR=2.5						
TXAR	Lajitas Array	124.00	57	PKP	PKPdf	06 22 35.0	-0.2
	comp=Z,0.3nm,0.9s,baz=315,slow=0.4,SNR=3.4						
TORD	Torodi Ar. Bea	127.81	283	PKP	PKPdf	06 22 43.4	+0.6
	comp=Z,0.8nm,0.8s,baz=68,slow=2.3,SNR=4.2						
LVC	Limon Verde	147.62	147	PKPbc	PKPbc	06 23 23.3	+1.5
	comp=Z,5.4nm,0.7s,baz=250,slow=5.3,SNR=4.7						
LVC	Limon Verde	147.62	147	PKPbc	PKPbc	06 23 24.0	+2.2
LPAZ	La Paz	152.99	140	PKPbc	PKPbc	06 23 36.9	+1.6
	comp=Z,1.9nm,0.8s,baz=216,slow=2.8,SNR=6.7						

IDC 24 06:24:19.9±2.3, **4°.34S**×**129°.82E, h0**^{km}**, mb3.2**/1, **mb1 3.7**/3, **mb1mx3.2**/39, **mbtmp3.5**/3, **ML3.2**/2, **Error ellipse: s-maj=175.6km s-min=15.0km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.12	165	Pn	Pn	06 28 06.3	-1.8
	0.1nm,0.3s,baz=344,slow=13,SNR=2.9						
ASAR	Alice Springs	19.61	169	P	P	06 28 50.1	+0.1
	0.2nm,0.3s,baz=350,slow=11,SNR=16						
MKAR	Makanchi Array	65.92	326	P	P	06 35 07.6	-0.2
	0.1nm,0.3s,baz=118,slow=6.8,SNR=1.6						

*IDC **24** 06:24:40.8±1.0, 4°.45S×129°.64E, h0^{km}, mb4.0/4, mb1 4.2/8, mb1mx3.8/41, mbtmp4.1/8, ML3.8/4, MS4.0/1, Ms1 4.0/1, ms1mx2.6/45, Error ellipse: s-maj=55.1km s-min=18.2km az=77.0*

*NEIC **24** 06:24:44.0±1.3, 4°.36S±0°.05×129°.5E±0°.1, h10^{km}±1^{km}, mb4.3/19, Error ellipse: s-maj=20.4km s-min=8.1km az=279.0*

ISC 24 06:24:43.4±0.6**, 4°.33S**±0°.06×**129°.6E**±0°.1**, h10^{km}, n35,** σ**1ˢ.66**/35**, mb4.2**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.96	62		Pn	06 25 32.4	+1.9
SIJI	Sorong	3.80	25	Pn	Pn	06 25 41.7	-0.3
	7.0nm,0.3s,baz=184,slow=20,SNR=12						
SIJI				Sn	Sn	06 26 25.9	-1.0
	3.6nm,0.3s,baz=216,slow=22,SNR=6.5						
MTN	Manton Dam	8.59	170	Pn	Pn	06 26 47.8	-0.1
KNRA	Kununurra	11.31	184	Pn	Pn	06 27 24.8	-0.4
FITZ	Fitzroy Crossi	14.23	196	Pn	Pn	06 28 00.8	-4.4
	0.1nm,0.3s,baz=18,slow=6.4,SNR=1.8						
WB0	Warramunga Arr	16.03	164	Pn	Pn	06 28 27.4	-1.7
WB0				IAmb	IAmb	06 28 37.4	
	comp=Z,13nm,1.0s						
WRA	Warramunga Arr	16.18	164	Pn	Pn	06 28 26.2	-4.9
	comp=Z,0.4nm,0.3s,baz=353,slow=13,SNR=13						
WRA	Warramunga Arr	16.18	164		Pn	06 28 29.0	-2.1
WB2	Warramunga Arr	16.19	164	Pn	Pn	06 28 27.1	-4.0
WB2				IAmb	IAmb	06 28 35.9	
	comp=Z,19nm,1.4s						
COEN	Coen	16.43	127	Pn	Pn	06 28 34.2	0.0
COEN				IAmb	IAmb	06 28 45.1	
	comp=Z,11nm,0.9s						
PSA00	Pilbara Seismi	19.60	208	P	Pn	06 29 15.4	+2.1
AS31	Alice Springs	19.66	168	P	Pn	06 29 14.7	+0.6
ASAR	Alice Springs	19.66	168	P	P	06 29 11.2	-1.4
	comp=Z,1.2nm,0.3s,baz=349,slow=11,SNR=46						
ASAR	Alice Springs	19.66	168	P	P	06 29 12.5	-0.2
CTAO	Charters Tower	22.53	135	P	P	06 29 44.0	+0.3
CTAO				IAmb	IAmb	06 29 45.2	
	comp=Z,7.6nm,0.8s						
TWG	Pinlang	28.25	343	P	P	06 30 37.4	+0.6
BBOO	Buckleboo	28.97	169	P	P	06 30 43.2	0.0
BBOO				IAmb	IAmb	06 31 01.3	
	comp=Z,12nm,1.4s						
EIDS	Eidsvold	29.36	138	P	P	06 30 46.9	+0.2
EIDS				IAmb	IAmb	06 31 08.8	
	comp=Z,11nm,1.4s						
STKA	Stephens Creek	29.62	159	P	P	06 30 47.1	-1.9
	comp=Z,1.2nm,0.6s,baz=336,slow=8.6,SNR=8.4						
STKA	Stephens Creek	29.62	159	P	P	06 30 48.4	-0.6
ARMA	Armidale	33.23	144	P	P	06 31 20.6	-0.3
TOO	Toolangi	36.13	158	P	P	06 31 45.1	-0.7
ASAJ	Asahikawa	49.61	12	LR	LR	06 56 17.1	
	comp=Z,168nm,19.4s,baz=246,slow=38						
TUWZ	Tuamarina	54.13	140	P	P	06 34 09.9	+1.2
ULN	Ulaanbaatar	55.63	342	P	P	06 34 20.5	+0.8
ULN				IAmb	IAmb	06 34 23.3	
	comp=Z,2.8nm,1.1s						
SONM	Songino Array	55.81	341	P	P	06 34 20.8	-0.1
	comp=Z,1.0nm,0.7s,baz=162,slow=9.2,SNR=6.3						
SONM	Songino Array	55.81	341	P	P	06 34 21.1	+0.2
SONM				IAmb	IAmb	06 34 23.9	
	comp=Z,4.1nm,1.3s						
CASY	Casey	63.27	189	P	P	06 35 11.2	-0.7
MK31	Makanchi Array	65.81	326	P	P	06 35 29.4	+0.4
MK31				IAmb	IAmb	06 35 32.4	
	comp=Z,4.3nm,1.5s						
MKAR	Makanchi Array	65.81	326	P	P	06 35 28.9	-0.1
	comp=Z,0.9nm,0.7s,baz=124,slow=8.0,SNR=9.5						
MKAR	Makanchi Array	65.81	326	P	P	06 35 28.1	-0.8
ZAA0	Zalesovo Array	69.04	334	P	P	06 35 49.0	-0.2
ZAA0				IAmb	IAmb	06 35 51.6	
	comp=Z,1.9nm,1.1s						
ZALV	Zalesovo Beam	69.04	334	P	P	06 35 48.5	-0.7
	comp=Z,0.4nm,0.3s,baz=134,slow=4.3,SNR=4.3						
KURK	Kurchatov	70.06	328	P	P	06 35 55.8	+0.2
KURK				IAmb	IAmb	06 35 56.7	
	comp=Z,2.5nm,0.8s						
ABKAR	Akbulak array	80.20	321	P	P	06 36 53.9	-0.3

IDC 24 06:29:31.9±1.4**, 5°.90N×123°.22E, h0^{km}, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.3**/54**, mbtmp3.7**/3**, Error ellipse: s-maj=176.3km s-min=9.8km az=64.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	27.91	157	P	P	06 35 22.9	-1.1
	0.6nm,0.8s,baz=330,slow=11,SNR=7.4						
ASAR	Alice Springs	31.18	161	P	P	06 35 53.0	0.0
	0.7nm,0.3s,baz=340,slow=7.4,SNR=19						
MKAR	Makanchi Array	53.80	326	P	P	06 38 56.4	-0.1
	0.4nm,0.5s,baz=120,slow=7.7,SNR=6.6						

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*NEIC **24** 06:37:41.0±1.3, 5°.77S±0°.05×146°.9E±0°.1, h36^{km}±9^{km}, mb4.5/21, Error ellipse: s-maj=15.5km s-min=7.5km az=90.0*

*IDC **24** 06:37:49.0±0.8, 6°.46S×147°.07E, h68^{km}±6^{km}, mb3.8/11, mb1 4.1/16, mb1mx3.8/48, mbtmp4.2/16, MS3.2/5, Ms1 3.2/5, ms1mx2.9/37, Error ellipse: s-maj=21.5km s-min=13.8km az=81.0*

*DJA **24** 06:37:50.4±0.5, 7°S±4°×14°7E±°, h64^{km}±7^{km}, M4.4/13, mB5.0/4, mb4.6/13, MLv4.4/2, Mw(mB)4.3/4*

ISC 24 06:37:47.1±0.5**, 6°.42S**±0°.06×**147°.07E**±0°.07**, h49^{km}, n85,** σ**1ˢ.65**/79**, mb4.4**/29**, MS3.2**/3**, 1C, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	2.97	178	P	Pn	06 38 33.7	+2.0
	75nm,0.3s,baz=48,slow=5.8,SNR=79						
PMG				S	Sn	06 39 04.7	-1.4
	47nm,0.3s,baz=339,slow=12,SNR=6.7						
PMG	Port Moresby	2.97	178	Pn	Pn	06 38 34.3	+2.5
PMG	Port Moresby	2.97	178	P	Pn	06 38 34.3	+2.5
PMG	Port Moresby	2.97	178	P	Pn	06 38 34.2	+2.5
JAY	Jayapura	7.44	301	P	Pn	06 39 35.3	+2.1
	1.3nm,0.3s,baz=134,slow=16,SNR=1.8						
COEN	Coen	8.41	207	Pn	Pn	06 39 47.1	+0.7
COEN				Sn	Sn	06 41 15.7	-4.4
COEN	Coen	8.41	207	P	Pn	06 39 46.5	0.0
	61nm,0.6s						
HNR	Honiara	13.10	104	LR	LR	06 45 11.8	
	comp=Z,69nm,19.6s,baz=282,slow=34						
HNR	Honiara	13.10	104	Pn	Pn	06 40 47.7	-3.0
CTA	Charters Tower	13.61	183	P	Pn	06 40 59.1	+1.5
	2.2nm,0.3s,baz=0.3,slow=13,SNR=19						
CTAO	Charters Tower	13.61	183	Pn	Pn	06 41 00.3	+2.7
CTAO	Charters Tower	13.61	183	P	Pn	06 41 00.9	+3.3
FAKI	Fak Fak	15.17	283	Pn	Pn	06 41 08.0	-10
QIS	Mount Isa	15.81	207	P	Pn	06 41 27.8	+1.3
	46nm,0.8s						
SIJI	Sorong	16.70	289	P	P	06 41 39.5	-0.1
	2.1nm,0.3s,baz=82,slow=15,SNR=4.1						
SWI	Sorong	16.71	289	P	P	06 41 41.3	+1.7
	43nm,0.8s						
MTN	Manton Dam	16.95	247	P	P	06 41 42.6	+0.3
	58nm,1.7s						
DRS	Darwin Rock St	17.02	248	P	P	06 41 42.6	-0.5
	17nm,0.6s						
WB0	Warramunga Arr	18.10	222	P	P	06 41 53.8	-1.3
WR0	Warramunga Arr	18.14	221	P	P	06 41 54.6	-0.9
WR0				IAmb	IAmb	06 41 55.0	
	comp=Z,24nm,1.5s						
WRAB	Tennant Creek	18.25	221	P	P	06 41 54.5	-2.1
WRAB				IAmb	IAmb	06 42 00.1	
	comp=Z,15nm,1.1s						
WRAB	Tennant Creek	18.25	221	P	P	06 41 55.5	-1.1
WB2	Warramunga Arr	18.25	221	P	P	06 41 55.2	-1.5
WRA	Warramunga Arr	18.26	221	P	P	06 41 55.2	-1.6
	comp=Z,0.9nm,0.3s,baz=43,slow=12,SNR=38						
WRA				LR	LR	06 48 30.0	
	comp=Z,51nm,21.1s,baz=205,slow=35						
WRA	Warramunga Arr	18.26	221	P	P	06 41 54.2	-2.6
EIDS	Eidsvold	19.23	169	P	Pn	06 42 09.3	+0.7
EIDS				IAmb	IAmb	06 42 12.0	
	comp=Z,9.2nm,0.7s						
EIDS	Eidsvold	19.23	169	P	Pn	06 42 11.0	+2.3
	comp=Z,21nm,1.4s						
RMQ	Roma	20.02	176	P	Pn	06 42 19.8	+1.8
	comp=Z,35nm,0.8s						
KNRA	Kununurra	20.16	241	P	Pn	06 42 19.7	-0.1
	comp=Z,61nm,2.1s						
QLP	Quilpie	20.23	187	P	Pn	06 42 19.6	-0.9
	comp=Z,54nm,1.5s						
AS31	Alice Springs	21.31	215	P	P	06 42 29.7	-0.3
ASAR	Alice Springs	21.31	215	P	P	06 42 28.8	-1.2
	comp=Z,6.8nm,0.6s,baz=52,slow=7.8,SNR=75						
ASAR				S	S	06 46 24.8	+0.6
	comp=Z,1.5nm,0.7s,baz=27,slow=27,SNR=4.8						
ASAR				LR	LR	06 52 10.6	
	comp=Z,72nm,21.3s,baz=138,slow=40						
ASAR	Alice Springs	21.31	215	P	P	06 42 29.3	-0.7
INKA	Innaminka	22.04	195	P	P	06 42 38.0	+0.4
	comp=Z,62nm,0.6s						
OOD	Oodnadatta	23.84	206	P	P	06 42 54.7	-1.2
	comp=Z,28nm,1.2s						
FITZ	Fitzroy Crossi	23.91	239	P	P	06 42 55.5	-1.1
	comp=Z,5.1nm,0.7s,baz=76,slow=9.3,SNR=1.9						
ARMA	Armidale	24.25	170	P	P	06 43 00.2	+0.4
ARMA	Armidale	24.25	170	P	P	06 43 02.1	+2.3
	comp=Z,21nm,1.6s						
DZM	Mont Dzumac	24.34	132	P	P	06 43 00.6	0.0
	comp=Z,8.0nm,0.9s,baz=244,slow=2.7,SNR=4.7						
DZM				LR	LR	06 51 33.1	
	comp=Z,108nm,19.2s,baz=12,slow=34						
DZM	Mont Dzumac	24.34	132	P	P	06 43 00.1	-0.5
DZM				IAmb	IAmb	06 43 03.1	
	comp=Z,9.6nm,0.9s						
CMSA	Cobar Meteorol	25.02	183	P	P	06 43 06.8	+0.2
	comp=Z,8.2nm,0.7s						
LCRK	Leigh Creek	25.31	198	P	P	06 43 08.6	-0.6
	comp=Z,108nm,0.7s						
STKA	Stephens Creek	25.84	191	P	P	06 43 13.3	-0.7
	comp=Z,2.1nm,0.4s,baz=357,slow=8.3,SNR=10						
STKA				LR	LR	06 55 37.8	
	comp=Z,78nm,19.3s,baz=206,slow=41						
STKA	Stephens Creek	25.84	191	P	P	06 43 14.1	+0.1
STKA	Stephens Creek	25.84	191	P	P	06 43 15.1	+1.1
	comp=Z,1.1nm,1.5s						
MULG	Mulgathing	26.70	206	P	P	06 43 21.4	-0.5
	comp=Z,8.1nm,1.0s						
MGCD	Mangrove Creek	26.92	172	P	P	06 43 27.3	+3.5
	comp=Z,28nm,1.4s						
TOLI2	Tolitoli	27.29	285	P	P	06 43 16.9	-10
TOLI2				IAmb	IAmb	06 43 46.4	
	comp=Z,12nm,0.8s						
HTT	Hallett	27.92	195	P	P	06 43 32.6	-0.2
	comp=Z,8.4nm,0.8s						
BBOO	Buckleboo	28.18	200	P	P	06 43 34.8	-0.3
BBOO				IAmb	IAmb	06 43 35.5	
	comp=Z,12nm,0.9s						
BBOO	Buckleboo	28.18	200	P	P	06 43 34.9	-0.2
	comp=Z,17nm,2.8s						
CAN	Canberra	28.82	177	P	P	06 43 41.4	+0.6
CAN				IAmb	IAmb	06 43 42.9	
	comp=Z,27nm,1.5s						
FORT	Forrest	30.09	214	P	P	06 43 50.4	-1.6
FORT				IAmb	IAmb	06 43 52.5	
	comp=Z,12nm,0.9s						
FORT	Forrest	30.09	214	P	P	06 43 51.2	-0.8
	comp=Z,16nm,2.4s						
ARPS	Mount Arapiles	30.58	188	P	P	06 43 56.9	+0.6
	comp=Z,7.7nm,0.8s						
MEEK	Meekatharra	33.73	230	P	P	06 44 22.7	-1.5
	comp=Z,16nm,2.0s						
BHHZ	Black Hill Sta	42.01	146	P	P	06 45 36.6	+2.8
BKZ	Black Stump Fm	42.03	145	P	P	06 45 34.3	+0.3
BKZ				IAmb	IAmb	06 45 42.3	
	comp=Z,22nm,1.4s						
KWHZ	Kaweka Forest	42.17	146	P	P	06 45 38.0	+2.9
TSZ	Takapari Road	42.35	147	P	P	06 45 39.1	+2.5
PNHZ	Pukenui	42.38	146	P	P	06 45 39.4	+2.6
MRZ	Mangatainoka R	42.57	148	P	P	06 45 40.3	+2.1
HOWZ	Holdsworth Sta	42.70	148	P	P	06 45 41.6	+2.2
MTW	Mount Morrison	42.88	148	P	P	06 45 42.8	+2.0
ANWZ	Angora Road	42.91	147	P	P	06 45 43.5	+2.5
BFZ	Birch Farm	42.94	147	P	P	06 45 43.2	+2.0
BFZ	Birch Farm	42.94	147	P	P	06 45 40.8	-0.5
NJ2	Nanjing	46.77	327	*e*P	P	06 46 03.8	-8.0
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KSRS	Korea Array	47.17	339	P	P	06 46 14.0	-0.8
	comp=Z,1.4nm,0.8s,baz=157,slow=9.7,SNR=2.7						
GYA	Guiyang	51.01	312	⇑P	P	06 46 37.3	-7.3
GYA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CMAR	Chiang Mai Arr	53.51	298	P	P	06 47 03.2	+0.1
	comp=Z,2.0nm,0.6s,baz=122,slow=5.5,SNR=7.8						
CMAR				pP	sP	06 47 21.1	-2.3
	comp=Z,3.0nm,0.7s,baz=122,slow=5.7,SNR=3.2						
HHC	Hu-ho-hao-te	57.23	328	*e*P	P	06 47 20.6	-9.0
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.4s						
PETK	Petropavlovsk-	59.98	7	P	P	06 47 48.0	-0.4
	comp=Z,0.9nm,0.5s,baz=168,slow=9.6,SNR=1.4						
ULN	Ulaanbaatar	64.51	331	P	P	06 48 09.5	-10
CASY	Casey	64.87	195	P	P	06 48 19.7	-1.2
VNDA	Vanda	71.49	177	P	P	06 49 02.5	+0.2
	comp=Z,3.0nm,0.9s,baz=355,slow=7.0,SNR=5.0						
VNDA	Vanda	71.49	177	P	P	06 49 01.4	-0.8
VNDA				IAmb	IAmb	06 49 03.7	
	comp=Z,7.0nm,1.1s						
SBA	Scott Base	72.13	176	P	P	06 49 04.9	-1.2
WMQ	Urumqi	73.15	319	*e*P	P	06 49 06.3	-6.5
MKAR	Makanchi Array	77.86	321	P	P	06 49 40.1	+0.4
	comp=Z,0.4nm,0.7s,baz=104,slow=6.1,SNR=3.2						
ZALV	Zalesovo Beam	79.40	328	P	P	06 49 47.9	0.0
	comp=Z,0.4nm,0.3s,baz=72,slow=6.2,SNR=2.0						
QSPA	South Pole Qui	83.55	180	P	P	06 50 10.0	+0.2
ILAR	Eielson Array	85.84	23	P	P	06 50 20.3	-0.9
	comp=Z,0.3nm,0.7s,baz=261,slow=4.5,SNR=3.2						
ILAR				pP	pP	06 50 37.9	+1.4
	comp=Z,0.7nm,0.9s,baz=246,slow=5.2,SNR=3.3						
TORD	Torodi Ar. Bea	145.26	284	PKPbc	PKPdf	06 57 20.6	+0.1
	comp=Z,3.1nm,0.7s,baz=76,slow=3.8,SNR=16						
TORD				pPKPbc	sPKPab	06 57 39.3	-1.9
	comp=Z,3.1nm,0.8s,baz=78,slow=3.5,SNR=6.7						
BDFB	Brasilia	153.47	146	PKPbc	PKiKP	06 57 41.5	0.0
	comp=Z,0.8nm,0.4s,baz=210,slow=6.9,SNR=3.3						

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*IGIL **24** 06:52:10.6, 36°.70N×10°.93W, h6^{km}, ML1.5*

*MDD **24** 06:52:10.4±1.7, 36°.80N×10°.87W, h0^{km}, mbLg2.6/9, Error ellipse: s-maj=14.1km s-min=11.3km az=81.0, PRXIMO*

*INMG **24** 06:52:11.2±1.2, 36°.70N×10°.93W, h10^{km}, ML2.1, Error ellipse: s-maj=6.9km s-min=4.0km az=85.0*

*CNRM **24** 06:52:12.7, 36°.27N×10°.20W, h0^{km}, ml2.1*

ISC 24 06:52:03.9±2.1**, 36°.68N**±0°.05×**10°.98W**±0°.07**, h3^{km}**±11^{km}**, n61,** σ**2ˢ.08**/95**, 2D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	1.79	75	⇓*e*Pn	Pg	06 52 39.4	+1.3
PFVI				*e*Sn	Sg	06 53 00.5	-0.8
PFVI				A	A	06 53 03.9	
	20nm,0.7s						
PFVI	Vila Bisbo	1.79	75	⇓P	Pg	06 52 39.4	+1.3
	5.4nm,0.1s,SNR=18						
PFVI				S	Sg	06 53 00.4	-0.8
	11nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	1.79	75	P	Pg	06 52 38.3	+0.2
PFVI				S	Sn	06 52 57.5	-1.3
MORF	Marmelete	1.97	71	*e*P	Pg	06 52 42.0	+0.4
MORF	Marmelete	1.97	71	*e*Pn	Pg	06 52 42.0	+0.4
MORF				*e*Sn	Sg	06 53 05.2	-1.9
MORF				A	A	06 53 11.5	
	6.4nm,0.4s						
MORF	Marmelete	1.97	71	P	Pg	06 52 42.0	+0.4
MORF				S	Sg	06 53 05.2	-1.9
	6.4nm,0.4s						
PTEO	Sao Teotonio	2.00	64	*e*Sn	Sg	06 53 06.8	-1.4
PTEO				A	A	06 53 27.4	
	12nm,0.6s						
PTEO	Sao Teotonio	2.00	64	S	Sg	06 53 06.8	-1.4
	6.2nm,0.6s						
PNCL	Nicolau / Gran	2.42	53	*e*Pn	Pb	06 52 48.3	+0.3
PNCL				*e*Sn	Sb	06 53 16.3	-2.0
PNCL				A	A	06 53 21.5	
	9.2nm,0.6s						
PNCL	Nicolau / Gran	2.42	53	P	Pb	06 52 48.3	+0.3
PNCL				S	Sb	06 53 16.3	-2.0
	9.2nm,0.6s						
MESJ	Messejana	2.49	61	*e*P	Pb	06 52 49.1	-0.1
MESJ				*e*S	Sn	06 53 17.4	+1.3
MESJ				IAML		06 53 19.1	
	comp=N,2.5nm,0.1s						
MESJ	Messejana	2.49	61	*e*Pn	Pb	06 52 49.2	0.0
MESJ				*e*Sn	Sb	06 53 17.6	-2.6
MESJ				A	A	06 53 23.6	
	comp=N,4.0nm,0.2s						
MESJ	Messejana	2.49	61	P	Pb	06 52 49.1	-0.1
MESJ				S	Sn	06 53 17.4	+1.3
PBDV	Barranco-do-Ve	2.51	76	*e*Pn	Pb	06 52 49.7	+0.2
PBDV				*e*Sn	Sb	06 53 18.4	-2.4
PBDV				A	A	06 53 25.6	
	comp=N,4.1nm,0.6s						
PBDV	Barranco-do-Ve	2.51	76	P	Pb	06 52 49.7	+0.2
PBDV				S	Sb	06 53 18.4	-2.4
	comp=N,4.1nm,0.6s						
PCVE	Castro Verde	2.54	67	*e*Pn	Pb	06 52 50.0	0.0
PCVE				*e*Sn	Sb	06 53 19.1	-2.5
PCVE				A	A	06 53 23.1	
	comp=N,4.9nm,0.5s						
PCVE	Castro Verde	2.54	67	P	Pb	06 52 50.0	0.0
PCVE				S	Sb	06 53 19.1	-2.5
	comp=N,4.9nm,0.5s						
PMAFR	Mafra	2.64	30	*e*Sn	Sn	06 53 20.8	+0.9
PMAFR				A	A	06 53 26.4	
	comp=N,18nm,0.7s						
PMAFR	Mafra	2.64	30	S	Sn	06 53 20.4	+0.6
	comp=N,11nm,0.2s,SNR=7.9						
PVAQ	Vaqueiros	2.71	74	*e*Pn	Pb	06 52 52.4	-0.6
PVAQ				*e*Sn	Sn	06 53 22.8	+1.2
PVAQ				A	A	06 53 26.6	
	comp=N,5.1nm,0.3s						
PVAQ	Vaqueiros	2.71	74	P	Pb	06 52 52.4	-0.6
PVAQ				S	Sn	06 53 22.8	+1.2
	comp=N,5.1nm,0.3s						
PVAQ	Vaqueiros	2.71	74	P	Pn	06 52 50.8	+2.5
PVAQ				S	Sn	06 53 22.9	+1.3
PBEJ	Beja	2.82	61	*e*Sn	Sn	06 53 25.8	+1.4
PBEJ	Beja	2.82	61	S	Sn	06 53 25.8	+1.4
EGRO	El Granado	2.92	72	P	Pb	06 52 54.9	-1.7
	comp=N,0.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	06 53 27.8	+1.0
	comp=N,2.8nm,0.1s,SNR=7.9						
PMTG	Montargil	3.23	42	*e*Pn	Pn	06 52 58.9	+3.4
PMTG				*e*Sn	Sn	06 53 35.6	+1.1
PMTG				A	A	06 53 37.2	
	comp=N,2.5nm,0.2s						
PMTG	Montargil	3.23	42	P	Pn	06 52 58.9	+3.4
PMTG				S	Sn	06 53 35.6	+1.1
	comp=N,2.5nm,0.2s						
PSBE	So Bento	3.31	31	*e*Pn	Pb	06 53 03.8	+0.5
PSBE				*e*Sn	Sn	06 53 38.5	+2.0
PSBE				A	A	06 53 41.7	
	comp=N,4.6nm,0.9s						
PESTR	Estremoz	3.46	50	*e*Pn	Pb	06 53 06.9	+1.1
PESTR				*e*Sn	Sn	06 53 41.0	+0.8
PESTR				A	A	06 53 58.4	
	comp=N,2.4nm,0.7s						
PBAR	Barrancos	3.48	63	*e*Sn	Sn	06 53 43.0	+2.5
PBAR	Barrancos	3.48	63	S	Sn	06 53 43.0	+2.5
EMIN	Mina Concepcio	3.61	71	P	Pn	06 53 04.5	+3.9
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	06 53 44.2	+0.5
	comp=N,1.3nm,0.1s,SNR=6.6						
EBAD	Badajoz	3.77	55	P	Pn	06 53 06.6	+3.7
	comp=N,0.2nm,0.1s,SNR=7.9						
EBAD				S	Sn	06 53 47.9	+0.2
	comp=N,5.6nm,0.2s,SNR=7.3						
PCAS	Casmilo, Conde	3.89	29	*e*Pn	Pn	06 53 03.3	-1.3
PCAS				*e*Sn	Sn	06 53 51.2	+0.4
PCAS				A	A	06 53 57.6	
	comp=N,2.9nm,0.7s						
PCAS	Casmilo, Conde	3.89	29	P	Pn	06 53 03.3	-1.3
PCAS				S	Sn	06 53 51.2	+0.4
	comp=N,2.9nm,0.7s						
PMRV	Marv??o	3.94	45	*e*Pn	Pn	06 53 08.6	+3.3
PMRV				*e*Sn	Sn	06 53 51.7	-0.4
PMRV				A	A	06 53 53.7	
	comp=N,2.5nm,0.2s						
PMRV	Marv??o	3.94	45	P	Pn	06 53 08.6	+3.3
PMRV				S	Sn	06 53 51.7	-0.4
	comp=N,2.5nm,0.2s						
ESPR	Espera	4.12	86	P	Pn	06 53 11.8	+4.1
	comp=N,2.5nm,0.1s,SNR=7.9						
ESPR				S	Sn	06 53 57.8	+1.4
	comp=N,3.2nm,0.3s,SNR=7.9						
PCBR	Castelo Branco	4.19	40	*e*Sn	Sn	06 53 58.4	+0.3
PCBR	Castelo Branco	4.19	40	S	Sn	06 53 58.4	+0.3
MTE	Manteigas	4.59	35	*e*Sn	Sn	06 54 08.0	0.0
MTE	Manteigas	4.59	35	S	Sn	06 54 08.0	0.0
ECAB	El Cabril	4.64	71	P	Pn	06 53 18.7	+3.8
	comp=N,0.3nm,0.1s,SNR=7.9						
ECAB				S	Sn	06 54 08.9	-0.4
	comp=N,0.8nm,0.2s,SNR=7.9						
PVIS	Viseu	4.70	30	*e*Sn	Sn	06 54 10.3	-0.4
PVIS				A	A	06 54 15.9	
	comp=N,2.9nm,0.7s						
PVIS	Viseu	4.70	30	S	Sn	06 54 10.3	-0.4
	comp=N,1.4nm,0.7s						
EPLA	Plasencia	5.12	47	S	Sn	06 54 20.7	-0.4
	comp=N,2.5nm,0.1s,SNR=8.8						
POLO	Lamas de Olo	5.30	27	*e*Sn	Sn	06 54 24.3	-1.4
POLO	Lamas de Olo	5.30	27	S	Sn	06 54 24.3	-1.4
EADA	Adamuz	5.31	72	P	Pn	06 53 28.1	+4.0
	comp=N,0.1nm,0.0s,SNR=7.9						
EADA				S	Sn	06 54 25.4	-0.3
	comp=N,0.7nm,0.1s,SNR=7.9						
MVO	Moncorvo	5.43	33	*e*Sn	Sn	06 54 28.3	-0.6
MVO				A	A	06 54 32.5	
	comp=N,2.6nm,1.1s						
MVO	Moncorvo	5.43	33	S	Sn	06 54 27.3	-1.6
	comp=N,0.8nm,0.1s,SNR=7.9						
PCAB	Cabril	5.52	24	*e*Sn	Sn	06 54 29.6	-1.4
ELOB	Lobios	5.65	23	S	Sn	06 54 32.3	-2.0
	comp=N,0.9nm,0.1s,SNR=5.7						
PGAV	Gavieira, Arco	5.68	21	*e*Sn	Sn	06 54 34.3	-0.7
EZAM	Zamans	5.74	17	S	Sn	06 54 33.4	-3.0
	comp=N,2.3nm,0.1s,SNR=7.9						
PAB	San Pablo	5.96	59	P	Pn	06 53 36.4	+3.3
	SNR=7.9						
PAB				S	Sn	06 54 40.4	-1.5
	comp=N,0.1nm,0.1s,SNR=7.9						
OUK	Oukaimeden	6.04	154	P	Pn	06 53 36.1	+1.6
OUK				S	Sn	06 54 35.2	-9.1
PBRG	Braganca	6.08	31	*e*Sn	Sn	06 54 44.1	-0.7
ECAL	Calabor	6.20	31	S	Sn	06 54 45.7	-2.0
	comp=N,1.9nm,0.3s,SNR=7.9						
MD31	MD31	6.38	125	P	Pn	06 53 40.3	+1.5
MD31				S	Sn	06 54 44.8	-7.4
MDT	Midelt	6.51	124	P	Pn	06 53 42.3	+1.7
MDT				S	Sn	06 54 47.9	-7.6

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*IDC **24** 06:52:37.9±0.8, 21°.13S×67°.12W, h183^{km}±15^{km}, mb3.5/1, mb1 3.2/6, mb1mx3.1/27, mbtmp3.7/6, MS3.1/1, Ms1 3.1/1, ms1mx2.3/21, Error ellipse: s-maj=26.9km s-min=10.8km az=114.0*

*SCB **24** 06:52:42.3±1.4, 21°.22S×67°.35W, h173^{km}±11^{km}, ML3.5/4, Error ellipse: s-maj=4.7km s-min=4.4km az=0.0*

ISC 24 06:52:37.5±0.9**, 21°.19S**±0°.05×**67°.28W**±0°.05**, h200^{km}, n23,** σ**1ˢ.85**/29**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	Mochara	1.53	93	P	Pn	06 53 13.6	+1.6
MOCB				S	Sn	06 53 38.1	-0.6
MOCB				IAML		06 53 40.1	
	428nm,0.4s						
YJA	Yavi	1.91	121	P	Pn	06 53 17.2	+1.6
PB09	IPOC Station P	1.93	251	P	Pn	06 53 16.8	+1.3
PB08	IPOC Station P	2.04	300	P	Pn	06 53 18.6	+1.7
PB08				S	Sn	06 53 46.0	-1.4
PB08				IAML		06 53 51.7	
	105nm,0.2s						
PB01	IPOC Station P	2.07	274	P	Pn	06 53 17.9	+1.1
LVC	Limon Verde	2.07	227	P	Pn	06 53 18.4	+1.2
	21nm,0.3s,baz=61,slow=8.7,SNR=364						
LVC				S	Sn	06 53 49.0	+0.9
	2.6nm,0.3s,baz=141,slow=23,SNR=8.3						
LVC	Limon Verde	2.07	227	P	Pn	06 53 18.2	+1.0
PB03	IPOC Station P	2.46	249	P	Pn	06 53 22.1	+1.0
PB07	IPOC Station P	2.49	257	P	Pn	06 53 22.4	+0.9
PB06	IPOC Station P	2.61	234	P	Pn	06 53 23.7	+0.9
PB11	IPOC Station P	2.64	302	P	Pn	06 53 24.0	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
PB11				S	Sn	06 53 56.8	-2.0
PB11				IAML		06 54 00.0	
	468nm,0.2s						
PB15	**IPOC Station P**	**2.86**	**225**	P	**Pn**	**06 53 27.1**	**+1.4**
PB04	**IPOC Station P**	**2.90**	**246**	P	**Pn**	**06 53 26.8**	**+0.6**
PB05	**IPOC Station P**	**3.18**	**238**	P	**Pn**	**06 53 30.3**	**+0.9**
PB05				S	Sn	06 54 06.4	-3.6
PB05				IAML		06 54 11.3	
	36nm,0.3s						
BBOE	**La Paz, Chanca**	**4.40**	**351**	P	**Pn**	**06 53 47.7**	**+2.7**
BBOD	**La Paz, Gloria**	**4.70**	**344**	P	**Pn**	**06 53 51.2**	**+2.6**
LPAZ	**La Paz**	**4.94**	**350**	P	**Pn**	**06 53 52.5**	**+0.7**
	0.5nm,0.3s,baz=166,slow=6.4,SNR=13						
LPAZ				S	Sn	06 54 49.1	-1.2
	0.1nm,0.3s,baz=242,slow=16,SNR=2.1						
LPAZ	**La Paz**	**4.94**	**350**	P	**Pn**	**06 53 53.4**	**+1.6**
SIV	**San Ignacio**	**7.83**	**50**	P	**Pn**	**06 54 28.1**	**-0.6**
	0.7nm,0.3s,baz=244,slow=8.0,SNR=19						
SIV				S	Sn	06 55 51.8	-5.3
	0.3nm,0.3s,baz=308,slow=23,SNR=6.2						
BDFB	**Brasilia**	**19.09**	**76**	P	**P**	**06 56 46.5**	**+1.1**
	0.5nm,0.3s,baz=255,slow=16,SNR=5.0						
PLCA	**Paso Flores**	**19.68**	**187**	P	**Pn**	**06 56 54.9**	**-0.5**
	0.1nm,0.3s,baz=14,slow=17,SNR=3.5						
JTS	**Las Juntas de**	**35.78**	**329**	LR	LR	07 17 04.7	
	comp=Z,24nm,18.1s,slow=41						
TORD	**Torodi Ar. Bea**	**75.82**	**70**	P	**P**	**07 04 02.9**	**+0.8**
	0.7nm,0.5s,baz=260,slow=5.5,SNR=9.6						

NNC 24 07:38:00.6±1.5**, 38°.42N×72°.93E, h6^{km}±6^{km}, mb4.0, mpv3.6, 2C-4D, Error ellipse: s-maj=10.7km s-min=7.9km az=167.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	**Merke**	**4.32**	**3**	Pg	Pb	07 39 19.2	+2.1
	4.5nm,0.4s						
MRKS				Lg	Lg	07 40 17.5	
	11nm,0.4s						
IUG	**Iuzhnay**	**4.33**	**330**	Pg	Pb	07 39 20.2	+3.0
	301nm,0.5s						
IUG				Lg	Lg	07 40 19.5	
	38nm,0.5s						
AAK	**Ala-Archa**	**4.38**	**15**	⇑Pg	Pb	07 39 19.6	+1.6
	3.2nm,0.6s						
AAK				⇓Lg	Lg	07 40 18.3	
	11nm,0.8s						
TKM2	**Tokmak 2**	**4.93**	**23**	⇓Pg	Pb	07 39 29.5	+2.1
	4.4nm,1.4s						
TKM2				⇓Lg	Lg	07 40 37.6	
	3.5nm,0.6s						
KK02	**Karatay Array**	**5.03**	**339**	⇑Pn	Pn	07 39 16.4	-0.1
	1.8nm,0.4s						
KK02				⇓Sn	Sn	07 40 16.0	+1.1
	3.1nm,0.6s						
KST	**Kastek**	**5.16**	**26**	Pg	Pb	07 39 34.6	+3.3
	4.1nm,0.7s						
KST				Lg	Lg	07 40 43.9	
	6.4nm,1.0s						
BRLS	**Borolday**	**5.17**	**334**	Pg	Pb	07 39 31.7	+0.3
	2.3nm,0.4s						
BRLS				Lg	Lg	07 40 39.2	
	5.8nm,0.3s						
DGS	**Degeres**	**5.27**	**23**	Pg	Pg	07 39 37.5	-4.2
	2.5nm,0.5s						
DGS				Lg	Lg	07 40 49.0	
	4.9nm,0.5s						
KRBS	**Karabastau**	**5.66**	**21**	Pg	Pg	07 39 45.3	-3.8
	2.4nm,0.4s						
KRBS				Lg	Lg	07 41 02.5	
	1.9nm,0.5s						
KTBS	**Karatobe**	**6.00**	**27**	Pg	Pg	07 39 51.2	-4.3
	3.1nm,0.4s						
KTBS				Lg	Lg	07 41 12.7	
	7.2nm,0.6s						

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*THE **24** 07:43:42.2, 38°.65N×20°.59E, h10^{km}, ML2.6/6, Error ellipse: s-maj=1.4km s-min=0.4km az=97.0*
*ATH **24** 07:43:42.3, 38°.66N×20°.60E, h12^{km}±1^{km}, ML2.3/4, Error ellipse: s-maj=2.5km s-min=0.9km az=279.0*
ISC 24 07:43:41.1±0.8**, 38°.68N**±0°.03×**20°.56E**±0°.04**, h17**^{km}±4^{km}**, n30, σ0^s.96**/48**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	**Dragano-Lefkad**	**0.02**	**67**	P	**Pg**	**07 43 44.1**	**0.0**
DRAG				S	**Sg**	**07 43 45.4**	**-0.8**
	11µm,0.2s						
DRAG	**Dragano-Lefkad**	**0.02**	**67**	P	**Pg**	**07 43 44.1**	**0.0**
DRAG				S	**Sg**	**07 43 45.5**	**-0.7**
EVGI	**Lefkada island**	**0.10**	**125**	P	**Pg**	**07 43 44.5**	**-0.1**
EVGI				S	**Sg**	**07 43 46.1**	**-0.9**
	15µm,0.1s						
EVGI	**Lefkada island**	**0.10**	**125**	P	**Pg**	**07 43 44.5**	**-0.1**
EVGI				S	**Sg**	**07 43 46.4**	**-0.6**
NYDR	**Nydri-Lefkada**	**0.12**	**72**	P	**Pg**	**07 43 44.9**	**+0.1**
NYDR				S	**Sg**	**07 43 46.8**	**-0.5**
	187µm,0.9s						
LKD2	**Lefkada island**	**0.14**	**36**	P	**Pg**	**07 43 45.7**	**+0.5**
LKD2				S	**Sg**	**07 43 47.8**	**-0.1**
	2µm,0.2s						
LKD2	**Lefkada island**	**0.14**	**36**	P	**Pg**	**07 43 45.6**	**+0.5**
LKD2				S	**Sg**	**07 43 48.4**	**+0.5**
LKD2				AML	AML	07 43 48.6	
	comp=N,4449µm,0.3s						
LKD2				AML	AML	07 43 48.8	
	comp=E,4239µm,0.2s						
TSLK	**Tsoukalades, L**	**0.17**	**28**	P	**Pg**	**07 43 46.4**	**+0.9**
TSLK				S	**Sg**	**07 43 49.2**	**+0.7**
	comp=E,2µm,0.3s						
TSLK	**Tsoukalades, L**	**0.17**	**28**	P	**Pg**	**07 43 46.4**	**+0.9**
TSLK				S	**Sg**	**07 43 49.4**	**+0.9**
TSLK				AML	AML	07 43 50.0	
	comp=N,3939µm,0.3s						
TSLK				AML	AML	07 43 50.2	
	comp=E,3124µm,0.2s						
FSK	**Fiskardo**	**0.22**	**178**	P	**Pg**	**07 43 46.7**	**+0.5**
FSK	**Fiskardo**	**0.22**	**178**	P	**Pg**	**07 43 46.7**	**+0.5**
FSK				AML	AML	07 43 50.3	
	comp=N,2277µm,0.5s						
FSK				S	**Sg**	**07 43 50.4**	**+0.8**
FSK				AML	AML	07 43 51.8	
	comp=E,2700µm,0.2s						
KEF4	**Livadi, Kephal**	**0.43**	**194**	P	**Pg**	**07 43 50.0**	**+0.1**
KEF4				S	**Sg**	**07 43 56.9**	**+1.1**
	comp=E,4µm,0.2s						
DMLN	**Damoulianata-K**	**0.46**	**198**	P	**Pg**	**07 43 50.9**	**+0.5**
KEF3	**Kipouria, Keph**	**0.50**	**199**	P	**Pg**	**07 43 51.0**	**-0.1**
VLS	**Valsamata**	**0.50**	**177**	P	**Pg**	**07 43 51.0**	**-0.2**
VLS	**Valsamata**	**0.50**	**177**	P	**Pg**	**07 43 50.9**	**-0.2**
VLS				S	**Sg**	**07 43 58.6**	**+0.7**
VLS				AML	AML	07 44 00.1	
	comp=N,735µm,0.2s						
VLS				AML	AML	07 44 00.1	
	comp=E,526µm,0.3s						
PSDA	**Pessada-Kefalo**	**0.56**	**178**	P	**Pg**	**07 43 52.2**	**-0.1**
PSDA	**Pessada-Kefalo**	**0.56**	**178**	P	**Pg**	**07 43 52.1**	**-0.1**
PSDA				S	**Sb**	**07 44 00.9**	**+0.7**
ANX	**Ano Chora**	**1.07**	**94**	P	**Pg**	**07 44 01.8**	**-0.1**
EFP	**Efpalio**	**1.09**	**103**	P	**Pb**	**07 44 01.6**	**+0.1**
DRO	**Drossia**	**1.16**	**128**	P	**Pb**	**07 44 02.8**	**+0.1**
LAKA	**Lakka**	**1.20**	**111**	P	**Pb**	**07 44 03.3**	**0.0**
SERG	**Sergoula**	**1.21**	**102**	P	**Pb**	**07 44 03.5**	**0.0**
TRIZ	**Trizonia**	**1.23**	**104**	P	**Pn**	**07 44 03.8**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.28**	**74**	P	**Pn**	**07 44 05.6**	**+1.5**
LSTV	**Lastovo**	**4.94**	**327**	*e*Pn	**Pn**	**07 44 55.9**	**+1.4**
LSTV				Sn	**Sn**	**07 45 49.5**	**-1.8**
RICI	**Ricice**	**5.46**	**333**	*e*Pn	**Pn**	**07 45 02.3**	**+0.6**
RICI				Sn	**Sn**	**07 46 01.3**	**-2.8**
KIJV	**Kijevo**	**6.17**	**331**	*e*Pn	**Pn**	**07 45 12.2**	**+0.8**
KIJV				Sn	**Sn**	**07 46 19.3**	**-2.2**
ZIRJ	**Zirje**	**6.20**	**325**	*e*Pn	**Pn**	**07 45 12.2**	**+0.4**
ZIRJ				Sn	**Sn**	**07 46 20.5**	**-1.7**
MORI	**Morici**	**6.34**	**326**	*e*Pn	**Pn**	**07 45 15.6**	**+1.9**
MORI				Sn	**Sn**	**07 46 23.9**	**-1.7**

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*SOME **24** 07:46:59.2, 38°.00N×72°.47E, h5^{km}*
*NNC **24** 07:47:05.1±1.3, 38°.14N×72°.52E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=10.2km s-min=6.6km az=176.0*
*NEIC **24** 07:47:06.2±1.9, 38°.08N±0°.06×72°.47E±0°.07, h10^{km}±2^{km}, mb4.1/6, Error ellipse: s-maj=11.3km s-min=7.5km az=133.0*
*IDC **24** 07:47:09.2±3.7, 38°.01N×72°.75E, h50^{km}±31^{km}, mb3.7/15, mb1 3.9/20, mb1mx3.8/41, mbtmp4.0/20, ML3.5/5, MS3.1/3, Ms1 3.1/3, ms1mx2.8/43, Error ellipse: s-maj=26.0km s-min=15.0km az=8.0*
ISC 24 07:47:04.9±0.5**, 38°.10N**±0°.04×**72°.48E**±0°.03**, h10^{km}, n112, σ2^s.83**/131**, mb4.1**/19**, 12C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.47**	**339**		**Pb**	**07 47 32.3**	**-0.3**
CHGR	**Chuyangaron**	**2.67**	**283**		**Pn**	**07 47 49.3**	**+1.3**
CEP	**Cherat**	**4.30**	**186**	P	**Pn**	**07 48 13.9**	**+3.4**
CEP				S	**Sn**	**07 49 07.0**	**+6.3**
IUG	**Iuzhnay**	**4.45**	**336**	*e*P	**Pb**	**07 48 23.8**	**+0.5**
	2µm,0.3s						
IUG				*e*S	**Sg**	**07 49 25.0**	**-2.8**
	397nm,0.7s						
IUG	**Iuzhnay**	**4.45**	**336**	Pg	**Pb**	**07 48 23.8**	**+0.5**
	2µm,0.3s						
IUG				Lg	Lg	07 49 25.0	
	397nm,0.7s						
CHCP	**Chirah Chowk**	**4.48**	**172**	P	**Pn**	**07 48 15.5**	**+2.6**
NIL	**Nilore**	**4.49**	**172**		**Pn**	**07 48 14.8**	**+1.8**
MRKS	**Merke**	**4.67**	**7**	*e*P	**Pb**	**07 48 28.8**	**+1.9**
	28nm,0.3s						
MRKS				*e*S	**Sg**	**07 49 33.5**	**-1.4**
	61nm,0.5s						
MRKS	**Merke**	**4.67**	**7**	Pg	**Pb**	**07 48 28.8**	**+1.9**
	28nm,0.3s						
MRKS				Lg	Lg	07 49 33.5	
	61nm,0.5s						
CHM	**Chimkent**	**4.75**	**333**	*e*P	**Pb**	**07 48 29.7**	**+1.4**
	6.1nm,0.5s						
CHM				*e*S	**Sg**	**07 49 34.9**	**-2.5**
	325nm,0.1s						
AAK	**Ala-Archa**	**4.78**	**18**	P	**Pn**	**07 48 20.3**	**+3.2**
	2.0nm,0.3s,baz=188,slow=7.4,SNR=25						
AAK				S	**Sn**	**07 49 17.8**	**+5.0**
	1.8nm,0.3s,baz=140,slow=22,SNR=5.9						
AAK				LR	LR	07 50 25.6	
	comp=Z,110nm,21.0s,baz=195,slow=41						
AAK	**Ala-Archa**	**4.78**	**18**	⇑Pn	**Pn**	**07 48 19.5**	**+2.3**
	15nm,1.1s						
AAK				⇓Pg	**Pb**	**07 48 31.4**	**+2.5**
	34nm,0.7s						
AAK				⇑Lg	Lg	07 49 36.7	
	115nm,1.3s						
AAK	**Ala-Archa**	**4.78**	**18**		**Pn**	**07 48 20.6**	**+3.4**
DZA	**Taraz**	**4.86**	**350**	*e*P	**Pb**	**07 48 29.8**	**-0.3**
	67nm,0.1s						
DZA				*e*S	**Sg**	**07 49 35.1**	**-5.9**
	110nm,0.1s						
DZA	**Taraz**	**4.86**	**350**	Pg	**Pb**	**07 48 29.8**	**-0.3**
	67nm,0.1s						
DZA				Lg	Lg	07 49 35.1	
	110nm,0.1s						
FRU1	**Bishkek**	**4.98**	**19**	Pn	**Pn**	**07 48 22.3**	**+2.5**
BOOM	**Boomskoye usch**	**5.12**	**30**		**Pn**	**07 48 23.0**	**+1.2**
KK02	**Karatay Array**	**5.21**	**344**	⇑Pn	**Pn**	**07 48 26.2**	**+3.3**
	9.8nm,0.4s						
KK02				⇓Sn	**Sn**	**07 49 25.9**	**+2.7**
	48nm,0.9s						
KKAR	**Karatay Array**	**5.21**	**344**		**Pn**	**07 48 26.4**	**+3.5**
BRLS	**Borolday**	**5.32**	**339**	*e*P	**Pb**	**07 48 37.6**	**-0.3**
	14nm,0.3s						
BRLS				*e*S	**Sg**	**07 49 48.8**	**-6.7**
	47nm,0.8s						
BRLS	**Borolday**	**5.32**	**339**	Pg	**Pb**	**07 48 37.6**	**-0.3**
	14nm,0.3s						
BRLS				Lg	Lg	07 49 48.8	
	47nm,0.8s						
THW	**Thamme Wali**	**5.33**	**187**	P	**Pn**	**07 48 25.7**	**+1.1**
TKM2	**Tokmak 2**	**5.37**	**25**	⇑Pg	**Pb**	**07 48 42.5**	**+3.7**
	8.6nm,0.5s						
TKM2				⇑Lg	Lg	07 49 55.5	
	47nm,0.9s						
TARG	**Taragay, Kyrgy**	**5.47**	**47**		**Pn**	**07 48 29.7**	**+2.9**
SGDS	**Sogindy**	**5.59**	**16**	Pg	**Pb**	**07 48 45.7**	**+3.2**
	14nm,0.6s						
SGDS				Lg	Lg	07 50 02.5	
	38nm,1.4s						
KST	**Kastek**	**5.60**	**27**	*e*P	**Pb**	**07 48 45.5**	**+2.7**
	22nm,0.7s						
KST				*e*S	**Sg**	**07 50 02.4**	**-2.4**
	37nm,0.6s						
KST	**Kastek**	**5.60**	**27**	Pg	**Pb**	**07 48 45.5**	**+2.7**
	22nm,0.7s						
KST				Lg	Lg	07 50 02.4	
	37nm,0.6s						
DGS	**Degeres**	**5.71**	**25**	*e*P	**Pb**	**07 48 48.3**	**+3.7**
	21nm,0.6s						
DGS				*e*S	**Sg**	**07 50 07.3**	**-0.9**
	43nm,0.5s						
DGS	**Degeres**	**5.71**	**25**	Pg	**Pb**	**07 48 48.3**	**+3.7**
	21nm,0.6s						
DGS				Lg	Lg	07 50 07.3	
	43nm,0.5s						
IZV	**Izvestkoviy**	**5.85**	**31**	*e*P	**Pb**	**07 48 50.1**	**+3.1**
	12nm,0.6s						
IZV				*e*S	**Sg**	**07 50 10.1**	**-2.5**
	44nm,0.7s						
IZV	**Izvestkoviy**	**5.85**	**31**	Pg	**Pb**	**07 48 50.1**	**+3.1**
	12nm,0.6s						
IZV				Lg	Lg	07 50 10.1	
	44nm,0.7s						
MTBS	**Maitube**	**5.85**	**30**	*e*P	**Pb**	**07 48 50.0**	**+3.0**
	12nm,0.6s						
MTBS				*e*S	**Sg**	**07 50 10.0**	**-2.7**
	36nm,1.5s						
MTBS	**Maitube**	**5.85**	**30**	Pg	**Pb**	**07 48 50.1**	**+3.0**
	12nm,0.6s						
MTBS				Lg	Lg	07 50 10.0	
	36nm,1.5s						
TNSS	**Tian-Shan**	**5.99**	**33**	*e*P	**Pb**	**07 48 53.4**	**+3.8**
	14nm,0.5s						
TNSS				*e*S	**Sg**	**07 50 15.1**	**-2.1**
	17nm,1.0s						
TNSS	**Tian-Shan**	**5.99**	**33**	Pg	**Pb**	**07 48 53.4**	**+3.8**
	14nm,0.5s						
TNSS				Lg	Lg	07 50 15.0	
	17nm,1.0s						
KRBS	**Karabastau**	**6.09**	**22**	*e*P	**Pb**	**07 48 55.0**	**+3.9**
	9.3nm,0.6s						
KRBS				*e*S	**Sg**	**07 50 17.9**	**-2.4**
	8.2nm,0.6s						
KRBS	**Karabastau**	**6.09**	**22**	Pg	**Pb**	**07 48 55.0**	**+3.9**
	9.3nm,0.6s						
KRBS				Lg	Lg	07 50 17.9	
	8.2nm,0.6s						
MDOK	**Medeo**	**6.13**	**33**	*e*P	**Pb**	**07 48 55.1**	**+3.2**
	11nm,0.7s						
MDOK				*e*S	**Sg**	**07 50 18.8**	**-3.0**
	34nm,0.7s						
MDOK	**Medeo**	**6.13**	**33**	⇑Pg	**Pb**	**07 48 55.6**	**+3.7**
	14nm,0.8s						
MDOK				⇑Lg	Lg	07 50 18.3	
	106nm,1.4s						
MDOK	**Medeo**	**6.13**	**33**	Pg	**Pb**	**07 48 55.1**	**+3.2**
	11nm,0.7s						
MDOK				Lg	Lg	07 50 18.8	
	34nm,0.7s						
KOTS	**Kotyrbulak**	**6.22**	**33**	*e*P	**Pb**	**07 48 56.8**	**+3.5**
	19nm,0.8s						
KOTS				*e*S	**Sg**	**07 50 21.7**	**-2.7**
	92nm,0.5s						
KOTS	**Kotyrbulak**	**6.22**	**33**	Pg	**Pb**	**07 48 56.8**	**+3.5**
	19nm,0.8s						
KOTS				Lg	Lg	07 50 21.7	
	92nm,0.5s						
KTBS	**Karatobe**	**6.44**	**28**	*e*P	**Pb**	**07 49 01.1**	**+3.9**
	11nm,0.5s						
KTBS				*e*S	**Sg**	**07 50 28.7**	**-3.0**
	39nm,0.4s						
KTBS	**Karatobe**	**6.44**	**28**	Pg	**Pb**	**07 49 01.1**	**+3.9**
	11nm,0.5s						
KTBS				Lg	Lg	07 50 28.7	
	39nm,0.4s						
KUU	**Kurty**	**6.48**	**26**	*e*P	Pb	07 49 02.4	+4.7
	7.7nm,0.6s						
KUU				*e*S	**Sg**	**07 50 31.1**	**-1.7**
	30nm,0.8s						
KUU	**Kurty**	**6.48**	**26**	Pg	Pb	07 49 02.4	+4.7
	7.7nm,0.6s						
KUU				Lg	Lg	07 50 31.1	
	30nm,0.8s						
DHRM	**DHARAMSHALA**	**6.62**	**151**	*e*P	**Pn**	**07 48 42.6**	**+0.1**
DHRM				*e*S	**Sn**	**07 49 53.0**	**-5.3**
DHRM				IAML		07 50 04.7	
	comp=E,207nm,0.8s						
SATY	**Saty**	**6.70**	**40**	*e*P	Pb	07 49 05.9	+4.5
	comp=E,17nm,0.7s						
SATY				*e*S	**Sg**	**07 50 37.3**	**-2.5**
	comp=E,43nm,1.2s						
SATY	**Saty**	**6.70**	**40**	Pg	Pb	07 49 05.9	+4.5
	comp=E,17nm,0.7s						
SATY				Lg	Lg	07 50 37.3	
	comp=E,43nm,1.2s						
ZHN	**Zhinishke**	**6.79**	**40**	*e*P	**Pb**	**07 49 06.8**	**+3.7**
	comp=E,7.0nm,0.3s						
ZHN				*e*S	**Sg**	**07 50 38.7**	**-4.1**
	comp=E,20nm,0.5s						
ZHN	**Zhinishke**	**6.79**	**40**	Pg	**Pb**	**07 49 06.8**	**+3.7**
	comp=E,7.0nm,0.3s						
ZHN				Lg	Lg	07 50 38.7	
	comp=E,20nm,0.5s						
BTLS	**Baital**	**7.03**	**9**	*e*P	Pb	07 49 11.6	+4.5
	comp=E,6.0nm,1.1s						
BTLS				*e*S	**Sg**	**07 50 47.2**	**-3.2**
	comp=E,11nm,0.7s						
BTLS	**Baital**	**7.03**	**9**	Pg	Pb	07 49 11.6	+4.5
	comp=E,6.0nm,1.1s						
BTLS				Lg	Lg	07 50 47.2	
	comp=E,11nm,0.7s						
UZB	**Uzynbulak**	**7.08**	**43**	*e*P	Pb	07 49 12.4	+4.4
	comp=E,8.2nm,0.4s						
UZB				*e*S	**Sg**	**07 50 48.6**	**-3.5**
	comp=E,16nm,0.7s						
UZB	**Uzynbulak**	**7.08**	**43**	Pg	Pb	07 49 12.4	+4.4
	comp=E,8.2nm,0.4s						
UZB				Lg	Lg	07 50 48.6	
	comp=E,16nm,0.7s						
KPKS	**Kokpek**	**7.13**	**39**	*e*P	**Pb**	**07 49 12.7**	**+3.8**
	comp=E,14nm,0.8s						
KPKS				*e*S	**Sg**	**07 50 48.7**	**-5.0**
	comp=E,20nm,0.6s						
ARXS	**Arharly**	**7.32**	**32**	*e*P	**Pb**	**07 49 16.2**	**+4.2**
	comp=E,11nm,0.5s						
ARXS				*e*S	**Sg**	**07 50 55.1**	**-4.5**
	comp=E,28nm,0.7s						
ARXS	**Arharly**	**7.32**	**32**	Pg	**Pb**	**07 49 16.2**	**+4.2**
	comp=E,11nm,0.5s						
ARXS				Lg	Lg	07 50 55.1	
	comp=E,28nm,0.7s						
SHLS	**Shalkode**	**7.33**	**44**	*e*P	**Pg**	**07 49 20.6**	**-4.5**
	comp=E,11nm,0.5s						
SHLS				*e*S	**Sg**	**07 51 02.6**	**+2.7**
	comp=E,19nm,0.7s						
SHLS	**Shalkode**	**7.33**	**44**	Pg	**Pg**	**07 49 20.6**	**-4.5**
	comp=E,11nm,0.5s						
SHLS				Lg	Lg	07 51 02.6	
	comp=E,19nm,0.7s						
SMLA	**Simla**	**7.96**	**150**	*e*P	**Pn**	**07 48 59.1**	**-1.5**
SMLA				*e*S	**Sn**	**07 50 22.8**	**-7.9**
SMLA				IAML		07 50 27.0	
	comp=N,118nm,0.5s						
SMLA				IAML		07 50 27.5	
	comp=E,94nm,0.4s						
DJR	**Jarkent**	**8.31**	**39**	Pg	Pb	07 49 34.8	+5.9
	comp=E,3.0nm,0.6s						
DJR				Lg	Lg	07 51 26.9	
	comp=E,15nm,0.8s						
KAPS	**Kapalarasan**	**8.83**	**33**	Pg	Pg	07 49 45.0	-8.8
	comp=E,5.9nm,1.0s						
KAPS				Lg	Lg	07 51 44.3	
	comp=E,12nm,0.8s						
KUDL	**Kundal**	**10.48**	**160**	*e*P	**Pn**	**07 49 32.0**	**-3.3**
KUDL				*e*S	Sn	07 51 19.9	-13
MAKZ	**Makanchi**	**11.17**	**36**	⇑Pn	**Pn**	**07 49 48.1**	**+3.6**
	comp=E,4.2nm,1.0s						
MAKZ	**Makanchi**	**11.17**	**36**		**Pn**	**07 49 45.7**	**+1.1**
MK31	**Makanchi Array**	**11.30**	**37**	Pn	**Pn**	**07 49 50.6**	**+4.2**
	comp=E,1.6nm,0.7s,baz=219,slow=12,SNR=9.2						
MK31	**Makanchi Array**	**11.30**	**37**		**Pn**	**07 49 47.1**	**+0.7**
MKAR	**Makanchi Array**	**11.30**	**37**	P	**Pn**	**07 49 47.9**	**+1.4**
	comp=E,0.1nm,0.3s,baz=222,slow=15,SNR=11						
MKAR	**Makanchi Array**	**11.30**	**37**	Pn	**Pn**	**07 49 48.8**	**+2.3**
GEYT	**Alibeck**	**11.33**	**274**	S	**Sn**	**07 51 54.0**	**+0.5**
	comp=E,1.1nm,0.3s,baz=144,slow=44,SNR=2.3						
GYA0B	**ALIBECK ARRAY**	**11.33**	**274**	Pn	**Pn**	**07 49 47.3**	**+0.4**
KURBB	**Kurchatov Arra**	**13.24**	**17**	P	**Pn**	**07 50 12.9**	**+0.1**
	comp=E,0.2nm,0.3s,baz=206,slow=13,SNR=6.1						
KURBB	**Kurchatov Arra**	**13.24**	**17**	⇑Pn	**Pn**	**07 50 13.7**	**+0.9**
	comp=E,4.8nm,1.0s						
KURK	**Kurchatov**	**13.34**	**17**	⇑Pn	**Pn**	**07 50 14.3**	**+0.1**
	comp=E,7.1nm,1.5s						
AB31	**Akbulak array**	**14.35**	**325**	Pn	**Pn**	**07 50 27.3**	**-0.7**
	comp=E,1.7nm,0.5s,baz=136,slow=11,SNR=55						
AB31				⇓Sn	**Sn**	**07 53 06.4**	**-0.6**
	comp=E,2.8nm,0.6s,baz=136,slow=27,SNR=3.7						
ABKAR	**Akbulak array**	**14.35**	**325**	Pn	**Pn**	**07 50 27.8**	**-0.2**
ABKAR	**Akbulak array**	**14.35**	**325**	Pn	**Pn**	**07 50 27.8**	**-0.2**
BVAR	**Borovoye Array**	**14.99**	**355**	P	**Pn**	**07 50 36.0**	**-0.8**
	comp=E,0.5nm,0.3s,baz=178,slow=16,SNR=24						
BRVK	**Borovoye**	**15.03**	**355**	⇑Pn	**Pn**	**07 50 37.2**	**0.0**
	comp=E,8.0nm,0.9s						
BRVK	**Borovoye**	**15.03**	**355**		**Pn**	**07 50 37.2**	**0.0**
BRVK				IAmb	IAmb	07 50 39.6	
	comp=Z,8.0nm,0.9s						
BHPL	**Bhopal**	**15.41**	**163**	*e*P	**Pn**	**07 50 38.6**	**-3.8**
BHPL				*e*S	Sn	07 53 16.6	-17
AKTO	**Aktyubinsk**	**16.06**	**325**	P	**Pn**	**07 50 52.1**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=144,slow=8.8,SNR=20						
AKTO				S	**Sn**	**07 53 49.5**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=116,slow=23,SNR=3.7						
AKTO	**Aktyubinsk**	**16.06**	**325**	⇑Pn	**P**	**07 50 53.2**	**-1.0**
	comp=Z,33nm,1.2s						
AKTO				⇓Sn	**Sn**	**07 53 47.3**	**-1.6**
	comp=Z,10nm,1.1s						
ZAA0	**Zalesovo Array**	**17.97**	**24**	P	**P**	**07 51 15.1**	**-0.1**
ZALV	**Zalesovo Beam**	**17.97**	**24**	P	**Pn**	**07 51 13.6**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=222,slow=11,SNR=12						
ZALV	**Zalesovo Beam**	**17.97**	**24**	P	**P**	**07 51 15.0**	**-0.2**
ARU	**Arti**	**20.55**	**338**	P	Pn	07 51 44.6	-1.0
	comp=Z,1.8nm,0.4s,baz=161,slow=7.0,SNR=11						
ARU	**Arti**	**20.55**	**338**		**P**	**07 51 44.5**	**+1.1**
ARU				IAmb	IAmb	07 51 46.0	
	comp=Z,13nm,1.0s						
SHL	**Shillong**	**20.64**	**122**	P	**P**	**07 51 45.0**	**+0.2**
SHL				IAmb	IAmb	07 51 51.4	
	comp=Z,7.5nm,0.8s						
KBZ	**Khabaz**	**22.98**	**294**	P	**P**	**07 52 12.7**	**+3.2**
	comp=Z,2.0nm,0.6s,baz=118,slow=6.1,SNR=0.9						
SONM	**Songino Array**	**26.47**	**58**	P	**P**	**07 52 41.9**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=259,slow=10,SNR=10						
SONM				LR	LR	08 05 04.7	
	comp=Z,64nm,18.4s,baz=217,slow=41						
BRTR	**Keskin Array B**	**30.11**	**285**	P	**P**	**07 53 16.9**	**+2.1**
	comp=Z,0.5nm,0.5s,baz=46,slow=16,SNR=4.2						
BURAR	**Bucovina Array**	**35.44**	**301**	P	**P**	**07 54 02.0**	**+0.7**
BURAR				IAmb	IAmb	07 54 05.7	
	comp=Z,2.1nm,1.1s						
FIA1	**FINESS Array S**	**36.84**	**325**	P	**P**	**07 54 14.2**	**+1.4**
FINES	**FINESS Array B**	**36.84**	**325**	P	**P**	**07 54 13.6**	**+0.7**
	comp=Z,1.8nm,0.4s,baz=114,slow=9.1,SNR=22						
ARCES	**ARCESS Array B**	**40.13**	**336**	P	**P**	**07 54 40.5**	**0.0**
	comp=Z,4.2nm,0.9s,baz=106,slow=4.0,SNR=7.6						
CONA	**Conrad Observa**	**41.69**	**302**	*e*P	**P**	**07 54 56.0**	**+2.3**
	comp=Z,3.8nm,0.9s						
SOKA	**Soboth**	**42.44**	**301**	*e*P	**P**	**07 55 01.4**	**+1.5**
	comp=Z,4.1nm,1.5s						
GERES	**GERESS Array B**	**42.99**	**304**	P	**P**	**07 55 05.7**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=69,slow=7.3,SNR=5.0						
KSRS	**Korea Array**	**43.26**	**73**	LR	LR	08 14 27.6	
	comp=Z,31nm,18.6s,baz=5.0,slow=38						
NB2	**NORSAR Subarra**	**43.83**	**322**	P	**P**	**07 55 11.3**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=89,slow=7.9						
NOA	**NORSAR Array B**	**43.83**	**322**	P	**P**	**07 55 10.4**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=101,slow=7.3,SNR=4.6						
FETA	**Feichten**	**45.28**	**302**	*e*P	**P**	**07 55 22.7**	**-0.1**
	comp=Z,9.1nm,1.8s						
DAVA	**Damuels**	**45.79**	**303**	*e*P	**P**	**07 55 28.0**	**+1.2**
	comp=Z,5.4nm,0.5s						
KEST	**Kesra**	**49.66**	**288**	P	**P**	**07 55 58.9**	**+2.0**
	comp=Z,2.1nm,0.5s,baz=44,slow=13,SNR=2.6						
ESDC	**Sonseca Array**	**57.76**	**297**	P	**P**	**07 56 56.9**	**+0.8**
	comp=Z,2.3nm,0.7s,baz=53,slow=6.9,SNR=17						
TORD	**Torodi Ar. Bea**	**66.93**	**269**	P	**P**	**07 57 57.3**	**-0.5**
	comp=Z,1.4nm,0.9s,baz=42,slow=5.8,SNR=8.0						
ILAR	**Eielson Array**	**72.91**	**17**	P	**P**	**07 58 32.6**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=320,slow=4.8,SNR=15						
YKA	**Yellowknife Ar**	**79.58**	**3**	P	**P**	**07 59 11.5**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=348,slow=5.5,SNR=34						
WRA	**Warramunga Arr**	**81.86**	**123**	P	**P**	**07 59 21.5**	**-3.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,0.9nm,0.6s,baz=323,slow=4.7,SNR=13						
ASAR	Alice Springs	84.22	126	P	P	07 59 33.9	-2.9
	comp=Z,0.4nm,0.6s,baz=302,slow=4.8,SNR=7.2						

*IDC **24** 07:49:00.2±6.1, 31°.86S×179°.68E, h409km±67km, mb3.3/3, mb1 3.6/4, mb1mx3.3/22, mbtmp4.4/4, Error ellipse: s-maj=75.2km s-min=33.2km az=8.0*
*WEL **24** 07:49:03.8±0.6, 32°S±7°×17°9W±1°6, h353km±10km, M4.0/22, mB4.6/22, ML5.0/25, MLv4.9/21, Mw(mB)3.8/22, Error ellipse: s-maj=0.0km s-min=0.0km az=113.2*
ISC 24 07:48:58.5±1.0**, 32°.01S**±0°.08×**179°.9W**±0°.1**, h400**km**, n87, σ2s.48**/107**, mb3.6**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.21	32	P	Pn	07 50 03.6	+0.1
GLKZ				S	S	07 50 56.0	-0.1
MXZ	Matakaoa Point	5.74	195	P	Pn	07 50 31.3	+3.1
GRZ	Great Barrier	5.74	221	P	Pn	07 50 33.0	+4.8
WMGZ	Waiomatatini S	5.97	193	P	Pn	07 50 35.5	+4.9
KUZ	Kuaotunu	5.97	217	P	Pn	07 50 35.5	+4.8
HAZ	Te Kaha	6.05	198	P	Pn	07 50 35.3	+3.8
WCZ	Waipu Caves	6.21	229	P	Pn	07 50 37.7	+4.4
URZ	Urewera	6.71	201	P	P	07 50 42.5	+3.1
	60nm,0.3s,baz=252,slow=1.7,SNR=130						
URZ				S	S	07 52 00.6	-0.1
	5.3nm,0.3s,baz=122,slow=23,SNR=2.2						
URZ	Urewera	6.71	201	P	P	07 50 41.1	+1.7
BKZ	Black Stump Fm	7.73	202	P	P	07 50 52.2	+1.4
BKZ				S	S	07 52 20.2	-1.7
BKZ	Black Stump Fm	7.73	202	P	P	07 50 52.2	+1.4
HIZ	Hauiti	7.79	212	P	P	07 50 55.3	+3.8
NTVZ	North Tongarir	7.95	206	P	P	07 50 56.5	+3.2
TMVZ	Te Maari	7.96	206	P	P	07 50 56.0	+2.6
KRVZ	Karewarewa	7.96	206	P	P	07 50 56.5	+3.0
ETVZ	East Tongariro	7.97	206	P	P	07 50 56.4	+2.9
KWHZ	Kaweka Forest	7.99	201	P	P	07 50 54.0	+0.3
KWHZ				S	S	07 52 26.4	-0.9
WTVZ	West Tongariro	8.00	206	P	P	07 50 56.2	+2.4
NNVZ	North Ngauruho	8.00	206	P	P	07 50 57.0	+3.0
OTVZ	Oturere	8.01	206	P	P	07 50 54.7	+0.6
OTVZ				S	S	07 52 29.0	+1.0
TWVZ	Taurewa	8.02	207	P	P	07 50 56.9	+2.8
SNVZ	South Ngauruho	8.04	206	P	P	07 50 55.1	+0.7
NGZ	Ngauruhoe	8.05	206	P	P	07 50 57.3	+2.9
TUVZ	Tukino	8.11	206	P	P	07 50 57.7	+2.6
TUVZ				S	S	07 52 27.8	-2.2
WHVZ	Whangaehu Hut	8.15	206	P	P	07 50 58.1	+2.5
BHHZ	Black Hill Sta	8.16	203	P	P	07 50 57.1	+1.5
TRVZ	Turoa	8.18	206	P	P	07 50 58.3	+2.4
WNVZ	Wahianoa	8.18	206	P	P	07 50 57.9	+1.9
WNVZ				S	S	07 52 31.4	-0.2
KRHZ	Kereru	8.21	201	P	P	07 50 57.7	+1.6
KRHZ				S	S	07 52 29.7	-2.2
PKVZ	Pokaka	8.24	207	P	P	07 50 58.9	+2.4
VRZ	Vera Road	8.34	210	P	P	07 51 02.0	+4.5
PXZ	Pawanui	8.43	197	P	P	07 51 01.6	+3.1
PXZ				S	S	07 52 35.3	-1.2
PNHZ	Pukenui	8.51	201	P	P	07 51 00.3	+0.9
PNHZ				S	S	07 52 36.0	-2.2
WPHZ	Waipukurau	8.58	199	P	P	07 51 03.2	+3.0
WPHZ				S	S	07 52 38.4	-1.2
PRHZ	Porangahau	8.71	198	P	P	07 51 03.4	+1.8
TSZ	Takapari Road	8.71	202	P	Pn	07 51 00.9	-0.6
TSZ				S	S	07 52 38.9	-3.7
NEZ	North Egmont	8.76	213	P	P	07 51 07.6	+5.4
WAZ	Wanganui	8.79	207	P	P	07 51 05.3	+2.8
WAZ				S	S	07 52 44.8	+0.7
DVHZ	Dannevirke	8.87	200	P	P	07 51 05.4	+1.9
DVHZ				S	S	07 52 44.9	-1.1
DVHZ	Dannevirke	8.87	200	P	S	07 52 43.4	-2.5
ANWZ	Angora Road	8.94	198	P	P	07 51 06.7	+2.6
ANWZ				S	S	07 52 47.0	-0.1
ANWZ	Angora Road	8.94	198	P	S	07 52 47.1	-0.1
POWZ	Post Office Ro	9.08	202	P	Pn	07 51 07.5	+1.8
POWZ				S	S	07 52 49.5	-0.7
POWZ	Post Office Ro	9.08	202	P	S	07 52 50.3	0.0
PRWZ	Pori Road	9.17	200	P	Pn	07 51 09.3	+2.6
PRWZ				S	S	07 52 48.8	-3.3
PRWZ	Pori Road	9.17	200	P	S	07 52 50.6	-1.5
BFZ	Birch Farm	9.21	199	P	Pn	07 51 10.4	+3.2
BFZ				S	S	07 52 52.0	-0.8
BFZ	Birch Farm	9.21	199	P	S	07 52 53.2	+0.3
MRZ	Mangatainoka R	9.38	202	P	Pn	07 51 10.5	+1.3
MRZ				S	S	07 52 53.0	-3.6
MRZ	Mangatainoka R	9.38	202	P	S	07 52 51.4	-5.1
HOWZ	Holdsworth Sta	9.62	201	P	Pn	07 51 13.5	+1.5
HOWZ				S	S	07 52 55.1	-6.3
HOWZ	Holdsworth Sta	9.62	201	P	S	07 52 58.8	-2.6
OGWZ	Otaki Gorge	9.66	203	P	P	07 51 08.9	-3.2
OGWZ				S	S	07 52 58.6	-3.6
OGWZ	Otaki Gorge	9.66	203	P	S	07 53 01.7	-0.5
TMWZ	Te Maipa	9.70	199	P	Pn	07 51 15.5	+2.6
TMWZ	Te Maipa	9.70	199	P	S	07 53 03.4	+0.3
KIW	Kapiti Island	9.78	204	P	Pn	07 51 14.9	+1.0
KIW				S	S	07 53 00.3	-4.5
KIW	Kapiti Island	9.78	204	P	S	07 53 01.3	-3.5
MTW	Mount Morrison	9.86	201	P	Pn	07 51 16.3	+1.6
MTW	Mount Morrison	9.86	201	P	S	07 53 03.2	-3.2
CAW	Cannon Point	9.95	203	P	Pn	07 51 16.7	+1.0
CAW	Cannon Point	9.95	203	P	S	07 53 04.9	-3.3
TRWZ	Traveller	10.03	200	P	S	07 53 05.8	-4.0
PAWZ	Paruwai Farm	10.09	201	P	Pn	07 51 18.6	+1.3
PAWZ	Paruwai Farm	10.09	201	P	S	07 53 08.9	-2.1
DUWZ	D'Urville Isla	10.10	208	P	Pn	07 51 18.1	+0.5
DUWZ	D'Urville Isla	10.10	208	P	S	07 53 07.8	-3.5
MSWZ	Moikau Station	10.17	201	P	Pn	07 51 20.3	+1.9
MSWZ	Moikau Station	10.17	201	P	S	07 53 09.4	-3.3
SNZO	South Karori	10.26	204	P	Pn	07 51 21.3	+2.0
	57nm,1.1s						
PLWZ	Palliser	10.31	201	P	Pn	07 51 20.9	+0.9
PLWZ	Palliser	10.31	201	P	S	07 53 14.7	-0.9
TCW	Tory Channel	10.32	206	P	Pn	07 51 20.0	0.0
TCW	Tory Channel	10.32	206	P	S	07 53 13.0	-2.7
TUWZ	Tuamarina	10.63	206	P	Pn	07 51 24.0	+0.4
NNZ	Nelson	10.67	209	P	Pn	07 51 24.1	0.0
NNZ	Nelson	10.67	209	P	S	07 53 19.0	-3.9
QRZ	Quartz Range	10.72	213	P	Pn	07 51 25.4	+0.7
CMWZ	Cape Campbell	10.81	204	P	S	07 53 25.1	-0.6
BSWZ	Blackbirch Sta	10.90	206	P	S	07 53 28.3	+0.7
THZ	Tophouse	11.32	209	P	Pn	07 51 32.2	+0.4
THZ	Tophouse	11.32	209	P	S	07 53 31.2	-5.0
KHZ	Kahutara	11.64	205	P	Pn	07 51 36.7	+1.4
STKA	Stephens Creek	32.60	260	P	P	07 54 54.1	-0.7
	0.5nm,0.3s,baz=104,slow=11,SNR=5.5						
ASAR	Alice Springs	41.47	270	P	P	07 56 06.0	-2.6
	1.8nm,0.6s,baz=106,slow=7.3,SNR=34						
ASAR				PcP	PP	07 57 56.1	+1.6
	0.2nm,0.4s,baz=116,slow=3.6,SNR=4.2						
WRA	Warramunga Arr	42.61	275	P	P	07 56 14.8	-2.8
	2.4nm,0.3s,baz=112,slow=7.8,SNR=57						
FINES	FINESS Array B	146.07	338	PKPbc	PKPbc	08 07 50.7	-0.9
	1.7nm,0.4s,baz=51,slow=4.4,SNR=24						

IDC 24 07:59:14.9±59.0**, 19°.24S**×**177°.89W, h0**km**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.7**/21**, mbtmp3.8**/3**, Error ellipse: s-maj=1089.0km s-min=167.3km az=81.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.44	243	P	P	08 06 38.5	-0.1
	1.0nm,0.8s,baz=81,slow=13,SNR=1.6						
WRA	Warramunga Arr	44.89	261	P	P	08 07 31.7	0.0
	0.5nm,0.3s,baz=96,slow=7.5,SNR=18						
ASAR	Alice Springs	44.92	255	P	P	08 07 31.6	-0.3
	1.0nm,0.4s,baz=94,slow=7.5,SNR=28						

JMA 24 08:09:57.3±0.1**, 38°.47N**×**142°.08E, h49**km±1km**, M3.7, 4C-5D Broadband fault plane solution: P waves. NP1:**φs170.00000°**,**δ20.00000°**,**λ-22.00000°. **NP2:** φs281.00000°**,**δ83.00000°**,**λ-109.00000°. **Principal axes:** T Plg35.0000°**,** Azm27.0000°**;** N Plg19.0000°**,** Azm283.0000°**;** P Plg49.0000°**,** Azm170.0000°**; Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.51	252	⇑P	Pn	08 10 08.5	-0.1
JIKH				S	Sn	08 10 16.5	-0.1
JIO	Ouri	0.57	269	⇑P	Pn	08 10 09.4	0.0
JIO				S	Sn	08 10 17.8	-0.3
JKMT	Kesennumamotoy	0.58	306	⇓P	Pn	08 10 09.6	+0.1
JKMT				S	Sn	08 10 18.2	-0.1
OFUJ	Ofunato	0.69	332	⇓P	Pn	08 10 10.9	0.0
OFUJ				S	Sn	08 10 20.7	0.0
JMK	Ichinoseki	0.83	306	⇓P	Pn	08 10 12.8	+0.1
JMK				S	Sn	08 10 24.1	+0.2
JOU	Okura	1.12	265	⇑P	Pn	08 10 16.9	+0.3
JOU				S	Sn	08 10 31.7	+0.8
JOM	Ohasama	1.18	329	⇓P	Pn	08 10 17.8	+0.4
JOM				S	Sn	08 10 33.0	+0.7
JMM	Marumori	1.18	240	⇑P	Pn	08 10 17.1	-0.3
JMM				S	Sn	08 10 31.6	-0.8
JYK	Kaneyama	1.42	289	⇓P	Pn	08 10 21.2	+0.5
JYK				*e*S	Sn	08 10 38.8	+0.6
MAT	Matsushiro	3.63	239	P	Pn	08 10 52.8	+1.8
MAT				*e*S	Sn	08 11 31.2	-1.4

*IDC **24** 08:26:16.8±6.1, 36°.38N×70°.75E, h197km±50km, mb3.3/6, mb1 3.4/11, mb1mx2.9/60, mbtmp3.9/11 Error ellipse: s-maj=52.9km s-min=23.5km az=45.0*
*NNC **24** 08:26:21.5±3.5, 36°.88N×70°.33E, h183km±40km, mb3.2, mpv4.2, Error ellipse: s-maj=31.2km s-min=19.1km az=10.0*
ISC 24 08:26:18.2±1.2**, 36°.6N**±0°.1×**70°.5E**±0°.1**, h204**km**, n27, σ1s.30**/31**, mb3.3**/5**, 4C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.07	23	P	Pn	08 27 47.2	+0.4
	SNR=141						
UCH	Uchtor	6.44	27	P	Pn	08 27 52.1	+0.5
	SNR=67						
KK02	Karatay Array	6.53	360	⇓P	Pn	08 27 51.7	-0.5
	4.9nm,0.4s						
KK02				⇑S	S	08 29 02.9	-3.8
	13nm,0.7s						
EKS2	Erkin-Say	6.58	21	P	Pn	08 27 53.8	+0.7
	SNR=19						
AAK	Ala-Archa	6.79	26	P	Pn	08 27 56.7	+0.9
	4.0nm,0.3s,baz=175,slow=6.1,SNR=31						
AAK				S	S	08 29 12.3	-0.8
	2.1nm,0.3s,baz=337,slow=21,SNR=22						
AAK	Ala-Archa	6.79	26	P	Pn	08 27 56.3	+0.5
	SNR=14						
AAK	Ala-Archa	6.79	26	⇓P	Pn	08 27 56.0	+0.2
	8.1nm,0.6s						
AAK				⇑S	S	08 29 12.0	-1.2
	26nm,0.6s						
KBK	Karagaybulak	6.97	28	P	Pn	08 27 59.1	+0.9
	SNR=9.3						
CHMS	Chumysh	7.20	26	P	Pn	08 28 00.6	-0.4
	SNR=7.7						
USP	Ospenovka	7.35	23	P	Pn	08 28 03.1	+0.1
	SNR=5.9						
TKM2	Tokmak 2	7.45	30	P	Pn	08 28 05.0	+0.7
	SNR=14						
TKM2	Tokmak 2	7.45	30	⇑P	Pn	08 28 05.1	+0.7
	17nm,0.5s						
TKM2				⇓S	S	08 29 26.7	-2.1
	8.2nm,0.8s						
MAKZ	Makanchi	13.32	36	⇓P	Pn	08 29 20.3	+0.8
	4.8nm,0.8s						
MK31	Makanchi Array	13.46	37	P	P	08 29 25.8	+2.1
	2.4nm,0.7s,baz=212,slow=10,SNR=16						
MKAR	Makanchi Array	13.46	37	P	Pn	08 29 21.1	-0.1
	0.2nm,0.3s,baz=218,slow=16,SNR=12						
AB31	Akbulak array	14.84	332	P	Pn	08 29 36.8	-1.3
	0.8nm,0.4s,baz=146,slow=12,SNR=38						
KURBB	Kurchatov Arra	15.18	20	P	Pn	08 29 42.0	-0.2
	0.1nm,0.3s,baz=207,slow=10.0,SNR=1.7						
BVAR	Borovoye Array	16.45	360	P	Pn	08 29 58.1	+0.5
	0.7nm,0.3s,baz=198,slow=14,SNR=5.2						
BRVK	Borovoye	16.49	359	⇑P	Pn	08 29 58.8	+0.8
	3.0nm,0.7s						
AKTO	Aktyubinsk	16.53	331	P	Pn	08 29 58.6	+0.2
	0.6nm,0.3s,baz=142,slow=11,SNR=15						
AKTO	Aktyubinsk	16.53	331	⇓P	P	08 29 58.1	+0.6
	7.5nm,0.9s						
ZALV	Zalesovo Beam	20.01	25	P	P	08 30 35.9	+0.7
	1.6nm,0.3s,baz=224,slow=11,SNR=10						
ARU	Arti	21.44	342	P	P	08 30 51.9	+1.7
	1.5nm,0.2s,baz=147,slow=4.9,SNR=3.7						
ARCES	ARCESS Array B	40.93	338	P	P	08 33 41.1	+0.8
	3.9nm,0.9s,baz=120,slow=5.4,SNR=2.4						
YKA	Yellowknife Ar	81.19	2	P	P	08 38 11.3	+0.6
	0.1nm,0.5s,baz=348,slow=5.5,SNR=3.0						
WRA	Warramunga Arr	82.36	122	P	P	08 38 15.1	-2.3
	0.4nm,0.6s,baz=323,slow=5.4,SNR=1.6						
ASAR	Alice Springs	84.61	125	P	P	08 38 26.9	-2.0
	0.4nm,0.7s,baz=316,slow=4.9,SNR=6.2						

*KRNET **24** 08:30:43.6±0.1, 40°.39N×73°.22E, h14km, mb2.7*
*NNC **24** 08:30:45.5±1.8, 40°.44N×73°.24E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=14.9km s-min=7.0km az=169.0*
*SOME **24** 08:30:55.4, 40°.88N×73°.17E, h10km*
ISC 24 08:30:44.3±1.2**, 40°.33N**±0°.03×**73°.13E**±0°.02**, h0**km±11km**, n33, σ1s.32**/55**, 23C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.33	306	⇑*i*P	Pg	08 30 50.4	-0.2
	baz=92						
OHH				⇑*i*S	Sg	08 30 55.7	+0.8
	baz=92						
SFK	Sufi-Kurgan	0.42	138	⇓*e*P	Pg	08 30 51.9	-0.5
	baz=50						
SFK				⇓*e*S	Sg	08 30 57.9	0.0
	baz=50						
DRK	Karamyk	1.33	231	⇑*i*P	Pb	08 31 10.4	+0.1
	baz=31						
DRK				⇑*i*S	Sn	08 31 29.6	+0.7
	baz=31						
ARK	Arkit	1.71	329	⇑*i*P	Pn	08 31 15.4	-0.1
	baz=27						
ARK				⇑*i*S	Sn	08 31 37.9	-0.2
	baz=27						
ARLS	Aral	1.77	30	⇑*i*P	Pn	08 31 15.2	-1.2
	baz=29						
ARLS				⇑*i*S	Sn	08 31 37.2	-2.5
	baz=29						
BTK	Batken	1.79	262	⇑*i*P	Pg	08 31 17.9	-0.8
	baz=61						
BTK				⇑*i*S	Sg	08 31 42.7	+0.8
	baz=61						
AML	Almayashu	1.85	13	⇑*i*P	Pn	08 31 16.7	-0.9
	baz=12						
AML				⇑*i*S	Sn	08 31 40.5	-1.4
	baz=12						
TRKS	Terek-Say	1.93	309	⇑*e*P	Pn	08 31 18.3	-0.2
	baz=5.0						
TRKS				⇑*e*S	Sb	08 31 43.6	-1.5
	baz=5.0						
UCH	Uchtor	2.16	28	⇑*e*P	Pn	08 31 21.5	-0.5
	baz=28						
UCH				⇑*e*S	Sn	08 31 48.6	-1.1
	baz=28						
MNAS	Manas	2.21	348	⇑*i*P	Pn	08 31 22.1	-0.2
	baz=46						
MNAS				⇑*i*S	Sn	08 31 50.8	+0.4
	baz=46						
MRKS	Merke	2.42	2	*e*P	Pg	08 31 31.7	+1.1
	4.3nm,0.5s						
MRKS				*e*S	Sb	08 31 58.3	-0.7
	22nm,0.3s						
AAK	Ala-Archa	2.52	23	⇓Pn	Pn	08 31 26.3	-0.3
	3.3nm,0.6s						
AAK				⇓Sn	Sn	08 31 58.4	+0.2
	9.9nm,0.6s						
AAK	Ala-Archa	2.52	23	⇑*e*P	Pn	08 31 25.9	-0.7
	baz=23						
AAK				⇑*i*S	Sn	08 31 57.4	-0.8
	baz=23						
IUG	Iuzhnay	2.96	309	*e*P	Pg	08 31 43.1	+2.0
	52nm,0.3s						
IUG				*e*S	Sg	08 32 17.6	-1.8
	21nm,0.3s						
IUG	Iuzhnay	2.96	309	Pg	Pg	08 31 39.9	-1.2
	160nm,0.7s						
IUG				Lg	Lg	08 32 18.5	
	21nm,0.3s						
TKM2	Tokmak 2	3.18	35	⇑Pg	Pb	08 31 38.8	-2.9
	4.8nm,0.7s						
TKM2				⇑Lg	Lg	08 32 21.1	
	4.3nm,0.6s						
KK02	Karatay Array	3.40	326	⇓Pg	Pb	08 31 45.8	+0.4
	0.6nm,0.6s						
KK02				⇑Lg	Lg	08 32 29.7	
	3.5nm,0.6s						
KST	Kastek	3.44	37	*e*P	Pg	08 31 50.7	+0.4
	1.9nm,0.8s						
KST				*e*S	Sb	08 32 30.1	+1.5
	6.7nm,0.4s						
KST	Kastek	3.44	37	Pg	Pb	08 31 46.6	+0.5
	2.0nm,0.4s						
KST				Lg	Lg	08 32 30.1	
	6.7nm,0.4s						
DGS	Degeres	3.52	33	*e*P	Pg	08 31 52.4	+0.7
	3.5nm,0.6s						
DGS				*e*S	Sb	08 32 33.5	+2.8
	5.0nm,0.4s						
DGS	Degeres	3.52	33	Pg	Pb	08 31 46.9	-0.6
	3.0nm,0.6s						
DGS				Lg	Lg	08 32 30.5	
	5.0nm,0.4s						
MTBS	Maitube	3.73	40	*e*P	Pg	08 31 55.0	-0.8
	0.5nm,0.6s						
MTBS				*e*S	Sb	08 32 37.5	+0.7
	3.7nm,0.5s						
KRBS	Karabastau	3.86	29	*e*P	Pg	08 31 56.6	-1.6
	1.2nm,0.4s						
KRBS				*e*S	Sb	08 32 41.1	+0.5
	3.7nm,0.2s						
KRBS	Karabastau	3.86	29	Pg	Pb	08 31 53.5	+0.2
	1.2nm,0.6s						
KRBS				Lg	Lg	08 32 41.7	
	3.7nm,0.2s						
TNSS	Tian-Shan	3.93	45	*e*P	Pg	08 31 58.1	-1.6
	1.4nm,0.6s						
TNSS				*e*S	Sb	08 32 43.7	+0.7
	4.1nm,0.4s						
TNSS	Tian-Shan	3.93	45	Pg	Pb	08 31 54.5	-0.2
	2.8nm,0.2s						
TNSS				Lg	Lg	08 32 43.7	
	4.1nm,0.4s						
MDOK	Medeo	4.07	45	*e*P	Pg	08 32 01.2	-1.2
	3.0nm,1.2s						
MDOK				*e*S	Sb	08 32 48.1	+1.4
	3.7nm,0.8s						
KOTS	Kotyrbulak	4.16	44	*e*P	Pg	08 32 03.1	-0.8
	3.0nm,0.9s						
KOTS				*e*S	Sb	08 32 51.9	+2.8
	12nm,0.5s						
KOTS	Kotyrbulak	4.16	44	Pg	Pb	08 31 59.2	+0.8
	3.1nm,0.5s						
KOTS				Lg	Lg	08 32 51.9	
	12nm,0.5s						
KTBS	Karatobe	4.29	37	*e*P	Pg	08 32 05.9	-0.6
	1.1nm,0.5s						
KTBS				*e*S	Sb	08 32 56.4	+3.5
	4.9nm,0.3s						
KTBS	Karatobe	4.29	37	Pg	Pb	08 32 01.9	+1.3
	1.8nm,0.3s						
KTBS				Lg	Lg	08 32 56.4	
	4.9nm,0.3s						
SATY	Saty	4.80	54	Pg	Pb	08 32 10.7	+1.4
	1.0nm,0.1s						
SATY				Lg	Lg	08 33 11.2	
	3.9nm,0.3s						
ARXS	Arharly	5.21	40	Pg	Pb	08 32 18.4	+2.1
	1.4nm,0.3s						
ARXS				Lg	Lg	08 33 24.8	
	4.6nm,0.4s						

*IDC **24** 08:31:34.2±1.4, 6°.98S×155°.58E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.7/29, mbtmp3.8/8, Error ellipse: s-maj=49.3km s-min=23.5km az=120.0*
ISC 24 08:31:41.3±1.3**, 7°.0S**±0°.2×**155°.5E**±0°.3**, h50**km**, n11, σ0s.73**/8**, mb3.6**/8**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.24	236	P	P	08 36 52.6	-1.2
	1.8nm,0.9s,baz=61,slow=9.2,SNR=4.4						
ASAR	Alice Springs	26.55	229	P	P	08 37 15.2	+0.4
	0.6nm,0.8s,baz=59,slow=8.7,SNR=3.7						
H11S3	WAKE ISLAND Hy	27.64	23	T	T	09 05 49.4	
	baz=203,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	27.65	23	T	T	09 05 55.4	
	baz=203,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	27.66	23	T	T	09 05 51.4	
	baz=203,slow=76,SNR=6.0						
STKA	Stephens Creek	27.94	206	P	P	08 37 27.3	+0.3
	0.6nm,0.4s,baz=42,slow=14,SNR=3.6						
CMAR	Chiang Mai Arr	61.28	295	P	P	08 41 52.5	+0.5
	0.9nm,0.4s,baz=127,slow=5.3,SNR=6.7						
SONM	Songino Array	69.66	327	P	P	08 42 46.1	+0.3
	0.3nm,0.5s,baz=175,slow=3.6,SNR=3.6						
ILAR	Eielson Array	83.21	21	P	P	08 44 01.5	-0.4
	0.3nm,0.4s,baz=238,slow=5.3,SNR=8.5						
MKAR	Makanchi Array	83.78	319	P	P	08 44 04.9	-0.5
	0.2nm,0.5s,baz=106,slow=7.5,SNR=1.8						
YKA	Yellowknife Ar	96.11	28	P	P	08 45 03.6	+0.3
	0.4nm,0.9s,baz=267,slow=4.7,SNR=6.5						

*IDC **24** 09:06:06.8±0.9, 4°.42S×129°.49E, h0km, mb4.1/6, mb1 4.3/8, mb1mx3.7/54, mbtmp4.2/8, ML4.0/2, Error ellipse: s-maj=45.7km s-min=17.6km az=70.0*
ISC 24 09:06:08.1±2.4**, 4°.34S**±0°.08×**129°.6E**±0°.1**, h10**km±16km**, n16, σ1s.67**/15**, mb4.1**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.40	117	P	Pg	09 06 16.0	0.0
FAKI	Fak Fak	3.04	62	P	Pn	09 06 57.1	+0.7
SIJI	Sorong	3.85	26	Pn	Pn	09 07 07.2	-0.4
	7.3nm,0.3s,baz=225,slow=16,SNR=12						
SIJI				Sn	Sn	09 07 51.8	-1.2
	2.2nm,0.3s,baz=131,slow=24,SNR=1.4						
SOEI	Soe	7.51	224	P	Pn	09 08 04.6	+6.7
KNRA	Kununurra	11.29	184	P	Pn	09 08 51.7	+2.1
	37nm,2.5s						
BKB	Balikpapan	13.00	283	P	P	09 09 21.8	-1.8
	151nm,1.4s						
WRA	Warramunga Arr	16.19	164	Pn	Pn	09 09 52.0	-4.0
	0.2nm,0.3s,baz=344,slow=13,SNR=12						
ASAR	Alice Springs	19.67	168	P	P	09 10 36.9	-0.6
	0.7nm,0.3s,baz=344,slow=9.4,SNR=62						
WRKA	Warakurna	20.61	183	P	Pn	09 10 49.8	-0.2
	16nm,0.9s						
CTA	Charters Tower	22.58	135	P	P	09 11 08.8	-0.1
	2.4nm,0.4s,baz=315,slow=16,SNR=5.9						
CTAO	Charters Tower	22.58	135	P	P	09 11 09.3	+0.4
STKA	Stephens Creek	29.63	159	P	P	09 12 13.3	-0.6
	3.1nm,0.8s,baz=325,slow=9.8,SNR=11						
SONM	Songino Array	55.80	341	P	P	09 15 46.7	+1.1
	1.7nm,1.0s,baz=157,slow=8.0,SNR=8.4						
MKAR	Makanchi Array	65.77	326	P	P	09 16 53.1	-0.3
	0.9nm,0.7s,baz=123,slow=7.6,SNR=8.8						
SEY	Seymchan	69.30	11	P	P	09 17 16.9	+1.5
	2.7nm,0.8s,baz=172,slow=4.3,SNR=6.9						
BVAR	Borovoye Array	75.59	328	P	P	09 17 54.0	+0.8
	1.9nm,1.0s,baz=152,slow=6.5,SNR=2.8						

*IDC **24** 09:10:09.9±0.9, 4°.34S×129°.71E, h0km, mb4.1/7, mb1 4.2/10, mb1mx3.7/48, mbtmp4.1/10, ML3.7/3, Error ellipse: s-maj=38.8km s-min=17.6km az=77.0*
ISC 24 09:10:11.0±0.8**, 4°.43S**±0°.07×**129°.8E**±0°.2**, h10**km**, n11, σ0s.93**/13**, mb4.1**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.84	23	Pn	Pn	09 11 09.8	-0.5
	3.8nm,0.3s,baz=224,slow=22,SNR=10						
SIJI				Sn	Sn	09 11 55.8	+0.2
	2.8nm,0.3s,baz=26,slow=23,SNR=1.7						
FITZ	Fitzroy Crossi	14.17	196	Pn	Pn	09 13 31.4	-0.5
	0.2nm,0.3s,baz=23,slow=13,SNR=2.5						
WRA	Warramunga Arr	16.05	164	Pn	Pn	09 13 55.0	-1.9
	0.2nm,0.3s,baz=344,slow=13,SNR=7.1						
ASAR	Alice Springs	19.54	169	P	Pn	09 14 41.0	+0.9
	0.8nm,0.3s,baz=348,slow=11,SNR=37						
ASAR				PcP	PcP	09 19 00.9	+1.4
	0.1nm,0.3s,baz=6.4,slow=1.5,SNR=5.9						
STKA	Stephens Creek	29.48	159	P	P	09 16 16.2	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	3.4nm,0.9s,baz=336,slow=10,SNR=7.1						
CMAR	Chiang Mai Arr 1.3nm,0.3s,baz=140,slow=7.9,SNR=5.7	37.95	308	P	P	09 17 29.5	+0.4
SONM	Songino Array 1.2nm,0.9s,baz=163,slow=6.2,SNR=4.8	55.95	341	P	P	09 19 49.3	-0.2
MKAR	Makanchi Array 0.7nm,0.5s,baz=117,slow=8.7,SNR=4.6	65.97	326	P	P	09 20 57.0	-0.6
ZALV	Zalesovo Beam 1.3nm,0.7s,baz=75,slow=6.3,SNR=4.2	69.19	333	P	P	09 21 17.5	-0.2
KURBB	Kurchatov Arra 1.7nm,0.7s,baz=126,slow=5.6,SNR=8.5	70.21	328	P	P	09 21 23.9	-0.2
BVAR	Borovoye Array 0.7nm,0.5s,baz=183,slow=7.4,SNR=5.1	75.78	328	P	P	09 21 56.9	-0.2

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*JMA **24** 09:11:33.2±0.2, 24°.00N×121°.84E, h10km±4km, M3.0*
*TAP **24** 09:11:34.6, 24°.06N×121°.79E, h22km, ML3.9, B*
ISC 24 09:11:34.0±1.0**, 24°.03N**±0°.02×**121°.83E**±0°.02**, h16**km±8km**,**
n104, σ0.65/186**, 9C-11D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien baz=244	0.21	256	P	Pb	09 11 40.3	+0.9
HWA	baz=244			S	Sb	09 11 44.8	+1.7
TWD	Chiawan baz=278	0.22	283	⇓iP	Pb	09 11 39.6	+0.1
TWD	baz=278			i S	Sb	09 11 43.4	+0.1
ETL	Fush Village baz=297	0.23	304	P	Pb	09 11 39.7	0.0
ETL	baz=297			S	Sb	09 11 43.7	+0.1
NACB	Ninganchiao baz=296	0.26	304	⇓iP	Pb	09 11 40.0	-0.2
NACB	baz=296			S	Sb	09 11 43.9	-0.5
TEYL	Yanliau Villag baz=228	0.27	233	P	Pb	09 11 41.0	+0.6
TEYL	baz=228			S	Sb	09 11 45.8	+1.1
EHP	Heping Village baz=346	0.29	344	P	Pb	09 11 40.7	-0.1
EHP	baz=346			S	Sb	09 11 45.3	-0.1
ETM	Tongmen baz=247	0.31	258	P	Pb	09 11 41.1	-0.1
ETM	baz=247			eS	Sb	09 11 46.2	+0.1
ETLH	Xiulin Townshi baz=298	0.36	299	⇓iP	Pb	09 11 41.8	-0.2
ETLH	baz=298			S	Sb	09 11 47.2	-0.4
ENA	Nanau baz=350	0.41	349	⇓iP	Pb	09 11 42.6	-0.1
ENA	baz=350			i S	Sb	09 11 48.9	+0.2
TEGC	Jichi Village baz=213	0.41	220	eP	Pb	09 11 43.9	+1.0
TEGC	baz=213			eS	Sn	09 11 52.0	-0.6
EWUT	Wuta baz=355	0.42	354	⇓iP	Pb	09 11 43.0	+0.1
EWUT	baz=355			S	Sb	09 11 49.2	+0.2
ESL	Shilin baz=237	0.42	239	P	Pb	09 11 42.9	-0.1
ESL	baz=237			S	Sb	09 11 49.5	+0.3
EGFH	Guangfu baz=213	0.51	226	eP	Pb	09 11 45.2	+0.6
WHF	Hehuan Shan baz=281	0.53	283	⇓iP	Pb	09 11 44.8	-0.3
WHF	baz=281			i S	Sb	09 11 52.1	-0.5
NNSB	Datong baz=315	0.57	314	⇓iP	Pb	09 11 45.4	-0.2
NNSB	baz=315			i S	Sb	09 11 53.2	-0.3
FUSS	Fushou baz=291	0.58	292	⇑iP	Pb	09 11 45.9	0.0
FUSS	baz=291			S	Sb	09 11 53.8	-0.1
TWC	Suao baz=358	0.58	2	⇓iP	Pb	09 11 45.9	+0.2
TWC	baz=358			i S	Sb	09 11 54.1	+0.4
NNS	Nan Shan baz=316	0.58	315	⇓iP	Pb	09 11 45.6	-0.2
NNS	baz=316			i S	Sb	09 11 53.7	-0.2
CHGB	Renai baz=260	0.60	273	⇑iP	Pb	09 11 46.1	-0.1
CHGB	baz=260			i S	Sb	09 11 54.2	-0.3
OWD	Renai baz=260	0.60	263	P	Pb	09 11 46.0	-0.2
OWD	baz=260			S	Sb	09 11 54.0	-0.5
NDS	Dongshan baz=346	0.61	350	P	Pb	09 11 46.2	0.0
NDS	baz=346			S	Sb	09 11 54.4	-0.2
TWT	Tachien baz=288	0.64	291	P	Pb	09 11 47.0	+0.1
TWT	baz=288			S	Sb	09 11 55.4	-0.2
NDT	Datong Townshi baz=335	0.64	333	P	Pb	09 11 46.7	-0.1
NDT	baz=335			S	Sb	09 11 55.7	+0.2
HGSD	Ruisui baz=211	0.65	215	P	Pb	09 11 47.3	+0.4
HGSD	baz=211			S	Sn	09 11 58.1	-0.4
TDCB	Techi baz=289	0.65	290	P	Pb	09 11 47.0	0.0
TDCB	baz=289			S	Sg	09 11 55.3	-0.2
ENTT	Nioudou baz=341	0.65	339	⇓iP	Pb	09 11 47.0	+0.1
ENTT	baz=341			i S	Sb	09 11 55.9	+0.1
VWDT	VWDT baz=235	0.69	247	⇑P	Pb	09 11 47.7	+0.1
VWDT	baz=235			S	Sb	09 11 56.7	-0.1
EHY	Hungye baz=219	0.70	222	eP	Pb	09 11 47.9	+0.1
TWE	Neicheng baz=345	0.70	348	P	Pb	09 11 47.8	-0.1
TWE	baz=345			S	Sb	09 11 57.4	+0.1
YHNB	Yeheng baz=329	0.76	327	⇑iP	Pb	09 11 48.7	-0.1
YHNB	baz=329			S	Sg	09 11 58.6	-0.3
NSK	Sanguang baz=328	0.77	326	⇑iP	Pg	09 11 48.9	-0.2
NSK	baz=328			S	Sg	09 11 59.0	-0.4
YULB	Yu-li baz=228	0.80	218	P	Pb	09 11 49.1	-0.4
NWLT	Wulai baz=331	0.80	338	eP	Pn	09 11 50.2	-0.4
NWLT	baz=331			eS	Sb	09 11 59.7	-0.5
EGS	baz=10.0	0.82	7	eP	Pn	09 11 51.6	+0.8
EGS	baz=10.0			eS	Sg	09 12 01.5	+0.8
NTC	Toucheng baz=3.0	0.82	0	P	Pg	09 11 50.3	+0.4
NTC	baz=3.0			eS	Sb	09 12 00.3	-0.4
EYUL	Yuli baz=227	0.82	215	eP	Pn	09 11 51.6	+0.7
SSLB	Suanglung baz=259	0.84	253	⇑iP	Pb	09 11 49.8	-0.3
SSLB	baz=259			S	Sb	09 12 00.2	-0.9
WCS	Beigang Elemen baz=263	0.84	272	P	Pb	09 11 49.9	-0.3
WCS	baz=263			eS	Sg	09 12 01.6	+0.2
WHP	Taichung City baz=286	0.84	287	P	Pg	09 11 50.2	-0.1
WHP	baz=286			S	Sb	09 12 00.5	-0.9
SMLT	Sun Moon Lake baz=259	0.86	260	⇑iP	Pg	09 11 50.5	-0.3
SMLT	baz=259			S	Sb	09 12 01.6	-0.4
TYC	Yuchr baz=254	0.90	262	⇑iP	Pb	09 11 50.9	-0.3
TYC	baz=254			S	Sb	09 12 01.9	-1.0
TIPB	Shuangxi baz=2.0	0.94	360	P	Pg	09 11 52.2	+0.1
TIPB	baz=2.0			S	Sg	09 12 04.5	0.0
FULB	Fuli baz=200	0.96	211	eP	Pb	09 11 52.1	-0.1
LIOB	Emei baz=310	0.96	310	P	Pn	09 11 52.9	0.0
LIOB	baz=310			S	Sg	09 12 05.3	0.0
NSTT	Nanjuang baz=309	0.96	309	P	Pg	09 11 52.4	-0.3
NSTT	baz=309			S	Sb	09 12 04.4	-0.3
NHDH	Xindian Distri baz=332	0.97	343	eP	Pn	09 11 53.0	+0.1
NHDH	baz=332			eS	Sg	09 12 05.1	-0.4
TWA	Mucha baz=349	0.97	347	P	Pn	09 11 52.8	-0.1
TWA	baz=349			S	Sb	09 12 04.7	-0.4
TWB1	Santiao Chiao baz=3.0	0.98	8	eP	Pg	09 11 53.0	0.0
TWB1	baz=3.0			eS	Sg	09 12 06.0	0.0
TWQ1	Liyutan baz=288	1.01	288	P	Pg	09 11 54.2	+0.5
TWQ1	baz=288			S	Sn	09 12 09.0	+1.5
CHKT	Chengkung baz=188	1.02	205	P	Pb	09 11 53.2	0.0
CHKT	baz=188			eS	Sn	09 12 08.1	+0.5
WJS	Zhushan baz=258	1.03	259	eP	Pg	09 11 53.9	0.0
WJS	baz=258			eS	Sn	09 12 08.2	+0.5
NWF	Wu-fen Shan baz=351	1.04	358	P	Pg	09 11 54.2	+0.2
NWF	baz=351			S	Sn	09 12 08.2	0.0
TAP	Taipei baz=346	1.05	344	eS	Sg	09 12 07.9	0.0
NSY	Sanyi baz=291	1.05	292	P	Pg	09 11 54.9	+0.6
NSY	baz=291			S	Sn	09 12 08.8	+0.5
WNT	Mingjian baz=261	1.06	262	eP	Pg	09 11 54.3	-0.1
WNT	baz=261			eS	Sn	09 12 08.8	+0.3
TCU	Taichung baz=276	1.06	277	eP	Pg	09 11 54.7	+0.2
TCU	baz=276			eS	Sn	09 12 10.5	+2.0
ALS	Alishan baz=240	1.07	241	P	Pn	09 11 54.2	-0.3
ALS	baz=240			S	Sn	09 12 09.2	0.0
NMLH	Miaoli baz=298	1.07	298	eP	Pg	09 11 54.9	+0.1
NMLH	baz=298			eS	Sn	09 12 09.3	+0.4
SBCB	Hsinchu baz=315	1.08	315	eP	Pg	09 11 54.9	0.0
SBCB	baz=315			eS	Sn	09 12 09.8	+0.7
HSN	Hsinchu baz=318	1.10	315	eP	Pg	09 11 55.0	-0.2
HSN	baz=318			eS	Sn	09 12 10.1	+0.6
JYNG	Yonagunijimaku	1.10	67	P	Pb	09 11 54.3	-0.3
JYNG				eS	Sb	09 12 09.4	+0.6
NCUH	Zhongli baz=329	1.10	328	eP	Pn	09 11 54.8	+0.1
NCUH	baz=329			eS	Sg	09 12 10.1	+0.4
NCU	National Centr baz=330	1.10	328	eP	Pg	09 11 55.0	-0.3
NCU	baz=330			eS	Sg	09 12 10.5	+0.7
ELDTW	Lidau baz=221	1.12	222	eP	Pb	09 11 53.9	-1.1
TWS1	Kuangyinshan baz=343	1.13	341	eP	Pg	09 11 55.6	-0.2
TWS1	baz=343			eS	Sg	09 12 10.8	+0.2
WDJ	Dajia District baz=286	1.13	287	eP	Pg	09 11 55.7	-0.1
WDJ	baz=286			eS	Sg	09 12 10.9	+0.3
YM01	YM01 baz=337	1.14	348	eP	Pn	09 11 55.3	0.0
YM01	baz=337			eS	Sg	09 12 10.8	-0.1
CHN5	Tsauling baz=247	1.14	248	⇑iP	Pg	09 11 55.8	-0.2
CHN5	baz=247			i S	Sg	09 12 13.0	+2.1
EDH	Donghe baz=192	1.16	205	eP	Pn	09 11 54.8	-0.7
WCHH	Zhanghua baz=272	1.16	273	P	Pg	09 11 56.3	-0.1
WCHH	baz=272			S	Sg	09 12 13.1	+1.5
YOJ	Yonaguni jima baz=69	1.16	68	eP	Pn	09 11 55.4	-0.1
YOJ	Yonaguni jima	1.16	68	P	Pn	09 11 55.4	-0.1
YOJ				eS	Sn	09 12 11.4	+0.3
ANP	Anpu baz=347	1.19	346	eP	Pg	09 11 56.8	-0.1
WDLH	Douliu baz=253	1.23	254	eP	Pb	09 11 57.0	+0.2
WDLH	baz=253			eS	Sg	09 12 17.2	+3.4
LONT	Longtian baz=211	1.29	210	eP	Pn	09 11 56.0	-1.4
STYH	Taoyuan baz=220	1.29	229	eP	Pb	09 11 57.5	-0.4
STYH	baz=220			eS	Sn	09 12 14.5	+0.3
TPUB	Ta-pu baz=227	1.32	237	eP	Pb	09 11 58.6	+0.3
TPUB	baz=227			eS	Sg	09 12 16.4	-0.2
WRL	Guolierlin Hig baz=264	1.33	265	eP	Pb	09 11 58.5	-0.1
WRL	baz=264			eS	Sg	09 12 16.2	-0.9
WTP	Ta-pu baz=235	1.36	235	P	Pg	09 11 59.5	-0.7
WTP	baz=235			eS	Sg	09 12 18.5	+0.6
WTK	Tuku baz=255	1.36	256	eP	Pb	09 11 59.3	+0.3
WTK	baz=255			eS	Sg	09 12 18.2	+0.2
TWGBT	Beinan baz=198	1.39	210	eP	Pn	09 11 57.0	-1.7
LDUT	Ludao baz=182	1.39	194	eP	Pn	09 11 56.6	-2.1
CHY	Chiayi baz=247	1.39	248	eP	Pg	09 12 00.1	-0.7
CHY	baz=247			eS	Sg	09 12 19.5	+0.6
TWK	Hsinying baz=239	1.45	239	⇓iP	Pb	09 12 00.6	+0.1
TWK	baz=239			S	Sg	09 12 20.5	-0.1
CHN1	Nanshi baz=236	1.46	235	P	Pb	09 12 01.1	+0.3
CHN1	baz=236			S	Sg	09 12 21.5	+0.4
SGST	Jiashian baz=232	1.48	231	eP	Pn	09 12 00.3	+0.3
SGST	baz=232			eS	Sg	09 12 20.7	-1.1
WSF	Szhu baz=255	1.52	255	eP	Pb	09 12 01.6	-0.2
WSF	baz=255			eS	Sg	09 12 22.9	-0.2
ICHU	Yijhu baz=246	1.57	245	eP	Pb	09 12 02.2	-0.4
ICHU	baz=246			eS	Sg	09 12 23.1	-1.4
TSMG	Majia baz=215	1.71	220	eP	Pb	09 12 04.8	-0.2
IRIF	Iriomote-Funau	1.76	80	P	Pn	09 12 03.8	0.0
IRIF				eS	Sn	09 12 26.1	+0.2
MASBT	Mashibuluo baz=212	1.79	218	eP	Pn	09 12 04.2	0.0
HATJ	Hateruma jima	1.81	89	P	Pn	09 12 04.6	+0.2
HATJ				eS	Sn	09 12 26.9	-0.1
EAST	Anshuo baz=202	1.87	209	eP	Pb	09 12 07.4	-0.4
SCZT	Fangliau baz=204	1.99	214	eP	Pn	09 12 08.0	+1.1
JKRS	Kuro-shima	2.00	84	P	Pn	09 12 07.6	+0.5
JKRS				S	Sn	09 12 32.7	+0.9
SLIU	Shizi baz=202	2.04	208	eP	Pn	09 12 07.6	0.0
PHUB	P'eng-hu baz=256	2.13	256	eP	Pn	09 12 08.9	0.0
WDGT	Dungji baz=249	2.13	249	eP	Pn	09 12 09.4	+0.6
WDGT	baz=249			eS	Sn	09 12 35.5	+0.5
JIJ	Ishigaki jima	2.14	81	P	Pn	09 12 08.8	-0.2
JIJ				eS	Sn	09 12 33.9	-1.3
JISG	Ishigakijimahi	2.33	76	P	Pn	09 12 11.6	0.0
JISG				S	Sn	09 12 39.0	-0.9
PTMZ	Houxiangcun baz=291	2.66	293	eP	Pn	09 12 15.4	-0.7
JTJ	Tarama	2.69	76	P	Pn	09 12 17.1	+0.5
JTJ				S	Sn	09 12 50.6	+1.8
MATB	Ma-tsu baz=320	2.72	321	eP	Pn	09 12 15.8	-1.1
LYJJ	Jianjiangzhen baz=323	3.13	324	eP	Pn	09 12 21.0	-1.6

NNC 24 09:55:22.8±1.9**, 53°.79N×90°.56E, h0**km**, mb3.7, mpv3.4, 8C-5D, Error ellipse: s-maj=13.7km s-min=10.2km az=58.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array 2.3nm,0.7s	3.40	275	⇓Pg	Pb	09 56 24.2	+0.4
ZAA0	14nm,0.8s			⇑Lg	Lg	09 57 10.6	
KURK	Kurchatov 5.6nm,1.1s	7.94	252	⇑Pn	Pn	09 57 18.9	-0.5
KURK	12nm,1.0s			⇓Sn	Sn	09 58 51.3	+1.5
KURK	51nm,1.4s			⇑Lg	Lg	09 59 37.0	
KURBB	Kurchatov Arra 5.3nm,0.8s	8.04	252	⇓Pn	Pn	09 57 22.4	+1.7
KURBB	34nm,0.9s			⇑Sn	Sn	09 58 53.7	+1.5
KURBB	82nm,1.0s			⇑Lg	Lg	09 59 39.0	
MK31	Makanchi Array 0.1nm,0.3s,baz=33,slow=12,SNR=12	8.77	220	Pn	Pn	09 57 30.9	+0.2
MK31	5.7nm,1.1s,baz=43,slow=23,SNR=4.1			⇑Sn	Sn	09 59 11.9	+1.6
MK31	27nm,1.2s,baz=39,slow=34,SNR=6.0			⇑Lg	Lg	10 00 04.2	
MAKZ	Makanchi 4.0nm,1.4s	8.88	222	⇓Pn	Pn	09 57 32.1	-0.1
MAKZ	4.8nm,1.2s			⇓Sn	Sn	09 59 12.6	-0.4
MAKZ	20nm,1.0s			⇑Lg	Lg	10 00 05.0	

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*THE **24** 09:56:56.7, 38°.46N×20°.48E, h2km±19km, ML2.8/8, Error ellipse: s-maj=19.3km s-min=0.2km az=0.0*
*ATH **24** 09:56:57.0, 38°.45N×20°.55E, h7km±1km, ML2.5/9, Error ellipse: s-maj=2.3km s-min=0.8km az=276.0*
ISC 24 09:56:55.3±0.8**, 38°.47N**±0°.02×**20°.47E**±0°.03**, h15**km±5km**,**
n40, σ1.37/63**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.07	96	P	Pg	09 56 58.1	-0.2
FSK	26µm,0.3s			S	Sg	09 56 59.1	-1.2
FSK	Fiskardo	0.07	96	P	Pg	09 56 58.1	-0.2
FSK				S	Sg	09 56 59.2	-1.2
FSK	comp=N,38307µm,0.2s			AML	AML	09 56 59.3	
FSK	comp=E,64026µm,0.2s			AML	AML	09 56 59.4	
KEF4	Livadi, Kephal	0.21	189	P	Pb	09 57 00.9	+0.1
KEF4	comp=E,14µm,0.3s			S	Sb	09 57 03.8	-0.7
EVGI	Lefkada island	0.21	44	P	Pb	09 57 00.9	0.0
EVGI	comp=E,7µm,0.2s			S	Sb	09 57 03.9	-0.7
EVGI	Lefkada island	0.21	44	P	Pb	09 57 00.9	0.0
EVGI				S	Sg	09 57 04.6	+1.1
DRAG	Dragano-Lefkad	0.23	21	P	Pb	09 57 01.3	+0.1
DRAG	comp=E,7µm,0.2s			S	Sb	09 57 04.9	-0.3
DRAG	Dragano-Lefkad	0.23	21	P	Pb	09 57 01.3	+0.1
DRAG				S	Sg	09 57 05.8	+1.7
DMLN	Damoulianata-K	0.24	198	P	Pg	09 57 01.4	+0.8
DMLN	comp=E,3µm,0.5s			S	Sg	09 57 04.5	+0.3
LXRA	Lixouri, Kepha	0.27	185	P	Pg	09 57 02.0	+1.0
LXRA				S	Sg	09 57 06.8	+1.9
KEF3	Kipouria, Keph	0.28	200	P	Pg	09 57 01.7	+0.5
VLS	Valsamata	0.30	161	P	Pg	09 57 02.2	+0.5
VLS	comp=E,1024µm,0.1s			S	Sg	09 57 06.5	+0.4
NYDR	Nydri-Lefkada	0.31	36	P	Pg	09 57 02.5	+0.8
NYDR				S	Sg	09 57 07.0	+0.9
LKD2	Lefkada island	0.35	25	P	Pg	09 57 03.5	+0.9
LKD2	comp=E,785nm,0.3s			S	Sb	09 57 09.1	+0.4
LKD2	Lefkada island	0.35	25	P	Pg	09 57 03.0	+0.4
LKD2				S	Sb	09 57 09.2	+0.4
LKD2	comp=E,1438µm,0.3s			AML	AML	09 57 10.5	
LKD2	comp=N,1663µm,0.3s			AML	AML	09 57 13.4	
PSDA	Pessada-Kefalo	0.36	165	P	Pg	09 57 03.4	+0.7
PSDA	Pessada-Kefalo	0.36	165	P	Pg	09 57 03.4	+0.7
PSDA				S	Sg	09 57 08.6	+0.8
TSLK	Tsoukalades, L	0.39	22	P	Pg	09 57 03.9	+0.8
TSLK	comp=N,882nm,0.5s			S	Sg	09 57 09.6	+1.1
TSLK	Tsoukalades, L	0.39	22	P	Pg	09 57 04.0	+0.8
TSLK				S	Sg	09 57 09.4	+0.9
TSLK	comp=N,1875µm,0.4s			AML	AML	09 57 13.9	
TSLK	comp=E,1607µm,0.5s			AML	AML	09 57 14.0	
LTHK	Lithakia	0.81	159	P	Pb	09 57 12.1	+1.1
LTHK	Lithakia	0.81	159	P	Pb	09 57 11.1	+0.1
LTHK				S	Sg	09 57 22.8	+1.2
LTHK	comp=E,479µm,0.5s			AML	AML	09 57 25.8	
LTHK	comp=N,636µm,0.4s			AML	AML	09 57 26.8	
DRO	Drossia	1.11	117	P	Pn	09 57 17.0	+0.8
DRO	Drossia	1.11	117	P	Pb	09 57 16.7	+0.6
DRO	comp=N,392µm,0.5s			AML	AML	09 57 39.1	
DRO	comp=E,543µm,0.3s			AML	AML	09 57 42.2	
EFP	Efpalio	1.13	92	P	Pg	09 57 18.0	+0.9
EFP	Efpalio	1.13	92	P	Pn	09 57 17.1	+0.6
EFP	comp=E,486µm,0.6s			AML	AML	09 57 40.0	
EFP	comp=N,472µm,0.5s			AML	AML	09 57 42.2	
EVR	Evrytania	1.14	66	P	Pg	09 57 17.7	+0.3
ANX	Ano Chora	1.15	83	P	Pn	09 57 17.4	+0.6

ANX				AML	AML	09 57 42.5	
	comp=E,593µm,0.6s						
ANX				AML	AML	09 57 43.8	
	comp=N,653µm,0.6s						
LAKA	Lakka	1.21	100	P	Pb	09 57 18.2	+0.4
LAKA				AML	AML	09 57 42.0	
	comp=E,1201µm,0.8s						
LAKA				AML	AML	09 57 44.6	
	comp=N,641µm,0.6s						
JAN	Janina	1.23	14	P	Pg	09 57 21.2	+2.3
SERG	Sergoula	1.25	92	P	Pb	09 57 18.9	+0.3
SERG				AML	AML	09 57 43.5	
	comp=N,355µm,0.4s						
SERG				AML	AML	09 57 45.0	
	comp=E,465µm,0.4s						
TRIZ	Trizonia	1.27	94	P	Pn	09 57 18.9	+0.6
KEK	Kerkira	1.35	338	P	Pg	09 57 22.6	+1.4
KLV	Kalavryta, Ach	1.39	107	P	Pb	09 57 21.1	+0.1
MAKR	Makrakomi, Fth	1.41	67	P	Pg	09 57 23.0	+0.6
THL	Klokotos Trika	1.63	47	P	Pg	09 57 26.9	+0.3
LSTV	Lastovo	5.08	329	*e*Pn	Pn	09 58 12.0	+1.2
LSTV				Sn	Sn	09 59 05.3	-3.9
RICI	Ricice	5.62	334	*e*Pn	Pn	09 58 19.2	+1.0
RICI				Sn	Sn	09 59 20.3	-2.2
KIJV	Kijevo	6.32	332	*e*Pn	Pn	09 58 29.2	+1.4
KIJV				Sn	Sn	09 59 37.7	-2.1
ZIRJ	Zirje	6.33	326	*e*Pn	Pn	09 58 29.1	+1.1
ZIRJ				Sn	Sn	09 59 36.7	-3.3
MORI	Morici	6.48	328	*e*Pn	Pn	09 58 31.1	+1.1
MORI				Sn	Sn	09 59 39.9	-3.6
DUGI	Dugi Otok	6.86	325	*e*Pn	Pn	09 58 35.8	+0.6
DUGI				Sn	Sn	09 59 48.5	-4.5

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*IDC **24** 09:56:52.7±2.1, 4°.83S×153°.69E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.7/39, mbtmp3.8/6, MS2.8/1, Ms1 2.8/1, ms1mx2.5/32, Error ellipse: s-maj=75.6km s-min=27.9km az=109.0*

ISC 24 09:57:01.5±1.7**, 4°.9S**±0°.3×**153°.4E**±0°.3**, h56**^{km}**, n8, σ**0^{s}**.99**/10**, mb3.9**/6**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.67	234	Sn	Sn	10 00 15.3	-0.8
	0.9nm,0.3s,baz=117,slow=12,SNR=5.4						
PMG				LR	LR	10 01 31.5	
	comp=Z,72nm,21.3s,baz=135,slow=35						
WRA	Warramunga Arr	23.86	229	P	P	10 02 09.4	-0.5
	0.7nm,0.8s,baz=55,slow=10,SNR=3.2						
WRA				PcP	PcP	10 05 52.2	+0.3
	0.6nm,0.9s,baz=57,slow=2.5,SNR=4.7						
ASAR	Alice Springs	26.52	223	P	P	10 02 33.6	-0.5
	0.4nm,0.8s,baz=50,slow=9.0,SNR=5.7						
ASAR				PcP	PcP	10 05 58.1	+0.3
	0.4nm,0.6s,baz=48,slow=3.1,SNR=5.4						
FITZ	Fitzroy Crossi	30.16	242	P	P	10 03 08.3	+1.8
	5.7nm,1.0s,baz=32,slow=9.5,SNR=1.1						
SONM	Songino Array	66.70	328	P	P	10 07 46.8	0.0
	0.5nm,0.4s,baz=135,slow=7.5,SNR=3.9						
MKAR	Makanchi Array	80.77	319	P	P	10 09 09.7	+0.5
	1.3nm,1.0s,baz=89,slow=5.2,SNR=5.7						
ZALV	Zalesovo Beam	81.54	326	P	P	10 09 11.8	-1.2
	0.6nm,0.4s,baz=97,slow=7.6,SNR=3.5						
TORD	Torodi Ar. Bea	150.90	288	PKPbc	PKPbc	10 16 48.1	-0.9
	2.7nm,0.7s,baz=49,slow=2.2,SNR=19						

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*NOU **24** 10:18:48.1, 38°.06S×176°.92E, h179^{km}, MLv4.3/10, North Island, New Zealand*

*WEL **24** 10:18:52.9±0.8, 38°S±3°×17°7E±°, h128^{km}±8^{km}, M3.7/69, ML3.6/8, MLv3.7/69, Error ellipse: s-maj=0.0km s-min=0.0km az=120.8*

ISC 24 10:18:48.4±1.9**, 37°.98S**±0°.06×**176°.70E**±0°.06**, h173**^{km}±10^{km}**, n162, σ**1^{s}**.27**/167**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARZ	Manawahe	0.02	248	P	Pn	10 19 11.3	0.0
EDRZ	Edgecumbe	0.13	166	P	Pn	10 19 11.6	+0.2
OPRZ	Ohinepanea	0.17	320	P	Pn	10 19 11.0	-0.5
MKRZ	Makatiti	0.24	229	P	Pn	10 19 12.6	+0.9
WHRZ	Whale Island	0.25	61	P	Pn	10 19 11.9	+0.3
OMRZ	Omania	0.29	243	P	Pn	10 19 11.7	0.0
TARZ	Mount Tarawera	0.30	210	P	Pn	10 19 12.2	+0.3
KARZ	Kaharoa	0.36	263	P	Pn	10 19 11.8	-0.1
HLRZ	Highlands Stat	0.39	225	P	Pn	10 19 12.5	+0.5
RRRZ	Republican Roa	0.39	202	P	Pn	10 19 12.1	+0.1
NGRZ	Ngongotaha	0.42	253	P	Pn	10 19 12.5	+0.4
TGRZ	Tauranga	0.43	306	P	Pn	10 19 11.8	-0.3
URZ	Urewera	0.43	131	P	Pn	10 19 11.9	-0.1
URZ	Urewera	0.43	131	P	Pn	10 19 11.7	-0.4
UTU	Utuhina	0.44	243	P	Pn	10 19 12.7	+0.5
HSRZ	Hossack Road	0.49	227	P	Pn	10 19 12.8	+0.5
MUGZ	Murupara	0.50	173	P	Pn	10 19 12.7	+0.3
HRRZ	Handcock Road	0.53	218	P	Pn	10 19 12.9	+0.3
PRRZ	Plateau Road	0.57	205	P	Pn	10 19 13.0	+0.3
GRRZ	Galatos Road	0.59	231	P	Pn	10 19 13.5	+0.6
KMRZ	Kaimai	0.61	282	P	Pn	10 19 13.1	+0.1
ALRZ	Allen Road	0.65	205	P	Pn	10 19 13.5	+0.4
RTZ	Ruatahuna	0.67	161	P	Pn	10 19 13.8	+0.5
WPRZ	Whakapapatarin	0.69	218	P	Pn	10 19 13.3	0.0
WPRZ				P	Pn	10 19 14.0	+0.7
MWZ	Matawai	0.74	119	P	Pn	10 19 14.2	+0.5
RAGZ	Rawiri	0.77	133	P	Pn	10 19 14.8	+0.9
RUGZ	Raukumara Rang	0.77	89	P	Pn	10 19 13.4	-0.6
KUTZ	Kaahu Road	0.86	233	P	Pn	10 19 15.3	+0.9
MTHZ	Maungataniwha	0.88	173	P	Pn	10 19 15.4	+0.8
MRHZ	Matea Rd	0.88	194	P	Pn	10 19 15.2	+0.6
HAZ	Te Kaha	0.89	76	P	Pn	10 19 14.3	-0.3
WHTZ	Whakaora	0.90	220	P	Pn	10 19 16.1	+1.3
TOZ	Tahuroa Road	0.98	284	P	Pn	10 19 15.8	+0.5
TLZ	Tolley Road	0.98	249	P	Pn	10 19 16.2	+0.9
RAHZ	Arahi	0.98	162	P	Pn	10 19 16.8	+1.5
TKGZ	Te Karaka	1.02	117	P	Pn	10 19 16.8	+1.3
HATZ	Hinemaiaia	1.03	207	P	Pn	10 19 16.7	+1.0
TWGZ	Tauwhareparae	1.03	101	P	Pn	10 19 17.0	+1.3
WATZ	Wairara	1.05	226	P	Pn	10 19 16.9	+1.1
PKGZ	Pakihiroa	1.09	86	P	Pn	10 19 17.0	+0.8
RIGZ	Rimuhau	1.11	131	P	Pn	10 19 17.9	+1.6
NMHZ	Naumai	1.12	176	P	Pn	10 19 18.2	+1.8
RATZ	Rangitukua	1.15	219	P	Pn	10 19 17.7	+1.1
RITZ	Rihia Road	1.20	213	P	Pn	10 19 18.5	+1.5
BKZ	Black Stump Fm	1.20	188	P	Pn	10 19 17.9	+0.9
BKZ	Black Stump Fm	1.20	188	P	Pn	10 19 17.8	+0.7
PUZ	Puketiti	1.23	95	P	Pn	10 19 18.2	+0.8
KATZ	Kakaramea	1.27	218	P	Pn	10 19 18.9	+1.1
CNGZ	Carnagh Statio	1.29	113	P	Pn	10 19 20.0	+2.2
KNZ	Kokohu	1.29	144	P	Pn	10 19 19.4	+1.6
ARHZ	Aropaoanui	1.30	170	P	Pn	10 19 19.8	+1.8
PRGZ	Paritu Road	1.32	136	P	Pn	10 19 19.9	+1.8
MXZ	Matakaoa Point	1.34	72	P	Pn	10 19 19.4	+1.1
WMGZ	Waiomatatini S	1.37	84	P	Pn	10 19 19.7	+1.2
NTVZ	North Tongarir	1.38	215	P	Pn	10 19 20.0	+1.2
TMVZ	Te Maari	1.38	214	P	Pn	10 19 20.0	+1.2
KRVZ	Karewarewa	1.39	216	P	Pn	10 19 20.1	+1.3
ETVZ	East Tongariro	1.39	213	P	Pn	10 19 20.2	+1.3
WTVZ	West Tongariro	1.43	217	P	Pn	10 19 20.5	+1.3
NNVZ	North Ngauruho	1.43	216	P	Pn	10 19 20.6	+1.4
OTVZ	Oturere	1.43	214	P	Pn	10 19 20.7	+1.4
OTVZ				S	Sn	10 19 42.6	-0.7
KUZ	Kuaotunu	1.46	327	P	Pn	10 19 19.9	+0.5
KWHZ	Kaweka Forest	1.46	188	P	Pn	10 19 20.9	+1.5
KWHZ				S	Sn	10 19 43.2	-0.4
MCHZ	McNeill Hill	1.46	180	P	Pn	10 19 21.2	+1.8
SNVZ	South Ngauruho	1.46	214	P	Pn	10 19 21.2	+1.6
TWVZ	Taurewa	1.47	222	P	Pn	10 19 21.0	+1.4
NGZ	Ngauruhoe	1.47	215	P	Pn	10 19 21.1	+1.5
MHGZ	Mahia Peninsul	1.51	141	P	Pn	10 19 22.0	+2.1
TUVZ	Tukino	1.52	212	P	Pn	10 19 21.6	+1.4
HIZ	Hauiti	1.55	249	P	Pn	10 19 21.8	+1.6
HIZ	Hauiti	1.55	249	P	Pn	10 19 21.8	+1.6
FWVZ	Far West T-bar	1.56	215	P	Pn	10 19 21.9	+1.3
WHVZ	Whangaehu Hut	1.57	213	P	Pn	10 19 22.1	+1.4
DRZ	Dome Shelter	1.57	214	P	Pn	10 19 22.3	+1.5
BHHZ	Black Hill Sta	1.59	198	P	Pn	10 19 21.8	+1.1
BHHZ				S	Sn	10 19 44.1	-1.8
TRVZ	Turoa	1.60	214	P	Pn	10 19 22.4	+1.5
WNVZ	Wahianoa	1.60	212	P	Pn	10 19 22.2	+1.3
WNVZ				S	Sn	10 19 45.6	-0.5
MOVZ	Moawhango	1.61	207	P	Pn	10 19 21.7	+0.8
KRHZ	Kereru	1.68	189	P	Pn	10 19 22.8	+1.2
PKVZ	Pokaka	1.68	219	P	Pn	10 19 23.2	+1.5
MTVZ	Mangateitei	1.70	214	P	Pn	10 19 23.4	+1.6
CKHZ	Cape Kidnapper	1.70	170	P	Pn	10 19 23.8	+2.0
WIAZ	Waiheke Island	1.72	313	P	Pn	10 19 23.1	+1.1
ETAZ	East Tamaki Re	1.74	305	P	Pn	10 19 23.5	+1.3
KAHZ	Kahuranaki	1.82	176	P	Pn	10 19 24.9	+1.8
AWAZ	Awhitu Peninsu	1.87	299	P	Pn	10 19 24.7	+1.1
MBAZ	Motutapu North	1.87	310	P	Pn	10 19 25.0	+1.4
VRZ	Vera Road	1.90	232	P	Pn	10 19 25.9	+2.0
EPAZ	Eden Park BICE	1.91	305	P	Pn	10 19 25.4	+1.4
HBAZ	Herne Bay Bore	1.93	305	P	Pn	10 19 25.7	+1.5
PNHZ	Pukenui	1.97	191	P	Pn	10 19 25.7	+1.0
WTAZ	Waiatarua	1.99	301	P	Pn	10 19 26.2	+1.3
GRZ	Great Barrier	1.99	330	P	Pn	10 19 26.0	+1.1
ABAZ	Army Bay	2.03	312	P	Pn	10 19 26.5	+1.3
PXZ	Pawanui	2.05	176	P	Pn	10 19 27.1	+1.5
RVAZ	Riverhead Bore	2.07	305	P	Pn	10 19 27.1	+1.3
WPHZ	Waipukurau	2.09	185	P	Pn	10 19 27.3	+1.3
TSZ	Takapari Road	2.16	195	P	Pn	10 19 27.6	+0.9
MHEZ	Mangahewa	2.16	239	P	Pn	10 19 29.7	+3.0
WAZ	Wanganui	2.22	216	P	Pn	10 19 29.1	+1.6
PRHZ	Porangahau	2.29	181	P	Pn	10 19 29.6	+1.4
DREZ	Durham Road	2.30	238	P	Pn	10 19 31.1	+2.8
LREZ	Lake Rotokare	2.33	230	P	Pn	10 19 31.2	+2.5
DVHZ	Dannevirke	2.35	190	P	Pn	10 19 29.8	+0.8
PREZ	Palmer Road	2.41	235	P	Pn	10 19 32.9	+3.2
NEZ	North Egmont	2.41	237	P	Pn	10 19 32.6	+2.8
PKE	Pukeiti	2.45	239	P	Pn	10 19 32.8	+2.7
OHWZ	Ohakea	2.47	205	P	Pn	10 19 31.7	+1.4
KHEZ	Kahui Hut	2.48	237	P	Pn	10 19 33.3	+2.8
ANWZ	Angora Road	2.48	184	P	Pn	10 19 31.9	+1.5
POWZ	Post Office Ro	2.52	196	P	Pn	10 19 31.8	+0.9
PRWZ	Pori Road	2.63	192	P	Pn	10 19 33.5	+1.3
BFZ	Birch Farm	2.72	187	P	Pn	10 19 34.3	+1.0
BFZ	Birch Farm	2.72	187	P	Pn	10 19 33.9	+0.6
WCZ	Waipu Caves	2.77	316	P	Pn	10 19 35.8	+1.8
MRZ	Mangatainoka R	2.82	198	P	Pn	10 19 35.0	+0.5
TIWZ	Tintock	2.87	192	P	Pn	10 19 36.0	+1.0
CPWZ	Castlepoint	2.95	187	P	Pn	10 19 37.8	+1.7
HOWZ	Holdsworth Sta	3.06	197	P	Pn	10 19 37.8	+0.4
OGWZ	Otaki Gorge	3.07	202	P	Pn	10 19 38.1	+0.5
TMWZ	Te Maipa	3.19	191	P	Pn	10 19 39.6	+0.6
KIW	Kapiti Island	3.19	205	P	Pn	10 19 39.2	+0.1
MTW	Mount Morrison	3.31	196	P	Pn	10 19 40.6	+0.1
CAW	Cannon Point	3.37	201	P	Pn	10 19 41.4	+0.1
TRWZ	Traveller	3.50	193	P	Pn	10 19 43.3	+0.3
PAWZ	Paruwai Farm	3.54	196	P	Pn	10 19 43.3	-0.1
DUWZ	D’Urville Isla	3.55	216	P	Pn	10 19 43.5	0.0
MSWZ	Moikau Station	3.61	198	P	Pn	10 19 44.1	-0.2
WEL	Wellington	3.62	204	P	Pn	10 19 44.5	+0.1
SNZO	South Karori	3.67	204	P	Pn	10 19 45.0	0.0
BHW	Baring Head	3.70	202	P	Pn	10 19 45.3	-0.1
OUZ	Omahuta	3.71	317	P	Pn	10 19 48.3	+2.6
OUZ	Omahuta	3.71	317	P	Pn	10 19 48.3	+2.6
TCW	Tory Channel	3.73	209	P	Pn	10 19 45.5	-0.3
PLWZ	Palliser	3.75	197	P	Pn	10 19 45.8	-0.4
TUWZ	Tuamarina	4.05	211	P	Pn	10 19 49.5	-0.4
NNZ	Nelson	4.13	217	P	Pn	10 19 50.7	-0.1
QRZ	Quartz Range	4.30	227	P	Pn	10 19 52.9	-0.2
QRZ	Quartz Range	4.30	227	P	Pn	10 19 53.3	+0.2
BSWZ	Blackbirch Sta	4.32	209	P	Pn	10 19 53.5	+0.2
THZ	Tophouse	4.78	216	P	Pn	10 19 59.1	-0.2
KHZ	Kahutara	5.05	208	P	Pn	10 20 02.1	-0.7
KHZ	Kahutara	5.05	208	P	Pn	10 20 02.2	-0.6
DSZ	Denniston Nort	5.32	223	P	Pn	10 20 05.8	-0.6
GVZ	Greta Valley S	5.71	208	P	Pn	10 20 10.5	-1.0
LTZ	Lake Taylor	5.87	214	P	Pn	10 20 12.5	-1.1
AMCZ	Amberley	6.04	209	P	Pn	10 20 15.3	-0.5
INZ	Inchbonnie	6.21	219	P	Pn	10 20 16.8	-1.2
OKCZ	Okains Bay	6.37	205	P	Pn	10 20 19.7	-0.4
OXZ	Oxford	6.41	212	P	Pn	10 20 19.2	-1.5
MQZ	McQueen’s Vall	6.49	207	P	Pn	10 20 19.7	-2.0
AKCZ	Akaroa Harbour	6.55	205	P	Pn	10 20 22.1	-0.4
RACZ	Rakaia	6.70	210	P	Pn	10 20 23.2	-1.2
WACZ	Wakanui South	7.00	210	P	Pn	10 20 27.8	-0.6
RPZ	Rata Peaks	7.15	215	P	Pn	10 20 30.5	+0.1
RPZ	Rata Peaks	7.15	215	P	Pn	10 20 31.0	+0.6
ARCZ	Arundel	7.28	213	P	Pn	10 20 31.8	-0.3
CTZ	Chatham Island	7.66	141	P	Pn	10 20 41.0	+3.8
TMZ	Timaru	7.70	212	P	Pn	10 20 37.0	-0.8
ODZ	Otahua Downs	8.39	211	P	Pn	10 20 45.8	-1.0
ODZ	Otahua Downs	8.39	211	P	Pn	10 20 46.2	-0.6
JCZ	Jackson Bay	8.53	222	P	Pn	10 20 49.0	+0.3

IDC 24 10:27:13.6±3.1**, 0°.87S**×**137°.19E, h0**^{km}**, mb3.4**/2**, mb1 3.6**/3**, mb1mx3.4**/28**, mbtmp3.4**/3**, ML3.3**/1**, Error ellipse: s-maj=122.1km s-min=29.4km az=81.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.16	188	P	P	10 31 38.8	0.0
	0.1nm,0.3s,baz=10,slow=12,SNR=4.9						
ASAR	Alice Springs	22.88	188	P	P	10 32 19.1	+0.1
	0.9nm,0.7s,baz=16,slow=11,SNR=6.3						
MKAR	Makanchi Array	67.42	322	P	P	10 38 11.1	0.0
	0.2nm,0.4s,baz=117,slow=8.3,SNR=4.4						

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*KRSZO **24** 10:39:12.7±1.0, 45°.31N×18°.28E, h5^{km}±7^{km}, ML3.2/15, Error ellipse: s-maj=2.6km s-min=2.1km az=31.0*

*RHSSO **24** 10:39:13.8±0.2, 45°.26N×18°.31E, h4^{km}±1^{km}, ML2.9/20*

*PRU **24** 10:39:13.8±0.0, 45°.35N×18°.24E, h3^{km}*

*BEO **24** 10:39:15.2±0.5, 45°.25N×18°.35E, h20^{km}±4^{km}, ML2.7/10*

*VIE **24** 10:39:16.9±0.8, 45°.46N×17°.87E, h0^{km}, mb2.4/6, ml2.4/11, Error ellipse: s-maj=7.3km s-min=6.1km az=33.0 36 km NNW of Slavonski Brod Suspected Mining explosion.*

ISC 24 10:39:11.7±0.7**, 45°.35N**±0°.02×**18°.32E**±0°.01**, h0**^{km}**, n109, σ**1^{s}**.01**/180**, 11C-8D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOB	Doboj	0.63	194	*e*Pg	Pg	10 39 23.6	-0.2
DOB				*e*Sg	Sg	10 39 31.8	-0.2
BLJ	Bijeljina	0.88	130	*e*Pg	Pg	10 39 28.6	+0.1
BLJ				*e*Sg	Sg	10 39 39.8	0.0
MORH	Mrgy, Hungar	0.90	14	⇓P	Pn	10 39 31.6	+0.1
MORH				⇑S	Sn	10 39 45.2	0.0
MORH	Mrgy, Hungar	0.90	14	⇓*i*Pg	Pn	10 39 31.4	-0.2
MORH				*e*Sg	Sn	10 39 44.3	-0.9
BLY	Banja Luka	1.00	234	*e*Pg	Pb	10 39 31.5	-0.5
BLY				*e*Sg	Sg	10 39 44.3	+0.4
BLY	Banja Luka	1.00	234	Pg	Pb	10 39 32.3	+0.3
	comp=Z,0.7nm,SNR=17						
BLY	Banja Luka	1.00	234	*e*Pg	Pb	10 39 32.3	+0.3
BLY				*e*Sg	Sb	10 39 45.9	+0.2
MRAK	Mrakovica	1.06	252	⇓*i*Pg	Pg	10 39 32.2	+0.2
MRAK				*e*Sg	Sb	10 39 46.7	-0.7
FRGS	Fruska Gora	1.07	100	⇓P	Pn	10 39 33.8	-0.1
FRGS				⇑S	Sn	10 39 49.6	+0.1
FRGS	Fruska Gora	1.07	100	*e*Pg	Pb	10 39 33.3	+0.2
FRGS				*e*Sg	Sb	10 39 47.8	+0.2
FRGS	Fruska Gora	1.07	100	*e*Pg	Pn	10 39 33.8	-0.1
FRGS				*e*Sg	Sn	10 39 49.0	-0.5
MOSL	Moslavina	1.13	284	*e*Pg	Pn	10 39 34.8	-0.1
MOSL				Sg	Sb	10 39 49.1	-0.4
A265A	Kaposfured	1.14	341	Pn	Pn	10 39 36.4	+1.5
	comp=Z,1.3nm,SNR=12						
TEKS	Tekeris	1.17	133	*e*Pg	Pg	10 39 33.9	-0.2
TEKS				*e*Sg	Sg	10 39 49.7	+0.4
TEKS	Tekeris	1.17	133	*e*Pg	Pb	10 39 35.1	+0.3
TEKS				*e*Sg	Sg	10 39 49.5	+0.2
A266A	Gyulaj	1.18	358	Pn	Pn	10 39 36.9	+1.5
	comp=Z,1.7nm,SNR=24						
A266A				Sn	Sb	10 39 51.6	+0.9
PRIJ	Prijedor	1.20	252	*e*Pg	Pg	10 39 34.3	-0.3
PRIJ				*e*Sg	Sb	10 39 50.7	-0.5
MGRS	Mrkonjic Grad	1.28	224	⇑*i*Pg	Pg	10 39 36.2	0.0
MGRS				*e*Sg	Sg	10 39 52.6	-0.2
A263A	Hollad	1.47	332	Pn	Pn	10 39 39.4	0.0
	comp=Z,0.9nm,SNR=12						
A263A				Sn	Sg	10 39 58.5	-0.4
KALN	Kalnik	1.52	302	*e*Pn	Pb	10 39 41.0	+0.1
KALN				Sn	Sn	10 40 02.4	+1.6
TIH	Tihany	1.58	349	*e*P	Pn	10 39 40.9	-0.1
TIH	Tihany	1.58	349	Pn	Pn	10 39 40.9	-0.1
	comp=Z,0.8nm,SNR=5.5						
BBLS	Lazići	1.67	152	⇑*i*Pn	Pn	10 39 42.0	-0.2
BBLS				*e*Sn	Sn	10 40 03.8	-0.6
BBLS	Lazići	1.67	152	*e*Pg	Pn	10 39 42.1	-0.2
BBLS				*e*Sg	Sg	10 40 06.4	+1.0
ZAG	Zagreb	1.71	287	*e*Sn	Sg	10 40 07.7	+1.1
DIVS	Divibare	1.73	136	*e*Pn	Pb	10 39 43.9	-0.4
DIVS				*e*Sn	Sb	10 40 06.5	-0.1
DIVS	Divibare	1.73	136	*e*Pg	Pg	10 39 45.2	+0.4
DIVS				*e*Sg	Sg	10 40 08.6	+1.5
PTJ	Puntijarka	1.74	290	*e*Pn	Pb	10 39 44.1	-0.6
PTJ				Sn	Sn	10 40 06.3	0.0
PTJ	Puntijarka	1.74	290	Pn	Pn	10 39 43.0	-0.3
	comp=Z,0.2nm,SNR=3.4						
LOBO	Lobor	1.77	298	*e*Pn	Pb	10 39 44.9	-0.1
LOBO				Sn	Sg	10 40 08.6	0.0
KOGS	Kog	1.82	308	Pg	Pg	10 39 51.6	+5.0
TRUS	Trudelj	1.86	126	*e*Pg	Pg	10 39 48.1	+0.7
TRUS				*e*Sg	Sg	10 40 12.0	+0.5
RUDO	Rudo	1.89	156	*e*Pn	Pn	10 39 46.0	+0.8
RUDO				*e*Sn	Sn	10 40 09.3	-0.3
MPLH	Magyarpolny	1.90	344	*e*P	Pn	10 39 46.5	+1.1
MPLH	Magyarpolny	1.90	344	Pn	Pn	10 39 46.5	+1.1
	comp=Z,0.4nm,SNR=4.7						
KIJV	Kijevo	1.92	226	*e*Pn	Pn	10 39 46.1	+0.5
KIJV				Sn	Sn	10 40 09.9	-0.5
GCIS	Gornji Cirnik	1.96	286	*i* Pn	Pn	10 39 46.2	-0.1
GCIS				*i* Sn	Sn	10 40 09.7	-1.8
PLIT	Plitvice	1.97	257	*e*Pn	Pb	10 39 47.9	-0.5
PLIT				Sn	Sn	10 40 11.4	-0.3
UDBI	Udbina	1.99	247	*e*Pn	Pn	10 39 47.4	+0.7
UDBI				Sn	Sn	10 40 12.2	-0.2
GOLS	Golise	2.00	290	*i* Pn	Pn	10 39 46.8	0.0
GOLS				*i* Sn	Sn	10 40 11.3	-1.3
OZLJ	Ozalj	2.03	279	*e*Pn	Pn	10 39 48.3	+1.2
OZLJ				Sn	Sn	10 40 12.7	-0.4
RICI	Ricice	2.04	205	*e*Pn	Pn	10 39 47.8	+0.5
RICI				Sn	Sn	10 40 14.1	+0.6
CRES	Cresnjev	2.07	284	*i* Pn	Pn	10 39 47.7	+0.1
CRES				*i* Sn	Sn	10 40 12.5	-1.7
CRES	Cresnjev	2.07	284	*e*Pn	Pb	10 39 49.4	-0.7
CRES				*e*Sn	Sn	10 40 15.2	+1.0
CRES	Cresnjev	2.07	284	Pn	Pn	10 39 47.9	+0.2
	comp=Z,0.3nm,SNR=2.5						
UPM	Unac-Piva	2.18	169	*e*Pn	Pn	10 39 49.3	-0.1
UPM				*e*Sn	Sn	10 40 16.2	-1.1
IVAS	Ivanjica	2.20	143	*e*Pn	Pn	10 39 49.0	-0.6
IVAS				*e*Sg	Sg	10 40 21.5	-0.9
GRUS	Gruza	2.25	130	*e*Pn	Pn	10 39 50.6	+0.5
GRUS				*e*Sg	Sg	10 40 24.6	+0.7
MAKA	Makarska	2.26	205	*e*Pn	Pn	10 39 50.8	+0.5
MAKA				Sn	Sn	10 40 19.2	+0.4
A269A	Baj	2.29	1	Pn	Pn	10 39 44.5	-6.2
BZS	Buzias	2.33	82	⇑P	Pn	10 39 51.6	+0.3
BZS				⇑S	Sb	10 40 24.3	+0.3
BZS	Buzias	2.33	82	Pg	Pn	10 39 51.3	0.0
	comp=Z,0.1nm,SNR=2.4						
MORI	Morici	2.38	233	*e*Pn	Pn	10 39 53.5	+1.5
MORI				Sn	Sn	10 40 21.0	-0.9
SJES	Sjenica	2.40	150	*e*Pn	Pn	10 39 53.0	+0.7
SJES				*e*Sg	Sb	10 40 27.3	+1.3
BRY	Bratogost	2.45	176	*e*Pn	Pn	10 39 53.1	0.0
BRY				*e*Sn	Sn	10 40 23.2	-0.6
SRO	Srobarova	2.47	360	*e*PN	Pb	10 39 55.2	-1.7
SIRR	Siria	2.51	67	⇑P	Pn	10 39 52.8	-0.9
SIRR	Siria	2.51	67	Pg	Pn	10 39 53.5	-0.3
	comp=Z,0.1nm,SNR=2.0						
STON	Ston	2.52	190	*e*Pn	Pn	10 39 54.3	+0.5
STON				*e*Sn	Sn	10 40 24.7	-0.4
STON	Ston	2.52	190	*e*Pn	Pn	10 39 54.5	+0.7
STON				Sn	Sn	10 40 24.9	-0.2
HVAR	Hvar	2.55	212	*e*Pn	Pn	10 39 55.5	+1.2
HVAR				Sn	Sn	10 40 25.7	-0.4
ZIRJ	Zirje	2.56	229	*e*Pn	Pn	10 39 55.4	+1.0
ZIRJ				Sn	Sn	10 40 24.6	-1.5
NVLJ	Novalja	2.57	253	*e*Pn	Pn	10 39 55.0	+0.5
NVLJ				Sn	Sn	10 40 25.4	-1.2
TREB	Trebinje	2.63	180	*e*Pn	Pn	10 39 55.9	+0.5
TREB				*e*Sn	Sn	10 40 27.4	-0.6
SOKA	Soboth	2.65	301	*e*Pn	Pn	10 39 55.7	-0.1
	comp=Z,0.9nm,0.2s,SNR=8.2						
SOKA				*e*Sn	Sn	10 40 26.1	-2.6
	comp=Z,1.2nm,0.4s						
DUGI	Dugi Otok	2.69	241	*e*Pn	Pn	10 39 57.1	+0.8
DUGI				Sn	Sn	10 40 28.4	-1.1
RIY	Rijeka	2.71	271	*e*Sn	Sn	10 40 31.3	+1.4
ARSA	Arzberg	2.72	315	*e*Pn	Pn	10 39 57.5	+0.9
	comp=Z,3.9nm,0.3s,SNR=10						
ARSA				*e*Sn	Sn	10 40 30.0	-0.3
	comp=Z,4.7nm,0.2s						
CEY	Cerknica	2.77	280	*e*Pn	Pn	10 39 59.1	+1.8
CEY				*e*Sn	Sn	10 40 33.2	+1.8
LSTV	Lastovo	2.78	202	*e*Pn	Pn	10 39 58.5	+1.1
LSTV				Sn	Sn	10 40 31.0	-0.6
PSZ	Piszkesteto	2.79	22	⇑P	Pn	10 39 57.8	+0.1
PSZ	Piszkesteto	2.79	22	*e*P	Pn	10 39 57.6	-0.1
PSZ	Piszkesteto	2.79	22	Pn	Pn	10 39 57.6	-0.1
	comp=Z,0.1nm,SNR=1.6						
OBKA	Obir	2.88	295	*e*Pn	Pn	10 39 58.8	-0.1
	comp=Z,0.6nm,0.2s,SNR=5.0						
OBKA				*e*Sn	Sn	10 40 33.0	-1.3
	comp=Z,3.0nm,0.4s						
HCY	Herceg Novi	2.90	177	*e*Pn	Pn	10 39 59.5	+0.4
HCY				*e*Sn	Sn	10 40 33.9	-0.8
SELS	Selova	2.93	136	*e*Pn	Pn	10 39 59.4	-0.1
SELS				*e*Sg	Sg	10 40 46.2	+0.5
HERR	Herculane	2.94	98	⇓P	Pn	10 39 59.6	0.0
HERR				⇓S	Sn	10 40 37.0	+1.5
SMRN	Sveta Marina	2.96	265	*e*Pn	Pn	10 40 01.2	+1.3
SMRN				Sn	Sn	10 40 35.3	-0.9
BOVS	Bovan	2.97	124	⇓P	Pn	10 39 59.7	-0.3
BOVS				⇑S	Sn	10 40 36.8	+0.5
ZST	Bratislava	2.97	344	*e*PN	Pn	10 40 01.1	+1.0
PDG	Podgorica	2.99	167	*e*Sn	Sn	10 40 36.1	-0.8
CONA	Conrad Observa	3.09	328	*e*Pn	Pn	10 40 02.5	+0.8
	comp=Z,1.7nm,0.2s,SNR=14						
CONA				*e*Sn	Sn	10 40 38.8	-0.6
	comp=Z,1.5nm,0.3s						
CONA	Conrad Observa	3.09	328	Pn	Pn	10 40 02.4	+0.6
	comp=Z,0.2nm,SNR=2.2						
MODS	Modra-Piesok	3.11	347	Pn	Pn	10 40 02.2	+0.1
	comp=Z,1.2nm,SNR=1.4						
MODS	Modra-Piesok	3.11	347	*e*PN	Pn	10 40 02.0	0.0
MODS				*e*SN	Sn	10 40 37.0	-2.9
GZR	Gura Zlata	3.14	88	⇑P	Pn	10 40 03.0	+0.5
GZR	Gura Zlata	3.14	88	Pn	Pn	10 40 03.0	+0.5
	comp=Z,0.1nm,SNR=1.9						
VYHS	Vyhne	3.17	6	*e*PN	Pn	10 40 04.5	+1.7
VYHS				*e*SN	Sn	10 40 41.7	+0.4
ZAGS	Zajecar	3.19	117	*e*Pn	Pn	10 40 03.1	0.0
DRME	Dracevica, Mon	3.22	169	⇓*i*Pn	Pn	10 40 04.3	+0.8
DRME				*e*Sn	Sn	10 40 41.3	-1.3
DRGR		3.38	63	⇑P	Pn	10 40 06.1	+0.3
DRGR		3.38	63	Pg	Pn	10 40 05.8	+0.1
	comp=Z,0.1nm,SNR=1.9						
JAVC	Velka Javorina	3.54	353	*e*PN	Pn	10 40 09.0	+1.0
BARS	Barje	3.57	134	*e*Pg	Pn	10 40 06.5	-1.8
BARS	Barje	3.57	134	*e*Pn	Pn	10 40 08.4	+0.1
BARS				*e*Sg	Sn	10 40 44.7	-6.5
MOA	Molln	3.75	313	*e*Pn	Pn	10 40 12.5	+1.6
	comp=Z,2.0nm,0.5s						
MOA				*e*Sn	Sn	10 40 55.1	-0.6
	comp=Z,6.9nm,0.2s						
KBA	Koelnbreinsper	3.86	298	*e*Pn	Pn	10 40 13.7	+1.1
	comp=Z,0.2nm,0.3s						
KBA				*e*Sn	Sn	10 40 55.7	-3.0
	comp=Z,0.6nm,0.3s						
PRVS	Prvonek	3.93	135	*e*Pn	Pn	10 40 13.4	+0.2
KRUC	Moravsky	3.94	341	*e*PN	Pn	10 40 14.1	+0.7
KRUC				*e*SN	Sn	10 41 00.0	-0.3
VRAC	Vranov	4.13	344	*e*PN	Pn	10 40 16.9	+0.8
VRAC				*e*SN	Sn	10 41 05.0	-0.1
BOSS	Bosilegrad	4.14	132	*e*Pn	Pn	10 40 16.1	-0.1
MORC	Moravsky Berou	4.46	353	*e*PN	Pn	10 40 21.5	+0.9
MORC				*e*SN	Sn	10 41 13.7	+0.4
KRLC	Kraliky	4.84	348	*e*SN	Sn	10 41 22.9	+0.2
KHC	Kasperske Hory	4.98	321	*e*PN	Pn	10 40 29.4	+1.7
KHC				*e*SN	Sn	10 41 25.1	-0.8
WTTA	Wattenberg	5.01	295	*e*Pn	Pn	10 40 28.7	+0.3
	comp=Z,0.7nm,0.2s						
WTTA				*e*Sn	Sn	10 41 23.7	-3.3
	comp=Z,0.5nm,0.3s						
DPC	Dobruska-Polom	5.18	346	*e*PN	Pn	10 40 32.0	+1.5
SQTA	Sankt Quirin	5.27	293	*e*Pn	Pn	10 40 32.6	+0.8
	comp=Z,0.6nm,0.2s						

MOTA	Moosalm	5.38	294	ePn	Pn	10 40 33.7	+0.3
	comp=Z,0.4nm,0.2s						
FETA	Feichten	5.53	290	ePn	Pn	10 40 36.6	+1.1
	comp=Z,0.3nm,0.3s						
FETA				eSn	Sn	10 41 39.2	-0.5
	comp=Z,0.3nm,0.3s						

IDC ***24*** *10:42:14.8±0.6, 35°.58S×72°.89W, h0km, mb4.4/11, mb1 4.4/15, mb1mx4.3/31, mbtmp4.3/15, ML4.0/4, MS3.6/6, Ms1 3.6/6, ms1mx3.3/22, Error ellipse: s-maj=24.8km s-min=15.2km az=91.0*

NEIC ***24*** *10:42:16.6, 35°.49S×73°.02W, h21km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.02; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$-2.53; $M_{r\theta}$0.53; $M_{\theta\phi}$-0.42; $M_{\phi r}$0.01; Fault plane solution: $M_0$2.89000×10^{15} NP1:ϕ_s19.53000°, δ46.74000°, λ101.58000°. NP2:ϕ_s182.88000°, δ44.48000°, λ77.96000°. Principal axes: T 3.1021, Plg82.0000°, Azm4.0000°; N -0.4881, Plg8.0000°, Azm192.0000°; P -2.6140, Plg1.0000°, Azm101.0000°;*

NEIC ***24*** *10:42:17.1±1.5, 35°.50S±0°.05×73°.0W±0°.1, h17km±3km, mb4.8/39, Mwr4.2/43, ML4.7(GUC) Error ellipse: s-maj=12.0km s-min=7.8km az=94.0*

VAO ***24*** *10:42:17.6±0.7, 35°.47S×72°.97W, h18km, mb4.5*

GUC ***24*** *10:42:18.5±0.7, 35°.45S×72°.99W, h36km±7km, ML4.7*

ISC 24 10:42:17.0±0.5, **35°.49S**±0°.05×**73°.00W**±0°.06, **h17**km, **n156**, σ**0^{s}85**/147, **mb4.7**/27, **MS3.7**/4, **1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	Huala	0.99	62	i P	Pb	10 42 35.6	-0.2
GO05				i S	Sb	10 42 48.5	-0.1
GO05	Huala	0.99	62		Pn	10 42 36.1	-0.1
ML02	Panimavida	1.31	102	⇓iP	Pn	10 42 40.9	+0.2
ML02				i S	Sn	10 42 57.6	-0.1
ML02				IAML		10 43 01.4	
	comp=N,28µm,0.6s						
ML02	Panimavida	1.31	102		Pb	10 42 41.0	-0.2
BO01	Tunca	1.91	56	eP	Pn	10 42 48.8	-0.1
BO01				eS	Sb	10 43 15.1	+0.1
BO01	Tunca	1.91	56		Pn	10 42 49.0	+0.2
BO02	Sierra Bellavi	1.94	70	⇑iP	Pn	10 42 49.8	+0.4
BO02				eS	Sb	10 43 15.6	-0.4
BO02	Sierra Bellavi	1.94	70		Pn	10 42 50.0	+0.6
MT01	Popeta	2.17	42	eP	Pn	10 42 52.4	0.0
MT01	Popeta	2.17	42	Pn	Pn	10 42 52.9	+0.5
MT09	Talagante	2.38	45	eP	Pn	10 42 56.1	+0.7
MT09				IAML		10 43 42.0	
	comp=N,5µm,0.6s						
MT09	Talagante	2.38	45		Pn	10 42 56.1	+0.7
BO04	La Punta	2.47	53	eP	Pn	10 42 57.5	+1.0
BO04				IAML		10 43 38.8	
	comp=N,3µm,0.4s						
VA01	Torpederas	2.70	25	Pn	Pn	10 43 00.1	+0.5
MT02	Curacav	2.70	35	i P	Pn	10 42 59.7	0.0
MT02	Curacav	2.70	35		Pn	10 42 59.6	0.0
MT05	Renca	2.80	42	eP	Pn	10 43 02.8	+1.7
MT05				IAML		10 43 52.8	
	comp=E,3µm,0.5s						
MT05	Renca	2.80	42		Pn	10 43 01.3	+0.1
ROCH	El Roble	3.00	34	eP	Pn	10 43 04.2	+0.1
ROCH				eP	Pn	10 43 04.1	+0.1
ROCH				IAML		10 44 03.7	
	comp=N,3µm,0.5s						
ROCH				IAML		10 44 04.1	
	comp=N,4µm,0.3s						
PEL	Peldehue	3.02	40	eP	Pn	10 43 05.3	+1.2
PEL				IAML		10 43 56.5	
	comp=N,2µm,0.5s						
PEL	Peldehue	3.02	40		Pn	10 43 05.3	+1.2
VA03	San Esteban	3.39	37		Pn	10 43 10.6	+1.4
LC01	Cunco	3.52	166	Pn	Pn	10 43 11.0	0.0
LR03	Panguipulli	4.17	173		Pn	10 43 19.4	-0.5
CO06	Fray Jorge	4.94	14		Pn	10 43 29.9	-0.6
CO03	El Pedregal	5.02	23	Pn	Pn	10 43 32.3	+0.6
H03S1	Juan Fernandez	5.14	287	T	T	10 48 54.6	
	SNR=1395						
H03S3	Juan Fernandez	5.15	287	T	T	10 48 55.9	
	SNR=1806						
H03S2	Juan Fernandez	5.16	287	T	T	10 48 54.8	
	SNR=1297						
H03N1	Juan Fernandez	5.30	291	T	T	10 49 09.0	
	baz=109,slow=75,SNR=28						
H03N3	Juan Fernandez	5.30	291	T	T	10 49 07.7	
	baz=109,slow=75,SNR=38						
H03N2	Juan Fernandez	5.31	291	T	T	10 49 11.8	
	baz=109,slow=75,SNR=50						
PLCA	Paso Flores	5.58	161	Pn	Pn	10 43 38.8	-0.6
	comp=N,1.2nm,0.3s,baz=330,slow=11,SNR=34						
PLCA				LR	LR	10 46 03.2	
	comp=N,375nm,19.5s,baz=332,slow=42						
PLCA	Paso Flores	5.58	161	eP	Pn	10 43 39.7	+0.4
PLCA	Paso Flores	5.58	161	Pn	Pn	10 43 39.4	+0.1
GO04	Tololo Observa	5.61	20		Pn	10 43 40.0	0.0
LL03	Petrohue	5.66	175	Pn	Pn	10 43 39.9	-0.4
CO05	La Serena	5.75	15		Pn	10 43 41.1	-0.5
LCO	Las Campanas	6.74	17	Pn	Pn	10 43 55.5	0.0
GO03	Copiap	8.21	17	Pn	Pn	10 44 15.2	-0.3
LVC	Limon Verde	13.32	17	Pn	Pn	10 45 27.4	+1.7
	comp=N,0.3nm,0.3s,baz=198,slow=16,SNR=2.6						
LVC	Limon Verde	13.32	17	Pn	Pn	10 45 24.2	-1.5
PB04	IPOC Station P	13.34	11	Pn	Pn	10 45 25.5	-0.3
TA02	Huaiquique	15.37	10	Pn	Pn	10 45 52.4	-0.8
TA02				IAmb	IAmb	10 46 02.2	
	comp=Z,48nm,1.1s						
PB08	IPOC Station P	15.66	13	Pn	Pn	10 45 56.5	-0.8
CPUP	Villa Florida	16.23	60	Pn	Pn	10 46 04.5	+0.2
	comp=Z,0.1nm,0.3s,baz=174,slow=18,SNR=1.6						
CPUP				LR	LR	10 52 24.9	
	comp=Z,120nm,21.7s,baz=235,slow=38						
PLTB	Pedras Altas	16.57	83	Pn	Pn	10 46 07.8	-0.8
LPAZ	La Paz	19.61	14	P	Pn	10 46 47.3	+0.7
	comp=Z,0.5nm,0.3s,baz=182,slow=3.3,SNR=18						
LPAZ	La Paz	19.61	14	eP	P	10 46 43.7	-1.6
LPAZ	La Paz	19.61	14	P	P	10 46 41.4	-3.9
AQDB	Aquidauana	21.33	50	eP	P	10 47 03.9	+0.7
AQDB	Aquidauana	21.33	50	P	P	10 47 01.2	-2.0
AQDB				IAmb	IAmb	10 47 11.4	
	comp=Z,33nm,1.0s						
TER01	Tubaro-SC	21.36	78	eP	P	10 47 03.4	-0.2
SIV	San Ignacio	22.15	32	P	P	10 47 12.4	+0.2
	comp=Z,18nm,0.9s,baz=210,slow=8.2,SNR=43						
SIV				LR	LR	10 57 23.8	
	comp=Z,290nm,18.3s,baz=274,slow=41						
TIJ01	Guaruva-PR	22.99	70	eP	P	10 47 21.0	0.0
PTLB	Pontes e Lacer	23.50	35	eP	P	10 47 26.9	+0.8
PTLB	Pontes e Lacer	23.50	35	P	P	10 47 26.0	-0.2
PCMB	Pacaembu	23.51	60	eP	P	10 47 26.6	+0.4
FRTB	Fartura	23.66	66	eP	P	10 47 27.9	+0.2
PP1B	Ponte de Pedra	24.01	47	eP	P	10 47 31.4	+0.3
SALV	Santo Antonio	24.90	43	eP	P	10 47 39.7	+0.6
SPB	Sao Paulo	25.13	69	eP	P	10 47 41.5	+0.4
VILB	Vilhena	25.24	30	eP	P	10 47 41.5	-0.7
VILB	Vilhena	25.24	30	P	P	10 47 41.6	-0.7
VILB				IAmb	IAmb	10 47 45.3	
	comp=Z,19nm,0.8s						
ITRB	Iturama	25.40	58	eP	P	10 47 43.6	-0.1
RCLB	Rio Claro- Sao	25.72	66	eP	P	10 47 46.7	+0.1
BB19B	Bebedouro	25.81	63	eP	P	10 47 47.0	-0.4
VAO	Valinhos	25.81	68	eP	P	10 47 47.6	+0.1
ETMB	Extrema	26.29	15	eP	P	10 47 51.9	+0.1
ETMB	Extrema	26.29	15	IAmb	IAmb	10 47 57.4	
	comp=Z,16nm,1.1s						
PARB	Paraibuna	26.65	70	eP	P	10 47 55.1	0.0
ARAG	Araguaiana, MT	27.33	49	eP	P	10 48 00.9	-0.2
BSCB	Bom Sucesso	28.62	67	eP	P	10 48 12.7	-0.1
ATAH	Atahualpa	28.65	349	LR	LR	10 57 07.6	
	comp=Z,64nm,18.9s,baz=217,slow=31						
CLDB	Colider	29.06	37	eP	P	10 48 16.7	+0.1
PMSA	Palmer Station	29.81	172	LR	LR	10 59 50.5	
	comp=Z,208nm,18.2s,baz=126,slow=36						
BDFB	Brasilia	29.83	55	P	P	10 48 23.5	-0.1
	comp=Z,7.7nm,0.9s,baz=197,slow=6.5,SNR=7.1						
BDFB				LR	LR	11 01 27.2	
	comp=Z,200nm,19.9s,baz=179,slow=39						
BDFB	Brasilia	29.83	55	P	P	10 48 23.4	-0.1
BDFB				IAmb	IAmb	10 48 24.1	
	comp=Z,11nm,1.0s						
SNDB	Serra Nova Dou	30.56	45	eP	P	10 48 30.2	+0.3
DIAM	Diamantina, MG	31.09	64	eP	P	10 48 35.0	+0.2
MC01	Montes Claros	31.92	62	eP	P	10 48 42.7	+0.8
ALF01	Guarapari-ES	31.93	71	eP	P	10 48 42.1	+0.2
PEXB	Peixe	32.27	50	eP	P	10 48 45.0	+0.1
NPGB	Novo Progresso	32.61	34	eP	P	10 48 47.6	-0.3
JANB	Januaria	32.77	59	eP	P	10 48 49.0	-0.3
BSFB	Barra de Sao F	32.88	68	eP	P	10 48 50.0	-0.2
RIB01	Linhares ES	32.94	69	eP	P	10 48 51.0	+0.2
MACA	Manacapuru-AM	34.13	22	eP	P	10 49 01.9	+0.8
MACA	Manacapuru-AM	34.13	22	P	P	10 49 01.1	0.0
SDBA	SAO DESIDERIO	34.24	55	eP	P	10 49 02.4	+0.2
ITTB	Itaituba	34.84	31	eP	P	10 49 07.5	+0.3
GUA01	Guaratinga, BA	35.03	66	eP	P	10 49 08.7	-0.3
SMTB	Santa Maria do	35.22	47	eP	P	10 49 10.9	+0.3
OTAV	Otavalo	35.91	351	P	P	10 49 16.7	-0.2
CMC01	Camacan, BA	36.02	65	eP	P	10 49 17.2	-0.3
GDU01	Guandu, BA	37.05	63	eP	P	10 49 26.4	+0.1
BOAV	Boa Vista	39.45	20	eP	P	10 49 47.1	+0.7
ZARC	Zaragoza, Cauc	42.79	357	P	P	10 50 14.9	+1.0
SDV	Santo Domingo	44.19	3	eP	P	10 50 25.1	-0.3
SDV	Santo Domingo	44.19	3	P	P	10 50 23.9	-1.5
SDV				IAmb	IAmb	10 50 27.3	
	comp=Z,6.3nm,0.8s						
VNA3	Neumayer Olymp	48.29	157	P	P	10 50 58.1	+1.3
VNA2	Neumayer--Watz	48.95	157	P	P	10 51 03.0	+1.1
SNAA	Sanae	50.51	157	P	P	10 51 14.8	+0.9
SNAA	Sanae	50.51	157	P	P	10 51 14.0	+0.2
	comp=Z,6.2nm,0.9s,baz=281,slow=6.2,SNR=12						
SNAA	Sanae	50.51	157	P	P	10 51 13.5	-0.4
SNAA				IAmb	IAmb	10 51 15.9	
	comp=Z,12nm,1.1s						
PCDR	Punta Cana, DR	53.88	5	P	P	10 51 39.1	-0.3
PETF	Flores	54.52	340	P	P	10 51 42.4	-1.7
QSPA	South Pole Qui	54.75	180	P	P	10 51 45.4	-0.1
	comp=Z,4.8nm,0.9s,baz=156,slow=1.9,SNR=15						
HODGE	Hodges	69.90	352	P	P	10 53 27.4	+0.5
HODGE				IAmb	IAmb	10 53 53.4	
	comp=Z,12nm,1.4s						
X51A	Calhoun	70.57	350	P	P	10 53 30.2	-0.7
TXAR	Lajitas Array	70.66	332	P	P	10 53 32.5	+0.7
	comp=Z,0.8nm,0.7s,baz=150,slow=8.6,SNR=10.0						
TXAR	Lajitas Array	70.66	332	P	P	10 53 31.9	+0.1
CPCT	Cooper Cave	71.39	350	P	P	10 53 36.2	+0.2
CPCT				IAmb	IAmb	10 53 38.0	
	comp=Z,8.0nm,1.0s						
MAW	Mawson	71.98	164	P	P	10 53 39.9	+0.8
	comp=Z,4.8nm,0.8s,baz=213,slow=10.0,SNR=4.5						
MAW	Mawson	71.98	164	P	P	10 53 38.8	-0.4
WVT	Waverly	72.58	347	P	P	10 53 44.0	+0.9
U49A	Red Boiling Sp	72.62	349	P	P	10 53 44.0	+0.7
U49A				IAmb	IAmb	10 54 09.3	
	comp=Z,15nm,1.4s						
WHAR	Wooly Hollow	72.68	344	P	P	10 53 43.5	-0.2
WHAR				IAmb	IAmb	10 53 46.1	
	comp=Z,16nm,1.3s						
MNTX	Cornudas Mount	73.43	332	P	P	10 53 46.9	-1.3
PBMO	Poplar Bluff	73.71	345	P	P	10 53 49.8	+0.1
PBMO				IAmb	IAmb	10 53 50.7	
	comp=Z,5.2nm,0.7s						
SIUC	Southern Illin	74.38	347	P	P	10 53 52.8	-0.8
SIUC				IAmb	IAmb	10 53 55.1	
	comp=Z,9.2nm,0.9s						
OK031	S. Brethren Rd	74.47	340	P	P	10 53 54.8	+0.6
OK031				IAmb	IAmb	10 53 56.5	
	comp=Z,16nm,1.1s						
CCM	Cathedral Cave	75.11	345	P	P	10 53 59.2	+1.4
CCM				IAmb	IAmb	10 53 59.7	
	comp=Z,11nm,0.7s						
P52A	Corning	75.23	353	P	P	10 53 58.8	+0.3
LIC	Lamto	75.99	72	eP	P	10 54 04.0	+0.5
	comp=Z,28nm,1.1s						
TIC	Toumodi	76.26	71	eP	P	10 54 05.6	+0.5
KIC	Kosan Boka	76.30	72	eP	P	10 54 05.9	+0.6
	comp=Z,20nm,0.9s						
DBIC	Dimbokro	76.40	72	P	P	10 54 06.7	+0.9
	comp=Z,6.9nm,0.8s,baz=225,slow=5.9,SNR=13						
DBIC	Dimbokro	76.40	72	P	P	10 54 05.5	-0.3
DBIC				IAmb	IAmb	10 54 07.6	
	comp=Z,9.9nm,0.9s						
P40A	Paris	76.69	345	P	P	10 54 06.1	-0.7
N38A	Joes South For	78.16	344	P	P	10 54 13.3	-1.7
BOSA	Boshof	80.07	118	P	P	10 54 26.3	+0.1
	comp=Z,3.3nm,0.7s,baz=229,slow=3.4,SNR=5.6						
BOSA	Boshof	80.07	118	IAmb	IAmb	10 54 37.7	
	comp=Z,14nm,1.1s						
K31A	O'Neill	81.23	341	P	P	10 54 31.4	-0.3
ECSD	EROS Data Cent	81.73	343	P	P	10 54 33.9	-0.5
ECSD				IAmb	IAmb	10 54 36.2	
	comp=Z,9.7nm,0.8s						
NVAR	Mina Array Bea	84.66	326	P	P	10 54 52.4	+2.5
	comp=Z,1.2nm,0.8s,baz=148,slow=5.7,SNR=6.0						
PDAR	Pinedale Array	84.74	334	P	P	10 54 51.8	+1.6
	comp=Z,0.5nm,0.6s,baz=134,slow=4.3,SNR=4.5						
TORD	Torodi Ar. Bea	85.45	70	P	P	10 54 52.8	-1.3
	comp=Z,2.1nm,0.9s,baz=254,slow=4.0,SNR=11						
TORD	Torodi Ar. Bea	85.45	70	P	P	10 54 52.0	-2.2
TORD				IAmb	IAmb	10 54 55.6	
	comp=Z,3.5nm,1.1s						
LAO	LASA Array	87.09	338	P	P	10 55 00.8	-0.7
LAO				IAmb	IAmb	10 55 11.1	
	comp=Z,5.9nm,1.3s						
WRA	Warramunga Arr	119.08	210	PKP	PKPdf	11 01 04.6	-0.8
	comp=Z,0.3nm,0.4s,baz=164,slow=1.8,SNR=4.6						
H11S2	WAKE ISLAND Hy	124.95	269	T	T	13 18 52.6	
	baz=118,slow=74,SNR=6.3						
H11S1	WAKE ISLAND Hy	124.97	269	T	T	13 18 50.0	
	baz=118,slow=74,SNR=4.5						
H11S3	WAKE ISLAND Hy	124.97	269	T	T	13 18 55.0	
	baz=118,slow=74,SNR=4.1						
H11N3	WAKE ISLAND Hy	125.40	270	T	T	13 19 14.9	
	baz=116,slow=78,SNR=4.8						
H11N1	WAKE ISLAND Hy	125.42	270	T	T	13 19 16.4	
	baz=116,slow=78,SNR=7.0						
H11N2	WAKE ISLAND Hy	125.42	270	T	T	13 19 18.1	
	baz=116,slow=78,SNR=6.2						
DAV	Davao City (W)	146.97	215	PKPbc	PKPdf	11 01 57.1	-0.3
	comp=Z,167nm,0.4s,baz=177,slow=3.6,SNR=3.9						
BVAR	Borovoye Array	148.90	44	PKPbc	PKiKP	11 02 04.5	-0.1
	comp=Z,2.5nm,0.6s,baz=243,slow=6.5,SNR=15						
AAK	Ala-Archa	153.88	64	PKPbc	PKPbc	11 02 15.2	-0.2
	comp=Z,1.5nm,0.8s,baz=26,slow=4.8,SNR=4.8						
KURBB	Kurchatov Arra	154.49	45	PKPbc	PKiKP	11 02 17.1	+0.9
	comp=Z,0.6nm,0.2s,baz=303,slow=2.6,SNR=7.5						
KURK	Kurchatov	154.50	45		PKiKP	11 02 17.1	+0.9
ZALV	Zalesovo Beam	155.90	33	PKP	PKPdf	11 02 09.7	+0.1
	comp=Z,0.5nm,0.4s,baz=338,slow=3.4,SNR=1.8						
ZALV				PKPbc	sPKPdf	11 02 19.8	+2.4
	comp=Z,1.5nm,0.6s,baz=284,slow=2.4,SNR=7.1						
ZALV				PKPab	PKPab	11 02 37.8	+1.2
	comp=Z,1.7nm,0.7s,baz=308,slow=7.3,SNR=4.9						
ZALV	Zalesovo Beam	155.90	33	PKPdf	PKPdf	11 02 10.0	+0.4
MKAR	Makanchi Array	158.32	51	PKPab	PKPab	11 02 45.2	-2.1
	comp=Z,0.8nm,0.9s,baz=300,slow=2.4,SNR=4.1						
SONM	Songino Array	167.66	2	PKPab	PKPab	11 03 30.1	+1.9
	comp=Z,1.0nm,0.9s,baz=340,slow=4.1,SNR=5.1						

SKO ***24*** *11:14:34.3, 40°.70N×21°.23E, h19km*

ATH ***24*** *11:14:35.0, 40°.78N×21°.20E, h13km±5km, ML2.8/4, Error ellipse: s-maj=6.0km s-min=1.7km az=359.0*

TIR ***24*** *11:14:34.1, 40°.76N×21°.19E, h16km±1km, Md2.9, Ml2.5*

THE ***24*** *11:14:35.5, 40°.75N×21°.23E, h12km±4km, ML2.9/3, Error ellipse: s-maj=4.4km s-min=1.1km az=355.0*

ISC 24 11:14:35.2±0.8, **40°.73N**±0°.02×**21°.22E**±0°.02, **h14**km±5km, **n32**, σ**1^{s}20**/59, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNA	Florina	0.13	64	P	Pg	11 14 38.7	-0.1
FNA				S	Sg	11 14 41.1	-0.1
	18µm,0.2s						
FNA	Florina	0.13	64	P	Pg	11 14 38.7	-0.1
FNA				S	Sg	11 14 41.1	-0.1
FNA				AML	AML	11 14 41.5	
	comp=E,31313µm,0.3s						
FNA				AML	AML	11 14 41.7	
	comp=N,37972µm,0.2s						
FNA	Florina	0.13	64	i Pg	Pg	11 14 38.7	-0.1
FNA				i Sg	Sb	11 14 41.3	-1.1
FNA	Florina	0.13	64	P	Pg	11 14 38.7	-0.1
	baz=81						
FNA				S	Sb	11 14 41.3	-1.1
	baz=81						
NEST	Nestorio	0.34	203	P	Pg	11 14 42.3	+0.1
NEST				S	Sg	11 14 47.7	+0.8
	comp=N,2µm,0.3s						
NEST	Nestorio	0.34	203	P	Pg	11 14 42.3	+0.1
NEST				S	Sg	11 14 47.7	+0.8
NEST				AML	AML	11 14 48.5	
	comp=E,5005µm,0.2s						
NEST				AML	AML	11 14 48.6	
	comp=N,4769µm,0.2s						
KBN	Korca	0.34	253	P	Pg	11 14 42.0	-0.2
	baz=247						
KBN				S	Sg	11 14 47.0	-0.1
	baz=247						
KBN				AMP			
	comp=N,3.0nm,0.4s,baz=247						
OHR	Ohrid	0.50	320	i Pg	Pg	11 14 44.8	-0.3
OHR				i Sg	Sb	11 14 52.9	-0.1
OHR				eLg	Lg	11 14 53.5	
	comp=E,239nm,0.6s						
PENT	Pentalofos	0.54	187	P	Pg	11 14 46.0	+0.2
PENT				S	Sb	11 14 55.4	+1.4
PENT	Pentalofos	0.54	187	P	Pg	11 14 46.0	+0.2
PENT				S	Sb	11 14 55.4	+1.4
PENT				AML	AML	11 14 57.3	
	comp=E,780µm,0.4s						
PENT				AML	AML	11 14 58.4	
	comp=N,482µm,0.4s						
KZN	Kozani	0.59	135	P	Pg	11 14 47.0	+0.2
KZN				S	Sb	11 14 55.9	+0.2
	comp=N,562nm,0.3s						
KZN	Kozani	0.59	135	P	Pg	11 14 47.0	+0.2
KZN				S	Sb	11 14 55.9	+0.2
KZN				AML	AML	11 14 57.4	
	comp=N,1163µm,0.3s						
KZN				AML	AML	11 14 58.5	
	comp=E,1079µm,0.4s						
LSK	Leskovik	0.75	220	P	Pb	11 14 49.4	-0.7
	baz=217						
LSK				S	Sb	11 15 00.4	+0.3
	baz=217						
LSK				AMP			
	comp=E,0.8nm,0.5s,baz=217						
KPRO	Kipourio	0.78	172	P	Pn	11 14 51.4	-0.5
KPRO	Kipourio	0.78	172	P	Pn	11 14 51.4	-0.5
GRG	Griva	0.93	75	i Pg	Pg	11 14 52.6	-0.5
GRG				i Sg	Sn	11 15 06.1	-0.8
PHP	Peshkopia	1.12	329	P	Pb	11 14 55.0	-1.4
	baz=329						
PHP				AMP			
	comp=N,0.5nm,0.4s,baz=329						
VAY	Valandovo	1.18	59	i Pg	Pg	11 14 57.7	-0.2
VAY				i Sg	Sg	11 15 13.5	+0.2
VAY				eLg	Lg	11 15 19.3	
	comp=E,25nm,0.5s						
STIP	Stip	1.21	37	i Pn	Pg	11 15 00.2	+1.7
STIP				i Sn	Sg	11 15 20.6	+6.3
STIP				eLg	Lg	11 15 22.3	
	comp=E,14nm,0.3s						
SKO	Skopje	1.25	7	i Pg	Pg	11 14 59.1	-0.3
SKO				i Sg	Sg	11 15 15.2	-0.5
SKO				eLg	Lg	11 15 16.4	
	comp=E,3.1nm,0.3s						
THE	Thessaloniki	1.33	94	i Pg	Pb	11 14 59.4	-0.5
SOH	Sokhos	1.62	86	i Pn	Pb	11 15 05.2	+0.2
SOH				i Sn	Sg	11 15 26.2	-1.3
ULC	Ulcinj	1.93	310	i Pn	Pb	11 15 10.4	+0.2
STON	Ston	3.39	310	ePn	Pn	11 15 28.2	+0.5
STON				Sn	Sn	11 16 07.0	-0.7
LSTV	Lastovo	3.83	304	ePn	Pn	11 15 34.4	+0.7
LSTV				Sn	Sn	11 16 16.9	-1.5
MAKA	Makarska	4.04	311	ePn	Pn	11 15 37.5	+0.9
MAKA				Sn	Sn	11 16 23.7	0.0
RICI	Ricice	4.11	314	ePn	Pn	11 15 39.1	+1.5
RICI				Sn	Sn	11 16 24.9	-0.5
HVAR	Hvar	4.32	306	ePn	Pn	11 15 41.0	+0.6
HVAR				Sn	Sn	11 16 28.6	-2.0
KIJV	Kijevo	4.84	314	ePn	Pn	11 15 48.6	+0.9
KIJV				Sn	Sn	11 16 43.8	+0.3
ZIRJ	Zirje	5.07	307	ePn	Pn	11 15 51.6	+0.8
ZIRJ				Sn	Sn	11 16 47.5	-1.6
MORI	Morici	5.15	309	ePn	Pn	11 15 53.2	+1.3
MORI				Sn	Sn	11 16 50.6	-0.5
DUGI	Dugi Otok	5.61	308	ePn	Pn	11 15 58.2	0.0
DUGI				Sn	Sn	11 17 00.3	-2.1

MAN ***24*** *11:41:47.2, 9°.40N×126°.19E, h19km, mb4.8, ML3.7, MS3.6*

IDC ***24*** *11:41:52.0±2.9, 9°.55N×126°.48E, h100km±29km, mb3.6/14, mb1 3.8/15, mb1mx3.6/49, mbtmp4.0/15, MS2.9/3, Ms1 2.9/3, ms1mx2.6/50, Error ellipse: s-maj=28.8km s-min=15.0km az=82.0*

ISC 24 11:41:46.2±1.1, **9°.53N**±0°.04×**126°.38E**±0°.07, **h44**km±10km, **n39**, σ**1^{s}44**/43, **mb3.9**/14, **10C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLSP	General Luna,	0.36	316	⇑eP	Pn	11 41 55.9	+0.5
GLSP				i S	Sn	11 42 00.5	-1.4
SCPH	Surigao	0.92	286	⇑eP	Pn	11 42 01.9	-0.7
SCPH				eS	Sn	11 42 13.2	-1.5
BIPH	Bislig	1.33	181	⇓iP	Pn	11 42 08.6	+0.2
BIPH				i S	Sn	11 42 22.1	-2.8
MSLP	Maasin	1.62	292	⇑iP	Pn	11 42 12.9	+0.7
MSLP				i S	Sn	11 42 32.9	+1.0
BUKP	Musuan	2.09	219	⇑eP	Pn	11 42 18.2	-0.7
BUKP				eS	Sn	11 42 43.1	-0.6
TBP	Tagbilaran	2.49	274	⇑eP	Pn	11 42 24.1	-0.1
TBP				i S	Sn	11 42 52.7	-0.7
LLP	Lapu-Lapu	2.50	288	⇑eP	Pn	11 42 25.7	+1.3
LLP				eS	Sn	11 42 55.5	+1.7
DAV	Davao City (W)	2.57	198	P	Pn	11 42 33.8	+8.5
	72nm,0.3s,baz=238,slow=1.9,SNR=7.8						
DAV				S	Sn	11 43 00.9	+5.6
	57nm,0.3s,baz=136,slow=22,SNR=8.0						
DAV				LR	LR	11 43 32.8	
	comp=Z,311nm,21.3s,baz=18,slow=38						
MATI	Mati	2.57	183	⇓iP	Pn	11 42 24.8	-0.5
DMPH	Davao City--Mi	2.58	200	⇑eP	Pn	11 42 26.1	+0.7
KCP	Kidapawan	2.81	207	⇓iP	Pn	11 42 28.2	-0.5
KCP				i S	Sn	11 43 00.5	-0.9
SNPH	Sibulan	3.11	267	⇓iP	Pn	11 42 32.9	+0.1
SNPH				i S	Sn	11 43 06.8	-1.9
DCPH	Dipolog City	3.13	253	⇓eP	Pn	11 42 33.6	+0.5
DCPH				eS	Sn	11 43 08.0	-1.3
PAGZ	Pagadian	3.40	241	⇓eP	Pn	11 42 37.3	+0.5
PAGZ				eS	Sn	11 43 14.7	-1.2
CNOP	Candoni, Negro	3.70	275	⇑eP	Pn	11 42 41.0	+0.1
CNOP				eS	Sn	11 43 52.3	+29
RCP	Roxas	4.11	300	⇑eP	Pn	11 42 48.3	+1.8
LQP	Lukban	6.57	314	⇑eP	Pn	11 43 24.8	+4.3
APYP	Conner	9.67	329	eP	Pn	11 44 04.7	+1.9
APYP				eS	Sn	11 45 49.5	-0.7
FITZ	Fitzroy Crossi	27.46	182	P	P	11 47 27.9	-0.4
	5.6nm,1.0s,baz=52,slow=18						
KSRS	Korea Array	27.84	3	P	P	11 47 31.9	+0.4
	1.2nm,0.4s,baz=183,slow=10,SNR=6.5						
KSRS				LR	LR	12 00 07.5	
	comp=Z,25nm,19.1s,baz=247,slow=39						
CMAR	Chiang Mai Arr	28.03	291	P	P	11 47 35.6	+2.2
	0.5nm,0.4s,baz=109,slow=6.5,SNR=4.1						
MJAR	Matsushiro Arr	28.96	20	LR	LR	11 58 37.3	
	comp=Z,17nm,18.9s,baz=270,slow=35						
WRA	Warramunga Arr	30.32	165	P	P	11 47 54.5	+0.8
	0.4nm,0.7s,baz=345,slow=7.7,SNR=5.7						
ASAR	Alice Springs	33.80	168	P	P	11 48 24.4	+0.1
	0.2nm,0.3s,baz=347,slow=7.2,SNR=2.2						
USRK	Ussuriysk Ar.	34.88	7	P	P	11 48 32.6	-0.7
	4.1nm,0.8s,baz=218,slow=7.3,SNR=5.0						
H11S3	WAKE ISLAND Hy	40.03	73	T	T	12 32 20.7	
	baz=262,slow=75,SNR=94						
H11S1	WAKE ISLAND Hy	40.05	73	T	T	12 32 18.4	
	baz=262,slow=75,SNR=49						
H11S2	WAKE ISLAND Hy	40.05	73	T	T	12 32 18.8	
	baz=262,slow=75,SNR=48						
H11N1	WAKE ISLAND Hy	40.39	71	T	T	12 32 53.4	
	baz=265,slow=74,SNR=50						
H11N2	WAKE ISLAND Hy	40.40	71	T	T	12 32 57.1	
	baz=265,slow=74,SNR=29						
H11N3	WAKE ISLAND Hy	40.41	71	T	T	12 32 57.9	
	baz=265,slow=74,SNR=37						
SONM	Songino Array	41.75	340	P	P	11 49 31.4	+0.1
	0.2nm,0.3s,baz=161,slow=9.4,SNR=2.1						
PETK	Petropavlovsk-	50.27	24	P	P	11 50 36.5	-1.6
	1.8nm,0.5s,baz=206,slow=4.5,SNR=12						
MKAR	Makanchi Array	52.68	323	P	P	11 50 55.1	-1.2
	0.8nm,0.6s,baz=122,slow=8.0,SNR=8.7						

ILAR	Eielson Array	80.06	26	P	P	11 53 51.1	+0.1
	0.5nm,0.7s,baz=244,slow=5.2,SNR=5.8						
ARCES	ARCESS Array B	84.92	340	P	P	11 54 14.9	-1.4
	2.3nm,0.8s,baz=349,slow=1.2,SNR=7.1						
INK	Inuvik	84.93	22	P	P	11 54 16.1	-0.2
	0.6nm,0.6s,baz=265,slow=3.3,SNR=2.4						
FINES	FINESS Array B	86.59	332	P	P	11 54 25.6	+1.0
	2.0nm,0.9s,baz=105,slow=2.2,SNR=5.6						
YKA	Yellowknife Ar	94.39	24	P	P	11 55 01.1	0.0
	0.4nm,0.6s,baz=300,slow=4.7,SNR=9.4						

KRNET ***24*** *11:49:08.1±0.1, 43°.98N×69°.21E, mb2.8*
NNC ***24*** *11:49:13.8±1.4, 43°.65N×69°.77E, h0^{km}, mb3.7, mpv3.1, Error ellipse: s-maj=8.4km s-min=6.6km az=132.0, Suspected Mining explosion.*
SOME ***24*** *11:49:13.1, 43°.63N×69°.73E*
ISC 24 11:49:14.2±2.0**, 43°.71N**±0°.07×**69°.80E**±0°.09**, h0^{km}, n15,** σ**1^{s}.33**/21**, 9C-3D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLS	Borolday	0.68	178	P	Pb	11 49 29.6	+0.8
	1.3nm,0.7s						
BRLS				S	Sn	11 49 41.8	-0.5
	5.5nm,0.2s						
KK02	Karatay Array	0.79	139	⇑P	Pg	11 49 28.4	-1.0
	1.7nm,0.5s						
KK02				⇑S	Sg	11 49 39.6	-0.1
	12nm,0.6s						
IUG	Iuzhnay	1.57	174	P	Pn	11 49 43.1	-0.3
	259nm,0.6s						
IUG				S	Sb	11 50 04.9	+0.4
	37nm,0.5s						
MNAS	Manas	2.32	121	⇑*i*P	Pn	11 49 54.0	+0.2
	baz=21						
MNAS				⇑*i*S	Sb	11 50 27.8	+1.5
	baz=21						
TRKS	Terek-Say	2.39	155	⇓*i*P	Pn	11 49 55.2	+0.5
	baz=49						
TRKS				⇓*i*S	Sb	11 50 29.4	+1.2
	baz=49						
ARK	Arkit	2.48	139	⇑*i*P	Pn	11 49 56.4	+0.4
	baz=36						
ARK				⇑*i*S	Sb	11 50 30.6	-0.3
	baz=36						
MRKS	Merke	2.68	110	Pg	Pb	11 50 04.2	+1.1
	3.3nm,0.6s						
MRKS				Lg	Lg	11 50 41.1	
	9.5nm,0.5s						
BTLS	Baital	3.32	65	Pg	Pg	11 50 17.0	-0.9
	8.9nm,0.5s						
BTLS				Lg	Lg	11 51 02.4	
	3.1nm,0.7s						
SGDS	Sogindy	3.52	92	Pg	Pb	11 50 16.2	-1.2
	2.0nm,0.7s						
SGDS				Lg	Lg	11 51 01.4	
	7.0nm,0.6s						
AAK	Ala-Archa	3.59	106	⇑Pg	Pb	11 50 19.7	+1.0
	3.7nm,0.6s						
AAK				⇓Lg	Lg	11 51 09.0	
	4.6nm,0.6s						
KRBS	Karabastau	4.26	88	Pg	Pb	11 50 32.6	+2.6
	2.5nm,0.5s						
KRBS				Lg	Lg	11 51 29.9	
	4.2nm,0.5s						
TKM2	Tokmak 2	4.30	99	⇑Pg	Pb	11 50 32.0	+1.3
	2.9nm,0.8s						
TKM2				⇑Lg	Lg	11 51 31.9	
	3.3nm,0.6s						
KST	Kastek	4.54	96	Pg	Pg	11 50 38.6	-2.5
	5.4nm,0.7s						
KST				Lg	Lg	11 51 40.7	
	9.2nm,0.7s						
KUU	Kurty	4.74	85	Pg	Pb	11 50 39.6	+1.5
	1.3nm,0.6s						
KUU				Lg	Lg	11 51 41.5	
	4.6nm,0.6s						
MDOK	Medeo	5.30	93	Pg	Pg	11 50 53.8	-2.0
	2.5nm,0.3s						
MDOK				Lg	Lg	11 52 05.7	
	4.0nm,0.5s						

TUL ***24*** *11:50:10±1.1, 36°.27N±0°.01×97°.36W±0°.01, h5^{km}±5^{km}, ML2.7, mb_Lg2.5/25(NEIC), Error ellipse: s-maj=1.8km s-min=1.5km az=223.0*
ANF ***24*** *11:50:10.2±0.4, 36°.28N×97°.35W, h7^{km}, ML2.9/8, Error ellipse: s-maj=4.2km s-min=3.4km az=135.0*
NEIC ***24*** *11:50:10.2±1.1, 36°.27N±0°.01×97°.36W±0°.02, h7^{km}±7^{km}, Error ellipse: s-maj=1.8km s-min=1.6km az=73.0*
ISC 24 11:50:10.1±1.0**, 36°.27N**±0°.02×**97°.36W**±0°.02**, h6^{km}**±10^{km}**, n58,** σ**0^{s}.67**/68**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK033	Mehan	0.41	123	Pg	Pg	11 50 18.0	-0.1
OK029	Liberty Lake	0.48	189	Pg	Pg	11 50 19.5	+0.1
OK029				Sg	Sg	11 50 26.2	+0.5
BLOK	Blackwell	0.50	14	Pg	Pg	11 50 20.0	+0.2
OK031	S. Brethren Rd	0.53	127	Pg	Pg	11 50 20.4	0.0
OK031				Sg	Sg	11 50 27.7	+0.5
QUOK	Quay	0.54	100	Pg	Pg	11 50 20.6	+0.1
QUOK				Sg	Sg	11 50 27.7	+0.1
CROK	Carrier	0.55	295	Pg	Pg	11 50 20.9	+0.2
CROK				Sg	Sg	11 50 28.7	+0.7
OK030	Cody Creek RV	0.58	126		Pg	11 50 21.4	+0.1
OK030				Sg	Sg	11 50 29.4	+0.5
OK034	N. Norfolk Rd.	0.59	116	Pg	Pg	11 50 21.5	0.0
BCOK	Bluff Creek, N	0.65	198	Pg	Pg	11 50 22.4	-0.1
BCOK				Sg	Sg	11 50 31.4	+0.5
OK025	Westminster Rd	0.69	178	Pg	Pg	11 50 23.4	0.0
GC02	Grant County #	0.70	326	Pg	Pg	11 50 23.8	+0.1
KAN13	South Haven SW	0.75	353	Pg	Pg	11 50 24.5	0.0
KAN17	Caldwell West	0.84	337		Pg	11 50 26.1	-0.1
KAN14	Manchester OK	0.84	325		Pg	11 50 26.1	-0.1
KAN14				Sg	Sg	11 50 37.5	+0.4
OKCFA	Oklahoma City	0.86	185		Pg	11 50 26.3	-0.2
OKCFA				IAmb_Lg		11 50 37.5	
	comp=Z,30nm,0.9s						
OKCFA				Sg	Sg	11 50 38.1	+0.4
OKCFA	Oklahoma City	0.86	185	P	Pg	11 50 26.3	-0.2
	baz=5.1						
OKCFA				S	Sg	11 50 38.2	+0.5
	baz=5.1						
OK032	Salt Plains WL	0.86	308		Pb	11 50 27.5	-0.1
OKCSW	OKLAHOMA CITY	0.87	184	Pg	Pg	11 50 26.5	-0.2
OKCSW				Sg	Sg	11 50 38.5	+0.6
KAN05	Bluff City Nor	0.93	334	Pg	Pg	11 50 28.0	0.0
KAN01	Argonia South	0.94	340		Pg	11 50 27.9	-0.2
T35A	Sooner Cattle	0.94	47		Pg	11 50 27.9	-0.3
T35A				Sg	Sg	11 50 40.2	-0.2
T35B	Sooner Cattle	0.94	47	P	Pg	11 50 27.9	-0.3
	baz=227						
T35B				S	Sg	11 50 40.3	-0.1
	baz=227						
FNO	Franklin	1.01	182	Pg	Pg	11 50 29.0	-0.5
KAN10	Anthony SW Sta	1.03	326	Pg	Pg	11 50 29.7	-0.2
KAN06	Argonia West S	1.05	338		Pg	11 50 30.1	-0.3
KAN08	Anthony NE Sta	1.07	333		Pg	11 50 30.4	-0.3
KAN12	Harper NE Stat	1.14	334	Pg	Pg	11 50 31.7	-0.3
OK035	E0210 Rd and N	1.17	292		Pg	11 50 32.1	-0.5
W35A	Tecumseh	1.19	160		Pg	11 50 31.8	-1.0
TUL1	Leonard	1.32	105		Pn	11 50 34.1	-1.0
TUL1	Leonard	1.32	105	P	Pn	11 50 34.1	-1.0
	baz=286						
TUL1				S	Sb	11 50 52.0	-0.5
	baz=286						
U32A	Winter Ranch,	1.33	275		Pn	11 50 34.7	-0.5
U32A	Winter Ranch,	1.33	275	P	Pn	11 50 34.8	-0.5
	baz=94						
U32A				S	Sn	11 50 53.2	0.0
	baz=94						
X34A	Smith Ranch, M	1.71	193	Pn	Pb	11 50 41.5	-0.5
WMOK	Wichita Mounta	1.92	217		Pb	11 50 44.6	-0.9
WMOK	Wichita Mounta	1.92	217	P	Pn	11 50 44.1	+0.7
	baz=37						
WMOK				S	Sb	11 51 09.8	+0.1
	baz=37						
LOOK	Love County	2.28	176	Pn	Pb	11 50 50.3	-1.4
LOOK				IAmb_Lg		11 51 25.5	
	comp=Z,13nm,0.9s						
X37A	Clayton	2.34	135	Pn	Pn	11 50 50.0	+1.0
X37A				IAmb_Lg		11 51 30.0	
	comp=Z,26nm,0.8s						
X37A	Clayton	2.34	135	P	Pn	11 50 50.2	+1.2
	baz=317						
R32A	Long Quarter,	2.40	334	Pn	Pb	11 50 52.4	-1.3
R32A	Long Quarter,	2.40	334	S	Sn	11 51 21.0	+1.3
	baz=153						
U38A	Gravette	2.41	85	Pn	Pn	11 50 51.1	+1.1
U38A	Gravette	2.41	85	P	Pn	11 50 51.6	+1.5
	baz=267						
KSU1	Kansas State U	2.89	12	Pn	Pn	11 50 56.6	-0.1
W39A	Magazine	3.10	109	Pn	Pn	11 50 60.0	+0.4
W39A				IAmb_Lg		11 51 56.9	
	comp=Z,12nm,0.9s						
CBKS	Cedar Bluff	3.16	324	Pn	Pn	11 51 01.2	+0.7
CBKS				IAmb_Lg		11 51 57.0	
	comp=Z,15nm,0.7s						
S39A	Bolivar	3.53	65	Pn	Pn	11 51 06.0	+0.5
MIAR	Mount Ida	3.54	118	Pn	Pn	11 51 05.8	+0.2
MIAR				IAmb_Lg		11 52 05.2	
	comp=Z,10.0nm,0.7s						
MIAR	Mount Ida	3.54	118	P	Pn	11 51 06.3	+0.7
	baz=300						
U40A	Yellville	3.64	87	Pn	Pn	11 51 07.8	+0.8
AMTX	Amarillo	3.78	250	IAmb_Lg		11 52 15.3	
	comp=Z,13nm,0.7s						
X40A	Basin Creek Fa	4.11	114	Pn	Pn	11 51 13.5	+0.1
X40A				IAmb_Lg		11 52 20.3	
	comp=Z,12nm,0.7s						
FCAR	Ozark Folk Cen	4.26	94	Pn	Pn	11 51 18.1	+2.6
FCAR				IAmb_Lg		11 52 28.3	
	comp=Z,7.9nm,0.8s						
P38A	Dawn	4.51	41	IAmb_Lg		11 52 45.0	
	comp=Z,12nm,0.9s						
R40A	Maddies Statio	4.54	62	Pn	Pn	11 51 19.3	0.0
KSCO	Kaye Shedlock'	4.99	305	IAmb_Lg		11 53 01.0	
	comp=Z,8.7nm,0.7s						
BGNE	Belgrade	5.17	353	IAmb_Lg		11 52 58.7	
	comp=Z,13nm,0.9s						
P40A	Paris	5.32	51	IAmb_Lg		11 53 02.6	
	comp=Z,13nm,0.7s						

NAO ***24*** *11:54:17.7±1.3, 73°.44N×7°.32E, ML4.4*
BJI ***24*** *11:54:18.0±0.0, 73°.50N×7°.50E, h7^{km}, mB5.1/21, mb4.7/43, Ms4.7/5, Ms7 4.4/5*
IDC ***24*** *11:54:19.3±0.4, 73°.42N×7°.52E, h0^{km}, mb4.2/28, mb1 4.3/34, mb1mx4.2/63, mbtmp4.2/34, ML4.0/6, MS4.0/35, Ms1 4.0/35, ms1mx3.8/53, Error ellipse: s-maj=11.8km s-min=8.0km az=56.0*
MOS ***24*** *11:54:19.3±1.4, 73°.46N×7°.57E, h10^{km}, mb4.8/48, Error ellipse: s-maj=18.0km s-min=4.1km az=96.9*
GCMT ***24*** *11:54:20.2±0.3, 73°.44N±0°.03×7°.4E±0°.1, h12^{km}, MW4.8/73, Moment Tensor Solution. s11,c11; s73,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.61±.06; $M_{\theta\theta}$0.82±.06; $M_{\phi\phi}$0.79±.06; $M_{r\theta}$-0.41±.30; $M_{\theta\phi}$0.77±.06; $M_{\phi r}$-0.73±.28; Best double couple: $M_0$1.79800×10^{16} NP1:ϕ_s232.00000°, δ32.00000°, λ-78.00000°. NP2: ϕ_s38.00000°, δ59.00000°, λ-97.00000°. Principal axes: T 1.7680, Plg14.0000°, Azm134.0000°; N 0.0630, Plg6.0000°, Azm42.0000°; P -1.8290, Plg75.0000°, Azm288.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***24*** *11:54:21.2±1.9, 73°.43N±0°.07×7°.5E±0°.2, h10^{km}±1^{km}, mb4.7/121 Error ellipse: s-maj=11.8km s-min=10.4km az=225.0*
BER ***24*** *11:54:22.3±3.0, 73°.51N×7°.45E, h21^{km}, ML2.4, MW3.7, ML4.4(NAO), Confirmed Earthquake*
IEPN ***24*** *11:54:23.0, 73°.59N×8°.73E, h10^{km}*
KOLA ***24*** *11:54:28.1, 73°.13N×9°.39E, h0^{km}, ML2.8, Error ellipse: s-maj=60.9km s-min=24.6km az=20.0, Norwegian sea*
HEL ***24*** *11:54:29.3±0.6, 73°.40N×9°.97E, h15^{km}, ML3.4, Confirmed Earthquake*
BGR ***24*** *11:54:33.5±0.0, 72°.71N×4°.72E, h10^{km}, mb4.2*
ISC 24 11:54:20.7±0.3**, 73°.42N**±0°.04×**7°.74E**±0°.04**, h10^{km}, n491,** σ**1^{s}.91**/500**, mb4.6**/129**, MS3.9**/38**, 24C-21D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	Bjornoya	3.31	66	Pn	Pn	11 55 10.5	-1.9
HSPB	Hornsund (broa	4.11	25	Pn	Pn	11 55 21.7	-1.8
HSPB	Hornsund (broa	4.11	25	*e*P	Pn	11 55 21.1	-2.3
BRBA	Barentsburg A	4.92	16	Pn	Pn	11 55 32.4	-2.2
BRBA	Barentsburg A	4.92	16	*e*P	Pn	11 55 32.4	-2.2
BRBA				IAML		11 56 34.8	
	comp=Z,25nm,1.0s						
BRBB	Barentsburg B	4.96	16	Pn	Pn	11 55 32.8	-2.2
BRBB	Barentsburg B	4.96	16	*e*P	Pn	11 55 33.0	-2.1
BRBB				*e*S	Sn	11 56 26.9	-5.4
TRO	Tromso	5.21	131	*e*P	Pn	11 55 38.5	+0.1
TRO				*e*S	Sn	11 56 32.2	-6.2
TRO				IAML		11 56 35.4	
	comp=Z,54nm,0.4s						
SPB2	Spitsbergen Ar	5.22	20		Pn	11 55 37.6	-1.1
SPA0	Spitsbergen Ar	5.22	20	Pn	Pn	11 55 37.5	-1.2
	baz=195,slow=14						
SPA0	Spitsbergen Ar	5.22	20	Pn	Pn	11 55 37.5	-1.2
	baz=195,slow=14						
SPITS	Spitsbergen Ar	5.22	20	Pn	Pn	11 55 37.1	-1.6
	baz=189,slow=14,SNR=288						
HOPEN	Hopen	5.44	47	Pn	Pn	11 55 40.5	-1.2
HOPEN				Sn	Sn	11 56 39.5	-4.8
HOPEN	Hopen	5.44	47	*e*P	Pn	11 55 40.6	-1.1
HOPEN				IAML		11 57 29.5	
	comp=Z,30nm,0.8s						
JETT	Jettan, Norway	5.59	128	Pn	Pn	11 55 43.9	0.0
JETT				Sn	Sn	11 56 44.2	-3.9
KBS	Kingsbay	5.62	8	Pn	Pn	11 55 42.5	-1.6
KBS	Kingsbay	5.62	8	P	Pn	11 55 42.3	-1.9
KBS	Kingsbay	5.62	8	*i* P	Pn	11 55 42.4	-1.9
KBS	Kingsbay	5.62	8	*e*P	Pn	11 55 42.5	-1.6
KBS				IAML		11 57 44.8	
	comp=Z,6.0nm,0.8s						
KBS	Kingsbay	5.62	8		Pn	11 55 42.3	-1.9
LOF	Lofoten	5.65	157	*e*P	Pn	11 55 43.9	-0.7
LOF				IAML		11 57 54.9	
	comp=Z,17nm,0.7s						
HAMF	Hammerfest	5.66	112	Pn	Pn	11 55 43.8	-0.9
HAMF				Sn	Sn	11 56 42.0	-7.6
HAMF	Hammerfest	5.66	112	*e*P	Pn	11 55 43.4	-1.3
HAMF				IAML		11 57 27.8	
	comp=Z,6.2nm,0.5s						
KIF	Kilpisjarvi	6.11	130	Pn	Pn	11 55 51.0	+0.1
KIF				Sn	Sn	11 56 55.0	-5.7
KIF	Kilpisjarvi	6.11	130	*e*P	Pn	11 55 50.3	-0.6
KIF				*e*S	Sn	11 56 54.1	-6.6
KIF	Kilpisjarvi	6.11	130	*e*P	Pn	11 55 50.3	-0.6
KIF				*e*S	Sn	11 56 54.1	-6.6
FAUS	Fauske	6.57	154	*e*P	Pn	11 55 55.7	-1.6
FAUS				IAML		11 57 58.5	
	comp=Z,15nm,0.9s						
KTK1	Kautokeino	6.66	124	*e*P	Pn	11 55 58.7	+0.2
KTK1				*e*S	Sn	11 57 09.7	-4.7
KTK1				IAML		11 57 30.3	
	comp=Z,14nm,0.6s						
ARCES	ARCESS Array B	6.85	116	Pn	Pn	11 56 00.2	-0.9
	baz=323,slow=11,SNR=75						
ARCES				Sn	Sn	11 57 13.9	-5.1
	baz=308,slow=18,SNR=9.4						
ARCES				LR	LR	11 58 57.2	
	comp=Z,858nm,20.2s,baz=320,slow=40						
ARCES	ARCESS Array B	6.85	116	P	Pn	11 56 00.9	-0.2
ARCES	ARCESS Array B	6.85	116	Pn	Pn	11 56 00.9	-0.2
ARCES	ARCESS Array B	6.85	116	P	Pn	11 56 00.7	-0.4
ARCES				S	Sn	11 57 09.0	-10
ARA0	ARCESS Array S	6.85	116	Pn	Pn	11 56 00.3	-0.8
	baz=316,slow=14						
ARA0				Sn	Sn	11 57 13.3	-5.8
	baz=310,slow=22						
ARA0	ARCESS Array S	6.85	116	Pn	Pn	11 56 00.3	-0.8
	baz=316,slow=14						
ARA0				Sn	Sn	11 57 13.3	-5.8
	baz=310,slow=22						
ARA0				IAML		11 57 19.4	
	comp=Z,21nm,0.7s						
ARA0	ARCESS Array S	6.85	116	*e*P	Pn	11 56 00.8	-0.3
ARA0				*e*S	Sn	11 57 08.7	-10
KEV	Kevo	7.10	112	Pn	Pn	11 56 03.4	-1.0
KEV	Kevo	7.10	112	P	Pn	11 56 03.5	-1.0
KEV	Kevo	7.10	112	*e*P	Pn	11 56 03.0	-1.5
KEV				MPN		11 56 07.7	
	comp=Z,5.0nm,0.3s						
KEV				*e*S	Sn	11 57 13.8	-11
KEV	Kevo	7.10	112		Pn	11 56 03.5	-0.9
KEV	Kevo	7.10	112	*e*P	Pn	11 56 03.7	-0.8
KEV				MPN		11 56 07.7	
	comp=Z,5.0nm,0.3s						
KEV				*e*S	Sn	11 57 13.8	-11
LANU	Lannavaara	7.14	132	*e*P	Pn	11 56 04.9	-0.2
LANU				*e*S	Sn	11 57 18.1	-8.1
LANU	Lannavaara	7.14	132	*e*P	Pn	11 56 04.9	-0.2
LANU				*e*S	Sn	11 57 18.1	-8.1
KONS	Konsvik	7.20	163	*e*P	Pn	11 56 05.5	-0.3
KONS				IAML		11 58 28.6	
	comp=Z,5.1nm,0.6s						
HEF	Hetta	7.23	126	*e*P	Pn	11 56 06.0	-0.3
HEF				MPN		11 56 11.4	
	comp=Z,2.2nm,0.2s						
HEF				*e*S	Sn	11 57 21.7	-6.5
DAG	Danmarks Havn	7.53	309	P	Pn	11 56 08.4	-1.9
DAG	Danmarks Havn	7.53	309	*i* P	Pn	11 56 08.0	-2.3
DAG				*i* S	Sn	11 57 20.5	-15
DAG				IAML		11 57 26.1	
	comp=Z,1.7nm,0.2s						
DAG	Danmarks Havn	7.53	309	*i* P	Pn	11 56 08.0	-2.3
DAG				*i* P	Pn	11 56 08.0	-2.3
DAG				*i* S	Sn	11 57 20.5	-15
DAG				IAML		11 57 26.1	
	comp=Z,1.7nm,0.2s						
DBG	Daneborg	7.79	290	Pn	Pn	11 56 08.2	-5.7
DBG	Daneborg	7.79	290	*i* P	Pn	11 56 08.1	-5.8
DBG				*e*S	Sn	11 57 27.7	-14
DBG	Daneborg	7.79	290	*i* P	Pn	11 56 07.8	-6.2
DBG				IAML		11 56 12.6	
	comp=Z,0.2nm,0.2s						
DBG				*i* S	Sn	11 57 29.1	-13
SGF	Sodankyl	8.66	124	*e*P	Pn	11 56 26.2	+0.3
SGF				*e*S	Sn	11 57 54.2	-9.1
SGF	Sodankyl	8.66	124	*e*P	Pn	11 56 26.2	+0.3
SGF				*e*S	Sn	11 57 54.2	-9.1
VRF	Varrio	9.19	117	*e*P	Pn	11 56 31.6	-1.5
VRF	Varrio	9.19	117	*e*P	Pn	11 56 31.6	-1.5
RNF	Rovaniemi	9.22	129	*e*P	Pn	11 56 32.6	-0.9
RNF				*e*S	Sn	11 58 07.3	-10
RNF	Rovaniemi	9.22	129	*e*P	Pn	11 56 32.6	-0.9
RNF				*e*S	Sn	11 58 07.3	-10
TOF	Tornio	9.30	134	*e*P	Pn	11 56 35.4	+0.7
TOF	Tornio	9.30	134	*e*P	Pn	11 56 35.4	+0.7
SCO	Scoresbysund	9.60	267	P	Pn	11 56 36.0	-2.6
SCO	Scoresbysund	9.60	267	*i* P	Pn	11 56 35.8	-2.9
SCO	Scoresbysund	9.60	267	*i* P	Pn	11 56 35.0	-3.6
SCO				IAML		11 56 38.1	
	comp=Z,0.8nm,0.2s						
SCO	Scoresbysund	9.60	267	Pn	Pn	11 56 36.0	-2.6
NOR	Nord	9.62	339	Pn	Pn	11 56 36.2	-2.7
NOR	Nord	9.62	339	*i* P	Pn	11 56 32.7	-6.3
NOR	Nord	9.62	339	*i* P	Pn	11 56 30.7	-8.3
NOR				*i* S	Sn	11 58 16.6	-10
NOR				IAML		11 58 23.9	
	comp=Z,2.9nm,0.7s						
TERR	Teriberka	9.67	102	P	Pn	11 56 37.4	-2.3
TERR				S	Sn	11 58 16.6	-12
APA0	Apatity Array	10.17	112	Pn	Pn	11 56 44.2	-2.3
	baz=326,slow=12						
APA0	Apatity Array	10.17	112	Pn	Pn	11 56 44.2	-2.3
	baz=326,slow=12						
APA0	Apatity Array	10.17	112	P	Pn	11 56 44.9	-1.6
APA0				S	Sn	11 58 27.8	-13
LVZ	Lovozero	10.41	109	c*e*P	Pn	11 56 47.9	-1.9
LVZ				pmax	pmax		
	comp=Z,81nm,1.3s						
LVZ	Lovozero	10.41	109	Pn	Pn	11 56 47.9	-1.9
MSF	Maaselka	10.49	125	P	Pn	11 56 51.1	+0.2
MSF	Maaselka	10.49	125	*e*P	Pn	11 56 50.2	-0.7
MSF	Maaselka	10.49	125	*e*P	Pn	11 56 50.2	-0.7
OUL	Oulu	10.50	134	*e*P	Pn	11 56 50.5	-0.4
OUL	Oulu	10.50	134	*e*P	Pn	11 56 50.5	-0.4
OBF4	Vikkela, Lumij	10.57	136	*e*P	Pn	11 56 51.0	-1.0
OBF4	Vikkela, Lumij	10.57	136	*e*P	Pn	11 56 51.0	-1.0
KU6	Riekki	10.60	123	*e*P	Pn	11 56 51.5	-0.9
KU6				*e*S	Sn	11 58 40.1	-11
KU6	Riekki	10.60	123	*e*P	Pn	11 56 51.5	-0.9
KU6				*e*S	Sn	11 58 40.1	-11
OBF0	Syolatti, Pyha	10.69	138	*e*P	Pn	11 56 52.0	-1.5
OBF0	Syolatti, Pyha	10.69	138	*e*P	Pn	11 56 52.0	-1.5
OUF	Merijarvi	10.90	138	*e*P	Pn	11 56 55.4	-1.1
OUF	Merijarvi	10.90	138	*e*P	Pn	11 56 55.4	-1.1
AKN	Aaknes	11.30	182	Pn	Pn	11 57 02.1	0.0
AKN	Aaknes	11.30	182	Pn	Pn	11 57 02.1	0.0
VAF	Ylistaro	11.75	145	*e*P	Pn	11 57 07.2	-0.9
VAF	Ylistaro	11.75	145	*e*P	Pn	11 57 07.2	-0.9
RMF	Romuvaara	12.13	128	*e*P	Pn	11 57 12.0	-1.2
RMF	Romuvaara	12.13	128	*e*P	Pn	11 57 12.0	-1.2
NC204	NORSAR Array S	12.26	173	Pn	Pn	11 57 14.6	-0.5
NC303	NORSAR Array S	12.33	172	Pn	Pn	11 57 16.0	0.0
NC405	NORSAR Array S	12.46	171		Pn	11 57 16.8	-1.0
NBO00	NORSAR Array S	12.50	173	Pn	Pn	11 57 17.0	-1.4
NB201	NORSAR Array S	12.50	172		Pn	11 57 17.6	-0.9
NB2	NORSAR Subarra	12.51	172	Pn	Pn	11 57 17.6	-1.0
NB2	NORSAR Subarra	12.51	172	Pn	Pn	11 57 17.6	-1.0
NOA	NORSAR Array B	12.51	172	Pn	Pn	11 57 17.8	-0.8
	comp=Z,0.2nm,0.3s,baz=356,slow=12,SNR=26						
NOA				LR	LR	12 01 50.0	
	comp=Z,565nm,20.4s,baz=355,slow=36						
SUF	Sumiainen	12.67	138	*e*P	Pn	11 57 19.9	-0.7
SUF	Sumiainen	12.67	138	*e*P	Pn	11 57 19.9	-0.7
NAO01	NORSAR Array S	12.69	173	Pn	Pn	11 57 20.0	-1.0
SKAR	Skarslia	12.80	179	*e*P	Pn	11 57 17.0	-5.6
NC602	NORSAR Array S	12.83	172	Pn	Pn	11 57 22.0	-0.8
NRA0	NORESS Array S	12.83	172	Pn	Pn	11 57 22.3	-0.5
	baz=350,slow=16						
NRA0	NORESS Array S	12.83	172	Pn	Pn	11 57 22.3	-0.5
	baz=350,slow=16						
SLVR	Solovky	12.85	117	*e*P	Pn	11 57 20.9	-2.2
	comp=Z,33nm,1.4s						
KEF	Keuruu	12.94	142	*e*P	Pn	11 57 23.5	-0.8
KEF	Keuruu	12.94	142	*e*P	Pn	11 57 23.5	-0.8
KAF	Kangasniemi	13.25	139	*e*P	Pn	11 57 27.6	-1.0
KAF	Kangasniemi	13.25	139	*e*P	Pn	11 57 27.6	-1.0
SUMG	Summit	13.28	289	P	Pn	11 57 27.0	-2.3
SUMG	Summit	13.28	289	*i* P	Pn	11 57 27.6	-1.7
SUMG	Summit	13.28	289	*i* P	Pn	11 57 26.8	-2.4
SUMG	Summit	13.28	289	Pn	Pn	11 57 27.0	-2.3
BORG	Borgarnes	13.36	244	LR	LR	12 01 20.1	
	comp=Z,386nm,19.1s,baz=32,slow=32						
RAF	Rauma	13.52	150	*e*P	Pn	11 57 30.9	-1.3
RAF	Rauma	13.52	150	*e*P	Pn	11 57 30.9	-1.3
HFS	Hagfors	13.54	167	Pn	Pn	11 57 31.9	-0.7
	comp=Z,2.5nm,0.3s,baz=356,slow=12,SNR=49						
HFS				Sn	Sn	11 59 55.2	-7.6
	comp=Z,0.5nm,0.3s,baz=353,slow=22,SNR=2.3						
HFS				LR	LR	12 02 22.6	
	comp=Z,937nm,19.9s,baz=342,slow=36						
HFS	Hagfors	13.54	167	Pn	Pn	11 57 31.9	-0.7
	baz=351,slow=16						
HFS	Hagfors	13.54	167	Pn	Pn	11 57 31.9	-0.7
	baz=351,slow=16						
JOF	Joensuu	13.56	129	*e*P	Pn	11 57 30.7	-2.1
JOF	Joensuu	13.56	129	*e*P	Pn	11 57 30.7	-2.1
FIA0	FINESS Array S	13.83	141	Pn	Pn	11 57 35.5	-1.0
	baz=336,slow=11						
FIA0	FINESS Array S	13.83	141	*e*P	Pn	11 57 34.8	-1.7
FIA0	FINESS Array S	13.83	141	*e*P	Pn	11 57 34.8	-1.7
FIA1	FINESS Array S	13.83	141	Pn	Pn	11 57 35.9	-0.6
FINES	FINESS Array B	13.83	141	Pn	Pn	11 57 35.5	-1.0
	comp=Z,1.4nm,0.3s,baz=341,slow=12,SNR=55						
FINES				LR	LR	12 02 49.4	
	comp=Z,535nm,21.7s,baz=334,slow=37						
KONO	Kongsberg	13.86	176	P	Pn	11 57 36.0	-0.8
KONO	Kongsberg	13.86	176	Pn	Pn	11 57 36.0	-0.8
NUR	Nurmijrvi	14.46	145	*e*P	Pn	11 57 42.7	-2.3
NUR	Nurmijrvi	14.46	145	*e*P	Pn	11 57 42.7	-2.3
NEEM	North Greenlan	14.71	313	*i* P	Pn	11 57 41.6	-7.1
SNART	Snartemo	15.15	181	*i* P	Pn	11 57 51.0	-3.5
LSH	Leshukonskoye	15.67	103	*e*P	Pn	11 57 57.0	-4.2
	comp=Z,83nm,1.9s						
LSH				*e*S	Sn	12 00 39.0	-16
VSU	Vasula	16.75	144	*e*P	P	11 58 18.4	+1.2
AMDE	Amderma	16.89	75	*e*P	Pn	11 58 13.0	-3.8
	comp=Z,21nm,0.9s						
KLMR	Klimovskoe	17.30	120	*e*P	Pn	11 58 19.8	-2.2

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KLMR                               e                12 01 35.6
KLMR                                pmax    pmax
      comp=Z,140nm,1.3s
KLMR  Klimovskoe        17.30 120  eP       Pn      11 58 22.0  0.0
      comp=Z,140nm,1.3s
KLMR  Klimovskoe        17.30 120  ePn      Pn      11 58 19.8 -2.2
KLMR                                AMP             11 58 36.2
      comp=Z,140nm,1.3s
KLMR                               eSn      Sn      12 01 35.6 +1.4
KLMR                               eSn      Sn      12 01 35.6 +1.4
PRGR  Permogore         18.23 110  eP       Pn      11 58 28.0 -5.3
PRGR                                pmax    pmax
      comp=Z,16nm,1.0s
PRGR  Permogore         18.23 110  eP       Pn      11 58 28.1 -5.3
PBUR  Paburge           18.39 154  eP       Pn      11 58 36.6 +1.2
BSD   Bornholm Skovb    18.62 167  i P      P       11 58 36.0 -1.9
EKA   Eskdalemuir Ar    18.70 200   P       P       11 58 37.3 -1.6
      baz=18,slow=11,SNR=5.2
TULEG Thule             18.76 315   P       P       11 58 37.3 -2.1
PABE  Paberze           19.16 151  eP       Pn      11 58 45.4 +0.6
PABE  Paberze           19.16 151   P       P       11 58 45.2 +1.4
PABE                                IAmb    IAmb    11 58 47.0
      comp=Z,98nm,1.3s
ISAL  Salakas           19.42 147  eP       Pn      11 58 48.5 +0.6
IIGN  Ignalina          19.64 147  eP       Pn      11 58 51.0 +0.4
IIGN                                IAmb    IAmb    11 59 05.5
      comp=Z,14nm,0.8s
IDID  Didziasalis       19.76 147  eP       Pn      11 58 52.3 +0.5
IDID                                IAmb    IAmb    11 59 03.0
      comp=Z,12nm,0.8s
SFJD  Kangerlussuaq     19.95 281   LR      LR      12 05 34.5
      comp=Z,743nm,19.0s,baz=20,slow=34
SFJD  Kangerlussuaq     19.95 281   P       P       11 58 52.1 -0.2
SFJD                                pmax    pmax
      comp=Z,31nm,1.5s
SFJD  Kangerlussuaq     19.95 281   P       P       11 58 52.1 -0.2
EUNU  Eureka            20.00 330           P       11 58 51.9 -1.0
EUNU                                IAmb    IAmb    11 59 03.9
      comp=Z,48nm,1.4s
NACGM Naroch            20.16 147  i P      P       11 58 56.6 +1.8
SUW   Suwalki           20.51 153  eP       P       11 58 59.5 +0.9
SUW   Suwalki           20.51 153   P       P       11 58 59.5 +0.9
SUW                                 pmax    pmax
      comp=Z,132nm,1.1s
SUW   Suwalki           20.51 153   P       P       11 58 59.5 +0.9
MNK   Minsk             20.73 145  i P      P       11 59 00.8 -0.1
MNK                                i PPP    PPP     11 59 26.1
MNK                                i S      S       12 02 53.9 +2.0
MNK                                i SS     SnSn    12 03 35.9  +25
MNK                                 pmax    pmax
      comp=N,37nm,0.6s
MNK                                 pmax    pmax
      comp=Z,27nm,0.6s
MNK                                 pmax    pmax
      comp=E,3.0nm,0.6s
MNK                                 MLR     MLR
      comp=E,13nm,13.0s
MNK                                 MLR     MLR
      comp=Z,144nm,13.0s
MNK                                 MLR     MLR
      comp=N,104nm,13.0s
MNK   Minsk             20.73 145  i P      P       11 59 00.8 -0.1
      comp=E,3.0nm,0.6s
MNK                                i P      P       11 59 00.8 -0.1
      comp=N,37nm,0.6s,baz=344
MNK                                i P      P       11 59 00.8 -0.1
      comp=Z,27nm,0.6s
MNK                                i PP     PnPn    11 59 18.5 -0.1
MNK                                i PPP    PPP     11 59 26.1
MNK                                i S      S       12 02 53.9 +2.0
MNK                                i SS     SnSn    12 03 36.0  +25
MNK                                i LR     LR      12 06 14.0
MNK                                i LRM    MLR     12 08 24.2
      comp=Z,144nm,12.9s
MNK                                i LRM    MLR     12 08 25.5
      comp=E,13nm,12.9s
MNK                                i LRM    MLR     12 08 26.1
      comp=N,104nm,12.9s
MOS   Moscow            21.45 130  eP       P       11 59 08.4 -0.2
MOS                                e                11 59 32.8
MOS                                eS       S       12 03 09.3 +3.1
MOS                                 pmax    pmax
      comp=Z,85nm,1.2s
OBN   Obninsk           21.80 132   P       P       11 59 13.3 +0.9
      comp=Z,3.9nm,0.4s,baz=330,slow=5.9,SNR=6.7
OBN   Obninsk           21.80 132⇓iP       P       11 59 13.2 +0.9
OBN                                 *SP     pwP     11 59 18.0 +0.1
OBN                                 PPP     PPP     11 59 42.0
OBN                                e                11 59 53.6
OBN                                 S       S       12 03 07.0 -6.0
OBN                                e                12 03 43.5
OBN                                 pmax    pmax
      comp=Z,49nm,1.2s
OBN                                 MLR     MLR
      comp=Z,297nm,15.0s
OBN   Obninsk           21.80 132   P       P       11 59 13.1 +0.7
KIRV  Kirov             21.83 110   P       P       11 59 13.2 +0.6
      comp=Z,28nm,0.6s,baz=325,slow=4.9,SNR=15
KIRV                                LR      LR      12 07 48.6
      comp=Z,471nm,20.2s,baz=331,slow=37
KIRV  Kirov             21.83 110ceP       P       11 59 11.6 -1.1
CLL   Collm             22.31 171  i P      P       11 59 20.1 +2.1
CLL                                i                11 59 23.0
CLL                                 pmax    pmax
      comp=Z,25nm,1.6s
CLL   Collm             22.31 171  i P      P       11 59 20.1 +2.1
      comp=Z,25nm,1.6s
CLL                                i sP     sP      11 59 23.0 +2.0
      comp=Z,49nm,1.5s
CLL                                i (PP)           11 59 37.0
CLL                                eS       Sn      12 03 35.0 +0.1
CLL                                eSSS     SSS     12 04 07.0
CLL   Collm             22.31 171   P       P       11 59 18.6 +0.7
NRS   Narsarsuaq        22.89 266   P       P       11 59 21.7 -2.3
NRS                                 pmax    pmax
      comp=Z,31nm,1.0s
NRS   Narsarsuaq        22.89 266   P       P       11 59 21.7 -2.3
NRS                                 IAmb    IAmb    11 59 35.4
      comp=Z,31nm,1.0s
MOX   Moxa              22.92 174   P       P       11 59 25.8 +1.3
MOX                                 pmax    pmax
      comp=Z,23nm,1.3s
BTNL  Ternell           22.93 183  dP       P       11 59 25.3 +0.7
BSTI  Sart Tilman       22.94 184  dP       P       11 59 27.6 +3.0
BCLA  Clavier           23.11 184  dP       P       11 59 28.5 +2.1
BGES  Gesves            23.15 184  dP       P       11 59 27.4 +0.6
CHVC  Chvalec           23.20 166  eP       P       11 59 28.2 +0.9
CHVC                               ex       x       11 59 32.0
NKC   Novy Kostel       23.36 172  eP       P       11 59 30.7 +1.7
NKC   Novy Kostel       23.36 172  eP       P       11 59 30.7 +1.7
DOU   Dourbes           23.45 185  dP       P       11 59 30.4 +0.6
DPC   Dobruska-Polom    23.46 166  eP       P       11 59 30.3 +0.4
DPC   Dobruska-Polom    23.46 166  eP       P       11 59 30.3 +0.4
PRU   Pruhonice         23.71 169  eP       P       11 59 33.8 +1.5
PRU   Pruhonice         23.71 169  eP       P       11 59 33.8 +1.5
KRLC  Kraliky           23.76 165  eP       P       11 59 33.6 +0.7
KRLC  Kraliky           23.76 165  eP       P       11 59 33.6 +0.7
WLF   Walferdange       23.85 183  dP       P       11 59 36.3 +2.5
GRF   Grafenberg Arr    23.86 174  eP       P       11 59 37.9 +4.0
      comp=Z,7.7nm,0.9s,baz=353,slow=9.8
OJC   Ojcow             23.87 161   P       P       11 59 35.3 +1.4
OJC                                 pmax    pmax
      comp=Z,14nm,0.8s
OJC   Ojcow             23.87 161   P       P       11 59 35.3 +1.4
OJC                                 IAmb    IAmb    11 59 49.8
      comp=Z,14nm,0.8s
NRIK  Noril'sk          24.00  59   P       P       11 59 35.2 +0.3
      comp=Z,1.6nm,0.5s,baz=315,slow=6.1,SNR=9.5
NRIK                                LR      LR      12 11 36.0
      comp=Z,108nm,18.3s,baz=319,slow=43
NRIK  Noril'sk          24.00  59ceP       P       11 59 36.0 +1.1
NRIK                                pmax    pmax
      comp=Z,18nm,1.0s
NRIK  Noril'sk          24.00  59   P       P       11 59 34.9  0.0
NRIK                                IAmb    IAmb    11 59 43.5
      comp=Z,34nm,1.1s
OKC   Ostrava-Krasne    24.10 163  eP       P       11 59 40.0 +3.9
OKC   Ostrava-Krasne    24.10 163  eP       P       11 59 40.0 +3.9
MORC  Moravsky Berou    24.12 164  ⇓P       P       11 59 37.3 +1.0
MORC  Moravsky Berou    24.12 164  eP       P       11 59 36.8 +0.5
MORC  Moravsky Berou    24.12 164   P       P       11 59 36.6 +0.3
MORC                                pmax    pmax
      comp=Z,19nm,1.1s
MORC  Moravsky Berou    24.12 164   P       P       11 59 36.6 +0.3
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MORC                                IAmb    IAmb    11 59 48.1
      comp=Z,20nm,1.1s
VRAC  Vranov            24.51 166  ⇓P       P       11 59 41.3 +1.4
VRAC  Vranov            24.51 166   P       P       11 59 39.7 -0.1
      comp=Z,18nm,0.9s,baz=357,slow=11,SNR=12
VRAC                                LR      LR      12 09 31.8
      comp=Z,398nm,18.6s,baz=352,slow=37
VRAC  Vranov            24.51 166  eP       P       11 59 41.2 +1.4
VRAC  Vranov            24.51 166  ⇓P       P       11 59 41.3 +1.4
KHC   Kasperske Hory    24.51 171  eP       P       11 59 41.9 +2.0
KHC                                epP      pwP     11 59 45.1 -0.5
KHC   Kasperske Hory    24.51 171  i P      P       11 59 42.9 +3.0
KHC                                 pmax    pmax
      comp=Z,7.0nm,1.2s
AKASG Malin Array Be    24.61 146   P       P       11 59 40.9 +0.2
      comp=Z,7.5nm,0.6s,baz=345,slow=9.5,SNR=23
AKASG                               LR      LR      12 09 04.9
      comp=Z,850nm,20.4s,baz=335,slow=36
AKASG Malin Array Be    24.61 146   P       P       11 59 39.8 -0.9
AKASG                               pmax    pmax
      comp=Z,6.0nm,1.2s
AKASG Malin Array Be    24.61 146   P       P       11 59 39.8 -0.9
AKBB  Malin Array Si    24.61 146   P       P       11 59 41.1 +0.4
AKBB                                pmax    pmax
      comp=Z,36nm,1.2s
AKBB  Malin Array Si    24.61 146   P       P       11 59 41.1 +0.4
LPSR  Galich'ya Gora    24.65 131  eP       P       11 59 41.1 +0.1
LPSR                                pmax    pmax
      comp=Z,20nm,0.8s
LVV   L'vov             24.73 154  eP       P       11 59 47.3 +5.5
LVV                                 MLR     MLR
      comp=E,100nm,14.0s
LVV                                 MLR     MLR
      comp=N,600nm,16.0s
LVV                                 MLR     MLR
      comp=Z,700nm,17.0s
KRUC  Moravsky          24.74 166  eP       P       11 59 45.0 +3.1
GEC2  GERESS Array S    24.80 171   P       P       11 59 44.2 +1.6
GEC2                                IAmb    IAmb    11 59 46.7
      comp=Z,35nm,1.4s
GERES GERESS Array B    24.80 171   P       P       11 59 43.4 +0.8
      comp=Z,7.1nm,1.0s,baz=8.9,slow=9.5,SNR=27
GERES                               LR      LR      12 09 37.8
      comp=Z,349nm,19.8s,baz=354,slow=37
GERES GERESS Array B    24.80 171   P       P       11 59 44.5 +1.9
GERES GERESS Array B    24.80 171   P       P       11 59 44.5 +1.9
CKRC  Cesky Krumlov     24.86 170  eP       P       11 59 45.5 +2.5
LANS  Liptovska Anna    24.90 162  eP       P       11 59 45.6 +2.2
LANS  Liptovska Anna    24.90 162  eP       P       11 59 45.6 +2.2
RES   Resolute Bay      24.94 322   P       P       11 59 43.8 +0.4
      comp=Z,1.1nm,0.6s,baz=104,slow=3.3,SNR=6.6
RES                                 PcP     PcP     12 03 19.4 +1.2
      comp=Z,2.3nm,0.7s,baz=143,slow=7.0,SNR=6.1
RES                                 LR      LR      12 09 40.9
      comp=Z,339nm,18.1s,baz=42,slow=37
JAVC  Velka Javorina    25.04 164  eP       P       11 59 48.4 +3.7
BFO   Black Forest      25.18 179   P       P       11 59 47.1 +1.2
BFO                                 pmax    pmax
      comp=Z,20nm,1.1s
BFO   Black Forest      25.18 179   P       P       11 59 47.1 +1.2
BFO                                 IAmb    IAmb    11 59 50.6
      comp=Z,20nm,1.1s
ECH   Echery            25.30 181   P       P       11 59 48.4 +1.4
ECH                                 pmax    pmax
      comp=Z,28nm,1.3s
ECH   Echery            25.30 181   P       P       11 59 48.4 +1.4
ECH                                 IAmb    IAmb    11 59 50.2
      comp=Z,28nm,1.3s
KOLS  Kolonicke sedl    25.40 157  eP       P       11 59 48.8 +0.9
KOLS  Kolonicke sedl    25.40 157  eP       P       11 59 48.8 +0.9
MODS  Modra-Piesok      25.49 165  eP       P       11 59 49.8 +1.1
MODS  Modra-Piesok      25.49 165  eP       P       11 59 49.8 +1.1
VYHS  Vyhne             25.50 163  eP       P       11 59 51.0 +2.3
VYHS  Vyhne             25.50 163  eP       P       11 59 51.0 +2.3
CLF   Chambon-Foret     25.60 189   P       P       11 59 52.8 +3.2
ZST   Bratislava        25.65 165  eP       P       11 59 51.1 +0.9
ZST   Bratislava        25.65 165  eP       P       11 59 51.1 +0.9
UZH   Uzhgorod          25.70 157  eP       P       11 59 51.8 +1.3
UZH                                e                11 59 56.9
MOA   Molln             25.83 170  eP       P       11 59 53.2 +1.4
      comp=Z,3.6nm,0.9s
CONA  Conrad Observa    25.84 167  eP       P       11 59 53.6 +1.6
      comp=Z,12nm,1.1s
VSR   Storozhevoye      26.00 132  eP       P       11 59 53.6 +0.3
VSR                                 pmax    pmax
      comp=Z,20nm,1.4s
PSZ   Piszkesteto       26.16 161  eP       P       12 00 00.9 +6.0
ARU   Arti              26.20 103   P       P       11 59 56.4 +1.3
      comp=Z,4.0nm,0.6s,baz=330,slow=8.1,SNR=15
ARU                                 LR      LR      12 10 00.3
      comp=Z,145nm,20.6s,baz=328,slow=36
ARU   Arti              26.20 103d iP       P       11 59 55.5 +0.4
ARU                                                 12 00 33.0
ARU                                 S       S       12 04 30.0 +3.3
ARU                                 SS      SnSn    12 05 27.6 +2.5
ARU                                 pmax    pmax
      comp=Z,45nm,1.2s
ARU   Arti              26.20 103   P       P       11 59 56.5 +1.5
MOTA  Moosalm           26.21 175  eP       P       11 59 59.3 +3.9
      comp=Z,13nm,1.7s
TRPA  Tarpa             26.22 157  ⇓P       P       11 59 56.7 +1.4
TRPA  Tarpa             26.22 157  eP       P       11 59 56.7 +1.4
WATA  Walderalm         26.23 174  eP       P       11 59 59.7 +4.1
      comp=Z,9.8nm,1.3s
DAVA  Damuels           26.24 177  eP       P       11 59 58.5 +2.8
      comp=Z,11nm,1.1s
VORD  Divnogorie        26.26 132  eP       P       11 59 54.7 -0.9
VORD                                pmax    pmax
      comp=Z,10.0nm,0.7s
WTTA  Wattenberg        26.30 174  eP       P       11 59 59.9 +3.6
      comp=Z,10nm,0.9s
SQTA  Sankt Quirin      26.34 175  eP       P       11 59 58.5 +2.0
      comp=Z,6.5nm,0.9s
SVE   Sverdlovsk        26.44 100  eP       P       11 59 59.1 +1.9
EGYH  Egyhazaskeszo     26.45 165  eP       P       11 59 58.1 +0.7
ARSA  Arzberg           26.49 168  eP       P       11 59 59.9 +2.1
      comp=Z,7.4nm,1.2s
FETA  Feichten          26.52 175  eP       P       12 00 00.8 +2.6
      comp=Z,5.1nm,1.3s
KBA   Koelnbreinsper    26.55 171  eP       P       12 00 00.7 +2.1
      comp=Z,4.1nm,1.2s
VRH   Novokhopyorsk     26.58 128  eP       P       12 00 00.0 +1.5
VRH                                 pmax    pmax
      comp=Z,20nm,1.0s
MPLH  Magyarpolny       26.71 165  eP       P       12 00 00.4 +0.7
DAVOX Davos/Dischmat    26.75 177   LR      LR      12 09 56.8
      comp=Z,263nm,19.7s,baz=347,slow=35
ABTA  Abfaltersbach     26.85 173  eP       P       12 00 02.5 +1.4
      comp=Z,8.9nm,1.1s
SORM  Soroca            26.97 149  ⇑P       P       12 00 02.1  0.0
SORM  Soroca            26.97 149  ⇑P       P       12 00 02.1  0.0
MYKA  Terra Mystica     27.01 171  eP       P       12 00 08.1 +5.5
      comp=Z,9.3nm,1.1s
BUR08 Bucovina Ar. S    27.02 153   P       P       12 00 04.2 +1.6
BURAR Bucovina Array    27.05 153  ⇓P       P       12 00 01.7 -1.2
BURAR Bucovina Array    27.05 153  ⇓P       P       12 00 01.7 -1.2
BURAR Bucovina Array    27.05 153   P       P       12 00 03.9 +1.0
ZOU   Zoufplan          27.06 172   P       P       12 00 04.7 +1.5
ZOU                                 IAmb    IAmb    12 00 25.8
      comp=Z,32nm,1.4s
OBKA  Obir              27.18 170  eP       P       12 00 06.5 +2.5
      comp=Z,12nm,1.6s
FRB   Frobisher Bay     27.35 290   LR      LR      12 10 00.0
      comp=Z,232nm,18.2s,baz=34,slow=34
DRGR                    27.56 157  ⇓P       P       12 00 04.7 -2.8
DRGR                    27.56 157  ⇓P       P       12 00 04.7 -2.8
MORH  Mrgy, Hungar      27.74 164  ⇑P       P       12 00 10.3 +1.3
MORH  Mrgy, Hungar      27.74 164  eP       P       12 00 02.6 -6.4
KOVH  Kovagotottos      27.82 164  eP       P       12 00 03.3 -6.5
BZS   Buzias            28.61 159  ⇑P       P       12 00 13.3 -3.4
BZS   Buzias            28.61 159  ⇑P       P       12 00 13.3 -3.4
FRGS  Fruska Gora       28.89 162  ⇑P       P       12 00 20.8 +1.6
GZR   Gura Zlata        28.95 158  ⇓P       P       12 00 20.7 +0.9
GZR   Gura Zlata        28.95 158  ⇓P       P       12 00 20.7 +0.9
VRI   Vrincioaia        28.96 152  ⇑P       P       12 00 21.9 +2.0
VRI   Vrincioaia        28.96 152  ⇑P       P       12 00 21.9 +2.0
VOIR                    29.17 155  ⇑P       P       12 00 07.7  -14
MLR   Muntele Rosu      29.23 153  ⇑P       P       12 00 14.9 -7.5
MLR   Muntele Rosu      29.23 153  ⇑P       P       12 00 14.9 -7.5
IZVR  Izvoarele         29.42 151  ⇑P       P       12 00 29.1 +5.2
ISR   Istrita           29.67 153  ⇑P       P       12 00 32.2 +5.9
ISR   Istrita           29.67 153  ⇑P       P       12 00 32.2 +6.0
CFR   Carcaliu          29.83 150  ⇓P       P       12 00 27.9 +0.4
CFR   Carcaliu          29.83 150  ⇓P       P       12 00 27.9 +0.4
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HARR  Harsova           30.28 151  ⇑P       P       12 00 32.1 +0.6
HARR  Harsova           30.28 151  ⇑P       P       12 00 32.1 +0.6
TIXI  Tiksi             30.50  32   P       P       12 00 33.6 +0.4
      comp=Z,2.6nm,0.4s,baz=320,slow=9.0,SNR=6.9
TIXI                                LR      LR      12 13 04.2
      comp=Z,101nm,20.1s,baz=336,slow=37
TIXI  Tiksi             30.50  32⇓eP       P       12 00 34.7 +1.4
TIXI                                pmax    pmax
      comp=Z,15nm,1.1s
TIXI  Tiksi             30.50  32   P       P       12 00 33.9 +0.6
TIXI                                IAmb    IAmb    12 00 35.8
      comp=Z,15nm,1.1s
NRCA  Norcia            30.78 172   P       P       12 00 37.2 +1.1
NRCA                                IAmb    IAmb    12 00 49.5
      comp=Z,23nm,1.3s
AKTO  Aktyubinsk        31.38 109   LR      LR      12 13 51.7
      comp=Z,353nm,20.2s,baz=343,slow=37
VTS   Vitosha           31.74 158  ⇑P       P       12 00 44.3 -0.3
VTS   Vitosha           31.74 158   P       P       12 00 44.7 +0.1
VTS                                 pmax    pmax
      comp=Z,3.0nm,0.9s
VTS   Vitosha           31.74 158   P       P       12 00 44.7 +0.1
BRVK  Borovoye          32.48  94   P       P       12 00 52.6 +1.8
BRVK                                pmax    pmax
      comp=Z,8.0nm,0.9s
BRVK  Borovoye          32.48  94   P       P       12 00 52.6 +1.8
BRVK                                IAmb    IAmb    12 00 53.3
      comp=Z,8.3nm,0.8s
PAOL  Paolisi           32.64 170   P       P       12 00 53.7 +1.3
ABKAR Akbulak array     32.97 108   P       P       12 00 56.5 +1.4
ABKAR Akbulak array     32.97 108   P       P       12 00 56.3 +1.2
SOC   Sochi             33.38 136  eP       P       12 00 58.8  0.0
SOC                                e                12 02 08.9
SOC                                ePPP     PPP     12 02 22.4
SOC                                eS       S       12 06 21.5 +2.1
SOC                                eSS      SnSn    12 08 25.6 +5.5
SOC                                 MLR     MLR
      comp=Z,252nm,16.0s
KIV   Kislovodsk        33.64 132  eP       P       12 01 03.7 +2.5
KIV                                 pmax    pmax
      comp=Z,8.0nm,1.0s
KIV                                 MLR     MLR
      comp=Z,212nm,15.0s
KIV   Kislovodsk        33.64 132   P       P       12 01 02.6 +1.4
KBZ   Khabaz            33.91 132   P       P       12 01 05.3 +2.0
      comp=Z,2.8nm,0.7s,baz=18,slow=5.4,SNR=5.2
KBZ                                 LR      LR      12 15 22.4
      comp=Z,376nm,20.5s,baz=344,slow=37
ESDC  Sonseca Array     34.30 196   P       P       12 01 07.5 +0.6
      comp=Z,1.2nm,0.8s,baz=3.5,slow=8.2,SNR=8.3
SCHQ  Schefferville     34.36 279   LR      LR      12 13 26.5
      comp=Z,304nm,20.7s,baz=71,slow=33
TIP   Timpagrande       34.61 168   P       P       12 01 10.7 +1.2
TIP                                 IAmb    IAmb    12 01 25.9
      comp=Z,17nm,1.3s
GROC  Groznyy           35.05 128  eP       P       12 01 13.7 +0.5
GROC                               e                12 02 27.5
GROC                               e                12 03 46.9
GROC                                pmax    pmax
      comp=Z,83nm,1.3s
A21K  Barrow            35.14 351   P       P       12 01 14.4 +0.7
A21K                                IAmb    IAmb    12 01 25.5
      comp=Z,7.1nm,0.8s
CORL  Corleone          35.72 172   P       P       12 01 21.1 +2.0
ZALV  Zalesovo Beam     35.85  80   P       P       12 01 20.2 +0.3
      comp=Z,0.5nm,0.3s,baz=323,slow=9.3,SNR=6.0
ZALV                                PcP     PcP     12 03 46.7 -0.2
      comp=Z,1.3nm,0.5s,baz=302,slow=4.3,SNR=4.4
ZALV  Zalesovo Beam     35.85  80   P       P       12 01 20.9 +0.9
BRTR  Keskin Array B    36.01 145   P       P       12 01 21.8 +0.1
      comp=Z,2.5nm,0.6s,baz=345,slow=6.0,SNR=6.7
BRTR                                LR      LR      12 17 15.5
      comp=Z,262nm,21.4s,baz=17,slow=38
BRTR  Keskin Array B    36.01 145  i P      P       12 01 23.8 +2.1
BRTR                                pmax    pmax
      comp=Z,2.0nm,0.6s
BRTR  Keskin Array B    36.01 145   P       P       12 01 23.4 +1.8
INK   Inuvik            36.29 337   P       P       12 01 23.1 -0.6
      comp=Z,6.2nm,1.0s,baz=5.0,slow=11,SNR=11
INK                                 PcP     PcP     12 03 48.3 +0.3
      comp=Z,4.3nm,1.1s,baz=14,slow=7.5,SNR=4.6
INK   Inuvik            36.29 337   IAmb    IAmb    12 01 24.8
      comp=Z,15nm,1.2s
DDFL  Dedoflistskaro    36.79 129   P       P       12 01 33.6 +5.3
KARS  Kars              36.91 133   P       P       12 01 31.7 +2.3
KARS                                pmax    pmax
      comp=Z,70nm,1.0s
KARS  Kars              36.91 133   P       P       12 01 31.7 +2.3
KURK  Kurchatov         36.95  88   P       P       12 01 30.0 +0.6
KURK                                                12 03 50.7
KURK                                pmax    pmax
      comp=Z,8.0nm,1.1s
KURK  Kurchatov         36.95  88   P       P       12 01 30.0 +0.6
KURBB Kurchatov Arra    37.00  88   PcP     PcP     12 03 50.6 +0.2
      comp=Z,1.4nm,0.7s,baz=323,slow=3.6,SNR=6.2
TOLK  Toolik Lake Re    37.41 347   P       P       12 01 34.3 +1.0
TOLK                                IAmb    IAmb    12 01 35.0
      comp=Z,19nm,1.5s
GNI   Garni             37.73 131   P       P       12 01 37.0 +0.7
GNI                                 pmax    pmax
      comp=Z,26nm,1.2s
GNI   Garni             37.73 131   P       P       12 01 37.0 +0.7
GNI                                 IAmb    IAmb    12 01 50.3
      comp=Z,26nm,1.2s
KEST  Kesra             37.78 178   P       P       12 01 37.0 +0.3
      comp=Z,3.3nm,0.8s,baz=244,slow=23,SNR=3.8
KEST                                LR      LR      12 16 34.9
      comp=Z,159nm,20.0s,baz=154,slow=35
KEST  Kesra             37.78 178   IAmb    IAmb    12 02 00.8
      comp=Z,18nm,1.4s
BILL  Bilibino          38.09  13⇑eP       P       12 01 39.0 +0.1
BILL                               e*PP     pwP     12 01 44.9 +0.1
BILL                               e                12 03 53.7
BILL                                S       S       12 07 26.0 -5.0
BILL                                pmax    pmax
      comp=Z,12nm,1.7s
BILL                                MLR     MLR
      comp=Z,93nm,16.0s
BILL  Bilibino          38.09  13   P       P       12 01 39.3 +0.4
BILL                                IAmb    IAmb    12 01 45.9
      comp=Z,18nm,1.3s
BMAR  Burnt Mountain    38.23 343   P       P       12 01 41.0 +0.9
EPYK  Eagle Plains      38.51 338   P       P       12 01 42.3 -0.2
EPYK                                IAmb    IAmb    12 01 48.4
      comp=Z,15nm,1.1s
COLD  Coldfoot          38.85 347   P       P       12 01 46.0 +0.7
YKA   Yellowknife Ar    39.00 321   P       P       12 01 46.0 -0.6
      comp=Z,3.0nm,1.0s,baz=16,slow=8.3,SNR=23
YKA                                 PcP     PcP     12 03 55.5 -0.9
      comp=Z,1.0nm,0.7s,baz=16,slow=2.9,SNR=11
YKA                                 LR      LR      12 17 46.2
      comp=Z,345nm,19.2s,baz=0.0,slow=36
YAK   Yakutsk           39.36  39   P       P       12 01 49.8 +0.2
YAK                                 IAmb    IAmb    12 01 54.7
      comp=Z,9.9nm,0.5s
BOD   Bodaibo           39.99  53  eP       P       12 01 54.8 -0.1
BOD                                 pmax    pmax
      comp=Z,15nm,1.9s
PRP   Porcupine Dome    40.19 343   P       P       12 01 57.3 +0.7
IMAR  Indian Mountai    40.31 348   P       P       12 01 58.1 +0.7
DGZ   Jazzator, Alta    40.37  80  i P      P       12 01 59.6 +1.3
DGZ                                 pmax    pmax
      comp=Z,6.0nm,1.3s
EGAK  Eagle             40.52 340   P       P       12 01 59.6 +0.4
H21K  Melozitna Rive    40.57 348   P       P       12 02 01.2 +1.6
I23K  Minto, Yukon-K    40.85 345   P       P       12 02 03.9 +2.0
MDM   Murphy Dome       40.95 345   P       P       12 02 03.3 +0.4
COLA  College           41.01 344  i P      P       12 02 03.4 +0.2
COLA                                pmax    pmax
      comp=Z,4.0nm,1.0s
IL31                    41.03 344   P       P       12 02 04.5 +1.1
ILAR  Eielson Array     41.03 344   P       P       12 02 03.8 +0.4
      comp=Z,4.2nm,0.9s,baz=1.8,slow=7.0,SNR=36
ILAR                                PcP     PcP     12 04 02.3 -0.6
      comp=Z,1.2nm,0.9s,baz=350,slow=3.5,SNR=4.7
CCB   Clear Creek Bu    41.23 344   P       P       12 02 05.9 +0.8
HDA   Harding Lake      41.40 344   P       P       12 02 07.2 +0.8
MK31  Makanchi Array    41.53  87   P       P       12 02 09.2 +1.4
MK31                                pmax    pmax
      comp=Z,11nm,1.5s
MK31  Makanchi Array    41.53  87   P       P       12 02 09.2 +1.4
MKAR  Makanchi Array    41.53  87   P       P       12 02 07.9 +0.1
      comp=Z,1.8nm,0.8s,baz=326,slow=6.3,SNR=13
MKAR                                LR      LR      12 23 25.2
      comp=Z,186nm,18.0s,baz=328,slow=42
```

MKAR	**Makanchi Array**	**41.53**	**87**	P	**P**	**12 02 08.6**	**+0.8**
MKAR	**Makanchi Array**	**41.53**	**87**	P	**P**	**12 02 08.6**	**+0.8**
KKAR	**Karatay Array**	**41.55**	**101**	P	**P**	**12 02 09.6**	**+1.7**
KKAR	**Karatay Array**	**41.55**	**101**	P	**P**	**12 02 09.6**	**+1.7**
SEY	**Seymchan**	**41.87**	**23**	*i* P	**P**	**12 02 10.8**	**+0.5**
DOT	**Dot Lake**	**41.90**	**342**	P	**P**	**12 02 11.1**	**+0.5**
DOT				IAmb	IAmb	12 02 13.2	
	comp=Z,21nm,1.3s						
BCAR	**Beaver Creek A**	**42.26**	**340**	P	**P**	**12 02 14.5**	**+1.0**
L27K	**Beaver Creek,**	**42.26**	**340**	P	**P**	**12 02 14.0**	**+0.5**
MOY	**Mondy**	**42.33**	**67**	*e*P	**P**	**12 02 16.9**	**+2.6**
MOY				pmax	pmax		
	comp=Z,33nm,2.1s						
L26K	**Log Cabin Wild**	**42.44**	**341**	P	**P**	**12 02 16.5**	**+1.5**
L26K				IAmb	IAmb	12 02 16.8	
	comp=Z,20nm,1.5s						
KTH	**Kantishna Hill**	**42.54**	**346**	P	**P**	**12 02 19.4**	**+3.6**
KTH				IAmb	IAmb	12 02 22.8	
	comp=Z,22nm,1.3s						
MENT	**Mentasta**	**42.56**	**341**	P	**P**	**12 02 16.5**	**+0.5**
DHY	**Denali Highway**	**42.75**	**344**	P	**P**	**12 02 18.5**	**+0.9**
DHY				IAmb	IAmb	12 02 28.4	
	comp=Z,28nm,1.3s						
CAST	**Castle Rocks**	**42.75**	**347**	P	**P**	**12 02 18.5**	**+1.0**
CAST				IAmb	IAmb	12 02 19.4	
	comp=Z,16nm,1.2s						
GEYT	**Alibeck**	**43.02**	**117**	LR	LR	12 22 20.0	
	comp=Z,351nm,20.1s,baz=260,slow=39						
AAK	**Ala-Archa**	**43.11**	**97**	P	**P**	**12 02 22.3**	**+1.5**
	comp=Z,1.2nm,0.5s,baz=212,slow=5.8,SNR=4.5						
AAK	**Ala-Archa**	**43.11**	**97**	*ce*P	**P**	**12 02 22.7**	**+1.9**
AAK				pmax	pmax		
	comp=Z,13nm,1.3s						
AAK	**Ala-Archa**	**43.11**	**97**	P	**P**	**12 02 22.3**	**+1.5**
TKM2	**Tokmak 2**	**43.16**	**96**	P	**P**	**12 02 24.4**	**+3.1**
TKM2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BOOM	**Boomskoye usch**	**43.66**	**96**	P	**P**	**12 02 26.7**	**+1.5**
BOOM				pmax	pmax		
	comp=Z,11nm,1.0s						
BOOM	**Boomskoye usch**	**43.66**	**96**	P	**P**	**12 02 26.7**	**+1.5**
BOOM				IAmb	IAmb	12 02 28.7	
	comp=Z,11nm,1.0s						
ZAK	**Zakamensk**	**44.10**	**66**	*e*P	**P**	**12 02 27.4**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,54nm,1.6s						
BTK	**Batken**	**44.45**	**102**	P	**P**	**12 02 33.6**	**+2.0**
BTK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BTK	**Batken**	**44.45**	**102**	P	**P**	**12 02 33.6**	**+2.0**
TARG	**Taragay, Kyrgy**	**44.89**	**94**	P	**P**	**12 02 37.8**	**+2.4**
TARG				IAmb	IAmb	12 02 39.1	
	comp=Z,7.9nm,0.9s						
CHGR	**Chuyangaron**	**45.30**	**105**	P	**P**	**12 02 39.4**	**+1.1**
CHGR				IAmb	IAmb	12 02 40.6	
	comp=Z,10nm,0.9s						
WMQ	**Urumqi**	**45.80**	**84**	*e*P	**P**	**12 02 46.5**	**+4.3**
ULM	**Lac du Bonnet**	**46.28**	**300**	P	**P**	**12 02 44.6**	**-1.2**
	comp=Z,6.0nm,1.0s,baz=14,slow=8.3,SNR=3.7						
ULM				LR	LR	12 21 59.6	
	comp=Z,301nm,18.7s,baz=40,slow=36						
ULM	**Lac du Bonnet**	**46.28**	**300**	P	**P**	**12 02 45.7**	**-0.1**
ULM				pmax	pmax		
	comp=Z,12nm,1.1s						
ULM	**Lac du Bonnet**	**46.28**	**300**	P	**P**	**12 02 45.7**	**-0.1**
ULM				IAmb	IAmb	12 02 51.2	
	comp=Z,12nm,1.1s						
KSH	**Kashi**	**46.42**	**97**	P	**P**	**12 02 51.8**	**+4.6**
KSH				sP	pwP	12 02 58.8	+5.7
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONM	**Songino Array**	**47.25**	**65**	P	**P**	**12 02 54.6**	**+1.0**
	comp=Z,5.0nm,1.1s,baz=328,slow=6.9,SNR=16						
SONM				PcP	**PcP**	**12 04 25.2**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=279,slow=3.5,SNR=4.0						
SONM				LR	LR	12 27 40.5	
	comp=Z,75nm,19.0s,baz=350,slow=42						
SONM	**Songino Array**	**47.25**	**65**	P	**P**	**12 02 54.6**	**+1.0**
SONM				IAmb	IAmb	12 02 56.2	
	comp=Z,8.8nm,1.2s						
ULN	**Ulaanbaatar**	**47.40**	**65**	P	**P**	**12 02 56.7**	**+1.9**
ULN				pmax	pmax		
	comp=Z,17nm,1.3s						
ULN	**Ulaanbaatar**	**47.40**	**65**	P	**P**	**12 02 56.6**	**+1.9**
F33A	**5 Mile Ranch,**	**50.48**	**298**	P	**P**	**12 03 18.1**	**-0.1**
NIL	**Nilore**	**51.13**	**103**	P	**P**	**12 03 24.1**	**+0.8**
NIL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NIL	**Nilore**	**51.13**	**103**	P	**P**	**12 03 24.1**	**+0.8**
NIL				IAmb	IAmb	12 03 25.3	
	comp=Z,10.0nm,0.8s						
WALA	**Waterton Lakes**	**51.51**	**314**	P	**P**	**12 03 25.0**	**-1.0**
WALA				IAmb	IAmb	12 03 31.1	
	comp=Z,23nm,1.4s						
EGMT	**Eagleton**	**51.61**	**311**	P	**P**	**12 03 26.7**	**-0.1**
EGMT				IAmb	IAmb	12 03 33.5	
	comp=Z,14nm,1.1s						
PETK	**Petropavlovsk-**	**52.09**	**22**	LR	LR	12 24 59.7	
	comp=Z,81nm,19.9s,baz=343,slow=35						
SUSD	**Miller**	**52.46**	**300**	P	**P**	**12 03 32.4**	**-0.7**
ECSD	**EROS Data Cent**	**52.53**	**298**	P	**P**	**12 03 34.0**	**+0.3**
GTA	**Gaotai**	**53.30**	**75**	*e*P	**P**	**12 03 41.0**	**+1.5**
GTA				pP	pwP	12 03 45.1	-0.3
GTA				sP	sP	12 03 48.1	+5.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
MSO	**Missoula**	**53.64**	**313**	P	**P**	**12 03 41.3**	**-0.5**
GCMT	**Greycliff**	**53.70**	**310**	P	**P**	**12 03 42.8**	**+0.4**
RAYN	**Ar Rayn**	**53.95**	**136**	P	**P**	**12 03 45.3**	**+1.0**
RAYN				pmax	pmax		
	comp=Z,17nm,1.4s						
RAYN	**Ar Rayn**	**53.95**	**136**	P	**P**	**12 03 45.3**	**+1.0**
RSSD	**Black Hills**	**53.99**	**304**	P	**P**	**12 03 45.1**	**+0.5**
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RSSD	**Black Hills**	**53.99**	**304**	P	**P**	**12 03 45.1**	**+0.5**
LRM	**Limekiln Ridge**	**54.28**	**312**	P	**P**	**12 03 46.3**	**-0.4**
YHL	**Hebgen Lake**	**54.93**	**310**	P	**P**	**12 03 51.3**	**-0.2**
YHL				IAmb	IAmb	12 03 58.7	
	comp=Z,15nm,1.2s						
HHC	**Hu-ho-hao-te**	**55.10**	**64**	*e*P	**P**	**12 03 54.0**	**+1.4**
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,5.1s						
HHC				LR	LR		
	comp=Z,200nm,16.4s						
HHC				LR	LR		
	comp=Z,290nm,17.7s						
HHC				LR	LR		
	comp=Z,230nm,15.2s						
MCMT	**McKenzie Canyo**	**55.31**	**312**	P	**P**	**12 03 54.2**	**0.0**
CN2	**Changchun**	**55.66**	**51**	*e*P	**P**	**12 03 57.0**	**+0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MOOW	**Moose Ponds**	**55.88**	**310**	P	**P**	**12 03 59.5**	**+1.2**
K22A	**Casper**	**55.97**	**306**	P	**P**	**12 03 57.6**	**-1.2**
K22A				IAmb	IAmb	12 04 04.1	
	comp=Z,13nm,1.0s						
BMO	**Blue Mountains**	**56.22**	**316**	P	**P**	**12 04 01.2**	**+0.7**
BMO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BMO	**Blue Mountains**	**56.22**	**316**	P	**P**	**12 04 01.2**	**+0.7**
BMO				IAmb	IAmb	12 04 06.3	
	comp=Z,8.1nm,1.2s						
S44A	**Carbondale**	**56.25**	**289**	P	**P**	**12 04 00.2**	**-0.5**
BW06	**Boulder Array**	**56.55**	**308**	P	**P**	**12 04 02.8**	**-0.4**
BW06				IAmb	IAmb	12 04 08.9	
	comp=Z,17nm,1.4s						
PD31	**Pinedale Array**	**56.55**	**308**	P	**P**	**12 04 02.2**	**-0.9**
PD31				IAmb	IAmb	12 04 08.9	
	comp=Z,16nm,1.4s						
PDAR	**Pinedale Array**	**56.55**	**308**	P	**P**	**12 04 02.6**	**-0.5**
	comp=Z,1.6nm,1.0s,baz=48,slow=4.8,SNR=10						
PDAR				LR	LR	12 27 31.4	
	comp=Z,161nm,18.3s,baz=47,slow=35						
PDAR	**Pinedale Array**	**56.55**	**308**	P	**P**	**12 04 02.7**	**-0.4**
USRK	**Ussuriysk Ar.**	**56.68**	**45**	LR	LR	12 30 21.3	
	comp=Z,58nm,18.8s,baz=354,slow=38						
HLID	**Hailey**	**56.85**	**313**	P	**P**	**12 04 05.2**	**0.0**
LZH	**Lanzhou**	**57.52**	**73**	*e*P	**P**	**12 04 11.6**	**+1.7**
LZH				pP	pwP	12 04 15.6	-0.3
LZH				pmax	pmax		
	comp=Z,26nm,1.4s						
HWUT	**Hardware Ranch**	**58.11**	**310**	P	**P**	**12 04 13.9**	**-0.1**
HWUT				IAmb	IAmb	12 04 20.2	
	comp=Z,8.7nm,1.4s						
ISCO	**Idaho Springs**	**58.46**	**304**	P	**P**	**12 04 17.7**	**+1.0**
ISCO				pmax	pmax		
	comp=Z,12nm,1.5s						
ISCO	**Idaho Springs**	**58.46**	**304**	P	**P**	**12 04 17.7**	**+1.0**
ISCO				IAmb	IAmb	12 04 24.0	
	comp=Z,12nm,1.4s						
RDMU	**Red Mountain**	**58.65**	**308**	P	**P**	**12 04 18.0**	**+0.1**
RDMU				IAmb	IAmb	12 04 24.0	
	comp=Z,11nm,1.3s						
O20A	**White River Ci**	**58.76**	**306**	P	**P**	**12 04 19.4**	**+0.8**
SMCO	**Snowmass**	**59.38**	**305**	P	**P**	**12 04 22.0**	**-1.1**
SMCO				IAmb	IAmb	12 04 29.8	
	comp=Z,11nm,1.2s						
MOD	**Modoc Plateau**	**59.65**	**317**	P	**P**	**12 04 26.1**	**+1.4**
DUG	**Dugway, Tooele**	**59.73**	**310**	P	**P**	**12 04 25.8**	**+0.5**
DUG				pmax	pmax		
	comp=Z,7.0nm,1.4s						
DUG	**Dugway, Tooele**	**59.73**	**310**	P	**P**	**12 04 25.8**	**+0.5**
DUG				IAmb	IAmb	12 04 45.7	
	comp=Z,7.4nm,1.4s						
OK031	**S. Brethren Rd**	**59.91**	**295**	P	**P**	**12 04 27.2**	**+0.8**
TMUT	**Trail Mountain**	**60.24**	**309**	P	**P**	**12 04 29.8**	**+0.9**
TMUT				IAmb	IAmb	12 04 36.0	
	comp=Z,11nm,1.2s						
TORD	**Torodi Ar. Bea**	**60.36**	**187**	P	**P**	**12 04 30.0**	**+0.4**
	comp=Z,3.3nm,0.7s,baz=354,slow=6.8,SNR=16						
TORD				LR	LR	12 33 12.6	
	comp=Z,70nm,18.9s,baz=310,slow=39						
TORD	**Torodi Ar. Bea**	**60.36**	**187**	P	**P**	**12 04 29.9**	**+0.3**
TORD				IAmb	IAmb	12 04 36.8	
	comp=Z,5.6nm,1.1s						
Q16A	**Castle Valley**	**60.59**	**308**	P	**P**	**12 04 31.5**	**+0.3**
Q16A				IAmb	IAmb	12 04 38.4	
	comp=Z,12nm,1.2s						
W35A	**Tecumseh**	**60.68**	**295**	P	**P**	**12 04 30.9**	**-0.7**
XAN	**Xi'an**	**60.82**	**69**	P	**P**	**12 04 33.6**	**+0.9**
XAN				pmax	pmax		
	comp=Z,11nm,1.4s						
XAN				LR	LR		
	comp=Z,210nm,19.9s						
MSU	**Marysvale**	**61.20**	**309**	P	**P**	**12 04 36.8**	**+1.3**
MSU	**Marysvale**	**61.20**	**309**	P	**P**	**12 04 36.8**	**+1.3**
MVU	**Marysvale**	**61.22**	**309**	P	**P**	**12 04 37.4**	**+1.8**
MVCO	**Mesa Verde**	**61.61**	**306**	P	**P**	**12 04 39.0**	**+0.7**
MTPU	**Mount Pierson**	**61.66**	**309**	P	**P**	**12 04 40.2**	**+1.5**
MTPU				IAmb	IAmb	12 04 47.1	
	comp=Z,11nm,1.4s						
KVN	**Kaiserville**	**61.95**	**314**	P	**P**	**12 04 40.0**	**-0.5**
KVN				pmax	pmax		
	comp=Z,12nm,1.3s						
KVN	**Kaiserville**	**61.95**	**314**	P	**P**	**12 04 40.0**	**-0.5**
R11A	**Troy Canyon, C**	**62.10**	**312**	P	**P**	**12 04 41.9**	**+0.4**
R11A				IAmb	IAmb	12 04 48.6	
	comp=Z,8.5nm,1.3s						
KSRS	**Korea Array**	**62.28**	**51**	LR	LR	12 35 03.1	
	comp=Z,74nm,18.3s,baz=354,slow=39						
CCUT	**Cedar City**	**62.39**	**310**	P	**P**	**12 04 44.8**	**+1.4**
CCUT				IAmb	IAmb	12 04 51.0	
	comp=Z,9.4nm,1.1s						
NVAR	**Mina Array Bea**	**62.59**	**314**	P	**P**	**12 04 45.1**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=33,slow=6.0,SNR=7.9						
NVAR				LR	LR	12 32 34.6	
	comp=Z,208nm,18.4s,baz=5.5,slow=37						
TPH	**Tonopah**	**62.71**	**313**	P	**P**	**12 04 46.3**	**+0.7**
TPH				pmax	pmax		
	comp=Z,23nm,1.1s						
TPH	**Tonopah**	**62.71**	**313**	P	**P**	**12 04 46.3**	**+0.7**
LCMT	**Little Creek M**	**62.88**	**310**	P	**P**	**12 04 46.3**	**-0.3**
LCMT				IAmb	IAmb	12 04 53.9	
	comp=Z,6.9nm,1.1s						
PRN	**Pahroc Range**	**62.89**	**311**	P	**P**	**12 04 46.0**	**-0.7**
U15A	**North Rim**	**63.23**	**309**	P	**P**	**12 04 49.6**	**+0.5**
U15A				IAmb	IAmb	12 04 55.2	
	comp=Z,7.5nm,1.3s						
ANMO	**Albuquerque**	**63.28**	**303**	P	**P**	**12 04 49.2**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=20,slow=8.3,SNR=4.1						
ANMO	**Albuquerque**	**63.28**	**303**	IAmb	IAmb	12 04 56.0	
	comp=Z,4.8nm,1.2s						
TPNV	**Topopah Spring**	**63.59**	**312**	P	**P**	**12 04 51.3**	**0.0**
TPNV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TPNV	**Topopah Spring**	**63.59**	**312**	P	**P**	**12 04 51.3**	**0.0**
SHPR	**Sheep Range**	**63.78**	**311**	P	**P**	**12 04 53.4**	**+0.7**
SHPR				IAmb	IAmb	12 04 54.5	
	comp=Z,6.6nm,1.3s						
JSD	**Sado**	**63.86**	**42**	P	**P**	**12 04 52.3**	**-0.6**
WUAZ	**Wupatki**	**63.89**	**307**	P	**P**	**12 04 54.4**	**+1.0**
WUAZ				IAmb	IAmb	12 04 59.9	
	comp=Z,12nm,1.4s						
ATD	**Arta Tunnel**	**65.14**	**142**	LR	LR	12 33 44.2	
	comp=Z,79nm,19.8s,baz=345,slow=36						
NJ2	**Nanjing**	**65.29**	**61**	*e*P	**P**	**12 05 02.3**	**0.0**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ISA	**Isabella, Lake**	**65.30**	**314**	P	**P**	**12 05 05.3**	**+2.9**
ISA				pmax	pmax		
	comp=Z,14nm,1.2s						
ISA	**Isabella, Lake**	**65.30**	**314**	P	**P**	**12 05 05.3**	**+2.9**
MAT	**Matsushiro**	**65.30**	**42**	P	**P**	**12 05 02.1**	**-0.3**
MJAR	**Matsushiro Arr**	**65.30**	**42**	P	**P**	**12 05 02.3**	**-0.1**
	comp=Z,5.2nm,0.9s,baz=337,slow=7.4,SNR=6.9						
TUC	**Tucson**	**66.83**	**306**	P	**P**	**12 05 12.8**	**+0.5**
TUC				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TUC	**Tucson**	**66.83**	**306**	P	**P**	**12 05 12.8**	**+0.5**
TUC				IAmb	IAmb	12 05 19.6	
	comp=Z,9.1nm,1.4s						
GYA	**Guiyang**	**67.38**	**74**	⇑P	**P**	**12 05 17.1**	**+1.2**
GYA				pmax	pmax		
	comp=Z,14nm,1.2s						
TX31	**Lajitas Ar. Si**	**67.95**	**299**	P	**P**	**12 05 21.1**	**+1.7**
TX32	**Lajitas Array**	**67.95**	**299**	P	**P**	**12 05 21.1**	**+1.7**
TX32				IAmb	IAmb	12 05 40.5	
	comp=Z,6.2nm,1.4s						
TXAR	**Lajitas Array**	**67.95**	**299**	P	**P**	**12 05 18.6**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=53,slow=3.6,SNR=7.8						
TXAR				LR	LR	12 34 59.5	
	comp=Z,189nm,19.4s,baz=0.0,slow=36						
SLVN	**Son La**	**71.47**	**78**	P	**P**	**12 05 42.1**	**+0.8**
SLVN				IAmb	IAmb	12 05 43.1	
	comp=Z,6.1nm,1.1s						
CHTO	**Chiang Mai**	**72.46**	**83**	P	**P**	**12 05 47.3**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CHTO	**Chiang Mai**	**72.46**	**83**	P	**P**	**12 05 47.3**	**+0.2**
CHTO				IAmb	IAmb	12 05 49.6	
	comp=Z,10nm,1.4s						
CMAR	**Chiang Mai Arr**	**72.80**	**83**	P	**P**	**12 05 49.9**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=330,slow=6.4,SNR=15						
CMAR				LR	LR	12 44 32.7	
	comp=Z,28nm,18.3s,baz=350,slow=41						
CMAR	**Chiang Mai Arr**	**72.80**	**83**	P	**P**	**12 05 49.3**	**+0.2**
MBAR	**Mbarara**	**75.27**	**156**	*ce*P	**P**	**12 06 07.2**	**+3.5**
BAUV	**El Baul**	**77.43**	**259**	P	**P**	**12 06 16.5**	**+0.7**
ZARC	**Zaragoza, Cauc**	**80.75**	**265**	P	**P**	**12 06 33.2**	**-0.7**
ZARC				IAmb	IAmb	12 06 36.1	
	comp=Z,6.3nm,1.0s						
OTAV	**Otavalo**	**88.68**	**266**	P	**P**	**12 07 14.5**	**0.0**
OTAV				pmax	pmax		
	comp=Z,22nm,1.3s						
OTAV	**Otavalo**	**88.68**	**266**	P	**P**	**12 07 14.5**	**0.0**
ASAR	**Alice Springs**	**122.53**	**61**	PKP	**PKPdf**	**12 13 14.9**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=359,slow=1.7,SNR=24						
ASAR	**Alice Springs**	**122.53**	**61**	PKIKP	**PKPdf**	**12 13 15.0**	**-0.7**
VNA1	**Neumayer--Stat**	**144.21**	**189**	PKPdf	PKPbc	12 13 53.4	+0.5
	baz=73,slow=7.5						
VNA2	**Neumayer--Watz**	**144.44**	**188**	PKPbc	**PKPab**	**12 13 53.6**	**+0.3**
	baz=6.8,slow=5.9						
VNA3	**Neumayer Olymp**	**144.87**	**190**	PKPbc	**PKPab**	**12 13 55.2**	**+0.2**
	baz=73,slow=7.5						
SNAA	**Sanae**	**145.03**	**186**	PKPbc	**PKPbc**	**12 13 56.0**	**+0.4**
	baz=73,slow=7.5						
MAW	**Mawson**	**145.28**	**146**	PKPbc	**PKPab**	**12 13 57.1**	**+0.6**
	comp=Z,5.7nm,0.7s,baz=320,slow=4.0,SNR=5.8						

IDC 24 12:01:53.4±10.0**, 1°.80N×126°.71E, h0**^{km}**, mb3.6**/3**,**
mb1 3.8/3**, mb1mx3.2**/45**, mbtmp3.6**/3**, MS3.9**/1**, Ms1 3.9**/1**,**
ms1mx2.5/34**, Error ellipse: s-maj=169.6km**
s-min=158.5km az=84.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.87**	**161**	P	P	12 06 59.1	+0.5
	0.8nm,0.4s,baz=340,slow=11,SNR=21						
ASAR	**Alice Springs**	**26.26**	**165**	P	P	12 07 30.7	+0.1
	0.2nm,0.3s,baz=344,slow=11,SNR=7.5						
STKA	**Stephens Creek**	**36.35**	**158**	P	P	12 08 58.5	-0.7
	1.3nm,0.6s,baz=340,slow=12,SNR=4.4						
MSVF	**Nonsavu**	**54.15**	**113**	LR	LR	12 33 13.4	
	comp=Z,128nm,21.8s,baz=73,slow=35						

IDC ***24*** *12:02:15.6±1.2, 31°.06N×56°.88E, h0*^{km}*, mb3.5/8,*
mb1 3.7/11, mb1mx3.5/53, mbtmp3.6/11, ML3.6/3, Error
ellipse: s-maj=35.2km s-min=22.5km az=111.0
TEH ***24*** *12:02:16.1, 31°.06N×57°.06E, h7*^{km}*, ML4.3*
THR ***24*** *12:02:17.0±0.9, 31°.08N×57°.07E, h15*^{km}*±5*^{km}*, ML3.8*
ISC 24 12:02:17.3±1.5**, 31°.05N**±0°.04×**57°.07E**±0°.04**, h8**^{km}±11^{km}**,**
n80, $\sigma 0^{s}.92$/85**, mb3.6**/8**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHGB	**Koh Gabri**	**0.84**	**217**	*e*Pg	**Pg**	**12 02 32.9**	**-0.7**
KHGB				*e*Sg	**Sg**	**12 02 43.7**	**-0.9**
TVBK	**TV Kerman**	**1.09**	**194**	*e*Pg	**Pg**	**12 02 38.1**	**-0.3**
TVBK				*e*		12 02 57.4	
	comp=Z,52µm,0.3s						
KRBR	**Kerman**	**1.10**	**194**	*e*Pg	**Pg**	**12 02 38.3**	**-0.1**
KRBR				*e*Sg	**Sg**	**12 02 53.8**	**+1.1**
KRBR				IAML		12 02 56.2	
	comp=N,2µm,0.3s						
KRBR				IAML		12 02 57.3	
	comp=E,2µm,0.2s						
KRBR	**Kerman**	**1.10**	**194**	*e*Pn	**Pg**	**12 02 38.3**	**-0.1**
CHMN	**Cheshme madani**	**1.25**	**161**	*e*Pg	**Pn**	**12 02 40.5**	**-1.0**
CHMN				*e*Sg	**Sn**	**12 03 00.1**	**+1.3**
CHMN				*e*		12 03 03.5	
	comp=Z,31µm,0.4s						
NGRK	**Negar Kerman**	**1.43**	**192**	*e*Pg	**Pn**	**12 02 44.4**	**+0.4**
NGRK				*e*		12 02 45.9	
	comp=Z,34µm,0.3s						
BSRN	**Basiran**	**1.98**	**62**	*e*Pn	**Pn**	**12 02 51.6**	**+0.2**
BSRN				*e*Sg	**Sb**	**12 03 19.0**	**+0.3**
BSRN				IAML		12 03 22.2	
	comp=N,637nm,0.5s						
BSRN				IAML		12 03 22.2	
	comp=E,624nm,0.4s						
BSRN	**Basiran**	**1.98**	**62**	*e*Pn	**Pn**	**12 02 51.6**	**+0.2**
TPRV	**Parvadeh(Tabas**	**2.00**	**351**	*e*Pn	**Pn**	**12 02 52.2**	**+0.6**
IMEH	**Mehriz**	**2.13**	**280**	*e*Pn	**Pn**	**12 02 54.0**	**+0.5**
IMEH				*e*		12 03 28.8	
	comp=Z,16µm,0.6s						
IKOO	**Kooshah**	**2.15**	**50**	*e*Pn	**Pn**	**12 02 54.3**	**+0.6**
IKOO				*e*		12 03 28.3	
	comp=Z,31µm,0.4s						
KBAM	**BAM**	**2.25**	**147**	*e*Pn	**Pn**	**12 02 55.6**	**+0.5**
KBAM				*e*		12 03 34.2	
	comp=Z,24µm,0.3s						
ITEG	**Tejag**	**2.33**	**37**	*e*Pn	**Pn**	**12 02 56.1**	**-0.1**
ITEG				*e*		12 03 36.5	
	comp=Z,13µm,0.4s						
YZKH	**Yazd**	**2.50**	**303**	*e*Pn	**Pn**	**12 02 59.0**	**+0.6**
YZKH				*e*Sg	**Sb**	**12 03 35.0**	**+1.5**
YZKH				IAML		12 03 40.5	
	comp=E,716nm,0.5s						
YZKH				IAML		12 03 40.6	
	comp=N,465nm,0.7s						
YZKH	**Yazd**	**2.50**	**303**	*e*Pn	**Pn**	**12 02 59.0**	**+0.6**
TKDS	**Koohdasht(Taba**	**2.56**	**1**	*e*Pn	**Pn**	**12 02 59.7**	**+0.5**
TKDS				*e*		12 03 47.2	
	comp=Z,11µm,0.4s						
ICHK	**Chekchek**	**2.56**	**298**	*e*Pn	**Pn**	**12 03 00.4**	**+1.0**
ICHK				*e*		12 03 42.0	
	comp=Z,13µm,0.6s						
NHDN	**Nehbandan**	**2.58**	**82**	*e*Pn	**Pn**	**12 03 00.3**	**+0.7**
TABS	**Tabas**	**2.59**	**1**	*e*Pn	**Pn**	**12 03 00.1**	**+0.4**
TABS				IAML		12 03 50.6	
	comp=N,512nm,0.4s						
TABS				IAML		12 03 56.6	
	comp=E,234nm,0.6s						
TABS	**Tabas**	**2.59**	**1**	*e*Pn	**Pn**	**12 03 00.1**	**+0.4**
AFRZ	**Afriz**	**2.89**	**34**	*e*Pn	**Pn**	**12 03 04.0**	**+0.2**
AFRZ				*e*		12 03 55.5	
	comp=Z,8µm,0.8s						
IDAH	**Dahanechah**	**2.92**	**54**	*e*Pn	**Pn**	**12 03 05.3**	**+1.0**
IDAH				*e*		12 04 04.9	
	comp=Z,7µm,0.6s						
TNSJ	**Nastanj**	**2.93**	**353**	*e*Pn	**Pn**	**12 03 04.8**	**+0.4**
ISAD	**Sadrabad**	**3.02**	**287**	*e*		12 03 54.8	
	comp=Z,11µm,1.0s						
ISAD				*e*Pn	**Pn**	**12 03 06.9**	**+1.2**
IMON	**Monand**	**3.07**	**45**	*e*Pn	**Pn**	**12 03 07.7**	**+1.3**
IMON				*e*		12 04 03.7	
	comp=Z,6µm,0.5s						
KHNJ	**Kahnooj**	**3.14**	**170**	*e*Pn	**Pn**	**12 03 08.5**	**+1.3**
ZHSF	**Zahedan**	**3.51**	**113**	*e*Pn	**Pn**	**12 03 13.3**	**+0.9**
ZHSF	**Zahedan**	**3.51**	**113**	*e*Pn	**Pn**	**12 03 13.4**	**+0.9**
ANAR	**Anarak**	**3.55**	**308**	*e*Pn	**Pn**	**12 03 14.1**	**+1.2**
ZHDN	**Zahedan**	**3.63**	**116**	*e*Pn	**Pn**	**12 03 15.4**	**+1.3**
GENO	**Geno**	**3.72**	**192**	*e*Pn	**Pn**	**12 03 16.3**	**+1.0**
SHRT	**Shahrakht**	**3.76**	**46**	*e*Pn	**Pn**	**12 03 17.3**	**+1.5**
SHRT				IAML		12 04 24.7	
	comp=E,73nm,0.6s						
SHRT				IAML		12 04 37.4	
	comp=N,309nm,0.9s						
SHRT	**Shahrakht**	**3.76**	**46**	*e*Pn	**Pn**	**12 03 17.3**	**+1.5**
IRAM	**Ramesheh**	**4.08**	**282**	*e*Pn	**Pn**	**12 03 20.9**	**+0.7**
IZEF	**Zefreh**	**4.43**	**296**	*e*Pn	**Pn**	**12 03 25.7**	**+0.6**
GHIR	**Ghir-Karzin**	**4.49**	**233**	*e*Pn	**Pn**	**12 03 27.1**	**+1.2**
GHIR				IAML		12 04 45.9	
	comp=N,42nm,0.6s						
GHIR				IAML		12 04 54.4	
	comp=E,30nm,0.6s						
GHIR	**Ghir-Karzin**	**4.49**	**233**	*e*Pn	**Pn**	**12 03 27.1**	**+1.2**
KLNJ	**Kolanjah**	**4.70**	**271**	*e*Pn	**Pn**	**12 03 30.1**	**+1.2**
SHRO	**Shahrood**	**5.00**	**350**	*e*Pn	**Pn**	**12 03 33.5**	**+0.6**
SHRO				IAML		12 05 08.7	
	comp=E,120nm,0.4s						
SHRO				IAML		12 05 16.8	
	comp=N,68nm,0.4s						
SHRO	**Shahrood**	**5.00**	**350**	*e*Pn	**Pn**	**12 03 33.5**	**+0.6**
TBJM	**Torbat-e-JAM**	**5.02**	**32**	*e*Pn	**Pn**	**12 03 34.1**	**+1.0**
KRSH	**Karshahi**	**5.08**	**306**	*e*Pn	**Pn**	**12 03 34.8**	**+0.8**
IANJ	**Anjilo**	**5.14**	**330**	*e*Pn	**Pn**	**12 03 35.1**	**+0.3**
IKLH	**Kolahrood**	**5.17**	**297**	*e*Pn	**Pn**	**12 03 37.4**	**+2.0**
ISFB	**Sefidab**	**5.23**	**310**	*e*Pn	**Pn**	**12 03 36.7**	**+0.7**
SBZV	**Sabzevar**	**5.34**	**5**	*e*Pn	**Pn**	**12 03 38.0**	**+0.3**
IMOG	**Moghan**	**5.39**	**20**	*e*Pn	**Pn**	**12 03 39.1**	**+0.8**
IPIR	**Pirpir**	**5.50**	**289**	*e*Pn	**Pn**	**12 03 41.5**	**+1.6**
JRKH	**Jarkhoshk**	**5.57**	**29**	*e*Pn	**Pn**	**12 03 41.4**	**+0.8**
ISHM	**Shahmirzad**	**5.70**	**327**	*e*Pn	**Pn**	**12 03 43.9**	**+1.3**
IAKL	**Akhelmad**	**5.71**	**14**	*e*Pn	**Pn**	**12 03 43.8**	**+1.0**
IFIR	**Firoozkooh**	**5.83**	**323**	*e*Pn	**Pn**	**12 03 44.5**	**+0.1**
IMYA	**Miami**	**5.85**	**25**	*e*Pn	**Pn**	**12 03 45.6**	**+1.0**
SRVN	**Saravan**	**5.91**	**127**	*e*Pn	**Pn**	**12 03 45.2**	**-0.1**
IVRN	**Varamin**	**5.96**	**313**	*e*Pn	**Pn**	**12 03 46.6**	**+0.5**
ISFR	**Sfrayin**	**6.04**	**7**	*e*Pn	**Pn**	**12 03 48.4**	**+1.2**
IGLO	**Ghaloghah**	**6.07**	**335**	*e*Pn	**Pn**	**12 03 48.8**	**+1.2**
IDMV	**Damavand**	**6.18**	**318**	*e*Pn	**Pn**	**12 03 50.0**	**+0.8**
DAMV	**Damavand**	**6.25**	**318**	*e*Pn	**Pn**	**12 03 50.9**	**+0.8**
DAMV	**Damavand**	**6.25**	**318**	*e*Pn	**Pn**	**12 03 50.9**	**+0.8**
IEMG	**Emamgholi**	**6.48**	**11**	*e*Pn	**Pn**	**12 03 54.9**	**+1.5**
BJRD	**Bojnurd**	**6.64**	**2**	*e*Pn	**Pn**	**12 03 56.4**	**+1.0**
BJRD	**Bojnurd**	**6.64**	**2**	*e*Pn	**Pn**	**12 03 56.4**	**+1.0**
MRVT	**Maraveh tapeh**	**6.64**	**353**	*e*Pn	**Pn**	**12 03 56.3**	**+1.0**
MRVT	**Maraveh tapeh**	**6.64**	**353**	*e*Pn	**Pn**	**12 03 56.3**	**+1.0**
ASAO	**Ashtian**	**6.88**	**302**	*e*Pn	**Pn**	**12 03 59.7**	**+0.9**
ASAO	**Ashtian**	**6.88**	**302**	*e*Pn	**Pn**	**12 03 59.7**	**+0.9**
GEYT	**Alibeck**	**6.92**	**7**	Pn	**Pn**	**12 03 59.8**	**+0.7**
	comp=N,0.6nm,0.3s,baz=179,slow=8.5,SNR=2.5						
CHTH	**Charan**	**6.94**	**316**	*e*Pn	**Pn**	**12 03 59.1**	**-0.4**
CHTH	**Charan**	**6.94**	**316**	*e*Pn	**Pn**	**12 03 59.1**	**-0.4**
WSAR	**Wadi Sarin**	**7.90**	**169**	Pn	**Pn**	**12 04 13.6**	**+0.9**
	comp=N,1.0nm,0.3s,baz=13,slow=8.3,SNR=7.3						
AKTO	**Aktyubinsk**	**19.38**	**2**	P	**P**	**12 06 44.0**	**+0.5**
	comp=N,0.2nm,0.3s,baz=194,slow=10,SNR=5.5						
BVAR	**Borovoye Array**	**24.01**	**20**	P	**P**	**12 07 32.9**	**+0.5**
	comp=N,0.8nm,0.6s,baz=211,slow=11,SNR=4.0						
MKAR	**Makanchi Array**	**24.99**	**44**	P	**P**	**12 07 41.8**	**+0.2**
	comp=N,0.3nm,0.6s,baz=231,slow=6.9,SNR=2.8						
KURBB	**Kurchatov Arra**	**25.25**	**33**	P	**P**	**12 07 43.5**	**-0.3**
	comp=N,0.4nm,0.6s,baz=233,slow=8.9,SNR=4.8						
ZALV	**Zalesovo Beam**	**30.35**	**33**	P	**P**	**12 08 29.1**	**-0.4**
	comp=N,0.8nm,0.5s,baz=242,slow=9.9,SNR=4.6						
TORD	**Torodi Ar. Bea**	**53.77**	**264**	P	**P**	**12 11 38.5**	**-2.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=N,0.6nm,0.6s,baz=60,slow=7.4,SNR=4.1						
ILAR	**Eielson Array**	**82.67**	**10**	P	**P**	**12 14 40.4**	**-0.7**
	comp=N,0.5nm,1.0s,baz=332,slow=4.5,SNR=2.4						
YKA	**Yellowknife Ar**	**86.54**	**356**	P	**P**	**12 15 00.3**	**-0.4**
	comp=N,0.1nm,0.6s,baz=360,slow=5.1,SNR=4.3						
ASAR	**Alice Springs**	**91.47**	**117**	P	**P**	**12 15 25.0**	**+0.3**
	comp=N,0.4nm,1.0s,baz=293,slow=4.8,SNR=4.1						

IDC 24 12:14:31.9±5.0**,29°.82S**×**179°.67W,h0^{km},mb4.1**/2**, mb1 4.4**/2**,mb1mx3.8**/27**,mbtmp4.1**/2**,Error ellipse: s-maj=219.8km s-min=78.9km az=166.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**41.69**	**267**	P	P	12 22 21.9	-0.8
	0.9nm,0.3s,baz=108,slow=7.6,SNR=30						
WRA	**Warramunga Arr**	**42.63**	**272**	P	P	12 22 30.8	+0.5
	1.2nm,0.3s,baz=111,slow=7.9,SNR=36						
FINES	**FINESS Array B**	**144.10**	**339**	PKP	PKPdf	12 34 08.2	-0.7
	0.8nm,0.3s,baz=47,slow=3.3,SNR=10						

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*IDC **24** 12:18:16.0±1.2, 11°.55S×162°.49E, h0^{km}, mb3.9/7, mb1 4.1/9, mb1mx3.9/33, mbtmp3.9/9, ML4.0/2, MS3.3/6, Ms1 3.3/6, ms1mx2.9/32, Error ellipse: s-maj=28.1km s-min=25.6km az=89.0*

*NOU **24** 12:18:16.5, 11°.33S×162°.80E, h0^{km}, mb5.3/7, Solomon Islands*

ISC 24 12:18:21.1±0.7**,11°.60S**±0°.09×**162°.6E**±0°.1**,h39^{km},n19,** σ**1^{s}39**/17**,mb3.8**/7**,MS3.1**/3**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.35**	**310**	Pn	**Pn**	**12 19 09.0**	**-1.9**
	48nm,0.3s,baz=158,slow=3.1,SNR=18						
HNR				Sn	**Sn**	**12 19 48.3**	**-1.1**
	62nm,0.3s,baz=70,slow=6.1,SNR=6.5						
HNR				LR	LR	12 20 24.0	
	comp=Z,248nm,20.1s,baz=128,slow=39						
HNR	**Honiara**	**3.35**	**310**	P	**Pn**	**12 19 10.6**	**-0.3**
SANVU	**Saraoutou**	**5.92**	**131**	P	**Pn**	**12 19 45.5**	**-0.8**
DVP	**Devils Point**	**8.17**	**139**	P	**Pn**	**12 20 17.2**	**0.0**
	112µm,1.0s						
KOUNC	**Koumac, New Ca**	**9.06**	**170**	P	**Pn**	**12 20 30.8**	**+1.4**
NOUC	**Port Laguerre**	**11.04**	**162**	P	**Pn**	**12 20 58.7**	**+2.1**
DZM	**Mont Dzumac**	**11.06**	**161**	Pn	**Pn**	**12 20 56.9**	**0.0**
	0.3nm,0.3s,baz=303,slow=13,SNR=12						
DZM				Sn	**Sn**	**12 22 56.5**	**-2.9**
	0.1nm,0.3s,baz=341,slow=17,SNR=1.8						
DZM				LR	LR	12 24 37.3	
	comp=Z,152nm,19.3s,baz=32,slow=34						
DZM	**Mont Dzumac**	**11.06**	**161**	P	**Pn**	**12 20 58.7**	**+1.8**
PMG	**Port Moresby**	**15.29**	**277**	LR	LR	12 27 34.0	
	comp=Z,182nm,19.3s,baz=75,slow=37						
RAO	**Raoul Island**	**25.30**	**137**	LR	LR	12 30 50.5	
	comp=Z,61nm,21.2s,baz=72,slow=30						
WRA	**Warramunga Arr**	**28.36**	**249**	P	**P**	**12 24 11.8**	**0.0**
	1.5nm,1.0s,baz=80,slow=8.9,SNR=3.6						
URZ	**Urewera**	**29.57**	**156**	LR	LR	12 34 04.4	
	comp=Z,90nm,18.2s,baz=31,slow=32						
ASAR	**Alice Springs**	**29.76**	**242**	P	**P**	**12 24 24.2**	**0.0**
	1.4nm,0.7s,baz=64,slow=10,SNR=15						
MJAR	**Matsushiro Arr**	**53.09**	**335**	P	**P**	**12 27 35.8**	**+1.0**
	0.7nm,0.6s,baz=97,slow=9.9,SNR=1.3						
KSRS	**Korea Array**	**58.62**	**328**	LR	LR	12 53 19.8	
	comp=Z,8.9nm,18.2s,baz=295,slow=36						
SONM	**Songino Array**	**77.29**	**325**	P	**P**	**12 30 11.8**	**+0.2**
	1.3nm,0.7s,baz=140,slow=5.4,SNR=6.8						
ILAR	**Eielson Array**	**85.05**	**19**	P	**P**	**12 30 53.0**	**+0.7**
	0.1nm,0.5s,baz=224,slow=3.8,SNR=1.6						
NVAR	**Mina Array Bea**	**88.78**	**50**	P	**P**	**12 31 12.5**	**+1.1**
	0.1nm,0.3s,baz=251,slow=5.6,SNR=2.0						
MKAR	**Makanchi Array**	**91.79**	**317**	P	**P**	**12 31 24.4**	**-0.6**
	1.1nm,0.6s,baz=99,slow=5.6,SNR=11						

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*IDC **24** 12:26:56.4±0.9, 35°.90N×27°.53E, h0^{km}, mb3.9/9, mb1 3.8/15, mb1mx3.7/48, mbtmp3.8/15, ML3.5/6, MS2.8/1, Ms1 2.8/1, ms1mx2.1/43, Error ellipse: s-maj=20.0km s-min=13.9km az=149.0*

*DDA **24** 12:26:57.8, 35°.88N×27°.42E, h24^{km}±1^{km}, MW3.7*

*ISK **24** 12:26:58.8, 35°.93N×27°.50E, h10^{km}, ML3.7/22*

*NIC **24** 12:26:58.5±0.0, 35°.82N×27°.62E, h6^{km}±2^{km}, Ml4.0/4*

*ATH **24** 12:26:58.6, 35°.96N×27°.50E, h44^{km}±11^{km}, ML3.3/5, Error ellipse: s-maj=11.4km s-min=1.5km az=95.0*

*THE **24** 12:26:59.6, 35°.93N×27°.56E, h2^{km}±3^{km}, ML3.4/2, Error ellipse: s-maj=4.6km s-min=0.4km az=205.0*

ISC 24 12:26:58.8±1.1**,35°.91N**±0°.02×**27°.54E**±0°.02**,h13^{km}**±8^{km}**, n104,** σ**1^{s}07**/130**,mb3.9**/9**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.57**	**57**	P	**Pb**	**12 27 10.5**	**-0.2**
ARG				S	**Sb**	**12 27 18.9**	**+0.3**
	4µm,0.2s						
ARG	**Arkhangelos**	**0.57**	**57**	P	**Pb**	**12 27 10.5**	**-0.2**
ARG				S	**Sb**	**12 27 19.1**	**+0.5**
ARG				AML	AML	12 27 21.1	
	comp=E,8975µm,0.2s						
ARG				AML	AML	12 27 21.6	
	comp=N,7501µm,0.2s						
ARG	**Arkhangelos**	**0.57**	**57**	PG	**Pb**	**12 27 10.4**	**-0.2**
ARG				SG	**Sb**	**12 27 19.0**	**+0.3**
ARG	**Arkhangelos**	**0.57**	**57**	P	**Pb**	**12 27 10.3**	**-0.4**
ARG				S	**Sb**	**12 27 19.0**	**+0.3**
NISR	**Nisiros**	**0.78**	**335**	P	**Pb**	**12 27 14.1**	**-0.2**
NISR				AML	AML	12 27 31.9	
	comp=E,4671µm,0.2s						
NISR				AML	AML	12 27 32.4	
	comp=N,4560µm,0.6s						
DAT	**Datca**	**0.82**	**2**	P	**Pb**	**12 27 15.2**	**+0.1**
DAT				S	**Sn**	**12 27 27.6**	**-0.8**
DAT	**Datca**	**0.82**	**2**	PG	**Pb**	**12 27 15.1**	**0.0**
DAT				SG	**Sn**	**12 27 26.9**	**-1.5**
KOSK	**Kos Island**	**0.96**	**332**	PG	**Pn**	**12 27 18.2**	**+0.2**
TURN	**Turunc**	**1.04**	**33**	*i* P	**Pb**	**12 27 18.6**	**-0.1**
TURN				*i* S	**Sb**	**12 27 32.1**	**-0.1**
BDRM	**Kayabasi**	**1.16**	**356**	*i* P	**Pn**	**12 27 20.6**	**-0.2**
BDRM				*i* S	**Sn**	**12 27 36.0**	**-0.5**
BODT	**Bodrum**	**1.17**	**351**	P	**Pn**	**12 27 20.9**	**0.0**
BODT	**Bodrum**	**1.17**	**351**	PN	**Pn**	**12 27 20.9**	**0.0**
BODT				SN	**Sn**	**12 27 37.3**	**+0.5**
YKAV	**Yalikavak-Bodr**	**1.23**	**350**	PN	**Pn**	**12 27 21.3**	**-0.5**
ZKR	**Zakros**	**1.34**	**234**	P	**Pb**	**12 27 23.8**	**+0.1**
ZKR				S	**Sg**	**12 27 42.5**	**+0.6**
	comp=N,2µm,0.5s						
ZKR	**Zakros**	**1.34**	**234**	P	**Pn**	**12 27 23.4**	**+0.2**
ZKR				AML	AML	12 27 43.9	
	comp=N,2251µm,0.6s						
ZKR				AML	AML	12 27 52.8	
	comp=E,4448µm,0.7s						
ZKR	**Zakros**	**1.34**	**234**	PN	**Pb**	**12 27 23.8**	**+0.1**
ZKR				SN	**Sg**	**12 27 42.5**	**+0.6**
ZKR	**Zakros**	**1.34**	**234**	P	**Pn**	**12 27 23.4**	**+0.2**
ZKR				AML	AML	12 27 42.5	
	comp=E,2.0nm,0.5s						
ZKR				AML	AML	12 27 42.5	
	comp=E,2.0nm,0.5s						
ZKR				S	**Sg**	**12 27 43.1**	**+1.2**
ZKR				AML	AML	12 27 43.4	
	comp=E,4.1nm,0.6s						
ZKR				AML	AML	12 27 43.4	
	comp=E,4.1nm,0.6s						
YER	**Yerkesik**	**1.37**	**26**	PN	**Pg**	**12 27 24.7**	**-0.4**
STIA	**Sitia Lasithi**	**1.37**	**240**	P	**Pb**	**12 27 24.4**	**0.0**
FETY	**Fethiye**	**1.45**	**59**	PN	**Pg**	**12 27 25.9**	**-0.7**
MULA	**Mugla, Merkez-**	**1.49**	**25**	*i* P	**Pg**	**12 27 26.8**	**-0.7**
MULA				*i* S	**Sg**	**12 27 45.7**	**-1.0**
DDIM	**Aydin, Didim**	**1.57**	**351**	*i* P	**Pb**	**12 27 27.4**	**-0.2**
DDIM				*i* S	**Sg**	**12 27 50.4**	**+1.1**
KSL	**Kastellorizon**	**1.67**	**81**	P	**Pb**	**12 27 29.5**	**0.0**
KSL				AML	AML	12 27 57.1	
	comp=E,789µm,0.7s						
KSL				AML	AML	12 28 04.9	
	comp=N,640µm,0.6s						
KSL	**Kastellorizon**	**1.67**	**81**	P	**Pb**	**12 27 29.0**	**-0.5**
NPS	**Neapolis**	**1.70**	**248**	P	**Pn**	**12 27 28.4**	**+0.2**
NPS	**Neapolis**	**1.70**	**248**	P	**Pn**	**12 27 28.3**	**+0.2**
AKAS	**Kas**	**1.71**	**78**	*i* P	**Pb**	**12 27 30.1**	**0.0**
AKAS				*i* S	**Sg**	**12 27 53.6**	**-0.1**
FRMA	**Ierapetra Chan**	**1.72**	**239**	P	**Pn**	**12 27 28.7**	**+0.2**
THR8	**Santorini-Mono**	**1.74**	**287**	P	**Pn**	**12 27 28.7**	**-0.1**
SANT	**Santorini**	**1.75**	**286**	P	**Pn**	**12 27 29.1**	**+0.2**
SANT	**Santorini**	**1.75**	**286**	P	**Pn**	**12 27 28.9**	**0.0**
SANT				AML	AML	12 27 59.2	
	comp=E,2827µm,0.4s						
SANT				AML	AML	12 28 03.2	
	comp=N,870µm,0.5s						
SANT	**Santorini**	**1.75**	**286**	*i* P	**Pn**	**12 27 28.9**	**0.0**
SANT				*i* S	**Sn**	**12 27 51.1**	**+0.1**
SANT	**Santorini**	**1.75**	**286**	PN	**Pn**	**12 27 29.1**	**+0.2**
CAME	**Cameli-Denizli**	**1.76**	**53**	PN	**Pb**	**12 27 30.6**	**-0.4**
AYDN	**Tasoluk**	**1.77**	**9**	*i* P	**Pn**	**12 27 29.9**	**+0.6**
AYDN				*i* S	**Sb**	**12 27 52.7**	**-0.8**
THR2	**Thira island,**	**1.79**	**288**	P	**Pn**	**12 27 29.7**	**+0.3**
THR6	**Thira Island,**	**1.79**	**285**	P	**Pn**	**12 27 30.0**	**+0.6**
THT2	**Imerovigli**	**1.79**	**288**	P	**Pn**	**12 27 29.2**	**-0.3**
STAX	**Taxiarchis Har**	**1.80**	**287**	P	**Pn**	**12 27 29.9**	**+0.4**
STAX	**Taxiarchis Har**	**1.80**	**287**	P	**Pn**	**12 27 29.6**	**+0.1**
THR3	**Thira Island,**	**1.80**	**287**	P	**Pn**	**12 27 29.9**	**+0.3**
SNT5	**Nea Kammeni, S**	**1.81**	**287**	P	**Pb**	**12 27 30.7**	**-1.0**
SNT5	**Nea Kammeni, S**	**1.81**	**287**	P	**Pb**	**12 27 30.8**	**-1.0**
GCAM	**G?zelcaml?**	**1.81**	**352**	*i* P	**Pn**	**12 27 30.2**	**+0.5**
CMBO	**Columbo, Santo**	**1.82**	**289**	P	**Pn**	**12 27 30.2**	**+0.4**
CMBO	**Columbo, Santo**	**1.82**	**289**	P	**Pn**	**12 27 30.2**	**+0.4**
THR5	**Thira Island,**	**1.85**	**287**	P	**Pn**	**12 27 30.8**	**+0.6**
THR5	**Thira Island,**	**1.85**	**287**	P	**Pn**	**12 27 30.7**	**+0.6**
CAEL	**Denizli, Camel**	**1.88**	**49**	*i* P	**Pg**	**12 27 34.2**	**-0.7**
CAEL				*i* S	**Sg**	**12 27 58.5**	**-0.8**
SMG	**Samos**	**1.89**	**343**	P	**Pn**	**12 27 31.0**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.91**	**35**	*i* P	**Pg**	**12 27 34.3**	**-1.2**
TAVA				*i* S	**Sg**	**12 27 59.4**	**-0.9**
APE	**Apeiranthos**	**1.99**	**306**	P	**Pn**	**12 27 32.4**	**+0.1**
APE	**Apeiranthos**	**1.99**	**306**	*i* P	**Pn**	**12 27 31.9**	**-0.4**
APE				*i* S	**Sn**	**12 27 55.7**	**-1.5**
APE	**Apeiranthos**	**1.99**	**306**	PN	**Pn**	**12 27 32.5**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**2.06**	**8**	PN	**Pn**	**12 27 34.1**	**+0.9**
HRKL	**Herakleio**	**2.07**	**254**	PN	**Pn**	**12 27 34.3**	**+1.0**
ELL	**Elmali**	**2.09**	**66**	PN	**Pn**	**12 27 35.1**	**+1.4**
GOLH	**Golhisar**	**2.10**	**50**	*i* P	**Pb**	**12 27 37.6**	**+0.7**
GOLH				*i* S	**Sg**	**12 28 06.8**	**+0.4**
IDI	**Anoyia**	**2.25**	**255**	Pn	**Pn**	**12 27 34.9**	**-0.8**
	comp=N,13nm,0.3s,baz=359,slow=12,SNR=65						
IDI				Sn	**Sn**	**12 28 02.3**	**-1.0**
	comp=N,71nm,0.3s,baz=332,slow=15,SNR=10						
AKUM	**Antalya-Kumluc**	**2.31**	**79**	*i* P	**Pn**	**12 27 37.8**	**+1.2**
AKUM				*i* S	**Sn**	**12 28 06.7**	**+1.9**
KORT	**Korkueli**	**2.52**	**63**	*i* P	**Pb**	**12 27 42.2**	**-1.7**
KORT				*i* S	**Sb**	**12 28 13.7**	**-1.2**
KULA	**Kula-Manisa**	**2.75**	**19**	PN	**Pn**	**12 27 43.9**	**+1.1**
PASA	**Karahalli, USA**	**2.89**	**32**	*i* P	**Pn**	**12 27 47.1**	**+2.4**
PASA				*i* S	**Sn**	**12 28 22.2**	**+2.8**
IMMV	**Iera Moni Meta**	**2.93**	**262**	PN	**Pn**	**12 27 46.5**	**+1.4**
GVDS	**Gavdos**	**3.01**	**250**	PN	**Pn**	**12 27 48.2**	**+2.0**
GVD	**Gavdhos**	**3.02**	**250**	PN	**Pn**	**12 27 48.2**	**+1.9**
ISP	**Isparta**	**3.06**	**50**	PN	**Pn**	**12 27 49.4**	**+2.4**
RODP	**Rodopos**	**3.10**	**265**	PN	**Pn**	**12 27 49.1**	**+1.7**
KNDR	**Palaiochora Ch**	**3.21**	**259**	PN	**Pn**	**12 27 51.4**	**+2.4**
SEYD	**Seydisehir-KON**	**3.77**	**65**	PN	**Pn**	**12 27 59.6**	**+2.9**
OSC1	**CSNet OBS 1**	**3.90**	**127**	P	**Pn**	**12 27 57.7**	**-0.8**
OSC1				S	**Sn**	**12 28 44.3**	**+0.2**
AKMS	**Akamas**	**4.01**	**101**	P	**Pn**	**12 27 59.3**	**-0.7**
AKMS				AML	AML	12 28 47.2	
	comp=N,0.8nm,0.4s						
AKMS				AML	AML	12 28 47.9	
	comp=N,0.7nm,0.6s						
HDMB	**Hadim**	**4.13**	**74**	PN	**Pn**	**12 28 04.3**	**+2.5**
ALFC	**Alefka**	**4.19**	**99**	P	**Pn**	**12 28 02.3**	**-0.2**
ALFC				AML	AML	12 28 53.3	
	comp=N,0.9nm,0.3s						
ALFC				AML	AML	12 28 53.7	
	comp=N,0.6nm,0.5s						
NATA	**Nata**	**4.26**	**104**	P	**Pn**	**12 28 03.7**	**+0.3**
KONT	**Konya--Tatoy**	**4.37**	**61**	PN	**Pn**	**12 28 07.4**	**+2.5**
LADK	**Ladik-KONYA**	**4.49**	**58**	PN	**Pn**	**12 28 09.2**	**+2.6**
ASGA	**Asgata**	**4.80**	**102**	P	**Pn**	**12 28 10.5**	**-0.3**
ASGA				AML	AML	12 29 06.8	
	comp=N,0.3nm,0.3s						
ASGA				AML	AML	12 29 08.7	
	comp=N,0.3nm,0.6s						
OSC2	**CSNet OBS 4**	**4.82**	**125**	P	**Pn**	**12 28 11.4**	**+0.4**
CSS	**Mathiatis**	**4.82**	**100**	P	**Pn**	**12 28 11.3**	**+0.2**
MVOU	**Mavrovouni**	**5.05**	**98**	P	**Pn**	**12 28 13.5**	**-0.7**
BRTR	**Keskin Array B**	**6.15**	**50**	Pn	**Pn**	**12 28 30.9**	**+1.3**
	comp=N,0.4nm,0.3s,baz=3.9,slow=24,SNR=2.6						
BRTR				Sn	**Sn**	**12 29 40.3**	**+0.5**
	comp=N,0.3nm,0.3s,baz=214,slow=24,SNR=4.2						
MMAI	**Mount Meron Ar**	**7.11**	**112**	Pn	**Pn**	**12 28 42.2**	**-0.3**
	comp=N,4.1nm,0.3s,baz=314,slow=13,SNR=6.0						
MMAI				Sn	**Sn**	**12 30 02.8**	**-0.5**
	comp=N,6.1nm,0.3s,baz=310,slow=28,SNR=5.4						
EIL	**Elat**	**8.80**	**133**	Pn	**Pn**	**12 29 04.7**	**-1.1**
	comp=N,0.8nm,0.3s,baz=222,slow=1.9,SNR=4.8						
STON	**Ston**	**10.31**	**315**	P	**Pn**	**12 29 27.4**	**+1.0**
LSTV	**Lastovo**	**10.72**	**313**	P	**Pn**	**12 29 32.8**	**+0.9**
RICI	**Ricice**	**11.03**	**317**	P	**Pn**	**12 29 36.8**	**+0.6**
HVAR	**Hvar**	**11.22**	**314**	P	Pn	12 29 29.3	-10
KIJV	**Kijevo**	**11.76**	**317**	P	**Pn**	**12 29 50.4**	**+4.2**
ZIRJ	**Zirje**	**11.98**	**314**	P	**Pn**	**12 29 50.0**	**+0.8**
DUGI	**Dugi Otok**	**12.52**	**314**	P	**Pn**	**12 29 55.6**	**-1.0**
KEST	**Kesra**	**14.77**	**275**	Pn	**Pn**	**12 30 29.8**	**+2.3**
	comp=N,0.2nm,0.3s,baz=79,slow=10,SNR=2.1						
AKASG	**Malin Array Be**	**14.84**	**4**	Pn	**Pn**	**12 30 29.0**	**+0.8**
	comp=N,0.3nm,0.3s,baz=195,slow=12,SNR=1.4						
GERES	**GERESS Array B**	**16.45**	**326**	Pn	**P**	**12 30 50.9**	**-1.2**
	comp=N,0.1nm,0.3s,baz=129,slow=11,SNR=4.5						
OBN	**Obninsk**	**20.19**	**15**	LR	LR	12 39 08.6	
	comp=N,25nm,19.4s,baz=344,slow=36						
ESDC	**Sonseca Array**	**25.11**	**288**	P	**P**	**12 32 22.6**	**-0.7**
	comp=N,0.5nm,0.6s,baz=80,slow=9.4,SNR=6.9						
FINES	**FINESS Array B**	**25.58**	**358**	P	**P**	**12 32 26.7**	**-0.6**
	comp=N,1.0nm,0.4s,baz=158,slow=12,SNR=9.6						
HFS	**Hagfors**	**25.84**	**344**	P	**P**	**12 32 28.6**	**-1.1**
	comp=N,2.3nm,0.7s,baz=177,slow=10,SNR=4.0						
AKTO	**Aktyubinsk**	**26.32**	**47**	P	**P**	**12 32 33.4**	**-0.8**
	comp=N,1.0nm,0.6s,baz=268,slow=11,SNR=3.7						
TORD	**Torodi Ar. Bea**	**32.47**	**232**	P	**P**	**12 33 29.0**	**0.0**
	comp=N,1.2nm,0.4s,baz=33,slow=8.7,SNR=11						
ARCES	**ARCESS Array B**	**33.70**	**359**	P	**P**	**12 33 38.4**	**-1.0**
	comp=N,4.3nm,1.1s,baz=172,slow=8.1,SNR=7.3						
DBIC	**Dimbokro**	**41.56**	**233**	P	**P**	**12 34 45.7**	**-0.6**
	comp=N,1.5nm,0.5s,baz=48,slow=7.1,SNR=4.2						
MKAR	**Makanchi Array**	**41.74**	**57**	P	**P**	**12 34 47.3**	**-0.3**
	comp=N,0.6nm,0.5s,baz=272,slow=7.9,SNR=7.3						
ZALV	**Zalesovo Beam**	**43.09**	**47**	P	**P**	**12 34 57.9**	**-0.4**
	comp=N,0.8nm,0.6s,baz=283,slow=7.4,SNR=4.0						

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*IDC **24** 12:30:33.3±1.3, 8°.19S×125°.56E, h0^{km}, mb3.9/4, mb1 4.2/8, mb1mx3.8/41, mbtmp4.0/8, ML3.9/4, MS3.2/4, Ms1 3.2/4, ms1mx2.8/30, Error ellipse: s-maj=45.5km s-min=20.8km az=78.0*

*NEIC **24** 12:30:35.2±2.2, 8°.16S±0°.09×125°.37E±0°.09, h10^{km}±2^{km}, mb4.5/5, Error ellipse: s-maj=19.1km s-min=9.5km az=45.0*

*DJA **24** 12:30:38.4±1.0, 8°S±5°×12°5E±°, h10^{km}, M4.2/6, mb4.7/1, MLv4.0/6*

ISC 24 12:30:38.4±0.7**,8°.32S**±0°.05×**125°.37E**±0°.07**,h35^{km},n35,** σ**1^{s}53**/36**,mb4.2**/6**,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.80**	**217**	P	**Pn**	**12 31 07.6**	**+0.5**
SOEI	**Soe**	**1.80**	**217**		**Pn**	**12 31 08.1**	**+0.9**
SOEI	**Soe**	**1.80**	**217**	P	**Pn**	**12 31 09.0**	**+1.9**
BATI	**Baumata**	**2.53**	**222**	Pn	**Pn**	**12 31 18.4**	**+1.4**
	26nm,0.3s,baz=37,slow=2.9,SNR=10						
BATI				Sn	**Sn**	**12 31 49.8**	**+3.2**
	25nm,0.3s,baz=328,slow=23,SNR=7.6						
BATI				LR	LR	12 32 19.2	
	comp=Z,464nm,19.8s,baz=36,slow=39						
BATI	**Baumata**	**2.53**	**222**	P	**Pn**	**12 31 18.2**	**+1.2**
MMRI	**Maumere**	**3.12**	**264**	P	**Pn**	**12 31 24.7**	**-0.4**
MMRI	**Maumere**	**3.12**	**264**		**Pn**	**12 31 24.9**	**-0.2**
MMRI	**Maumere**	**3.12**	**264**	P	**Pn**	**12 31 26.3**	**+1.2**
EDFI	**Ende, Flores**	**3.67**	**263**	P	**Pn**	**12 31 30.9**	**-1.9**
BBSI	**Bau Bau**	**3.95**	**315**	P	**Pn**	**12 31 35.4**	**-1.2**
BSSI	**Bau Bau, Buton**	**5.30**	**294**	P	**Pn**	**12 31 53.3**	**-1.9**
SANI	**Sanana**	**6.25**	**6**	P	**Pn**	**12 32 10.6**	**+2.3**
MTN	**Manton Dam**	**7.23**	**129**	Pn	**Pn**	**12 32 21.9**	**+0.2**
MTN	**Manton Dam**	**7.23**	**129**	P	Pn	12 32 27.1	+5.4
	57nm,0.7s						
KNRA	**Kununurra**	**8.03**	**156**	Pn	**Pn**	**12 32 34.2**	**+1.5**
KNRA	**Kununurra**	**8.03**	**156**	P	**Pn**	**12 32 35.4**	**+2.7**
	40nm,1.8s						
KDU	**Kakadu**	**8.22**	**123**	P	Pn	12 32 40.3	+5.0
	21nm,2.3s						
FITZ	**Fitzroy Crossi**	**9.73**	**179**	Pn	**Pn**	**12 32 56.0**	**+0.1**
	0.8nm,0.3s,baz=357,slow=10.0,SNR=16						
FITZ				Sn	**Sn**	**12 34 43.7**	**-0.3**
	1.1nm,0.3s,baz=180,slow=15,SNR=4.6						
WB0	**Warramunga Arr**	**14.35**	**143**		**Pn**	**12 33 56.7**	**-2.5**
WRAB	**Tennant Creek**	**14.45**	**144**		**Pn**	**12 34 00.1**	**-0.5**
WRA	**Warramunga Arr**	**14.46**	**144**	Pn	**Pn**	**12 33 59.5**	**-1.1**
	0.7nm,0.3s,baz=317,slow=16,SNR=34						
WRA				Sn	**Sn**	**12 36 36.0**	**-3.8**
	0.3nm,0.3s,baz=312,slow=24,SNR=2.4						
WB2	**Warramunga Arr**	**14.46**	**144**		**Pn**	**12 33 58.0**	**-2.7**
WR0	**Warramunga Arr**	**14.59**	**143**		**Pn**	**12 34 01.6**	**-0.8**
AS31	**Alice Springs**	**17.32**	**153**		**P**	**12 34 38.7**	**0.0**
ASAR	**Alice Springs**	**17.32**	**153**	P	**Pn**	**12 34 37.5**	**-0.1**
	0.3nm,0.3s,baz=321,slow=10,SNR=28						
ASAR				S	**Sn**	**12 37 50.0**	**+0.7**
	0.2nm,0.3s,baz=308,slow=20,SNR=4.2						
ASAR				LR	LR	12 42 36.7	
	comp=Z,106nm,19.1s,baz=354,slow=42						
ASAR	**Alice Springs**	**17.32**	**153**		**P**	**12 34 38.5**	**-0.2**
LEM	**Lembang**	**17.66**	**274**	LR	LR	12 43 37.7	
	comp=Z,110nm,19.0s,baz=170,slow=44						
COEN	**Coen**	**18.34**	**109**		**Pn**	**12 34 51.1**	**+0.9**
COEN				IAmb	IAmb	12 35 12.6	
	comp=Z,43nm,1.8s						
FORT	**Forrest**	**22.49**	**174**	P	**P**	**12 35 35.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**37.26**	**316**	P	**P**	**12 37 48.1**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=142,slow=6.3,SNR=4.6						
CMAR				LR	LR	12 55 23.1	
	comp=Z,13nm,18.4s,baz=325,slow=40						
SONM	**Songino Array**	**58.38**	**345**	P	**P**	**12 40 30.1**	**-0.3**
	comp=Z,0.8nm,0.9s,baz=164,slow=7.7,SNR=4.1						
MK31	**Makanchi Array**	**66.91**	**329**	P	**P**	**12 41 27.5**	**+0.3**
MK31				IAmb	IAmb	12 41 30.8	
	comp=Z,11nm,1.9s						
MKAR	**Makanchi Array**	**66.91**	**329**	P	**P**	**12 41 27.1**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=131,slow=7.8,SNR=15						
ZALV	**Zalesovo Beam**	**70.82**	**336**	P	**P**	**12 41 51.3**	**0.0**
	comp=Z,1.7nm,0.8s,baz=137,slow=3.3,SNR=8.1						
KURK	**Kurchatov**	**71.33**	**331**	P	**P**	**12 41 53.9**	**-0.5**
KURK				IAmb	IAmb	12 41 55.5	
	comp=Z,3.0nm,0.9s						

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*NOU **24** 12:37:44.9, 17°.93S×178°.33W, h586^{km}, mb4.9/85, Fiji Islands Region*

*IDC **24** 12:37:45.1±1.2, 17°.94S×178°.52W, h570^{km}±14^{km}, mb3.9/18, mb1 4.1/21, mb1mx3.8/29, mbtmp4.8/21, Error ellipse: s-maj=15.6km s-min=10.8km az=151.0*

*NEIC **24** 12:37:45±1.7, 18°.0S±0°.1×178°.4W±0°.1, h567^{km}±7^{km}, mb4.8/68, Error ellipse: s-maj=16.8km s-min=13.7km az=134.0*

ISC 24 12:37:45.3±0.4**,17°.97S**±0°.07×**178°.46W**±0°.06**,h579^{km}, n220,** σ**1^{s}00**/214**,mb4.9**/79**,22C-72D,Fault plane solution: NP1:**ϕ_s38.98658°**,**δ60.42581°**,**λ-104.46654°. **NP2:**ϕ_s246.58411°**,**δ32.63302°**,**λ-66.24020°. **Principal axes:** T Plg14.2700°**,** Azm139.4886°**;** N Plg12.5486°**,** Azm46.2432°**;** P Plg70.8175°**,** Azm276.4657°**; Fault plane solution: NP1:**ϕ_s179.18375°**,**δ26.49930°**,** λ-85.32141°. **NP2:**ϕ_s353.95880°**,**δ63.59585°**,** λ-92.32871°. **Principal axes:** T Plg18.5642°**,** Azm85.6956°**;** N Plg2.0857°**,** Azm354.9948°**;** P Plg71.3104°**,** Azm258.8146°**; Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**1.87**	**312**	P	**P**	**12 38 57.4**	**+0.2**
DGTI	**Dogotuki**	**2.39**	**314**	P	**P**	**12 38 58.9**	**-0.7**
MSVF	**Nonsavu**	**3.33**	**274**	P	**P**	**12 39 05.1**	**+0.2**
	28nm,0.3s,baz=126,slow=3.2,SNR=195						
MSVF	**Nonsavu**	**3.33**	**274**	P	**P**	**12 39 05.6**	**+0.7**
MSVF	**Nonsavu**	**3.33**	**274**	P	**P**	**12 39 05.6**	**+0.7**
AFI	**Afiamalu**	**7.59**	**59**	P	**P**	**12 39 38.3**	**-1.9**
	9.9nm,0.3s,baz=5.7,slow=4.2,SNR=12						
NIUE	**Niue**	**8.17**	**99**	P	**P**	**12 39 45.0**	**-0.6**
RTV	**Rentapao**	**12.49**	**269**	P	**P**	**12 40 31.3**	**+2.3**
	922µm,1.3s						
DVP	**Devils Point**	**12.72**	**269**	P	**P**	**12 40 33.1**	**+1.7**
	200µm,0.7s						
MARNC	**Mare, Loyalty**	**13.19**	**252**	P	**P**	**12 40 34.8**	**-1.5**
MARNC	**Mare, Loyalty**	**13.19**	**252**	P	**P**	**12 40 36.4**	**+0.2**
LIFNC	**LIFOU**	**13.78**	**256**	P	**P**	**12 40 40.0**	**-2.3**
SANVU	**Saraoutou**	**13.96**	**278**	P	**P**	**12 40 43.8**	**-0.3**
SANVU	**Saraoutou**	**13.96**	**278**	P	**P**	**12 40 44.2**	**0.0**
PINNC	**Pines Island,**	**14.00**	**248**	P	**P**	**12 40 43.6**	**-0.9**
YATNC	**Mamie plateau,**	**14.35**	**251**	P	**P**	**12 40 49.1**	**+1.1**
OUENC	**Ouen Island, N**	**14.49**	**250**	P	**P**	**12 40 48.4**	**-0.9**
OUENC	**Ouen Island, N**	**14.49**	**250**	P	**P**	**12 40 49.8**	**+0.5**
DZM	**Mont Dzumac**	**14.76**	**251**	P	**P**	**12 40 50.7**	**-1.3**
	6.0nm,0.3s,baz=77,slow=17,SNR=57						
DZM	**Mont Dzumac**	**14.76**	**251**	P	**P**	**12 40 51.8**	**-0.1**
DZM	**Mont Dzumac**	**14.76**	**251**	P	**P**	**12 40 52.6**	**+0.6**
ONTNC	**Ouen Toro**	**14.81**	**251**	P	**P**	**12 40 52.5**	**+0.2**
ONTNC	**Ouen Toro**	**14.81**	**251**	P	**P**	**12 40 53.9**	**+1.6**
NOUC	**Port Laguerre**	**14.89**	**251**	P	**P**	**12 40 53.4**	**+0.2**
KNTN	**Kanton**	**16.49**	**24**	P	**P**	**12 41 06.2**	**-2.0**
KNTN	**Kanton**	**16.49**	**24**	P	**P**	**12 41 08.3**	**0.0**
	129nm,1.8s						
KOUNC	**Koumac, New Ca**	**16.49**	**258**	P	**P**	**12 41 08.7**	**+0.5**
OUZ	**Omahuta**	**18.58**	**201**	P	**P**	**12 41 27.7**	**+0.7**
OUZ				IAmb	IAmb	12 41 47.6	
	comp=Z,46nm,1.5s						
OUZ	**Omahuta**	**18.58**	**201**	P	**P**	**12 41 27.2**	**+0.2**
URZ	**Urewera**	**20.58**	**190**	P	**P**	**12 41 43.8**	**-1.3**
	comp=Z,3.2nm,0.4s,baz=299,slow=23,SNR=6.6						
URZ	**Urewera**	**20.58**	**190**	IAmb	IAmb	12 41 51.8	
	comp=Z,10nm,0.7s						
URZ	**Urewera**	**20.58**	**190**	P	**P**	**12 41 44.7**	**-0.4**
HIZ	**Hauiti**	**21.28**	**195**	P	**P**	**12 41 52.1**	**+0.7**
BKZ	**Black Stump Fm**	**21.57**	**191**	P	**P**	**12 41 51.7**	**-2.4**
HNR	**Honiara**	**22.61**	**289**	P	**P**	**12 42 04.3**	**+0.7**
	comp=Z,24nm,0.4s,baz=106,slow=1.9,SNR=4.6						
QRZ	**Quartz Range**	**24.06**	**197**	P	**P**	**12 42 16.9**	**+0.8**
TUWZ	**Tuamarina**	**24.27**	**194**	P	**P**	**12 42 17.2**	**-0.7**
KHZ	**Kahutara**	**25.30**	**194**	P	**P**	**12 42 27.5**	**+0.5**
OXZ	**Oxford**	**26.53**	**196**	P	**P**	**12 42 36.7**	**-1.1**
OXZ				IAmb	IAmb	12 42 37.7	
	comp=Z,23nm,1.1s						
RPZ	**Rata Peaks**	**27.15**	**197**	P	**P**	**12 42 43.5**	**+0.2**
ODZ	**Otahua Downs**	**28.49**	**196**	P	**P**	**12 42 54.4**	**-0.5**
EIDS	**Eidsvold**	**29.20**	**250**	P	**P**	**12 43 00.8**	**-0.6**
EIDS				IAmb	IAmb	12 43 01.8	
	comp=Z,28nm,0.7s						
EIDS	**Eidsvold**	**29.20**	**250**	P	**P**	**12 43 00.3**	**-1.1**
	comp=Z,41nm,1.2s						
RK1H	**Rockhampton Ha**	**29.50**	**254**	P	**P**	**12 43 03.0**	**-1.0**
	comp=Z,24nm,0.6s						
MLZ	**Mavora Lakes**	**29.52**	**199**	P	**P**	**12 43 03.1**	**-0.8**
MLZ				IAmb	IAmb	12 43 05.2	
	comp=Z,18nm,0.7s						
ARMA	**Armidale**	**29.87**	**240**	P	**P**	**12 43 07.9**	**+0.7**
ARMA				IAmb	IAmb	12 43 08.8	
	comp=Z,30nm,0.7s						
ARMA	**Armidale**	**29.87**	**240**	P	**P**	**12 43 07.4**	**+0.2**
	comp=Z,58nm,0.7s						
WHZ	**Wether Hill Ro**	**30.05**	**199**	P	**P**	**12 43 08.7**	**+0.3**
WHZ				IAmb	IAmb	12 43 35.9	
	comp=Z,59nm,1.5s						
MGCD	**Mangrove Creek**	**31.22**	**235**	P	**P**	**12 43 19.3**	**+0.7**
	comp=Z,29nm,1.0s						
RMQ	**Roma**	**31.43**	**248**	P	**P**	**12 43 20.6**	**0.0**
	comp=Z,53nm,0.7s						
CNB	**Canberra Magne**	**33.35**	**232**	P	**P**	**12 43 37.0**	**+0.3**
	comp=Z,74nm,1.0s						
CTA	**Charters Tower**	**33.39**	**261**	P	**P**	**12 43 36.9**	**-0.3**
	comp=Z,23nm,0.6s,baz=95,slow=12,SNR=22						
CTAO	**Charters Tower**	**33.39**	**261**	P	**P**	**12 43 36.6**	**-0.6**
CTAO				IAmb	IAmb	12 43 37.7	
	comp=Z,30nm,0.8s						
CTAO	**Charters Tower**	**33.39**	**261**	P	**P**	**12 43 36.9**	**-0.3**
CAN	**Canberra**	**33.63**	**233**	P	**P**	**12 43 39.4**	**+0.4**
CAN				IAmb	IAmb	12 43 40.0	
	comp=Z,20nm,0.7s						
CAN	**Canberra**	**33.63**	**233**	P	**P**	**12 43 39.8**	**+0.8**
PMG	**Port Moresby**	**34.42**	**280**	P	**P**	**12 43 45.3**	**-0.5**
	comp=Z,59nm,0.8s,baz=74,slow=6.3,SNR=36						
PMG	**Port Moresby**	**34.42**	**280**	P	**P**	**12 43 46.2**	**+0.4**
PMG	**Port Moresby**	**34.42**	**280**	P	**P**	**12 43 47.0**	**+1.2**

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PMG   Port Moresby      34.42 280  P       P        12 43 47.0 +1.2
CMSA  Cobar Meteorol    35.08 240  P       P        12 43 50.8 -0.3
        comp=Z,70nm,0.7s
MTSU  Mount Surprise    35.35 264  P       P        12 43 52.5 -1.1
        comp=Z,22nm,0.8s
QLP   Quilpie           35.47 249  P       P        12 43 53.6 -0.8
        comp=Z,164nm,0.6s
JOHN  Johnston Islan    35.59  15  P       P        12 43 53.6 -1.8
GLAD  Gladstone         36.77 224  P       P        12 44 05.1 +0.2
        comp=Z,29nm,0.7s
COEN  Coen              37.06 271  P       P        12 44 07.7 +0.1
COEN                               IAmb    IAmb     12 44 08.7
        comp=Z,40nm,0.8s
COEN  Coen              37.06 271  P       P        12 44 07.2 -0.4
        comp=Z,64nm,0.8s
TOO   Toolangi          37.09 231  P       P        12 44 08.4 +0.7
TOO                                IAmb    IAmb     12 44 09.3
        comp=Z,40nm,0.8s
TOO   Toolangi          37.09 231  P       P        12 44 08.0 +0.4
        comp=Z,56nm,1.0s
TAU   Tasmania Unive    38.16 222  P       P        12 44 16.7 +0.5
TAU                                IAmb    IAmb     12 44 39.9
        comp=Z,23nm,1.1s
TAU   Tasmania Unive    38.16 222  P       P        12 44 17.0 +0.8
BRAT  Ballarat          38.24 232  P       P        12 44 18.6 +1.7
        comp=Z,36nm,0.8s
STKA  Stephens Creek    38.56 241  P       P        12 44 20.4 +0.8
        comp=Z,39nm,0.5s,baz=88,slow=9.5,SNR=156
STKA  Stephens Creek    38.56 241  P       P        12 44 20.4 +0.8
STKA  Stephens Creek    38.56 241  P       P        12 44 19.6  0.0
        comp=Z,16nm,1.2s
INKA  Innaminka         38.68 248  P       P        12 44 20.8 +0.2
        comp=Z,118nm,0.8s
ARPS  Mount Arapiles    39.57 234  P       P        12 44 27.4 -0.3
        comp=Z,37nm,0.7s
QIS   Mount Isa         39.59 259  P       P        12 44 26.9 -1.2
        comp=Z,14nm,0.8s
HTT   Hallett           41.07 240  P       P        12 44 39.5 -0.2
        comp=Z,73nm,0.7s
LCRK  Leigh Creek       41.18 244  P       P        12 44 40.2 -0.4
        comp=Z,160nm,0.6s
WHYH  Whyalla           42.11 240  P       P        12 44 47.9 +0.1
        comp=Z,78nm,0.7s
JAY   Jayapura          42.88 286  P       P        12 44 53.6 -0.5
        comp=Z,21nm,0.4s,baz=154,slow=5.9,SNR=14
JAY   Jayapura          42.88 286  P       P        12 44 52.2 -1.9
        comp=Z,34nm,1.1s
OOD   Oodnadatta        43.15 248  P       P        12 44 56.0  0.0
        comp=Z,76nm,0.9s
BBOO  Buckleboo         43.33 241  P       P        12 44 57.6 +0.2
BBOO  Buckleboo         43.33 241  P       P        12 44 56.8 -0.6
        comp=Z,102nm,0.7s
KHLU  Kahalu`u          43.41  32  P       P        12 44 58.2 +0.1
MLOA  Mauna Loa Obse    43.52  32  P       P        12 44 59.2 -0.2
MLH   Mauna Loa         43.58  32  P       P        12 44 59.7  0.0
POHA  Pohakuloa         43.73  32  P       P        12 45 00.8 +0.1
POHA  Pohakuloa         43.73  32  P       P        12 44 59.1 -1.7
DHH   Diamond Head      43.93  28  P       P        12 45 02.3 +0.3
WMR   Waimanalo Ridg    44.04  28  P       P        12 45 02.1 -0.7
WR0   Warramunga Arr    44.38 260  P       P        12 45 04.6 -1.0
WB0   Warramunga Arr    44.54 260  P       P        12 45 06.0 -0.9
WB0                                IAmb    IAmb     12 45 06.8
        comp=Z,33nm,0.6s
WB2   Warramunga Arr    44.56 260  P       P        12 45 06.0 -1.0
WB2                                IAmb    IAmb     12 45 07.0
        comp=Z,40nm,0.6s
WRAB  Tennant Creek     44.56 260  P       P        12 45 06.1 -1.0
WRAB                               IAmb    IAmb     12 45 07.0
        comp=Z,31nm,0.6s
WRAB  Tennant Creek     44.56 260  P       P        12 45 06.8 -0.2
WRA   Warramunga Arr    44.57 260  P       P        12 45 06.1 -1.0
        comp=Z,21nm,0.4s,baz=91,slow=7.9,SNR=530
WRA   Warramunga Arr    44.57 260  P       P        12 45 05.3 -1.9
AS31  Alice Springs     44.73 254  P       P        12 45 08.4 +0.1
ASAR  Alice Springs     44.73 254  P       P        12 45 08.2 -0.1
        comp=Z,224nm,0.6s,baz=88,slow=8.3,SNR=5794
ASAR                               PcP     PcP      12 46 38.1 +0.1
        comp=Z,4.4nm,0.5s,baz=85,slow=4.4,SNR=4.7
ASAR                               S       S        12 51 02.0 -1.8
        comp=Z,0.9nm,0.8s,baz=91,slow=16,SNR=5.1
MULG  Mulgathing        44.74 245  P       P        12 45 07.4 -0.8
        comp=Z,222nm,0.5s
KDU   Kakadu            47.51 269  P       P        12 45 28.2 -1.2
        comp=Z,61nm,1.1s
MTN   Manton Dam        48.75 269  P       P        12 45 37.8 -0.8
MTN                                IAmb    IAmb     12 45 38.1
        comp=Z,42nm,0.8s
MTN   Manton Dam        48.75 269  P       P        12 45 37.2 -1.4
        comp=Z,64nm,0.8s
DRS   Darwin Rock St    49.06 269  P       P        12 45 39.5 -1.4
        comp=Z,39nm,1.2s
WRKA  Warakurna         49.78 252  P       P        12 45 45.2 -0.9
        comp=Z,118nm,1.1s
FORT  Forrest           49.94 245  P       P        12 45 46.5 -0.6
FORT  Forrest           49.94 245  P       P        12 45 45.8 -1.3
        comp=Z,87nm,0.8s
KNRA  Kununurra         50.43 264  P       P        12 45 50.4 -0.5
KNRA                               IAmb    IAmb     12 45 51.1
        comp=Z,46nm,0.6s
KNRA  Kununurra         50.43 264  P       P        12 45 49.7 -1.2
        comp=Z,63nm,0.6s
FAKI  Fak Fak           50.54 281  P       P        12 45 52.0 +0.2
SWI   Sorong            52.21 283  P       P        12 46 03.9 +0.1
        comp=Z,102nm,0.7s
LBMI  Labuha            55.78 282  P       P        12 46 29.6 +0.7
        comp=Z,28nm,0.8s
SOEI  Soe               56.02 270  P       P        12 46 32.1 +1.4
        comp=Z,97nm,0.7s
SOEI  Soe               56.02 270  P       P        12 46 31.8 +1.1
SANI  Sanana            56.70 280  P       P        12 46 34.6 -0.6
SANI  Sanana            56.70 280  P       P        12 46 35.0 -0.2
PSA00 Pilbara Seismi    57.84 255  IAmb    IAmb     12 46 43.1
        comp=Z,32nm,0.6s
PSA00 Pilbara Seismi    57.84 255  P       P        12 46 41.8 -1.1
        comp=Z,49nm,0.6s
MBWA  Marble Bar        58.01 256  P       P        12 46 43.8 -0.2
MEEK  Meekatharra       58.37 249  P       P        12 46 45.0 -1.4
KLBR  Kellerberrin      58.76 244  P       P        12 46 47.8 -1.1
NWAO  Narrogin (SRO)    59.14 242  P       P        12 46 52.1 +0.7
BLDU  Ballidu           59.71 245  P       P        12 46 54.0 -1.3
MUN   Mundaring         60.05 243  P       P        12 46 57.0 -0.5
        comp=Z,36nm,2.3s
VNDA  Vanda             60.38 185  P       P        12 46 59.8 +1.0
        comp=Z,2.1nm,1.0s,baz=11,slow=6.5,SNR=7.5
VNDA  Vanda             60.38 185  P       P        12 47 00.7 +1.9
MORW  Morawa            60.41 246  P       P        12 46 59.4 -0.6
MORW                               IAmb    IAmb     12 47 00.1
        comp=Z,16nm,0.6s
MORW  Morawa            60.41 246  P       P        12 46 59.0 -0.9
TOLI2 Tolitoli          62.68 281  P       P        12 47 16.3 +1.4
TOLI2 Tolitoli          62.68 281  P       P        12 47 15.1 +0.2
GIRL  Giralia           62.83 253  P       P        12 47 16.6 +0.9
GIRL  Giralia           62.83 253  P       P        12 47 16.0 +0.3
        comp=Z,152nm,1.5s
JAGI  Jajag, Banyuwa    65.99 269  P       P        12 47 34.7 -1.2
JAGI                               IAmb    IAmb     12 47 35.2
        comp=Z,41nm,0.7s
JAGI  Jajag, Banyuwa    65.99 269  P       P        12 47 35.7 -0.1
MJAR  Matsushiro Arr    67.93 323  P       P        12 47 46.1 -1.1
        comp=Z,1.4nm,0.5s,baz=160,slow=7.1,SNR=4.3
KKM   Kota Kinabalu     68.71 284  P       P        12 47 52.5 -0.1
KKM                                IAmb    IAmb     12 47 53.3
        comp=Z,16nm,0.9s
KKM   Kota Kinabalu     68.71 284  P       P        12 47 52.3 -0.2
        comp=Z,24nm,1.1s
JSD   Sado              68.96 325  P       P        12 47 54.0 +0.6
UGM   Wanagama          69.59 268  P       P        12 47 57.7 -0.1
UGM   Wanagama          69.59 268  P       P        12 47 57.8  0.0
JHS   Saijyo            69.91 319  P       P        12 47 59.9 +0.8
SBUM  Sibu              71.17 279  P       P        12 48 07.5 +0.5
YULB  Yu-li             71.76 303  P       P        12 48 09.6 -0.6
YULB                               IAmb    IAmb     12 48 15.7
        comp=Z,22nm,1.4s
QSPA  South Pole Qui    72.08 180  P       P        12 48 12.8 +1.2
SSLB  Suanglung         72.23 303  P       P        12 48 12.8 -0.2
TPUB  Ta-pu             72.25 302  P       P        12 48 11.7 -1.4
UNV   Unalaska Valle    72.26   7  P       P        12 48 11.3 -1.1
KSM   Kuching           72.64 277  P       P        12 48 16.5 +1.0
KSM                                IAmb    IAmb     12 48 17.1
        comp=Z,36nm,0.8s
KSM   Kuching           72.64 277  P       P        12 48 17.0 +1.4
PEA0B Petropavlovsk-    73.73 345  P       P        12 48 21.5 +0.7
PEA0B                              IAmb    IAmb     12 48 42.5
        comp=Z,60nm,1.4s
PETK  Petropavlovsk-    73.73 345  P       P        12 48 20.9 +0.1
        comp=Z,3.2nm,0.7s,baz=138,slow=9.6,SNR=5.2
SII   Sitkinak Islan    77.00  14  P       P        12 48 39.4 +0.5
SII                                IAmb    IAmb     12 48 55.0
        comp=Z,64nm,1.2s
OHAK  Old Harbor        77.80  14  P       P        12 48 43.5 +0.3
OHAK                               IAmb    IAmb     12 48 51.8
        comp=Z,49nm,1.3s
CMB   Columbia Colle    77.92  43  P       P        12 48 45.0 +0.6
NJ2   Nanjing           77.94 310  eP      P        12 48 47.0 +2.4
NJ2                                pmax    pmax
        comp=Z,5.0nm,0.6s
P18K  Big Mountain,     79.39  12  P       P        12 48 51.6 -0.1
P18K                               IAmb    IAmb     12 48 52.1
        comp=Z,20nm,0.8s
NVAR  Mina Array Bea    79.50  44  P       P        12 48 54.1 +1.1
        comp=Z,5.7nm,0.8s,baz=224,slow=8.6,SNR=39
NVAR  Mina Array Bea    79.50  44  P       P        12 48 54.3 +1.3
O18K  Koktuh Hills      79.83  12  IAmb    IAmb     12 48 54.5
        comp=Z,26nm,0.9s
IPM   Ipoh              82.38 277  P       P        12 49 08.8 +0.7
IPM                                IAmb    IAmb     12 49 09.5
        comp=Z,13nm,0.8s
TTA   Tatalina          82.54  10  P       P        12 49 08.5 +0.6
GHO   Glory Hole Cre    82.88  14  IAmb    IAmb     12 49 10.1
        comp=Z,18nm,0.6s
LTY   Liberty           83.05  35  P       P        12 49 11.7 +0.9
N25K  Chitina, Valde    83.77  16  P       P        12 49 14.1  0.0
N25K                               IAmb    IAmb     12 49 14.6
        comp=Z,12nm,0.6s
RPSI  Rantau Prapat     83.81 275  IAmb    IAmb     12 49 15.8
        comp=Z,8.7nm,0.7s
PSI   Prapat            83.84 275  P       P        12 49 14.8 -0.8
        comp=Z,6.8nm,0.6s,baz=353,slow=22,SNR=7.8
ENH   Enshi             84.27 304  IAmb    IAmb     12 49 19.0
        comp=Z,10.0nm,0.7s
BCAR  Beaver Creek A    85.72  16  P       P        12 49 24.2 +0.7
ILAR  Eielson Array     85.96  13  P       P        12 49 23.6 -0.9
        comp=Z,2.1nm,0.4s,baz=221,slow=5.1,SNR=89
TXAR  Lajitas Array     86.07  58  P       P        12 49 28.1 +2.1
        comp=Z,5.4nm,0.7s,baz=219,slow=6.1,SNR=67
XAN   Xi'an             86.26 307  P       P        12 49 28.3 +1.6
XAN                                pmax    pmax
        comp=Z,10.0nm,1.0s
HHC   Hu-ho-hao-te      87.28 314  eP      P        12 49 34.4 +3.0
HHC                                pmax    pmax
        comp=Z,14nm,1.2s
HHC                                pmax    pmax
        comp=Z,69nm,6.5s
PDAR  Pinedale Array    87.43  43  P       P        12 49 33.0 +0.8
        comp=Z,3.3nm,0.6s,baz=219,slow=3.4,SNR=44
PDAR  Pinedale Array    87.43  43  P       P        12 49 32.5 +0.2
COLD  Coldfoot          87.48  11  P       P        12 49 32.2 +0.6
BMAR  Burnt Mountain    88.73  12  P       P        12 49 38.3 +0.8
CMAR  Chiang Mai Arr    88.86 290  P       P        12 49 39.6 +0.5
        comp=Z,3.0nm,0.9s,baz=106,slow=2.8,SNR=18
SNAA  Sanae             90.54 179  P       P        12 49 45.5 -0.5
SNAA  Sanae             90.54 179  P       P        12 49 46.0 +0.1
VNA3  Neumayer Olymp    90.68 176  P       P        12 49 46.8 +0.2
VNA2  Neumayer--Watz    91.12 177  P       P        12 49 49.0 +0.4
        baz=175,slow=4.6
VNA1  Neumayer--Stat    91.35 177  P       P        12 49 50.4 +0.9
SONM  Songino Array     93.56 319  P       P        12 50 01.1 +0.8
        comp=Z,0.3nm,0.5s,baz=149,slow=3.4,SNR=2.3
BO01  Tunca             93.59 128  P       P        12 49 59.5 -1.2
MT09  Talagante         93.92 127  P       P        12 49 58.8 -3.6
YKA   Yellowknife Ar    94.41  25  P       P        12 50 03.4 -0.2
        comp=Z,0.8nm,0.5s,baz=238,slow=4.6,SNR=20
YKA                                PKKPbc  PKKPdf   13 06 58.2 -3.2
        comp=Z,0.3nm,0.9s,baz=37,slow=2.2,SNR=4.6
PEL   Peldehue          94.41 127  P       P        12 50 05.7 +1.1
A36M  Sachs Harbour     96.55  15  IAmb    IAmb     12 50 14.7
        comp=Z,2.8nm,0.8s
MKAR  Makanchi Array   109.14 314  PKiKP   PKiKP    12 55 09.4 -0.6
        comp=Z,0.4nm,0.5s,baz=79,slow=0.3,SNR=4.2
AKASG Malin Array Be   140.59 332  PKhKP   PKPpre   12 56 04.5
        comp=Z,0.4nm,0.4s,baz=40,slow=4.2,SNR=4.2
TLCR                   144.60 326 ⥯P      PKPab    12 56 17.5 -0.1
BURAR Bucovina Array   144.65 332 ⥮P      PKPab    12 56 18.5 +0.6
BRTR  Keskin Array B   144.79 315  PKP     PKPbc    12 56 17.8 -0.1
        comp=Z,3.0nm,0.8s,baz=149,slow=2.6,SNR=5.9
BRTR  Keskin Array B   144.79 315          PKPdf    12 56 17.1 -0.3
TPGR  Topolog          145.02 326 ⥯P      PKPab    12 56 19.1 -0.3
VRI   Vrincioaia       145.21 329 ⥮P      PKPbc    12 56 19.3 +0.5
TIRR  Tirgusor         145.29 325 ⥣P      PKPbc    12 56 19.4 +0.4
TRPA  Tarpa            145.38 335 ⥯P      PKPbc    12 56 19.8 +0.7
HARR  Harsova          145.40 326 ⥮P      PKPbc    12 56 19.8 +0.4
MANR  Mangalia         145.61 324 ⥥P      PKPbc    12 56 19.8 -0.1
TSMN  Mangalia Port-   145.62 324 ⥥P      PKPdf    12 56 14.9 -3.5
DOPR  Dopca            145.78 330 ⥯P      PKPab    12 56 21.6 -0.7
MLR   Muntele Rosu     145.86 329 ⥮P      PKPbc    12 56 21.9 +1.0
VOIR                   146.34 330 ⥣P      PKPbc    12 56 23.0 +0.9
DRGR                   146.37 333 ⥯P      PKPbc    12 56 22.4 +0.2
VRAC  Vranov           146.45 342 ⥮P      PKPdf    12 56 21.0 +1.3
MEM   Membach          147.24 355 dPKP     PKPbc    12 56 23.6 -0.6
GZR   Gura Zlata       147.43 332 ⥥P      PKPbc    12 56 24.4 -0.6
GERES GERESS Array B   147.66 345  PKPbc   PKPbc    12 56 25.9 +0.4
        comp=Z,0.8nm,0.5s,baz=17,slow=2.7,SNR=11
BZS   Buzias           147.77 333 ⥥P      PKPbc    12 56 25.9 +0.2
DOU   Dourbes          147.86 356 dPKP     PKPbc    12 56 25.4 -0.4
HERR  Herculane        147.99 331 ⥥P      PKPbc    12 56 25.9 -0.4
MORH  Mrgy, Hungar     148.47 337 ⥯P      PKPdf    12 56 24.6 +1.5
VTS   Vitosha          149.28 328 ⥮P      PKPbc    12 56 30.2 +0.4
DIVS  Divibare         149.67 333          PKiKP    12 56 31.0 -0.2
PDG   Podgorica        151.33 332 ⥣P      PKPbc    12 56 34.4 +0.1
FNA   Florina          151.57 327          PKPbc    12 56 34.5 -0.5
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*CNRM **24** 12:38:14.7, 36°.54N×4°.55W, h70km, ml2.3*
*MDD **24** 12:38:16.8±0.6, 36°.59N×4°.45W, h71km±4km, mb2.7/15, Error ellipse: s-maj=6.0km s-min=3.8km az=164.0, PRXIMO*
MDD EMS: I-II INTENSIDAD MAXIMA.
*SFS **24** 12:38:16.0, 36°.57N×4°.45W, ML2.6, TORREMOLINOS (MALAGA)*
*IGIL **24** 12:38:17.3, 36°.57N×4°.46W, h31km, ML2.0*
*INMG **24** 12:38:17.5±1.8, 36°.67N×4°.52W, h67km±7km, ML2.0, Error ellipse: s-maj=4.4km s-min=3.9km az=144.0*
ISC 24 12:38:14.3±1.2**, 36°.57N**±0°.03×**4°.45W**±0°.03**, h89**km±6km**, n58, σ1ˢ79**/107**, 1C-1D, Strait of Gibraltar**

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Code  Station Name       Δ°  AZ°    Phase ID        Time      Res
                                   Op      ISC     h  m  s    ISC
EMAL  Malaga-Limoner    0.19   5  eP      Pn       12 38 27.4 +0.3
EMAL                              eS      Sn       12 38 34.9 -1.6
EMAL  Malaga-Limoner    0.19   5   P      Pn       12 38 27.4 +0.3
EMAL                               S      Sn       12 38 34.9 -1.6
EMIJ  Mijas             0.26 269   P      Pn       12 38 27.4 +0.1
        6.4nm,0.1s,SNR=25
EMIJ                               S      Sn       12 38 35.1 -2.0
        18nm,0.1s,SNR=27
EGOR  Sierra Gorda,     0.60  27   P      Pn       12 38 31.0 +1.1
        2.2nm,0.2s,SNR=7.9
EGOR                               S      Sn       12 38 43.0 +1.4
        3.7nm,0.2s,SNR=7.9
ELGU  Los Guajares,     0.72  65   P      Pn       12 38 31.1 +0.2
        1.1nm,0.1s,SNR=7.9
ELGU                               S      Sn       12 38 42.6 -0.8
        11nm,0.1s,SNR=7.9
EJIF  Jimena Fronter    0.83 262   P      Pn       12 38 33.9 +1.9
        2µm,0.1s,SNR=7.9
EJIF                               S      Sn       12 38 47.5 +2.3
        SNR=7.9
ECEU  Ceuta             1.00 229   P      Pn       12 38 36.3 +2.4
        2.6nm,0.1s,SNR=4.0
SMIR  Smir Dam          1.16 221   P      Pn       12 38 35.3 -0.4
SMIR                               S      Sn       12 38 50.3 -1.6
ESPR  Espera            1.17 285   P      Pn       12 38 38.3 +2.5
        1.0nm,0.1s,SNR=7.9
ESPR                               S      Sn       12 38 52.2 +0.1
        1.7nm,0.1s,SNR=7.9
EBER  Berja             1.29  75   P      Pn       12 38 38.1 +0.6
        1.0nm,0.3s,SNR=7.9
EBER                               S      Sn       12 38 53.5 -1.6
        2.3nm,0.2s,SNR=4.7
EALB  Alboran           1.30 118   P      Pn       12 38 38.2 +0.7
        3.1nm,0.2s,SNR=7.9
EALB                               S      Sn       12 38 53.8 -1.2
        4.9nm,0.2s,SNR=7.9
PALE  Palemas           1.41 163   P      Pn       12 38 38.6 -0.3
PALE                               S      Sn       12 38 56.5 -0.9
EADA  Adamuz            1.60 356  ⥣P      Pn       12 38 42.5 +1.3
        6.4nm,0.1s,SNR=18
EADA                               S      Sn       12 39 00.5 -1.2
        4.8nm,0.1s,SNR=5.0
EQES  Quesada           1.65  41   P      Pn       12 38 43.3 +1.3
        0.5nm,0.1s,SNR=10
EQES                               S      Sn       12 39 03.1 +0.1
        4.5nm,0.2s,SNR=5.0
ECAB  El Cabril         1.69 333   P      Pn       12 38 43.2 +0.8
        0.5nm,0.0s,SNR=21
ECAB                               S      Sn       12 39 01.8 -2.0
        2.5nm,0.0s,SNR=24
GOG   Mont Gurugu       1.79 138   P      Pn       12 38 44.4 +0.7
GOG                                S      Sn       12 39 06.0 -0.1
EMIN  Mina Concepcio    2.14 305   P      Pn       12 38 49.0 +0.7
        0.8nm,0.1s,SNR=7.9
EMIN                               S      Sn       12 39 12.6 -1.6
        1.4nm,0.0s,SNR=12
SESP  Santiago Espad    2.17  44   P      Pn       12 38 50.2 +1.4
        1.4nm,0.1s,SNR=7.9
SESP                               S      Sn       12 39 14.6 -0.6
        3.6nm,0.1s,SNR=7.9
EGRO  El Granado        2.61 293   P      Pn       12 38 55.4 +0.9
        0.6nm,0.0s,SNR=13
EGRO                               S      Sn       12 39 23.7 -1.7
        4.4nm,0.1s,SNR=4.6
PBAR  Barrancos         2.61 309  eS      Sn       12 39 24.1 -1.4
PVAQ  Vaqueiros         2.75 289  eP      Pn       12 38 57.2 +0.9
PVAQ                              eS      Sn       12 39 26.5 -2.2
PVAQ                               A      A        12 39 28.7
        3.0nm,0.1s
PVAQ  Vaqueiros         2.75 289   P      Pn       12 38 57.5 +1.2
PVAQ                               S      Sn       12 39 26.8 -1.9
PBDV  Barranco-do-Ve    2.87 285  eP      Pn       12 39 00.1 +2.1
PBDV                              eS      Sn       12 39 29.6 -2.1
PBDV                               A      A        12 39 38.2
        2.3nm,0.5s
PAB   San Pablo         2.97   2   P      Pn       12 39 00.8 +1.3
        0.3nm,0.1s,SNR=7.9
PAB                                S      Sn       12 39 31.9 -2.3
        0.5nm,0.1s,SNR=7.9
EBAD  Badajoz           2.98 318   P      Pn       12 39 00.8 +1.3
        3.0nm,0.1s,SNR=14
EBAD                               S      Sn       12 39 32.9 -1.5
        4.4nm,0.0s,SNR=12
PCVE  Castro Verde      3.06 291  eP      Pn       12 39 01.8 +1.3
PCVE                              eS      Sn       12 39 34.4 -1.8
PCVE                               A      A        12 39 35.0
        3.4nm,0.6s
PBEJ  Beja              3.09 299  eS      Sn       12 39 35.7 -1.2
ETOB  Tobarra           3.10  47  ⥥P      Pn       12 39 02.7 +1.6
        3.0nm,0.1s,SNR=18
ETOB                               S      Sn       12 39 35.6 -1.6
        1.9nm,0.1s
ESDC  Sonseca Array     3.12   7   P      Pn       12 39 02.7 +1.2
        0.1nm,0.1s,baz=188,slow=12,SNR=7.9
ESDC                               S      Sn       12 39 36.1 -1.7
        0.6nm,0.2s,baz=182,slow=23,SNR=6.3
MESJ  Messejana         3.27 294  eP      Pn       12 39 04.1 +0.8
MESJ                              eS      Sn       12 39 38.9 -2.3
MESJ                               IAML            12 39 40.6
        comp=N,4.2nm,0.2s
MESJ  Messejana         3.27 294  eP      Pn       12 39 04.7 +1.4
MESJ                              eS      Sn       12 39 39.5 -1.7
MESJ                               A      A        12 39 40.8
        comp=N,2.0nm,0.3s
PESTR Estremoz          3.39 314  eP      Pn       12 39 06.7 +1.7
PESTR                             eS      Sn       12 39 42.4 -1.7
PESTR                              A      A        12 39 54.1
        comp=N,1.9nm,0.5s
PESTR Estremoz          3.39 314   P      Pn       12 39 03.5 -1.4
PESTR                              S      Sn       12 39 42.6 -1.5
MORF  Marmelete         3.45 284  eP      Pn       12 39 06.9 +1.1
MORF                              eS      Sn       12 39 43.0 -2.6
MORF                               IAML            12 39 44.6
        comp=N,5.5nm,0.3s
MORF  Marmelete         3.45 284  eP      Pn       12 39 07.5 +1.7
MORF                              eS      Sn       12 39 43.4 -2.2
PFVI  Vila Bisbo        3.56 280  eP      Pn       12 39 08.6 +1.4
PFVI                              eS      Sn       12 39 46.1 -2.1
PFVI                               A      A        12 39 52.5
        comp=N,12nm,0.8s
PFVI  Vila Bisbo        3.56 280   P      Pn       12 39 08.8 +1.6
        SNR=7.9
PFVI                               S      Sn       12 39 45.9 -2.3
        comp=N,6.8nm,0.3s,SNR=7.9
PTEO  Sao Teotonio      3.56 287  eP      Pn       12 39 09.5 +2.3
PTEO                              eS      Sn       12 39 45.9 -2.3
PNCL  Nicolau / Gran    3.60 297  eP      Pn       12 39 09.1 +1.3
PNCL                              eS      Sn       12 39 46.6 -2.6
PNCL                               A      A        12 40 03.6
        comp=N,2.4nm,0.7s
PMRV  Marv??o           3.68 322  eP      Pn       12 39 10.6 +1.7
PMRV                              eS      Sn       12 39 49.5 -1.8
PMRV                               A      A        12 39 51.7
        comp=N,2.1nm,0.2s
MD31  MD31              3.70 184   P      Pn       12 39 11.0 +1.6
MD31                               S      Sn       12 39 50.1 -1.8
EPLA  Plasencia         3.72 340   S      Sn       12 39 51.6 -0.6
        comp=N,1.0nm,0.1s,SNR=7.9
MDT   Midelt            3.75 182   P      Pn       12 39 10.9 +1.0
MDT                                S      Sn       12 39 52.5 -0.6
PMTG  Montargil         3.90 311  eP      Pn       12 39 13.5 +1.7
PMTG                              eS      Sn       12 39 55.0 -1.4
PMTG                               A      A        12 39 57.3
        comp=N,3.4nm,0.8s
PCBR  Castelo Branco    4.04 325  eS      Sn       12 39 57.7 -2.3
GUD   Guadarrama        4.08   3   P      Pn       12 39 15.7 +1.3
        comp=N,0.4nm,0.1s,SNR=6.0
GUD                                S      Sn       12 39 58.7 -2.3
        comp=N,0.2nm,0.1s,SNR=7.9
PSBE  So Bento          4.52 312  eP      Pn       12 39 23.0 +2.7
PSBE                              eS      Sn       12 40 10.5 -1.1
ETOR  Torete            4.64  23   P      Pn       12 39 23.7 +1.7
        comp=N,14nm,0.1s,SNR=30
ETOR                               S      Sn       12 40 12.1 -2.6
        comp=N,3.7nm,0.1s
PCAS  Casmilo, Conde    4.72 319  eP      Pn       12 39 24.3 +1.3
PCAS                              eS      Sn       12 40 10.5 -5.9
COI   Coimbra           4.79 321  eS      Sn       12 40 20.5 +2.5
EMOS  Mosqueruela       4.91  38   P      Pn       12 39 28.1 +2.4
        comp=N,0.3nm,0.1s,SNR=7.9
EMOS                               S      Sn       12 40 19.1 -2.2
        comp=N,0.2nm,0.0s,SNR=7.9
PVIS  Viseu             4.94 328  eP      Pn       12 39 29.0 +2.9
PVIS                              eS      Sn       12 40 20.9 -1.1
MVO   Moncorvo          5.01 337  eP      Pn       12 39 29.5 +2.5
MVO                               eS      Sn       12 40 21.5 -2.2
MVO   Moncorvo          5.01 337   P      Pn       12 39 29.5 +2.5
        comp=N,1.5nm,0.1s,SNR=7.9
MVO                                S      Sn       12 40 21.1 -2.6
        SNR=7.9
POLO  Lamas de Olo      5.46 333  eP      Pn       12 39 34.8 +1.6
POLO                              eS      Sn       12 40 34.6 -0.1
PBRG  Braganca          5.52 342  eP      Pn       12 39 36.3 +2.3
OUZM  OUZ               5.96 199   P      Pn       12 39 41.7 +1.5
PGAV  Gavieira, Arco    6.15 332  eS      Sn       12 40 49.7 -1.8
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*IDC **24** 13:12:47.1±4.4, 24°.45N×94°.22E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.1/56, mbtmp3.4/3, Error ellipse: s-maj=374.6km s-min=28.8km az=60.0*
ISC 24 13:12:48.6±1.4**, 24°.4N**±0°.4×**94°.1E**±0°.3**, h10**km**, n4, σ0ˢ93**/5**, mb3.5**/3**, Myanmar-India border region**

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Code  Station Name       Δ°  AZ°    Phase ID        Time      Res
                                   Op      ISC     h  m  s    ISC
SHL   Shillong          2.33 300  ePG     Pn       13 13 28.0 +0.8
SHL                               eSG     Sn       13 13 55.0 -1.0
MKAR  Makanchi Array   24.27 340   P      P        13 18 05.8 -0.1
        0.2nm,0.4s,baz=163,slow=7.6,SNR=5.4
WRA   Warramunga Arr   58.97 135   P      P        13 22 48.4 -0.1
        0.5nm,0.4s,baz=323,slow=7.5,SNR=12
ASAR  Alice Springs    61.42 138   P      P        13 23 05.2 -0.2
        0.2nm,0.6s,baz=318,slow=6.9,SNR=4.4
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*IDC **24** 13:31:23.2±0.9, 60°.42S×26°.64W, h0km, mb4.2/6, mb1 4.3/7, mb1mx4.0/28, mbtmp4.2/7, ML4.8/1, MS3.9/14, Ms1 3.9/14, ms1mx3.8/26, Error ellipse: s-maj=35.7km s-min=22.8km az=93.0*
ISC 24 13:31:26.5±0.8**, 60°.5S**±0°.1×**26°.6W**±0°.2**, h20**km**, n31, σ1ˢ16**/17**, mb4.2**/6**, MS3.8**/12**, South Sandwich Islands region**

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Code  Station Name       Δ°  AZ°    Phase ID        Time      Res
                                   Op      ISC     h  m  s    ISC
VNA1  Neumayer--Stat   12.63 151   P      Pn       13 34 25.6 +1.1
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VNA3	Neumayer Olymp	12.74	155	P	Pn	13 34 25.7	-0.6
VNA2	Neumayer--Watz	13.03	151	P	Pn	13 34 30.5	+0.4
	baz=301,slow=16						
SNAA	Sanae	14.63	150	P	Pn	13 34 53.8	+1.8
SNAA	Sanae	14.63	150	Pn	Pn	13 34 53.2	+1.2
	4.1nm,0.3s,baz=325,slow=18,SNR=179						
SNAA				Sn	Sn	13 37 31.5	-1.8
	0.3nm,0.3s,baz=3.9,slow=20,SNR=3.7						
SNAA				LR	LR	13 39 34.4	
	comp=Z,248nm,18.4s,baz=352,slow=33						
PMSA	Palmer Station	17.55	240	LR	LR	13 40 49.7	
	comp=Z,536nm,19.3s,baz=104,slow=32						
USHA	Ushuaia	22.77	266	LR	LR	13 42 48.4	
	comp=Z,341nm,20.9s,baz=87,slow=30						
H09W1	TRISTAN DA CUN	25.11	28	T	T	14 03 30.3	
	SNR=14						
QSPA	South Pole Qui	29.74	180	P	P	13 37 32.2	+1.0
	6.1nm,1.0s,baz=220,slow=1.7,SNR=12						
QSPA				LR	LR	13 49 31.5	
	comp=Z,159nm,18.9s,baz=189,slow=36						
PLCA	Paso Flores	33.33	286	LR	LR	13 51 36.0	
	comp=Z,148nm,18.2s,baz=141,slow=36						
MAW	Mawson	36.45	140	LR	LR	13 52 37.9	
	comp=Z,143nm,18.7s,baz=244,slow=35						
CPUP	Villa Florida	40.08	315	LR	LR	13 55 37.5	
	comp=Z,77nm,19.0s,baz=161,slow=36						
VNDA	Vanda	42.14	183	P	P	13 39 16.8	+0.2
	3.4nm,1.0s,baz=177,slow=17,SNR=3.0						
BOSA	Boshof	46.94	71	P	P	13 39 57.0	+1.4
	2.4nm,0.8s,baz=214,slow=5.2,SNR=6.0						
BOSA				LR	LR	13 56 41.0	
	comp=Z,94nm,18.1s,baz=194,slow=32						
H10S2	ASCENSION HYDR	52.20	15	T	T	14 37 22.5	
	baz=188,slow=74,SNR=7.7						
H10S3	ASCENSION HYDR	52.20	15	T	T	14 37 23.7	
	baz=32,slow=74,SNR=16						
LPAZ	La Paz	53.27	307	P	P	13 40 44.6	+0.2
	0.9nm,0.5s,baz=215,slow=14,SNR=3.7						
LPAZ				LR	LR	14 03 50.9	
	comp=Z,33nm,20.0s,baz=119,slow=37						
H10N1	ASCENSION HYDR	53.32	15	T	T	14 38 52.2	
	baz=181,slow=71,SNR=3.5						
H10N3	ASCENSION HYDR	53.32	15	T	T	14 38 44.4	
	baz=181,slow=71,SNR=7.7						
H10N2	ASCENSION HYDR	53.34	15	T	T	14 38 53.1	
	baz=181,slow=71,SNR=8.1						
DBIC	Dimbokro	69.11	23	LR	LR	14 05 19.3	
	comp=Z,159nm,21.2s,baz=179,slow=30						
KMBO	Kilima Mbogo	76.40	67	LR	LR	14 14 24.8	
	comp=Z,162nm,18.5s,baz=84,slow=34						
TORD	Torodi Ar. Bea	76.81	28	P	P	13 43 14.9	-1.5
	3.0nm,0.6s,baz=197,slow=6.2,SNR=10						
TORD				LR	LR	14 09 41.9	
	comp=Z,111nm,21.9s,baz=0.0,slow=30						
PPT	Papeete	89.80	233	LR	LR	14 18 10.7	
	comp=Z,110nm,20.5s,baz=136,slow=31						
ASAR	Alice Springs	94.65	162	P	P	13 44 44.9	-1.1
	0.3nm,0.6s,baz=178,slow=4.1,SNR=8.9						
DZM	Mont Dzumac	97.05	192	LR	LR	14 25 15.9	
	comp=Z,124nm,20.6s,baz=38,slow=33						
FINES	FINESS Array B	128.15	29	PKP	PKiKP	13 50 30.7	+0.7
	3.1nm,1.0s,baz=329,slow=1.6,SNR=4.1						
MKAR	Makanchi Array	137.85	76	PKP	PKPdf	13 50 47.3	-1.0
	0.2nm,0.7s,baz=258,slow=1.3,SNR=2.0						
YKA	Yellowknife Ar	139.60	314	PKP	PKPdf	13 50 51.0	+0.2
	0.1nm,0.6s,baz=135,slow=1.7,SNR=2.5						
ZALV	Zalesovo Beam	143.87	69	PKhKP	PKPpre	13 50 53.2	
	0.8nm,0.4s,baz=251,slow=4.5,SNR=3.5						
ZALV				PKP	PKPdf	13 50 59.1	+0.3
	1.2nm,0.4s,baz=224,slow=4.1,SNR=5.8						
SONM	Songino Array	150.40	94	PKPbc	PKPbc	13 51 14.3	-1.1
	0.8nm,0.5s,baz=209,slow=3.5,SNR=5.9						

*IDC **24** 13:36:56.5±1.8, 32°.84S×178°.31W, h0km, mb4.2/3, mb1 4.4/4, mb1mx4.0/25, mbtmp4.2/4, ML4.0/1, Error ellipse: s-maj=44.2km s-min=34.0km az=63.0*
*WEL **24** 13:36:59.6±1.4, 33°S±24°×17°7W±2°5, h206km±51km, M4.2/9, mB4.4/7, ML5.0/8, MLv4.7/9, Mw(mB)3.6/7, Error ellipse: s-maj=0.0km s-min=0.0km az=133.5*
*NEIC **24** 13:37:07.1±1.2, 33°.2S±0°.1×178°.9W±0°.2, h49km±11km, mb4.6/14, Error ellipse: s-maj=20.9km s-min=17.5km az=85.0*
ISC 24 13:36:56.9±1.3**, 32°.95S**±0°.08×**178°.2W**±0°.2**, h10km, n41, σ1s.35**/57**, mb4.5**/9**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	5.44	211	P	Pn	13 38 16.8	-1.2
MXZ				S	Sn	13 39 21.6	+1.0
WMGZ	Waiomatatini S	5.61	209	P	Pn	13 38 21.0	+0.7
WMGZ				S	Sn	13 39 27.6	+2.8
PKGZ	Pakihiroa	5.81	211	P	Pn	13 38 22.4	-0.7
PKGZ				S	Sn	13 39 29.6	-0.3
HAZ	Te Kaha	5.83	214	P	Pn	13 38 24.2	+0.8
HAZ				S	Sn	13 39 30.4	+0.1
PUZ	Puketiti	5.89	209	P	Pn	13 38 23.2	-1.0
PUZ				S	Sn	13 39 30.9	-0.9
RUGZ	Raukumara Rang	6.05	213	P	Pn	13 38 26.6	0.0
RUGZ				S	Sn	13 39 38.2	+2.3
TWGZ	Tauwhareparae	6.09	210	P	Pn	13 38 27.1	0.0
TWGZ				S	Sn	13 39 35.6	-1.2
CNGZ	Carnagh Statio	6.27	207	P	Pn	13 38 27.4	-2.0
TKGZ	Te Karaka	6.37	210	P	Pn	13 38 30.7	-0.1
TKGZ				S	Sn	13 39 43.0	-0.6
MWZ	Matawai	6.42	212	P	Pn	13 38 30.9	-0.6
MWZ				S	Sn	13 39 43.4	-1.5
OPRZ	Ohinepanea	6.52	220	P	Pn	13 38 34.3	+1.5
OPRZ				S	Sn	13 39 49.4	+2.1
URZ	Urewera	6.55	215	Pn	Pn	13 38 33.2	-0.1
	3.1nm,0.3s,baz=298,slow=24,SNR=24						
URZ				Sn	Sn	13 39 48.1	0.0
	11nm,0.3s,baz=262,slow=13,SNR=8.5						
URZ	Urewera	6.55	215	P	Pn	13 38 33.6	+0.3
URZ				S	Sn	13 39 45.7	-2.3
URZ	Urewera	6.55	215		Pn	13 38 33.9	+0.6
RIGZ	Rimuhau	6.63	209	P	Pn	13 38 34.5	0.0
RIGZ				S	Sn	13 39 49.5	-0.6
SNGZ	Shannon Statio	6.88	211	P	Pn	13 38 36.3	-1.5
SNGZ				S	Sn	13 39 55.6	-0.4
TOZ	Tahuroa Road	7.04	226	P	Pn	13 38 44.0	+4.0
RAHZ	Arahi	7.10	212	P	Pn	13 38 42.5	+1.7
RAHZ				S	Sn	13 40 00.1	-1.4
MTHZ	Maungataniwha	7.16	213	P	Pn	13 38 43.1	+1.5
MTHZ				S	Sn	13 40 01.5	-1.4
BKZ	Black Stump Fm	7.57	213		Pn	13 38 46.7	-0.6
OUENC	Ouen Island, N	16.91	305	Pn	P	13 40 54.7	-0.9
OUENC				IAmb	IAmb	13 41 11.6	
	comp=Z,16nm,0.8s						
EIDS	Eidsvold	27.83	278	P	P	13 42 44.1	-2.4
EIDS				IAmb	IAmb	13 42 55.4	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	33.85	261	P	P	13 43 37.8	-1.8
CTAO	Charters Tower	34.16	283	P	P	13 43 42.1	-0.2
BBOO	Buckleboo	38.21	257	P	P	13 44 16.4	-0.6
BBOO				IAmb	IAmb	13 44 17.1	
	comp=Z,12nm,1.3s						
COEN	Coen	39.90	289	P	P	13 44 32.2	+1.0
AS31	Alice Springs	42.90	270	P	P	13 44 54.5	-1.4
ASAR	Alice Springs	42.90	270	P	P	13 44 56.2	+0.4
	comp=Z,2.2nm,0.8s,baz=108,slow=7.7,SNR=48						
ASAR	Alice Springs	42.90	270	P	P	13 44 54.2	-1.6
WR0	Warramunga Arr	43.94	275	P	P	13 45 04.1	-0.1
WR0				IAmb	IAmb	13 45 15.6	
	comp=Z,18nm,1.4s						
WB2	Warramunga Arr	44.11	275	P	P	13 45 05.4	-0.2
WB2				IAmb	IAmb	13 45 27.3	
	comp=Z,9.6nm,1.1s						
WRAB	Tennant Creek	44.11	275	P	P	13 45 05.6	0.0
WRAB				IAmb	IAmb	13 45 12.7	
	comp=Z,21nm,1.5s						
WRA	Warramunga Arr	44.12	275	P	P	13 45 05.8	+0.1
	comp=Z,3.6nm,0.6s,baz=114,slow=7.6,SNR=70						
WRA	Warramunga Arr	44.12	275	P	P	13 45 05.4	-0.3
WB0	Warramunga Arr	44.15	275	P	P	13 45 05.3	-0.6
WB0				IAmb	IAmb	13 45 06.8	
	comp=Z,25nm,1.4s						
FORT	Forrest	45.32	258	P	P	13 45 13.8	-1.3
QSPA	South Pole Qui	57.17	180	P	P	13 46 45.9	+2.1
	comp=Z,1.4nm,0.8s,baz=16,slow=1.3,SNR=6.0						
QSPA	South Pole Qui	57.17	180	P	P	13 46 46.5	+2.7
QSPA				IAmb	IAmb	13 46 59.7	
	comp=Z,7.2nm,0.9s						
FIA1	FINESS Array S	147.47	338	PKPdf	PKPbc	13 56 41.0	+0.7
FINES	FINESS Array B	147.47	338	PKPbc	PKPbc	13 56 40.4	+0.1
	comp=Z,4.2nm,0.7s,baz=65,slow=3.8,SNR=19						
FINES	FINESS Array B	147.47	338	PKPdf	PKPbc	13 56 41.0	+0.6

*WEL **24** 13:40:03.9±0.9, 33°S±8°×17°8W±2°0, h33km, M4.9/16, mB5.2/12, ML5.6/16, MLv5.3/16, Mw(mB)4.6/12, Error ellipse: s-maj=0.0km s-min=0.0km az=110.1*
*IDC **24** 13:40:10.7±3.3, 32°.59S×178°.43W, h48km±29km, mb4.3/9, mb1 4.5/10, mb1mx4.2/37, mbtmp4.5/10, ML4.5/1, MS4.0/18, Ms1 4.0/18, ms1mx3.9/30, Error ellipse: s-maj=24.2km s-min=18.9km az=99.0*
*NEIC **24** 13:40:11.3±1.6, 33°.0S±0°.2×178°.6W±0°.3, h44km±12km, mb4.8/21, Error ellipse: s-maj=39.2km s-min=10.5km az=55.0*
ISC 24 13:40:04.1±0.5**, 32°.92S**±0°.05×**178°.20W**±0°.09**, h10km, n114, σ2s.18**/115**, mb4.8**/19**, MS4.0**/20**, 1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.66	4	P	Pn	13 40 57.0	-3.7
GLKZ				S	Sn	13 41 38.9	-4.9
RAO	Raoul Island	3.67	4	P	Pn	13 41 00.2	-0.6
	53nm,0.3s,baz=298,slow=22,SNR=4.0						
RAO				S	Sn	13 41 41.4	-2.8
	131nm,0.3s,baz=111,slow=24,SNR=5.7						
MXZ	Matakaoa Point	5.44	211	P	Pn	13 41 22.9	-2.3
MXZ				S	Sn	13 42 26.0	-1.9
MXZ	Matakaoa Point	5.44	211	Pn	Pn	13 41 25.7	+0.4
WMGZ	Waiomatatini S	5.62	209	P	Pn	13 41 26.4	-1.2
WMGZ				S	Sn	13 42 32.3	+0.1
PKGZ	Pakihiroa	5.81	210	P	Pn	13 41 28.7	-1.8
PKGZ				S	Sn	13 42 36.6	-0.6
HAZ	Te Kaha	5.83	213	P	Pn	13 41 29.6	-1.1
HAZ				S	Sn	13 42 38.8	+1.2
PUZ	Puketiti	5.89	208	P	Pn	13 41 28.9	-2.6
PUZ				S	Sn	13 42 35.8	-3.4
TWGZ	Tauwhareparae	6.10	210	P	Pn	13 41 33.2	-1.1
TWGZ				S	Sn	13 42 43.7	-0.5
CNGZ	Carnagh Statio	6.27	207	P	Pn	13 41 34.8	-1.9
CNGZ				S	Sn	13 42 48.4	0.0
TKGZ	Te Karaka	6.38	209	P	Pn	13 41 36.6	-1.5
TKGZ				S	Sn	13 42 48.7	-2.2
URZ	Urewera	6.55	214	P	Pn	13 41 40.9	+0.4
	6.9nm,0.3s,baz=281,slow=7.3,SNR=8.2						
URZ				S	Sn	13 42 54.4	-0.9
	34nm,0.3s,baz=194,slow=21,SNR=10						
URZ	Urewera	6.55	214	P	Pn	13 41 39.5	-1.0
URZ				S	Sn	13 42 52.9	-2.4
URZ	Urewera	6.55	214	Pn	Pn	13 41 40.6	+0.1
RAGZ	Rawiri	6.61	211	P	Pn	13 41 41.7	+0.4
RAGZ				S	Sn	13 42 55.1	-1.7
RIGZ	Rimuhau	6.64	208	P	Pn	13 41 39.9	-1.9
RIGZ				S	Sn	13 42 55.1	-2.4
PRGZ	Paritu Road	6.78	207	P	Pn	13 41 40.1	-3.5
PRGZ				S	Sn	13 42 58.1	-2.9
RTZ	Ruatahuna	6.90	213	P	Pn	13 41 44.0	-1.4
RRRZ	Republican Roa	6.91	217	P	Pn	13 41 44.1	-1.4
RRRZ				S	Sn	13 43 03.4	-0.7
MHGZ	Mahia Peninsul	6.97	206	P	Pn	13 41 42.4	-3.9
RAHZ	Arahi	7.10	211	P	Pn	13 41 48.9	+0.9
RAHZ				S	Sn	13 43 07.0	-1.8
MTHZ	Maungataniwha	7.16	213	P	Pn	13 41 49.7	+0.8
MTHZ				S	Sn	13 43 07.2	-3.0
ALRZ	Allen Road	7.17	217	P	Pn	13 41 48.7	-0.2
OUZ	Omahuta	7.18	249	Pn	Pn	13 41 52.4	+3.2
NMHZ	Naumai	7.37	212	P	Pn	13 41 51.7	-0.1
BKZ	Black Stump Fm	7.57	213	Pn	Pn	13 41 53.4	-1.1
OUENC	Ouen Island, N	16.86	305	Pn	P	13 44 01.4	-1.0
OUENC				IAmb	IAmb	13 44 08.3	
	comp=Z,72nm,0.9s						
ONTNC	Ouen Toro	17.21	304		P	13 44 04.7	-1.5
ONTNC				IAmb	IAmb	13 44 12.9	
	comp=Z,44nm,0.8s						
DZM	Mont Dzumac	17.37	305	P	P	13 44 09.3	+1.2
	comp=Z,1.2nm,0.3s,baz=118,slow=16,SNR=15						
DZM	Mont Dzumac	17.37	305	*e*Pn	P	13 44 11.1	+3.0
	comp=Z,101nm,1.1s						
DZM				*e*LR	LR	13 48 11.5	
	comp=Z,894nm,22.9s						
DZM	Mont Dzumac	17.37	305		P	13 44 10.1	+2.0
DZM				IAmb	IAmb	13 44 25.6	
	comp=Z,40nm,0.9s						
RAR	Rarotonga	20.10	59	LR	LR	13 51 52.3	
	comp=Z,405nm,19.1s,baz=248,slow=35						
TBI	Tubuai	27.00	77	*e*LR	LR	13 52 54.3	
	comp=Z,351nm,22.0s						
EIDS	Eidsvold	27.80	278	P	P	13 45 51.6	-1.8
EIDS				IAmb	IAmb	13 45 57.0	
	comp=Z,15nm,0.9s						
PPT2	Papeete2	29.93	66	*e*LR	LR	13 54 08.3	
	comp=Z,307nm,20.8s						
PPT	Papeete	29.94	66	LR	LR	13 56 18.8	
	comp=Z,316nm,21.5s,baz=246,slow=32						
STKA	Stephens Creek	33.82	261	P	P	13 46 47.4	+0.8
	comp=Z,2.5nm,0.8s,baz=101,slow=9.8,SNR=6.8						
STKA				LR	LR	14 00 01.4	
	comp=Z,442nm,18.2s,baz=59,slow=35						
STKA	Stephens Creek	33.82	261	P	P	13 46 45.0	-1.5
CTAO	Charters Tower	34.12	283	P	P	13 46 50.8	+1.6
CTAO				IAmb	IAmb	13 46 53.8	
	comp=Z,15nm,0.7s						
BBOO	Buckleboo	38.19	257	P	P	13 47 23.4	-0.5
BBOO				IAmb	IAmb	13 47 38.4	
	comp=Z,13nm,1.1s						
PMG	Port Moresby	39.59	298	LR	LR	14 01 44.3	
	comp=Z,108nm,20.7s,baz=100,slow=33						
COEN	Coen	39.86	289	P	P	13 47 38.9	+0.8
COEN				IAmb	IAmb	13 47 49.6	
	comp=Z,11nm,0.8s						
AS31	Alice Springs	42.87	270	P	P	13 48 02.2	-0.6
ASAR	Alice Springs	42.87	270	P	P	13 48 02.9	+0.1
	comp=Z,16nm,0.8s,baz=111,slow=7.5,SNR=68						
ASAR				S	S	13 54 23.2	-4.3
	comp=Z,1.6nm,1.0s,baz=115,slow=15,SNR=6.9						
ASAR				LR	LR	14 04 00.9	
	comp=Z,104nm,18.8s,baz=135,slow=34						
ASAR	Alice Springs	42.87	270	P	P	13 48 00.9	-1.9
WR0	Warramunga Arr	43.91	275	P	P	13 48 10.8	-0.4
WR0				IAmb	IAmb	13 48 16.5	
	comp=Z,28nm,1.3s						
WB2	Warramunga Arr	44.07	275	P	P	13 48 12.1	-0.4
WB2				IAmb	IAmb	13 48 13.2	
	comp=Z,20nm,0.6s						
WRAB	Tennant Creek	44.08	275	P	P	13 48 11.2	-1.4
WRAB				IAmb	IAmb	13 48 13.3	
	comp=Z,19nm,0.7s						
WRA	Warramunga Arr	44.08	275	P	P	13 48 12.4	-0.2
	comp=Z,16nm,0.6s,baz=115,slow=7.6,SNR=87						
WRA				LR	LR	14 06 47.2	
	comp=Z,211nm,18.7s,baz=115,slow=36						
WRA	Warramunga Arr	44.08	275	P	P	13 48 11.1	-1.5
WB0	Warramunga Arr	44.12	275	P	P	13 48 11.3	-1.6
WB0				IAmb	IAmb	13 48 13.2	
	comp=Z,22nm,0.7s						
FORT	Forrest	45.29	258	P	P	13 48 21.5	-0.6
VNDA	Vanda	45.58	186	P	P	13 48 27.8	+4.0
	comp=Z,2.3nm,1.0s,baz=10.0,slow=7.5,SNR=2.1						
VNDA				LR	LR	14 04 10.9	
	comp=Z,188nm,18.6s,baz=12,slow=31						
VNDA	Vanda	45.58	186	P	P	13 48 24.4	+0.7
MTN	Manton Dam	50.25	281	P	P	13 49 00.4	-0.4
KNRA	Kununurra	50.77	276	P	P	13 49 04.6	-0.1
CASY	Casey	52.85	209	P	P	13 49 20.6	+1.1
QSPA	South Pole Qui	57.20	180	P	P	13 49 55.1	+4.0
	comp=Z,3.9nm,0.8s,baz=86,slow=1.0,SNR=7.4						
QSPA				LR	LR	14 11 19.8	
	comp=Z,219nm,19.9s,baz=48,slow=32						
QSPA	South Pole Qui	57.20	180	P	P	13 49 52.4	+1.3
RPN	Rapa Nui	58.96	104	LR	LR	14 08 01.5	
	comp=Z,237nm,21.8s,baz=166,slow=28						
MAW	Mawson	69.90	201	P	P	13 51 16.9	+2.1
	comp=Z,5.0nm,0.8s,baz=157,slow=2.9,SNR=4.9						
MAW	Mawson	69.90	201	P	P	13 51 16.1	+1.3
PMSA	Palmer Station	70.05	155	LR	LR	14 16 01.3	
	comp=Z,101nm,18.4s,baz=101,slow=30						
USHA	Ushuaia	73.94	145	LR	LR	14 16 58.8	
	comp=Z,140nm,20.1s,baz=240,slow=30						
SYO	Syowa Base	74.63	193⇓	*e*P	P	13 51 41.0	-2.0
SNAA	Sanae	75.65	178	P	P	13 52 00.2	+11
VNA3	Neumayer Olymp	75.81	176	P	P	13 52 02.3	+12
VNA2	Neumayer--Watz	76.24	177	P	P	13 52 04.4	+12
	baz=176,slow=4.5						
VNA1	Neumayer--Stat	76.47	177	P	P	13 52 05.9	+12
MJAR	Matsushiro Arr	80.22	326	LR	LR	14 22 55.7	
	comp=Z,40nm,21.5s,baz=225,slow=32						
PLCA	Paso Flores	80.92	133	LR	LR	14 21 08.4	
	comp=Z,137nm,19.1s,baz=206,slow=30						
KSRS	Korea Array	86.16	320	P	P	13 52 43.6	-1.7
	comp=Z,1.9nm,0.8s,baz=142,slow=8.2,SNR=4.6						
KSRS				LR	LR	14 28 50.0	
	comp=Z,36nm,19.2s,baz=130,slow=34						
NJ2	Nanjing	87.75	311	*e*P	P	13 52 56.3	+3.1
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PETK	Petropavlovsk-	88.21	346	P	P	13 52 53.9	-1.0
	comp=Z,5.8nm,1.0s,baz=157,slow=7.8,SNR=3.8						
NVAR	Mina Array Bea	90.20	43	P	P	13 53 05.9	+1.0
	comp=Z,2.0nm,0.9s,baz=227,slow=6.2,SNR=8.1						
TXAR	Lajitas Array	93.89	58	LR	LR	14 29 17.8	
	comp=Z,104nm,18.6s,baz=0.0,slow=31						
CMAR	Chiang Mai Arr	94.07	289	PP	PP	13 57 11.2	+1.6
	comp=Z,0.5nm,0.4s,baz=128,slow=4.7,SNR=5.9						
CMAR				LR	LR	14 40 22.6	
	comp=Z,38nm,18.1s,baz=196,slow=38						
LPAZ	La Paz	97.26	115	LR	LR	14 34 21.5	
	comp=Z,32nm,18.0s,baz=243,slow=33						
HHC	Hu-ho-hao-te	97.86	314	*e*P	Pdif	13 53 42.6	+2.7
HHC				pmax	pmax		
	comp=Z,13nm,1.3s						
HHC				pmax	pmax		
	comp=Z,130nm,6.8s						
CPUP	Villa Florida	98.55	129	LR	LR	14 32 24.4	
	comp=Z,91nm,18.1s,baz=214,slow=32						
WMQ	Urumqi	114.63	307	*e*P	PKiKP	13 58 46.8	+2.3
MKAR	Makanchi Array	119.24	309	PKP	PKPdf	13 58 51.8	-1.4
	comp=Z,1.5nm,0.7s,baz=64,slow=2.8,SNR=10						
ZALV	Zalesovo Beam	119.78	317	PKP	PKPdf	13 58 53.3	-0.6
	comp=Z,0.9nm,0.6s,baz=132,slow=4.2,SNR=4.6						
TETE	Tete	122.52	217	*i* P	Pdif	13 55 20.0	-10
TETE	Tete	122.52	217	*i* P	Pdif	13 55 20.0	-10
ARCES	ARCESS Array B	141.01	347	PKP	PKPdf	13 59 33.9	+0.3
	comp=Z,6.2nm,1.1s,baz=2.3,slow=6.1,SNR=4.2						
KLMR	Klimovskoe	142.88	330	*e*	PKPdf	13 59 25.3	-12
KLMR				AMP		13 59 33.0	
	comp=Z,21nm,1.4s						
KBZ	Khabaz	146.31	301	PKPbc	PKPab	13 59 45.4	-0.2
	comp=Z,5.1nm,1.0s,baz=157,slow=8.0,SNR=4.4						
FIA1	FINESS Array S	147.43	338	PKPbc	PKPbc	13 59 47.8	+0.4
FINES	FINESS Array B	147.44	338	PKPbc	PKPbc	13 59 47.7	+0.3
	comp=Z,21nm,0.9s,baz=48,slow=3.3,SNR=23						
FINES	FINESS Array B	147.44	338		PKPbc	13 59 47.8	+0.4
VSU	Vasula	149.44	334	*e*P	PKPbc	13 59 53.5	+0.7
NB2	NORSAR Subarra	151.21	350	PKP	PKPbc	13 59 57.5	+0.5
	comp=Z,2.2nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.21	350	PKPbc	PKPbc	13 59 57.0	0.0
	comp=Z,2.4nm,0.7s,baz=15,slow=4.1,SNR=7.0						
IDID	Didziasalis	151.62	330	*e*P	PKiKP	13 59 59.7	+1.3
IIGN	Ignalina	151.81	330	*e*P	PKiKP	13 59 59.4	+0.6
NACGM	Naroch	151.87	329	*i* PKP	PKiKP	13 59 59.2	+0.2
PABE	Paberze	152.62	332	*e*P	PKiKP	14 00 01.3	+0.8
LIC	Lamto	152.69	165	*e*PKP1	PKiKP	14 00 02.6	+0.6
	comp=Z,36nm,1.3s						
KIC	Kosan Boka	152.88	166	*e*PKP1	PKPbc	14 00 02.6	+0.4
	comp=Z,4.9nm,0.6s						
TIC	Toumodi	153.10	165	*e*PKP1	PKiKP	14 00 03.5	+0.7
AKASG	Malin Array Be	153.15	320	PKPbc	PKPbc	14 00 01.8	+0.2
	comp=Z,3.4nm,0.7s,baz=60,slow=2.4,SNR=15						
DBIC	Dimbokro	153.16	165	PKPbc	PKPbc	14 00 03.5	+0.8
	comp=Z,1.9nm,0.6s,baz=157,slow=1.3,SNR=3.8						
BRTR	Keskin Array B	153.56	294	PKPbc	PKPbc	14 00 03.3	+0.2
	comp=Z,1.5nm,0.7s,baz=197,slow=3.0,SNR=3.0						
BRTR				PKPab	PKPab	14 00 14.4	-1.2
	comp=Z,3.6nm,0.8s,baz=160,slow=3.9,SNR=6.3						
CLL	Collm	159.88	339	*e*PKPab	PKPab	14 00 42.0	-0.1
TORD	Torodi Ar. Bea	160.32	180	PKP	PKPdf	14 00 05.4	+0.9
	comp=Z,0.8nm,0.8s,baz=239,slow=1.9,SNR=4.3						
TORD				PKPab	sPKPab	14 00 47.5	+0.7
	comp=Z,2.0nm,0.9s,baz=180,slow=3.8,SNR=5.5						
CONA	Conrad Observa	161.63	329	*e*P	PKPab	14 00 53.3	+3.3
	comp=Z,6.8nm,1.4s						
GERES	GERESS Array B	161.76	334	PKPab	PKPab	14 00 49.4	-1.2
	comp=Z,0.8nm,0.9s,baz=35,slow=4.9,SNR=5.3						
WATA	Walderalm	163.80	336	*i* P	PKPab	14 00 59.8	+0.2
	comp=Z,4.8nm,1.2s						
RETA	Reutte	163.94	338	*e*P	PKPab	14 01 00.2	+0.1
	comp=Z,12nm,1.8s						
MOTA	Moosalm	163.95	337	*e*P	PKPab	14 01 00.2	-0.1
	comp=Z,7.3nm,1.7s						
SQTA	Sankt Quirin	164.03	336	*e*P	PKPab	14 01 12.6	+12
	comp=Z,9.8nm,1.5s						
FETA	Feichten	164.36	337	*e*P	PKPab	14 01 02.5	+0.5
	comp=Z,7.1nm,1.8s						
DAVA	Damuels	164.39	339	*e*P	PKPab	14 01 02.5	+0.3
	comp=Z,6.8nm,1.3s						

*IDC **24** 13:59:45.3±5.0, 30°.13S×179°.50W, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.7/28, mbtmp3.8/2, Error ellipse: s-maj=228.2km s-min=79.3km az=166.0*
*WEL **24** 14:00:27.9±0.8, 32°S±10°×17°9E±2°4, h208km±29km, M4.1/10, mB4.1/4, MLv4.4/10, Mw(mB)3.1/4, Error ellipse: s-maj=0.0km s-min=0.0km az=111.4*
ISC 24 14:00:25.4±1.8**, 32°.0S**±0°.1×**178°.8E**±0°.2**, h300km, n25, σ2s.18**/42**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.92	47	S	S	14 02 15.1	-8.1
KUZ	Kuaotunu	5.38	208	P	Pn	14 01 46.5	-0.6
MXZ	Matakaoa Point	5.56	184	P	Pn	14 01 52.2	+2.9
MXZ				S	S	14 02 56.5	-0.4
HAZ	Te Kaha	5.80	188	P	Pn	14 01 53.7	+1.5
HAZ				S	S	14 03 02.0	-0.2
WMGZ	Waiomatatini S	5.81	183	P	Pn	14 01 55.2	+2.9
WMGZ				S	S	14 03 01.8	-0.6
PKGZ	Pakihiroa	5.90	186	P	Pn	14 01 56.8	+3.3
PKGZ				S	S	14 03 04.0	-0.5
PUZ	Puketiti	6.07	184	P	Pn	14 01 55.5	+0.1
PUZ				S	S	14 03 04.9	-3.2
TWGZ	Tauwhareparae	6.20	186	P	Pn	14 02 01.1	+4.1
TWGZ				S	S	14 03 11.3	+0.4
URZ	Urewera	6.40	192	P	Pn	14 02 01.1	+1.8
URZ				S	S	14 03 15.3	+0.2
MWZ	Matawai	6.40	189	P	Pn	14 02 02.2	+2.7
MWZ				S	S	14 03 15.3	0.0
RIGZ	Rimuhau	6.74	187	P	Pn	14 02 03.4	-0.1
RIGZ				S	S	14 03 21.5	-1.4
MTHZ	Maungataniwha	7.02	193	P	Pn	14 02 08.5	+1.6
MTHZ				S	S	14 03 28.0	-1.0
MRHZ	Matea Rd	7.09	195	P	Pn	14 02 10.5	+2.7
MRHZ				S	S	14 03 30.4	-0.2
BKZ	Black Stump Fm	7.39	194	P	Pn	14 02 13.3	+1.8
BKZ				S	S	14 03 35.9	-1.4
OTVZ	Oturere	7.59	199	P	Pn	14 02 16.6	+2.6
SNVZ	South Ngauruho	7.62	199	P	Pn	14 02 17.3	+3.0
MCHZ	McNeill Hill	7.62	192	P	Pn	14 02 16.2	+2.0
MCHZ				S	S	14 03 43.3	+0.9
KWHZ	Kaweka Forest	7.66	194	P	Pn	14 02 16.3	+1.7
KWHZ				S	S	14 03 42.6	-0.6
BHHZ	Black Hill Sta	7.80	196	P	Pn	14 02 17.2	+0.8
BHHZ				S	S	14 03 44.5	-1.9
KRHZ	Kereru	7.88	194	P	Pn	14 02 18.6	+1.2
KRHZ				S	S	14 03 45.7	-2.4
PXZ	Pawanui	8.16	191	P	Pn	14 02 21.1	+0.3
PXZ				S	S	14 03 49.7	-4.8
PNHZ	Pukenui	8.17	194	P	Pn	14 02 21.9	+0.9
PNHZ				S	S	14 03 52.0	-2.8
ASAR	Alice Springs	40.34	270	P	P	14 07 36.4	+1.7
	0.4nm,0.5s,baz=106,slow=7.4,SNR=13						
WRA	Warramunga Arr	41.48	276	P	P	14 07 45.5	+1.6
	1.1nm,0.3s,baz=112,slow=7.9,SNR=30						
FINES	FINESS Array B	145.63	337	PKP	PKPdf	14 19 22.2	-5.0
	1.6nm,0.9s,baz=28,slow=3.3,SNR=1.1						

*GCG **24** 14:03:31.3±0.6, 14°.08N×91°.72W, h13km±74km, MD3.5*
*SNET **24** 14:03:32.8±1.1, 13°.81N×91°.45W, h5km±35km, ML2.8*
ISC 24 14:03:27.5±3.1**, 14°.0N**±0°.1×**91°.9W**±0°.1**, h10km, n8, σ0s.61**/12**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG3	Santiaguito 3,	0.76	22	*e*P	Pn	14 03 43.9	-0.5
STG3				*e*S	Sb	14 03 53.9	+0.5
FUG	Fuego 3	1.09	66	*e*P	Pb	14 03 48.4	-0.1

FUG				eS	Sb	14 04 01.7	-1.1
PCG	Pacaya	1.28	73	eP	Pb	14 03 52.2	+0.3
PCG				eS	Sb	14 04 08.2	-0.4
NBG	Las Nubes	1.58	68	eP	Pb	14 03 57.2	+0.1
NBG				eS	Sn	14 04 17.6	+1.0
SLOZ	Alcaldia de Sa	2.02	89	eP	Pn	14 04 02.0	+0.2
SLOZ				IAML		14 04 31.1	
	comp=Z,77nm,0.4s						
NUBE	Las Nubes	2.03	93	eP	Pn	14 04 02.1	+0.1
NUBE				IAML		14 04 27.8	
	comp=Z,72nm,0.2s						
CEVE	Cerro Verde	2.19	94	eP	Pn	14 04 03.7	-0.5
JAYA	Jayaque - finc	2.38	98	eP	Pn	14 04 06.5	-0.3
JAYA				IAML		14 04 34.2	
	comp=Z,219nm,0.2s						

*IDC **24** 14:08:47.7±0.9,21°.12S×67°.35W,h171km±10km,mb3.5/6, mb1 3.6/11,mb1mx3.6/29,mbtmp4.0/11,Error ellipse: s-maj=19.9km s-min=13.1km az=127.0*

*GUC **24** 14:08:50.1±0.7,21°.16S×67°.64W,h193km±7km,ML4.1*

*SCB **24** 14:08:52.4±1.3,21°.18S×67°.54W,h161km±8km,ML3.8/9, Error ellipse: s-maj=3.6km s-min=3.1km az=0.0*

ISC 24 14:08:48.4±0.7,21°.12S±0°.04×67°.51W±0°.05,h181km±7km, n45,σ1ˢ.32/68,mb3.8/6,1C-11D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.75	247	⇓iP	Pn	14 09 24.4	+1.4
PB09				iS	Sn	14 09 50.9	+1.0
PB09	IPOC Station P	1.75	247	P	Pn	14 09 24.6	+1.5
PB09				S	Sn	14 09 48.3	-1.6
PB09				IAML		14 09 56.2	
	142nm,0.4s						
MOCB	Mochara	1.75	95	P	Pn	14 09 24.6	+1.2
MOCB				S	Sn	14 09 49.5	-1.0
MOCB				IAML		14 09 51.5	
	340nm,0.6s						
PB08	IPOC Station P	1.82	302	⇓iP	Pn	14 09 25.6	+1.5
PB08				iS	Sn	14 09 52.8	+1.2
PB08	IPOC Station P	1.82	302	P	Pn	14 09 25.6	+1.5
PB08				S	Sn	14 09 51.1	-0.6
PB08				IAML		14 09 54.1	
	238nm,0.3s						
PB01	IPOC Station P	1.85	272	⇓iP	Pn	14 09 24.5	+0.5
PB01				iS	Sn	14 09 51.2	-0.3
PB01				IAML		14 09 54.1	
	comp=E,708nm,0.1s						
PB01	IPOC Station P	1.85	272	P	Pn	14 09 25.0	+1.0
PB01				S	Sn	14 09 50.4	-1.2
PB01				IAML		14 09 55.3	
	comp=E,334nm,0.2s						
LVC	Limon Verde	1.97	221	P	Pn	14 09 26.5	+0.9
	comp=E,13nm,0.3s,baz=11,slow=8.3,SNR=163						
LVC				S	Sn	14 09 54.3	-0.2
	comp=E,24nm,0.3s,baz=193,slow=19,SNR=14						
LVC	Limon Verde	1.97	221	eP	Pn	14 09 26.5	+0.9
LVC				iS	Sn	14 09 55.0	+0.5
LVC	Limon Verde	1.97	221	P	Pn	14 09 26.7	+1.1
YJA	Yavi	2.13	120	P	Pn	14 09 28.5	+1.0
PB03	IPOC Station P	2.28	246	⇓iP	Pn	14 09 29.6	+0.7
PB03				iS	Sn	14 09 59.6	-0.6
PB03				IAML		14 10 00.7	
	comp=E,658nm,0.1s						
PB03	IPOC Station P	2.28	246	P	Pn	14 09 29.5	+0.7
PB03				S	Sn	14 09 58.0	-2.2
PB03				IAML		14 10 01.5	
	comp=E,470nm,0.2s						
PB07	IPOC Station P	2.29	254	⇓iP	Pn	14 09 29.4	+0.4
PB07				iS	Sn	14 09 59.5	-1.0
PB07				IAML		14 10 00.5	
	comp=N,819nm,0.3s						
PB07	IPOC Station P	2.29	254	P	Pn	14 09 29.6	+0.6
PB07				S	Sn	14 09 58.3	-2.2
PB07				IAML		14 10 00.7	
	comp=N,644nm,0.2s						
PB11	IPOC Station P	2.42	304	⇓iP	Pn	14 09 31.1	+0.7
PB11				iS	Sn	14 10 02.3	-0.8
PB11				IAML		14 10 04.8	
	comp=N,1μm,0.1s						
PB11	IPOC Station P	2.42	304	P	Pn	14 09 31.3	+0.8
PB11				S	Sn	14 10 02.0	-1.1
PB11				IAML		14 10 04.7	
	comp=N,818nm,0.2s						
PB06	IPOC Station P	2.48	230	⇓iP	Pn	14 09 31.7	+0.7
PB06				iS	Sn	14 10 03.9	-0.4
PB06				IAML		14 10 05.7	
	comp=E,735nm,0.1s						
PB06	IPOC Station P	2.48	230	P	Pn	14 09 31.8	+0.7
TA01	Diego Aracena	2.56	282	⇓iP	Pn	14 09 31.9	+0.1
TA01				iS	Sn	14 10 04.0	-1.6
TA01				IAML		14 10 05.8	
	comp=E,462nm,0.6s						
PB04	IPOC Station P	2.73	243	⇓iP	Pn	14 09 34.4	+0.3
PB04				iS	Sn	14 10 08.1	-1.6
PB04				IAML		14 10 12.8	
	comp=N,377nm,0.1s						
PB04	IPOC Station P	2.73	243	P	Pn	14 09 34.7	+0.6
PB04				S	Sn	14 10 06.8	-2.8
PB04				IAML		14 10 13.0	
	comp=N,305nm,0.1s						
PB15	IPOC Station P	2.76	221	⇑iP	Pn	14 09 35.3	+0.9
PB15				iS	Sn	14 10 09.6	-0.7
PB15	IPOC Station P	2.76	221	P	Pn	14 09 35.1	+0.7
PB15				S	Sn	14 10 07.1	-3.2
PB15				IAML		14 10 12.4	
	comp=N,1μm,0.5s						
PB05	IPOC Station P	3.03	235	⇓iP	Pn	14 09 38.2	+0.5
PB05				iS	Sn	14 10 13.9	-2.2
PB05				IAML		14 10 16.2	
	comp=E,322nm,0.3s						
PB05	IPOC Station P	3.03	235	P	Pn	14 09 38.4	+0.8
PB12	IPOC Station P	3.64	313	⇓iP	Pn	14 09 44.5	-0.6
PB12				iS	Sn	14 10 26.5	-3.0
PB12				IAML		14 10 29.6	
	comp=E,187nm,0.4s						
PB10	IPOC Station P	3.69	229	P	Pn	14 09 46.0	+0.4
BBOE	La Paz, Chanca	4.31	354	P	Pn	14 09 56.2	+2.1
BBOD	La Paz, Gloria	4.58	347	P	Pn	14 09 59.6	+2.1
LPAZ	La Paz	4.84	353	P	Pn	14 10 01.8	+0.8
	comp=E,5.7nm,0.3s,baz=134,slow=5.2,SNR=98						
LPAZ	La Paz	4.84	353	P	Pn	14 10 02.8	+1.8
SIV	San Ignacio	7.96	51	P	Pn	14 10 38.8	-2.5
	comp=E,7.2nm,0.3s,baz=234,slow=11,SNR=84						
SIV				S	Sn	14 12 02.9	-7.7
	comp=E,0.3nm,0.3s,baz=304,slow=22,SNR=5.7						
BDFB	Brasilia	19.28	77	P	P	14 12 59.1	-0.6
	comp=E,0.9nm,0.3s,baz=264,slow=8.9,SNR=6.5						
PLCA	Paso Flores	19.72	187	P	P	14 13 04.9	+0.7
	comp=E,0.2nm,0.3s,baz=7.9,slow=10,SNR=7.7						
PTGA	Pitinga	21.56	21	P	P	14 13 21.8	-2.1
	comp=E,0.9nm,0.3s,baz=314,slow=23,SNR=2.1						
TXAR	Lajitas Array	61.08	324	P	P	14 18 44.1	+0.6
	comp=E,0.2nm,0.6s,baz=152,slow=4.1,SNR=2.4						
DBIC	Dimbokro	67.38	73	P	P	14 19 23.4	-1.2
	comp=E,0.9nm,0.4s,baz=206,slow=8.8,SNR=2.7						
PDAR	Pinedale Array	74.44	329	P	P	14 20 07.8	+0.8
	comp=E,0.3nm,0.5s,baz=117,slow=8.8,SNR=6.7						
TORD	Torodi Ar. Bea	76.00	70	P	P	14 20 15.6	-0.5
	comp=E,3.4nm,0.4s,baz=255,slow=5.5,SNR=33						
YKA	Yellowknife Ar	91.27	340	P	P	14 21 33.9	+1.1
	comp=E,1.1nm,0.5s,baz=133,slow=4.6,SNR=36						
ASAR	Alice Springs	130.84	206	PKP	PKPdf	14 27 40.1	+1.1
	comp=E,0.4nm,0.8s,baz=137,slow=1.6,SNR=8.0						
WRA	Warramunga Arr	133.93	209	PKP	PKPdf	14 27 45.1	+0.2
	comp=E,1.0nm,1.1s,baz=143,slow=1.8,SNR=2.0						
MKAR	Makanchi Array	144.56	37	PKP	PKPab	14 28 03.5	+1.2
	comp=E,1.7nm,0.4s,baz=341,slow=2.9,SNR=50						
SONM	Songino Array	152.90	9	PKPbc	PKPbc	14 28 23.8	-0.4
	comp=E,0.4nm,0.6s,baz=270,slow=3.7,SNR=2.7						

*THE **24** 14:29:44.3,38°.43N×20°.48E,h16km,ML2.5/3,Error ellipse: s-maj=1.6km s-min=0.4km az=281.0*

*ATH **24** 14:29:44.5,38°.44N×20°.48E,h17km±1km,ML2.1/3,Error ellipse: s-maj=2.8km s-min=0.6km az=283.0*

ISC 24 14:29:43.4±0.9,38°.45N±0°.02×20°.41E±0°.05,h23km±6km, n30,σ0ˢ.91/60,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.19	176	P	Pb	14 29 48.8	+0.1
KEF4				S	Sb	14 29 52.0	-0.3
KEF4	Livadi, Kephal	0.19	176	P	Pb	14 29 48.8	+0.1
KEF4				S	Sb	14 29 52.0	-0.3
DMLN	Damoulianata-K	0.21	188	P	Pb	14 29 49.3	+0.3
DMLN				S	Sb	14 29 52.9	+0.1
	3μm,0.3s						
DMLN	Damoulianata-K	0.21	188	P	Pb	14 29 49.4	+0.3
DMLN				S	Sb	14 29 52.9	+0.1
LXRA	Lixouri, Kepha	0.25	175	P	Pb	14 29 49.8	+0.3
LXRA				S	Sb	14 29 54.0	+0.5
KEF3	Kipouria, Keph	0.25	191	P	Pb	14 29 49.5	0.0
KEF3				S	Sb	14 29 53.3	-0.3
	3μm,0.2s						
KEF3	Kipouria, Keph	0.25	191	P	Pb	14 29 49.5	0.0
KEF3				S	Sb	14 29 53.3	-0.3
EVGI	Lefkada island	0.26	48	P	Pb	14 29 49.6	-0.1
EVGI				S	Sb	14 29 53.3	-0.7
EVGI	Lefkada island	0.26	48	P	Pb	14 29 49.6	-0.1
EVGI				S	Sb	14 29 53.3	-0.7
DRAG	Dragano-Lefkad	0.27	29	P	Pb	14 29 50.0	+0.1
DRAG				S	Sb	14 29 54.7	+0.4
DRAG	Dragano-Lefkad	0.27	29	P	Pb	14 29 50.0	+0.1
DRAG				S	Sb	14 29 54.7	+0.4
ARGA	Argostoli. Kep	0.27	168	P	Pb	14 29 50.8	+1.0
ARGA				S	Sb	14 29 55.1	+0.8
VLS	Valsamata	0.30	152	P	Pb	14 29 50.1	-0.3
VLS				S	Sb	14 29 54.4	-0.7
VLS	Valsamata	0.30	152	P	Pb	14 29 50.1	-0.3
VLS				S	Sb	14 29 54.4	-0.7
VLS				AML	AML	14 29 55.0	
	comp=N,1938μm,0.2s						
VLS				AML	AML	14 29 55.5	
	comp=E,1609μm,0.1s						
NYDR	Nydri-Lefkada	0.35	40	P	Pb	14 29 51.1	0.0
NYDR				S	Sb	14 29 56.2	-0.1
NYDR	Nydri-Lefkada	0.35	40	P	Pb	14 29 51.1	0.0
NYDR				S	Sb	14 29 56.2	-0.1
PSDA	Pessada-Kefalo	0.36	157	P	Pb	14 29 51.2	0.0
PSDA				S	Sb	14 29 56.1	-0.4
PSDA	Pessada-Kefalo	0.36	157	P	Pb	14 29 51.2	0.0
PSDA				S	Sb	14 29 56.1	-0.4
LKD2	Lefkada island	0.39	30	P	Pb	14 29 52.0	+0.2
LKD2				S	Sb	14 29 57.7	+0.1
	comp=E,362nm,0.3s						
LKD2	Lefkada island	0.39	30	P	Pb	14 29 52.0	+0.2
LKD2				S	Sb	14 29 57.7	+0.1
LKD2				AML	AML	14 29 59.3	
	comp=N,698μm,0.3s						
LKD2				AML	AML	14 29 59.6	
	comp=E,747μm,0.3s						
TSLK	Tsoukalades, L	0.42	27	P	Pb	14 29 52.8	+0.5
TSLK				S	Sb	14 29 59.2	+0.8
TSLK	Tsoukalades, L	0.42	27	P	Pb	14 29 52.8	+0.5
TSLK				S	Sb	14 29 59.2	+0.8
TSLK				AML	AML	14 30 01.4	
	comp=E,677μm,0.3s						
TSLK				AML	AML	14 30 01.6	
	comp=N,694μm,0.3s						
LTHK	Lithakia	0.81	155	P	Pb	14 29 58.8	0.0
LTHK				S	Sb	14 30 10.2	+0.9
LTHK	Lithakia	0.81	155	P	Pb	14 29 58.8	0.0
LTHK				S	Sb	14 30 10.2	+0.9
LSTV	Lastovo	5.08	329	ePn	Pn	14 30 59.3	+1.1
LSTV				Sn	Sn	14 31 54.2	-1.9
HVAR	Hvar	5.60	329	ePn	Pn	14 31 06.5	+1.2
HVAR				Sn	Sn	14 32 06.7	-2.2
KIJV	Kijevo	6.32	333	ePn	Pn	14 31 17.1	+1.9
KIJV				Sn	Sn	14 32 25.1	-1.5
ZIRJ	Zirje	6.33	327	ePn	Pn	14 31 16.7	+1.4
ZIRJ				Sn	Sn	14 32 24.1	-2.7
MORI	Morici	6.47	328	ePn	Pn	14 31 18.7	+1.4
MORI				Sn	Sn	14 32 28.9	-1.4
DUGI	Dugi Otok	6.85	326	ePn	Pn	14 31 24.0	+1.5
DUGI				Sn	Sn	14 32 37.5	-2.2

*IDC **24** 14:37:30.8±2.2,5°.88S×146°.20E,h120km±24km,mb3.7/10, mb1 3.8/13,mb1mx3.7/32,mbtmp4.1/13,Error ellipse: s-maj=25.3km s-min=17.3km az=92.0*

ISC 24 14:37:29.3±0.7,5°.76S±0°.07×146°.2E±0°.1,h100km,n34, σ0ˢ.91/35,mb4.4/15,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.76	165	P	Pn	14 38 26.6	+1.3
	17nm,0.3s,baz=352,slow=6.2,SNR=70						
PMG				S	Sn	14 39 08.0	-0.5
	82nm,0.3s,baz=147,slow=23,SNR=40						
PMG	Port Moresby	3.76	165	P	Pn	14 38 26.7	+1.4
PMG	Port Moresby	3.76	165	P	Pn	14 38 26.7	+1.4
COEN	Coen	8.66	200	P	Pn	14 39 32.7	+0.8
	49nm,0.8s						
SIJI	Sorong	15.64	288	P	Pn	14 41 06.3	+2.1
	3.0nm,0.3s,baz=154,slow=14,SNR=11						
MTN	Manton Dam	16.41	244	P	Pn	14 41 13.3	-0.5
	46nm,1.2s						
WRAB	Tennant Creek	18.18	218	P	P	14 41 34.3	0.0
WRA	Warramunga Arr	18.19	218	P	P	14 41 32.5	-2.0
	0.2nm,0.3s,baz=47,slow=10,SNR=11						
ASAR	Alice Springs	21.36	212	P	P	14 42 07.1	-1.7
	0.6nm,0.5s,baz=48,slow=7.5,SNR=16						
INKA	Innaminka	22.46	193	P	P	14 42 20.7	+0.4
	18nm,0.9s						
OOD	Oodnadatta	24.07	203	P	P	14 42 35.0	-0.5
STKA	Stephens Creek	26.33	189	P	P	14 42 54.9	-1.1
	2.1nm,0.8s,baz=1.5,slow=8.0,SNR=5.6						
KSRS	Korea Array	46.23	340	P	P	14 45 45.0	+0.4
	2.0nm,0.7s,baz=165,slow=9.8,SNR=5.9						
USRK	Ussuriysk Ar.	51.34	347	P	P	14 46 23.6	+0.1
	4.5nm,0.6s,baz=149,slow=6.5,SNR=8.5						
CMAR	Chiang Mai Arr	52.40	298	P	P	14 46 32.5	+0.7
	4.3nm,0.7s,baz=122,slow=5.9,SNR=41						
PETK	Petropavlovsk-	59.45	8	P	P	14 47 21.9	+0.4
	2.9nm,0.9s,baz=132,slow=6.2,SNR=6.5						
SONM	Songino Array	63.79	331	P	P	14 47 50.7	-0.2
	0.2nm,0.6s,baz=151,slow=3.4,SNR=3.8						
JIRN	Jiri	66.69	303	eP	P	14 48 10.4	0.0
	7.7nm,0.7s						
GUN	Gumba	67.04	303	eP	P	14 48 12.7	+0.1
	11nm,0.4s						
PKI	Pulchoki	67.31	303	eP	P	14 48 14.4	+0.1
PKIN	Phulchoki	67.33	303	eP	P	14 48 14.0	-0.3
KKN	Kakani	67.50	303	eP	P	14 48 15.1	-0.2
DMN	Daman	67.58	303	eP	P	14 48 15.9	0.0
GKN	Gorkha	68.10	303	eP	P	14 48 18.6	-0.5
DANN	Dangsing	68.95	303	eP	P	14 48 23.2	-1.3
	14nm,0.6s						
PYUN	Piuthan	69.51	303	eP	P	14 48 27.2	-0.7
	20nm,0.7s						
MKAR	Makanchi Array	76.78	321	P	P	14 49 09.9	-0.2
	0.6nm,0.5s,baz=97,slow=8.7,SNR=10						
ZALV	Zalesovo Beam	78.36	328	P	P	14 49 17.0	-1.7
	0.6nm,0.5s,baz=88,slow=4.9,SNR=2.6						
ILAR	Eielson Array	85.59	23	P	P	14 49 55.6	-0.7
	1.2nm,0.7s,baz=251,slow=5.0,SNR=18						
TORD	Torodi Ar. Bea	144.22	284	PKP	PKPab	14 56 53.1	+0.5
	1.7nm,0.5s,baz=60,slow=3.6,SNR=12						
KIC	Kosan Boka	151.06	273	ePKP1	PKPbc	14 57 12.1	+0.2
	9.1nm,0.7s						
DBIC	Dimbokro	151.17	273	PKPbc	PKPbc	14 57 12.1	-0.1
	7.4nm,0.7s,baz=111,slow=0.9,SNR=14						
TIC	Toumodi	151.34	273	ePKP1	PKPbc	14 57 12.7	+0.2
LIC	Lamto	151.34	272	ePKP1	PKPbc	14 57 12.7	+0.2
	33nm,0.7s						

IDC 24 15:09:29.7±2.1,2°.16N×126°.40E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.3/30,mbtmp3.3/3,MS2.8/1,Ms1 2.8/1, ms1mx2.3/16,Error ellipse: s-maj=179.5km s-min=26.2km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	15.04	108	LR	LR	15 18 33.8	
	comp=Z,35nm,20.0s,baz=328,slow=36						
WRA	Warramunga Arr	23.31	161	P	P	15 14 38.9	-0.6
	0.3nm,0.4s,baz=339,slow=11,SNR=9.9						
ASAR	Alice Springs	26.69	165	P	P	15 15 11.8	+1.0
	0.5nm,1.0s,baz=348,slow=13,SNR=2.5						
MKAR	Makanchi Array	58.65	326	P	P	15 19 28.7	-0.2
	0.2nm,0.5s,baz=121,slow=8.1,SNR=5.7						

*ANF **24** 15:13:33.9±0.4,35°.86N×97°.44W,h1km±4km,ML3.3/7, Error ellipse: s-maj=3.1km s-min=2.6km az=149.0*

*IASPEI **24** 15:13:34.5±0.9,35°.84N±0°.02×97°.44W±0°.03,h8km±7km, Error ellipse: s-maj=4.3km s-min=3.4km az=83.7,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*TUL **24** 15:13:34.6±1.2,35°.82N±0°.01×97°.43W±0°.02,h6km±7km, ML3.2,mb_Lg2.9/65(NEIC),Error ellipse: s-maj=2.5km s-min=1.2km az=139.0*

*NEIC **24** 15:13:34.6±0.6,35°.84N±0°.01×97°.46W±0°.02,h5km±2km, Error ellipse: s-maj=3.1km s-min=2.7km az=134.0*

ISC 24 15:13:34.6±0.9,35°.84N±0°.02×97°.45W±0°.02,h6km±6km, n80,σ0ˢ.52/74,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.05	187	Pg	Pg	15 13 35.9	-0.1
OK029				Sg	Sg	15 13 37.0	0.0
BCOK	Bluff Creek, N	0.23	215	Pg	Pg	15 13 39.1	+0.1
BCOK				Sg	Sg	15 13 42.8	+0.7
OK009	Oakdale Elemen	0.26	176	Pg	Pg	15 13 39.6	-0.1
OK025	Westminster Rd	0.28	161	Pg	Pg	15 13 40.0	-0.1
OK025				Sg	Sg	15 13 43.9	+0.3
OK005	Luther M Schoo	0.28	132	Pg	Pg	15 13 40.0	-0.2
OK005				Sg	Sg	15 13 43.9	+0.1
OK001	Jones High Sch	0.31	155	Pg	Pg	15 13 40.5	-0.1
OK001				Sg	Sg	15 13 44.8	+0.1
OKCFA	Oklahoma City	0.43	180		Pg	15 13 42.6	-0.2
OKCFA	Oklahoma City	0.43	180	P	Pg	15 13 42.7	-0.2
	baz=359,SNR=20						
OKCFA				S	Sg	15 13 48.7	+0.3
	baz=359						
OKCSW	OKLAHOMA CITY	0.44	179	Pg	Pg	15 13 42.8	-0.3
OK033	Mehan	0.46	64	Pg	Pg	15 13 43.8	+0.3
OK031	S. Brethren Rd	0.51	77	Pg	Pg	15 13 44.6	+0.2
OK030	Cody Creek RV	0.55	81		Pg	15 13 45.2	0.0
FNO	Franklin	0.58	176	Pg	Pg	15 13 45.5	-0.4
OK034	N. Norfolk Rd.	0.62	74	Pg	Pg	15 13 46.5	0.0
QUOK	Quay	0.68	61	Pg	Pg	15 13 47.8	0.0
CROK	Carrier	0.79	327	Pg	Pg	15 13 49.9	+0.1
W35A	Tecumseh	0.83	146	Pg	Pg	15 13 49.7	-0.9
BLOK	Blackwell	0.94	12		Pg	15 13 52.6	0.0
GC02	Grant County #	1.06	342	Pg	Pg	15 13 54.7	-0.3
OK032	Salt Plains WL	1.14	328		Pg	15 13 56.4	-0.2
KAN13	South Haven SW	1.17	359	Pg	Pg	15 13 57.0	-0.1
KAN14	Manchester OK	1.19	340		Pg	15 13 57.3	-0.2
KAN17	Caldwell West	1.23	348		Pg	15 13 58.0	-0.2
X34A	Smith Ranch, M	1.28	194	Pn	Pg	15 13 58.5	-0.7
KAN05	Bluff City Nor	1.31	345		Pn	15 13 59.3	-0.2
T35A	Sooner Cattle	1.31	35	Pn	Pn	15 13 59.0	-0.5
T35B	Sooner Cattle	1.31	35	P	Pn	15 13 59.0	-0.5
	baz=216,SNR=65						
T35B				S	Sg	15 14 16.9	+0.1
	baz=216						
KAN01	Argonia South	1.33	349		Pb	15 14 00.1	+0.1
OK035	E0210 Rd and N	1.34	311	Pn	Pn	15 13 59.8	-0.1
TUL1	Leonard	1.35	87	Pn	Pn	15 13 58.7	-1.3
TUL1				IAmb_Lg		15 14 19.0	
	comp=Z,121nm,1.1s						
TUL1	Leonard	1.35	87	P	Pn	15 13 58.6	-1.3
	baz=267,SNR=28						
TUL1				S	Sb	15 14 16.6	-1.1
	baz=267						
U32A	Winter Ranch,	1.37	294	Pn	Pn	15 13 59.7	-0.6
U32A	Winter Ranch,	1.37	294	P	Pn	15 13 60.0	-0.3
	baz=113,SNR=24						
U32A				S	Sn	15 14 19.5	+0.7
	baz=113						
KAN10	Anthony SW Sta	1.38	338		Pn	15 14 00.3	-0.2
KAN06	Argonia West S	1.44	347		Pn	15 14 00.7	-0.6
KAN06				IAmb_Lg		15 14 21.0	
	comp=Z,54nm,1.0s						
KAN08	Anthony NE Sta	1.45	343	Pn	Pn	15 14 01.2	-0.2
KAN16	Harper SW Stat	1.47	340		Pn	15 14 01.7	0.0
KAN12	Harper NE Stat	1.52	343		Pb	15 14 03.4	+0.2
WMOK	Wichita Mounta	1.55	225	Pn	Pn	15 14 02.8	-0.1
WMOK	Wichita Mounta	1.55	225	P	Pn	15 14 02.6	-0.2
	baz=44,SNR=82						
WMOK				S	Sn	15 14 23.2	0.0
	baz=44						
LOOK	Love County	1.86	173		Pn	15 14 07.5	+0.5
X37A	Clayton	2.11	126		Pn	15 14 10.9	+0.5
X37A				IAmb_Lg		15 14 43.6	
	comp=Z,53nm,0.8s						
X37A	Clayton	2.11	126	P	Pn	15 14 11.0	+0.5
	baz=307,SNR=29						
X37A				S	Sb	15 14 38.7	-1.1
	baz=307						
Z35A	Perchaven, San	2.51	176		Pn	15 14 16.4	+0.4
Z35A	Perchaven, San	2.51	176	P	Pn	15 14 16.4	+0.4
	baz=356						
U38A	Gravette	2.55	76		Pn	15 14 18.1	+1.6
U38A				IAmb_Lg		15 14 57.3	
	comp=Z,36nm,0.7s						
R32A	Long Quarter,	2.77	339	IAmb_Lg		15 15 06.6	
	comp=Z,27nm,0.8s						
HHAR	Hobbs	2.88	80	IAmb_Lg		15 15 08.0	
	comp=Z,26nm,0.7s						
W39A	Magazine	3.06	101		Pn	15 14 23.7	+0.2
W39A				IAmb_Lg		15 15 17.6	
	comp=Z,30nm,0.7s						
Z38A	Mt. Pleasant	3.28	141	IAmb_Lg		15 15 22.9	
	comp=Z,24nm,0.7s						
KSU1	Kansas State U	3.32	11	IAmb_Lg		15 15 28.3	
	comp=Z,34nm,0.9s						
MIAR	Mount Ida	3.42	111	Pn	Pn	15 14 29.0	+0.5
MIAR	Mount Ida	3.42	111	P	Pn	15 14 29.5	+1.0
	baz=293,SNR=20						
MIAR				S	Sn	15 15 10.4	+0.9
	baz=293						
AMTX	Amarillo	3.59	256		Pn	15 14 31.1	+0.2
AMTX				IAmb_Lg		15 15 33.0	
	comp=Z,31nm,0.8s						
ABTX	Abilene, Hawle	3.69	210	Pn	Pn	15 14 32.1	-0.1
ABTX				IAmb_Lg		15 15 40.6	
	comp=Z,21nm,0.9s						
U40A	Yellville	3.76	81		Pn	15 14 32.8	-0.4
S39A	Bolivar	3.79	60	Pn	Pn	15 14 33.8	+0.2
S39A				IAmb_Lg		15 15 41.1	
	comp=Z,26nm,0.8s						
X40A	Basin Creek Fa	4.01	108		Pn	15 14 37.1	+0.4
WLAR	White Oak Lake	4.17	120	IAmb_Lg		15 15 57.4	
	comp=Z,21nm,0.7s						
WHAR	Wooly Hollow	4.24	96		Pn	15 14 39.7	-0.1
WHAR				IAmb_Lg		15 15 51.5	
	comp=Z,46nm,1.2s						
FCAR	Ozark Folk Cen	4.32	88		Pn	15 14 40.5	-0.4
FCAR				IAmb_Lg		15 15 49.7	
	comp=Z,22nm,0.8s						
MGMO	Mountain Grove	4.37	71	IAmb_Lg		15 15 57.6	
	comp=Z,24nm,0.8s						
R40A	Maddies Statio	4.81	58	Pn	Pn	15 14 47.5	0.0
R40A				IAmb_Lg		15 16 08.0	
	comp=Z,20nm,0.8s						
P38A	Dawn	4.89	38	IAmb_Lg		15 16 10.6	
	comp=Z,16nm,0.8s						
435B	Jarrell	5.05	181	IAmb_Lg		15 16 19.1	
	comp=Z,22nm,0.8s						
KSCO	Kaye Shedlock'	5.20	309	IAmb_Lg		15 16 35.1	
	comp=Z,27nm,0.7s						
CCM	Cathedral Cave	5.44	64	IAmb_Lg		15 16 33.2	
	comp=Z,19nm,0.7s						
P40A	Paris	5.65	48	Pn	Pn	15 15 00.2	+1.2
P40A				IAmb_Lg		15 16 38.4	
	comp=Z,28nm,0.8s						
JCT	Junction City	5.70	201	Pn	Pn	15 14 60.0	+0.1
PBMO	Poplar Bluff	5.74	79	IAmb_Lg		15 16 36.3	
	comp=Z,30nm,0.9s						
T25A	Trinidad	5.76	285	Pn	Pn	15 15 01.1	+0.3
T25A				IAmb_Lg		15 16 42.9	
	comp=Z,17nm,0.8s						
FVM	French Village	6.02	67	IAmb_Lg		15 16 49.8	
	comp=Z,18nm,0.8s						
OGNE	Ogallala	6.24	326		Pn	15 15 06.9	-0.4
SLM	Saint Louis	6.39	62	IAmb_Lg		15 16 55.2	
	comp=Z,31nm,0.8s						
SDCO	Great Sand Dun	6.74	289		Pn	15 15 14.2	-0.1
S44A	Carbondale	6.83	72	IAmb_Lg		15 17 14.7	
	comp=Z,20nm,0.8s						
SCIA	State Center	6.90	27	IAmb_Lg		15 17 19.9	
	comp=Z,23nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
N41A	Harden Midland	7.10	45	IAmb_Lg		15 17 18.5	
	comp=Z,26nm,0.8s						
P43A	Skaggs, Pawnee	7.33	57	IAmb_Lg		15 17 32.3	
	comp=Z,26nm,0.9s						
PHWY	Pilot Hill	8.31	313	IAmb_Lg		15 18 17.5	
	comp=Z,9.4nm,0.9s						

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*IASPEI **24** 15:14:54.9±0.9, 35.°84N±0.°02×97.°44W±0.°03, h8^{km}±7^{km}, Error ellipse: s-maj=4.1km s-min=3.3km az=103.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **24** 15:14:54.2±0.5, 35.°86N×97.°44W, h2^{km}±4^{km}, ML3.5/6, Error ellipse: s-maj=4.0km s-min=3.0km az=128.0*

*TUL **24** 15:14:55.1±1.5, 35.°82N±0.°01×97.°43W±0.°02, h6^{km}±5^{km}, ML3.4, mb_Lg3.2/74(NEIC), Error ellipse: s-maj=2.2km s-min=1.3km az=134.0*

*NEIC **24** 15:14:55.0±0.6, 35.°84N±0.°01×97.°46W±0.°01, h7^{km}±5^{km}, Error ellipse: s-maj=1.7km s-min=1.1km az=213.0*

ISC 24 15:14:55.1±0.9, **35.°84N**±0.°02×**97.°45W**±0.°03, **h6**^{km}±6^{km}, **n77**, σ**0^{s}50**/56, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.05	188	Pg	Pg	15 14 56.5	0.0
OK029				Sg	Sg	15 14 57.3	-0.2
BCOK	Bluff Creek, N	0.23	215	Pg	Pg	15 14 59.7	+0.1
BCOK				Sg	Sg	15 15 03.2	+0.6
OK009	Oakdale Elemen	0.26	176		Pg	15 15 00.2	0.0
OK025	Westminster Rd	0.28	161	Pg	Pg	15 15 00.5	0.0
OK025				Sg	Sg	15 15 04.2	+0.1
OKCFA	Oklahoma City	0.43	181		Pg	15 15 03.3	0.0
OKCFA	Oklahoma City	0.43	181	P	Pg	15 15 03.2	-0.1
	baz=359						
OKCFA				S	Sg	15 15 09.2	+0.3
	baz=359						
OKCSW	OKLAHOMA CITY	0.44	179		Pg	15 15 03.4	-0.1
OKCSW				Sg	Sg	15 15 09.4	+0.2
OK033	Mehan	0.46	64	Pg	Pg	15 15 04.4	+0.4
OK033				Sg	Sg	15 15 10.6	+0.7
OK031	S. Brethren Rd	0.51	77	Pg	Pg	15 15 05.0	+0.2
OK031				Sg	Sg	15 15 11.9	+0.5
OK030	Cody Creek RV	0.55	81	Pg	Pg	15 15 05.6	0.0
OK030				Sg	Sg	15 15 12.9	+0.3
FNO	Franklin	0.59	176		Pg	15 15 06.1	-0.3
OK034	N. Norfolk Rd.	0.62	74	Pg	Pg	15 15 07.1	+0.2
QUOK	Quay	0.68	61	Pg	Pg	15 15 08.3	+0.2
OK011	Prague	0.71	120	Pg	Pg	15 15 08.7	-0.1
CROK	Carrier	0.79	327	Pg	Pg	15 15 10.0	-0.2
W35A	Tecumseh	0.83	146	Pg	Pg	15 15 10.1	-0.9
BLOK	Blackwell	0.93	11	Pg	Pg	15 15 13.3	+0.3
GC02	Grant County #	1.06	342	Pg	Pg	15 15 14.7	-0.7
OK032	Salt Plains WL	1.14	327	Pg	Pg	15 15 16.9	0.0
KAN13	South Haven SW	1.17	359	Pg	Pg	15 15 17.5	0.0
KAN14	Manchester OK	1.19	340	Pg	Pg	15 15 17.6	-0.2
KAN17	Caldwell West	1.23	348		Pb	15 15 18.6	0.0
X34A	Smith Ranch, M	1.28	194		Pn	15 15 19.0	-0.5
KAN05	Bluff City Nor	1.31	345		Pn	15 15 19.8	-0.1
T35A	Sooner Cattle	1.31	35		Pn	15 15 19.5	-0.4
T35B	Sooner Cattle	1.31	35	P	Pn	15 15 19.5	-0.5
	baz=216						
T35B				S	Sb	15 15 37.2	+0.1
	baz=216						
KAN01	Argonia South	1.33	349		Pn	15 15 19.8	-0.5
OK035	E0210 Rd and N	1.34	311		Pn	15 15 20.3	0.0
TUL1	Leonard	1.34	87	Pn	Pn	15 15 19.1	-1.2
TUL1				IAmb_Lg		15 15 38.7	
	comp=Z,165nm,1.0s						
TUL1	Leonard	1.34	87	P	Pn	15 15 19.2	-1.2
	baz=268						
TUL1				S	Sb	15 15 37.2	-1.0
	baz=268						
U32A	Winter Ranch,	1.37	293		Pn	15 15 20.1	-0.6
U32A	Winter Ranch,	1.37	293	P	Pn	15 15 20.6	-0.1
	baz=113						
KAN10	Anthony SW Sta	1.38	338		Pn	15 15 20.6	-0.3
KAN06	Argonia West S	1.44	347		Pn	15 15 21.9	+0.2
KAN06				IAmb_Lg		15 15 43.7	
	comp=Z,179nm,0.9s						
KAN08	Anthony NE Sta	1.44	343		Pn	15 15 21.9	+0.1
KAN16	Harper SW Stat	1.47	340		Pn	15 15 22.2	+0.1
KAN12	Harper NE Stat	1.52	343		Pn	15 15 22.6	-0.2
WMOK	Wichita Mounta	1.55	225	Pn	Pn	15 15 23.3	0.0
WMOK	Wichita Mounta	1.55	225	P	Pn	15 15 23.3	0.0
	baz=44						
WMOK				S	Sn	15 15 43.6	-0.1
	baz=44						
LOOK	Love County	1.86	173		Pn	15 15 27.8	+0.3
X37A	Clayton	2.11	126	Pn	Pn	15 15 31.6	+0.7
X37A				IAmb_Lg		15 16 04.4	
	comp=Z,83nm,0.8s						
X37A	Clayton	2.11	126	P	Pn	15 15 31.6	+0.7
	baz=307						
X37A				S	Sb	15 15 59.4	-0.7
	baz=307						
Z35A	Perchaven, San	2.51	176	Pn	Pn	15 15 36.2	-0.2
Z35A	Perchaven, San	2.51	176	S	Sn	15 16 08.9	+1.6
	baz=356						
U38A	Gravette	2.55	76	IAmb_Lg		15 16 16.0	
	comp=Z,77nm,1.0s						
W39A	Magazine	3.06	101	IAmb_Lg		15 16 35.8	
	comp=Z,55nm,0.7s						
Z38A	Mt. Pleasant	3.28	141	IAmb_Lg		15 16 46.9	
	comp=Z,70nm,1.1s						
KSU1	Kansas State U	3.32	11	IAmb_Lg		15 16 48.3	
	comp=Z,70nm,0.9s						
CBKS	Cedar Bluff	3.48	329	IAmb_Lg		15 16 47.4	
	comp=Z,84nm,0.8s						
U40A	Yellville	3.75	81	IAmb_Lg		15 16 55.8	
	comp=Z,39nm,0.8s						
S39A	Bolivar	3.79	60	IAmb_Lg		15 17 03.7	
	comp=Z,40nm,0.7s						
X40A	Basin Creek Fa	4.01	108	IAmb_Lg		15 17 10.8	
	comp=Z,49nm,1.0s						
R40A	Maddies Statio	4.81	58	IAmb_Lg		15 17 38.6	
	comp=Z,30nm,0.8s						
N33A	J Bar K, Exete	4.89	360	IAmb_Lg		15 17 39.1	
	comp=Z,34nm,0.7s						
435B	Jarrell	5.05	181	IAmb_Lg		15 17 40.0	
	comp=Z,46nm,0.9s						
KSCO	Kaye Shedlock'	5.20	309	IAmb_Lg		15 17 46.4	
	comp=Z,29nm,0.8s						
CCM	Cathedral Cave	5.43	64	IAmb_Lg		15 17 59.9	
	comp=Z,28nm,0.7s						
BGNE	Belgrade	5.58	355	IAmb_Lg		15 17 57.6	
	comp=Z,38nm,0.8s						
P40A	Paris	5.64	48	IAmb_Lg		15 17 56.6	
	comp=Z,54nm,0.8s						
JCT	Junction City	5.70	201	IAmb_Lg		15 17 59.0	
	comp=Z,61nm,0.8s						
PBMO	Poplar Bluff	5.74	79	IAmb_Lg		15 17 59.4	
	comp=Z,46nm,0.7s						
T25A	Trinidad	5.76	285	IAmb_Lg		15 18 04.2	
	comp=Z,29nm,0.8s						
FVM	French Village	6.02	67	IAmb_Lg		15 18 21.8	
	comp=Z,57nm,1.3s						
OGNE	Ogallala	6.24	326	IAmb_Lg		15 18 17.4	
	comp=Z,51nm,0.8s						
SLM	Saint Louis	6.39	62	IAmb_Lg		15 18 14.9	
	comp=Z,39nm,0.8s						
LNXT	Lenox	6.46	85	IAmb_Lg		15 18 23.6	
	comp=Z,47nm,0.7s						
HICK	Hickman	6.68	82	IAmb_Lg		15 18 36.1	
	comp=Z,50nm,0.7s						
S44A	Carbondale	6.83	72	IAmb_Lg		15 18 34.7	
	comp=Z,36nm,0.8s						
SCIA	State Center	6.89	27	IAmb_Lg		15 18 39.1	
	comp=Z,33nm,0.7s						
N41A	Harden Midland	7.10	45	IAmb_Lg		15 18 51.0	
	comp=Z,41nm,0.8s						
T45A	Paducah	7.19	78	IAmb_Lg		15 18 57.3	
	comp=Z,45nm,0.7s						
P43A	Skaggs, Pawnee	7.33	57	IAmb_Lg		15 18 55.9	
	comp=Z,41nm,0.8s						
ECSD	EROS Data Cent	7.91	4	IAmb_Lg		15 19 21.2	
	comp=Z,15nm,1.1s						
JFWS	Jewell Farm	8.99	36	IAmb_Lg		15 19 39.4	
	comp=Z,28nm,0.7s						
RWWY	Rawlins	9.60	310	IAmb_Lg		15 20 17.5	
	comp=Z,12nm,1.0s						
RSSD	Black Hills	9.69	331	IAmb_Lg		15 20 04.9	
	comp=Z,12nm,0.9s						
K22A	Casper	9.78	317	IAmb_Lg		15 20 20.6	
	comp=Z,23nm,1.1s						

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*IDC **24** 16:13:21.6±0.6, 4.°34S×129.°64E, h0^{km}, mb4.4/16, mb1 4.5/20, mb1mx4.1/45, mbtmp4.4/20, ML3.8/3, MS3.1/6, Ms1 3.2/6, ms1mx2.8/36, Error ellipse: s-maj=24.3km s-min=12.7km az=73.0*

*NEIC **24** 16:13:23.8±2.3, 4.°35S±0.°06×129.°60E±0.°09, h10^{km}±1^{km}, mb4.5/31, Error ellipse: s-maj=15.8km s-min=10.3km az=274.0*

*DJA **24** 16:13:25.0±0.8, 4°S±8°×13°0E±°, h10^{km}, M4.0/7, MLv4.0/7*

ISC 24 16:13:22.9±0.4, **4.°38S**±0.°04×**129.°61E**±0.°04, **h10**^{km}, **n87**, σ**1^{s}51**/90, **mb4.5**/28, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.33	115	P	Pg	16 13 30.9	+1.4
MSAI	Masohi	1.23	327	P	Pb	16 13 45.2	-1.1
MSAI				S	Sb	16 14 00.6	-1.6
AAI	Ambon	1.57	296	P	Pn	16 13 50.9	0.0
FAKI	Fak Fak	3.01	61	P	Pn	16 14 12.1	+1.3
FAKI				S	Sn	16 14 46.9	0.0
FAKI	Fak Fak	3.01	61	Pn	Pn	16 14 12.0	+1.3
FAKI	Fak Fak	3.01	61	P	Pn	16 14 12.2	+1.5
SIJI	Sorong	3.86	25	Pn	Pn	16 14 22.1	-0.3
	4.7nm,0.3s,baz=47,slow=3.1,SNR=28						
SIJI				Sn	Sn	16 15 07.9	0.0
	2.9nm,0.3s,baz=241,slow=23,SNR=1.6						
SIJI				LR	LR	16 16 30.1	
	comp=Z,222nm,18.3s,baz=114,slow=49						
SWI	Sorong	3.87	25	P	Pn	16 14 23.3	+0.8
SAUI	Saumlaki	3.96	155	Pn	Pn	16 14 26.0	+2.3
LBMI	Labuha	4.27	330	P	Pn	16 14 29.5	+1.4
SANI	Sanana	4.29	303	P	Pn	16 14 30.0	+1.7
SANI	Sanana	4.29	303	P	Pn	16 14 30.7	+2.4
MTN	Manton Dam	8.54	170	Pn	Pn	16 15 29.3	+2.5
KAPI	Kappang	9.84	266	LR	LR	16 19 23.7	
	comp=Z,105nm,20.4s,baz=106,slow=37						
KNRA	Kununurra	11.26	184	Pn	Pn	16 16 04.4	+0.4
FITZ	Fitzroy Crossi	14.18	196	Pn	Pn	16 16 43.5	-0.4
	0.3nm,0.3s,baz=29,slow=8.6,SNR=6.5						
FITZ				LR	LR	16 22 22.7	
	comp=Z,97nm,18.8s,baz=90,slow=38						
WB0	Warramunga Arr	15.99	163	P	Pn	16 17 05.1	-3.1
WB0				IAmb	IAmb	16 17 17.4	
	comp=Z,26nm,0.9s						
WRAB	Tennant Creek	16.14	164		Pn	16 17 07.2	-2.8
WRAB				IAmb	IAmb	16 17 21.1	
	comp=Z,49nm,1.4s						
WRA	Warramunga Arr	16.14	164	Pn	Pn	16 17 06.2	-3.9
	comp=Z,0.4nm,0.3s,baz=343,slow=13,SNR=20						
WRA	Warramunga Arr	16.14	164		Pn	16 17 08.4	-1.7
WB2	Warramunga Arr	16.14	164	Pn	Pn	16 17 07.3	-2.8
WB2				IAmb	IAmb	16 17 21.1	
	comp=Z,52nm,1.4s						
WR0	Warramunga Arr	16.21	163		Pn	16 17 09.2	-1.8
COEN	Coen	16.42	126		Pn	16 17 08.2	-5.5
COEN				IAmb	IAmb	16 17 18.6	
	comp=Z,27nm,0.9s						
PMG	Port Moresby	18.12	107	P	Pn	16 17 34.9	-0.1
	comp=Z,0.2nm,0.3s,baz=324,slow=8.3,SNR=8.9						
PMG				LR	LR	16 24 58.2	
	comp=Z,65nm,21.5s,baz=250,slow=38						
PMG	Port Moresby	18.12	107	Pn	Pn	16 17 33.4	-1.6
PMG				IAmb	IAmb	16 17 37.4	
	comp=Z,39nm,1.1s						
PMG	Port Moresby	18.12	107	P	P	16 17 36.4	+1.1
	comp=Z,34nm,1.2s						
PMG	Port Moresby	18.12	107	P	P	16 17 36.4	+1.1
	comp=Z,34nm,1.2s						
SBUM	Sibu	18.65	291		P	16 17 40.7	-0.5
PSA00	Pilbara Seismi	19.54	208		Pn	16 17 52.7	+0.6
PSA00	Pilbara Seismi	19.54	208	P	P	16 17 51.5	+0.6
PSA00				IAmb	IAmb	16 17 56.3	
	comp=Z,24nm,0.8s						
AS31	Alice Springs	19.62	168	P	P	16 17 52.0	+0.3
ASAR	Alice Springs	19.62	168	P	P	16 17 53.2	+1.5
	comp=Z,0.7nm,0.3s,baz=346,slow=9.2,SNR=110						
ASAR				S	S	16 21 30.3	-3.0
	comp=Z,0.0nm,0.3s,baz=350,slow=21,SNR=3.5						
ASAR				LR	LR	16 25 29.3	
	comp=Z,83nm,19.2s,baz=316,slow=37						
ASAR	Alice Springs	19.62	168		P	16 17 52.6	+0.8
KSM	Kuching	20.14	286	P	Pn	16 17 59.7	+0.3
KSM				IAmb	IAmb	16 18 04.4	
	comp=Z,22nm,1.2s						
CTA	Charters Tower	22.51	135	P	P	16 18 24.1	+1.1
	comp=Z,14nm,0.9s,baz=322,slow=13,SNR=8.9						
CTAO	Charters Tower	22.51	135	P	P	16 18 21.2	-1.8
CTAO	Charters Tower	22.51	135	P	P	16 18 24.5	+1.5
OOD	Oodnadatta	24.00	167	P	P	16 18 39.9	+2.0
	comp=Z,19nm,1.2s						
INKA	Innaminka	25.54	157	P	P	16 18 53.6	+1.6
	comp=Z,46nm,1.2s						
QLP	Quilpie	26.14	149	P	P	16 18 59.2	+1.8
	comp=Z,22nm,1.3s						
FORT	Forrest	26.30	183	P	P	16 18 58.2	-0.6
LCRK	Leigh Creek	27.17	164	P	P	16 19 08.4	+1.7
	comp=Z,27nm,0.9s						
BBOO	Buckleboo	28.92	169	P	P	16 19 21.5	-0.8
BBOO				IAmb	IAmb	16 19 30.0	
	comp=Z,12nm,1.4s						
STKA	Stephens Creek	29.58	159	P	P	16 19 28.9	+0.8
	comp=Z,7.6nm,0.9s,baz=329,slow=8.3,SNR=14						
STKA	Stephens Creek	29.58	159	P	P	16 19 28.3	+0.1
STKA	Stephens Creek	29.58	159	P	P	16 19 29.5	+1.3
	comp=Z,2.0nm,1.2s						
CMSA	Cobar Meteorol	30.96	153	P	P	16 19 42.2	+1.8
	comp=Z,14nm,1.0s						
CAN	Canberra	35.63	152	P	P	16 20 20.6	-0.6
CM31	Chiang Mai Arr	37.79	308	P	P	16 20 40.7	+0.9
CMAR	Chiang Mai Arr	37.79	308	P	P	16 20 41.1	+1.4
	comp=Z,1.7nm,0.7s,baz=140,slow=7.6,SNR=17						
CMAR				PcP	PcP	16 22 58.3	+1.7
	comp=Z,0.2nm,0.5s,baz=181,slow=0.9,SNR=4.3						
CMAR				LR	LR	16 36 58.8	
	comp=Z,18nm,19.6s,baz=175,slow=38						
CMAR	Chiang Mai Arr	37.79	308	P	P	16 20 40.1	+0.4
CHTO	Chiang Mai	37.99	308	P	P	16 20 42.0	+0.6
CHTO				IAmb	IAmb	16 20 45.2	
	comp=Z,4.5nm,0.8s						
SHL	Shillong	47.17	311	P	P	16 21 55.8	-0.4
SHL				IAmb	IAmb	16 22 02.4	
	comp=Z,5.3nm,1.0s						
HHC	Hu-ho-hao-te	47.95	342	*e*P	P	16 22 03.8	+1.9
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,77nm,5.2s						
USRK	Ussuriysk Ar.	48.41	2	P	P	16 22 05.3	+0.1
	comp=Z,1.9nm,0.8s,baz=210,slow=6.3,SNR=4.5						
USRK	Ussuriysk Ar.	48.41	2	P	P	16 22 05.2	0.0
KLR	Kul'dur	53.42	2	P	P	16 22 43.5	+0.6
	comp=Z,4.2nm,1.1s,baz=197,slow=5.2,SNR=5.1						
ULN	Ulaanbaatar	55.67	342	P	P	16 22 59.8	+0.3
SONM	Songino Array	55.85	341	P	P	16 23 02.0	+1.2
	comp=Z,6.0nm,1.1s,baz=162,slow=6.6,SNR=20						
SONM	Songino Array	55.85	341	P	P	16 23 01.0	+0.2
SONM				IAmb	IAmb	16 23 03.4	
	comp=Z,6.8nm,1.2s						
WMQ	Urumqi	61.00	326	*e*P	P	16 23 40.3	+3.5
PETK	Petropavlovsk-	61.98	19	P	P	16 23 44.5	+1.4
	comp=Z,1.3nm,0.4s,baz=326,slow=15,SNR=4.1						
PETK	Petropavlovsk-	61.98	19	P	P	16 23 43.3	+0.2
MK31	Makanchi Array	65.84	326	P	P	16 24 09.0	+0.3
MK31				IAmb	IAmb	16 24 09.9	
	comp=Z,3.1nm,1.1s						
MKAR	Makanchi Array	65.84	326	P	P	16 24 09.1	+0.4
	comp=Z,2.1nm,0.8s,baz=125,slow=7.5,SNR=18						
MKAR	Makanchi Array	65.84	326	P	P	16 24 08.0	-0.6
YAK	Yakutsk	66.22	0	P	P	16 24 11.0	+0.3
	comp=Z,6.4nm,0.8s,baz=269,slow=1.8,SNR=7.3						
YAK	Yakutsk	66.22	0	P	P	16 24 10.8	0.0
AAK	Ala-Archa	68.31	319	P	P	16 24 24.0	-0.7
AAK				IAmb	IAmb	16 24 26.2	
	comp=Z,3.9nm,1.2s						
ZAA0	Zalesovo Array	69.08	334	P	P	16 24 28.6	-0.4
ZALV	Zalesovo Beam	69.08	334	P	P	16 24 28.8	-0.1
	comp=Z,4.2nm,1.0s,baz=119,slow=5.2,SNR=12						
ZALV	Zalesovo Beam	69.08	334	P	P	16 24 27.8	-1.2
SEY	Seymchan	69.32	11	P	P	16 24 30.7	+0.4
	comp=Z,7.6nm,0.9s,baz=358,slow=24,SNR=9.6						
KURBB	Kurchatov Arra	70.09	328	P	P	16 24 34.3	-1.0
	comp=Z,4.2nm,0.9s,baz=127,slow=5.4,SNR=21						
KURK	Kurchatov	70.09	328	P	P	16 24 35.6	+0.3
KKAR	Karatay Array	71.13	318	P	P	16 24 40.4	-1.5
VNDA	Vanda	75.08	173	P	P	16 25 04.0	-0.5
	comp=Z,5.3nm,1.2s,baz=295,slow=4.8,SNR=3.6						
BRVK	Borovoye	75.73	328	P	P	16 25 08.8	+0.1
BRVK				IAmb	IAmb	16 25 11.2	
	comp=Z,4.2nm,0.9s						
TIXI	Tiksi	75.89	360	P	P	16 25 07.8	-1.4
	comp=Z,1.7nm,0.5s,baz=281,slow=1.4,SNR=5.6						
TIXI	Tiksi	75.89	360	P	P	16 25 08.9	-0.3
NRIK	Noril'sk	78.94	346	P	P	16 25 25.8	-0.6
	comp=Z,1.2nm,0.3s,baz=136,slow=7.2,SNR=6.6						
NRIK	Noril'sk	78.94	346	P	P	16 25 26.9	+0.5
NRIK				IAmb	IAmb	16 25 28.0	
	comp=Z,5.0nm,1.0s						
ILAR	Eielson Array	91.16	25	P	P	16 26 26.0	-1.9
	comp=Z,0.8nm,1.0s,baz=247,slow=4.9,SNR=4.5						
TORD	Torodi Ar. Bea	127.88	283	PKP	PKPdf	16 32 29.6	-0.4
	comp=Z,0.7nm,0.7s,baz=50,slow=2.0,SNR=4.5						
CPUP	Villa Florida	148.74	168	PKPbc	PKPbc	16 33 11.7	+0.3
	comp=Z,2.9nm,1.0s,baz=268,slow=4.2,SNR=3.0						
LPAZ	La Paz	152.99	140	PKPbc	PKPbc	16 33 22.6	+0.1
	comp=Z,0.8nm,0.5s,baz=145,slow=4.5,SNR=3.5						
LPAZ	La Paz	152.99	140		PKPbc	16 33 20.9	-1.6

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*IDC **24** 16:18:16.0±1.5, 36.°71N×140.°54E, h0^{km}, mb3.6/2, mb1 3.9/3, mb1mx2.9/48, mbtmp3.6/3, ML3.1/1, Error ellipse: s-maj=24.5km s-min=16.6km az=170.0*

*JMA **24** 16:18:17.1, 36.°78N×140.°59E, h6^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s154.00000°, δ44.00000°, λ-66.00000°. NP2: ϕ_s302.00000°, δ50.00000°, λ-112.00000°. Principal axes: T Plg3.0000°, Azm47.0000°; N Plg17.0000°, Azm316.0000°; P Plg73.0000°, Azm147.0000°;*

ISC 24 16:18:16.8±1.1, **36.°77N**±0.°03×**140.°57E**±0.°05, **h8**^{km}±9^{km}, **n15**, σ**0^{s}46**/22, **8C**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.16	179	⇑P	Pg	16 18 20.6	+0.6
JFFD	Fukushimafurud	0.32	359	⇑P	Pg	16 18 23.2	0.0
JFFD				S	Sg	16 18 27.4	-0.1
ONAJ	Iwakimizuishiy	0.38	29	⇑P	Pg	16 18 24.2	-0.1
JSB	Shiboa	0.56	291	⇑P	Pb	16 18 28.8	0.0
JSB				S	Sb	16 18 36.5	-0.5
JYT	Yasato	0.62	209	⇑P	Pb	16 18 29.2	-0.6
JYT				S	Sb	16 18 37.8	-0.8
JFK	Kawauchi	0.65	22	⇑P	Pg	16 18 28.9	-0.4
JFK				S	Sg	16 18 37.5	-0.3
JFT	Otama	0.77	346	⇑P	Pg	16 18 31.7	0.0
JFT				S	Sg	16 18 41.7	0.0
JFY	Yanaizu	0.94	313	P	Pb	16 18 35.4	0.0
JAG	Ashikaga	0.96	249	⇑P	Pg	16 18 35.0	-0.2
JKT	Katashina	1.06	270	P	Pb	16 18 37.2	-0.2
JKT				S	Sb	16 18 51.3	-0.2
MJAR	Matsushiro Arr	1.91	264	Pn	Pn	16 18 50.1	+0.4
	3.1nm,0.3s,baz=88,slow=14,SNR=64						
MJAR				Lg	Lg	16 19 14.3	
	5.0nm,0.3s,baz=83,slow=31,SNR=18						
MAT	Matsushiro	1.91	264	P	Pb	16 18 51.2	-0.7
MAT				S	Sb	16 19 16.7	+0.7
ASAJ	Asahikawa	7.50	11	Pn	Pn	16 20 06.8	+0.3
	0.3nm,0.3s,baz=186,slow=19,SNR=5.9						
WRA	Warramunga Arr	56.71	187	P	P	16 28 00.7	-0.3
	1.0nm,1.1s,baz=1.6,slow=7.5,SNR=5.4						
TXAR	Lajitas Array	90.82	52	P	P	16 31 21.8	+0.7
	0.2nm,0.7s,baz=295,slow=4.9,SNR=1.8						

IDC 24 16:34:18.9±1.5, **4.°13S**×**132.°28E**, **h0**^{km}, **mb3.7**/1, **mb1 3.5**/4, **mb1mx3.1**/31, **mbtmp3.4**/4, **ML2.7**/3, **Error ellipse: s-maj=130.9km s-min=5.2km az=78.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.39	343	Pn	Pn	16 35 13.1	0.0
	1.5nm,0.3s,baz=281,slow=23,SNR=11						
SIJI				Sn	Sn	16 35 55.3	+1.1
	0.8nm,0.3s,baz=176,slow=23,SNR=2.0						
WRA	Warramunga Arr	15.85	173	Pn	Pn	16 38 04.0	+0.4
	0.0nm,0.3s,baz=344,slow=12,SNR=2.1						
ASAR	Alice Springs	19.49	176	P	P	16 38 47.6	-0.1
	0.1nm,0.3s,baz=347,slow=10,SNR=8.5						
MKAR	Makanchi Array	67.13	325	P	P	16 45 14.7	+0.1
	0.6nm,0.7s,baz=122,slow=7.4,SNR=6.9						

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*KISR **24** 16:55:08.5±0.8, 30.°24N×49.°23E, h262^{km}±19^{km}, ML3.7*

*TEH **24** 16:55:09.8, 31.°02N×49.°94E, h14^{km}, ML3.1*

ISC 24 16:55:09.3±0.9, **30.°97N**±0.°04×**49.°89E**±0.°04, **h10**^{km}, **n38**, σ**1^{s}21**/41, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABEH	Behbahan	0.49	139	*e*Pg	Pb	16 55 20.4	+0.4
AMIS	Naft Sefid	0.86	324	*e*Pg	Pg	16 55 25.1	-0.8
AHWZ	Ahwaz	1.12	289	*e*Pg	Pb	16 55 31.3	+0.5
AHWZ				*e*Sg	Sn	16 55 48.4	+1.8
KLNJ	Kolanjah	1.47	88	*e*Pg	Pn	16 55 36.0	-0.2
KLNJ				*e*		16 56 02.2	
	comp=Z,4µm,0.5s						
IBRJ	Brojen	1.50	51	*e*Pg	Pg	16 55 37.6	-0.6
IBRJ				*e*		16 56 06.6	
	comp=Z,2µm,0.7s						
SHK1	Shahrekord	1.60	32	*e*Pg	Pg	16 55 39.0	-1.1
SHK1				*e*		16 56 04.7	
	comp=Z,3µm,0.6s						
IPIR	Pirpir	1.91	26	*e*Pn	Pb	16 55 43.9	-0.6
IPIR				*e*		16 56 15.1	
	comp=Z,2µm,0.4s						
IGAR	Gharneh	2.33	52	*e*Pn	Pb	16 55 49.4	-2.2
IGAR				*e*		16 56 30.4	
	comp=Z,888nm,0.5s						
AHBU	AHRAM	2.43	149	*e*Pn	Pb	16 55 54.2	+1.0
IKLH	Kolahrood	2.75	31	*e*Pn	Pn	16 55 55.4	+1.7
IKLH				*e*		16 56 43.8	
	comp=Z,732nm,0.4s						
KHMZ	Khomeyn	2.76	1	*e*Pn	Pn	16 55 54.9	+1.0
QRN	Al-Qurain	2.80	218	*e*P	Pn	16 55 53.5	-0.7
QRN				*e*S	Sn	16 56 27.3	-0.8
QRN				IAML		16 56 33.4	
	comp=Z,171nm,0.3s						
IZEF	Zefreh	2.83	47	*e*Pn	Pn	16 55 56.2	+1.4
RDF	Al-Radifah	2.87	225	*e*P	Pn	16 55 54.7	-0.5
RDF				*e*S	Sn	16 56 29.4	-0.5
RDF				IAML		16 56 39.9	
	comp=Z,250nm,0.5s						
RST	Umm Al-Ruwaisa	2.90	240	*e*P	Pn	16 55 55.1	-0.4
QAMS	Qamsar	3.04	24	*e*Pn	Pn	16 55 59.8	+2.1
IDOB	Doab	3.16	333	*e*Pn	Pn	16 56 01.2	+1.9
ISAD	Sadrabad	3.38	73	*e*Pn	Pn	16 56 03.5	+1.0
KRSH	Karshahi	3.54	32	*e*Pn	Pn	16 56 06.1	+1.5
ASAO	Ashtian	3.57	2	*e*Pn	Pn	16 56 06.4	+1.4
GHVR	GHOM	3.69	18	*e*Pn	Pn	16 56 07.4	+0.8
HAGD	Aghdareh	3.89	351	*e*Pn	Pn	16 56 10.6	+1.2
HAGD				*e*		16 57 15.1	
	comp=Z,252nm,0.6s						
ISFB	Sefidab	3.91	30	*e*Pn	Pn	16 56 10.5	+0.9
ISFB				*e*		16 56 12.3	
	comp=Z,194nm,0.2s						
ANAR	Anarak	3.94	55	*e*Pn	Pn	16 56 11.4	+1.4
IQOM	Qom	3.99	14	*e*Pn	Pn	16 56 11.7	+0.9
ICHK	Chekchek	4.06	71	*e*Pn	Pn	16 56 12.1	+0.3
IMEH	Mehriz	4.07	83	*e*Pn	Pn	16 56 12.4	+0.4
IALM	Almabolaq	4.14	340	*e*Pn	Pn	16 56 13.1	+0.2
YZKH	Yazd	4.25	69	*e*Pn	Pn	16 56 16.0	+1.7
IVRN	Varamin	4.30	21	*e*Pn	Pn	16 56 15.6	+0.7
IRAZ	Razeghan	4.42	0	*e*Pn	Pn	16 56 17.5	+0.8
SNGE	Sanandaj	4.63	333	*e*Pn	Pn	16 56 17.4	-2.2
QABG	Abgarm-Qazvin	4.73	357	*e*Pn	Pn	16 56 21.9	+0.9
IFIR	Firoozkooh	5.24	27	*e*Pn	Pn	16 56 29.2	+1.2
QALM	Alamut, Qazvin	5.48	6	*e*Pn	Pn	16 56 32.8	+1.5
ISHM	Shahmirzad	5.60	30	*e*Pn	Pn	16 56 34.0	+1.0
IANJ	Anjilo	5.61	36	*e*Pn	Pn	16 56 34.2	+1.1
SHRO	Shahrood	7.16	44	*e*Pn	Pn	16 56 55.6	+1.4

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*KLM **24** 17:00:51, 3.°65N×117.°85E, h1^{km}, mb3.9*

DJA 24 17:00:49.1±0.6,**3°N**±5°×**11°8E**±°,**h17**^{km}±6^{km},**M3.8**/7, **mb3.9**/5,**mB4.8**/1,**MLv3.8**/7,**Mw(mB)4.0**/1,**Borneo**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPMM	**Sapulut**	1.74	318	P	Pg	17 01 22.0	-0.7
MPSI	**Mapaga**	3.80	143	P	Pn	17 01 46.1	-0.8
MRSI	**Marisa**	5.19	124	P	Pn	17 02 05.5	-0.6
	0.1nm838nm25nm,0.6s						
APSI	**Ampana**	5.87	137	P	Pn	17 02 15.3	-0.1
GTOI	**Gorontalo**	6.03	117	P	Pn	17 02 14.7	-2.9
	0.0nm4.4nm,1.6s						

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*ATH **24** 17:15:19.4,35°.55N×28°.07E,h114^{km}±8^{km},ML3.2/6,Error ellipse: s-maj=8.9km s-min=1.8km az=43.0*

*NIC **24** 17:15:23.6±0.0,35°.36N×28°.32E,h9^{km}±1^{km},Ml3.8/4*

*DDA **24** 17:15:24.6,35°.53N×28°.10E,h45^{km}±4^{km},MW3.5*

*HLW **24** 17:15:24.8,35°.15N×28°.20E,h10^{km}±11^{km},Md3.8,Ml3.9*

*THE **24** 17:15:26.4,35°.55N×28°.20E,h80^{km}±7^{km},ML3.1/2,Error ellipse: s-maj=8.3km s-min=1.2km az=9.0*

ISC 24 17:15:24.7±0.9,**35°.43N**±0°.04×**28°.22E**±0°.03,**h60**^{km}±13^{km}, **n106**,σ**1ˢ.54**/121,**Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	0.79	354	P	Pn	17 15 40.4	+0.3
ARG				S	Sn	17 15 51.8	+0.4
	2μm,0.6s						
ARG	**Arkhangelos**	0.79	354	P	Pn	17 15 40.3	+0.3
ARG				AML	AML	17 15 55.8	
	comp=E,4013μm,0.4s						
ARG				AML	AML	17 15 57.1	
	comp=N,4891μm,0.7s						
ARG	**Arkhangelos**	0.79	354	P	Pn	17 15 40.4	+0.3
ARG				S	Sn	17 15 52.9	+1.5
KSL	**Kastellorizon**	1.32	57	P	Pn	17 15 48.3	+1.3
KSL				S	Sn	17 16 04.1	+0.4
	comp=N,288nm,0.4s						
KSL	**Kastellorizon**	1.32	57	P	Pn	17 15 48.3	+1.3
KSL				AML	AML	17 16 09.0	
	comp=E,773μm,0.4s						
KSL				AML	AML	17 16 37.8	
	comp=N,501μm,1.3s						
KSL	**Kastellorizon**	1.32	57	P	Pn	17 15 48.0	+1.0
KSL				S	Sn	17 16 06.5	+2.8
TURN	**Turunc**	1.35	1	*i* P	Pn	17 15 48.4	+1.0
AKAS	**Kas**	1.38	54	*i* P	Pn	17 15 49.0	+1.0
AKAS				*i* S	Sn	17 16 07.3	+1.9
FETY	**Fethiye**	1.39	30	P	Pn	17 15 48.5	+0.5
FETY	**Fethiye**	1.39	30	*i* P	Pn	17 15 47.0	-1.0
DAT	**Datca**	1.40	338	*i* P	Pn	17 15 47.7	-0.5
NISR	**Nisiros**	1.48	323	P	Pn	17 15 48.0	-1.1
NISR	**Nisiros**	1.48	323	P	Pn	17 15 48.0	-1.1
ZKR	**Zakros**	1.67	260	P	Pn	17 15 52.4	+0.7
ZKR	**Zakros**	1.67	260	P	Pn	17 15 52.4	+0.7
ZKR				AML	AML	17 16 19.8	
	comp=N,546μm,0.4s						
ZKR				AML	AML	17 16 24.3	
	comp=E,1311μm,0.5s						
ZKR	**Zakros**	1.67	260	P	Pn	17 15 52.6	+0.9
ZKR				S	Sn	17 16 17.5	+5.4
ZKR				AML	AML	17 16 22.8	
	comp=E,1.3nm,0.5s						
ZKR				AML	AML	17 16 22.8	
	comp=E,1.3nm,0.5s						
ZKR				AML	AML	17 16 33.1	
	comp=E,0.5nm,0.5s						
ZKR				AML	AML	17 16 33.1	
	comp=E,0.5nm,0.5s						
YER	**Yerkesik**	1.71	2	P	Pn	17 15 54.1	+1.8
BDRM	**Kayabasi**	1.75	339	*i* P	Pn	17 15 52.8	0.0
BDRM				IAML		17 16 14.0	
	comp=E,160nm,0.4s						
BDRM				IAML		17 16 21.0	
	comp=N,155nm,0.5s						
BODT	**Bodrum**	1.79	336	P	Pn	17 15 53.0	-0.4
MULA	**Mugla, Merkez-**	1.83	3	*i* P	Pn	17 15 56.1	+2.2
ELL	**Elmali**	1.90	46	P	Pn	17 15 56.9	+2.0
CAEL	**Denizli, Camel**	1.91	27	*i* P	Pn	17 15 56.6	+1.5
CAEL				*i* S	Sn	17 16 20.5	+2.3
CAEL				IAML		17 16 22.0	
	comp=N,264nm,0.5s						
CAEL				IAML		17 16 26.0	
	comp=E,236nm,0.5s						
AKUM	**Antalya-Kumluc**	1.94	62	*i* P	Pn	17 15 59.0	+3.6
AKUM				*i* S	Sn	17 16 19.1	+0.4
AKUM				IAML		17 16 21.0	
	comp=E,69nm,0.4s						
AKUM				IAML		17 16 26.0	
	comp=N,61nm,0.4s						
GOLH	**Golhisar**	2.11	31	*i* P	Pn	17 15 59.4	+1.6
TAVA	**DENIZLI_Tavas**	2.11	15	*i* P	Pn	17 15 58.9	+1.1
TAVA				*i* S	Sn	17 16 23.6	+0.6
TAVA				IAML		17 16 28.0	
	comp=N,67nm,0.4s						
NPS	**Neapolis**	2.14	266	P	Pn	17 15 59.6	+1.5
NPS	**Neapolis**	2.14	266	P	Pn	17 15 59.6	+1.5
NPS				AML	AML	17 16 35.0	
	comp=E,971μm,0.4s						
NPS				AML	AML	17 16 39.0	
	comp=N,714μm,0.5s						
DDIM	**Aydin, Didim**	2.17	339	*i* P	Pn	17 16 01.8	+3.3
AYDN	**Tasoluk**	2.25	353	*i* P	Pn	17 15 59.9	+0.2
KORT	**Korkueli**	2.33	47	*i* P	Pn	17 16 02.5	+1.6
KORT				*i* S	Sn	17 16 30.8	+2.4
KORT				IAML		17 16 37.0	
	comp=N,63nm,0.4s						
KORT				IAML		17 16 39.0	
	comp=E,82nm,0.4s						
THR8	**Santorini-Mono**	2.43	295	P	Pn	17 16 01.8	-0.3
THR8	**Santorini-Mono**	2.43	295	P	Pn	17 16 01.7	-0.3
SANT	**Santorini**	2.43	294	P	Pn	17 16 01.8	-0.3
SANT	**Santorini**	2.43	294	P	Pn	17 16 01.8	-0.3
SANT				AML	AML	17 16 43.7	
	comp=N,220μm,0.4s						
SANT				AML	AML	17 16 44.6	
	comp=E,774μm,0.7s						
SANT	**Santorini**	2.43	294	*i* P	Pn	17 16 01.8	-0.3
THR6	**Thira Island,**	2.47	293	P	Pn	17 16 02.9	+0.3
THR6	**Thira Island,**	2.47	293	P	Pn	17 16 02.9	+0.3
THR2	**Thira island,**	2.48	295	P	Pn	17 16 03.1	+0.4
THR2	**Thira island,**	2.48	295	P	Pn	17 16 03.1	+0.4
STAX	**Taxiarchis Har**	2.48	294	P	Pn	17 16 02.4	-0.3
STAX	**Taxiarchis Har**	2.48	294	P	Pn	17 16 02.4	-0.3
THR3	**Thira Island,**	2.49	294	P	Pn	17 16 02.7	-0.2
THR3	**Thira Island,**	2.49	294	P	Pn	17 16 02.7	-0.2
THR5	**Thira Island,**	2.53	294	P	Pn	17 16 03.3	-0.1
THR5	**Thira Island,**	2.53	294	P	Pn	17 16 03.3	-0.1
BUCA	**Burdur, Bucak-**	2.68	44	*i* P	Pn	17 16 08.3	+2.9
BRDR	**BURDUR-Merkez**	2.71	33	*i* P	Pn	17 16 08.1	+2.2
APE	**Apeiranthos**	2.72	308	P	Pn	17 16 06.0	-0.1
APE	**Apeiranthos**	2.72	308	P	Pn	17 16 06.0	-0.1
APE	**Apeiranthos**	2.72	308	*i* P	Pn	17 16 05.2	-0.9
IDI	**Anoyia**	2.73	268	P	Pn	17 16 06.7	+0.6
IDI	**Anoyia**	2.73	268	P	Pn	17 16 06.7	+0.6
IDI				AML	AML	17 16 43.6	
	comp=E,380μm,0.4s						
IDI				AML	AML	17 16 44.0	
	comp=N,368μm,0.4s						
SIVA	**Sivas**	2.82	263	P	Pn	17 16 09.0	+1.6
DGB	**zmir**	2.83	338	*i* P	Pn	17 16 07.4	-0.1
PASA	**Karahalli, USA**	3.09	19	*i* P	Pn	17 16 10.6	-0.5
ZEYE	**Izmir, Urla-Ze**	3.13	334	*i* P	Pn	17 16 11.7	+0.1
OSC1	**CSNet OBS 1**	3.17	126	P	Pn	17 16 12.3	+0.1
OSC1				S	Sn	17 16 50.5	+1.7
URLA	**Izmir**	3.20	336	*i* P	Pn	17 16 12.6	-0.1
KZIL	**AFYON_Kizioren**	3.22	28	*i* P	Pn	17 16 15.0	+2.1
VAM	**Vamos**	3.28	271	P	Pn	17 16 15.2	+1.5
VAM	**Vamos**	3.28	271	P	Pn	17 16 15.2	+1.5
MHLO	**Agia Marina, M**	3.34	293	P	Pn	17 16 15.6	+1.1
USAK	**Uak-Merkez**	3.34	11	*i* P	Pn	17 16 14.5	-0.1
AKMS	**Akamas**	3.39	96	P	Pn	17 16 15.9	+0.7
AKMS				AML	AML	17 16 55.1	
	comp=N,0.9nm,0.3s						
AKMS				AML	AML	17 16 56.3	
	comp=N,0.5nm,0.2s						
GAZI	**Gazipasa**	3.42	75	*i* P	Pn	17 16 15.5	-0.2
GAZI				*i* S	Sn	17 16 52.1	-2.9
GAZI				IAML		17 16 55.0	
	comp=N,103nm,0.3s						
GAZI				IAML		17 16 59.0	
	comp=E,153nm,0.4s						
IMMV	**Iera Moni Meta**	3.46	272	P	Pn	17 16 17.6	+1.5
IMMV	**Iera Moni Meta**	3.46	272	P	Pn	17 16 17.6	+1.5
SEDI	**Konya, Seydise**	3.49	54	*i* P	Pn	17 16 19.4	+2.7
SEDI				*i* S	Sn	17 16 58.9	+2.1
SEDI				IAML		17 17 07.0	
	comp=E,68nm,0.4s						
ALFC	**Alefka**	3.59	93	P	Pn	17 16 18.4	+0.5
ALFC				AML	AML	17 16 59.7	
	comp=E,0.9nm,0.3s						
ALFC				AML	AML	17 17 00.4	
	comp=E,0.5nm,0.2s						
NATA	**Nata**	3.62	99	P	Pn	17 16 19.3	+0.9
ZEDA	**zmir-Bergama**	3.65	346	*i* P	Pn	17 16 18.3	-0.4
OSC2	**CSNet OBS 4**	4.09	124	P	Pn	17 16 25.4	+0.6
ASGA	**Asgata**	4.17	97	P	Pn	17 16 26.5	+0.7
ASGA				AML	AML	17 17 13.9	
	comp=E,0.5nm,0.4s						
ASGA				AML	AML	17 17 14.3	
	comp=E,0.4nm,0.3s						
CSS	**Mathiatis**	4.21	95	P	Pn	17 16 26.7	+0.3
KDHN	**Kadinhani**	4.39	44	*i* P	Pn	17 16 30.6	+1.7
KDHN				*i* S	Sn	17 17 16.0	-2.8
KDHN				IAML		17 17 26.0	
	comp=E,8.3nm,0.4s						
GULN	**MERSIN_Gulnar**	4.39	79	*i* P	Pn	17 16 28.2	-0.7
MVOU	**Mavrovouni**	4.45	94	P	Pn	17 16 30.5	+0.8
BAYC	**CANAKKALE_Bayr**	4.51	343	*i* P	Pn	17 16 30.1	-0.3
SLUM	**Salum**	4.66	213	P	Pn	17 16 31.7	-0.9
	baz=216						
SLUM				AMP		17 17 00.0	
	baz=216						
SLUM				S	Sn	17 17 20.5	-4.9
	baz=216						
ALIN	**Konya, Altinte**	4.71	51	*i* P	Pn	17 16 32.1	-1.2
KOT	**Kottamia**	6.27	150	P	Pn	17 16 53.6	-1.1
	baz=148						
HHAG	**Hagoal**	6.36	148	P	Pn	17 16 55.9	0.0
	baz=146						
HSAF	**As Saff**	6.44	153	P	Pn	17 16 57.0	+0.1
	baz=151						
GLL	**Jalalah**	6.53	152	P	Pn	17 16 57.8	-0.5
	baz=150						
TR2	**Tor 2**	8.43	145	P	Pn	17 17 23.9	-0.3
	baz=143						
STON	**Ston**	11.04	315	P	Pn	17 17 57.7	-2.0
LSTV	**Lastovo**	11.45	313	P	Pn	17 18 02.9	-2.4
MAKA	**Makarska**	11.69	316	P	Pn	17 18 06.6	-2.0
RICI	**Ricice**	11.75	317	P	Pn	17 18 08.4	-1.2
HVAR	**Hvar**	11.95	314	P	Pn	17 18 09.7	-2.5
KIJV	**Kijevo**	12.48	317	P	Pn	17 18 18.2	-1.3
ZIRJ	**Zirje**	12.71	314	P	Pn	17 18 20.3	-2.2
MORI	**Morici**	12.79	315	P	Pn	17 18 22.5	-1.2
UDBI	**Udbina**	13.17	317	P	Pn	17 18 28.5	-0.4
DUGI	**Dugi Otok**	13.25	314	P	Pn	17 18 28.4	-1.5
PLIT	**Plitvice**	13.47	318	P	Pn	17 18 31.5	-1.5
NVLJ	**Novalja**	13.70	316	P	Pn	17 18 34.3	-1.6
SMRN	**Sveta Marina**	14.39	316	P	Pn	17 18 43.4	-1.7
BRJN	**Brijuni**	14.54	315	P	Pn	17 18 45.0	-2.1
CONA	**Conrad Observa**	15.51	327	*e*Pn	Pn	17 18 57.1	-2.5
	comp=E,6.4nm,1.6s						
KBA	**Koelnbreinsper**	16.11	321	*e*Pn	P	17 19 09.6	-0.1
	comp=E,1.3nm,0.5s						
MOA	**Molln**	16.18	324	*e*Pn	Pn	17 19 05.7	-2.4
	comp=E,9.2nm,1.6s						
WATA	**Walderalm**	17.21	319	*e*Pn	P	17 19 20.6	-1.3
	comp=E,6.9nm,1.3s						
SQTA	**Sankt Quirin**	17.34	318	*e*Pn	P	17 19 23.8	+0.6
	comp=E,5.9nm,1.6s						
FETA	**Feichten**	17.48	317	*e*Pn	P	17 19 26.8	+1.9
	comp=E,2.7nm,0.8s						
DAVA	**Damuels**	18.11	316	*e*Pn	Pn	17 19 33.3	+1.1
	comp=E,14nm,1.9s						

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*IDC **24** 17:48:26.2±6.4,33°.46S×136°.65E,h0^{km},mb1 3.2/3, mb1mx3.2/22,mbtmp3.0/3,ML3.0/3,Error ellipse: s-maj=66.5km s-min=26.8km az=19.0*

*NOU **24** 17:48:28.1,33°.50S×136°.80E,h0^{km},mB4.5/10,Near Coast of South Australia*

*AUST **24** 17:48:31.8±0.7,33°.38S×136°.83E,h24^{km}±7^{km},Error ellipse: s-maj=5.4km s-min=3.2km az=19.0*

ISC 24 17:48:28.2±0.9,**33°.21S**±0°.05×**136°.90E**±0°.04,**h10**^{km},**n24**, σ**2ˢ.94**/27,**Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHYH	**Whyalla**	0.59	73	P	Pn	17 48 44.7	+2.1
BBOO	**Buckleboo**	0.81	299	P	Pn	17 48 48.5	+2.8
	baz=0.9,SNR=1000						
BBOO				S	Sn	17 49 00.3	+2.4
	baz=0.9						
BBOO	**Buckleboo**	0.81	299	P	Pn	17 48 47.6	+1.9
AUCAS	**Cummins Area S**	1.44	223	P	Pb	17 48 54.1	-1.0
	baz=1.3						
HTT	**Hallett**	1.70	98	P	Pg	17 49 00.3	-0.5
	baz=1.7,SNR=34						
HTT	**Hallett**	1.70	98	P	Pb	17 49 00.0	+0.4
AUMAR	**Marden Senior**	2.21	140	P	Pb	17 49 06.3	-1.9
	baz=2.1						
LCRK	**Leigh Creek**	2.97	22	P	Pb	17 49 20.2	-1.1
	baz=3.2,SNR=14						
LCRK	**Leigh Creek**	2.97	22	P	Pb	17 49 19.5	-1.7
MULG	**Mulgathing**	3.79	320	P	Pn	17 49 30.4	+3.7
	baz=3.9,SNR=12						
MULG	**Mulgathing**	3.79	320	P	Pn	17 49 29.8	+3.1
STKA	**Stephens Creek**	4.18	73	Pn	Pn	17 49 35.7	+3.7
	0.4nm,0.3s,baz=257,slow=12,SNR=10						
STKA				Sn	Sn	17 50 20.6	-0.3
	1.2nm,0.3s,baz=279,slow=13,SNR=5.6						
STKA				Lg	Lg	17 50 47.0	
	3.0nm,0.3s,baz=327,slow=22,SNR=6.9						
STKA	**Stephens Creek**	4.18	73	P	Pn	17 49 35.9	+3.9
	baz=4.3,SNR=9.5						
STKA	**Stephens Creek**	4.18	73	P	Pn	17 49 35.5	+3.5
ARPS	**Mount Arapiles**	5.39	133	P	Pn	17 49 48.7	+0.1
	baz=5.3,SNR=7.6						
ARPS	**Mount Arapiles**	5.39	133	P	Pn	17 49 47.9	-0.7
	6.3nm,0.5s						
OOD	**Oodnadatta**	5.50	349	P	Pn	17 49 55.9	+5.7
	baz=5.7						
OOD	**Oodnadatta**	5.50	349	P	Pn	17 49 54.7	+4.6
	12nm,0.8s						
INKA	**Innaminka**	6.38	32	P	Pn	17 50 06.2	+3.9
	baz=6.6,SNR=8.4						
INKA	**Innaminka**	6.38	32	P	Pn	17 50 06.0	+3.8
	6.3nm,2.2s						
FORT	**Forrest**	7.89	286	P	Pn	17 50 23.6	+0.6
	baz=7.9						
FORT	**Forrest**	7.89	286	P	Pn	17 50 23.4	+0.4
	27nm,1.0s						
ASAR	**Alice Springs**	9.87	344	Pn	Pn	17 50 53.2	+3.1
	0.1nm,0.3s,baz=174,slow=8.6,SNR=14						
ASAR				Sn	Sn	17 52 37.6	-3.5
	0.3nm,0.3s,baz=158,slow=22,SNR=6.2						
ASAR				Lg	Lg	17 53 46.0	
	baz=173,slow=25,SNR=1.9						
WRA	**Warramunga Arr**	13.41	350	Pn	Pn	17 51 38.8	+0.1
	0.1nm,0.3s,baz=169,slow=14,SNR=5.4						
WRA				Sn	Sn	17 54 01.7	-6.2
	0.1nm,0.3s,baz=176,slow=23,SNR=1.5						

IDC 24 17:48:36.5±0.9,**33°.52S**×**136°.71E**,**h0**^{km},**mb1 3.5**/3, **mb1mx3.3**/22,**mbtmp3.3**/3,**ML3.2**/3,**Error ellipse: s-maj=16.6km s-min=7.0km az=53.0,Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	4.43	70	Pn	Pn	17 49 45.5	+0.5
	0.4nm,0.3s,baz=249,slow=14,SNR=5.6						
ASAR	**Alice Springs**	10.12	345	Pn	Pn	17 51 03.4	+0.2
	0.3nm,0.3s,baz=165,slow=11,SNR=17						
ASAR				Lg	Lg	17 53 58.3	
	0.1nm,0.3s,baz=164,slow=24,SNR=6.4						
WRA	**Warramunga Arr**	13.68	351	Pn	Pn	17 51 49.8	-2.1
	0.2nm,0.3s,baz=166,slow=14,SNR=8.6						

NNC 24 17:51:28.1±2.3,**38°.28N**×**73°.20E**,**h5**^{km}±9^{km},**mb3.8**, **mpv3.3,2C-3D,Error ellipse: s-maj=16.6km s-min=11.8km az=168.0,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	**Merke**	4.46	0	Pg	Pb	17 52 48.3	+1.4
	3.0nm,1.0s						
MRKS				Lg	Lg	17 53 48.8	
	11nm,0.6s						
AAK	**Ala-Archa**	4.46	12	⇑Pg	Pb	17 52 48.8	+1.8
	3.5nm,0.7s						
IUG	**Iuzhnay**	4.56	329	Pg	Pb	17 52 51.3	+2.8
	240nm,0.9s						
IUG				Lg	Lg	17 53 54.4	
	25nm,0.8s						
TKM2	**Tokmak 2**	4.98	21	⇓Pg	Pb	17 52 59.0	+3.1
	2.7nm,1.4s						
TKM2				⇓Lg	Lg	17 54 03.5	
	1.7nm,0.8s						
KST	**Kastek**	5.20	23	Pg	Pg	17 53 03.9	-3.7
	5.1nm,0.9s						
KST				Lg	Lg	17 54 15.2	
	6.9nm,1.1s						
KK02	**Karatay Array**	5.23	338	⇑Pn	Pn	17 52 47.7	+0.8
	1.0nm,0.4s						
KK02				⇓Sn	Sn	17 53 48.7	+1.1
	3.9nm,0.8s						
SGDS	**Sogindy**	5.28	11	Pg	Pb	17 53 04.4	+3.6
	1.4nm,0.8s						
SGDS				Lg	Lg	17 54 16.8	
	4.3nm,1.3s						
KRBS	**Karabastau**	5.72	18	Pg	Pb	17 53 13.0	+4.5
	1.2nm,0.6s						
KRBS				Lg	Lg	17 54 31.1	
	1.9nm,0.5s						
KOTS	**Kotyrbulak**	5.77	30	Pg	Pb	17 53 13.8	+4.5
	1.3nm,0.5s						
KOTS				Lg	Lg	17 54 32.1	
	6.0nm,0.7s						

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*ATH **24** 18:34:18.8,38°.48N×20°.55E,h13^{km}±1^{km},ML2.3/14,Error ellipse: s-maj=1.7km s-min=0.5km az=284.0*

*THE **24** 18:34:18.8,38°.48N×20°.56E,h10^{km},ML2.7/4,Error ellipse: s-maj=1.3km s-min=0.4km az=282.0*

ISC 24 18:34:17.5±0.9,**38°.50N**±0°.02×**20°.51E**±0°.03,**h19**^{km}±2^{km}, **n59**,σ**0ˢ.97**/92,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	0.06	135	P	Pg	18 34 21.0	0.0
FSK				S	Sg	18 34 22.3	-1.1
FSK	**Fiskardo**	0.06	135	P	Pg	18 34 21.0	0.0
FSK				S	Sg	18 34 22.3	-1.1
FSK				AML	AML	18 34 22.8	
	comp=N,19926μm,0.2s						
FSK				AML	AML	18 34 22.9	
	comp=E,77068μm,0.2s						
EVGI	**Lefkada island**	0.17	43	P	Pg	18 34 22.5	+0.3
EVGI				S	Sg	18 34 24.8	-0.5
EVGI	**Lefkada island**	0.17	43	P	Pg	18 34 22.5	+0.3
EVGI				S	Sg	18 34 24.8	-0.5
DRAG	**Dragano-Lefkad**	0.19	15	P	Pg	18 34 22.9	+0.4
DRAG				S	Sg	18 34 26.9	+1.0
DRAG	**Dragano-Lefkad**	0.19	15	P	Pg	18 34 22.8	+0.4
DRAG				S	Sg	18 34 26.9	+1.0
KEF4	**Livadi, Kephal**	0.25	196	P	Pg	18 34 23.7	+0.3
KEF4				S	Sg	18 34 28.1	+0.7
KEF4	**Livadi, Kephal**	0.25	196	P	Pg	18 34 23.7	+0.3
KEF4				S	Sg	18 34 28.1	+0.7
NYDR	**Nydri-Lefkada**	0.26	35	P	Pg	18 34 23.9	+0.4
NYDR				S	Sb	18 34 27.4	+0.1
NYDR	**Nydri-Lefkada**	0.26	35	P	Pg	18 34 23.9	+0.4
NYDR				S	Sb	18 34 27.4	+0.1
DMLN	**Damoulianata-K**	0.28	202	P	Pg	18 34 24.2	+0.3
DMLN				S	Sg	18 34 28.9	+0.7
	comp=E,2μm,0.3s						
DMLN	**Damoulianata-K**	0.28	202	P	Pg	18 34 24.2	+0.3
DMLN				S	Sg	18 34 28.9	+0.7
LXRA	**Lixouri, Kepha**	0.30	191	P	Pb	18 34 24.7	+0.3
LXRA				S	Sb	18 34 29.4	+0.4
LKD2	**Lefkada island**	0.31	22	P	Pb	18 34 24.9	+0.4
LKD2	**Lefkada island**	0.31	22	P	Pb	18 34 24.9	+0.4
LKD2				AML	AML	18 34 33.1	
	comp=E,936μm,0.2s						
LKD2				AML	AML	18 34 35.5	
	comp=N,840μm,0.3s						
KEF3	**Kipouria, Keph**	0.32	203	P	Pg	18 34 24.4	-0.1
KEF3				S	Sg	18 34 28.9	-0.4
	comp=N,3μm,0.3s						
KEF3	**Kipouria, Keph**	0.32	203	P	Pg	18 34 24.4	-0.1
KEF3				S	Sg	18 34 28.9	-0.4
ARGA	**Argostoli. Kep**	0.32	184	P	Pb	18 34 25.4	+0.7
VLS	**Valsamata**	0.33	169	P	Pb	18 34 24.9	0.0
VLS				S	Sg	18 34 29.5	0.0
	comp=N,4μm,0.2s						
VLS	**Valsamata**	0.33	169	P	Pb	18 34 24.9	0.0
VLS				S	Sg	18 34 29.5	0.0
VLS				AML	AML	18 34 30.3	
	comp=E,11798μm,0.2s						
VLS				AML	AML	18 34 30.8	
	comp=N,5192μm,0.2s						
TSLK	**Tsoukalades, L**	0.34	19	P	Pb	18 34 25.7	+0.5
TSLK				S	Sb	18 34 31.6	+1.4
TSLK	**Tsoukalades, L**	0.34	19	P	Pb	18 34 25.7	+0.5
TSLK				S	Sb	18 34 31.6	+1.4
TSLK				AML	AML	18 34 32.2	
	comp=N,1198μm,0.5s						
TSLK				AML	AML	18 34 33.1	
	comp=E,1022μm,0.4s						
PSDA	**Pessada-Kefalo**	0.39	171	P	Pb	18 34 25.9	0.0
PSDA				S	Sg	18 34 31.4	+0.2
PSDA	**Pessada-Kefalo**	0.39	171	P	Pb	18 34 25.9	0.0
PSDA				S	Sg	18 34 31.4	+0.2
VTN	**Vitineika**	0.79	137	P	Pg	18 34 33.2	+0.2
VTN	**Vitineika**	0.79	137	P	Pg	18 34 33.2	+0.2
LTHK	**Lithakia**	0.83	162	P	Pb	18 34 33.4	+0.1
LTHK				S	Sn	18 34 45.7	-0.1
	comp=E,508nm,0.2s						
LTHK	**Lithakia**	0.83	162	P	Pb	18 34 33.4	+0.1
LTHK				S	Sn	18 34 45.7	-0.1
LTHK				AML	AML	18 34 47.3	
	comp=E,789μm,0.3s						
LTHK				AML	AML	18 34 47.4	
	comp=N,1221μm,0.3s						
RLS	**Riolos of Patr**	0.87	120	P	Pg	18 34 34.8	+0.2
RLS	**Riolos of Patr**	0.87	120	P	Pg	18 34 34.8	+0.2
RLS				S	Sg	18 34 46.6	+0.5
RLS				AML	AML	18 34 57.1	
	comp=N,176μm,0.2s						
RLS				AML	AML	18 34 58.2	
	comp=E,145μm,0.4s						
DRO	**Drossia**	1.09	120	P	Pg	18 34 38.5	-0.2
DRO	**Drossia**	1.09	120	P	Pg	18 34 38.5	-0.2
DRO				AML	AML	18 34 57.7	
	comp=E,382μm,0.2s						
DRO				AML	AML	18 34 59.5	
	comp=N,333μm,0.3s						
EFP	**Efpalio**	1.10	93	P	Pb	18 34 38.2	+0.3
EFP	**Efpalio**	1.10	93	P	Pb	18 34 38.2	+0.3
EFP				AML	AML	18 35 01.2	
	comp=E,361μm,0.4s						
EFP				AML	AML	18 35 02.7	
	comp=N,278μm,0.4s						
EVR	**Evrytania**	1.10	67	P	Pn	18 34 38.1	+0.1
EVR	**Evrytania**	1.10	67	P	Pn	18 34 38.1	+0.1
EVR				AML	AML	18 34 59.7	
	comp=E,153μm,0.3s						
EVR				AML	AML	18 35 02.8	
	comp=N,120μm,0.4s						
ANX	**Ano Chora**	1.11	85	P	Pn	18 34 38.2	0.0
ANX	**Ano Chora**	1.11	85	P	Pn	18 34 38.2	0.0
ANX				AML	AML	18 35 01.2	
	comp=N,297μm,0.8s						
ANX				AML	AML	18 35 02.5	
	comp=E,198μm,0.3s						
LAKA	**Lakka**	1.18	102	P	Pb	18 34 39.8	+0.4
LAKA	**Lakka**	1.18	102	P	Pb	18 34 39.8	+0.4
LAKA				AML	AML	18 35 02.3	
	comp=N,129μm,0.5s						
LAKA				AML	AML	18 35 04.7	
	comp=E,115μm,0.6s						
SERG	**Sergoula**	1.22	94	P	Pb	18 34 40.5	+0.5
SERG	**Sergoula**	1.22	94	P	Pb	18 34 40.5	+0.5
SERG				AML	AML	18 35 01.0	
	comp=E,220μm,0.3s						
SERG				AML	AML	18 35 04.0	

	comp=N,303µm,0.4s						
TRIZ	**Trizonia**	**1.23**	**96**	P	**Pb**	**18 34 40.7**	**+0.5**
KEK	**Kerkira**	**1.33**	**336**	P	**Pg**	**18 34 43.9**	**+0.6**
KEK	**Kerkira**	**1.33**	**336**	P	**Pg**	**18 34 43.9**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.37**	**67**	P	**Pg**	**18 34 43.7**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.37**	**67**	P	**Pg**	**18 34 43.7**	**-0.3**
MAKR				AML	AML	18 35 10.5	
	comp=E,330µm,0.4s						
MAKR				AML	AML	18 35 18.4	
	comp=N,223µm,0.5s						
KLV	**Kalavryta, Ach**	**1.37**	**109**	P	**Pb**	**18 34 42.8**	**+0.2**
KLV	**Kalavryta, Ach**	**1.37**	**109**	P	**Pb**	**18 34 42.8**	**+0.2**
KLV				AML	AML	18 35 12.5	
	comp=E,72µm,0.4s						
KLV				AML	AML	18 35 14.8	
	comp=N,74µm,0.7s						
VIL2	**Platees**	**2.19**	**97**	P	**Pb**	**18 34 58.2**	**+1.7**
STON	**Ston**	**4.86**	**335**	*e*Pn	**Pn**	**18 35 30.4**	**+0.8**
STON				Sn	**Sn**	**18 36 23.5**	**-1.8**
LSTV	**Lastovo**	**5.08**	**328**	*e*Pn	**Pn**	**18 35 33.3**	**+0.7**
LSTV				Sn	**Sn**	**18 36 28.1**	**-2.5**
MAKA	**Makarska**	**5.46**	**332**	*e*Pn	**Pn**	**18 35 39.1**	**+1.2**
MAKA				Sn	**Sn**	**18 36 38.1**	**-2.1**
HVAR	**Hvar**	**5.60**	**328**	*e*Pn	**Pn**	**18 35 41.0**	**+1.3**
HVAR				Sn	**Sn**	**18 36 41.4**	**-2.1**
RICI	**Ricice**	**5.61**	**334**	*e*Pn	**Pn**	**18 35 40.4**	**+0.5**
RICI				Sn	**Sn**	**18 36 40.9**	**-2.8**
KIJV	**Kijevo**	**6.31**	**332**	*e*Pn	**Pn**	**18 35 50.3**	**+0.8**
KIJV				Sn	**Sn**	**18 36 57.9**	**-3.1**
ZIRJ	**Zirje**	**6.33**	**326**	*e*Pn	**Pn**	**18 35 50.9**	**+1.2**
ZIRJ				Sn	**Sn**	**18 36 59.2**	**-2.2**
MORI	**Morici**	**6.47**	**327**	*e*Pn	**Pn**	**18 35 52.7**	**+1.0**
MORI				Sn	**Sn**	**18 37 02.5**	**-2.4**
DUGI	**Dugi Otok**	**6.85**	**325**	*e*Pn	**Pn**	**18 35 57.8**	**+0.8**
DUGI				Sn	**Sn**	**18 37 11.3**	**-3.0**

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*IDC **24** 18:43:20.8±1.3, 3°.34S×12°.19W, h0^{km}, mb4.2/9, mb1 4.3/11, mb1mx4.0/38, mbtmp4.2/11, ML3.4/2, MS3.5/13, Ms1 3.5/13, ms1mx3.2/40, Error ellipse: s-maj=38.0km s-min=24.5km az=136.0*

*NEIC **24** 18:43:21.8±2.3, 3°.55S±0°.10×12°.0W±0°.2, h10^{km}±1^{km}, mb4.6/15, Error ellipse: s-maj=35.3km s-min=8.5km az=115.0*

ISC 24 18:43:21.9±0.7**, 3°.4S**±0°.1×**12°.2W**±0°.1**, h12^{km}, n53, σ0^s.90**/37**, mb4.5**/24**, MS3.6**/11**, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**4.92**	**207**	T	T	18 49 45.8	
	baz=29,slow=74,SNR=537						
H10N1	**ASCENSION HYDR**	**4.93**	**207**	T	T	18 49 34.8	
	baz=29,slow=74,SNR=655						
H10N3	**ASCENSION HYDR**	**4.93**	**208**	T	T	18 49 38.0	
	baz=29,slow=74,SNR=597						
H10S2	**ASCENSION HYDR**	**6.00**	**204**	T	T	18 50 59.5	
	baz=195,slow=74,SNR=74						
H10S3	**ASCENSION HYDR**	**6.00**	**204**	T	T	18 51 01.1	
	baz=25,slow=74,SNR=139						
DBIC	**Dimbokro**	**12.44**	**36**	Pn	**Pn**	**18 46 19.9**	**+1.0**
	0.1nm,0.3s,baz=216,slow=14,SNR=4.1						
DBIC				LR	LR	18 50 12.9	
	comp=Z,138nm,21.0s,baz=205,slow=33						
KOWA	**Kowa**	**19.58**	**24**	P	**P**	**18 47 49.2**	**-0.9**
	0.5nm,0.3s,baz=197,slow=8.9,SNR=20						
KOWA				LR	LR	18 54 34.6	
	comp=Z,91nm,19.7s,baz=174,slow=35						
KOWA	**Kowa**	**19.58**	**24**	P	**P**	**18 47 48.6**	**-1.5**
KOWA				IAmb	IAmb	18 47 52.4	
	comp=Z,37nm,1.2s						
TORD	**Torodi Ar. Bea**	**21.50**	**40**	P	**P**	**18 48 08.9**	**-1.8**
	comp=Z,11nm,0.9s,baz=226,slow=10,SNR=37						
TORD				LR	LR	18 55 02.3	
	comp=Z,130nm,20.4s,baz=285,slow=33						
TORD	**Torodi Ar. Bea**	**21.50**	**40**	P	**P**	**18 48 08.7**	**-2.1**
BDFB	**Brasilia**	**37.26**	**249**	P	**P**	**18 50 35.3**	**+1.2**
	comp=Z,2.3nm,0.6s,baz=49,slow=20,SNR=3.2						
BDFB	**Brasilia**	**37.26**	**249**	IAmb	IAmb	18 50 37.0	
	comp=Z,15nm,1.5s						
LSZ	**Lusaka**	**41.47**	**109**	P	**P**	**18 51 10.0**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=68,slow=2.5,SNR=3.9						
BOSA	**Boshof**	**43.53**	**129**	LR	LR	19 06 03.3	
	comp=Z,59nm,20.9s,baz=258,slow=31						
ESDC	**Sonseca Array**	**43.57**	**9**	LR	LR	19 08 04.5	
	comp=Z,46nm,18.9s,baz=200,slow=34						
KEST	**Kesra**	**43.88**	**26**	P	**P**	**18 51 29.3**	**+0.8**
	comp=Z,4.9nm,0.8s,baz=169,slow=12,SNR=8.7						
KEST	**Kesra**	**43.88**	**26**	IAmb	IAmb	18 51 31.3	
	comp=Z,7.2nm,0.9s						
CPUP	**Villa Florida**	**48.82**	**238**	LR	LR	19 08 56.4	
	comp=Z,77nm,21.9s,baz=46,slow=31						
KMBO	**Kilima Mbogo**	**49.47**	**89**	LR	LR	19 11 36.8	
	comp=Z,118nm,18.3s,baz=103,slow=34						
CTI	**Castel Tesino**	**53.62**	**20**	P	**P**	**18 52 43.0**	**-0.3**
FNA	**Florina**	**53.65**	**31**	P	**P**	**18 52 44.9**	**+1.4**
DAVA	**Damuels**	**54.12**	**18**	*e*P	**P**	**18 52 46.8**	**-0.2**
	comp=Z,8.3nm,0.8s						
FETA	**Feichten**	**54.16**	**19**	*e*P	**P**	**18 52 47.8**	**+0.5**
	comp=Z,8.6nm,1.2s						
SQTA	**Sankt Quirin**	**54.49**	**19**	*e*P	**P**	**18 52 49.5**	**-0.2**
	comp=Z,9.0nm,0.9s						
ABTA	**Abfaltersbach**	**54.53**	**21**	*e*P	**P**	**18 52 50.7**	**+0.9**
	comp=Z,3.0nm,0.7s						
MOTA	**Moosalm**	**54.57**	**19**	*e*P	**P**	**18 52 49.9**	**-0.3**
	comp=Z,5.5nm,1.0s						
WTTA	**Wattenberg**	**54.67**	**20**	*e*P	**P**	**18 52 51.0**	**0.0**
	comp=Z,8.4nm,0.9s						
WATA	**Walderalm**	**54.72**	**20**	*e*P	**P**	**18 52 50.7**	**-0.6**
	comp=Z,6.3nm,1.1s						
OBKA	**Obir**	**55.07**	**22**	*e*P	**P**	**18 52 54.4**	**+0.6**
	comp=Z,4.6nm,1.6s						
DIVS	**Divibare**	**55.44**	**28**	P	**P**	**18 52 56.7**	**+0.2**
DIVS				IAmb	IAmb	18 53 11.2	
	comp=Z,6.4nm,1.1s						
ARSA	**Arzberg**	**56.06**	**22**	*e*P	**P**	**18 53 01.4**	**+0.6**
	comp=Z,4.4nm,1.1s						
LPAZ	**La Paz**	**56.38**	**253**	LR	LR	19 16 42.7	
	comp=Z,32nm,18.6s,baz=71,slow=36						
ATD	**Arta Tunnel**	**56.73**	**74**	LR	LR	19 15 10.5	
	comp=Z,66nm,18.8s,baz=148,slow=34						
GEC2	**GERESS Array S**	**56.74**	**20**	P	**P**	**18 53 05.7**	**0.0**
GEC2				IAmb	IAmb	18 53 06.8	
	comp=Z,6.6nm,0.9s						
GERES	**GERESS Array B**	**56.74**	**20**	P	**P**	**18 53 06.1**	**+0.3**
	comp=Z,3.9nm,0.7s,baz=189,slow=6.8,SNR=48						
GERES				LR	LR	19 17 54.1	
	comp=Z,12nm,21.2s,baz=48,slow=37						
GERES	**GERESS Array B**	**56.74**	**20**	P	**P**	**18 53 05.5**	**-0.3**
CONA	**Conrad Observa**	**56.75**	**22**	*e*P	**P**	**18 53 06.4**	**+0.6**
	comp=Z,4.0nm,1.1s						
MLR	**Muntele Rosu**	**59.35**	**30**	P	**P**	**18 53 24.3**	**+0.2**
MLR				IAmb	IAmb	18 53 25.0	
	comp=Z,6.4nm,1.3s						
BRTR	**Keskin Array B**	**60.11**	**40**	P	**P**	**18 53 30.9**	**+1.3**
	comp=Z,1.8nm,1.0s,baz=219,slow=6.7,SNR=4.7						
BRTR	**Keskin Array B**	**60.11**	**40**	P	**P**	**18 53 29.3**	**-0.2**
BNN	**Bunyan**	**61.07**	**42**	P	**P**	**18 53 36.8**	**+0.8**
ZARC	**Zaragoza, Cauc**	**63.45**	**280**	P	**P**	**18 53 51.5**	**-0.8**
ZARC				IAmb	IAmb	18 53 53.3	
	comp=Z,5.8nm,1.2s						
PLCA	**Paso Flores**	**64.10**	**226**	LR	LR	19 18 56.4	
	comp=Z,49nm,19.7s,baz=178,slow=33						
SUW	**Suwalki**	**64.39**	**22**	P	**P**	**18 53 56.5**	**-1.2**
NNA	**Nana**	**64.49**	**258**	LR	LR	19 21 37.8	
	comp=Z,35nm,18.2s,baz=82,slow=36						
AKASG	**Malin Array Be**	**64.54**	**28**	P	**P**	**18 53 58.2**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=224,slow=6.3,SNR=6.3						
AKASG	**Malin Array Be**	**64.54**	**28**	P	**P**	**18 53 57.4**	**-1.3**
ATAH	**Atahualpa**	**65.97**	**264**	LR	LR	19 21 18.7	
	comp=Z,74nm,20.2s,baz=91,slow=34						
SNAA	**Sanae**	**68.40**	**177**	P	**P**	**18 54 22.0**	**-1.2**
SNAA				IAmb	IAmb	18 54 35.3	
	comp=Z,4.3nm,1.1s						
FINES	**FINESS Array B**	**71.08**	**18**	P	**P**	**18 54 39.3**	**-0.5**
	comp=Z,6.4nm,1.0s,baz=197,slow=6.0,SNR=6.6						
ARU	**Arti**	**82.35**	**32**	P	**P**	**18 55 43.5**	**-0.1**
QSPA	**South Pole Qui**	**86.65**	**180**	P	**P**	**18 56 05.5**	**+0.1**
QSPA				IAmb	IAmb	18 56 13.7	
	comp=Z,6.4nm,1.2s						
YKA	**Yellowknife Ar**	**98.76**	**333**	P	**P**	**18 57 01.8**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=78,slow=5.1,SNR=4.2						

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*MDD **24** 18:58:54.6±0.8, 35°.42N×3°.63W, h14^{km}±8^{km}, mbLg2.1/15, Error ellipse: s-maj=8.3km s-min=5.8km az=175.0, PRXIMO*

*INMG **24** 18:58:54.8±1.7, 35°.43N×3°.63W, h14^{km}±10^{km}, ML2.1, Error ellipse: s-maj=6.7km s-min=4.8km az=144.0*

*SFS **24** 18:58:54.0, 35°.41N×3°.62W, ML2.1, ALBORAN SUR*

*CNRM **24** 18:58:56.0, 35°.50N×3°.74W, h20^{km}, ml2.6*

ISC 24 18:58:54.2±1.0**, 35°.52N**±0°.02×**3°.62W**±0°.02**, h14^{km}**±8^{km}**, n50, σ1^s.57**/95**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.40**	**221**	P	**Pg**	**18 59 02.6**	**+0.4**
PALE				S	**Sg**	**18 59 08.3**	**+0.6**
EMEL	**Melilla**	**0.58**	**112**	P	**Pg**	**18 59 05.4**	**-0.3**
	56nm,0.1s,SNR=13						
EMEL				S	**Sg**	**18 59 12.9**	**-0.5**
	951nm,0.2s,SNR=7.8						
EALB	**Alboran**	**0.63**	**49**	P	**Pb**	**18 59 07.7**	**+0.7**
	6.8nm,0.1s,SNR=84						
EALB				S	**Sb**	**18 59 16.7**	**+1.0**
	57nm,0.2s,SNR=7.9						
CHAS	**Isla Isabel II**	**1.03**	**109**	*e*P	**Pb**	**18 59 11.9**	**-1.9**
CHAS				*e*S	**Sb**	**18 59 24.6**	**-2.5**
AKLM	**AKL**	**1.03**	**191**	P	**Pb**	**18 59 13.1**	**-0.7**
AKLM				S	**Sb**	**18 59 26.7**	**-0.6**
ELGU	**Los Guajares,**	**1.34**	**360**	P	**Pn**	**18 59 18.3**	**-0.3**
	0.5nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**18 59 35.5**	**-0.8**
	51nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**1.40**	**318**	P	**Pn**	**18 59 18.2**	**-1.2**
	0.3nm,0.1s,SNR=16						
EMIJ				S	**Sn**	**18 59 36.1**	**-1.5**
	22nm,0.4s,SNR=10						
EMAL	**Malaga-Limoner**	**1.40**	**332**	*e*P	**Pn**	**18 59 19.6**	**+0.3**
EMAL				*e*S	**Sn**	**18 59 36.9**	**-0.7**
EMAL	**Malaga-Limoner**	**1.40**	**332**	P	**Pn**	**18 59 19.6**	**+0.3**
EMAL				S	**Sn**	**18 59 36.9**	**-0.7**
SMIR	**Smir Dam**	**1.45**	**277**	P	**Pn**	**18 59 18.2**	**-1.7**
SMIR				S	**Sn**	**18 59 35.9**	**-2.8**
JBK	**JBK**	**1.47**	**144**	P	**Pn**	**18 59 18.3**	**-2.1**
JBK				S	**Sn**	**18 59 39.4**	**-0.1**
CHEFC	**Chefchaouen**	**1.47**	**254**	P	**Pn**	**18 59 20.8**	**+0.4**
CHEFC				S	**Sn**	**18 59 39.3**	**-0.1**
ECEU	**Ceuta**	**1.48**	**285**	P	**Pn**	**18 59 18.7**	**-1.7**
	0.9nm,0.0s,SNR=4.6						
ECEU				S	**Sn**	**18 59 36.4**	**-3.2**
	18nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.49**	**23**	P	**Pn**	**18 59 20.3**	**-0.5**
	0.6nm,0.1s,SNR=19						
EBER				S	**Sg**	**18 59 42.6**	**+0.2**
	15nm,0.3s,SNR=7.3						
EGOR	**Sierra Gorda,**	**1.63**	**346**	P	**Pn**	**18 59 23.4**	**+0.8**
	0.2nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**18 59 44.1**	**+0.5**
	14nm,0.4s,SNR=4.0						
EJIF	**Jimena Fronter**	**1.76**	**302**	P	**Pg**	**18 59 27.9**	**-0.2**
	SNR=7.9						
EJIF				S	**Sn**	**18 59 47.8**	**+1.2**
	7µm,0.3s,SNR=4.0						
ENIJ	**Nijar**	**1.84**	**38**	P	**Pn**	**18 59 24.4**	**-1.0**
	SNR=7.9						
ENIJ				S	**Sn**	**18 59 47.8**	**-0.8**
	6.8nm,0.3s,SNR=7.9						
LCRM	**LCR**	**2.10**	**210**	P	**Pb**	**18 59 31.4**	**-0.7**
LCRM				S	**Sb**	**18 59 59.7**	**+1.6**
EQES	**Quesada**	**2.32**	**11**	P	**Pb**	**18 59 34.9**	**-1.0**
	0.4nm,0.1s,SNR=14						
EQES				S	**Sb**	**19 00 03.8**	**-0.6**
	14nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**2.73**	**18**	P	**Pn**	**18 59 40.6**	**+2.8**
	0.1nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**19 00 13.0**	**+2.3**
	2.1nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.75**	**344**	P	**Pn**	**18 59 40.5**	**+2.6**
	0.1nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**19 00 12.8**	**+1.8**
	1.6nm,0.2s,SNR=7.9						
TDRA	**Tendrara**	**2.80**	**152**	P	**Pn**	**18 59 41.3**	**+2.5**
TDRA				S	**Sn**	**19 00 14.8**	**+2.2**
EZAR	**Zarzadilla de**	**2.81**	**33**	P	**Pn**	**18 59 39.1**	**+0.3**
	SNR=7.9						
EZAR				S	**Sn**	**19 00 13.2**	**+0.7**
	1.4nm,0.3s,SNR=7.9						
MD31	**MD31**	**2.81**	**200**	P	**Pn**	**18 59 39.0**	**+0.2**
MD31				S	**Sn**	**19 00 13.9**	**+1.3**
MDT	**Midelt**	**2.82**	**197**	P	**Pn**	**18 59 40.2**	**+1.2**
MDT				S	**Sn**	**19 00 14.5**	**+1.6**
ECAB	**El Cabril**	**2.93**	**331**	P	**Pn**	**18 59 42.6**	**+2.2**
	0.1nm,0.2s,SNR=7.9						
ECAB				S	**Sn**	**19 00 16.8**	**+1.4**
	1.5nm,0.4s,SNR=7.9						
EMUR	**La Murta**	**3.00**	**39**	P	**Pn**	**18 59 42.3**	**+0.9**
	SNR=7.9						
EMUR				S	**Sn**	**19 00 15.3**	**-1.9**
	0.5nm,0.2s,SNR=7.9						
ZHG	**ZHG**	**3.25**	**231**	P	**Pn**	**18 59 45.8**	**+1.0**
ZHG				S	**Sn**	**19 00 23.5**	**+0.2**
EMIN	**Mina Concepcio**	**3.32**	**313**	P	**Pn**	**18 59 46.0**	**+0.2**
	0.2nm,0.1s,SNR=8.4						
EMIN				S	**Sn**	**19 00 23.6**	**-1.5**
	0.6nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**3.53**	**27**	P	**Pn**	**18 59 51.0**	**+2.4**
	0.8nm,0.2s,SNR=15						
ETOB				S	**Sn**	**19 00 30.4**	**+0.1**
	0.6nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**3.70**	**304**	P	**Pn**	**18 59 51.3**	**+0.3**
	1.2nm,0.1s,SNR=11						
EGRO				S	**Sn**	**19 00 32.1**	**-2.4**
	1.8nm,0.2s,SNR=4.0						
PVAQ	**Vaqueiros**	**3.80**	**301**	*e*Pn	**Pn**	**18 59 53.2**	**+0.9**
PVAQ				*e*Sn	**Sn**	**19 00 35.3**	**-1.5**
PVAQ				A	A	19 00 48.6	
	2.5nm,0.5s						
PVAQ	**Vaqueiros**	**3.80**	**301**	P	**Pn**	**18 59 54.0**	**+1.7**
PVAQ				S	**Sn**	**19 00 36.7**	**-0.1**
PBDV	**Barranco-do-Ve**	**3.88**	**298**	*e*Pn	**Pn**	**18 59 53.9**	**+0.5**
PBDV				*e*Sn	**Sn**	**19 00 37.5**	**-1.3**
PBDV				A	A	19 00 45.5	
	2.8nm,0.6s						
PAB	**San Pablo**	**4.06**	**352**	P	**Pn**	**18 59 58.3**	**+2.4**
	0.1nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**19 00 43.3**	**0.0**
	0.4nm,0.3s,SNR=7.9						
PCVE	**Castro Verde**	**4.13**	**302**	*e*Pn	**Pn**	**18 59 57.3**	**+0.4**
PCVE				*e*Sn	**Sn**	**19 00 44.5**	**-0.6**
PCVE				A	A	19 00 46.9	
	2.1nm,0.4s						
ESDC	**Sonseca Array**	**4.15**	**356**	P	**Pn**	**18 59 59.2**	**+1.9**
	0.3nm,0.3s,baz=174,slow=13,SNR=8.1						
ESDC				S	**Sn**	**19 00 46.3**	**+0.7**
	1.4nm,0.6s,baz=173,slow=22,SNR=5.0						
EBAD	**Badajoz**	**4.21**	**321**	P	**Pn**	**18 59 58.5**	**+0.4**
	0.1nm,0.1s,SNR=4.0						
EBAD				S	**Sn**	**19 00 45.9**	**-1.1**
	1.5nm,0.2s,SNR=7.9						
MESJ	**Messejana**	**4.36**	**303**	*e*Pn	**Pn**	**19 00 00.6**	**+0.6**
MESJ				*e*Sn	**Sn**	**19 00 49.9**	**-0.8**
MESJ				A	A	19 00 53.3	
	2.8nm,0.5s						
PTEO	**Sao Teotonio**	**4.58**	**298**	*e*Sn	**Sn**	**19 00 55.1**	**-0.9**
PESTR	**Estremoz**	**4.60**	**318**	*e*Pn	**Pn**	**19 00 05.0**	**+1.6**
PESTR				*e*Sn	**Sn**	**19 00 56.4**	**-0.3**
PESTR				A	A	19 01 05.2	
	1.8nm,0.5s						
PESTR	**Estremoz**	**4.60**	**318**	P	**Pn**	**19 00 03.1**	**-0.2**
PESTR				S	**Sn**	**19 00 58.9**	**+2.3**
PNCL	**Nicolau / Gran**	**4.71**	**305**	*e*Pn	**Pn**	**19 00 05.0**	**+0.2**
PNCL				*e*Sn	**Sn**	**19 00 57.4**	**-1.9**
PMRV	**Marv??o**	**4.92**	**324**	*e*Pn	**Pn**	**19 00 08.4**	**+0.7**
PMRV				*e*Sn	**Sn**	**19 01 03.8**	**-0.7**
PMTG	**Montargil**	**5.10**	**315**	*e*Pn	**Pn**	**19 00 12.3**	**+2.1**
EIBI	**Ibiza**	**5.28**	**47**	P	**Pn**	**19 00 13.3**	**+0.6**
	0.4nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**19 01 10.4**	**-2.9**
	0.2nm,0.2s,SNR=7.9						
OUZM	**OUZ**	**5.30**	**211**	P	Pn	19 00 18.1	+5.0
OUZM				S	**Sn**	**19 01 20.2**	**+6.2**
OUK	**Oukaimeden**	**5.58**	**221**	P	**Pn**	**19 00 17.2**	**0.0**
OUK				S	**Sn**	**19 01 19.3**	**-2.0**
PSBE	**So Bento**	**5.73**	**316**	*e*Pn	**Pn**	**19 00 21.6**	**+2.8**
MVO	**Moncorvo**	**6.24**	**336**	*e*Pn	**Pn**	**19 00 27.9**	**+2.0**

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*IDC **24** 19:03:10.5±5.4, 3°.71S×151°.07E, h48^{km}±50^{km}, mb3.5/8, mb1 3.7/9, mb1mx3.6/40, mbtmp3.8/9, ML1.8/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/34, Error ellipse: s-maj=46.8km s-min=28.5km az=97.0*

ISC 24 19:03:09.3±1.4**, 3°.6S**±0°.1×**151°.1E**±0°.3**, h35^{km}, n12, σ1^s.12**/10**, mb3.7**/8**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.95**	**214**	P	**Pn**	**19 04 49.6**	**+0.9**
	1.2nm,0.3s,baz=23,slow=9.6,SNR=12						
PMG				LR	LR	19 07 39.2	
	comp=Z,210nm,20.6s,baz=60,slow=39						
JAY	**Jayapura**	**10.44**	**276**	LR	LR	19 09 09.1	
	comp=Z,185nm,21.2s,baz=90,slow=34						
HNR	**Honiara**	**10.52**	**124**	LR	LR	19 10 02.3	
	comp=Z,223nm,18.4s,baz=308,slow=39						
WRA	**Warramunga Arr**	**23.03**	**224**	P	**P**	**19 08 09.7**	**-1.9**
	3.3nm,1.0s,baz=49,slow=10,SNR=5.1						
WRA				LR	LR	19 17 49.1	
	comp=Z,68nm,20.7s,baz=295,slow=38						
ASAR	**Alice Springs**	**25.95**	**218**	P	**P**	**19 08 36.9**	**-1.7**
	0.7nm,0.7s,baz=54,slow=7.8,SNR=8.8						
STKA	**Stephens Creek**	**29.50**	**197**	P	**P**	**19 09 11.0**	**+0.7**
	1.0nm,0.7s,baz=48,slow=12,SNR=2.9						
CMAR	**Chiang Mai Arr**	**55.84**	**295**	P	**P**	**19 12 43.7**	**0.0**
	1.9nm,0.8s,baz=111,slow=5.4,SNR=16						
SONM	**Songino Array**	**64.43**	**328**	P	**P**	**19 13 43.0**	**+0.8**
	0.5nm,0.7s,baz=140,slow=11,SNR=2.3						
MKAR	**Makanchi Array**	**78.33**	**319**	P	**P**	**19 15 06.0**	**-0.1**
	1.3nm,0.9s,baz=93,slow=7.3,SNR=6.3						
ILAR	**Eielson Array**	**81.72**	**22**	P	**P**	**19 15 23.4**	**-0.5**
	0.7nm,0.8s,baz=247,slow=5.5,SNR=6.5						
KURBB	**Kurchatov Arra**	**81.83**	**322**	P	**P**	**19 15 25.0**	**+0.2**
	0.3nm,0.8s,baz=113,slow=5.5,SNR=4.4						
TORD	**Torodi Ar. Bea**	**148.32**	**289**	PKPbc	**PKPbc**	**19 22 52.9**	**-0.1**
	0.6nm,0.7s,baz=78,slow=3.6,SNR=3.6						

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*IDC **24** 19:10:49.5±0.9, 30°.20N×102°.78E, h0^{km}, mb3.6/8, mb1 3.8/10, mb1mx3.6/52, mbtmp3.6/10, ML3.3/2, MS3.1/3, Ms1 3.1/3, ms1mx2.8/50, Error ellipse: s-maj=34.5km s-min=16.8km az=60.0*

ISC 24 19:10:50.8±0.8**, 30°.26N**±0°.07×**102°.85E**±0°.08**, h10^{km}, n16, σ1^s.64**/18**, mb3.6**/8**, 1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.02**	**50**	⇓Pg	**Pn**	**19 11 11.8**	**+0.6**
CD2				Sg	**Sn**	**19 11 27.8**	**+2.2**
CD2				smax	smax		
	comp=N,970nm,1.0s						
CD2				smax	smax		
	comp=E,1µm,0.5s						
LZH	**Lanzhou**	**5.87**	**8**	*e*Pg	Pg	19 12 49.8	+6.5
LZH				Sg	**Sg**	**19 13 58.9**	**-0.4**
LZH				smax	smax		
	comp=N,20nm,1.1s						
LZH				smax	smax		
	comp=E,26nm,1.2s						
XAN	**Xi'an**	**6.38**	**52**	Pn	**Pn**	**19 12 26.1**	**+1.2**
XAN				Pg	**Pg**	**19 12 51.8**	**-1.2**
XAN				Sn	**Sn**	**19 13 33.1**	**-4.8**
XAN				Sg	**Sg**	**19 14 16.9**	**+1.3**
XAN				smax	smax		
	comp=N,83nm,1.0s						
XAN				smax	smax		
	comp=E,94nm,0.9s						
XAN				LR	LR		
	comp=N,270nm,4.9s						
XAN				LR	LR		
	comp=E,180nm,7.9s						
XAN				LR	LR		
	comp=Z,170nm,12.4s						
WHN	**Wuhan**	**9.94**	**85**	P	Pn	19 13 19.5	+5.9
CMAR	**Chiang Mai Arr**	**12.28**	**198**	Pn	**Pn**	**19 13 44.9**	**-0.9**
	comp=Z,0.0nm,0.3s,baz=0.5,slow=9.9,SNR=1.7						
CMAR				LR	LR	19 18 51.0	
	comp=Z,41nm,18.6s,baz=176,slow=40						
SONM	**Songino Array**	**17.76**	**8**	P	**P**	**19 14 59.3**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=194,slow=10,SNR=6.9						
SONM				LR	LR	19 22 15.1	
	comp=Z,90nm,19.7s,baz=147,slow=38						
WMQ	**Urumqi**	**18.11**	**323**	*e*P	**P**	**19 15 01.8**	**-1.1**
KSRS	**Korea Array**	**21.98**	**64**	P	**P**	**19 15 46.1**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=251,slow=9.4,SNR=2.3						
MKAR	**Makanchi Array**	**22.94**	**322**	P	**P**	**19 15 56.0**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=111,slow=12,SNR=4.2						
ZALV	**Zalesovo Beam**	**27.04**	**336**	P	**P**	**19 16 32.7**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=152,slow=9.9,SNR=5.3						
KURBB	**Kurchatov Arra**	**27.29**	**325**	P	**P**	**19 16 35.6**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=130,slow=9.6,SNR=9.2						
ASAJ	**Asahikawa**	**34.21**	**55**	LR	LR	19 34 06.7	
	comp=Z,33nm,18.1s,baz=51,slow=41						
FINES	**FINESS Array B**	**57.67**	**326**	P	**P**	**19 20 40.9**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=50,slow=6.2,SNR=5.1						
WRA	**Warramunga Arr**	**58.39**	**145**	P	**P**	**19 20 47.6**	**+0.9**
	comp=Z,1.4nm,0.5s,baz=336,slow=7.5,SNR=27						
ASAR	**Alice Springs**	**61.35**	**147**	P	**P**	**19 21 06.0**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=336,slow=6.8,SNR=5.8						
GERES	**GERESS Array B**	**67.36**	**314**	P	**P**	**19 21 47.6**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=64,slow=6.2,SNR=3.7						

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*RSNC **24** 19:13:56.7±1.0, 6°.82N×73°.15W, h148^{km}±4^{km}, ML3.6, Mw3.8, Fault plane solution: NP1:ϕ_s64.00000°, δ74.00000°, λ-110.00000°.*

*IDC **24** 19:13:58.1±3.5, 6°.66N×73°.51W, h176^{km}±24^{km}, mb3.1/3, mb1 3.5/3, mb1mx3.0/34, mbtmp3.6/3, Error ellipse: s-maj=76.8km s-min=26.5km az=82.0*

ISC 24 19:13:54.9±0.8**, 6°.83N**±0°.03×**73°.11W**±0°.04**, h159^{km}**±6^{km}**, n35, σ1^s.28**/67**, mb3.3**/3**, 4C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.24**	**197**	⇓*i*P	**Pn**	**19 14 16.6**	**-0.1**
BARC				*e*S	**Sn**	**19 14 31.7**	**-1.7**
BARC				*i*		19 14 32.9	
	comp=Z,823nm,0.3s						
PAMC	**Pamplona, Colo**	**0.65**	**39**	*e*P	**Pn**	**19 14 19.6**	**+0.9**
PAMC				*e*S	**Sn**	**19 14 36.8**	**-0.1**
PAMC				*i*		19 14 38.9	
	comp=Z,1µm,0.5s						
BRRC	**Barranca, Sant**	**0.66**	**295**	⇑*i*P	**Pn**	**19 14 18.5**	**+0.4**
BRRC				*e*S	**Sn**	**19 14 35.1**	**-0.8**
BRRC				*i*		19 14 39.5	
	comp=Z,722nm,0.4s						
RUSC	**La Rusia**	**0.93**	**178**	⇓*e*P	**Pn**	**19 14 20.6**	**0.0**
RUSC				*e*S	**Sn**	**19 14 39.5**	**-0.8**
RUSC				*i*		19 14 40.6	
	comp=Z,344nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.37**	**258**	*e*P	**Pn**	**19 14 23.3**	**-0.6**
PTBC				*e*S	**Sn**	**19 14 44.6**	**-1.5**
PTBC				*i*		19 14 51.7	
	comp=Z,250nm,0.4s						
TAMC	**Tame, Arauca**	**1.37**	**107**	⇓*i*P	**Pn**	**19 14 25.1**	**+1.2**
TAMC				*e*P	**Pn**	**19 14 25.1**	**+1.2**
TAMC				*e*S	**Sn**	**19 14 47.0**	**+0.8**
OCAC	**Ocana**	**1.42**	**352**	⇑*e*P	**Pn**	**19 14 24.7**	**+0.1**
OCAC				*e*S	**Sn**	**19 14 46.5**	**-0.8**
OCAC				*i*		19 14 56.4	
	comp=Z,579nm,0.3s						
SPBC	**San Pablo de B**	**1.51**	**219**	*e*P	**Pn**	**19 14 25.4**	**0.0**
SPBC				*e*S	**Sn**	**19 14 47.5**	**-1.3**
SPBC				*i*		19 14 50.1	
	comp=Z,466nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	*e*P	**Pn**	**19 14 29.3**	**+0.3**
ZARC				*e*S	**Sn**	**19 14 54.8**	**-0.4**
ZARC				*i*		19 15 00.8	
	comp=Z,390nm,0.2s						
NORC	**Norcasia**	**2.15**	**234**	*e*P	**Pn**	**19 14 32.6**	**+0.2**
NORC				⇓*i*P	**Pn**	**19 14 32.9**	**+0.4**
NORC				*e*S	**Sn**	**19 15 00.0**	**-1.4**
NORC				*i*		19 15 03.2	
	comp=Z,146nm,0.2s						
SMLC	**San Martn de**	**2.18**	**334**	*e*P	**Pn**	**19 14 32.8**	**+0.1**
SMLC				*e*S	**Sn**	**19 15 01.5**	**-0.4**
SMLC				*i*		19 15 04.7	
	comp=Z,270nm,0.3s						
CHIC	**Chingaza**	**2.27**	**196**	*e*P	**Pn**	**19 14 34.9**	**+0.7**
CHIC				*e*S	**Sn**	**19 15 04.1**	**-0.4**
CHIC				*i*		19 15 07.8	
	comp=Z,302nm,0.4s						
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**19 14 36.9**	**+2.2**
	comp=Z,59nm,0.3s,baz=68,slow=22,SNR=46						
ROSC				S	**Sn**	**19 15 03.8**	**-1.5**

	comp=Z,182nm,0.3s,baz=130,slow=18,SNR=24						
ROSC	El Rosal	2.31	211	*e*P	Pn	19 14 36.4	+1.7
ROSC				*e*S	Sn	19 15 04.5	-0.8
ROSC				*i*		19 15 10.4	
	comp=Z,501nm,0.3s						
HELC	Santa Helena	2.48	255	*e*P	Pn	19 14 38.5	+1.8
HELC				*e*S	Sn	19 15 08.9	0.0
HELC				*i*		19 15 14.8	
	comp=Z,115nm,0.3s						
UREC	San Jos de Ur	2.57	291	*e*P	Pn	19 14 36.7	-0.7
UREC				*e*S	Sn	19 15 07.9	-2.3
UREC				*i*		19 15 19.7	
	comp=Z,219nm,0.3s						
SOCV	Socops	2.66	57	*i* P	Pn	19 14 38.6	+0.1
SOCV				*e*S	Sn	19 15 10.3	-1.9
GUY2C	Guyana, Caldas	2.75	235	*e*P	Pn	19 14 41.0	+1.0
GUY2C				*e*S	Sn	19 15 15.6	+0.7
GUY2C				*i*		19 15 20.9	
	comp=Z,116nm,0.4s						
VILC	Villavicencio,	2.76	192	*e*P	Pn	19 14 40.1	+0.2
VILC				*e*S	Sn	19 15 14.0	-0.7
PTGC	Puerto Gaitan,	2.79	160	*e*P	Pn	19 14 39.8	-0.3
PTGC				*e*S	Sn	19 15 13.2	-1.9
PTGC				*i*		19 15 15.9	
	comp=Z,343nm,0.4s						
LL6C	La Loma 6 Bece	2.89	357	*i* P	Pn	19 14 42.0	+0.6
LL6C				*e*S	Sn	19 15 16.0	-1.4
LL6C				*i*		19 15 23.7	
	comp=Z,114nm,0.4s						
CBOC	Ciudad Bolivar	3.04	252	*e*P	Pn	19 14 44.6	+1.3
CBOC				*e*S	Sn	19 15 20.5	-0.3
CBOC				*i*		19 15 33.4	
	comp=Z,45nm,0.7s						
DBBC	Dabeiba	3.08	274	*e*P	Pn	19 14 43.7	-0.1
DBBC				*e*S	Sn	19 15 20.0	-1.7
DBBC				*i*		19 15 24.3	
	comp=Z,412nm,0.7s						
ANIL	Santa Ana	3.25	225	⇑*i*P	Pn	19 14 48.0	+1.8
ANIL				*e*S	Sn	19 15 26.5	+0.5
PRAC	Prado	3.56	210	*e*P	Pn	19 14 50.1	+0.2
PRAC				*e*S	Sn	19 15 32.1	-0.5
PRAC				*i*		19 15 37.7	
	comp=Z,196nm,0.5s						
ORTC	Ortega, Tolima	3.60	216	*e*P	Pn	19 14 51.0	+0.6
ORTC				*e*S	Sn	19 15 34.1	+0.8
ORTC				*i*		19 15 38.2	
	comp=Z,118nm,0.6s						
SJCC	San Jacinto, C	3.67	326	*e*P	Pn	19 14 51.0	-0.3
SJCC				*e*S	Sn	19 15 31.9	-3.2
SJCC				*i*		19 15 36.4	
	comp=Z,70nm,0.6s						
GUVC	San Jose del G	4.28	174	⇑*i*P	Pn	19 14 59.5	+0.3
GUVC				*e*S	Sn	19 15 47.1	-2.1
GUVC				*i*		19 15 52.9	
	comp=Z,157nm,0.3s						
MACC	Macarena, Meta	4.71	189	*i* P	Pn	19 15 03.7	-1.0
MACC				*e*S	Sn	19 15 54.9	-4.5
MACC				*i*		19 16 03.5	
	comp=Z,35nm,0.4s						
BETC	Betania	4.73	210	*i* P	Pn	19 15 05.0	-0.1
BETC				*e*S	Sn	19 15 57.0	-2.8
BETC				*i*		19 16 02.9	
	comp=Z,34nm,0.4s						
TXAR	Lajitas Array	36.46	312	P	P	19 20 45.2	+0.3
	comp=Z,0.3nm,0.5s,baz=128,slow=8.7,SNR=6.1						
PDAR	Pinedale Array	48.08	324	P	P	19 22 19.6	+0.8
	comp=Z,0.2nm,0.4s,baz=130,slow=9.7,SNR=2.9						
YKA	Yellowknife Ar	63.26	340	P	P	19 24 07.1	+0.8
	comp=Z,1.0nm,0.6s,baz=134,slow=6.6,SNR=21						
ASAR	Alice Springs	149.12	234	PKPbc	PKPbc	19 33 25.2	-0.2
	comp=Z,0.4nm,0.6s,baz=122,slow=3.6,SNR=6.0						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	19 33 28.0	-0.5
	comp=Z,0.3nm,0.4s,baz=107,slow=2.9,SNR=6.3						

REN ***24*** *19:14:46.5±2.6, 37°.41N±0°.03×118°.51W±0°.04, h8*^{km}*±6*^{km}*,*
Error ellipse: s-maj=4.9km s-min=4.5km az=224.0
NCEDC ***24*** *19:14:46.5±2.5, 37°.41N±0°.03×118°.51W±0°.02, h7*^{km}*±6*^{km}*,*
ML3.7/50, ML3.3/68(NEIC), ML4.0/6(REN), Error ellipse:
s-maj=4.9km s-min=2.4km az=199.0
ANF ***24*** *19:14:46.6±0.4, 37°.38N×118°.51W, h4*^{km}*±4*^{km}*, ML3.7/18,*
Error ellipse: s-maj=4.5km s-min=3.4km az=38.0
NEIC ***24*** *19:14:46.6±1.9, 37°.45N±0°.03×118°.48W±0°.04, h2*^{km}*±9*^{km}*,*
Error ellipse: s-maj=5.2km s-min=4.5km az=218.0
ISC 24 19:14:46.2±1.0**, 37°.45N**±0°.02×**118°.47W**±0°.02**, h7**^{km}±9^{km}**,**
n95, σ**1**^{s}**11**/110**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTUM	Tungsten Hills	0.12	218		Pg	19 14 48.5	-0.3
MLAC	Mammoth, Mammo	0.34	303	P	Pb	19 14 53.9	-0.9
	baz=131						
MLAC				S	Sg	19 14 58.4	+0.9
	baz=131						
MDRNC	Doe Ridge	0.35	304		Pg	19 14 53.6	+0.5
TIN	Tinemaha, Big	0.43	154	P	Pg	19 14 55.0	+0.3
	baz=328						
TIN				S	Sg	19 15 01.1	+0.8
	baz=328						
MRDM	Red Cones	0.49	288		Pg	19 14 55.7	-0.1
MDCM	Deadman Creek	0.52	300		Pg	19 14 56.5	+0.2
KCC	Kaiser Creek	0.69	260		Pg	19 14 58.6	-0.7
KCC	Kaiser Creek	0.69	260		Sg	19 15 07.1	-1.2
LCH	Last Change Ra	0.69	108		Pg	19 14 59.9	+0.4
LCH				IAML		19 15 10.1	
	comp=N,3μm,0.5s						
LHV	Little Huntoon	0.81	358		Pb	19 15 02.6	+0.1
LHV				IAML		19 15 17.2	
	comp=N,2μm,0.6s						
LHV				IAML		19 15 21.8	
	comp=E,1μm,0.5s						
HELL	Mitchell Peak,	0.88	210		Pg	19 15 02.1	-1.0
GRAC	Grapevine Rang	0.99	117	P	Pb	19 15 05.8	+0.1
	baz=294						
GRAC				S	Sb	19 15 19.1	+0.1
	baz=294						
NVAR	Mina Array Bea	0.99	8		Pb	19 15 05.9	+0.1
NV11	Mina Array Sit	1.02	14		Pb	19 15 06.4	+0.1
CWC	Cottonwood Cre	1.05	162	P	Pg	19 15 05.5	-0.9
	baz=340						
TPH	Tonopah	1.17	57		Pn	19 15 09.6	+0.3
RYN	Ryan	1.18	358		Pn	19 15 09.4	0.0
RYN				IAML		19 15 26.5	
	comp=E,490nm,0.5s						
RYN				IAML		19 15 28.7	
	comp=N,491nm,0.4s						
VOG	Valley Oaks Go	1.34	213	P	Pn	19 15 10.7	-0.6
	baz=32						
VOG				S	Sg	19 15 27.8	-1.4
	baz=32						
MPMC	Manual Prospec	1.59	150	P	Pn	19 15 15.1	+0.1
	baz=329						
MPMC				S	Sn	19 15 35.0	-1.0
	baz=329						
FURC	Furnace Creek,	1.62	127	P	Pb	19 15 16.3	-0.1
	baz=306						
FURC				S	Sg	19 15 37.8	-0.3
	baz=306						
CMB	Columbia Colle	1.63	292		Pn	19 15 15.6	+0.2
KVN	Kaiserville	1.63	10		Pn	19 15 16.1	+0.6
KVN				IAML		19 15 41.7	
	comp=E,402nm,0.6s						
KVN				IAML		19 15 42.8	
	comp=N,259nm,0.5s						
YERR	Yerington	1.65	339		Pn	19 15 16.2	+0.4
YERR				IAML		19 15 46.2	
	comp=E,318nm,0.4s						
VES	Vestal, Richgr	1.68	197	P	Pn	19 15 16.3	+0.3
	baz=16						
VES				S	Sn	19 15 37.6	0.0
	baz=16						
ISA	Isabella, Lake	1.78	180		Pn	19 15 18.0	+0.6
ISA	Isabella, Lake	1.78	180	P	Pn	19 15 18.0	+0.6
	baz=359						
ISA				S	Sn	19 15 40.4	+0.1
	baz=359						
TPNV	Topopah Spring	1.84	105		Pn	19 15 18.7	+0.3
TPNV				IAML		19 15 50.4	
	comp=E,242nm,1.2s						
TPNV				IAML		19 15 54.4	
	comp=E,269nm,0.7s						
TPNV	Topopah Spring	1.84	105	P	Pn	19 15 19.3	+0.9
	baz=285						
TPNV				Sb	Sg	19 15 46.4	+0.9
	baz=285						
PNTR	Pine Nut	1.87	332		Pn	19 15 19.0	+0.2
PNTR				IAML		19 15 50.4	
	comp=N,309nm,0.7s						
PNTR				IAML		19 15 52.0	
	comp=E,357nm,1.0s						
PDRM	Domengine Ranc	1.88	235		Pn	19 15 19.9	+1.1
GWY	Greenwater Val	1.92	130		Pn	19 15 18.7	-0.7
GWY				IAML		19 15 51.3	
	comp=E,214nm,0.3s						
QSM	Queen of Sheba	1.96	138		Pn	19 15 19.6	-0.3
QSM				IAML		19 15 50.6	
	comp=E,213nm,0.5s						
QSM				IAML		19 15 51.1	
	comp=N,231nm,0.6s						
EMB	Emerald Bay	2.00	320		Pn	19 15 20.1	-0.5
EMB				IAML		19 15 55.7	
	comp=E,177nm,0.7s						
EMB				IAML		19 16 05.2	
	comp=N,248nm,0.3s						
LRMC	Laurel Mtn Rad	2.06	162	Pb	Pb	19 15 23.6	-0.4
	baz=341						
LRMC				Sb	Sb	19 15 50.9	+1.0
	baz=341						
VCNR	Virginia City	2.07	334		Pn	19 15 22.8	+1.2
VCNR				IAML		19 15 55.0	
	comp=E,191nm,1.1s						
RUBR	Rubicon Trail	2.08	321		Pn	19 15 20.9	-0.8
RUBR				IAML		19 15 57.0	
	comp=E,300nm,0.5s						
RUBR				IAML		19 15 59.8	
	comp=N,276nm,0.4s						
MPK	Martis Peak	2.22	327		Pn	19 15 22.8	-0.8
MPK				IAML		19 16 00.4	
	comp=N,223nm,0.7s						
MPK				IAML		19 16 11.5	
	comp=E,213nm,0.8s						
THIS	South End of C	2.22	220		Pn	19 15 24.4	+0.8
PAGB	Antelope Grade	2.23	220		Pn	19 15 23.8	+0.3
PMPB	Monarch Peak	2.23	237		Pn	19 15 24.5	+0.8
PKD	Bear Valley Ra	2.24	229		Pn	19 15 24.2	+0.5
TRAM	Private Proper	2.28	220		Pn	19 15 25.2	+0.9
BBNM	San Benito	2.28	247		Pn	19 15 25.2	+0.9
PACP	Pacheco Peak	2.29	260		Pn	19 15 25.9	+1.4
COSM	Mount Oso	2.31	272		Pn	19 15 26.4	+1.6
ARVC	Arvin	2.33	187	Pb	Pb	19 15 28.3	-0.2
	baz=6.3						
ARVC				Sb	Sb	19 15 58.1	+0.5
	baz=6.3						
TCHL	Shandon	2.34	222		Pn	19 15 26.2	+1.0
SHOC	Shoshone, Teco	2.34	130	Pb	Pb	19 15 28.7	-0.1
	baz=311						
SHOC				Sb	Sg	19 15 59.9	-1.7
	baz=311						
PAHR	Pah Rah Range	2.37	343		Pn	19 15 26.7	+1.0
BLRM	Lewis Ranch	2.37	252		Pn	19 15 27.2	+1.7
HFEM	San Felipe	2.38	260		Pn	19 15 27.3	+1.7
GHS	Gilroy Hot Spr	2.40	263		Pn	19 15 27.3	+1.3
TSCN	Private Proper	2.42	219		Pn	19 15 27.1	+0.9
R11A	Troy Canyon, C	2.46	68		Pn	19 15 27.4	+0.5
R11A				IAML		19 16 06.7	
	comp=N,123nm,0.5s						
R11A	Troy Canyon, C	2.46	68	Pb	Pb	19 15 31.9	+1.1
	baz=249						
R11A				Sb	Sg	19 16 04.7	-0.4
	baz=249						
SAO	San Andreas Ge	2.47	255		Pn	19 15 27.9	+0.9
SCZ	Santa Cruz	2.49	251		Pn	19 15 28.4	+1.2
HSFM	Saint Francis	2.50	256		Pn	19 15 28.9	+1.6
BJCM	Johnson Can.	2.50	250		Pn	19 15 28.2	+0.9
GSC	Goldstone, Bar	2.53	147		Pn	19 15 27.9	+0.2
GSC	Goldstone, Bar	2.53	147	P	Pn	19 15 27.9	+0.2
	baz=327						
MHC	Mount Hamilton	2.53	269		Pn	19 15 29.3	+1.5
EDW2	Edwards Air Fo	2.59	171	Pb	Pb	19 15 32.8	-0.2
	baz=351						
BSMM	Soledad Missio	2.59	247		Pn	19 15 29.6	+0.9
WENL	Wente Vineyard	2.62	275		Pn	19 15 31.0	+2.2
RAMR	Ramage Ranch	2.64	228		Pn	19 15 30.2	+1.0
HAST	Hastings Reser	2.68	248		Pn	19 15 29.8	0.0
PRN	Pahroc Range	2.72	90		Pn	19 15 30.6	+0.1
BDM	Black Diamond	2.74	282		Pb	19 15 33.8	-1.7
PKM	Mcpherson Peak	2.77	203	P	Pn	19 15 31.8	+0.6
	baz=22						
PAPM	Alder Peak	2.78	238		Pn	19 15 31.9	+0.6
SHPR	Sheep Range	2.81	108		Pn	19 15 32.7	+0.9
OSI	Osito Audit: C	2.83	184		Pb	19 15 36.8	-0.3
OSI	Osito Audit: C	2.83	184	Pb	Pb	19 15 36.8	-0.3
	baz=3.4						
BMN	Battle Mountai	3.14	18	Pn	Pn	19 15 37.3	+1.1
BMN				IAML		19 16 29.5	
	comp=N,104nm,0.5s						
BMN				IAML		19 16 30.5	
	comp=E,75nm,0.6s						
ORV	Oroville	3.17	312		Pn	19 15 38.1	+1.5
ORV				IAML		19 16 31.5	
	comp=E,85nm,0.6s						
MWC	Mount Wilson	3.23	174		Pb	19 15 44.7	+0.7
MWC				IAML		19 16 35.5	
	comp=N,134nm,0.6s						
MWC				IAML		19 16 37.1	
	comp=E,141nm,1.0s						
SPR3	Spring Creek 3	3.61	63		Pn	19 15 44.5	+1.6
GDXM	Geysers	3.67	293		Pn	19 15 43.1	-0.4
PSUT	Pine Spring	3.81	72		Pn	19 15 44.1	-1.3
CCUT	Cedar City	4.07	87		Pn	19 15 50.4	+1.4
PFO	Pinyon Flats O	4.16	156	Pn	Pn	19 15 50.9	+0.7
PFO					Pb	19 16 02.6	+2.8
LCMT	Little Creek M	4.20	94		Pn	19 15 50.9	+0.2
SZCU	Shurtz Canyon	4.28	86		Pn	19 15 52.8	+0.8
KNB	Kanab	4.53	94		Pn	19 15 57.5	+2.1
MOD	Modoc Plateau	4.67	343		Pb	19 16 10.6	+2.1
MOD				IAML		19 16 57.4	
	comp=E,22nm,4.0s						
MOD				IAML		19 17 44.8	
	comp=N,23nm,4.9s						
PKCU	Pink Cliffs	4.90	88	Pn	Pn	19 15 59.8	-0.9
MTPU	Mount Pierson	5.02	81	Pn	Pn	19 16 02.7	+0.5
MVU	Marysvale	5.06	76		Pg	19 16 20.6	-2.4
MSU	Marysvale	5.09	76	Pn	Pn	19 16 00.9	-2.1
DUG	Dugway, Tooele	5.20	56	Pg	Pg	19 16 23.7	-2.2
BGU	Big Grassy Mou	5.47	49		Pn	19 16 06.5	-1.8
WUAZ	Wupatki	6.03	106	Pg	Pb	19 16 35.6	+3.8
HVU	Hansel Valley	6.17	44	Pn	Pn	19 16 20.0	+2.1
HVU				Pg	Pg	19 16 43.1	-1.3
MFID	Camas Ranch	6.29	18	Pg	Pb	19 16 37.1	+1.0

TAP ***24*** *19:18:31.8, 23°.97N×121°.05E, h7*^{km}*, ML4.1, C*
JMA ***24*** *19:18:31.1±0.1, 23°.97N×121°.04E, h4*^{km}*, M3.4*
ASIES ***24*** *19:18:32.9, 23°.97N×121°.06E, h18*^{km}*, MW3.9*
NEIC ***24*** *19:18:32.9±2.0, 23°.92N±0°.03×121°.13E±0°.04, h10*^{km}*±1*^{km}*,*
mb4.0/5, ML4.2(TAP), Error ellipse: s-maj=7.7km
s-min=2.9km az=130.0
IDC ***24*** *19:18:32.2±0.9, 24°.06N×121°.17E, h0*^{km}*, mb3.6/8,*
mb1 3.8/10, mb1mx3.5/46, mbtmp3.7/10, ML3.3/2, MS3.3/3,
Ms1 3.3/3, ms1mx2.9/50, Error ellipse: s-maj=28.2km
s-min=18.7km az=66.0
ISC 24 19:18:32.7±0.8**, 23°.98N**±0°.01×**121°.05E**±0°.01**, h5**^{km}±6^{km}**,**
n171, σ**0**^{s}**94**/280**, mb3.7**/10**, MS3.3**/3**, 14C-20D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPL	Puli Township	0.09	291	⇓*i*P	Pg	19 18 34.4	-0.4
	baz=296						
WPL				*i* S	Sg	19 18 36.1	0.0
	baz=296						
OWD	Renai	0.12	102	⇑*i*P	Pg	19 18 35.0	-0.2
	baz=99						
OWD				*i* S	Sg	19 18 37.4	+0.6
	baz=99						
DPDB	Guoxing	0.13	296	⇓*i*P	Pg	19 18 35.1	-0.2
	baz=308						
DPDB				*i* S	Sg	19 18 37.3	+0.2
	baz=308						
CHGB	Renai	0.14	54	⇑*i*P	Pg	19 18 35.4	-0.2
	baz=53						
CHGB				*i* S	Sg	19 18 37.9	+0.3
	baz=53						
WCS	Beigang Elemen	0.15	302	⇓*i*P	Pg	19 18 35.5	-0.2
	baz=305						
WCS				S	Sg	19 18 37.8	+0.1
	baz=305						
SMLT	Sun Moon Lake	0.17	236	⇑*i*P	Pg	19 18 35.5	-0.6
	baz=234						
SMLT				S	Sg	19 18 38.5	+0.1
	baz=234						
TYC	Yuchr	0.19	248	⇑*i*P	Pg	19 18 35.8	-0.7
	baz=247						
TYC				*e*S	Sg	19 18 39.2	+0.1
	baz=247						
SSLB	Suanglung	0.21	205	⇑*i*P	Pg	19 18 35.7	-1.2
	baz=204						
SSLB				S	Sg	19 18 38.8	-0.9
	baz=204						
SSLB	Suanglung	0.21	205	Pg	Pg	19 18 34.9	-1.9
VWDT	VWDT	0.24	160	⇓*i*P	Pg	19 18 37.0	-0.4
	baz=158						
VWDT				*i* S	Sg	19 18 39.9	-0.6
	baz=158						
WHF	Hehuan Shan	0.26	49	P	Pg	19 18 37.9	0.0
	baz=51						
WHF				S	Sg	19 18 41.9	+0.6
	baz=51						
TDCB	Techi	0.29	19	⇓*i*P	Pg	19 18 37.8	-0.6
	baz=20						
TDCB				S	Sg	19 18 41.4	-1.0
	baz=20						
TWT	Tachien	0.30	22	*i* P	Pg	19 18 37.9	-0.7
	baz=21						
TWT				S	Sg	19 18 41.6	-0.9
	baz=21						
WHP	Taichung City	0.31	342	⇓*i*P	Pg	19 18 38.6	-0.2
	baz=343						
WHP				*e*S	Sg	19 18 43.4	+0.3
	baz=343						
FUSS	Fushou	0.32	33	⇑*i*P	Pg	19 18 38.4	-0.7
	baz=34						
FUSS				S	Sg	19 18 42.6	-0.7
	baz=34						
WWF	Wufeng	0.33	281	P	Pb	19 18 39.9	-1.1
	baz=287						
WJS	Zhushan	0.34	242	*e*P	Pg	19 18 39.1	-0.1
	baz=230						
WNT1	Nantou City	0.35	258	P	Pg	19 18 40.1	+0.6
	baz=259						
WNT1				S	Sb	19 18 46.4	-0.8
	baz=259						
WNT	Mingjian	0.35	254	P	Pg	19 18 40.0	+0.5
	baz=253						
WNT				*e*S	Sb	19 18 46.2	-1.1
	baz=253						
TCU	Taichung	0.38	296	⇓*i*P	Pb	19 18 41.3	-0.6
	baz=298						
TCU				S	Sb	19 18 47.7	-0.5
	baz=298						
ESL	Shilin	0.39	115	⇓*i*P	Pg	19 18 40.1	-0.1
	baz=114						
ESL				*e*S	Sg	19 18 45.7	+0.5
	baz=114						
ETM	Tongmen	0.40	92	⇑*i*P	Pg	19 18 40.3	-0.2
	baz=91						
ETM				S	Sg	19 18 45.8	0.0
	baz=91						
TWQ1	Liyutan	0.45	325	⇓*i*P	Pg	19 18 42.0	+0.6
	baz=339						
TWQ1				S	Sb	19 18 49.1	-1.0
	baz=339						
ETLH	Xiulin Townshi	0.45	60	⇑*i*P	Pg	19 18 41.3	-0.2
	baz=51						
ETLH				*e*S	Sg	19 18 47.2	-0.3
	baz=51						
EGFH	Guangfu	0.46	132	⇓*i*P	Pg	19 18 41.2	-0.4
	baz=131						
EGFH				*e*S	Sg	19 18 47.2	-0.4
	baz=131						
WCHH	Zhanghua	0.46	283	*i* P	Pb	19 18 42.6	-0.7
	baz=283						
WCHH				S	Sb	19 18 50.1	-0.4
	baz=283						
HWA	Hwalien	0.51	90	*i* P	Pg	19 18 42.8	+0.3
	baz=90						
HWA				*i* S	Sb	19 18 50.1	-1.6
	baz=90						
TWD	Chiawan	0.51	78	⇑*i*P	Pg	19 18 42.2	-0.3
	baz=79						
TWD				S	Sg	19 18 48.8	-0.3
	baz=79						
CHN5	Tsauling	0.51	222	⇑*i*P	Pg	19 18 43.0	+0.4
	baz=221						
CHN5				S	Sb	19 18 51.6	-0.4
	baz=221						
NSY	Sanyi	0.51	329	⇓*i*P	Pb	19 18 43.5	-0.7
	baz=330						
NSY				*e*S	Sb	19 18 51.8	-0.1
	baz=330						
TEYL	Yanliau Villag	0.51	102	*e*P	Pg	19 18 42.6	+0.1
	baz=98						
TEYL				*e*S	Sg	19 18 49.1	-0.1
	baz=98						
ALS	Alishan	0.52	206	⇑*i*P	Pg	19 18 42.0	-0.8
	baz=193						
ALS				*e*S	Sg	19 18 49.5	0.0
	baz=193						
WDJ	Dajia District	0.53	314	⇓*i*P	Pb	19 18 44.3	-0.2
	baz=329						
WDJ				S	Sb	19 18 53.0	+0.6
	baz=329						
EHY	Hungye	0.53	152	⇓*i*P	Pg	19 18 42.4	-0.6
	baz=143						
EHY				*e*S	Sg	19 18 48.8	-1.0
	baz=143						
NACB	Ninganchiao	0.53	68	⇑*i*P	Pg	19 18 42.6	-0.4
	baz=61						
NACB				*e*S	Sg	19 18 49.0	-0.9
	baz=61						
NACB	Ninganchiao	0.53	68	Pg	Pg	19 18 42.3	-0.6
NNSB	Datong	0.54	34	⇑*i*P	Pg	19 18 42.2	-1.0
	baz=42						
NNSB				*e*S	Sg	19 18 50.0	-0.2
	baz=42						
NNS	Nan Shan	0.55	32	*i* P	Pg	19 18 42.6	-0.7
	baz=42						
NNS				*e*S	Sg	19 18 48.9	-1.5
	baz=42						
ETL	Fush Village	0.55	71	*e*P	Pg	19 18 42.9	-0.5
	baz=84						
ETL				*e*S	Sg	19 18 50.0	-0.6
	baz=84						
WDLH	Douliu	0.55	239	*e*P	Pb	19 18 44.1	-0.8
	baz=238						
WDLH				*e*S	Sb	19 18 53.1	0.0
	baz=238						
HGSD	Ruisui	0.59	145	⇓*i*P	Pg	19 18 44.0	-0.1
	baz=152						
HGSD				*e*S	Sg	19 18 51.0	-0.8
	baz=152						
NMLH	Miaoli	0.61	337	*e*P	Pb	19 18 45.0	-0.8
	baz=350						
NMLH				*e*S	Sb	19 18 54.5	-0.2
	baz=350						
WRL	Guolierlin Hig	0.62	263	*e*P	Pg	19 18 44.9	+0.2
	baz=263						
WRL				*e*S	Sb	19 18 54.3	-0.8
	baz=263						
YULB	Yu-li	0.62	159	⇓*i*P	Pg	19 18 43.7	-1.0
	baz=151						
YULB				*e*S	Sg	19 18 51.4	-1.5
	baz=151						
YULB	Yu-li	0.62	159	Pg	Pg	19 18 43.2	-1.5
NSTT	Nanjuang	0.65	356	⇓*i*P	Pg	19 18 45.2	-0.1
	baz=357						
NSTT				*e*S	Sg	19 18 53.9	+0.1
	baz=357						
LIOB	Emei	0.67	357	⇓*i*P	Pg	19 18 45.5	0.0
	baz=358						
LIOB				S	Sg	19 18 54.3	+0.1
	baz=358						
WTK	Tuku	0.67	245	P	Pb	19 18 46.0	-0.9
	baz=244						
WTK				*e*S	Sb	19 18 55.8	-0.7
	baz=244						
EYUL	Yuli	0.67	159	*e*P	Pg	19 18 44.8	-0.9
	baz=151						
EYUL				*e*S	Sg	19 18 54.6	+0.2
	baz=151						
CHN2	Minshiung	0.69	230	P	Pb	19 18 46.5	-0.7
	baz=230						
CHN2				*e*S	Sb	19 18 57.3	+0.2
	baz=230						
WTCT	Ta-ch'eng	0.71	261	*e*P	Pg	19 18 46.4	0.0

	baz=261						
WTCT				*e*S	Sb	19 18 57.3	-0.4
	baz=261						
CHY	**Chiayi**	0.75	230	*e*P	Pg	19 18 47.3	+0.2
	baz=229						
CHY				*e*S	Sb	19 18 57.9	-0.8
	baz=229						
NSK	**Sanguang**	0.75	22	⇓*i*P	Pg	19 18 46.1	-1.0
	baz=15						
NSK				*e*S	Sg	19 18 55.2	-1.7
	baz=15						
YHNB	**Yeheng**	0.75	23	⇓*i*P	Pg	19 18 46.1	-1.1
	baz=24						
YHNB				S	Sg	19 18 55.5	-1.4
	baz=24						
YHNB	**Yeheng**	0.75	23	Pg	Pg	19 18 45.8	-1.4
NDT	**Datong Townshi**	0.75	34	*e*P	Pg	19 18 46.4	-0.8
	baz=34						
NDT				*e*S	Sg	19 18 57.2	+0.3
	baz=34						
ENA	**Nanau**	0.77	54	*e*P	Pg	19 18 47.0	-0.6
	baz=47						
ENA				*e*S	Sg	19 18 56.5	-1.1
	baz=47						
TPUB	**Ta-pu**	0.78	210	*e*P	Pg	19 18 47.2	-0.4
	baz=209						
TPUB				*e*S	Sb	19 18 58.8	-0.8
	baz=209						
TPUB	**Ta-pu**	0.78	210	Pg	Pg	19 18 47.1	-0.6
ELDTW	**Lidau**	0.79	182	P	Pg	19 18 45.8	-2.1
	baz=175						
ELDTW				*e*S	Sg	19 18 56.9	-1.1
	baz=175						
FULB	**Fuli**	0.81	164	*e*P	Pg	19 18 47.8	-0.4
	baz=163						
FULB				*e*S	Sb	19 19 00.5	0.0
	baz=163						
ENTT	**Nioudou**	0.81	35	*e*P	Pg	19 18 47.5	-0.8
	baz=36						
ENTT				*e*S	Sg	19 18 57.4	-1.4
	baz=36						
EWUT	**Wuta**	0.81	55	*e*P	Pg	19 18 47.9	-0.4
	baz=47						
EWUT				*e*S	Sg	19 18 57.3	-1.5
	baz=47						
SBCB	**Hsinchu**	0.81	356	*e*P	Pb	19 18 49.4	+0.1
	baz=6.0						
SBCB				*e*S	Sb	19 19 01.3	+0.6
	baz=6.0						
HSN	**Hsinchu**	0.82	355	*e*P	Pn	19 18 50.1	-0.9
	baz=8.0						
HSN				*e*S	Sn	19 19 02.3	-1.2
	baz=8.0						
WSF	**Szhu**	0.83	246	*e*P	Pg	19 18 48.2	-0.5
	baz=245						
WSF				*e*S	Sb	19 19 00.7	-0.5
	baz=245						
WTP	**Ta-pu**	0.83	209	P	Pg	19 18 48.5	-0.2
	baz=208						
WTP				*e*S	Sb	19 19 01.4	+0.2
	baz=208						
STYH	**Taoyuan**	0.84	198	⇓*i*P	Pg	19 18 47.6	-1.3
	baz=196						
STYH				*e*S	Sg	19 18 59.8	0.0
	baz=196						
TWK	**Hsinying**	0.88	216	⇑*i*P	Pg	19 18 49.4	-0.2
	baz=214						
TWK				S	Sb	19 19 02.1	-0.4
	baz=214						
NDS	**Dongshan**	0.89	43	P	Pg	19 18 48.8	-1.0
	baz=52						
NDS				S	Sg	19 19 00.7	-0.6
	baz=52						
NWLT	**Wulai**	0.90	27	*e*P	Pg	19 18 49.0	-1.0
	baz=28						
NWLT				*e*S	Sg	19 18 59.5	-2.0
	baz=28						
SNST	**Tainan City**	0.91	214	*e*P	Pg	19 18 49.9	-0.3
	baz=213						
SNST				*e*S	Sb	19 19 03.9	+0.5
	baz=213						
CHKT	**Chengkung**	0.92	162	*e*P	Pg	19 18 50.1	-0.3
	baz=167						
CHKT				*e*S	Sb	19 19 04.1	+0.5
	baz=167						
CHN1	**Nanshi**	0.92	211	*e*P	Pg	19 18 50.0	-0.5
	baz=224						
CHN1				*e*S	Sg	19 19 02.4	-0.1
	baz=224						
TWE	**Neicheng**	0.93	37	*i* P	Pg	19 18 49.7	-0.9
	baz=39						
TWE				*e*S	Sb	19 19 03.5	-0.4
	baz=39						
ICHU	**Yijhu**	0.94	229	P	Pg	19 18 50.4	-0.3
	baz=228						
ICHU				*e*S	Sg	19 19 03.1	+0.2
	baz=228						
TWC	**Suao**	0.96	49	*e*P	Pg	19 18 50.4	-0.8
	baz=43						
TWC				*e*S	Sg	19 19 03.1	-0.6
	baz=43						
SGST	**Jiashian**	0.99	206	*e*P	Pg	19 18 50.8	-1.0
	baz=217						
SGST				S	Sb	19 19 06.4	+0.7
	baz=217						
NCUH	**Zhongli**	0.99	7	P	Pn	19 18 52.7	-0.6
	baz=8.0						
NCUH				*e*S	Sn	19 19 06.8	-0.9
	baz=8.0						
CHN8	**Yiju**	0.99	231	*e*P	Pg	19 18 51.0	-0.8
	baz=230						
CHN8				*e*S	Sb	19 19 05.6	-0.2
	baz=230						
ILA	**Ilan**	1.01	39	*e*P	Pb	19 18 52.2	-0.4
	baz=40						
ILA				*e*S	Sb	19 19 06.7	+0.5
	baz=40						
EDH	**Donghe**	1.03	167	*e*P	Pg	19 18 51.8	-0.6
	baz=166						
EDH				*e*S	Sb	19 19 06.5	-0.3
	baz=166						
SLGT	**Liugui**	1.05	201	*e*P	Pg	19 18 52.4	-0.5
	baz=200						
SLGT				*e*S	Sn	19 19 08.4	-0.6
	baz=200						
LONT	**Longtian**	1.07	176	*e*P	Pg	19 18 52.2	-1.1
	baz=168						
LONT				*e*S	Sg	19 19 07.1	0.0
	baz=168						
TATO	**Taipei**	1.07	22		Pg	19 18 52.5	-0.7
NHDH	**Xindian Distri**	1.07	24	P	Pg	19 18 52.8	-0.4
	baz=30						
NHDH				*e*S	Sg	19 19 06.3	-0.9
	baz=30						
SSHA	**Shanhua**	1.09	220	*e*P	Pg	19 18 53.2	-0.4
	baz=219						
SSHA				*e*S	Sn	19 19 10.4	+0.3
	baz=219						
CHN3	**Shinhua**	1.10	215	*e*P	Pb	19 18 54.1	-0.1
	baz=227						
CHN3				*e*S	Sn	19 19 11.3	+1.0
	baz=227						
TWA	**Mucha**	1.11	26	*e*P	Pg	19 18 53.6	-0.4
	baz=27						
TWA				*e*S	Sg	19 19 08.4	0.0
	baz=27						
SCLT	**Jiali**	1.12	225	*e*P	Pb	19 18 54.3	-0.3
	baz=223						
SCLT				*e*S	Sn	19 19 10.8	-0.1
	baz=223						
NTC	**Toucheng**	1.12	39	*e*P	Pg	19 18 53.4	-0.9
	baz=30						
NTC				*e*S	Sb	19 19 09.0	-0.5
	baz=30						
TAP	**Taipei**	1.14	21	*e*P	Pb	19 18 54.8	0.0
	baz=30						
TWG	**Pinlang**	1.15	179		Pg	19 18 53.0	-1.8
TWGBT	**Beinan**	1.16	179	*e*P	Pg	19 18 53.4	-1.5
	baz=171						
TWGBT				*e*S	Sn	19 19 10.8	-0.9
	baz=171						
TWS1	**Kuangyinshan**	1.17	17	*e*P	Pn	19 18 55.8	+0.1
	baz=17						
TWS1				*e*S	Sn	19 19 12.2	+0.2
	baz=17						
TAI1	**Yung-k'ang**	1.20	219	*e*P	Pg	19 18 55.0	-0.7
	baz=216						
TIPB	**Shuangxi**	1.22	35	P	Pg	19 18 54.5	-1.5
	baz=36						
TIPB				*e*S	Sg	19 19 10.8	-1.0
	baz=36						
TTN	**Taitung**	1.22	176	*e*P	Pg	19 18 54.9	-1.3
	baz=174						
NTST	**Danshui**	1.23	17	*e*P	Pg	19 18 56.0	-0.5
	baz=27						
NTST				*e*S	Sn	19 19 14.5	+0.8
	baz=27						
YM01	**YM01**	1.25	22	P	Pg	19 18 56.6	-0.2
	baz=24						
YM01				*e*S	Sb	19 19 13.4	0.0
	baz=24						
NWF	**Wu-fen Shan**	1.27	31	P	Pg	19 18 56.6	-0.5
	baz=32						
NWF				*e*S	Sn	19 19 14.3	-0.5
	baz=32						
ANP	**Anpu**	1.28	19	*e*P	Pb	19 18 57.1	-0.2
	baz=22						
ANP				*e*S	Sn	19 19 14.9	0.0
	baz=22						
SSD	**Sandimen**	1.29	198	*e*P	Pg	19 18 56.0	-1.4
	baz=196						
SSD				*e*S	Sn	19 19 15.2	+0.3
	baz=196						
TWM1	**Shoushan**	1.29	207	*e*P	Pb	19 18 57.8	+0.4
	baz=205						
TWM1				*e*S	Sn	19 19 17.7	+2.7
	baz=205						
TSMG	**Majia**	1.32	197	*e*P	Pn	19 18 56.7	-1.1
	baz=195						
TSMG				*e*S	Sn	19 19 16.3	+0.5
	baz=195						
TWB1	**Santiao Chiao**	1.33	40	*e*P	Pn	19 18 57.3	-0.7
	baz=54						
TWB1				*e*S	Sg	19 19 14.9	-0.7
	baz=54						
SGLT	**Jiouru**	1.35	203	*e*P	Pg	19 18 59.0	+0.4
	baz=200						
LDUT	**Ludao**	1.35	163	*e*P	Pn	19 18 57.0	-1.3
	baz=147						
LDUT				*e*S	Sb	19 19 15.3	-0.9
	baz=147						
ECL	**Taimali**	1.38	184	*e*P	Pn	19 18 57.5	-1.1
	baz=182						
ECL				*e*S	Sn	19 19 17.3	+0.2
	baz=182						
TWY	**Chenhua**	1.39	21	*e*P	Pb	19 18 58.8	-0.2
	baz=34						
TWY				*e*S	Sn	19 19 17.5	+0.2
	baz=34						
MASBT	**Mashibuluo**	1.41	196	*e*P	Pn	19 18 58.3	-0.8
	baz=194						
MASBT				*e*S	Sn	19 19 19.4	+1.4
	baz=194						
PNG	**Penghu**	1.43	254	P	Pn	19 18 58.0	-1.3
	baz=244						
PNG				*e*S	Sb	19 19 16.8	-1.6
	baz=244						
PHUB	**P'eng-hu**	1.43	251	*e*P	Pn	19 18 57.4	-1.9
	baz=251						
PHUB				*e*S	Sb	19 19 16.2	-2.2
	baz=251						
WDGT	**Dungji**	1.46	241	P	Pn	19 18 58.3	-1.5
	baz=240						
WDGT				*e*S	Sb	19 19 16.8	-2.5
	baz=240						
SSPT	**Xinbi**	1.55	197	*e*P	Pb	19 19 01.6	-0.3
	baz=183						
EAST	**Anshuo**	1.60	187	*e*P	Pn	19 19 01.4	-0.3
	baz=185						
EAST				*e*S	Sb	19 19 23.1	-0.2
	baz=185						
TAW	**Tawu**	1.62	185	*e*P	Pn	19 19 01.1	-0.8
	baz=173						
SCZT	**Fangliau**	1.65	194	*e*P	Pn	19 19 02.0	-0.2
	baz=203						
SCZT				*e*S	Sb	19 19 24.1	-0.5
	baz=203						
VCHM	**Qimei**	1.67	243	*e*P	Pn	19 19 01.1	-1.6
	baz=230						
VCHM				*e*S	Sn	19 19 24.2	-0.3
	baz=230						
WLCH	**Liuqiu**	1.73	201	*e*P	Pb	19 19 04.2	-0.8
	baz=197						
SLIU	**Shizi**	1.77	188	*e*P	Pn	19 19 03.5	-0.4
	baz=202						
JYNG	**Yonagunijimaku**	1.79	74	P	Pn	19 19 04.1	-0.2
JYNG				*e*S	Sn	19 19 27.2	-0.2
YOJ	**Yonaguni jima**	1.85	75	*e*P	Pn	19 19 04.5	-0.6
	baz=76						
YOJ	**Yonaguni jima**	1.85	75	P	Pn	19 19 04.6	-0.6
YOJ				*e*S	Sn	19 19 28.2	-0.7
YOJ	**Yonaguni jima**	1.85	75	Pn	Pn	19 19 04.5	-0.6
PCYT	**Pengchaiyu**	1.89	29	*e*P	Pn	19 19 05.7	+0.1
	baz=32						
LAY	**Lan-yu**	1.98	167	*e*P	Pn	19 19 05.8	-1.1
	baz=153						
HEN	**Hengchun**	1.98	188	*e*P	Pn	19 19 07.8	+0.9
	baz=185						
LYUB	**Lan-yu**	2.03	166	*e*P	Pn	19 19 06.3	-1.2
	baz=153						
TWK1	**Hengchun**	2.04	186	*e*P	Pn	19 19 08.5	+0.8
	baz=199						
TWKBT	**Hengchun**	2.04	186	*e*P	Pn	19 19 07.7	0.0
	baz=199						
PTMZ	**Houxiangcun**	2.05	301	*e*P	Pn	19 19 05.9	-1.9
	baz=301						
TSEB	**Hengchuen, Pin**	2.07	184	*e*P	Pb	19 19 09.8	-1.0
	baz=176						
MATB	**Ma-tsu**	2.38	335	*e*P	Pn	19 19 10.6	-1.8
	baz=338						
KNM	**Kinmen**	2.43	281	*e*P	Pn	19 19 13.2	+0.1
	baz=276						
QZH	**Quanzhou**	2.44	294	Pn	Pn	19 19 12.3	-0.9
QZH				Sn	Sn	19 19 39.8	-3.6
QZH				smax	smax		
	comp=N,300nm,0.6s						
QZH				smax	smax		
	comp=E,170nm,0.8s						
IRIF	**Iriomote-Funau**	2.47	81	P	Pn	19 19 13.8	+0.2
IRIF				*e*S	Sn	19 19 44.4	+0.2
KNMB	**Chin-men Tao**	2.48	282	*e*P	Pn	19 19 11.8	-2.0
	baz=278						
KNMB	**Chin-men Tao**	2.48	282	Pn	Pn	19 19 11.5	-2.3
HATJ	**Hateruma jima**	2.52	88	S	Sn	19 19 44.9	-0.5
JKRS	**Kuro-shima**	2.71	84	P	Pn	19 19 17.0	0.0
JKRS				*e*S	Sn	19 19 50.6	+0.4
LYJJ	**Jianjiangzhen**	2.82	336	*e*P	Pn	19 19 16.4	-1.9
	baz=339						
JIJ	**Ishigaki jima**	2.85	82	P	Pn	19 19 18.3	-0.5
JIJ				S	Sn	19 19 51.9	-1.6
AXDP	**Jialang**	2.96	289	*e*P	Pn	19 19 18.4	-1.8
	baz=285						
ZPLA	**Ao Xicun**	3.02	270	*e*P	Pn	19 19 19.1	-2.1
	baz=265						
JISG	**Ishigakijimahi**	3.04	78	P	Pn	19 19 21.1	-0.3
JISG				*e*S	Sn	19 19 56.9	-1.2
XPSS	**Dashiqiu**	3.04	345	*e*P	Pn	19 19 19.7	-1.8
	baz=348						
JTJ	**Tarama**	3.40	78	*e*S	Sn	19 20 06.8	-0.2
JOW	**Kunigami**	7.12	65	Pn	Pn	19 20 16.8	-0.8
	comp=E,1.2nm,0.3s,baz=229,slow=12,SNR=6.2						
JOW	**Kunigami**	7.12	65	Pn	Pn	19 20 16.6	-1.0
XAN	**Xi'an**	14.59	316	P	Pn	19 22 03.3	+3.4
XAN				pP	P	19 22 08.3	+1.8
XAN				sP		19 22 11.9	
XAN				pmax	pmax		
	comp=Z,5.0nm,1.9s						
XAN				LR	LR		
	comp=N,280nm,9.6s						
XAN				LR	LR		
	comp=E,280nm,8.9s						
XAN				LR	LR		
	comp=Z,190nm,12.4s						
KSRS	**Korea Array**	14.67	22	Pn	Pn	19 22 00.5	-0.3
	comp=Z,0.2nm,0.3s,baz=210,slow=14,SNR=4.9						
CMAR	**Chiang Mai Arr**	21.32	259	P	P	19 23 24.0	+3.4
	comp=Z,0.5nm,0.5s,baz=55,slow=7.8,SNR=5.8						
SONM	**Songino Array**	26.51	338	P	P	19 24 11.6	+0.4
	comp=Z,0.8nm,0.8s,baz=151,slow=8.7,SNR=4.6						
SONM				LR	LR	19 35 46.9	
	comp=Z,53nm,20.7s,baz=133,slow=39						
MK31	**Makanchi Array**	38.40	316	P	P	19 25 55.1	0.0
MKAR	**Makanchi Array**	38.40	316	P	P	19 25 55.1	0.0
	comp=Z,0.9nm,0.7s,baz=110,slow=9.8,SNR=11						
MKAR	**Makanchi Array**	38.40	316	P	P	19 25 55.3	+0.3
YAK	**Yakutsk**	38.49	7	LR	LR	19 43 15.8	
	comp=Z,42nm,19.1s,baz=242,slow=39						
ZAA0	**Zalesovo Array**	40.35	327	P	P	19 26 10.8	-0.3
ZAA0				IAmb	IAmb	19 26 11.5	
	comp=Z,1.6nm,0.8s						
ZALV	**Zalesovo Beam**	40.35	327	P	P	19 26 10.1	-1.1
	comp=Z,1.8nm,0.7s,baz=115,slow=7.8,SNR=9.1						
ZALV	**Zalesovo Beam**	40.35	327	P	P	19 26 10.9	-0.3
WRA	**Warramunga Arr**	45.53	162	P	P	19 26 53.2	-0.4
	comp=Z,1.2nm,0.9s,baz=344,slow=8.9,SNR=3.2						
TIXI	**Tiksi**	47.91	3	LR	LR	19 47 32.6	
	comp=Z,47nm,18.0s,baz=241,slow=36						
ASAR	**Alice Springs**	48.98	164	P	P	19 27 20.9	+0.6
	comp=Z,0.5nm,0.9s,baz=336,slow=6.5,SNR=2.2						
ABKAR	**Akbulak array**	53.50	314	P	P	19 27 54.4	+0.3
ABKAR				IAmb	IAmb	19 28 14.1	
	comp=Z,4.0nm,1.5s						
ABKAR	**Akbulak array**	53.50	314	P	P	19 27 54.5	+0.5
STKA	**Stephens Creek**	58.91	160	P	P	19 28 33.3	+0.5
	comp=Z,1.3nm,0.8s,baz=341,slow=4.6,SNR=2.9						
STKA	**Stephens Creek**	58.91	160	P	P	19 28 31.5	-1.3
STKA				IAmb	IAmb	19 28 37.5	
	comp=Z,1.8nm,1.3s						
RSO	**Redoubt South**	67.60	32	P	P	19 29 27.9	-2.5
ARCES	**ARCESS Array B**	69.68	338	P	P	19 29 45.4	+2.3
YKA	**Yellowknife Ar**	83.20	23	P	P	19 31 00.2	+0.4
	comp=Z,0.1nm,0.6s,baz=312,slow=4.3,SNR=2.4						

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*IDC **24** 19:23:44.1±0.8, 13°.88S×66°.17E, h0^{km}, mb3.9/11, mb1 4.1/12, mb1mx3.7/54, mbtmp4.0/12, ML4.2/1, MS4.0/3, Ms1 4.0/3, ms1mx3.4/56, Error ellipse: s-maj=31.9km s-min=18.0km az=6.0*

*NEIC **24** 19:23:46.8±2.5, 13°.8S±0°.1×66°.2E±0°.1, h10^{km}±1^{km}, mb4.5/20, Error ellipse: s-maj=24.6km s-min=19.8km az=186.0*

ISC 24 19:23:46.6±0.8**, 13°.8S**±0°.2×**66°.17E**±0°.10**, h15^{km}, n54, σ1^{s}.16**/43**, mb4.4**/27**, MS3.7**/3**, 1D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	8.73	46	T	T	19 34 35.2	
	baz=226,slow=75,SNR=166						
H08S2	**Diego Garcia H**	8.74	46	T	T	19 34 31.4	
	baz=226,slow=75,SNR=234						
H08S3	**Diego Garcia H**	8.75	46	T	T	19 34 46.5	
	baz=226,slow=75,SNR=178						
MSEY	**Mahe Island**	13.93	310	Pn	Pn	19 27 03.1	-0.6
OPO	**Ambohidratompo**	18.82	253	P	Pn	19 28 07.2	+0.5
	0.7nm,0.3s,baz=80,slow=11,SNR=2.9						
ABPO	**Ambohimpanom**	18.88	252	P	Pn	19 28 07.8	+0.4
KMBO	**Kilima Mbogo**	31.27	291	P	P	19 30 06.5	-0.1
	1.8nm,0.7s,baz=80,slow=10.0,SNR=8.3						
KMBO				LR	LR	19 39 55.7	
	comp=Z,136nm,20.9s,baz=102,slow=31						
KMBO	**Kilima Mbogo**	31.27	291	P	P	19 30 06.5	-0.1
LSZ	**Lusaka**	36.76	263	P	P	19 30 54.4	+0.3
LSZ				IAmb	IAmb	19 30 55.2	
	comp=Z,11nm,1.1s						
LEM	**Lembang**	41.32	85	LR	LR	19 45 08.4	
	comp=Z,99nm,20.6s,baz=64,slow=31						
CMAR	**Chiang Mai Arr**	45.54	46	P	P	19 32 07.8	+1.7
	comp=Z,0.6nm,0.8s,baz=234,slow=8.5,SNR=5.8						
H01W3	**Cape Leeuwin H**	47.93	125	T	T	20 23 55.9	
	baz=284,slow=75,SNR=44						
H01W2	**Cape Leeuwin H**	47.93	125	T	T	20 23 56.0	
	baz=284,slow=75,SNR=41						
H01W1	**Cape Leeuwin H**	47.95	125	T	T	20 23 57.2	
	baz=284,slow=75,SNR=41						
KBL	**Kabul**	48.19	3	P	P	19 32 26.5	-0.3
KBL				IAmb	IAmb	19 32 37.7	
	comp=Z,4.2nm,1.1s						
BTK	**Batken**	53.79	4	P	P	19 33 09.5	+0.7
BTK				IAmb	IAmb	19 33 16.4	
	comp=Z,4.5nm,1.1s						
AAK	**Ala-Archa**	56.72	7	LR	LR	19 54 57.7	
	comp=Z,640nm,18.6s,baz=191,slow=33						
AAK	**Ala-Archa**	56.72	7	P	P	19 33 30.8	+0.9
MAKZ	**Makanchi**	62.02	12	⇓Lg	Lg	19 34 10.9	
	comp=Z,4.7nm,1.2s						
MAKZ	**Makanchi**	62.02	12	P	P	19 34 04.6	-1.7
MAKZ				IAmb	IAmb	19 34 15.7	
	comp=Z,4.0nm,1.1s						
MK31	**Makanchi Array**	62.07	12	P	P	19 34 05.5	-1.2
MK31				IAmb	IAmb	19 34 13.0	
	comp=Z,3.5nm,1.1s						
MKAR	**Makanchi Array**	62.07	12	P	P	19 34 04.7	-1.9
ABKAR	**Akbulak array**	63.06	355	P	P	19 34 12.6	-0.6
ABKAR				IAmb	IAmb	19 34 16.4	
	comp=Z,3.9nm,1.1s						
ASAR	**Alice Springs**	64.39	110	P	P	19 34 21.6	-1.1
	comp=Z,1.0nm,0.9s,baz=268,slow=5.8,SNR=6.0						
WRA	**Warramunga Arr**	65.14	106	P	P	19 34 27.8	+0.2
	comp=Z,1.4nm,0.9s,baz=243,slow=7.3,SNR=7.7						
WRAB	**Tennant Creek**	65.15	106	P	P	19 34 28.4	+0.8
KURK	**Kurchatov**	65.20	9	P	P	19 34 26.4	-0.7
KURK				IAmb	IAmb	19 34 34.0	
	comp=Z,4.2nm,0.9s						
WR0	**Warramunga Arr**	65.33	106	P	P	19 34 27.1	-1.6
TORD	**Torodi Ar. Bea**	69.27	290	P	P	19 34 52.9	-0.8
	comp=Z,1.9nm,0.9s,baz=88,slow=1.5,SNR=7.8						
TORD	**Torodi Ar. Bea**	69.27	290	P	P	19 34 52.5	-1.2
TORD				IAmb	IAmb	19 34 56.0	
	comp=Z,2.6nm,1.0s						
ZAA0	**Zalesovo Array**	69.37	12	P	P	19 34 52.8	-0.7
ZAA0				IAmb	IAmb	19 34 59.9	
	comp=Z,4.9nm,0.9s						
ZALV	**Zalesovo Beam**	69.37	12	P	P	19 34 52.5	-1.0
	comp=Z,0.9nm,0.4s,baz=202,slow=4.9,SNR=7.9						
ZALV	**Zalesovo Beam**	69.37	12	P	P	19 34 52.1	-1.4
SONM	**Songino Array**	71.09	27	P	P	19 35 03.9	-0.6
	comp=Z,2.0nm,1.2s,baz=216,slow=4.2,SNR=7.4						
SONM	**Songino Array**	71.09	27	IAmb	IAmb	19 35 07.2	
	comp=Z,3.9nm,1.4s						
AKASG	**Malin Array Be**	71.93	336	P	P	19 35 09.9	+0.7
	comp=Z,0.7nm,0.6s,baz=145,slow=5.5,SNR=1.6						
KIC	**Kosan Boka**	73.17	281	*e*P	P	19 35 16.8	-0.6
	comp=Z,8.4nm,0.8s						
DBIC	**Dimbokro**	73.36	281	P	P	19 35 18.4	-0.2
	comp=Z,4.0nm,0.8s,baz=128,slow=4.7,SNR=7.8						
DBIC	**Dimbokro**	73.36	281	P	P	19 35 18.7	+0.1
LIC	**Lamto**	73.40	281	*e*P	P	19 35 18.3	-0.5
	comp=Z,21nm,0.7s						
TIC	**Toumodi**	73.51	281	*e*P	P	19 35 19.0	-0.5
KOWA	**Kowa**	74.94	289	P	P	19 35 27.6	-0.2
ARSA	**Arzberg**	75.78	327	*e*P	P	19 35 33.8	+1.9
	comp=Z,4.2nm,0.9s						
MOA	**Molln**	76.82	327	*e*P	P	19 35 41.5	+3.7
	comp=Z,3.7nm,1.0s						
ABTA	**Abfaltersbach**	77.10	325	*e*P	P	19 35 39.4	-0.1
	comp=Z,2.4nm,0.8s						
GERES	**GERESS Array B**	77.73	328	P	P	19 35 44.4	+1.4
	comp=Z,0.2nm,0.7s,baz=101,slow=6.9,SNR=5.3						
WTTA	**Wattenberg**	77.89	325	*e*P	P	19 35 50.6	+6.5
	comp=Z,7.4nm,1.3s						
MOTA	**Moosalm**	78.23	325	*e*P	P	19 35 46.6	+0.7
	comp=Z,8.4nm,1.7s						
FETA	**Feichten**	78.25	325	*e*P	P	19 35 48.7	+2.7
	comp=Z,4.1nm,1.1s						
ESDC	**Sonseca Array**	84.05	313	P	P	19 36 16.2	-0.7
	comp=Z,1.4nm,1.1s,baz=107,slow=3.1,SNR=3.3						
ILAR	**Eielson Array**	124.31	16	PKP	PKiKP	19 42 45.3	+0.4
	comp=Z,0.5nm,1.0s,baz=251,slow=2.8,SNR=2.2						
YKA	**Yellowknife Ar**	131.41	0	PKP	PKiKP	19 42 59.6	+0.5
	comp=Z,0.1nm,0.6s,baz=341,slow=2.2,SNR=3.9						
PDAR	**Pinedale Array**	150.94	354	PKPbc	PKPbc	19 43 38.5	-0.9
	comp=Z,2.4nm,0.9s,baz=78,slow=1.8,SNR=9.8						
TXAR	**Lajitas Array**	161.93	330	PKPab	PKPab	19 44 34.0	0.0
	comp=Z,0.2nm,0.6s,baz=35,slow=2.2,SNR=1.9						

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*IDC **24** 19:31:23.9±5.8, 3°.90S×151°.35E, h48^{km}±52^{km}, mb3.4/6, mb1 3.7/7, mb1mx3.2/43, mbtmp3.7/7, ML1.7/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/29, Error ellipse: s-maj=57.1km s-min=32.6km az=100.0*

ISC 24 19:31:21.0±1.4**, 3°.8S**±0°.2×**151°.4E**±0°.3**, h21^{km}, n9, σ1^{s}.51**/8**, mb3.6**/6**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	6.96	217	P	Pn	19 33 02.7	+0.9
	0.9nm,0.3s,baz=33,slow=9.4,SNR=9.6						
PMG				LR	LR	19 35 43.2	
	comp=Z,299nm,18.0s,baz=46,slow=38						
HNR	**Honiara**	10.18	124	LR	LR	19 37 50.6	

	comp=Z,246nm,21.9s,baz=306,slow=38						
WRA	Warramunga Arr	23.09	225	P	P	19 36 23.3	-2.3
	1.3nm,0.7s,baz=48,slow=10,SNR=6.8						
WRA				LR	LR	19 46 13.0	
	comp=Z,87nm,18.3s,baz=225,slow=39						
ASAR	Alice Springs	25.97	219	P	P	19 36 51.5	-1.0
	1.1nm,0.8s,baz=52,slow=8.8,SNR=9.4						
STKA	Stephens Creek	29.39	197	P	P	19 37 23.2	+0.2
	0.3nm,0.3s,baz=25,slow=13,SNR=4.1						
CMAR	Chiang Mai Arr	56.17	295	P	P	19 40 59.2	-0.5
	0.6nm,0.4s,baz=111,slow=5.1,SNR=1.9						
MKAR	Makanchi Array	78.65	319	P	P	19 43 22.9	+1.3
	1.0nm,1.0s,baz=98,slow=10,SNR=3.2						
ILAR	Eielson Array	81.79	22	P	P	19 43 37.1	-1.0
	0.3nm,0.7s,baz=244,slow=5.4,SNR=1.6						
TORD	Torodi Ar. Bea	148.65	289	PKPbc	PKPdf	19 51 05.2	+1.2
	0.2nm,0.6s,baz=106,slow=4.7,SNR=1.2						

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*TIR **24** 19:31:32.4, 40°.19N×19°.78E, h2^{km}±1^{km}, Md2.8, Ml2.6*

ISC 24 19:31:33.2±1.2**, 40°.11N**±0°.04×**19°.70E**±0°.04**, h18**^{km}±7^{km}**,**
n19, σ1^{s}.45/35**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	Sarande	0.33	134	P	Pb	19 31 40.2	-0.3
	baz=151						
SRN				S	Sb	19 31 46.4	+0.9
	baz=151						
SRN				AMP			
	comp=N,2.5nm,0.5s,baz=151						
VLO	Vlora	0.39	337	P	Pg	19 31 40.4	-0.8
	baz=323						
VLO				S	Sg	19 31 46.2	-0.5
	baz=323						
VLO				AMP			
	comp=E,7.9nm,0.4s,baz=323						
LSK	Leskovik	0.69	87	P	Pg	19 31 45.4	-1.5
	baz=93						
LSK				S	Sg	19 31 55.9	-0.3
	baz=93						
LSK				AMP			
	comp=N,1.4nm,0.6s,baz=93						
KBN	Korca	0.98	58	P	Pg	19 31 50.5	-1.7
	baz=60						
KBN				S	Sg	19 32 04.2	-0.9
	baz=60						
KBN				AMP			
	comp=E,0.4nm,0.6s,baz=60						
OHR	Ohrid	1.31	40	*i* Pg	Pg	19 31 59.9	+1.5
OHR				*i* Sg	Sg	19 32 19.8	+4.4
FNA	Florina	1.45	62	P	Pn	19 31 59.0	+0.5
	baz=63						
FNA				S	Sb	19 32 19.8	+2.0
	baz=63						
LKD2	Lefkada island	1.52	150	P	Pg	19 32 03.4	+1.0
	baz=153						
PHP	Peshkopia	1.67	20	P	Pb	19 32 03.5	+0.1
	baz=18						
PHP				S	Sg	19 32 27.2	+0.2
	baz=18						
PHP				AMP			
	comp=N,0.3nm,0.8s,baz=18						
STIP	Stip	2.46	49	*i* Pn	Pb	19 32 17.6	+0.6
VAY	Valandovo	2.50	60	*i* Pn	Pn	19 32 10.7	-2.3
STON	Ston	3.14	332	*e*Pn	Pn	19 32 21.5	-0.2
STON				Sn	Sn	19 32 57.4	-1.4
LSTV	Lastovo	3.39	322	*e*Pn	Pn	19 32 25.2	0.0
LSTV				Sn	Sn	19 33 02.9	-2.1
MAKA	Makarska	3.75	329	*e*Pn	Pn	19 32 31.1	+0.9
MAKA				Sn	Sn	19 33 13.0	-0.9
RICI	Ricice	3.88	331	*e*Pn	Pn	19 32 32.2	+0.2
RICI				Sn	Sn	19 33 16.4	-0.8
HVAR	Hvar	3.91	323	*e*Pn	Pn	19 32 33.4	+1.1
HVAR				Sn	Sn	19 33 16.4	-1.5
KIJV	Kijevo	4.60	329	*e*Pn	Pn	19 32 42.4	+0.6
KIJV				Sn	Sn	19 33 33.8	-1.0
ZIRJ	Zirje	4.66	321	*e*Pn	Pn	19 32 43.0	+0.5
ZIRJ				Sn	Sn	19 33 34.0	-2.1
MORI	Morici	4.79	323	*e*Pn	Pn	19 32 45.4	+1.0
MORI				Sn	Sn	19 33 38.2	-1.1
DUGI	Dugi Otok	5.19	320	*e*Pn	Pn	19 32 51.2	+1.2
DUGI				Sn	Sn	19 33 47.6	-1.8

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*IDC **24** 19:43:59.9±0.4, 55°.86S×123°.51W, h0^{km}, mb4.8/22, mb1 4.9/22, mb1mx4.9/32, mbtmp4.8/22, MS5.9/31, Ms1 5.9/31, ms1mx5.9/34, Error ellipse: s-maj=18.4km s-min=11.9km az=165.0*

*MOS **24** 19:44:01.4±1.2, 55°.84S×123°.16W, h10^{km}, mb5.6/36, MS5.9/23, Error ellipse: s-maj=18.6km s-min=12.0km az=68.5*

*NEIC **24** 19:44:03.1±2.5, 55°.8S±0°.1×123°.1W±0°.2, h12^{km}±3^{km}, mb5.5/154, Ms_20 6.0/290, Mwb6.1/39, Mww6.2, Error ellipse: s-maj=17.8km s-min=13.7km az=160.0*

*NEIC **24** 19:44:03.3, 55°.77S×123°.09W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.03; $M_{\theta\theta}$0.90; $M_{\phi\phi}$-0.88; $M_{r\theta}$-0.18; $M_{\theta\phi}$1.47; $M_{\phi r}$-0.15; Fault plane solution: $M_0$1.74000×10^{18} NP1:ϕ_s195.35000°, δ85.95000°, λ173.83000°. NP2:ϕ_s285.78000°, δ83.85000°, λ4.07000°. Principal axes: T 1.7644, Plg7.0000°, Azm150.0000°; N -0.0546, Plg83.0000°, Azm342.0000°; P -1.7098, Plg1.0000°, Azm241.0000°;*

*BJI **24** 19:44:03.0±0.0, 55°.80S×123°.10W, h20^{km}, mB5.7/28, Ms5.9/37, Ms7 5.8/35*

*GCMT **24** 19:44:09.1±0.1, 56°.06S×123°.11W, h12^{km}, MW6.2/157, Moment Tensor Solution. s157,c352; s154,c576; Duration: 2^{s}.9 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.03±.01; $M_{\theta\theta}$1.09±.01; $M_{\phi\phi}$-1.06±.01; $M_{r\theta}$-0.31±.03; $M_{\theta\phi}$1.78±.01; $M_{\phi r}$-0.55±.04; Best double couple: $M_0$2.17200×10^{18} NP1:ϕ_s286.00000°, δ74.00000°, λ3.00000°. NP2:ϕ_s195.00000°, δ87.00000°, λ164.00000°. Principal axes: T 2.2250, Plg14.0000°, Azm149.0000°; N -0.1090, Plg73.0000°, Azm5.0000°; P -2.1180, Plg9.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 19:44:12, 55°.67S×123°.45W, h16^{km}, Moment Tensor Solution. Duration: 18^{s}.0 Moment tensor: Scale 10^{18}Nm; M_{rr}0.35; $M_{\theta\theta}$0.63; $M_{\phi\phi}$-0.99; $M_{r\theta}$-0.99; $M_{\theta\phi}$1.79; $M_{\phi r}$-0.67; Fault plane solution: $M_0$2.32000×10^{18} NP1: ϕ_s286.00000°, δ69.00000°, λ21.00000°. NP2: ϕ_s188.00000°, δ70.00000°, λ158.00000°. Principal axes: T 2.4632, Plg30.0000°, Azm147.0000°; N -0.3255, Plg60.0000°, Azm329.0000°; P -2.1378, Plg1.0000°, Azm237.0000°;*

ISC 24 19:44:02.4±0.2**, 55°.56S**±0°.07×**123°.17W**±0°.05**, h10**^{km}**,**
n748, σ2^{s}.00/597**, mb5.4**/105**, MS6.0**/205**, 19C-22D,**
Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMAI	San Martin Ant	28.14	139	P	P	19 49 53.0	-1.1
SMAI				IAmb	IAmb	19 49 58.4	
	comp=Z,122nm,1.5s						
PMSA	Palmer Station	29.71	132	P	P	19 50 06.6	-1.6
	comp=Z,23nm,0.9s,baz=277,slow=7.9,SNR=3.5						
PMSA				LR	LR	19 58 39.8	
	comp=Z,37μm,19.8s,baz=265,slow=30						
PMSA	Palmer Station	29.71	132	*e*P	P	19 50 11.9	+3.8
PMSA	Palmer Station	29.71	132	P	P	19 50 07.0	-1.2
PMSA				IAmb	IAmb	19 50 17.3	
	comp=Z,91nm,1.2s						
PMSA	Palmer Station	29.71	132	IAMs_20	IAMs_20	19 58 18.2	
	comp=Z,38μm,21.0s						
MG04	Isla Riesco	29.73	107	P	P	19 50 05.5	-2.9
MG05	Puerto Natales	29.75	104	P	P	19 50 09.0	+0.4
MG05				IAmb	IAmb	19 50 11.6	
	comp=Z,76nm,1.1s						
GO09	Cerro Castillo	30.04	103	P	P	19 50 10.2	-1.0
GO09				IAmb	IAmb	19 50 16.1	
	comp=Z,110nm,1.2s						
USHA	Ushuaia	30.57	112	P	P	19 50 16.3	+0.5
	comp=Z,43nm,1.0s,baz=223,slow=7.8,SNR=7.9						
USHA				LR	LR	19 59 19.0	
	comp=Z,43μm,19.8s,baz=238,slow=30						
MG01	Puerto William	30.95	112	P	P	19 50 17.2	-2.0
COYC	Coyhaique	33.24	94	P	P	19 50 38.0	-1.3
COYC				IAmb	IAmb	19 50 52.4	
	comp=Z,59nm,1.1s						
COYC	Coyhaique	33.24	94	IAMs_20	IAMs_20	20 00 08.8	
	comp=Z,26μm,20.0s						
VNDA	Vanda	33.36	202	P	P	19 50 37.1	-2.9
	comp=Z,5.4nm,1.0s,baz=127,slow=5.1,SNR=4.1						
VNDA				LR	LR	20 01 28.1	
	comp=Z,7μm,19.0s,baz=92,slow=32						
VNDA	Vanda	33.36	202	P	P	19 50 40.0	-0.1
VNDA				pmax	pmax		
	comp=Z,67nm,1.5s						
VNDA	Vanda	33.36	202	P	P	19 50 40.0	-0.1
VNDA				IAmb	IAmb	19 50 49.8	
	comp=Z,67nm,1.5s						
QSPA	South Pole Qui	34.62	180	IAMs_20	IAMs_20	20 02 43.2	
	comp=Z,21μm,18.0s						
LL02	Futaleuf	34.82	91	P	P	19 50 50.6	-2.6
LL01	San Ignacio de	35.02	90	P	P	19 50 52.5	-2.3
LL01				IAmb	IAmb	19 51 11.2	
	comp=Z,83nm,1.5s						
LL05	Los Muermos	35.05	87	P	P	19 50 56.2	+1.1
LL03	Petrohue	35.83	88	P	P	19 51 01.8	0.0
LL03				IAmb	IAmb	19 51 20.9	
	comp=Z,81nm,0.9s						
LL04	Puerto Octay	35.98	88	P	P	19 51 03.1	0.0
LR03	Panguipulli	36.87	86	P	P	19 51 11.9	+1.2
PLCA	Paso Flores	37.15	89	P	P	19 51 13.1	-0.1
	comp=Z,11nm,0.9s,baz=214,slow=9.5,SNR=2.9						
PLCA				LR	LR	20 02 38.1	
	comp=Z,22μm,20.3s,baz=230,slow=30						
PLCA	Paso Flores	37.15	89	P	P	19 51 14.0	+0.8
PLCA				pmax	pmax		
	comp=Z,43nm,1.3s						
PLCA	Paso Flores	37.15	89	*e*P	P	19 51 14.0	+0.8
PLCA	Paso Flores	37.15	89	P	P	19 51 13.9	+0.8
H03S2	Juan Fernandez	37.35	73	T	T	20 30 51.9	
	SNR=972						
H03S1	Juan Fernandez	37.36	73	T	T	20 30 56.8	
	SNR=1058						
H03S3	Juan Fernandez	37.37	73	T	T	20 31 00.0	
	SNR=1287						
EFI	East Falkland	37.55	112	P	P	19 51 16.9	+0.6
EFI				pmax	pmax		
	comp=Z,168nm,1.3s						
EFI				MLR	MLR		
	comp=Z,46μm,22.0s						
EFI	East Falkland	37.55	112	P	P	19 51 16.9	+0.6
TBI	Tubuai	37.59	318	*e*S	S	19 56 58.4	-7.7
	comp=Z,4μm,31.0s						
TBI				*e*LR	LR	20 01 10.4	
	comp=Z,34μm,28.8s,baz=164						
LC01	Cunco	37.64	86	P	P	19 51 17.7	+0.5
H03N3	Juan Fernandez	37.64	73	T	T	20 31 14.1	
	baz=221,slow=72,SNR=7636						
H03N2	Juan Fernandez	37.65	73	T	T	20 31 13.1	
	baz=221,slow=72						
H03N1	Juan Fernandez	37.66	73	T	T	20 31 18.2	
	baz=221,slow=72,SNR=7226						
ORCD	Orcadas	39.40	131	P	P	19 51 30.3	-1.4
ML02	Panimavida	40.10	83	P	P	19 51 38.3	+0.3
ML02				IAmb	IAmb	19 51 51.3	
	comp=Z,133nm,1.4s						
BO02	Sierra Bellavi	41.16	82	P	P	19 51 47.2	+0.4
BO01	Tunca	41.28	81	P	P	19 51 46.0	-1.8
BFZ	Birch Farm	41.71	265	P	P	19 51 52.6	+1.5
BFZ				IAmb	IAmb	19 51 54.4	
	comp=Z,138nm,1.5s						
BFZ	Birch Farm	41.71	265	P	P	19 51 53.5	+2.4
MQZ	McQueen's Vall	41.75	259	P	P	19 51 50.4	-0.9
MQZ				IAmb	IAmb	19 52 14.6	
	comp=Z,179nm,1.7s						
MSWZ	Moikau Station	41.78	263	P	P	19 51 46.8	-5.0
MT09	Talagante	41.79	81	P	P	19 51 52.8	+0.7
ODZ	Otahua Downs	42.01	256	IAMs_20	IAMs_20	20 04 35.2	
	comp=Z,17μm,22.0s						
KHZ	Kahutara	42.09	261	P	P	19 51 53.5	-0.6
MEH	Mehetia	42.11	323	*e*T	T	20 35 56.9	
	comp=Z,38nm,0.3s						
MT05	Renca	42.22	81	P	P	19 51 54.1	-1.4
MT05				IAmb	IAmb	19 52 07.4	
	comp=Z,179nm,1.4s						
OXZ	Oxford	42.34	259	P	P	19 51 56.8	+0.6
BSWZ	Blackbirch Sta	42.36	262	P	P	19 51 57.8	+1.4
PEL	Peldehue	42.43	81	P	P	19 51 57.5	+0.3
PEL				pmax	pmax		
	comp=Z,107nm,1.4s						
PEL				MLR	MLR		
	comp=Z,15μm,19.0s						
PEL	Peldehue	42.43	81	P	P	19 51 57.5	+0.3
PEL				IAmb	IAmb	19 52 20.8	
	comp=Z,107nm,1.4s						
PEL				IAMs_20	IAMs_20	20 04 41.9	
	comp=Z,15μm,19.0s						
TUWZ	Tuamarina	42.51	262	P	P	19 51 59.1	+1.5
LTZ	Lake Taylor	42.56	259	P	P	19 52 00.4	+2.3
BKZ	Black Stump Fm	42.59	267	P	P	19 52 00.3	+1.9
BKZ				IAmb	IAmb	19 52 03.5	
	comp=Z,114nm,1.4s						
BKZ				IAMs_20	IAMs_20	20 04 58.8	
	comp=Z,16μm,21.0s						
BKZ	Black Stump Fm	42.59	267	P	P	19 52 01.6	+3.2
RPZ	Rata Peaks	42.63	258	P	P	19 52 00.6	+2.0
RPZ				IAmb	IAmb	19 52 02.9	
	comp=Z,104nm,1.4s						
RPZ				IAMs_20	IAMs_20	20 05 03.8	
	comp=Z,15μm,22.0s						
LBZ	Lake Benmore	42.68	256	IAMs_20	IAMs_20	20 05 07.0	
	comp=Z,20μm,22.0s						
VA03	San Esteban	42.79	80	P	P	19 52 00.1	-0.1
URZ	Urewera	42.86	268	P	P	19 51 57.6	-2.9
	comp=Z,8.2nm,1.0s,baz=127,slow=20,SNR=2.4						
URZ	Urewera	42.86	268	IAmb	IAmb	19 52 12.9	
	comp=Z,142nm,2.0s						
THZ	Tophouse	42.87	261	P	P	19 52 02.5	+1.8
THZ				IAmb	IAmb	19 52 14.3	
	comp=Z,74nm,1.0s						
PPT2	Papeete2	42.90	321	*e*S	S	19 58 18.8	-7.0
	comp=Z,5μm,26.8s						
PPT2				*e*LQ	LQ	20 01 51.5	
	comp=Z,18μm,27.8s						
PPT2				*e*LR	LR	20 03 38.4	
	comp=Z,44μm,27.2s,baz=163						
PPT	Papeete	42.92	321	LR	LR	20 05 04.4	
	comp=Z,9μm,21.9s,baz=152,slow=29						
WHZ	Wether Hill Ro	42.95	253	P	P	19 51 59.6	-1.6
WHZ				IAmb	IAmb	19 52 08.8	
	comp=Z,129nm,1.5s						
NNZ	Nelson	42.97	262	P	P	19 51 57.6	-3.8
NNZ				IAmb	IAmb	19 52 05.7	
	comp=Z,170nm,1.3s						
WKZ	Wanaka	43.04	255	IAMs_20	IAMs_20	20 05 20.3	
	comp=Z,17μm,22.0s						
FOZ	Fox Glacier	43.44	257	P	P	19 52 04.2	-0.9
FOZ				IAmb	IAmb	19 52 09.8	
	comp=Z,138nm,1.3s						
FOZ				IAMs_20	IAMs_20	20 06 01.0	
	comp=Z,19μm,20.0s						
RAR	Rarotonga	43.81	307	LR	LR	20 07 08.0	
	comp=Z,1μm,20.4s,baz=150,slow=32						
HIZ	Hauiti	43.97	266	P	P	19 52 11.8	+2.4
CO03	El Pedregal	44.16	78	P	P	19 52 11.6	+0.4
CO03				IAmb	IAmb	19 52 29.0	
	comp=Z,135nm,1.6s						
VAH	Vaihoa	44.43	325	*e*T	T	20 38 51.0	
	comp=Z,209nm,0.3s						
GO04	Tololo Observa	44.61	78	P	P	19 52 14.5	-0.4
GO04				IAmb	IAmb	19 52 28.2	
	comp=Z,84nm,1.2s						
PMOR	Pomariorio Ree	44.73	325	*e*T	T	20 39 13.5	
	comp=Z,52nm,0.3s						
ZON	Zonda	44.75	81	P	P	19 52 16.5	+0.6
ZON				pmax	pmax		
	comp=Z,92nm,1.6s						
ZON	Zonda	44.75	81	P	P	19 52 16.4	+0.6
ZON				IAmb	IAmb	19 52 40.0	
	comp=Z,92nm,1.6s						
VNA3	Neumayer Olymp	45.14	155	P	P	19 52 16.3	-2.2
LCO	Las Campanas	45.55	77	*e*P	P	19 52 24.5	+2.0
VNA1	Neumayer--Stat	45.88	155	P	P	19 52 21.7	-2.5
VNA2	Neumayer--Watz	45.90	156	P	P	19 52 21.5	-2.9
	baz=219,slow=11						
SNAA	Sanae	46.38	158	P	P	19 52 25.4	-2.9
SNAA	Sanae	46.38	158	P	P	19 52 25.2	-3.1
	comp=Z,6.0nm,0.7s,baz=237,slow=5.0,SNR=19						
SNAA				LR	LR	20 12 05.6	
	comp=Z,26μm,18.1s,baz=244,slow=36						
SNAA	Sanae	46.38	158	P	P	19 52 25.4	-2.9
SNAA				pmax	pmax		
	comp=Z,53nm,1.2s						
SNAA				MLR	MLR		
	comp=Z,40μm,18.0s						
SNAA	Sanae	46.38	158	P	P	19 52 25.4	-2.9
SNAA				IAmb	IAmb	19 52 38.8	
	comp=Z,53nm,1.2s						
HOPE	Hope Point	46.69	126	P	P	19 52 28.8	-2.0
HOPE				pmax	pmax		
	comp=Z,271nm,1.5s						
HOPE				MLR	MLR		
	comp=Z,23μm,19.0s						
HOPE	Hope Point	46.69	126	P	P	19 52 28.8	-2.0
GO03	Copiap	46.91	76	P	P	19 52 32.3	-0.7
GO03				IAmb	IAmb	19 52 51.5	
	comp=Z,49nm,1.4s						
OUZ	Omahuta	47.01	268	P	P	19 52 35.6	+2.0
AC02	Maricunga	48.12	76	P	P	19 52 44.2	+1.4
AC02				IAmb	IAmb	19 52 55.8	
	comp=Z,50nm,1.1s						
LPA	La Plata	48.36	93*d*	*i*P	P	19 52 40.8	-3.3
LPA				PP	PP	19 54 29.5	-6.9
LPA				PKIKP	PKiKP	20 01 04.4	+4.0
LPA				SS	SS	20 03 32.0	+19
LPA				SS(2)		20 04 02.1	
TAOE	Nuku Hiva Isla	48.48	337	*e*S	S	19 59 40.9	-5.4
	comp=Z,6μm,25.6s						
TAOE				*e*LR	LR	20 06 16.7	
	comp=Z,38μm,28.2s,baz=180						
PB14	IPOC Station P	49.16	73	IAMs_20	IAMs_20	20 07 51.0	
	comp=Z,19μm,21.0s						
NVL	N'lazarevskaya	49.96	162⇓	*i*P	P	19 52 59.4	+3.6
NVL				*i*		19 54 12.3	
NVL				*i*		19 54 51.9	
NVL				*e*S	S	20 00 07.1	+1.4
NVL				pmax	pmax		
	comp=Z,39nm,1.1s						
PB10	IPOC Station P	49.97	72	IAMs_20	IAMs_20	20 07 54.6	
	comp=Z,16μm,20.0s						
PB15	IPOC Station P	50.81	73	P	P	19 53 03.1	0.0
PB15				IAmb	IAmb	19 53 13.1	
	comp=Z,71nm,1.2s						
PB15				IAMs_20	IAMs_20	20 08 42.5	
	comp=Z,15μm,19.0s						
PB04	IPOC Station P	51.14	72	P	P	19 53 06.4	+0.8
PB04				IAMs_20	IAMs_20	20 08 29.6	
	comp=Z,17μm,21.0s						
PB06	IPOC Station P	51.16	73	P	P	19 53 06.3	+0.7
PB06				IAmb	IAmb	19 53 17.6	
	comp=Z,48nm,0.9s						
PB06				IAMs_20	IAMs_20	20 08 31.8	
	comp=Z,16μm,22.0s						
LVC	Limon Verde	51.59	73	P	P	19 53 09.0	-0.2
	comp=Z,17nm,0.8s,baz=226,slow=7.6,SNR=17						
LVC				LR	LR	20 09 09.4	
	comp=Z,17μm,22.0s,baz=222,slow=29						
LVC	Limon Verde	51.59	73	P	P	19 53 10.1	+0.9
LVC				pmax	pmax		
	comp=Z,68nm,1.3s						
LVC				MLR	MLR		
	comp=Z,15μm,22.0s						
LVC	Limon Verde	51.59	73	*e*P	P	19 53 10.0	+0.8
LVC	Limon Verde	51.59	73	P	P	19 53 10.1	+0.9
LVC				IAmb	IAmb	19 53 21.8	
	comp=Z,68nm,1.3s						
LVC	Limon Verde	51.59	73	IAMs_20	IAMs_20	20 09 17.3	
	comp=Z,15μm,22.0s						
PB07	IPOC Station P	51.78	72	P	P	19 53 10.9	+0.5
PB07				IAmb	IAmb	19 53 19.4	
	comp=Z,112nm,1.5s						
PB07				IAMs_20	IAMs_20	20 08 49.4	
	comp=Z,18μm,22.0s						
CASY	Casey	51.94	204	P	P	19 53 10.1	-0.6
CASY				IAmb	IAmb	19 53 19.4	
	comp=Z,55nm,1.2s						
PB09	IPOC Station P	52.07	72	P	P	19 53 13.6	+1.1
PB09				IAMs_20	IAMs_20	20 09 18.1	
	comp=Z,15μm,21.0s						
PB01	IPOC Station P	52.55	71	P	P	19 53 16.7	+0.8
PB01				IAmb	IAmb	19 53 28.5	
	comp=Z,76nm,1.4s						
PB01				IAMs_20	IAMs_20	20 09 30.8	
	comp=Z,19μm,22.0s						
TA01	Diego Aracena	52.56	70	P	P	19 53 14.4	-1.5
TA01				IAmb	IAmb	19 53 24.1	
	comp=Z,99nm,1.6s						
TA02	Huaiquique	52.83	70	P	P	19 53 17.5	-0.4
ITQB	Itaqui	52.98	90	*e*P	P	19 53 19.4	+0.5
ITQB	Itaqui	52.98	90	P	P	19 53 19.5	+0.6
PLTB	Pedras Altas	53.12	94	*e*P	P	19 53 19.1	-0.9
PLTB	Pedras Altas	53.12	94	P	P	19 53 20.1	+0.1
PLTB				IAmb	IAmb	19 53 26.1	
	comp=Z,54nm,1.0s						
PB08	IPOC Station P	53.46	71	P	P	19 53 24.3	+1.3
PB08				IAmb	IAmb	19 53 35.8	
	comp=Z,136nm,1.9s						
PB08				IAMs_20	IAMs_20	20 10 11.1	
	comp=Z,17μm,21.0s						
PB11	IPOC Station P	53.50	70	P	P	19 53 22.7	-0.4
PB11				IAMs_20	IAMs_20	20 09 42.3	
	comp=Z,12μm,22.0s						
PB12	IPOC Station P	54.09	69	P	P	19 53 25.4	-1.9
CPSB	Cacapava Do Su	54.23	93	*e*P	P	19 53 28.3	+0.1
PB16	IPOC Station P	54.75	70	P	P	19 53 32.7	0.0
SYO	Syowa Base	55.10	173⇑	*e*P	P	19 53 29.4	-4.5
SYO	Syowa Base	55.10	173⇑	*e*pP	P	19 53 33.4	-0.5
CPUP	Villa Florida	55.13	86	P	P	19 53 34.4	-0.3
	comp=Z,15nm,1.1s,baz=229,slow=7.3,SNR=9.4						
CPUP				LR	LR	20 14 14.3	
	comp=Z,18μm,18.2s,baz=228,slow=33						
CPUP	Villa Florida	55.13	86	P	P	19 53 34.5	-0.2
CPUP				pmax	pmax		
	comp=Z,99nm,1.8s						
CPUP	Villa Florida	55.13	86	*e*P	P	19 53 35.4	+0.7
CPUP	Villa Florida	55.13	86	P	P	19 53 34.5	-0.2
CPUP				IAmb	IAmb	19 53 40.5	
	comp=Z,99nm,1.8s						
TAU	Tasmania Unive	55.82	243	P	P	19 53 39.5	0.0
TAU				pmax	pmax		
	comp=Z,99nm,1.4s						
TAU				MLR	MLR		
	comp=Z,7μm,20.0s						
TAU	Tasmania Unive	55.82	243	P	P	19 53 39.5	0.0
NNA	Nana	56.38	58	LR	LR	20 11 36.7	
	comp=Z,18μm,20.8s,baz=202,slow=29						
NNA	Nana	56.38	58	IAMs_20	IAMs_20	20 11 22.9	
	comp=Z,14μm,19.0s						
MAW	Mawson	57.07	183	P	P	19 53 45.0	-3.0
	comp=Z,14nm,0.8s,baz=176,slow=10.0,SNR=10						
MAW				LR	LR	20 16 44.1	
	comp=Z,24μm,20.4s,baz=166,slow=35						
MAW	Mawson	57.07	183	P	P	19 53 46.5	-1.5
MAW				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MAW	Mawson	57.07	183	P	P	19 53 46.5	-1.5
LPAZ	La Paz	57.18	69	P	P	19 53 51.2	+1.1
	comp=Z,24nm,1.0s,baz=191,slow=5.2,SNR=44						
LPAZ				LR	LR	20 12 30.4	
	comp=Z,13μm,18.0s,baz=204,slow=30						
LPAZ	La Paz	57.18	69	P	P	19 53 49.8	-0.4
LPAZ				pmax	pmax		
	comp=Z,84nm,1.2s						
LPAZ	La Paz	57.18	69	*e*P	P	19 53 49.7	-0.4
LPAZ	La Paz	57.18	69	P	P	19 53 49.8	-0.4
ITAB	Concordia	57.38	91	*e*P	P	19 53 52.3	+1.5
MSVF	Nonsavu	58.01	286	LR	LR	20 13 44.1	
	comp=Z,1μm,21.2s,baz=148,slow=31						
TER01	Tubaro-SC	58.09	95	*e*P	P	19 53 57.5	+1.7
ATAH	Atahualpa	59.88	54	LR	LR	20 13 58.5	
	comp=Z,31μm,20.5s,baz=228,slow=30						
CNB	Canberra Magne	60.39	250	P	P	19 54 14.0	+2.3
	comp=Z,47nm,1.5s						
OUENC	Ouen Island, N	60.53	273	P	P	19 54 12.9	+0.2
OUENC				IAmb	IAmb	19 54 29.6	
	comp=Z,57nm,1.3s						
OUENC	Ouen Island, N	60.53	273	P	P	19 54 15.1	+2.4
CAN	Canberra	60.58	250	P	P	19 54 13.2	+0.3
CAN				pmax	pmax		
	comp=Z,57nm,1.4s						
CAN				MLR	MLR		
	comp=Z,9μm,21.0s						
CAN	Canberra	60.58	250	P	P	19 54 13.2	+0.3
CAN				IAmb	IAmb	19 54 39.6	
	comp=Z,57nm,1.4s						
CAN				IAMs_20	IAMs_20	20 13 58.9	
	comp=Z,9μm,21.0s						

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CAN   Canberra          60.58 250  P         P         19 54 13.8 +0.8
AQDB  Aquidauana        60.64  84 eP         P         19 54 13.8 +0.3
AQDB  Aquidauana        60.64  84  P         P         19 54 13.6 +0.2
AQDB                               IAmb      IAmb      19 54 24.3
      comp=Z,69nm,1.6s
TOO   Toolangi          60.72 246  P         P         19 54 14.2 +0.3
TOO                                pmax      pmax
      comp=Z,60nm,1.2s
TOO   Toolangi          60.72 246  P         P         19 54 14.2 +0.3
TOO   Toolangi          60.72 246  P         P         19 54 15.9 +2.0
      comp=Z,52nm,1.2s
YATNC Mamie plateau,    60.79 273  P         P         19 54 16.3 +1.8
ONTNC Ouen Toro         60.84 273  P         P         19 54 16.4 +1.6
ONTNC                              IAmb      IAmb      19 54 36.1
      comp=Z,49nm,1.0s
ONTNC Ouen Toro         60.84 273  P         P         19 54 16.7 +1.9
DZM   Mont Dzumac       61.03 273  P         P         19 54 14.6 -1.6
      comp=Z,8.7nm,1.0s,baz=176,slow=14,SNR=3.3
DZM   Mont Dzumac       61.03 273 eP         P         19 54 14.7 -1.5
      comp=Z,81nm,1.6s
DZM                               eS         S         20 02 29.0 -5.9
      comp=Z,6µm,34.1s
DZM                               eLQ        LQ        20 09 29.9
      comp=Z,26µm,31.1s
DZM                               eLR        LR        20 12 03.3
      comp=Z,18µm,26.1s
DZM   Mont Dzumac       61.03 273  P         P         19 54 17.2 +0.9
NOUC  Port Laguerre     61.09 273  P         P         19 54 18.7 +2.2
SIV   San Ignacio       61.25  76  LR        LR        20 16 25.3
      comp=Z,9µm,21.9s,baz=233,slow=32
FRTB  Fartura           61.86  91 eP         P         19 54 22.9 +1.2
CZSB  Cruzeiro do Su    62.07  60 eP         P         19 54 23.8 +0.6
CZSB  Cruzeiro do Su    62.07  60  P         P         19 54 23.7 +0.6
PCMB  Pacaembu          62.26  88 eP         P         19 54 23.5 -0.9
PTLB  Pontes e Lacer    62.76  77 eP         P         19 54 28.1 +0.4
PTLB  Pontes e Lacer    62.76  77  P         P         19 54 28.4 +0.7
SPB   Sao Paulo         62.88  93 eP         P         19 54 30.4 +1.9
ARMA  Armidale          62.90 255  P         P         19 54 29.9 +1.2
ARMA                               IAmb      IAmb      19 54 40.6
      comp=Z,62nm,1.4s
ARMA  Armidale          62.90 255  P         P         19 54 30.8 +2.1
      comp=Z,36nm,2.6s
ARPS  Mount Arapiles    63.21 244  P         P         19 54 32.0 +1.5
      comp=Z,31nm,1.2s
PP1B  Ponte de Pedra    63.40  82 eP         P         19 54 32.1 +0.1
KOUNC Koumac, New Ca    63.46 272  P         P         19 54 34.8 +2.4
ETMB  Extrema           63.59  67 eP         P         19 54 32.4 -0.9
ETMB  Extrema           63.59  67  P         P         19 54 33.3  0.0
ETMB                               IAmb      IAmb      19 55 00.7
      comp=Z,41nm,1.2s
VAO   Valinhos          63.60  93 eP         P         19 54 35.2 +1.8
RCLB  Rio Claro- Sao    63.74  92 eP         P         19 54 35.8 +1.5
XMAS  Kiritimati        63.90 321  IAMs_20   IAMs_20   20 16 19.5
      comp=Z,10µm,18.0s
PARB  Paraibuna         64.10  94 eP         P         19 54 38.7 +2.0
VILB  Vilhena           64.21  75 eP         P         19 54 38.1 +0.7
VILB  Vilhena           64.21  75  P         P         19 54 36.5 -0.9
BB19B Bebedouro         64.24  90 eP         P         19 54 39.2 +1.7
ITRB  Iturama           64.28  88 eP         P         19 54 38.4 +0.6
SALV  Santo Antonio     64.31  81 eP         P         19 54 37.5 -0.5
CMSA  Cobar Meteorol    65.25 250  P         P         19 54 44.8 +0.8
      comp=Z,39nm,1.4s
SAML  Samuel            65.92  70  IAMs_20   IAMs_20   20 17 30.3
      comp=Z,12µm,21.0s
VAS01 Vassouras-RJ      66.17  95 eP         P         19 54 50.7 +0.6
OTAV  Otavalo           66.40  50  P         P         19 54 52.8 +0.7
OTAV                               pmax      pmax
      comp=Z,73nm,1.4s
OTAV                               MLR       MLR
      comp=Z,9µm,22.0s
OTAV  Otavalo           66.40  50 eP         P         19 54 53.8 +1.7
OTAV                              eP         P         19 54 54.7 +2.7
OTAV  Otavalo           66.40  50 eP         P         19 54 53.0 +0.9
OTAV  Otavalo           66.40  50  P         P         19 54 52.8 +0.7
OTAV  Otavalo           66.40  50  IAMs_20   IAMs_20   20 17 15.4
      comp=Z,9µm,22.0s
BSCB  Bom Sucesso       66.42  93 eP         P         19 54 52.4 +0.6
ARAG  Araguaiana, MT    66.65  84 eP         P         19 54 54.1 +1.0
DUB01 Friburgo-RJ       66.93  96 eP         P         19 54 54.4 -0.5
STKA  Stephens Creek    67.15 247  P         P         19 54 53.9 -2.3
      comp=Z,29nm,1.3s,baz=145,slow=6.9,SNR=13
STKA                               LR        LR        20 17 43.1
      comp=Z,9µm,21.6s,baz=153,slow=30
STKA  Stephens Creek    67.15 247  P         P         19 54 55.7 -0.5
STKA                               pmax      pmax
      comp=Z,9.0nm,1.3s
STKA  Stephens Creek    67.15 247  P         P         19 54 55.7 -0.5
PDRB  Porto dos Gac     67.22  77 eP         P         19 54 56.7 -0.2
CAM01 Campos-RJ         67.53  96 eP         P         19 55 01.3 +2.6
RMQ   Roma              67.53 256  P         P         19 55 00.4 +1.7
      comp=Z,24nm,1.4s
BDFB  Brasilia          68.85  87  P         P         19 55 07.5 +0.3
      comp=Z,9.5nm,1.0s,baz=193,slow=6.3,SNR=8.3
BDFB                               LR        LR        20 22 21.5
      comp=Z,23µm,20.5s,baz=215,slow=33
BDFB  Brasilia          68.85  87  P         P         19 55 07.8 +0.6
BDFB                               pmax      pmax
      comp=Z,35nm,1.3s
BDFB  Brasilia          68.85  87  P         P         19 55 07.8 +0.6
BDFB                               IAmb      IAmb      19 55 13.1
      comp=Z,35nm,1.3s
SOTA  Rioblanco         68.90  51 eP         P         19 55 10.1 +2.1
PCON  Cinco Dias        69.17  51 eP         P         19 55 12.9 +3.3
DIAM  Diamantina, MG    69.19  92 eP         P         19 55 10.2 +0.8
POPC  Popayan, Colom    69.23  51 eP         P         19 55 10.1 +0.4
BBOO  Buckleboo         69.25 242  P         P         19 55 08.4 -0.9
MARP  Paez Belalcaza    69.82  51 eP         P         19 55 14.8 +1.5
SNDB  Serra Nova Dou    69.96  82 eP         P         19 55 13.6 -0.4
MACC  Macarena, Meta    70.15  54 eP         P         19 55 16.7 +1.7
RIB01 Linhares ES       70.24  95 eP         P         19 55 18.2 +2.6
BSFB  Barra de Sao F    70.37  95 eP         P         19 55 18.5 +2.1
YOTC  Yotoco, Valle     70.67  50 eP         P         19 55 20.6 +2.2
PRAC  Prado             71.07  52 eP         P         19 55 23.4 +2.7
JANB  Januaria          71.42  90 eP         P         19 55 22.8 -0.2
ANIL  Santa Ana         71.53  51 eP         P         19 55 26.6 +2.8
PEXB  Peixe             71.55  84 eP         P         19 55 24.5 +0.9
NPGB  Novo Progresso    71.74  75 eP         P         19 55 24.2 -0.6
RIOS  Rincon, Osa       72.01  42  P         P         19 55 29.5 +3.2
RIOS                               IAmb      IAmb      19 55 30.3
      comp=Z,49nm,0.9s
MACA  Manacapuru-AM     72.11  69 eP         P         19 55 26.2 -0.8
MACA  Manacapuru-AM     72.11  69  P         P         19 55 26.4 -0.5
MACA                               IAmb      IAmb      19 55 32.4
      comp=Z,45nm,0.9s
CDITO Canoas            72.14  42  P         P         19 55 29.2 +2.2
GUY2C Guyana, Caldas    72.20  51 eP         P         19 55 29.2 +1.2
GUY2C                             eP         P         19 55 32.0 +4.0
ROSC  El Rosal          72.33  52  P         P         19 55 29.6 +0.9
      comp=Z,34nm,1.0s,baz=166,slow=2.5,SNR=15
ROSC                               LR        LR        20 22 16.1
      comp=Z,12µm,18.3s,baz=211,slow=32
ROSC  El Rosal          72.33  52  P         P         19 55 29.3 +0.6
ROSC                               pmax      pmax
      comp=Z,120nm,1.3s
ROSC  El Rosal          72.33  52  P         P         19 55 29.3 +0.6
CHIC  Chingaza          72.40  53 eP         P         19 55 31.7 +2.6
CBOC  Ciudad Bolivar    72.49  50 eP         P         19 55 31.3 +1.9
SRBA  San Rafael, Bu    72.56  41  P         P         19 55 32.2 +2.6
SRBA                               IAmb      IAmb      19 55 40.5
      comp=Z,44nm,1.2s
NORC  Norcasia          72.72  51 eP         P         19 55 31.1 +0.5
GUA01 Guaratinga, BA    72.76  94 eP         P         19 55 30.8 -0.1
ORTG  Ortega, Santa     72.83  39  P         P         19 55 34.0 +2.8
RIMA  Rio Macho         72.86  41  P         P         19 55 33.8 +2.2
RIMA                               IAmb      IAmb      19 55 51.0
      comp=Z,51nm,1.4s
JTS   Las Juntas de     72.95  40  P         P         19 55 34.6 +2.7
JTS                                pmax      pmax
      comp=Z,38nm,1.1s
JTS                                MLR       MLR
      comp=Z,10µm,20.0s
JTS   Las Juntas de     72.95  40  P         P         19 55 34.6 +2.7
JTS                                IAmb      IAmb      19 55 36.2
      comp=Z,38nm,1.1s
JTS   Las Juntas de     72.95  40  IAMs_20   IAMs_20   20 20 20.9
      comp=Z,10µm,20.0s
CVTR  Volcan Turrial    73.14  41  P         P         19 55 37.0 +3.6
CVTR                               IAmb      IAmb      19 55 52.6
      comp=Z,65nm,1.3s
SPBC  San Pablo de B    73.16  52 eP         P         19 55 32.0 -1.2
SDBA  SAO DESIDERIO     73.23  87 eP         P         19 55 33.3 -0.3
DBBC  Dabeiba           73.44  49 eP         P         19 55 37.8 +2.9
ITTB  Itaituba          73.76  74 eP         P         19 55 37.5 +0.7
PTBC  PUERTO BERRIO,    73.78  51 eP         P         19 55 37.8 +1.0
RUSC  La Rusia          73.81  53 eP         P         19 55 38.8 +1.2
BCIP  Isla Barro Col    73.87  45  IAMs_20   IAMs_20   20 20 02.9
      comp=Z,10µm,20.0s
CMC01 Camacan, BA       73.90  94 eP         P         19 55 40.1 +2.5
CTA   Charters Tower    74.00 258  P         P         19 55 36.5 -1.6
      comp=Z,10.0nm,0.9s,baz=132,slow=10,SNR=3.9
CTA                                LR        LR        20 23 49.1
      comp=Z,4µm,20.6s,baz=164,slow=32
CTAO  Charters Tower    74.00 258  P         P         19 55 38.4 +0.2
CTAO                               pmax      pmax
      comp=Z,63nm,1.1s
CTAO                               MLR       MLR
      comp=Z,3µm,21.0s
CTAO  Charters Tower    74.00 258  P         P         19 55 38.4 +0.2
CTAO                               IAmb      IAmb      19 55 49.6
      comp=Z,63nm,1.1s
ZARC  Zaragoza, Cauc    74.45  50 eP         P         19 55 42.6 +1.9
ZARC  Zaragoza, Cauc    74.45  50  P         P         19 55 39.6 -1.0
ZARC                               IAmb      IAmb      19 55 44.0
      comp=Z,48nm,1.2s
SMTB  Santa Maria do    74.59  83 eP         P         19 55 41.9 +0.3
SNET  Serv Nac Est T    74.65  34  IAMs_20   IAMs_20   20 22 03.6
      comp=Z,7µm,18.0s
HNR   Honiara           74.86 275  IAMs_20   IAMs_20   20 25 04.5
      comp=Z,8µm,20.0s
ESPN  Las Esperanzas    74.94  39  P         P         19 55 45.8 +2.4
ESPN                               IAmb      IAmb      19 55 47.3
      comp=Z,58nm,1.0s
MATN  Matagalpa         75.05  38  P         P         19 55 42.8 -1.4
GDU01 Guandu, BA        75.19  93 eP         P         19 55 44.2 -0.9
MOTC  Monteria, Cord    75.25  49  P         P         19 55 46.4 +1.1
MTO3  Montecristo       75.28  34  pP        pP        19 55 48.9 +0.9
ESQI  Esquipulas        75.44  34  P         P         19 55 48.7 +2.3
TGUH  Tegucigalpa,Un    75.64  36  P         P         19 55 48.4 +0.8
TGUH                               IAMs_20   IAMs_20   20 21 22.6
      comp=Z,9µm,21.0s
TLIG  Tlapa             75.76  24  P         P         19 55 50.6 +2.4
TLIG                               IAmb      IAmb      19 56 00.3
      comp=Z,54nm,1.4s
OCAC  Ocana             75.79  51  P         P         19 55 47.8 -0.8
SJCC  San Jacinto, C    76.46  49 eP         P         19 55 52.1 -0.1
SJCC  San Jacinto, C    76.46  49  P         P         19 55 52.3  0.0
SJCC                               IAmb      IAmb      19 56 01.9
      comp=Z,36nm,1.0s
BOAV  Boa Vista         76.90  66 eP         P         19 55 55.1 +0.3
BOAV  Boa Vista         76.90  66  P         P         19 55 55.4 +0.6
BOAV                               IAmb      IAmb      19 56 03.3
      comp=Z,47nm,1.3s
UNM   Universidad Na    77.33  23  IAMs_20   IAMs_20   20 23 06.2
      comp=Z,6µm,22.0s
PETF  Flores            77.49  33  P         P         19 55 58.1 +0.3
PETF                               IAmb      IAmb      19 56 01.9
      comp=Z,36nm,1.0s
H01W1 Cape Leeuwin H    77.50 225  T         T         21 21 57.1
      baz=150,slow=76,SNR=625
H01W2 Cape Leeuwin H    77.50 225  T         T         21 21 57.4
      baz=150,slow=76,SNR=606
H01W3 Cape Leeuwin H    77.52 225  T         T         21 21 58.3
      baz=150,slow=76,SNR=537
SDV   Santo Domingo     77.57  53 eP         P         19 55 59.1 +0.4
SDV   Santo Domingo     77.57  53  P         P         19 55 58.6 -0.1
SDV                                IAmb      IAmb      19 56 06.5
      comp=Z,43nm,1.2s
SDV   Santo Domingo     77.57  53  IAMs_20   IAMs_20   20 24 55.1
      comp=Z,9µm,21.0s
ASAR  Alice Springs     77.77 246  P         P         19 55 55.2 -4.5
      comp=Z,16nm,1.1s,baz=153,slow=4.6,SNR=15
ASAR                               LR        LR        20 24 38.8
      comp=Z,9µm,21.3s,baz=144,slow=32
ASAR  Alice Springs     77.77 246  P         P         19 55 54.3 -5.4
AS31  Alice Springs     77.77 246  P         P         19 55 55.8 -3.9
NWAO  Narrogin (SRO)    77.92 228  IAMs_20   IAMs_20   20 21 44.1
      comp=Z,6µm,21.0s
BAUV  El Baul           78.82  56  P         P         19 56 06.0 +0.6
SLBS  Sierra La Lagu    79.73  12  IAMs_20   IAMs_20   20 22 43.4
      comp=Z,7µm,22.0s
WR0   Warramunga Arr    80.48 249  P         P         19 56 13.7 -0.8
WR0                                IAmb      IAmb      19 56 29.4
      comp=Z,66nm,1.3s
WB2   Warramunga Arr    80.59 249  P         P         19 56 12.7 -2.4
WRA   Warramunga Arr    80.60 249  P         P         19 56 11.0 -4.2
      comp=Z,20nm,1.0s,baz=143,slow=4.8,SNR=28
WRA                                LR        LR        20 27 04.4
      comp=Z,7µm,20.6s,baz=145,slow=32
WRA   Warramunga Arr    80.60 249  P         P         19 56 13.3 -1.9
WRA   Warramunga Arr    80.60 249  P         P         19 56 13.3 -1.9
WRAB  Tennant Creek     80.60 249  P         P         19 56 13.7 -1.5
WRAB                               pmax      pmax
      comp=Z,123nm,1.6s
WRAB                               MLR       MLR
      comp=Z,7µm,21.0s
WRAB  Tennant Creek     80.60 249  P         P         19 56 13.7 -1.5
WRAB  Tennant Creek     80.60 249  IAMs_20   IAMs_20   20 26 31.7
      comp=Z,7µm,21.0s
WB0   Warramunga Arr    80.71 249  P         P         19 56 14.8 -1.0
HATO  Hato, Curacao     81.24  53  IAMs_20   IAMs_20   20 27 36.2
      comp=Z,9µm,21.0s
PMG   Port Moresby      82.14 265  LR        LR        20 28 25.5
      comp=Z,5µm,19.2s,baz=142,slow=32
MTDJ  Mount Denham      83.01  43  IAMs_20   IAMs_20   20 27 16.1
      comp=Z,8µm,18.0s
GRGR  Grenville         84.65  60  IAMs_20   IAMs_20   20 29 44.1
      comp=Z,6µm,20.0s
AIS   Amsterdam Isla    85.34 196  IAMs_20   IAMs_20   20 28 12.0
      comp=Z,5µm,21.0s
TX31  Lajitas Ar. Si    86.18  17  P         P         19 56 44.0 +0.4
TX32  Lajitas Array     86.18  17  P         P         19 56 43.6  0.0
TX32                               IAmb      IAmb      19 56 54.1
      comp=Z,83nm,2.0s
TXAR  Lajitas Array     86.18  17  P         P         19 56 44.5 +0.9
      comp=Z,2.7nm,0.8s,baz=190,slow=6.4,SNR=14
TXAR                               LR        LR        20 28 21.2
      comp=Z,2µm,18.9s,baz=0.0,slow=31
TXAR  Lajitas Array     86.18  17  P         P         19 56 43.8 +0.3
SDDR  Presa de Saban    86.23  48  IAMs_20   IAMs_20   20 32 35.0
      comp=Z,4µm,18.0s
PSA00 Pilbara Seismi    86.51 236  P         P         19 56 44.2 -1.3
PSA00                              IAmb      IAmb      19 56 54.5
      comp=Z,36nm,0.8s
PSA00 Pilbara Seismi    86.51 236  P         P         19 56 44.6 -0.9
PSA00                              IAmb      IAmb      19 56 59.8
      comp=Z,30nm,1.1s
BBGH  Gun Hill          86.56  61  IAMs_20   IAMs_20   20 36 35.4
      comp=Z,8µm,22.0s
FITZ  Fitzroy Crossi    86.63 243  P         P         19 56 43.3 -2.8
      comp=Z,16nm,1.1s,baz=147,slow=7.0,SNR=3.9
FITZ                               LR        LR        20 29 58.9
      comp=Z,4µm,22.0s,baz=134,slow=32
MBWA  Marble Bar        86.92 236  IAMs_20   IAMs_20   20 30 39.5
      comp=Z,5µm,19.0s
FDF   Fort de France    87.14  59  IAMs_20   IAMs_20   20 32 13.1
      comp=Z,7µm,20.0s
SVN   Savane Anatole    87.22  59  IAMs_20   IAMs_20   20 32 57.3
      comp=Z,7µm,18.0s
214A  Organ Pipe Nat    87.61   9  P         P         19 56 51.0 +0.6
214A                               IAmb      IAmb      19 57 14.8
      comp=Z,45nm,1.3s
SJG   San Juan          87.71  53  IAMs_20   IAMs_20   20 32 22.9
      comp=Z,5µm,20.0s
JCT   Junction City     88.00  20  P         P         19 56 54.6 +2.3
JCT                                pmax      pmax
      comp=Z,46nm,1.2s
JCT                                MLR       MLR
      comp=Z,3µm,19.0s
JCT   Junction City     88.00  20  P         P         19 56 54.6 +2.3
EPT   El Paso           88.14  14  IAMs_20   IAMs_20   20 28 34.2
      comp=Z,5µm,20.0s
TUC   Tucson            88.16  10  P         P         19 56 56.4 +3.4
TUC                                pmax      pmax
      comp=Z,34nm,1.4s
TUC                                MLR       MLR
      comp=Z,6µm,19.0s
TUC   Tucson            88.16  10  P         P         19 56 56.4 +3.4
TUC                                IAmb      IAmb      19 57 20.6
      comp=Z,34nm,1.4s
TUC   Tucson            88.16  10  IAMs_20   IAMs_20   20 28 54.7
      comp=Z,6µm,19.0s
MNTX  Cornudas Mount    88.23  15  P         P         19 56 55.2 +1.9
MNTX                               IAmb      IAmb      19 57 04.1
      comp=Z,39nm,1.6s
MNTX                               IAMs_20   IAMs_20   20 29 01.5
      comp=Z,4µm,20.0s
109C  Camp Elliot, M    88.25   5  IAMs_20   IAMs_20   20 26 45.2
      comp=Z,4µm,20.0s
HKT   Hockley           88.32  23  P         P         19 56 56.3 +2.6
HKT                                pmax      pmax
      comp=Z,74nm,1.6s
HKT                                MLR       MLR
      comp=Z,2µm,18.0s
HKT   Hockley           88.32  23  P         P         19 56 56.3 +2.6
GRTK  Grand Turk        88.54  47  IAMs_20   IAMs_20   20 33 27.4
      comp=Z,4µm,19.0s
GLA   Glamis            88.54   7  P         P         19 56 56.5 +1.7
GLA                                pmax      pmax
      comp=Z,71nm,1.6s
GLA   Glamis            88.54   7  P         P         19 56 56.5 +1.7
121A  Cookes Peak, D    88.72  13  P         P         19 56 56.8 +0.9
435B  Jarrell           88.74  22  P         P         19 56 55.5 -0.2
PFO   Pinyon Flats O    89.00   6  IAMs_20   IAMs_20   20 28 15.1
      comp=Z,5µm,19.0s
ANWB  Willy Bob         89.36  57  IAMs_20   IAMs_20   20 33 04.1
      comp=Z,5µm,20.0s
PASC  Pasadena Art C    89.47   4  IAMs_20   IAMs_20   20 27 56.8
      comp=Z,6µm,20.0s
WHTX  Lake Whitney,     89.94  22  P         P         19 57 02.1 +0.8
WHTX                               IAmb      IAmb      19 57 19.6
      comp=Z,48nm,1.5s
ABTX  Abilene, Hawle    90.11  20  P         P         19 57 04.8 +2.6
X16A  Lo Mia Camp, P    90.18  10  P         P         19 57 03.1 +0.5
X18A  Snowflake         90.44  11  P         P         19 57 04.6 +0.8
X18A                               IAmb      IAmb      19 57 27.8
      comp=Z,28nm,1.2s
BNM   Barren Site       90.47  14  P         P         19 57 06.3 +2.2
DWPF  Disney Wildern    90.64  36  IAMs_20   IAMs_20   20 32 15.0
      comp=Z,5µm,18.0s
MSTX  Muleshoe          90.87  17  P         P         19 57 07.8 +2.1
ISA   Isabella, Lake    90.95   4  P         P         19 57 03.7 -2.3
ISA                                pmax      pmax
      comp=Z,29nm,1.5s
ISA   Isabella, Lake    90.95   4  P         P         19 57 03.7 -2.3
ISA                                IAmb      IAmb      19 57 19.8
      comp=Z,29nm,1.4s
ANMO  Albuquerque       91.27  14  LR        LR        20 30 22.5
      comp=Z,2µm,19.6s,baz=189,slow=30
ANMO  Albuquerque       91.27  14  P         P         19 57 07.5 -0.2
ANMO                               pmax      pmax
      comp=Z,29nm,1.6s
ANMO                               MLR       MLR
      comp=Z,3µm,21.0s
ANMO  Albuquerque       91.27  14  P         P         19 57 07.5 -0.2
ANMO                               IAmb      IAmb      19 57 17.7
      comp=Z,29nm,1.6s
QSM   Queen of Sheba    91.32   5  P         P         19 57 07.6  0.0
QSM                                IAmb      IAmb      19 57 35.0
      comp=Z,24nm,1.4s
JAY   Jayapura          91.42 264  LR        LR        20 33 28.8
      comp=Z,2µm,21.7s,baz=102,slow=33
GWY   Greenwater Val    91.55   5  P         P         19 57 08.7 -0.2
GWY                                IAmb      IAmb      19 57 36.9
      comp=Z,27nm,1.4s
BRAL  Brewton           91.74  30  IAMs_20   IAMs_20   20 31 24.6
      comp=Z,4µm,21.0s
BOSA  Boshof            91.92 153  P         P         19 57 10.6 -0.5
      comp=Z,3.9nm,0.9s,baz=157,slow=7.7,SNR=3.7
BOSA                               LR        LR        20 35 32.8
      comp=Z,12µm,18.8s,baz=195,slow=34
AMTX  Amarillo          91.94  18  P         P         19 57 12.2 +1.5
AMTX                               IAMs_20   IAMs_20   20 32 35.6
      comp=Z,3µm,20.0s
SHPR  Sheep Range       91.96   6  P         P         19 57 13.3 +2.5
SHPR                               IAmb      IAmb      19 57 35.2
      comp=Z,19nm,1.2s
U15A  North Rim         92.09   9  P         P         19 57 12.2 +0.6
U15A                               IAmb      IAmb      19 57 22.9
      comp=Z,34nm,1.4s
WMOK  Wichita Mounta    92.33  20  P         P         19 57 14.2 +1.8
WMOK                               pmax      pmax
      comp=Z,12nm,1.2s
WMOK                               MLR       MLR
      comp=Z,2µm,21.0s
WMOK  Wichita Mounta    92.33  20  P         P         19 57 14.2 +1.8
LCH   Last Change Ra    92.55   4  P         P         19 57 14.2 +0.7
LCH                                IAmb      IAmb      19 57 40.9
      comp=Z,38nm,1.8s
LCMT  Little Creek M    92.60   8  P         P         19 57 13.7  0.0
KNB   Kanab             92.63   8  P         P         19 57 15.3 +1.4
KNB                                pmax      pmax
      comp=Z,21nm,1.4s
KNB   Kanab             92.63   8  P         P         19 57 15.2 +1.4
KNB                                IAmb      IAmb      19 57 25.2
      comp=Z,21nm,1.4s
PRN   Pahroc Range      92.86   6  P         P         19 57 15.6 +0.7
PRN                                IAmb      IAmb      19 57 44.1
      comp=Z,16nm,1.1s
CCUT  Cedar City        93.12   8  P         P         19 57 17.7 +1.5
SZCU  Shurtz Canyon     93.19   8  P         P         19 57 17.8 +1.3
MVCO  Mesa Verde        93.25  12  P         P         19 57 18.3 +1.5
MVCO                               IAmb      IAmb      19 57 40.1
      comp=Z,28nm,1.4s
MVCO                               IAMs_20   IAMs_20   20 32 27.6
      comp=Z,4µm,18.0s
CMB   Columbia Colle    93.26   2  IAMs_20   IAMs_20   20 29 03.0
      comp=Z,5µm,20.0s
MCCM  Marconi Confer    93.34   0  IAMs_20   IAMs_20   20 29 21.1
      comp=Z,4µm,18.0s
TPH   Tonopah           93.41   5  P         P         19 57 19.3 +1.8
TPH                                pmax      pmax
      comp=Z,105nm,1.5s
TPH   Tonopah           93.41   5  P         P         19 57 19.3 +1.8
MTPU  Mount Pierson     93.70   9  P         P         19 57 15.6 -3.5
NVAR  Mina Array Bea    93.71   4  P         P         19 57 20.1 +1.2
      comp=Z,0.6nm,0.6s,baz=198,slow=5.7,SNR=3.2
NVAR                               LR        LR        20 30 07.2
      comp=Z,6µm,21.7s,baz=176,slow=29
T25A  Trinidad          93.72  15  IAMs_20   IAMs_20   20 32 05.7
      comp=Z,4µm,20.0s
R11A  Troy Canyon, C    93.77   6  P         P         19 57 18.2 -0.9
MVU   Marysvale         94.16   9  P         P         19 57 19.3 -1.7
MSU   Marysvale         94.17   9  P         P         19 57 17.8 -3.3
MSU   Marysvale         94.17   9  P         P         19 57 17.8 -3.3
HOPS  Hopland Field     94.18   0  IAMs_20   IAMs_20   20 29 16.6
      comp=Z,6µm,20.0s
BATI  Baumata           94.31 245  LR        LR        20 34 41.8
      comp=Z,9µm,21.8s,baz=148,slow=32
KVN   Kaiserville       94.34   4  P         P         19 57 20.6 -1.1
KVN                                pmax      pmax
      comp=Z,16nm,1.4s
KVN   Kaiserville       94.34   4  P         P         19 57 20.6 -1.1
H11S2 WAKE ISLAND Hy    94.37 296  T         T         21 42 22.5
      baz=148,slow=76,SNR=339
H11S3 WAKE ISLAND Hy    94.38 296  T         T         21 42 26.1
      baz=148,slow=76,SNR=268
H11S1 WAKE ISLAND Hy    94.38 296  T         T         21 42 21.3
      baz=148,slow=76,SNR=250
Q16A  Castle Valley     94.67   9  P         P         19 57 22.7 -0.5
ORV   Oroville          94.75   1  IAMs_20   IAMs_20   20 32 23.7
      comp=Z,5µm,18.0s
TMUT  Trail Mountain    95.04   9  P         P         19 57 23.5 -1.6
H11N3 WAKE ISLAND Hy    95.29 297  T         T         21 43 33.2
      baz=148,slow=76,SNR=40
H11N1 WAKE ISLAND Hy    95.30 297  T         T         21 43 40.0
      baz=148,slow=76,SNR=33
H11N2 WAKE ISLAND Hy    95.31 297  T         T         21 43 41.0
      baz=148,slow=76,SNR=38
NLU   North Lily Min    95.61   9  P         P         19 57 26.9 -0.7
NHSC  New Hope          95.66  35  IAMs_20   IAMs_20   20 35 29.9
      comp=Z,4µm,18.0s
WDC   Whiskeytown Da    95.77   0  IAMs_20   IAMs_20   20 31 23.5
      comp=Z,5µm,20.0s
DUG   Dugway, Tooele    95.79   8  IAMs_20   IAMs_20   20 34 12.9
      comp=Z,6µm,18.0s
FAKI  Fak Fak           95.81 256  IAMs_20   IAMs_20   20 36 15.1
      comp=Z,4µm,21.0s
ISCO  Idaho Springs     96.16  14  IAMs_20   IAMs_20   20 34 04.5
      comp=Z,6µm,19.0s
ELK   Elko              96.17   6  LR        LR        20 32 12.4
      comp=Z,4µm,21.5s,baz=202,slow=30
MMRI  Maumere           96.38 245  IAMs_20   IAMs_20   20 35 32.4
      comp=Z,5µm,22.0s
TKL   Tuckaleechee C    96.89  31  LR        LR        20 37 17.8
      comp=Z,2µm,18.3s,baz=178,slow=33
YBH   Yreka Blue Hor    96.92   0  LR        LR        20 32 29.0
      comp=Z,7µm,20.3s,baz=168,slow=30
MOD   Modoc Plateau     97.12   2  IAMs_20   IAMs_20   20 33 09.2
      comp=Z,4µm,20.0s
PHWY  Pilot Hill        97.66  13  IAMs_20   IAMs_20   20 34 32.8
      comp=Z,5µm,20.0s
WVOR  Wild Horse Val    97.70   3  IAMs_20   IAMs_20   20 32 43.5
      comp=Z,5µm,19.0s
OGNE  Ogallala          97.80  16  IAMs_20   IAMs_20   20 34 48.9
      comp=Z,5µm,22.0s
RWWY  Rawlins           97.82  12  IAMs_20   IAMs_20   20 36 55.6
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	comp=Z,3µm,19.0s						
CNNC	Cliffs of the	98.36	36	IAMs_20	IAMs_20	20 36 04.5	
	comp=Z,4µm,20.0s						
AHID	Auburn Hatcher	98.49	9	IAMs_20	IAMs_20	20 34 20.1	
	comp=Z,5µm,18.0s						
WCI	Wyandotte Cave	98.58	29	IAMs_20	IAMs_20	20 36 05.7	
	comp=Z,4µm,22.0s						
BW06	Boulder Array	98.63	10	IAMs_20	IAMs_20	20 34 15.1	
	comp=Z,5µm,20.0s						
PDAR	Pinedale Array	98.63	10	P	Pdif	19 57 41.9	+0.7
	comp=Z,0.3nm,0.6s,baz=193,slow=3.7,SNR=2.1						
PDAR				LR	LR	20 34 06.0	
	comp=Z,4µm,20.5s,baz=206,slow=30						
HLID	Hailey	99.03	6	IAMs_20	IAMs_20	20 33 18.6	
	comp=Z,6µm,20.0s						
REDW	Red Top Meadow	99.10	9	IAMs_20	IAMs_20	20 34 49.5	
	comp=Z,6µm,18.0s						
BLA	Blacksburg	99.35	33	IAMs_20	IAMs_20	20 37 35.8	
	comp=Z,4µm,19.0s						
LOHW	Long Hollow	99.37	9	IAMs_20	IAMs_20	20 34 58.6	
	comp=Z,6µm,19.0s						
MOOW	Moose Ponds	99.50	9	IAMs_20	IAMs_20	20 35 12.9	
	comp=Z,5µm,19.0s						
BMO	Blue Mountains	100.16	4	IAMs_20	IAMs_20	20 33 13.7	
	comp=Z,6µm,19.0s						
RSSD	Black Hills	100.62	14	IAMs_20	IAMs_20	20 37 53.5	
	comp=Z,5µm,18.0s						
DLMT	Dillon	100.94	8	IAMs_20	IAMs_20	20 34 37.3	
	comp=Z,4µm,20.0s						
RLMT	Red Lodge	101.00	10	IAMs_20	IAMs_20	20 35 29.6	
	comp=Z,6µm,20.0s						
P52A	Corning	101.06	31	IAMs_20	IAMs_20	20 40 42.3	
	comp=Z,3µm,20.0s						
CBN	Corbin Frederi	101.23	35	IAMs_20	IAMs_20	20 37 43.5	
	comp=Z,5µm,19.0s						
BOZ	Bozeman (W)	101.25	8	IAMs_20	IAMs_20	20 35 38.5	
	comp=Z,4µm,18.0s						
HAWA	Hanford	101.62	3	IAMs_20	IAMs_20	20 35 07.4	
	comp=Z,3µm,18.0s						
MCWV	Mont Chateau	101.77	33	IAMs_20	IAMs_20	20 37 59.0	
	comp=Z,4µm,20.0s						
MSO	Missoula	102.31	6	IAMs_20	IAMs_20	20 34 58.5	
	comp=Z,6µm,20.0s						
NLWA	Neilton Lookou	102.58	360	IAMs_20	IAMs_20	20 34 21.8	
	comp=Z,3µm,22.0s						
O56A	Blue Knob Stat	102.73	33	IAMs_20	IAMs_20	20 40 08.2	
	comp=Z,4µm,19.0s						
N54A	Moraine State	102.92	32	IAMs_20	IAMs_20	20 39 17.5	
	comp=Z,4µm,19.0s						
M53A	WI Miller and	103.16	31	IAMs_20	IAMs_20	20 41 24.7	
	comp=Z,3µm,18.0s						
P60A	Greenville	103.26	36	IAMs_20	IAMs_20	20 40 22.1	
	comp=Z,4µm,18.0s						
SSPA	Standing Stone	103.27	34	IAMs_20	IAMs_20	20 38 07.7	
	comp=Z,5µm,21.0s						
M54A	Oil Creek Stat	103.52	32	IAMs_20	IAMs_20	20 39 43.3	
	comp=Z,5µm,19.0s						
NEW	Newport	103.58	4	IAMs_20	IAMs_20	20 35 37.8	
	comp=Z,3µm,20.0s						
ERPA	Erie	103.98	32	IAMs_20	IAMs_20	20 39 33.5	
	comp=Z,4µm,20.0s						
N59A	State Game Lan	104.21	35	IAMs_20	IAMs_20	20 41 04.3	
	comp=Z,5µm,18.0s						
DGMT	Dagmar	104.87	13	IAMs_20	IAMs_20	20 38 51.0	
	comp=Z,4µm,21.0s						
GLMI	Grayling	105.19	27	IAMs_20	IAMs_20	20 40 10.6	
	comp=Z,3µm,20.0s						
BINY	Binghamton	105.30	34	IAMs_20	IAMs_20	20 41 34.1	
	comp=Z,4µm,18.0s						
BKB	Balikpapan	105.40	244	IAMs_20	IAMs_20	20 41 06.6	
	comp=Z,3µm,21.0s						
AGMN	Agassiz Nation	105.99	19	IAMs_20	IAMs_20	20 40 37.4	
	comp=Z,3µm,20.0s						
M65A	Busby, Falmout	106.53	38	IAMs_20	IAMs_20	20 40 45.4	
	comp=Z,3µm,20.0s						
BRYW	Bryant College	106.53	38	IAMs_20	IAMs_20	20 39 48.5	
	comp=Z,6µm,21.0s						
BCX	Boston College	107.03	38	IAMs_20	IAMs_20	20 40 02.7	
	comp=Z,5µm,21.0s						
SACV	Santiago Islan	107.60	89	IAMs_20	IAMs_20	20 43 28.5	
	comp=Z,4µm,18.0s						
LONY	Lake Ozonia	107.92	34	IAMs_20	IAMs_20	20 42 44.5	
	comp=Z,5µm,19.0s						
WVL	Waterville	109.51	38	IAMs_20	IAMs_20	20 43 10.4	
	comp=Z,5µm,19.0s						
PKME	Peaks-Kenny Pk	110.25	37	IAMs_20	IAMs_20	20 43 43.0	
	comp=Z,5µm,20.0s						
WRAK	Wrangell Islan	111.87	355	IAMs_20	IAMs_20	20 39 01.6	
	comp=Z,3µm,20.0s						
JIS	Juneau Island	113.84	354	IAMs_20	IAMs_20	20 38 52.7	
	comp=Z,5µm,22.0s						
CNBA	Chernabura Isl	113.99	338	IAMs_20	IAMs_20	20 40 04.9	
	comp=Z,5µm,21.0s						
MYKOM	Kota Tinggi	114.38	233	IAMs_20	IAMs_20	20 44 44.7	
	comp=Z,3µm,22.0s						
Q23K	Middleton Isla	116.13	347	IAMs_20	IAMs_20	20 40 14.1	
	comp=Z,4µm,19.0s						
KAIM	Kayak Island	116.38	348	IAMs_20	IAMs_20	20 42 28.8	
	comp=Z,5µm,20.0s						
GSI	Gunungsitoli	116.68	227	IAMs_20	IAMs_20	20 41 03.7	
	comp=Z,3µm,20.0s						
HMT	Hamilton	116.76	348	IAMs_20	IAMs_20	20 42 23.8	
	comp=Z,5µm,19.0s						
HIN	Hinchinbrook I	117.08	347	IAMs_20	IAMs_20	20 42 03.4	
	comp=Z,5µm,20.0s						
RPSI	Rantau Prapat	117.36	229	IAMs_20	IAMs_20	20 47 51.7	
	comp=Z,2µm,21.0s						
FID	Port Fidalgo	117.42	347	IAMs_20	IAMs_20	20 41 25.3	
	comp=Z,5µm,20.0s						
P18K	Big Mountain,	117.43	342	IAMs_20	IAMs_20	20 41 37.6	
	comp=Z,6µm,22.0s						
VRDI	Verde Repeater	117.54	349	IAMs_20	IAMs_20	20 41 02.5	
	comp=Z,6µm,22.0s						
O22K	Cooper Landing	117.60	346	IAMs_20	IAMs_20	20 41 19.1	
	comp=Z,6µm,22.0s						
GLI	Glacier Island	117.63	347	IAMs_20	IAMs_20	20 40 59.9	
	comp=Z,6µm,22.0s						
MCARA	McCarthy VSAT	117.65	349	IAMs_20	IAMs_20	20 40 33.4	
	comp=Z,5µm,22.0s						
PWL	Port Wells	117.77	346	IAMs_20	IAMs_20	20 40 39.6	
	comp=Z,4µm,21.0s						
GLB	Gilahina Butte	117.79	349	IAMs_20	IAMs_20	20 40 01.1	
	comp=Z,5µm,22.0s						
YKA	Yellowknife Ar	117.90	4	PKP	PKPdf	20 02 47.1	-0.4
	comp=Z,0.6nm,0.7s,baz=179,slow=2.8,SNR=11						
YKA				PKKPbc	PKKPbc	20 13 10.5	+2.5
	comp=Z,0.8nm,0.8s,baz=355,slow=3.6,SNR=7.5						
YKA	Yellowknife Ar	117.90	4		PKPdf	20 02 46.9	-0.7
N25K	Chitina, Valde	118.04	349	IAMs_20	IAMs_20	20 43 53.6	
	comp=Z,4µm,19.0s						
RC01	Rabbit Creek A	118.18	346	IAMs_20	IAMs_20	20 40 53.6	
	comp=Z,4µm,22.0s						
KOWA	Kowa	118.21	106	IAMs_20	IAMs_20	20 43 05.3	
	comp=Z,4µm,22.0s						
KNK	Knik Glacier	118.32	347	IAMs_20	IAMs_20	20 40 59.1	
	comp=Z,4µm,21.0s						
M27K	Edge Creek, AK	118.49	350	IAMs_20	IAMs_20	20 43 18.4	
	comp=Z,5µm,20.0s						
SCM	Sheep Creek Mo	118.58	347	IAMs_20	IAMs_20	20 40 34.1	
	comp=Z,4µm,22.0s						
M26K	Nabesna, AK	118.64	350	IAMs_20	IAMs_20	20 42 12.5	
	comp=Z,5µm,21.0s						
SML	Sawmill	118.69	347	IAMs_20	IAMs_20	20 44 44.8	
	comp=Z,4µm,20.0s						
M24K	Tolsona, Glenn	118.71	348	IAMs_20	IAMs_20	20 42 27.4	
	comp=Z,4µm,20.0s						
GHO	Glory Hole Cre	118.73	346	IAMs_20	IAMs_20	20 40 36.0	
	comp=Z,4µm,22.0s						
L26K	Log Cabin Wild	119.29	350	IAMs_20	IAMs_20	20 43 52.7	
	comp=Z,5µm,20.0s						
CUT	Chulitna	119.52	346	IAMs_20	IAMs_20	20 41 45.9	
	comp=Z,4µm,22.0s						
TORD	Torodi Ar. Bea	120.16	112	PKP	PKPdf	20 02 52.5	-1.0
	comp=Z,0.8nm,0.8s,baz=214,slow=1.2,SNR=3.4						
TORD				PKKPbc	PKKPab	20 13 02.8	-0.3
	comp=Z,2.4nm,1.2s,baz=358,slow=3.1,SNR=4.9						
TORD	Torodi Ar. Bea	120.16	112	PKPdf	PKPdf	20 02 50.9	-2.6
EGAK	Eagle	120.80	351		PKPdf	20 02 52.9	-0.2
WRH	Wood River Hil	121.22	348		PKiKP	20 02 54.7	+0.6
CCB	Clear Creek Bu	121.36	348		PKPdf	20 02 53.3	-0.8
IL31		121.37	348		PKPdf	20 02 53.4	-0.8
ILAR	Eielson Array	121.37	348	PKP	PKPdf	20 02 52.6	-1.6
	comp=Z,5.1nm,0.8s,baz=196,slow=2.0,SNR=22						
ILAR				PKKPbc	PKKPbc	20 12 55.9	+0.7
	comp=Z,0.5nm,0.9s,baz=316,slow=5.2,SNR=4.3						
ILAR	Eielson Array	121.37	348	PKIKP	PKPdf	20 02 53.1	-1.1
ILAR	Eielson Array	121.37	348	PKPdf	PKPdf	20 02 53.1	-1.1
MDM	Murphy Dome	121.71	348		PKiKP	20 02 57.4	+2.4
PRP	Porcupine Dome	121.94	349	PKPdf	PKiKP	20 02 57.5	+1.8
BMAR	Burnt Mountain	123.71	350	PKPdf	PKiKP	20 02 59.7	+0.8
INK	Inuvik	123.79	355	PKP	PKPdf	20 02 58.5	-0.3
	comp=Z,1.4nm,0.7s,baz=42,slow=4.5,SNR=7.5						
PMOZ	Porto Moniz, M	125.14	82	*e*LR	LR	20 46 10.9	
	comp=Z,2µm,18.0s						
YUK	Yuzh-Kuril'sk	125.24	298	*e*PKIKP	PKPdf	20 03 02.6	+0.3
TOLK	Toolik Lake Re	125.40	348	PKPdf	PKiKP	20 03 03.7	+1.4
QIZ	Qiongzhong	126.16	249	PKP	PKPdf	20 03 04.1	-0.7
QIZ				PP	PP	20 05 06.0	+6.9
QIZ				SS	SS	20 22 05.0	+3.3
QIZ				LR	LR		
	comp=Z,690nm,25.5s						
QIZ				LR	LR		
	comp=Z,660nm,31.9s						
QIZ				LR	LR		
	comp=Z,1µm,27.1s						
PETK	Petropavlovsk-	126.30	313	PKP	PKPdf	20 03 03.7	-0.3
	comp=Z,6.4nm,0.8s,baz=178,slow=3.6,SNR=5.4						
SSE	Sheshan	129.34	269	PKP	PKiKP	20 03 15.5	+4.3
SSE				PP	PP	20 05 22.1	+2.0
SSE				AMB	AMB		
	comp=Z,76nm,4.1s						
SSE				LR	LR		
	comp=Z,470nm,24.8s						
SSE				LR	LR		
	comp=Z,380nm,24.6s						
CMAR	Chiang Mai Arr	131.23	238	PKP	PKPdf	20 03 13.3	-1.2
	comp=Z,2.1nm,0.8s,baz=202,slow=2.5,SNR=17						
CMAR	Chiang Mai Arr	131.23	238	PKPdf	PKPdf	20 03 12.4	-2.1
RES	Resolute Bay	131.33	10	PKIKP	PKPdf	20 03 13.3	+0.3
RES	Resolute Bay	131.33	10		PKPdf	20 03 13.3	+0.3
NJ2	Nanjing	131.37	268	*e*PKP	PKPdf	20 03 15.4	+1.0
NJ2				SKS	SKSdf	20 10 25.1	-0.5
NJ2				AMB	AMB		
	comp=Z,370nm,4.2s						
NJ2				LR	LR		
	comp=Z,1µm,21.1s						
NJ2				LR	LR		
	comp=Z,1µm,20.1s						
NJ2				LR	LR		
	comp=Z,1µm,23.5s						
CHTO	Chiang Mai	131.53	238	PKIKP	PKPdf	20 03 15.2	+0.1
CHTO	Chiang Mai	131.53	238	PKPdf	PKPdf	20 03 15.2	+0.1
BILL	Bilibino	133.74	331	⇓*i*PKIKP	PKiKP	20 03 20.9	+1.9
BILL				*i*		20 03 24.0	
BILL				*e*		20 03 26.7	
BILL				*e*SS	SS	20 23 36.2	+1.9
BILL				MLR	MLR		
	comp=Z,665nm,17.0s						
PVAQ	Vaqueiros	133.80	85	*e*SS	SS	20 23 39.5	+3.6
PVAQ	Vaqueiros	133.80	85	*e*LQ	LQ	20 39 08.1	
PVAQ				*e*LR	LR	20 48 03.4	
	comp=Z,3µm,20.0s						
DY2G	Dye2	134.59	33	*i* P	PKPdf	20 03 19.8	+0.1
DL2	Dalian	134.71	277	SS	SS	20 23 57.6	+11
DL2				AMB	AMB		
	comp=Z,160nm,3.9s						
DL2				LR	LR		
	comp=N,770nm,23.7s						
DL2				LR	LR		
	comp=E,840nm,23.3s						
DL2				LR	LR		
	comp=Z,2µm,24.5s						
KMI	Kunming	134.90	247	⇑PKP	PKPdf	20 03 22.5	+1.0
KMI				sPKP		20 03 27.8	
KMI				PP	PP	20 06 02.3	+6.3
KMI				PKS	PKSdf	20 06 55.4	-2.8
KMI				AMB	AMB		
	comp=Z,260nm,11.9s						
KMI				LR	LR		
	comp=Z,990nm,21.0s						
KMI				LR	LR		
	comp=Z,790nm,24.3s						
KMI				LR	LR		
	comp=Z,2µm,22.7s						
PMRV	Marv??o	135.39	83	*e*SS	SS	20 24 04.1	+9.1
PMRV	Marv??o	135.39	83	*e*LQ	LQ	20 41 12.9	
PMRV				*e*LR	LR	20 49 44.5	
	comp=Z,3µm,22.0s						
MTE	Manteigas	135.96	82	*e*SS	SS	20 24 13.7	+12
MTE	Manteigas	135.96	82	*e*LQ	LQ	20 41 35.9	
MTE				*e*LR	LR	20 51 07.7	
	comp=Z,5µm,20.0s						
UPNV	Upernavik	136.02	23	*i* P	PKiKP	20 03 26.3	+2.8
TULEG	Thule	136.25	16	*i* P	PKiKP	20 03 28.8	+4.9
PGAV	Gavieira, Arco	136.60	80	*e*SS	SS	20 24 28.9	+19
PGAV	Gavieira, Arco	136.60	80	*e*LR	LR	20 49 20.5	
	comp=Z,2µm,18.0s						
MVO	Moncorvo	136.77	82	*e*SS	SS	20 24 15.3	+3.7
MVO	Moncorvo	136.77	82	*e*LQ	LQ	20 40 20.6	
MVO	Moncorvo	136.77	82	*e*LR	LR	20 51 07.3	
	comp=Z,3µm,20.0s						
ESDC	Sonseca Array	137.50	86	PKP	PKPdf	20 03 24.7	-1.0
	comp=Z,1.3nm,1.1s,baz=267,slow=2.6,SNR=4.3						
ESDC	Sonseca Array	137.50	86		PKPdf	20 03 22.3	-3.4
XAN	Xi'an	138.45	261	PKP	PKiKP	20 03 30.3	+0.6
XAN				LR	LR		
	comp=Z,2µm,26.8s						
XAN				LR	LR		
	comp=Z,740nm,24.0s						
XAN				LR	LR		
	comp=Z,3µm,33.0s						
HYB	Hyderabad	138.48	212	*i* PKP	PKiKP	20 03 34.0	+3.8
BJI	Beijing	138.57	274	PKP	PKPdf	20 03 27.8	+0.3
BJI				PP	PP	20 06 21.8	+3.0
BJI				AMB	AMB		
	comp=Z,290nm,10.1s						
BJI				LR	LR		
	comp=Z,2µm,20.0s						
BJI				LR	LR		
	comp=Z,1µm,18.3s						
CD2	Chengdu	138.95	253	PKP	PKPdf	20 03 28.9	+0.3
CD2				PP	PP	20 06 23.8	+2.6
CD2				SKKS		20 13 17.3	
CD2				SS	SS	20 24 39.4	+2.2
CD2				AMB	AMB		
	comp=Z,320nm,10.8s						
CD2				LR	LR		
	comp=Z,110nm,21.6s						
CD2				LR	LR		
	comp=Z,1µm,20.9s						
CD2				LR	LR		
	comp=Z,2µm,24.1s						
NEEM	North Greenlan	139.89	19	*i* P	PKiKP	20 03 31.0	-0.6
NEEM				IVMs_BB	IVMs_BB	20 59 13.9	
	comp=Z,2µm,7.6s						
SUMG	Summit	140.26	28	*i* P	PKiKP	20 03 35.1	+2.4
HHC	Hu-ho-hao-te	141.72	271	*e*PKP	PKPdf	20 03 30.6	-2.8
HHC				AMB	AMB		
	comp=Z,330nm,8.4s						
HHC				LR	LR		
	comp=Z,1µm,19.9s						
HHC				LR	LR		
	comp=Z,1µm,21.7s						
HHC				LR	LR		
	comp=Z,2µm,21.3s						
KEST	Kesra	142.26	102	PKP	PKPdf	20 03 33.6	-0.9
	comp=Z,2.4nm,0.8s,baz=252,slow=8.4,SNR=5.0						
BTO	Baotou	142.44	269	*e*PKP	PKPdf	20 03 34.0	-0.7
BTO				LR	LR		
	comp=Z,3µm,20.8s						
BTO				LR	LR		
	comp=Z,4µm,19.8s						
LZH	Lanzhou	142.79	258	*e*PKP	PKPdf	20 03 33.9	-1.6
LZH				pPKP	pPKPdf	20 03 38.3	+0.4
LZH				sPKP		20 03 41.8	
LZH				LR	LR		
	comp=Z,680nm,14.1s						
LZH				LR	LR		
	comp=Z,560nm,15.9s						
LZH				LR	LR		
	comp=Z,640nm,16.7s						
YAK	Yakutsk	143.58	311	*e*PKIKP	PKPdf	20 03 35.4	-0.4
VSL	Villasalto	144.94	97	PKPdf	PKPab	20 03 37.4	-0.9
JIRN	Jiri	145.01	229	*e*P	PKPbc	20 03 39.3	0.0
PKI	Pulchoki	145.26	228	*e*P	PKPbc	20 03 39.6	-0.5
PKIN	Phulchoki	145.28	228	*e*P	PKPbc	20 03 39.6	-0.4
GUN	Gumba	145.36	229	*e*P	PKPbc	20 03 40.4	0.0
	comp=Z,108nm,0.7s						
GUN	Gumba	145.36	229	*e*P	PKPbc	20 03 40.4	0.0
	comp=Z,76nm,0.6s						
DMN	Daman	145.43	228	*e*P	PKPbc	20 03 40.4	-0.1
	comp=Z,436nm,1.1s						
DMN	Daman	145.43	228	*e*P	PKPbc	20 03 40.3	-0.2
	comp=Z,436nm,1.1s						
KKN	Kakani	145.51	228	*e*P	PKPdf	20 03 40.6	0.0
DBG	Daneborg	145.74	28	*i* P	PKPdf	20 03 38.5	-0.8
CLTB	Caltabellotta	145.74	103		PKPdf	20 03 40.2	-0.3
GKN	Gorkha	145.97	227	*e*P	PKPdf	20 03 38.9	-2.4
GKN	Gorkha	145.97	227	*e*P	PKPdf	20 03 41.5	+0.2
DAG	Danmarks Havn	146.47	24	*i* P	PKPdf	20 03 39.7	-0.7
DAG				IVMs_BB	IVMs_BB	21 08 55.9	
	comp=Z,2µm,6.9s						
JLN	Jalan Bani Buh	146.58	184	PKPdf	PKPdf	20 03 42.5	+0.2
DANN	Dangsing	146.64	227	*e*P	PKPdf	20 03 40.0	-2.7
	comp=Z,126nm,0.7s						
DANN	Dangsing	146.64	227	*e*P	PKPdf	20 03 39.9	-2.7
	comp=Z,126nm,0.7s						
TIXI	Tiksi	146.73	327	*i* PKIKP	PKPdf	20 03 41.2	+0.2
TIXI	Tiksi	146.73	327	PKPdf	PKPdf	20 03 40.9	-0.1
PYUN	Piuthan	146.73	225	*e*P	PKPdf	20 03 40.2	-2.5
	comp=Z,76nm,0.8s						
NOR	Nord	146.90	15	*i* P	PKPbc	20 03 43.4	+0.4
RAYN	Ar Rayn	146.92	161	PKP2	PKPdf	20 03 43.2	+0.3
RAYN	Ar Rayn	146.92	161	PKPdf	PKPdf	20 03 40.4	-2.5
RAYN	Ar Rayn	146.92	161		PKPdf	20 03 43.2	+0.3
BNI	Bardonecchia	146.98	87	PKP2	PKPdf	20 03 43.1	+0.7
BNI	Bardonecchia	146.98	87		PKPdf	20 03 43.1	+0.7
WBK	Wadi Bani Khal	147.06	184	PKPdf	PKPdf	20 03 36.9	-6.3
CIT	Chita	147.10	288	*e*PKIKP	PKPdf	20 03 42.0	-0.3
CIT				pmax	pmax		
	comp=Z,178nm,2.8s						
UMZA	Um Al Zommool	147.18	177	PKPdf	PKPdf	20 03 29.6	-14
BSY	Bisya	147.23	181	PKPdf	PKPdf	20 03 30.8	-13
GTA	Gaotai	147.39	259	PKPbc	PKPdf	20 03 44.0	+0.7
GTA				LR	LR		
	comp=Z,540nm,21.1s						
GTA				LR	LR		
	comp=Z,740nm,21.5s						
GTA				LR	LR		
	comp=Z,860nm,22.5s						
SMDO	Samad	147.53	182	PKPdf	PKPdf	20 03 42.7	-1.4
WSAR	Wadi Sarin	147.69	183	PKPdf	PKPdf	20 03 34.8	-9.4
ARQ	Araqi	147.82	179	PKPdf	PKPdf	20 03 45.9	+1.6
BIDO	Bidbid	147.99	182	PKPbc	PKPbc	20 03 47.7	0.0
HOQ	Hoqain	148.06	181	PKPdf	PKPdf	20 03 34.9	-10
SENIN	Lac Senin/Sane	148.10	86		PKPbc	20 03 48.2	+0.6
MZWR	Madinat Zayed	148.16	175	PKPbc	PKPbc	20 03 48.0	-0.1
GHWR	Ruwais	148.31	173	PKiKP	PKiKP	20 03 50.6	+0.5
SLWR	Sila	148.32	171	PKPdf	PKPdf	20 03 46.3	+1.2
ALNE	Al Ain	148.52	178	pPKPdf	PKiKP	20 03 50.9	+0.2
ULN	Ulaanbaatar	148.56	277	*i* PKIKP	PKPdf	20 03 46.9	+1.9
ULN	Ulaanbaatar	148.56	277		PKPdf	20 03 46.6	+1.6
DOU	Dourbes	148.61	78	*d*PKP	PKPbc	20 03 47.3	-1.1
SOHO	SOHO	148.61	179	PKPdf	PKPdf	20 03 47.7	+2.1
OSSC	Osservatorio P	148.64	93		PKPdf	20 03 44.2	-0.9
BMRD	Maredsous	148.81	78	*d*PKP	PKPbc	20 03 47.8	-1.2
TIP	Timpagrande	148.84	105	⇓P	PKPbc	20 03 49.7	+0.1
TIP	Timpagrande	148.84	105		PKPdf	20 03 47.9	+2.3
PAOL	Paolisi	148.90	100		PKPdf	20 03 45.7	+0.1
SONM	Songino Array	148.91	277	PKPbc	PKPbc	20 03 48.2	-1.4
	comp=Z,12nm,1.2s,baz=161,slow=2.7,SNR=22						
SONM	Songino Array	148.91	277	PKPdf	PKPdf	20 03 45.4	-0.2
RCHB	Rochefort	148.99	78	*d*PKP	PKPbc	20 03 49.4	0.0
ZCCA	Zocca	149.00	92		PKPdf	20 03 45.6	-0.1
AJN	Ajban	149.01	177	pPKPdf	pPKPdf	20 03 49.6	+0.9
BGES	Gesves	149.03	78	*d*PKP	PKPbc	20 03 49.4	-0.1
ECH	Echery	149.06	83	PKIKP	PKPdf	20 03 45.7	+0.1
ECH	Echery	149.06	83	PKPdf	PKPdf	20 03 45.6	+0.1
AQU	L'Aquila	149.12	97	PKIKP	PKPdf	20 03 45.8	-0.1
AQU	L'Aquila	149.12	97	*e*P	PKPbc	20 03 50.6	+0.5
AQU	L'Aquila	149.12	97		PKPdf	20 03 45.8	-0.1
ASHO	Ashiyiah	149.15	179	PKPdf	PKPdf	20 03 45.4	-1.1
MURB	Monte Urbino	149.20	95	PKPdf	PKPdf	20 03 46.0	-0.1
FAQ	Al Faqa, Dubai	149.21	178	PKPbc	PKPbc	20 03 51.9	+1.0
WLF	Walferdange	149.25	80	*d*PKPdf	PKPdf	20 03 47.5	+1.6
NRCA	Norcia	149.26	96		PKPdf	20 03 45.9	-0.3
HATD	Hatta, Dubai	149.30	179	PKPdf	PKPdf	20 03 44.9	-1.9
BOD	Bodaibo	149.32	298	*e*PKP2	PKPbc	20 03 49.7	-0.3
BOD				pmax	pmax		
	comp=Z,64nm,1.7s						
BSTI	Sart Tilman	149.39	78	*d*PKP	PKPbc	20 03 51.2	+0.7
GVD	Gavdhos	149.44	119	P	PKiKP	20 03 54.3	+2.1
SALO	Salr	149.50	89	PKPdf	PKPdf	20 03 46.1	-0.3
BHOU	Houvegnez	149.52	78	*d*PKP	PKPdf	20 03 48.1	+1.9
BEBN	Eben Emael	149.56	77	*d*PKP	PKPdf	20 03 47.9	+1.7
MEM	Membach	149.65	78	*d*x	PKPab	20 03 56.5	+0.1
BTNL	Ternell	149.70	78	*d*PKPdf	PKPdf	20 03 46.5	0.0
BFO	Black Forest	149.78	83	PKHKP	PKPpre	20 03 48.2	
BFO	Black Forest	149.78	83		PKPdf	20 03 48.2	+1.4
MATE	Matera	149.83	103	⇑P	PKPbc	20 03 51.7	-0.1
MASF	Masafi	149.84	179	PKPdf	PKPdf	20 03 44.8	-2.8
ANKY	Antikythira Is	149.85	117	P	PKiKP	20 03 54.1	+1.1
IMMV	Iera Moni Meta	149.87	118	P	PKiKP	20 03 54.5	+1.4
VAM	Vamos	149.94	118	P	PKiKP	20 03 53.5	+0.3
SGRT	San Giovanni R	150.04	100	PKPdf	PKPdf	20 03 48.5	+1.0
DAVA	Damuels	150.09	86	*e*P	PKiKP	20 03 53.4	+0.1
	comp=Z,50nm,1.2s						
ITM	Ithomi	150.15	113	P	PKiKP	20 03 55.3	+1.7
ITM	Ithomi	150.15	113		PKPdf	20 03 47.4	-0.3
IDI	Anoyia	150.19	119	P	PKiKP	20 03 55.8	+2.0
VLI	Veliai	150.32	115	P	PKiKP	20 03 56.4	+2.4
CTI	Castel Tesino	150.39	90	PKIKP	PKPdf	20 03 47.9	0.0
CTI	Castel Tesino	150.39	90	PKPdf	PKPdf	20 03 47.9	0.0
FETA	Feichten	150.42	87	*i* P	PKiKP	20 03 54.6	+0.5
	comp=Z,57nm,1.4s,SNR=11						
SHME	Shamm	150.51	179	pPKPdf	PKPbc	20 03 53.1	-0.9
RETA	Reutte	150.70	86	*e*P	PKPbc	20 03 54.5	+0.7
	comp=Z,28nm,1.4s						
SQTA	Sankt Quirin	150.81	87	*i* P	PKiKP	20 03 55.0	+0.2
	comp=Z,66nm,1.5s,SNR=12						
MOTA	Moosalm	150.81	87	*i* P	PKPbc	20 03 54.7	+0.4
	comp=Z,44nm,1.2s,SNR=11						
KLV	Kalavryta, Ach	150.91	112	P	PKiKP	20 03 55.8	+0.6
KRND	KRANIDI	150.94	115	P	PKPbc	20 03 53.6	-1.0
WTTA	Wattenberg	151.07	88	*i* P	PKPbc	20 03 55.2	+0.4
	comp=Z,54nm,1.3s,SNR=15						
WATA	Walderalm	151.08	87	*i* P	PKPbc	20 03 55.5	+0.6
	comp=Z,68nm,2.0s,SNR=16						
STAL	STALIGIAL	151.12	90	PKPdf	PKPdf	20 03 49.5	+0.6
ANX	Ano Chora	151.20	111	P	PKiKP	20 03 56.1	+0.2
ABTA	Abfaltersbach	151.28	89	*i* P	PKPbc	20 03 55.9	+0.7
	comp=Z,41nm,1.9s,SNR=11						
SANT	Santorini	151.33	119	⇑P	PKPdf	20 03 49.1	-0.5
EVR	Evrytania	151.38	111	P	PKiKP	20 03 56.7	+0.5
ZOU	Zoufplan	151.44	90		PKPbc	20 03 54.4	-1.4
GHAJ	Ghor Haditha	151.48	139		PKPdf	20 03 50.3	+0.4
RIY	Rijeka	151.58	93	*e*P	PKiKP	20 03 57.0	+0.8
VLY	Voula,Athens	151.63	115	P	PKPbc	20 03 56.1	-0.1
CEY	Cerknica	151.79	92	*e*P	PKPbc	20 03 54.2	-2.2
MYKA	Terra Mystica	151.86	90	*e*P	PKiKP	20 03 58.5	+1.6
	comp=Z,34nm,1.7s						
STON	Ston	151.87	100	*e*P	PKPbc	20 03 54.8	-1.7
DION	Dionisos Attik	151.87	115	P	PKiKP	20 03 59.4	+2.2
KPRO	Kipourio	151.89	109	P	PKiKP	20 03 57.8	+0.6
APE	Apeiranthos	151.91	118	⇑P	PKiKP	20 03 58.4	+1.1
KBA	Koelnbreinsper	151.94	89	*e*P	PKPab	20 04 04.1	-2.2
	comp=Z,30nm,1.4s						
LJU	Ljubljana	152.02	92	*e*P	PKPab	20 04 02.3	-4.1
TIR	Tirane	152.05	105	PKIKP	PKPdf	20 03 49.4	-1.0
TIR	Tirane	152.05	105	PKPdf	PKPdf	20 03 49.4	-1.0
GRF	Grafenberg Arr	152.11	83	*e*PKPbc	PKPab	20 04 03.9	-2.8
	baz=216,slow=2.4						
DRME	Dracevica, Mon	152.24	103	*e*P	PKPbc	20 03 57.8	+0.3
IRK	Irkutsk	152.28	283	*e*PKIKP	PKiKP	20 04 02.0	+4.5
IRK				pmax	pmax		
	comp=Z,76nm,2.3s						
OBKA	Obir	152.30	91	*e*P	PKiKP	20 03 58.4	+0.6
	comp=Z,14nm,1.0s						
OHR	Ohrid	152.40	106	*i* P	PKPab	20 04 03.7	-4.5
CRES	Cresnjev	152.43	93	*e*P	PKPbc	20 03 57.4	-0.4
PDG	Podgorica	152.44	103	⇑P	PKPbc	20 03 58.5	+0.6
PDG	Podgorica	152.44	103	*e*P	PKiKP	20 04 02.0	+3.9
PDG	Podgorica	152.44	103	PKPdf	PKPdf	20 03 49.6	-1.4
FNA	Florina	152.48	108	P	PKiKP	20 04 02.3	+3.9
FNA	Florina	152.48	108	PKIKP	PKPdf	20 03 49.0	-2.2
FNA	Florina	152.48	108	PKPdf	PKPdf	20 03 49.0	-2.2
ARG	Arkhangelos	152.51	123	P	PKiKP	20 04 03.3	+4.8
DAT	Datca	152.65	121	P	PKiKP	20 04 01.8	+2.9
SOKA	Soboth	152.67	91	*e*P	PKiKP	20 03 59.0	+0.4
	comp=Z,10nm,1.0s						
BLY	Banja Luka	152.76	97	*e*P	PKPbc	20 03 56.2	-2.3
MRAK	Mrakovica	152.76	96	*e*P	PKPbc	20 03 56.9	-1.7
MOA	Molln	152.88	89	*e*P	PKiKP	20 04 00.5	+1.5
	comp=Z,20nm,1.3s						
GEC2	GERESS Array S	153.09	86		PKPdf	20 03 53.2	+1.3

GERES	GERESS Array B	153.09	86	PKP	PKPdf	20 03 52.0	+0.1
	comp=Z,0.9nm,0.8s,baz=180,slow=0.1,SNR=6.9						
GERES				PKPbc	PKPbc	20 03 59.7	+0.5
	comp=Z,3.1nm,0.7s,baz=188,slow=2.0,SNR=14						
GERES	GERESS Array B	153.09	86		PKPdf	20 03 52.3	+0.4
KHC	Kasperske Hory	153.16	86	⇑ePKP	PKiKP	20 04 00.3	+0.8
KHC				epPKP	sPKPbc	20 04 06.0	+3.5
KHC				eSS	SS	20 27 24.3	+5.3
KHC				AMS	AMS	21 12 20.0	
	comp=Z,3µm,19.2s						
KHC	Kasperske Hory	153.16	86	ePKIKP	PKiKP	20 04 00.3	+0.8
KHC				e		20 04 06.0	
KHC				eSS	SS	20 27 24.3	+5.3
KHC				MLR	MLR		
	comp=Z,3µm,19.2s						
KHC	Kasperske Hory	153.16	86	PKPdf	PKPdf	20 03 51.2	-0.7
ARSA	Arzberg	153.27	91	eP	PKiKP	20 04 01.7	+1.9
	comp=Z,13nm,1.2s						
FETY	Fethiye	153.30	124	P	PKPbc	20 03 58.3	-1.7
SKO	Skopje	153.34	106	i P	PKPbc	20 03 57.5	-2.4
CKRC	Cesky Krumlov	153.42	87	⇑ePKP	PKiKP	20 04 01.4	+1.4
CKRC				AMS	AMS	21 11 50.0	
	comp=Z,3µm,19.0s						
SPITS	Spitsbergen Ar	153.43	17	PKPbc	PKiKP	20 04 00.3	+1.1
	comp=Z,22nm,1.0s,baz=262,slow=4.4,SNR=3.6						
BBLS	Lazići	153.46	100	eP	PKPdf	20 03 54.8	+2.3
VAY	Valandovo	153.50	108	i P	PKiKP	20 04 01.1	+0.7
STIP	Stip	153.56	107	i P	PKPbc	20 03 59.0	-1.4
ELL	Elmali	153.78	125	PKIKP	PKPdf	20 03 51.2	-2.1
ELL	Elmali	153.78	125	PKPdf	PKPdf	20 03 51.2	-2.1
CSS	Mathiatis	153.81	132	PKPdf	PKPdf	20 03 49.6	-3.7
CONA	Conrad Observa	153.83	90	eP	PKiKP	20 04 02.4	+1.4
	comp=Z,15nm,1.6s						
MOY	Mondy	153.86	280	ePKIKP	PKPbc	20 03 58.3	-2.6
MOY				pmax	pmax		
	comp=Z,38nm,2.2s						
CLL	Collm	153.88	81	ePKIKP	PKPdf	20 03 57.0	+4.2
CLL				e		20 04 04.0	
CLL				MLR	MLR		
	comp=Z,3µm,21.0s						
CLL	Collm	153.88	81	e(PKPdf)	PKPdf	20 03 57.0	+4.2
CLL				ePKPbc	pPKPbc	20 04 04.0	+0.9
CLL				ePKPab	pPKPab	20 04 17.0	+0.6
CLL				i		20 04 26.9	
	comp=Z,58nm,1.7s						
CLL				eSKPdf	SKPdf	20 07 24.0	-1.5
CLL				ePP	PP	20 07 53.0	+3.7
CLL				ePSKS		20 18 18.0	
CLL				eSS	SS	20 27 22.0	-4.6
CLL				e		20 28 23.0	
CLL				eSSS	SSS	20 33 06.0	
CLL				e		20 34 23.0	
CLL				eSSSS		20 37 20.0	
CLL				Lm	MLR	21 06 00.0	
	comp=Z,3µm,21.0s						
CLL				Lm	MLR	21 24 00.0	
	comp=Z,3µm,21.2s						
DIVS	Divibare	153.93	101	eP	PKPdf	20 03 57.6	+4.4
DIVS	Divibare	153.93	101	PKPdf	PKPdf	20 03 50.9	-2.4
KOVH	Kovagotottos	154.07	95	ePKP	PKPdf	20 03 55.0	+1.8
MPLH	Magyarpolny	154.37	93	ePKP	PKiKP	20 04 02.8	+0.9
MORH	Mrgy, Hungar	154.46	95	⇓P	PKPdf	20 03 53.7	0.0
MORH	Mrgy, Hungar	154.46	95	ePKP	PKPdf	20 03 55.9	+2.2
MORH	Mrgy, Hungar	154.46	95	eP	PKPbc	20 04 01.4	-0.7
BOVS	Bovan	154.59	103	⇓P	PKPdf	20 03 51.6	-2.5
ZST	Bratislava	154.68	90	ePKIKP	PKPdf	20 03 55.5	+1.5
ZST	Bratislava	154.68	90	ePKP	PKPdf	20 03 55.5	+1.5
KRUC	Moravsky	154.73	88	ePKP	PKPdf	20 03 57.9	+3.8
VTS	Vitosha	154.75	107	⇑P	PKPbc	20 04 02.2	-0.9
VTS	Vitosha	154.75	107	PKIKP	PKPdf	20 03 51.5	-3.0
VTS	Vitosha	154.75	107	PKPdf	PKPdf	20 03 51.5	-3.0
MODS	Modra-Piesok	154.87	90	ePKIKP	PKPdf	20 03 55.1	+0.8
MODS				e		20 04 18.7	
MODS	Modra-Piesok	154.87	90	ePKP	PKPdf	20 03 55.1	+0.8
MODS				e		20 04 18.7	
VRAC	Vranov	154.96	88	ePKP	PKPdf	20 03 56.5	+2.1
ALN	Alexandroupoli	155.05	113	PKIKP	PKPdf	20 03 52.6	-2.2
ALN	Alexandroupoli	155.05	113	PKPdf	PKPdf	20 03 52.6	-2.2
DPC	Dobruska-Polom	155.31	85	ePKPDF	PKPdf	20 04 00.0	+5.1
DPC				ePKPAB	PKPab	20 04 21.3	+1.0
DPC				AMS	AMS	21 08 10.0	
	comp=Z,3µm,19.4s						
DPC	Dobruska-Polom	155.31	85	ePKIKP	PKPdf	20 04 00.0	+5.1
DPC				MLR	MLR		
	comp=Z,3µm,19.4s						
JAVC	Velka Javorina	155.35	89	ePKP	PKPdf	20 04 00.2	+5.2
KRLC	Kraliky	155.44	86	⇑ePKP	PKPdf	20 04 04.1	+9.0
KRLC				ePKPAB	pPKPab	20 04 22.5	-0.7
KRLC				AMS	AMS	21 13 20.0	
	comp=Z,2µm,20.6s						
KRLC	Kraliky	155.44	86	ePKIKP	PKPdf	20 04 04.1	+9.0
KRLC				MLR	MLR		
	comp=Z,2µm,20.6s						
MORC	Moravsky Berou	155.73	87	ePKP	PKPdf	20 04 00.7	+5.2
HERR	Herculane	155.77	102	⇓P	PKPdf	20 03 56.4	+0.8
BZS	Buzias	155.78	99	⇑P	PKPdf	20 03 53.7	-1.9
NOA	NORSAR Array B	155.82	58	PKP	PKPdf	20 03 55.4	+0.2
	comp=Z,1.9nm,1.0s,baz=249,slow=0.8,SNR=2.3						
NOA				PKPab	PKPab	20 04 22.9	+0.8
	comp=Z,2.9nm,1.0s,baz=259,slow=4.6,SNR=3.3						
LANS	Liptovska Anna	156.52	90	ePKIKP	PKPdf	20 04 01.1	+4.6
LANS				e		20 04 22.7	
LANS	Liptovska Anna	156.52	90	ePKP	PKPdf	20 04 01.1	+4.6
LANS				e		20 04 22.7	
WMQ	Urumqi	157.05	252	ePKP	PKPdf	20 04 00.1	+2.7
WMQ				PKPab	PKPab	20 04 28.5	+0.6
WMQ				PP	PP	20 08 06.5	-0.5
WMQ				AMB	AMB		
	comp=Z,410nm,4.9s						
WMQ				LR	LR		
	comp=Z,2µm,18.1s						
WMQ				LR	LR		
	comp=Z,2µm,19.5s						
WMQ				LR	LR		
	comp=Z,2µm,19.3s						
DRGR		157.08	98	⇓P	PKPdf	20 03 59.2	+1.9
KBL	Kabul	157.35	207	PKIKP	PKPdf	20 03 58.1	-0.2
KBL	Kabul	157.35	207		PKPdf	20 03 58.1	-0.2
VOIR		157.58	104	⇑P	PKPdf	20 04 01.0	+3.0
TRPA	Tarpa	157.73	95	⇑P	PKPdf	20 04 04.2	+6.2
UZH	Uzhgorod	157.86	94	ePKIKP	PKPdf	20 03 56.9	-1.2
BRTR	Keskin Array B	157.91	126	PKP	PKPdf	20 03 57.7	-1.0
	comp=Z,1.1nm,0.8s,baz=199,slow=4.0,SNR=2.8						
MLR	Muntele Rosu	158.11	104	⇑P	PKPdf	20 03 59.5	+0.8
PLOR	Plostina	158.72	104	⇑P	PKPdf	20 03 57.0	-2.3
VRI	Vrincioaia	158.77	105	⇓P	PKPdf	20 04 00.2	+0.8
TIRR	Tirgusor	158.78	110	⇑P	PKPdf	20 04 01.7	+2.4
BURAR	Bucovina Array	158.96	99	⇓P	PKPdf	20 04 06.6	+6.9
CFR	Carcaliu	159.10	108	⇑P	PKPdf	20 04 00.8	+1.0
KSH	Kashi	159.51	226	PKP	PKPdf	20 04 01.6	+1.0
KSH				SKKS		20 15 06.1	
KSH				SS	SS	20 28 24.1	-2.5
KSH				LR	LR		
	comp=Z,1µm,21.6s						
KSH				LR	LR		
	comp=Z,2µm,22.5s						
KSH				LR	LR		
	comp=Z,5µm,22.3s						
ARCES	ARCESS Array B	160.23	33	PKPab	PKPab	20 04 41.0	+0.1
	comp=Z,6.5nm,0.9s,baz=320,slow=3.2,SNR=5.0						
SORM	Soroca	161.00	101	⇑P	PKPdf	20 04 04.2	+2.4
MKAR	Makanchi Array	161.88	252	PKPab	PKPab	20 04 46.0	-2.8
	comp=Z,3.0nm,0.7s,baz=116,slow=5.5,SNR=6.5						
MKAR				PP	PP	20 08 33.0	-0.2
	comp=Z,7.3nm,1.2s,baz=122,slow=5.9,SNR=10						
MKAR	Makanchi Array	161.88	252	PKIKP	PKPdf	20 03 59.2	-3.6
MKAR	Makanchi Array	161.88	252	PKPdf	PKPdf	20 03 59.1	-3.6
BTK	Batken	161.93	217	PKIKP	PKPdf	20 04 01.8	-1.4
BTK	Batken	161.93	217	PKPdf	PKPdf	20 04 01.8	-1.4
AKASG	Malin Array Be	162.79	95	PKP	PKPdf	20 04 02.7	-0.8
	comp=Z,1.4nm,0.8s,baz=307,slow=0.9,SNR=8.1						
AKASG				PKPab	PKPab	20 04 51.4	-1.3
	comp=Z,6.3nm,1.1s,baz=251,slow=3.6,SNR=2.3						
AKASG				PP	PP	20 08 39.0	+0.9
	comp=Z,0.1nm,0.3s,baz=234,slow=4.0,SNR=4.4						
AKASG	Malin Array Be	162.79	95		PKPdf	20 03 59.3	-4.2
APA	Apatity	163.74	33	⇓iPKIKP	PKPdf	20 04 08.7	+4.8
APA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZALV	Zalesovo Beam	163.81	276	PKP	PKPdf	20 04 04.4	0.0
	comp=Z,1.2nm,0.9s,baz=106,slow=3.1,SNR=2.8						
ZALV				PKPab	PKPab	20 04 55.8	-1.2
	comp=Z,4.5nm,1.0s,baz=108,slow=4.8,SNR=7.5						
ZALV				PP	PP	20 08 46.6	+3.2
	comp=Z,0.5nm,0.5s,baz=64,slow=3.4,SNR=3.8						
ZALV	Zalesovo Beam	163.81	276	PKPdf	PKPdf	20 04 01.1	-3.3
KKAR	Karatay Array	164.71	221	PKIKP	PKPdf	20 04 03.8	-1.8
KKAR	Karatay Array	164.71	221	PKPdf	PKPdf	20 04 03.8	-1.8
KIV	Kislovodsk	165.26	136	ePKIKP	PKPdf	20 04 09.1	+2.9
KIV				e		20 08 51.0	
KIV				eSS	SS	20 29 26.0	-0.2
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,3µm,27.0s						
MAK	Makhachkala	166.02	150	ePKIKP	PKPdf	20 04 04.4	-2.2
MAK				e		20 08 49.6	
MAK				e		20 11 04.6	
MAK				pmax	pmax		
	comp=Z,319nm,1.1s						
OBN	Obninsk	168.45	84	⇓ePKIKP	PKPdf	20 04 08.9	+0.9
OBN						20 04 14.0	
OBN				PPP	PPP	20 13 18.0	
OBN				eSS	SS	20 30 03.1	+4.0
OBN				pmax	pmax		
	comp=Z,37nm,1.4s						
MOS	Moscow	169.15	81	ePKIKP	PKPdf	20 04 08.1	-0.3
KLMR	Klimovskoe	169.45	53	ePKIKP	PKPdf	20 04 06.4	-2.0
KLMR				e		20 09 13.6	
KLMR				eSS	SS	20 30 02.7	-5.8
KLMR				pmax	pmax		
	comp=Z,21nm,1.4s						
KLMR	Klimovskoe	169.45	53	ePKPdf	PKPdf	20 04 06.5	-2.0
KLMR				AMP		20 04 23.2	
	comp=Z,21nm,1.4s						
KLMR				ePP	PP	20 09 13.7	+1.5
KLMR				eSS	SS	20 30 02.7	-5.8
KLMR				eSS	SS	20 30 02.7	-5.8
KLMR				LQ	LQ	21 07 49.1	
KLMR				LQ	LQ	21 07 49.1	
KLMR				LR	LR	21 13 57.4	
PRGR	Permogore	171.56	39	ePKP2	PKPab	20 05 32.1	+1.1
ARU	Arti	178.69	313	i PKP2		20 05 57.9	
ARU				MLR	MLR		
	comp=Z,6µm,27.0s						

IDC 24 19:48:08.6±1.8, 7°.26S×120°.57E, h408^{km}±17^{km}, mb2.9/2, mb1 3.0/6, mb1mx2.8/57, mbtmp3.7/6, Error ellipse: s-maj=108.1km s-min=22.3km az=52.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	2.38	340	P	P	19 49 07.8	0.0
	1.9nm,0.3s,baz=180,slow=10,SNR=9.4						
BATI	Baumata	4.23	134	P	P	19 49 23.8	+0.5
	6.4nm,0.3s,baz=297,slow=9.0,SNR=15						
BATI				S	S	19 50 24.2	0.0
	12nm,0.3s,baz=304,slow=22,SNR=4.1						
FITZ	Fitzroy Crossi	11.85	156	P	P	19 50 46.9	+0.4
	0.2nm,0.3s,baz=333,slow=9.4,SNR=13						
WRA	Warramunga Arr	18.36	135	P	P	19 51 56.3	-0.5
	0.3nm,0.3s,baz=315,slow=11,SNR=14						
ASAR	Alice Springs	20.73	143	P	P	19 52 19.6	+0.3
	1.1nm,0.6s,baz=314,slow=8.7,SNR=22						
STKA	Stephens Creek	31.37	144	P	P	19 53 53.4	-0.3
	1.2nm,0.8s,baz=326,slow=7.3,SNR=5.5						

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*SOME **24** 19:52:48.1, 39°.92N×75°.92E, h0^{km}, MS3.8*
*NNC **24** 19:52:51.9±1.1, 40°.00N×75°.89E, h0^{km}, mb5.0, mpv4.8, Error ellipse: s-maj=8.6km s-min=5.9km az=158.0*
*IDC **24** 19:52:51.7±0.8, 39°.80N×75°.84E, h0^{km}, mb4.0/16, mb1 4.1/22, mb1mx3.9/57, mbtmp4.0/22, ML3.7/6, MS3.8/2, Ms1 3.8/2, ms1mx3.2/69, Error ellipse: s-maj=15.1km s-min=13.0km az=55.0*
*KRNET **24** 19:52:58.7±0.1, 40°.08N×75°.79E, mb4.7*
*NEIC **24** 19:52:59.1±1.8, 39°.93N±0°.09×75°.80E±0°.09, h49^{km}±8^{km}, mb4.0/10, Error ellipse: s-maj=14.2km s-min=8.8km az=155.0*
ISC 24 19:52:53.8±1.2, **40°.10N**±0°.03×**75°.81E**±0°.02, **h5**^{km}±8^{km}, **n176, σ1^{s}92**/215, **mb4.0**/19, **39C-18D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	0.60	168	Pg	Pn	19 53 13.3	+4.3
KSH				Sg	Sn	19 53 27.3	+8.2
KSH				pmax	pmax		
	comp=Z,3µm,0.7s						
KSH				smax	smax		
	comp=N,5µm,0.6s						
KSH				smax	smax		
	comp=E,5µm,0.8s						
SFK	Sufi-Kurgan	1.77	268	⇑eP	Pg	19 53 29.4	+1.7
	baz=69						
SFK				⇑eS	Sg	19 53 53.1	+2.4
	baz=69						
ARLS	Aral	2.09	328	⇑eP	Pg	19 53 34.3	+0.5
	baz=29						
ARLS				⇑iS	Sg	19 54 00.4	-0.5
	baz=29						
ULHL	Ulahol	2.17	9	P	Pg	19 53 36.1	+0.8
	SNR=293						
ULHL	Ulahol	2.17	9	⇓eP	Pg	19 53 36.2	+0.8
	baz=9.0						
ULHL				⇓eS	Sg	19 54 03.2	-0.2
	baz=9.0						
TARG	Taragay, Kyrgy	2.22	42	Pn	Pg	19 53 35.6	-0.7
KDJ	Kajisay	2.28	27	Pn	Pg	19 53 37.0	-0.4
KDJ				Sn	Sg	19 54 07.2	+0.3
KDJ	Kajisay	2.28	27	⇓eP	Pg	19 53 37.7	+0.3
	baz=27						
KDJ				⇓iS	Sb	19 54 05.3	+1.3
	baz=27						
UCH	Uchtor	2.34	336	P	Pg	19 53 38.6	0.0
	SNR=1102						
UCH	Uchtor	2.34	336	⇑eP	Pg	19 53 38.2	-0.4
	baz=36						
UCH				⇑iS	Sb	19 54 07.1	+1.1
	baz=36						
OHH	Osh	2.35	281	⇑iP	Pg	19 53 38.1	-0.7
	baz=82						
OHH				⇑iS	Sb	19 54 06.3	+0.3
	baz=82						
BOOM	Boomskoye usch	2.39	2		Pg	19 53 39.2	-0.4
BOOM				Sn	Sg	19 54 12.7	+2.1
BOOM					LR	19 54 12.9	
BOOM	Boomskoye usch	2.39	2	⇑eP	Pg	19 53 39.1	-0.4
	baz=3.0						
BOOM				⇑iS	Sb	19 54 08.3	+1.1
	baz=3.0						
AML	Almayashu	2.58	322	P	Pb	19 53 41.7	+0.9
	SNR=494						
AML	Almayashu	2.58	322	⇑eP	Pb	19 53 41.7	+0.9
	baz=23						
AML				⇑iS	Sb	19 54 12.7	-0.3
	baz=23						
KBK	Karagaybulak	2.63	346	P	Pb	19 53 42.9	+1.3
	SNR=1384						
KBK	Karagaybulak	2.63	346	⇑iP	Pb	19 53 42.4	+0.9
	baz=47						
KBK				⇑iS	Sb	19 54 14.2	-0.1
	baz=47						
AAK	Ala-Archa	2.72	339	Pn	Pb	19 53 43.4	+0.4
	comp=E,63nm,0.3s,baz=155,slow=8.6,SNR=572						
AAK				Sn	Sg	19 54 21.3	+0.1
	comp=E,170nm,0.3s,baz=276,slow=20,SNR=20						
AAK	Ala-Archa	2.72	339	P	Pb	19 53 44.2	+1.2
	SNR=204						
AAK	Ala-Archa	2.72	339	⇓Pg	Pb	19 53 44.0	+1.0
	comp=E,384nm,0.6s						
AAK				⇓Lg	Lg	19 54 21.5	
	comp=E,4µm,0.9s						
AAK	Ala-Archa	2.72	339		Pb	19 53 44.1	+1.2
AAK				Sn	Sg	19 54 21.3	+0.1
AAK	Ala-Archa	2.72	339	⇑eP	Pb	19 53 43.5	+0.5
	baz=40						
AAK				⇑iS	Sb	19 54 16.2	-0.5
	baz=40						
TKM2	Tokmak 2	2.82	357	P	Pb	19 53 45.7	+0.9
	SNR=372						
TKM2	Tokmak 2	2.82	357	⇑Pg	Pb	19 53 45.6	+0.8
	comp=E,410nm,0.6s						
TKM2				⇓Lg	Lg	19 54 25.4	
	comp=E,2µm,1.0s						
TKM2	Tokmak 2	2.82	357	⇓iP	Pb	19 53 45.0	+0.2
	baz=57						
TKM2				⇓iS	Sb	19 54 18.8	-0.9
	baz=57						
FRU1	Bishkek	2.85	342		Pb	19 53 46.4	+1.3
FRU1	Bishkek	2.85	342	⇑eP	Pb	19 53 45.7	+0.6
	baz=43						
FRU1				⇑iS	Sb	19 54 19.7	-0.6
	baz=43						
KST	Kastek	2.94	2	eP	Pb	19 53 47.3	+0.5
	comp=E,656nm,0.5s						
KST				eS	Sg	19 54 30.4	+2.1
	comp=E,1µm,0.5s						
KST	Kastek	2.94	2	Pg	Pb	19 53 47.3	+0.5
	comp=E,656nm,0.5s						
KST				Lg	Lg	19 54 30.4	
	comp=E,1µm,0.5s						
EKS2	Erkin-Say	2.98	330	P	Pb	19 53 47.7	+0.3
	SNR=167						
EKS2	Erkin-Say	2.98	330	⇑eP	Pb	19 53 47.2	-0.2
	baz=30						
EKS2				⇑iS	Sb	19 54 22.3	-1.9
	baz=30						
CHMS	Chumysh	3.00	345	P	Pb	19 53 47.9	+0.1
	SNR=128						
CHMS	Chumysh	3.00	345	⇓eP	Pb	19 53 47.6	-0.1
	baz=45						
CHMS				⇓iS	Sb	19 54 22.8	-1.9
	baz=45						
ANVS	Anan'yevo	3.02	27	⇑eP	Pb	19 53 47.7	-0.5
	baz=27						
ANVS				⇑eS	Sb	19 54 23.9	-1.5
	baz=27						
TNSS	Tian-Shan	3.06	16	eP	Pb	19 53 48.4	-0.5
	comp=E,311nm,0.6s						
TNSS				eS	Sg	19 54 32.3	+0.4
	comp=E,242nm,0.4s						
TNSS	Tian-Shan	3.06	16	Pg	Pb	19 53 48.4	-0.5
	comp=E,311nm,0.6s						
TNSS				Lg	Lg	19 54 32.3	
	comp=E,242nm,0.4s						
MTBS	Maitube	3.06	9	eP	Pb	19 53 48.9	+0.1
	comp=E,309nm,0.4s						
MTBS				eS	Sg	19 54 33.4	+1.2
	comp=E,1µm,0.6s						
MTBS	Maitube	3.06	9	Pg	Pb	19 53 48.9	+0.1
	comp=E,309nm,0.4s						
MTBS				Lg	Lg	19 54 33.4	
	comp=E,1µm,0.6s						
DGS	Degeres	3.14	360	eP	Pb	19 53 50.0	-0.1
	comp=E,648nm,0.6s						
DGS				eS	Sg	19 54 35.0	+0.4
	comp=E,688nm,0.5s						
DGS	Degeres	3.14	360	Pg	Pb	19 53 50.0	-0.1
	comp=E,648nm,0.6s						
DGS				Lg	Lg	19 54 35.0	
	comp=E,688nm,0.5s						
MDOK	Medeo	3.20	16	eP	Pb	19 53 50.1	-1.0
	comp=E,105nm,0.5s						
MDOK				eS	Sg	19 54 35.4	-1.1
	comp=E,780nm,0.8s						
MDOK	Medeo	3.20	16	ePn	Pn	19 53 47.2	+2.4
	baz=15						
MDOK	Medeo	3.20	16	⇓Pg	Pb	19 53 49.9	-1.2
	comp=E,172nm,0.6s						
MDOK				⇑Lg	Lg	19 54 38.0	
	comp=E,1µm,0.9s						
MDOK	Medeo	3.20	16	Pg	Pb	19 53 50.1	-1.0
	comp=E,105nm,0.5s						
MDOK				Lg	Lg	19 54 35.4	
	comp=E,780nm,0.8s						
AAA	Alma-Ata	3.21	15	eP	Pb	19 53 53.0	+1.6
	comp=E,399nm,0.8s						
AAA				eS	Sg	19 54 39.9	+2.9
	comp=E,979nm,0.4s						
AAA	Alma-Ata	3.21	15	ePb	Pb	19 53 52.8	+1.4
	baz=14						
AAA				eLg	Lg	19 54 40.6	
	baz=14						
AAA	Alma-Ata	3.21	15	Pg	Pb	19 53 53.0	+1.6
	comp=E,399nm,0.8s						
AAA				Lg	Lg	19 54 39.9	
	comp=E,979nm,0.4s						
KNDC	Almaty	3.23	15	⇑Pg	Pb	19 53 50.8	-0.9
	comp=E,526nm,0.8s						
KNDC				⇓Lg	Lg	19 54 38.0	
	comp=E,1µm,0.5s						
MRKS	Merke	3.28	325	eP	Pb	19 53 51.7	-0.8
	comp=E,102nm,0.4s						
MRKS				eS	Sg	19 54 38.0	-1.1
	comp=E,618nm,0.4s						
MRKS	Merke	3.28	325	Pg	Pb	19 53 51.7	-0.8
	comp=E,102nm,0.4s						
MRKS				Lg	Lg	19 54 38.0	
	comp=E,618nm,0.4s						
KOTS	Kotyrbulak	3.28	17	eP	Pb	19 53 51.4	-1.1
	comp=E,229nm,0.8s						
KOTS				eS	Sg	19 54 37.3	-1.8
	comp=E,1µm,0.6s						
KOTS	Kotyrbulak	3.28	17	Pg	Pb	19 53 51.4	-1.1
	comp=E,229nm,0.8s						
KOTS				Lg	Lg	19 54 37.3	
	comp=E,1µm,0.6s						
USP	Ospenovka	3.31	343	P	Pb	19 53 51.8	-1.3
	SNR=206						
USP	Ospenovka	3.31	343	⇑eP	Pb	19 53 51.7	-1.3
	baz=44						
USP				⇑iS	Sb	19 54 30.2	-3.4
	baz=44						
ARK	Arkit	3.37	301	⇓iP	Pb	19 53 52.1	-1.9
	baz=2.0						
ARK				⇓iS	Sn	19 54 31.4	+3.8
	baz=2.0						
MNAS	Manas	3.45	315	⇑iP	Pb	19 53 53.2	-2.2
	baz=15						
MNAS				⇑iS	Sn	19 54 33.0	+3.5
	baz=15						
SGDS	Sogindy	3.46	346	ePg	Pg	19 53 59.2	-0.9
	baz=346						
SGDS	Sogindy	3.46	346	Pg	Pb	19 53 57.3	+1.7
	comp=E,182nm,0.8s						
SGDS				Lg	Lg	19 54 47.0	
	comp=E,534nm,0.5s						
SATY	Saty	3.54	33	eP	Pb	19 53 57.4	+0.5
	comp=E,219nm,0.8s						
SATY				eS	Sg	19 54 47.3	-0.2
	comp=E,623nm,1.2s						
SATY	Saty	3.54	33	i Pn	Pn	19 53 50.0	+0.5
	baz=31						
SATY				ePg	Pg	19 54 00.0	-1.6
	baz=31						
SATY	Saty	3.54	33	Pg	Pb	19 53 57.4	+0.5
	comp=E,219nm,0.8s						
SATY				Lg	Lg	19 54 47.3	
	comp=E,623nm,1.2s						
KRBS	Karabastau	3.59	358	eP	Pb	19 53 58.4	+0.5
	comp=E,177nm,0.5s						
KRBS				eS	Sg	19 54 49.6	+0.4
	comp=E,976nm,0.6s						
KRBS	Karabastau	3.59	358	Pg	Pb	19 53 58.4	+0.5
	comp=E,177nm,0.5s						
KRBS				Lg	Lg	19 54 49.6	
	comp=E,976nm,0.6s						
ZHN	Zhinishke	3.64	32	ePg	Pg	19 54 01.3	-2.3
	baz=30						
KTBS	Karatobe	3.67	10	eP	Pb	19 54 00.1	+1.0
	comp=E,261nm,0.7s						
KTBS				eS	Sg	19 54 52.5	+1.0
	comp=E,2µm,0.7s						
KTBS	Karatobe	3.67	10	Pg	Pb	19 54 00.1	+1.0
	comp=E,261nm,0.7s						
KTBS				Lg	Lg	19 54 52.5	
	comp=E,2µm,0.7s						
KUU	Kurty	3.81	6	eP	Pb	19 54 02.8	+1.3
	comp=E,186nm,0.7s						
KUU				eS	Sg	19 54 56.8	+0.6
	comp=E,1µm,0.7s						
KUU	Kurty	3.81	6	ePg	Pg	19 54 05.2	-1.5
	baz=5.2						
KUU	Kurty	3.81	6	Pg	Pb	19 54 02.8	+1.3
	comp=E,186nm,0.7s						
KUU				Lg	Lg	19 54 56.7	
	comp=E,1µm,0.7s						
TRKS	Terek-Say	3.82	293	⇑iP	Pn	19 53 56.7	+3.3
	baz=93						
TRKS				⇑iS	Sn	19 54 41.0	+2.3
	baz=93						
BTK	Batken	3.83	271		Pn	19 53 56.0	+2.5
CHKK	Chushkaly	3.85	13	eP	Pb	19 54 03.4	+1.2

	comp=E,90nm,0.6s						
CHKK				eS	Sg	19 54 57.8	+0.3
	comp=E,530nm,0.3s						
CHKK	Chushkaly	3.85	13	ePg	Pg	19 54 05.6	-2.0
	baz=12						
CHKK	Chushkaly	3.85	13	Pg	Pb	19 54 03.4	+1.2
	comp=E,90nm,0.6s						
CHKK				Lg	Lg	19 54 57.8	
	comp=E,530nm,0.3s						
UZB	Uzynbulak	3.88	37	eP	Pb	19 54 03.1	+0.4
	comp=E,131nm,0.6s						
UZB				eS	Sg	19 54 57.1	-1.3
	comp=E,441nm,0.7s						
UZB	Uzynbulak	3.88	37	ePg	Pg	19 54 05.8	-2.3
	baz=36						
UZB	Uzynbulak	3.88	37	Pg	Pb	19 54 03.1	+0.4
	comp=E,131nm,0.6s						
UZB				Lg	Lg	19 54 57.1	
	comp=E,441nm,0.7s						
KPKS	Kokpek	3.99	32	eP	Pb	19 54 05.1	+0.5
	comp=E,26nm,0.4s						
KPKS				eS	Sg	19 55 00.1	-1.9
	comp=E,981nm,0.7s						
KPKS	Kokpek	3.99	32	ePg	Pg	19 54 08.1	-2.1
	baz=30						
SHLS	Shalkode	4.10	41	eP	Pg	19 54 10.8	-1.5
	comp=E,87nm,1.2s						
SHLS				eS	Sg	19 55 10.8	+5.3
	comp=E,387nm,1.0s						
SHLS	Shalkode	4.10	41	ePg	Pg	19 54 14.0	+1.6
	baz=42						
SHLS	Shalkode	4.10	41	Pg	Pg	19 54 10.8	-1.5
	comp=E,87nm,1.2s						
SHLS				Lg	Lg	19 55 10.8	
	comp=E,387nm,1.0s						
DZA	Taraz	4.37	311	ePg	Pg	19 54 15.7	-1.8
	baz=312						
BLB	Baldybastay	4.46	26	Pg	Pb	19 54 12.4	-0.3
	comp=E,106nm,0.6s						
BLB				Lg	Lg	19 55 13.2	
	comp=E,211nm,0.3s						
IUG	Iuzhnay	4.82	297	eP	Pb	19 54 21.3	+2.6
	comp=E,665nm,0.3s						
IUG				eS	Sg	19 55 29.3	+0.8
	comp=E,413nm,1.0s						
IUG	Iuzhnay	4.82	297	ePg	Pg	19 54 22.6	-3.4
	baz=298						
IUG	Iuzhnay	4.82	297	Pg	Pb	19 54 21.3	+2.6
	comp=E,665nm,0.3s						
IUG				Lg	Lg	19 55 29.3	
	comp=E,413nm,1.0s						
KK02	Karatay Array	4.98	309	⇑Pn	Pn	19 54 11.0	+1.9
	comp=E,4.9nm,0.4s						
KK02				⇓Pg	Pg	19 54 25.9	-3.2
	comp=E,40nm,0.6s						
KK02				⇑Lg	Lg	19 55 33.5	
	comp=E,130nm,0.7s						
KKAR	Karatay Array	4.98	309		Pn	19 54 12.4	+3.3
TAS	Tashkent	5.10	286	Pn	Pn	19 54 11.8	+1.0
BTLS	Baital	5.11	346	eP	Pb	19 54 25.9	+2.4
	comp=E,42nm,0.6s						
BTLS				eS	Sg	19 55 36.6	-1.1
	comp=E,272nm,0.6s						
BTLS	Baital	5.11	346	ePg	Pg	19 54 29.1	-2.4
	baz=346						
BTLS	Baital	5.11	346	Pg	Pb	19 54 25.9	+2.4
	comp=E,42nm,0.6s						
BTLS				Lg	Lg	19 55 36.6	
	comp=E,272nm,0.6s						
DJR	Jarkent	5.16	34	eP	Pb	19 54 26.1	+1.6
	comp=E,16nm,0.4s						
DJR				eS	Sg	19 55 36.6	-2.8
	comp=E,172nm,0.4s						
DJR	Jarkent	5.16	34	Pg	Pb	19 54 26.1	+1.6
	comp=E,16nm,0.4s						
DJR				Lg	Lg	19 55 36.6	
	comp=E,172nm,0.4s						
TDK	Taldyqorghan	5.26	21	ePn	Pn	19 54 14.5	+1.5
	comp=E,26nm,0.6s,baz=20						
TDK				ePg	Pg	19 54 31.2	-3.3
	baz=20						
BRLS	Borolday	5.35	305	eP	Pb	19 54 31.5	+3.8
	comp=E,41nm,0.6s						
BRLS				eS	Sg	19 55 46.1	+0.6
	comp=E,141nm,0.6s						
BRLS	Borolday	5.35	305	ePn	Pn	19 54 15.2	+1.0
	baz=304						
BRLS				ePg	Pb	19 54 31.4	+3.6
	baz=304						
BRLS	Borolday	5.35	305	Pg	Pb	19 54 31.5	+3.8
	comp=E,41nm,0.6s						
BRLS				Lg	Lg	19 55 46.1	
	comp=E,141nm,0.6s						
CHGR	Chuyangaron	5.35	256		Pn	19 54 16.2	+1.9
CHCP	Chirah Chowk	6.75	198	P	Pn	19 54 36.2	+2.7
CEP	Cherat	7.00	208	P	Pn	19 54 39.0	+2.0
KBL	Kabul	7.73	226	Pn	Pn	19 54 49.5	+2.3
DHRM	DHARAMSHALA	7.84	177	eP	Pn	19 54 49.2	+0.5
DHRM	DHARAMSHALA	7.84	177	eP	Pn	19 54 49.0	+0.3
DHRM				eS	Sn	19 56 14.6	-3.5
DHRM				IAML		19 56 21.3	
	comp=E,158nm,0.5s						
THW	Thamme Wali	7.99	205	P	Pn	19 54 52.2	+1.6
MAKZ	Makanchi	8.06	32	⇑Pn	Pn	19 54 54.7	+3.2
	comp=E,8.5nm,0.8s						
MAKZ				⇑Lg	Lg	19 57 12.0	
	comp=E,67nm,1.2s						
MAKZ	Makanchi	8.06	32		Pn	19 54 55.2	+3.7
MK31	Makanchi Array	8.18	33	Pn	Pn	19 54 56.3	+3.2
	comp=E,4.1nm,0.4s,baz=208,slow=11,SNR=131						
MK31				⇓Lg	Lg	19 57 18.0	
	comp=E,23nm,0.7s						
MK31	Makanchi Array	8.18	33	Pn	Pn	19 54 56.6	+3.4
MKAR	Makanchi Array	8.18	33	Pn	Pn	19 54 56.8	+3.7
	comp=E,2.1nm,0.3s,baz=203,slow=16,SNR=87						
MKAR				Lg	Lg	19 57 15.4	
	comp=E,1.2nm,0.3s,baz=212,slow=29,SNR=2.8						
MKAR				LR	LR	19 58 26.3	
	comp=E,370nm,19.1s,baz=220,slow=40						
MKAR	Makanchi Array	8.18	33		Pn	19 54 56.4	+3.3
SMLA	Simla	9.02	173	eP	Pn	19 55 03.7	-0.9
SMLA	Simla	9.02	173	eP	Pn	19 55 04.8	+0.2
SMLA				eS	Sn	19 56 41.5	-5.1
SMLA				IAML		19 56 45.2	
	comp=N,32nm,0.4s						
SMLA				IAML		19 56 46.0	
	comp=E,38nm,0.5s						
WMQ	Urumqi	9.60	63	ePn	Pn	19 55 19.1	+6.5
WMQ				Sn	Sn	19 57 08.3	+7.4
WMQ				smax	smax		
	comp=N,25nm,1.1s						
WMQ				smax	smax		
	comp=E,34nm,1.3s						
ZSN	Zaisan	9.84	39	ePn	Pn	19 55 17.7	+1.9
	baz=38						
ZSN				ePg		19 55 54.4	
	baz=38						
BRZS	Berezniki	10.12	348	ePn	Pn	19 55 21.4	+1.7
	baz=348						
KURBB	Kurchatov Arra	10.69	9	Pn	Pn	19 55 29.9	+2.5
	comp=E,0.1nm,0.3s,baz=192,slow=12,SNR=12						
KURBB				Lg	Lg	19 58 33.1	
	comp=E,0.4nm,0.3s,baz=197,slow=27,SNR=10						
KURBB	Kurchatov Arra	10.69	9	⇑Pn	Pn	19 55 29.3	+1.8
	comp=E,3.8nm,0.7s						
KURBB				⇑Lg	Lg	19 58 34.6	
	comp=E,195nm,1.1s						
SEM	Semipalatinsk	10.77	15	ePn	Pn	19 55 30.9	+2.2
	baz=15						
SEM				ePg		19 56 11.8	
	baz=15						
KURK	Kurchatov	10.80	10		Pn	19 55 31.0	+2.1
KUDL	Kundal	11.94	177	eP	Pn	19 55 43.0	-1.6
KUDL				eS	Sn	19 57 55.4	-2.8
HRA	Herat	12.22	246	Pn	Pn	19 55 46.3	-2.3
PYUN	Piuthan	13.36	151	eP	Pn	19 55 58.6	-5.6
	comp=E,16nm,0.4s						
DANN	Dangsing	13.43	148	eP	Pn	19 55 59.2	-6.1
	comp=E,11nm,0.4s						
BVAR	Borovoye Array	13.45	346	Pn	Pn	19 56 06.8	+1.6
	comp=E,0.5nm,0.3s,baz=168,slow=15,SNR=17						
BVAR				Lg	Lg	20 00 00.3	
	comp=E,0.6nm,0.3s,baz=151,slow=25,SNR=5.9						
BRVK	Borovoye	13.50	346	⇑Pn	Pn	19 56 07.4	+1.6
	comp=E,24nm,0.7s						
BRVK	Borovoye	13.50	346	Pn	Pn	19 56 05.5	-0.4
GEYT	Alibeck	13.93	267	Pn	Pn	19 56 10.3	-1.5
	comp=E,0.2nm,0.3s,baz=138,slow=9.0,SNR=2.2						
GEYT				Sn	Sn	19 58 43.8	-3.0
	comp=E,1.4nm,0.3s,baz=76,slow=40,SNR=5.4						
GKN	Gorkha	14.10	146	eP	Pn	19 56 08.6	-5.7
	comp=E,11nm,0.4s						
AB31	Akbulak array	14.51	314	⇓Pn	Pn	19 56 19.8	+0.2
	comp=E,3.0nm,0.6s,baz=120,slow=12,SNR=43						
ABKAR	Akbulak array	14.51	314	Pn	Pn	19 56 19.8	+0.2
KKN	Kakani	14.57	145	eP	Pn	19 56 14.7	-6.0
	comp=E,9.1nm,0.5s						
DMN	Daman	14.65	145	eP	Pn	19 56 16.5	-5.4
	comp=E,17nm,0.6s						
GUN	Gumba	14.74	143	eP	Pn	19 56 17.8	-5.4
	comp=E,16nm,0.4s						
JHNI	Jhansi	14.77	170	eP	Pn	19 56 16.5	-6.8
PKIN	Phulchoki	14.80	145	eP	Pn	19 56 18.1	-5.9
	comp=E,14nm,0.5s						
PKI	Pulchoki	14.81	145	eP	Pn	19 56 18.3	-5.9
	comp=E,10nm,0.5s						
JIRN	Jiri	15.09	142	eP	Pn	19 56 22.1	-5.9
	comp=E,25nm,0.6s						
ZAA0	Zalesovo Array	15.13	21	⇑Pn	Pn	19 56 28.3	+0.3
	comp=E,2.1nm,1.1s						
ZAA0	Zalesovo Array	15.13	21	Pn	Pn	19 56 27.2	-0.9
ZAA0				IAmb	IAmb	19 56 38.0	
	comp=Z,8.0nm,1.0s						
ZALV	Zalesovo Beam	15.13	21	Pn	Pn	19 56 29.3	+1.3
	comp=Z,0.3nm,0.3s,baz=204,slow=12,SNR=12						
ZALV	Zalesovo Beam	15.13	21	Pn	Pn	19 56 27.8	-0.3
GTA	Gaotai	18.46	84	eP	Pn	19 57 11.9	+1.4
GTA				pP	sP	19 57 16.3	+2.5
GTA				sP	pP	19 57 19.6	+6.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARU	Arti	19.87	331	P	Pn	19 57 27.6	+0.5
	comp=Z,2.8nm,0.7s,baz=152,slow=7.4,SNR=16						
ARU	Arti	19.87	331	P	P	19 57 26.2	+0.6
ARU				IAmb	IAmb	19 57 31.3	
	comp=Z,11nm,0.9s						
HYB	Hyderabad	22.73	173	iP	P	19 57 55.5	-1.2
SONM	Songino Array	23.22	60	P	P	19 58 02.6	+0.9
	comp=Z,1.3nm,0.9s,baz=265,slow=9.7,SNR=1.4						
SONM	Songino Array	23.22	60	IAmb	IAmb	19 58 09.1	
	comp=Z,2.8nm,1.0s						
KBZ	Khabaz	24.66	289	LR	LR	20 09 19.4	
	comp=Z,391nm,19.1s,baz=60,slow=40						
HHC	Hu-ho-hao-te	27.10	77	eP	P	19 58 40.3	+2.8
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,4.3s						
BRTR	Keskin Array B	32.13	283	P	P	19 59 22.9	+0.8
	comp=Z,1.7nm,0.5s,baz=94,slow=7.9,SNR=5.3						
BRTR	Keskin Array B	32.13	283	P	P	19 59 21.0	-1.2
BURAR	Bucovina Array	36.69	299	P	P	20 00 02.2	+0.7
BURAR				IAmb	IAmb	20 00 07.0	
	comp=Z,1.3nm,1.1s						
FIA1	FINESS Array S	36.78	322	P	P	20 00 01.0	-1.0
FINES	FINESS Array B	36.78	322	P	P	20 00 02.6	+0.7
	comp=Z,2.9nm,0.7s,baz=112,slow=11,SNR=10						
FINES	FINESS Array B	36.78	322	P	P	20 00 02.1	+0.1
ARCES	ARCESS Array B	39.38	335	P	P	20 00 24.9	+1.0
	comp=Z,3.3nm,0.8s,baz=99,slow=7.5,SNR=7.4						
KLR	Kul'dur	39.99	58	P	P	20 00 27.9	-1.2
	comp=Z,3.0nm,1.0s,baz=241,slow=12,SNR=4.7						
KLR	Kul'dur	39.99	58	P	P	20 00 28.0	-1.2
DIVS	Divibare	40.94	295	P	P	20 00 37.9	+0.7
DIVS				IAmb	IAmb	20 00 50.8	
	comp=Z,2.4nm,1.0s						
TIXI	Tiksi	41.01	23	P	P	20 00 37.5	+0.3
TIXI				IAmb	IAmb	20 00 47.5	
	comp=Z,5.9nm,0.8s						
NB2	NORSAR Subarra	43.89	321	P	P	20 01 00.8	-0.2
	comp=Z,1.4nm,0.6s,baz=89,slow=7.9						
NOA	NORSAR Array B	43.89	321	P	P	20 01 00.8	-0.2
	comp=Z,0.9nm,0.7s,baz=89,slow=7.9,SNR=3.4						
GERES	GERESS Array B	44.05	303	P	P	20 01 03.1	+0.7
	comp=Z,0.8nm,0.7s,baz=60,slow=8.1,SNR=7.8						
GERES	GERESS Array B	44.05	303	P	P	20 01 03.0	+0.5
MJAR	Matsushiro Arr	48.20	73	P	P	20 01 33.8	-1.4
	comp=Z,1.6nm,0.7s,baz=313,slow=9.8,SNR=2.4						
ESDC	Sonseca Array	59.13	298	P	P	20 02 54.6	-0.7
	comp=Z,0.3nm,0.5s,baz=54,slow=7.0,SNR=7.0						
TORD	Torodi Ar. Bea	69.54	270	P	P	20 04 02.5	-1.3
	comp=Z,1.8nm,0.5s,baz=47,slow=5.4,SNR=14						
TORD	Torodi Ar. Bea	69.54	270	IAmb	IAmb	20 04 16.7	
	comp=Z,3.7nm,1.2s						
INK	Inuvik	69.70	11	P	P	20 04 03.8	-0.2
	comp=Z,2.4nm,0.6s,baz=332,slow=4.1,SNR=12						
INK	Inuvik	69.70	11	IAmb	IAmb	20 04 04.5	
	comp=Z,8.7nm,1.2s						
ILAR	Eielson Array	70.24	18	P	P	20 04 06.3	-1.0
	comp=Z,1.4nm,0.9s,baz=325,slow=5.2,SNR=2.0						
YKA	Yellowknife Ar	77.41	5	P	P	20 04 48.7	-0.7
	comp=Z,3.2nm,0.6s,baz=346,slow=5.7,SNR=31						
WRA	Warramunga Arr	80.84	126	P	P	20 05 07.8	-0.9
	comp=Z,0.8nm,0.9s,baz=316,slow=7.9,SNR=5.2						
ASAR	Alice Springs	83.36	128	P	P	20 05 21.1	-0.9
	comp=Z,0.5nm,0.8s,baz=309,slow=5.5,SNR=4.3						

*IDC **24** 19:53:50.9±1.6, 3°.73S×151°.48E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.8/43, mbtmp4.0/7, ML2.0/1, MS3.5/1, Ms1 3.5/1, ms1mx2.9/41, Error ellipse: s-maj=51.4km s-min=23.4km az=114.0*

ISC 24 19:53:56.2±1.5**, 3°.8S**±0°.2×**151°.5E**±0°.3**, h35**^{km}**, n9,** σ1^{s}.**08**/8**, mb3.8**/6**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	7.07	217	Pn	Pn	19 55 37.5	+0.3
	1.5nm,0.3s,baz=31,slow=9.4,SNR=15						
HNR	Honiara	10.13	124	LR	LR	20 00 24.1	
	comp=Z,298nm,19.9s,baz=296,slow=39						
WRA	Warramunga Arr	23.20	225	P	P	19 58 58.0	-2.2
	2.2nm,0.7s,baz=49,slow=10,SNR=5.5						
ASAR	Alice Springs	26.08	219	P	P	19 59 26.2	-0.5
	2.3nm,0.7s,baz=53,slow=7.8,SNR=8.5						
FITZ	Fitzroy Crossi	29.04	239	P	P	19 59 53.9	+0.6
	3.6nm,0.7s,baz=66,slow=10.0,SNR=2.0						
STKA	Stephens Creek	29.48	197	P	P	19 59 57.3	+0.2
	1.6nm,0.9s,baz=38,slow=12,SNR=3.3						
CMAR	Chiang Mai Arr	56.24	295	P	P	20 03 33.3	-0.2
	3.4nm,1.0s,baz=114,slow=5.8,SNR=9.2						
ILAR	Eielson Array	81.69	22	P	P	20 06 10.7	-0.1
	0.5nm,0.7s,baz=238,slow=4.8,SNR=5.3						
TORD	Torodi Ar. Bea	148.72	289	PKPbc	PKPbc	20 13 41.1	+0.1
	1.0nm,0.8s,baz=70,slow=3.1,SNR=5.6						

*IDC **24** 20:03:40.7±0.6, 55°.63S×123°.50W, h0^{km}, mb4.2/8, mb1 4.4/8, mb1mx4.2/33, mbtmp4.2/8, Error ellipse: s-maj=31.4km s-min=19.5km az=153.0*

*NEIC **24** 20:03:42.9±0.9, 55°.7S±0°.2×123°.5W±0°.2, h10^{km}±3^{km}, mb4.7/12, Error ellipse: s-maj=24.8km s-min=17.6km az=159.0*

ISC 24 20:03:42.6±0.6**, 55°.8S**±0°.2×**123°.5W**±0°.2**, h10**^{km}**, n56,** σ1^{s}.**15**/41**, mb4.5**/12**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QSPA	South Pole Qui	34.44	180	P	P	20 10 30.4	+0.4
	2.7nm,0.8s,baz=346,slow=1.1,SNR=5.5						
QSPA	South Pole Qui	34.44	180	IAmb	IAmb	20 10 34.0	
	comp=Z,4.6nm,0.9s						
H03S2	Juan Fernandez	37.60	73	T	T	20 50 39.0	
	SNR=21						
H03S1	Juan Fernandez	37.61	73	T	T	20 50 40.3	
	SNR=21						
H03S3	Juan Fernandez	37.62	73	T	T	20 50 39.5	
	SNR=30						
H03N3	Juan Fernandez	37.90	73	T	T	20 51 03.2	
	baz=221,slow=72,SNR=30						
H03N2	Juan Fernandez	37.90	73	T	T	20 50 57.1	
	baz=221,slow=72,SNR=64						
H03N1	Juan Fernandez	37.91	73	T	T	20 51 03.1	
	baz=221,slow=72,SNR=24						
VNA2	Neumayer--Watz	45.81	156	P	P	20 12 02.8	-1.2
	baz=210,slow=9.8						
SNAA	Sanae	46.28	158	P	P	20 12 09.4	+1.7
	comp=Z,1.2nm,0.9s,baz=244,slow=6.3,SNR=3.2						
SNAA	Sanae	46.28	158	IAmb	IAmb	20 12 19.0	
	comp=Z,9.5nm,1.3s						
AC02	Maricunga	48.36	76	P	P	20 12 24.7	-0.2
PB16	IPOC Station P	55.01	70	P	P	20 13 13.9	-0.8
PB16				IAmb	IAmb	20 13 31.2	
	comp=Z,13nm,1.3s						
LPAZ	La Paz	57.43	70	P	P	20 13 30.4	-1.7
	comp=Z,5.0nm,1.1s,baz=168,slow=4.3,SNR=8.8						
LPAZ	La Paz	57.43	70	P	P	20 13 31.9	-0.2
LPAZ				IAmb	IAmb	20 13 45.8	
	comp=Z,14nm,1.2s						
SIV	San Ignacio	61.49	76	P	P	20 13 58.0	-1.5
	comp=Z,4.2nm,1.1s,baz=228,slow=7.8,SNR=7.1						
CZSB	Cruzeiro do Su	62.34	60	P	P	20 14 04.5	-0.7
ETMB	Extrema	63.85	68	P	P	20 14 14.8	-0.5
ETMB				IAmb	IAmb	20 14 20.3	
	comp=Z,3.6nm,1.0s						
OTAV	Otavalo	66.68	50	P	P	20 14 33.7	-0.3
STKA	Stephens Creek	66.89	247	P	P	20 14 33.9	-0.9
	comp=Z,4.2nm,1.2s,baz=122,slow=14,SNR=2.9						
ZARC	Zaragoza, Cauc	74.73	51	P	P	20 15 22.5	0.0
ZARC				IAmb	IAmb	20 15 25.6	
	comp=Z,16nm,1.5s						
H01W1	Cape Leeuwin H	77.22	225	T	T	21 41 09.3	
	baz=149,slow=75,SNR=14						
H01W2	Cape Leeuwin H	77.22	225	T	T	21 41 12.1	
	baz=149,slow=75,SNR=12						
H01W3	Cape Leeuwin H	77.24	225	T	T	21 41 10.4	
	baz=149,slow=75,SNR=14						
ASAR	Alice Springs	77.50	246	P	P	20 15 38.3	-0.1
	comp=Z,2.2nm,0.9s,baz=139,slow=5.1,SNR=13						
WRA	Warramunga Arr	80.34	249	P	P	20 15 54.1	+0.1
	comp=Z,5.9nm,1.0s,baz=142,slow=5.1,SNR=14						
WRA	Warramunga Arr	80.34	249	IAmb	IAmb	20 15 56.2	
	comp=Z,0.5nm,1.1s						
TX32	Lajitas Array	86.42	17	P	P	20 16 27.3	+2.4
TX32				IAmb	IAmb	20 16 38.9	
	comp=Z,8.5nm,1.4s						
TXAR	Lajitas Array	86.42	17	P	P	20 16 25.7	+0.8
	comp=Z,1.5nm,1.0s,baz=191,slow=6.1,SNR=8.0						
TXAR	Lajitas Array	86.42	17	P	P	20 16 26.6	+1.7
TX31	Lajitas Ar. Si	86.42	17	P	P	20 16 27.3	+2.4
H11S2	WAKE ISLAND Hy	94.27	297	T	T	22 01 52.1	
	baz=148,slow=75,SNR=11						
H11S3	WAKE ISLAND Hy	94.28	297	T	T	22 01 54.0	
	baz=148,slow=75,SNR=7.8						
H11S1	WAKE ISLAND Hy	94.28	297	T	T	22 01 50.7	
	baz=148,slow=75,SNR=4.3						
ILAR	Eielson Array	121.51	349	PKP	PKPdf	20 22 33.5	-1.1
	comp=Z,0.8nm,0.8s,baz=202,slow=3.5,SNR=5.9						
CMAR	Chiang Mai Arr	130.95	238	PKP	PKiKP	20 22 55.2	+0.1
	comp=Z,0.3nm,0.7s,baz=259,slow=1.4,SNR=1.8						
EKA	Eskdalemuir Ar	147.16	65	PKPbc	PKPbc	20 23 23.9	-0.7
	comp=Z,2.5nm,0.8s,baz=286,slow=1.6,SNR=5.4						
SONM	Songino Array	148.73	277	PKPbc	PKPbc	20 23 28.8	-0.5
	comp=Z,1.5nm,0.9s,baz=169,slow=3.0,SNR=7.2						
DAVOX	Davos/Dischmat	150.02	88	PKPbc	PKPbc	20 23 32.4	-0.2
	comp=Z,1.5nm,0.5s,baz=172,slow=2.5,SNR=5.2						
DAVA	Damuels	150.31	87	eP	PKiKP	20 23 34.3	+0.3
	comp=Z,6.7nm,1.3s						
FETA	Feichten	150.63	88	eP	PKiKP	20 23 34.8	+0.1
	comp=Z,10nm,1.2s						
RETA	Reutte	150.91	87	eP	PKiKP	20 23 35.0	-0.1
	comp=Z,6.2nm,1.1s						
SQTA	Sankt Quirin	151.02	88	eP	PKiKP	20 23 35.3	-0.2
	comp=Z,12nm,1.3s						
MOTA	Moosalm	151.03	88	eP	PKPbc	20 23 34.6	-0.3
	comp=Z,8.0nm,1.2s						
WTTA	Wattenberg	151.28	88	eP	PKiKP	20 23 36.2	+0.2
	comp=Z,15nm,1.4s						
WATA	Walderalm	151.29	88	eP	PKiKP	20 23 37.0	+1.0
	comp=Z,12nm,1.3s						
ABTA	Abfaltersbach	151.49	90	eP	PKiKP	20 23 37.4	+1.0
	comp=Z,5.2nm,1.3s						
MYKA	Terra Mystica	152.06	91	eP	PKiKP	20 23 37.4	-0.1
	comp=Z,4.0nm,0.9s						
KBA	Koelnbreinsper	152.15	90	eP	PKPbc	20 23 36.9	-0.6
	comp=Z,2.1nm,0.9s						
OBKA	Obir	152.50	92	eP	PKiKP	20 23 38.3	-0.1
	comp=Z,4.4nm,0.9s						
SOKA	Soboth	152.87	92	eP	PKPdf	20 23 34.0	+2.2
	comp=Z,2.2nm,0.8s						
MOA	Molln	153.09	89	eP	PKPdf	20 23 35.4	+3.4
	comp=Z,11nm,1.5s						
GERES	GERESS Array B	153.30	87	PKPbc	PKPbc	20 23 39.2	-0.7
	comp=Z,0.8nm,0.8s,baz=205,slow=2.5,SNR=7.3						
ARSA	Arzberg	153.47	91	eP	PKPbc	20 23 39.8	-0.5
	comp=Z,4.2nm,1.6s						
CONA	Conrad Observa	154.04	90	eP	PKPbc	20 23 40.6	-1.0
	comp=Z,5.4nm,1.6s						
MKAR	Makanchi Array	161.62	252	PKPab	PKPab	20 24 26.7	-1.2
	comp=Z,0.9nm,0.8s,baz=126,slow=6.2,SNR=6.4						

*IDC **24** 20:06:55.8±3.0, 38°.82N×30°.49W, h0^{km}, mb3.6/9, mb1 3.8/9, mb1mx3.5/66, mbtmp3.6/9, Error ellipse: s-maj=101.1km s-min=23.7km az=178.0*

*SVSA **24** 20:06:56.4±0.8, 38°.43N×30°.28W, h14^{km}±6^{km}, ML3.8(INMG), Error ellipse: s-maj=5.5km s-min=2.8km az=42.0*

ISC 24 20:06:55.5±2.3**, 38°.4N**±0°.1×**29°.92W**±0°.07**, h6**^{km}±12^{km}**, n25,** σ1^{s}.**34**/34**, mb3.8**/8**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCAPE	Capelo, Faial	0.89	74	eS	Sn	20 07 26.4	-1.2
PCAPE				A	A	20 07 27.8	
	4µm,0.2s						
PFCBR	Castelo Branco	0.95	80	eS	Sn	20 07 28.4	-0.9
PFCBR				A	A	20 07 29.5	
	542nm,0.2s						
CALA	Caldeira	0.98	77	eP	Pb	20 07 15.0	+0.1
CALA				eS	Sn	20 07 28.8	-1.2
CALA				A	A	20 07 31.3	
	1µm,0.3s						
PCED	Cedros	0.99	74	eP	Pg	20 07 15.1	+0.7
PCED				eS	Sn	20 07 29.0	-1.2
PCED				A	A	20 07 30.0	
	687nm,0.2s						
PCAN	Candelaria	1.13	84	eS	Sn	20 07 32.9	-0.7
PCAN				A	A	20 07 33.7	
	502nm,0.2s						
PICO	Pico	1.18	83	eP	Pb	20 07 18.3	0.0
PICO				eS	Sn	20 07 34.1	-0.9
PICO				A	A	20 07 36.3	
	987nm,0.2s						
ROSA	Rosais	1.36	74	eP	Pn	20 07 20.4	-0.6
ROSA				eS	Sg	20 07 37.9	-1.3
ROSA				A	A	20 07 39.9	
	389nm,0.3s						
H07S1	FLORES T-PHASE	1.43	316	eS	Sn	20 07 27.5	-14
PMAN	Manadas	1.46	79	eS	Sg	20 07 40.6	-1.7
PMAN				A	A	20 07 42.4	
	109nm,0.2s						
ADH	Angra Heroismo	2.12	81	eP	Pn	20 07 31.2	-0.3
ADH				eS	Sn	20 07 57.1	-1.0
ADH				A	A	20 07 58.3	
	74nm,0.3s						
PAGU	Agualva, Azore	2.18	78	eP	Pn	20 07 31.9	-0.3
PAGU				eS	Sn	20 07 58.2	-1.4
PAGU				A	A	20 08 00.4	
	68nm,0.2s						
PSCM	Serra do Cume	2.22	80	eP	Pn	20 07 32.6	-0.2
PSCM				eS	Sn	20 07 59.5	-1.1
PSCM				A	A	20 08 01.8	
	123nm,0.3s						
PDA	Ponta Delgada	3.41	99	eP	Pn	20 07 49.3	+0.1
PDA				eS	Sn	20 08 28.8	-1.1
PDA				A	A	20 08 31.4	
	52nm,0.2s						
CMLA	Cha da Macela	3.52	98	eP	Pn	20 07 50.7	+0.1
CMLA				eS	Sn	20 08 31.4	-1.2
CMLA				A	A	20 08 33.6	
	70nm,0.3s						
PSMA	Santa Maria	4.03	108	eP	Pn	20 07 57.5	-0.2
PSMA				eS	Sn	20 08 44.0	-1.3
PSMA				A	A	20 08 44.5	
	38nm,0.2s						
PSMN	Pico do Norte,	4.08	108	eP	Pn	20 07 57.9	-0.5
PSMN				eS	Sn	20 08 45.1	-1.3
PSMN				A	A	20 08 47.1	
	15nm,0.2s						
ESDC	Sonseca Array	20.19	78	P	Pn	20 11 36.6	+3.9
	0.6nm,0.9s,baz=263,slow=8.9,SNR=2.6						
AKASG	Malin Array Be	42.83	53	P	P	20 14 55.6	+1.6
	0.2nm,0.3s,baz=275,slow=8.2,SNR=2.8						
YKA	Yellowknife Ar	54.47	325	P	P	20 16 21.1	-2.3
	0.8nm,0.9s,baz=70,slow=6.6,SNR=5.4						
PDAR	Pinedale Array	58.52	302	P	P	20 16 48.0	-4.8
	0.3nm,0.8s,baz=68,slow=7.2,SNR=2.4						
TXAR	Lajitas Array	60.44	285	P	P	20 17 04.2	-1.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.7nm,0.8s,baz=66,slow=6.0,SNR=3.5						
KURBB	Kurchatov Arra	71.46	40	P	P	20 18 16.7	+0.2
	1.6nm,0.8s,baz=313,slow=6.6,SNR=11						
ZALV	Zalesovo Beam	72.30	34	P	P	20 18 22.0	+0.4
	0.4nm,0.4s,baz=307,slow=11,SNR=2.2						
MKAR	Makanchi Array	75.82	41	P	P	20 18 43.5	+1.1
	1.3nm,0.9s,baz=312,slow=4.6,SNR=6.5						
SONM	Songino Array	85.77	28	P	P	20 19 37.2	+1.6
	0.8nm,1.0s,baz=318,slow=4.1,SNR=3.7						

BJI ***24*** *20:18:39.4±0.0, 3°.44S×151°.54E, h6km, mB5.3/41, mb4.9/67, Ms5.1/44, Ms7 5.0/44*

MOS ***24*** *20:18:41.0±0.8, 3°.66S×151°.30E, h15km, mb5.1/23, Error ellipse: s-maj=9.8km s-min=6.1km az=105.1*

NEIC ***24*** *20:18:42.7±1.9, 3°.67S±0°.07×151°.32E±0°.06, h10km±1km, mb5.1/107, Error ellipse: s-maj=13.1km s-min=8.5km az=36.0*

DJA ***24*** *20:18:43.1±1.4, 4°S±4°×15°2E±°, h18km±9km, M5.1/37, mb5.0/37, mB5.6/13, MLv5.2/3, Mw(mB)5.1/13, MwMwp6.1/1, Mwp6.1/1*

IDC ***24*** *20:18:45.5±4.3, 3°.72S×151°.25E, h33km±33km, mb4.6/23, mb1 4.7/28, mb1mx4.6/45, mbtmp4.8/28, ML4.2/4, MS4.8/13, Ms1 4.8/13, ms1mx4.5/44, Error ellipse: s-maj=16.6km s-min=12.0km az=77.0*

ISC 24 20:18:42.2±0.3, **3°.62S**±0°.05×**151°.33E**±0°.05, **h10km, n413, σ1ˢ.58**/410, **mb5.1**/127, **MS4.9**/26, **9C-3D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.01	124		Pg	20 19 00.8	-0.8
MANU	Manus Island	4.26	292		Pn	20 19 46.0	-1.1
PMG	Port Moresby	7.08	216	Pn	Pn	20 20 27.1	+1.1
	7.2nm,0.3s,baz=33,slow=9.2,SNR=106						
PMG	Port Moresby	7.08	216	P	Pn	20 20 27.5	+1.5
PMG	Port Moresby	7.08	216	Pn	Pn	20 20 27.5	+1.5
PMG	Port Moresby	7.08	216	P	Pn	20 20 28.0	+2.0
PMG	Port Moresby	7.08	216	P	Pn	20 20 28.0	+2.0
HNR	Honiara	10.32	124	Pn	Pn	20 21 12.8	+2.4
	4.4nm,0.3s,baz=185,slow=13,SNR=1.4						
HNR				LR	LR	20 25 14.5	
	comp=Z,8μm,21.0s,baz=288,slow=38						
HNR	Honiara	10.32	124	P	Pn	20 21 10.2	-0.3
HNR	Honiara	10.32	124		Pn	20 21 10.2	-0.3
HNR	Honiara	10.32	124	P	Pn	20 21 25.2	+15
JAY	Jayapura	10.66	276	Pn	Pn	20 21 16.4	+1.2
	0.6nm,0.3s,baz=103,slow=11,SNR=2.2						
GENI	Genyem	11.19	275	P	Pn	20 21 36.6	+14
GENI	Genyem	11.19	275	P	Pn	20 21 26.3	+3.9
PATS	Pohnpei	12.51	34	P	Pn	20 21 46.3	+5.9
	baz=13						
PATS	Pohnpei	12.51	34	Pn	Pn	20 21 40.8	+0.4
COEN	Coen	13.05	218		Pn	20 21 47.2	-0.6
SRPI	Serui, Papua	15.17	276	P	P	20 22 21.5	-0.3
	3μm59nm,1.3s						
MTSU	Mount Surprise	15.97	205	P	P	20 22 29.3	-1.5
	baz=16,SNR=13						
MTSU	Mount Surprise	15.97	205	P	P	20 22 29.4	-1.4
	46nm,1.4s						
CTA	Charters Tower	17.10	196	Pn	Pn	20 22 41.5	0.0
	0.3nm,0.3s,baz=16,slow=14,SNR=3.8						
CTAO	Charters Tower	17.10	196	P	Pn	20 22 40.8	-0.7
CTAO				pmax	pmax		
	comp=Z,182nm,1.3s						
CTAO	Charters Tower	17.10	196		Pn	20 22 40.8	-0.7
CTAO				IAmb	IAmb	20 22 52.5	
	comp=Z,182nm,1.3s						
CTAO	Charters Tower	17.10	196	P	P	20 22 43.0	-0.2
GUMO	Guam	18.26	340	P	P	20 22 57.4	+1.3
	comp=Z,2.8nm,0.3s,baz=124,slow=11,SNR=2.5						
GUMO				LR	LR	20 28 25.4	
	comp=Z,1μm,20.9s,baz=141,slow=32						
RK1H	Rockhampton Ha	19.67	182	P	Pn	20 23 15.6	+2.8
	comp=Z,44nm,1.0s						
SIJI	Sorong	20.23	277	P	P	20 23 17.1	-0.6
	comp=Z,23nm,0.9s,baz=95,slow=6.9,SNR=5.9						
SWI	Sorong	20.24	277	P	P	20 23 18.6	+0.8
	comp=Z,1μmcomp=Z,62nm,1.2s						
QIS	Mount Isa	20.34	213	P	P	20 23 19.0	+0.1
	baz=20,SNR=21						
QIS	Mount Isa	20.34	213	P	P	20 23 18.8	-0.1
	comp=Z,117nm,1.1s						
KDU	Kakadu	20.71	243	P	P	20 23 21.2	-1.7
	baz=21,SNR=9.0						
EIDS	Eidsvold	21.62	181	P	P	20 23 36.2	+3.6
	baz=22,SNR=12						
EIDS	Eidsvold	21.62	181	P	P	20 23 32.6	0.0
EIDS				IAmb	IAmb	20 23 39.9	
	comp=Z,85nm,1.4s						
RMQ	Roma	22.87	186	P	P	20 23 47.7	+1.7
	baz=23,SNR=18						
WB0	Warramunga Arr	23.03	225	P	P	20 23 45.6	-2.2
WR0	Warramunga Arr	23.06	224	P	P	20 23 45.0	-3.0
WR0				IAmb	IAmb	20 23 53.2	
	comp=Z,91nm,1.0s						
AAI	Ambon	23.09	269	P	P	20 23 51.7	+3.3
	comp=Z,2μmcomp=Z,92nm,1.5s						
WRAB	Tennant Creek	23.17	224	d iP	P	20 23 47.5	-1.7
WRAB				pmax	pmax		
	comp=Z,150nm,1.4s						
WRAB	Tennant Creek	23.17	224	P	P	20 23 47.2	-2.0
WRAB				IAmb	IAmb	20 23 55.3	
	comp=Z,148nm,1.3s						
WB2	Warramunga Arr	23.18	224	P	P	20 23 45.7	-3.5
WB2				IAmb	IAmb	20 23 52.1	
	comp=Z,88nm,1.1s						
WRA	Warramunga Arr	23.19	224	P	P	20 23 47.4	-2.0
	comp=Z,53nm,1.1s,baz=47,slow=11,SNR=72						
WRA	Warramunga Arr	23.19	224	i P	P	20 23 47.4	-2.0
WRA				pmax	pmax		
	comp=Z,50nm,1.1s						
WRA	Warramunga Arr	23.19	224	P	P	20 23 46.0	-3.3
DZM	Mont Dzumac	23.48	143	P	P	20 23 52.8	+0.4
	comp=Z,69nm,0.9s,baz=355,slow=9.5,SNR=36						
DZM				LR	LR	20 31 59.9	
	comp=Z,3μm,21.3s,baz=282,slow=34						
DZM	Mont Dzumac	23.48	143	eP	P	20 23 53.7	+1.3
	comp=Z,600nm,1.4s						
DZM				eLR	LR	20 29 38.2	
	comp=Z,7μm,25.1s						
DZM	Mont Dzumac	23.48	143	P	P	20 23 53.2	+0.9
ONTNC	Ouen Toro	23.67	143	P	P	20 23 54.0	-0.1
QLP	Quilpie	23.82	196	P	P	20 23 56.0	+0.5
	baz=24,SNR=20						
OUENC	Ouen Island, N	23.98	142	P	P	20 23 57.9	+0.8
LBMI	Labuha	23.99	277	P	P	20 24 01.3	+4.0
	comp=Z,2μmcomp=Z,116nm,2.7s						
MARNC	Mare, Loyalty	24.05	139	P	P	20 23 56.8	-0.9
TNTI	Ternate	24.34	280	P	P	20 23 58.6	-1.9
TNTI				IAmb	IAmb	20 24 08.7	
	comp=Z,70nm,1.3s						
PINNC	Pines Island,	24.50	142	P	P	20 24 03.0	+1.1
KNRA	Kununurra	25.23	240	P	P	20 24 13.7	+5.2
	baz=25,SNR=5.3						
AS31	Alice Springs	26.08	219	P	P	20 24 15.1	-1.2
ASAR	Alice Springs	26.09	219	P	P	20 24 15.2	-1.1
	comp=Z,21nm,0.9s,baz=52,slow=7.7,SNR=93						
ASAR	Alice Springs	26.09	219	P	P	20 24 15.1	-1.2
ASAR	Alice Springs	26.09	219	P	P	20 24 15.1	-1.2
SOEI	Soe	27.55	256	P	P	20 24 28.1	-1.6
BATI	Baumata	28.22	255	P	P	20 24 34.5	-1.0
	comp=Z,26nm,0.8s,baz=90,slow=8.1,SNR=2.5						
LUWI	Luwuk	28.64	274	P	P	20 24 36.2	-3.1
FITZ	Fitzroy Crossi	28.98	238	P	P	20 24 41.1	-1.1
	comp=Z,32nm,1.0s,baz=39,slow=6.5,SNR=8.4						
FITZ	Fitzroy Crossi	28.98	238	P	P	20 24 45.1	+2.9
	baz=29,SNR=6.0						
STKA	Stephens Creek	29.56	197	P	P	20 24 46.3	-0.9
	comp=Z,6.8nm,0.8s,baz=0.4,slow=9.6,SNR=17						
STKA				LR	LR	20 36 07.9	
	comp=Z,1μm,19.5s,baz=354,slow=35						
STKA	Stephens Creek	29.56	197	P	P	20 24 46.6	-0.6
	baz=30,SNR=9.1						
STKA	Stephens Creek	29.56	197	P	P	20 24 45.8	-1.4
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STKA	Stephens Creek	29.56	197	P	P	20 24 45.8	-1.4
MRSI	Marisa	29.65	277	P	P	20 24 52.4	+4.1
	comp=Z,17nm,1.2s						
MSVF	Nonsavu	29.70	120	LR	LR	20 35 52.3	
	comp=Z,2μm,20.3s,baz=296,slow=34						
APSI	Ampana	29.78	274	P	P	20 24 49.5	+0.1
	comp=Z,27nm,1.2s						
EDFI	Ende, Flores	29.89	259	P	P	20 24 48.3	-2.2
	comp=Z,21nm,1.3s						
WRKA	Warakurna	30.73	224	P	P	20 24 56.1	-1.7
	baz=31,SNR=11						
MPSI	Mapaga	31.66	276	P	P	20 25 09.0	+3.0
	comp=Z,16nm,1.2s						
HTT	Hallett	31.84	200	P	P	20 25 07.0	-0.5
	baz=32,SNR=5.9						
WBSI	Waikabubak, Su	32.27	258	P	P	20 25 15.7	+4.3
	comp=Z,84nm,1.6s						
ARPS	Mount Arapiles	34.12	194	P	P	20 25 27.8	+0.5
	baz=34,SNR=5.3						
TOO	Toolangi	34.21	188	P	P	20 25 27.7	-0.4
TOO				pmax	pmax		
	comp=Z,28nm,1.5s						
TOO	Toolangi	34.21	188	P	P	20 25 27.7	-0.4
TOO				IAmb	IAmb	20 25 32.7	
	comp=Z,28nm,1.4s						
FORT	Forrest	34.81	217	P	P	20 25 30.1	-3.2
PSA00	Pilbara Seismi	35.40	237	P	P	20 25 36.1	-2.5
PSA00				IAmb	IAmb	20 25 37.5	
	comp=Z,46nm,1.1s						
PSA00	Pilbara Seismi	35.40	237	P	P	20 25 36.1	-2.5
PSA00				IAmb	IAmb	20 25 38.2	
	comp=Z,26nm,1.2s						
SPMM	Sapulut	35.80	283	P	P	20 25 40.0	-2.1
AFI	Afiamalu	37.81	108	LR	LR	20 39 36.3	
	comp=Z,732nm,18.6s,baz=266,slow=33						
RAO	Raoul Island	38.74	134	LR	LR	20 39 45.0	
	comp=Z,937nm,21.7s,baz=336,slow=32						
MEEK	Meekatharra	38.78	231	P	P	20 26 05.9	-1.3
	baz=39,SNR=4.1						
SBUM	Sibu	39.55	278	P	P	20 26 15.0	+1.2
SBUM	Sibu	39.55	278	P	P	20 26 13.6	-0.3
YULB	Yu-li	39.73	314	P	P	20 26 15.2	0.0
YULB				IAmb	IAmb	20 26 16.3	
	comp=Z,40nm,1.0s						
STKI	Sintang	39.99	274	P	P	20 26 18.8	+1.3
YHNB	Yeheng	40.48	316	P	P	20 26 21.0	-0.5
KSM	Kuching	41.31	276	P	P	20 26 29.0	+0.6
KSM	Kuching	41.31	276	P	P	20 26 26.6	-1.8
URZ	Urewera	41.74	149	P	P	20 26 29.1	-2.5
	comp=Z,6.9nm,0.8s,baz=121,slow=23,SNR=5.3						
URZ				LR	LR	20 41 35.0	
	comp=Z,976nm,20.4s,baz=30,slow=33						
URZ	Urewera	41.74	149	IAmb	IAmb	20 26 51.1	
	comp=Z,34nm,1.2s						
MJAR	Matsushiro Arr	41.79	344	P	P	20 26 30.4	-1.7
	comp=Z,10nm,1.1s,baz=158,slow=9.1,SNR=8.5						
MJAR	Matsushiro Arr	41.79	344	P	P	20 26 29.6	-2.4
MJAR				pmax	pmax		
	comp=Z,11nm,1.4s						
MJAR	Matsushiro Arr	41.79	344	P	P	20 26 29.6	-2.4
MAJO	Matsushiro	41.80	344	P	P	20 26 28.3	-3.7
MAJO				pmax	pmax		
	comp=Z,25nm,1.3s						
MAJO	Matsushiro	41.80	344	P	P	20 26 28.3	-3.7
MAT	Matsushiro	41.80	344	P	P	20 26 29.4	-2.7
MJB9	Matsu-Tunnel	41.80	344	P	P	20 26 28.6	-3.5
TUWZ	Tuamarina	42.76	155	P	P	20 26 40.9	+1.0
RPZ	Rata Peaks	43.58	159	P	P	20 26 47.8	+1.3
RPZ				IAmb	IAmb	20 26 54.1	
	comp=Z,42nm,1.0s						
CGJI	Cibinong	45.54	264	P	P	20 27 04.3	+1.7
	comp=Z,27nm,1.4s						
KSRS	Korea Array	46.30	334	P	P	20 27 07.0	-1.1
	comp=Z,5.0nm,0.9s,baz=156,slow=8.6,SNR=9.6						
KSAR	Wonju Array Be	46.31	334	P	P	20 27 06.9	-1.4
KSAR	Wonju Array Be	46.31	334	P	P	20 27 06.8	-1.4
KASI	Kota Agung	46.71	266	P	P	20 27 11.1	-0.7
	comp=Z,30nm,1.1s						
INCN	Inchon	46.90	333	P	P	20 27 13.6	+0.7
INCN				pmax	pmax		
	comp=Z,112nm,1.2s						
INCN	Inchon	46.90	333	P	P	20 27 13.6	+0.7
NJ2	Nanjing	47.01	321	eP	P	20 27 14.6	+0.7
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,1μm,18.5s						
NJ2				LR	LR		
	comp=Z,760nm,20.4s						
NJ2				LR	LR		
	comp=Z,1μm,19.9s						
MDSI	Maura Dua	47.03	267	P	P	20 27 13.8	-0.6
	comp=Z,15nm,1.3s						
LWLI	Liwa	47.15	267	P	P	20 27 19.3	+3.9
	comp=Z,19μmcomp=Z,42nm,1.3s						
LHSI	Lahat	47.70	268	P	P	20 27 30.4	+11
MYKOM	Kota Tinggi	47.76	276	P	P	20 27 19.0	-1.0
JKA	Kamikawa-asahi	48.17	352	P	P	20 27 23.3	+0.6
JKA				IAmb	IAmb	20 27 24.2	
	comp=Z,37nm,1.2s						
ASAJ	Asahikawa	48.17	352	P	P	20 27 23.3	+0.7
ASAJ				pmax	pmax		
	comp=Z,37nm,1.2s						
WHN	Wuhan	49.00	317	⇓P	P	20 27 30.8	+1.5
WHN				pP	pwP	20 27 34.8	-0.2
JRMM	Jerantut	49.38	278	P	P	20 27 37.0	+4.5
KRJI	Kerinci	49.82	270	P	P	20 27 49.6	+14
RAR	Rarotonga	50.60	115	LR	LR	20 47 59.9	
	comp=Z,378nm,18.8s,baz=236,slow=35						
USA0B	Ussuriysk Arra	50.67	342	P	P	20 27 42.5	+0.7
USA0B				pmax	pmax		
	comp=Z,32nm,1.3s						
USA0B	Ussuriysk Arra	50.67	342	P	P	20 27 42.5	+0.7
USA0B				IAmb	IAmb	20 27 42.9	
	comp=Z,32nm,1.2s						
USRK	Ussuriysk Ar.	50.67	342	P	P	20 27 42.5	+0.7
	comp=Z,8.4nm,0.8s,baz=165,slow=8.2,SNR=10						
USRK	Ussuriysk Ar.	50.67	342	P	P	20 27 41.8	0.0
USRK	Ussuriysk Ar.	50.67	342	P	P	20 27 41.8	0.0
IPM	Ipoh	50.90	279	P	P	20 27 44.0	-0.1
TIA	Tai'an	50.91	324	eP	P	20 27 42.4	-1.3
TIA				pmax	pmax		
	comp=Z,11nm,1.9s						
TIA				LR	LR		
	comp=Z,670nm,23.5s						
TIA				LR	LR		
	comp=Z,560nm,24.5s						
TIA				LR	LR		
	comp=Z,1μm,23.5s						
YSS	Yuzh-Sakhalins	50.93	352	eP	P	20 27 44.0	+0.4
KULM	Kulim	51.39	280	P	P	20 27 47.0	-0.7
MDJ	Mudanjiang	51.82	340	P	P	20 27 51.1	+0.7
MDJ				pmax	pmax		
	comp=Z,29nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,440nm,4.5s						
MDJ	Mudanjiang	51.82	340	P	P	20 27 50.6	+0.3
MDJ				IAmb	IAmb	20 27 52.0	
	comp=Z,28nm,1.0s						
MNSI	Mandailing Nat	51.91	274	P	P	20 27 51.6	0.0
	comp=Z,28nm,1.1s						
SISI	Saibi	52.23	271	P	P	20 27 54.0	0.0
	comp=Z,19nm,1.6s						
ENH	Enshi	52.28	313	P	P	20 27 52.9	-1.3
ENH				IAmb	IAmb	20 28 10.7	
	comp=Z,32nm,1.2s						
CN2	Changchun	52.64	337	eP	P	20 27 56.3	-0.2
CN2				pmax	pmax		
	comp=Z,20nm,1.4s						
CN2				LR	LR		
	comp=Z,700nm,18.0s						
CN2				LR	LR		
	comp=Z,800nm,18.0s						
CN2				LR	LR		
	comp=Z,1μm,22.0s						
SLVN	Son La	52.64	300	P	P	20 27 56.7	-0.3
PSI	Prapat	52.76	276	LR	LR	20 53 16.9	
	comp=Z,1μm,20.5s,baz=144,slow=39						
GSI	Gunungsitoli	53.95	274	P	P	20 28 07.4	+0.7
	comp=Z,27nm,1.2s						
GSI	Gunungsitoli	53.95	274	P	P	20 28 05.1	-1.6
BJI	Beijing	54.11	327	P	P	20 28 07.1	-0.3
BJI				pmax	pmax		
	comp=Z,9.0nm,1.8s						
SKR	Severo-Kuril's	54.25	4	eP	P	20 27 54.4	-14
SKR				MLR	MLR		
	comp=Z,1μm,17.0s						
XAN	Xi'an	54.76	317	⇑P	P	20 28 12.6	+0.3
XAN				pP	pwP	20 28 20.3	+2.2
XAN				sP	sP	20 28 24.1	+8.5
XAN				S	S	20 35 52.6	-0.6
XAN				pmax	pmax		
	comp=Z,19nm,1.1s						
XAN				pmax	pmax		
	comp=Z,380nm,7.8s						
XAN				LR	LR		
	comp=Z,740nm,22.0s						
XAN				LR	LR		
	comp=Z,830nm,20.6s						
XAN				LR	LR		
	comp=Z,1μm,23.4s						
KMI	Kunming	55.12	304	⇑P	P	20 28 17.0	+1.7
KMI				pP	pwP	20 28 20.9	-0.1
KMI				sP	sP	20 28 22.8	+4.2
KMI				pmax	pmax		
	comp=Z,22nm,1.5s						
KLR	Kul'dur	55.32	345	ceP	P	20 28 15.2	-0.8
KLR				pmax	pmax		
	comp=Z,11nm,1.4s						
CM31	Chiang Mai Arr	56.05	295	P	P	20 28 23.0	+1.1
CMAR	Chiang Mai Arr	56.05	295	P	P	20 28 22.4	+0.5
	comp=Z,21nm,0.9s,baz=110,slow=5.4,SNR=136						
CMAR				LR	LR	20 52 11.8	
	comp=Z,2μm,21.7s,baz=216,slow=36						
CMAR	Chiang Mai Arr	56.05	295	i P	P	20 28 23.0	+1.2
CMAR				pmax	pmax		
	comp=Z,21nm,0.9s						
CMAR	Chiang Mai Arr	56.05	295	P	P	20 28 22.6	+0.7
CHTO	Chiang Mai	56.16	295	P	P	20 28 23.1	+0.5
CHTO				pmax	pmax		
	comp=Z,36nm,1.2s						
CHTO	Chiang Mai	56.16	295	P	P	20 28 23.1	+0.5
CHTO				IAmb	IAmb	20 28 24.7	
	comp=Z,36nm,1.2s						
PETK	Petropavlovsk-	56.78	5	P	P	20 28 26.8	+0.5
	comp=Z,5.0nm,0.7s,baz=128,slow=4.6,SNR=12						
PETK	Petropavlovsk-	56.78	5	P	P	20 28 27.0	+0.6
PETK	Petropavlovsk-	56.78	5	P	P	20 28 27.0	+0.6
CD2	Chengdu	56.86	311	P	P	20 28 27.8	+0.3
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
HHC	Hu-ho-hao-te	57.24	325	eP	P	20 28 30.3	+0.2
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,260nm,6.4s						
HHC				LR	LR		
	comp=Z,520nm,16.9s						
HHC				LR	LR		
	comp=Z,1μm,17.1s						
HHC				LR	LR		
	comp=Z,4μm,20.6s						
LZH	Lanzhou	59.37	316	eP	P	20 28 46.1	+1.0
LZH				pP	pwP	20 28 51.5	+0.6
LZH				sP	sP	20 28 55.8	+7.4
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				LR	LR		
	comp=Z,830nm,16.8s						
LZH				LR	LR		
	comp=Z,920nm,15.7s						
LZH				LR	LR		
	comp=Z,940nm,16.7s						
HIA	Hailar	59.37	337	P	P	20 28 44.7	0.0
HIA				pmax	pmax		
	comp=Z,26nm,1.2s						
HIA	Hailar	59.37	337	P	P	20 28 44.7	0.0
HIA				IAmb	IAmb	20 28 46.4	
	comp=Z,26nm,1.2s						
PPT2	Papeete2	59.48	108	eLR	LR	20 46 12.8	
	comp=Z,1μm,25.2s						
TBI	Tubuai	60.38	115	eLR	LR	20 46 43.0	
	comp=Z,1μm,29.2s						
ZEA	Zeya	60.61	344	eP	P	20 28 53.7	+0.7
MA2	Magadan	63.01	360	ceP	P	20 29 06.8	-2.3
MA2				pmax	pmax		
	comp=Z,132nm,2.5s						
GTA	Gaotai	63.80	317	⇑P	P	20 29 15.8	+0.9
GTA				pP	pwP	20 29 20.5	-0.2
GTA				sP	sP	20 29 23.0	+4.8
GTA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,150nm,6.8s						
GTA				LR	LR		
	comp=Z,540nm,19.5s						
GTA				LR	LR		
	comp=Z,740nm,20.3s						
GTA				LR	LR		
	comp=Z,700nm,22.3s						
ULN	Ulaanbaatar	64.23	329	P	P	20 29 18.1	+0.5
ULN				pmax	pmax		
	comp=Z,14nm,1.1s						
ULN	Ulaanbaatar	64.23	329	P	P	20 29 18.1	+0.5
ULN				IAmb	IAmb	20 29 19.4	
	comp=Z,14nm,1.1s						
SHL	Shillong	64.45	300	P	P	20 29 18.5	-1.0
SHL				pmax	pmax		
	comp=Z,39nm,1.3s						
SHL	Shillong	64.45	300	P	P	20 29 18.5	-1.0
SONM	Songino Array	64.56	328	P	P	20 29 20.1	+0.4
	comp=Z,5.2nm,0.9s,baz=151,slow=5.8,SNR=28						
SONM	Songino Array	64.56	328	P	P	20 29 19.9	+0.2
SONM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SONM	Songino Array	64.56	328	P	P	20 29 19.9	+0.2
SONM				IAmb	IAmb	20 29 21.3	
	comp=Z,10nm,1.0s						
LSA	Lhasa	66.37	305	P	P	20 29 33.3	+1.1
LSA				pmax	pmax		
	comp=Z,42nm,1.3s						
LSA	Lhasa	66.37	305	P	P	20 29 32.7	+0.5
LSA				pmax	pmax		
	comp=Z,23nm,1.4s						
LSA	Lhasa	66.37	305	P	P	20 29 32.7	+0.5
LSA				IAmb	IAmb	20 29 34.6	
	comp=Z,22nm,1.4s						
YAK	Yakutsk	67.54	349	eP	P	20 29 38.8	+0.4
YAK				e*PP	pwP	20 29 44.6	+0.3
YAK				eS	S	20 38 33.5	-1.3
YAK				pmax	pmax		
	comp=Z,38nm,1.0s						
YAK				pmax	pmax		
	comp=N,14nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK				smax	smax		
	comp=N,528nm,3.7s						
YAK	Yakutsk	67.54	349	P	P	20 29 38.0	-0.4
ZAK	Zakamensk	67.73	329	eP	P	20 29 40.4	+0.4
ZAK				e		20 30 12.5	
ZAK				pmax	pmax		
	comp=Z,22nm,1.3s						
BOD	Bodaibo	68.18	340	eP	P	20 29 42.8	+0.3
BOD				pmax	pmax		
	comp=Z,20nm,1.4s						
TAOE	Nuku Hiva Isla	68.24	98	eLR	LR	20 50 19.4	
	comp=Z,912nm,29.9s						
MOY	Mondy	69.66	329	eP	P	20 29 52.7	+0.7
MOY				pmax	pmax		
	comp=Z,38nm,1.8s						
JIRN	Jiri	69.93	301	eP	P	20 29 54.5	0.0
GUN	Gumba	70.26	301	eP	P	20 29 56.5	0.0
PKI	Pulchoki	70.57	301	eP	P	20 29 58.4	0.0
PKIN	Phulchoki	70.59	301	eP	P	20 29 58.4	0.0
KKN	Kakani	70.74	301	eP	P	20 29 59.3	0.0
	comp=Z,36nm,0.9s						
DMN	Daman	70.84	301	eP	P	20 30 00.2	+0.2
	comp=Z,93nm,1.1s						
GKN	Gorkha	71.34	301	eP	P	20 30 03.1	+0.2
	comp=Z,110nm,1.2s						
DANN	Dangsing	72.18	301	eP	P	20 30 08.1	0.0
	comp=Z,46nm,0.9s						
BILL	Bilibino	72.27	6	⇓eP	P	20 30 07.9	+0.5
BILL				*PP	sP	20 30 12.0	+1.3
BILL				*SP	pwP	20 30 16.0	+2.7
BILL				e		20 30 24.5	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,834nm,17.0s						
PYUN	Piuthan	72.78	301	eP	P	20 30 11.1	-0.5
	comp=Z,84nm,0.9s						
WMQ	Urumqi	73.89	318	⇑P	P	20 30 18.4	+0.8
WMQ				sP	pwP	20 30 27.5	+4.1
WMQ				PcP	PcP	20 30 35.9	+2.9
WMQ				pmax	pmax		
	comp=Z,26nm,1.3s						

WMQ				pmax	pmax		
	comp=Z,370nm,4.3s						
WMQ				LR	LR		
	comp=Z,870nm,24.1s						
WMQ				LR	LR		
	comp=Z,620nm,21.7s						
HYB	Hyderabad	74.72	289	i P	P	20 30 22.0	-0.9
ANM	Nome	75.10	18	P	P	20 30 24.9	+0.8
ANM				pmax	pmax		
	comp=Z,27nm,1.4s						
ANM	Nome	75.10	18	P	P	20 30 24.9	+0.8
ANM				IAmb	IAmb	20 30 36.6	
	comp=Z,26nm,1.4s						
ANM	Nome	75.10	18	P	P	20 30 25.3	+1.2
	baz=225						
DGZ	Jazzator, Alta	76.27	323	c iP	P	20 30 31.8	+0.5
DGZ				pmax	pmax		
	comp=Z,26nm,1.5s						
TIXI	Tiksi	76.55	353	i P	P	20 30 31.3	-0.9
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TIXI	Tiksi	76.55	353	P	P	20 30 31.6	-0.6
TIXI				IAmb	IAmb	20 30 47.1	
	comp=Z,17nm,1.4s						
ZSN	Zaisan	77.03	320	eP	P	20 30 35.2	-0.4
	comp=Z,24nm,1.9s,baz=320						
ZSN	Zaisan	77.03	320	eP	P	20 30 35.1	-0.4
ZSN				pmax	pmax		
	comp=Z,24nm,1.9s						
TTA	Tatalina	77.22	22	P	P	20 30 37.6	+1.2
TTA				pmax	pmax		
	comp=Z,15nm,1.2s						
TTA	Tatalina	77.22	22	P	P	20 30 37.6	+1.2
TTA				IAmb	IAmb	20 30 57.8	
	comp=Z,15nm,1.2s						
TTA	Tatalina	77.22	22	P	P	20 30 38.1	+1.8
	baz=234						
L19K	White Mountain	77.23	23	P	P	20 30 36.0	-0.3
L19K				IAmb	IAmb	20 30 53.3	
	comp=Z,21nm,1.1s						
L19K	White Mountain	77.23	23	P	P	20 30 37.8	+1.5
	baz=236						
CNPM	China Poot	77.30	26	P	P	20 30 38.0	+1.2
BRSE	Bradley Lake S	77.63	26	P	P	20 30 40.3	+1.7
	baz=240						
L20K	Farewell, AK	77.78	23	P	P	20 30 41.5	+2.1
	baz=236						
SEW	Seward	78.37	26	P	P	20 30 43.9	+1.3
	baz=241						
O22K	Cooper Landing	78.44	26	P	P	20 30 44.6	+1.6
	baz=241						
MK31	Makanchi Array	78.48	319	P	P	20 30 43.0	-0.6
MK31				pmax	pmax		
	comp=Z,14nm,1.1s						
MK31	Makanchi Array	78.48	319	P	P	20 30 43.0	-0.6
MK31				IAmb	IAmb	20 30 45.4	
	comp=Z,14nm,1.1s						
MKAR	Makanchi Array	78.48	319	P	P	20 30 43.7	0.0
	comp=Z,9.2nm,0.9s,baz=104,slow=7.0,SNR=64						
MKAR	Makanchi Array	78.48	319	i P	P	20 30 44.0	+0.4
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MKAR	Makanchi Array	78.48	319	P	P	20 30 43.0	-0.6
J20K	Nowinta River	78.62	21	P	P	20 30 45.8	+1.8
J20K				IAmb	IAmb	20 31 04.5	
	comp=Z,21nm,0.9s						
J20K	Nowinta River	78.62	21	P	P	20 30 46.0	+2.0
	baz=236						
PPLA	Purkeypile	78.66	23	P	P	20 30 45.7	+1.3
	baz=238						
MAKZ	Makanchi	78.69	319	P	P	20 30 44.2	-0.6
MAKZ				pmax	pmax		
	comp=Z,16nm,0.8s						
MAKZ	Makanchi	78.69	319	P	P	20 30 44.2	-0.6
MAKZ				IAmb	IAmb	20 30 46.4	
	comp=Z,16nm,0.8s						
RC01	Rabbit Creek A	78.73	25	P	P	20 30 42.0	-2.6
RC01				IAmb	IAmb	20 31 08.7	
	comp=Z,33nm,1.1s						
RC01	Rabbit Creek A	78.73	25	P	P	20 30 46.0	+1.4
	baz=241						
M22K	Willow	78.90	24	P	P	20 30 47.0	+1.5
	baz=240						
CAST	Castle Rocks	78.98	22	P	P	20 30 45.9	-0.1
CAST	Castle Rocks	78.98	22	P	P	20 30 48.1	+2.1
	baz=238						
CHUM	Lake Minchumin	79.14	22	P	P	20 30 48.3	+1.5
	baz=238						
CUT	Chulitna	79.17	24	P	P	20 30 48.5	+1.5
	baz=240						
PWL	Port Wells	79.22	26	P	P	20 30 47.5	+0.1
PWL	Port Wells	79.22	26	P	P	20 30 48.7	+1.4
	baz=242						
PMR	Palmer	79.23	25	P	P	20 30 48.5	+1.1
PMR				pmax	pmax		
	comp=Z,15nm,1.1s						
PMR	Palmer	79.23	25	P	P	20 30 48.5	+1.1
PMR	Palmer	79.23	25	P	P	20 30 48.5	+1.1
	baz=241						
SHLS	Shalkode	79.37	315	eP	P	20 30 46.5	-2.3
	baz=315						
SHLS	Shalkode	79.37	315	eP	P	20 30 46.4	-2.3
ZAA0	Zalesovo Array	79.37	327	P	P	20 30 48.3	0.0
ZALV	Zalesovo Beam	79.37	327	P	P	20 30 47.6	-0.7
	comp=Z,4.4nm,0.8s,baz=107,slow=5.1,SNR=22						
ZALV	Zalesovo Beam	79.37	327	i P	P	20 30 48.0	-0.3
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZALV	Zalesovo Beam	79.37	327	P	P	20 30 48.4	+0.1
KNK	Knik Glacier	79.43	25	P	P	20 30 49.2	+0.7
KNK				IAmb	IAmb	20 31 00.8	
	comp=Z,44nm,1.4s						
KNK	Knik Glacier	79.43	25	P	P	20 30 49.4	+0.8
	baz=242						
KTH	Kantishna Hill	79.49	23	P	P	20 30 49.5	+0.7
KTH				IAmb	IAmb	20 30 59.5	
	comp=Z,24nm,1.2s						
SML	Sawmill	79.67	25	P	P	20 30 51.3	+1.5
SML				IAmb	IAmb	20 31 06.7	
	comp=Z,26nm,0.9s						
SML	Sawmill	79.67	25	P	P	20 30 51.2	+1.3
	baz=242						
UZB	Uzynbulak	79.67	315	eP	P	20 30 49.9	-0.6
	comp=Z,15nm,1.2s,baz=315						
UZB	Uzynbulak	79.67	315	eP	P	20 30 49.8	-0.6
UZB				pmax	pmax		
	comp=Z,15nm,1.2s						
TRF	Thorofare Moun	79.69	23	P	P	20 30 50.5	+0.5
TRF	Thorofare Moun	79.69	23	P	P	20 30 50.4	+0.4
	baz=240						
BPAW	Bear Paw Mtn.	79.75	22	P	P	20 30 51.1	+0.9
BPAW				IAmb	IAmb	20 31 13.2	
	comp=Z,33nm,1.4s						
BPAW	Bear Paw Mtn.	79.75	22	P	P	20 30 50.3	+0.1
	baz=239						
GLI	Glacier Island	79.77	26	P	P	20 30 51.2	+0.8
	baz=243						
IMAR	Indian Mountai	79.78	20	P	P	20 30 51.4	+1.2
H21K	Melozitna Rive	79.92	20	P	P	20 30 52.8	+1.7
H21K	Melozitna Rive	79.92	20	P	P	20 30 52.5	+1.5
	baz=237						
I21K	Tanana	79.95	21	P	P	20 30 52.3	+1.1
I21K				IAmb	IAmb	20 31 09.9	
	comp=Z,35nm,1.2s						
I21K	Tanana	79.95	21	P	P	20 30 52.9	+1.7
	baz=238						
KPKS	Kokpek	80.00	315	eP	P	20 30 51.1	-1.0
	comp=Z,14nm,1.4s,baz=315						
KPKS	Kokpek	80.00	315	eP	P	20 30 51.0	-1.0
KPKS				pmax	pmax		
	comp=Z,13nm,1.4s						
SATY	Saty	80.09	315	eP	P	20 30 52.1	-0.5
	baz=315						
SATY	Saty	80.09	315	eP	P	20 30 52.1	-0.5
ZHN	Zhinishke	80.10	315	eP	P	20 30 52.0	-0.6
	baz=315						
ZHN	Zhinishke	80.10	315	eP	P	20 30 52.0	-0.6
SCM	Sheep Creek Mo	80.11	25	P	P	20 30 53.3	+1.1
	baz=243						
EYAK	Cordova Ski Ar	80.22	27	P	P	20 30 55.4	+2.7
	baz=244						
RND	Reindeer	80.23	23	P	P	20 30 53.3	+0.5
RND				pmax	pmax		
	comp=Z,30nm,1.1s						
RND	Reindeer	80.23	23	P	P	20 30 53.3	+0.5
RND				IAmb	IAmb	20 31 03.4	
	comp=Z,30nm,1.1s						
WAT6	Susitna Watana	80.28	24	P	P	20 30 54.3	+1.0
	baz=242						
MCK	McKinley	80.35	23	P	P	20 30 53.7	+0.3
MCK				pmax	pmax		
	comp=Z,32nm,1.1s						
MCK	McKinley	80.35	23	P	P	20 30 53.7	+0.3
MCK				IAmb	IAmb	20 31 13.6	
	comp=Z,32nm,1.1s						
MCK	McKinley	80.35	23	P	P	20 30 54.0	+0.5
	baz=241						
BWN	Browne	80.36	22	P	P	20 30 54.4	+0.9
BWN				IAmb	IAmb	20 31 12.0	
	comp=Z,46nm,1.2s						
KLU	Klutina	80.55	26	P	P	20 30 56.0	+1.4
KLU				IAmb	IAmb	20 31 11.5	
	comp=Z,26nm,1.0s						
KLU	Klutina	80.55	26	P	P	20 30 55.9	+1.2
	baz=244						
KAIM	Kayak Island	80.55	27	P	P	20 30 57.1	+2.5
	baz=246						
TDK	Taldyqorghan	80.58	317	eP	P	20 30 54.5	-0.7
	comp=Z,49nm,1.6s,baz=317						
TDK	Taldyqorghan	80.58	317	eP	P	20 30 54.4	-0.7
TDK				pmax	pmax		
	comp=Z,49nm,1.6s						
DHY	Denali Highway	80.66	24	P	P	20 30 56.2	+0.9
DHY				IAmb	IAmb	20 31 16.0	
	comp=Z,25nm,1.2s						
DHY	Denali Highway	80.66	24	P	P	20 30 56.8	+1.5
	baz=242						
M24K	Tolsona, Glenn	80.71	25	P	P	20 30 57.2	+1.7
M24K	Tolsona, Glenn	80.71	25	P	P	20 30 56.8	+1.3
	baz=244						
NEA2	Nenana	80.72	22	P	P	20 30 55.2	-0.2
NEA2				IAmb	IAmb	20 31 15.4	
	comp=Z,18nm,1.1s						
NEA2	Nenana	80.72	22	P	P	20 30 56.0	+0.6
	baz=241						
KDJ	Kajisay	80.75	314	P	P	20 30 56.8	+0.5
KDJ				pmax	pmax		
	comp=Z,18nm,1.0s						
KDJ	Kajisay	80.75	314	P	P	20 30 56.8	+0.5
KDJ				IAmb	IAmb	20 30 58.5	
	comp=Z,18nm,0.9s						
SEM	Semipalatinsk	80.86	322	eP	P	20 30 54.6	-2.1
	baz=322						
SEM	Semipalatinsk	80.86	322	eP	P	20 30 54.6	-2.1
BMRM	Bremner River	80.90	26	P	P	20 30 57.7	+1.2
	baz=245						
WRH	Wood River Hil	81.03	22	P	P	20 30 56.8	-0.2
WRH				IAmb	IAmb	20 31 13.5	
	comp=Z,20nm,1.1s						
KSH	Kashi	81.06	311	P	P	20 31 00.3	+2.4
KSH				pP	PcP	20 31 05.5	+1.2
KSH				sP	pwP	20 31 06.8	+3.0
KSH				pmax	pmax		
	comp=Z,15nm,1.4s						
MDOK	Medeo	81.08	315	eP	P	20 30 56.9	-1.2
	baz=314						
MDOK	Medeo	81.08	315	eP	P	20 30 56.8	-1.2
TNSS	Tian-Shan	81.12	314	eP	P	20 30 59.1	+0.6
	baz=314						
N25K	Chitina, Valde	81.17	26	P	P	20 30 59.5	+1.5
	baz=245						
CCB	Clear Creek Bu	81.23	22	P	P	20 30 58.1	+0.1
HARP	HAARP	81.27	25	P	P	20 30 59.0	+0.6
	baz=245						
CHKK	Chushkaly	81.28	315	eP	P	20 30 58.5	-0.4
	baz=315						
COLA	College	81.32	22	i P	P	20 30 58.3	-0.2
COLA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PAX	Paxson	81.39	24	P	P	20 30 59.6	+0.5
	baz=244						
HDA	Harding Lake	81.44	23	P	P	20 30 58.9	-0.3
	baz=243						
GLB	Gilahina Butte	81.45	26	P	P	20 30 58.4	-1.0
GLB				IAmb	IAmb	20 31 20.5	
	comp=Z,43nm,1.4s						
CRQM	Cirque	81.47	27	P	P	20 31 00.8	+1.1
CRQM				IAmb	IAmb	20 31 23.5	
	comp=Z,25nm,0.9s						
CRQE	Cirque	81.49	27	P	P	20 31 00.5	+0.8
	baz=247						
IL31		81.63	22	P	P	20 30 58.9	-1.2
IL31				IAmb	IAmb	20 31 19.8	
	comp=Z,15nm,1.1s						
ILAR	Eielson Array	81.63	22	P	P	20 30 60.0	-0.3
	comp=Z,2.9nm,0.6s,baz=245,slow=5.4,SNR=56						
ILAR	Eielson Array	81.63	22	P	P	20 30 59.5	-0.8
ILAR	Eielson Array	81.63	22	P	P	20 30 59.5	-0.8
COLD	Coldfoot	81.64	20	P	P	20 31 01.0	+0.8
COLD	Coldfoot	81.64	20	P	P	20 31 01.5	+1.3
	baz=239						
BOOM	Boomskoye usch	81.72	314	P	P	20 31 01.0	-0.5
BOOM				pmax	pmax		
	comp=Z,12nm,1.1s						
BOOM	Boomskoye usch	81.72	314	P	P	20 31 01.0	-0.5
KUU	Kurty	81.75	315	eP	P	20 31 00.5	-0.8
	comp=Z,41nm,1.3s,baz=315						
KUU	Kurty	81.75	315	eP	P	20 31 00.5	-0.8
KUU				pmax	pmax		
	comp=Z,41nm,1.3s						
H24K	Noodor Dome	81.76	21	P	P	20 31 01.8	+0.8
	baz=242						
MCARA	McCarthy VSAT	81.77	26	P	P	20 31 02.0	+0.9
	baz=247						
KURK	Kurchatov	81.94	322	P	P	20 31 01.9	-0.3
KURK				pmax	pmax		
	comp=Z,14nm,1.0s						
KURK	Kurchatov	81.94	322	P	P	20 31 01.9	-0.3
KURK				IAmb	IAmb	20 31 03.5	
	comp=Z,14nm,1.0s						
RIDG	Independent Ri	81.97	24	P	P	20 31 02.6	+0.5
RIDG				IAmb	IAmb	20 31 23.6	
	comp=Z,24nm,1.2s						
RIDG	Independent Ri	81.97	24	P	P	20 31 02.9	+0.7
	baz=245						
A21K	Barrow	82.05	15	P	P	20 31 03.3	+1.1
	baz=233						
TKM2	Tokmak 2	82.06	314	P	P	20 31 04.2	+0.9
	SNR=9.8						
TKM2	Tokmak 2	82.06	314	i P	P	20 31 03.2	-0.1
TKM2				pmax	pmax		
	comp=Z,12nm,1.2s						
MENT	Mentasta	82.10	25	P	P	20 31 03.4	+0.7
J25K	Salcha River,	82.14	23	P	P	20 31 03.9	+0.9
	baz=244						
DOT	Dot Lake	82.25	24	P	P	20 31 04.5	+0.9
DOT				IAmb	IAmb	20 31 22.2	
	comp=Z,21nm,1.2s						
L26K	Log Cabin Wild	82.29	25	P	P	20 31 05.4	+1.6
L26K	Log Cabin Wild	82.29	25	P	P	20 31 04.9	+1.1
	baz=246						
CTG	Chitna Glacier	82.37	27	P	P	20 31 04.7	+0.4
	baz=248						
SCRK	Sand Creek	82.42	24	P	P	20 31 05.0	+0.4
SCRK	Sand Creek	82.42	24	P	P	20 31 05.0	+0.4
	baz=246						
KBK	Karagaybulak	82.47	314	P	P	20 31 06.7	+1.3
	SNR=6.7						
TOLK	Toolik Lake Re	82.57	18	P	P	20 31 06.3	+1.2
TOLK	Toolik Lake Re	82.57	18	P	P	20 31 06.5	+1.4
	baz=240						
M27K	Edge Creek, AK	82.65	26	P	P	20 31 07.0	+1.2
M27K	Edge Creek, AK	82.65	26	P	P	20 31 07.9	+2.1
	baz=248						
CHMS	Chumysh	82.69	314	P	P	20 31 07.4	+1.1
	SNR=8.9						
UCH	Uchtor	82.70	313	P	P	20 31 08.4	+1.5
	SNR=14						
AAK	Ala-Archa	82.80	314	P	P	20 31 08.5	+1.4
	SNR=9.3						
AAK	Ala-Archa	82.80	314	P	P	20 31 07.0	0.0
AAK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AAK	Ala-Archa	82.80	314	P	P	20 31 07.0	0.0
J26L	Joseph Creek	82.81	23	P	P	20 31 07.4	+0.8
	baz=246						
SGDS	Sogindy	82.86	314	eP	P	20 31 07.0	-0.2
	baz=314						
USP	Ospenovka	82.92	314	P	P	20 31 08.4	+0.9
	SNR=13						
L27K	Beaver Creek,	82.94	25	P	P	20 31 08.5	+1.3
L27K				IAmb	IAmb	20 31 19.1	
	comp=Z,20nm,1.4s						
L27K	Beaver Creek,	82.94	25	P	P	20 31 08.7	+1.6
	baz=248						
BCAR	Beaver Creek A	82.96	25	P	P	20 31 08.5	+1.2
AML	Almayashu	83.28	313	P	P	20 31 11.5	+1.6
	SNR=15						
EKS2	Erkin-Say	83.32	314	P	P	20 31 10.8	+1.1
	SNR=9.3						
BTLS	Baital	83.60	316	eP	P	20 31 10.3	-0.6
	comp=Z,18nm,1.5s,baz=316						
BTLS	Baital	83.60	316	eP	P	20 31 10.3	-0.6
BTLS				pmax	pmax		
	comp=Z,18nm,1.5s						
EGAK	Eagle	83.87	23	P	P	20 31 13.0	+1.2
EGAK				IAmb	IAmb	20 31 39.1	
	comp=Z,19nm,1.4s						
DAWY	Dawson	84.33	24	P	P	20 31 15.5	+1.2
DAWY				IAmb	IAmb	20 31 36.5	
	comp=Z,15nm,1.3s						
DAWY	Dawson	84.33	24	P	P	20 31 15.4	+1.2
	baz=250						
NRIK	Noril'sk	84.39	341	P	P	20 31 14.4	0.0
	comp=Z,19nm,0.9s,baz=112,slow=4.5,SNR=23						
NRIK	Noril'sk	84.39	341	ceP	P	20 31 14.7	+0.3
NRIK				pmax	pmax		
	comp=Z,31nm,1.1s						
NRIK	Noril'sk	84.39	341	P	P	20 31 14.4	0.0
BTK	Batken	85.06	311	P	P	20 31 19.1	+0.5
BTK				pmax	pmax		
	comp=Z,37nm,1.3s						
BTK	Batken	85.06	311	P	P	20 31 19.1	+0.5
N31M	Braeburn, Yuko	85.08	27	P	P	20 31 18.0	-0.1
	baz=253						
DZA	Taraz	85.13	313	eP	P	20 31 18.8	0.0
	comp=Z,18nm,1.0s,baz=313						
DZA	Taraz	85.13	313	eP	P	20 31 18.8	0.0
DZA				pmax	pmax		
	comp=Z,18nm,1.0s						
I29M	Ogilvie Camp,	85.20	23	P	P	20 31 19.1	+0.5
	baz=251						
BRZS	Berezniki	85.48	321	eP	P	20 31 19.9	-0.5
	baz=321						
BRZS	Berezniki	85.48	321	eP	P	20 31 19.8	-0.5
KBL	Kabul	85.69	305	P	P	20 31 20.3	-1.7
KBL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBL	Kabul	85.69	305	P	P	20 31 20.3	-1.7
KKAR	Karatay Array	85.76	314	P	P	20 31 22.1	+0.2
KKAR	Karatay Array	85.76	314	P	P	20 31 22.1	+0.2
M31M	Drury Creek, Y	85.91	27	P	P	20 31 23.6	+1.4
	baz=254						
IUG	Iuzhnay	85.97	313	eP	P	20 31 22.9	-0.2
	baz=312						
IUG	Iuzhnay	85.97	313	eP	P	20 31 22.9	-0.2
CHGR	Chuyangaron	86.14	309	P	P	20 31 24.3	+0.4
EPYK	Eagle Plains	86.15	23	P	P	20 31 23.9	+0.6
EPYK				IAmb	IAmb	20 31 34.9	
	comp=Z,29nm,1.2s						
EPYK	Eagle Plains	86.15	23	P	P	20 31 25.0	+1.6
	baz=252						
BRLS	Borolday	86.24	313	eP	P	20 31 23.4	-1.0
	baz=313						
BRLS	Borolday	86.24	313	eP	P	20 31 23.3	-1.0
QSPA	South Pole Qui	86.33	180	P	P	20 31 23.5	-0.8
	comp=Z,7.7nm,1.0s,baz=343,slow=3.9,SNR=15						
DLBC	Dease Lake	87.14	31	P	P	20 31 29.6	+1.2
	comp=Z,1.8nm,0.7s,baz=256,slow=2.7,SNR=4.2						
DLBC	Dease Lake	87.14	31	P	P	20 31 28.6	+0.3
DLBC				IAmb	IAmb	20 31 50.4	
	comp=Z,12nm,1.2s						
BRVK	Borovoye	87.49	323	P	P	20 31 29.4	-0.7
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BRVK	Borovoye	87.49	323	P	P	20 31 29.4	-0.7
BRVK				IAmb	IAmb	20 31 30.8	
	comp=Z,8.0nm,1.0s						
INK	Inuvik	87.89	21	P	P	20 31 32.4	+0.8
	comp=Z,3.3nm,0.9s,baz=220,slow=2.6,SNR=3.2						
INK	Inuvik	87.89	21	P	P	20 31 32.0	+0.3
INK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
INK	Inuvik	87.89	21	P	P	20 31 32.0	+0.3
INK				IAmb	IAmb	20 31 49.8	
	comp=Z,9.3nm,1.1s						
INK	Inuvik	87.89	21	P	P	20 31 32.5	+0.8
	baz=255						
BUCK	Buck Mountain	89.40	46	P	P	20 31 39.2	-0.3
HRA	Herat	91.27	304	P	P	20 31 47.5	-1.1
NVAR	Mina Array Bea	92.52	52	LR	LR	21 04 39.2	
	comp=Z,452nm,21.6s,baz=184,slow=30						
ABKAR	Akbulak array	93.62	319	P	P	20 31 57.4	-1.5
SYO	Syowa Base	94.28	200⇑	epP	pP	20 32 04.2	+0.3
YKA	Yellowknife Ar	95.08	28	P	P	20 32 06.1	+0.9
	comp=Z,1.2nm,0.7s,baz=272,slow=4.8,SNR=17						
EDM	Edmonton	96.07	37	P	P	20 32 10.2	+0.1
EDM				pmax	pmax		
	comp=Z,21nm,1.3s						
EDM	Edmonton	96.07	37	P	P	20 32 10.2	+0.1
PDAR	Pinedale Array	99.14	47	P	Pdif	20 32 25.3	+0.9
	comp=Z,0.4nm,0.5s,baz=249,slow=1.5,SNR=4.8						
PDAR				LR	LR	21 11 02.8	
	comp=Z,517nm,20.2s,baz=269,slow=32						
PDAR	Pinedale Array	99.14	47		Pdif	20 32 25.3	+0.9
MAK	Makhachkala	102.57	313	eP	Pdif	20 32 32.2	-7.1
MAK				i		20 36 52.9	
MAK				e		20 43 10.5	
MAK				ePS	PS	20 45 56.8	-2.8
MAK				eSS	SS	20 51 28.8	-2.7
MAK				pmax	pmax		
	comp=Z,281nm,1.4s						
MAK				MLR	MLR		
	comp=Z,3µm,19.0s						
SNAA	Sanae	102.98	188	P	Pdif	20 32 29.3	-11
MNK	Minsk	111.83	328	i PKIKP	PKiKP	20 37 21.1	+3.7
MNK				i		20 37 57.6	
MNK				i PPP	PPP	20 40 18.4	
MNK				i PS	PS	20 47 29.2	-3.6
MNK				i SS	SS	20 53 35.9	-0.1
MNK				i SSS	SSS	20 57 45.8	
MNK				pmax	pmax		
	comp=N,8.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MNK	Minsk	111.83	328	i PKP	PKiKP	20 37 21.2	+3.8
MNK				i PKP	PKiKP	20 37 21.2	+3.8
	comp=N,8.0nm,1.0s						
MNK				i PKP	PKiKP	20 37 21.2	+3.8
	comp=Z,4.0nm,1.0s,baz=64						
MNK				i PP	PP	20 37 57.7	-2.0
MNK				i PPP	PPP	20 40 18.5	
MNK				i PKS	PKSdf	20 40 51.7	-2.1
MNK				i PS	PS	20 47 29.3	-3.5
MNK				i SS	SS	20 53 36.0	-0.1
MNK				i SSS	SSS	20 57 45.9	
MNK				i LR	LR	21 15 57.4	
MNK				i LRM	MLR	21 20 38.4	
	comp=Z,1µm,13.5s						
MNK				i LRM	MLR	21 20 41.0	
	comp=E,157nm,13.5s						
MNK				i LRM	MLR	21 20 42.3	
	comp=N,886nm,13.5s						
CONA	Conrad Observa	121.66	326	eP	PKPdf	20 37 36.8	+0.2
	comp=N,1.9nm,0.8s						
GERES	GERESS Array B	122.29	328	PKP	PKPdf	20 37 37.9	+0.1
	comp=N,0.7nm,0.7s,baz=42,slow=2.2,SNR=8.8						
SOKA	Soboth	122.84	326	eP	PKiKP	20 37 40.8	+1.7
	comp=N,3.0nm,0.8s						
KBA	Koelnbreinsper	123.55	327	eP	PKPdf	20 37 40.2	-0.2
	comp=N,6.3nm,1.2s						
ABTA	Abfaltersbach	124.20	327	eP	PKPdf	20 37 41.1	-0.4
	comp=N,8.0nm,1.5s						
WATA	Walderalm	124.34	328	eP	PKPdf	20 37 40.3	-1.6
	comp=N,6.2nm,1.4s						
WTTA	Wattenberg	124.36	328	eP	PKPdf	20 37 42.3	+0.4
	comp=N,7.6nm,1.5s						
STAL	STALIGIAL	124.39	326	PKPdf	PKPdf	20 37 41.5	-0.4
MOTA	Moosalm	124.59	328	eP	PKPdf	20 37 42.2	-0.2
	comp=N,4.2nm,1.2s						
SQTA	Sankt Quirin	124.61	328	eP	PKPdf	20 37 42.0	-0.3
	comp=N,5.4nm,1.3s						
SIV	San Ignacio	142.49	122	PKP	PKPdf	20 38 13.6	-2.9
	comp=N,3.0nm,0.9s,baz=241,slow=6.2,SNR=7.8						
PTGA	Pitinga	148.43	97	PKPbc	PKPbc	20 38 30.8	+0.5
	comp=N,1.7nm,0.6s,baz=225,slow=2.9,SNR=1.2						
TORD	Torodi Ar. Bea	148.54	289	PKPbc	PKPbc	20 38 30.2	-0.2
	comp=N,5.5nm,0.8s,baz=67,slow=2.2,SNR=30						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
TORD	Torodi Ar. Bea	148.54	289	PKPdf	PKPdf	20 38 25.4	-1.5
BDFB	Brasilia	152.93	135	PKPbc	PKPbc	20 38 38.8	-2.2
	comp=N,2.1nm,0.9s,baz=279,slow=7.1,SNR=1.8						
KOWA	Kowa	153.40	296	PKPdf	PKPdf	20 38 34.2	-0.1

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*IDC **24** 20:26:52.9±1.8,3°.96S×151°.67E,h0^{km},mb3.8/5,mb1 4.0/6,mb1mx3.5/44,mbtmp3.8/6,ML1.3/1,Error ellipse: s-maj=61.2km s-min=24.8km az=117.0*

ISC 24 20:26:53.9±1.9,**3°.9S**±0°.2×**151°.7E**±0°.4,**h10**^{km},**n7**,σ**1^{s}.20**/7,**mb3.7**/5,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.09	219	Pn	Pn	20 28 38.5	+0.8
	0.3nm,0.3s,baz=42,slow=12,SNR=2.8						
WRA	Warramunga Arr	23.25	225	P	P	20 32 00.7	-1.0
	2.0nm,0.8s,baz=49,slow=10,SNR=9.8						
ASAR	Alice Springs	26.10	220	P	P	20 32 27.6	-0.5
	1.5nm,0.9s,baz=44,slow=8.2,SNR=5.7						
CMAR	Chiang Mai Arr	56.50	295	P	P	20 36 37.5	+0.8
	1.6nm,0.8s,baz=110,slow=5.9,SNR=10						
MKAR	Makanchi Array	78.93	319	P	P	20 38 57.5	-0.3
	0.4nm,0.7s,baz=95,slow=6.5,SNR=2.9						
ILAR	Eielson Array	81.75	22	P	P	20 39 13.2	+0.6
	0.6nm,0.8s,baz=251,slow=6.1,SNR=5.3						
TORD	Torodi Ar. Bea	148.98	289	PKPbc	PKPab	20 46 45.7	-1.7
	0.9nm,0.8s,baz=68,slow=2.3,SNR=3.9						

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*IDC **24** 20:27:59.3±0.9,55°.94S×123°.42W,h0^{km},mb4.0/5,mb1 4.2/5,mb1mx3.8/40,mbtmp4.0/5,MS4.6/4,Ms1 4.6/4,ms1mx4.1/36,Error ellipse: s-maj=45.5km s-min=28.3km az=141.0*

*NEIC **24** 20:28:01.1±1.8,56°.0S±0°.2×123°.4W±0°.4,h10^{km}±3^{km},mb4.1/3,Error ellipse: s-maj=35.1km s-min=26.7km az=131.0*

ISC 24 20:28:00.8±0.9,**55°.9S**±0°.2×**123°.4W**±0°.2,**h10**^{km},**n30**,σ**0^{s}.77**/10,**mb4.0**/5,**MS4.7**/4,**Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	Palmer Station	29.57	132	LR	LR	20 43 16.6	
	comp=Z,449nm,18.2s,baz=224,slow=31						
USHA	Ushuaia	30.57	111	LR	LR	20 42 45.1	
	comp=Z,878nm,20.3s,baz=197,slow=29						
QSPA	South Pole Qui	34.26	180	P	P	20 34 47.2	+0.6
	2.0nm,0.8s,baz=117,slow=16,SNR=3.9						
QSPA	South Pole Qui	34.26	180	IAmb	IAmb	20 35 01.8	
	comp=Z,4.8nm,1.1s						
H03S2	Juan Fernandez	37.60	73	T	T	21 15 03.3	
	SNR=27						
H03S1	Juan Fernandez	37.60	73	T	T	21 15 00.5	
	SNR=26						
H03S3	Juan Fernandez	37.61	73	T	T	21 15 02.9	
	SNR=29						
H03N3	Juan Fernandez	37.89	73	T	T	21 15 16.2	
	baz=221,slow=72,SNR=38						
H03N2	Juan Fernandez	37.90	73	T	T	21 15 15.4	
	baz=221,slow=72,SNR=61						
H03N1	Juan Fernandez	37.91	73	T	T	21 15 22.1	
	baz=221,slow=72,SNR=33						
VNA3	Neumayer Olymp	44.86	155	P	P	20 36 14.3	-0.3
VNA1	Neumayer--Stat	45.61	155	P	P	20 36 06.8	-14
VNA2	Neumayer--Watz	45.62	156	P	P	20 36 20.7	+0.2
	baz=217,slow=10						
LPAZ	La Paz	57.44	69	P	P	20 37 49.5	-0.8
	comp=Z,1.5nm,0.9s,baz=101,slow=1.8,SNR=4.0						
LPAZ	La Paz	57.44	69	IAmb	IAmb	20 38 08.0	
	comp=Z,4.6nm,1.1s						
H01W1	Cape Leeuwin H	77.14	225	T	T	22 05 31.5	
	baz=150,slow=76,SNR=21						
H01W2	Cape Leeuwin H	77.14	225	T	T	22 05 28.8	
	baz=150,slow=76,SNR=27						
H01W3	Cape Leeuwin H	77.16	225	T	T	22 05 33.6	
	baz=150,slow=76,SNR=18						
ASAR	Alice Springs	77.49	246	P	P	20 39 56.0	-0.4
	comp=Z,1.3nm,0.8s,baz=135,slow=6.0,SNR=9.1						
WRA	Warramunga Arr	80.33	249	P	P	20 40 11.9	-0.1
	comp=Z,2.1nm,0.8s,baz=146,slow=5.0,SNR=9.5						
WRA	Warramunga Arr	80.33	249	IAmb	IAmb	20 40 18.6	
	comp=Z,0.4nm,1.4s						
PMG	Port Moresby	81.97	265	LR	LR	21 12 40.4	
	comp=Z,583nm,19.0s,baz=160,slow=33						
TXAR	Lajitas Array	86.58	17	P	P	20 40 45.1	+1.3
	comp=Z,0.4nm,0.9s,baz=190,slow=9.8,SNR=3.3						
TXAR				LR	LR	21 11 56.8	
	comp=Z,562nm,19.2s,baz=0.0,slow=30						
H11S2	WAKE ISLAND Hy	94.41	297	T	T	22 26 06.5	
	baz=148,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	94.42	297	T	T	22 26 04.3	
	baz=148,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	94.42	297	T	T	22 26 04.1	
	baz=148,slow=76,SNR=9.2						
H11N2	WAKE ISLAND Hy	95.36	297	T	T	22 27 14.4	
	SNR=3.7						
ILAR	Eielson Array	121.70	348	PKP	PKPdf	20 46 52.6	-0.6
	comp=Z,0.5nm,0.8s,baz=186,slow=1.8,SNR=2.4						
SONM	Songino Array	148.82	276	PKPbc	PKiKP	20 47 49.4	+0.4
	comp=Z,0.6nm,0.9s,baz=120,slow=5.2,SNR=3.7						
MKAR	Makanchi Array	161.62	251	PKPab	PKPab	20 48 45.2	-0.8
	comp=Z,0.7nm,0.8s,baz=126,slow=6.3,SNR=4.3						

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*ANF **24** 20:30:36.9±0.4,41°.82N×119°.55W,h0^{km},ML4.8/23,Error ellipse: s-maj=3.5km s-min=2.6km az=93.0*

*NEIC **24** 20:30:37.0±3.2,41°.92N±0°.04×119°.61W±0°.04,h5^{km}±1^{km},Error ellipse: s-maj=6.5km s-min=5.3km az=3.0*

*REN **24** 20:30:38.1±2.9,41°.88N±0°.04×119°.59W±0°.05,h11^{km}±3^{km},ML4.4/5,mb4.7/83(NEIC),ML4.6/112(NEIC),Mwr4.7/49(NEIC),Error ellipse: s-maj=5.7km s-min=5.0km az=185.0*

*IDC **24** 20:30:38.5±0.4,41°.84N×119°.59W,h0^{km},mb4.2/18,mb1 4.3/25,mb1mx4.2/61,mbtmp4.1/25,ML3.7/7,MS4.7/6,Ms1 4.7/6,ms1mx4.0/61,Error ellipse: s-maj=8.7km s-min=5.6km az=18.0*

*NEIC **24** 20:30:39.7,41°.85N×119°.64W,h6^{km},Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.87; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$0.96; $M_{r\theta}$-0.58; $M_{\theta\phi}$0.50; $M_{\phi r}$-0.00; Fault plane solution: $M_0$1.20000×10^{16} NP1:ϕ_s48.83000°,δ58.38000°,λ-54.01000°. NP2:ϕ_s174.66000°,δ46.45000°,λ-133.66000°. Principal axes: T 1.1873, Plg7.0000°, Azm114.0000°; N 0.0178, Plg30.0000°, Azm208.0000°; P -1.2051, Plg59.0000°, Azm13.0000°;*

ISC 24 20:30:38.7±0.4,**41°.89N**±0°.03×**119°.60W**±0°.03,**h10**^{km},**n266**,σ**1^{s}.94**/267,**mb4.6**/57,**MS4.5**/3,**Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.52	272		Pb	20 30 48.6	-1.5
MOD				Sg	Sb	20 30 55.6	-2.1
MOD				IAML		20 30 57.5	
	comp=N,50µm,0.8s						
MOD				IAML		20 30 58.5	
	comp=E,49µm,0.9s						
WVOR	Wild Horse Val	0.90	52		Pn	20 30 55.5	-2.1
WVOR					Sn	20 31 09.3	-1.4
WVOR				IAML		20 31 15.6	
	comp=E,9µm,0.8s						
K05A	Summer Lake	1.27	312		Pg	20 31 02.3	-0.8
K05A				IAML		20 31 26.9	
	comp=E,14µm,1.4s						
M04C	Macdoel	1.68	267	P	Pb	20 31 08.1	-1.6
	baz=86,SNR=856						
M04C				S	Sg	20 31 31.3	-1.3
	baz=86						
J08A	Circle Bar Ran	1.69	29		Pb	20 31 08.3	-1.6
J08A				IAML		20 31 36.2	
	comp=E,4µm,0.8s						
J08A				IAML		20 31 40.6	
	comp=N,4µm,1.0s						
K04D	Chiloquin, OR	1.76	295	P	Pb	20 31 09.5	-1.6
	baz=114,SNR=149						
K04D				Sb	Sg	20 31 36.1	+0.8
	baz=114						
J05D	Fort Rock, OR	1.85	320	P	Pb	20 31 10.8	-1.8
	baz=139						
J05D				S	Sg	20 31 38.3	+0.3
	baz=139						
L04D	Klamath Falls	2.04	280	P	Pb	20 31 13.2	-2.8
	baz=99,SNR=1000						
L04D				Sb	Sg	20 31 43.9	-0.3
	baz=99						
PINE	Pine Mountain	2.14	333	Pn	Pn	20 31 13.2	-1.5
PINE				IAML		20 32 01.1	
	comp=N,2µm,2.1s						
PAHR	Pah Rah Range	2.19	176		Pn	20 31 15.3	+0.1
PAHR				Pg	Pb	20 31 18.3	0.0
PAHR				IAML		20 31 50.1	
	comp=N,3µm,0.5s						
PAHR				IAML		20 31 53.5	
	comp=E,3µm,0.8s						
J04D	Umpqua Nationa	2.29	307	P	Pb	20 31 16.7	-3.6
	baz=125,SNR=34						
J04D				Sb	Sg	20 31 52.4	0.0
	baz=125						
O03E	Paynes Creek	2.30	227	P	Pn	20 31 16.6	-0.2
	baz=46						
O03E				Sb	Sg	20 31 50.1	-2.6
	baz=46						
BMN	Battle Mountai	2.31	128		Pn	20 31 17.4	+0.5
BMN				IAML		20 31 52.6	
	comp=N,3µm,0.9s						
BMN				IAML		20 31 58.4	
	comp=E,3µm,1.4s						
YBH	Yreka Blue Hor	2.33	267	Pn	Pb	20 31 17.4	-3.4
	comp=E,16nm,0.3s,baz=59,slow=12,SNR=87						
YBH				Lg	Lg	20 31 51.8	
	comp=E,291nm,0.3s,baz=335,slow=2.3,SNR=18						
YBH	Yreka Blue Hor	2.33	267		Pn	20 31 16.9	-0.3
YBH				IAML		20 32 02.2	
	comp=E,2µm,1.8s						
YBH				IAML		20 32 03.3	
	comp=N,2µm,1.7s						
M02C	Callahan	2.49	260	P	Pn	20 31 18.6	-0.7
	baz=78,SNR=49						
M02C				Sb	Sg	20 31 56.9	-1.7
	baz=78						
N02D	Trinity Center	2.51	250	P	Pn	20 31 19.1	-0.5
	baz=68,SNR=138						
N02D				Sb	Sg	20 31 57.3	-1.8
	baz=68						
WDC	Whiskeytown Da	2.57	240		Pn	20 31 19.9	-0.5
WDC				IAML		20 32 01.4	
	comp=N,5µm,0.8s						
WDC				IAML		20 32 02.4	
	comp=E,2µm,0.8s						
VCNR	Virginia City	2.59	181		Pn	20 31 19.6	-1.2
HUMO	Hull Mountain	2.59	287		Pn	20 31 20.1	-0.6
HUMO				IAML		20 32 02.0	
	comp=N,2µm,1.1s						
HUMO				IAML		20 32 12.5	
	comp=E,1µm,1.9s						
MPK	Martis Peak	2.61	187		Pn	20 31 19.7	-1.5
ORV	Oroville	2.74	212		Pn	20 31 23.1	+0.4
I05D	Terrebonne, OR	2.76	333	Pb	Pg	20 31 28.3	-3.2
	baz=152						
PNTR	Pine Nut	2.79	180		Pn	20 31 22.3	-1.4
I04A	Tendick Farm,	2.81	314	Pb	Pg	20 31 29.4	-3.1
	baz=132						
I04A				Sb	Sg	20 32 07.4	-1.6
	baz=132						
RUBR	Rubicon Trail	2.86	189		Pn	20 31 22.7	-1.9
RUBR				IAML		20 32 37.8	
	comp=N,3µm,1.3s						
YERR	Yerington	2.91	174		Pn	20 31 23.7	-1.5
EMB	Emerald Bay	2.93	188		Pn	20 31 24.9	-0.7
EMB				IAML		20 32 14.2	
	comp=E,2µm,1.4s						
EMB				IAML		20 32 16.9	
	comp=N,2µm,0.8s						
O02D	Mt. Diablo Mer	2.96	236	P	Pn	20 31 25.0	-0.7
	baz=54,SNR=30						
O02D				Sb	Sg	20 32 09.6	-3.9
	baz=54						
L02E	Cave Junction	2.99	277	P	Pn	20 31 26.7	+0.5
	baz=94						
L02E				Sb	Sg	20 32 11.1	-3.7
	baz=94						
KVN	Kaiserville	3.06	158		Pn	20 31 25.3	-1.9
KVN				IAML		20 32 20.7	
	comp=E,2µm,0.7s						
KVN				IAML		20 32 20.9	
	comp=N,1µm,1.3s						
K02D	Willamette Mer	3.12	286	P	Pn	20 31 28.5	+0.4
	baz=104,SNR=572						
MFID	Camas Ranch	3.17	60	Pn	Pn	20 31 28.4	-0.4
MFID				IAML		20 32 29.8	
	comp=N,1µm,0.9s						
MFID				IAML		20 32 38.3	
	comp=N,2µm,1.0s						
KHMM	Horse Mountain	3.27	253		Pn	20 31 27.4	-2.7
I03D	Drain, OR	3.30	305	Sb	Sg	20 32 21.6	-3.0
	baz=122						
RYN	Ryan	3.36	165		Pn	20 31 29.6	-1.7
RYN				IAML		20 32 31.0	
	comp=N,2µm,0.7s						
RYN				IAML		20 32 31.4	
	comp=E,2µm,0.8s						
H04A	Detroit Lake	3.37	327		Pb	20 31 38.5	-0.1
BMO	Blue Mountains	3.40	29	Pn	Pn	20 31 29.6	-2.3
G08A	Pilot Rock	3.43	8		Pb	20 31 37.6	-2.0
J01E	Myrtle Point	3.44	293	P	Pn	20 31 34.0	+1.6
	baz=110						
J01E				Sg	Sg	20 32 32.6	+3.3
	baz=110						
KBO	Bosley Butte	3.46	277		Pb	20 31 36.6	-3.4
ELK	Elko	3.48	108	Pn	Pn	20 31 34.6	+1.6
	comp=E,4.4nm,0.3s,baz=295,slow=12,SNR=75						
ELK				Lg	Lg	20 32 25.5	
	comp=E,87nm,0.3s,baz=32,slow=21,SNR=8.9						
ELK	Elko	3.48	108		Pn	20 31 34.6	+1.6
H04D	Lebanon	3.49	320	Pb	Pb	20 31 40.3	-0.3
	baz=138,SNR=23						
JCC	Jacoby Creek,	3.50	254		Pb	20 31 40.1	-0.6
JCC				IAML		20 32 35.3	
	comp=N,2µm,1.4s						
KMRM	Mail Ridge	3.52	243	Pn	Pn	20 31 33.5	0.0
G05D	Wamic, OR	3.58	340	Pb	Pb	20 31 42.0	0.0
	baz=159,SNR=8.4						
NVAR	Mina Array Bea	3.59	164	Pn	Pn	20 31 35.8	+1.1
	comp=N,4.7nm,0.3s,baz=342,slow=13,SNR=54						
NVAR				Lg	Lg	20 32 31.2	
	comp=N,154nm,0.3s,baz=208,slow=22,SNR=16						
NVAR	Mina Array Bea	3.59	164		Pn	20 31 34.7	+0.1
NV11	Mina Array Sit	3.62	162	Pn	Pn	20 31 35.0	0.0
NV11				IAML		20 32 47.3	
	comp=E,1µm,1.5s						
NV11				IAML		20 32 47.9	
	comp=N,1µm,1.6s						
LHV	Little Huntoon	3.73	167		Pn	20 31 33.6	-2.6
KCPM	Cahto Peak	3.74	235		Pn	20 31 35.6	-0.9
KCPM				IAML		20 32 47.0	
	comp=N,1µm,1.4s						
KCPM				IAML		20 33 00.9	
	comp=E,1µm,1.0s						
HOOD	Mount Hood Mea	3.74	337		Pb	20 31 45.3	+0.4
COR	Corvallis	3.82	316		Pb	20 31 45.1	-1.1
COR				IAML		20 32 55.4	
	comp=E,723nm,1.4s						
COR				IAML		20 33 00.4	
	comp=E,792nm,2.0s						
I02E	Swisshome, OR	3.82	307	Pb	Pb	20 31 46.2	0.0
	baz=124						
CMB	Columbia Colle	3.90	189		Pn	20 31 38.2	-0.4
CMB				IAML		20 32 46.1	
	comp=N,726nm,0.7s						
CMB				IAML		20 32 54.2	
	comp=E,579nm,1.0s						
HOPS	Hopland Field	3.92	224		Pn	20 31 36.8	-2.1
HOPS				IAML		20 33 06.4	
	comp=N,541nm,1.4s						
HOPS				IAML		20 33 21.6	
	comp=E,428nm,2.0s						
GDXM	Geysers	3.93	219		Pn	20 31 38.2	-0.9
F07A	Phinny Hill Vi	4.01	357		Pn	20 31 38.8	-1.3
F07A				IAML		20 33 05.7	
	comp=E,394nm,1.8s						
PLID	Pearl Lake	4.13	38	Pn	Pn	20 31 42.8	+0.7
HLID	Hailey	4.17	65	Pn	Pn	20 31 42.9	+0.4
HLID				IAML		20 33 04.8	
	comp=E,772nm,1.1s						
HLID				IAML		20 33 04.8	
	comp=E,797nm,1.4s						
HLID	Hailey	4.17	65	P	Pn	20 31 42.6	0.0
	baz=248						
F05D	White Salmon	4.22	342	Pg	Pg	20 31 59.0	-0.4
	baz=161						
F05D				Sb	Sg	20 32 49.8	-4.2
	baz=161						
TPH	Tonopah	4.22	154	Pn	Pn	20 31 43.5	+0.2
G03D	McMinnville, O	4.26	323	Pg	Pg	20 32 00.8	+0.6
	baz=140						
F10A	Beach Ranch, E	4.43	22		Pn	20 31 46.5	+0.5
HEBO	Mount Hebo	4.49	319		Pb	20 31 55.8	-1.8
HEBO				IAML		20 33 25.8	
	comp=E,625nm,1.8s						
HEBO				IAML		20 33 26.8	
	comp=N,689nm,2.0s						
HAWA	Hanford	4.50	1	Pn	Pn	20 31 43.5	-3.4
KCC	Kaiser Creek	4.56	177		Pn	20 31 51.9	+4.1
E08A	Dider Farm, El	4.62	5		Pn	20 31 47.9	-0.6
E07A	Sunnyside	4.67	358		Pn	20 31 46.5	-2.8
E07A				IAML		20 33 29.8	
	comp=E,265nm,3.0s						
R11A	Troy Canyon, C	4.69	138	Pn	Pn	20 31 50.3	+0.6
R11A				IAML		20 33 10.3	
	comp=E,477nm,2.0s						
R11A				IAML		20 33 17.0	
	comp=N,393nm,1.3s						
E09A	Wood Farm, Sta	4.74	12	Pn	Pn	20 31 47.3	-2.9
TIN	Tinemaha, Big	4.94	167	Sb	Sb	20 33 06.0	+1.1
	baz=348						
BGU	Big Grassy Mou	5.03	99		Pn	20 31 55.3	+0.9
BGU				IAML		20 33 25.0	
	comp=N,508nm,1.3s						
HVU	Hansel Valley	5.10	89	Pn	Pn	20 31 55.0	-0.3
D08A	Wollman Farm,	5.19	5	Pn	Pn	20 31 55.9	-0.5
SAO	San Andreas Ge	5.31	196	Pn	Pn	20 31 56.9	-1.2
SPUT	South Promonto	5.39	94	Pn	Pn	20 31 57.2	-2.1
SPUT				IAML		20 33 35.6	
	comp=E,336nm,2.7s						
SPUT				IAML		20 33 38.3	
	comp=N,406nm,2.0s						
DUG	Dugway, Tooele	5.40	106	Pn	Pn	20 31 58.5	-0.9
DUG	Dugway, Tooele	5.40	106	P	Pn	20 32 01.2	+1.8
	baz=290						
LTY	Liberty	5.42	352	Pg	Pb	20 32 11.3	-2.2
E03A	Lebam	5.46	330	Pg	Pb	20 32 12.9	-1.1
D05A	Enumclaw	5.57	343	Pn	Pn	20 31 59.9	-1.6
TPNV	Topopah Spring	5.57	151	P	Pn	20 32 04.3	+2.6
	baz=333						
MCMT	McKenzie Canyo	5.73	57		Pn	20 32 03.9	-0.1
PMPB	Monarch Peak	5.74	190	Pn	Pn	20 32 03.9	-0.1
D04E	Lakebay	5.75	338	P	Pn	20 32 06.0	+2.0
	baz=156						
C09A	Chrisman Ranch	5.99	9	Pn	Pn	20 32 04.7	-2.6
NLU	North Lily Min	6.02	106	Pn	Pn	20 32 06.9	-1.1
CTU	Camp Tracy	6.03	99	Pn	Pn	20 32 06.7	-1.4
MPMC	Manual Prospec	6.05	164	P	Pn	20 32 08.7	+0.3
	baz=345						
DLMT	Dillon	6.16	53	Pn	Pn	20 32 08.2	-1.6
ECR	Eagle Creek	6.20	76	Pn	Pn	20 32 09.1	-1.4
ISA	Isabella, Lake	6.28	172	Pn	Pn	20 32 07.2	-4.1
QSM	Queen of Sheba	6.29	159	Pn	Pn	20 32 09.8	-1.6
MPU	Maple Canyon	6.32	105	Pn	Pn	20 32 09.2	-2.8
SHPR	Sheep Range	6.38	146	Pn	Pn	20 32 10.8	-2.2
MSO	Missoula	6.39	37	P	Pn	20 32 15.5	+2.6
	baz=221						
ICU	Indian Springs	6.45	135		Pn	20 32 17.7	+3.8
LRM	Limekiln Ridge	6.49	50	Pn	Pn	20 32 13.1	-1.4
MVU	Marysvale	6.59	118		Pn	20 32 14.1	-1.7
SZCU	Shurtz Canyon	6.60	128	Pn	Pn	20 32 18.4	+2.5
MSU	Marysvale	6.61	118	Pn	Pn	20 32 17.3	+1.2
B05A	Bryant	6.62	345	P	Pn	20 32 20.1	+4.2
	baz=164						
BOZ	Bozeman (W)	6.86	55		Pn	20 32 17.7	-1.8
BOZ	Bozeman (W)	6.86	55	P	Pn	20 32 20.5	+1.0
	baz=240						
MTPU	Mount Pierson	6.87	122	Pn	Pn	20 32 16.9	-2.9
YMR	Madison River	6.89	63	Pn	Pn	20 32 17.4	-2.5
TMUT	Trail Mountain	6.89	109		Pn	20 32 20.8	+0.8
LCMT	Little Creek M	6.92	133		Pn	20 32 17.1	-3.1
GSC	Goldstone, Bar	6.93	161	Pn	Pn	20 32 17.4	-3.0
JTMT	Jette	6.97	31	Pn	Pn	20 32 18.8	-2.1
YHH	Holmes Hill	7.01	63	Pn	Pn	20 32 18.9	-2.7
H17A	Grant Village	7.06	66	Pn	Pn	20 32 20.6	-1.7
Q16A	Castle Valley	7.08	112	Pn	Pn	20 32 20.2	-2.3
KNB	Kanab	7.15	131	Pn	Pn	20 32 21.0	-2.5
P17A	Butcher Ranch,	7.15	107	Pn	Pn	20 32 21.4	-2.0
LKWY	Lake	7.23	65	Pn	Pn	20 32 21.3	-3.3
HRY	Holter Researc	7.37	46		Pn	20 32 25.4	-1.0
SRU	San Rafael Swe	7.45	109		Pn	20 32 25.4	-2.2
YMP	Mirror Lake Pl	7.46	64		Pn	20 32 27.1	-0.7
BW06	Boulder Array	7.50	80	Pn	Pn	20 32 26.9	-1.4
BW06	Boulder Array	7.50	80	P	Pn	20 32 32.9	+4.6
	baz=267						
PD31	Pinedale Array	7.50	80		Pn	20 32 25.2	-3.0
PDAR	Pinedale Array	7.50	80	Pn	Pn	20 32 31.8	+3.6
	comp=N,0.2nm,0.3s,baz=262,slow=8.9,SNR=24						
GCMT	Greycliff	8.17	58	Pn	Pn	20 32 36.0	-1.4
PFO	Pinyon Flats O	8.63	162	LR	LR	20 36 13.1	
	comp=N,1µm,18.9s,baz=231,slow=39						
O20A	White River Ci	8.77	98	Pn	Pn	20 32 44.8	-0.9
K22A	Casper	9.73	81		Pn	20 32 56.0	-2.8
SMCO	Snowmass	9.99	102		Pn	20 33 03.0	+0.5
W18A	Petrified Fore	10.26	128	Pn	Pn	20 33 05.5	-0.6
X18A	Snowflake	10.56	131	Pn	Pn	20 33 08.7	-1.5
ANMO	Albuquerque	12.41	120	Pn	Pn	20 33 38.0	+2.5
	comp=N,0.1nm,0.3s,baz=314,slow=13,SNR=10						
MNTX	Cornudas Mount	15.25	127	Pn	Pn	20 34 11.6	-2.4
MSTX	Muleshoe	15.44	115	Pn	Pn	20 34 12.7	-3.9
MSTX				IAmb	IAmb	20 34 26.6	
	comp=Z,30nm,1.4s						
AMTX	Amarillo	15.68	111	Pn	Pn	20 34 17.8	-1.9
ECSD	EROS Data Cent	16.96	76	Pn	Pn	20 34 34.0	-1.9
ECSD				IAmb	IAmb	20 34 45.3	
	comp=Z,46nm,1.4s						
KAN16	Harper SW Stat	17.24	99		Pn	20 34 36.7	-2.7
KAN12	Harper NE Stat	17.26	98	Pn	Pn	20 34 37.3	-2.5
KAN12				IAmb	IAmb	20 34 56.2	
	comp=Z,36nm,1.0s						
L34A	Svendsen Farm,	17.28	82	Pn	Pn	20 34 36.5	-3.4
KSU1	Kansas State U	17.70	91	P	Pn	20 34 43.7	-1.5
WMOK	Wichita Mounta	17.81	107		Pn	20 34 43.9	-2.7
DLBC	Dease Lake	17.83	342	P	P	20 34 48.3	+0.9
	comp=Z,0.2nm,0.3s,baz=188,slow=22,SNR=6.9						
DLBC	Dease Lake	17.83	342	P	P	20 34 48.3	+0.9
TXAR	Lajitas Array	17.98	129	P	P	20 34 51.2	+1.9
	comp=Z,0.1nm,0.3s,baz=321,slow=9.7,SNR=22						
TXAR				PcP	PcP	20 39 26.1	+2.1
	comp=Z,0.0nm,0.3s,baz=163,slow=1.3,SNR=4.5						
TXAR				LR	LR	20 42 18.9	
	comp=Z,1µm,18.1s,baz=0.0,slow=39						
TXAR	Lajitas Array	17.98	129		PcP	20 39 26.1	+2.1
TXAR	Lajitas Array	17.98	129	Pn	Pn	20 34 45.2	-3.7
N35A	Tabor	18.00	85		P	20 34 48.6	-0.8
N35A				IAmb	IAmb	20 34 56.9	
	comp=Z,141nm,1.4s						
ULM	Lac du Bonnet	18.41	55	LR	LR	20 41 40.3	
	comp=Z,4µm,18.7s,baz=168,slow=36						
QUOK	Quay	18.66	100	P	P	20 34 54.5	-2.1
OK030	Cody Creek RV	18.70	101	P	P	20 34 55.3	-1.9
OK030				IAmb	IAmb	20 35 08.6	
	comp=Z,47nm,1.4s						
OK034	N. Norfolk Rd.	18.72	101	P	P	20 34 54.5	-2.8
W35A	Tecumseh	18.98	103		P	20 34 56.3	-4.0
F36A	Milaca	19.18	69	P	P	20 34 58.8	-3.5
TUL1	Leonard	19.44	100	P	P	20 35 04.2	-1.0
SCIA	State Center	19.62	81	P	P	20 35 03.6	-3.6
SCIA				IAmb	IAmb	20 35 18.2	
	comp=Z,31nm,1.1s						
SPMN	Marine on St.	19.67	71	P	P	20 35 04.4	-3.3
SPMN				IAmb	IAmb	20 35 14.0	
	comp=Z,36nm,1.3s						
N38A	Joes South For	19.81	84	P	P	20 35 08.2	-1.0
N38A				IAmb	IAmb	20 35 15.3	
	comp=Z,49nm,1.1s						
K38A	Parkersburg	19.85	79	P	P	20 35 08.0	-1.7
K38A				IAmb	IAmb	20 35 16.9	
	comp=Z,81nm,1.1s						
P38A	Dawn	19.86	88	P	P	20 35 07.1	-2.7
P38A				IAmb	IAmb	20 35 16.7	
	comp=Z,24nm,1.1s						
U38A	Gravette	20.26	97	P	P	20 35 11.1	-3.1
U38A				IAmb	IAmb	20 35 24.7	
	comp=Z,23nm,0.9s						
X37A	Clayton	20.34	103	P	P	20 35 11.8	-3.3
S39A	Bolivar	20.59	93	P	P	20 35 16.1	-1.7
S39A				IAmb	IAmb	20 35 26.9	
	comp=Z,34nm,1.0s						
YKA	Yellowknife Ar	20.85	7	P	Pn	20 35 22.6	-0.2
	comp=Z,8.5nm,1.0s,baz=191,slow=9.8,SNR=46						

YKA				LR	LR	20 43 54.6	
	comp=Z,2µm,20.2s,baz=0.0,slow=38						
YKA	Yellowknife Ar	20.85	7	P	Pn	20 35 20.6	-2.2
435B	Jarrell	20.85	115	P	P	20 35 19.9	-0.8
P40A	Paris	20.99	87	P	P	20 35 21.5	-0.5
L40A	Anamosa	21.07	80	P	P	20 35 21.9	-1.0
L40A				IAmb	IAmb	20 35 30.3	
	comp=Z,82nm,1.2s						
R40A	Maddies Statio	21.18	91	P	P	20 35 23.2	-1.0
R40A				IAmb	IAmb	20 35 29.5	
	comp=Z,35nm,1.4s						
W39A	Magazine	21.22	100	P	P	20 35 22.6	-2.0
W39A				IAmb	IAmb	20 35 33.7	
	comp=Z,32nm,1.1s						
I40A	Norwalk	21.29	75	P	P	20 35 23.9	-1.4
I40A				IAmb	IAmb	20 35 30.8	
	comp=Z,81nm,1.3s						
237A	Washetta, Mont	21.36	110	P	P	20 35 24.9	-1.2
237A				IAmb	IAmb	20 35 32.5	
	comp=Z,61nm,1.1s						
U40A	Yellville	21.43	96	P	P	20 35 25.3	-1.5
U40A				IAmb	IAmb	20 35 34.3	
	comp=Z,29nm,1.0s						
MGMO	Mountain Grove	21.57	94	P	P	20 35 26.9	-1.4
MGMO				IAmb	IAmb	20 35 35.6	
	comp=Z,26nm,1.1s						
CCM	Cathedral Cave	22.02	91	P	P	20 35 30.9	-2.2
CCM				IAmb	IAmb	20 35 40.8	
	comp=Z,20nm,0.8s						
FCAR	Ozark Folk Cen	22.16	97	P	P	20 35 33.7	-1.0
FCAR				IAmb	IAmb	20 35 41.6	
	comp=Z,28nm,1.4s						
L42A	Oliver, Polo	22.22	80	P	P	20 35 34.5	-0.7
PCA	Pinnacle	22.22	332	P	P	20 35 32.6	-2.6
PCA				IAmb	IAmb	20 35 35.7	
	comp=Z,25nm,0.6s						
X40A	Basin Creek Fa	22.24	101	P	P	20 35 35.1	-0.4
NATX	Nacogdoches	22.31	109	P	P	20 35 33.2	-3.1
NATX				IAmb	IAmb	20 35 43.2	
	comp=Z,81nm,1.4s						
WLAR	White Oak Lake	22.41	103	P	P	20 35 34.5	-2.8
FVM	French Village	22.66	90	P	P	20 35 37.3	-2.7
FVM				IAmb	IAmb	20 35 54.5	
	comp=Z,21nm,1.1s						
KVTX	Kingsville	22.79	122	P	P	20 35 40.4	-1.0
P43A	Skaggs, Pawnee	22.84	86	P	P	20 35 38.9	-3.0
PBMO	Poplar Bluff	23.07	93	P	P	20 35 41.4	-2.9
PBMO				IAmb	IAmb	20 35 49.8	
	comp=Z,28nm,1.1s						
Q44A	Meyer Farm, Va	23.42	87	P	P	20 35 44.0	-3.9
O44A	Mansfield	23.49	84	P	P	20 35 48.3	-0.2
HQIL	Hanson Quary C	23.59	80	P	P	20 35 47.8	-1.6
PARMO	Parma	23.62	93	P	P	20 35 47.8	-2.0
S44A	Carbondale	23.63	90	P	P	20 35 48.4	-1.5
S44A				IAmb	IAmb	20 35 54.1	
	comp=Z,48nm,1.1s						
SIUC	Southern Illin	23.65	90	P	P	20 35 49.4	-0.7
ZAIG	Zacatecas	23.81	138	P	P	20 35 49.7	-2.3
T45A	Paducah	24.32	91	P	P	20 35 54.4	-2.0
SFIN	Lafayette	24.45	83	P	P	20 35 57.8	+0.2
SFIN				IAmb	IAmb	20 36 03.5	
	comp=Z,26nm,1.0s						
P46A	Rosedale	24.57	84	P	P	20 35 58.7	0.0
P46A				IAmb	IAmb	20 36 04.1	
	comp=Z,29nm,0.9s						
W45A	Hickory Valley	24.64	96	P	P	20 35 59.3	-0.1
BCAR	Beaver Creek A	24.90	336	P	P	20 36 00.7	-0.7
BLO	Bloomington	25.20	85	P	P	20 36 01.1	-3.3
WVT	Waverly	25.26	93	P	P	20 36 02.5	-2.4
WVT				IAmb	IAmb	20 36 11.8	
	comp=Z,25nm,1.1s						
344A	Westbrook Farm	25.28	105	P	P	20 36 03.5	-1.7
T47A	Sharon Grove	25.48	90	P	P	20 36 05.9	-1.0
T47A				IAmb	IAmb	20 36 13.8	
	comp=Z,38nm,1.2s						
PLAL	Pickwick Lake	25.54	95	P	P	20 36 07.4	-0.1
PLAL				IAmb	IAmb	20 36 12.6	
	comp=Z,29nm,1.1s						
WCI	Wyandotte Cave	25.66	87	P	P	20 36 08.7	+0.1
WCI				IAmb	IAmb	20 36 16.1	
	comp=Z,33nm,1.0s						
SCRK	Sand Creek	26.24	336	P	P	20 36 10.5	-3.2
SCRK				IAmb	IAmb	20 36 21.5	
	comp=Z,15nm,1.3s						
Z47A	Carrollton	26.35	99	P	P	20 36 12.8	-2.0
Z47A				IAmb	IAmb	20 36 19.9	
	comp=Z,36nm,1.1s						
P49A	Miami Univ. Ec	26.44	83	P	P	20 36 16.0	+0.4
X48A	Hartselle	26.54	96	P	P	20 36 17.1	+0.6
X48A				IAmb	IAmb	20 36 21.2	
	comp=Z,28nm,1.1s						
INK	Inuvik	27.51	349	P	P	20 36 28.3	+3.5
	comp=Z,3.8nm,0.9s,baz=146,slow=8.9,SNR=7.9						
FPAL	Fort Paine	27.56	94	P	P	20 36 23.1	-2.7
FPAL				IAmb	IAmb	20 36 30.4	
	comp=Z,21nm,1.1s						
ILAR	Eielson Array	27.70	335	P	P	20 36 30.2	+3.5
	comp=Z,3.4nm,0.8s,baz=151,slow=8.3,SNR=9.1						
ILAR	Eielson Array	27.70	335	P	P	20 36 30.2	+3.5
V51A	Loudon	27.98	91	P	P	20 36 28.1	-1.4
V51A				IAmb	IAmb	20 36 34.4	
	comp=Z,30nm,1.2s						
CPCT	Cooper Cave	28.00	92	P	P	20 36 29.0	-0.6
CPCT				IAmb	IAmb	20 36 34.7	
	comp=Z,32nm,1.1s						
X51A	Calhoun	28.11	94	P	P	20 36 26.8	-3.9
250A	Grady	28.27	100	P	P	20 36 31.4	-0.6
W52A	Murphy	28.59	92	P	P	20 36 34.0	-0.9
152A	Waverly Hall	29.08	97	P	P	20 36 38.4	-0.9
152A				IAmb	IAmb	20 36 44.1	
	comp=Z,27nm,1.2s						
PAULI	Pauline	30.28	91	P	P	20 36 50.1	+0.2
IMAR	Indian Mountai	30.70	333	P	P	20 36 51.5	-1.9
CMIG	Matias Romero	32.54	132	P	P	20 37 12.5	+2.6
	comp=Z,4.3nm,1.1s,baz=16,slow=3.7,SNR=3.7						
CMIG	Matias Romero	32.54	132	P	P	20 37 12.5	+2.6
SCHQ	Schefferville	36.49	51	P	P	20 37 44.0	+0.2
	comp=Z,6.1nm,1.0s,baz=290,slow=10,SNR=3.6						
SCHQ	Schefferville	36.49	51	P	P	20 37 44.0	+0.2
SCHQ	Schefferville	36.49	51	IAmb	IAmb	20 37 48.4	
	comp=Z,33nm,1.4s						
MTO3	Montecristo	37.87	127	P	P	20 37 56.3	+0.2
MTO3				IAmb	IAmb	20 38 01.8	
	comp=Z,17nm,1.1s						
SEY	Seymchan	52.89	325	P	P	20 39 56.0	+1.7
	comp=Z,2.4nm,0.8s,baz=75,slow=1.3,SNR=20						
SEY	Seymchan	52.89	325	P	P	20 39 56.0	+1.7
PETK	Petropavlovsk-	53.99	312	P	P	20 40 03.9	+1.3
	comp=Z,1.2nm,0.7s,baz=308,slow=4.0,SNR=5.9						
ARCES	ARCESS Array B	65.97	13	LR	LR	21 11 58.7	
	comp=Z,3µm,21.2s,baz=230,slow=38						
NRIK	Noril'sk	67.29	350	P	P	20 41 35.2	+2.2
	comp=Z,3.2nm,1.0s,baz=322,slow=5.0,SNR=3.8						
NRIK	Noril'sk	67.29	350	P	P	20 41 35.2	+2.2
NRIK	Noril'sk	67.29	350	IAmb	IAmb	20 41 38.6	
	comp=Z,9.7nm,1.4s						
FINES	FINESS Array B	73.32	16	P	P	20 42 13.2	+3.2
	comp=Z,7.8nm,1.0s,baz=205,slow=4.0,SNR=5.1						
LPAZ	La Paz	74.85	129	P	P	20 42 21.1	+0.8
	comp=Z,2.7nm,0.9s,baz=5.6,slow=4.7,SNR=5.5						
LPAZ	La Paz	74.85	129	P	P	20 42 21.1	+0.8
LPAZ	La Paz	74.85	129	IAmb	IAmb	20 42 24.6	
	comp=Z,3.5nm,0.9s						
KLMR	Klimovskoe	76.20	10	*e*P	P	20 42 27.1	+0.4
KLMR				AMP		20 42 32.4	
	comp=Z,39nm,1.4s						
CLL	Collm	78.43	28	*e*(P)	P	20 42 42.0	+2.6
SIV	San Ignacio	78.88	123	P	P	20 42 43.4	+1.1
	comp=Z,3.6nm,1.1s,baz=342,slow=9.0,SNR=5.3						
SIV	San Ignacio	78.88	123	P	P	20 42 43.4	+1.1
ESDC	Sonseca Array	80.00	45	P	P	20 42 50.4	+2.1
	comp=Z,1.3nm,1.0s,baz=328,slow=4.6,SNR=4.5						
GERES	GERESS Array B	80.73	29	P	P	20 42 53.9	+1.9
	comp=Z,0.5nm,0.8s,baz=335,slow=5.9,SNR=4.1						
DAVOX	Davos/Dischmat	80.97	32	P	P	20 42 54.6	+1.1
	comp=Z,1.2nm,0.8s,baz=335,slow=2.2,SNR=3.2						
MOTA	Moosalm	80.99	31	*e*P	P	20 42 56.7	+3.1
	comp=Z,7.5nm,1.3s						
FETA	Feichten	81.11	32	*e*P	P	20 42 52.4	-1.8
	comp=Z,7.4nm,1.5s						
SQTA	Sankt Quirin	81.14	31	*e*P	P	20 42 54.5	+0.2
	comp=Z,8.2nm,1.1s						
WATA	Walderalm	81.19	31	*e*P	P	20 42 53.0	-1.6
	comp=Z,13nm,1.5s						
WTTA	Wattenberg	81.27	31	*e*P	P	20 42 53.7	-1.4
	comp=Z,7.6nm,1.2s						
SONM	Songino Array	81.83	331	P	P	20 43 00.4	+2.4
	comp=Z,1.3nm,1.0s,baz=33,slow=4.7,SNR=6.9						
ABTA	Abfaltersbach	82.03	31	*e*P	P	20 42 58.9	-0.1
	comp=Z,4.5nm,1.5s						
ZALV	Zalesovo Beam	82.26	346	P	P	20 43 01.7	+1.8
	comp=Z,2.5nm,0.8s,baz=353,slow=6.0,SNR=9.5						
ZALV	Zalesovo Beam	82.26	346	P	P	20 43 00.7	+0.7
OBKA	Obir	83.00	30	*e*P	P	20 43 00.3	-3.8
	comp=Z,6.7nm,1.8s						
SOKA	Soboth	83.04	30	*e*P	P	20 43 06.1	+1.9
	comp=Z,4.1nm,1.0s						
AKASG	Malin Array Be	83.85	19	P	P	20 43 09.6	+1.4
	comp=Z,0.3nm,0.3s,baz=334,slow=4.2,SNR=11						
GUMO	Guam	85.11	284	LR	LR	21 17 03.1	
	comp=Z,169nm,18.3s,baz=80,slow=33						
HHC	Hu-ho-hao-te	85.52	324	*e*P	P	20 43 14.9	-2.1
HHC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,340nm,6.0s						
NJ2	Nanjing	88.88	314	*e*P	P	20 43 31.3	-1.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MKAR	Makanchi Array	89.58	345	P	P	20 43 37.2	+0.9
	comp=Z,0.5nm,0.6s,baz=343,slow=2.5,SNR=6.8						
MKAR	Makanchi Array	89.58	345	P	P	20 43 34.2	-2.1
MAKZ	Makanchi	89.63	345	P	P	20 43 35.5	-1.0
MAKZ				IAmb	IAmb	20 43 41.0	
	comp=Z,7.6nm,1.2s						
WMQ	Urumqi	91.22	341	*e*P	P	20 43 44.4	+0.3
XAN	Xi'an	92.30	321	P	P	20 43 51.9	+2.7
XAN				pP	sP	20 44 02.0	+7.4
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ASAR	Alice Springs	117.38	262	PKP	PKiKP	20 49 25.6	+0.9
	comp=Z,1.1nm,1.0s,baz=48,slow=1.9,SNR=4.9						
QSPA	South Pole Qui	131.70	180	PKP	PKiKP	20 49 52.3	+0.6
	comp=Z,9.1nm,1.0s,baz=292,slow=1.1,SNR=8.8						

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*IDC **24** 20:34:10.3±4.0, 3°.43S×11°.77W, h0^{km}, mb4.3/8, mb1 4.4/9, mb1mx3.9/53, mbtmp4.3/9, ML3.4/2, Error ellipse: s-maj=124.1km s-min=49.8km az=145.0*

*NEIC **24** 20:34:12.8±1.2, 3°.5S±0°.2×11°.8W±0°.2, h14^{km}±7^{km}, mb4.3/7, Error ellipse: s-maj=28.9km s-min=17.4km az=54.0*

ISC 24 20:34:10.7±1.2**, 3°.6S**±0°.1×**11°.8W**±0°.3**, h10^{km}, n36, σ0^{s}.75**/28**, mb4.4**/17**, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	ASCENSION HYDR	4.99	212	T	T	20 40 33.6	
	baz=29,slow=74,SNR=248						
H10N1	ASCENSION HYDR	5.00	212	T	T	20 40 24.3	
	baz=29,slow=74,SNR=184						
H10N3	ASCENSION HYDR	5.01	212	T	T	20 40 34.6	
	baz=29,slow=74,SNR=229						
H10S2	ASCENSION HYDR	6.04	208	T	T	20 41 53.5	
	baz=195,slow=74,SNR=57						
H10S3	ASCENSION HYDR	6.04	208	T	T	20 41 55.9	
	baz=25,slow=74,SNR=144						
DBIC	Dimbokro	12.32	34	Pn	Pn	20 37 06.1	-0.3
	0.1nm,0.3s,baz=216,slow=14,SNR=1.7						
KOWA	Kowa	19.55	23	P	P	20 38 37.7	-1.0
	0.3nm,0.3s,baz=204,slow=4.5,SNR=17						
TORD	Torodi Ar. Bea	21.36	39	P	P	20 38 58.1	-0.3
	11nm,1.0s,baz=226,slow=8.1,SNR=12						
TORD	Torodi Ar. Bea	21.36	39	IAmb	IAmb	20 39 00.4	
	comp=Z,13nm,1.0s						
MBAR	Mbarara	42.62	87	P	P	20 42 07.5	-0.5
KEST	Kesra	43.84	25	P	P	20 42 18.2	+1.0
	comp=Z,4.3nm,0.8s,baz=170,slow=6.1,SNR=7.5						
KEST	Kesra	43.84	25	IAmb	IAmb	20 42 20.1	
	comp=Z,5.6nm,0.9s						
DAVOX	Davos/Dischmat	53.68	18	P	P	20 43 32.4	-0.5
	comp=Z,3.5nm,0.8s,baz=216,slow=8.4,SNR=8.8						
DAVA	Damuels	54.13	18	*e*P	P	20 43 35.8	-0.3
	comp=Z,4.7nm,0.7s						
FETA	Feichten	54.16	19	*e*P	P	20 43 36.3	-0.1
	comp=Z,7.4nm,1.2s						
SQTA	Sankt Quirin	54.49	19	*e*P	P	20 43 38.2	-0.5
	comp=Z,5.4nm,0.8s						
ABTA	Abfaltersbach	54.52	20	*e*P	P	20 43 39.5	+0.6
	comp=Z,4.2nm,1.1s						
MOTA	Moosalm	54.57	19	*e*P	P	20 43 39.4	+0.1
	comp=Z,4.9nm,1.1s						
WTTA	Wattenberg	54.67	19	*e*P	P	20 43 39.9	-0.2
	comp=Z,5.5nm,0.8s						
WATA	Walderalm	54.72	19	*e*P	P	20 43 39.5	-0.9
	comp=Z,3.9nm,0.9s						
OBKA	Obir	55.05	22	*e*P	P	20 43 43.7	+0.9
	comp=Z,1.0nm,0.9s						
SOKA	Soboth	55.38	22	*e*P	P	20 43 46.1	+1.0
	comp=Z,1.9nm,0.7s						
GEC2	GERESS Array S	56.73	20	P	P	20 43 54.7	0.0
GEC2				IAmb	IAmb	20 43 55.7	
	comp=Z,4.5nm,0.9s						
GERES	GERESS Array B	56.73	20	P	P	20 43 54.8	0.0
	comp=Z,3.2nm,0.8s,baz=190,slow=6.5,SNR=28						
GERES	GERESS Array B	56.73	20	P	P	20 43 54.6	-0.2
BRTR	Keskin Array B	59.97	39	P	P	20 44 18.3	+0.7
	comp=Z,2.1nm,1.0s,baz=228,slow=6.5,SNR=4.3						
BRTR	Keskin Array B	59.97	39	P	P	20 44 17.7	0.0
AKASG	Malin Array Be	64.47	28	P	P	20 44 47.0	-0.4
	comp=Z,0.2nm,0.3s,baz=230,slow=7.1,SNR=4.8						
AKASG	Malin Array Be	64.47	28	IAmb	IAmb	20 44 53.2	
	comp=Z,1.5nm,1.1s						
VNA2	Neumayer--Watz	67.31	178	P	P	20 45 05.1	-0.3
	baz=331,slow=9.0						
VNA3	Neumayer Olymp	67.59	179	P	P	20 45 06.5	-0.7
SNAA	Sanae	68.24	177	P	P	20 45 11.4	0.0
FINES	FINESS Array B	71.09	18	P	P	20 45 27.7	-1.2
	comp=Z,14nm,1.2s,baz=219,slow=1.2,SNR=4.7						
HRA	Herat	78.94	54	P	P	20 46 16.3	+1.1
HRA				IAmb	IAmb	20 46 17.4	
	comp=Z,4.0nm,1.1s						
ARU	Arti	82.26	32	P	P	20 46 32.8	+0.6
YKA	Yellowknife Ar	99.06	333	P	Pdif	20 47 53.7	+1.9
	comp=Z,0.8nm,0.9s,baz=102,slow=3.3,SNR=7.4						

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*IDC **24** 20:42:51.6±11.0, 11°.23S×166°.14E, h124^{km}±108^{km}, mb3.4/5, mb1 3.7/6, mb1mx3.4/47, mbtmp3.8/6, ML4.2/1, MS4.3/1, Ms1 4.3/1, ms1mx3.3/29, Error ellipse: s-maj=74.5km s-min=35.9km az=164.0*

ISC 24 20:42:49.1±1.1**, 11°.12S**±0°.10×**166°.1E**±0°.3**, h100^{km}, n8, σ1^{s}.02**/8**, mb3.5**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.89	178	P	Pn	20 45 23.5	+1.4
	1.9nm,0.3s,baz=312,slow=22,SNR=44						
DZM				S	Sn	20 47 20.6	-1.5
	0.8nm,0.3s,baz=345,slow=22,SNR=5.0						
WRA	Warramunga Arr	31.80	250	P	P	20 49 04.4	-0.1
	1.0nm,1.1s,baz=83,slow=8.7,SNR=2.1						
ASAR	Alice Springs	33.09	244	P	P	20 49 15.3	-0.4
	0.3nm,0.6s,baz=68,slow=9.4,SNR=5.1						
DAV	Davao City (W)	44.21	292	LR	LR	21 07 53.7	
	comp=Z,410nm,21.8s,baz=174,slow=34						
SONM	Songino Array	78.95	324	P	P	20 54 42.0	0.0
	0.2nm,0.4s,baz=142,slow=6.6,SNR=3.0						
MKAR	Makanchi Array	93.83	317	P	P	20 55 55.6	+0.3
	0.4nm,0.6s,baz=90,slow=5.8,SNR=5.9						
YKA	Yellowknife Ar	94.87	27	P	P	20 55 58.8	-0.8
	0.3nm,0.5s,baz=258,slow=5.0,SNR=4.9						
ARCES	ARCESS Array B	116.50	346	PKP	PKPdf	21 01 21.1	+0.3
	6.4nm,1.1s,baz=90,slow=2.4,SNR=5.0						

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*IDC **24** 20:50:59.6±1.2, 59°.97N×139°.71W, h0^{km}, mb3.5/3, mb1 3.4/7, mb1mx3.3/52, mbtmp3.3/7, ML2.9/4, MS4.1/1, Ms1 4.1/1, ms1mx3.5/37, Error ellipse: s-maj=24.8km s-min=12.3km az=27.0*

*ANF **24** 20:51:01.3±0.3, 59°.98N×140°.14W, h12^{km}±2^{km}, ML3.5/18, Error ellipse: s-maj=3.3km s-min=2.1km az=25.0*

*AEIC **24** 20:51:01.9±2.0, 60°.01N±0°.03×140°.06W±0°.06, h12^{km}±4^{km}, ML3.2/73, ML2.8(OTT), ML3.4/74(NEIC), Error ellipse: s-maj=5.6km s-min=2.3km az=50.0*

*PGC **24** 20:51:02.5±0.0, 59°.99N×140°.05W, h1^{km}, ML2.8/7, 83km northwest of Yakutat, Ak Southeastern Alaska*

*NEIC **24** 20:51:02.3±2.1, 60°.00N±0°.03×140°.08W±0°.07, h16^{km}±7^{km}, Error ellipse: s-maj=5.8km s-min=4.2km az=132.0*

ISC 24 20:51:02.0±0.8**, 60°.00N**±0°.02×**140°.11W**±0°.02**, h16^{km}**±4^{km}**, n162, σ1^{s}.40**/189**, mb3.6**/3**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINM	Pinnacle	0.12	323	P	Pg	20 51 05.3	-0.4
	baz=132,SNR=1000						
PINM				S	Sg	20 51 07.0	-1.2
	baz=132						
PCA	Pinnacle	0.12	323		Pg	20 51 05.2	-0.6
PCA					Sg	20 51 08.6	+0.4
PCA	Pinnacle	0.12	323	P	Pg	20 51 05.4	-0.4
PCA				S	Sg	20 51 08.0	-0.3
BCPM	Bancas Point	0.24	101		Pg	20 51 06.7	-0.7
BCPM					Sg	20 51 11.0	-0.1
BCPM	Bancas Point	0.24	101	IAML		20 51 11.6	
	comp=N,24µm,0.5s						
BCPM				IAML		20 51 11.6	
	comp=E,26µm,0.5s						
SAMH	Samovar Hills	0.36	292		Pb	20 51 10.1	0.0
SAMH					Sb	20 51 15.9	+0.2
SAMH	Samovar Hills	0.36	292	P	Pb	20 51 10.2	0.0
SAMH				S	Sb	20 51 15.6	-0.1
PNL	Peninsula	0.49	132		Pg	20 51 10.3	-1.4
PNL					Sb	20 51 17.7	-1.4
PNL	Peninsula	0.49	132	P	Pg	20 51 10.4	-1.4
	baz=316,SNR=115						
PNL				S	Sg	20 51 17.2	-1.1
	baz=316						
PNL	Peninsula	0.49	132	P	Pg	20 51 10.5	-1.3
PNL				S	Sg	20 51 17.0	-1.3
CHX	Chaix Hills	0.51	278		Pb	20 51 12.7	+0.1
YKU2	Yakutat	0.54	155		Sb	20 51 21.0	+0.5
YKU2	Yakutat	0.54	155	Pg	Pg	20 51 11.5	-1.1
YKU2	Yakutat	0.54	155	IAML		20 51 27.3	
	comp=E,3µm,1.0s						
YKU2				IAML		20 51 30.1	
	comp=N,3µm,0.6s						
TABL	Table Mountain	0.68	311		Pg	20 51 14.9	-0.5
TABL					Sb	20 51 25.6	+0.7
TABL	Table Mountain	0.68	311	P	Pg	20 51 14.9	-0.5
TABL				S	Sb	20 51 25.1	+0.1
YAH	Yahtse	0.90	295		Pb	20 51 19.1	-0.2
YAH	Yahtse	0.90	295	IAML		20 51 33.5	
	comp=E,1µm,0.6s						
YAH				IAML		20 51 33.8	
	comp=N,1µm,0.9s						
LOGN	Logan Glacier	0.94	332		Pg	20 51 19.0	-1.3
LOGN					Sg	20 51 32.0	-0.7
LOGN	Logan Glacier	0.94	332	P	Pg	20 51 18.9	-1.4
LOGN				S	Sg	20 51 31.8	-0.8
MESA	MESA	0.94	282		Pb	20 51 19.8	-0.2
MESA					Sb	20 51 33.8	+1.3
MESA	MESA	0.94	282	P	Pb	20 51 19.8	-0.2
	baz=99,SNR=21						
MESA				Sn	Sb	20 51 33.7	+1.3
	baz=99						
MESA	MESA	0.94	282	P	Pb	20 51 19.9	-0.2
MESA				S	Sb	20 51 33.5	+1.1
BAGL	Bagley Icefiel	1.10	297		Pg	20 51 22.1	-1.3
BAGL					Sb	20 51 37.6	+0.8
CTGM	Chitina Glacie	1.14	328		Pg	20 51 22.5	-1.7
CTGM	Chitina Glacie	1.14	328	P	Pg	20 51 22.4	-1.7
CTGM				S	Sg	20 51 37.6	-1.4
CTG	Chitna Glacier	1.15	328	P	Pg	20 51 22.4	-1.8
	baz=146,SNR=63						
CTG				S	Sg	20 51 38.1	-1.0
	baz=146						
CYK	Cape Yakataga	1.20	275		Sn	20 51 42.5	+2.6
ISLE	Juniper Island	1.27	300		Pg	20 51 24.1	-2.3
ISLE	Juniper Island	1.27	300	IAML		20 51 44.4	
	comp=E,677nm,0.3s						
ISLE				IAML		20 51 44.5	
	comp=N,502nm,0.4s						
BARN	Barnard Glacie	1.31	325		Pn	20 51 25.0	-0.9
BARN					Sg	20 51 42.9	-1.5
BARN	Barnard Glacie	1.31	325	IAML		20 51 43.7	
	comp=N,567nm,0.4s						
BARN				IAML		20 51 48.5	
	comp=E,731nm,0.5s						
SNH	Sunshine Point	1.38	279		Pn	20 51 27.0	+0.3
SNH					Sn	20 51 46.5	+1.9
SNH	Sunshine Point	1.38	279	IAML		20 51 49.2	
	comp=E,580nm,0.6s						
WAX	Waxell Ridge	1.44	289		Pn	20 51 27.6	+0.1
WAX					Sn	20 51 48.5	+2.3
KIAG	Kiagna River	1.45	311		Pn	20 51 26.9	-0.9
KIAG	Kiagna River	1.45	311	Pn	Pn	20 51 26.8	-0.9
KIAG				Sg	Sb	20 51 47.4	+0.4
BALM	Baldy	1.52	314		Pn	20 51 27.9	-0.8
BALM	Baldy	1.52	314	Pn	Pn	20 51 27.9	-0.8
BALM				Sn	Sn	20 51 48.3	+0.1
TGL	Tana Glacier	1.55	301		Pn	20 51 28.7	-0.4
TGL					Sb	20 51 50.9	+1.0
TGL	Tana Glacier	1.55	301	IAML		20 51 52.1	
	comp=E,293nm,1.0s						
BGLC	Bering Glacier	1.60	276		Pn	20 51 30.6	+1.0
BGLC	Bering Glacier	1.60	276	Pb	Pn	20 51 30.4	+0.8
	baz=92						
BGLC				Sg	Sg	20 51 53.5	+0.1
	baz=92						
KHIT	Khitrov Hills	1.63	287		Pn	20 51 30.5	+0.4
KHIT					Sb	20 51 52.8	+0.7
GRIN	Grindle Hills	1.63	281		Pn	20 51 30.9	+0.8
CRQE	Cirque	1.67	298	P	Pn	20 51 30.5	-0.1
	baz=115						
CRQE				Sb	Sn	20 51 53.6	+1.9
	baz=115						
PTPK	Patty Peak	1.67	317		Pn	20 51 30.6	-0.2
PTPK	Patty Peak	1.67	317	Pn	Pn	20 51 30.7	0.0
PTPK				Sg	Sg	20 51 55.0	-0.7
CRQM	Cirque	1.69	298		Pn	20 51 30.7	-0.3
CRQM	Cirque	1.69	298	IAML		20 51 55.5	
	comp=E,503nm,0.6s						
CRQM				IAML		20 51 57.7	
	comp=N,442nm,0.5s						
YUK3	Moose Creek	1.79	355		Pn	20 51 34.1	+1.6
YUK3	Moose Creek	1.79	355	Pb	Pn	20 51 33.9	+1.5
	baz=174						
YUK3				Sb	Sb	20 51 58.6	+1.7
	baz=174						
YUK3	Moose Creek	1.79	355	Pn	Pn	20 51 34.0	+1.5
YUK3				Sn	Sb	20 51 59.0	+2.1
YUK2	White River	1.83	349		Pn	20 51 34.5	+1.6
YUK2	White River	1.83	349	Pn	Pn	20 51 34.6	+1.6
YUK2				Sn	Sb	20 51 58.9	+1.0
BERG	Berg Lake	1.84	284		Pn	20 51 33.2	+0.3
BERG					Sb	20 51 59.0	+1.1
SUCK	Suckling Hills	1.84	274		Pn	20 51 33.5	+0.5
SUCK	Suckling Hills	1.84	274	IAML		20 52 01.7	
	comp=E,424nm,0.8s						
SUCK				IAML		20 52 03.3	
	comp=N,236nm,0.7s						
NICHA	Nichawak Mount	1.95	279		Pn	20 51 35.3	+0.9
MCARA	McCarthy VSAT	2.00	315		Pn	20 51 36.3	+1.2
MCARA	McCarthy VSAT	2.00	315	P	Pn	20 51 35.2	+0.1
	baz=132						
VRDI	Verde Repeater	2.06	308		Pn	20 51 36.5	+0.4
VRDI	Verde Repeater	2.06	308	IAML		20 52 06.5	
	comp=N,224nm,0.6s						
HMT	Hamilton	2.10	281		Pn	20 51 37.0	+0.5
KAIM	Kayak Island	2.17	270		Pn	20 51 37.9	+0.4
KAIM	Kayak Island	2.17	270	IAML		20 52 12.9	
	comp=E,144nm,1.4s						
KAIM				IAML		20 52 28.4	
	comp=N,183nm,2.2s						
RAGM	Ragged Mountai	2.31	282		Pn	20 51 39.9	+0.4
GLB	Gilahina Butte	2.33	310		Pn	20 51 40.7	+1.0
GLB	Gilahina Butte	2.33	310	IAML		20 52 16.0	
	comp=N,160nm,0.7s						
GOAT	Goat Mountain	2.37	286		Pn	20 51 41.1	+0.8
BMRM	Bremner River	2.43	296		Pn	20 51 41.3	+0.3
BMRM	Bremner River	2.43	296	IAML		20 52 18.9	
	comp=N,258nm,0.5s						
BMRM				IAML		20 52 19.1	
	comp=E,192nm,0.6s						
BMRM	Bremner River	2.43	296	P	Pn	20 51 41.0	0.0
	baz=111						
BVCY	Beaver Creek	2.45	352		Pn	20 51 43.4	+2.0
BVCY	Beaver Creek	2.45	352	Pb	Pb	20 51 45.6	-0.1
	baz=170						
BVCY	Beaver Creek	2.45	352	Pn	Pn	20 51 43.7	+2.4
BVCY				Sg	Sg	20 52 19.2	-1.5
SKAG	Skagway	2.48	101		Pn	20 51 42.1	+0.4

SKAG	Skagway	2.48	101	IAML		20 52 19.8	
	comp=N,179nm,0.9s						
SKAG	Skagway	2.48	101	P	Pn	20 51 41.5	-0.1
	baz=285,SNR=7.2						
M27K	Edge Creek, AK	2.52	341		Pn	20 51 44.2	+1.8
M27K	Edge Creek, AK	2.52	341	IAML		20 52 23.2	
	comp=E,115nm,1.0s						
M27K				IAML		20 52 28.4	
	comp=N,152nm,0.8s						
M27K	Edge Creek, AK	2.52	341	Pb	Pb	20 51 46.1	-0.8
	baz=159						
M27K				Sb	Sb	20 52 19.5	+1.8
	baz=159						
N31M	Braeburn, Yuko	2.60	53		Pn	20 51 44.3	+0.9
N31M	Braeburn, Yuko	2.60	53	P	Pn	20 51 44.2	+0.9
	baz=237,SNR=17						
N31M				S	Sn	20 52 15.8	+1.2
	baz=237						
WHY	Whitehorse	2.68	73		Pn	20 51 45.0	+0.4
WHY	Whitehorse	2.68	73	P	Pn	20 51 45.0	+0.4
	baz=258,SNR=12						
WHY	Whitehorse	2.68	73	Pn	Pn	20 51 45.0	+0.4
WHY				Sn	Sn	20 52 18.8	+2.0
WHY				Sg	Sb	20 52 24.6	+2.2
N25K	Chitina, Valde	2.73	308		Pn	20 51 46.6	+1.3
N25K	Chitina, Valde	2.73	308	P	Pn	20 51 46.0	+0.8
	baz=124						
M26K	Nabesna, AK	2.79	331		Pn	20 51 47.3	+1.3
M26K				IAML		20 52 33.5	
	comp=E,78nm,0.5s						
M26K	Nabesna, AK	2.79	331	Pb	Pb	20 51 50.8	-0.6
	baz=148						
M26K				S	Sn	20 52 20.4	+1.1
	baz=148						
EYAK	Cordova Ski Ar	2.87	284	Sb	Sb	20 52 28.1	+0.6
	baz=98						
PS12	TAPS Pump St12	2.88	303		Pn	20 51 48.5	+1.2
DIV	Divide	3.02	295		Pn	20 51 49.4	+0.2
DIV	Divide	3.02	295	Sn	Sn	20 52 26.5	+1.5
BESE	Bessie Mountai	3.05	116		Pn	20 51 49.1	-0.5
BESE	Bessie Mountai	3.05	116	Pn	Pn	20 51 49.3	-0.2
BESE				Sn	Sn	20 52 25.2	-0.5
BC03		3.18	346		Pn	20 51 52.3	+1.0
BCAR	Beaver Creek A	3.18	346		Pn	20 51 52.0	+0.6
L27K	Beaver Creek,	3.18	346		Pn	20 51 52.1	+0.7
KLU	Klutina	3.23	300		Pn	20 51 53.5	+1.5
KLU	Klutina	3.23	300	IAML		20 52 40.3	
	comp=N,106nm,0.4s						
KLU	Klutina	3.23	300	P	Pn	20 51 52.3	+0.3
	baz=115,SNR=14						
KLU				S	Sn	20 52 30.8	+0.7
	baz=115						
FID	Port Fidalgo	3.25	286		Pn	20 51 53.1	+0.8
L26K	Log Cabin Wild	3.41	334		Pn	20 51 55.6	+1.1
L26K				IAML		20 52 38.4	
	comp=E,63nm,0.5s						
L26K				IAML		20 52 38.4	
	comp=N,58nm,0.5s						
M24K	Tolsona, Glenn	3.63	308		Pn	20 51 58.7	+1.1
M24K	Tolsona, Glenn	3.63	308	IAML		20 53 01.6	
	comp=N,76nm,1.9s						
M24K	Tolsona, Glenn	3.63	308	Sb	Sb	20 52 50.0	+0.5
	baz=123						
P33M	Teslin, Yukon	3.66	84		Pn	20 51 57.2	-0.8
P33M	Teslin, Yukon	3.66	84	Sb	Sb	20 52 53.6	+3.3
	baz=270						
PAX	Paxson	3.94	322		Pn	20 52 02.0	+0.2
PAX	Paxson	3.94	322	Pb	Pb	20 52 08.7	-2.3
	baz=136						
FARO	Faro, Yukon	3.97	53	Pn	Pn	20 52 03.5	+1.3
SCM	Sheep Creek Mo	3.98	301		Pn	20 52 02.9	+0.6
SCM				IAML		20 53 06.4	
	comp=E,58nm,0.7s						
SCM				IAML		20 53 07.5	
	comp=N,60nm,0.9s						
DAWY	Dawson	4.10	4		Pn	20 52 05.1	+1.2
DAWY				IAML		20 53 14.7	
	comp=N,28nm,0.8s						
DAWY				IAML		20 53 17.6	
	comp=E,43nm,1.4s						
DAWY	Dawson	4.10	4	P	Pn	20 52 05.4	+1.4
	baz=185						
DAWY	Dawson	4.10	4	Pn	Pn	20 52 05.6	+1.6
DAWY				Sn	Sn	20 52 51.7	+0.1
DAWY				Sg	Sg	20 53 09.6	-3.8
DOT	Dot Lake	4.12	335		Pn	20 52 05.3	+1.1
DOT	Dot Lake	4.12	335	Pn	Pn	20 52 05.5	+1.3
PWL	Port Wells	4.17	286		Pn	20 52 05.1	+0.2
PWL	Port Wells	4.17	286	IAML		20 53 22.6	
	comp=E,36nm,3.4s						
PWL				IAML		20 53 40.3	
	comp=N,34nm,4.1s						
KNK	Knik Glacier	4.34	293	Pn	Pn	20 52 08.3	+1.0
RIDG	Independent Ri	4.37	331	Pn	Pn	20 52 08.0	+0.2
SCRK	Sand Creek	4.39	337		Pn	20 52 08.6	+0.5
SML	Sawmill	4.41	298		Pn	20 52 08.8	+0.6
DHY	Denali Highway	4.65	315		Pn	20 52 11.2	-0.5
GHO	Glory Hole Cre	4.66	296	Pn	Pn	20 52 12.3	+0.5
SEW	Seward	4.69	275	Pn	Pn	20 52 09.8	-2.1
PMR	Palmer	4.70	294		Pn	20 52 10.5	-1.7
J26L	Joseph Creek	4.80	342		Pn	20 52 15.1	+1.5
EGAK	Eagle	4.82	355		Pn	20 52 15.2	+1.3
EGAK				IAML		20 53 44.3	
	comp=N,35nm,1.7s						
RC01	Rabbit Creek A	4.88	287		Pn	20 52 13.6	-1.1
RC01				IAML		20 53 33.0	
	comp=N,32nm,0.7s						
RC01				IAML		20 53 34.0	
	comp=E,24nm,1.9s						
MMPY	Sheldon Lake,	5.01	55	Pn	Pn	20 52 17.6	+1.1
MMPY				Sn	Sn	20 53 13.0	-0.9
MMPY				Sg	Sg	20 53 37.1	-5.5
RND	Reindeer	5.38	313	Pn	Pn	20 52 21.9	+0.3
DLBC	Dease Lake	5.41	102	Pn	Pn	20 52 19.1	-2.9
	comp=E,0.2nm,0.3s,baz=292,slow=7.9,SNR=6.7						
DLBC				Lg	Lg	20 53 47.3	
	comp=E,1.3nm,0.3s,baz=213,slow=25,SNR=6.5						
DLBC	Dease Lake	5.41	102	Pn	Pn	20 52 22.7	+0.7
DLBC				Sg	Sb	20 53 47.3	+6.6
CUT	Chulitna	5.47	301	Pn	Pn	20 52 22.4	-0.4
MCK	McKinley	5.61	316		Pn	20 52 25.2	+0.5
CNPM	China Poot	5.65	270		Pn	20 52 26.0	+0.8
WTLY	Watson Lake, Y	5.67	84	Sg	Sg	20 53 58.0	-5.7
IL31		5.73	330	Pn	Pn	20 52 25.0	-1.3
ILAR	Eielson Array	5.73	330	Pn	Pn	20 52 26.6	+0.2
	comp=E,0.1nm,0.3s,baz=149,slow=12,SNR=7.1						
ILAR				Lg	Lg	20 54 09.2	
	comp=E,0.4nm,0.3s,baz=137,slow=26,SNR=6.6						
ILAR	Eielson Array	5.73	330	Pn	Pn	20 52 24.9	-1.5
WRH	Wood River Hil	5.83	324	Pn	Pn	20 52 26.9	-0.9
TRF	Thorofare Moun	5.95	310		Pn	20 52 31.1	+1.6
PRP	Porcupine Dome	6.07	338	Pn	Pn	20 52 31.8	+0.7
NEA2	Nenana	6.22	322	Pn	Pn	20 52 31.9	-1.1
KTH	Kantishna Hill	6.25	309		Pn	20 52 35.2	+1.8
PPLA	Purkeypile	6.48	302	Pn	Pn	20 52 36.4	-0.3
KDAK	Kodiak Island	6.84	256	Pn	Pn	20 52 41.5	0.0
	comp=E,1.0nm,0.3s,baz=72,slow=8.9,SNR=29						
KDAK				Sn	Sn	20 53 56.5	-2.3
	comp=E,0.5nm,0.3s,baz=269,slow=15,SNR=1.7						
H24K	Noodor Dome	6.84	332	Pn	Pn	20 52 41.7	0.0
Q19K	Cape Douglas,	6.98	267	Pn	Pn	20 52 44.1	+0.6
OHAK	Old Harbor	7.42	254	Pn	Pn	20 52 48.4	-1.1
L19K	White Mountain	7.47	293	Pn	Pn	20 52 50.4	+0.1
BMAR	Burnt Mountain	7.72	347	Pn	Pn	20 52 55.0	+1.4
J20K	Nowinta River	7.80	308	Pn	Pn	20 52 55.2	+0.5
INK	Inuvik	8.81	16	Pn	Pn	20 53 09.0	+0.4
	comp=E,0.1nm,0.3s,baz=196,slow=9.3,SNR=1.6						
ELK	Elko	24.70	130	LR	LR	21 05 38.7	
	comp=E,439nm,19.1s,baz=146,slow=36						
HOMB	Homborsund	59.52	19	*i* P	P	21 01 13.0	+9.2
SONM	Songino Array	59.74	314	P	P	21 01 08.6	+2.9
	comp=E,0.5nm,0.9s,baz=35,slow=5.3,SNR=3.5						
AKASG	Malin Array Be	69.32	7	P	P	21 02 08.7	+0.6
	comp=E,0.3nm,0.4s,baz=335,slow=5.5,SNR=1.6						
ESDC	Sonseca Array	74.33	34	P	P	21 02 36.3	-2.2
	comp=E,0.4nm,0.8s,baz=346,slow=3.6,SNR=4.3						

IDC ***24*** *20:51:48.9±0.8, 3.°72S×151.°23E, h0^{km}, mb4.1/11, mb1 4.3/12, mb1mx4.0/43, mbtmp4.1/12, ML2.2/1, MS4.0/3, Ms1 4.0/3, ms1mx3.6/41, Error ellipse: s-maj=27.7km s-min=16.8km az=99.0*

DJA ***24*** *20:51:49.4±0.6, 3°S±6°×15°1E±°, h10^{km}, M4.4/6, mB4.5/1, mb4.4/6, MLv4.4/3, Mw(mB)3.7/1*

NEIC ***24*** *20:51:49.6±0.9, 3.°7S±0.°1×151.°46E±0.°03, h7^{km}±6^{km}, mb4.4/12, Error ellipse: s-maj=17.6km s-min=4.5km az=186.0*

ISC 24 20:51:49.8±0.6**, 3.°73S**±0.°09×**151.°41E**±0.°09**, h10**^{km}**, n33,** σ**1.^{s}07**/29**, mb4.2**/16**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	0.88	121		Pn	20 52 08.6	+0.2
PMG	Port Moresby	7.04	217	Pn	Pn	20 53 33.1	0.0
	2.7nm,0.3s,baz=30,slow=9.0,SNR=21						
PMG				LR	LR	20 56 01.0	
	comp=Z,1µm,19.8s,baz=341,slow=36						
PMG	Port Moresby	7.04	217		Pn	20 53 34.8	+1.7
HNR	Honiara	10.20	124	LR	LR	20 58 30.8	
	comp=Z,696nm,19.5s,baz=292,slow=39						
JAY	Jayapura	10.76	276	LR	LR	20 57 43.7	
	comp=Z,844nm,21.7s,baz=189,slow=34						
CTAO	Charters Tower	17.02	197	P	P	20 55 49.9	-0.1
CTAO				IAmb	IAmb	20 56 01.2	
	comp=Z,33nm,1.4s						
WB2	Warramunga Arr	23.16	225	P	P	20 56 56.1	-0.6
WB2				IAmb	IAmb	20 57 22.8	
	comp=Z,19nm,1.2s						
WRA	Warramunga Arr	23.17	225	P	P	20 56 55.2	-1.6
	comp=Z,3.8nm,0.9s,baz=48,slow=9.7,SNR=15						
WRA	Warramunga Arr	23.17	225	IAmb	IAmb	20 57 04.0	
	comp=Z,0.7nm,1.2s						
DZM	Mont Dzumac	23.35	143	P	P	20 57 01.9	+3.3
	comp=Z,10.0nm,0.9s,baz=325,slow=17,SNR=5.4						
DZM	Mont Dzumac	23.35	143	P	P	20 56 56.4	-2.3
AS31	Alice Springs	26.05	219	P	P	20 57 23.1	-0.5
ASAR	Alice Springs	26.05	219	P	P	20 57 22.9	-0.7
	comp=Z,2.4nm,0.8s,baz=52,slow=8.7,SNR=16						
STKA	Stephens Creek	29.48	197	P	P	20 57 53.8	-0.5
	comp=Z,3.3nm,0.7s,baz=32,slow=14,SNR=12						
STKA	Stephens Creek	29.48	197	IAmb	IAmb	20 57 56.5	
	comp=Z,0.7nm,0.7s						
CM31	Chiang Mai Arr	56.17	295	P	P	21 01 30.4	0.0
CMAR	Chiang Mai Arr	56.17	295	P	P	21 01 31.1	+0.7
	comp=Z,3.2nm,0.8s,baz=115,slow=5.5,SNR=26						
CMAR	Chiang Mai Arr	56.17	295	P	P	21 01 30.1	-0.3
CHTO	Chiang Mai	56.28	295	P	P	21 01 30.5	-0.7
CHTO				IAmb	IAmb	21 01 39.0	
	comp=Z,5.9nm,1.1s						
SONM	Songino Array	64.69	328	P	P	21 02 28.8	+0.5
	comp=Z,0.7nm,0.8s,baz=151,slow=6.6,SNR=5.5						
MK31	Makanchi Array	78.61	319	P	P	21 03 52.3	+0.3
MK31				IAmb	IAmb	21 04 05.0	
	comp=Z,2.6nm,1.1s						
MKAR	Makanchi Array	78.61	319	P	P	21 03 52.3	+0.3
	comp=Z,1.1nm,0.7s,baz=104,slow=7.3,SNR=13						
MKAR	Makanchi Array	78.61	319	P	P	21 03 51.9	-0.2
MAKZ	Makanchi	78.82	319	P	P	21 03 52.8	-0.4
MAKZ				IAmb	IAmb	21 03 54.2	
	comp=Z,2.7nm,0.8s						
ZALV	Zalesovo Beam	79.50	327	P	P	21 03 55.6	-1.0
	comp=Z,0.6nm,0.6s,baz=123,slow=2.5,SNR=4.7						
RND	Reindeer	80.29	23	P	P	21 03 59.4	-1.5
ILAR	Eielson Array	81.70	22	P	P	21 04 08.5	+0.2
	comp=Z,1.0nm,0.7s,baz=244,slow=5.5,SNR=14						
NRIK	Noril'sk	84.51	341	P	P	21 04 23.1	+0.4
	comp=Z,2.0nm,0.5s,baz=131,slow=4.5,SNR=4.6						
BTK	Batken	85.20	311	P	P	21 04 26.8	-0.1
BTK				IAmb	IAmb	21 04 34.3	
	comp=Z,3.5nm,0.8s						
KKAR	Karatay Array	85.89	314	P	P	21 04 30.1	-0.2
YKA	Yellowknife Ar	95.13	28	P	P	21 05 14.2	+1.1
	comp=Z,0.4nm,0.6s,baz=273,slow=4.9,SNR=3.9						
GERES	GERESS Array B	122.42	328	PKP	PKiKP	21 10 46.5	+0.5
	comp=Z,0.3nm,0.5s,baz=198,slow=0.3,SNR=2.4						
TORD	Torodi Ar. Bea	148.65	289	PKPbc	PKPbc	21 11 37.8	-0.6
	comp=Z,2.0nm,0.8s,baz=65,slow=2.4,SNR=8.8						

IDC ***24*** *20:56:05.4±1.6, 16.°16S×178.°03W, h446^{km}±24^{km}, mb2.8/3, mb1 3.3/5, mb1mx2.8/39, mbtmp3.8/5, Error ellipse: s-maj=117.4km s-min=17.5km az=152.0*

NEIC ***24*** *20:56:05.0±1.3, 15.°9S±0.°3×178.°2W±0.°2, h425^{km}±11^{km}, mb4.3/8, Error ellipse: s-maj=46.7km s-min=19.3km az=152.0*

ISC 24 20:56:05.7±0.9**, 15.°9S**±0.°3×**178.°1W**±0.°2**, h450**^{km}**, n18,** σ**0.^{s}80**/17**, mb4.3**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.08	243	P	P	20 57 21.7	+0.1
	6.5nm,0.3s,baz=176,slow=19,SNR=24						
AFI	Afiamalu	6.46	73	P	P	20 57 43.7	-1.2
	4.7nm,0.3s,baz=82,slow=1.4,SNR=7.2						
SANVU	Saraoutou	14.12	270	P	P	20 59 07.2	-0.4
MARNC	Mare, Loyalty	14.23	245	P	P	20 59 08.8	+0.1
WR0	Warramunga Arr	45.09	258	P	P	21 03 39.5	-1.1
WB0	Warramunga Arr	45.24	258	P	P	21 03 40.6	-1.1
WB0				IAmb	IAmb	21 04 07.2	
	comp=Z,11nm,1.4s						
WB2	Warramunga Arr	45.27	258	P	P	21 03 41.1	-0.8
WB2				IAmb	IAmb	21 03 45.0	
	comp=Z,27nm,1.4s						
WRAB	Tennant Creek	45.27	258	P	P	21 03 41.8	-0.2
WRAB				IAmb	IAmb	21 04 06.6	
	comp=Z,25nm,1.5s						
WRA	Warramunga Arr	45.28	258	P	P	21 03 41.7	-0.3
	comp=Z,0.8nm,0.3s,baz=97,slow=7.5,SNR=54						
WRA	Warramunga Arr	45.28	258	IAmb	IAmb	21 03 43.9	
	comp=Z,0.2nm,0.9s						
AS31	Alice Springs	45.62	252	P	P	21 03 44.9	+0.3
ASAR	Alice Springs	45.62	252	P	P	21 03 44.9	+0.3
	comp=Z,13nm,0.5s,baz=84,slow=8.5,SNR=260						
ASAR	Alice Springs	45.62	252	P	P	21 03 44.6	0.0
MTN	Manton Dam	49.14	267	P	P	21 04 10.8	-0.6
FORT	Forrest	51.12	243	P	P	21 04 26.2	+0.5
FORT				IAmb	IAmb	21 04 27.1	
	comp=Z,15nm,0.7s						
ILAR	Eielson Array	83.87	13	P	P	21 07 46.9	+0.4
	comp=Z,0.2nm,0.3s,baz=230,slow=7.0,SNR=7.3						
PDAR	Pinedale Array	85.72	43	P	P	21 07 58.0	+1.7
	comp=Z,0.2nm,0.6s,baz=224,slow=2.5,SNR=1.9						
GERES	GERESS Array B	145.73	346	PKPbc	PKPab	21 14 54.3	-0.5
	comp=Z,0.1nm,0.4s,baz=15,slow=4.1,SNR=4.3						

MOS ***24*** *21:07:18.7±0.7, 28.°61N×139.°60E, h414^{km}, mb4.3/11, Error ellipse: s-maj=11.7km s-min=6.2km az=107.6*

IDC ***24*** *21:07:20.9±0.6, 28.°68N×139.°67E, h423^{km}±7^{km}, mb3.5/24, mb1 3.6/30, mb1mx3.5/50, mbtmp4.3/30, Error ellipse: s-maj=11.5km s-min=8.3km az=80.0*

JMA ***24*** *21:07:20.5±0.1, 28.°79N×140.°10E, h447^{km}, M3.9*

NEIC ***24*** *21:07:21.0±1.5, 28.°65N±0.°09×139.°6E±0.°1, h417^{km}±7^{km}, mb4.0/94, Error ellipse: s-maj=13.9km s-min=12.9km az=96.0*

ISC 24 21:07:19.8±0.4**, 28.°69N**±0.°05×**139.°52E**±0.°06**, h400**^{km}**, n204,** σ**1.^{s}58**/217**, mb4.0**/86**, 6C-5D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.84	123	P	Pn	21 08 24.1	+2.3
CBIJ				*e*S	S	21 09 14.1	+2.2
JCJ	Chichijima	2.84	123	P	Pn	21 08 24.5	+2.7
	102nm,0.3s,baz=265,slow=21,SNR=33						
JCJ				S	S	21 09 14.3	+2.4
	253nm,0.3s,baz=128,slow=23,SNR=9.8						
JCJ	Chichijima	2.84	123	P	Pn	21 08 23.7	+1.9
JCJ					S	21 09 10.0	-1.9
JHH2	Haha-jima-NKT2	3.12	130	P	Pn	21 08 26.6	+2.5
JHH2				*e*S	S	21 09 18.3	+2.3
JHJ	Hachijo jima 2	4.42	3	P	Pn	21 08 39.1	+3.3
	15nm,0.3s,baz=319,slow=19,SNR=1.9						
JHJ				S	S	21 09 42.7	+5.1
	25nm,0.3s,baz=106,slow=22,SNR=4.7						
BSO1	Boso 1	6.08	11	P	Pn	21 08 55.5	+3.0
BSO3	Boso 3	6.15	8	P	Pn	21 08 56.0	+2.4
JOD2	Odawara 2	6.56	357	P	P	21 09 00.6	+1.5
JOD2				*e*S	S	21 10 20.8	+1.7
JMN	Monobe	6.97	318		P	21 09 07.0	+3.3
INU	Inuyama	6.97	343	P	P	21 09 06.8	+3.2
JHU	Hanno	7.14	358	*e*S	S	21 10 28.7	-2.2
JRY	Ryogami san	7.33	356	P	Pn	21 09 09.0	+2.0
JRY				*e*S	S	21 10 34.1	-0.6
JWT	Wachi	7.45	333		P	21 09 13.2	+4.3
JAG	Ashikaga	7.71	360	P	Pn	21 09 11.9	+0.5
JAG				S	S	21 10 39.1	-3.7
MJAR	Matsushiro Arr	7.91	352	P	Pn	21 09 15.3	+1.7
	0.1nm,0.3s,baz=170,slow=9.2,SNR=4.5						
MJAR				S	S	21 10 44.4	-2.4
	0.1nm,0.3s,baz=95,slow=16,SNR=4.2						
MAJO	Matsushiro	7.91	352	P	P	21 09 16.4	+2.4
MAJO	Matsushiro	7.91	352	P	P	21 09 16.4	+2.4
MJB9	Matsu-Tunnel	7.91	352	P	P	21 09 15.7	+1.6
JMZ	Minamidaito 2	7.92	251		Pn	21 09 14.7	+0.8
JHO	Hitachi	7.95	6	P	Pn	21 09 14.6	+0.6
JHO				*e*S	S	21 10 44.7	-3.0
JHS	Saijyo	8.32	321	P	P	21 09 22.9	+4.3
JHS	Saijyo	8.32	321	P	P	21 09 21.5	+2.9
JSU	Suzuyama	8.34	292	P	P	21 09 21.5	+2.7
JMM	Marumori	9.21	6		S	21 11 12.8	-1.5
JOW	Kunigami	10.13	262	P	Pn	21 09 42.7	+3.4
	9.3nm,0.3s,baz=107,slow=15,SNR=29						
JOW	Kunigami	10.13	262	P	Pn	21 09 43.6	+4.3
JOW	Kunigami	10.13	262	P	Pn	21 09 43.2	+3.9
JKE	Kume jima 2	11.54	261	P	Pn	21 09 58.6	+2.9
KSRS	Korea Array	13.06	315	P	P	21 10 13.4	+2.4
	0.2nm,0.3s,baz=134,slow=11,SNR=5.7						
ERM	Erimo	13.62	12	P	P	21 10 19.2	+2.1
ERM	Erimo	13.62	12	P	P	21 10 19.1	+2.1
JCH	Churui	14.24	12	P	P	21 10 26.3	+2.5
ASAJ	Asahikawa	15.59	8	P	P	21 10 40.1	+1.6
	0.4nm,0.3s,baz=152,slow=17,SNR=2.3						
JTKR	Abashiri--Toko	15.65	12	P	P	21 10 41.4	+2.4
USA0B	Ussuriysk Arra	16.61	341	P	P	21 10 50.8	+1.5
USA0B				pmax	pmax		
	comp=Z,17nm,1.0s						
USA0B	Ussuriysk Arra	16.61	341	P	P	21 10 50.8	+1.5
USRK	Ussuriysk Ar.	16.61	341	P	P	21 10 51.4	+2.1
	baz=145,slow=11,SNR=27						
USRK	Ussuriysk Ar.	16.61	341	P	P	21 10 50.4	+1.1
USRK	Ussuriysk Ar.	16.61	341	P	P	21 10 50.4	+1.1
NACB	Ninganchiao	16.67	258	P	P	21 10 50.6	+0.4
YHNB	Yeheng	16.70	260	P	P	21 10 51.4	+0.7
KNMB	Chin-men Tao	19.36	262	P	P	21 11 18.0	-0.3
KLR	Kul'dur	21.36	346	P	P	21 11 36.8	+0.4
	comp=Z,2.6nm,0.7s,baz=182,slow=9.3,SNR=7.5						
ENH	Enshi	26.16	281	P	P	21 12 20.0	+0.2
ZEA	Zeya	26.59	344	*e*P	P	21 12 18.4	-4.9
ZEA				pmax	pmax		
	comp=E,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.5s						
MYLDM	Lahad Datu	30.72	224	P	P	21 13 02.2	+2.3
MYLDM				IAmb	IAmb	21 13 12.1	
	comp=Z,14nm,1.0s						
ULN	Ulaanbaatar	31.55	316	P	P	21 13 07.7	+0.8
ULN				pmax	pmax		
	comp=Z,12nm,0.9s						
ULN	Ulaanbaatar	31.55	316	P	P	21 13 07.7	+0.8
ULN				IAmb	IAmb	21 13 08.6	
	comp=Z,12nm,0.8s						
SONM	Songino Array	31.93	316	P	P	21 13 11.0	+0.8
	comp=Z,7.5nm,0.6s,baz=127,slow=8.1,SNR=94						
SONM	Songino Array	31.93	316	IAmb	IAmb	21 13 11.6	
	comp=Z,13nm,1.2s						
YAK	Yakutsk	33.97	352	*ce*P	P	21 13 27.7	+0.4
YAK				pmax	pmax		
	comp=Z,51nm,2.5s						
ZAK	Zakamensk	34.86	319	*e*P	P	21 13 34.6	-0.5
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
TLY	Talaya	35.22	321	P	P	21 13 39.2	+1.1
SEY	Seymchan	35.26	10	P	P	21 13 37.3	-0.9
	comp=Z,3.9nm,0.3s,baz=190,slow=0.6,SNR=18						
MOY	Mondy	36.70	320	*e*P	P	21 13 50.9	+0.3
SBUM	Sibu	36.84	230	P	P	21 13 52.7	+0.7
CHTO	Chiang Mai	38.26	264	P	P	21 14 04.0	+0.2
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CHTO	Chiang Mai	38.26	264	P	P	21 14 04.0	+0.2
CHTO				IAmb	IAmb	21 14 04.8	
	comp=Z,6.0nm,0.9s						
CMAR	Chiang Mai Arr	38.40	264	P	P	21 14 05.3	+0.4
	comp=Z,1.0nm,0.6s,baz=49,slow=8.6,SNR=12						
CMAR				PcP	PcP	21 16 08.8	-0.1
	comp=Z,0.6nm,0.7s,baz=47,slow=2.3,SNR=5.8						
BILL	Bilibino	42.47	15	*de*P	P	21 14 36.9	-0.2
BILL				*PP	pwP	21 16 01.0	+4.4
BILL						21 16 19.7	
BILL						21 16 24.0	
BILL				SS	SS	21 23 42.0	-10
BILL				pmax	pmax		
	comp=Z,13nm,1.1s						
TIXI	Tiksi	43.41	355	*ce*P	P	21 14 44.2	-0.2
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KULM	Kulim	43.54	245	P	P	21 14 47.1	+0.8
IPM	Ipoh	43.73	244	P	P	21 14 47.9	+0.1
IPM				IAmb	IAmb	21 14 48.3	
	comp=Z,6.6nm,0.6s						
DGZ	Jazzator, Alta	44.46	313	⇓*i*P	P	21 14 53.5	+0.3
DGZ				pmax	pmax		
	comp=Z,11nm,1.0s						
PSI	Prapat	46.41	244	P	P	21 15 08.8	+0.1
PSI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
RPSI	Rantau Prapat	46.47	244	P	P	21 15 08.8	-0.3
RPSI				IAmb	IAmb	21 15 09.8	
	comp=Z,7.2nm,0.7s						
JIRN	Jiri	46.69	282	*e*P	P	21 15 11.8	+0.8
ZAA0	Zalesovo Array	46.74	319	P	P	21 15 09.7	-0.9
ZAA0				IAmb	IAmb	21 15 10.7	
	comp=Z,6.1nm,1.1s						
ZALV	Zalesovo Beam	46.74	319	P	P	21 15 10.0	-0.5
	comp=Z,2.6nm,0.5s,baz=98,slow=7.3,SNR=16						
ZALV				PcP	PcP	21 16 35.1	-1.2
	comp=Z,1.0nm,0.5s,baz=112,slow=2.9,SNR=4.4						
GUN	Gumba	46.89	283	*e*P	P	21 15 13.0	+0.4
	comp=Z,32nm,0.8s						
PKI	Pulchoki	47.38	282	*e*P	P	21 15 16.1	-0.2
	comp=Z,15nm,1.1s						
PKIN	Phulchoki	47.39	282	*e*P	P	21 15 16.1	-0.2
KKN	Kakani	47.44	283	*e*P	P	21 15 16.8	+0.2
DMN	Daman	47.63	282	*e*P	P	21 15 18.3	+0.2
MK31	Makanchi Array	47.64	309	*d i*P	P	21 15 17.3	-0.3
MK31	Makanchi Array	47.64	309	P	P	21 15 17.3	-0.3
MK31				IAmb	IAmb	21 15 18.2	
	comp=Z,4.7nm,0.8s						
MKAR	Makanchi Array	47.64	309	P	P	21 15 17.4	-0.2
	comp=Z,5.9nm,0.6s,baz=89,slow=9.0,SNR=88						
MKAR				PcP	PcP	21 16 38.8	-1.1
	comp=Z,0.9nm,0.5s,baz=82,slow=8.2,SNR=4.3						
MKAR				ScP	ScP	21 19 50.1	-5.0
	comp=Z,1.5nm,0.8s,baz=83,slow=4.1,SNR=8.5						
MKAR				S	S	21 21 38.0	-4.3
	comp=Z,0.1nm,0.4s,baz=198,slow=14,SNR=5.7						
MKAR	Makanchi Array	47.64	309	*i* P	P	21 15 17.3	-0.3
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MAKZ	Makanchi	47.86	309	P	P	21 15 19.2	0.0
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MAKZ	Makanchi	47.86	309	P	P	21 15 19.2	0.0
MAKZ				IAmb	IAmb	21 15 19.8	
	comp=Z,5.8nm,0.6s						
GKN	Gorkha	47.94	283	*e*P	P	21 15 20.8	+0.5
GSI	Gunungsitoli	48.38	243	P	P	21 15 23.7	+0.1
WB0	Warramunga Arr	48.43	186	P	P	21 15 23.4	-0.3
WB0				IAmb	IAmb	21 15 23.9	
	comp=Z,8.0nm,1.1s						
DANN	Dangsing	48.60	284	*e*P	P	21 15 26.0	+0.6
WR0	Warramunga Arr	48.60	186	P	P	21 15 24.9	-0.2
WR0				IAmb	IAmb	21 15 38.8	
	comp=Z,5.9nm,1.1s						
WB2	Warramunga Arr	48.60	186	P	P	21 15 24.8	-0.3
WB2				IAmb	IAmb	21 15 28.0	
	comp=Z,4.8nm,1.0s						
WRA	Warramunga Arr	48.60	186	P	P	21 15 24.0	-1.1
	comp=Z,2.0nm,0.3s,baz=3.0,slow=7.7,SNR=75						
WRA				PcP	PcP	21 16 42.7	-0.9
	comp=Z,1.4nm,0.8s,baz=356,slow=3.9,SNR=5.3						
WRA				ScP	ScP	21 19 54.1	-5.3
	comp=Z,0.7nm,0.7s,baz=360,slow=4.2,SNR=4.7						
WRA	Warramunga Arr	48.60	186	*i* P	P	21 15 25.1	0.0
WRA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
WRA	Warramunga Arr	48.60	186	IAmb	IAmb	21 15 25.2	
	comp=Z,0.3nm,0.9s						
PYUN	Piuthan	49.32	284	*e*P	P	21 15 30.0	-0.7
	comp=Z,24nm,0.5s						
KURK	Kurchatov	50.19	314	P	P	21 15 36.0	-0.5

KURK				pmax	pmax		
	comp=Z,13nm,0.7s						
KURK	Kurchatov	50.19	314	P	P	21 15 36.0	-0.5
NRIK	Noril'sk	50.31	339	P	P	21 15 36.7	-0.5
	comp=Z,1.9nm,0.7s,baz=130,slow=9.8,SNR=4.5						
NRIK	Noril'sk	50.31	339	ceP	P	21 15 37.9	+0.8
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NRIK	Noril'sk	50.31	339	IAmb	IAmb	21 15 38.7	
	comp=Z,3.4nm,0.9s						
TARG	Taragay, Kyrgy	51.07	302	IAmb	IAmb	21 15 45.4	
	comp=Z,7.3nm,1.0s						
KDJ	Kajisay	51.49	303	P	P	21 15 45.7	-0.8
KDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KDJ	Kajisay	51.49	303	P	P	21 15 45.7	-0.8
KDJ				IAmb	IAmb	21 15 50.1	
	comp=Z,7.4nm,1.0s						
AS31	Alice Springs	52.33	187	P	P	21 15 52.4	-0.2
ASAR	Alice Springs	52.33	187	P	P	21 15 51.9	-0.7
	comp=Z,1.1nm,0.5s,baz=3.0,slow=6.6,SNR=35						
ASAR				PcP	PcP	21 16 57.3	-0.1
	comp=Z,0.8nm,0.9s,baz=355,slow=4.9,SNR=4.4						
BOOM	Boomskoye usch	52.37	303	P	P	21 15 52.8	-0.1
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BOOM	Boomskoye usch	52.37	303	P	P	21 15 52.8	-0.1
BOOM				IAmb	IAmb	21 15 54.0	
	comp=Z,4.5nm,0.6s						
P18K	Big Mountain,	53.24	35	P	P	21 15 59.2	+0.6
SVW2	Sparrevohn	53.24	33	P	P	21 15 58.8	+0.1
SVW2				IAmb	IAmb	21 16 00.4	
	comp=Z,5.8nm,1.0s						
O18K	Koktuh Hills	53.29	35	P	P	21 15 59.8	+0.7
O18K				IAmb	IAmb	21 16 18.6	
	comp=Z,9.9nm,0.9s						
AAK	Ala-Archa	53.41	304	P	P	21 16 00.3	-0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AAK	Ala-Archa	53.41	304	P	P	21 16 00.3	-0.1
PSA00	Pilbara Seismi	53.45	203	P	P	21 15 59.9	-0.7
J20K	Nowinta River	54.28	30	P	P	21 16 06.7	+0.6
J20K				IAmb	IAmb	21 16 07.7	
	comp=Z,6.1nm,0.8s						
KDAK	Kodiak Island	54.52	38	P	P	21 16 06.8	-1.0
KDAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KDAK	Kodiak Island	54.52	38	P	P	21 16 06.8	-1.0
KDAK				IAmb	IAmb	21 16 21.7	
	comp=Z,10nm,1.1s						
IMAR	Indian Mountai	54.70	27	P	P	21 16 08.5	-0.5
PPLA	Purkeypile	55.01	31	P	P	21 16 11.7	+0.3
PPLA				IAmb	IAmb	21 16 23.2	
	comp=Z,6.5nm,1.2s						
H21K	Melozitna Rive	55.05	28	P	P	21 16 11.7	+0.2
H21K				IAmb	IAmb	21 16 13.5	
	comp=Z,5.7nm,1.1s						
BRVK	Borovoye	55.34	317	P	P	21 16 13.5	-0.1
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BRVK	Borovoye	55.34	317	P	P	21 16 13.5	-0.1
BRVK				IAmb	IAmb	21 16 14.3	
	comp=Z,9.0nm,0.7s						
KTH	Kantishna Hill	55.64	31	P	P	21 16 16.8	+1.0
BPAW	Bear Paw Mtn.	55.65	30	P	P	21 16 16.1	+0.3
TRF	Thorofare Moun	55.91	31	P	P	21 16 17.3	-0.4
RC01	Rabbit Creek A	56.07	34	P	P	21 16 18.2	-0.4
RC01				IAmb	IAmb	21 16 19.0	
	comp=Z,4.2nm,0.4s						
GHO	Glory Hole Cre	56.48	33	P	P	21 16 20.9	-0.6
RND	Reindeer	56.56	31	P	P	21 16 21.5	-0.6
RND				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RND	Reindeer	56.56	31	P	P	21 16 21.5	-0.6
RND				IAmb	IAmb	21 16 22.2	
	comp=Z,5.9nm,1.2s						
TOLK	Toolik Lake Re	56.66	24	P	P	21 16 22.3	-0.4
KNK	Knik Glacier	56.69	33	P	P	21 16 22.2	-0.9
KNK				IAmb	IAmb	21 16 25.0	
	comp=Z,7.9nm,1.2s						
PWL	Port Wells	56.75	34	P	P	21 16 22.3	-1.1
PWL				IAmb	IAmb	21 16 25.4	
	comp=Z,12nm,1.0s						
SML	Sawmill	56.76	33	P	P	21 16 22.9	-0.6
SML				IAmb	IAmb	21 16 23.8	
	comp=Z,12nm,1.2s						
MDM	Murphy Dome	56.90	29	P	P	21 16 24.2	-0.2
WRH	Wood River Hil	56.94	30	P	P	21 16 24.5	-0.2
CCB	Clear Creek Bu	57.07	29	P	P	21 16 24.7	-0.8
H24K	Noodor Dome	57.09	28	P	P	21 16 26.2	+0.5
H24K				IAmb	IAmb	21 16 26.5	
	comp=Z,5.3nm,1.1s						
DHY	Denali Highway	57.22	31	P	P	21 16 26.1	-0.7
SCM	Sheep Creek Mo	57.23	33	P	P	21 16 26.2	-0.7
SCM				pmax	pmax		
	comp=Z,15nm,1.2s						
SCM	Sheep Creek Mo	57.23	33	P	P	21 16 26.2	-0.7
POKR	Poker Plat Res	57.24	29	P	P	21 16 26.8	0.0
POKR				IAmb	IAmb	21 16 46.5	
	comp=Z,5.0nm,0.9s						
GLI	Glacier Island	57.36	34	P	P	21 16 26.4	-1.2
HDA	Harding Lake	57.43	30	IAmb	IAmb	21 16 27.8	
	comp=Z,3.9nm,0.5s						
IL31		57.46	29	P	P	21 16 27.8	-0.5
IL31				IAmb	IAmb	21 16 28.4	
	comp=Z,1.7nm,0.4s						
ILAR	Eielson Array	57.46	29	P	P	21 16 26.7	-1.6
	comp=Z,1.1nm,0.3s,baz=250,slow=5.7,SNR=43						
ILAR	Eielson Array	57.46	29	P	P	21 16 27.5	-0.8
ILAR	Eielson Array	57.46	29	P	P	21 16 27.5	-0.8
FID	Port Fidalgo	57.66	34	P	P	21 16 29.1	-0.6
HIN	Hinchinbrook I	57.66	34	P	P	21 16 29.3	-0.4
HIN				IAmb	IAmb	21 16 41.6	
	comp=Z,5.5nm,0.8s						
M24K	Tolsona, Glenn	57.78	32	P	P	21 16 31.4	+0.8
KLU	Klutina	57.91	33	P	P	21 16 31.2	-0.3
PRP	Porcupine Dome	58.05	28	P	P	21 16 32.1	-0.4
PAX	Paxson	58.09	31	P	P	21 16 32.2	-0.5
PAX				pmax	pmax		
	comp=Z,4.0nm,1.1s						
PAX	Paxson	58.09	31	P	P	21 16 32.2	-0.5
RIDG	Independent Ri	58.35	30	P	P	21 16 34.1	-0.4
BMAR	Burnt Mountain	58.45	26	P	P	21 16 36.2	+1.1
N25K	Chitina, Valde	58.54	33	P	P	21 16 36.5	+0.6
N25K				IAmb	IAmb	21 16 42.6	
	comp=Z,4.5nm,1.1s						
RAGM	Ragged Mountai	58.57	34	P	P	21 16 35.5	-0.4
BMRM	Bremner River	58.57	34	P	P	21 16 35.4	-0.6
BMRM				IAmb	IAmb	21 16 36.3	
	comp=Z,12nm,1.1s						
BMRM				pwP	pwP	21 18 06.3	+3.8
DOT	Dot Lake	58.70	31	P	P	21 16 36.2	-0.7
DOT				IAmb	IAmb	21 16 37.0	
	comp=Z,4.9nm,0.7s						
SCRK	Sand Creek	58.73	30	IAmb	IAmb	21 16 36.8	
	comp=Z,8.4nm,1.1s						
HMT	Hamilton	58.78	34	P	P	21 16 37.1	-0.3
GLB	Gilahina Butte	58.93	33	P	P	21 16 38.1	-0.3
GLB				IAmb	IAmb	21 16 55.6	
	comp=Z,4.9nm,1.1s						
SUCK	Suckling Hills	59.04	35	P	P	21 16 38.2	-0.9
SUCK				IAmb	IAmb	21 16 44.8	
	comp=Z,11nm,1.0s						
BERG	Berg Lake	59.05	34	P	P	21 16 39.4	+0.2
L26K	Log Cabin Wild	59.05	31	IAmb	IAmb	21 16 40.3	
	comp=Z,5.4nm,0.5s						
VRDI	Verde Repeater	59.11	33	P	P	21 16 39.0	-0.8
VRDI				IAmb	IAmb	21 16 46.5	
	comp=Z,6.1nm,1.2s						
KBL	Kabul	59.21	295	P	P	21 16 40.5	-0.5
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBL	Kabul	59.21	295	P	P	21 16 40.5	-0.5
KBL				IAmb	IAmb	21 16 41.4	
	comp=Z,4.0nm,0.8s						
M26K	Nabesna, AK	59.25	32	P	P	21 16 40.5	-0.1
M26K				IAmb	IAmb	21 16 42.0	
	comp=Z,5.4nm,1.1s						
MLOA	Mauna Loa Obse	59.33	83	P	P	21 16 41.9	-0.4
ISLE	Juniper Island	59.70	34	P	P	21 16 43.4	-0.4
ISLE				IAmb	IAmb	21 16 56.7	
	comp=Z,12nm,1.1s						
L27K	Beaver Creek,	59.74	31	P	P	21 16 43.5	-0.3
BCAR	Beaver Creek A	59.76	31	P	P	21 16 44.0	-0.1
M27K	Edge Creek, AK	59.77	32	P	P	21 16 43.8	-0.5
M27K				IAmb	IAmb	21 16 45.1	
	comp=Z,4.5nm,1.0s						
EGAK	Eagle	59.92	29	P	P	21 16 43.2	-1.7
FORT	Forrest	60.14	191	P	P	21 16 46.4	-0.5
STKA	Stephens Creek	60.26	178	P	P	21 16 46.4	-1.2
	comp=Z,1.9nm,0.8s,baz=352,slow=10,SNR=4.8						
STKA	Stephens Creek	60.26	178	IAmb	IAmb	21 16 53.3	
	comp=Z,0.3nm,1.1s						
SVE	Sverdlovsk	60.52	322	⇓iP	P	21 16 49.3	+0.2
SVE				pmax	pmax		
	comp=Z,15nm,0.8s						
DAWY	Dawson	60.74	30	P	P	21 16 50.1	-0.4
EPYK	Eagle Plains	61.61	27	P	P	21 16 56.6	+0.3
ARU	Arti	61.72	321	d iP	P	21 16 56.1	-1.0
ARU						21 17 31.9	
ARU				*PP	pwP	21 18 25.4	-0.4
ARU						21 19 17.3	
ARU				S	S	21 24 44.1	-3.3
ARU				pmax	pmax		
	comp=Z,13nm,0.6s						
ARU	Arti	61.72	321	P	P	21 16 56.5	-0.5
ABKAR	Akbulak array	62.29	313	P	P	21 17 00.2	-0.7
ABKAR	Akbulak array	62.29	313	P	P	21 17 00.3	-0.7
INK	Inuvik	62.57	25	P	P	21 17 01.1	-1.4
	comp=Z,0.8nm,0.5s,baz=271,slow=8.5,SNR=5.9						
INK	Inuvik	62.57	25	P	P	21 17 01.6	-0.8
INK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
INK	Inuvik	62.57	25	P	P	21 17 01.6	-0.8
HRA	Herat	64.62	297	P	P	21 17 16.5	-0.1
HRA				IAmb	IAmb	21 17 17.6	
	comp=Z,5.8nm,0.9s						
KIRV	Kirov	66.05	325	ceP	P	21 17 24.3	-0.5
GEYT	Alibeck	66.66	302	P	P	21 17 29.2	0.0
	comp=Z,4.3nm,0.7s,baz=52,slow=7.9,SNR=6.5						
GEYT	Alibeck	66.66	302	IAmb	IAmb	21 17 30.0	
	comp=Z,3.9nm,0.7s						
ARCES	ARCESS Array B	71.26	340	P	P	21 17 56.5	0.0
	comp=Z,3.5nm,0.8s,baz=350,slow=6.5,SNR=3.7						
YKA	Yellowknife Ar	71.86	28	P	P	21 17 58.9	-1.2
	comp=Z,0.8nm,0.4s,baz=293,slow=5.8,SNR=16						
KBZ	Khabaz	75.19	312	P	P	21 18 19.8	+0.2
	comp=Z,10nm,0.7s,baz=88,slow=4.1,SNR=23						
KBZ	Khabaz	75.19	312	ceP	P	21 18 18.8	-0.9
KBZ				pmax	pmax		
	comp=Z,12nm,0.9s						
KIV	Kislovodsk	75.23	312	eP	P	21 18 20.5	+0.4
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FINES	FINESS Array B	75.47	333	P	P	21 18 19.7	-1.2
	comp=Z,1.1nm,0.3s,baz=67,slow=4.3,SNR=17						
FINES	FINESS Array B	75.47	333	i P	P	21 18 20.3	-0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	79.93	323	P	P	21 18 44.2	-1.3
	comp=Z,1.1nm,0.5s,baz=49,slow=6.0,SNR=9.6						
AKBB	Malin Array Si	79.93	323	ceP	P	21 18 44.9	-0.5
NOA	NORSAR Array B	81.25	337	P	P	21 18 50.9	-1.3
	comp=Z,1.1nm,0.7s,baz=46,slow=4.9,SNR=2.9						
NVAR	Mina Array Bea	81.37	51	P	P	21 18 53.4	-0.1
	comp=Z,1.9nm,0.7s,baz=280,slow=5.9,SNR=5.8						
BRTR	Keskin Array B	83.19	312	P	P	21 19 02.3	-0.4
	comp=Z,1.6nm,0.7s,baz=86,slow=7.4,SNR=3.6						
HVU	Hansel Valley	83.27	46	P	P	21 19 02.7	-0.5
HVU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HVU	Hansel Valley	83.27	46	P	P	21 19 02.6	-0.5
HVU				IAmb	IAmb	21 19 04.3	
	comp=Z,3.7nm,0.9s						
PDAR	Pinedale Array	84.72	44	P	P	21 19 09.8	-0.7
	comp=Z,0.8nm,0.7s,baz=307,slow=1.7,SNR=8.4						
GERES	GERESS Array B	88.92	328	P	P	21 19 28.4	-1.7
	comp=Z,0.6nm,0.6s,baz=47,slow=5.9,SNR=4.7						
TXAR	Lajitas Array	96.51	52	P	P	21 20 04.5	-0.9
	comp=Z,0.4nm,0.8s,baz=290,slow=2.7,SNR=5.2						

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*IDC **24** 21:12:22.2±2.0, 5°.37S×153°.47E, h0^{km}, mb3.5/4, mb1 3.8/5, mb1mx3.6/39, mbtmp3.6/5, ML1.9/1, Error ellipse: s-maj=72.3km s-min=29.3km az=127.0*

ISC 24 21:12:28.9±1.9**, 5°.3S**±0°.3×**153°.3E**±0°.4**, h43**^{km}**, n6,** σ**0^s.76**/6**, mb3.4**/4**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.29	236	Pn	Pn	21 14 13.0	+0.1
	1.1nm,0.3s,baz=42,slow=11,SNR=4.0						
WRA	Warramunga Arr	23.46	230	P	P	21 17 34.9	+0.1
	0.8nm,0.8s,baz=59,slow=9.5,SNR=2.3						
ASAR	Alice Springs	26.09	224	P	P	21 17 58.1	-0.7
	0.7nm,0.8s,baz=54,slow=8.5,SNR=3.1						
CMAR	Chiang Mai Arr	58.52	295	P	P	21 22 21.2	-0.2
	1.0nm,1.0s,baz=123,slow=4.6,SNR=4.2						
ILAR	Eielson Array	82.46	22	P	P	21 24 46.2	-0.3
	0.4nm,0.8s,baz=246,slow=4.4,SNR=2.7						
TORD	Torodi Ar. Bea	150.91	287	PKPbc	PKiKP	21 32 19.7	+1.1
	0.4nm,0.7s,baz=88,slow=3.5,SNR=2.0						

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*JMA **24** 21:20:21.8±0.1, 24°.03N×121°.03E, h0^{km}, M4.3*

*BJI **24** 21:20:21.1±0.0, 24°.08N×121°.03E, h5^{km}, mB4.7/8, mb4.1/17, ML4.3/2, Ms4.3/6, Ms7 4.1/5*

*NEIC **24** 21:20:22.2±2.3, 24°.02N±0°.02×121°.08E±0°.03, h10^{km}±1^{km}, mb4.4/23, ML4.4(TAP), Error ellipse: s-maj=5.9km s-min=2.9km az=307.0*

*IASPEI **24** 21:20:22.7±0.8, 24°.03N±0°.01×121°.02E±0°.02, h19^{km}±1^{km}, mb4.3/22, Error ellipse: s-maj=2.3km s-min=1.4km az=110.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*TAP **24** 21:20:22.6, 24°.05N×121°.03E, h21^{km}, ML4.6, B*

*ASIES **24** 21:20:23.4, 24°.01N×121°.06E, h23^{km}, MW4.1*

*IDC **24** 21:20:25.5±3.2, 23°.97N×121°.24E, h49^{km}±32^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.6/51, mbtmp3.9/12, ML4.0/2, Error ellipse: s-maj=24.8km s-min=16.2km az=68.0*

ISC 24 21:20:22.4±0.6**, 24°.03N**±0°.01×**121°.01E**±0°.01**, h18**^{km}±1^{km}**, n231,** σ**1^s.09**/380**, mb4.3**/22**, 18C-62D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WPL	Puli Township	0.05	256	⇑iP	Pg	21 20 26.8	+1.0
	baz=243						
WPL				i S	Sg	21 20 29.6	+1.5
	baz=243						
DPDB	Guoxing	0.08	276	⇑iP	Pg	21 20 27.0	+1.0
	baz=262						
DPDB				eS	Sg	21 20 30.4	+1.9
	baz=262						
WCS	Beigang Elemen	0.10	289	⇑iP	Pg	21 20 27.2	+1.0
	baz=276						
WCS				eS	Sg	21 20 30.2	+1.6
	baz=276						
CHGB	Renai	0.15	76	⇓iP	Pg	21 20 27.7	+0.7
	baz=84						
CHGB				i S	Sg	21 20 31.0	+1.0
	baz=84						
OWD	Renai	0.16	115	⇓iP	Pg	21 20 27.9	+0.8
	baz=124						
OWD				i S	Sg	21 20 31.2	+1.0
	baz=124						
SMLT	Sun Moon Lake	0.18	216	⇑iP	Pg	21 20 28.2	+1.1
	baz=214						
SMLT				i S	Sg	21 20 32.6	+2.3
	baz=214						
TYC	Yuchr	0.19	230	⇑iP	Pg	21 20 28.3	+1.1
	baz=226						
TYC				i S	Sg	21 20 32.3	+1.9
	baz=226						
SSLB	Suanglung	0.24	193	⇑iP	Pb	21 20 28.7	+0.6
	baz=195						
SSLB				eS	Sb	21 20 32.7	+0.9
	baz=195						
SSLB	Suanglung	0.24	193		Pb	21 20 28.5	+0.5
SSLB					Sb	21 20 32.8	+0.9
WHF	Hehuan Shan	0.26	62	⇓iP	Pg	21 20 29.5	+0.9
	baz=66						
WHF				i S	Sg	21 20 34.0	+1.1
	baz=66						
WHP	Taichung City	0.26	346	⇑iP	Pb	21 20 29.2	+0.7
	baz=342						
WHP				i S	Sb	21 20 34.0	+1.5
	baz=342						
TDCB	Techi	0.26	30	⇓iP	Pb	21 20 28.9	+0.3
	baz=30						
TDCB				i S	Sg	21 20 32.8	+0.2
	baz=30						
TWT	Tachien	0.27	33	⇓iP	Pg	21 20 28.9	+0.3
	baz=31						
TWT				i S	Sg	21 20 32.9	0.0
	baz=31						
WWF	Wufeng	0.29	274	⇓P	Pn	21 20 30.9	-0.8
	baz=269						
WWF				eS	Sn	21 20 37.3	-0.3
	baz=269						
VWDT	VWDT	0.29	157	⇓iP	Pb	21 20 29.9	+0.8
	baz=160						
VWDT				i S	Sb	21 20 34.7	+1.1
	baz=160						
FUSS	Fushou	0.30	43	⇓iP	Pg	21 20 29.6	+0.3
	baz=44						
FUSS				i S	Sg	21 20 33.9	0.0
	baz=44						
WNT1	Nantou City	0.33	249	⇓P	Pn	21 20 31.3	-0.9
	baz=247						
WNT1				eS	Sn	21 20 37.5	-1.0
	baz=247						
WJS	Zhushan	0.33	232	⇓P	Pn	21 20 31.1	-1.2
	baz=231						
WJS				eS	Sn	21 20 37.3	-1.3
	baz=231						
TCU	Taichung	0.33	292	⇓iP	Pn	21 20 31.4	-0.9
	baz=288						
TCU				S	Sn	21 20 37.6	-1.0
	baz=288						
WNT	Mingjian	0.34	244	P	Pn	21 20 31.3	-1.0
	baz=241						
WNT				eS	Sn	21 20 37.5	-1.2
	baz=241						
TWQ1	Liyutan	0.39	326	⇑P	Pn	21 20 32.1	-1.0
	baz=323						
TWQ1				eS	Sn	21 20 38.9	-1.2
	baz=323						
WYL	Yuanlin Townsh	0.40	261	⇓P	Pn	21 20 32.5	-0.7
	baz=258						
WYL				eS	Sn	21 20 40.2	-0.1
	baz=258						
WCHH	Zhanghua	0.42	278	⇓P	Pn	21 20 32.8	-0.7
	baz=274						
WCHH				eS	Sn	21 20 40.2	-0.6
	baz=274						
ESL	Shilin	0.44	119	⇓iP	Pb	21 20 31.9	+0.3
	baz=122						
ESL				i S	Sg	21 20 37.8	+0.4
	baz=122						
ETM	Tongmen	0.44	98	⇓iP	Pg	21 20 31.7	+0.2
	baz=101						
ETM				eS	Sg	21 20 37.7	+0.1
	baz=101						
NSY	Sanyi	0.45	329	⇑P	Pn	21 20 33.6	-0.4
	baz=327						
NSY				eS	Sn	21 20 41.3	-0.3
	baz=327						
ETLH	Xiulin Townshi	0.46	67	⇓P	Pg	21 20 32.0	+0.1
	baz=69						
ETLH				eS	Sg	21 20 38.7	+0.4
	baz=69						
WDJ	Dajia District	0.47	313	⇓iP	Pn	21 20 33.8	-0.4
	baz=310						
WDJ				eS	Sn	21 20 42.1	+0.1
	baz=310						
EGFH	Guangfu	0.52	133	eP	Pb	21 20 33.4	+0.4
	baz=136						
NNSB	Datong	0.52	40	⇓iP	Pg	21 20 32.8	-0.2
	baz=40						
NNSB				eS	Sg	21 20 39.5	-0.7
	baz=40						
CHN5	Tsauling	0.53	216	⇓iP	Pn	21 20 34.2	-0.8
	baz=216						
CHN5				eS	Sn	21 20 42.6	-0.9
	baz=216						
NNS	Nan Shan	0.53	38	⇓P	Pg	21 20 33.0	-0.1
	baz=40						
NNS				eS	Sg	21 20 39.8	-0.5
	baz=40						
WGK	Gukeng	0.53	231	P	Pn	21 20 34.5	-0.5
	baz=229						
WGK				eS	Sn	21 20 43.5	-0.1
	baz=229						
TWD	Chiawan	0.54	84	⇓P	Pg	21 20 33.2	+0.1
	baz=86						
TWD				eS	Sg	21 20 40.0	-0.4
	baz=86						
YUS	Yu-Shan	0.54	186	⇓P	Pb	21 20 34.0	+0.6
	baz=186						
YUS				eS	Sb	21 20 41.4	+0.4
	baz=186						
HWA	Hwalien	0.54	95	⇓P	Pb	21 20 34.0	+0.7
	baz=97						
HWA				eS	Sb	21 20 41.6	+0.9
	baz=97						
ALS	Alishan	0.55	201	⇓iP	Pn	21 20 34.6	-0.9
	baz=200						
ALS				eS	Sb	21 20 42.5	+1.4
	baz=200						
NMLH	Miaoli	0.55	338	P	Pn	21 20 35.2	-0.1
	baz=336						
NMLH				eS	Sn	21 20 43.7	-0.3
	baz=336						
WDLH	Douliu	0.55	233	⇓P	Pn	21 20 34.7	-0.6
	baz=232						
WDLH				eS	Sn	21 20 43.4	-0.5
	baz=232						
NACB	Ninganchiao	0.55	74	⇓P	Pg	21 20 33.4	-0.1
	baz=76						
NACB				eS	Sg	21 20 40.8	-0.1
	baz=76						
NACB	Ninganchiao	0.55	74		Pg	21 20 33.4	-0.1
NACB					Sg	21 20 40.3	-0.6
TEYL	Yanliau Villag	0.56	106	⇓P	Pg	21 20 33.9	+0.4
	baz=105						
TEYL				eS	Sg	21 20 41.5	+0.4
	baz=105						
ETL	Fush Village	0.57	76	⇓eP	Pg	21 20 33.7	-0.1
	baz=78						
ETL				eS	Sg	21 20 41.1	-0.5
	baz=78						
TEGC	Jichi Village	0.57	123	eP	Pg	21 20 34.8	+0.9
	baz=125						
TEGC				eS	Sb	21 20 42.8	+1.2
	baz=125						
EHY	Hungye	0.59	151	⇓P	Pg	21 20 34.6	+0.5
	baz=153						
EHY				eS	Sg	21 20 42.3	+0.2
	baz=153						
WRL	Guolierlin Hig	0.59	258	⇓P	Pn	21 20 35.2	-0.7
	baz=256						
WRL				eS	Sn	21 20 43.8	-1.3
	baz=256						
NSTT	Nanjuang	0.60	359	⇑P	Pn	21 20 35.4	-0.7
	baz=358						
NSTT				eS	Sn	21 20 44.1	-1.3
	baz=358						
LIOB	Emei	0.62	0	⇑eP	Pn	21 20 35.7	-0.6
	baz=359						
LIOB				eS	Sn	21 20 44.5	-1.2
	baz=359						
HGSD	Ruisui	0.65	145	⇓P	Pg	21 20 36.1	+0.8
	baz=147						
HGSD				eS	Sg	21 20 45.2	+1.2
	baz=147						
WTK	Tuku	0.66	240	⇓P	Pn	21 20 36.2	-0.6
	baz=239						
WTK				eS	Sn	21 20 46.3	-0.5
	baz=239						
NJN	Zhunan	0.67	349	eP	Pn	21 20 37.1	+0.2
	baz=347						
NJN				eS	Sn	21 20 47.6	+0.7
	baz=347						
YULB	Yu-li	0.68	158	⇓P	Pg	21 20 36.2	+0.4
	baz=159						
YULB				eS	Sb	21 20 45.1	+0.4
	baz=159						
YULB	Yu-li	0.68	158		Pg	21 20 36.2	+0.4
WTCT	Ta-ch'eng	0.69	257	eP	Pn	21 20 36.8	-0.4
	baz=255						
WTCT				eS	Sn	21 20 47.8	+0.3
	baz=255						
CHN2	Minshiung	0.70	225	eP	Pn	21 20 37.1	-0.2
	baz=225						

CHN2				eS	Sn	21 20 48.2	+0.7
	baz=225						
NJD	Zhudong	0.71	5	eP	Pn	21 20 37.9	+0.4
	baz=5.0						
NJD				eS	Sn	21 20 47.9	-0.1
	baz=5.0						
TWF1	Yuli	0.72	159	⇓P	Pg	21 20 37.0	+0.5
	baz=160						
TWF1				eS	Sg	21 20 46.4	+0.3
	baz=160						
NSK	Sanguang	0.72	26	⇓P	Pb	21 20 36.5	+0.1
	baz=26						
NSK				eS	Sb	21 20 45.5	-0.4
	baz=26						
EHP	Heping Village	0.72	67	eP	Pg	21 20 37.1	+0.5
	baz=68						
YHNB	Yeheng	0.72	27	⇓P	Pb	21 20 36.5	0.0
	baz=27						
YHNB				eS	Sb	21 20 45.5	-0.5
	baz=27						
YHNB	Yeheng	0.72	27		Pb	21 20 36.5	0.0
EYUL	Yuli	0.73	157	⇓P	Pg	21 20 37.2	+0.4
	baz=159						
EYUL				eS	Sg	21 20 46.8	+0.2
	baz=159						
NDT	Datong Townshi	0.73	38	eP	Pb	21 20 36.5	-0.1
	baz=39						
NDT				eS	Sb	21 20 45.9	-0.5
	baz=39						
HSN1	Hsinchu	0.75	0	eP	Pn	21 20 38.5	+0.4
	baz=359						
HSN1				eS	Sn	21 20 50.0	+1.0
	baz=359						
CHY	Chiayi	0.75	226	⇓eP	Pn	21 20 37.9	-0.2
	baz=225						
CHY				eS	Sn	21 20 49.2	+0.2
	baz=225						
WMLT	Mailiao	0.76	253	eP	Pn	21 20 38.3	+0.1
	baz=252						
WMLT				eS	Sn	21 20 49.7	+0.7
	baz=252						
SBCB	Hsinchu	0.76	358	⇓P	Pn	21 20 38.7	+0.4
	baz=357						
SBCB				eS	Sn	21 20 50.5	+1.2
	baz=357						
CHN4	Tsaushan	0.77	210	⇓eP	Pn	21 20 38.3	-0.1
	baz=210						
CHN4				eS	Sn	21 20 50.1	+0.6
	baz=210						
HSN	Hsinchu	0.78	357	eP	Pg	21 20 37.9	+0.2
	baz=359						
HSN				eS	Sn	21 20 51.3	+1.7
	baz=359						
ENA	Nanau	0.78	59	⇓eP	Pb	21 20 37.4	0.0
	baz=60						
ENA				eS	Sb	21 20 47.2	-0.3
	baz=60						
ENTT	Nioudou	0.79	39	⇓eP	Pb	21 20 37.5	-0.1
	baz=40						
ENTT				eS	Sg	21 20 49.6	+1.1
	baz=40						
TPUB	Ta-pu	0.80	206	⇓eP	Pn	21 20 38.5	-0.3
	baz=206						
TPUB				eS	Sn	21 20 50.3	0.0
	baz=206						
TPUB	Ta-pu	0.80	206		Pg	21 20 38.4	+0.2
ECBN	Changbin	0.81	150	⇑eP	Pn	21 20 39.4	+0.5
	baz=152						
ECBN				eS	Sg	21 20 49.6	+0.6
	baz=152						
EWUT	Wuta	0.81	59	⇓P	Pb	21 20 37.9	-0.1
	baz=60						
EWUT				eS	Sb	21 20 48.6	0.0
	baz=60						
WSF	Szhu	0.82	242	⇓eP	Pn	21 20 38.8	-0.2
	baz=241						
WSF				eS	Sn	21 20 51.5	+0.9
	baz=241						
ELDTW	Lidau	0.83	180	⇓eP	Pg	21 20 38.7	-0.1
	baz=180						
ELDTW				eS	Sg	21 20 49.8	0.0
	baz=180						
WTP	Ta-pu	0.86	205	⇓eP	Pn	21 20 39.4	-0.2
	baz=205						
WTP				eS	Sn	21 20 52.1	+0.4
	baz=205						
FULB	Fuli	0.86	163	⇑eP	Pn	21 20 40.3	+0.6
	baz=164						
FULB				eS	Sn	21 20 52.4	+0.7
	baz=164						
NWLT	Wulai	0.87	31	eP	Pb	21 20 39.2	+0.2
	baz=31						
NWLT				eS	Sg	21 20 51.5	+0.5
	baz=31						
STYH	Taoyuan	0.88	194	⇓eP	Pn	21 20 39.7	-0.1
	baz=195						
STYH				eS	Sn	21 20 52.2	+0.2
	baz=195						
NDS	Dongshan	0.88	46	⇓eP	Pb	21 20 39.0	-0.1
	baz=47						
NDS				eS	Sb	21 20 50.9	+0.3
	baz=47						
STYT	Tauyuan	0.89	195	⇓eP	Pn	21 20 40.1	+0.1
	baz=195						
STYT				eS	Sn	21 20 52.1	-0.3
	baz=195						
TWK	Hsinying	0.90	213	⇓eP	Pn	21 20 40.1	0.0
	baz=212						
TWK				eS	Sn	21 20 53.3	+0.7
	baz=212						
TWE	Neicheng	0.91	41	⇓eP	Pb	21 20 40.0	+0.3
	baz=42						
TWE				eS	Sg	21 20 52.6	+0.3
	baz=42						
SNST	Tainan City	0.93	211	eP	Pn	21 20 40.7	+0.2
	baz=211						
SNST				eS	Sn	21 20 54.3	+0.9
	baz=211						
ECS	Chishang	0.94	168	⇑eP	Pg	21 20 41.5	+0.7
	baz=169						
ECS				eS	Sn	21 20 54.6	+0.9
	baz=169						
ICHU	Yijhu	0.94	226	⇓eP	Pn	21 20 40.8	+0.1
	baz=225						
ICHU				eS	Sn	21 20 54.3	+0.6
	baz=225						
CHN1	Nanshi	0.95	208	⇓eP	Pn	21 20 40.8	0.0
	baz=208						
CHN1				eS	Sn	21 20 54.7	+0.8
	baz=208						
NCUH	Zhongli	0.95	9	eP	Pg	21 20 41.4	+0.4
	baz=9.0						
NCUH				eS	Sn	21 20 54.9	+1.0
	baz=9.0						
NCU	National Centr	0.95	9	eP	Pg	21 20 41.5	+0.4
	baz=9.0						
NCU				eS	Sn	21 20 55.2	+1.2
	baz=9.0						
TWC	Suao	0.96	52	eP	Pb	21 20 40.6	+0.2
	baz=54						
TWC				eS	Sb	21 20 53.4	+0.6
	baz=54						
CHKT	Chengkung	0.98	161	eP	Pg	21 20 41.6	+0.2
	baz=161						
CHKT				eS	Sn	21 20 55.8	+1.3
	baz=161						
NHW	Xinwu Township	0.98	2	eP	Pg	21 20 41.9	+0.4
	baz=1.0						
NHW				eS	Sn	21 20 56.2	+1.7
	baz=1.0						
ILA	Ilan	1.00	42	eP	Pg	21 20 42.1	+0.3
	baz=43						
CHN8	Yiju	1.00	228	eP	Pg	21 20 42.0	+0.1
	baz=227						
CHN8				eS	Sn	21 20 56.6	+1.6
	baz=227						
NTY	Taoyuan	1.00	15	eP	Pg	21 20 43.2	+1.2
	baz=15						
NTY				eS	Sn	21 20 58.0	+2.8
	baz=15						
SGST	Jiashian	1.02	203	eP	Pb	21 20 41.6	+0.1
	baz=203						
SGST				eS	Sn	21 20 56.4	+0.8
	baz=203						
TATO	Taipei	1.04	24	eP	Pg	21 20 42.9	+0.2
	baz=25						
TATO				eS	Sg	21 20 57.5	+1.2
	baz=25						
TATO	Taipei	1.04	24		Pg	21 20 43.1	+0.5
BACT	New Taipei Cit	1.04	22	eP	Pn	21 20 42.6	+0.5
	baz=22						
NHDH	Xindian Distri	1.04	26	eP	Pb	21 20 41.1	-0.9
	baz=26						
NHDH				eS	Sg	21 20 57.5	+1.1
	baz=26						
EDH	Donghe	1.08	166	⇑eP	Pn	21 20 43.1	+0.5
	baz=167						
EDH				eS	Sg	21 20 57.9	+0.3
	baz=167						
SLGT	Liugui	1.08	198	⇓eP	Pg	21 20 43.4	0.0
	baz=198						
SLGT				eS	Sg	21 20 58.9	+1.3
	baz=198						
TWA	Mucha	1.08	29	eP	Pg	21 20 43.5	0.0
	baz=29						
TWA				eS	Sg	21 20 58.5	+0.8
	baz=29						
TAP	Taipei	1.10	24	eP	Pn	21 20 42.8	-0.1
	baz=24						
TAP				eS	Sg	21 20 59.0	+0.6
	baz=24						
SSHA	Shanhua	1.11	217	eP	Pg	21 20 44.4	+0.5
	baz=217						
SSHA				eS	Sg	21 21 01.0	+2.6
	baz=217						
NTC	Toucheng	1.11	42	eP	Pb	21 20 43.7	+0.7
	baz=42						
NTC				eS	Sn	21 20 58.4	+0.5
	baz=42						
TAP1	Taipei	1.11	25	eP	Pg	21 20 43.9	-0.1
	baz=24						
TAP1				eS	Sg	21 20 59.5	+1.0
	baz=24						
CHN3	Shinhua	1.12	212	eP	Pg	21 20 44.5	+0.4
	baz=212						
CHN3				eS	Sg	21 21 01.6	+2.9
	baz=212						
LONT	Longtian	1.12	175	⇑eP	Pg	21 20 44.0	-0.1
	baz=175						
LONT				eS	Sg	21 20 59.2	+0.4
	baz=175						
NHY	Taipei	1.13	26	eP	Pg	21 20 44.3	0.0
	baz=26						
NHY				eS	Sg	21 21 00.0	+0.9
	baz=26						
SCLT	Jiali	1.13	222	eP	Pg	21 20 44.4	+0.1
	baz=221						
SCLT				eS	Sg	21 21 01.2	+2.0
	baz=221						
TWS1	Kuangyinshan	1.13	19	eP	Pb	21 20 44.0	+0.5
	baz=19						
TWS1				eS	Sg	21 21 00.2	+0.9
	baz=19						
EGS		1.17	46	eP	Pg	21 20 46.0	+0.9
	baz=46						
TIPB	Shuangxi	1.20	38	eP	Pb	21 20 45.0	+0.4
	baz=38						
TIPB				eS	Sg	21 21 02.8	+1.4
	baz=38						
TWG	Pinlang	1.20	177		Pb	21 20 44.8	+0.2
NTST	Danshui	1.20	19	eP	Pb	21 20 45.1	+0.5
	baz=19						
NTST				eS	Sg	21 21 02.3	+0.8
	baz=19						
TWGBT	Beinan	1.20	177	⇑eP	Pg	21 20 45.3	-0.4
	baz=178						
TWGBT				eS	Sg	21 21 02.2	+0.8
	baz=178						
TAI1	Yung-k'ang	1.22	216	eP	Pb	21 20 45.1	+0.3
	baz=216						
TAI1				eS	Sg	21 21 03.7	+1.8
	baz=216						
YM01	YM01	1.23	24	eP	Pb	21 20 45.1	0.0
	baz=24						
YM01				eS	Sg	21 21 02.4	+0.2
	baz=24						
ANP	Anpu	1.25	22	eP	Pb	21 20 45.4	0.0
	baz=22						
ANP				eS	Sn	21 21 02.0	+0.7
	baz=22						
NWF	Wu-fen Shan	1.25	34	eP	Pg	21 20 47.0	+0.3
	baz=34						
NWF				eS	Sg	21 21 04.3	+1.2
	baz=34						
WFSB	Wu-fen Shan	1.25	34	eP	Pg	21 20 47.0	+0.3
	baz=34						
WFSB				eS	Sg	21 21 03.6	+0.5
	baz=34						
TAI	Tainan	1.27	216	eP	Pg	21 20 46.9	0.0
	baz=216						
TTN	Taitung	1.27	174	eP	Pg	21 20 46.6	-0.4
	baz=175						
YM08	YM08	1.27	24	eP	Pn	21 20 45.6	+0.4
	baz=24						
YM08				eS	Sn	21 21 02.5	+0.6
	baz=24						
TWM1	Shoushan	1.31	205	eP	Pg	21 20 48.1	+0.3
	baz=204						
TWM1				eS	Sg	21 21 10.2	+5.2
	baz=204						
TNOU	National Taiwa	1.32	32	eP	Pb	21 20 47.2	+0.6
	baz=32						
TNOU				eS	Sg	21 21 05.6	+0.5
	baz=32						
SSD	Sandimen	1.32	195	⇓eP	Pb	21 20 47.2	+0.6
	baz=195						
SSD				eS	Sg	21 21 05.2	0.0
	baz=195						
TWB1	Santiao Chiao	1.32	42	eP	Pb	21 20 47.5	+0.8
	baz=43						
TWB1				eS	Sb	21 21 04.3	+1.1
	baz=43						
TWY	Chenhua	1.35	23	eP	Pn	21 20 46.6	+0.3
	baz=23						
TSMG	Majia	1.36	195	⇓eP	Pb	21 20 47.8	+0.5
	baz=195						
TSMG				eS	Sg	21 21 05.9	-0.4
	baz=195						
SGLT	Jiouru	1.38	200	eP	Pg	21 20 49.0	0.0
	baz=200						
SGLT				eS	Sg	21 21 10.4	+3.3
	baz=200						
LDUT	Ludao	1.41	163	⇑eP	Pn	21 20 47.2	+0.1
	baz=163						
LDUT				eS	Sn	21 21 04.5	-0.7
	baz=163						
PNG	Penghu	1.41	251	eP	Pn	21 20 47.1	0.0
	baz=250						
PNG				eS	Sg	21 21 06.7	-1.4
	baz=250						
PHUB	P'eng-hu	1.42	249	⇓eP	Pn	21 20 47.2	0.0
	baz=248						
PHUB				eS	Sb	21 21 06.5	+0.6
	baz=248						
ECL	Taimali	1.42	182	eP	Pb	21 20 48.3	-0.1
	baz=182						
ECL				eS	Sg	21 21 07.8	-0.6
	baz=182						
MASBT	Mashibuluo	1.45	194	⇓eP	Pb	21 20 49.2	+0.4
	baz=194						
MASBT				eS	Sg	21 21 08.9	-0.4
	baz=194						
WDGT	Dungji	1.46	239	⇓eP	Pb	21 20 48.3	-0.6
	baz=238						
WDGT				eS	Sg	21 21 08.1	-1.5
	baz=238						
SSPT	Xinbi	1.59	195	eP	Pb	21 20 51.5	+0.4
	baz=195						
SSPT				eS	Sb	21 21 10.9	0.0
	baz=195						
EAST	Anshuo	1.64	185	eP	Pb	21 20 52.3	+0.1
	baz=185						
EAST				eS	Sg	21 21 14.0	-1.4
	baz=185						
TAW	Tawu	1.66	184	eP	Pb	21 20 52.4	-0.1
	baz=184						
VCHM	Qimei	1.67	241	⇓eP	Pn	21 20 51.0	+0.4
	baz=240						
VCHM				eS	Sb	21 21 12.8	-0.4
	baz=240						
SCZT	Fangliau	1.69	193	eP	Pb	21 20 52.4	-0.5
	baz=192						
SCZT				eS	Sb	21 21 14.7	+1.0
	baz=192						
WLCH	Liuqiu	1.77	199	eP	Pb	21 20 54.1	-0.2
	baz=199						
TWP	Hsiaoliuchiu	1.77	200	eP	Pb	21 20 53.7	-0.7
	baz=200						
SLIU	Shizi	1.81	186	eP	Pn	21 20 53.8	+1.1
	baz=187						
SLIU				eS	Sb	21 21 16.4	-1.0
	baz=187						
JYNG	Yonagunijimaku	1.81	76	P	Pn	21 20 53.5	+0.8
JYNG				S	Sb	21 21 17.9	+0.5
PCYT	Pengchaiyu	1.86	31	eP	Pb	21 20 55.1	-0.9
	baz=31						
YOJ	Yonaguni jima	1.87	76	eP	Pn	21 20 54.5	+0.9
	baz=77						
YOJ				eS	Sn	21 21 17.8	+1.1
	baz=77						
YOJ	Yonaguni jima	1.87	76	P	Pn	21 20 54.7	+1.2
YOJ				S	Sb	21 21 19.6	+0.5
YOJ	Yonaguni jima	1.87	76		Pn	21 20 53.9	+0.4
PTMZ	Houxiangcun	2.00	301	eP	Pn	21 20 54.5	-0.7
	baz=300						
HEN	Hengchun	2.03	187	eP	Pb	21 20 57.7	-0.9
	baz=187						
LAY	Lan-yu	2.04	166	eP	Pn	21 20 56.0	+0.2
	baz=166						
LAY				eS	Sn	21 21 21.2	+0.4
	baz=166						
LYUB	Lan-yu	2.08	165	eP	Pn	21 20 55.7	-0.7
	baz=166						
TWK1	Hengchun	2.08	185	eP	Pb	21 20 58.1	-1.5
	baz=185						
TWKBT	Hengchun	2.08	185	eP	Pn	21 20 58.0	+1.6
	baz=185						
TSEB	Hengchuen, Pin	2.12	183	eP	Pb	21 20 58.6	-1.6
	baz=184						
MATB	Ma-tsu	2.33	336	eP	Pn	21 20 58.9	-0.8
	baz=334						
MATB				eS	Sn	21 21 26.0	-1.9
	baz=334						
MSUT	Lienchiang	2.35	335	eP	Pn	21 20 59.4	-0.7
	baz=335						
MSUT				eS	Sn	21 21 27.1	-1.4
	baz=335						
KNM	Kinmen	2.39	280	eP	Pn	21 21 01.9	+1.3
	baz=278						
QZH	Quanzhou	2.39	293	Pn	Pn	21 20 59.8	-0.8
QZH				Sn	Sn	21 21 28.5	-0.9
QZH				LR	LR		
	comp=E,2µm,8.5s						
QZH				LR	LR		
	comp=Z,2µm,11.8s						
KNMB	Chin-men Tao	2.44	281	eP	Pn	21 21 00.8	-0.5
	baz=280						
KNMB	Chin-men Tao	2.44	281		Pn	21 21 00.6	-0.6
IRIF	Iriomote-Funau	2.50	82	P	Pn	21 21 02.8	+0.7
IRIF				S	Sn	21 21 34.2	+2.1
HATJ	Hateruma jima	2.55	89	P	Pn	21 21 03.9	+1.1
HATJ				S	Sn	21 21 34.5	+1.1
JKRS	Kuro-shima	2.75	85	P	Pn	21 21 07.0	+1.5
JKRS				S	Sn	21 21 39.4	+1.2
LYJJ	Jianjiangzhen	2.76	336	eP	Pn	21 21 04.8	-0.9
	baz=335						
LYJJ				eS	Sn	21 21 36.8	-1.7
	baz=335						
JIJ	Ishigaki jima	2.88	83	P	Pn	21 21 07.9	+0.6
JIJ				eS	Sn	21 21 41.2	-0.3
AXDP	Jialang	2.91	288	eP	Pn	21 21 07.3	-0.4
	baz=287						
XPSS	Dashiqiu	2.99	346	eP	Pn	21 21 08.0	-0.8
	baz=345						
ZPLA	Ao Xicun	2.99	269	eP	Pn	21 21 08.8	0.0
	baz=268						
JISG	Ishigakijimahi	3.06	79	P	Pn	21 21 10.4	+0.6
JISG				S	Sn	21 21 45.5	-0.4
JTJ	Tarama	3.42	79	P	Pn	21 21 15.8	+1.0
JTJ				eS	Sn	21 21 57.3	+2.5
BBP	Basco	3.67	166	⇓iP	Pn	21 21 19.1	+0.9
BBP				i S	Sn	21 22 03.0	+1.9
JIRB	Irabujima	3.87	77	P	Pn	21 21 22.2	+1.2
JIRB				eS	Sn	21 22 09.5	+3.4
JIKM	Ikemajima	3.96	76	P	Pn	21 21 24.3	+2.1
JIKM				S	Sn	21 22 11.0	+2.8
JMJ	Miyako jima 2	3.98	78	eP	Pn	21 21 24.1	+1.6
	baz=79						
JMJ2	Miyako jima3	4.00	79	P	Pn	21 21 24.1	+1.4
JMJ2				eS	Sn	21 22 11.2	+2.1
JOGS	Gusukube	4.07	79	P	Pn	21 21 26.6	+2.9
JOGS				eS	Sn	21 22 14.4	+3.5
HKPS	Hong Kong Po S	6.56	256	Pn	Pn	21 21 58.0	0.0
JOW	Kunigami	7.13	65	P	Pn	21 22 05.5	-0.4
	17nm,0.3s,baz=110,slow=23,SNR=68						
JOW	Kunigami	7.13	65		Pn	21 22 05.8	-0.1
NJ2	Nanjing	8.22	347	eP	Pn	21 22 12.8	-7.9
NJ2				S	Sn	21 23 48.3	-4.8
NJ2				smax	smax		
	comp=N,120nm,1.1s						
NJ2				smax	smax		
	comp=E,89nm,1.0s						
WHN	Wuhan	8.79	319	P	Pn	21 22 30.9	+2.4
WHN				S	Sn	21 24 12.1	+5.0
JMZ	Minamidaito 2	9.44	77	Pn	Pn	21 22 35.3	-2.1
JSU	Suzuyama	11.19	46	Pn	Pn	21 23 02.0	+0.5
XAN	Xi'an	14.53	316	P	P	21 23 56.3	+2.7
XAN				pP	Pn	21 24 03.8	+17
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KSRS	Korea Array	14.64	22	P	Pn	21 23 48.0	-0.5
	comp=Z,0.1nm,0.3s,baz=208,slow=16,SNR=1.2						
JHS	Saijyo	15.17	41	Pn	Pn	21 23 56.6	+0.9
JHS				IAmb	IAmb	21 24 09.0	
	comp=Z,13nm,1.1s						
SLVN	Son La	16.02	264	Pn	Pn	21 24 07.7	+0.8
CD2	Chengdu	16.77	298	P	P	21 24 21.3	+2.8
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
JSG	Sagara	18.32	51		Pn	21 24 34.9	-0.7
JHJ2	Mitsune	18.81	57	P	P	21 24 38.8	-2.2
JCJ	Chichijima	19.34	76	P	P	21 24 43.8	-3.1
CHTO	Chiang Mai	21.18	260	P	P	21 25 05.4	-1.6
CMAR	Chiang Mai Arr	21.29	259	P	P	21 25 10.4	+2.3
	comp=Z,1.4nm,0.9s,baz=58,slow=8.7,SNR=5.9						
SBUM	Sibu	23.07	203	P	P	21 25 27.5	+0.4
BKB	Balikpapan	25.45	190	P	P	21 25 49.8	+0.4
JEM	Erimo	25.70	40	P	P	21 26 01.1	+10
JEM				IAmb	IAmb	21 26 01.4	
	comp=Z,12nm,0.9s						
SONM	Songino Array	26.45	338	P	P	21 25 59.4	+1.0
	comp=Z,1.4nm,0.9s,baz=161,slow=8.7,SNR=7.6						
SONM	Songino Array	26.45	338	IAmb	IAmb	21 26 08.9	
	comp=Z,2.8nm,1.2s						
WMQ	Urumqi	33.65	314	eP	P	21 27 04.5	+2.4
MTN	Manton Dam	37.95	164	P	P	21 27 38.8	-0.3
MK31	Makanchi Array	38.34	316	P	P	21 27 43.8	+1.6
MK31				IAmb	IAmb	21 27 44.3	
	comp=Z,2.1nm,0.7s						
MKAR	Makanchi Array	38.34	316	P	P	21 27 43.5	+1.3
	comp=Z,3.6nm,0.7s,baz=107,slow=10,SNR=44						
MKAR	Makanchi Array	38.34	316	P	P	21 27 43.2	+1.0
MAKZ	Makanchi	38.55	316	P	P	21 27 45.3	+1.4
MAKZ				IAmb	IAmb	21 27 45.7	
	comp=Z,3.4nm,0.6s						
KNRA	Kununurra	40.18	168	P	P	21 27 56.5	-1.2
KNRA				IAmb	IAmb	21 28 06.3	
	comp=Z,13nm,1.1s						
ZALV	Zalesovo Beam	40.29	327	P	P	21 27 58.0	-0.3
	comp=Z,2.5nm,0.8s,baz=115,slow=7.7,SNR=14						
ZALV	Zalesovo Beam	40.29	327	P	P	21 27 58.4	+0.1
PALK	Pallekele	42.04	253	P	P	21 28 12.2	-1.0
PALK				IAmb	IAmb	21 28 16.2	
	comp=Z,7.7nm,0.9s						
COEN	Coen	43.52	148	P	P	21 28 23.5	-1.6
COEN				IAmb	IAmb	21 28 24.5	
	comp=Z,12nm,1.1s						
PSA00	Pilbara Seismi	45.34	182	P	P	21 28 38.0	-1.5
PSA00				IAmb	IAmb	21 28 44.3	
	comp=Z,14nm,1.1s						
WB0	Warramunga Arr	45.44	162	P	P	21 28 39.9	-0.5
WB0				IAmb	IAmb	21 28 57.8	
	comp=Z,6.9nm,1.1s						
KKAR	Karatay Array	45.44	308	P	P	21 28 41.1	+0.8
WRA	Warramunga Arr	45.59	162	P	P	21 28 39.0	-2.6
	comp=Z,1.2nm,0.7s,baz=340,slow=7.3,SNR=12						
WRA	Warramunga Arr	45.59	162	IAmb	IAmb	21 28 41.0	
	comp=Z,0.1nm,0.8s						
KBL	Kabul	46.09	296	P	P	21 28 46.0	+0.2
KBL				IAmb	IAmb	21 28 48.4	
	comp=Z,3.0nm,0.8s						

BRVK	Borovoye	47.77	321	P	P	21 28 57.5	-0.8
BRVK				IAmb	IAmb	21 29 01.0	
	comp=Z,3.0nm,0.8s						
ASAR	Alice Springs	49.03	164	P	P	21 29 07.5	-0.9
	comp=Z,0.6nm,0.6s,baz=340,slow=6.9,SNR=13						
ASAR	Alice Springs	49.03	164	P	P	21 29 08.1	-0.2
CTAO	Charters Tower	50.27	149	P	P	21 29 16.1	-1.8
CTAO				IAmb	IAmb	21 29 31.8	
	comp=Z,9.0nm,1.1s						
ABKAR	Akbulak array	53.44	314	P	P	21 29 42.6	+1.4
ABKAR				IAmb	IAmb	21 29 43.4	
	comp=Z,3.2nm,0.9s						
ABKAR	Akbulak array	53.44	314	P	P	21 29 42.2	+1.0
ILAR	Eielson Array	69.42	27	P	P	21 31 28.1	-0.9
	comp=Z,0.2nm,0.7s,baz=269,slow=5.9,SNR=4.8						
FINES	FINESS Array B	71.50	330	P	P	21 31 41.5	-0.2
	comp=Z,1.6nm,0.8s,baz=69,slow=6.3,SNR=5.1						
NOA	NORSAR Array B	78.29	332	P	P	21 32 21.3	+0.2
	comp=Z,0.6nm,0.8s,baz=50,slow=8.3,SNR=1.5						
YKA	Yellowknife Ar	83.17	23	P	P	21 32 46.1	-1.0
	comp=Z,0.3nm,0.7s,baz=314,slow=4.7,SNR=5.5						

IDC 24 21:22:35.8±1.5, 3°.46S×12°.08W, h0km, mb4.2/8, mb1 4.3/10, mb1mx3.9/49, mbtmp4.2/10, ML3.6/2, Error ellipse: s-maj=58.1km s-min=22.0km az=95.0

NEIC 24 21:22:37.9±1.6, 3°.6S±0°.1×12°.2W±0°.2, h10km±1km, mb4.5/16, Error ellipse: s-maj=32.0km s-min=15.2km az=302.0

ISC 24 21:22:37.3±0.7, 3°.5S±0°.1×12°.2W±0°.2, h12km, n45, σ0s.87/40, mb4.4/26, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	4.87	208	T	T	21 28 57.5	
	baz=29,slow=75,SNR=421						
H10N1	ASCENSION HYDR	4.88	208	T	T	21 28 56.3	
	baz=29,slow=75,SNR=312						
H10N3	ASCENSION HYDR	4.89	208	T	T	21 28 58.9	
	baz=29,slow=75,SNR=350						
ASCN	Ascension	4.91	207	Pn	Pn	21 23 50.4	-0.6
H10S2	ASCENSION HYDR	5.95	205	T	T	21 30 17.2	
	baz=26,slow=74,SNR=141						
H10S3	ASCENSION HYDR	5.95	205	T	T	21 30 12.5	
	baz=194,slow=74,SNR=420						
DBIC	Dimbokro	12.47	36	Pn	Pn	21 25 35.0	+0.3
	0.1nm,0.3s,baz=207,slow=14,SNR=2.0						
KOWA	Kowa	19.63	24	P	P	21 27 05.5	-0.5
	0.5nm,0.3s,baz=203,slow=11,SNR=16						
KOWA	Kowa	19.63	24	P	P	21 27 05.4	-0.6
TORD	Torodi Ar. Bea	21.52	39	P	P	21 27 24.5	-2.0
	10nm,0.9s,baz=225,slow=10,SNR=24						
TORD	Torodi Ar. Bea	21.52	39	P	P	21 27 24.8	-1.6
BOSA	Boshof	43.44	129	P	P	21 30 40.7	+0.2
	1.6nm,0.6s,baz=270,slow=8.1,SNR=4.1						
BOSA	Boshof	43.44	129	P	P	21 30 40.5	-0.1
KEST	Kesra	43.93	25	P	P	21 30 45.5	+1.2
	4.7nm,0.7s,baz=164,slow=3.7,SNR=10.0						
KEST	Kesra	43.93	25	P	P	21 30 45.0	+0.7
KEST				IAmb	IAmb	21 30 46.8	
	comp=Z,4.4nm,0.7s						
NRCA	Norcia	51.49	24	P	P	21 31 44.3	+1.4
NRCA				IAmb	IAmb	21 31 52.2	
	comp=Z,7.2nm,1.3s						
SALO	Salr	52.92	20	P	P	21 31 53.7	+0.3
SALO				IAmb	IAmb	21 32 06.0	
	comp=Z,6.3nm,1.0s						
CTI	Castel Tesino	53.68	20	P	P	21 31 59.7	+0.6
CTI				IAmb	IAmb	21 32 02.4	
	comp=Z,11nm,1.5s						
FNA	Florina	53.69	31	P	P	21 31 59.6	+0.4
FNA				IAmb	IAmb	21 32 01.6	
	comp=Z,5.9nm,1.2s						
PDG	Podgorica	53.86	29	P	P	21 32 01.2	+0.9
PDG				IAmb	IAmb	21 32 09.7	
	comp=Z,9.2nm,1.4s						
ETMB	Extrema	54.01	260	P	P	21 32 01.8	-0.2
ETMB				IAmb	IAmb	21 32 05.2	
	comp=Z,8.5nm,1.5s						
DAVA	Damuels	54.18	18	eP	P	21 32 03.2	+0.4
	comp=Z,5.1nm,0.7s						
FETA	Feichten	54.22	19	eP	P	21 32 04.2	+1.1
	comp=Z,7.1nm,1.4s						
SQTA	Sankt Quirin	54.55	19	eP	P	21 32 05.3	-0.1
	comp=Z,4.7nm,0.7s						
ABTA	Abfaltersbach	54.59	21	eP	P	21 32 06.8	+1.1
	comp=Z,2.7nm,0.6s						
ZOU	Zoufplan	54.59	21	P	P	21 32 07.3	+1.5
MOTA	Moosalm	54.62	19	eP	P	21 32 05.9	-0.1
	comp=Z,4.8nm,1.2s						
RETA	Reutte	54.64	19	eP	P	21 32 05.9	-0.1
	comp=Z,5.6nm,1.1s						
WTTA	Wattenberg	54.73	20	eP	P	21 32 07.1	+0.3
	comp=Z,5.5nm,0.8s						
WATA	Walderalm	54.77	20	eP	P	21 32 07.4	+0.3
	comp=Z,3.1nm,0.8s						
SOKA	Soboth	55.45	22	eP	P	21 32 13.2	+1.2
	comp=Z,3.2nm,0.9s						
DIVS	Divibare	55.48	28	P	P	21 32 13.5	+1.3
VTS	Vitosha	55.98	31	P	P	21 32 17.1	+1.2
ARSA	Arzberg	56.11	22	eP	P	21 32 17.6	+1.0
	comp=Z,1.8nm,0.8s						
MOA	Molln	56.15	21	eP	P	21 32 16.7	-0.2
	comp=Z,4.5nm,1.2s						
GEC2	GERESS Array S	56.80	20	P	P	21 32 21.8	+0.2
GEC2				IAmb	IAmb	21 32 22.8	
	comp=Z,4.3nm,0.8s						
GERES	GERESS Array B	56.80	20	P	P	21 32 21.3	-0.3
	comp=Z,3.2nm,0.7s,baz=190,slow=6.8,SNR=36						
GERES	GERESS Array B	56.80	20	P	P	21 32 21.0	-0.5
CONA	Conrad Observa	56.80	22	eP	P	21 32 22.5	+0.9
	comp=Z,4.7nm,1.1s						
MORC	Moravsky Berou	58.96	22	P	P	21 32 37.4	+0.8
GAZ	Gaziantep	61.15	44	P	P	21 32 51.7	-0.3
AKASG	Malin Array Be	64.58	28	P	P	21 33 13.6	-0.9
	comp=Z,0.5nm,0.5s,baz=218,slow=5.9,SNR=2.9						
SNAA	Sanae	68.32	177	P	P	21 33 39.1	+1.0
	comp=Z,2.3nm,0.9s,baz=354,slow=9.2,SNR=3.7						
FINES	FINESS Array B	71.14	18	P	P	21 33 54.9	-0.6
	comp=Z,4.3nm,0.9s,baz=202,slow=3.9,SNR=11						
ARCES	ARCESS Array B	77.24	13	P	P	21 34 31.4	+0.4
	comp=Z,2.6nm,0.8s,baz=216,slow=5.6,SNR=3.7						

IDC 24 21:23:12.4±1.1, 3°.86S×151°.50E, h0km, mb3.9/8, mb1 4.1/9, mb1mx3.9/39, mbtmp3.9/9, ML2.2/1, MS3.9/3, Ms1 3.9/3, ms1mx3.5/33, Error ellipse: s-maj=42.7km s-min=19.4km az=112.0

NEIC 24 21:23:15.4±1.2, 3°.65S±0°.10×151°.48E±0°.10, h11km±6km, mb4.1/9, Error ellipse: s-maj=17.6km s-min=8.6km az=225.0

ISC 24 21:23:16.0±0.7, 3°.76S±0°.10×151°.49E±0°.10, h21km, n25, σ1s.03/23, mb3.9/11, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.80	122	Pg	Pn	21 23 32.2	+0.1
PMG	Port Moresby	7.07	217	Pn	Pn	21 24 57.6	-0.7
	2.3nm,0.3s,baz=21,slow=6.1,SNR=7.9						
PMG				LR	LR	21 27 36.1	
	comp=Z,950nm,19.0s,baz=26,slow=38						
PMG	Port Moresby	7.07	217		Pn	21 24 60.0	+1.7
JAY	Jayapura	10.84	276	LR	LR	21 29 16.2	
	comp=Z,595nm,19.2s,baz=66,slow=34						
CTAO	Charters Tower	17.01	197	Pn	P	21 27 14.4	-0.1
CTAO				IAmb	IAmb	21 27 23.6	
	comp=Z,14nm,1.1s						
WB0	Warramunga Arr	23.05	225	P	P	21 28 20.5	+0.3
WB0				IAmb	IAmb	21 28 30.8	
	comp=Z,11nm,1.1s						
WRAB	Tennant Creek	23.19	225	P	P	21 28 19.9	-1.7
WRAB				IAmb	IAmb	21 28 32.5	
	comp=Z,12nm,1.1s						
WB2	Warramunga Arr	23.19	225	P	P	21 28 22.6	+1.0
WRA	Warramunga Arr	23.20	225	P	P	21 28 19.8	-2.0
	comp=Z,2.0nm,0.8s,baz=49,slow=10,SNR=9.5						
WRA	Warramunga Arr	23.20	225	P	P	21 28 23.5	+1.8
AS31	Alice Springs	26.07	219	P	P	21 28 48.5	+0.1
AS31				IAmb	IAmb	21 29 02.3	
	comp=Z,0.9nm,0.8s						
ASAR	Alice Springs	26.08	219	P	P	21 28 47.3	-1.1
	comp=Z,0.8nm,0.7s,baz=49,slow=8.3,SNR=11						
ASAR	Alice Springs	26.08	219	P	P	21 28 48.6	+0.2
STKA	Stephens Creek	29.47	197	P	P	21 29 17.3	-1.3
	comp=Z,1.4nm,0.6s,baz=30,slow=10,SNR=4.6						
STKA	Stephens Creek	29.47	197	P	P	21 29 19.0	+0.4
MSVF	Nonsavu	29.49	120	LR	LR	21 41 46.4	
	comp=Z,271nm,18.2s,baz=330,slow=38						
SSLB	Suanglung	40.43	314	P	P	21 30 52.4	-0.8
CMAR	Chiang Mai Arr	56.26	295	P	P	21 32 55.5	+0.2
	comp=Z,2.4nm,0.9s,baz=114,slow=5.5,SNR=11						
SONM	Songino Array	64.76	328	P	P	21 33 53.5	+0.4
	comp=Z,0.4nm,0.5s,baz=146,slow=7.0,SNR=2.8						
SONM	Songino Array	64.76	328	P	P	21 33 52.7	-0.4
SONM				IAmb	IAmb	21 34 08.5	
	comp=Z,2.8nm,1.5s						
MKAR	Makanchi Array	78.69	319	P	P	21 35 16.8	-0.1
	comp=Z,0.6nm,0.7s,baz=105,slow=7.9,SNR=4.5						
ILAR	Eielson Array	81.70	22	P	P	21 35 32.1	-0.5
	comp=Z,1.2nm,0.9s,baz=245,slow=5.4,SNR=10						
YKA	Yellowknife Ar	95.12	28	P	P	21 36 38.9	+1.5
	comp=Z,0.3nm,0.7s,baz=268,slow=5.2,SNR=3.5						
GERES	GERESS Array B	122.49	328	PKP	PKPdf	21 42 10.0	-0.1
	comp=Z,0.2nm,0.6s,baz=96,slow=2.0,SNR=2.2						
TORD	Torodi Ar. Bea	148.74	289	PKPbc	PKPbc	21 43 02.9	0.0
	comp=Z,1.8nm,0.8s,baz=58,slow=3.1,SNR=9.1						

JMA 24 21:32:35.3±0.1, 24°.53N×122°.51E, h94km±1km, M2.4

TAP 24 21:32:36.0, 24°.58N×122°.51E, h91km±1km, ML3.4, D

ISC 24 21:32:36.4±1.4, 24°.55N±0°.04×122°.53E±0°.02, h86km±8km, n84, σ0s.67/147, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.39	105	P	Pn	21 32 49.9	+0.1
JYNG				S	Sn	21 33 00.8	+0.9
YOJ	Yonaguni jima	0.44	102	P	Pn	21 32 50.5	+0.3
	baz=103						
YOJ				S	Sn	21 33 01.4	+0.9
	baz=103						
YOJ	Yonaguni jima	0.44	102	P	Pn	21 32 50.4	+0.2
YOJ				S	Sn	21 33 01.2	+0.7
TWC	Suao	0.63	275	P	Pn	21 32 51.4	-0.4
	baz=273						
TWC				eS	Sn	21 33 03.0	-0.3
	baz=273						
TWB1	Santiao Chiao	0.67	312	P	Pn	21 32 52.1	-0.1
	baz=312						
TWB1				eS	Sn	21 33 02.4	-1.6
	baz=312						
EWUT	Wuta	0.70	261	eP	Pn	21 32 52.5	0.0
	baz=259						
NTC	Toucheng	0.71	295	eP	Pn	21 32 52.4	-0.1
	baz=294						
NTC				eS	Sn	21 33 04.2	-0.5
	baz=294						
ENA	Nanau	0.73	260	eP	Pn	21 32 52.9	0.0
	baz=257						
ENA				eS	Sn	21 33 05.9	+0.7
	baz=257						
ILA	Ilan	0.75	287	eS	Sn	21 33 06.0	+0.7
	baz=285						
NDS	Dongshan	0.75	276	eP	Pn	21 32 52.8	-0.2
	baz=274						
NDS				eS	Sn	21 33 05.1	-0.4
	baz=274						
TIPB	Shuangxi	0.77	303	eP	Pn	21 32 53.1	-0.1
	baz=302						
TIPB				eS	Sn	21 33 05.4	-0.4
	baz=302						
TWE	Neicheng	0.81	282	P	Pn	21 32 53.6	0.0
	baz=280						
TWE				eS	Sn	21 33 06.4	-0.1
	baz=280						
NWF	Wu-fen Shan	0.86	307	eP	Pn	21 32 54.3	+0.1
	baz=306						
NWF				eS	Sn	21 33 07.8	+0.2
	baz=306						
ENTT	Nioudou	0.89	276	eP	Pn	21 32 55.0	+0.4
	baz=274						
ENTT				eS	Sn	21 33 08.8	+0.7
	baz=274						
LATG	Datong	0.92	269	eP	Pn	21 32 55.0	+0.1
	baz=267						
LATG				eS	Sn	21 33 09.4	+0.5
	baz=267						
ETL	Fush Village	0.92	245	eP	Pn	21 32 54.6	-0.3
	baz=242						
ETL				eS	Sn	21 33 08.9	+0.1
	baz=242						
NDT	Datong Townshi	0.93	273	eP	Pn	21 32 55.3	+0.3
	baz=271						
NDT				eS	Sn	21 33 09.5	+0.5
	baz=271						
NACB	Ninganchiao	0.94	246	eP	Pn	21 32 54.4	-0.7
	baz=244						
NACB				eS	Sn	21 33 08.3	-0.7
	baz=244						
TWA	Mucha	0.96	296	eP	Pn	21 32 55.2	-0.1
	baz=295						
TWA				eS	Sn	21 33 08.9	-0.7
	baz=295						
NWLT	Wulai	0.96	284	eP	Pn	21 32 55.4	0.0
	baz=282						
NWLT				eS	Sn	21 33 09.5	-0.2
	baz=282						
TWD	Chiawan	0.98	241	eP	Pn	21 32 55.1	-0.4
	baz=239						
TWD				eS	Sn	21 33 09.6	-0.2
	baz=239						
NHDH	Xindian Distri	1.00	294	eS	Sn	21 33 09.5	-0.9
	baz=293						
ETLH	Xiulin Townshi	1.02	250	eP	Pn	21 32 55.7	-0.4
	baz=248						
ETLH				eS	Sn	21 33 10.5	-0.4
	baz=248						
HWA	Hwalien	1.02	236	eP	Pn	21 32 56.0	-0.1
	baz=233						
HWA				eS	Sn	21 33 11.0	+0.2
	baz=233						
NNSB	Datong	1.06	263	eP	Pn	21 32 56.1	-0.5
	baz=261						
NNSB				eS	Sn	21 33 11.8	+0.1
	baz=261						
YM01	YM01	1.06	304	eP	Pn	21 32 56.2	-0.2
	baz=303						
YM01				eS	Sn	21 33 10.9	-0.6
	baz=303						
YHNB	Yeheng	1.06	276	eP	Pn	21 32 56.8	+0.2
	baz=275						
YHNB				eS	Sn	21 33 12.2	+0.5
	baz=275						
NNS	Nan Shan	1.06	264	eP	Pn	21 32 56.3	-0.3
	baz=262						
NNS				eS	Sn	21 33 11.8	-0.1
	baz=262						
NSK	Sanguang	1.08	277	eP	Pn	21 32 56.6	-0.1
	baz=275						
NSK				eS	Sn	21 33 12.0	-0.1
	baz=275						
IRIF	Iriomote-Funau	1.11	101	P	Pn	21 32 57.0	-0.1
IRIF				S	Sn	21 33 13.1	+0.4
TWS1	Kuangyinshan	1.15	298	eS	Sn	21 33 12.9	-0.6
	baz=298						
NTST	Danshui	1.16	302	eS	Sn	21 33 12.9	-0.8
	baz=301						
FUSS	Fushou	1.22	256	eP	Pn	21 32 58.5	-0.1
	baz=254						
FUSS				eS	Sn	21 33 14.9	-0.4
	baz=254						
WHF	Hehuan Shan	1.23	251	eP	Pn	21 32 58.6	-0.4
	baz=249						
WHF				eS	Sn	21 33 15.3	-0.6
	baz=249						
ESL	Shilin	1.25	234	eP	Pn	21 32 58.8	0.0
	baz=232						
ESL				eS	Sn	21 33 14.3	-1.3
	baz=232						
HATJ	Hateruma jima	1.26	113	P	Pn	21 32 58.8	-0.1
HATJ				S	Sn	21 33 16.4	+0.5
TWT	Tachien	1.27	257	eP	Pn	21 33 00.7	+1.4
	baz=255						
TWT				eS	Sn	21 33 16.7	+0.2
	baz=255						
TDCB	Techi	1.29	257	eP	Pn	21 33 00.7	+1.2
	baz=255						
TDCB				eS	Sn	21 33 16.5	-0.3
	baz=255						
NCU	National Centr	1.29	289	eS	Sn	21 33 17.1	+0.5
	baz=288						
NCUH	Zhongli	1.29	289	eS	Sn	21 33 16.5	-0.2
	baz=288						
CHGB	Renai	1.33	249	eP	Pn	21 33 00.1	+0.1
	baz=247						
CHGB				eS	Sn	21 33 18.3	+0.4
	baz=247						
EGFH	Guangfu	1.34	229	eS	Sn	21 33 17.3	-0.4
	baz=227						
OWD	Renai	1.38	245	eP	Pn	21 33 00.4	-0.1
	baz=243						
OWD				eS	Sn	21 33 18.1	-0.6
	baz=243						
JKRS	Kuro-shima	1.38	103	P	Pn	21 33 00.7	+0.3
JKRS				S	Sn	21 33 18.8	+0.2
LIOB	Emei	1.39	274	eP	Pn	21 33 00.5	0.0
	baz=273						
LIOB				eS	Sn	21 33 18.8	+0.1
	baz=273						
NSTT	Nanjuang	1.40	273	eP	Pn	21 33 00.6	-0.1
	baz=272						
NSTT				eS	Sn	21 33 18.8	-0.1
	baz=272						
WUSB	Renai	1.41	247	eP	Pn	21 33 01.0	+0.1
	baz=245						
WUSB				eS	Sn	21 33 19.4	0.0
	baz=245						
SBCB	Hsinchu	1.43	280	eS	Sn	21 33 20.2	+0.5
	baz=278						
HGSD	Ruisui	1.47	224	eP	Pn	21 33 01.8	+0.3
	baz=222						
HGSD				eS	Sn	21 33 20.6	+0.1
	baz=222						
WHP	Taichung City	1.47	260	eP	Pn	21 33 02.2	+0.5
	baz=258						
WHP				eS	Sn	21 33 21.6	+0.8
	baz=258						
JIJ	Ishigaki jima	1.48	97	P	Pn	21 33 01.5	-0.1
JIJ				S	Sn	21 33 20.1	-0.7
VWDT	VWDT	1.50	238	eP	Pn	21 33 02.0	+0.1
	baz=236						
VWDT				eS	Sn	21 33 21.2	-0.1
	baz=236						
EHY	Hungye	1.52	227	eP	Pn	21 33 01.6	-0.6
	baz=225						
EHY				eS	Sn	21 33 20.4	-1.4
	baz=225						
WCS	Beigang Elemen	1.56	252	eP	Pn	21 33 03.2	+0.5
	baz=250						
WCS				eS	Sn	21 33 23.2	+0.5
	baz=250						
NMLH	Miaoli	1.59	270	eP	Pn	21 33 03.0	-0.1
	baz=268						
NMLH				eS	Sn	21 33 23.2	-0.1
	baz=268						
JISG	Ishigakijimahi	1.62	88	P	Pn	21 33 03.0	-0.4
JISG				S	Sn	21 33 24.0	0.0
YULB	Yu-li	1.62	225	eP	Pn	21 33 02.3	-1.2
	baz=223						
YULB				eS	Sn	21 33 22.5	-1.5
	baz=223						
NSY	Sanyi	1.62	266	eS	Sn	21 33 24.4	+0.3
	baz=264						
SSLB	Suanglung	1.63	242	eP	Pn	21 33 04.3	+0.7
	baz=241						
SSLB				eS	Sn	21 33 24.6	+0.2
	baz=241						
SMLT	Sun Moon Lake	1.64	246	eP	Pn	21 33 04.7	+0.9
	baz=244						
SMLT				eS	Sn	21 33 25.7	+1.2
	baz=244						
EYUL	Yuli	1.64	223	eP	Pn	21 33 03.8	+0.1
	baz=221						
EYUL				eS	Sn	21 33 25.4	+1.0
	baz=221						
TYC	Yuchr	1.66	247	eP	Pn	21 33 05.0	+1.0
	baz=245						
TYC				eS	Sn	21 33 25.7	+0.8
	baz=245						
WDJ	Dajia District	1.74	264	eS	Sn	21 33 26.3	-0.4
	baz=262						
FULB	Fuli	1.76	220	eP	Pn	21 33 04.9	-0.5
	baz=219						
FULB				eS	Sn	21 33 26.9	-0.5
	baz=219						
CHKT	Chengkung	1.80	217	eS	Sn	21 33 26.4	-1.8
	baz=215						
WJS	Zhushan	1.80	247	eP	Pn	21 33 06.1	+0.2
	baz=245						
WJS				eS	Sn	21 33 30.1	+1.8
	baz=245						
ALS	Alishan	1.89	237	eP	Pn	21 33 07.8	+0.5
	baz=235						
EDH	Donghe	1.94	216	eP	Pn	21 33 06.9	-0.7
	baz=214						
EDH				eS	Sn	21 33 29.6	-1.8
	baz=214						
ELDTW	Lidau	1.94	226	eP	Pn	21 33 07.2	-0.6
	baz=224						
CHN5	Tsauling	1.95	241	eP	Pn	21 33 08.7	+0.9
	baz=239						
JTJ	Tarama	1.98	87	P	Pn	21 33 08.1	0.0
JTJ				S	Sn	21 33 32.7	+0.4
WDLH	Douliu	2.02	245	eP	Pn	21 33 09.4	+0.8
	baz=243						
WDLH				eS	Sn	21 33 33.0	-0.3
	baz=243						
WRL	Guolierlin Hig	2.07	252	eP	Pn	21 33 09.1	-0.3
	baz=250						
WRL				eS	Sn	21 33 33.9	-0.8
	baz=250						
LONT	Longtian	2.08	218	eS	Sn	21 33 34.4	-0.5
	baz=217						
STYH	Taoyuan	2.12	230	eP	Pn	21 33 10.5	+0.5
	baz=228						
STYH				eS	Sn	21 33 36.5	+0.8
	baz=228						
TPUB	Ta-pu	2.14	235	eP	Pn	21 33 11.6	+1.2
	baz=233						
TPUB				eS	Sn	21 33 38.0	+1.6
	baz=233						
TWGBT	Beinan	2.18	218	eP	Pn	21 33 10.2	-0.7
	baz=216						
TWGBT				eS	Sn	21 33 35.4	-1.9
	baz=216						
WTP	Ta-pu	2.19	234	eP	Pn	21 33 11.8	+0.8
	baz=232						
WTP				eS	Sn	21 33 38.7	+1.2
	baz=232						
TWK	Hsinying	2.27	236	eP	Pn	21 33 12.4	+0.4
	baz=234						
CHN1	Nanshi	2.29	234	eP	Pn	21 33 13.1	+0.8
	baz=232						
SLGT	Liugui	2.33	228	eP	Pn	21 33 13.6	+0.8
	baz=227						
JIRB	Irabujima	2.42	83	P	Pn	21 33 13.8	-0.1
JIRB				S	Sn	21 33 41.8	-1.0
TSMG	Majia	2.53	224	eP	Pn	21 33 16.5	+1.0
	baz=222						
MASBT	Mashibuluo	2.60	222	eP	Pn	21 33 17.1	+0.6
	baz=221						

IDC 24 21:51:46.4±1.5, 0°.17S×129°.74E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/45, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=33.3km s-min=22.1km az=47.0

DJA 24 21:51:48.9±0.6, 0°S±7°×13°0E±°, h10km, M4.0/7, mb4.7/1, MLv3.7/7

ISC 24 21:51:52.0±1.1, 0°.2S±0°.1×129°.78E±0°.08, h41km, n13, σ0s.89/15, mb3.6/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	1.64	115	P	Pn	21 52 17.5	-0.8
SWI				S	Sn	21 52 39.1	+0.9
SIJI	Sorong	1.65	115	Pn	Pn	21 52 17.4	-1.1
	89nm,0.3s,baz=293,slow=11,SNR=90						
SIJI				Sn	Sn	21 52 39.7	+1.3
	34nm,0.3s,baz=172,slow=20,SNR=10						
LBMI	Labuha	2.32	258	P	Pn	21 52 27.4	-0.4
TNTI	Ternate	2.58	291	P	Pn	21 52 31.5	+0.2
MSAI	Masohi	3.27	195	P	Pn	21 52 41.5	+0.7
FAKI	Fak Fak	3.69	138	P	Pn	21 52 46.3	-0.3
AAI	Ambon	3.84	204	P	Pn	21 52 48.6	0.0
APSI	Ampana	8.16	265	P	Pn	21 53 48.7	+0.7
FITZ	Fitzroy Crossi	18.28	193	P	P	21 56 00.7	-1.8
	0.1nm,0.3s,baz=39,slow=15,SNR=1.1						
WRA	Warramunga Arr	20.16	167	P	P	21 56 22.3	-0.8
	1.3nm,0.8s,baz=347,slow=12,SNR=11						
ASAR	Alice Springs	23.70	171	P	P	21 57 00.6	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	1.1nm,0.6s,baz=359,slow=8.6,SNR=23						
STKA	Stephens Creek	33.47	162	P	P	21 58 27.4	+0.1
	1.2nm,0.7s,baz=348,slow=13,SNR=4.5						
MKAR	Makanchi Array	62.47	325	P	P	22 02 11.5	+0.3
	0.3nm,0.6s,baz=122,slow=6.4,SNR=4.2						

JMA 24 21:54:53.0±0.2**,28°.57N**×**127°.68E,h179**km**,M3.5, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMN	Amaminishikomi	1.36	104	P	Pn	21 55 23.8	+0.3
JAMN				S	Sn	21 55 46.9	-0.2
JTK	Tokunoshima	1.37	125	P	Pn	21 55 24.1	+0.4
JTK				S	Sn	21 55 47.7	+0.4
JOKE	Okinoerabujima	1.44	147	P	Pn	21 55 24.7	+0.4
JOKE				S	Sn	21 55 48.5	-0.1
JIH	Iheya	1.55	170	P	Pn	21 55 25.9	+0.5
JIH				S	Sn	21 55 50.9	+0.5
JYRO	Yoronjima	1.68	156	P	Pn	21 55 26.9	+0.2
JYRO				eS	Sn	21 55 51.5	-1.3
JAM	Amami Oshima	1.70	95	P	Pn	21 55 27.0	+0.2
JAM				S	Sn	21 55 53.0	0.0
JOW	Kunigami	1.81	163	P	Pn	21 55 28.2	+0.2
JOW				eS	Sn	21 55 54.2	-0.9
JAGN	Aguni-jima	2.01	191	P	Pn	21 55 30.8	+0.7
JAGN				eS	Sn	21 55 59.2	+0.3
JZK	Kikaishima	2.03	97	P	Pn	21 55 31.4	+1.1
JZK				eS	Sn	21 56 00.1	+0.8
JNTH	Nagotoyohara	2.07	171	P	Pn	21 55 30.9	+0.2
JNTH				eS	Sn	21 55 58.9	-1.1
JKE	Kume jima 2	2.37	200	P	Pn	21 55 34.1	-0.1
JKE				eS	Sn	21 56 05.5	-0.7
JJT3	Tamagusuku3	2.42	178	eS	Sn	21 56 07.2	0.0
JYAK	Yakushimahirau	2.98	55	P	Pn	21 55 41.4	+0.1
JYAK				eS	Sn	21 56 15.8	-3.1
JMTN	Minamitane	3.35	56	P	Pn	21 55 45.4	-0.4
JMTN				eS	Sn	21 56 23.8	-3.3
JTN	Tanegashima 3	3.54	53	P	Pn	21 55 47.8	-0.5
JTN				eS	Sn	21 56 28.4	-3.2
JKDJ	Kitadaitoujima	4.14	128	P	Pn	21 55 55.8	-0.1
JKDJ				eS	Sn	21 56 41.7	-3.5

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*REN **24** 22:00:18.9±2.4, 41°.89N±0°.04×119°.60W±0°.04, h10km±6km, ML3.2/5, ML2.9/72(NEIC), Error ellipse: s-maj=5.5km s-min=4.3km az=190.0*

*ANF **24** 22:00:20.1±0.9, 41°.91N×119°.71W, h10km, ML3.2/7, Error ellipse: s-maj=7.1km s-min=4.5km az=88.0*

*NEIC **24** 22:00:20.2±2.3, 41°.88N±0°.04×119°.64W±0°.05, h13km±6km, Error ellipse: s-maj=5.7km s-min=5.2km az=150.0*

ISC 24 22:00:19.6±1.2**,41°.88N**±0°.02×**119°.63W**±0°.02**,h5**km±12km**, n46,**σ**1s.07**/57**,Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.51	273	Pg	Pg	22 00 28.6	-0.7
MOD				Sg	Sg	22 00 36.8	+0.9
MOD				IAML		22 00 38.5	
	comp=N,1μm,0.4s						
WVOR	Wild Horse Val	0.92	53		Pg	22 00 36.1	-1.2
WVOR					Sg	22 00 49.6	+0.3
WVOR				IAML		22 00 52.7	
	comp=N,266nm,0.7s						
K05A	Summer Lake	1.26	312		Pn	22 00 43.4	-0.7
K05A					Sg	22 01 00.7	+0.5
M04C	Macdoel	1.66	267	P	Pn	22 00 48.7	-0.6
	baz=86,SNR=86						
M04C				Sg	Sg	22 01 12.9	+0.2
	baz=86						
J08A	Circle Bar Ran	1.70	30		Pn	22 00 48.5	-1.6
J08A					Sn	22 01 11.5	-0.7
J08A				IAML		22 01 19.5	
	comp=E,126nm,0.7s						
J08A				IAML		22 01 19.8	
	comp=N,134nm,1.1s						
K04D	Chiloquin, OR	1.74	296	Pb	Pb	22 00 51.2	-0.9
	baz=114						
K04D				Sb	Sb	22 01 14.4	0.0
	baz=114						
J05D	Fort Rock, OR	1.84	320	Pb	Pb	22 00 53.2	-0.6
	baz=139,SNR=65						
J05D				Sg	Sg	22 01 19.2	+0.6
	baz=139						
BMRR	Black Mountain	1.84	196		Pb	22 00 53.7	-0.1
L04D	Klamath Falls	2.02	280	P	Pn	22 00 53.6	-0.8
	baz=98,SNR=59						
L04D				Sb	Sb	22 01 23.0	+0.6
	baz=98						
PINE	Pine Mountain	2.14	334		Pn	22 00 54.9	-1.2
PINE				IAML		22 01 11.3	
	comp=E,76nm,4.8s						
PINE				IAML		22 01 36.2	
	comp=N,64nm,1.2s						
PAHR	Pah Rah Range	2.18	175	Pg	Pb	22 00 59.1	-0.4
J04D	Umpqua Nationa	2.28	307	Pg	Pb	22 01 01.7	+0.3
	baz=125						
J04D				Sg	Sg	22 01 33.8	+0.9
	baz=125						
O03E	Paynes Creek	2.28	227	P	Pn	22 00 57.7	-0.3
	baz=46,SNR=7.3						
O03E				Sb	Sb	22 01 31.1	+1.3
	baz=46						
PEAR	Peavine Mounta	2.29	186		Pb	22 01 01.3	-0.1
BABR	Babbit Peak	2.31	189		Pb	22 01 02.1	+0.3
YBH	Yreka Blue Hor	2.31	267	Pn	Pn	22 00 57.0	-1.3
YBH					Pb	22 01 01.6	-0.1
BMN	Battle Mountai	2.32	128	Pg	Pb	22 01 00.7	-1.3
BMN				IAML		22 01 36.4	
	comp=N,47nm,0.4s						
BMN				IAML		22 01 37.1	
	comp=E,48nm,0.7s						
N02D	Trinity Center	2.48	250	Pb	Pb	22 01 04.0	-0.7
	baz=68						
WDC	Whiskeytown Da	2.55	240		Pn	22 01 00.7	-0.9
WDC				IAML		22 01 41.8	
	comp=N,47nm,0.7s						
HUMO	Hull Mountain	2.58	287		Pn	22 01 00.6	-1.4
HUMO				IAML		22 01 40.1	
	comp=N,62nm,2.2s						
HUMO				IAML		22 01 41.4	
	comp=E,43nm,0.6s						
VCNR	Virginia City	2.58	180		Pn	22 01 00.8	-1.4
VCNR				IAML		22 01 42.5	
	comp=N,63nm,0.7s						
VCNR				IAML		22 01 43.0	
	comp=E,80nm,0.8s						
MPK	Martis Peak	2.60	187	Pg	Pb	22 01 08.0	+1.2
ORV	Oroville	2.73	212		Pn	22 01 03.3	-0.6
PNTR	Pine Nut	2.79	180		Pb	22 01 10.1	+0.1
PNTR				IAML		22 01 48.7	
	comp=N,52nm,0.9s						
PNTR				IAML		22 01 54.8	
	comp=E,63nm,1.0s						
YERR	Yerington	2.91	174		Pb	22 01 11.7	-0.3
YERR				IAML		22 01 55.0	
	comp=N,53nm,0.6s						
YERR				IAML		22 01 56.2	
	comp=E,56nm,1.1s						
EMB	Emerald Bay	2.92	187	Pg	Pb	22 01 13.3	+0.9
EMB				IAML		22 01 54.1	
	comp=E,27nm,0.7s						
EMB				IAML		22 01 57.0	
	comp=N,28nm,0.9s						
O02D	Mt. Diablo Mer	2.94	236	Sb	Sb	22 01 50.6	+2.0
	baz=54						
KVN	Kaiserville	3.06	157		Pn	22 01 07.0	-1.7
MFID	Camas Ranch	3.19	60		Pn	22 01 09.5	-1.0
MFID				IAML		22 02 10.8	
	comp=N,39nm,0.5s						
MFID				IAML		22 02 11.0	
	comp=N,32nm,0.6s						
RYN	Ryan	3.36	165		Pn	22 01 12.1	-0.7
RYN				IAML		22 02 09.1	
	comp=N,18nm,0.5s						
RYN				IAML		22 02 14.0	
	comp=E,20nm,0.6s						
H04A	Detroit Lake	3.37	327	Pg	Pb	22 01 21.4	+1.6
H04A				IAML		22 01 36.2	
	comp=E,33nm,4.3s						
H04A				IAML		22 01 54.7	
	comp=N,32nm,4.6s						
BUCK	Buck Mountain	3.38	314	Pg	Pg	22 01 23.7	-0.6
BMO	Blue Mountains	3.42	29	Pg	Pg	22 01 24.5	-0.6
KBO	Bosley Butte	3.44	277	Pn	Pn	22 01 12.9	-1.0
KBO				Pg	Pb	22 01 22.6	+1.6
G08A	Pilot Rock	3.44	8	Pg	Pb	22 01 23.6	+2.5
NVAR	Mina Array Bea	3.59	163		Pg	22 01 27.4	-1.1
NV11	Mina Array Sit	3.62	161		Pb	22 01 26.0	+1.8
NV11				IAML		22 02 28.1	
	comp=E,12nm,3.0s						
LHV	Little Huntoon	3.73	166		Pb	22 01 28.2	+2.4
LHV					Lg	22 02 22.2	
CMB	Columbia Colle	3.89	189	Pg	Pb	22 01 29.9	+1.4
CMB				IAML		22 02 26.6	
	comp=N,12nm,4.1s						
PLID	Pearl Lake	4.15	38	Pn	Pn	22 01 22.8	-1.0
HLID	Hailey	4.19	65		Pn	22 01 24.0	-0.3
HLID				IAML		22 02 43.1	
	comp=N,14nm,1.1s						
HLID				IAML		22 02 43.9	
	comp=N,17nm,2.6s						
BGU	Big Grassy Mou	5.05	99		Pn	22 01 35.8	-0.3
BGU				IAML		22 03 12.4	
	comp=N,8.5nm,3.0s						
BGU				IAML		22 03 25.1	
	comp=E,12nm,4.7s						
HVU	Hansel Valley	5.12	89		Pn	22 01 37.0	-0.1
SPUT	South Promonto	5.41	94	Pn	Pn	22 01 41.5	+0.5
DUG	Dugway, Tooele	5.42	106	Pn	Pn	22 01 41.9	+0.7
CCUT	Cedar City	6.48	130		Lg	22 03 45.9	

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*SOME **24** 22:03:07.1, 38°.73N×73°.35E, h10km*

*IDC **24** 22:03:09.4±1.3, 38°.70N×73°.26E, h0km, mb3.8/7, mb1 3.9/11, mb1mx3.5/53, mbtmp3.8/11, ML3.1/4, Error ellipse: s-maj=23.9km s-min=19.7km az=134.0*

*KRNET **24** 22:03:12.1±0.1, 39°.02N×73°.60E, h17km, mb3.3*

*NNC **24** 22:03:15.0±2.7, 39°.28N×72°.58E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=20.6km s-min=14.5km az=2.0*

ISC 24 22:03:12.0±1.9**,39°.02N**±0°.07×**73°.60E**±0°.04**,h10**km±10km**, n38,**σ**2s.13**/49**,mb3.7**/7**,15C-10D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.99	356	⇑eP	Pb	22 03 31.1	-0.3
	baz=56						
SFK				⇑eS	Sg	22 03 44.9	+0.9
	baz=56						
DRK	Karamyk	1.47	289	⇓iP	Pb	22 03 39.6	0.0
	baz=89						
DRK				⇓iS	Sg	22 03 59.9	+0.5
	baz=89						
OHH	Osh	1.62	337	⇑iP	Pb	22 03 42.4	+0.3
	baz=38						
OHH				⇑iS	Sg	22 04 04.4	+0.1
	baz=38						
SALK	Salom-Alik	1.86	5	⇓eP	Pb	22 03 46.6	+0.4
	baz=5.0						
SALK				⇓eS	Sg	22 04 11.8	-0.1
	baz=5.0						
BTK	Batken	2.39	297	⇑iP	Pb	22 03 53.8	-1.3
	baz=97						
BTK				⇑iS	Sb	22 04 24.7	+0.1
	baz=97						
ARLS	Aral	2.89	11	⇓iP	Pb	22 04 01.2	-2.4
	baz=11						
ARLS				⇓iS	Sb	22 04 36.8	-2.3
	baz=11						
ARK	Arkit	3.04	336	⇑iP	Pb	22 04 03.2	-3.0
	baz=36						
ARK				⇑iS	Sb	22 04 40.6	-2.8
	baz=36						
AML	Almayashu	3.10	1	P	Pb	22 04 09.1	+1.6
	SNR=14						
TRKS	Terek-Say	3.13	324	⇑iP	Pn	22 04 03.5	+2.0
	baz=23						
TRKS				⇑iS	Sn	22 04 41.1	+2.1
	baz=23						
UCH	Uchtor	3.27	12	P	Pb	22 04 09.7	-0.7
	SNR=16						
MNAS	Manas	3.56	347	⇑iP	Pn	22 04 10.6	+3.2
	baz=47						
MNAS				⇑iS	Sn	22 04 52.9	+3.4
	baz=47						
EKS2	Erkin-Say	3.64	2	P	Pb	22 04 16.8	+0.4
	SNR=7.5						
AAK	Ala-Archa	3.67	10	Pn	Pb	22 04 16.0	-1.1
	2.6nm,0.3s,baz=192,slow=9.7,SNR=15						
AAK				Sn	Sg	22 05 07.7	-2.2
	2.1nm,0.3s,baz=348,slow=22,SNR=6.3						
AAK	Ala-Archa	3.67	10	P	Pb	22 04 15.8	-1.2
	SNR=17						
AAK	Ala-Archa	3.67	10	⇓Pn	Pb	22 04 14.2	-2.8
	28nm,0.8s						
AAK				⇓Lg	Lg	22 05 12.0	
	42nm,0.8s						
MRKS	Merke	3.73	356	eP	Pb	22 04 19.4	+1.5
	12nm,0.4s						
MRKS				eS	Sg	22 05 11.6	-0.2
	38nm,0.6s						
MRKS	Merke	3.73	356	Pg	Pb	22 04 16.8	-1.1
	13nm,0.3s						
MRKS				Lg	Lg	22 05 05.3	
	38nm,0.6s						
ULHL	Ulahol	3.79	31	P	Pg	22 04 25.2	+0.5
	SNR=5.4						
CHMS	Chumysh	4.07	12	P	Pb	22 04 20.4	-3.2
	SNR=8.1						
IUG	Iuzhnay	4.14	320	eP	Pb	22 04 26.6	+1.6
	1μm,0.8s						
IUG				eS	Sg	22 05 23.9	-0.9
	157nm,0.7s						
IUG	Iuzhnay	4.14	320	Pg	Pn	22 04 18.8	+3.6
	1μm,0.8s						
IUG				Lg	Lg	22 05 08.5	
	92nm,0.7s						
TKM2	Tokmak 2	4.18	21	⇓Pn	Pb	22 04 22.0	-3.6
	9.7nm,0.8s						
TKM2				⇑Lg	Lg	22 05 31.8	
	30nm,0.8s						
SGDS	Sogindy	4.49	10	Pg	Pg	22 04 36.0	-2.0
	12nm,0.7s						
SGDS				Lg	Lg	22 05 38.2	
	13nm,0.9s						
DGS	Degeres	4.52	21	eP	Pg	22 04 37.4	-1.2
	11nm,0.9s						
DGS				eS	Sg	22 05 42.6	+5.5
	17nm,0.6s						
DGS	Degeres	4.52	21	Pg	Pg	22 04 38.5	0.0
	11nm,0.9s						
DGS				Lg	Lg	22 05 42.6	
	17nm,0.6s						
KK02	Karatay Array	4.70	331	⇓Pg	Pn	22 04 27.7	+4.8
	4.9nm,0.5s						
KK02				⇑Lg	Lg	22 05 25.2	
	16nm,0.6s						
MDOK	Medeo	4.89	31	⇑Pg	Pg	22 04 48.0	+2.5
	16nm,0.8s						
MDOK				Lg	Lg	22 05 57.4	
	22nm,0.7s						
MKAR	Makanchi Array	10.04	37	Pn	Pn	22 05 43.4	+7.2
	0.1nm,0.3s,baz=200,slow=12,SNR=5.3						
BVAR	Borovoye Array	14.18	352	Pn	P	22 06 36.1	-4.1
	0.1nm,0.3s,baz=181,slow=12,SNR=2.6						
AKTO	Aktyubinsk	15.86	321	Pn	Pn	22 06 54.2	-1.0
	0.1nm,0.3s,baz=113,slow=8.3,SNR=3.9						
ZALV	Zalesovo Beam	16.77	23	P	P	22 07 09.3	+0.4
	0.2nm,0.3s,baz=210,slow=13,SNR=4.4						
SONM	Songino Array	25.23	59	P	P	22 08 41.9	+3.9
	0.4nm,0.4s,baz=260,slow=8.6,SNR=1.9						
FINES	FINESS Array B	36.61	324	P	P	22 10 18.0	+0.1
	4.5nm,1.0s,baz=122,slow=9.3,SNR=6.3						
ARCES	ARCESS Array B	39.65	336	P	P	22 10 43.4	-0.1
	2.3nm,0.8s,baz=100,slow=6.4,SNR=4.6						
NOA	NORSAR Array B	43.65	321	P	P	22 11 16.1	-0.3
	1.3nm,0.9s,baz=85,slow=5.8,SNR=2.4						
TORD	Torodi Ar. Bea	67.83	269	P	P	22 14 08.2	-2.3
	0.4nm,0.5s,baz=41,slow=4.8,SNR=2.7						
YKA	Yellowknife Ar	78.61	4	P	P	22 15 14.2	+0.8
	0.5nm,0.6s,baz=349,slow=5.4,SNR=11						
WRA	Warramunga Arr	81.63	124	P	P	22 15 29.4	-1.0
	0.5nm,0.7s,baz=323,slow=4.7,SNR=2.3						

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*IASPEI **24** 22:21:41.8±0.9, 35°.84N±0°.02×97°.44W±0°.03, h8km±7km, Error ellipse: s-maj=4.4km s-min=3.4km az=90.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*TUL **24** 22:21:41.9±1.7, 35°.82N±0°.02×97°.42W±0°.04, h3km±7km, ML3.0, mb_Lg2.6/31(NEIC), Error ellipse: s-maj=4.8km s-min=2.4km az=59.0*

*ANF **24** 22:21:41.2±0.3, 35°.86N×97°.43W, h2km±3km, ML3.0/6, Error ellipse: s-maj=2.5km s-min=2.2km az=137.0*

*NEIC **24** 22:21:42.1±0.9, 35°.85N±0°.01×97°.46W±0°.02, h5km±6km, Error ellipse: s-maj=2.7km s-min=0.8km az=130.0*

ISC 24 22:21:42.0±0.9**,35°.84N**±0°.02×**97°.46W**±0°.02**,h6**km±6km**, n66,**σ**0s.63**/69**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.05	178	Pg	Pg	22 21 43.4	0.0
OK029				Sg	Sg	22 21 44.4	+0.1
BCOK	Bluff Creek, N	0.22	214	Pg	Pg	22 21 46.5	+0.1
BCOK				Sg	Sg	22 21 50.0	+0.6
OK009	Oakdale Elemen	0.26	174		Pg	22 21 47.1	-0.1
OK025	Westminster Rd	0.28	160	Pg	Pg	22 21 47.3	-0.2
OK025				Sg	Sg	22 21 51.2	+0.1
OK005	Luther M Schoo	0.29	131	Pg	Pg	22 21 47.4	-0.2
OK005				Sg	Sg	22 21 51.3	-0.1
OK001	Jones High Sch	0.31	154	Pg	Pg	22 21 47.9	-0.2
OKCFA	Oklahoma City	0.43	179		Pg	22 21 50.0	-0.3
OKCFA				Sg	Sg	22 21 56.1	+0.3
OKCFA	Oklahoma City	0.43	179	P	Pg	22 21 50.0	-0.3
	baz=3.3						
OKCFA				S	Sg	22 21 56.0	+0.2
	baz=3.3						
OKCSW	OKLAHOMA CITY	0.44	178	Pg	Pg	22 21 50.2	-0.3
OKCSW				Sg	Sg	22 21 56.5	+0.3
OK033	Mehan	0.47	64	Pg	Pg	22 21 51.1	+0.1
OK031	S. Brethren Rd	0.51	78	Pg	Pg	22 21 51.8	-0.1
OK030	Cody Creek RV	0.55	81		Pg	22 21 52.5	-0.2
FNO	Franklin	0.59	175	Pg	Pg	22 21 52.9	-0.4
OK034	N. Norfolk Rd.	0.63	74	Pg	Pg	22 21 53.9	-0.2
QUOK	Quay	0.69	61	Pg	Pg	22 21 55.2	-0.1
CROK	Carrier	0.79	327	Pg	Pb	22 21 57.8	-0.3
W35A	Tecumseh	0.84	145	Pg	Pg	22 21 57.0	-1.1
BLOK	Blackwell	0.94	12	Pg	Pg	22 22 00.1	+0.1
GC02	Grant County #	1.06	342		Pg	22 22 02.4	+0.1
OK032	Salt Plains WL	1.14	328		Pg	22 22 03.8	-0.1
KAN13	South Haven SW	1.17	359		Pg	22 22 04.4	0.0
KAN14	Manchester OK	1.18	340		Pg	22 22 04.7	-0.1
KAN17	Caldwell West	1.22	348		Pg	22 22 05.4	-0.2
X34A	Smith Ranch, M	1.28	194		Pg	22 22 05.8	-0.7
KAN05	Bluff City Nor	1.31	345		Pn	22 22 07.0	+0.1
T35A	Sooner Cattle	1.31	35		Pn	22 22 06.4	-0.6
T35B	Sooner Cattle	1.31	35	P	Pn	22 22 06.2	-0.8
	baz=214						
T35B				S	Sg	22 22 24.0	-0.3
	baz=214						
KAN01	Argonia South	1.33	350		Pn	22 22 07.3	+0.1
OK035	E0210 Rd and N	1.33	311	Pn	Pn	22 22 07.0	-0.3
TUL1	Leonard	1.35	87	Pn	Pn	22 22 06.0	-1.5
TUL1				IAmb_Lg		22 22 26.1	
	comp=Z,33nm,0.7s						
TUL1	Leonard	1.35	87	P	Pn	22 22 06.0	-1.5
	baz=267						
TUL1				S	Sb	22 22 24.1	-1.3
	baz=267						
U32A	Winter Ranch,	1.36	294		Pn	22 22 07.4	-0.2
U32A	Winter Ranch,	1.36	294	P	Pn	22 22 07.5	-0.2
	baz=113						
U32A				S	Sn	22 22 26.7	+0.7
	baz=113						
KAN10	Anthony SW Sta	1.38	338		Pn	22 22 08.1	+0.2
KAN06	Argonia West S	1.44	347	IAmb_Lg		22 22 29.6	
	comp=Z,42nm,0.7s						
KAN08	Anthony NE Sta	1.44	343		Pn	22 22 09.0	+0.3
KAN16	Harper SW Stat	1.46	341		Pb	22 22 09.7	-0.1
WMOK	Wichita Mounta	1.55	225		Pn	22 22 10.1	-0.1
WMOK	Wichita Mounta	1.55	225	P	Pn	22 22 10.3	+0.1
	baz=45						
WMOK				S	Sn	22 22 30.6	0.0
	baz=45						
LOOK	Love County	1.86	173		Pn	22 22 14.7	+0.2
X37A	Clayton	2.12	126		Pn	22 22 18.2	+0.2
X37A				IAmb_Lg		22 22 52.8	
	comp=Z,39nm,1.1s						
X37A	Clayton	2.12	126	P	Pn	22 22 18.4	+0.3
	baz=307						
X37A				S	Sn	22 22 45.8	+1.1
	baz=307						
Z35A	Perchaven, San	2.51	176	Pn	Pn	22 22 24.2	+0.7
Z35A	Perchaven, San	2.51	176	P	Pn	22 22 23.4	-0.1
	baz=357						
U38A	Gravette	2.56	76		Pn	22 22 24.9	+0.9
R32A	Long Quarter,	2.76	339	Pg	Pg	22 22 34.1	-0.8
HHAR	Hobbs	2.88	80		Pn	22 22 29.3	+0.7
W39A	Magazine	3.06	101		Pn	22 22 31.7	+0.6
W39A				IAmb_Lg		22 23 24.6	
	comp=Z,15nm,0.7s						
KSU1	Kansas State U	3.32	11	IAmb_Lg		22 23 32.2	
	comp=Z,18nm,1.1s						
MIAR	Mount Ida	3.43	111	Pn	Pn	22 22 36.9	+0.8
CBKS	Cedar Bluff	3.48	329		Pn	22 22 37.1	+0.3
AMTX	Amarillo	3.58	256		Pb	22 22 45.5	-0.4
AMTX				IAmb_Lg		22 23 45.3	
	comp=Z,11nm,0.7s						
ABTX	Abilene, Hawle	3.69	210	Pn	Pn	22 22 40.6	+1.0
ABTX				IAmb_Lg		22 23 41.0	
	comp=Z,13nm,0.7s						
U40A	Yellville	3.76	81		Pn	22 22 41.4	+0.8
S39A	Bolivar	3.80	60		Pn	22 22 42.7	+1.5
S39A				IAmb_Lg		22 23 46.9	
	comp=Z,21nm,0.9s						
X40A	Basin Creek Fa	4.02	108		Pn	22 22 44.8	+0.6
X40A				IAmb_Lg		22 23 53.8	
	comp=Z,11nm,0.8s						
WHAR	Wooly Hollow	4.25	96	Pn	Pn	22 22 48.7	+1.3
FCAR	Ozark Folk Cen	4.33	88		Pn	22 22 49.5	+1.1
R40A	Maddies Statio	4.81	58	Pn	Pn	22 22 56.5	+1.4
P38A	Dawn	4.89	38	IAmb_Lg		22 24 29.7	
	comp=Z,7.6nm,0.7s						
435B	Jarrell	5.05	181	IAmb_Lg		22 24 25.3	
	comp=Z,14nm,0.8s						
KSCO	Kaye Shedlock'	5.19	309	IAmb_Lg		22 24 41.5	
	comp=Z,9.0nm,0.7s						
CCM	Cathedral Cave	5.44	64	IAmb_Lg		22 24 40.8	
	comp=Z,8.6nm,0.8s						
BGNE	Belgrade	5.58	355	IAmb_Lg		22 24 43.9	
	comp=Z,14nm,0.7s						
JCT	Junction City	5.70	201	IAmb_Lg		22 24 45.9	
	comp=Z,16nm,0.8s						
PBMO	Poplar Bluff	5.75	79	IAmb_Lg		22 24 47.2	
	comp=Z,12nm,0.8s						

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*ANF **24** 22:23:21.8±0.6, 41°.88N×119°.62W, h0km, ML3.3/8, Error ellipse: s-maj=4.9km s-min=2.6km az=84.0*

*REN **24** 22:23:22.4±1.6, 41°.87N±0°.03×119°.61W±0°.03, h11km±5km, ML3.4/5, ML3.1/64(NEIC), Error ellipse: s-maj=4.8km s-min=2.7km az=158.0*

*IDC **24** 22:23:23.0±0.8, 41°.92N×119°.69W, h0km, mb2.8/2, mb1 3.3/6, mb1mx3.2/54, mbtmp2.9/6, ML3.3/4, Error ellipse: s-maj=11.2km s-min=7.0km az=18.0*

*NEIC **24** 22:23:23.1±1.3, 41°.89N±0°.03×119°.62W±0°.03, h12km±5km, Error ellipse: s-maj=4.8km s-min=2.6km az=156.0*

ISC 24 22:23:23.0±1.2**,41°.89N**±0°.03×**119°.65W**±0°.03**,h7**km±11km**, n46,**σ**1s.03**/55**,Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.49	271	Pg	Pg	22 23 33.0	+0.4
MOD				Sg	Sg	22 23 40.2	+1.3
MOD				IAML		22 23 47.5	
	comp=N,1μm,0.8s						
WVOR	Wild Horse Val	0.93	54		Pg	22 23 40.1	-0.8
WVOR					Sg	22 23 52.5	-0.4
WVOR	Wild Horse Val	0.93	54	IAML		22 23 56.1	
	comp=N,457nm,0.6s						
WVOR				IAML		22 24 00.3	
	comp=N,396nm,0.9s						
K05A	Summer Lake	1.25	312		Pg	22 23 46.6	-0.3
K05A					Sn	22 24 04.1	-0.2
K05A				IAML		22 24 05.2	
	comp=E,512nm,0.6s						

M04C	Macdoel	1.64	267	P	Pn	22 23 52.2	-0.2
	baz=86,SNR=112						
M04C				Sb	Sg	22 24 16.5	+0.7
	baz=86						
J08A	Circle Bar Ran	1.70	30		Pn	22 23 52.1	-1.2
J08A					Sg	22 24 17.1	-0.6
J08A				IAML		22 24 20.7	
	comp=N,167nm,0.4s						
J08A				IAML		22 24 29.3	
	comp=E,186nm,0.6s						
K04D	Chiloquin, OR	1.73	296	P	Pn	22 23 53.3	-0.4
	baz=114,SNR=28						
K04D				Sg	Sg	22 24 19.7	+1.2
	baz=114						
J05D	Fort Rock, OR	1.82	320	Pb	Pb	22 23 56.6	-0.1
	baz=139,SNR=59						
J05D				Sg	Sg	22 24 22.7	+1.2
	baz=139						
L04D	Klamath Falls	2.01	280	P	Pn	22 23 57.0	-0.5
	baz=99,SNR=124						
L04D				Sb	Sg	22 24 27.0	-0.5
	baz=99						
PINE	Pine Mountain	2.12	334		Pn	22 23 58.2	-1.0
PINE				IAML		22 24 41.8	
	comp=E,121nm,0.9s						
PINE				IAML		22 24 41.9	
	comp=N,80nm,0.6s						
PAHR	Pah Rah Range	2.19	175		Pn	22 23 58.1	-2.0
J04D	Umpqua Nationa	2.26	307	Pb	Pb	22 24 04.1	-0.3
	baz=126,SNR=16						
O03E	Paynes Creek	2.28	226	P	Pn	22 24 00.8	-0.4
	baz=46,SNR=18						
O03E				Sb	Sg	22 24 35.0	-1.3
	baz=46						
YBH	Yreka Blue Hor	2.30	267	Pn	Pn	22 24 00.9	-0.5
	comp=N,5.9nm,0.3s,baz=47,slow=12,SNR=36						
YBH				Lg	Lg	22 24 35.4	
	comp=N,6.4nm,0.3s,baz=348,slow=14,SNR=5.9						
YBH	Yreka Blue Hor	2.30	267		Pn	22 24 00.4	-1.0
BMN	Battle Mountai	2.34	128		Pn	22 24 01.1	-1.1
BMN				IAML		22 24 36.7	
	comp=E,116nm,0.6s						
BMN				IAML		22 24 38.1	
	comp=N,108nm,0.8s						
M02C	Callahan	2.46	259	Pb	Pb	22 24 07.0	-0.6
	baz=78						
N02D	Trinity Center	2.48	249	Pb	Pb	22 24 06.7	-1.2
	baz=68						
WDC	Whiskeytown Da	2.55	240		Pn	22 24 05.0	+0.2
HUMO	Hull Mountain	2.56	287	Pn	Pn	22 24 04.1	-0.9
HUMO				IAML		22 24 50.4	
	comp=N,55nm,1.1s						
VCNR	Virginia City	2.59	180		Pn	22 24 03.4	-2.2
VCNR				IAML		22 24 49.0	
	comp=N,95nm,0.8s						
VCNR				IAML		22 24 54.5	
	comp=E,105nm,0.9s						
MPK	Martis Peak	2.61	187	Pg	Pb	22 24 10.8	+0.5
MPK				IAML		22 24 51.8	
	comp=N,71nm,0.8s						
MPK				IAML		22 24 53.8	
	comp=E,77nm,0.7s						
ORV	Oroville	2.73	212		Pn	22 24 06.2	-1.1
I04A	Tendick Farm,	2.78	314	Pb	Pb	22 24 13.3	+0.2
	baz=132						
I04A				Sb	Sg	22 24 51.0	-1.5
	baz=132						
PNTR	Pine Nut	2.80	179		Pn	22 24 07.0	-1.4
PNTR				IAML		22 24 59.6	
	comp=N,64nm,1.1s						
PNTR				IAML		22 25 02.0	
	comp=E,61nm,0.8s						
YERR	Yerington	2.92	174		Pn	22 24 09.6	-0.5
YERR				IAML		22 24 58.7	
	comp=N,65nm,0.6s						
YERR				IAML		22 24 59.6	
	comp=E,78nm,0.9s						
O02D	Mt. Diablo Mer	2.93	235	Pb	Pb	22 24 14.6	-1.1
	baz=54						
EMB	Emerald Bay	2.94	187	Pn	Pn	22 24 09.9	-0.4
EMB				IAML		22 24 59.8	
	comp=E,44nm,0.9s						
KVN	Kaiserville	3.07	157		Pn	22 24 12.4	+0.2
MFID	Camas Ranch	3.20	60	Pn	Pn	22 24 13.3	-0.6
KHMM	Horse Mountain	3.24	253	Pn	Pn	22 24 14.1	-0.3
H04A	Detroit Lake	3.35	327	Pn	Pn	22 24 16.4	+0.5
H04A				IAML		22 25 47.3	
	comp=E,36nm,4.1s						
H04A				IAML		22 25 47.9	
	comp=N,35nm,3.9s						
RYN	Ryan	3.37	165		Pn	22 24 15.9	-0.4
RYN				IAML		22 25 14.7	
	comp=E,34nm,0.8s						
KBO	Bosley Butte	3.42	277	Pn	Pn	22 24 16.9	0.0
JCC	Jacoby Creek,	3.47	253	Pn	Pn	22 24 17.7	+0.2
KMRM	Mail Ridge	3.50	243	Pn	Pn	22 24 16.4	-1.4
ELK	Elko	3.51	108	Pn	Pn	22 24 20.8	+2.6
	comp=E,4.8nm,0.3s,baz=313,slow=15,SNR=47						
ELK				Lg	Lg	22 25 08.5	
	comp=E,7.3nm,0.3s,baz=32,slow=21,SNR=13						
NVAR	Mina Array Bea	3.61	163	Pn	Pn	22 24 21.2	+1.6
	comp=E,0.7nm,0.3s,baz=342,slow=12,SNR=11						
NVAR				Pg	Pb	22 24 28.9	+1.6
	comp=E,2.0nm,0.3s,baz=341,slow=15,SNR=12						
NVAR				Lg	Lg	22 25 16.6	
	comp=E,5.3nm,0.3s,baz=341,slow=35,SNR=4.4						
NVAR	Mina Array Bea	3.61	163		Pn	22 24 19.0	-0.6
NV11	Mina Array Sit	3.64	161		Pn	22 24 19.5	-0.4
NV11				IAML		22 25 21.7	
	comp=E,26nm,2.9s						
LHV	Little Huntoon	3.74	166	Pn	Pn	22 24 19.9	-1.3
LHV				IAML		22 25 25.9	
	comp=E,41nm,0.6s						
LHV				IAML		22 25 30.6	
	comp=N,39nm,0.6s						
PLID	Pearl Lake	4.15	38	Pn	Pn	22 24 26.6	-0.4
HLID	Hailey	4.20	65	Pn	Pn	22 24 26.4	-1.3
HLID				IAML		22 25 35.5	
	comp=N,22nm,0.6s						
HLID				IAML		22 25 36.4	
	comp=N,25nm,0.8s						
PDAR	Pinedale Array	7.53	80	Pn	Pn	22 25 18.5	+5.1
	comp=N,0.1nm,0.3s,baz=266,slow=13,SNR=2.3						
PDAR				Pg	Pb	22 25 34.9	+0.8
	comp=N,0.1nm,0.3s,baz=259,slow=15,SNR=4.1						
YKA	Yellowknife Ar	20.85	7	P	Pn	22 28 07.7	+0.1
	comp=N,0.2nm,0.7s,baz=184,slow=9.9,SNR=2.5						
ILAR	Eielson Array	27.68	335	P	P	22 29 12.6	+1.2
	comp=N,0.2nm,0.6s,baz=131,slow=11,SNR=1.8						

KLM **24** *22:25:45, 1°.60N×127°.47E, h106^{km}, mb4.8*

BJI **24** *22:25:46.2±0.0, 1°.33N×126°.96E, h126^{km}, mB5.0/14, mb4.6/34*

DJA **24** *22:25:47.4±0.2, 2°N±2°×12°7E±°, h122^{km}±2^{km}, M4.9/37, mb5.0/37, mB5.3/14, MLv5.1/17, Mw(mB)4.8/14, MwMwp5.6/1, Mwp5.7/1*

IDC **24** *22:25:48.2±0.7, 1°.55N×127°.27E, h133^{km}±6^{km}, mb4.2/18, mb1 4.2/21, mb1mx3.9/62, mbtmp4.6/21, Error ellipse: s-maj=14.7km s-min=9.2km az=72.0*

NEIC **24** *22:25:48.1±1.9, 1°.61N±0°.05×127°.21E±0°.06, h127^{km}±6^{km}, mb4.9/64, Error ellipse: s-maj=8.4km s-min=7.4km az=106.0*

ISC 24 22:25:47.8±0.3**, 1°.63N**±0°.04×**127°.24E**±0°.05**, h127^{km}, n186, σ1^{s}.16**/202**, mb4.8**/72**, 2C-4D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.86	172	P	Pn	22 26 09.8	+0.6
TNTI				S	Sn	22 26 26.1	+0.7
TNTI	Ternate	0.86	172	Pn	Pn	22 26 09.3	+0.1
TNTI				Sn	Sn	22 26 26.1	+0.7
TNTI	Ternate	0.86	172	P	Pn	22 26 09.9	+0.7
LBMI	Labuha	2.27	173	P	Pn	22 26 26.4	+1.4
LBMI				S	Sn	22 26 54.8	+1.3
SGSI	Sangihe	2.67	320	P	Pn	22 26 28.8	-1.2
SGSI				S	Sn	22 27 00.9	-1.6
KMSI	Cibinong	3.42	252	P	Pn	22 26 40.4	+0.5
KMSI				S	Sn	22 27 20.1	-0.1
SANI	Sanana	3.86	199	P	Pn	22 26 44.9	-0.8
SANI				S	Sn	22 27 26.2	-4.4
SANI	Sanana	3.86	199	P	Pn	22 26 45.1	-0.6
GTOI	Gorontalo	4.34	257	P	Pn	22 26 53.8	+1.7
GTOI				S	Sn	22 27 44.1	+2.1
SWI	Sorong	4.72	122	P	Pn	22 26 57.5	+0.4
SIJI	Sorong	4.73	122	P	Pn	22 26 58.0	+0.7
	7.3nm,0.3s,baz=325,slow=19,SNR=24						
GSPH	General Santos	4.98	333	⇓*e*P	Pn	22 26 58.6	-2.2
GSPH				*i* S	Sn	22 27 52.3	-5.2
LUWI	Luwuk	5.20	239	P	Pn	22 27 03.2	-0.3
	7.7nm11μm892nm,0.5s						
LUWI	Luwuk	5.20	239	Pn	Pn	22 27 02.9	-0.6
LUWI	Luwuk	5.20	239	P	Pn	22 27 03.0	-0.6
MSAI	Masohi	5.22	161	P	Pn	22 27 06.4	+2.5
AAI	Ambon	5.37	170	P	Pn	22 27 07.0	+1.2
MRSI	Marisa	5.42	258	P	Pn	22 27 07.0	+0.5
	3.1nm8μm522nm,0.5s						
DAV	Davao City (W)	5.65	343	P	Pn	22 27 09.9	+0.3
	32nm,0.3s,baz=236,slow=2.3,SNR=4.6						
DAV	Davao City (W)	5.65	343		Pn	22 27 09.4	-0.2
DAV	Davao City (W)	5.65	343	P	Pn	22 27 14.8	+5.1
	205nm,0.6s						
KCP	Kidapawan	5.76	338	⇓*i*P	Pn	22 27 10.4	-0.8
KCP				*i* S	Sn	22 28 19.2	+3.0
APSI	Ampana	6.13	246	P	Pn	22 27 16.7	+0.6
	2.1nm8μm473nm,0.9s						
TOLI2	Tolitoli	6.48	266	Pn	Pn	22 27 20.4	-0.4
TOLI2				Sn	Sn	22 28 31.1	-2.4
TOLI2	Tolitoli	6.48	266	P	Pn	22 27 20.6	-0.2
FAKI	Fak Fak	6.74	132	P	Pn	22 27 26.1	+1.7
	0.3nm72nm,1.0s						
FAKI	Fak Fak	6.74	132	Pn	Pn	22 27 25.5	+1.1
MPSI	Mapaga	7.45	260	P	Pn	22 27 34.8	+0.9
	0.3nm1μm77nm,0.8s						
GLSP	General Luna,	8.18	352	⇑*i*P	Pn	22 27 40.0	-3.7
GLSP				*e*S	Sn	22 29 01.9	-13
BBSI	Bau Bau	8.47	213	P	Pn	22 27 48.5	+0.8
	209nm12nm,1.0s						
TTSI	Tana Toraja	8.75	238	P	Pn	22 27 51.4	-0.1
	7μm641nm,0.6s						
MSLP	Maasin	8.78	344	⇓*e*P	Pn	22 27 50.4	-1.3
SPSI	Sidrap Palu	9.31	233	P	Pn	22 27 59.7	+0.8
	10μm909nm,0.6s						
BNSI	Bone	9.31	230	P	Pn	22 27 59.7	+0.7
	5μm440nm,0.7s						
MYLDM	Lahad Datu	9.41	292	Pn	Pn	22 28 01.1	+0.8
BKSI	Bulukumba	9.91	226	P	Pn	22 28 09.1	+2.0
KAPI	Kappang	9.98	229	P	Pn	22 28 09.2	+1.3
	73nm,0.3s,baz=68,slow=5.2,SNR=110						
KAPI				S	Sn	22 29 56.6	-1.6
	17nm,0.3s,baz=190,slow=22,SNR=14						
BESP	Borongan	10.07	350	⇑*i*P	Pn	22 28 14.8	+5.6
SMKI	Samarinda	10.24	258	P	Pn	22 28 11.9	+0.4
	135nm,0.7s						
SPMM	Sapulut	11.19	286	P	Pn	22 28 26.0	+1.8
KKM	Kota Kinabalu	11.84	292	Pn	Pn	22 28 33.3	+0.4
KBKI	Kotabaru	12.10	246	P	Pn	22 28 36.4	+0.2
	1μm85nm,0.9s						
MTKI	Muara Teweh, K	12.61	258	P	Pn	22 28 42.7	-0.1
	24nm,0.5s						
BBKI	Banjar Baru	13.39	248	P	Pn	22 28 53.6	+0.7
	46nm,0.7s						
GENI	Genyem	13.59	108	P	P	22 29 01.3	+1.3
GENI	Genyem	13.59	108	P	P	22 28 59.6	-0.4
JAY	Jayapura	14.07	107	P	P	22 29 04.8	-0.7
	2.2nm,0.3s,baz=276,slow=5.8,SNR=12						
JAY	Jayapura	14.07	107	P	P	22 29 06.0	+0.5
MTN	Manton Dam	14.89	165	Pn	Pn	22 29 10.4	-1.6
SBUM	Sibu	15.03	273		Pn	22 29 13.6	-0.3
STKI	Sintang	15.84	265	P	P	22 29 24.9	-0.2
	4μm31nm,1.0s						
JAGI	Jajag, Banyuwa	16.46	232	P	P	22 29 33.7	+1.8
JAGI	Jajag, Banyuwa	16.46	232		P	22 29 31.7	-0.2
JAGI				IAmb	IAmb	22 29 38.1	
	comp=Z,82nm,1.1s						
KSM	Kuching	16.93	270	P	Pn	22 29 38.0	+0.8
KSM	Kuching	16.93	270	P	P	22 29 36.9	-0.2
KSM	Kuching	16.93	270	P	P	22 29 36.7	-0.4
KNRA	Kununurra	17.26	175		P	22 29 39.9	-0.8
KNRA				IAmb	IAmb	22 29 42.5	
	comp=Z,47nm,0.6s						
KNRA	Kununurra	17.26	175	P	Pn	22 29 42.0	+0.8
	comp=Z,63nm,0.8s						
PCJI	Pacitan	18.76	238	P	Pn	22 29 59.0	0.0
UGM	Wanagama	19.18	240	P	Pn	22 30 04.1	+0.1
UGM	Wanagama	19.18	240	P	P	22 30 02.7	+0.9
FITZ	Fitzroy Crossi	19.67	185	P	P	22 30 06.0	-0.9
	comp=Z,2.9nm,0.3s,baz=16,slow=8.7,SNR=21						
LEM	Lembang	21.31	247	P	P	22 30 25.8	+0.8
	comp=Z,38nm,0.7s,baz=103,slow=7.9,SNR=8.7						
COEN	Coen	22.12	135	P	P	22 30 32.1	-1.1
WB0	Warramunga Arr	22.39	162	P	P	22 30 34.5	-1.4
TPUB	Ta-pu	22.48	344	P	P	22 30 36.5	-0.2
TPUB				IAmb	IAmb	22 31 04.7	
	comp=Z,61nm,1.4s						
WRAB	Tennant Creek	22.54	162	P	P	22 30 36.2	-1.1
WRAB				IAmb	IAmb	22 30 43.6	
	comp=Z,74nm,0.7s						
WRAB	Tennant Creek	22.54	162	P	P	22 30 36.1	-1.2
WRA	Warramunga Arr	22.54	162	P	P	22 30 36.1	-1.3
	comp=Z,45nm,0.6s,baz=343,slow=11,SNR=154						
WRA	Warramunga Arr	22.54	162	P	P	22 30 34.7	-2.7
WB2	Warramunga Arr	22.54	162	P	P	22 30 36.2	-1.2
WB2				IAmb	IAmb	22 30 44.1	
	comp=Z,82nm,0.8s						
WR0	Warramunga Arr	22.62	162	P	P	22 30 37.0	-1.1
WR0				IAmb	IAmb	22 30 37.4	
	comp=Z,53nm,0.6s						
SSLB	Suanglung	22.85	345	P	P	22 30 40.0	-0.4
CGJI	Cibinong	23.02	249	P	P	22 30 41.3	-0.7
	comp=Z,100nm,0.7s						
KLSI		23.35	254	P	P	22 30 45.4	+0.3
	comp=Z,20nm,0.8s						
MYKOM	Kota Tinggi	23.38	271	P	P	22 30 46.0	+0.6
MYKOM	Kota Tinggi	23.38	271	P	P	22 30 45.5	+0.1
MYKOM				IAmb	IAmb	22 30 46.6	
	comp=Z,19nm,0.7s						
MDSI	Maura Dua	23.83	255	P	P	22 30 49.9	+0.4
	comp=Z,15nm,0.9s						
PSA00	Pilbara Seismi	24.17	197	P	P	22 30 51.7	-0.7
PSA00				IAmb	IAmb	22 30 53.1	
	comp=Z,42nm,1.1s						
XMIS	Christmas Isla	24.62	240	P	P	22 30 56.4	-0.3
XMIS				IAmb	IAmb	22 30 59.4	
	comp=Z,77nm,0.9s						
QIS	Mount Isa	25.16	152	P	P	22 31 01.4	-0.1
	comp=Z,71nm,0.7s						
UBPT	Khong Chiam	25.41	303	P	P	22 31 03.9	+0.2
MASI	Maura Aman, Be	25.44	259	P	P	22 31 04.9	+0.8
	comp=Z,172nm,0.9s						
MTSU	Mount Surprise	25.85	140	P	P	22 31 09.5	+1.7
	comp=Z,28nm,0.8s						
AS31	Alice Springs	25.96	166	P	P	22 31 07.6	-1.1
ASAR	Alice Springs	25.97	166	P	P	22 31 07.7	-1.1
	comp=Z,12nm,0.5s,baz=350,slow=7.4,SNR=110						
ASAR				ScP	ScP	22 38 01.1	-1.1
	comp=Z,1.3nm,0.7s,baz=328,slow=2.3,SNR=6.5						
IPM	Ipoh	26.33	277	P	P	22 31 13.0	+0.9
IPM	Ipoh	26.33	277	P	P	22 31 11.7	-0.4
IPM				IAmb	IAmb	22 31 16.8	
	comp=Z,20nm,1.1s						
KULM	Kulim	26.79	278	P	P	22 31 16.4	+0.1
GIRL	Giralia	27.26	207	P	P	22 31 20.6	+0.4
PSI	Prapat	28.32	273	P	P	22 31 29.6	-0.4
	comp=Z,9.5nm,0.7s,baz=82,slow=6.5,SNR=14						
CTAO	Charters Tower	28.52	140	P	P	22 31 31.4	-0.2
CTAO				IAmb	IAmb	22 31 37.1	
	comp=Z,13nm,0.8s						
CTAO	Charters Tower	28.52	140	P	P	22 31 33.7	+2.1
GSI	Gunungsitoli	29.66	270	P	P	22 31 40.2	-1.6
	comp=Z,46nm,0.6s						
GSI	Gunungsitoli	29.66	270	P	P	22 31 41.1	-0.6
GSI	Gunungsitoli	29.66	270	P	P	22 31 42.8	+1.0
NJ2	Nanjing	31.28	346	*e*P	P	22 31 57.8	+2.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
INKA	Innaminka	31.96	157	P	P	22 32 01.6	-0.2
	comp=Z,73nm,0.6s						
FORT	Forrest	32.24	179	P	P	22 32 03.1	-1.1
FORT				IAmb	IAmb	22 32 03.9	
	comp=Z,27nm,0.7s						
MULG	Mulgathing	32.39	169	P	P	22 32 05.0	-0.6
	comp=Z,17nm,1.6s						
CMAR	Chiang Mai Arr	32.40	303	P	P	22 32 06.5	+0.7
	comp=Z,0.9nm,0.3s,baz=121,slow=6.9,SNR=11						
CMAR				ScP	ScP	22 38 23.4	+0.7
	comp=Z,1.1nm,0.3s,baz=139,slow=2.3,SNR=5.3						
QLP	Quilpie	32.49	151	P	P	22 32 05.7	-0.8
	comp=Z,44nm,1.1s						
CHTO	Chiang Mai	32.57	303	P	P	22 32 07.4	+0.1
CHTO	Chiang Mai	32.57	303	P	P	22 32 10.3	+3.0
KMI	Kunming	33.23	317	⇓P	P	22 32 14.8	+1.6
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
LCRK	Leigh Creek	33.57	163	P	P	22 32 15.9	+0.1
	comp=Z,22nm,1.4s						
RK1H	Rockhampton Ha	33.62	139	P	P	22 32 16.6	+0.2
	comp=Z,24nm,0.7s						
BBOO	Buckleboo	35.25	167	P	P	22 32 28.9	-1.4
BBOO				IAmb	IAmb	22 32 30.1	
	comp=Z,15nm,0.8s						
BBOO	Buckleboo	35.25	167	P	P	22 32 29.9	-0.4
	comp=Z,29nm,1.5s						
EIDS	Eidsvold	35.40	141	P	P	22 32 30.8	-0.9
EIDS				IAmb	IAmb	22 32 31.8	
	comp=Z,12nm,0.8s						
EIDS	Eidsvold	35.40	141	P	P	22 32 32.0	+0.3
	comp=Z,19nm,1.3s						
WHYH	Whyalla	35.83	165	P	P	22 32 34.5	-0.7
	comp=Z,23nm,0.6s						
STKA	Stephens Creek	36.00	159	P	P	22 32 36.1	-0.5
	comp=Z,47nm,0.6s,baz=332,slow=8.2,SNR=138						
STKA	Stephens Creek	36.00	159	P	P	22 32 36.2	-0.5
STKA				IAmb	IAmb	22 32 37.5	
	comp=Z,11nm,0.7s						
STKA	Stephens Creek	36.00	159	P	P	22 32 36.1	-0.5
	comp=Z,16nm,0.8s						
XAN	Xi'an	36.51	334	P	P	22 32 41.8	+0.7
XAN				pP	pwP	22 33 10.8	-0.7
XAN				sP	sP	22 33 23.0	+0.3
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
CMSA	Cobar Meteorol	37.35	154	P	P	22 32 47.8	-0.3
	comp=Z,30nm,0.8s						
ARMA	Armidale	39.45	146	P	P	22 33 06.4	+0.5
ARMA				IAmb	IAmb	22 33 07.0	
	comp=Z,33nm,0.8s						
ARMA	Armidale	39.45	146	P	P	22 33 06.4	+0.5
	comp=Z,48nm,0.8s						
ARPS	Mount Arapiles	40.54	162	P	P	22 33 15.6	+0.9
	comp=Z,42nm,1.1s						
HHC	Hu-ho-hao-te	41.54	342	*e*P	P	22 33 25.8	+2.9
HHC				sP	sP	22 34 11.5	+6.6
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,4.9s						
SHL	Shillong	41.55	308	P	P	22 33 23.0	-0.3
SHL				IAmb	IAmb	22 33 24.1	
	comp=Z,16nm,0.8s						
CAN	Canberra	42.02	153	P	P	22 33 27.1	+0.3
CAN				IAmb	IAmb	22 33 28.3	
	comp=Z,34nm,0.9s						
CAN	Canberra	42.02	153	P	P	22 33 27.3	+0.5
TOO	Toolangi	42.51	158	P	P	22 33 31.1	+0.3
TOO				IAmb	IAmb	22 33 37.1	
	comp=Z,38nm,1.5s						
DZM	Mont Dzumac	44.93	124	P	P	22 33 50.1	-0.3
	comp=Z,6.7nm,0.7s,baz=251,slow=6.2,SNR=7.7						
DZM	Mont Dzumac	44.93	124	P	P	22 33 49.8	-0.6
LIFNC	LIFOU	45.04	122	P	P	22 33 50.5	-0.7
GTA	Gaotai	45.15	330	*e*P	P	22 33 52.6	+0.6
GTA				pP	pwP	22 34 23.5	+0.2
GTA				sP	sP	22 34 42.6	+8.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PINNC	Pines Island,	46.00	124	P	P	22 33 58.8	0.0
PINNC				IAmb	IAmb	22 34 02.5	
	comp=Z,65nm,1.4s						
PALK	Pallekele	46.71	278	P	P	22 34 04.8	+0.3
PALK				IAmb	IAmb	22 34 31.4	
	comp=Z,21nm,1.4s						
JIRN	Jiri	47.02	307	*e*P	P	22 34 07.6	+0.5
	comp=Z,21nm,0.7s						
GUN	Gumba	47.38	307	*e*P	P	22 34 10.1	+0.2
	comp=Z,26nm,0.6s						
KLR	Kul'dur	47.58	4	P	P	22 34 10.8	+0.2
	comp=Z,1.1nm,0.6s,baz=277,slow=3.5,SNR=3.6						
KLR				pP	pwP	22 34 42.8	+0.5
	comp=Z,1.6nm,0.5s,baz=144,slow=6.0,SNR=4.0						
PKI	Pulchoki	47.61	307	*e*P	P	22 34 11.5	-0.1
GKN	Gorkha	48.41	307	*e*P	P	22 34 17.8	+0.2
DANN	Dangsing	49.26	307	*e*P	P	22 34 24.4	+0.2
	comp=Z,26nm,0.6s						
SONM	Songino Array	49.44	342	P	P	22 34 25.7	+0.6
	comp=Z,0.8nm,0.7s,baz=159,slow=8.9,SNR=3.9						
SONM				pP	pwP	22 34 56.2	-0.5
	comp=Z,1.5nm,0.7s,baz=162,slow=8.5,SNR=4.7						
PYUN	Piuthan	49.78	306	*e*P	P	22 34 28.7	+0.7
	comp=Z,34nm,0.7s						
HYB	Hyderabad	50.33	291	*i* P	P	22 34 31.5	-0.6
WMQ	Urumqi	54.73	326	*e*P	P	22 35 07.4	+3.2
PETK	Petropavlovsk-	57.18	21	P	P	22 35 22.1	+0.7
	comp=Z,4.4nm,0.8s,baz=258,slow=5.7,SNR=2.6						
PETK	Petropavlovsk-	57.18	21	P	P	22 35 21.4	0.0
DCZ	Deep Cove	58.70	148	P	P	22 35 31.8	-0.3
DCZ				IAmb	IAmb	22 35 34.1	
	comp=Z,27nm,1.2s						
QRZ	Quartz Range	58.98	141	P	P	22 35 34.7	+0.5
MLZ	Mavora Lakes	59.15	147	P	P	22 35 34.3	-0.9
MLZ				IAmb	IAmb	22 35 57.1	
	comp=Z,28nm,1.3s						
WKZ	Wanaka	59.29	147	P	P	22 35 35.7	-0.5
WHZ	Wether Hill Ro	59.40	148	P	P	22 35 35.8	-1.2
MK31	Makanchi Array	59.56	326	P	P	22 35 38.5	+0.4
MKAR	Makanchi Array	59.56	326	P	P	22 35 38.5	+0.4
	comp=Z,3.5nm,0.5s,baz=119,slow=8.1,SNR=51						
MKAR				pP	pP	22 36 08.2	+0.4
	comp=Z,2.0nm,0.5s,baz=122,slow=8.2,SNR=3.3						
MKAR				ScP	ScP	22 40 11.9	-1.5
	comp=Z,0.5nm,0.7s,baz=139,slow=4.4,SNR=4.6						
LBZ	Lake Benmore	59.67	146	P	P	22 35 38.5	-0.3
NNZ	Nelson	59.73	141	P	P	22 35 37.8	-1.5
NNZ				IAmb	IAmb	22 35 56.8	
	comp=Z,22nm,1.0s						
THZ	Tophouse	59.74	142	P	P	22 35 38.8	-0.6
MAKZ	Makanchi	59.75	326	P	P	22 35 39.3	-0.1
MAKZ				IAmb	IAmb	22 35 43.0	
	comp=Z,5.0nm,0.8s						
KSH	Kashi	59.89	316	P	P	22 35 42.8	+2.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
LTZ	Lake Taylor	59.93	143	P	P	22 35 40.5	-0.2
LTZ				IAmb	IAmb	22 35 46.5	
	comp=Z,12nm,0.9s						
OXZ	Oxford	60.11	144	P	P	22 35 40.9	-0.9
TUWZ	Tuamarina	60.21	141	P	P	22 35 41.0	-1.5
KDJ	Kajisay	60.25	319	P	P	22 35 43.8	+0.7
KDJ				IAmb	IAmb	22 35 59.3	
	comp=Z,6.6nm,0.8s						
BSWZ	Blackbirch Sta	60.32	141	P	P	22 35 42.0	-1.4
ODZ	Otahua Downs	60.33	146	P	P	22 35 43.0	-0.4
KHZ	Kahutara	60.50	142	P	P	22 35 43.0	-1.4
SNZO	South Karori	60.62	140	P	P	22 35 43.9	-1.4
URZ	Urewera	60.67	136	P	P	22 35 44.8	-1.0
URZ				IAmb	IAmb	22 36 10.3	
	comp=Z,26nm,1.5s						
BKZ	Black Stump Fm	60.69	138	P	P	22 35 45.3	-0.6
BKZ				IAmb	IAmb	22 35 45.5	
	comp=Z,11nm,0.7s						
MQZ	McQueen’s Vall	60.70	144	P	P	22 35 45.3	-0.5
MQZ				IAmb	IAmb	22 35 46.4	
	comp=Z,16nm,0.8s						
PLWZ	Palliser	61.11	140	P	P	22 35 46.9	-1.8
BFZ	Birch Farm	61.29	139	P	P	22 35 48.9	-1.0
ZALV	Zalesovo Beam	62.68	333	P	P	22 36 00.3	+1.4
	comp=Z,1.1nm,0.4s,baz=116,slow=6.8,SNR=6.8						
ZALV				pP	pwP	22 36 31.4	-0.4
	comp=Z,2.0nm,0.8s,baz=116,slow=6.9,SNR=3.3						
ZALV	Zalesovo Beam	62.68	333	P	P	22 35 60.0	+1.1
KBL	Kabul	63.21	308	P	P	22 36 03.4	+0.3
KBL				IAmb	IAmb	22 36 04.9	
	comp=Z,4.5nm,0.7s						
BTK	Batken	63.74	315	P	P	22 36 07.1	+0.7
KURK	Kurchatov	63.78	328	P	P	22 36 06.4	+0.2
KURK				IAmb	IAmb	22 36 09.7	
	comp=Z,7.6nm,0.7s						
SEY	Seymchan	63.95	12	P	P	22 36 08.0	+0.8
	comp=Z,4.0nm,0.7s,baz=226,slow=5.8,SNR=5.8						
KKAR	Karatay Array	65.11	318	P	P	22 36 15.2	+0.1
BRVK	Borovoye	69.42	327	P	P	22 36 42.1	0.0
ABKAR	Akbulak array	74.09	321	P	P	22 37 09.7	-0.4
AKTO	Aktyubinsk	75.61	322	P	P	22 37 18.7	-0.1
	comp=Z,2.2nm,0.6s,baz=98,slow=9.7,SNR=6.7						

VNDA	**Vanda**	81.29	173	P	P	22 37 48.3	-1.1
	comp=Z,3.6nm,0.6s,baz=313,slow=7.5,SNR=24						
VNDA	**Vanda**	81.29	173	P	P	22 37 49.0	-0.4
MAW	**Mawson**	81.97	200	P	P	22 37 52.3	-0.8
	comp=Z,5.7nm,0.6s,baz=61,slow=5.3,SNR=7.9						
KDAK	**Kodiak Island**	83.38	32	P	P	22 38 00.5	-0.1
	comp=Z,7.1nm,0.9s,baz=275,slow=8.8,SNR=4.9						
ILAR	**Eielson Array**	86.77	25	P	P	22 38 15.5	-2.0
	comp=Z,0.6nm,0.8s,baz=270,slow=4.7,SNR=4.9						
YKA	**Yellowknife Ar**	101.19	25	P	Pdif	22 39 23.3	-0.3
	comp=Z,0.4nm,0.9s,baz=295,slow=5.2,SNR=4.3						
TXAR	**Lajitas Array**	122.45	53	PKP	PKPdf	22 44 28.2	-0.8
	comp=Z,0.3nm,0.7s,baz=90,slow=0.1,SNR=4.1						
TORD	**Torodi Ar. Bea**	124.04	287	PKP	PKPdf	22 44 31.5	-0.7
	comp=Z,1.0nm,0.7s,baz=48,slow=2.3,SNR=9.5						

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*BJI **24** 22:39:17.6±0.0, 40°.16N×52°.03E, h5^{km}, mB5.0/15, mb4.6/37, Ms4.5/4, Ms7 4.2/4*

*IDC **24** 22:39:17.5±0.6, 40°.12N×51°.98E, h0^{km}, mb4.4/25, mb1 4.5/38, mb1mx4.4/54, mbtmp4.5/38, ML4.0/9, MS3.5/16, Ms1 3.5/16, ms1mx3.3/64, Error ellipse: s-maj=12.7km s-min=7.8km az=170.0*

*MOS **24** 22:39:19.7±1.1, 40°.38N×52°.13E, h18^{km}, mb4.7/11, Error ellipse: s-maj=4.3km s-min=3.2km az=25.6*

*NEIC **24** 22:39:20.7±1.6, 40°.28N±0°.06×52°.06E±0°.08, h13^{km}±2^{km}, mb4.7/85, Error ellipse: s-maj=9.5km s-min=8.4km az=159.0*

*AZER **24** 22:39:23.2±0.3, 40°.02N×51°.90E, h34^{km}±2^{km}, ml4.6/34, Error ellipse: s-maj=5.5km s-min=4.3km az=280.0*

*NNC **24** 22:39:23.3±2.7, 40°.65N×52°.42E, h0^{km}, mb4.9, Error ellipse: s-maj=32.5km s-min=8.7km az=67.0*

ISC 24 22:39:20.4±0.8**, 40°.26N**±0°.03×**52°.09E**±0°.03**, h17**^{km}±5^{km}**, n564,** σ1^s**79**/636**, mb4.6**/97**, MS3.6**/11**, 60C-14D, Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALA	**Gala**	1.48	276	Pg	Pg	22 39 50.6	+1.6
GALA				Sg	Sg	22 40 08.5	+0.1
NDR	**Nardaran**	1.63	282	Pg	Pg	22 39 52.8	+1.0
	SNR=30						
NDR				Sg	Sg	22 40 14.2	+1.1
GOBA	**Gobu**	1.81	275	Pg	Pg	22 39 54.8	-0.3
	SNR=7.2						
GOBA				Sn	Sn	22 40 12.6	-0.6
ALIB	**Äli-Bayra**	2.38	264	Pg	Pb	22 40 03.3	+0.5
	SNR=12						
ALIB				Sg	Sg	22 40 34.4	-2.7
GBS	**Qobustan**	2.42	277	Pn	Pb	22 40 02.8	-0.6
	SNR=26						
GBS				Sg	Sg	22 40 36.4	-1.7
ATGJ	**Altiaghaj**	2.47	285	Pn	Pb	22 40 03.3	-1.1
	SNR=54						
ATGJ				Sn	Sb	22 40 33.5	-1.2
SIZA	**Siyzn**	2.56	290	Pn	Pb	22 40 04.6	-1.3
	SNR=43						
SIZA				Sg	Sg	22 40 44.0	+1.3
PQL	**Pirkuli**	2.71	282	Pn	Pb	22 40 06.5	-2.1
	SNR=50						
PQL				Sn	Sb	22 40 39.1	-2.6
SAAT	**Saatly**	2.84	263	Pn	Pb	22 40 08.5	-2.1
	SNR=18						
SAAT				Sn	Sn	22 40 40.1	+1.4
QUBA	**Quba, Azerbaij**	2.94	293	Pn	Pb	22 40 09.9	-2.4
	SNR=28						
QUBA				Sn	Sb	22 40 45.4	-2.6
KDMR	**Kurdemir**	2.99	273	Pn	Pn	22 40 09.5	+2.5
	SNR=18						
KDMR				Sn	Sn	22 40 44.2	+1.9
LKRN	**Lenkeran, Azer**	2.99	240	Pn	Pn	22 40 07.6	+0.6
	SNR=166						
LKRN				Sn	Sn	22 40 40.9	-1.6
LKRN	**Lenkeran, Azer**	2.99	240	P	Pn	22 40 07.6	+0.6
IML	**Ismayilli**	3.02	281	Pn	Pn	22 40 09.9	+2.4
	SNR=13						
IML				Sn	Sn	22 40 46.3	+2.9
GLBA	**Clilabad**	3.02	251	Pn	Pn	22 40 08.6	+1.1
	SNR=174						
GLBA				Sn	Sn	22 40 42.9	-0.3
ASTR	**Astara**	3.07	237	Pn	Pn	22 40 08.5	+0.5
	SNR=170						
ASTR				Sn	Sn	22 40 42.4	-2.0
XNQ	**Khinaliq**	3.13	288	Pn	Pn	22 40 11.9	+2.7
	SNR=117						
XNQ				Sn	Sn	22 40 48.5	+2.1
QSAR	**Qusar**	3.16	295	Pn	Pn	22 40 12.6	+3.2
	SNR=315						
QSAR				Sn	Sn	22 40 50.3	+3.6
YRD	**Yardimli**	3.26	247	Pn	Pn	22 40 11.1	+0.2
	SNR=214						
YRD				Sn	Sn	22 40 47.5	-2.0
QBL	**Gabala**	3.31	283	Pn	Pn	22 40 13.2	+1.8
	SNR=51						
QBL				Sn	Sn	22 40 51.0	+0.7
LRK	**Lerik**	3.32	242	Pn	Pn	22 40 12.0	+0.3
	SNR=399						
LRK				Sn	Sn	22 40 48.2	-2.7
DRN	**Derbent**	3.34	303	eP	Pn	22 40 14.8	+3.0
ZRD	**Zardab**	3.37	272	Pn	Pn	22 40 14.4	+2.2
	SNR=60						
ZRD				Sn	Sn	22 40 52.4	+0.7
AKT	**Akhty**	3.52	292	deP	Pn	22 40 16.7	+2.3
BLQ	**Beylaqan**	3.52	263	Pn	Pn	22 40 15.0	+0.7
	SNR=69						
BLQ				Sn	Sn	22 40 54.9	-0.6
BRDA	**Brd**	3.75	272	Pn	Pn	22 40 20.0	+2.5
	SNR=26						
BRDA				Sn	Sn	22 41 01.7	+0.4
QRD	**Qoradiz**	3.75	259	Pn	Pn	22 40 18.4	+0.8
	SNR=28						
QRD				Sn	Sn	22 40 58.0	-3.3
AGDM	**Agdam**	3.82	269	Pn	Pn	22 40 19.8	+1.3
	SNR=66						
AGDM				Sn	Sn	22 41 01.6	-1.2
SEKA	**Sheki**	3.83	286	Pn	Pn	22 40 20.8	+2.1
	SNR=115						
SEKA				Sn	Sn	22 41 05.3	+2.0
SEKA	**Sheki**	3.83	286	P	Pn	22 40 20.8	+2.1
MNGR	**Mingechevir, A**	3.85	279	Pn	Pn	22 40 21.0	+2.2
	SNR=6.9						
MNGR				Sn	Sn	22 41 04.5	+0.9
MNGR	**Mingechevir, A**	3.85	279	P	Pn	22 40 20.9	+2.2
ZKTA	**Zakatala**	4.36	290	Pn	Pn	22 40 28.1	+2.2
	SNR=58						
ZKTA				Sn	Sn	22 41 18.3	+2.0
ZKTA	**Zakatala**	4.36	290	P	Pn	22 40 28.1	+2.2
MAK	**Makhachkala**	4.37	310	eP	Pn	22 40 22.1	-3.8
MAK				eS	Sn	22 41 11.6	-4.7
MAK				pmax	pmax		
	comp=Z,72nm,0.9s						
MAK				MLR	MLR		
	comp=Z,378nm,6.0s						
GNBR	**Gunib**	4.40	301	i P	Pn	22 40 30.4	+3.9
GANJ	**Ganja**	4.42	277	Pn	Pn	22 40 27.4	+0.8
	SNR=34						
GANJ				Sn	Sn	22 41 16.7	-1.0
GANJ	**Ganja**	4.42	277	P	Pn	22 40 27.4	+0.8
DDFL	**Dedoflistskaro**	4.68	287	P	Pn	22 40 34.7	+4.4
DDFL				S	Sn	22 41 31.1	+6.9
DDFL	**Dedoflistskaro**	4.68	287	P	Pn	22 40 34.7	+4.4
DDFL				S	Sn	22 41 31.1	+6.9
LGD	**Lagodekhi**	4.69	291	P	Pn	22 40 32.5	+2.1
LGD				S	Sn	22 41 25.9	+1.5
LGD	**Lagodekhi**	4.69	291	P	Pn	22 40 32.5	+2.1
LGD				S	Sn	22 41 25.9	+1.5
GDB	**GEDABAY**	4.85	277	Pn	Pn	22 40 33.3	+0.5
	SNR=29						
GDB				Sn	Sn	22 41 27.1	-1.5
ORD	**Ordubad**	4.89	256	Pn	Pn	22 40 34.4	+1.1
	SNR=118						
ORD				Sn	Sn	22 41 28.0	-1.5
BTLR	**Botlikh**	5.02	300	i P	Pn	22 40 38.0	+3.1
SBZ	**Shahbuz**	5.10	262	Pn	Pn	22 40 38.2	+2.1
	SNR=137						
SBZ				Sn	Sn	22 41 32.9	-1.9
QZX	**Qazax, Azerbai**	5.17	281	Pn	Pn	22 40 38.1	+1.1
	SNR=5.9						
QZX				Sn	Sn	22 41 35.4	-0.9
NAX	**Nakhchivan**	5.20	260	Pn	Pn	22 40 39.4	+2.0
	SNR=82						
NAX				Sn	Sn	22 41 36.4	-0.7
NAX	**Nakhchivan**	5.20	260	P	Pn	22 40 39.4	+2.0
GEYT	**Alibeck**	5.24	114	Pn	Pn	22 40 39.1	+1.1
	comp=Z,7.9nm,0.3s,baz=301,slow=12,SNR=50						
GEYT				Sn	Sn	22 41 37.0	-0.9
	comp=Z,10.0nm,0.3s,baz=277,slow=27,SNR=1.3						
GEYT				LR	LR	22 43 21.8	
	comp=Z,159nm,18.3s,baz=135,slow=46						
GEYT	**Alibeck**	5.24	114		Pn	22 40 39.9	+1.9
GYA0	**ALIBECK ARRAY**	5.24	114	P	Pn	22 40 39.0	+1.1
GYA0				S	Sn	22 41 37.2	-0.7
GYA0B	**ALIBECK ARRAY**	5.24	114	⇑Pn	Pn	22 40 40.4	+2.4
GYA0B				⇓Sn	Sn	22 41 44.6	+6.7
GYA0B	**ALIBECK ARRAY**	5.24	114	Pn	Pn	22 40 39.0	+1.1
GYA0B				Sn	Sn	22 41 37.2	-0.8
GROC	**Groznyy**	5.55	304	eP	Pn	22 40 45.5	+3.4
GROC				eS	Sn	22 41 48.9	+3.4
GROC				pmax	pmax		
	comp=Z,106nm,0.6s						
GROC				smax	smax		
	comp=N,346nm,0.5s						
GROC				smax	smax		
	comp=E,160nm,0.9s						
GROC				smax	smax		
	comp=N,473nm,0.8s						
GROC				MLR	MLR		
	comp=Z,4.0nm,2.0s						
HYR	**Heyderabad**	5.58	267	Pn	Pn	22 40 44.8	+2.1
	SNR=28						
HYR				Sn	Sn	22 41 41.9	-4.6
GNI	**Garni**	5.62	271	Pn	Pn	22 40 45.1	+1.7
	comp=Z,9.6nm,0.3s,baz=308,slow=2.6,SNR=75						
GNI				LR	LR	22 44 15.3	
	comp=Z,178nm,18.4s,baz=60,slow=54						
GNI	**Garni**	5.62	271	P	Pn	22 40 45.7	+2.3
GNI	**Garni**	5.62	271	P	Pn	22 40 45.8	+2.3
GNI	**Garni**	5.62	271	Pn	Pn	22 40 45.7	+2.3
BTNK	**Botanikuri**	5.70	287	P	Pn	22 40 44.2	0.0
BTNK				S	Sn	22 41 45.8	-3.4
BTNK	**Botanikuri**	5.70	287	P	Pn	22 40 44.2	0.0
BTNK				S	Sn	22 41 45.8	-3.4
DMNI	**Dmanisi**	6.09	283	P	Pn	22 40 50.2	+0.5
DMNI				S	Sn	22 41 57.2	-1.8
DMNI	**Dmanisi**	6.09	283	P	Pn	22 40 50.2	+0.5
DMNI				S	Sn	22 41 57.2	-1.8
PNSH	**Pansheti**	6.09	295	P	Pn	22 40 52.5	+2.7
PNSH	**Pansheti**	6.09	295	P	Pn	22 40 52.5	+2.7
GUDG	**Gudauri**	6.13	293	P	Pn	22 40 55.4	+5.0
GUDG				S	Sn	22 42 02.9	+2.6
GUDG	**Gudauri**	6.13	293	P	Pn	22 40 55.4	+5.0
GUDG				S	Sn	22 42 02.9	+2.6
MTEO	**Meteo**	6.17	296	P	Pn	22 40 53.9	+2.8
TRLG	**Trialeti**	6.18	284	P	Pn	22 40 41.3	-10
TRLG				S	Sn	22 41 59.1	-2.3
TRLG	**Trialeti**	6.18	284	P	Pn	22 40 41.3	-10
TRLG				S	Sn	22 41 59.1	-2.3
BRNG	**Burnasheti**	6.40	285	P	Pn	22 40 55.8	+1.7
BRNG				S	Sn	22 42 02.6	-4.1
BGD	**Bogdanovka**	6.52	282	P	Pn	22 40 58.1	+2.3
BGD				S	Sn	22 42 11.3	+1.5
BGD	**Bogdanovka**	6.52	282	P	Pn	22 40 58.1	+2.3
BGD				S	Sn	22 42 11.3	+1.5
ZEI	**Tsey**	6.64	295	eP	Pn	22 40 50.4	-7.0
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KARS	**Kars**	6.88	276	P	Pn	22 41 01.8	+1.2
KARS	**Kars**	6.88	276	Pn	Pn	22 41 01.8	+1.2
ONI	**Oni**	6.89	293	P	Pn	22 41 03.0	+2.3
ONI	**Oni**	6.89	293	P	Pn	22 41 03.0	+2.3
ONI	**Oni**	6.89	293		Pn	22 41 03.0	+2.3
NCK	**Nalchik**	7.11	300	i P	Pn	22 41 06.3	+2.6
TKB	**Tkibuli**	7.16	290	P	Pn	22 41 05.5	+1.2
TKB				S	Sn	22 42 24.6	-0.6
TKB	**Tkibuli**	7.16	290	P	Pn	22 41 05.5	+1.2
TKB				S	Sn	22 42 24.6	-0.6
ABS	**Abastumani**	7.17	285	P	Pn	22 41 05.7	+1.1
ABS	**Abastumani**	7.17	285	P	Pn	22 41 05.7	+1.1
KBZ	**Khabaz**	7.67	300	Pn	Pn	22 41 12.1	+0.8
	comp=Z,0.6nm,0.3s,baz=105,slow=7.5,SNR=14						
KBZ				LR	LR	22 45 19.7	
	comp=Z,96nm,18.1s,baz=112,slow=47						
PYA1	**Pyatigorsk**	7.68	303	i P	Pn	22 41 13.4	+1.9
SHA1	**Shidzhatmaz**	7.83	299	i P	Pn	22 41 15.0	+1.3
KVAR	**Kislovodsk Arr**	7.90	301	Pn	Pn	22 41 15.8	+1.3
	baz=107,slow=19,SNR=2.4						
KVAR				Sn	Sn	22 42 40.5	-2.9
	baz=122,slow=22,SNR=3.8						
CHVG	**Ch'k'valeri**	7.90	291	P	Pn	22 41 23.6	+9.1
CHVG	**Ch'k'valeri**	7.90	291	P	Pn	22 41 16.0	+1.5
CHVG	**Ch'k'valeri**	7.90	291	P	Pn	22 41 23.6	+9.2
KIV	**Kislovodsk**	7.90	301	⇓P	Pn	22 41 15.0	+0.5
KIV	**Kislovodsk**	7.90	301	eP	Pn	22 41 15.6	+1.0
KIV				eS	Sn	22 42 46.1	+2.5
KIV				pmax	pmax		
	comp=Z,35nm,1.0s						
KIV	**Kislovodsk**	7.90	301	P	Pn	22 41 17.9	+3.3
KIV				S	Sn	22 42 40.8	-2.8
KIV	**Kislovodsk**	7.90	301	Pn	Pn	22 41 14.8	+0.2
GURO	**Guroymak-BITLI**	7.97	261		Pn	22 41 16.5	+0.9
SIRT	**Sirnak**	8.01	253	Pn	Pn	22 41 17.8	+1.7
HRA	**Herat**	9.99	123		Pn	22 41 44.8	+1.5
AB31	**Akbulak array**	10.58	29	P	Pn	22 41 50.5	-0.6
AB31				SN	Sn	22 43 44.2	-4.9
AB31	**Akbulak array**	10.58	29	⇓Pn	Pn	22 41 50.5	-0.6
	comp=Z,9.3nm,0.5s,baz=207,slow=12,SNR=595						
AB31				⇑Sn	Sn	22 43 44.2	-4.9
	comp=Z,21nm,0.3s,baz=220,slow=24,SNR=6.0						
ABKAR	**Akbulak array**	10.58	29	Pn	Pn	22 41 50.6	-0.5
MALT	**Malatya**	10.77	264	P	Pn	22 41 57.7	+3.9
AKTO	**Aktyubinsk**	10.99	20	Pn	Pn	22 41 57.0	+0.2
	comp=Z,10nm,0.3s,baz=204,slow=9.2,SNR=102						
AKTO				Sn	Sn	22 43 54.7	-4.5
	comp=Z,25nm,0.3s,baz=10,slow=21,SNR=8.5						
AKTO				LR	LR	22 47 30.2	
	comp=Z,267nm,19.1s,baz=192,slow=44						
AKTO	**Aktyubinsk**	10.99	20	P	Pn	22 41 56.6	-0.1
AKTO				SN	Sn	22 43 53.9	-5.3
AKTO	**Aktyubinsk**	10.99	20	⇑Pn	Pn	22 41 56.6	-0.1
	comp=Z,42nm,0.7s						
AKTO				⇑Sn	Sn	22 43 53.9	-5.3
	comp=Z,145nm,0.6s						
GAZ	**Gaziantep**	12.02	260	Pn	Pn	22 42 10.9	-0.1
BNN	**Bunyan**	12.62	269	Pn	Pn	22 42 21.1	+1.9
VRH	**Novokhopyorsk**	13.10	330	eP	Pn	22 42 26.4	+0.8
VRH				pmax	pmax		
	comp=Z,150nm,0.8s						
CHGR	**Chuyangaron**	13.29	91	Pn	Pn	22 42 29.1	+0.7
BRLS	**Borolday**	13.56	72	eP	Pn	22 42 29.2	-2.8
	comp=Z,3.5nm,0.6s,baz=74						
BRLS	**Borolday**	13.56	72	eP	Pn	22 42 29.1	-2.8
BRLS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
IUG	**Iuzhnay**	13.64	76	eP	Pn	22 42 33.8	+0.7
	baz=77						
IUG	**Iuzhnay**	13.64	76	eP	Pn	22 42 33.8	+0.7
SIM	**Simferopol'**	14.03	295	eP	P	22 42 45.5	-0.6
SIM				pmax	pmax		
	comp=Z,97nm,0.6s						
KK02	**Karatay Array**	14.06	72	⇑P	Pn	22 42 38.2	-0.6
	comp=Z,22nm,0.8s						
KKAR	**Karatay Array**	14.06	72	P	Pn	22 42 38.7	0.0
KKAR	**Karatay Array**	14.06	72	Pn	Pn	22 42 38.7	0.0
BR131	**Keskin Array S**	14.16	274	P	Pn	22 42 41.6	+1.4
BR131	**Keskin Array S**	14.16	274	P	Pn	22 42 42.6	+2.3
BR131	**Keskin Array S**	14.16	274	Pn	Pn	22 42 41.6	+1.4
BRTR	**Keskin Array B**	14.16	274	Pn	Pn	22 42 41.2	+1.0
	comp=Z,0.2nm,0.3s,baz=95,slow=11,SNR=12						
BRTR	**Keskin Array B**	14.16	274	i P	Pn	22 42 42.5	+2.3
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VSR	**Storozhevoye**	14.17	325	eP	Pn	22 42 38.9	-1.2
VSR				pmax	pmax		
	comp=Z,90nm,1.0s						
BTK	**Batken**	14.33	85	P	Pn	22 42 42.4	-0.1
BTK	**Batken**	14.33	85	Pn	Pn	22 42 42.4	-0.1
VORR	**Voronezh**	14.48	326	eP	Pn	22 42 45.0	+0.6
VORR				pmax	pmax		
	comp=Z,250nm,1.0s						
KBL	**Kabul**	14.63	108	P	Pn	22 42 48.7	+1.9
KBL	**Kabul**	14.63	108	Pn	Pn	22 42 48.7	+1.9
DZA	**Taraz**	14.64	73	eP	Pn	22 42 47.3	+0.5
	comp=Z,15nm,0.8s,baz=74						
DZA	**Taraz**	14.64	73	eP	Pn	22 42 47.2	+0.5
DZA				pmax	pmax		
	comp=Z,15nm,0.8s						
ANTO	**Ankara**	14.78	275	P	Pn	22 42 50.5	+1.8
ANTO	**Ankara**	14.78	275		Pn	22 42 50.5	+1.8
BR231	**Keskin MP Arra**	14.80	275		Pn	22 42 52.1	+3.1
DRK	**Karamyk**	15.16	87	Pn	Pn	22 42 55.4	+1.5
DRK				IAmb	IAmb	22 43 12.2	
	comp=Z,24nm,0.4s						
MMAI	**Mount Meron Ar**	15.21	247	Pn	Pn	22 42 55.7	+1.3
	comp=Z,0.2nm,0.3s,baz=64,slow=12,SNR=8.9						
LPSR	**Galich'ya Gora**	15.28	328	eP	Pn	22 42 54.3	-0.9
LPSR				eS	Sn	22 45 36.2	-7.7
LPSR				pmax	pmax		
	comp=Z,70nm,0.6s						
LPSR				smax	smax		
	comp=N,100nm,0.9s						
UOSS	**Minazif**	15.66	166	Pn	Pn	22 43 00.1	-0.2
UOSS				IAmb	IAmb	22 43 01.9	
	comp=Z,77nm,1.6s						
KDZE	**Karadeniz Ereo**	15.67	281	P	Pn	22 43 02.0	+1.6
CSS	**Mathiatis**	15.77	256		Pn	22 43 02.9	+1.2
MDUB	**Mudurnu**	15.93	278		Pn	22 43 03.2	-0.5
MDUB				IAmb	IAmb	22 43 22.8	
	comp=Z,55nm,0.8s						
GHAJ	**Ghor Haditha**	16.09	241		Pn	22 43 06.2	+0.4
GHAJ				IAmb	IAmb	22 43 11.6	
	comp=Z,48nm,0.9s						
AML	**Almayashu**	16.37	76	P	Pn	22 43 10.2	+0.6
	SNR=9.2						
EKS2	**Erkin-Say**	16.43	75	P	Pn	22 43 11.6	+1.4
	SNR=13						
ALNE	**Al Ain**	16.45	168	P	Pn	22 43 10.5	0.0
	SNR=6.9						
OTUK	**Ortayu**	16.52	54	P	Pn	22 43 09.8	-1.4
OTUK	**Ortayu**	16.52	54	⇑P	Pn	22 43 09.8	-1.4
	comp=Z,26nm,0.6s						
ARU	**Arti**	16.73	13	Pn	Pn	22 43 11.7	-2.0
	comp=Z,0.1nm,0.3s,baz=203,slow=8.9,SNR=43						
ARU				Sn	Sn	22 46 08.4	-11
	comp=Z,0.0nm,0.3s,baz=94,slow=24,SNR=7.0						
ARU				LR	LR	22 51 13.7	
	comp=Z,266nm,18.1s,baz=215,slow=42						
ARU	**Arti**	16.73	13	c iP	Pn	22 43 11.3	-2.4
ARU				S	Sn	22 46 15.3	-3.6
ARU				pmax	pmax		
	comp=Z,37nm,0.6s						
ARU	**Arti**	16.73	13	Pn	Pn	22 43 11.7	-2.0
ARU				IAmb	IAmb	22 43 17.9	
	comp=Z,60nm,0.5s						
AAK	**Ala-Archa**	16.96	75	P	Pn	22 43 17.8	+0.9
	comp=Z,0.5nm,0.3s,baz=267,slow=9.3,SNR=14						
AAK				LR	LR	22 50 48.8	
	comp=Z,265nm,18.9s,baz=290,slow=40						
AAK	**Ala-Archa**	16.96	75	ceP	Pn	22 43 17.3	+0.4
AAK				pmax	pmax		
	comp=Z,25nm,1.3s						
AAK	**Ala-Archa**	16.96	75	Pn	Pn	22 43 17.1	+0.2
USP	**Ospenovka**	16.98	72	P	P	22 43 20.8	+1.9
	SNR=10.0						
FRU1	**Bishkek**	17.06	74	P	Pn	22 43 18.5	+0.4
FRU1				pmax	pmax		
	comp=Z,29nm,0.7s						
FRU1	**Bishkek**	17.06	74		Pn	22 43 18.5	+0.4
FRU1				IAmb	IAmb	22 43 34.2	
	comp=Z,29nm,0.7s						
SGDS	**Sogindy**	17.08	72	eP	Pn	22 43 18.8	+0.4
	baz=72						
CHMS	**Chumysh**	17.16	73	P	P	22 43 21.4	+0.6
	SNR=10						
PURM	**Purcari**	17.29	299	⇑P	Pn	22 43 20.4	-0.5
KBK	**Karagaybulak**	17.30	75	P	P	22 43 25.8	+3.2
	SNR=13						
BRZS	**Berezniki**	17.43	49	eP	Pn	22 43 22.4	-0.2
	baz=50						
BRZS	**Berezniki**	17.43	49	eP	Pn	22 43 22.4	-0.2
SVE	**Sverdlovsk**	17.49	16	eP	Pn	22 43 22.2	-1.1
SVE				eS	Sn	22 46 31.8	-5.7
SVE				pmax	pmax		
	comp=Z,59nm,0.7s						
EIL	**Elat**	17.55	238	P	Pn	22 43 25.1	+0.9
	comp=Z,0.9nm,0.3s,baz=54,slow=3.9,SNR=14						
RAYN	**Ar Rayn**	17.59	200	P	Pn	22 43 22.6	-2.2
RAYN				pmax	pmax		
	comp=Z,32nm,1.1s						
RAYN	**Ar Rayn**	17.59	200	P	Pn	22 43 22.9	-1.9
RAYN	**Ar Rayn**	17.59	200	Pn	Pn	22 43 22.6	-2.2
JURR	**Jurilovca**	17.67	292	⇑P	Pn	22 43 26.2	+0.6
UMZA	**Um Al Zommool**	17.69	171	P	Pn	22 43 25.0	-1.0
ELL	**Elmali**	17.70	266	P	P	22 43 27.6	+0.6
ELL				pmax	pmax		
	comp=Z,83nm,0.6s						
ELL	**Elmali**	17.70	266	P	P	22 43 27.6	+0.6
TLCR		17.77	294	⇑P	Pn	22 43 26.6	-0.2
TKM2	**Tokmak 2**	17.77	74	P	Pn	22 43 28.5	+1.3
	SNR=20						
TKM2	**Tokmak 2**	17.77	74	i P	Pn	22 43 28.2	+1.1
TKM2				pmax	pmax		
	comp=Z,45nm,0.8s						
TKM2	**Tokmak 2**	17.77	74	⇓P	Pn	22 43 28.2	+1.1
	comp=Z,45nm,0.8s						
MANR	**Mangalia**	17.80	289	⇑P	P	22 43 28.4	+0.5
BRVK	**Borovoye**	17.81	38	ceP	Pn	22 43 25.7	-1.6
BRVK				pmax	pmax		
	comp=Z,28nm,0.6s						
BRVK	**Borovoye**	17.81	38	⇑P	Pn	22 43 26.2	-1.1
	comp=Z,40nm,0.9s						
BRVK	**Borovoye**	17.81	38		Pn	22 43 26.7	-0.6
BRVK				IAmb	IAmb	22 43 31.3	
	comp=Z,37nm,0.6s						
BVAR	**Borovoye Array**	17.84	38	P	Pn	22 43 27.7	0.0
	comp=Z,2.6nm,0.3s,baz=224,slow=17,SNR=123						
BVAR				S	Sn	22 46 33.9	-12
	comp=Z,3.9nm,0.3s,baz=231,slow=30,SNR=7.1						
WSAR	**Wadi Sarin**	17.85	160	P	Pn	22 43 26.9	-1.0
	comp=Z,0.4nm,0.3s,baz=350,slow=11,SNR=5.3						
WSAR	**Wadi Sarin**	17.85	160	P	Pn	22 43 25.5	-2.5
MFTR	**Murfatlar**	17.94	290	⇑P	P	22 43 30.1	+0.7
TIRR	**Tirgusor**	17.97	291	⇑P	Pn	22 43 29.3	0.0
TIRR	**Tirgusor**	17.97	291	P	Pn	22 43 28.5	-0.8
TIRR				pmax	pmax		
	comp=Z,32nm,0.8s						
TIRR	**Tirgusor**	17.97	291		Pn	22 43 28.5	-0.8
TIRR				IAmb	IAmb	22 43 35.2	
	comp=Z,32nm,0.8s						
TPGR	**Topolog**	18.01	293	⇑P	Pn	22 43 29.9	+0.2
BOOM	**Boomskoye usch**	18.03	75	P	Pn	22 43 29.7	-0.5
BOOM	**Boomskoye usch**	18.03	75	P	Pn	22 43 29.7	-0.5
BOOM				IAmb	IAmb	22 43 44.8	
	comp=Z,27nm,0.8s						
MILM	**Milestii Mici**	18.09	299	⇓P	Pn	22 43 31.3	+0.6
MILM	**Milestii Mici**	18.09	299	c iP	Pn	22 43 29.0	-1.7
MILM				eS	Sn	22 46 49.0	-3.0
MILM				pmax	pmax		
	comp=Z,40nm,0.6s						
MILM				smax	smax		
	comp=N,70nm,1.3s						
MILM				smax	smax		
	comp=E,40nm,1.1s						
OBN	**Obninsk**	18.10	330	⇑P	P	22 43 32.1	+1.1
OBN	**Obninsk**	18.10	330	P	P	22 43 31.7	+0.7
	comp=E,1.8nm,0.3s,baz=168,slow=23,SNR=10						
OBN				S	Sn	22 46 49.1	-3.0
	comp=E,0.6nm,0.3s,baz=21,slow=22,SNR=3.9						
OBN				LR	LR	22 51 26.0	
	comp=E,40nm,18.9s,baz=33,slow=40						
OBN	**Obninsk**	18.10	330	ceP	P	22 43 31.9	+0.9
OBN				eS	Sn	22 46 45.3	-6.8
OBN				pmax	pmax		
	comp=Z,37nm,0.5s						
OBN	**Obninsk**	18.10	330	P	Pn	22 43 31.1	+0.4
OBN				IAmb	IAmb	22 43 46.3	
	comp=Z,79nm,0.8s						
KIS	**Kishinev**	18.10	300	eP	Pn	22 43 29.0	-1.9
	comp=Z,40nm,1.7s						
KIS	**Kishinev**	18.10	300	eP	Pn	22 43 29.0	-1.9
KIS				pmax	pmax		
	comp=Z,340nm,1.7s						
MOS	**Moscow**	18.20	333	eP	Pn	22 43 30.6	-1.4
MOS				eS	Sn	22 46 49.8	-4.7
MOS				pmax	pmax		
	comp=Z,92nm,1.2s						
TLBR	**Topalu**	18.24	291	⇑P	Pn	22 43 32.4	-0.2
CFR	**Carcaliu**	18.25	293	⇑P	Pn	22 43 32.3	-0.3
HARR	**Harsova**	18.34	292	⇑P	Pn	22 43 34.0	+0.3
KSH	**Kashi**	18.34	85	P	Pn	22 43 33.5	-0.5
KSH				pP	pP	22 43 37.1	-1.7
KSH				sP	sP	22 43 40.6	-0.5

KSH				S	Sn	22 46 50.8	-7.6
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KUU	Kurty	18.35	71	eP	Pn	22 43 34.5	+0.6
	baz=71						
KUU	Kurty	18.35	71	eP	Pn	22 43 34.5	+0.6
TATR	Tatarca	18.36	295	⇑P	Pn	22 43 34.1	0.0
VLDR	Vladesti	18.38	296	⇓P	Pn	22 43 34.2	-0.1
ICOR	Ion Corvin	18.38	290	⇑P	P	22 43 34.9	+0.6
SCTR	Scanteiesti	18.41	295	⇑P	P	22 43 34.4	-0.2
KIRV	Kirov	18.42	356	P	P	22 43 33.8	-0.8
	comp=Z,27nm,0.3s,baz=165,slow=2.8,SNR=36						
KIRV				S	Sn	22 46 57.2	-2.6
	comp=Z,2.5nm,0.3s,baz=160,slow=21,SNR=5.6						
KIRV				LR	LR	22 51 43.5	
	comp=Z,227nm,20.7s,baz=180,slow=40						
KIRV	Kirov	18.42	356	ceP	P	22 43 33.4	-1.1
WBK	Wadi Bani Khal	18.54	160	P	P	22 43 33.9	-2.3
VARL	Varlezi	18.55	296	⇑P	P	22 43 36.3	+0.2
BALB	Balikesir	18.56	276		P	22 43 36.3	0.0
VASR	Vaslui	18.72	298	⇑P	P	22 43 38.4	+0.4
CHKK	Chushkaly	18.81	71	eP	P	22 43 39.9	+0.9
	baz=71						
MDOK	Medeo	18.84	73	eP	P	22 43 40.2	+0.6
	baz=73						
MDOK	Medeo	18.84	73	eP	P	22 43 40.1	+0.6
MDOK	Medeo	18.84	73	⇓P	P	22 43 40.6	+1.0
	comp=Z,16nm,0.9s						
GHRR		18.88	296	⇑P	Pn	22 43 40.6	+0.3
KDJ	Kajisay	18.96	76	P	P	22 43 42.1	+1.2
KDJ				pmax	pmax		
	comp=Z,18nm,0.9s						
KDJ	Kajisay	18.96	76		P	22 43 42.0	+1.2
IAS	Iasi	18.98	300	⇑P	P	22 43 41.1	+0.2
AKASG	Malin Array Be	19.05	311	P	Pn	22 43 42.5	+0.1
	comp=Z,16nm,0.3s,baz=111,slow=11,SNR=73						
AKASG				S	Sn	22 47 11.0	-4.3
	comp=Z,1.1nm,0.3s,baz=114,slow=22,SNR=6.2						
AKASG	Malin Array Be	19.05	311	P	P	22 43 41.3	-0.3
AKASG				pmax	pmax		
	comp=Z,38nm,0.7s						
AKASG	Malin Array Be	19.05	311	P	P	22 43 41.3	-0.3
AKASG				IAmb	IAmb	22 43 45.7	
	comp=Z,38nm,0.7s						
AKBB	Malin Array Si	19.05	311	P	P	22 43 41.3	-0.3
AKBB				pmax	pmax		
	comp=Z,63nm,0.6s						
AKBB	Malin Array Si	19.05	311	P	P	22 43 41.3	-0.3
BISRR	Bisoca	19.29	294	⇑P	P	22 43 45.3	+1.0
RAZG	Razgrad	19.30	288	⇑P	P	22 43 45.1	+0.7
VRI	Vrincioaia	19.32	295	⇓P	Pn	22 43 45.8	+0.2
VRI	Vrincioaia	19.32	295	P	Pn	22 43 48.7	+3.0
VRI				pmax	pmax		
	comp=Z,13nm,1.4s						
ISR	Istrita	19.36	293	⇑P	Pn	22 43 46.3	0.0
PLOR	Plostina	19.37	295	⇑P	Pn	22 43 46.4	+0.1
PLOR	Plostina	19.37	295	P	Pn	22 43 46.4	+0.1
TARG	Taragay, Kyrgy	19.45	77	P	P	22 43 47.0	+0.6
TESR	Tescani	19.47	297	⇑P	Pn	22 43 47.4	-0.1
COVR	Voineasa-Covas	19.68	295	⇑P	P	22 43 49.6	+1.1
ALN	Alexandroupoli	19.77	280	P	P	22 43 49.8	+0.3
ALN				pmax	pmax		
	comp=Z,33nm,1.6s						
ALN	Alexandroupoli	19.77	280	P	P	22 43 49.8	+0.3
MLR	Muntele Rosu	19.82	294	⇓P	Pn	22 43 52.0	+0.2
MLR	Muntele Rosu	19.82	294	P	P	22 43 51.1	+1.0
	comp=Z,1.4nm,0.3s,baz=4.7,slow=7.4,SNR=27						
MLR	Muntele Rosu	19.82	294	P	P	22 43 51.4	+1.2
MLR				pmax	pmax		
	comp=Z,12nm,0.8s						
MLR	Muntele Rosu	19.82	294	P	P	22 43 51.4	+1.2
SATY	Saty	19.84	73	eP	P	22 43 51.4	+0.9
	baz=74						
SATY	Saty	19.84	73	eP	P	22 43 51.3	+0.9
TDK	Taldyqorghan	19.90	68	eP	P	22 43 51.5	+0.6
	comp=Z,9.5nm,0.8s,baz=68						
TDK	Taldyqorghan	19.90	68	eP	P	22 43 51.5	+0.6
TDK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PRAR	RASCA	19.91	299	⇑P	P	22 43 51.2	+0.2
OZUR		20.00	296	⇓P	P	22 43 53.4	+1.3
KPKS	Kokpek	20.04	72	eP	P	22 43 53.3	+0.7
	baz=72						
KPKS	Kokpek	20.04	72	eP	P	22 43 53.2	+0.7
DOPR	Dopca	20.26	295	⇑P	P	22 43 56.0	+1.1
UZB	Uzynbulak	20.29	73	eP	P	22 43 56.0	+0.7
	baz=73						
UZB	Uzynbulak	20.29	73	eP	P	22 43 56.0	+0.7
MTUR	Matau	20.41	293	⇑P	P	22 43 57.4	+0.8
HUMR	Humele	20.43	291	⇑P	P	22 43 58.1	+1.4
VOIR		20.44	294	⇓P	P	22 43 58.2	+1.4
VOIR		20.44	294	P	P	22 43 58.1	+1.2
VOIR				pmax	pmax		
	comp=Z,21nm,0.6s						
SHLS	Shalkode	20.61	73	eP	Pn	22 44 02.7	+1.6
	baz=73						
SHLS	Shalkode	20.61	73	eP	Pn	22 44 02.6	+1.5
BURAR	Bucovina Array	20.63	300	⇑P	P	22 43 59.5	+0.5
BURAR	Bucovina Array	20.63	300	P	P	22 43 58.0	-0.9
BURAR				pmax	pmax		
	comp=Z,19nm,0.7s						
BURAR	Bucovina Array	20.63	300	P	P	22 43 59.0	0.0
BURAR				IAmb	IAmb	22 44 00.2	
	comp=Z,19nm,0.7s						
BUR08	Bucovina Ar. S	20.64	300	P	P	22 43 59.3	+0.1
ARR	Arges	20.73	293	⇑P	P	22 44 01.4	+1.5
VLAD	Vladila	20.83	289	⇑P	P	22 44 02.2	+1.2
APE	Apeiranthos	20.95	270	P	Pn	22 44 04.5	-0.6
APE				pmax	pmax		
	comp=Z,68nm,0.9s						
ARCR	ARCALIA	21.12	298	⇑P	P	22 44 05.1	+1.0
KURBB	Kurchatov Arra	21.14	52	P	P	22 44 06.1	+1.8
	comp=Z,19nm,0.8s,baz=254,slow=13,SNR=42						
KURBB				S	S	22 47 54.4	-4.3
	comp=Z,3.3nm,0.7s,baz=261,slow=23,SNR=4.4						
KURBB	Kurchatov Arra	21.14	52	P	P	22 44 05.9	+1.6
KURBB	Kurchatov Arra	21.14	52	⇑P	P	22 44 05.9	+1.6
	comp=Z,30nm,0.9s						
SANT	Santorini	21.22	268	P	P	22 44 05.5	+0.1
SANT				IAmb	IAmb	22 44 24.4	
	comp=Z,34nm,1.2s						
KURK	Kurchatov	21.23	52	P	P	22 44 07.0	+1.8
KURK				pmax	pmax		
	comp=Z,57nm,0.9s						
KURK	Kurchatov	21.23	52	P	P	22 44 06.7	+1.5
KURK	Kurchatov	21.23	52	P	P	22 44 07.0	+1.8
LOT	Lotru	21.34	293	⇑P	P	22 44 07.5	+0.9
NPS	Neapolis	21.48	265	P	P	22 44 07.7	-0.4
MNK	Minsk	21.56	319	i P	P	22 44 08.8	0.0
MNK				i		22 44 30.6	
MNK				i PPP	PPP	22 44 38.0	
MNK				i S	S	22 48 09.4	+2.4
MNK				i SS	SnSn	22 48 34.6	+3.9
MNK				i SSS	SSS	22 48 52.7	
MNK				pmax	pmax		
	comp=N,16nm,0.8s						
MNK				pmax	pmax		
	comp=E,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,61nm,0.8s						
MNK				MLR	MLR		
	comp=N,86nm,16.0s						
MNK				MLR	MLR		
	comp=E,29nm,16.0s						
MNK				MLR	MLR		
	comp=Z,118nm,16.0s						
MNK	Minsk	21.56	319	i P	P	22 44 08.8	0.0
	comp=E,6.0nm,0.8s						
MNK				i P	P	22 44 08.8	0.0
	comp=N,16nm,0.8s						
MNK				i P	P	22 44 08.8	0.0
	comp=Z,61nm,0.8s,baz=121						
MNK				i PP	PnPn	22 44 30.6	+1.3
MNK				i PPP	PPP	22 44 38.0	
MNK				i S	S	22 48 09.5	+2.5
MNK				i SS	SnSn	22 48 34.7	+3.9
MNK				i SSS	SSS	22 48 52.7	
MNK				i LQ	LQ	22 50 43.5	
MNK				i LR	LR	22 52 13.5	
MNK				i LRM	MLR	22 54 04.7	
	comp=N,86nm,16.1s						
MNK				i LRM	MLR	22 54 07.2	
	comp=E,29nm,16.1s						
MNK				i LRM	MLR	22 54 10.1	
	comp=Z,118nm,16.1s						
CJR	Cluj-Napoca	21.58	297	⇑P	P	22 44 10.4	+1.3
CBBR	Cluj-Babes-Bol	21.62	297	⇑P	P	22 44 10.5	+1.0
DOK	Doka	21.64	175	P	P	22 44 09.0	-0.9
	SNR=27						
SRE	Strehaia	21.70	291	⇑P	P	22 44 11.2	+0.8
VTS	Vitosha	21.71	286	⇓P	P	22 44 11.9	+1.1
VTS	Vitosha	21.71	286	P	P	22 44 11.2	+0.5
VTS				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VTS	Vitosha	21.71	286	P	P	22 44 11.2	+0.5
PRGR	Permogore	21.76	352	eP	P	22 44 11.7	+0.8
PRGR				eS	S	22 48 07.6	-3.1
PRGR				pmax	pmax		
	comp=Z,28nm,0.7s						
BMR	Baia Mare	21.78	299	⇑P	P	22 44 11.9	+0.7
LVV	L'vov	21.89	305	eP	P	22 44 15.9	+3.5
DION	Dionisos Attik	21.90	273	P	P	22 44 14.7	+2.1
DEV	Deva	21.98	294	⇑P	P	22 44 14.1	+0.7
IDI	Anoyia	22.02	266	P	P	22 44 13.2	-0.8
	comp=Z,10nm,0.3s,baz=22,slow=8.9,SNR=24						
IDI	Anoyia	22.02	266	P	P	22 44 12.6	-1.4
KLMR	Klimovskoe	22.03	344	eP	P	22 44 12.4	-1.4
KLMR				e		22 44 34.9	
KLMR				e		22 48 10.5	
KLMR				pmax	pmax		
	comp=Z,65nm,0.6s						
KLMR	Klimovskoe	22.03	344	eP	P	22 44 12.4	-1.4
KLMR				AMP		22 44 18.8	
	comp=Z,65nm,0.6s						
KLMR				ePP	PnPn	22 44 34.9	-0.7
KLMR				ePcP	PcP	22 48 10.5	-0.7
GZR	Gura Zlata	22.03	293	⇑P	P	22 44 14.0	0.0
VLY	Voula,Athens	22.07	273	P	P	22 44 14.4	0.0
SEM	Semipalatinsk	22.12	53	eP	P	22 44 15.7	+0.6
	baz=54						
SEM	Semipalatinsk	22.12	53	eP	P	22 44 15.7	+0.6
ZAPS	Zavoj	22.12	288	eP	P	22 44 18.5	+3.5
DRGR		22.19	297	⇓P	P	22 44 16.3	+0.6
BOSS	Bosilegrad	22.28	285	eP	P	22 44 20.5	+3.9
WHFO	Wadi Hawf	22.31	176	P	P	22 44 15.3	-1.8
	SNR=16						
NACGM	Naroch	22.32	319	i P	P	22 44 18.9	+2.0
VAY	Valandovo	22.33	282	i P	P	22 44 19.1	+2.0
SHAO	Shalim	22.37	171	P	P	22 44 15.5	-2.2
	SNR=12						
ZAGS	Zajecar	22.40	289	eP	P	22 44 17.9	0.0
TRPA	Tarpa	22.49	300	⇑P	P	22 44 19.6	+0.7
TRPA	Tarpa	22.49	300	eP	P	22 44 18.4	-0.5
MAKZ	Makanchi	22.55	63	P	P	22 44 20.7	+1.2
MAKZ				pmax	pmax		
	comp=Z,19nm,0.7s						
MAKZ	Makanchi	22.55	63	⇑P	P	22 44 20.6	+1.2
	comp=Z,20nm,0.7s						
MAKZ	Makanchi	22.55	63	P	P	22 44 20.7	+1.2
MAKZ				IAmb	IAmb	22 44 32.5	
	comp=Z,19nm,0.7s						
IDID	Didziasalis	22.55	320	eP	P	22 44 20.9	+1.5
STIP	Stip	22.57	283	i P	P	22 44 18.2	-1.5
PRVS	Prvonek	22.58	286	eP	P	22 44 19.7	-0.1
IMMV	Iera Moni Meta	22.66	267	P	P	22 44 19.6	-1.1
UZH	Uzhgorod	22.74	301	eP	P	22 44 23.0	+1.5
UZH				e		22 44 45.7	
BARS	Barje	22.75	286	eP	P	22 44 18.5	-3.1
BARS	Barje	22.75	286	eP	P	22 44 27.3	+5.7
MK31	Makanchi Array	22.76	63	i P	P	22 44 22.9	+1.2
MK31				pmax	pmax		
	comp=Z,20nm,0.7s						
MK31	Makanchi Array	22.76	63	P	P	22 44 22.9	+1.2
	comp=Z,20nm,0.7s,baz=256,slow=8.9,SNR=75						
MK31	Makanchi Array	22.76	63	P	P	22 44 22.7	+0.9
MK31				IAmb	IAmb	22 44 34.0	
	comp=Z,18nm,0.8s						
MKAR	Makanchi Array	22.76	63	P	P	22 44 23.1	+1.4
	comp=Z,7.8nm,0.6s,baz=257,slow=8.9,SNR=50						
MKAR				S	S	22 48 35.0	+5.2
	comp=Z,2.5nm,0.7s,baz=276,slow=14,SNR=3.8						
MKAR				LR	LR	22 54 09.7	
	comp=Z,170nm,18.0s,baz=264,slow=39						
MKAR	Makanchi Array	22.76	63	P	P	22 44 22.2	+0.5
BOVS	Bovan	22.78	289	eP	P	22 44 21.4	-0.6
GVD	Gavdhos	22.80	265	P	P	22 44 23.3	+1.1
KOLS	Kolonicke sedl	22.81	302	eP	P	22 44 24.7	+2.5
KOLS	Kolonicke sedl	22.81	302	eP	P	22 44 24.7	+2.5
IIGN	Ignalina	22.82	320	eP	P	22 44 23.6	+1.3
ABTO	Aybut	22.85	177	P	P	22 44 21.6	-1.3
	SNR=6.3						
BZS	Buzias	22.86	294	⇑P	P	22 44 22.3	-0.4
ISAL	Salakas	22.98	320	eP	P	22 44 25.4	+1.5
SKO	Skopje	23.10	284	i P	P	22 44 25.2	0.0
SVIS	Svilajnac	23.12	290	eP	P	22 44 24.2	-1.3
FNA	Florina	23.30	281	P	P	22 44 27.4	+0.1
FNA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FNA	Florina	23.30	281	P	P	22 44 27.4	+0.1
ITM	Ithomi	23.68	272	P	P	22 44 29.7	-1.4
ITM	Ithomi	23.68	272	P	P	22 44 29.6	-1.4
ITM				IAmb	IAmb	22 44 30.8	
	comp=Z,14nm,0.7s						
KBN	Korca	23.76	281	P	P	22 44 31.7	-0.2
KBN				pmax	pmax		
	comp=Z,18nm,1.2s						
KBN	Korca	23.76	281	P	P	22 44 31.7	-0.2
KBN				IAmb	IAmb	22 44 37.4	
	comp=Z,18nm,1.2s						
SUW	Suwalki	23.79	315	eP	P	22 44 33.1	+1.2
SUW	Suwalki	23.79	315	P	P	22 44 31.4	-0.5
SUW				pmax	pmax		
	comp=Z,54nm,0.9s						
SUW	Suwalki	23.79	315	P	P	22 44 31.4	-0.5
DIVS	Divibare	24.01	290	eP	P	22 44 34.4	+0.1
DIVS	Divibare	24.01	290	P	P	22 44 34.3	+0.1
DIVS				IAmb	IAmb	22 44 53.6	
	comp=Z,15nm,1.2s						
DIVS	Divibare	24.01	290	eP	P	22 44 34.8	+0.6
PABE	Paberze	24.02	319	eP	P	22 44 35.6	+1.5
PABE	Paberze	24.02	319	P	P	22 44 35.0	+0.9
SJES	Sjenica	24.06	288	eP	P	22 44 36.1	+1.3
FRGS	Fruska Gora	24.12	292	⇑P	P	22 44 35.9	+0.7
FRGS	Fruska Gora	24.12	292	eP	P	22 44 32.8	-2.4
FRGS	Fruska Gora	24.12	292	eP	P	22 44 35.2	0.0
PSZ	Piszkesteto	24.22	299	eP	P	22 44 34.3	-1.9
PSZ	Piszkesteto	24.22	299	P	P	22 44 35.6	-0.6
PSZ				pmax	pmax		
	comp=Z,11nm,1.0s						
PSZ	Piszkesteto	24.22	299	P	P	22 44 35.6	-0.6
LKD2	Lefkada island	24.23	277	P	P	22 44 36.2	-0.1
VSU	Vasula	24.34	327	eP	P	22 44 37.8	+0.8
VSU	Vasula	24.34	327	i P	P	22 44 36.7	-0.3
VSU				pmax	pmax		
	comp=Z,71nm,0.5s						
BBLS	Lazići	24.44	289	eP	P	22 44 38.9	+0.7
KEF4	Livadi, Kephal	24.53	276	P	P	22 44 39.0	0.0
KEF3	Kipouria, Keph	24.61	276	P	P	22 44 39.5	-0.1
OJC	Ojcow	24.64	305	P	P	22 44 40.7	+0.8
OJC				pmax	pmax		
	comp=Z,17nm,0.7s						
OJC	Ojcow	24.64	305	P	P	22 44 40.7	+0.8
OJC				IAmb	IAmb	22 44 51.0	
	comp=Z,17nm,0.7s						
PDG	Podgorica	24.66	286	eP	P	22 44 39.2	-0.9
PDG	Podgorica	24.66	286	P	P	22 44 39.9	-0.3
PDG				IAmb	IAmb	22 44 42.6	
	comp=Z,18nm,0.8s						
DRME	Dracevica, Mon	24.74	285	eP	P	22 44 40.4	-0.5
UPM	Unac-Piva	24.85	288	eP	P	22 44 42.7	+0.7
MORH	Mrgy, Hungar	24.95	295	eP	P	22 44 43.8	+1.1
VYHS	Vyhne	24.99	300	eP	P	22 44 47.5	+4.4
VYHS	Vyhne	24.99	300	eP	P	22 44 47.5	+4.4
BRY	Bratogost	25.14	287	eP	P	22 44 44.8	+0.2
HCY	Herceg Novi	25.22	286	eP	P	22 44 44.6	-0.6
SRO	Srobarova	25.27	299	eP	P	22 44 48.5	+2.9
SRO	Srobarova	25.27	299	eP	P	22 44 48.5	+2.9
PBUR	Paburge	25.28	319	eP	P	22 44 47.2	+1.6
TREB	Trebinje	25.30	287	eP	P	22 44 45.7	-0.2
KOVH	Kovagotottos	25.33	295	eP	P	22 44 46.4	+0.2
MTSE	Matsula	25.73	325	eP	P	22 44 50.8	+1.2
MPLH	Magyarpolny	25.75	297	eP	P	22 44 50.3	+0.3
STON	Ston	25.76	287	eP	P	22 44 49.7	-0.3
STON	Ston	25.76	287	P	P	22 44 48.8	-1.2
SLIT	Slitere, Latvi	25.85	322	eP	P	22 44 52.4	+1.7
ZAA0	Zalesovo Array	25.87	47	P	P	22 44 51.1	+0.2
ZAA0				IAmb	IAmb	22 44 54.9	
	comp=Z,12nm,0.7s						
ZALV	Zalesovo Beam	25.87	47	P	P	22 44 52.0	+1.0
	comp=Z,13nm,0.6s,baz=265,slow=12,SNR=55						
ZALV				LR	LR	22 56 27.9	
	comp=Z,205nm,18.9s,baz=224,slow=40						
ZALV	Zalesovo Beam	25.87	47	P	P	22 44 52.0	+1.0
ZALV	Zalesovo Beam	25.87	47	P	P	22 44 51.6	+0.6
BLY	Banja Luka	25.99	292	eP	P	22 44 54.7	+2.5
MORC	Moravsky Berou	26.00	303	⇑P	P	22 44 53.6	+1.4
MORC	Moravsky Berou	26.00	303	eP	P	22 44 54.2	+1.9
MODS	Modra-Piesok	26.01	300	eP	P	22 44 53.0	+0.6
MODS	Modra-Piesok	26.01	300	eP	P	22 44 53.0	+0.6
MGRS	Mrkonjic Grad	26.08	291	eP	P	22 44 55.1	+2.1
RICI	Ricice	26.11	289	P	P	22 44 51.4	-1.9
ZST	Bratislava	26.11	299	eP	P	22 44 54.9	+1.7
ZST	Bratislava	26.11	299	eP	P	22 44 54.9	+1.7
MRAK	Mrakovica	26.18	292	eP	P	22 44 54.6	+0.6
MAKA	Makarska	26.21	288	P	P	22 44 53.0	-1.2
PRIJ	Prijedor	26.32	292	eP	P	22 44 45.2	-10
LSTV	Lastovo	26.36	287	P	P	22 44 57.0	+1.5
FIA1	FINESS Array S	26.49	332	P	P	22 44 57.0	+0.5
FINES	FINESS Array B	26.49	332	P	P	22 44 56.5	0.0
	comp=Z,9.6nm,0.5s,baz=143,slow=11,SNR=45						
FINES				LR	LR	22 56 38.7	
	comp=Z,219nm,20.1s,baz=210,slow=39						
FINES	FINESS Array B	26.49	332	P	P	22 44 56.3	-0.2
DGZ	Jazzator, Alta	26.51	57	i P	P	22 44 57.9	+0.9
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KRLC	Kraliky	26.53	304	eP	P	22 44 58.7	+1.6
KRLC	Kraliky	26.53	304	eP	P	22 44 58.7	+1.6
WMQ	Urumqi	26.55	71	eP	P	22 44 59.0	+1.6
WMQ				pP	pP	22 45 01.3	-1.3
WMQ				sP	sP	22 45 10.6	+5.9
WMQ				pmax	pmax		
	comp=Z,59nm,0.7s						
VRAC	Vranov	26.56	302	P	P	22 44 58.1	+0.9
	comp=Z,3.4nm,1.0s,baz=138,slow=7.1,SNR=4.8						
VRAC	Vranov	26.56	302	eP	P	22 44 58.6	+1.4
KIJV	Kijevo	26.59	290	P	P	22 44 58.4	+0.7
HVAR	Hvar	26.64	288	P	P	22 44 56.1	-1.9
DPC	Dobruska-Polom	26.86	304	eP	P	22 45 03.7	+3.7
DPC	Dobruska-Polom	26.86	304	eP	P	22 45 03.7	+3.7
CONA	Conrad Observa	26.93	299	eP	P	22 45 02.2	+1.5
	comp=Z,1.9nm,0.8s						
CHVC	Chvalec	27.07	305	eP	P	22 45 03.5	+1.7
UPC	Upice	27.08	304	eP	P	22 45 04.0	+2.0
UPC	Upice	27.08	304	eP	P	22 45 04.0	+2.0
MORI	Morici	27.11	290	P	P	22 45 03.8	+1.6
ARSA	Arzberg	27.13	297	eP	P	22 45 03.8	+1.3
	comp=Z,3.7nm,0.7s						
ZIRJ	Zirje	27.17	289	P	P	22 45 02.1	-0.7
CRES	Cresnjev	27.18	294	eP	P	22 45 03.5	+0.7
SGRT	San Giovanni R	27.34	285	P	P	22 45 03.8	-0.7
SGRT				IAmb	IAmb	22 45 14.7	
	comp=Z,15nm,1.4s						
SOKA	Soboth	27.46	296	i P	P	22 45 06.6	+1.2
	comp=Z,2.7nm,0.7s,SNR=7.2						
DUGI	Dugi Otok	27.56	290	P	P	22 45 02.5	-3.8
OBKA	Obir	27.79	296	eP	P	22 45 10.8	+2.4
	comp=Z,1.5nm,0.6s						
LJU	Ljubljana	27.82	295	eP	P	22 45 07.3	-1.3
CEY	Cerknica	27.90	294	eP	P	22 45 09.5	+0.1
PRU	Pruhonice	27.95	303	eP	P	22 45 08.5	-1.3
PRU	Pruhonice	27.95	303	eP	P	22 45 08.5	-1.3
MOA	Molln	28.00	298	eP	P	22 45 10.8	+0.6
	comp=Z,0.2nm,0.3s						
CKRC	Cesky Krumlov	28.01	300	eP	P	22 45 13.2	+2.9
GEC2	GERESS Array S	28.41	300	P	P	22 45 13.9	-0.1
GERES	GERESS Array B	28.41	300	P	P	22 45 13.7	-0.3
	comp=Z,0.8nm,0.4s,baz=95,slow=9.3,SNR=12						
GERES	GERESS Array B	28.41	300	P	P	22 45 14.4	+0.4
GERES	GERESS Array B	28.41	300	P	P	22 45 14.4	+0.4
KHC	Kasperske Hory	28.51	301	eP	P	22 45 17.5	+2.7
KHC				ex	x	22 45 51.0	
KHC	Kasperske Hory	28.51	301	eP	P	22 45 17.5	+2.7
KBA	Koelnbreinsper	28.61	297	eP	P	22 45 17.1	+1.3
	comp=Z,1.9nm,0.4s						
ZOU	Zoufplan	28.88	296	P	P	22 45 18.4	+0.1
CLL	Collm	29.07	305	eP	P	22 45 23.0	+3.3
CLL				epPP		22 46 17.0	
CLL				ePPP	PPP	22 46 23.0	
NRCA	Norcia	29.11	288	P	P	22 45 19.9	-0.3
ABTA	Abfaltersbach	29.19	296	eP	P	22 45 21.6	+0.7
	comp=Z,1.0nm,0.5s						
LVZ	Lovozero	29.29	347	P	P	22 45 22.0	+0.5
LVZ				pmax	pmax		
	comp=Z,52nm,1.2s						
LVZ	Lovozero	29.29	347	P	P	22 45 22.0	+0.5
RAFF	Raffo Rosso	29.44	276	P	P	22 45 24.1	+1.1
RAFF				IAmb	IAmb	22 45 29.6	
	comp=Z,13nm,1.2s						
MURB	Monte Urbino	29.47	289	P	P	22 45 24.1	+0.7
MURB				IAmb	IAmb	22 45 40.8	
	comp=Z,40nm,1.7s						
ATD	Arta Tunnel	29.76	198	LR	LR	22 58 03.1	
	comp=Z,90nm,18.9s,baz=48,slow=38						
WTTA	Wattenberg	29.78	297	i P	P	22 45 26.5	+0.3
	comp=Z,4.2nm,0.3s,SNR=11						
WATA	Walderalm	29.82	297	eP	P	22 45 26.9	+0.4
	comp=Z,1.7nm,0.4s						
CTI	Castel Tesino	29.82	295	P	P	22 45 26.7	+0.2
CTI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CTI	Castel Tesino	29.82	295	P	P	22 45 26.7	+0.2
TEOL	Teolo	29.85	293	P	P	22 45 26.2	-0.5
TEOL				IAmb	IAmb	22 45 28.2	
	comp=Z,7.4nm,0.8s						
SQTA	Sankt Quirin	30.07	297	eP	P	22 45 29.1	+0.3
	comp=Z,1.2nm,0.3s						
MOTA	Moosalm	30.14	297	eP	P	22 45 29.7	+0.3
	comp=Z,0.5nm,0.2s						
OSSC	Osservatorio P	30.36	290	P	P	22 45 31.0	-0.2
OSSC				IAmb	IAmb	22 45 33.3	
	comp=Z,6.4nm,0.8s						
RETA	Reutte	30.36	298	eP	P	22 45 31.2	-0.1
	comp=Z,0.7nm,0.3s						
FETA	Feichten	30.40	297	i P	P	22 45 31.7	-0.1
	comp=Z,1.8nm,0.6s,SNR=4.4						
HFS	Hagfors	30.96	323	P	P	22 45 36.5	+0.2
	comp=Z,11nm,0.6s,baz=107,slow=8.5,SNR=25						
DAVA	Damuels	30.97	297	eP	P	22 45 36.4	-0.3
	comp=Z,0.8nm,0.3s						
NC602	NORSAR Array S	32.18	323	eP	P	22 45 47.0	0.0
NC405	NORSAR Array S	32.24	324	P	P	22 45 46.8	-0.8
OSL	Oslo	32.29	321	eP	P	22 45 47.9	-0.1
NB2	NORSAR Subarra	32.44	324	P	P	22 45 48.8	-0.5
	comp=Z,12nm,1.0s,baz=111,slow=9.3						
NB2	NORSAR Subarra	32.44	324	P	P	22 45 48.8	-0.5
	baz=111,slow=9.3						
NOA	NORSAR Array B	32.44	324	P	P	22 45 49.0	-0.3
	comp=Z,3.7nm,0.8s,baz=113,slow=8.3,SNR=9.2						
NOA				LR	LR	22 59 48.3	
	comp=Z,72nm,19.2s,baz=335,slow=38						
NOA	NORSAR Array B	32.44	324	P	P	22 45 49.0	-0.3
ARA0	ARCESS Array S	32.51	343	eP	P	22 45 50.3	+0.5
ARCES	ARCESS Array B	32.51	343	P	P	22 45 49.9	0.0
	comp=Z,0.9nm,0.3s,baz=142,slow=9.9,SNR=22						
ARCES				LR	LR	23 00 16.4	
	comp=Z,154nm,18.3s,baz=300,slow=39						
NAO01	NORSAR Array S	32.52	323	P	P	22 45 49.3	-0.7
VSL	Villasalto	32.55	283	P	P	22 45 50.3	-0.2
VSL				IAmb	IAmb	22 46 11.1	
	comp=Z,7.4nm,1.0s						
NBO00	NORSAR Array S	32.63	323	P	P	22 45 50.2	-0.8
KTK1	Kautokeino	32.65	341	eP	P	22 45 51.3	+0.3
NC204	NORSAR Array S	32.73	324	P	P	22 45 52.3	+0.5
KONO	Kongsberg	32.74	321	P	P	22 45 53.3	+1.4
KONO				pmax	pmax		
	comp=Z,65nm,1.4s						
KONO	Kongsberg	32.74	321	eP	P	22 45 52.7	+0.8
KONO	Kongsberg	32.74	321	P	P	22 45 53.3	+1.4
SENIN	Lac Senin/Sane	32.80	296	P	P	22 45 52.6	-0.3
SENIN				IAmb	IAmb	22 46 08.9	
	comp=Z,7.1nm,0.8s						
BNI	Bardonecchia	33.40	293	P	P	22 45 58.5	+0.5
BNI				pmax	pmax		
	comp=Z,26nm,1.8s						
BNI	Bardonecchia	33.40	293	P	P	22 45 58.5	+0.5
BNI				IAmb	IAmb	22 46 08.8	
	comp=Z,26nm,1.8s						
MOR8	Moi Rana	33.45	333	eP	P	22 45 57.6	-0.4
NSS	Namsos	33.54	330	eP	P	22 45 59.1	+0.3
SKAR	Skarslia	33.66	322	eP	P	22 46 00.6	+0.5

KEST	**Kesra**	**33.74**	**276**	P	**P**	**22 46 01.0**	**0.0**
	comp=Z,2.3nm,0.6s,baz=292,slow=4.3,SNR=11						
KEST	**Kesra**	**33.74**	**276**	P	**P**	**22 46 01.3**	**+0.2**
KEST				IAmb	IAmb	22 46 06.0	
	comp=Z,12nm,1.5s						
JETT	**Jettan, Norway**	**33.74**	**341**	*e*P	**P**	**22 46 00.8**	**+0.2**
DOMB	**Dombas**	**33.75**	**325**	*e*P	**P**	**22 46 00.3**	**-0.5**
HAMF	**Hammerfest**	**33.76**	**343**	*e*P	**P**	**22 46 01.5**	**+0.8**
FAUS	**Fauske**	**33.83**	**335**	*e*P	**P**	**22 46 01.7**	**+0.3**
KONS	**Konsvik**	**34.07**	**333**	*e*P	**P**	**22 46 03.9**	**+0.5**
STEI	**Steigen**	**34.16**	**336**	*e*P	**P**	**22 46 04.1**	**-0.1**
NRIK	**Noril'sk**	**34.61**	**21**	P	**P**	**22 46 09.4**	**+1.3**
	comp=Z,2.8nm,0.5s,baz=230,slow=5.2,SNR=5.8						
NRIK				LR	LR	23 01 36.4	
	comp=Z,102nm,20.3s,baz=230,slow=38						
NRIK	**Noril'sk**	**34.61**	**21**	IAmb	IAmb	22 46 12.5	
	comp=Z,3.5nm,0.7s						
AKN	**Aaknes**	**34.72**	**324**	*e*P	**P**	**22 46 10.2**	**+1.1**
SSB	**Saint Sauveur**	**34.86**	**294**	P	**P**	**22 46 11.2**	**+0.6**
SSB				pmax	pmax		
	comp=Z,24nm,1.6s						
SSB	**Saint Sauveur**	**34.86**	**294**	P	**P**	**22 46 11.2**	**+0.6**
SSB				IAmb	IAmb	22 46 17.8	
	comp=Z,24nm,1.6s						
SHL	**Shillong**	**36.16**	**102**	P	**P**	**22 46 22.8**	**+0.7**
SHL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SHL	**Shillong**	**36.16**	**102**	P	**P**	**22 46 22.8**	**+0.7**
SHL				IAmb	IAmb	22 46 35.6	
	comp=Z,9.0nm,0.8s						
ZAK	**Zakamensk**	**36.72**	**57**	*e*P	**P**	**22 46 27.3**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
EKA	**Eskdalemuir Ar**	**38.96**	**312**	P	**P**	**22 46 45.4**	**+0.1**
ESK	**Eskdalemuir**	**38.99**	**312**	P	**P**	**22 46 45.9**	**+0.4**
ESK	**Eskdalemuir**	**38.99**	**312**	P	**P**	**22 46 45.9**	**+0.4**
SONM	**Songino Array**	**39.06**	**60**	P	**P**	**22 46 47.1**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=271,slow=9.5,SNR=13						
ULN	**Ulaanbaatar**	**39.49**	**60**	P	**P**	**22 46 50.3**	**+0.3**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ULN	**Ulaanbaatar**	**39.49**	**60**	P	**P**	**22 46 50.3**	**+0.3**
ULN				IAmb	IAmb	22 46 54.0	
	comp=Z,6.1nm,0.7s						
LODK	**Lodwar**	**39.67**	**207**	P	**P**	**22 46 52.4**	**+0.7**
	SNR=6.6						
LODK	**Lodwar**	**39.67**	**207**	P	**P**	**22 46 51.9**	**+0.3**
SPB2	**Spitsbergen Ar**	**40.70**	**349**	P	**P**	**22 46 59.9**	**+0.4**
SPA0	**Spitsbergen Ar**	**40.71**	**349**	*e*P	**P**	**22 46 59.5**	**-0.1**
SPITS	**Spitsbergen Ar**	**40.71**	**349**	P	**P**	**22 47 00.6**	**+1.0**
	comp=Z,6.4nm,0.5s,baz=133,slow=10,SNR=23						
ESBB	**Sonseca Array**	**42.34**	**288**	P	**P**	**22 47 13.2**	**-0.2**
ESBB				IAmb	IAmb	22 47 22.2	
	comp=Z,22nm,1.6s						
ESDC	**Sonseca Array**	**42.34**	**288**	P	**P**	**22 47 13.0**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=59,slow=8.2,SNR=34						
BOD	**Bodaibo**	**42.56**	**44**	*e*P	**P**	**22 47 15.4**	**+0.5**
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMBO	**Kilima Mbogo**	**43.36**	**202**	P	**P**	**22 47 21.1**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=18,slow=9.9,SNR=4.3						
KMBO	**Kilima Mbogo**	**43.36**	**202**	*i* P	**P**	**22 47 25.0**	**+2.9**
HHC	**Hu-ho-hao-te**	**44.42**	**69**	*e*P	**P**	**22 47 29.4**	**-0.9**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.0s						
XAN	**Xi'an**	**45.06**	**79**	P	**P**	**22 47 39.3**	**+3.9**
XAN				sP	sP	22 47 48.3	+5.4
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MBAR	**Mbarara**	**45.09**	**211**	*ce*P	**P**	**22 47 36.4**	**+0.5**
PESTR	**Estremoz**	**45.26**	**288**	P	**P**	**22 47 36.9**	**0.0**
PESTR				IAmb	IAmb	22 47 37.7	
	comp=Z,4.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**45.63**	**104**	P	**P**	**22 47 40.6**	**+0.6**
	comp=Z,1.9nm,0.3s,baz=302,slow=8.5,SNR=7.1						
CMAR	**Chiang Mai Arr**	**45.63**	**104**	*i* P	**P**	**22 47 43.0**	**+3.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
DAG	**Danmarks Havn**	**46.80**	**343**	*i* P	**P**	**22 47 48.0**	**-0.5**
DAG				IAmb	IAmb	22 47 49.2	
	comp=Z,4.2nm,0.5s						
DBG	**Daneborg**	**46.94**	**339**	*i* P	**P**	**22 47 47.8**	**-1.9**
DBG				IAmb	IAmb	22 47 53.2	
	comp=Z,2.2nm,1.0s						
NOR	**Nord**	**47.35**	**349**	*i* P	**P**	**22 47 52.5**	**-0.3**
NOR				IAmb	IAmb	22 47 53.5	
	comp=Z,2.5nm,0.6s						
BORG	**Borgarnes**	**47.53**	**326**	LR	LR	23 08 03.4	
	comp=Z,77nm,20.8s,baz=66,slow=36						
TIXI	**Tiksi**	**48.24**	**24**	P	**P**	**22 48 01.2**	**+1.5**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIXI	**Tiksi**	**48.24**	**24**	P	**P**	**22 48 01.1**	**+1.5**
TIXI				IAmb	IAmb	22 48 02.1	
	comp=Z,5.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**51.63**	**253**	P	**P**	**22 48 24.4**	**-1.9**
	comp=Z,3.0nm,0.8s,baz=53,slow=7.0,SNR=22						
TORD	**Torodi Ar. Bea**	**51.63**	**253**	P	**P**	**22 48 25.0**	**-1.2**
SUMG	**Summit**	**52.29**	**338**	P	**P**	**22 48 32.3**	**+1.5**
SUMG				pmax	pmax		
	comp=Z,29nm,1.3s						
SUMG	**Summit**	**52.29**	**338**	*i* P	**P**	**22 48 32.0**	**+1.1**
SUMG				IAmb	IAmb	22 48 35.4	
	comp=Z,10nm,0.7s						
SUMG	**Summit**	**52.29**	**338**	P	**P**	**22 48 32.3**	**+1.5**
NJ2	**Nanjing**	**53.39**	**76**	*e*P	**P**	**22 48 38.9**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NEEM	**North Greenlan**	**53.84**	**345**	*i* P	**P**	**22 48 42.3**	**+0.2**
NEEM				IAmb	IAmb	22 48 46.7	
	comp=Z,5.6nm,0.7s						
KOWA	**Kowa**	**55.01**	**259**	P	**P**	**22 48 50.8**	**-0.3**
USA0B	**Ussuriysk Arra**	**57.06**	**58**	P	**P**	**22 49 05.7**	**+0.3**
USA0B				pmax	pmax		
	comp=Z,18nm,1.3s						
USA0B	**Ussuriysk Arra**	**57.06**	**58**	P	**P**	**22 49 05.7**	**+0.3**
USA0B				IAmb	IAmb	22 49 14.8	
	comp=Z,18nm,1.3s						
USRK	**Ussuriysk Ar.**	**57.06**	**58**	P	**P**	**22 49 05.4**	**0.0**
	comp=Z,3.4nm,0.7s,baz=294,slow=6.6,SNR=11						
USRK	**Ussuriysk Ar.**	**57.06**	**58**	P	**P**	**22 49 05.8**	**+0.4**
USRK	**Ussuriysk Ar.**	**57.06**	**58**	P	**P**	**22 49 05.8**	**+0.4**
UPNV	**Upernavik**	**57.09**	**340**	*i* P	**P**	**22 49 06.5**	**+1.3**
UPNV				IAmb	IAmb	22 49 08.5	
	comp=Z,6.2nm,0.6s						
KSRS	**Korea Array**	**57.40**	**66**	P	**P**	**22 49 08.1**	**+0.2**
	comp=Z,3.5nm,0.6s,baz=295,slow=6.6,SNR=9.2						
LSZ	**Lusaka**	**59.56**	**207**	P	**P**	**22 49 24.0**	**+0.8**
LSZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LSZ	**Lusaka**	**59.56**	**207**	P	**P**	**22 49 24.0**	**+0.8**
LSZ				IAmb	IAmb	22 49 24.4	
	comp=Z,5.1nm,0.9s						
DBIC	**Dimbokro**	**60.73**	**253**	P	**P**	**22 49 30.7**	**-0.5**
	comp=Z,15nm,0.6s,baz=46,slow=7.2,SNR=31						
DBIC	**Dimbokro**	**60.73**	**253**	P	**P**	**22 49 30.6**	**-0.7**
DBIC	**Dimbokro**	**60.73**	**253**		**P**	**22 49 31.0**	**-0.2**
KIC	**Kosan Boka**	**60.86**	**252**	*e*P	**P**	**22 49 31.6**	**-0.5**
	comp=Z,34nm,0.5s						
TIC	**Toumodi**	**60.87**	**253**	*e*P	**P**	**22 49 31.5**	**-0.7**
LIC	**Lamto**	**61.16**	**252**	*e*P	**P**	**22 49 33.5**	**-0.7**
	comp=Z,94nm,0.6s						
BILL	**Bilibino**	**61.41**	**23⇑**	*e*P	**P**	**22 49 36.3**	**+1.2**
BILL				*e**PP	**pP**	**22 49 38.8**	**-1.8**
BILL						22 50 21.0	
BILL				S	**S**	**22 57 53.0**	**-1.9**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,131nm,18.0s						
FRB	**Frobisher Bay**	**66.22**	**335**	P	**P**	**22 50 06.6**	**-0.2**
	baz=0.0,slow=7.1,SNR=1.0						
A36M	**Sachs Harbour**	**68.04**	**359**	P	**P**	**22 50 18.8**	**+0.5**
TOLK	**Toolik Lake Re**	**70.22**	**8**	P	**P**	**22 50 33.2**	**+1.3**
COLD	**Coldfoot**	**71.50**	**9**	P	**P**	**22 50 41.8**	**+2.2**
COLD				IAmb	IAmb	22 50 44.1	
	comp=Z,10.0nm,1.1s						
INK	**Inuvik**	**71.67**	**2**	P	**P**	**22 50 40.4**	**-0.2**
	comp=Z,3.2nm,1.0s,baz=327,slow=9.4,SNR=5.9						
SCHQ	**Schefferville**	**71.88**	**328**	P	**P**	**22 50 41.1**	**-1.1**
	comp=Z,3.3nm,0.7s,baz=17,slow=14,SNR=4.0						
ILAR	**Eielson Array**	**74.25**	**8**	P	**P**	**22 50 56.2**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=356,slow=4.1,SNR=12						
ILAR	**Eielson Array**	**74.25**	**8**	P	**P**	**22 50 57.1**	**+1.1**
ILAR	**Eielson Array**	**74.25**	**8**	P	**P**	**22 50 57.1**	**+1.1**
DAWY	**Dawson**	**75.61**	**5**	IAmb	IAmb	22 51 08.3	
	comp=Z,7.6nm,0.9s						
DOT	**Dot Lake**	**75.64**	**7**	P	**P**	**22 51 05.1**	**+1.0**
DOT				IAmb	IAmb	22 51 17.6	
	comp=Z,6.8nm,1.0s						
L27K	**Beaver Creek,**	**76.42**	**6**	IAmb	IAmb	22 51 12.7	
	comp=Z,18nm,1.6s						
YKA	**Yellowknife Ar**	**77.03**	**354**	P	**P**	**22 51 11.7**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=3.7,slow=6.1,SNR=18						
GCMT	**Greycliff**	**92.78**	**347**	P	**P**	**22 52 33.8**	**+1.9**
ASAR	**Alice Springs**	**99.04**	**113**	PKKPbc	PKKPbc	23 09 26.9	+1.5
	comp=Z,0.2nm,0.7s,baz=118,slow=3.9,SNR=4.4						

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*IDC **24** 22:42:12.1±1.2, 13.°27S×72.°25W, h0^{km}, mb3.6/4, mb1 3.9/9, mb1mx3.8/35, mbtmp3.8/9, ML3.3/6, MS3.5/2, Ms1 3.5/2, ms1mx2.9/26, Error ellipse: s-maj=39.4km s-min=19.7km az=34.0*

*NEIC **24** 22:42:18.4±2.5, 13.°53S±0.°07×72.°42W±0.°04, h47^{km}±11^{km}, mb4.2/9, Error ellipse: s-maj=11.5km s-min=4.1km az=205.0*

ISC 24 22:42:16.9±0.7**, 13.°50S**±0.°08×**72.°43W**±0.°09**, h35^{km}, n35, σ1^{s}56**/33**, mb3.8**/7**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**4.56**	**289**	Pn	**Pn**	**22 43 23.2**	**-0.3**
	10nm,0.3s,baz=106,slow=11,SNR=13						
NNA				Sn	Sn	22 44 26.8	+11
	4.9nm,0.3s,baz=80,slow=21,SNR=4.2						
NNA	**Nana**	**4.56**	**289**		**Pn**	**22 43 23.5**	**0.0**
LPAZ	**La Paz**	**5.00**	**124**	Pn	**Pn**	**22 43 29.2**	**-0.8**
	0.1nm,0.3s,baz=304,slow=12,SNR=1.4						
LPAZ				LR	LR	22 45 58.5	
	comp=Z,256nm,21.5s,baz=30,slow=45						
LPAZ	**La Paz**	**5.00**	**124**		**Pn**	**22 43 31.3**	**+1.3**
PB12	**IPOC Station P**	**5.47**	**159**		**Pn**	**22 43 36.6**	**+0.5**
PB16	**IPOC Station P**	**5.57**	**150**		**Pn**	**22 43 39.9**	**+2.1**
CZSB	**Cruzeiro do Su**	**5.74**	**357**		**Pn**	**22 43 40.6**	**+1.0**
PB11	**IPOC Station P**	**6.77**	**157**		**Pn**	**22 43 54.0**	**-0.1**
TA02	**Huaiquique**	**7.09**	**162**	Pn	**Pn**	**22 43 58.4**	**+0.3**
ETMB	**Extrema**	**7.10**	**60**		**Pn**	**22 44 00.8**	**+2.4**
PB08	**IPOC Station P**	**7.31**	**155**		**Pn**	**22 44 02.4**	**+0.7**
TA01	**Diego Aracena**	**7.35**	**163**	Pn	**Pn**	**22 44 01.3**	**-0.5**
PB01	**IPOC Station P**	**8.01**	**160**	Pn	**Pn**	**22 44 09.8**	**-1.2**
PB07	**IPOC Station P**	**8.54**	**164**		**Pn**	**22 44 17.6**	**-0.6**
ATAH	**Atahualpa**	**8.62**	**317**	Pn	**Pn**	**22 44 18.0**	**-1.7**
	0.3nm,0.3s,baz=107,slow=17,SNR=3.0						
LVC	**Limon Verde**	**9.66**	**160**	Pn	**Pn**	**22 44 35.3**	**+1.5**
	0.6nm,0.3s,baz=337,slow=5.6,SNR=5.4						
SAML	**Samuel**	**10.13**	**64**	Pn	**Pn**	**22 44 40.9**	**+0.9**
SIV	**San Ignacio**	**11.26**	**104**	Pn	**Pn**	**22 44 53.7**	**-1.8**
	0.1nm,0.3s,baz=286,slow=15,SNR=2.6						
VILB	**Vilhena**	**11.92**	**89**	Pn	**Pn**	**22 45 07.2**	**+2.7**
PTLB	**Pontes e Lacer**	**13.02**	**100**	Pn	**Pn**	**22 45 20.7**	**+1.2**
MACA	**Manacapuru-AM**	**15.50**	**50**		**Pn**	**22 45 52.6**	**-0.4**
MACA				IAmb	IAmb	22 45 55.8	
	comp=Z,17nm,0.5s						
TUMC	**Tumaco**	**16.45**	**337**		**P**	**22 46 06.8**	**-0.8**
PTGA	**Pitinga**	**17.70**	**45**	P	**Pn**	**22 46 17.5**	**-3.3**
	comp=Z,0.8nm,0.3s,baz=223,slow=15,SNR=10						
BOAV	**Boa Vista**	**19.72**	**38**	P	**Pn**	**22 46 44.2**	**-1.0**
BOAV				IAmb	IAmb	22 47 06.5	
	comp=Z,12nm,1.4s						
ZARC	**Zaragoza, Cauc**	**20.99**	**353**	P	Pn	22 46 58.2	-2.0
ITQB	**Itaqui**	**21.75**	**140**	P	**P**	**22 47 06.1**	**+0.6**
ITQB				IAmb	IAmb	22 47 31.7	
	comp=Z,14nm,1.1s						
PLTB	**Pedras Altas**	**25.07**	**140**	P	**P**	**22 47 38.5**	**+0.2**
PLTB				IAmb	IAmb	22 47 40.3	
	comp=Z,14nm,1.3s						
LC01	**Cunco**	**25.30**	**179**	P	**P**	**22 47 40.4**	**+0.1**
LC01				IAmb	IAmb	22 48 04.6	
	comp=Z,8.4nm,1.1s						
CVTR	**Volcan Turrial**	**25.93**	**334**	P	**P**	**22 47 51.2**	**+4.6**
TKL	**Tuckaleechee C**	**50.05**	**348**	LR	LR	23 14 24.8	
	comp=Z,91nm,18.2s,baz=147,slow=39						
TXAR	**Lajitas Array**	**52.18**	**325**	P	**P**	**22 51 24.1**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=152,slow=9.1,SNR=6.6						
PDAR	**Pinedale Array**	**65.53**	**331**	P	**P**	**22 52 58.2**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=113,slow=6.0,SNR=2.5						
TORD	**Torodi Ar. Bea**	**78.06**	**73**	P	**P**	**22 54 11.0**	**-1.7**
	comp=Z,0.8nm,0.7s,baz=281,slow=5.2,SNR=4.9						
YKA	**Yellowknife Ar**	**82.57**	**342**	P	**P**	**22 54 35.4**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=136,slow=5.7,SNR=4.8						
SONM	**Songino Array**	**145.75**	**1**	PKPbc	**PKPab**	**23 01 52.4**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=332,slow=5.7,SNR=5.5						

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*BUL **24** 22:53:10.0±0.6, 25.°00S×29.°29E, h13^{km}±9^{km}, MD4.5*

EAF 24 22:53:10.4±0.9**, 24.°98S×29.°27E, h13**^{km}±14^{km}**, MD4.2, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	**Mopani**	**2.43**	**54**	*i* P	Pn	22 53 49.0	-0.8
MOPA				*i* Sg	Sb	22 54 26.0	+2.2
MOPA	**Mopani**	**2.43**	**54**	*i* P	Pn	22 53 49.0	-0.8
MOPA				*i* Sg	Sb	22 54 26.0	+2.2
MSNA	**Messina**	**2.71**	**15**	*i* P	Pn	22 53 53.6	-0.2
MSNA				*i* Sg	Sb	22 54 34.7	+2.6
MSNA	**Messina**	**2.71**	**15**	*i* P	Pn	22 53 53.6	-0.2
MSNA				*i* Sg	Sb	22 54 34.7	+2.6
MATP	**Matopo**	**4.59**	**351**	*i* S	Sn	22 55 09.2	-3.8
MATP	**Matopo**	**4.59**	**351**	*i* S	Sn	22 55 09.2	-3.8
TETE	**Tete**	**9.67**	**25**	*i* P	Pn	22 55 27.9	-1.4
TETE	**Tete**	**9.67**	**25**	*i* P	Pn	22 55 27.9	-1.4

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*TAP **24** 23:10:15.5, 24.°95N×122.°23E, h115^{km}, ML3.5, D*

*JMA **24** 23:10:15.7±0.2, 24.°94N×122.°22E, h109^{km}±2^{km}, M2.5*

ISC 24 23:10:16.1±1.8**, 24.°93N**±0.°06×**122.°24E**±0.°03**, h111**^{km}±10^{km}**, n48, σ0^{s}57**/93**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.24**	**288**	P	**Pn**	**23 10 31.8**	**+0.1**
	baz=284						
TWB1				S	**Sn**	**23 10 43.6**	**+0.1**
	baz=284						
TIPB	**Shuangxi**	**0.38**	**276**	*i* P	**Pn**	**23 10 32.4**	**0.0**
	baz=273						
TIPB				S	**Sn**	**23 10 44.4**	**-0.3**
	baz=273						
NTC	**Toucheng**	**0.38**	**258**	P	**Pn**	**23 10 32.2**	**-0.2**
	baz=255						
NTC				S	**Sn**	**23 10 45.2**	**+0.6**
	baz=255						
NWF	**Wu-fen Shan**	**0.44**	**288**	*i* P	**Pn**	**23 10 32.7**	**-0.1**
	baz=286						
NWF				*i* S	**Sn**	**23 10 45.6**	**+0.2**
	baz=286						
WFSB	**Wu-fen Shan**	**0.44**	**288**	P	**Pn**	**23 10 32.8**	**+0.1**
	baz=286						
WFSB				S	**Sn**	**23 10 45.6**	**+0.4**
	baz=286						
TNOU	**National Taiwa**	**0.48**	**297**	P	**Pn**	**23 10 32.9**	**-0.1**
	baz=295						
TNOU				S	**Sn**	**23 10 45.2**	**-0.4**
	baz=295						
TWC	**Suao**	**0.48**	**228**	*i* P	**Pn**	**23 10 32.7**	**-0.3**
	baz=224						
TWC				S	**Sn**	**23 10 45.8**	**+0.2**
	baz=224						
NDS	**Dongshan**	**0.56**	**238**	P	**Pn**	**23 10 33.4**	**-0.1**
	baz=235						
NDS				*e*S	**Sn**	**23 10 47.9**	**+1.3**
	baz=235						
TWE	**Neicheng**	**0.56**	**248**	*i* P	**Pn**	**23 10 33.5**	**0.0**
	baz=244						
TWE				S	**Sn**	**23 10 46.5**	**-0.1**
	baz=244						
TWA	**Mucha**	**0.60**	**275**	*i* P	**Pn**	**23 10 33.5**	**-0.3**
	baz=272						
TWA				S	**Sn**	**23 10 46.6**	**-0.5**
	baz=272						
EWUT	**Wuta**	**0.64**	**221**	*i* P	**Pn**	**23 10 34.0**	**-0.1**
	baz=219						
EWUT				S	**Sn**	**23 10 48.0**	**+0.4**
	baz=219						
YM08	**YM08**	**0.64**	**293**	P	**Pn**	**23 10 33.8**	**-0.3**
	baz=291						
YM08				*e*S	**Sn**	**23 10 46.1**	**-1.6**
	baz=291						
YM01	**YM01**	**0.65**	**289**	P	**Pn**	**23 10 34.1**	**-0.1**
	baz=287						
YM01				S	**Sn**	**23 10 47.7**	**-0.1**
	baz=287						
ENA	**Nanau**	**0.68**	**222**	*i* P	**Pn**	**23 10 34.7**	**+0.3**
	baz=219						
ENA				*i* S	**Sn**	**23 10 48.4**	**+0.2**
	baz=219						
ENTT	**Nioudou**	**0.68**	**245**	*i* P	**Pn**	**23 10 34.5**	**+0.1**
	baz=242						
ENTT				*e*S	**Sn**	**23 10 49.6**	**+1.4**
	baz=242						
TATO	**Taipei**	**0.69**	**274**	P	**Pn**	**23 10 34.0**	**-0.4**
	baz=271						
TATO				S	**Sn**	**23 10 47.2**	**-1.0**
	baz=271						
NWLT	**Wulai**	**0.69**	**257**	*i* P	**Pn**	**23 10 34.2**	**-0.4**
	baz=255						
NWLT				S	**Sn**	**23 10 48.9**	**+0.5**
	baz=255						
ANP	**Anpu**	**0.70**	**291**	*i* P	**Pn**	**23 10 34.4**	**-0.3**
	baz=289						
NDT	**Datong Townshi**	**0.74**	**244**	*i* P	**Pn**	**23 10 35.2**	**+0.3**
	baz=241						
NDT				S	**Sn**	**23 10 50.0**	**+0.9**
	baz=241						
LATG	**Datong**	**0.76**	**239**	P	**Pn**	**23 10 35.7**	**+0.4**
	baz=237						
LATG				*e*S	**Sn**	**23 10 50.7**	**+1.0**
	baz=237						
TWS1	**Kuangyinshan**	**0.77**	**283**	*i* P	**Pn**	**23 10 35.5**	**+0.3**
	baz=281						
TWS1				*e*S	**Sn**	**23 10 51.9**	**+2.5**
	baz=281						
JYNG	**Yonagunijimaku**	**0.80**	**127**	P	**Pn**	**23 10 35.2**	**-0.3**
JYNG				S	**Sn**	**23 10 50.2**	**+0.2**
YHNB	**Yeheng**	**0.83**	**252**	P	**Pn**	**23 10 35.6**	**-0.3**
	baz=250						
YHNB				S	**Sn**	**23 10 50.3**	**-0.4**
	baz=250						
YOJ	**Yonaguni jima**	**0.84**	**124**	P	**Pn**	**23 10 35.7**	**-0.1**
	baz=124						
YOJ				S	**Sn**	**23 10 51.1**	**+0.4**
	baz=124						
YOJ	**Yonaguni jima**	**0.84**	**124**	P	**Pn**	**23 10 35.6**	**-0.2**
YOJ				S	**Sn**	**23 10 50.8**	**+0.1**
NSK	**Sanguang**	**0.84**	**253**	P	**Pn**	**23 10 35.8**	**-0.2**
	baz=250						
NSK				S	**Sn**	**23 10 50.3**	**-0.6**
	baz=250						
NNSB	**Datong**	**0.93**	**237**	P	**Pn**	**23 10 37.1**	**+0.2**
	baz=235						
NNSB				S	**Sn**	**23 10 52.5**	**+0.1**
	baz=235						
NNS	**Nan Shan**	**0.93**	**238**	P	**Pn**	**23 10 37.3**	**+0.4**
	baz=236						
NNS				S	**Sn**	**23 10 52.2**	**-0.3**
	baz=236						
ETL	**Fush Village**	**0.95**	**216**	P	**Pn**	**23 10 36.8**	**-0.2**
	baz=215						
ETL				*e*S	**Sn**	**23 10 51.7**	**-1.0**
	baz=215						
NACB	**Ninganchiao**	**0.96**	**218**	P	**Pn**	**23 10 36.2**	**-0.8**
	baz=216						
NACB				S	**Sn**	**23 10 52.3**	**-0.4**
	baz=216						
NCUH	**Zhongli**	**0.96**	**272**	*i* P	**Pn**	**23 10 36.8**	**-0.2**
	baz=270						
NCUH				S	**Sn**	**23 10 53.0**	**+0.2**
	baz=270						
ETLH	**Xiulin Townshi**	**1.00**	**224**	P	**Pn**	**23 10 37.3**	**-0.3**
	baz=222						
ETLH				S	**Sn**	**23 10 53.2**	**-0.5**
	baz=222						
TWD	**Chiawan**	**1.03**	**215**	*i* P	**Pn**	**23 10 37.4**	**-0.3**
	baz=213						
TWD				S	**Sn**	**23 10 54.1**	**0.0**
	baz=213						
FUSS	**Fushou**	**1.14**	**233**	*i* P	**Pn**	**23 10 39.3**	**+0.2**
	baz=232						
FUSS				*i* S	**Sn**	**23 10 56.2**	**-0.2**
	baz=232						
LIOB	**Emei**	**1.15**	**256**	P	**Pn**	**23 10 39.1**	**0.0**
	baz=254						
LIOB				S	**Sn**	**23 10 56.0**	**-0.4**
	baz=254						
NSTT	**Nanjuang**	**1.17**	**255**	*i* P	**Pn**	**23 10 39.2**	**0.0**
	baz=253						
NSTT				S	**Sn**	**23 10 56.0**	**-0.7**
	baz=253						
ETM	**Tongmen**	**1.18**	**216**	*e*P	**Pn**	**23 10 38.5**	**-0.9**
	baz=214						
ETM				*e*S	**Sn**	**23 10 55.4**	**-1.5**
	baz=214						
WHF	**Hehuan Shan**	**1.19**	**229**	*i* P	**Pn**	**23 10 40.1**	**+0.2**
	baz=227						
WHF				*i* S	**Sn**	**23 10 57.6**	**-0.2**
	baz=227						
TDCB	**Techi**	**1.20**	**236**	P	**Pn**	**23 10 40.1**	**+0.4**
	baz=234						
TDCB				S	**Sn**	**23 10 57.1**	**-0.4**
	baz=234						
CHGB	**Renai**	**1.30**	**228**	P	**Pn**	**23 10 41.4**	**+0.4**
	baz=227						
CHGB				*e*S	**Sn**	**23 10 59.5**	**-0.3**
	baz=227						
IRIF	**Iriomote-Funau**	**1.48**	**113**	*e*S	**Sn**	**23 11 02.5**	**-0.4**
SSLB	**Suanglung**	**1.64**	**226**	P	**Pn**	**23 10 45.1**	**+0.4**
	baz=225						
SSLB				S	**Sn**	**23 11 06.9**	**+0.4**
	baz=225						
HATJ	**Hateruma jima**	**1.67**	**121**	P	**Pn**	**23 10 45.5**	**+0.5**
HATJ				*e*S	**Sn**	**23 11 08.0**	**+1.0**
JKRS	**Kuro-shima**	**1.75**	**113**	P	**Pn**	**23 10 46.2**	**+0.2**
JKRS				*e*S	**Sn**	**23 11 08.4**	**-0.4**
JIJ	**Ishigaki jima**	**1.82**	**108**	P	**Pn**	**23 10 46.7**	**-0.2**
JIJ				S	**Sn**	**23 11 09.5**	**-0.9**
JISG	**Ishigakijimahi**	**1.91**	**100**	P	**Pn**	**23 10 48.3**	**+0.3**
JISG				S	**Sn**	**23 11 12.6**	**+0.2**
ALS	**Alishan**	**1.93**	**223**	*i* P	**Pn**	**23 10 49.3**	**+0.7**
	baz=221						
JTJ	**Tarama**	**2.25**	**97**	P	**Pn**	**23 10 52.5**	**+0.1**
JTJ				*e*S	**Sn**	**23 11 19.8**	**-0.4**

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*BJI **24** 23:10:52.7±0.0, 7.°47S×129.°39E, h128^{km}, mB5.9/66, mb5.8/86*

*IDC **24** 23:10:57.8±0.4, 7.°20S×129.°00E, h129^{km}±3^{km}, mb5.1/43, mb1 5.1/46, mb1mx4.9/53, mbtmp5.5/46, MS4.7/21, Ms1 4.7/21, ms1mx4.6/31, Error ellipse: s-maj=10.0km s-min=7.3km az=75.0*

*NEIC **24** 23:10:57.7, 7.°23S×129.°00E, h120^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.02; M$_{\theta\theta}$-2.81; M$_{\phi\phi}$-1.21; M$_{r\theta}$1.64; M$_{\theta\phi}$2.84; M$_{\phi r}$1.46; Fault plane solution: M$_0$5.06000×10^{17} NP1:φ$_s$102.58000°, δ53.66000°, λ55.76000°. NP2:φ$_s$331.53000°, δ48.25000°, λ127.41000°. Principal axes: T 5.1410, Plg63.0000°, Azm312.0000°; N -0.1612, Plg27.0000°, Azm125.0000°; P -4.9798, Plg3.0000°, Azm216.0000°;*

*DJA **24** 23:10:58.9±0.2, 7°S±1°×12°9E±°, h142^{km}±2^{km}, M5.6/121, mB6.0/114, mb5.6/121, MLv6.2/15, Mw(mB)5.7/114, MwMwp5.5/67, Mwp5.7/67*

*NEIC **24** 23:10:58.2±2.7, 7.°22S±0.°05×128.°98E±0.°05, h119^{km}±1^{km}, mb5.8/254, Mwb5.7/32, Mww5.8, Error ellipse: s-maj=9.3km s-min=8.7km az=182.0*

*NEIC **24** 23:10:59, 7.°33S×129.°01E, h140^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.84; M$_{\theta\theta}$-3.53; M$_{\phi\phi}$-1.31; M$_{r\theta}$-0.47; M$_{\theta\phi}$2.51; M$_{\phi r}$2.73; Fault plane solution: M$_0$5.72000×10^{17} NP1: φ$_s$105.00000°, δ38.00000°, λ58.00000°. NP2: φ$_s$323.00000°, δ59.00000°, λ112.00000°. Principal axes: T 5.8988, Plg68.0000°, Azm278.0000°; N -0.3694, Plg19.0000°, Azm131.0000°; P -5.5294, Plg11.0000°, Azm37.0000°;*

*KLM **24** 23:10:59, 7.°35S×129.°16E, h143^{km}, mb6.0*

*MOS **24** 23:10:59.0±1.2, 7.°10S×129.°01E, h149^{km}, mb5.7/52, Error ellipse: s-maj=7.1km s-min=4.4km az=114.5*

*GCMT **24** 23:10:59.2±0.1, 7.°34S±0.°01×129.°11E±0.°01, h132^{km}, MW5.8/158, Moment Tensor Solution. s158,c305; s158,c415; Duration: 2^{s}0 Moment tensor: Scale 10^{17}*

Nm; M_{rr}5.08±.05; $M_{\theta\theta}$-3.92±.06; $M_{\phi\phi}$-1.16±.06; $M_{r\theta}$1.23±.04; $M_{\theta\phi}$3.84±.05; $M_{\phi r}$2.28±.04; Best double couple: $M_0$6.53400×10^{17} NP1:ϕ_s100.00000°,δ50.00000°, λ53.00000°. NP2:ϕ_s330.00000°,δ53.00000°,λ126.00000°. Principal axes: T 6.4380, Plg62.0000°, Azm303.0000°; N 0.1910, Plg28.0000°, Azm126.0000°; P -6.6290, Plg2.0000°, Azm36.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

BGR ***24*** *23:11:00.5±0.0,7°.32S×129°.01E,h140km*

ISC 24 23:10:58.0±0.2,**7°.22S**±0°.03×**129°.01E**±0°.03,**h134**km±1km, **h134**km**:pP-P,n1523,**σ**1**ˢ**45**/1643,**mb5.7**/304,**156C-54D, Fault plane solution: NP1:**ϕ_s114.14233°,δ58.78135°, λ48.79667°. **NP2:**ϕ_s353.51740°,δ49.95200°,λ137.38445°. **Principal axes:** T Plg55.2323°, Azm329.3742°; N Plg34.2875°, Azm138.5507°; P Plg5.0759°, Azm232.0228°; **Fault plane solution: NP1:**ϕ_s97.22305°, δ59.95223°,λ79.06471°. **NP2:**ϕ_s298.32266°,δ31.80024°, λ108.15633°. **Principal axes:** T Plg72.7514°, Azm340.3267°; N Plg9.4511°, Azm102.7489°; P Plg14.2941°, Azm195.1797°; **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.39	109	P	Pn	23 11 36.9	-0.1
SAUI	Saumlaki	2.39	109		Pn	23 11 36.2	-0.8
SAUI				Sn	Sn	23 12 05.3	-1.7
SAUI	Saumlaki	2.39	109	P	Pn	23 11 36.9	-0.1
BNDI	Bandanaira	2.82	18	P	Pn	23 11 44.7	+2.3
AAI	Ambon	3.60	347	P	Pn	23 11 55.8	+3.2
AAI	Ambon	3.60	347	P	Pn	23 11 56.0	+3.4
MSAI	Masohi	3.85	359	P	Pn	23 11 59.4	+3.6
SOEI	Soe	5.33	241	P	Pn	23 12 16.3	+0.7
	45nm112µm114µm10µm,1.2s						
SOEI	Soe	5.33	241	Pn	Pn	23 12 15.4	-0.2
SOEI	Soe	5.33	241	P	Pn	23 12 16.3	+0.7
FAKI	Fak Fak	5.35	37	P	Pn	23 12 15.3	-0.6
	25nm61µm40µm5µm,0.8s						
FAKI	Fak Fak	5.35	37	Pn	Pn	23 12 14.8	-1.1
FAKI	Fak Fak	5.35	37	P	Pn	23 12 15.3	-0.6
DRS	Darwin Rock St	5.50	160	P	Pn	23 12 15.6	-2.3
	3µm,0.6s						
SANI	Sanana	5.95	329	P	Pn	23 12 30.0	+6.1
	3.8nm46µm12µm458nm,0.7s						
SANI	Sanana	5.95	329	P	Pn	23 12 29.0	+5.1
MTN	Manton Dam	5.97	160	P	Pn	23 12 21.6	-2.5
	baz=5.9,SNR=1000						
MTN	Manton Dam	5.97	160	Pn	Pn	23 12 20.9	-3.2
MTN	Manton Dam	5.97	160	P	Pn	23 12 21.7	-2.4
	4µm,0.4s						
BATI	Baumata	6.06	240	P	Pn	23 12 25.4	-0.1
	2µm,0.3s,baz=127,slow=3.2,SNR=675						
BATI				S	Sn	23 13 31.0	-2.7
	1µm,0.3s,baz=89,slow=23,SNR=11						
BATI				LR	LR	23 14 30.8	
	comp=Z,20µm,19.8s,baz=15,slow=35						
BATI	Baumata	6.06	240	P	Pn	23 12 25.7	+0.3
	22nm52µm70µm6µm,1.2s						
KDU	Kakadu	6.41	148	P	Pn	23 12 26.6	-3.5
	baz=6.4,SNR=1000						
KDU	Kakadu	6.41	148	P	Pn	23 12 26.6	-3.5
	1µm,0.5s						
BBSI	Bau Bau	6.63	285	P	Pn	23 12 38.8	+5.8
	0.7nm2µm167nm,1.1s						
SIJI	Sorong	6.70	20	P	Pn	23 12 34.2	+0.3
	135nm,0.3s,baz=189,slow=6.3,SNR=264						
SIJI				S	Sn	23 13 46.4	-2.6
	112nm,0.3s,baz=204,slow=23,SNR=2.0						
SWI	Sorong	6.70	20	P	Pn	23 12 34.7	+0.8
	12nm39µm37µm4µm,1.1s						
LBMI	Labuha	6.71	347	P	Pn	23 12 38.1	+4.0
	8.6nm40µm22µm1µm,1.2s						
MMRI	Maumere	6.86	258	P	Pn	23 12 36.8	+0.7
	6.3nm46µm18µm1µm,1.3s						
MMRI	Maumere	6.86	258	Pn	Pn	23 12 36.0	-0.1
MMRI	Maumere	6.86	258	P	Pn	23 12 37.3	+1.2
EDFI	Ende, Flores	7.41	258	P	Pn	23 12 45.1	+1.5
	1.6nm21µm6µm348nm,1.0s						
TNTI	Ternate	8.11	348	P	Pn	23 12 56.6	+3.7
	8µm7µm537nm,1.2s						
TNTI	Ternate	8.11	348	Pn	Pn	23 12 54.9	+2.0
TNTI	Ternate	8.11	348	P	Pn	23 12 55.9	+3.0
KNRA	Kununurra	8.41	182	P	Pn	23 12 52.9	-4.0
	baz=8.4,SNR=1000						
KNRA	Kununurra	8.41	182	Pn	Pn	23 12 52.9	-4.0
KNRA	Kununurra	8.41	182	P	Pn	23 12 52.7	-4.2
	5µm,0.7s						
BSSI	Bau Bau, Buton	8.53	277	P	Pn	23 13 01.8	+3.2
	9µm6µm401nm,1.8s						
LUWI	Luwuk	8.74	314	P	Pn	23 13 05.7	+4.3
	14µm17µm1µm,1.8s						
LUWI	Luwuk	8.74	314	Pn	Pn	23 13 00.4	-1.0
LUWI	Luwuk	8.74	314	P	Pn	23 13 06.4	+5.0
BASI	Baing, Sumba	8.85	250	P	Pn	23 13 01.6	-1.3
	15µm28µm2µm,0.6s						
SRPI	Serui, Papua	8.95	54	P	Pn	23 13 03.1	-1.1
	13µm32µm3µm,1.3s						
BKSI	Bulukumba	9.04	282	P	Pn	23 13 08.4	+3.0
	13µm10µm387nm,1.4s						
KMSI	Cibinong	9.23	327	P	Pn	23 13 12.6	+4.7
	890nm12µm1µm,1.1s						
BAKI	Biak	9.27	50	P	Pn	23 13 09.4	+0.9
BNSI	Bone	9.29	287	P	Pn	23 13 11.5	+2.7
	13µm12µm724nm,1.3s						
KAPI	Kappang	9.46	283	P	Pn	23 13 10.7	-0.4
	2.2nm,0.3s,baz=123,slow=7.7,SNR=16						
KAPI				S	Sn	23 14 55.8	-0.1
	3.3nm,0.3s,baz=147,slow=6.7,SNR=1.5						
KAPI	Kappang	9.46	283	P	Pn	23 13 10.7	-0.4
KAPI				S	Sn	23 14 55.8	-0.1
APSI	Ampana	9.65	310	P	Pn	23 13 18.0	+4.4
	8µm11µm813nm,1.6s						
SPSI	Sidrap Palu	9.75	289	P	Pn	23 13 17.6	+2.7
	12µm8µm559nm,1.6s						
WBSI	Waikabubak, Su	9.82	255	P	Pn	23 13 13.3	-2.6
	16µm1µm,1.1s						
TTSI	Tana Toraja	10.05	294	P	Pn	23 13 22.8	+3.8
	11µm10µm424nm,1.5s						
MRSI	Marisa	10.40	317	P	Pn	23 13 28.8	+5.1
	11µm20µm2µm,1.2s						
FITZ	Fitzroy Crossi	11.30	197	P	Pn	23 13 29.6	-6.0
	baz=29,slow=13						
FITZ				S	Sn	23 15 26.8	-13
	224nm,0.3s,baz=88,slow=17,SNR=10						
FITZ	Fitzroy Crossi	11.30	197	P	Pn	23 13 30.2	-5.4
	baz=11,SNR=1000						
MMPI	Merauke	11.33	97	P	Pn	23 13 34.6	-1.5
	43µm2µm,0.6s						
SGSI	Sangihe	11.38	342	P	Pn	23 13 40.3	+3.7
	651nm,0.8s						
TOLI2	Tolitoli	11.66	315		Pn	23 13 42.2	+1.9
TOLI2	Tolitoli	11.66	315	P	P	23 13 46.1	-2.1
MPSI	Mapaga	11.79	309	P	P	23 13 46.0	-3.6
	13µm13µm723nm,1.6s						
GENI	Genyem	12.02	68	P	Pn	23 13 45.1	0.0
	15µm19µm2µm,0.9s						
GENI	Genyem	12.02	68	P	Pn	23 13 45.9	+0.8
JAY	Jayapura	12.55	69	P	Pn	23 13 48.7	-3.4
	7.0nm,0.3s,baz=248,slow=6.7,SNR=58						
JAY				S	Sn	23 15 59.5	-11
	9.2nm,0.3s,baz=101,slow=17,SNR=1.2						
JAY	Jayapura	12.55	69	P	Pn	23 13 50.4	-1.6
JAY	Jayapura	12.55	69	P	Pn	23 13 51.3	-0.7
	4µm383nm,0.9s						
KBKI	Kotabaru	13.37	286	P	P	23 14 06.3	-1.0
	3µm138nm,0.8s						
BKB	Balikpapan	13.45	296	P	P	23 14 09.5	+1.3
	20µm21µm558nm,1.0s						
BKB	Balikpapan	13.45	296		Pn	23 14 03.8	+0.2
WB0	Warramunga Arr	13.52	158		Pn	23 13 58.1	-6.4
SMKI	Samarinda	13.56	299	P	P	23 14 10.5	+1.1
	14µm14µm730nm,1.6s						
WRAB	Tennant Creek	13.66	158	*d i*P	Pn	23 14 00.5	-5.8
WRAB	Tennant Creek	13.66	158	Pn	Pn	23 14 00.4	-5.9
WRA	Warramunga Arr	13.66	158	P	Pn	23 14 00.2	-6.2
	60nm,0.3s,baz=341,slow=12,SNR=767						
WRA				S	Sn	23 16 18.6	-19
	146nm,0.3s,baz=332,slow=22,SNR=14						
WRA	Warramunga Arr	13.66	158	P	Pn	23 13 59.6	-6.7
WRA	Warramunga Arr	13.66	158	Pn	Pn	23 13 59.6	-6.8
WB2	Warramunga Arr	13.67	158	Pn	Pn	23 14 01.0	-5.4
WR0	Warramunga Arr	13.75	158	Pn	Pn	23 14 01.4	-6.0
IGBI	Denpasar	13.82	262	P	P	23 14 11.0	-1.3
	6µm4µm337nm,0.5s						
GSPH	General Santos	13.82	343	⇓*i*P	Pn	23 14 10.0	+1.5
MATI	Mati	14.34	349	⇑*i*P	P	23 14 17.7	-0.3
BBKI	Banjar Baru	14.59	284	P	P	23 14 21.8	+0.9
	9µm15µm837nm,2.0s						
DAV	Davao City (W)	14.60	346	P	P	23 14 20.5	-0.5
	20nm,0.3s,baz=132,slow=2.5,SNR=33						
DAV				S	Sn	23 16 54.1	-5.9
	34nm,0.3s,baz=243,slow=22,SNR=1.3						
DAV				LR	LR	23 20 18.4	
	comp=Z,5µm,18.0s,baz=98,slow=38						
DAV	Davao City (W)	14.60	346	P	P	23 14 22.2	+1.2
	1µm,1.1s						
ABJI	Asem Bagus	14.66	267	P	P	23 14 20.8	-0.9
	16µm5µm209nm,1.1s						
KCP	Kidapawan	14.66	344	⇑*i*P	P	23 14 21.0	-0.8
JAGI	Jajag, Banyuwa	14.77	264	P	Pn	23 14 19.4	-1.0
	13µm4µm158nm,0.7s						
JAGI	Jajag, Banyuwa	14.77	264		Pn	23 14 17.3	-3.2
JAGI	Jajag, Banyuwa	14.77	264	P	Pn	23 14 21.8	+1.4
BLJI	Banyuglugur	15.30	267	P	P	23 14 29.5	+0.8
	9µm3µm177nm,0.8s						
MTKI	Muara Teweh, K	15.39	293	P	P	23 14 32.1	+2.3
	11µm15µm445nm,1.4s						
COEN	Coen	15.44	117		Pn	23 14 25.1	-3.7
COEN				IAmb	IAmb	23 15 03.9	
	comp=Z,610nm,1.0s						
COEN	Coen	15.44	117	P	Pn	23 14 26.0	-2.8
	comp=Z,422nm,1.2s						
GMJI	Gumukmas	15.46	265	P	Pn	23 14 27.5	-1.5
	comp=Z,13µmcomp=Z,3µmcomp=Z,71nm,1.3s						
BIPH	Bislig	15.53	350	⇑*e*P	P	23 14 32.2	+1.0
PAGZ	Pagadian	15.98	339	⇑*e*P	P	23 14 38.0	+1.7
PAGZ				*e*S	Sn	23 17 34.1	+0.8
MYLDM	Lahad Datu	16.18	319		P	23 14 41.5	+3.1
MBWA	Marble Bar	16.51	212	P	Pn	23 14 39.6	-2.2
DCPH	Dipolog City	16.68	340	⇓*e*P	P	23 14 49.9	+5.9
QIS	Mount Isa	16.77	143	P	P	23 14 42.2	-2.7
	baz=17,SNR=102						
QIS	Mount Isa	16.77	143	P	P	23 14 42.6	-2.3
	comp=Z,407nm,1.1s						
PSA00	Pilbara Seismi	16.80	211		P	23 14 42.0	-3.2
PSA00	Pilbara Seismi	16.80	211		P	23 14 42.0	-3.2
PSA00				IAmb	IAmb	23 14 49.0	
	comp=Z,2µm,1.5s						
PSA00	Pilbara Seismi	16.80	211	P	P	23 14 42.5	-2.7
	comp=Z,1µm,0.9s						
AS31	Alice Springs	17.02	164	P	P	23 14 43.8	-3.9
ASAR	Alice Springs	17.02	165	P	P	23 14 44.1	-3.5
	comp=Z,25nm,0.3s,baz=334,slow=8.6,SNR=657						
ASAR				S	Sn	23 17 40.0	-18
	comp=Z,22nm,0.3s,baz=328,slow=12,SNR=2.7						
ASAR				LR	LR	23 21 57.2	
	comp=Z,8µm,18.2s,baz=342,slow=39						
ASAR				P3KPbc		23 49 47.0	
	comp=Z,0.1nm,0.3s,baz=169,slow=4.6,SNR=6.8						
ASAR	Alice Springs	17.02	165	P	P	23 14 43.4	-4.3
ASAR	Alice Springs	17.02	165	P	P	23 14 43.4	-4.3
GLSP	General Luna,	17.13	350	⇓*e*P	Pn	23 14 51.1	+1.7
SPMM	Sapulut	17.24	313	P	Pn	23 14 54.0	+3.2
TBP	Tagbilaran	17.56	343	⇑*i*P	Pn	23 14 55.2	+0.6
TBP				*i* S	S	23 18 07.7	-2.0
PCJI	Pacitan	17.70	266	P	P	23 14 53.2	-2.0
	comp=Z,10µmcomp=Z,3µmcomp=Z,235nm,0.6s						
MSLP	Maasin	17.73	346	⇑*e*P	Pn	23 14 58.6	+2.0
MSLP				*e*S	Sn	23 18 19.4	+4.3
WRKA	Warakurna	17.73	182	P	P	23 14 53.2	-2.4
	baz=18,SNR=1000						
WRKA	Warakurna	17.73	182	P	P	23 14 53.2	-2.3
	comp=Z,1µm,0.8s						
PBKI	Pangkalan Bun	17.85	284	P	Pn	23 15 00.3	+2.3
	comp=Z,37µmcomp=Z,3µm,1.4s						
WOJI	Wonogiri, Jawa	17.94	267	P	Pn	23 14 59.1	-0.1
	comp=Z,111nm,1.3s						
PMG	Port Moresby	18.09	98	P	P	23 14 59.4	-0.1
	comp=Z,6.7nm,0.3s,baz=296,slow=7.9,SNR=82						
PMG				S	S	23 18 08.6	-12
	comp=Z,5.9nm,0.3s,baz=166,slow=20,SNR=1.9						
PMG				LR	LR	23 22 30.4	
	comp=Z,2µm,18.9s,baz=325,slow=38						
PMG	Port Moresby	18.09	98	P	Pn	23 15 00.0	-0.9
PMG				pmax	pmax		
	comp=Z,895nm,1.2s						
PMG	Port Moresby	18.09	98	P	Pn	23 14 60.0	-0.9
PMG				IAmb	IAmb	23 15 05.5	
	comp=Z,895nm,1.1s						
PMG	Port Moresby	18.09	98	P	Pn	23 15 02.0	+1.1
PMG	Port Moresby	18.09	98	P	Pn	23 15 01.8	+0.9
LLP	Lapu-Lapu	18.13	344	⇑*e*P	Pn	23 15 02.5	+1.1
LLP				*e*S	Sn	23 18 22.8	-1.9
UGM	Wanagama	18.34	267	P	P	23 15 02.2	-0.1
	comp=Z,11µmcomp=Z,264nm,1.1s						
UGM	Wanagama	18.34	267	P	P	23 15 00.7	-1.6
UGM				IAmb	IAmb	23 15 53.8	
	comp=Z,690nm,1.5s						
KKM	Kota Kinabalu	18.35	316		Pn	23 15 04.4	+0.3
KKM	Kota Kinabalu	18.35	316	P	Pn	23 15 05.5	+1.5
SMRI	Semarang	18.43	269	P	Pn	23 15 09.1	+4.2
SMRI	Semarang	18.43	269	P	Pn	23 15 04.8	-0.2
SMRI	Semarang	18.43	269	P	Pn	23 15 05.1	+0.1
MTSU	Mount Surprise	18.44	127	P	P	23 15 03.9	+0.6
	baz=18,SNR=444						
MTSU	Mount Surprise	18.44	127	P	Pn	23 15 05.2	+0.2
	comp=Z,388nm,0.9s						
STKI	Sintang	18.93	292	P	Pn	23 15 10.8	0.0
	comp=Z,17µmcomp=Z,503nm,1.6s						
MANU	Manus Island	19.00	75	P	Pn	23 15 12.0	+0.4
MANU				IAmb	IAmb	23 15 15.6	
	comp=Z,682nm,1.1s						
BESP	Borongan	19.03	349	⇓*e*P	Pn	23 15 13.1	+1.1
JAP	San Jose, Anti	19.18	338	⇓*e*P	Pn	23 15 14.2	+0.5
SBUM	Sibu	19.32	299	P	Pn	23 15 16.0	+0.7
SBUM	Sibu	19.32	299	P	Pn	23 15 14.8	-0.5
SBUM				IAmb	IAmb	23 15 22.8	
	comp=Z,590nm,1.4s						
BATP	Bataraza	19.44	325	⇓*i*P	Pn	23 15 17.9	+1.1
RCP	Roxas	19.67	341	⇓*e*P	P	23 15 17.6	+1.0
PPR	Puerto Princes	19.75	329	⇑*i*P	Pn	23 15 19.8	-0.5
CMJI	Cimerak	20.40	267	P	P	23 15 22.8	-1.7
	comp=Z,6µmcomp=Z,3µmcomp=Z,210nm,0.8s						
KSM	Kuching	20.56	294	P	P	23 15 28.0	+1.7
KSM	Kuching	20.56	294	P	P	23 15 26.3	-0.1
KSM	Kuching	20.56	294	P	P	23 15 27.3	+1.0
GIRL	Giralia	20.92	221	P	P	23 15 31.1	+1.1
	baz=21,SNR=24						
GIRL	Giralia	20.92	221	P	P	23 15 30.7	+0.7
GIRL	Giralia	20.92	221	P	Pn	23 15 32.5	-1.6
	comp=Z,1µm,1.8s						
CTA	Charters Tower	21.05	129	P	P	23 15 31.4	-0.1
	comp=Z,18nm,0.5s,baz=299,slow=14,SNR=32						
CTA				S	S	23 19 10.6	-7.9
	comp=Z,25nm,0.6s,baz=174,slow=22,SNR=1.5						
CTA	Charters Tower	21.05	129	P	P	23 15 31.4	-0.1
CTA	Charters Tower	21.05	129	P	P	23 15 34.7	+3.2
	comp=Z,259nm,1.1s						
CTAO	Charters Tower	21.05	129	P	P	23 15 32.1	+0.6
CTAO				pmax	pmax		
	comp=Z,524nm,1.2s						
CTAO	Charters Tower	21.05	129	P	P	23 15 32.1	+0.6
CTAO				IAmb	IAmb	23 16 29.4	
	comp=Z,524nm,1.2s						
CTAO	Charters Tower	21.05	129	P	P	23 15 31.9	+0.4
LEM	Lembang	21.24	270	P	P	23 15 33.4	-0.4
	comp=Z,88nm,0.7s,baz=54,slow=7.4,SNR=18						
LEM	Lembang	21.24	270	P	P	23 15 33.4	-0.4
LEM	Lembang	21.24	270	P	P	23 15 33.6	-0.1
	comp=Z,4µmcomp=Z,2µmcomp=Z,164nm,1.7s						
OOD	Oodnadatta	21.42	164	P	P	23 15 34.1	-1.3
	comp=Z,635nm,0.6s						
SCSP	San Jose Seism	21.44	345	⇑*e*P	P	23 15 35.8	+0.2
MEEK	Meekatharra	21.70	206	P	P	23 15 37.6	-0.8
	baz=22,SNR=46						
MEEK	Meekatharra	21.70	206	P	P	23 15 37.5	-0.9
	comp=Z,460nm,0.6s						
CNJI	Cibinong	21.71	268	P	P	23 15 35.1	-3.5
	comp=Z,8µmcomp=Z,7µmcomp=Z,643nm,1.2s						
TPI	Tanjungpandan	21.73	281	P	P	23 15 39.7	+0.9
CBJI	Citeko	22.02	271	P	P	23 15 39.5	-2.3
	comp=Z,8µmcomp=Z,6µmcomp=Z,352nm,1.0s						
PGP	Puerto Galera	22.09	339	⇑*i*P	P	23 15 43.8	+1.3
DBJI	Dramaga	22.11	270	P	P	23 15 41.5	-1.3
	comp=Z,10µmcomp=Z,130nm,1.5s						
JCNP	Jose Panganiba	22.27	344	⇑*i*P	P	23 15 44.1	-0.1
JCNP				*e*S	S	23 19 44.1	+4.3
SKJI	Sukabumi	22.28	269	P	P	23 15 42.6	-1.9
	comp=Z,3µmcomp=Z,233nm,0.6s						
LQP	Lukban	22.45	341	*e*P	P	23 15 46.4	+0.1
SBJI	Serang	22.75	271	P	P	23 15 50.8	+1.8
	comp=Z,5µmcomp=Z,150nm,0.8s						
MACP	Maragondon, Ca	22.87	339	⇓*e*P	P	23 15 48.0	-2.1
CGJI	Cibinong	23.16	270	P	P	23 15 49.6	-3.2
	comp=Z,8µmcomp=Z,5µmcomp=Z,340nm,0.8s						
RABL	Rabaul	23.23	84	P	P	23 15 54.0	+0.4
RABL				IAmb	IAmb	23 16 21.3	
	comp=Z,854nm,1.2s						
RABL	Rabaul	23.23	84	P	P	23 15 55.0	+1.5
INKA	Innaminka	23.24	153	P	P	23 15 53.7	+0.2
	comp=Z,1µm,1.2s						
XMI	Christmas Isla	23.27	260	P	P	23 15 58.0	+4.1
	comp=Z,170nm,0.9s						
XMIS	Christmas Isla	23.31	260	P	P	23 15 52.0	-2.2
XMIS	Christmas Isla	23.31	260	P	P	23 15 57.1	+2.9
	comp=Z,156nm,1.1s						
PPBI	Pangkal Pinang	23.34	281	P	P	23 15 54.9	+0.4
	comp=Z,12µmcomp=Z,335nm,2.3s						
MULG	Mulgathing	23.43	169	P	P	23 15 54.7	-0.4
	comp=Z,612nm,1.4s						
FORT	Forrest	23.46	182	P	P	23 15 55.2	-0.2
	baz=24,SNR=235						
FORT	Forrest	23.46	182	P	P	23 15 55.3	-0.1
FORT	Forrest	23.46	182	P	P	23 15 55.4	0.0
	comp=Z,1µm,0.7s						
QLP	Quilpie	24.09	145	P	P	23 16 01.2	0.0
	baz=24,SNR=121						
QLP	Quilpie	24.09	145	P	P	23 16 01.1	-0.1
	comp=Z,2µm,1.5s						
KLI	Kotabumi	24.13	274	P	P	23 16 06.0	+4.3
	comp=Z,5µmcomp=Z,215nm,1.0s						
KLSI		24.28	275	P	P	23 16 01.2	-1.9
	comp=Z,2µmcomp=Z,102nm,1.8s						
KASI	Kota Agung	24.42	273	P	P	23 16 00.4	-3.9
	comp=Z,5µmcomp=Z,1µmcomp=Z,88nm,0.9s						
PMBI	Palembang	24.51	279	P	P	23 16 08.7	+3.5
	comp=Z,1µm,1.3s						
PMBI	Palembang	24.51	279	P	P	23 16 06.7	+1.6
PMBI	Palembang	24.51	279	P	P	23 16 08.7	+3.5
	comp=Z,1µm,1.3s						
SMPP	San Manuel, Pa	24.64	340	⇑*e*P	P	23 16 07.0	+0.8
LCRK	Leigh Creek	24.67	161	P	P	23 16 06.1	-0.3
	comp=Z,1µm,1.1s						
MDSI	Maura Dua	24.85	275	P	P	23 16 04.5	-3.7
	comp=Z,4µmcomp=Z,901nmcomp=Z,31nm,2.4s						
LWLI	Liwa	24.91	274	P	P	23 16 19.2	+10
MORW	Morawa	24.94	208	P	P	23 16 10.0	+1.1
	baz=25,SNR=30						
MORW	Morawa	24.94	208	P	P	23 16 08.9	0.0
MORW	Morawa	24.94	208	P	P	23 16 10.3	+1.4
	comp=Z,251nm,0.8s						
DSRI	Dabo	25.27	284	P	P	23 16 12.3	+0.3
	comp=Z,4µmcomp=Z,3µmcomp=Z,88nm,1.5s						
SAMP	Sagada Mountai	25.44	342	⇓*i*P	P	23 16 12.4	-1.1
LHSI	Lahat	25.59	276	P	P	23 16 15.4	+0.5
	comp=Z,7µmcomp=Z,2µmcomp=Z,142nm,1.9s						
TPRI	Tanjung Pinang	25.73	287	P	P	23 16 24.8	+8.6
JMBI	JAMBI	25.89	281	P	P	23 16 24.3	+6.7
BLDU	Ballidu	25.98	205	P	P	23 16 18.1	-0.1
	baz=26,SNR=114						
BLDU	Ballidu	25.98	205	P	P	23 16 20.1	+1.9
	comp=Z,279nm,1.6s						
GUMO	Guam	25.98	37	P	P	23 16 17.9	-0.5
	comp=Z,239nm,1.1s,baz=198,slow=20,SNR=3.7						
GUMO	Guam	25.98	37	P	P	23 16 18.3	-0.2
GUMO				pmax	pmax		
	comp=Z,1µm,1.7s						
GUMO	Guam	25.98	37	P	P	23 16 18.2	-0.2
RK1H	Rockhampton Ha	26.16	130	P	P	23 16 20.7	+0.7
	comp=Z,101nm,1.2s						
BBOO	Buckleboo	26.29	167	P	P	23 16 20.5	-0.6
	baz=26,SNR=122						
BBOO	Buckleboo	26.29	167	P	P	23 16 20.5	-0.6
BBOO				IAmb	IAmb	23 17 12.0	
	comp=Z,423nm,1.1s						
BBOO	Buckleboo	26.29	167	P	P	23 16 20.4	-0.7
	comp=Z,392nm,1.4s						
KLBR	Kellerberrin	26.43	202	P	P	23 16 22.5	+0.2
	baz=26,SNR=84						
KLBR	Kellerberrin	26.43	202	P	P	23 16 22.5	+0.2
	comp=Z,344nm,0.8s						
MYKOM	Kota Tinggi	26.66	289	P	P	23 16 26.0	+1.5
MYKOM	Kota Tinggi	26.66	289	P	P	23 16 24.9	+0.4
MYKOM				IAmb	IAmb	23 16 27.3	
	comp=Z,322nm,1.3s						
RMQ	Roma	26.84	138	P	P	23 16 26.3	+0.3
	baz=27,SNR=12						
RMQ	Roma	26.84	138	P	P	23 16 26.6	+0.6
	comp=Z,79nm,1.0s						
WHYH	Whyalla	26.89	164	P	P	23 16 25.9	-0.5
	comp=Z,143nm,1.2s						
MASI	Maura Aman, Be	26.96	277	P	P	23 16 27.1	-0.2
	comp=Z,3µmcomp=Z,121nm,1.4s						
STKA	Stephens Creek	27.20	156	P	P	23 16 28.9	-0.3
	comp=Z,43nm,0.6s,baz=325,slow=9.1,SNR=68						
STKA				LR	LR	23 28 50.5	
	comp=Z,8µm,18.5s,baz=323,slow=39						
STKA	Stephens Creek	27.20	156	P	P	23 16 28.9	-0.3
	baz=27,SNR=38						
STKA	Stephens Creek	27.20	156	P	P	23 16 28.7	-0.5
STKA				pmax	pmax		
	comp=Z,47nm,1.0s						
STKA	Stephens Creek	27.20	156	P	P	23 16 28.7	-0.5
STKA	Stephens Creek	27.20	156	P	P	23 16 28.7	-0.5
	comp=Z,52nm,1.2s						
MUN	Mundaring	27.38	204	P	P	23 16 30.8	+0.1
	baz=27,SNR=60						
MUN	Mundaring	27.38	204	P	P	23 16 31.5	+0.7
	comp=Z,74nm,0.9s						
HTT	Hallett	27.65	162	P	P	23 16 33.0	-0.2
	baz=28,SNR=51						
HTT	Hallett	27.65	162	P	P	23 16 33.3	0.0
	comp=Z,223nm,1.0s						
EIDS	Eidsvold	27.75	133	P	P	23 16 36.3	+2.2
	baz=28,SNR=9.9						
EIDS	Eidsvold	27.75	133	P	P	23 16 34.3	+0.1
EIDS				IAmb	IAmb	23 17 25.4	
	comp=Z,289nm,1.4s						
NWAO	Narrogin (SRO)	27.82	202	P	P	23 16 35.3	+0.6
DLV	T Lat	27.91	313	P	P	23 16 35.1	-0.8
DLV					PcP	23 19 50.2	+1.8
DLV	T Lat	27.91	313	P	P	23 16 38.1	+2.2
KRJI	Kerinci	27.92	279	P	P	23 16 35.7	-0.2
	comp=Z,28µmcomp=Z,195nm,0.9s						
JRMM	Jerantut	28.69	292	P	P	23 16 44.0	+1.4
CMSA	Cobar Meteorol	28.78	149	P	P	23 16 43.3	+0.1
	baz=29,SNR=166						
CMSA	Cobar Meteorol	28.78	149	P	P	23 16 43.3	+0.1
	comp=Z,117nm,0.9s						
BKNI	Bangkinang	28.89	284	P	P	23 16 45.0	+0.5
	comp=Z,5µmcomp=Z,4µmcomp=Z,134nm,0.9s						
BKNI	Bangkinang	28.89	284	P	P	23 16 44.7	+0.2
BKNI				IAmb	IAmb	23 17 36.6	
	comp=Z,188nm,1.1s						
BKNI	Bangkinang	28.89	284	P	P	23 16 46.1	+1.6
PPI	Padang Panjang	29.31	282	P	P	23 16 47.9	-0.3
	comp=Z,580nmcomp=Z,59nm,0.9s						
IPM	Ipoh	30.25	292	P	P	23 16 58.0	+1.5
IPM	Ipoh	30.25	292	P	P	23 16 56.3	-0.2
IPM				IAmb	IAmb	23 17 00.2	
	comp=Z,491nm,1.9s						
IPM	Ipoh	30.25	292	P	P	23 16 57.4	+0.9
SISI	Saibi	30.39	280	P	P	23 17 00.5	+2.8
	comp=Z,18nm,0.9s						
MNSI	Mandailing Nat	30.42	284	P	P	23 16 57.0	-1.0
	comp=Z,3µmcomp=Z,163nm,1.2s						
HNR	Honiara	30.68	96	ScP	ScP	23 23 26.8	+1.1
	comp=Z,102nm,0.7s,baz=163,slow=1.3,SNR=9.8						
HNR				LR	LR	23 30 34.7	
	comp=Z,2µm,19.3s,baz=270,slow=38						
HNR	Honiara	30.68	96	P	P	23 16 59.6	-0.7
HNR				pmax	pmax		
	comp=Z,535nm,1.3s						
HNR	Honiara	30.68	96	P	P	23 16 59.6	-0.7
HNR				ScP	ScP	23 23 27.3	+1.6
HNR	Honiara	30.68	96	P	P	23 17 02.6	+2.3
KULM	Kulim	30.91	293	P	P	23 17 02.0	-0.3
KULM	Kulim	30.91	293	P	P	23 17 01.5	-0.8
YULB	Yu-li	31.34	346	P	P	23 17 04.3	-1.6
ARMA	Armidale	31.35	140	P	P	23 17 07.1	+1.1
	baz=31,SNR=21						
ARMA	Armidale	31.35	140	P	P	23 17 06.4	+0.4
ARMA	Armidale	31.35	140	P	P	23 17 08.1	+2.0
	comp=Z,48nm,1.6s						
TPUB	Ta-pu	31.42	345	P	P	23 17 05.6	-1.0

TPUB				IAmb	IAmb	23 18 00.9	
	comp=Z,213nm,1.5s						
TPUB	**Ta-pu**	**31.42**	**345**	P	**P**	**23 17 05.6**	**-1.0**
RPSI	**Rantau Prapat**	**31.60**	**287**	IAmb	IAmb	23 17 11.2	
	comp=Z,216nm,1.0s						
ARPS	**Mount Arapiles**	**31.66**	**160**	P	**P**	**23 17 09.1**	**+0.5**
	baz=32,SNR=46						
ARPS	**Mount Arapiles**	**31.66**	**160**	P	**P**	**23 17 09.1**	**+0.6**
	comp=Z,294nm,0.9s						
SSLB	**Suanglung**	**31.81**	**346**	P	**P**	**23 17 08.3**	**-1.7**
SSLB	**Suanglung**	**31.81**	**346**	P	**P**	**23 17 08.7**	**-1.3**
YOJ	**Yonaguni jima**	**32.03**	**350**	P	**P**	**23 17 12.0**	**+0.1**
YOJ				pmax	pmax		
	comp=Z,214nm,1.1s						
YOJ	**Yonaguni jima**	**32.03**	**350**	P	**P**	**23 17 12.0**	**+0.1**
YOJ				IAmb	IAmb	23 17 13.0	
	comp=Z,214nm,1.1s						
NACB	**Ninganchiao**	**32.03**	**347**	P	**P**	**23 17 10.1**	**-1.9**
TSI	**Tuntungan**	**32.20**	**288**	P	**P**	**23 17 14.1**	**+0.5**
	comp=Z,6µmcomp=Z,248nm,1.6s						
QIZ	**Qiongzhong**	**32.21**	**324**	P	**P**	**23 17 14.3**	**+0.7**
QIZ				pP	**pwP**	**23 17 46.6**	**-0.9**
QIZ				PP	**PP**	**23 18 33.0**	**+3.9**
QIZ				S	**S**	**23 22 17.8**	**+0.9**
QIZ				sS	**sS**	**23 23 05.1**	**-0.8**
QIZ				pmax	pmax		
	comp=Z,110nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,1µm,5.0s						
QIZ				LR	LR		
	comp=Z,1µm,13.7s						
QIZ				LR	LR		
	comp=Z,1µm,14.7s						
QIZ				LR	LR		
	comp=Z,2µm,17.2s						
QIZ	**Qiongzhong**	**32.21**	**324**	P	**P**	**23 17 14.0**	**+0.4**
QIZ				IAmb	IAmb	23 17 15.8	
	comp=Z,285nm,1.4s						
QIZ	**Qiongzhong**	**32.21**	**324**	P	**P**	**23 17 14.4**	**+0.8**
UBPT	**Khong Chiam**	**32.31**	**314**	P	**P**	**23 17 15.2**	**+0.7**
UBPT				IAmb	IAmb	23 17 46.3	
	comp=Z,177nm,1.1s						
GSI	**Gunungsitoli**	**32.49**	**284**	P	**P**	**23 17 14.5**	**-1.6**
	comp=Z,5µmcomp=Z,268nm,1.6s						
GSI	**Gunungsitoli**	**32.49**	**284**	P	**P**	**23 17 14.6**	**-1.5**
GSI				IAmb	IAmb	23 17 17.2	
	comp=Z,259nm,1.2s						
GSI	**Gunungsitoli**	**32.49**	**284**	P	**P**	**23 17 15.7**	**-0.4**
YHNB	**Yeheng**	**32.56**	**347**	P	**P**	**23 17 16.1**	**-0.5**
YHNB				IAmb	IAmb	23 17 46.3	
	comp=Z,149nm,1.2s						
YHNB	**Yeheng**	**32.56**	**347**	P	**P**	**23 17 16.9**	**+0.3**
KCSI	**Kotacane, Aceh**	**32.95**	**288**	P	**P**	**23 17 20.7**	**+0.5**
	comp=Z,2µmcomp=Z,55nm,0.9s						
MGCD	**Mangrove Creek**	**32.99**	**145**	P	**P**	**23 17 22.4**	**+2.2**
	baz=33,SNR=8.2						
KNMB	**Chin-men Tao**	**33.15**	**342**	P	**P**	**23 17 21.5**	**-0.2**
KNMB				IAmb	IAmb	23 17 52.9	
	comp=Z,184nm,1.1s						
SRIT	**Nakonsritamara**	**33.26**	**298**	P	**P**	**23 17 23.7**	**+0.9**
TPTI		**33.43**	**287**	P	**P**	**23 17 23.0**	**-1.3**
	comp=Z,988nmcomp=Z,37nm,1.3s						
CAN	**Canberra**	**33.45**	**150**	P	**P**	**23 17 24.9**	**+0.6**
CAN				pmax	pmax		
	comp=Z,277nm,0.9s						
CAN	**Canberra**	**33.45**	**150**	P	**P**	**23 17 24.9**	**+0.6**
CAN				IAmb	IAmb	23 18 01.1	
	comp=Z,277nm,0.9s						
CAN	**Canberra**	**33.45**	**150**	P	**P**	**23 17 25.5**	**+1.2**
QZH	**Quanzhou**	**33.54**	**343**	⇑*i*P	**P**	**23 17 25.3**	**+0.3**
QZH				PP	**PnPn**	**23 18 41.6**	**-0.1**
QZH				S	**S**	**23 22 34.3**	**-3.1**
QZH				pmax	pmax		
	comp=Z,62nm,1.0s						
QZH				LR	LR		
	comp=Z,830nm,22.3s						
QZH				LR	LR		
	comp=Z,1µm,19.4s						
CNB	**Canberra Magne**	**33.63**	**149**	P	**P**	**23 17 26.8**	**+0.9**
	baz=34,SNR=12						
CNB	**Canberra Magne**	**33.63**	**149**	P	**P**	**23 17 28.8**	**+2.9**
	comp=Z,56nm,1.5s						
TOO	**Toolangi**	**33.72**	**156**	P	**P**	**23 17 28.2**	**+1.6**
	baz=34,SNR=30						
TOO	**Toolangi**	**33.72**	**156**	P	**P**	**23 17 27.8**	**+1.2**
TOO				pmax	pmax		
	comp=Z,367nm,1.4s						
TOO	**Toolangi**	**33.72**	**156**	P	**P**	**23 17 27.8**	**+1.2**
TOO				IAmb	IAmb	23 18 04.0	
	comp=Z,367nm,1.4s						
TOO	**Toolangi**	**33.72**	**156**	P	**P**	**23 17 28.6**	**+2.0**
	comp=Z,150nm,1.9s						
GEXS	**Deakin Univers**	**33.80**	**158**	P	**P**	**23 17 29.7**	**+2.5**
	comp=Z,221nm,0.7s						
JOW	**Kunigami**	**33.85**	**359**	P	**P**	**23 17 29.1**	**+1.4**
	comp=Z,105nm,0.9s,baz=178,slow=7.5,SNR=12						
JOW	**Kunigami**	**33.85**	**359**	P	**P**	**23 17 28.4**	**+0.6**
JOW				IAmb	IAmb	23 17 30.3	
	comp=Z,315nm,1.2s						
JOW	**Kunigami**	**33.85**	**359**	P	**P**	**23 17 29.3**	**+1.5**
LHMI	**Lhok Sumawe**	**34.30**	**290**	P	**P**	**23 17 32.0**	**+0.1**
	comp=Z,5µmcomp=Z,7µmcomp=Z,478nm,1.1s						
LHMI	**Lhok Sumawe**	**34.30**	**290**	P	**P**	**23 17 31.2**	**-0.6**
LHMI	**Lhok Sumawe**	**34.30**	**290**	P	**P**	**23 17 33.7**	**+1.8**
JCJ	**Chichijima**	**36.42**	**20**	P	**P**	**23 17 49.4**	**-0.4**
	comp=Z,78nm,0.4s,baz=211,slow=19,SNR=6.0						
JCJ				S	**S**	**23 23 17.5**	**-4.0**
	comp=Z,113nm,1.0s,baz=277,slow=24,SNR=1.9						
JCJ	**Chichijima**	**36.42**	**20**	P	**P**	**23 17 50.2**	**+0.5**
SLVN	**Son La**	**37.58**	**320**	P	**P**	**23 18 00.8**	**+1.0**
SANVU	**Saraoutou**	**38.28**	**106**	P	**P**	**23 18 06.1**	**+0.5**
SANVU	**Saraoutou**	**38.28**	**106**	P	**P**	**23 18 07.3**	**+1.7**
JSU	**Suzuyama**	**38.53**	**2**	P	**P**	**23 18 08.2**	**+0.7**
SSE	**Sheshan**	**38.83**	**349**	P	**P**	**23 18 10.4**	**+0.5**
SSE				pP	**pP**	**23 18 38.8**	**+0.6**
SSE				sP	**sP**	**23 18 50.1**	**-2.7**
SSE				S	**S**	**23 23 58.6**	**+0.8**
SSE				pmax	pmax		
	comp=Z,68nm,1.2s						
SSE				pmax	pmax		
	comp=Z,440nm,5.4s						
SSE				LR	LR		
	comp=Z,450nm,23.1s						
NOUC	**Port Laguerre**	**38.85**	**116**	P	**P**	**23 18 11.2**	**+0.8**
DZM	**Mont Dzumac**	**38.97**	**116**	LR	LR	23 34 26.4	
	comp=Z,1µm,19.5s,baz=285,slow=36						
DZM	**Mont Dzumac**	**38.97**	**116**	*e*P	**P**	**23 18 12.0**	**+0.5**
	comp=Z,99nm,1.4s						
DZM				*e*pP	**pP**	**23 18 40.4**	**-0.3**
	comp=Z,169nm,1.1s						
DZM				*e*S	**S**	**23 24 03.8**	**+3.2**
	comp=Z,1µm,28.6s						
DZM				*e*LR	LR	23 28 56.7	
	comp=Z,3µm,30.8s						
DZM	**Mont Dzumac**	**38.97**	**116**	P	**P**	**23 18 11.3**	**-0.2**
DZM	**Mont Dzumac**	**38.97**	**116**	P	**P**	**23 18 12.1**	**+0.6**
TAU	**Tasmania Unive**	**39.04**	**159**	P	**P**	**23 18 13.0**	**+1.4**
TAU				pmax	pmax		
	comp=Z,192nm,1.3s						
TAU	**Tasmania Unive**	**39.04**	**159**	P	**P**	**23 18 13.0**	**+1.4**
TAU				IAmb	IAmb	23 18 48.3	
	comp=Z,192nm,1.2s						
ONTNC	**Ouen Toro**	**39.05**	**117**	P	**P**	**23 18 11.8**	**-0.2**
CM31	**Chiang Mai Arr**	**39.13**	**311**	P	**P**	**23 18 14.2**	**+1.5**
	SNR=90						
CM31	**Chiang Mai Arr**	**39.13**	**311**	P	**P**	**23 18 13.8**	**+1.1**
CMAR	**Chiang Mai Arr**	**39.13**	**311**	P	**P**	**23 18 13.2**	**+0.6**
	comp=Z,48nm,0.7s,baz=142,slow=6.9,SNR=206						
CMAR				pP	**pP**	**23 18 42.2**	**+1.3**
	comp=Z,53nm,1.0s,baz=148,slow=8.5,SNR=5.6						
CMAR				PcP	**PcP**	**23 20 20.8**	**+1.0**
	comp=Z,12nm,0.6s,baz=160,slow=2.7,SNR=6.4						
CMAR				ScP	**ScP**	**23 23 57.4**	**+1.4**
	comp=Z,4.9nm,0.8s,baz=157,slow=3.1,SNR=5.1						
CMAR				LR	LR	23 33 59.2	
	comp=Z,882nm,21.8s,baz=170,slow=35						
CMAR	**Chiang Mai Arr**	**39.13**	**311**	P	**P**	**23 18 13.3**	**+0.6**
CMAR				*PP	**pP**	**23 18 42.2**	**+1.3**
CMAR						23 20 20.8	
CMAR						23 23 57.4	
CMAR	**Chiang Mai Arr**	**39.13**	**311**	P	**P**	**23 18 13.6**	**+1.0**
CMAR					**PcP**	**23 20 21.6**	**+1.9**
CMAR				ScP	**ScP**	**23 23 57.8**	**+1.8**
LIFNC	**LIFOU**	**39.34**	**114**	P	**P**	**23 18 14.0**	**-0.4**
LIFNC	**LIFOU**	**39.34**	**114**	P	**P**	**23 18 15.5**	**+1.0**
CHTO	**Chiang Mai**	**39.35**	**312**	P	**P**	**23 18 15.4**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,812nm,1.7s						
CHTO	**Chiang Mai**	**39.35**	**312**	P	**P**	**23 18 15.3**	**+0.8**
CHTO	**Chiang Mai**	**39.35**	**312**	P	**P**	**23 18 15.4**	**+0.9**
CHTO	**Chiang Mai**	**39.35**	**312**	P	**P**	**23 18 15.7**	**+1.2**
YATNC	**Mamie plateau,**	**39.37**	**116**	P	**P**	**23 18 15.5**	**+0.8**
OUENC	**Ouen Island, N**	**39.42**	**117**	P	**P**	**23 18 15.4**	**+0.3**
OUENC				IAmb	IAmb	23 18 51.7	
	comp=Z,212nm,1.5s						
OUENC	**Ouen Island, N**	**39.42**	**117**	P	**P**	**23 18 16.6**	**+1.5**
	comp=Z,61nm,1.6s						
PINNC	**Pines Island,**	**40.02**	**117**	P	**P**	**23 18 20.2**	**+0.2**
PINNC				IAmb	IAmb	23 18 56.7	
	comp=Z,155nm,1.0s						
WHN	**Wuhan**	**40.09**	**340**	⇑*i*P	**P**	**23 18 21.6**	**+1.1**
WHN				pP	**pwP**	**23 18 52.1**	**-3.1**
WHN				S	**S**	**23 24 17.3**	**+0.5**
WHN				pmax	pmax		
	comp=Z,520nm,1.1s						
WHN				pmax	pmax		
	comp=Z,3µm,4.0s						
JNU	**Nakatsue**	**40.16**	**2**	P	**P**	**23 18 21.1**	**+0.2**
	comp=Z,63nm,1.0s,baz=176,slow=4.7,SNR=7.0						
JNU	**Nakatsue**	**40.16**	**2**	P	**P**	**23 18 20.9**	**-0.1**
MARNC	**Mare, Loyalty**	**40.23**	**115**	P	**P**	**23 18 22.0**	**+0.2**
NJ2	**Nanjing**	**40.23**	**347**	⇑*i*P	**P**	**23 18 20.6**	**-1.0**
NJ2				pP	**pP**	**23 18 51.0**	**+1.1**
NJ2				sP	**sP**	**23 19 01.8**	**-2.7**
NJ2				PP	**PP**	**23 19 54.8**	**-2.2**
NJ2				PcP	**PcP**	**23 20 22.3**	**-0.7**
NJ2				ScP	**ScP**	**23 23 59.4**	**-0.5**
NJ2				S	**S**	**23 24 15.1**	**-3.7**
NJ2				sS	**sS**	**23 25 06.3**	**-2.6**
NJ2				pmax	pmax		
	comp=Z,130nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,1µm,4.7s						
NJ2				LR	LR		
	comp=Z,680nm,12.3s						
NJ2				LR	LR		
	comp=Z,1µm,16.2s						
NJ2				LR	LR		
	comp=Z,840nm,18.6s						
PBA	**Port Blair**	**40.66**	**297**	P	**P**	**23 18 23.5**	**-1.8**
PBA				IAmb	IAmb	23 19 39.3	
	comp=Z,256nm,1.4s						
JMN	**Monobe**	**40.98**	**6**	P	**P**	**23 18 27.5**	**-0.3**
KMI	**Kunming**	**41.08**	**322**	⇑P	**P**	**23 18 30.8**	**+1.8**
KMI				pP	pP	23 19 00.3	+3.0
KMI				sP	sP	23 19 13.9	+2.0
KMI				PcP	**PcP**	**23 20 26.8**	**+0.6**
KMI				S	**S**	**23 24 36.6**	**+4.5**
KMI				sS	sS	23 25 22.3	0.0
KMI				pmax	pmax		
	comp=Z,310nm,1.4s						
KMI				pmax	pmax		
	comp=Z,1µm,3.5s						
KMI				LR	LR		
	comp=Z,510nm,21.2s						
KMI				LR	LR		
	comp=Z,1µm,18.7s						
KMI				LR	LR		
	comp=Z,680nm,27.5s						
JHJ2	**Mitsune**	**41.40**	**14**	P	**P**	**23 18 30.3**	**-0.8**
JHS	**Saijyo**	**42.17**	**5**	P	**P**	**23 18 37.5**	**+0.1**
JHS				IAmb	IAmb	23 18 39.0	
	comp=Z,195nm,1.3s						
JWT	**Wachi**	**42.70**	**8**	P	**P**	**23 18 42.1**	**+0.5**
JWT				IAmb	IAmb	23 19 19.5	
	comp=Z,160nm,1.0s						
INU	**Inuyama**	**43.01**	**10**	P	**P**	**23 18 44.4**	**+0.2**
INU	**Inuyama**	**43.01**	**10**	P	**P**	**23 18 44.9**	**+0.8**
JGF	**Kuroka**	**43.31**	**10**	P	**P**	**23 18 47.3**	**+0.6**
TJN	**Taejon**	**43.39**	**358**	*c i*P	**P**	**23 18 48.2**	**+1.0**
TJN	**Taejon**	**43.39**	**358**	P	**P**	**23 18 48.6**	**+1.4**
MJAR	**Matsushiro Arr**	**44.38**	**11**	P	**P**	**23 18 54.2**	**-0.9**
	comp=Z,70nm,0.9s,baz=191,slow=9.2,SNR=60						
MJAR				pP	**pP**	**23 19 24.0**	**0.0**
	comp=Z,29nm,0.9s,baz=190,slow=9.1,SNR=4.0						
MJAR				PcP	**PcP**	**23 20 36.8**	**+0.1**
	comp=Z,10nm,1.0s,baz=197,slow=6.0,SNR=2.6						
MJAR				S	**S**	**23 25 17.7**	**-1.9**
	comp=Z,0.8nm,0.3s,baz=187,slow=13,SNR=4.5						
MJAR				LR	LR	23 36 47.6	
	comp=Z,900nm,19.6s,baz=185,slow=35						
MJAR	**Matsushiro Arr**	**44.38**	**11**	P	**P**	**23 18 54.2**	**-0.9**
MJAR				*PP	**pP**	**23 19 24.0**	**0.0**
MJAR						23 20 36.8	
MAJO	**Matsushiro**	**44.38**	**11**	*c i*P	**P**	**23 18 54.4**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,132nm,1.1s						
MAJO	**Matsushiro**	**44.38**	**11**	P	**P**	**23 18 54.3**	**-0.8**
MAJO	**Matsushiro**	**44.38**	**11**	P	**P**	**23 18 54.7**	**-0.4**
MAT	**Matsushiro**	**44.38**	**11**	P	**P**	**23 18 54.0**	**-1.1**
MAT				S	**S**	**23 25 16.4**	**-3.2**
KSAR	**Wonju Array Be**	**44.44**	**359**	P	**P**	**23 18 56.6**	**+1.0**
KSAR	**Wonju Array Be**	**44.44**	**359**	P	**P**	**23 18 56.6**	**+1.0**
KSRS	**Korea Array**	**44.45**	**359**	P	**P**	**23 18 56.6**	**+1.1**
	comp=Z,36nm,0.9s,baz=177,slow=11,SNR=61						
KSRS				pP	**pP**	**23 19 25.9**	**+1.4**
	comp=Z,16nm,1.0s,baz=183,slow=7.6,SNR=3.6						
KSRS				PcP	**PcP**	**23 20 36.7**	**-0.2**
	comp=Z,15nm,0.7s,baz=184,slow=3.3,SNR=11						
KSRS				ScP	**ScP**	**23 24 16.9**	**+0.2**
	comp=Z,6.2nm,0.8s,baz=179,slow=4.6,SNR=5.3						
KSRS	**Korea Array**	**44.45**	**359**	P	**P**	**23 18 56.7**	**+1.1**
KSRS				*PP	**pP**	**23 19 25.9**	**+1.4**
KSRS						23 20 36.7	
KS19	**Wonju Array Si**	**44.50**	**359**	P	**P**	**23 18 56.9**	**+0.8**
INCN	**Inchon**	**44.52**	**357**	P	**P**	**23 18 56.5**	**+0.3**
INCN				pmax	pmax		
	comp=Z,358nm,1.8s						
INCN	**Inchon**	**44.52**	**357**	P	**P**	**23 18 56.5**	**+0.3**
INCN				IAmb	IAmb	23 19 28.8	
	comp=Z,358nm,1.8s						
TIA	**Tai'an**	**44.62**	**346**	⇑P	**P**	**23 18 56.4**	**-0.6**
TIA				pP	**pP**	**23 19 25.0**	**-0.9**
TIA				S	**S**	**23 25 17.5**	**-5.6**
TIA				sS	**sS**	**23 26 10.3**	**-3.6**
TIA				SS	**ScS**	**23 28 42.4**	**+1.4**
TIA				pmax	pmax		
	comp=Z,53nm,1.4s						
TIA				pmax	pmax		
	comp=Z,800nm,9.3s						
TIA				LR	LR		
	comp=Z,740nm,17.6s						
TIA				LR	LR		
	comp=Z,670nm,17.7s						
TIA				LR	LR		
	comp=Z,930nm,21.6s						
CD2	**Chengdu**	**44.97**	**329**	⇑P	**P**	**23 18 59.9**	**-0.1**
CD2				pP	pP	23 19 29.8	+0.9
CD2				PcP	**PcP**	**23 20 39.3**	**+0.3**
CD2				S	**S**	**23 25 30.3**	**+1.9**
CD2				pmax	pmax		
	comp=Z,250nm,1.1s						
CD2				pmax	pmax		
	comp=Z,790nm,6.6s						
CD2				LR	LR		
	comp=Z,3µm,17.1s						
CD2				LR	LR		
	comp=Z,1µm,17.8s						
XAN	**Xi'an**	**45.23**	**336**	P	**P**	**23 19 01.6**	**-0.4**
XAN				pP	pP	23 19 31.4	+0.5
XAN				sP	sP	23 19 44.4	-0.9
XAN				PcP	**PcP**	**23 20 41.3**	**+1.5**
XAN				PP	**PP**	**23 20 50.4**	**-0.2**
XAN				ScP	**ScP**	**23 24 22.3**	**+2.1**
XAN				S	**S**	**23 25 26.8**	**-5.3**
XAN				ScS	**ScS**	**23 28 44.6**	**-0.6**
XAN				SS	**SS**	**23 28 48.8**	**-8.7**
XAN				pmax	pmax		
	comp=Z,190nm,1.1s						
XAN				pmax	pmax		
	comp=Z,1µm,6.5s						
XAN				LR	LR		
	comp=Z,1µm,17.9s						
XAN				LR	LR		
	comp=Z,540nm,18.5s						
XAN				LR	LR		
	comp=Z,2µm,19.2s						
JSD	**Sado**	**45.84**	**10**	P	**P**	**23 19 06.6**	**0.0**
JMM	**Marumori**	**46.18**	**13**	P	**P**	**23 19 09.5**	**+0.3**
JMM				IAmb	IAmb	23 19 56.0	
	comp=Z,163nm,0.9s						
DL2	**Dalian**	**46.40**	**352**	⇑*i*P	**P**	**23 19 10.1**	**-0.8**
DL2				pP	**pP**	**23 19 38.4**	**-1.6**
DL2				sP	**sP**	**23 19 51.8**	**-2.6**
DL2				PcP	**PcP**	**23 20 44.8**	**+1.1**
DL2				S	**S**	**23 25 45.4**	**-3.1**
DL2				pmax	pmax		
	comp=Z,85nm,1.1s						
DL2				pmax	pmax		
	comp=Z,1µm,5.3s						
DL2				LR	LR		
	comp=Z,730nm,15.2s						
DL2				LR	LR		
	comp=Z,1µm,20.6s						
DL2				LR	LR		
	comp=Z,1µm,20.0s						
LKP	**Lekhapani**	**47.01**	**318**	⇑*e*P	**P**	**23 19 15.6**	**-0.4**
KOHI	**KOHIMA**	**47.15**	**315**	*e*P	**P**	**23 19 17.2**	**0.0**
MOKO	**MOKOCHONG**	**47.25**	**316**	*e*P	**P**	**23 19 18.5**	**+0.5**
TIY	**Taiyuan**	**47.30**	**342**	P	**P**	**23 19 17.8**	**-0.3**
TIY				PP	**PP**	**23 21 10.4**	**-0.2**
TIY				S	**S**	**23 25 55.6**	**-6.0**
TIY				pmax	pmax		
	comp=Z,78nm,1.0s						
TIY				pmax	pmax		
	comp=Z,750nm,4.5s						
TIY				LR	LR		
	comp=Z,520nm,10.0s						
TIY				LR	LR		
	comp=Z,470nm,10.9s						
TIY				LR	LR		
	comp=Z,510nm,16.6s						
ITAN	**ITANAGAR**	**48.32**	**316**	*e*P	**P**	**23 19 26.3**	**+0.2**
BJT	**Baijiatuau**	**48.48**	**347**	IAmb	IAmb	23 19 28.7	
	comp=Z,160nm,1.2s						
BJI	**Beijing**	**48.49**	**347**	P	**P**	**23 19 27.0**	**-0.1**
BJI				pP	**pP**	**23 19 57.5**	**+1.0**
BJI				sP	**sP**	**23 20 12.3**	**+1.4**
BJI				PcP	**PcP**	**23 20 52.6**	**+1.5**
BJI				ScP	**ScP**	**23 24 35.1**	**+1.5**
BJI				S	**S**	**23 26 14.6**	**-3.5**
BJI				pmax	pmax		
	comp=Z,150nm,1.2s						
BJI				pmax	pmax		
	comp=Z,1µm,4.0s						
BJI				LR	LR		
	comp=Z,520nm,21.1s						
BJI				LR	LR		
	comp=Z,730nm,20.6s						
BJI				LR	LR		
	comp=Z,950nm,25.6s						
SHL	**Shillong**	**48.63**	**313**	P	**P**	**23 19 28.5**	**-0.2**
SHL				pmax	pmax		
	comp=Z,783nm,1.5s						
SHL	**Shillong**	**48.63**	**313**	*e*P	**P**	**23 19 28.6**	**-0.2**
SHL				*e*PG	**P**	**23 19 30.0**	**+1.3**
SHL				IAmb	IAmb	23 19 30.7	
	comp=Z,149nm,0.6s						
SHL	**Shillong**	**48.63**	**313**	P	**P**	**23 19 29.2**	**+0.5**
	SNR=102						
SHL	**Shillong**	**48.63**	**313**	P	**P**	**23 19 28.5**	**-0.2**
MSVF	**Nonsavu**	**48.88**	**107**	LR	LR	23 38 19.9	
	comp=Z,1µm,19.9s,baz=284,slow=34						
MSVF	**Nonsavu**	**48.88**	**107**	P	**P**	**23 19 31.7**	**+1.1**
MSVF				pmax	pmax		
	comp=Z,84nm,1.1s						
MSVF	**Nonsavu**	**48.88**	**107**	P	**P**	**23 19 31.7**	**+1.1**
MSVF	**Nonsavu**	**48.88**	**107**	P	**P**	**23 19 32.3**	**+1.7**
JTM	**Tenmabayashi**	**49.04**	**12**	IAmb	IAmb	23 19 33.1	
	comp=Z,260nm,1.1s						
SNY	**Shenyang**	**49.06**	**355**	⇑P	**P**	**23 19 31.5**	**+0.1**
SNY				S	**S**	**23 26 23.1**	**-2.9**
SNY				pmax	pmax		
	comp=Z,1µm,2.5s						
SNY				LR	LR		
	comp=Z,1µm,20.2s						
SNY				LR	LR		
	comp=Z,870nm,16.7s						
SNY				LR	LR		
	comp=Z,2µm,20.2s						
LZH	**Lanzhou**	**49.14**	**333**	⇑P	**P**	**23 19 33.4**	**+1.0**
LZH				pP	pwP	23 20 05.6	-2.4
LZH				sP	sP	23 20 20.4	+4.3
LZH				PP	**PP**	**23 21 25.3**	**-2.2**
LZH				ScP	**ScP**	**23 24 38.4**	**+1.7**
LZH				S	**S**	**23 26 25.1**	**-2.6**
LZH				sS	sS	23 27 17.5	-1.8
LZH				pmax	pmax		
	comp=Z,320nm,1.4s						
LZH				pmax	pmax		
	comp=Z,1µm,6.0s						
LZH				LR	LR		
	comp=Z,940nm,16.8s						
LZH				LR	LR		
	comp=Z,1µm,17.3s						
LZH				LR	LR		
	comp=Z,1µm,16.8s						
OUZ	**Omahuta**	**49.44**	**131**	P	**P**	**23 19 35.9**	**+1.4**
OUZ				IAmb	IAmb	23 20 13.3	
	comp=Z,164nm,1.1s						
VLA	**Vladivostok**	**50.17**	**3**	*c i*P	**P**	**23 19 40.8**	**+1.0**
VLA				pmax	pmax		
	comp=Z,209nm,1.2s						
PALK	**Pallekele**	**50.29**	**286**	P	**P**	**23 19 40.9**	**-0.4**
PALK				pmax	pmax		
	comp=Z,304nm,1.7s						
PALK	**Pallekele**	**50.29**	**286**	P	**P**	**23 19 41.0**	**-0.4**
PALK	**Pallekele**	**50.29**	**286**	P	**P**	**23 19 40.9**	**-0.4**
PALK				IAmb	IAmb	23 19 42.6	
	comp=Z,304nm,1.7s						
DGTI	**Dogotuki**	**50.36**	**105**	P	**P**	**23 19 42.9**	**+1.1**
DCZ	**Deep Cove**	**50.37**	**146**	P	**P**	**23 19 41.7**	**+0.3**
DCZ				IAmb	IAmb	23 20 18.1	
	comp=Z,122nm,1.2s						
HHC	**Hu-ho-hao-te**	**50.45**	**343**	*i* P	**P**	**23 19 42.8**	**+0.6**
HHC				pP	pP	23 20 12.6	+1.0
HHC				sP	sP	23 20 28.3	+2.4
HHC				S	**S**	**23 26 44.6**	**-1.1**
HHC				sS	sS	23 27 35.4	-2.1
HHC				pmax	pmax		
	comp=Z,110nm,1.1s						
HHC				pmax	pmax		
	comp=Z,1µm,6.0s						
PYZ	**Puysegur Point**	**50.54**	**147**	P	**P**	**23 19 43.6**	**+0.9**
PYZ				IAmb	IAmb	23 21 30.2	
	comp=Z,130nm,1.1s						
ERM	**Erimo**	**50.67**	**14**	*c i*P	**P**	**23 19 44.2**	**+0.6**
ERM				pmax	pmax		
	comp=Z,15nm,0.9s						
ERM	**Erimo**	**50.67**	**14**	P	**P**	**23 19 44.2**	**+0.6**
ERM	**Erimo**	**50.67**	**14**	P	**P**	**23 19 44.7**	**+1.1**
BTO	**Baotou**	**50.70**	**341**	*e*P	**P**	**23 19 44.8**	**+0.8**
BTO				S	**S**	**23 26 50.4**	**+1.3**
BTO				LR	LR		
	comp=Z,3µm,7.9s						
BTO				LR	LR		
	comp=Z,2µm,12.4s						
FOZ	**Fox Glacier**	**50.81**	**142**	P	**P**	**23 19 45.2**	**+0.5**
FOZ				IAmb	IAmb	23 20 21.7	
	comp=Z,129nm,1.2s						
MLZ	**Mavora Lakes**	**50.85**	**145**	IAmb	IAmb	23 20 22.1	
	comp=Z,144nm,1.2s						
WKZ	**Wanaka**	**51.06**	**144**	P	**P**	**23 19 47.4**	**+0.8**
WKZ				IAmb	IAmb	23 20 50.9	
	comp=Z,197nm,1.4s						
WHZ	**Wether Hill Ro**	**51.07**	**146**	IAmb	IAmb	23 20 22.8	
	comp=Z,240nm,1.1s						
JEW	**Eniwo**	**51.09**	**12**	P	**P**	**23 19 46.7**	**0.0**
QRZ	**Quartz Range**	**51.15**	**138**	P	**P**	**23 19 48.6**	**+1.3**
QRZ				IAmb	IAmb	23 20 24.3	
	comp=Z,132nm,1.0s						
USA0B	**Ussuriysk Arra**	**51.25**	**3**	P	**P**	**23 19 48.3**	**+0.4**
USA0B				pmax	pmax		
	comp=Z,89nm,1.0s						
USA0B	**Ussuriysk Arra**	**51.25**	**3**	P	**P**	**23 19 48.2**	**+0.4**
USRK	**Ussuriysk Ar.**	**51.25**	**3**	P	**P**	**23 19 48.5**	**+0.6**
	comp=Z,51nm,0.8s,baz=185,slow=7.1,SNR=60						
USRK				ScP	**ScP**	**23 24 45.0**	**-0.3**
	comp=Z,4.0nm,0.8s,baz=151,slow=4.4,SNR=5.2						
USRK				LR	LR	23 44 33.4	
	comp=Z,245nm,18.0s,baz=165,slow=39						
USRK	**Ussuriysk Ar.**	**51.25**	**3**	P	**P**	**23 19 48.6**	**+0.7**
USRK	**Ussuriysk Ar.**	**51.25**	**3**	P	**P**	**23 19 48.5**	**+0.7**
USRK					**ScP**	**23 24 45.8**	**+0.5**

LBZ	Lake Benmore	51.50	143	IAmb	IAmb	23 20 26.1	
	comp=Z,284nm,1.3s						
MDJ	Mudanjiang	51.60	1	P	P	23 19 51.0	+0.5
MDJ				S	S	23 27 01.1	+0.1
MDJ				pmax	pmax		
	comp=Z,130nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,2µm,3.9s						
MDJ	Mudanjiang	51.60	1	IAmb	IAmb	23 19 52.1	
	comp=Z,121nm,1.1s						
MDJ	Mudanjiang	51.60	1	P	P	23 19 51.4	+0.9
LSA	Lhasa	51.68	317	P	P	23 19 53.4	+1.4
LSA	Lhasa	51.68	317	*i* P	P	23 19 52.9	+0.9
	SNR=114						
LSA	Lhasa	51.68	317	P	P	23 19 53.4	+1.4
LSA				pmax	pmax		
	comp=Z,2µm,1.7s						
LSA	Lhasa	51.68	317	P	P	23 19 52.9	+0.9
LSA	Lhasa	51.68	317	P	P	23 19 53.4	+1.4
THZ	Tophouse	51.85	139	P	P	23 19 52.8	+0.2
TOZ	Tahuroa Road	51.85	133	P	P	23 19 59.3	+6.7
LKBA	Tubou, Lakemba	51.89	107	P	P	23 19 53.9	+0.7
NNZ	Nelson	51.90	138	P	P	23 19 53.2	+0.4
NNZ				IAmb	IAmb	23 19 54.5	
	comp=Z,144nm,1.6s						
LTZ	Lake Taylor	51.94	140	P	P	23 19 54.0	+0.8
LTZ				IAmb	IAmb	23 20 30.6	
	comp=Z,207nm,1.8s						
GTK	Tadong	52.04	313	*e*P	P	23 19 54.9	+0.6
OXZ	Oxford	52.07	141	P	P	23 19 55.0	+0.8
ODZ	Otahua Downs	52.14	143	P	P	23 19 55.0	+0.4
ODZ				IAmb	IAmb	23 20 31.3	
	comp=Z,127nm,1.3s						
BOK	Bokaro	52.18	308	*e*P	P	23 19 55.5	+0.3
BOK				IAmb	IAmb	23 20 01.1	
	comp=Z,26nm,0.6s						
WAZ	Wanganui	52.33	136	P	P	23 19 58.3	+2.2
TEY	Ternei	52.46	7	⇑*e*P	P	23 19 57.1	+0.3
TEY				*e*		23 27 09.8	
TEY				pmax	pmax		
	comp=N,40nm,1.0s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=N,100nm,3.3s						
TEY				pmax	pmax		
	comp=Z,100nm,3.5s						
TEY				pmax	pmax		
	comp=Z,80nm,1.2s						
BSWZ	Blackbirch Sta	52.46	138	P	P	23 19 57.7	+0.6
WTVZ	West Tongariro	52.48	135	P	P	23 19 59.6	+2.2
NNVZ	North Ngauruho	52.51	135	P	P	23 19 59.9	+2.3
NGZ	Ngauruhoe	52.52	135	P	P	23 19 59.2	+1.5
ASAJ	Asahikawa	52.55	12	P	P	23 19 58.0	+0.4
	comp=Z,53nm,0.8s,baz=234,slow=14,SNR=25						
ASAJ	Asahikawa	52.55	12	P	P	23 19 58.0	+0.4
JKA	Kamikawa-asahi	52.55	12	IAmb	IAmb	23 19 59.5	
	comp=Z,129nm,1.1s						
TMVZ	Te Maari	52.56	135	P	P	23 20 00.1	+2.1
KHZ	Kahutara	52.58	139	IAmb	IAmb	23 20 35.0	
	comp=Z,98nm,1.0s						
ETVZ	East Tongariro	52.58	135	P	P	23 20 00.2	+2.1
WNVZ	Wahianoa	52.58	135	P	P	23 19 59.5	+1.3
MQZ	McQueen's Vall	52.65	141	P	P	23 19 59.0	+0.6
MQZ				IAmb	IAmb	23 20 35.0	
	comp=Z,173nm,1.5s						
CMWZ	Cape Campbell	52.70	138	P	P	23 19 58.7	-0.1
MOVZ	Moawhango	52.72	135	P	P	23 19 59.9	+0.8
SNZO	South Karori	52.83	137	P	P	23 19 59.4	-0.3
SNZO				IAmb	IAmb	23 20 40.3	
	comp=Z,158nm,1.1s						
MCQ	Macquarie Isla	52.92	159	P	P	23 20 02.7	+2.6
	baz=53,SNR=3.3						
MCQ	Macquarie Isla	52.92	159	P	P	23 20 01.3	+1.1
MCQ				pmax	pmax		
	comp=Z,182nm,1.1s						
MCQ	Macquarie Isla	52.92	159	P	P	23 20 01.3	+1.1
MCQ				IAmb	IAmb	23 20 38.1	
	comp=Z,182nm,1.1s						
OGWZ	Otaki Gorge	52.92	137	P	P	23 20 00.8	+0.3
BHHZ	Black Hill Sta	52.97	135	P	P	23 20 01.3	+0.3
MRZ	Mangatainoka R	53.13	136	P	P	23 20 02.0	0.0
TSZ	Takapari Road	53.14	135	P	P	23 20 02.2	+0.1
BKZ	Black Stump Fm	53.14	134	P	P	23 20 02.4	+0.3
BKZ	Black Stump Fm	53.14	134	P	P	23 20 02.5	+0.3
HOWZ	Holdsworth Sta	53.19	137	P	P	23 20 02.5	+0.1
KWHZ	Kaweka Forest	53.20	135	P	P	23 20 03.4	+0.8
URZ	Urewera	53.23	133	P	P	23 20 02.8	0.0
URZ	Urewera	53.23	133	IAmb	IAmb	23 20 39.6	
	comp=Z,97nm,1.1s						
MSWZ	Moikau Station	53.24	137	P	P	23 20 01.3	-1.5
YUK	Yuzh-Kuril'sk	53.24	15	*d i*P	P	23 20 02.0	-0.6
YUK				*i* *PP	pP	23 20 32.1	-1.0
YUK				*e*		23 22 02.4	
YUK				*e*PPP	PPP	23 23 10.5	
YUK				*e*S	S	23 27 23.5	+0.1
YUK				*e*SS	SS	23 31 00.6	-4.6
YUK				pmax	pmax		
	comp=Z,549nm,1.2s						
YUK				pmax	pmax		
	comp=Z,390nm,1.0s						
YUK				pmax	pmax		
	comp=E,111nm,1.1s						
KRHZ	Kereru	53.25	135	P	P	23 20 03.2	+0.3
RTZ	Ruatahuna	53.27	133	P	P	23 20 03.9	+0.7
MTW	Mount Morrison	53.30	137	P	P	23 20 03.0	-0.2
NMHZ	Naumai	53.34	134	P	P	23 20 04.6	+1.0
PRWZ	Pori Road	53.36	136	P	P	23 20 04.2	+0.5
MCHZ	McNeill Hill	53.40	135	P	P	23 20 05.0	+1.0
RAHZ	Arahi	53.47	134	P	P	23 20 05.3	+0.8
HAZ	Te Kaha	53.53	132	P	P	23 20 05.5	+0.6
RUGZ	Raukumara Rang	53.53	132	P	P	23 20 05.0	-0.1
TRWZ	Traveller	53.53	137	P	P	23 20 04.9	0.0
RAGZ	Rawiri	53.54	133	P	P	23 20 05.7	+0.6
TMWZ	Te Maipa	53.54	137	P	P	23 20 05.5	+0.5
MWZ	Matawai	53.56	133	P	P	23 20 05.6	+0.4
SNGZ	Shannon Statio	53.60	134	P	P	23 20 06.0	+0.5
BFZ	Birch Farm	53.60	136	P	P	23 20 05.3	-0.1
BFZ	Birch Farm	53.60	136	P	P	23 20 05.3	-0.1
ANWZ	Angora Road	53.67	136	P	P	23 20 05.7	-0.2
KAHZ	Kahuranaki	53.67	135	P	P	23 20 06.6	+0.6
GTA	Gaotai	53.70	332	⇑P	P	23 20 07.0	+0.8
GTA				pP	pP	23 20 36.1	0.0
GTA				sP	sP	23 20 52.5	+2.2
GTA				ScP	ScP	23 24 58.4	+2.1
GTA				S	S	23 27 33.6	+3.5
GTA				sS	sS	23 28 20.6	-1.4
GTA				pmax	pmax		
	comp=E,220nm,1.0s						
GTA				pmax	pmax		
	comp=E,980nm,10.8s						
GTA				LR	LR		
	comp=E,2µm,18.7s						
GTA				LR	LR		
	comp=E,2µm,17.5s						
GTA				LR	LR		
	comp=E,1µm,18.7s						
PKGZ	Pakihiroa	53.79	132	P	P	23 20 07.6	+0.7
TWGZ	Tauwhareparae	53.83	133	P	P	23 20 08.5	+1.3
MXZ	Matakaoa Point	53.84	132	P	P	23 20 07.9	+0.7
MXZ	Matakaoa Point	53.84	132	P	P	23 20 07.4	+0.1
MXZ				IAmb	IAmb	23 20 09.1	
	comp=Z,321nm,1.6s						
RIGZ	Rimuhau	53.87	133	P	P	23 20 07.8	+0.3
JIRN	Jiri	53.99	312	*e*Pg	P	23 20 09.5	+0.6
	comp=Z,458nm,0.7s						
WMGZ	Waiomatatini S	54.02	132	P	P	23 20 09.3	+0.8
CNGZ	Carnagh Statio	54.11	133	P	P	23 20 12.6	+3.4
GUN	Gumba	54.36	312	*e*Pg	P	23 20 12.1	+0.6
	comp=Z,622nm,0.5s						
BLSP	Bilaspur	54.40	304	*e*P	P	23 20 10.7	-0.8
PKI	Pulchoki	54.53	311	*e*Pg	P	23 20 12.9	+0.2
	comp=Z,183nm,0.4s						
PKIN	Phulchoki	54.54	311	*e*Pg	P	23 20 12.9	+0.2
	comp=Z,199nm,0.4s						
KKN	Kakani	54.74	311	*e*Pg	P	23 20 14.6	+0.5
	comp=Z,398nm,0.8s						
DMN	Daman	54.77	311	*e*Pg	P	23 20 14.8	+0.4
	comp=Z,427nm,0.8s						
KUR	Kuril'sk	54.89	16	*e*P	P	23 20 15.3	+0.8
KUR				*e*S	S	23 27 45.5	-0.1
KUR				pmax	pmax		
	comp=Z,346nm,1.5s						
YSS	Yuzh-Sakhalins	55.30	11	α *i*P	P	23 20 17.9	+0.5
YSS				*e*		23 21 04.4	
YSS				*e*		23 22 25.2	
YSS				*e*S	S	23 27 49.6	-1.4
YSS				*e*SS	SS	23 31 29.4	-8.2
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,500nm,4.5s						
YSS				smax	smax		
	comp=N,200nm,7.5s						
YSS	Yuzh-Sakhalins	55.30	11	P	P	23 20 17.9	+0.5
YSS				IAmb	IAmb	23 20 18.5	
	comp=Z,102nm,1.2s						
YSS	Yuzh-Sakhalins	55.30	11	P	P	23 20 18.6	+1.2
GKN	Gorkha	55.34	311	*e*Pg	P	23 20 18.8	+0.5
	comp=Z,504nm,0.3s						
AIS	Amsterdam Isla	55.52	229	P	P	23 20 21.3	+2.0
AIS				IAmb	IAmb	23 20 26.1	
	comp=Z,154nm,1.1s						
HYB	Hyderabad	55.53	297	*i* P	P	23 20 19.0	-0.8
	comp=Z,120nm,1.0s						
HYB				*e*pP	pP	23 20 48.5	-1.6
HYB				*e*sP	sP	23 21 03.0	-1.4
HYB				*e*PcP	PcP	23 21 20.0	+1.9
HYB	Hyderabad	55.53	297	*e*P	P	23 20 18.5	-1.3
VLK	Valmikinagar	55.55	310	⇑*e*P	P	23 20 20.0	+0.4
DGAR	Diego Garcia	56.07	266	P	P	23 20 23.4	-0.2
DGAR				pmax	pmax		
	comp=Z,656nm,1.6s						
DGAR	Diego Garcia	56.07	266	P	P	23 20 23.4	-0.2
DANN	Dangsing	56.17	311	*e*Pg	P	23 20 24.7	+0.2
KLR	Kul'dur	56.26	2	P	P	23 20 24.7	+0.4
	comp=Z,54nm,1.0s,baz=202,slow=5.1,SNR=80						
KLR				ScP	ScP	23 25 06.2	-0.9
	comp=Z,5.5nm,0.8s,baz=252,slow=3.6,SNR=3.8						
KLR	Kul'dur	56.26	2	⇑*i*P	P	23 20 24.6	+0.3
KLR				pmax	pmax		
	comp=Z,160nm,1.4s						
KAAM	Kaadhehdhoo	56.39	275	P	P	23 20 26.2	+0.2
KAAM				IAmb	IAmb	23 20 29.0	
	comp=Z,222nm,1.3s						
PYUN	Piuthan	56.62	310	*e*Pg	P	23 20 28.1	+0.6
	comp=Z,1µm,1.0s						
JBP	Jabalpur	56.64	304	⇓*e*P	P	23 20 26.9	-0.6
JBP				IAmb	IAmb	23 20 28.1	
	comp=Z,106nm,0.8s						
UGL	Uglegorsk	57.21	10	*c i*P	P	23 20 32.3	+1.3
UGL				*e*		23 21 06.7	
UGL				*e*S	S	23 28 17.5	+1.4
UGL				pmax	pmax		
	comp=Z,290nm,1.1s						
UGL				pmax	pmax		
	comp=Z,810nm,1.4s						
UGL				smax	smax		
	comp=N,2µm,7.0s						
LATR	Latur	57.66	297	*e*P	P	23 20 32.1	-2.6
MNCI	Minicoy	57.87	284	P	P	23 20 36.9	+0.6
GRNR	Gornyy	58.11	6	⇑*i*P	P	23 20 38.4	+1.2
GRNR				*e*S	S	23 28 33.2	+5.4
GRNR				pmax	pmax		
	comp=N,30nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,50nm,1.2s						
GRNR				smax	smax		
	comp=N,2.0nm,0.7s						
GRNR				MLR	MLR		
	comp=N,340nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,690nm,17.0s						
ULN	Ulaanbaatar	58.17	343	*c i*P	P	23 20 39.2	+1.2
ULN				pmax	pmax		
	comp=Z,203nm,1.8s						
ULN	Ulaanbaatar	58.17	343	P	P	23 20 39.1	+1.1
SONM	Songino Array	58.34	342	P	P	23 20 40.0	+0.9
	comp=Z,41nm,1.0s,baz=163,slow=7.3,SNR=146						
SONM				pP	pP	23 21 10.4	+0.9
	comp=Z,20nm,0.8s,baz=153,slow=7.7,SNR=5.1						
SONM				PcP	PcP	23 21 28.2	-0.5
	comp=Z,29nm,0.9s,baz=164,slow=5.9,SNR=7.2						
SONM				ScP	ScP	23 25 16.3	-0.3
	comp=Z,4.7nm,0.8s,baz=159,slow=5.1,SNR=3.9						
SONM				PKPPKP	P'P'df	23 50 17.0	+0.9
	comp=Z,1.3nm,0.9s,baz=272,slow=1.6,SNR=6.0						
SONM				PKP2bc	P'P'bc	23 50 27.5	0.0
	comp=Z,2.6nm,0.8s,baz=276,slow=2.3,SNR=12						
SONM	Songino Array	58.34	342	P	P	23 20 40.1	+1.0
SONM				pmax	pmax		
	comp=Z,139nm,1.3s						
SONM	Songino Array	58.34	342	P	P	23 20 40.1	+1.0
SONM				IAmb	IAmb	23 20 41.9	
	comp=Z,139nm,1.3s						
BHPL	Bhopal	58.80	303	*e*P	P	23 20 41.5	-1.2
BHPL				IAmb	IAmb	23 20 45.2	
	comp=Z,62nm,1.1s						
JHNI	Jhansi	58.84	305	*e*P	P	23 20 41.4	-1.4
TYV	Tymovskoe	59.04	10	*e*P	P	23 20 45.1	+1.4
TYV				*e*S	S	23 28 44.6	+4.8
TYV				pmax	pmax		
	comp=Z,83nm,1.3s						
TYV				pmax	pmax		
	comp=Z,1µm,4.2s						
TYV				smax	smax		
	comp=N,13nm,1.6s						
TYV				smax	smax		
	comp=N,800nm,8.3s						
TYV				smax	smax		
	comp=E,700nm,8.3s						
KNTN	Kanton	59.17	89	P	P	23 20 44.6	-0.7
KAD	Karad	59.40	295	*e*P	P	23 20 45.5	-1.3
POO	Poona	60.11	296	*e*P	P	23 20 47.0	-4.7
POO				*e*P	P	23 20 50.4	-1.4
CASY	Casey	60.34	188	P	P	23 20 52.9	+0.5
CASY				IAmb	IAmb	23 21 30.8	
	comp=Z,90nm,1.1s						
CIT	Chita	60.48	349	*e*P	P	23 20 55.0	+1.4
CIT				*e*		23 21 51.5	
ZEA	Zeya	60.74	359	*e*P	P	23 20 55.7	+0.4
ZEA				*e*		23 21 26.7	
ZEA				*e*S	S	23 29 06.3	+4.7
ZEA				pmax	pmax		
	comp=N,50nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,90nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,500nm,7.2s						
ZEA				smax	smax		
	comp=E,300nm,12.4s						
NDI	New Delhi	61.34	308	*e*P	P	23 20 59.0	-0.9
ZAK	Zakamensk	61.55	342	*e*P	P	23 21 01.2	+0.2
ZAK				pmax	pmax		
	comp=Z,57nm,1.8s						
KUDL	Kundal	61.67	307	⇑*e*P	P	23 21 01.7	-0.4
SKR	Severo-Kuril's	62.25	19	*e*P	P	23 21 06.7	+1.3
SKR				*e*S	S	23 29 20.4	-0.3
SKR				pmax	pmax		
	comp=Z,300nm,4.1s						
SKR				pmax	pmax		
	comp=Z,900nm,4.2s						
SKR				pmax	pmax		
	comp=Z,84nm,1.5s						
SKR				MLR	MLR		
	comp=Z,300nm,18.0s						
AJM	Ajmer	62.44	305	⇑*e*P	P	23 21 06.4	-0.8
SMLA	Simla	62.52	311	*e*P	P	23 21 08.2	+0.5
SMLA				IAmb	IAmb	23 21 10.6	
	comp=Z,371nm,1.0s						
TLY	Talaya	62.58	343	*e*P	P	23 21 08.5	+0.8
TLY				*e*S	S	23 29 20.8	-4.1
TLY				pmax	pmax		
	comp=Z,308nm,2.2s						
TLY				MLR	MLR		
	comp=Z,1µm,20.0s						
TLY	Talaya	62.58	343	P	P	23 21 08.8	+1.0
TLY	Talaya	62.58	343	P	P	23 21 08.7	+1.0
TLY				IAmb	IAmb	23 21 09.8	
	comp=Z,174nm,1.9s						
IRK	Irkutsk	62.89	343	*e*P	P	23 21 09.5	-0.2
IRK				*e*		23 21 42.0	
IRK				pmax	pmax		
	comp=Z,370nm,2.6s						
WMQ	Urumqi	63.05	328	⇑*i*P	P	23 21 12.0	+1.0
WMQ				pP	pP	23 21 43.4	+1.3
WMQ				PcP	PcP	23 21 48.3	+0.7
WMQ				pmax	pmax		
	comp=Z,230nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,2µm,4.7s						
WMQ				LR	LR		
	comp=Z,3µm,18.7s						
WMQ				LR	LR		
	comp=Z,2µm,18.5s						
WMQ				LR	LR		
	comp=Z,1µm,20.3s						
MOY	Mondy	63.40	341	*e*P	P	23 21 13.6	+0.4
MOY				pmax	pmax		
	comp=Z,369nm,2.2s						
PAF	Port-aux-Franc	64.50	218	P	P	23 21 21.5	+1.2
PAF				pmax	pmax		
	comp=Z,303nm,1.2s						
PAF	Port-aux-Franc	64.50	218	P	P	23 21 21.5	+1.2
PEA0B	Petropavlovsk-	64.84	19	*c i*P	P	23 21 23.5	+1.1
PETK	Petropavlovsk-	64.84	19	P	P	23 21 23.0	+0.6
	comp=Z,134nm,1.0s,baz=194,slow=5.4,SNR=51						
PETK				pP	pP	23 21 54.1	-0.1
	comp=Z,18nm,0.6s,baz=204,slow=2.6,SNR=3.5						
PETK				LR	LR	23 47 08.2	
	comp=Z,423nm,21.0s,baz=217,slow=34						
PETK	Petropavlovsk-	64.84	19	P	P	23 21 23.0	+0.6
PETK				*PP	pP	23 21 54.1	-0.1
PETK	Petropavlovsk-	64.84	19	P	P	23 21 23.4	+1.0
PET	Petropavlovsk	65.08	19	*e*P	P	23 21 24.7	+0.8
PET				*e**PP	pwP	23 22 00.0	+1.8
PET				*e**SP	sP	23 22 15.4	+5.4
PET				*e*S	S	23 29 58.8	+3.2
PET				*e*PS	PnS	23 30 39.3	+3.9
PET				*e*SSS	SSS	23 37 10.4	
PET				pmax	pmax		
	comp=Z,1µm,2.7s						
PET				pmax	pmax		
	comp=Z,201nm,1.1s						
PET				pmax	pmax		
	comp=Z,300nm,13.7s						
PET	Petropavlovsk	65.08	19	P	P	23 21 25.2	+1.3
PET				IAmb	IAmb	23 21 26.1	
	comp=Z,138nm,1.0s						
PET	Petropavlovsk	65.08	19	P	P	23 21 25.4	+1.5
	comp=Z,587nm,1.2s						
BOD	Bodaibo	65.96	351	*e*P	P	23 21 29.6	+0.1
BOD				pmax	pmax		
	comp=Z,172nm,1.8s						
ZSN	Zaisan	66.95	329	⇑*i*P	P	23 21 36.5	+0.4
	comp=Z,169nm,2.5s,baz=329						
ZSN	Zaisan	66.95	329	*c i*P	P	23 21 36.5	+0.4
ZSN				pmax	pmax		
	comp=Z,169nm,2.5s						
DGZ	Jazzator, Alta	67.23	332	*c i*P	P	23 21 39.2	+1.2
DGZ				pmax	pmax		
	comp=Z,169nm,1.7s						
SHLS	Shalkode	67.30	323	⇑*i*P	P	23 21 37.8	-0.8
	comp=Z,204nm,2.0s,baz=323						
SHLS	Shalkode	67.30	323	*c i*P	P	23 21 37.7	-0.8
SHLS				pmax	pmax		
	comp=Z,204nm,2.0s						
TARG	Taragay, Kyrgy	67.51	321	IAmb	IAmb	23 21 52.8	
	comp=Z,136nm,1.2s						
KSH	Kashi	67.52	318	P	P	23 21 41.8	+1.8
KSH				pP	pP	23 22 12.3	+0.9
KSH				sP	sP	23 22 25.8	+0.4
KSH				S	S	23 30 25.5	-0.5
KSH				pmax	pmax		
	comp=Z,180nm,1.3s						
KSH				pmax	pmax		
	comp=Z,2µm,4.1s						
KSH				LR	LR		
	comp=Z,670nm,23.0s						
KSH				LR	LR		
	comp=Z,790nm,20.8s						
KSH				LR	LR		
	comp=Z,730nm,19.6s						
UZB	Uzynbulak	67.55	323	⇑*i*P	P	23 21 41.1	+0.9
	comp=Z,246nm,2.2s,baz=323						
UZB	Uzynbulak	67.55	323	*c i*P	P	23 21 41.0	+0.9
UZB				pmax	pmax		
	comp=Z,246nm,2.2s						
PRZ	Przheval'sk	67.56	322	P	P	23 21 42.0	+1.7
PRZ	Przheval'sk	67.56	322	P	P	23 21 42.0	+1.7
MK31	Makanchi Array	67.88	327	P	P	23 21 42.5	+0.5
MK31				pmax	pmax		
	comp=Z,96nm,1.0s						
MK31	Makanchi Array	67.88	327	P	P	23 21 42.5	+0.5
MKAR	Makanchi Array	67.88	327	P	P	23 21 42.6	+0.7
	comp=Z,54nm,0.5s,baz=126,slow=7.6,SNR=683						
MKAR				S	S	23 30 27.7	-2.1
	comp=Z,1.7nm,1.0s,baz=111,slow=6.6,SNR=2.3						
MKAR				PKPPKP		23 50 01.2	
	comp=Z,0.4nm,0.7s,baz=333,slow=1.9,SNR=4.6						
MKAR	Makanchi Array	67.88	327	*i* P	P	23 21 42.5	+0.6
MKAR				pmax	pmax		
	comp=Z,54nm,0.5s						
SATY	Saty	67.88	322	⇑*i*P	P	23 21 43.2	+1.0
	comp=Z,176nm,1.3s,baz=322						
SATY	Saty	67.88	322	*c i*P	P	23 21 43.1	+1.0
SATY				pmax	pmax		
	comp=Z,177nm,1.3s						
ZHN	Zhinishke	67.92	322	*i* P	P	23 21 43.4	+1.0
	baz=322						
ZHN	Zhinishke	67.92	322	*i* P	P	23 21 43.4	+1.0
KPKS	Kokpek	67.94	323	⇑*i*P	P	23 21 43.4	+0.8
	comp=Z,290nm,2.0s,baz=323						
KPKS	Kokpek	67.94	323	*c i*P	P	23 21 43.3	+0.8
KPKS				pmax	pmax		
	comp=Z,290nm,2.0s						
MAKZ	Makanchi	68.05	327	P	P	23 21 43.6	+0.5
MAKZ				pmax	pmax		
	comp=Z,238nm,1.5s						
MAKZ	Makanchi	68.05	327	P	P	23 21 43.6	+0.5
MAKZ				IAmb	IAmb	23 21 45.4	
	comp=Z,238nm,1.4s						
KDJ	Kajisay	68.12	321	P	P	23 21 44.8	+1.0
KDJ				pmax	pmax		
	comp=Z,681nm,1.9s						
KDJ	Kajisay	68.12	321	P	P	23 21 44.8	+1.0
TNSS	Tian-Shan	68.76	322	*i* P	P	23 21 48.2	+0.2
	baz=322						
MDOK	Medeo	68.76	322	*i* P	P	23 21 48.8	+1.1
	baz=322						
MDOK	Medeo	68.76	322	*i* P	P	23 21 48.8	+1.1
ULHL	Ulahol	68.77	321	P	P	23 21 49.0	+1.2
	SNR=20						
MA2	Magadan	68.81	12	*ce*P	P	23 21 47.3	-0.1
MA2				pmax	pmax		
	comp=Z,559nm,2.5s						
MA2	Magadan	68.81	12	P	P	23 21 48.7	+1.2
MA2				IAmb	IAmb	23 21 50.0	
	comp=Z,300nm,1.2s						
MA2	Magadan	68.81	12	P	P	23 21 49.1	+1.7
TDK	Taldyqorghan	68.98	324	*i* P	P	23 21 49.7	+0.9
	comp=Z,198nm,1.7s,baz=324						
TDK	Taldyqorghan	68.98	324	*i* P	P	23 21 49.7	+0.9
TDK				pmax	pmax		
	comp=Z,198nm,1.7s						
YAK	Yakutsk	69.04	0	P	P	23 21 49.0	+0.3
	comp=Z,135nm,0.8s,baz=167,slow=0.2,SNR=72						
YAK	Yakutsk	69.04	0	*c i*P	P	23 21 49.1	+0.3
YAK				*e*		23 22 09.9	
YAK				*e**PP	pwP	23 22 25.6	+1.6
YAK				*e*		23 24 28.5	
YAK				*e*S	S	23 30 43.7	+0.9
YAK				*e*		23 31 31.4	
YAK				*e*SS	SS	23 35 10.6	-1.0
YAK				pmax	pmax		
	comp=N,49nm,0.8s						
YAK				pmax	pmax		
	comp=Z,279nm,0.9s						
YAK				pmax	pmax		
	comp=E,19nm,0.9s						
YAK				pmax	pmax		
	comp=Z,435nm,3.5s						
YAK				pmax	pmax		
	comp=N,432nm,3.0s						
YAK				pmax	pmax		
	comp=E,389nm,3.0s						
YAK				smax	smax		
	comp=E,336nm,1.5s						
YAK	Yakutsk	69.04	0	P	P	23 21 49.3	+0.5
BOOM	Boomskoye usch	69.09	321	P	P	23 21 50.5	+0.7
BOOM				pmax	pmax		
	comp=Z,139nm,0.9s						
BOOM	Boomskoye usch	69.09	321	P	P	23 21 50.5	+0.7
BOOM				IAmb	IAmb	23 21 52.6	
	comp=Z,139nm,0.8s						

CHKK	**Chushkaly**	**69.18**	**322**	⇑*i*P	**P**	**23 21 50.3**	**+0.2**
	baz=322						
TKM2	**Tokmak 2**	**69.53**	**321**	P	**P**	**23 21 53.5**	**+1.0**
	SNR=124						
TKM2	**Tokmak 2**	**69.53**	**321**	P	**P'P'ab**	**23 49 57.8**	**-1.2**
	SNR=14						
TKM2	**Tokmak 2**	**69.53**	**321**	*i* P	**P**	**23 21 53.2**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,95nm,0.7s						
KUU	**Kurty**	**69.59**	**322**	⇑*i*P	**P**	**23 21 53.5**	**+0.8**
	baz=322						
KUU	**Kurty**	**69.59**	**322**	*c i*P	**P**	**23 21 53.4**	**+0.8**
KBK	**Karagaybulak**	**69.80**	**320**	P	**P**	**23 21 55.5**	**+1.3**
	SNR=90						
KBK	**Karagaybulak**	**69.80**	**320**	P	**P'P'ab**	**23 49 58.7**	**+0.6**
	SNR=14						
UCH	**Uchtor**	**69.86**	**320**	P	**P**	**23 21 56.3**	**+1.4**
	SNR=128						
UCH	**Uchtor**	**69.86**	**320**	P	**P'P'ab**	**23 49 59.2**	**+1.0**
	SNR=16						
AAK	**Ala-Archa**	**70.08**	**320**	P	**P**	**23 21 57.2**	**+1.4**
	comp=Z,56nm,0.6s,baz=128,slow=5.5,SNR=168						
AAK	**Ala-Archa**	**70.08**	**320**	P	**P**	**23 21 57.1**	**+1.2**
	SNR=111						
AAK	**Ala-Archa**	**70.08**	**320**	P	**P'P'ab**	**23 49 58.0**	**+1.0**
	SNR=22						
AAK	**Ala-Archa**	**70.08**	**320**	*i* P	**P**	**23 21 56.6**	**+0.8**
	SNR=151						
AAK	**Ala-Archa**	**70.08**	**320**	*c i*P	**P**	**23 21 57.3**	**+1.4**
AAK				pmax	pmax		
	comp=Z,923nm,1.6s						
AAK	**Ala-Archa**	**70.08**	**320**	P	**P**	**23 21 57.1**	**+1.2**
AAK	**Ala-Archa**	**70.08**	**320**	P	**P**	**23 21 57.1**	**+1.2**
AAK				IAmb	IAmb	23 21 59.0	
	comp=Z,401nm,1.6s						
FRU1	**Bishkek**	**70.08**	**320**	IAmb	IAmb	23 21 58.8	
	comp=Z,392nm,1.8s						
CHMS	**Chumysh**	**70.10**	**321**	P	**P**	**23 21 56.6**	**+0.8**
	SNR=35						
CHMS	**Chumysh**	**70.10**	**321**	P	**P'P'ab**	**23 49 56.5**	**-0.2**
	SNR=11						
KBL	**Kabul**	**70.16**	**311**	P	**P**	**23 21 56.9**	**+0.3**
KBL				pmax	pmax		
	comp=Z,316nm,1.5s						
KBL	**Kabul**	**70.16**	**311**	P	**P**	**23 21 57.2**	**+0.7**
	SNR=112						
KBL	**Kabul**	**70.16**	**311**	P	**P**	**23 21 56.9**	**+0.3**
KBL				IAmb	IAmb	23 21 58.6	
	comp=Z,316nm,1.4s						
AML	**Almayashu**	**70.33**	**319**	P	**P**	**23 21 59.1**	**+1.4**
	SNR=132						
AML	**Almayashu**	**70.33**	**319**	P	**P'P'ab**	**23 49 57.1**	**+0.7**
	SNR=11						
AML	**Almayashu**	**70.33**	**319**	*i* P	**P**	**23 21 58.5**	**+0.8**
	SNR=134						
AML	**Almayashu**	**70.33**	**319**	P	**P**	**23 21 58.8**	**+1.1**
AML				pmax	pmax		
	comp=Z,229nm,2.0s						
USP	**Ospenovka**	**70.40**	**321**	P	**P**	**23 21 58.4**	**+0.8**
	SNR=200						
SGDS	**Sogindy**	**70.41**	**321**	⇑*i*P	**P**	**23 21 58.4**	**+0.7**
	comp=Z,251nm,2.6s,baz=321						
EKS2	**Erkin-Say**	**70.55**	**320**	P	**P**	**23 22 00.1**	**+1.5**
	SNR=128						
EKS2	**Erkin-Say**	**70.55**	**320**	P	**P'P'ab**	**23 49 56.5**	**+1.2**
	SNR=6.5						
SEM	**Semipalatinsk**	**71.18**	**329**	⇑*i*P	**P**	**23 22 02.2**	**-0.3**
	comp=Z,203nm,2.1s,baz=329						
SEM	**Semipalatinsk**	**71.18**	**329**	*c i*P	**P**	**23 22 02.1**	**-0.3**
SEM				pmax	pmax		
	comp=Z,203nm,2.1s						
BTK	**Batken**	**71.26**	**316**	IAmb	IAmb	23 22 05.5	
	comp=Z,448nm,1.6s						
ZALV	**Zalesovo Beam**	**71.35**	**334**	P	**P**	**23 22 02.7**	**-0.3**
	comp=Z,68nm,0.7s,baz=120,slow=4.7,SNR=131						
ZALV				pP	**pP**	**23 22 34.2**	**-0.8**
	comp=Z,37nm,0.9s,baz=125,slow=4.8,SNR=3.1						
ZALV				PKPPKP	**P'P'df**	**23 49 53.1**	**-1.7**
	comp=Z,0.9nm,0.9s,baz=236,slow=2.7,SNR=4.2						
ZALV				LR	LR	23 56 49.8	
	comp=Z,243nm,19.0s,baz=126,slow=39						
ZALV	**Zalesovo Beam**	**71.35**	**334**	P	**P**	**23 22 02.7**	**-0.3**
ZALV				*PP	**pP**	**23 22 34.3**	**-0.8**
RER	**Riviere de l'E**	**71.85**	**250**	P	**P**	**23 22 08.0**	**+1.1**
RER				IAmb	IAmb	23 22 13.3	
	comp=Z,174nm,0.9s						
KURBB	**Kurchatov Arra**	**72.19**	**329**	P	**P**	**23 22 08.5**	**+0.4**
	comp=Z,78nm,0.6s,baz=127,slow=5.0,SNR=360						
KURBB				pP	**pP**	**23 22 39.4**	**-0.7**
	comp=Z,44nm,0.9s,baz=127,slow=5.0,SNR=3.6						
KURK	**Kurchatov**	**72.20**	**329**	*c i*P	**P**	**23 22 08.6**	**+0.4**
KURK				pmax	pmax		
	comp=Z,249nm,1.3s						
KURK	**Kurchatov**	**72.20**	**329**	P	**P**	**23 22 08.3**	**+0.1**
KURK	**Kurchatov**	**72.20**	**329**	P	**P**	**23 22 08.5**	**+0.4**
KURK				IAmb	IAmb	23 22 11.5	
	comp=Z,176nm,1.0s						
SEY	**Seymchan**	**72.20**	**11**	P	**P**	**23 22 09.1**	**+1.1**
	comp=Z,201nm,1.0s,baz=204,slow=4.9,SNR=134						
SEY	**Seymchan**	**72.20**	**11**	*c i*P	**P**	**23 22 09.4**	**+1.5**
DZA	**Taraz**	**72.23**	**319**	⇑*e*P	**P**	**23 22 09.4**	**+0.8**
	comp=Z,300nm,2.6s,baz=319						
DZA	**Taraz**	**72.23**	**319**	*ce*P	**P**	**23 22 09.4**	**+0.8**
DZA				pmax	pmax		
	comp=Z,300nm,2.6s						
VNDA	**Vanda**	**72.35**	**173**	P	**P**	**23 22 08.8**	**+0.1**
	comp=Z,18nm,0.7s,baz=320,slow=6.5,SNR=90						
VNDA				LR	LR	23 54 37.2	
	comp=Z,1µm,18.1s,baz=346,slow=36						
VNDA	**Vanda**	**72.35**	**173**	P	**P**	**23 22 09.0**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,42nm,1.0s						
VNDA	**Vanda**	**72.35**	**173**	P	**P**	**23 22 09.0**	**+0.3**
IUG	**Iuzhnay**	**72.74**	**318**	⇑*i*P	**P**	**23 22 12.9**	**+1.1**
	baz=318						
IUG	**Iuzhnay**	**72.74**	**318**	*c i*P	**P**	**23 22 12.8**	**+1.1**
TAS	**Tashkent**	**72.86**	**317**	P	**P**	**23 22 13.5**	**+1.1**
TAS				pmax	pmax		
	comp=Z,381nm,1.1s						
TAS	**Tashkent**	**72.86**	**317**	P	**P**	**23 22 13.5**	**+1.1**
MSEY	**Mahe Island**	**73.12**	**267**	P	**P**	**23 22 14.8**	**+0.3**
MSEY				pmax	pmax		
	comp=Z,101nm,1.9s						
MSEY	**Mahe Island**	**73.12**	**267**	P	**P**	**23 22 14.8**	**+0.3**
BRLS	**Borolday**	**73.27**	**319**	*e*P	**P**	**23 22 15.5**	**+0.7**
	comp=Z,125nm,2.0s,baz=319						
BRLS	**Borolday**	**73.27**	**319**	*e*P	**P**	**23 22 15.4**	**+0.7**
BRLS				pmax	pmax		
	comp=Z,125nm,2.0s						
XMAS	**Kiritimati**	**73.95**	**86**	P	**P**	**23 22 19.9**	**+0.7**
XMAS				IAmb	IAmb	23 22 22.8	
	comp=Z,305nm,1.4s						
XMAS	**Kiritimati**	**73.95**	**86**	P	**P**	**23 22 21.2**	**+1.9**
JLN	**Jalan Bani Buh**	**74.11**	**295**	P	**P**	**23 22 22.0**	**+1.9**
	SNR=5.2						
OTUK	**Ortayu**	**74.25**	**325**	*i* P	**P**	**23 22 21.2**	**+0.9**
OTUK				pmax	pmax		
	comp=Z,309nm,1.0s						
MAW	**Mawson**	**74.39**	**201**	P	**P**	**23 22 21.9**	**+1.1**
	comp=Z,20nm,0.5s,baz=71,slow=5.4,SNR=47						
MAW				LR	LR	23 51 53.6	
	comp=Z,583nm,22.0s,baz=58,slow=33						
MAW	**Mawson**	**74.39**	**201**	P	**P**	**23 22 21.9**	**+1.1**
	baz=74,SNR=24						
MAW	**Mawson**	**74.39**	**201**	P	**P**	**23 22 21.9**	**+1.1**
MAW	**Mawson**	**74.39**	**201**	P	**P**	**23 22 21.9**	**+1.1**
BRZS	**Berezniki**	**74.95**	**326**	⇑*i*P	**P**	**23 22 24.9**	**+0.5**
	comp=Z,243nm,1.9s,baz=326						
BRZS	**Berezniki**	**74.95**	**326**	*c i*P	**P**	**23 22 24.8**	**+0.5**
BRZS				pmax	pmax		
	comp=Z,243nm,1.9s						
WSAR	**Wadi Sarin**	**75.08**	**296**	P	**P**	**23 22 25.9**	**+0.2**
	comp=Z,16nm,0.5s,baz=135,slow=6.5,SNR=51						
HRA	**Herat**	**75.32**	**308**	IAmb	IAmb	23 22 29.1	
	comp=Z,180nm,1.1s						
JMDO	**Jabal Madar**	**75.34**	**295**	P	**P**	**23 22 29.0**	**+1.8**
	SNR=6.3						
SMDO	**Samad**	**75.55**	**296**	P	**P**	**23 22 30.0**	**+1.5**
	SNR=6.3						
BIDO	**Bidbid**	**75.60**	**296**	P	**P**	**23 22 30.0**	**+1.4**
	SNR=12						
HOQ	**Hoqain**	**76.34**	**296**	P	**P**	**23 22 34.0**	**+1.2**
	SNR=15						
SHAO	**Shalim**	**76.61**	**290**	*i* P	**P**	**23 22 34.1**	**-0.3**
	SNR=15						
HON	**Honolulu**	**76.97**	**66**	P	**P**	**23 22 37.3**	**+1.0**
HON				pmax	pmax		
	comp=Z,557nm,1.4s						
HON	**Honolulu**	**76.97**	**66**	P	**P**	**23 22 37.3**	**+1.0**
KIP	**Kipapa**	**76.98**	**66**	P	**P**	**23 22 39.9**	**+3.5**
KIP	**Kipapa**	**76.98**	**66**	P	**P**	**23 22 39.6**	**+3.2**
SOHO	**SOHO**	**77.17**	**297**	*i* P	**P**	**23 22 36.8**	**-0.6**
	SNR=12						
UOSS	**Minazif**	**77.65**	**297**	P	**P**	**23 22 39.4**	**-0.8**
UOSS	**Minazif**	**77.65**	**297**	P	**P**	**23 22 39.6**	**-0.5**
UOSS	**Minazif**	**77.65**	**297**	P	**P**	**23 22 40.2**	**+0.1**
HATD	**Hatta, Dubai**	**77.69**	**297**	*i* P	**P**	**23 22 40.6**	**+0.3**
	SNR=11						
ASHO	**Ashiyiah**	**77.72**	**297**	*i* P	**P**	**23 22 40.3**	**-0.3**
	SNR=12						
BVAR	**Borovoye Array**	**77.73**	**328**	P	**P**	**23 22 40.1**	**+0.2**
	comp=Z,36nm,1.0s,baz=170,slow=9.0,SNR=91						
BVAR				pP	**pP**	**23 23 11.2**	**-0.9**
	comp=Z,27nm,0.9s,baz=178,slow=10,SNR=4.4						
BVAR	**Borovoye Array**	**77.73**	**328**	P	**P**	**23 22 40.1**	**+0.2**
MSFE	**Esma-Masafi**	**77.79**	**298**	*i* P	**P**	**23 22 41.0**	**+0.1**
	SNR=5.6						
BRVK	**Borovoye**	**77.80**	**328**	*c i*P	**P**	**23 22 40.7**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,96nm,1.3s						
BRVK	**Borovoye**	**77.80**	**328**	P	**P**	**23 22 40.6**	**+0.3**
BANOM	**Banah**	**77.81**	**298**	*i* P	**P**	**23 22 41.5**	**+0.5**
	SNR=7.6						
ALNE	**Al Ain**	**77.84**	**296**	*i* P	**P**	**23 22 40.8**	**-0.5**
	SNR=20						
SHME	**Shamm**	**77.97**	**298**	*i* P	**P**	**23 22 42.2**	**+0.3**
	SNR=16						
NAZ	**Nazwa, Dubai**	**78.14**	**297**	*i* P	**P**	**23 22 42.6**	**-0.2**
	SNR=7.2						
FAQ	**Al Faqa, Dubai**	**78.14**	**297**	*i* P	**P**	**23 22 42.6**	**-0.2**
	SNR=20						
ASUD	**Al Ashush, Dub**	**78.35**	**297**	*i* P	**P**	**23 22 44.3**	**+0.3**
	SNR=10						
KHLU	**Kahalu`u**	**78.52**	**68**	P	**P**	**23 22 45.1**	**0.0**
KHLU				IAmb	IAmb	23 22 47.8	
	comp=Z,284nm,1.3s						
TIXI	**Tiksi**	**78.70**	**360**	P	**P**	**23 22 44.4**	**-0.5**
	comp=Z,50nm,0.5s,baz=143,slow=4.3,SNR=41						
TIXI	**Tiksi**	**78.70**	**360**	P	**P**	**23 22 44.4**	**-0.5**
TIXI	**Tiksi**	**78.70**	**360**	P	**P**	**23 22 44.2**	**-0.7**
TIXI				IAmb	IAmb	23 22 46.0	
	comp=Z,241nm,1.4s						
MLOA	**Mauna Loa Obse**	**78.80**	**69**	P	**P**	**23 22 47.6**	**+0.5**
HMH	**Humu'ula Sheep**	**78.90**	**68**	P	**P**	**23 22 48.5**	**+1.0**
TBI	**Tubuai**	**79.42**	**112**	*e*S	**S**	**23 32 41.7**	**+1.3**
	comp=Z,335nm,43.0s						
TBI	**Tubuai**	**79.42**	**112**	*e*LQ	LQ	23 44 25.4	
	comp=Z,767nm,33.2s						
TBI				*e*LR	LR	23 47 48.3	
	comp=Z,1µm,32.0s						
BILL	**Bilibino**	**79.55**	**13**	*d i*P	**P**	**23 22 49.6**	**0.0**
BILL				*e*		23 22 56.1	
BILL				*PP	**pwP**	**23 23 25.0**	**-0.3**
BILL				*SP	**sP**	**23 23 41.0**	**+4.6**
BILL				*e*S	**S**	**23 32 40.6**	**+0.7**
BILL				*e**SS	**sS**	**23 33 35.6**	**+0.1**
BILL				SSS	SSS	23 41 12.0	
BILL				pmax	pmax		
	comp=Z,46nm,1.3s						
BILL	**Bilibino**	**79.55**	**13**	P	**P**	**23 22 49.5**	**-0.1**
NIKH	**Nikolski High**	**79.57**	**33**	P	**P**	**23 22 50.3**	**+0.4**
	baz=243						
GEYT	**Alibeck**	**79.61**	**311**	P	**P**	**23 22 51.1**	**+0.5**
	comp=Z,14nm,0.6s,baz=158,slow=4.2,SNR=21						
GEYT				LR	LR	00 01 31.8	
	comp=Z,204nm,21.4s,baz=65,slow=38						
GEYT	**Alibeck**	**79.61**	**311**	P	**P**	**23 22 51.1**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**79.61**	**311**	P	**P**	**23 22 51.1**	**+0.5**
PAE	**Paea**	**79.69**	**107**	*e*P	**P**	**23 22 52.7**	**+1.3**
	comp=Z,20nm,1.1s						
PPT2	**Papeete2**	**79.70**	**107**	*e*P	**P**	**23 22 53.2**	**+1.6**
	comp=Z,109nm,1.3s						
PPT2				*e*pP	**pP**	**23 23 24.3**	**+0.6**
	comp=Z,122nm,1.2s						
PPT2				*e*S	**S**	**23 32 44.5**	**+0.9**
	comp=Z,247nm,23.5s						
PPT2	**Papeete2**	**79.70**	**107**	*e*LQ	LQ	23 44 30.4	
	comp=Z,2µm,26.8s						
PPT2				*e*LR	LR	23 47 55.6	
	comp=Z,1µm,30.2s						
PPT	**Papeete**	**79.70**	**107**	P	**P**	**23 22 50.7**	**-0.8**
	comp=Z,64nm,0.9s,baz=71,slow=20,SNR=3.8						
PPT				LR	LR	23 54 47.5	
	comp=Z,79nm,20.5s,baz=264,slow=33						
PPT	**Papeete**	**79.70**	**107**	P	**P**	**23 22 50.7**	**-0.8**
PPTF	**Pamatai, Papee**	**79.71**	**107**	P	**P**	**23 22 55.1**	**+3.5**
TIAR	**Tiarei**	**79.92**	**107**	*e*P	**P**	**23 22 54.0**	**+1.3**
ABPO	**Ambohimpanom**	**79.95**	**252**	P	**P**	**23 22 53.1**	**+0.1**
ABPO				pmax	pmax		
	comp=Z,95nm,1.5s						
ABPO	**Ambohimpanom**	**79.95**	**252**	P	**P**	**23 22 53.1**	**+0.1**
VOI	**Vohitsoka**	**80.15**	**249**	P	**P**	**23 22 54.3**	**+0.3**
VOI				IAmb	IAmb	23 22 56.2	
	comp=Z,405nm,1.9s						
VOI	**Vohitsoka**	**80.15**	**249**	P	**P**	**23 22 54.7**	**+0.7**
MEH	**Mehetia**	**81.11**	**107**	*e*P	**P**	**23 23 00.2**	**+1.1**
	comp=Z,72nm,1.3s						
MEH				*e*pP	**pP**	**23 23 31.7**	**+0.4**
	comp=Z,51nm,1.3s						
UNV	**Unalaska Valle**	**81.22**	**33**	IAmb	IAmb	23 23 02.5	
	comp=Z,319nm,1.5s						
UNV	**Unalaska Valle**	**81.22**	**33**	P	**P**	**23 22 59.2**	**+0.5**
	baz=245						
UNV	**Unalaska Valle**	**81.22**	**33**	P	**P**	**23 23 00.4**	**+1.7**
PMOR	**Pomariorio Ree**	**81.52**	**104**	*e*P	**P**	**23 23 02.7**	**+1.5**
	comp=Z,366nm,1.3s						
PMOR				*e*pP	**pP**	**23 23 33.6**	**+0.1**
	comp=Z,204nm,1.3s						
NRIK	**Noril'sk**	**81.53**	**346**	P	**P**	**23 23 00.8**	**+0.7**
	comp=Z,98nm,1.1s,baz=138,slow=5.2,SNR=79						
NRIK				LR	LR	00 02 21.9	
	comp=Z,613nm,18.3s,baz=142,slow=38						
NRIK	**Noril'sk**	**81.53**	**346**	P	**P**	**23 23 00.8**	**+0.7**
NRIK	**Noril'sk**	**81.53**	**346**	IAmb	IAmb	23 23 02.3	
	comp=Z,186nm,1.2s						
VAH	**Vaihoa**	**81.76**	**104**	*e*P	**P**	**23 23 03.8**	**+1.3**
	comp=Z,176nm,1.4s						
VAH				*e*pP	**pP**	**23 23 34.9**	**+0.1**
	comp=Z,118nm,1.3s						
KHOR	**Al-Khor Airpor**	**81.94**	**297**	P	**P**	**23 23 03.5**	**+0.3**
AB31	**Akbulak array**	**82.07**	**322**	*i* P	**P**	**23 23 03.1**	**-0.3**
AB31				pmax	pmax		
	comp=Z,35nm,0.7s						
QSPA	**South Pole Qui**	**82.76**	**180**	PKPPKP	**P'P'df**	**23 49 33.5**	**-1.5**
	comp=Z,3.7nm,1.1s,baz=250,slow=1.6,SNR=4.4						
QSPA	**South Pole Qui**	**82.76**	**180**	P	**P**	**23 23 06.6**	**-0.2**
SYO	**Syowa Base**	**83.11**	**201**	⇑*i*P	**P**	**23 23 09.1**	**+0.7**
SYO	**Syowa Base**	**83.11**	**201**	⇓*e*PcP	**PcP**	**23 23 15.6**	**+2.9**
SYO	**Syowa Base**	**83.11**	**201**	⇑*e*pP	pP	23 23 40.9	+0.2
SYO	**Syowa Base**	**83.11**	**201**	⇑*e*sP	sP	23 23 52.5	-1.9
FALS	**False Pass**	**83.28**	**33**	P	**P**	**23 23 09.8**	**+0.3**
	baz=247						
GAMB	**Gambell**	**83.49**	**23**	IAmb	IAmb	23 23 12.9	
	comp=Z,202nm,1.3s						
GAMB	**Gambell**	**83.49**	**23**	P	**P**	**23 23 11.3**	**+0.9**
	baz=239,SNR=9.7						
AKTO	**Aktyubinsk**	**83.65**	**323**	P	**P**	**23 23 11.8**	**+0.3**
	comp=Z,69nm,0.8s,baz=108,slow=6.1,SNR=114						
AKTO	**Aktyubinsk**	**83.65**	**323**	P	**P**	**23 23 11.8**	**+0.3**
SVE	**Sverdlovsk**	**84.45**	**329**	*d i*P	**P**	**23 23 15.6**	**+0.2**
SVE				*e*S	**SKSac**	**23 33 27.4**	**+0.8**
SVE				pmax	pmax		
	comp=Z,174nm,1.2s						
SDPT	**Sand Point**	**85.03**	**33**	P	**P**	**23 23 18.4**	**+0.1**
	baz=250						
CHNA	**Chernabura Isl**	**85.34**	**33**	P	**P**	**23 23 20.1**	**+0.2**
	baz=251						
ARU	**Arti**	**85.37**	**328**	P	**P**	**23 23 19.5**	**-0.6**
	comp=Z,23nm,0.9s,baz=100,slow=3.4,SNR=55						
ARU				PP	**PP**	**23 26 40.2**	**+0.2**
	comp=Z,4.2nm,0.9s,baz=113,slow=6.0,SNR=4.0						
ARU	**Arti**	**85.37**	**328**	*c i*P	**P**	**23 23 20.0**	**0.0**
ARU						23 26 38.0	
ARU				S	**SKSac**	**23 33 32.4**	**-0.1**
ARU				pmax	pmax		
	comp=Z,130nm,1.2s						
ARU	**Arti**	**85.37**	**328**	P	**P**	**23 23 19.9**	**-0.1**
ARU				IAmb	IAmb	23 23 21.9	
	comp=Z,126nm,1.2s						
QRN	**Al-Qurain**	**85.69**	**300**	*e*P	**P**	**23 23 21.7**	**-0.5**
TNA	**Tin City**	**85.79**	**22**	P	**P**	**23 23 22.4**	**+0.5**
	baz=242,SNR=6.1						
RDF	**Al-Radifah**	**86.04**	**300**	*e*P	**P**	**23 23 23.5**	**-0.5**
ANM	**Nome**	**86.31**	**23**	P	**P**	**23 23 25.3**	**+0.8**
	baz=245						
MIB	**Mutribah**	**86.38**	**300**	*e*P	**P**	**23 23 24.8**	**-0.8**
CHGN	**Chignik**	**86.45**	**32**	P	**P**	**23 23 25.5**	**+0.2**
	baz=252						
RST	**Umm Al-Ruwaisa**	**86.62**	**300**	*e*P	**P**	**23 23 26.1**	**-0.7**
RAYN	**Ar Rayn**	**86.94**	**294**	*i* P	**P**	**23 23 28.8**	**+0.3**
	SNR=89						
RAYN	**Ar Rayn**	**86.94**	**294**	P	**P**	**23 23 28.8**	**+0.3**
RAYN				pmax	pmax		
	comp=Z,87nm,0.8s						
RAYN	**Ar Rayn**	**86.94**	**294**	P	**P**	**23 23 28.6**	**0.0**
RAYN	**Ar Rayn**	**86.94**	**294**	P	**P**	**23 23 28.8**	**+0.3**
RAYN				IAmb	IAmb	23 23 29.5	
	comp=Z,87nm,0.8s						
ATD	**Arta Tunnel**	**87.69**	**282**	P	**P**	**23 23 33.3**	**+1.0**
ATD				IAmb	IAmb	23 23 35.5	
	comp=Z,212nm,1.8s						
CHIR	**Chirikof Islan**	**87.80**	**33**	P	**P**	**23 23 32.1**	**+0.3**
	baz=254						
RDOG	**Red Dog Mine**	**88.65**	**20**	P	**P**	**23 23 36.4**	**+0.8**
	baz=247						
MAK	**Makhachkala**	**88.69**	**313**	*e*P	**P**	**23 23 33.4**	**-2.9**
MAK				*e*		23 27 04.9	
MAK				*e*		23 33 48.7	
MAK				pmax	pmax		
	comp=Z,213nm,1.1s						
SII	**Sitkinak Islan**	**88.77**	**33**	P	**P**	**23 23 37.4**	**+1.0**
	baz=255						
SII	**Sitkinak Islan**	**88.77**	**33**	P	**P**	**23 23 39.3**	**+2.9**
	comp=Z,122nm,1.3s						
LGD	**Lagodekhi**	**89.41**	**312**	P	**P**	**23 23 41.0**	**+1.2**
OHAK	**Old Harbor**	**89.41**	**32**	IAmb	IAmb	23 23 41.3	
	comp=Z,111nm,1.2s						
OHAK	**Old Harbor**	**89.41**	**32**	P	**P**	**23 23 39.7**	**+0.4**
	baz=256,SNR=8.7						
DDFL	**Dedoflistskaro**	**89.43**	**312**	P	**P**	**23 23 43.5**	**+3.5**
TTA	**Tatalina**	**89.62**	**26**	IAmb	IAmb	23 24 39.9	
	comp=Z,120nm,1.4s						
TTA	**Tatalina**	**89.62**	**26**	P	**P**	**23 23 40.8**	**+0.5**
	baz=253,SNR=19						
O19K	**Port Alsworth**	**89.65**	**29**	P	**P**	**23 23 40.3**	**-0.1**
	baz=255						
Q19K	**Cape Douglas,**	**89.65**	**30**	P	**P**	**23 23 40.2**	**-0.4**
	baz=256						
TAOE	**Nuku Hiva Isla**	**89.73**	**99**	*e*S	**S**	**23 34 22.0**	**-1.1**
	comp=Z,490nm,27.0s						
TAOE	**Nuku Hiva Isla**	**89.73**	**99**	*e*LR	LR	23 52 36.2	
	comp=Z,621nm,28.0s						
N19K	**Bonanza Creek**	**89.73**	**28**	IAmb	IAmb	23 24 40.5	
	comp=Z,124nm,1.2s						
N19K	**Bonanza Creek**	**89.73**	**28**	P	**P**	**23 23 41.3**	**+0.4**
	baz=255						
GCSA	**Galena City Sc**	**89.78**	**24**	P	**P**	**23 23 41.3**	**+0.4**
	baz=253						
KDAK	**Kodiak Island**	**89.92**	**32**	P	**P**	**23 23 40.5**	**-1.2**
	comp=Z,50nm,1.1s,baz=304,slow=3.4,SNR=13						
KDAK	**Kodiak Island**	**89.92**	**32**	P	**P**	**23 23 42.5**	**+0.8**
KDAK				pmax	pmax		
	comp=Z,126nm,1.4s						
KDAK	**Kodiak Island**	**89.92**	**32**	P	**P**	**23 23 42.5**	**+0.8**
KDAK				IAmb	IAmb	23 23 43.6	
	comp=Z,126nm,1.4s						
KDAK	**Kodiak Island**	**89.92**	**32**	P	**P**	**23 23 42.1**	**+0.4**
	baz=256						
GROC	**Groznyy**	**89.97**	**313**	*e*P	**P**	**23 23 41.4**	**-0.9**
GROC				*e**SP	**sP**	**23 24 32.9**	**+3.2**
GROC				*e*		23 27 14.6	
GROC				pmax	pmax		
	comp=Z,44nm,0.9s						
GNI	**Garni**	**90.24**	**310**	P	**P**	**23 23 43.9**	**0.0**
	comp=Z,51nm,1.3s,baz=154,slow=8.2,SNR=8.9						
GNI	**Garni**	**90.24**	**310**	P	**P**	**23 23 44.3**	**+0.3**
GNI	**Garni**	**90.24**	**310**	P	**P**	**23 23 44.7**	**+0.8**
GNI				pmax	pmax		
	comp=Z,57nm,1.3s						
GNI	**Garni**	**90.24**	**310**	P	**P**	**23 23 44.7**	**+0.8**
L20K	**Farewell, AK**	**90.44**	**27**	P	**P**	**23 23 44.7**	**+0.5**
	baz=255						
KZRT	**Kazreti**	**90.69**	**311**	P	**P**	**23 23 47.8**	**+2.0**
KIRV	**Kirov**	**90.72**	**329**	P	**P**	**23 23 44.0**	**-1.4**
	comp=Z,7.7nm,0.5s,baz=134,slow=4.6,SNR=6.6						
KIRV				PP	**PP**	**23 27 22.6**	**0.0**
	comp=Z,7.3nm,0.3s,baz=67,slow=6.9,SNR=3.9						
KIRV	**Kirov**	**90.72**	**329**	*ce*P	**P**	**23 23 44.3**	**-1.1**
J20K	**Nowinta River**	**90.76**	**25**	IAmb	IAmb	23 23 48.4	
	comp=Z,186nm,1.6s						
J20K	**Nowinta River**	**90.76**	**25**	P	**P**	**23 23 46.2**	**+0.6**
	baz=255						
GUDG	**Gudauri**	**90.81**	**313**	P	**P**	**23 23 50.9**	**+4.4**
SPCR	**Spurr Chakacha**	**90.90**	**28**	P	**P**	**23 23 45.4**	**-0.9**
	baz=257,SNR=7.2						
BRLK	**Bradley Lake**	**91.22**	**30**	IAmb	IAmb	23 24 45.8	
	comp=Z,63nm,1.3s						
ZEI	**Tsey**	**91.27**	**313**	*e*P	**P**	**23 23 46.9**	**-1.8**
ZEI				pmax	pmax		
	comp=Z,16nm,1.3s						
BRSE	**Bradley Lake S**	**91.29**	**30**	P	**P**	**23 23 47.6**	**-0.5**
	baz=258						
PPLA	**Purkeypile**	**91.30**	**27**	IAmb	IAmb	23 23 49.4	
	comp=Z,106nm,1.3s						
PPLA	**Purkeypile**	**91.30**	**27**	P	**P**	**23 23 47.8**	**-0.4**
	baz=257,SNR=16						
AKH	**Akhalkalaki**	**91.37**	**311**	⇑P	**P**	**23 23 50.4**	**+1.2**
AKH	**Akhalkalaki**	**91.37**	**311**	P	**P**	**23 23 50.2**	**+1.1**
CAST	**Castle Rocks**	**91.47**	**26**	P	**P**	**23 23 48.5**	**-0.3**
	baz=257,SNR=14						
CHUM	**Lake Minchumin**	**91.47**	**26**	P	**P**	**23 23 49.3**	**+0.5**
	baz=257,SNR=32						
KARS	**Kars**	**91.57**	**311**	P	**P**	**23 23 51.7**	**+1.7**
KARS				pmax	pmax		
	comp=Z,151nm,1.4s						
KARS	**Kars**	**91.57**	**311**	P	**P**	**23 23 50.7**	**+0.7**
ONI	**Oni**	**91.57**	**313**	P	**P**	**23 23 51.7**	**+1.8**
NCK	**Nalchik**	**91.60**	**313**	*c i*P	**P**	**23 23 50.1**	**+0.2**
NCK				pmax	pmax		
	comp=Z,40nm,1.1s						
KMBO	**Kilima Mbogo**	**91.61**	**269**	P	**P**	**23 23 50.5**	**-0.4**
	comp=Z,19nm,1.1s,baz=76,slow=5.2,SNR=29						
KMBO				LR	LR	00 05 37.5	
	comp=Z,123nm,18.5s,baz=94,slow=36						
KMBO	**Kilima Mbogo**	**91.61**	**269**	*i* P	**P**	**23 23 51.5**	**+0.6**
	SNR=25						
KMBO	**Kilima Mbogo**	**91.61**	**269**	P	**P**	**23 23 51.5**	**+0.6**
KMBO				pmax	pmax		
	comp=Z,28nm,1.2s						
KMBO	**Kilima Mbogo**	**91.61**	**269**	P	**P**	**23 23 51.5**	**+0.6**
H21K	**Melozitna Rive**	**91.68**	**24**	P	**P**	**23 23 50.0**	**+0.2**
	baz=256						
A21K	**Barrow**	**91.84**	**18**	P	**P**	**23 23 50.4**	**0.0**
	baz=253,SNR=11						
NVL	**N'lazarevskaya**	**91.86**	**197**	*e*P	**P**	**23 23 53.8**	**+3.2**
NVL				pmax	pmax		
	comp=Z,72nm,1.6s						
I21K	**Tanana**	**91.91**	**24**	P	**P**	**23 23 51.2**	**+0.4**
	baz=257						
O22K	**Cooper Landing**	**91.94**	**29**	IAmb	IAmb	23 25 01.9	
	comp=Z,56nm,0.9s						
O22K	**Cooper Landing**	**91.94**	**29**	P	**P**	**23 23 50.7**	**-0.3**
	baz=259						
M22K	**Willow**	**92.00**	**28**	P	**P**	**23 23 50.5**	**-0.8**
	baz=259,SNR=12						
SEW	**Seward**	**92.00**	**30**	IAmb	IAmb	23 23 55.9	
	comp=Z,80nm,1.4s						
SEW	**Seward**	**92.00**	**30**	P	**P**	**23 23 50.8**	**-0.5**
	baz=259						
KTH	**Kantishna Hill**	**92.00**	**26**	IAmb	IAmb	23 23 52.0	
	comp=Z,89nm,1.2s						
RC01	**Rabbit Creek A**	**92.05**	**29**	IAmb	IAmb	23 23 52.4	
	comp=Z,73nm,1.2s						
RC01	**Rabbit Creek A**	**92.05**	**29**	P	**P**	**23 23 50.9**	**-0.6**
	baz=259,SNR=15						
CUT	**Chulitna**	**92.06**	**27**	P	**P**	**23 23 50.5**	**-1.0**
	baz=258,SNR=8.9						
BPAW	**Bear Paw Mtn.**	**92.09**	**26**	P	**P**	**23 23 51.2**	**-0.5**
	baz=258,SNR=8.0						
KBZ	**Khabaz**	**92.13**	**314**	P	**P**	**23 23 52.1**	**-0.2**
	comp=Z,8.2nm,1.0s,baz=159,slow=3.3,SNR=10.0						
KBZ				PP	**PP**	**23 27 34.0**	**-0.3**
	comp=Z,3.7nm,1.1s,baz=106,slow=11,SNR=3.8						
KBZ	**Khabaz**	**92.13**	**314**	*ce*P	**P**	**23 23 51.1**	**-1.2**
KBZ				pmax	pmax		
	comp=Z,14nm,1.1s						
TRF	**Thorofare Moun**	**92.26**	**26**	IAmb	IAmb	23 23 53.3	
	comp=Z,90nm,1.4s						
TRF	**Thorofare Moun**	**92.26**	**26**	P	**P**	**23 23 52.0**	**-0.7**
	baz=258,SNR=9.6						

KIV	**Kislovodsk**	**92.32**	**314**	⇑P	**P**	**23 23 55.4**	**+2.1**
KIV	**Kislovodsk**	**92.32**	**314**	*e*P	**P**	**23 23 51.9**	**-1.4**
KIV				*e*		23 27 34.6	
KIV				*e*		23 34 12.1	
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,230nm,20.0s						
PMR	**Palmer**	**92.43**	**28**	IAmb	IAmb	23 23 54.0	
	comp=Z,73nm,1.3s						
PMR	**Palmer**	**92.43**	**28**	P	**P**	**23 23 52.8**	**-0.5**
	baz=259,SNR=14						
CHVG	**Ch'k'valeri**	**92.59**	**313**	⇑P	**P**	**23 23 56.5**	**+1.9**
PWL	**Port Wells**	**92.68**	**29**	IAmb	IAmb	23 23 55.6	
	comp=Z,80nm,1.4s						
PWL	**Port Wells**	**92.68**	**29**	P	**P**	**23 23 54.0**	**-0.5**
	baz=260,SNR=6.9						
KNK	**Knik Glacier**	**92.72**	**29**	P	**P**	**23 23 54.7**	**0.0**
	baz=260,SNR=24						
BCA	**Borcka**	**92.77**	**311**	⇑P	P	23 24 04.2	+8.8
SML	**Sawmill**	**92.84**	**28**	P	**P**	**23 23 55.1**	**-0.2**
	baz=260,SNR=27						
MCK	**McKinley**	**92.91**	**26**	P	**P**	**23 23 54.8**	**-0.7**
	baz=260,SNR=33						
WAT1	**Susitna Watana**	**92.92**	**27**	P	**P**	**23 23 54.9**	**-0.7**
	baz=260						
I23K	**Minto, Yukon-K**	**92.98**	**25**	P	**P**	**23 23 55.6**	**-0.2**
	baz=259,SNR=39						
NEA2	**Nenana**	**93.01**	**25**	P	**P**	**23 23 54.9**	**-1.0**
	baz=260,SNR=13						
COLD	**Coldfoot**	**93.05**	**23**	IAmb	IAmb	23 23 57.7	
	comp=Z,60nm,1.3s						
COLD	**Coldfoot**	**93.05**	**23**	P	**P**	**23 23 56.4**	**+0.4**
	baz=259,SNR=24						
PRGR	**Permogore**	**93.16**	**332**	*e*P	P	23 23 49.3	-7.3
PRGR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WAT6	**Susitna Watana**	**93.25**	**27**	P	**P**	**23 23 56.9**	**-0.4**
	baz=261,SNR=20						
GLI	**Glacier Island**	**93.28**	**29**	P	**P**	**23 23 57.7**	**+0.4**
GLI				IAmb	IAmb	23 23 58.3	
	comp=Z,115nm,1.3s						
GLI	**Glacier Island**	**93.28**	**29**	P	**P**	**23 23 56.9**	**-0.3**
	baz=261						
SCM	**Sheep Creek Mo**	**93.32**	**28**	P	**P**	**23 23 57.4**	**-0.1**
	baz=261,SNR=26						
Q23K	**Middleton Isla**	**93.43**	**31**	P	**P**	**23 23 58.1**	**+0.2**
	baz=262						
DHY	**Denali Highway**	**93.49**	**27**	P	**P**	**23 23 58.2**	**-0.2**
	baz=261,SNR=39						
TOLK	**Toolik Lake Re**	**93.55**	**21**	P	**P**	**23 23 58.5**	**+0.1**
	baz=259,SNR=12						
CCB	**Clear Creek Bu**	**93.55**	**25**	P	**P**	**23 23 57.4**	**-1.0**
FID	**Port Fidalgo**	**93.56**	**29**	IAmb	IAmb	23 23 59.8	
	comp=Z,75nm,1.4s						
TCOL	**CIGO, UAF Yank**	**93.56**	**25**	P	**P**	**23 23 57.1**	**-1.3**
	baz=261						
COLA	**College**	**93.57**	**25**	P	**P**	**23 23 57.3**	**-1.2**
	baz=261						
H24K	**Noodor Dome**	**93.71**	**24**	P	**P**	**23 23 59.2**	**0.0**
	baz=261						
POKR	**Poker Plat Res**	**93.78**	**25**	P	**P**	**23 23 59.5**	**0.0**
	baz=261						
VRH	**Novokhopyorsk**	**93.87**	**321**	*e*P	**P**	**23 23 58.2**	**-2.0**
VRH				pmax	pmax		
	comp=Z,60nm,1.5s						
HDA	**Harding Lake**	**93.88**	**26**	P	**P**	**23 23 58.7**	**-1.3**
	baz=262						
EYAK	**Cordova Ski Ar**	**93.89**	**30**	P	**P**	**23 23 59.6**	**-0.4**
	baz=262						
M24K	**Tolsona, Glenn**	**93.90**	**28**	P	**P**	**23 24 00.3**	**+0.2**
	baz=262,SNR=28						
KLU	**Klutina**	**93.93**	**29**	P	**P**	**23 24 00.4**	**+0.1**
	baz=262,SNR=5.5						
IL31		**93.96**	**25**	IAmb	IAmb	23 23 59.8	
	comp=Z,54nm,1.4s						
ILAR	**Eielson Array**	**93.96**	**25**	P	**P**	**23 23 58.8**	**-1.5**
	comp=Z,19nm,1.0s,baz=267,slow=4.2,SNR=72						
ILAR				PP	**PP**	**23 27 43.9**	**-4.1**
	comp=Z,0.6nm,0.5s,baz=246,slow=6.8,SNR=4.4						
ILAR				PKiKP	**PKiKP**	**23 28 42.5**	**-1.6**
	comp=Z,1.5nm,0.9s,baz=277,slow=3.4,SNR=1.3						
ILAR				PKKP	**PKKPdf**	**23 41 02.7**	**-1.4**
	comp=Z,2.2nm,0.7s,baz=350,slow=1.4,SNR=20						
ILAR				LR	LR	00 02 36.4	
	comp=Z,217nm,20.8s,baz=277,slow=33						
ILAR	**Eielson Array**	**93.96**	**25**	P	**P**	**23 23 58.8**	**-1.5**
ILAR	**Eielson Array**	**93.96**	**25**	P	**P**	**23 23 58.7**	**-1.6**
LODK	**Lodwar**	**94.04**	**273**	P	**P**	**23 24 02.5**	**+0.5**
	SNR=7.2						
LODK	**Lodwar**	**94.04**	**273**	P	**P**	**23 24 01.3**	**-0.6**
PAX	**Paxson**	**94.34**	**27**	P	**P**	**23 24 02.0**	**-0.2**
PAX				pmax	pmax		
	comp=Z,97nm,1.2s						
PAX	**Paxson**	**94.34**	**27**	P	**P**	**23 24 02.0**	**-0.2**
PAX				IAmb	IAmb	23 24 03.5	
	comp=Z,97nm,1.2s						
PAX	**Paxson**	**94.34**	**27**	P	**P**	**23 24 02.1**	**-0.2**
	baz=263,SNR=48						
RAGM	**Ragged Mountai**	**94.40**	**30**	P	**P**	**23 24 02.7**	**+0.3**
RAGM				IAmb	IAmb	23 24 03.5	
	comp=Z,84nm,1.3s						
HARP	**HAARP**	**94.41**	**28**	P	**P**	**23 24 02.9**	**+0.4**
	baz=263,SNR=11						
SOC	**Sochi**	**94.41**	**313**	*e*P	**P**	**23 23 59.3**	**-3.5**
SOC				*e**PP	**pP**	**23 24 35.2**	**-1.2**
SOC				*e*		23 27 47.1	
SOC				*e*S	**SKSac**	**23 34 21.7**	**-3.9**
SOC				*e*SS	**SS**	**23 41 26.6**	**-2.3**
SOC				*e*SSS	SSS	23 45 10.5	
SOC				pmax	pmax		
	comp=Z,22nm,1.1s						
KAIM	**Kayak Island**	**94.47**	**30**	P	**P**	**23 24 03.0**	**+0.3**
	baz=263						
BMRM	**Bremner River**	**94.50**	**29**	IAmb	IAmb	23 24 04.2	
	comp=Z,85nm,1.2s						
BMRM	**Bremner River**	**94.50**	**29**	P	**P**	**23 24 03.0**	**+0.1**
	baz=263,SNR=12						
N25K	**Chitina, Valde**	**94.58**	**29**	P	**P**	**23 24 03.5**	**+0.3**
N25K				IAmb	IAmb	23 24 05.0	
	comp=Z,63nm,1.2s						
N25K	**Chitina, Valde**	**94.58**	**29**	P	**P**	**23 24 03.6**	**+0.3**
	baz=263,SNR=14						
J25K	**Salcha River,**	**94.58**	**26**	P	**P**	**23 24 02.1**	**-1.2**
	baz=263,SNR=18						
RIDG	**Independent Ri**	**94.71**	**26**	P	**P**	**23 24 03.4**	**-0.4**
	baz=263,SNR=29						
BERG	**Berg Lake**	**94.88**	**30**	IAmb	IAmb	23 24 06.3	
	comp=Z,84nm,1.2s						
MALT	**Malatya**	**94.88**	**308**	P	**P**	**23 24 06.0**	**+0.7**
GLB	**Gilahina Butte**	**94.93**	**29**	IAmb	IAmb	23 24 06.2	
	comp=Z,70nm,1.3s						
DOT	**Dot Lake**	**95.05**	**27**	IAmb	IAmb	23 24 06.4	
	comp=Z,88nm,1.3s						
VRDI	**Verde Repeater**	**95.08**	**29**	IAmb	IAmb	23 24 07.0	
	comp=Z,48nm,1.3s						
SCRK	**Sand Creek**	**95.11**	**26**	IAmb	IAmb	23 24 06.9	
	comp=Z,40nm,1.2s						
SCRK	**Sand Creek**	**95.11**	**26**	P	**P**	**23 24 05.4**	**-0.3**
	baz=264,SNR=18						
MENT	**Mentasta**	**95.13**	**27**	IAmb	IAmb	23 24 07.1	
	comp=Z,52nm,1.3s						
CRQM	**Cirque**	**95.19**	**30**	IAmb	IAmb	23 24 07.8	
	comp=Z,82nm,1.2s						
CRQE	**Cirque**	**95.21**	**30**	P	**P**	**23 24 06.3**	**0.0**
	baz=265						
SNAA	**Sanae**	**95.22**	**194**	P	**P**	**23 24 06.7**	**+0.6**
SNAA	**Sanae**	**95.22**	**194**	PKKP	**PKKPdf**	**23 40 57.3**	**-3.8**
	comp=Z,1.7nm,0.6s,baz=259,slow=5.8,SNR=12						
SNAA	**Sanae**	**95.22**	**194**	IAmb	IAmb	23 24 08.3	
	comp=Z,80nm,1.5s						
WAX	**Waxell Ridge**	**95.30**	**30**	P	**P**	**23 24 07.0**	**+0.4**
WAX				IAmb	IAmb	23 24 07.8	
	comp=Z,67nm,1.3s						
MCARA	**McCarthy VSAT**	**95.30**	**29**	P	**P**	**23 24 06.9**	**+0.3**
MCARA				IAmb	IAmb	23 24 17.9	
	comp=Z,37nm,1.2s						
MCARA	**McCarthy VSAT**	**95.30**	**29**	P	**P**	**23 24 06.7**	**+0.2**
	baz=265						
L26K	**Log Cabin Wild**	**95.31**	**27**	IAmb	IAmb	23 24 08.0	
	comp=Z,52nm,1.2s						
L26K	**Log Cabin Wild**	**95.31**	**27**	P	**P**	**23 24 06.6**	**0.0**
	baz=265,SNR=19						
TGL	**Tana Glacier**	**95.34**	**30**	P	**P**	**23 24 07.2**	**+0.4**
TGL				IAmb	IAmb	23 24 08.4	
	comp=Z,69nm,1.2s						
J26L	**Joseph Creek**	**95.35**	**26**	P	**P**	**23 24 06.8**	**0.0**
	baz=265,SNR=38						
VORD	**Divnogorie**	**95.37**	**321**	*e*P	**P**	**23 24 05.1**	**-1.9**
VORD				pmax	pmax		
	comp=Z,30nm,0.9s						
M26K	**Nabesna, AK**	**95.41**	**28**	IAmb	IAmb	23 24 08.5	
	comp=Z,47nm,1.4s						
M26K	**Nabesna, AK**	**95.41**	**28**	P	**P**	**23 24 06.9**	**-0.2**
	baz=265						
VSR	**Storozhevoye**	**95.47**	**321**	*e*P	**P**	**23 24 05.9**	**-1.6**
VSR				pmax	pmax		
	comp=Z,50nm,1.2s						
ISLE	**Juniper Island**	**95.57**	**30**	IAmb	IAmb	23 24 09.6	
	comp=Z,71nm,1.3s						
ASF	**Jabal al Asfar**	**95.58**	**302**	P	**P**	**23 24 08.3**	**-0.3**
	comp=Z,11nm,1.1s,baz=72,slow=2.2,SNR=10						
ASF	**Jabal al Asfar**	**95.58**	**302**	P	**P**	**23 24 08.3**	**-0.3**
MESA	**MESA**	**95.73**	**30**	P	**P**	**23 24 08.7**	**0.0**
	baz=266						
LPSR	**Galich'ya Gora**	**95.73**	**322**	*e*P	**P**	**23 24 07.5**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,40nm,1.0s						
GAZ	**Gaziantep**	**95.74**	**307**	IAmb	IAmb	23 24 09.5	
	comp=Z,92nm,1.8s						
M27K	**Edge Creek, AK**	**95.92**	**28**	IAmb	IAmb	23 24 11.2	
	comp=Z,44nm,1.2s						
M27K	**Edge Creek, AK**	**95.92**	**28**	P	**P**	**23 24 09.9**	**+0.4**
	baz=266						
BARN	**Barnard Glacie**	**95.94**	**29**	IAmb	IAmb	23 24 11.6	
	comp=Z,56nm,1.3s						
L27K	**Beaver Creek,**	**96.00**	**27**	P	**P**	**23 24 10.0**	**+0.3**
	baz=266,SNR=40						
KLMR	**Klimovskoe**	**96.00**	**331**	*e*P	**P**	**23 24 06.0**	**-3.7**
KLMR				*e**PP	**pP**	**23 24 41.7**	**-1.0**
KLMR				*e*		23 28 01.4	
KLMR				pmax	pmax		
	comp=Z,36nm,1.2s						
KLMR	**Klimovskoe**	**96.00**	**331**	*e*P	**P**	**23 24 06.0**	**-3.7**
KLMR				AMP		23 24 12.1	
	comp=Z,36nm,1.2s						
KLMR				*e*pP	**pP**	**23 24 41.7**	**-1.0**
KLMR				*e*PP	**PP**	**23 28 01.4**	**-2.5**
KLMR				*e*PKKP	PKKPbc	23 40 50.2	-10
BVCY	**Beaver Creek**	**96.40**	**28**	P	**P**	**23 24 12.1**	**+0.6**
	baz=267,SNR=6.3						
EGAK	**Eagle**	**96.40**	**26**	IAmb	IAmb	23 24 12.7	
	comp=Z,74nm,1.4s						
YUK3	**Moose Creek**	**96.56**	**29**	P	**P**	**23 24 12.9**	**+0.4**
	baz=267,SNR=13						
PINM	**Pinnacle**	**96.57**	**30**	P	**P**	**23 24 12.7**	**+0.3**
	baz=267						
GHAJ	**Ghor Haditha**	**96.64**	**301**	P	**P**	**23 24 13.3**	**+0.1**
GHAJ				IAmb	IAmb	23 24 14.6	
	comp=Z,99nm,1.8s						
MOS	**Moscow**	**96.69**	**325**	*e*P	**P**	**23 24 10.4**	**-2.5**
MOS				*e*		23 28 09.1	
MOS				pmax	pmax		
	comp=Z,51nm,1.2s						
VNA2	**Neumayer--Watz**	**96.80**	**193**	P	**P**	**23 24 13.9**	**+0.7**
	baz=147,slow=3.1						
MMAI	**Mount Meron Ar**	**96.90**	**302**	P	**P**	**23 24 14.4**	**-0.2**
	comp=Z,21nm,1.1s,baz=120,slow=1.2,SNR=9.7						
MMAI				PKiKP	**PKiKP**	**23 28 50.8**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=90,slow=3.3,SNR=5.5						
BNN	**Bunyan**	**96.94**	**308**	P	**P**	**23 24 14.4**	**-0.2**
BNN				IAmb	IAmb	23 28 02.8	
	comp=Z,41nm,1.4s						
PNL	**Peninsula**	**96.98**	**31**	P	**P**	**23 24 14.0**	**-0.2**
	baz=268						
EIL	**Elat**	**97.04**	**299**	P	**P**	**23 24 13.5**	**-1.7**
	comp=Z,8.8nm,1.2s,baz=82,slow=6.8,SNR=5.4						
VNA3	**Neumayer Olymp**	**97.06**	**192**	P	Pdif	23 24 14.9	+0.4
DAWY	**Dawson**	**97.14**	**26**	P	Pdif	23 24 15.2	+0.3
	baz=268,SNR=44						
VNA1	**Neumayer--Stat**	**97.20**	**193**	P	Pdif	23 24 15.7	+0.7
OBN	**Obninsk**	**97.27**	**325**	P	**P**	**23 24 13.8**	**-1.7**
	comp=Z,3.0nm,0.4s,baz=86,slow=6.4,SNR=7.7						
OBN	**Obninsk**	**97.27**	**325**	⇑*i*P	**P**	**23 24 14.1**	**-1.4**
OBN				*PP	**pP**	**23 24 50.0**	**+1.4**
OBN				*SP	**sP**	**23 25 04.0**	**+1.8**
OBN				*e*		23 36 49.2	
OBN				*e*		23 37 37.1	
OBN				SS	SS	23 42 11.0	+2.4
OBN				pmax	pmax		
	comp=Z,72nm,1.6s						
OBN				MLR	MLR		
	comp=Z,463nm,20.0s						
OBN	**Obninsk**	**97.27**	**325**	P	**P**	**23 24 14.2**	**-1.3**
OBN				IAmb	IAmb	23 24 16.2	
	comp=Z,44nm,1.1s						
I29M	**Ogilvie Camp,**	**97.63**	**25**	P	Pdif	23 24 17.2	+0.2
	baz=269						
J29M	**Klondike Camp**	**97.66**	**26**	P	Pdif	23 24 17.6	+0.4
	baz=269						
MBAR	**Mbarara**	**98.13**	**268**	P	**P**	**23 24 19.0**	**-1.6**
MBAR				pmax	pmax		
	comp=Z,18nm,0.3s						
MBAR	**Mbarara**	**98.13**	**268**	P	**P**	**23 24 19.0**	**-1.6**
EPYK	**Eagle Plains**	**98.28**	**24**	IAmb	IAmb	23 24 21.1	
	comp=Z,71nm,1.4s						
EPYK	**Eagle Plains**	**98.28**	**24**	P	**P**	**23 24 19.6**	**-0.3**
	baz=271,SNR=15						
LSZ	**Lusaka**	**98.46**	**253**	P	**P**	**23 24 21.6**	**-0.4**
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LSZ	**Lusaka**	**98.46**	**253**	P	**P**	**23 24 21.6**	**-0.4**
BOSA	**Boshof**	**98.51**	**240**	P	**P**	**23 24 21.8**	**-0.2**
	comp=Z,6.9nm,0.8s,baz=112,slow=3.6,SNR=18						
BOSA				LR	LR	00 03 12.8	
	comp=Z,185nm,21.9s,baz=100,slow=32						
BOSA	**Boshof**	**98.51**	**240**	P	**P**	**23 24 21.8**	**-0.2**
BRTR	**Keskin Array B**	**98.69**	**309**	P	**P**	**23 24 21.1**	**-1.4**
	comp=Z,1.3nm,0.6s,baz=143,slow=5.2,SNR=3.8						
BRTR				PP	**PP**	**23 28 26.2**	**+0.9**
	comp=Z,2.6nm,0.9s,baz=107,slow=7.7,SNR=4.0						
BRTR	**Keskin Array B**	**98.69**	**309**	P	**P**	**23 24 21.1**	**-1.4**
APA	**Apatity**	**98.77**	**337**	⇓*i*P	Pdif	23 24 27.2	+5.2
APA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
N31M	**Braeburn, Yuko**	**98.78**	**29**	P	Pdif	23 24 23.1	+0.8
	baz=271						
SKAG	**Skagway**	**99.05**	**31**	P	**Pdif**	**23 24 23.9**	**+0.5**
	baz=271						
WHY	**Whitehorse**	**99.24**	**30**	P	**Pdif**	**23 24 24.8**	**+0.4**
	baz=272						
M31M	**Drury Creek, Y**	**99.42**	**28**	P	**Pdif**	**23 24 25.1**	**0.0**
	baz=272						
INK	**Inuvik**	**99.43**	**22**	P	**Pdif**	**23 24 24.7**	**-0.2**
	baz=274						
P33M	**Teslin, Yukon**	**100.28**	**30**	P	**Pdif**	**23 24 29.4**	**+0.3**
	baz=274						
ARCES	**ARCESS Array B**	**101.44**	**340**	P	**Pdif**	**23 24 33.0**	**-0.9**
	comp=Z,14nm,1.1s,baz=81,slow=4.5,SNR=12						
ARCES				PKiKP	**PKiKP**	**23 28 57.2**	**-0.1**
	comp=Z,4.1nm,0.8s,baz=115,slow=1.4,SNR=12						
ARCES				PKKPbc	**PKKPbc**	**23 40 41.6**	**-3.3**
	comp=Z,2.2nm,0.5s,baz=258,slow=2.7,SNR=21						
ARCES	**ARCESS Array B**	**101.44**	**340**	P	**Pdif**	**23 24 33.0**	**-0.9**
A36M	**Sachs Harbour**	**101.67**	**18**	P	**Pdif**	**23 24 34.8**	**-0.1**
	baz=283						
AKASG	**Malin Array Be**	**101.75**	**320**	P	**Pdif**	**23 24 34.2**	**-1.4**
	comp=Z,1.1nm,0.6s,baz=75,slow=4.1,SNR=17						
AKASG				PP	**PP**	**23 28 48.2**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=80,slow=6.2,SNR=6.5						
AKASG	**Malin Array Be**	**101.75**	**320**	*i* P	**Pdif**	**23 24 34.7**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MNK	**Minsk**	**102.30**	**324**	*i* P	**Pdif**	**23 24 37.2**	**-0.8**
MNK				*i*		23 28 52.3	
MNK				*i* PPP	PPP	23 31 06.2	
MNK				*i* S	**SKSac**	**23 35 04.3**	**-0.6**
MNK				*i* SS	**SS**	**23 43 20.9**	**+2.2**
MNK				*i* SSS	SSS	23 47 14.7	
MNK				pmax	pmax		
	comp=N,8.0nm,1.0s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,15nm,1.0s						
MNK				MLR	MLR		
	comp=E,18nm,13.0s						
MNK				MLR	MLR		
	comp=Z,120nm,13.0s						
MNK				MLR	MLR		
	comp=N,239nm,13.0s						
MNK	**Minsk**	**102.30**	**324**	*i* P	**Pdif**	**23 24 37.2**	**-0.8**
	comp=E,3.0nm,1.0s						
MNK				*i* P	**Pdif**	**23 24 37.2**	**-0.8**
	comp=N,8.0nm,1.0s						
MNK				*i* P	**Pdif**	**23 24 37.2**	**-0.8**
	comp=Z,15nm,1.0s,baz=85						
MNK				*i* pP	**pPdif**	**23 25 10.5**	**-0.5**
MNK				*i* sP	**sPdif**	**23 25 21.7**	**-3.0**
MNK				*i* PP	**PP**	**23 28 52.4**	**+0.5**
MNK				*i* PPP	PPP	23 31 06.3	
MNK				*i* S	**SKSac**	**23 35 04.3**	**-0.6**
MNK				*i* SS	**SS**	**23 43 20.9**	**+2.2**
MNK				*i* SSS	SSS	23 47 14.7	
MNK				*i* LR	LR	00 05 50.2	
MNK				*i* LRM	MLR	00 11 12.8	
	comp=E,18nm,12.6s						
MNK				*i* LRM	MLR	00 11 13.5	
	comp=N,239nm,12.6s						
MNK				*i* LRM	MLR	00 11 17.7	
	comp=Z,120nm,12.6s						
SORM	**Soroca**	**102.45**	**318**	⇑P	**Pdif**	**23 24 37.2**	**-1.6**
FINES	**FINESS Array B**	**102.48**	**331**	P	**Pdif**	**23 24 37.5**	**-1.2**
	comp=Z,1.4nm,0.5s,baz=68,slow=3.9,SNR=16						
FINES				PKiKP	**PKiKP**	**23 28 59.9**	**+0.6**
	comp=Z,5.2nm,0.7s,baz=75,slow=2.7,SNR=14						
FINES				PKKPbc	**PKKPbc**	**23 40 38.8**	**-2.8**
	comp=Z,2.0nm,0.8s,baz=243,slow=8.4,SNR=4.2						
FINES	**FINESS Array B**	**102.48**	**331**	P	**Pdif**	**23 24 37.5**	**-1.2**
FINES				*i*		23 28 59.9	
TPGR	**Topolog**	**102.56**	**314**	⇓P	**Pdif**	**23 24 38.8**	**-0.6**
TIRR	**Tirgusor**	**102.58**	**314**	⇑P	**PKKPbc**	**23 40 39.1**	**-1.5**
CFR	**Carcaliu**	**102.75**	**315**	⇑P	**Pdif**	**23 24 40.7**	**+0.5**
CFR	**Carcaliu**	**102.75**	**315**	⇑P	**PKKPbc**	**23 40 36.3**	**-3.9**
TLBR	**Topalu**	**102.84**	**314**	⇑P	**PKKPbc**	**23 40 39.9**	**-0.1**
HARR	**Harsova**	**102.92**	**314**	⇑P	**PKiKP**	**23 28 58.7**	**-1.9**
VRI	**Vrincioaia**	**103.70**	**315**	⇓P	**Pdif**	**23 24 44.3**	**-0.2**
VRI	**Vrincioaia**	**103.70**	**315**	⇓P	**PKiKP**	**23 29 05.7**	**+3.6**
TESR	**Tescani**	**103.71**	**316**	⇑P	**Pdif**	**23 24 44.4**	**-0.1**
TESR	**Tescani**	**103.71**	**316**	⇓P	**PKiKP**	**23 29 00.5**	**-1.5**
PLOR	**Plostina**	**103.75**	**315**	⇑P	**Pdif**	**23 24 47.1**	**+2.4**
PLOR	**Plostina**	**103.75**	**315**	⇑P	**PKiKP**	**23 29 05.7**	**+3.5**
NEHR	**Nehoiu**	**104.03**	**315**	⇓P	**Pdif**	**23 24 46.2**	**+0.2**
NEHR	**Nehoiu**	**104.03**	**315**	⇑P	**PKiKP**	**23 29 02.7**	**0.0**
MLR	**Muntele Rosu**	**104.27**	**315**	⇑P	**Pdif**	**23 24 47.6**	**+0.4**
MLR	**Muntele Rosu**	**104.27**	**315**	⇓P	**PKiKP**	**23 29 02.8**	**-0.5**
MLR	**Muntele Rosu**	**104.27**	**315**	Pdiff	**Pdif**	**23 24 46.8**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=287,slow=6.1,SNR=9.1						
MLR				PP	**PP**	**23 29 07.5**	**+0.5**
	comp=Z,40nm,1.2s,baz=41,slow=8.5,SNR=5.8						
MLR	**Muntele Rosu**	**104.27**	**315**	P	**Pdif**	**23 24 47.4**	**+0.2**
MLR	**Muntele Rosu**	**104.27**	**315**	Pdif	**Pdif**	**23 24 47.4**	**+0.2**
OZUR		**104.34**	**316**	⇑P	**PKiKP**	**23 29 08.1**	**+4.9**
BURAR	**Bucovina Array**	**104.59**	**317**	⇑P	**Pdif**	**23 24 48.5**	**-0.1**
BURAR	**Bucovina Array**	**104.59**	**317**	⇑P	**PKiKP**	**23 29 06.8**	**+3.1**
ARCR	**ARCALIA**	**105.23**	**317**	⇑P	**PKiKP**	**23 29 11.8**	**+7.0**
VLAD	**Vladila**	**105.49**	**314**	⇑P	**PKKPbc**	**23 40 28.9**	**-3.1**
DRGR		**106.38**	**317**	⇓P	**Pdif**	**23 24 56.9**	**+0.5**
UZH	**Uzhgorod**	**106.42**	**319**	*e*P	**Pdif**	**23 24 57.0**	**+0.5**
UZH				*e*PKP	**PP**	**23 29 23.0**	**+0.4**
UZH				MLR	MLR		
	comp=Z,220nm,18.0s						
VTS	**Vitosha**	**106.46**	**312**	⇓P	**Pdif**	**23 24 56.9**	**-0.1**
VTS	**Vitosha**	**106.46**	**312**	⇑P	**PKiKP**	**23 29 06.6**	**-0.9**
VTS	**Vitosha**	**106.46**	**312**	⇑P	**PKKPbc**	**23 40 27.9**	**-1.3**
GZR	**Gura Zlata**	**106.50**	**315**	⇑P	**PKiKP**	**23 29 08.0**	**+0.7**
GZR	**Gura Zlata**	**106.50**	**315**	⇑P	**PKKPbc**	**23 40 28.9**	**-0.1**
HERR	**Herculane**	**106.81**	**315**	⇑P	**Pdif**	**23 24 57.3**	**-1.1**
BZS	**Buzias**	**107.28**	**315**	⇓P	**PKiKP**	**23 29 09.0**	**+0.4**
PRVS	**Prvonek**	**107.32**	**312**	*e*P	**PKiKP**	**23 29 08.1**	**-0.8**
D03D	**Eldon**	**107.36**	**43**	P	**PKiKP**	**23 29 09.1**	**+0.3**
	baz=278						
BOVS	**Bovan**	**107.47**	**313**	⇑P	**Pdif**	**23 25 00.9**	**-0.3**
BARS	**Barje**	**107.48**	**313**	*e*P	**PKiKP**	**23 29 09.3**	**+0.2**
KECS	**Kecovo**	**107.63**	**319**	*e*PP	**PP**	**23 29 36.3**	**+4.8**
B05A	**Bryant**	**107.91**	**42**	P	**PKiKP**	**23 29 10.2**	**+0.5**
	baz=280						
GRUS	**Gruza**	**108.15**	**314**	*e*P	**PKiKP**	**23 29 10.6**	**+0.3**
TRUS	**Trudelj**	**108.32**	**314**	*e*P	**PKiKP**	**23 29 11.5**	**+0.9**
DAG	**Danmarks Havn**	**108.33**	**353**	*i* P	**PKiKP**	**23 29 09.4**	**-0.4**
M02C	**Callahan**	**108.33**	**49**	P	**PKiKP**	**23 29 11.5**	**+0.7**
	baz=277						
YKA	**Yellowknife Ar**	**108.38**	**26**	Pdiff	**Pdif**	**23 25 04.6**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=292,slow=4.9,SNR=12						
YKA				PKiKP	**PKiKP**	**23 29 10.2**	**+0.1**
	comp=Z,4.6nm,0.8s,baz=295,slow=1.8,SNR=65						
YKA				PKKPbc	**PKKPbc**	**23 40 20.3**	**-3.4**
	comp=Z,4.9nm,0.5s,baz=114,slow=3.2,SNR=4.4						
YKA				PKKP	**PKKPab**	**23 40 33.7**	**-1.1**
	comp=Z,1.4nm,0.6s,baz=106,slow=5.3,SNR=8.0						
O02D	**Mt. Diablo Mer**	**108.52**	**50**	P	**PKiKP**	**23 29 11.7**	**+0.5**
	baz=276						
FRGS	**Fruska Gora**	**108.61**	**315**	*e*P	**PKiKP**	**23 29 08.8**	**-2.4**
FRGS	**Fruska Gora**	**108.61**	**315**	*e*P	**PKiKP**	**23 29 08.8**	**-2.4**
DIVS	**Divibare**	**108.64**	**314**	*e*P	**PKiKP**	**23 29 11.7**	**+0.3**
DIVS	**Divibare**	**108.64**	**314**	*e*P	**PKiKP**	**23 29 11.7**	**+0.3**
L04D	**Klamath Falls**	**108.64**	**48**	P	**PKiKP**	**23 29 12.0**	**+0.5**
	baz=277						
VYHS	**Vyhne**	**108.71**	**319**	*e*PP	**PP**	**23 29 42.7**	**+3.3**
SJES	**Sjenica**	**108.77**	**313**	*e*P	**PKiKP**	**23 29 12.2**	**+0.5**
KOLL	**Kolacno**	**108.98**	**319**	*e*PP	**PP**	**23 29 43.7**	**+2.4**
M04C	**Macdoel**	**109.04**	**48**	P	**PKiKP**	**23 29 12.8**	**+0.5**
	baz=278						
I05D	**Terrebonne, OR**	**109.05**	**46**	P	**PKiKP**	**23 29 12.7**	**+0.6**
	baz=279						
BBLS	**Lazići**	**109.09**	**314**	*e*P	**PKiKP**	**23 29 11.9**	**-0.3**
BBLS	**Lazići**	**109.09**	**314**	*e*P	**PKiKP**	**23 29 13.2**	**+1.0**
RUDO	**Rudo**	**109.15**	**314**	*e*P	**PKiKP**	**23 29 11.9**	**-0.3**
SRO	**Srobarova**	**109.18**	**318**	*e*PP	**PP**	**23 29 47.6**	**+4.9**
MORH	**Mrgy, Hungar**	**109.25**	**316**	*e*P	**PKiKP**	**23 29 12.2**	**-0.1**
O03E	**Paynes Creek**	**109.26**	**50**	P	**PKiKP**	**23 29 12.6**	**0.0**
	baz=277						
J05D	**Fort Rock, OR**	**109.28**	**47**	P	**PKiKP**	**23 29 13.1**	**+0.4**
	baz=278						
MORC	**Moravsky Berou**	**109.30**	**320**	*e*PKIKP	**PKiKP**	**23 29 13.0**	**+0.6**
JAVC	**Velka Javorina**	**109.40**	**319**	*e*PKIKP	**PKiKP**	**23 29 13.8**	**+1.2**
PDG	**Podgorica**	**109.40**	**312**	*e*P	**PKiKP**	**23 29 11.5**	**-1.2**
DRME	**Dracevica, Mon**	**109.49**	**312**	*e*P	**PKiKP**	**23 29 12.8**	**-0.1**
NOA	**NORSAR Array B**	**109.53**	**333**	Pdiff	**Pdif**	**23 25 09.5**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=51,slow=6.3,SNR=2.4						
NOA				PKiKP	**PKiKP**	**23 29 12.6**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=79,slow=1.8,SNR=4.9						
NOA				PKKPbc	**PKKPbc**	**23 40 17.9**	**-2.1**
	comp=Z,1.0nm,0.8s,baz=65,slow=3.0,SNR=3.4						
NOA	**NORSAR Array B**	**109.53**	**333**	P	**Pdif**	**23 25 09.5**	**-0.6**
UPM	**Unac-Piva**	**109.55**	**313**	*e*P	**PKiKP**	**23 29 12.7**	**-0.5**
MODS	**Modra-Piesok**	**109.75**	**319**	*e*PP	**PP**	**23 29 49.2**	**+2.3**
NEEM	**North Greenlan**	**109.81**	**0**	*i* P	**PKiKP**	**23 29 12.6**	**-0.4**
BRY	**Bratogost**	**109.86**	**313**	*e*P	**PKiKP**	**23 29 13.3**	**-0.5**
ZST	**Bratislava**	**109.91**	**319**	*e*PP	**PP**	**23 29 49.4**	**+1.5**
DPC	**Dobruska-Polom**	**109.94**	**321**	*e*PKP	**PKiKP**	**23 29 14.3**	**+0.7**
OSTC	**Ostas**	**109.96**	**321**	*e*PKP	**PKiKP**	**23 29 14.6**	**+1.0**
VRAC	**Vranov**	**110.00**	**320**	*e*PKIKP	**PKiKP**	**23 29 14.1**	**+0.4**
TULEG	**Thule**	**110.04**	**4**	*i* P	**PKiKP**	**23 29 12.3**	**-0.7**
CHVC	**Chvalec**	**110.05**	**321**	*e*PKP	**PKiKP**	**23 29 14.6**	**+0.9**
KRUC	**Moravsky**	**110.18**	**320**	*e*PKIKP	**PKiKP**	**23 29 14.2**	**+0.2**
STON	**Ston**	**110.47**	**313**	*e*P	**PKiKP**	**23 29 14.1**	**-0.6**
BLY	**Banja Luka**	**110.52**	**315**	*e*P	**PKiKP**	**23 29 14.9**	**+0.2**
DBG	**Daneborg**	**110.62**	**351**	*i* P	**PKiKP**	**23 29 13.0**	**-1.1**
MRAK	**Mrakovica**	**110.67**	**315**	*e*P	**PKiKP**	**23 29 15.1**	**0.0**
CONA	**Conrad Observa**	**110.78**	**319**	*e*P	**PKiKP**	**23 29 15.6**	**+0.3**
	comp=Z,9.2nm,1.4s						
CONA				*e*P	**PP**	**23 29 50.1**	**-4.2**
	comp=Z,33nm,1.4s						
CONA				*e*P	**PKKPbc**	**23 40 13.0**	**-2.5**
	comp=Z,7.6nm,1.9s						
PVCC	**Panska Ves**	**110.98**	**322**	*e*PKP	**PKiKP**	**23 29 16.2**	**+0.7**
PVCC	**Panska Ves**	**110.98**	**322**	*e*PKIKP	**PKiKP**	**23 29 16.2**	**+0.7**
PRU	**Pruhonice**	**111.14**	**321**	*e*PKP	**PKiKP**	**23 29 16.0**	**+0.2**
PRU				*e*PP	**PP**	**23 30 02.2**	**+5.5**
PRU	**Pruhonice**	**111.14**	**321**	*e*PKIKP	**PKiKP**	**23 29 16.0**	**+0.2**
PRU				*e*		23 30 02.2	
ARSA	**Arzberg**	**111.15**	**318**	*e*P	**PKiKP**	**23 29 15.8**	**-0.1**
	comp=Z,6.6nm,1.2s						
ARSA				*e*P	**PP**	**23 29 50.5**	**-6.5**
	comp=Z,26nm,2.2s						
ARSA				*e*P	**PKKPbc**	**23 40 13.0**	**-1.2**
	comp=Z,1.4nm,0.6s						
PRA	**Prague**	**111.19**	**321**	*e*PKP	**PKiKP**	**23 29 16.3**	**+0.5**
PRA	**Prague**	**111.19**	**321**	*e*PKIKP	**PKiKP**	**23 29 16.3**	**+0.5**
BRG	**Berggiesshubel**	**111.28**	**322**	*e*PKPdf	**PKiKP**	**23 29 16.6**	**+0.6**
	baz=76,slow=1.9						
PKM	**Mcpherson Peak**	**111.45**	**55**	P	**PKiKP**	**23 29 17.0**	**-0.1**
	baz=276						
CRES	**Cresnjev**	**111.50**	**316**	*e*P	**PKiKP**	**23 29 16.4**	**-0.2**
PERS	**Pernice**	**111.56**	**317**	*e*PKiKP	**PKiKP**	**23 29 16.5**	**-0.2**

MATE	Matera	111.56	311	⇑P	PKiKP	23 29 17.3	+0.4
CKRC	Cesky Krumlov	111.58	320	*e*PKP	PKiKP	23 29 18.0	+1.3
SOKA	Soboth	111.60	317	*i* P	PKiKP	23 29 16.9	0.0
	comp=Z,12nm,1.4s,SNR=7.1						
SOKA				*e*P	PP	23 29 51.7	-8.5
	comp=Z,25nm,1.6s						
SOKA				*e*P	PKKPbc	23 40 11.6	-1.2
	comp=Z,1.7nm,0.8s						
FBE	Freiberg	111.63	322	*e*PKPdf	PKiKP	23 29 17.1	+0.5
	baz=76,slow=1.9						
BOJS	Bojanci	111.71	316	*e*PKiKP	PKiKP	23 29 17.4	+0.4
CLL	Collm	111.73	323	*e*P	Pdif	23 25 17.0	-3.0
CLL				*e*		23 29 17.0	
CLL	Collm	111.73	323	*e*PKiKP	PKiKP	23 29 17.0	+0.2
CLL				*e*PP	PP	23 30 03.0	+2.1
CLL				*e*sPP		23 30 47.0	
CLL				*e*pPS		23 39 54.0	
CLL				*e*SSSS		23 53 06.0	
CLL	Collm	111.73	323	*e*PKPdf	PKiKP	23 29 17.2	+0.3
	baz=76,slow=1.9						
TIP	Timpagrande	111.75	309	⇑P	PKiKP	23 29 18.2	+0.8
MOA	Molln	111.84	319	*e*P	PKiKP	23 29 17.0	-0.2
	comp=Z,2.2nm,0.7s						
MOA				*e*P	PP	23 29 54.9	-6.9
	comp=Z,13nm,1.2s						
MOA				*e*P	PKKPbc	23 40 09.1	-2.9
	comp=Z,5.8nm,1.1s						
VISS	Visnje	111.93	317	*i* PKiKP	PKiKP	23 29 17.6	+0.2
VES	Vestal, Richgr	111.93	54	P	PKiKP	23 29 17.7	0.0
	baz=277						
GEC2	GERESS Array S	111.96	320	*e*PKPdf	PKiKP	23 29 17.7	+0.3
	baz=76,slow=1.9						
GERES	GERESS Array B	111.96	320	PKiKP	PKiKP	23 29 17.8	+0.3
	comp=Z,6.2nm,0.5s,baz=69,slow=2.2,SNR=81						
GERES				PP	PP	23 30 03.2	+0.4
	comp=Z,4.9nm,0.9s,baz=74,slow=5.7,SNR=8.7						
GERES				SKP	SKPdf	23 32 40.7	0.0
	comp=Z,0.9nm,0.5s,baz=67,slow=2.7,SNR=6.5						
GERES				PKKPbc	PKKPbc	23 40 08.4	-3.3
	comp=Z,0.5nm,0.6s,baz=296,slow=3.2,SNR=3.7						
GERES				PKKPab	PKKPab	23 40 20.1	+0.8
	comp=Z,0.8nm,0.7s,baz=264,slow=2.7,SNR=4.9						
GERES	GERESS Array B	111.96	320	*i* PKIKP	PKiKP	23 29 17.8	+0.3
KHC	Kasperske Hory	111.96	320	*e*PKP	PKiKP	23 29 17.9	+0.5
KHC				*e*PP	PP	23 30 06.4	+3.7
KHC	Kasperske Hory	111.96	320	*e*PKIKP	PKiKP	23 29 17.9	+0.5
KHC				*e*		23 30 06.4	
OBKA	Obir	111.97	317	*e*P	PKiKP	23 29 17.5	0.0
	comp=Z,4.5nm,0.9s						
OBKA				*e*P	PP	23 29 52.7	-10
	comp=Z,19nm,1.6s						
OBKA				*e*P	PKKPbc	23 40 10.7	-0.9
	comp=Z,3.4nm,0.8s						
LJU	Ljubljana	112.08	317	*e*PKiKP	PKiKP	23 29 18.1	+0.4
LJU				*e*pPKiKP	PP	23 29 53.9	-10
LJU				*e*		23 30 08.6	
LJU				*i*		23 30 37.8	
LJU	Ljubljana	112.08	317	*e*P	PKiKP	23 29 18.1	+0.4
NVAR	Mina Array Bea	112.20	52	Pdiff	Pdif	23 25 23.5	+0.8
	comp=Z,0.3nm,0.6s,baz=282,slow=6.3,SNR=1.5						
NVAR				PKiKP	PKiKP	23 29 19.4	+1.0
	comp=Z,2.1nm,0.7s,baz=252,slow=2.3,SNR=13						
NVAR				PP	PP	23 30 04.0	-1.1
	comp=Z,3.2nm,1.0s,baz=266,slow=4.5,SNR=4.0						
NVAR				PKKPbc	PKKPbc	23 40 09.7	-1.0
	comp=Z,1.6nm,0.7s,baz=104,slow=3.8,SNR=7.6						
CEY	Cerknica	112.22	317	*e*P	PKiKP	23 29 17.8	-0.2
TANN	Tannenbergstha	112.31	322	*e*PKPdf	PKiKP	23 29 18.5	+0.4
	baz=76,slow=1.9						
WERD	Werda	112.40	322	*e*PKPdf	PKiKP	23 29 18.7	+0.5
	baz=76,slow=1.9						
WERN	Wernitzgruen	112.40	322	*e*PKPdf	PKiKP	23 29 18.4	+0.2
	baz=76,slow=1.9						
WET	Wettzell	112.40	320	*e*PKPdf	PKiKP	23 29 18.8	+0.6
	baz=76,slow=1.9						
GUNZ	Gunzen	112.41	322	*e*PKPdf	PKiKP	23 29 18.8	+0.5
	baz=76,slow=1.9						
ISA	Isabella, Lake	112.45	54	P	PKiKP	23 29 18.7	-0.2
	baz=277						
FLTG	Flechtingen	112.48	324	*e*PKPdf	PKiKP	23 29 19.0	+0.8
	baz=76,slow=1.9						
BSEG	Bad Segeberg	112.48	326	*e*PKPdf	PKiKP	23 29 19.1	+1.0
	baz=76,slow=1.9						
MYKA	Terra Mystica	112.55	318	*e*P	PKiKP	23 29 18.5	-0.1
	comp=Z,4.8nm,0.7s						
MYKA				*e*P	PP	23 29 54.9	-12
	comp=Z,13nm,1.6s						
MYKA				*e*P	PKKPbc	23 40 08.6	-1.1
	comp=Z,3.3nm,0.7s						
KBA	Koelnbreinsper	112.63	318	*e*P	PKiKP	23 29 18.5	-0.4
	comp=Z,4.4nm,0.6s						
KBA				*e*P	PP	23 29 55.4	-12
	comp=Z,11nm,1.2s						
KBA				*e*P	PKKPbc	23 40 08.5	-1.1
	comp=Z,4.2nm,1.1s						
MANZ	Manzenberg	112.65	321	*e*PKPdf	PKiKP	23 29 19.1	+0.4
	baz=76,slow=1.9						
CWC	Cottonwood Cre	112.66	54	P	PKiKP	23 29 20.1	+0.8
	baz=278						
MOX	Moxa	112.76	322	*e*PKPdf	PKiKP	23 29 19.1	+0.3
	baz=76,slow=1.9						
CIS	Catalina Islan	112.77	57	P	PKiKP	23 29 19.9	+0.5
	baz=276						
RJOB	Jochberg	112.83	319	*e*PKPdf	PKiKP	23 29 19.1	0.0
	baz=76,slow=1.9						
EDW2	Edwards Air Fo	112.94	55	P	PKiKP	23 29 20.6	+0.9
	baz=277,SNR=5.1						
CLZ	Clausthal	113.14	324	*e*PKPdf	PKiKP	23 29 20.1	+0.5
	baz=76,slow=1.9						
MPMC	Manual Prospec	113.19	54	P	PKiKP	23 29 21.2	+0.8
	baz=278,SNR=6.3						
ABTA	Abfaltersbach	113.27	318	*i* P	PKiKP	23 29 19.7	-0.4
	comp=Z,10nm,0.7s,SNR=8.3						
ABTA				*e*P	PP	23 30 15.3	+3.2
	comp=Z,10nm,1.2s						
ABTA				*e*P	PKKPab	23 40 14.2	+0.7
	comp=Z,4.3nm,0.8s						
GRF	Grafenberg Arr	113.29	321	*e*PKPdf	PKiKP	23 29 20.4	+0.5
	baz=76,slow=1.9						
BFSC	Mount Baldy Ra	113.29	56	P	PKiKP	23 29 20.8	+0.2
	baz=277						
GTTG	Gottingen	113.47	323	*e*PKPdf	PKiKP	23 29 21.0	+0.8
	baz=76,slow=1.9						
MSO	Missoula	113.61	42	P	PKiKP	23 29 20.7	0.0
	baz=285,SNR=10						
FURC	Furnace Creek,	113.63	53	P	PKiKP	23 29 21.7	+0.8
	baz=279						
AQU	L'Aquila	113.68	313	*e*P	PKiKP	23 29 20.4	-0.5
FUR	Furstenfeldbru	113.69	320	*e*PKPdf	PKiKP	23 29 20.9	+0.1
	baz=76,slow=1.9						
WTTA	Wattenberg	113.71	319	*i* P	PKiKP	23 29 21.2	+0.2
	comp=Z,35nm,0.6s,SNR=19						
WTTA				*e*P	PKKPab	23 40 10.4	-1.2
	comp=Z,3.8nm,0.7s						
WATA	Walderalm	113.73	319	*i* P	PKiKP	23 29 20.6	-0.4
	comp=Z,8.5nm,0.5s,SNR=7.9						
WATA				*e*P	PP	23 30 14.9	-0.6
	comp=Z,22nm,1.4s						
WATA				*e*P	PKKPbc	23 40 05.4	-0.4
	comp=Z,9.4nm,1.3s						
MURC	Murrieta	113.75	57	P	PKiKP	23 29 21.8	+0.5
	baz=277						
GSC	Goldstone, Bar	113.84	55	P	PKiKP	23 29 21.9	+0.4
	baz=278						
SQTA	Sankt Quirin	114.00	319	*i* P	PKPdf	23 29 21.4	-0.1
	comp=Z,16nm,1.1s,SNR=6.5						
SQTA				*e*P	PP	23 30 17.3	-0.1
	comp=Z,19nm,1.5s						
SQTA				*e*P	PKKPbc	23 40 05.3	+0.4
	comp=Z,12nm,1.1s						
MOTA	Moosalm	114.04	319	*i* P	PKPdf	23 29 21.3	-0.3
	comp=Z,12nm,0.5s,SNR=5.7						
MOTA				*e*P	PP	23 30 15.9	-1.7
	comp=Z,23nm,1.5s						
MOTA				*e*P	PKKPbc	23 40 04.4	-0.4
	comp=Z,7.0nm,1.5s						
TPNV	Topopah Spring	114.04	53	P	PKiKP	23 29 22.3	+0.3
	baz=279						
HLID	Hailey	114.10	45	P	PKiKP	23 29 22.7	+0.8
	baz=284						
SHOC	Shoshone, Teco	114.18	54	P	PKiKP	23 29 22.9	+0.8
	baz=279						
RETA	Reutte	114.22	319	*e*P	PKPdf	23 29 21.7	-0.2
	comp=Z,4.4nm,0.5s						
RETA				*e*P	PP	23 30 19.1	+0.3
	comp=Z,24nm,1.5s						
RETA				*e*P	PKKPab	23 40 09.7	+0.5
	comp=Z,5.2nm,1.7s						
SUMG	Summit	114.26	356	*i* P	PKPdf	23 29 20.6	-1.0
HEC	Hector,Ludlow	114.29	55	P	PKiKP	23 29 23.1	+0.7
	baz=278						
R11A	Troy Canyon, C	114.32	51	P	PKiKP	23 29 23.1	+0.7
	baz=280						
PFO	Pinyon Flats O	114.36	56	P	PKiKP	23 29 23.3	+0.7
	baz=278,SNR=7.0						
TPFO	Pinon Flats	114.37	56	P	PKiKP	23 29 23.5	+0.9
	baz=278,SNR=5.8						
FETA	Feichten	114.37	319	*e*P	PKiKP	23 29 22.3	+0.1
	comp=Z,5.3nm,0.6s						
FETA				*e*P	PP	23 30 16.1	-3.9
	comp=Z,18nm,1.4s						
FETA				*e*P	PKKPbc	23 39 58.1	-5.5
	comp=Z,11nm,1.6s						
UPNV	Upernavik	114.42	2	*i* P	PKPdf	23 29 20.9	-0.5
MONP2	Monument Peak	114.49	57	P	PKiKP	23 29 23.1	+0.2
	baz=278						
UBR	Ueberruh	114.59	319	*e*PKPdf	PKiKP	23 29 22.5	0.0
	baz=76,slow=1.9						
BELC	Belle Mtn. Jos	114.69	56	P	PKiKP	23 29 24.0	+0.7
	baz=278,SNR=5.2						
IKP	In-Ko-Pah, Jac	114.78	57	P	PKPdf	23 29 23.1	-0.3
	baz=278						
STU	Stuttgart	114.83	321	*e*PKPdf	PKPdf	23 29 23.3	+0.5
	baz=76,slow=1.9						
GMRC	Granite Mounta	114.85	55	P	PKiKP	23 29 24.4	+0.9
	baz=279,SNR=14						
DAVA	Damuels	114.85	319	*i* P	PKiKP	23 29 23.0	-0.1
	comp=Z,18nm,0.5s,SNR=7.0						
DAVA				*e*P	PP	23 30 26.1	+2.8
	comp=Z,34nm,1.4s						
SWSC	Sam W. Stewart	115.00	57	P	PKPdf	23 29 24.2	+0.6
	baz=278						
BUG	Bochum--Univer	115.09	324	*e*PKPdf	PKPdf	23 29 23.8	+0.6
	baz=76,slow=1.9						
BC3	Big Chuckawall	115.19	56	P	PKPdf	23 29 24.6	+0.4
	baz=278,SNR=6.3						
IRM	Iron Mountain	115.37	56	P	PKPdf	23 29 24.8	+0.4
	baz=279,SNR=8.7						
BOZ	Bozeman (W)	115.49	43	P	PKPdf	23 29 25.0	+0.6
	baz=287						
BFO	Black Forest	115.52	321	*e*PKPdf	PKiKP	23 29 24.2	-0.1
	baz=76,slow=1.9						
AHRW	Bad Neuenahr-A	115.53	323	*e*PKPdf	PKPdf	23 29 25.0	+0.9
	baz=76,slow=1.9						
HVU	Hansel Valley	115.70	47	PKIKP	PKiKP	23 29 25.6	+0.6
HVU	Hansel Valley	115.70	47		PKiKP	23 29 25.6	+0.6
BGU	Big Grassy Mou	115.72	48		PKiKP	23 29 25.5	+0.5
GLA	Glamis	115.79	57	PKIKP	PKiKP	23 29 26.3	+1.1
GLA	Glamis	115.79	57		PKiKP	23 29 26.3	+1.1
GLA	Glamis	115.79	57	P	PKiKP	23 29 25.3	0.0
	baz=278						
EGMT	Eagleton	115.97	40	P	PKiKP	23 29 25.5	+0.3
	baz=289,SNR=14						
DUG	Dugway, Tooele	116.05	49	P	PKiKP	23 29 26.8	+1.1
	baz=283,SNR=14						
MEM	Membach	116.14	323	*d*PKPdf	PKPdf	23 29 25.2	-0.1
PDMCI	Parker Dam,Lak	116.16	55	P	PKiKP	23 29 26.2	+0.4
	baz=280						
CCUT	Cedar City	116.19	52	PKPdf	PKiKP	23 29 27.6	+1.5
BEBN	Eben Emael	116.26	324	*d*PKP	PKiKP	23 29 25.6	+0.1
LCMT	Little Creek M	116.39	52		PKiKP	23 29 28.0	+1.6
WLF	Walferdange	116.40	322	*d*PKPdf	PKiKP	23 29 26.3	+0.4
USHA	Ushuaia	116.48	169	PKP	PKiKP	23 29 26.9	+1.1
	comp=Z,11nm,0.6s,baz=189,slow=4.7,SNR=11						
H17A	Grant Village	116.56	44	P	PKiKP	23 29 27.3	+0.6
	baz=287						
BCLA	Clavier	116.63	323	*d*PKPdf	PKiKP	23 29 26.7	+0.4
TCRU	Three Creeks R	116.68	50		PKiKP	23 29 28.7	+1.6
BGES	Gesves	116.77	323	*d*PKPdf	PKPdf	23 29 26.3	-0.2
RCHB	Rochefort	116.77	323	*d*PKPdf	PKiKP	23 29 27.1	+0.6
MVU	Marysvale	116.88	50		PKiKP	23 29 28.7	+1.2
MSU	Marysvale	116.91	50	PKIKP	PKiKP	23 29 29.0	+1.5
MSU	Marysvale	116.91	50	PKPdf	PKiKP	23 29 29.0	+1.5
MPU	Maple Canyon	116.97	49		PKiKP	23 29 28.6	+1.1
BMRD	Maredsous	116.99	323	*d*PKPdf	PKPdf	23 29 26.3	-0.7
DOU	Dourbes	117.17	323	*d*PKPdf	PKiKP	23 29 28.0	+0.7
SNF	Seneffe	117.19	324	*d*PKPdf	PKiKP	23 29 27.7	+0.4
RLMT	Red Lodge	117.22	43	P	PKiKP	23 29 28.1	+0.2
	baz=288						
U15A	North Rim	117.26	53		PKiKP	23 29 29.8	+1.5
214A	Organ Pipe Nat	117.64	58	PKPdf	PKiKP	23 29 30.0	+1.1
214A	Organ Pipe Nat	117.64	58	P	PKiKP	23 29 28.8	0.0
	baz=279						
SOEG	Soedalen	117.70	352	*i* P	PKPdf	23 29 27.1	-0.7
BW06	Boulder Array	117.74	45	P	PKiKP	23 29 29.5	+0.5
	baz=287						
PDAR	Pinedale Array	117.74	45	PKP	PKiKP	23 29 29.4	+0.3
	comp=Z,4.9nm,0.6s,baz=209,slow=0.6,SNR=43						
PDAR				pPKP	pPKPdf	23 30 05.6	+1.8
	comp=Z,1.8nm,0.8s,baz=230,slow=2.1,SNR=1.8						
PDAR				PKKPbc	PKKPbc	23 39 50.6	-1.3
	comp=Z,2.3nm,0.6s,baz=116,slow=5.8,SNR=12						
SRU	San Rafael Swe	118.02	49	PKIKP	PKiKP	23 29 30.1	+0.5
SRU	San Rafael Swe	118.02	49		PKiKP	23 29 30.1	+0.5
KEST	Kesra	118.17	307	PKP	PKiKP	23 29 30.6	+0.7
	comp=Z,12nm,0.8s,baz=91,slow=0.6,SNR=48						
KEST				PP	PP	23 30 42.7	-4.1
	comp=Z,23nm,1.0s,baz=42,slow=4.8,SNR=8.1						
KEST				PKKPbc	PKKPbc	23 39 49.6	-0.2
	comp=Z,1.3nm,0.6s,baz=266,slow=6.4,SNR=2.9						
WUAZ	Wupatki	118.17	54		PKiKP	23 29 31.4	+1.5
WUAZ	Wupatki	118.17	54	P	PKiKP	23 29 31.1	+1.1
	baz=282,SNR=8.6						
LAO	LASA Array	118.69	40	P	PKiKP	23 29 31.2	+0.7
	baz=292						
DGMT	Dagmar	119.25	38	P	PKiKP	23 29 32.3	+0.8
	baz=294,SNR=8.7						
TUC	Tucson	119.28	57	PKIKP	PKiKP	23 29 33.2	+1.1
TUC	Tucson	119.28	57	PKPdf	PKiKP	23 29 33.2	+1.1
TUC	Tucson	119.28	57	P	PKiKP	23 29 32.8	+0.7
	baz=281						
O20A	White River Ci	119.45	48	P	PKiKP	23 29 33.4	+1.0
	baz=287						
W18A	Petrified Fore	119.57	54	P	PKiKP	23 29 33.7	+1.0
	baz=283,SNR=7.8						
K22A	Casper	119.90	45	P	PKPdf	23 29 33.0	-0.1
	baz=289						
MVCO	Mesa Verde	120.04	51	P	PKiKP	23 29 34.6	+1.0
	baz=285,SNR=20						
SFJD	Kangerlussuaq	120.31	360	PKIKP	PKiKP	23 29 33.0	+0.1
SFJD	Kangerlussuaq	120.31	360	*i* P	PKPdf	23 29 31.9	-1.0
SFJD	Kangerlussuaq	120.31	360		PKiKP	23 29 33.0	+0.1
319A	Douglas	120.71	58	PKPdf	PKiKP	23 29 36.2	+1.2
DY2G	Dye2	120.75	358	*i* P	PKPdf	23 29 33.5	-0.6
N23A	Red Feather La	120.88	46	P	PKiKP	23 29 36.0	+0.7
	baz=289						
RSSD	Black Hills	121.08	42	PKIKP	PKPdf	23 29 35.2	-0.1
RSSD	Black Hills	121.08	42	PKPdf	PKPdf	23 29 35.2	-0.1
RSSD	Black Hills	121.08	42	P	PKPdf	23 29 35.2	-0.1
	baz=292						
ISOG	Isortoq, Green	121.16	354	*i* P	PKPdf	23 29 33.5	-1.0
S22A	4UR Ranch, Cre	121.18	50	P	PKiKP	23 29 37.0	+1.1
	baz=286,SNR=19						
SLBS	Sierra La Lagu	121.26	67	PKPdf	PKiKP	23 29 37.2	+1.0
ISCO	Idaho Springs	121.47	47	P	PKiKP	23 29 37.2	+0.7
	baz=289,SNR=18						
121A	Cookes Peak, D	121.72	56	P	PKiKP	23 29 37.7	+0.7
	baz=283,SNR=16						
Y22D	IRIS PASSCAL I	122.07	54	P	PKiKP	23 29 38.4	+0.8
	baz=284						
Q24A	Divide	122.08	48	P	PKiKP	23 29 38.0	+0.2
	baz=288						
SDCO	Great Sand Dun	122.19	50	P	PKiKP	23 29 38.5	+0.5
	baz=287,SNR=15						
ANMO	Albuquerque	122.22	53	PKIKP	PKiKP	23 29 39.1	+1.1
ANMO	Albuquerque	122.22	53	PKPdf	PKiKP	23 29 39.1	+1.1
ANMO	Albuquerque	122.22	53	P	PKiKP	23 29 38.9	+0.9
	baz=285						
MDND	Maddock	122.28	37	P	PKiKP	23 29 37.3	-0.2
	baz=298,SNR=7.4						
NUUK	Nuuk	123.14	0	*i* P	PKPdf	23 29 38.2	-0.1
ULM	Lac du Bonnet	123.16	33	PKP	PKPdf	23 29 38.4	-0.4
	comp=Z,14nm,0.6s,baz=306,slow=3.3,SNR=18						
ULM	Lac du Bonnet	123.16	33	PKIKP	PKPdf	23 29 38.4	-0.4
T25A	Trinidad	123.20	50	P	PKiKP	23 29 39.7	-0.1
	baz=288,SNR=17						
OGNE	Ogallala	123.64	45	P	PKPdf	23 29 39.8	-0.4
	baz=292,SNR=10						
MNTX	Cornudas Mount	123.89	57	P	PKiKP	23 29 42.1	+1.0
	baz=284,SNR=63						
KSCO	Kaye Shedlock’	123.92	47	P	PKiKP	23 29 41.0	-0.1
	baz=290						
AGMN	Agassiz Nation	124.22	35	P	PKPdf	23 29 40.2	-0.7
	baz=302						
SUSD	Miller	124.26	40	P	PKPdf	23 29 40.9	-0.3
	baz=297						
MSTX	Muleshoe	125.42	53	P	PKiKP	23 29 44.4	+0.2
	baz=287,SNR=18						
TXAR	Lajitas Array	125.88	59	PKP	PKiKP	23 29 45.0	-0.2
	comp=Z,3.4nm,0.4s,baz=172,slow=2.5,SNR=74						
TXAR				pPKP	pPKPdf	23 30 20.4	+0.7
	comp=Z,2.3nm,0.8s,baz=207,slow=0.3,SNR=2.7						
TXAR				PP	PP	23 31 38.9	-0.4
	comp=Z,0.4nm,0.8s,baz=297,slow=7.0,SNR=1.6						
TXAR				PKKPab	PKKPab	23 39 19.6	+0.6
	comp=Z,0.6nm,0.4s,baz=111,slow=5.5,SNR=12						
TXAR	Lajitas Array	125.88	59	PKIKP	PKiKP	23 29 45.0	-0.2
TXAR						23 30 20.4	
AMTX	Amarillo	126.00	52	P	PKiKP	23 29 45.4	+0.1
	baz=288						
NRS	Narsarsuaq	126.01	357	*i* P	PKPdf	23 29 42.7	-1.3
ECSD	EROS Data Cent	126.08	40	P	PKPdf	23 29 44.0	-0.7
	baz=299,SNR=28						
CBKS	Cedar Bluff	126.09	47	P	PKPdf	23 29 44.4	-0.5
	baz=293						
BGNE	Belgrade	126.14	43	P	PKPdf	23 29 44.4	-0.4
	baz=296,SNR=13						
EYMN	Ely	126.84	33	P	PKPdf	23 29 46.0	0.0
	baz=306						
ESDC	Sonseca Array	126.97	315	PKP	PKPdf	23 29 45.4	-1.1
	comp=Z,20nm,1.2s,baz=36,slow=2.3,SNR=35						
ESDC				PP	PP	23 31 45.7	-0.2
	comp=Z,6.8nm,1.1s,baz=56,slow=6.7,SNR=6.6						
PAB	San Pablo	127.29	315	PKIKP	PKiKP	23 29 48.3	+0.6
PAB	San Pablo	127.29	315	PKPdf	PKiKP	23 29 48.3	+0.6
OK035	E0210 Rd and N	127.64	49		PKiKP	23 29 49.1	+0.6
SPMN	Marine on St.	127.65	37	P	PKPdf	23 29 47.6	0.0
	baz=303,SNR=12						
TORD	Torodi Ar. Bea	127.89	281	PKP	PKPdf	23 29 48.7	-0.2
	comp=Z,16nm,0.7s,baz=91,slow=3.4,SNR=64						
TORD	Torodi Ar. Bea	127.89	281	PKPdf	PKPdf	23 29 49.0	+0.1
PBRG	Braganca	127.90	319	*e*PKPdf	PKiKP	23 29 49.5	+0.7
TDRA	Tendrara	127.95	307	P	PKiKP	23 29 50.0	+0.7
JBK	JBK	127.95	308	P	PKiKP	23 29 51.0	+1.6
OK032	Salt Plains WL	127.97	48		PKiKP	23 29 49.6	+0.5
KAN08	Anthony NE Sta	127.99	48		PKiKP	23 29 49.0	-0.1
KAN14	Manchester OK	128.10	48		PKiKP	23 29 49.4	+0.1
KSU1	Kansas State U	128.20	45	P	PKiKP	23 29 49.1	-0.4
	baz=296						
WMOK	Wichita Mounta	128.30	51	P	PKPdf	23 29 49.3	+0.1
	baz=291,SNR=12						
ABTX	Abilene, Hawle	128.32	54	P	PKiKP	23 29 49.6	-0.4
	baz=288						
MVO	Moncorvo	128.40	318	*e*PKPdf	PKiKP	23 29 50.7	+0.8
PALE	Palemas	128.70	310	P	PKiKP	23 29 52.0	+1.4
PVRL	Vila Real	128.80	318	*e*PKPdf	PKiKP	23 29 51.8	+1.2
POLO	Lamas de Olo	128.80	319	*e*PKPdf	PKiKP	23 29 51.8	+1.1
PGAV	Gavieira, Arco	128.81	320	*e*PKPdf	PKiKP	23 29 51.6	+0.9
JCT	Junction City	128.83	57	P	PKPdf	23 29 50.6	+0.2
	baz=287,SNR=49						
BCOK	Bluff Creek, N	128.86	49		PKiKP	23 29 51.1	+0.2
AKLM	AKL	128.89	309	P	PKiKP	23 29 52.0	+0.9
PLCA	Paso Flores	129.00	161	PKP	PKiKP	23 29 51.0	-0.2
	comp=Z,18nm,0.8s,baz=254,slow=2.9,SNR=33						
PLCA				SKPbc		23 32 58.2	
	comp=Z,8.8nm,1.0s,baz=178,slow=4.1,SNR=4.5						
PLCA				PKKP	PKKPdf	23 39 57.4	-0.2
	comp=Z,1.2nm,0.5s,baz=343,slow=8.2,SNR=2.9						
PLCA	Paso Flores	129.00	161	PKIKP	PKiKP	23 29 51.8	+0.6
PLCA	Paso Flores	129.00	161	PKPdf	PKiKP	23 29 51.8	+0.6
MTE	Manteigas	129.10	317	*e*PKPdf	PKiKP	23 29 51.9	+0.6
SCIA	State Center	129.16	40	P	PKiKP	23 29 50.9	-0.4
	baz=301						
PVIS	Viseu	129.19	318	*e*PKPdf	PKiKP	23 29 52.1	+0.6
PCBR	Castelo Branco	129.32	317	*e*PKPdf	PKiKP	23 29 52.7	+1.0
PMRV	Marv??o	129.46	316	*e*PKPdf	PKiKP	23 29 52.3	+0.3
SMIR	Smir Dam	129.61	311	P	PKiKP	23 29 54.0	+1.6
N38A	Joes South For	129.71	42		PKPdf	23 29 51.9	+0.3
833A	Chaparral WMA,	129.76	59	P	PKPdf	23 29 52.2	+0.1
	baz=285,SNR=16						
LOOK	Love County	129.80	51		PKiKP	23 29 52.9	+0.1
CHEFC	Chefchaouen	129.80	310	P	PKiKP	23 29 54.0	+1.1
PESTR	Estremoz	129.85	316	*e*PKPdf	PKiKP	23 29 53.3	+0.5
PESTR	Estremoz	129.85	316	PKPdf	PKiKP	23 29 52.9	+0.1
PCAS	Casmilo, Conde	129.91	317	*e*PKPdf	PKPdf	23 29 51.9	-0.2
LCRM	LCR	129.96	308	P	PKiKP	23 29 55.0	+1.6
F42A	Maple Grove Fa	130.00	33		PKiKP	23 29 52.7	-0.1
MDT	Midelt	130.07	307	P	PKiKP	23 29 53.9	+0.4
TUL1	Leonard	130.12	48		PKiKP	23 29 53.8	+0.4
TUL1	Leonard	130.12	48	P	PKiKP	23 29 53.2	-0.2
	baz=294,SNR=12						
SICH	Sidi Chahed	130.16	309	P	PKiKP	23 29 55.0	+1.4
LC01	Cunco	130.19	159	PKPdf	PKiKP	23 29 53.5	-0.1
PMTG	Montargil	130.20	316	*e*PKPdf	PKiKP	23 29 54.0	+0.6
WHTX	Lake Whitney,	130.28	54	P	PKiKP	23 29 53.5	-0.3
	baz=290,SNR=16						
PSBE	So Bento	130.37	317	*e*PKPdf	PKiKP	23 29 54.1	+0.3
PBEJ	Beja	130.43	315	*e*PKPdf	PKiKP	23 29 54.6	+0.6
JFWS	Jewell Farm	130.47	38	P	PKPdf	23 29 52.5	-0.5
	baz=304						
435B	Jarrell	130.56	55	P	PKPdf	23 29 53.9	+0.3
	baz=288,SNR=5.5						
PVAQ	Vaqueiros	130.60	314	*e*PKPdf	PKiKP	23 29 55.5	+1.2
GOLM	Goulmima	130.72	306	P	PKiKP	23 29 56.0	+1.1
PCVE	Castro Verde	130.73	314	*e*PKPdf	PKiKP	23 29 55.0	+0.4
MESJ	Messejana	130.76	315	*e*PKPdf	PKiKP	23 29 54.9	+0.2
MESJ	Messejana	130.76	315	*e*PKPdf	PKiKP	23 29 55.0	+0.4
PBDV	Barranco-do-Ve	130.83	314	*e*PKPdf	PKiKP	23 29 55.5	+0.7
SCHQ	Schefferville	130.85	12	PKP	PKPdf	23 29 53.8	+0.4
	comp=Z,11nm,0.6s,baz=313,slow=1.8,SNR=25						
SCHQ				SKPbc	SKPbc	23 33 05.0	-0.3
	comp=Z,22nm,0.7s,baz=1.5,slow=4.2,SNR=16						
PNCL	Nicolau / Gran	130.85	315	*e*PKPdf	PKiKP	23 29 55.9	+1.1
U38A	Gravette	130.93	47	PKPdf	PKiKP	23 29 54.9	-0.1
MORF	Marmelete	131.31	314	*e*PKPdf	PKiKP	23 29 55.9	0.0
ZHG	ZHG	131.43	309	P	PKiKP	23 29 57.1	+0.9
TZRR	Tazzarine	131.52	305	P	PKiKP	23 29 57.0	+0.5
ZGR	Zagora	131.78	304	P	PKiKP	23 29 57.0	0.0
W39A	Magazine	131.90	48	P	PKPdf	23 29 55.8	-0.1
	baz=295,SNR=10						
U40A	Yellville	132.08	47	P	PKPdf	23 29 55.9	-0.4
	baz=297,SNR=18						
MGMO	Mountain Grove	132.13	45		PKiKP	23 29 57.2	-0.3
L44A	Lake County Fo	132.30	37	P	PKPdf	23 29 56.0	-0.6
	baz=306						
MIAR	Mount Ida	132.33	49	P	PKiKP	23 29 57.5	-0.4
	baz=295,SNR=12						
HDIL	Hopedale	132.38	40	P	PKPdf	23 29 56.6	-0.2
	baz=304,SNR=5.9						
CCM	Cathedral Cave	132.40	44	PKIKP	PKiKP	23 29 58.1	+0.1
CCM	Cathedral Cave	132.40	44		PKiKP	23 29 58.1	+0.1
CCM	Cathedral Cave	132.40	44	P	PKPdf	23 29 56.7	-0.1
	baz=300						
OUZM	OUZ	132.44	306	P	PKiKP	23 29 59.0	+0.6
GLMI	Grayling	132.50	32	P	PKPdf	23 29 56.9	0.0
	baz=312						
TLIG	Tlapa	132.53	73	PKPdf	PKiKP	23 29 59.7	+0.8
NATX	Nacogdoches	132.59	53	PKPdf	PKiKP	23 29 59.0	+0.5
NATX	Nacogdoches	132.59	53	P	PKPdf	23 29 57.8	+0.4
	baz=292						
P43A	Skaggs, Pawnee	132.74	41		PKiKP	23 29 58.7	+0.2
SRHM	Skhour des Reh	132.78	308	P	PKiKP	23 29 60.0	+1.0
X40A	Basin Creek Fa	132.91	49	P	PKPdf	23 29 57.8	-0.1
	baz=296						
T42A	Van Buren	133.01	45	PKPdf	PKPdf	23 29 58.2	+0.2
W41B	Gary Mavity, V	133.05	48	P	PKPdf	23 29 58.0	-0.2
	baz=297						
ML02	Panimavida	133.12	157	PKPdf	PKiKP	23 29 59.6	+0.1
OUK	Oukaimeden	133.23	307	P	PKiKP	23 30 01.0	+0.7
KOWA	Kowa	133.38	283		PKPdf	23 29 59.0	-0.3
KOWA	Kowa	133.38	283	P	PKPdf	23 29 59.8	+0.5
Z41A	Richland Creek	133.45	50	P	PKPdf	23 29 59.2	+0.2
	baz=294,SNR=6.0						
Q44A	Meyer Farm, Va	133.46	41		PKiKP	23 29 59.6	-0.4
SFIN	Lafayette	133.86	39	P	PKPdf	23 29 59.3	-0.2
	baz=306						
I49A	Point Hope	134.04	32	PKPdf	PKiKP	23 30 01.2	+0.1
KIC	Kosan Boka	134.08	272	*e*PKIKP	PKiKP	23 30 01.8	-0.2
	comp=Z,86nm,1.4s						
DBIC	Dimbokro	134.22	272	PKhKP	PKPpre	23 29 48.0	
	comp=Z,3.8nm,0.5s,baz=143,slow=2.6,SNR=13						
DBIC				PKP	PKPdf	23 30 00.3	-0.6
	comp=Z,9.9nm,0.5s,baz=78,slow=2.1,SNR=21						
DBIC				SKPbc	SKPbc	23 33 17.6	-0.7
	comp=Z,15nm,0.9s,baz=113,slow=3.2,SNR=6.0						
DBIC	Dimbokro	134.22	272	PKIKP	PKPdf	23 30 00.3	-0.6
DBIC	Dimbokro	134.22	272	PKPdf	PKiKP	23 30 02.1	-0.2

BO02	Sierra Bellavi	134.22	157		PKiKP	23 30 01.2	-0.7
P46A	Rosedale	134.23	40	PKPdf	PKiKP	23 30 01.0	-0.6
LIC	Lamto	134.36	272	*e*PKIKP	PKiKP	23 30 02.2	-0.4
	comp=Z,101nm,0.9s						
TIC	Toumodi	134.38	272	*e*PKIKP	PKiKP	23 30 02.5	-0.1
BO01	Tunca	134.46	157	PKPdf	PKPdf	23 30 01.4	+0.6
AAM	Ann Arbor	134.69	34	P	PKPdf	23 30 00.5	-0.5
	baz=311						
BLO	Bloomington	134.92	40	PKIKP	PKiKP	23 30 03.0	0.0
BLO	Bloomington	134.92	40	PKPdf	PKiKP	23 30 03.0	0.0
W45A	Hickory Valley	135.27	46	PKPdf	PKPdf	23 30 02.1	-0.2
WCI	Wyandotte Cave	135.61	41	PKIKP	PKPdf	23 30 03.1	+0.3
WCI	Wyandotte Cave	135.61	41		PKPdf	23 30 03.1	+0.3
WCI	Wyandotte Cave	135.61	41	P	PKPdf	23 30 02.8	-0.1
	baz=305						
Y45A	Yeager Farm, C	135.63	48		PKPdf	23 30 02.8	-0.2
VBMS	Vicksburg	135.63	50	P	PKPdf	23 30 02.9	-0.2
	baz=296						
O49A	Covington	135.66	37	PKPdf	PKPdf	23 30 03.4	+0.5
WVT	Waverly	135.73	44	PKHKP	PKPpre	23 29 55.7	
WVT						23 30 03.3	
WVT	Waverly	135.73	44		PKPpre	23 29 55.7	
WVT				PKPdf	PKPdf	23 30 03.2	+0.1
WVT	Waverly	135.73	44	P	PKPdf	23 30 03.0	-0.1
	baz=302						
P49A	Miami Univ. Ec	135.83	38	P	PKPdf	23 30 03.0	-0.3
	baz=308,SNR=10.0						
VA03	San Esteban	136.09	156	PKPdf	PKPdf	23 30 03.4	-0.7
R49A	Shelbyville	136.29	40	PKPpre	PKPpre	23 29 54.9	
ACSO	Alum Creek Sta	136.43	36	PKPdf	PKPdf	23 30 04.8	+0.5
ACSO	Alum Creek Sta	136.43	36	P	PKPdf	23 30 03.9	-0.4
	baz=310,SNR=9.2						
V48A	Smith Brothers	136.63	44	PKPdf	PKPdf	23 30 04.8	0.0
CLTN	Cedars of Leba	136.78	43	PKPdf	PKPdf	23 30 04.5	-0.6
ERPA	Erie	136.81	32	P	PKPdf	23 30 04.6	-0.4
	baz=316						
R50A	Paris	136.83	39	PKPdf	PKPdf	23 30 05.0	-0.1
P51A	Williamsport	136.86	37	PKPdf	PKPdf	23 30 05.3	+0.2
M53A	WI Miller and	136.92	33	P	PKPdf	23 30 04.4	-0.8
	baz=314						
U49A	Red Boiling Sp	136.92	42	PKPdf	PKPdf	23 30 05.3	0.0
X48A	Hartselle	137.15	46	PKPdf	PKPdf	23 30 05.2	-0.6
T50A	Nancy	137.25	41		PKPdf	23 30 06.0	0.0
N53A	Lisbon	137.26	34	PKPdf	PKPdf	23 30 06.2	+0.3
WVNY	West Valley, N	137.31	30		PKiKP	23 30 06.9	-0.9
P52A	Corning	137.31	36	P	PKPdf	23 30 05.4	-0.5
	baz=311,SNR=8.3						
M54A	Oil Creek Stat	137.41	32	P	PKPdf	23 30 05.8	-0.3
	baz=315,SNR=8.4						
O53A	New Philadelph	137.43	35	P	PKPdf	23 30 06.1	-0.1
	baz=313						
LONY	Lake Ozonia	137.45	25	PKPpre	PKPpre	23 29 59.2	
LONY	Lake Ozonia	137.45	25	P	PKPdf	23 30 05.3	-0.8
	baz=324						
SWET	Sewanee	137.53	44	PKPdf	PKPdf	23 30 06.3	-0.2
N54A	Moraine State	137.62	33	PKPdf	PKPdf	23 30 07.0	+0.5
N54A	Moraine State	137.62	33	P	PKPdf	23 30 05.9	-0.7
	baz=315						
Q52A	Bidwell	137.67	37	PKPdf	PKiKP	23 30 07.8	-0.8
CO03	El Pedregal	137.71	154	PKPdf	PKiKP	23 30 08.3	-0.8
P53A	Whipple	137.84	36	PKPdf	PKPdf	23 30 06.8	-0.2
Y49A	Blount Mountai	137.90	46	PKPdf	PKPdf	23 30 07.8	+0.6
ZON	Zonda	137.91	157	PKIKP	PKPdf	23 30 07.3	-0.1
ZON	Zonda	137.91	157	PKPdf	PKPdf	23 30 07.3	-0.1
M55A	Ridgway	137.91	31	PKPpre	PKPpre	23 29 59.8	
O54A	Avella	137.95	34	PKPpre	PKPpre	23 29 59.1	
O54A					PKPdf	23 30 06.5	-0.7
W50A	Signal Mountai	137.96	44	PKPdf	PKPdf	23 30 07.2	-0.1
NCB	Newcomb	138.13	25		PKPpre	23 30 01.1	
NCB				PKPdf	PKPdf	23 30 08.0	+0.6
V51A	Loudon	138.27	42	PKPdf	PKiKP	23 30 09.4	-0.5
CPCT	Cooper Cave	138.36	43	PKPpre	PKPpre	23 30 00.0	
CPCT					PKPdf	23 30 08.7	+0.7
TZTN	Tazewell	138.37	41	P	PKPdf	23 30 07.9	-0.1
	baz=307						
J59A	Piesco	138.41	26	PKPdf	PKPdf	23 30 08.2	+0.3
Q54A	Coxs Mills	138.50	36	PKPdf	PKPdf	23 30 08.9	+0.7
MCWV	Mont Chateau	138.60	34	PKPdf	PKiKP	23 30 09.6	-0.9
MCWV	Mont Chateau	138.60	34	P	PKPdf	23 30 08.0	-0.3
	baz=314						
X51A	Calhoun	138.62	44		PKPpre	23 30 02.9	
X51A				PKPdf	PKPdf	23 30 09.5	+1.0
BINY	Binghamton	138.74	28	PKPpre	PKPpre	23 30 02.1	
BINY	Binghamton	138.74	28	P	PKPdf	23 30 08.2	-0.3
	baz=321						
TKL	Tuckaleechee C	138.74	42	PKIKP	PKiKP	23 30 10.2	-0.7
TKL	Tuckaleechee C	138.74	42	PKPdf	PKiKP	23 30 10.2	-0.7
BRAL	Brewton	138.75	50	P	PKPdf	23 30 09.3	+0.5
	baz=298						
V52A	Sevierville	138.75	42	PKPdf	PKPdf	23 30 09.8	+1.0
LBNH	Lisbon	138.84	23	P	PKPdf	23 30 08.6	0.0
	baz=328						
M57A	Sunshine Farm,	138.84	30	PKPdf	PKiKP	23 30 10.0	-0.9
O56A	Blue Knob Stat	138.88	33	P	PKPdf	23 30 09.2	+0.3
	baz=316						
PKME	Peaks-Kenny Pk	138.90	20	P	PKPdf	23 30 08.6	-0.1
	baz=332						
250A	Grady	138.95	48	PKPdf	PKPdf	23 30 09.7	+0.5
W52A	Murphy	138.96	43	PKPdf	PKPdf	23 30 09.9	+0.7
SSPA	Standing Stone	138.97	32		PKPpre	23 30 02.8	
SSPA				PKPdf	PKPdf	23 30 09.1	+0.1
SSPA	Standing Stone	138.97	32	P	PKPdf	23 30 08.8	-0.2
	baz=317						
S54A	Dingess, Beckl	138.99	38	PKPdf	PKPdf	23 30 08.2	-1.0
Z51A	Franklin	139.07	46	PKPdf	PKPdf	23 30 10.1	+0.7
LCO	Las Campanas	139.28	153	PKHKP	PKPpre	23 30 02.3	
LCO	Las Campanas	139.28	153		PKPpre	23 30 02.3	
V53A	Saluda	139.37	41	PKPdf	PKPdf	23 30 11.0	+1.1
R55A	Marlinton	139.38	36	PKPdf	PKPdf	23 30 10.7	+0.7
Q56A	Snyder Ridge,	139.40	34	PKPdf	PKPdf	23 30 10.3	+0.4
Y52A	Lilburn	139.56	44	PKPdf	PKPdf	23 30 11.1	+0.8
BG3	Lake Jocassee	139.69	42	PKPdf	PKPdf	23 30 11.4	+1.0
152A	Waverly Hall	139.73	46	PKPdf	PKPdf	23 30 11.3	+0.7
PAGS	Pennsylvania G	139.87	31	PKPpre	PKPpre	23 30 02.5	
BLA	Blacksburg	139.91	38	PKIKP	PKPdf	23 30 10.8	-0.1
BLA	Blacksburg	139.91	38	PKPdf	PKPdf	23 30 10.8	-0.1
BLA	Blacksburg	139.91	38	P	PKPdf	23 30 10.7	-0.1
	baz=311						
L61B	Northampton	140.02	25	P	PKPdf	23 30 11.3	+0.5
	baz=325						
GOGA	Godfrey	140.22	45	PKIKP	PKPdf	23 30 10.3	-1.2
GOGA	Godfrey	140.22	45	PKPdf	PKPdf	23 30 10.3	-1.2
GOGA	Godfrey	140.22	45	P	PKPdf	23 30 11.4	0.0
	baz=304						
V55A	Taylorsville	140.28	40	PKPdf	PKPdf	23 30 12.4	+0.9
HRV	Adam Dziewonsk	140.44	24	P	PKPdf	23 30 11.7	+0.1
	baz=327						
PAULI	Pauline	140.53	42	PKPdf	PKPdf	23 30 13.0	+1.0
HODGE	Hodges	140.58	43	PKPdf	PKiKP	23 30 13.6	-1.1
VCA	Vinchina	140.59	156	*i* P	PKPdf	23 30 09.0	-3.5
KMSC	Kings Mountain	140.65	41	PKPdf	PKPdf	23 30 12.9	+0.7
KMSC	Kings Mountain	140.65	41	P	PKPdf	23 30 11.8	-0.4
	baz=308						
WUPA	West Chester U	140.66	30	PKPpre	PKPpre	23 30 05.4	
WUPA				PKPdf	PKPdf	23 30 12.9	+0.9
154A	Montrose	140.91	45	PKPdf	PKPdf	23 30 13.7	+1.0
CBN	Corbin Frederi	141.00	34	PKPpre	PKPpre	23 30 06.1	
V58A	Windy Hill, Pi	141.63	38		PKPpre	23 30 05.9	
V58A				PKPdf	PKPdf	23 30 15.2	+1.3
T59A	Double "B" Far	141.76	35	PKPdf	PKPdf	23 30 14.5	+0.4
NHSC	New Hope	142.64	42	P	PKPdf	23 30 16.3	+0.5
	baz=307						
ITQB	Itaqui	142.93	172		PKPpre	23 30 13.4	
AHML	Horco Molle	143.45	158	*i* P	PKPbc	23 30 15.0	-0.1
TGUH	Tegucigalpa,Un	143.73	76	*e*P	PKPbc	23 30 15.9	-0.4
PB10	IPOC Station P	143.96	148	*i* P	PKPdf	23 30 18.0	-0.5
DWPF	Disney Wildern	144.50	50		PKPdf	23 30 18.7	-0.5
DWPF	Disney Wildern	144.50	50	P	PKPdf	23 30 18.6	-0.6
	baz=300						
PB05	IPOC Station P	144.69	148	*i* P	PKPdf	23 30 20.0	+0.1
PB06	IPOC Station P	145.14	149	pPKPdf	pPKPdf	23 30 54.0	-1.1
PB06	IPOC Station P	145.14	149	*i* P	PKPbc	23 30 20.0	-0.5
PB04	IPOC Station P	145.14	148	*i* P	PKPdf	23 30 22.0	+1.3
LVC	Limon Verde	145.55	150	PKPbc	PKPab	23 30 23.3	+0.9
	comp=Z,73nm,0.6s,baz=255,slow=2.4,SNR=79						
LVC				pPKPbc	pPKPbc	23 30 55.8	0.0
	comp=Z,108nm,1.1s,baz=225,slow=5.7,SNR=4.6						
LVC				SKPbc	SKiKP	23 33 49.8	+0.1
	comp=Z,7.8nm,0.9s,baz=256,slow=5.7,SNR=2.7						
LVC	Limon Verde	145.55	150	PKP2	PKPab	23 30 23.3	+0.9
LVC						23 33 49.8	
PB03	IPOC Station P	145.59	148	*i* P	PKPab	23 30 23.0	+0.7
PB07	IPOC Station P	145.78	148	*i* P	PKPab	23 30 24.0	+1.0
AZAP	Zapla	145.86	157	*i* P	PKPbc	23 30 23.0	+0.2
CPUP	Villa Florida	146.09	170	PKPbc	PKPbc	23 30 23.2	+0.1
	comp=Z,60nm,0.8s,baz=187,slow=2.1,SNR=88						
CPUP	Villa Florida	146.09	170	PKP2	PKPbc	23 30 23.2	+0.1
CPUP	Villa Florida	146.09	170	pPKPdf	pPKPdf	23 30 56.5	0.0
JTS	Las Juntas de	146.30	82	PKP2	PKPbc	23 30 23.7	-0.4
JTS	Las Juntas de	146.30	82	*e*P	PKPbc	23 30 23.5	-0.6
JTS	Las Juntas de	146.30	82		PKPbc	23 30 23.7	-0.4
JTS				pPKPdf	pPKPbc	23 30 58.1	+0.1
ASTB	Santa Barbara	146.35	157	*i* P	PKPab	23 30 25.0	-0.1
PB01	IPOC Station P	146.55	147	pPKPdf	pPKPdf	23 30 57.4	0.0
TA01	Diego Aracena	146.56	146	pPKPdf	pPKPdf	23 30 57.7	+0.4
HJA	Humahuaca	146.63	155	*i* P	PKPbc	23 30 25.0	-0.3
ALOL	LOMAS DE OLMED	146.65	158	*i* P	PKPab	23 30 26.0	-0.1
PB08	IPOC Station P	147.46	147		pPKPab	23 31 00.6	-2.9
PB11	IPOC Station P	147.50	146		pPKPab	23 31 01.2	-2.2
YJA	Yavi	147.50	154	*i* P	PKPab	23 30 30.0	0.0
NNA	Nana	147.98	126	PKP	PKPdf	23 30 26.4	+0.9
	comp=Z,73nm,0.9s,baz=252,slow=7.9,SNR=23						
NNA				PKPbc	PKiKP	23 30 30.1	-0.4
	comp=Z,73nm,0.9s,baz=267,slow=4.0,SNR=17						
NNA				pPKPbc	pPKPbc	23 31 02.5	-0.3
	comp=Z,50nm,0.9s,baz=342,slow=3.2,SNR=3.3						
NNA	Nana	147.98	126	PKIKP	PKPdf	23 30 26.4	+0.9
NNA						23 30 30.1	
NNA						23 31 02.5	
AP01	Chacalluta	148.20	143	pPKPab	pPKPab	23 31 05.6	0.0
BRU2	Volcan	148.57	85	*e*P	PKiKP	23 30 32.5	+0.6
PRVC	Isla de Provid	149.51	76	*e*P	PKiKP	23 30 33.6	0.0
LPAZ	La Paz	151.13	144	PKP	PKPdf	23 30 32.0	+0.9
	comp=Z,18nm,1.0s,baz=242,slow=0.3,SNR=42						
LPAZ				PKPbc	PKiKP	23 30 38.3	+0.6
	comp=Z,87nm,1.1s,baz=237,slow=0.7,SNR=37						
LPAZ				pPKPbc	pPKPbc	23 31 11.1	-0.3
	comp=Z,61nm,1.0s,baz=75,slow=1.4,SNR=3.0						
LPAZ	La Paz	151.13	144	PKIKP	PKPdf	23 30 32.1	+0.9
LPAZ						23 31 11.1	
LPAZ	La Paz	151.13	144	*e*P	PKiKP	23 30 38.1	+0.4
BCIP	Isla Barro Col	151.38	84	PKIKP	PKiKP	23 30 37.9	+0.4
BCIP	Isla Barro Col	151.38	84	*e*P	PKPbc	23 30 37.1	+0.1
BCIP	Isla Barro Col	151.38	84	PKPbc	PKiKP	23 30 37.9	+0.4
PAC1	Pacto, Paraso	151.43	103	*e*P	PKPdf	23 30 31.1	-0.1
OTAV	Otavalo	151.75	103	*e*P	PKPdf	23 30 32.0	0.0
CUSE	Cuicocha Este	151.81	103	*e*P	PKPdf	23 30 33.0	+0.9
TUMC	Tumaco	151.84	100	*e*P	PKiKP	23 30 39.2	+0.7
BBSR	BB Station	151.91	25		PKiKP	23 30 37.9	-0.1
MTDJ	Mount Denham	151.93	65	*e*P	PKPbc	23 30 37.1	-1.2
AQDB	Aquidauana	152.09	171	PKPbc	PKiKP	23 30 39.2	+0.4
GCUF	Volcan Galeras	153.06	102	*e*P	PKPdf	23 30 34.0	0.0
PTAC	Punta Ardita,	153.39	88	*e*P	PKPdf	23 30 33.8	-0.1
GTBY	Guantanamo Bay	153.41	59	*e*P	PKPbc	23 30 40.7	-0.7
PIZC	Pizarro, Choco	153.68	93⇓	*e*P	PKPdf	23 30 35.7	+1.4
CAPC	Capurgana	153.85	85	*e*P	PKiKP	23 30 42.6	0.0
SOTA	Rioblanco	153.98	100	*e*P	PKPdf	23 30 33.0	-2.3
POPC	Popayan, Colom	153.99	99	*e*P	PKPdf	23 30 34.4	-0.7
PCON	Cinco Dias	154.22	100	*e*P	PKPdf	23 30 36.5	+0.7
YOTC	Yotoco, Valle	154.56	96	*e*P	PKPdf	23 30 35.6	-0.1
PLMC	San Jos del P	154.74	94	*e*P	PKPdf	23 30 35.0	-0.9
FLOC	Florencia	154.79	102	*e*P	PKPdf	23 30 35.0	-0.9
SIV	San Ignacio	154.87	157	PKP	PKPdf	23 30 36.7	+0.8
	comp=Z,6.7nm,0.8s,baz=166,slow=1.4,SNR=24						
SIV				PKPbc	PKiKP	23 30 45.0	+0.3
	comp=Z,14nm,0.8s,baz=202,slow=2.8,SNR=25						
SIV				PKPab	PKPab	23 31 01.0	+0.8
	comp=Z,16nm,0.5s,baz=232,slow=5.4,SNR=27						
DBBC	Dabeiba	154.97	89	*e*P	PKPdf	23 30 36.9	+0.7
CBOC	Ciudad Bolivar	155.10	92	*e*P	PKPdf	23 30 45.8	+9.3
BETC	Betania	155.23	99	*e*P	PKPdf	23 30 35.0	-1.6
PTLC	Puerto Leguiza	155.25	105	*e*P	PKPdf	23 30 45.2	+8.7
MOTC	Monteria, Cord	155.51	85	*e*P	PKPdf	23 30 37.1	+0.3
ANIL	Santa Ana	155.56	95⇑	*e*P	PKPdf	23 30 37.8	+0.5
HELC	Santa Helena	155.61	91	*e*P	PKPdf	23 30 35.0	-2.4
ORTC	Ortega, Tolima	155.64	96	*e*P	PKPdf	23 30 37.1	0.0
UREC	San Jos de Ur	155.66	87	*e*P	PKPdf	23 30 36.8	-0.3
GUY2C	Guyana, Caldas	155.69	93	*e*P	PKPdf	23 30 35.9	-1.7
SJCC	San Jacinto, C	155.93	82	*e*P	PKPdf	23 30 38.2	+0.8
PRAC	Prado	155.96	97	*e*P	PKPdf	23 30 36.9	-0.6
PTLB	Pontes e Lacer	156.08	160	PKPdif	PKPdf	23 30 48.7	+11
PTLB				PKPab	PKPab	23 31 06.0	+0.8
ZARC	Zaragoza, Cauc	156.32	88	*e*P	PKPdf	23 30 36.4	-1.5
ZARC	Zaragoza, Cauc	156.32	88	PKPdif	PKPdf	23 30 48.3	+10
ZARC				PKPab	PKPab	23 31 08.5	+1.8
MACC	Macarena, Meta	156.67	101	*e*P	PKPdf	23 30 38.7	+0.3
ROSC	El Rosal	156.68	94	PKP	PKPdf	23 30 40.0	+1.1
	comp=Z,6.7nm,0.3s,baz=276,slow=1.0,SNR=13						
ROSC				PKPbc	PKPdf	23 30 49.9	+11
	comp=Z,12nm,0.4s,baz=186,slow=21,SNR=6.7						
ROSC				pPKP	pPKPdf	23 31 12.3	-1.4
	comp=Z,34nm,0.6s,baz=180,slow=3.0,SNR=5.9						
ROSC	El Rosal	156.68	94	PKIKP	PKPdf	23 30 40.0	+1.1
ROSC	El Rosal	156.68	94	*e*P	PKPdf	23 30 39.6	+0.7
PTBC	PUERTO BERRIO,	156.69	90	*e*P	PKPdf	23 30 37.6	-0.7
SMRC	Santa Marta, M	156.73	79	*e*P	PKPdf	23 30 38.8	+0.4
ARGC	Ariguani, Magd	156.85	82	*e*P	PKPdf	23 30 39.8	+1.3
SPBC	San Pablo de B	157.01	93	*e*P	PKPdf	23 30 38.8	-0.1
SDDR	Presa de Saban	157.06	57	*e*P	PKPdf	23 30 41.6	+2.8
SMLC	San Martn de	157.09	84	*e*P	PKPdf	23 30 37.8	-1.1
BDFB	Brasilia	157.10	187	PKP	PKPdf	23 30 39.4	+0.4
	comp=Z,12nm,0.9s,baz=33,slow=1.0,SNR=12						
BDFB				PKPab	PKPab	23 31 10.1	+0.3
	comp=Z,16nm,1.1s,baz=76,slow=1.1,SNR=5.7						
BDFB	Brasilia	157.10	187	PKIKP	PKPdf	23 30 39.4	+0.4
CHIC	Chingaza	157.23	95	*e*P	PKPdf	23 30 38.8	-0.8
ETMB	Extrema	157.28	138	PKPab	PKPab	23 31 11.1	+0.5
BRRC	Barranca, Sant	157.45	89	*e*P	PKPdf	23 30 39.6	+0.3
LL6C	La Loma 6 Bece	157.82	82	*e*P	PKPdf	23 30 39.7	0.0
OCAC	Ocana	157.85	86	*e*P	PKPdf	23 30 40.5	+0.6
BARC	Barichara	157.96	90	*e*P	PKPdf	23 30 37.8	-2.4
RUSC	La Rusia	158.01	92	*e*P	PKPdf	23 30 40.4	-0.3
CRJC	Cerrejon, Guaj	158.06	78	*e*P	PKPdf	23 30 39.7	-0.4
PAMC	Pamplona, Colo	158.46	88	*e*P	PKPdf	23 30 41.1	0.0
PTGC	Puerto Gaitan,	158.75	97	*e*P	PKPdf	23 30 39.0	-1.9
TAMC	Tame, Arauca	159.33	91	*e*P	PKPdf	23 30 39.7	-1.9
SOCV	Socops	160.28	86	*e*P	PKPdf	23 30 41.0	-1.7
SDV	Santo Domingo	160.48	84	*e*P	PKPdf	23 30 42.8	-0.3
CRPR	Cabo Rojo, PR	160.98	54	PKPdf	PKPdf	23 30 43.5	+0.3
CRPR					PKPab	23 31 27.4	+0.7
OBIP	Obispado Ponce	161.36	53	PKPdf	PKPdf	23 30 44.0	+0.4
CELP	Cerrillos	161.37	53	PKPdf	PKPdf	23 30 43.4	-0.2
CELP					PKPab	23 31 28.4	+0.1
GCPR	Guaynabo City	161.63	52		PKPab	23 31 29.3	-0.1
SJG	San Juan	161.69	52	PKIKP	PKPdf	23 30 44.2	+0.2
SJG						23 31 29.0	
SJG	San Juan	161.69	52	*e*P	PKPdf	23 30 42.6	-1.4
SJG	San Juan	161.69	52		PKPdf	23 30 44.2	+0.2
SJG				PKPab	PKPab	23 31 29.0	-0.7
PDPR	Patillas Dam,	161.84	52		PKPdf	23 30 43.4	-0.8
PDPR					PKPab	23 31 30.7	+0.3
HUMP	Col San Antoni	161.90	52		PKPdf	23 30 43.4	-0.8
BAUV	El Baul	163.03	83		PKPab	23 31 36.9	+1.0
MACA	Manacapuru-AM	165.86	136	PKPdf	PKPdf	23 30 47.9	-0.1
MACA				pPKPab	pPKPab	23 32 19.7	-1.8

IDC 24 23:31:03.5±2.1**, 6°.22S**×**130°.96E, h0**^{km}**, mb3.3**/1**,**
mb1 3.8/5**, mb1mx3.6**/27**, mbtmp3.6**/5**, ML3.2**/4 **Error**
ellipse: s-maj=90.4km s-min=26.3km az=85.0, Banda
Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.33	3	Pn	Pn	23 32 25.7	+1.4
	0.9nm,0.3s,baz=254,slow=22,SNR=1.8						
SIJI				Sn	Sn	23 33 16.7	-10
	0.6nm,0.3s,baz=288,slow=23,SNR=1.8						
FITZ	Fitzroy Crossi	12.89	203	Pn	Pn	23 34 08.7	+0.6
	0.1nm,0.3s,baz=26,slow=8.9,SNR=1.7						
FITZ				Sn	Sn	23 36 21.9	-11
	0.1nm,0.3s,baz=114,slow=10,SNR=1.3						
WRA	Warramunga Arr	14.03	167	Pn	Pn	23 34 23.7	+0.1
	0.1nm,0.3s,baz=352,slow=13,SNR=7.3						
WRA				Sn	Sn	23 36 53.1	-7.2
	0.1nm,0.3s,baz=348,slow=21,SNR=1.2						
ASAR	Alice Springs	17.57	171	P	Pn	23 35 10.0	0.0
	0.1nm,0.3s,baz=350,slow=11,SNR=2.6						
MKAR	Makanchi Array	68.11	326	P	P	23 42 04.8	-0.5
	0.2nm,0.6s,baz=118,slow=6.7,SNR=2.3						

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*SSNC **24** 23:43:46.8±1.3, 19°.66N×78°.84W, h0^{km}±7^{km}, MD3.2,*
ML2.5, MW2.8

*JSN **24** 23:43:47.6±0.4, 19°.73N×78°.59W, h0^{km}±235^{km}, MD3.8*
ISC 24 23:43:48.0±2.1**, 19°.69N**±0°.05×**78°.82W**±0°.07**, h29**^{km}±19^{km}**,**
n9, σ**1**^{s}**.03**/16**, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMGC	Las Mercedes	1.74	77	*e*P	Pn	23 44 15.6	-0.7
LMGC				*e*S	Sn	23 44 37.8	+0.3
LMGC				IAML		23 44 40.1	
	comp=E,109nm,0.2s						
LMGC				IAML		23 44 40.3	
	comp=N,145nm,0.0s						
CCCC	Cccc	1.79	33	*e*P	Pb	23 44 19.2	-1.0
CCCC				*e*S	Sb	23 44 44.1	+1.7
CCCC				IAML		23 44 48.7	
	comp=E,16nm,0.7s						
CCCC				IAML		23 44 50.8	
	comp=N,15nm,0.1s						
CVJ	Coleyville	1.90	140	*i* P	Pn	23 44 18.3	-0.2
MTDJ	Mount Denham	1.90	140	*e*P	Pn	23 44 18.2	-0.3
MTDJ				*e*S	Sn	23 44 40.8	-0.7
MCJ	Malvern	2.06	148	*i* P	Pn	23 44 21.3	+0.6
MCJ				*i* S	Sn	23 44 46.4	+1.0
STH	Stony Hill	2.49	130	*i* P	Pn	23 44 26.4	-0.2
MGV	Manicaragua	2.64	336	*e*P	Pn	23 44 28.6	-0.1
MGV				*e*S	Sn	23 44 59.9	+0.2
MGV				IAML		23 45 02.6	
	comp=E,20nm,0.2s						
MGV				IAML		23 45 02.7	
	comp=N,17nm,0.4s						
RCC	Rio Carpintero	2.95	84	*e*P	Pn	23 44 32.5	-0.5
RCC				*e*S	Sn	23 45 06.8	-0.7
GTBY	Guantanamo Bay	3.50	86	*e*P	Pn	23 44 42.6	+2.2
GTBY				*e*S	Sn	23 45 20.1	-0.7

DJA 24 23:48:46.9±1.2**, 8°S**±5°×**10°7E**±°**, h10**^{km}±10^{km}**, M4.0**/7**,**
mb4.6/1**, mB5.2**/1**, MLv3.7**/7**, Mw(mB)4.6**/1**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	Cibinong	0.90	352	P	Pg	23 49 04.3	0.0
CMJI	Cimerak	1.25	70	P	Pn	23 49 09.4	-1.1
SKJI	Sukabumi	1.39	330	P	Pn	23 49 11.9	-0.4
LEM	Lembang	1.42	14	P	Pn	23 49 12.5	-0.4
CGJI	Cibinong	2.22	315	P	Pn	23 49 23.1	-0.7
UGM	Wanagama	3.25	85	P	Pn	23 49 37.7	-0.2
SMRI	Semarang	3.36	70	P	Pn	23 49 39.2	-0.3
PCJI	Pacitan	3.88	90	P	Pn	23 49 46.9	+0.3

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*IDC **24** 23:56:13.6±1.1, 35°.54N×117°.90E, h0^{km}, mb3.7/5,*
mb1 3.8/7, mb1mx3.6/36, mbtmp3.6/7, ML3.0/2, Error
ellipse: s-maj=23.8km s-min=21.9km az=178.0
*NEIC **24** 23:56:14.5±1.8, 35°.59N±0°.06×117°.86E±0°.09, h10^{km}±2^{km},*
mb4.3/4, Error ellipse: s-maj=14.6km s-min=6.2km
az=122.0
ISC 24 23:56:14.7±0.5**, 35°.58N**±0°.04×**117°.80E**±0°.05**, h10**^{km}**, n32,**
σ**2**^{s}**.05**/38**, mb4.0**/8**, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIA	Tai'an	0.83	319	Pn	Pg	23 56 27.1	-3.7
TIA				Pg	Pb	23 56 28.4	-2.9
TIA				Sg	Sn	23 56 46.0	+1.1
TIA				smax	smax		
	comp=N,1µm,1.0s						
TIA				smax	smax		
	comp=E,3µm,1.5s						
DL2	Dalian	4.51	42	Pg	Pg	23 57 41.3	+0.2
DL2				Sg	Sg	23 58 42.3	+2.8
DL2				smax	smax		
	comp=N,95nm,0.9s						
DL2				smax	smax		
	comp=E,82nm,0.8s						
BJT	Baijiatuau	4.61	344	Pn	Pn	23 57 23.9	-0.5
BJT					Pg	23 57 39.8	-3.2
BJI	Beijing	4.63	344	Pn	Pn	23 57 23.6	-1.1
BJI				Pg	Pg	23 57 41.8	-1.6
BJI				Sn	Sn	23 58 19.9	+1.4
BJI				Sg	Sg	23 58 49.4	+6.0
BJI				smax	smax		
	comp=N,140nm,0.8s						
BJI				smax	smax		
	comp=E,120nm,0.9s						
SSE	Sheshan	5.30	147	Pn	Pn	23 57 30.0	-3.9
SSE				Sn	Sn	23 58 33.5	-1.4
SSE				smax	smax		
	comp=N,38nm,0.8s						
SSE				smax	smax		
	comp=E,51nm,0.8s						
SSE				LR	LR		
	comp=N,220nm,11.7s						
SSE				LR	LR		
	comp=E,240nm,11.9s						
WHN	Wuhan	5.80	211	P	Pn	23 57 42.8	+2.1
WHN				S	Sn	23 58 50.3	+3.0
HHC	Hu-ho-hao-te	7.19	319	Pg	Pg	23 58 39.3	+6.9
HHC				smax	smax		
	comp=N,47nm,0.8s						
HHC				smax	smax		
	comp=E,60nm,1.1s						
INCN	Inchon	7.36	72	Pn	Pn	23 58 01.1	-1.1
XAN	Xi'an	7.46	261	Pn	Pn	23 57 56.5	-7.1
XAN	Xi'an	7.46	261	Pg	Pg	23 58 36.3	-1.2
XAN	Xi'an	7.46	261	Sn	Sn	23 59 18.3	-10
XAN				smax	smax		
	comp=N,48nm,1.1s						
XAN				smax	smax		
	comp=E,36nm,1.0s						
XAN				LR	LR		
	comp=N,410nm,5.5s						
XAN				LR	LR		
	comp=E,320nm,3.7s						
XAN				LR	LR		
	comp=Z,560nm,13.1s						
KS19	Wonju Array Si	8.33	74	Pn	Pn	23 58 16.0	+0.5
KSRS	Korea Array	8.36	74	Pn	Pn	23 58 16.5	+0.6
	comp=Z,0.3nm,0.3s,baz=255,slow=13,SNR=1.9						
KSRS				Lg	Lg	00 00 35.9	
	comp=Z,0.3nm,0.3s,baz=129,slow=26,SNR=2.2						
JTU	Tsushima	9.57	93	Pn	Pn	23 58 31.9	-0.6
TATO	Taipei	11.04	162	Pn	Pn	23 58 52.3	-0.3
NACB	Ninganchiao	11.84	163	Pn	Pn	23 59 02.9	-0.7
CD2	Chengdu	12.64	252	P	Pn	23 59 16.0	+1.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TWG	Pinlang	13.03	166	Pn	Pn	23 59 18.5	-1.4
JMN	Monobe	13.37	93	Pn	Pn	23 59 22.4	-2.2
GTA	Gaotai	14.78	290	*e*P	Pn	23 59 43.3	-0.5
GTA				pP	P	23 59 47.4	-2.5
GTA				sP		23 59 50.4	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				smax	smax		
	comp=N,6.0nm,1.8s						
GTA				smax	smax		
	comp=E,3.0nm,1.6s						
SONM	Songino Array	14.89	329	Pn	Pn	23 59 45.8	+0.4
	comp=E,0.0nm,0.3s,baz=161,slow=14,SNR=6.5						
SONM				Lg	Lg	00 04 10.2	
	comp=E,0.1nm,0.3s,baz=138,slow=25,SNR=3.4						
CMAR	Chiang Mai Arr	23.87	229	P	P	00 01 29.0	+0.6
	comp=E,1.5nm,0.3s,baz=28,slow=8.6,SNR=7.7						
WMQ	Urumqi	24.48	299	*e*P	P	00 01 37.1	+3.1
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MKAR	Makanchi Array	28.74	304	P	P	00 02 13.3	+1.1
	comp=Z,0.3nm,0.8s,baz=106,slow=11,SNR=2.4						
MKAR	Makanchi Array	28.74	304	P	P	00 02 12.7	+0.5
ZALV	Zalesovo Beam	29.37	319	P	P	00 02 20.3	+2.5
	comp=Z,0.8nm,0.6s,baz=108,slow=8.2,SNR=4.8						
MYLDM	Lahad Datu	30.26	179	P	P	00 02 25.0	-0.9
TARG	Taragay, Kyrgy	31.62	293	P	P	00 02 38.4	+0.2
TARG				IAmb	IAmb	00 02 57.6	
	comp=Z,4.2nm,1.1s						
KURK	Kurchatov	31.91	311	P	P	00 02 39.8	-0.4
KURK				IAmb	IAmb	00 02 43.4	
	comp=Z,4.3nm,1.1s						
NRIK	Noril'sk	37.67	343	P	P	00 03 28.6	-1.2
ASAR	Alice Springs	60.87	163	P	P	00 06 27.8	+0.3
	comp=Z,0.7nm,0.9s,baz=354,slow=7.5,SNR=3.3						
YKA	Yellowknife Ar	73.61	23	P	P	00 07 47.7	-0.1
	comp=Z,1.1nm,0.8s,baz=316,slow=5.7,SNR=13						

JMA ***24*** *23:57:10.1±0.2, 40°.71N×142°.68E, h23km±3km, M4.0*

NEIC ***24*** *23:57:15.2±2.9, 40°.77N±0°.05×142°.28E±0°.07, h51km±9km, mb4.2/12, Error ellipse: s-maj=9.2km s-min=5.9km az=136.0*

IDC ***24*** *23:57:15.4±3.8, 40°.71N×142°.57E, h75km±32km, mb3.6/8, mb1 3.8/10, mb1mx3.4/38, mbtmp3.9/10, Error ellipse: s-maj=32.4km s-min=17.0km az=76.0*

ISC 24 23:57:11.1±1.7**, 40°.73N**±0°.03×**142°.56E**±0°.06**, h30**km±11km**, n66, σ1°.52**/72**, mb4.2**/18**, 9D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.83	231	⇓P	Pn	23 57 26.5	-0.3
JKEN				S	Sn	23 57 37.7	-0.3
JANG	Nango	0.87	246	⇓P	Pn	23 57 27.7	+0.4
JARK	Aomorirokkasho	0.95	287	⇓P	Pn	23 57 28.6	+0.3
JTH	Tanohata	0.95	214	⇓P	Pn	23 57 28.1	-0.3
JTH				*e*S	Sn	23 57 40.8	-0.2
JTM	Tenmabayashi	1.14	273	⇓P	Pn	23 57 31.8	+1.0
JTM	Tenmabayashi	1.14	273		Pn	23 57 31.9	+1.0
JTM				Sn	Sn	23 57 43.8	-1.6
JOT	Ohata	1.32	300	⇓P	Pn	23 57 33.8	+0.4
ERM	Erimo	1.36	19	Pn	Pn	23 57 34.3	+0.4
JEM	Erimo	1.36	19	P	Pn	23 57 34.0	0.0
JNBK	Urakawa-nobuka	1.55	5	P	Pn	23 57 37.2	+0.5
JNBK				*e*S	Sn	23 57 58.0	+2.2
JAH	Hinai	1.57	250	⇓P	Pb	23 57 38.7	-0.7
JAH				*e*S	Sb	23 58 00.1	+1.3
JOM	Ohasama	1.59	218	⇓P	Pn	23 57 38.1	+1.0
JOM				*e*S	Sb	23 57 58.6	-0.9
JKB	Kayabe	1.63	316	P	Pn	23 57 38.4	+0.7
JKB				*e*S	Sn	23 57 58.3	+0.6
JSR	Shiriuchi	1.81	297	⇓P	Pn	23 57 41.7	+1.6
JSR				S	Sb	23 58 05.0	-0.6
JIW	Iwasaki	1.95	267	P	Pb	23 57 44.6	-1.3
JCH	Churui	1.98	17	P	Pn	23 57 42.5	+0.1
JCH				*e*S	Sn	23 58 06.1	-0.1
JMK	Ichinoseki	2.06	211	P	Pn	23 57 45.6	+2.1
JEW	Eniwo	2.27	339	Pn	Pn	23 57 48.4	+2.0
JEW				Sn	Sn	23 58 16.5	+3.1
JMM	Marumori	3.17	206	Pn	Pn	23 58 00.7	+1.8
JMM				Sn	Sn	23 58 37.5	+1.8
JKA	Kamikawa-asahi	3.38	0	Pn	Pn	23 58 02.5	+0.8
JSD	Sado	4.28	232	Pn	Pn	23 58 16.1	+2.0
MJB9	Matsu-Tunnel	5.39	221	Pn	Pn	23 58 33.2	+3.8
MAJO	Matsushiro	5.39	221	Pn	Pn	23 58 32.8	+3.4
MAT	Matsushiro	5.39	221	P	Pn	23 58 31.6	+2.1
MAT				S	Sn	23 59 32.8	+2.2
MJAR	Matsushiro Arr	5.39	221	P	Pn	23 58 33.1	+3.6
	0.6nm,0.3s,baz=33,slow=12,SNR=12						
MJAR	Matsushiro Arr	5.39	221		Pn	23 58 33.5	+4.0
JGF	Kuroka	6.56	220	Pn	Pn	23 58 48.3	+2.8
JWT	Wachi	7.84	228	Pn	Pn	23 59 05.6	+2.6
USA0B	Ussuriysk Arra	8.55	297	Pn	Pn	23 59 13.7	+1.0
USRK	Ussuriysk Ar.	8.55	297	P	Pn	23 59 16.2	+3.5
	baz=97,slow=14,SNR=9.6						
USRK	Ussuriysk Ar.	8.55	297	Pn	Pn	23 59 14.2	+1.5
ULN	Ulaanbaatar	26.22	298	P	P	00 02 41.4	-1.9
ULN				IAmb	IAmb	00 02 55.9	
	comp=Z,6.3nm,1.4s						
SONM	Songino Array	26.66	298	P	P	00 02 47.7	+0.5
	comp=Z,1.1nm,0.7s,baz=89,slow=8.7,SNR=8.2						
SONM	Songino Array	26.66	298	P	P	00 02 47.3	0.0
H11N2	WAKE ISLAND Hy	29.50	128	T	T	00 34 18.3	
	baz=319,slow=75,SNR=51						
H11N1	WAKE ISLAND Hy	29.50	128	T	T	00 34 16.5	
	baz=319,slow=75,SNR=27						
H11N3	WAKE ISLAND Hy	29.51	128	T	T	00 34 19.7	
	baz=319,slow=75,SNR=32						
H11S1	WAKE ISLAND Hy	30.33	130	T	T	00 35 29.1	
	baz=322,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	30.33	130	T	T	00 35 24.1	
	baz=322,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	30.34	130	T	T	00 35 25.3	
	baz=322,slow=75,SNR=12						
ZAA0	Zalesovo Array	40.18	309	P	P	00 04 44.2	0.0
ZAA0				IAmb	IAmb	00 04 44.7	
	comp=Z,3.2nm,0.6s						
ZALV	Zalesovo Beam	40.18	309	P	P	00 04 44.4	+0.1
	comp=Z,4.3nm,0.6s,baz=95,slow=7.8,SNR=18						
ZALV	Zalesovo Beam	40.18	309	P	P	00 04 44.2	-0.1
MK31	Makanchi Array	43.01	299	P	P	00 05 07.6	0.0
MKAR	Makanchi Array	43.01	299	P	P	00 05 07.6	-0.1
	comp=Z,1.2nm,0.5s,baz=84,slow=10.0,SNR=31						
MKAR	Makanchi Array	43.01	299	P	P	00 05 07.4	-0.2
MAKZ	Makanchi	43.22	299	P	P	00 05 09.3	0.0
MAKZ				IAmb	IAmb	00 05 17.1	
	comp=Z,1.9nm,0.8s						
ILAR	Eielson Array	45.92	34	P	P	00 05 30.6	0.0
	comp=Z,0.3nm,0.7s,baz=256,slow=6.0,SNR=4.7						
GUN	Gumba	47.77	273	*e*P	P	00 05 46.1	+0.1
	comp=Z,9.4nm,0.4s						
GKN	Gorkha	48.67	274	*e*P	P	00 05 53.3	+0.7
	comp=Z,1.6nm,0.3s						
BRVK	Borovoye	48.86	310	P	P	00 05 53.6	0.0
BRVK				IAmb	IAmb	00 05 54.4	
	comp=Z,2.2nm,0.7s						
DANN	Dangsing	49.16	275	*e*P	P	00 05 57.0	+0.5
	comp=Z,24nm,0.7s						
PYUN	Piuthan	49.87	275	*e*P	P	00 06 02.8	+0.9
	comp=Z,3.4nm,0.4s						
INK	Inuvik	50.70	29	P	P	00 06 07.7	+0.4
INK				IAmb	IAmb	00 06 26.2	
	comp=Z,3.7nm,1.1s						
KKAR	Karatay Array	52.11	298	P	P	00 06 17.8	-0.5
ABKAR	Akbulak array	56.29	309	P	P	00 06 48.1	-0.5
ABKAR	Akbulak array	56.29	309	P	P	00 06 47.9	-0.7
WB0	Warramunga Arr	60.66	189	P	P	00 07 18.6	-0.8
WB2	Warramunga Arr	60.84	189	P	P	00 07 18.9	-1.7
WRA	Warramunga Arr	60.84	189	P	P	00 07 19.3	-1.2
	comp=Z,0.6nm,0.7s,baz=7.3,slow=6.9,SNR=8.3						
WRA	Warramunga Arr	60.84	189	P	P	00 07 19.5	-1.0
HRA	Herat	61.89	292	P	P	00 07 27.8	-0.1
HRA				IAmb	IAmb	00 07 30.1	
	comp=Z,2.4nm,1.2s						
ASAR	Alice Springs	64.57	189	P	P	00 07 45.0	-0.4
	comp=Z,0.5nm,0.5s,baz=4.4,slow=6.9,SNR=8.8						
ASAR	Alice Springs	64.57	189	P	P	00 07 45.2	-0.2
FINES	FINESS Array B	65.97	332	P	P	00 07 53.2	-0.8
	comp=Z,2.2nm,0.5s,baz=41,slow=7.8,SNR=22						
AKASG	Malin Array Be	71.93	322	P	P	00 08 30.0	-1.2
	comp=Z,0.5nm,0.5s,baz=49,slow=5.4,SNR=2.1						

IDC ***25*** *00:13:04.9±1.2, 16°.23S×176°.01W, h343km±13km, mb3.8/11, mb1 4.0/13, mb1mx3.6/31, mbtmp4.5/13, Error ellipse: s-maj=18.9km s-min=10.6km az=139.0*

NEIC ***25*** *00:13:05.9±1.5, 16°.21S±0°.09×175°.92W±0°.09, h352km±6km, mb4.4/59, Error ellipse: s-maj=14.4km s-min=11.1km az=141.0*

NOU ***25*** *00:13:07.1, 16°.05S×175°.79W, h392km, mb4.6/41, Tonga Islands*

ISC 25 00:13:06.5±0.3**, 16°.16S**±0°.07×**176°.02W**±0°.06**, h360**km**, n206, σ1°.10**/209**, mb4.5**/49**, 14C-17D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.67	62	P	Pn	00 14 22.3	-0.9
	79nm,0.3s,baz=50,slow=0.9,SNR=65						
AFI				S	S	00 15 22.1	-3.1
	3.3nm,0.3s,baz=198,slow=20,SNR=1.6						
MSVF	Nonsavu	5.89	254	P	Pn	00 14 40.2	+3.7
	5.3nm,0.3s,baz=95,slow=10,SNR=70						
MSVF	Nonsavu	5.89	254	Pn	Pn	00 14 39.6	+3.1
MSVF	Nonsavu	5.89	254	P	Pn	00 14 40.0	+3.5
NIUE	Niue	6.49	117	Pn	Pn	00 14 43.3	0.0
NIUE	Niue	6.49	117	P	Pn	00 14 43.6	+0.3
FUNA	Funafuti	8.91	328	Pn	Pn	00 15 11.6	-0.1
KNTN	Kanton	13.96	18	P	P	00 16 09.3	-0.1
MARNC	Mare, Loyalty	16.00	248	P	P	00 16 31.7	+0.2
MARNC	Mare, Loyalty	16.00	248	P	Pn	00 16 34.7	0.0
LIFNC	LIFOU	16.53	251	P	P	00 16 38.3	+1.0
PINNC	Pines Island,	16.86	245	P	P	00 16 41.0	+0.1
PINNC				IAmb	IAmb	00 16 41.8	
	comp=Z,25nm,0.8s						
OUENC	Ouen Island, N	17.33	246	P	P	00 16 46.0	+0.2
OUENC				IAmb	IAmb	00 17 05.5	
	comp=Z,17nm,0.8s						
DZM	Mont Dzumac	17.58	248	P	P	00 16 47.5	-1.1
	comp=Z,0.8nm,0.3s,baz=69,slow=21,SNR=10						
DZM	Mont Dzumac	17.58	248	P	P	00 16 48.3	-0.3
DZM	Mont Dzumac	17.58	248	P	Pn	00 16 51.1	-1.7
NOUC	Port Laguerre	17.71	248	P	P	00 16 52.1	+2.1
OUZ	Omahuta	21.13	204	P	P	00 17 24.6	+0.6
OUZ	Omahuta	21.13	204	P	P	00 17 24.5	+0.5
WIAZ	Waiheke Island	22.00	199	P	P	00 17 32.8	+0.9
WMGZ	Waiomatatini S	22.13	192	P	P	00 17 33.6	+0.5
HAZ	Te Kaha	22.20	193	P	P	00 17 33.3	-0.3
PUZ	Puketiti	22.40	192	P	P	00 17 35.2	-0.4
RUGZ	Raukumara Rang	22.42	193	P	P	00 17 36.8	+0.9
TWGZ	Tauwhareparae	22.56	192	P	P	00 17 37.8	+0.8
MWZ	Matawai	22.81	193	P	P	00 17 39.0	-0.3
URZ	Urewera	22.83	194	P	P	00 17 36.4	-3.0
	comp=Z,7.7nm,0.3s,baz=121,slow=23,SNR=32						
URZ	Urewera	22.83	194	P	P	00 17 36.4	-3.0
URZ	Urewera	22.83	194	P	P	00 17 36.6	-2.8
URZ				IAmb	IAmb	00 17 38.2	
	comp=Z,17nm,0.9s						
RIGZ	Rimuhau	23.11	192	P	P	00 17 43.1	+1.1
RTZ	Ruatahuna	23.20	194	P	P	00 17 41.0	-1.9
MTHZ	Maungataniwha	23.46	194	P	P	00 17 45.3	+0.2
HIZ	Hauiti	23.67	198	P	P	00 17 48.3	+1.3
HIZ	Hauiti	23.67	198	P	P	00 17 48.0	+0.9
HIZ				IAmb	IAmb	00 17 57.7	
	comp=Z,31nm,1.1s						
HIZ	Hauiti	23.67	198	P	P	00 17 47.1	+0.1
NMHZ	Naumai	23.70	194	P	P	00 17 47.3	-0.1
BKZ	Black Stump Fm	23.84	195	P	P	00 17 46.7	-1.9
BKZ	Black Stump Fm	23.84	195	P	P	00 17 46.7	-1.9
TMVZ	Te Maari	23.99	196	P	P	00 17 48.4	-1.6
ETVZ	East Tongariro	24.01	196	P	P	00 17 48.6	-1.6
OTVZ	Oturere	24.05	196	P	P	00 17 48.9	-1.7
SNVZ	South Ngauruho	24.07	196	P	P	00 17 49.3	-1.5
KWHZ	Kaweka Forest	24.10	194	P	P	00 17 49.9	-1.1
WNVZ	Wahianoa	24.22	196	P	P	00 17 51.4	-0.7
BHHZ	Black Hill Sta	24.25	195	P	P	00 17 51.1	-1.2
KAHZ	Kahuranaki	24.35	193	P	P	00 17 52.9	-0.2
BFZ	Birch Farm	25.34	194	P	P	00 18 00.8	-1.1
BFZ				IAmb	IAmb	00 18 17.9	
	comp=Z,24nm,1.2s						
BFZ	Birch Farm	25.34	194	P	P	00 18 01.4	-0.6
MSWZ	Moikau Station	26.27	195	P	P	00 18 09.8	-0.5
SNZO	South Karori	26.31	196	P	P	00 18 09.8	-0.8
PLWZ	Palliser	26.41	195	P	P	00 18 10.1	-1.4
QRZ	Quartz Range	26.51	200	P	P	00 18 11.8	-0.5
QRZ				IAmb	IAmb	00 18 12.1	
	comp=Z,30nm,1.0s						
NNZ	Nelson	26.60	198	P	P	00 18 12.2	-1.0
NNZ				IAmb	IAmb	00 18 25.3	
	comp=Z,12nm,0.8s						
BSWZ	Blackbirch Sta	26.91	197	P	P	00 18 15.8	-0.2
THZ	Tophouse	27.24	198	P	P	00 18 18.3	-0.6
THZ				IAmb	IAmb	00 18 32.9	
	comp=Z,17nm,1.1s						
LHI	Lord Howe Isla	27.35	232	P	P	00 18 18.9	-1.0
KHZ	Kahutara	27.66	197	P	P	00 18 21.3	-1.2
KHZ	Kahutara	27.66	197	P	P	00 18 22.4	-0.1
LTZ	Lake Taylor	28.36	198	P	P	00 18 26.9	-1.8
LTZ				IAmb	IAmb	00 18 37.1	
	comp=Z,8.6nm,0.8s						
OXZ	Oxford	28.93	198	P	P	00 18 31.4	-2.3
OXZ				IAmb	IAmb	00 18 32.6	
	comp=Z,16nm,0.7s						
MQZ	McQueen's Vall	29.10	197	P	P	00 18 33.4	-1.7
FOZ	Fox Glacier	29.83	201	P	P	00 18 40.2	-1.3
LBZ	Lake Benmore	30.46	200	P	P	00 18 43.6	-3.5
LBZ				IAmb	IAmb	00 18 49.2	
	comp=Z,17nm,1.1s						
ODZ	Otahua Downs	30.91	199	P	P	00 18 49.7	-1.3
WKZ	Wanaka	31.24	201	P	P	00 18 53.1	-0.8
WKZ				IAmb	IAmb	00 19 00.9	
	comp=Z,40nm,1.2s						
MLZ	Mavora Lakes	32.02	201	P	P	00 19 00.2	-0.5
MLZ				IAmb	IAmb	00 19 02.6	
	comp=Z,20nm,0.8s						
EIDS	Eidsvold	32.03	248	P	P	00 18 60.0	-1.0
DCZ	Deep Cove	32.45	202	P	P	00 19 03.4	-1.0
DCZ				IAmb	IAmb	00 19 04.9	
	comp=Z,23nm,0.8s						
WHZ	Wether Hill Ro	32.54	201	P	P	00 19 05.8	+0.6
ARMA	Armidale	32.80	239	P	P	00 19 07.8	+0.1
ARMA				IAmb	IAmb	00 19 10.7	
	comp=Z,8.7nm,0.8s						
RMQ	Roma	34.28	247	P	P	00 19 20.1	-0.3
	comp=Z,9.4nm,0.6s						
CTA	Charters Tower	36.02	258	P	P	00 19 34.3	-0.8
	comp=Z,3.7nm,0.6s,baz=90,slow=6.9,SNR=1.5						
CTAO	Charters Tower	36.02	258	P	P	00 19 34.3	-0.8
CTAO	Charters Tower	36.02	258	P	P	00 19 34.4	-0.8
	comp=Z,13nm,2.1s						
CNB	Canberra Magne	36.30	232	P	P	00 19 37.1	-0.2
	comp=Z,44nm,1.1s						
CAN	Canberra	36.58	232	P	P	00 19 39.9	+0.3
CAN				IAmb	IAmb	00 19 40.5	
	comp=Z,18nm,0.6s						
CAN	Canberra	36.58	232	P	P	00 19 38.3	-1.3
CMSA	Cobar Meteorol	38.00	239	P	P	00 19 50.6	-0.9
	comp=Z,24nm,0.8s						
QLP	Quilpie	38.30	247	P	P	00 19 54.0	0.0
	comp=Z,27nm,0.5s						
MANU	Manus Island	38.68	287		S	00 25 24.1	-2.9
COEN	Coen	39.42	268	P	P	00 20 04.2	+0.8
COEN				IAmb	IAmb	00 20 05.4	
	comp=Z,26nm,0.9s						
TOO	Toolangi	40.04	230	P	P	00 20 08.3	+0.2
TOO	Toolangi	40.04	230	P	P	00 20 08.6	+0.5
	comp=Z,52nm,0.9s						
STKA	Stephens Creek	41.48	240	P	P	00 20 19.9	+0.1
	comp=Z,6.1nm,0.5s,baz=89,slow=9.8,SNR=38						
STKA				PcP	PcP	00 22 09.8	0.0
	comp=Z,2.1nm,0.6s,baz=38,slow=5.7,SNR=3.0						
STKA	Stephens Creek	41.48	240	P	P	00 20 20.0	+0.2
STKA	Stephens Creek	41.48	240	P	P	00 20 19.3	-0.5
	comp=Z,2.5nm,0.8s						
HTT	Hallett	44.00	238	P	P	00 20 39.5	-0.4
	comp=Z,19nm,0.9s						
LCRK	Leigh Creek	44.08	243	P	P	00 20 39.6	-0.9
	comp=Z,27nm,0.9s						
OOD	Oodnadatta	46.00	247	P	P	00 20 55.2	-0.3
	comp=Z,16nm,0.8s						
BBOO	Buckleboo	46.25	240	P	P	00 20 57.1	-0.3
BBOO				IAmb	IAmb	00 20 57.8	
	comp=Z,18nm,0.8s						
BBOO	Buckleboo	46.25	240	P	P	00 20 56.5	-0.9
	comp=Z,22nm,0.8s						
WR0	Warramunga Arr	47.03	258	P	P	00 21 03.1	-0.5
WB0	Warramunga Arr	47.18	258	P	P	00 21 04.4	-0.3
WB2	Warramunga Arr	47.21	258	P	P	00 21 05.0	0.0
WB2				IAmb	IAmb	00 21 05.3	
	comp=Z,27nm,0.7s						
WRAB	Tennant Creek	47.21	258	P	P	00 21 04.8	-0.2
WRAB				IAmb	IAmb	00 21 05.3	
	comp=Z,24nm,0.6s						
WRAB	Tennant Creek	47.21	258	P	P	00 21 03.8	-1.1
	comp=Z,32nm,0.8s						
WRA	Warramunga Arr	47.22	258	P	P	00 21 04.4	-0.6
	comp=Z,19nm,0.6s,baz=92,slow=6.9,SNR=349						
WRA	Warramunga Arr	47.22	258	P	P	00 21 04.3	-0.7
AS31	Alice Springs	47.48	253	P	P	00 21 06.9	-0.1
AS31				IAmb	IAmb	00 21 07.9	
	comp=Z,19nm,0.6s						
ASAR	Alice Springs	47.48	253	P	P	00 21 06.9	-0.1
	comp=Z,65nm,0.5s,baz=88,slow=7.7,SNR=1980						
ASAR				PcP	PcP	00 22 30.8	0.0
	comp=Z,2.5nm,0.7s,baz=88,slow=4.8,SNR=4.4						
ASAR				S	S	00 27 29.9	-4.0
	comp=Z,1.5nm,0.9s,baz=91,slow=15,SNR=7.6						
ASAR	Alice Springs	47.48	253	P	P	00 21 06.7	-0.3
MULG	Mulgathing	47.63	244	P	P	00 21 06.9	-1.0
KDU	Kakadu	49.91	267	P	P	00 21 25.0	-0.3
MTN	Manton Dam	51.16	266	P	P	00 21 34.7	+0.1
MTN	Manton Dam	51.16	266	P	P	00 21 34.0	-0.6
WRKA	Warakurna	52.57	251	P	P	00 21 44.1	-0.7
FORT	Forrest	52.83	243	P	P	00 21 45.6	-0.9
FORT	Forrest	52.83	243	P	P	00 21 45.1	-1.4
KNRA	Kununurra	52.97	262	P	P	00 21 47.3	-0.4
KNRA				IAmb	IAmb	00 21 54.9	
	comp=Z,14nm,0.8s						
KNRA	Kununurra	52.97	262	P	P	00 21 47.2	-0.5
SOEI	Soe	58.38	268	P	P	00 22 26.2	+0.2
PSA00	Pilbara Seismi	60.57	254	P	P	00 22 40.0	-0.7
PSA00				IAmb	IAmb	00 22 41.5	
	comp=Z,20nm,1.1s						
PSA00	Pilbara Seismi	60.57	254	P	P	00 22 40.4	-0.2
PSA00				IAmb	IAmb	00 22 40.8	
	comp=Z,31nm,0.5s						
PSA00	Pilbara Seismi	60.57	254	P	P	00 22 39.9	-0.7
MBWA	Marble Bar	60.73	255	P	P	00 22 41.2	-0.5
MEEK	Meekatharra	61.20	248	P	P	00 22 43.7	-1.0
KLBR	Kellerberrin	61.66	243	P	P	00 22 46.8	-0.9
NWAO	Narrogin (SRO)	62.05	241	P	P	00 22 50.5	+0.3
LUWI	Luwuk	62.12	278	P	P	00 22 50.1	-0.8
SBA	Scott Base	62.30	184	P	P	00 22 53.0	+1.9
SBA				IAmb	IAmb	00 22 59.8	
	comp=Z,19nm,1.1s						
VNDA	Vanda	62.38	185	P	P	00 22 52.6	+1.0
	comp=Z,5.6nm,1.0s,baz=21,slow=7.4,SNR=9.2						
VNDA	Vanda	62.38	185	P	P	00 22 52.6	+1.0
VNDA				IAmb	IAmb	00 22 54.0	
	comp=Z,8.3nm,1.1s						
BLDU	Ballidu	62.60	244	P	P	00 22 53.0	-0.9
MUN	Mundaring	62.95	242	P	P	00 22 55.9	-0.3
MORW	Morawa	63.28	245	P	P	00 22 58.0	-0.3
MORW				IAmb	IAmb	00 23 13.4	
	comp=Z,15nm,1.1s						
GIRL	Giralia	65.59	252	P	P	00 23 14.3	+1.0
PEA0B	Petropavlovsk-	72.62	344	P	P	00 23 55.2	-0.1
PETK	Petropavlovsk-	72.62	344	P	P	00 23 55.3	0.0
	comp=Z,3.4nm,0.8s,baz=142,slow=10,SNR=5.0						
PETK	Petropavlovsk-	72.62	344	P	P	00 23 55.6	+0.3
QSPA	South Pole Qui	73.88	180	P	P	00 24 03.6	+0.9
BMN	Battle Mountai	78.39	42	P	P	00 24 28.9	+0.6
NJ2	Nanjing	78.63	308	*e*P	P	00 24 31.5	+1.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GHO	Glory Hole Cre	80.60	13	P	P	00 24 39.6	+0.1
GHO				IAmb	IAmb	00 24 51.6	
	comp=Z,7.5nm,1.1s						
VRDI	Verde Repeater	81.39	15	P	P	00 24 43.9	+0.1
N25K	Chitina, Valde	81.43	15	P	P	00 24 44.0	+0.1
GLB	Gilahina Butte	81.48	15	P	P	00 24 44.4	+0.3
GLB				IAmb	IAmb	00 25 00.9	
	comp=Z,5.5nm,1.1s						
RND	Reindeer	82.08	12	P	P	00 24 47.6	+0.4
RND				IAmb	IAmb	00 25 04.1	
	comp=Z,5.6nm,1.2s						
MNTX	Cornudas Mount	82.71	54	P	P	00 24 52.0	+0.9
TXAR	Lajitas Array	83.13	57	P	P	00 24 54.3	+0.9
	comp=Z,1.5nm,0.9s,baz=199,slow=3.4,SNR=12						
TXAR	Lajitas Array	83.13	57	P	P	00 24 54.4	+1.0
CCB	Clear Creek Bu	83.40	12	P	P	00 24 53.7	-0.1
CCB				IAmb	IAmb	00 24 54.1	
	comp=Z,3.4nm,0.6s						
ILAR	Eielson Array	83.69	12	P	P	00 24 54.9	-0.4
	comp=Z,1.3nm,0.6s,baz=218,slow=5.7,SNR=11						
PDAR	Pinedale Array	84.52	43	P	P	00 25 00.2	0.0
	comp=Z,0.5nm,0.7s,baz=233,slow=3.1,SNR=6.2						
MAW	Mawson	86.26	199	P	P	00 25 08.1	+0.1
	comp=Z,9.0nm,1.0s,baz=90,slow=5.8,SNR=4.9						
GSI	Gunungsitoli	86.91	272	P	P	00 25 13.0	+0.8
GSI				IAmb	IAmb	00 25 14.9	
	comp=Z,6.7nm,0.8s						
HHC	Hu-ho-hao-te	87.71	314	*e*P	P	00 25 18.1	+2.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,96nm,6.6s						
PLCA	Paso Flores	90.86	133	P	P	00 25 29.9	-0.3
	comp=Z,1.5nm,0.7s,baz=207,slow=4.3,SNR=3.0						
SNAA	Sanae	92.26	178	P	P	00 25 35.4	-0.7
VNA3	Neumayer Olymp	92.31	176	P	P	00 25 36.2	0.0
VNA2	Neumayer--Watz	92.78	176	P	P	00 25 38.7	+0.3
	baz=184,slow=4.0						
MKAR	Makanchi Array	109.56	314	PKiKP	PKiKP	00 30 53.8	-1.1
	comp=Z,0.3nm,0.6s,baz=45,slow=2.2,SNR=5.4						
BVAR	Borovoye Array	116.92	322	PKP	PKPdf	00 31 08.1	-0.6
	comp=Z,0.8nm,0.5s,baz=193,slow=4.2,SNR=9.6						
ARCES	ARCESS Array B	124.99	351	PKP	PKPdf	00 31 23.6	-0.1
	comp=Z,0.9nm,0.5s,baz=336,slow=2.0,SNR=6.7						
FINES	FINESS Array B	132.10	346	PKP	PKPdf	00 31 37.6	+0.2
	comp=Z,3.3nm,0.9s,baz=54,slow=3.3,SNR=6.4						
BCA	Borcka	138.98	316	⇑P	PKiKP	00 31 55.8	+2.6
KMBO	Kilima Mbogo	142.93	245	PKP	PKPdf	00 31 57.3	-1.8
	comp=Z,3.7nm,0.8s,baz=74,slow=6.0,SNR=16						
KMBO	Kilima Mbogo	142.93	245	PKPdf	PKPdf	00 31 57.1	-2.0
BURAR	Bucovina Array	144.07	335	⇑P	PKPdf	00 31 59.5	-0.4
CLL	Collm	144.20	350	*e*PKPdf	PKPbc	00 31 59.0	0.0
SLCR	Slobozia Conac	144.53	331	⇑P	PKPbc	00 32 00.0	-0.1
IZVR	Izvoarele	144.57	331	⇑P	PKPdf	00 32 00.8	+0.2
TRPA	Tarpa	144.66	338	⇑P	PKPdf	00 32 01.0	+0.3
CFR	Carcaliu	144.66	330	⇑P	PKPab	00 32 00.7	0.0
BMR	Baia Mare	144.69	337	⇑P	PKPdf	00 32 00.9	+0.1
MORC	Moravsky Berou	144.71	345	⇓P	PKPbc	00 32 00.0	-0.7
LANS	Liptovska Anna	144.76	342	*e*PKP	PKPab	00 32 02.0	+1.0
TPGR	Topolog	144.76	329	⇓P	PKPab	00 32 01.5	+0.4
VRI	Vrincioaia	144.80	332	⇑P	PKPab	00 32 01.5	+0.2
PLOR	Plostina	144.85	332	⇓P	PKPdf	00 32 01.2	0.0
COVR	Voineasa-Covas	145.05	333	⇓P	PKiKP	00 32 07.3	+1.8
GRER		145.06	331	⇓P	PKPab	00 32 03.2	+1.0
BRTR	Keskin Array B	145.10	318	PKPbc	PKPab	00 32 02.6	-0.2
	comp=Z,2.1nm,0.5s,baz=137,slow=4.7,SNR=11						
BRTR	Keskin Array B	145.10	318		PKPbc	00 32 02.3	0.0
HARR	Harsova	145.12	330	⇓P	PKPab	00 32 02.7	+0.2
DOPR	Dopca	145.31	333	⇓P	PKPbc	00 32 02.5	0.0
NEHR	Nehoiu	145.33	332	⇓P	PKPab	00 32 03.5	+0.2
MLR	Muntele Rosu	145.44	332	⇓P	PKPdf	00 32 01.1	-1.2
MLR				⇑P	PKPab	00 32 04.2	+0.3
DRGR		145.72	337	⇑P	PKPbc	00 32 03.5	-0.3
VOIR		145.88	333	⇑P	PKPab	00 32 05.3	-0.2
ARR	Arges	146.11	334	⇑P	PKPab	00 32 06.3	-0.1
GERES	GERESS Array B	146.45	348	PKPbc	PKPbc	00 32 06.1	+0.2
	comp=Z,0.4nm,0.5s,baz=54,slow=3.5,SNR=8.0						
SIRR	Siria	146.56	338	⇓P	PKPdf	00 32 03.9	-0.1
CONA	Conrad Observa	146.84	345	*e*P	PKPbc	00 32 07.6	+0.6
	comp=Z,1.8nm,0.6s						
GZR	Gura Zlata	146.86	335	⇓P	PKPbc	00 32 07.6	+0.5
BZS	Buzias	147.12	337	⇓P	PKPbc	00 32 07.6	-0.1
MOA	Molln	147.28	347	*e*P	PKPbc	00 32 08.4	+0.3
	comp=Z,2.4nm,1.0s						
VLAD	Vladila	147.29	332	⇓P	PKPbc	00 32 08.8	+0.6
HERR	Herculane	147.43	335	⇓P	PKPbc	00 32 08.1	-0.4
ARSA	Arzberg	147.56	345	*e*P	PKPbc	00 32 08.5	-0.4
	comp=Z,3.1nm,1.5s						
LEF	Lefka	148.00	312	⇓P	PKPbc	00 32 10.6	+0.3
FRGS	Fruska Gora	148.17	339	⇓P	PKPbc	00 32 10.4	-0.2
KBA	Koelnbreinsper	148.21	348	*e*P	PKPbc	00 32 10.5	-0.3
	comp=Z,2.3nm,0.5s						
SOKA	Soboth	148.21	345	*e*P	PKiKP	00 32 12.8	+0.7
	comp=Z,3.8nm,1.5s						
RETA	Reutte	148.26	351	*e*P	PKPab	00 32 13.9	-1.1
	comp=Z,4.7nm,1.3s						
WATA	Walderalm	148.29	350	*e*P	PKPbc	00 32 10.8	-0.1
	comp=Z,1.3nm,0.5s						
WTTA	Wattenberg	148.34	350	*e*P	PKPbc	00 32 10.9	-0.2
	comp=Z,5.6nm,0.9s						
SQTA	Sankt Quirin	148.46	351	*e*P	PKPbc	00 32 11.3	0.0
	comp=Z,2.4nm,0.7s						
OBKA	Obir	148.49	346	*e*P	PKPbc	00 32 11.0	-0.3
	comp=Z,2.2nm,1.0s						
MYKA	Terra Mystica	148.57	347	*e*P	PKPbc	00 32 11.0	-0.6
	comp=Z,2.8nm,0.6s						
ABTA	Abfaltersbach	148.69	349	*e*P	PKPbc	00 32 11.4	-0.5
	comp=Z,2.8nm,0.6s						
FETA	Feichten	148.72	351	*e*P	PKiKP	00 32 12.8	-0.5
	comp=Z,2.1nm,0.9s						
BOVS	Bovan	148.74	335	⇓P	PKPbc	00 32 11.4	-0.6
VTS	Vitosha	148.90	332	⇑P	PKPbc	00 32 12.8	+0.2
TEOL	Teolo	150.18	349		PKPbc	00 32 15.1	-0.3
PDG	Podgorica	150.73	336	⇑P	PKPbc	00 32 16.6	-0.1
TORD	Torodi Ar. Bea	176.27	143	PKP	PKPdf	00 32 33.7	-1.1
	comp=Z,0.7nm,0.8s,baz=301,slow=1.4,SNR=5.1						
TORD				PKPab	PKPab	00 34 17.8	+0.3
	comp=Z,0.7nm,0.8s,baz=237,slow=4.1,SNR=4.8						

IDC 25 00:31:57.4±1.8**, 4°.35N**×**127°.24E, h0**km**, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.4**/34**, mbtmp3.6**/5**, Error ellipse: s-maj=102.8km s-min=25.0km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.36	184	P	P	00 36 58.5	+1.3
	5.1nm,0.6s,baz=1.7,slow=11,SNR=9.5						
WRA	Warramunga Arr	25.13	164	P	P	00 37 24.1	-0.2
	0.4nm,0.3s,baz=339,slow=11,SNR=8.6						
ASAR	Alice Springs	28.60	167	P	P	00 37 55.6	0.0
	0.2nm,0.5s,baz=349,slow=7.0,SNR=6.2						
STKA	Stephens Creek	38.53	160	P	P	00 39 20.8	-1.0
	0.7nm,0.4s,baz=345,slow=9.4,SNR=6.7						

MKAR	Makanchi Array	57.34	325	P	P	00 41 47.5	+0.2
	0.1nm,0.4s,baz=126,slow=6.9,SNR=4.5						

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*DJA **25** 00:32:57.6±1.6, 1°S±2°×12°0E±°, h16km±14km, M4.3/16, mb4.5/4, mB4.8/1, MLv4.2/16, Mw(mB)4.1/1*
*NEIC **25** 00:32:59.6±1.6, 1°.26S±0°.08×120°.01E±0°.06, h84km±14km, mb4.2/9, Error ellipse: s-maj=10.9km s-min=8.6km az=182.0*
*IDC **25** 00:33:12.6±8.8, 2°.45S×121°.00E, h92km±87km, mb3.7/4, mb1 3.9/5, mb1mx3.3/33, mbtmp4.0/5, ML3.7/1, Error ellipse: s-maj=125.4km s-min=22.9km az=52.0*
ISC 25 00:32:59.5±0.8**, 1°.26S**±0°.06×**119°.99E**±0°.04**, h100**km**, n35, σ1ˢ.01**/36**, mb4.1**/7**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	Mapaga	1.59	357	P	Pn	00 33 25.4	-1.5
APSI	Ampana	1.69	78	P	Pn	00 33 27.4	-0.8
APSI				S	Sn	00 33 50.5	+0.5
TTSI	Tana Toraja	1.78	186	P	Pn	00 33 29.0	-0.4
TOLI2	Tolitoli	2.48	19	Pn	Pn	00 33 38.2	-0.2
MRSI	Marisa	2.60	49	P	Pn	00 33 38.7	-1.3
SPSI	Sidrap Palu	2.70	185	P	Pn	00 33 40.7	-0.6
LUWI	Luwuk	2.79	86	P	Pn	00 33 42.2	-0.3
LUWI	Luwuk	2.79	86	Pn	Pn	00 33 41.6	-0.9
LUWI				Sn	Sn	00 34 14.8	-0.8
SMKI	Samarinda	2.90	286	P	Pn	00 33 43.6	-0.3
BKB	Balikpapan	3.09	270	P	Pn	00 33 45.2	-1.3
BKB	Balikpapan	3.09	270	Pn	Pn	00 33 46.1	-0.4
BKB				Sn	Sn	00 34 21.9	-0.9
BNSI	Bone	3.12	178	P	Pn	00 33 47.0	0.0
GTOI	Gorontalo	3.56	58	P	Pn	00 33 51.1	-1.7
KAPI	Kappang	3.74	184	P	Pn	00 33 55.7	+0.5
	12nm,0.3s,baz=17,slow=0.3,SNR=12						
KAPI				S	Sn	00 34 38.3	0.0
	8.0nm,0.3s,baz=103,slow=18,SNR=2.2						
BKSI	Bulukumba	4.04	178	P	Pn	00 33 58.5	-0.8
KBKI	Kotabaru	4.32	242	P	Pn	00 34 01.3	-1.8
BSSI	Bau Bau, Buton	4.88	174	P	Pn	00 34 09.1	-1.5
SANI	Sanana	6.05	98	P	Pn	00 34 25.9	-0.6
	0.2nm838nm26nm,0.6s						
MYLDM	Lahad Datu	6.57	347		Pn	00 34 35.2	+1.6
KKM	Kota Kinabalu	8.18	333	Pn	Pn	00 34 56.4	+0.8
FAKI	Fak Fak	12.36	98	Pn	Pn	00 35 52.2	+0.1
MTN	Manton Dam	15.95	137		P	00 36 39.1	-0.8
MTN				IAmb	IAmb	00 36 41.7	
	comp=Z,20nm,1.0s						
WB0	Warramunga Arr	23.17	143	P	P	00 37 57.2	-0.5
WB0				IAmb	IAmb	00 37 57.5	
	comp=Z,7.2nm,0.8s						
WRA	Warramunga Arr	23.28	144	P	P	00 37 57.7	-0.9
	comp=Z,6.2nm,0.7s,baz=324,slow=11,SNR=34						
WRA	Warramunga Arr	23.28	144	IAmb	IAmb	00 37 59.2	
	comp=Z,0.3nm,0.9s						
WB2	Warramunga Arr	23.28	144	P	P	00 37 58.6	-0.1
WB2				IAmb	IAmb	00 37 59.5	
	comp=Z,11nm,0.8s						
WR0	Warramunga Arr	23.41	144	P	P	00 37 59.9	+0.1
AS31	Alice Springs	26.04	150	P	P	00 38 26.2	+2.6
ASAR	Alice Springs	26.04	150	P	P	00 38 23.0	-0.7
	comp=Z,1.3nm,0.7s,baz=342,slow=12,SNR=26						
ASAR	Alice Springs	26.04	150	P	P	00 38 24.0	+0.3
STKA	Stephens Creek	36.65	148	P	P	00 39 56.9	+0.3
	comp=Z,6.3nm,0.8s,baz=313,slow=9.1,SNR=20						
STKA	Stephens Creek	36.65	148	IAmb	IAmb	00 39 57.6	
	comp=Z,1.1nm,0.7s						
CAN	Canberra	43.32	145	P	P	00 40 52.9	+1.1
CAN				IAmb	IAmb	00 41 05.8	
	comp=Z,6.8nm,1.1s						
OUENC	Ouen Island, N	50.14	118	P	P	00 41 45.7	+0.6
MKAR	Makanchi Array	58.16	330	P	P	00 43 07.6	+25
	comp=Z,0.5nm,0.6s,baz=127,slow=7.7,SNR=4.1						

NNC 25 00:38:47.6±3.7**, 38°.43N**×**73°.13E, h0**km**, mb4.2, mpv3.8, 3C-3D, Error ellipse: s-maj=26.5km s-min=16.8km az=169.0, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	Merke	4.31	1	Pg	Pb	00 40 04.1	-0.2
	13nm,0.4s						
MRKS				Lg	Lg	00 40 59.7	
	28nm,0.4s						
AAK	Ala-Archa	4.33	14	⇑Pn	Pn	00 39 53.8	-1.0
	6.4nm,0.5s						
AAK				⇓Sn	Sb	00 40 52.9	-4.6
	39nm,0.9s						
IUG	Iuzhnay	4.40	328	Pg	Pb	00 40 05.9	0.0
	253nm,0.2s						
IUG				Lg	Lg	00 41 02.0	
	36nm,0.7s						
TKM2	Tokmak 2	4.86	22	⇓Pg	Pg	00 40 18.7	-2.1
	5.1nm,0.7s						
TKM2				⇓Lg	Lg	00 41 22.3	
	15nm,0.8s						
KK08	Karatay Array	5.08	338	⇑Pn	Pn	00 40 04.5	-0.5
	3.4nm,0.4s,baz=155,slow=13						
KK08				⇑Sn	Sn	00 41 07.8	+3.4
	6.8nm,0.6s,baz=155,slow=25						
KST	Kastek	5.09	24	Pg	Pg	00 40 21.5	-3.5
	4.6nm,0.4s						
KST				Lg	Lg	00 41 28.1	
	12nm,0.8s						
SGDS	Sogindy	5.14	12	Pg	Pb	00 40 21.8	+3.3
	4.3nm,0.5s						
SGDS				Lg	Lg	00 41 29.2	
	9.2nm,0.6s						
DGS	Degeres	5.21	22	Pg	Pb	00 40 21.6	+1.9
	6.4nm,0.4s						
DGS				Lg	Lg	00 41 28.5	
	9.5nm,0.5s						
BRLS	Borolday	5.23	333	Pg	Pb	00 40 20.5	+0.6
	3.3nm,0.2s						
BRLS				Lg	Lg	00 41 27.3	
	7.9nm,0.6s						
MTBS	Maitube	5.32	27	Pg	Pb	00 40 25.1	+3.6
	3.5nm,0.4s						
MTBS				Lg	Lg	00 41 34.3	
	10nm,0.6s						
TNSS	Tian-Shan	5.44	31	Pg	Pb	00 40 26.6	+2.9
	2.8nm,0.3s						
TNSS				Lg	Lg	00 41 37.1	
	5.9nm,0.6s						
MDOK	Medeo	5.58	31	Pg	Pb	00 40 29.4	+3.3
	4.0nm,0.4s						
MDOK				Lg	Lg	00 41 42.5	
	15nm,0.7s						
KRBS	Karabastau	5.60	19	Pg	Pb	00 40 28.9	+2.6
	1.9nm,0.4s						
KRBS				Lg	Lg	00 41 41.4	
	3.4nm,0.8s						
KTBS	Karatobe	5.92	26	Pg	Pb	00 40 34.4	+2.6
	1.5nm,0.5s						
KTBS				Lg	Lg	00 41 51.2	
	11nm,0.5s						
KUU	Kurty	5.97	23	Pg	Pb	00 40 35.6	+3.1
	2.0nm,0.5s						
KUU				Lg	Lg	00 41 52.5	
	10.0nm,0.6s						
ARXS	Arharly	6.77	30	Pg	Pb	00 40 49.9	+3.7
	4.3nm,0.4s						

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*IDC **25** 01:03:49.3±2.5, 37°.48N×72°.28E, h195km±22km, mb3.3/10, mb1 3.4/17, mb1mx3.2/41, mbtmp3.9/17, MS3.1/1, Ms1 3.1/1, ms1mx2.5/31, Error ellipse: s-maj=22.8km s-min=12.6km az=165.0*
*NNC **25** 01:03:55.2±4.4, 38°.09N×72°.21E, h221km±54km, mb3.1, mpv4.4, Error ellipse: s-maj=45.3km s-min=25.0km az=10.0*
ISC 25 01:03:49.4±0.6**, 37°.57N**±0°.06×**72°.20E**±0°.07**, h200**km**, n38, σ1ˢ.60**/43**, mb3.6**/10**, 7C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.74	184	P	Pn	01 04 47.8	-0.3
CEP				S	Sn	01 05 32.0	-2.2
CHCP	Chirah Chowk	3.99	167	P	Pn	01 04 51.3	+0.1
AML	Almayashu	4.70	14	P	Pn	01 04 59.7	-0.6
	SNR=245						
THW	Thamme Wali	4.78	185	P	Pn	01 05 00.3	-0.7
UCH	Uchtor	4.98	20	P	Pn	01 05 03.3	-0.6
	SNR=99						
EKS2	Erkin-Say	5.23	13	P	Pn	01 05 06.4	-0.3
	SNR=124						
AAK	Ala-Archa	5.36	18	P	Pn	01 05 08.3	-0.1
	17nm,0.3s,baz=191,slow=5.2,SNR=236						
AAK				S	Sn	01 06 08.3	-2.7
	2.9nm,0.3s,baz=330,slow=23,SNR=8.7						
AAK	Ala-Archa	5.36	18	P	Pn	01 05 08.3	-0.1
	SNR=101						
AAK	Ala-Archa	5.36	18	⇓P	Pn	01 05 08.0	-0.5
	49nm,0.6s						
AAK				⇓S	Sn	01 06 07.6	-3.4
	44nm,0.7s						
KBK	Karagaybulak	5.50	22	P	Pn	01 05 10.3	0.0
	SNR=40						
ULHL	Ulahol	5.61	32	P	Pn	01 05 10.6	-1.2
	SNR=5.2						
SARP	Sargodha	5.64	176	P	Pn	01 05 10.3	-1.8
KK08	Karatay Array	5.69	347	⇑P	Pn	01 05 12.0	-0.5
	12nm,0.3s,baz=163,slow=12						
KK08				⇑S	Sn	01 06 13.7	-4.6
	22nm,0.5s,baz=162,slow=22						
CHMS	Chumysh	5.77	19	P	Pn	01 05 13.1	-0.4
	SNR=39						
TKM2	Tokmak 2	5.95	25	P	Pn	01 05 15.0	-1.0
	SNR=39						
TKM2	Tokmak 2	5.95	25	⇑P	Pn	01 05 15.1	-0.9
	24nm,0.6s						
TKM2				⇑S	Sn	01 06 21.9	-2.8
	16nm,0.8s						
USP	Ospenovka	5.96	16	P	Pn	01 05 15.0	-1.0
	SNR=32						
GEYT	Alibeck	11.16	276	P	Pn	01 06 23.5	0.0
	0.5nm,0.3s,baz=118,slow=12,SNR=2.1						
GEYT				S	Sn	01 08 24.1	-3.8
	1.4nm,0.3s,baz=135,slow=22,SNR=4.5						
MKAR	Makanchi Array	11.87	36	P	Pn	01 06 31.6	-0.8
	0.2nm,0.3s,baz=217,slow=13,SNR=8.2						
KURBB	Kurchatov Arra	13.81	17	P	P	01 06 59.0	+0.1
	0.1nm,0.3s,baz=206,slow=11,SNR=38						
AB31	Akbulak array	14.67	327	⇑P	P	01 07 09.2	+0.8
	0.6nm,0.3s,baz=358,slow=5.2,SNR=75						
AB31				⇑S	S	01 09 41.3	-8.8
	1.4nm,0.5s,baz=147,slow=24,SNR=11						
BVAR	Borovoye Array	15.51	356	P	Pn	01 07 17.8	+0.3
	0.6nm,0.3s,baz=174,slow=14,SNR=18						
AKTO	Aktyubinsk	16.38	326	P	Pn	01 07 29.8	+1.8
	0.5nm,0.3s,baz=120,slow=15,SNR=10.0						
AKTO	Aktyubinsk	16.38	326	⇑P	Pn	01 07 29.6	+1.5
	2.2nm,0.6s						
ZALV	Zalesovo Beam	18.55	24	P	P	01 07 51.2	+0.3
	2.0nm,0.3s,baz=221,slow=10,SNR=85						
ARU	Arti	20.97	339	P	P	01 08 17.7	+1.0
	0.5nm,0.3s,baz=160,slow=8.9,SNR=4.6						
GNI	Garni	21.51	285	LR	LR	01 18 29.0	
	comp=Z,50nm,19.5s,baz=260,slow=41						
SONM	Songino Array	26.94	57	P	P	01 09 13.4	+1.2
	0.7nm,0.6s,baz=252,slow=7.6,SNR=5.5						
ASF	Jabal al Asfar	29.35	270	P	P	01 09 36.0	+2.4
	31nm,0.9s,baz=16,slow=14,SNR=19						
FINES	FINESS Array B	37.15	325	P	P	01 10 42.0	+1.5
	1.4nm,0.8s,baz=117,slow=12,SNR=6.4						
ARCES	ARCESS Array B	40.54	337	P	P	01 11 10.0	+1.4
	4.5nm,0.9s,baz=110,slow=8.2,SNR=13						
NB2	NORSAR Subarra	44.12	322	P	P	01 11 38.5	+0.9
	comp=Z,1.0nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.12	322	P	P	01 11 38.5	+0.9
	comp=Z,0.9nm,0.5s,baz=94,slow=7.5,SNR=2.2						
USRK	Ussuriysk Ar.	44.82	62	P	P	01 11 45.1	+1.8
	comp=Z,0.6nm,0.3s,baz=297,slow=14,SNR=7.0						
TORD	Torodi Ar. Bea	66.70	269	P	P	01 14 19.2	+0.1
	comp=Z,0.9nm,0.5s,baz=49,slow=5.4,SNR=15						
ILAR	Eielson Array	73.49	16	P	P	01 14 59.5	-0.1
	comp=Z,0.7nm,0.8s,baz=316,slow=5.5,SNR=8.1						
YKA	Yellowknife Ar	80.13	3	P	P	01 15 37.3	+0.6
	comp=Z,1.2nm,0.6s,baz=349,slow=5.5,SNR=27						
WRA	Warramunga Arr	81.75	123	P	P	01 15 44.5	-1.3
	comp=Z,0.5nm,0.9s,baz=323,slow=4.4,SNR=1.8						

IDC 25 01:19:35.2±1.8**, 5°.65S**×**123°.07E, h0**km**, mb3.2**/2**, mb1 3.6**/3**, mb1mx3.4**/24**, mbtmp3.4**/3**, ML2.8**/1**, Error ellipse: s-maj=219.2km s-min=29.0km az=59.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.95	143	P	Pn	01 23 46.5	+0.1
	0.0nm,0.3s,baz=316,slow=13,SNR=1.2						
ASAR	Alice Springs	20.73	151	P	P	01 24 17.7	+0.1
	0.8nm,0.9s,baz=330,slow=13,SNR=4.5						
MKAR	Makanchi Array	63.47	330	P	P	01 30 07.0	-0.1
	0.4nm,0.7s,baz=130,slow=8.3,SNR=4.2						

IDC 25 01:44:51.6±3.0**, 32°.92S**×**178°.46W, h0**km**, mb3.8**/2**, mb1 4.0**/3**, mb1mx3.8**/21**, mbtmp3.8**/3**, ML3.7**/1**, Error ellipse: s-maj=71.2km s-min=45.1km az=123.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.43	213	Pn	Pn	01 46 26.6	-0.9
	1.7nm,0.3s,baz=121,slow=23,SNR=11						
URZ				Sn	Sn	01 47 37.4	-4.4
	3.7nm,0.3s,baz=129,slow=21,SNR=6.9						
ASAR	Alice Springs	42.65	270	P	P	01 52 50.0	-0.1
	0.9nm,0.7s,baz=110,slow=7.8,SNR=9.1						
WRA	Warramunga Arr	43.86	275	P	P	01 52 60.0	+0.1
	1.2nm,0.7s,baz=114,slow=7.8,SNR=13						
FINES	FINESS Array B	147.35	338	PKPbc	PKPbc	02 04 35.6	-0.8
	1.8nm,0.8s,baz=29,slow=3.2,SNR=6.9						

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*NEIC **25** 02:04:54.6±1.4, 43°.24N±0°.04×126°.7W±0°.1, h10km±2km, ML3.3/22, Error ellipse: s-maj=15.0km s-min=3.1km az=241.0*
*IDC **25** 02:04:54.9±2.3, 43°.44N×126°.37W, h0km, mb3.1/3, mb1 3.5/8, mb1mx3.2/50, mbtmp3.2/8, ML3.1/4, MS3.0/3, Ms1 3.1/3, ms1mx2.8/12, Error ellipse: s-maj=48.2km s-min=13.9km az=51.0*
*ANF **25** 02:04:58.4±0.7, 43°.19N×126°.19W, h10km, ML3.5/4, Error ellipse: s-maj=5.9km s-min=5.2km az=50.0*
ISC 25 02:04:55.6±1.3**, 43°.23N**±0°.05×**126°.43W**±0°.07**, h10**km**, n52, σ1ˢ.69**/54**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
J01E	Myrtle Point	1.83	91	P	Pn	02 05 26.8	-0.2
	baz=272,SNR=17						
J01E				Sg	Sg	02 05 53.2	-1.1
	baz=272						
I02E	Swisshome, OR	2.07	64	P	Pn	02 05 30.4	0.0
	baz=242,SNR=26						
I02E				Sb	Sg	02 05 59.7	-2.4
	baz=242						
K02D	Willamette Mer	2.10	104	P	Pn	02 05 30.8	-0.1
	baz=286,SNR=36						
K02D				Sb	Sg	02 05 59.2	-3.8
	baz=286						
I03D	Drain, OR	2.29	77	P	Pn	02 05 33.7	+0.3
	baz=257,SNR=65						
I03D				Sb	Sb	02 06 05.2	-0.2
	baz=257						
DBO	Dodson Butte	2.33	92		Pn	02 05 35.0	+0.9
L02E	Cave Junction	2.34	116	P	Pn	02 05 34.1	-0.1
	baz=299						
L02E				Sb	Sb	02 06 05.7	-1.2
	baz=299						
COR	Corvallis	2.63	58	Pn	Pn	02 05 38.1	0.0
COR				IAML		02 06 16.5	
	88nm,0.8s						
COR				IAML		02 06 18.1	
	105nm,2.1s						
BUCK	Buck Mountain	2.68	68	Pn	Pn	02 05 39.8	+1.0
BUCK				IAML		02 05 59.4	
	comp=N,96nm,4.3s						
BUCK				IAML		02 06 36.7	
	comp=E,107nm,3.5s						
H04D	Lebanon	2.97	63	P	Pn	02 05 44.0	+1.3
	baz=243,SNR=26						
H04D				Sb	Sb	02 06 24.9	+0.1
	baz=243						
I04A	Tendick Farm,	2.98	78	P	Pn	02 05 44.0	+1.0
	baz=259,SNR=5.8						
I04A				Sb	Sb	02 06 24.0	-1.1
	baz=259						
G03D	McMinnville, O	3.02	48	P	Pn	02 05 43.9	+0.5
	baz=227,SNR=29						
G03D				S	Sn	02 06 21.5	+1.9
	baz=227						
YBH	Yreka Blue Hor	3.13	117	Pn	Pn	02 05 46.6	+1.5
	comp=E,1.0nm,0.3s,baz=316,slow=12,SNR=18						
YBH				Sn	Sb	02 06 25.7	-3.9
	comp=E,0.5nm,0.3s,baz=90,slow=19,SNR=1.5						
YBH				LR	LR	02 06 48.3	
	comp=E,123nm,20.9s,baz=286,slow=36						
J04D	Umpqua Nationa	3.16	88	P	Pn	02 05 47.1	+1.5
	baz=270						
J04D				Sb	Sb	02 06 31.3	+0.8
	baz=270						
L04D	Klamath Falls	3.20	107	P	Pn	02 05 47.3	+1.2
	baz=290						
M02C	Callahan	3.22	123	P	Pn	02 05 47.2	+0.8
	baz=307						
H04A	Detroit Lake	3.39	63		Pn	02 05 50.0	+1.4
H04A				IAML		02 06 37.8	
	comp=N,49nm,0.4s						
H04A				IAML		02 06 37.9	
	comp=E,64nm,0.5s						
K04D	Chiloquin, OR	3.48	98	P	Pn	02 05 51.4	+1.4
	baz=281						
I05D	Terrebonne, OR	3.85	71	P	Pn	02 05 56.2	+1.3
	baz=254						
HOOD	Mount Hood Mea	4.02	57		Pn	02 05 58.7	+1.4
PINE	Pine Mountain	4.03	80		Pn	02 05 59.5	+1.9
PINE				IAML		02 06 35.2	
	comp=N,34nm,4.6s						
PINE				IAML		02 07 54.3	
	comp=E,42nm,5.0s						
K05A	Summer Lake	4.09	95	Pn	Pn	02 05 59.7	+1.3
K05A				IAML		02 07 35.4	
	comp=N,36nm,4.8s						
K05A				IAML		02 08 47.6	
	comp=E,38nm,4.7s						
G05D	Wamic, OR	4.19	60	P	Pn	02 06 00.9	+1.3
	baz=241,SNR=32						
E04D	Cinebar	4.31	38	P	Pn	02 06 02.5	+1.3
	baz=219						
F05D	White Salmon	4.43	51	P	Pn	02 06 04.5	+1.5
	baz=233,SNR=11						
D05A	Enumclaw	5.05	37	Pn	Pn	02 06 11.5	+0.2
F07A	Phinny Hill Vi	5.36	58		Pn	02 06 16.3	+0.7
E07A	Sunnyside	5.73	52		Pn	02 06 21.6	+0.8
G08A	Pilot Rock	5.75	66		Pn	02 06 22.7	+1.7
PGC	Sidney	5.81	20	Pn	Pn	02 06 20.7	-1.0
HAWA	Hanford	5.84	55		Pn	02 06 23.3	+1.2
BMO	Blue Mountains	6.77	73		Pn	02 06 37.3	+2.2
F10A	Beach Ranch, E	7.12	64		Pn	02 06 41.0	+1.1
C09A	Chrisman Ranch	7.33	49		Pn	02 06 43.5	+0.9
NVAR	Mina Array Bea	7.80	125	Pn	Pn	02 06 52.9	+3.5
	comp=E,0.1nm,0.3s,baz=298,slow=13,SNR=3.4						
NV11	Mina Array Sit	7.89	125	Pn	Pn	02 06 51.1	+0.5
LLLB	Lillooet	8.01	21	Pn	Pn	02 06 51.9	-0.1
ELK	Elko	8.70	103	LR	LR	02 09 54.2	
	comp=E,56nm,19.1s,baz=356,slow=34						
MCMT	McKenzie Canyo	9.91	76	Pn	Pn	02 07 20.9	+2.6
LRM	Limekiln Ridge	10.31	71	Pn	Pn	02 07 25.8	+2.0
PDAR	Pinedale Array	12.36	86	Pn	Pn	02 07 55.5	+3.6
	baz=291,slow=12,SNR=4.0						
DLBC	Dease Lake	15.39	353	Pn	Pn	02 08 30.7	-2.1
	comp=E,0.1nm,0.3s,baz=170,slow=19,SNR=1.2						
ANMO	Albuquerque	17.54	111	P	P	02 09 03.4	+1.9
	comp=E,0.1nm,0.3s,baz=307,slow=14,SNR=3.6						
YKA	Yellowknife Ar	20.51	16	P	P	02 09 33.0	-0.5
	comp=E,1.8nm,0.7s,baz=200,slow=11,SNR=21						
ULM	Lac du Bonnet	21.98	61	LR	LR	02 18 17.5	
	comp=E,194nm,20.9s,baz=171,slow=37						
TXAR	Lajitas Array	22.90	120	P	P	02 10 03.1	+3.4
	comp=E,0.3nm,0.9s,baz=312,slow=7.2,SNR=2.4						
ILAR	Eielson Array	24.48	339	P	P	02 10 12.9	-1.6
	comp=E,0.3nm,0.7s,baz=154,slow=8.0,SNR=4.9						
H11N3	WAKE ISLAND Hy	59.89	269	T	T	03 19 26.5	
	baz=52						
H11N2	WAKE ISLAND Hy	59.89	269	T	T	03 19 26.6	
	baz=52,SNR=158						
H11N1	WAKE ISLAND Hy	59.91	269	T	T	03 19 24.5	
	baz=52						
H11S1	WAKE ISLAND Hy	60.81	268	T	T	03 20 31.9	
	baz=50,slow=75,SNR=91						
H11S2	WAKE ISLAND Hy	60.81	268	T	T	03 20 36.9	
	baz=50,slow=75,SNR=73						
H11S3	WAKE ISLAND Hy	60.82	268	T	T	03 20 35.6	
	baz=50,slow=75,SNR=57						

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*JMA **25** 02:06:20.3±0.3, 37°.08N×142°.36E, h8km, M3.7*
*IDC **25** 02:06:23.8±4.7, 36°.59N×142°.64E, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.1/43, mbtmp3.7/4, ML2.9/2, MS3.1/1, Ms1 3.1/1, ms1mx2.3/42, Error ellipse: s-maj=88.2km s-min=45.3km az=27.0*
ISC 25 02:06:21.6±1.6**, 37°.10N**±0°.07×**142°.3E**±0°.1**, h9**km**, n21, σ0ˢ.59**/14**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	1.14	284	P	Pb	02 06 43.3	-0.1
JMST	Minamisoumatoc	1.25	300	P	Pn	02 06 44.8	-0.5
JIKH	Ishinomakikobu	1.36	333	P	Pn	02 06 46.1	-0.6
JMM	Marumori	1.39	304	P	Pn	02 06 46.8	-0.3
JIO	Ouri	1.53	332	P	Pn	02 06 48.9	-0.1
JFT	Otama	1.59	286	P	Pb	02 06 50.7	-0.4
JOU	Okura	1.78	315	P	Pn	02 06 53.3	+0.7
JMK	Ichinoseki	2.02	336	P	Pn	02 06 56.1	+0.3
JFY	Yanaizu	2.06	279	P	Pb	02 06 58.4	-0.7
JAG	Ashikaga	2.35	254	P	Pn	02 07 01.2	+0.8
MJAR	Matsushiro Arr	3.30	261	Pn	Pb	02 07 20.0	-0.2
	0.4nm,0.3s,baz=87,slow=14,SNR=5.1						
JHJ	Hachijo jima 2	4.46	208	Pn	Pn	02 07 28.7	-0.7
	6.1nm,0.3s,baz=30,slow=20,SNR=2.1						
JOW	Kunigami	15.66	233	LR	LR	02 15 21.9	
	comp=Z,74nm,19.3s,baz=84,slow=34						
H11N2	WAKE ISLAND Hy	27.61	122	T	T	02 41 01.4	
	baz=315,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	27.62	122	T	T	02 41 02.9	
	baz=315,slow=75,SNR=7.2						
H11N3	WAKE ISLAND Hy	27.63	122	T	T	02 41 02.8	
	baz=315,slow=75,SNR=7.4						
H11S1	WAKE ISLAND Hy	28.34	124	T	T	02 41 57.2	
	baz=316,slow=76,SNR=7.2						
H11S3	WAKE ISLAND Hy	28.34	124	T	T	02 41 58.4	
	baz=316,slow=76,SNR=8.6						
H11S2	WAKE ISLAND Hy	28.35	124	T	T	02 41 54.2	
	baz=316,slow=76,SNR=9.6						
WRA	Warramunga Arr	57.23	189	P	P	02 16 09.3	+0.1
	0.4nm,0.5s,baz=7.2,slow=7.2,SNR=6.3						
ASAR	Alice Springs	60.95	189	P	P	02 16 35.9	+0.8
	0.3nm,0.7s,baz=10,slow=7.9,SNR=5.0						

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*IDC **25** 02:20:34.8±1.0, 33°.56N×134°.50E, h0km, mb3.8/8, mb1 4.1/13, mb1mx3.7/51, mbtmp3.8/13, ML3.7/3, MS3.3/4, Ms1 3.4/4, ms1mx2.9/43, Error ellipse: s-maj=24.5km s-min=16.7km az=164.0*
*JMA **25** 02:20:38.9, 33°.56N×134°.48E, h34km±1km, M4.2 Broadband fault plane solution: P waves. NP1: φs48.00000°, δ76.00000°, λ2.00000°. NP2:φs318.00000°, δ88.00000°, λ166.00000°. Principal axes: T Plg11.0000°, Azm272.0000°; N Plg76.0000°, Azm129.0000°; P Plg8.0000°, Azm4.0000°;*
JMA Felt III J1.
*NEIC **25** 02:20:39.0±1.4, 33°.61N±0°.07×134°.43E±0°.06, h26km±6km, mb4.1/12 Error ellipse: s-maj=9.7km s-min=6.8km az=162.0*
*NIED **25** 02:20:39.0, 33°.56N×134°.48E, h34km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.06; Mθθ-2.94; Mφφ2.88; Mrθ-0.69; Mθφ0.03; Mφr0.27; Fault plane solution: M0 2.99000×10^15 NP1: φs136.00000°, δ85.00000°, λ-167.00000°. NP2: φs45.00000°, δ77.00000°, λ-5.00000°.*
ISC 25 02:20:38.7±0.9**, 33°.57N**±0°.05×**134°.47E**±0°.03**, h30**km±7km**, n57, σ0ˢ.86**/61**, mb3.8**/13**, MS3.1**/3**, 7C-3D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAI	Aioi	0.23	356	⇓P	Pn	02 20 45.9	-0.2
JAI				S	Sb	02 20 50.5	+0.8
MRT2	Murotomisaki 2	0.33	237	⇑P	Pb	02 20 46.7	+0.2
JMN	Monobe	0.52	288	⇑P	Pn	02 20 49.7	-0.4
JMN				*e*S	Sn	02 20 57.3	-0.7

JMN	**Monobe**	**0.52**	**288**		**Pn**	**02 20 49.8**	**-0.4**
JWM	**Minabe**	**0.79**	**69**	⇑P	**Pn**	**02 20 53.2**	**-0.7**
JWM				S	**Sb**	**02 21 03.3**	**-1.1**
JJS	**Sakaide**	**0.92**	**331**	⇓P	**Pn**	**02 20 55.6**	**-0.1**
JJS				S	**Sn**	**02 21 07.1**	**-0.8**
JAWN	**Awajishima-nag**	**0.98**	**21**	⇓P	**Pn**	**02 20 56.6**	**0.0**
JAWN				*e*S	**Sn**	**02 21 09.4**	**-0.1**
JTNC	**Tanabenakahech**	**0.98**	**75**	⇑P	**Pn**	**02 20 56.0**	**-0.6**
JTNC				*e*S	**Sn**	**02 21 07.8**	**-1.7**
JWY	**Kouya**	**1.14**	**55**	⇑P	**Pn**	**02 20 58.4**	**-0.3**
JWY				*e*S	**Sn**	**02 21 12.3**	**-1.1**
JET	**Tanbara**	**1.20**	**281**	⇑P	**Pn**	**02 20 59.1**	**-0.5**
JET				*e*S	**Sn**	**02 21 14.0**	**-0.9**
JKU	**Kubokawa**	**1.20**	**258**	⇑P	**Pn**	**02 20 58.9**	**-0.7**
JHS	**Saijyo**	**1.81**	**322**	Pn	**Pn**	**02 21 07.9**	**-0.1**
JWT	**Wachi**	**1.88**	**24**	Pn	**Pn**	**02 21 08.7**	**-0.1**
INU	**Inuyama**	**2.76**	**49**	Pn	**Pn**	**02 21 21.9**	**+1.0**
JNU	**Nakatsue**	**3.04**	**263**	Pn	**Pn**	**02 21 25.4**	**+0.6**
	26nm,0.3s,baz=162,slow=0.7,SNR=110						
JNU				Sn	**Sn**	**02 21 59.6**	**-0.6**
	16nm,0.3s,baz=232,slow=12,SNR=1.7						
JNU	**Nakatsue**	**3.04**	**263**		**Pn**	**02 21 24.7**	**-0.1**
JGF	**Kuroka**	**3.13**	**49**		**Pn**	**02 21 26.6**	**+0.5**
JSG	**Sagara**	**3.28**	**69**	Pn	**Pn**	**02 21 28.2**	**+0.1**
JSU	**Suzuyama**	**3.96**	**240**	Pn	**Pn**	**02 21 37.7**	**+0.2**
MAJO	**Matsushiro**	**4.27**	**45**	Pn	**Pn**	**02 21 42.3**	**+0.6**
MAT	**Matsushiro**	**4.27**	**45**	P	**Pn**	**02 21 42.4**	**+0.7**
MAT				*e*S	**Sn**	**02 22 29.2**	**-1.3**
MJAR	**Matsushiro Arr**	**4.27**	**45**	Pn	**Pn**	**02 21 42.9**	**+1.2**
	1.2nm,0.3s,baz=238,slow=14,SNR=23						
MJAR				Sn	**Sn**	**02 22 30.1**	**-0.4**
	0.9nm,0.3s,baz=249,slow=17,SNR=5.3						
MJAR	**Matsushiro Arr**	**4.27**	**45**		**Pn**	**02 21 41.5**	**-0.2**
MJB9	**Matsu-Tunnel**	**4.27**	**45**		**Pn**	**02 21 41.8**	**0.0**
JTU	**Tsushima**	**4.32**	**284**	Pn	**Pn**	**02 21 41.3**	**-1.1**
JHJ	**Hachijo jima 2**	**4.47**	**94**	Pn	**Pn**	**02 21 44.6**	**+0.1**
	128nm,0.3s,baz=51,slow=20,SNR=30						
JHJ				Sn	**Sn**	**02 22 33.2**	**-2.3**
	18nm,0.3s,baz=68,slow=19,SNR=1.2						
KSRS	**Korea Array**	**6.60**	**308**	Pn	**Pn**	**02 22 14.0**	**+0.3**
	1.8nm,0.3s,baz=125,slow=15,SNR=8.7						
KSRS				Sn	**Sn**	**02 23 25.5**	**-2.3**
	4.4nm,0.3s,baz=125,slow=24,SNR=16						
KSAR	**Wonju Array Be**	**6.62**	**308**	Pn	**Pn**	**02 22 12.2**	**-1.7**
KS19	**Wonju Array Si**	**6.66**	**308**	Pn	**Pn**	**02 22 13.4**	**-1.2**
USRK	**Ussuriysk Ar.**	**10.79**	**350**	Pn	**Pn**	**02 23 09.5**	**-1.6**
	baz=133,slow=17,SNR=2.4						
ASAJ	**Asahikawa**	**12.29**	**29**	LR	LR	02 27 59.5	
	comp=Z,66nm,21.6s,baz=310,slow=36						
KLR	**Kul'dur**	**15.78**	**353**	Pn	**P**	**02 24 21.4**	**-0.9**
	0.2nm,0.3s,baz=173,slow=11,SNR=9.2						
ENH	**Enshi**	**21.44**	**268**	P	**P**	**02 25 24.3**	**-0.3**
ULN	**Ulaanbaatar**	**25.05**	**313**	P	**P**	**02 25 59.5**	**-0.9**
SONM	**Songino Array**	**25.44**	**312**	P	**P**	**02 26 04.1**	**+0.2**
	0.7nm,0.6s,baz=133,slow=9.9,SNR=4.4						
PETK	**Petropavlovsk-**	**25.63**	**33**	LR	LR	02 36 23.6	
	comp=Z,49nm,19.6s,baz=130,slow=37						
H11N2	**WAKE ISLAND Hy**	**31.94**	**107**	T	T	03 00 46.1	
	baz=304,slow=74,SNR=247						
H11N1	**WAKE ISLAND Hy**	**31.95**	**107**	T	T	03 00 52.7	
	baz=304,SNR=35						
H11N3	**WAKE ISLAND Hy**	**31.96**	**107**	T	T	03 00 47.9	
	baz=304,slow=74,SNR=78						
H11S3	**WAKE ISLAND Hy**	**32.45**	**109**	T	T	03 01 24.1	
	baz=304,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**32.45**	**109**	T	T	03 01 22.1	
	baz=304,slow=75,SNR=15						
H11S2	**WAKE ISLAND Hy**	**32.47**	**109**	T	T	03 01 21.6	
	baz=304,slow=75,SNR=10						
CMAR	**Chiang Mai Arr**	**35.10**	**254**	P	**P**	**02 27 30.4**	**+0.8**
	1.4nm,0.4s,baz=40,slow=9.5,SNR=5.4						
CMAR				LR	LR	02 44 04.5	
	comp=Z,32nm,18.7s,baz=155,slow=40						
LSA	**Lhasa**	**36.89**	**276**	P	**P**	**02 27 46.0**	**+0.7**
LSA				IAmb	IAmb	02 27 53.0	
	comp=Z,3.3nm,0.6s						
TIXI	**Tiksi**	**38.26**	**357**	P	**P**	**02 27 55.7**	**-0.1**
MK31	**Makanchi Array**	**41.27**	**305**	P	**P**	**02 28 21.1**	**-0.1**
MK31				IAmb	IAmb	02 28 37.4	
	comp=Z,1.6nm,0.9s						
MKAR	**Makanchi Array**	**41.27**	**305**	P	**P**	**02 28 22.1**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=94,slow=10,SNR=15						
MAKZ	**Makanchi**	**41.48**	**305**	P	**P**	**02 28 23.1**	**+0.2**
MAKZ				IAmb	IAmb	02 28 29.2	
	comp=Z,2.1nm,0.9s						
WB2	**Warramunga Arr**	**53.21**	**180**	P	**P**	**02 29 55.0**	**+0.6**
WRA	**Warramunga Arr**	**53.21**	**180**	P	**P**	**02 29 54.0**	**-0.4**
	comp=Z,1.0nm,1.1s,baz=357,slow=8.1,SNR=2.2						
IL31		**55.41**	**31**	P	**P**	**02 30 10.3**	**+0.5**
IL31				IAmb	IAmb	02 30 28.8	
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	**55.41**	**31**	P	**P**	**02 30 10.2**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=261,slow=5.8,SNR=17						
ABKAR	**Akbulak array**	**55.83**	**310**	P	**P**	**02 30 12.9**	**-0.2**
ABKAR				IAmb	IAmb	02 30 37.6	
	comp=Z,3.4nm,0.8s						
YKA	**Yellowknife Ar**	**69.58**	**28**	P	**P**	**02 31 45.0**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=296,slow=6.2,SNR=5.9						
NVAR	**Mina Array Bea**	**81.58**	**49**	P	**P**	**02 32 55.1**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=293,slow=4.6,SNR=3.6						
TXAR	**Lajitas Array**	**96.70**	**48**	P	**P**	**02 34 07.8**	**+1.1**
	comp=Z,0.1nm,0.6s,baz=319,slow=3.6,SNR=1.5						
ESDC	**Sonseca Array**	**97.60**	**329**	LR	LR	03 25 31.9	
	comp=Z,37nm,19.8s,baz=350,slow=40						

*NEIC **25** 02:21:24.7±1.1,56°.0S±0°.1×26°.9W±0°.2,h60^{km}±7^{km},mb4.2/5,Error ellipse: s-maj=18.0km s-min=17.8km az=81.0*

*IDC **25** 02:21:28.7±8.9,56°.13S×27°.19W,h89^{km}±77^{km},mb3.6/4,mb1 3.7/5,mb1mx3.4/26,mbtmp3.9/5,ML3.5/1,Error ellipse: s-maj=41.3km s-min=28.9km az=69.0*

ISC 25 02:21:25.6±0.8**,56°.0S**±0°.1×**27°.0W**±0°.1**,h63**^{km}**,n27,** σ**0^{s}86**/18**,mb4.0**/4**,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.69**	**284**	Pn	**Pn**	**02 22 47.1**	**-0.3**
VNA1	**Neumayer--Stat**	**16.80**	**158**	P	**P**	**02 25 18.7**	**+1.1**
VNA3	**Neumayer Olymp**	**17.00**	**161**	P	**P**	**02 25 20.8**	**+1.0**
VNA2	**Neumayer--Watz**	**17.20**	**158**	P	**P**	**02 25 22.5**	**+0.6**
	baz=315,slow=9.4						
SNAA	**Sanae**	**18.75**	**156**	P	**Pn**	**02 25 39.4**	**-0.7**
SNAA	**Sanae**	**18.75**	**156**	P	**Pn**	**02 25 39.3**	**-0.7**
	0.2nm,0.3s,baz=301,slow=12,SNR=14						
PMSA	**Palmer Station**	**20.00**	**229**	P	**Pn**	**02 25 56.4**	**+1.7**
	0.5nm,0.3s,baz=78,slow=9.3,SNR=2.0						
PMSA	**Palmer Station**	**20.00**	**229**	IAmb	IAmb	02 26 24.3	
	comp=Z,22nm,1.2s						
QSPA	**South Pole Qui**	**34.24**	**180**	P	**P**	**02 28 05.0**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=34,slow=18,SNR=10						
QSPA	**South Pole Qui**	**34.24**	**180**	IAmb	IAmb	02 28 09.9	
	comp=Z,6.8nm,1.5s						
VNDA	**Vanda**	**46.62**	**183**	P	**P**	**02 29 45.7**	**-1.0**
	comp=Z,1.5nm,0.8s,baz=194,slow=6.7,SNR=5.9						
VNDA	**Vanda**	**46.62**	**183**	IAmb	IAmb	02 29 50.8	
	comp=Z,1.9nm,0.9s						
H10S2	**ASCENSION HYDR**	**47.93**	**17**	T	T	03 22 42.6	
	baz=188						
H10S3	**ASCENSION HYDR**	**47.94**	**17**	T	T	03 22 41.5	
	baz=32,SNR=12						
H10N1	**ASCENSION HYDR**	**49.05**	**17**	T	T	03 24 05.3	
	baz=191						
H10N3	**ASCENSION HYDR**	**49.05**	**17**	T	T	03 24 04.7	
	baz=191,slow=74,SNR=12						
H10N2	**ASCENSION HYDR**	**49.07**	**17**	T	T	03 24 05.3	
	baz=191,slow=74,SNR=12						
LPAZ	**La Paz**	**50.42**	**305**	P	**P**	**02 30 17.2**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=83,slow=8.1,SNR=2.5						
LPAZ	**La Paz**	**50.42**	**305**	IAmb	IAmb	02 30 28.8	
	comp=Z,3.1nm,1.3s						
TORD	**Torodi Ar. Bea**	**72.97**	**29**	P	**P**	**02 32 49.6**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=202,slow=6.2,SNR=3.0						
FINES	**FINESS Array B**	**124.30**	**28**	PKP	**PKPdf**	**02 40 15.1**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=207,slow=2.1,SNR=10						
ARCES	**ARCESS Array B**	**130.87**	**22**	PKP	**PKPdf**	**02 40 27.3**	**-0.7**
	comp=Z,5.3nm,1.0s,baz=191,slow=2.8,SNR=4.1						
YKA	**Yellowknife Ar**	**136.20**	**318**	PKP	**PKPdf**	**02 40 37.6**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=124,slow=2.5,SNR=5.6						
INK	**Inuvik**	**145.82**	**321**	PKPbc	**PKPbc**	**02 40 55.9**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=68,slow=3.0,SNR=5.4						
ILAR	**Eielson Array**	**150.15**	**312**	PKPbc	**PKPbc**	**02 41 07.2**	**-0.4**
	comp=Z,2.5nm,0.8s,baz=130,slow=3.1,SNR=20						
SONM	**Songino Array**	**150.64**	**86**	PKPbc	**PKPbc**	**02 41 09.3**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=216,slow=3.0,SNR=7.6						
KDAK	**Kodiak Island**	**150.88**	**296**	PKPbc	**PKPbc**	**02 41 09.2**	**-0.3**
	comp=Z,5.9nm,0.7s,baz=176,slow=1.4,SNR=14						

GUC 25 02:23:21.8±0.9**,32°.40S**×**71°.78W,h27**^{km}±6^{km}**,ML3.6,2C-3D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	**Catapilco**	**0.44**	**112**	⇓*i*P	Pn	02 23 32.0	-0.3
VA06				*e*S	Sb	02 23 38.2	+0.8
VA06				IAML		02 23 41.6	
	comp=N,9µm,0.5s						
VA01	**Torpederas**	**0.63**	**170**	*e*P	Pb	02 23 34.6	+0.3
VA01				*e*S	Sn	02 23 44.1	0.0
ROCH	**El Roble**	**0.86**	**132**	⇓*i*P	Pb	02 23 38.9	+0.6
ROCH				⇓*i*P	Pn	02 23 38.5	+0.2
ROCH				*e*S	Sn	02 23 51.6	+1.4
ROCH				IAML		02 23 55.4	
	comp=E,4µm,0.3s						
ROCH				IAML		02 23 55.9	
	comp=E,4µm,0.6s						
PEL	**Peldehue**	**1.18**	**129**	*e*P	Pb	02 23 43.9	+0.3
PEL				*e*S	Sb	02 24 00.3	+1.8
PEL				IAML		02 24 03.6	
	comp=N,2µm,0.5s						
VA05	**Santo Domingo**	**1.26**	**174**	*e*P	Pn	02 23 44.2	+0.5
VA05				IAML		02 24 09.9	
	comp=E,3µm,0.3s						
MT05	**Renca**	**1.32**	**139**	*e*P	Pb	02 23 46.0	0.0
MT05				*e*S	Sb	02 24 05.1	+2.6
MT09	**Talagante**	**1.52**	**154**	*e*P	Pb	02 23 49.3	-0.2
MT09				*e*S	Sb	02 24 09.6	+1.2
MT09				IAML		02 24 13.0	
	comp=N,1µm,0.2s						
MT01	**Popeta**	**1.52**	**163**	⇑*i*P	Pb	02 23 48.5	-1.0
MT01				IAML		02 24 14.5	
	comp=E,1µm,0.2s						
FCH	**Farellones**	**1.56**	**127**	*e*P	Pb	02 23 49.3	-0.8
FCH				IAML		02 24 14.0	
	comp=E,1µm,0.2s						
BO04	**La Punta**	**1.86**	**149**	⇑*i*P	Pb	02 23 54.4	-0.8
BO04				IAML		02 24 25.9	
	comp=N,937nm,0.3s						
LMEL	**Las Melosas**	**1.96**	**138**	*e*P	Pb	02 23 55.9	-1.0
LMEL				IAML		02 24 30.7	
	comp=N,2µm,0.1s						
BO01	**Tunca**	**2.07**	**164**	*e*P	Pn	02 23 56.1	+1.4
GO04	**Tololo Observa**	**2.37**	**21**	*e*P	Pn	02 23 58.4	-0.7
CO05	**La Serena**	**2.52**	**11**	*e*P	Pn	02 24 00.8	0.0
CO05				IAML		02 24 46.9	
	comp=N,867nm,0.5s						
GO05	**Huala**	**2.61**	**183**	*i* P	Pn	02 24 02.0	-0.1
GO05				IAML		02 24 54.9	
	comp=E,148nm,0.5s						
ML02	**Panimavida**	**3.37**	**175**	*e*P	Pb	02 24 18.6	-2.2
LCO	**Las Campanas**	**3.50**	**16**	*e*P	Pn	02 24 14.0	-0.7
AC04	**Llanos de Chal**	**4.22**	**8**	*e*P	Pn	02 24 22.6	-1.8
BI05	**Punta Hualpn**	**4.49**	**195**	*e*P	Pn	02 24 26.8	-1.2

*MOS **25** 02:24:30.6±1.2,34°.59N×25°.47E,h27^{km},mb4.8/29,Error ellipse: s-maj=5.4km s-min=3.0km az=86.7*

*ATH **25** 02:24:31.6,34°.71N×25°.50E,h75^{km}±3^{km},ML4.4/12,Error ellipse: s-maj=5.3km s-min=1.8km az=164.0*

*HLW **25** 02:24:31.8,34°.72N×25°.61E,h25^{km}±18^{km},Md4.6,Ml4.6*

*NIC **25** 02:24:32.4±0.0,34°.36N×25°.57E,h34^{km}±37^{km},Ml5.0/7*

*NEIC **25** 02:24:32.9±1.6,34°.62N±0°.06×25°.46E±0°.07,h28^{km}±5^{km},mb4.6/56,ML4.0(THE),Error ellipse: s-maj=10.1km s-min=5.5km az=222.0*

*BGR **25** 02:24:32.3±0.0,34°.43N×25°.41E,h10^{km}*

*ISK **25** 02:24:33.7,34°.67N×25°.52E,h24^{km},ML4.3/26*

*IDC **25** 02:24:33.7±1.4,34°.71N×25°.47E,h33^{km}±10^{km},mb4.2/25,mb1 4.3/35,mb1mx4.2/54,mbtmp4.4/35,ML4.4/10,MS3.6/17,Ms1 3.6/17,ms1mx3.4/43,Error ellipse: s-maj=11.5km s-min=9.9km az=155.0*

*THE **25** 02:24:34.9,34°.70N×25°.46E,h12^{km}±1^{km},ML4.0/12,Error ellipse: s-maj=1.6km s-min=0.5km az=4.0*

*MED_RC **25** 02:24:35.0±0.4,34°.66N×25°.47E,h35^{km},MW4.5/12,Moment Tensor Solution.Mantle waves: s12,c17; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.43±1.04; $M_{\theta\theta}$3.13±.58; $M_{\phi\phi}$-1.70±.78; $M_{r\theta}$4.87±.31; $M_{\theta\phi}$-1.34±.79; $M_{\phi r}$-3.29±.55; Best double couple: $M_0$6.49000×10^{15} NP1:ϕ_s65.00000°,δ19.00000°,λ-151.00000°. NP2:ϕ_s307.00000°,δ81.00000°,λ-73.00000°. Principal axes: T 7.2100, Plg34.0000°, Azm23.0000°; N -1.4300, Plg16.0000°, Azm124.0000°; P -5.7800, Plg51.0000°, Azm236.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*DDA **25** 02:24:36.0,34°.80N×25°.53E,h53^{km}±92^{km},MW4.4*

ISC 25 02:24:33.1±0.5**,34°.64N**±0°.03×**25°.47E**±0°.02**,h35**^{km}±2^{km}**,h35**^{km}**:pP-P,n615,**σ**1^{s}91**/648**,mb4.6**/77**,MS3.6**/14**,55C-58D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRMA	**Ierapetra Chan**	**0.43**	**30**	P	**Pn**	**02 24 44.0**	**+1.1**
FRMA				S	**Sn**	**02 24 50.8**	**+1.2**
	20µm,0.7s						
NPS	**Neapolis**	**0.63**	**10**	P	**Pb**	**02 24 45.9**	**0.0**
NPS				S	**Sb**	**02 24 54.5**	**-0.3**
	23µm,0.6s						
NPS	**Neapolis**	**0.63**	**10**	P	**Pb**	**02 24 46.0**	**0.0**
NPS				S	**Sn**	**02 24 57.4**	**+2.8**
NPS				AML	AML	02 24 58.6	
	comp=E,59606µm,0.8s						
NPS				AML	AML	02 25 00.0	
	comp=N,46463µm,0.7s						
NPS	**Neapolis**	**0.63**	**10**	P	**Pb**	**02 24 46.0**	**0.0**
NPS				S	**Sn**	**02 24 57.3**	**+2.8**
SIVA	**Sivas**	**0.66**	**305**	P	**Pn**	**02 24 46.9**	**+0.9**
SIVA				S	**Sn**	**02 24 56.8**	**+1.5**
	comp=N,60µm,0.5s						
SIVA	**Sivas**	**0.66**	**305**	P	**Pn**	**02 24 47.0**	**+0.9**
SIVA				AML	AML	02 25 00.1	
SIVA				AML	AML	02 25 05.2	
TMBK	**Timbaki Herakl**	**0.72**	**307**	P	**Pb**	**02 24 48.0**	**+0.5**
TMBK				S	**Sn**	**02 24 58.5**	**+1.7**
	comp=N,12µm,0.6s						
HRKL	**Herakleio**	**0.74**	**336**	P	**Pb**	**02 24 48.1**	**+0.4**
HRKL	**Herakleio**	**0.74**	**336**	PG	**Pb**	**02 24 48.7**	**+1.0**
HRKL				SG	**Sn**	**02 24 59.3**	**+2.2**
KSTL	**Kastelli Herak**	**0.74**	**334**	P	**Pn**	**02 24 45.1**	**-2.0**
KSTL				S	**Sb**	**02 24 53.1**	**-4.6**
	comp=N,12µm,0.4s						
IACM	**Heraklion**	**0.74**	**334**	P	**Pb**	**02 24 48.3**	**+0.6**
STIA	**Sitia Lasithi**	**0.76**	**42**	P	**Pb**	**02 24 48.3**	**+0.3**
STIA				S	**Sn**	**02 24 59.3**	**+1.7**
ZKR	**Zakros**	**0.78**	**52**	P	**Pb**	**02 24 48.8**	**+0.4**
ZKR				S	**Sn**	**02 25 00.2**	**+2.1**
	comp=N,34µm,0.4s						
ZKR	**Zakros**	**0.78**	**52**	P	**Pb**	**02 24 49.1**	**+0.8**
ZKR				S	**Sn**	**02 25 01.3**	**+3.3**
ZKR				AML	AML	02 25 07.0	
	comp=E,92687µm,0.5s						
ZKR				AML	AML	02 25 08.0	
	comp=N,41694µm,0.4s						
ZKR	**Zakros**	**0.78**	**52**	PG	**Pb**	**02 24 48.7**	**+0.4**
ZKR				SG	**Sn**	**02 24 59.3**	**+1.2**
ZKR	**Zakros**	**0.78**	**52**	P	**Pb**	**02 24 48.7**	**+0.4**
ZKR				S	**Sn**	**02 25 01.7**	**+3.6**
ZKR				AML	AML	02 25 05.9	
	comp=N,87nm,0.4s						
ZKR				AML	AML	02 25 05.9	
	comp=N,87nm,0.4s						
ZKR				AML	AML	02 25 06.8	
	comp=N,40nm,0.4s						
ZKR				AML	AML	02 25 06.8	
	comp=N,40nm,0.4s						
IDI	**Anoyia**	**0.81**	**324**	Pg	**Pn**	**02 24 48.1**	**0.0**
	comp=N,260nm,0.3s,baz=163,slow=11,SNR=1859						
IDI				Lg	Lg	02 25 00.2	
	comp=N,1µm,0.3s,baz=78,slow=19,SNR=20						
IDI				LR	LR	02 25 20.3	
	comp=N,2µm,18.8s,baz=79,slow=62						
IDI	**Anoyia**	**0.81**	**324**	P	**Pb**	**02 24 48.7**	**-0.2**
IDI				S	**Sb**	**02 25 00.3**	**+0.8**
	comp=N,10µm,0.5s						
IDI	**Anoyia**	**0.81**	**324**	P	**Pb**	**02 24 48.9**	**+0.1**
IDI				AML	AML	02 25 02.4	
	comp=E,19259µm,0.4s						
IDI				AML	AML	02 25 06.1	
	comp=N,18889µm,0.5s						
PRNS	**Prines Rethymn**	**1.08**	**313**	P	**Pb**	**02 24 54.2**	**+0.9**
PRNS				S	**Sb**	**02 25 08.2**	**+1.1**
	comp=N,4µm,0.5s						
GVDS	**Gavdos**	**1.16**	**281**	P	**Pb**	**02 24 55.0**	**+0.3**
GVDS				S	**Sb**	**02 25 12.2**	**+2.8**
	comp=N,9µm,0.5s						
GVDS	**Gavdos**	**1.16**	**281**	PN	**Pb**	**02 24 55.0**	**+0.3**
GVDS				SN	**Sb**	**02 25 11.9**	**+2.5**
GVD	**Gavdhos**	**1.16**	**280**	P	**Pb**	**02 24 54.6**	**-0.1**
GVD				S	**Sb**	**02 25 10.0**	**+0.6**
	comp=N,11µm,0.5s						
GVD	**Gavdhos**	**1.16**	**280**	P	**Pb**	**02 24 54.8**	**+0.1**
GVD				S	**Sb**	**02 25 11.4**	**+1.9**
GVD				AML	AML	02 25 18.6	
	comp=E,24023µm,0.4s						
GVD				AML	AML	02 25 24.0	
	comp=N,20150µm,0.6s						
GVD	**Gavdhos**	**1.16**	**280**	PN	**Pb**	**02 24 55.5**	**+0.8**
GVD				SN	**Sb**	**02 25 11.3**	**+1.9**
VAM	**Vamos**	**1.29**	**307**	P	**Pb**	**02 24 57.3**	**+0.3**
VAM				S	**Sb**	**02 25 13.7**	**+0.3**
	comp=N,11µm,0.6s						
VAM	**Vamos**	**1.29**	**307**	P	**Pb**	**02 24 57.4**	**+0.4**
VAM				S	**Sb**	**02 25 14.4**	**+1.0**
VAM				AML	AML	02 25 26.9	
	comp=N,21538µm,0.5s						
VAM				AML	AML	02 25 30.7	
	comp=E,20237µm,0.7s						
VAM	**Vamos**	**1.29**	**307**	P	**Pb**	**02 24 57.4**	**+0.4**
VAM				S	**Sb**	**02 25 13.7**	**+0.3**
IMMV	**Iera Moni Meta**	**1.47**	**304**	P	**Pb**	**02 25 00.4**	**+0.4**
IMMV				AML	AML	02 25 37.6	
	comp=N,15809µm,0.7s						
IMMV				AML	AML	02 25 46.3	
	comp=E,16488µm,1.1s						
IMMV	**Iera Moni Meta**	**1.47**	**304**	PN	**Pb**	**02 24 59.6**	**-0.4**
KNDR	**Palaiochora Ch**	**1.58**	**293**	P	**Pb**	**02 25 02.1**	**+0.3**
KNDR				S	**Sb**	**02 25 22.8**	**+1.3**
	comp=E,2µm,0.6s						
KNDR	**Palaiochora Ch**	**1.58**	**293**	PN	**Pb**	**02 25 02.2**	**+0.4**
THR6	**Thira Island,**	**1.71**	**358**	P	**Pb**	**02 25 03.1**	**-1.0**
THR6	**Thira Island,**	**1.71**	**358**	P	**Pb**	**02 25 03.0**	**-1.0**
THR9	**Santorini-Faro**	**1.72**	**357**	P	**Pn**	**02 25 01.9**	**+1.3**
SANT	**Santorini**	**1.73**	**360**	P	**Pn**	**02 25 02.5**	**+1.8**
SANT	**Santorini**	**1.73**	**360**	P	**Pn**	**02 25 02.8**	**+2.0**
SANT				AML	AML	02 25 36.9	
	comp=N,3968µm,0.6s						
SANT				AML	AML	02 25 38.8	
	comp=E,13642µm,0.6s						
SANT	**Santorini**	**1.73**	**360**	*i* P	**Pb**	**02 25 03.3**	**-1.1**
SANT	**Santorini**	**1.73**	**360**	PN	**Pn**	**02 25 02.6**	**+1.8**
SANT	**Santorini**	**1.73**	**360**	Pn	**Pn**	**02 25 02.6**	**+1.8**
STAX	**Taxiarchis Har**	**1.76**	**358**	P	**Pn**	**02 25 03.3**	**+2.2**
STAX	**Taxiarchis Har**	**1.76**	**358**	P	**Pb**	**02 25 03.5**	**-1.2**
THR8	**Santorini-Mono**	**1.76**	**0**	P	**Pn**	**02 25 03.1**	**+1.9**
THR8	**Santorini-Mono**	**1.76**	**0**	P	**Pn**	**02 25 03.2**	**+2.0**
THR3	**Thira Island,**	**1.77**	**358**	P	**Pb**	**02 25 03.5**	**-1.5**
THR3	**Thira Island,**	**1.77**	**358**	P	**Pb**	**02 25 03.7**	**-1.2**
THR5	**Thira Island,**	**1.78**	**357**	P	**Pb**	**02 25 03.7**	**-1.4**
THR5	**Thira Island,**	**1.78**	**357**	P	**Pb**	**02 25 03.8**	**-1.4**
SFIR	**Foira Santorin**	**1.78**	**359**	P	**Pn**	**02 25 03.7**	**+2.2**
THT2	**Imerovigli**	**1.79**	**359**	P	**Pn**	**02 25 03.9**	**+2.3**
THT2	**Imerovigli**	**1.79**	**359**	P	**Pb**	**02 25 04.0**	**-1.4**
THR2	**Thira island,**	**1.80**	**359**	P	**Pb**	**02 25 04.1**	**-1.5**
THR2	**Thira island,**	**1.80**	**359**	P	**Pb**	**02 25 04.2**	**-1.4**
CMBO	**Columbo, Santo**	**1.83**	**358**	P	**Pb**	**02 25 04.7**	**-1.3**
ANKY	**Antikythira Is**	**2.16**	**305**	P	**Pb**	**02 25 10.0**	**-1.6**
ANKY	**Antikythira Is**	**2.16**	**305**	P	**Pb**	**02 25 10.2**	**-1.4**
MHLO	**Agia Marina, M**	**2.23**	**337**	P	**Pn**	**02 25 09.4**	**+1.9**
MHLO				AML	AML	02 25 58.4	
	comp=N,17523µm,0.9s						
MHLO				AML	AML	02 26 00.3	
	comp=E,15605µm,0.6s						
NISR	**Nisiros**	**2.39**	**34**	P	**Pn**	**02 25 11.9**	**+2.2**
NISR				AML	AML	02 26 07.1	
	comp=N,8630µm,0.8s						
NISR				AML	AML	02 26 10.2	
	comp=E,5864µm,0.7s						
APE	**Apeiranthos**	**2.43**	**1**	P	**Pn**	**02 25 12.3**	**+2.0**
APE	**Apeiranthos**	**2.43**	**1**	P	**Pn**	**02 25 12.4**	**+2.0**
APE				AML	AML	02 25 58.5	
	comp=N,1855µm,0.6s						
APE				AML	AML	02 26 02.4	
	comp=E,2637µm,0.6s						
APE	**Apeiranthos**	**2.43**	**1**	*i* P	**Pn**	**02 25 11.4**	**+1.0**
APE	**Apeiranthos**	**2.43**	**1**	P	**Pn**	**02 25 12.3**	**+2.0**
APE	**Apeiranthos**	**2.43**	**1**	PN	**Pn**	**02 25 12.6**	**+2.2**
KOSK	**Kos Island**	**2.44**	**30**	P	**Pn**	**02 25 12.5**	**+2.0**
KOSK	**Kos Island**	**2.44**	**30**	PN	**Pn**	**02 25 12.7**	**+2.2**
KTHA	**Kythira Island**	**2.54**	**310**	P	**Pn**	**02 25 14.1**	**+2.1**
KTHR	**Kythira**	**2.58**	**309**	P	**Pn**	**02 25 14.8**	**+2.3**
ARG	**Arkhangelos**	**2.68**	**53**	P	**Pn**	**02 25 16.8**	**+3.0**
ARG	**Arkhangelos**	**2.68**	**53**	P	**Pn**	**02 25 16.8**	**+3.0**
ARG				AML	AML	02 26 05.0	
	comp=N,4553µm,0.8s						
ARG				AML	AML	02 26 12.4	
	comp=E,5137µm,0.7s						
ARG	**Arkhangelos**	**2.68**	**53**	P	**Pn**	**02 25 16.7**	**+3.0**
ARG	**Arkhangelos**	**2.68**	**53**	PN	**Pn**	**02 25 16.1**	**+2.3**
ARG	**Arkhangelos**	**2.68**	**53**	⇑P	**Pn**	**02 25 16.3**	**+2.5**
DAT	**Datca**	**2.70**	**39**	P	**Pn**	**02 25 16.4**	**+2.2**
DAT	**Datca**	**2.70**	**39**	PN	**Pn**	**02 25 16.6**	**+2.4**
BODT	**Bodrum**	**2.84**	**31**	PN	**Pn**	**02 25 18.3**	**+2.2**
YKAV	**Yalikavak-Bodr**	**2.88**	**30**	PN	**Pn**	**02 25 18.9**	**+2.3**
BDRM	**Kayabasi**	**2.90**	**33**	*i* P	**Pn**	**02 25 17.9**	**+1.0**
DIDI	**Didim-Aydin**	**3.08**	**27**	PN	**Pn**	**02 25 21.8**	**+2.4**
TURN	**Turunc**	**3.10**	**46**	*i* P	**Pn**	**02 25 21.4**	**+1.8**
SLUM	**Salum**	**3.15**	**184**	P	**Pn**	**02 25 21.1**	**+0.8**
	baz=187						
SLUM				AMP		02 25 00.0	
	baz=187						
SLUM				S	**Sn**	**02 25 56.3**	**-0.2**
	baz=187						
DDIM	**Aydin, Didim**	**3.16**	**26**	*i* P	**Pn**	**02 25 22.8**	**+2.4**
GCAM	**G?zelcaml?**	**3.37**	**24**	*i* P	**Pn**	**02 25 24.9**	**+1.7**
YER	**Yerkesik**	**3.38**	**42**	P	**Pn**	**02 25 26.6**	**+3.1**
YER	**Yerkesik**	**3.38**	**42**	PN	**Pn**	**02 25 25.9**	**+2.4**
MULA	**Mugla, Merkez-**	**3.49**	**41**	*i* P	**Pn**	**02 25 27.1**	**+2.1**
FETY	**Fethiye**	**3.55**	**55**	PN	**Pn**	**02 25 27.8**	**+2.0**
AYDN	**Tasoluk**	**3.59**	**32**	*i* P	**Pn**	**02 25 28.2**	**+1.8**
DGB	**zmir**	**3.59**	**18**	*i* P	**Pn**	**02 25 27.7**	**+1.3**
KSL	**Kastellorizon**	**3.68**	**65**	⇑P	**Pn**	**02 25 29.4**	**+1.8**
KSL				S	**Sn**	**02 26 12.1**	**+2.3**
KSL				AML	AML	02 26 15.1	
	comp=E,1.5nm,0.4s						
KSL				AML	AML	02 26 15.1	
	comp=E,1.5nm,0.4s						
KSL				AML	AML	02 27 08.3	
	comp=E,0.9nm,1.5s						
KSL				AML	AML	02 27 08.3	
	comp=E,0.9nm,1.5s						
ZEYE	**Izmir, Urla-Ze**	**3.69**	**13**	*i* P	**Pn**	**02 25 28.8**	**+1.1**
AKAS	**Kas**	**3.73**	**64**	*i* P	**Pn**	**02 25 28.8**	**+0.4**
AKAS				*i* S	**Sn**	**02 26 11.0**	**-0.2**
AKAS				IAML		02 26 18.0	
	comp=E,518nm,0.5s						
AKAS				IAML		02 26 19.0	
	comp=N,1µm,0.6s						
URLA	**Izmir**	**3.82**	**13**	*i* P	**Pn**	**02 25 30.9**	**+1.3**
ITM	**Ithomi**	**3.83**	**312**	PN	**Pn**	**02 25 31.8**	**+2.1**
ITM	**Ithomi**	**3.83**	**312**	Pn	**Pn**	**02 25 31.5**	**+1.7**
AYDB	**Zeytinkoy-Aydi**	**3.84**	**30**	PN	**Pn**	**02 25 32.4**	**+2.6**
CAME	**Cameli-Denizli**	**3.87**	**52**	PN	**Pn**	**02 25 32.8**	**+2.5**
BLCB	**Balcova**	**3.95**	**18**	PN	**Pn**	**02 25 33.6**	**+2.4**
DEMR	**Demre-Antalya**	**3.96**	**65**	PN	**Pn**	**02 25 34.3**	**+3.0**
TAVA	**DENIZLI_Tavas**	**3.97**	**44**	*i* P	**Pn**	**02 25 33.6**	**+2.0**
CAEL	**Denizli, Camel**	**3.99**	**50**	*i* P	**Pn**	**02 25 34.2**	**+2.2**
ELL	**Elmali**	**4.18**	**58**	P	**Pn**	**02 25 37.0**	**+2.5**
ELL	**Elmali**	**4.18**	**58**	PN	**Pn**	**02 25 37.6**	**+3.1**
ELL	**Elmali**	**4.18**	**58**	P	**Pn**	**02 25 36.3**	**+1.7**
ELL	**Elmali**	**4.18**	**58**	Pn	**Pn**	**02 25 37.0**	**+2.5**
GOLH	**Golhisar**	**4.21**	**51**	*i* P	**Pn**	**02 25 36.9**	**+1.9**
AKUM	**Antalya-Kumluc**	**4.32**	**66**	*i* P	**Pn**	**02 25 37.4**	**+1.1**
AKUM				*i* S	**Sn**	**02 26 23.4**	**-1.9**
AKUM				IAML		02 26 29.0	
	comp=E,290nm,0.5s						
AKUM				IAML		02 26 33.0	
	comp=N,252nm,0.5s						
ZEDA	**zmir-Bergama**	**4.51**	**16**	*i* P	**Pn**	**02 25 39.6**	**+0.7**
DKL	**Dikili**	**4.57**	**14**	PN	**Pn**	**02 25 42.3**	**+2.5**

SIGR	SIGRI	4.57	4	PN	Pn	02 25 42.4	+2.6
KEMT	Kemer-ANTALYA	4.58	63	PN	Pn	02 25 43.2	+3.3
KORT	Korkueli	4.61	58	i P	Pn	02 25 42.3	+1.8
KORT				i S	Sn	02 26 35.2	+2.3
KORT				IAML		02 26 39.0	
	comp=E,371nm,0.5s						
KORT				IAML		02 26 51.0	
	comp=N,222nm,0.5s						
AKHS	Akhisar	4.63	23	i P	Pn	02 25 42.8	+2.2
KULA	Kula-Manisa	4.64	33	PN	Pn	02 25 43.8	+2.9
ANTB	Antalya	4.78	60	PN	Pn	02 25 45.9	+3.3
BRDR	BURDUR-Merkez	4.80	49	i P	Pn	02 25 43.4	+0.3
KOCA	Canakkale, Ayv	4.88	6	i P	Pn	02 25 43.4	-0.7
KHL	Karahalli	4.92	40	PN	Pn	02 25 47.6	+3.0
PASA	Karahalli, USA	4.92	40	i P	Pn	02 25 45.5	+0.9
BUCA	Burdur, Bucak-	4.92	55	i P	Pn	02 25 46.8	+2.1
BUCA				i S	Sn	02 26 40.8	+0.4
BUCA				IAML		02 26 48.0	
	comp=N,100nm,0.8s						
BUCA				IAML		02 27 11.0	
	comp=E,126nm,0.6s						
BASM	Basmaki-Afyon	4.94	47	PN	Pn	02 25 47.2	+2.3
OSC1	CSNet OBS 1	4.95	102	P	Pn	02 25 44.1	-0.9
USAK	Uak-Merkez	4.97	34	i P	Pn	02 25 46.6	+1.3
BCK	Bucak	5.01	54	PN	Pn	02 25 49.2	+3.3
BUHA	Balikesir, Bur	5.02	14	i P	Pn	02 25 46.1	+0.1
STEP	BALIKESIR_Sava	5.06	20	i P	Pn	02 25 48.2	+1.7
BAYC	CANAKKALE_Bayr	5.17	9	i P	Pn	02 25 48.2	+0.3
ISP	Isparta	5.17	51	eP	Pn	02 25 49.6	+1.4
ISP	Isparta	5.17	51	PN	Pn	02 25 51.5	+3.3
ISP	Isparta	5.17	51	Pn	Pn	02 25 49.6	+1.4
BOZC	Bozcaada	5.21	5	i P	Pn	02 25 48.8	+0.1
KZIL	AFYON_Kizioren	5.21	45	i P	Pn	02 25 49.3	+0.5
BALB	Balikesir	5.35	20	Pn	Pn	02 25 52.8	+2.3
BALY	Balya	5.37	18	i P	Pn	02 25 53.7	+2.8
SWA2		5.38	180	P	Pn	02 25 51.8	+0.8
	baz=182						
BAGO	Egridir - ISPA	5.44	51	i P	Pn	02 25 49.3	-2.5
GDZ	Gediz	5.48	35	i P	Pn	02 25 54.2	+1.7
DURS	Dursunbey	5.50	25	i P	Pn	02 25 53.7	+1.0
AKMS	Akamas	5.66	84	P	Pn	02 25 54.2	-0.6
AKMS				AML	AML	02 26 56.2	
	comp=E,2.7nm,0.8s						
AKMS				AML	AML	02 26 58.1	
	comp=E,2.5nm,0.4s						
AFYO	Afyonkarahisar	5.67	42	i P	Pn	02 25 57.1	+2.1
GAZI	Gazipasa	5.81	72	i P	Pn	02 25 56.4	-0.5
GAZI				i S	Sn	02 26 57.0	-5.2
SEDI	Konya, Seydise	5.81	59	i P	Pn	02 25 59.5	+2.5
SEDI				i S	Sn	02 27 02.8	+0.3
SEDI				IAML		02 27 10.0	
	comp=N,140nm,0.7s						
SEDI				IAML		02 27 11.0	
	comp=E,170nm,0.6s						
NATA	Nata	5.85	87	P	Pn	02 25 57.0	-0.3
NATA				AML	AML	02 27 01.7	
	comp=E,3.2nm,0.5s						
NATA				AML	AML	02 27 02.6	
	comp=E,3.9nm,0.6s						
OSC2	CSNet OBS 4	5.86	104	P	Pn	02 25 56.8	-0.8
ALFC	Alefka	5.88	83	P	Pn	02 25 57.1	-0.7
ALFC				AML	AML	02 27 00.8	
	comp=E,2.0nm,0.8s						
ALFC				AML	AML	02 27 01.1	
	comp=E,2.5nm,0.7s						
YVAC	Isparta, Yalva	5.89	50	i P	Pn	02 26 00.2	+2.1
ANDZ	Kutahya, Merke	6.01	35	i P	Pn	02 25 59.1	-0.6
CAVK	Edirne/Enez-Ca	6.07	5	i P	Pn	02 26 01.8	+1.4
DOGA	KONYA_Doganhis	6.08	54	i P	Pn	02 26 01.8	+1.2
DOGA				i S	Sn	02 27 06.7	-2.4
DOGA				IAML		02 27 30.0	
	comp=E,62nm,0.8s						
DOGA				IAML		02 27 34.0	
	comp=N,84nm,0.8s						
ULDT	Uludag	6.22	27	i P	Pn	02 26 03.4	+0.8
KESN	Edirne-Kesan	6.25	8	i P	Pn	02 26 02.9	-0.3
ALN	Alexandroupoli	6.26	4	i P	Pn	02 26 05.0	+2.0
ALN	Alexandroupoli	6.26	4	P	Pn	02 26 02.5	-0.5
ALN	Alexandroupoli	6.26	4		Pn	02 26 02.5	-0.5
ASGA	Asgata	6.41	86	P	Pn	02 26 04.7	-0.3
ASGA				AML	AML	02 27 14.7	
	comp=N,3.0nm,0.6s						
ASGA				AML	AML	02 27 15.9	
	comp=N,2.4nm,0.5s						
CSS	Mathiatis	6.47	85	P	Pn	02 26 05.7	-0.2
CSS	Mathiatis	6.47	85	Pn	Pn	02 26 04.8	-1.2
SGAZ	Eskisehir, Sey	6.50	40	i P	Pn	02 26 06.7	+0.3
ATHAL	Athalassa	6.53	83	P	Pn	02 26 06.5	-0.2
KDHN	Kadinhani	6.60	52	i P	Pn	02 26 09.1	+1.3
HMYD	Mayadein	6.61	135	P	Pn	02 26 08.3	+0.5
	baz=136						
HNAT	Natroun	6.63	137	P	Pn	02 26 08.6	+0.5
	baz=138						
MVOU	Mavrovouni	6.72	84	P	Pn	02 26 09.0	-0.4
MVOU				AML	AML	02 27 25.3	
	comp=N,1.2nm,0.6s						
MVOU				AML	AML	02 27 33.0	
	comp=N,1.3nm,0.8s						
FNA	Florina	6.94	333	P	Pn	02 26 12.8	+0.4
FNA	Florina	6.94	333	Pn	Pn	02 26 12.8	+0.4
KBN	Korca	7.04	329	P	Pn	02 26 15.4	+1.7
KBN	Korca	7.04	329	Pn	Pn	02 26 15.4	+1.7
VAY	Valandovo	7.05	342	i Pn	Pn	02 26 22.5	+8.6
PARAL	Paralimni	7.06	85	P	Pn	02 26 14.6	+0.7
KOT	Kottamia	7.14	129	P	Pn	02 26 14.5	-0.7
	baz=130						
KOT				AMP		02 27 00.0	
	baz=130						
KOT				S	Sn	02 27 30.9	-4.3
	baz=130						
HSAF	As Saff	7.19	132	P	Pn	02 26 15.2	-0.6
	baz=133						
HHAG	Hagoal	7.30	128	P	Pn	02 26 17.2	-0.2
	baz=129						
HHAG				S	Sn	02 27 33.4	-5.6
	baz=129						
GLL	Jalalah	7.31	132	P	Pn	02 26 16.6	-0.9
	baz=133						
ARMN	Kirklareli, Me	7.38	11	i P	Pn	02 26 19.7	+1.4
MDUB	Mudurnu	7.39	36		Pn	02 26 19.6	+1.1
KAYN	Sakarya, Kayna	7.40	30	i P	Pn	02 26 20.6	+2.0
OHR	Ohrid	7.44	332	i Pn	Pn	02 26 21.9	+2.6
KAND	Kocaeli-Kandir	7.45	29	i P	Pn	02 26 21.8	+2.6
STIP	Stip	7.50	341	i Pn	Pn	02 26 28.5	+8.4
VLO	Vlora	7.51	323	P	Pn	02 26 19.7	-0.4
VLO	Vlora	7.51	323	Pn	Pn	02 26 19.7	-0.4
SAHE	Sakarya_HENDEK	7.53	33	i P	Pn	02 26 20.2	-0.2
NBNS	Bani Suef	7.78	139	P	Pn	02 26 24.0	0.0
	baz=139						
NBNS				AMP		02 27 00.0	
	baz=139						
BR231	Keskin MP Arra	7.80	46		Pn	02 26 25.9	+1.6
ANTO	Ankara	7.83	46	P	Pn	02 26 24.9	+0.3
ANTO	Ankara	7.83	46		Pn	02 26 24.9	+0.3
HFRF	Wahat Farafira	7.85	161	P	Pn	02 26 24.8	-0.1
	baz=162						
SUZ	Suez	7.86	125	P	Pn	02 26 24.6	-0.4
	baz=126						
SKO	Skopje	7.98	338	i Pn	Pn	02 26 34.1	+7.5
TIR	Tirane	8.03	328	⇑P	Pn	02 26 32.6	+5.3
TIR	Tirane	8.03	328	P	Pn	02 26 28.2	+1.0
TIR	Tirane	8.03	328	Pn	Pn	02 26 28.2	+1.0
ZAF	Zafarana	8.04	130	P	Pn	02 26 27.1	-0.3
	baz=130						
VTS	Vitosha	8.16	348	⇑P	Pn	02 26 30.6	+1.4
VTS	Vitosha	8.16	348	⇑P	Pn	02 26 30.6	+1.4
VTS	Vitosha	8.16	348	Pn	Pn	02 26 29.7	+0.5
KDZE	Karadeniz Ereo	8.16	34	⇓P	Pn	02 26 32.1	+3.0
ZNM	Zenema	8.19	128	S	Sn	02 27 54.4	-6.4
	baz=128						
BOSS	Bosilegrad	8.19	344	eP	Pn	02 26 33.1	+3.6
BRTR	Keskin Array B	8.26	50	Pn	Pn	02 26 32.0	+1.5
	comp=N,0.9nm,0.3s,baz=223,slow=15,SNR=11						
BRTR				Sn	Sn	02 28 05.1	+2.3
	comp=N,0.4nm,0.3s,baz=197,slow=28,SNR=2.0						
BRTR				LR	LR	02 30 35.5	
	comp=N,726nm,18.9s,baz=246,slow=44						
BRTR	Keskin Array B	8.26	50		Pn	02 26 31.3	+0.7
BR131	Keskin Array S	8.26	50	P	Pn	02 26 31.1	+0.5
BR131	Keskin Array S	8.26	50	Pn	Pn	02 26 31.1	+0.5
PRVS	Prvonek	8.29	342	eP	Pn	02 26 39.4	+8.4
TIP	Timpagrande	8.32	306	⇑P	Pn	02 26 31.9	+0.6
TIP	Timpagrande	8.32	306	Pn	Pn	02 26 30.5	-0.8
TAMRE	El Minia	8.36	145	P	Pn	02 26 31.4	-0.4
	baz=145						
DQRL	Deir Qamar	8.42	93	eP	Pn	02 26 31.2	-1.5
MMAI	Mount Meron Ar	8.42	98	Pn	Pn	02 26 31.8	-1.0
	comp=N,21nm,0.3s,baz=293,slow=11,SNR=107						
MMAI				Sn	Sn	02 28 00.1	-6.5
	comp=N,25nm,0.3s,baz=281,slow=23,SNR=10						
BHL	Bhannes	8.46	92	eP	Pn	02 26 31.3	-2.0
CEL	Celeste	8.52	298	Pn	Pn	02 26 34.4	+0.3
BARS	Barje	8.65	342	eP	Pn	02 26 39.0	+3.2
HWQ	Hawqa	8.66	89	eP	Pn	02 26 35.5	-0.5
RCY	Rachaya	8.67	95	eP	Pn	02 26 35.0	-1.3
ZAPS	Zavoj	8.90	346	eP	Pn	02 26 42.2	+2.9
GRB	Gharib	8.90	133	P	Pn	02 26 39.1	-0.2
	baz=134						
RAZG	Razgrad	8.95	5	⇑P	Pn	02 26 42.2	+2.3
DRME	Dracevica, Mon	9.01	329	ePn	Pn	02 26 38.2	-2.5
ZIMR		9.01	360	⇑P	Pn	02 26 42.6	+1.9
ZIMR		9.01	360	⇑P	Pn	02 26 42.6	+1.9
GHAJ	Ghor Haditha	9.11	109		Pn	02 26 41.5	-0.6
PDG	Podgorica	9.18	330	⇑P	Pn	02 26 42.6	-0.4
PDG	Podgorica	9.18	330	ePn	Pn	02 26 41.1	-1.9
PDG	Podgorica	9.18	330		Pn	02 26 42.9	-0.1
MATE	Matera	9.18	313	⇓P	Pn	02 26 42.4	-0.6
SELS	Selova	9.21	340	eP	Pn	02 26 44.8	+1.3
RAFF	Raffo Rosso	9.37	289		Pn	02 26 45.4	-0.3
VLAD	Vladila	9.38	355	⇑P	Pn	02 26 47.3	+1.5
VAE	Valguarnera	9.39	291	Pn	Pn	02 26 47.6	+1.6
	comp=N,2.4nm,0.3s,baz=26,slow=8.9,SNR=20						
VAE				Sn	Sn	02 28 26.4	-4.1
	comp=N,1.5nm,0.3s,baz=227,slow=19,SNR=1.3						
EIL	Elat	9.44	119	Pn	Pn	02 26 46.2	-0.4
	comp=N,9.9nm,0.3s,baz=314,slow=2.3,SNR=104						
EIL				Sn	Sn	02 28 24.1	-7.4
	comp=N,16nm,0.3s,baz=32,slow=23,SNR=8.6						
BOVS	Bovan	9.45	343	⇑P	Pn	02 26 48.3	+1.6
BOVS	Bovan	9.45	343	eP	Pn	02 26 48.0	+1.3
COPA	Copaceanca	9.48	359	⇑P	Pn	02 26 51.3	+4.1
ZAGS	Zajecar	9.50	346	eP	Pn	02 26 48.8	+1.4
BAIL	Bailesti	9.51	351	⇓P	Pn	02 27 02.0	+14
HCY	Herceg Novi	9.52	327	ePn	Pn	02 26 46.4	-1.3
SJES	Sjenica	9.61	335	eP	Pn	02 26 49.0	-0.1
ICOR	Ion Corvin	9.63	10	⇓P	Pn	02 26 51.5	+2.3
RASA	Rasa	9.65	7	⇓P	Pn	02 26 56.7	+7.2
MFTR	Murfatlar	9.79	13	⇑P	Pn	02 26 46.3	-5.2
TREB	Trebinje	9.80	328	ePn	Pn	02 26 48.9	-2.6
PUNG	Punghina	9.82	349	⇑P	Pn	02 26 58.0	+6.1
ASF	Jabal al Asfar	9.86	101	Pn	Pn	02 26 51.2	-1.3
	comp=N,1.8nm,0.3s,baz=295,slow=3.6,SNR=22						
ASF				Sn	Sn	02 28 37.7	-4.3
	comp=N,3.8nm,0.3s,baz=6.4,slow=16,SNR=4.4						
BRY	Bratogost	9.86	329	ePn	Pn	02 26 53.5	+0.9
HUMR	Humele	9.88	358	⇓P	Pn	02 26 53.7	+1.0
GRUS	Gruza	9.94	340	eP	Pn	02 26 56.7	+3.2
UPM	Unac-Piva	9.96	331	ePn	Pn	02 26 51.7	-2.2
SULR		10.04	3	⇑P	Pn	02 26 57.8	+2.9
TIRR	Tirgusor	10.06	12	⇓P	Pn	02 26 57.8	+2.6
TIRR	Tirgusor	10.06	12	P	Pn	02 26 55.7	+0.6
TIRR	Tirgusor	10.06	12		Pn	02 26 55.7	+0.6
TLBR	Topalu	10.09	11	⇓P	Pn	02 26 56.1	+0.6
RUDO	Rudo	10.14	334	ePn	Pn	02 26 54.1	-2.1
SRE	Strehaia	10.16	351	⇓P	Pn	02 27 03.9	+7.4
SRE	Strehaia	10.16	351	⇓P	Pn	02 27 03.9	+7.4
STON	Ston	10.21	326	ePn	Pn	02 26 54.7	-2.5
STON	Ston	10.21	326	P	Pn	02 26 52.7	-4.5
HARR	Harsova	10.21	10	⇓P	Pn	02 27 04.6	+7.4
HARR	Harsova	10.21	10	⇓P	Pn	02 27 04.6	+7.4
STFAR	Stefanesti-Arg	10.22	358	⇓P	Pn	02 27 01.5	+4.2
TRUS	Trudelj	10.34	339	eP	Pn	02 27 07.9	+9.0
BBLS	Lazići	10.34	335	ePn	Pn	02 26 58.0	-1.1
BBLS	Lazići	10.34	335	eP	Pn	02 26 57.9	-1.1
DIVS	Divibare	10.35	337	ePn	Pn	02 26 59.8	+0.6
DIVS	Divibare	10.35	337	eP	Pn	02 27 00.4	+1.2
SECR		10.39	2	⇑P	Pn	02 26 58.6	-1.1
SGRT	San Giovanni R	10.44	316		Pn	02 26 59.8	-0.6
JURR	Jurilovca	10.45	13	⇑P	Pn	02 27 04.5	+4.2
TPGR	Topolog	10.45	12	⇓P	Pn	02 27 09.9	+9.4
HERR	Herculane	10.49	348	⇑P	Pn	02 27 14.5	+13
ISR	Istrita	10.50	4	⇑P	Pn	02 27 02.3	+1.1
ISR	Istrita	10.50	4	⇑P	Pn	02 27 02.3	+1.1
LSTV	Lastovo	10.52	323	P	Pn	02 26 59.1	-2.3
CFR	Carcaliu	10.72	10	⇑P	Pn	02 27 10.1	+6.0
CFR	Carcaliu	10.72	10	⇑P	Pn	02 27 10.1	+6.0
PAOL	Paolisi	10.72	310		Pn	02 27 02.6	-1.7
ARR	Arges	10.73	357	⇑P	Pn	02 27 07.9	+3.5
GRER		10.79	6	⇑P	Pn	02 27 13.2	+8.2
VOIR		10.79	358	⇑P	Pn	02 27 06.2	+1.0
VOIR		10.79	358	⇑P	Pn	02 27 06.2	+1.0
NEHR	Nehoiu	10.79	3	⇓P	Pn	02 27 15.7	+11
MLR	Muntele Rosu	10.85	2	⇓P	Pn	02 27 08.9	+2.9
MLR				⇑P		02 27 15.7	
MLR	Muntele Rosu	10.85	2	Pn	Pn	02 27 07.7	+1.8
	comp=N,0.2nm,0.3s,baz=168,slow=7.5,SNR=17						
MLR				LR	LR	02 31 52.9	
	comp=N,478nm,20.7s,baz=176,slow=41						
MLR	Muntele Rosu	10.85	2		Pn	02 27 06.9	+0.9
MAKA	Makarska	10.85	325	P	Pn	02 27 04.3	-1.6
LOT	Lotru	10.88	354	⇓P	Pn	02 27 08.6	+2.2
BISRR	Bisoca	10.94	5	⇓P	Pn	02 27 16.4	+9.2
GZR	Gura Zlata	10.94	350	⇓P	Pn	02 27 10.6	+3.4
GZR	Gura Zlata	10.94	350	⇓P	Pn	02 27 10.6	+3.4
RICI	Ricice	10.96	326	P	Pn	02 27 05.3	-2.1
GIUM	Giurgiulesti	11.03	10	⇑P	Pn	02 27 05.5	-2.9
HVAR	Hvar	11.04	323	P	Pn	02 27 05.6	-3.0
ODBI	Odobesti	11.18	6	⇓P	Pn	02 27 19.6	+9.2
SCTR	Scanteiesti	11.19	9	⇓P	Pn	02 27 12.8	+2.3
COVR	Voineasa-Covas	11.21	3	⇑P	Pn	02 27 11.9	+1.0
PLOR	Plostina	11.24	4	⇓P	Pn	02 27 15.3	+4.1
PLOR				⇓P	Pn	02 27 15.9	+4.6
PLOR	Plostina	11.24	4	⇓P	Pn	02 27 15.3	+4.1
VRI	Vrincioaia	11.26	4	⇓P	Pn	02 27 15.2	+3.7
VRI	Vrincioaia	11.26	4	⇓P	Pn	02 27 15.2	+3.7
DOPR	Dopca	11.32	360	⇓P	Pn	02 27 14.6	+2.3
BZS	Buzias	11.35	346	⇑P	Pn	02 27 25.1	+12
FRGS	Fruska Gora	11.37	339	⇓P	Pn	02 27 19.9	+6.9
FRGS	Fruska Gora	11.37	339	ePn	Pn	02 27 13.8	+0.8
VLDR	Vladesti	11.37	9	⇑P	Pn	02 27 20.1	+7.1
VARL	Varlezi	11.39	8	⇑P	Pn	02 27 19.0	+5.7
DEV	Deva	11.40	351	⇓P	Pn	02 27 16.4	+2.9
DEV	Deva	11.40	351	⇓P	Pn	02 27 16.4	+2.9
OZUR		11.45	1	⇑P	Pn	02 27 22.6	+8.4
MDB	Medias	11.52	356	⇑P	Pn	02 27 17.7	+2.6
MDB	Medias	11.52	356	⇑P	Pn	02 27 17.7	+2.6
KIJV	Kijevo	11.69	326	P	Pn	02 27 14.7	-2.7
MGRS	Mrkonjic Grad	11.71	329	ePn	Pn	02 27 14.2	-3.5
ZIRJ	Zirje	11.79	323	P	Pn	02 27 17.1	-1.7
TESR	Tescani	11.89	4	⇑P	Pn	02 27 22.1	+1.9
MORI	Morici	11.91	324	P	Pn	02 27 18.2	-2.2
BLY	Banja Luka	11.94	330	ePn	Pn	02 27 16.2	-4.6
CJR	Cluj-Napoca	12.14	354	⇓P	P	02 27 35.2	-0.7
AQU	L'Aquila	12.19	313	ePn	Pn	02 27 25.6	+1.3
MRAK	Mrakovica	12.27	330	ePn	Pn	02 27 21.7	-3.7
DRGR		12.32	351	⇓P	P	02 27 33.1	-4.7
DRGR		12.32	351	⇓P	P	02 27 33.1	-4.7
ARCR	ARCALIA	12.46	356	⇑P	P	02 27 38.8	-0.5
MILM	Milestii Mici	12.52	11	⇑P	Pn	02 27 27.3	-1.4
MILM	Milestii Mici	12.52	11	⇑P	Pn	02 27 27.3	-1.4
MORH	Mrgy, Hungar	12.67	338	ePn	Pn	02 27 29.6	-1.2
PRAR	RASCA	12.72	2	⇑P	P	02 27 40.7	-1.5
KOVH	Kovagotottos	12.73	336	eP	Pn	02 27 31.8	+0.1
NVLJ	Novalja	12.84	324	P	Pn	02 27 29.4	-3.6
BURAR	Bucovina Array	12.97	359	⇑P	Pn	02 27 39.1	+4.2
BURAR	Bucovina Array	12.97	359	⇑P	Pn	02 27 39.1	+4.2
BMR	Baia Mare	13.11	354	⇓P	P	02 27 46.5	0.0
BMR	Baia Mare	13.11	354	⇓P	P	02 27 46.5	0.0
OZLJ	Ozalj	13.36	328	P	Pn	02 27 38.5	-1.7
KALN	Kalnik	13.37	332	P	P	02 27 49.5	0.0
CRES	Cresnjev	13.53	329	ePn	Pn	02 27 38.0	-4.5
SMRN	Sveta Marina	13.53	324	P	Pn	02 27 39.4	-3.1
LOBO	Lobor	13.54	331	P	P	02 27 48.7	-2.6
RIY	Rijeka	13.58	325	ePn	Pn	02 27 40.4	-2.8
BRJN	Brijuni	13.64	322	P	Pn	02 27 39.6	-4.4
SORM	Soroca	13.65	8	⇓P	Pn	02 27 46.7	+2.5
SORM	Soroca	13.65	8	⇓P	Pn	02 27 46.7	+2.5
TRPA	Tarpa	13.66	352	⇑P	P	02 27 51.9	-0.7
TRPA	Tarpa	13.66	352	eP	P	02 27 51.1	-1.4
MPLH	Magyarpolny	13.87	337	eP	Pn	02 27 50.4	+3.2
PSZ	Piszkesteto	13.91	344	⇓P	Pn	02 27 49.3	+1.6
PSZ	Piszkesteto	13.91	344	⇓P	Pn	02 27 49.3	+1.6
CEY	Cerknica	13.92	326	ePn	Pn	02 27 45.3	-2.6
EGYH	Egyhazaskeszo	14.15	337	eP	Pn	02 27 53.9	+2.9
UZH	Uzhgorod	14.18	351	eP	Pn	02 27 53.9	+2.6
SOC	Sochi	14.20	47	eP	Pn	02 27 50.9	-0.8
SOC				e		02 30 28.3	
SOC				MLR	MLR		
	comp=Z,109nm,13.0s						
SOKA	Soboth	14.38	330	ePn	P	02 28 02.1	+1.4
	comp=Z,5.6nm,0.6s						
SOKA				eSn	Sn	02 30 39.1	+6.6
	comp=Z,1.0nm,0.6s						
BCA	Borcka	14.42	57	⇑P	P	02 28 12.9	+12
OBKA	Obir	14.46	328	ePn	P	02 28 03.5	+1.9
	comp=Z,4.2nm,0.6s						
OBKA				eSn	Sn	02 30 28.1	-6.1
	comp=Z,3.1nm,0.6s						
KOLS	Kolonicke sedl	14.48	352	eP	P	02 27 59.8	-1.9
KOLS	Kolonicke sedl	14.48	352	eP	P	02 27 59.8	-1.9
SOP	Sopron	14.64	336	eP	P	02 28 02.5	-1.0
ARSA	Arzberg	14.65	332	i Pn	P	02 28 05.5	+1.8
	comp=Z,11nm,1.1s,SNR=4.2						
ARSA				eSn	S	02 30 50.3	-6.8
	comp=Z,2.8nm,1.2s						
ZST	Bratislava	14.91	338	eP	Pn	02 28 03.4	+2.1
ZST	Bratislava	14.91	338	eP	Pn	02 28 03.4	+2.1
MYKA	Terra Mystica	14.95	327	ePn	P	02 28 09.5	+2.5
	comp=Z,2.7nm,0.6s						
MYKA				eSn	Sn	02 30 55.4	+9.2
	comp=Z,0.8nm,0.5s						
MODS	Modra-Piesok	15.02	338	eP	P	02 28 08.0	+0.2
MODS	Modra-Piesok	15.02	338	eP	P	02 28 07.9	+0.2
TEOL	Teolo	15.03	320	IAmb	IAmb	02 28 11.5	
	comp=Z,26nm,0.6s						
CONA	Conrad Observa	15.10	334	ePn	P	02 28 09.6	+0.9
	comp=Z,5.3nm,1.2s						
CONA				eSn	Sn	02 30 52.3	+2.5
	comp=Z,3.7nm,1.1s						
LANS	Liptovska Anna	15.17	345	eP	P	02 28 09.5	+0.1
LANS	Liptovska Anna	15.17	345	eP	P	02 28 09.5	+0.1
KARS	Kars	15.17	62	P	Pn	02 28 04.9	0.0
KARS				pmax	pmax		
	comp=Z,88nm,1.1s						
KARS	Kars	15.17	62	Pn	Pn	02 28 04.9	0.0
ZOU	Zoufplan	15.20	325	IAmb	IAmb	02 28 12.9	
	comp=Z,14nm,0.8s						
LVV	L'vov	15.21	356	eP	P	02 28 10.6	+0.8
CHVG	Ch'k'valeri	15.26	53	⇓P	P	02 28 12.3	+1.9
CHVG	Ch'k'valeri	15.26	53	⇓P	P	02 28 12.3	+1.9
KBA	Koelnbreinsper	15.42	327	ePn	P	02 28 13.2	+0.8
	comp=Z,1.9nm,0.7s						
KBA				eSn	Sn	02 30 58.8	+1.0
	comp=Z,1.7nm,0.7s						
CTI	Castel Tesino	15.49	321	P	Pn	02 28 09.2	+0.1
CTI				pmax	pmax		
	comp=Z,18nm,0.6s						
CTI	Castel Tesino	15.49	321	Pn	Pn	02 28 09.2	+0.1
CTI				IAmb	IAmb	02 28 17.1	
	comp=Z,18nm,0.6s						
ABTA	Abfaltersbach	15.56	325	ePn	P	02 28 15.0	+1.2
	comp=Z,8.6nm,0.6s						
ABTA				eSn	Sn	02 30 54.4	-6.7
	comp=Z,2.9nm,0.7s						
MOA	Molln	15.64	331	i Pn	P	02 28 15.6	+1.0
	comp=Z,5.8nm,0.8s,SNR=5.3						
MOA				eSn	S	02 31 13.5	-3.7
	comp=Z,5.2nm,1.4s						
AKH	Akhalkalaki	15.71	59	⇓P	Pn	02 28 13.8	+1.8
KRUC	Moravsky	15.90	338	ePN	Pn	02 28 16.3	+2.1
NEY	Neytrino	15.92	52	i P	P	02 28 17.1	-0.8
VRAC	Vranov	16.06	339	⇓P	Pn	02 28 18.1	+1.9
VRAC	Vranov	16.06	339	Pn	Pn	02 28 17.6	+1.4
	comp=Z,0.5nm,0.3s,baz=158,slow=11,SNR=13						
VRAC	Vranov	16.06	339	ePN	P	02 28 18.5	-0.7
SHA1	Shidzhatmaz	16.10	51c	iP	P	02 28 21.0	+1.0
OJC	Ojcow	16.12	347	eP	P	02 28 29.4	+9.5
ONI	Oni	16.12	55	IAmb	IAmb	02 28 26.9	
	comp=Z,26nm,0.9s						
MORC	Moravsky Berou	16.21	341	ePN	Pn	02 28 18.8	+0.6
KIV	Kislovodsk	16.23	50	eP	P	02 28 22.9	+1.7
KIV				pmax	pmax		
	comp=Z,72nm,1.0s						
KIV				MLR	MLR		
	comp=Z,47nm,13.0s						
KIV	Kislovodsk	16.23	50	Pn	Pn	02 28 19.3	+0.9
KBZ	Khabaz	16.25	51	Pn	P	02 28 21.3	-0.1
	comp=Z,3.6nm,0.3s,baz=229,slow=8.8,SNR=142						
KBZ				LR	LR	02 35 14.6	
	comp=Z,153nm,21.1s,baz=272,slow=40						
GNI	Garni	16.26	65	Pn	P	02 28 21.0	-0.7
	comp=Z,1.1nm,0.3s,baz=308,slow=5.4,SNR=7.5						
GNI	Garni	16.26	65	P	Pn	02 28 18.3	-0.7
GNI				pmax	pmax		
	comp=Z,29nm,1.4s						
GNI	Garni	16.26	65	Pn	Pn	02 28 18.3	-0.7
AKASG	Malin Array Be	16.29	9	Pn	Pn	02 28 18.8	-0.2
	comp=Z,8.0nm,0.3s,baz=197,slow=11,SNR=34						
AKASG				LR	LR	02 35 15.2	
	comp=Z,138nm,18.1s,baz=305,slow=40						
AKASG	Malin Array Be	16.29	9	IAmb	IAmb	02 28 22.8	
	comp=Z,109nm,1.4s						
AKBB	Malin Array Si	16.29	9	P	Pn	02 28 19.0	0.0
AKBB				pmax	pmax		
	comp=Z,96nm,1.4s						
AKBB	Malin Array Si	16.29	9	Pn	Pn	02 28 19.0	0.0
AKBB				IAmb	IAmb	02 28 22.8	
	comp=Z,96nm,1.4s						
WTTA	Wattenberg	16.35	325	ePn	P	02 28 23.4	+0.7
	comp=Z,13nm,1.1s						
WTTA				eSn	Sn	02 31 11.7	-8.7
	comp=Z,3.6nm,0.7s						
CKRC	Cesky Krumlov	16.41	333	eP	P	02 28 24.8	+1.6
WATA	Walderalm	16.43	325	ePn	Pn	02 28 22.5	+1.4
	comp=Z,6.4nm,0.5s						
WATA				eSn	Sn	02 31 22.0	-0.2
	comp=Z,1.9nm,0.6s						
ZEI	Tsey	16.50	55	eP	Pn	02 28 23.6	+1.5
ZEI				pmax	pmax		
	comp=Z,23nm,1.2s						
SQTA	Sankt Quirin	16.52	324	i Pn	P	02 28 25.7	+1.2
	comp=Z,2.9nm,0.5s,SNR=5.7						
SQTA				eSn	Sn	02 31 18.9	-5.6
	comp=Z,1.3nm,0.4s						
FETA	Feichten	16.62	323	ePn	P	02 28 26.2	+0.5
	comp=Z,14nm,0.9s						
FETA				eSn	Sn	02 31 23.1	-3.9
	comp=Z,0.7nm,0.5s						
MOTA	Moosalm	16.66	324	ePn	P	02 28 27.7	+1.6
	comp=Z,8.6nm,1.1s						
MOTA				eSn	Sn	02 31 20.8	-7.1
	comp=Z,2.0nm,0.6s						
GERES	GERESS Array B	16.66	332	Pn	Pn	02 28 25.0	+1.1
	comp=Z,0.8nm,0.3s,baz=144,slow=12,SNR=35						
GERES				LR	LR	02 36 36.2	
	comp=Z,142nm,18.9s,baz=124,slow=44						
GERES	GERESS Array B	16.66	332	Pn	Pn	02 28 23.5	-0.5
KRLC	Kraliky	16.69	340	eP	P	02 28 26.6	+0.3
KRLC	Kraliky	16.69	340	eP	P	02 28 26.6	+0.3
DAVOX	Davos/Dischmat	16.90	321	Pn	P	02 28 30.7	+1.9
	comp=Z,0.6nm,0.3s,baz=139,slow=11,SNR=18						
RETA	Reutte	16.93	324	i Pn	P	02 28 28.9	0.0
	comp=Z,3.3nm,0.6s,SNR=4.8						
RETA				eSn	Sn	02 31 25.9	-8.4
	comp=Z,0.9nm,0.5s						
KHC	Kasperske Hory	16.94	332	eP	P	02 28 30.1	+1.0
KHC				esP	sP	02 28 41.2	-0.9
KHC	Kasperske Hory	16.94	332	eP	P	02 28 30.1	+1.0
DPC	Dobruska-Polom	17.07	340	eP	Pn	02 28 30.0	+1.0
DPC				esP	sP	02 28 43.9	+0.4
DPC	Dobruska-Polom	17.07	340	eP	Pn	02 28 30.0	+1.0
DAVA	Damuels	17.23	322	i Pn	P	02 28 33.5	+1.1
	comp=Z,6.7nm,0.7s,SNR=9.6						
DAVA				eSn	Sn	02 31 38.5	-3.2
	comp=Z,0.6nm,0.3s						
OSTC	Ostas	17.28	340	eP	P	02 28 33.7	+0.9
UPC	Upice	17.30	339	eP	P	02 28 33.7	+0.8
UPC	Upice	17.30	339	eP	P	02 28 33.7	+0.8
PRU	Pruhonice	17.31	336	eP	Pn	02 28 31.0	-0.9
PRU	Pruhonice	17.31	336	eP	Pn	02 28 31.0	-0.9
BEL	Belsk	17.52	350	eP	P	02 28 36.5	+1.1
KSP	Ksiaz	17.52	340	eP	P	02 28 35.8	+0.4
PVCC	Panska Ves	17.76	337	eP	P	02 28 39.6	+1.5
PVCC	Panska Ves	17.76	337	eP	P	02 28 39.6	+1.5
GROC	Groznyy	17.95	56	eP	Pn	02 28 39.4	-0.4
GROC				pmax	pmax		
	comp=Z,42nm,1.4s						
LPL	La Plagne	17.95	313	eP	P	02 28 42.0	+1.6

LPL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
SENIN	Lac Senin/Sane	18.07	316	Pn	Pn	02 28 38.6	-2.9
NKC	Novy Kostel	18.27	332	eP	Pn	02 28 44.4	+0.7
NKC	Novy Kostel	18.27	332	eP	Pn	02 28 44.4	+0.7
GRF	Grafenberg Arr	18.33	329	eP	Pn	02 28 46.9	+2.4
	baz=347,slow=8.6						
BFO	Black Forest	18.70	322	eP	P	02 28 48.9	+0.4
BFO	Black Forest	18.70	322	P	P	02 28 47.5	-1.0
CLL	Collm	18.95	335	eP	P	02 28 52.0	+0.9
CLL				pmax	pmax		
	comp=Z,17nm,1.2s						
CLL	Collm	18.95	335	eP	P	02 28 52.0	+0.9
	comp=Z,17nm,1.2s						
CLL				epP	pP	02 28 58.0	-1.9
CLL				esP	sP	02 29 04.0	-0.2
CLL				epPP		02 29 10.0	
VORD	Divnogorie	19.16	27	eP	P	02 28 54.1	+0.7
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR	Storozhevoye	19.31	27	eP	P	02 28 55.2	+0.1
VSR				pmax	pmax		
	comp=Z,20nm,0.7s						
SUW	Suwalki	19.44	356	eP	P	02 28 55.8	-0.6
SUW	Suwalki	19.44	356	eP	P	02 28 55.5	-0.9
SUW	Suwalki	19.44	356	P	P	02 28 56.0	-0.4
SUW				pmax	pmax		
	comp=Z,94nm,0.9s						
MNK	Minsk	19.93	4	i P	P	02 29 01.2	-0.6
MNK				i S	S	02 32 43.8	-0.2
MNK				pmax	pmax		
	comp=Z,21nm,1.1s						
MNK				pmax	pmax		
	comp=N,30nm,1.1s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.1s						
MNK				MLR	MLR		
	comp=Z,196nm,13.0s						
MNK				MLR	MLR		
	comp=E,28nm,15.0s						
MNK				MLR	MLR		
	comp=N,118nm,16.0s						
MNK	Minsk	19.93	4	i P	P	02 29 01.2	-0.6
	comp=E,3.0nm,1.1s						
MNK				i P	P	02 29 01.2	-0.6
	comp=N,30nm,1.1s						
MNK				i P	P	02 29 01.2	-0.6
	comp=Z,21nm,1.1s,baz=186						
MNK				i PP	PnPn	02 29 17.9	-0.3
MNK				i S	S	02 32 43.9	-0.2
MNK				i SS	SnSn	02 33 03.3	+2.1
MNK				i LQ	LQ	02 35 08.5	
MNK				i LR	LR	02 36 39.7	
MNK				i LRM	MLR	02 37 59.5	
	comp=E,28nm,14.7s						
MNK				i LRM	MLR	02 38 00.2	
	comp=Z,196nm,12.8s						
MNK				i LRM	MLR	02 38 17.8	
	comp=N,118nm,15.7s						
VRH	Novokhopyorsk	20.31	30	eP	P	02 29 06.2	+0.3
VRH				pmax	pmax		
	comp=Z,150nm,0.6s						
LPSR	Galich'ya Gora	20.37	24	eP	P	02 29 06.3	-0.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SSF	Saint Saulge	20.66	314	eP	P	02 29 09.8	0.0
SSF				pmax	pmax		
	comp=Z,25nm,1.1s						
WLF	Walferdange	20.66	322	dP	P	02 29 10.8	+1.0
	comp=Z,15nm,0.8s						
WLF	Walferdange	20.66	322	P	P	02 29 10.3	+0.5
WLF				pmax	pmax		
	comp=Z,24nm,0.9s						
WLF	Walferdange	20.66	322	P	P	02 29 10.3	+0.5
WLF				IAmb	IAmb	02 29 12.8	
	comp=Z,24nm,0.9s						
RAYN	Ar Rayn	20.68	117	P	P	02 29 10.4	+0.2
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RAYN	Ar Rayn	20.68	117	P	P	02 29 10.4	+0.2
IDID	Didziasalis	20.69	2	eP	P	02 29 10.2	+0.1
IIGN	Ignalina	20.72	1	eP	P	02 29 09.6	-0.7
PABE	Paberze	20.89	358	eP	P	02 29 12.3	+0.2
PABE	Paberze	20.89	358	P	P	02 29 11.4	-0.7
PABE				IAmb	IAmb	02 29 14.8	
	comp=Z,35nm,0.8s						
ISAL	Salakas	20.94	1	eP	P	02 29 12.2	-0.4
BHOU	Houvegnez	21.18	324	dP	P	02 29 17.0	+1.7
BTNL	Ternell	21.27	324	dP	P	02 29 17.3	+1.0
	comp=Z,17nm,1.0s						
MEM	Membach	21.34	324	dP	P	02 29 18.3	+1.2
	comp=Z,24nm,0.8s						
MEM	Membach	21.34	324	P	P	02 29 18.7	+1.6
MEM				pmax	pmax		
	comp=Z,41nm,0.9s						
RCHB	Rochefort	21.43	322	dP	P	02 29 17.9	-0.1
PBUR	Paburge	21.52	355	eP	P	02 29 18.7	-0.2
LFF	La Frestale	21.53	306	eP	P	02 29 20.1	+0.9
LFF				pmax	pmax		
	comp=Z,93nm,1.9s						
BSTI	Sart Tilman	21.54	324	dP	P	02 29 20.5	+1.3
	comp=Z,6.6nm,0.9s						
BCLA	Clavier	21.56	323	dP	P	02 29 20.0	+0.6
BEBN	Eben Emael	21.62	324	dP	P	02 29 21.4	+1.3
BGES	Gesves	21.65	323	dP	P	02 29 22.4	+2.0
DOU	Dourbes	21.72	322	dP	P	02 29 20.7	-0.4
	comp=Z,23nm,1.0s						
BMRD	Maredsous	21.76	322	dP	P	02 29 22.0	+0.5
	comp=Z,8.5nm,1.0s						
OBN	Obninsk	21.88	17	⇑P	P	02 29 22.0	-0.7
OBN	Obninsk	21.88	17	P	P	02 29 22.4	-0.3
	comp=Z,4.8nm,0.4s,baz=175,slow=15,SNR=7.5						
OBN	Obninsk	21.88	17	ceP	P	02 29 23.6	+0.8
OBN				e*PP	sP	02 29 33.7	-2.2
OBN				e		02 29 46.8	
OBN				ePPP	PPP	02 29 55.0	
OBN				e		02 33 18.6	
OBN				pmax	pmax		
	comp=Z,26nm,0.9s						
OBN				MLR	MLR		
	comp=Z,205nm,17.0s						
OBN	Obninsk	21.88	17	P	P	02 29 22.4	-0.3
SNF	Seneffe	22.13	322	dP	P	02 29 26.4	+0.9
	comp=Z,19nm,0.9s						
UCC	Uccle	22.27	323	dP	P	02 29 27.7	+0.7
	comp=Z,8.7nm,0.9s						
UCC	Uccle	22.27	323	P	P	02 29 26.8	-0.2
UCC				pmax	pmax		
	comp=Z,11nm,0.9s						
UCC	Uccle	22.27	323	P	P	02 29 26.8	-0.2
UCC				IAmb	IAmb	02 29 28.7	
	comp=Z,11nm,0.9s						
LUNU	Lund	22.58	342	i P	P	02 29 33.4	+3.1
BLEU	Blekinge	22.66	346	i P	P	02 29 27.3	-3.8
MOS	Moscow	22.70	18	eP	P	02 29 30.1	-1.5
MOS				e		02 29 40.9	
MOS				eS	S	02 33 35.2	-2.3
MOS				pmax	pmax		
	comp=Z,32nm,0.7s						
MFF	Saint Martin d	22.71	309	eP	P	02 29 32.6	+0.8
MFF				pmax	pmax		
	comp=Z,39nm,1.2s						
DEL	Delary	23.23	344	i P	P	02 29 34.5	-2.5
VSU	Vasula	23.85	2	eP	P	02 29 42.5	-0.3
ESDC	Sonseca Array	23.93	291	P	P	02 29 44.5	+0.4
	comp=Z,1.5nm,0.5s,baz=78,slow=9.2,SNR=28						
ESDC				LR	LR	02 39 58.4	
	comp=Z,80nm,19.0s,baz=250,slow=39						
ESDC	Sonseca Array	23.93	291	P	P	02 29 44.7	+0.7
MDT	Midelt	25.04	274	P	P	02 29 56.1	+1.9
	comp=Z,0.6nm,0.4s,baz=87,slow=5.0,SNR=5.1						
GEYT	Alibeck	26.45	73	P	P	02 30 09.9	+3.1
	comp=Z,4.9nm,0.5s,baz=259,slow=14,SNR=8.0						
GEYT				LR	LR	02 43 19.3	
	comp=Z,71nm,18.2s,baz=260,slow=43						
GEYT	Alibeck	26.45	73	P	P	02 30 07.6	+0.7
GEYT				IAmb	IAmb	02 30 34.4	
	comp=Z,10nm,0.9s						
GYA0B	ALIBECK ARRAY	26.45	73	IAmb	IAmb	02 30 34.4	
	comp=Z,14nm,0.9s						
HFS	Hagfors	26.64	347	P	P	02 30 07.7	-0.5
	comp=Z,5.0nm,0.6s,baz=155,slow=10,SNR=12						
FINES	FINESS Array B	26.83	1	P	P	02 30 08.7	-1.3
	comp=Z,3.7nm,0.4s,baz=160,slow=11,SNR=49						
FINES				PcP	PcP	02 33 32.6	+0.9
	comp=Z,6.3nm,1.1s,baz=180,slow=1.1,SNR=3.6						
FINES				LR	LR	02 40 34.1	
	comp=Z,175nm,20.4s,baz=204,slow=36						
KONO	Kongsberg	27.11	342	eP	P	02 30 13.3	+0.9
NC602	NORSAR Array S	27.62	345	eP	P	02 30 17.1	+0.1
KLMR	Klimovskoe	27.75	15	eP	P	02 30 15.8	-2.4
KLMR				eS	S	02 34 53.6	-4.7
KLMR				pmax	pmax		
	comp=Z,30nm,0.8s						
KLMR	Klimovskoe	27.75	15	eP	P	02 30 15.8	-2.4
KLMR				AMP		02 30 18.2	
	comp=Z,30nm,0.8s						
KLMR				eS	S	02 34 53.7	-4.6
KLMR				eS	S	02 34 53.7	-4.6
NB2	NORSAR Subarra	27.97	345	P	P	02 30 19.9	-0.3
	comp=Z,0.7nm,0.5s,baz=153,slow=11						
NB2	NORSAR Subarra	27.97	345	P	P	02 30 19.9	-0.3
	baz=153,slow=11						
NOA	NORSAR Array B	27.97	345	P	P	02 30 18.4	-1.9
	comp=Z,1.7nm,0.9s,baz=111,slow=13,SNR=5.9						
NOA				LR	LR	02 42 07.6	
	comp=Z,48nm,18.6s,baz=170,slow=38						
AKTO	Aktyubinsk	28.42	46	P	P	02 30 24.5	+0.2
	comp=Z,5.2nm,0.5s,baz=252,slow=7.6,SNR=38						
EKA	Eskdalemuir Ar	28.61	325	P	P	02 30 25.8	-0.2
	comp=Z,1.4nm,0.4s,baz=123,slow=10,SNR=7.3						
KIRV	Kirov	28.75	26	P	P	02 30 26.4	-0.7
	comp=Z,16nm,0.5s,baz=248,slow=4.6,SNR=11						
KIRV	Kirov	28.75	26	ceP	P	02 30 26.3	-0.8
ASK	Askoy	29.01	339	eP	P	02 30 29.3	-0.1
ABKAR	Akbulak array	29.21	49	P	P	02 30 32.4	+1.1
DOMB	Dombas	29.33	344	eP	P	02 30 32.7	+0.4
PRGR	Permogore	29.91	19	eP	P	02 30 35.0	-2.4
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
FOO	Floro	29.96	340	eP	P	02 30 37.9	+0.1
HRA	Herat	30.20	80	P	P	02 30 39.9	-0.6
TORD	Torodi Ar. Bea	30.36	231	P	P	02 30 42.2	+0.4
	comp=Z,2.8nm,0.4s,baz=35,slow=8.9,SNR=57						
TORD				LR	LR	02 45 37.6	
	comp=Z,132nm,18.7s,baz=45,slow=42						
TORD	Torodi Ar. Bea	30.36	231	P	P	02 30 41.5	-0.3
TORD				IAmb	IAmb	02 30 54.7	
	comp=Z,5.4nm,1.1s						
NSS	Namsos	31.04	349	eP	P	02 30 46.2	-1.0
ARU	Arti	31.32	36	c iP	P	02 30 50.0	+0.1
ARU				*PP	sP	02 31 01.4	-2.1
ARU						02 31 48.8	
ARU				S	S	02 35 55.9	+1.4
ARU				SS	SnSn	02 37 40.3	+1.1
ARU				pmax	pmax		
	comp=Z,40nm,1.8s						
ARU	Arti	31.32	36	P	P	02 30 50.1	+0.1
ARU				IAmb	IAmb	02 31 02.6	
	comp=Z,8.2nm,0.6s						
MOR8	Moi Rana	32.24	352	eP	P	02 30 57.5	-0.4
SVE	Sverdlovsk	32.52	36	eP	P	02 31 01.4	+1.0
SVE				pmax	pmax		
	comp=Z,27nm,0.5s						
KONS	Konsvik	32.72	351	eP	P	02 31 01.6	-0.4
KOWA	Kowa	33.29	240	P	P	02 31 07.3	-0.3
KOWA				IAmb	IAmb	02 31 20.2	
	comp=Z,5.3nm,1.0s						
FAUS	Fauske	33.31	353	eP	P	02 31 06.5	-0.8
STEI	Steigen	33.85	353	eP	P	02 31 10.2	-1.6
KTK1	Kautokeino	34.45	359	eP	P	02 31 16.2	-0.9
ARA0	ARCESS Array S	34.95	0	eP	P	02 31 20.4	-1.0
ARCES	ARCESS Array B	34.95	0	P	P	02 31 19.9	-1.5
	comp=Z,1.9nm,0.4s,baz=193,slow=8.8,SNR=30						
ARCES				PcP	PcP	02 33 53.4	+0.2
	comp=Z,6.3nm,1.0s,baz=149,slow=2.6,SNR=3.8						
ARCES				LR	LR	02 46 27.3	
	comp=Z,210nm,20.1s,baz=170,slow=38						
JETT	Jettan, Norway	35.08	357	eP	P	02 31 22.6	0.0
TRO	Tromso	35.23	356	eP	P	02 31 22.6	-1.3
MBAR	Mbarara	35.40	171	P	P	02 31 26.0	0.0
MBAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MBAR	Mbarara	35.40	171	P	P	02 31 26.0	0.0
MBAR				IAmb	IAmb	02 31 52.0	
	comp=Z,2.7nm,0.7s						
KBL	Kabul	35.66	77	P	P	02 31 28.7	+0.5
KBL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBL	Kabul	35.66	77	P	P	02 31 28.7	+0.5
KKAR	Karatay Array	35.71	63	P	P	02 31 29.2	+0.9
KKAR	Karatay Array	35.71	63	P	P	02 31 29.2	+0.9
BRVK	Borovoye	36.47	46	P	P	02 31 35.4	+0.8
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BRVK	Borovoye	36.47	46	P	P	02 31 35.4	+0.8
BRVK				IAmb	IAmb	02 31 36.8	
	comp=Z,8.0nm,1.1s						
OTUK	Ortayu	37.09	54	P	P	02 31 41.1	+1.0
KIBK	Kibwezi	38.63	160	P	P	02 31 53.2	-0.2
AAK	Ala-Archa	38.66	63	i P	P	02 31 54.9	+1.4
AAK				pmax	pmax		
	comp=Z,23nm,1.1s						
AAK	Ala-Archa	38.66	63	P	P	02 31 54.8	+1.2
AAK				IAmb	IAmb	02 32 08.5	
	comp=Z,17nm,1.1s						
TKM2	Tokmak 2	39.45	63	i P	P	02 32 01.2	+1.1
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
DBIC	Dimbokro	39.45	232	P	P	02 32 00.6	+0.5
	comp=Z,1.3nm,0.4s,baz=43,slow=8.7,SNR=8.7						
DBIC				LR	LR	02 52 07.8	
	comp=Z,150nm,19.2s,baz=46,slow=42						
DBIC	Dimbokro	39.45	232	IAmb	IAmb	02 32 10.1	
	comp=Z,12nm,1.1s						
KURK	Kurchatov	41.31	50	P	P	02 32 16.2	+1.0
KURK				pmax	pmax		
	comp=Z,12nm,0.9s						
KURK	Kurchatov	41.31	50	P	P	02 32 16.2	+1.0
KURK				IAmb	IAmb	02 32 30.5	
	comp=Z,12nm,0.9s						
MAKZ	Makanchi	43.63	56	P	P	02 32 34.6	+0.4
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAKZ	Makanchi	43.63	56	P	P	02 32 34.6	+0.4
MAKZ				IAmb	IAmb	02 32 49.7	
	comp=Z,3.9nm,0.8s						
SPA0	Spitsbergen Ar	43.82	357	eP	P	02 32 34.2	-1.0
MK31	Makanchi Array	43.85	56	d iP	P	02 32 37.1	+1.2
MK31	Makanchi Array	43.85	56	IAmb	IAmb	02 32 49.5	
	comp=Z,6.7nm,0.7s						
MKAR	Makanchi Array	43.85	56	P	P	02 32 37.2	+1.3
	comp=Z,3.6nm,0.4s,baz=270,slow=7.8,SNR=70						
MKAR	Makanchi Array	43.85	56	P	P	02 32 36.3	+0.4
ZALV	Zalesovo Beam	45.18	46	P	P	02 32 46.8	+0.4
	comp=Z,9.5nm,0.4s,baz=269,slow=8.3,SNR=53						
ZALV				LR	LR	02 55 34.3	
	comp=Z,58nm,18.1s,baz=352,slow=41						
ZALV	Zalesovo Beam	45.18	46	P	P	02 32 46.2	-0.2
DGZ	Jazzator, Alta	47.00	52	i P	P	02 33 02.2	+1.2
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WMQ	Urumqi	48.05	59	eP	P	02 33 12.3	+3.2
NRIK	Noril'sk	48.24	25	P	P	02 33 11.4	+1.3
	comp=Z,9.5nm,0.6s,baz=251,slow=5.4,SNR=17						
NRIK				LR	LR	02 54 49.5	
	comp=Z,74nm,18.0s,baz=222,slow=38						
NRIK	Noril'sk	48.24	25	ceP	P	02 33 10.5	+0.4
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NRIK	Noril'sk	48.24	25	P	P	02 33 10.9	+0.8
PYUN	Piuthan	48.98	81	eP	P	02 33 18.0	+1.3
	comp=Z,30nm,0.5s						
NOR	Nord	49.49	353	i P	P	02 33 19.0	-0.6
NOR				IAmb	IAmb	02 33 20.0	
	comp=Z,2.7nm,0.6s						
DANN	Dangsing	49.51	80	eP	P	02 33 22.4	+1.6
	comp=Z,72nm,0.7s						
SUMG	Summit	49.56	339	P	P	02 33 20.8	+0.1
SUMG				pmax	pmax		
	comp=Z,18nm,1.0s						
SUMG	Summit	49.56	339	i P	P	02 33 21.0	+0.4
SUMG				IAmb	IAmb	02 33 22.2	
	comp=Z,11nm,0.5s						
SUMG	Summit	49.56	339	P	P	02 33 20.8	+0.1
GKN	Gorkha	50.36	80	eP	P	02 33 28.0	+0.9
	comp=Z,28nm,0.5s						
DMN	Daman	50.90	81	eP	P	02 33 32.3	+1.0
KKN	Kakani	50.97	80	eP	P	02 33 32.6	+0.9
	comp=Z,21nm,0.5s						
PKIN	Phulchoki	51.15	81	eP	P	02 33 33.9	+0.7
	comp=Z,24nm,0.8s						
PKI	Pulchoki	51.16	81	eP	P	02 33 33.9	+0.6
GUN	Gumba	51.41	80	eP	P	02 33 36.1	+0.9
	comp=Z,28nm,0.5s						
DY2G	Dye2	51.54	331	i P	P	02 33 37.0	+1.5
DY2G				IAmb	IAmb	02 33 38.6	
	comp=Z,17nm,0.9s						
JIRN	Jiri	51.76	80	eP	P	02 33 38.7	+0.8
	comp=Z,17nm,0.5s						
NEEM	North Greenlan	53.55	345	i P	P	02 33 50.1	-0.2
NEEM				IAmb	IAmb	02 33 51.0	
	comp=Z,8.3nm,0.6s						
UPNV	Upernavik	54.83	339	i P	P	02 33 59.6	+0.3
UPNV				IAmb	IAmb	02 34 00.5	
	comp=Z,8.4nm,0.6s						
MOY	Mondy	55.17	47	eP	P	02 34 04.1	+1.8
ZAK	Zakamensk	56.90	48	eP	P	02 34 14.8	+0.2
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SHL	Shillong	57.26	80	P	P	02 34 16.8	-0.8
SHL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SHL	Shillong	57.26	80	P	P	02 34 16.8	-0.8
SHL				IAmb	IAmb	02 34 30.2	
	comp=Z,4.6nm,0.8s						
TULEG	Thule	57.62	344	i P	P	02 34 19.2	+0.1
TULEG				IAmb	IAmb	02 34 19.6	
	comp=Z,14nm,1.1s						
TULEG	Thule	57.62	344	P	P	02 34 18.8	-0.3
GTA	Gaotai	57.98	62	eP	P	02 34 23.6	+1.1
GTA				pP	pP	02 34 27.8	-5.0
GTA				sP	sP	02 34 30.8	-5.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
LBTB	Lobatse	59.33	180	P	P	02 34 33.3	+1.6
	comp=Z,1.1nm,0.5s,baz=338,slow=5.3,SNR=6.3						
SONM	Songino Array	59.62	50	P	P	02 34 35.2	+1.5
	comp=Z,2.9nm,0.6s,baz=287,slow=7.2,SNR=27						
SONM	Songino Array	59.62	50	P	P	02 34 34.5	+0.8
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	Songino Array	59.62	50	P	P	02 34 34.5	+0.8
SONM				IAmb	IAmb	02 34 35.5	
	comp=Z,2.5nm,0.8s						
ULN	Ulaanbaatar	60.03	50	ceP	P	02 34 37.3	+0.8
ULN				pmax	pmax		
	comp=Z,11nm,1.4s						
ULN	Ulaanbaatar	60.03	50	P	P	02 34 36.8	+0.3
TIXI	Tiksi	61.56	21	ceP	P	02 34 46.1	-0.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BOSA	Boshof	62.91	180	P	P	02 34 58.1	+2.1
	comp=Z,2.0nm,0.4s,baz=5.9,slow=7.6,SNR=20						
BOSA				LR	LR	03 06 15.0	
	comp=Z,97nm,19.0s,baz=9.0,slow=40						
SCHQ	Schefferville	63.75	320	P	P	02 35 01.7	+0.4
	comp=Z,4.6nm,0.5s,baz=89,slow=4.2,SNR=11						
CD2	Chengdu	64.33	69	P	P	02 35 07.4	+1.9
HHC	Hu-ho-hao-te	65.71	56	eP	P	02 35 16.8	+2.4
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,6.6s						
CMAR	Chiang Mai Arr	66.38	83	P	P	02 35 19.9	+1.1
	comp=Z,1.1nm,0.3s,baz=298,slow=7.7,SNR=7.9						
CMAR	Chiang Mai Arr	66.38	83	ceP	P	02 35 19.8	+0.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	66.38	83	P	P	02 35 20.1	+1.3
XAN	Xi'an	66.83	64	P	P	02 35 23.9	+2.3
XAN				pP	sP	02 35 35.0	-1.0
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
HIA	Hailar	67.21	45	P	P	02 35 23.9	+0.2
HIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HIA	Hailar	67.21	45	P	P	02 35 23.9	+0.2
A36M	Sachs Harbour	71.70	351	P	P	02 35 51.9	+0.9
A36M				IAmb	IAmb	02 36 06.1	
	comp=Z,8.2nm,0.8s						
BILL	Bilibino	73.50	14	eP	P	02 36 01.0	-0.8
BILL				e*PP	pP	02 36 13.0	+0.6
BILL				e		02 38 45.7	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,71nm,21.0s						
KLR	Kul'dur	73.99	41	ceP	P	02 36 06.2	+1.2
KLR				pmax	pmax		
	comp=Z,15nm,1.5s						
NJ2	Nanjing	75.08	61	eP	P	02 36 12.3	+0.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
USRK	Ussuriysk Ar.	77.03	45	P	P	02 36 23.0	+0.5
	comp=Z,1.6nm,0.5s,baz=288,slow=4.6,SNR=12						
USRK	Ussuriysk Ar.	77.03	45	P	P	02 36 23.0	+0.5
BMAR	Burnt Mountain	77.97	356	P	P	02 36 28.6	+1.2
YKA	Yellowknife Ar	78.02	342	P	P	02 36 28.1	+0.4
	comp=Z,1.9nm,0.5s,baz=30,slow=5.4,SNR=37						
KSAR	Wonju Array Be	78.38	53	P	P	02 36 31.2	+1.1
KSAR	Wonju Array Be	78.38	53	P	P	02 36 31.2	+1.1
KSRS	Korea Array	78.39	52	P	P	02 36 30.9	+0.6
	comp=Z,1.9nm,0.6s,baz=311,slow=4.3,SNR=4.7						
KSRS				LR	LR	03 16 32.7	
	comp=Z,28nm,18.5s,baz=315,slow=40						
ILAR	Eielson Array	80.74	357	P	P	02 36 43.1	+0.6
	comp=Z,0.5nm,0.5s,baz=333,slow=4.0,SNR=7.6						
DAWY	Dawson	80.90	353	P	P	02 36 43.8	+0.4
DAWY				IAmb	IAmb	02 36 57.0	
	comp=Z,3.8nm,0.8s						
BCAR	Beaver Creek A	82.10	354	P	P	02 36 50.1	+0.4
DHY	Denali Highway	82.45	357	P	P	02 36 52.8	+1.1
DHY				IAmb	IAmb	02 37 12.4	
	comp=Z,16nm,1.5s						
PETK	Petropavlovsk-	83.26	27	LR	LR	03 16 30.2	
	comp=Z,12nm,18.1s,baz=344,slow=38						
T47A	Sharon Grove	85.10	312	P	P	02 37 04.7	-0.9
BDFB	Brasilia	85.75	248	P	P	02 37 09.5	+0.3
	comp=Z,1.9nm,0.7s,baz=72,slow=4.7,SNR=4.2						
BDFB	Brasilia	85.75	248	IAmb	IAmb	02 37 18.5	
	comp=Z,5.9nm,1.2s						
WRA	Warramunga Arr	116.28	97	PKP	PKPdf	02 43 13.6	+0.3
	comp=Z,0.3nm,0.4s,baz=227,slow=2.1,SNR=8.0						
WRA	Warramunga Arr	116.28	97		PKPdf	02 43 12.9	-0.4
ASAR	Alice Springs	117.70	101	PKP	PKiKP	02 43 16.7	+0.7
	comp=Z,0.4nm,0.5s,baz=320,slow=1.6,SNR=5.4						
ASAR				PKKPab	PKKPab	02 53 38.9	-1.1
	comp=Z,0.4nm,0.9s,baz=116,slow=3.9,SNR=5.4						
ASAR	Alice Springs	117.70	101		PKPdf	02 43 16.0	0.0

ANF ***25*** *02:36:49.5±0.3, 41.°86N×119.°65W, h0km, ML3.7/15, Error ellipse: s-maj=3.2km s-min=2.5km az=40.0*

NEIC ***25*** *02:36:49.8, 41.°87N×119.°60W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.40; $M_{\theta\theta}$-2.10; $M_{\phi\phi}$1.69; $M_{r\theta}$1.98; $M_{\theta\phi}$1.33; $M_{\phi r}$1.15; Fault plane solution: $M_0$3.27000×10^{14} NP1:ϕ_s330.00000°, δ45.00000°, λ173.00000°. NP2:ϕ_s65.00000°, δ85.00000°, λ45.00000°. Principal axes: T 3.2770, Plg34.0000°, Azm298.0000°; N -0.0039, Plg45.0000°, Azm70.0000°; P -3.2730, Plg26.0000°, Azm189.0000°;*

REN ***25*** *02:36:49.8±1.8, 41.°87N±0.°04×119.°60W±0.°06, h11km±6km, ML3.9/5, ML3.4/90(NEIC), Mwr3.6/17(SLM) Error ellipse: s-maj=6.1km s-min=5.7km az=92.0*

NEIC ***25*** *02:36:50.1±1.8, 41.°88N±0.°04×119.°60W±0.°03, h9km±6km, Error ellipse: s-maj=5.9km s-min=3.1km az=165.0*

IDC ***25*** *02:36:50.1±0.8, 41.°92N×119.°65W, h0km, mb3.2/2, mb1 3.6/7, mb1mx3.3/47, mbtmp3.3/7, ML3.4/5, MS2.6/4, Ms1 2.6/4, ms1mx2.5/18, Error ellipse: s-maj=9.9km s-min=6.3km az=13.0*

ISC 25 02:36:50.2±0.7**, 41.°87N**±0.°02×**119.°58W**±0.°02**, h10**km**,**
n113, σ1.°29/122**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.54	274	Pg	Pg	02 37 00.3	-0.4
MOD	Modoc Plateau	0.54	274		Sg	02 37 08.0	+0.2
WVOR	Wild Horse Val	0.90	51	Pg	Pg	02 37 07.3	-0.2
WVOR				IAML		02 37 25.1	
	850nm,0.6s						
WVOR	Wild Horse Val	0.90	51		Sb	02 37 20.0	-0.1
K05A	Summer Lake	1.30	312	Pn	Pn	02 37 14.1	-0.5

M04C	**Macdoel**	**1.69**	**268**	P	**Pn**	**02 37 19.6**	**-0.3**
	baz=86,SNR=715						
M04C				Sb	**Sg**	**02 37 43.3**	**-1.2**
	baz=86						
J08A	**Circle Bar Ran**	**1.70**	**28**		**Pn**	**02 37 20.6**	**+0.6**
J08A				IAML		02 37 47.2	
	comp=N,573nm,0.7s						
J08A				IAML		02 37 49.7	
	comp=E,560nm,0.5s						
K04D	**Chiloquin, OR**	**1.78**	**296**	P	**Pn**	**02 37 20.9**	**-0.2**
	baz=115,SNR=140						
K04D				Sb	**Sg**	**02 37 46.3**	**-1.1**
	baz=115						
J05D	**Fort Rock, OR**	**1.87**	**320**	P	**Pn**	**02 37 22.3**	**-0.1**
	baz=139						
J05D				Sb	**Sg**	**02 37 49.5**	**-0.7**
	baz=139						
L04D	**Klamath Falls**	**2.06**	**281**	P	**Pn**	**02 37 24.5**	**-0.4**
	baz=99,SNR=502						
L04D				Sb	**Sg**	**02 37 54.5**	**-1.9**
	baz=99						
PAHR	**Pah Rah Range**	**2.17**	**176**		**Pn**	**02 37 26.5**	**+0.1**
PINE	**Pine Mountain**	**2.17**	**333**		**Pn**	**02 37 27.4**	**+0.9**
PINE				IAML		02 38 02.2	
	comp=N,286nm,0.4s						
PEAR	**Peavine Mounta**	**2.28**	**187**		**Pn**	**02 37 29.2**	**+1.1**
BMN	**Battle Mountai**	**2.29**	**128**		**Pn**	**02 37 29.2**	**+1.1**
BMN				IAML		02 38 04.3	
	comp=E,303nm,0.6s						
BMN				IAML		02 38 05.7	
	comp=N,290nm,0.8s						
O03E	**Paynes Creek**	**2.30**	**228**	P	**Pn**	**02 37 28.4**	**+0.2**
	baz=46,SNR=101						
O03E				Sb	**Sb**	**02 38 01.4**	**+1.1**
	baz=46						
J04D	**Umpqua Nationa**	**2.32**	**307**	P	**Pn**	**02 37 28.8**	**+0.2**
	baz=126,SNR=29						
J04D				Sb	**Sg**	**02 38 03.2**	**-1.4**
	baz=126						
YBH	**Yreka Blue Hor**	**2.34**	**268**	Pn	**Pn**	**02 37 28.4**	**-0.4**
	comp=N,15nm,0.3s,baz=51,slow=12,SNR=128						
YBH				LR	LR	02 38 00.3	
	comp=N,81nm,21.3s,baz=19,slow=31						
YBH				Lg	Lg	02 38 03.4	
	comp=N,29nm,0.3s,baz=353,slow=19,SNR=13						
YBH	**Yreka Blue Hor**	**2.34**	**268**		**Pn**	**02 37 28.2**	**-0.6**
YBH				IAML		02 38 04.6	
	comp=N,216nm,0.6s						
YBH	**Yreka Blue Hor**	**2.34**	**268**	Pn	**Pn**	**02 37 27.7**	**-1.1**
YBH	**Yreka Blue Hor**	**2.34**	**268**		**Sg**	**02 38 03.4**	**-2.1**
M02C	**Callahan**	**2.50**	**260**	P	**Pn**	**02 37 30.1**	**-0.9**
	baz=78,SNR=21						
M02C				Sb	**Sb**	**02 38 06.8**	**+0.8**
	baz=78						
N02D	**Trinity Center**	**2.52**	**250**	P	**Pn**	**02 37 30.5**	**-0.7**
	baz=68,SNR=11						
N02D				Sb	**Sb**	**02 38 07.8**	**+1.3**
	baz=68						
VCNR	**Virginia City**	**2.57**	**181**		**Pn**	**02 37 32.1**	**0.0**
WDC	**Whiskeytown Da**	**2.58**	**241**		**Pn**	**02 37 31.5**	**-0.5**
WDC				IAML		02 38 11.1	
	comp=N,154nm,0.7s						
MPK	**Martis Peak**	**2.59**	**188**		**Pb**	**02 37 35.0**	**-1.9**
MPK				IAML		02 38 20.5	
	comp=N,180nm,0.5s						
MPK				IAML		02 38 25.3	
	comp=E,187nm,1.0s						
ORV	**Oroville**	**2.73**	**213**		**Pn**	**02 37 35.0**	**+0.9**
ORV	**Oroville**	**2.73**	**213**	Pn	**Pn**	**02 37 33.7**	**-0.4**
PNTR	**Pine Nut**	**2.78**	**180**		**Pn**	**02 37 35.7**	**+0.8**
PNTR				IAML		02 38 36.6	
	comp=E,198nm,1.2s						
I05D	**Terrebonne, OR**	**2.78**	**333**	Pb	**Pb**	**02 37 40.0**	**-0.1**
	baz=152						
I05D				Sb	**Sg**	**02 38 16.8**	**-2.8**
	baz=152						
I04A	**Tendick Farm,**	**2.83**	**314**	Pb	**Pb**	**02 37 40.6**	**-0.3**
	baz=132,SNR=11						
I04A				Sb	**Sg**	**02 38 18.0**	**-3.2**
	baz=132						
RUBR	**Rubicon Trail**	**2.85**	**189**	Pn	**Pn**	**02 37 35.9**	**0.0**
RUBR				IAML		02 37 53.2	
	comp=E,109nm,0.7s						
RUBR				IAML		02 38 24.4	
	comp=N,122nm,1.4s						
YERR	**Yerington**	**2.89**	**175**		**Pn**	**02 37 36.0**	**-0.4**
EMB	**Emerald Bay**	**2.92**	**188**	Pn	**Pn**	**02 37 37.4**	**+0.5**
EMB				IAML		02 38 25.8	
	comp=E,89nm,0.6s						
EMB				IAML		02 38 26.7	
	comp=N,88nm,0.8s						
O02D	**Mt. Diablo Mer**	**2.96**	**236**	Pb	**Pb**	**02 37 42.3**	**-0.8**
	baz=54,SNR=10.0						
O02D				Sb	**Sb**	**02 38 21.2**	**+2.0**
	baz=54						
L02E	**Cave Junction**	**3.01**	**277**	P	**Pn**	**02 37 38.4**	**+0.4**
	baz=94						
L02E				Sb	**Sb**	**02 38 22.2**	**+1.5**
	baz=94						
KVN	**Kaiserville**	**3.03**	**158**		**Pn**	**02 37 39.5**	**+1.1**
KVN				IAML		02 38 30.7	
	comp=E,131nm,0.6s						
KVN				IAML		02 38 35.7	
	comp=N,88nm,0.9s						
K02D	**Willamette Mer**	**3.14**	**287**	P	**Pn**	**02 37 40.3**	**+0.6**
	baz=104						
MFID	**Camas Ranch**	**3.17**	**60**		**Pn**	**02 37 41.0**	**+0.8**
KHMM	**Horse Mountain**	**3.28**	**254**	Pn	**Pn**	**02 37 41.3**	**-0.4**
KHMM				IAML		02 38 45.7	
	comp=N,104nm,1.5s						
KHMM				IAML		02 38 49.2	
	comp=E,126nm,2.2s						
I03D	**Drain, OR**	**3.32**	**305**	Sb	**Sb**	**02 38 32.2**	**+2.6**
	baz=122						
RYN	**Ryan**	**3.34**	**166**		**Pn**	**02 37 42.2**	**-0.4**
RYN				IAML		02 38 39.5	
	comp=N,87nm,0.5s						
RYN				IAML		02 38 42.2	
	comp=E,120nm,0.9s						
H04A	**Detroit Lake**	**3.40**	**327**	Pn	**Pn**	**02 37 43.0**	**-0.3**
BMO	**Blue Mountains**	**3.41**	**28**		**Pn**	**02 37 44.0**	**+0.5**
G08A	**Pilot Rock**	**3.45**	**7**		**Pn**	**02 37 44.7**	**+0.6**
ELK	**Elko**	**3.46**	**108**	Pn	**Pn**	**02 37 46.3**	**+2.0**
	comp=E,8.1nm,0.3s,baz=297,slow=12,SNR=50						
ELK				Lg	Lg	02 38 36.1	
	comp=E,22nm,0.3s,baz=28,slow=21,SNR=15						
ELK				LR	LR	02 38 43.8	
	comp=E,64nm,19.7s,baz=323,slow=32						
NVAR	**Mina Array Bea**	**3.57**	**164**	Pn	**Pn**	**02 37 47.6**	**+1.7**
	comp=E,1.9nm,0.3s,baz=342,slow=12,SNR=27						
NVAR				Pg	**Pg**	**02 37 56.2**	**-2.4**
	comp=E,7.1nm,0.3s,baz=340,slow=15,SNR=29						
NVAR				Lg	Lg	02 38 44.4	
	comp=E,20nm,0.3s,baz=345,slow=32,SNR=10						
NVAR	**Mina Array Bea**	**3.57**	**164**		**Pn**	**02 37 45.9**	**+0.1**
NVAR	**Mina Array Bea**	**3.57**	**164**		**Sg**	**02 38 44.4**	**-0.5**
NV11	**Mina Array Sit**	**3.60**	**162**		**Pn**	**02 37 46.9**	**+0.7**
NV11				IAML		02 38 48.0	
	comp=N,50nm,0.6s						
NV11				IAML		02 38 53.0	
	comp=E,49nm,0.8s						
LHV	**Little Huntoon**	**3.71**	**167**		**Pn**	**02 37 46.5**	**-1.0**
HOOD	**Mount Hood Mea**	**3.77**	**337**	Pn	**Pn**	**02 37 47.0**	**-1.4**
HOOD				IAML		02 38 54.9	
	comp=N,80nm,1.4s						
HOOD				IAML		02 38 55.2	
	comp=E,76nm,0.8s						
CMB	**Columbia Colle**	**3.88**	**189**		**Pn**	**02 37 49.5**	**-0.4**
F07A	**Phinny Hill Vi**	**4.03**	**357**	Pn	**Pn**	**02 37 51.0**	**-0.9**
F07A				IAML		02 39 09.0	
	comp=E,57nm,0.8s						
PLID	**Pearl Lake**	**4.14**	**38**	Pn	**Pn**	**02 37 52.9**	**-0.7**
HLID	**Hailey**	**4.17**	**64**		**Pn**	**02 37 53.1**	**-0.8**
HLID				IAML		02 39 03.9	
	comp=E,76nm,0.9s						
HLID				IAML		02 39 19.0	
	comp=E,56nm,1.0s						
HLID	**Hailey**	**4.17**	**64**	P	**Pn**	**02 37 54.2**	**+0.2**
	baz=248						
TPH	**Tonopah**	**4.20**	**154**		**Pn**	**02 37 55.1**	**+0.7**
F10A	**Beach Ranch, E**	**4.44**	**22**	Pn	**Pn**	**02 37 57.0**	**-0.6**
F10A				IAML		02 39 18.0	
	comp=E,28nm,2.5s						
F10A				IAML		02 39 30.7	
	comp=N,35nm,4.0s						
HAWA	**Hanford**	**4.52**	**0**		**Pn**	**02 37 58.3**	**-0.4**
HAWA				IAML		02 39 27.2	
	comp=N,25nm,0.9s						
E08A	**Dider Farm, El**	**4.64**	**4**	Pn	**Pn**	**02 37 59.4**	**-0.9**
E08A				IAML		02 39 32.0	
	comp=E,35nm,1.0s						
DSP	**Deep Springs**	**4.66**	**164**		**Pn**	**02 38 04.5**	**+3.9**
R11A	**Troy Canyon, C**	**4.66**	**138**		**Pn**	**02 38 00.5**	**-0.3**
R11A				IAML		02 39 21.7	
	comp=E,34nm,1.2s						
R11A				IAML		02 39 22.1	
	comp=N,35nm,0.8s						
R11A	**Troy Canyon, C**	**4.66**	**138**	P	**Pn**	**02 38 02.0**	**+1.2**
	baz=320						
E07A	**Sunnyside**	**4.69**	**358**	Pn	**Pn**	**02 38 00.7**	**-0.4**
E07A				IAML		02 39 44.9	
	comp=N,28nm,3.3s						
E07A				IAML		02 39 48.9	
	comp=E,28nm,2.0s						
E09A	**Wood Farm, Sta**	**4.76**	**12**	Pn	**Pn**	**02 38 01.1**	**-0.8**
LCH	**Last Change Ra**	**4.87**	**161**		**Pn**	**02 38 03.2**	**-0.4**
LCH				IAML		02 39 30.4	
	comp=E,20nm,0.7s						
BGU	**Big Grassy Mou**	**5.02**	**99**		**Pn**	**02 38 08.7**	**+3.1**
BGU	**Big Grassy Mou**	**5.02**	**99**	IAML		02 39 36.6	
	comp=N,22nm,0.7s						
BGU				IAML		02 39 40.6	
	comp=E,40nm,0.9s						
HVU	**Hansel Valley**	**5.09**	**89**		**Pn**	**02 38 10.3**	**+3.8**
D08A	**Wollman Farm,**	**5.21**	**5**	Pn	**Pn**	**02 38 08.8**	**+0.7**
D08A				IAML		02 39 49.8	
	comp=E,19nm,2.9s						
D08A				IAML		02 39 54.8	
	comp=N,18nm,3.6s						
DUG	**Dugway, Tooele**	**5.38**	**106**		**Pn**	**02 38 10.4**	**-0.2**
DUG	**Dugway, Tooele**	**5.38**	**106**	P	**Pn**	**02 38 12.8**	**+2.1**
	baz=290						
LTY	**Liberty**	**5.44**	**352**	Pn	**Pn**	**02 38 12.0**	**+0.6**
LTY					Lg	02 39 47.1	
MCA	**Marble Canyon**	**5.51**	**160**		**Pn**	**02 38 16.1**	**+3.8**
TPNV	**Topopah Spring**	**5.55**	**151**	Pn	**Pn**	**02 38 12.9**	**-0.1**
PRN	**Pahroc Range**	**5.66**	**140**		**Pn**	**02 38 15.3**	**+0.8**
MCMT	**McKenzie Canyo**	**5.73**	**57**		**Pn**	**02 38 15.6**	**+0.1**
NLU	**North Lily Min**	**6.00**	**106**	Pn	**Pn**	**02 38 18.3**	**-0.8**
CTU	**Camp Tracy**	**6.01**	**99**	Pn	**Pn**	**02 38 17.5**	**-1.8**
CTU					Lg	02 40 04.2	
GWY	**Greenwater Val**	**6.11**	**157**	Pn	**Pn**	**02 38 19.8**	**-0.9**
DLMT	**Dillon**	**6.15**	**53**	Pn	**Pn**	**02 38 20.1**	**-1.1**
ISA	**Isabella, Lake**	**6.26**	**172**	Pn	**Pn**	**02 38 22.3**	**-0.3**
ISA					LR	02 40 09.9	
MPU	**Maple Canyon**	**6.29**	**104**	Pn	**Pn**	**02 38 23.5**	**+0.3**
MPU					Lg	02 40 16.4	
AHID	**Auburn Hatcher**	**6.35**	**79**		**Pb**	**02 38 38.7**	**-2.2**
TCRU	**Three Creeks R**	**6.35**	**118**	Pn	**Pn**	**02 38 24.8**	**+0.7**
SHPR	**Sheep Range**	**6.36**	**146**	Pn	**Pn**	**02 38 23.3**	**-0.8**
SHPR					LR	02 40 14.1	
MSO	**Missoula**	**6.40**	**37**	Pn	**Pn**	**02 38 23.9**	**-0.6**
CCUT	**Cedar City**	**6.45**	**130**	Pn	**Pn**	**02 38 25.5**	**+0.2**
LRM	**Limekiln Ridge**	**6.49**	**50**	Pn	**Pn**	**02 38 25.9**	**-0.1**
MVU	**Marysvale**	**6.57**	**118**	Pn	**Pn**	**02 38 27.7**	**+0.7**
REDW	**Red Top Meadow**	**6.61**	**74**	Pn	**Pn**	**02 38 27.5**	**-0.1**
YHL	**Hebgen Lake**	**6.81**	**61**		**Pg**	**02 38 58.1**	**-2.4**
LOHW	**Long Hollow**	**6.83**	**72**	Pn	**Pn**	**02 38 30.1**	**-0.6**
MTPU	**Mount Pierson**	**6.85**	**122**	Pn	**Pn**	**02 38 30.0**	**-1.0**
BOZ	**Bozeman (W)**	**6.86**	**54**	Pn	**Pn**	**02 38 30.6**	**-0.3**
BOZ					Lg	02 40 34.5	
TMUT	**Trail Mountain**	**6.87**	**109**	Pn	**Pn**	**02 38 30.3**	**-0.9**
YMR	**Madison River**	**6.88**	**63**	Pn	**Pn**	**02 38 31.2**	**-0.1**
LCMT	**Little Creek M**	**6.90**	**133**	Pn	**Pn**	**02 38 31.7**	**+0.3**
LCMT					LR	02 40 28.0	
Q16A	**Castle Valley**	**7.06**	**112**	Pn	**Pn**	**02 38 33.7**	**0.0**
Q16A					Lg	02 40 42.7	
KNB	**Kanab**	**7.13**	**131**	Pn	**Pn**	**02 38 32.5**	**-2.2**
PKCU	**Pink Cliffs**	**7.14**	**126**	Pn	**Pn**	**02 38 34.2**	**-0.7**
SRU	**San Rafael Swe**	**7.43**	**109**	Pn	**Pn**	**02 38 38.8**	**0.0**
P18A	**Preston Nutter**	**7.43**	**104**	Pn	**Pn**	**02 38 38.3**	**-0.6**
PD31	**Pinedale Array**	**7.48**	**80**	Pn	**Pn**	**02 38 39.5**	**-0.1**
PDAR	**Pinedale Array**	**7.48**	**80**	Pn	Pn	02 38 45.4	+5.8
	comp=N,0.1nm,0.3s,baz=252,slow=11,SNR=6.8						
PDAR				Pg	**Pb**	**02 39 01.1**	**+1.0**
	comp=N,0.3nm,0.3s,baz=260,slow=10.0,SNR=6.7						
PDAR				Lg	Lg	02 40 48.4	
	comp=N,0.1nm,0.3s,baz=271,slow=14,SNR=1.7						
PDAR				LR	LR	02 42 02.5	
	comp=N,47nm,20.9s,baz=268,slow=42						
PDAR	**Pinedale Array**	**7.48**	**80**	Pn	**Pn**	**02 38 38.2**	**-1.4**
RDMU	**Red Mountain**	**7.66**	**96**	Pn	**Pn**	**02 38 41.4**	**-0.6**
ANMO	**Albuquerque**	**12.39**	**120**	LR	LR	02 44 44.1	
	comp=N,61nm,18.5s,baz=12,slow=38						
TXAR	**Lajitas Array**	**17.96**	**129**	P	**P**	**02 41 03.5**	**+2.9**
	comp=N,0.0nm,0.3s,baz=321,slow=7.0,SNR=4.1						
YKA	**Yellowknife Ar**	**20.87**	**6**	P	Pn	02 41 33.9	-0.6
	comp=N,0.3nm,0.8s,baz=193,slow=11,SNR=4.2						
YKA	**Yellowknife Ar**	**20.87**	**6**		Pn	02 41 33.9	-0.6
ILAR	**Eielson Array**	**27.72**	**335**	P	**P**	**02 42 40.9**	**+2.5**
	comp=N,0.6nm,0.8s,baz=150,slow=7.3,SNR=5.2						
ILAR	**Eielson Array**	**27.72**	**335**	P	**P**	**02 42 40.9**	**+2.5**

IDC ***25*** *02:39:28.0±2.8, 31°.74S×71°.63W, h0^{km}, mb4.0/2, mb1 3.9/3, mb1mx3.7/20, mbtmp3.8/3, ML3.5/1, MS3.5/2, Ms1 3.4/2, ms1mx2.9/24, Error ellipse: s-maj=95.2km s-min=40.4km az=109.0*

NEIC ***25*** *02:39:29.4±1.4, 31°.78S±0°.02×72°.2W±0°.1, h24^{km}±10^{km}, mb4.1/2, ML3.6(GUC), Error ellipse: s-maj=16.3km s-min=2.6km az=85.0*

GUC ***25*** *02:39:30.6±0.8, 31°.81S×71°.79W, h27^{km}±5^{km}, ML3.6*

ISC 25 02:39:27.1±3.3, **31°.80S**±0°.04×**72°.12W**±0°.09, **h5**^{km}±22^{km}, **n39**, σ**0^{s}.98**/44, **5C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	**Catapilco**	**1.03**	**138**	*e*P	**Pb**	**02 39 47.1**	**-0.3**
VA06				*e*S	**Sb**	**02 39 59.9**	**-1.4**
VA06				IAML		02 40 08.9	
	comp=N,3µm,0.6s						
CO06	**Fray Jorge**	**1.19**	**20**	Pn	**Pn**	**02 39 50.2**	**-0.2**
VA01	**Torpederas**	**1.29**	**162**	Pn	**Pn**	**02 39 52.4**	**+0.7**
ROCH	**El Roble**	**1.50**	**142**	⇑*e*P	**Pb**	**02 39 55.4**	**-0.2**
ROCH				⇑*e*P	**Pn**	**02 39 55.0**	**+0.2**
ROCH				*e*S	**Sn**	**02 40 14.1**	**-0.8**
ROCH				*e*S	**Sb**	**02 40 14.3**	**-0.7**
ROCH				IAML		02 40 21.3	
	comp=N,2µm,0.3s						
ROCH				IAML		02 40 21.7	
	comp=N,2µm,0.5s						
CO03	**El Pedregal**	**1.55**	**52**	Pn	**Pn**	**02 39 56.6**	**+1.2**
VA03	**San Esteban**	**1.64**	**126**		**Pn**	**02 39 57.6**	**+0.9**
MT02	**Curacav**	**1.68**	**151**	Pn	**Pn**	**02 39 57.9**	**+0.8**
PEL	**Peldehue**	**1.81**	**138**	*e*P	**Pn**	**02 39 59.6**	**+0.7**
PEL				*e*S	**Sn**	**02 40 22.1**	**-0.2**
PEL				IAML		02 40 30.6	
	comp=E,1µm,0.8s						
PEL	**Peldehue**	**1.81**	**138**		**Pn**	**02 39 59.8**	**+0.9**
VA05	**Santo Domingo**	**1.91**	**167**	⇑*e*P	**Pn**	**02 40 00.4**	**+0.2**
VA05				*e*S	**Sb**	**02 40 27.7**	**+1.3**
VA05				IAML		02 40 37.3	
	comp=N,1µm,0.6s						
VA05	**Santo Domingo**	**1.91**	**167**	Pn	**Pn**	**02 40 00.3**	**+0.1**
MT05	**Renca**	**1.97**	**144**	⇑*e*P	**Pn**	**02 40 02.0**	**+0.8**
MT05				*e*S	**Sn**	**02 40 26.9**	**+0.5**
MT05				IAML		02 40 35.9	
	comp=E,2µm,0.3s						
MT05	**Renca**	**1.97**	**144**		**Pn**	**02 40 02.3**	**+1.1**
GO04	**Tololo Observa**	**1.97**	**35**	*e*P	**Pn**	**02 40 02.5**	**+1.1**
GO04				*e*S	**Sb**	**02 40 28.4**	**-0.2**
GO04	**Tololo Observa**	**1.97**	**35**	Pn	**Pn**	**02 40 03.1**	**+1.7**
CO05	**La Serena**	**2.02**	**22**	⇑*e*P	**Pn**	**02 40 03.0**	**+1.3**
CO05				*e*S	**Sb**	**02 40 30.1**	**+0.5**
CO05				IAML		02 40 43.1	
	comp=E,614nm,0.7s						
CO05	**La Serena**	**2.02**	**22**	Pn	**Pn**	**02 40 03.4**	**+1.6**
FCH	**Farellones**	**2.17**	**135**	*e*P	**Pn**	**02 40 05.3**	**+1.1**
FCH				*e*S	**Sn**	**02 40 32.4**	**+0.8**
FCH				IAML		02 40 37.9	
	comp=E,746nm,0.2s						
MT01	**Popeta**	**2.19**	**161**	Pn	**Pn**	**02 40 04.1**	**0.0**
MT09	**Talagante**	**2.19**	**155**	*e*P	**Pn**	**02 40 05.8**	**+1.5**
MT09				⇓*e*S	**Sn**	**02 40 32.3**	**+0.4**
MT09				IAML		02 40 43.6	
	comp=N,603nm,0.4s						
MT09	**Talagante**	**2.19**	**155**		**Pn**	**02 40 06.1**	**+1.8**
BO01	**Tunca**	**2.73**	**162**	Pn	**Pn**	**02 40 12.2**	**+0.6**
LCO	**Las Campanas**	**3.03**	**24**	Pn	**Pn**	**02 40 16.6**	**+0.6**
BO02	**Sierra Bellavi**	**3.19**	**160**	Pn	**Pn**	**02 40 19.1**	**+1.1**
GO05	**Huala**	**3.21**	**177**	Pn	**Pn**	**02 40 18.5**	**+0.3**
AC04	**Llanos de Chal**	**3.69**	**14**	Pn	**Pn**	**02 40 24.4**	**-0.3**
AC02	**Maricunga**	**5.59**	**29**		**Pn**	**02 40 51.0**	**-0.3**
H03N1	**Juan Fernandez**	**5.96**	**252**	T	T	02 47 41.3	
	baz=78,slow=72,SNR=487						
H03N3	**Juan Fernandez**	**5.98**	**252**	T	T	02 47 36.2	
	baz=78,slow=72,SNR=543						
H03N2	**Juan Fernandez**	**5.98**	**252**	T	T	02 47 40.7	
	baz=78,slow=72,SNR=509						
LC01	**Cunco**	**7.09**	**178**	Pn	**Pn**	**02 41 11.3**	**-0.2**
PLCA	**Paso Flores**	**9.01**	**172**	Pn	**Pn**	**02 41 39.0**	**+1.1**
	comp=N,0.1nm,0.3s,baz=342,slow=15,SNR=5.8						
PLCA				LR	LR	02 45 25.2	
	comp=N,111nm,18.4s,baz=163,slow=40						
LL07	**Hotel Espejo d**	**11.07**	**185**	Pn	**Pn**	**02 42 05.8**	**-0.2**
BDFB	**Brasilia**	**27.21**	**59**	P	**P**	**02 45 09.5**	**-2.6**
	comp=N,2.1nm,0.7s,baz=240,slow=12,SNR=3.6						
BDFB	**Brasilia**	**27.21**	**59**	IAmb	IAmb	02 45 17.6	
	comp=Z,9.1nm,1.3s						
ANMO	**Albuquerque**	**73.82**	**331**	LR	LR	03 18 44.1	
	comp=Z,68nm,18.6s,baz=30,slow=32						
TORD	**Torodi Ar. Bea**	**83.53**	**70**	P	**P**	**02 51 57.0**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=236,slow=4.3,SNR=6.7						
TORD	**Torodi Ar. Bea**	**83.53**	**70**	IAmb	IAmb	02 52 07.1	
	comp=Z,1.3nm,1.1s						
ZALV	**Zalesovo Beam**	**152.38**	**30**	PKPbc	**PKiKP**	**02 59 24.3**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=296,slow=5.4,SNR=3.5						

GUC ***25*** *02:46:58.9±0.9, 33°.23S×71°.61W, h17^{km}±9^{km}, ML3.8*

IDC ***25*** *02:47:03.3±4.6, 33°.43S×71°.63W, h81^{km}±50^{km}, mb3.1/2, mb1 3.3/5, mb1mx3.3/20, mbtmp3.4/5, ML3.5/3, MS3.0/1, Ms1 3.0/1, ms1mx2.5/9, Error ellipse: s-maj=51.7km s-min=36.2km az=123.0*

ISC 25 02:46:58.2±1.1, **33°.18S**±0°.04×**71°.78W**±0°.06, **h28**^{km}±7^{km}, **n26**, σ**0^{s}.91**/27, **1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA01	**Torpederas**	**0.20**	**35**	⇓*i*P	**Pb**	**02 47 04.0**	**-0.1**
VA01				*i* S	**Sb**	**02 47 08.2**	**+0.2**
VA01				IAML		02 47 08.7	
	comp=N,21µm,0.1s						
VA05	**Santo Domingo**	**0.49**	**163**	*e*P	**Pb**	**02 47 08.1**	**-0.3**
VA05				*e*S	**Sb**	**02 47 15.0**	**-0.3**
ROCH	**El Roble**	**0.68**	**72**	*e*P	**Pn**	**02 47 11.4**	**-0.8**
ROCH				*e*P	**Pb**	**02 47 10.7**	**-1.0**
ROCH				*e*S	**Sb**	**02 47 20.0**	**-0.9**
ROCH				*i* S	**Sn**	**02 47 20.2**	**-1.8**
ROCH				IAML		02 47 22.9	
	comp=N,9µm,0.3s						
ROCH				IAML		02 47 23.3	
	comp=N,13µm,0.3s						
MT09	**Talagante**	**0.89**	**132**	*e*P	**Pn**	**02 47 14.7**	**-0.2**
MT09				*e*S	**Sb**	**02 47 25.4**	**-1.3**
MT09				IAML		02 47 28.4	
	comp=N,7µm,0.5s						
MT05	**Renca**	**0.90**	**104**	*e*P	**Pn**	**02 47 14.7**	**-0.3**
MT05				*e*S	**Sn**	**02 47 27.2**	**+0.1**
MT05				IAML		02 47 29.5	
	comp=E,9µm,0.3s						
PEL	**Peldehue**	**0.92**	**88**	*e*P	**Pn**	**02 47 15.4**	**+0.1**
PEL				*e*S	**Sn**	**02 47 27.1**	**-0.5**
PEL				IAML		02 47 30.0	
	comp=N,6µm,0.4s						
FCH	**Farellones**	**1.26**	**97**	*e*P	**Pb**	**02 47 21.1**	**-0.4**
FCH				*e*S	**Sn**	**02 47 37.1**	**+0.7**
FCH				IAML		02 47 39.0	
	comp=E,4µm,0.4s						
LMEL	**Las Melosas**	**1.48**	**117**	*e*P	**Pn**	**02 47 23.2**	**+0.1**
LMEL				*e*S	**Sb**	**02 47 44.5**	**+1.1**
LMEL				IAML		02 47 48.1	
	comp=N,4µm,0.4s						
GO05	**Huala**	**1.82**	**184**	*e*P	**Pn**	**02 47 26.8**	**-1.0**
GO05				IAML		02 47 58.5	
	comp=N,308nm,0.4s						
ML02	**Panimavida**	**2.59**	**173**	*e*P	**Pn**	**02 47 37.7**	**-0.5**
ML02				IAML		02 48 23.2	
	comp=E,513nm,0.7s						
GO04	**Tololo Observa**	**3.12**	**16**	*e*P	**Pn**	**02 47 45.7**	**0.0**
CO05	**La Serena**	**3.29**	**8**	*e*P	**Pn**	**02 47 47.2**	**-0.7**
CO05				IAML		02 48 44.0	
	comp=E,436nm,0.6s						
H03N1	**Juan Fernandez**	**5.97**	**266**	T	T	02 54 59.1	
	baz=90,slow=74,SNR=18						
H03N3	**Juan Fernandez**	**5.98**	**265**	T	T	02 54 58.8	
	baz=90,slow=74,SNR=25						
H03S1	**Juan Fernandez**	**5.99**	**262**	T	T	02 54 29.3	
	baz=86,SNR=444						
H03S3	**Juan Fernandez**	**5.99**	**262**	T	T	02 54 30.6	
	baz=86,SNR=380						
H03N2	**Juan Fernandez**	**5.99**	**266**	T	T	02 55 00.1	
	baz=90,slow=74,SNR=20						
H03S2	**Juan Fernandez**	**6.00**	**262**	T	T	02 54 30.3	
	baz=86,SNR=583						
PLCA	**Paso Flores**	**7.60**	**173**	P	**Pn**	**02 48 48.0**	**+0.9**
	comp=E,0.1nm,0.3s,baz=354,slow=11,SNR=4.7						
CPUP	**Villa Florida**	**14.28**	**65**	P	**Pn**	**02 50 20.1**	**+1.5**
	comp=E,0.1nm,0.3s,baz=225,slow=13,SNR=2.0						
CPUP				LR	LR	02 56 47.2	
	comp=E,52nm,19.1s,baz=218,slow=41						
SIV	**San Ignacio**	**19.67**	**32**	P	**Pn**	**02 51 28.3**	**+1.6**
	comp=E,0.1nm,0.3s,baz=203,slow=13,SNR=2.5						
TXAR	**Lajitas Array**	**69.13**	**330**	P	**P**	**02 58 02.5**	**+0.5**
	comp=E,0.3nm,0.7s,baz=150,slow=7.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**83.73**	**70**	P	**P**	**02 59 23.6**	**-1.3**
	comp=E,0.5nm,1.1s,baz=222,slow=5.6,SNR=1.3						
H11S2	**WAKE ISLAND Hy**	**125.99**	**270**	T	T	05 24 44.1	
	baz=118,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**126.01**	**270**	T	T	05 24 44.8	
	baz=118,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	**126.01**	**270**	T	T	05 24 45.4	
	baz=118,slow=75,SNR=9.8						

NIC ***25*** *03:00:17.0±0.0, 34°.32N×32°.89E, h5^{km}±1^{km}, Ml3.1/5*

DDA ***25*** *03:00:19.6, 34°.62N×32°.95E, h10^{km}±1^{km}, ML2.5*

ISK ***25*** *03:00:20.6, 34°.59N×32°.86E, h4^{km}, ML3.0/27*

GII ***25*** *03:00:22.7±0.0, 34°.48N×33°.05E, h2^{km}, MD2.4/5, Mm2.9/3*

ISC 25 03:00:20.1±1.3, **34°.53N**±0°.02×**32°.82E**±0°.03, **h4**^{km}±10^{km}, **n78**, σ**1^{s}.23**/112, **1C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NATA	**Nata**	**0.32**	**320**	⇑*e*P	**Pb**	**03 00 28.1**	**-0.4**
NATA				S	**Sb**	**03 00 36.0**	**+1.9**
NATA				AML	AML	03 00 38.5	
	11nm,0.3s						
NATA				AML	AML	03 00 38.5	
	11nm,0.3s						
NATA				AML	AML	03 00 45.3	
	10.0nm,0.5s						
NATA				AML	AML	03 00 45.3	
	10.0nm,0.5s						
ASGA	**Asgata**	**0.43**	**54**	⇓*e*P	**Pg**	**03 00 28.9**	**+0.5**
ASGA				S	**Sb**	**03 00 37.2**	**0.0**
ASGA				AML	AML	03 00 37.6	
	4.3nm,0.2s						
ASGA				AML	AML	03 00 37.6	
	4.3nm,0.2s						
ASGA				AML	AML	03 00 38.4	
	10nm,0.4s						
ASGA				AML	AML	03 00 38.4	
	10nm,0.4s						
LEF	**Lefka**	**0.59**	**5**	PG	**Pg**	**03 00 31.4**	**0.0**
LEF				SG	**Sg**	**03 00 39.4**	**+0.3**
CSS	**Mathiatis**	**0.60**	**44**	PG	**Pg**	**03 00 31.7**	**+0.1**
CSS				SG	**Sg**	**03 00 39.8**	**+0.4**
CSS	**Mathiatis**	**0.60**	**44**	P	**Pg**	**03 00 31.3**	**-0.4**
CSS				S	**Sb**	**03 00 42.8**	**+0.8**
AKMS	**Akamas**	**0.63**	**321**	P	**Pb**	**03 00 33.1**	**-0.6**
AKMS				S	**Sn**	**03 00 46.0**	**-0.3**
AKMS				AML	AML	03 00 46.8	
	2.3nm,0.2s						
AKMS				AML	AML	03 00 46.8	
	2.3nm,0.2s						
AKMS				AML	AML	03 00 48.7	
	2.6nm,0.3s						
AKMS				AML	AML	03 00 48.7	
	2.6nm,0.3s						
ALFC	**Alefka**	**0.65**	**344**	P	**Pg**	**03 00 32.4**	**-0.2**
ALFC				AML	AML	03 00 45.1	
	3.4nm,0.6s						

ALFC				AML	AML	03 00 45.1	
	3.4nm,0.6s						
ALFC				AML	AML	03 00 45.5	
	2.4nm,0.2s						
ALFC				AML	AML	03 00 45.5	
	2.4nm,0.2s						
ALFC				S	Sn	03 00 46.9	0.0
AKIN	Akıncılar- Kıb	0.72	47	PG	Pg	03 00 33.7	-0.2
ATHAL	Athalassa	0.77	38	P	Pg	03 00 34.6	-0.3
AKDN	Akdeniz- Kıbrı	0.77	9	PG	Pg	03 00 35.0	0.0
MVOU	Mavrovouni	0.82	54	P	Pg	03 00 34.9	-1.0
MVOU				S	Sb	03 00 48.5	0.0
MVOU				AML	AML	03 00 49.9	
	1.4nm,0.6s						
MVOU				AML	AML	03 00 49.9	
	1.4nm,0.6s						
MVOU				AML	AML	03 00 57.3	
	1.1nm,0.4s						
MVOU				AML	AML	03 00 57.3	
	1.1nm,0.4s						
LFK	Lefkose	0.95	38	PG	Pg	03 00 38.4	+0.1
LFK				SG	Sg	03 00 51.1	+0.5
EREN	Erenkoy	1.49	48	*i*P	Pg	03 00 49.4	+0.7
EREN	Erenkoy	1.49	48	PN	Pn	03 00 48.0	+0.4
BOZY	Bozyazi-Mersin	1.58	5	PN	Pn	03 00 49.3	+0.5
TEKE	Tekeli-Mersin	1.62	8	PN	Pn	03 00 49.7	+0.2
OSC1	CSNet OBS 1	1.65	232	S	Sn	03 01 07.5	-3.9
YORU	Yoruktepe-Mers	1.69	16	PN	Pn	03 00 50.9	+0.5
AKK2	Akkuyu-Mersin	1.71	20	PN	Pn	03 00 51.1	+0.4
AKK1	Akkuyu-Mersin	1.71	20	PN	Pn	03 00 51.2	+0.5
AKKU	Akkuyu-Mersin	1.73	20	PN	Pn	03 00 50.9	-0.1
GAZI	Gazipasa	1.75	346	*i*P	Pn	03 00 49.5	-1.7
GAZI				*i*S	Sn	03 01 10.9	-3.2
GAZI				IAML		03 01 13.0	
	comp=E,52nm,0.6s						
GAZI				IAML		03 01 14.0	
	comp=Z,58nm,0.6s						
GAZI				IAML		03 01 14.0	
	comp=N,70nm,0.4s						
GULN	MERSIN_Gulnar	1.75	19	*i*P	Pn	03 00 50.9	-0.3
GULN				*i*S	Sn	03 01 13.0	-1.0
GULN				IAML		03 01 14.0	
	comp=E,42nm,0.4s						
GULN				IAML		03 01 17.0	
	comp=N,49nm,0.8s						
TISA	Tisan-Mersin	1.77	23	PN	Pn	03 00 51.9	+0.4
YESI	Yesilovacik-Me	1.79	22	PN	Pn	03 00 52.3	+0.5
KARG	Kargicak-Mersi	1.82	23	PN	Pn	03 00 52.7	+0.5
BERE	Bereket-Mersin	1.84	10	PN	Pn	03 00 52.9	+0.3
IKL	Isikli	1.84	22	PN	Pn	03 00 52.8	+0.3
TEVE	Tevekalti-Mers	1.97	15	PN	Pn	03 00 54.8	+0.5
SILI	Silifke-Mersin	2.04	26	PN	Pn	03 00 55.8	+0.6
KEBE	Keben-Mersin	2.04	21	PN	Pn	03 00 55.8	+0.4
ERMK	Ermenek	2.11	2	*i*P	Pn	03 00 56.3	-0.1
ERMK				*i*S	Sn	03 01 23.9	+0.7
ERMK				IAML		03 01 29.0	
	comp=N,56nm,0.3s						
ERMK				IAML		03 01 34.0	
	comp=E,60nm,0.3s						
KIZK	Mersin	2.22	29	*i*P	Pn	03 00 56.7	-1.1
KIZK				*i*S	Sn	03 01 25.7	0.0
KIZK				IAML		03 01 28.0	
	comp=N,39nm,0.9s						
KIZK				IAML		03 01 34.0	
	comp=E,35nm,0.8s						
HNTI	Hanita	2.43	126	Pn	Pn	03 01 00.3	-0.3
HNTI				Sn	Sn	03 01 29.7	-1.2
HDMB	Hadim	2.44	354	PN	Pn	03 01 01.9	+0.9
KEPZ	Antalya-Kepez	2.56	338	*i*P	Pn	03 01 01.6	-0.9
KEPZ				*i*S	Sn	03 01 32.5	-1.6
KEPZ				IAML		03 01 39.0	
	comp=E,15nm,0.7s						
OFRI	`Ofer	2.62	136	Pn	Pn	03 01 03.5	+0.2
OFRI				Sn	Sn	03 01 33.7	-1.9
MMA0B	Mount Meron ar	2.63	124	Pn	Pn	03 01 03.4	0.0
MMA0B				Sn	Sn	03 01 35.1	-0.7
KKBE	Karaman, Kazim	2.68	2	*i*P	Pb	03 01 07.0	-1.8
KKBE				*i*S	Sn	03 01 38.9	+1.6
GEM	Giv'at Ha'Em	2.71	118	Pn	Pn	03 01 04.3	-0.1
GEM				Sn	Sn	03 01 35.1	-2.5
MERS	Mersin	2.71	30	PN	Pn	03 01 05.7	+1.2
NATI	Neve Ativ	2.73	117	Pn	Pn	03 01 05.2	+0.4
NATI				Sn	Sn	03 01 37.0	-1.3
DED	Mersin	2.91	33	*i*P	Pn	03 01 06.3	-0.9
DED				*i*S	Sn	03 01 42.8	+0.1
DED				IAML		03 01 49.0	
	comp=E,16nm,0.7s						
KRTS	Karatas	2.91	45	PN	Pn	03 01 08.6	+1.4
KSHT	Keshet	2.93	121	Pn	Pn	03 01 08.5	+1.0
SLTI	Sal'it	2.94	140	Pn	Pn	03 01 08.2	+0.5
SEYD	Seydisehir-KON	2.98	345	PN	Pn	03 01 09.9	+1.7
MMLI	Mount Malkishu	3.01	133	Pn	Pn	03 01 09.0	+0.4
MMLI				Sn	Sn	03 01 44.4	-0.8
SEDI	Konya, Seydise	3.04	344	*i*P	Pb	03 01 11.9	-2.9
SEDI				*i*S	Sn	03 01 47.6	+1.6
KERG	Konya-Eregli	3.06	20	*i*P	Pn	03 01 10.7	+1.2
KERG				IAML		03 01 42.0	
	comp=N,29nm,1.3s						
KERG				*i*S	Sn	03 01 47.1	+0.4
KERG				IAML		03 01 55.0	
	comp=E,38nm,0.4s						
HMDT	Nahal Hemdat	3.21	134	Pn	Pn	03 01 12.4	+1.1
HMDT				Sn	Sn	03 01 49.9	0.0
ELL	Elmali	3.24	314	PN	Pn	03 01 13.9	+2.0
KMER	Konya-Meram	3.25	354	*i*P	Pn	03 01 14.8	+2.8
KARA	Karaisali	3.27	33	PN	Pn	03 01 13.4	+1.2
TAHT	Tahtakopru-Hat	3.30	55	PN	Pn	03 01 13.9	+1.3
YESY	Yesilyurt	3.33	13	PN	Pn	03 01 14.4	+1.3
KONT	Konya--Tatoy	3.43	354	PN	Pn	03 01 16.1	+1.7
CEYT	Ceyhan	3.43	43	PN	Pn	03 01 15.7	+1.3
AMAZ	Amatzia	3.47	149	Pn	Pn	03 01 16.2	+1.3
AMAZ				Sn	Sn	03 01 56.8	+0.3
CMRD	Camardi-Nigde	3.58	29	PN	Pn	03 01 17.9	+1.3
AKO	Adana	3.62	35	*i*P	Pn	03 01 17.2	+0.3
AKO				*i*S	Sn	03 01 59.7	-0.3
DSI	Dead Sea	3.65	143	Pn	Pn	03 01 18.6	+1.2
DSI				Sn	Sn	03 02 00.5	-0.4
LADK	Ladik-KONYA	3.68	354	PN	Pn	03 01 19.4	+1.5
DOGA	KONYA_Doganhis	3.69	346	*i*P	Pn	03 01 19.6	+1.6
FETY	Fethiye	3.70	306	PN	Pn	03 01 18.3	+0.2
YTIR	Yattir	3.70	148	Pn	Pn	03 01 19.4	+1.2
YTIR				Sn	Sn	03 02 02.7	+0.4
SULT	Sultanhani-AKS	3.70	8	PN	Pn	03 01 19.8	+1.6
CAME	Cameli-Denizli	3.74	311	PN	Pn	03 01 20.4	+1.6
ALIN	Konya, Altinte	3.76	1	*i*P	Pn	03 01 15.4	-3.6
NIDE	Nigde/Merkez-G	3.80	24	*i*P	Pn	03 01 22.8	+3.2
KOZT	Kozan	3.82	39	PN	Pn	03 01 21.1	+1.4
KZIT	Kziot	3.85	159	Pn	Pn	03 01 21.4	+1.3
KZIT				Sn	Sn	03 02 06.9	+1.0
GHAJ	Ghor Haditha	3.96	144	Pn	Pn	03 01 22.9	+1.3
PRNI	Paran	4.56	156	Pn	Pn	03 01 30.8	+0.9
PRNI				Sn	Sn	03 02 23.9	+0.6
KRMI	Paran Flat	4.69	159	Pn	Pn	03 01 32.8	+1.1
HRFI	Mount Harif	4.86	157	Pn	Pn	03 01 35.0	+1.0
HRFI				Sn	Sn	03 02 30.3	-0.5
MBRI	Mt Berech	5.04	159	Pn	Pn	03 01 37.8	+1.2
MBRI				Sn	Sn	03 02 36.0	+0.6
EIL	Elat	5.17	159	Pn	Pn	03 01 39.6	+1.3
EIL				Sn	Sn	03 02 39.4	+0.9

NIC ***25*** *03:02:00.5±0.0, 34°.58N×32°.89E, h22^{km}±2^{km}, Ml2.7/5*
ISK ***25*** *03:02:01.1, 34°.64N×32°.88E, h19^{km}, ML2.8/16*
DDA ***25*** *03:02:02.0, 34°.81N×32°.82E, h8^{km}±5^{km}, ML2.3*
GII ***25*** *03:02:03.9±0.0, 34°.59N×32°.91E, h30^{km}, MD2.4/3, Mm2.6/2*

ISC 25 03:02:01.9±1.1**, 34°.64N**±0°.03×**32°.87E**±0°.03**, h21**^{km}±2^{km}**, n54, σ0^{s}.83**/78**, 1C, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NATA	Nata	0.28	299	⇑*e*P	Pb	03 02 07.9	-0.6
NATA				S	Sb	03 02 13.9	+0.9
NATA				AML	AML	03 02 18.3	
	8.0nm,0.3s						
NATA				AML	AML	03 02 18.3	
	8.0nm,0.3s						
NATA				AML	AML	03 02 19.1	
	5.2nm,0.6s						
NATA				AML	AML	03 02 19.1	
	5.2nm,0.6s						
ASGA	Asgata	0.34	65	P	Pb	03 02 08.7	-0.6
ASGA				S	Sb	03 02 14.1	-0.1
ASGA				AML	AML	03 02 18.1	
	3.4nm,0.3s						
ASGA				AML	AML	03 02 18.1	
	3.4nm,0.3s						
ASGA				AML	AML	03 02 18.2	
	6.3nm,0.4s						
ASGA				AML	AML	03 02 18.2	
	6.3nm,0.4s						
LEF	Lefka	0.48	2	PG	Pb	03 02 11.2	-0.4
LEF				SG	Sb	03 02 18.5	+0.3
CSS	Mathiatis	0.50	49	PG	Pb	03 02 11.5	-0.4
CSS				SG	Sb	03 02 19.1	+0.3
CSS	Mathiatis	0.50	49	P	Pb	03 02 11.2	-0.8
CSS				S	Sb	03 02 19.8	+1.0
ALFC	Alefka	0.56	337	P	Pb	03 02 12.6	-0.6
ALFC				S	Sb	03 02 22.4	+1.6
ALFC				AML	AML	03 02 25.3	
	1.6nm,0.3s						
ALFC				AML	AML	03 02 25.3	
	1.6nm,0.3s						
ALFC				AML	AML	03 02 26.4	
	2.1nm,0.5s						
ALFC				AML	AML	03 02 26.4	
	2.1nm,0.5s						
AKMS	Akamas	0.58	311	P	Pb	03 02 12.9	-0.6
AKMS				S	Sn	03 02 23.8	0.0
AKMS				AML	AML	03 02 26.5	
	1.3nm,0.2s						
AKMS				AML	AML	03 02 26.5	
	1.3nm,0.2s						
AKMS				AML	AML	03 02 28.1	
	1.4nm,0.3s						
AKMS				AML	AML	03 02 28.1	
	1.4nm,0.3s						
ATHAL	Athalassa	0.66	41	P	Pb	03 02 14.8	0.0
MVOU	Mavrovouni	0.73	59	P	Pb	03 02 15.1	-0.8
MVOU				AML	AML	03 02 28.1	
	0.6nm,0.4s						
MVOU				AML	AML	03 02 29.6	
	0.7nm,0.6s						
LFK	Lefkose	0.84	40	PG	Pb	03 02 17.9	+0.1
LFK				SG	Sn	03 02 30.1	-0.1
EREN	Erenkoy	1.39	50	*i*P	Pb	03 02 27.0	-0.1
EREN	Erenkoy	1.39	50	PN	Pn	03 02 26.3	+0.3
EREN				SN	Sb	03 02 44.3	-0.1
TEKE	Tekeli-Mersin	1.51	7	PN	Pn	03 02 28.0	+0.3
TEKE				SN	Sb	03 02 47.6	-0.4
YORU	Yoruktepe-Mers	1.57	16	PN	Pn	03 02 28.7	+0.1
AKK2	Akkuyu-Mersin	1.59	20	PN	Pn	03 02 29.2	+0.4
AKK1	Akkuyu-Mersin	1.60	20	PN	Pn	03 02 29.1	+0.2
AKKU	Akkuyu-Mersin	1.61	20	PN	Pn	03 02 29.4	+0.3
GULN	MERSIN_Gulnar	1.64	19	*i*P	Pn	03 02 29.5	+0.1
GULN				*i*S	Sb	03 02 51.6	+0.1
GAZI	Gazipasa	1.66	344	*i*P	Pb	03 02 31.0	-0.7
GAZI				*i*S	Sn	03 02 50.1	-0.2
GAZI				IAML		03 02 54.0	
	comp=N,43nm,0.7s						
TISA	Tisan-Mersin	1.66	23	PN	Pn	03 02 29.9	+0.2
YESI	Yesilovacik-Me	1.68	22	PN	Pn	03 02 30.2	+0.2
KARG	Kargicak-Mersi	1.70	23	PN	Pn	03 02 30.5	+0.1
BERE	Bereket-Mersin	1.73	9	PN	Pn	03 02 31.1	+0.3
IKL	Isikli	1.73	22	PN	Pn	03 02 30.8	+0.1
TEVE	Tevekalti-Mers	1.85	14	PN	Pn	03 02 32.8	+0.3
SILI	Silifke-Mersin	1.93	26	PN	Pn	03 02 33.7	+0.3
KEBE	Keben-Mersin	1.93	21	PN	Pn	03 02 33.5	0.0
KIZK	Mersin	2.11	29	*i*P	Pn	03 02 37.1	+1.2
KIZK				*i*S	Sn	03 03 01.2	-0.3
KIZK				IAML		03 03 10.0	
	comp=N,20nm,0.3s						
HDMB	Hadim	2.34	352	PN	Pn	03 02 39.4	+0.1
KEPZ	Antalya-Kepez	2.48	336	*i*P	Pn	03 02 42.1	+1.0
KEPZ				*i*S	Sn	03 03 09.5	-1.3
KEPZ				IAML		03 03 26.0	
	comp=N,13nm,0.8s						
KKBE	Karaman, Kazim	2.58	1	*i*P	Pb	03 02 45.9	-1.6
KKBE				*i*S	Sb	03 03 18.6	-0.1
KKBE				IAML		03 03 23.0	
	comp=E,25nm,0.8s						
KKBE				IAML		03 03 24.0	
	comp=N,16nm,0.6s						
MERS	Mersin	2.60	31	PN	Pn	03 02 43.4	+0.7
MMC7	Mount Meron ar	2.65	127	Pn	Pn	03 02 43.5	+0.1
MMA0B	Mount Meron ar	2.66	127	Pn	Pn	03 02 43.7	+0.2
MMA0B				Sn	Sn	03 03 15.1	0.0
GEM	Giv'at Ha'Em	2.72	121	Pn	Pn	03 02 44.8	+0.4
GEM				Sn	Sn	03 03 15.8	-0.9
DED	Mersin	2.80	34	*i*P	Pn	03 02 45.1	-0.3
DED				*i*S	Sn	03 03 20.8	+2.3
SEYD	Seydisehir-KON	2.89	343	PN	Pn	03 02 47.6	+0.9
SEDI	Konya, Seydise	2.95	342	*i*P	Pb	03 02 51.0	-2.9
KERG	Konya-Eregli	2.95	20	*i*P	Pn	03 02 50.4	+2.7
KERG				*i*S	Sb	03 03 28.5	-1.0
KERG				IAML		03 03 34.0	
	comp=E,23nm,0.5s						
KERG				IAML		03 03 45.0	
	comp=N,20nm,1.5s						
KSHT	Keshet	2.95	123	Pn	Pn	03 02 48.6	+1.0
KARA	Karaisali	3.16	33	PN	Pn	03 02 51.2	+0.8
TAHT	Tahtakopru-Hat	3.21	56	PN	Pn	03 02 51.6	+0.5
YESY	Yesilyurt	3.21	12	PN	Pn	03 02 51.9	+0.6
HMDT	Nahal Hemdat	3.25	136	Pn	Pn	03 02 52.4	+0.7
CMRD	Camardi-Nigde	3.47	29	PN	Pn	03 02 55.6	+0.8
AMAZ	Amatzia	3.54	150	Pn	Pn	03 02 56.5	+0.9
AMAZ				Sn	Sn	03 03 36.7	-0.2
FETY	Fethiye	3.67	304	PN	Pn	03 02 58.8	+1.4
CAME	Cameli-Denizli	3.70	309	PN	Pn	03 02 59.6	+1.6
DSI	Dead Sea	3.71	145	Pn	Pn	03 02 58.5	+0.5
DSI				Sn	Sn	03 03 41.0	-0.1
YTIR	Yattir	3.77	149	Pn	Pn	03 02 59.6	+0.7
YTIR				Sn	Sn	03 03 42.7	0.0
KZIT	Kziot	3.94	161	Pn	Pn	03 03 01.5	+0.4
PRNI	Paran	4.64	157	Pn	Pn	03 03 11.0	+0.3
PRNI				Sn	Sn	03 04 03.5	-0.5
KRMI	Paran Flat	4.77	160	Pn	Pn	03 03 12.8	+0.2
EIL	Elat	5.26	160	Pn	Pn	03 03 20.1	+0.9
EIL				Sn	Sn	03 04 18.6	-0.6

IDC 25 03:16:25.8±9.5**, 2°.47N×127°.64E, h244**^{km}±91^{km}**, mb3.0**/5**, mb1 3.1**/5**, mb1mx2.9**/57**, mbtmp3.6**/5**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.3**/17**, Error ellipse: s-maj=155.0km s-min=19.8km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	22.74	121	LR	LR	03 31 46.3	
	comp=Z,28nm,18.3s,baz=66,slow=40						
WRA	Warramunga Arr	23.22	164	P	P	03 21 11.5	0.0
	0.4nm,0.5s,baz=342,slow=10,SNR=14						
ASAR	Alice Springs	26.68	167	P	P	03 21 43.0	+0.3
	0.5nm,0.5s,baz=353,slow=7.6,SNR=20						
ASAR				PcP	PcP	03 24 59.5	-0.2
	0.3nm,0.4s,baz=358,slow=2.3,SNR=9.2						
STKA	Stephens Creek	36.63	160	P	P	03 23 08.5	-0.6
	0.7nm,0.3s,baz=350,slow=7.6,SNR=8.7						
MKAR	Makanchi Array	59.11	325	P	P	03 26 00.7	0.0
	0.2nm,0.4s,baz=111,slow=8.5,SNR=4.7						
KURBB	Kurchatov Arra	63.29	327	P	P	03 26 28.6	-0.1
	0.3nm,0.5s,baz=123,slow=7.0,SNR=4.3						

IDC ***25*** *03:22:30.9±1.6, 40°.07N×51°.95E, h0^{km}, mb3.7/5, mb1 3.9/14, mb1mx3.6/48, mbtmp3.8/14, ML3.4/6, Error ellipse: s-maj=26.7km s-min=12.4km az=173.0*
MOS ***25*** *03:22:31.7±1.3, 40°.29N×52°.17E, h15^{km}, mb4.4/4, Error ellipse: s-maj=7.5km s-min=5.5km az=33.2*
NEIC ***25*** *03:22:33.2±2.6, 40°.4N±0°.1×52°.1E±0°.1, h10^{km}±2^{km}, mb4.0/11, Error ellipse: s-maj=19.7km s-min=12.8km az=194.0*
THR ***25*** *03:22:33.3±0.8, 40°.15N×51°.99E, h15^{km}, ML3.9*
AZER ***25*** *03:22:36.8±0.3, 40°.03N×51°.82E, h34^{km}±3^{km}, ml3.9/32, Error ellipse: s-maj=7.1km s-min=4.3km az=230.0*
TEH ***25*** *03:22:36.4, 40°.05N×52°.06E, h48^{km}, ML4.1*
NNC ***25*** *03:22:40.4±4.5, 40°.62N×53°.24E, h0^{km}, mb4.2, Error ellipse: s-maj=51.5km s-min=13.9km az=70.0*

ISC 25 03:22:35.4±0.7**, 40°.19N**±0°.04×**52°.18E**±0°.03**, h52**^{km}±12^{km}**, n204, σ2^{s}.70**/246**, mb4.0**/12**, 22C-16D, Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALA	Gala	1.56	279	P	Pn	03 23 01.9	+1.1
GALA				S	Sn	03 23 17.1	-2.7
GALA	Gala	1.56	279	*e*Pn	Pn	03 23 01.8	+1.1
NDR	Nardaran	1.72	284	Pg	Pn	03 23 05.9	+3.0
	SNR=9.5						
NDR				Sn	Sn	03 23 21.2	-2.5
NDR	Nardaran	1.72	284	*e*Pn	Pn	03 23 05.8	+3.0
GOBA	Gobu	1.88	277	Pg	Pn	03 23 06.8	+1.6
GOBA				Sn	Sn	03 23 26.3	-1.3
GOBA	Gobu	1.88	277	*e*Pn	Pn	03 23 06.7	+1.6
ALIB	Äli-Bayra	2.44	266	Pg	Pn	03 23 16.2	+3.4
ALIB				Sg	Sn	03 23 45.9	+4.5
ALIB	Äli-Bayra	2.44	266	*e*Pn	Pn	03 23 16.2	+3.4
ATGJ	Altiaghaj	2.56	286	Pn	Pn	03 23 16.0	+1.5
	SNR=16						
ATGJ				Sn	Sn	03 23 44.3	-0.2
ATGJ	Altiaghaj	2.56	286	*e*Pn	Pn	03 23 16.0	+1.5
SIZA	Siyzn	2.65	291	Pn	Pn	03 23 18.1	+2.4
	SNR=3.2						
SIZA				Sg	Sn	03 23 55.1	+8.5
SIZA	Siyzn	2.65	291	*e*Pn	Pn	03 23 18.1	+2.4
PQL	Pirkuli	2.80	284	P	Pn	03 23 19.1	+1.3
	SNR=7.3						
PQL				Sn	Sn	03 23 49.7	-0.8
PQL	Pirkuli	2.80	284	*e*Pn	Pn	03 23 19.1	+1.3
SAAT	Saatly	2.90	265	Pn	Pn	03 23 21.6	+2.6
SAAT				Sg	Sn	03 23 56.9	+4.3
SAAT	Saatly	2.90	265	*e*Pn	Pn	03 23 21.6	+2.6
LKRN	Lenkeran, Azer	3.02	242	Pn	Pn	03 23 21.0	+0.3
	SNR=4.7						
LKRN				Sn	Sn	03 23 52.6	-2.9
LKRN	Lenkeran, Azer	3.02	242	P	Pn	03 23 20.9	+0.3
LKRN	Lenkeran, Azer	3.02	242	*e*Pn	Pn	03 23 20.9	+0.3
QUBA	Quba, Azerbaij	3.03	294	Pn	Pn	03 23 22.5	+1.6
	SNR=3.6						
QUBA				Sn	Sn	03 23 57.1	+1.1
GLBA	Clilabad	3.07	253	Pn	Pn	03 23 21.5	+0.1
	SNR=19						
GLBA				Sn	Sn	03 23 55.0	-1.7
GLBA	Clilabad	3.07	253	*e*Pn	Pn	03 23 21.4	+0.1
ASTR	Astara	3.09	239	Pn	Pn	03 23 21.4	-0.2
	SNR=18						
ASTR				Sn	Sn	03 23 55.1	-2.1
ASTR	Astara	3.09	239	*e*Pn	Pn	03 23 21.4	-0.2
IML	Ismayilli	3.11	283	Pn	Pn	03 23 22.8	+0.8
	SNR=16						
IML				Sn	Sn	03 23 57.3	-0.5
QUB	Quba	3.13	294	*e*Pn	Pn	03 23 22.5	+0.2
XNQ	Khinaliq	3.23	289	Pn	Pn	03 23 24.7	+1.0
	SNR=51						
XNQ				Sn	Sn	03 23 59.1	-1.9
QSAR	Qusar	3.25	295	Pn	Pn	03 23 25.4	+1.5
	SNR=3.9						
QSAR				Sn	Sn	03 24 02.8	+1.4
YRD	Yardimli	3.30	249	Pn	Pn	03 23 24.2	-0.5
	SNR=24						
YRD				Sn	Sn	03 23 59.5	-3.3
LRK	Lerik	3.35	244	Pn	Pn	03 23 25.0	-0.4
	SNR=17						
LRK				Sn	Sn	03 24 00.3	-3.6
QBL	Gabala	3.39	284	Pn	Pn	03 23 26.2	+0.3
	SNR=18						
QBL				Sn	Sn	03 24 02.9	-1.9
ZRD	Zardab	3.44	273	Pn	Pn	03 23 27.5	+1.1
	SNR=44						
ZRD				Sn	Sn	03 24 05.1	-0.8
BLQ	Beylaqan	3.58	264	Pn	Pn	03 23 27.6	-0.8
	SNR=3.0						
BLQ				Sn	Sn	03 24 04.8	-4.6
GRMI	Germi	3.59	249	*e*Pn	Pn	03 23 28.2	-0.4
GRMI				IAML		03 24 09.9	
	comp=N,96nm,0.2s						
GRMI	Germi	3.59	249	*e*Pn	Pn	03 23 28.2	-0.4
AKT	Akhty	3.61	292	c*e*P	Pn	03 23 29.7	+0.8
QRD	Qoradiz	3.81	261	Pn	Pn	03 23 31.2	-0.3
QRD				Sn	Sn	03 24 09.7	-5.4
BRDA	Brd	3.83	273	Pn	Pn	03 23 32.5	+0.8
BRDA				Sn	Sn	03 24 11.1	-4.3
IMND	Minoodasht	3.86	138	*e*Pn	Pn	03 23 34.5	+2.2
AGDM	Agdam	3.89	270	Pn	Pn	03 23 32.6	0.0
	SNR=33						
AGDM				Sn	Sn	03 24 12.2	-4.8
IGLO	Ghaloghah	3.90	160	*e*Pn	Pn	03 23 34.0	+1.0
IGLO				*e*	Sn	03 24 23.7	+6.1
	comp=Z,4μm,0.4s						
SEKA	Sheki	3.92	287	Pn	Pn	03 23 33.0	-0.2
	SNR=24						
SEKA				Sn	Sn	03 24 15.9	-1.9
SEKA	Sheki	3.92	287	P	Pn	03 23 32.9	-0.2
QALM	Alamut, Qazvin	3.94	198	*e*	Sn	03 24 21.2	+2.6
	comp=Z,3μm,0.3s						
IPRN	Peran	3.94	178	*e*Pn	Pn	03 23 33.8	+0.4
IGZV	Ghazvin	4.09	203	*e*Pn	Pn	03 23 35.9	+0.2
IGZV				*e*	Sn	03 24 21.9	-0.5
	comp=Z,3μm,0.2s						
ISRB	Sarab	4.23	238	*e*Pn	Pn	03 23 37.8	+0.3
ISRB				*e*	Sn	03 24 25.0	-0.7
	comp=Z,2μm,0.3s						
QCNT	Qazvin	4.25	204	*e*Pn	Pn	03 23 38.4	+0.7
CHTH	Charan	4.35	191	*e*Pn	Pn	03 23 40.4	+1.2
CHTH	Charan	4.35	191	*e*Pn	Pn	03 23 40.4	+1.2
IHRS	Heris	4.40	247	*e*Pn	Pn	03 23 40.3	+0.5
IHRS				*e*	Sn	03 24 30.8	+0.9
	comp=Z,2μm,0.2s						
ZKTA	Zakatala	4.45	291	Pn	Pn	03 23 41.2	+0.8
	SNR=7.3						
ZKTA				Sn	Sn	03 24 30.5	-0.4
ZKTA	Zakatala	4.45	291	P	Pn	03 23 41.1	+0.8
ZNJK	Zanjan	4.45	219	*e*Pn	Pn	03 23 40.0	-0.6
ZNJK				IAML		03 24 29.9	
	comp=N,258nm,0.1s						
ZNJK				IAML		03 24 30.0	
	comp=E,438nm,0.3s						
ZNJK	Zanjan	4.45	219	*e*Pn	Pn	03 23 40.0	-0.6
ISHM	Shahmirzad	4.46	168	*e*Pn	Pn	03 23 42.3	+1.6
MAK	Makhachkala	4.47	310	*e*P	Pn	03 23 43.0	+2.5
MAK				*e*S	Sn	03 24 40.0	+8.8
MAK				pmax	pmax		
	comp=Z,160nm,1.1s						
MAK				MLR	MLR		
	comp=Z,266nm,7.0s						
GANJ	Ganja	4.49	278	Pn	Pn	03 23 40.3	-0.6
	SNR=10						
GANJ				Sn	Sn	03 24 27.7	-4.2
GANJ	Ganja	4.49	278	P	Pn	03 23 40.3	-0.6
GNBR	Gunib	4.50	301	*de*P	Pn	03 23 44.0	+2.9
DAMV	Damavand	4.55	182	*e*Pn	Pn	03 23 43.9	+1.9
DAMV	Damavand	4.55	182	*e*Pn	Pn	03 23 43.9	+1.9
IFIR	Firoozkooh	4.56	174	*e*Pn	Pn	03 23 44.1	+2.0
IDMV	Damavand	4.60	181	*e*Pn	Pn	03 23 44.8	+2.1
IMHD	Mahdasht	4.65	195	*e*Pn	Pn	03 23 45.0	+1.9
BJRD	Bojnurd	4.77	120	*e*Pn	Pn	03 23 48.0	+3.1
BJRD				IAML		03 24 46.7	
	comp=E,46nm,0.4s						
BJRD	Bojnurd	4.77	120	*e*Pn	Pn	03 23 48.0	+3.1
IBST	Bostanabad	4.81	241	*e*Pn	Pn	03 23 45.9	+0.4
ILAS	Lasjerd	4.83	172	*e*Pn	Pn	03 23 47.6	+1.8
IANJ	Anjilo	4.91	163	*e*Pn	Pn	03 23 49.1	+2.3
GDB	GEDABAY	4.93	278	Pn	Pn	03 23 46.2	-0.9
	SNR=5.2						
GDB				Sn	Sn	03 24 39.5	-3.3
ORD	Ordubad	4.94	257	Pn	Pn	03 23 47.2	+0.1
	SNR=6.4						
ORD				Sn	Sn	03 24 39.1	-3.9
IRAZ	Razeghan	5.09	201	*e*Pn	Pn	03 23 50.3	+1.0
IRAZ				*e*	Sn	03 24 51.0	+4.1
	comp=Z,2μm,0.8s						
BTLR	Botlikh	5.12	301	⇑*e*P	Pn	03 23 52.0	+2.5
GEYT	Alibeck	5.14	114	Pn	Pn	03 23 51.6	+1.7
	comp=Z,2.5nm,0.3s,baz=303,slow=8.3,SNR=14						
GEYT				Sn	Sn	03 24 45.3	-2.6
	comp=Z,3.0nm,0.3s,baz=321,slow=13,SNR=1.5						
GEYT	Alibeck	5.14	114		Pn	03 23 52.4	+2.5
GYA0	ALIBECK ARRAY	5.14	114	P	Pn	03 23 51.9	+2.1
GYA0					Sn	03 24 46.4	-1.5
GYA0B	ALIBECK ARRAY	5.14	114	⇑Pn	Pn	03 23 51.9	+2.1
GYA0B				⇓Sn	Sn	03 24 46.5	-1.4
GYA0B	ALIBECK ARRAY	5.14	114		Pn	03 23 52.1	+2.2
SBZ	Shahbuz	5.16	263	Pn	Pn	03 23 51.0	+0.8
	SNR=6.3						
SBZ				Sn	Sn	03 24 45.4	-3.1
SHRO	Shahrood	5.17	143	*e*Pn	Pn	03 23 53.0	+2.8
SHRO				IAML		03 24 52.0	
	comp=N,21nm,0.4s						

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SHRO                                 IAML         03 24 57.0
      comp=E,27nm,0.4s
SHRO  Shahrood           5.17 143  ePn      Pn    03 23 53.0 +2.8
IVRN  Varamin            5.19 184  ePn      Pn    03 23 51.6 +1.0
IMRD  Marand             5.22 256  ePn      Pn    03 23 51.9 +0.8
QZX   Qazax, Azerbai     5.25 282   Pn      Pn    03 23 51.0 -0.3
      SNR=6.9
QZX                                 Sn      Sn    03 24 47.7 -2.8
NAX   Nakhchivan         5.25 261   Pn      Pn    03 23 50.8 -0.6
      SNR=3.5
NAX                                 Sn      Sn    03 24 49.1 -1.5
NAX   Nakhchivan         5.25 261   P       Pn    03 23 50.8 -0.6
IQOM  Qom                5.41 190  ePn      Pn    03 23 55.0 +1.3
IQOM                               e        Pn    03 23 58.6 +4.9
      comp=Z,720nm,0.4s
ISHB  Shabestar          5.44 252  ePn      Pn    03 23 54.2 +0.2
ISFR  Sfrayin            5.53 123  ePn      Pn    03 23 58.4 +3.0
ISFR                               e        Sn    03 25 06.3 +8.6
      comp=Z,1µm,0.2s
GROC  Groznyy            5.65 304  eP       Pn    03 23 54.2 -2.5
GROC                               eS       Sn    03 25 04.3 +4.1
GROC                                pmax    pmax
      comp=Z,17nm,0.3s
GROC                                smax    smax
      comp=E,52nm,0.5s
GROC                                smax    smax
      comp=N,88nm,0.8s
GROC                                smax    smax
      comp=N,77nm,0.6s
GROC                                MLR     MLR
      comp=Z,49nm,2.0s
HYR   Heyderabad         5.65 268   Pn      Pn    03 23 56.9 +0.1
HYR                                 Sn      Sn    03 24 55.4 -5.0
GNI   Garni              5.70 272   Pn      Pn    03 23 57.7 +0.2
      comp=Z,1.0nm,0.3s,baz=46,slow=22,SNR=4.0
IEMG  Emamgholi          5.76 117  ePn      Pn    03 24 00.6 +2.0
IEMG                               e        Sn    03 25 11.0 +7.4
      comp=Z,991nm,0.2s
ISFB  Sefidab            5.82 179  ePn      Pn    03 24 01.3 +2.1
MAKU  Maku               5.83 264  ePn      Pn    03 24 00.3 +0.9
MAKU  Maku               5.83 264  ePn      Pn    03 24 00.3 +0.9
HAGD  Aghdareh           5.87 205  ePn      Pn    03 24 00.7 +0.7
ASAO  Ashtian            5.88 198  ePn      Pn    03 24 01.6 +1.4
ASAO  Ashtian            5.88 198  ePn      Pn    03 24 01.6 +1.4
KRSH  Karshahi           6.21 180  ePn      Pn    03 24 06.2 +1.7
IAKL  Akhelmad           6.28 123  ePn      Pn    03 24 08.3 +2.6
IAKL                               e        Sn    03 25 26.3  +10
      comp=Z,464nm,0.4s
SNGE  Sanandaj           6.37 219  ePn      Pn    03 24 05.6 -1.2
SNGE  Sanandaj           6.37 219  ePn      Pn    03 24 05.6 -1.2
QAMS  Qamsar             6.47 186  ePn      Pn    03 24 10.1 +1.9
HSAM  Samen              6.61 207  ePn      Pn    03 24 11.7 +1.5
IKRD  Kardeh             6.69 118  ePn      Pn    03 24 14.1 +2.9
IKRD                               e              03 25 48.6
      comp=Z,492nm,0.2s
ZEI   Tsey               6.74 295  eP       Pn    03 24 26.5  +15
ZEI                                 pmax    pmax
      comp=Z,2.0nm,0.8s
IKLH  Kolahrood          6.87 184  ePn      Pn    03 24 16.0 +2.3
ONI   Oni                6.99 293   P       Pn    03 24 14.7 -0.4
ONI   Oni                6.99 293   Pn      Pn    03 24 14.7 -0.4
ANAR  Anarak             7.09 169  ePn      Pn    03 24 18.9 +2.2
TNSJ  Nastanj            7.15 149  ePn      Pn    03 24 20.5 +3.1
IDHR  Dehrash            7.15 222  ePn      Pn    03 24 18.7 +1.1
IZEF  Zefreh             7.28 179  ePn      Pn    03 24 21.0 +1.7
TABS  Tabas              7.63 147  ePn      Pn    03 24 27.0 +3.0
TABS  Tabas              7.63 147  ePn      Pn    03 24 27.0 +3.0
TKDS  Koohdasht(Taba     7.66 147  ePn      Pn    03 24 27.2 +2.8
IGAR  Gharneh            7.77 181  ePn      Pn    03 24 27.6 +1.6
KBZ   Khabaz             7.77 300   Pn      Pn    03 24 25.6 -0.1
      comp=Z,0.2nm,0.3s,baz=103,slow=18,SNR=1.9
KBZ                                 Sn      Sn    03 25 46.7 -5.5
      comp=Z,0.6nm,0.3s,baz=91,slow=9.3,SNR=3.7
SHK1  Shahrekord         7.91 188  ePn      Pn    03 24 29.6 +1.6
SHA1  Shidzhatmaz        7.93 300⇑eP       Pn    03 24 29.5 +1.3
KVAR  Kislovodsk Arr     8.00 301   Pn      Pn    03 24 28.8 -0.2
      baz=108,slow=20,SNR=2.1
KVAR                                Sn      Sn    03 25 51.1 -7.0
      baz=172,slow=15,SNR=1.9
KIV   Kislovodsk         8.00 301  eP       Pn    03 24 29.1 +0.1
KIV                                eS       Sn    03 26 01.2 +3.1
KIV                                 pmax    pmax
      comp=Z,5.0nm,1.1s
KIV   Kislovodsk         8.00 301   Pn      Pn    03 24 26.0 -3.0
TPRV  Parvadeh(Tabas     8.01 152  ePn      Pn    03 24 31.9 +2.7
YZKH  Yazd               8.02 165  ePn      Pn    03 24 31.8 +2.5
YZKH  Yazd               8.02 165  ePn      Pn    03 24 31.8 +2.5
ITEG  Tejag              8.99 142  ePn      Pn    03 24 45.9 +3.2
SHRT  Shahrakht          9.21 133  ePn      Pn    03 24 48.8 +3.3
SHRT  Shahrakht          9.21 133  ePn      Pn    03 24 48.8 +3.3
BSRN  Basiran            9.94 143  ePn      Pn    03 24 60.0 +4.3
BSRN  Basiran            9.94 143  ePn      Pn    03 25 00.0 +4.3
AB31  Akbulak array     10.61  29   P       Pn    03 25 03.5 -1.1
AB31                                        Sn    03 26 56.6 -5.2
AB31  Akbulak array     10.61  29 ⇑Pn       Pn    03 25 03.5 -1.1
      comp=Z,0.6nm,0.3s,baz=208,slow=12,SNR=101
AB31                              ⇓Sn       Sn    03 26 56.7 -5.2
      comp=Z,4.8nm,0.4s,baz=207,slow=24,SNR=13
ABKAR Akbulak array     10.61  29   Pn      Pn    03 25 03.2 -1.4
AKTO  Aktyubinsk        11.04  20   Pn      Pn    03 25 10.0 -0.5
      comp=Z,2.3nm,0.3s,baz=207,slow=9.2,SNR=49
AKTO                                Sn      Sn    03 27 05.7 -6.6
      comp=Z,3.7nm,0.3s,baz=178,slow=18,SNR=10.0
AKTO  Aktyubinsk        11.04  20   P       Pn    03 25 09.8 -0.6
AKTO                                        Sn    03 27 05.4 -6.9
AKTO  Aktyubinsk        11.04  20 ⇓Pn       Pn    03 25 09.9 -0.6
      comp=Z,2.6nm,0.3s
AKTO                              ⇓Sn       Sn    03 27 05.5 -6.9
      comp=Z,14nm,0.5s
CHGR  Chuyangaron       13.22  91   Pn      Pn    03 25 41.4 +1.0
KK02  Karatay Array     14.02  72 ⇑Pn       Pn    03 25 51.9 +0.8
      comp=Z,4.7nm,0.8s,baz=267,slow=15
KK02                              ⇑Sn       Sn    03 28 18.0 -7.1
      comp=Z,3.9nm,0.7s,baz=275,slow=24
KK31  Karatay Array     14.02  72   P       Pn    03 25 51.8 +0.7
KK31                                        Sn    03 28 17.9 -7.2
KKAR  Karatay Array     14.02  72   P       Pn    03 25 51.5 +0.4
KKAR  Karatay Array     14.02  72   Pn      Pn    03 25 51.5 +0.4
BTK   Batken            14.27  84   P       Pn    03 25 54.4 -0.1
BTK   Batken            14.27  84   Pn      Pn    03 25 54.4 -0.1
ARU   Arti              16.79  12   Pn      Pn    03 26 23.7 -3.0
      comp=Z,0.0nm,0.3s,baz=240,slow=20,SNR=2.6
ARU                                 Sn      Sn    03 29 20.3  -12
      comp=Z,0.0nm,0.3s,baz=62,slow=21,SNR=8.1
ARU   Arti              16.79  12c iP       Pn    03 26 26.3 -0.3
ARU                                 S       Sn    03 29 34.1 +2.1
ARU                                 pmax    pmax
      comp=Z,19nm,2.3s
ARU   Arti              16.79  12   Pn      Pn    03 26 23.2 -3.5
AAK   Ala-Archa         16.91  74   P       P     03 26 31.0 +1.2
      comp=Z,0.4nm,0.3s,baz=247,slow=15,SNR=5.9
AAK   Ala-Archa         16.91  74   Pn      Pn    03 26 27.7 -0.8
BRVK  Borovoye          17.83  38⇑eP        Pn    03 26 38.4 -1.2
BRVK                                pmax    pmax
      comp=Z,6.0nm,0.7s
BRVK  Borovoye          17.83  38   Pn      Pn    03 26 38.3 -1.3
BRVK                                IAmb    IAmb  03 26 44.4
      comp=Z,6.6nm,0.8s
BVAR  Borovoye Array    17.86  38   P       Pn    03 26 40.1 +0.1
      comp=Z,2.0nm,0.3s,baz=227,slow=15,SNR=38
BVAR                                S       Sn    03 29 47.6  -10
      comp=Z,1.0nm,0.3s,baz=231,slow=28,SNR=7.6
MILM  Milestii Mici     18.19 299 ⇓P        Pn    03 26 44.5 +0.6
MILM  Milestii Mici     18.19 299 ⇓P        Pn    03 26 44.5 +0.6
OBN   Obninsk           18.20 330  eP       Pn    03 26 45.6 +1.6
OBN                                 pmax    pmax
      comp=Z,3.0nm,1.0s
KIRV  Kirov             18.50 355   P       Pn    03 26 48.5 +0.9
      comp=Z,4.7nm,0.3s,baz=158,slow=2.1,SNR=11
SORM  Soroca            18.80 303 ⇑P        P     03 26 50.6 +0.3
SORM  Soroca            18.80 303 ⇑P        P     03 26 50.6 +0.3
RASA  Rasa              18.95 290 ⇑P        Pn    03 27 05.4  +12
AKASG Malin Array Be    19.16 311   P       Pn    03 26 55.2 -0.4
      comp=Z,2.0nm,0.3s,baz=110,slow=11,SNR=9.0
AKASG Malin Array Be    19.16 311  i P      Pn    03 26 57.2 +1.7
AKASG                               pmax    pmax
      comp=Z,2.0nm,0.5s
AKBB  Malin Array Si    19.16 311⇑eP        Pn    03 26 55.5  0.0
AKBB                                pmax    pmax
      comp=Z,4.0nm,0.6s
AKBB  Malin Array Si    19.16 311   P       Pn    03 26 55.2 -0.3
AKBB                                IAmb    IAmb  03 26 58.1
      comp=Z,4.9nm,0.6s
ODBI  Odobesti          19.17 295 ⇑P        P     03 26 42.0  -12
VRI   Vrincioaia        19.41 295 ⇓P        Pn    03 27 14.6  +16
COVR  Voineasa-Covas    19.77 295 ⇑P        P     03 26 56.5 -4.6
MLR   Muntele Rosu      19.91 294 ⇓P        P     03 26 48.6  -14
MLR   Muntele Rosu      19.91 294   P       P     03 27 02.9 +0.2
      comp=Z,0.1nm,0.3s,baz=172,slow=7.1,SNR=1.7
MLR   Muntele Rosu      19.91 294   IAmb    IAmb  03 27 19.2
      comp=Z,19nm,1.9s
PRAR  RASCA             20.00 300 ⇑P        P     03 26 54.0  -10
DOPR  Dopca             20.35 295 ⇓P        P     03 27 07.5 +0.2
VOIR                    20.53 294 ⇓P        Pn    03 27 11.0 -1.0
VOIR                    20.53 294 ⇓P        Pn    03 27 11.0 -1.0
BURAR Bucovina Array    20.73 300 ⇑P        P     03 27 12.3 +0.9
BURAR Bucovina Array    20.73 300 ⇑P        P     03 27 12.3 +0.9
BUR08 Bucovina Ar. S    20.74 300   P       P     03 27 11.2 -0.4
BUR08                               IAmb    IAmb  03 28 05.0
      comp=Z,8.1nm,1.4s
ARR   Arges             20.82 293 ⇓P        P     03 27 13.5 +1.1
KURBB Kurchatov Arra    21.13  52   P       P     03 27 19.2 +3.5
      comp=Z,0.6nm,0.5s,baz=256,slow=12,SNR=5.6
ARCR  ARCALIA           21.21 298 ⇓P        P     03 27 19.6 +3.0
KURK  Kurchatov         21.22  51   P       P     03 27 19.2 +2.6
KURK  Kurchatov         21.22  51   P       P     03 27 19.2 +2.6
KURK  Kurchatov         21.22  51   IAmb    IAmb  03 27 56.8
      comp=Z,16nm,1.9s
VTS   Vitosha           21.80 286 ⇓P        P     03 27 25.1 +2.0
VTS   Vitosha           21.80 286 ⇓P        P     03 27 25.1 +2.0
KLMR  Klimovskoe        22.12 343  eP       P     03 27 24.7 -1.5
KLMR                                pmax    pmax
      comp=Z,15nm,1.1s
KLMR  Klimovskoe        22.12 343  eP       P     03 27 24.7 -1.5
KLMR                                AMP           03 27 32.5
      comp=Z,15nm,1.1s
DRGR                    22.29 297 ⇑P        P     03 27 38.9  +11
DRGR                    22.29 297 ⇑P        P     03 27 38.9  +11
HERR  Herculane         22.36 292 ⇑P        P     03 27 10.9  -18
MAKZ  Makanchi          22.52  63   P       P     03 27 30.6  0.0
MAKZ                                pmax    pmax
      comp=Z,11nm,2.0s
MAKZ  Makanchi          22.52  63   P       P     03 27 30.6  0.0
MAKZ                                IAmb    IAmb  03 27 53.3
      comp=Z,11nm,1.9s
MK31  Makanchi Array    22.73  63   P       P     03 27 34.4 +1.5
MK31                                pmax    pmax
      comp=Z,5.0nm,1.8s
MK31  Makanchi Array    22.73  63   P       P     03 27 34.4 +1.5
MKAR  Makanchi Array    22.73  63   P       P     03 27 36.1 +3.3
      comp=Z,0.4nm,0.6s,baz=261,slow=7.7,SNR=4.7
SUW   Suwalki           23.89 315   P       P     03 27 41.4 -2.5
SUW                                 pmax    pmax
      comp=Z,32nm,1.2s
SUW   Suwalki           23.89 315   P       P     03 27 41.4 -2.5
FRGS  Fruska Gora       24.21 293 ⇑P        P     03 27 30.4  -17
ZALV  Zalesovo Beam     25.88  47   P       P     03 28 06.2 +4.2
      comp=Z,0.6nm,0.5s,baz=284,slow=11,SNR=2.2
FINES FINESS Array B    26.59 332   P       P     03 28 09.9 +1.6
      comp=Z,2.1nm,0.5s,baz=101,slow=7.2,SNR=17
ARCES ARCESS Array B    32.60 343   P       P     03 29 04.6 +3.1
      comp=Z,2.8nm,1.0s,baz=141,slow=9.1,SNR=1.3
XAN   Xi'an             45.01  79   P       P     03 30 46.4 +0.6
XAN                                 pmax    pmax
      comp=Z,8.0nm,1.4s
XAN                                 pmax    pmax
      comp=Z,6.0nm,1.7s
BILL  Bilibino          61.45  23  eP       P     03 32 45.0 -0.9
BILL                                pmax    pmax
      comp=Z,2.0nm,1.1s
```

IDC 25 03:22:59.5±28.0**, 22°.89S**×**172°.71W, h0****km, mb4.0**/4**,**
mb1 4.1/4**, mb1mx3.8**/24**, mbtmp4.0**/4**, Error ellipse:**
s-maj=531.1km s-min=154.0km az=80.0, Tonga Islands region

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC      h  m  s     ISC
CTA   Charters Tower     38.20 266   P       P        03 30 21.6 +0.3
      3.3nm,0.5s,baz=76,slow=6.2,SNR=1.8
STKA  Stephens Creek     41.30 247   P       P        03 30 46.3 -0.6
      1.5nm,0.8s,baz=99,slow=13,SNR=3.5
ASAR  Alice Springs      48.80 258   P       P        03 31 46.6 -0.1
      0.7nm,0.8s,baz=91,slow=6.3,SNR=12
WRA   Warramunga Arr     49.17 263   P       P        03 31 49.6  0.0
      0.9nm,0.4s,baz=102,slow=8.4,SNR=19
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*DDA **25** 03:25:03.9, 39°.18N×27°.75E, h7km±3km, ML1.8*
ISK 25 03:25:03.9, 39°.21N×27°.81E, h9km, ML2.1/27**, Turkey**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC      h  m  s     ISC
STEP  BALIKESIR_Sava     0.19 337  i P       Pg       03 25 08.8 +1.0
STEP                                 IAML             03 25 11.0
      comp=E,334nm,0.6s
STEP                               i S       Sg       03 25 11.6 +1.2
STEP                                 IAML             03 25 12.0
      comp=N,312nm,0.5s
AKHS  Akhisar            0.33 180  i P       Pg       03 25 09.0 -1.4
AKHS                               i S       Sg       03 25 15.6 +0.9
AKS   Akhisar            0.33 180    PG      Pg       03 25 10.9 +0.5
AKS                                  SG      Sg       03 25 15.9 +1.2
BALB  Balikesir          0.44   7    PG      Pb       03 25 13.2 -0.6
BALB                                 SG      Sb       03 25 19.9 -0.6
BALY  Balya              0.55 344  i P       Pg       03 25 14.9 +0.3
BALY                               i S       Sb       03 25 23.5 -0.4
BALY                                 IAML             03 25 24.0
      comp=N,37nm,0.6s
BALY                                 IAML             03 25 24.0
      comp=E,40nm,0.5s
ZEDA  zmir-Bergama       0.62 248  i P       Pg       03 25 15.5 -0.4
ZEDA                               i S       Sg       03 25 23.9 -0.1
ZEDA                                 IAML             03 25 24.0
      comp=E,18nm,0.5s
BUHA  Balikesir, Bur     0.64 298  i P       Pg       03 25 16.1 -0.2
BUHA                               i S       Sg       03 25 24.4 -0.3
DURS  Dursunbey          0.65  52  i P       Pb       03 25 17.1 -0.3
DURS                               i S       Sb       03 25 27.0 +0.4
DKL   Dikili             0.72 260    PG      Pb       03 25 18.7 +0.1
DKL                                  SG      Sb       03 25 28.7 +0.2
DEMI  Demirci            0.72 103  i P       Pb       03 25 18.7  0.0
DEMI                               i S       Sb       03 25 29.0 +0.3
DEMI                                 IAML             03 25 33.0
      comp=N,55nm,0.2s
GONE  Gonen-Balikesi     0.84 353    PG      Pb       03 25 20.7 -0.1
GONE                                 SG      Sb       03 25 32.9 +0.7
AYVA  Ayvalik            0.88 277  i P       Pb       03 25 21.2 -0.1
AYVA                               i S       Sg       03 25 31.7 -0.5
SMAA  Simav-Kutahya      0.91  96    PG      Pb       03 25 21.9 -0.1
SMAA                                 SG      Sb       03 25 35.1 +0.8
SIMA  Simav-Kutahya      0.92  97    PG      Pb       03 25 22.1  0.0
SIMA                                 SG      Sb       03 25 35.3 +0.9
KULA  Kula-Manisa        0.96 136    PG      Pb       03 25 22.8 +0.1
KULA                                 SG      Sn       03 25 36.5 -0.9
BLCB  Balcova            1.02 217    PG      Pb       03 25 23.7  0.0
BLCB                                 SG      Sn       03 25 38.4 -0.3
USAK  Uak-Merkez         1.06 117  i P       Pb       03 25 24.7 +0.2
USAK                                 IAML             03 25 32.0
      comp=N,49nm,1.4s
USAK                               i S       Sb       03 25 38.5 +0.1
USAK                                 IAML             03 25 55.0
      comp=E,96nm,1.0s
SHAP  Saphane-Kutahy     1.11  99    PN      Pn       03 25 25.7 -0.1
BAYC  CANAKKALE_Bayr     1.12 299  i P       Pb       03 25 25.5 +0.1
BAYC                               i S       Sg       03 25 39.9  0.0
BAYC                                 IAML             03 25 42.0
      comp=E,18nm,0.2s
BAYC                                 IAML             03 25 44.0
      comp=N,20nm,0.1s
KCTX  Karacabey (Bur     1.14  21    PN      Pb       03 25 25.9 +0.1
EDC   Edincik            1.14   2    PN      Pn       03 25 26.2 +0.1
KRBG  Karabiga-Canak     1.25 342    PN      Pg       03 25 28.3 +0.4
GEDZ  Gediz              1.25  97    PN      Pg       03 25 28.2 +0.2
AYDB  Zeytinkoy-Aydi     1.26 177    PN      Pg       03 25 28.2 +0.1
URLA  Izmir              1.27 229  i P       Pn       03 25 27.4 -0.5
TVSB  Tavsanli           1.30  79    PN      Pg       03 25 28.9  0.0
EZN   Ezine              1.31 299    PN      Pg       03 25 28.9 -0.1
ULDT  Uludag             1.39  47  i P       Pg       03 25 30.6 +0.1
ULDT                               i S       Sg       03 25 50.6 +2.1
ULDT                                 IAML             03 25 54.0
      comp=E,15nm,0.6s
ULDT                                 IAML             03 26 01.0
      comp=N,9.6nm,0.7s
MRMT  Marmara Adasi      1.41 353    PN      Pb       03 25 30.5 +0.1
MDNY  Mudanya-Bursa      1.43  35    PN      Pb       03 25 30.7 +0.1
SIGR  SIGRI              1.52 271    PN      Pb       03 25 32.0 -0.3
MAR6  Marsite Statio     1.56 344    PN      Pb       03 25 32.4 -0.5
MAR2  Marsite Statio     1.56 346    PN      Pb       03 25 32.5 -0.4
RKY   Sarkoy-Tekirda     1.56 342    PN      Pn       03 25 32.4 +0.5
GELI  Tayfur-Gelibol     1.57 320    PN      Pb       03 25 33.0 -0.2
GZKV  Gazikoy-Tekird     1.58 347    PN      Pb       03 25 32.8 -0.6
MAR3  Marsite Statio     1.59 346    PN      Pn       03 25 32.8 +0.6
TRML  Termal-Yalova      1.75  36    PN      Pn       03 25 35.1 +0.7
ERIK  Erikli-Kesan       1.77 326    PN      Pn       03 25 35.5 +0.8
YLV   Yalova             1.81  41    PN      Pn       03 25 36.1 +0.7
ENEZ  Enez               1.99 321    PN      Pn       03 25 38.9 +1.2
ALN   Alexandroupoli     2.17 322    PN      Pn       03 25 41.1 +0.9
SRCK  Saricakaya, Es     2.33  68    PN      Pn       03 25 43.5 +1.1
GULT  Gulveren           2.42  59    PN      Pn       03 25 44.5 +0.8
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*IDC **25** 04:02:23.2±2.4, 32°.27S×72°.06W, h0km, mb4.0/3,*
mb1 3.9/5, mb1mx3.7/16, mbtmp3.9/5, ML3.6/2, Error ellipse: s-maj=75.4km s-min=35.6km az=102.0
*NEIC **25** 04:02:24.7±1.3, 32°.32S±0°.03×71°.96W±0°.08, h3km±6km,*
mb4.1/4, ML3.7(GUC), Error ellipse: s-maj=9.5km s-min=3.7km az=91.0
*GUC **25** 04:02:27.5±0.7, 32°.46S×71°.93W, h35km±3km, ML3.7*
ISC 25 04:02:24.3±1.6**, 32°.30S**±0°.04×**72°.04W**±0°.07**, h12**km±9km**,**
n54, σ0§79/56**, mb4.0**/3**, 5D, Off coast of central Chile**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC      h  m  s     ISC
VA06  Catapilco          0.68 113⇓iP        Pn       04 02 38.9 -0.8
VA06                               eS       Sb       04 02 48.0 +0.6
VA06                                IAML             04 02 52.0
      comp=N,15µm,0.3s
VA01  Torpederas         0.79 156  eP       Pg       04 02 39.7 +0.2
VA01                               eS       Sg       04 02 49.6 -0.3
VA01  Torpederas         0.79 156           Pg       04 02 39.8 +0.2
ROCH  El Roble           1.09 128⇓iP        Pn       04 02 45.4 -0.3
ROCH                             ⇓iP        Pb       04 02 45.1 -0.2
ROCH                               eS       Sb       04 02 58.6 -1.0
ROCH                               eS       Sg       04 02 59.7 +0.1
ROCH                                IAML             04 03 04.4
      comp=N,3µm,0.5s
ROCH                                IAML             04 03 04.5
      comp=E,2µm,0.4s
MT02  Curacav            1.22 142  eP       Pn       04 02 46.8 -0.4
MT02  Curacav            1.22 142           Pn       04 02 46.8 -0.4
VA03  San Esteban        1.34 111⇓iP        Pb       04 02 49.6 +0.2
VA03                               eS       Sn       04 03 06.6 -0.1
VA03                                IAML             04 03 12.9
      comp=E,4µm,0.3s
VA03  San Esteban        1.34 111   Pg      Pn       04 02 48.5 -0.4
VA05  Santo Domingo      1.40 165  eP       Pn       04 02 48.8 -0.9
VA05                                IAML             04 03 20.6
      comp=E,2µm,0.5s
VA05  Santo Domingo      1.40 165           Pn       04 02 49.7  0.0
PEL   Peldehue           1.42 127  i P      Pb       04 02 50.7  0.0
PEL                                eS       Sg       04 03 09.8  0.0
PEL                                 IAML             04 03 15.4
      comp=N,3µm,0.5s
PEL   Peldehue           1.42 127           Pb       04 02 50.8 +0.1
MT05  Renca              1.54 135  eP       Pb       04 02 52.5 -0.4
MT05  Renca              1.54 135           Pb       04 02 52.7 -0.2
CO06  Fray Jorge         1.66  12  eP       Pn       04 02 53.1 -0.2
CO06                                IAML             04 03 28.7
      comp=N,740nm,0.5s
CO06  Fray Jorge         1.66  12           Pn       04 02 53.5 +0.2
MT01  Popeta             1.69 157  eP       Pn       04 02 53.1 -0.6
MT01                               eS       Sn       04 03 14.7 -0.7
MT01                                IAML             04 03 21.5
      comp=E,1µm,0.2s
MT01  Popeta             1.69 157           Pn       04 02 53.6 -0.1
MT09  Talagante          1.71 149  eP       Pn       04 02 54.4 +0.2
MT09                               eS       Sn       04 03 13.4 -2.7
MT09                                IAML             04 03 24.8
      comp=N,1µm,0.4s
MT09  Talagante          1.71 149           Pn       04 02 54.7 +0.5
FCH   Farellones         1.79 125  i P      Pb       04 02 56.4 -0.8
FCH                                eS       Sb       04 03 19.6 -0.3
FCH                                 IAML             04 03 28.3
      comp=E,826nm,0.2s
CO03  El Pedregal        1.86  39  eP       Pb       04 02 57.6 -0.6
CO03                                IAML             04 03 31.6
      comp=E,1µm,0.3s
CO03  El Pedregal        1.86  39           Pb       04 02 57.8 -0.5
BO04  La Punta           2.06 145⇓eP        Pn       04 02 60.0 +1.0
BO04                                IAML             04 03 34.4
      comp=E,724nm,0.5s
BO01  Tunca              2.23 159  eP       Pn       04 03 01.0 -0.1
BO01  Tunca              2.23 159           Pn       04 03 01.4 +0.2
GO04  Tololo Observa     2.37  27  eP       Pn       04 03 03.9 +0.7
GO04  Tololo Observa     2.37  27           Pn       04 03 04.5 +1.2
CO05  La Serena          2.47  16  eP       Pn       04 03 04.0 -0.4
CO05                                IAML             04 03 59.6
      comp=E,728nm,0.3s
CO05  La Serena          2.47  16           Pn       04 03 05.7 +1.2
BO02  Sierra Bellavi     2.70 157  eP       Pn       04 03 08.0 +0.4
BO02  Sierra Bellavi     2.70 157           Pn       04 03 08.4 +0.8
GO05  Huala              2.70 178  eP       Pn       04 03 06.4 -1.2
GO05                                IAML             04 03 57.2
      comp=N,151nm,0.6s
GO05  Huala              2.70 178           Pn       04 03 08.0 +0.3
LCO   Las Campanas       3.48  20  eP       Pn       04 03 18.9 +0.4
LCO   Las Campanas       3.48  20           Pn       04 03 18.8 +0.4
ML02  Panimavida         3.49 172  eP       Pn       04 03 20.3 +1.9
ML02                                IAML             04 04 19.2
      comp=N,324nm,0.5s
ML02  Panimavida         3.49 172           Pn       04 03 19.4 +1.0
H03N1 Juan Fernandez     5.90 257   T       T        04 10 42.8
      baz=86,slow=73,SNR=408
H03N3 Juan Fernandez     5.91 257   T       T        04 10 41.1
      baz=86,slow=73,SNR=324
H03N2 Juan Fernandez     5.91 257   T       T        04 10 35.7
      baz=86,slow=73,SNR=340
H03S3 Juan Fernandez     5.97 253   T       T        04 10 22.6
      baz=78,SNR=36
H03S1 Juan Fernandez     5.97 253   T       T        04 10 22.5
      baz=78,SNR=20
H03S2 Juan Fernandez     5.98 253   T       T        04 10 21.4
      baz=78,SNR=30
AC02  Maricunga          6.01  26           Pn       04 03 54.0 +0.5
LC01  Cunco              6.58 179   Pn      Pn       04 04 01.8 +0.9
PLCA  Paso Flores        8.50 172   Pn      Pn       04 04 28.9 +1.6
      comp=N,0.1nm,0.3s,baz=322,slow=7.5,SNR=5.1
LPAZ  La Paz            16.33  13   Pn      P        04 06 16.0 -1.1
      comp=N,0.1nm,0.3s,baz=180,slow=7.2,SNR=6.0
BDFB  Brasilia          27.41  58   P       P        04 08 10.7 +0.6
      comp=N,1.4nm,0.5s,baz=224,slow=8.3,SNR=5.7
BDFB  Brasilia          27.41  58   IAmb    IAmb     04 08 20.0
      comp=Z,7.0nm,1.4s
DBIC  Dimbokro          74.64  72   P       P        04 14 04.6 +0.7
      comp=Z,1.5nm,0.9s,baz=228,slow=7.9,SNR=1.3
TORD  Torodi Ar. Bea    83.63  70   P       P        04 14 54.1 +1.0
      comp=Z,0.7nm,0.6s,baz=238,slow=2.4,SNR=6.7
TORD  Torodi Ar. Bea    83.63  70   IAmb    IAmb     04 14 55.0
      comp=Z,0.6nm,0.6s
ZALV  Zalesovo Beam    152.78  31   PKPbc   PKiKP    04 22 21.0 +0.1
      comp=Z,0.5nm,0.6s,baz=343,slow=4.5,SNR=2.5
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*ATH **25** 04:08:15.1, 38°.73N×20°.62E, h10km±1km, ML2.5/13, Error ellipse: s-maj=1.7km s-min=0.7km az=296.0*
*THE **25** 04:08:15.2, 38°.72N×20°.60E, h7km, ML2.8/9, Error ellipse: s-maj=0.9km s-min=0.4km az=341.0*
ISC 25 04:08:13.7±0.8**, 38°.75N**±0°.02×**20°.57E**±0°.03**, h15**km±4km**,**
n48, σ1§19/77**, Greece**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC      h  m  s     ISC
DRAG  Dragano-Lefkad     0.06 174    P       Pg       04 08 16.7 +0.1
DRAG                                 S       Sg       04 08 17.7 -0.7
      40µm,0.2s
DRAG  Dragano-Lefkad     0.06 174    P       Pg       04 08 16.7 +0.1
DRAG                                 S       Sg       04 08 17.6 -0.8
LKD2  Lefkada island     0.08  58    P       Pg       04 08 17.2 +0.4
LKD2                                 S       Sg       04 08 18.5 -0.4
      14µm,0.1s
LKD2  Lefkada island     0.08  58    P       Pg       04 08 17.2 +0.4
LKD2                                 S       Sg       04 08 18.9  0.0
LKD2                                 AML     AML      04 08 19.1
      comp=N,26429µm,0.1s
LKD2                                 AML     AML      04 08 19.3
      comp=E,26612µm,0.1s
TSLK  Tsoukalades, L     0.11  41    P       Pg       04 08 17.9 +0.8
TSLK                                 S       Sg       04 08 20.0 +0.8
      comp=E,8µm,0.4s
```

TSLK	Tsoukalades, L	0.11	41	P	Pg	04 08 17.8	+0.8
TSLK				S	Sg	04 08 20.1	+0.8
TSLK				AML	AML	04 08 20.5	
	comp=E,16678µm,0.3s						
TSLK				AML	AML	04 08 20.5	
	comp=N,17850µm,0.4s						
NYDR	Nydri-Lefkada	0.11	107	P	Pg	04 08 17.1	+0.1
NYDR				S	Sg	04 08 18.9	-0.3
	comp=N,22µm,0.2s						
NYDR	Nydri-Lefkada	0.11	107	P	Pg	04 08 17.1	+0.1
NYDR				S	Sg	04 08 18.6	-0.6
EVGI	Lefkada island	0.14	150	P	Pg	04 08 17.8	+0.4
EVGI				S	Sg	04 08 19.8	-0.1
	comp=N,6µm,0.2s						
EVGI	Lefkada island	0.14	150	P	Pg	04 08 17.9	+0.4
EVGI				S	Sg	04 08 20.1	+0.2
FSK	Fiskardo	0.28	181	P	Pb	04 08 20.8	+0.3
FSK				S	Sg	04 08 24.2	+0.4
	comp=N,2µm,0.4s						
FSK	Fiskardo	0.28	181	P	Pb	04 08 20.7	+0.3
FSK				S	Sb	04 08 25.0	0.0
FSK				AML	AML	04 08 26.1	
	comp=N,2999µm,0.5s						
FSK				AML	AML	04 08 26.3	
	comp=E,5975µm,0.3s						
KEF4	Livadi, Kephal	0.50	193	P	Pb	04 08 24.4	+0.3
KEF4				S	Sb	04 08 32.0	+0.9
	comp=E,7µm,0.2s						
KEF4	Livadi, Kephal	0.50	193	P	Pg	04 08 24.2	+0.6
KEF4				S	Sb	04 08 32.1	+0.9
DMLN	Damoulianata-K	0.53	197	P	Pb	04 08 25.0	+0.4
DMLN	Damoulianata-K	0.53	197	P	Pg	04 08 24.3	+0.2
DMLN				S	Sb	04 08 32.9	+0.8
KEF3	Kipouria, Keph	0.57	198	P	Pg	04 08 24.8	0.0
KEF3				S	Sg	04 08 33.3	+0.9
VLS	Valsamata	0.57	178	P	Pg	04 08 25.2	+0.4
VLS	Valsamata	0.57	178	P	Pg	04 08 25.2	+0.4
VLS				S	Sg	04 08 33.0	+0.6
VLS				AML	AML	04 08 34.9	
	comp=E,949µm,0.2s						
VLS				AML	AML	04 08 36.5	
	comp=N,971µm,0.3s						
PSDA	Pessada-Kefalo	0.63	179	P	Pg	04 08 26.3	+0.3
PSDA	Pessada-Kefalo	0.63	179	P	Pg	04 08 26.3	+0.3
PSDA				S	Sb	04 08 35.4	+0.4
JAN	Janina	0.94	14	P	Pn	04 08 33.1	+0.8
JAN				AML	AML	04 08 52.3	
	comp=N,325µm,0.5s						
JAN				AML	AML	04 08 52.8	
	comp=E,377µm,0.4s						
VTN	Vitineika	0.96	149	P	Pn	04 08 32.8	+0.3
EVR	Evrytania	0.98	80	P	Pn	04 08 33.2	+0.1
EVR				AML	AML	04 08 58.0	
	comp=E,157µm,0.7s						
EVR				AML	AML	04 09 04.1	
	comp=N,142µm,0.9s						
RLS	Riolos of Patr	0.98	134	P	Pg	04 08 32.9	+0.2
RLS	Riolos of Patr	0.98	134	P	Pg	04 08 32.7	-0.1
RLS				AML	AML	04 08 53.9	
	comp=E,313µm,0.3s						
RLS				AML	AML	04 08 55.6	
	comp=N,272µm,0.4s						
LTHK	Lithakia	1.05	168	P	Pb	04 08 33.3	-0.3
LTHK				AML	AML	04 08 56.1	
	comp=E,486µm,0.4s						
LTHK				AML	AML	04 08 59.1	
	comp=N,502µm,0.4s						
ANX	Ano Chora	1.07	98	P	Pg	04 08 34.7	+0.3
ANX				S	Sn	04 08 50.1	+1.2
	comp=N,175nm,0.6s						
ANX	Ano Chora	1.07	98	P	Pg	04 08 34.6	+0.3
ANX				AML	AML	04 08 60.0	
	comp=E,349µm,0.5s						
ANX				AML	AML	04 09 01.3	
	comp=N,431µm,0.6s						
EFP	Efpalio	1.10	106	P	Pg	04 08 34.8	0.0
EFP				S	Sg	04 08 51.3	+2.2
	comp=N,162nm,0.5s						
EFP	Efpalio	1.10	106	P	Pg	04 08 34.7	-0.2
EFP				AML	AML	04 08 58.3	
	comp=E,399µm,0.6s						
EFP				AML	AML	04 09 00.6	
	comp=N,245µm,0.5s						
KEK	Kerkira	1.14	329	P	Pg	04 08 37.3	+1.8
DRO	Drossia	1.20	131	P	Pg	04 08 36.4	-0.4
DRO				AML	AML	04 09 01.7	
	comp=N,519µm,0.4s						
DRO				AML	AML	04 09 04.2	
	comp=E,552µm,0.4s						
SERG	Sergoula	1.21	105	P	Pb	04 08 36.1	-0.2
LAKA	Lakka	1.22	114	P	Pg	04 08 36.5	-0.6
LAKA				AML	AML	04 09 02.2	
	comp=N,567µm,0.5s						
LAKA				AML	AML	04 09 07.4	
	comp=E,770µm,1.1s						
TRIZ	Trizonia	1.24	107	P	Pb	04 08 36.6	-0.2
MAKR	Makrakomi, Fth	1.25	77	P	Pg	04 08 38.2	+0.5
THL	Klokotos Trika	1.39	54	P	Pg	04 08 40.9	+0.5
THL				AML	AML	04 09 05.5	
	comp=N,175µm,0.6s						
THL				AML	AML	04 09 07.7	
	comp=E,190µm,0.5s						
KLV	Kalavryta, Ach	1.43	119	P	Pb	04 08 39.8	-0.2
STON	Ston	4.66	333	ePn	Pn	04 09 24.8	+1.4
STON				Sn	Sn	04 10 13.5	-3.7
LSTV	Lastovo	4.89	326	ePn	Pn	04 09 27.1	+0.4
LSTV				Sn	Sn	04 10 20.5	-2.5
MAKA	Makarska	5.27	331	ePn	Pn	04 09 32.3	+0.5
MAKA				Sn	Sn	04 10 29.1	-3.2
RICI	Ricice	5.41	332	ePn	Pn	04 09 34.7	+0.9
RICI				Sn	Sn	04 10 33.0	-2.7
HVAR	Hvar	5.42	326	ePn	Pn	04 09 35.4	+1.5
HVAR				Sn	Sn	04 10 32.9	-3.0
KIJV	Kijevo	6.12	331	ePn	Pn	04 09 44.8	+1.3
KIJV				Sn	Sn	04 10 50.6	-2.6
ZIRJ	Zirje	6.15	324	ePn	Pn	04 09 44.7	+0.7
ZIRJ				Sn	Sn	04 10 51.6	-2.4
MORI	Morici	6.29	326	ePn	Pn	04 09 47.0	+1.2
MORI				Sn	Sn	04 10 55.3	-2.1
DUGI	Dugi Otok	6.68	323	ePn	Pn	04 09 53.1	+1.9
DUGI				Sn	Sn	04 11 04.6	-2.5

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*OSPL **25** 04:17:38.9±0.4, 18.°09N×67.°89W, h120^{km}, ML3.4*
*NEIC **25** 04:17:39.5±1.0, 18.°5N±0.°1×68.°03W±0.°07, h93^{km}±14^{km}, Error ellipse: s-maj=17.1km s-min=8.6km az=196.0*
*RSPR **25** 04:17:39.2, 18.°57N×68.°05W, h91^{km}, MD3.7/18*
ISC 25 04:17:38.6±1.2**, 18.°44N**±0.°10×**68.°06W**±0.°05**, h99**^{km}**, n72, σ0.^{s}68**/80**, 12C-6D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.32	284		Pn	04 17 52.0	-1.1
IDE	Isla Desecheo	0.56	95	⇓eP	Pn	04 17 53.8	-0.8
IDE	Isla Desecheo	0.56	95	eS	Sn	04 18 05.8	-1.0
PRSN	Puerto Rico Se	0.89	104		Pn	04 17 57.2	-0.6
AGPR	Aguadilla, PR	0.90	88	⇑eP	Pn	04 17 57.6	-0.3
AGPR	Aguadilla, PR	0.90	88	eS	Sn	04 18 11.3	-1.0
AGPR	Aguadilla, PR	0.90	88		Pn	04 17 57.6	-0.3
AGPR					Sn	04 18 11.3	-1.0
AGPR	Aguadilla, PR	0.90	88	IAML		04 18 14.5	
	comp=E,3µm,0.4s						
AGPR				IAML		04 18 15.0	
	comp=N,2µm,0.2s						
AGPR	Aguadilla, PR	0.90	88	i P	Pn	04 17 58.0	+0.2
AGPR				eS	Sn	04 18 12.6	+0.3
AGPR				IAML		04 18 15.5	
	comp=Z,804nm,0.1s						
LSP	Las Mesas	0.96	105	⇑eP	Pn	04 17 58.2	-0.3
LSP	Las Mesas	0.96	105	eS	Sn	04 18 13.4	-0.1
CRPR	Cabo Rojo, PR	1.00	115	⇑eP	Pn	04 17 58.8	0.0
CRPR	Cabo Rojo, PR	1.00	115	eS	Sn	04 18 14.3	+0.2
CRPR	Cabo Rojo, PR	1.00	115		Pn	04 17 58.8	0.0
CRPR					Sn	04 18 14.3	+0.2
CRPR	Cabo Rojo, PR	1.00	115	i P	Pn	04 17 57.7	-1.1
CRPR				IAML		04 18 17.8	
	comp=Z,519nm,0.3s						
MLPR	Magueyes Islan	1.07	116	⇓eP	Pn	04 17 59.7	0.0
MLPR	Magueyes Islan	1.07	116	eS	Sn	04 18 15.8	+0.3
MLPR	Magueyes Islan	1.07	116		Pn	04 17 59.7	0.0
MLPR					Sn	04 18 15.8	+0.3
GBPR	Guanica, Bosqu	1.21	112	⇓eP	Pn	04 18 01.8	+0.5
GBPR	Guanica, Bosqu	1.21	112	eS	Sn	04 18 19.0	+0.6
AOPR	Arecibo Observ	1.24	94	⇑eP	Pn	04 18 01.6	-0.1
AOPR	Arecibo Observ	1.24	94	eS	Sn	04 18 18.9	-0.3
AOPR	Arecibo Observ	1.24	94		Pn	04 18 01.6	-0.1
AOPR					Sn	04 18 18.9	-0.3
UUPR	Utuado, UPR, P	1.28	98	⇑eP	Pn	04 18 02.4	+0.3
UUPR	Utuado, UPR, P	1.28	98	eS	Sn	04 18 19.9	-0.1
UUPR	Utuado, UPR, P	1.28	98		Pn	04 18 02.4	+0.3
UUPR					Sn	04 18 19.9	-0.1
OBIP	Obispado Ponce	1.43	106	⇑eP	Pn	04 18 04.1	+0.2
OBIP	Obispado Ponce	1.43	106	eS	Sn	04 18 23.4	+0.2
OBIP	Obispado Ponce	1.43	106		Pn	04 18 04.1	+0.2
OBIP					Sn	04 18 23.4	+0.2
CELP	Cerrillos	1.45	104	⇑eP	Pn	04 18 04.3	+0.2
CELP	Cerrillos	1.45	104	eS	Sn	04 18 23.9	+0.4
CELP	Cerrillos	1.45	104		Pn	04 18 04.3	+0.2
CELP					Sn	04 18 23.9	+0.4
CELP	Cerrillos	1.45	104	IAML		04 18 26.6	
	comp=E,751nm,0.3s						
EMPR	Esperanza - Ma	1.45	88	⇑eP	Pn	04 18 04.2	+0.1
EMPR	Esperanza - Ma	1.45	88	eS	Sn	04 18 23.2	-0.4
EMPR	Esperanza - Ma	1.45	88		Pn	04 18 04.2	+0.1
EMPR					Sn	04 18 23.2	-0.4
EMPR	Esperanza - Ma	1.45	88	IAML		04 18 30.4	
	comp=N,1µm,0.4s						
SDD	Santo Domingo	1.76	271	Pn	Pn	04 18 09.4	+1.4
SDD				IAML		04 18 36.5	
	comp=N,371nm,0.8s						
SDD	Santo Domingo	1.76	271	i P	Pn	04 18 10.3	+2.3
SJG	San Juan	1.84	100		Pn	04 18 09.1	+0.1
SJG				IAML		04 18 33.6	
	comp=N,901nm,0.5s						
GCPR	Guaynabo City	1.88	94	⇑eP	Pn	04 18 09.2	-0.3
GCPR	Guaynabo City	1.88	94	eS	Sn	04 18 32.9	-0.3
GCPR	Guaynabo City	1.88	94		Pn	04 18 09.2	-0.3
GCPR					Sn	04 18 32.9	-0.3
GCPR	Guaynabo City	1.88	94	IAML		04 18 34.5	
	comp=N,445nm,0.4s						
PDPR	Patillas Dam,	1.98	102		Pn	04 18 11.1	+0.3
PDPR				IAML		04 18 38.5	
	comp=E,390nm,0.2s						
CBYP	Canovanas	2.10	94	⇑eP	Pn	04 18 12.1	-0.4
CBYP	Canovanas	2.10	94	eS	Sn	04 18 38.2	-0.1
CBYP	Canovanas	2.10	94		Pn	04 18 12.1	-0.4
CBYP					Sn	04 18 38.2	-0.1
HUMP	Col San Antoni	2.12	98	⇑eP	Pn	04 18 12.8	+0.2
HUMP	Col San Antoni	2.12	98	eS	Sn	04 18 38.7	0.0
HUMP	Col San Antoni	2.12	98		Pn	04 18 12.8	+0.2
HUMP					Sn	04 18 38.7	0.0
HUMP	Col San Antoni	2.12	98	IAML		04 18 41.4	
	comp=N,959nm,0.3s						
MTP	Monte Pirata	2.41	98	⇓eP	Pn	04 18 16.9	+0.5
MTP	Monte Pirata	2.41	98	eS	Sn	04 18 46.1	+0.7
MTP	Monte Pirata	2.41	98		Pn	04 18 16.9	+0.5
MTP					Sn	04 18 46.1	+0.7
MTP	Monte Pirata	2.41	98	IAML		04 18 49.3	
	comp=E,193nm,0.2s						
MTP				IAML		04 18 49.6	
	comp=N,298nm,0.2s						
CUPR	Culebra, Puert	2.64	92	⇓eP	Pn	04 18 19.5	0.0
CUPR	Culebra, Puert	2.64	92	eS	Sn	04 18 50.9	0.0
CUPR	Culebra, Puert	2.64	92		Pn	04 18 19.5	0.0
CUPR					Sn	04 18 50.9	0.0
SC01	Santiago de lo	2.71	292		Pn	04 18 21.8	+1.3
SC01				IAML		04 19 03.6	
	comp=N,477nm,0.9s						
SC01				IAML		04 19 06.4	
	comp=E,339nm,0.5s						
SC01	Santiago de lo	2.71	292	i P	Pn	04 18 23.6	+3.2
STVI	Saint Thomas	2.95	91	⇑eP	Pn	04 18 23.4	-0.1
STVI	Saint Thomas	2.95	91	eS	Sn	04 18 58.3	0.0
STVI	Saint Thomas	2.95	91		Pn	04 18 23.4	-0.1
STVI					Sn	04 18 58.3	0.0
STVI	Saint Thomas	2.95	91	IAML		04 18 59.4	
	comp=N,312nm,0.3s						
SDDR	Presa de Saban	3.11	281		Pn	04 18 26.4	+0.6
SDDR				IAML		04 19 14.2	
	comp=N,205nm,0.7s						
SDDR				IAML		04 19 14.4	
	comp=N,154nm,0.5s						
CDVI	St. Croix	3.20	102	Pn	Pn	04 18 26.7	-0.3
CDVI				IAML		04 19 25.7	
	comp=N,233nm,0.5s						
CDVI				IAML		04 19 35.8	
	comp=E,242nm,0.7s						
TBVI	Tortola	3.27	90	⇓eP	Pn	04 18 28.4	+0.6
TBVI	Tortola	3.27	90	eS	Sn	04 19 06.0	0.0
FDF	Fort de France	7.58	118	Pn	Pn	04 19 28.6	+2.2
BIRV	Birongo	8.10	167	Pn	Pn	04 19 33.2	-0.3
ZARC	Zaragoza, Cauc	12.73	212	Pn	Pn	04 20 35.8	-0.2

IDC 25 04:17:53.2±2.3**, 19.°23S**×**177.°73W, h0**^{km}**, mb3.5**/5**, mb1 3.8**/5**, mb1mx3.5**/29**, mbtmp3.5**/5**, Error ellipse: s-maj=140.2km s-min=27.2km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.04	261	P	P	04 26 11.5	+0.4
	0.7nm,0.9s,baz=97,slow=7.5,SNR=4.1						
ASAR	Alice Springs	45.07	255	P	P	04 26 10.7	-0.7
	0.2nm,0.5s,baz=94,slow=7.6,SNR=6.2						
TXAR	Lajitas Array	86.16	57	P	P	04 30 36.8	+0.1
	0.3nm,0.8s,baz=224,slow=7.4,SNR=2.5						
ILAR	Eielson Array	87.02	13	P	P	04 30 39.8	-0.2
	0.2nm,0.8s,baz=192,slow=8.1,SNR=2.7						
PDAR	Pinedale Array	87.86	43	P	P	04 30 45.0	+0.1
	0.2nm,0.6s,baz=210,slow=4.8,SNR=3.5						

MAN 25 04:19:24.3, 9.°70N×**123.°82E, h32**^{km}**, mb4.2, ML3.0, MS2.6, Negros**

IDC 25 04:21:57.7±59.0**, 19.°33S**×**178.°45W, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/26**, mbtmp3.8**/3**, Error ellipse: s-maj=1069.0km s-min=164.3km az=81.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.93	243	P	P	04 29 16.1	-1.0
	1.1nm,0.5s,baz=107,slow=12,SNR=4.8						
WRA	Warramunga Arr	44.35	261	P	P	04 30 10.9	+0.8
	1.6nm,1.1s,baz=90,slow=7.6,SNR=6.5						
ASAR	Alice Springs	44.39	256	P	P	04 30 10.2	-0.2
	1.0nm,0.5s,baz=98,slow=7.9,SNR=18						

IDC 25 04:40:51.8±1.7**, 4.°42S**×**129.°46E, h0**^{km}**, mb3.5**/1**, mb1 3.8**/4**, mb1mx3.2**/40**, mbtmp3.6**/4**, ML3.3**/3**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.4**/29**, Error ellipse: s-maj=60.8km s-min=27.1km az=83.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.96	27	Pn	Pn	04 41 53.2	-0.7
	3.1nm,0.3s,baz=238,slow=22,SNR=16						
SIJI				Sn	Sn	04 42 38.5	-2.7
	1.6nm,0.3s,baz=221,slow=19,SNR=1.8						
WRA	Warramunga Arr	16.14	163	Pn	Pn	04 44 38.1	-2.1
	0.1nm,0.3s,baz=343,slow=13,SNR=4.7						
ASAR	Alice Springs	19.60	168	P	Pn	04 45 22.6	-0.5
	0.2nm,0.3s,baz=350,slow=9.8,SNR=19						
GUMO	Guam	23.54	40	LR	LR	04 55 24.1	
	comp=Z,35nm,20.6s,baz=114,slow=37						
MKAR	Makanchi Array	65.80	326	P	P	04 51 39.1	+0.2
	0.4nm,0.6s,baz=116,slow=8.2,SNR=3.9						

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*IDC **25** 05:00:11.2±0.8, 3.°68N×117.°62E, h0^{km}, mb3.9/9, mb1 4.2/10, mb1mx3.9/42, mbtmp4.0/10, ML4.5/1, MS3.5/13, Ms1 3.6/13, ms1mx3.3/36, Error ellipse: s-maj=73.3km s-min=14.4km az=60.0*
*NEIC **25** 05:00:13.4±2.2, 3.°61N±0.°06×117.°57E±0.°03, h10^{km}±1^{km}, mb4.6/17, Error ellipse: s-maj=10.4km s-min=3.8km az=204.0*
*DJA **25** 05:00:14.3±0.4, 4°N±3°×11°8E±°, h10^{km}, M4.6/15, mb4.8/8, mB5.0/6, MLv4.8/15, Mw(mB)4.3/6, MwMwp5.1/1, Mwp5.4/1*
*KLM **25** 05:00:19, 3.°91N×117.°69E, h10^{km}, mb4.5*
ISC 25 05:00:16.7±0.5**, 3.°60N**±0.°06×**117.°66E**±0.°07**, h35**^{km}**, n60, σ1.^{s}34**/52**, mb4.3**/18**, MS3.5**/9**, 1C, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPMM	Sapulut	1.62	313	P	Pn	05 00 42.0	-0.8
MYLDM	Lahad Datu	1.78	28	Pn	Pn	05 00 43.8	-1.2
KKM	Kota Kinabalu	2.82	329	Pn	Pn	05 00 57.2	-2.2
MPSI	Mapaga	3.94	145	P	Pn	05 01 13.5	-1.3
TOLI2	Tolitoli	3.98	128	Pn	Pn	05 01 13.7	-1.7
SMKI	Samarinda	4.05	186	P	Pn	05 01 16.8	+0.6
BKB	Balikpapan	4.89	189	P	Pn	05 01 25.9	-1.9
MRSI	Marisa	5.29	126	P	Pn	05 01 32.6	-0.7
	0.7nm2µm111nm,0.4s						
MTKI	Muara Teweh, K	5.29	211	P	Pn	05 01 34.7	+1.4
	0.9nm62nm,1.0s						
SBUM	Sibu	5.55	258	Pn	Pn	05 01 34.1	-2.8
APSI	Ampana	6.00	138	P	Pn	05 01 41.9	-1.2
	0.5nm774nm68nm,0.7s						
PPR	Puerto Princes	6.22	10	⇑iP	Pn	05 01 45.4	-0.8
LUWI	Luwuk	6.89	132	P	Pn	05 01 54.6	-0.7
	0.6nm5µm104nm,0.6s						
LUWI	Luwuk	6.89	132	Pn	Pn	05 01 54.4	-0.9
TTSI	Tana Toraja	6.95	162	P	Pn	05 01 56.2	+0.1
	1.0nm2µm275nm,0.8s						
KMSI	Cibinong	7.00	115	P	Pn	05 01 55.4	-1.4
	0.5nm56nm,0.6s						
KBKI	Kotabaru	7.02	192	P	Pn	05 01 56.0	-1.0
KSM	Kuching	7.64	254	Pn	Pn	05 02 03.8	-1.8
KAPI	Kappang	8.81	166	Pn	Pn	05 02 23.2	+1.5
	5.7nm,0.3s,baz=342,slow=10,SNR=8.4						
KAPI				LR	LR	05 06 58.7	
	comp=Z,493nm,20.2s,baz=3.0,slow=46						
LEM	Lembang	14.41	224	LR	LR	05 08 46.5	
	comp=Z,138nm,21.0s,baz=69,slow=36						
BATI	Baumata	14.97	156	Pn	P	05 03 50.9	0.0
	2.6nm,0.3s,baz=200,slow=16,SNR=4.1						
BATI				LR	LR	05 10 07.1	
	comp=Z,425nm,19.5s,baz=332,slow=40						
BKNI	Bangkinang	16.92	259		Pn	05 04 10.3	-0.7
BKNI				IAmb	IAmb	05 04 21.4	
	comp=Z,70nm,1.3s						
PSI	Prapat	18.72	268	LR	LR	05 12 27.0	
	comp=Z,140nm,21.3s,baz=132,slow=39						
GSI	Gunungsitoli	20.19	264		P	05 04 47.9	-0.7
GSI				IAmb	IAmb	05 05 00.1	
	comp=Z,15nm,0.7s						
MTN	Manton Dam	21.12	141	P	P	05 04 58.6	-0.1
SLVN	Son La	22.12	324	P	P	05 05 09.5	+0.1
SLVN				IAmb	IAmb	05 05 14.0	
	comp=Z,19nm,1.2s						
CMAR	Chiang Mai Arr	23.52	310	P	P	05 05 22.9	-0.9
	comp=Z,0.5nm,0.3s,baz=113,slow=8.9,SNR=5.5						
CMAR				LR	LR	05 15 12.8	
	comp=Z,138nm,18.2s,baz=170,slow=38						
CMAR	Chiang Mai Arr	23.52	310	P	P	05 05 22.3	-1.6
PSA00	Pilbara Seismi	25.11	175	P	P	05 05 37.9	-0.6
PSA00				IAmb	IAmb	05 05 39.5	
	comp=Z,9.2nm,0.9s						
JOW	Kunigami	25.24	23	LR	LR	05 17 13.8	
	comp=Z,44nm,19.0s,baz=125,slow=41						
ENH	Enshi	27.63	345	P	P	05 06 02.7	+1.5
WB0	Warramunga Arr	28.46	145	P	P	05 06 08.1	-0.6
WB0				IAmb	IAmb	05 06 09.0	
	comp=Z,8.7nm,0.8s						
WRA	Warramunga Arr	28.57	146	P	P	05 06 08.9	-0.7
	comp=Z,4.2nm,0.8s,baz=336,slow=9.6,SNR=33						
WRA	Warramunga Arr	28.57	146	P	P	05 06 08.9	-0.7
WB2	Warramunga Arr	28.58	146	P	P	05 06 09.3	-0.4
GUMO	Guam	28.64	68	LR	LR	05 17 49.6	
	comp=Z,47nm,21.0s,baz=112,slow=37						
XAN	Xi'an	31.36	346	P	P	05 06 38.6	+4.4
XAN				pP	sP	05 06 51.9	+3.4
XAN				sP	pP	05 06 57.8	+14
XAN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
ASAR	Alice Springs	31.39	150	P	P	05 06 35.1	+0.5
	comp=Z,1.5nm,0.8s,baz=341,slow=13,SNR=13						
SHL	Shillong	33.01	314	P	P	05 06 49.9	+0.9
SHL				IAmb	IAmb	05 06 52.3	
	comp=Z,12nm,1.2s						
LZH	Lanzhou	34.75	340	eP	P	05 07 07.4	+3.5
LZH				pP	pP	05 07 11.0	-3.1
LZH				sP	sP	05 07 14.8	-3.5
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
KSRS	Korea Array	34.98	14	LR	LR	05 22 20.2	
	comp=Z,62nm,20.9s,baz=192,slow=38						
BJT	Baijiatuau	36.27	358	P	P	05 07 17.7	+1.0
BJT				IAmb	IAmb	05 07 22.6	
	comp=Z,16nm,1.2s						
MJAR	Matsushiro Arr	37.85	27	LR	LR	05 23 44.9	
	comp=Z,60nm,19.1s,baz=210,slow=37						
GTA	Gaotai	39.15	338	eP	P	05 07 45.0	+3.7
GTA				pP	pP	05 07 50.1	-1.4
GTA				sP	sP	05 07 53.4	-2.3
GTA				pmax	pmax		
	comp=Z,14nm,1.4s						
STKA	Stephens Creek	41.99	149	P	P	05 08 05.1	+0.4
	comp=Z,6.5nm,0.9s,baz=319,slow=7.4,SNR=9.1						
STKA				LR	LR	05 26 45.9	
	comp=Z,84nm,18.3s,baz=6.7,slow=38						
STKA	Stephens Creek	41.99	149	P	P	05 08 04.9	+0.2
SONM	Songino Array	45.12	349	P	P	05 08 29.9	+0.1
	comp=Z,1.2nm,0.9s,baz=169,slow=8.8,SNR=5.1						
SONM				LR	LR	05 30 03.3	
	comp=Z,63nm,18.0s,baz=78,slow=40						
SONM	Songino Array	45.12	349	P	P	05 08 30.3	+0.5
CAN	Canberra	48.62	145	P	P	05 08 58.4	+1.2
MK31	Makanchi Array	52.80	330	P	P	05 09 29.7	+1.1
MKAR	Makanchi Array	52.80	330	P	P	05 09 27.1	-1.5
	comp=Z,0.6nm,0.6s,baz=140,slow=6.6,SNR=6.1						
MKAR				PcP	PcP	05 10 37.5	-0.3
	comp=Z,0.3nm,0.5s,baz=144,slow=3.9,SNR=4.3						
MKAR	Makanchi Array	52.80	330	P	P	05 09 28.1	-0.5
ZALV	Zalesovo Beam	56.90	338	P	P	05 09 56.8	-1.3
	comp=Z,0.7nm,0.3s,baz=134,slow=11,SNR=5.6						
ZALV	Zalesovo Beam	56.90	338	P	P	05 09 56.6	-1.6
KURBB	Kurchatov Arra	57.23	331	P	P	05 09 60.0	-0.5
	comp=Z,0.8nm,0.6s,baz=134,slow=7.0,SNR=5.7						
KURK	Kurchatov	57.25	332	P	P	05 09 59.7	-0.9
KURK				IAmb	IAmb	05 10 05.0	
	comp=Z,4.7nm,1.0s						
ABKAR	Akbulak array	66.64	323	P	P	05 11 02.8	-1.0
KBZ	Khabaz	76.51	314	LR	LR	05 52 49.8	
	comp=Z,45nm,18.9s,baz=92,slow=41						
BRTR	Keskin Array B	83.11	309	P	P	05 12 38.0	-1.4
	comp=Z,0.7nm,0.9s,baz=92,slow=3.3,SNR=2.7						
ARCES	ARCESS Array B	87.41	339	LR	LR	05 55 53.2	
	comp=Z,54nm,19.1s,baz=240,slow=38						

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*IDC **25** 05:14:39.4±5.0, 6.°82N×126.°74E, h48^{km}±45^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.4/35, mbtmp3.9/5, ML5.0/1, Error ellipse: s-maj=59.2km s-min=18.0km az=59.0*
*NEIC **25** 05:14:42.4±1.6, 6.°7N±0.°1×126.°50E±0.°06, h67^{km}±11^{km}, mb4.6/10, Error ellipse: s-maj=18.0km s-min=7.5km az=195.0*
*DJA **25** 05:14:42.5±0.8, 6°N±6°×12°6E±°, h10^{km}, M4.5/7, mb4.6/6, mB4.7/2, MLv4.4/7, Mw(mB)3.9/2*
*MAN **25** 05:14:42.9, 6.°50N×126.°14E, h25^{km}, mb5.0, ML4.0, MS4.0*
ISC 25 05:14:43.6±0.8**, 6.°54N**±0.°06×**126.°19E**±0.°06**, h69**^{km}±9^{km}**, n31, σ1.^{s}51**/34**, mb4.1**/9**, 5C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.41	9	⇑eP	Pn	05 14 53.4	-2.1
MATI				eS	Sn	05 15 03.4	-0.8
DAV	Davao City (W)	0.81	311	P	Pn	05 14 59.3	-0.3
	404nm,0.3s,baz=85,slow=0.5,SNR=38						
DAV				S	Sn	05 15 14.6	+3.0
	285nm,0.3s,baz=78,slow=20,SNR=5.5						
DAV				LR	LR	05 15 15.5	
	comp=Z,116nm,18.0s,baz=320,slow=31						
DAV	Davao City (W)	0.81	311		Pn	05 14 59.5	-0.1
KCP	Kidapawan	1.19	293	⇑iP	Pn	05 15 03.5	-1.0
KCP				i S	Sn	05 15 18.6	-1.6
GSPH	General Santos	1.31	250	⇑iP	Pn	05 15 04.0	-2.2
GSPH				i S	Sn	05 15 21.5	-1.6
BIPH	Bislig	1.65	6	⇑eP	Pn	05 15 10.7	+0.2
BIPH				eS	Sn	05 15 31.5	+0.8
BUKP	Musuan	1.74	320	⇓eP	Pn	05 15 21.0	+9.2
BUKP				eS	Sn	05 15 44.0	+11
SGSI	Sangihe	2.91	193	P	Pn	05 15 27.8	+0.2
MSLP	Maasin	3.81	340	⇑eP	Pn	05 15 43.4	+3.6
TNTI	Ternate	5.85	168	Pn	Pn	05 16 08.7	+0.9

GTOI	Gorontalo	6.67	209	P	Pn	05 16 19.6	+0.7
	0.1nm274nm21nm,0.7s						
LBMI	Labuha	7.25	170	P	Pn	05 16 27.3	+0.4
	0.2nm38nm,0.7s						
MRSI	Marisa	7.36	215	P	Pn	05 16 30.1	+1.6
	0.2nm29nm,0.8s						
SANI	Sanana	8.53	181	P	Pn	05 16 45.2	+0.7
SBUM	Sibu	14.51	254	P	P	05 18 13.6	+3.4
BATI	Baumata	16.82	189	P	P	05 18 36.8	+0.9
	4.8nm,0.3s,baz=326,slow=3.7,SNR=6.5						
MTN	Manton Dam	19.87	166	P	P	05 19 09.4	+0.1
MTN				IAmb	IAmb	05 19 20.4	
	comp=Z,85nm,1.4s						
KNRA	Kununurra	22.22	173	P	P	05 19 34.2	-0.4
KNRA				IAmb	IAmb	05 19 37.6	
	comp=Z,71nm,1.5s						
FITZ	Fitzroy Crossi	24.48	181	P	P	05 19 56.4	0.0
	comp=Z,3.7nm,0.5s,baz=9.3,slow=4.0,SNR=16						
WB0	Warramunga Arr	27.36	163	P	P	05 20 24.3	+1.8
WB0				IAmb	IAmb	05 20 44.6	
	comp=Z,18nm,1.4s						
WRA	Warramunga Arr	27.51	163	P	P	05 20 22.6	-1.2
	comp=Z,0.7nm,0.5s,baz=348,slow=10,SNR=5.5						
WRA	Warramunga Arr	27.51	163	IAmb	IAmb	05 20 32.0	
	comp=Z,0.2nm,1.4s						
WB2	Warramunga Arr	27.51	163	P	P	05 20 24.2	+0.4
WB2				IAmb	IAmb	05 20 48.9	
	comp=Z,19nm,1.4s						
PSA00	Pilbara Seismi	28.62	192	P	P	05 20 33.6	-0.1
AS31	Alice Springs	30.95	166	P	P	05 20 53.9	-0.4
ASAR	Alice Springs	30.95	166	P	P	05 20 53.4	-0.9
	comp=Z,0.8nm,0.6s,baz=349,slow=7.6,SNR=9.6						
ASAR				PcP	PcP	05 23 48.1	-1.3
	comp=Z,0.3nm,0.7s,baz=342,slow=3.7,SNR=4.2						
BBOO	Buckleboo	40.24	167	P	P	05 22 14.4	+0.7
STKA	Stephens Creek	40.93	160	P	P	05 22 17.9	-1.5
	comp=Z,2.1nm,0.8s,baz=331,slow=7.0,SNR=6.4						
STKA	Stephens Creek	40.93	160	IAmb	IAmb	05 22 27.1	
	comp=Z,3.0nm,1.4s						
MKAR	Makanchi Array	54.97	324	P	P	05 24 06.2	-1.5
	comp=Z,0.2nm,0.4s,baz=128,slow=7.4,SNR=7.7						
CASY	Casey	73.52	187	P	P	05 26 08.1	-0.5
CASY				IAmb	IAmb	05 26 24.9	
	comp=Z,13nm,1.2s						

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*JMA **25** 05:36:43.0±0.1, 23°.58N×121°.64E, h45^{km}±3^{km}, M3.2*
*TAP **25** 05:36:44.0, 23°.58N×121°.64E, h32^{km}, ML3.3, C*
ISC 25 05:36:43.0±0.9**, 23°.56N**±0°.02×**121°.71E**±0°.02**, h31**^{km}±8^{km}**,**
n106, σ0^{s}.81/180**, 1C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEGC	Jichi Village	0.21	315	P	Pn	05 36 50.1	0.0
	baz=326						
TEGC				S	Sb	05 36 55.2	+1.3
	baz=326						
HGSD	Ruisui	0.27	256	P	Pn	05 36 50.6	-0.2
	baz=244						
HGSD				S	Sn	05 36 55.7	-0.1
	baz=244						
EGFH	Guangfu	0.28	294	*i* P	Pn	05 36 51.0	0.0
	baz=298						
EGFH				S	Sn	05 36 56.1	-0.1
	baz=298						
ECBN	Changbin	0.34	225	*i* P	Pn	05 36 52.0	+0.2
	baz=212						
ECBN				*i* S	Sn	05 36 57.3	-0.2
	baz=212						
EHY	Hungye	0.36	262	⇑*i*P	Pn	05 36 51.6	-0.5
	baz=267						
EHY				*i* S	Sn	05 36 57.1	-1.0
	baz=267						
ESL	Shilin	0.36	316	*i* P	Pn	05 36 51.5	-0.6
	baz=312						
ESL				*i* S	Sb	05 36 56.6	-0.4
	baz=312						
YULB	Yu-li	0.41	247	*i* P	Pn	05 36 52.6	-0.2
	baz=248						
YULB				*i* S	Sn	05 36 58.6	-0.7
	baz=248						
EYUL	Yuli	0.41	240	*i* P	Pn	05 36 53.1	+0.3
	baz=242						
EYUL				S	Sn	05 36 59.9	+0.5
	baz=242						
HWA	Hwalien	0.43	348	*i* P	Pn	05 36 53.0	0.0
	baz=3.0						
HWA				S	Sn	05 36 59.9	0.0
	baz=3.0						
FULB	Fuli	0.52	227	*i* P	Pn	05 36 54.3	0.0
	baz=233						
FULB				S	Sn	05 37 04.0	+1.9
	baz=233						
TWD	Chiawan	0.53	349	*i* P	Pn	05 36 54.1	-0.3
	baz=5.0						
TWD				*i* S	Sn	05 37 01.9	-0.5
	baz=5.0						
CHKT	Chengkung	0.55	215	*i* P	Pn	05 36 54.3	-0.5
	baz=196						
CHKT				*i* S	Sb	05 37 01.7	-0.3
	baz=196						
VWDT	VWDT	0.55	291	P	Pn	05 36 54.6	-0.2
	baz=289						
VWDT				S	Sb	05 37 01.9	-0.2
	baz=289						
ETL	Fush Village	0.60	353	P	Pn	05 36 55.3	-0.2
	baz=5.0						
ETL				S	Sn	05 37 04.0	-0.3
	baz=5.0						
NACB	Ninganchiao	0.62	351	P	Pn	05 36 55.2	-0.5
	baz=345						
NACB				S	Sn	05 37 04.0	-0.7
	baz=345						
OWD	Renai	0.63	309	*i* P	Pn	05 36 55.5	-0.4
	baz=311						
OWD				*i* S	Sb	05 37 03.4	-0.9
	baz=311						
ECS	Chishang	0.64	224	P	Pn	05 36 56.4	+0.5
	baz=218						
ETLH	Xiulin Townshi	0.68	342	P	Pn	05 36 56.2	-0.4
	baz=337						
ETLH				S	Sb	05 37 05.2	-0.5
	baz=337						
EDH	Donghe	0.69	213	*i* P	Pn	05 36 56.5	-0.1
	baz=197						
EDH				S	Sb	05 37 05.3	-0.5
	baz=197						
YUS	Yu-Shan	0.70	265	*i* P	Pn	05 36 57.1	0.0
	baz=260						
CHGB	Renai	0.70	316	P	Pn	05 36 56.8	-0.2
	baz=329						
CHGB				S	Sb	05 37 05.7	-0.7
	baz=329						
WHF	Hehuan Shan	0.71	326	*i* P	Pb	05 36 56.6	-0.6
	baz=329						
WHF				*i* S	Sb	05 37 06.3	-0.7
	baz=329						
SSLB	Suanglung	0.73	289	P	Pn	05 36 56.8	-0.4
	baz=287						
SSLB				S	Sb	05 37 05.8	-1.2
	baz=287						
ELDTW	Lidau	0.73	240	*i* P	Pb	05 36 56.8	-0.6
	baz=233						
ELDTW				*i* S	Sb	05 37 05.8	-1.3
	baz=233						
FUSS	Fushou	0.81	328	*i* P	Pn	05 36 58.5	0.0
	baz=331						
FUSS				*i* S	Sb	05 37 08.4	-1.0
	baz=331						
SMLT	Sun Moon Lake	0.81	294	*i* P	Pn	05 36 58.4	+0.1
	baz=297						
SMLT				*i* S	Sn	05 37 09.3	-0.1
	baz=297						
WPL	Puli Township	0.82	304	*i* P	Pb	05 36 58.7	-0.1
	baz=303						
ALS	Alishan	0.83	267	*i* P	Pb	05 36 59.4	+0.3
	baz=270						
ALS				*i* S	Sn	05 37 09.7	-0.4
	baz=270						
LONT	Longtian	0.84	219	P	Pn	05 36 58.3	-0.3
	baz=215						
TWT	Tachien	0.85	325	*i* P	Pb	05 36 59.4	+0.1
	baz=326						
TWT				*i* S	Sb	05 37 09.6	-0.8
	baz=326						
TYC	Yuchr	0.85	294	*i* P	Pb	05 36 59.1	-0.2
	baz=293						
TYC				*i* S	Sn	05 37 10.1	-0.2
	baz=293						
TDCB	Techi	0.86	324	P	Pb	05 36 59.3	-0.2
	baz=326						
TDCB				S	Sb	05 37 09.4	-1.3
	baz=326						
ENA	Nanau	0.87	2	*i* P	Pb	05 36 59.3	-0.3
	baz=21						
ENA				*i* S	Sn	05 37 11.0	+0.3
	baz=21						
WCS	Beigang Elemen	0.88	305	P	Pb	05 36 59.4	-0.4
	baz=312						
WCS				S	Sn	05 37 10.7	-0.4
	baz=312						
EWUT	Wuta	0.89	4	P	Pb	05 36 59.6	-0.3
	baz=8.0						
LDUT	Ludao	0.91	194	*i* P	Pn	05 36 59.0	-0.6
	baz=182						
LDUT				*i* S	Sb	05 37 10.2	-1.7
	baz=182						
NNSB	Datong	0.92	341	P	Pb	05 37 00.1	-0.4
	baz=345						
NNSB				S	Sb	05 37 10.9	-1.5
	baz=345						
NNS	Nan Shan	0.93	341	*i* P	Pb	05 37 00.5	-0.2
	baz=345						
NNS				*i* S	Sb	05 37 11.4	-1.4
	baz=345						
TWGBT	Beinan	0.93	218	P	Pn	05 36 59.4	-0.6
	baz=213						
TWGBT				*e*S	Sb	05 37 12.3	-0.4
	baz=213						
WJS	Zhushan	0.94	287	*i* P	Pb	05 37 01.2	+0.6
	baz=285						
WJS				*i* S	Sb	05 37 13.5	+0.7
	baz=285						
STYH	Taoyuan	0.94	246	P	Pb	05 37 00.6	-0.1
	baz=239						
STYH				*e*S	Sb	05 37 13.0	+0.2
	baz=239						
STYT	Tauyuan	0.96	246	*i* P	Pb	05 37 01.1	0.0
	baz=241						
WNT	Mingjian	0.99	289	*i* P	Pb	05 37 02.1	+0.5
	baz=287						
WNT				*i* S	Sb	05 37 15.5	+1.2
	baz=287						
WHP	Taichung City	1.00	316	*i* P	Pb	05 37 01.7	-0.1
	baz=322						
WHP				*i* S	Sb	05 37 14.5	-0.2
	baz=322						
TPUB	Ta-pu	1.02	256	P	Pb	05 37 02.5	+0.4
	baz=251						
TPUB				S	Sb	05 37 15.9	+0.6
	baz=251						
CHN4	Tsaushan	1.04	259	*i* P	Pb	05 37 02.9	+0.4
	baz=254						
CHN4				*i* S	Sb	05 37 17.0	+1.1
	baz=254						
WWF	Wufeng	1.04	298	P	Pb	05 37 03.6	+1.1
	baz=297						
WTP	Ta-pu	1.05	253	*i* P	Pb	05 37 02.7	0.0
	baz=248						
WTP				*i* S	Sb	05 37 16.9	+0.8
	baz=248						
TWC	Suao	1.06	7	*i* P	Pb	05 37 02.5	-0.3
	baz=13						
TWC				*i* S	Sb	05 37 16.4	+0.2
	baz=13						
NDT	Datong Townshi	1.06	350	P	Pb	05 37 02.4	-0.4
	baz=353						
NDS	Dongshan	1.07	0	P	Pb	05 37 02.5	-0.5
	baz=350						
WDLH	Douliu	1.08	277	*i* P	Pb	05 37 03.3	+0.2
	baz=274						
WDLH				*i* S	Sb	05 37 17.1	+0.2
	baz=274						
ENTT	Nioudou	1.09	353	*i* P	Pb	05 37 02.9	-0.4
	baz=346						
ENTT				S	Sn	05 37 15.7	-0.5
	baz=346						
TCU	Taichung	1.11	302	*i* P	Pb	05 37 04.4	+0.7
	baz=302						
TCU				S	Sb	05 37 18.7	+0.9
	baz=302						
SLGT	Liugui	1.12	240	*i* P	Pb	05 37 03.9	0.0
	baz=227						
CHN2	Minshiung	1.13	269	*i* S	Sb	05 37 20.6	+2.3
	baz=265						
SGST	Jiashian	1.14	246	*i* P	Pb	05 37 03.8	-0.2
	baz=230						
SGST				*i* S	Sb	05 37 19.4	+0.9
	baz=230						
CHN1	Nanshi	1.14	251	*i* P	Pb	05 37 04.5	+0.3
	baz=246						
CHN1				*i* S	Sb	05 37 20.1	+1.3
	baz=246						
YHNB	Yeheng	1.15	345	P	Pb	05 37 03.9	-0.4
	baz=348						
YHNB				S	Sn	05 37 17.5	-0.3
	baz=348						
TWK	Hsinying	1.16	256	*i* P	Pb	05 37 04.5	+0.1
	baz=250						
TWK				S	Sb	05 37 18.4	-0.7
	baz=250						
NSK	Sanguang	1.16	344	*i* P	Pb	05 37 04.0	-0.5
	baz=347						
NSK				*i* S	Sb	05 37 18.2	-1.0
	baz=347						
SNST	Tainan City	1.16	253	*i* P	Pb	05 37 04.7	+0.2
	baz=248						
SNST				*i* S	Sb	05 37 20.1	+1.0
	baz=248						
TWE	Neicheng	1.16	358	*i* P	Pb	05 37 04.0	-0.5
	baz=351						
TWQ1	Liyutan	1.16	313	*i* P	Pb	05 37 05.0	+0.4
	baz=322						
TWQ1				*i* S	Sb	05 37 19.2	0.0
	baz=322						
WCHH	Zhanghua	1.17	297	*i* P	Pb	05 37 05.0	+0.3
	baz=295						
CHY	Chiayi	1.18	267	P	Pb	05 37 05.3	+0.5
	baz=264						
ECL	Taimali	1.18	216	*i* P	Pn	05 37 02.1	-1.3
	baz=213						
WTK	Tuku	1.22	276	P	Pb	05 37 05.4	0.0
	baz=273						
NSY	Sanyi	1.22	315	*i* P	Pb	05 37 05.9	+0.5
	baz=315						
NSY				*i* S	Sb	05 37 21.9	+1.1
	baz=315						
NWLT	Wulai	1.23	351	*i* P	Pb	05 37 05.4	-0.3
	baz=354						
NSTT	Nanjuang	1.25	329	*i* P	Pb	05 37 06.2	+0.2
	baz=331						
NSTT				*i* S	Sb	05 37 20.8	-0.9
	baz=331						
WDJ	Dajia District	1.25	309	P	Pb	05 37 06.4	+0.4
	baz=309						
LIOB	Emei	1.25	330	*i* P	Pb	05 37 06.3	+0.2
	baz=331						
LIOB				*i* S	Sb	05 37 22.1	+0.2
	baz=331						
WRL	Guolierlin Hig	1.27	286	P	Pb	05 37 06.0	-0.2
	baz=284						
SSD	Sandimen	1.28	231	*i* P	Pb	05 37 06.1	-0.3
	baz=222						
SSD				*i* S	Sb	05 37 23.2	+0.7
	baz=222						
NMLH	Miaoli	1.29	320	*i* P	Pb	05 37 06.5	-0.1
	baz=319						
TSMG	Majia	1.29	229	P	Pb	05 37 06.3	-0.4
	baz=226						
NTC	Toucheng	1.30	5	*e*P	Pn	05 37 05.4	+0.4
	baz=20						
MASBT	Mashibuluo	1.36	227	P	Pb	05 37 06.7	-1.2
	baz=220						
MASBT				S	Sb	05 37 26.9	+1.9
	baz=220						
WSF	Szhu	1.36	274	P	Pb	05 37 07.7	-0.3
	baz=270						
WSF				*i* S	Sb	05 37 25.1	+0.1
	baz=270						
TWM1	Shoushan	1.39	239	P	Pb	05 37 09.8	+1.5
	baz=232						
TWM1				*e*S	Sb	05 37 29.1	+3.3
	baz=232						
CHN8	Yiju	1.39	262	P	Pb	05 37 08.1	-0.3
	baz=257						
CHN8				*i* S	Sb	05 37 26.0	+0.3
	baz=257						
TAW	Tawu	1.41	212	*i* S	Sn	05 37 23.4	-0.6
	baz=207						
EAST	Anshuo	1.41	214	*i* P	Pn	05 37 06.5	-0.1
	baz=212						
TIPB	Shuangxi	1.41	4	*i* P	Pb	05 37 08.4	-0.4
	baz=356						
TIPB				*i* S	Sb	05 37 26.7	+0.2
	baz=356						
TWA	Mucha	1.42	356	P	Pb	05 37 08.4	-0.6
	baz=358						
TWB1	Santiao Chiao	1.47	10	P	Pb	05 37 08.6	-1.1
	baz=14						
YOJ	Yonaguni jima	1.50	53	*e*S	Sn	05 37 26.1	-0.1
NWF	Wu-fen Shan	1.51	3	*i* P	Pb	05 37 09.7	-0.8
	baz=352						
NWF				S	Sb	05 37 30.4	+1.2
	baz=352						
LAY	Lan-yu	1.52	185	*i* P	Pn	05 37 07.5	-0.5
	baz=175						
LAY				S	Sn	05 37 25.7	-1.1
	baz=175						
SCZT	Fangliau	1.55	221	P	Pb	05 37 09.5	-1.5
	baz=212						
SCZT				S	Sb	05 37 29.1	-1.1
	baz=212						
LYUB	Lan-yu	1.55	184	P	Pn	05 37 07.3	-1.2
	baz=174						
LYUB				*e*S	Sn	05 37 25.8	-1.7
	baz=174						
TWS1	Kuangyinshan	1.56	350	P	Pb	05 37 10.9	-0.4
	baz=352						
SLIU	Shizi	1.57	212	P	Pb	05 37 10.1	-1.4
	baz=202						
YM01	YM01	1.59	356	P	Pb	05 37 10.2	-1.5
	baz=358						
YM01				S	Sb	05 37 29.7	-1.8
	baz=358						
PHUB	P'eng-hu	1.96	269	P	Pn	05 37 15.0	+0.9
	baz=264						
PHUB				S	Sn	05 37 38.1	+0.5
	baz=264						
PNG	Penghu	1.97	271	*i* P	Pn	05 37 15.3	+1.0
	baz=266						
PNG				S	Sn	05 37 38.2	+0.2
	baz=266						
HATJ	Hateruma jima	1.99	75	S	Sn	05 37 39.5	+1.2
IRIF	Iriomote-Funau	2.01	67	*e*S	Sn	05 37 39.9	+1.1
VCHM	Qimei	2.12	261	P	Pn	05 37 16.9	+0.6
	baz=255						
VCHM				S	Sn	05 37 42.1	+0.5
	baz=255						
JKRS	Kuro-shima	2.21	72	P	Pn	05 37 19.2	+1.6
JKRS				S	Sn	05 37 45.7	+1.8
JIJ	Ishigaki jima	2.37	70	P	Pn	05 37 21.2	+1.5
JIJ				S	Sn	05 37 48.5	+0.7
JISG	Ishigakijimahi	2.59	66	P	Pn	05 37 23.9	+1.1
JISG				S	Sn	05 37 53.9	+0.6
PTMZ	Houxiangcun	2.78	303	P	Pn	05 37 25.8	+0.3
	baz=301						
PTMZ				S	Sn	05 37 57.5	-0.5
	baz=301						
JTJ	Tarama	2.94	68	*e*S	Sn	05 38 03.9	+2.0
MATB	Ma-tsu	3.04	329	P	Pn	05 37 29.1	+0.2
	baz=327						
MATB				S	Sn	05 38 03.6	-0.7
	baz=327						

IDC 25 05:45:23.3±30.0**, 17°.35N×144°.95E, h0**^{km}**, mb3.8**/4**,**
mb1 3.9/4**, mb1mx3.2**/47**, mbtmp3.8**/4**, MS4.6**/1**, Ms1 4.6**/1**,**
ms1mx2.7/56**, Error ellipse: s-maj=556.5km**
s-min=132.2km az=10.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNU	Nakatsue	20.18	324	LR	LR	05 56 23.7	
	comp=Z,2µm,21.8s,baz=118,slow=33						
WRA	Warramunga Arr	38.50	196	P	P	05 52 46.2	-1.3
	0.3nm,0.3s,baz=14,slow=8.8,SNR=10						
FITZ	Fitzroy Crossi	40.03	209	P	P	05 53 01.4	+1.1
	3.0nm,0.9s,baz=27,slow=14						
ASAR	Alice Springs	42.17	195	P	P	05 53 17.8	-0.1
	0.2nm,0.3s,baz=17,slow=6.2,SNR=2.1						
STKA	Stephens Creek	49.05	184	P	P	05 54 12.2	-0.1
	2.6nm,0.9s,baz=32,slow=13,SNR=2.6						

IDC 25 05:52:20.6±5.6**, 3°.63S×151°.41E, h0**^{km}**, mb3.9**/4**,**
mb1 4.1/4**, mb1mx3.4**/50**, mbtmp3.9**/4**, MS3.1**/1**, Ms1 3.1**/1**,**
ms1mx2.5/40**, Error ellipse: s-maj=144.4km**
s-min=35.6km az=98.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	10.25	125	LR	LR	05 58 52.6	
	comp=Z,106nm,19.8s,baz=316,slow=38						
WRA	Warramunga Arr	23.24	224	P	P	05 57 28.2	-1.6
	2.3nm,1.0s,baz=50,slow=8.9,SNR=3.5						
ASAR	Alice Springs	26.13	219	P	P	05 57 57.9	+1.2
	1.0nm,0.9s,baz=56,slow=9.0,SNR=4.2						
CMAR	Chiang Mai Arr	56.13	295	P	P	06 02 02.2	-0.2
	1.9nm,0.3s,baz=101,slow=4.9,SNR=4.3						
MKAR	Makanchi Array	78.54	319	P	P	06 04 24.3	+0.2
	0.4nm,0.7s,baz=100,slow=6.3,SNR=3.1						

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*OSPL **25** 05:52:16.5±1.3, 19°.22N×66°.97W, h15^{km}±9^{km}, ML3.8*
*RSPR **25** 05:52:18.3, 18°.99N×67°.69W, h13^{km}±8^{km}, MD3.5/17*
*NEIC **25** 05:52:18.6±1.7, 18°.92N±0°.05×67°.55W±0°.04, h17^{km}±6^{km},*
Error ellipse: s-maj=7.0km s-min=4.4km az=200.0
*IDC **25** 05:52:20.0±1.9, 19°.62N×67°.55W, h0^{km}, mb3.6/3,*
mb1 4.1/4, mb1mx3.4/40, mbtmp3.9/4, ML3.1/1, Error
ellipse: s-maj=47.2km s-min=33.7km az=169.0
ISC 25 05:52:20.9±0.7**, 18°.89N**±0°.05×**67°.48W**±0°.03**, h27**^{km}**, n74,**
σ1^{s}.43/80**, mb3.8**/3**, 13C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.51	180	⇑*e*P	Pb	05 52 29.4	-1.9
IDE	Isla Desecheo	0.51	180	*e*S	Sb	05 52 37.7	-0.7
AGPR	Aguadilla, PR	0.55	141	⇑*e*P	Pb	05 52 31.2	-0.8
AGPR	Aguadilla, PR	0.55	141	*e*S	Sb	05 52 40.1	+0.6
AGPR	Aguadilla, PR	0.55	141		Pb	05 52 30.8	-1.2
AGPR	Aguadilla, PR	0.55	141		Sb	05 52 40.1	+0.6
AGPR	Aguadilla, PR	0.55	141	*i* P	Pb	05 52 30.8	-1.2
AGPR				*e*S	Sb	05 52 39.3	-0.2
AGPR				IAML		05 52 39.7	
	comp=Z,5µm,0.5s						
PRSN	Puerto Rico Se	0.74	155	⇑*e*P	Pb	05 52 33.8	-1.5
PRSN	Puerto Rico Se	0.74	155	*e*S	Sb	05 52 45.8	+0.7
PRSN	Puerto Rico Se	0.74	155		Pb	05 52 33.6	-1.6
PRSN	Puerto Rico Se	0.74	155		Sb	05 52 45.8	+0.7
LSP	Las Mesas	0.81	153	⇑*e*P	Pn	05 52 35.2	-1.3
LSP	Las Mesas	0.81	153	*e*S	Sb	05 52 47.8	+0.9
AOPR	Arecibo Observ	0.88	128	⇑*e*P	Pn	05 52 35.8	-1.6
AOPR	Arecibo Observ	0.88	128	*e*S	Sn	05 52 50.7	+1.3
AOPR	Arecibo Observ	0.88	128		Pn	05 52 36.0	-1.4
AOPR				IAML		05 52 57.1	
	comp=N,2µm,0.4s						
AOPR	Arecibo Observ	0.88	128		Sn	05 52 50.7	+1.3
PCDR	Punta Cana, DR	0.94	246		Pn	05 52 35.5	-2.8
PCDR				IAML		05 52 57.2	
	comp=N,6µm,0.5s						
CRPR	Cabo Rojo, PR	0.95	158	⇑*e*P	Pn	05 52 37.0	-1.4
CRPR	Cabo Rojo, PR	0.95	158	*e*S	Sn	05 52 50.7	-0.4
CRPR	Cabo Rojo, PR	0.95	158		Pn	05 52 37.1	-1.4
CRPR				IAML		05 52 58.3	
	comp=N,1µm,0.5s						
CRPR	Cabo Rojo, PR	0.95	158	*i* P	Pn	05 52 36.6	-1.9
CRPR				*e*S	Sb	05 52 52.8	+1.9
CRPR				IAML		05 52 54.7	
	comp=Z,2µm,0.4s						
UUPR	Utuado, UPR, P	0.96	132	⇓*i*P	Pn	05 52 37.1	-1.5
UUPR	Utuado, UPR, P	0.96	132	*e*S	Sn	05 52 52.5	+1.1
UUPR	Utuado, UPR, P	0.96	132		Pn	05 52 37.1	-1.5
UUPR					Sn	05 52 52.5	+1.1
EMPR	Esperanza - Ma	0.99	115	⇓*e*P	Pn	05 52 38.1	-0.9
EMPR	Esperanza - Ma	0.99	115	*e*S	Sn	05 52 53.1	+1.0
EMPR	Esperanza - Ma	0.99	115		Pn	05 52 38.0	-0.9
EMPR				IAML		05 52 53.3	
	comp=N,2µm,0.8s						
EMPR	Esperanza - Ma	0.99	115		Sn	05 52 53.1	+1.0
MLPR	Magueyes Islan	1.01	156	⇑*e*P	Pn	05 52 37.8	-1.4
MLPR	Magueyes Islan	1.01	156	*e*S	Sn	05 52 52.2	-0.3

MLPR	Magueyes Islan	1.01	156		Pn	05 52 37.8	-1.4
GBPR	Guanica, Bosqu	1.07	148	⇑eP	Pn	05 52 39.0	-1.2
GBPR	Guanica, Bosqu	1.07	148	eS	Sn	05 52 54.4	+0.2
CELP	Cerrillos	1.18	134	⇑eP	Pn	05 52 40.5	-1.2
CELP	Cerrillos	1.18	134	eS	Sn	05 52 58.0	+1.2
CELP	Cerrillos	1.18	134		Pn	05 52 40.7	-0.9
CELP				IAML		05 53 06.4	
	comp=N,1μm,0.3s						
CELP				IAML		05 53 06.9	
	comp=E,993nm,0.8s						
CELP	Cerrillos	1.18	134		Sn	05 52 58.0	+1.2
OBIP	Obispado Ponce	1.18	136	⇑eP	Pn	05 52 40.5	-1.2
OBIP	Obispado Ponce	1.18	136	eS	Sn	05 52 57.8	+0.9
OBIP	Obispado Ponce	1.18	136		Pn	05 52 40.7	-1.0
OBIP				IAML		05 53 05.3	
	comp=N,950nm,0.7s						
OBIP	Obispado Ponce	1.18	136		Sn	05 52 57.8	+0.9
GCPR	Guaynabo City	1.44	114	⇓eP	Pn	05 52 44.5	-0.7
GCPR	Guaynabo City	1.44	114	eS	Sn	05 53 04.5	+1.2
GCPR	Guaynabo City	1.44	114		Pn	05 52 44.5	-0.7
GCPR	Guaynabo City	1.44	114		Sn	05 53 04.5	+1.2
SJG	San Juan	1.48	122		Pn	05 52 45.5	-0.2
SJG				IAML		05 53 10.5	
	comp=N,962nm,0.5s						
SJG				IAML		05 53 14.7	
	comp=N,914nm,0.6s						
PDPR	Patillas Dam,	1.63	122		Pn	05 52 47.7	-0.2
CBYP	Canovanas	1.66	112		Pn	05 52 47.6	-0.6
CBYP				IAML		05 53 22.1	
	comp=E,1μm,0.2s						
HUMP	Col San Antoni	1.71	116	⇑eP	Pn	05 52 48.6	-0.4
HUMP	Col San Antoni	1.71	116	eS	Sn	05 53 11.6	+1.5
HUMP	Col San Antoni	1.71	116		Pn	05 52 48.6	-0.4
HUMP					Sn	05 53 11.6	+1.5
MTP	Monte Pirata	1.99	113	⇑eP	Pn	05 52 52.2	-0.6
MTP	Monte Pirata	1.99	113	eS	Sn	05 53 18.4	+1.6
MTP	Monte Pirata	1.99	113		Pn	05 52 52.2	-0.6
MTP					Sn	05 53 18.4	+1.6
CUPR	Culebra, Puert	2.16	105	⇓eP	Pn	05 52 54.4	-0.7
CUPR	Culebra, Puert	2.16	105	eS	Sn	05 53 22.2	+1.2
CUPR	Culebra, Puert	2.16	105		Sn	05 53 22.2	+1.2
SDD	Santo Domingo	2.35	260	i P	Pb	05 53 00.5	-2.0
SDD				eS	Sb	05 53 33.0	+1.8
STVI	Saint Thomas	2.45	102	⇑eP	Pn	05 52 58.3	-0.8
STVI	Saint Thomas	2.45	102	eS	Sn	05 53 29.4	+1.2
STVI	Saint Thomas	2.45	102		Pn	05 52 58.0	-1.1
STVI	Saint Thomas	2.45	102		Sn	05 53 29.4	+1.2
CDVI	St. Croix	2.81	113	Pn	Pn	05 53 03.8	-0.3
SC01	Santiago de lo	3.12	280		Pn	05 53 08.7	+0.4
SDDR	Presa de Saban	3.61	272		Pn	05 53 15.5	+0.4
SDDR				IAML		05 54 15.4	
	comp=E,349nm,0.7s						
LONE2	Loma La Sidra	3.80	266	i P	Pn	05 53 19.6	+1.7
LGNH	Logne	4.88	266	Pn	Pn	05 53 33.4	+0.9
LGNH				IAML		05 54 59.2	
	comp=E,126nm,2.6s						
LGNH				IAML		05 55 06.0	
	comp=N,121nm,2.7s						
BAUV	El Baul	9.91	183	Pn	Pn	05 54 41.6	0.0
BBSR	BB Station	13.65	10	Pn	Pn	05 55 30.0	-2.8
ROSC	El Rosal	15.48	206	Pn	P	05 56 08.7	+6.5
	comp=N,1.7nm,0.3s,baz=145,slow=12,SNR=5.5						
TXAR	Lajitas Array	34.51	294	P	P	05 59 06.5	-0.6
	comp=N,0.3nm,0.7s,baz=102,slow=7.9,SNR=5.2						
YKA	Yellowknife Ar	54.26	335	P	P	06 01 42.8	-1.5
	comp=N,0.6nm,0.6s,baz=112,slow=7.5,SNR=13						
ESDC	Sonseca Array	57.96	55	P	P	06 02 11.9	+0.7
	comp=N,0.8nm,0.8s,baz=268,slow=7.1,SNR=6.8						

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*IDC **25** 06:02:02.8±2.8, 40.°36N×141.°09E, h0^{km}, mb3.4/2, mb1 3.7/5, mb1mx3.1/57, mbtmp3.5/5, ML2.9/3, Error ellipse: s-maj=50.2km s-min=34.2km az=51.0*

*JMA **25** 06:02:06.2, 40.°00N×140.°58E, h3^{km}±2^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s298.00000°, δ67.00000°, λ-13.00000°. NP2: ϕ_s33.00000°, δ78.00000°, λ-156.00000°. Principal axes: T Plg8.0000°, Azm164.0000°; N Plg64.0000°, Azm58.0000°; P Plg25.0000°, Azm258.0000°;*

JMA Felt II J1.

ISC 25 06:02:06.8±1.2, **40.°02N**±0.°03×**140.°61E**±0.°04, **h5**^{km}±11^{km}, **n12, σ1^{s}.21**/19, **5C-2D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAH	Hinai	0.17	7	⇑P	Pg	06 02 10.2	0.0
JAH				S	Sg	06 02 13.1	+0.7
JKZ	Kuzumaki	0.55	93	⇓P	Pg	06 02 17.4	0.0
JKZ				S	Sg	06 02 24.8	+0.2
JRG	Rokugo	0.62	178	⇑P	Pg	06 02 18.1	-0.6
JRG				S	Sg	06 02 26.4	-0.4
JIW	Iwasaki	0.73	321	⇑P	Pg	06 02 20.1	-0.8
JIW				S	Sg	06 02 30.1	-0.3
JOM	Ohasama	0.76	136	⇑P	Pg	06 02 20.5	-0.8
JANG	Nango	0.78	63	⇓P	Pg	06 02 21.5	-0.2
JANG				S	Sg	06 02 31.9	+0.1
JTM	Tenmabayashi	0.84	24	⇑P	Pg	06 02 22.6	-0.3
JTM				S	Sg	06 02 34.2	+0.3
MJAR	Matsushiro Arr	3.95	209	Pn	Pn	06 03 10.0	+1.9
	0.2nm,0.3s,baz=24,slow=15,SNR=2.8						
MJAR				Sn	Sb	06 04 06.3	+1.3
	0.4nm,0.3s,baz=32,slow=18,SNR=4.3						
USRK	Ussuriysk Ar.	7.65	306	Pn	Pn	06 03 57.1	-1.7
	baz=112,slow=14,SNR=6.0						
KSRS	Korea Array	10.24	260	Pn	Pn	06 04 37.5	+3.2
	0.6nm,0.3s,baz=63,slow=14,SNR=6.3						
WRA	Warramunga Arr	59.94	187	P	P	06 12 13.9	0.0
	0.6nm,1.0s,baz=7.1,slow=7.5,SNR=1.8						
ASAR	Alice Springs	63.66	187	P	P	06 12 37.8	-1.1
	0.3nm,0.7s,baz=360,slow=7.1,SNR=1.7						

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*IDC **25** 06:04:31.7±1.2, 21.°42S×66.°63W, h214^{km}±11^{km}, mb3.6/10, mb1 3.7/15, mb1mx3.6/32, mbtmp4.1/15, Error ellipse: s-maj=15.0km s-min=12.7km az=120.0*

*NEIC **25** 06:04:31.1±1.6, 21.°48S±0.°06×66.°70W±0.°08, h206^{km}±6^{km}, mb4.5/17, Error ellipse: s-maj=11.4km s-min=8.8km az=114.0*

*VAO **25** 06:04:31.8±0.4, 21.°44S×66.°91W, h240^{km}±5^{km}, mb4.0*

*SCB **25** 06:04:35.1±1.7, 21.°52S×66.°86W, h193^{km}±9^{km}, ML4.4/6, Error ellipse: s-maj=5.5km s-min=4.1km az=0.0*

ISC 25 06:04:30.9±0.6, **21.°47S**±0.°05×**66.°77W**±0.°04, **h213**^{km}±6^{km}, **n133, σ1^{s}.19**/144, **mb4.1**/14, **Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	Mochara	1.08	79	P	Pn	06 05 05.1	+2.0
MOCB				S	S	06 05 27.2	-0.7
YJA	Yavi	1.36	121	P	Pn	06 05 06.9	+1.7
YJA				S	S	06 05 31.3	-0.3
LVC	Limon Verde	2.29	240	P	Pn	06 05 14.8	+1.0
	22nm,0.3s,baz=51,slow=6.9,SNR=198						
LVC				S	S	06 05 46.7	-0.2
	5.8nm,0.3s,baz=66,slow=12,SNR=3.6						
LVC	Limon Verde	2.29	240	P	Pn	06 05 14.9	+1.1
LVC	Limon Verde	2.29	240	eP	Pn	06 05 14.7	+1.0
PB09	IPOC Station P	2.32	261	P	Pn	06 05 15.5	+1.6
PB09				S	S	06 05 46.2	-0.9
PB09	IPOC Station P	2.32	261		Pn	06 05 15.5	+1.6
PB09				Sn	S	06 05 47.7	+0.6
PB01	IPOC Station P	2.57	279	P	Pn	06 05 17.4	+0.9
PB01				S	S	06 05 50.3	-1.4
PB01				IAML		06 05 53.6	
	736nm,0.3s						
PB01	IPOC Station P	2.57	279		Pn	06 05 17.3	+0.8
PB01				Sn	S	06 05 51.8	+0.1
PB08	IPOC Station P	2.59	300	P	Pn	06 05 19.0	+1.9
PB08				S	S	06 05 52.7	0.0
PB08				IAML		06 05 57.7	
	825nm,0.3s						
PB08	IPOC Station P	2.59	300		Pn	06 05 18.8	+1.7
PB03	IPOC Station P	2.83	258	P	Pn	06 05 20.0	+0.5
PB03				S	S	06 05 54.7	-2.4
PB03				IAML		06 05 56.7	
	790nm,0.2s						
PB06	IPOC Station P	2.88	244	P	Pn	06 05 19.8	-0.2
PB06	IPOC Station P	2.88	244		Pn	06 05 20.7	+0.7
PB07	IPOC Station P	2.91	264	P	Pn	06 05 21.2	+0.8
PB07				S	S	06 05 56.3	-2.5
PB07				IAML		06 05 58.3	
	731nm,0.4s						
PB07	IPOC Station P	2.91	264		Pn	06 05 21.3	+0.8
PB15	IPOC Station P	3.04	235	P	Pn	06 05 22.7	+0.7
PB15				S	S	06 05 58.8	-2.8
PB15				IAML		06 06 06.7	
	2μm,0.5s						
PB15	IPOC Station P	3.04	235		Pn	06 05 22.8	+0.9
PB11	IPOC Station P	3.19	302	P	Pn	06 05 24.5	+0.9
PB11				S	S	06 06 02.4	-2.2
PB11				IAML		06 06 08.3	
	832nm,0.3s						
PB11	IPOC Station P	3.19	302	Pn	Pn	06 05 24.6	+0.9
PB04	IPOC Station P	3.25	254	P	Pn	06 05 25.0	+0.6
PB04	IPOC Station P	3.25	254	Pn	Pn	06 05 24.6	+0.2
TA01	Diego Aracena	3.31	285		Pn	06 05 25.2	+0.3
TA02	Huaiquique	3.36	290		Pn	06 05 25.4	-0.1
PB05	IPOC Station P	3.47	246	P	Pn	06 05 27.5	+0.6
PB16	IPOC Station P	4.04	320	P	Pn	06 05 36.5	+2.2
PB16	IPOC Station P	4.04	320		Pn	06 05 36.3	+2.0
PB10	IPOC Station P	4.05	239	P	Pn	06 05 33.8	0.0
PB10	IPOC Station P	4.05	239	Pn	Pn	06 05 33.8	0.0
PB12	IPOC Station P	4.39	310		Pn	06 05 38.3	+0.2
PB14	IPOC Station P	4.59	226	Pn	Pn	06 05 40.5	-0.3
BBOE	La Paz, Chanca	4.77	346	P	Pn	06 05 45.7	+2.3
BBOD	La Paz, Gloria	5.11	340	P	Pn	06 05 50.4	+2.8
LPAZ	La Paz	5.31	346	P	Pn	06 05 52.2	+2.0
	15nm,0.3s,baz=142,slow=8.1,SNR=107						
LPAZ	La Paz	5.31	346	P	Pn	06 05 52.3	+2.0
LPAZ	La Paz	5.31	346	eP	Pn	06 05 52.1	+1.8
AC02	Maricunga	5.76	201	Pn	Pn	06 05 55.8	0.0
GO03	Copiap	6.87	207	Pn	Pn	06 06 07.6	-2.0
SIV	San Ignacio	7.67	46	P	Pn	06 06 19.7	-0.3
	16nm,0.3s,baz=234,slow=9.3,SNR=357						
SIV				S	S	06 07 43.7	-3.3
	1.0nm,0.3s,baz=139,slow=20,SNR=1.7						
AC04	Llanos de Chal	7.76	209	Pn	Pn	06 06 17.9	-3.2
PTLB	Pontes e Lacer	9.39	52	eP	Pn	06 06 41.7	-0.5
PTLB	Pontes e Lacer	9.39	52	Pn	Pn	06 06 41.4	-0.8
ZON	Zonda	10.18	189		Pn	06 06 50.7	-1.7
AQDB	Aquidauana	10.39	87	eP	Pn	06 06 56.6	+1.6
VILB	Vilhena	10.54	38	eP	Pn	06 06 57.0	+0.1
VILB	Vilhena	10.54	38	Pn	Pn	06 06 56.9	-0.1
ETMB	Extrema	11.60	3	eP	Pn	06 07 09.9	-0.6
ETMB	Extrema	11.60	3		Pn	06 07 09.9	-0.6
SALV	Santo Antonio	11.86	64	eP	P	06 07 15.8	-2.5
ITQB	Itaqui	12.27	134	eP	Pn	06 07 20.0	+1.2
MT09	Talagante	12.82	196	Pn	Pn	06 07 24.3	-1.6
SAML	Samuel	12.92	16		Pn	06 07 26.3	-0.7
MT01	Popeta	12.97	197	Pn	Pn	06 07 26.6	-1.0
BO01	Tunca	13.43	196		Pn	06 07 32.2	-1.0
PDRB	Porto dos Gac	13.73	46	eP	P	06 07 39.7	+0.6
PTGB	Pitanga	13.91	106	eP	P	06 07 42.5	+1.4
PCMB	Pacaembu	14.43	93	eP	P	06 07 47.8	+1.0
ITAB	Concordia	14.52	116	eP	P	06 07 48.3	+0.6
CLDB	Colider	14.89	47	eP	P	06 07 52.2	+0.3
CPSB	Cacapava Do Su	14.92	129	eP	P	06 07 52.8	+0.7
ARAG	Araguaiana, MT	15.29	71	eP	P	06 07 57.5	+1.2
ITRB	Iturama	15.47	86	eP	Pn	06 07 59.4	+1.0
PLTB	Pedras Altas	15.60	134	eP	P	06 07 59.7	+0.1
FRTB	Fartura	16.02	100	eP	Pn	06 08 06.1	+1.1
TIJ01	Guaruva-PR	16.75	107	eP	Pn	06 08 13.1	-0.7
BB19B	Bebedouro	17.01	92	eP	Pn	06 08 15.9	-0.9
TER01	Tubaro-SC	17.46	117	eP	P	06 08 20.7	+0.6
SNDB	Serra Nova Dou	17.56	60	eP	Pn	06 08 21.9	-1.3
IPMB	Ipameri, GO	17.81	82	eP	Pn	06 08 24.6	-1.6
RCLB	Rio Claro- Sao	17.88	97	eP	P	06 08 24.9	+0.3
SPB	Sao Paulo	17.99	100	eP	P	06 08 26.6	+0.7
SPB	Sao Paulo	17.99	100	P	P	06 08 25.8	0.0
NPGB	Novo Progresso	18.09	39	eP	P	06 08 26.4	-0.7
PET01	Itanhaem-SP	18.18	103	eP	P	06 08 28.5	+0.6
VAO	Valinhos	18.40	98	eP	P	06 08 30.5	+0.1
BDFB	Brasilia	18.70	75	P	P	06 08 34.5	+0.8
	1.1nm,0.3s,baz=235,slow=7.3,SNR=16						
BDFB	Brasilia	18.70	75	P	P	06 08 34.1	+0.4
LR03	Panguipulli	18.73	194	P	P	06 08 33.5	-0.2
LR03				IAmb	IAmb	06 08 34.9	
	comp=Z,18nm,0.8s						
MACA	Manacapuru-AM	19.13	19	eP	P	06 08 37.9	-0.4
MACA	Manacapuru-AM	19.13	19	P	P	06 08 37.1	-1.2
MACA				IAmb	IAmb	06 08 39.6	
	comp=Z,14nm,0.5s						
PLCA	Paso Flores	19.47	189	P	P	06 08 44.0	+2.2
	comp=Z,0.2nm,0.3s,baz=15,slow=12,SNR=3.9						
PLCA	Paso Flores	19.47	189	eP	P	06 08 41.2	-0.5
PLCA	Paso Flores	19.47	189	IAmb	IAmb	06 09 23.1	
	comp=Z,28nm,1.8s						
PARB	Paraibuna	19.64	99	eP	P	06 08 44.0	+0.2
PEXB	Peixe	19.96	65	eP	P	06 08 47.6	+0.4
LL04	Puerto Octay	19.97	193	P	P	06 08 46.6	-0.3
ITTB	Itaituba	20.09	34	eP	P	06 08 48.2	-0.3
BSCB	Bom Sucesso	20.51	93	eP	P	06 08 53.6	+0.6
MAN01	Angra dos Reis	21.17	98	eP	P	06 08 58.9	-1.0
PTGA	Pitinga	21.65	19	P	P	06 09 04.6	-0.2
	comp=Z,1.5nm,0.3s,baz=329,slow=19,SNR=2.1						
VAS01	Vassouras-RJ	21.66	96	eP	P	06 09 04.2	-0.7
DIAM	Diamantina, MG	21.95	86	eP	P	06 09 06.6	-1.2
MC01	Montes Claros	22.08	82	eP	P	06 09 07.7	-1.3
JANB	Januaria	22.25	77	eP	P	06 09 09.8	-0.8
SMTB	Santa Maria do	22.32	59	eP	P	06 09 11.1	-0.2
PRPB	Parauapebas	22.37	50	eP	P	06 09 10.6	-1.0
SDBA	SAO DESIDERIO	22.75	70	eP	P	06 09 14.9	-0.3
MALB	Monte Alegre	22.99	34	eP	P	06 09 16.9	-0.3
SJMB	Sao Joao De Ma	24.18	88	eP	P	06 09 28.7	+0.7
BSFB	Barra de Sao F	24.47	88	eP	P	06 09 30.4	-0.2
RIB01	Linhares ES	24.81	90	eP	P	06 09 33.4	-0.3
NAN01	Guarapari, ES	25.34	87	eP	P	06 09 37.8	-0.7
GUA01	Guaratinga, BA	25.93	84	eP	P	06 09 43.6	-0.3
GDU01	Guandu, BA	27.01	78	eP	P	06 09 51.4	-2.1
ROSB	Rosrio	28.74	53	eP	P	06 10 08.2	-0.6
BAUV	El Baul	30.25	358	P	P	06 10 22.1	0.0
TXAR	Lajitas Array	61.76	323	P	P	06 14 27.2	0.0
	comp=Z,0.2nm,0.5s,baz=147,slow=8.1,SNR=3.9						
S39A	Bolivar	63.93	337	P	P	06 14 41.4	+0.1
S39A				IAmb	IAmb	06 14 42.0	
	comp=Z,5.1nm,0.6s						
DBIC	Dimbokro	66.82	72	P	P	06 14 59.7	-0.5
	comp=Z,3.0nm,0.8s,baz=256,slow=6.3,SNR=3.0						
DBIC	Dimbokro	66.82	72	P	P	06 14 59.8	-0.4
DBIC				IAmb	IAmb	06 15 09.6	
	comp=Z,18nm,1.5s						
K43A	Burlington	66.88	343	P	P	06 14 59.5	-0.5
QSPA	South Pole Qui	68.73	180	P	P	06 15 12.4	+0.9
	comp=Z,0.8nm,0.4s,baz=90,slow=7.1,SNR=5.8						
QSPA	South Pole Qui	68.73	180	IAmb	IAmb	06 16 59.6	
	comp=Z,16nm,1.9s						
Q16A	Castle Valley	73.05	325	P	P	06 15 40.1	+2.2
Q16A				IAmb	IAmb	06 18 08.9	
	comp=Z,15nm,1.9s						
P18A	Preston Nutter	73.09	326	P	P	06 15 40.0	+1.8
PDAR	Pinedale Array	75.09	329	P	P	06 15 50.8	+1.1
	comp=Z,0.4nm,0.5s,baz=128,slow=8.9,SNR=6.8						
TORD	Torodi Ar. Bea	75.47	69	P	P	06 15 51.5	-0.7
	comp=Z,4.4nm,0.5s,baz=259,slow=5.4,SNR=41						
TORD	Torodi Ar. Bea	75.47	69	P	P	06 15 51.4	-0.7
ULM	Lac du Bonnet	75.91	341	P	P	06 15 53.8	+0.1
	comp=Z,2.2nm,0.6s,baz=247,slow=2.8,SNR=3.0						
REDW	Red Top Meadow	76.17	328	P	P	06 15 57.3	+1.5
REDW				IAmb	IAmb	06 17 08.3	
	comp=Z,18nm,1.8s						
NVAR	Mina Array Bea	76.71	321	P	P	06 16 01.0	+2.1
	comp=Z,1.3nm,1.0s,baz=157,slow=7.5,SNR=6.3						
KVN	Kaiserville	77.00	321	P	P	06 16 01.6	+1.1
KVN				IAmb	IAmb	06 18 17.7	
	comp=Z,9.4nm,1.6s						
K05A	Summer Lake	81.01	323	P	P	06 16 24.4	+2.3
BOSA	Boshof	81.70	117	P	P	06 16 26.3	+0.1
	comp=Z,1.9nm,0.6s,baz=249,slow=4.3,SNR=9.0						
YKA	Yellowknife Ar	91.83	340	P	P	06 17 14.8	+0.6
	comp=Z,0.9nm,0.6s,baz=128,slow=4.3,SNR=20						
ASAR	Alice Springs	130.83	205	PKP	PKPdf	06 23 17.6	0.0
	comp=Z,0.4nm,0.4s,baz=128,slow=1.7,SNR=11						
WRA	Warramunga Arr	133.96	208	PKP	PKPdf	06 23 24.2	+0.6
	comp=Z,1.4nm,1.0s,baz=150,slow=1.9,SNR=7.0						
ZALV	Zalesovo Beam	141.05	27	PKP	PKPdf	06 23 35.2	-0.2
	comp=Z,1.1nm,0.6s,baz=259,slow=3.0,SNR=5.6						
MAKZ	Makanchi	144.23	38		PKPdf	06 23 41.2	-0.1
MK31	Makanchi Array	144.42	37		PKPdf	06 23 41.8	+0.1
MKAR	Makanchi Array	144.42	37	PKP	PKPdf	06 23 41.8	+0.1
	comp=Z,4.0nm,0.7s,baz=319,slow=3.7,SNR=22						
MKAR	Makanchi Array	144.42	37		PKPdf	06 23 41.6	-0.1
SONM	Songino Array	153.12	10	PKPbc	PKiKP	06 24 04.3	+0.8
	comp=Z,1.0nm,0.4s,baz=301,slow=1.7,SNR=11						

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*IDC **25** 06:11:01.6±0.5, 54.°33S×22.°84W, h0^{km}, mb4.5/13, mb1 4.5/14, mb1mx4.4/23, mbtmp4.4/14, ML4.6/1, MS4.1/18, Ms1 4.1/18, ms1mx4.1/19, Error ellipse: s-maj=18.0km s-min=15.5km az=114.0*

*NEIC **25** 06:11:03.6±1.3, 54.°4S±0.°1×23.°0W±0.°1, h10^{km}±1^{km}, mb4.9/35, Error ellipse: s-maj=19.0km s-min=14.4km az=192.0*

*GCMT **25** 06:11:05.6±0.3, 54.°64S±0.°03×22.°95W±0.°03, h30^{km}, MW5.0/76, Moment Tensor Solution. s39,c52; s76,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.29±.19; $M_{\theta\theta}$-0.59±.14; $M_{\phi\phi}$-2.69±.13; $M_{r\theta}$1.13±.21; $M_{\theta\phi}$-1.77±.08; $M_{\phi r}$-1.04±.15; Best double couple: $M_0$3.82900×10^{16} NP1: ϕ_s51.00000°, δ47.00000°, λ122.00000°. NP2: ϕ_s188.00000°, δ52.00000°, λ61.00000°. Principal axes: T 3.9410, Plg67.0000°, Azm36.0000°; N -0.2180, Plg23.0000°, Azm207.0000°; P -3.7170, Plg3.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 06:11:03.4±0.4, **54.°36S**±0.°07×**22.°94W**±0.°07, **h10**^{km}, **n93, σ1^{s}.03**/75, **mb4.7**/29, **MS4.1**/20, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	7.92	265		Pn	06 12 57.7	-0.7
VNA1	Neumayer--Stat	17.61	164	P	P	06 15 09.4	0.0
VNA3	Neumayer Olymp	17.92	166	P	Pn	06 15 12.1	-0.2
VNA2	Neumayer--Watz	17.99	163	P	Pn	06 15 12.8	-0.3
	baz=317,slow=13						
SNAA	Sanae	19.43	161	P	Pn	06 15 30.6	-0.1
SNAA	Sanae	19.43	161	P	P	06 15 30.0	+0.4
	1.9nm,0.3s,baz=331,slow=15,SNR=21						
SNAA				LR	LR	06 21 34.5	
	comp=Z,907nm,18.4s,baz=344,slow=33						
SNAA	Sanae	19.43	161	P	P	06 15 29.8	+0.3
SNAA				IAmb	IAmb	06 15 41.0	
	comp=Z,40nm,0.6s						
EFI	East Falkland	21.16	263	P	P	06 15 47.7	-0.7
EFI				IAmb	IAmb	06 15 48.3	
	comp=Z,58nm,0.9s						
PMSA	Palmer Station	22.84	227	P	P	06 16 06.3	+0.1
	comp=Z,22nm,1.0s,baz=49,slow=5.8,SNR=7.2						
PMSA				LR	LR	06 23 30.0	
	comp=Z,411nm,19.7s,baz=78,slow=33						
PMSA	Palmer Station	22.84	227	P	P	06 16 06.0	-0.2
PMSA				IAmb	IAmb	06 16 12.5	
	comp=Z,38nm,1.0s						
SMAI	San Martin Ant	24.62	219	P	P	06 16 22.7	-0.7
SMAI				IAmb	IAmb	06 16 28.5	
	comp=Z,18nm,1.1s						
USHA	Ushuaia	26.01	250	P	P	06 16 38.1	+2.0
	comp=Z,8.3nm,0.8s,baz=71,slow=9.0,SNR=2.2						
USHA				LR	LR	06 25 44.9	
	comp=Z,296nm,19.0s,baz=95,slow=34						
MG02	Cerro Sombrero	27.15	254	P	P	06 16 47.0	+0.6
PLCA	Paso Flores	34.22	274	P	P	06 17 50.5	+1.5
	comp=Z,2.4nm,0.9s,baz=172,slow=6.6,SNR=4.2						
PLCA				LR	LR	06 31 48.2	
	comp=Z,160nm,20.5s,baz=130,slow=36						
PLCA	Paso Flores	34.22	274	IAmb	IAmb	06 17 59.6	
	comp=Z,6.4nm,1.1s						
SPB	Sao Paulo	35.77	319	P	P	06 18 04.3	+1.8
SPB				IAmb	IAmb	06 18 12.3	
	comp=Z,14nm,1.2s						
QSPA	South Pole Qui	35.90	180	P	P	06 18 03.3	0.0
	comp=Z,12nm,0.9s,baz=192,slow=4.1,SNR=27						
QSPA	South Pole Qui	35.90	180	P	P	06 18 03.3	0.0
QSPA				IAmb	IAmb	06 18 15.3	
	comp=Z,24nm,0.9s						
CPUP	Villa Florida	37.70	304	P	P	06 18 22.9	+4.1
	comp=Z,2.6nm,0.6s,baz=120,slow=5.2,SNR=3.3						
CPUP				LR	LR	06 33 28.4	
	comp=Z,265nm,18.4s,baz=156,slow=36						
CPUP	Villa Florida	37.70	304	P	P	06 18 17.8	-1.0
SUR	Sutherland	37.83	73	P	P	06 18 20.8	+0.7
	comp=Z,7.6nm,1.0s,baz=207,slow=11,SNR=1.9						
SUR	Sutherland	37.83	73	P	P	06 18 21.4	+1.3
MT09	Talagante	39.23	282	P	P	06 18 31.0	-0.8
MT09				IAmb	IAmb	06 18 42.8	
	comp=Z,20nm,0.8s						
ZON	Zonda	39.56	286	P	P	06 18 33.3	-1.3
MT02	Curacav	39.69	282	P	P	06 18 34.5	-1.1
MT02				IAmb	IAmb	06 18 40.5	
	comp=Z,26nm,1.1s						
MAW	Mawson	40.07	144	P	P	06 18 37.6	-0.6
	comp=Z,3.8nm,0.8s,baz=349,slow=5.2,SNR=1.7						
MAW				LR	LR	06 33 00.7	
	comp=Z,265nm,18.4s,baz=251,slow=33						
MAW	Mawson	40.07	144	P	P	06 18 38.0	-0.2
BOSA	Boshof	43.17	73	P	P	06 19 03.2	-1.1
	comp=Z,7.6nm,1.0s,baz=191,slow=10,SNR=9.4						
BOSA				LR	LR	06 33 14.7	
	comp=Z,340nm,18.8s,baz=218,slow=31						
BOSA	Boshof	43.17	73	P	P	06 19 03.5	-0.7
BOSA				IAmb	IAmb	06 19 04.6	
	comp=Z,31nm,1.4s						
BDFB	Brasilia	43.28	323	P	P	06 19 04.7	-0.5
	comp=Z,1.7nm,0.6s,baz=154,slow=8.4,SNR=3.9						
BDFB				LR	LR	06 35 09.5	
	comp=Z,496nm,18.4s,baz=142,slow=33						
AC04	Llanos de Chal	43.45	287	P	P	06 19 06.2	-0.2
AC04				IAmb	IAmb	06 19 17.0	
	comp=Z,21nm,1.1s						
H10S2	ASCENSION HYDR	45.76	11	T	T	07 08 28.1	
	baz=34,slow=74,SNR=33						
H10S3	ASCENSION HYDR	45.76	11	T	T	07 08 27.8	
	baz=186,slow=74,SNR=33						
LBTB	Lobatse	46.17	70	P	P	06 19 28.0	-0.2
LBTB				IAmb	IAmb	06 19 28.6	
	comp=Z,19nm,1.0s						
LVC	Limon Verde	46.70	294	P	P	06 19 33.0	+0.4
LVC				IAmb	IAmb	06 19 50.4	
	comp=Z,7.8nm,1.0s						
H10N1	ASCENSION HYDR	46.88	12	T	T	07 09 52.4	
	baz=186,slow=75,SNR=11						
H10N3	ASCENSION HYDR	46.88	11	T	T	07 09 52.8	
	baz=186,slow=75,SNR=21						
H10N2	ASCENSION HYDR	46.89	12	T	T	07 09 49.9	
	baz=186,slow=75,SNR=31						
PB09	IPOC Station P	47.53	294	P	P	06 19 38.3	-0.6
SBA	Scott Base	47.92	183	P	P	06 19 42.1	+1.0
PTLB	Pontes e Lacer	47.92	310	P	P	06 19 41.5	-0.2
PTLB				IAmb	IAmb	06 19 53.0	
	comp=Z,14nm,0.9s						
PB01	IPOC Station P	48.28	295	P	P	06 19 44.3	-0.4
PB01				IAmb	IAmb	06 20 13.2	
	comp=Z,20nm,1.4s						
VNDA	Vanda	48.36	181	P	P	06 19 44.5	0.0
	comp=Z,4.4nm,0.8s,baz=153,slow=5.4,SNR=9.2						
VNDA				LR	LR	06 39 27.0	
	comp=Z,155nm,18.6s,baz=155,slow=35						
VNDA	Vanda	48.36	181	P	P	06 19 45.3	+0.8
VNDA				IAmb	IAmb	06 19 56.6	
	comp=Z,9.3nm,1.1s						
PB11	IPOC Station P	49.42	295	P	P	06 19 53.0	-0.5
PB11				IAmb	IAmb	06 20 01.7	
	comp=Z,15nm,1.2s						
PB16	IPOC Station P	50.52	297	P	P	06 20 01.9	-0.5
MOPA	Mopani	50.59	75	i P	P	06 20 02.7	+0.5
MOPA	Mopani	50.59	75	i P	P	06 20 02.7	+0.5
MSNA	Messina	50.74	73	i P	P	06 19 59.0	-4.4
MSNA	Messina	50.74	73	i P	P	06 19 59.0	-4.4
MATP	Matopo	51.43	70	i P	P	06 20 07.9	-0.8
MATP	Matopo	51.43	70	i P	P	06 20 07.9	-0.8
LPAZ	La Paz	51.52	300	P	P	06 20 09.2	-0.8
	comp=Z,1.6nm,0.4s,baz=332,slow=16,SNR=6.2						
LPAZ	La Paz	51.52	300	P	P	06 20 09.4	-0.6
SAML	Samuel	55.48	309	P	P	06 20 37.9	-0.4
ETMB	Extrema	56.13	306	P	P	06 20 42.4	-0.5
ETMB				IAmb	IAmb	06 20 55.3	
	comp=Z,6.3nm,1.0s						
VOI	Vohitsoka	60.72	87	P	P	06 21 16.0	+0.9
LIC	Lamto	62.20	20	eP	P	06 21 24.9	0.0
	comp=Z,32nm,0.8s						
KIC	Kosan Boka	62.39	21	eP	P	06 21 26.0	-0.2
	comp=Z,14nm,0.8s						
TIC	Toumodi	62.61	20	eP	P	06 21 27.5	-0.2
DBIC	Dimbokro	62.67	20	P	P	06 21 27.9	-0.1
	comp=Z,7.4nm,0.7s,baz=195,slow=7.7,SNR=11						
DBIC				LR	LR	06 42 33.6	
	comp=Z,113nm,18.1s,baz=178,slow=30						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**62.67**	**20**	P	**P**	**06 21 27.9**	**-0.1**
BOAV	**Boa Vista**	**64.55**	**318**	P	**P**	**06 21 39.8**	**-0.7**
BOAV				IAmb	IAmb	06 21 40.6	
	comp=Z,9.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**70.43**	**26**	P	**P**	**06 22 17.6**	**0.0**
	comp=Z,11nm,0.7s,baz=200,slow=6.4,SNR=73						
TORD				LR	LR	06 46 41.1	
	comp=Z,112nm,20.1s,baz=230,slow=30						
TORD	**Torodi Ar. Bea**	**70.43**	**26**	P	**P**	**06 22 17.4**	**-0.2**
TORD				IAmb	IAmb	06 22 18.7	
	comp=Z,12nm,0.8s						
KMBO	**Kilima Mbogo**	**72.14**	**66**	LR	LR	06 51 50.6	
	comp=Z,108nm,18.5s,baz=241,slow=34						
ROSC	**El Rosal**	**72.78**	**305**	LR	LR	06 54 43.8	
	comp=Z,114nm,21.3s,baz=304,slow=36						
BIRV	**Birongo**	**74.20**	**315**	P	**P**	**06 22 40.2**	**+0.1**
STKA	**Stephens Creek**	**93.09**	**167**	LR	LR	07 02 44.1	
	comp=Z,356nm,21.2s,baz=202,slow=33						
KEST	**Kesra**	**93.95**	**26**	LR	LR	07 02 54.4	
	comp=Z,106nm,18.2s,baz=226,slow=33						
ESDC	**Sonseca Array**	**95.07**	**15**	P	**P**	**06 24 27.3**	**+1.4**
	comp=Z,0.7nm,0.9s,baz=199,slow=4.2,SNR=4.7						
ESDC				LR	LR	07 01 56.5	
	comp=Z,62nm,18.0s,baz=200,slow=32						
PPT2	**Papeete2**	**95.14**	**230**	*e*S	S	06 36 29.8	+48
	comp=Z,109nm,25.5s						
PPT2	**Papeete2**	**95.14**	**230**	*e*LR	LR	06 55 46.7	
	comp=Z,226nm,28.5s						
PPT	**Papeete**	**95.16**	**230**	LR	LR	06 55 48.9	
	comp=Z,40nm,20.9s,baz=144,slow=28						
TAOE	**Nuku Hiva Isla**	**98.08**	**243**	*e*LR	LR	06 57 18.0	
	comp=Z,77nm,22.7s						
ASAR	**Alice Springs**	**99.78**	**159**	LR	LR	07 06 25.2	
	comp=Z,68nm,18.2s,baz=185,slow=33						
DZM	**Mont Dzumac**	**103.46**	**189**	*e*LR	LR	06 59 49.8	
	comp=Z,108nm,23.6s						
FINES	**FINESS Array B**	**121.78**	**25**	PKP	**PKPdf**	**06 29 54.5**	**-1.6**
	comp=Z,2.5nm,1.0s,baz=236,slow=2.1,SNR=5.4						
AAK	**Ala-Archa**	**127.09**	**67**	PKP	**PKPdf**	**06 30 05.9**	**-1.2**
	comp=Z,1.5nm,0.5s,baz=123,slow=2.5,SNR=5.9						
ARCES	**ARCESS Array B**	**128.50**	**20**	PKP	**PKPdf**	**06 30 07.4**	**-1.4**
	comp=Z,4.5nm,0.9s,baz=197,slow=2.8,SNR=1.9						
BVAR	**Borovoye Array**	**131.81**	**54**	PKP	**PKPdf**	**06 30 14.4**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=266,slow=5.9,SNR=4.5						
MKAR	**Makanchi Array**	**134.01**	**67**	PKP	**PKPdf**	**06 30 18.3**	**-1.6**
	comp=Z,0.3nm,0.6s,baz=252,slow=2.4,SNR=4.1						
KURBB	**Kurchatov Arra**	**134.36**	**61**	PKP	**PKPdf**	**06 30 18.8**	**-1.6**
	comp=Z,1.3nm,0.2s,baz=230,slow=3.1,SNR=5.0						
KURK	**Kurchatov**	**134.46**	**61**		**PKPdf**	**06 30 18.8**	**-1.7**
YKA	**Yellowknife Ar**	**136.55**	**318**	PKP	**PKPdf**	**06 30 22.7**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=122,slow=2.1,SNR=4.8						
A36M	**Sachs Harbour**	**144.03**	**329**	PKPdf	**PKPab**	**06 30 35.1**	**+0.3**
INK	**Inuvik**	**146.01**	**321**	PKPdf	**PKPdf**	**06 30 40.9**	**0.0**
NRIK	**Noril'sk**	**146.18**	**37**	PKPbc	**PKPbc**	**06 30 42.3**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=239,slow=7.1,SNR=5.5						
DAWY	**Dawson**	**147.44**	**313**	PKPdf	**PKPdf**	**06 30 44.4**	**+0.9**
SONM	**Songino Array**	**148.12**	**81**	PKPbc	**PKPdf**	**06 30 46.9**	**+1.6**
	comp=Z,4.9nm,1.0s,baz=223,slow=2.6,SNR=19						
BCAR	**Beaver Creek A**	**148.26**	**311**		**PKPbc**	**06 30 47.1**	**-1.2**
ILAR	**Eielson Array**	**150.77**	**313**	PKPbc	**PKPbc**	**06 30 53.1**	**-1.2**
	comp=Z,4.2nm,1.0s,baz=110,slow=1.4,SNR=24						
ILAR	**Eielson Array**	**150.77**	**313**	PKPdf	**PKPdf**	**06 30 51.4**	**+2.6**

NOU 25 06:24:36.6, 14°.69S×167°.21E, h116^{km}, mb3.9/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.75**	**180**	P	Pn	06 24 56.7	+0.7
KOUNC	**Koumac, New Ca**	**6.46**	**205**	P	Pn	06 26 09.9	+0.7
	24nm,0.9s						
YATNC	**Mamie plateau,**	**7.34**	**182**	P	Pn	06 26 20.5	-0.6
DZM	**Mont Dzumac**	**7.38**	**186**	P	Pn	06 26 21.4	-0.3
	8.3nm,0.8s						
NOUC	**Port Laguerre**	**7.42**	**187**	P	Pn	06 26 22.0	-0.2
	14nm,1.5s						

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*NEIC **25** 06:25:15.9±2.0, 25°.51S±0°.09×176°.7W±0°.2, h91^{km}±8^{km}, mb4.5/12, Error ellipse: s-maj=25.3km s-min=12.8km az=79.0*

*IDC **25** 06:25:21.5±5.0, 25°.25S×177°.11W, h135^{km}±44^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.6/25, mbtmp4.0/6, MS3.3/6, Ms1 3.3/6, ms1mx3.0/35, Error ellipse: s-maj=32.9km s-min=28.5km az=113.0*

ISC 25 06:25:16.1±1.0, 25°.47S±0°.09×176°.7W±0°.2, h100^{km}, n32, σ1^s.43/22, mb4.4/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.91**	**196**	Pn	**Pn**	**06 26 14.6**	**+0.5**
MSVF	**Nonsavu**	**9.11**	**327**	P	**Pn**	**06 27 24.6**	**-0.1**
	1.3nm,0.3s,baz=120,slow=22,SNR=6.9						
MSVF				LR	LR	06 30 42.0	
	comp=Z,68nm,19.1s,baz=165,slow=37						
URZ	**Urewera**	**13.78**	**201**	Pn	**Pn**	**06 28 25.5**	**-1.6**
BKZ	**Black Stump Fm**	**14.80**	**201**	Pn	**Pn**	**06 28 38.8**	**-1.5**
DZM	**Mont Dzumac**	**15.78**	**279**	LR	LR	06 33 35.4	
	comp=Z,99nm,21.4s,baz=112,slow=32						
DZM	**Mont Dzumac**	**15.78**	**279**	*e*LR	LR	06 32 38.5	
	comp=Z,142nm,25.1s						
TBI	**Tubuai**	**24.90**	**91**	*e*T	T	06 55 45.3	
	22nm,0.4s						
PAE	**Paea**	**26.37**	**78**	*e*T	T	06 57 29.7	
	4.6nm,0.3s						
PPT2	**Papeete2**	**26.40**	**78**	*e*LR	LR	06 37 12.9	
	comp=Z,109nm,25.5s						
PPT2	**Papeete2**	**26.40**	**78**	*e*T	T	06 57 32.7	
	5.1nm,0.4s						
HNR	**Honiara**	**27.31**	**302**	LR	LR	06 39 46.6	
	comp=Z,83nm,18.2s,baz=102,slow=32						
EIDS	**Eidsvold**	**29.05**	**263**	P	**P**	**06 31 08.2**	**+1.2**
EIDS				IAmb	IAmb	06 31 09.8	
	comp=Z,8.1nm,0.8s						
CTAO	**Charters Tower**	**34.48**	**271**	P	**P**	**06 31 56.1**	**+1.4**
CTAO				IAmb	IAmb	06 31 56.4	
	comp=Z,5.4nm,0.8s						
STKA	**Stephens Creek**	**36.96**	**250**	P	**P**	**06 32 15.9**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=100,slow=12,SNR=10.0						
AS31	**Alice Springs**	**44.74**	**261**	P	**P**	**06 33 19.2**	**-0.6**
AS31				IAmb	IAmb	06 33 21.6	
	comp=Z,2.0nm,0.5s						
ASAR	**Alice Springs**	**44.74**	**261**	P	**P**	**06 33 18.9**	**-0.9**
	comp=Z,3.1nm,0.5s,baz=86,slow=6.4,SNR=69						
WB2	**Warramunga Arr**	**45.27**	**267**	P	**P**	**06 33 23.1**	**-0.9**
WB2				IAmb	IAmb	06 33 49.9	
	comp=Z,13nm,1.3s						
WRA	**Warramunga Arr**	**45.28**	**267**	P	**P**	**06 33 22.6**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=103,slow=7.9,SNR=10						
WB0	**Warramunga Arr**	**45.29**	**267**	P	**P**	**06 33 24.2**	**+0.1**
WB0				IAmb	IAmb	06 33 46.7	
	comp=Z,12nm,1.3s						
KNRA	**Kununurra**	**51.66**	**270**	P	**P**	**06 34 12.9**	**-0.2**
SBA	**Scott Base**	**53.02**	**184**	P	**P**	**06 34 22.2**	**0.0**
VNDA	**Vanda**	**53.09**	**186**	P	**P**	**06 34 26.6**	**+3.8**
	comp=Z,2.5nm,1.1s,baz=9.4,slow=8.8,SNR=5.7						
VNDA	**Vanda**	**53.09**	**186**	IAmb	IAmb	06 34 34.9	
	comp=Z,7.9nm,1.4s						
CASY	**Casey**	**60.02**	**206**	P	**P**	**06 35 11.4**	**-0.6**
QSPA	**South Pole Qui**	**64.62**	**180**	P	**P**	**06 35 42.9**	**+0.1**
TXAR	**Lajitas Array**	**88.76**	**57**	LR	LR	07 13 41.8	
	comp=Z,31nm,18.3s,baz=0.0,slow=33						
MA2	**Magadan**	**88.87**	**344**	LR	LR	07 11 30.5	
	comp=Z,6.1nm,20.8s,baz=274,slow=31						
DLBC	**Dease Lake**	**92.16**	**23**	LR	LR	07 15 51.0	
	comp=Z,37nm,18.8s,baz=336,slow=33						
ILAR	**Eielson Array**	**92.89**	**12**	P	**P**	**06 38 17.9**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=196,slow=6.1,SNR=1.4						
AKASG	**Malin Array Be**	**147.88**	**328**	PKPbc	**PKPbc**	**06 44 49.6**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=43,slow=4.5,SNR=4.7						
CLL	**Collm**	**153.15**	**346**	*e*PKPdf	**PKPbc**	**06 45 00.0**	**-1.8**
CLL				*e*PKPab	**pPKPdf**	**06 45 19.0**	**-2.7**
TORD	**Torodi Ar. Bea**	**167.65**	**173**	PKPab	**PKPab**	**06 46 17.8**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=201,slow=4.5,SNR=3.6						

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*JMA **25** 06:54:21.4±0.1, 39°.43N×142°.69E, h31^{km}±2^{km}, M4.0*
JMA Felt I J1.

*IDC **25** 06:54:22.4±0.7, 39°.37N×142°.65E, h40^{km}±6^{km}, mb3.6/14, mb1 3.8/16, mb1mx3.5/51, mbtmp3.8/16, ML3.5/2, MS3.0/4, Ms1 3.0/4, ms1mx2.7/64, Error ellipse: s-maj=18.3km s-min=15.6km az=110.0*

*NEIC **25** 06:54:24.9±1.6, 39°.53N±0°.04×142°.6E±0°.1, h52^{km}±8^{km}, mb4.1/7, Error ellipse: s-maj=14.1km s-min=1.3km az=111.0*

ISC 25 06:54:22.8±0.7, 39°.45N±0°.04×142°.66E±0°.06, h40^{km}±7^{km}, n55, σ1^s.45/66, mb3.9/18, 3C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.66**	**281**	⇑P	**Pn**	**06 54 34.6**	**-1.1**
MIYJ				S	**Sn**	**06 54 43.5**	**-1.5**
JTH	**Tanohata**	**0.78**	**308**	P	**Pn**	**06 54 36.4**	**-1.0**
JTH				*e*S	**Sn**	**06 54 47.2**	**-0.7**
OFUJ	**Ofunato**	**0.86**	**245**	⇓P	**Pn**	**06 54 37.1**	**-1.3**
OFUJ				*e*S	**Sn**	**06 54 48.4**	**-1.3**
JOM	**Ohasama**	**1.06**	**271**	P	**Pn**	**06 54 40.9**	**-0.3**
JOM				S	**Sn**	**06 54 54.9**	**+0.2**
JKMT	**Kesennumamotoy**	**1.13**	**236**	⇓P	**Pn**	**06 54 41.0**	**-1.0**
JKMT				*e*S	**Sn**	**06 54 55.4**	**-0.9**
JKZ	**Kuzumaki**	**1.16**	**298**	⇑P	**Pn**	**06 54 42.4**	**-0.1**
JKZ				*e*S	**Sn**	**06 54 57.5**	**+0.3**
JMK	**Ichinoseki**	**1.23**	**246**	⇓P	**Pn**	**06 54 42.9**	**-0.5**
JMK				S	**Sn**	**06 54 58.7**	**-0.1**
JANG	**Nango**	**1.27**	**317**	⇑P	**Pn**	**06 54 43.5**	**-0.6**
JANG				*e*S	**Sn**	**06 55 00.4**	**+0.4**
JIO	**Ouri**	**1.43**	**226**	P	**Pn**	**06 54 45.3**	**-0.9**
JRG	**Rokugo**	**1.57**	**269**	P	**Pn**	**06 54 49.1**	**+0.9**
JAH	**Hinai**	**1.73**	**296**	P	**Pn**	**06 54 51.5**	**+1.2**
JAH				S	**Sn**	**06 55 14.0**	**+2.9**
JTM	**Tenmabayashi**	**1.81**	**318**	P	**Pn**	**06 54 52.0**	**+0.6**
JTM				S	**Sn**	**06 55 15.3**	**+2.2**
JTM	**Tenmabayashi**	**1.81**	**318**		**Pn**	**06 54 52.0**	**+0.6**
JMM	**Marumori**	**2.16**	**223**		**Pn**	**06 54 55.8**	**-0.4**
ERM	**Erimo**	**2.59**	**8**	Pn	**Pn**	**06 55 02.9**	**+0.8**
JEW	**Eniwo**	**3.50**	**345**	Pn	**Pn**	**06 55 16.7**	**+2.0**
JSD	**Sado**	**3.72**	**249**	Pn	**Pn**	**06 55 19.2**	**+1.5**
JYT	**Yasato**	**3.77**	**212**	Pn	**Pn**	**06 55 18.8**	**+0.5**
MJAR	**Matsushiro Arr**	**4.56**	**232**	Pn	**Pn**	**06 55 29.2**	**-0.1**
	0.5nm,0.3s,baz=35,slow=12,SNR=16						
MJAR				LR	LR	06 57 29.9	
	comp=Z,95nm,18.3s,baz=35,slow=42						
MJAR	**Matsushiro Arr**	**4.56**	**232**		**Pn**	**06 55 31.1**	**+1.8**
MAJO	**Matsushiro**	**4.56**	**232**		**Pn**	**06 55 31.7**	**+2.4**
MAT	**Matsushiro**	**4.56**	**232**	P	**Pn**	**06 55 31.2**	**+1.9**
MAT				*e*S	**Sn**	**06 56 28.4**	**+7.3**
MJB9	**Matsu-Tunnel**	**4.56**	**232**		**Pn**	**06 55 31.1**	**+1.8**
JKA	**Kamikawa-asahi**	**4.66**	**359**		**Pn**	**06 55 32.4**	**+1.9**
JKA					**Sn**	**06 56 22.1**	**-1.2**
ASAJ	**Asahikawa**	**4.66**	**359**	Pn	**Pn**	**06 55 32.4**	**+1.9**
	2.9nm,0.3s,baz=220,slow=8.7,SNR=6.2						
ASAJ				Sn	**Sn**	**06 56 22.1**	**-1.2**
	1.8nm,0.3s,baz=15,slow=20,SNR=1.8						
ASAJ				LR	LR	06 57 39.5	
	comp=Z,167nm,18.9s,baz=162,slow=42						
JGF	**Kuroka**	**5.71**	**229**	Pn	**Pn**	**06 55 46.8**	**+1.8**
JWT	**Wachi**	**7.12**	**236**	Pn	**Pn**	**06 56 05.4**	**+1.0**
KSRS	**Korea Array**	**11.73**	**265**	LR	LR	07 00 56.7	
	comp=Z,55nm,20.1s,baz=70,slow=34						
KLR	**Kul'dur**	**12.50**	**325**	LR	LR	07 01 51.8	
	comp=Z,102nm,18.3s,baz=328,slow=36						
SONM	**Songino Array**	**27.34**	**300**	P	**P**	**07 00 04.5**	**+0.5**
	0.7nm,0.7s,baz=81,slow=8.5,SNR=3.9						
SONM	**Songino Array**	**27.34**	**300**	P	**P**	**07 00 04.2**	**+0.2**
SONM				IAmb	IAmb	07 00 19.7	
	comp=Z,1.5nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**28.66**	**126**	T	T	07 30 49.0	
	baz=318,slow=75,SNR=141						
H11N1	**WAKE ISLAND Hy**	**28.67**	**126**	T	T	07 30 51.1	
	baz=318,slow=75,SNR=108						
H11N3	**WAKE ISLAND Hy**	**28.68**	**126**	T	T	07 30 50.4	
	baz=318,slow=75,SNR=88						
ZALV	**Zalesovo Beam**	**41.06**	**310**	P	**P**	**07 02 02.0**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=94,slow=8.2,SNR=2.3						
MK31	**Makanchi Array**	**43.71**	**300**	P	**P**	**07 02 24.0**	**+0.2**
MK31				IAmb	IAmb	07 02 38.3	
	comp=Z,3.2nm,1.4s						
MKAR	**Makanchi Array**	**43.71**	**300**	P	**P**	**07 02 23.8**	**0.0**
	comp=Z,0.4nm,0.4s,baz=83,slow=10,SNR=6.4						
I21K	**Tanana**	**44.76**	**33**	P	**P**	**07 02 32.4**	**+0.5**
KURK	**Kurchatov**	**45.25**	**306**	P	**P**	**07 02 36.5**	**+0.4**
KURK	**Kurchatov**	**45.25**	**306**	IAmb	IAmb	07 02 53.1	
	comp=Z,2.2nm,0.8s						
KURBB	**Kurchatov Arra**	**45.33**	**306**	P	**P**	**07 02 36.5**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=80,slow=8.6,SNR=4.5						
ILAR	**Eielson Array**	**46.93**	**34**	P	**P**	**07 02 49.2**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=263,slow=6.3,SNR=12						
BMAR	**Burnt Mountain**	**47.74**	**30**	P	**P**	**07 02 57.0**	**+1.6**
SCRK	**Sand Creek**	**48.25**	**35**	P	**P**	**07 02 59.9**	**+0.5**
SCRK				IAmb	IAmb	07 03 18.5	
	comp=Z,6.0nm,1.4s						
BCAR	**Beaver Creek A**	**49.35**	**36**	P	**P**	**07 03 09.2**	**+1.4**
BVAR	**Borovoye Array**	**49.70**	**311**	P	**P**	**07 03 09.6**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=76,slow=6.3,SNR=4.4						
ABKAR	**Akbulak array**	**57.15**	**309**	P	**P**	**07 04 05.1**	**-0.2**
ABKAR				IAmb	IAmb	07 04 23.5	
	comp=Z,4.4nm,1.4s						
WRA	**Warramunga Arr**	**59.59**	**189**	P	**P**	**07 04 21.1**	**-1.4**
	comp=Z,1.1nm,1.0s,baz=6.4,slow=6.9,SNR=5.1						
WRA				pP	**pP**	**07 04 33.0**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=6.4,slow=7.1,SNR=3.8						
YKA	**Yellowknife Ar**	**61.23**	**31**	P	**P**	**07 04 33.4**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=302,slow=6.4,SNR=4.7						
YKA				pP	**pP**	**07 04 44.7**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=300,slow=6.4,SNR=5.7						
ASAR	**Alice Springs**	**63.32**	**189**	P	**P**	**07 04 47.0**	**-0.6**
	comp=Z,0.5nm,0.9s,baz=10,slow=9.0,SNR=2.4						
ASAR				pP	**pP**	**07 04 58.5**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=7.7,slow=7.5,SNR=3.0						
FINES	**FINESS Array B**	**67.14**	**332**	P	**P**	**07 05 11.6**	**-0.3**
	comp=Z,4.0nm,1.0s,baz=67,slow=6.4,SNR=6.8						
FINES				pP	**pP**	**07 05 24.0**	**+0.5**
	comp=Z,7.8nm,1.2s,baz=16,slow=8.9,SNR=1.7						
NVAR	**Mina Array Bea**	**72.77**	**54**	P	**P**	**07 05 47.8**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=308,slow=7.7,SNR=4.1						
AKASG	**Malin Array Be**	**72.98**	**322**	P	**P**	**07 05 47.8**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=44,slow=5.9,SNR=7.4						
PDAR	**Pinedale Array**	**75.28**	**46**	P	**P**	**07 06 02.0**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=247,slow=0.5,SNR=4.6						
TXAR	**Lajitas Array**	**87.88**	**53**	P	**P**	**07 07 08.0**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=308,slow=3.0,SNR=5.5						

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*NEIC **25** 07:11:05.3±1.2, 52°.7N±0°.2×173°.5W±0°.1, h178^{km}±6^{km}, Error ellipse: s-maj=33.2km s-min=7.7km az=165.0*

*AEIC **25** 07:11:05.7±0.8, 52°.5N±0°.2×173°.42W±0°.08, h186^{km}±5^{km}, ML3.5/18, mb4.0/13(NEIC), Error ellipse: s-maj=30.5km s-min=1.4km az=167.0*

*IDC **25** 07:11:06.1±34.0, 52°.89N×173°.26W, h165^{km}±188^{km}, mb3.2/5, mb1 3.7/7, mb1mx3.0/51, mbtmp3.8/7, ML4.2/2, MS3.6/1, Ms1 3.6/1, ms1mx2.6/28, Error ellipse: s-maj=305.8km s-min=41.3km az=65.0*

ISC 25 07:11:05.5±0.8, 52°.9N±0°.1×173°.50W±0°.07, h150^{km}, n36, σ1^s.64/38, mb3.6/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOSE	**Korovin Southe**	**0.68**	**210**		**Pn**	**07 11 30.1**	**+2.1**
KOKL	**Mount Kliuchef**	**0.74**	**215**		**Pn**	**07 11 30.7**	**+2.4**
KOFP	**Korovin Flat P**	**0.75**	**209**		**Pn**	**07 11 30.4**	**+1.9**
ATKA	**Atka Island**	**0.84**	**210**		**Pn**	**07 11 30.5**	**+1.5**
ATKA					**Sn**	**07 11 49.9**	**+3.0**
GSMY	**Great Sitkin M**	**1.80**	**241**		**Pn**	**07 11 38.8**	**+0.4**
GSTD	**Great Sitkin T**	**1.84**	**243**		**Pn**	**07 11 39.5**	**+0.6**
GSTD					**Sn**	**07 12 05.3**	**+0.9**
ADK	**Adak**	**2.22**	**243**		**Pn**	**07 11 43.5**	**+0.4**
ADK					**Sn**	**07 12 11.9**	**-0.2**
KIMD	**Kanaga Island**	**2.57**	**244**		**Pn**	**07 11 47.8**	**+0.3**
NIKH	**Nikolski High**	**2.81**	**87**		**Pn**	**07 11 51.2**	**+0.8**
NIKH					**Sn**	**07 12 25.8**	**+0.8**
OKTU	**Okmok Mt. Tuli**	**3.32**	**80**		**Pn**	**07 11 58.2**	**+1.4**
MAPS	**Pakushin South**	**4.03**	**75**		**Pn**	**07 12 07.5**	**+1.5**
UNV	**Unalaska Valle**	**4.29**	**75**		**Pn**	**07 12 10.8**	**+1.4**
Q19K	**Cape Douglas,**	**12.62**	**54**	Pn	**Pn**	**07 14 02.6**	**+3.0**
SVW2	**Sparrevohn**	**12.70**	**43**	Pn	**Pn**	**07 14 04.8**	**+4.2**
KDAK	**Kodiak Island**	**12.83**	**59**	P	**Pn**	**07 14 00.6**	**-1.7**
	0.6nm,0.3s,baz=178,slow=2.4,SNR=30						
KDAK				S	Sn	07 16 14.3	-10
	0.2nm,0.3s,baz=135,slow=20,SNR=2.0						
N19K	**Bonanza Creek**	**13.01**	**45**	Pn	**Pn**	**07 14 07.1**	**+2.4**
KTH	**Kantishna Hill**	**15.85**	**39**	P	**Pn**	**07 14 42.1**	**+2.0**
SML	**Sawmill**	**16.12**	**47**	P	**Pn**	**07 14 43.5**	**0.0**
RND	**Reindeer**	**16.58**	**41**	P	**P**	**07 14 48.4**	**-0.5**
RND				IAmb	IAmb	07 14 49.9	
	comp=Z,5.2nm,0.6s						
MCK	**McKinley**	**16.70**	**40**	P	**P**	**07 14 50.6**	**+0.4**
MCK				IAmb	IAmb	07 14 51.2	
	comp=Z,6.4nm,1.0s						
DHY	**Denali Highway**	**17.03**	**43**	P	**P**	**07 14 54.0**	**0.0**
CCB	**Clear Creek Bu**	**17.58**	**38**	P	**P**	**07 14 59.2**	**-0.6**
CCB				IAmb	IAmb	07 15 03.3	
	comp=Z,9.0nm,1.3s						
MDM	**Murphy Dome**	**17.59**	**37**	P	**P**	**07 15 00.3**	**+0.4**
N25K	**Chitina, Valde**	**17.74**	**49**	P	**P**	**07 15 02.0**	**+0.4**
N25K				IAmb	IAmb	07 15 04.8	
	comp=Z,7.5nm,1.1s						
IL31		**17.99**	**38**	P	**P**	**07 15 04.9**	**+0.7**
ILAR	**Eielson Array**	**17.99**	**38**	P	**P**	**07 15 03.3**	**-1.0**
	comp=Z,1.6nm,0.3s,baz=232,slow=8.8,SNR=84						
H24K	**Noodor Dome**	**18.18**	**35**	P	**P**	**07 15 07.3**	**+0.9**
H24K				IAmb	IAmb	07 15 09.2	
	comp=Z,6.2nm,0.8s						
TOLK	**Toolik Lake Re**	**19.38**	**27**	P	**P**	**07 15 20.4**	**+1.0**
EGAK	**Eagle**	**20.23**	**42**	P	**P**	**07 15 28.0**	**-0.4**
EGAK				IAmb	IAmb	07 15 30.7	
	comp=Z,4.8nm,0.6s						
INK	**Inuvik**	**24.30**	**35**	P	**P**	**07 16 07.7**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=235,slow=8.5,SNR=9.8						
INK	**Inuvik**	**24.30**	**35**	IAmb	IAmb	07 16 34.8	
	comp=Z,2.5nm,0.7s						
YKA	**Yellowknife Ar**	**31.77**	**49**	P	**P**	**07 17 13.1**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=281,slow=7.2,SNR=7.9						
JHJ	**Hachijo jima 2**	**38.63**	**258**	LR	LR	07 32 53.4	
	comp=Z,92nm,20.2s,baz=96,slow=34						
NVAR	**Mina Array Bea**	**40.18**	**88**	P	**P**	**07 18 26.0**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=297,slow=8.0,SNR=4.5						
PDAR	**Pinedale Array**	**42.75**	**77**	P	**P**	**07 18 45.9**	**-2.1**
	comp=Z,0.9nm,0.6s,baz=308,slow=3.8,SNR=12						
TXAR	**Lajitas Array**	**55.24**	**86**	P	**P**	**07 20 20.5**	**-2.5**
	comp=Z,0.5nm,0.5s,baz=305,slow=5.6,SNR=18						

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*NNC **25** 07:11:16.0±0.5, 50°.01N×78°.66E, h0^{km}, mb2.9, mpv2.8, Error ellipse: s-maj=9.6km s-min=2.3km az=77.0, Suspected Mining explosion.*

*IDC **25** 07:11:17.2±0.9, 50°.06N×78°.73E, h0^{km}, mb1 3.0/3, mb1mx2.5/52, mbtmp3.0/3, ML2.7/3, Error ellipse: s-maj=13.6km s-min=6.4km az=65.0*

ISC 25 07:11:17.2±0.9, 50°.02N±0°.05×78°.69E±0°.08, h0^{km}, n17, σ0^s.78/28, 13C-10D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.58**	**349**	⇑P	**Pg**	**07 11 27.4**	**-0.9**
KUR07				⇑S	**Sg**	**07 11 36.3**	**+0.5**
KUR06	**Kurchatov Arra**	**0.60**	**350**	⇑P	**Pg**	**07 11 27.6**	**-1.0**
KUR06				⇓S	**Sg**	**07 11 36.5**	**+0.2**
KUR14	**Kurchatov Arra**	**0.60**	**354**	⇓P	**Pg**	**07 11 27.7**	**-1.0**
KUR14				⇑S	**Sg**	**07 11 36.7**	**+0.2**
KUR15	**Kurchatov Arra**	**0.61**	**352**	⇑P	**Pg**	**07 11 28.0**	**-0.9**
KUR15				⇑S	**Sg**	**07 11 37.0**	**+0.3**
KURBB	**Kurchatov Arra**	**0.62**	**350**	Pg	**Pg**	**07 11 28.1**	**-0.8**
	3.0nm,0.3s,baz=169,slow=18,SNR=39						
KURBB				Lg	Lg	07 11 36.5	
	4.6nm,0.3s,baz=168,slow=18,SNR=18						
KURBB	**Kurchatov Arra**	**0.62**	**350**	⇑P	**Pg**	**07 11 28.1**	**-0.8**
	16nm,0.2s						
KURBB				⇓S	**Sg**	**07 11 37.0**	**+0.1**
	133nm,0.6s						
KUR16	**Kurchatov Arra**	**0.62**	**349**	⇓P	**Pg**	**07 11 28.3**	**-0.8**
KUR16				⇑S	**Sg**	**07 11 37.3**	**+0.1**
KUR17	**Kurchatov Arra**	**0.63**	**347**	⇓P	**Pg**	**07 11 28.6**	**-0.7**
KUR17				⇓S	**Sg**	**07 11 37.7**	**+0.2**
KUR05	**Kurchatov Arra**	**0.64**	**351**	⇑P	**Pg**	**07 11 28.5**	**-0.9**
KUR05				⇓S	**Sg**	**07 11 37.0**	**-0.5**
KUR04	**Kurchatov Arra**	**0.66**	**352**	⇑P	**Pg**	**07 11 28.5**	**-1.2**
KUR04				⇑S	**Sg**	**07 11 37.9**	**-0.3**
KURK	**Kurchatov**	**0.70**	**356**	⇓P	**Pg**	**07 11 29.3**	**-1.3**
	7.1nm,0.3s						
KURK				⇓S	**Sg**	**07 11 40.0**	**+0.3**
	24nm,0.5s						
MK31	**Makanchi Array**	**4.02**	**142**	Pn	**Pn**	**07 12 20.6**	**+0.6**
	0.1nm,0.2s,baz=279,slow=6.7,SNR=33						
MK31				⇑Pg	**Pb**	**07 12 29.4**	**+0.7**
	0.9nm,0.3s,baz=322,slow=13,SNR=22						
MK31				⇓Lg	Lg	07 13 22.3	
	9.1nm,0.5s,baz=326,slow=26,SNR=8.3						
MKAR	**Makanchi Array**	**4.02**	**142**	Pn	**Pn**	**07 12 20.3**	**+0.4**
	0.6nm,0.3s,baz=322,slow=10,SNR=56						
MKAR				Pg	**Pb**	**07 12 27.8**	**-1.0**
	1.1nm,0.3s,baz=327,slow=15,SNR=11						
MKAR				Lg	Lg	07 13 23.5	
	2.7nm,0.3s,baz=322,slow=26,SNR=5.4						
OTUK	**Ortayu**	**4.53**	**249**	⇑Lg	Lg	07 13 40.1	
	4.4nm,0.6s						
ZALV	**Zalesovo Beam**	**5.46**	**42**	Pn	**Pn**	**07 12 40.9**	**+1.1**
	0.8nm,0.3s,baz=233,slow=14,SNR=4.3						
ZALV				Lg	Lg	07 14 10.7	
	0.4nm,0.3s,baz=228,slow=32,SNR=2.2						
I46RU	**ZALESOVO INFRA**	**5.46**	**42**	*i*		07 45 10.0	
	baz=220,slow=322,SNR=2.0						
BVAR	**Borovoye Array**	**5.99**	**303**	Pn	**Pn**	**07 12 47.4**	**+0.4**
	0.3nm,0.3s,baz=110,slow=12,SNR=2.7						
BVAR				Sn	**Sn**	**07 13 57.4**	**+1.0**
	2.0nm,0.3s,baz=124,slow=23,SNR=14						
BVAR				Lg	Lg	07 14 30.4	
	0.8nm,0.3s,baz=114,slow=24,SNR=3.9						

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*IDC **25** 07:12:05.7±2.4, 25°.49S×137°.94E, h0^{km}, mb1 3.8/4, mb1mx3.2/29, mbtmp3.6/4, ML3.4/4, Error ellipse: s-maj=31.9km s-min=16.1km az=52.0*

*NOU **25** 07:12:05.9, 25°.55S×138°.01E, h0^{km}, MLv4.3/11, Queensland, Australia*

*AUST **25** 07:12:06.3±0.5, 25°.48S×137°.91E, h10^{km}, Error ellipse: s-maj=10.1km s-min=6.4km az=57.0*

ISC 25 07:12:05.7±0.8, 25°.54S±0°.07×138°.04E±0°.07, h10^{km}, n26, σ2^s.26/30, Queensland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OOD	**Oodnadatta**	**3.07**	**223**	P	**Pn**	**07 12 56.1**	**+1.7**
	baz=3.0,SNR=22						
OOD	**Oodnadatta**	**3.07**	**223**	P	**Pn**	**07 12 56.1**	**+1.7**
INKA	**Innaminka**	**3.27**	**133**	P	**Pn**	**07 13 00.1**	**+3.1**
	baz=3.4,SNR=6.5						
ASAR	**Alice Springs**	**4.20**	**296**	Pn	**Pn**	**07 13 11.4**	**+1.5**
	1.2nm,0.3s,baz=114,slow=15,SNR=49						
ASAR				Pg	**Pb**	**07 13 21.4**	**+1.7**
	2.4nm,0.3s,baz=118,slow=16,SNR=20						
ASAR				Sn	**Sn**	**07 13 59.8**	**+0.7**
	2.6nm,0.3s,baz=118,slow=23,SNR=8.4						
ASAR				Lg	Lg	07 14 14.5	
	5.0nm,0.3s,baz=111,slow=26,SNR=11						
LCRK	**Leigh Creek**	**4.89**	**178**	P	**Pn**	**07 13 21.4**	**+2.1**
	baz=5.0,SNR=14						
LCRK	**Leigh Creek**	**4.89**	**178**	P	**Pn**	**07 13 20.9**	**+1.6**
QIS	**Mount Isa**	**5.17**	**17**	P	**Pn**	**07 13 25.2**	**+2.0**
	baz=5.2,SNR=7.5						
QIS	**Mount Isa**	**5.17**	**17**	P	**Pn**	**07 13 24.7**	**+1.5**
	5.8nm,0.7s						
QLP	**Quilpie**	**5.67**	**102**	P	**Pn**	**07 13 32.4**	**+2.3**
	baz=5.8						
MULG	**Mulgathing**	**5.89**	**216**	P	**Pn**	**07 13 34.2**	**+1.1**
	baz=5.9,SNR=4.0						
MULG	**Mulgathing**	**5.89**	**216**	P	**Pn**	**07 13 33.8**	**+0.7**
	18nm,2.1s						
WC3	**Warramunga Arr**	**6.50**	**328**	P	**Pn**	**07 13 42.0**	**+0.4**
	baz=6.4						
WRA	**Warramunga Arr**	**6.54**	**328**	Pn	**Pn**	**07 13 42.6**	**+0.6**
	0.7nm,0.3s,baz=148,slow=12,SNR=25						
WRA				Sn	**Sn**	**07 14 50.6**	**-6.0**
	1.7nm,0.3s,baz=153,slow=25,SNR=7.6						
WRA				Lg	Lg	07 15 27.5	
	2.2nm,0.3s,baz=153,slow=32,SNR=4.5						
WRAB	**Tennant Creek**	**6.54**	**328**	P	**Pn**	**07 13 42.0**	**0.0**
STKA	**Stephens Creek**	**7.04**	**154**	Pn	**Pn**	**07 13 49.9**	**+1.0**
	0.4nm,0.3s,baz=331,slow=13,SNR=11						
STKA				Sn	**Sn**	**07 15 03.3**	**-5.7**
	1.6nm,0.3s,baz=240,slow=6.4,SNR=6.2						
STKA				Lg	Lg	07 15 51.5	
	1.0nm,0.3s,baz=282,slow=20,SNR=3.9						
STKA	**Stephens Creek**	**7.04**	**154**	P	**Pn**	**07 13 50.0**	**+1.0**
	baz=7.2,SNR=8.6						
STKA	**Stephens Creek**	**7.04**	**154**	P	**Pn**	**07 13 49.9**	**+1.0**
	1.9nm,2.7s						
BBOO	**Buckleboo**	**7.45**	**193**	P	**Pn**	**07 13 54.5**	**0.0**
	30nm,2.3s						
HTT	**Hallett**	**7.90**	**175**	P	**Pn**	**07 14 02.0**	**+1.3**
	baz=8.0,SNR=6.9						

HTT	Hallett	7.90	175	P	Pn	07 14 01.8	+1.1
	9.8nm,2.8s						
WRKA	Warakurna	8.83	271	P	Pn	07 14 14.9	+1.4
	11nm,1.4s						
CMSA	Cobar Meteorol	9.00	133	P	Pn	07 14 17.6	+1.8
	baz=9.1						
CMSA	Cobar Meteorol	9.00	133	P	Pn	07 14 16.8	+1.0
CTAO	Charters Tower	9.32	56	P	Pn	07 14 22.6	+2.3
	5.3nm,1.3s						
KNRA	Kununurra	13.10	317	P	Pn	07 15 09.2	-2.8
	baz=13						
FITZ	Fitzroy Crossi	13.68	300	Pn	Pn	07 15 18.9	-1.0
	0.3nm,0.3s,baz=118,slow=8.6,SNR=11						
FITZ				Sn	Sn	07 17 42.2	-10
	0.3nm,0.3s,baz=280,slow=12,SNR=1.1						

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*IDC **25** 07:15:03.0±6.2, 35°.92N×142°.94E, h0^{km}, mb3.6/2,*
mb1 3.6/3, mb1mx2.9/55, mbtmp3.6/3, ML3.0/1, MS3.6/2,
Ms1 3.6/2, ms1mx2.7/48, Error ellipse: s-maj=121.6km
s-min=60.2km az=168.0
*JMA **25** 07:15:11.4±0.4, 36°.71N×142°.29E, h18^{km}±5^{km}, M3.6*
ISC 25 07:15:10.3±3.8**, 36°.72N**±0°.05×**142°.24E**±0°.08**, h1**^{km}±25^{km}**,**
n21, σ0^{s}.82/29**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	1.22	289	P	Pn	07 15 34.2	-0.3
JFK	Kawauchi	1.27	301	P	Pn	07 15 34.9	-0.3
JFK				eS	Sb	07 15 51.9	0.0
JHO	Hitachi	1.35	266	P	Pn	07 15 36.2	-0.1
JHO				eS	Sn	07 15 54.2	-0.7
JHYU	Hitachinakayam	1.39	255	P	Pn	07 15 37.1	+0.3
JFFD	Fukushimafurud	1.40	286	P	Pn	07 15 37.1	+0.1
JMM	Marumori	1.62	315	P	Pn	07 15 40.4	+0.3
JFT	Otama	1.72	298	P	Pn	07 15 42.2	+0.8
JIO	Ouri	1.87	338	P	Pn	07 15 43.6	+0.2
JIO				eS	Sn	07 16 06.8	-0.9
JOU	Okura	2.06	323	P	Pb	07 15 47.8	-0.8
JOU				eS	Sb	07 16 14.4	-0.4
JAG	Ashikaga	2.26	263	P	Pn	07 15 49.8	+0.9
BSO1	Boso 1	2.31	207	P	Pn	07 15 49.0	+0.1
BSO1				eS	Sn	07 16 16.8	-0.9
JMK	Ichinoseki	2.37	340	P	Pn	07 15 51.0	+0.7
JMK				eS	Sn	07 16 19.6	-0.4
JYK	Kaneyama	2.65	326	P	Pn	07 15 55.3	+1.1
JRY	Ryogami san	2.78	256	P	Pn	07 15 56.6	+0.5
JRY				eS	Sn	07 16 29.6	-0.8
JOM	Ohasama	2.85	345	P	Pn	07 15 57.4	+0.5
JOM				eS	Sn	07 16 31.8	-0.1
MJAR	Matsushiro Arr	3.25	268	Pn	Pn	07 16 04.3	+1.9
	1.1nm,0.3s,baz=100,slow=11,SNR=18						
MJAR				Sn	Sb	07 16 49.1	+0.2
	0.4nm,0.3s,baz=98,slow=19,SNR=6.7						
MAT	Matsushiro	3.25	268	P	Pn	07 16 04.5	+2.1
MAT				S	Sb	07 16 48.5	-0.4
KSRS	Korea Array	11.46	278	LR	LR	07 22 21.0	
	comp=Z,42nm,18.2s,baz=195,slow=36						
SONM	Songino Array	28.51	304	P	P	07 21 08.2	+0.9
	0.4nm,0.5s,baz=101,slow=8.2,SNR=6.6						
MKAR	Makanchi Array	44.84	303	P	P	07 23 25.9	-0.2
	0.3nm,0.6s,baz=96,slow=7.1,SNR=3.0						
ARU	Arti	57.03	319	LR	LR	07 50 52.1	
	comp=Z,367nm,20.1s,baz=348,slow=37						

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*BJI **25** 07:43:48.5±0.0, 14°.82S×167°.86E, h126^{km}, mB5.0/25,*
mb5.0/50
*IDC **25** 07:43:49.7±1.9, 15°.23S×167°.55E, h127^{km}±16^{km},*
mb4.5/21, mb1 4.6/23, mb1mx4.6/26, mbtmp4.9/23, MS3.5/7,
Ms1 3.4/7, ms1mx3.2/24, Error ellipse: s-maj=14.0km
s-min=11.1km az=81.0
*GCMT **25** 07:43:49.0±0.3, 14°.98S±0°.04×167°.44E±0°.03, h125^{km}±3^{km},*
MW4.9/75, Moment Tensor Solution. s24,c25; s75,c92;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.06±.10;
$M_{\theta\theta}$-0.92±.19; $M_{\phi\phi}$-2.14±.17; $M_{r\theta}$0.71±.15; $M_{\theta\phi}$-0.88±.15;
$M_{\phi r}$0.15±.13; Best double couple: $M_0$2.91200×10^{16}
NP1:ϕ_s200.00000°, δ41.00000°, λ77.00000°. NP2:
ϕ_s37.00000°, δ50.00000°, λ101.00000°. Principal axes: T
3.1820, Plg80.0000°, Azm0.0000°; N -0.5440, Plg9.0000°,
Azm210.0000°; P -2.6420, Plg5.0000°, Azm119.0000°;
nsta1 refers to body waves, cutoff=40s. nsta2 refers to
surface waves, cutoff=50s. Triangular moment-rate
function
*NOU **25** 07:43:50.9, 15°.24S×167°.41E, h119^{km}, mb5.2/54,*
Vanuatu Islands
*NEIC **25** 07:43:50±2.3, 15°.28S±0°.08×167°.6E±0°.1, h121^{km}±4^{km},*
mb5.1/45, Error ellipse: s-maj=14.3km s-min=11.3km
az=76.0
*MOS **25** 07:43:52.0±1.2, 15°.19S×167°.40E, h155^{km}, mb5.0/23,*
Error ellipse: s-maj=9.8km s-min=8.2km az=42.2
ISC 25 07:43:50.3±0.8**, 15°.21S**±0°.05×**167°.49E**±0°.06**, h131**^{km}±6^{km}**,**
n278, σ1^{s}.27/286**, mb5.1**/95**, 36C-12D, Fault plane**
solution: NP1:ϕ_s238.91989°**,** δ44.20252°**,** λ89.37975°.
NP2:ϕ_s59.78507°**,** δ45.80075°**,** λ90.60318°. **Principal**
axes: T Plg89.0914°**,** Azm357.7809°**;** N Plg0.4324°**,**
Azm239.3645°**;** P Plg0.7991°**,** Azm149.3585°**; Vanuatu**
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.37	230		Pn	07 44 07.4	-1.4
SANVU	Saraoutou	0.37	230	P	Pn	07 44 06.9	-1.8
DVP	Devils Point	2.59	165	P	Pn	07 44 32.9	+1.3
LIFNC	LIFOU	5.54	182	Pn	Pn	07 45 09.0	-1.6
LIFNC	LIFOU	5.54	182	P	Pn	07 45 10.0	-0.6
KOUNC	Koumac, New Ca	6.13	209	P	Pn	07 45 19.4	+0.9
KOUNC	Koumac, New Ca	6.13	209	P	Pn	07 45 18.8	+0.3
MARNC	Mare, Loyalty	6.26	175	Pn	Pn	07 45 18.4	-1.9
YATNC	Mamie plateau,	6.84	185	P	Pn	07 45 29.5	+1.5
YATNC	Mamie plateau,	6.84	185	P	Pn	07 45 26.6	-1.4
DZM	Mont Dzumac	6.90	188	P	Pn	07 45 28.7	-0.3
	23nm,0.3s,baz=55,slow=8.2,SNR=387						
DZM				S	Sn	07 46 43.2	-3.0
	9.8nm,0.3s,baz=114,slow=20,SNR=1.7						
DZM	Mont Dzumac	6.90	188	ePn	Pn	07 45 28.4	-0.5
	322nm,0.9s						
DZM				eSn	Sn	07 46 45.8	-0.3
	970nm,0.9s						
DZM	Mont Dzumac	6.90	188		Pn	07 45 29.1	+0.2
DZM	Mont Dzumac	6.90	188	P	Pn	07 45 30.3	+1.4
DZM	Mont Dzumac	6.90	188	P	Pn	07 45 29.1	+0.2
NOUC	Port Laguerre	6.95	189	P	Pn	07 45 31.7	+2.2
NOUC	Port Laguerre	6.95	189	P	Pn	07 45 30.1	+0.6
ONTNC	Ouen Toro	7.13	188	Pn	Pn	07 45 34.0	+2.0
ONTNC	Ouen Toro	7.13	188	P	Pn	07 45 34.5	+2.5
ONTNC	Ouen Toro	7.13	188	P	Pn	07 45 32.4	+0.4
OUENC	Ouen Island, N	7.20	185	Pn	Pn	07 45 33.1	+0.2
OUENC	Ouen Island, N	7.20	185	P	Pn	07 45 34.5	+1.6
OUENC	Ouen Island, N	7.20	185	P	Pn	07 45 34.0	+1.1
PINNC	Pines Island,	7.36	180	Pn	Pn	07 45 34.9	-0.3
PINNC	Pines Island,	7.36	180	P	Pn	07 45 36.3	+1.2
PINNC	Pines Island,	7.36	180	P	Pn	07 45 35.4	+0.3
HNR	Honiara	9.35	307	P	Pn	07 46 02.9	+1.0
	22nm,0.3s,baz=332,slow=3.4,SNR=12						
HNR	Honiara	9.35	307	Pn	Pn	07 46 02.7	+0.8
HNR	Honiara	9.35	307	P	Pn	07 46 02.4	+0.5
MSVF	Nonsavu	10.43	105	P	Pn	07 46 20.1	+3.6
	0.4nm,0.3s,baz=292,slow=7.7,SNR=8.7						
MSVF				LR	LR	07 49 21.6	
	comp=Z,299nm,18.5s,baz=261,slow=32						
MSVF	Nonsavu	10.43	105	P	Pn	07 46 19.6	+3.1
MSVF	Nonsavu	10.43	105	Pn	Pn	07 46 19.6	+3.1
EIDS	Eidsvold	18.40	234	P	Pn	07 47 57.4	+0.5
	baz=18,SNR=24						
EIDS	Eidsvold	18.40	234	P	Pn	07 47 56.5	-0.5
EIDS	Eidsvold	18.40	234	P	Pn	07 47 57.4	+0.5
	64nm,1.0s						
OUZ	Omahuta	20.67	166	P	P	07 48 20.4	+0.7
OUZ				IAmb	IAmb	07 48 24.1	
	comp=Z,56nm,0.9s						
PMG	Port Moresby	20.68	284	P	Pn	07 48 23.2	-0.6
	comp=Z,14nm,0.9s,baz=308,slow=4.9,SNR=3.5						
PMG	Port Moresby	20.68	284	P	Pn	07 48 22.4	-1.4
PMG				pmax	pmax		
	comp=Z,30nm,1.0s						
PMG	Port Moresby	20.68	284	P	Pn	07 48 22.4	-1.4
PMG	Port Moresby	20.68	284	P	Pn	07 48 22.2	-1.6
PMG	Port Moresby	20.68	284	P	Pn	07 48 22.1	-1.7
RMQ	Roma	20.77	234	P	P	07 48 22.7	+1.8
	baz=21,SNR=37						
RMQ	Roma	20.77	234	P	P	07 48 22.5	+1.6
	comp=Z,64nm,0.8s						
CTA	Charters Tower	20.81	253	P	Pn	07 48 23.5	-1.8
	comp=Z,8.3nm,0.6s,baz=79,slow=14,SNR=10						
CTAO	Charters Tower	20.81	253	P	P	07 48 22.7	+1.3
CTAO				pmax	pmax		
	comp=Z,106nm,2.0s						
CTAO	Charters Tower	20.81	253	P	P	07 48 22.7	+1.3
CTAO	Charters Tower	20.81	253	P	P	07 48 22.2	+0.8
ARMA	Armidale	21.01	221	P	P	07 48 25.1	+1.5
	baz=21,SNR=28						
ARMA	Armidale	21.01	221	P	P	07 48 24.7	+1.1
ARMA				IAmb	IAmb	07 48 27.5	
	comp=Z,73nm,1.1s						
ARMA	Armidale	21.01	221	P	P	07 48 26.1	+2.5
	comp=Z,78nm,1.1s						
MTSU	Mount Surprise	22.39	259	P	P	07 48 39.1	+1.0
	baz=22,SNR=14						
MTSU	Mount Surprise	22.39	259	P	P	07 48 39.6	+1.5
	comp=Z,20nm,0.8s						
MGCD	Mangrove Creek	23.28	217	P	P	07 48 47.5	+1.2
	baz=23,SNR=19						
MGCD	Mangrove Creek	23.28	217	P	P	07 48 48.1	+1.8
	comp=Z,66nm,1.1s						
COEN	Coen	23.57	270	P	P	07 48 49.6	+0.4
RIV	Riverview	23.70	216	P	P	07 48 51.3	+1.2
	baz=24,SNR=6.7						
SYDH	Sydney Hard Ro	23.89	216	P	P	07 48 53.0	+1.2
	comp=Z,76nm,0.8s						
HIZ	Hauiti	24.10	166	P	P	07 48 54.8	+1.0
QLP	Quilpie	24.45	239	P	P	07 48 57.8	+0.7
	baz=24,SNR=16						
QLP	Quilpie	24.45	239	P	P	07 48 57.6	+0.5
	comp=Z,165nm,0.8s						
URZ	Urewera	24.48	161	P	P	07 48 57.3	+0.2
	comp=Z,41nm,0.8s,baz=305,slow=23,SNR=14						
URZ	Urewera	24.48	161	P	P	07 48 57.4	+0.2
URZ				IAmb	IAmb	07 49 01.0	
	comp=Z,51nm,0.9s						
URZ	Urewera	24.48	161	P	P	07 48 58.3	+1.1
CMSA	Cobar Meteorol	25.70	227	P	P	07 49 08.5	+0.2
	baz=26,SNR=25						
CMSA	Cobar Meteorol	25.70	227	P	P	07 49 08.5	+0.2
	comp=Z,42nm,1.1s						
CNB	Canberra Magne	25.79	216	P	P	07 49 09.9	+0.7
	baz=26,SNR=20						
CNB	Canberra Magne	25.79	216	P	P	07 49 10.1	+0.9
	comp=Z,58nm,1.2s						
QRZ	Quartz Range	25.90	171	P	P	07 49 11.6	+1.6
BFZ	Birch Farm	26.50	165	P	P	07 49 17.1	+1.7
QIS	Mount Isa	27.05	255	P	P	07 49 20.8	+0.2
	baz=27,SNR=7.5						
QIS	Mount Isa	27.05	255	P	P	07 49 21.4	+0.8
	comp=Z,16nm,1.3s						
INKA	Innaminka	27.77	239	P	P	07 49 27.8	+0.9
	comp=Z,108nm,0.8s						
FOZ	Fox Glacier	28.30	176	P	P	07 49 30.3	-1.0
FOZ				IAmb	IAmb	07 49 33.0	
	comp=Z,57nm,1.0s						
STKA	Stephens Creek	28.85	230	P	P	07 49 37.2	+0.7
	comp=Z,54nm,0.7s,baz=47,slow=8.0,SNR=76						
STKA				PcP	PcP	07 52 42.5	-0.4
	comp=Z,14nm,0.7s,baz=22,slow=5.1,SNR=12						
STKA				LR	LR	08 00 03.0	
	comp=Z,50nm,21.1s,baz=47,slow=34						
STKA	Stephens Creek	28.85	230	P	P	07 49 37.3	+0.7
	baz=29,SNR=62						
STKA	Stephens Creek	28.85	230	P	P	07 49 37.4	+0.9
STKA	Stephens Creek	28.85	230	P	P	07 49 37.2	+0.7
	comp=Z,17nm,0.9s						
TOO	Toolangi	29.60	217	P	P	07 49 43.6	+0.5
	baz=30,SNR=12						
TOO	Toolangi	29.60	217	P	P	07 49 43.6	+0.5
TOO				pmax	pmax		
	comp=Z,42nm,1.0s						
TOO	Toolangi	29.60	217	P	P	07 49 43.6	+0.5
TOO				IAmb	IAmb	07 49 44.6	
	comp=Z,42nm,0.9s						
TOO	Toolangi	29.60	217	P	P	07 49 43.8	+0.7
	comp=Z,52nm,1.0s						
GLAD	Gladstone	30.75	210	P	P	07 49 54.0	+0.8
	comp=Z,96nm,0.8s						
LCRK	Leigh Creek	30.83	235	P	P	07 49 54.7	+0.7
	comp=Z,60nm,1.0s						
ARPS	Mount Arapiles	31.33	222	P	P	07 49 58.9	+0.6
	baz=31,SNR=8.6						
ARPS	Mount Arapiles	31.33	222	P	P	07 49 58.9	+0.6
	comp=Z,40nm,0.8s						
HTT	Hallett	31.57	230	P	P	07 50 01.1	+0.6
	baz=32,SNR=17						
HTT	Hallett	31.57	230	P	P	07 50 01.4	+0.8
	comp=Z,51nm,1.0s						
WB0	Warramunga Arr	31.86	257	P	P	07 50 02.1	-1.1
WB0				IAmb	IAmb	07 50 02.8	
	comp=Z,17nm,0.7s						
WRAB	Tennant Creek	31.91	257	⇑eP	P	07 50 02.4	-1.2
WRAB				pmax	pmax		
	comp=Z,17nm,0.9s						
WRA	Warramunga Arr	31.92	257	P	P	07 50 02.5	-1.2
	comp=Z,10.0nm,0.8s,baz=87,slow=9.0,SNR=50						
WRA				PcP	PcP	07 52 50.7	-0.5
	comp=Z,3.4nm,0.9s,baz=76,slow=2.6,SNR=6.0						
WRA				PKiKP	PKiKP	08 00 17.3	-2.3
	comp=Z,1.3nm,0.8s,baz=336,slow=0.2,SNR=6.6						
WRA				LR	LR	08 03 05.6	
	comp=Z,181nm,18.6s,baz=75,slow=36						
WRA	Warramunga Arr	31.92	257	i P	P	07 50 02.7	-1.0
WRA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OOD	Oodnadatta	32.03	242	P	P	07 50 05.1	+0.6
	comp=Z,100nm,0.8s						
WHYH	Whyalla	32.40	231	P	P	07 50 08.5	+0.8
	comp=Z,67nm,0.8s						
TAU	Tasmania Unive	32.58	208	P	P	07 50 09.7	+0.6
TAU				pmax	pmax		
	comp=Z,265nm,2.0s						
TAU	Tasmania Unive	32.58	208	P	P	07 50 09.7	+0.6
AS31	Alice Springs	32.71	250	P	P	07 50 09.9	-0.7
AS31				IAmb	IAmb	07 50 10.9	
	comp=Z,18nm,0.6s						
ASAR	Alice Springs	32.71	250	P	P	07 50 09.7	-0.9
	comp=Z,42nm,0.7s,baz=78,slow=9.1,SNR=402						
ASAR				PcP	PcP	07 52 53.2	-0.1
	comp=Z,1.7nm,0.8s,baz=72,slow=2.7,SNR=4.2						
ASAR				ScP	ScP	07 56 26.3	+0.9
	comp=Z,2.7nm,1.0s,baz=77,slow=3.6,SNR=7.9						
ASAR				PKiKP	PKiKP	08 00 18.2	-1.9
	comp=Z,0.5nm,0.8s,baz=67,slow=1.7,SNR=6.4						
ASAR				LR	LR	08 03 35.1	
	comp=Z,120nm,18.4s,baz=97,slow=36						
ASAR	Alice Springs	32.71	250	P	P	07 50 10.1	-0.5
BBOO	Buckleboo	33.46	233	P	P	07 50 17.4	+0.5
	baz=34,SNR=45						
BBOO	Buckleboo	33.46	233	P	P	07 50 17.7	+0.7
BBOO	Buckleboo	33.46	233	P	P	07 50 17.6	+0.6
	comp=Z,145nm,0.8s						
MULG	Mulgathing	34.14	238	P	P	07 50 22.9	+0.1
	comp=Z,122nm,1.0s						
KNRA	Kununurra	37.30	264	P	P	07 50 49.6	-0.5
	baz=37,SNR=5.8						
WRKA	Warakurna	37.96	249	P	P	07 50 54.8	-0.7
	baz=38,SNR=13						
WRKA	Warakurna	37.96	249	P	P	07 50 55.0	-0.6
	comp=Z,37nm,0.8s						
SWI	Sorong	38.51	288	P	P	07 51 02.4	+2.2
	comp=Z,44nm,0.9s						
FORT	Forrest	39.24	240	P	P	07 51 06.5	+0.4
	baz=39,SNR=31						
FORT	Forrest	39.24	240	P	P	07 51 06.2	+0.1
FORT	Forrest	39.24	240	P	P	07 51 06.6	+0.5
	comp=Z,143nm,0.7s						
PAE	Paea	41.18	100	eP	P	07 51 22.6	+0.4
	comp=Z,10nm,0.9s						
PPT2	Papeete2	41.19	99	eP	P	07 51 23.0	+0.6
	comp=Z,76nm,1.1s						
PPT	Papeete	41.19	99	P	P	07 51 22.7	+0.4
	comp=Z,72nm,0.8s,baz=45,slow=10.0,SNR=6.4						
PPTF	Pamatai, Papee	41.20	99	P	P	07 51 25.4	+2.9
MEH	Mehetia	42.61	100	eP	P	07 51 34.4	+0.5
	comp=Z,34nm,1.0s						
PMOR	Pomariorio Ree	43.01	96	eP	P	07 51 37.5	+0.4
	comp=Z,178nm,1.1s						
VAH	Vaihoa	43.24	96	eP	P	07 51 39.2	+0.2
	comp=Z,85nm,1.0s						
PSA00	Pilbara Seismi	45.52	255	P	P	07 51 57.0	0.0
PSA00				IAmb	IAmb	07 51 57.9	
	comp=Z,31nm,0.9s						
PSA00	Pilbara Seismi	45.52	255	P	P	07 51 57.7	+0.7
	comp=Z,37nm,1.0s						
GTOI	Gorontalo	46.70	286	P	P	07 52 07.9	+1.6
	comp=Z,8.7nm,1.0s						
MEEK	Meekatharra	46.80	248	P	P	07 52 06.8	-0.3
	baz=47,SNR=10						
MEEK	Meekatharra	46.80	248	P	P	07 52 07.0	-0.1
	comp=Z,47nm,0.9s						
KLBR	Kellerberrin	48.06	241	P	P	07 52 16.0	-0.7
	baz=48,SNR=16						
KLBR	Kellerberrin	48.06	241	P	P	07 52 16.1	-0.6
	comp=Z,69nm,0.7s						
MORW	Morawa	49.26	245	P	P	07 52 26.1	+0.2
MORW				IAmb	IAmb	07 52 26.4	
	comp=Z,25nm,0.8s						
MUN	Mundaring	49.42	241	P	P	07 52 26.7	-0.4
	baz=49,SNR=4.5						
MPSI	Mapaga	49.50	284	P	P	07 52 28.2	+0.3
	comp=Z,54nm,1.1s						
TWSI	Taliwang, Sumb	49.84	271	P	P	07 52 31.6	+1.1
	comp=Z,61nm,1.1s						
MYLDM	Lahad Datu	52.59	289	P	P	07 52 52.5	+1.5
SPMM	Sapulut	54.27	287	P	P	07 53 04.0	+0.6
KKM	Kota Kinabalu	55.02	289	P	P	07 53 09.4	+0.6
KKM	Kota Kinabalu	55.02	289	P	P	07 53 11.1	+2.3
MJAR	Matsushiro Arr	58.43	332	P	P	07 53 31.5	-0.8
	comp=Z,5.3nm,0.8s,baz=171,slow=9.0,SNR=6.4						
MJAR				PcP	PcP	07 54 21.8	+0.1
	comp=Z,4.0nm,0.7s,baz=167,slow=5.8,SNR=4.7						
MAJO	Matsushiro	58.43	332	⇑eP	P	07 53 31.7	-0.6
MAJO				pmax	pmax		
	comp=Z,68nm,3.9s						
MAT	Matsushiro	58.43	332	P	P	07 53 31.5	-0.8
TPUB	Ta-pu	59.71	309	P	P	07 53 41.0	-0.5
YHNB	Yeheng	59.96	311	P	P	07 53 43.5	+0.3
CGJI	Cibinong	61.12	271	P	P	07 53 50.1	-1.1
	comp=Z,131nm,0.6s						
YUK	Yuzh-Kuril'sk	62.18	343	eP	P	07 53 57.1	-0.5
YUK				e		07 54 36.1	
YUK				e		07 56 15.3	
YUK				ePPP	PPP	07 57 43.5	
YUK				eS	S	08 02 13.6	+0.8
YUK				e		08 03 37.3	
YUK				eSS	SS	08 06 20.0	+1.4
VNDA	Vanda	62.39	181	P	P	07 53 58.5	-0.2
	comp=Z,11nm,0.9s,baz=356,slow=7.0,SNR=36						
VNDA	Vanda	62.39	181	P	P	07 53 58.9	+0.2
VNDA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VNDA	Vanda	62.39	181	P	P	07 53 58.9	+0.2
SBA	Scott Base	62.66	180	P	P	07 54 01.6	+1.2
SBA				pmax	pmax		
	comp=Z,35nm,0.9s						
SBA	Scott Base	62.66	180	P	P	07 54 01.6	+1.2
SBA				IAmb	IAmb	07 54 02.4	
	comp=Z,35nm,0.8s						
MDSI	Maura Dua	63.10	273	P	P	07 54 02.7	-1.7
CASY	Casey	63.17	202	P	P	07 54 04.0	0.0
CASY				IAmb	IAmb	07 54 04.8	
	comp=Z,16nm,0.9s						
KSRS	Korea Array	64.26	326	P	P	07 54 11.9	+0.4
	comp=Z,2.5nm,0.8s,baz=143,slow=7.7,SNR=8.2						
KSRS				LR	LR	08 19 31.2	
	comp=Z,11nm,21.4s,baz=355,slow=33						
YSS	Yuzh-Sakhalins	65.75	342	⇓eP	P	07 54 20.8	-0.1
YSS				pmax	pmax		
	comp=Z,38nm,2.5s						
NJ2	Nanjing	66.17	316	eP	P	07 54 26.0	+2.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USA0B	Ussuriysk Arra	67.41	333	P	P	07 54 32.6	+1.0
USA0B				pmax	pmax		
	comp=Z,48nm,1.5s						
USA0B	Ussuriysk Arra	67.41	333	P	P	07 54 32.6	+1.0
USA0B				IAmb	IAmb	07 54 33.3	
	comp=Z,48nm,1.4s						
USRK	Ussuriysk Ar.	67.41	333	P	P	07 54 32.1	+0.6
	comp=Z,7.7nm,0.7s,baz=142,slow=6.5,SNR=12						
USRK	Ussuriysk Ar.	67.41	333	P	P	07 54 32.8	+1.2
USRK	Ussuriysk Ar.	67.41	333	P	P	07 54 32.8	+1.2
PETK	Petropavlovsk-	68.56	354	P	P	07 54 39.0	+0.5
	comp=Z,6.7nm,0.8s,baz=159,slow=8.6,SNR=5.5						
PETK				LR	LR	08 21 53.7	
	comp=Z,19nm,18.5s,baz=70,slow=33						
IPM	Ipoh	68.65	281	P	P	07 54 39.7	-0.4
IPM				IAmb	IAmb	07 54 40.9	
	comp=Z,18nm,0.9s						
MDJ	Mudanjiang	68.81	332	P	P	07 54 40.5	+0.2
MDJ				pP	pP	07 55 11.0	-0.9
MDJ				sP	sP	07 55 22.5	-3.3
MDJ				S	S	08 03 37.8	+4.3
MDJ				ScS	ScS	08 04 29.3	+1.1
MDJ				SS	SS	08 07 59.3	-2.2
MDJ				pmax	pmax		
	comp=Z,29nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,420nm,3.8s						
MNSI	Mandailing Nat	68.94	277	P	P	07 54 41.0	-0.8
	comp=Z,41nm,0.8s						
RPSI	Rantau Prapat	70.11	279	P	P	07 54 48.1	-0.9
RPSI				IAmb	IAmb	07 54 49.1	
	comp=Z,20nm,1.0s						
PSI	Prapat	70.14	279	P	P	07 54 48.1	-1.2
PSI				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2	Changchun	70.17	329	eP	P	07 54 49.0	+0.3
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
GSI	Gunungsitoli	71.00	277	P	P	07 54 54.6	+0.2
	comp=Z,48nm,0.9s						
GSI	Gunungsitoli	71.00	277	P	P	07 54 53.9	-0.5
GSI				IAmb	IAmb	07 54 55.3	
	comp=Z,39nm,0.9s						
KLR	Kul'dur	71.53	336	⇑iP	P	07 54 57.3	+0.5
KLR				pmax	pmax		
	comp=Z,24nm,1.6s						
ENH	Enshi	71.84	309	P	P	07 54 58.9	-0.2
ENH				IAmb	IAmb	07 54 59.7	
	comp=Z,20nm,0.8s						
BJI	Beijing	72.77	321	P	P	07 55 04.8	+0.4
BJI				pmax	pmax		
	comp=Z,16nm,0.8s						
XAN	Xi'an	74.17	313	P	P	07 55 13.5	+0.7
XAN				pP	pP	07 55 49.0	+3.9
XAN				pmax	pmax		
	comp=Z,21nm,1.0s						
KMI	Kunming	74.74	302	⇑P	P	07 55 17.8	+1.3
KMI				pP	pP	07 55 48.5	-0.5
KMI				pmax	pmax		
	comp=Z,22nm,1.1s						
QSPA	South Pole Qui	74.82	180	P	P	07 55 15.9	-0.3
CMAR	Chiang Mai Arr	75.34	294	P	P	07 55 21.1	+1.2
	comp=Z,6.8nm,0.7s,baz=129,slow=4.2,SNR=25						
CMAR	Chiang Mai Arr	75.34	294	ceP	P	07 55 21.2	+1.4
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CMAR	Chiang Mai Arr	75.34	294	P	P	07 55 20.7	+0.9
CHTO	Chiang Mai	75.47	294	P	P	07 55 21.2	+0.6
CHTO				pmax	pmax		
	comp=Z,48nm,1.7s						
CHTO	Chiang Mai	75.47	294	P	P	07 55 21.2	+0.6
CHTO				IAmb	IAmb	07 55 22.2	
	comp=Z,48nm,1.6s						
HHC	Hu-ho-hao-te	76.09	320	eP	P	07 55 24.5	+0.8
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,6.6s						
CD2	Chengdu	76.47	308	P	P	07 55 26.8	+0.8
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA	Zeya	76.82	337	eP	P	07 55 28.6	+1.2
ZEA				pmax	pmax		
	comp=N,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
SEY	Seymchan	78.78	353	⇑eP	P	07 55 40.2	+2.2
LZH	Lanzhou	78.80	312	eP	P	07 55 40.5	+1.5
LZH				pmax	pmax		
	comp=Z,26nm,0.9s						
MAW	Mawson	81.52	202	P	P	07 55 52.5	-0.3
	comp=Z,12nm,1.0s,baz=135,slow=6.7,SNR=5.4						
MAW	Mawson	81.52	202	IAmb	IAmb	07 55 54.0	

	comp=Z,5.7nm,1.2s						
YAK	**Yakutsk**	**82.55**	**343**	eP	**P**	**07 55 57.8**	**-0.3**
YAK				pmax	pmax		
	comp=Z,38nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
ULN	**Ulaanbaatar**	**82.65**	**324**	c iP	**P**	**07 55 59.7**	**+0.5**
ULN				pmax	pmax		
	comp=Z,53nm,1.7s						
ULN	**Ulaanbaatar**	**82.65**	**324**	P	**P**	**07 55 59.5**	**+0.3**
ULN				IAmb	IAmb	07 56 00.7	
	comp=Z,29nm,1.0s						
SONM	**Songino Array**	**83.01**	**324**	P	**P**	**07 56 01.1**	**0.0**
	comp=Z,10nm,0.9s,baz=140,slow=5.6,SNR=42						
SONM				LR	LR	08 33 39.6	
	comp=Z,35nm,18.4s,baz=76,slow=36						
SONM	**Songino Array**	**83.01**	**324**	P	**P**	**07 56 01.1**	**0.0**
BILL	**Bilibino**	**83.02**	**360**	eP	**P**	**07 56 01.8**	**+1.3**
BILL				e		07 59 11.2	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA	**Gaotai**	**83.16**	**314**	⇑P	**P**	**07 56 02.5**	**+0.5**
GTA				pP	pP	07 56 36.5	+1.6
GTA				sP	sP	07 56 49.3	+0.6
GTA				pmax	pmax		
	comp=Z,22nm,1.2s						
SHL	**Shillong**	**83.98**	**298**	P	**P**	**07 56 06.5**	**-0.1**
SHL				pmax	pmax		
	comp=Z,49nm,0.8s						
SHL	**Shillong**	**83.98**	**298**	P	**P**	**07 56 06.5**	**-0.1**
TABL	**Table Mountain**	**85.84**	**23**	P	**P**	**07 56 15.0**	**-0.1**
TABL				IAmb	IAmb	07 58 27.4	
	comp=Z,19nm,0.8s						
ZAK	**Zakamensk**	**86.07**	**325**	eP	**P**	**07 56 14.8**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,22nm,1.1s						
COLA	**College**	**86.71**	**17**	⇓eP	**P**	**07 56 20.7**	**+1.8**
COLA				pmax	pmax		
	comp=Z,42nm,4.0s						
ILAR	**Eielson Array**	**86.91**	**18**	P	**P**	**07 56 18.8**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=234,slow=5.0,SNR=13						
K05A	**Summer Lake**	**87.24**	**44**	P	**P**	**07 56 22.4**	**+0.1**
NVAR	**Mina Array Bea**	**87.42**	**49**	P	**P**	**07 56 23.6**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=231,slow=8.1,SNR=13						
NVAR				PKKPbc	**PKKPbc**	**08 14 12.4**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=94,slow=1.6,SNR=4.8						
NV11	**Mina Array Sit**	**87.53**	**49**	P	**P**	**07 56 23.6**	**-0.1**
PRN	**Pahroc Range**	**89.47**	**51**	P	**P**	**07 56 33.3**	**+0.4**
G08A	**Pilot Rock**	**89.52**	**43**	P	**P**	**07 56 32.7**	**-0.2**
G08A				IAmb	IAmb	07 57 51.4	
	comp=Z,19nm,1.7s						
TIXI	**Tiksi**	**90.48**	**349**	P	**P**	**07 56 35.9**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=142,slow=4.2,SNR=8.2						
TIXI	**Tiksi**	**90.48**	**349**	⇑eP	**P**	**07 56 35.6**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NVL	**N'lazarevskaya**	**92.61**	**188**	eP	**P**	**07 56 48.6**	**+1.9**
NVL				pmax	pmax		
	comp=Z,15nm,0.7s						
SNAA	**Sanae**	**93.08**	**183**	P	**P**	**07 56 47.6**	**-1.4**
SNAA	**Sanae**	**93.08**	**183**	P	**P**	**07 56 47.7**	**-1.3**
SNAA				pmax	pmax		
	comp=Z,11nm,0.8s						
SNAA	**Sanae**	**93.08**	**183**	P	**P**	**07 56 47.7**	**-1.3**
SNAA				IAmb	IAmb	07 56 48.6	
	comp=Z,11nm,0.8s						
WMQ	**Urumqi**	**93.22**	**314**	eP	**P**	**07 56 50.3**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,6.9s						
VNA3	**Neumayer Olymp**	**93.74**	**181**	P	**P**	**07 56 50.2**	**-1.7**
VNA2	**Neumayer--Watz**	**94.01**	**182**	P	**P**	**07 56 51.7**	**-1.5**
	baz=178,slow=4.5						
VNA1	**Neumayer--Stat**	**94.31**	**181**	P	**P**	**07 56 53.1**	**-1.4**
PDAR	**Pinedale Array**	**95.11**	**47**	PKKP	**PKKPbc**	**08 13 51.0**	**-3.5**
	comp=Z,0.5nm,0.7s,baz=94,slow=5.0,SNR=6.0						
DGZ	**Jazzator, Alta**	**95.17**	**320**	⇑eP	**P**	**07 56 58.4**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TXAR	**Lajitas Array**	**96.31**	**61**	P	**P**	**07 57 04.0**	**-0.6**
	comp=Z,0.1nm,0.6s,baz=236,slow=2.9,SNR=1.7						
MK31	**Makanchi Array**	**97.70**	**316**	P	**P**	**07 57 10.1**	**-0.2**
MK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MK31	**Makanchi Array**	**97.70**	**316**	P	**P**	**07 57 10.1**	**-0.2**
MK31				IAmb	IAmb	07 57 11.3	
	comp=Z,6.1nm,0.9s						
MKAR	**Makanchi Array**	**97.70**	**316**	P	**P**	**07 57 10.3**	**0.0**
	comp=Z,4.5nm,0.7s,baz=94,slow=6.4,SNR=47						
MKAR				PKiKP	**PKiKP**	**08 01 43.0**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=41,slow=1.6,SNR=2.3						
MKAR	**Makanchi Array**	**97.70**	**316**	ceP	**P**	**07 57 10.1**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MKAR	**Makanchi Array**	**97.70**	**316**	P	Pdif	07 57 10.5	+0.1
YKA	**Yellowknife Ar**	**97.87**	**27**	P	**P**	**07 57 09.2**	**-1.5**
	comp=Z,2.4nm,0.8s,baz=255,slow=4.7,SNR=34						
YKA				PKKP	**PKKPbc**	**08 13 43.0**	**-4.4**
	comp=Z,0.5nm,0.7s,baz=67,slow=2.3,SNR=7.9						
ZAA0	**Zalesovo Array**	**97.91**	**324**	P	**P**	**07 57 10.5**	**-0.5**
ZAA0				IAmb	IAmb	07 57 10.8	
	comp=Z,9.1nm,0.9s						
ZALV	**Zalesovo Beam**	**97.91**	**324**	P	**P**	**07 57 09.7**	**-1.3**
	comp=Z,7.0nm,0.7s,baz=108,slow=4.7,SNR=34						
ZALV	**Zalesovo Beam**	**97.91**	**324**	P	**P**	**07 57 10.5**	**-0.5**
ZALV	**Zalesovo Beam**	**97.91**	**324**	P	**P**	**07 57 10.5**	**-0.5**
NRIK	**Noril'sk**	**100.60**	**339**	P	**Pdif**	**07 57 21.9**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=104,slow=3.4,SNR=4.4						
NRIK	**Noril'sk**	**100.60**	**339**	⇓eP	**Pdif**	**07 57 22.1**	**-0.6**
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KURK	**Kurchatov**	**100.91**	**320**	⇑eP	**Pdif**	**07 57 24.4**	**-0.1**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
ARU	**Arti**	**113.00**	**325**	i PKIKP	**PKiKP**	**08 02 11.1**	**-0.6**
ARU						08 03 00.0	
ARU						08 09 10.9	
ARU				SS	SS	08 18 30.1	-6.0
FRB	**Frobisher Bay**	**118.25**	**25**	PKP	**PKPdf**	**08 02 20.2**	**-1.3**
	comp=Z,3.9nm,1.0s,baz=270,slow=1.0,SNR=4.1						
ARCES	**ARCESS Array B**	**120.77**	**345**	PKP	**PKPdf**	**08 02 25.7**	**-0.6**
	comp=Z,6.1nm,0.6s,baz=53,slow=1.6,SNR=29						
KLMR	**Klimovskoe**	**121.21**	**333**	ePKIKP	**PKPdf**	**08 02 25.0**	**-2.2**
KLMR				pmax	pmax		
	comp=Z,29nm,1.5s						
KLMR	**Klimovskoe**	**121.21**	**333**	ePKPdf	**PKPdf**	**08 02 25.1**	**-2.2**
KLMR				AMP		08 02 29.3	
	comp=Z,29nm,1.5s						
BOSA	**Boshof**	**123.15**	**220**	PKP	**PKPdf**	**08 02 32.4**	**+0.1**
	comp=Z,7.9nm,0.9s,baz=105,slow=2.1,SNR=6.1						
OBN	**Obninsk**	**125.22**	**328**	i PKIKP	**PKPdf**	**08 02 34.3**	**-0.8**
OBN				e		08 04 24.5	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBZ	**Khabaz**	**125.24**	**313**	⇓iPKIKP	**PKiKP**	**08 02 36.7**	**+0.8**
KIV	**Kislovodsk**	**125.33**	**313**	ePKIKP	**PKiKP**	**08 02 37.9**	**+1.6**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NEY	**Neytrino**	**125.47**	**313**	⇓iPKIKP	**PKPdf**	**08 02 34.0**	**-2.3**
FINES	**FINESS Array B**	**126.25**	**338**	PKP	**PKPdf**	**08 02 36.4**	**-0.6**
	comp=Z,6.1nm,0.9s,baz=146,slow=4.4,SNR=5.6						
KMBO	**Kilima Mbogo**	**128.20**	**256**	PKP	**PKiKP**	**08 02 43.7**	**+0.6**
	comp=Z,5.0nm,0.8s,baz=59,slow=5.2,SNR=16						
NB2	**NORSAR Subarra**	**131.14**	**345**	PKP	**PKPdf**	**08 02 46.1**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=42,slow=2.8						
NOA	**NORSAR Array B**	**131.14**	**345**	PKP	**PKPdf**	**08 02 46.4**	**0.0**
	comp=Z,2.0nm,0.8s,baz=30,slow=2.0,SNR=5.6						
AKASG	**Malin Array Be**	**131.25**	**326**	PKP	**PKPdf**	**08 02 45.1**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=66,slow=2.0,SNR=6.8						
AKASG	**Malin Array Be**	**131.25**	**326**	i PKIKP	**PKPdf**	**08 02 47.0**	**+0.2**
BDFB	**Brasilia**	**133.42**	**130**	PKP	**PKPdf**	**08 02 51.7**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=260,slow=6.1,SNR=3.2						
MBAR	**Mbarara**	**134.47**	**254**	c iPKIKP	**PKiKP**	**08 02 56.0**	**+0.4**
KOLS	**Kolonicke sedl**	**135.96**	**327**	ePKIKP	**PKiKP**	**08 02 57.9**	**+0.5**
KOLS	**Kolonicke sedl**	**135.96**	**327**	ePKP	**PKiKP**	**08 02 57.9**	**+0.5**
MODS	**Modra-Piesok**	**138.85**	**330**	ePKIKP	**PKPdf**	**08 03 01.0**	**-0.1**
MODS	**Modra-Piesok**	**138.85**	**330**	ePKP	**PKPdf**	**08 03 01.0**	**-0.1**
EKA	**Eskdalemuir Ar**	**139.31**	**352**	PKhKP	PKPpre	08 02 54.1	
	comp=Z,3.6nm,0.9s,baz=20,slow=2.3,SNR=3.8						
KHC	**Kasperske Hory**	**140.01**	**333**	ePKIKP	**PKPdf**	**08 02 58.0**	**-5.2**
GERES	**GERESS Array B**	**140.17**	**333**	PKhKP	PKPpre	08 02 55.5	
	comp=Z,1.4nm,0.7s,baz=46,slow=3.5,SNR=11						
GERES				PKP	**PKPdf**	**08 03 04.3**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=52,slow=2.2,SNR=11						
DAVOX	**Davos/Dischmat**	**143.41**	**334**	PKP	PKPbc	08 03 07.6	+0.5
	comp=Z,26nm,0.7s,baz=63,slow=1.0,SNR=80						
SGRT	**San Giovanni R**	**144.03**	**323**	PKPdf	PKPbc	08 03 08.9	-0.1
ZCCA	**Zocca**	**144.77**	**330**		**PKPdf**	**08 03 12.3**	**+0.5**
NRCA	**Norcia**	**144.78**	**327**		PKPbc	08 03 11.3	+0.1
SENIN	**Lac Senin/Sane**	**144.79**	**336**		PKPbc	08 03 11.6	+0.2
BNI	**Bardonecchia**	**146.12**	**335**	PKP2	**PKPdf**	**08 03 14.1**	**-0.2**
BNI	**Bardonecchia**	**146.12**	**335**	PKPdf	**PKPdf**	**08 03 14.1**	**-0.2**
KEST	**Kesra**	**151.72**	**320**	PKPbc	**PKiKP**	**08 03 30.2**	**-0.1**
	comp=Z,11nm,0.8s,baz=274,slow=2.2,SNR=16						
KEST				PKPab	**PKPab**	**08 03 39.8**	**+0.7**
	comp=Z,14nm,0.9s,baz=269,slow=1.6,SNR=7.7						
PBRG	**Braganca**	**153.03**	**350**	ePKPdf	**PKPdf**	**08 03 17.9**	**-7.3**
PBRG	**Braganca**	**153.03**	**350**	ePKPab	**PKPab**	**08 03 44.5**	**+0.2**
POLO	**Lamas de Olo**	**153.61**	**352**	ePKPdf	**PKPdf**	**08 03 22.6**	**-3.5**
POLO	**Lamas de Olo**	**153.61**	**352**	ePKPab	**PKPab**	**08 03 47.8**	**+0.9**
PVRL	**Vila Real**	**153.70**	**352**	ePKPab	**PKPab**	**08 03 48.0**	**+0.8**
MVO	**Moncorvo**	**153.71**	**351**	ePKPdf	PKPdf	08 03 16.5	-10
MVO	**Moncorvo**	**153.71**	**351**	ePKPab	**PKPab**	**08 03 45.5**	**-1.7**
PVIS	**Viseu**	**154.27**	**352**	ePKPab	**PKPab**	**08 03 50.4**	**+0.8**
ESDC	**Sonseca Array**	**154.50**	**345**	PKP	**PKPdf**	**08 03 27.5**	**+0.2**
	comp=Z,0.9nm,1.0s,baz=352,slow=4.6,SNR=3.8						
ESDC				PKPbc	**PKPbc**	**08 03 35.5**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=31,slow=3.7,SNR=7.3						
ESDC				PKPab	**PKPab**	**08 03 50.8**	**+0.1**
	comp=Z,3.1nm,0.9s,baz=359,slow=4.5,SNR=10						
MTE	**Manteigas**	**154.53**	**351**	ePKPab	**PKPab**	**08 03 51.3**	**+0.5**
COI	**Coimbra**	**154.84**	**353**	ePKPab	**PKPab**	**08 03 53.1**	**+1.1**
PCAS	**Casmilo, Conde**	**155.00**	**353**	ePKPab	**PKPab**	**08 03 52.1**	**-0.6**
PCBR	**Castelo Branco**	**155.07**	**351**	ePKPdf	**PKPdf**	**08 03 27.9**	**-0.1**
PMRV	**Marv??o**	**155.46**	**350**	ePKPab	**PKPab**	**08 03 55.6**	**+0.9**
PESTR	**Estremoz**	**156.04**	**351**	ePKPab	**PKPab**	**08 03 57.8**	**+0.6**
PBEJ	**Beja**	**156.91**	**351**	ePKPab	**PKPab**	**08 04 02.2**	**+1.3**
MESJ	**Messejana**	**157.14**	**351**	ePKPab	**PKPab**	**08 04 03.1**	**+1.2**
PCVE	**Castro Verde**	**157.32**	**351**	ePKPab	**PKPab**	**08 04 03.8**	**+1.1**
PVAQ	**Vaqueiros**	**157.49**	**350**	ePKPab	**PKPab**	**08 04 04.1**	**+0.7**
TORD	**Torodi Ar. Bea**	**166.08**	**263**	PKP	**PKPdf**	**08 03 40.0**	**-0.7**
	comp=Z,4.4nm,0.7s,baz=53,slow=0.9,SNR=26						
TORD				PKPab	**PKPab**	**08 04 41.2**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=97,slow=3.7,SNR=6.3						
DBIC	**Dimbokro**	**168.67**	**222**	PKP	**PKPdf**	**08 03 41.2**	**-1.4**
	comp=Z,3.5nm,1.0s,baz=260,slow=4.0,SNR=4.4						
DBIC				PKPab	**PKPab**	**08 04 53.1**	**0.0**
	comp=Z,2.8nm,0.7s,baz=150,slow=5.9,SNR=3.8						

*NAO **25** 07:50:53.7±4.8, 73°.45N×7°.70E, ML3.2*
*BER **25** 07:50:55.6±2.6, 73°.49N×7°.56E, h10^{km}, ML1.9, ML3.2(NAO), Confirmed Earthquake*
*IDC **25** 07:50:55.3±1.4, 73°.43N×8°.30E, h0^{km}, mb3.5/3, mb1 3.8/6, mb1mx3.4/42, mbtmp3.6/6, ML3.0/3, Error ellipse: s-maj=24.7km s-min=12.1km az=71.0*

ISC 25 07:50:55.2±1.1**, 73°.43N**±0°.06×**8°.4E**±0°.1**, h10**^{km}**, n31, σ1**^{s}**66**/37**, mb3.5**/3**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	**Hornsund (broa**	**4.03**	**24**	Pn	**Pn**	**07 51 56.0**	**-0.8**
HSPB	**Hornsund (broa**	**4.03**	**24**	Pn	**Pn**	**07 51 56.0**	**-0.8**
BRBB	**Barentsburg B**	**4.90**	**14**	Pn	**Pn**	**07 52 08.9**	**+0.2**
BRBB	**Barentsburg B**	**4.90**	**14**	eP	**Pn**	**07 52 07.5**	**-1.2**
TRO	**Tromso**	**5.08**	**134**	eP	**Pn**	**07 52 12.8**	**+1.6**
SPA0	**Spitsbergen Ar**	**5.15**	**19**	Pn	**Pn**	**07 52 11.9**	**-0.3**
	baz=192,slow=14						
SPA0	**Spitsbergen Ar**	**5.15**	**19**	Pn	**Pn**	**07 52 11.9**	**-0.3**
	baz=192,slow=14						
SPITS	**Spitsbergen Ar**	**5.15**	**19**	Pn	**Pn**	**07 52 11.9**	**-0.3**
	baz=204,slow=14,SNR=78						
SPITS				Sn	**Sn**	**07 53 11.8**	**+0.2**
	baz=195,slow=27,SNR=0.9						
HOPEN	**Hopen**	**5.30**	**47**	eP	**Pn**	**07 52 13.8**	**-0.4**
JETT	**Jettan, Norway**	**5.46**	**130**	Pn	**Pn**	**07 52 18.5**	**+2.0**
HAMF	**Hammerfest**	**5.49**	**113**	Pn	**Pn**	**07 52 18.0**	**+1.1**
HAMF	**Hammerfest**	**5.49**	**113**	eP	**Pn**	**07 52 18.3**	**+1.4**
KBS	**Kingsbay**	**5.59**	**7**	Pn	**Pn**	**07 52 17.0**	**-1.1**
KBS	**Kingsbay**	**5.59**	**7**	eP	**Pn**	**07 52 16.5**	**-1.6**
LOF	**Lofoten**	**5.59**	**160**	eP	**Pn**	**07 52 17.7**	**-0.6**
LOF				eS	**Sn**	**07 53 17.3**	**-5.1**
KIF	**Kilpisjarvi**	**5.98**	**132**	Pn	**Pn**	**07 52 25.6**	**+2.0**
KIF				Sn	**Sn**	**07 53 30.4**	**-1.6**
KIF	**Kilpisjarvi**	**5.98**	**132**	eP	**Pn**	**07 52 25.0**	**+1.5**
KIF				eS	**Sn**	**07 53 30.0**	**-1.9**
KTK1	**Kautokeino**	**6.52**	**126**	eP	**Pn**	**07 52 33.0**	**+2.0**
KTK1				IAML		07 54 08.9	
	comp=Z,2.1nm,0.5s						
ARA0	**ARCESS Array S**	**6.69**	**117**	Pn	**Pn**	**07 52 35.0**	**+1.6**
	baz=315,slow=12						
ARA0				Sn	**Sn**	**07 53 47.8**	**-1.7**
	baz=305,slow=16						
ARA0	**ARCESS Array S**	**6.69**	**117**	Pn	**Pn**	**07 52 35.0**	**+1.6**
	baz=315,slow=12						
ARA0				Sn	**Sn**	**07 53 47.8**	**-1.7**
	baz=305,slow=16						
ARCES	**ARCESS Array B**	**6.69**	**117**	Pn	**Pn**	**07 52 35.3**	**+1.9**
	baz=320,slow=12,SNR=17						
ARCES				Sn	**Sn**	**07 53 47.1**	**-2.4**
	baz=317,slow=21,SNR=1.8						
KEV	**Kevo**	**6.93**	**113**	eP	**Pn**	**07 52 38.0**	**+1.4**
KONS	**Konsvik**	**7.15**	**165**	eP	**Pn**	**07 52 40.1**	**+0.5**
DAG	**Danmarks Havn**	**7.66**	**308**	eP	Pn	07 52 39.3	-7.3
DAG				eS	Sn	07 53 56.2	-17
FIA0	**FINESS Array S**	**13.72**	**142**	Pn	**Pn**	**07 54 10.5**	**+1.0**
	baz=331,slow=16						
FIA0	**FINESS Array S**	**13.72**	**142**	Pn	**Pn**	**07 54 10.5**	**+1.0**
	baz=331,slow=16						
FINES	**FINESS Array B**	**13.72**	**142**	Pn	**Pn**	**07 54 10.1**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=334,slow=16,SNR=5.3						
KLMR	**Klimovskoe**	**17.15**	**121**	ePn	**Pn**	**07 54 53.7**	**-0.8**
KLMR				AMP		07 54 56.4	
	comp=Z,16nm,1.2s						
AKASG	**Malin Array Be**	**24.52**	**147**	P	**P**	**07 56 15.5**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=346,slow=9.5,SNR=4.1						
GERES	**GERESS Array B**	**24.79**	**172**	P	**P**	**07 56 19.4**	**+2.5**
	comp=Z,1.2nm,1.0s,baz=354,slow=8.2,SNR=4.3						
ILAR	**Eielson Array**	**41.07**	**344**	P	**P**	**07 58 38.8**	**+0.5**
	comp=Z,0.7nm,0.9s,baz=7.8,slow=7.3,SNR=5.2						

JMA 25 08:02:54.7, 37°.06N×140°.70E, h17^{km}±1^{km}, M3.5, 2C-6D Broadband fault plane solution: P waves. NP1: φs195.00000°,δ50.00000°,λ14.00000°. **NP2:**φs96.00000°, δ79.00000°,λ139.00000°. **Principal axes:** T Plg36.0000°, Azm47.0000°; N Plg48.0000°, Azm263.0000°; P Plg19.0000°, Azm151.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.09**	**62**	⇓P	Pg	08 02 58.0	-0.2
ONAJ				S	Sg	08 03 00.4	-0.1
JFFD	**Fukushimafurud**	**0.12**	**286**	⇓P	Pg	08 02 58.3	-0.1
JFFD				S	Sg	08 03 00.6	-0.3
JFK	**Kawauchi**	**0.34**	**24**	⇓P	Pg	08 03 01.6	-0.2
JFK				S	Sg	08 03 06.4	-0.3
JHO	**Hitachi**	**0.46**	**193**	⇑P	Pg	08 03 03.4	-0.6
JHO				S	Sg	08 03 09.9	-0.4
JFT	**Otama**	**0.54**	**328**	⇓P	Pg	08 03 05.5	0.0
JFT				S	Sg	08 03 13.0	+0.2
JSB	**Shiboa**	**0.63**	**262**	⇑P	Pb	08 03 07.4	+0.1
JSB				S	Sb	08 03 16.0	+0.2
JMM	**Marumori**	**0.81**	**5**	⇓P	Pb	08 03 09.6	-0.7
JMM				S	Sb	08 03 20.4	-0.5
JFY	**Yanaizu**	**0.87**	**294**	⇓P	Pb	08 03 11.0	-0.3
JFY				S	Sb	08 03 22.3	-0.3
MAT	**Matsushiro**	**2.07**	**256**	P	Pn	08 03 30.1	+1.5
MAT				S	Sb	08 03 57.4	+0.2

IDC 25 08:06:56.4±2.2**, 8°.12S×129°.43E, h0**^{km}**, mb3.4**/1**, mb1 3.5**/3**, mb1mx3.3**/21**, mbtmp3.3**/3**, ML3.3**/2 **Error ellipse: s-maj=132.5km s-min=32.6km az=67.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**12.67**	**158**	Pn	Pn	08 09 57.4	-0.7
	0.2nm,0.3s,baz=341,slow=12,SNR=8.9						
WRA				Sn	Sn	08 12 14.1	-6.0
	0.3nm,0.3s,baz=337,slow=21,SNR=6.5						
ASAR	**Alice Springs**	**16.04**	**165**	Pn	Pn	08 10 44.3	+0.8
	0.1nm,0.3s,baz=337,slow=8.8,SNR=12						
ASAR				Sn	Sn	08 13 37.3	-4.9
	0.1nm,0.3s,baz=344,slow=26,SNR=2.3						
MKAR	**Makanchi Array**	**68.86**	**327**	P	P	08 18 02.9	0.0
	0.1nm,0.4s,baz=111,slow=7.9,SNR=4.7						

*IDC **25** 08:37:46.5±1.7, 4°.53S×152°.97E, h0^{km}, mb3.8/6, mb1 4.0/6, mb1mx3.7/42, mbtmp3.8/6, MS2.9/2, Ms1 2.9/2, ms1mx2.5/39, Error ellipse: s-maj=79.2km s-min=25.3km az=122.0*
*NEIC **25** 08:37:56.0±1.5, 4°.5S±0°.1×153°.0E±0°.1, h73^{km}±8^{km}, mb4.4/9, Error ellipse: s-maj=18.4km s-min=15.0km az=120.0*

ISC 25 08:37:54.4±0.8**, 4°.6S**±0°.1×**153°.0E**±0°.1**, h55**^{km}**, n23, σ1**^{s}**61**/23**, mb4.2**/11**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.94**	**295**		**Pn**	**08 38 14.0**	**+2.5**
PMG	**Port Moresby**	**7.53**	**230**	Pn	**Pn**	**08 39 45.4**	**+3.9**
	0.4nm,0.3s,baz=300,slow=20,SNR=1.6						
PMG				Sn	**Sn**	**08 41 02.2**	**-3.4**
	0.9nm,0.3s,baz=307,slow=20,SNR=1.9						
JAY	**Jayapura**	**12.46**	**279**	LR	LR	08 44 11.9	
	comp=Z,53nm,18.6s,baz=352,slow=31						
PATS	**Pohnpei**	**12.53**	**25**	Pn	**Pn**	**08 40 50.1**	**+0.2**
MTN	**Manton Dam**	**23.11**	**248**	P	**P**	**08 42 56.3**	**+0.4**
WB0	**Warramunga Arr**	**23.59**	**229**	P	**P**	**08 42 59.6**	**-0.9**
WB0				IAmb	IAmb	08 43 18.2	
	comp=Z,29nm,1.5s						
WB2	**Warramunga Arr**	**23.73**	**228**	P	**P**	**08 43 01.2**	**-0.6**
WB2				IAmb	IAmb	08 43 09.9	
	comp=Z,22nm,1.4s						
WRA	**Warramunga Arr**	**23.74**	**228**	P	**P**	**08 43 00.5**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=50,slow=10.0,SNR=15						
KNRA	**Kununurra**	**26.26**	**243**	P	**P**	**08 43 24.5**	**-0.2**
AS31	**Alice Springs**	**26.44**	**222**	P	**P**	**08 43 26.1**	**-0.2**
ASAR	**Alice Springs**	**26.45**	**222**	P	**P**	**08 43 24.9**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=55,slow=9.0,SNR=5.4						
ASAR				PcP	**PcP**	**08 46 52.0**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=65,slow=2.3,SNR=5.1						
FITZ	**Fitzroy Crossi**	**29.95**	**241**	P	**P**	**08 43 56.7**	**-0.9**
	comp=Z,1.8nm,0.3s,baz=57,slow=9.0,SNR=2.0						
KLR	**Kul'dur**	**56.71**	**343**	LR	LR	09 07 01.8	
	comp=Z,9.1nm,21.5s,baz=14,slow=31						
VNDA	**Vanda**	**73.03**	**178**	P	**P**	**08 49 18.6**	**+0.7**
VNDA				IAmb	IAmb	08 49 36.1	
	comp=Z,6.7nm,1.2s						
IMAR	**Indian Mountai**	**80.12**	**19**	P	**P**	**08 49 59.0**	**+0.8**
MKAR	**Makanchi Array**	**80.31**	**319**	P	**P**	**08 50 00.5**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=87,slow=6.3,SNR=3.6						
MKAR	**Makanchi Array**	**80.31**	**319**	P	**P**	**08 49 58.5**	**-1.2**
ILAR	**Eielson Array**	**81.89**	**22**	P	**P**	**08 50 06.4**	**-1.2**
	comp=Z,0.6nm,0.9s,baz=230,slow=5.6,SNR=3.1						
KURK	**Kurchatov**	**83.74**	**322**	P	**P**	**08 50 15.5**	**-2.0**
KURK				IAmb	IAmb	08 50 21.9	
	comp=Z,7.1nm,0.8s						
QSPA	**South Pole Qui**	**85.36**	**180**	P	**P**	**08 50 25.3**	**-0.3**
QSPA				IAmb	IAmb	08 50 26.7	
	comp=Z,1.3nm,0.7s						
BVAR	**Borovoye Array**	**89.21**	**323**	P	**P**	**08 50 42.6**	**-1.6**
	comp=Z,1.5nm,0.8s,baz=159,slow=9.5,SNR=5.5						
GERES	**GERESS Array B**	**123.99**	**329**	PKP	**PKiKP**	**08 56 47.2**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=0.0,slow=1.3,SNR=6.2						
TORD	**Torodi Ar. Bea**	**150.45**	**289**	PKPbc	**PKPbc**	**08 57 40.6**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=48,slow=2.1,SNR=8.2						

NNC 25 08:49:04.5±1.9**, 51°.41N×75°.28E, h0**^{km}**, mb3.0, mpv2.6, 3C-2D, Error ellipse: s-maj=78.3km s-min=9.7km az=24.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.20**	**110**	⇓Pg	Pb	08 49 44.7	-0.4
	1.9nm,0.4s						
KURBB				⇑Lg	Lg	08 50 15.5	
	11nm,0.6s						
KURK	**Kurchatov**	**2.22**	**107**	⇑Pg	Pb	08 49 44.4	-1.1
	3.1nm,0.8s						
BVA4	**Borovoye Array**	**3.41**	**300**	⇓Lg	Lg	08 50 53.4	
	5.9nm,0.7s						
MK31	**Makanchi Array**	**6.52**	**132**	⇑Lg	Lg	08 52 31.2	
	0.7nm,0.6s,baz=327,slow=24,SNR=5.6						

*IDC **25** 08:53:59.3±1.8, 43°.86N×128°.67W, h0^{km}, mb3.6/5, mb1 3.7/9, mb1mx3.4/50, mbtmp3.4/9, ML3.1/4, MS3.4/12, Ms1 3.4/12, ms1mx3.1/41, Error ellipse: s-maj=44.3km s-min=16.2km az=41.0*
*NEIC **25** 08:54:02.8±2.2, 44°.03N±0°.09×128°.45W±0°.05, h10^{km}±1^{km}, mb4.2/20, ML3.7/20, Error ellipse: s-maj=14.9km s-min=6.3km az=189.0*

ISC 25 08:54:01.4±1.4**, 43°.9N**±0°.1×**128°.6W**±0°.1**, h13**^{km}**, n65, σ1**^{s}**55**/52**, mb4.0**/5**, MS3.3**/7**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEBO	**Mount Hebo**	**3.70**	**67**	Pn	**Pn**	**08 54 55.9**	**-2.5**
COR	**Corvallis**	**3.86**	**77**	Pn	**Pn**	**08 54 58.2**	**-2.2**
COR				IAML		08 55 56.4	
	107nm,3.5s						
DBO	**Dodson Butte**	**3.95**	**99**		**Pn**	**08 54 59.8**	**-1.9**
BUCK	**Buck Mountain**	**4.04**	**83**	Pn	**Pn**	**08 55 01.4**	**-1.6**
BUCK				IAML		08 56 06.3	
	comp=E,113nm,3.5s						
BUCK				IAML		08 56 54.0	
	comp=N,82nm,4.2s						
E03A	**Lebam**	**4.44**	**51**	Pn	**Pn**	**08 55 08.3**	**-0.2**
E03A				IAML		08 55 40.6	
	comp=E,81nm,3.0s						
E03A				IAML		08 55 42.7	
	comp=N,72nm,3.3s						
H04A	**Detroit Lake**	**4.66**	**78**	Pn	**Pn**	**08 55 10.6**	**-0.8**
WISH	**Wishkah**	**4.69**	**44**	Pn	**Pn**	**08 55 12.1**	**+0.2**
YBH	**Yreka Blue Hor**	**4.81**	**114**	LR	LR	08 57 03.1	
	comp=N,617nm,20.0s,baz=324,slow=38						
NLWA	**Neilton Lookou**	**4.83**	**41**	Pn	**Pn**	**08 55 12.5**	**-1.4**
NLWA				IAML		08 57 10.8	
	comp=N,57nm,4.5s						
NLWA				IAML		08 57 36.0	
	comp=N,55nm,3.8s						
HOOD	**Mount Hood Mea**	**5.15**	**71**		**Pn**	**08 55 17.9**	**-0.5**
HOOD				IAML		08 58 00.1	
	comp=N,55nm,4.4s						
B04A	**Port Angeles**	**5.49**	**38**	Pn	**Pn**	**08 55 22.4**	**-0.4**
B04A				IAML		08 56 35.5	
	comp=E,36nm,4.1s						
B04A				IAML		08 56 56.6	
	comp=N,37nm,3.9s						
PINE	**Pine Mountain**	**5.52**	**88**		**Pn**	**08 55 22.4**	**-1.1**
D05A	**Enumclaw**	**5.70**	**52**		**Pn**	**08 55 25.6**	**-0.1**
CLRS	**Cowichan Lake**	**5.83**	**30**	Pn	**Pn**	**08 55 29.5**	**+1.9**
LTY	**Liberty**	**6.50**	**56**	Pn	**Pn**	**08 55 36.4**	**-0.4**
TLCB	**Telegraph Cove**	**6.79**	**9**	Pn	**Pn**	**08 55 42.0**	**+1.3**
ORV	**Oroville**	**6.82**	**127**		**Pn**	**08 55 43.6**	**+2.4**
HAWA	**Hanford**	**6.88**	**65**	Pn	**Pn**	**08 55 41.0**	**-0.9**
G08A	**Pilot Rock**	**7.01**	**75**		**Pn**	**08 55 42.4**	**-1.5**
YERR	**Yerington**	**8.53**	**122**	Pn	**Pn**	**08 56 06.8**	**+2.0**
NVAR	**Mina Array Bea**	**9.45**	**122**	Pn	**Pn**	**08 56 18.4**	**+0.9**
	comp=N,0.1nm,0.3s,baz=312,slow=11,SNR=2.7						
NVAR				LR	LR	08 59 46.0	
	comp=N,186nm,21.6s,baz=272,slow=36						
ELK	**Elko**	**10.36**	**103**	Pn	**Pn**	**08 56 31.9**	**+2.1**
	comp=N,0.1nm,0.3s,baz=283,slow=11,SNR=5.7						
ELK				LR	LR	09 00 43.7	
	comp=N,167nm,20.6s,baz=317,slow=39						
MCMT	**McKenzie Canyo**	**11.30**	**80**	Pn	**Pn**	**08 56 45.4**	**+2.6**
TCRU	**Three Creeks R**	**13.21**	**108**	Pn	**Pn**	**08 57 10.2**	**+1.2**
MVU	**Marysvale**	**13.43**	**108**	Pn	**Pn**	**08 57 14.5**	**+2.7**
MSU	**Marysvale**	**13.45**	**108**	Pn	**Pn**	**08 57 15.1**	**+3.0**
PDAR	**Pinedale Array**	**13.89**	**88**	Pn	**P**	**08 57 24.7**	**-1.7**
	comp=N,0.0nm,0.3s,baz=264,slow=5.3,SNR=2.0						
PDAR				LR	LR	09 02 29.2	
	comp=N,162nm,18.2s,baz=278,slow=36						
PFO	**Pinyon Flats O**	**13.91**	**133**	LR	LR	09 02 10.4	
	comp=N,111nm,19.9s,baz=242,slow=35						
P18A	**Preston Nutter**	**14.32**	**101**	Pn	**Pn**	**08 57 27.9**	**+3.8**
SRU	**San Rafael Swe**	**14.33**	**103**	Pn	**Pn**	**08 57 28.1**	**+3.9**
O20A	**White River Ci**	**15.56**	**97**	Pn	**Pn**	**08 57 42.5**	**+1.9**
O20A				IAmb	IAmb	08 57 47.9	
	comp=Z,11nm,1.3s						
X16A	**Lo Mia Camp, P**	**16.27**	**120**	Pn	**P**	**08 57 52.0**	**-0.8**

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MVCO  Mesa Verde        16.62 107  Pn     Pn       08 57 54.8 +0.5
MVCO                               IAmb   IAmb     08 58 00.2
      comp=Z,12nm,1.2s
W18A  Petrified Fore    16.93 115         Pn       08 57 59.4 +1.3
W18A                               IAmb   IAmb     08 58 04.6
      comp=Z,26nm,1.4s
X18A  Snowflake         17.15 117         P        08 58 03.1 +0.5
X18A                               IAmb   IAmb     08 58 12.8
      comp=Z,14nm,1.3s
ISCO  Idaho Springs     17.57  95  Pn     Pn       08 58 05.8 -0.5
RSSD  Black Hills       17.64  81  Pn     Pn       08 58 06.8 -0.3
SDCO  Great Sand Dun    18.48 101  P      Pn       08 58 18.7 +1.4
SDCO                               IAmb   IAmb     08 58 20.2
      comp=Z,16nm,1.1s
ANMO  Albuquerque       19.22 110  P      Pn       08 58 27.0 +0.6
      comp=Z,0.0nm,0.3s,baz=323,slow=11,SNR=4.3
ANMO  Albuquerque       19.22 110  P      Pn       08 58 27.0 +0.6
E28A  Huff              19.79  72  P      P        08 58 31.5 +0.2
E28A                               IAmb   IAmb     08 58 37.7
      comp=Z,30nm,1.4s
KSCO  Kaye Shedlock'    20.01  95  P      P        08 58 34.4 +0.5
KSCO                               IAmb   IAmb     08 58 47.2
      comp=Z,18nm,1.2s
YKA   Yellowknife Ar    20.37  19  P      P        08 58 36.9 -0.5
      comp=Z,4.8nm,0.8s,baz=208,slow=11,SNR=34
K31A  O'Neill           21.71  83  P      P        08 58 51.5 -0.6
MNTX  Cornudas Mount    21.90 116  P      P        08 58 54.7 +0.4
AMTX  Amarillo          22.56 104  P      P        08 59 01.6 +0.2
ECSD  EROS Data Cent    23.00  79  P      P        08 59 06.9 +1.1
ECSD                               IAmb   IAmb     08 59 13.2
      comp=Z,7.7nm,1.1s
ULM   Lac du Bonnet     23.04  62  LR     LR       09 07 33.7
      comp=Z,75nm,20.0s,baz=286,slow=35
ILAR  Eielson Array     23.34 340  P      P        08 59 09.3 +0.3
      comp=Z,0.4nm,0.8s,baz=160,slow=7.8,SNR=4.9
ILAR                               LR     LR       09 06 31.0
      comp=Z,84nm,18.2s,baz=146,slow=32
KAN16 Harper SW Stat    24.02  96  P      P        08 59 16.0  0.0
KAN12 Harper NE Stat    24.04  95  P      P        08 59 16.9 +0.7
TXAR  Lajitas Array     24.57 118  P      P        08 59 22.2 +1.0
      comp=Z,0.6nm,1.0s,baz=297,slow=5.5,SNR=4.4
TXAR                               LR     LR       09 09 52.8
      comp=Z,65nm,20.2s,baz=0.0,slow=39
WMOK  Wichita Mounta    24.68 101  P      P        08 59 23.3 +1.3
RES   Resolute Bay      34.35  15  P      P        09 00 46.5 -0.8
      comp=Z,1.4nm,0.8s,baz=228,slow=8.5,SNR=4.5
RES   Resolute Bay      34.35  15  IAmb   IAmb     09 00 48.4
      comp=Z,4.9nm,1.2s
YAK   Yakutsk           57.35 327  LR     LR       09 27 00.8
      comp=Z,45nm,20.1s,baz=234,slow=35
H11N3 WAKE ISLAND Hy    58.35 267  T      T        10 06 60.0
      baz=49,slow=75,SNR=190
H11N2 WAKE ISLAND Hy    58.35 268  T      T        10 07 02.5
      baz=49,slow=75,SNR=125
H11N1 WAKE ISLAND Hy    58.37 268  T      T        10 07 03.8
      baz=49,slow=75,SNR=94
H11S1 WAKE ISLAND Hy    59.28 267  T      T        10 08 12.1
      baz=49,slow=75,SNR=41
H11S2 WAKE ISLAND Hy    59.28 267  T      T        10 08 11.1
      baz=49,slow=75,SNR=34
H11S3 WAKE ISLAND Hy    59.30 267  T      T        10 08 13.4
      baz=49,slow=75,SNR=23
ATAH  Atahualpa         68.01 125  LR     LR       09 32 43.9
      comp=Z,18nm,19.4s,baz=66,slow=34
SONM  Songino Array     76.67 325  P      P        09 05 51.8 -0.2
      comp=Z,1.1nm,0.8s,baz=32,slow=5.6,SNR=6.6
SONM                               LR     LR       09 37 41.3
      comp=Z,53nm,18.0s,baz=44,slow=34
MSVF  Nonsavu           78.33 231  LR     LR       09 31 48.3
      comp=Z,30nm,20.5s,baz=78,slow=29
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*IDC **25** 08:55:02.6±1.2, 5°.53S×152°.56E, h0^{km}, mb4.4/11, mb1 4.5/12, mb1mx4.2/37, mbtmp4.4/12, ML2.2/1, MS3.4/10, Ms1 3.5/10, ms1mx3.2/30, Error ellipse: s-maj=40.6km s-min=17.2km az=119.0*

*DJA **25** 08:55:07.3±1.0, 6°S±4°×15°3E±1°2, h30^{km}±5^{km}, M4.9/8, mB4.9/1, mb4.6/8, MLv5.0/3, Mw(mB)4.2/1*

*NEIC **25** 08:55:08.9±1.7, 5°.43S±0°.05×152°.5E±0°.1, h34^{km}±7^{km}, mb4.7/16, Error ellipse: s-maj=21.5km s-min=5.0km az=105.0*

ISC 25 08:55:09.2±0.7**, 5°.47S**±0°.08×**152°.5E**±0°.1**, h40^{km}, n53,** σ**1^s.24**/47**, mb4.5**/20**, MS3.5**/9**, New Britain region**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC       h  m  s     ISC
RABL  Rabaul             1.30 347         Pn       08 55 31.2 +0.2
RABL  Rabaul             1.30 347  P      Pn       08 55 31.2 +0.2
PMG   Port Moresby       6.56 233  Pn     Pn       08 56 42.9 -0.3
      3.1nm,0.3s,baz=53,slow=8.5,SNR=27
PMG                                Sn     Sn       08 57 54.5 -2.3
      5.8nm,0.3s,baz=159,slow=23,SNR=6.9
PMG                                LR     LR       08 58 47.9
      comp=Z,145nm,21.3s,baz=9.0,slow=34
PMG   Port Moresby       6.56 233         Pn       08 56 45.0 +1.8
PMG   Port Moresby       6.56 233  P      Pn       08 56 46.3 +3.1
PMG   Port Moresby       6.56 233  P      Pn       08 56 46.6 +3.4
HNR   Honiara            8.40 118  LR     LR       09 00 07.4
      comp=Z,281nm,18.6s,baz=296,slow=37
QIS   Mount Isa         19.52 219  P      P        08 59 33.5 +0.1
      23nm,1.5s
EIDS  Eidsvold          19.83 184  P      P        08 59 36.6 -0.2
KDU   Kakadu            20.99 249  P      P        08 59 49.1 -0.3
      49nm,1.0s
SAUI  Saumlaki          21.17 262  P      P        08 59 50.2 -1.1
DZM   Mont Dzumac       21.34 142  LR     LR       09 05 07.9
      comp=Z,35nm,21.9s,baz=10,slow=28
MTN   Manton Dam        22.29 249  P      P        09 00 05.7 +2.4
      46nm,1.8s
WB0   Warramunga Arr    22.61 229  P      P        09 00 06.1 -0.7
WB0                                IAmb   IAmb     09 00 33.0
      comp=Z,27nm,1.4s
WB2   Warramunga Arr    22.75 229  P      P        09 00 07.4 -0.8
WRA   Warramunga Arr    22.76 229  P      P        09 00 07.7 -0.6
      comp=Z,4.3nm,0.7s,baz=54,slow=9.8,SNR=17
WRA                                LR     LR       09 10 11.7
      comp=Z,186nm,18.3s,baz=60,slow=40
KNRA  Kununurra         25.38 245  P      P        09 00 35.4 +2.4
      comp=Z,45nm,0.9s
AS31  Alice Springs     25.43 223  P      P        09 00 33.2 -0.2
ASAR  Alice Springs     25.43 223  P      P        09 00 32.1 -1.4
      comp=Z,8.2nm,0.7s,baz=56,slow=8.3,SNR=63
STKA  Stephens Creek    28.18 200  P      P        09 00 56.4 -1.7
      comp=Z,2.7nm,0.7s,baz=347,slow=13,SNR=3.9
STKA                               LR     LR       09 12 45.3
      comp=Z,127nm,18.1s,baz=21,slow=38
FITZ  Fitzroy Crossi    29.05 242  P      P        09 01 04.7 -1.2
      comp=Z,4.3nm,0.6s,baz=50,slow=3.9,SNR=9.6
AFI   Afiamalu          36.19 106  LR     LR       09 14 30.3
      comp=Z,2μm,21.1s,baz=258,slow=32
MJAR  Matsushiro Arr    43.87 343  LR     LR       09 22 56.9
      comp=Z,36nm,18.2s,baz=140,slow=38
KLR   Kul'dur           57.39 344  LR     LR       09 27 53.7
      comp=Z,31nm,18.5s,baz=97,slow=34
CMAR  Chiang Mai Arr    57.86 296  P      P        09 04 58.2 +0.8
      comp=Z,0.9nm,0.3s,baz=118,slow=5.9,SNR=5.1
PETK  Petropavlovsk-    58.52   4  LR     LR       09 24 51.2
      comp=Z,40nm,20.2s,baz=90,slow=30
SONM  Songino Array     66.71 328  P      P        09 05 56.6 +0.2
      comp=Z,2.0nm,0.6s,baz=148,slow=5.8,SNR=11
SONM  Songino Array     66.71 328  P      P        09 05 56.9 +0.5
SONM                               IAmb   IAmb     09 05 58.1
      comp=Z,3.3nm,0.9s
CNPM  China Poot        78.46  26  P      P        09 07 05.8  0.0
RC01  Rabbit Creek A    79.92  25  P      P        09 07 13.6 -0.1
J20K  Nowinta River     79.93  21  P      P        09 07 14.6 +0.8
J20K                               IAmb   IAmb     09 07 26.8
      comp=Z,19nm,1.4s
MKAR  Makanchi Array    80.61 319  P      P        09 07 16.6 -1.3
      comp=Z,1.2nm,0.9s,baz=101,slow=6.4,SNR=6.3
IMAR  Indian Mountai    81.12  20  P      P        09 07 21.0 +0.9
H21K  Melozitna Rive    81.25  20  P      P        09 07 21.2 +0.4
H21K                               IAmb   IAmb     09 07 22.9
      comp=Z,5.0nm,0.9s
ZALV  Zalesovo Beam     81.52 326  P      P        09 07 21.6 -0.9
      comp=Z,3.3nm,0.6s,baz=120,slow=4.9,SNR=14
ZALV  Zalesovo Beam     81.52 326  P      P        09 07 21.7 -0.7
IL31                    82.90  22  P      P        09 07 29.1 -0.3
IL31                               IAmb   IAmb     09 07 39.7
      comp=Z,8.8nm,1.2s
ILAR  Eielson Array     82.90  22  P      P        09 07 28.6 -0.8
      comp=Z,3.0nm,0.7s,baz=247,slow=5.4,SNR=29
ILAR                               LR     LR       09 46 22.6
      comp=Z,32nm,18.0s,baz=282,slow=37
KURK  Kurchatov         84.09 322         P        09 07 35.2 -0.7
KURK                               IAmb   IAmb     09 07 37.1
      comp=Z,11nm,1.1s
BCAR  Beaver Creek A    84.15  25  P      P        09 07 36.7 +0.7
TKM2  Tokmak 2          84.15 314  P      P        09 07 36.9 +0.2
      SNR=7.3
QSPA  South Pole Qui    84.50 180  P      P        09 07 37.7 -0.1
QSPA                               IAmb   IAmb     09 07 50.8
      comp=Z,4.6nm,1.4s
UCH   Uchtor            84.78 313  P      P        09 07 41.7 +1.5
      SNR=8.8
AAK   Ala-Archa         84.88 314  P      P        09 07 40.7 +0.4
AAK                                IAmb   IAmb     09 07 42.4
      comp=Z,6.4nm,0.8s
BMAR  Burnt Mountain    84.98  20  P      P        09 07 40.5 +0.4
USP   Ospenovka         85.01 314  P      P        09 07 41.4 +0.6
      SNR=9.4
AML   Almayashu         85.36 313  P      P        09 07 44.3 +1.3
      SNR=17
EKS2  Erkin-Say         85.41 313  P      P        09 07 44.0 +1.1
      SNR=7.0
NRIK  Noril'sk          86.48 341  P      P        09 07 49.1 +1.7
      comp=Z,1.5nm,0.4s,baz=82,slow=5.8,SNR=3.5
EPYK  Eagle Plains      87.41  22  P      P        09 07 52.7 +0.6
YKA   Yellowknife Ar    96.17  28  P      P        09 08 33.3 +0.6
      comp=Z,0.8nm,0.7s,baz=270,slow=4.9,SNR=18
PDAR  Pinedale Array    99.54  48  LR     LR       09 51 55.2
      comp=Z,31nm,18.1s,baz=316,slow=34
TORD  Torodi Ar. Bea   150.19 287  PKPbc  PKPbc    09 14 56.2 -0.8
      comp=Z,1.4nm,0.7s,baz=48,slow=2.1,SNR=7.0
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*SJA **25** 09:19:36.5±1.6, 31°.72S×72°.16W, h15^{km}, ML3.9, MW4.2*

*IDC **25** 09:19:38.4±1.6, 31°.73S×71°.62W, h0^{km}, mb4.1/4, mb1 3.9/7, mb1mx3.7/29, mbtmp3.8/7, ML3.6/3, MS3.2/4, Ms1 3.2/4, ms1mx2.9/21, Error ellipse: s-maj=67.5km s-min=23.7km az=109.0*

*GUC **25** 09:19:40.6±0.9, 31°.74S×71°.92W, h36^{km}±4^{km}, ML3.9*

*NEIC **25** 09:19:42.3±1.4, 31°.75S±0°.03×71°.94W±0°.10, h35^{km}±2^{km}, mb4.2/5, Mwr3.8/36, ML3.9(GUC), Error ellipse: s-maj=14.1km s-min=4.8km az=273.0*

*NEIC **25** 09:19:42.3, 31°.75S×71°.94W, h28^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}5.26; $M_{\theta\theta}$0.54; $M_{\phi\phi}$-5.80; $M_{r\theta}$0.57; $M_{\theta\phi}$0.67; $M_{\phi r}$-3.56; Fault plane solution: $M_0$6.65000×10^{14} NP1:ϕ_s172.18000°, δ61.46000°, λ88.11000°. NP2:ϕ_s356.13000°, δ28.59000°, λ93.47000°. Principal axes: T 6.3293, Plg73.0000°, Azm77.0000°; N 0.6021, Plg2.0000°, Azm173.0000°; P -6.9315, Plg16.0000°, Azm264.0000°;*

ISC 25 09:19:37.3±1.0**, 31°.73S**±0°.02×**72°.07W**±0°.04**, h8^{km}**±6^{km}**, n107,** σ**1^s.65**/135**, mb4.2**/4**, 4D, Off coast of central Chile**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC       h  m  s     ISC
VA06  Catapilco          1.06 142⇓iP      Pg       09 19 58.5 +0.9
VA06                               eS     Sb       09 20 10.7 -1.1
VA06                                IAML           09 20 15.8
      comp=E,7μm,0.5s
CO06  Fray Jorge         1.12  20  i P    Pg       09 19 60.0 +1.2
CO06                               eS     Sg       09 20 14.5 +1.2
CO06                                IAML           09 20 20.2
      comp=N,3μm,0.4s
CO06  Fray Jorge         1.12  20         Pg       09 20 00.1 +1.2
CO06                                Sn    Sg       09 20 14.8 +1.4
VA01  Torpederas         1.34 164  eP     Pg       09 20 03.1 +0.2
VA01                               eS     Sn       09 20 18.1 -2.2
VA01  Torpederas         1.34 164   Pn    Pg       09 20 03.4 +0.5
VA01                                Sn    Sn       09 20 18.4 -1.9
VA01  Torpederas         1.34 164  eP     Pg       09 20 03.0  0.0
VA01                               eP     Pb       09 20 06.1 +3.5
VA01                               eS     Sg       09 20 22.3 +2.0
CO03  El Pedregal        1.48  53⇓iP      Pb       09 20 05.0 -0.2
CO03                               eS     Sn       09 20 22.6 -1.3
CO03                                IAML           09 20 25.5
      comp=N,2μm,0.4s
CO03  El Pedregal        1.48  53         Pb       09 20 05.1 -0.1
CO03                                Sn    Sn       09 20 23.0 -1.0
CO03  El Pedregal        1.48  53  eP     Pg       09 20 05.4 -0.4
CO03                               eS     Sb       09 20 23.6 -0.6
CO03                               eS     Sn       09 20 23.8 -0.2
CO03                                IAML           09 20 26.1
      comp=Z,1μm,0.7s
ROCH  El Roble           1.53 144  i P    Pg       09 20 06.0 -0.6
ROCH                               i P    Pb       09 20 05.7 -0.4
ROCH                               eS     Sn       09 20 23.2 -2.2
ROCH                               eS     Sb       09 20 23.4 -2.3
ROCH                                IAML           09 20 28.6
      comp=N,3μm,0.4s
ROCH                                IAML           09 20 28.9
      comp=N,3μm,0.4s
ROC1  El Roble           1.53 144  eP     Pb       09 20 06.1 +0.1
ROC1                               eS     Sn       09 20 24.7 -0.7
VA03  San Esteban        1.65 129⇓iP      Pb       09 20 07.6 -0.4
VA03                               eS     Sn       09 20 27.4 -0.8
VA03                                IAML           09 20 34.5
      comp=E,4μm,0.5s
VA03  San Esteban        1.65 129         Pb       09 20 07.7 -0.4
VA03                                Sn    Sn       09 20 27.5 -0.6
VA03  San Esteban        1.65 129  eP     Pn       09 20 06.1 -0.6
VA03                               eP     Pb       09 20 07.8 -0.3
VA03                               eS     Sb       09 20 29.8 +0.8
VA03                                IAML           09 20 32.9
      comp=Z,3μm,0.8s
MT02  Curacav            1.72 153  eP     Pb       09 20 08.9 -0.2
MT02  Curacav            1.72 153         Pb       09 20 08.6 -0.5
MT02                                Sn    Sn       09 20 28.5 -1.2
MT02  Curacav            1.72 153  eP     Pn       09 20 06.1 -1.4
MT02                               eP     Pb       09 20 08.7 -0.5
MT02                               eS     Sb       09 20 31.8 +0.9
MT02                                IAML           09 20 36.4
      comp=Z,652nm,0.7s
PEL   Peldehue           1.83 141  eP     Pb       09 20 10.4 -0.7
PEL                                eS     Sn       09 20 31.5 -1.1
PEL                                 IAML           09 20 39.4
      comp=E,2μm,0.5s
PEL   Peldehue           1.83 141         Pb       09 20 10.5 -0.7
PEL                                 Sn    Sn       09 20 32.0 -0.7
PEL   Peldehue           1.83 141  eP     Pb       09 20 10.6 -0.5
PEL                                eS     Sb       09 20 35.7 +1.5
GO04  Tololo Observa     1.90  35  eP     Pb       09 20 11.1 -1.2
GO04  Tololo Observa     1.90  35         Pb       09 20 11.2 -1.2
GO04  Tololo Observa     1.90  35  eP     Pn       09 20 06.1 -4.1
GO04                               eP     Pb       09 20 11.2 -1.2
GO04                               eS     Sb       09 20 35.6 -0.8
CO05  La Serena          1.94  22  eP     Pb       09 20 11.8 -1.2
CO05                                IAML           09 20 43.7
      comp=N,2μm,0.5s
CO05  La Serena          1.94  22         Pb       09 20 12.1 -0.9
VA05  Santo Domingo      1.96 169  eP     Pb       09 20 11.8 -1.4
VA05                                IAML           09 20 45.1
      comp=E,3μm,0.5s
VA05  Santo Domingo      1.96 169         Pb       09 20 12.1 -1.2
MT05  Renca              2.00 146  eP     Pb       09 20 12.7 -1.4
MT05                               eS     Sb       09 20 37.5 -1.7
MT05  Renca              2.00 146         Pb       09 20 12.8 -1.2
MT05  Renca              2.00 146  eP     Pb       09 20 13.0 -1.0
MT05                               eS     Sn       09 20 20.3  -17
MT05                                IAML           09 20 49.4
      comp=Z,799nm,0.5s
FCH   Farellones         2.19 137  eP     Pb       09 20 15.5 -1.9
FCH                                 IAML           09 20 44.7
      comp=E,860nm,0.3s
MT09  Talagante          2.23 156  i P    Pb       09 20 16.7 -1.4
MT09                                IAML           09 20 58.2
      comp=E,966nm,0.4s
MT09  Talagante          2.23 156   Pn    Pb       09 20 16.8 -1.2
MT01  Popeta             2.24 162  i P    Pb       09 20 16.1 -1.9
MT01                                IAML           09 20 52.1
      comp=E,707nm,0.4s
MT01  Popeta             2.24 162         Pb       09 20 16.2 -1.8
MT01  Popeta             2.24 162  eP     Pb       09 20 15.9 -2.1
MT01                               eS     Sn       09 20 42.9 +0.4
MT01                               eS     Sg       09 20 49.1 -0.1
MT01                                IAML           09 20 50.6
      comp=Z,432nm,0.6s
AUSP  Uspallata          2.33 103  eP     Pb       09 20 19.7 -0.1
AUSP                               eS     Sb       09 20 50.2 +1.2
RTLS  Leoncito           2.37  92  eP     Pb       09 20 19.9 -0.4
RTLS                               eS     Sb       09 20 51.0 +1.1
RTLS                                IAML           09 20 51.4
      comp=Z,571nm,0.4s
BO04  La Punta           2.57 152⇓eP      Pb       09 20 21.1 -2.6
BO04                                IAML           09 21 01.0
      comp=E,884nm,0.4s
LMEL  Las Melosas        2.63 144  eP     Pb       09 20 22.2 -2.6
LMEL                                IAML           09 21 04.6
      comp=E,688nm,0.1s
AROD  Rodeo              2.72  56  eP     Pb       09 20 25.0 -1.5
AROD                               eS     Sb       09 21 01.9 +1.7
BO01  Tunca              2.78 163  eP     Pn       09 20 23.5 +1.4
BO01  Tunca              2.78 163         Pn       09 20 23.7 +1.5
BO01  Tunca              2.78 163  eP     Pn       09 20 23.6 +1.5
BO01                               eS     Sn       09 20 56.6 +0.7
BO01                               eS     Sb       09 21 01.1 -0.3
BO01                                IAML           09 21 18.0
      comp=Z,195nm,0.8s
ACCO  Cerro Coronel      2.82  67  eP     Pb       09 20 26.7 -1.4
ACCO                               eS     Sb       09 21 03.9 +1.0
ASAL  Salagasta          2.88 108  eP     Pb       09 20 28.0 -1.0
ASAL                               eS     Sb       09 21 06.6 +2.3
ARCO  CERRO ARCO         2.88 113  eP     Pb       09 20 28.0 -1.1
ARCO                               eS     Sn       09 21 00.1 +1.4
ARCO                                IAML           09 21 14.2
      comp=Z,524nm,0.7s
ZON   Zonda              2.90  87  eP     Pb       09 20 28.0 -1.4
ZON                                eS     Sn       09 21 01.1 +2.2
ZON                                 IAML           09 21 11.6
      comp=Z,248nm,1.4s
LCO   Las Campanas       2.96  24   Pn    Pn       09 20 26.0 +1.1
LCO   Las Campanas       2.96  24  eP     Pn       09 20 26.0 +1.1
ACDV  Cuesta del Vie     2.98  59  eP     Pb       09 20 29.0 -1.7
ACDV                               eS     Sb       09 21 09.0 +1.7
ACDV                                IAML           09 21 09.9
      comp=Z,323nm,1.1s
RTCV  Cerro Valdivia     3.01  93  eP     Pb       09 20 29.0 -2.2
RTCV                               eS     Sb       09 21 05.6 -2.5
AAGR  Agrelo             3.06 117  eP     Pb       09 20 30.8 -1.3
AAGR                               eS     Sg       09 21 18.3 +2.8
BO02  Sierra Bellavi     3.24 161  eP     Pn       09 20 30.1 +1.6
BO02  Sierra Bellavi     3.24 161         Pn       09 20 30.3 +1.7
BO02  Sierra Bellavi     3.24 161  eS     Sn       09 21 07.1 -0.2
BO02                                IAML           09 21 24.0
      comp=Z,448nm,0.5s
GO05  Huala              3.27 178  eP     Pn       09 20 29.5 +0.5
GO05  Huala              3.27 178   Pn    Pn       09 20 30.0 +1.1
GO05  Huala              3.27 178  eP     Pn       09 20 29.8 +0.9
GO05                               eS     Sg       09 21 18.6 -3.8
AC04  Llanos de Chal     3.62  14  eP     Pn       09 20 33.9 +0.2
AC04  Llanos de Chal     3.62  14         Pn       09 20 34.2 +0.5
ML02  Panimavida         4.06 172  eP     Pn       09 20 40.8 +1.1
ML02  Panimavida         4.06 172   Pn    Pn       09 20 41.2 +1.5
AVFE  Valle Fertil       4.10  76  eS     Sn       09 21 28.6 +0.1
AVFE                                IAML           09 21 48.0
      comp=Z,144nm,0.8s
GO03  Copiap             4.42  22   Pn    Pn       09 20 46.2 +1.3
VCA   Vinchina           4.48  49  eP     Pn       09 20 50.0 +4.3
VCA                                eS     Sb       09 21 46.6 -4.1
VCA                                 IAML           09 22 08.7
      comp=Z,358nm,1.1s
ACHE  Chepes             4.66  84  eS     Sb       09 21 49.1 -6.5
BI05  Punta Hualpn       5.09 190  eP     Pn       09 20 54.2 +0.3
MRA   San Martin         5.44  99  eS     Sn       09 22 07.1 +5.5
MRA                                 IAML           09 22 12.8
      comp=Z,154nm,0.6s
AC02  Maricunga          5.51  29   Pn    Pn       09 21 01.5 +1.3
H03N1 Juan Fernandez     6.02 252   T     T        09 27 48.7
      baz=80,slow=73,SNR=1704
H03N3 Juan Fernandez     6.03 252   T     T        09 27 44.8
      baz=80,slow=73,SNR=1391
H03N2 Juan Fernandez     6.04 252   T     T        09 27 46.5
      baz=80,slow=73,SNR=2310
H03S3 Juan Fernandez     6.12 248   T     T        09 28 01.4
      baz=83,SNR=6.1
H03S1 Juan Fernandez     6.13 248   T     T        09 27 59.0
      baz=83,SNR=6.3
H03S2 Juan Fernandez     6.14 248   T     T        09 27 59.0
      baz=83,SNR=10
LC01  Cunco              7.15 179   Pn    Pn       09 21 23.8 +1.6
PB14  IPOC Station P     7.23  12   Pn    Pn       09 21 26.9 +3.2
LR03  Panguipulli        7.89 182   Pn    Pn       09 21 34.2 +1.9
PB15  IPOC Station P     8.80  16   Pn    Pn       09 21 46.0 +0.9
PLCA  Paso Flores        9.07 173   Pn    Pn       09 21 50.8 +2.2
      comp=Z,0.2nm,0.3s,baz=325,slow=13,SNR=4.2
PLCA                                LR    LR       09 25 30.6
      comp=Z,124nm,19.4s,baz=328,slow=39
PLCA  Paso Flores        9.07 173         Pn       09 21 49.9 +1.4
LL04  Puerto Octay       9.16 182   Pn    Pn       09 21 51.0 +1.2
LVC   Limon Verde        9.51  18   LR    LR       09 25 31.6
      comp=Z,74nm,18.6s,baz=206,slow=38
LVC   Limon Verde        9.51  18   Pn    Pn       09 21 54.7 -0.3
CPUP  Villa Florida     13.97  71   LR    LR       09 28 32.3
      comp=Z,84nm,20.9s,baz=212,slow=39
CPUP  Villa Florida     13.97  71   Pn    Pn       09 22 53.4 -2.2
LPAZ  La Paz            15.79  14   Pn    P        09 23 22.2 -2.4
      comp=Z,0.1nm,0.3s,baz=196,slow=7.4,SNR=2.3
LPAZ  La Paz            15.79  14         P        09 23 22.4 -2.2
SIV   San Ignacio       18.60  35   P     Pn       09 23 54.4 -0.9
      comp=Z,0.1nm,0.3s,baz=244,slow=9.7,SNR=4.7
GO09  Cerro Castillo    19.52 180   P     Pn       09 24 07.0 +0.8
BDFB  Brasilia          27.14  59   P     P        09 25 20.7 -0.6
      comp=Z,1.2nm,0.4s,baz=200,slow=12,SNR=3.5
BDFB  Brasilia          27.14  59   IAmb  IAmb     09 25 24.1
      comp=Z,7.0nm,1.3s
QSPA  South Pole Qui    58.50 180   P     P        09 29 36.0 +2.2
      comp=Z,1.0nm,0.6s,baz=164,slow=1.7,SNR=7.3
QSPA  South Pole Qui    58.50 180   P     P        09 29 36.0 +2.2
QSPA                                IAmb  IAmb     09 29 38.9
      comp=Z,6.2nm,1.4s
DBIC  Dimbokro          74.49  72   P     P        09 31 17.2 +0.5
      comp=Z,3.7nm,1.1s,baz=230,slow=7.9,SNR=4.2
DBIC                                LR    LR       10 03 32.6
      comp=Z,33nm,18.3s,baz=150,slow=36
TORD  Torodi Ar. Bea    83.47  70   P     P        09 32 06.0 +0.1
      comp=Z,1.3nm,0.8s,baz=263,slow=5.8,SNR=7.6
TORD  Torodi Ar. Bea    83.47  70   P     P        09 32 06.6 +0.7
TORD                                IAmb  IAmb     09 32 06.9
      comp=Z,1.1nm,0.8s
H11S2 WAKE ISLAND Hy125.74 271      T     T        11 57 32.1
      baz=116,slow=74,SNR=13
H11S1 WAKE ISLAND Hy125.75 271      T     T        11 57 33.6
      baz=116,slow=74,SNR=8.9
H11S3 WAKE ISLAND Hy125.76 271      T     T        11 57 33.1
      baz=116,slow=74,SNR=9.1
H11N3 WAKE ISLAND Hy126.10 272      T     T        11 58 01.4
      baz=116,slow=74,SNR=7.7
H11N1 WAKE ISLAND Hy126.11 272      T     T        11 58 02.3
      baz=116
H11N2 WAKE ISLAND Hy126.12 272      T     T        11 58 03.3
      baz=116,slow=74,SNR=19
BVAR  Borovoye Array   145.61  41   PKPbc PKiKP    09 39 17.9 -1.9
      comp=Z,1.3nm,0.6s,baz=224,slow=4.1,SNR=7.4
ZALV  Zalesovo Beam    152.30  30   PKPbc PKiKP    09 39 34.5 +1.0
      comp=Z,1.8nm,0.4s,baz=306,slow=2.9,SNR=9.3
ZALV  Zalesovo Beam    152.30  30   PKPdf PKPdf    09 39 27.5 +1.1
ZALV                                      pPKPbc   09 39 34.7 -0.2
```

IDC 25 09:30:22.5±2.1**, 7°.78S**×**129°.92E, h0^{km}, mb3.7**/1**, mb1 3.9**/4**, mb1mx3.2**/40**, mbtmp3.7**/4**, ML3.8**/3**, MS3.1**/1**, Ms1 3.3**/1**, ms1mx2.4**/37**, Error ellipse: s-maj=80.1km s-min=28.3km az=77.0, Banda Sea**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC       h  m  s     ISC
FITZ  Fitzroy Crossi    11.07 202  Pn     Pn       09 33 04.3 +2.1
      0.8nm,0.3s,baz=18,slow=8.1,SNR=17
FITZ                               Sn     Sn       09 35 03.4 -3.4
      0.5nm,0.3s,baz=327,slow=17,SNR=2.8
WRA   Warramunga Arr    12.83 161  Pn     Pn       09 33 25.1 -1.1
      0.4nm,0.3s,baz=341,slow=13,SNR=18
WRA                                Sn     Sn       09 35 39.0  -11
      0.3nm,0.3s,baz=338,slow=23,SNR=3.4
ASAR  Alice Springs     16.25 167  Pn     Pn       09 34 11.2 -1.1
      0.4nm,0.3s,baz=339,slow=8.7,SNR=28
ASAR                               Sn     Sn       09 37 07.3 -6.1
      0.2nm,0.3s,baz=356,slow=29,SNR=4.8
CMAR  Chiang Mai Arr    40.17 311  LR     LR       09 55 56.2
      comp=Z,25nm,18.3s,baz=165,slow=38
MKAR  Makanchi Array    68.83 327  P      P        09 41 28.8  0.0
      0.4nm,0.5s,baz=114,slow=7.5,SNR=6.3
```

GUC 25 09:42:51.2±0.7**, 30°.39S**×**71°.51W, h35^{km}**±3^{km}**, ML3.6, 1C-1D, Near coast of central Chile**

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

CO06	**Fray Jorge**	**0.31**	**201**	⇑*i*P	Pn	09 42 58.7	-0.6
CO06				*e*S	Sn	09 43 04.1	-0.5
CO05	**La Serena**	**0.52**	**27**	*i* P	Pn	09 43 01.7	-0.4
CO05				*e*S	Sn	09 43 09.0	-0.7
CO05				IAML		09 43 10.4	
	comp=E,4µm,0.3s						
GO04	**Tololo Observa**	**0.65**	**71**	⇓*i*P	Pn	09 43 04.1	0.0
GO04				*e*S	Sb	09 43 13.5	0.0
CO03	**El Pedregal**	**0.84**	**123**	*e*P	Pn	09 43 06.8	+0.1
CO03				*e*S	Sn	09 43 18.1	+0.3
LCO	**Las Campanas**	**1.54**	**27**	*e*P	Pn	09 43 16.6	+0.2
LCO				*i* S	Sn	09 43 36.0	+0.7
VA06	**Catapilco**	**2.18**	**175**	*e*P	Pn	09 43 25.6	+0.7
VA06				IAML		09 44 00.9	
	comp=N,438nm,0.4s						
AC04	**Llanos de Chal**	**2.21**	**10**	*e*P	Pn	09 43 25.2	-0.1
AC04				IAML		09 44 03.9	
	comp=E,251nm,0.4s						
VA03	**San Esteban**	**2.51**	**161**	*e*P	Pn	09 43 31.7	+2.1
VA03				IAML		09 44 10.4	
	comp=N,422nm,0.7s						
ROCH	**El Roble**	**2.61**	**171**	*e*P	Pb	09 43 32.3	-5.2
ROCH				*e*P	Pn	09 43 31.5	+0.3
ROCH				IAML		09 44 18.9	
	comp=N,216nm,0.6s						
ROCH				IAML		09 44 19.4	
	comp=N,296nm,0.3s						
PEL	**Peldehue**	**2.84**	**166**	*e*P	Pn	09 43 36.6	+2.5
PEL				IAML		09 44 23.6	
	comp=E,157nm,0.5s						
MT02	**Curacav**	**2.88**	**174**	*e*P	Pn	09 43 35.2	+0.6
GO03	**Copiap**	**3.00**	**22**	*e*P	Pn	09 43 37.6	+1.3
GO03				IAML		09 44 26.2	
	comp=N,209nm,0.3s						
MT05	**Renca**	**3.07**	**168**	*e*P	Pn	09 43 39.0	+1.7
MT05				IAML		09 44 29.6	
	comp=E,311nm,0.6s						
FCH	**Farellones**	**3.11**	**161**	*e*P	Pn	09 43 40.2	+2.1
FCH				IAML		09 44 31.9	
	comp=E,127nm,0.3s						
VA05	**Santo Domingo**	**3.26**	**182**	*e*P	Pn	09 43 42.5	+2.7
VA05				IAML		09 44 34.0	
	comp=E,172nm,0.4s						
MT09	**Talagante**	**3.41**	**173**	*e*P	Pn	09 43 43.2	+1.2
MT09				IAML		09 44 41.5	
	comp=N,136nm,0.5s						
MT01	**Popeta**	**3.48**	**176**	*e*P	Pn	09 43 43.5	+0.6
MT01				IAML		09 44 42.7	
	comp=E,85nm,0.3s						
BO04	**La Punta**	**3.67**	**168**	*e*P	Pn	09 43 46.7	+1.2
BO01	**Tunca**	**4.01**	**175**	*e*P	Pn	09 43 51.2	+1.0
AC02	**Maricunga**	**4.11**	**31**	*e*P	Pn	09 43 54.1	+2.1
BO02	**Sierra Bellavi**	**4.44**	**172**	*e*P	Pn	09 43 57.7	+1.6

*IDC **25** 09:50:10.6±106.0, 14°.84S×173°.13E, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.7/34, mbtmp4.0/3, Error ellipse: s-maj=1831.0km s-min=155.0km az=69.0*

*NOU **25** 09:51:16.8, 17°.26S×168°.64E, h212^{km}, MLv4.0/12, Vanuatu Islands*

ISC 25 09:50:12.1±4.9, 15°.9S±0°.2×174°.9E±0°.4, h100^{km}, n10, σ1^{s}.84/9, mb4.2/3, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	**Rentapao**	**6.51**	**252**	P	**Pn**	**09 51 47.1**	**+1.7**
DVP	**Devils Point**	**6.71**	**253**	P	**Pn**	**09 51 46.9**	**-1.2**
SANVU	**Saraoutou**	**7.45**	**272**	P	**Pn**	**09 51 58.6**	**+0.4**
MARNC	**Mare, Loyalty**	**8.59**	**228**	P	Pn	09 52 21.1	+7.5
LIFNC	**LIFOU**	**8.78**	**235**	P	**Pn**	**09 52 14.9**	**-1.3**
DZM	**Mont Dzumac**	**10.11**	**231**	P	**Pn**	**09 52 35.2**	**+0.7**
NOUC	**Port Laguerre**	**10.24**	**231**	P	**Pn**	**09 52 35.8**	**-0.3**
STKA	**Stephens Creek**	**34.22**	**236**	P	**P**	**09 56 50.8**	**+2.4**
	4.7nm,1.1s,baz=82,slow=19,SNR=3.7						
WRA	**Warramunga Arr**	**38.77**	**258**	P	**P**	**09 57 24.7**	**-2.5**
	0.3nm,0.7s,baz=88,slow=6.6,SNR=1.0						
ASAR	**Alice Springs**	**39.27**	**252**	P	**P**	**09 57 30.2**	**-1.1**
	3.9nm,0.5s,baz=78,slow=9.1,SNR=105						

*IDC **25** 10:01:25.3±0.8, 4°.23S×129°.41E, h0^{km}, mb4.0/7, mb1 4.1/10, mb1mx3.9/44, mbtmp4.0/10, ML3.7/3, MS3.2/4, Ms1 3.2/4, ms1mx2.8/37, Error ellipse: s-maj=38.3km s-min=16.0km az=66.0*

*NEIC **25** 10:01:27.9±0.9, 4°.08S±0°.04×129°.50E±0°.09, h10^{km}±1^{km}, mb4.2/16, Error ellipse: s-maj=15.7km s-min=5.3km az=110.0*

*DJA **25** 10:01:27.4±1.2, 4°S±12°×12°9E±°, h10^{km}, M4.0/7, MLv4.0/7*

ISC 25 10:01:27.0±0.5, 4°.13S±0°.05×129°.45E±0°.06, h10^{km}, n52, σ1^{s}.42/50, mb4.2/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.60**	**131**	P	**Pb**	**10 01 39.9**	**+0.3**
MSAI	**Masohi**	**0.93**	**326**	P	**Pg**	**10 01 46.3**	**+1.3**
AAI	**Ambon**	**1.32**	**289**	P	**Pn**	**10 01 51.3**	**-0.3**
FAKI	**Fak Fak**	**3.04**	**67**	P	**Pn**	**10 02 16.7**	**+1.5**
FAKI	**Fak Fak**	**3.04**	**67**		**Pn**	**10 02 15.6**	**+0.4**
FAKI	**Fak Fak**	**3.04**	**67**	P	**Pn**	**10 02 15.8**	**+0.6**
SIJI	**Sorong**	**3.71**	**29**	Pn	**Pn**	**10 02 25.0**	**+0.5**
	7.9nm,0.3s,baz=227,slow=23,SNR=36						
SIJI				Sn	**Sn**	**10 03 05.7**	**-2.5**
	16nm,0.3s,baz=311,slow=22,SNR=7.2						
SIJI				LR	LR	10 04 14.9	
	comp=Z,127nm,19.0s,baz=209,slow=44						
SWI	**Sorong**	**3.71**	**29**	P	**Pn**	**10 02 25.9**	**+1.5**
LBMI	**Labuha**	**3.97**	**331**	P	**Pn**	**10 02 29.1**	**+1.0**
SANI	**Sanana**	**4.02**	**301**	P	**Pn**	**10 02 29.2**	**+0.4**
SANI	**Sanana**	**4.02**	**301**	P	**Pn**	**10 02 30.5**	**+1.7**
SAUI	**Saumlaki**	**4.25**	**154**	Pn	**Pn**	**10 02 32.7**	**+0.9**
SOEI	**Soe**	**7.60**	**222**	Pn	**Pn**	**10 03 18.5**	**+0.5**
MTN	**Manton Dam**	**8.82**	**169**	Pn	**Pn**	**10 03 37.3**	**+2.6**
KDU	**Kakadu**	**9.02**	**161**	P	**Pn**	**10 03 39.4**	**+2.0**
	52nm,1.5s						
KNRA	**Kununurra**	**11.50**	**183**	Pn	**Pn**	**10 04 13.1**	**+1.7**
KNRA	**Kununurra**	**11.50**	**183**	P	**Pn**	**10 04 14.8**	**+3.4**
	32nm,1.6s						
WB0	**Warramunga Arr**	**16.28**	**163**	Pn	**Pn**	**10 05 13.5**	**-2.5**
WB0				IAmb	IAmb	10 05 41.9	
	comp=Z,14nm,1.4s						
WRAB	**Tennant Creek**	**16.42**	**163**	Pn	Pn	10 05 09.5	-8.3
WRAB				IAmb	IAmb	10 05 21.7	
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**16.42**	**163**	P	**P**	**10 05 20.4**	**-0.2**
WRA	**Warramunga Arr**	**16.43**	**164**	Pn	**Pn**	**10 05 14.1**	**-3.8**
	comp=Z,0.2nm,0.3s,baz=349,slow=12,SNR=8.2						
WRA				LR	LR	10 11 18.7	
	comp=Z,38nm,20.4s,baz=270,slow=36						
WB2	**Warramunga Arr**	**16.43**	**163**	Pn	**Pn**	**10 05 13.6**	**-4.3**
WB2				IAmb	IAmb	10 05 15.7	
	comp=Z,15nm,1.2s						
WR0	**Warramunga Arr**	**16.50**	**163**	Pn	**Pn**	**10 05 16.9**	**-1.9**
COEN	**Coen**	**16.70**	**127**		**Pn**	**10 05 22.4**	**+1.1**
COEN				IAmb	IAmb	10 05 40.8	
	comp=Z,35nm,1.4s						
COEN	**Coen**	**16.70**	**127**	P	**P**	**10 05 22.7**	**-0.9**
	comp=Z,16nm,1.6s						
QIS	**Mount Isa**	**19.09**	**150**	P	**P**	**10 05 49.8**	**-0.3**
	comp=Z,7.9nm,1.3s						
MBWA	**Marble Bar**	**19.39**	**208**	P	**Pn**	**10 05 55.2**	**+0.8**
PSA00	**Pilbara Seismi**	**19.69**	**207**	P	**Pn**	**10 05 57.8**	**-0.2**
AS31	**Alice Springs**	**19.90**	**168**	P	**P**	**10 05 58.4**	**-0.4**
ASAR	**Alice Springs**	**19.90**	**168**	P	**P**	**10 05 58.2**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=345,slow=9.4,SNR=48						
ASAR				PcP	**PcP**	**10 10 15.4**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=4.5,slow=1.7,SNR=7.0						
ASAR				LR	LR	10 14 10.3	
	comp=Z,68nm,18.5s,baz=95,slow=39						
MTSU	**Mount Surprise**	**20.14**	**135**	P	**P**	**10 06 01.3**	**-0.2**
	comp=Z,4.5nm,0.5s						
WRKA	**Warakurna**	**20.82**	**183**	P	Pn	10 06 10.5	-0.8
	comp=Z,13nm,1.1s						
CTA	**Charters Tower**	**22.80**	**135**	P	**P**	**10 06 29.7**	**-0.5**
	comp=Z,3.1nm,0.3s,baz=324,slow=12,SNR=9.0						
CTAO	**Charters Tower**	**22.80**	**135**	P	**P**	**10 06 30.0**	**-0.2**
CTAO				IAmb	IAmb	10 06 32.2	
	comp=Z,9.7nm,1.1s						
STKA	**Stephens Creek**	**29.87**	**159**	P	**P**	**10 07 33.5**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=305,slow=16,SNR=4.4						
CMAR	**Chiang Mai Arr**	**37.51**	**308**	P	**P**	**10 08 41.6**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=122,slow=7.0,SNR=5.1						
USA0B	**Ussuriysk Arra**	**48.16**	**2**	P	**P**	**10 10 07.2**	**-0.2**
USRK	**Ussuriysk Ar.**	**48.16**	**2**	P	**P**	**10 10 08.4**	**+1.1**
	comp=Z,1.7nm,0.8s,baz=157,slow=7.8,SNR=2.3						
USRK	**Ussuriysk Ar.**	**48.16**	**2**	P	**P**	**10 10 07.7**	**+0.3**
SONM	**Songino Array**	**55.56**	**341**	P	**P**	**10 11 02.9**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=152,slow=6.7,SNR=3.8						
SONM	**Songino Array**	**55.56**	**341**	IAmb	IAmb	10 11 04.4	
	comp=Z,2.6nm,1.4s						
MK31	**Makanchi Array**	**65.54**	**326**	P	**P**	**10 12 11.3**	**+0.5**
MK31				IAmb	IAmb	10 12 11.7	
	comp=Z,1.7nm,0.8s						
MKAR	**Makanchi Array**	**65.54**	**326**	P	**P**	**10 12 11.1**	**+0.2**
	comp=Z,1.9nm,0.4s,baz=114,slow=8.1,SNR=43						
MAKZ	**Makanchi**	**65.72**	**326**	P	**P**	**10 12 12.5**	**+0.5**
ZAA0	**Zalesovo Array**	**68.78**	**334**	P	**P**	**10 12 31.3**	**+0.1**
ZAA0				IAmb	IAmb	10 12 32.3	
	comp=Z,5.4nm,1.4s						
ZALV	**Zalesovo Beam**	**68.78**	**334**	P	**P**	**10 12 31.3**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=116,slow=6.8,SNR=6.3						
ZALV	**Zalesovo Beam**	**68.78**	**334**	P	**P**	**10 12 31.4**	**+0.2**
KURK	**Kurchatov**	**69.80**	**328**	P	**P**	**10 12 38.1**	**+0.5**
KKAR	**Karatay Array**	**70.84**	**318**	P	**P**	**10 12 44.4**	**+0.3**
BRTR	**Keskin Array B**	**97.09**	**309**	LR	LR	11 05 38.1	
	comp=Z,67nm,20.7s,baz=184,slow=40						
TXAR	**Lajitas Array**	**123.89**	**57**	PKP	**PKPdf**	**10 20 26.5**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=256,slow=3.6,SNR=1.5						
TORD	**Torodi Ar. Bea**	**127.67**	**283**	PKP	**PKPdf**	**10 20 33.7**	**0.0**
	comp=Z,0.5nm,0.8s,baz=48,slow=2.1,SNR=2.2						

*IDC **25** 10:07:39.8±0.8, 54°.09S×1°.93W, h0^{km}, mb4.3/8, mb1 4.3/9, mb1mx4.1/32, mbtmp4.3/9, ML4.8/1, MS4.0/16, Ms1 3.9/16, ms1mx3.8/25, Error ellipse: s-maj=38.9km s-min=18.0km az=82.0*

*NEIC **25** 10:07:41.8±0.9, 54°.1S±0°.1×2°.1W±0°.3, h10^{km}±1^{km}, mb4.7/10, Error ellipse: s-maj=31.7km s-min=11.6km az=63.0*

ISC 25 10:07:41.4±0.9, 54°.1S±0°.1×2°.1W±0°.2, h10^{km}, n37, σ0^{s}.50/23, mb4.6/9, MS4.0/15, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.83**	**187**	P	**Pn**	**10 11 37.3**	**+0.5**
VNA2	**Neumayer--Watz**	**17.05**	**186**	P	**Pn**	**10 11 40.2**	**+0.7**
	baz=4.9,slow=15						
VNA3	**Neumayer Olymp**	**17.52**	**188**	P	**Pn**	**10 11 45.8**	**+0.4**
SNAA	**Sanae**	**17.63**	**181**	P	**P**	**10 11 47.6**	**-0.2**
SNAA	**Sanae**	**17.63**	**181**	P	**Pn**	**10 11 46.8**	**0.0**
	2.9nm,0.3s,baz=0.8,slow=15,SNR=49						
SNAA				LR	LR	10 17 04.5	
	comp=Z,372nm,19.1s,baz=7.0,slow=32						
SNAA	**Sanae**	**17.63**	**181**	P	**P**	**10 11 48.2**	**+0.4**
SUR	**Sutherland**	**27.14**	**46**	LR	LR	10 22 04.3	
	comp=Z,578nm,18.3s,baz=172,slow=32						
PMSA	**Palmer Station**	**31.93**	**226**	P	**P**	**10 14 06.1**	**-0.6**
BOSA	**Boshof**	**32.32**	**49**	LR	LR	10 25 05.7	
	comp=Z,320nm,18.7s,baz=198,slow=32						
SMAI	**San Martin Ant**	**32.60**	**219**	P	**P**	**10 14 12.1**	**-0.5**
SMAI				IAmb	IAmb	10 14 19.6	
	comp=Z,15nm,1.2s						
MAW	**Mawson**	**32.63**	**140**	LR	LR	10 24 49.9	
	comp=Z,148nm,20.2s,baz=240,slow=32						
LBTB	**Lobatse**	**35.60**	**46**	LR	LR	10 27 14.8	
	comp=Z,528nm,18.2s,baz=210,slow=33						
QSPA	**South Pole Qui**	**36.13**	**180**	P	**P**	**10 14 43.2**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=221,slow=6.7,SNR=8.7						
QSPA				LR	LR	10 28 39.1	
	comp=Z,176nm,20.7s,baz=208,slow=35						
QSPA	**South Pole Qui**	**36.13**	**180**	P	**P**	**10 14 43.3**	**-0.1**
QSPA				IAmb	IAmb	10 14 50.4	
	comp=Z,8.8nm,0.9s						
USHA	**Ushuaia**	**37.28**	**241**	LR	LR	10 26 52.8	
	comp=Z,191nm,19.9s,baz=91,slow=31						
TSUM	**Tsumeb**	**37.97**	**31**	LR	LR	10 27 28.3	
	comp=Z,238nm,19.8s,baz=176,slow=31						
PLCA	**Paso Flores**	**46.42**	**257**	LR	LR	10 31 59.3	
	comp=Z,97nm,20.9s,baz=150,slow=31						
VNDA	**Vanda**	**48.25**	**175**	P	**P**	**10 16 22.6**	**+0.8**
	comp=Z,3.7nm,0.9s,baz=220,slow=7.4,SNR=7.5						
VNDA				LR	LR	10 36 01.3	
	comp=Z,303nm,20.4s,baz=174,slow=35						
VNDA	**Vanda**	**48.25**	**175**	P	**P**	**10 16 22.1**	**+0.4**
VNDA				IAmb	IAmb	10 16 24.5	
	comp=Z,14nm,1.4s						
CPUP	**Villa Florida**	**48.89**	**282**	LR	LR	10 33 45.0	
	comp=Z,35nm,20.1s,baz=133,slow=32						
BDFB	**Brasilia**	**52.35**	**299**	P	**P**	**10 16 54.1**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=117,slow=11,SNR=3.7						
BDFB	**Brasilia**	**52.35**	**299**	IAmb	IAmb	10 17 01.6	
	comp=Z,6.7nm,1.0s						
MBAR	**Mbarara**	**59.77**	**39**	LR	LR	10 41 14.7	
	comp=Z,188nm,21.0s,baz=82,slow=34						
DBIC	**Dimbokro**	**60.60**	**357**	P	**P**	**10 17 52.0**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=186,slow=9.2,SNR=1.8						
DBIC				LR	LR	10 37 13.6	
	comp=Z,70nm,19.4s,baz=180,slow=29						
DBIC	**Dimbokro**	**60.60**	**357**	P	**P**	**10 17 52.6**	**+0.5**
DBIC				IAmb	IAmb	10 18 03.2	
	comp=Z,10.0nm,1.2s						
KMBO	**Kilima Mbogo**	**61.88**	**46**	LR	LR	10 42 30.0	
	comp=Z,289nm,19.9s,baz=259,slow=34						
LPAZ	**La Paz**	**62.96**	**280**	P	**P**	**10 18 09.0**	**+0.1**
	comp=Z,2.9nm,1.0s,baz=140,slow=7.9,SNR=7.2						
LPAZ				LR	LR	10 44 48.0	
	comp=Z,30nm,19.8s,baz=100,slow=35						
LPAZ	**La Paz**	**62.96**	**280**	P	**P**	**10 18 08.7**	**-0.2**
LPAZ				IAmb	IAmb	10 18 15.6	
	comp=Z,5.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**67.06**	**4**	P	**P**	**10 18 34.1**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=190,slow=6.3,SNR=9.2						
TORD				LR	LR	10 40 59.8	
	comp=Z,120nm,21.5s,baz=305,slow=30						
TORD	**Torodi Ar. Bea**	**67.06**	**4**	P	**P**	**10 18 35.0**	**+0.3**
TORD				IAmb	IAmb	10 18 41.6	
	comp=Z,6.4nm,1.4s						
KOWA	**Kowa**	**68.35**	**358**	P	**P**	**10 18 43.3**	**+0.6**
	comp=Z,2.7nm,0.6s,baz=175,slow=5.5,SNR=7.6						
KOWA	**Kowa**	**68.35**	**358**	P	**P**	**10 18 43.0**	**+0.3**
H01W2	**Cape Leeuwin H**	**75.71**	**130**	T	T	11 43 22.0	
	baz=212,slow=76,SNR=5.7						
H01W1	**Cape Leeuwin H**	**75.73**	**130**	T	T	11 43 21.3	
	baz=212,slow=76,SNR=5.6						
H01W3	**Cape Leeuwin H**	**75.73**	**130**	T	T	11 43 21.8	
	baz=212,slow=76,SNR=5.3						
STKA	**Stephens Creek**	**88.78**	**150**	P	**P**	**10 20 34.6**	**-0.7**
	comp=Z,4.8nm,1.0s,baz=127,slow=5.4,SNR=4.7						
YKA	**Yellowknife Ar**	**145.16**	**311**	PKPbc	**PKPbc**	**10 27 16.6**	**-0.7**
	comp=Z,4.8nm,0.8s,baz=105,slow=3.7,SNR=65						

IDC 25 10:09:01.5±3.5, 6°.02S×147°.80E, h0^{km}, mb3.7/2, mb1 3.9/4, mb1mx3.5/39, mbtmp3.7/4, ML3.6/1, MS2.5/1, Ms1 2.5/1, ms1mx2.2/35, Error ellipse: s-maj=78.1km s-min=42.0km az=98.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.43**	**191**	Pn	Pn	10 09 57.3	+1.1
	4.5nm,0.3s,baz=79,slow=5.2,SNR=11						
PMG				Sn	Sn	10 10 34.4	-3.1
	9.7nm,0.3s,baz=244,slow=22,SNR=13						
PMG				LR	LR	10 11 06.7	
	comp=Z,67nm,18.1s,baz=94,slow=36						
WRA	**Warramunga Arr**	**19.05**	**222**	P	P	10 13 24.6	-0.9
	0.2nm,0.3s,baz=48,slow=11,SNR=8.9						
ASAR	**Alice Springs**	**22.06**	**216**	P	P	10 13 57.6	-0.6
	0.8nm,0.3s,baz=50,slow=9.0,SNR=18						
FITZ	**Fitzroy Crossi**	**24.74**	**239**	P	P	10 14 25.4	+0.6
	2.9nm,0.7s,baz=60,slow=14,SNR=0.4						
TORD	**Torodi Ar. Bea**	**145.87**	**285**	PKPbc	PKPdf	10 28 43.1	-0.2
	0.3nm,0.6s,baz=79,slow=3.7,SNR=1.4						

*IDC **25** 10:16:59.2±1.1, 53°.75S×1°.87W, h0^{km}, mb4.2/5, mb1 4.3/6, mb1mx3.8/31, mbtmp4.2/6, ML3.7/1, Error ellipse: s-maj=55.0km s-min=23.5km az=80.0*

*NEIC **25** 10:16:59.4±1.4, 54°.25S±0°.07×2°.3W±0°.3, h10^{km}±1^{km}, mb4.6/11, Error ellipse: s-maj=25.6km s-min=11.0km az=93.0*

ISC 25 10:16:59.5±0.8, 54°.0S±0°.1×2°.3W±0°.2, h10^{km}, n23, σ2^{s}.46/22, mb4.6/8, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.93**	**187**	P	**P**	**10 21 00.2**	**+2.1**
VNA2	**Neumayer--Watz**	**17.14**	**186**	P	**P**	**10 21 03.2**	**+2.8**
	baz=5.7,slow=16						
VNA3	**Neumayer Olymp**	**17.61**	**188**	P	**P**	**10 21 08.0**	**+2.4**
SNAA	**Sanae**	**17.75**	**181**	P	**P**	**10 21 11.4**	**+4.2**
SNAA	**Sanae**	**17.75**	**181**	P	**P**	**10 21 08.7**	**+1.5**
	0.2nm,0.3s,baz=353,slow=14,SNR=5.5						
SNAA	**Sanae**	**17.75**	**181**	P	**Pn**	**10 21 04.3**	**-2.1**
QSPA	**South Pole Qui**	**36.25**	**180**	P	**P**	**10 24 06.5**	**+4.0**
	4.5nm,0.9s,baz=165,slow=3.0,SNR=3.9						
QSPA	**South Pole Qui**	**36.25**	**180**	P	**P**	**10 23 60.0**	**-2.5**
QSPA				IAmb	IAmb	10 24 07.9	
	comp=Z,6.4nm,1.0s						
MG05	**Puerto Natales**	**40.87**	**244**	P	**P**	**10 24 40.0**	**-1.2**
MG05				IAmb	IAmb	10 24 52.4	
	comp=Z,40nm,1.3s						
VNDA	**Vanda**	**48.38**	**175**	P	**P**	**10 25 44.9**	**+4.1**
	comp=Z,5.1nm,0.9s,baz=211,slow=5.9,SNR=8.2						
VNDA	**Vanda**	**48.38**	**175**	P	**P**	**10 25 37.1**	**-3.7**
VNDA				IAmb	IAmb	10 25 46.7	
	comp=Z,8.1nm,1.0s						
CPUP	**Villa Florida**	**48.70**	**282**	P	**P**	**10 25 42.5**	**-1.4**
CPUP				IAmb	IAmb	10 25 51.5	
	comp=Z,7.3nm,1.1s						
CASY	**Casey**	**49.81**	**151**	P	**P**	**10 25 48.8**	**-3.1**
CASY				IAmb	IAmb	10 25 58.2	
	comp=Z,20nm,1.5s						
GO04	**Tololo Observa**	**53.75**	**267**	P	**P**	**10 26 21.5**	**-0.6**
RCBR	**Riachuelo**	**55.19**	**318**	P	**P**	**10 26 32.5**	**+0.1**
LPAZ	**La Paz**	**62.78**	**280**	P	**P**	**10 27 28.0**	**+2.3**
	comp=Z,1.9nm,0.8s,baz=146,slow=4.8,SNR=3.1						
LPAZ	**La Paz**	**62.78**	**280**	P	**P**	**10 27 25.9**	**+0.2**
LPAZ				IAmb	IAmb	10 27 33.8	
	comp=Z,3.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**66.96**	**4**	P	**P**	**10 27 52.3**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=191,slow=4.6,SNR=5.1						
TORD	**Torodi Ar. Bea**	**66.96**	**4**	P	**P**	**10 27 53.3**	**+1.2**
TORD				IAmb	IAmb	10 28 06.9	
	comp=Z,3.6nm,1.4s						
STKA	**Stephens Creek**	**88.96**	**150**	P	**P**	**10 29 54.4**	**+0.2**
	comp=Z,3.0nm,0.8s,baz=191,slow=5.9,SNR=3.7						
STKA	**Stephens Creek**	**88.96**	**150**	IAmb	IAmb	10 29 59.1	
	comp=Z,2.2nm,1.2s						
YKA	**Yellowknife Ar**	**144.96**	**312**	PKPbc	**PKPbc**	**10 36 35.0**	**+0.3**
	comp=Z,4.5nm,1.1s,baz=108,slow=3.8,SNR=26						
YKA	**Yellowknife Ar**	**144.96**	**312**		**PKPab**	**10 36 35.2**	**+0.5**

*NEIC **25** 10:18:18.8±2.2, 54°.1S±0°.2×1°.1W±0°.2, h10^{km}±2^{km}, mb4.6/7, Error ellipse: s-maj=39.9km s-min=10.1km az=29.0*

*IDC **25** 10:18:18.3±1.4, 54°.04S×0°.49W, h0^{km}, mb3.9/3, mb1 4.1/4, mb1mx3.6/32, mbtmp4.0/4, ML4.2/1, MS3.8/2, Ms1 3.7/2, ms1mx3.3/17, Error ellipse: s-maj=162.1km s-min=26.9km az=87.0*

ISC 25 10:18:19.3±1.1, 54°.1S±0°.1×1°.2W±0°.2, h10^{km}, n17, σ0^{s}.80/16, mb4.2/5, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.93**	**188**	P	**P**	**10 22 17.3**	**-0.5**
VNA2	**Neumayer--Watz**	**17.13**	**187**	P	**P**	**10 22 19.8**	**-0.3**
	baz=8.3,slow=14						
VNA3	**Neumayer Olymp**	**17.63**	**189**	P	**P**	**10 22 26.0**	**+0.3**
SNAA	**Sanae**	**17.67**	**182**	P	**P**	**10 22 27.2**	**+1.0**
SNAA	**Sanae**	**17.67**	**182**	P	**Pn**	**10 22 25.5**	**+0.3**
	0.8nm,0.3s,baz=5.8,slow=14,SNR=7.2						
SNAA	**Sanae**	**17.67**	**182**	P	**Pn**	**10 22 24.7**	**-0.5**
HOPE	**Hope Point**	**20.54**	**255**	P	**P**	**10 22 56.6**	**-0.9**
HOPE				IAmb	IAmb	10 23 23.5	
	comp=Z,74nm,1.2s						
MAW	**Mawson**	**32.32**	**140**	LR	LR	10 35 18.9	
	comp=Z,118nm,21.0s,baz=238,slow=32						
MAW	**Mawson**	**32.32**	**140**	P	**P**	**10 24 46.6**	**-1.3**
MAW				IAmb	IAmb	10 25 12.2	
	comp=Z,4.2nm,1.4s						
QSPA	**South Pole Qui**	**36.16**	**180**	P	**P**	**10 25 21.9**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=219,slow=13,SNR=1.9						
QSPA	**South Pole Qui**	**36.16**	**180**	P	**P**	**10 25 21.6**	**+0.1**
QSPA				IAmb	IAmb	10 25 49.8	
	comp=Z,9.7nm,1.4s						
VNDA	**Vanda**	**48.24**	**175**	P	**P**	**10 27 00.8**	**+1.3**
	comp=Z,2.0nm,0.8s,baz=187,slow=2.1,SNR=4.0						
VNDA	**Vanda**	**48.24**	**175**	P	**P**	**10 27 00.1**	**+0.7**
VNDA				IAmb	IAmb	10 27 01.1	
	comp=Z,4.3nm,1.0s						
MT05	**Renca**	**52.06**	**264**	P	**P**	**10 27 29.8**	**+0.7**
MT05				IAmb	IAmb	10 27 35.2	
	comp=Z,17nm,0.8s						
VA01	**Torpederas**	**52.86**	**263**	P	**P**	**10 27 34.2**	**-0.7**
TORD	**Torodi Ar. Bea**	**67.00**	**3**	P	**P**	**10 29 12.2**	**0.0**
	comp=Z,0.5nm,0.6s,baz=194,slow=4.9,SNR=2.5						
TORD				LR	LR	10 52 00.7	
	comp=Z,103nm,21.6s,baz=285,slow=30						
YKA	**Yellowknife Ar**	**145.52**	**311**	PKPbc	**PKPab**	**10 37 57.3**	**+0.7**
	comp=Z,4.1nm,1.0s,baz=106,slow=3.9,SNR=6.9						

*IDC **25** 10:30:41.8±3.9, 4°.52S×101°.76E, h0^{km}, mb4.1/4, mb1 4.2/5, mb1mx3.6/48, mbtmp4.2/5, ML4.5/1, Error ellipse: s-maj=112.6km s-min=34.1km az=41.0*

*NEIC **25** 10:30:44.8±1.2, 5°.05S±0°.08×101°.6E±0°.1, h35^{km}±2^{km}, mb4.3/8, Error ellipse: s-maj=18.6km s-min=12.7km az=242.0*

*DJA **25** 10:30:47.0±0.7, 5°S±6°×10°2E±°, h34^{km}±20^{km}, M3.9/12, MLv3.9/12*

ISC 25 10:30:43.8±1.1, 5°.0S±0°.1×101°.7E±0°.1, h32^{km}, n32, σ1^{s}.49/28, mb4.3/7, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.63**	**33**	P	**Pn**	**10 31 10.4**	**+0.1**
MASI	**Maura Aman, Be**	**1.95**	**16**	P	**Pn**	**10 31 15.3**	**+0.6**
LHSI	**Lahat**	**2.16**	**57**	P	**Pn**	**10 31 18.4**	**+0.7**
LWLI	**Liwa**	**2.33**	**90**	P	**Pn**	**10 31 21.4**	**+1.3**
MDSI	**Maura Dua**	**2.51**	**78**	P	**Pn**	**10 31 23.3**	**+0.8**
KASI	**Kota Agung**	**2.81**	**100**	P	**Pn**	**10 31 27.8**	**+1.2**
PPSI	**Pulau Pagai**	**2.82**	**323**	P	**Pn**	**10 31 29.6**	**+2.9**
KRJI	**Kerinci**	**2.93**	**355**	P	**Pn**	**10 31 29.6**	**+1.3**
KLSI		**3.02**	**84**	P	**Pn**	**10 31 30.6**	**+1.1**
KLI	**Kotabumi**	**3.13**	**87**	P	**Pn**	**10 31 32.1**	**+1.1**
CGJI	**Cibinong**	**4.26**	**112**	P	**Pn**	**10 31 47.8**	**+1.3**
SISI	**Saibi**	**4.52**	**324**	P	**Pn**	**10 31 52.4**	**+2.3**
LEM	**Lembang**	**6.14**	**107**	Pn	**Pn**	**10 32 16.8**	**+4.4**
	11nm,0.3s,baz=217,slow=18,SNR=4.8						
XMIS	**Christmas Isla**	**6.67**	**144**	Pn	**Pn**	**10 32 18.2**	**-1.5**
GSI	**Gunungsitoli**	**7.53**	**327**	Pn	**Pn**	**10 32 31.3**	**-0.2**
UGM	**Wanagama**	**9.21**	**109**	Pn	**Pn**	**10 32 56.1**	**+1.5**
JAGI	**Jajag, Banyuwa**	**12.81**	**106**	Pn	**Pn**	**10 33 43.6**	**-0.3**
H08S2	**Diego Garcia H**	**29.16**	**263**	T	T	11 07 15.6	
	baz=86,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**29.16**	**263**	T	T	11 07 17.0	
	baz=86,slow=76,SNR=20						
H08S1	**Diego Carcia H**	**29.17**	**263**	T	T	11 07 17.1	
	baz=86,slow=76,SNR=5.8						
WB0	**Warramunga Arr**	**35.02**	**118**	P	**P**	**10 37 34.1**	**+0.3**
WB2	**Warramunga Arr**	**35.04**	**118**	P	**P**	**10 37 34.5**	**+0.5**
WR0	**Warramunga Arr**	**35.21**	**118**	P	**P**	**10 37 33.8**	**-1.7**
WR0				IAmb	IAmb	10 37 36.4	
	comp=Z,6.9nm,1.2s						
SONM	**Songino Array**	**52.80**	**4**	P	**P**	**10 39 56.2**	**0.0**
	comp=Z,1.9nm,0.7s,baz=187,slow=10,SNR=11						
SONM	**Songino Array**	**52.80**	**4**	IAmb	IAmb	10 39 57.1	
	comp=Z,1.5nm,0.7s						
MK31	**Makanchi Array**	**54.40**	**344**	P	**P**	**10 40 07.7**	**0.0**
MKAR	**Makanchi Array**	**54.40**	**344**	P	**P**	**10 40 07.5**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=152,slow=8.8,SNR=12						
USRK	**Ussuriysk Ar.**	**56.06**	**26**	P	**P**	**10 40 18.1**	**-1.7**
	comp=Z,1.4nm,0.7s,baz=212,slow=4.0,SNR=3.5						
ZAA0	**Zalesovo Array**	**60.45**	**349**	P	**P**	**10 40 50.1**	**-0.1**
ZAA0				IAmb	IAmb	10 40 50.7	
	comp=Z,3.0nm,1.1s						
ZALV	**Zalesovo Beam**	**60.45**	**349**	P	**P**	**10 40 49.5**	**-0.8**
	comp=Z,1.5nm,0.4s,baz=163,slow=6.0,SNR=10						
ABKAR	**Akbulak array**	**65.10**	**331**	P	**P**	**10 41 21.7**	**+0.3**
ABKAR				IAmb	IAmb	10 41 22.8	
	comp=Z,3.6nm,1.2s						
TXAR	**Lajitas Array**	**145.93**	**42**	PKPbc	**PKPab**	**10 50 21.5**	**0.0**
	comp=Z,0.6nm,0.7s,baz=326,slow=1.2,SNR=7.3						

IDC 25 10:31:01.2±58.0, 14°.25S×167°.89E, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.5/33, mbtmp4.0/3, Error ellipse: s-maj=980.3km s-min=110.2km az=65.0, Vanuatu

Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	29.76	229	P	P	10 37 09.4	-0.2
	1.0nm,0.4s,baz=67,slow=9.1,SNR=8.2						
WRA	**Warramunga Arr**	32.52	255	P	P	10 37 34.4	+0.2
	0.6nm,0.4s,baz=86,slow=9.0,SNR=13						
WRA	**Warramunga Arr**	32.52	255	P	P	10 37 34.4	+0.2
ASAR	**Alice Springs**	33.40	249	P	P	10 37 41.7	-0.2
	1.2nm,0.4s,baz=75,slow=9.2,SNR=29						

WEL 25 11:04:47.5±0.8**, 35°S**±13°×**18°0W**±1°8**, h253^{km}**±15^{km}**, M3.6**/14**, mB4.1**/4**, ML4.1**/22**, MLv3.8**/14**, Mw(mB)3.1**/4**, Error ellipse: s-maj=0.0km s-min=0.0km az=123.6, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	3.30	202	P	Pn	11 05 44.4	+1.0
WMGZ				S	S	11 06 29.7	+1.9
HAZ	**Te Kaha**	3.48	210	P	Pn	11 05 44.9	-0.5
HAZ				S	S	11 06 31.4	+0.1
PKGZ	**Pakihiroa**	3.48	206	P	Pn	11 05 46.7	+1.2
PUZ	**Puketiti**	3.58	203	P	Pn	11 05 45.3	-1.2
PUZ				S	S	11 06 31.9	-1.7
RUGZ	**Raukumara Rang**	3.70	210	P	Pn	11 05 47.6	-0.4
TWGZ	**Tauwhareparae**	3.77	205	P	Pn	11 05 48.1	-0.7
TWGZ				S	S	11 06 37.5	0.0
CNGZ	**Carnagh Statio**	3.98	201	P	Pn	11 05 53.2	+2.1
TKGZ	**Te Karaka**	4.05	205	P	Pn	11 05 52.5	+0.5
TKGZ				S	S	11 06 44.6	+1.4
MWZ	**Matawai**	4.08	209	P	Pn	11 05 50.9	-1.4
MWZ				S	S	11 06 42.8	-1.1
OPRZ	**Ohinepanea**	4.14	221	P	Pn	11 05 53.2	+0.2
URZ	**Urewera**	4.19	213	P	Pn	11 05 52.6	-1.0
URZ				S	S	11 06 46.1	-0.1
RAGZ	**Rawiri**	4.26	209	P	Pn	11 05 54.2	-0.4
RAGZ				S	S	11 06 49.0	+1.1
MUGZ	**Murupara**	4.52	214	P	Pn	11 05 57.6	0.0
MUGZ				S	S	11 06 54.0	+0.6
SNGZ	**Shannon Statio**	4.54	207	P	Pn	11 05 57.5	-0.3
SNGZ				S	S	11 06 53.7	-0.1
MHGZ	**Mahia Peninsul**	4.68	200	P	Pn	11 06 02.2	+2.7
MHGZ				S	S	11 06 55.6	-1.3
RAHZ	**Arahi**	4.75	209	P	Pn	11 06 00.7	+0.4
RAHZ				S	S	11 06 57.3	-1.1
MTHZ	**Maungataniwha**	4.80	211	P	Pn	11 06 01.4	+0.4
MTHZ				S	S	11 07 01.1	+1.6
MRHZ	**Matea Rd**	4.97	214	P	Pn	11 06 02.6	-0.4
MRHZ				S	S	11 07 03.9	+0.5
NMHZ	**Naumai**	5.02	210	P	Pn	11 06 03.3	-0.4
NMHZ				S	S	11 07 06.4	+2.0
ARHZ	**Aropaoanui**	5.09	207	P	Pn	11 06 03.5	-0.9
ARHZ				S	S	11 07 07.0	+1.3
BKZ	**Black Stump Fm**	5.21	212	P	Pn	11 06 05.0	-0.9
BKZ				S	S	11 07 10.5	+1.9
MCHZ	**McNeill Hill**	5.36	209	P	Pn	11 06 08.1	+0.4
KWHZ	**Kaweka Forest**	5.46	211	P	Pn	11 06 08.7	-0.3
TMVZ	**Te Maari**	5.54	217	P	Pn	11 06 10.1	+0.1
NTVZ	**North Tongarir**	5.54	218	P	Pn	11 06 10.3	+0.3
OTVZ	**Oturere**	5.59	217	P	Pn	11 06 10.8	+0.1
KAHZ	**Kahuranaki**	5.60	206	P	Pn	11 06 10.2	-0.5
KAHZ				S	S	11 07 17.8	+0.5
SNVZ	**South Ngauruho**	5.62	217	P	Pn	11 06 11.3	+0.2
BHHZ	**Black Hill Sta**	5.67	213	P	Pn	11 06 11.3	-0.2
BHHZ				S	S	11 07 18.3	-0.5
PRHZ	**Porangahau**	6.10	205	P	Pn	11 06 16.8	-0.1
PRHZ				S	S	11 07 28.8	+0.3
TSZ	**Takapari Road**	6.18	210	P	Pn	11 06 16.6	-1.3
TSZ				S	S	11 07 29.7	-0.7

IDC 25 11:06:49.5±387.0**, 53°.55N×43°.01E, h0^{km}, Error ellipse: s-maj=162.0km s-min=92.3km az=139.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	4.60	316	*i*		11 35 50.0	
	baz=132,slow=332,SNR=0.8						
I31KZ	**AKTYUBINSK INF**	9.79	103	*i*		12 10 20.0	
	baz=295,slow=306,SNR=1.0						
I34MN	**SONGINO INFRAS**	39.40	72	*i*		15 06 20.0	
	baz=301,slow=333,SNR=0.4						

IDC ***25*** *11:11:11.2±8.7, 36°.80N×70°.43E, h208^{km}±54^{km}, mb2.8/1, mb1 3.1/6, mb1mx2.8/47, mbtmp3.7/6, Error ellipse: s-maj=83.1km s-min=48.6km az=174.0*

NNC ***25*** *11:11:13.1±6.6, 37°.08N×70°.09E, h168^{km}±110^{km}, mb3.1, mpv4.0, Error ellipse: s-maj=62.4km s-min=38.3km az=17.0*

ISC 25 11:11:12.3±2.2**, 37°.0N**±0°.2×**70°.2E**±0°.1**, h200^{km}, n19,** σ**1^{s}04**/23**, 1C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	5.79	27	P	Pn	11 12 37.1	-0.1
	SNR=121						
KK07	**Karatay Array**	6.09	2	⇓P	Pn	11 12 41.2	+0.6
	2.7nm,0.5s						
KK07				⇓S	Sn	11 13 47.9	-2.8
	4.6nm,0.5s						
UCH	**Uchtor**	6.19	31	P	Pn	11 12 42.1	-0.2
	SNR=59						
EKS2	**Erkin-Say**	6.29	25	P	Pn	11 12 43.7	+0.4
	SNR=17						
AAK	**Ala-Archa**	6.53	29	P	Pn	11 12 46.7	+0.3
	4.3nm,0.3s,baz=194,slow=6.0,SNR=36						
AAK				S	Sn	11 14 02.3	+1.2
	1.2nm,0.3s,baz=329,slow=19,SNR=11						
AAK	**Ala-Archa**	6.53	29	P	Pn	11 12 46.5	+0.1
	SNR=18						
AAK	**Ala-Archa**	6.53	29	⇓P	Pn	11 12 46.1	-0.3
	4.5nm,0.4s						
AAK				⇓S	Sn	11 14 02.6	+1.5
	11nm,0.8s						
KBK	**Karagaybulak**	6.73	31	P	Pn	11 12 49.0	0.0
	SNR=8.7						
CHMS	**Chumysh**	6.94	29	P	Pn	11 12 51.5	-0.1
	SNR=8.5						
USP	**Ospenovka**	7.07	26	P	Pn	11 12 53.6	+0.2
	SNR=6.8						
TKM2	**Tokmak 2**	7.22	33	P	Pn	11 12 55.0	-0.5
	SNR=37						
TKM2	**Tokmak 2**	7.22	33	⇓P	Pn	11 12 54.9	-0.5
	16nm,0.5s						
TKM2				⇓S	Sn	11 14 16.4	-1.0
	3.3nm,0.7s						
MKAR	**Makanchi Array**	13.28	39	P	Pn	11 14 12.8	-0.3
	0.3nm,0.3s,baz=217,slow=10.0,SNR=14						
AB31	**Akbulak array**	14.35	332	P	Pn	11 14 26.6	+0.3
	0.6nm,0.5s,baz=149,slow=12,SNR=23						
BVAR	**Borovoye Array**	16.03	0	P	Pn	11 14 48.0	+1.2
	0.3nm,0.3s,baz=191,slow=14,SNR=4.9						
AKTO	**Aktyubinsk**	16.04	331	P	P	11 14 47.4	+0.9
	0.1nm,0.3s,baz=132,slow=14,SNR=9.8						
AKTO	**Aktyubinsk**	16.04	331	⇑P	P	11 14 48.3	+1.8
	2.8nm,0.8s						
ZALV	**Zalesovo Beam**	19.74	26	P	P	11 15 26.2	-0.3
	0.5nm,0.3s,baz=205,slow=10,SNR=7.5						
YKA	**Yellowknife Ar**	80.78	2	P	P	11 23 01.8	-1.3
	0.2nm,0.7s,baz=350,slow=5.4,SNR=3.4						

MIRAS ***25*** *11:18:58.0±0.0, 54°.28N×59°.81E, h0^{km}, ML2.6/4*

ISC 25 11:18:59.6±1.1**, 54°.34N**±0°.04×**59°.9E**±0°.1**, h10^{km}, n6,** σ**1^{s}55**/11**, 3C-1D, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARU	**Arti**	2.23	340	*i* P	Pb	11 19 39.3	-0.7
	33nm,0.3s,baz=334						
ARU				*e*S	Sg	11 20 09.0	-2.3
	baz=334						
KAUR	**Kamensk Uralsk**	2.28	23	*e*P	Pn	11 19 36.4	-0.9
	119nm,3.1s,baz=14						
KAUR				*e*S	Sn	11 20 07.2	+1.8
	baz=14						
SVE	**Sverdlovsk**	2.53	9	P	Pn	11 19 39.7	-0.9
	38nm,4.8s,baz=1.4						
SVE				S	Sn	11 20 12.6	+1.2
	baz=1.4						
PR3R	**Kungur**	3.52	333	P	Pb	11 20 03.0	+1.1
	43nm,3.2s,baz=330						
PR3R				S	Sb	11 20 46.0	+1.4
	baz=330						
AKTO	**Aktyubinsk**	4.08	197	⇓Pg	Pb	11 20 10.6	-0.9
	0.3nm,0.3s						
AKTO				⇑Sn	Sn	11 20 51.6	+1.8
	1.7nm,0.5s						
AKTO				⇑Lg	Lg	11 21 08.6	
	3.0nm,0.6s						
AB31	**Akbulak array**	5.09	180	Pg	Pb	11 20 28.9	+0.2
	0.2nm,0.3s,baz=351,slow=14,SNR=6.2						
AB31				⇑Lg	Lg	11 21 35.6	
	1.0nm,0.3s,baz=0.1,slow=28,SNR=8.5						

IDC ***25*** *11:22:50.3±1.6, 53°.97S×2°.08W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.7/29, mbtmp3.9/3, Error ellipse: s-maj=65.2km s-min=37.8km az=84.0*

NEIC ***25*** *11:22:51.1±2.0, 53°.9S±0°.1×2°.6W±0°.3, h10^{km}±1^{km}, mb4.6/8, Error ellipse: s-maj=25.8km s-min=22.2km az=87.0*

ISC 25 11:22:52.2±1.0**, 54°.0S**±0°.2×**2°.8W**±0°.2**, h10^{km}, n14,** σ**1^{s}01**/12**, mb4.5**/6**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	17.70	180	Pn	Pn	11 26 57.8	-0.6
MAW	**Mawson**	32.95	140	P	P	11 29 27.1	+0.8
LBTB	**Lobatse**	35.86	47	P	P	11 29 47.1	-5.0
LBTB				IAmb	IAmb	11 29 50.5	
	comp=Z,14nm,1.5s						
QSPA	**South Pole Qui**	36.21	180	P	P	11 29 54.6	-0.2
VNDA	**Vanda**	48.36	176	P	P	11 31 33.2	-0.1
	comp=Z,2.0nm,0.7s,baz=180,slow=4.0,SNR=2.7						
VNDA	**Vanda**	48.36	176	IAmb	IAmb	11 31 38.2	
	comp=Z,3.5nm,0.9s						
CPUP	**Villa Florida**	48.46	282	P	P	11 31 34.2	-0.4
BO01	**Tunca**	50.63	264	P	P	11 31 50.6	-0.7
AC02	**Maricunga**	54.98	272	P	P	11 32 23.3	-0.7
AC02				IAmb	IAmb	11 32 42.0	
	comp=Z,8.8nm,1.4s						
PB16	**IPOC Station P**	61.72	278	P	P	11 33 11.7	+0.4
PB16				IAmb	IAmb	11 33 18.0	
	comp=Z,6.8nm,1.4s						
LPAZ	**La Paz**	62.53	280	P	P	11 33 19.3	+2.5
	comp=Z,1.3nm,0.8s,baz=150,slow=7.9,SNR=2.9						
TORD	**Torodi Ar. Bea**	67.03	5	P	P	11 33 44.5	-0.7
	comp=Z,0.6nm,0.9s,baz=197,slow=9.0,SNR=2.6						
YKA	**Yellowknife Ar**	144.79	312	PKPbc	PKPab	11 42 26.4	-0.4
	comp=Z,3.5nm,1.0s,baz=107,slow=3.8,SNR=21						
YKA	**Yellowknife Ar**	144.79	312		PKPab	11 42 26.9	+0.1

IDC ***25*** *11:26:19.0±1.1, 54°.03S×2°.18W, h0^{km}, mb4.2/5, mb1 4.3/5, mb1mx3.9/26, mbtmp4.2/5, MS4.1/17, Ms1 4.1/17, ms1mx4.0/21, Error ellipse: s-maj=42.7km s-min=28.3km az=104.0*

NEIC ***25*** *11:26:20.1±2.6, 54°.1S±0°.1×2°.3W±0°.1, h10^{km}±1^{km}, mb4.6/12, Error ellipse: s-maj=22.5km s-min=13.7km az=190.0*

GCMT ***25*** *11:26:23.1±0.3, 54°.13S±0°.03×1°.78W±0°.04, h17^{km}±1^{km}, MW5.0/88, Moment Tensor Solution. s24,c26; s88,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.50±.21; $M_{\theta\theta}$1.66±.16; $M_{\phi\phi}$1.84±.13; $M_{r\theta}$1.14±.45; $M_{\theta\phi}$-1.59±.09; $M_{\phi r}$-1.25±.36; Best double couple: $M_0$3.81700×10^{16} NP1:ϕ_s136.00000°,δ32.00000°,λ-91.00000°. NP2: ϕ_s317.00000°,δ58.00000°,λ-90.00000°. Principal axes: T 3.7380, Plg13.0000°, Azm47.0000°; N 0.1580, Plg0.0000°, Azm137.0000°; P -3.8960, Plg77.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 11:26:20.0±0.8**, 54°.1S**±0°.1×**2°.4W**±0°.2**, h10^{km}, n39,** σ**0^{s}81**/19**, mb4.5**/7**, MS4.3**/21**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	16.80	187	P	P	11 30 16.6	-0.6
VNA2	**Neumayer--Watz**	17.02	186	P	P	11 30 19.0	-0.6
	baz=2.6,slow=15						
VNA3	**Neumayer Olymp**	17.49	188	P	P	11 30 24.2	-0.6
SNAA	**Sanae**	17.63	180	P	P	11 30 27.1	+0.7
SNAA	**Sanae**	17.63	180		Pn	11 30 25.2	-0.2
PMSA	**Palmer Station**	31.77	226	P	P	11 32 44.8	+0.9
BOSA	**Boshof**	32.48	49	LR	LR	11 43 43.6	
	comp=Z,686nm,18.0s,baz=192,slow=32						
MAW	**Mawson**	32.76	140	LR	LR	11 44 19.4	
	comp=Z,176nm,19.5s,baz=240,slow=33						
QSPA	**South Pole Qui**	36.13	180	P	P	11 33 21.2	-0.8
PLCA	**Paso Flores**	46.21	258	LR	LR	11 51 47.1	
	comp=Z,117nm,21.0s,baz=144,slow=33						
LC01	**Cunco**	48.19	259	P	P	11 34 59.3	-1.0
LC01				IAmb	IAmb	11 35 18.9	
	comp=Z,6.2nm,1.1s						
VNDA	**Vanda**	48.27	175	P	P	11 35 01.1	+0.7
	comp=Z,2.8nm,0.8s,baz=215,slow=6.1,SNR=6.6						
VNDA				LR	LR	11 54 40.2	
	comp=Z,482nm,20.3s,baz=179,slow=35						
VNDA	**Vanda**	48.27	175	P	P	11 35 01.3	+0.9
VNDA				IAmb	IAmb	11 35 01.8	
	comp=Z,6.9nm,1.1s						
CPUP	**Villa Florida**	48.68	282	LR	LR	11 55 08.0	
	comp=Z,56nm,18.1s,baz=140,slow=35						
BDFB	**Brasilia**	52.16	299	LR	LR	11 53 35.8	
	comp=Z,195nm,19.9s,baz=327,slow=31						
LVC	**Limon Verde**	58.27	275	P	P	11 36 15.0	-0.2
LVC				IAmb	IAmb	11 36 38.9	
	comp=Z,7.5nm,1.2s						
PB09	**IPOC Station P**	59.09	275	P	P	11 36 21.2	+0.6
MBAR	**Mbarara**	59.91	39	P	P	11 36 26.6	+0.3
	comp=Z,4.5nm,0.2s,baz=225,slow=7.1,SNR=6.8						
MBAR	**Mbarara**	59.91	39	IAmb	IAmb	11 36 34.8	
	comp=Z,3.9nm,0.6s						
DBIC	**Dimbokro**	60.59	357	LR	LR	11 55 40.4	
	comp=Z,85nm,21.5s,baz=166,slow=29						
PB11	**IPOC Station P**	60.91	276	P	P	11 36 32.8	-0.4
KMBO	**Kilima Mbogo**	62.04	46	LR	LR	12 01 18.9	
	comp=Z,606nm,19.4s,baz=210,slow=34						
LPAZ	**La Paz**	62.75	280	P	P	11 36 47.8	+1.7
	comp=Z,1.5nm,0.9s,baz=146,slow=3.6,SNR=3.9						
LPAZ				LR	LR	12 01 18.9	
	comp=Z,63nm,22.0s,baz=106,slow=33						
LPAZ	**La Paz**	62.75	280	P	P	11 36 47.0	+0.9
LPAZ				IAmb	IAmb	11 37 10.8	
	comp=Z,5.0nm,1.4s						
TORD	**Torodi Ar. Bea**	67.08	4	P	P	11 37 12.4	-1.0
	comp=Z,0.7nm,0.7s,baz=181,slow=6.0,SNR=5.0						
TORD				LR	LR	12 00 23.1	
	comp=Z,212nm,21.4s,baz=270,slow=30						
TORD	**Torodi Ar. Bea**	67.08	4	IAmb	IAmb	11 37 13.5	
	comp=Z,2.7nm,1.4s						
KOWA	**Kowa**	68.35	358	P	P	11 37 21.3	-0.1
	comp=Z,1.1nm,0.5s,baz=158,slow=5.4,SNR=2.0						
KOWA				LR	LR	12 01 11.5	
	comp=Z,124nm,19.1s,baz=210,slow=31						
KOWA	**Kowa**	68.35	358	IAmb	IAmb	11 37 26.5	
	comp=Z,5.2nm,1.3s						
ATD	**Arta Tunnel**	75.78	46	LR	LR	12 10 37.8	
	comp=Z,423nm,18.1s,baz=198,slow=35						
ROSC	**El Rosal**	83.43	288	LR	LR	12 14 38.6	
	comp=Z,161nm,19.4s,baz=240,slow=35						
MDT	**Midelt**	86.59	358	LR	LR	12 12 49.3	
	comp=Z,123nm,18.4s,baz=195,slow=32						
ESDC	**Sonseca Array**	93.42	359	LR	LR	12 19 16.2	
	comp=Z,61nm,18.5s,baz=140,slow=34						
RAO	**Raoul Island**	96.89	184	LR	LR	12 22 19.0	
	comp=Z,40nm,18.8s,baz=80,slow=35						
TBI	**Tubuai**	97.79	210	*e*LR	LR	12 11 37.2	
	comp=Z,196nm,27.2s						
BRTR	**Keskin Array B**	98.48	27	LR	LR	12 24 16.6	
	comp=Z,111nm,21.2s,baz=194,slow=35						
PPT2	**Papeete2**	103.24	212	*e*LR	LR	12 14 05.7	
	comp=Z,92nm,21.0s						
DZM	**Mont Dzumac**	103.53	169	*e*LR	LR	12 13 58.0	
	comp=Z,115nm,20.9s						
TAOE	**Nuku Hiva Isla**	107.88	224	*e*LR	LR	12 16 25.2	
	comp=Z,147nm,22.3s						
YKA	**Yellowknife Ar**	145.00	311	PKPbc	PKPdf	11 45 56.1	+0.1
	comp=Z,1.8nm,0.7s,baz=105,slow=3.0,SNR=9.9						

IDC 25 11:39:50.3±2.1**, 5°.35S×152°.70E, h0^{km}, mb3.5**/4**, mb1 3.8**/4**, mb1mx3.5**/26**, mbtmp3.5**/4**, Error ellipse: s-maj=94.4km s-min=28.5km az=122.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	23.01	229	P	P	11 44 57.1	0.0
	1.6nm,1.1s,baz=54,slow=10.0,SNR=3.3						
ASAR	**Alice Springs**	25.68	223	P	P	11 45 22.1	-0.1
	0.5nm,0.6s,baz=55,slow=9.5,SNR=8.3						
MKAR	**Makanchi Array**	80.67	319	P	P	11 52 05.4	+0.1
	0.2nm,0.6s,baz=102,slow=6.3,SNR=3.9						
ILAR	**Eielson Array**	82.70	22	P	P	11 52 15.8	+0.2
	0.6nm,0.8s,baz=252,slow=4.8,SNR=4.7						
TORD	**Torodi Ar. Bea**	150.38	287	PKPbc	PKPbc	11 59 44.3	-0.6
	0.2nm,0.3s,baz=99,slow=3.7,SNR=2.4						

IDC ***25*** *11:50:36.9±2.7, 27°.14N×142°.23E, h0^{km}, mb3.9/5, mb1 4.0/5, mb1mx3.4/70, mbtmp3.9/5, MS3.4/4, Ms1 3.4/4, ms1mx2.9/46, Error ellipse: s-maj=115.5km s-min=30.7km az=77.0*

JMA ***25*** *11:51:24.0±0.2, 27°.00N×141°.19E, h385^{km}±2^{km}, M4.2*

ISC 25 11:51:21.4±1.4**, 26°.7N**±0°.2×**141°.1E**±0°.2**, h400^{km}, n15,** σ**1^{s}10**/12**, mb3.1**/5**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	0.94	94	P	Pn	11 52 13.5	+1.2
JHH2				*e*S	S	11 52 52.3	-1.0
CBIJ	**Chichi jima**	1.02	67	P	Pn	11 52 13.4	+0.9
CBIJ				*e*S	S	11 52 52.0	-1.8
BSO1	**Boso 1**	7.93	359	P	P	11 53 15.9	+0.7
JKN2	**Miekihoku**	8.60	332	P	P	11 53 24.3	+1.0
JRY	**Ryogami san**	9.48	349	P	Pn	11 53 33.3	0.0
JAG	**Ashikaga**	9.80	352	P	Pn	11 53 36.4	-0.5
JAY	**Jayapura**	29.05	181	LR	LR	12 05 35.3	
	comp=Z,48nm,18.9s,baz=266,slow=30						
SEY	**Seymchan**	36.98	9	LR	LR	12 17 31.5	
	comp=Z,20nm,18.1s,baz=200,slow=44						
WRA	**Warramunga Arr**	46.83	189	P	P	11 59 13.2	-0.1
	0.5nm,0.6s,baz=8.9,slow=7.5,SNR=4.6						
ZALV	**Zalesovo Beam**	49.17	319	P	P	11 59 29.3	-1.2
	0.3nm,0.3s,baz=99,slow=8.9,SNR=2.5						
MKAR	**Makanchi Array**	50.00	310	P	P	11 59 36.2	-0.7
	0.2nm,0.4s,baz=100,slow=8.5,SNR=6.9						
BVAR	**Borovoye Array**	57.69	318	P	P	12 00 31.5	-0.2
	0.9nm,0.5s,baz=129,slow=3.9,SNR=4.9						
AFI	**Afiamalu**	61.02	126	LR	LR	12 23 30.0	
	comp=Z,40nm,20.1s,baz=138,slow=33						
ARCES	**ARCESS Array B**	73.60	341	LR	LR	12 39 32.3	
	comp=Z,55nm,19.1s,baz=270,slow=40						
FINES	**FINESS Array B**	77.88	334	P	P	12 02 36.5	+0.7
	5.5nm,0.9s,baz=68,slow=4.8,SNR=18						

IDC ***25*** *11:54:03.6±1.3, 4°.26S×129°.39E, h0^{km}, mb3.6/3, mb1 3.9/6, mb1mx3.3/58, mbtmp3.8/6, ML3.7/3, Error ellipse: s-maj=54.3km s-min=24.4km az=78.0*

NEIC ***25*** *11:54:05.6±1.9, 4°.20S±0°.06×129°.56E±0°.07, h10^{km}±1^{km}, mb4.1/15, Error ellipse: s-maj=11.3km s-min=10.4km az=120.0*

ISC 25 11:54:08.2±0.7**, 4°.25S**±0°.06×**129°.59E**±0°.08**, h36^{km}, n30,** σ**1^{s}14**/31**, mb4.0**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	2.96	64		Pn	11 54 53.9	+1.2
SIJI	**Sorong**	3.75	27	Pn	Pn	11 55 04.9	+1.4
	14nm,0.3s,baz=51,slow=23,SNR=72						
SIJI				Sn	Sn	11 55 48.2	+1.8
	2.0nm,0.3s,baz=17,slow=19,SNR=1.2						
SAUI	**Saumlaki**	4.08	155	Pn	Pn	11 55 07.4	-0.8
TNTI	**Ternate**	5.46	336	Pn	Pn	11 55 25.6	-1.5
LUWI	**Luwuk**	7.52	295	Pn	Pn	11 55 53.6	-1.8
SOEI	**Soe**	7.61	224	Pn	Pn	11 55 56.8	+0.2
MMRI	**Maumere**	8.51	239	Pn	Pn	11 56 10.5	+1.6
MTN	**Manton Dam**	8.68	170	Pn	Pn	11 56 13.3	+2.0
WB0	**Warramunga Arr**	16.12	164	Pn	Pn	11 57 52.4	+0.2
WB0				IAmb	IAmb	11 58 14.1	
	comp=Z,12nm,1.2s						
WRA	**Warramunga Arr**	16.27	164	Pn	Pn	11 57 52.4	-1.8
	comp=Z,0.2nm,0.3s,baz=349,slow=13,SNR=3.1						
WRA	**Warramunga Arr**	16.27	164		Pn	11 57 52.8	-1.4
WB2	**Warramunga Arr**	16.28	164	Pn	Pn	11 57 53.7	-0.5
WB2				IAmb	IAmb	11 57 55.9	
	comp=Z,13nm,1.3s						
WR0	**Warramunga Arr**	16.35	163	Pn	Pn	11 57 54.3	-0.8
WR0				IAmb	IAmb	11 58 12.7	
	comp=Z,18nm,1.4s						
COEN	**Coen**	16.51	127	Pn	Pn	11 57 57.3	+0.1
COEN				IAmb	IAmb	11 58 03.0	
	comp=Z,32nm,1.3s						
PMG	**Port Moresby**	18.18	107	Pn	Pn	11 58 15.2	-2.7
UGM	**Wanagama**	19.30	258	P	P	11 58 30.0	-0.3
PSA00	**Pilbara Seismi**	19.65	208	P	Pn	11 58 36.2	+0.6
PSA00				IAmb	IAmb	11 58 39.6	
	comp=Z,28nm,1.2s						
PSA00	**Pilbara Seismi**	19.65	208	P	P	11 58 35.0	+1.0
PSA00				IAmb	IAmb	11 58 36.1	
	comp=Z,7.2nm,1.1s						
AS31	**Alice Springs**	19.75	168	P	P	11 58 35.5	+0.4
ASAR	**Alice Springs**	19.75	168	P	Pn	11 58 36.5	-0.3
	comp=Z,0.5nm,0.3s,baz=346,slow=8.3,SNR=39						
ASAR	**Alice Springs**	19.75	168	P	Pn	11 58 35.8	-1.0
RABL	**Rabaul**	22.51	91	P	P	11 59 03.9	-1.1
SONM	**Songino Array**	55.72	341	P	P	12 03 41.9	+0.6
	comp=Z,0.4nm,0.8s,baz=147,slow=8.6,SNR=2.8						
SONM	**Songino Array**	55.72	341	P	P	12 03 41.3	0.0
SONM				IAmb	IAmb	12 03 44.2	
	comp=Z,2.1nm,1.3s						
MK31	**Makanchi Array**	65.72	326	P	P	12 04 49.8	+0.5
MK31				IAmb	IAmb	12 05 06.2	
	comp=Z,2.2nm,1.4s						
MKAR	**Makanchi Array**	65.72	326	P	P	12 04 49.3	0.0
	comp=Z,0.2nm,0.4s,baz=115,slow=6.8,SNR=6.9						
MKAR	**Makanchi Array**	65.72	326	P	P	12 04 49.2	-0.1
MAKZ	**Makanchi**	65.90	326	P	P	12 04 50.5	0.0
MAKZ				IAmb	IAmb	12 05 01.9	
	comp=Z,2.1nm,1.2s						
KURBB	**Kurchatov Arra**	69.97	328	P	P	12 05 16.1	+0.3
	comp=Z,0.4nm,0.3s,baz=132,slow=5.1,SNR=6.0						
KURK	**Kurchatov**	69.97	328	P	P	12 05 16.1	+0.2

IDC ***25*** *12:00:56.9±1.4, 54°.09S×1°.77W, h0^{km}, mb4.0/4, mb1 4.1/4, mb1mx3.8/34, mbtmp4.0/4, MS3.9/13, Ms1 3.8/13, ms1mx3.8/18, Error ellipse: s-maj=54.2km s-min=33.1km az=76.0*

NEIC ***25*** *12:00:59.0±1.2, 54°.0S±0°.1×1°.6W±0°.3, h10^{km}±1^{km}, mb4.8/16, Error ellipse: s-maj=26.1km s-min=18.0km az=99.0*

ISC 25 12:00:58.2±0.7**, 53°.99S**±0°.10×**1°.5W**±0°.1**, h10^{km}, n31,** σ**1^{s}23**/21**, mb4.7**/10**, MS3.9**/13**, 2C, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	17.76	181	Pn	Pn	12 05 05.2	-0.1
SYO	**Syowa Base**	24.05	144	⇑*e*P	P	12 06 09.4	-3.6
SYO	**Syowa Base**	24.05	144	⇑*e*pP	P	12 06 14.2	+1.2
BOSA	**Boshof**	31.98	48	LR	LR	12 17 33.0	
	comp=Z,414nm,21.2s,baz=195,slow=31						
PMSA	**Palmer Station**	32.25	225	P	P	12 07 27.0	+0.7
PMSA				IAmb	IAmb	12 07 27.0	
	comp=Z,22nm,1.3s						
MAW	**Mawson**	32.50	140	LR	LR	12 19 25.4	
	comp=Z,117nm,18.5s,baz=238,slow=34						
WIN	**Windhoek**	34.37	31	P	P	12 07 45.8	+0.4
WIN				IAmb	IAmb	12 08 06.8	
	comp=Z,16nm,1.2s						
QSPA	**South Pole Qui**	36.26	180	LR	LR	12 21 25.1	
	comp=Z,180nm,18.6s,baz=226,slow=34						
QSPA	**South Pole Qui**	36.26	180	P	P	12 08 01.5	+0.3
SHEL	**Horse Pasture**	38.09	353	P	P	12 08 16.1	-1.0
MG02	**Cerro Sombrero**	39.02	243	P	P	12 08 23.5	-1.0
GO10	**Punta Arenas**	39.79	242	P	P	12 08 30.7	-0.3
PLCA	**Paso Flores**	46.78	257	LR	LR	12 26 02.9	
	comp=Z,90nm,21.4s,baz=140,slow=32						
SBA	**Scott Base**	48.23	177	P	P	12 09 39.6	+1.4
VNDA	**Vanda**	48.35	175	P	P	12 09 39.0	-0.2
	comp=Z,2.0nm,0.8s,baz=190,slow=6.2,SNR=5.0						
VNDA				LR	LR	12 28 57.3	
	comp=Z,259nm,20.5s,baz=177,slow=35						

VNDA	Vanda	48.35	175	P	P	12 09 40.2	+1.0
VNDA				IAmb	IAmb	12 09 45.6	
	comp=Z,9.1nm,1.4s						
CPUP	Villa Florida	49.19	281	LR	LR	12 29 18.7	
	comp=Z,54nm,18.1s,baz=138,slow=35						
MT09	Talagante	51.78	263	P	P	12 10 06.2	+0.2
MT09				IAmb	IAmb	12 10 21.6	
	comp=Z,14nm,1.2s						
MT01	Popeta	51.87	263	P	P	12 10 06.8	+0.2
MT01				IAmb	IAmb	12 10 16.1	
	comp=Z,17nm,1.4s						
BDFB	Brasilia	52.58	298	P	P	12 10 13.1	+1.0
	comp=Z,4.1nm,1.0s,baz=173,slow=8.1,SNR=3.0						
BDFB				LR	LR	12 29 39.7	
	comp=Z,121nm,18.1s,baz=144,slow=33						
BDFB	Brasilia	52.58	298	IAmb	IAmb	12 10 17.9	
	comp=Z,4.8nm,1.0s						
DBIC	Dimbokro	60.50	356	LR	LR	12 30 40.3	
	comp=Z,39nm,18.3s,baz=157,slow=29						
TA02	Huaiquique	61.33	275	P	P	12 11 14.0	+0.1
TA02				IAmb	IAmb	12 11 31.8	
	comp=Z,14nm,1.1s						
KMBO	Kilima Mbogo	61.55	45	LR	LR	12 35 47.3	
	comp=Z,235nm,19.4s,baz=176,slow=34						
LPAZ	La Paz	63.28	279	P	P	12 11 26.0	-1.8
	comp=Z,1.6nm,1.0s,baz=132,slow=7.7,SNR=2.5						
LPAZ				LR	LR	12 35 56.9	
	comp=Z,51nm,21.7s,baz=84,slow=33						
LPAZ	La Paz	63.28	279	P	P	12 11 27.0	-0.7
LPAZ				IAmb	IAmb	12 11 42.2	
	comp=Z,5.3nm,1.4s						
TORD	Torodi Ar. Bea	66.92	3	P	P	12 11 51.7	+1.1
	comp=Z,0.6nm,0.8s,baz=186,slow=6.5,SNR=4.3						
TORD				LR	LR	12 35 02.0	
	comp=Z,86nm,21.1s,baz=335,slow=30						
ETMB	Extrema	67.35	285	P	P	12 11 53.7	+0.3
ETMB				IAmb	IAmb	12 11 58.7	
	comp=Z,8.4nm,1.4s						
ESDC	Sonseca Array	93.31	358	LR	LR	12 53 07.0	
	comp=Z,33nm,19.5s,baz=310,slow=34						
BRTR	Keskin Array B	98.11	27	LR	LR	13 00 28.3	
	comp=Z,52nm,18.7s,baz=192,slow=36						
YKA	Yellowknife Ar	145.33	311	PKPbc	PKPbc	12 20 33.5	-1.1
	comp=Z,3.0nm,0.8s,baz=104,slow=3.8,SNR=21						

*NEIC **25** 12:01:26.0±2.3, 43°.85N±0°.02×128°.5W±0°.1, h10^{km}±2^{km}, mb3.6/7, ML3.7/20, Error ellipse: s-maj=18.1km s-min=3.2km az=262.0*

*IDC **25** 12:01:26.7±2.9, 44°.04N×128°.17W, h0^{km}, mb3.0/3, mb1 3.5/7, mb1mx3.4/51, mbtmp3.2/7, ML3.0/4, MS3.1/4, Ms1 3.1/4, ms1mx2.9/12, Error ellipse: s-maj=58.1km s-min=20.3km az=49.0*

ISC 25 12:01:26.1±1.5**, 43°.8N**±0°.1×**128°.5W**±0°.1**, h13**^{km}**, n62, σ1^{s}24**/55**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEBO	Mount Hebo	3.66	66	Pn	Pn	12 02 21.5	-1.0
COR	Corvallis	3.81	77	Pn	Pn	12 02 23.6	-0.8
COR				IAML		12 03 33.4	
	105nm,2.8s						
COR				IAML		12 04 06.8	
	109nm,4.4s						
DBO	Dodson Butte	3.89	99		Pn	12 02 25.1	-0.5
BUCK	Buck Mountain	3.99	83	Pn	Pn	12 02 25.8	-1.3
BUCK				IAML		12 02 57.4	
	comp=N,86nm,3.9s						
BUCK				IAML		12 03 17.9	
	comp=E,113nm,3.9s						
E03A	Lebam	4.42	50	Pn	Pn	12 02 33.1	+0.3
E03A				IAML		12 03 24.5	
	comp=N,100nm,2.7s						
E03A				IAML		12 05 00.3	
	comp=E,77nm,2.8s						
H04A	Detroit Lake	4.61	77	Pn	Pn	12 02 34.5	-1.0
WISH	Wishkah	4.67	44	Pn	Pn	12 02 36.0	-0.3
YBH	Yreka Blue Hor	4.75	114	LR	LR	12 03 52.5	
	comp=E,92nm,18.8s,baz=321,slow=32						
HOOD	Mount Hood Mea	5.11	71		Pn	12 02 43.4	+0.9
HOOD				IAML		12 03 51.3	
	comp=E,49nm,2.7s						
PINE	Pine Mountain	5.47	88		Pn	12 02 47.7	+0.2
B04A	Port Angeles	5.47	38	Pn	Pn	12 02 46.4	-1.0
D05A	Enumclaw	5.67	51		Pn	12 02 49.5	-0.5
CLRS	Cowichan Lake	5.83	30	Pn	Pn	12 02 51.5	-0.8
PGC	Sidney	5.95	34	Pn	Pn	12 02 55.2	+1.3
F07A	Phinny Hill Vi	6.43	68	Pn	Pn	12 03 00.8	+0.3
LTY	Liberty	6.47	55	Pn	Pn	12 03 01.2	0.0
CBB	Campbell River	6.56	18	Pn	Pn	12 03 02.7	+0.4
E07A	Sunnyside	6.69	63	Pn	Pn	12 03 04.7	+0.7
ORV	Oroville	6.75	127		Pn	12 03 06.2	+1.2
TLCB	Telegraph Cove	6.81	9	Pn	Pn	12 03 07.9	+2.2
HOLB	Holberg	6.82	2	Pn	Pn	12 03 05.2	-0.6
HAWA	Hanford	6.84	65	Pn	Pn	12 03 06.8	+0.7
G08A	Pilot Rock	6.97	75	Pn	Pn	12 03 07.6	-0.4
E08A	Dider Farm, El	7.18	65	Pn	Pn	12 03 09.5	-1.3
J08A	Circle Bar Ran	7.29	90	Pn	Pn	12 03 13.2	+0.8
WVOR	Wild Horse Val	7.34	98	Pn	Pn	12 03 12.9	-0.3
D08A	Wollman Farm,	7.46	61		Pn	12 03 15.0	+0.3
BMO	Blue Mountains	8.09	79	Pn	Pn	12 03 24.4	+1.1
LLLB	Lillooet	8.14	31	Pn	Pn	12 03 23.6	-0.3
C09A	Chrisman Ranch	8.17	57		Pn	12 03 23.8	-0.6
PNTR	Pine Nut	8.19	122	Pn	Pn	12 03 24.2	-0.6
F10A	Beach Ranch, E	8.28	71	Pn	Pn	12 03 27.9	+2.0
YERR	Yerington	8.47	122	Pn	Pn	12 03 30.1	+1.4
NEW	Newport	9.06	57	Pn	Pn	12 03 35.0	-1.7
NVAR	Mina Array Bea	9.39	122	Pn	Pn	12 03 44.2	+2.9
	comp=E,0.0nm,0.3s,baz=302,slow=14,SNR=4.1						
NVAR				LR	LR	12 07 21.6	
	comp=E,164nm,18.1s,baz=299,slow=38						
NVAR	Mina Array Bea	9.39	122		Pn	12 03 39.8	-1.5
NV11	Mina Array Sit	9.48	121	Pn	Pn	12 03 43.5	+1.0
ELK	Elko	10.29	103	Pn	Pn	12 03 55.1	+1.4
	comp=E,0.1nm,0.3s,baz=270,slow=11,SNR=7.2						
MSU	Marysvale	13.38	108	Pn	Pn	12 04 36.7	+0.8
LCMT	Little Creek M	13.46	115	Pn	Pn	12 04 37.3	+0.4
PDAR	Pinedale Array	13.84	88	Pn	Pn	12 04 45.6	+3.5
	comp=E,0.0nm,0.3s,baz=270,slow=15,SNR=3.1						
PDAR				LR	LR	12 09 13.6	
	comp=E,52nm,20.9s,baz=276,slow=34						
PDAR	Pinedale Array	13.84	88	Pn	Pn	12 04 40.2	-1.9
P18A	Preston Nutter	14.26	101	Pn	Pn	12 04 48.9	+0.9
SRU	San Rafael Swe	14.27	103	Pn	Pn	12 04 48.0	0.0
RDMU	Red Mountain	14.40	97	Pn	Pn	12 04 50.3	+0.4
U15A	North Rim	14.42	115	Pn	Pn	12 04 49.2	-1.0
BCPM	Bancas Point	17.51	341		Pn	12 05 29.6	-0.2
BCPM				IAmb	IAmb	12 05 52.5	
	comp=Z,49nm,0.7s						
ISCO	Idaho Springs	17.51	95		P	12 05 31.5	+0.2
ISCO				IAmb	IAmb	12 05 36.9	
	comp=Z,3.2nm,1.1s						
RSSD	Black Hills	17.59	81	Pn	Pn	12 05 30.4	-0.8
RSSD				IAmb	IAmb	12 05 41.9	
	comp=Z,9.1nm,1.5s						
TUC	Tucson	18.03	124	Pn	Pn	12 05 34.1	-2.4
TUC				IAmb	IAmb	12 05 48.0	
	comp=Z,2.6nm,0.9s						
SDCO	Great Sand Dun	18.41	101		Pn	12 05 40.1	-1.2
SDCO				IAmb	IAmb	12 05 45.5	
	comp=Z,5.2nm,1.2s						
SNH	Sunshine Point	18.53	337	P	P	12 05 40.2	-1.9
ANMO	Albuquerque	19.16	110	P	Pn	12 05 51.9	+1.6
	comp=Z,0.1nm,0.3s,baz=305,slow=12,SNR=4.8						
ANMO				LR	LR	12 13 56.2	
	comp=Z,100nm,18.0s,baz=302,slow=39						
YKA	Yellowknife Ar	20.38	19	P	P	12 06 02.5	+0.2
	comp=Z,2.2nm,0.8s,baz=207,slow=11,SNR=21						
ILAR	Eielson Array	23.39	340	P	P	12 06 34.7	+0.4
	comp=Z,0.2nm,0.7s,baz=144,slow=8.5,SNR=2.4						
TXAR	Lajitas Array	24.51	118	P	P	12 06 47.4	+2.0
	comp=Z,0.2nm,0.8s,baz=302,slow=7.4,SNR=2.2						
H11N3	WAKE ISLAND Hy	58.40	268	T	T	13 14 31.9	
	baz=49,slow=75,SNR=61						
H11N2	WAKE ISLAND Hy	58.41	268	T	T	13 14 33.7	
	baz=49,slow=75,SNR=37						
H11N1	WAKE ISLAND Hy	58.42	268	T	T	13 14 34.8	
	baz=49,slow=75,SNR=48						
H11S1	WAKE ISLAND Hy	59.33	267	T	T	13 15 44.4	
	baz=49,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	59.34	267	T	T	13 15 40.4	
	baz=49,slow=75,SNR=13						
H11S3	WAKE ISLAND Hy	59.35	267	T	T	13 15 43.5	
	baz=49,slow=75,SNR=14						

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*NNC **25** 12:47:49.8±0.4, 43°.11N×78°.10E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=4.2km s-min=2.1km az=178.0*

*SOME **25** 12:47:50.1, 43°.08N×78°.10E, h10^{km}*

*KRNET **25** 12:47:53.1±0.1, 40°.94N×76°.39E, h29^{km}, mb1.9*

ISC 25 12:47:50.2±1.0**, 43°.11N**±0°.03×**78°.12E**±0°.02**, h8**^{km}±9^{km}**, n22, σ1^{s}04**/43**, 4C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.22	104	*e*P	Pg	12 47 54.5	-0.1
	14nm,0.1s						
SATY				*e*S	Sg	12 47 57.7	+0.1
	110nm,0.1s						
SATY	Saty	0.22	104	P	Pg	12 47 54.5	-0.1
	14nm,0.1s						
SATY				S	Sg	12 47 57.7	+0.1
	110nm,0.1s						
ZHN	Zhinishke	0.24	76	*e*P	Pg	12 47 55.0	0.0
	10nm,0.1s						
ZHN				*e*S	Sg	12 47 58.4	+0.2
	137nm,0.1s						
ZHN	Zhinishke	0.24	76	P	Pg	12 47 55.0	0.0
	10nm,0.1s						
ZHN				S	Sg	12 47 58.4	+0.2
	137nm,0.1s						
KPKS	Kokpek	0.54	49	*e*P	Pg	12 48 00.7	0.0
	3.3nm,0.1s						
KPKS				*e*S	Sg	12 48 08.2	+0.4
	15nm,0.4s						
UZB	Uzynbulak	0.66	87	*e*P	Pg	12 48 02.5	-0.4
	3.1nm,0.1s						
UZB				*e*S	Sg	12 48 11.3	-0.3
	9.3nm,0.1s						
UZB	Uzynbulak	0.66	87	P	Pg	12 48 02.5	-0.4
	3.1nm,0.1s						
UZB				S	Sg	12 48 11.3	-0.3
	9.3nm,0.1s						
MDOK	Medeo	0.79	274	*e*P	Pg	12 48 04.8	-0.5
	2.0nm,0.3s						
MDOK				*e*S	Sg	12 48 15.3	-0.3
	3.4nm,0.3s						
MDOK	Medeo	0.79	274	Pg	Pg	12 48 04.8	-0.5
	2.0nm,0.3s						
MDOK				Lg	Lg	12 48 15.3	
	3.4nm,0.3s						
TNSS	Tian-Shan	0.86	265	*e*P	Pg	12 48 06.3	-0.4
	1.0nm,0.2s						
TNSS				*e*S	Sg	12 48 17.9	-0.1
	0.9nm,0.2s						
TNSS	Tian-Shan	0.86	265	P	Pg	12 48 06.3	-0.4
	1.0nm,0.2s						
TNSS				S	Sg	12 48 17.9	-0.1
	0.9nm,0.2s						
BLB	Baldybastay	1.02	15	P	Pg	12 48 09.6	-0.2
	4.2nm,0.1s						
BLB				S	Sg	12 48 23.2	+0.2
	5.6nm,0.1s						
ARXS	Arharly	1.12	349	*e*P	Pb	12 48 11.4	-0.5
	1.2nm,0.1s						
ARXS				*e*S	Sg	12 48 26.4	+0.1
	1.9nm,0.1s						
ARXS	Arharly	1.12	349	P	Pb	12 48 11.4	-0.5
	1.2nm,0.1s						
ARXS				S	Sg	12 48 26.4	+0.1
	1.9nm,0.1s						
KDJ	Kajisay	1.20	216	⇓*i*P	Pn	12 48 16.4	+2.9
	baz=27						
KDJ				⇓*i*S	Sn	12 48 33.2	+3.1
	baz=27						
TARG	Taragay, Kyrgy	1.40	190	⇑*i*P	Pn	12 48 15.7	-0.8
	baz=53						
TARG				⇑*i*S	Sb	12 48 33.3	-1.8
	baz=53						
DJR	Jarkent	1.72	44	*e*P	Pb	12 48 22.5	+0.4
	1.9nm,0.2s						
DJR				*e*S	Sg	12 48 45.5	0.0
	6.9nm,0.4s						
DJR	Jarkent	1.72	44	P	Pb	12 48 22.5	+0.4
	1.9nm,0.2s						
DJR				S	Sg	12 48 45.5	0.0
	6.9nm,0.4s						
BOOM	Boomskoye usch	1.72	250	⇓*i*P	Pn	12 48 20.3	-0.3
	baz=48						
BOOM				⇓*i*S	Sn	12 48 39.1	-3.8
	baz=48						
TKM2	Tokmak 2	1.86	265	⇑*i*P	Pg	12 48 27.2	+1.4
	baz=44						
TKM2				⇑*i*S	Sg	12 48 51.0	+1.0
	baz=44						
KRBS	Karabastau	1.87	289	*e*P	Pb	12 48 24.3	-0.4
	0.4nm,0.1s						
KRBS				*e*S	Sb	12 48 48.8	+0.4
	3.0nm,0.4s						
KRBS	Karabastau	1.87	289	P	Pb	12 48 24.3	-0.4
	0.4nm,0.1s						
KRBS				S	Sb	12 48 48.8	+0.4
	3.0nm,0.4s						

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*IDC **25** 13:42:33.9±1.4, 46°.44N×147°.11E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.3/42, mbtmp3.6/3, Error ellipse: s-maj=68.3km s-min=34.2km az=100.0*

*JMA **25** 13:43:04.1±0.4, 45°.73N×147°.86E, h252^{km}, M3.4*

ISC 25 13:43:02.1±1.4**, 45°.6N**±0°.2×**147°.7E**±0°.2**, h300**^{km}**, n10, σ1^{s}43**/12**, mb3.1**/3**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	2.62	213	P	Pn	13 43 54.8	+0.5
NEM2				*e*S	S	13 44 34.4	-1.5
JTKR	Abashiri--Toko	3.13	240	P	Pn	13 44 00.4	+1.2
JAK	Akkeshi	3.36	221	P	Pn	13 44 02.8	+1.3
JAK				*e*S	S	13 44 48.5	-0.5
JAR	Ashorobuto	3.62	232	P	Pn	13 44 06.5	+2.3
JCH	Churui	4.30	228	P	Pn	13 44 13.2	+1.5
JCH				*e*S	S	13 45 06.0	-1.5
JNBK	Urakawa-nobuka	4.86	229	P	Pn	13 44 18.8	+0.8
JKB	Kayabe	6.07	235	P	Pn	13 44 33.2	+0.9
JKB				*e*S	S	13 45 40.4	-4.5
YKA	Yellowknife Ar	54.07	35	P	P	13 51 56.2	+0.4
	0.2nm,0.7s,baz=304,slow=6.9,SNR=4.1						
FINES	FINESS Array B	63.41	333	P	P	13 52 58.5	-1.2
	2.5nm,0.9s,baz=27,slow=9.4,SNR=4.9						
ASAR	Alice Springs	70.05	193	P	P	13 53 52.1	+10
	0.3nm,0.7s,baz=4.5,slow=5.9,SNR=4.6						

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*NEIC **25** 13:45:27.0±1.2, 36°.71N±0°.01×97°.99W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.9km az=338.0*

*TUL **25** 13:45:26.6±1.5, 36°.73N±0°.01×98°.01W±0°.02, h5^{km}±7^{km}, ML3.1, mb_Lg2.9/53(NEIC), Error ellipse: s-maj=2.6km s-min=1.7km az=90.0*

*ANF **25** 13:45:26.9±0.1, 36°.70N×98°.01W, h5^{km}, ML3.5/14, Error ellipse: s-maj=1.7km s-min=1.5km az=173.0*

ISC 25 13:45:27.0±1.0**, 36°.71N**±0°.02×**98°.00W**±0°.02**, h5**^{km}±9^{km}**, n96, σ0^{s}63**/110**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.18	38	Pg	Pg	13 45 30.7	+0.2
GC02				Sg	Sg	13 45 33.4	+0.5
CROK	Carrier	0.21	177	Pg	Pg	13 45 31.3	+0.3
CROK				Sg	Sg	13 45 34.8	+1.1
KAN14	Manchester OK	0.25	6	Pg	Pg	13 45 31.7	-0.1
KAN14				Sg	Sg	13 45 35.3	+0.1
KAN05	Bluff City Nor	0.41	14		Pg	13 45 34.8	-0.1
KAN05				Sg	Sg	13 45 40.4	+0.1
KAN10	Anthony SW Sta	0.42	349	Pg	Pg	13 45 34.9	-0.2
KAN10				Sg	Sg	13 45 40.6	0.0
KAN01	Argonia South	0.48	23		Pg	13 45 36.1	-0.1
KAN13	South Haven SW	0.52	54	Pg	Pg	13 45 36.8	-0.1
KAN08	Anthony NE Sta	0.52	2		Pg	13 45 36.6	-0.3
KAN16	Harper SW Stat	0.52	354	Pg	Pg	13 45 36.7	-0.2
KAN06	Argonia West S	0.55	12		Pg	13 45 37.3	-0.2
KAN06				Sg	Sg	13 45 44.6	-0.1
OK035	E0210 Rd and N	0.57	270	Pg	Pg	13 45 37.6	-0.4
OK035				Sg	Sg	13 45 45.5	0.0
KAN12	Harper NE Stat	0.59	360	Pg	Pg	13 45 37.9	-0.3
BLOK	Blackwell	0.63	85	Pg	Pg	13 45 39.0	-0.1
U32A	Winter Ranch,	0.87	248		Pg	13 45 43.2	-0.6
U32A				Sg	Sg	13 45 55.3	+0.2
U32A	Winter Ranch,	0.87	248	P	Pg	13 45 43.1	-0.6
	baz=66,SNR=19						
U32A				S	Sg	13 45 55.3	+0.2
	baz=66						
OK033	Mehan	1.08	128		Pg	13 45 47.6	-0.1
OK033				Sg	Sg	13 46 02.1	+0.3
BCOK	Bluff Creek, N	1.10	163		Pg	13 45 47.4	-0.6
BCOK				Sg	Sb	13 46 02.7	-0.3
QUOK	Quay	1.17	117		Pg	13 45 48.9	-0.5
QUOK				Sg	Sg	13 46 04.6	0.0
OK031	S. Brethren Rd	1.20	129		Pg	13 45 49.6	-0.5
OK031				Sg	Sg	13 46 05.8	+0.2
T35A	Sooner Cattle	1.21	80		Pg	13 45 49.5	-0.6
T35A				Sg	Sg	13 46 05.8	-0.1
T35B	Sooner Cattle	1.21	80	P	Pg	13 45 49.4	-0.7
	baz=262,SNR=272						
OK025	Westminster Rd	1.25	154		Pg	13 45 50.3	-0.6
OK034	N. Norfolk Rd.	1.25	124		Pg	13 45 50.4	-0.5
OK030	Cody Creek RV	1.25	128		Pg	13 45 50.4	-0.6
OK030				Sg	Sg	13 46 07.3	+0.1
OKCFA	Oklahoma City	1.37	161		Pn	13 45 52.1	-0.6
OKCFA	Oklahoma City	1.37	161	P	Pn	13 45 52.1	-0.6
	baz=341,SNR=7.0						
OKCFA				S	Sn	13 46 11.7	+0.6
	baz=341						
OKCSW	OKLAHOMA CITY	1.38	161		Pn	13 45 52.4	-0.4
FNO	Franklin	1.53	161		Pn	13 45 54.9	0.0
R32A	Long Quarter,	1.80	342	Pn	Pn	13 45 58.6	-0.1
R32A				IAmb_Lg		13 46 25.8	
	comp=Z,71nm,0.8s						
R32A	Long Quarter,	1.80	342	P	Pn	13 45 59.4	+0.7
	baz=162,SNR=6.3						
R32A				S	Sb	13 46 22.8	-0.5
	baz=162						
W35A	Tecumseh	1.80	149		Pn	13 45 59.2	+0.6
TUL1	Leonard	1.95	113		Pn	13 46 00.9	+0.2
TUL1				IAmb_Lg		13 46 32.0	
	comp=Z,58nm,0.9s						
TUL1	Leonard	1.95	113	P	Pn	13 46 00.7	0.0
	baz=295,SNR=75						
TUL1				S	Sb	13 46 27.0	-0.6
	baz=295						
WMOK	Wichita Mounta	2.07	198	Pn	Pn	13 46 02.6	+0.3
WMOK	Wichita Mounta	2.07	198	P	Pn	13 46 02.9	+0.5
	baz=17,SNR=112						
X34A	Smith Ranch, M	2.11	176	Pn	Pn	13 46 03.7	+0.8
X34A				IAmb_Lg		13 46 35.0	
	comp=Z,44nm,0.9s						
CBKS	Cedar Bluff	2.51	327		Pn	13 46 08.8	+0.3
CBKS	Cedar Bluff	2.51	327	P	Pn	13 46 08.7	+0.3
	baz=146						
CBKS				S	Sn	13 46 41.0	+1.5
	baz=146						
KSU1	Kansas State U	2.63	24		Pn	13 46 09.9	-0.1
KSU1				IAmb_Lg		13 46 56.5	
	comp=Z,47nm,0.7s						
LOOK	Love County	2.79	166		Pn	13 46 12.4	+0.2
U38A	Gravette	2.92	94	Pn	Pn	13 46 14.5	+0.5
U38A	Gravette	2.92	94	P	Pn	13 46 14.5	+0.5
	baz=277,SNR=29						
X37A	Clayton	3.01	134		Pn	13 46 16.1	+0.8
HHAR	Hobbs	3.30	96	Pn	Pn	13 46 19.0	-0.2
Z35A	Perchaven, San	3.43	170		Pn	13 46 20.9	0.0
Z35A	Perchaven, San	3.43	170	S	Sn	13 47 03.2	+1.2
	baz=350						
AMTX	Amarillo	3.50	240		Pn	13 46 22.6	+0.4
AMTX	Amarillo	3.50	240	S	Sn	13 47 05.1	+1.0
	baz=57						
W39A	Magazine	3.74	113		Pn	13 46 24.5	-0.7
W39A				IAmb_Lg		13 47 31.2	
	comp=Z,26nm,0.8s						
S39A	Bolivar	3.86	74		Pn	13 46 27.1	+0.2
S39A				IAmb_Lg		13 47 29.7	
	comp=Z,23nm,0.8s						
S39A	Bolivar	3.86	74	P	Pn	13 46 26.9	-0.1
	baz=257,SNR=22						
U40A	Yellville	4.16	93	Pn	Pn	13 46 31.2	+0.1
U40A	Yellville	4.16	93	P	Pn	13 46 31.3	+0.2
	baz=277,SNR=19						
U40A				P	Pn	13 46 31.3	+0.2
	baz=277,SNR=19						
MIAR	Mount Ida	4.20	120		Pn	13 46 32.4	+0.8
Z38A	Mt. Pleasant	4.24	143		Pn	13 46 33.4	+1.3
ABTX	Abilene, Hawle	4.30	199		Pn	13 46 32.8	-0.2
KSCO	Kaye Shedlock’	4.32	303		Pn	13 46 32.7	-0.8
KSCO				IAmb_Lg		13 47 46.7	
	comp=Z,23nm,0.7s						
N35A	Tabor	4.53	23		Pn	13 46 35.2	-1.0
P38A	Dawn	4.56	49		Pn	13 46 37.3	+0.7
P38A				IAmb_Lg		13 48 04.2	
	comp=Z,20nm,0.8s						
P38A	Dawn	4.56	49	P	Pn	13 46 36.6	-0.1
	baz=232,SNR=6.6						
MGMO	Mountain Grove	4.61	83		Pn	13 46 37.8	+0.5
BGNE	Belgrade	4.69	359	Pn	Pn	13 46 36.2	-2.2
WHTX	Lake Whitney,	4.73	174		Pn	13 46 39.0	+0.2
WHTX	Lake Whitney,	4.73	174	P	Pn	13 46 39.1	+0.2
	baz=355,SNR=12						
X40A	Basin Creek Fa	4.76	116		Pn	13 46 40.0	+0.8
X40A				IAmb_Lg		13 48 00.5	
	comp=Z,21nm,0.8s						
FCAR	Ozark Folk Cen	4.81	98		Pn	13 46 41.0	+0.9
R40A	Maddies Statio	4.82	69		Pn	13 46 40.1	-0.1
R40A	Maddies Statio	4.82	69	P	Pn	13 46 39.9	-0.2
	baz=253,SNR=12						
WHAR	Wooly Hollow	4.84	105		Pn	13 46 41.8	+1.4
WHAR				IAmb_Lg		13 48 05.0	
	comp=Z,21nm,1.0s						
WLAR	White Oak Lake	5.01	126		Pn	13 46 42.2	-0.5
WLAR				IAmb_Lg		13 48 10.4	
	comp=Z,17nm,0.7s						
237A	Washetta, Mont	5.03	158	Pn	Pn	13 46 43.5	+0.4
237A				IAmb_Lg		13 48 16.2	
	comp=Z,22nm,1.1s						
T25A	Trinidad	5.16	277	IAmb_Lg		13 48 19.6	
	comp=Z,23nm,0.8s						
OGNE	Ogallala	5.27	325		Pn	13 46 46.5	+0.1
OGNE				IAmb_Lg		13 48 17.2	
	comp=Z,20nm,0.8s						
L34A	Svendsen Farm,	5.40	13		Pn	13 46 47.7	-0.4
L34A				IAmb_Lg		13 48 19.7	
	comp=Z,18nm,0.8s						
P40A	Paris	5.47	57	Pn	Pn	13 46 49.5	+0.5
P40A				IAmb_Lg		13 48 32.0	
	comp=Z,23nm,0.9s						
N38A	Joes South For	5.52	41	IAmb_Lg		13 48 35.2	
	comp=Z,26nm,0.9s						
CCM	Cathedral Cave	5.54	74		Pn	13 46 48.9	-1.1
CCM				IAmb_Lg		13 48 28.0	
	comp=Z,18nm,0.8s						
T42A	Van Buren	5.54	85	Pn	Pn	13 46 51.0	+0.9
LCAR	Lake Charles	5.56	95	Pn	Pn	13 46 50.5	+0.3
K31A	O'Neill	5.93	355	Pn	Pn	13 46 53.7	-1.7
K31A				IAmb_Lg		13 48 47.9	
	comp=Z,24nm,0.8s						
FVM	French Village	6.17	76	Pn	Pn	13 46 59.6	+1.0
JCT	Junction City	6.39	194		Pn	13 47 01.2	-0.6
JCT				IAmb_Lg		13 48 53.4	
	comp=Z,22nm,1.2s						
SLM	Saint Louis	6.45	70	IAmb_Lg		13 48 53.0	
	comp=Z,19nm,0.8s						
ISCO	Idaho Springs	6.74	300		Pn	13 47 06.3	-0.5
S44A	Carbondale	7.05	79	Pn	Pn	13 47 10.7	0.0
S44A				IAmb_Lg		13 49 11.1	
	comp=Z,12nm,0.8s						
SIUC	Southern Illin	7.08	79	Pn	Pn	13 47 10.4	-0.7
SIUC				IAmb_Lg		13 49 30.8	
	comp=Z,15nm,0.9s						
ANMO	Albuquerque	7.09	258	Pn	Pn	13 47 11.1	-0.4
ECSD	EROS Data Cent	7.09	8	Pn	Pn	13 47 10.3	-1.0
W45A	Hickory Valley	7.31	100	IAmb_Lg		13 49 22.2	
	comp=Z,15nm,0.8s						
Q44A	Meyer Farm, Va	7.44	70		Pn	13 47 16.2	+0.1
L40A	Anamosa	7.49	42	Pn	Pn	13 47 15.5	-1.3
T45A	Paducah	7.50	85	IAmb_Lg		13 49 34.3	
	comp=Z,16nm,0.7s						
MNTX	Cornudas Mount	7.90	233		Pn	13 47 21.7	-0.8
WVT	Waverly	8.22	91		Pn	13 47 25.7	-1.0
L42A	Oliver, Polo	8.34	48	Pn	Pn	13 47 27.6	-0.8
JFWS	Jewell Farm	8.60	42	IAmb_Lg		13 50 05.5	
	comp=Z,14nm,0.8s						

IDC 25 13:49:17.6±2.1**, 1°.96N×126°.48E, h0**^{km}**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/38**, mbtmp3.3**/3**, Error ellipse: s-maj=183.6km s-min=25.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.09	161	P	P	13 54 24.6	-0.6
	0.4nm,0.4s,baz=339,slow=11,SNR=6.7						
ASAR	Alice Springs	26.48	165	P	P	13 54 57.4	+0.6
	0.3nm,0.7s,baz=347,slow=12,SNR=6.0						
MKAR	Makanchi Array	58.87	326	P	P	13 59 18.2	-0.1
	0.3nm,0.5s,baz=114,slow=6.5,SNR=7.1						

BJI ***25*** *14:02:12.7±0.0, 6°.58S×129°.68E, h30^{km}, mB5.3/13, mb4.8/27, Ms4.4/1, Ms7 4.2/1*

IDC ***25*** *14:02:15.8±0.6, 5°.98S×129°.47E, h0^{km}, mb4.5/13, mb1 4.6/17, mb1mx4.3/41, mbtmp4.6/17, ML4.7/3, MS3.7/22, Ms1 3.7/22, ms1mx3.6/36, Error ellipse: s-maj=20.7km s-min=14.0km az=71.0*

GCMT ***25*** *14:02:19.5±0.3, 5°.91S±0°.02×129°.30E±0°.02, h20^{km}±2^{km}, MW4.8/58, Moment Tensor Solution. s20,c23; s58,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.17±.14; M$_{\theta\theta}$-2.08±.11; M$_{\phi\phi}$2.25±.12; M$_{r\theta}$-0.73±.22; M$_{\theta\phi}$0.48±.08; M$_{\phi r}$0.28±.21; Best double couple: M$_0$2.35400×10^{16} NP1:ϕ_s50.00000°, δ73.00000°, λ-10.00000°. NP2: ϕ_s143.00000°, δ80.00000°, λ-163.00000°. Principal axes: T 2.3190, Plg5.0000°, Azm275.0000°; N 0.0720, Plg71.0000°, Azm171.0000°; P -2.3880, Plg19.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***25*** *14:02:20.6±1.0, 6°S±2°×12°9E±°, h28^{km}±9^{km}, M4.8/37, mB5.3/13, mb5.0/37, MLv5.0/13, Mw(mB)4.7/13*

NEIC ***25*** *14:02:21.5±2.4, 6°.01S±0°.05×129°.48E±0°.07, h41^{km}±6^{km}, mb4.8/33, Error ellipse: s-maj=10.6km s-min=6.7km az=84.0*

ISC 25 14:02:20.7±0.3**, 6°.03S**±0°.04×**129°.43E**±0°.05**, h35**^{km}**, n146,** σ**1**^{s}.**59**/135**, mb4.8**/35**, MS3.6**/14**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	1.57	18	P	Pn	14 02 45.9	-0.2
AAI	Ambon	2.63	332	P	Pn	14 02 57.5	-3.2
SAUI	Saumlaki	2.69	136	P	Pn	14 03 05.3	+3.8
SAUI	Saumlaki	2.69	136	Pn	Pn	14 03 03.3	+1.8
SAUI	Saumlaki	2.69	136	P	Pn	14 03 04.2	+2.7
MSAI	Masohi	2.71	349	P	Pn	14 02 59.4	-2.4
FAKI	Fak Fak	4.18	42	P	Pn	14 03 21.9	-0.1
FAKI				S	Sn	14 04 09.0	-0.7
FAKI	Fak Fak	4.18	42	Pn	Pn	14 03 21.7	-0.3
FAKI	Fak Fak	4.18	42	P	Pn	14 03 22.1	+0.1
SANI	Sanana	5.23	319	P	Pn	14 03 35.9	-0.6
	0.6nm1µm162nm,0.7s						
SANI	Sanana	5.23	319	P	Pn	14 03 36.2	-0.3
SIJI	Sorong	5.45	20	Pn	Pn	14 03 39.0	-0.5
	38nm,0.3s,baz=41,slow=8.2,SNR=216						
SIJI				Sn	Sn	14 04 37.9	-3.0
	44nm,0.3s,baz=208,slow=23,SNR=8.1						
SIJI				LR	LR	14 05 45.1	
	comp=Z,829nm,19.9s,baz=248,slow=39						
SWI	Sorong	5.45	20	P	Pn	14 03 38.8	-0.7
	1.9nm6µm322nm,0.8s						
LBMI	Labuha	5.69	340	P	Pn	14 03 42.7	-0.1
	1.2nm4µm340nm,0.6s						
SOEI	Soe	6.31	234	P	Pn	14 03 53.3	+1.8
	1.1nm157nm,1.3s						
SOEI	Soe	6.31	234		Pn	14 03 53.2	+1.8
SOEI	Soe	6.31	234	P	Pn	14 03 53.4	+2.0
MTN	Manton Dam	6.98	166	P	Pn	14 04 00.3	-0.2
	baz=7.0,SNR=29						
MTN	Manton Dam	6.98	166	Pn	Pn	14 04 01.4	+0.9
BATI	Baumata	7.05	234	Pn	Pn	14 04 01.9	+0.4
	25nm,0.3s,baz=92,slow=3.3,SNR=23						
BATI				LR	LR	14 06 59.6	
	comp=Z,2µm,20.7s,baz=66,slow=40						
BATI	Baumata	7.05	234	P	Pn	14 04 02.1	+0.5
	0.3nm94nm,1.0s						
TNTI	Ternate	7.06	343	P	Pn	14 04 00.8	-0.9
	1.0nm3µm238nm,1.1s						
TNTI	Ternate	7.06	343	Pn	Pn	14 04 01.8	+0.2
TNTI	Ternate	7.06	343	P	Pn	14 04 01.8	+0.2
	235nm,1.1s						
KDU	Kakadu	7.26	156	P	Pn	14 04 03.5	-0.9
	baz=7.3,SNR=60						
SRPI	Serui, Papua	7.95	59	P	Pn	14 04 14.1	+0.2
	0.8nm67nm,0.5s						
EDFI	Ende, Flores	8.13	250	P	Pn	14 04 17.7	+1.2
	1µm110nm,1.1s						
BAKI	Biak	8.22	54	P	Pn	14 04 18.4	+0.9
	91nm,1.5s						
KMSI	Cibinong	8.52	320	P	Pn	14 04 20.4	-1.3
	119nm,1.0s						
BSSI	Bau Bau, Buton	8.89	269	P	Pn	14 04 26.3	-0.4
	116nm,0.6s						
GTOI	Gorontalo	9.21	316	P	Pn	14 04 32.8	+1.6
	622nm67nm,0.9s						
APSI	Ampana	9.28	303	P	Pn	14 04 31.1	-1.0
	581nm43nm,0.8s						
BKSI	Bulukumba	9.29	274	P	Pn	14 04 31.9	-0.3
	72nm,1.1s						
BNSI	Bone	9.42	279	P	Pn	14 04 33.4	-0.6
	78nm,0.8s						
KNRA	Kununurra	9.61	184	P	Pn	14 04 34.0	-2.6
	baz=9.7,SNR=57						
KNRA	Kununurra	9.61	184	Pn	Pn	14 04 34.9	-1.7
KNRA	Kununurra	9.61	184	P	Pn	14 04 35.9	-0.7
	216nm,0.7s						
KAPI	Kappang	9.68	276	Pn	Pn	14 04 37.6	-0.1
	baz=113,slow=9.4,SNR=7.9						
KAPI				LR	LR	14 08 13.8	
	comp=Z,783nm,18.2s,baz=92,slow=37						
SPSI	Sidrap Palu	9.84	282	P	Pn	14 04 39.2	-0.5
	49nm,1.4s						
MRSI	Marisa	9.88	311	P	Pn	14 04 39.8	-0.5
	759nm85nm,0.9s						
TOLI2	Tolitoli	11.17	309	Pn	Pn	14 05 00.1	+2.1
GENI	Genyem	11.24	73	P	Pn	14 04 59.8	+0.8
FITZ	Fitzroy Crossi	12.55	197	Pn	Pn	14 05 12.3	-4.6
	baz=11,slow=9.1						
FITZ				LR	LR	14 10 27.5	
	comp=Z,298nm,18.5s,baz=5.0,slow=39						
DAV	Davao City (W)	13.57	344	LR	LR	14 11 34.4	
	comp=Z,314nm,21.4s,baz=170,slow=41						
WRA	Warramunga Arr	14.63	161	Pn	Pn	14 05 39.9	-5.4
	0.9nm,0.3s,baz=336,slow=14,SNR=37						
WRA				Sn	Sn	14 08 15.8	-11
	1.7nm,0.3s,baz=344,slow=22,SNR=8.0						
WRA				LR	LR	14 11 27.6	
	comp=Z,593nm,20.0s,baz=340,slow=38						
COEN	Coen	15.66	121	Pn	Pn	14 05 56.7	-2.1
COEN	Coen	15.66	121	P	Pn	14 05 59.3	+0.5
	139nm,1.0s						
QIS	Mount Isa	17.50	147	P	Pn	14 06 18.4	-3.7
	baz=18,SNR=28						
QIS	Mount Isa	17.50	147	P	P	14 06 23.8	+0.8
	35nm,1.0s						
KKM	Kota Kinabalu	17.83	312	P	Pn	14 06 26.5	+0.2
KKM				IAmb	IAmb	14 06 36.2	
	comp=Z,42nm,1.0s						
KKM	Kota Kinabalu	17.83	312	P	P	14 06 28.3	+1.6
PMG	Port Moresby	17.89	102	P	P	14 06 28.6	+1.3
	comp=Z,2.5nm,0.3s,baz=300,slow=7.2,SNR=37						
PMG				LR	LR	14 15 12.4	
	comp=Z,379nm,18.5s,baz=249,slow=44						
PMG	Port Moresby	17.89	102		P	14 06 28.3	+1.0
PMG				IAmb	IAmb	14 06 30.0	
	comp=Z,108nm,1.0s						
PMG	Port Moresby	17.89	102	P	P	14 06 28.3	+1.0
PMG	Port Moresby	17.89	102	P	P	14 06 28.6	+1.3
PBKI	Pangkalan Bun	18.01	280	P	P	14 06 30.1	+1.4
	comp=Z,2µmcomp=Z,260nm,1.0s						
PSA00	Pilbara Seismi	18.02	210	P	Pn	14 06 24.5	-4.0
PSA00				IAmb	IAmb	14 06 42.8	
	comp=Z,55nm,1.1s						
PSA00	Pilbara Seismi	18.02	210	P	Pn	14 06 24.9	-3.6
PSA00				IAmb	IAmb	14 06 42.8	
	comp=Z,28nm,1.1s						
PSA00	Pilbara Seismi	18.02	210	P	P	14 06 32.0	+3.3
	comp=Z,45nm,1.1s						
AS31	Alice Springs	18.06	167		Pn	14 06 27.0	-2.0
ASAR	Alice Springs	18.06	167	P	Pn	14 06 27.2	-1.7
	comp=Z,0.7nm,0.3s,baz=337,slow=9.2,SNR=93						
ASAR				S	Sn	14 09 40.8	-8.7
	comp=Z,0.4nm,0.3s,baz=354,slow=26,SNR=4.4						
ASAR				LR	LR	14 13 20.5	
	comp=Z,435nm,20.0s,baz=344,slow=37						
ASAR	Alice Springs	18.06	167		Pn	14 06 27.9	-1.1
MANU	Manus Island	18.32	78	P	Pn	14 06 33.1	+0.8
MTSU	Mount Surprise	18.87	131	P	P	14 06 38.3	+0.2
	baz=19,SNR=33						
MTSU	Mount Surprise	18.87	131	P	Pn	14 06 39.6	+0.7
	comp=Z,27nm,1.0s						
WRKA	Warakurna	18.93	183	P	P	14 06 36.4	-2.4
	baz=19,SNR=11						
SBUM	Sibu	19.14	296	P	P	14 06 42.1	+1.0
KPJI	Karang Pucung	20.40	265	P	P	14 06 56.8	+2.0
	comp=Z,95nm,0.8s						
KSM	Kuching	20.49	291	P	P	14 06 56.0	+0.1
KSM				IAmb	IAmb	14 07 06.2	
	comp=Z,38nm,0.9s						
KSM	Kuching	20.49	291	P	Pn	14 06 58.9	+0.7
CTA	Charters Tower	21.51	132	P	P	14 07 08.1	+1.3
	comp=Z,39nm,0.9s,baz=316,slow=13,SNR=21						
CTA	Charters Tower	21.51	132	P	P	14 07 09.1	+2.3
	comp=Z,63nm,1.0s						
CTAO	Charters Tower	21.51	132	P	P	14 07 08.1	+1.3
CTAO				IAmb	IAmb	14 07 09.8	
	comp=Z,68nm,1.0s						
CTAO	Charters Tower	21.51	132	P	P	14 07 08.5	+1.7
LEM	Lembang	21.69	267	P	P	14 07 10.7	+1.7
	comp=Z,26nm,0.7s,baz=128,slow=19,SNR=2.6						
LEM				LR	LR	14 16 30.2	
	comp=Z,344nm,18.3s,baz=74,slow=39						
TPI	Tanjungpandan	21.95	278	P	P	14 07 12.4	+0.9
	comp=Z,37nm,1.1s						
CNJI	Cibinong	22.18	265	P	P	14 07 13.9	-0.2
	comp=Z,4µmcomp=Z,463nm,1.1s						
OOD	Oodnadatta	22.45	165	P	P	14 07 18.5	+1.7
	comp=Z,56nm,1.1s						
RABL	Rabaul	22.72	86	P	P	14 07 19.2	-0.6
MEEK	Meekatharra	22.94	206	P	P	14 07 22.4	+0.4
	baz=23,SNR=4.6						
CGJI	Cibinong	23.60	267	P	P	14 07 29.1	+0.5
	comp=Z,1µmcomp=Z,106nm,1.1s						
INKA	Innaminka	24.12	155	P	P	14 07 35.0	+1.6
	comp=Z,100nm,0.9s						
FORT	Forrest	24.65	183	P	P	14 07 39.2	+1.0
	baz=25,SNR=11						
FORT	Forrest	24.65	183	P	P	14 07 39.5	+1.3
FORT	Forrest	24.65	183	P	P	14 07 40.7	+2.5
	comp=Z,131nm,0.9s						
GUMO	Guam	24.80	38	LR	LR	14 16 20.5	
	comp=Z,110nm,20.2s,baz=200,slow=34						
QLP	Quilpie	24.84	147	P	P	14 07 41.0	+1.0
	baz=25,SNR=11						
QLP	Quilpie	24.84	147	P	P	14 07 41.1	+1.1
	comp=Z,57nm,1.2s						
MORW	Morawa	26.18	207	P	P	14 08 02.9	+11
	baz=26,SNR=7.6						
MORW	Morawa	26.18	207	P	P	14 07 54.3	+2.2
RK1H	Rockhampton Ha	26.63	133	P	P	14 07 58.7	+2.5
	comp=Z,17nm,1.0s						
BBOO	Buckleboo	27.35	168	P	P	14 08 02.9	+0.3
BBOO				IAmb	IAmb	14 08 06.9	
	comp=Z,27nm,1.2s						
RMQ	Roma	27.45	140	P	P	14 08 06.3	+2.7
	comp=Z,8.0nm,1.0s						
KLBR	Kellerberrin	27.68	202	P	P	14 08 14.7	+9.2
	baz=28,SNR=4.2						
STKA	Stephens Creek	28.12	158	P	P	14 08 09.9	+0.4
	comp=Z,4.4nm,0.8s,baz=323,slow=11,SNR=7.6						
STKA				LR	LR	14 19 41.2	
	comp=Z,339nm,18.6s,baz=323,slow=37						
STKA	Stephens Creek	28.12	158	P	P	14 08 10.1	+0.6
	baz=28,SNR=8.5						
STKA	Stephens Creek	28.12	158	P	P	14 08 10.5	+1.1
CMSA	Cobar Meteorol	29.60	151	P	P	14 08 23.7	+1.1
	baz=30,SNR=10						
PSI	Prapat	31.70	285	P	P	14 08 42.5	+1.0
	comp=Z,1.6nm,0.3s,baz=160,slow=4.7,SNR=4.5						
ARPS	Mount Arapiles	32.64	161	P	P	14 08 50.8	+1.5
	baz=33,SNR=5.7						
CAN	Canberra	34.27	151	P	P	14 09 05.4	+1.7
TOO	Toolangi	34.64	157	P	P	14 09 08.0	+1.2
TOO				IAmb	IAmb	14 09 10.3	
	comp=Z,16nm,1.1s						
CMAR	Chiang Mai Arr	38.68	310	P	P	14 09 41.0	-0.3
	comp=Z,0.6nm,0.3s,baz=134,slow=8.0,SNR=7.2						
CMAR				LR	LR	14 26 15.5	
	comp=Z,60nm,21.3s,baz=162,slow=37						
CMAR	Chiang Mai Arr	38.68	310	P	P	14 09 40.5	-0.9
CHTO	Chiang Mai	38.89	310	P	P	14 09 42.0	-1.1
WHN	Wuhan	39.13	339	⇑P	P	14 09 45.5	+0.5
DZM	Mont Dzumac	39.14	118	LR	LR	14 25 26.5	
	comp=Z,93nm,20.7s,baz=220,slow=36						
MJAR	Matsushiro Arr	43.14	10	P	P	14 10 17.1	-0.8
	comp=Z,7.3nm,0.9s,baz=195,slow=10,SNR=9.2						
MJAR				LR	LR	14 28 03.2	
	comp=Z,55nm,19.9s,baz=185,slow=36						
KSAR	Wonju Array Be	43.27	358	P	P	14 10 19.4	+0.5
KSRS	Korea Array	43.28	358	P	P	14 10 18.9	-0.1
	comp=Z,2.2nm,0.8s,baz=181,slow=7.2,SNR=6.8						
KSRS				LR	LR	14 26 45.9	
	comp=Z,54nm,20.4s,baz=152,slow=34						
XAN	Xi'an	44.33	335	P	P	14 10 26.5	-1.0
XAN				pP	sP	14 10 40.8	+0.7
XAN				pmax	pmax		
	comp=Z,13nm,1.1s						
BJT	Baijiatuau	47.42	346	P	P	14 10 50.9	-0.9
BJT				IAmb	IAmb	14 10 52.2	
	comp=Z,20nm,1.1s						
LZH	Lanzhou	48.29	332	*e*P	P	14 10 58.8	0.0
LZH				pP	pP	14 11 03.3	-4.5
LZH				pmax	pmax		
	comp=Z,26nm,0.9s						
USRK	Ussuriysk Ar.	50.05	2	P	P	14 11 12.3	+0.4
	comp=Z,4.9nm,0.8s,baz=182,slow=8.0,SNR=6.8						
USRK	Ussuriysk Ar.	50.05	2	P	P	14 11 11.8	-0.1
GTA	Gaotai	52.85	331	*e*P	P	14 11 32.5	-0.7
GTA				pP	pP	14 11 42.8	+0.5
GTA				sP	sP	14 11 46.8	+0.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TUWZ	Tuamarina	52.98	139	P	P	14 11 34.6	+0.6
URZ	Urewera	53.74	134	LR	LR	14 34 33.5	
	comp=Z,95nm,19.1s,baz=31,slow=36						
ULN	Ulaanbaatar	57.17	342	P	P	14 12 04.2	-0.1
ULN				IAmb	IAmb	14 12 05.7	
	comp=Z,16nm,1.0s						
SONM	Songino Array	57.35	342	P	P	14 12 05.9	+0.4
	comp=Z,8.7nm,1.0s,baz=166,slow=5.9,SNR=35						
SONM				LR	LR	14 39 09.8	
	comp=Z,26nm,20.4s,baz=134,slow=39						
SONM	Songino Array	57.35	342	P	P	14 12 05.4	-0.1
SONM				IAmb	IAmb	14 12 07.5	
	comp=Z,11nm,1.0s						
PETK	Petropavlovsk-	63.59	19	LR	LR	14 35 22.9	
	comp=Z,49nm,21.6s,baz=221,slow=31						
MK31	Makanchi Array	67.11	327	P	P	14 13 10.3	-0.4
MK31				IAmb	IAmb	14 13 11.3	
	comp=Z,8.6nm,0.8s						
MKAR	Makanchi Array	67.11	327	P	P	14 13 10.5	-0.3
	comp=Z,9.9nm,0.7s,baz=128,slow=7.8,SNR=114						
MAKZ	Makanchi	67.29	327	P	P	14 13 10.8	-1.2
MAKZ				IAmb	IAmb	14 13 12.3	
	comp=Z,10.0nm,1.0s						
YAK	Yakutsk	67.86	0	P	P	14 13 14.2	-1.0
BOOM	Boomskoye usch	68.44	320	P	P	14 13 18.9	-0.5
BOOM				IAmb	IAmb	14 13 20.2	
	comp=Z,6.5nm,1.1s						
ZAA0	Zalesovo Array	70.47	334	P	P	14 13 30.8	-0.7
ZAA0				IAmb	IAmb	14 13 31.7	
	comp=Z,13nm,1.1s						
ZALV	Zalesovo Beam	70.47	334	P	P	14 13 30.9	-0.6
	comp=Z,7.6nm,0.8s,baz=108,slow=4.8,SNR=31						
ZALV	Zalesovo Beam	70.47	334	P	P	14 13 30.6	-0.9
KURK	Kurchatov	71.40	329	P	P	14 13 37.0	-0.2
VNDA	Vanda	73.47	173	P	P	14 13 48.5	-0.6
	comp=Z,1.1nm,0.7s,baz=334,slow=7.3,SNR=2.9						
VNDA				LR	LR	14 44 16.1	
	comp=Z,76nm,21.0s,baz=334,slow=34						
VNDA	Vanda	73.47	173	P	P	14 13 49.9	+0.8
WSAR	Wadi Sarin	74.93	296	LR	LR	14 48 23.8	
	comp=Z,16nm,20.6s,baz=111,slow=37						
MAW	Mawson	75.64	201	P	P	14 13 58.0	-3.8
	baz=76,SNR=17						
SOCY	Socotra	77.14	284	P	P	14 14 13.6	+2.1
TIXI	Tiksi	77.52	360	P	P	14 14 12.0	-0.4
TIXI				IAmb	IAmb	14 14 13.1	
	comp=Z,4.4nm,0.8s						
GEYT	Alibeck	79.16	310	LR	LR	14 54 30.1	
	comp=Z,33nm,20.0s,baz=245,slow=40						
PPT	Papeete	79.64	107	LR	LR	14 47 56.4	
	comp=Z,32nm,18.1s,baz=222,slow=34						
NRIK	Noril'sk	80.49	346	P	P	14 14 29.2	+0.5
	comp=Z,4.2nm,0.9s,baz=109,slow=6.0,SNR=5.8						
NRIK	Noril'sk	80.49	346	P	P	14 14 27.9	-0.7
NRIK				IAmb	IAmb	14 14 41.7	
	comp=Z,11nm,1.2s						
ABKAR	Akbulak array	81.40	322	P	P	14 14 33.5	-0.4
QSPA	South Pole Qui	83.94	180	P	P	14 14 46.5	-0.6
QSPA				IAmb	IAmb	14 15 00.3	
	comp=Z,11nm,1.2s						
TXAR	Lajitas Array	124.91	58	PKP	PKPdf	14 21 18.5	+0.6
	comp=Z,0.3nm,0.9s,baz=225,slow=1.1,SNR=3.0						
CPUP	Villa Florida	147.17	169	PKPbc	PKPbc	14 22 01.6	+0.6
	comp=Z,4.6nm,0.9s,baz=188,slow=1.1,SNR=4.3						
LPAZ	La Paz	151.83	142	PKPbc	PKPbc	14 22 14.6	+1.0
	comp=Z,1.0nm,0.7s,baz=239,slow=5.2,SNR=4.2						

IDC ***25*** *14:17:24.5±1.0, 36°.34N×21°.72E, h0^{km}, mb3.9/7, mb1 3.9/8, mb1mx3.6/43, mbtmp3.9/8, ML3.2/1, MS2.9/1, Ms1 3.0/1, ms1mx2.3/46, Error ellipse: s-maj=29.7km s-min=19.3km az=142.0*

ATH ***25*** *14:17:26.2, 36°.09N×21°.67E, h9^{km}±3^{km}, ML3.4/10, Error ellipse: s-maj=4.2km s-min=1.4km az=26.0*

THE ***25*** *14:17:29.4, 36°.25N×21°.87E, h11^{km}±1^{km}, ML3.2/4, Error ellipse: s-maj=1.9km s-min=0.4km az=28.0*

ISC 25 14:17:28.6±1.5**, 36°.29N**±0°.06×**21°.70E**±0°.05**, h29**^{km}±11^{km}**, n65,** σ**2**^{s}.**24**/83**, mb3.9**/7**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	PYLOS	0.60	3	P	Pn	14 17 41.6	+0.4
PYL	PYLOS	0.60	3	P	Pn	14 17 41.5	+0.4
PYL				S	Sn	14 17 52.2	+2.2
ITM	Ithomi	0.91	12	P	Pn	14 17 47.1	+1.8
ITM	Ithomi	0.91	12	P	Pn	14 17 46.7	+1.3
ITM				S	Sn	14 18 01.9	+4.5
ITM				AML	AML	14 18 11.8	
	comp=N,1818µm,0.5s						
ITM				AML	AML	14 18 14.7	
	comp=E,2547µm,0.5s						
KTHR	Kythira	1.06	91	P	Pn	14 17 46.5	-0.9
KTHR				S	Sb	14 17 59.8	-1.9
	comp=E,2µm,0.4s						
VLI	Veliai	1.09	67	P	Pb	14 17 48.0	-0.7
VLI				S	Sn	14 18 02.5	+0.7
	comp=E,2µm,0.5s						
VLI	Veliai	1.09	67	P	Pb	14 17 47.8	-1.0
VLI				AML	AML	14 18 10.8	
	comp=N,2820µm,0.5s						
VLI				AML	AML	14 18 12.5	
	comp=E,5168µm,0.6s						
KTHA	Kythira Island	1.10	91	P	Pn	14 17 47.6	-0.4
KTHA				S	Sb	14 18 01.5	-1.6
	comp=E,2µm,0.7s						
KTHA	Kythira Island	1.10	91	P	Pn	14 17 47.6	-0.4
KTHA				AML	AML	14 18 08.0	
	comp=N,3280µm,0.8s						
KTHA				AML	AML	14 18 09.8	
	comp=E,4720µm,0.7s						
MNVA	Monemvasia	1.15	70	P	Pb	14 17 50.1	+0.3
ANKY	Antikythira Is	1.37	108	P	Pn	14 17 51.5	-0.2
ANKY	Antikythira Is	1.37	108	P	Pn	14 17 51.4	-0.2
ANKY				AML	AML	14 18 17.3	
	comp=N,1917µm,0.7s						
ANKY				AML	AML	14 18 21.9	
	comp=E,2134µm,1.0s						
LTHK	Lithakia	1.57	334	P	Pb	14 17 58.1	+1.1
LTHK	Lithakia	1.57	334	P	Pb	14 17 58.1	+1.1
KRND	KRANIDI	1.59	47	P	Pb	14 17 57.2	-0.2
KRND				AML	AML	14 18 30.7	
	comp=E,1543µm,0.5s						
KRND				AML	AML	14 18 34.1	
	comp=N,1507µm,0.6s						
DRO	Drossia	1.66	0	P	Pb	14 17 59.7	+1.3
DRO				AML	AML	14 18 36.0	
	comp=E,1673µm,0.6s						
DRO				AML	AML	14 18 39.9	
	comp=N,1417µm,0.5s						
EPID	Epidavros	1.74	40	P	Pb	14 18 00.3	+0.4
RLS	Riolos of Patr	1.77	354	P	Pb	14 18 02.4	+2.0
KLV	Kalavryta, Ach	1.79	12	P	Pb	14 18 02.1	+1.4
RODP	Rodopos	1.82	113	P	Pn	14 17 58.7	+0.8
KNDR	Palaiochora Ch	1.93	123	P	Pn	14 17 58.9	-0.5
KNDR				S	Sn	14 18 22.2	-0.5
	comp=N,168nm,0.5s						
LAKA	Lakka	1.96	6	P	Pb	14 18 05.1	+1.5
LAKA				AML	AML	14 18 54.5	
	comp=E,1784µm,0.7s						
LAKA				AML	AML	14 18 55.2	
	comp=N,1688µm,0.8s						
LTK	Loutraki	2.00	30	P	Pb	14 18 04.5	+0.2
LTK				AML	AML	14 18 47.2	
	comp=E,741µm,0.7s						
LTK				AML	AML	14 18 48.1	
	comp=N,671µm,0.8s						
PSDA	Pessada-Kefalo	2.02	334	P	Pb	14 18 04.7	0.0
IMMV	Iera Moni Meta	2.03	113	P	Pn	14 18 01.3	+0.5
IMMV	Iera Moni Meta	2.03	113	P	Pn	14 18 01.0	+0.2
IMMV				AML	AML	14 18 49.5	
	comp=N,1100µm,0.7s						
IMMV				AML	AML	14 18 54.7	
	comp=E,854µm,0.7s						
VLS	Valsamata	2.08	335	P	Pb	14 18 05.4	-0.2
TRIZ	Trizonia	2.09	8	P	Pb	14 18 07.9	+2.1
VAM	Vamos	2.22	113	P	Pn	14 18 03.7	+0.4
VAM	Vamos	2.22	113	P	Pn	14 18 03.5	+0.2
VAM				AML	AML	14 18 45.9	
	comp=E,636µm,0.9s						
VAM				AML	AML	14 18 49.9	
	comp=N,992µm,0.8s						
DION	Dionisos Attik	2.52	44	P	Pn	14 18 09.6	+2.0
IDI	Anoyia	2.78	110	Pn	Pn	14 18 11.5	+0.3
	comp=N,3.6nm,0.3s,baz=309,slow=14,SNR=35						
IDI				Sn	Sn	14 18 46.2	+2.4
	comp=N,8.0nm,0.3s,baz=62,slow=20,SNR=6.2						
OHR	Ohrid	4.86	352	*i* Pn	Pn	14 18 42.5	+2.8
STIP	Stip	5.41	4	*i* Pn	Pn	14 18 52.6	+5.4
PRVS	Prvonek	6.21	3	*e*P	Pn	14 19 01.5	+3.2
BOSS	Bosilegrad	6.22	5	*e*P	Pn	14 19 03.9	+5.5
BARS	Barje	6.52	1	*e*P	Pn	14 19 05.6	+3.2
SELS	Selova	6.93	356	*e*P	Pn	14 19 09.5	+1.3
SJES	Sjenica	7.09	350	*e*P	Pn	14 19 14.2	+3.9
STON	Ston	7.26	336	*e*Pn	Pn	14 19 13.7	+1.1
STON				Sn	Sn	14 20 31.0	-2.9
BOVS	Bovan	7.33	0	*e*P	Pn	14 19 15.5	+1.9
IVAS	Ivanjica	7.37	351	*e*P	Pn	14 19 15.7	+1.5
LSTV	Lastovo	7.46	332	*e*Pn	Pn	14 19 16.6	+1.3
LSTV				Sn	Sn	14 20 34.0	-4.8
GRUS	Gruza	7.62	355	*e*P	Pn	14 19 19.4	+1.8
MAKA	Makarska	7.86	334	*e*Pn	Pn	14 19 21.6	+0.8
MAKA				Sn	Sn	14 20 44.9	-3.8
DIVS	Divibare	7.91	351	*e*P	Pn	14 19 23.2	+1.7
HVAR	Hvar	7.98	331	*e*Pn	Pn	14 19 23.3	+0.8
HVAR				Sn	Sn	14 20 46.9	-4.7
RICI	Ricice	8.00	335	*e*Pn	Pn	14 19 23.5	+0.7
RICI				Sn	Sn	14 20 48.8	-3.5
ZIRJ	Zirje	8.70	330	*e*Pn	Pn	14 19 33.6	+1.3
ZIRJ				Sn	Sn	14 21 04.1	-5.2
KIJV	Kijevo	8.70	334	*e*Pn	Pn	14 19 33.9	+1.5
KIJV				Sn	Sn	14 21 06.2	-3.3
MORI	Morici	8.85	331	*e*Pn	Pn	14 19 36.1	+1.8
MORI				Sn	Sn	14 21 09.1	-3.9
DUGI	Dugi Otok	9.21	329	*e*Pn	Pn	14 19 40.3	+0.9
DUGI				Sn	Sn	14 21 18.2	-3.9
UDBI	Udbina	9.38	333	*e*Pn	Pn	14 19 43.6	+1.8
UDBI				Sn	Sn	14 21 22.4	-4.0
PLIT	Plitvice	9.74	334	*e*Pn	Pn	14 19 48.1	+1.5
PLIT				Sn	Sn	14 21 30.9	-4.1
NVLJ	Novalja	9.76	330	*e*Pn	Pn	14 19 48.3	+1.5
NVLJ				Sn	Sn	14 21 30.1	-5.3
MOSL	Moslavina	10.03	340	*e*Pn	Pn	14 19 51.9	+1.3
MOSL				Sn	Sn	14 21 38.8	-3.3
BRJN	Brijuni	10.51	327	*e*Pn	Pn	14 19 58.9	+1.8
BRJN				Sn	Sn	14 21 48.8	-5.0
ESDC	Sonseca Array	20.48	287	LR	LR	14 28 59.4	
	comp=N,29nm,18.3s,baz=350,slow=34						
TORD	Torodi Ar. Bea	29.22	223	P	P	14 23 28.1	+0.3
	comp=N,0.8nm,0.7s,baz=32,slow=10,SNR=7.1						
ARCES	ARCESS Array B	33.37	2	P	P	14 24 04.8	+1.0
	comp=N,3.7nm,1.0s,baz=196,slow=8.4,SNR=5.3						
DBIC	Dimbokro	38.20	226	P	P	14 24 46.7	+0.9

	comp=N,2.2nm,1.0s,baz=58,slow=5.9,SNR=3.8						
MKAR	Makanchi Array	45.51	57	P	P	14 25 44.8	-0.5
	comp=N,0.5nm,0.3s,baz=270,slow=7.9,SNR=23						
ZALV	Zalesovo Beam	46.27	47	P	P	14 25 50.4	-0.7
	comp=N,1.0nm,0.4s,baz=280,slow=7.4,SNR=5.0						
SONM	Songino Array	60.94	50	P	P	14 27 39.3	+0.5
	comp=N,0.3nm,0.7s,baz=262,slow=7.1,SNR=1.6						
KSRS	Korea Array	79.79	51	P	P	14 29 33.9	-0.1
	comp=N,0.7nm,0.5s,baz=308,slow=4.0,SNR=5.3						

NOU 25 14:22:25.9, 14°.64S×167°.40E, h116km, mb4.3/13, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.82	193	P	Pn	14 22 46.8	+0.9
DVP	Devils Point	3.16	166	P	Pn	14 23 13.5	-0.7
RTV	Rentapao	3.29	163	P	Pn	14 23 16.5	+0.7
LIFNC	LIFOU	6.11	181	P	Pn	14 23 54.8	+1.1
KOUNC	Koumac, New Ca	6.58	206	P	Pn	14 23 59.8	-0.4
ONTNC	Ouen Toro	7.68	187	P	Pn	14 24 15.3	+0.3
OUENC	Ouen Island, N	7.75	184	P	Pn	14 24 16.3	+0.2
PINNC	Pines Island,	7.93	180	P	Pn	14 24 17.7	-0.7

IDC 25 14:31:04.7±1.9, 52°.02N×169°.65W, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.3/68, mbtmp3.6/8, ML3.2/2, MS3.4/1, Ms1 3.4/1, ms1mx2.5/36, Error ellipse: s-maj=50.1km s-min=25.8km az=152.0

AEIC 25 14:31:09±1.5, 52°.2N±0°.2×169°.8W±0°.2, h78km±10km, Error ellipse: s-maj=25.1km s-min=20.2km az=162.0

NEIC 25 14:31:14.3±0.4, 52°.4N±0°.2×169°.5W±0°.2, h38km±63km, ML2.9(AEIC), Error ellipse: s-maj=27.9km s-min=16.8km az=151.0

ISC 25 14:31:07.9±1.3, 51°.9N±0°.2×169°.2W±0°.1, h29km, n18, σ1ˢ61/18, mb3.6/6, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.10	10		Pb	14 31 28.2	0.0
OKSP	Okmok Steeple	1.47	21		Pb	14 31 33.7	-0.8
OKSO	Okmok South	1.59	22		Pb	14 31 35.7	-1.0
OKTU	Okmok Mt. Tuli	1.65	24		Pb	14 31 37.3	-0.3
OKNC	Okmok New Cone	1.69	22		Pb	14 31 38.0	-0.3
OKFG	Magazine Ridge	1.71	26		Pb	14 31 38.0	-0.5
MAPS	Pakushin South	2.35	34		Pb	14 31 47.3	-2.2
MSW	Makushin Switc	2.49	35		Pb	14 31 49.3	-2.6
UNV	Unalaska Valle	2.54	39		Pb	14 31 50.2	-2.5
AKUT	Akutan	3.04	41	Pn	Pb	14 31 59.8	-1.5
ILAR	Eielson Array	17.28	33	P	Pn	14 35 07.1	+0.3
	0.0nm,0.3s,baz=232,slow=9.8,SNR=1.1						
PETK	Petropavlovsk-	20.11	287	P	P	14 35 36.9	-2.1
	0.8nm,0.3s,baz=88,slow=15,SNR=23						
INK	Inuvik	23.68	33	P	P	14 36 17.8	+1.2
	1.0nm,0.8s,baz=222,slow=12,SNR=2.3						
INK				LR	LR	14 46 52.2	
	comp=Z,78nm,18.7s,baz=293,slow=40						
YKA	Yellowknife Ar	30.47	48	P	P	14 37 20.7	+3.1
	0.1nm,0.5s,baz=270,slow=9.2,SNR=3.2						
BVAR	Borovoye Array	64.16	325	P	P	14 41 39.1	-0.1
	0.5nm,0.4s,baz=22,slow=4.7,SNR=4.1						
MKAR	Makanchi Array	64.22	314	P	P	14 41 38.7	-1.0
	0.1nm,0.5s,baz=48,slow=5.2,SNR=1.5						
FINES	FINESS Array B	66.36	352	P	P	14 41 53.3	0.0
	2.8nm,0.9s,baz=357,slow=7.0,SNR=1.3						
ASAR	Alice Springs	90.18	230	P	P	14 44 05.8	+0.5
	0.4nm,0.7s,baz=22,slow=4.7,SNR=5.9						

IDC 25 14:32:04.7±1.4, 45°.89N×82°.84E, h0km, mb3.7/1, mb1 3.5/4, mb1mx2.9/58, mbtmp3.4/4, ML2.7/3, Error ellipse: s-maj=15.0km s-min=10.2km az=92.0

NNC 25 14:32:07.2±0.7, 45°.96N×82°.82E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=5.7km s-min=3.0km az=112.0

SOME 25 14:32:10.1, 46°.03N×82°.45E, h5km

ISC 25 14:32:09.2±1.2, 46°.07N±0°.03×82°.81E±0°.03, h9km±10km, n57, σ2ˢ26/84, 7C-6D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	0.81	334	⇓P	Pg	14 32 25.1	+0.3
	15nm,0.1s,baz=156,slow=16						
MK31				⇑S	Sb	14 32 37.4	+0.8
	79nm,0.2s,baz=153,slow=29,SNR=57						
MKAR	Makanchi Array	0.81	334	Pg	Pg	14 32 25.2	+0.4
	98nm,0.3s,baz=156,slow=17,SNR=8998						
MKAR				Lg	Lg	14 32 37.1	
	377nm,0.3s,baz=154,slow=29,SNR=147						
MKAR				LR	LR	14 32 42.6	
	comp=Z,104nm,18.8s,baz=45,slow=39						
MKAR	Makanchi Array	0.81	334	Pg	Pg	14 32 25.3	+0.4
MKAR				Sg	Sb	14 32 37.2	+0.6
MAKZ	Makanchi	0.94	323	Pg	Pg	14 32 27.3	0.0
MAKZ				Sg	Sb	14 32 40.8	+0.5
MAKZ	Makanchi	0.94	323	⇑P	Pg	14 32 27.2	-0.1
	82nm,0.3s						
MAKZ				⇑S	Sb	14 32 40.8	+0.5
	252nm,0.5s						
ZSN	Zaisan	1.98	45	*e*P	Pb	14 32 45.6	+0.2
	35nm,0.2s						
ZSN				*e*S	Sg	14 33 10.9	-2.0
	208nm,0.6s						
KAPS	Kapalarasan	2.54	253	*e*P	Pb	14 32 54.3	-0.7
	42nm,0.3s						
KAPS				*e*S	Sn	14 33 25.8	+4.1
	38nm,0.2s						
KAPS	Kapalarasan	2.54	253	Pg	Pb	14 32 54.3	-0.7
	42nm,0.3s						
KAPS				Lg	Lg	14 33 25.8	
	38nm,0.2s						
DJR	Jarkent	2.75	232	*e*P	Pb	14 32 57.3	-1.3
	6.3nm,0.2s						
DJR				*e*S	Sn	14 33 30.8	+3.9
	69nm,0.3s						
DJR	Jarkent	2.75	232	Pg	Pb	14 32 57.3	-1.3
	6.3nm,0.2s						
DJR				Lg	Lg	14 33 30.8	
	69nm,0.3s						
BLB	Baldybastay	3.64	239	Pg	Pb	14 33 14.2	+0.4
	39nm,0.4s						
SHLS	Shalkode	3.76	221	*e*P	Pb	14 33 12.7	-3.2
	9.2nm,0.3s						
SHLS				*e*S	Sn	14 33 56.8	+4.9
	102nm,0.4s						
SHLS	Shalkode	3.76	221	Pg	Pb	14 33 12.7	-3.2
	9.2nm,0.3s						
SHLS				Lg	Lg	14 33 57.2	
	114nm,0.3s						
KPKS	Kokpek	3.92	230	*e*P	Pb	14 33 18.5	0.0
	8.9nm,0.2s						
KPKS				*e*S	Sb	14 34 06.7	+0.6
	99nm,0.3s						
UZB	Uzynbulak	3.98	224	*e*P	Pb	14 33 19.2	-0.3
	5.8nm,0.3s						
UZB				*e*S	Sb	14 34 08.2	+0.4
	18nm,0.2s						
UZB	Uzynbulak	3.98	224	Pg	Pb	14 33 19.2	-0.3
	5.8nm,0.3s						
UZB				Lg	Lg	14 34 07.4	
ARXS	Arharly	3.98	244	*e*P	Pb	14 33 20.2	+0.6
	9.5nm,0.3s						
ARXS				*e*S	Sb	14 34 10.2	+2.3
	34nm,0.5s						
ARXS	Arharly	3.98	244	Pg	Pb	14 33 20.2	+0.6
	9.5nm,0.3s						
ARXS				Lg	Lg	14 34 11.2	
ZHN	Zhinishke	4.26	229	*e*P	Pb	14 33 24.9	+0.6
	3.9nm,0.2s						
ZHN				*e*S	Sb	14 34 17.6	+1.8
	43nm,0.2s						
ZHN	Zhinishke	4.26	229	Pg	Pb	14 33 24.9	+0.6
	3.9nm,0.2s						
ZHN				Lg	Lg	14 34 17.6	
	43nm,0.2s						
SATY	Saty	4.35	228	*e*P	Pb	14 33 25.9	0.0
	4.4nm,0.2s						
SATY				*e*S	Sb	14 34 20.1	+1.6
	60nm,0.4s						
SATY	Saty	4.35	228	Pg	Pb	14 33 25.9	0.0
	4.4nm,0.2s						
SATY				Lg	Lg	14 34 20.1	
	60nm,0.4s						
SEM	Semipalatinsk	4.67	339	*e*P	Pb	14 33 35.3	+4.0
	4.8nm,0.2s						
SEM				*e*S	Sg	14 34 35.7	-3.3
	41nm,0.3s						
SEM	Semipalatinsk	4.67	339	Pg	Pb	14 33 35.3	+4.0
	4.8nm,0.2s						
SEM				Lg	Lg	14 34 35.7	
	41nm,0.3s						
CHKK	Chushkaly	4.69	244	*e*P	Pb	14 33 32.7	+1.2
	2.1nm,0.3s						
CHKK				*e*S	Sb	14 34 31.1	+3.1
	18nm,0.3s						
CHKK	Chushkaly	4.69	244	Pg	Pb	14 33 32.7	+1.2
	2.1nm,0.3s						
CHKK				Lg	Lg	14 34 31.1	
	18nm,0.3s						
DGZ	Jazzator, Alta	4.79	39	Pn	Pn	14 33 22.8	+1.2
DGZ				Pg	Pg	14 33 42.0	+1.2
DGZ				Sg	Sg	14 34 41.3	-1.5
KTBS	Karatobe	4.95	244	*e*P	Pb	14 33 36.8	+0.8
	4.4nm,0.5s						
KTBS				*e*S	Sb	14 34 38.1	+2.5
	25nm,0.6s						
KTBS	Karatobe	4.95	244	Pg	Pb	14 33 36.8	+0.8
	4.4nm,0.5s						
KTBS				Lg	Lg	14 34 40.5	
KOTS	Kotyrbulak	4.95	237	*e*P	Pb	14 33 37.9	+1.8
	4.8nm,0.5s						
KOTS				*e*S	Sb	14 34 40.3	+4.5
	21nm,0.3s						
KOTS	Kotyrbulak	4.95	237	Pg	Pb	14 33 37.9	+1.8
	4.8nm,0.5s						
KOTS				Lg	Lg	14 34 40.1	
MDOK	Medeo	5.03	237	*e*P	Pb	14 33 38.4	+0.9
	2.3nm,0.3s						
MDOK				*e*S	Sb	14 34 41.3	+3.2
	12nm,0.4s						
MDOK	Medeo	5.03	237	⇓Pg	Pb	14 33 39.8	+2.3
	3.7nm,0.5s						
MDOK				Lg	Lg	14 34 44.2	
MDOK	Medeo	5.03	237	Pg	Pb	14 33 38.4	+0.9
	2.3nm,0.3s						
MDOK				Lg	Lg	14 34 41.3	
	12nm,0.4s						
UKR	Ust'-Kan	5.05	14	Pn	Pn	14 33 22.3	-2.8
UKR				Pg	Pb	14 33 36.2	-1.5
UKR				Sg	Sg	14 34 51.9	+0.7
KUU	Kurty	5.08	247	*e*P	Pb	14 33 39.2	+1.1
	4.3nm,0.5s						
KUU				*e*S	Sb	14 34 42.5	+3.2
	11nm,0.4s						
KUU	Kurty	5.08	247	Pg	Pb	14 33 39.2	+1.1
	4.3nm,0.5s						
KUU				Lg	Lg	14 34 42.5	
	11nm,0.4s						
TNSS	Tian-Shan	5.17	236	*e*P	Pb	14 33 41.2	+1.2
	1.8nm,0.3s						
TNSS				*e*S	Sb	14 34 45.9	+3.6
	2.9nm,0.5s						
TNSS	Tian-Shan	5.17	236	Pg	Pb	14 33 41.2	+1.2
	1.8nm,0.3s						
AKAR	Aktash	5.34	35	Pn	Pn	14 33 30.7	+1.6
AKAR				Pg	Pg	14 33 52.0	+0.7
AKAR				Sg	Sg	14 35 00.5	0.0
KURBB	Kurchatov Arra	5.38	330	Pn	Pn	14 33 29.0	-0.5
	0.2nm,0.3s,baz=142,slow=13,SNR=6.0						
KURBB				Sn	Sn	14 34 31.1	-0.4
	0.5nm,0.3s,baz=149,slow=22,SNR=4.5						
KURBB				Lg	Lg	14 34 57.0	
	1.1nm,0.3s,baz=157,slow=35,SNR=4.6						
KURBB	Kurchatov Arra	5.38	330	⇑Pg	Pg	14 33 48.7	-3.4
	4.0nm,0.5s						
KURBB				⇓Lg	Lg	14 35 00.2	
	91nm,0.5s						
MTBS	Maitube	5.42	239	*e*P	Pb	14 33 44.1	0.0
	1.4nm,0.3s						
MTBS				*e*S	Sb	14 34 50.5	+1.4
	16nm,0.5s						
MTBS	Maitube	5.42	239	Pg	Pb	14 33 44.1	0.0
	1.4nm,0.3s						
KURK	Kurchatov	5.42	331	⇓Pg	Pb	14 33 48.4	+4.4
	2.3nm,0.5s						
KURK				⇑Lg	Lg	14 35 00.2	
	29nm,0.5s						
CUR	Chagan-Uzun	5.49	41	Pn	Pn	14 33 33.0	+1.9
CUR				Pg	Pg	14 33 54.6	+0.4
CUR				Sg	Sg	14 35 04.2	-1.0
KRBS	Karabastau	5.59	248	*e*P	Pb	14 33 49.6	+2.5
	2.2nm,0.4s						
KRBS				*e*S	Sb	14 35 00.1	+5.8
	11nm,0.4s						
KRBS	Karabastau	5.59	248	Pg	Pb	14 33 49.6	+2.5
	2.2nm,0.4s						
TKM2	Tokmak 2	6.04	241	⇓Lg	Lg	14 35 18.4	
	5.7nm,0.5s						
AAK	Ala-Archa	6.87	243	Pn	Pn	14 33 48.7	-1.6
	0.3nm,0.3s,baz=111,slow=7.8,SNR=5.1						
AAK				Lg	Lg	14 35 38.6	
	0.3nm,0.3s,baz=289,slow=18,SNR=1.7						
AAK	Ala-Archa	6.87	243	⇓Lg	Lg	14 35 44.1	
	4.6nm,0.6s						
OTUK	Ortayu	7.46	291	⇑Lg	Lg	14 36 05.0	
	8.2nm,0.6s						
ZAA0	Zalesovo Array	8.00	9	⇑Lg	Lg	14 36 23.0	
	1.7nm,0.9s						
ZALV	Zalesovo Beam	8.00	9	Pn	Pn	14 34 04.5	-0.9
	0.3nm,0.3s,baz=192,slow=13,SNR=3.3						
ZALV				Lg	Lg	14 36 20.6	
	0.6nm,0.3s,baz=200,slow=28,SNR=5.8						
BVAR	Borovoye Array	10.65	315	Sn	Sn	14 36 33.9	-7.2
	0.3nm,0.3s,baz=126,slow=22,SNR=3.4						
BVAR				Lg	Lg	14 37 45.1	
	0.4nm,0.3s,baz=141,slow=28,SNR=3.8						
SONM	Songino Array	16.19	75	Pn	Pn	14 35 58.1	+1.1
	baz=269,slow=12,SNR=2.3						
ASAR	Alice Springs	83.43	134	P	P	14 44 33.1	-3.8
	0.7nm,1.1s,baz=323,slow=4.9,SNR=5.5						

IDC 25 14:42:26.9±2.1, 6°.76S×130°.02E, h142km±22km, mb3.7/4, mb1 3.9/9, mb1mx3.5/31, mbtmp4.3/9, Error ellipse: s-maj=32.4km s-min=15.6km az=80.0

NEIC 25 14:42:28.1±1.4, 6°.72S±0°.08×130°.0E±0°.1, h145km±11km, mb4.1/10, Error ellipse: s-maj=14.5km s-min=11.3km az=77.0

ISC 25 14:42:27.1±0.6, 6°.70S±0°.06×129°.98E±0°.06, h146km, n52, σ1ˢ30/52, mb4.3/16, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.83	134	Pn	Pn	14 43 01.9	+1.9
SAUI	Saumlaki	1.83	134	P	Pn	14 43 02.4	+2.4
FAKI	Fak Fak	4.38	31	Pn	Pn	14 43 32.6	+0.3
FAKI	Fak Fak	4.38	31	P	Pn	14 43 32.9	+0.6
DRS	Darwin Rock St	5.77	171	P	Pn	14 43 50.0	-0.8
	25nm,0.6s						
SIJI	Sorong	5.93	13	P	Pn	14 43 53.4	+0.5
	2.3nm,0.3s,baz=243,slow=23,SNR=23						
SIJI				S	Sn	14 44 56.3	-3.7
	9.0nm,0.3s,baz=80,slow=23,SNR=13						
SANI	Sanana	6.09	319	P	Pn	14 44 00.2	+5.1
MTN	Manton Dam	6.21	170	Pn	Pn	14 43 56.6	-0.1
MTN	Manton Dam	6.21	170	P	Pn	14 43 55.9	-0.8
SOEI	Soe	6.42	241		Pn	14 44 00.7	+1.1
SOEI	Soe	6.42	241	P	Pn	14 44 00.3	+0.7
KDU	Kakadu	6.44	158	P	Pn	14 43 58.3	-1.4
BATI	Baumata	7.16	240	P	Pn	14 44 10.2	+0.9
	12nm,0.3s,baz=303,slow=6.8,SNR=13						
BATI				S	Sn	14 45 27.0	-2.5
	23nm,0.3s,baz=124,slow=22,SNR=11						
KNRA	Kununurra	9.01	188	Pn	Pn	14 44 32.9	-1.1
KNRA	Kununurra	9.01	188	P	Pn	14 44 31.6	-2.4
	38nm,2.0s						
TOLI2	Tolitoli	12.02	310	Pn	Pn	14 45 14.4	+0.5
TOLI2	Tolitoli	12.02	310	P	Pn	14 45 15.0	+1.1
FITZ	Fitzroy Crossi	12.10	200	P	Pn	14 45 12.2	-2.6
	0.9nm,0.3s,baz=28,slow=10,SNR=14						
FITZ				S	Sn	14 47 16.7	-12
	1.0nm,0.3s,baz=95,slow=12,SNR=2.6						
WRA	Warramunga Arr	13.83	163	P	Pn	14 45 34.5	-2.7
	1.1nm,0.3s,baz=347,slow=10.0,SNR=29						
WRA				S	Sn	14 47 57.1	-13
	3.2nm,0.3s,baz=341,slow=22,SNR=13						
COEN	Coen	14.84	120	P	P	14 45 51.4	-0.7
COEN	Coen	14.84	120	P	P	14 45 51.3	-0.7
	14nm,1.4s						
JAGI	Jajag, Banyuwa	15.79	263	P	P	14 46 02.8	+0.3
QIS	Mount Isa	16.64	147	P	P	14 46 11.6	-0.3
	17nm,0.6s						
AS31	Alice Springs	17.29	168	P	P	14 46 19.1	+0.2
ASAR	Alice Springs	17.29	168	P	P	14 46 19.3	+0.3
	1.3nm,0.3s,baz=352,slow=12,SNR=117						
ASAR				S	S	14 49 18.4	-13
	0.5nm,0.3s,baz=354,slow=26,SNR=4.9						
ASAR	Alice Springs	17.29	168	P	Pn	14 46 19.6	-0.2
PSA00	Pilbara Seismi	17.74	213	P	Pn	14 46 24.8	-0.4
MTSU	Mount Surprise	18.02	130	P	Pn	14 46 28.5	0.0
	5.2nm,1.1s						
WRKA	Warakurna	18.31	185	P	P	14 46 30.2	0.0
	16nm,1.0s						
SBUM	Sibu	19.92	297	P	Pn	14 46 51.1	+0.2
SBUM				IAmb	IAmb	14 46 51.6	
	comp=Z,6.6nm,1.2s						
CTA	Charters Tower	20.65	132	P	P	14 46 56.9	+1.3
	comp=Z,3.8nm,0.5s,baz=310,slow=11,SNR=6.5						
CTAO	Charters Tower	20.65	132	P	P	14 46 56.2	+0.7
CTAO				IAmb	IAmb	14 46 59.9	
	comp=Z,5.9nm,0.8s						
CTAO	Charters Tower	20.65	132	P	P	14 46 56.4	+0.9
OOD	Oodnadatta	21.67	166	P	P	14 47 07.4	+1.1
	comp=Z,20nm,0.9s						
INKA	Innaminka	23.29	155	P	P	14 47 23.1	+1.2
	comp=Z,35nm,0.9s						
MULG	Mulgathing	23.77	171	P	P	14 47 27.0	+0.7
	comp=Z,17nm,1.8s						
QLP	Quilpie	23.99	147	P	P	14 47 28.9	+0.6
	comp=Z,12nm,0.8s						
FORT	Forrest	24.03	184	P	P	14 47 29.5	+0.9
	comp=Z,47nm,0.9s						
LCRK	Leigh Creek	24.86	163	P	P	14 47 39.3	+3.1
	comp=Z,18nm,1.3s						
STKA	Stephens Creek	27.30	158	P	P	14 47 58.2	0.0
	comp=Z,1.5nm,0.4s,baz=335,slow=9.3,SNR=8.6						
STKA	Stephens Creek	27.30	158	P	P	14 47 56.9	-1.3
STKA	Stephens Creek	27.30	158	P	P	14 47 58.2	0.0
	comp=Z,2.0nm,1.9s						
CMSA	Cobar Meteorol	28.75	151	P	P	14 48 11.2	+0.2
	comp=Z,6.3nm,0.8s						
CAN	Canberra	33.43	151	P	P	14 48 52.2	+0.1
CMAR	Chiang Mai Arr	39.52	310	P	P	14 49 50.1	+6.2
	comp=Z,1.7nm,0.7s,baz=137,slow=6.9,SNR=12						
SONM	Songino Array	58.15	341	P	P	14 52 06.7	+1.0
	comp=Z,0.3nm,0.4s,baz=156,slow=7.3,SNR=2.7						
MK31	Makanchi Array	67.96	327	P	P	14 53 11.2	+0.9
MK31				IAmb	IAmb	14 53 12.0	
	comp=Z,3.6nm,0.8s						
MKAR	Makanchi Array	67.96	327	P	P	14 53 11.2	+0.9
	comp=Z,4.3nm,0.5s,baz=115,slow=8.3,SNR=76						
MAKZ	Makanchi	68.14	327	P	P	14 53 12.3	+0.8
MAKZ				IAmb	IAmb	14 53 13.0	
	comp=Z,3.4nm,0.7s						
AAK	Ala-Archa	70.30	320	P	P	14 53 25.6	+0.5
AAK				IAmb	IAmb	14 53 27.1	
	comp=Z,2.0nm,0.6s						
ZALV	Zalesovo Beam	71.30	334	P	P	14 53 30.2	-0.4
	comp=Z,0.7nm,0.6s,baz=134,slow=8.6,SNR=3.6						
KURK	Kurchatov	72.25	329	P	P	14 53 37.3	+0.9
KURK				IAmb	IAmb	14 53 47.4	
	comp=Z,3.5nm,1.3s						

BUL 25 15:05:21.0±1.1, 20°.65S×30°.72E, h0km±36km, MD4.7

EAF 25 15:05:23.2±0.7, 22°.41S×28°.11E, h11km±25km, MD4.4, Botswana

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	1.77	88	*i* P	Pn	15 05 53.5	-0.3
MSNA	Messina	1.77	88	*i* P	Pn	15 05 53.5	-0.3
MATP	Matopo	2.01	11	*i* P	Pn	15 05 57.3	+0.1
MATP				*i* Sg	Sb	15 06 25.4	+0.6
MATP	Matopo	2.01	11	*i* P	Pn	15 05 57.3	+0.1
MATP				*i* Sg	Sb	15 06 25.4	+0.6
MOPA	Mopani	3.23	111	*i* P	Pn	15 06 13.1	-0.8
MOPA				*i* Sg	Sg	15 07 03.6	-3.3
MOPA	Mopani	3.23	111	*i* P	Pn	15 06 13.1	-0.8
MOPA				*i* Sg	Sg	15 07 03.6	-3.3

SJA 25 15:11:48.4±1.2, 30°.59S×71°.49W, h58km±11km, ML4.5, MW4.2

NEIC 25 15:11:49.9±3.0, 30°.61S±0°.03×71°.40W±0°.06, h35km±1km, mb4.5/14, ML4.5(GUC), Error ellipse: s-maj=9.1km s-min=5.3km az=82.0

IDC 25 15:11:49.7±0.9, 30°.62S×71°.15W, h44km±6km, mb4.1/10, mb1 4.2/15, mb1mx4.0/28, mbtmp4.2/15, ML3.9/5, MS2.9/2, Ms1 2.9/2, ms1mx2.8/18, Error ellipse: s-maj=22.8km s-min=18.7km az=51.0

GUC 25 15:11:50.3±0.7, 30°.59S×71°.29W, h60km±2km, ML4.5

VAO 25 15:11:50.0±0.5, 30°.51S×71°.14W, h35km, mb4.4

ISC 25 15:11:50.0±0.5, 30°.58S±0°.03×71°.34W±0°.04, h49km±5km, n178, σ1ˢ33/196, mb4.4/14, 7C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.27	250	⇑*i*P	Pn	15 12 00.0	+1.2
CO06				*i* S	Sn	15 12 07.6	+2.6
CO06				IAML		15 12 10.6	
	comp=E,24µm,0.4s						
CO06	Fray Jorge	0.27	250		Pn	15 11 58.5	-0.3
CO03	El Pedregal	0.62	115	*e*P	Pn	15 12 03.1	+0.3
CO03				*i* S	Sn	15 12 12.3	+0.3
CO03				IAML		15 12 13.1	
	comp=N,75µm,0.4s						
CO03	El Pedregal	0.62	115		Pn	15 12 02.8	0.0
CO03					Sn	15 12 12.3	+0.3
CO03	El Pedregal	0.62	115	*i* P	Pn	15 12 03.0	+0.3
CO03				*e*S	Sn	15 12 12.5	+0.5
CO03				IAML		15 12 13.0	
	comp=Z,163µm,0.7s						
GO04	Tololo Observa	0.62	49	*e*P	Pn	15 12 03.7	+0.8
GO04				*i* S	Sn	15 12 13.2	+1.0
GO04	Tololo Observa	0.62	49		Pn	15 12 03.5	+0.5
GO04	Tololo Observa	0.62	49	*i* P	Pn	15 12 03.7	+0.8
GO04				*e*S	Sn	15 12 13.2	+1.0
CO05	La Serena	0.67	8	⇑*e*P	Pn	15 12 04.3	+1.1
CO05				*i* S	Sn	15 12 14.2	+1.3
CO05				IAML		15 12 16.4	
	comp=N,28µm,0.4s						
CO05	La Serena	0.67	8		Pn	15 12 04.4	+1.1
CO05					Sn	15 12 14.3	+1.5
LCO	Las Campanas	1.66	20	*i* S	Sn	15 12 38.6	+1.4
LCO	Las Campanas	1.66	20		Pn	15 12 18.1	+1.1
LCO	Las Campanas	1.66	20	*i* P	Pn	15 12 18.0	+1.1
LCO				*e*S	Sn	15 12 39.1	+1.9
LCO				IAML		15 12 40.5	
	comp=Z,20µm,0.2s						
AROD	Rodeo	1.67	76	*i* P	Pn	15 12 19.0	+1.9
ACCO	Cerro Coronel	1.96	91	*i* P	Pn	15 12 24.0	+2.8
ACCO				IAML		15 12 59.3	
	comp=Z,963nm,1.5s						
VA06	Catapilco	1.98	179	*e*P	Pn	15 12 22.1	+1.1
VA06				*i* S	Sn	15 12 45.6	+1.1
VA06				IAML		15 13 00.3	
	comp=N,6µm,0.1s						
RTLS	Leoncito	2.13	125	*i* P	Pn	15 12 26.0	+2.6
RTLS				IAML		15 12 55.8	
	comp=Z,531nm,0.6s						
VA03	San Esteban	2.28	163	*e*P	Pn	15 12 26.3	+1.0
VA03				*i* S	Sn	15 12 53.5	+1.3
VA03				IAML		15 12 57.2	
	comp=E,6µm,0.1s						
VA03	San Esteban	2.28	163		Pn	15 12 26.3	+1.0
VA03	San Esteban	2.28	163	*i* P	Pn	15 12 26.0	+0.7
VA03				IAML		15 12 59.8	
	comp=Z,2µm,0.2s						
AUSP	Uspallata	2.34	135	*i* P	Pn	15 12 29.0	+2.7
AC04	Llanos de Chal	2.38	6	⇑*e*P	Pn	15 12 27.9	+1.4
AC04				*i* S	Sn	15 12 55.6	+1.0
AC04				IAML		15 13 11.4	
	comp=N,2µm,0.2s						
AC04	Llanos de Chal	2.38	6	Pn	Pn	15 12 28.0	+1.4
AC04	Llanos de Chal	2.38	6	*i* P	Pn	15 12 28.0	+1.4
AC04				IAML		15 13 05.6	
	comp=Z,1µm,0.3s						
ROCH	El Roble	2.40	173	*e*P	Pn	15 12 28.2	+1.1
ROCH				*e*P	Pn	15 12 27.8	+0.7
ROCH				*i* S	Sn	15 12 56.5	+1.1
ROCH				*i* S	Sn	15 12 56.8	+1.4

ROCH				IAML		15 13 07.7	
	comp=E,3µm,0.4s						
ROCH				IAML		15 13 09.1	
	comp=N,4µm,0.3s						
ROC1	El Roble	2.41	173	iP	Pn	15 12 27.0	-0.1
VA01	Torpederas	2.45	186	eP	Pn	15 12 28.0	+0.6
VA01				iS	Sn	15 12 57.2	+1.0
VA01				IAML		15 13 05.1	
	comp=E,2µm,0.4s						
VA01	Torpederas	2.45	186		Pn	15 12 27.6	+0.1
ZON	Zonda	2.48	114		Pn	15 12 30.5	+2.6
ZON	Zonda	2.48	114	iP	Pn	15 12 30.0	+2.0
ZON				IAML		15 13 13.2	
	comp=Z,675nm,0.4s						
PEL	Peldehue	2.62	168		Pn	15 12 30.9	+1.1
PEL	Peldehue	2.62	168	iP	Pn	15 12 31.0	+1.1
MT02	Curacav	2.68	176	eP	Pn	15 12 31.1	+0.4
MT02				iS	Sn	15 13 02.6	+0.7
MT02				IAML		15 13 12.0	
	comp=E,1µm,0.6s						
MT02	Curacav	2.68	176		Pn	15 12 31.1	+0.4
MT02	Curacav	2.68	176	iP	Pn	15 12 31.0	+0.4
MT02				IAML		15 13 13.2	
	comp=Z,934nm,0.5s						
RTCV	Cerro Valdivia	2.72	119	iP	Pn	15 12 34.0	+2.7
RTCV				IAML		15 13 26.3	
	comp=Z,220nm,1.0s						
MT05	Renca	2.85	170	eP	Pn	15 12 34.4	+1.3
MT05				iS	Sn	15 13 06.8	+0.6
MT05				IAML		15 13 18.0	
	comp=E,3µm,0.3s						
MT05	Renca	2.85	170		Pn	15 12 34.3	+1.3
MT05	Renca	2.85	170	iP	Pn	15 12 34.0	+0.9
MT05				IAML		15 13 23.6	
	comp=Z,1µm,1.2s						
ASAL	Salagasta	2.93	134	iP	Pn	15 12 37.0	+2.8
ASAL				IAML		15 13 24.4	
	comp=Z,563nm,0.3s						
ARCO	CERRO ARCO	3.05	138	iP	Pn	15 12 39.0	+3.1
ARCO				IAML		15 13 24.0	
	comp=Z,641nm,0.7s						
VA05	Santo Domingo	3.08	184	eP	Pn	15 12 36.1	0.0
VA05				iS	Sn	15 13 18.7	+7.1
VA05				IAML		15 13 27.3	
	comp=E,3µm,0.4s						
VA05	Santo Domingo	3.08	184		Pn	15 12 36.1	0.0
GO03	Copiap	3.13	18		Pn	15 12 38.7	+1.8
GO03	Copiap	3.13	18	iP	Pn	15 12 39.0	+2.1
MT09	Talagante	3.20	175	eP	Pn	15 12 39.0	+1.1
MT09				iS	Sn	15 13 15.2	+0.3
MT09				IAML		15 13 26.1	
	comp=N,1µm,0.7s						
MT09	Talagante	3.20	175		Pn	15 12 39.1	+1.2
MT01	Popeta	3.27	179	⇑iP	Pn	15 12 39.5	+0.6
MT01				iS	Sn	15 13 16.9	+0.3
MT01				IAML		15 13 30.2	
	comp=E,920nm,0.4s						
MT01	Popeta	3.27	179		Pn	15 12 39.5	+0.6
MT01	Popeta	3.27	179	iP	Pn	15 12 39.0	+0.2
MT01				IAML		15 13 26.6	
	comp=Z,758nm,0.5s						
AAGR	Agrelo	3.29	140	iP	Pn	15 12 42.0	+2.9
AAGR				IAML		15 13 29.4	
	comp=Z,458nm,0.5s						
VCA	Vinchina	3.29	57	⇓iP	Pn	15 12 43.2	+4.0
VCA				iS	Sn	15 13 17.8	+0.6
VCA	Vinchina	3.29	57	iP	Pn	15 12 43.0	+3.8
VCA				IAML		15 13 34.6	
	comp=Z,2µm,0.6s						
AVFE	Valle Fertil	3.35	92	iP	Pn	15 12 41.0	+1.0
AVFE				IAML		15 13 32.2	
	comp=Z,561nm,0.3s						
BO04	La Punta	3.46	170	⇑iP	Pn	15 12 42.4	+1.1
BO04				iS	Sn	15 13 21.4	+0.3
BO04				IAML		15 13 40.0	
	comp=N,1µm,0.6s						
BO01	Tunca	3.81	177	⇑eP	Pn	15 12 46.4	+0.3
BO01				IAML		15 13 47.9	
	comp=E,393nm,0.3s						
BO01	Tunca	3.81	177		Pn	15 12 46.7	+0.5
BO01	Tunca	3.81	177	iP	Pn	15 12 47.0	+0.9
BO01				IAML		15 13 53.8	
	comp=Z,361nm,0.6s						
ACLC	CERRO LA CRUZ	3.98	74	iP	Pn	15 12 51.0	+2.3
ACLC				IAML		15 13 43.7	
	comp=Z,1µm,0.4s						
ACHE	Chepes	4.06	99	iP	Pn	15 12 51.0	+1.2
APLL	PUNTA DE LOS L	4.16	89	iP	Pn	15 12 52.0	+1.0
APLL				IAML		15 13 47.7	
	comp=Z,17µm,3.2s						
AC02	Maricunga	4.21	28	eP	Pn	15 12 54.2	+2.2
AC02	Maricunga	4.21	28		Pn	15 12 54.3	+2.2
AC02	Maricunga	4.21	28	iP	Pn	15 12 54.0	+1.9
AC02				IAML		15 14 03.1	
	comp=Z,439nm,0.6s						
BO02	Sierra Bellavi	4.23	174	⇑eP	Pn	15 12 52.9	+0.9
BO02				iS	Sn	15 13 39.3	-0.8
BO02	Sierra Bellavi	4.23	174		Pn	15 12 52.9	+0.9
BO02	Sierra Bellavi	4.23	174	iP	Pn	15 12 53.0	+1.0
BO02				IAML		15 14 02.2	
	comp=Z,433nm,0.8s						
GO05	Huala	4.45	186		Pn	15 12 54.1	-0.8
GO05	Huala	4.45	186	iP	Pn	15 12 54.0	-0.9
RFA	San Rafael	4.83	151	iP	Pn	15 13 01.0	+0.7
RFA				IAML		15 14 34.3	
	comp=Z,130nm,0.9s						
MRA	San Martin	5.14	112	iP	Pn	15 13 05.0	+0.4
MRA				IAML		15 14 10.6	
	comp=Z,159nm,0.6s						
ML02	Panimavida	5.17	181		Pn	15 13 03.9	-0.9
PB14	IPOC Station P	5.99	8	Pn	Pn	15 13 17.0	+0.6
AHML	Horco Molle	6.49	56	iP	Pn	15 13 24.0	+1.0
AHML				IAML		15 14 48.5	
	comp=Z,92nm,0.7s						
H03N1	Juan Fernandez	7.03	244	T	T	15 20 25.9	
	baz=72,slow=72,SNR=2513						
H03N3	Juan Fernandez	7.05	244	T	T	15 20 24.9	
	baz=72,slow=72,SNR=1713						
H03N2	Juan Fernandez	7.05	244	T	T	15 20 26.2	
	baz=72,slow=72,SNR=1829						
PB10	IPOC Station P	7.07	6	Pn	Pn	15 13 30.8	-0.2
PB10	IPOC Station P	7.07	6	iP	Pn	15 13 31.0	0.0
PB10				IAML		15 15 32.2	
	comp=Z,98nm,0.6s						
H03S3	Juan Fernandez	7.18	241	T	T	15 20 39.4	
	baz=84,SNR=13						
H03S1	Juan Fernandez	7.19	241	T	T	15 20 41.9	
	baz=84,SNR=14						
H03S2	Juan Fernandez	7.20	241	T	T	15 20 43.5	
	baz=84,SNR=12						
PB15	IPOC Station P	7.53	13		Pn	15 13 37.4	-0.1
PB15	IPOC Station P	7.53	13	iP	Pn	15 13 38.0	+0.6
PB15				IAML		15 15 46.9	
	comp=Z,234nm,0.4s						
PB06	IPOC Station P	8.00	12	Pn	Pn	15 13 43.1	-0.8
PB06	IPOC Station P	8.00	12	iP	Pn	15 13 44.0	+0.2
PB06				IAML		15 15 45.8	
	comp=Z,132nm,1.0s						
LVC	Limon Verde	8.23	16	P	Pn	15 13 45.9	-1.2
	comp=Z,1.0nm,0.3s,baz=179,slow=9.4,SNR=13						
LVC				S	Sn	15 15 29.0	+10
	comp=Z,3.5nm,0.3s,baz=194,slow=14,SNR=4.7						
LVC				LR	LR	15 17 43.6	
	comp=Z,45nm,18.8s,baz=219,slow=43						
LVC	Limon Verde	8.23	16	eP	Pn	15 13 45.8	-1.4
LVC	Limon Verde	8.23	16	Pn	Pn	15 13 46.8	-0.3
LVC	Limon Verde	8.23	16	iP	Pn	15 13 46.0	-1.2
LVC				IAML		15 15 59.6	
	comp=Z,55nm,1.1s						
PB04	IPOC Station P	8.28	8	Pn	Pn	15 13 47.0	-0.7
LC01	Cunco	8.31	183	Pn	Pn	15 13 46.5	-1.4
AZAP	Zapla	8.44	43	iP	Pn	15 13 51.0	+1.1
AZAP				IAML		15 16 09.3	
	comp=Z,50nm,0.9s						
PB03	IPOC Station P	8.62	10	iP	Pn	15 13 51.0	-1.3
PB03				IAML		15 16 09.7	
	comp=Z,110nm,0.7s						
PB07	IPOC Station P	8.91	9	Pn	Pn	15 13 56.2	-0.2
PB09	IPOC Station P	8.95	13	Pn	Pn	15 13 57.9	+1.1
PB09	IPOC Station P	8.95	13	iP	Pn	15 13 56.0	-0.8
PB09				IAML		15 16 13.6	
	comp=Z,149nm,0.7s						
PLCA	Paso Flores	10.15	177	P	Pn	15 14 13.2	0.0
	comp=Z,0.1nm,0.3s,baz=334,slow=9.6,SNR=5.0						
PLCA	Paso Flores	10.15	177	eP	Pn	15 14 14.6	+1.4
PLCA	Paso Flores	10.15	177	Pn	Pn	15 14 12.6	-0.6
PB11	IPOC Station P	10.88	8	Pn	Pn	15 14 24.3	+1.0
ITQB	Itaqui	12.78	90	eP	Pn	15 14 46.7	-2.2
ITQB	Itaqui	12.78	90	Pn	Pn	15 14 47.2	-1.7
CPUP	Villa Florida	13.03	74	P	Pn	15 14 48.9	-3.6
	comp=Z,0.5nm,0.3s,baz=237,slow=13,SNR=6.8						
CPUP				LR	LR	15 20 24.6	
	comp=Z,80nm,19.5s,baz=210,slow=40						
CPUP	Villa Florida	13.03	74	eP	Pn	15 14 50.0	-2.5
CPUP	Villa Florida	13.03	74	Pn	Pn	15 14 52.0	-0.5
LPAZ	La Paz	14.53	12	P	Pn	15 15 13.9	+0.6
	comp=Z,0.2nm,0.3s,baz=184,slow=8.6,SNR=14						
LPAZ	La Paz	14.53	12	eP	Pn	15 15 12.2	-1.1
LPAZ	La Paz	14.53	12	Pn	Pn	15 15 14.6	+1.2
CPSB	Cacapava Do Su	15.44	94	eP	Pn	15 15 22.2	-2.4
SIV	San Ignacio	17.30	35	P	P	15 15 48.8	-0.2
	comp=Z,0.8nm,0.3s,baz=209,slow=9.4,SNR=41						
AQDB	Aquidauana	17.32	58	eP	Pn	15 15 46.5	-1.8
AQDB	Aquidauana	17.32	58		P	15 15 49.1	-0.1
PTLB	Pontes e Lacer	18.77	39	eP	P	15 16 05.4	+0.3
PTLB	Pontes e Lacer	18.77	39	P	P	15 16 05.3	+0.2
TER01	Tubaro-SC	19.43	90	eP	P	15 16 12.6	+0.2
PP1B	Ponte de Pedra	19.79	53	eP	P	15 16 15.7	-0.6
PCMB	Pacaembu	20.10	68	eP	P	15 16 19.8	+0.1
VILB	Vilhena	20.34	33	eP	P	15 16 22.6	+0.3
VILB	Vilhena	20.34	33	P	P	15 16 21.9	-0.4
VILB				IAmb	IAmb	15 16 27.4	
	comp=Z,16nm,0.7s						
TIJ01	Guaruva-PR	20.40	81	eP	P	15 16 22.3	-0.8
SALV	Santo Antonio	20.46	48	eP	P	15 16 23.8	+0.1
ETMB	Extrema	21.20	14	eP	P	15 16 32.6	+1.0
ETMB	Extrema	21.20	14	P	P	15 16 32.9	+1.2
ETMB				IAmb	IAmb	15 16 36.3	
	comp=Z,8.2nm,0.6s						
PET01	Itanhaem-SP	22.24	79	eP	P	15 16 42.5	-0.2
SPB	Sao Paulo	22.37	78	eP	P	15 16 43.1	-1.0
SPB	Sao Paulo	22.37	78	P	P	15 16 44.9	+0.8
SPB				IAmb	IAmb	15 17 00.1	
	comp=Z,14nm,1.3s						
CZSB	Cruzeiro do Su	22.77	357	eP	P	15 16 48.1	-0.3
RCLB	Rio Claro- Sao	22.78	75	eP	P	15 16 48.3	-0.2
VAO	Valinhos	23.00	77	eP	P	15 16 49.5	-1.4
ARAG	Araguaiana, MT	23.22	55	eP	P	15 16 52.9	0.0
PDRB	Porto dos Gac	23.23	39	eP	P	15 16 53.3	+0.2
DSPA	Despedida	23.46	175	P	P	15 16 55.0	+0.1
PARB	Paraibuna	24.00	79	eP	P	15 16 59.2	-1.2
CLDB	Colider	24.36	40	eP	P	15 17 02.2	-1.3
IPMB	Ipameri, GO	24.47	64	eP	P	15 17 03.3	-1.4
BSCB	Bom Sucesso	25.70	75	eP	P	15 17 15.2	-0.6
BDFB	Brasilia	26.03	60	P	P	15 17 18.1	-0.7
	comp=Z,11nm,0.7s,baz=232,slow=9.9,SNR=25						
BDFB	Brasilia	26.03	60	P	P	15 17 18.2	-0.7
BDFB				IAmb	IAmb	15 17 18.9	
	comp=Z,12nm,0.8s						
SNDB	Serra Nova Dou	26.22	49	eP	P	15 17 19.7	-0.8
VAS01	Vassouras-RJ	26.26	78	eP	P	15 17 20.8	-0.1
NPGB	Novo Progresso	27.80	36	eP	P	15 17 33.4	-1.3
PEXB	Peixe	28.16	54	eP	P	15 17 37.6	-0.2
MC01	Montes Claros	28.55	67	eP	P	15 17 40.3	-1.2
MACA	Manacapuru-AM	29.07	22	eP	P	15 17 46.1	+0.1
JANB	Januaria	29.21	64	eP	P	15 17 46.6	-0.7
SJMB	Sao Joao De Ma	29.76	74	eP	P	15 17 51.6	-0.5
BSFB	Barra de Sao F	29.98	74	eP	P	15 17 53.2	-0.8
SDBA	SAO DESIDERIO	30.40	59	eP	P	15 17 57.2	-0.6
SMTB	Santa Maria do	30.96	51	eP	P	15 18 02.7	0.0
PRPB	Parauapebas	31.60	44	eP	P	15 18 07.7	-0.6
GUA01	Guaratinga, BA	31.96	71	eP	P	15 18 11.4	0.0
CMC01	Camacan, BA	32.84	70	eP	P	15 18 19.3	+0.1
BOAV	Boa Vista	34.38	19	eP	P	15 18 32.6	+0.1
BOAV	Boa Vista	34.38	19	P	P	15 18 31.8	-0.7
BOAV				IAmb	IAmb	15 18 33.3	
	comp=Z,4.2nm,0.7s						
MCPB	Macapa, AP	35.20	35	eP	P	15 18 39.5	-0.1
VNA3	Neumayer Olymp	52.31	159	P	P	15 20 56.4	0.0
VNA2	Neumayer--Watz	52.95	158	P	P	15 21 00.8	-0.1
	baz=290,slow=8.1						
SNAA	Sanae	54.54	159	P	P	15 21 12.3	-0.3
QSPA	South Pole Qui	59.65	180	P	P	15 21 48.8	-0.1
TXAR	Lajitas Array	67.07	330	P	P	15 22 39.8	+1.4
	comp=Z,0.6nm,0.6s,baz=154,slow=9.2,SNR=12						
TXAR				pP	pP	15 22 52.8	+0.5
	comp=Z,0.6nm,0.7s,baz=150,slow=8.3,SNR=5.6						
DBIC	Dimbokro	73.54	72	P	P	15 23 17.9	-0.2
	comp=Z,6.3nm,0.7s,baz=237,slow=3.8,SNR=11						
MAW	Mawson	76.28	164	P	P	15 23 33.2	0.0
	comp=Z,2.4nm,0.5s,baz=240,slow=9.9,SNR=2.0						
ECSD	EROS Data Cent	77.49	342	P	P	15 23 39.7	-0.4
ECSD				IAmb	IAmb	15 23 41.5	
	comp=Z,6.7nm,0.9s						
PDAR	Pinedale Array	81.00	333	P	P	15 24 00.2	+0.6
	comp=Z,0.3nm,0.6s,baz=134,slow=7.7,SNR=4.9						
BOSA	Boshof	81.14	118	P	P	15 24 00.2	-0.5
	comp=Z,4.8nm,0.8s,baz=245,slow=4.0,SNR=7.9						
BOSA	Boshof	81.14	118	IAmb	IAmb	15 24 16.2	
	comp=Z,7.9nm,1.2s						
NVAR	Mina Array Bea	81.43	325	P	P	15 24 03.6	+1.7
	comp=Z,0.2nm,0.4s,baz=159,slow=6.4,SNR=4.0						
TORD	Torodi Ar. Bea	82.49	70	P	P	15 24 07.7	-0.1
	comp=Z,4.5nm,0.6s,baz=273,slow=5.6,SNR=22						
TORD	Torodi Ar. Bea	82.49	70	IAmb	IAmb	15 24 08.3	
	comp=Z,5.6nm,1.1s						
ULM	Lac du Bonnet	83.36	344	P	P	15 24 10.4	-1.0
	comp=Z,1.7nm,0.4s,baz=144,slow=8.4,SNR=3.6						
ULM	Lac du Bonnet	83.36	344	IAmb	IAmb	15 24 11.3	
	comp=Z,11nm,1.4s						
YKA	Yellowknife Ar	99.02	341	P	Pdif	15 25 24.3	-0.5
	comp=Z,0.2nm,0.6s,baz=145,slow=4.4,SNR=8.1						
YKA				pP	pP	15 25 39.8	+0.4
	comp=Z,0.2nm,0.6s,baz=143,slow=4.6,SNR=2.7						
ZALV	Zalesovo Beam	151.00	30	PKPbc	PKPbc	15 31 37.0	0.0
	comp=Z,8.6nm,0.5s,baz=305,slow=3.2,SNR=40						
ZALV	Zalesovo Beam	151.00	30		PKPbc	15 31 36.6	-0.3
MKAR	Makanchi Array	153.99	44	PKPbc	PKPbc	15 31 43.2	-0.8
	comp=Z,0.6nm,0.8s,baz=296,slow=0.8,SNR=5.8						
MKAR				pPKPbc	sPKPdf	15 31 56.5	+0.2
	comp=Z,0.6nm,0.6s,baz=292,slow=3.5,SNR=5.2						
WMQ	Urumqi	158.78	46	eP	PKPdf	15 31 43.8	+1.5
HHC	Hu-ho-hao-te	169.49	348	eP	PKPdf	15 31 53.5	+1.5

IDC 25 15:21:28.4±2.1**, 3°.72S**×**130°.39E, h0**^{km}**, mb3.6**/2**, mb1 3.9**/3**, mb1mx3.5**/30**, mbtmp3.7**/3**, ML3.3**/1**, MS3.1**/1**, Ms1 3.0**/1**, ms1mx2.6**/22**, Error ellipse: s-maj=168.9km s-min=5.4km az=71.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.58	167	Pn	Pn	15 25 21.4	-1.1
	0.1nm,0.3s,baz=349,slow=13,SNR=2.3						
ASAR	Alice Springs	20.12	171	P	P	15 26 04.2	0.0
	2.9nm,0.9s,baz=350,slow=11,SNR=26						
STKA	Stephens Creek	29.93	161	LR	LR	15 41 59.9	
	comp=Z,33nm,18.2s,baz=26,slow=41						
MKAR	Makanchi Array	65.72	326	P	P	15 32 15.0	0.0
	0.5nm,0.6s,baz=113,slow=7.8,SNR=11						

MAN 25 15:25:15.1, 9°.92N×**126°.11E, h32**^{km}**, mb4.2, ML3.0, MS2.7, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	1.25	280	⇑eP	Pn	15 25 37.0	+0.6
MSLP				eS	Sn	15 25 52.0	-0.1

IDC ***25*** *15:48:06.3±2.0, 6°.58S×129°.76E, h136*^{km}*±21*^{km}*, mb3.7/5, mb1 4.0/10, mb1mx3.5/33, mbtmp4.4/10, Error ellipse: s-maj=23.1km s-min=13.7km az=63.0*

NEIC ***25*** *15:48:07.9±2.5, 6°.52S±0°.08×129°.94E±0°.04, h151*^{km}*±9*^{km}*, mb4.2/13, Error ellipse: s-maj=11.4km s-min=4.6km az=161.0*

DJA ***25*** *15:48:08.3±0.2, 7°S±2°×13°0E±°, h139*^{km}*±8*^{km}*, M4.7/15, mB5.2/7, mb4.7/15, MLv4.9/13, Mw(mB)4.6/7*

ISC 25 15:48:07.5±0.5**, 6°.56S**±0°.05×**129°.99E**±0°.06**, h150**^{km}**, n83,** σ**1**^{s}**.72**/86**, mb4.3**/19**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.92	138	P	Pn	15 48 42.8	+1.1
SAUI	Saumlaki	1.92	138	Pn	Pn	15 48 44.4	+2.6
SAUI	Saumlaki	1.92	138	P	Pn	15 48 44.0	+2.3
BNDI	Bandanaira	2.02	358	P	Pn	15 48 45.5	+2.6
MSAI	Masohi	3.36	342	P	Pn	15 49 00.6	+1.1
AAI	Ambon	3.37	328	P	Pn	15 49 00.9	+1.4
FAKI	Fak Fak	4.25	32	P	Pn	15 49 10.7	-0.4
FAKI	Fak Fak	4.25	32	Pn	Pn	15 49 10.1	-1.1
FAKI	Fak Fak	4.25	32	P	Pn	15 49 10.3	-0.8
SIJI	Sorong	5.79	13	P	Pn	15 49 30.4	-1.1
	29nm,0.3s,baz=199,slow=24,SNR=174						
SIJI				S	Sn	15 50 31.2	-5.9
	15nm,0.3s,baz=116,slow=7.0,SNR=3.6						
SWI	Sorong	5.79	13	P	Pn	15 49 30.8	-0.7
DRS	Darwin Rock St	5.91	171	P	Pn	15 49 32.8	-0.2
	180nm,0.7s						
SANI	Sanana	6.00	318	P	Pn	15 49 35.7	+1.5
	0.1nm30nm,0.8s						
SANI	Sanana	6.00	318	P	Pn	15 49 36.0	+1.8
MTN	Manton Dam	6.35	170	Pn	Pn	15 49 39.3	+0.5
MTN	Manton Dam	6.35	170	P	Pn	15 49 38.6	-0.3
LBMI	Labuha	6.38	337	P	Pn	15 49 40.5	+1.2
	0.4nm939nm116nm,0.8s						
SOEI	Soe	6.50	240	P	Pn	15 49 41.7	+0.7
	0.7nm98nm,0.8s						
SOEI	Soe	6.50	240	Pn	Pn	15 49 41.5	+0.5
SOEI	Soe	6.50	240	P	Pn	15 49 41.7	+0.7
KDU	Kakadu	6.57	158	P	Pn	15 49 41.3	-0.5
	120nm,0.5s						
BATI	Baumata	7.24	239	P	Pn	15 49 47.8	-3.0
	39nm,0.3s,baz=88,slow=2.7,SNR=13						
BATI				S	Sn	15 51 09.9	-1.9
	31nm,0.3s,baz=199,slow=22,SNR=12						
BATI	Baumata	7.24	239	P	Pn	15 49 50.7	-0.1
	0.5nm3µm110nm,0.8s						
BATI				S	Sn	15 51 12.1	+0.3
	0.5nm3µm110nm,0.8s						
SRPI	Serui, Papua	7.78	54	P	Pn	15 49 58.0	0.0
	0.4nm64nm,0.6s						
EDFI	Ende, Flores	8.51	255	P	Pn	15 50 10.3	+2.4
	15nm,1.1s						
KNRA	Kununurra	9.14	187	Pn	Pn	15 50 14.5	-1.7
KNRA	Kununurra	9.14	187	P	Pn	15 50 13.9	-2.3
	72nm,0.6s						
APSI	Ampana	10.04	304	P	Pn	15 50 31.4	+3.4
	30nm,0.9s						
MRSI	Marisa	10.65	311	P	Pn	15 50 37.9	+1.8
	942nm103nm,0.8s						
TOLI2	Tolitoli	11.94	309	P	Pn	15 50 54.2	+1.2
FITZ	Fitzroy Crossi	12.23	200	P	Pn	15 50 54.3	-2.5
	3.8nm,0.3s,baz=36,slow=12,SNR=54						
FITZ				S	Sn	15 53 00.9	-11
	3.9nm,0.3s,baz=83,slow=14,SNR=4.7						
WB0	Warramunga Arr	13.81	162		Pn	15 51 15.4	-1.7
WRAB	Tennant Creek	13.96	163		Pn	15 51 16.8	-2.2
WRA	Warramunga Arr	13.96	163	P	Pn	15 51 17.3	-1.7
	2.2nm,0.3s,baz=340,slow=13,SNR=38						
WRA				S	Sn	15 53 43.9	-10
	6.8nm,0.3s,baz=317,slow=19,SNR=13						
WRA	Warramunga Arr	13.96	163	Pn	Pn	15 51 15.8	-3.2
WB2	Warramunga Arr	13.96	163	Pn	Pn	15 51 16.7	-2.3
WR0	Warramunga Arr	14.04	162	Pn	Pn	15 51 17.9	-2.0
COEN	Coen	14.91	121	Pn	Pn	15 51 29.9	-0.9
COEN	Coen	14.91	121	P	Pn	15 51 30.6	-0.3
	64nm,0.8s						
QIS	Mount Isa	16.75	147	P	P	15 51 53.5	+0.3
	26nm,0.8s						
PMG	Port Moresby	17.23	101	P	Pn	15 52 01.9	+2.6
	0.6nm,0.3s,baz=276,slow=6.4,SNR=9.4						
AS31	Alice Springs	17.42	168	Pn	Pn	15 52 02.0	+0.4
AS31				IAmb	IAmb	15 52 14.0	
	comp=Z,5.3nm,0.3s						
ASAR	Alice Springs	17.43	168	P	P	15 52 01.9	+1.3
	comp=Z,1.0nm,0.3s,baz=343,slow=7.6,SNR=95						
ASAR				S	S	15 55 09.3	-5.1
	comp=Z,2.0nm,0.3s,baz=354,slow=25,SNR=9.9						
ASAR	Alice Springs	17.43	168	P	P	15 52 01.7	+1.1
MBWA	Marble Bar	17.59	213	P	P	15 52 01.7	-0.7
PSA00	Pilbara Seismi	17.86	212	P	P	15 52 05.1	-0.3
PSA00	Pilbara Seismi	17.86	212		P	15 52 05.0	-0.3
PSA00				IAmb	IAmb	15 52 06.6	
	comp=Z,8.8nm,0.6s						
PSA00	Pilbara Seismi	17.86	212	P	P	15 52 05.3	-0.1
	comp=Z,44nm,0.5s						
MTSU	Mount Surprise	18.10	131	P	P	15 52 09.2	+1.2
	comp=Z,7.0nm,0.8s						
WRKA	Warakurna	18.45	185	P	P	15 52 12.3	+0.5
	comp=Z,24nm,0.9s						
PBKI	Pangkalan Bun	18.66	281	P	Pn	15 52 39.1	+23
CTA	Charters Tower	20.74	132	P	P	15 52 38.5	+2.1
	comp=Z,4.9nm,0.5s,baz=302,slow=9.9,SNR=10						
CTAO	Charters Tower	20.74	132	P	P	15 52 37.0	+0.5
CTAO				IAmb	IAmb	15 52 40.9	
	comp=Z,11nm,0.8s						
CTAO	Charters Tower	20.74	132	P	P	15 52 38.1	+1.6
MEEK	Meekatharra	22.72	207	P	P	15 52 56.7	-0.1
	comp=Z,20nm,1.3s						
INKA	Innaminka	23.41	155	P	P	15 53 04.5	+1.4
	comp=Z,27nm,1.1s						
MULG	Mulgathing	23.91	171	P	P	15 53 08.3	+0.7
	comp=Z,22nm,2.1s						
QLP	Quilpie	24.10	147	P	P	15 53 09.5	+0.2
	comp=Z,15nm,0.6s						
LCRK	Leigh Creek	24.99	163	P	P	15 53 19.7	+2.3
	comp=Z,23nm,0.8s						
RK1H	Rockhampton Ha	25.87	132	P	P	15 53 26.6	+1.2
	comp=Z,5.2nm,0.8s						
BBOO	Buckleboo	26.73	169	P	P	15 53 32.7	-0.3
BBOO	Buckleboo	26.73	169	P	P	15 53 35.8	+2.8
	comp=Z,20nm,2.1s						
STKA	Stephens Creek	27.43	158	P	P	15 53 39.7	+0.4
	comp=Z,2.6nm,0.5s,baz=336,slow=7.9,SNR=20						
STKA	Stephens Creek	27.43	158	P	P	15 53 39.5	+0.3
STKA	Stephens Creek	27.43	158	P	P	15 53 39.1	-0.2
	comp=Z,1.9nm,2.9s						
EIDS	Eidsvold	27.51	135	P	P	15 53 40.0	0.0
EIDS				IAmb	IAmb	15 53 44.5	
	comp=Z,6.8nm,1.1s						
CMSA	Cobar Meteorol	28.87	151	P	P	15 53 52.5	+0.4
	comp=Z,12nm,1.0s						
ARMA	Armidale	31.25	142	P	P	15 54 14.7	+1.5
ARMA				IAmb	IAmb	15 54 25.9	
	comp=Z,7.4nm,1.1s						
ARMA	Armidale	31.25	142	P	P	15 54 14.8	+1.5
	comp=Z,15nm,2.4s						
ARPS	Mount Arapiles	31.96	162	P	P	15 54 20.1	+0.8
	comp=Z,21nm,0.6s						
CAN	Canberra	33.55	151	P	P	15 54 33.7	+0.6
CAN	Canberra	33.55	151	P	P	15 54 34.5	+1.4
CNB	Canberra Magne	33.72	151	P	P	15 54 36.5	+1.9
	comp=Z,32nm,2.7s						
CMAR	Chiang Mai Arr	39.44	310	P	P	15 55 21.9	-1.3
	comp=Z,0.7nm,0.5s,baz=135,slow=7.2,SNR=8.2						
HHC	Hu-ho-hao-te	50.12	342	eP	P	15 56 50.5	+3.0
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,260nm,6.6s						
WMQ	Urumqi	63.02	327	eP	P	15 58 21.3	+2.7
MK31	Makanchi Array	67.85	327	P	P	15 58 49.4	-0.2
MK31				IAmb	IAmb	15 58 49.7	
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	67.85	327	P	P	15 58 49.5	-0.1
	comp=Z,1.8nm,0.4s,baz=114,slow=8.5,SNR=50						
MKAR	Makanchi Array	67.85	327	P	P	15 58 49.3	-0.2
MAKZ	Makanchi	68.03	327	P	P	15 58 50.3	-0.4
MAKZ				IAmb	IAmb	15 58 51.0	
	comp=Z,1.9nm,0.6s						
VNDA	Vanda	72.89	173	P	P	15 59 19.5	-0.1
	comp=Z,0.7nm,0.6s,baz=320,slow=7.9,SNR=1.8						
VNDA	Vanda	72.89	173	P	P	15 59 18.8	-0.9
QSPA	South Pole Qui	83.42	180	P	P	16 00 17.0	-0.9

NNC 25 15:54:12.9±13.0**, 37°.03N**×**71°.00E, h0**^{km}**, mb3.8, mpv3.4, 1C-5D, Error ellipse: s-maj=108.1km s-min=99.1km az=152.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK08	Karatay Array	6.08	356	⇓P	Pn	15 55 43.5	-0.5
	0.6nm,0.3s,baz=176,slow=13						
KK08				⇑S	Sn	15 56 55.1	+0.8
	2.1nm,0.6s,baz=189,slow=21						
AAK	Ala-Archa	6.21	25	⇓P	Pn	15 55 46.5	+0.5
	1.6nm,0.4s						
AAK				⇓S	Sn	15 57 03.2	+5.5
	3.9nm,0.9s						
TKM2	Tokmak 2	6.86	30	⇓P	Pn	15 55 55.1	+0.2

	2.2nm,0.4s						
TKM2				⇓S	Sn	15 57 10.2	-3.6
	1.0nm,0.8s						

BJI ***25*** *16:42:22.8±0.0, 39°.53N×141°.52E, h36^{km}, mB5.0/17, mb4.5/25, Ms4.2/4, Ms7 4.1/2*
JMA ***25*** *16:42:23.2, 39°.67N×141°.47E, h14^{km}±1^{km}, M4.4 Broadband fault plane solution: P waves. NP1: ϕ_s104.00000°, δ31.00000°, λ64.00000°. NP2: ϕ_s314.00000°, δ62.00000°, λ105.00000°. Principal axes: T Plg69.0000°, Azm255.0000°; N Plg13.0000°, Azm127.0000°; P Plg16.0000°, Azm33.0000°;*
JMA Felt III J1.
NIED ***25*** *16:42:23.3, 39°.68N×141°.47E, h14^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.59; $M_{\theta\theta}$-6.35; $M_{\phi\phi}$1.76; $M_{r\theta}$-2.09; $M_{\theta\phi}$4.56; $M_{\phi r}$6.23; Fault plane solution: $M_0$9.81000×10^{14} NP1: ϕ_s327.00000°, δ72.00000°, λ126.00000°. NP2: ϕ_s80.00000°, δ40.00000°, λ28.00000°.*
MOS ***25*** *16:42:25.2±1.2, 39°.74N×141°.50E, h41^{km}, mb4.7/13 Error ellipse: s-maj=8.4km s-min=5.4km az=88.3*
IDC ***25*** *16:42:27.4±2.0, 39°.67N×141°.30E, h43^{km}±19^{km}, mb4.0/21, mb1 4.2/25, mb1mx4.0/45, mbtmp4.2/25, ML4.3/2, MS3.0/6, Ms1 3.0/6, ms1mx2.8/42, Error ellipse: s-maj=15.8km s-min=12.6km az=101.0*
NEIC ***25*** *16:42:28.1±1.9, 39°.77N±0°.05×141°.29E±0°.08, h48^{km}±6^{km}, mb4.7/17, Error ellipse: s-maj=9.1km s-min=6.9km az=75.0*
KMA ***25*** *16:42:34.5, 39°.93N×140°.81E, h15^{km}*
ISC 25 16:42:23.5±0.8**, 39°.69N**±0°.02×**141°.48E**±0°.03**, h14**^{km}±5^{km}**, n196, σ1^{s}.74**/202**, mb4.5**/53**, 23C-17D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOM	Ohasama	0.26	215	⇓P	Pg	16 42 28.3	-0.7
JOM				S	Sg	16 42 32.1	-0.6
MIYJ	Miyakonagasawa	0.28	113	⇑P	Pg	16 42 29.3	-0.1
MIYJ				S	Sg	16 42 33.3	-0.1
JKZ	Kuzumaki	0.32	338	⇓P	Pg	16 42 29.8	-0.3
JKZ				S	Sg	16 42 33.9	-0.7
JTH	Tanohata	0.39	49	⇓P	Pg	16 42 31.2	0.0
JTH				S	Sg	16 42 36.7	+0.2
JSZI	Iwateshizukuis	0.41	278	⇓P	Pg	16 42 31.5	-0.2
JSZI				S	Sg	16 42 37.3	0.0
OFUJ	Ofunato	0.62	167	⇓P	Pg	16 42 34.7	-0.9
OFUJ				S	Sg	16 42 43.0	-0.9
JANG	Nango	0.69	2	⇓P	Pg	16 42 36.1	-0.8
JANG				S	Sg	16 42 45.8	-0.1
JRG	Rokugo	0.72	246	⇓P	Pg	16 42 36.7	-0.7
JRG				S	Sg	16 42 46.0	-0.9
JMK	Ichinoseki	0.76	196	⇓P	Pg	16 42 36.7	-1.6
JMK				S	Sg	16 42 47.2	-1.1
JAH	Hinai	0.82	308	⇑P	Pb	16 42 38.8	-0.7
JAH				S	Sb	16 42 49.6	-0.9
JTM	Tenmabayashi	1.14	344	Pn	Pn	16 42 44.3	-0.8
JMM	Marumori	1.90	197		Pn	16 42 55.2	-0.2
ERM	Erimo	2.65	28	P	Pn	16 43 07.4	+1.7
ERM	Erimo	2.65	28		Pn	16 43 07.4	+1.7
JSD	Sado	3.01	238	Pn	Pn	16 43 10.8	+0.1
JEW	Eniwo	3.15	360	Pn	Pn	16 43 13.6	+1.0
JYT	Yasato	3.60	197	Pn	Pn	16 43 18.9	+0.1
MJAR	Matsushiro Arr	4.07	220	P	Pn	16 43 26.7	+1.5
	1.1nm,0.3s,baz=28,slow=14,SNR=44						
MJB9	Matsu-Tunnel	4.07	221		Pn	16 43 26.8	+1.6
MAJO	Matsushiro	4.07	220	d iP	Pn	16 43 26.8	+1.5
MAJO	Matsushiro	4.07	220	Pn	Pn	16 43 26.8	+1.5
MAT	Matsushiro	4.07	220	P	Pn	16 43 26.5	+1.2
MAT				eS	Sn	16 44 15.0	+2.3
ASAJ	Asahikawa	4.50	10	P	Pn	16 43 32.7	+1.4
	16nm,0.3s,baz=211,slow=12,SNR=136						
ASAJ	Asahikawa	4.50	10	P	Pn	16 43 33.0	+1.8
JKA	Kamikawa-asahi	4.50	10	Pn	Pn	16 43 33.0	+1.8
NMR	Nemuro--Hokkai	4.87	40	eP	Pn	16 43 34.7	-1.5
NMR				eS	Sn	16 44 30.2	-2.1
GLVR	Golovnino	5.05	35	eP	Pn	16 43 38.7	0.0
GLVR				eS	Sn	16 44 36.9	+0.1
GLVR				smax	smax		
	comp=E,395nm,0.4s						
GLVR				smax	smax		
	comp=N,327nm,0.2s						
JGF	Kuroka	5.23	220		Pn	16 43 44.6	+3.3
RUSJ	Misakicho	5.23	31	eP	Pn	16 43 41.9	+0.7
RUSJ				eS	Sn	16 44 43.7	+2.4
YUK	Yuzh-Kuril'sk	5.44	36	eP	Pn	16 43 43.7	-0.3
YUK				eS	Sn	16 44 45.5	-0.8
YUK				pmax	pmax		
	comp=Z,165nm,0.3s						
YUK				smax	smax		
	comp=N,248nm,0.4s						
YUK				smax	smax		
	comp=E,168nm,0.4s						
INU	Inuyama	5.60	221	Pn	Pn	16 43 48.7	+2.4
SHO	Shikotan	5.78	42	eP	Pn	16 43 46.7	-2.1
SHO				eS	Sn	16 44 49.3	-5.6
SHO				pmax	pmax		
	comp=Z,18nm,0.3s						
SHO				smax	smax		
	comp=N,123nm,0.3s						
SHO				smax	smax		
	comp=E,132nm,0.2s						
JWT	Wachi	6.54	230	Pn	Pn	16 44 02.7	+3.5
JHJ	Hachijo jima 2	6.70	192	P	Pn	16 44 02.4	+1.0
	comp=E,13nm,0.3s,baz=231,slow=16,SNR=2.4						
KUR	Kuril'sk	7.28	38	eP	Pn	16 44 09.9	+0.6
KUR				eS	Sn	16 45 31.7	0.0
KUR				pmax	pmax		
	comp=Z,79nm,0.5s						
KUR				smax	smax		
	comp=N,67nm,0.7s						
KUR				smax	smax		
	comp=E,31nm,0.3s						
YSS	Yuzh-Sakhalins	7.32	7	eP	Pn	16 44 11.0	+1.1
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
JHS	Saijyo	8.14	238	Pn	Pn	16 44 24.1	+2.8
USA0B	Ussuriysk Arra	8.39	306	P	Pn	16 44 26.1	+1.6
USA0B	Ussuriysk Arra	8.39	306	Pn	Pn	16 44 26.1	+1.6
USRK	Ussuriysk Ar.	8.39	306	P	Pn	16 44 25.2	+0.7
	baz=114,slow=14,SNR=15						
USRK				LR	LR	16 47 44.2	
	comp=Z,64nm,18.4s,baz=69,slow=38						
USRK	Ussuriysk Ar.	8.39	306	P	Pn	16 44 26.1	+1.6
USRK	Ussuriysk Ar.	8.39	306	Pn	Pn	16 44 26.1	+1.6
IMWB	Imwonan-gil	9.83	259	P	Pn	16 44 47.4	+3.1
	SNR=31						
KSJMJ	Jumunjin	10.10	264	P	Pn	16 44 51.5	+3.5
	SNR=37						
MDJ	Mudanjiang	10.11	303	P	Pn	16 44 49.0	+0.9
MDJ				sP		16 45 03.5	
MDJ				pmax	pmax		
	comp=Z,39nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,310nm,5.4s						
MDJ				LR	LR		
	comp=Z,220nm,5.1s						
MDJ				LR	LR		
	comp=Z,230nm,4.7s						
KSTBA	Taebaek	10.16	259	P	Pn	16 44 52.7	+3.8
	SNR=13						
KSSKC	Sokcho	10.19	266	P	Pn	16 44 52.4	+3.1
	SNR=6.6						
KSDGY	Daegwallycong	10.21	263	P	Pn	16 44 54.0	+4.3
	SNR=14						
CHYB	Chungyang	10.25	258	P	Pn	16 44 54.0	+3.9
	SNR=9.5						
SEHB	SEOHWA	10.40	266	P	Pn	16 44 55.8	+3.7
	SNR=20						
KSYOW	Yeongwol	10.53	260	P	Pn	16 44 58.0	+4.1
	SNR=16						
KSIJA	INJE	10.57	265	P	Pn	16 44 58.3	+3.8
	SNR=52						
YOJB	Youngju	10.57	259	P	Pn	16 44 59.0	+4.4
	SNR=7.9						
JNU	Nakatsue	10.76	236	LR	LR	16 48 50.7	
	comp=Z,3µm,21.5s,baz=50,slow=36						
KSWJU	Wonju	10.77	262	P	Pn	16 45 01.3	+4.1
	SNR=14						
KSCHC	Chuncheon	10.85	264	P	Pn	16 45 02.0	+3.7
	SNR=64						
KSRS	Korea Array	10.85	262	P	Pn	16 45 03.0	+4.8
	comp=Z,3.6nm,0.3s,baz=71,slow=14,SNR=43						
KSRS				S	Sn	16 47 03.5	+4.0
	comp=Z,1.2nm,0.3s,baz=74,slow=24,SNR=6.9						
KSRS				LR	LR	16 48 47.0	
	comp=Z,115nm,19.9s,baz=60,slow=35						
KS19	Wonju Array Si	10.88	263		Pn	16 45 01.3	+2.6
KSAR	Wonju Array Be	10.88	262	P	Pn	16 45 02.2	+3.4
KSAR	Wonju Array Be	10.88	262	Pn	Pn	16 45 02.2	+3.4
KSCHJ	Chungju	10.98	259	P	Pn	16 45 04.4	+4.3
	SNR=20						
KSBON	Boeun	11.24	258	P	Pn	16 45 07.9	+4.2
	SNR=10						
OKCB	Cheongsan-myeo	11.30	257	P	Pn	16 45 09.0	+4.5
	SNR=14						
KSCEA	Cheonan	11.54	260	P	Pn	16 45 12.2	+4.4
	SNR=10						
KLR	Kul'dur	11.79	327	P	Pn	16 45 16.5	+5.3
	comp=Z,0.2nm,0.3s,baz=125,slow=14,SNR=2.7						
KLR				LR	LR	16 49 27.8	
	comp=Z,36nm,18.5s,baz=197,slow=36						
HAWB	Hwaseong-si	11.83	262	P	Pn	16 45 16.7	+4.9
	SNR=18						
KSGAH	Ganghwa	11.92	265	P	Pn	16 45 17.3	+4.4
	SNR=9.4						
YPDB	Yeonpyeongdo	12.51	265	P	Pn	16 45 26.0	+5.0
	SNR=12						
ZEA	Zeya	17.06	330	eP	Pn	16 46 22.1	+0.7
PETK	Petropavlovsk-	17.41	34	LR	LR	16 52 47.3	
	comp=Z,80nm,19.4s,baz=40,slow=35						
NJ2	Nanjing	19.83	254	eP	P	16 46 51.8	-1.9
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
HHC	Hu-ho-hao-te	22.81	283	eP	P	16 47 24.8	-1.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,6.6s						
YAK	Yakutsk	23.50	346	P	P	16 47 31.4	-1.2
	comp=Z,3.4nm,0.3s,baz=34,slow=5.7,SNR=4.0						
YAK	Yakutsk	23.50	346	⇓eP	P	16 47 32.0	-0.6
YAK				pmax	pmax		
	comp=Z,12nm,0.8s						
SEY	Seymchan	24.18	12	P	P	16 47 39.5	+0.4
	comp=Z,6.8nm,0.8s,baz=177,slow=10,SNR=8.2						
SEY	Seymchan	24.18	12	⇓eP	P	16 47 40.5	+1.4
ULN	Ulaanbaatar	26.00	300	⇓eP	P	16 47 57.1	+1.2
ULN				pmax	pmax		
	comp=Z,14nm,2.5s						
SONM	Songino Array	26.44	300	P	P	16 47 59.1	-0.7
	comp=Z,1.1nm,0.9s,baz=45,slow=4.4,SNR=3.7						
SONM				LR	LR	16 58 56.8	
	comp=Z,35nm,21.6s,baz=343,slow=38						
SONM	Songino Array	26.44	300	P	P	16 47 58.0	-1.9
SONM				pmax	pmax		
	comp=Z,6.0nm,1.8s						
SONM	Songino Array	26.44	300	P	P	16 47 58.0	-1.9
H11N2	WAKE ISLAND Hy	29.54	125	T	T	17 19 02.9	
	baz=317,slow=75,SNR=848						
H11N1	WAKE ISLAND Hy	29.55	125	T	T	17 18 58.6	
	baz=317,slow=75,SNR=909						
H11N3	WAKE ISLAND Hy	29.56	125	T	T	17 19 02.5	
	baz=317,slow=75,SNR=711						
H11S1	WAKE ISLAND Hy	30.33	127	T	T	17 19 58.7	
	baz=318,slow=76,SNR=136						
H11S3	WAKE ISLAND Hy	30.33	127	T	T	17 19 55.6	
	baz=318,slow=76,SNR=310						
H11S2	WAKE ISLAND Hy	30.35	127	T	T	17 20 00.1	
	baz=318,slow=76,SNR=109						
BILL	Bilibino	31.48	18	eP	P	16 48 47.6	+3.3
BILL				e		16 49 49.4	
BILL				ePPP	PPP	16 49 57.6	
BILL				e		16 51 36.7	
BILL				pmax	pmax		
	comp=Z,51nm,3.3s						
PATS	Pohnpei	36.04	151	P	P	16 49 23.9	-0.5
DGZ	Jazzator, Alta	38.93	303	⇑iP	P	16 49 48.6	-0.3
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ	Urumqi	39.75	294	eP	P	16 49 57.0	+1.3
ZAA0	Zalesovo Array	40.21	310	P	P	16 49 58.3	-1.0
ZAA0				IAmb	IAmb	16 49 59.0	
	comp=Z,3.5nm,0.6s						
ZALV	Zalesovo Beam	40.21	310	P	P	16 49 58.8	-0.5
	comp=Z,4.5nm,0.6s,baz=87,slow=7.3,SNR=20						
ZALV				PcP	PcP	16 52 02.4	-0.6
	comp=Z,1.3nm,0.5s,baz=104,slow=2.6,SNR=4.8						
ZALV	Zalesovo Beam	40.21	310	i P	P	16 49 58.5	-0.7
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZALV	Zalesovo Beam	40.21	310	P	P	16 49 58.2	-1.1
NRIK	Noril'sk	40.90	334	P	P	16 50 03.8	-0.9
	comp=Z,1.4nm,0.4s,baz=75,slow=2.2,SNR=4.0						
CMAR	Chiang Mai Arr	42.28	253	P	P	16 50 16.8	+0.1
	comp=Z,0.9nm,0.8s,baz=47,slow=6.0,SNR=7.5						
CMAR	Chiang Mai Arr	42.28	253	c eP	P	16 50 16.5	-0.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK31	Makanchi Array	42.80	300	P	P	16 50 18.5	-2.2
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	Makanchi Array	42.80	300	P	P	16 50 18.5	-2.2
MKAR	Makanchi Array	42.80	300	P	P	16 50 19.8	-0.9
	comp=Z,3.2nm,0.8s,baz=86,slow=9.7,SNR=25						
MAKZ	Makanchi	43.01	300	P	P	16 50 20.0	-2.4
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MAKZ	Makanchi	43.01	300	P	P	16 50 20.0	-2.4
KURK	Kurchatov	44.38	306	⇓iP	P	16 50 32.4	-0.8
KURK				pmax	pmax		
	comp=Z,13nm,1.3s						
KURK	Kurchatov	44.38	306	P	P	16 50 31.8	-1.5
KURK				IAmb	IAmb	16 50 33.8	
	comp=Z,7.7nm,0.7s						
JIRN	Jiri	46.89	273	eP	P	16 50 52.6	-1.3
GUN	Gumba	47.01	273	eP	P	16 50 53.5	-1.2
	comp=Z,12nm,0.5s						
ILAR	Eielson Array	47.24	34	P	P	16 50 56.6	+1.0
	comp=Z,1.8nm,0.6s,baz=268,slow=6.3,SNR=14						
PKIN	Phulchoki	47.54	273	eP	P	16 50 57.1	-1.7
GKN	Gorkha	47.92	274	eP	P	16 51 00.0	-1.6
	comp=Z,5.4nm,0.4s						
DANN	Dangsing	48.42	275	eP	P	16 51 04.3	-1.4
	comp=Z,26nm,0.6s						
SCRK	Sand Creek	48.58	35	P	P	16 51 06.3	+0.1
SCRK				IAmb	IAmb	16 51 12.0	
	comp=Z,42nm,2.0s						
KAPI	Kappang	48.79	209	LR	LR	17 10 12.5	
	comp=Z,25nm,20.5s,baz=300,slow=34						
BRVK	Borovoye	48.91	311	P	P	16 51 08.3	-0.5
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRVK	Borovoye	48.91	311	P	P	16 51 08.3	-0.5
BRVK				IAmb	IAmb	16 51 09.0	
	comp=Z,4.7nm,0.7s						
AAK	Ala-Archa	49.32	296	⇑eP	P	16 51 11.5	-0.7
INK	Inuvik	52.01	28	P	P	16 51 32.3	+0.4
INK				pmax	pmax		
	comp=Z,35nm,1.9s						
INK	Inuvik	52.01	28	P	P	16 51 32.3	+0.4
INK				IAmb	IAmb	16 51 38.5	
	comp=Z,35nm,1.9s						
SVE	Sverdlovsk	53.22	317	eP	P	16 51 41.0	0.0
SVE				pmax	pmax		
	comp=Z,17nm,0.7s						
ARU	Arti	54.43	317	d iP	P	16 51 49.5	-0.4
ARU						16 53 50.3	
ARU				S	S	16 59 28.3	+0.5
ARU				SS	SS	17 03 07.5	-2.0
ARU				pmax	pmax		
	comp=Z,76nm,3.3s						
ARU	Arti	54.43	317	P	P	16 51 48.3	-1.6
ABKAR	Akbulak array	56.30	309	P	P	16 52 02.5	-1.0
ABKAR	Akbulak array	56.30	309	P	P	16 52 02.4	-1.0
ABKAR				IAmb	IAmb	16 52 03.3	
	comp=Z,12nm,0.6s						
KIRV	Kirov	58.18	322	⇓eP	P	16 52 16.3	-0.3
WRA	Warramunga Arr	59.69	188	P	P	16 52 26.2	-1.2
	comp=Z,2.9nm,0.5s,baz=5.2,slow=7.1,SNR=24						
RES	Resolute Bay	60.02	15	P	P	16 52 28.8	-0.3
RES				pmax	pmax		
	comp=Z,9.0nm,1.3s						
RES	Resolute Bay	60.02	15	P	P	16 52 28.8	-0.3
RES				IAmb	IAmb	16 52 46.2	
	comp=Z,9.4nm,1.2s						
YKA	Yellowknife Ar	61.50	31	P	P	16 52 39.7	+0.4
	comp=Z,1.6nm,0.7s,baz=300,slow=6.3,SNR=14						
ARCES	ARCESS Array B	61.54	339	P	P	16 52 38.7	-0.9
	comp=Z,5.1nm,1.1s,baz=62,slow=6.2,SNR=3.6						
BELG	Belogornoye	61.91	316	⇓eP	P	16 52 41.6	-0.7
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AS31	Alice Springs	63.42	188	P	P	16 52 52.1	-0.6
ASAR	Alice Springs	63.42	188	P	P	16 52 51.8	-0.9
	comp=Z,1.8nm,0.7s,baz=4.5,slow=8.1,SNR=36						
ASAR	Alice Springs	63.42	188	P	P	16 52 51.6	-1.0
EIDS	Eidsvold	65.34	170	P	P	16 53 06.0	+0.9
OBN	Obninsk	66.02	323	eP	P	16 53 10.7	+1.5
OBN				e		16 53 39.4	
OBN				e		16 55 32.2	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FINES	FINESS Array B	66.50	332	P	P	16 53 11.9	-0.3
	comp=Z,4.8nm,0.6s,baz=38,slow=9.6,SNR=24						
FINES	FINESS Array B	66.50	332	i P	P	16 53 11.6	-0.6
FINES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KIV	Kislovodsk	69.22	310	⇑P	P	16 53 30.8	+1.0
KIV	Kislovodsk	69.22	310	eP	P	16 53 30.6	+0.7
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KBZ	Khabaz	69.23	310	P	P	16 53 29.4	-0.3
	comp=Z,4.9nm,0.9s,baz=67,slow=3.7,SNR=7.8						
KBZ	Khabaz	69.23	310	⇓iP	P	16 53 29.7	0.0
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NB2	NORSAR Subarra	71.77	337	P	P	16 53 44.3	-0.7
	comp=Z,0.6nm,0.4s,baz=39,slow=6.5						
NOA	NORSAR Array B	71.77	337	P	P	16 53 44.1	-0.9
	comp=Z,0.1nm,0.3s,baz=53,slow=8.0,SNR=4.8						
AKASG	Malin Array Be	72.24	322	P	P	16 53 47.0	-1.0
	comp=Z,1.9nm,0.3s,baz=45,slow=6.4,SNR=20						
AKBB	Malin Array Si	72.24	322	i P	P	16 53 47.5	-0.5
BOZ	Bozeman (W)	72.81	45	P	P	16 53 52.8	+1.1
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BOZ	Bozeman (W)	72.81	45	P	P	16 53 52.8	+1.1
BOZ				IAmb	IAmb	16 53 57.3	
	comp=Z,3.9nm,0.7s						
NVAR	Mina Array Bea	73.37	54	P	P	16 53 56.8	+1.6
	comp=Z,1.4nm,0.7s,baz=292,slow=6.8,SNR=4.1						
SORM	Soroca	74.38	320	⇑P	P	16 53 59.3	-1.3
SORM	Soroca	74.38	320	⇑P	P	16 53 59.3	-1.3
BW06	Boulder Array	75.78	46	P	P	16 54 09.4	+0.2
BW06				IAmb	IAmb	16 54 14.3	
	comp=Z,3.7nm,0.6s						
PDAR	Pinedale Array	75.78	46	P	P	16 54 10.1	+0.9
	comp=Z,3.0nm,0.6s,baz=50,slow=0.2,SNR=37						
PDAR	Pinedale Array	75.78	46	P	P	16 54 09.4	+0.2
BUR08	Bucovina Ar. S	76.26	321	P	P	16 54 11.1	-0.5
BUR08				IAmb	IAmb	16 56 44.1	
	comp=Z,39nm,2.0s						
BURAR	Bucovina Array	76.27	321	⇑P	P	16 54 11.5	-0.2
BURAR	Bucovina Array	76.27	321	⇑P	P	16 54 11.5	-0.2
TESR	Tescani	76.34	320	⇑P	P	16 54 11.5	-0.5
VRI	Vrincioaia	76.75	319	⇑P	P	16 54 15.4	+1.1
VRI	Vrincioaia	76.75	319	⇑P	P	16 54 15.4	+1.1
PLOR	Plostina	76.80	319	⇑P	P	16 54 21.0	+6.4
PLOR	Plostina	76.80	319	⇑P	P	16 54 21.0	+6.4
HARR	Harsova	76.95	318	⇑P	P	16 54 15.0	-0.4
HARR	Harsova	76.95	318	⇑P	P	16 54 15.0	-0.4
ARCR	ARCALIA	77.06	321	⇑P	P	16 54 16.6	+0.5
BRTR	Keskin Array B	77.14	311	P	P	16 54 15.5	-1.3
	comp=Z,0.7nm,0.6s,baz=57,slow=4.6,SNR=4.3						
BRTR	Keskin Array B	77.14	311	i P	P	16 54 16.2	-0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TRPA	Tarpa	77.17	323	⇑P	P	16 54 16.8	+0.3
VOIR		77.89	320	⇑P	P	16 54 21.4	+0.6
VOIR		77.89	320	⇑P	P	16 54 21.4	+0.6
MORC	Moravsky Berou	78.17	327	⇑P	P	16 54 22.1	-0.1
MORC	Moravsky Berou	78.17	327	⇑P	P	16 54 22.1	-0.1
DPC	Dobruska-Polom	78.25	328	eP	P	16 54 23.0	+0.4
DPC	Dobruska-Polom	78.25	328	eP	P	16 54 23.0	+0.4
KRLC	Kraliky	78.27	327	eP	P	16 54 22.8	+0.1
KRLC	Kraliky	78.27	327	eP	P	16 54 22.8	+0.1
CLL	Collm	78.83	330	i P	P	16 54 25.3	-0.4
CLL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CLL	Collm	78.83	330	i P	P	16 54 25.3	-0.4
	comp=Z,9.0nm,1.3s						
CKRC	Cesky Krumlov	80.26	328	eP	P	16 54 34.5	+0.9
KHC	Kasperske Hory	80.32	328	eP	P	16 54 33.8	-0.1
KHC	Kasperske Hory	80.32	328	eP	P	16 54 33.8	-0.1
GERES	GERESS Array B	80.49	328	P	P	16 54 34.6	-0.4
	comp=Z,0.5nm,0.5s,baz=45,slow=5.2,SNR=10						
GERES	GERESS Array B	80.49	328	P	P	16 54 32.5	-2.4
SOKA	Soboth	81.63	326	eP	P	16 54 40.7	-0.3
	comp=Z,2.4nm,0.6s,SNR=5.2						
OBKA	Obir	81.97	326	eP	P	16 54 42.9	0.0
	comp=Z,4.2nm,1.3s						
KBA	Koelnbreinsper	82.03	327	eP	P	16 54 43.3	0.0
	comp=Z,7.8nm,1.6s						
MYKA	Terra Mystica	82.26	327	i P	P	16 54 43.5	-0.9
	comp=Z,1.8nm,0.4s						
WATA	Walderalm	82.56	328	i P	P	16 54 46.1	+0.1
	comp=Z,5.1nm,1.4s						
WTTA	Wattenberg	82.59	328	i P	P	16 54 45.8	-0.4
	comp=Z,1.9nm,0.5s						
ABTA	Abfaltersbach	82.64	327	i P	P	16 54 45.8	-0.5
	comp=Z,2.2nm,0.9s						
MOTA	Moosalm	82.74	329	i P	P	16 54 47.2	+0.2
	comp=Z,5.5nm,1.0s						
RETA	Reutte	82.76	329	eP	P	16 54 46.8	-0.2
	comp=Z,2.7nm,0.6s,SNR=4.0						
DAVA	Damuels	83.28	329	i P	P	16 54 49.4	-0.3
	comp=Z,2.8nm,0.7s						
KAN10	Anthony SW Sta	85.99	44		pP	16 55 17.3	+8.9
TXAR	Lajitas Array	88.46	52	P	P	16 55 16.4	+0.8
	comp=Z,1.0nm,0.5s,baz=289,slow=3.3,SNR=15						
LPAZ	La Paz	145.24	56	PKPbc	PKPbc	17 02 00.7	-0.8
	comp=Z,1.9nm,0.5s,baz=3.8,slow=3.6,SNR=9.4						
LPAZ	La Paz	145.24	56	PKIKP	PKPbc	17 02 01.2	-0.3
LPAZ	La Paz	145.24	56		PKPbc	17 02 01.2	-0.3

IDC ***25*** *16:51:44.8±3.1, 40°.14N×143°.14E, h0^{km}, mb3.4/3, mb1 3.5/4, mb1mx3.1/60, mbtmp3.4/4, ML2.2/1, Error ellipse: s-maj=77.5km s-min=34.5km az=74.0*
JMA ***25*** *16:51:52.9±0.1, 39°.92N×142°.41E, h38^{km}±1^{km}, M3.4*
ISC 25 16:51:52.9±1.7**, 39°.95N**±0°.06×**142°.4E**±0°.2**, h38**^{km}±5^{km}**, n21, σ0^{s}.98**/20**, mb3.4**/3**, 8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.44	269	⇓P	Pn	16 52 02.5	0.0
JTH				S	Sn	16 52 09.2	-0.3
MIYJ	Miyakonagasawa	0.60	232	⇓P	Pn	16 52 04.3	-0.7
MIYJ				S	Sn	16 52 12.3	-1.2
JKEN	Kujiedanarisaw	0.61	295	⇓P	Pn	16 52 04.7	-0.4
JKEN				eS	Sn	16 52 13.4	-0.3
JANG	Nango	0.82	302	⇓P	Pn	16 52 07.6	-0.3
JKZ	Kuzumaki	0.85	273	P	Pn	16 52 08.6	+0.3
JKZ				S	Sn	16 52 19.3	-0.3
JOM	Ohasama	1.00	242	⇓P	Pn	16 52 10.2	-0.1
JOM				eS	Sn	16 52 22.8	-0.3
OFUJ	Ofunato	1.05	214	⇓P	Pn	16 52 10.7	-0.3
JTM	Tenmabayashi	1.34	309	⇓P	Pn	16 52 15.9	+0.9
JMK	Ichinoseki	1.37	224	P	Pn	16 52 15.5	+0.1
JAH	Hinai	1.40	280	⇓P	Pn	16 52 16.6	+0.8
JRG	Rokugo	1.49	249	P	Pn	16 52 18.0	+0.9
MJAR	Matsushiro Arr	4.75	226	Pn	Pn	16 53 05.1	+3.1
	0.1nm,0.3s,baz=34,slow=12,SNR=5.5						
H11N2	WAKE ISLAND Hy	29.10	127	T	T	17 28 26.4	
	baz=319,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	29.11	127	T	T	17 28 26.7	
	baz=319,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	29.12	127	T	T	17 28 26.9	
	baz=319,slow=75,SNR=25						
H11S1	WAKE ISLAND Hy	29.91	129	T	T	17 29 39.4	
	baz=321,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	29.91	129	T	T	17 29 39.5	
	baz=321,slow=76,SNR=5.6						
H11S2	WAKE ISLAND Hy	29.93	129	T	T	17 29 37.5	
	baz=321,slow=76,SNR=6.2						
ZALV	Zalesovo Beam	40.60	310	P	P	16 59 28.8	+0.3
	0.3nm,0.4s,baz=105,slow=8.1,SNR=2.2						
MKAR	Makanchi Array	43.31	300	P	P	16 59 50.6	-0.2
	0.2nm,0.5s,baz=91,slow=9.0,SNR=4.3						
ASAR	Alice Springs	63.78	189	P	P	17 02 20.3	-0.6

0.5nm,1.0s,baz=358,slow=5.7,SNR=1.9

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*RSNC **25** 17:35:59.1±1.5, 2°.37N×76°.36W, h6km, ML3.8, Probable volcanic*

*IDC **25** 17:36:04.9±2.7, 2°.29N×76°.31W, h58km±28km, mb3.2/6, mb1 3.6/9, mb1mx3.4/40, mbtmp3.7/9, ML3.4/3, MS3.2/3, Ms1 3.3/3, ms1mx3.0/10, Error ellipse: s-maj=29.2km s-min=17.6km az=65.0*

ISC 25 17:35:57.8±1.1, **2°.45N**±0°.02×**76°.32W**±0°.02, **h2**km±8km, **n40**, σ**1s.45**/61, **mb3.5**/5, **3C-5D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCON	Cinco Dias	0.14	213	⇓iP	Pg	17 36 00.7	0.0
PCON				eS	Sg	17 36 02.6	0.0
PCON				i		17 36 03.0	
	comp=Z,78μm,0.5s						
POPC	Popayan, Colom	0.37	284	⇑iP	Pg	17 36 05.3	+0.4
POPC				eS	Sg	17 36 10.5	+0.8
POPC				i		17 36 10.8	
	comp=Z,6μm,0.4s						
SOTA	Rioblanco	0.42	223	⇓iP	Pg	17 36 05.9	-0.1
SOTA				eS	Sg	17 36 11.5	0.0
SOTA				i		17 36 11.8	
	comp=Z,6μm,0.5s						
MARP	Paez Belalcaza	0.53	43	⇓eP	Pb	17 36 09.4	-0.6
MARP				i		17 36 25.1	
	comp=Z,513nm,0.5s						
GARC	Garzon, Huila	0.86	107	eP	Pg	17 36 15.4	+1.0
GARC				eS	Sb	17 36 27.5	-0.4
GARC				i		17 36 29.1	
	comp=Z,4μm,0.3s						
BETC	Betania	0.91	75	⇓eP	Pn	17 36 16.9	-0.7
BETC				i P	Pn	17 36 16.9	-0.7
BETC				eS	Sn	17 36 30.3	-1.1
BETC				i		17 36 30.8	
	comp=Z,2μm,0.4s						
RAC02	Cali,SGC	0.94	347	eP	Pn	17 36 17.0	-1.2
RAC02				eS	Sn	17 36 30.5	-1.8
BBAC	Balboa, Cauca	1.02	245	eP	Pg	17 36 16.5	-0.8
BBAC				eS	Sg	17 36 30.0	-0.6
FLOC	Florencia	1.09	142	eP	Pb	17 36 18.3	-1.1
FLOC				eS	Sg	17 36 33.1	+0.3
FLOC				i		17 36 40.0	
	comp=Z,788nm,0.4s						
YOTC	Yotoco, Valle	1.52	359	⇑iP	Pb	17 36 25.8	-1.1
YOTC				eS	Sg	17 36 47.3	+0.5
YOTC				i		17 36 55.5	
	comp=Z,527nm,0.5s						
GCUF	Volcan Galeras	1.59	220	eP	Pn	17 36 26.4	-1.0
ORTC	Ortega, Tolima	1.80	36	eP	Pg	17 36 32.5	+0.1
ORTC				eS	Sg	17 36 57.2	+1.5
ORTC				i		17 37 04.5	
	comp=Z,1μm,0.5s						
PRAC	Prado	1.90	49	⇓iP	Pg	17 36 34.3	0.0
PRAC				eS	Sg	17 36 59.7	+0.7
PRAC				i		17 37 08.1	
	comp=Z,524nm,0.4s						
ANIL	Santa Ana	2.23	24	eP	Pb	17 36 38.9	0.0
ANIL				eS	Sg	17 37 08.6	-0.8
ANIL				i		17 37 14.4	
	comp=Z,2μm,0.4s						
PLMC	San Jos del P	2.44	1	eP	Pb	17 36 41.6	-0.9
PLMC				eS	Sg	17 37 17.5	+1.3
PLMC				i		17 37 22.7	
	comp=Z,276nm,0.6s						
MACC	Macarena, Meta	2.49	97	eP	Pb	17 36 41.9	-1.4
MACC				eS	Sb	17 37 15.1	+0.7
MACC				i		17 37 21.1	
	comp=Z,2μm,0.5s						
PTLC	Puerto Leguiza	2.73	146	⇑iP	Pb	17 36 48.0	+0.7
PTLC				eS	Sg	17 37 25.3	-0.2
PTLC				i		17 37 39.7	
	comp=Z,490nm,0.5s						
GUY2C	Guyana, Caldas	2.92	19	eP	Pb	17 36 51.0	+0.2
GUY2C				eS	Sg	17 37 32.0	+0.4
GUY2C				i		17 37 42.7	
	comp=Z,156nm,0.6s						
VILC	Villavicencio,	3.10	58	eP	Pb	17 36 52.2	-1.6
VILC				eS	Sg	17 37 37.8	+0.4
VILC				i		17 37 42.8	
	comp=Z,33μm,0.4s						
ROSC	El Rosal	3.10	40	P	Pb	17 36 53.1	-0.8
	comp=Z,28nm,0.3s,baz=333,slow=6.4,SNR=20						
ROSC				S	Sg	17 37 35.3	-2.3
	comp=Z,58nm,0.3s,baz=183,slow=18,SNR=4.0						
CHIC	Chingaza	3.37	50	eP	Pb	17 36 55.6	-3.0
CHIC				eS	Sg	17 37 42.8	-3.4
CHIC				i		17 37 57.2	
	comp=Z,162nm,0.4s						
CBOC	Ciudad Bolivar	3.41	5	eP	Pb	17 36 56.6	-2.4
CBOC				eS	Sb	17 37 42.6	+1.6
CBOC				i		17 37 52.6	
	comp=Z,76nm,0.5s						
NORC	Norcasia	3.42	25	eP	Pb	17 36 56.5	-2.6
NORC				eS	Sb	17 37 43.4	+2.3
NORC				i		17 37 53.2	
	comp=Z,84nm,0.6s						
GUVC	San Jose del G	3.69	88	eP	Pb	17 37 04.3	+0.5
GUVC				eS	Sb	17 37 49.4	+0.3
GUVC				i		17 37 54.9	
	comp=Z,788nm,0.3s						
HELC	Santa Helena	3.80	12	eP	Pb	17 37 04.1	-1.7
HELC				eS	Sb	17 37 55.1	+2.6
HELC				i		17 38 04.5	
	comp=Z,45nm,0.5s						
PTBC	PUERTO BERRIO,	4.47	24	eP	Pn	17 37 11.1	+4.5
PTBC				i		17 38 20.4	
	comp=Z,40nm,0.5s						
PTGC	Puerto Gaitan,	4.53	67	eP	Pb	17 37 20.9	+2.9
PTGC				eS	Sg	17 38 19.9	-3.4
PTGC				i		17 38 28.1	
	comp=Z,294nm,0.4s						
DBBC	Dabeiba	4.54	1	eP	Pb	17 37 12.5	-5.8
RUSC	La Rusia	4.70	43	eP	Pn	17 37 12.8	+2.5
RUSC				i		17 38 47.8	
	comp=Z,53nm,0.6s						
ZARC	Zaragoza, Cauc	5.22	16	eP	Pn	17 37 22.0	+5.1
ZARC				i		17 38 29.8	
	comp=Z,30nm,0.6s						
ATAH	Atahualpa	9.74	192	P	Pn	17 38 20.2	+0.7
	comp=Z,0.4nm,0.3s,baz=85,slow=12,SNR=2.7						
ATAH				LR	LR	17 42 36.9	
	comp=Z,154nm,19.2s,baz=83,slow=41						
JTS	Las Juntas de	11.59	313	LR	LR	17 42 35.5	
	comp=Z,88nm,18.9s,slow=33						
PTGA	Pitinga	16.65	101	P	P	17 39 56.0	+1.0
	comp=Z,0.6nm,0.3s,baz=329,slow=20,SNR=2.5						
LPAZ	La Paz	20.30	157	P	P	17 40 36.1	+0.3
	comp=Z,0.9nm,0.7s,baz=337,slow=13,SNR=3.8						
LPAZ				LR	LR	17 49 04.2	
	comp=Z,78nm,20.4s,baz=301,slow=39						
SIV	San Ignacio	23.73	141	P	P	17 41 09.9	-1.6
	comp=Z,0.9nm,0.8s,baz=335,slow=15,SNR=2.5						
TXAR	Lajitas Array	37.29	319	P	P	17 43 13.5	+1.9
	comp=Z,0.2nm,0.6s,baz=126,slow=5.7,SNR=2.8						
PDAR	Pinedale Array	49.90	328	P	P	17 44 53.3	+0.1
	comp=Z,0.4nm,0.6s,baz=122,slow=8.6,SNR=4.5						
YKA	Yellowknife Ar	66.31	342	P	P	17 46 48.2	+0.6
	comp=Z,0.7nm,0.8s,baz=135,slow=6.0,SNR=17						
TORD	Torodi Ar. Bea	77.78	77	P	P	17 47 56.7	-0.6
	comp=Z,0.8nm,0.8s,baz=298,slow=6.0,SNR=4.4						
ASAR	Alice Springs	143.95	232	PKP	PKPdf	17 55 34.5	-1.4
	comp=Z,0.5nm,0.8s,baz=121,slow=3.6,SNR=9.0						

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*IDC **25** 17:36:48.6±3.8, 48°.32N×154°.25E, h68km±34km, mb3.3/9, mb1 3.6/11, mb1mx3.3/64, mbtmp3.7/11, ML2.7/2, Error ellipse: s-maj=38.6km s-min=18.1km az=144.0*

*KRSC **25** 17:36:48.5±1.7, 48°.24N×155°.81E, h60km±34km, ML4.2*

ISC 25 17:36:46.8±0.9, **48°.3N**±0°.1×**154°.6E**±0°.1, **h50**km, **n31**, σ**1s.91**/30, **mb3.6**/9, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.62	22	eP	Pn	17 37 28.6	+2.1
SKR				eS	Sn	17 37 57.2	+0.2
ASAK	Asacha	4.64	26	eP	Pn	17 37 55.9	+1.6
GRL	Gorelyy	4.84	26	eP	Pn	17 37 58.5	+1.5
GRL				eS	Sn	17 38 51.3	-0.5
RUS	Russkaya	4.87	30	eP	Pn	17 37 57.1	-0.3
RUS				eS	Sn	17 38 48.7	-3.7
APC	Apacha	4.95	18	eP	Pn	17 38 01.3	+2.9
KRMR	Karymshinskiy	5.10	25	eP	Pn	17 38 01.1	+0.6
KRMR				eS	Sn	17 38 55.0	-3.0
PETK	Petropavlovsk-	5.24	21	P	Pn	17 38 04.2	+1.8
	1.5nm,0.3s,baz=109,slow=22,SNR=22						
DALK	Dalny	5.46	28	eP	Pn	17 38 06.5	+1.1
DALK				eS	Sn	17 39 05.4	-1.4
UGLR	Uglovaya	5.63	27	eP	Pn	17 38 09.3	+1.4
KOK	Koryaka	5.65	26	P	Pn	17 38 11.2	+3.0
AVH	Avacha	5.66	26	eP	Pn	17 38 11.3	+3.1
GNL	Ganaly	5.83	20	eP	Pn	17 38 13.0	+2.3
SPN	Mys Shipunski	5.95	34	eP	Pn	17 38 12.3	+0.2
SPN				eS	Sn	17 39 14.8	-4.0
KBTR	Krutoberegovo	9.42	29	P	Pn	17 38 59.9	+0.3
BKI	Bering	9.90	41	eS	Sn	17 40 46.8	-8.9
USRK	Ussuriysk Ar.	16.14	264	P	Pn	17 40 29.8	-0.2
	baz=74,slow=16,SNR=4.1						
KSRS	Korea Array	22.22	251	P	P	17 41 37.4	-1.5
	2.4nm,0.8s,baz=46,slow=10,SNR=5.2						
H11N2	WAKE ISLAND Hy	30.16	156	T	T	18 14 26.4	
	baz=344,slow=76,SNR=50						
H11N1	WAKE ISLAND Hy	30.18	156	T	T	18 14 31.5	
	baz=344,slow=76,SNR=105						
H11N3	WAKE ISLAND Hy	30.18	156	T	T	18 14 21.3	
	baz=344,slow=76,SNR=58						
H11S1	WAKE ISLAND Hy	31.28	157	T	T	18 15 57.5	
	baz=344,slow=76,SNR=284						
H11S3	WAKE ISLAND Hy	31.29	157	T	T	18 15 54.8	
	baz=344,slow=76,SNR=360						
H11S2	WAKE ISLAND Hy	31.30	157	T	T	18 15 55.4	
	baz=344,slow=76,SNR=342						
ILAR	Eielson Array	34.74	40	P	P	17 43 32.4	+0.7
	0.4nm,0.8s,baz=256,slow=7.3,SNR=2.6						
INK	Inuvik	39.84	33	P	P	17 44 15.8	+1.1
	1.0nm,0.9s,baz=287,slow=3.5,SNR=3.6						
YKA	Yellowknife Ar	49.11	38	P	P	17 45 29.4	+0.7
	0.6nm,0.8s,baz=294,slow=7.0,SNR=6.6						
NVAR	Mina Array Bea	60.86	64	P	P	17 46 55.7	+1.5
	0.4nm,0.8s,baz=306,slow=7.7,SNR=2.1						
ASAR	Alice Springs	73.97	200	P	P	17 48 16.2	-0.5
	0.3nm,0.7s,baz=15,slow=5.3,SNR=2.0						
EKA	Eskdalemuir Ar	75.09	347	P	P	17 48 21.9	-1.0
	0.6nm,0.4s,baz=20,slow=4.7,SNR=6.0						
TXAR	Lajitas Array	75.89	62	P	P	17 48 28.6	+0.5
	0.3nm,0.6s,baz=299,slow=4.9,SNR=4.3						
BRTR	Keskin Array B	77.96	317	P	P	17 48 38.4	-1.2
	0.7nm,0.8s,baz=75,slow=5.2,SNR=4.5						

NOU 25 17:53:49.9, 14°.85S×167°.17E, h89km, **MLv4.6**/11, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	3.02	161	P	Pn	17 54 35.6	-0.1
KOUNC	Koumac, New Ca	6.30	205	P	Pn	17 55 18.8	-1.4
YATNC	Mamie plateau,	7.17	182	P	Pn	17 55 32.7	+0.5
DZM	Mont Dzumac	7.21	185	P	Pn	17 55 33.7	+0.9
ONTNC	Ouen Toro	7.45	185	P	Pn	17 55 36.4	+0.5
PINNC	Pines Island,	7.73	178	P	Pn	17 55 39.9	+0.2

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*NEIC **25** 17:58:05.0±2.7, 40°.73S±0°.08×86°.4W±0°.1, h10km±1km, mb5.2/149, Ms_20 5.7/133, Mwb5.7/14, Mww5.8, Mwc5.7(GCMT), Error ellipse: s-maj=19.0km s-min=12.6km az=264.0*

*NEIC **25** 17:58:05, 40°.72S×86°.45W, h13km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.12; $M_{\theta\theta}$-0.57; $M_{\phi\phi}$0.45; $M_{r\theta}$-0.67; $M_{\theta\phi}$-3.81; $M_{\phi r}$0.19; Fault plane solution: $M_0$3.91000×10^{17} NP1:ϕ_s4.04000°, δ79.90000°, λ2.55000°. NP2:ϕ_s273.59000°, δ87.49000°, λ169.89000°. Principal axes: T 3.8735, Plg9.0000°, Azm228.0000°; N 0.0648, Plg80.0000°, Azm80.0000°; P -3.9383, Plg5.0000°, Azm319.0000°;*

*IDC **25** 17:58:12.6±0.8, 41°.59S×86°.00W, h0km, mb4.6/14, mb1 4.7/14, mb1mx4.5/26, mbtmp4.6/14, MS5.1/25, Ms1 5.0/25, ms1mx5.0/27 Error ellipse: s-maj=24.7km s-min=20.5km az=109.0*

*NEIC **25** 17:58:16, 41°.32S×86°.72W, h12km, Moment Tensor Solution. Duration: 22s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.75; $M_{\theta\theta}$1.48; $M_{\phi\phi}$-0.73; $M_{r\theta}$0.93; $M_{\theta\phi}$-5.13; $M_{\phi r}$-2.48; Fault plane solution: $M_0$5.91000×10^{17} NP1:ϕ_s83.00000°, δ64.00000°, λ-180.00000°. NP2:ϕ_s353.00000°, δ90.00000°, λ-26.00000°. Principal axes: T 6.3718, Plg18.0000°, Azm41.0000°; N -1.0559, Plg64.0000°, Azm173.0000°; P -5.3159, Plg18.0000°, Azm305.0000°;*

*GCMT **25** 17:58:18.0±0.1, 41°.40S±0°.01×86°.23W±0°.01, h15km, MW5.7/148, Moment Tensor Solution. s137,c260; s148,c394; Duration: 1s.8 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.48±.04; $M_{\theta\theta}$1.22±.04; $M_{\phi\phi}$-0.73±.04; $M_{r\theta}$0.62±.12; $M_{\theta\phi}$-4.72±.04; $M_{\phi r}$-0.84±.13; Best double couple: $M_0$4.91900×10^{17} NP1:ϕ_s84.00000°, δ80.00000°, λ175.00000°. NP2:ϕ_s174.00000°, δ86.00000°, λ10.00000°. Principal axes: T 5.2420, Plg10.0000°, Azm39.0000°; N -0.6410, Plg79.0000°, Azm199.0000°; P -4.5960, Plg4.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **25** 17:58:19, 41°.44S×86°.22W, h14km, Moment Tensor Solution. Duration: 3s.6 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.37; $M_{\theta\theta}$1.23; $M_{\phi\phi}$-0.86; $M_{r\theta}$0.24; $M_{\theta\phi}$-5.01; $M_{\phi r}$0.18; Fault plane solution: $M_0$5.14000×10^{17} NP1: ϕ_s174.00000°, δ87.00000°, λ-2.00000°. NP2:ϕ_s264.00000°, δ88.00000°, λ-177.00000°. Principal axes: T 5.3045, Plg1.0000°, Azm39.0000°; N -0.3543, Plg86.0000°, Azm298.0000°; P -4.9501, Plg4.0000°, Azm129.0000°;*

ISC 25 17:58:04.9±0.4, **40°.70S**±0°.06×**86°.46W**±0°.06, **h10**km, **n349**, σ**1s.99**/189, **mb5.2**/81, **MS5.4**/91, **1C, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	9.11	44	T	T	18 10 16.5	
	baz=212,SNR=1140						
H03S1	Juan Fernandez	9.12	44	T	T	18 10 14.4	
	baz=212,SNR=1913						
H03S3	Juan Fernandez	9.13	44	T	T	18 10 19.6	
	baz=212,SNR=2110						
H03N3	Juan Fernandez	9.41	42	T	T	18 10 32.6	
	baz=198,SNR=211						
H03N2	Juan Fernandez	9.42	42	T	T	18 10 34.6	
	baz=198,SNR=698						
H03N1	Juan Fernandez	9.43	42	T	T	18 10 32.3	
	baz=198,SNR=132						
LL05	Los Muermos	9.84	98	Pn	Pn	18 00 26.1	-0.2
GO07	Milladeo Hill,	9.84	108	Pn	Pn	18 00 27.3	+1.0
LL04	Puerto Octay	10.66	96	Pn	Pn	18 00 37.4	-0.2
LL01	San Ignacio de	10.66	104	Pn	Pn	18 00 38.5	+0.9
LR03	Panguipulli	10.86	89		Pn	18 00 41.4	+1.1
LC01	Cunco	11.37	86	Pn	Pn	18 00 47.3	0.0
COYC	Coyhaique	11.57	120	Pn	Pn	18 00 48.8	-1.3
PLCA	Paso Flores	12.08	95	Pn	Pn	18 01 07.4	+10
	0.3nm,0.3s,baz=260,slow=12,SNR=9.5						
PLCA				Sn	Sn	18 03 18.3	+6.5
	0.1nm,0.3s,baz=216,slow=15,SNR=2.9						
PLCA				LR	LR	18 04 39.1	
	comp=Z,12μm,19.8s,baz=264,slow=33						
PLCA	Paso Flores	12.08	95	eP	Pn	18 01 07.0	+10
PLCA	Paso Flores	12.08	95	Pn	Pn	18 00 56.8	-0.2
GO05	Huala	12.81	68	Pn	Pn	18 01 07.8	+0.8
ML02	Panimavida	12.81	72	Pn	Pn	18 01 08.2	+1.2
BO01	Tunca	13.72	68		Pn	18 01 20.1	+0.6
BO02	Sierra Bellavi	13.73	70		Pn	18 01 17.9	-1.8
VA05	Santo Domingo	13.76	64		Pn	18 01 20.1	+0.2
MT01	Popeta	13.89	65		Pn	18 01 21.9	+0.1
VA01	Torpederas	14.11	62	Pn	Pn	18 01 25.2	+0.4
MT09	Talagante	14.12	66	Pn	Pn	18 01 25.4	+0.3
MT02	Curacav	14.31	64		Pn	18 01 29.3	+1.7
GO09	Cerro Castillo	14.40	142		Pn	18 01 27.0	-1.6
MT05	Renca	14.51	65		Pn	18 01 29.2	-1.1
MG05	Puerto Natales	14.60	143		Pn	18 01 30.1	-1.2
PEL	Peldehue	14.69	64		Pn	18 01 32.5	-0.2
VA03	San Esteban	15.00	63		Pn	18 01 36.4	-0.7
CO06	Fray Jorge	15.64	55		Pn	18 01 43.0	-2.4
MG04	Isla Riesco	15.83	145	Pn	Pn	18 01 45.4	-2.2
CO03	El Pedregal	16.12	57		Pn	18 01 50.1	-1.6
GO10	Punta Arenas	16.26	145	P	Pn	18 01 47.7	-5.5
CO05	La Serena	16.41	54		Pn	18 01 53.2	-2.0
CO05				IAmb	IAmb	18 02 15.0	
	comp=Z,460nm,1.8s						
GO04	Tololo Observa	16.51	55		Pn	18 01 56.1	-0.6
MG02	Cerro Sombrero	16.84	142	Pn	Pn	18 01 55.3	-5.2
MG02				IAmb	IAmb	18 02 10.7	
	comp=Z,357nm,1.3s						
ZON	Zonda	17.00	63	P	Pn	18 02 01.9	-0.9
ZON				IAmb	IAmb	18 02 41.8	
	comp=Z,323nm,1.9s						
AC04	Llanos de Chal	17.76	50		Pn	18 02 10.6	-1.6
AC04				IAmb	IAmb	18 02 48.1	
	comp=Z,332nm,1.9s						
USHA	Ushuaia	18.54	146	LR	LR	18 08 05.5	
	comp=Z,10μm,18.6s,baz=306,slow=34						
GO03	Copiap	18.70	51		P	18 02 16.5	-7.0
AC02	Maricunga	19.92	51	P	P	18 02 31.8	-5.5
PB14	IPOC Station P	20.92	45		P	18 02 41.5	-6.4
PB14				IAmb	IAmb	18 03 08.0	
	comp=Z,121nm,1.1s						
PB14				IAMs_20	IAMs_20	18 08 40.0	
	comp=Z,12μm,21.0s						
PB10	IPOC Station P	21.74	43	P	P	18 02 50.5	-6.0
PB10				IAMs_20	IAMs_20	18 09 02.9	
	comp=Z,12μm,21.0s						
EFI	East Falkland	22.37	129	P	P	18 03 00.2	-2.7
EFI	East Falkland	22.37	129	IAMs_20	IAMs_20	18 10 38.1	
	comp=Z,11μm,20.0s						
PB15	IPOC Station P	22.56	44	P	P	18 03 02.5	-2.9
PB15				IAmb	IAmb	18 03 28.2	
	comp=Z,111nm,1.2s						
PB15				IAMs_20	IAMs_20	18 09 39.6	
	comp=Z,9μm,19.0s						
PB06	IPOC Station P	22.92	44	P	P	18 03 06.6	-2.6
PB06				IAmb	IAmb	18 03 46.2	
	comp=Z,106nm,1.5s						
PB04	IPOC Station P	22.93	42	P	P	18 03 07.1	-2.2
PB04				IAmb	IAmb	18 03 26.6	
	comp=Z,60nm,0.9s						
PB04				IAMs_20	IAMs_20	18 09 39.2	
	comp=Z,10μm,22.0s						
RPN	Rapa Nui	23.23	299	P	P	18 03 08.0	-4.2
VA02	Isla de Pascua	23.28	298	P	P	18 03 08.2	-4.4
LVC	Limon Verde	23.34	45	P	P	18 03 28.5	+15
	comp=Z,19nm,0.7s,baz=210,slow=11,SNR=19						
LVC				LR	LR	18 10 26.8	
	comp=Z,9μm,19.6s,baz=238,slow=31						
LVC	Limon Verde	23.34	45	eP	P	18 03 27.9	+14
LVC	Limon Verde	23.34	45	P	P	18 03 11.4	-2.3
LVC				IAmb	IAmb	18 03 31.4	
	comp=Z,168nm,1.6s						
LVC	Limon Verde	23.34	45	IAMs_20	IAMs_20	18 10 05.3	
	comp=Z,10μm,21.0s						
PB07	IPOC Station P	23.57	42	P	P	18 03 15.1	-0.7
PB07				IAmb	IAmb	18 03 43.8	
	comp=Z,181nm,2.0s						
PB09	IPOC Station P	23.84	43	P	P	18 03 12.8	-5.5
PB01	IPOC Station P	24.34	41	P	P	18 03 19.8	-3.2
PB01				IAmb	IAmb	18 03 40.2	
	comp=Z,64nm,0.9s						
TA01	Diego Aracena	24.40	39	P	P	18 03 21.3	-2.1
TA01				IAmb	IAmb	18 03 40.5	
	comp=Z,53nm,0.8s						
TA02	Huaiquique	24.68	39	P	P	18 03 24.6	-1.3
TA02				IAmb	IAmb	18 03 43.4	
	comp=Z,57nm,0.7s						
PB08	IPOC Station P	25.26	41	P	P	18 03 24.8	-6.9
PB08				IAMs_20	IAMs_20	18 11 01.2	
	comp=Z,8μm,21.0s						
PB11	IPOC Station P	25.34	40	P	P	18 03 27.9	-4.2
PB11				IAmb	IAmb	18 03 50.0	
	comp=Z,45nm,1.0s						
PB12	IPOC Station P	26.01	37	P	P	18 03 38.5	+0.3
PB12				IAMs_20	IAMs_20	18 11 29.0	
	comp=Z,8μm,19.0s						
ITQB	Itaqui	26.63	75	eP	P	18 03 54.6	+11
ITQB	Itaqui	26.63	75	P	P	18 03 41.6	-2.0
ITQB				IAmb	IAmb	18 04 39.7	
	comp=Z,101nm,1.4s						
PB16	IPOC Station P	26.64	38	P	P	18 03 43.0	-1.3
PB16				IAmb	IAmb	18 04 01.6	
	comp=Z,64nm,1.5s						
PB16				IAMs_20	IAMs_20	18 11 43.5	
	comp=Z,7μm,19.0s						
PMSA	Palmer Station	27.36	159	LR	LR	18 11 22.8	
	comp=Z,3μm,21.5s,baz=320,slow=30						
PLTB	Pedras Altas	27.83	82	eP	P	18 04 05.0	+11
PLTB	Pedras Altas	27.83	82	P	P	18 03 56.0	+1.6
CPUP	Villa Florida	28.05	68	P	P	18 04 07.2	+11
	comp=Z,15nm,1.0s,baz=250,slow=8.0,SNR=17						
CPUP				LR	LR	18 14 34.4	
	comp=Z,11μm,19.3s,baz=238,slow=35						
CPUP	Villa Florida	28.05	68	eP	P	18 04 07.3	+11
CPUP	Villa Florida	28.05	68	P	P	18 03 55.6	-0.7
ESPZ	Base Esperanza	28.59	152	P	P	18 04 03.1	+2.3
CPSB	Cacapava Do Su	28.61	79	eP	P	18 04 11.9	+11
LPAZ	La Paz	29.06	38	P	P	18 04 19.9	+14
	comp=Z,10nm,1.0s,baz=178,slow=4.4,SNR=25						
LPAZ				LR	LR	18 13 58.6	
	comp=Z,3μm,18.9s,baz=186,slow=32						
LPAZ	La Paz	29.06	38	eP	P	18 04 19.2	+13
LPAZ	La Paz	29.06	38		pwP	18 04 13.4	+1.2
LPAZ	La Paz	29.06	38	P	P	18 04 05.0	-1.0
SMAI	San Martin Ant	29.42	165	P	P	18 04 07.0	-1.1
NNA	Nana	29.83	19	P	P	18 04 28.5	+16
	comp=Z,7.2nm,0.8s,baz=209,slow=10,SNR=4.6						
NNA				LR	LR	18 13 36.5	
	comp=Z,5μm,19.0s,baz=192,slow=30						
NNA	Nana	29.83	19	P	P	18 04 11.8	-0.5
ITAB	Concordia	31.27	75	eP	P	18 04 36.5	+12
ITAB	Concordia	31.27	75	P	P	18 04 25.9	+1.0
ITAB				IAmb	IAmb	18 04 55.9	
	comp=Z,75nm,1.4s						
SIV	San Ignacio	33.02	49	P	P	18 04 50.9	+10
	comp=Z,14nm,0.9s,baz=226,slow=11,SNR=49						
SIV				LR	LR	18 17 21.5	
	comp=Z,8μm,21.9s,baz=222,slow=34						
AQDB	Aquidauana	33.03	62	eP	P	18 04 51.5	+11
AQDB	Aquidauana	33.03	62	P	P	18 04 40.2	-0.2
PTLB	Pontes e Lacer	34.58	51	eP	P	18 05 06.0	+12
PTLB	Pontes e Lacer	34.58	51	P	P	18 04 54.0	+0.1
CZSB	Cruzeiro do Su	35.05	24	eP	P	18 05 12.7	+15
CZSB	Cruzeiro do Su	35.05	24	P	P	18 04 58.8	+0.9
CZSB				IAmb	IAmb	18 06 17.6	
	comp=Z,16nm,0.5s						
PCMB	Pacaembu	35.32	68	eP	P	18 05 12.1	+12
ETMB	Extrema	35.61	36	eP	P	18 05 16.8	+14
ETMB	Extrema	35.61	36	P	P	18 05 04.6	+1.8
PP1B	Ponte de Pedra	35.62	59	eP	P	18 05 14.7	+12
HOPE	Hope Point	35.62	130	IAMs_20	IAMs_20	18 17 19.4	
	comp=Z,6μm,22.0s						
VILB	Vilhena	35.97	47	eP	P	18 05 19.4	+14
VILB	Vilhena	35.97	47	P	P	18 05 07.8	+2.0
VILB				IAmb	IAmb	18 05 20.4	
	comp=Z,37nm,0.9s						
SALV	Santo Antonio	36.35	56	eP	P	18 05 22.1	+13
PET01	Itanhaem-SP	36.54	76	eP	P	18 05 21.4	+11
SPB	Sao Paulo	36.84	74	eP	P	18 05 25.0	+12
SPB	Sao Paulo	36.84	74	IAMs_20	IAMs_20	18 19 32.0	
	comp=Z,6μm,19.0s						
ITRB	Iturama	37.21	67	eP	P	18 05 28.7	+12
RCLB	Rio Claro- Sao	37.48	73	eP	P	18 05 30.1	+11
VAO	Valinhos	37.53	74	eP	P	18 05 31.3	+12
BB19B	Bebedouro	37.61	70	eP	P	18 05 32.1	+12
ARAG	Araguaiana, MT	39.00	60	eP	P	18 05 44.7	+13
PDRB	Porto dos Gac	39.03	50	eP	P	18 05 43.4	+12
TBTG	Tabatinga, AM	39.29	27	P	P	18 05 44.5	+11
TBTG				IAmb	IAmb	18 06 24.9	
	comp=Z,62nm,1.3s						
IPMB	Ipameri, GO	39.86	67	eP	P	18 05 50.0	+11
CLDB	Colider	40.17	51	eP	P	18 05 54.1	+13
BSCB	Bom Sucesso	40.37	74	eP	P	18 05 54.8	+12
VAS01	Vassouras-RJ	40.56	76	eP	P	18 05 56.9	+12
OTAV	Otavalo	41.40	12	P	P	18 05 46.7	-5.2
DUB01	Friburgo-RJ	41.47	77	eP	P	18 06 04.4	+12
BDFB	Brasilia	41.61	64	P	P	18 06 03.9	+11
	comp=Z,11nm,0.7s,baz=224,slow=8.4,SNR=21						
BDFB				LR	LR	18 23 11.2	
	comp=Z,5μm,18.8s,baz=225,slow=36						
BDFB	Brasilia	41.61	64	P	P	18 05 52.7	-0.6
SNDB	Serra Nova Dou	42.09	57	eP	P	18 06 10.0	+13
DIAM	Diamantina, MG	42.88	72	eP	P	18 06 16.4	+13
NPGB	Novo Progresso	43.51	48	eP	P	18 06 19.8	+11
MC01	Montes Claros	43.73	70	eP	P	18 06 22.8	+12
PEXB	Peixe	43.94	61	eP	P	18 06 25.1	+13
MACA	Manacapuru-AM	44.02	39	eP	P	18 06 26.4	+14
MACA	Manacapuru-AM	44.02	39	P	P	18 06 11.9	-0.8

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MACA                                  IAmb     IAmb     18 06 27.4
       comp=Z,31nm,0.7s
SJMB   Sao Joao De Ma     44.43  74  eP       P        18 06 28.1  +12
JANB   Januaria           44.58  67  eP       P        18 06 29.4  +12
BSFB   Barra de Sao F     44.59  75  eP       P        18 06 29.6  +12
RIB01  Linhares ES        44.62  76  eP       P        18 06 29.6  +12
ITTB   Itaituba           45.51  46  eP       P        18 06 36.4  +12
SDBA   SAO DESIDERIO      46.02  64  eP       P        18 06 40.8  +12
PTGA   Pitinga            46.48  38  P        P        18 06 44.3  +12
       comp=Z,36nm,0.8s,baz=213,slow=8.7,SNR=55
ROSC   El Rosal           46.67  17  P        P        18 06 51.0  +17
       comp=Z,3.8nm,0.3s,baz=108,slow=20,SNR=1.6
ROSC                                  LR       LR       18 24 15.0
       comp=Z,8µm,21.6s,baz=214,slow=33
ROSC   El Rosal           46.67  17  P        P        18 06 34.9 +0.7
GUA01  Guaratinga, BA     46.79  73  eP       P        18 06 47.0  +12
SMTB   Santa Maria do     46.82  58  eP       P        18 06 46.7  +12
PRPB   Parauapebas        47.48  54  eP       P        18 06 53.3  +13
CMC01  Camacan, BA        47.80  72  eP       P        18 06 54.4  +12
VNA3   Neumayer Olymp     47.86 155  P        P        18 06 48.4 +5.9
VNA1   Neumayer--Stat     48.37 154  P        P        18 06 52.7 +6.4
MALB   Monte Alegre       48.40  45  eP       P        18 07 00.4  +13
VNA2   Neumayer--Watz     48.63 155  P        P        18 06 54.2 +5.9
       baz=275,slow=9.5
GDU01  Guandu, BA         48.85  70  eP       P        18 07 03.0  +12
BOAV   Boa Vista          49.00  35  eP       P        18 07 05.3  +14
BOAV   Boa Vista          49.00  35  P        P        18 06 53.1 +1.3
BOAV                                  IAmb     IAmb     18 07 06.5
       comp=Z,22nm,0.9s
ZARC   Zaragoza, Cauc     49.13  15  P        P        18 06 53.6 +0.8
ZARC                                  IAmb     IAmb     18 07 26.1
       comp=Z,39nm,1.2s
QSPA   South Pole Qui     49.53 180  P        P        18 06 59.2 +3.7
       comp=Z,0.7nm,1.0s,baz=108,slow=3.2,SNR=1.2
QSPA   South Pole Qui     49.53 180  P        P        18 06 56.0 +0.5
QSPA                                  IAmb     IAmb     18 07 47.6
       comp=Z,51nm,1.8s
SNAA   Sanae              49.98 156  P        P        18 07 04.6 +5.8
SNAA   Sanae              49.98 156  P        P        18 06 60.0 +1.2
SNAA                                  IAmb     IAmb     18 07 19.6
       comp=Z,36nm,1.3s
BCIP   Isla Barro Col     50.00   9  P        P        18 07 00.1 +0.8
OCAC   Ocana              50.19  17  P        P        18 07 04.4 +3.5
MOTC   Monteria, Cord     50.23  14  P        P        18 07 01.8 +0.6
RIMA   Rio Macho          50.27   3  P        P        18 07 02.9 +1.2
JTS    Las Juntas de      50.76   2  P        P        18 07 06.1 +0.9
JTS                                   IAmb     IAmb     18 08 01.7
       comp=Z,33nm,1.3s
MCPB   Macapa, AP         50.85  47  eP       P        18 07 19.3  +13
SJCC   San Jacinto, C     51.41  14  P        P        18 07 10.9 +0.8
SDV    Santo Domingo      51.46  20  eP       P        18 07 25.3  +15
SDV    Santo Domingo      51.46  20  P        P        18 07 12.0 +1.4
SDV                                   IAmb     IAmb     18 07 42.3
       comp=Z,37nm,1.3s
SDV    Santo Domingo      51.46  20  IAMs_20  IAMs_20  18 26 41.0
       comp=Z,2µm,21.0s
TMAB   Tom-Au,PA,Br       51.52  52  eP       P        18 07 22.7  +12
BAUV   El Baul            52.24  23           P        18 07 18.5 +2.2
BOAB   BOACO BROADBAN52.89     1  IAMs_20  IAMs_20  18 24 55.1
       comp=Z,3µm,21.0s
TGUH   Tegucigalpa,Un     54.49 359  P        P        18 07 33.7 +0.9
TGUH                                  IAmb     IAmb     18 08 22.4
       comp=Z,33nm,0.9s
MTO3   Montecristo        54.89 357  P        P        18 07 37.2 +1.3
MTO3                                  IAmb     IAmb     18 08 09.8
       comp=Z,56nm,2.0s
TBI    Tubuai             55.02 268  eS       S        18 15 21.8 +2.8
       comp=Z,884nm,31.0s
TBI                                   eLQ      LQ       18 21 19.9
       comp=Z,3µm,33.0s
TBI                                   eLR      LR       18 23 35.6
       comp=Z,1µm,29.2s,baz=131
VNDA   Vanda              55.04 194  LR       LR       18 26 09.5
       comp=Z,2µm,21.4s,baz=122,slow=31
VNDA   Vanda              55.04 194  P        P        18 07 37.0 +0.9
HATO   Hato, Curacao      55.06  21  IAMs_20  IAMs_20  18 31 45.4
       comp=Z,2µm,18.0s
RCBR   Riachuelo          56.91  67  IAMs_20  IAMs_20  18 31 32.9
       comp=Z,4µm,21.0s
CCIG   Comitan            56.94 353  P        P        18 07 52.2 +1.7
CCIG                                  IAmb     IAmb     18 08 25.7
       comp=Z,40nm,1.6s
TAOE   Nuku Hiva Isla     57.03 288  eS       S        18 15 50.5 +4.5
       comp=Z,1µm,26.5s
TAOE                                  eLR      LR       18 24 31.6
       comp=Z,2µm,27.5s
TAOE   Nuku Hiva Isla     57.03 288  eT       T        19 09 15.2
       comp=Z,28nm,0.2s
GRGR   Grenville          57.37  29  IAMs_20  IAMs_20  18 30 40.9
       comp=Z,3µm,22.0s
PPT2   Papeete2           58.47 273  eS       S        18 16 07.2 +2.4
       comp=Z,2µm,26.5s
PPT2                                  eLQ      LQ       18 22 45.8
       comp=Z,5µm,31.2s
PPT2                                  eLR      LR       18 25 10.3
       comp=Z,2µm,29.5s,baz=131
PPT    Papeete            58.48 274  LR       LR       18 27 27.2
       comp=Z,322nm,20.0s,baz=120,slow=30
TLIG   Tlapa              59.05 347  P        P        18 08 05.6 +0.4
TLIG                                  IAmb     IAmb     18 08 39.3
       comp=Z,29nm,1.4s
MCLT   Moule a Chique     59.08  29  P        P        18 08 08.2 +2.9
BBGH   Gun Hill           59.09  31  IAMs_20  IAMs_20  18 34 43.5
       comp=Z,4µm,20.0s
FDF    Fort de France     59.95  29  IAMs_20  IAMs_20  18 35 44.3
       comp=Z,2µm,21.0s
MLPR   Magueyes Islan     61.10  21  P        P        18 08 19.8 +0.7
OBIP   Obispado Ponce     61.29  22  P        P        18 08 22.8 +2.4
PRSN   Puerto Rico Se     61.31  21  P        P        18 08 20.4 -0.1
CBYP   Canovanas          61.72  22  P        P        18 08 22.3 -1.1
EMPR   Esperanza - Ma     61.73  22  P        P        18 08 25.3 +2.0
SEUS   St. Eustatius      61.88  26  IAMs_20  IAMs_20  18 33 50.2
       comp=Z,3µm,21.0s
SABA   Saba               61.91  25  IAMs_20  IAMs_20  18 34 24.1
       comp=Z,3µm,22.0s
SMRT   St. Maarten        62.37  25  IAMs_20  IAMs_20  18 34 37.2
       comp=Z,3µm,22.0s
ANWB   Willy Bob          62.44  27  IAMs_20  IAMs_20  18 35 25.2
       comp=Z,2µm,20.0s
SYO    Syowa Base         63.59 161⇑eP       P        18 08 33.4 -1.8
ZAIG   Zacatecas          64.90 344  P        P        18 08 46.1 +1.5
ZAIG                                  IAmb     IAmb     18 09 18.8
       comp=Z,23nm,1.4s
MAW    Mawson             69.55 168  LR       LR       18 39 18.5
       comp=Z,792nm,18.1s,baz=210,slow=36
HPIG                      69.62 342  P        P        18 09 14.1 -0.3
HPIG                                  IAmb     IAmb     18 09 47.7
       comp=Z,31nm,1.2s
MQZ    McQueen's Vall     69.93 229  IAMs_20  IAMs_20  18 30 48.7
       comp=Z,2µm,20.0s
BKZ    Black Stump Fm     70.36 235  IAMs_20  IAMs_20  18 32 10.8
       comp=Z,3µm,20.0s
URZ    Urewera            70.51 236  LR       LR       18 33 15.7
       comp=Z,1µm,20.8s,baz=211,slow=30
URZ    Urewera            70.51 236  IAMs_20  IAMs_20  18 33 05.0
       comp=Z,1µm,20.0s
LTZ    Lake Taylor        70.72 230  IAMs_20  IAMs_20  18 31 45.0
       comp=Z,2µm,22.0s
RPZ    Rata Peaks         70.84 229  IAMs_20  IAMs_20  18 32 06.3
       comp=Z,2µm,21.0s
LBZ    Lake Benmore       70.92 228  IAMs_20  IAMs_20  18 32 08.2
       comp=Z,2µm,18.0s
TX31   Lajitas Ar. Si     71.49 344  P        P        18 09 26.0 +0.3
TX32   Lajitas Array      71.49 344  P        P        18 09 24.3 -1.3
TX32                                  IAmb     IAmb     18 09 58.1
       comp=Z,20nm,1.2s
TXAR   Lajitas Array      71.49 344  P        P        18 09 39.5  +14
       comp=Z,2.0nm,0.7s,baz=166,slow=8.6,SNR=13
TXAR                                  LR       LR       18 36 10.7
       comp=Z,788nm,18.6s,baz=0.0,slow=31
TXAR   Lajitas Array      71.49 344  P        P        18 09 25.6 -0.1
435B   Jarrell            71.87 350  P        P        18 09 28.6 +0.8
435B                                  IAmb     IAmb     18 09 60.0
       comp=Z,26nm,1.1s
JCT    Junction City      71.90 348  P        P        18 09 29.0 +0.9
JCT                                   IAmb     IAmb     18 10 01.3
       comp=Z,36nm,1.3s
CASY   Casey              72.54 187  IAMs_20  IAMs_20  18 36 09.5
       comp=Z,2µm,21.0s
146A   Union              73.02 358  P        P        18 09 35.0 +0.4
152A   Waverly Hall       73.03   2  P        P        18 09 34.9 +0.2
152A                                  IAmb     IAmb     18 10 07.2
       comp=Z,32nm,1.1s
WHTX   Lake Whitney,      73.05 350  P        P        18 09 35.7 +0.9
WHTX                                  IAmb     IAmb     18 10 06.4
       comp=Z,27nm,1.1s
Z47A   Carrollton         73.55 359  P        P        18 09 39.4 +1.7
GOGA   Godfrey            73.80   3  P        P        18 09 40.5 +1.3
GOGA                                  IAmb     IAmb     18 10 11.0
       comp=Z,24nm,1.1s
Y52A   Lilburn            74.23   2  P        P        18 09 40.2 -1.5
Y52A                                  IAmb     IAmb     18 10 13.8
       comp=Z,29nm,1.1s
Y45A   Yeager Farm, C     74.26 357           P        18 09 40.9 -1.0
WLAR   White Oak Lake     74.28 354           P        18 09 40.6 -1.4
WLAR                                  IAmb     IAmb     18 10 14.7
       comp=Z,30nm,1.1s
HODGE  Hodges             74.67   4  P        P        18 09 43.5 -0.7
HODGE                                 IAmb     IAmb     18 10 16.1
       comp=Z,30nm,1.1s
JSC    Jenkinsville       74.77   4  P        P        18 09 45.4 +0.6
JSC                                   IAmb     IAmb     18 10 16.9
       comp=Z,32nm,1.2s
X48A   Hartselle          74.79 359  P        P        18 09 45.9 +1.0
X48A                                  IAmb     IAmb     18 10 16.8
       comp=Z,23nm,1.1s
MIAR   Mount Ida          75.17 354  P        P        18 09 48.9 +1.8
MIAR                                  IAmb     IAmb     18 10 23.7
       comp=Z,43nm,1.8s
BIRD   Birdtown, Kers     75.18   5           P        18 09 47.1 -0.1
BIRD                                  IAmb     IAmb     18 10 18.8
       comp=Z,25nm,1.2s
PAULI  Pauline            75.28   4  P        P        18 09 48.4 +0.7
PAULI                                 IAmb     IAmb     18 10 19.9
       comp=Z,42nm,1.1s
BG3    Lake Jocassee      75.40   3  P        P        18 09 48.8 +0.4
BG3                                   IAmb     IAmb     18 10 20.4
       comp=Z,41nm,1.2s
W45A   Hickory Valley     75.53 358  P        P        18 09 48.2 -1.0
SWET   Sewanee            75.55   0  P        P        18 09 48.9 -0.5
SWET                                  IAmb     IAmb     18 10 21.2
       comp=Z,34nm,1.2s
KMSC   Kings Mountain     75.62   4  P        P        18 09 49.9 +0.1
KMSC                                  IAmb     IAmb     18 10 21.6
       comp=Z,23nm,1.1s
W57A   Gilead             75.72   5  P        P        18 09 48.0 -2.2
W57A                                  IAmb     IAmb     18 10 21.6
       comp=Z,37nm,1.1s
CPCT   Cooper Cave        75.80   2  P        P        18 09 48.7 -2.0
CPCT                                  IAmb     IAmb     18 10 23.0
       comp=Z,30nm,1.0s
WHAR   Wooly Hollow       75.81 355  P        P        18 09 51.3 +0.5
WHAR                                  IAmb     IAmb     18 10 15.9
       comp=Z,17nm,0.9s
MSTX   Muleshoe           75.81 346  P        P        18 09 49.0 -2.0
MSTX                                  IAmb     IAmb     18 10 16.5
       comp=Z,33nm,0.9s
W39A   Magazine           75.83 354  P        P        18 09 51.2 +0.3
W39A                                  IAmb     IAmb     18 10 23.5
       comp=Z,46nm,1.7s
V48A   Smith Brothers     76.07 360  P        P        18 09 53.4 +1.1
V48A                                  IAmb     IAmb     18 10 23.8
       comp=Z,30nm,1.2s
V51A   Loudon             76.16   2  P        P        18 09 52.6 -0.1
V51A                                  IAmb     IAmb     18 10 28.8
       comp=Z,20nm,1.1s
V52A   Sevierville        76.22   2  P        P        18 09 54.2 +1.1
V58A   Windy Hill, Pi     76.42   6  P        P        18 09 54.5 +0.2
V58A                                  IAmb     IAmb     18 10 24.6
       comp=Z,29nm,1.2s
LCAR   Lake Charles       76.52 356  P        P        18 09 55.0 +0.2
TUL1   Leonard            76.72 352  P        P        18 09 56.5 +0.5
TUL1                                  IAmb     IAmb     18 10 21.3
       comp=Z,22nm,0.9s
U49A   Red Boiling Sp     76.85   1  P        P        18 09 57.2 +0.5
OK030  Cody Creek RV      76.85 351  P        P        18 09 57.6 +0.9
OK030                                 IAmb     IAmb     18 10 28.2
       comp=Z,23nm,1.0s
HHAR   Hobbs              76.92 354  P        P        18 09 58.4 +1.3
OK033  Mehan              76.98 351           P        18 09 58.6 +1.2
OK033                                 IAmb     IAmb     18 10 29.1
       comp=Z,30nm,1.1s
OK032  Salt Plains WL     77.88 350           P        18 09 59.7 -2.8
S44A   Carbondale         78.06 358  P        P        18 10 01.6 -1.9
S44A                                  IAmb     IAmb     18 10 34.9
       comp=Z,26nm,1.2s
R49A   Shelbyville        78.63   1  P        P        18 10 05.0 -1.6
OLIL   Olney              79.08 359  P        P        18 10 07.2 -1.7
OLIL                                  IAmb     IAmb     18 10 40.1
       comp=Z,31nm,1.1s
R32A   Long Quarter,      79.54 350  P        P        18 10 09.7 -1.9
SFIN   Lafayette          80.70 360  P        P        18 10 18.1 +0.4
WUPA   West Chester U     80.86   8           P        18 10 16.8 -1.8
O56A   Blue Knob Stat     80.91   6  P        P        18 10 19.6 +0.6
KNB    Kanab              81.04 339  P        P        18 10 18.3 -1.6
SSPA   Standing Stone     81.33   7  P        P        18 10 20.8 -0.3
SSPA                                  IAmb     IAmb     18 11 14.1
       comp=Z,29nm,1.5s
N54A   Moraine State      81.50   5  P        P        18 10 21.2 -0.8
N54A                                  IAmb     IAmb     18 10 53.3
       comp=Z,46nm,1.4s
M50A   Fremont            81.79   3  P        P        18 10 21.5 -2.0
M53A   WI Miller and      81.93   4  P        P        18 10 24.1 -0.1
ALLY   Alegheny Colle     82.17   5  P        P        18 10 22.5 -3.1
Q16A   Castle Valley      82.40 341  P        P        18 10 25.0 -2.1
KSPA   Keystone Colle     82.45   8  P        P        18 10 24.4 -2.6
MSVF   Nonsavu            82.68 253  LR       LR       18 40 59.8
       comp=Z,220nm,21.4s,baz=155,slow=31
L56A   Greenwood          82.85   7  P        P        18 10 28.9 -0.2
KSCT   Kent School, K     82.89  10  P        P        18 10 27.7 -1.5
WVNY   West Valley, N     83.03   6  P        P        18 10 30.7 +0.7
WVNY                                  IAmb     IAmb     18 11 01.1
       comp=Z,34nm,1.2s
K43A   Burlington         83.04 359  P        P        18 10 28.0 -2.0
BINY   Binghamton         83.07   8  P        P        18 10 33.4 +3.2
BINY                                  IAmb     IAmb     18 11 01.5
       comp=Z,32nm,1.1s
JFWS   Jewell Farm        83.31 357           P        18 10 31.6 +0.2
RDMU   Red Mountain       83.58 342  P        P        18 10 33.9 +0.8
RDMU                                  IAmb     IAmb     18 11 33.4
       comp=Z,43nm,1.8s
NLU    North Lily Min     83.60 340           P        18 10 32.7 -0.6
J55A   Hilton             83.95   6           P        18 10 35.1 +0.5
NVAR   Mina Array Bea     83.97 335  P        P        18 10 50.8  +16
       comp=Z,1.2nm,0.8s,baz=160,slow=6.1,SNR=6.2
NVAR                                  LR       LR       18 40 07.3
       comp=Z,350nm,21.7s,baz=146,slow=30
J56A   Wolcott            84.05   7  P        P        18 10 35.1 -0.1
I42A   Draeger Farm,      84.24 358  P        P        18 10 36.8 +0.7
J58A   Remsen             84.29   8  P        P        18 10 38.7 +2.3
J58A                                  IAmb     IAmb     18 11 09.8
       comp=Z,34nm,1.5s
I40A   Norwalk            84.30 357  P        P        18 10 35.7 -0.7
MBO    M'Bour             84.41  66  IAMs_20  IAMs_20  18 44 56.3
       comp=Z,3µm,22.0s
ACCN   Adirondack Com     84.50   9           P        18 10 38.3 +0.8
ACCN                                  IAmb     IAmb     18 11 08.3
       comp=Z,29nm,1.3s
SADO   Sadowa             85.34   5  P        P        18 10 41.8 +0.1
SADO                                  IAmb     IAmb     18 11 12.2
       comp=Z,25nm,0.9s
LONY   Lake Ozonia        85.61   8  P        P        18 10 40.8 -2.3
LONY                                  IAmb     IAmb     18 11 14.2
       comp=Z,21nm,1.1s
PDAR   Pinedale Array     85.67 343  P        P        18 10 56.5  +13
       comp=Z,0.6nm,0.7s,baz=153,slow=5.0,SNR=5.6
PDAR                                  LR       LR       18 45 07.9
       comp=Z,396nm,18.3s,baz=166,slow=32
BOSA   Boshof             86.44 125  P        P        18 10 53.1 +5.2
       comp=Z,4.6nm,0.9s,baz=170,slow=6.7,SNR=3.0
BOSA                                  LR       LR       18 43 46.0
       comp=Z,1µm,20.1s,baz=224,slow=32
F33A   5 Mile Ranch,      86.61 353  P        P        18 10 47.4 -0.6
G62A   West of Eustis     86.72  11           P        18 10 45.0 -3.6
F63A   Nahmakanta, Br     87.42  12  P        P        18 10 49.7 -2.2
TSUM   Tsumeb             87.82 113  IAMs_20  IAMs_20  18 44 19.0
       comp=Z,1µm,20.0s
DZM    Mont Dzumac        87.97 243  LR       LR       18 42 09.4
       comp=Z,897nm,21.4s,baz=188,slow=30
DZM    Mont Dzumac        87.97 243  eS       S        18 21 39.2  0.0
       comp=Z,431nm,30.8s
DZM    Mont Dzumac        87.97 243  eLQ      LQ       18 35 12.3
       comp=Z,2µm,27.1s
DZM                                   eLR      LR       18 38 52.4
       comp=Z,3µm,29.8s
DBIC   Dimbokro           87.98  80  P        P        18 11 02.5 +7.1
       comp=Z,4.3nm,0.9s,baz=214,slow=2.5,SNR=5.3
DBIC                                  LR       LR       18 47 12.2
       comp=Z,574nm,19.1s,baz=238,slow=34
J08A   Circle Bar Ran     88.52 337  P        P        18 10 56.1 -1.2
J08A                                  IAmb     IAmb     18 11 55.0
       comp=Z,43nm,1.9s
BOZ    Bozeman (W)        88.83 343  P        P        18 10 58.5 -0.2
DLMT   Dillon             88.83 342  P        P        18 10 57.8 -0.9
DLMT                                  IAmb     IAmb     18 11 58.2
       comp=Z,37nm,1.6s
LRM    Limekiln Ridge     89.23 342  P        P        18 11 00.3 -0.4
ULM    Lac du Bonnet      90.95 354  LR       LR       18 49 30.5
       comp=Z,505nm,21.2s,baz=162,slow=34
KOWA   Kowa               93.71  74  IAMs_20  IAMs_20  18 52 13.9
       comp=Z,1µm,19.0s
STKA   Stephens Creek     95.22 219  LR       LR       18 45 48.8
       comp=Z,762nm,20.5s,baz=157,slow=30
SCHQ   Schefferville      96.64  11  LR       LR       18 52 34.7
       comp=Z,696nm,20.5s,baz=234,slow=34
TORD   Torodi Ar. Bea     97.06  79  P        Pdif     18 11 45.0 +7.5
       comp=Z,1.5nm,1.0s,baz=230,slow=3.1,SNR=6.0
TORD                                  LR       LR       18 54 06.6
       comp=Z,524nm,18.8s,baz=220,slow=35
LSZ    Lusaka             97.81 118  IAMs_20  IAMs_20  18 50 22.6
       comp=Z,2µm,21.0s
VOI    Vohitsoka         104.05 136  IAMs_20  IAMs_20  18 51 33.6
       comp=Z,1µm,20.0s
PMG    Port Moresby      109.84 238  IAMs_20  IAMs_20  18 52 38.3
       comp=Z,1µm,21.0s
MBAR   Mbarara           109.92 109  IAMs_20  IAMs_20  18 56 24.4
       comp=Z,928nm,22.0s
KIBK   Kibwezi           113.83 116  IAMs_20  IAMs_20  18 59 39.8
       comp=Z,1µm,20.0s
KMBO   Kilima Mbogo      114.15 114  IAMs_20  IAMs_20  19 00 07.2
       comp=Z,1µm,21.0s
LODK   Lodwar            116.02 109  IAMs_20  IAMs_20  19 08 01.0
       comp=Z,754nm,18.0s
WLF    Walferdange       121.09  49  IAMs_20  IAMs_20  19 08 10.3
       comp=Z,2µm,20.0s
CEL    Celeste           121.92  65  IAMs_20  IAMs_20  19 12 17.6
       comp=Z,1µm,20.0s
TIP    Timpagrande       122.95  64  IAMs_20  IAMs_20  19 10 57.0
       comp=Z,1µm,20.0s
MSEY   Mahe Island       122.96 133  IAMs_20  IAMs_20  19 03 06.7
       comp=Z,556nm,21.0s
GERES  GERESS Array B    125.19  53  PKP      PKiKP    18 17 16.4  +11
       comp=Z,0.7nm,0.8s,baz=85,slow=2.8,SNR=3.5
PDG    Podgorica         126.10  62  IAMs_20  IAMs_20  19 23 14.4
       comp=Z,3µm,18.0s
DIVS   Divibare          127.28  60           PKPpre   18 17 03.6
DIVS                                  IAMs_20  IAMs_20  19 23 08.4
       comp=Z,4µm,18.0s
SANT   Santorini         127.78  71  IAMs_20  IAMs_20  19 24 48.9
       comp=Z,2µm,19.0s
PSZ    Piszkesteto       128.66  56  IAMs_20  IAMs_20  19 10 50.9
       comp=Z,1µm,20.0s
LUWI   Luwuk             130.66 220  IAMs_20  IAMs_20  19 25 51.4
       comp=Z,5µm,22.0s
MLR    Muntele Rosu      131.73  61  IAMs_20  IAMs_20  19 28 20.2
       comp=Z,8µm,21.0s
ISP    Isparta           132.06  72  IAMs_20  IAMs_20  19 27 44.1
       comp=Z,9µm,21.0s
BKB    Balikpapan        133.12 213  IAMs_20  IAMs_20  19 26 46.6
       comp=Z,2µm,18.0s
TOLI2  Tolitoli          133.50 219  IAMs_20  IAMs_20  19 24 33.4
       comp=Z,2µm,18.0s
BRTR   Keskin Array B    135.04  71  PKP      PKiKP    18 17 31.3 +5.6
       comp=Z,0.4nm,0.6s,baz=196,slow=1.0,SNR=2.2
PMBI   Palembang         135.38 196  IAMs_20  IAMs_20  19 30 21.7
       comp=Z,8µm,21.0s
KSM    Kuching           138.10 206  IAMs_20  IAMs_20  19 24 38.2
       comp=Z,8µm,20.0s
MYLDM  Lahad Datu        138.13 219  IAMs_20  IAMs_20  19 32 20.4
       comp=Z,8µm,19.0s
SBUM   Sibu              138.34 209  IAMs_20  IAMs_20  19 31 44.1
       comp=Z,3µm,20.0s
BKNI   Bangkinang        139.24 192  IAMs_20  IAMs_20  19 25 55.6
       comp=Z,5µm,19.0s
KKM    Kota Kinabalu     139.96 217  IAMs_20  IAMs_20  19 24 35.5
       comp=Z,7µm,20.0s
KLMR   Klimovskoe        141.73  40  e        PKiKP    18 17 52.4  +14
KLMR                                  AMP               18 17 59.7
       comp=Z,36nm,1.4s
ERM    Erimo             143.15 289  IAMs_20  IAMs_20  19 31 22.2
       comp=Z,4µm,18.0s
TIXI   Tiksi             144.36 342  PKPbc    PKiKP    18 17 51.7 +8.2
       comp=Z,3.3nm,0.7s,baz=48,slow=4.5,SNR=4.5
YSS    Yuzh-Sakhalins    144.44 297  IAMs_20  IAMs_20  19 36 41.8
       comp=Z,6µm,22.0s
MAJO   Matsushiro        145.14 278  IAMs_20  IAMs_20  19 23 48.0
       comp=Z,4µm,20.0s
INU    Inuyama           145.60 275  IAMs_20  IAMs_20  19 37 05.9
       comp=Z,5µm,20.0s
WSAR   Wadi Sarin        145.93 110  PKPbc    PKiKP    18 17 50.2 +1.9
       comp=Z,7.1nm,1.0s,baz=302,slow=1.2,SNR=2.8
BELG   Belogornoye       146.88  54  PKPbc    PKiKP    18 17 54.0 +4.8
       comp=Z,19nm,1.0s,baz=41,slow=0.7,SNR=9.2
YAK    Yakutsk           149.58 327           PKPdf    18 17 47.7 -1.2
NACB   Ninganchiao       151.32 244  IAMs_20  IAMs_20  19 32 56.0
       comp=Z,6µm,21.0s
TPUB   Ta-pu             151.38 241  IAMs_20  IAMs_20  19 32 37.4
       comp=Z,7µm,20.0s
ARU    Arti              152.40  43  PKPbc    PKPab    18 18 09.4 -1.2
       comp=Z,0.9nm,0.6s,baz=252,slow=3.2,SNR=2.9
ARU    Arti              152.40  43           PKPdf    18 17 52.3 -1.1
MDJ    Mudanjiang        153.34 290  IAMs_20  IAMs_20  19 42 17.7
       comp=Z,6µm,18.0s
HYB    Hyderabad         153.43 146 i PKP     PKPab    18 18 16.5 +0.6
AKTO   Aktyubinsk        153.52  56  PKPbc    PKPab    18 18 13.7 -1.8
       comp=Z,0.5nm,0.4s,baz=307,slow=1.3,SNR=1.9
INCN   Inchon            154.20 274  IAMs_20  IAMs_20  19 33 55.9
       comp=Z,7µm,21.0s
HRA    Herat             154.48  94           PKPdf    18 17 57.0 -0.4
HKPS   Hong Kong Po S    154.69 230  IAMs_20  IAMs_20  19 24 43.0
       comp=Z,6µm,18.0s
ABKAR  Akbulak array     154.91  59           PKPdf    18 17 56.3 -1.0
NJ2    Nanjing           157.92 255  ePKP     PKPdf    18 18 01.5 -0.2
BJI    Beijing           162.74 275  PKP      PKPdf    18 18 06.0 -0.8
ZALV   Zalesovo Beam     165.51  21  PKP      PKPdf    18 18 19.9  +11
       comp=Z,0.3nm,0.5s,baz=336,slow=3.2,SNR=2.1
KURK   Kurchatov         165.58  41           PKPdf    18 18 06.4 -2.6
KURBB  Kurchatov Arra    165.59  42  PKP      PKPdf    18 18 20.0  +11
       comp=Z,0.4nm,0.7s,baz=50,slow=1.4,SNR=2.4
KURBB                                 PKPab    sPKPab   18 19 18.7 +7.8
       comp=Z,0.9nm,0.8s,baz=327,slow=2.1,SNR=5.0
AAK    Ala-Archa         165.63  76  PKPab    PKPab    18 19 16.7 +8.1
       comp=Z,3.1nm,1.1s,baz=253,slow=7.5,SNR=4.5
HHC    Hu-ho-hao-te      166.34 276  ePKP     PKPdf    18 18 06.5 -3.6
WMQ    Urumqi            174.66  52  ePKP     PKPdf    18 18 14.8 +0.3
GTA    Gaotai            175.01 257  PKP      PKPdf    18 18 16.8 +1.9
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*NNC **25** 18:06:46.2±5.9, 37°.36N×71°.17E, h126^{km}±172^{km}, mb2.6, mpv3.4, Error ellipse: s-maj=54.2km s-min=35.9km az=1.0*

ISC 25 18:06:41.9±1.4**, 37°.07N**±0°.08×**71°.2E**±0°.1**, h88^{km}, n11,** σ**1^{s}.94**/15**, 5C-2D, Afghanistan-Tajikistan border region**

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Code   Station Name         Δ°   AZ°    Phase ID              Time       Res
                                       Op       ISC         h  m  s     ISC
AML    Almayashu           5.41  20   P        Pn         18 08 01.6 +1.2
       SNR=15
UCH    Uchtor              5.75  25   P        Pn         18 08 06.5 +1.4
       SNR=7.0
EKS2   Erkin-Say           5.92  19   P        Pn         18 08 08.9 +1.7
       SNR=5.7
KK08   Karatay Array       6.05 355  ⇑P        Pn         18 08 10.3 +1.4
       1.3nm,0.3s,baz=180,slow=14
KK08                                 ⇑S        Sn         18 09 14.7 -2.0
       0.6nm,0.4s,baz=173,slow=25
AAK    Ala-Archa           6.11  23   P        Pn         18 08 11.3 +1.6
       SNR=8.0
AAK    Ala-Archa           6.11  23  ⇑P        Pn         18 08 11.1 +1.3
       3.4nm,0.5s
AAK                                  ⇓S        Sn         18 09 16.2 -2.0
       2.9nm,0.5s
DHRM   DHARAMSHALA         6.38 137  eP        Pn         18 08 15.9 +2.4
DHRM                                 eS        Sn         18 09 21.2 -3.8
DHRM                                  IAML                18 09 23.3
       comp=N,39nm,0.3s
DHRM                                  IAML                18 09 23.6
       comp=E,46nm,0.2s
CHMS   Chumysh             6.51  24   P        Pn         18 08 16.3 +1.1
       SNR=6.7
TKM2   Tokmak 2            6.74  29  ⇑P        Pn         18 08 18.3 -0.1
       comp=E,0.8nm,0.3s
TKM2                                 ⇓S        Sn         18 09 34.6 +0.8
       comp=E,1.0nm,0.6s
SMLA   Simla               7.71 138  eP        Pn         18 08 32.6 +1.1
SMLA                                 eS        Sn         18 09 49.4 -7.8
SMLA                                  IAML                18 09 55.2
       comp=E,16nm,0.4s
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SMLA				IAML		18 09 56.2	
	comp=N,21nm,0.4s						
AB31	**Akbulak array**	14.68	330	⇑P	Pn	18 10 03.7	-1.1
	comp=N,0.1nm,0.3s,baz=160,slow=9.6,SNR=6.1						

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*ISK **25** 18:09:54.4, 38°.03N×26°.68E, h13^{km}, ML2.6/12*
*DDA **25** 18:09:55.2, 38°.04N×26°.71E, h10^{km}±1^{km}, ML2.4*
ISC 25 18:09:54.9±1.0, **38°.03N**±0°.03×**26°.69E**±0°.04, **h13**^{km}±7^{km}, **n28**, σ**0^{s}.62**/43, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	**zmir**	0.15	81	*i* P	Pg	18 09 58.5	-0.2
DGB				*i* S	Sg	18 10 00.8	-0.4
ZEYE	**Izmir, Urla-Ze**	0.26	325	*i* P	Pg	18 10 00.6	+0.2
ZEYE				*i* S	Sb	18 10 04.8	-1.0
ZEYE				IAML		18 10 05.0	
	comp=E,566nm,0.3s						
URLA	**Izmir**	0.34	347	*i* P	Pg	18 10 01.9	0.0
URLA				*i* S	Sb	18 10 07.2	-1.0
URLA				IAML		18 10 08.0	
	comp=E,327nm,0.4s						
URLA	**Izmir**	0.34	347	PG	Pg	18 10 01.9	0.0
URLA				SG	Sg	18 10 07.1	+0.5
BLCB	**Balcova**	0.45	38	PG	Pg	18 10 03.3	-0.6
GCAM	**G?zelcaml?**	0.54	127	*i* P	Pb	18 10 06.0	-0.3
GCAM				IAML		18 10 13.0	
	comp=E,321nm,0.3s						
GCAM				*i* S	Sb	18 10 13.5	-0.3
GCAM				IAML		18 10 15.0	
	comp=N,257nm,0.2s						
GCAM	**G?zelcaml?**	0.54	127	PG	Pb	18 10 05.9	-0.3
GCAM				SG	Sb	18 10 13.6	-0.3
KRBN	**Karaburun**	0.57	349	PG	Pg	18 10 06.1	-0.1
FOCM	**Foa**	0.69	3	PG	Pb	18 10 08.4	-0.3
DDIM	**Aydin, Didim**	0.72	142	*i* P	Pb	18 10 09.4	+0.1
DDIM				*i* S	Sb	18 10 20.0	+1.0
DDIM				IAML		18 10 22.0	
	comp=N,147nm,0.8s						
CAND	**Candarli**	0.93	5	PG	Pb	18 10 12.9	0.0
AYDB	**Zeytinkoy-Aydi**	0.95	94	PG	Pg	18 10 13.1	-0.2
ZEDA	**zmir-Bergama**	0.98	18	*i* P	Pb	18 10 13.8	-0.1
ZEDA				*i* S	Sn	18 10 28.2	-0.1
AYDN	**Tasoluk**	1.01	111	*i* P	Pn	18 10 14.7	-0.1
AYDN				*i* S	Sg	18 10 27.4	-0.2
AYDN				IAML		18 10 31.0	
	comp=E,95nm,0.3s						
DKL	**Dikili**	1.06	9	PG	Pb	18 10 14.8	-0.2
BODT	**Bodrum**	1.08	153	PN	Pb	18 10 15.6	+0.1
BDRM	**Kayabasi**	1.13	148	*i* P	Pb	18 10 16.4	0.0
BDRM				*i* S	Sn	18 10 32.4	+0.5
AYVA	**Ayvalik**	1.28	360	*i* P	Pb	18 10 19.0	+0.1
AYVA				*i* S	Sg	18 10 38.1	+1.9
APE	**Apeiranthos**	1.33	224	PN	Pn	18 10 18.9	-0.3
SIGR	**SIGRI**	1.35	331	PN	Pn	18 10 19.4	-0.1
BUHA	**Balikesir, Bur**	1.50	11	*i* P	Pn	18 10 21.6	0.0
BUHA				*i* S	Sg	18 10 43.9	+0.6
MULA	**Mugla, Merkez-**	1.50	120	*i* P	Pn	18 10 21.8	+0.1
STEP	**BALIKESIR_Sava**	1.57	30	*i* P	Pg	18 10 24.4	-0.6
STEP				*i* S	Sg	18 10 45.1	-0.4
STEP				IAML		18 10 47.0	
	comp=N,41nm,0.7s						
STEP				IAML		18 10 49.0	
	comp=E,52nm,0.8s						
KULA	**Kula-Manisa**	1.62	72	PN	Pn	18 10 23.8	+0.5
BAYC	**CANAKKALE_Bayr**	1.71	356	*i* P	Pn	18 10 23.8	-0.7
BALB	**Balikesir**	1.86	30	PN	Pn	18 10 27.2	+0.8
DEMI	**Demirci**	1.88	57	*i* P	Pg	18 10 30.4	-0.7
DEMI				*i* S	Sb	18 10 53.8	+1.1
DEMI				IAML		18 10 57.0	
	comp=E,30nm,0.3s						
USAK	**Uak-Merkez**	1.95	69	*i* P	Pg	18 10 31.2	-1.2
USAK				*i* S	Sb	18 10 55.7	+1.1

KRSC 25 18:13:00.3±1.5, **48°.95N**×**156°.51E**, **h31**^{km}±20^{km}, **ML4.1**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	1.76	352	*e*P	Pn	18 13 28.8	+0.2
SKR				*e*S	Sn	18 13 51.2	+1.3
RUS	**Russkaya**	3.72	19	*e*P	Pn	18 13 59.9	+4.4
RUS				*e*S	Sn	18 14 43.4	+5.2
GRL	**Gorelyy**	3.75	15	*e*P	Pb	18 14 01.5	-4.2
GRL				S	Sb	18 14 44.9	-5.8
KRMR	**Karymshinskiy**	4.02	14	P	Pn	18 14 04.2	+4.5
KRMR				*e*S	Sn	18 14 51.6	+5.9
PET	**Petropavlovsk**	4.30	18	*e*P	Pn	18 14 08.5	+5.0
PET				*e*S	Sn	18 14 59.3	+6.7
DALK	**Dalny**	4.33	18	*e*P	Pn	18 14 07.9	+4.0
DALK				*e*S	Sn	18 14 59.0	+5.7
UGLR	**Uglovaya**	4.51	18	*e*P	Pn	18 14 11.1	+4.6
AVH	**Avacha**	4.55	17	P	Pn	18 14 12.4	+5.4
KOK	**Koryaka**	4.55	16	*e*P	Pn	18 14 12.4	+5.3
SPN	**Mys Shipunski**	4.71	27	P	Pn	18 14 14.2	+5.0
KBTR	**Krutoberegovo**	8.22	25	P	Pn	18 15 01.6	+4.3
BKI	**Bering**	8.55	39	*e*S	Sn	18 16 40.4	+3.2

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*IDC **25** 18:18:34.3±2.0, 7°.19S×156°.14E, h39^{km}±9^{km}, mb3.4/6, mb1 3.7/7, mb1mx3.5/32, mbtmp3.7/7, ML2.6/1, Error ellipse: s-maj=52.9km s-min=25.4km az=126.0*
ISC 25 18:18:34.4±1.5, **7°.1S**±0°.3×**156°.1E**±0°.2, **h35**^{km}, **n7**, σ**0^{s}.81**/11, **mb3.6**/6, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	9.15	255	Pn	Pn	18 20 45.1	+1.1
	2.8nm,0.3s,baz=58,slow=9.2,SNR=16						
PMG				Sn	Sn	18 22 24.7	-1.1
	0.5nm,0.3s,baz=94,slow=16,SNR=4.1						
WRA	**Warramunga Arr**	24.67	237	P	P	18 23 52.2	+0.1
	0.7nm,0.9s,baz=80,slow=8.7,SNR=1.6						
WRA				pP	pP	18 24 02.0	+0.1
	1.5nm,0.8s,baz=59,slow=9.2,SNR=4.3						
ASAR	**Alice Springs**	26.93	230	P	P	18 24 12.1	-0.6
	0.8nm,1.1s,baz=57,slow=9.5,SNR=4.4						
ASAR				pP	pP	18 24 22.3	-0.1
	0.4nm,0.5s,baz=59,slow=9.3,SNR=2.6						
CMAR	**Chiang Mai Arr**	61.85	295	P	P	18 28 50.1	-0.4
	0.7nm,0.7s,baz=120,slow=5.0,SNR=6.0						
CMAR				pP	pP	18 29 02.4	+1.2
	0.7nm,0.7s,baz=112,slow=4.7,SNR=4.3						
ILAR	**Eielson Array**	83.09	21	P	P	18 30 56.2	0.0
	0.5nm,0.9s,baz=238,slow=5.0,SNR=2.5						
MKAR	**Makanchi Array**	84.24	318	P	P	18 31 02.6	+0.1
	0.3nm,0.6s,baz=123,slow=5.3,SNR=2.5						
ZALV	**Zalesovo Beam**	84.92	326	P	P	18 31 04.8	-0.9
	0.3nm,0.4s,baz=98,slow=4.4,SNR=2.1						

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*IDC **25** 18:22:11.3±1.5, 15°.54S×175°.52W, h310^{km}±27^{km}, mb3.3/3, mb1 3.6/4, mb1mx3.2/38, mbtmp4.1/4, Error ellipse: s-maj=136.3km s-min=22.0km az=150.0*
*NEIC **25** 18:22:11.2±1.8, 15°.85S±0°.08×175°.4W±0°.1, h311^{km}±10^{km}, mb4.4/21, Error ellipse: s-maj=19.5km s-min=11.6km az=105.0*
ISC 25 18:22:10.0±0.7, **15°.8S**±0°.1×**175°.52W**±0°.09, **h300**^{km}, **n30**, σ**0^{s}.88**/31, **mb4.4**/15, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	4.09	63	P	Pn	18 23 18.7	+1.3
	20nm,0.3s,baz=192,slow=4.1,SNR=15						
AFI				S	S	18 24 10.9	-0.5
	5.6nm,0.3s,baz=24,slow=20,SNR=1.7						
NIUE	**Niue**	6.24	122	Pn	Pn	18 23 43.2	+1.0
SANVU	**Saraoutou**	16.64	269	P	P	18 25 44.5	-0.7
QRZ	**Quartz Range**	26.98	200	P	P	18 27 24.2	-0.6
NNZ	**Nelson**	27.06	199	P	P	18 27 24.6	-0.8
THZ	**Tophouse**	27.70	199	P	P	18 27 30.6	-0.6
THZ				IAmb	IAmb	18 28 00.9	
	comp=Z,23nm,1.4s						
LTZ	**Lake Taylor**	28.82	199	P	P	18 27 39.6	-1.5
LTZ				IAmb	IAmb	18 28 05.6	
	comp=Z,15nm,1.2s						
FOZ	**Fox Glacier**	30.31	201	P	P	18 27 54.1	0.0
MLZ	**Mavora Lakes**	32.50	202	P	P	18 28 12.1	-1.2
MLZ				IAmb	IAmb	18 28 35.2	
	comp=Z,48nm,1.7s						
DCZ	**Deep Cove**	32.94	203	P	P	18 28 17.0	+0.1
DCZ				IAmb	IAmb	18 28 31.5	
	comp=Z,32nm,1.3s						
WHZ	**Wether Hill Ro**	33.02	201	P	P	18 28 17.6	0.0
WHZ				IAmb	IAmb	18 28 19.2	
	comp=Z,23nm,1.0s						
CTAO	**Charters Tower**	36.55	258	IAmb	IAmb	18 28 47.8	
	comp=Z,10nm,1.2s						
CTAO				P	P	18 28 47.8	-0.3
COEN	**Coen**	39.91	267	P	P	18 29 17.8	+1.8
COEN				IAmb	IAmb	18 29 54.9	
	comp=Z,36nm,1.5s						
STKA	**Stephens Creek**	42.05	240	P	P	18 29 34.1	+1.0
	comp=Z,0.8nm,0.3s,baz=79,slow=12,SNR=5.4						
STKA	**Stephens Creek**	42.05	240	IAmb	IAmb	18 29 42.8	
	comp=Z,2.4nm,1.3s						
BBOO	**Buckleboo**	46.83	240	P	P	18 30 10.7	+0.1
BBOO				IAmb	IAmb	18 30 33.4	
	comp=Z,70nm,1.6s						
WR0	**Warramunga Arr**	47.56	257	P	P	18 30 17.0	+0.5
WR0				IAmb	IAmb	18 30 56.7	
	comp=Z,21nm,1.6s						
WB0	**Warramunga Arr**	47.72	258	P	P	18 30 17.8	+0.2
WB2	**Warramunga Arr**	47.74	257	P	P	18 30 18.2	+0.4
WB2				IAmb	IAmb	18 30 19.8	
	comp=Z,10nm,0.7s						
WRAB	**Tennant Creek**	47.74	257	P	P	18 30 18.5	+0.7
WRA	**Warramunga Arr**	47.76	257	P	P	18 30 18.5	+0.5
	comp=Z,2.7nm,0.4s,baz=91,slow=7.4,SNR=78						
WRA	**Warramunga Arr**	47.76	257	P	P	18 30 17.4	-0.6
WRA				PcP	PcP	18 31 40.1	-1.8
AS31	**Alice Springs**	48.03	252		P	18 30 20.7	+0.6
AS31				IAmb	IAmb	18 30 21.6	
	comp=Z,7.1nm,0.6s						
ASAR	**Alice Springs**	48.03	252	P	P	18 30 21.4	+1.3
	comp=Z,28nm,0.6s,baz=89,slow=7.6,SNR=664						
ASAR	**Alice Springs**	48.03	252		P	18 30 20.9	+0.8
FORT	**Forrest**	53.40	243	P	P	18 30 59.5	-0.2
KNRA	**Kununurra**	53.48	262	P	P	18 31 00.3	-0.2
QSPA	**South Pole Qui**	74.21	180	P	P	18 33 14.4	+0.2
PDAR	**Pinedale Array**	83.96	43	P	P	18 34 06.0	-1.1
	comp=Z,0.2nm,0.6s,baz=193,slow=3.7,SNR=3.9						
BRTR	**Keskin Array B**	145.17	319	PKP	PKPdf	18 41 12.2	-0.2
	comp=Z,1.0nm,0.9s,baz=137,slow=1.5,SNR=5.6						

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*IDC **25** 18:40:03.9±1.2, 25°.44S×154°.41E, h0^{km}, mb4.0/6, mb1 4.1/10, mb1mx3.8/28, mbtmp3.9/10, ML3.7/4, MS4.2/3, Ms1 4.2/3, ms1mx3.5/38, Error ellipse: s-maj=39.4km s-min=21.9km az=52.0*
*NEIC **25** 18:40:07.4±1.2, 25°.55S±0°.09×154°.15E±0°.07, h15^{km}±5^{km}, mb4.2/9, Error ellipse: s-maj=13.0km s-min=9.5km az=192.0*
ISC 25 18:40:05.4±0.8, **25°.4S**±0°.1×**154°.3E**±0°.1, **h10**^{km}, **n37**, σ**1^{s}.25**/33, **mb4.1**/6, **MS4.1**/3, **Near east coast of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	2.93	270	P	Pn	18 40 51.9	-0.2
	baz=3.0,SNR=9.7						
EIDS	**Eidsvold**	2.93	270		Pn	18 40 51.3	-0.8
RMQ	**Roma**	5.12	257	P	Pn	18 41 22.8	+0.6
	baz=5.2,SNR=22						
ARMA	**Armidale**	5.52	205	P	Pn	18 41 28.8	+1.0
	baz=5.7,SNR=6.1						
ARMA	**Armidale**	5.52	205		Pn	18 41 28.7	+1.0
LHI	**Lord Howe Isla**	7.37	147	Pn	Pn	18 41 52.1	-1.0
CTA	**Charters Tower**	9.14	304	Pn	Pn	18 42 17.6	+0.2
	0.3nm,0.3s,baz=121,slow=3.7,SNR=7.7						
CTAO	**Charters Tower**	9.14	304	Pn	Pn	18 42 17.2	-0.3
QLP	**Quilpie**	9.15	261	P	Pn	18 42 17.4	-0.1
	baz=9.2,SNR=8.1						
CMSA	**Cobar Meteorol**	9.73	229	P	Pn	18 42 26.2	+0.7
	baz=9.9,SNR=22						
STKA	**Stephens Creek**	12.89	237	Pn	Pn	18 43 08.0	-0.8
	0.5nm,0.3s,baz=62,slow=12,SNR=9.5						
STKA				Sn	Sn	18 45 20.6	-12
	0.2nm,0.3s,baz=162,slow=19,SNR=1.6						
STKA	**Stephens Creek**	12.89	237		Pn	18 43 06.9	-1.9
AS31	**Alice Springs**	18.65	271	P	P	18 44 22.9	-0.7
ASAR	**Alice Springs**	18.66	271	P	Pn	18 44 24.4	+0.5
	0.2nm,0.3s,baz=92,slow=11,SNR=19						
ASAR	**Alice Springs**	18.66	271	P	P	18 44 22.7	-0.9
WR0	**Warramunga Arr**	19.03	283	P	P	18 44 25.3	-2.4
WR0				IAmb	IAmb	18 44 56.8	
	comp=Z,24nm,1.6s						
WB2	**Warramunga Arr**	19.21	282	P	P	18 44 27.6	-2.1
WB2				IAmb	IAmb	18 44 49.4	
	comp=Z,16nm,1.3s						
WRAB	**Tennant Creek**	19.21	282	P	P	18 44 25.7	-4.0
WRAB				IAmb	IAmb	18 44 56.3	
	comp=Z,13nm,1.1s						
WRA	**Warramunga Arr**	19.22	282	P	P	18 44 30.2	+0.4
	comp=Z,0.2nm,0.3s,baz=107,slow=9.5,SNR=11						
WRA	**Warramunga Arr**	19.22	282	P	P	18 44 28.8	-1.0
WB0	**Warramunga Arr**	19.23	283	P	P	18 44 28.8	-1.2
WB0				IAmb	IAmb	18 44 54.3	
	comp=Z,27nm,1.6s						
FITZ	**Fitzroy Crossi**	27.57	280	P	P	18 45 55.1	+2.3
	comp=Z,5.8nm,1.0s,baz=99,slow=13,SNR=2.4						
BATI	**Baumata**	32.76	292	LR	LR	19 00 29.7	
	comp=Z,906nm,21.3s,baz=162,slow=37						
KAPI	**Kappang**	38.84	296	LR	LR	19 06 13.5	
	comp=Z,272nm,20.0s,baz=212,slow=40						
GUMO	**Guam**	39.85	346	LR	LR	19 01 07.4	
	comp=Z,176nm,21.4s,baz=168,slow=32						
VNDA	**Vanda**	52.29	178	P	P	18 49 16.0	-0.6
	comp=Z,1.0nm,0.7s,baz=331,slow=5.7,SNR=2.3						
VNDA	**Vanda**	52.29	178	P	P	18 49 16.6	-0.1
VNDA				IAmb	IAmb	18 49 50.0	
	comp=Z,9.6nm,1.6s						
QSPA	**South Pole Qui**	64.66	180	P	P	18 50 43.7	+0.5
	comp=Z,1.7nm,0.6s,baz=189,slow=1.0,SNR=26						
QSPA	**South Pole Qui**	64.66	180	IAmb	IAmb	18 50 45.0	
	comp=Z,6.2nm,1.2s						
CM31	**Chiang Mai Arr**	69.31	303	P	P	18 51 14.3	+0.9
CMAR	**Chiang Mai Arr**	69.31	303	P	P	18 51 13.6	+0.3
	comp=Z,0.5nm,0.6s,baz=127,slow=5.1,SNR=4.3						
SONM	**Songino Array**	84.67	330	P	P	18 52 40.0	+0.6
	comp=Z,0.4nm,0.7s,baz=139,slow=6.0,SNR=2.7						
MKAR	**Makanchi Array**	96.80	319	P	P	18 53 36.6	+0.2
	comp=Z,0.4nm,0.7s,baz=101,slow=6.3,SNR=4.4						
KEST	**Kesra**	148.29	297	PKPbc	PKPbc	18 59 52.5	+0.2
	comp=Z,3.0nm,0.9s,baz=236,slow=3.3,SNR=4.3						
TORD	**Torodi Ar. Bea**	151.49	250	PKPbc	PKPbc	19 00 00.4	-0.2
	comp=Z,2.8nm,0.5s,baz=105,slow=1.2,SNR=23						
TORD	**Torodi Ar. Bea**	151.49	250		PKPbc	18 59 59.7	-0.8
DBIC	**Dimbokro**	152.73	230	PKPbc	PKPbc	19 00 02.8	-0.6
	comp=Z,2.1nm,0.7s,baz=150,slow=5.9,SNR=4.6						

IDC 25 18:55:37.5±1.9, **1°.18N**×**127°.26E**, **h0**^{km}, **mb3.3**/3, **mb1 3.7**/4, **mb1mx3.2**/46, **mbtmp3.5**/4, **ML3.3**/1, **Error ellipse: s-maj=118.6km s-min=23.8km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	19.23	185	P	Pn	19 00 04.3	+0.1
	0.1nm,0.3s,baz=356,slow=14,SNR=1.5						
WRA	**Warramunga Arr**	22.11	162	P	P	19 00 35.4	+0.7
	1.0nm,0.4s,baz=340,slow=11,SNR=14						
ASAR	**Alice Springs**	25.53	166	P	P	19 01 07.0	-1.0
	0.3nm,0.4s,baz=345,slow=12,SNR=6.9						
MKAR	**Makanchi Array**	59.94	326	P	P	19 05 45.6	0.0
	0.3nm,0.8s,baz=117,slow=8.6,SNR=2.5						

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*SNET **25** 19:06:56.2±0.6, 12°.51N×87°.30W, h97^{km}±19^{km}, ML3.7*
*IDC **25** 19:06:56.5±1.7, 12°.18N×87°.36W, h139^{km}±48^{km}, mb3.2/4, mb1 3.5/6, mb1mx3.2/49, mbtmp3.7/6, Error ellipse: s-maj=86.2km s-min=21.7km az=26.0*
*INET **25** 19:06:56.8, 12°.53N×87°.31W, h99^{km}, MW3.4*
*UCR **25** 19:06:57.4±1.8, 12°.31N×87°.45W, h60^{km}±39^{km}, ML3.6, MW3.9*
ISC 25 19:06:55.6±0.9, **12°.5N**±0°.1×**87°.4W**±0°.1, **h100**^{km}, **n41**, σ**1^{s}.33**/47, **mb3.5**/4, **1C-13D**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCND	**La Caada**	0.99	328	⇓*i*P	Pn	19 07 16.4	+0.5
LCND				*e*S	Sn	19 07 32.0	+0.8
LCND				IAML		19 07 41.4	
	comp=Z,1μm,0.3s						
LCND	**La Caada**	0.99	328	⇓*i*P	Pn	19 07 16.4	+0.5
LCND				*e*S	Sn	19 07 32.0	+0.8
LCND				IAML		19 07 41.4	
	comp=Z,1μm,0.3s						
ALJI	**Alcalda de J**	1.47	306	*e*P	Pn	19 07 22.2	+0.8
ALJI	**Alcalda de J**	1.47	306	*e*P	Pn	19 07 22.2	+0.8
COEB	**Comit de Eme**	1.54	312	*e*P	Pn	19 07 23.2	+0.7
COEB				IAML		19 07 51.6	
	comp=Z,515nm,0.5s						
COEB	**Comit de Eme**	1.54	312	*e*P	Pn	19 07 23.2	+0.7
COEB				IAML		19 07 51.6	
	comp=Z,515nm,0.5s						
PQSS	**Presa 15 de Se**	1.65	314	⇑*e*P	Pn	19 07 24.6	+0.8
TECO	**Alcaldia de Te**	1.75	307	⇓*e*P	Pn	19 07 25.8	+0.7
SCLA	**Alcaldia de Sa**	1.82	312	⇓*e*P	Pn	19 07 26.9	+1.0
SCLA	**Alcaldia de Sa**	1.82	312	⇓*e*P	Pn	19 07 26.9	+1.0
LALI	**Alcalda de L**	2.17	298	*e*P	Pn	19 07 31.1	+0.6
LALI	**Alcalda de L**	2.17	298	*e*P	Pn	19 07 31.1	+0.6
UEES	**Universidad Ev**	2.22	304	*e*P	Pn	19 07 32.6	+1.4
UEES	**Universidad Ev**	2.22	304	*e*P	Pn	19 07 32.6	+1.4
JAYA	**Jayaque - finc**	2.36	300	⇓*e*P	Pn	19 07 34.2	+1.1
JAYA				IAML		19 08 04.7	
	comp=Z,851nm,0.2s						
JAYA	**Jayaque - finc**	2.36	300	⇓*e*P	Pn	19 07 34.2	+1.1
JAYA				IAML		19 08 04.7	
	comp=Z,851nm,0.2s						
HZTE	**Horizontes, Gu**	2.45	135	*e*P	Pn	19 07 35.9	+1.7
HZTE				*e*S	Sn	19 08 05.0	+1.4
TACO	**Tacachico**	2.46	308	⇓*i*P	Pn	19 07 35.2	+0.9
TACO	**Tacachico**	2.46	308	⇓*i*P	Pn	19 07 35.2	+0.9
CEVE	**Cerro Verde**	2.60	302	*e*P	Pn	19 07 37.8	+1.5
CEVE	**Cerro Verde**	2.60	302	*e*P	Pn	19 07 37.8	+1.5
GUAB	**Guayabo de Bag**	2.71	130	*i* P	Pn	19 07 39.2	+1.5
COLC	**Colonia**	2.76	130	*i* P	Pn	19 07 40.1	+1.8
NUBE	**Las Nubes**	2.77	301	*e*P	Pn	19 07 39.8	+1.3
NUBE	**Las Nubes**	2.77	301	*e*P	Pn	19 07 39.8	+1.3
CUI	**Cuipilapa**	2.80	130	*i* P	Pn	19 07 40.1	+1.3
GUAI	**GUAI**	2.83	140	⇓*i*P	Pn	19 07 40.8	+1.6
SAJU	**San Juanillo,**	2.88	146	⇓*i*P	Pn	19 07 40.9	+1.1
INDI	**Punta indio, G**	3.16	145	⇓*i*P	Pn	19 07 44.7	+1.1
INDI				*e*S	Sn	19 08 18.0	-2.5
JTS	**Las Juntas de**	3.19	132	P	Pn	19 07 44.8	+0.7
JTS				S	Sn	19 08 20.3	-1.1
JTS	**Las Juntas de**	3.19	132	*e*P	Pn	19 07 45.0	+0.9
ARE1	**Arenal 1**	3.26	128	*e*P	Pn	19 07 46.9	+2.0
LAFE	**Finca La Fe, P**	3.57	138	*e*P	Pn	19 07 50.3	+1.3
LCR2	**La Lucha 2**	4.25	129	⇓*i*P	Pn	19 08 00.3	+1.8
LCR2				*e*S	Sn	19 08 49.5	+2.2
RIMA	**Rio Macho**	4.35	128	*e*P	Pn	19 08 01.5	+1.7
SRBA	**San Rafael, Bu**	5.07	129	*e*P	Pn	19 08 11.3	+1.8
CMIG	**Matias Romero**	8.62	303	P	Pn	19 08 59.2	+1.7
	comp=Z,1.7nm,0.3s,baz=165,slow=8.9,SNR=5.5						
TXAR	**Lajitas Array**	22.62	320	P	P	19 11 48.8	+0.4
	comp=Z,0.6nm,1.0s,baz=144,slow=9.3,SNR=4.5						
TKL	**Tuckaleechee C**	23.31	7	P	P	19 11 55.4	+0.5
	comp=Z,1.2nm,0.3s,baz=176,slow=1.9,SNR=6.3						
SCHQ	**Schefferville**	45.23	17	P	P	19 15 01.2	-1.6
	comp=Z,2.0nm,0.4s,baz=201,slow=13,SNR=5.5						
YKA	**Yellowknife Ar**	53.62	345	P	P	19 16 04.8	-1.6
	comp=Z,0.2nm,0.5s,baz=147,slow=6.8,SNR=4.2						

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*NEIC **25** 19:12:24.4±2.9, 36°.69N±0°.01×97°.965W±0°.007, h5^{km}±1^{km}, Error ellipse: s-maj=3.0km s-min=2.2km az=320.0*
*IDC **25** 19:12:24.9±0.8, 36°.80N×98°.04W, h0^{km}, mb3.5/2, mb1 4.1/10, mb1mx3.9/65, mbtmp3.8/10, ML3.7/8, Error ellipse: s-maj=13.2km s-min=10.6km az=158.0*
*ANF **25** 19:12:25.2±0.2, 36°.74N×97°.99W, h6^{km}, ML4.7/20, Error ellipse: s-maj=2.8km s-min=2.3km az=128.0*
*TUL **25** 19:12:25.4±2.9, 36°.73N±0°.01×98°.01W±0°.03, h6^{km}±5^{km}, ML4.0, mb4.1/32(NEIC), mb_Lg4.0/112(NEIC), Mwr3.6/30(NEIC), Error ellipse: s-maj=0.0km s-min=0.0km az=176.0*
*NEIC **25** 19:12:25.3, 36°.70N×97°.99W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.59; $M_{\theta\theta}$2.47; $M_{\phi\phi}$-1.88; $M_{r\theta}$0.59; $M_{\theta\phi}$0.23; $M_{\phi r}$1.35; Fault plane solution: $M_0$2.68000×10^{14} NP1:ϕ_s225.88000°, δ77.29000°, λ-146.34000°. NP2:ϕ_s127.54000°, δ57.27000°, λ-15.16000°. Principal axes: T 2.6341, Plg13.0000°, Azm353.0000°; N 0.0962, Plg54.0000°, Azm244.0000°; P -2.7303, Plg33.0000°, Azm92.0000°;*
ISC 25 19:12:24.8±0.8, **36°.77N**±0°.02×**97°.94W**±0°.02, **h13**^{km}±5^{km}, **n373**, σ**1^{s}.48**/419, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	0.11	38		Pg	19 12 28.6	+0.7
GC02				Sg	Sg	19 12 31.1	+0.9
KAN14	**Manchester OK**	0.19	355		Pg	19 12 30.2	+1.1
KAN14				Sg	Sb	19 12 34.0	+0.2
OK032	**Salt Plains WL**	0.22	280		Pg	19 12 29.3	-0.3
OK032				Sg	Sg	19 12 32.1	-0.7
CROK	**Carrier**	0.26	187	Pg	Pg	19 12 29.0	-1.3
KAN05	**Bluff City Nor**	0.35	9	Pg	Pb	19 12 33.5	+0.6
KAN05				Sg	Sb	19 12 38.7	+0.4
KAN10	**Anthony SW Sta**	0.38	341		Pb	19 12 33.5	+0.2
KAN10					Sb	19 12 39.2	+0.1
KAN01	**Argonia South**	0.41	21		Pb	19 12 34.8	+0.8
KAN01				Sg	Sn	19 12 41.3	-2.8
KAN13	**South Haven SW**	0.45	56		Pb	19 12 35.0	+0.4
KAN13				Sg	Sn	19 12 42.3	-2.5
KAN08	**Anthony NE Sta**	0.46	357		Pb	19 12 35.3	+0.5
KAN16	**Harper SW Stat**	0.47	348		Pb	19 12 35.4	+0.5
KAN16				Sg	Sb	19 12 41.8	0.0
KAN06	**Argonia West S**	0.48	8		Pb	19 12 35.9	+0.7
KAN06				Sg	Sb	19 12 42.7	+0.4
KAN12	**Harper NE Stat**	0.53	355		Pb	19 12 36.7	+0.7
BLOK	**Blackwell**	0.58	90		Pn	19 12 37.7	-1.1
OK035	**E0210 Rd and N**	0.62	265	Pg	Pg	19 12 36.3	-0.6
U32A	**Winter Ranch,**	0.94	246	Pg	Pb	19 12 41.8	-1.0
U32A				Sg	Sb	19 12 53.6	-1.6
U32A	**Winter Ranch,**	0.94	246	P	Pb	19 12 41.9	-1.0
	baz=66,SNR=133						
U32A				S	Sb	19 12 53.9	-1.3
	baz=66						
OK029	**Liberty Lake**	1.04	158		Pb	19 12 44.7	0.0
OK033	**Mehan**	1.08	131	Pg	Pn	19 12 46.3	+0.7
OK033				Sg	Sn	19 13 00.8	+0.3
BCOK	**Bluff Creek, N**	1.14	166		Pn	19 12 46.0	-0.4
BCOK				Sg	Sb	19 13 01.7	+0.6
T35A	**Sooner Cattle**	1.16	82	Pg	Pg	19 12 48.2	+1.1
T35A				Sg	Sg	19 13 03.8	+1.6
T35B	**Sooner Cattle**	1.16	82	P	Pg	19 12 48.2	+1.1
	baz=262						
T35B				S	Sg	19 13 04.2	+2.0
	baz=262						
QUOK	**Quay**	1.16	120	Pg	Pg	19 12 47.6	+0.5
QUOK				Sg	Sg	19 13 03.4	+1.3
OK031	**S. Brethren Rd**	1.21	132	Pg	Pb	19 12 48.2	+0.8
OK031				Sg	Sn	19 13 04.0	+0.5
OK034	**N. Norfolk Rd.**	1.25	127		Pb	19 12 48.9	+0.8
OK009	**Oakdale Elemen**	1.25	160		Pn	19 12 48.2	+0.2
OK009				Sg	Sn	19 13 06.1	+1.4
OK030	**Cody Creek RV**	1.25	132		Pb	19 12 49.0	+0.7
OK005	**Luther M Schoo**	1.27	151		Pn	19 12 48.0	-0.1
OK025	**Westminster Rd**	1.28	157		Pn	19 12 49.0	+0.6
OK001	**Jones High Sch**	1.31	156	Pn	Pn	19 12 49.3	+0.5
OKCFA	**Oklahoma City**	1.41	163		Pn	19 12 50.7	+0.6
OKCFA	**Oklahoma City**	1.41	163	P	Pn	19 12 50.7	+0.6
	baz=341,SNR=33						
OKCFA				S	Sn	19 13 09.7	+1.2
	baz=341						
OKCSW	**OKLAHOMA CITY**	1.42	163		Pn	19 12 51.0	+0.7
FNO	**Franklin**	1.57	164		Pn	19 12 53.3	+1.0
OK011	**Prague**	1.63	141	Pn	Pb	19 12 55.1	+0.4
R32A	**Long Quarter,**	1.76	340	Pn	Pb	19 12 57.7	+0.7
R32A	**Long Quarter,**	1.76	340	P	Pb	19 12 57.9	+0.9
	baz=162,SNR=290						
R32A				S	Sg	19 13 21.6	+0.1
	baz=162						
W35A	**Tecumseh**	1.83	151	Pn	Pn	19 12 56.9	+1.0
TUL1	**Leonard**	1.94	116	Pn	Pb	19 12 59.5	-0.4
TUL1				IAmb_Lg		19 13 31.2	
	comp=Z,590nm,0.9s						
TUL1	**Leonard**	1.94	116	P	Pb	19 12 59.5	-0.4
	baz=295,SNR=72						
TUL1				S	Sg	19 13 26.2	-0.8
	baz=295						
TUL1	**Leonard**	1.94	116	P	Pb	19 12 59.4	-0.4
	baz=295,SNR=256						
TUL1				Sb	Sg	19 13 26.8	-0.2

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      baz=295
WMOK  Wichita Mounta    2.14 199  Pn       Pn   19 13 00.8 +0.7
WMOK                              IAmb_Lg       19 13 33.0
      comp=Z,699nm,0.9s
WMOK  Wichita Mounta    2.14 199  P        Pn   19 13 01.1 +0.8
      baz=17,SNR=302
WMOK                              S        Sn   19 13 29.7 +3.1
      baz=17
WMOK  Wichita Mounta    2.14 199  P        Pn   19 13 01.0 +0.8
      baz=17,SNR=208
WMOK                              S        Sn   19 13 27.1 +0.5
      baz=17
X34A  Smith Ranch, M    2.16 178           Pn   19 13 02.5 +1.9
X34A                              IAmb_Lg       19 13 34.7
      comp=Z,682nm,0.8s
CBKS  Cedar Bluff       2.49 326  Pn       Pn   19 13 07.1 +2.1
CBKS  Cedar Bluff       2.49 326  P        Pn   19 13 07.4 +2.4
      baz=146,SNR=27
CBKS  Cedar Bluff       2.49 326  P        Pn   19 13 07.2 +2.1
      baz=146,SNR=38
KSU1  Kansas State U    2.56  24  Pn       Pb   19 13 08.8 -1.7
KSU1                              IAmb_Lg       19 13 55.2
      comp=Z,554nm,0.8s
KSU1  Kansas State U    2.56  24  P        Pb   19 13 08.8 -1.7
      baz=205,SNR=46
KSU1                              Sb       Sg   19 13 45.8 -1.1
      baz=205
KSU1  Kansas State U    2.56  24  P        Pb   19 13 08.8 -1.7
      baz=205,SNR=144
KSU1                              Sb       Sg   19 13 46.0 -1.0
      baz=205
LOOK  Love County       2.84 167  Pn       Pn   19 13 11.0 +1.2
LOOK                              IAmb_Lg       19 13 58.2
      comp=Z,317nm,0.8s
U38A  Gravette          2.88  95  Pn       Pb   19 13 13.1 -2.9
U38A                              IAmb_Lg       19 14 05.5
      comp=Z,483nm,1.0s
U38A  Gravette          2.88  95  P        Pb   19 13 13.1 -2.9
      baz=277,SNR=43
X37A  Clayton           3.02 135  Pn       Pn   19 13 13.6 +1.4
X37A                              IAmb_Lg       19 14 06.0
      comp=Z,338nm,0.8s
X37A  Clayton           3.02 135  P        Pn   19 13 14.5 +2.2
      baz=316,SNR=34
HHAR  Hobbs             3.26  97  Pn       Pn   19 13 17.6 +2.0
HHAR                              IAmb_Lg       19 14 12.3
      comp=Z,215nm,0.7s
HHAR  Hobbs             3.26  97  P        Pn   19 13 18.5 +2.9
      baz=279
Z35A  Perchaven, San    3.47 170  Pn       Pn   19 13 19.2 +0.7
Z35A  Perchaven, San    3.47 170  P        Pn   19 13 20.0 +1.5
      baz=350,SNR=47
Z35A                              S        Sn   19 14 01.4 +1.9
      baz=350
AMTX  Amarillo          3.57 239  Pn       Pn   19 13 19.3 -0.6
AMTX                              IAmb_Lg       19 14 16.9
      comp=Z,269nm,0.7s
AMTX  Amarillo          3.57 239  Pb       Pb   19 13 29.5 +1.6
      baz=57
AMTX                              Sb       Sb   19 14 14.0 +2.9
      baz=57
W39A  Magazine          3.72 114  Pn       Pn   19 13 23.8 +1.9
W39A                              IAmb_Lg       19 14 29.6
      comp=Z,318nm,0.7s
W39A  Magazine          3.72 114  P        Pn   19 13 23.7 +1.8
      baz=295,SNR=52
W39A                              S        Sn   19 14 08.1 +2.6
      baz=295
S39A  Bolivar           3.80  75  Pn       Pn   19 13 24.6 +1.6
S39A                              IAmb_Lg       19 14 29.0
      comp=Z,288nm,0.8s
S39A  Bolivar           3.80  75  P        Pn   19 13 25.5 +2.5
      baz=257,SNR=89
N33A  J Bar K, Exete    3.98   5           Pn   19 13 27.4 +1.8
U40A  Yellville         4.12  94  Pn       Pn   19 13 29.6 +2.3
U40A  Yellville         4.12  94  P        Pn   19 13 29.7 +2.3
      baz=277,SNR=36
U40A                              P        Pn   19 13 29.7 +2.3
      baz=277,SNR=36
U40A  Yellville         4.12  94  P        Pn   19 13 29.3 +1.9
      baz=277,SNR=48
U40A                              S        Sn   19 14 17.4 +2.0
      baz=277
MIAR  Mount Ida         4.19 121           Pn   19 13 30.2 +1.9
MIAR                              IAmb_Lg       19 14 51.5
      comp=Z,219nm,0.7s
MIAR  Mount Ida         4.19 121  P        Pn   19 13 30.6 +2.2
      baz=302,SNR=30
MIAR  Mount Ida         4.19 121  P        Pn   19 13 29.9 +1.6
      baz=302,SNR=9.4
MIAR                              S        Sn   19 14 19.0 +1.9
      baz=302
Z38A  Mt. Pleasant      4.26 144  Pn       Pn   19 13 30.9 +1.6
KSCO  Kaye Shedlock’    4.33 303  Pn       Pn   19 13 30.1 -0.3
KSCO                              IAmb_Lg       19 14 51.8
      comp=Z,243nm,0.7s
KSCO  Kaye Shedlock’    4.33 303  S        Sn   19 14 23.4 +2.5
      baz=121
ABTX  Abilene, Hawle    4.36 199           Pn   19 13 30.6 -0.2
ABTX  Abilene, Hawle    4.36 199  P        Pn   19 13 31.5 +0.7
      baz=18
ABTX  Abilene, Hawle    4.36 199  P        Pn   19 13 31.1 +0.3
      baz=18
ABTX                              S        Sn   19 14 22.3 +0.7
      baz=18
N35A  Tabor             4.46  23           Pn   19 13 34.2 +2.0
P38A  Dawn              4.50  49  Pn       Pn   19 13 35.0 +2.4
P38A                              IAmb_Lg       19 15 02.9
      comp=Z,332nm,0.7s
P38A  Dawn              4.50  49  P        Pn   19 13 35.1 +2.6
      baz=232,SNR=36
MGMO  Mountain Grove    4.56  83           Pn   19 13 35.7 +2.3
MGMO                              IAmb_Lg       19 14 57.1
      comp=Z,206nm,0.8s
BGNE  Belgrade          4.64 358  Pn       Pn   19 13 36.8 +2.2
BGNE  Belgrade          4.64 358  P        Pn   19 13 36.8 +2.2
      baz=179,SNR=14
BGNE  Belgrade          4.64 358  P        Pn   19 13 36.7 +2.1
      baz=179,SNR=6.7
X40A  Basin Creek Fa    4.74 117           Pn   19 13 37.4 +1.5
X40A                              IAmb_Lg       19 14 59.3
      comp=Z,281nm,0.8s
X40A  Basin Creek Fa    4.74 117  P        Pn   19 13 37.8 +1.9
      baz=300,SNR=35
X40A                              P        Pn   19 13 37.8 +1.9
      baz=300,SNR=35
X40A  Basin Creek Fa    4.74 117  P        Pn   19 13 37.5 +1.5
      baz=300,SNR=15
X40A                              S        Sn   19 14 32.9 +2.1
      baz=300
R40A  Maddies Statio    4.76  70           Pn   19 13 38.0 +1.8
R40A                              IAmb_Lg       19 15 06.2
      comp=Z,240nm,0.8s
R40A  Maddies Statio    4.76  70  P        Pn   19 13 38.5 +2.3
      baz=253,SNR=55
FCAR  Ozark Folk Cen    4.78  99           Pn   19 13 36.6 +0.2
FCAR                              IAmb_Lg       19 15 07.1
      comp=Z,192nm,0.8s
WHTX  Lake Whitney,     4.78 175  Pn       Pn   19 13 37.2 +0.7
WHTX  Lake Whitney,     4.78 175  P        Pn   19 13 37.5 +1.0
      baz=355,SNR=62
WHTX  Lake Whitney,     4.78 175  P        Pn   19 13 37.2 +0.7
      baz=355,SNR=23
WHTX                              S        Sn   19 14 31.9 +0.1
      baz=355
WHAR  Wooly Hollow      4.81 106           Pn   19 13 37.5 +0.5
WHAR                              IAmb_Lg       19 15 09.6
      comp=Z,205nm,0.8s
MSTX  Muleshoe          4.83 236  Pn       Pn   19 13 37.1 -0.3
MSTX  Muleshoe          4.83 236  P        Pn   19 13 38.5 +1.1
      baz=53
W41B  Gary Mavity, V    4.88 107  P        Pn   19 13 39.6 +1.7
      baz=290,SNR=13
W41B  Gary Mavity, V    4.88 107  P        Pn   19 13 39.4 +1.5
      baz=290,SNR=9.3
W41B                              S        Sn   19 14 36.2 +2.0
      baz=290
WLAR  White Oak Lake    5.01 126  Pn       Pn   19 13 41.4 +1.8
WLAR                              IAmb_Lg       19 15 10.5
      comp=Z,217nm,0.8s
237A  Washetta, Mont    5.07 159           Pn   19 13 40.1 -0.4
237A                              IAmb_Lg       19 15 11.4
      comp=Z,204nm,0.8s
T25A  Trinidad          5.19 276  Pn       Pn   19 13 43.6 +1.3
T25A                              IAmb_Lg       19 15 17.4
      comp=Z,265nm,0.8s
T25A  Trinidad          5.19 276  P        Pn   19 13 43.7 +1.3
      baz=93,SNR=7.3
OGNE  Ogallala          5.25 324  Pn       Pn   19 13 45.4 +2.4
OGNE                              IAmb_Lg       19 15 15.5
      comp=Z,298nm,0.8s
OGNE  Ogallala          5.25 324  P        Pn   19 13 45.8 +2.7
      baz=142,SNR=5.2
OGNE                              S        Sn   19 14 45.6 +2.1
      baz=142
L34A  Svendsen Farm,    5.33  13           Pn   19 13 45.4 +1.3
L34A                              IAmb_Lg       19 15 17.6
      comp=Z,194nm,0.9s
P40A  Paris             5.40  58           Pn   19 13 46.7 +1.7
P40A                              IAmb_Lg       19 15 30.8
      comp=Z,331nm,0.9s
P40A  Paris             5.40  58  P        Pn   19 13 46.7 +1.7
      baz=241,SNR=8.6
N38A  Joes South For    5.45  41           Pn   19 13 47.0 +1.4
N38A  Joes South For    5.45  41  P        Pn   19 13 47.9 +2.2
      baz=224,SNR=29
Z41A  Richland Creek    5.48 128  P        Pn   19 13 47.2 +1.1
      baz=311
Z41A                              S        Sn   19 14 48.6 -0.4
      baz=311
CCM   Cathedral Cave    5.48  74  Pn       Pn   19 13 47.9 +1.7
CCM                               IAmb_Lg       19 15 28.8
      comp=Z,233nm,0.7s
CCM   Cathedral Cave    5.48  74  P        Pn   19 13 48.1 +2.0
      baz=258,SNR=21
CCM   Cathedral Cave    5.48  74  P        Pn   19 13 47.9 +1.7
      baz=258
LCAR  Lake Charles      5.52  95           Pn   19 13 48.5 +1.9
NATX  Nacogdoches       5.69 151           Pn   19 13 49.9 +1.0
NATX                              IAmb_Lg       19 15 34.4
      comp=Z,138nm,0.8s
NATX  Nacogdoches       5.69 151  S        Sn   19 14 53.0 -1.1
      baz=332
K31A  O'Neill           5.88 354           Pn   19 13 53.4 +1.7
435B  Jarrell           5.98 177           Pn   19 13 53.2 +0.3
435B                              IAmb_Lg       19 15 49.9
      comp=Z,136nm,0.8s
435B  Jarrell           5.98 177  P        Pn   19 13 53.5 +0.6
      baz=357,SNR=11
435B  Jarrell           5.98 177  P        Pn   19 13 53.3 +0.3
      baz=357,SNR=6.9
435B                              S        Sn   19 15 00.7 -0.5
      baz=357
HBAR  Harrisburg        6.02  99  Pn       Pn   19 13 54.7 +1.2
PBMO  Poplar Bluff      6.03  88           Pn   19 13 54.4 +0.8
PBMO                              IAmb_Lg       19 15 48.2
      comp=Z,203nm,0.8s
FVM   French Village    6.11  76           Pn   19 13 56.2 +1.4
FVM                               IAmb_Lg       19 15 40.7
      comp=Z,202nm,0.8s
FVM   French Village    6.11  76  P        Pn   19 13 56.5 +1.7
      baz=261,SNR=22
Q24A  Divide            6.11 293  P        Pn   19 13 56.2 +1.1
      baz=109,SNR=5.9
Q24A                              S        Sn   19 15 06.4 +1.5
      baz=109
SDCO  Great Sand Dun    6.11 281           Pn   19 13 55.0 -0.1
LPAR  Lepanto           6.29  98  Pn       Pn   19 13 57.6 +0.4
LPAR                              IAmb_Lg       19 15 53.7
      comp=Z,205nm,0.7s
SCIA  State Center      6.30  34  Pn       Pn   19 13 59.9 +2.5
SCIA  State Center      6.30  34  P        Pn   19 13 59.7 +2.2
      baz=217
SCIA                              S        Sn   19 15 10.6 +1.3
      baz=217
SLM   Saint Louis       6.39  71           Pn   19 13 59.5 +1.0
SLM                               IAmb_Lg       19 15 51.7
      comp=Z,276nm,0.8s
JCT   Junction City     6.46 194  Pn       Pn   19 13 59.1 -0.6
JCT                               IAmb_Lg       19 15 51.5
      comp=Z,295nm,1.1s
JCT   Junction City     6.46 194  P        Pn   19 14 01.2 +1.5
      baz=13,SNR=5.7
JCT   Junction City     6.46 194  P        Pn   19 14 00.5 +0.9
      baz=13
PEBM  Pemiscott Bayo    6.55  93  Pn       Pn   19 14 01.1 +0.3
PARMO Parma             6.58  88  IAmb_Lg       19 16 05.1
      comp=Z,268nm,0.8s
HDBT  Hernando Brdge    6.59 102  Pn       Pn   19 14 01.1 -0.2
PVMO  Portageville      6.64  91  Pn       Pn   19 14 03.3 +1.2
PVMO                              IAmb_Lg       19 16 07.4
      comp=Z,172nm,0.7s
PENMO Penman            6.70  90  Pn       Pn   19 14 03.2 +0.5
PENMO                             IAmb_Lg       19 16 09.0
      comp=Z,282nm,1.0s
MET   Memphis--Engin    6.70 102  Pn       Pn   19 14 02.0 -0.8
MET                               IAmb_Lg       19 16 09.4
      comp=Z,213nm,0.9s
143A  Socs Landing,     6.74 125  Pn       Pn   19 14 02.8 -0.6
143A                              IAmb_Lg       19 16 17.9
      comp=Z,156nm,1.1s
ISCO  Idaho Springs     6.75 299  Pn       Pn   19 14 04.0 +0.2
ISCO  Idaho Springs     6.75 299  P        Pn   19 14 05.0 +1.2
      baz=115,SNR=17
N41A  Harden Midland    6.79  52           Pn   19 14 05.9 +1.7
HENM  Henderson Moun    6.80  88  Pn       Pn   19 14 04.4 +0.2
GLAT  Glass             6.99  91  Pn       Pn   19 14 07.0 +0.2
S44A  Carbondale        6.99  80           Pn   19 14 07.7 +0.8
S44A                              IAmb_Lg       19 16 19.5
      comp=Z,201nm,0.7s
S44A  Carbondale        6.99  80  P        Pn   19 14 08.5 +1.6
      baz=265,SNR=25
HALT  Halls             7.00  94  Pn       Pn   19 14 07.0 +0.1
HICK  Hickman           7.01  89           Pn   19 14 06.8 -0.3
HKT   Hockley           7.02 165  Pn       Pn   19 14 05.9 -1.4
SIUC  Southern Illin    7.02  80           Pn   19 14 07.8 +0.5
SIUC                              IAmb_Lg       19 16 26.4
      comp=Z,218nm,0.7s
ECSD  EROS Data Cent    7.03   8  Pn       Pn   19 14 08.4 +1.0
ECSD  EROS Data Cent    7.03   8  P        Pn   19 14 08.5 +1.0
      baz=189,SNR=41
ECSD  EROS Data Cent    7.03   8  P        Pn   19 14 08.3 +1.0
      baz=189,SNR=10
K38A  Parkersburg       7.10  33           Pn   19 14 10.9 +2.7
ANMO  Albuquerque       7.15 258  Pn       Pn   19 14 12.0 +2.8
      comp=Z,0.5nm,0.3s,baz=83,slow=16,SNR=9.4
ANMO                              Lg       Lg   19 16 05.0
      comp=Z,4.3nm,0.3s,baz=0.0,slow=18,SNR=2.7
ANMO  Albuquerque       7.15 258  Pn       Pn   19 14 08.7 -0.6
ANMO  Albuquerque       7.15 258  P        Pn   19 14 11.7 +2.4
      baz=73
441A  DeRidder          7.19 145  Pn       Pn   19 14 09.8 +0.3
P43A  Skaggs, Pawnee    7.22  64           Pn   19 14 11.6 +1.6
P43A  Skaggs, Pawnee    7.22  64  P        Pn   19 14 11.6 +1.6
      baz=249,SNR=28
W45A  Hickory Valley    7.28 100  Pn       Pn   19 14 12.4 +1.6
UTMT  University of     7.32  91  Pn       Pn   19 14 12.4 +1.1
Q44A  Meyer Farm, Va    7.38  71  Pn       Pn   19 14 13.3 +1.2
Q44A  Meyer Farm, Va    7.38  71  P        Pn   19 14 14.1 +1.9
      baz=256
PHWY  Pilot Hill        7.40 310  IAmb_Lg       19 16 32.4
      comp=Z,125nm,0.8s
L40A  Anamosa           7.42  42           Pn   19 14 14.0 +1.3
L40A                              IAmb_Lg       19 16 33.6
      comp=Z,184nm,0.8s
L40A  Anamosa           7.42  42  P        Pn   19 14 14.3 +1.7
      baz=227,SNR=16
Y45A  Yeager Farm, C    7.45 110           Pn   19 14 13.8 +0.7
Y45A                              IAmb_Lg       19 16 38.4
      comp=Z,134nm,0.9s
T45A  Paducah           7.46  85           Pn   19 14 14.5 +1.3
T45A                              IAmb_Lg       19 16 40.2
      comp=Z,212nm,0.9s
N23A  Red Feather La    7.48 306  P        Pn   19 14 16.2 +2.3
      baz=121,SNR=16
SMCO  Snowmass          7.53 291  Pn       Pn   19 14 14.0 -0.6
BNM   Barren Site       7.55 252  Pn       Pn   19 14 14.2 -0.6
VBMS  Vicksburg         7.62 124  Pn       Pn   19 14 15.7 +0.2
VBMS  Vicksburg         7.62 124  P        Pn   19 14 18.4 +2.9
      baz=308
SUSD  Miller            7.71 355  Pn       Pn   19 14 18.3 +1.6
SUSD                              IAmb_Lg       19 16 33.8
      comp=Z,107nm,0.7s
SUSD  Miller            7.71 355  P        Pn   19 14 18.2 +1.5
      baz=174
HDIL  Hopedale          7.75  58           Pn   19 14 18.4 +1.1
HDIL  Hopedale          7.75  58  P        Pn   19 14 19.4 +2.2
      baz=243,SNR=18
HDIL  Hopedale          7.75  58  P        Pn   19 14 19.5 +2.2
      baz=243,SNR=28
Y22D  IRIS PASSCAL I    7.81 253  Pn       Pn   19 14 18.6 +0.4
Y22D                              IAmb_Lg       19 16 38.9
      comp=Z,134nm,0.8s
LENM  Lemitar           7.81 253  Pn       Pn   19 14 18.1 -0.2
735A  Kenedy            7.89 179  Pn       Pn   19 14 17.1 -2.1
735A                              IAmb_Lg       19 16 48.9
      comp=Z,96nm,0.9s
MNTX  Cornudas Mount    7.97 233  Pn       Pn   19 14 21.0 +0.7
MNTX  Cornudas Mount    7.97 233  P        Pn   19 14 20.8 +0.5
      baz=48,SNR=5.3
344A  Westbrook Farm    7.99 129  IAmb_Lg       19 17 00.3
      comp=Z,216nm,1.1s
I37A  Lemond, Waseca    8.03  24           Pn   19 14 22.0 +1.0
I37A                              IAmb_Lg       19 16 53.6
      comp=Z,151nm,0.8s
OLIL  Olney             8.04  73           Pn   19 14 22.8 +1.5
O44A  Mansfield         8.16  63           Pn   19 14 24.5 +1.6
O44A                              IAmb_Lg       19 17 01.9
      comp=Z,188nm,0.7s
WVT   Waverly           8.17  91  Pn       Pn   19 14 23.4 +0.3
WVT   Waverly           8.17  91  P        Pn   19 14 24.4 +1.3
      baz=277,SNR=6.4
WVT   Waverly           8.17  91  P        Pn   19 14 23.9 +0.8
      baz=277
PLAL  Pickwick Lake     8.20 100  Pn       Pn   19 14 24.3 +0.8
L42A  Oliver, Polo      8.27  48           Pn   19 14 25.9 +1.5
146A  Union             8.39 117  Pn       Pn   19 14 27.1 +1.0
146A                              IAmb_Lg       19 17 02.9
      comp=Z,71nm,0.8s
MVCO  Mesa Verde        8.46 276  Pn       Pn   19 14 26.8 -0.4
JFWS  Jewell Farm       8.52  42  Pn       Pn   19 14 29.3 +1.4
JFWS  Jewell Farm       8.52  42  P        Pn   19 14 29.3 +1.4
      baz=226,SNR=20
JFWS  Jewell Farm       8.52  42  P        Pn   19 14 29.2 +1.3
      baz=226,SNR=14
T47A  Sharon Grove      8.69  85           Pn   19 14 30.9 +0.8
RSSD  Black Hills       8.69 330  Pn       Pn   19 14 31.4 +1.0
RSSD  Black Hills       8.69 330  P        Pn   19 14 33.0 +2.7
      baz=146
RWWY  Rawlins           8.71 307  Pn       Pn   19 14 31.5 +0.8
RWWY                              IAmb_Lg       19 17 15.1
      comp=Z,115nm,1.0s
O20A  White River Ci    8.75 296  Pn       Pn   19 14 30.5 -0.7
TX31  Lajitas Ar. Si    8.83 215           Pn   19 14 31.5 -0.7
TX32  Lajitas Array     8.83 215           Pn   19 14 31.5 -0.7
TXAR  Lajitas Array     8.83 215  Pn       Pn   19 14 31.6 -0.6
      comp=Z,0.7nm,0.3s,baz=51,slow=12,SNR=55
TXAR                              Lg       Lg   19 16 55.4
      comp=Z,2.3nm,0.3s,baz=45,slow=18,SNR=2.1
TXAR  Lajitas Array     8.83 215  Pn       Pn   19 14 30.9 -1.4
K22A  Casper            8.84 314           Pn   19 14 32.9 +0.5
K22A                              IAmb_Lg       19 17 21.8
      comp=Z,139nm,1.0s
K22A  Casper            8.84 314  P        Pn   19 14 33.9 +1.5
      baz=129,SNR=7.3
Z47A  Carrollton        8.85 111  Pn       Pn   19 14 32.2 -0.1
P46A  Rosedale          8.92  68           Pn   19 14 34.1 +0.8
M44A  Midewin, Midew    8.97  56           Pn   19 14 34.9 +0.9
V48A  Smith Brothers    9.04  93           Pn   19 14 35.6 +0.6
I40A  Norwalk           9.05  36           Pn   19 14 35.8 +0.7
I40A                              IAmb_Lg       19 17 35.0
      comp=Z,119nm,1.0s
I40A  Norwalk           9.05  36  P        Pn   19 14 35.8 +0.7
      baz=221,SNR=19
121A  Cookes Peak, D    9.14 245  Pn       Pn   19 14 34.5 -2.1
F33A  5 Mile Ranch,     9.15   7           Pn   19 14 35.9 -0.6
X48A  Hartselle         9.17 101  Pn       Pn   19 14 37.0 +0.2
SFIN  Lafayette         9.23  64  Pn       Pn   19 14 37.5  0.0
SFIN  Lafayette         9.23  64  P        Pn   19 14 38.8 +1.3
      baz=250
SPMN  Marine on St.     9.30  23           Pn   19 14 38.4  0.0
SPMN  Marine on St.     9.30  23  P        Pn   19 14 39.1 +0.7
      baz=207,SNR=7.3
BLO   Bloomington       9.33  72           Pn   19 14 39.2 +0.2
WCI   Wyandotte Cave    9.37  78  Pn       Pn   19 14 39.9 +0.4
WCI   Wyandotte Cave    9.37  78  P        Pn   19 14 40.5 +1.0
      baz=264
CLTN  Cedars of Leba    9.38  91           Pn   19 14 39.8 +0.1
L44A  Lake County Fo    9.45  52  Pn       Pn   19 14 40.4 -0.1
K43A  Burlington        9.48  48  Pn       Pn   19 14 41.6 +0.7
F36A  Milaca            9.67  19  Pn       Pn   19 14 42.6 -1.0
U49A  Red Boiling Sp    9.78  88           Pn   19 14 45.9 +0.8
U49A  Red Boiling Sp    9.78  88  P        Pn   19 14 47.3 +2.2
      baz=275,SNR=6.8
SWET  Sewanee           9.86  95           Pn   19 14 44.7 -1.5
Y49A  Blount Mountai    9.86 104  Pn       Pn   19 14 45.5 -0.8
I42A  Draeger Farm,     9.90  41           Pn   19 14 46.8 +0.1
I42A                              IAmb_Lg       19 17 47.2
      comp=Z,83nm,0.8s
I42A  Draeger Farm,     9.90  41  P        Pn   19 14 48.0 +1.3
      baz=227,SNR=14
P18A  Preston Nutter   10.10 290  Pn       Pn   19 14 48.9 -0.9
P48A  Milroy           10.22  71           Pn   19 14 50.6 -0.6
R49A  Shelbyville      10.26  78           Pn   19 14 52.5 +0.9
R49A  Shelbyville      10.26  78  P        Pn   19 14 52.8 +1.2
      baz=265,SNR=9.9
R49A                              P        Pn   19 14 52.8 +1.2
      baz=265,SNR=9.9
G40A  Rib Lake         10.31  32           Pn   19 14 52.8 +0.5
W50A  Signal Mountai   10.35  95  Pn       Pn   19 14 52.8 -0.2
N47A  Urbana           10.40  63  Pn       Pn   19 14 53.7 +0.1
L46A  Eue Claire       10.42  56           Pn   19 14 54.4 +0.5
T50A  Nancy            10.50  85           Pn   19 14 54.7 -0.3
BRAL  Brewton          10.62 119  Pn       Pn   19 14 55.7 -0.9
Q16A  Castle Valley    10.68 286  Pn       Pn   19 14 58.4 +0.7
BW06  Boulder Array    10.76 307           Pn   19 14 59.2 +0.5
PD31  Pinedale Array   10.76 307           Pn   19 14 59.2 +0.5
PDAR  Pinedale Array   10.76 307  Pn       Pn   19 14 58.8  0.0
      comp=Z,0.5nm,0.3s,baz=120,slow=16,SNR=7.6
PDAR                              Lg       Lg   19 18 02.0
      comp=Z,1.3nm,0.3s,baz=107,slow=35,SNR=4.2
PDAR  Pinedale Array   10.76 307  Pn       Pn   19 14 58.9 +0.2
250A  Grady            10.76 113  Pn       Pn   19 14 58.6 +0.1
P49A  Miami Univ. Ec   10.78  71           Pn   19 14 58.2 -0.5
P49A  Miami Univ. Ec   10.78  71  P        Pn   19 14 58.6 -0.1
      baz=259
319A  Douglas          10.83 244  Pn       Pn   19 14 59.3 -0.3
H43A  Windswept, Lux   10.90  42  Pn       Pn   19 15 00.1 -0.3
R50A  Paris            10.92  78           Pn   19 15 01.6 +0.9
R50A  Paris            10.92  78  P        Pn   19 15 02.1 +1.4
      baz=266,SNR=12
R50A                              P        Pn   19 15 02.1 +1.4
      baz=266,SNR=12
E38A  The Farm, Brul   10.93  24  Pn       Pn   19 15 02.2 +1.5
CPCT  Cooper Cave      10.94  93  Pn       Pn   19 15 01.8 +0.8
V51A  Loudon           11.01  91           Pn   19 15 04.0 +2.0
V51A  Loudon           11.01  91  P        Pn   19 15 04.2 +2.2
      baz=279,SNR=13
O49A  Covington        11.20  68           Pn   19 15 04.3 -0.2
O49A  Covington        11.20  68  P        Pn   19 15 04.3 -0.2
      baz=256,SNR=7.8
O49A                              P        Pn   19 15 04.3 -0.2
      baz=256,SNR=7.8
MTPU  Mount Pierson    11.40 281  Pn       Pn   19 15 06.3 -1.3
S51A  Beattyville      11.48  81           Pn   19 15 10.0 +1.6
TKL   Tuckaleechee C   11.50  91  Pn       Pn   19 15 10.5 +1.8
      comp=Z,0.9nm,0.3s,baz=243,slow=6.6,SNR=27
TKL                               Lg       Lg   19 18 24.6
      comp=Z,2.4nm,0.3s,baz=350,slow=17,SNR=5.5
TKL   Tuckaleechee C   11.50  91           Pn   19 15 09.9 +1.2
N49A  Columbus Grove   11.50  65           Pn   19 15 08.6  0.0
N49A  Columbus Grove   11.50  65  P        Pn   19 15 08.5 -0.1
      baz=253,SNR=19
N49A                              P        Pn   19 15 08.5 -0.1
      baz=253,SNR=19
TZTN  Tazewell         11.56  87           Pn   19 15 10.7 +1.2
TZTN  Tazewell         11.56  87  P        Pn   19 15 10.7 +1.2
      baz=275
V52A  Sevierville      11.61  90           Pn   19 15 11.7 +1.5
F42A  Maple Grove Fa   11.62  36           Pn   19 15 08.3 -1.9
AGMN  Agassiz Nation   11.62   7           Pn   19 15 08.3 -2.0
AGMN  Agassiz Nation   11.62   7  P        Pn   19 15 09.9 -0.4
      baz=188
L48A  N Adams          11.66  60           Pn   19 15 10.9  0.0
L48A  N Adams          11.66  60  P        Pn   19 15 11.1 +0.2
      baz=248,SNR=9.4
L48A                              P        Pn   19 15 11.1 +0.2
      baz=248,SNR=9.4
Q51A  Peebles          11.75  75           Pn   19 15 11.6 -0.5
LOHW  Long Hollow      11.85 309  Pn       Pn   19 15 13.2 -0.4
REDW  Red Top Meadow   11.88 308  Pn       Pn   19 15 12.8 -1.2
RLMT  Red Lodge        11.95 318  Pn       Pn   19 15 14.0 -0.9
RLMT  Red Lodge        11.95 318  P        Pn   19 15 15.8 +0.8
      baz=131
J47A  Sunmer           11.95  53  Pn       Pn   19 15 14.5 -0.3
B35A  Bob, Littlefor   11.99  14           Pn   19 15 13.9 -1.4
MOOW  Moose Ponds      12.00 309  Pn       Pn   19 15 14.4 -1.3
```

P51A	Williamsport	12.03	72		Pn	19 15 15.7	-0.2
EYMN	Ely	12.14	21	Pn	Pn	19 15 15.6	-1.8
EYMN	Ely	12.14	21	P	Pn	19 15 16.7	-0.7
	baz=206						
ACSO	Alum Creek Sta	12.22	69		Pn	19 15 17.8	-0.7
ACSO	Alum Creek Sta	12.22	69	P	Pn	19 15 17.7	-0.8
	baz=258,SNR=17						
V53A	Saluda	12.27	91		Pn	19 15 20.7	+1.5
BG3	Lake Jocassee	12.30	94	Pn	Pn	19 15 20.7	+1.0
AAM	Ann Arbor	12.33	59		Pn	19 15 19.9	-0.1
AAM	Ann Arbor	12.33	59	P	Pn	19 15 19.7	-0.3
	baz=248,SNR=5.7						
G45A	Suttons Bay	12.43	45	Pn	Pn	19 15 21.3	0.0
M50A	Fremont	12.46	64		Pn	19 15 21.6	-0.2
DGMT	Dagmar	12.56	341	Pn	Pn	19 15 23.2	+0.1
DGMT	Dagmar	12.56	341	P	Pn	19 15 23.9	+0.7
	baz=157						
Q52A	Bidwell	12.58	75		Pn	19 15 23.0	-0.4
Q52A	Bidwell	12.58	75	P	Pn	19 15 23.7	+0.3
	baz=265,SNR=8.0						
Q52A				P	Pn	19 15 23.7	+0.3
	baz=265,SNR=8.0						
GCMT	Greycliff	12.60	319	Pn	Pn	19 15 24.6	+0.8
E43A	Lone Tree Farm	12.61	37		Pn	19 15 22.1	-1.7
P52A	Corning	12.76	72		Pn	19 15 25.6	-0.3
P52A	Corning	12.76	72	P	Pn	19 15 25.3	-0.6
	baz=262						
R53A	Hurricane	12.79	78		Pn	19 15 27.1	+0.8
R53A	Hurricane	12.79	78	P	Pn	19 15 27.0	+0.8
	baz=268,SNR=9.8						
R53A				P	Pn	19 15 27.0	+0.8
	baz=268,SNR=9.8						
N51A	Ashland	12.82	66	Pn	Pn	19 15 25.8	-0.9
GLMI	Grayling	12.90	47		Pn	19 15 26.4	-1.3
GLMI	Grayling	12.90	47	P	Pn	19 15 26.2	-1.5
	baz=236,SNR=6.5						
U54A	Nelsons Funny	12.95	86		Pn	19 15 27.9	-0.7
HODGE	Hodges	13.03	97	Pn	Pn	19 15 30.3	+0.7
O52A	Adamsville	13.06	70	Pn	Pn	19 15 30.5	+0.5
PAULI	Pauline	13.24	94	Pn	Pn	19 15 33.1	+0.7
S54A	Dingess, Beckl	13.29	81		Pn	19 15 31.7	-1.4
P53A	Whipple	13.31	73	Pn	Pn	19 15 31.2	-2.3
V55A	Taylorsville	13.52	89	Pn	Pn	19 15 35.8	-0.5
O53A	New Philadelph	13.55	70		Pn	19 15 34.7	-2.0
O53A	New Philadelph	13.55	70	P	Pn	19 15 35.2	-1.5
	baz=260						
KMSC	Kings Mountain	13.55	92		Pn	19 15 36.0	-0.7
ULM	Lac du Bonnet	13.56	6	Pn	Pn	19 15 32.8	-3.9
	comp=Z,0.9nm,0.3s,baz=185,slow=15,SNR=3.2						
ULM				Lg	Lg	19 19 18.4	
	comp=Z,1.1nm,0.3s,baz=134,slow=18,SNR=2.3						
I49A	Point Hope	13.56	53	Pn	Pn	19 15 34.6	-2.1
Q54A	Coxs Mills	13.70	76		Pn	19 15 38.0	-0.6
M52A	Chesterland	13.72	65	Pn	Pn	19 15 36.2	-2.7
N53A	Lisbon	13.94	68		Pn	19 15 39.9	-2.0
E46A	Sault Ste Mari	13.99	42	Pn	Pn	19 15 40.1	-2.4
BLA	Blacksburg	14.02	83	Pn	Pn	19 15 42.1	-1.0
O54A	Avella	14.18	71		Pn	19 15 43.2	-2.0
M53A	WI Miller and	14.19	66		Pn	19 15 43.1	-2.4
R55A	Marlinton	14.23	79		Pn	19 15 45.0	-1.0
R55A	Marlinton	14.23	79	P	Pn	19 15 45.5	-0.5
	baz=269,SNR=8.6						
R55A				P	Pn	19 15 45.5	-0.5
	baz=269,SNR=8.6						
BIRD	Birdtown, Kers	14.36	93	Pn	Pn	19 15 46.0	-1.8
N54A	Moraine State	14.60	68		Pn	19 15 48.8	-2.2
N54A	Moraine State	14.60	68	P	Pn	19 15 49.0	-2.0
	baz=259						
ALLY	Alegheny Colle	14.63	65		Pn	19 15 48.2	-3.2
ERPA	Erie	14.86	63	Pn	Pn	19 15 52.1	-2.4
M54A	Oil Creek Stat	14.95	66		Pn	19 15 52.8	-2.9
T57A	Hurt	14.96	84		Pn	19 15 55.1	-0.8
Q56A	Snyder Ridge,	14.98	76	Pn	Pn	19 15 53.8	-2.4
S57A	Dark Hollow, R	15.16	81	Pn	Pn	19 15 56.5	-2.0
S57A				IAmb	IAmb	19 16 10.6	
	comp=Z,6.7nm,0.8s						
O56A	Blue Knob Stat	15.56	71	Pn	Pn	19 16 00.4	-3.5
M55A	Ridgway	15.60	67	Pn	Pn	19 16 00.6	-3.8
M55A				IAmb	IAmb	19 16 23.3	
	comp=Z,24nm,1.4s						
WVNY	West Valley, N	15.93	63	Pn	Pn	19 16 05.4	-3.1
WVNY				IAmb	IAmb	19 16 27.1	
	comp=Z,8.6nm,0.7s						
R58B	Mineral	16.00	80	Pn	Pn	19 16 05.9	-3.6
SSPA	Standing Stone	16.12	70	Pn	Pn	19 16 08.6	-2.4
SSPA				IAmb	IAmb	19 16 10.8	
	comp=Z,16nm,1.2s						
NVAR	Mina Array Bea	16.23	282	Pn	P	19 16 15.4	-0.3
	comp=Z,0.1nm,0.3s,baz=88,slow=9.7,SNR=6.6						
MEDO	Medina	16.23	61	Pn	Pn	19 16 08.0	-4.4
MEDO				IAmb	IAmb	19 16 39.4	
	comp=Z,9.5nm,0.7s						
SADO	Sadowa	16.31	55	Pn	Pn	19 16 10.7	-2.7
	comp=Z,0.4nm,0.3s,baz=268,slow=12,SNR=4.8						
SADO	Sadowa	16.31	55	IAmb	IAmb	19 16 41.9	
	comp=Z,21nm,1.6s						
T59A	Double "B" Far	16.32	83	Pn	Pn	19 16 09.8	-3.8
L56A	Greenwood	16.62	65	Pn	Pn	19 16 16.3	-1.1
L56A				IAmb	IAmb	19 16 22.3	
	comp=Z,22nm,1.5s						
M57A	Sunshine Farm,	16.79	68	Pn	Pn	19 16 18.6	-0.9
N58A	Sunbury	17.03	70	Pn	Pn	19 16 20.4	-2.1
N58A				IAmb	IAmb	19 16 34.4	
	comp=Z,25nm,1.6s						
DELO	Deloro Mine	17.23	57	Pn	Pn	19 16 21.1	-4.0
DELO				IAmb	IAmb	19 16 55.8	
	comp=Z,19nm,1.4s						
K57A	Scipio Center	17.50	64	Pn	Pn	19 16 27.1	-1.4
N59A	State Game Lan	17.75	70	Pn	Pn	19 16 29.0	-2.6
PLVO	Plevna	17.77	56		Pn	19 16 29.0	-2.8
PLVO				IAmb	IAmb	19 17 05.7	
	comp=Z,21nm,1.4s						
BINY	Binghamton	17.78	65		Pn	19 16 29.2	-2.7
BINY				IAmb	IAmb	19 16 41.4	
	comp=Z,18nm,1.4s						
WUPA	West Chester U	17.80	73		Pn	19 16 30.3	-1.8
KSPA	Keystone Colle	17.83	68		Pn	19 16 30.3	-2.3
KSPA				IAmb	IAmb	19 17 00.8	
	comp=Z,17nm,1.5s						
J57A	Williamstown	18.03	62		Pn	19 16 33.0	-1.9
L59A	Walton	18.47	66		P	19 16 37.3	-3.0
J58A	Remsen	18.52	62	P	P	19 16 38.1	-2.7
J58A				IAmb	IAmb	19 16 54.9	
	comp=Z,14nm,1.2s						
ODNJ	Ogdensburg	18.64	69	P	P	19 16 40.6	-1.6
J59A	Piesco	19.10	62	P	P	19 16 46.8	-0.4
J59A				IAmb	IAmb	19 16 56.4	
	comp=Z,15nm,1.4s						
NCB	Newcomb	19.41	61	P	P	19 16 49.3	-1.3
NCB				IAmb	IAmb	19 17 02.7	
	comp=Z,14nm,1.3s						
ACCN	Adirondack Com	19.68	63	P	P	19 16 51.4	-2.1
YBH	Yreka Blue Hor	19.79	292	P	Pn	19 16 57.6	+1.3
	comp=Z,0.1nm,0.3s,baz=86,slow=15,SNR=2.4						
FRNY	Flat Rock	20.07	59	P	P	19 16 57.8	+0.1
FRNY				IAmb	IAmb	19 17 02.2	
	comp=Z,20nm,1.4s						
PKME	Peaks-Kenny Pk	23.13	60	P	P	19 17 29.4	-1.1
YKA	Yellowknife Ar	27.75	343	P	P	19 18 14.4	+1.7
	comp=Z,0.2nm,0.5s,baz=148,slow=8.4,SNR=5.5						
ILAR	Eielson Array	40.14	330	P	P	19 20 02.8	+2.8
	comp=Z,0.9nm,0.7s,baz=101,slow=7.1,SNR=11						

SOME **25** *19:14:44.0, 36°.48N×71°.32E, h0^{km}, MS5.7*

MOS **25** *19:14:45.5±1.0, 36°.47N×71°.23E, h207^{km}, mb6.5/64, Error ellipse: s-maj=3.8km s-min=2.8km az=99.8 Broadband fault plane solution: P waves. NP1:ϕ_s262.00000°, δ46.00000°, λ105.00000°. NP2:ϕ_s61.00000°, δ46.00000°, λ75.00000°. Principal axes: T Plg79.0000°, Azm252.0000°; N Plg11.0000°, Azm72.0000°; P Plg0.0000°, Azm342.0000°;*

MOS Fault plane solution: P-wave C73, D37 . Felt (III) at Taraz, Shymkent.

BJI **25** *19:14:47.4±0.0, 36°.50N×71°.25E, h210^{km}, mB6.4/53, mb6.4/76*

IDC **25** *19:14:47.9±0.3, 36°.43N×71°.24E, h215^{km}±2^{km}, mb6.0/58, mb1 6.0/63, mb1mx5.9/64, mbtmp6.5/63, Error ellipse: s-maj=5.5km s-min=4.2km az=21.0*

BGR **25** *19:14:47.8±0.0, 36°.43N×71°.17E, h202^{km}, mb6.3, mB_BB6.8*

NEIC **25** *19:14:47.2±1.9, 36°.49N±0°.06×71°.13E±0°.05, h206^{km}±1^{km}, mb6.5/549, Mwb6.3/90, Mww6.3, Error ellipse: s-maj=9.8km s-min=6.1km az=342.0*

NEIC **25** *19:14:47.7, 36°.50N×71°.12E, h209^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$4.45; M$_{\theta\theta}$-2.99; M$_{\phi\phi}$-1.46; M$_{r\theta}$0.50; M$_{\theta\phi}$-0.70; M$_{\phi r}$-0.54; Fault plane solution: M$_0$4.06000×10^{18} NP1:ϕ_s75.95000°, δ47.47000°, λ99.27000°. NP2:ϕ_s242.37000°, δ43.34000°, λ80.04000°. Principal axes: T 4.5449, Plg83.0000°, Azm53.0000°; N -1.2739, Plg7.0000°, Azm250.0000°; P -3.2710, Plg2.0000°, Azm159.0000°;*

NEIC **25** *19:14:48, 36°.41N×71°.01E, h200^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{18}Nm; M$_{rr}$3.95; M$_{\theta\theta}$-2.14; M$_{\phi\phi}$-1.81; M$_{r\theta}$0.85; M$_{\theta\phi}$-0.44; M$_{\phi r}$-0.53; Fault plane solution: M$_0$3.60000×10^{18} NP1: ϕ_s229.00000°, δ42.00000°, λ76.00000°. NP2:ϕ_s67.00000°, δ50.00000°, λ102.00000°. Principal axes: T 4.1271, Plg80.0000°, Azm35.0000°; N -1.6487, Plg9.0000°, Azm240.0000°; P -2.4785, Plg4.0000°, Azm149.0000°;*

NNC **25** *19:14:48.0±2.6, 36°.72N×70°.93E, h201^{km}±27^{km}, mb6.3, mpv7.5 Error ellipse: s-maj=27.0km s-min=15.3km az=159.0*

GCMT **25** *19:14:49.2±0.1, 36°.46N×71°.06E, h214^{km}, MW6.3/169, Moment Tensor Solution. s157,c362; s169,c594; Duration: 3^{s}5 Moment tensor: Scale 10^{18}Nm; M$_{rr}$4.64±.02; M$_{\theta\theta}$-2.57±.03; M$_{\phi\phi}$-2.07±.03; M$_{r\theta}$0.66±.02; M$_{\theta\phi}$-0.44±.02; M$_{\phi r}$-0.63±.02; Best double couple: M$_0$3.79900×10^{18} NP1:ϕ_s234.00000°, δ43.00000°, λ79.00000°. NP2:ϕ_s69.00000°, δ48.00000°, λ100.00000°. Principal axes: T 4.7650, Plg82.0000°, Azm46.0000°; N -1.9320, Plg8.0000°, Azm242.0000°; P -2.8340, Plg2.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 25 19:14:46.6±0.2**, 36°.46N**±0°.02×**71°.17E**±0°.02**, h206**^{km}±1^{km}**, h206**^{km}**:pP-P, n2623, σ1^{s}70**/3056**, mb6.4**/567**, 787C-161D, Fault plane solution: NP1:**ϕ_s63.75406°**,** δ50.59814°**,** λ99.22477°. **NP2:**ϕ_s229.40227°**,** δ40.29546°**,** λ78.95756°. **Principal axes:** T Plg81.1760°**,** Azm21.3959°**;** N Plg7.1156°**,** Azm237.8683°**;** P Plg5.1915°**,** Azm147.2184°**;**

Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.59	223	PN	Pn	19 15 32.0	-0.1
KBL	Kabul	2.59	223	Pn	Pn	19 15 32.0	-0.1
CEP	Cherat	2.70	167	P	Pn	19 15 33.9	+0.5
CEP				S	S	19 16 09.0	-0.3
CHGR	Chuyangaron	2.71	324	PN	Pn	19 15 32.9	-0.4
CHGR	Chuyangaron	2.71	324	Pn	Pn	19 15 32.9	-0.4
DRK	Karamyk	3.05	9		Pn	19 15 37.8	+0.4
CHCP	Chirah Chowk	3.28	148	P	Pn	19 15 41.1	+1.1
CHCP				S	S	19 16 23.0	+1.8
BTK	Batken	3.60	356	PN	Pn	19 15 44.4	+0.7
BTK	Batken	3.60	356		Pn	19 15 44.4	+0.7
THW	Thamme Wali	3.69	172	P	Pn	19 15 45.4	+0.5
THW				S	S	19 16 27.0	-3.1
SARP	Sargodha	4.70	164	P	Pn	19 15 57.1	-0.3
KSH	Kashi	4.87	50	P	Pn	19 15 55.0	-4.5
KSH				S	S	19 16 45.5	-11
KSH				smax	smax		
	comp=N,222μm,1.0s						
KSH				smax	smax		
	comp=E,132μm,0.9s						
TAS	Tashkent	5.07	344	PN	Pn	19 16 02.1	+0.1
TAS	Tashkent	5.07	344	Pn	Pn	19 16 02.1	+0.1
IUG	Iuzhnay	5.74	352	eP	Pn	19 16 10.8	+0.1
	99μm,0.4s						
IUG				eS	S	19 17 13.5	-3.5
	97μm,0.8s						
IUG	Iuzhnay	5.74	352	⇑iP	Pn	19 16 10.7	+0.1
	baz=351						
IUG	Iuzhnay	5.74	352	c iPN	Pn	19 16 10.7	0.0
DHRM	DHARAMSHALA	5.97	133	eP	Pn	19 16 14.0	+0.2
DHRM				eS	S	19 17 20.2	-2.3
DHRM				IAML		19 17 24.1	
	comp=E,233μm,0.5s						
CHM	Chimkent	5.97	349	eP	Pn	19 16 15.4	+1.9
	comp=E,20μm,0.8s						
CHM				eS	S	19 17 21.5	-0.7
	comp=E,134μm,0.5s						
AML	Almayashu	5.99	18	P	Pn	19 16 13.7	-0.4
AML	Almayashu	5.99	18	iP	Pn	19 16 13.6	-0.4
UCH	Uchtor	6.31	23	P	Pn	19 16 17.8	-0.5
	SNR=3837						
DZA	Taraz	6.42	1	eP	Pn	19 16 19.5	+0.2
	comp=E,51μm,0.7s						
DZA				eS	S	19 17 28.5	-4.2
	comp=E,111μm,0.6s						
DZA	Taraz	6.42	1	eP	Pn	19 16 19.0	-0.4
	baz=0.7						
DZA	Taraz	6.42	1	ePN	Pn	19 16 18.9	-0.4
MRKS	Merke	6.47	14	eP	Pn	19 16 20.2	+0.2
	comp=E,47μm,0.9s						
MRKS				eS	S	19 17 29.7	-4.3
	comp=E,30μm,0.8s						
EKS2	Erkin-Say	6.51	17	P	Pn	19 16 20.3	-0.2
BRLS	Borolday	6.64	352	eP	Pn	19 16 18.3	-3.8
	comp=E,5μm,0.5s						
BRLS				eS	S	19 17 26.5	-11
	comp=E,20μm,0.3s						
BRLS	Borolday	6.64	352	eP	Pn	19 16 18.4	-3.8
	comp=E,3μm,1.1s,baz=350						
BRLS	Borolday	6.64	352	ePN	Pn	19 16 18.3	-3.8
BRLS				pmax	pmax		
	comp=Z,3μm,1.1s						
KK02	Karatay Array	6.65	356	⇑P	Pn	19 16 21.5	-0.8
	comp=Z,10μm,0.4s						
KK02				⇑S	S	19 17 32.6	-5.6
	comp=Z,12μm,0.5s						
KKAR	Karatay Array	6.65	356	PN	Pn	19 16 21.5	-0.8
KKAR	Karatay Array	6.65	356		Pn	19 16 21.5	-0.8
BHK	Bhakra	6.66	138	eP	Pn	19 16 22.0	-0.5
AAK	Ala-Archa	6.68	22	P	Pn	19 16 22.5	-0.3
	comp=Z,4μm,0.3s,baz=195,slow=7.4,SNR=8059						
AAK				S	S	19 17 37.2	-1.8
	comp=Z,379nm,0.3s,baz=321,slow=22,SNR=13						
AAK				P3KPbc		19 53 42.9	
	comp=Z,0.0nm,0.3s,baz=162,slow=6.4,SNR=2.4						
AAK	Ala-Archa	6.68	22	P	Pn	19 16 22.7	-0.1
	SNR=2740						
AAK	Ala-Archa	6.68	22	iP	Pn	19 16 22.8	+0.1
AAK	Ala-Archa	6.68	22	PN	Pn	19 16 22.7	-0.1
AAK				S	S	19 17 36.4	-2.6
AAK	Ala-Archa	6.68	22	P	Pn	19 16 23.1	+0.4
AAK				P	Pn	19 16 23.1	+0.4
AAK	Ala-Archa	6.68	22	⇓P	Pn	19 16 22.7	-0.1
AAK	Ala-Archa	6.68	22	⇓P	Pn	19 16 22.7	-0.1
	comp=Z,18μm,0.6s						
AAK				⇓S	S	19 17 36.4	-2.6
	comp=Z,42μm,1.1s						
AAK	Ala-Archa	6.68	22	Pn	Pn	19 16 22.6	-0.2
KBK	Karagaybulak	6.84	24	P	Pn	19 16 24.8	-0.1
FRU1	Bishkek	6.88	22	PN	Pn	19 16 25.5	+0.3
FRU1	Bishkek	6.88	22		Pn	19 16 25.5	+0.3
ULHL	Ulahol	6.98	33	P	Pn	19 16 25.9	-0.9
	SNR=907						
BOOM	Boomskoye usch	7.06	30	PN	Pn	19 16 27.0	-0.7
BOOM	Boomskoye usch	7.06	30		Pn	19 16 27.0	-0.7
CHMS	Chumysh	7.08	22	P	Pn	19 16 27.4	-0.5
USP	Ospenovka	7.26	20	P	Pn	19 16 29.1	-1.1
	SNR=1267						
SMLA	Simla	7.29	135	eP	Pn	19 16 30.1	-0.6
SMLA				eS	S	19 17 50.6	-2.7
SMLA				IAML		19 17 52.3	
	comp=E,100μm,0.9s						
TKM2	Tokmak 2	7.29	27	P	Pn	19 16 30.4	-0.4
TKM2	Tokmak 2	7.29	27	PN	Pn	19 16 30.7	-0.1
TKM2				S	S	19 17 52.2	-1.4
TKM2	Tokmak 2	7.29	27	⇓P	Pn	19 16 30.7	-0.1
	comp=E,59μm,1.2s						
TKM2				S	S	19 17 52.2	-1.4
KDJ	Kajisay	7.33	38	PN	Pn	19 16 30.1	-1.1
KDJ	Kajisay	7.33	38		Pn	19 16 30.1	-1.1
TARG	Taragay, Kyrgy	7.36	42		Pn	19 16 30.5	-1.4
SGDS	Sogindy	7.47	20	iP	Pn	19 16 31.9	-1.0
	comp=E,5μm,0.8s,baz=19						
SGDS	Sogindy	7.47	20	ePN	Pn	19 16 31.9	-1.0
SGDS				pmax	pmax		
	comp=Z,7μm,1.0s						
HRA	Herat	7.58	257	Pn	Pn	19 16 34.2	-0.4
TNSS	Tian-Shan	7.93	32	iP	Pn	19 16 38.5	-0.6
	baz=32						
KKR	Kurukshetra	8.03	142	eP	Pn	19 16 40.1	-0.1
AAA	Alma-Ata	8.05	31	ePN	Pn	19 16 42.8	+2.3
MDOK	Medeo	8.07	32	iP	Pn	19 16 40.4	-0.4
	baz=32						
MDOK	Medeo	8.07	32	iPN	Pn	19 16 40.4	-0.4
MDOK	Medeo	8.07	32	⇑P	Pn	19 16 40.5	-0.4
	comp=Z,10μm,0.6s						
KNDC	Almaty	8.08	32	PN	Pn	19 16 40.7	-0.2
KNDC				S	S	19 18 13.8	+1.7
KNDC	Almaty	8.08	32	⇑P	Pn	19 16 40.7	-0.2
	comp=Z,69μm,1.2s						
KNDC				S	S	19 18 13.8	+1.7
KUU	Kurty	8.41	26	eP	Pn	19 16 43.6	-1.5
	comp=Z,5μm,1.1s,baz=26						
KUU	Kurty	8.41	26	ePN	Pn	19 16 43.5	-1.5
KUU				pmax	pmax		
	comp=Z,5μm,1.1s						
CHKK	Chushkaly	8.62	29	iP	Pn	19 16 46.3	-1.4
	baz=29						
SATY	Saty	8.62	38	iP	Pn	19 16 46.6	-1.3
	baz=38						
SATY	Saty	8.62	38	iPN	Pn	19 16 46.6	-1.3
ZHN	Zhinishke	8.72	38	iP	Pn	19 16 48.1	-1.1
	baz=37						
ZHN	Zhinishke	8.72	38	iPN	Pn	19 16 48.0	-1.1
BTLS	Baital	8.84	13	eP	Pn	19 16 49.9	-0.8
	comp=Z,2μm,1.3s,baz=13						
BTLS	Baital	8.84	13	ePN	Pn	19 16 49.8	-0.8
BTLS				pmax	pmax		
	comp=Z,2μm,1.3s						
UZB	Uzynbulak	9.00	40	eP	Pn	19 16 51.4	-1.5
	comp=Z,915nm,0.8s,baz=39						
UZB	Uzynbulak	9.00	40	ePN	Pn	19 16 51.3	-1.5
UZB				pmax	pmax		
	comp=Z,915nm,0.8s						
KPKS	Kokpek	9.06	37	iP	Pn	19 16 52.7	-1.0
	comp=Z,2μm,0.8s,baz=37						
KPKS	Kokpek	9.06	37	iP	Pn	19 16 52.6	-1.0
KPKS				pmax	pmax		
	comp=Z,2μm,0.8s						
SHLS	Shalkode	9.24	41	eP	Pn	19 16 57.5	+1.6
	baz=42						
SHLS	Shalkode	9.24	41	eP	Pn	19 16 57.4	+1.6
ARXS	Arharly	9.26	31	eP	Pn	19 16 54.5	-1.6
NDI	New Delhi	9.28	145	eP	Pn	19 16 55.0	-1.5
MERT	Meerut	9.29	142	eP	Pn	19 16 56.4	-0.2
AYAN	Aya Nagar	9.41	146	eP	Pn	19 16 56.8	-1.4
AYAN				eS	S	19 18 36.9	-6.9
KUDL	Kundal	9.44	150	eP	Pn	19 16 56.9	-1.5
BISR	Bishrakh	9.48	144	eP	Pn	19 16 58.7	-0.3
JASL	Jaisalmer	9.51	181	eP	Pn	19 16 57.6	-1.9
TDK	Taldyqorghan	10.14	31	eP	Pn	19 17 05.7	-1.8
	comp=Z,3μm,0.9s,baz=30						
TDK				eS	S	19 18 59.1	-2.0
	baz=30						
TDK	Taldyqorghan	10.14	31	eP	Pn	19 17 05.6	-1.8
TDK				eS	S	19 18 59.0	-2.0
TDK				pmax	pmax		
	comp=Z,3μm,0.9s						
LGTI	Lohaghat	10.34	130	eP	P	19 17 31.4	+14
LGTI				eS	S	19 19 12.2	+6.1
AJM	Ajmer	10.38	162	eP	Pn	19 17 10.0	-0.8
GEYT	Alibeck	10.52	282	P	Pn	19 17 09.8	-2.6
	comp=Z,117nm,0.3s,baz=122,slow=9.9,SNR=604						
GEYT				S	S	19 19 07.6	-2.6
	comp=Z,212nm,0.3s,baz=192,slow=13,SNR=2.2						
GYA0	ALIBECK ARRAY	10.52	282	P	Pn	19 17 09.9	-2.5
GYA0B	ALIBECK ARRAY	10.52	282	⇓P	Pn	19 17 10.0	-2.4
GYA0B	ALIBECK ARRAY	10.52	282	Pn	Pn	19 17 10.0	-2.4
BRCI	Bahraich	12.51	132	eP	Pn	19 17 36.9	-0.9
JHNI	Jhansi	12.65	148	eP	Pn	19 17 37.5	-2.0
PYUN	Piuthan	13.01	127	eP	Pn	19 17 42.0	-2.3
	comp=Z,612nm,0.3s						
MAKZ	Makanchi	13.11	35	P	Pn	19 17 43.6	-1.5
MAKZ	Makanchi	13.11	35	⇓P	Pn	19 17 43.7	-1.4
MAKZ	Makanchi	13.11	35	⇓P	Pn	19 17 43.9	-1.2
	comp=Z,5μm,0.7s						
MAKZ	Makanchi	13.11	35		Pn	19 17 43.6	-1.5
BHUJ	Bhuj	13.23	186	eP	Pn	19 17 46.4	-0.4
BHUJ				IAmb	IAmb	19 17 50.1	
	comp=Z,59μm,1.0s						
MK31	Makanchi Array	13.24	35	d iP	Pn	19 17 45.1	-1.7
MK31	Makanchi Array	13.24	35	P	Pn	19 17 44.9	-1.8
	comp=Z,3μm,0.8s,baz=207,slow=13						
MK31	Makanchi Array	13.24	35		Pn	19 17 45.0	-1.7
MKAR	Makanchi Array	13.24	35	P	Pn	19 17 45.1	-1.7
	comp=Z,20nm,0.3s,baz=191,slow=16,SNR=8.1						
MKAR				S	S	19 20 11.1	-2.6
	comp=Z,13nm,0.3s,baz=227,slow=13,SNR=1.2						
MKAR				P3KPbc		19 53 27.8	
	comp=Z,0.1nm,0.3s,baz=90,slow=2.9,SNR=2.4						
MKAR	Makanchi Array	13.24	35	iP	Pn	19 17 43.0	-3.7
MKAR				pmax	pmax		
	comp=Z,238nm,0.5s						
MKAR	Makanchi Array	13.24	35		Pn	19 17 45.0	-1.8
DANN	Dangsing	13.35	124	eP	Pn	19 17 46.6	-2.0
	comp=Z,906nm,0.3s						
VLK	Valmikinagar	14.11	127	eP	Pn	19 17 56.3	-1.4
GKN	Gorkha	14.17	123	eP	Pn	19 17 57.5	-1.1
	comp=Z,708nm,0.3s						
BHPL	Bhopal	14.24	156	eP	Pn	19 17 58.6	-0.8
BHPL				eS	S	19 20 28.4	-9.2
WMQ	Urumqi	14.61	55	P	Pn	19 18 03.0	-0.7
WMQ				sP	sPn	19 18 57.0	+0.8
WMQ				S	S	19 20 41.3	-4.3
WMQ				pmax	pmax		
	comp=Z,1μm,1.1s						
WMQ				pmax	pmax		
	comp=Z,12μm,4.1s						
WMQ				LR	LR		
	comp=Z,27μm,10.5s						
WMQ				LR	LR		
	comp=Z,18μm,5.7s						
WMQ				LR	LR		
	comp=Z,6μm,12.3s						
DMN	Daman	14.74	123	eP	Pn	19 18 04.7	-1.0
	comp=Z,620nm,0.3s						
KKN	Kakani	14.74	122	eP	Pn	19 18 04.5	-1.1
	comp=Z,823nm,0.4s						
ZSN	Zaisan	14.95	39	iP	Pn	19 18 06.3	-1.6
	baz=38						
ZSN				eS	S	19 20 52.9	-0.5
	baz=38						
ZSN	Zaisan	14.95	39	iP	Pn	19 18 06.2	-1.6
ZSN				eS	S	19 20 52.9	-0.5
PKI	Pulchoki	14.97	122	eP	Pn	19 18 07.7	-0.8
	comp=Z,613nm,0.3s						
VAR	Varanasi	15.06	134	eP	P	19 18 09.9	+0.1
GUN	Gumba	15.08	120	eP	Pn	19 18 09.2	-0.7
	comp=Z,624nm,0.3s						
KURBB	Kurchatov Arra	15.11	18	P	Pn	19 18 07.8	-1.9
	comp=Z,25nm,0.3s,baz=207,slow=12,SNR=570						
KURBB				S	S	19 20 58.7	+1.7
	baz=204,slow=19,SNR=8.9						
KURBB				P3KPbc		19 53 18.6	
	comp=Z,0.0nm,0.3s,baz=28,slow=3.6,SNR=9.1						
KURBB	Kurchatov Arra	15.11	18	⇓P	Pn	19 18 07.7	-1.9
	comp=Z,4μm,1.1s						
AB31	Akbulak array	15.18	331	P	Pn	19 18 09.5	-1.0
AB31	Akbulak array	15.18	331	P	Pn	19 18 09.5	-1.0
	comp=Z,9μm,1.1s,baz=145,slow=12						
ABKAR	Akbulak array	15.18	331	⇑P	Pn	19 18 09.2	-1.4
ABKAR	Akbulak array	15.18	331		Pn	19 18 09.0	-1.6
ABKAR	Akbulak array	15.18	331	P	Pn	19 18 09.1	-1.4
ABKAR				IAmb	IAmb	19 18 16.5	
	comp=Z,7μm,1.1s						
KURK	Kurchatov	15.22	18	d iP	Pn	19 18 09.2	-1.8
KURK	Kurchatov	15.22	18	P	Pn	19 18 09.8	-1.2
KURK	Kurchatov	15.22	18	⇓P	Pn	19 18 09.0	-2.0
KURK	Kurchatov	15.22	18		Pn	19 18 09.2	-1.8
KURK				IAmb	IAmb	19 18 12.9	
	comp=Z,4μm,1.1s						
KURK	Kurchatov	15.22	18		S	19 20 58.7	-0.8
JBP	Jabalpur	15.29	148	eP	P	19 18 12.3	0.0
JBP				IAmb	IAmb	19 18 15.6	
	comp=Z,5μm,1.0s						
SEM	Semipalatinsk	15.40	22	eP	Pn	19 18 12.0	-1.4
	comp=Z,1μm,1.6s,baz=22						
SEM				eS	S	19 21 03.9	-0.2
	baz=22						
SEM	Semipalatinsk	15.40	22	eP	Pn	19 18 12.0	-1.4

SEM				*e*S	S	19 21 03.8	-0.2
SEM				pmax	pmax		
	comp=Z,1µm,1.6s						
JIRN	Jiri	15.45	120	*e*P	Pn	19 18 13.8	-0.6
	comp=Z,751nm,0.4s						
BANOM	Banah	16.48	235	*i* P	P	19 18 25.4	-0.1
	SNR=101						
SHME	Shamm	16.50	235	*i* P	P	19 18 25.4	-0.2
	SNR=29						
AKL	Akola	16.51	160	*e*P	Pn	19 18 27.5	+0.7
BVAR	Borovoye Array	16.57	358	P	P	19 18 26.6	+0.5
	comp=Z,104nm,0.3s,baz=176,slow=13,SNR=1026						
BVAR				S	S	19 21 27.7	-1.0
	comp=Z,79nm,0.3s,baz=173,slow=25,SNR=4.3						
BRVK	Borovoye	16.61	358	*d i*P	Pn	19 18 27.5	-0.1
BRVK	Borovoye	16.61	358	⇓P	Pn	19 18 27.1	-0.5
BRVK	Borovoye	16.61	358	⇓P	Pn	19 18 27.1	-0.5
	comp=Z,9µm,1.4s						
BRVK	Borovoye	16.61	358	P	P	19 18 27.0	+0.5
AKTO	Aktyubinsk	16.88	330	P	Pn	19 18 30.8	-0.1
	comp=Z,176nm,0.3s,baz=141,slow=8.7,SNR=1283						
AKTO				S	S	19 21 34.9	-0.1
	comp=Z,29nm,0.3s,baz=38,slow=19,SNR=1.9						
AKTO	Aktyubinsk	16.88	330	⇑P	Pn	19 18 30.7	-0.3
	comp=Z,6µm,1.1s						
MSFE	Esma-Masafi	16.96	233	*i* P	P	19 18 30.0	-0.8
	SNR=253						
WSAR	Wadi Sarin	17.07	223	P	Pn	19 18 33.2	-0.2
	comp=Z,35nm,0.3s,baz=69,slow=9.6,SNR=400						
WSAR				S	S	19 21 36.7	-2.4
	comp=Z,4.4nm,0.3s,baz=126,slow=18,SNR=1.5						
WSAR	Wadi Sarin	17.07	223	S	S	19 21 37.8	-1.3
BIDO	Bidbid	17.12	225	S	S	19 21 38.3	-1.9
BLSP	Bilaspur	17.17	143	*e*P	Pn	19 18 34.8	+0.2
UMQ	Umm Al-Quwin	17.17	235	*i* P	Pn	19 18 36.2	+1.6
	SNR=30						
UMQ	Umm Al-Quwin	17.17	235	S	S	19 21 40.0	-1.1
UMQ				S	S	19 21 40.0	-1.1
UOSS	Minazif	17.22	232	*i* P	P	19 18 33.2	-0.4
	SNR=92						
UOSS	Minazif	17.22	232	⇓P	P	19 18 32.0	-1.6
UOSS	Minazif	17.22	232	P	P	19 18 31.9	-1.6
UOSS				IAmb	IAmb	19 18 41.1	
	comp=Z,2µm,1.1s						
HATD	Hatta, Dubai	17.35	232	*i* P	P	19 18 34.4	-0.6
	SNR=216						
ASHO	Ashiyiah	17.50	232	*i* P	P	19 18 37.2	+0.6
	SNR=184						
BOM	Bombay	17.56	175	*e*P	Pn	19 18 38.6	-0.5
SOHO	SOHO	17.60	230	*i* P	P	19 18 36.5	-1.2
	SNR=16						
SLGI	Shiliguri	17.60	119	*e*P	Pn	19 18 41.9	+2.3
DGZ	Jazzator, Alta	17.73	37	*d i*P	Pn	19 18 40.2	-0.9
FAQ	Al Faqa, Dubai	17.76	233	*i* P	P	19 18 39.2	-0.2
	SNR=158						
FAQ	Al Faqa, Dubai	17.76	233	S	S	19 21 50.8	-2.0
LKRN	Lenkeran, Azer	17.88	284	P	Pn	19 18 42.7	-0.1
BOK	Bokaro	17.90	131	*e*P	Pn	19 18 42.5	-0.7
BOK				*e*S	S	19 21 59.0	+3.2
ASUD	Al Ashush, Dub	18.01	233	*i* P	P	19 18 42.6	+0.5
	SNR=142						
POO	Poona	18.02	172	⇑*i*P	P	19 18 41.0	-1.4
	comp=Z,900nm,1.2s						
POO				IAmb	IAmb	19 18 49.8	
	comp=Z,8µm,1.1s						
POO				*i* S	S	19 21 58.0	-0.3
LSA	Lhasa	18.04	106	P	Pn	19 18 46.3	+1.1
LSA				S	S	19 21 49.8	-9.4
LSA				pmax	pmax		
	comp=Z,10µm,0.8s						
LSA				LR	LR		
	comp=Z,51µm,11.4s						
LSA				LR	LR		
	comp=Z,32µm,12.8s						
LSA				LR	LR		
	comp=Z,51µm,17.1s						
LSA	Lhasa	18.04	106	P	Pn	19 18 44.1	-1.1
LSA				pmax	pmax		
	comp=Z,3µm,0.7s						
LSA	Lhasa	18.04	106	P	Pn	19 18 44.1	-1.1
ALNE	Al Ain	18.14	231	*i* P	P	19 18 43.3	-0.4
	SNR=402						
AJN	Ajban	18.28	234	*i* P	P	19 18 44.6	-0.4
	SNR=33						
LATR	Latur	18.60	164	*e*P	P	19 18 49.7	+1.2
SEKA	Sheki	19.25	292	P	Pn	19 18 58.0	-0.9
KAD	Karad	19.27	171	*e*P	P	19 18 56.6	+0.7
KAD				⇑*i*P	Pn	19 18 57.3	-2.0
MNGR	Mingechevir, A	19.29	290	P	Pn	19 18 57.9	-1.4
MAK	Makhachkala	19.30	297	*d i*P	P	19 18 56.5	+0.7
MAK				*e*S	S	19 22 26.5	+3.5
MAK				pmax	pmax		
	comp=Z,2µm,0.7s						
MAK				MLR	MLR		
	comp=Z,44µm,16.0s						
ZKTA	Zakatala	19.73	293	P	P	19 19 02.0	+1.5
GANJ	Ganja	19.86	290	P	P	19 19 03.1	+1.2
ZAA0	Zalesovo Array	19.89	24	⇓P	P	19 19 01.9	-0.2
	comp=Z,329nm,0.7s						
ZAA0	Zalesovo Array	19.89	24	P	P	19 19 01.6	-0.5
ZALV	Zalesovo Beam	19.89	24	P	P	19 19 01.9	-0.2
	comp=Z,116nm,0.3s,baz=211,slow=11,SNR=888						
ZALV				S	S	19 22 32.7	-1.7
	comp=Z,35nm,0.3s,baz=212,slow=19,SNR=4.8						
ZALV				P3KPbc		19 53 02.1	
	comp=Z,0.1nm,0.3s,baz=5.7,slow=1.4,SNR=1.7						
ZALV	Zalesovo Beam	19.89	24	*i* P	P	19 19 01.9	-0.2
ZALV				pmax	pmax		
	comp=Z,2µm,0.7s						
ZALV	Zalesovo Beam	19.89	24	P	P	19 19 01.7	-0.4
KHOR	Al-Khor Airpor	19.97	243	P	P	19 19 02.7	-0.6
LGD	Lagodekhi	20.03	293	P	P	19 19 05.2	+1.4
HYB	Hyderabad	20.07	159	*i* P	P	19 19 04.5	+0.1
HYB				*e*		19 20 00.0	
HYB				*e*S	S	19 22 34.0	-4.5
HYB				*e*		19 53 15.0	
HYB	Hyderabad	20.07	159	*e*P	P	19 19 05.2	+0.9
HYB				IAmb	IAmb	19 19 11.9	
	comp=Z,3µm,1.1s						
DDFL	Dedoflistskaro	20.08	292	P	Pn	19 19 07.9	-1.1
SHMA	Al-Shehemyia	20.23	244	P	P	19 19 05.7	-0.3
NAX	Nakhchivan	20.44	285	P	P	19 19 10.5	+2.2
GROC	Groznyy	20.57	297	*e*P	P	19 19 10.9	+1.4
GROC				*e**PP	pP	19 19 41.6	-2.3
GROC				pmax	pmax		
	comp=Z,3µm,0.8s						
SHL	Shillong	20.77	116	P	P	19 19 12.3	+0.3
SHL				pmax	pmax		
	comp=Z,5µm,1.0s						
SHL	Shillong	20.77	116	*e*P	P	19 19 12.9	+0.9
SHL				IAmb	IAmb	19 19 17.0	
	comp=Z,4µm,1.1s						
SHL				*e*S	S	19 22 52.7	+0.7
SHL	Shillong	20.77	116	P	P	19 19 12.3	+0.3
UMR	Umm Al-Rimmam	20.81	257	*e*P	P	19 19 12.1	-0.1
MIB	Mutribah	21.01	258	*e*P	P	19 19 14.8	+0.6
QRN	Al-Qurain	21.02	255	*e*P	P	19 19 14.6	+0.3
GOA	Goa	21.02	173	*e*P	P	19 19 16.3	+1.9
GNI	Garni	21.04	288	P	P	19 19 16.8	+2.2
	comp=Z,1µm,1.0s,baz=54,slow=1.2,SNR=189						
GNI	Garni	21.04	288	*e*P	P	19 19 17.3	+2.7
GNI	Garni	21.04	288	⇑P	P	19 19 17.0	+2.4
GNI	Garni	21.04	288	P	P	19 19 15.1	+0.5
GNI				IAmb	IAmb	19 19 44.1	
	comp=Z,2µm,0.8s						
RDF	Al-Radifah	21.22	256	*e*P	P	19 19 16.7	+0.2
ITAN	ITANAGAR	21.26	110	*e*P	P	19 19 18.4	+1.6
ITAN				IAmb	IAmb	19 19 22.2	
	comp=Z,8µm,1.0s						
KZRT	Kazreti	21.36	291	P	P	19 19 19.6	+1.7
RST	Umm Al-Ruwaisa	21.40	258	*e*P	P	19 19 18.5	+0.2
GUDG	Gudauri	21.41	294	P	P	19 19 22.8	+4.2
TASB	TASBURUN-IGDIR	21.42	288	*e*P	P	19 19 20.6	+2.1
SVE	Sverdlovsk	21.57	344	*de*P	P	19 19 20.3	+0.6
SVE				*e*S	S	19 23 09.1	+4.6
SVE				pmax	pmax		
	comp=Z,3µm,1.3s						
CLDR	Caldiran	21.67	285	*e*P	P	19 19 23.3	+2.1
ARU	Arti	21.71	341	P	P	19 19 21.8	+0.6
	comp=Z,316nm,0.8s,baz=148,slow=7.0,SNR=362						
ARU	Arti	21.71	341	*c i*P	P	19 19 21.8	+0.6
ARU				*PP	pP	19 19 56.1	-0.6
ARU				PPP	PPP	19 20 22.4	
ARU				S	S	19 23 10.8	+4.0
ARU				pmax	pmax		
	comp=Z,1µm,0.8s						
ARU	Arti	21.71	341	⇑P	P	19 19 21.7	+0.6
ARU	Arti	21.71	341	P	P	19 19 21.7	+0.6
ARU				IAmb	IAmb	19 20 05.7	
	comp=Z,2µm,1.0s						
JORH	JORHAT	21.87	110	*e*P	P	19 19 24.3	+1.3
JORH				IAmb	IAmb	19 19 27.8	
	comp=Z,7µm,1.0s						
BELO	BELONIA	21.91	121	*e*P	P	19 19 25.9	+2.4
DIBR	DIBRUGARH	22.00	107	*e*P	P	19 19 26.2	+1.9
DIBR				IAmb	IAmb	19 19 28.5	
	comp=Z,3µm,1.0s						
CUKT	Cukurca	22.04	280	*e*P	P	19 19 26.6	+1.8
ONI	Oni	22.18	295	P	P	19 19 28.2	+2.3
ONI				pmax	pmax		
	comp=Z,2µm,1.1s						
ONI	Oni	22.18	295	P	P	19 19 28.2	+2.3
ONI				IAmb	IAmb	19 20 11.4	
	comp=Z,2µm,1.1s						
NCK	Nalchik	22.20	297	*c i*P	P	19 19 26.9	+0.8
NCK				pmax	pmax		
	comp=Z,2µm,0.6s						
MOKO	MOKOCHONG	22.30	110	*e*P	P	19 19 28.6	+1.4
MOKO				IAmb	IAmb	19 19 32.2	
	comp=Z,5µm,0.8s						
KARS	Kars	22.32	289	*e*P	P	19 19 30.1	+2.8
KARS	Kars	22.32	289	P	P	19 19 29.9	+2.6
KARS				pmax	pmax		
	comp=Z,7µm,1.2s						
KARS	Kars	22.32	289	P	P	19 19 29.9	+2.6
KOHI	KOHIMA	22.32	112	*e*P	P	19 19 28.8	+1.3
KOHI				IAmb	IAmb	19 19 42.6	
	comp=Z,5µm,1.2s						
AGRB	Hanur-Agry	22.38	287	*e*P	P	19 19 30.6	+2.7
GEVA	Gevas	22.38	283	P	P	19 19 29.4	+1.5
GEVA				IAmb	IAmb	19 20 13.3	
	comp=Z,1µm,1.1s						
AKDM	Akdamar-Van	22.44	283	*e*P	P	19 19 30.6	+2.1
MLAZ	Malazgirt-MUS	22.73	285	*e*P	P	19 19 34.0	+2.9
KBZ	Khabaz	22.74	297	P	P	19 19 31.4	+0.5
	comp=Z,468nm,0.9s,baz=99,slow=6.5,SNR=253						
KBZ				P3KPbc		19 52 56.0	
	comp=Z,2.7nm,0.9s,baz=94,slow=4.6,SNR=4.0						
KBZ	Khabaz	22.74	297	*ce*P	P	19 19 31.4	+0.5
KBZ				pmax	pmax		
	comp=Z,780nm,0.9s						
GTA	Gaotai	22.74	74	⇓P	P	19 19 33.3	+2.2
GTA				pP	pP	19 20 11.3	+2.4
GTA				sP	sP	19 20 36.8	+1.2
GTA				S	S	19 23 25.3	+1.2
GTA				ScS	ScS	19 30 20.3	+0.5
GTA				pmax	pmax		
	comp=Z,2µm,0.9s						
GTA				pmax	pmax		
	comp=Z,19µm,9.2s						
GTA				LR	LR		
	comp=Z,9µm,12.3s						
GTA				LR	LR		
	comp=Z,9µm,12.4s						
GTA				LR	LR		
	comp=Z,9µm,14.7s						
LKP	Lekhapani	22.79	107	*e*P	P	19 19 33.4	+1.9
LKP				IAmb	IAmb	19 19 36.0	
	comp=Z,5µm,0.7s						
NEY	Neytrino	22.80	296	*c i*P	P	19 19 34.0	+2.4
NEY				pmax	pmax		
	comp=Z,2µm,2.6s						
SENK	Senkaya-Erzuru	22.87	289	*e*P	P	19 19 34.9	+2.5
KVAR	Kislovodsk Arr	22.92	298	P	P	19 19 34.2	+1.5
	comp=Z,189nm,0.7s,baz=270,slow=20,SNR=53						
KIV	Kislovodsk	22.93	298	⇑P	P	19 19 34.5	+1.8
KIV	Kislovodsk	22.93	298	*i* P	P	19 19 32.3	-0.4
	SNR=246						
KIV	Kislovodsk	22.93	298	*e*P	P	19 19 33.5	+0.8
KIV	Kislovodsk	22.93	298	*e*P	P	19 19 33.5	+0.8
KIV				*e*S	S	19 23 30.2	+3.3
KIV				pmax	pmax		
	comp=Z,738nm,4.3s						
KIV				pmax	pmax		
	comp=Z,557nm,1.0s						
KIV				MLR	MLR		
	comp=Z,13µm,14.0s						
KIV	Kislovodsk	22.93	298	P	P	19 19 33.6	+0.9
KIV	Kislovodsk	22.93	298	⇑P	P	19 19 33.4	+0.8
KIV	Kislovodsk	22.93	298	P	P	19 19 33.4	+0.8
KIV				IAmb	IAmb	19 20 28.9	
	comp=Z,2µm,1.0s						
SHAO	Shalim	22.93	221	*i* P	P	19 19 33.2	+0.4
	SNR=44						
SIRT	Sirnak	22.94	281	*e*P	P	19 19 34.5	+1.6
SIRT	Sirnak	22.94	281	P	P	19 19 33.9	+1.0
BELG	Belogornoye	23.00	321	P	P	19 19 33.9	+0.8
	comp=Z,3µm,0.8s,baz=21,slow=0.5,SNR=811						
BELG	Belogornoye	23.00	321	*c i*P	P	19 19 34.1	+1.0
BELG				pmax	pmax		
	comp=Z,1µm,1.1s						
GURO	Guroymak-BITLI	23.17	284	*e*P	P	19 19 37.5	+2.5
GURO	Guroymak-BITLI	23.17	284	P	P	19 19 36.9	+1.9
CHVG	Ch'k'valeri	23.20	295	⇓P	P	19 19 38.3	+3.3
KOPR	Koprukoy-ERZUR	23.25	288	*e*P	P	19 19 38.7	+2.9
BCA	Borcka	23.45	291	*e*P	P	19 19 49.2	+12
VRTB	Varto-Mus	23.58	286	*e*P	P	19 19 42.0	+3.2
ERZM	Erzurum	23.63	287	*e*P	P	19 19 42.3	+3.0
MNGI	Mangalore	23.65	171	*e*P	P	19 19 41.3	+1.9
EJDE	Erzurum, Palan	23.68	287	*e*P	P	19 19 41.5	+1.6
SVAN	Silvan-Diyarba	23.86	283	*e*P	P	19 19 43.5	+2.4
KARO	Karliova-Bingo	23.89	286	*e*P	P	19 19 44.6	+3.0
CHOM	Cayeli-Rize	24.09	290	*e*P	P	19 19 45.5	+2.3
BNGB	Bingl	24.20	285	*e*P	P	19 19 46.8	+2.5
MARD	Mardin	24.28	281	P	P	19 19 46.8	+1.7
MARD				IAmb	IAmb	19 19 50.8	
	comp=Z,827nm,0.9s						
YEDI	Yedisu-Bingol	24.28	286	*e*P	P	19 19 47.3	+2.2
KOPT	Kop Dagi	24.29	288	P	P	19 19 47.2	+1.9
MAZI	Mazidag	24.52	282	*e*P	P	19 19 49.2	+1.9
BAYT	Aydıntepe-Bayb	24.56	289	*e*P	P	19 19 50.1	+2.5
MDRS	Chennai	24.68	158	*e*P	P	19 19 49.0	+0.3
DYBB	Diyarbakir	24.71	283	*e*P	P	19 19 51.3	+2.4
KTUT	Trabzon	24.84	290	⇑P	P	19 19 52.3	+2.3
KTUT	Trabzon	24.84	290	*e*P	P	19 19 52.1	+2.2
ERZN	Erzincan	24.90	287	*e*P	P	19 19 53.3	+2.6
SOC	Sochi	25.01	296	*e*P	P	19 19 50.4	-1.1
SOC				*e**PP	pP	19 20 26.7	-5.3
SOC				*e*		19 20 36.2	
SOC				*e*S	S	19 24 01.4	+1.5
SOC				*e**SS	sS	19 25 09.5	-6.0
SOC				pmax	pmax		
	comp=Z,390nm,1.0s						
SVRC	Sivrice-ELAZID	25.32	284	*e*P	P	19 19 56.4	+1.9
RAYN	Ar Rayn	25.61	247	*i* P	P	19 19 57.2	0.0
	SNR=69						
RAYN	Ar Rayn	25.61	247	P	P	19 19 56.9	-0.2
RAYN				pmax	pmax		
	comp=Z,790nm,1.1s						
RAYN	Ar Rayn	25.61	247	⇑P	P	19 19 57.1	0.0
RAYN	Ar Rayn	25.61	247	P	P	19 19 56.9	-0.2
RAYN				IAmb	IAmb	19 20 01.9	
	comp=Z,790nm,1.1s						
VRH	Novokhopyorsk	25.63	314	*e*P	P	19 19 57.3	+0.3
VRH				*e*S	S	19 24 08.6	-0.9
VRH				pmax	pmax		
	comp=Z,850nm,0.9s						
VRH				pmax	pmax		
	comp=Z,2µm,1.2s						
VRH				smax	smax		
	comp=N,13µm,8.9s						
ILIC	ilic-Erzincan	25.80	287	*e*P	P	19 20 01.5	+2.7
ARPR	Arapgir-MALATY	26.01	286	*e*P	P	19 20 03.5	+2.8
MALT	Malatya	26.01	284	*e*P	P	19 20 03.0	+2.3
MOY	Mondy	26.03	45	*e*P	P	19 20 02.6	+1.9
MOY				pmax	pmax		
	comp=Z,2µm,2.0s						
LZH	Lanzhou	26.28	81	⇑P	P	19 20 05.3	+2.1
LZH				pP	pP	19 20 50.5	+4.7
LZH				sP	sP	19 21 12.8	+2.3
LZH				PcP	PcP	19 23 27.0	+3.2
LZH				S	S	19 24 23.8	+3.4
LZH				sS	sS	19 25 34.5	-2.0
LZH				pmax	pmax		
	comp=Z,880nm,1.4s						
LZH				pmax	pmax		
	comp=Z,9µm,5.4s						
LZH				LR	LR		
	comp=Z,9µm,15.7s						
LZH				LR	LR		
	comp=Z,7µm,14.7s						
LZH				LR	LR		
	comp=Z,6µm,16.3s						
KIRV	Kirov	26.33	334	P	P	19 20 04.0	+0.9
	comp=Z,2µm,0.6s,baz=130,slow=2.2,SNR=358						
KIRV				pP	pP	19 20 46.9	+1.9
	comp=Z,783nm,0.9s,baz=117,slow=15,SNR=2.6						
RSDY	Resadiye-TOKAT	26.70	289	*e*P	P	19 20 08.6	+1.8
DARE	Darende-Malaty	26.72	285	*e*P	P	19 20 09.5	+2.5
ZAK	Zakamensk	26.91	49	*e*P	P	19 20 10.3	+1.7
ZAK				pmax	pmax		
	comp=Z,850nm,1.1s						
VORD	Divnogorie	26.97	313	*e*P	P	19 20 09.2	+0.3
VORD				pmax	pmax		
	comp=Z,900nm,1.5s						
SVSK	Karacayir	26.98	288	*e*P	P	19 20 11.4	+2.2
GAZ	Gaziantep	27.11	282	*e*P	P	19 20 11.4	+0.9
GAZ	Gaziantep	27.11	282	P	P	19 20 10.9	+0.4
VSR	Storozhevoye	27.13	313	*e*P	P	19 20 10.6	+0.3
VSR				*e*S	S	19 24 29.6	-3.4
VSR				*e**SS	sS	19 25 42.8	-6.6
VSR				pmax	pmax		
	comp=Z,1µm,1.0s						
VSR				pmax	pmax		
	comp=Z,1µm,1.2s						
VSR				smax	smax		
	comp=N,5µm,11.7s						
VORR	Voronezh	27.27	314	⇑*i*P	P	19 20 12.0	+0.5
VORR				pmax	pmax		
	comp=Z,2µm,1.2s						
TOKT	Tokat	27.30	289	*e*P	P	19 20 13.9	+1.8
TOKA	Tokat	27.36	289	P	P	19 20 13.3	+0.8
TOKA				IAmb	IAmb	19 21 04.2	
	comp=Z,1µm,1.4s						
TLY	Talaya	27.57	46	*c i*P	P	19 20 16.5	+2.2
TLY				*e*		19 21 01.9	
TLY				*e*PPP	PPP	19 21 19.2	
TLY				*e*S	S	19 24 45.9	+5.9
TLY				*e*SSS	SSS	19 26 14.5	
TLY				pmax	pmax		
	comp=Z,410nm,0.8s						
TLY				MLR	MLR		
	comp=Z,9µm,9.0s						
TLY	Talaya	27.57	46	P	P	19 20 16.4	+2.1
TLY				P	P	19 20 16.4	+2.1
TLY	Talaya	27.57	46	⇑P	P	19 20 16.5	+2.2
TLY	Talaya	27.57	46	P	P	19 20 16.2	+1.9
SARI	SarD1z-Kayseri	27.57	285	*e*P	P	19 20 16.9	+2.3
CD2	Chengdu	27.59	92	P	P	19 20 16.8	+2.0
CD2				PcP	PcP	19 23 28.5	+1.6
CD2				S	S	19 24 44.3	+3.4
CD2				pmax	pmax		
	comp=Z,1µm,1.1s						
CD2				pmax	pmax		
	comp=Z,4µm,4.7s						
KVT	Kavak	27.65	290	*e*P	P	19 20 16.7	+1.5
LPSR	Galich'ya Gora	27.77	316	*e*P	P	19 20 16.9	+0.9
LPSR				*e*S	S	19 24 41.9	-1.3
LPSR				*e**SS	sS	19 25 59.0	-0.6
LPSR				pmax	pmax		
	comp=Z,890nm,0.9s						
LPSR				pmax	pmax		
	comp=Z,820nm,0.8s						
LPSR				smax	smax		
	comp=N,5µm,9.9s						
BNN	Bunyan	27.96	286	*e*P	P	19 20 19.8	+1.7
BNN	Bunyan	27.96	286	P	P	19 20 19.5	+1.4
BNN				IAmb	IAmb	19 20 23.8	
	comp=Z,1µm,1.0s						
TAHT	Tahtakopru-Hat	28.06	280	*e*P	P	19 20 20.5	+1.7
IRK	Irkutsk	28.13	45	*e*P	P	19 20 20.8	+1.6
IRK				pmax	pmax		
	comp=Z,2µm,2.1s						
KOZT	Kozan	28.16	283	*e*P	P	19 20 21.5	+1.8
YAYL	Yayladag	28.19	280	*e*P	P	19 20 21.6	+1.5
SONM	Songino Array	28.24	55	P	P	19 20 22.1	+1.7
	comp=Z,453nm,0.8s,baz=260,slow=8.9,SNR=475						
SONM				PcP	PcP	19 23 30.1	+1.8
	comp=Z,238nm,0.9s,baz=233,slow=4.6,SNR=5.7						
SONM				P3KPbc		19 52 36.5	
	comp=Z,19nm,0.9s,baz=94,slow=3.6,SNR=42						
SONM				P3KP		19 53 33.4	
	comp=Z,7.6nm,1.0s,baz=96,slow=3.8,SNR=6.7						
SONM	Songino Array	28.24	55	P	P	19 20 21.6	+1.1
SNOP	Sinop	28.26	292	*e*P	P	19 20 21.4	+0.9
SNOP	Sinop	28.26	292	P	P	19 20 21.2	+0.7
SNOP				IAmb	IAmb	19 21 12.1	
	comp=Z,2µm,1.6s						
YOZ	Yozgat	28.29	287	*e*P	P	19 20 22.5	+1.5
CEYT	Ceyhan	28.30	282	*e*P	P	19 20 23.2	+2.3
TRD	Trivandrum	28.32	168	*e*P	P	19 20 22.7	+1.4
ASF	Jabal al Asfar	28.54	271	P	P	19 20 25.0	+1.8
	comp=Z,148nm,0.8s,baz=94,slow=2.0,SNR=56						
ASF				pP	pP	19 21 08.0	+2.7
	comp=Z,232nm,1.1s,baz=78,slow=5.4,SNR=3.3						
KRTS	Karatas	28.67	281	*e*P	P	19 20 26.4	+2.2
ULN	Ulaanbaatar	28.68	55	*d i*P	P	19 20 25.5	+1.1
ULN				pmax	pmax		
	comp=Z,2µm,1.7s						
ULN	Ulaanbaatar	28.68	55	⇓P	P	19 20 25.6	+1.2
ULN	Ulaanbaatar	28.68	55	P	P	19 20 25.5	+1.1
ULN				IAmb	IAmb	19 20 30.1	
	comp=Z,587nm,0.9s						
SOCY	Socotra	28.70	217	⇑P	P	19 20 23.4	-1.4
SOCY	Socotra	28.70	217	P	P	19 20 23.0	-1.8
SOCY				IAmb	IAmb	19 20 27.6	
	comp=Z,973nm,1.6s						
HWQ	Hawqa	28.71	276	*e*P	P	19 20 26.6	+1.8
CORM	Corum	28.78	289	*e*P	P	19 20 26.9	+1.6
CMRD	Camardi-Nigde	28.79	283	*e*P	P	19 20 27.4	+2.0
KARA	Karaisali	28.80	283	*e*P	P	19 20 27.2	+1.8
RCY	Rachaya	29.00	275	*e*P	P	19 20 29.2	+1.9
BHL	Bhannes	29.04	276	*e*P	P	19 20 29.4	+1.7
SHBL	Chebaa	29.12	274	*e*P	P	19 20 30.2	+1.8
SIM	Simferopol'	29.14	298	*c i*P	P	19 20 28.0	-0.2
SIM				*e**PP	pP	19 21 06.9	-3.2
SIM						19 21 31.0	
SIM				S	S	19 25 04.0	-0.7
SIM				*e*SS	ScP	19 26 52.8	+0.5
SIM				pmax	pmax		
	comp=Z,173nm,0.6s						
BZK	Bozkurt	29.16	292	⇓P	P	19 20 30.7	+2.2
BZK	Bozkurt	29.16	292	*e*P	P	19 20 30.2	+1.8
BZK	Bozkurt	29.16	292	P	P	19 20 29.9	+1.5
DQRL	Deir Qamar	29.16	275	*e*P	P	19 20 30.7	+2.0
KMI	Kunming	29.25	104	⇑P	P	19 20 30.8	+1.0
KMI				sP	sP	19 21 37.5	+0.3
KMI				PcP	PcP	19 23 33.0	+1.7
KMI				S	S	19 25 10.3	+2.9
KMI				sS	sS	19 26 22.8	-1.2
KMI				ScS	ScS	19 30 48.8	+0.5
KMI				pmax	pmax		
	comp=Z,480nm,1.2s						
KMI				pmax	pmax		
	comp=Z,4µm,5.5s						
KMI				LR	LR		
	comp=Z,7µm,14.1s						
KMI				LR	LR		
	comp=Z,4µm,16.6s						
KMI				LR	LR		
	comp=Z,6µm,17.0s						
MERS	Mersin	29.29	282	*e*P	P	19 20 31.5	+1.8
ILGA	Ilgaz	29.41	291	P	P	19 20 32.2	+1.3
MMAI	Mount Meron Ar	29.49	274	P	P	19 20 33.4	+1.8
	comp=Z,165nm,0.7s,baz=70,slow=9.8,SNR=137						
MMAI				pP	pP	19 21 17.4	+3.6
	comp=Z,69nm,0.9s,baz=61,slow=12,SNR=1.5						
MMAI				PcP	PcP	19 23 32.7	+1.0
	comp=Z,108nm,0.7s,baz=75,slow=4.6,SNR=6.8						
MMAI				ScP	ScP	19 26 53.1	-0.6
	comp=Z,136nm,1.0s,baz=69,slow=5.4,SNR=7.9						
CANT	Cankiri	29.51	290	*e*P	P	19 20 33.2	+1.5
KAMT	Kaman	29.56	287	*e*P	P	19 20 33.4	+1.3
BR131	Keskin Array S	29.58	288	P	P	19 20 33.2	+0.9
BR131				pmax	pmax		
	comp=Z,766nm,0.9s						
BR131	Keskin Array S	29.58	288	P	P	19 20 33.2	+0.8
BR131				IAmb	IAmb	19 20 37.4	
	comp=Z,766nm,0.8s						
BRTR	Keskin Array B	29.58	288	P	P	19 20 33.3	+0.9
	comp=Z,364nm,0.9s,baz=102,slow=8.0,SNR=876						
BRTR				pP	pP	19 21 15.4	+1.1

	comp=Z,83nm,0.9s,baz=106,slow=7.9,SNR=1.7						
BRTR				P3KPbc		19 52 34.5	
	comp=Z,12nm,1.0s,baz=256,slow=3.4,SNR=34						
BRTR	**Keskin Array B**	**29.58**	**288**	*e*P	**P**	**19 20 33.4**	**+1.0**
BRTR	**Keskin Array B**	**29.58**	**288**	*i* P	**P**	**19 20 33.2**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,359nm,0.9s						
BRTR	**Keskin Array B**	**29.58**	**288**	P	**P**	**19 20 32.9**	**+0.5**
SERE	**Sereflikochisa**	**29.72**	**286**	*e*P	**P**	**19 20 35.1**	**+1.5**
MOS	**Moscow**	**29.77**	**321**	*e*P	**P**	**19 20 34.2**	**+0.5**
MOS				*e**PP	**pP**	**19 21 17.9**	**+1.8**
MOS				*e*		19 21 35.6	
MOS				*e*		19 21 42.2	
MOS				*e*S	**S**	**19 25 16.5**	**+2.1**
MOS				*e*		19 30 41.8	
MOS				pmax	pmax		
	comp=Z,1µm,0.8s						
MOS				pmax	pmax		
	comp=E,2µm,1.3s						
MOS				pmax	pmax		
	comp=N,577nm,1.1s						
MOS				pmax	pmax		
	comp=E,1µm,1.1s						
MOS				pmax	pmax		
	comp=Z,2µm,0.8s						
MOS				pmax	pmax		
	comp=N,500nm,1.0s						
MOS				smax	smax		
	comp=E,4µm,1.6s						
MOS				smax	smax		
	comp=N,4µm,1.7s						
SULT	**Sultanhani-AKS**	**29.86**	**285**	*e*P	**P**	**19 20 36.9**	**+2.1**
PRGR	**Permogore**	**29.86**	**336**	*e*P	**P**	**19 20 35.5**	**+1.1**
PRGR				*e**PP	**pP**	**19 21 16.2**	**-0.9**
PRGR				pmax	pmax		
	comp=Z,6µm,1.5s						
GHAJ	**Ghor Haditha**	**29.89**	**271**	P	**P**	**19 20 35.9**	**+0.9**
OBN	**Obninsk**	**30.05**	**319**	⇑P	**P**	**19 20 37.5**	**+1.4**
OBN	**Obninsk**	**30.05**	**319**	P	**P**	**19 20 37.1**	**+0.9**
	comp=Z,175nm,0.6s,baz=317,slow=0.4,SNR=148						
OBN	**Obninsk**	**30.05**	**319**	*c i*P	**P**	**19 20 37.0**	**+0.9**
OBN				*e*		19 21 43.2	
OBN				*e**SP	**sP**	**19 21 44.6**	**+2.4**
OBN				*e*		19 23 33.6	
OBN				*e*S	**S**	**19 25 21.7**	**+2.9**
OBN				pmax	pmax		
	comp=Z,2µm,1.3s						
OBN				pmax	pmax		
	comp=Z,5µm,1.8s						
OBN				MLR	MLR		
	comp=Z,13µm,19.0s						
OBN	**Obninsk**	**30.05**	**319**	⇑P	**P**	**19 20 37.0**	**+0.9**
OBN	**Obninsk**	**30.05**	**319**	P	**P**	**19 20 37.0**	**+0.9**
CHTO	**Chiang Mai**	**30.08**	**118**	P	**P**	**19 20 37.1**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,441nm,0.9s						
CHTO	**Chiang Mai**	**30.08**	**118**	⇑P	**P**	**19 20 36.9**	**0.0**
CHTO	**Chiang Mai**	**30.08**	**118**	P	**P**	**19 20 37.1**	**+0.3**
CHTO	**Chiang Mai**	**30.08**	**118**	P	**P**	**19 20 38.0**	**+1.2**
ANTO	**Ankara**	**30.21**	**288**	P	**P**	**19 20 38.9**	**+1.1**
ANTO				pmax	pmax		
	comp=Z,661nm,1.0s						
ANTO	**Ankara**	**30.21**	**288**	P	**P**	**19 20 38.9**	**+1.1**
ANTO				IAmb	IAmb	19 20 43.2	
	comp=Z,661nm,1.0s						
BR231	**Keskin MP Arra**	**30.23**	**288**	P	**P**	**19 20 38.9**	**+0.9**
BR231				IAmb	IAmb	19 20 43.4	
	comp=Z,536nm,0.9s						
CM31	**Chiang Mai Arr**	**30.32**	**119**	P	**P**	**19 20 39.6**	**+0.7**
CM31				IAmb	IAmb	19 20 43.7	
	comp=Z,968nm,1.1s						
CMAR	**Chiang Mai Arr**	**30.32**	**119**	P	**P**	**19 20 39.6**	**+0.8**
	comp=Z,417nm,1.0s,baz=300,slow=8.6,SNR=287						
CMAR				PcP	**PcP**	**19 23 35.9**	**+2.0**
	comp=Z,222nm,0.9s,baz=302,slow=3.7,SNR=5.6						
CMAR				PKiKP	**PKiKP**	**19 31 05.0**	**-0.1**
	comp=Z,5.8nm,0.8s,baz=305,slow=1.7,SNR=4.8						
CMAR				P3KPbc		19 52 29.2	
	comp=Z,13nm,1.0s,baz=151,slow=3.0,SNR=32						
CMAR	**Chiang Mai Arr**	**30.32**	**119**	*i* P	**P**	**19 20 39.7**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,369nm,0.9s						
CMAR	**Chiang Mai Arr**	**30.32**	**119**	P	**P**	**19 20 39.5**	**+0.6**
PALK	**Pallekele**	**30.33**	**161**	P	**P**	**19 20 40.4**	**+1.3**
	comp=Z,456nm,1.0s,baz=89,slow=9.4,SNR=116						
PALK				pP	**pP**	**19 21 21.7**	**+0.3**
	comp=Z,73nm,0.6s,baz=72,slow=8.6,SNR=1.2						
PALK				S	**S**	**19 25 27.4**	**+3.4**
	comp=Z,148nm,1.0s,baz=276,slow=19,SNR=3.4						
PALK				P3KPbc		19 52 28.3	
	comp=Z,44nm,1.1s,baz=228,slow=6.2,SNR=7.1						
PALK	**Pallekele**	**30.33**	**161**	P	**P**	**19 20 40.0**	**+0.9**
PALK				pmax	pmax		
	comp=Z,1µm,1.1s						
PALK	**Pallekele**	**30.33**	**161**	⇑P	**P**	**19 20 40.3**	**+1.3**
PALK	**Pallekele**	**30.33**	**161**	P	**P**	**19 20 40.0**	**+0.9**
PALK				IAmb	IAmb	19 21 33.0	
	comp=Z,1µm,1.1s						
BTO	**Baotou**	**30.50**	**70**	*e*P	**P**	**19 20 41.3**	**+0.9**
BTO				S	**S**	**19 25 30.5**	**+4.1**
BTO				LR	LR		
	comp=Z,29µm,8.3s						
BTO				LR	LR		
	comp=Z,23µm,8.8s						
CSS	**Mathiatis**	**30.64**	**279**	⇑P	**P**	**19 20 41.7**	**+0.1**
CSS	**Mathiatis**	**30.64**	**279**	P	**P**	**19 20 41.6**	**+0.1**
XAN	**Xi'an**	**30.80**	**83**	⇓P	**P**	**19 20 44.5**	**+1.5**
XAN				pP	pP	19 21 31.0	+4.7
XAN				sP	sP	19 21 52.0	+1.3
XAN				PcP	**PcP**	**19 23 37.5**	**+2.5**
XAN				S	**S**	**19 25 32.5**	**+1.4**
XAN				sS	sS	19 26 52.5	+4.7
XAN				ScP	**ScP**	**19 27 00.0**	**+2.0**
XAN				PcS	**PcS**	**19 27 19.8**	**+0.5**
XAN				SS	SS	19 27 27.5	-23
XAN				ScS	**ScS**	**19 30 57.0**	**+1.8**
XAN				pmax	pmax		
	comp=Z,2µm,1.2s						
XAN				pmax	pmax		
	comp=Z,7µm,3.5s						
XAN				LR	LR		
	comp=Z,8µm,15.1s						
XAN				LR	LR		
	comp=Z,7µm,11.7s						
XAN				LR	LR		
	comp=Z,12µm,15.8s						
LEF	**Lefka**	**30.95**	**279**	⇑P	**P**	**19 20 45.3**	**+1.0**
EIL	**Elat**	**30.97**	**268**	P	**P**	**19 20 45.6**	**+1.2**
	comp=Z,441nm,0.9s,baz=76,slow=3.6,SNR=143						
EIL				pP	**pP**	**19 21 30.2**	**+3.4**
	comp=Z,108nm,0.9s,baz=102,slow=7.1,SNR=1.7						
EIL	**Elat**	**30.97**	**268**	⇑P	**P**	**19 20 45.8**	**+1.2**
KDZE	**Karadeniz Ereo**	**31.11**	**291**	⇑P	**P**	**19 20 47.2**	**+1.6**
MDUB	**Mudurnu**	**31.36**	**290**	P	**P**	**19 20 49.0**	**+1.0**
MDUB				IAmb	IAmb	19 20 53.3	
	comp=Z,2µm,1.1s						
PBA	**Port Blair**	**31.44**	**136**	*e*P	**P**	**19 20 51.3**	**+2.6**
PBA				IAmb	IAmb	19 20 55.9	
	comp=Z,1µm,1.1s						
PBA	**Port Blair**	**31.44**	**136**	⇑P	**P**	**19 20 50.7**	**+2.0**
PBA	**Port Blair**	**31.44**	**136**	P	**P**	**19 20 50.3**	**+1.6**
KLMR	**Klimovskoe**	**31.58**	**331**	*c i*P	**P**	**19 20 50.2**	**+0.7**
KLMR				*e*		19 21 58.7	
KLMR				*e*S	**S**	**19 25 44.8**	**+2.3**
KLMR				pmax	pmax		
	comp=Z,2µm,0.9s						
KLMR				pmax	pmax		
	comp=Z,2µm,0.8s						
KLMR	**Klimovskoe**	**31.58**	**331**	⇑*i*P	**P**	**19 20 50.4**	**+0.9**
KLMR				⇑*i*P	**P**	**19 20 50.4**	**+0.9**
KLMR				⇓*i*P	**P**	**19 20 50.4**	**+0.9**
KLMR				AMP		19 20 53.3	
	comp=Z,2µm,0.8s						
KLMR				*e*sP	**sP**	**19 21 50.6**	**-5.4**
KLMR				*e*PP	**PnPn**	**19 21 58.8**	**-3.4**
KLMR				*e*S	**S**	**19 25 44.8**	**+2.3**
KLMR				*e*S	**S**	**19 25 44.8**	**+2.3**
KLMR				*e*sS	**sS**	**19 26 54.3**	**-5.0**
KLMR				*e*sS	**sS**	**19 26 54.3**	**-5.0**
HHC	**Hu-ho-hao-te**	**31.65**	**70**	*e*P	**P**	**19 20 53.3**	**+2.8**
HHC				PP	**PnPn**	**19 22 04.3**	**+0.8**
HHC				S	**S**	**19 25 43.8**	**-0.5**
HHC				pmax	pmax		
	comp=Z,1µm,1.4s						
HHC				pmax	pmax		
	comp=Z,3µm,5.7s						
GYA	**Guiyang**	**31.72**	**98**	⇑*i*P	**P**	**19 20 52.5**	**+1.2**
GYA				sP	sP	19 22 00.3	+1.6
GYA				PcP	**PcP**	**19 23 39.8**	**+2.1**
GYA				S	**S**	**19 25 46.0**	**+0.3**
GYA				PcS	**PcS**	**19 27 23.8**	**+1.0**
GYA				SS	**SS**	**19 27 58.0**	**-13**
GYA				ScS	**ScS**	**19 30 58.5**	**-1.6**
GYA				pmax	pmax		
	comp=Z,1µm,0.8s						
GYA				pmax	pmax		
	comp=Z,6µm,3.5s						
BORA	**Eskisehir**	**32.00**	**289**	P	**P**	**19 20 53.9**	**+0.4**
SLVN	**Son La**	**32.20**	**109**	P	**P**	**19 20 56.7**	**+1.3**
PURM	**Purcari**	**32.20**	**301**	⇑P	**P**	**19 20 56.8**	**+1.8**
TSSL	**Sulina**	**32.25**	**299**	⇓P	**P**	**19 20 57.2**	**+1.7**
ISP	**Isparta**	**32.25**	**285**	P	**P**	**19 20 56.3**	**+0.5**
ISP				pmax	pmax		
	comp=Z,351nm,0.8s						
ISP	**Isparta**	**32.25**	**285**	P	**P**	**19 20 56.2**	**+0.5**
ENH	**Enshi**	**32.44**	**90**	P	**P**	**19 20 58.6**	**+1.2**
ENH				IAmb	IAmb	19 21 02.3	
	comp=Z,2µm,1.2s						
TIY	**Taiyuan**	**32.75**	**75**	⇑P	**P**	**19 21 02.3**	**+2.2**
TIY				sP	**sP**	**19 22 07.5**	**-0.4**
TIY				S	**S**	**19 26 03.5**	**+2.1**
TIY				pmax	pmax		
	comp=Z,2µm,0.9s						
TIY				LR	LR		
	comp=Z,5µm,9.8s						
TIY				LR	LR		
	comp=Z,4µm,9.0s						
TIY				LR	LR		
	comp=Z,6µm,12.6s						
JURR	**Jurilovca**	**32.85**	**298**	⇑P	**P**	**19 21 02.2**	**+1.5**
TLCR		**32.90**	**299**	⇑P	**P**	**19 21 02.1**	**+1.0**
ISK	**Istanbul-Kandi**	**32.92**	**291**	P	**P**	**19 21 03.3**	**+1.9**
ELL	**Elmali**	**32.94**	**283**	P	**P**	**19 21 02.6**	**+0.8**
ELL				pmax	pmax		
	comp=Z,9µm,0.7s						
ELL	**Elmali**	**32.94**	**283**	P	**P**	**19 21 02.6**	**+0.8**
MILM	**Milestii Mici**	**32.95**	**302**	⇓P	**P**	**19 21 02.5**	**+1.0**
MILM	**Milestii Mici**	**32.95**	**302**	*c i*P	**P**	**19 21 02.0**	**+0.4**
MILM				*e**PP	**pP**	**19 21 46.0**	**+2.1**
MILM				*e*		19 22 06.0	
MILM				*i* S	**S**	**19 26 03.0**	**-1.0**
MILM				*e**SS	**sS**	**19 27 17.0**	**-4.1**
MILM				pmax	pmax		
	comp=Z,4µm,11.8s						
MILM				pmax	pmax		
	comp=E,2µm,2.0s						
MILM				smax	smax		
	comp=N,7µm,11.5s						
MILM				smax	smax		
	comp=E,11µm,12.5s						
MILM				MLR	MLR		
	comp=N,4µm,14.0s						
MILM				MLR	MLR		
	comp=E,6µm,15.0s						
KIS	**Kishinev**	**32.95**	**302**	*e*P	**P**	**19 21 02.0**	**+0.4**
	comp=E,340nm,0.9s						
KIS				*e*pP	**pP**	**19 21 46.0**	**+2.1**
KIS	**Kishinev**	**32.95**	**302**	*e*PP	PP	19 22 06.0	-14
KIS				*e*S	**S**	**19 26 03.0**	**-1.0**
KIS				*e*sS	sS	19 27 20.0	-1.1
KIS				*e*LR	LR	19 37 59.0	
	comp=E,4µm,17.0s						
KIS	**Kishinev**	**32.95**	**302**	⇑P	**P**	**19 21 02.9**	**+1.4**
KIS	**Kishinev**	**32.95**	**302**	*e*P	**P**	**19 21 02.0**	**+0.4**
KIS				*e**PP	**pP**	**19 21 46.0**	**+2.1**
KIS				*e*		19 22 06.0	
KIS				*i* S	**S**	**19 26 03.0**	**-1.0**
KIS				*e**SS	**sS**	**19 27 20.0**	**-1.1**
KIS				pmax	pmax		
	comp=Z,340nm,0.9s						
KIS				pmax	pmax		
	comp=E,1µm,2.2s						
KIS				MLR	MLR		
	comp=Z,4µm,17.0s						
EFOR	**EFORIE**	**33.04**	**297**	⇓P	**P**	**19 21 04.1**	**+1.7**
AKASG	**Malin Array Be**	**33.08**	**309**	P	**P**	**19 21 02.9**	**+0.3**
	comp=Z,551nm,0.9s,baz=82,slow=6.8,SNR=668						
AKASG				pP	**pP**	**19 21 47.4**	**+2.3**
	comp=Z,113nm,0.7s,baz=89,slow=7.5,SNR=2.0						
AKASG				P3KPbc		19 52 14.9	
	comp=Z,1.9nm,0.6s,baz=272,slow=4.0,SNR=11						
AKASG	**Malin Array Be**	**33.08**	**309**	*i* P	**P**	**19 21 02.9**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,383nm,0.6s						
AKASG	**Malin Array Be**	**33.08**	**309**	P	**P**	**19 21 02.6**	**0.0**
AKASG				IAmb	IAmb	19 21 07.0	
	comp=Z,2µm,1.3s						
AKBB	**Malin Array Si**	**33.08**	**309**	*ce*P	**P**	**19 21 02.8**	**+0.2**
AKBB				pmax	pmax		
	comp=Z,2µm,1.5s						
AKBB	**Malin Array Si**	**33.08**	**309**	P	**P**	**19 21 02.8**	**+0.2**
AKBB				IAmb	IAmb	19 21 06.9	
	comp=Z,3µm,1.6s						
TPGR	**Topolog**	**33.18**	**298**	⇑P	**P**	**19 21 04.6**	**+0.9**
MFTR	**Murfatlar**	**33.19**	**297**	⇑P	**P**	**19 21 04.9**	**+1.3**
TIRR	**Tirgusor**	**33.19**	**297**	⇑P	**P**	**19 21 04.9**	**+1.2**
TIRR	**Tirgusor**	**33.19**	**297**	P	**P**	**19 21 03.8**	**+0.1**
TIRR				pmax	pmax		
	comp=Z,1µm,1.5s						
TIRR	**Tirgusor**	**33.19**	**297**	⇑P	**P**	**19 21 04.3**	**+0.6**
TIRR	**Tirgusor**	**33.19**	**297**	P	**P**	**19 21 03.8**	**+0.1**
TIRR				IAmb	IAmb	19 21 08.7	
	comp=Z,1µm,1.5s						
KALB	**Balgarevo**	**33.22**	**295**	⇓P	**P**	**19 21 06.1**	**+2.1**
AKAS	**Kas**	**33.29**	**282**	P	**P**	**19 21 04.1**	**-0.8**
AKAS				IAmb	IAmb	19 21 09.0	
	comp=Z,1µm,0.9s						
LEOM	**Leova**	**33.32**	**301**	⇑P	**P**	**19 21 05.9**	**+1.2**
GIUM	**Giurgiulesti**	**33.33**	**299**	⇑P	**P**	**19 21 06.9**	**+2.0**
KSL	**Kastellorizon**	**33.33**	**282**	P	**P**	**19 21 04.5**	**-0.5**
SORM	**Soroca**	**33.34**	**304**	⇑P	**P**	**19 21 05.5**	**+0.6**
CFR	**Carcaliu**	**33.38**	**299**	⇑P	**P**	**19 21 06.1**	**+0.8**
VLDR	**Vladesti**	**33.42**	**300**	⇑P	**P**	**19 21 07.0**	**+1.3**
TATR	**Tatarca**	**33.44**	**299**	⇑P	**P**	**19 21 07.6**	**+1.8**
TLBR	**Topalu**	**33.45**	**298**	⇑P	**P**	**19 21 07.3**	**+1.4**
HARR	**Harsova**	**33.53**	**298**	⇑P	**P**	**19 21 07.9**	**+1.3**
CIT	**Chita**	**33.57**	**49**	*e*P	**P**	**19 21 07.9**	**+0.9**
CIT				*e*		19 21 54.3	
CIT				*e*		19 22 33.1	
CIT				*e*		19 23 42.4	
CIT				*e*S	**S**	**19 26 13.6**	**0.0**
CIT				*e*		19 28 40.3	
CIT				pmax	pmax		
	comp=Z,5µm,1.5s						
KULA	**Kula-Manisa**	**33.58**	**287**	P	**P**	**19 21 08.6**	**+1.4**
VARL	**Varlezi**	**33.58**	**300**	⇑P	**P**	**19 21 08.9**	**+1.8**
SCHL	**Schela**	**33.59**	**299**	⇑P	**P**	**19 21 08.9**	**+1.8**
FETY	**Fethiye**	**33.61**	**283**	P	**P**	**19 21 06.9**	**-0.6**
SLCR	**Slobozia Conac**	**33.63**	**299**	⇓P	**P**	**19 21 09.1**	**+1.5**
IZVR	**Izvoarele**	**33.64**	**299**	⇑P	**P**	**19 21 09.2**	**+1.7**
ICOR	**Ion Corvin**	**33.64**	**297**	⇓P	**P**	**19 21 09.7**	**+2.2**
VASR	**Vaslui**	**33.64**	**301**	⇑P	**P**	**19 21 08.5**	**+0.9**
BIR	**Birlad**	**33.74**	**301**	⇑P	**P**	**19 21 10.6**	**+2.2**
IAS	**Iasi**	**33.81**	**302**	⇑P	**P**	**19 21 10.3**	**+1.2**
GHRR		**33.89**	**300**	⇓P	**P**	**19 21 12.0**	**+2.3**
AMRR	**Amara**	**33.95**	**298**	⇓P	**P**	**19 21 12.5**	**+2.2**
BALB	**Balikesir**	**33.99**	**289**	P	**P**	**19 21 11.0**	**+0.3**
BALB				IAmb	IAmb	19 21 15.6	
	comp=Z,704nm,1.0s						
ODBI	**Odobesti**	**34.13**	**300**	⇑P	**P**	**19 21 14.3**	**+2.5**
YER	**Yerkesik**	**34.13**	**284**	P	**P**	**19 21 12.1**	**+0.1**
NRIK	**Noril'sk**	**34.14**	**10**	P	**P**	**19 21 13.1**	**+1.5**
	comp=Z,1µm,0.6s,baz=201,slow=6.3,SNR=314						
NRIK				pP	**pP**	**19 21 58.0**	**+3.1**
	comp=Z,226nm,0.8s,baz=195,slow=11,SNR=1.2						
NRIK				S	**S**	**19 26 22.8**	**+1.0**
	comp=Z,92nm,0.9s,baz=345,slow=20,SNR=2.4						
NRIK				P3KPbc		19 52 12.2	
	comp=Z,4.8nm,0.9s,baz=68,slow=2.1,SNR=5.6						
NRIK	**Noril'sk**	**34.14**	**10**	*ce*P	**P**	**19 21 13.0**	**+1.5**
NRIK				pmax	pmax		
	comp=Z,2µm,0.9s						
NRIK	**Noril'sk**	**34.14**	**10**	P	**P**	**19 21 12.9**	**+1.4**
GRER		**34.20**	**299**	⇑P	**P**	**19 21 15.5**	**+3.1**
PGOR	**Pogoanele**	**34.20**	**298**	⇑P	**P**	**19 21 14.9**	**+2.6**
LEHL	**Lehliu**	**34.33**	**297**	⇓P	**P**	**19 21 15.4**	**+1.9**
VRI	**Vrincioaia**	**34.37**	**300**	⇑P	**P**	**19 21 15.5**	**+1.7**
BISRR	**Bisoca**	**34.38**	**299**	⇑P	**P**	**19 21 16.3**	**+2.3**
PLOR	**Plostina**	**34.42**	**300**	⇑P	**P**	**19 21 16.2**	**+1.9**
TESR	**Tescani**	**34.42**	**301**	⇑P	**P**	**19 21 15.9**	**+1.6**
ARG	**Arkhangelos**	**34.46**	**283**	P	**P**	**19 21 15.5**	**+0.8**
ARG	**Arkhangelos**	**34.46**	**283**	⇑P	**P**	**19 21 15.0**	**+0.3**
ISR	**Istrita**	**34.51**	**299**	⇑P	**P**	**19 21 17.8**	**+2.7**
GIRR	**Girov**	**34.53**	**302**	⇑P	**P**	**19 21 16.5**	**+1.3**
EDRB	**Edirne**	**34.57**	**293**	P	**P**	**19 21 16.3**	**+0.7**
RAZG	**Razgrad**	**34.60**	**296**	⇑P	**P**	**19 21 17.6**	**+1.7**
MNK	**Minsk**	**34.62**	**315**	*i* P	**P**	**19 21 14.3**	**-1.6**
MNK				*i* *PP	**pP**	**19 21 53.9**	**-4.7**
MNK				*i*		19 22 38.0	
MNK				*i*		19 23 43.7	
MNK				*i* S	**S**	**19 26 30.6**	**+1.0**
MNK				*i* *SS	**sS**	**19 27 41.7**	**-5.3**
MNK				pmax	pmax		
	comp=Z,2µm,1.2s						
MNK				pmax	pmax		
	comp=N,340nm,1.2s						
MNK				pmax	pmax		
	comp=E,215nm,1.2s						
MNK				MLR	MLR		
	comp=Z,7µm,15.0s						
MNK				MLR	MLR		
	comp=N,13µm,17.0s						
MNK				MLR	MLR		
	comp=E,1µm,17.0s						
MNK	**Minsk**	**34.62**	**315**	*i* P	**P**	**19 21 14.4**	**-1.5**
	comp=E,215nm,1.2s,baz=103						
MNK				*i* P	**P**	**19 21 14.4**	**-1.5**
	comp=N,340nm,1.2s						
MNK				*i* P	**P**	**19 21 14.4**	**-1.5**
	comp=Z,2µm,1.2s						
MNK				*i* pP	**pP**	**19 21 54.0**	**-4.6**
MNK				*i* PP	**PP**	**19 22 38.0**	**-0.7**
MNK				*i* PcP	**PcP**	**19 23 43.8**	**-1.4**
MNK				*i* S	**S**	**19 26 30.6**	**+1.0**
MNK				*i* sS	**sS**	**19 27 41.8**	**-5.2**
MNK				*i* SS	**SS**	**19 29 07.8**	**+0.4**
MNK				*i* LRM	MLR	19 37 00.8	
	comp=Z,7µm,14.8s						
MNK				*i* LRM	MLR	19 37 06.8	
	comp=N,13µm,17.4s						
MNK				*i* LRM	MLR	19 37 23.0	
	comp=E,1µm,16.8s						
SULR		**34.72**	**298**	⇓P	**P**	**19 21 19.5**	**+2.7**
PRAR	**RASCA**	**34.73**	**303**	⇑P	**P**	**19 21 18.1**	**+1.2**
COVR	**Voineasa-Covas**	**34.73**	**300**	⇑P	**P**	**19 21 19.2**	**+2.2**
DAT	**Datca**	**34.77**	**284**	P	**P**	**19 21 17.7**	**+0.1**
BLCB	**Balcova**	**34.85**	**287**	P	**P**	**19 21 18.9**	**+0.8**
PLAR	**PLOIESTI**	**34.88**	**298**	⇓P	**P**	**19 21 20.2**	**+2.0**
BUC1	**Bucharest**	**34.90**	**297**	⇑P	**P**	**19 21 20.9**	**+2.5**
BODT	**Bodrum**	**34.91**	**284**	P	**P**	**19 21 19.1**	**+0.5**
MLR	**Muntele Rosu**	**34.92**	**299**	⇑P	**P**	**19 21 21.2**	**+2.5**
MLR	**Muntele Rosu**	**34.92**	**299**	P3KPbc		19 52 07.9	
	comp=E,17nm,0.9s,baz=153,slow=0.9,SNR=14						
MLR	**Muntele Rosu**	**34.92**	**299**	P	**P**	**19 21 19.9**	**+1.2**
MLR				pmax	pmax		
	comp=Z,3µm,1.2s						
MLR	**Muntele Rosu**	**34.92**	**299**	P	**P**	**19 21 19.9**	**+1.2**
SGRR	**Singureni**	**34.95**	**297**	⇑P	**P**	**19 21 20.8**	**+2.0**
OZUR		**35.02**	**300**	⇑P	**P**	**19 21 20.9**	**+1.4**
PUL	**Pulkovo**	**35.02**	**325**	*e*P	**P**	**19 21 19.6**	**+0.4**
PUL	**Pulkovo**	**35.02**	**325**	*c i*P	**P**	**19 21 20.7**	**+1.5**
PUL				pmax	pmax		
	comp=Z,2µm,0.9s						
SMG	**Samos**	**35.14**	**286**	P	**P**	**19 21 22.0**	**+1.4**
ENEZ	**Enez**	**35.15**	**291**	P	**P**	**19 21 22.6**	**+2.1**
EZN	**Ezine**	**35.15**	**289**	P	**P**	**19 21 22.2**	**+1.6**
JOSR	**Joseni**	**35.20**	**301**	⇓P	**P**	**19 21 22.9**	**+1.8**
ALN	**Alexandroupoli**	**35.21**	**291**	P	**P**	**19 21 22.1**	**+1.1**
ALN	**Alexandroupoli**	**35.21**	**291**	P	**P**	**19 21 21.0**	**-0.1**
ALN				pmax	pmax		
	comp=Z,569nm,1.2s						
ALN	**Alexandroupoli**	**35.21**	**291**	⇑P	**P**	**19 21 21.9**	**+0.9**
ALN	**Alexandroupoli**	**35.21**	**291**	P	**P**	**19 21 21.0**	**-0.1**
BJT	**Baijiatuau**	**35.24**	**70**	P	**P**	**19 21 22.3**	**+1.0**
BJT				pmax	pmax		
	comp=Z,3µm,1.6s						
BJT	**Baijiatuau**	**35.24**	**70**	P	**P**	**19 21 22.3**	**+1.0**
BJT				IAmb	IAmb	19 21 26.3	
	comp=Z,3µm,1.6s						
BJI	**Beijing**	**35.24**	**70**	P	**P**	**19 21 22.5**	**+1.2**
BJI				sP	**sP**	**19 22 29.5**	**0.0**
BJI				PP	**PP**	**19 22 44.8**	**-0.9**
BJI				PcP	**PcP**	**19 23 49.8**	**+2.5**
BJI				S	**S**	**19 26 41.3**	**+2.0**
BJI				ScP	**ScP**	**19 27 15.0**	**+1.8**
BJI				PcS	**PcS**	**19 27 35.5**	**+1.1**
BJI				sS	**sS**	**19 27 54.8**	**-2.1**
BJI				ScS	**ScS**	**19 31 19.5**	**+1.6**
BJI				pmax	pmax		
	comp=Z,6µm,5.6s						
BJI				LR	LR		
	comp=Z,6µm,14.0s						
BJI				LR	LR		
	comp=Z,5µm,13.4s						
PRK	**Paraskevi**	**35.29**	**288**	P	**P**	**19 21 23.9**	**+2.1**
BOD	**Bodaibo**	**35.29**	**39**	*e*P	**P**	**19 21 22.3**	**+0.8**
BOD				pmax	pmax		
	comp=Z,2µm,1.1s						
DOPR	**Dopca**	**35.30**	**300**	⇑P	**P**	**19 21 23.4**	**+1.5**
NACGM	**Naroch**	**35.34**	**316**	*i* P	**P**	**19 21 23.4**	**+1.5**
GADA	**Gvkgeada**	**35.42**	**290**	P	**P**	**19 21 24.9**	**+2.0**
BURAR	**Bucovina Array**	**35.42**	**303**	⇓P	**P**	**19 21 24.1**	**+1.2**
BURAR	**Bucovina Array**	**35.42**	**303**	P	**P**	**19 21 23.4**	**+0.4**
BUR08	**Bucovina Ar. S**	**35.43**	**303**	P	**P**	**19 21 23.6**	**+0.5**
VALR	**Valaam**	**35.43**	**327**	*c i*P	**P**	**19 21 23.3**	**+0.6**
VALR				pmax	pmax		
	comp=Z,2µm,1.0s						
IDID	**Didziasalis**	**35.45**	**316**	*e*P	**P**	**19 21 23.6**	**+0.6**
COPA	**Copaceanca**	**35.49**	**297**	⇑P	**P**	**19 21 25.9**	**+2.5**
MTUR	**Matau**	**35.55**	**299**	⇑P	**P**	**19 21 26.6**	**+2.5**
VOIR		**35.55**	**299**	⇑P	**P**	**19 21 25.2**	**+1.2**
RDO	**Rodhopi**	**35.55**	**292**	P	**P**	**19 21 25.4**	**+1.4**
RDO	**Rodhopi**	**35.55**	**292**	⇑P	**P**	**19 21 24.8**	**+0.8**
ATD	**Arta Tunnel**	**35.61**	**233**	P	**P**	**19 21 26.9**	**+2.1**
	comp=Z,531nm,1.2s,baz=15,slow=5.6,SNR=36						
ATD				pP	**pP**	**19 22 12.1**	**+3.5**
	comp=Z,138nm,1.0s,baz=10,slow=6.7,SNR=1.3						
ATD	**Arta Tunnel**	**35.61**	**233**	P	**P**	**19 21 26.6**	**+1.8**
ATD				IAmb	IAmb	19 21 35.5	
	comp=Z,929nm,1.3s						
ATD	**Arta Tunnel**	**35.61**	**233**	⇑P	**P**	**19 21 26.4**	**+1.6**
ATD				pP	**pP**	**19 22 13.0**	**+4.4**
ATD				sP	**sP**	**19 22 33.2**	**+0.5**
ATD				S	**S**	**19 26 47.6**	**+2.1**
SIGR	**SIGRI**	**35.61**	**288**	P	**P**	**19 21 25.2**	**+0.7**
STFAR	**Stefanesti-Arg**	**35.64**	**298**	⇓P	**P**	**19 21 26.7**	**+2.0**
HUMR	**Humele**	**35.64**	**298**	⇓P	**P**	**19 21 26.5**	**+1.8**
SMTH	**Samothraki Isl**	**35.65**	**291**	P	**P**	**19 21 25.7**	**+0.8**
IIGN	**Ignalina**	**35.75**	**316**	*e*P	**P**	**19 21 26.7**	**+1.2**
KAAM	**Kaadhehdhoo**	**35.83**	**177**	⇑P	**P**	**19 21 28.0**	**+1.4**
KAAM	**Kaadhehdhoo**	**35.83**	**177**	P	**P**	**19 21 26.6**	**0.0**
KAAM				IAmb	IAmb	19 22 39.4	
	comp=Z,2µm,1.4s						
ARR	**Arges**	**35.84**	**299**	⇓P	**P**	**19 21 28.5**	**+2.0**
ISAL	**Salakas**	**35.85**	**317**	*e*P	**P**	**19 21 27.9**	**+1.6**
TGMR	**Targu Mures**	**35.89**	**301**	⇑P	**P**	**19 21 29.8**	**+3.0**
MDB	**Medias**	**36.00**	**300**	⇑P	**P**	**19 21 30.3**	**+2.6**
ARCR	**ARCALIA**	**36.00**	**302**	⇑P	**P**	**19 21 30.3**	**+2.5**
LIA	**Limnos Island**	**36.01**	**290**	P	**P**	**19 21 28.9**	**+1.0**
VLAD	**Vladila**	**36.09**	**297**	⇑P	**P**	**19 21 29.7**	**+1.2**
ZKR	**Zakros**	**36.24**	**282**	P	**P**	**19 21 30.9**	**+1.0**
THAS	**Thassos island**	**36.24**	**291**	P	**P**	**19 21 30.6**	**+0.7**
WHN	**Wuhan**	**36.26**	**87**	⇑P	**P**	**19 21 32.0**	**+1.9**
WHN				sP	**sP**	**19 22 39.0**	**+0.8**
WHN				PcP	**PcP**	**19 23 53.0**	**+2.5**
WHN				S	**S**	**19 26 58.0**	**+3.0**
WHN				ScS	**ScS**	**19 31 23.0**	**-0.8**
WHN				pmax	pmax		
	comp=Z,4µm,0.9s						
WHN				LR	LR		
	comp=Z,12µm,7.5s						
WHN				LR	LR		
	comp=Z,5µm,9.6s						
WHN				LR	LR		
	comp=Z,11µm,15.6s						
LVV	**L'vov**	**36.29**	**307**	*e*P	**P**	**19 21 31.8**	**+1.6**
LVV				*e**PP	**pP**	**19 22 16.4**	**+3.2**
LVV				*e*S	**S**	**19 27 00.8**	**+5.6**
LVV				pmax	pmax		
	comp=Z,200nm,1.1s						

Sta	Name	Dist	Azi	Phase	ISC	Time	Res
LVV				MLR	MLR		
	comp=Z,6µm,17.0s						
APE	Apeiranthos	36.30	285	⇑P	P	19 21 31.2	+0.7
APE	Apeiranthos	36.30	285	P	P	19 21 31.2	+0.7
APE	Apeiranthos	36.30	285	⇑P	P	19 21 30.9	+0.5
VSU	Vasula	36.30	322	*e*P	P	19 21 29.9	-0.2
VSU	Vasula	36.30	322	*c i*P	P	19 21 30.6	+0.5
VSU				pmax	pmax		
	comp=Z,2µm,0.8s						
VSU	Vasula	36.30	322	⇑P	P	19 21 30.6	+0.5
STIA	Sitia Lasithi	36.32	282	P	P	19 21 31.6	+1.0
LOT	Lotru	36.45	299	⇑P	P	19 21 33.0	+1.3
THR8	Santorini-Mono	36.49	284	P	P	19 21 32.5	+0.5
SANT	Santorini	36.52	284	⇑P	P	19 21 32.7	+0.4
SANT	Santorini	36.52	284	P	P	19 21 32.5	+0.2
SANT	Santorini	36.52	284	⇑P	P	19 21 31.8	-0.5
SANT	Santorini	36.52	284	P	P	19 21 31.5	-0.8
SANT				IAmb	IAmb	19 21 35.9	
	comp=Z,834nm,1.0s						
CJR	Cluj-Napoca	36.52	301	⇑P	P	19 21 34.5	+2.3
THT2	Imerovigli	36.53	284	P	P	19 21 36.6	+4.2
STAX	Taxiarchis Har	36.55	284	P	P	19 21 33.4	+0.9
THR3	Thira Island,	36.55	284	P	P	19 21 32.8	+0.3
CBBR	Cluj-Babes-Bol	36.56	302	⇓P	P	19 21 34.7	+2.3
THR6	Thira Island,	36.57	284	P	P	19 21 33.4	+0.7
BMR	Baia Mare	36.58	303	⇑P	P	19 21 34.8	+2.2
THR5	Thira Island,	36.59	284	P	P	19 21 33.3	+0.4
THR9	Santorini-Faro	36.60	284	P	P	19 21 33.4	+0.5
TEND	Ethiopian Broa	36.62	236	*e*P	P	19 21 34.8	+1.4
FRMA	Ierapetra Chan	36.65	282	P	P	19 21 33.9	+0.5
NPS	Neapolis	36.68	282	P	P	19 21 34.0	+0.3
TIA	Tai'an	36.74	76	P	P	19 21 36.0	+1.8
TIA				S	S	19 27 04.5	+2.1
TIA				ScP	ScP	19 27 19.5	+0.6
TIA				ScS	ScS	19 31 26.0	-0.4
TIA				LR	LR		
	comp=Z,5µm,13.5s						
TIA				LR	LR		
	comp=Z,6µm,12.8s						
TIA				LR	LR		
	comp=Z,9µm,10.7s						
NVR	Nevrokopi	36.78	292	P	P	19 21 35.4	+1.0
BAIL	Bailesti	36.85	297	⇑P	P	19 21 36.7	+1.8
SRE	Strehaia	36.90	298	⇑P	P	19 21 37.0	+1.6
KARY	Karystos	36.93	287	P	P	19 21 37.8	+2.1
MESR	Meseseni	36.96	302	⇑P	P	19 21 38.0	+2.2
DEV	Deva	37.03	300	⇓P	P	19 21 38.7	+2.3
PABE	Paberze	37.04	316	*e*P	P	19 21 37.0	+0.7
PABE	Paberze	37.04	316	P	P	19 21 37.2	+0.8
KYMI	Kymi, Euboea I	37.07	288	P	P	19 21 37.2	+0.3
HRKL	Herakleio	37.07	282	P	P	19 21 38.9	+2.0
VTS	Vitosha	37.07	295	⇑P	P	19 21 38.4	+1.3
VTS	Vitosha	37.07	295	P	P	19 21 37.9	+0.9
VTS				pmax	pmax		
	comp=Z,432nm,1.4s						
VTS	Vitosha	37.07	295	⇑P	P	19 21 38.0	+0.9
VTS	Vitosha	37.07	295	P	P	19 21 37.9	+0.9
UBPT	Khong Chiam	37.09	116	⇑P	P	19 21 37.2	-0.1
UBPT	Khong Chiam	37.09	116	P	P	19 21 37.2	-0.1
IACM	Heraklion	37.09	282	P	P	19 21 40.5	+3.4
KSTL	Kastelli Herak	37.09	282	P	P	19 21 37.2	+0.1
PUNG	Punghina	37.12	297	⇑P	P	19 21 39.2	+1.9
DRGR		37.13	302	⇓P	P	19 21 39.1	+1.6
DRGR		37.13	302	P	P	19 21 39.0	+1.6
KWP	Kalwaria Pacla	37.14	306	*e*P	P	19 21 38.7	+1.3
KWP	Kalwaria Pacla	37.14	306	P	P	19 21 37.9	+0.5
KWP	Kalwaria Pacla	37.14	306	⇑P	P	19 21 38.4	+1.1
KWP	Kalwaria Pacla	37.14	306	P	P	19 21 37.9	+0.5
GZR	Gura Zlata	37.15	299	⇑P	P	19 21 38.5	+1.0
HIA	Hailar	37.20	54	P	P	19 21 39.0	+1.1
HIA				pmax	pmax		
	comp=Z,1µm,1.2s						
HIA	Hailar	37.20	54	P	P	19 21 39.0	+1.1
HIA				IAmb	IAmb	19 21 42.9	
	comp=Z,1µm,1.2s						
TRPA	Tarpa	37.23	304	⇑P	P	19 21 39.5	+1.4
TRPA	Tarpa	37.23	304	*e*P	P	19 21 39.4	+1.4
IDI	Anoyia	37.24	282	P	P	19 21 38.1	-0.4
	comp=Z,244nm,0.5s,baz=47,slow=12,SNR=178						
IDI				pP	pP	19 22 24.4	+2.7
	comp=Z,185nm,0.8s,baz=40,slow=15,SNR=1.5						
IDI				S	S	19 27 07.7	-2.3
	comp=Z,84nm,1.2s,baz=154,slow=18,SNR=1.8						
IDI	Anoyia	37.24	282	P	P	19 21 38.3	-0.2
PLG	Polygyros	37.24	291	P	P	19 21 39.5	+1.1
SUW	Suwalki	37.24	314	*e*P	P	19 21 38.2	+0.2
SUW	Suwalki	37.24	314	*e*P	P	19 21 37.8	-0.3
SUW	Suwalki	37.24	314	P	P	19 21 37.9	-0.2
SUW				pmax	pmax		
	comp=Z,1µm,0.9s						
SUW	Suwalki	37.24	314	⇑P	P	19 21 38.3	+0.2
SUW	Suwalki	37.24	314	P	P	19 21 37.9	-0.2
SUW				IAmb	IAmb	19 21 42.4	
	comp=Z,1µm,0.9s						
MHLO	Agia Marina, M	37.27	285	P	P	19 21 38.3	-0.2
CEI	Carei	37.28	303	⇑P	P	19 21 40.9	+2.3
DION	Dionisos Attik	37.31	287	P	P	19 21 40.3	+1.4
PTL	Penteli	37.37	287	P	P	19 21 40.7	+1.2
DJES	Djerdap	37.38	298	*e*P	P	19 21 42.6	+3.1
UZH	Uzhgorod	37.39	305	⇑*i*P	P	19 21 41.0	+1.6
UZH				*e*		19 22 23.4	
UZH				*i*		19 22 47.0	
UZH				*e*		19 23 13.7	
UZH				*e*S	S	19 27 13.8	+2.0
UZH				*i*		19 28 29.4	
UZH				MLR	MLR		
	comp=Z,700nm,15.0s						
TMBK	Timbaki Herakl	37.40	282	P	P	19 21 43.8	+4.1
KOLS	Kolonicke sedl	37.41	305	*e*P	P	19 21 40.8	+1.2
KOLS				*e*		19 22 44.6	
KOLS				*e*S	S	19 27 15.5	+3.4
KOLS				pmax	pmax		
	comp=Z,803nm,1.1s						
KOLS	Kolonicke sedl	37.41	305	*e*P	P	19 21 40.8	+1.2
KOLS				*e*		19 22 44.6	
KOLS				*e*S	S	19 27 15.5	+3.4
HERR	Herculane	37.44	298	⇓P	P	19 21 40.1	+0.2
ATHU	Athens Univers	37.45	287	P	P	19 21 41.1	+1.0
HORT	Hortiatis	37.46	291	P	P	19 21 40.7	+0.4
VLY	Voula,Athens	37.47	287	P	P	19 21 41.5	+1.3
ATH	Athens Observa	37.50	287	P	P	19 21 41.6	+1.1
PRNS	Prines Rethymn	37.53	283	P	P	19 21 42.7	+2.0
LVZ	Lovozero	37.54	338	*c i*P	P	19 21 41.0	+0.5
LVZ				pmax	pmax		
	comp=Z,3µm,1.3s						
LVZ	Lovozero	37.54	338	⇑P	P	19 21 41.2	+0.7
LVZ	Lovozero	37.54	338	P	P	19 21 40.6	+0.1
LVZ				IAmb	IAmb	19 21 45.0	
	comp=Z,1µm,0.8s						
FIA1	FINESS Array S	37.59	326	P	P	19 21 41.7	+0.8
FIA1				IAmb	IAmb	19 21 45.1	
	comp=Z,896nm,0.7s						
FINES	FINESS Array B	37.59	326	P	P	19 21 41.8	+0.8
	comp=Z,715nm,0.6s,baz=118,slow=8.4,SNR=884						
FINES				P3KPbc		19 51 54.8	
	comp=Z,3.7nm,0.8s,baz=217,slow=4.8,SNR=5.4						
FINES	FINESS Array B	37.59	326	P	P	19 21 41.4	+0.5
BOSS	Bosilegrad	37.64	295	*e*P	P	19 21 43.1	+1.4
ZAGS	Zajecar	37.67	297	*e*P	P	19 21 42.5	+0.7
LTVH	Ltavrtes, Hu	37.67	303	⇑P	P	19 21 44.0	+2.2
LTVH	Ltavrtes, Hu	37.67	303	*e*P	P	19 21 43.7	+1.9
APA	Apatity	37.72	337	⇓*i*P	P	19 21 41.6	-0.3
APA				*i* *PP	sP	19 22 49.0	-0.8
APA				*i*		19 23 58.0	
APA				*i* S	S	19 27 13.0	-3.3
APA				*i* SS	SS	19 30 09.0	-1.8
APA				pmax	pmax		
	comp=Z,485nm,0.9s						
APA				MLR	MLR		
	comp=Z,42µm,12.0s						
VAY	Valandovo	37.74	293	*i* Pn	P	19 21 43.5	+1.1
VAM	Vamos	37.75	283	P	P	19 21 43.1	+0.4
BORR	Bors	37.76	302	⇓P	P	19 21 45.1	+2.6
VILL	Villia	37.77	287	P	P	19 21 43.5	+0.7
MTSE	Matsula	37.84	321	*e*P	P	19 21 43.3	+0.3
ATAL	Atalanti	37.88	288	P	P	19 21 44.5	+0.8
SIRR	Siria	37.88	301	⇓P	P	19 21 45.8	+2.2
LKR	Lokris	37.91	288	P	P	19 21 44.6	+0.7
IMMV	Iera Moni Meta	37.91	283	P	P	19 21 44.6	+0.6
SRIT	Nakonsritamara	37.92	130	P	P	19 21 45.1	+0.9
GRG	Griva	37.93	292	P	P	19 21 45.7	+1.6
PRVS	Prvonek	37.94	295	*e*P	P	19 21 45.6	+1.4
MDVR	Moldovita	37.95	298	⇑P	P	19 21 45.4	+1.2
BZS	Buzias	37.95	300	⇓P	P	19 21 45.7	+1.5
STIP	Stip	37.97	293	*i* Pn	P	19 21 43.2	-1.2
GVDS	Gavdos	37.99	282	P	P	19 21 44.8	+0.1
GVD	Gavdhos	38.00	282	P	P	19 21 44.9	+0.2
SILA	Clinic, Silare	38.00	240	⇑P	P	19 21 47.1	+2.0
SILA				pP	pP	19 22 32.1	+2.8
KUBS	Kucevo	38.01	298	*e*P	P	19 21 44.8	+0.1
DESE	Dese	38.03	236	*e*P	P	19 21 47.8	+2.3
EPID	Epidavros	38.04	287	P	P	19 21 45.4	+0.3
RODP	Rodopos	38.06	283	P	P	19 21 45.7	+0.5
LTK	Loutraki	38.07	287	P	P	19 21 45.1	-0.2
BOVS	Bovan	38.07	296	⇓P	P	19 21 45.8	+0.7
BOVS	Bovan	38.07	296	*e*P	P	19 21 45.8	+0.7
KRND	KRANIDI	38.07	286	P	P	19 21 44.2	-1.1
QIZ	Qiongzhong	38.08	107	P	P	19 21 46.5	+1.0
QIZ				sP	sP	19 22 52.0	-2.1
QIZ				PcP	PcP	19 23 58.5	+2.3
QIZ				S	S	19 27 14.0	-8.8
QIZ				sS	sS	19 28 43.3	+2.3
QIZ				pmax	pmax		
	comp=Z,400nm,1.9s						
QIZ				pmax	pmax		
	comp=Z,4µm,5.8s						
QIZ	Qiongzhong	38.08	107	P	P	19 21 46.1	+0.6
QIZ				IAmb	IAmb	19 21 49.9	
	comp=Z,1µm,1.5s						
QIZ	Qiongzhong	38.08	107	P	P	19 21 47.4	+1.9
BARS	Barje	38.09	295	*e*P	P	19 21 42.5	-2.9
BARS	Barje	38.09	295	*e*P	P	19 21 46.6	+1.2
STHS	Stebnicka Huta	38.09	306	*e*P	P	19 21 46.0	+0.7
STHS	Stebnicka Huta	38.09	306	*e*P	P	19 21 46.0	+0.7
KNDR	Palaiochora Ch	38.20	283	P	P	19 21 47.5	+1.1
TIM	Timisoara	38.22	300	⇑P	P	19 21 48.9	+2.5
KTI	Kastanea	38.24	291	P	P	19 21 47.9	+1.1
PBUR	Paburge	38.27	317	*e*P	P	19 21 46.9	+0.3
THAL	Thalero	38.30	287	P	P	19 21 47.3	+0.1
BANR	Banloc	38.30	299	⇓P	P	19 21 49.5	+2.4
ANKY	Antikythira Is	38.33	284	P	P	19 21 47.5	0.0
SVIS	Svilajnac	38.35	298	*e*P	P	19 21 49.7	+2.2
SLIT	Slitere, Latvi	38.37	319	*e*P	P	19 21 47.7	+0.2
SLIT	Slitere, Latvi	38.37	319	⇑P	P	19 21 47.0	-0.5
VLI	Veliai	38.40	285	P	P	19 21 47.1	-0.9
KTHA	Kythira Island	38.42	284	P	P	19 21 48.3	+0.1
KTHR	Kythira	38.46	284	P	P	19 21 48.9	+0.3
BEL	Belsk	38.46	310	*e*P	P	19 21 49.1	+0.7
BEL	Belsk	38.46	310	⇑P	P	19 21 48.9	+0.6
THL	Klokotos Trika	38.47	290	P	P	19 21 48.8	+0.2
SKO	Skopje	38.48	294	*i* Pn	P	19 21 49.5	+0.8
MAKR	Makrakomi, Fth	38.49	289	P	P	19 21 49.7	+0.9
GOND	University, Go	38.49	241	⇑P	P	19 21 51.1	+1.8
GOND				pP	pP	19 22 39.0	+5.3
KZN	Kozani	38.51	291	P	P	19 21 49.9	+0.9
AMBH	Ambrzfalva	38.52	301	⇓P	P	19 21 51.8	+2.9
AMBH	Ambrzfalva	38.52	301	*e*P	P	19 21 51.0	+2.1
SELS	Selova	38.54	296	*e*P	P	19 21 49.5	+0.3
KECS	Kecovo	38.59	304	*e*P	P	19 21 51.2	+1.7
KECS				pmax	pmax		
	comp=Z,127nm,0.9s						
KECS	Kecovo	38.59	304	*e*P	P	19 21 51.2	+1.7
ALIK	Aliki, Aigiali	38.67	288	P	P	19 21 52.6	+2.4
TRIZ	Trizonia	38.68	288	P	P	19 21 50.5	+0.2
SERG	Sergoula	38.68	288	P	P	19 21 50.5	+0.1
KLV	Kalavryta, Ach	38.69	288	P	P	19 21 50.7	+0.2
NIE	Niedzica	38.71	306	*e*P	P	19 21 53.0	+2.5
FNA	Florina	38.72	292	P	P	19 21 51.5	+0.8
FNA	Florina	38.72	292	P	P	19 21 50.5	-0.2
FNA				pmax	pmax		
	comp=Z,370nm,1.0s						
FNA	Florina	38.72	292	⇑P	P	19 21 50.8	+0.1
FNA	Florina	38.72	292	P	P	19 21 50.5	-0.2
ANX	Ano Chora	38.74	288	P	P	19 21 51.2	+0.2
GRUS	Gruza	38.75	297	*e*P	P	19 21 51.7	+0.8
EVR	Evrytania	38.76	289	P	P	19 21 51.9	+0.8
LAKA	Lakka	38.78	288	P	P	19 21 51.2	0.0
BSZH	Besenyszg	38.78	303	⇓P	P	19 21 53.9	+2.8
BSZH	Besenyszg	38.78	303	*e*P	P	19 21 53.2	+2.1
EFP	Efpalio	38.79	288	P	P	19 21 51.5	+0.2
BEO	Beograd	38.83	299	*e*P	P	19 21 51.2	-0.2
KPRO	Kipourio	38.89	291	P	P	19 21 52.6	+0.5
TRUS	Trudelj	38.93	298	*e*P	P	19 21 53.3	+0.9
PSZ	Piszkesteto	39.01	304	⇑P	P	19 21 54.5	+1.5
PSZ	Piszkesteto	39.01	304	*e*P	P	19 21 53.9	+0.9
PSZ	Piszkesteto	39.01	304	P	P	19 21 53.6	+0.6
PSZ				pmax	pmax		
	comp=Z,491nm,1.0s						
PSZ	Piszkesteto	39.01	304	⇑P	P	19 21 54.2	+1.2
PSZ	Piszkesteto	39.01	304	P	P	19 21 53.6	+0.6
PENT	Pentalofos	39.01	291	P	P	19 21 53.9	+0.7
NEST	Nestorio	39.03	292	P	P	19 21 54.2	+0.8
OJC	Ojcow	39.03	307	*e*P	P	19 21 54.0	+0.8
OJC	Ojcow	39.03	307	P	P	19 21 53.5	+0.4
OJC				pmax	pmax		
	comp=Z,1µm,1.1s						
OJC	Ojcow	39.03	307	⇑P	P	19 21 53.8	+0.6
OJC	Ojcow	39.03	307	P	P	19 21 53.5	+0.4
OJC				IAmb	IAmb	19 21 57.9	
	comp=Z,1µm,1.1s						
KLNR	Kaliningrad	39.04	314	*c i*P	P	19 21 53.9	+0.8
KLNR				pmax	pmax		
	comp=Z,4µm,1.1s						
DRO	Drossia	39.05	288	P	P	19 21 53.9	+0.5
LHMI	Lhok Sumawe	39.06	137	⇑P	P	19 21 53.9	+0.2
LHMI	Lhok Sumawe	39.06	137	P	P	19 21 54.7	+1.1
	comp=Z,29µmcomp=Z,20µmcomp=Z,1µm,1.5s						
LHMI	Lhok Sumawe	39.06	137	P	P	19 21 53.5	-0.2
LHMI				IAmb	IAmb	19 22 00.4	
	comp=Z,772nm,0.7s						
LHMI	Lhok Sumawe	39.06	137	P	P	19 21 54.8	+1.1
ITM	Ithomi	39.07	286	P	P	19 21 52.9	-0.7
ITM	Ithomi	39.07	286	⇑P	P	19 21 52.4	-1.2
ITM	Ithomi	39.07	286	P	P	19 21 52.1	-1.5
ANKE	Ethiopia-Afar	39.08	235	*e*P	P	19 21 56.8	+2.5
OHR	Ohrid	39.09	293	*i* Pn	P	19 21 53.6	-0.2
IZAB	Izabela	39.11	305	*e*P	P	19 21 55.5	+1.7
MERTO	Secondary Scho	39.13	238	⇑P	P	19 21 56.9	+2.2
MERTO				pP	pP	19 22 49.1	+10
KBN	Korca	39.19	292	P	P	19 21 53.9	-0.7
KBN				pmax	pmax		
	comp=Z,1µm,1.6s						
KBN	Korca	39.19	292	P	P	19 21 53.9	-0.7
KBN				IAmb	IAmb	19 23 18.3	
	comp=Z,1µm,1.6s						
IVAS	Ivanjica	39.19	297	*e*P	P	19 21 54.9	+0.3
RLS	Riolos of Patr	39.21	288	P	P	19 21 54.8	+0.1
DIVS	Divibare	39.24	297	⇑*i*P	P	19 21 55.8	+0.7
DIVS	Divibare	39.24	297	⇑P	P	19 21 55.6	+0.6
DIVS	Divibare	39.24	297	P	P	19 21 54.9	-0.1
DIVS				IAmb	IAmb	19 22 45.2	
	comp=Z,1µm,1.5s						
DIVS	Divibare	39.24	297	*e*P	P	19 21 55.8	+0.7
BAHR	High School, B	39.25	239	⇑P	P	19 21 57.3	+1.8
BAHR				pP	pP	19 22 44.1	+4.2
BAHR				sP	sP	19 23 02.9	-0.9
BAHR				S	S	19 27 50.9	+10
LANS	Liptovska Anna	39.26	305	*e*P	P	19 21 57.0	+2.0
LANS				pmax	pmax		
	comp=Z,153nm,1.0s						
LANS	Liptovska Anna	39.26	305	*e*P	P	19 21 57.0	+2.0
FRGS	Fruska Gora	39.26	299	⇑P	P	19 21 56.2	+1.1
FRGS	Fruska Gora	39.26	299	⇑*i*P	P	19 21 55.9	+0.8
FRGS	Fruska Gora	39.26	299	*e*P	P	19 21 56.1	+1.0
PHP	Peshkopia	39.26	294	P	P	19 21 55.5	+0.3
PYL	PYLOS	39.28	286	P	P	19 21 54.3	-1.1
MCO	Taipa Grande	39.32	99	P	P	19 21 59.0	+3.2
JAN	Janina	39.33	290	P	P	19 21 56.5	+0.7
NJ2	Nanjing	39.34	82	⇑P	P	19 21 55.8	-0.1
NJ2				sP	sP	19 23 02.5	-2.1
NJ2				PcP	PcP	19 23 59.5	-0.5
NJ2				ScP	ScP	19 27 24.3	-4.5
NJ2				S	S	19 27 44.0	+2.5
NJ2				PcS	PcS	19 27 48.5	-1.7
NJ2				ScS	ScS	19 31 39.5	-2.0
NJ2				pmax	pmax		
	comp=Z,3µm,0.8s						
NJ2				pmax	pmax		
	comp=Z,11µm,5.8s						
NJ2				LR	LR		
	comp=Z,5µm,12.6s						
NJ2				LR	LR		
	comp=Z,3µm,15.3s						
NJ2				LR	LR		
	comp=Z,4µm,15.2s						
SHAW	Medical Clinic	39.35	240	⇑P	P	19 21 58.2	+1.7
SHAW				pP	sP	19 22 53.1	-11
SJES	Sjenica	39.37	296	*e*P	P	19 21 57.2	+1.1
LSK	Leskovik	39.42	291	P	P	19 21 57.6	+1.0
VTN	Vitineika	39.46	288	P	P	19 21 57.1	+0.3
TEKS	Tekeris	39.52	298	⇑*i*P	P	19 21 57.6	+0.3
TEKS	Tekeris	39.52	298	*e*P	P	19 21 57.4	+0.1
DL2	Dalian	39.60	71	⇑*i*P	P	19 21 59.8	+1.9
DL2				pP	pP	19 22 42.8	+0.2
DL2				sP	sP	19 23 06.0	-0.6
DL2				S	S	19 27 48.3	+3.2
DL2				pmax	pmax		
	comp=Z,4µm,0.8s						
DL2				pmax	pmax		
	comp=Z,10µm,3.9s						
MUKA	Police Camp, M	39.61	241	⇑P	P	19 21 59.8	+1.5
MUKA				pP	pP	19 22 53.1	+10
BUD	Budapest	39.62	303	*e*P	P	19 21 59.3	+1.4
NYDR	Nydri-Lefkada	39.65	289	P	P	19 21 58.0	-0.3
TSLK	Tsoukalades, L	39.66	289	P	P	19 21 59.1	+0.7
LKD2	Lefkada island	39.66	289	P	P	19 21 58.7	+0.2
MELAE	School, Dubaba	39.67	242	⇑P	P	19 21 60.0	+1.1
MELAE				pP	pP	19 22 47.8	+4.4
VYHS	Vyhne	39.69	304	*e*P	P	19 21 59.7	+1.1
VYHS				*e*		19 23 05.7	
VYHS				*e*S	S	19 27 49.5	+3.2
VYHS				pmax	pmax		
	comp=Z,650nm,1.3s						
VYHS	Vyhne	39.69	304	*e*P	P	19 21 59.7	+1.1
VYHS				*e*		19 23 05.7	
VYHS				*e*S	S	19 27 49.5	+3.2
BBLS	Lazići	39.69	297	⇑*i*P	P	19 21 59.7	+0.9
BBLS	Lazići	39.69	297	*e*P	P	19 21 59.9	+1.1
HKPS	Hong Kong Po S	39.70	99	P	P	19 22 00.4	+1.5
HKC	Hong Kong Obse	39.72	99	⇑P	P	19 22 01.0	+1.9
TIR	Tirane	39.75	293	P	P	19 21 58.2	-0.9
TIR				pmax	pmax		
	comp=Z,211nm,0.9s						
TIR	Tirane	39.75	293	P	P	19 21 58.2	-0.9
DRAG	Dragano-Lefkad	39.75	289	P	P	19 21 58.7	-0.5
RUDO	Rudo	39.75	297	⇑*i*P	P	19 21 59.6	+0.4
LTHK	Lithakia	39.78	287	P	P	19 21 58.9	-0.5
FSK	Fiskardo	39.81	289	P	P	19 22 03.4	+3.7
VLS	Valsamata	39.86	288	P	P	19 21 59.4	-0.7
PSDA	Pessada-Kefalo	39.88	288	P	P	19 21 59.6	-0.6
SRN	Sarande	39.93	291	P	P	19 22 00.1	-0.5
KEF4	Livadi, Kephal	39.96	288	P	P	19 22 00.8	-0.1
MORH	Mrgy, Hungar	39.97	301	⇑P	P	19 22 01.8	+0.9
MORH	Mrgy, Hungar	39.97	301	*e*P	P	19 22 01.6	+0.7
MORH	Mrgy, Hungar	39.97	301	⇑*i*P	P	19 22 01.8	+0.9
KOLL	Kolacno	39.98	305	*e*P	P	19 22 02.5	+1.6
DMLN	Damoulianata-K	40.01	288	P	P	19 22 01.3	0.0
PDG	Podgorica	40.01	295	⇑P	P	19 22 01.2	-0.2
PDG	Podgorica	40.01	295	⇑*i*P	P	19 22 01.1	-0.2
PDG	Podgorica	40.01	295	⇑P	P	19 22 01.1	-0.2
PDG	Podgorica	40.01	295	P	P	19 22 01.4	+0.2
KEF3	Kipouria, Keph	40.03	288	P	P	19 22 01.3	-0.2
RAC	Raciborz	40.07	307	*e*P	P	19 22 02.8	+1.2
RAC				*e*PP	pP	19 22 44.6	-0.8
RAC				*e*S	S	19 27 51.4	-0.4
RAC				LMZ	LR	19 42 12.4	
	comp=Z,6.8nm,18.3s						
RAC	Raciborz	40.07	307	*e*P	P	19 22 02.8	+1.2
RAC				*e**PP	pP	19 22 44.6	-0.8
RAC				*e*S	S	19 27 51.4	-0.4
RAC				MLR	MLR		
	comp=Z,7µm,18.3s						
SRO	Srobarova	40.08	303	*e*P	P	19 22 03.9	+2.2
SRO				pmax	pmax		
	comp=Z,2µm,1.0s						
SRO	Srobarova	40.08	303	*e*P	P	19 22 03.9	+2.2
AAL	Aland	40.08	323	*e*P	P	19 22 01.1	-0.4
OKC	Ostrava-Krasne	40.10	307	*e*P	P	19 22 03.4	+1.5
OKC	Ostrava-Krasne	40.10	307	*e*P	P	19 22 03.4	+1.5
DRME	Dracevica, Mon	40.10	295	⇑*i*P	P	19 22 01.8	-0.3
KEK	Kerkira	40.12	291	P	P	19 22 01.3	-0.9
KEK	Kerkira	40.12	291	⇑P	P	19 22 01.1	-1.0
AAE	Adis Abeba	40.13	235	*e*P	P	19 22 05.3	+2.4
CSKK	Cskako	40.14	303	*e*P	P	19 22 03.7	+1.4
UPM	Unac-Piva	40.15	296	⇑*i*P	P	19 22 04.3	+1.7
VLO	Vlora	40.19	292	P	P	19 22 02.0	-0.7
VLO				pmax	pmax		
	comp=Z,1µm,1.1s						
VLO	Vlora	40.19	292	P	P	19 22 02.0	-0.7
VLO				IAmb	IAmb	19 22 06.4	
	comp=Z,1µm,1.1s						
CHGE	School, Chagni	40.27	240	⇑P	P	19 22 05.5	+1.6
CHGE				pP	pP	19 22 51.5	+3.0
CHGE				sP	sP	19 23 09.4	-3.0
CHGE				S	S	19 28 11.6	+16
FURI	Furi	40.29	235	⇓P	P	19 22 07.3	+3.1
FURI	Furi	40.29	235	P	P	19 22 06.9	+2.7
FURI	Furi	40.29	235	⇑P	P	19 22 06.9	+2.7
FURI				pP	pP	19 23 00.3	+11
FURI				sP	sP	19 23 14.0	+1.3
GINR	Hospital, Gini	40.31	231	⇑P	P	19 22 06.1	+1.8
GINR				pP	pP	19 22 52.0	+3.1
GINR				sP	sP	19 23 13.7	+1.1
ABMD	Abulta/Almeha	40.33	242	⇑P	P	19 22 04.8	+0.6
ABMD				pP	pP	19 22 51.1	+2.3
ABMD				sP	sP	19 23 12.4	0.0
ABMD				S	S	19 28 11.6	+15
KOVH	Kovagotottos	40.36	301	*e*P	P	19 22 04.4	+0.4
TIH	Tihany	40.43	302	*e*P	P	19 22 05.1	+0.4
JAVC	Velka Javorina	40.45	305	⇑*i*P	P	19 22 06.9	+2.0
JAVC				*e*pP	pP	19 22 52.6	+3.9
JAVC				*e*S	S	19 28 04.1	+6.5
BRY	Bratogost	40.46	296	⇑*i*P	P	19 22 05.2	+0.1
SNY	Shenyang	40.48	66	⇑P	P	19 22 05.8	+0.7
SNY				sP	sP	19 23 15.0	+1.1
SNY				S	S	19 28 00.0	+2.0
SNY				pmax	pmax		
	comp=Z,200nm,0.5s						
SNY				LR	LR		
	comp=Z,6µm,9.8s						
SNY				LR	LR		
	comp=Z,10µm,15.7s						
SNY				LR	LR		
	comp=Z,12µm,14.8s						
MORC	Moravsky Berou	40.49	307	⇑P	P	19 22 06.5	+1.3
MORC	Moravsky Berou	40.49	307	⇑*i*P	P	19 22 06.4	+1.2
MORC				*e*pP	pP	19 22 51.8	+2.7
MORC				*e*S	S	19 28 01.9	+3.6
MORC	Moravsky Berou	40.49	307	P	P	19 22 05.9	+0.7
MORC				pmax	pmax		
	comp=Z,618nm,0.9s						
MORC	Moravsky Berou	40.49	307	⇑P	P	19 22 06.2	+1.0
MORC	Moravsky Berou	40.49	307	P	P	19 22 05.9	+0.7
HCY	Herceg Novi	40.56	295	*e*P	P	19 22 05.7	-0.1
TREB	Trebinje	40.62	296	⇑*i*P	P	19 22 06.3	0.0
MPLH	Magyarpolny	40.65	302	*e*P	P	19 22 07.2	+0.8
GKP	Gorka Klasztor	40.70	312	*e*P	P	19 22 08.0	+1.2
GKP	Gorka Klasztor	40.70	312	*e*P	P	19 22 07.4	+0.7
MODS	Modra-Piesok	40.73	304	*e*P	P	19 22 07.3	+0.1
MODS				*e*		19 23 15.7	
MODS				*e*S	S	19 27 56.0	-5.8
MODS				pmax	pmax		
	comp=Z,469nm,1.2s						
MODS	Modra-Piesok	40.73	304	*e*P	P	19 22 07.3	+0.1
MODS				*e*		19 23 15.7	
MODS				*e*S	S	19 27 56.0	-5.8
KIRE	School, Kiremu	40.74	238	⇑P	P	19 22 09.9	+2.0
KIRE				pP	pP	19 22 55.2	+2.6
EGYH	Egyhazaskeszo	40.77	303	*e*P	P	19 22 08.3	+1.0
TPTI		40.82	138	P	P	19 22 07.4	-0.8
	comp=Z,11µmcomp=Z,11µmcomp=Z,799nm,1.2s						
ZST	Bratislava	40.86	304	*e*P	P	19 22 09.6	+1.4
ZST				*e*		19 22 54.2	
ZST				*e*S	S	19 28 02.3	-1.3
ZST				pmax	pmax		
	comp=Z,5µm,2.3s						
ZST	Bratislava	40.86	304	*e*P	P	19 22 09.6	+1.4
ZST				*e*		19 22 54.2	
ZST				*e*S	S	19 28 02.3	-1.3
KEV	Kevo	40.89	338	P	P	19 22 08.8	+0.8
KEV	Kevo	40.89	338	⇑P	P	19 22 09.0	+0.9
KEV	Kevo	40.89	338	P	P	19 22 08.8	+0.8
KEV				IAmb	IAmb	19 22 12.3	
	comp=Z,807nm,0.7s						

GUBA	**Police Station**	**40.92**	**241**	⇑P	**P**	**19 22 10.0**	**+0.9**
GUBA				pP	**pP**	**19 22 56.5**	**+2.8**
KCSI	**Kotacane, Aceh**	**40.92**	**137**	P	**P**	**19 22 08.1**	**-0.9**
	comp=Z,7µmcomp=Z,855nm,0.9s						
KRLC	**Kraliky**	**40.98**	**307**	*e*P	**P**	**19 22 10.2**	**+1.1**
KRLC				*e*sP	**sP**	**19 23 20.9**	**+4.2**
KRLC				*e*S	**S**	**19 28 07.0**	**+1.6**
KRLC	**Kraliky**	**40.98**	**307**	*e*P	**P**	**19 22 10.2**	**+1.1**
KRLC				*e*		19 23 20.9	
KRLC				*e*S	**S**	**19 28 07.0**	**+1.6**
STON	**Ston**	**41.07**	**296**	⇑*i*P	**P**	**19 22 09.7**	**-0.2**
STON	**Ston**	**41.07**	**296**	P	**P**	**19 22 09.9**	**0.0**
DEBR	**School, Debre**	**41.10**	**240**	⇑P	**P**	**19 22 12.4**	**+1.6**
DEBR				pP	**pP**	**19 22 57.4**	**+1.8**
DEBR				sP	**sP**	**19 23 21.0**	**+1.7**
DEBR				S	**S**	**19 28 14.8**	**+6.4**
VRAC	**Vranov**	**41.13**	**306**	⇑P	**P**	**19 22 11.8**	**+1.4**
VRAC	**Vranov**	**41.13**	**306**	P3KPbc		19 51 40.9	
	comp=Z,2.0nm,0.8s,baz=95,slow=0.1,SNR=4.2						
VRAC	**Vranov**	**41.13**	**306**	⇑*i*P	**P**	**19 22 11.7**	**+1.3**
VRAC				*e*pP	**pP**	**19 22 57.1**	**+2.8**
VRAC				*e*S	**S**	**19 28 08.9**	**+1.3**
KULM	**Kulim**	**41.15**	**132**	⇑P	**P**	**19 22 11.4**	**+0.6**
KULM	**Kulim**	**41.15**	**132**	P	**P**	**19 22 11.3**	**+0.4**
KULM				IAmb	IAmb	19 22 15.4	
	comp=Z,1µm,1.6s						
BLY	**Banja Luka**	**41.16**	**299**	⇑*i*P	**P**	**19 22 11.4**	**+0.8**
BLY	**Banja Luka**	**41.16**	**299**	⇑P	**P**	**19 22 11.6**	**+0.9**
UPP	**Uppsala**	**41.19**	**322**	*e*P	**P**	**19 22 11.8**	**+1.2**
HARO	**School, Haroo**	**41.20**	**239**	⇑P	**P**	**19 22 13.5**	**+1.9**
HARO				pP	**pP**	**19 22 58.7**	**+2.3**
ARA0	**ARCESS Array S**	**41.23**	**338**	*e*P	**P**	**19 22 12.3**	**+1.4**
ARCES	**ARCESS Array B**	**41.23**	**338**	P	**P**	**19 22 12.1**	**+1.2**
	comp=Z,938nm,0.7s,baz=124,slow=9.3,SNR=606						
ARCES	**ARCESS Array B**	**41.23**	**338**	P	**P**	**19 22 10.8**	**-0.1**
ARCES				pmax	pmax		
	comp=Z,4µm,1.4s						
ARCES	**ARCESS Array B**	**41.23**	**338**	P	**P**	**19 22 10.8**	**-0.1**
DPC	**Dobruska-Polom**	**41.26**	**307**	*e*P	**P**	**19 22 12.8**	**+1.3**
DPC				*e*S	**S**	**19 28 13.1**	**+3.5**
DPC				AMS	AMS	19 31 20.0	
	comp=Z,18µm,17.2s						
DPC	**Dobruska-Polom**	**41.26**	**307**	*e*P	**P**	**19 22 12.8**	**+1.3**
DPC				*e*S	**S**	**19 28 13.1**	**+3.5**
DPC				MLR	MLR		
	comp=Z,18µm,17.2s						
SOP	**Sopron**	**41.27**	**303**	*e*P	**P**	**19 22 12.2**	**+0.8**
KSP	**Ksiaz**	**41.27**	**308**	*e*P	**P**	**19 22 12.3**	**+0.9**
KSP	**Ksiaz**	**41.27**	**308**	⇑P	**P**	**19 22 12.1**	**+0.7**
MGRS	**Mrkonjic Grad**	**41.27**	**298**	*e*P	**P**	**19 22 13.3**	**+1.7**
KRUC	**Moravsky**	**41.28**	**305**	⇑*i*P	**P**	**19 22 12.8**	**+1.3**
KRUC				*e*pP	**pP**	**19 22 58.6**	**+3.1**
KRUC				*e*S	**S**	**19 28 11.5**	**+1.8**
MRAK	**Mrakovica**	**41.32**	**299**	⇑*i*P	**P**	**19 22 12.5**	**+0.5**
OSTC	**Ostas**	**41.32**	**308**	*e*P	**P**	**19 22 13.3**	**+1.4**
OSTC				*e*S	**S**	**19 28 13.7**	**+3.3**
MOSL	**Moslavina**	**41.35**	**300**	P	**P**	**19 22 12.0**	**-0.1**
RICI	**Ricice**	**41.38**	**297**	P	**P**	**19 22 12.2**	**-0.2**
TSI	**Tuntungan**	**41.38**	**136**	P	**P**	**19 22 11.6**	**-1.1**
	comp=Z,13µmcomp=Z,8µmcomp=Z,754nm,1.0s						
CHVC	**Chvalec**	**41.43**	**308**	*e*P	**P**	**19 22 13.9**	**+1.1**
CHVC				*e*x	x	19 23 18.6	
UPC	**Upice**	**41.46**	**308**	*e*P	**P**	**19 22 14.1**	**+1.1**
UPC	**Upice**	**41.46**	**308**	*e*P	**P**	**19 22 14.1**	**+1.1**
DLV	**T Lat**	**41.49**	**116**	P	**P**	**19 22 13.6**	**-0.2**
DLV	**T Lat**	**41.49**	**116**	P	**P**	**19 22 15.2**	**+1.3**
KALN	**Kalnik**	**41.49**	**301**	P	**P**	**19 22 12.5**	**-0.8**
MAKA	**Makarska**	**41.49**	**297**	P	**P**	**19 22 13.1**	**-0.2**
CN2	**Changchun**	**41.50**	**63**	*e*P	**P**	**19 22 14.0**	**+0.6**
CN2				*e*S	**S**	**19 28 11.0**	**-2.2**
CN2				pmax	pmax		
	comp=Z,600nm,1.4s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,4µm,18.0s						
CN2				LR	LR		
	comp=Z,4µm,18.0s						
CN2				LR	LR		
	comp=Z,7µm,22.0s						
SSE	**Sheshan**	**41.54**	**82**	P	**P**	**19 22 16.3**	**+2.4**
SSE				pP	**pP**	**19 23 00.8**	**+1.9**
SSE				sP	**sP**	**19 23 21.5**	**-1.1**
SSE				S	**S**	**19 28 13.0**	**-1.0**
SSE				pmax	pmax		
	comp=Z,2µm,1.0s						
SSE				pmax	pmax		
	comp=Z,5µm,5.5s						
KOGS	**Kog**	**41.60**	**302**	*i* P	**P**	**19 22 14.9**	**+0.7**
KOGS				*e*pP	**pP**	**19 23 00.7**	**+2.4**
KOGS				*e*sP	**sP**	**19 23 23.5**	**+1.7**
KOGS				*e*		19 24 56.4	
LSTV	**Lastovo**	**41.67**	**296**	P	**P**	**19 22 14.6**	**-0.2**
KTK1	**Kautokeino**	**41.70**	**336**	*e*P	**P**	**19 22 15.6**	**+0.9**
KTK1				IVmB_BB		19 22 18.6	
	comp=Z,14µm,0.4s						
KTK1				*e*S	**S**	**19 28 16.2**	**+0.7**
CONA	**Conrad Observa**	**41.71**	**304**	*e*P	**P**	**19 22 16.2**	**+1.0**
	comp=Z,1µm,1.0s,SNR=379						
CONA				*i* P	**pP**	**19 23 02.4**	**+3.0**
	comp=Z,704nm,1.5s						
CONA				*e*P	**pPKiKP**	**19 32 06.0**	**-2.3**
	comp=Z,31nm,1.7s						
SHERE	**Police Station**	**41.74**	**241**	⇑P	**P**	**19 22 16.9**	**+1.2**
LOBO	**Lobor**	**41.76**	**301**	P	**P**	**19 22 15.8**	**+0.3**
KIJV	**Kijevo**	**41.82**	**298**	P	**P**	**19 22 15.0**	**-1.0**
ZAG	**Zagreb**	**41.85**	**301**	⇑*i*P	**P**	**19 22 16.9**	**+0.7**
PTJ	**Puntijarka**	**41.86**	**301**	P	**P**	**19 22 15.8**	**-0.6**
TREC	**Trest**	**41.86**	**306**	*e*P	**P**	**19 22 17.9**	**+1.6**
TREC	**Trest**	**41.86**	**306**	*e*P	**P**	**19 22 17.9**	**+1.6**
HVAR	**Hvar**	**41.92**	**297**	P	**P**	**19 22 16.9**	**+0.1**
QZH	**Quanzhou**	**41.99**	**92**	⇑*i*P	**P**	**19 22 20.3**	**+2.7**
QZH				sP	**sP**	**19 23 27.0**	**+0.4**
QZH				PcP	**PcP**	**19 24 08.5**	**-0.2**
QZH				ScP	**ScP**	**19 27 39.5**	**+0.1**
QZH				S	**S**	**19 28 23.5**	**+2.9**
QZH				sS	**sS**	**19 29 35.8**	**-4.1**
QZH				pmax	pmax		
	comp=Z,440nm,1.1s						
QZH				pmax	pmax		
	comp=Z,3µm,5.6s						
QZH				LR	LR		
	comp=Z,5µm,14.2s						
QZH				LR	LR		
	comp=Z,3µm,17.0s						
QZH				LR	LR		
	comp=Z,4µm,14.7s						
ZEA	**Zeya**	**41.99**	**47**	*e*P	**P**	**19 22 19.5**	**+2.3**
ZEA				*e*		19 23 05.8	
ZEA				*e*		19 23 27.3	
ZEA				*e*		19 24 03.7	
ZEA				*e*		19 31 59.2	
ZEA				pmax	pmax		
	comp=E,2µm,2.6s						
ZEA				pmax	pmax		
	comp=Z,4µm,2.6s						
ZEA				pmax	pmax		
	comp=N,1µm,2.3s						
ZEA				pmax	pmax		
	comp=N,720nm,0.9s						
ZEA				pmax	pmax		
	comp=E,940nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,2µm,0.9s						
ZEA				pmax	pmax		
	comp=Z,2µm,4.5s						
ZEA				MLR	MLR		
	comp=E,2µm,11.0s						
ARSA	**Arzberg**	**42.01**	**303**	*e*P	**P**	**19 22 17.9**	**+0.4**
	comp=E,249nm,0.9s,SNR=171						
ARSA				*e*P	**pP**	**19 23 04.8**	**+3.1**
	comp=E,262nm,1.6s						
IPM	**Ipoh**	**42.02**	**132**	P	**P**	**19 22 18.0**	**+0.1**
IPM	**Ipoh**	**42.02**	**132**	P	**P**	**19 22 17.9**	**0.0**
IPM				IAmb	IAmb	19 22 21.8	
	comp=Z,2µm,1.6s						
IPM	**Ipoh**	**42.02**	**132**	P	**P**	**19 22 17.5**	**-0.4**
KNMB	**Chin-men Tao**	**42.04**	**93**	P	**P**	**19 22 18.0**	**0.0**
KNMB				IAmb	IAmb	19 22 22.4	
	comp=Z,1µm,0.9s						
MEND	**High School, M**	**42.08**	**240**	⇑P	**P**	**19 22 19.8**	**+1.1**
MEND				pP	**pP**	**19 23 05.2**	**+1.6**
BSD	**Bornholm Skovb**	**42.13**	**315**	*e*P	**P**	**19 22 15.3**	**-3.0**
BSD	**Bornholm Skovb**	**42.13**	**315**	*i* P	**P**	**19 22 18.8**	**+0.5**
BSD				IVmB_BB		19 22 21.0	
	comp=Z,9µm,1.2s						
BSD				IAmb	IAmb	19 22 21.5	
	comp=Z,994nm,1.0s						
BSD	**Bornholm Skovb**	**42.13**	**315**	⇑P	**P**	**19 22 18.1**	**-0.3**
PSI	**Prapat**	**42.16**	**136**	P	**P**	**19 22 18.8**	**-0.4**
	comp=Z,594nm,0.8s,baz=320,slow=9.2,SNR=98						
KSBAR	**Backryungdo**	**42.17**	**71**	P	**P**	**19 22 19.8**	**+0.9**
	SNR=250						
KSBAR	**Backryungdo**	**42.17**	**71**	P	**P**	**19 22 19.8**	**+0.9**
	SNR=250						
UDBI	**Udbina**	**42.19**	**299**	P	**P**	**19 22 18.6**	**-0.5**
DACB	**Daecheong-do R**	**42.20**	**71**	P	**P**	**19 22 20.1**	**+1.0**
	SNR=76						
CRES	**Cresnjev**	**42.22**	**301**	⇑*i*P	**P**	**19 22 20.2**	**+0.9**
MATE	**Matera**	**42.23**	**293**	⇑P	**P**	**19 22 19.1**	**-0.2**
MATE	**Matera**	**42.23**	**293**	⇑P	**P**	**19 22 19.1**	**-0.2**
PLIT	**Plitvice**	**42.24**	**299**	P	**P**	**19 22 20.2**	**+0.8**
OZLJ	**Ozalj**	**42.24**	**300**	P	**P**	**19 22 19.9**	**+0.5**
HAMF	**Hammerfest**	**42.31**	**339**	*e*P	**P**	**19 22 20.9**	**+1.4**
HAMF				*e*S	**S**	**19 28 25.3**	**+1.0**
MORI	**Morici**	**42.34**	**298**	P	**P**	**19 22 19.7**	**-0.5**
PVCC	**Panska Ves**	**42.38**	**308**	*e*P	**P**	**19 22 22.0**	**+1.6**
PVCC				*e*S	**S**	**19 28 28.4**	**+2.6**
PVCC	**Panska Ves**	**42.38**	**308**	*e*P	**P**	**19 22 22.0**	**+1.6**
PVCC				*e*S	**S**	**19 28 28.4**	**+2.6**
DILA	**Dilla**	**42.38**	**233**	*e*P	**P**	**19 22 23.4**	**+2.3**
SOKA	**Soboth**	**42.41**	**302**	*e*P	**P**	**19 22 21.7**	**+0.9**
	comp=Z,887nm,0.9s,SNR=491						
SOKA				*e*P	**pP**	**19 23 07.7**	**+2.7**
	comp=Z,346nm,1.3s						
BOJS	**Bojanci**	**42.41**	**300**	*i* P	**P**	**19 22 21.5**	**+0.7**
BOJS				*i* PcP	**PcP**	**19 24 11.9**	**+2.1**
BOJS				*e*S	**S**	**19 28 25.0**	**-1.4**
BOJS				*e*		19 29 47.9	
BOJS				*e*SS	**ScS**	**19 31 54.2**	**-5.4**
NGLE	**Hospital, Nege**	**42.41**	**231**	P	**P**	**19 22 22.3**	**+0.9**
NGLE				pP	**pP**	**19 23 08.4**	**+2.2**
ZIRJ	**Zirje**	**42.42**	**297**	P	**P**	**19 22 20.7**	**-0.1**
PRU	**Pruhonice**	**42.42**	**307**	*e*P	**P**	**19 22 22.4**	**+1.6**
PRU				*e*pP	**pP**	**19 23 02.9**	**-2.2**
PRU				*e*sP	**sP**	**19 23 29.6**	**+1.1**
PRU				*e*S	**S**	**19 28 29.6**	**+3.1**
PRU				AMS	AMS	19 31 50.0	
	comp=Z,15µm,18.9s						
PRU	**Pruhonice**	**42.42**	**307**	*e*P	**P**	**19 22 22.4**	**+1.6**
PRU				*e*		19 23 02.9	
PRU				*e*		19 23 29.6	
PRU				*e*S	**S**	**19 28 29.6**	**+3.1**
PRU				MLR	MLR		
	comp=Z,15µm,18.9s						
PRA	**Prague**	**42.49**	**307**	*e*P	**P**	**19 22 23.0**	**+1.7**
PRA				AMS	AMS	19 32 00.0	
	comp=Z,14µm,16.8s						
PRA	**Prague**	**42.49**	**307**	*e*P	**P**	**19 22 23.0**	**+1.7**
PRA				MLR	MLR		
	comp=Z,14µm,16.8s						
MRVN	**Minervino Murg**	**42.52**	**294**	⇑P	**P**	**19 22 21.4**	**-0.3**
TIP	**Timpagrande**	**42.53**	**291**	⇑P	**P**	**19 22 21.5**	**-0.4**
TIP	**Timpagrande**	**42.53**	**291**	⇑P	**P**	**19 22 21.6**	**-0.4**
TIP	**Timpagrande**	**42.53**	**291**	P	**P**	**19 22 21.5**	**-0.4**
CKRC	**Cesky Krumlov**	**42.66**	**305**	*e*P	**P**	**19 22 25.1**	**+2.3**
CKRC				*e*x	x	19 23 31.4	
CKRC				*e*S	**S**	**19 28 34.7**	**+4.6**
CKRC				AMS	AMS	19 32 10.0	
	comp=Z,12µm,22.2s						
GSI	**Gunungsitoli**	**42.67**	**139**	⇑P	**P**	**19 22 24.7**	**+1.5**
GSI	**Gunungsitoli**	**42.67**	**139**	P	**P**	**19 22 24.5**	**+1.3**
	comp=Z,33µmcomp=Z,56µmcomp=Z,5µm,1.2s						
GSI	**Gunungsitoli**	**42.67**	**139**	P	**P**	**19 22 24.3**	**+1.1**
GSI	**Gunungsitoli**	**42.67**	**139**	P	**P**	**19 22 24.3**	**+1.1**
SGRT	**San Giovanni R**	**42.70**	**295**	P	**P**	**19 22 23.0**	**-0.3**
SGRT				IAmb	IAmb	19 23 13.1	
	comp=Z,1µm,1.1s						
BRG	**Berggiesshubel**	**42.75**	**308**	*e*P	**P**	**19 22 24.7**	**+1.3**
	comp=Z,528nm,0.9s,baz=85,slow=7.8						
OBKA	**Obir**	**42.76**	**302**	*e*P	**P**	**19 22 24.6**	**+1.0**
	comp=Z,617nm,1.4s,SNR=169						
OBKA				*i* P	**pP**	**19 23 11.0**	**+3.1**
	comp=Z,398nm,1.4s						
DUGI	**Dugi Otok**	**42.78**	**298**	P	**P**	**19 22 23.2**	**-0.5**
RUE	**Ruedersdorf**	**42.79**	**311**	*e*P	**P**	**19 22 24.1**	**+0.4**
RUE	**Ruedersdorf**	**42.79**	**311**	*e*P	**P**	**19 22 24.3**	**+0.6**
	comp=Z,734nm,1.0s,baz=85,slow=7.8						
RUE	**Ruedersdorf**	**42.79**	**311**	⇑P	**P**	**19 22 24.2**	**+0.6**
MOA	**Molln**	**42.79**	**304**	*e*P	**P**	**19 22 24.3**	**+0.5**
	comp=Z,580nm,0.9s,SNR=186						
MOA				*e*P	**pP**	**19 23 10.9**	**+2.8**
	comp=Z,431nm,1.5s						
MOA				*e*P	**pPKiKP**	**19 32 04.6**	**-4.6**
	comp=Z,47nm,1.4s						
NVLJ	**Novalja**	**42.82**	**299**	P	**P**	**19 22 23.8**	**-0.2**
LJU	**Ljubljana**	**42.83**	**301**	*i* P	**P**	**19 22 25.1**	**+1.0**
	comp=Z,2µm,1.2s						
LJU				*e*pP	**pP**	**19 23 10.6**	**+2.1**
LJU				*i* sP	**sP**	**19 23 33.1**	**+1.1**
LJU				*i* PcP	**PcP**	**19 24 13.2**	**+1.9**
LJU				*e*S	**S**	**19 28 32.9**	**+0.3**
LJU				*e*ScS	**ScS**	**19 32 03.0**	**+0.7**
LJU	**Ljubljana**	**42.83**	**301**	⇑*i*P	**P**	**19 22 25.2**	**+1.0**
JETT	**Jettan, Norway**	**42.85**	**336**	*e*P	**P**	**19 22 26.3**	**+2.3**
CEY	**Cerknica**	**42.95**	**301**	⇑*i*P	**P**	**19 22 25.9**	**+0.8**
GOREE	**District Admin**	**42.95**	**238**	⇑P	**P**	**19 22 28.0**	**+2.2**
GOREE				pP	**pP**	**19 23 14.3**	**+3.4**
RIY	**Rijeka**	**42.97**	**300**	⇑*i*P	**P**	**19 22 25.1**	**-0.1**
RIY	**Rijeka**	**42.97**	**300**	P	**P**	**19 22 24.5**	**-0.7**
GIDAE	**Health Center,**	**42.99**	**240**	⇑P	**P**	**19 22 27.9**	**+1.8**
GIDAE				pP	**pP**	**19 23 15.4**	**+4.3**
GIDAE				sP	**sP**	**19 23 36.6**	**+1.8**
YPDB	**Yeonpyeongdo**	**43.03**	**71**	P	**P**	**19 22 28.0**	**+2.1**
	SNR=9.3						
RGN	**Rugen**	**43.04**	**314**	*e*P	**P**	**19 22 26.8**	**+1.2**
RGN	**Rugen**	**43.04**	**314**	*e*P	**P**	**19 22 27.3**	**+1.6**
	comp=Z,3µm,1.1s,baz=85,slow=7.8						
RGN	**Rugen**	**43.04**	**314**	⇑P	**P**	**19 22 26.9**	**+1.3**
RGN	**Rugen**	**43.04**	**314**	P	**P**	**19 22 26.7**	**+1.0**
GEC2	**GERESS Array S**	**43.06**	**305**	*e*P	**P**	**19 22 27.1**	**+1.1**
	comp=Z,175nm,1.1s,baz=85,slow=7.8						
GEC2	**GERESS Array S**	**43.06**	**305**	P	**P**	**19 22 26.7**	**+0.6**
GERES	**GERESS Array B**	**43.06**	**305**	P	**P**	**19 22 26.6**	**+0.5**
	comp=Z,131nm,0.9s,baz=88,slow=6.8,SNR=394						
GERES				pP	**pP**	**19 23 11.8**	**+1.2**
	comp=Z,39nm,0.8s,baz=70,slow=12,SNR=2.4						
GERES				PcP	**PcP**	**19 24 11.8**	**-0.3**
	comp=Z,154nm,1.0s,baz=88,slow=4.5,SNR=7.7						
GERES				PKPPKP	**P'P'df**	**19 54 19.2**	**-1.0**
	comp=Z,1.9nm,1.1s,baz=28,slow=3.2,SNR=3.4						
GERES	**GERESS Array B**	**43.06**	**305**	P	**P**	**19 22 26.4**	**+0.3**
GERES				pP	**pP**	**19 23 12.9**	**+2.4**
KHC	**Kasperske Hory**	**43.12**	**306**	*e*P	**P**	**19 22 27.3**	**+0.8**
KHC				*e*x	x	19 22 39.5	
KHC				*e*x	x	19 23 16.3	
KHC				*e*S	**S**	**19 28 39.6**	**+2.9**
KHC				AMS	AMS	19 32 20.0	
	comp=Z,16µm,22.7s						
KHC	**Kasperske Hory**	**43.12**	**306**	*e*P	**P**	**19 22 27.3**	**+0.8**
KHC				*e*S	**S**	**19 28 39.6**	**+2.9**
KHC				MLR	MLR		
	comp=Z,16µm,22.7s						
KHC	**Kasperske Hory**	**43.12**	**306**	⇑P	**P**	**19 22 26.9**	**+0.5**
KHC	**Kasperske Hory**	**43.12**	**306**	P	**P**	**19 22 27.2**	**+0.8**
FBE	**Freiberg**	**43.12**	**308**	*e*P	**P**	**19 22 27.9**	**+1.6**
	comp=Z,671nm,0.9s,baz=85,slow=7.8						
SMRN	**Sveta Marina**	**43.24**	**300**	P	**P**	**19 22 27.6**	**+0.2**
CLL	**Collm**	**43.32**	**309**	⇑*i*P	**P**	**19 22 28.8**	**+0.8**
CLL				*e**PP	**pP**	**19 23 15.0**	**+2.4**
CLL				*e**SP	**sP**	**19 23 36.0**	**-0.1**
CLL				*e*S	**S**	**19 28 35.0**	**-4.5**
CLL				*e**SS	**sS**	**19 29 56.0**	**-3.2**
CLL				pmax	pmax		
	comp=Z,628nm,1.0s						
CLL	**Collm**	**43.32**	**309**	⇑*i*P	**P**	**19 22 28.8**	**+0.8**
	comp=Z,628nm,1.0s						
CLL				*e*pP	**pP**	**19 23 15.0**	**+2.4**
CLL				*e*sP	**sP**	**19 23 36.0**	**-0.1**
CLL				*e*PP	**PP**	**19 24 13.0**	**+0.1**
CLL				*e*sPP		19 25 22.0	
CLL				*e*S	**S**	**19 28 35.0**	**-4.5**
	comp=N,3µm,17.4s						
CLL				*e*S	**S**	**19 28 35.0**	**-4.5**
	comp=E,10µm,25.6s						
CLL				*e*sS	**sS**	**19 29 56.0**	**-3.2**
CLL				*e*		19 30 39.0	
CLL				*e*SS	**SS**	**19 32 00.0**	**-0.9**
CLL				*e*sSS		19 33 00.0	
CLL				*e*		19 34 06.0	
CLL				*e*		19 35 12.0	
CLL	**Collm**	**43.32**	**309**	*e*P	**P**	**19 22 28.4**	**+0.5**
	comp=E,264nm,1.0s,baz=85,slow=7.8						
CLL	**Collm**	**43.32**	**309**	P	**P**	**19 22 28.2**	**+0.3**
TRO	**Tromso**	**43.36**	**336**	*e*P	**P**	**19 22 29.3**	**+1.4**
TRO				*e*S	**S**	**19 28 40.8**	**+1.3**
JRMM	**Jerantut**	**43.36**	**131**	P	**P**	**19 22 29.0**	**+0.3**
MYKA	**Terra Mystica**	**43.36**	**302**	*e*P	**P**	**19 22 29.1**	**+0.6**
	comp=E,242nm,1.0s,SNR=103						
MYKA				*e*P	**pP**	**19 23 15.2**	**+2.3**
	comp=E,443nm,1.6s						
CEL	**Celeste**	**43.42**	**290**	⇑P	**P**	**19 22 29.2**	**+0.2**
CEL	**Celeste**	**43.42**	**290**	P	**P**	**19 22 29.2**	**+0.2**
KSDEI	**Deokjeokdo**	**43.43**	**72**	P	**P**	**19 22 32.7**	**+3.7**
	SNR=9.0						
MSEY	**Mahe Island**	**43.48**	**203**	*i* P	**P**	**19 22 30.2**	**+0.6**
	SNR=17						
MSEY	**Mahe Island**	**43.48**	**203**	P	**P**	**19 22 30.0**	**+0.4**
MSEY				pmax	pmax		
	comp=Z,617nm,1.3s						
MSEY	**Mahe Island**	**43.48**	**203**	⇑P	**P**	**19 22 30.2**	**+0.6**
MSEY	**Mahe Island**	**43.48**	**203**	P	**P**	**19 22 30.0**	**+0.4**
MSEY	**Mahe Island**	**43.48**	**203**	P	**P**	**19 22 30.2**	**+0.6**
MSEY				pP	**pP**	**19 23 16.9**	**+1.9**
KBA	**Koelnbreinsper**	**43.50**	**303**	*e*P	**P**	**19 22 30.1**	**+0.4**
	comp=Z,477nm,1.1s,SNR=155						
KBA				*i* P	**pP**	**19 23 15.1**	**+0.9**
	comp=Z,539nm,1.6s						
KBA				*e*P	**pPKiKP**	**19 32 05.5**	**-4.6**
	comp=Z,56nm,1.2s						
BRJN	**Brijuni**	**43.55**	**300**	P	**P**	**19 22 29.4**	**-0.4**
COP	**Copenhagen**	**43.56**	**315**	*i* P	**P**	**19 22 31.4**	**+1.6**
COP				IVmB_BB		19 22 34.2	
	comp=Z,142µm,1.2s						
COP				IAmb	IAmb	19 22 34.7	
	comp=Z,16µm,1.0s						
KSGAH	**Ganghwa**	**43.56**	**71**	P	**P**	**19 22 31.0**	**+0.9**
	SNR=215						
KSGAH	**Ganghwa**	**43.56**	**71**	P	**P**	**19 22 31.0**	**+0.9**
	SNR=215						
WET	**Wettzell**	**43.57**	**306**	*e*P	**P**	**19 22 30.7**	**+0.7**
	comp=Z,102nm,1.2s,baz=85,slow=7.8						
PTCC	**Patocco-Chiusa**	**43.59**	**302**	⇑P	**P**	**19 22 30.2**	**-0.1**
GGDB	**Gageodo**	**43.64**	**77**	P	**P**	**19 22 34.0**	**+3.2**
	SNR=7.5						
GGDB	**Gageodo**	**43.64**	**77**	P	**P**	**19 22 34.0**	**+3.2**
	SNR=16						
DGAR	**Diego Garcia**	**43.66**	**178**	*c i*P	**P**	**19 22 31.4**	**+0.4**
DGAR				pmax	pmax		
	comp=Z,1µm,2.5s						
DGAR	**Diego Garcia**	**43.66**	**178**	⇓P	**P**	**19 22 32.1**	**+1.1**
DGAR	**Diego Garcia**	**43.66**	**178**	P	**P**	**19 22 31.4**	**+0.4**
ECDB	**Euchungdo**	**43.66**	**73**	P	**P**	**19 22 34.0**	**+3.1**
	SNR=7.0						
ECDB	**Euchungdo**	**43.66**	**73**	P	**P**	**19 22 34.0**	**+3.1**
	SNR=7.0						
HUK2	**Heuksan-myeon**	**43.69**	**76**	P	**P**	**19 22 33.0**	**+1.8**
	SNR=49						
HUK2	**Heuksan-myeon**	**43.69**	**76**	P	**P**	**19 22 33.0**	**+1.8**
	SNR=49						
OYDB	**Oeyeondo**	**43.70**	**73**	P	**P**	**19 22 34.0**	**+2.8**
	SNR=12						
OYDB	**Oeyeondo**	**43.70**	**73**	P	**P**	**19 22 34.0**	**+2.8**
	SNR=12						
PAOL	**Paolisi**	**43.73**	**294**	P	**P**	**19 22 31.6**	**+0.1**
PAOL				IAmb	IAmb	19 23 21.0	
	comp=Z,2µm,1.7s						
TANN	**Tannenbergstha**	**43.73**	**308**	*e*P	**P**	**19 22 32.3**	**+1.0**
	baz=85,slow=7.8						
NKC	**Novy Kostel**	**43.75**	**307**	*e*P	**P**	**19 22 33.0**	**+1.6**
NKC				*e*S	**S**	**19 28 48.7**	**+2.8**
NKC				AMS	AMS	19 32 30.0	
	comp=Z,17µm,17.7s						
NKC	**Novy Kostel**	**43.75**	**307**	*e*P	**P**	**19 22 33.0**	**+1.6**
NKC				*e*S	**S**	**19 28 48.7**	**+2.8**
NKC				MLR	MLR		
	comp=Z,17µm,17.7s						
KSMUS	**Musan**	**43.75**	**71**	P	**P**	**19 22 32.9**	**+1.3**
	SNR=220						
KSMUS	**Musan**	**43.75**	**71**	P	**P**	**19 22 35.0**	**+3.4**
	SNR=52						
INCN	**Inchon**	**43.77**	**71**	P	**P**	**19 22 32.2**	**+0.4**
INCN				pmax	pmax		
	comp=Z,1µm,0.9s						
INCN	**Inchon**	**43.77**	**71**	P	**P**	**19 22 34.4**	**+2.6**
INCN				P	**P**	**19 22 34.4**	**+2.6**
INCN	**Inchon**	**43.77**	**71**	⇓P	**P**	**19 22 32.9**	**+1.1**
INCN	**Inchon**	**43.77**	**71**	P	**P**	**19 22 32.1**	**+0.4**
INCN				IAmb	IAmb	19 22 35.3	
	comp=Z,1µm,0.9s						
INCN	**Inchon**	**43.77**	**71**	P	**P**	**19 22 33.4**	**+1.6**
N2ST	**Straumen**	**43.77**	**332**	*e*P	**P**	**19 22 32.6**	**+1.3**
WERN	**Wernitzgruen**	**43.79**	**308**	*e*P	**P**	**19 22 33.1**	**+1.3**
	comp=Z,159nm,1.1s,baz=85,slow=7.8						
GUNZ	**Gunzen**	**43.81**	**308**	*e*P	**P**	**19 22 33.3**	**+1.3**
	comp=Z,313nm,1.0s,baz=85,slow=7.8						
WERD	**Werda**	**43.82**	**308**	*e*P	**P**	**19 22 33.2**	**+1.2**
	comp=Z,326nm,1.0s,baz=85,slow=7.8						
N2IH	**Innhavet**	**43.83**	**333**	*e*P	**P**	**19 22 33.4**	**+1.7**
ZOU	**Zoufplan**	**43.83**	**302**	P	**P**	**19 22 32.1**	**-0.2**
ZOU				IAmb	IAmb	19 23 22.9	
	comp=Z,2µm,1.9s						
KSSES	**Seosan**	**43.83**	**72**	P	**P**	**19 22 35.0**	**+2.8**
	SNR=13						
KSSES	**Seosan**	**43.83**	**72**	P	**P**	**19 22 33.1**	**+0.8**
	SNR=194						
KSSES	**Seosan**	**43.83**	**72**	P	**P**	**19 22 35.0**	**+2.8**
	SNR=13						
YNCB	**YEONCHEON**	**43.84**	**70**	P	**P**	**19 22 33.7**	**+1.5**
	SNR=291						
YNCB	**YEONCHEON**	**43.84**	**70**	P	**P**	**19 22 35.4**	**+3.2**
	SNR=9.3						
YNCB	**YEONCHEON**	**43.84**	**70**	P	**P**	**19 22 35.4**	**+3.2**
	SNR=9.3						
H08S3	**Diego Garcia H**	**43.87**	**178**	P	**P**	**19 22 33.3**	**+0.9**
	baz=354,slow=13,SNR=62						
H08S1	**Diego Carcia H**	**43.89**	**178**	P	**P**	**19 22 33.4**	**+0.8**
	baz=354,slow=13,SNR=29						
H08S2	**Diego Garcia H**	**43.89**	**178**	P	**P**	**19 22 33.3**	**+0.8**
	baz=354,slow=13,SNR=52						
FAUS	**Fauske**	**43.90**	**332**	*e*P	**P**	**19 22 33.4**	**+1.1**
FAUS				*e*S	**S**	**19 28 48.5**	**+1.1**
PLN	**Plauen**	**43.91**	**308**	*e*P	**P**	**19 22 34.0**	**+1.3**
	comp=Z,238nm,1.0s,baz=85,slow=7.8						
MOR8	**Moi Rana**	**43.91**	**331**	*e*P	**P**	**19 22 32.7**	**+0.2**
MOR8				*e*S	**S**	**19 28 47.3**	**-0.5**
YAK	**Yakutsk**	**43.92**	**35**	P	**P**	**19 22 32.7**	**+0.2**
	comp=Z,3µm,0.7s,baz=238,slow=1.1,SNR=366						
YAK				P4KPbc		20 00 25.5	
	comp=Z,2.6nm,0.5s,baz=80,slow=1.1,SNR=4.1						
YAK	**Yakutsk**	**43.92**	**35**	*e*P	**P**	**19 22 33.0**	**+0.5**
YAK				*e**PP	**pP**	**19 23 15.5**	**-2.7**
YAK				*e*		19 24 14.6	
YAK				*e*		19 24 19.5	
YAK				*e*PPP	PPP	19 25 01.8	
YAK				*e*S	**S**	**19 28 49.3**	**+1.5**
YAK				*e**SS	**sS**	**19 30 06.4**	**-1.2**
YAK				*e*		19 32 03.9	
YAK				pmax	pmax		
	comp=Z,6µm,0.9s						
YAK				pmax	pmax		
	comp=N,520nm,1.0s						
YAK				pmax	pmax		
	comp=E,457nm,1.0s						
YAK				pmax	pmax		
	comp=Z,816nm,1.0s						
YAK				pmax	pmax		
	comp=N,365nm,1.1s						
YAK				pmax	pmax		
	comp=E,628nm,1.5s						
YAK				smax	smax		
	comp=E,6µm,1.8s						
YAK				smax	smax		
	comp=N,726nm,1.8s						
YAK	**Yakutsk**	**43.92**	**35**	⇑P	**P**	**19 22 32.7**	**+0.2**
YAK	**Yakutsk**	**43.92**	**35**	P	**P**	**19 22 32.5**	**0.0**
ANMD	**Anmado**	**43.94**	**74**	P	**P**	**19 22 35.1**	**+2.0**
	SNR=46						
ROTZ	**Rotzenmuhle**	**43.95**	**307**	*e*P	**P**	**19 22 34.5**	**+1.5**
	comp=N,112nm,1.2s,baz=85,slow=7.8						
KSDDC	**Dongducheon**	**43.98**	**71**	P	**P**	**19 22 35.3**	**+1.9**
	SNR=67						

KSDDC	**Dongducheon**	**43.98**	**71**	P	**P**	**19 22 37.0**	**+3.6**
	SNR=34						
KSSEO	**Seoul**	**43.99**	**71**	P	**P**	**19 22 35.0**	**+1.5**
	SNR=118						
KSSEO	**Seoul**	**43.99**	**71**	P	**P**	**19 22 35.0**	**+1.5**
	SNR=118						
HAWB	**Hwaseong-si**	**43.99**	**72**	P	**P**	**19 22 35.0**	**+1.5**
	SNR=36						
HAWB	**Hwaseong-si**	**43.99**	**72**	P	**P**	**19 22 35.0**	**+1.5**
	SNR=36						
MANZ	**Manzenberg**	**43.99**	**307**	*e*P	**P**	**19 22 34.8**	**+1.4**
	comp=N,81nm,1.0s,baz=85,slow=7.8						
KSSOD	**Songwoldong**	**44.00**	**71**	P	**P**	**19 22 34.8**	**+1.3**
	SNR=40						
KSSOD	**Songwoldong**	**44.00**	**71**	P	**P**	**19 22 34.8**	**+1.3**
	SNR=40						
PORA	**Boryeong**	**44.05**	**73**	P	**P**	**19 22 36.0**	**+2.1**
	SNR=58						
STAL	**STALIGIAL**	**44.05**	**302**	P	**P**	**19 22 33.3**	**-0.6**
STEI	**Steigen**	**44.07**	**333**	*e*P	**P**	**19 22 34.5**	**+0.9**
STEI				*e*S	**S**	**19 28 50.2**	**+0.4**
KSSWO	**Suwon**	**44.09**	**72**	P	**P**	**19 22 35.1**	**+0.8**
	SNR=175						
KSSWO	**Suwon**	**44.09**	**72**	P	**P**	**19 22 35.1**	**+0.8**
	SNR=175						
NEUB	**Neuenburg**	**44.10**	**309**	*e*P	**P**	**19 22 35.3**	**+1.2**
	comp=N,707nm,0.9s,baz=85,slow=7.8						
MNYD	**Munyeodo**	**44.10**	**74**	P	**P**	**19 22 36.0**	**+1.6**
	SNR=84						
ABTA	**Abfaltersbach**	**44.11**	**302**	*e*P	**P**	**19 22 34.3**	**-0.2**
	comp=N,274nm,0.9s,SNR=144						
ABTA				*e*P	**pP**	**19 23 20.8**	**+1.8**
	comp=N,323nm,1.9s						
ABTA				*e*P	**PcP**	**19 24 17.0**	**+1.2**
	comp=N,168nm,0.9s						
ABTA				*e*P	**pPKiKP**	**19 32 09.0**	**-1.5**
	comp=N,51nm,1.2s						
NBB08	**Skaug oppvekst**	**44.14**	**332**	*e*P	**P**	**19 22 35.9**	**+1.7**
NBB28	**Valnes**	**44.16**	**332**	*e*P	**P**	**19 22 36.0**	**+1.7**
MNSI	**Mandailing Nat**	**44.18**	**137**	P	**P**	**19 22 36.1**	**+0.9**
	comp=N,24µmcomp=N,26µmcomp=N,3µm,0.9s						
SMKB	**Mukjeong-gil**	**44.24**	**74**	P	**P**	**19 22 38.0**	**+2.5**
	SNR=12						
SMKB	**Mukjeong-gil**	**44.24**	**74**	P	**P**	**19 22 38.0**	**+2.5**
	SNR=12						
MOX	**Moxa**	**44.24**	**308**	*e*P	**P**	**19 22 36.5**	**+1.1**
	comp=N,371nm,1.1s,baz=85,slow=7.8						
NBB17	**Glomfjord B¥r**	**44.26**	**332**	*e*P	**P**	**19 22 36.6**	**+1.5**
NC405	**NORSAR Array S**	**44.26**	**323**	P	**P**	**19 22 34.5**	**-0.8**
PYTK	**Pyeongtaek**	**44.27**	**72**	P	**P**	**19 22 38.7**	**+3.0**
	SNR=7.2						
KSCWO	**Cheorwon**	**44.27**	**70**	P	**P**	**19 22 39.3**	**+3.5**
	SNR=8.0						
KSCWO	**Cheorwon**	**44.27**	**70**	P	**P**	**19 22 39.3**	**+3.5**
	SNR=8.0						
NBB05	**Inndyr**	**44.28**	**332**	*e*P	**P**	**19 22 36.9**	**+1.6**
AQU	**L'Aquila**	**44.28**	**296**	P	**P**	**19 22 35.9**	**+0.1**
AQU				pmax	pmax		
	comp=Z,1µm,1.5s						
AQU	**L'Aquila**	**44.28**	**296**	⇑*i*P	**P**	**19 22 36.3**	**+0.5**
AQU	**L'Aquila**	**44.28**	**296**	⇑P	**P**	**19 22 36.4**	**+0.6**
AQU	**L'Aquila**	**44.28**	**296**	P	**P**	**19 22 35.9**	**+0.1**
MDJ	**Mudanjiang**	**44.30**	**61**	P	**P**	**19 22 36.5**	**+0.6**
MDJ				pP	pP	19 23 20.3	-1.3
MDJ				sP	sP	19 23 44.5	-0.8
MDJ				ScP	**ScP**	**19 27 49.0**	**+0.5**
MDJ				PcS	**PcS**	**19 28 09.8**	**+0.1**
MDJ				S	**S**	**19 28 53.8**	**-0.1**
MDJ				sS	sS	19 30 09.8	-4.0
MDJ				pmax	pmax		
	comp=Z,520nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,6µm,3.8s						
MDJ	**Mudanjiang**	**44.30**	**61**	P	**P**	**19 22 35.9**	**+0.1**
MDJ				IAmb	IAmb	19 24 19.5	
	comp=Z,1µm,1.2s						
MDJ	**Mudanjiang**	**44.30**	**61**	P	**P**	**19 22 36.5**	**+0.6**
NC602	**NORSAR Array S**	**44.30**	**323**	*e*P	**P**	**19 22 36.2**	**+0.6**
NC602				IVmBBB		19 22 39.6	
	comp=Z,12µm,1.5s						
NC602				*e*S	**S**	**19 28 54.7**	**+1.2**
NC602	**NORSAR Array S**	**44.30**	**323**	P	**P**	**19 22 35.4**	**-0.2**
TATO	**Taipei**	**44.30**	**90**	P	**P**	**19 22 36.7**	**+0.6**
TATO				IAmb	IAmb	19 22 41.6	
	comp=Z,2µm,1.6s						
KSGUS	**GUNSAN**	**44.31**	**73**	P	**P**	**19 22 38.3**	**+2.3**
	SNR=46						
GAPB	**Gapyeong**	**44.33**	**71**	P	**P**	**19 22 37.6**	**+1.4**
	SNR=49						
GAPB	**Gapyeong**	**44.33**	**71**	P	**P**	**19 22 39.4**	**+3.3**
	SNR=25						
GAPB	**Gapyeong**	**44.33**	**71**	P	**P**	**19 22 37.6**	**+1.4**
	SNR=49						
BUYB	**Buyeo**	**44.34**	**73**	P	**P**	**19 22 39.0**	**+2.7**
	SNR=38						
FLTG	**Flechtingen**	**44.35**	**311**	*e*P	**P**	**19 22 36.8**	**+0.7**
	comp=Z,995nm,0.8s,baz=85,slow=7.8						
FLTG	**Flechtingen**	**44.35**	**311**	P	**P**	**19 22 36.5**	**+0.3**
HWCB	**Hwacheon**	**44.35**	**70**	P	**P**	**19 22 40.0**	**+3.6**
	SNR=12						
HWCB	**Hwacheon**	**44.35**	**70**	P	**P**	**19 22 40.0**	**+3.6**
	SNR=12						
YHNB	**Yeheng**	**44.35**	**91**	P	**P**	**19 22 36.8**	**+0.2**
YHNB				IAmb	IAmb	19 22 42.0	
	comp=Z,3µm,1.5s						
YHNB	**Yeheng**	**44.35**	**91**	P	**P**	**19 22 37.9**	**+1.3**
GOCB	**Gochang-gun**	**44.38**	**74**	P	**P**	**19 22 39.0**	**+2.4**
	SNR=12						
GOCB	**Gochang-gun**	**44.38**	**74**	P	**P**	**19 22 37.2**	**+0.6**
	SNR=24						
NBB30	**Finnes**	**44.38**	**332**	*e*P	**P**	**19 22 37.1**	**+1.0**
NRCA	**Norcia**	**44.39**	**297**	P	**P**	**19 22 36.7**	**0.0**
TPUB	**Ta-pu**	**44.40**	**93**	P	**P**	**19 22 37.6**	**+0.6**
TPUB				IAmb	IAmb	19 22 42.4	
	comp=Z,2µm,1.3s						
NC300	**NORSAR Array S**	**44.42**	**323**	P	**P**	**19 22 36.8**	**+0.3**
KSICN	**Icheon**	**44.42**	**71**	P	**P**	**19 22 40.3**	**+3.3**
	SNR=9.3						
KSICN	**Icheon**	**44.42**	**71**	P	**P**	**19 22 38.1**	**+1.2**
	SNR=518						
SSLB	**Suanglung**	**44.43**	**92**	P	**P**	**19 22 38.1**	**+0.9**
SSLB				IAmb	IAmb	19 22 42.7	
	comp=Z,2µm,1.0s						
SSLB	**Suanglung**	**44.43**	**92**	P	**P**	**19 22 39.0**	**+1.8**
NC303	**NORSAR Array S**	**44.44**	**323**	P	**P**	**19 22 36.8**	**+0.1**
KSCEA	**Cheonan**	**44.44**	**72**	P	**P**	**19 22 37.6**	**+0.6**
	SNR=152						
KSJDO	**Jindo**	**44.44**	**76**	P	**P**	**19 22 38.1**	**+1.0**
	SNR=64						
KOJ2	**Gongju-si**	**44.45**	**73**	P	**P**	**19 22 40.1**	**+2.9**
	SNR=51						
NB201	**NORSAR Array S**	**44.45**	**323**	P	**P**	**19 22 36.9**	**0.0**
NB2	**NORSAR Subarra**	**44.49**	**323**	P	**P**	**19 22 37.2**	**0.0**
	comp=Z,1µm,0.8s,baz=97,slow=7.9						
NB2	**NORSAR Subarra**	**44.49**	**323**	P	**P**	**19 22 37.2**	**0.0**
	baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.49**	**323**	P	**P**	**19 22 36.9**	**-0.3**
	comp=Z,543nm,0.8s,baz=97,slow=7.7,SNR=506						
NOA				pP	**pP**	**19 23 23.4**	**+1.4**
	comp=Z,287nm,0.9s,baz=96,slow=8.0,SNR=2.7						
KONS	**Konsvik**	**44.51**	**331**	*e*P	**P**	**19 22 37.9**	**+0.8**
STOK	**Stokkvaagen**	**44.51**	**331**	*e*P	**P**	**19 22 39.1**	**+2.0**
N2VI	**Vinje**	**44.55**	**334**	*e*P	**P**	**19 22 38.8**	**+1.3**
NBB40	**Tonnes**	**44.56**	**331**	*e*P	**P**	**19 22 38.6**	**+1.1**
KSCHC	**Chuncheon**	**44.59**	**71**	P	**P**	**19 22 39.5**	**+1.3**
	SNR=104						
KSCHC	**Chuncheon**	**44.59**	**71**	P	**P**	**19 22 42.0**	**+3.7**
	SNR=39						
KSCHC	**Chuncheon**	**44.59**	**71**	P	**P**	**19 22 39.5**	**+1.3**
	SNR=104						
KSJEU	**Jeongeup**	**44.59**	**74**	P	**P**	**19 22 38.7**	**+0.4**
	SNR=18						
CJD	**Chujado**	**44.59**	**76**	P	**P**	**19 22 42.0**	**+3.7**
	SNR=19						
GRA1	**Grafenberg Arr**	**44.59**	**307**	P	**P**	**19 22 39.5**	**+1.4**
GRA1				IAmb	IAmb	19 22 43.8	
	comp=Z,3µm,1.7s						
GRF	**Grafenberg Arr**	**44.59**	**307**	P	**P**	**19 22 39.5**	**+1.4**
GRF				pmax	pmax		
	comp=Z,3µm,1.7s						
GRF	**Grafenberg Arr**	**44.59**	**307**	*e*P	**P**	**19 22 39.6**	**+1.5**
	baz=85,slow=7.8						
GRFO	**Grafenberg**	**44.59**	**307**	P	**P**	**19 22 38.9**	**+0.8**
GRFO				pmax	pmax		
	comp=Z,3µm,1.6s						
GRFO	**Grafenberg**	**44.59**	**307**	P	**P**	**19 22 38.9**	**+0.8**
GRFO				IAmb	IAmb	19 22 43.8	
	comp=Z,3µm,1.6s						
NSS	**Namsos**	**44.60**	**328**	*e*P	**P**	**19 22 38.8**	**+0.9**
HANB	**Haenam**	**44.61**	**75**	P	**P**	**19 22 40.0**	**+1.6**
	SNR=25						
WTTA	**Wattenberg**	**44.63**	**303**	*i* P	**P**	**19 22 38.4**	**-0.2**
	comp=Z,665nm,1.1s,SNR=197						
WTTA				*e*P	**pP**	**19 23 26.2**	**+2.8**
	comp=Z,445nm,1.4s						
WTTA				*e*P	**PcP**	**19 24 19.5**	**+1.9**
	comp=Z,211nm,0.8s						
WTTA				*e*P	**pPKiKP**	**19 32 13.4**	**+2.2**
	comp=Z,77nm,1.3s						
NAO01	**NORSAR Array S**	**44.63**	**323**	P	**P**	**19 22 38.4**	**+0.1**
OSL	**Oslo**	**44.65**	**321**	*e*P	**P**	**19 22 39.4**	**+1.1**
OSL				*e*S	**S**	**19 29 03.0**	**+4.6**
TJN	**Taejon**	**44.65**	**73**	*c* *i*P	**P**	**19 22 38.8**	**0.0**
TJN	**Taejon**	**44.65**	**73**	P	**P**	**19 22 38.7**	**0.0**
WATA	**Walderalm**	**44.66**	**303**	*e*P	**P**	**19 22 38.5**	**-0.3**
	comp=Z,519nm,1.2s,SNR=216						
WATA				*e*P	**pP**	**19 23 25.2**	**+1.6**
	comp=Z,576nm,1.4s						
EMSB	**Eumseong**	**44.67**	**72**	P	**P**	**19 22 41.0**	**+2.1**
	SNR=13						
EMSB	**Eumseong**	**44.67**	**72**	P	**P**	**19 22 40.0**	**+1.1**
	SNR=142						
EMSB	**Eumseong**	**44.67**	**72**	P	**P**	**19 22 40.0**	**+1.1**
	SNR=142						
NBO00	**NORSAR Array S**	**44.70**	**323**	P	**P**	**19 22 38.0**	**-0.9**
KS19	**Wonju Array Si**	**44.70**	**71**	P	**P**	**19 22 40.0**	**+0.8**
KS19				IAmb	IAmb	19 22 43.6	
	comp=Z,3µm,1.1s						
ASSE	**Asse, Remlinge**	**44.71**	**310**	*e*P	**P**	**19 22 39.6**	**+0.7**
	baz=85,slow=7.8						
MURB	**Monte Urbino**	**44.72**	**298**	P	**P**	**19 22 39.5**	**+0.2**
MURB				IAmb	IAmb	19 22 45.5	
	comp=Z,2µm,0.9s						
KSJEO	**Jeonju**	**44.73**	**73**	P	**P**	**19 22 40.0**	**+0.6**
	SNR=53						
KSJEO	**Jeonju**	**44.73**	**73**	P	**P**	**19 22 40.0**	**+0.6**
	SNR=148						
NC204	**NORSAR Array S**	**44.73**	**323**	P	**P**	**19 22 39.1**	**0.0**
KSAR	**Wonju Array Be**	**44.73**	**71**	P	**P**	**19 22 39.8**	**+0.4**
KSAR	**Wonju Array Be**	**44.73**	**71**	P	**P**	**19 22 39.8**	**+0.4**
LOF	**Lofoten**	**44.74**	**333**	*e*P	**P**	**19 22 40.1**	**+1.2**
LOF				IVmB_BB		19 22 42.3	
	comp=Z,11µm,0.7s						
LOF				*e*S	**S**	**19 28 59.9**	**+0.4**
KSKWJ	**Gwangju**	**44.74**	**74**	P	**P**	**19 22 40.3**	**+0.8**
	SNR=47						
KSKWJ	**Gwangju**	**44.74**	**74**	P	**P**	**19 22 40.0**	**+0.5**
	SNR=50						
KSKWJ	**Gwangju**	**44.74**	**74**	P	**P**	**19 22 41.0**	**+1.5**
	SNR=81						
KSKWJ	**Gwangju**	**44.74**	**74**	P	**P**	**19 22 40.3**	**+0.8**
	SNR=47						
KSKWJ	**Gwangju**	**44.74**	**74**	P	**P**	**19 22 40.0**	**+0.5**
	SNR=50						
FUR	**Furstenfeldbru**	**44.74**	**305**	*e*P	**P**	**19 22 40.5**	**+1.1**
	comp=Z,950nm,1.4s,baz=85,slow=7.8						
GOS2	**Gosang-Q330s**	**44.74**	**77**	P	**P**	**19 22 43.0**	**+3.5**
	SNR=27						
GOS1	**Gosan-ri**	**44.75**	**77**	P	**P**	**19 22 42.9**	**+3.4**
	SNR=15						
KSIJA	**INJE**	**44.75**	**70**	P	**P**	**19 22 41.4**	**+1.9**
	SNR=227						
VAE	**Valguarnera**	**44.76**	**289**	P	**P**	**19 22 41.5**	**+1.9**
	comp=Z,328nm,0.9s,baz=23,slow=2.5,SNR=73						
VAE				pP	**pP**	**19 23 28.7**	**+4.3**
	comp=Z,290nm,1.0s,baz=119,slow=12,SNR=0.9						
KSRS	**Korea Array**	**44.76**	**71**	P	**P**	**19 22 40.0**	**+0.5**
	comp=Z,1µm,1.0s,baz=281,slow=7.3,SNR=394						
KSRS				PcP	**PcP**	**19 24 19.2**	**+1.2**
	comp=Z,285nm,0.9s,baz=288,slow=2.8,SNR=7.9						
KSRS				ScP	**ScP**	**19 27 50.6**	**+0.2**
	comp=Z,23nm,0.8s,baz=291,slow=3.7,SNR=4.1						
KSRS				P4KPbc		20 00 27.9	
	comp=Z,3.7nm,1.0s,baz=284,slow=3.6,SNR=6.5						
HALB	**Hallimjungang-**	**44.76**	**77**	P	**P**	**19 22 43.0**	**+3.3**
	SNR=17						
NACB	**Ninganchiao**	**44.76**	**91**	P	**P**	**19 22 40.8**	**+1.0**
NACB				IAmb	IAmb	19 22 46.7	
	comp=Z,6µm,1.9s						
WAN2	**Wando-Q330s**	**44.76**	**75**	P	**P**	**19 22 43.0**	**+3.3**
	SNR=44						
SEHB	**SEOHWA**	**44.78**	**70**	P	**P**	**19 22 41.0**	**+1.2**
	SNR=159						
SEHB	**SEOHWA**	**44.78**	**70**	P	**P**	**19 22 41.3**	**+1.5**
	SNR=265						
SUCA	**Sunchang**	**44.79**	**74**	P	**P**	**19 22 40.1**	**+0.3**
	SNR=123						
CTI	**Castel Tesino**	**44.81**	**302**	P	**P**	**19 22 39.8**	**-0.2**
CTI				pmax	pmax		
	comp=Z,568nm,0.8s						
CTI	**Castel Tesino**	**44.81**	**302**	P	**P**	**19 22 39.8**	**-0.2**
BSEG	**Bad Segeberg**	**44.82**	**313**	*e*P	**P**	**19 22 41.4**	**+1.7**
	comp=Z,731nm,0.9s,baz=85,slow=7.8						
OVD	**Ostervraa, Den**	**44.82**	**318**	*i* P	**P**	**19 22 40.6**	**+0.8**
OVD				IAmb	IAmb	19 22 44.0	
	comp=Z,4µm,1.0s						
RAFF	**Raffo Rosso**	**44.87**	**289**	P	**P**	**19 22 41.4**	**+0.9**
RAFF				IAmb	IAmb	19 22 46.0	
	comp=Z,2µm,0.9s						
KSWJU	**Wonju**	**44.88**	**71**	P	**P**	**19 22 42.0**	**+1.4**
	SNR=33						
KSWJU	**Wonju**	**44.88**	**71**	P	**P**	**19 22 42.0**	**+1.4**
	SNR=33						
YULB	**Yu-li**	**44.89**	**92**	P	**P**	**19 22 42.1**	**+1.3**
YULB				IAmb	IAmb	19 22 46.7	
	comp=Z,2µm,1.0s						
CLZ	**Clausthal**	**44.92**	**310**	*e*P	**P**	**19 22 41.8**	**+1.1**
	comp=Z,1µm,1.6s,baz=85,slow=7.8						
TEOL	**Teolo**	**44.92**	**301**	P	**P**	**19 22 40.8**	**0.0**
SQTA	**Sankt Quirin**	**44.92**	**303**	*e*P	**P**	**19 22 40.6**	**-0.3**
	comp=Z,463nm,0.9s,SNR=131						
SQTA				*e*P	**pP**	**19 23 26.5**	**+0.8**
	comp=Z,361nm,1.5s						
SQTA				*e*P	**PcP**	**19 24 18.9**	**+0.3**
	comp=Z,274nm,1.1s						
SQTA				*e*P	**pPKiKP**	**19 32 12.9**	**+1.5**
	comp=Z,60nm,1.4s						
N2VA	**Vr¸y**	**44.94**	**333**	*e*P	**P**	**19 22 40.9**	**+0.4**
KSBON	**Boeun**	**44.95**	**72**	P	**P**	**19 22 41.3**	**+0.2**
	SNR=277						
KSBON	**Boeun**	**44.95**	**72**	P	**P**	**19 22 41.3**	**+0.2**
	SNR=277						
KSJJU	**Jeju**	**44.97**	**77**	P	**P**	**19 22 44.2**	**+2.9**
	SNR=32						
KSCHJ	**Chungju**	**44.97**	**72**	P	**P**	**19 22 42.0**	**+0.8**
	SNR=234						
KSCHJ	**Chungju**	**44.97**	**72**	P	**P**	**19 22 45.0**	**+3.7**
	SNR=18						
NAWB	**Namwon**	**44.97**	**74**	P	**P**	**19 22 42.0**	**+0.7**
	SNR=47						
MOTA	**Moosalm**	**44.98**	**304**	*e*P	**P**	**19 22 40.8**	**-0.6**
	comp=Z,615nm,0.9s,SNR=201						
MOTA				*e*P	**pP**	**19 23 27.4**	**+1.3**
	comp=Z,238nm,0.9s						
MOTA				*i* P	**PcP**	**19 24 18.9**	**+0.1**
	comp=Z,283nm,1.5s						
KSSKC	**Sokcho**	**44.98**	**70**	P	**P**	**19 22 45.2**	**+3.9**
	SNR=12						
TWG	**Pinlang**	**44.99**	**93**	P	**P**	**19 22 42.8**	**+1.3**
OKCB	**Cheongsan-myeo**	**44.99**	**72**	P	**P**	**19 22 43.0**	**+1.6**
	SNR=25						
OKCB	**Cheongsan-myeo**	**44.99**	**72**	P	**P**	**19 22 42.0**	**+0.6**
	SNR=168						
OKCB	**Cheongsan-myeo**	**44.99**	**72**	P	**P**	**19 22 43.0**	**+1.6**
	SNR=25						
NRDL	**Niedersach Rie**	**45.03**	**311**	*e*P	**P**	**19 22 42.8**	**+1.4**
	comp=Z,546nm,1.0s,baz=85,slow=7.8						
BOSB	**Boseong-gun**	**45.04**	**75**	P	**P**	**19 22 45.0**	**+3.2**
	SNR=47						
BOSB	**Boseong-gun**	**45.04**	**75**	P	**P**	**19 22 42.2**	**+0.4**
	SNR=179						
BOSB	**Boseong-gun**	**45.04**	**75**	P	**P**	**19 22 42.1**	**+0.3**
	SNR=264						
JECH	**Jecheon**	**45.05**	**71**	P	**P**	**19 22 45.0**	**+3.0**
	SNR=8.8						
JECH	**Jecheon**	**45.05**	**71**	P	**P**	**19 22 43.0**	**+1.0**
	SNR=440						
KLR	**Kul'dur**	**45.05**	**54**	P	**P**	**19 22 42.8**	**+1.1**
	comp=Z,1µm,1.0s,baz=282,slow=7.4,SNR=603						
KLR				PcP	**PcP**	**19 24 19.7**	**+0.9**
	comp=Z,267nm,0.8s,baz=292,slow=3.5,SNR=5.5						
KLR				P4KPbc		20 00 29.3	
	comp=Z,2.7nm,0.8s,baz=284,slow=7.1,SNR=5.4						
KLR	**Kul'dur**	**45.05**	**54**	*c* *i*P	**P**	**19 22 42.8**	**+1.1**
KLR				pmax	pmax		
	comp=Z,2µm,1.2s						
HOPEN	**Hopen**	**45.07**	**346**	*e*P	**P**	**19 22 44.5**	**+3.0**
HOPEN				IVmB_BB		19 22 47.6	
	comp=Z,26µm,1.5s						
HOPEN				*e*S	**S**	**19 29 05.0**	**+0.9**
KSMGY	**Mungyeong**	**45.10**	**72**	P	**P**	**19 22 43.5**	**+1.2**
	SNR=36						
KSMGY	**Mungyeong**	**45.10**	**72**	P	**P**	**19 22 45.2**	**+2.9**
	SNR=54						
N2RO	**R¸st**	**45.12**	**332**	*e*P	**P**	**19 22 42.5**	**+0.5**
KOHB	**KOHEUNG**	**45.14**	**75**	P	**P**	**19 22 43.1**	**+0.5**
	SNR=86						
KOHB	**KOHEUNG**	**45.14**	**75**	P	**P**	**19 22 43.1**	**+0.5**
	SNR=86						
KSCPR	**CHUPUNGNYEONG**	**45.17**	**73**	P	**P**	**19 22 43.1**	**+0.3**
	SNR=95						
KSCPR	**CHUPUNGNYEONG**	**45.17**	**73**	P	**P**	**19 22 45.3**	**+2.4**
	SNR=23						
TBLU	**Trondheim**	**45.17**	**326**	*e*P	**P**	**19 22 43.1**	**+0.7**
TBLU				*e*S	**S**	**19 29 07.7**	**+1.9**
RETA	**Reutte**	**45.19**	**304**	*e*P	**P**	**19 22 42.7**	**-0.2**
	comp=Z,189nm,0.8s,SNR=91						
RETA				*e*P	**pP**	**19 23 29.7**	**+2.0**
	comp=Z,173nm,1.2s						
RETA				*e*P	**pPKiKP**	**19 32 14.0**	**+2.5**
	comp=Z,60nm,1.4s						
GTTG	**Gottingen**	**45.20**	**310**	*e*P	**P**	**19 22 44.0**	**+1.1**
	comp=Z,847nm,0.9s,baz=85,slow=7.8						
KONO	**Kongsberg**	**45.20**	**321**	*c* *i*P	**P**	**19 22 43.0**	**+0.3**
KONO				pmax	pmax		
	comp=Z,2µm,1.3s						
KONO	**Kongsberg**	**45.20**	**321**	*e*P	**P**	**19 22 43.3**	**+0.6**
KONO				*e*S	**S**	**19 29 07.6**	**+1.2**
KONO	**Kongsberg**	**45.20**	**321**	⇓P	**P**	**19 22 43.1**	**+0.3**
KONO	**Kongsberg**	**45.20**	**321**	P	**P**	**19 22 43.0**	**+0.3**
KONO				IAmb	IAmb	19 22 46.9	
	comp=Z,2µm,1.2s						
HAMB	**Hamyang**	**45.21**	**74**	P	**P**	**19 22 46.0**	**+2.8**
	SNR=30						
HAMB	**Hamyang**	**45.21**	**74**	P	**P**	**19 22 44.0**	**+0.8**
	SNR=297						
KSYOW	**Yeongwol**	**45.25**	**71**	P	**P**	**19 22 47.0**	**+3.5**
	SNR=8.3						
UBBA	**Unterbreizbach**	**45.25**	**309**	*e*P	**P**	**19 22 44.1**	**+1.0**
	comp=Z,168nm,0.9s,baz=85,slow=7.8						
KSSAJ	**Sangju**	**45.25**	**72**	P	**P**	**19 22 44.1**	**+0.7**
	SNR=261						
KSSAJ	**Sangju**	**45.25**	**72**	P	**P**	**19 22 46.1**	**+2.6**
	SNR=41						
KSDGY	**Daegwallycong**	**45.27**	**70**	P	**P**	**19 22 47.0**	**+3.3**
	SNR=14						
KSDGY	**Daegwallycong**	**45.27**	**70**	P	**P**	**19 22 47.0**	**+3.3**
	SNR=14						
KSJMJ	**Jumunjin**	**45.27**	**70**	P	**P**	**19 22 47.4**	**+3.8**
	SNR=6.5						
KSJMJ	**Jumunjin**	**45.27**	**70**	P	**P**	**19 22 47.4**	**+3.8**
	SNR=6.5						
FETA	**Feichten**	**45.28**	**303**	*e*P	**P**	**19 22 43.4**	**-0.3**
	comp=Z,538nm,1.0s,SNR=255						
FETA				*e*P	**pP**	**19 23 29.6**	**+1.0**
	comp=Z,189nm,1.2s						
FETA				*e*P	**PcP**	**19 24 20.6**	**+0.7**
	comp=Z,309nm,0.9s						
FETA				*e*P	**pPKiKP**	**19 32 15.0**	**+3.2**
	comp=Z,179nm,2.3s						
KSGIC	**Gimchen**	**45.31**	**73**	P	**P**	**19 22 46.0**	**+2.1**
	SNR=27						
KSGIC	**Gimchen**	**45.31**	**73**	P	**P**	**19 22 46.0**	**+2.1**
	SNR=27						
KSKCH	**Geochang**	**45.31**	**73**	P	**P**	**19 22 45.6**	**+1.6**
	SNR=75						
GMDB	**Geomundo**	**45.34**	**76**	P	**P**	**19 22 47.0**	**+2.8**
	SNR=19						
BJO1	**Bjornoya**	**45.34**	**343**	*e*P	**P**	**19 22 45.1**	**+1.5**
BJO1				*e*S	**S**	**19 29 08.6**	**+0.5**
GOET	**G??ttrup**	**45.35**	**317**	*i* P	**P**	**19 22 45.5**	**+1.6**
GOET				IVmB_BB		19 22 48.4	
	comp=Z,21µm,1.2s						
GOET				IAmb	IAmb	19 22 48.8	
	comp=Z,3µm,1.0s						
GWYB	**Gwangyang**	**45.35**	**74**	P	**P**	**19 22 47.0**	**+2.7**
	SNR=7.7						
GWYB	**Gwangyang**	**45.35**	**74**	P	**P**	**19 22 45.0**	**+0.7**
	SNR=141						
BKNI	**Bangkinang**	**45.38**	**136**	⇑P	**P**	**19 22 44.7**	**0.0**
BKNI	**Bangkinang**	**45.38**	**136**	P	**P**	**19 22 44.7**	**0.0**
	comp=Z,24µmcomp=Z,36µmcomp=Z,5µm,0.9s						
BKNI	**Bangkinang**	**45.38**	**136**	P	**P**	**19 22 44.5**	**-0.2**
BKNI					**S**	**19 29 09.2**	**-0.8**
BKNI	**Bangkinang**	**45.38**	**136**	P	**P**	**19 22 44.9**	**+0.2**
MUD	**Monsted U'grnd**	**45.39**	**316**	*i* P	**P**	**19 22 46.2**	**+2.0**
MUD				IVmB_BB		19 22 48.5	
	comp=Z,12µm,1.3s						
MUD				IAmb	IAmb	19 22 49.0	
	comp=Z,2µm,1.2s						
MUD	**Monsted U'grnd**	**45.39**	**316**	⇓P	**P**	**19 22 45.8**	**+1.6**
RETH	**Rethem/Aller,**	**45.47**	**311**	*e*P	**P**	**19 22 46.0**	**+1.1**
	comp=Z,349nm,1.0s,baz=85,slow=7.8						
CORL	**Corleone**	**45.48**	**290**	P	**P**	**19 22 44.2**	**-1.1**
OSSC	**Osservatorio P**	**45.58**	**298**	P	**P**	**19 22 45.5**	**-0.4**
OSSC				IAmb	IAmb	19 23 36.6	
	comp=Z,2µm,1.5s						
UBR	**Ueberruh**	**45.59**	**304**	*e*P	**P**	**19 22 46.3**	**+0.3**
	comp=Z,412nm,0.9s,baz=85,slow=7.8						
ZCCA	**Zocca**	**45.60**	**299**	P	**P**	**19 22 46.4**	**+0.3**
DOMB	**Dombas**	**45.60**	**324**	*e*P	**P**	**19 22 46.6**	**+0.7**
DOMB				IVmBBB		19 22 49.6	
	comp=Z,11µm,1.0s						
DOMB				*e*S	**S**	**19 29 11.7**	**-0.5**
YNDB	**Yeoundo**	**45.61**	**75**	P	**P**	**19 22 49.0**	**+2.7**
	SNR=29						
CLTB	**Caltabellotta**	**45.64**	**290**	⇑P	**P**	**19 22 45.9**	**-0.7**
CLTB	**Caltabellotta**	**45.64**	**290**	P	**P**	**19 22 45.7**	**-0.9**
SALO	**Salr**	**45.66**	**301**	⇑P	**P**	**19 22 47.1**	**+0.5**
SALO	**Salr**	**45.66**	**301**	IAmb	IAmb	19 22 51.4	
	comp=Z,1µm,0.8s						
CHYB	**Chungyang**	**45.67**	**71**	P	**P**	**19 22 50.0**	**+3.2**
	SNR=8.4						
SISI	**Saibi**	**45.69**	**139**	P	**P**	**19 22 48.1**	**+1.0**
	comp=Z,18µmcomp=Z,22µmcomp=Z,2µm,1.0s						
EURB	**Uiryeong-eup**	**45.69**	**74**	P	**P**	**19 22 50.0**	**+3.1**
	SNR=17						
HOMB	**Homborsund**	**45.73**	**319**	*e*P	**P**	**19 22 47.5**	**+0.6**
HOMB				*e*S	**S**	**19 29 14.8**	**+0.8**
TIXI	**Tiksi**	**45.76**	**22**	P	**P**	**19 22 47.3**	**+0.4**
	comp=Z,1µm,0.8s,baz=266,slow=4.1,SNR=406						
TIXI				PcP	**PcP**	**19 24 22.4**	**+1.6**
	comp=Z,402nm,0.8s,baz=165,slow=1.7,SNR=3.1						
TIXI				ScP	**ScP**	**19 27 53.5**	**-0.4**
	comp=Z,103nm,1.0s,baz=343,slow=1.8,SNR=2.5						
TIXI				P4KPbc		20 00 32.2	
	comp=Z,9.4nm,0.9s,baz=299,slow=3.2,SNR=10						
TIXI	**Tiksi**	**45.76**	**22**	*c* *i*P	**P**	**19 22 47.3**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,2µm,0.8s						
TIXI	**Tiksi**	**45.76**	**22**	⇑P	**P**	**19 22 47.3**	**+0.4**
TIXI	**Tiksi**	**45.76**	**22**	P	**P**	**19 22 47.4**	**+0.6**
YOJ	**Yonaguni jima**	**45.77**	**90**	P	**P**	**19 22 48.0**	**+0.4**
YOJ				pmax	pmax		
	comp=Z,1µm,1.1s						
YOJ	**Yonaguni jima**	**45.77**	**90**	⇑P	**P**	**19 22 49.8**	**+2.1**
YOJ	**Yonaguni jima**	**45.77**	**90**	P	**P**	**19 22 48.0**	**+0.4**
YOJ				IAmb	IAmb	19 22 51.3	
	comp=Z,1µm,1.1s						
YOJ	**Yonaguni jima**	**45.77**	**90**	P	**P**	**19 22 49.4**	**+1.8**
DAVA	**Damuels**	**45.81**	**304**	*e*P	**P**	**19 22 48.0**	**+0.1**
	comp=Z,2µm,0.7s,SNR=534						
DAVA				*e*P	**pP**	**19 23 34.5**	**+1.7**
	comp=Z,716nm,1.2s						
MYKOM	**Kota Tinggi**	**45.85**	**131**	⇑P	**P**	**19 22 49.3**	**+0.9**
MYKOM	**Kota Tinggi**	**45.85**	**131**	P	**P**	**19 22 50.0**	**+1.7**
MYKOM	**Kota Tinggi**	**45.85**	**131**	P	**P**	**19 22 48.9**	**+0.6**
SKAR	**Skarslia**	**45.89**	**322**	*e*P	**P**	**19 22 50.0**	**+1.8**
SKAR				IVmBBB		19 22 52.5	
	comp=Z,11µm,1.6s						
SKAR				*e*S	**S**	**19 29 18.2**	**+1.9**
DAVOX	**Davos/Dischmat**	**45.90**	**303**	P	**P**	**19 22 48.4**	**-0.2**
	comp=Z,514nm,0.8s,baz=97,slow=7.5,SNR=250						
DAVOX				PcP	**PcP**	**19 24 23.1**	**+1.0**
	comp=Z,84nm,0.5s,baz=68,slow=5.4,SNR=3.8						
IMWB	**Imwonan-gil**	**45.91**	**71**	P	**P**	**19 22 52.0**	**+3.4**
	SNR=16						
YKDB	**Yokjido**	**45.91**	**75**	P	**P**	**19 22 52.0**	**+3.3**
	SNR=15						

PRMA	**PARMA**	45.98	300	P	P	19 22 50.0	+1.0
PRMA				IAmb	IAmb	19 23 40.0	
	comp=Z,2µm,1.5s						
CASP	**Castiglione de**	46.01	297	P	P	19 22 48.2	-1.1
KSDAG	**Daegu**	46.02	73	P	P	19 22 50.0	+0.5
	SNR=36						
STU	**Stuttgart**	46.03	306	P	P	19 22 49.2	-0.2
STU				pmax	pmax		
	comp=Z,721nm,0.9s						
STU	**Stuttgart**	46.03	306	*e*P	P	19 22 50.6	+1.2
	comp=Z,790nm,0.9s,baz=85,slow=7.8						
STU	**Stuttgart**	46.03	306	⇑P	P	19 22 50.1	+0.8
STU	**Stuttgart**	46.03	306	P	P	19 22 49.2	-0.2
VLC	**Villacollemand**	46.05	299	⇑P	P	19 22 49.9	+0.2
VLC	**Villacollemand**	46.05	299	P	P	19 22 49.3	-0.4
VLC				IAmb	IAmb	19 23 41.4	
	comp=Z,2µm,1.4s						
USA0B	**Ussuriysk Arra**	46.07	61	P	P	19 22 49.3	-0.4
USA0B				pmax	pmax		
	comp=Z,712nm,1.0s						
USA0B	**Ussuriysk Arra**	46.07	61	P	P	19 22 49.3	-0.4
USRK	**Ussuriysk Ar.**	46.07	61	P	P	19 22 50.0	+0.3
	comp=Z,505nm,0.9s,baz=280,slow=7.7,SNR=198						
USRK				PcP	PcP	19 24 22.9	+0.5
	comp=Z,265nm,1.1s,baz=251,slow=5.8,SNR=6.0						
USRK	**Ussuriysk Ar.**	46.07	61	P	P	19 22 49.7	0.0
KSULJ	**Uljin**	46.12	71	P	P	19 22 52.0	+1.8
	SNR=35						
YODB	**Yeongdeok**	46.17	72	P	P	19 22 52.0	+1.3
	SNR=40						
YODB	**Yeongdeok**	46.17	72	P	P	19 22 52.0	+1.3
	SNR=40						
VLA	**Vladivostok**	46.23	62*c*	*i*P	P	19 22 51.7	+0.7
VLA				pmax	pmax		
	comp=Z,5µm,1.1s						
HLG	**Helgoland**	46.23	313	*e*P	P	19 22 51.6	+0.8
	comp=Z,2µm,1.4s,baz=85,slow=7.8						
HLG	**Helgoland**	46.23	313	⇑P	P	19 22 52.4	+1.5
TNS	**Taunus Mts**	46.30	308	*e*P	P	19 22 52.6	+1.0
	comp=Z,272nm,1.1s,baz=85,slow=7.8						
MOL	**Molde**	46.34	325	*e*P	P	19 22 53.1	+1.5
MOL				*e*S	S	19 29 22.8	+0.2
SNART	**Snartemo**	46.42	319	*e*P	P	19 22 53.5	+1.3
SNART				*e*S	S	19 29 25.3	+1.5
IBBN	**Ibbenburen**	46.48	311	*e*P	P	19 22 54.0	+1.2
	comp=Z,843nm,0.9s,baz=85,slow=7.8						
IBBN	**Ibbenburen**	46.48	311	⇑P	P	19 22 53.8	+0.9
LODK	**Lodwar**	46.55	234	P	P	19 22 55.6	+1.7
	SNR=293						
LODK	**Lodwar**	46.55	234	P	P	19 22 55.3	+1.4
BOB	**Bobbio (Coli)**	46.58	300	⇑P	P	19 22 54.8	+0.9
AKN	**Aaknes**	46.58	324	*e*P	P	19 22 54.8	+1.3
AKN				*e*S	S	19 29 26.3	+0.2
BFO	**Black Forest**	46.67	305	P	P	19 22 54.3	-0.1
BFO				pmax	pmax		
	comp=Z,341nm,1.0s						
BFO	**Black Forest**	46.67	305	*e*P	P	19 22 54.4	-0.1
	comp=Z,208nm,1.2s,baz=85,slow=7.8						
BFO	**Black Forest**	46.67	305	P	P	19 22 54.4	0.0
BFO	**Black Forest**	46.67	305	P	P	19 22 54.2	-0.1
ODD1	**Odda**	46.71	321	*e*P	P	19 22 56.1	+1.6
ODD1				*e*S	S	19 29 28.8	+0.8
BLS5	**Blasjo**	46.80	321	*e*P	P	19 22 57.0	+1.8
BLS5				IVmB_BB		19 23 00.9	
	comp=Z,16µm,1.5s						
BLS5				*e*S	S	19 29 31.2	+1.9
JTU	**Tsushima**	46.82	74	⇑P	P	19 22 57.0	+1.3
JTU	**Tsushima**	46.82	74	P	P	19 22 56.7	+1.0
BUG	**Bochum--Univer**	46.88	310	*e*P	P	19 22 56.9	+0.9
	comp=Z,561nm,1.0s,baz=85,slow=7.8						
BBP	**Basco**	46.90	96	⇑*i*P	P	19 22 59.8	+3.3
HYA	**Hoyanger**	46.94	323	*e*P	P	19 22 57.2	+1.0
TPRI	**Tanjung Pinang**	46.95	131	P	P	19 22 57.8	+0.9
AHRW	**Bad Neuenahr-A**	47.13	308	*e*P	P	19 22 59.1	+1.2
	comp=Z,402nm,1.0s,baz=85,slow=7.8						
HSPB	**Hornsund (broa**	47.21	345	*e*P	P	19 23 00.0	+2.0
BER	**Bergen**	47.35	322	*e*P	P	19 23 00.7	+1.2
BER				IVmBBB		19 23 03.2	
	comp=Z,12µm,1.4s						
BER				*e*S	S	19 29 38.8	+1.9
ASK	**Askoy**	47.42	322	*e*P	P	19 23 01.0	+1.0
KMY	**Karmoy**	47.42	320	*e*P	P	19 23 01.4	+1.5
JMJ	**Miyako jima 2**	47.45	88	P	P	19 23 01.8	+1.1
ECH	**Echery**	47.46	305	P	P	19 23 00.5	0.0
ECH				pmax	pmax		
	comp=Z,286nm,1.0s						
ECH	**Echery**	47.46	305	⇑P	P	19 23 00.5	0.0
ECH	**Echery**	47.46	305	P	P	19 23 00.5	0.0
FOO	**Floro**	47.49	324	*e*P	P	19 23 01.6	+1.1
FOO				*e*S	S	19 29 40.0	+1.2
SPB2	**Spitsbergen Ar**	47.55	347	P	P	19 23 01.1	+0.4
SPB2				IAmb	IAmb	19 23 10.8	
	comp=Z,2µm,1.1s						
SPA0	**Spitsbergen Ar**	47.56	347	*e*P	P	19 23 03.0	+2.1
SPA0				IVmB_BB		19 23 05.6	
	comp=Z,17µm,1.3s						
SPA0				*e*S	S	19 29 40.8	+1.3
SPITS	**Spitsbergen Ar**	47.56	347	P	P	19 23 02.5	+1.7
	comp=Z,490nm,0.6s,baz=115,slow=11,SNR=236						
SPITS	**Spitsbergen Ar**	47.56	347	P	P	19 23 01.9	+1.1
SPITS				pmax	pmax		
	comp=Z,3µm,1.3s						
SUE	**Sulen**	47.63	323	*e*P	P	19 23 09.0	+7.5
SUE				*e*S	S	19 29 51.4	+11
BTNL	**Ternell**	47.72	309	*d*P	P	19 23 03.1	+0.7
	comp=Z,469nm,0.9s						
BTNL				*d*PcP	PcP	19 24 30.5	+2.3
SENIN	**Lac Senin/Sane**	47.72	303	P	P	19 23 02.2	-0.6
MEM	**Membach**	47.79	309	*d*P	P	19 23 03.6	+0.6
	comp=Z,500nm,0.9s						
GRNR	**Gornyy**	47.82	51	⇑*i*P	P	19 23 06.8	+3.6
GRNR				*e*		19 25 55.4	
GRNR				pmax	pmax		
	comp=E,910nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,2µm,0.9s						
GRNR				pmax	pmax		
	comp=N,180nm,1.1s						
GRNR				MLR	MLR		
	comp=E,3µm,18.0s						
GRNR				MLR	MLR		
	comp=N,2µm,11.0s						
GRNR				MLR	MLR		
	comp=Z,4µm,12.0s						
BHOU	**Houvegnez**	47.84	308	*d*P	P	19 23 04.4	+1.0
	comp=Z,171nm,1.2s						
WLF	**Walferdange**	47.85	307	*d*P	P	19 23 04.7	+1.2
	comp=Z,836nm,1.0s						
WLF	**Walferdange**	47.85	307	P	P	19 23 03.6	+0.1
WLF				pmax	pmax		
	comp=Z,1µm,0.9s						
WLF	**Walferdange**	47.85	307	*e*P	P	19 23 04.9	+1.4
	comp=Z,664nm,0.9s,baz=85,slow=7.8						
WLF	**Walferdange**	47.85	307	⇑P	P	19 23 04.7	+1.2
WLF	**Walferdange**	47.85	307	P	P	19 23 03.6	+0.1
WLF				IAmb	IAmb	19 23 08.6	
	comp=Z,1µm,0.9s						
VSL	**Villasalto**	47.96	293	⇑P	P	19 23 03.8	-0.7
VSL	**Villasalto**	47.96	293	P	P	19 23 03.5	-0.9
BEBN	**Eben Emael**	47.97	309	*d*P	P	19 23 04.8	+0.5
	comp=Z,255nm,0.9s						
BSTI	**Sart Tilman**	48.07	309	*d*P	P	19 23 06.1	+1.0
	comp=Z,51nm,0.9s						
BCLA	**Clavier**	48.27	309	*b*P	P	19 23 07.3	+0.7
	comp=Z,133nm,0.9s						
BCLA				*d*PcP	PcP	19 24 30.6	+0.4
LPL	**La Plagne**	48.29	302	*e*P	P	19 23 06.9	-0.3
LPL				pmax	pmax		
	comp=Z,758nm,0.9s						
RCHB	**Rochefort**	48.36	308	*d*P	P	19 23 07.9	+0.6
	comp=Z,255nm,1.0s						
BGES	**Gesves**	48.41	309	*d*P	P	19 23 08.3	+0.6
	comp=Z,137nm,1.3s						
BNI	**Bardonecchia**	48.44	301	P	P	19 23 07.9	-0.3
BNI				pmax	pmax		
	comp=Z,446nm,0.9s						
BNI	**Bardonecchia**	48.44	301	⇑P	P	19 23 08.0	-0.1
BNI	**Bardonecchia**	48.44	301	P	P	19 23 07.9	-0.3
JNU	**Nakatsue**	48.47	75	P	P	19 23 09.7	+1.2
	comp=Z,3µm,0.9s,baz=321,slow=3.5,SNR=194						
JNU	**Nakatsue**	48.47	75	⇑P	P	19 23 09.7	+1.2
JNU	**Nakatsue**	48.47	75	P	P	19 23 09.2	+0.8
JNU	**Nakatsue**	48.47	75	P	P	19 23 09.9	+1.4
BMRD	**Maredsous**	48.62	308	*d*P	P	19 23 10.1	+0.7
	comp=Z,585nm,1.0s						
KBS	**Kingsbay**	48.68	347	P	P	19 23 10.7	+1.4
KBS				pmax	pmax		
	comp=Z,3µm,1.1s						
KBS	**Kingsbay**	48.68	347	*i* P	P	19 23 11.8	+2.5
KBS				IVmB_BB		19 23 14.0	
	comp=Z,51µm,1.1s						
KBS				IAmb	IAmb	19 23 14.4	
	comp=Z,7µm,1.1s						
KBS	**Kingsbay**	48.68	347	*e*P	P	19 23 11.1	+1.7
KBS				IVmB_BB		19 23 13.9	
	comp=Z,22µm,1.1s						
KBS				*e*S	S	19 29 58.6	+3.5
KBS	**Kingsbay**	48.68	347	⇑P	P	19 23 10.9	+1.6
KBS	**Kingsbay**	48.68	347	P	P	19 23 10.7	+1.4
KBS				IAmb	IAmb	19 23 14.7	
	comp=Z,3µm,1.1s						
JSU	**Suzuyama**	48.74	78	⇓P	P	19 23 12.3	+1.7
JSU	**Suzuyama**	48.74	78	P	P	19 23 11.2	+0.6
JSU				IAmb	IAmb	19 23 15.3	
	comp=Z,1µm,0.8s						
DOU	**Dourbes**	48.77	308	*d*P	P	19 23 11.3	+0.9
	comp=Z,390nm,1.1s						
UCC	**Uccle**	48.80	309	*d*P	P	19 23 11.0	+0.4
	comp=Z,72nm,0.7s						
UCC	**Uccle**	48.80	309	P	P	19 23 10.6	0.0
UCC	**Uccle**	48.80	309	P	P	19 23 10.6	0.0
SNF	**Seneffe**	48.89	309	*d*P	P	19 23 12.3	+0.9
	comp=Z,611nm,1.0s						
KMBO	**Kilima Mbogo**	48.91	228	P	P	19 23 13.7	+1.5
	comp=Z,234nm,0.8s,baz=34,slow=11,SNR=450						
KMBO				S	S	19 30 02.5	+2.2
	comp=Z,6.9nm,1.0s,baz=322,slow=20,SNR=1.3						
KMBO	**Kilima Mbogo**	48.91	228	*i* P	P	19 23 13.4	+1.2
	SNR=499						
KMBO	**Kilima Mbogo**	48.91	228	⇑P	P	19 23 13.7	+1.5
KMBO	**Kilima Mbogo**	48.91	228	P	P	19 23 13.3	+1.2
KMBO	**Kilima Mbogo**	48.91	228	⇑P	P	19 23 13.4	+1.2
KMBO				pP	pP	19 24 05.2	+6.7
JOW	**Kunigami**	48.94	84	⇑P	P	19 23 12.3	+0.3
JOW	**Kunigami**	48.94	84	P	P	19 23 12.1	0.0
JOW				IAmb	IAmb	19 23 15.7	
	comp=Z,2µm,1.2s						
JOW	**Kunigami**	48.94	84	P	P	19 23 12.7	+0.6
TEY	**Ternei**	49.09	59	⇑*i*P	P	19 23 12.7	-0.2
TEY				*e*		19 24 33.7	
TEY				*e*		19 26 13.6	
TEY				*e*		19 29 53.5	
TEY				pmax	pmax		
	comp=N,900nm,2.5s						
TEY				pmax	pmax		
	comp=E,800nm,2.5s						
TEY				pmax	pmax		
	comp=Z,900nm,2.7s						
TEY				pmax	pmax		
	comp=N,850nm,1.0s						
TEY				pmax	pmax		
	comp=E,850nm,1.0s						
TEY				pmax	pmax		
	comp=Z,850nm,1.0s						
KEST	**Kesra**	49.18	289	P	P	19 23 14.6	+0.7
	comp=Z,633nm,1.0s,baz=315,slow=1.1,SNR=257						
KEST				pP	pP	19 24 00.6	+1.2
	comp=Z,611nm,1.2s,baz=31,slow=3.5,SNR=1.9						
KEST				S	S	19 30 06.0	+2.6
	comp=Z,21nm,1.1s,baz=330,slow=20,SNR=1.8						
KEST	**Kesra**	49.18	289	P	P	19 23 13.9	0.0
KEST				IAmb	IAmb	19 24 05.9	
	comp=Z,2µm,1.5s						
KIBK	**Kibwezi**	49.41	226	P	P	19 23 16.3	+0.4
KIBK				IAmb	IAmb	19 23 26.2	
	comp=Z,779nm,0.8s						
JHS	**Saijyo**	49.52	72	⇑P	P	19 23 16.4	-0.1
JHS	**Saijyo**	49.52	72	P	P	19 23 16.6	+0.1
JHS				IAmb	IAmb	19 23 19.8	
	comp=Z,2µm,1.0s						
RUSF	**Rustrel**	49.54	300	⇑P	P	19 23 19.2	+2.8
TGY	**Tagaytay City**	49.57	103	*e*P	P	19 23 19.6	+2.6
SSB	**Saint Sauveur**	49.85	302	P	P	19 23 18.3	-0.4
SSB				pmax	pmax		
	comp=Z,399nm,0.8s						
SSB	**Saint Sauveur**	49.85	302	⇑P	P	19 23 18.9	+0.2
SSB	**Saint Sauveur**	49.85	302	P	P	19 23 18.3	-0.4
PGP	**Puerto Galera**	49.94	104	⇑*e*P	P	19 23 20.1	+0.3
NKL	**Nikolayevsk**	50.03	47	*e*P	P	19 23 18.1	-1.8
NKL				*e*		19 24 30.5	
NKL				*e*S	S	19 30 14.7	+0.1
NKL				*e*SS	SS	19 33 53.3	+3.5
NKL				pmax	pmax		
	comp=Z,6µm,1.0s						
NKL				pmax	pmax		
	comp=Z,2µm,1.5s						
NKL				smax	smax		
	comp=E,8.0nm,0.6s						
NKL				smax	smax		
	comp=N,10.0nm,1.1s						
NKL				MLR	MLR		
	comp=N,16nm,14.0s						
NKL				MLR	MLR		
	comp=E,16nm,14.0s						
NKL				MLR	MLR		
	comp=Z,3µm,10.0s						
LQP	**Lukban**	50.04	103	⇑*e*P	P	19 23 21.7	+1.0
SSF	**Saint Saulge**	50.11	304	*e*P	P	19 23 19.9	-0.7
SSF				pmax	pmax		
	comp=Z,620nm,1.2s						
PMBI	**Palembang**	50.17	134	⇑P	P	19 23 20.8	-0.6
PMBI	**Palembang**	50.17	134	P	P	19 23 20.5	-0.9
PMBI				IAmb	IAmb	19 23 24.8	
	comp=Z,2µm,0.9s						
PMBI	**Palembang**	50.17	134	P	P	19 23 21.5	+0.1
KSM	**Kuching**	50.20	125	⇑P	P	19 23 22.5	+0.9
KSM	**Kuching**	50.20	125	P	P	19 23 23.0	+1.4
KSM	**Kuching**	50.20	125	P	P	19 23 21.8	+0.1
KSM	**Kuching**	50.20	125	P	P	19 23 22.5	+0.9
CMAH	**Djebel Manchou**	50.34	290	P	P	19 23 22.9	+0.4
ABSA	**Djebel Ababsia**	50.41	290	P	P	19 23 23.7	+0.5
PPR	**Puerto Princes**	50.50	110	⇑*e*P	P	19 23 24.9	+1.0
JMN	**Monobe**	50.57	73	⇑P	P	19 23 25.2	+0.9
JMN	**Monobe**	50.57	73	P	P	19 23 24.8	+0.5
JMN				IAmb	IAmb	19 23 28.9	
	comp=Z,1µm,1.0s						
LRW	**Lerwick**	50.61	322	*e*P	P	19 23 24.4	+0.3
LRW				IAmb	IAmb	19 23 28.1	
	comp=Z,2µm,0.9s						
ELMS	**Elmsett, Ipswi**	50.63	311	*e*P	P	19 23 24.6	+0.2
ELMS				IAmb	IAmb	19 23 28.4	
	comp=Z,2µm,0.8s						
CLF	**Chambon-Foret**	50.70	306	⇑P	P	19 23 25.2	+0.2
CLF	**Chambon-Foret**	50.70	306	P	P	19 23 24.8	-0.2
CLF				IAmb	IAmb	19 24 16.5	
	comp=Z,2µm,1.5s						
WACR	**West Acre**	50.73	312	*e*P	P	19 23 25.4	+0.3
WACR				IAmb	IAmb	19 23 29.4	
	comp=Z,5µm,0.9s						
ELSH	**Elham, Standar**	50.73	310	*e*P	P	19 23 25.9	+0.7
ELSH				IAmb	IAmb	19 23 29.2	
	comp=Z,3µm,0.8s						
SBUM	**Sibu**	50.76	122	⇑P	P	19 23 27.1	+1.2
SBUM	**Sibu**	50.76	122	P	P	19 23 27.0	+1.1
SBUM	**Sibu**	50.76	122	P	P	19 23 26.8	+0.9
JCNP	**Jose Panganiba**	50.85	102	⇑*e*P	P	19 23 27.3	+0.8
CKFL	**Kef-Lekhel**	50.94	290	P	P	19 23 26.8	-0.3
KKM	**Kota Kinabalu**	51.07	115	⇑P	P	19 23 29.9	+1.6
KKM	**Kota Kinabalu**	51.07	115	P	P	19 23 29.0	+0.7
KKM				IAmb	IAmb	19 23 33.5	
	comp=Z,2µm,1.2s						
KKM	**Kota Kinabalu**	51.07	115	P	P	19 23 29.2	+0.9
LMK	**Market Rasen**	51.15	313	⇑*e*P	P	19 23 28.3	0.0
LMK				IAmb	IAmb	19 23 32.1	
	comp=Z,920nm,0.8s						
CASM	**Ain Smara**	51.16	290	P	P	19 23 28.4	-0.3
JWT	**Wachi**	51.17	71	⇑P	P	19 23 29.9	+1.2
JWT	**Wachi**	51.17	71	P	P	19 23 29.2	+0.5
HMNX	**Herstmonceux**	51.28	310	*e*P	P	19 23 30.2	+0.9
HMNX				IAmb	IAmb	19 23 33.2	
	comp=Z,1µm,0.8s						
DFRA	**Djebel Bou Aff**	51.53	291	P	P	19 23 31.4	-0.1
MAHO	**Mahon**	51.59	295	*i* P	P	19 23 29.8	-1.9
MAHO				*i* S	S	19 30 32.8	-3.5
MAHO	**Mahon**	51.59	295	⇑P	P	19 23 31.4	-0.3
CAF	**Calviac**	51.63	302	*e*P	P	19 23 31.9	-0.1
CAF				pmax	pmax		
	comp=Z,402nm,0.8s						
TYV	**Tymovskoe**	51.69	50	*e*P	P	19 23 34.5	+2.2
TYV				*e*S	S	19 30 43.1	+5.8
TYV				pmax	pmax		
	comp=Z,1µm,0.8s						
TYV				pmax	pmax		
	comp=Z,7µm,5.5s						
TYV				smax	smax		
	comp=N,2µm,9.2s						
TYV				smax	smax		
	comp=E,7µm,9.2s						
TYV				smax	smax		
	comp=E,52nm,1.5s						
UGL	**Uglegorsk**	51.73	52	⇓*i*P	P	19 23 34.1	+1.5
UGL				*e*		19 24 46.1	
UGL				*e*S	S	19 30 40.6	+2.6
UGL				pmax	pmax		
	comp=Z,7µm,1.6s						
UGL				pmax	pmax		
	comp=Z,4µm,0.9s						
DRUM	**Mains of Drumt**	51.74	318	⇑*e*P	P	19 23 32.7	+0.1
DRUM				IAmb	IAmb	19 23 36.4	
	comp=Z,1µm,0.9s						
HPK	**Haverah Park**	51.81	314	⇑*e*P	P	19 23 33.6	+0.4
HPK				IAmb	IAmb	19 23 36.9	
	comp=Z,2µm,0.7s						
CWF	**Charnwood Fore**	51.88	313	*e*P	P	19 23 33.7	0.0
CWF				IAmb	IAmb	19 23 37.0	
	comp=Z,776nm,1.4s						
MLA1	**Latheron**	51.97	320	*e*P	P	19 23 34.9	+0.6
LBWR	**Ladybower, Pea**	51.98	313	*e*P	P	19 23 34.5	0.0
LBWR				IAmb	IAmb	19 23 38.0	
	comp=Z,762nm,0.9s						
ESY	**Stoneypath**	51.99	317	⇑*e*P	P	19 23 34.6	+0.1
SET	**Setif**	52.01	291	P	P	19 23 36.0	+1.0
MCD	**Coleburn Disti**	52.04	319	⇑*e*P	P	19 23 35.1	+0.3
EDU	**Dundee**	52.09	318	*e*P	P	19 23 35.3	+0.1
WOL	**Wolverton**	52.14	311	⇑*e*P	P	19 23 35.8	+0.2
SPMM	**Sapulut**	52.16	116	P	P	19 23 38.0	+1.7
BIGH	**Upper Bighouse**	52.23	320	⇑*e*P	P	19 23 36.3	+0.2
BIGH				IAmb	IAmb	19 23 40.2	
	comp=Z,2µm,1.1s						
EBL	**Broad Law**	52.26	317	⇑*e*P	P	19 23 36.4	-0.1
EDI	**Edinburgh**	52.31	317	⇑*e*P	P	19 23 37.0	+0.2
EDI				IAmb	IAmb	19 23 40.5	
	comp=Z,1µm,0.8s						
STNC	**Stoke**	52.33	313	⇑*e*P	P	19 23 37.3	+0.3
STNC				IAmb	IAmb	19 23 40.9	
	comp=Z,3µm,1.6s						
JSD	**Sado**	52.35	67	⇑P	P	19 23 37.0	-0.3
JSD	**Sado**	52.35	67	P	P	19 23 37.0	-0.3
JSD				IAmb	IAmb	19 23 40.5	
	comp=Z,2µm,1.0s						
JAP	**San Jose, Anti**	52.37	106	⇓*e*P	P	19 23 40.5	+2.8
INU	**Inuyama**	52.38	70	⇑P	P	19 23 37.8	+0.2
INU	**Inuyama**	52.38	70	P	P	19 23 37.4	-0.2
INU				IAmb	IAmb	19 23 41.4	
	comp=Z,1µm,1.1s						
INU	**Inuyama**	52.38	70	P	P	19 23 37.9	+0.3
EBH	**Black Hill**	52.42	317	⇑*e*P	P	19 23 37.7	0.0
ESK	**Eskdalemuir**	52.44	316	⇑*e*P	P	19 23 37.8	0.0
ESK				IAmb	IAmb	19 23 41.4	
	comp=Z,2µm,1.1s						
ESK	**Eskdalemuir**	52.44	316	P	P	19 23 37.7	0.0
ESK				pmax	pmax		
	comp=Z,1µm,1.1s						
ESK	**Eskdalemuir**	52.44	316	⇑P	P	19 23 37.7	0.0
ESK	**Eskdalemuir**	52.44	316	P	P	19 23 37.7	0.0
ESK				IAmb	IAmb	19 23 41.7	
	comp=Z,1µm,1.1s						
SWN1	**Swindon**	52.45	311	*e*P	P	19 23 38.0	+0.2
SWN1				IAmb	IAmb	19 23 41.7	
	comp=Z,3µm,1.1s						
RCP	**Roxas**	52.50	105	⇑*e*P	P	19 23 38.8	+0.1
KESW	**Keswick, Cumbr**	52.53	315	⇑*e*P	P	19 23 38.9	+0.5
KESW				IAmb	IAmb	19 23 42.4	
	comp=Z,1µm,0.9s						
JGF	**Kuroka**	52.54	70	⇑P	P	19 23 39.1	+0.2
JGF	**Kuroka**	52.54	70	P	P	19 23 38.5	-0.3
MBAR	**Mbarara**	52.60	235	P	P	19 23 39.9	+0.3
MBAR				pmax	pmax		
	comp=Z,623nm,0.9s						
MBAR	**Mbarara**	52.60	235	P	P	19 23 40.3	+0.7
MBAR				P	P	19 23 40.3	+0.7
MBAR	**Mbarara**	52.60	235	⇑P	P	19 23 40.1	+0.4
MBAR	**Mbarara**	52.60	235	P	P	19 23 39.9	+0.3
MBAR	**Mbarara**	52.60	235	⇑P	P	19 23 40.2	+0.6
MBAR				pP	pP	19 24 33.3	+6.5
MDO	**Dochfour**	52.65	319	*e*P	P	19 23 39.2	-0.1
MFF	**Saint Martin d**	52.65	305	*e*P	P	19 23 38.5	-1.0
MFF				pmax	pmax		
	comp=Z,603nm,1.1s						
YSS	**Yuzh-Sakhalins**	52.73	55	*e*P	P	19 23 40.5	+0.5
YSS				*e**PP	pP	19 24 27.5	+0.2
YSS				*e**SP	PcP	19 24 48.3	+1.6
YSS				*e*S	S	19 30 52.6	+0.9
YSS				*e*		19 33 11.0	
YSS				pmax	pmax		
	comp=Z,10µm,7.1s						
YSS				pmax	pmax		
	comp=E,3µm,6.6s						
YSS				pmax	pmax		
	comp=Z,4µm,0.9s						
YSS				smax	smax		
	comp=N,1µm,7.2s						
YSS				MLR	MLR		
	comp=Z,6µm,16.0s						
YSS				MLR	MLR		
	comp=E,4µm,15.0s						
YSS	**Yuzh-Sakhalins**	52.73	55	⇑P	P	19 23 40.0	0.0
YSS	**Yuzh-Sakhalins**	52.73	55	P	P	19 23 40.1	+0.1
YSS	**Yuzh-Sakhalins**	52.73	55	P	P	19 23 40.7	+0.7
KOND	**Kondoa**	52.80	226	*i* P	P	19 23 42.6	+1.5
KOND				*e*		19 23 44.0	
	baz=34,slow=7.9						
MJB9	**Matsu-Tunnel**	52.83	69	P	P	19 23 40.6	-0.4
MJB9				IAmb	IAmb	19 23 44.3	
	comp=Z,2µm,1.1s						
MAJO	**Matsushiro**	52.84	69*c*	*i*P	P	19 23 40.8	-0.2
MAJO				pmax	pmax		
	comp=Z,2µm,1.1s						
MAJO	**Matsushiro**	52.84	69	⇑P	P	19 23 40.7	-0.2
MAJO	**Matsushiro**	52.84	69	P	P	19 23 40.5	-0.4
MAJO				IAmb	IAmb	19 23 44.3	
	comp=Z,2µm,1.1s						
MAJO	**Matsushiro**	52.84	69	P	P	19 23 40.6	-0.4
MAT	**Matsushiro**	52.84	69	P	P	19 23 40.6	-0.4
MAT				S	S	19 30 55.7	+2.2
MJAR	**Matsushiro Arr**	52.84	69	P	P	19 23 41.2	+0.2
	comp=Z,1µm,1.1s,baz=294,slow=9.3,SNR=310						
MJAR				pP	pP	19 24 30.1	+1.7
	comp=Z,99nm,1.0s,baz=294,slow=7.0,SNR=1.4						
MJAR				P4KPbc		20 01 03.4	
	comp=Z,6.4nm,0.9s,baz=294,slow=5.8,SNR=7.8						
MJAR	**Matsushiro Arr**	52.84	69	P	P	19 23 40.7	-0.3
MJAR				IAmb	IAmb	19 23 44.4	
	comp=Z,2µm,1.1s						
HLM1	**Long Mynd**	52.86	313	*e*P	P	19 23 41.1	+0.2
HLM1				IAmb	IAmb	19 23 44.6	
	comp=Z,982nm,1.1s						
PGBU	**Glenifferbraes**	53.05	317	⇑*e*P	P	19 23 42.6	+0.5
PGBU				IAmb	IAmb	19 23 46.1	
	comp=Z,1µm,0.9s						
NEWG	**New Galloway**	53.05	316	*e*P	P	19 23 42.3	+0.1
NEWG				IAmb	IAmb	19 23 46.2	
	comp=Z,2µm,0.8s						
MCH1	**Michaelchurch**	53.05	312	⇑*e*P	P	19 23 42.2	-0.1
MCH1				IAmb	IAmb	19 23 45.8	
	comp=Z,2µm,0.8s						
MCH1	**Michaelchurch**	53.05	312	⇑P	P	19 23 42.2	-0.1
JEW	**Eniwo**	53.06	60	⇑P	P	19 23 42.9	+0.4
JEW	**Eniwo**	53.06	60	P	P	19 23 42.5	0.0
JQE	**Queens East**	53.17	308	*e*P	P	19 23 43.3	+0.1
LLW	**Llanuwychllyn**	53.25	313	*e*P	P	19 23 43.9	+0.2
JSA	**Saint Aubin**	53.26	308	⇑*e*P	P	19 23 43.4	-0.4
JSA	**Saint Aubin**	53.26	308	⇑P	P	19 23 43.8	0.0
JVM	**Valle D.L. Mar**	53.27	308	*e*P	P	19 23 44.0	0.0
MYLDM	**Lahad Datu**	53.33	114	⇑P	P	19 23 46.9	+2.1
MYLDM	**Lahad Datu**	53.33	114	P	P	19 23 46.0	+1.3
MYLDM				IAmb	IAmb	19 24 04.3	
	comp=Z,1µm,1.0s						
KPL	**Plockton**	53.36	319	⇑*e*P	P	19 23 44.7	+0.4
KPL				IAmb	IAmb	19 23 48.2	
	comp=Z,2µm,0.9s						
GAL1	**Galloway**	53.38	316	⇑*e*P	P	19 23 44.5	-0.1
GAL1				IAmb	IAmb	19 23 48.5	

	comp=Z,839nm,1.0s						
IOMK	Kirk Michael	53.44	315	⇑eP	P	19 23 45.6	+0.5
IOMK				IAmb	IAmb	19 23 49.1	
	comp=Z,3μm,0.8s						
JTM	Tenmabayashi	53.46	63	⇓P	P	19 23 45.6	+0.2
JTM	Tenmabayashi	53.46	63	P	P	19 23 44.5	-0.9
ASAJ	Asahikawa	53.46	58	P	P	19 23 45.4	0.0
ASAJ				pmax	pmax		
	comp=Z,922nm,1.3s						
JKA	Kamikawa-asahi	53.46	58	P	P	19 23 45.4	0.0
JKA				IAmb	IAmb	19 24 07.6	
	comp=Z,922nm,1.3s						
CNOP	Candoni, Negro	53.47	106	⇑iP	P	19 23 46.7	+0.9
YLL	Llanberis	53.47	314	eP	P	19 23 45.3	0.0
WME	Myndd Eilian	53.49	314	eP	P	19 23 44.9	-0.6
JSG	Sagara	53.52	71	⇑P	P	19 23 49.1	+3.1
JSG	Sagara	53.52	71	P	P	19 23 46.8	+0.8
JSG				IAmb	IAmb	19 23 50.5	
	comp=Z,3μm,1.3s						
WIM	Isle of Man	53.52	315	eP	P	19 23 45.7	0.0
SBV	Sambava	53.55	206	⇑P	P	19 23 46.5	+0.2
SBV	Sambava	53.55	206	P	P	19 23 46.9	+0.6
WLF1	Llynfaes	53.57	314	⇑eP	P	19 23 46.2	+0.2
WLF1				IAmb	IAmb	19 23 49.3	
	comp=Z,1μm,0.9s						
YRC	Rhoscolyn	53.68	314	eP	P	19 23 46.8	0.0
LEWI	Lewis, Hebride	53.83	320	eP	P	19 23 48.1	+0.3
LEWI				IAmb	IAmb	19 23 52.0	
	comp=Z,2μm,1.1s						
DODT	Dodoma, Tanzan	53.86	226	⇑P	P	19 23 50.0	+1.3
DODT				pP	PcP	19 24 45.8	-5.9
NOR	Nord	53.86	350	i P	P	19 23 50.0	+2.3
NOR				IVmB_BB		19 23 52.0	
	comp=Z,12μm,1.7s						
NOR				IAmb	IAmb	19 23 52.4	
	comp=Z,2μm,1.5s						
NOR	Nord	53.86	350	⇑P	P	19 23 48.7	+0.9
COCO	West Island	54.11	148	P	P	19 23 51.1	+0.8
COCO				pmax	pmax		
	comp=Z,2μm,1.3s						
COCO	West Island	54.11	148	P	P	19 23 51.1	+0.8
COCO				IAmb	IAmb	19 23 55.4	
	comp=Z,2μm,1.3s						
RSBS	Rosebush, Pemb	54.11	312	eP	P	19 23 49.9	-0.1
RSBS				IAmb	IAmb	19 23 53.4	
	comp=Z,2μm,1.6s						
CLGH	Cloghs, Cushen	54.11	316	⇑eP	P	19 23 50.0	0.0
HTL	Hartland	54.21	311	⇑eP	P	19 23 50.5	-0.2
HTL				IAmb	IAmb	19 23 54.1	
	comp=Z,501nm,0.8s						
SNPH	Sibulan	54.23	106	eP	P	19 23 55.2	+3.8
JMM	Marumori	54.28	66	P	P	19 23 51.6	+0.2
MA2	Magadan	54.31	38c	iP	P	19 23 52.5	+1.2
MA2				pmax	pmax		
	comp=Z,2μm,0.9s						
MA2	Magadan	54.31	38	⇑P	P	19 23 52.0	+0.8
MA2	Magadan	54.31	38	P	P	19 23 51.5	+0.2
MA2				IAmb	IAmb	19 23 55.4	
	comp=Z,2μm,1.0s						
MA2	Magadan	54.31	38	P	P	19 23 51.8	+0.5
SEY	Seymchan	54.37	34	P	P	19 23 53.0	+1.3
	comp=Z,2μm,0.9s,baz=273,slow=8.7,SNR=238						
SEY				PcP	PcP	19 24 55.0	+2.2
	comp=Z,372nm,0.8s,baz=248,slow=9.6,SNR=4.5						
SEY				P4KPbc		20 01 11.3	
	comp=Z,5.4nm,0.8s,baz=254,slow=4.9,SNR=11						
SEY	Seymchan	54.37	34	P	P	19 23 53.0	+1.3
SEY						19 24 55.0	
JYT	Yasato	54.44	68	⇑P	P	19 23 51.9	-0.7
JYT	Yasato	54.44	68	P	P	19 23 52.1	-0.5
TBP	Tagbilaran	54.50	106	eP	P	19 23 54.1	+0.8
ERM	Erimo	54.52	60	P	P	19 23 52.7	-0.4
ERM				pmax	pmax		
	comp=Z,1μm,1.5s						
ERM	Erimo	54.52	60	⇓P	P	19 23 54.0	+0.9
ERM	Erimo	54.52	60	P	P	19 23 52.7	-0.4
ERM				IAmb	IAmb	19 23 57.5	
	comp=Z,1μm,1.4s						
ERM	Erimo	54.52	60	P	P	19 23 54.1	+1.0
DAG	Danmarks Havn	54.80	344	i P	P	19 23 54.0	-0.6
DAG				IVmB_BB		19 23 58.6	
	comp=Z,19μm,1.1s						
DAG				IAmb	IAmb	19 23 59.0	
	comp=Z,3μm,1.1s						
DAG	Danmarks Havn	54.80	344	⇑P	P	19 23 55.5	+0.9
ZCP	Zamboanga City	54.85	110	⇑eP	P	19 23 58.1	+2.3
LEM	Lembang	54.97	134	P	P	19 23 55.1	-1.6
	comp=Z,85nm,0.8s,baz=28,slow=7.0,SNR=22						
LEM				S	S	19 31 25.5	+2.9
	comp=Z,16nm,0.7s,baz=131,slow=20,SNR=1.5						
MSLP	Maasin	55.01	104	⇑eP	P	19 23 57.7	+0.8
ECHA	Ech Chlef	55.06	292	P	P	19 23 57.5	+0.5
PAGZ	Pagadian	55.27	108	⇑iP	P	19 23 59.9	+1.1
EANR	'Ain N'Sour	55.33	292	P	P	19 24 00.0	+0.9
JHJ2	Mitsune	55.38	72	P	P	19 23 58.9	-0.5
JHJ2				IAmb	IAmb	19 24 03.9	
	comp=Z,1μm,1.4s						
ETRT	Tiaret	55.40	291	P	P	19 24 02.0	+2.3
OKGL	Djebel Kef Gue	55.64	292	P	P	19 24 02.0	+0.8
DBG	Daneborg	55.66	341	i P	P	19 24 00.6	-0.1
DBG				IVmB_BB		19 24 05.3	
	comp=Z,8μm,3.2s						
DBG				IAmb	IAmb	19 24 05.8	
	comp=Z,1μm,1.3s						
DBG	Daneborg	55.66	341	⇑P	P	19 24 00.7	0.0
YUK	Yuzh-Kuril'sk	55.71	57	eP	P	19 23 59.5	-2.0
YUK				e*PP	pP	19 24 43.1	-5.8
YUK				e		19 24 56.2	
YUK				e		19 26 05.6	
YUK				eS	S	19 31 31.5	0.0
YUK				e		19 33 29.3	
YUK				eSS	SS	19 35 21.0	+1.4
YUK				pmax	pmax		
	comp=Z,3μm,1.1s						
YUK				pmax	pmax		
	comp=N,610nm,0.9s						
YUK				pmax	pmax		
	comp=E,2μm,1.2s						
YUK				pmax	pmax		
	comp=Z,2μm,1.4s						
OJBR	Djebel Berber	56.04	292	P	P	19 24 02.0	-2.1
CART	Cartagena	56.26	295	i S	S	19 31 35.4	-3.6
CART	Cartagena	56.26	295	⇑P	P	19 24 05.0	-0.5
CART	Cartagena	56.26	295	P	P	19 24 05.2	-0.2
CART				IAmb	IAmb	19 24 09.0	
	comp=Z,1μm,0.9s						
CART	Cartagena	56.26	295	P	P	19 24 05.3	-0.2
ODJA	Bouhanifia	56.51	292	P	P	19 24 08.0	+0.6
KUR	Kuril'sk	56.65	55c	iP	P	19 24 08.5	+0.4
KUR				e		19 24 59.2	
KUR				e		19 26 11.8	
KUR				pmax	pmax		
	comp=Z,6μm,4.9s						
KUR				pmax	pmax		
	comp=Z,2μm,1.1s						
KUR				MLR	MLR		
	comp=Z,2μm,8.0s						
KUR				MLR	MLR		
	comp=E,7μm,15.0s						
KUR				MLR	MLR		
	comp=N,4μm,11.0s						
USTO	Oran	56.65	292	P	P	19 24 12.0	+3.7
BKB	Balikpapan	56.65	121	⇑P	P	19 24 09.7	+1.1
BKB	Balikpapan	56.65	121	P	P	19 24 08.5	0.0
BKB				IAmb	IAmb	19 24 12.4	
	comp=Z,2μm,1.1s						
BKB	Balikpapan	56.65	121	P	P	19 24 09.8	+1.2
SMRI	Semarang	56.82	131	⇑P	P	19 24 09.9	+0.2
SMRI	Semarang	56.82	131	P	P	19 24 09.3	-0.4
SMRI				IAmb	IAmb	19 24 13.4	
	comp=Z,727nm,1.0s						
SMRI	Semarang	56.82	131	P	P	19 24 09.9	+0.2
UCM	Universidad Co	56.84	298	i P	P	19 24 10.1	+0.4
UCM				i S	S	19 31 45.6	-1.1
XMI	Christmas Isla	56.86	138	⇑P	P	19 24 08.8	-1.1
XMI	Christmas Isla	56.86	138	P	P	19 24 08.9	-1.1
XMIS	Christmas Isla	56.86	138	P	P	19 24 08.6	-1.4
XMIS				IAmb	IAmb	19 24 12.2	
	comp=Z,984nm,0.9s						
XMIS	Christmas Isla	56.86	138	P	P	19 24 08.9	-1.1
OTSS	Djebel Tessala	57.01	292	P	P	19 24 04.0	-7.0
KCP	Kidapawan	57.11	107	⇑eP	P	19 24 12.9	+1.0
SCO	Scoresbysund	57.14	336	P	P	19 24 12.4	+1.2
SCO				pmax	pmax		
	comp=Z,631nm,1.3s						
SCO	Scoresbysund	57.14	336	i P	P	19 24 13.0	+1.8
SCO				IAmb	IAmb	19 24 16.1	
	comp=Z,376nm,1.0s						
SCO	Scoresbysund	57.14	336	⇑P	P	19 24 12.9	+1.8
SCO	Scoresbysund	57.14	336	P	P	19 24 12.4	+1.2
VAL	Valentia	57.37	313	⇑P	P	19 24 13.0	-0.1
DAV	Davao City (W)	57.45	107	P	P	19 24 14.9	+0.7
	comp=Z,122nm,0.4s,baz=6.3,slow=2.5,SNR=45						
DAV	Davao City (W)	57.45	107	P	P	19 24 15.4	+1.2
DAV				P	P	19 24 15.4	+1.2
DAV	Davao City (W)	57.45	107	⇑P	P	19 24 15.2	+1.0
DAV	Davao City (W)	57.45	107	P	P	19 24 14.9	+0.7
DAV				IAmb	IAmb	19 25 43.8	
	comp=Z,2μm,1.2s						
UGM	Wanagama	57.55	132	P	P	19 24 13.9	-0.9
UGM	Wanagama	57.55	132	P	P	19 24 13.4	-1.4
GSPH	General Santos	57.59	108	⇓iP	P	19 24 17.6	+2.4
ESBB	Sonseca Array	57.59	298	P	P	19 24 14.5	-0.5
ESDC	Sonseca Array	57.59	298	P	P	19 24 14.7	-0.3
	comp=Z,295nm,0.8s,baz=56,slow=6.8,SNR=876						
ESDC				pP	pP	19 25 02.5	+0.6
	comp=Z,266nm,1.2s,baz=54,slow=5.9,SNR=2.5						
ESDC				PKPPKP	P'P'df	19 54 01.1	+0.9
	comp=Z,6.1nm,1.0s,baz=292,slow=2.1,SNR=6.4						
ESDC				P4KPbc		20 01 27.1	
	comp=Z,4.9nm,0.9s,baz=49,slow=3.6,SNR=18						
ESDC	Sonseca Array	57.59	298	P	P	19 24 14.6	-0.3
TOLI2	Tolitoli	57.75	116	P	P	19 24 16.4	+0.2
TOLI2				IAmb	IAmb	19 24 21.7	
	comp=Z,455nm,0.8s						
TOLI2	Tolitoli	57.75	116	P	P	19 24 16.9	+0.7
PAB	San Pablo	57.92	298	P	P	19 24 16.9	-0.4
PAB				pmax	pmax		
	comp=Z,844nm,1.4s						
PAB	San Pablo	57.92	298	⇑P	P	19 24 16.9	-0.4
PAB	San Pablo	57.92	298	P	P	19 24 16.9	-0.4
PAB				IAmb	IAmb	19 24 21.2	
	comp=Z,844nm,1.4s						
PAB	San Pablo	57.92	298	P	P	19 24 17.1	-0.2
CHAS	Isla Isabel II	58.27	293	i P	P	19 24 18.0	-1.7
CHAS				i S	S	19 32 04.8	-0.6
BILL	Bilibino	58.58	26d	iP	P	19 24 22.3	+1.1
BILL				e*PP	PcP	19 25 09.0	-0.1
BILL				e		19 25 10.6	
BILL				e*SP	sP	19 25 27.2	-5.2
BILL				e		19 26 34.2	
BILL				eS	S	19 32 12.3	+3.9
BILL				eSS	SS	19 36 09.7	+5.9
BILL				pmax	pmax		
	comp=Z,4μm,1.2s						
BILL				pmax	pmax		
	comp=Z,2μm,0.9s						
BILL				MLR	MLR		
	comp=Z,5μm,18.0s						
BILL	Bilibino	58.58	26	P	P	19 24 22.0	+0.8
GOG	Mont Gurugu	58.68	293	P	P	19 24 22.6	+0.1
BORG	Borgarnes	58.70	330	P	P	19 24 23.4	+1.3
BORG				pmax	pmax		
	comp=Z,502nm,0.9s						
BORG	Borgarnes	58.70	330	⇓P	P	19 24 25.4	+3.3
BORG	Borgarnes	58.70	330	P	P	19 24 23.4	+1.3
BORG				IAmb	IAmb	19 24 28.2	
	comp=Z,502nm,0.9s						
PBRG	Braganca	58.72	301	eP	P	19 24 22.6	-0.1
	comp=Z,432nm,1.6s						
PBRG	Braganca	58.72	301	ePcP	PcP	19 25 11.1	+0.8
PBRG				i LQ	LQ	19 25 33.0	
JBK	JBK	58.73	292	P	P	19 24 23.2	+0.1
TDRA	Tendrara	58.88	290	P	P	19 24 24.1	0.0
EMAL	Malaga-Limoner	59.09	295	i P	P	19 24 23.3	-2.0
EMAL				i S	S	19 32 11.3	-4.6
RER	Riviere de l'E	59.14	197	P	P	19 24 26.2	+0.5
MVO	Moncorvo	59.17	301	eP	P	19 24 26.2	+0.3
	comp=Z,463nm,1.1s						
MVO	Moncorvo	59.17	301	ePcP	PcP	19 25 14.7	+2.6
MVO				i LQ	LQ	19 25 35.8	
MVO				eS	S	19 32 20.4	+3.5
PALE	Palemas	59.38	293	P	P	19 24 27.0	-0.4
PVRL	Vila Real	59.60	301	eP	P	19 24 29.2	+0.4
	comp=Z,377nm,1.9s						
PVRL	Vila Real	59.60	301	ePcP	PcP	19 25 14.2	+0.4
PVRL				i LQ	LQ	19 25 44.5	
POLO	Lamas de Olo	59.62	301	eP	P	19 24 29.5	+0.6
	comp=Z,173nm,1.7s						
POLO	Lamas de Olo	59.62	301	ePcP	PcP	19 25 15.7	+1.8
POLO				i LQ	LQ	19 25 46.1	
AKLM	AKL	59.63	292	P	P	19 24 29.0	-0.1
ABPO	Ambohimpanom	59.64	206	P	P	19 24 29.7	+0.4
ABPO				pmax	pmax		
	comp=Z,820nm,1.1s						
ABPO	Ambohimpanom	59.64	206	⇑P	P	19 24 30.2	+0.9
ABPO	Ambohimpanom	59.64	206	P	P	19 24 29.7	+0.4
ABPO				IAmb	IAmb	19 24 34.1	
	comp=Z,820nm,1.1s						
ABPO	Ambohimpanom	59.64	206	P	P	19 24 29.8	+0.5
ABPO				pP	pP	19 25 19.6	+1.9
ABPO				S	S	19 32 28.6	+5.2
PCAB	Cabril	59.64	302	eP	P	19 24 29.8	+0.8
	comp=Z,775nm,1.7s						
PCAB	Cabril	59.64	302	ePcP	PcP	19 25 18.5	+4.6
PCAB				i LQ	LQ	19 25 43.9	
KSMZ	Kasama	59.69	227	⇑iP	P	19 24 30.9	+1.1
KSMZ				i		19 25 17.5	
KSMZ				i		19 25 19.1	
KSMZ				i		19 25 20.3	
KSMZ	Kasama	59.69	227	⇑iP	P	19 24 30.9	+1.1
KSMZ				i		19 25 17.5	
KSMZ				i		19 25 19.1	
KSMZ				i		19 25 20.3	
PGAV	Gavieira, Arco	59.71	302	eP	P	19 24 30.1	+0.5
	comp=Z,607nm,1.2s						
PGAV	Gavieira, Arco	59.71	302	ePcP	PcP	19 25 18.6	+4.3
PGAV				i LQ	LQ	19 25 44.9	
PGAV				eS	S	19 32 25.2	+1.3
MTE	Manteigas	59.84	300	eP	P	19 24 31.2	+0.8
	comp=Z,941nm,1.4s						
MTE	Manteigas	59.84	300	ePcP	PcP	19 25 19.5	+4.8
MTE				i LQ	LQ	19 25 40.5	
MTE				eS	S	19 32 25.3	-0.1
MTE	Manteigas	59.84	300	⇑P	P	19 24 30.8	+0.4
MTE	Manteigas	59.84	300	P	P	19 24 30.6	+0.2
MTE				IAmb	IAmb	19 24 34.9	
	comp=Z,828nm,1.0s						
JCJ	Chichijima	59.88	77	P	P	19 24 29.3	-1.5
JCJ				IAmb	IAmb	19 24 31.0	
	comp=Z,795nm,1.3s						
JCJ	Chichijima	59.88	77	P	P	19 24 29.8	-1.0
SKR	Severo-Kuril's	59.89	47	eP	P	19 24 27.9	-2.5
SKR				e*SP	sP	19 25 35.4	-6.2
SKR				eS	S	19 32 24.2	-1.3
SKR				pmax	pmax		
	comp=Z,2μm,8.6s						
SKR				pmax	pmax		
	comp=Z,513nm,0.6s						
SKR				MLR	MLR		
	comp=Z,2μm,17.0s						
SKR				MLR	MLR		
	comp=Z,2μm,18.0s						
PEA0B	Petropavlovsk-	59.90	44	P	P	19 24 30.4	-0.2
PEA0B				pmax	pmax		
	comp=Z,3μm,1.9s						
PEA0B	Petropavlovsk-	59.90	44	P	P	19 24 30.4	-0.2
PEA0B				IAmb	IAmb	19 24 33.5	
	comp=Z,3μm,1.9s						
PETK	Petropavlovsk-	59.90	44	P	P	19 24 30.1	-0.5
	comp=Z,214nm,0.9s,baz=218,slow=9.3,SNR=85						
PETK	Petropavlovsk-	59.90	44	P	P	19 24 30.4	-0.1
PETK	Petropavlovsk-	59.90	44	P	P	19 24 30.4	-0.1
PVIS	Viseu	59.95	300	eP	P	19 24 31.8	+0.6
	comp=Z,807nm,0.9s						
PVIS	Viseu	59.95	300	ePcP	PcP	19 25 18.1	+2.9
PCBR	Castelo Branco	60.02	299	eP	P	19 24 31.9	+0.4
	comp=Z,396nm,1.9s						
PCBR	Castelo Branco	60.02	299	ePcP	PcP	19 25 20.8	+5.4
PCBR				i LQ	LQ	19 25 42.8	
PMRV	Marv??o	60.12	299	eP	P	19 24 32.6	+0.3
	comp=Z,537nm,1.6s						
PMRV	Marv??o	60.12	299	ePcP	PcP	19 25 20.8	+4.9
PMRV				i LQ	LQ	19 25 42.3	
PMRV				eS	S	19 32 28.8	-0.3
CEU	Ceuta	60.15	294	i P	P	19 24 28.9	-3.6
CEU				i S	S	19 32 28.1	-1.3
JAGI	Jajag, Banyuwa	60.21	129	⇓P	P	19 24 30.3	-2.8
JAGI	Jajag, Banyuwa	60.21	129	P	P	19 24 31.1	-2.0
SMIR	Smir Dam	60.25	294	P	P	19 24 33.0	-0.2
CHEFC	Chefchaouen	60.47	294	P	P	19 24 34.2	-0.6
PET	Petropavlovsk	60.47	44	eP	P	19 24 34.7	+0.4
PET				e		19 25 18.0	
PET				e*PP	pP	19 25 21.6	-1.1
PET				e*SP	sP	19 25 43.7	-2.0
PET				e		19 26 53.2	
PET				eS	S	19 32 29.8	-3.0
PET				eSP	SPn	19 32 43.3	-1.9
PET				e		19 34 00.1	
PET				pmax	pmax		
	comp=Z,5μm,9.4s						
PET				pmax	pmax		
	comp=Z,1μm,1.0s						
PET				pmax	pmax		
	comp=Z,3μm,14.8s						
PET				MLR	MLR		
	comp=Z,5μm,18.0s						
PET				MLR	MLR		
	comp=Z,4μm,17.0s						
PET	Petropavlovsk	60.47	44	⇑P	P	19 24 34.1	-0.2
PET	Petropavlovsk	60.47	44	P	P	19 24 34.7	+0.4
PET				IAmb	IAmb	19 24 36.4	
	comp=Z,1μm,1.1s						
PET	Petropavlovsk	60.47	44	P	P	19 24 35.5	+1.2
PESTR	Estremoz	60.50	298	eP	P	19 24 35.0	+0.2
	comp=Z,438nm,1.9s						
PESTR	Estremoz	60.50	298	ePcP	PcP	19 25 19.2	+1.8
PESTR				i LQ	LQ	19 25 44.9	
PESTR	Estremoz	60.50	298	⇑P	P	19 24 34.5	-0.3
PESTR	Estremoz	60.50	298	P	P	19 24 34.7	-0.2
PESTR	Estremoz	60.50	298	P	P	19 24 35.1	+0.3
SFS	San Fernando	60.52	295	i P	P	19 24 32.9	-2.0
SFS				i S	S	19 32 32.6	-1.4
COI	Coimbra	60.52	300	eP	P	19 24 35.6	+0.7
	comp=Z,976nm,0.9s						
COI	Coimbra	60.52	300	ePcP	PcP	19 25 24.4	+7.0
COI				i LQ	LQ	19 25 46.7	
COI	Coimbra	60.52	300	P	P	19 24 34.7	-0.2
COI				pmax	pmax		
	comp=Z,787nm,0.9s						
COI	Coimbra	60.52	300	P	P	19 24 34.7	-0.2
COI				IAmb	IAmb	19 24 39.2	
	comp=Z,787nm,0.8s						
ARNO	Arenosillo	60.63	296	i P	P	19 24 33.0	-2.7
ARNO				i S	S	19 32 35.8	+0.4
PCAS	Casmilo, Conde	60.64	300	eP	P	19 24 35.6	-0.2
	comp=Z,449nm,1.7s						
PCAS	Casmilo, Conde	60.64	300	ePcP	PcP	19 25 23.9	+6.0
LUWI	Luwuk	60.66	116	⇑P	P	19 24 34.6	-1.6
LUWI	Luwuk	60.66	116	P	P	19 24 35.9	-0.3
LUWI				IAmb	IAmb	19 26 09.8	
	comp=Z,793nm,0.9s						
LUWI	Luwuk	60.66	116	P	P	19 24 36.6	+0.4
LCRM	LCR	60.73	292	P	P	19 24 37.0	+0.3
PMTG	Montargil	60.86	299	eP	P	19 24 37.5	+0.2
	comp=Z,451nm,1.4s						
PMTG	Montargil	60.86	299	ePcP	PcP	19 25 25.8	+7.0
PMTG				i LQ	LQ	19 25 47.4	
MDT	Midelt	60.93	291	P	P	19 24 37.9	0.0
IFR	Ifrane	61.00	292	i P	P	19 24 35.0	-3.6
IFR				i S	S	19 32 39.6	-1.1
PBEJ	Beja	61.05	298	eP	P	19 24 38.9	+0.3
	comp=Z,544nm,1.7s						
PBEJ	Beja	61.05	298	ePcP	pP	19 25 28.2	+2.0
PBEJ				i LQ	LQ	19 25 49.7	
PSBE	So Bento	61.08	300	eP	P	19 24 39.5	+0.7
	comp=Z,1μm,1.4s						
PSBE	So Bento	61.08	300	ePcP	pP	19 25 28.1	+1.9
PSBE				i LQ	LQ	19 25 49.5	
SOEG	Soedalen	61.09	335	i P	P	19 24 40.6	+2.3
SOEG				IAmb	IAmb	19 24 43.4	
	comp=Z,1μm,1.3s						
NEEM	North Greenlan	61.10	348	i P	P	19 24 39.9	+1.3
NEEM				IVmB_BB		19 24 42.7	
	comp=Z,18μm,1.6s						
NEEM				IAmb	IAmb	19 24 43.1	
	comp=Z,2μm,1.1s						
NEEM	North Greenlan	61.10	348	⇑P	P	19 24 39.4	+0.8
SUMG	Summit	61.14	341	P	P	19 24 40.1	+1.0
SUMG				pmax	pmax		
	comp=Z,2μm,1.1s						
SUMG	Summit	61.14	341	i P	P	19 24 40.0	+1.0
SUMG				IAmb	IAmb	19 24 44.1	
	comp=Z,2μm,1.1s						
SUMG	Summit	61.14	341	⇑P	P	19 24 40.4	+1.3
SUMG	Summit	61.14	341	P	P	19 24 40.1	+1.0
PVAQ	Vaqueiros	61.21	297	eP	P	19 24 39.8	+0.2
	comp=Z,817nm,1.5s						
PVAQ				eLQ	LQ	19 25 23.4	
PVAQ				i LQ	LQ	19 25 50.6	
PVAQ				eS	S	19 32 43.9	+1.1
PVAQ	Vaqueiros	61.21	297	P	P	19 24 39.7	0.0
PVAQ	Vaqueiros	61.21	297	P	P	19 24 40.0	+0.4
KAPI	Kappang	61.32	122	P	P	19 24 39.5	-1.1
	comp=Z,402nm,1.1s,baz=326,slow=6.7,SNR=41						
PCVE	Castro Verde	61.34	297	eP	P	19 24 40.9	+0.4
	comp=Z,461nm,1.7s						
PCVE	Castro Verde	61.34	297	ePcP	pP	19 25 29.3	+1.1
PCVE				i LQ	LQ	19 25 50.7	
MESJ	Messejana	61.38	298	eP	P	19 24 41.0	+0.2
MESJ				IAmb	IAmb	19 24 45.2	
	comp=Z,419nm,1.1s						
MESJ				epP	pP	19 25 28.2	-0.1
MESJ				eS	S	19 32 45.7	+0.8
MESJ	Messejana	61.38	298	eP	P	19 24 41.2	+0.4
	comp=Z,365nm,1.2s						
MESJ	Messejana	61.38	298	ePcP	pP	19 25 29.5	+1.2
MESJ				i LQ	LQ	19 25 51.4	
MESJ	Messejana	61.38	298	eP	P	19 24 41.0	+0.2
MESJ				e*PP	pP	19 25 28.2	-0.1
MESJ				eS	S	19 32 45.7	+0.8
PBDV	Barranco-do-Ve	61.43	297	eP	P	19 24 41.7	+0.5
	comp=Z,1μm,1.2s						
PBDV	Barranco-do-Ve	61.43	297	ePcP	pP	19 25 30.0	+1.1
PBDV				i LQ	LQ	19 25 51.9	
PNCL	Nicolau / Gran	61.48	298	eP	P	19 24 42.1	+0.7
	comp=Z,606nm,1.5s						
PNCL	Nicolau / Gran	61.48	298	ePcP	pP	19 25 30.7	+1.7
PNCL				i LQ	LQ	19 25 45.7	
PMAFR	Mafra	61.66	299	eP	P	19 24 43.3	+0.7
	comp=Z,1μm,0.9s						
PMAFR	Mafra	61.66	299	ePcP	pP	19 25 30.4	+0.2
PMAFR				i LQ	LQ	19 25 53.2	
LIS	Lisbon	61.66	299	eP	P	19 24 43.0	+0.3
LIS				IAmb	IAmb	19 24 47.3	
	comp=Z,923nm,1.1s						
LIS				epP	pP	19 25 30.1	-0.1
LIS				eS	S	19 32 49.2	+0.7
LIS	Lisbon	61.66	299	eP	P	19 24 43.0	+0.3
	comp=Z,946nm,1.2s						
LIS	Lisbon	61.66	299	eP	P	19 24 43.0	+0.3
LIS				e*PP	pP	19 25 30.1	-0.1
LIS				eS	S	19 32 49.2	+0.7
ZOMB	Zomba	61.67	220	⇑P	P	19 24 43.3	+0.3
ZOMB				pP	pP	19 25 32.3	+0.8
PMST	Lisbon--Monsan	61.68	299	eP	P	19 24 43.4	+0.6
	comp=Z,1μm,1.2s						
PMST	Lisbon--Monsan	61.68	299	ePcP	pP	19 25 32.5	+2.2
PMST				i LQ	LQ	19 25 53.9	
GOLM	Goulmima	61.69	290	P	P	19 24 44.0	+0.9
PTEO	Sao Teotonio	61.87	297	eP	P	19 24 44.6	+0.6
	comp=Z,828nm,1.7s						
PTEO	Sao Teotonio	61.87	297	ePcP	pP	19 25 33.9	+2.3
PTEO				i LQ	LQ	19 25 55.6	
MORF	Marmelete	61.92	297	eP	P	19 24 44.5	0.0
MORF				IAmb	IAmb	19 24 48.6	
	comp=Z,477nm,1.3s						
MORF				epP	pP	19 25 31.9	-0.2
MORF				eS	S	19 32 52.5	+0.6
MORF	Marmelete	61.92	297	eP	P	19 24 44.6	+0.1
	comp=Z,511nm,1.5s						
MORF	Marmelete	61.92	297	ePcP	pP	19 25 34.4	+2.3
MORF				i LQ	LQ	19 25 54.8	
MORF	Marmelete	61.92	297	eP	P	19 24 44.5	+0.1
MORF				e*PP	pP	19 25 31.9	-0.2
MORF				eS	S	19 32 52.5	+0.6
MORF	Marmelete	61.92	297	⇑P	P	19 24 44.5	+0.1
PFVI	Vila Bisbo	62.12	297	eP	P	19 24 46.2	+0.5
	comp=Z,866nm,1.3s						
PFVI	Vila Bisbo	62.12	297	ePcP	pP	19 25 34.7	+1.3

PFVI				i LQ	LQ	19 25 55.9	
PFVI	Vila Bisbo	62.12	297	IAmb	IAmb	19 24 49.4	
	comp=Z,600nm,1.0s						
PFVI	Vila Bisbo	62.12	297	P	P	19 24 46.8	+1.1
ZHG	ZHG	62.17	292	P	P	19 24 47.0	+0.8
VOI	Vohitsoka	62.46	206	⇑P	P	19 24 48.8	+0.6
VOI	Vohitsoka	62.46	206	P	P	19 24 48.5	+0.4
VOI				IAmb	IAmb	19 24 52.9	
	comp=Z,1µm,1.0s						
VOI	Vohitsoka	62.46	206	P	P	19 24 49.0	+0.9
TZRR	Tazzarine	62.58	289	P	P	19 24 49.0	0.0
AVE	Averroes	62.81	293	i P	P	19 24 48.5	-1.8
AVE				i S	S	19 33 01.7	-1.3
AVE	Averroes	62.81	293	⇑P	P	19 24 50.1	-0.2
AVE	Averroes	62.81	293	P	P	19 24 50.5	+0.2
TNTI	Ternate	62.85	111	⇑P	P	19 24 50.9	+0.1
TNTI	Ternate	62.85	111	P	P	19 24 52.2	+1.4
ZGR	Zagora	62.93	289	P	P	19 24 51.2	-0.2
EUNU	Eureka	63.05	356	P	P	19 24 52.4	+1.1
EUNU				IAmb	IAmb	19 24 58.2	
	comp=Z,652nm,0.9s						
TETE	Tete	63.24	221	P	P	19 24 52.2	-1.0
TETE				pP	pP	19 25 44.7	+2.6
OUZM	OUZ	63.43	290	P	P	19 24 55.0	+0.4
SANI	Sanana	63.69	114	⇑P	P	19 24 55.8	-0.5
SANI	Sanana	63.69	114	P	P	19 24 56.4	+0.1
SKRH	Sakahara	64.04	207	P	P	19 24 57.9	-0.6
SKRH				pP	pP	19 25 50.3	+2.8
OUK	Oukaimeden	64.12	291	P	P	19 24 60.0	+0.6
TULEG	Thule	64.50	350	i P	P	19 25 00.0	-0.6
TULEG				IAmb	IAmb	19 25 04.7	
	comp=Z,2µm,1.3s						
TULEG	Thule	64.50	350	⇑P	P	19 25 01.1	+0.5
ANGG	Ammassalik, Gr	64.50	334	⇓eP	P	19 24 59.9	-0.9
ANGG				IVmB_BB		19 25 04.9	
	comp=Z,14µm,1.5s						
ANGG				IAmb	IAmb	19 25 05.2	
	comp=Z,3µm,1.4s						
ANGG	Ammassalik, Gr	64.50	334	⇑P	P	19 25 01.8	+0.9
TTIG	Tnine Tigouga,	64.87	290	P	P	19 25 04.0	0.0
ISOG	Isortoq, Green	65.01	334	i P	P	19 25 05.2	+1.1
ISOG				IVmB_BB		19 25 05.6	
	comp=Z,5µm,3.4s						
ISOG				IAmb	IAmb	19 25 07.8	
	comp=Z,518nm,1.1s						
ISOG	Isortoq, Green	65.01	334	⇑P	P	19 25 04.2	+0.2
EAH	EAH	65.20	292	P	P	19 25 07.0	+1.0
NUUG	Nuugaatsiaq	65.42	343	i P	P	19 25 08.7	+2.0
NUUG				IAmb	IAmb	19 25 10.9	
	comp=Z,278nm,1.2s						
LSZ	Lusaka	65.53	226	PKPPKP	P'P'df	19 53 46.4	+1.8
	comp=Z,25nm,1.1s,baz=215,slow=4.7,SNR=16						
LSZ	Lusaka	65.53	226	P	P	19 25 07.9	-0.3
LSZ				pmax	pmax		
	comp=Z,1µm,1.1s						
LSZ	Lusaka	65.53	226	P	P	19 25 07.9	-0.3
LSZ				IAmb	IAmb	19 25 12.5	
	comp=Z,1µm,1.1s						
LSZ	Lusaka	65.53	226	P	P	19 25 08.0	-0.3
LSZ				pP	pP	19 26 02.0	+4.6
MMRI	Maumere	65.63	122	⇑P	P	19 25 06.3	-2.5
MMRI	Maumere	65.63	122	P	P	19 25 07.6	-1.2
MMRI				IAmb	IAmb	19 25 10.0	
	comp=Z,1µm,1.3s						
MMRI	Maumere	65.63	122	P	P	19 25 07.8	-1.0
TORD	Torodi Ar. Bea	65.85	269	P	P	19 25 08.1	-2.2
	comp=Z,406nm,0.6s,baz=40,slow=5.5,SNR=995						
TORD				pP	pP	19 25 57.3	-1.7
	comp=Z,145nm,0.8s,baz=45,slow=5.7,SNR=1.9						
TORD				S	S	19 33 33.5	-7.3
	comp=Z,5.0nm,1.0s,baz=55,slow=11,SNR=1.6						
TORD				PKPPKP	P'P'df	19 53 37.2	-9.1
	comp=Z,9.1nm,1.0s,baz=210,slow=2.9,SNR=6.3						
TORD	Torodi Ar. Bea	65.85	269	P	P	19 25 08.8	-1.5
TORD				IAmb	IAmb	19 25 13.2	
	comp=Z,455nm,0.7s						
TORD				pP	pP	19 25 57.4	-1.7
CGR	Cap Guir	65.92	291	P	P	19 25 11.0	+0.5
ILULI	Ilulissat	66.48	341	eP	P	19 25 14.3	+0.9
ILULI				IVmB_BB		19 25 17.4	
	comp=Z,19µm,1.5s						
ILULI				IAmb	IAmb	19 25 17.8	
	comp=Z,4µm,1.4s						
SFNM	Sidi Ifni	66.77	290	P	P	19 25 16.0	+0.1
SIJI	Sorong	66.86	110	P	P	19 25 16.3	-0.4
	comp=Z,2µm,1.0s,baz=322,slow=6.1,SNR=125						
SIJI				pP	pP	19 26 06.5	+0.2
	comp=Z,448nm,1.1s,baz=330,slow=8.2,SNR=2.5						
SIJI				S	S	19 33 51.7	-1.2
	comp=Z,22nm,1.1s,baz=249,slow=23,SNR=3.7						
DY2G	Dye2	66.87	337	i P	P	19 25 17.8	+1.6
DY2G				IVmB_BB		19 25 20.4	
	comp=Z,24µm,1.6s						
DY2G				IAmb	IAmb	19 25 20.9	
	comp=Z,4µm,1.3s						
A21K	Barrow	67.31	15	P	P	19 25 19.7	+1.1
	baz=320,SNR=492						
A21K				S	S	19 33 56.9	+0.3
	baz=320						
BATI	Baumata	67.73	122	P	P	19 25 21.0	-1.1
	comp=Z,1µm,0.8s,baz=344,slow=1.0,SNR=101						
BATI				S	S	19 33 59.5	-3.5
	comp=Z,50nm,0.9s,baz=82,slow=18,SNR=3.4						
SOEI	Soe	67.82	122	⇑P	P	19 25 21.4	-1.4
SOEI	Soe	67.82	122	P	P	19 25 22.7	-0.1
SFJD	Kangerlussuaq	67.84	339	P	P	19 25 22.0	0.0
SFJD				pmax	pmax		
	comp=Z,864nm,1.1s						
SFJD	Kangerlussuaq	67.84	339	i P	P	19 25 22.0	0.0
SFJD				IAmb	IAmb	19 25 26.0	
	comp=Z,586nm,1.1s						
SFJD	Kangerlussuaq	67.84	339	⇑P	P	19 25 22.4	+0.4
SFJD	Kangerlussuaq	67.84	339	P	P	19 25 22.0	0.0
SFJD				IAmb	IAmb	19 25 26.2	
	comp=Z,864nm,1.1s						
TANT	Tantan	68.04	290	P	P	19 25 25.0	+1.0
BNDI	Bandanaira	68.24	113	⇓P	P	19 25 24.5	-0.7
BNDI	Bandanaira	68.24	113	P	P	19 25 25.8	+0.5
RDOG	Red Dog Mine	68.25	19	P	P	19 25 33.9	+9.3
	baz=315						
RDOG				S	S	19 34 16.8	+8.9
	baz=315						
GAMB	Gambell	68.48	25	⇑P	P	19 25 24.7	-1.3
GAMB	Gambell	68.48	25	P	P	19 25 26.9	+0.9
	baz=310						
TNA	Tin City	68.54	23	⇑P	P	19 25 27.2	+0.9
TNA	Tin City	68.54	23	P	P	19 25 27.0	+0.7
TNA				IAmb	IAmb	19 25 31.0	
	comp=Z,1µm,1.1s						
TNA	Tin City	68.54	23	P	P	19 25 27.2	+0.9
	baz=312,SNR=196						
TNA				S	S	19 34 13.6	+2.4
	baz=312						
RES	Resolute Bay	68.75	356	⇑P	P	19 25 28.1	+0.7
SMY	Shemya	68.90	39	⇑P	P	19 25 30.6	+1.8
SMY	Shemya	68.90	39	IAmb	IAmb	19 25 32.0	
	comp=Z,1µm,1.1s						
FAKI	Fak Fak	68.94	110	⇑P	P	19 25 29.5	-0.1
FAKI	Fak Fak	68.94	110	P	P	19 25 29.4	-0.1
FAKI	Fak Fak	68.94	110	P	P	19 25 29.7	+0.1
GUMO	Guam	69.01	88	P	P	19 25 30.2	+0.1
	comp=Z,984nm,1.2s,baz=308,slow=4.7,SNR=13						
GUMO	Guam	69.01	88	⇑P	P	19 25 31.3	+1.2
GUMO	Guam	69.01	88	P	P	19 25 30.2	+0.1
GUMO				IAmb	IAmb	19 25 34.5	
	comp=Z,2µm,1.4s						
GUMO	Guam	69.01	88	P	P	19 25 30.8	+0.7
PMPST	Porto Santo, M	69.46	296	eP	P	19 25 32.3	-0.3
	comp=Z,937nm,1.3s						
PMPST	Porto Santo, M	69.46	296	ePcP	pP	19 26 22.2	+0.8
PMPST				i LQ	LQ	19 26 45.2	
PMPS	Porto Santo	69.47	296	eP	P	19 25 33.4	+0.8
	comp=Z,560nm,1.8s						
MATP	Matopo	69.48	223	PKP2ab	P'P'ab	19 53 38.7	+0.7
	comp=Z,13nm,1.1s,baz=212,slow=5.8,SNR=5.6						
KOWA	Kowa	69.71	273	PKPPKP	P'P'df	19 53 32.2	-7.8
	comp=Z,26nm,1.1s,baz=328,slow=0.8,SNR=7.5						
KOWA	Kowa	69.71	273	⇑P	P	19 25 33.0	-1.3
KOWA	Kowa	69.71	273	P	P	19 25 33.2	-1.2
KOWA				IAmb	IAmb	19 25 37.0	
	comp=Z,723nm,0.9s						
KOWA	Kowa	69.71	273	P	P	19 25 33.1	-1.3
NRS	Narsarsuaq	69.97	333	i P	P	19 25 38.2	+3.0
NRS				IVmB_BB		19 25 38.9	
	comp=Z,12µm,1.3s						
NRS				IAmb	IAmb	19 25 39.3	
	comp=Z,1µm,1.1s						
NRS	Narsarsuaq	69.97	333	⇑P	P	19 25 35.6	+0.5
ANM	Nome	70.01	23	P	P	19 25 36.3	+0.9
ANM				pmax	pmax		
	comp=Z,2µm,1.2s						
ANM	Nome	70.01	23	P	P	19 25 36.3	+0.9
ANM	Nome	70.01	23	P	P	19 25 36.8	+1.4
	baz=314,SNR=343						
ANM				S	S	19 34 31.1	+2.5
	baz=314						
PMAR	Madeira	70.06	296	eP	P	19 25 37.1	+0.6
	comp=Z,2µm,1.3s						
PMAR	Madeira	70.06	296	ePcP	pP	19 26 26.5	+1.2
NUUK	Nuuk	70.11	337	i P	P	19 25 38.5	+2.5
NUUK				IAmb	IAmb	19 25 40.0	
	comp=Z,1µm,1.1s						
NUUK	Nuuk	70.11	337	⇓P	P	19 25 37.0	+1.0
PMOZ	Porto Moniz, M	70.21	297	eP	P	19 25 40.0	+2.7
	comp=Z,852nm,1.4s						
PMOZ	Porto Moniz, M	70.21	297	ePcP	pP	19 26 30.0	+3.8
PMOZ				eS	S	19 34 37.8	+5.7
PMOZ	Porto Moniz, M	70.21	297	⇓P	P	19 25 39.3	+2.0
PMOZ	Porto Moniz, M	70.21	297	P	P	19 25 38.6	+1.3
TOLK	Toolik Lake Re	70.92	15	P	P	19 25 41.8	+0.9
	baz=326,SNR=1000						
TOLK				S	S	19 34 38.3	-0.7
	baz=326						
A36M	Sachs Harbour	71.23	5	P	P	19 25 42.8	+0.2
A36M	Sachs Harbour	71.23	5	P	P	19 25 43.5	+0.9
	baz=346,SNR=1000						
A36M				S	S	19 34 43.5	+1.2
	baz=346						
GIRL	Giralia	71.48	138	P	P	19 25 45.7	+0.9
	baz=72,SNR=45						
GIRL	Giralia	71.48	138	⇑P	P	19 25 46.1	+1.3
GIRL	Giralia	71.48	138	IAmb	IAmb	19 25 50.4	
	comp=Z,1µm,0.9s						
GIRL	Giralia	71.48	138	P	P	19 25 45.5	+0.7
KUKU	Kukurantumi	71.51	264	P	P	19 25 43.8	-1.5
KUKU				pP	pP	19 26 37.2	+2.4
SAUI	Saumlaki	71.58	115	⇑P	P	19 25 46.7	+1.1
COLD	Coldfoot	71.97	16	P	P	19 25 48.0	+0.8
	baz=326,SNR=1000						
COLD				S	S	19 34 49.1	-1.9
	baz=326						
LESE	Lesego, Limpop	72.07	219	P	P	19 25 48.8	+0.4
LESE				pP	pP	19 26 38.6	+0.1
IMAR	Indian Mountai	72.17	18	P	P	19 25 48.0	-0.3
IMAR				pP	pP	19 26 40.1	+1.9
GCSA	Galena City Sc	72.34	20	P	P	19 25 50.3	+0.9
	baz=321,SNR=510						
GCSA				S	S	19 34 57.1	+1.9
	baz=321						
H21K	Melozitna Rive	72.66	18	P	P	19 25 51.2	0.0
H21K	Melozitna Rive	72.66	18	P	P	19 25 51.8	+0.5
	baz=324						
H21K				S	S	19 34 57.7	-1.2
	baz=324						
BMAR	Burnt Mountain	72.94	14	P	P	19 25 53.8	+0.8
BART	Pico Bartolome	73.12	305	eP	P	19 25 54.7	+0.2
	comp=Z,1µm,1.5s						
CRLN	Carolina, Mapu	73.24	218	eP	P	19 25 54.9	-0.4
I21K	Tanana	73.25	18	P	P	19 25 55.3	+0.6
	baz=325						
I21K				S	SKiKP	19 35 04.8	+0.5
	baz=325						
CMLA	Cha da Macela	73.36	305	eP	P	19 25 57.0	+1.1
	comp=Z,458nm,1.2s						
GRON	Grota Negra	73.36	305	eP	P	19 25 55.7	-0.2
	comp=Z,475nm,1.1s						
NEPA	Kaukuwa	73.39	232	P	P	19 26 01.2	+4.9
NEPA				pP	pP	19 26 47.0	+0.4
MBWA	Marble Bar	73.40	133	⇑P	P	19 25 55.9	-0.3
MBWA	Marble Bar	73.40	133	P	P	19 25 55.7	-0.5
PSET	Sete Cidades	73.46	305	eP	P	19 25 56.7	+0.2
	comp=Z,804nm,1.4s						
PDA	Ponta Delgada	73.46	305	eP	P	19 25 57.1	+0.7
	comp=Z,828nm,1.6s						
PSMN	Pico do Norte,	73.47	304	eP	P	19 25 56.8	+0.3
	comp=Z,661nm,1.2s						
PSMA	Santa Maria	73.52	304	eP	P	19 25 57.3	+0.5
	comp=Z,943nm,1.4s						
J20K	Nowinta River	73.52	19	P	P	19 25 57.3	+1.0
	baz=323,SNR=506						
J20K				S	S	19 35 07.6	-0.9
	baz=323						
POGA	Pongola	73.55	216	P	P	19 25 57.1	+0.2
POGA				pP	pP	19 26 47.0	-0.4
H24K	Noodor Dome	73.65	16	IAmb	IAmb	19 26 02.0	
	comp=Z,2µm,1.4s						
H24K	Noodor Dome	73.65	16	P	P	19 25 58.2	+1.1
	baz=328						
H24K				S	S	19 35 09.2	-0.8
	baz=328						
PSA00	Pilbara Seismi	73.79	133	P	P	19 25 58.0	-0.4
PSA00	Pilbara Seismi	73.79	133	P	P	19 25 57.9	-0.5
PSCM	Serra do Cume	73.89	306	eP	P	19 25 57.0	-1.9
	comp=Z,440nm,0.8s						
PAGU	Agualva, Azore	73.89	306	eP	P	19 25 59.1	+0.2
	comp=Z,609nm,1.9s						
I23K	Minto, Yukon-K	73.90	17	P	P	19 25 59.3	+0.9
	baz=327,SNR=548						
I23K				S	S	19 35 12.1	-0.6
	baz=327						
INK	Inuvik	73.92	9	S	S	19 35 12.5	-0.3
	comp=Z,16nm,1.0s,baz=220,slow=27,SNR=16						
INK	Inuvik	73.92	9	P	P	19 25 59.5	+1.0
	baz=340,SNR=1000						
INK				S	S	19 35 12.2	-0.7
	baz=340						
ADK	Adak	73.98	37	P	P	19 25 59.2	0.0
ADK				pmax	pmax		
	comp=Z,446nm,1.2s						
ADK	Adak	73.98	37	P	P	19 25 59.1	0.0
ADH	Angra Heroismo	73.99	306	eP	P	19 26 00.2	+0.7
	comp=Z,534nm,1.1s						
TTA	Tatalina	74.01	20	⇑P	P	19 25 60.0	+0.7
TTA	Tatalina	74.01	20	IAmb	IAmb	19 26 03.9	
	comp=Z,2µm,1.2s						
TTA	Tatalina	74.01	20	P	P	19 25 59.9	+0.7
	baz=322,SNR=282						
TTA				S	S	19 35 15.1	+0.9
	baz=322						
AIS	Amsterdam Isla	74.13	175	⇑P	P	19 26 01.6	+1.6
AIS	Amsterdam Isla	74.13	175	P	P	19 25 59.7	-0.2
AIS				IAmb	IAmb	19 26 04.4	
	comp=Z,1µm,1.0s						
CHUM	Lake Minchumin	74.23	18	P	P	19 26 01.1	+0.7
	baz=325,SNR=280						
CHUM				S	S	19 35 16.6	+0.1
	baz=325						
PGRA	Graciosa	74.26	307	eP	P	19 26 01.8	+0.7
	comp=Z,777nm,1.5s						
DRS	Darwin Rock St	74.31	119	P	P	19 26 01.3	-0.3
POKR	Poker Plat Res	74.36	16	P	P	19 26 02.1	+1.0
	baz=329,SNR=830						
POKR				S	S	19 35 17.9	0.0
	baz=329						
BPAW	Bear Paw Mtn.	74.39	18	IAmb	IAmb	19 26 05.4	
	comp=Z,2µm,1.2s						
BPAW	Bear Paw Mtn.	74.39	18	P	P	19 26 01.6	+0.3
	baz=326,SNR=63						
BPAW				S	S	19 35 18.4	+0.1
	baz=326						
PRP	Porcupine Dome	74.42	15	IAmb	IAmb	19 26 06.7	
	comp=Z,2µm,1.6s						
PRP	Porcupine Dome	74.42	15	P	P	19 26 02.8	+1.1
	baz=330,SNR=171						
PRP				S	S	19 35 18.6	-0.3
	baz=330						
NEA2	Nenana	74.43	17	P	P	19 26 02.0	+0.4
	baz=327,SNR=236						
NEA2				S	S	19 35 16.3	-2.5
	baz=327						
TCOL	CIGO, UAF Yank	74.47	16	P	P	19 26 02.3	+0.5
	baz=328,SNR=358						
TCOL				S	S	19 35 17.6	-1.5
	baz=328						
COLA	College	74.47	16	i P	P	19 26 02.2	+0.4
COLA				pmax	pmax		
	comp=Z,3µm,1.0s						
COLA	College	74.47	16	⇑P	P	19 26 02.2	+0.4
COLA	College	74.47	16	P	P	19 26 02.2	+0.4
COLA	College	74.47	16	P	P	19 26 02.3	+0.5
	baz=328						
COLA				S	S	19 35 17.9	-1.2
	baz=328						
PMAN	Manadas	74.55	307	eP	P	19 26 03.0	+0.2
	comp=Z,966nm,1.0s						
ROSA	Rosais	74.60	307	eP	P	19 26 03.0	-0.1
	comp=Z,626nm,1.2s						
CAST	Castle Rocks	74.67	19	P	P	19 26 03.4	+0.3
	baz=325,SNR=935						
CAST				S	S	19 35 19.7	-1.8
	baz=325						
BWN	Browne	74.69	17	P	P	19 26 03.3	+0.2
LBTB	Lobatse	74.74	222	PKKPbc	PKKPbc	19 45 31.5	+3.3
	comp=Z,3.9nm,0.8s,baz=226,slow=6.4,SNR=4.5						
LBTB				PKPPKP		19 53 25.4	
	comp=Z,5.9nm,1.0s,baz=177,slow=3.0,SNR=4.5						
LBTB	Lobatse	74.74	222	⇑P	P	19 26 04.5	+0.5
LBTB	Lobatse	74.74	222	P	P	19 26 04.2	+0.2
LBTB				pP	pP	19 26 57.0	+2.4
FITZ	Fitzroy Crossi	74.76	127	P	P	19 26 04.1	0.0
	comp=Z,738nm,0.9s,baz=327,slow=5.7,SNR=87						
FITZ				pP	pP	19 26 55.1	+0.9
	comp=Z,522nm,1.3s,baz=347,slow=8.5,SNR=2.3						
FITZ				S	S	19 35 21.4	-2.1
	baz=176,slow=19						
MTN	Manton Dam	74.76	119	P	P	19 26 03.5	-0.7
	baz=75,SNR=49						
MTN	Manton Dam	74.76	119	⇑P	P	19 26 03.5	-0.7
MTN	Manton Dam	74.76	119	P	P	19 26 03.3	-0.9
MTN				IAmb	IAmb	19 26 08.1	
	comp=Z,1µm,1.3s						
MTN	Manton Dam	74.76	119	P	P	19 26 03.4	-0.8
WRH	Wood River Hil	74.76	17	IAmb	IAmb	19 26 07.1	
	comp=Z,2µm,1.8s						
IL31		74.78	16	IAmb	IAmb	19 26 07.2	
	comp=Z,1µm,1.1s						
ILAR	Eielson Array	74.78	16	P	P	19 26 03.2	-0.4
	comp=Z,955nm,1.1s,baz=347,slow=3.5,SNR=235						
ILAR				PP	PP	19 28 47.0	-6.0
	comp=Z,40nm,0.9s,baz=311,slow=5.2,SNR=1.7						
ILAR				S	S	19 35 21.4	-1.2
	comp=Z,2.3nm,1.0s,baz=287,slow=17,SNR=3.0						
ILAR	Eielson Array	74.78	16	P	P	19 26 03.6	0.0
ILAR				pP	pP	19 26 54.3	+0.6
GENI	Genyem	74.81	105	⇑P	P	19 26 05.0	+0.4
GENI	Genyem	74.81	105	P	P	19 26 05.3	+0.8
DBIC	Dimbokro	74.83	267	P	P	19 26 03.4	-1.3
	comp=Z,284nm,0.9s,baz=53,slow=6.0,SNR=105						
DBIC				pP	pP	19 26 54.0	-0.9
	comp=Z,82nm,0.9s,baz=55,slow=4.9,SNR=1.8						
DBIC				S	S	19 35 17.6	-7.1
	comp=Z,18nm,1.2s,baz=276,slow=16,SNR=2.4						
DBIC				PKKPbc	PKKPbc	19 45 27.7	+1.7
	comp=Z,7.7nm,0.8s,baz=222,slow=1.6,SNR=7.2						
DBIC				PKPPKP	P'P'df	19 53 19.0	-12
	comp=Z,5.8nm,1.0s,baz=269,slow=1.5,SNR=4.1						
DBIC	Dimbokro	74.83	267	⇑P	P	19 26 03.2	-1.5
KIC	Kosan Boka	74.92	267	eP	P	19 26 02.4	-2.8
	comp=Z,574nm,0.9s						
PCED	Cedros	74.95	307	eP	P	19 26 05.7	+0.7
	comp=Z,768nm,1.0s						
ATKA	Atka Island	74.95	35	⇓P	P	19 26 05.5	+0.8
L20K	Farewell, AK	74.96	20	P	P	19 26 05.2	+0.5
	baz=324						
L20K				S	S	19 35 23.0	-1.8
	baz=324						
CALA	Caldeira	74.98	307	eP	P	19 26 05.6	+0.3
	comp=Z,1µm,1.1s						
TIC	Toumodi	74.98	267	eP	P	19 26 02.8	-2.8
TSUM	Tsumeb	75.00	232	PKKPbc	PKKPbc	19 45 30.6	+3.3
	comp=Z,4.0nm,0.7s,baz=258,slow=2.7,SNR=4.6						
TSUM	Tsumeb	75.00	232	⇑P	P	19 26 05.7	+0.1
TSUM	Tsumeb	75.00	232	P	P	19 26 04.9	-0.7
TSUM	Tsumeb	75.00	232	P	P	19 26 02.8	-2.8
TSUM				pP	pP	19 26 56.5	+0.3
HDA	Harding Lake	75.07	16	IAmb	IAmb	19 26 08.4	
	comp=Z,1µm,1.2s						
HDA	Harding Lake	75.07	16	P	P	19 26 04.7	-0.5
	baz=329						
HDA				S	S	19 35 24.5	-1.4
	baz=329						
HDA				S	S	19 35 24.5	-1.4
	baz=329						
PPLA	Purkeypile	75.08	19	P	P	19 26 05.7	+0.2
	baz=325,SNR=111						
PPLA				S	S	19 35 24.2	-2.0
	baz=325						
KNRA	Kununurra	75.09	123	P	P	19 26 06.1	+0.1
	baz=75,SNR=135						
KNRA	Kununurra	75.09	123	P	P	19 26 05.4	-0.6
TRF	Thorofare Moun	75.10	18	IAmb	IAmb	19 26 24.5	
	comp=Z,762nm,1.3s						
TRF	Thorofare Moun	75.10	18	P	P	19 26 05.2	-0.4
	baz=326,SNR=97						
TRF				S	S	19 35 24.3	-2.2
	baz=326						
FRB	Frobisher Bay	75.14	343	S	S	19 35 27.5	+1.0
	comp=Z,9.9nm,1.1s,baz=192,slow=18,SNR=1.5						
FRB	Frobisher Bay	75.14	343	⇑P	P	19 26 05.9	+0.3
JAY	Jayapura	75.18	104	P	P	19 26 06.5	-0.2
	comp=Z,483nm,0.9s,baz=297,slow=5.1,SNR=53						
MCK	McKinley	75.19	17	IAmb	IAmb	19 26 09.9	
	comp=Z,1µm,1.3s						
MCK	McKinley	75.19	17	P	P	19 26 05.9	-0.1
	baz=328,SNR=173						
MCK				S	S	19 35 24.6	-2.7
	baz=328						
LIC	Lamto	75.23	267	eP	P	19 26 04.3	-2.7
	comp=Z,1µm,1.0s						
RND	Reindeer	75.49	17	P	P	19 26 06.9	-0.8
RND				pmax	pmax		
	comp=Z,3µm,1.3s						
RND	Reindeer	75.49	17	P	P	19 26 06.9	-0.8
SVW2	Sparrevohn	75.59	21	IAmb	IAmb	19 26 13.2	
	comp=Z,1µm,1.2s						
KDU	Kakadu	75.60	118	P	P	19 26 08.5	-0.5
	baz=76,SNR=114						
KDU	Kakadu	75.60	118	⇑P	P	19 26 08.5	-0.5
KDU	Kakadu	75.60	118	P	P	19 26 08.3	-0.7
J26L	Joseph Creek	75.72	15	P	P	19 26 09.3	+0.2
	baz=332,SNR=763						
J26L				S	S	19 35 31.7	-1.4
	baz=332						
H07N1	FLORES T-PHASE	75.88	309	eP	P	19 26 11.2	+0.9
I29M	Ogilvie Camp,	75.94	12	P	P	19 26 10.5	+0.3
	baz=336,SNR=384						
I29M				S	S	19 35 33.8	-1.5
	baz=336						
EGAK	Eagle	75.95	14	P	P	19 26 10.7	+0.5
	baz=334,SNR=436						
EGAK				S	S	19 35 34.5	-0.9
	baz=334						
CUT	Chulitna	75.98	19	P	P	19 26 10.1	-0.3
	baz=327,SNR=111						
CUT				S	S	19 35 32.9	-2.9
	baz=327						
WAT1	Susitna Watana	76.05	18	P	P	19 26 10.2	-0.7
	baz=328						
WAT1				S	S	19 35 32.9	-3.8
	baz=328						
SCRK	Sand Creek	76.09	15	P	P	19 26 11.7	+0.5
	baz=332,SNR=616						
SCRK				S	S	19 35 36.0	-1.3
	baz=332						
H07S1	FLORES T-PHASE	76.11	309	eP	P	19 26 12.3	+0.6
RIDG	Independent Ri	76.12	16	P	P	19 26 11.0	-0.3
RIDG	Independent Ri	76.12	16	P	P	19 26 11.1	-0.3
	baz=331,SNR=102						
RIDG				S	S	19 35 36.5	-1.0
	baz=331						
DHY	Denali Highway	76.12	17	IAmb	IAmb	19 26 15.1	
	comp=Z,1µm,0.9s						
DHY	Denali Highway	76.12	17	P	P	19 26 11.2	-0.3
	baz=329,SNR=333						
DHY				S	S	19 35 35.2	-2.5
	baz=329						
N19K	Bonanza Creek	76.14	21	IAmb	IAmb	19 26 18.3	
	comp=Z,2µm,1.2s						
N19K	Bonanza Creek	76.14	21	P	P	19 26 12.2	+0.8
	baz=324,SNR=146						
N19K				S	S	19 35 38.6	+0.8
	baz=324						
DOT	Dot Lake	76.37	15	IAmb	IAmb	19 26 16.6	
	comp=Z,1µm,1.2s						
WAT6	Susitna Watana	76.46	17	P	P	19 26 13.1	-0.3
	baz=329,SNR=193						
WAT6				S	S	19 35 36.8	-4.6

	baz=329						
SPCR	Spurr Chakacha	76.47	20	P	P	19 26 13.1	-0.2
	baz=325,SNR=68						
M22K	Willow	76.57	19	P	P	19 26 13.5	-0.2
	baz=327,SNR=135						
M22K				S	S	19 35 40.0	-2.2
	baz=327						
PAX	Paxson	76.65	16	P	P	19 26 14.1	-0.2
PAX				pmax	pmax		
	comp=Z,4µm,1.5s						
PAX	Paxson	76.65	16	P	P	19 26 14.1	-0.2
PAX	Paxson	76.65	16	P	P	19 26 14.4	+0.1
	baz=330,SNR=567						
PAX				S	S	19 35 41.4	-1.9
	baz=330						
O19K	Port Alsworth	76.69	21	IAmb	IAmb	19 26 19.0	
	comp=Z,2µm,1.2s						
O19K	Port Alsworth	76.69	21	P	P	19 26 15.1	+0.7
	baz=324,SNR=41						
O19K				S	S	19 35 42.3	-1.2
	baz=324						
J29M	Klondike Camp	76.78	13	P	P	19 26 16.0	+1.0
	baz=336,SNR=215						
J29M				S	S	19 35 43.7	-1.0
	baz=336						
NIKH	Nikolski High	76.84	33	P	P	19 26 15.5	+0.1
	baz=314						
NIKH				S	S	19 35 41.7	-3.7
	baz=314						
DAWY	Dawson	76.92	13	P	P	19 26 16.3	+0.5
	baz=335,SNR=621						
DAWY				S	S	19 35 44.5	-1.7
	baz=335						
PMR	Palmer	76.96	19	P	P	19 26 15.9	0.0
PMR				pmax	pmax		
	comp=Z,2µm,1.2s						
PMR	Palmer	76.96	19	P	P	19 26 15.9	0.0
PMR				IAmb	IAmb	19 26 19.6	
	comp=Z,2µm,1.2s						
PMR	Palmer	76.96	19	P	P	19 26 15.9	0.0
	baz=328,SNR=156						
PMR				S	S	19 35 43.8	-2.6
	baz=328						
SML	Sawmill	76.98	18	P	P	19 26 16.3	+0.1
	baz=328,SNR=323						
SML				S	S	19 35 43.2	-3.6
	baz=328						
MEEK	Meekatharra	77.05	137	P	P	19 26 16.3	-0.6
	baz=77,SNR=71						
MEEK	Meekatharra	77.05	137	P	P	19 26 16.3	-0.6
P18K	Big Mountain,	77.06	22	P	P	19 26 16.5	-0.1
P18K	Big Mountain,	77.06	22	P	P	19 26 17.3	+0.7
	baz=323,SNR=21						
L26K	Log Cabin Wild	77.07	15	P	P	19 26 17.2	+0.6
	baz=332,SNR=316						
L26K				S	S	19 35 45.7	-2.1
	baz=332						
CAPN	Captain Cook N	77.11	20	P	P	19 26 17.1	+0.3
	baz=326						
SCM	Sheep Creek Mo	77.20	18	P	P	19 26 17.4	0.0
SCM				pmax	pmax		
	comp=Z,2µm,1.1s						
SCM	Sheep Creek Mo	77.20	18	P	P	19 26 17.4	0.0
SCM				IAmb	IAmb	19 26 21.3	
	comp=Z,2µm,1.1s						
SCM	Sheep Creek Mo	77.20	18	P	P	19 26 17.7	+0.3
	baz=329,SNR=153						
SCM				S	S	19 35 46.4	-2.9
	baz=329						
UNV	Unalaska Valle	77.22	31	IAmb	IAmb	19 26 23.0	
	comp=Z,605nm,1.0s						
UNV	Unalaska Valle	77.22	31	P	P	19 26 18.9	+1.4
	baz=316,SNR=26						
HARP	HAARP	77.22	16	P	P	19 26 17.5	+0.1
	baz=331,SNR=744						
HARP				S	S	19 35 50.0	+0.7
	baz=331						
RC01	Rabbit Creek A	77.23	19	P	P	19 26 17.3	-0.1
	baz=327,SNR=121						
RC01				S	S	19 35 46.2	-3.1
	baz=327						
M24K	Tolsona, Glenn	77.24	17	P	P	19 26 18.7	+1.1
	baz=330,SNR=393						
M24K				S	S	19 35 49.8	+0.2
	baz=330						
O20K	Slope Mountain	77.27	21	P	P	19 26 17.3	-0.5
	baz=325,SNR=23						
KNK	Knik Glacier	77.28	18	P	P	19 26 18.2	+0.4
	baz=328,SNR=286						
KNK				S	S	19 35 50.4	+0.4
	baz=328						
AKUT	Akutan	77.31	30	⇓P	P	19 26 18.2	+0.2
AKUT	Akutan	77.31	30	P	P	19 26 18.0	0.0
AKUT				IAmb	IAmb	19 26 20.7	
	comp=Z,1µm,1.1s						
L27K	Beaver Creek,	77.36	15	P	P	19 26 18.9	+0.7
	baz=333						
L27K				S	S	19 35 50.1	-0.7
	baz=333						
BCAR	Beaver Creek A	77.36	15	P	P	19 26 18.9	+0.6
MORW	Morawa	77.64	141	P	P	19 26 19.4	-0.7
	baz=78,SNR=96						
MORW	Morawa	77.64	141	⇑P	P	19 26 19.3	-0.7
MORW	Morawa	77.64	141	IAmb	IAmb	19 26 23.2	
	comp=Z,3µm,1.6s						
MORW	Morawa	77.64	141	P	P	19 26 19.0	-1.1
M26K	Nabesna, AK	77.70	16	IAmb	IAmb	19 26 24.8	
	comp=Z,1µm,1.4s						
M26K	Nabesna, AK	77.70	16	P	P	19 26 20.9	+0.7
	baz=332						
M26K				S	S	19 35 54.6	0.0
	baz=332						
FALS	False Pass	77.72	29	P	P	19 26 20.0	-0.2
FALS				IAmb	IAmb	19 26 25.7	
	comp=Z,1µm,0.9s						
FALS	False Pass	77.72	29	P	P	19 26 20.7	+0.4
	baz=318,SNR=23						
FALS				S	S	19 35 56.8	+2.0
	baz=318						
FALS	False Pass	77.72	29	P	P	19 26 22.2	+2.0
	comp=Z,2µm,0.9s						
O22K	Cooper Landing	77.74	19	P	P	19 26 20.2	-0.1
	baz=327,SNR=15						
O22K				S	S	19 35 53.6	-1.3
	baz=327						
PWL	Port Wells	77.78	19	IAmb	IAmb	19 26 24.4	
	comp=Z,1µm,1.0s						
PWL	Port Wells	77.78	19	P	P	19 26 20.8	+0.2
	baz=328,SNR=94						
PWL				S	S	19 35 54.5	-1.0
	baz=328						
WIN	Windhoek	77.79	230	P	P	19 26 21.6	+0.3
WIN				pmax	pmax		
	comp=Z,464nm,1.3s						
WIN	Windhoek	77.79	230	P	P	19 26 21.6	+0.3
WIN	Windhoek	77.79	230	P	P	19 26 21.1	-0.2
WIN				pP	pP	19 27 11.3	-0.8
BOSA	Boshof	77.81	220	P	P	19 26 21.0	-0.2
	comp=Z,784nm,0.9s,baz=32,slow=4.9,SNR=302						
BOSA				pP	pP	19 27 13.5	+1.4
	comp=Z,390nm,0.9s,baz=39,slow=6.2,SNR=6.7						
BOSA				S	S	19 35 56.1	-0.5
	comp=Z,11nm,1.1s,baz=160,slow=20,SNR=5.6						
BOSA				PKKPbc	PKKPbc	19 45 22.6	+0.8
	comp=Z,7.1nm,0.7s,baz=208,slow=2.0,SNR=11						
BOSA				PKPPKP	P'P'df	19 53 22.3	-0.6
	comp=Z,13nm,1.2s,baz=80,slow=3.9,SNR=3.9						
BOSA	Boshof	77.81	220	*e*P	P	19 26 20.4	-0.8
BOSA	Boshof	77.81	220	⇑P	P	19 26 20.9	-0.2
BOSA				⇑p	pP	19 27 12.7	+0.6
BOSA	Boshof	77.81	220	IAmb	IAmb	19 26 24.8	
	comp=Z,1µm,1.0s						
BOSA	Boshof	77.81	220	P	P	19 26 19.1	-2.0
BOSA				pP	pP	19 27 10.3	-1.8
KLU	Klutina	77.84	17	P	P	19 26 21.6	+0.6
KLU				IAmb	IAmb	19 26 25.4	
	comp=Z,2µm,1.1s						
KLU	Klutina	77.84	17	P	P	19 26 21.5	+0.6
	baz=330,SNR=285						
KLU				S	S	19 35 53.4	-2.7
	baz=330						
HOM	Homer	77.90	21	IAmb	IAmb	19 26 25.6	
	comp=Z,1µm,1.1s						
HOM	Homer	77.90	21	P	P	19 26 20.5	-0.6
	baz=326						
HOM				S	S	19 35 54.8	-1.8
	baz=326						
Q19K	Cape Douglas,	77.92	22	IAmb	IAmb	19 26 23.9	
	comp=Z,1µm,1.1s						
Q19K	Cape Douglas,	77.92	22	P	P	19 26 20.4	-0.9
	baz=325,SNR=10						
M27K	Edge Creek, AK	77.98	15	P	P	19 26 22.7	+0.9
	baz=333						
M27K				S	S	19 35 56.8	-1.0
	baz=333						
BRLK	Bradley Lake	78.03	20	IAmb	IAmb	19 26 25.0	
	comp=Z,2µm,1.0s						
N25K	Chitina, Valde	78.05	17	P	P	19 26 22.9	+0.8
N25K	Chitina, Valde	78.05	17	P	P	19 26 23.0	+0.8
	baz=331,SNR=188						
N25K				S	S	19 35 58.1	-0.2
	baz=331						
GLI	Glacier Island	78.08	18	IAmb	IAmb	19 26 26.1	
	comp=Z,2µm,1.0s						
GLI	Glacier Island	78.08	18	P	P	19 26 22.1	-0.1
	baz=329,SNR=73						
GLI				S	S	19 35 56.7	-1.9
	baz=329						
BRSE	Bradley Lake S	78.09	20	P	P	19 26 21.8	-0.4
	baz=327,SNR=32						
CNPM	China Poot	78.13	21	IAmb	IAmb	19 26 25.5	
	comp=Z,1µm,1.2s						
SEW	Seward	78.13	19	IAmb	IAmb	19 26 26.2	
	comp=Z,2µm,1.3s						
SEW	Seward	78.13	19	P	P	19 26 22.1	-0.3
	baz=328,SNR=69						
BVCY	Beaver Creek	78.14	15	P	P	19 26 23.7	+1.1
	baz=334,SNR=352						
BVCY				S	S	19 36 00.2	+1.0
	baz=334						
DIV	Divide	78.19	17	IAmb	IAmb	19 26 27.1	
	comp=Z,1µm,1.0s						
FID	Port Fidalgo	78.35	18	P	P	19 26 24.0	+0.4
GLB	Gilahina Butte	78.37	16	IAmb	IAmb	19 26 28.2	
	comp=Z,1µm,1.3s						
SDPT	Sand Point	78.46	27	IAmb	IAmb	19 26 27.8	
	comp=Z,702nm,1.0s						
SDPT	Sand Point	78.46	27	P	P	19 26 24.3	0.0
	baz=320,SNR=9.1						
CHGN	Chignik	78.47	26	IAmb	IAmb	19 26 28.0	
	comp=Z,1µm,1.4s						
CHGN	Chignik	78.47	26	P	P	19 26 23.9	-0.4
	baz=321,SNR=11						
BMRM	Bremner River	78.61	17	P	P	19 26 25.8	+0.6
	baz=331,SNR=330						
BMRM				S	S	19 36 04.4	+0.1
	baz=331						
VRDI	Verde Repeater	78.64	16	P	P	19 26 25.6	+0.1
VRDI				IAmb	IAmb	19 26 29.9	
	comp=Z,2µm,1.2s						
EYAK	Cordova Ski Ar	78.70	18	P	P	19 26 26.4	+0.8
	baz=330,SNR=128						
EYAK				S	S	19 36 05.9	+0.8
	baz=330						
YUK3	Moose Creek	78.80	15	P	P	19 26 27.0	+0.7
	baz=334,SNR=561						
YUK3				S	S	19 36 06.4	-0.2
	baz=334						
RAGM	Ragged Mountai	79.10	17	IAmb	IAmb	19 26 32.6	
	comp=Z,2µm,1.2s						
CRQE	Cirque	79.15	16	P	P	19 26 28.7	+0.5
	baz=333						
CRQE				S	S	19 36 08.3	-1.9
	baz=333						
KDAK	Kodiak Island	79.18	22	P	P	19 26 28.6	+0.4
KDAK				pmax	pmax		
	comp=Z,3µm,1.0s						
KDAK	Kodiak Island	79.18	22	⇑P	P	19 26 28.6	+0.4
KDAK				⇓P	PcP	19 26 29.0	-6.8
KDAK	Kodiak Island	79.18	22	P	P	19 26 28.6	+0.4
KDAK	Kodiak Island	79.18	22	P	P	19 26 28.6	+0.4
	baz=326						
CHNA	Chernabura Isl	79.19	27	P	P	19 26 28.1	-0.1
	baz=321,SNR=49						
TGL	Tana Glacier	79.20	16	IAmb	IAmb	19 26 32.8	
	comp=Z,2µm,1.1s						
BLDU	Ballidu	79.23	141	P	P	19 26 27.3	-1.4
	baz=79,SNR=97						
BLDU	Ballidu	79.23	141	P	P	19 26 27.4	-1.3
HMT	Hamilton	79.25	17	IAmb	IAmb	19 26 32.6	
	comp=Z,608nm,1.0s						
BERG	Berg Lake	79.33	17	P	P	19 26 29.9	+0.9
CTG	Chitna Glacier	79.34	15	P	P	19 26 30.1	+0.9
	baz=334,SNR=324						
CTG				S	S	19 36 13.5	+1.3
	baz=334						
OHAK	Old Harbor	79.42	23	P	P	19 26 30.0	+0.5
	baz=325,SNR=74						
ISLE	Juniper Island	79.45	16	IAmb	IAmb	19 26 34.1	
	comp=Z,2µm,1.3s						
Q23K	Middleton Isla	79.53	18	P	P	19 26 30.7	+0.7
Q23K	Middleton Isla	79.53	18	P	P	19 26 31.0	+1.0
	baz=330,SNR=7.4						
M31M	Drury Creek, Y	79.53	12	P	P	19 26 30.6	+0.5
	baz=339,SNR=601						
M31M				S	S	19 36 12.9	-1.0
	baz=339						
LOGN	Logan Glacier	79.54	15	IAmb	IAmb	19 26 34.9	
	comp=Z,1µm,1.1s						
KAIM	Kayak Island	79.57	17	P	P	19 26 30.9	+0.6
	baz=332,SNR=22						
BGLC	Bering Glacier	79.67	17	P	P	19 26 31.3	+0.6
	baz=332,SNR=11						
SII	Sitkinak Islan	79.68	24	P	P	19 26 31.5	+0.6
	baz=324,SNR=17						
SNH	Sunshine Point	79.72	17	P	P	19 26 32.8	+1.7
YAH	Yahtse	79.80	16	IAmb	IAmb	19 26 35.9	
	comp=Z,766nm,0.9s						
CHIR	Chirikof Islan	79.80	25	P	P	19 26 31.9	+0.3
	baz=323,SNR=6.7						
TABL	Table Mountain	79.86	16	IAmb	IAmb	19 26 36.4	
	comp=Z,3µm,2.0s						
MESA	MESA	79.92	16	P	P	19 26 33.6	+1.2
	baz=334,SNR=80						
MESA				S	S	19 36 14.7	-3.7
	baz=334						
N31M	Braeburn, Yuko	79.96	13	P	P	19 26 33.0	+0.6
	baz=338,SNR=402						
N31M				S	S	19 36 14.9	-3.6
	baz=338						
MUN	Mundaring	80.08	142	P	P	19 26 32.3	-1.0
	baz=80,SNR=64						
MUN	Mundaring	80.08	142	P	P	19 26 32.0	-1.3
MBO	M'Bour	80.11	281	P	P	19 26 33.3	-0.6
MBO				IAmb	IAmb	19 26 39.4	
	comp=Z,3µm,1.8s						
MANU	Manus Island	80.14	100	⇑P	P	19 26 34.5	+0.4
MANU				⇑P	PcP	19 26 34.6	-6.1
PINM	Pinnacle	80.36	15	P	P	19 26 35.5	+0.8
	baz=335,SNR=148						
KLBR	Kellerberrin	80.54	141	P	P	19 26 34.6	-1.1
	baz=81,SNR=42						
KLBR	Kellerberrin	80.54	141	P	P	19 26 34.5	-1.3
WHY	Whitehorse	80.89	13	IAmb	IAmb	19 26 41.2	
	comp=Z,2µm,1.8s						
WHY	Whitehorse	80.89	13	P	P	19 26 37.3	-0.2
	baz=339,SNR=200						
WHY				S	S	19 36 26.2	-2.1
	baz=339						
PNL	Peninsula	80.93	15	P	P	19 26 38.5	+0.9
	baz=336,SNR=100						
SOE	Somerset East	80.96	218	P	P	19 26 43.5	+5.5
SOE				pP	pP	19 27 29.9	+0.8
YKA	Yellowknife Ar	81.28	3	P	P	19 26 39.4	+0.1
	comp=Z,256nm,0.5s,baz=350,slow=5.4,SNR=964						
YKA				pP	pP	19 27 31.7	+1.4
	comp=Z,194nm,0.7s,baz=349,slow=5.4,SNR=2.5						
YKA				S	S	19 36 33.0	+1.0
	comp=Z,17nm,1.1s,baz=345,slow=7.0,SNR=7.7						
YKA				PKKPbc	PKKPbc	19 45 09.9	-3.0
	comp=Z,9.0nm,0.6s,baz=168,slow=2.3,SNR=31						
YKA				PKPPKP	P'P'df	19 53 13.3	-6.0
	comp=Z,1.1nm,0.8s,baz=190,slow=2.3,SNR=7.9						
YKA	Yellowknife Ar	81.28	3	P	P	19 26 39.0	-0.2
YKA				pP	pP	19 27 30.9	+0.5
NWAO	Narrogin (SRO)	81.36	142	P	P	19 26 38.7	-1.3
H01W3	Cape Leeuwin H	81.48	145	P	P	19 26 42.9	+2.5
	baz=326,slow=6.0,SNR=11						
H01W2	Cape Leeuwin H	81.50	145	P	P	19 26 43.0	+2.6
	baz=326,slow=6.0,SNR=7.4						
WRKA	Warakurna	81.50	130	P	P	19 26 40.5	-0.5
	baz=82,SNR=289						
WRKA	Warakurna	81.50	130	⇑P	P	19 26 40.5	-0.5
WRKA				⇑P	P	19 26 40.5	-0.5
WRKA	Warakurna	81.50	130	P	P	19 26 40.0	-1.0
H01W1	Cape Leeuwin H	81.50	145	P	P	19 26 43.0	+2.6
	baz=326,slow=6.0,SNR=9.0						
P33M	Teslin, Yukon	81.67	12	P	P	19 26 42.0	+0.4
	baz=341,SNR=884						
P33M				S	S	19 36 33.5	-2.7
	baz=341						
WRA	Warramunga Arr	81.86	122	P	P	19 26 42.0	-1.0
	comp=Z,1µm,0.9s,baz=324,slow=4.7,SNR=620						
WRA				pP	pP	19 27 34.5	+0.6
	comp=Z,156nm,0.9s,baz=320,slow=4.8,SNR=2.0						
WRA				S	S	19 36 37.0	-2.0
	comp=Z,26nm,1.3s,baz=294,slow=7.3,SNR=6.6						
WRA				PKKPbc	PKKPbc	19 45 12.6	+0.8
	comp=Z,14nm,1.2s,baz=123,slow=1.7,SNR=4.9						
WRA				PKPPKP	P'P'df	19 53 17.7	+1.2
	comp=Z,17nm,1.0s,baz=134,slow=1.9,SNR=11						
WRA	Warramunga Arr	81.86	122	P	P	19 26 42.2	-0.8
WRA				*PP	pP	19 27 34.7	+0.8
WRA				pmax	pmax		
	comp=Z,275nm,1.0s						
WRA	Warramunga Arr	81.86	122	P	P	19 26 42.2	-0.8
WRA				pP	pP	19 27 34.7	+0.8
WRAB	Tennant Creek	81.86	122	*c i*P	P	19 26 42.0	-0.9
WRAB				pmax	pmax		
	comp=Z,3µm,1.0s						
WRAB	Tennant Creek	81.86	122	⇑P	P	19 26 42.1	-0.9
WRAB	Tennant Creek	81.86	122	P	P	19 26 42.0	-0.9
WRAB	Tennant Creek	81.86	122	P	P	19 26 42.2	-0.8
WB2	Warramunga Arr	81.86	122	P	P	19 26 42.3	-0.7
SKAG	Skagway	81.93	13	⇑P	P	19 26 43.9	+1.2
SKAG	Skagway	81.93	13	IAmb	IAmb	19 26 47.7	
	comp=Z,2µm,1.3s						
SKAG	Skagway	81.93	13	P	P	19 26 44.0	+1.2
	baz=339,SNR=180						
SKAG				S	S	19 36 39.4	+0.7
	baz=339						
WR0	Warramunga Arr	82.00	122	P	P	19 26 42.6	-1.2
SCHQ	Schefferville	82.18	337	P	P	19 26 44.4	+0.2
	comp=Z,264nm,0.9s,baz=32,slow=5.2,SNR=61						
SCHQ				pP	pP	19 27 37.3	+2.2
	comp=Z,101nm,0.8s,baz=338,slow=2.6,SNR=2.4						
SCHQ				PKKPbc	PKKPbc	19 45 09.4	-1.4
	comp=Z,15nm,0.9s,baz=318,slow=0.7,SNR=6.7						
SCHQ	Schefferville	82.18	337	⇑P	P	19 26 44.4	+0.2
SCHQ				⇑P	P	19 26 44.5	+0.2
SCHQ				⇓P	PcP	19 26 47.3	-1.7
SCHQ	Schefferville	82.18	337	IAmb	IAmb	19 26 48.4	
	comp=Z,1µm,1.4s						
H11N2	WAKE ISLAND Hy	82.94	71	P	P	19 26 50.7	+2.2
	baz=293,slow=6.2,SNR=3.1						
H11N1	WAKE ISLAND Hy	82.95	71	P	P	19 26 50.7	+2.2
	baz=293,slow=6.2,SNR=4.5						
H11N3	WAKE ISLAND Hy	82.96	71	P	P	19 26 50.3	+1.8
	baz=293,slow=6.2,SNR=6.3						
WAKE	Wake Island	83.02	71	⇑P	P	19 26 51.1	+2.0
WAKE	Wake Island	83.02	71	P	P	19 26 48.2	-0.9
SUR	Sutherland	83.12	221	PKKPbc	PKKPbc	19 45 12.7	+2.9
	comp=Z,26nm,1.0s,baz=281,slow=1.7,SNR=5.3						
SUR	Sutherland	83.12	221	⇑P	P	19 26 49.8	+0.4
SUR				⇑P	P	19 26 49.9	+0.5
SUR				⇑P	PcP	19 26 52.6	-0.9
SUR	Sutherland	83.12	221	P	P	19 26 48.3	-1.1
SUR	Sutherland	83.12	221	P	P	19 26 56.3	+6.9
SUR				pP	pP	19 27 45.2	+4.2
JIS	Juneau Island	83.22	13	IAmb	IAmb	19 26 54.5	
	comp=Z,2µm,1.4s						
DRLN	Deer Lake	83.28	329	⇑P	P	19 26 50.5	+0.5
DRLN				⇓P	P	19 26 51.1	+1.1
DRLN				⇑P	PcP	19 26 53.8	-0.2
DRLN	Deer Lake	83.28	329	IAmb	IAmb	19 26 54.5	
	comp=Z,1µm,1.1s						
PATS	Pohnpei	83.69	86	P	P	19 26 53.9	+1.3
	baz=84,SNR=32						
PATS	Pohnpei	83.69	86	P	P	19 26 53.0	+0.4
DLBC	Dease Lake	83.80	11	PKKPbc	PKKPbc	19 45 06.5	-0.7
	comp=Z,13nm,1.1s,baz=240,slow=4.5,SNR=7.7						
DLBC				PKPPKP	P'P'df	19 53 05.6	-9.3
	comp=Z,11nm,1.2s,baz=256,slow=4.2,SNR=4.4						
DLBC	Dease Lake	83.80	11	IAmb	IAmb	19 26 57.4	
	comp=Z,2µm,1.5s						
AS31	Alice Springs	84.12	125	P	P	19 26 53.7	-0.9
ASAR	Alice Springs	84.12	125	P	P	19 26 53.5	-1.0
	comp=Z,1µm,0.8s,baz=312,slow=5.1,SNR=843						
ASAR				pP	pP	19 27 47.0	+1.4
	comp=Z,337nm,1.2s,baz=314,slow=4.3,SNR=2.4						
ASAR				S	S	19 36 53.3	-8.5
	comp=Z,15nm,1.0s,baz=310,slow=7.2,SNR=6.4						
ASAR				PKKPbc	PKKPdf	19 45 02.5	+3.4
	comp=Z,4.3nm,1.1s,baz=133,slow=2.2,SNR=4.2						
ASAR				PKPPKP	P'P'df	19 53 12.3	+0.1
	comp=Z,4.0nm,0.9s,baz=139,slow=2.5,SNR=7.8						
SIT	Sitka	84.18	14	IAmb	IAmb	19 26 59.2	
	comp=Z,667nm,1.1s						
SIT	Sitka	84.18	14	P	P	19 26 55.2	+0.9
	baz=339,SNR=29						
COEN	Coen	84.26	112	⇑P	P	19 26 54.4	-1.0
COEN				⇑P	P	19 26 54.4	-1.0
COEN	Coen	84.26	112	IAmb	IAmb	19 26 58.1	
	comp=Z,1µm,1.0s						
COEN	Coen	84.26	112	P	P	19 26 54.0	-1.4
CRZF	Crozet Islands	84.33	193	IAmb	IAmb	19 27 53.6	
	comp=Z,1µm,1.4s						
PMG	Port Moresby	84.46	106	P	P	19 26 56.0	-0.4
PMG				pmax	pmax		
	comp=Z,1µm,1.1s						
PMG	Port Moresby	84.46	106	⇑P	P	19 26 56.0	-0.4
PMG	Port Moresby	84.46	106	P	P	19 26 56.0	-0.4
PMG				IAmb	IAmb	19 26 59.5	
	comp=Z,1µm,1.1s						
PMG	Port Moresby	84.46	106	P	P	19 26 55.8	-0.6
PMG	Port Moresby	84.46	106	P	P	19 26 55.6	-0.8
CER	Ceres	84.69	221	*e*P	P	19 26 57.6	+0.5
SACV	Santiago Islan	85.01	285	P	P	19 26 57.6	-1.6
RABL	Rabaul	85.24	99	⇑P	P	19 26 59.7	-0.7
RABL				⇓P	PcP	19 27 01.7	-1.4
RABL	Rabaul	85.24	99	IAmb	IAmb	19 27 03.3	
	comp=Z,1µm,1.1s						
WRAK	Wrangell Islan	85.34	13	IAmb	IAmb	19 27 04.9	
	comp=Z,2µm,1.8s						
WRAK	Wrangell Islan	85.34	13	P	P	19 27 01.4	+1.2
	baz=341,SNR=60						
WRAK				S	S	19 37 12.4	-0.5
	baz=341						
FORT	Forrest	85.54	134	P	P	19 27 00.9	-0.5
	baz=86,SNR=368						
FORT	Forrest	85.54	134	P	P	19 27 00.9	-0.5
FORT	Forrest	85.54	134	P	P	19 27 00.3	-1.1
QIS	Mount Isa	85.92	119	P	P	19 27 02.5	-1.0
	baz=86,SNR=951						
QIS	Mount Isa	85.92	119	P	P	19 27 01.9	-1.6
CRAG	Craig	86.10	14	IAmb	IAmb	19 27 08.6	
	comp=Z,1µm,1.8s						
CRAG	Craig	86.10	14	P	P	19 27 04.6	+0.8
	baz=341,SNR=19						
CRAG				S	S	19 37 18.7	-1.6
	baz=341						
ICQ	Pointe Anglais	86.81	334	⇓P	P	19 27 09.1	+1.6
ICQ				⇑P	PcP	19 27 11.6	+2.2
RUBB	Prince Rupert	87.71	12	IAmb	IAmb	19 27 16.2	
	comp=Z,1µm,1.8s						
MTSU	Mount Surprise	87.75	114	P	P	19 27 11.8	-0.6
	baz=88,SNR=233						
MTSU	Mount Surprise	87.75	114	P	P	19 27 11.5	-0.9
GBN	Guysborough	88.00	329	IAmb	IAmb	19 27 19.6	
	comp=Z,654nm,1.1s						
OOD	Oodnadatta	88.12	127	P	P	19 27 12.4	-1.5
BATG	Bathurst New B	88.26	332	P	P	19 27 14.1	-0.3
DIB	Dawson Inlet,	88.37	14	IAmb	IAmb	19 27 19.2	
	comp=Z,660nm,1.6s						
H02S1	DAWSON INLET T	88.37	14	P	P	19 27 17.1	+2.3
	SNR=15						
MULG	Mulgathing	88.80	130	P	P	19 27 15.3	-1.7
MIDW	Midway	88.97	55	⇑P	P	19 27 18.9	+0.9
MIDW	Midway	88.97	55	P	P	19 27 17.2	-0.8
MIDW				IAmb	IAmb	19 27 21.4	
	comp=Z,1µm,1.0s						
SHEL	Horse Pasture	89.21	250	P	P	19 27 17.6	-1.7
SHEL				pmax	pmax		
	comp=Z,341nm,1.1s						
SHEL	Horse Pasture	89.21	250	P	P	19 27 17.6	-1.7
HG4B	Hotspring	89.48	14	IAmb	IAmb	19 27 24.5	
	comp=Z,660nm,1.6s						
HAL	Halifax	89.48	330	IAmb	IAmb	19 27 25.1	
	comp=Z,724nm,1.8s						

BBB	Bella Bella	90.13	12	P	P	19 27 23.1	+0.1
	comp=Z,134nm,1.1s,baz=336,slow=5.5,SNR=16						
BBB	Bella Bella	90.13	12	P	P	19 27 23.2	+0.3
BBB				IAmb	IAmb	19 27 27.2	
	comp=Z,526nm,1.4s						
CTA	Charters Tower	90.40	115	P	P	19 27 24.1	-0.6
	comp=Z,844nm,0.8s,baz=302,slow=7.6,SNR=91						
CTA				pP	pP	19 28 18.5	+1.6
	comp=Z,213nm,1.1s,baz=306,slow=7.8,SNR=2.6						
CTAO	Charters Tower	90.40	115	⇑P	P	19 27 23.9	-0.8
CTAO				⇑P	P	19 27 24.0	-0.8
CTAO	Charters Tower	90.40	115	P	P	19 27 24.2	-0.5
G65A	Princeton	90.57	332	P	P	19 27 24.9	-0.3
ASCN	Ascension	91.08	261	P	P	19 27 26.7	-1.4
ASCN				IAmb	IAmb	19 27 32.9	
	comp=Z,269nm,0.8s						
PKME	Peaks-Kenny Pk	91.15	333	IAmb	IAmb	19 27 32.8	
	comp=Z,458nm,1.4s						
PKME	Peaks-Kenny Pk	91.15	333	P	P	19 27 28.7	+0.8
	baz=31,SNR=32						
VLDQ	Val d'Or	91.26	340	P	P	19 27 28.4	+0.1
VLDQ				IAmb	IAmb	19 27 33.0	
	comp=Z,878nm,1.1s						
INKA	Innaminka	91.41	124	P	P	19 27 28.4	-0.8
LCRK	Leigh Creek	91.54	127	P	P	19 27 28.1	-1.7
G62A	West of Eustis	91.64	334	IAmb	IAmb	19 27 35.0	
	comp=Z,416nm,1.4s						
BBOO	Buckleboo	91.78	130	P	P	19 27 30.5	-0.3
	baz=92,SNR=66						
BBOO	Buckleboo	91.78	130	IAmb	IAmb	19 27 33.0	
	comp=Z,543nm,1.1s						
BBOO	Buckleboo	91.78	130	P	P	19 27 29.4	-1.4
TLCB	Telegraph Cove	91.92	11	P	P	19 27 31.0	-0.3
TLCB				IAmb	IAmb	19 27 36.0	
	comp=Z,609nm,1.2s						
TRQ	Mont Tremblant	92.10	337	IAmb	IAmb	19 27 36.6	
	comp=Z,510nm,1.2s						
LLLB	Lillooet	92.54	8	P	P	19 27 34.5	+0.3
LLLB				IAmb	IAmb	19 27 40.0	
	comp=Z,863nm,1.3s						
CBB	Campbell River	92.64	11	IAmb	IAmb	19 27 40.6	
	comp=Z,954nm,1.4s						
WHYH	Whyalla	92.86	130	P	P	19 27 34.8	-1.0
ULM	Lac du Bonnet	92.90	352	P	P	19 27 35.5	-0.3
	comp=Z,318nm,0.9s,baz=9.6,slow=4.9,SNR=73						
ULM				pP	pP	19 28 28.1	+0.4
	comp=Z,75nm,1.1s,baz=13,slow=5.4,SNR=2.1						
ULM				PP	PP	19 31 21.1	+0.9
	comp=Z,56nm,0.8s,baz=14,slow=8.5,SNR=4.3						
ULM				PKKP	PKKPdf	19 44 42.0	+0.9
	comp=Z,8.4nm,0.8s,baz=196,slow=4.6,SNR=5.8						
ULM				PKPPKP	P'P'df	19 52 47.6	-10
	comp=Z,5.4nm,0.8s,baz=8.7,slow=4.4,SNR=5.1						
ULM	Lac du Bonnet	92.90	352	IAmb	IAmb	19 27 39.3	
	comp=Z,525nm,1.1s						
LBNH	Lisbon	92.98	334	P	P	19 27 36.3	-0.1
	baz=29,SNR=19						
FRNY	Flat Rock	93.02	336	P	P	19 27 35.5	-1.0
QLP	Quilpie	93.04	121	P	P	19 27 35.9	-0.9
	baz=93,SNR=203						
QLP	Quilpie	93.04	121	P	P	19 27 36.1	-0.7
LONY	Lake Ozonia	93.54	336	IAmb	IAmb	19 27 43.2	
	comp=Z,367nm,1.1s						
LONY	Lake Ozonia	93.54	336	P	P	19 27 39.3	+0.4
	baz=27,SNR=98						
HNH	Hanover	93.57	334	P	P	19 27 39.0	0.0
PLVO	Plevna	93.94	338	IAmb	IAmb	19 27 45.0	
	comp=Z,331nm,1.2s						
HTT	Hallett	93.97	129	P	P	19 27 39.9	-1.0
	baz=94,SNR=131						
HTT	Hallett	93.97	129	P	P	19 27 39.6	-1.4
J61A	Chester	93.98	334	P	P	19 27 41.0	0.0
J61A				IAmb	IAmb	19 27 45.6	
	comp=Z,290nm,1.1s						
CLRS	Cowichan Lake	94.00	10	IAmb	IAmb	19 27 45.9	
	comp=Z,292nm,1.4s						
PGC	Sidney	94.27	10	P	P	19 27 41.6	-0.5
PGC				IAmb	IAmb	19 27 47.0	
	comp=Z,775nm,1.6s						
A04D	Lummi Island	94.30	9	P	P	19 27 42.8	+0.5
	baz=349,SNR=21						
ACCN	Adirondack Com	94.33	335	P	P	19 27 42.3	-0.3
HRV	Adam Dziewonsk	94.36	333	P	P	19 27 43.0	+0.3
HRV				pmax	pmax		
	comp=Z,119nm,1.2s						
HRV	Adam Dziewonsk	94.36	333	P	P	19 27 43.0	+0.3
HRV	Adam Dziewonsk	94.36	333	P	P	19 27 42.5	-0.2
	baz=29						
HRV				S	S	19 38 33.5	-2.9
	baz=29						
B35A	Bob, Littlefor	94.48	350	P	P	19 27 42.7	-0.5
B35A				IAmb	IAmb	19 27 46.8	
	comp=Z,484nm,1.5s						
J59A	Piesco	94.54	336	IAmb	IAmb	19 27 47.9	
	comp=Z,270nm,1.1s						
EYMN	Ely	94.55	348	IAmb	IAmb	19 27 47.4	
	comp=Z,535nm,1.1s						
EYMN	Ely	94.55	348	P	P	19 27 43.7	+0.2
	baz=14,SNR=98						
EYMN				S	S	19 38 34.9	-3.0
	baz=14						
HNR	Honiara	94.55	98	P	P	19 27 44.0	0.0
	comp=Z,131nm,0.9s,baz=175,slow=7.3,SNR=11						
HNR	Honiara	94.55	98	P	P	19 27 42.1	-1.9
HNR				pmax	pmax		
	comp=Z,191nm,0.9s						
HNR	Honiara	94.55	98	⇑P	P	19 27 44.2	+0.2
HNR	Honiara	94.55	98	P	P	19 27 42.1	-1.9
HNR				IAmb	IAmb	19 27 50.8	
	comp=Z,191nm,0.9s						
DELO	Deloro Mine	94.58	338	P	P	19 27 43.5	-0.2
DELO				IAmb	IAmb	19 27 47.8	
	comp=Z,407nm,1.1s						
B06A	Marblemount	94.64	8	IAmb	IAmb	19 27 47.7	
	comp=Z,498nm,1.5s						
STKA	Stephens Creek	94.66	126	P	P	19 27 42.3	-1.8
	comp=Z,109nm,0.8s,baz=343,slow=4.5,SNR=67						
STKA				S	SKSac	19 37 54.4	-5.1
	comp=Z,9.1nm,1.1s,baz=158,slow=22,SNR=5.6						
STKA				PKKPbc	PKKPbc	19 44 37.8	-2.9
	comp=Z,4.5nm,0.9s,baz=137,slow=6.1,SNR=2.2						
STKA	Stephens Creek	94.66	126	P	P	19 27 42.4	-1.7
	baz=95,SNR=96						
STKA	Stephens Creek	94.66	126	P	P	19 27 42.4	-1.7
STKA				pmax	pmax		
	comp=Z,25nm,0.9s						
STKA	Stephens Creek	94.66	126	P	P	19 27 42.4	-1.7
STKA	Stephens Creek	94.66	126	P	P	19 27 42.7	-1.4
WALA	Waterton Lakes	94.73	3	P	P	19 27 43.6	-0.9
WALA				IAmb	IAmb	19 27 49.3	
	comp=Z,359nm,1.1s						
SADO	Sadowa	94.79	339	IAmb	IAmb	19 27 48.6	
	comp=Z,260nm,1.2s						
L61B	Northampton	94.81	334	P	P	19 27 45.3	+0.5
	baz=28,SNR=32						
B05A	Bryant	94.82	9	P	P	19 27 45.1	+0.4
	baz=349,SNR=99						
AGMN	Agassiz Nation	94.82	351	IAmb	IAmb	19 27 48.5	
	comp=Z,501nm,1.1s						
AGMN	Agassiz Nation	94.82	351	P	P	19 27 44.8	+0.1
	baz=10,SNR=236						
AGMN				S	S	19 38 36.1	-4.1
	baz=10						
B04A	Port Angeles	94.84	10	IAmb	IAmb	19 27 49.8	
	comp=Z,697nm,1.6s						
M65A	Busby, Falmout	94.84	332	IAmb	IAmb	19 27 49.4	
	comp=Z,280nm,1.1s						
M65A	Busby, Falmout	94.84	332	P	P	19 27 45.0	0.0
	baz=30,SNR=6.5						
QUA2	Belchertown	94.84	334	P	P	19 27 43.8	-1.1
B08A	Colville Reser	95.03	7	IAmb	IAmb	19 27 50.9	
	comp=Z,709nm,1.6s						
J57A	Williamstown	95.07	337	P	P	19 27 45.3	-0.7
J57A				IAmb	IAmb	19 27 49.9	
	comp=Z,240nm,1.2s						
UCCT	U. Connecticut	95.22	333	IAmb	IAmb	19 27 50.7	
	comp=Z,192nm,1.1s						
E43A	Lone Tree Farm	95.23	345	IAmb	IAmb	19 27 50.3	
	comp=Z,404nm,1.4s						
C06D	Leavenworth	95.30	8	P	P	19 27 46.8	-0.2
	baz=350,SNR=18						
DGMT	Dagmar	95.34	357	P	P	19 27 48.0	+0.8
	baz=3.8,SNR=88						
D03D	Eldon	95.41	10	P	P	19 27 47.4	0.0
	baz=349,SNR=54						
NLWA	Neilton Lookou	95.44	10	⇑P	P	19 27 50.2	+2.6
NLWA				⇑P	PcP	19 27 51.1	+3.3
NLWA	Neilton Lookou	95.44	10	IAmb	IAmb	19 27 52.7	
	comp=Z,469nm,1.4s						
J56A	Wolcott	95.47	337	P	P	19 27 47.8	0.0
J56A				IAmb	IAmb	19 27 51.6	
	comp=Z,362nm,1.1s						
RK1H	Rockhampton Ha	95.53	115	P	P	19 27 49.0	+0.8
MDND	Maddock	95.66	354	P	P	19 27 48.6	0.0
	baz=7.5,SNR=80						
J55A	Hilton	95.77	338	P	P	19 27 48.5	-0.6
J55A				IAmb	IAmb	19 27 53.0	
	comp=Z,287nm,1.2s						
D04E	Lakebay	95.80	10	P	P	19 27 50.0	+0.8
	baz=349,SNR=12						
D04E				S	S	19 38 48.3	-0.3
	baz=349						
K57A	Scipio Center	95.85	337	IAmb	IAmb	19 27 53.5	
	comp=Z,195nm,1.1s						
E38A	The Farm, Brul	95.86	348	IAmb	IAmb	19 27 53.1	
	comp=Z,388nm,1.2s						
EGMT	Eagleton	95.88	1	P	P	19 27 49.5	-0.2
	baz=359,SNR=91						
D05A	Enumclaw	95.89	9	P	P	19 27 50.4	+0.8
LTY	Liberty	95.98	8	IAmb	IAmb	19 27 53.9	
	comp=Z,402nm,1.9s						
J54A	Appleton	96.01	338	IAmb	IAmb	19 27 54.2	
	comp=Z,326nm,1.2s						
F42A	Maple Grove Fa	96.05	346	IAmb	IAmb	19 27 54.0	
	comp=Z,208nm,0.8s						
MEDO	Medina	96.06	338	P	P	19 27 49.8	-0.6
D32A	Dogwood Acres,	96.11	352	IAmb	IAmb	19 27 54.0	
	comp=Z,334nm,1.5s						
RMQ	Roma	96.15	118	P	P	19 27 51.1	0.0
	baz=96,SNR=147						
RMQ	Roma	96.15	118	P	P	19 27 52.3	+1.3
BINY	Binghamton	96.16	336	P	P	19 27 51.0	0.0
	baz=26,SNR=31						
GLMI	Grayling	96.17	343	P	P	19 27 51.3	+0.4
	baz=19,SNR=43						
G45A	Suttons Bay	96.21	344	P	P	19 27 51.0	-0.1
MMNY	Mt. Morris Dam	96.28	338	IAmb	IAmb	19 27 55.2	
	comp=Z,323nm,1.1s						
D08A	Wollman Farm,	96.36	7	IAmb	IAmb	19 27 56.2	
	comp=Z,634nm,1.7s						
E04D	Cinebar	96.44	9	P	P	19 27 52.4	+0.3
	baz=349,SNR=37						
PAL	Palisades	96.52	334	P	P	19 27 52.1	-0.4
PAL				pmax	pmax		
	comp=Z,85nm,1.2s						
PAL	Palisades	96.52	334	P	P	19 27 52.1	-0.4
PAL	Palisades	96.52	334	P	P	19 27 52.3	-0.2
	baz=28,SNR=11						
I49A	Point Hope	96.56	341	IAmb	IAmb	19 27 56.6	
	comp=Z,324nm,1.1s						
L56A	Greenwood	96.72	337	IAmb	IAmb	19 27 57.2	
	comp=Z,255nm,1.1s						
CPNY	Central Park	96.72	334	P	P	19 27 53.1	-0.4
E07A	Sunnyside	96.76	8	IAmb	IAmb	19 27 58.0	
	comp=Z,283nm,1.6s						
WVNY	West Valley, N	96.79	338	IAmb	IAmb	19 27 57.7	
	comp=Z,338nm,1.1s						
F04D	Rainier, OR	96.84	10	P	P	19 27 54.7	+0.7
	baz=349						
F36A	Milaca	96.90	349	IAmb	IAmb	19 27 57.8	
	comp=Z,292nm,1.4s						
E08A	Dider Farm, El	96.91	7	P	P	19 27 53.6	-0.7
E08A				IAmb	IAmb	19 27 59.6	
	comp=Z,245nm,1.2s						
G40A	Rib Lake	96.92	347	IAmb	IAmb	19 27 58.1	
	comp=Z,281nm,1.1s						
MSO	Missoula	96.96	4	IAmb	IAmb	19 27 59.5	
	comp=Z,321nm,1.5s						
MSO	Missoula	96.96	4	P	P	19 27 54.6	0.0
	baz=356,SNR=91						
HAWA	Hanford	96.96	7	IAmb	IAmb	19 27 59.0	
	comp=Z,214nm,1.6s						
E09A	Wood Farm, Sta	96.97	6	IAmb	IAmb	19 27 59.7	
	comp=Z,293nm,1.1s						
E28A	Huff	97.01	354		pP	19 28 47.1	+0.2
CMSA	Cobar Meteorol	97.14	124	P	P	19 27 53.9	-1.4
	baz=97,SNR=94						
CMSA	Cobar Meteorol	97.14	124	P	P	19 27 54.1	-1.3
EIDS	Eidsvold	97.14	116	P	P	19 27 54.5	-1.1
	baz=97,SNR=70						
EIDS	Eidsvold	97.14	116	P	P	19 27 53.9	-1.7
EIDS				IAmb	IAmb	19 27 57.9	
	comp=Z,207nm,1.1s						
EIDS	Eidsvold	97.14	116	P	P	19 27 55.0	-0.5
LAO	LASA Array	97.19	358	P	Pdif	19 27 56.7	+1.1
	baz=2.1,SNR=47						
LAO				S	S	19 38 57.0	-3.8
	baz=2.1						
H43A	Windswept, Lux	97.21	345	IAmb	IAmb	19 27 59.5	
	comp=Z,308nm,1.2s						
N59A	State Game Lan	97.23	335	P	Pdif	19 27 55.9	0.0
	baz=26,SNR=10						
F05D	White Salmon	97.24	9	P	Pdif	19 27 56.1	+0.3
	baz=350,SNR=19						
F33A	5 Mile Ranch,	97.30	351	IAmb	IAmb	19 27 60.0	
	comp=Z,406nm,1.5s						
M57A	Sunshine Farm,	97.30	336	P	P	19 27 55.5	-0.6
M57A				IAmb	IAmb	19 28 00.5	
	comp=Z,200nm,1.1s						
SPMN	Marine on St.	97.41	349	IAmb	IAmb	19 28 00.2	
	comp=Z,437nm,1.8s						
SPMN	Marine on St.	97.41	349	P	P	19 27 56.5	0.0
	baz=13,SNR=40						
F07A	Phinny Hill Vi	97.41	8	IAmb	IAmb	19 28 02.1	
	comp=Z,264nm,1.3s						
ERPA	Erie	97.47	339	IAmb	IAmb	19 28 00.6	
	comp=Z,191nm,1.1s						
ERPA	Erie	97.47	339	P	P	19 27 56.5	-0.3
	baz=23,SNR=20						
F10A	Beach Ranch, E	97.59	6	IAmb	IAmb	19 28 02.1	
	comp=Z,311nm,1.5s						
K50A	Casco	97.59	341	P	P	19 27 56.3	-1.1
K50A				IAmb	IAmb	19 28 01.4	
	comp=Z,355nm,1.2s						
G03D	McMinnville, O	97.66	10	P	Pdif	19 27 58.1	+0.5
	baz=348,SNR=7.8						
M55A	Ridgway	97.70	338	IAmb	IAmb	19 28 02.2	
	comp=Z,155nm,1.0s						
J47A	Sunmer	97.72	343	IAmb	IAmb	19 28 02.1	
	comp=Z,422nm,1.1s						
HOOD	Mount Hood Mea	97.77	9	P	P	19 27 56.4	-1.9
HOOD				IAmb	IAmb	19 28 02.7	
	comp=Z,312nm,1.4s						
G05D	Wamic, OR	97.89	9	P	P	19 27 58.5	-0.2
	baz=350,SNR=9.0						
M54A	Oil Creek Stat	97.93	338	IAmb	IAmb	19 28 02.8	
	comp=Z,305nm,1.2s						
M54A	Oil Creek Stat	97.93	338	P	P	19 27 58.9	-0.1
	baz=23,SNR=51						
ALLY	Alegheny Colle	97.95	339	IAmb	IAmb	19 28 02.6	
	comp=Z,192nm,1.2s						
ARPS	Mount Arapiles	97.95	130	P	Pdif	19 28 00.1	+1.2
	baz=98,SNR=7.9						
I42A	Draeger Farm,	98.00	346	IAmb	IAmb	19 28 03.1	
	comp=Z,216nm,1.1s						
P61A	Hammonton	98.01	334	P	P	19 27 58.7	-0.5
P61A				IAmb	IAmb	19 28 03.3	
	comp=Z,346nm,1.1s						
P60A	Greenville	98.18	335	P	P	19 27 59.6	-0.4
	baz=26,SNR=18						
SSPA	Standing Stone	98.18	337	P	P	19 27 59.1	-1.0
SSPA				IAmb	IAmb	19 28 03.8	
	comp=Z,167nm,1.2s						
SSPA	Standing Stone	98.18	337	P	P	19 27 59.5	-0.6
	baz=25						
COR	Corvallis	98.27	10	P	P	19 28 00.1	-0.3
COR				pmax	pmax		
	comp=Z,418nm,1.6s						
COR	Corvallis	98.27	10	P	P	19 28 00.1	-0.3
COR				IAmb	IAmb	19 28 05.6	
	comp=Z,418nm,1.6s						
BOZ	Bozeman (W)	98.28	2	IAmb	IAmb	19 28 05.3	
	comp=Z,432nm,1.6s						
BOZ	Bozeman (W)	98.28	2	P	Pdif	19 28 00.8	+0.2
	baz=358,SNR=110						
BOZ				S	S	19 39 06.7	-3.5
	baz=358						
M53A	WI Miller and	98.29	339	P	P	19 27 59.0	-1.6
M53A	WI Miller and	98.29	339	P	P	19 28 00.3	-0.3
	baz=23,SNR=21						
M53A				S	S	19 39 07.5	-2.7
	baz=23						
AAM	Ann Arbor	98.31	341	IAmb	IAmb	19 28 04.2	
	comp=Z,150nm,1.2s						
AAM	Ann Arbor	98.31	341	P	P	19 28 00.4	-0.2
	baz=20,SNR=7.9						
AAM				S	S	19 39 10.1	-0.1
	baz=20						
I40A	Norwalk	98.33	347	IAmb	IAmb	19 28 04.8	
	comp=Z,286nm,1.1s						
H04A	Detroit Lake	98.33	10	IAmb	IAmb	19 28 04.8	
	comp=Z,209nm,1.5s						
M52A	Chesterland	98.39	340	P	P	19 27 59.8	-1.3
M52A				IAmb	IAmb	19 28 04.9	
	comp=Z,171nm,1.2s						
H04D	Lebanon	98.41	10	P	Pdif	19 28 01.6	+0.6
	baz=349,SNR=7.0						
DLMT	Dillon	98.48	3	IAmb	IAmb	19 28 07.1	
	comp=Z,345nm,1.4s						
N54A	Moraine State	98.53	338	IAmb	IAmb	19 28 05.5	
	comp=Z,156nm,1.2s						
N54A	Moraine State	98.53	338	P	Pdif	19 28 01.7	0.0
	baz=23,SNR=28						
PLID	Pearl Lake	98.57	5	IAmb	IAmb	19 28 06.8	
	comp=Z,146nm,1.2s						
I02E	Swisshome, OR	98.65	11	P	P	19 28 01.9	-0.1
	baz=348						
I37A	Lemond, Waseca	98.68	349	IAmb	IAmb	19 28 06.5	
	comp=Z,221nm,1.2s						
O56A	Blue Knob Stat	98.73	337	P	P	19 28 01.5	-1.1
O56A				IAmb	IAmb	19 28 06.4	
	comp=Z,211nm,1.4s						
O56A	Blue Knob Stat	98.73	337	P	P	19 28 02.4	-0.2
	baz=24,SNR=31						
I05D	Terrebonne, OR	98.78	9	P	Pdif	19 28 02.9	+0.2
	baz=350,SNR=18						
RLMT	Red Lodge	98.79	0	IAmb	IAmb	19 28 08.8	
	comp=Z,463nm,1.6s						
RLMT	Red Lodge	98.79	0	P	P	19 28 02.7	-0.3
	baz=360,SNR=106						
L48A	N Adams	98.84	342	IAmb	IAmb	19 28 06.8	
	comp=Z,328nm,1.5s						
Q61A	Milford	98.90	334	P	P	19 28 03.0	-0.2
	baz=27						
Q61A				S	S	19 39 13.8	-1.6
	baz=27						
SUSD	Miller	98.97	353	P	P	19 28 02.8	-0.8
SUSD				IAmb	IAmb	19 28 09.5	
	comp=Z,179nm,0.9s						
SUSD	Miller	98.97	353	P	Pdif	19 28 03.6	0.0
	baz=8.0,SNR=24						
M50A	Fremont	98.98	341	P	P	19 28 02.4	-1.3
M50A				IAmb	IAmb	19 28 07.1	
	comp=Z,132nm,1.2s						
K43A	Burlington	99.02	345	IAmb	IAmb	19 28 07.5	
	comp=Z,358nm,1.1s						
I03D	Drain, OR	99.13	11	P	Pdif	19 28 03.7	-0.5
	baz=348						
JFWS	Jewell Farm	99.20	346	P	Pdif	19 28 04.5	-0.1
	baz=15,SNR=50						
ECSD	EROS Data Cent	99.41	351	P	Pdif	19 28 05.5	0.0
	baz=9.9,SNR=90						
L44A	Lake County Fo	99.43	344	P	Pdif	19 28 05.5	-0.1
	baz=17,SNR=7.7						
H17A	Grant Village	99.50	1	P	Pdif	19 28 06.6	+0.4
	baz=359,SNR=63						
O53A	New Philadelph	99.55	339	P	Pdif	19 28 06.2	0.0
	baz=22,SNR=26						
RSSD	Black Hills	99.67	356	P	Pdif	19 28 07.1	+0.1
	baz=3.9						
MCWV	Mont Chateau	99.69	338	P	Pdif	19 28 06.9	+0.2
	baz=23,SNR=35						
J04D	Umpqua Nationa	99.75	10	P	Pdif	19 28 07.5	+0.2
	baz=349,SNR=10						
J05D	Fort Rock, OR	99.83	9	P	Pdif	19 28 07.8	+0.3
	baz=350,SNR=22						
K02D	Willamette Mer	100.06	11	P	Pdif	19 28 08.9	+0.4
	baz=348						
ACSO	Alum Creek Sta	100.06	340	P	Pdif	19 28 08.2	-0.2
	baz=21,SNR=34						
HLID	Hailey	100.19	4	P	Pdif	19 28 09.1	-0.1
	baz=356,SNR=21						
CBN	Corbin Frederi	100.21	335	P	Pdif	19 28 09.0	-0.2
	baz=25						
P52A	Corning	100.38	339	P	Pdif	19 28 09.6	-0.3
	baz=22,SNR=30						
K04D	Chiloquin, OR	100.41	10	P	Pdif	19 28 10.1	0.0
	baz=350						
ARMA	Armidale	100.53	120	P	Pdif	19 28 11.2	+0.6
	baz=101,SNR=23						
ARMA	Armidale	100.53	120	P	Pdif	19 28 11.1	+0.4
L02E	Cave Junction	100.60	11	P	Pdif	19 28 10.3	-0.5
	baz=348						
SCIA	State Center	100.71	348	P	Pdif	19 28 11.5	+0.2
	baz=13,SNR=13						
TOO	Toolangi	100.73	129	P	Pdif	19 28 10.8	-0.4
	baz=101,SNR=14						
TOO	Toolangi	100.73	129	P	Pdif	19 28 11.3	0.0
L04D	Klamath Falls	100.73	10	P	Pdif	19 28 11.4	-0.1
	baz=349,SNR=9.9						
SFIN	Lafayette	100.96	343	P	Pdif	19 28 12.3	-0.2
	baz=18,SNR=15						
BW06	Boulder Array	101.14	1	P	Pdif	19 28 13.7	+0.1
	baz=359,SNR=20						
PDAR	Pinedale Array	101.14	1	P	Pdif	19 28 13.4	-0.1
	comp=Z,11nm,0.8s,baz=39,slow=2.5,SNR=31						
PDAR				PP	PP	19 32 13.6	-10
	comp=Z,10nm,0.9s,baz=24,slow=3.3,SNR=3.9						
PDAR				PKiKP	PKiKP	19 32 38.0	+0.7
	comp=Z,11nm,0.8s,baz=46,slow=1.6,SNR=9.2						
PDAR				PKKPbc	PKKPbc	19 44 23.0	-0.1
	comp=Z,5.3nm,0.8s,baz=143,slow=2.6,SNR=15						
PDAR				PKPPKP	P'P'df	19 52 36.2	-6.3
	comp=Z,2.1nm,0.9s,baz=156,slow=3.0,SNR=7.1						
YBH	Yreka Blue Hor	101.15	11	P	Pdif	19 28 14.7	+1.3
	comp=Z,15nm,1.0s,baz=58,slow=9.0,SNR=3.6						
P49A	Miami Univ. Ec	101.18	341	P	Pdif	19 28 13.1	-0.3
	baz=20,SNR=15						
M04C	Macdoel	101.22	10	P	Pdif	19 28 13.6	-0.2
	baz=349,SNR=9.8						
K22A	Casper	101.23	358	P	Pdif	19 28 13.7	-0.1
	baz=1.9,SNR=24						
HDIL	Hopedale	101.28	345	P	Pdif	19 28 13.9	0.0
	baz=16,SNR=18						
M02C	Callahan	101.46	11	P	Pdif	19 28 14.8	0.0
	baz=349,SNR=9.4						
CAN	Canberra	101.63	125	P	Pdif	19 28 14.3	-1.1
MGCD	Mangrove Creek	101.80	123	P	Pdif	19 28 18.4	+2.3
	baz=102,SNR=10						
MGCD	Mangrove Creek	101.80	123	P	Pdif	19 28 16.3	+0.2
CNB	Canberra Magne	101.87	125	P	Pdif	19 28 17.7	+1.2
	baz=102,SNR=6.2						
BGNE	Belgrade	101.89	352	P	Pdif	19 28 16.7	+0.1
	baz=8.8,SNR=13						
N02D	Trinity Center	101.89	11	P	Pdif	19 28 16.9	+0.2
	baz=349,SNR=5.1						
BLA	Blacksburg	102.11	337	P	Pdif	19 28 17.5	-0.2
	baz=23,SNR=7.9						
O02D	Mt. Diablo Mer	102.66	11	P	Pdif	19 28 19.6	-0.5
	baz=349						
O03E	Paynes Creek	102.69	10	P	Pdif	19 28 20.2	-0.1
	baz=349						
OGNE	Ogallala	102.71	355	P	Pdif	19 28 20.4	0.0
	baz=5.6						
WCI	Wyandotte Cave	102.81	342	P	Pdif	19 28 20.9	+0.2
	baz=18						
ELK	Elko	102.94	5	PKKPbc	PKKPbc	19 44 12.8	-5.0
	comp=Z,1.0nm,0.7s,baz=264,slow=7.0,SNR=1.7						
N23A	Red Feather La	102.97	358	P	Pdif	19 28 22.0	+0.2
	baz=2.4,SNR=10						
CNNC	Cliffs of the	103.07	334	P	Pdif	19 28 22.0	+0.1
	baz=25						
DUG	Dugway, Tooele	103.63	3	P	Pdif	19 28 25.4	+0.8
	baz=357,SNR=22						
TZTN	Tazewell	103.66	339	P	Pdif	19 28 24.8	+0.3
	baz=21,SNR=6.3						
O20A	White River Ci	103.77	360	P	Pdif	19 28 25.5	+0.3
	baz=0.5,SNR=30						
MAW	Mawson	103.94	183	Pdiff	Pdif	19 28 25.0	+0.3
	comp=Z,9.3nm,0.9s,baz=28,slow=4.8,SNR=3.9						
MAW				PP	PP	19 32 44.5	-0.7
	comp=Z,34nm,1.1s,baz=0.7,slow=10,SNR=7.2						
MAW				PKKPbc	PKKPbc	19 44 15.1	-0.7
	comp=Z,13nm,0.7s,baz=231,slow=5.0,SNR=8.2						
KSU1	Kansas State U	103.97	350	P	Pdif	19 28 26.1	+0.2
	baz=10,SNR=6.9						
ISCO	Idaho Springs	104.05	357	P	Pdif	19 28 26.1	-0.5
	baz=2.7,SNR=14						
CCM	Cathedral Cave	104.09	346	P	Pdif	19 28 26.4	0.0
	baz=14						
KMSC	Kings Mountain	104.30	337	P	Pdif	19 28 27.0	-0.4

	baz=22,SNR=21						
CBKS	Cedar Bluff	104.62	353	P	Pdif	19 28 29.0	+0.1
	baz=7.6						
KSCO	Kaye Shedlock’	104.68	355	P	Pdif	19 28 29.6	+0.3
	baz=5.2						
Q24A	Divide	104.87	357	P	Pdif	19 28 30.4	+0.1
	baz=3.1,SNR=6.2						
NVAR	Mina Array Bea	104.97	8	Pdiff	Pdif	19 28 32.0	+1.4
	comp=Z,17nm,1.1s,baz=353,slow=2.2,SNR=28						
NVAR				PKiKP	PKiKP	19 32 47.0	+2.6
	comp=Z,19nm,1.0s,baz=26,slow=3.1,SNR=6.5						
NVAR				PKKPbc	PKKPbc	19 44 10.3	-1.5
	comp=Z,6.7nm,0.7s,baz=192,slow=5.5,SNR=14						
NVAR				PKPPKP	P'P'df	19 52 33.1	-2.2
	comp=Z,1.7nm,0.9s,baz=188,slow=3.6,SNR=5.1						
WVT	Waverly	105.18	343	P	Pdif	19 28 31.3	0.0
	baz=17						
R11A	Troy Canyon, C	105.30	6	P	Pdif	19 28 32.2	+0.2
	baz=354,SNR=18						
U40A	Yellville	106.04	347	P	PKiKP	19 32 46.2	+0.1
	baz=13						
SDCO	Great Sand Dun	106.10	357	P	PKiKP	19 32 47.8	+1.3
	baz=2.8						
S22A	4UR Ranch, Cre	106.14	358	P	PKiKP	19 32 44.5	-2.1
	baz=1.7						
TIN	Tinemaha, Big	106.33	8	P	PKiKP	19 32 45.5	-1.3
	baz=352						
GRAC	Grapevine Rang	106.48	7	P	PKiKP	19 32 46.4	-0.6
	baz=353						
GOGA	Godfrey	106.56	338	P	PKiKP	19 32 45.0	-2.1
	baz=21						
TPNV	Topopah Spring	106.63	6	P	PKiKP	19 32 46.4	-1.0
	baz=354						
MVCO	Mesa Verde	106.69	360	P	PKiKP	19 32 47.1	-0.5
	baz=0.3						
DZM	Mont Dzumac	106.84	105	Pdiff	Pdif	19 28 41.2	+2.3
	comp=Z,40nm,1.0s,baz=53,slow=21,SNR=12						
DZM				PKiKP	PKiKP	19 32 49.7	+1.8
	comp=Z,27nm,0.8s,baz=89,slow=5.4,SNR=9.5						
DZM	Mont Dzumac	106.84	105	*e*Pdif	Pdif	19 28 39.3	+0.4
	comp=Z,165nm,1.2s						
VOG	Valley Oaks Go	106.92	9	P	PKiKP	19 32 46.3	-1.4
	baz=351						
CWC	Cottonwood Cre	106.96	8	P	PKiKP	19 32 47.9	-0.1
	baz=352						
TUL1	Leonard	106.98	349	P	PKiKP	19 32 47.9	+0.1
	baz=11						
W41B	Gary Mavity, V	107.07	346	P	PKiKP	19 32 47.2	-0.8
	baz=14						
W39A	Magazine	107.34	347	P	PKiKP	19 32 49.8	+1.3
	baz=13						
MPMC	Manual Prospec	107.40	7	P	PKiKP	19 32 46.6	-2.3
	baz=353						
VES	Vestal, Richgr	107.43	9	P	PKiKP	19 32 48.4	-0.3
	baz=351						
SHOC	Shoshone, Teco	107.67	6	P	PKiKP	19 32 48.7	-0.4
	baz=354						
ISA	Isabella, Lake	107.68	8	P	PKiKP	19 32 48.5	-0.7
	baz=352						
SYO	Syowa Base	107.73	191	⇓*e*X	Pdif	19 28 41.0	-0.5
SYO	Syowa Base	107.73	191	⇓*e*PP	PP	19 33 14.0	+1.0
X40A	Basin Creek Fa	107.85	346	P	PKiKP	19 32 49.2	-0.3
	baz=14						
MIAR	Mount Ida	107.94	347	P	PKiKP	19 32 49.1	-0.5
	baz=13						
LRMC	Laurel Mtn Rad	107.95	8	P	PKiKP	19 32 50.3	+0.4
	baz=353						
TUQ	Turquoise Moun	108.16	6	P	PKiKP	19 32 49.5	-0.7
	baz=354						
ARVC	Arvin	108.17	9	P	PKiKP	19 32 50.1	+0.1
	baz=352						
GSC	Goldstone, Bar	108.21	7	P	PKiKP	19 32 50.8	+0.5
	baz=353						
PKM	Mcpherson Peak	108.28	9	P	PKiKP	19 32 49.4	-1.1
	baz=351						
WUAZ	Wupatki	108.35	2	P	PKiKP	19 32 48.9	-1.7
	baz=358						
TIGA	Tifton	108.43	337	P	PKiKP	19 32 51.1	+0.5
	baz=21						
EDW2	Edwards Air Fo	108.51	8	P	PKiKP	19 32 51.4	+0.6
	baz=352						
WMOK	Wichita Mounta	108.55	351	P	PKiKP	19 32 51.6	+0.8
	baz=8.5						
OSI	Osito Audit: C	108.69	9	P	PKiKP	19 32 52.3	+1.2
	baz=352						
AMTX	Amarillo	108.70	354	P	PKiKP	19 32 51.6	+0.3
	baz=6.1						
HEC	Hector,Ludlow	108.73	7	P	PKiKP	19 32 49.7	-1.6
	baz=354						
W18A	Petrified Fore	108.78	1	P	PKiKP	19 32 51.0	-0.5
	baz=359						
GMRC	Granite Mounta	108.83	6	P	PKiKP	19 32 50.5	-1.0
	baz=354						
ANMO	Albuquerque	108.92	358	P	PKiKP	19 32 51.8	+0.1
	baz=2.0						
NEE2	Needles Airpor	108.93	5	P	PKiKP	19 32 52.8	+1.3
	baz=355						
Z41A	Richland Creek	109.04	346	P	PKiKP	19 32 51.5	-0.2
	baz=14						
DECC	Green Verdugo	109.09	8	P	PKiKP	19 32 53.7	+1.8
	baz=352						
BFSC	Mount Baldy Ra	109.18	8	P	PKiKP	19 32 53.9	+1.7
	baz=352						
PDMCI	Parker Dam,Lak	109.42	5	P	PKiKP	19 32 53.8	+1.4
	baz=356						
IRM	Iron Mountain	109.50	6	P	PKiKP	19 32 53.2	+0.6
	baz=355						
BELC	Belle Mtn. Jos	109.58	6	P	PKiKP	19 32 52.8	-0.2
	baz=354						
FMP	Fort Macarthur	109.63	8	P	PKiKP	19 32 54.7	+1.9
	baz=352						
Y22D	IRIS PASSCAL I	109.80	358	P	PKiKP	19 32 53.4	0.0
	baz=1.7						
MURC	Murrieta	109.86	7	P	PKiKP	19 32 53.1	-0.3
	baz=353						
PFO	Pinyon Flats O	109.92	7	P	PKiKP	19 32 54.4	+0.8
	baz=354						
TPFO	Pinon Flats	109.93	7	P	PKiKP	19 32 54.4	+0.8
	baz=354						
BC3	Big Chuckawall	109.97	6	P	PKiKP	19 32 55.2	+1.6
	baz=354						
SCI2	San Clemente I	110.32	9	P	PKiKP	19 32 55.3	+1.1
	baz=352						
109C	Camp Elliot, M	110.57	7	P	PKiKP	19 32 56.2	+1.6
	baz=353						
GLA	Glamis	110.62	5	P	PKiKP	19 32 55.4	+0.6
	baz=355						
MONP2	Monument Peak	110.64	7	P	PKiKP	19 32 54.5	-0.5
	baz=354						
SWSC	Sam W. Stewart	110.64	6	P	PKiKP	19 32 54.4	-0.3
	baz=354						
ABTX	Abilene, Hawle	110.73	352	P	PKiKP	19 32 54.8	-0.2
	baz=7.9						
NATX	Nacogdoches	110.85	347	P	PKiKP	19 32 56.1	+0.9
	baz=12						
IKP	In-Ko-Pah, Jac	110.91	7	P	PKiKP	19 32 56.3	+0.9
	baz=354						
WHTX	Lake Whitney,	111.07	350	P	PKiKP	19 32 55.1	-0.5
	baz=9.8						
121A	Cookes Peak, D	111.36	359	P	PKiKP	19 32 56.1	-0.3
	baz=0.9						
TUC	Tucson	111.56	2	P	PKiKP	19 32 56.6	0.0
	baz=358						
214A	Organ Pipe Nat	111.83	4	P	PKiKP	19 32 56.5	-0.7
	baz=357						
MNTX	Cornudas Mount	112.12	357	P	PKiKP	19 32 57.0	-0.6
	baz=3.0						
435B	Jarrell	112.28	350	P	PKiKP	19 32 57.1	-0.9
	baz=9.8						
JCT	Junction City	112.87	352	P	PKiKP	19 32 59.0	-0.1
	baz=7.9						
MDP	Montagnes des	113.24	296	PKKPbc	PKKPbc	19 43 46.7	+2.1
	comp=Z,24nm,1.1s,baz=166,slow=6.0,SNR=4.3						
MSVF	Nonsavu	113.72	95	PKiKP	PKiKP	19 33 03.4	+2.4
	comp=Z,48nm,0.7s,baz=214,slow=2.4,SNR=30						
MSVF				PP	PP	19 33 57.7	+0.7
	comp=Z,71nm,1.0s,baz=129,slow=2.4,SNR=12						
TXAR	Lajitas Array	114.37	355	Pdiff	Pdif	19 29 15.5	+3.1
	comp=Z,3.1nm,0.9s,baz=23,slow=2.9,SNR=12						
TXAR				PKP	PKPdf	19 33 02.7	+0.6
	comp=Z,8.6nm,0.9s,baz=16,slow=1.3,SNR=6.5						
TXAR				PP	PP	19 33 58.9	-0.9
	comp=Z,36nm,1.0s,baz=347,slow=5.1,SNR=4.8						
TXAR				PKKPbc	PKKPbc	19 43 41.5	0.0
	comp=Z,9.1nm,0.8s,baz=179,slow=5.4,SNR=15						
833A	Chaparral WMA,	114.95	351	P	PKiKP	19 33 02.1	-1.0
	baz=8.4						
NVL	N'lazarevskaya	114.96	198	⇓*i*PKIKP	PKiKP	19 33 07.1	+5.5
NVL				*i*		19 33 55.2	
NVL				*i* PPP	PPP	19 34 03.8	
NVL				*e*SS	SKSac	19 39 36.7	+6.9
NVL				pmax	pmax		
	comp=Z,76nm,1.0s						
HPIG		116.87	357		PKPdf	19 33 06.2	-0.9
PYZ	Puysegur Point	118.64	128		PKPdf	19 33 09.1	-0.4
JCZ	Jackson Bay	119.15	125	P	PKPdf	19 33 09.9	-0.7
MLZ	Mavora Lakes	119.24	127	P	PKiKP	19 33 12.2	+1.5
SNAA	Sanae	119.41	200	PKPdf	PKPdf	19 33 09.8	-0.5
SNAA	Sanae	119.41	200	PKP	PKPdf	19 33 09.3	-1.0
	comp=Z,51nm,0.9s,baz=132,slow=1.3,SNR=36						
SNAA				PKKPab	PKKPbc	19 43 25.0	+0.5
	comp=Z,56nm,0.9s,baz=238,slow=5.8,SNR=29						
WKZ	Wanaka	119.61	126	P	PKiKP	19 33 13.5	+2.0
FOZ	Fox Glacier	119.62	124	P	PKPdf	19 33 10.4	-1.0
FOZ	Fox Glacier	119.62	124		PKPdf	19 33 11.1	-0.3
AFI	Afiamalu	119.83	85	PKP	PKiKP	19 33 13.6	+0.7
	comp=Z,405nm,0.9s,baz=265,slow=2.9,SNR=40						
GCSZ	Gaunt Creek Bo	119.88	124	P	PKiKP	19 33 12.3	+0.3
EAZ	Earnscleugh	119.96	126	P	PKiKP	19 33 13.9	+1.8
WVZ	Waitaha Valley	120.06	123	P	PKiKP	19 33 12.7	+0.4
LBZ	Lake Benmore	120.20	125	P	PKiKP	19 33 13.3	+0.7
LBZ	Lake Benmore	120.20	125		PKPdf	19 33 12.4	-0.2
INZ	Inchbonnie	120.39	123	P	PKPdf	19 33 11.1	-1.9
VNA2	Neumayer--Watz	120.42	202	PKPdf	PKPdf	19 33 12.2	0.0
	baz=48,slow=2.9						
RPZ	Rata Peaks	120.52	124	P	PKiKP	19 33 14.3	+1.0
VNA1	Neumayer--Stat	120.57	202	PKPdf	PKiKP	19 33 12.5	0.0
CAM01	Campos-RJ	120.62	264	*e*P	PKiKP	19 33 14.5	+0.4
ARCZ	Arundel	120.69	124	P	PKPdf	19 33 13.5	0.0
BOAV	Boa Vista	120.74	300	*e*P	PKPdf	19 33 14.5	-0.1
BOAV	Boa Vista	120.74	300		PKPdf	19 33 13.4	-1.2
PEXB	Peixe	120.74	278	*e*P	PKPdf	19 33 13.9	-0.6
TMZ	Timaru	120.74	125	P	PKiKP	19 33 14.7	+1.0
ODZ	Otahua Downs	120.76	126	P	PKiKP	19 33 13.8	+0.1
LTZ	Lake Taylor	120.98	123	P	PKPdf	19 33 13.2	-1.0
OXZ	Oxford	121.03	123	P	PKiKP	19 33 14.7	+0.4
OXZ	Oxford	121.03	123		PKPdf	19 33 12.9	-1.3
VNA3	Neumayer Olymp	121.22	202	PKPdf	PKPdf	19 33 13.5	-0.3
RACZ	Rakaia	121.25	124	P	PKiKP	19 33 16.5	+1.8
DUB01	Friburgo-RJ	121.32	264	*e*P	PKPdf	19 33 15.1	-0.4
MQZ	McQueen’s Vall	121.59	123		PKPdf	19 33 15.1	-0.1
ITTB	Itaituba	121.83	290	*e*P	PKPdf	19 33 15.7	-1.0
SNZO	South Karori	122.09	120		PKPdf	19 33 15.2	-1.0
VAS01	Vassouras-RJ	122.28	265	*e*P	PKPdf	19 33 17.1	-0.1
SDV	Santo Domingo	122.36	314	*e*P	PKPdf	19 33 15.2	-2.7
SDV	Santo Domingo	122.36	314	*e*P	PKPdf	19 33 16.5	-1.4
BDFB	Brasilia	122.50	274	PKP	PKPdf	19 33 17.6	-0.4
	comp=Z,14nm,0.5s,baz=340,slow=0.3,SNR=18						
BDFB				PP	PP	19 34 55.2	-2.4
	comp=Z,62nm,1.2s,baz=129,slow=6.2,SNR=3.8						
BDFB				PKKPab	PKKPab	19 43 14.4	+1.0
	comp=Z,97nm,1.0s,baz=237,slow=3.0,SNR=33						
BDFB	Brasilia	122.50	274		PKPdf	19 33 16.2	-1.8
PTGA	Pitinga	122.53	297	PKP	PKPdf	19 33 17.7	-0.3
	comp=Z,36nm,0.7s,baz=325,slow=22,SNR=19						
PTGA				PKKPab	PKKPab	19 43 13.9	-0.4
	comp=Z,40nm,0.8s,baz=238,slow=4.2,SNR=24						
RAO	Raoul Island	122.62	104	PKP	PKiKP	19 33 18.7	+0.8
	comp=Z,174nm,0.3s,baz=167,slow=17,SNR=5.3						
BSCB	Bom Sucesso	122.71	267	*e*P	PKiKP	19 33 18.3	-0.1
SOCV	Socops	122.97	313	*e*P	PKPdf	19 33 15.2	-3.7
MAN01	Angra dos Reis	122.99	265	*e*P	PKiKP	19 33 19.5	+0.6
SNDB	Serra Nova Dou	123.05	280	*e*P	PKPdf	19 33 18.0	-0.9
NPGB	Novo Progresso	123.25	287	*e*P	PKPdf	19 33 17.4	-2.0
IPMB	Ipameri, GO	123.92	272	*e*P	PKPdf	19 33 19.8	-0.8
PETF	Flores	123.97	338		PKPdf	19 33 19.9	-0.7
SJCC	San Jacinto, C	124.07	319	*e*P	PKPdf	19 33 20.9	-0.1
SMLC	San Martn de	124.38	317	*e*P	PKPdf	19 33 20.9	-0.6
OCAC	Ocana	124.42	316	*e*P	PKiKP	19 33 22.9	+0.7
OCAC	Ocana	124.42	316		PKPdf	19 33 20.5	-1.3
PARB	Paraibuna	124.55	265	*e*P	PKPdf	19 33 21.8	+0.2
MACA	Manacapuru-AM	124.72	295	*e*P	PKPdf	19 33 21.2	-1.0
PAMC	Pamplona, Colo	124.80	315	*e*P	PKPdf	19 33 20.9	-2.0
PAMC				*e*P	PKiKP	19 33 22.9	-0.5
TAMC	Tame, Arauca	125.00	313	*e*P	PKPdf	19 33 22.9	0.0
CMIG	Matias Romero	125.13	344	PKP	PKPdf	19 33 22.2	-0.7
	comp=Z,48nm,1.0s,baz=34,slow=1.6,SNR=20						
CMIG				pPKP	pPKPdf	19 34 17.5	+0.3
	comp=Z,53nm,1.3s,baz=12,slow=4.2,SNR=2.2						
CMIG				PP	PP	19 35 16.8	+3.4
	comp=Z,52nm,1.1s,baz=7.5,slow=2.5,SNR=5.0						
CMIG				PKKPab	PKKPbc	19 43 02.1	+0.1
	comp=Z,5.1nm,0.6s,baz=247,slow=2.0,SNR=7.7						
MOTC	Monteria, Cord	125.26	319	*e*P	PKPdf	19 33 22.9	-0.4
VNDA	Vanda	125.43	165	PKhKP	PKPpre	19 33 17.8	
	comp=Z,47nm,0.9s,baz=283,slow=5.3,SNR=39						
VNDA				PKP	PKPdf	19 33 21.5	-0.2
	comp=Z,47nm,0.9s,baz=291,slow=6.0,SNR=38						
VNDA				pPKP	pPKPdf	19 34 18.5	+1.9
	comp=Z,32nm,1.1s,baz=297,slow=5.6,SNR=3.0						
VNDA				PKKPab	PKKPbc	19 43 02.0	+0.7
	comp=Z,18nm,1.1s,baz=36,slow=1.2,SNR=7.8						
VAO	Valinhos	125.46	266	*e*P	PKiKP	19 33 24.1	+0.3
BRRC	Barranca, Sant	125.57	315	*e*P	PKPdf	19 33 22.9	-1.0
ARAG	Araguaiana, MT	125.58	277	*e*P	PKPdf	19 33 22.4	-1.3
RCLB	Rio Claro- Sao	125.63	267	*e*P	PKPdf	19 33 23.1	-0.6
BARC	Barichara	125.69	315	*e*P	PKiKP	19 33 24.8	0.0
TGUH	Tegucigalpa,Un	125.79	334		PKPdf	19 33 23.1	-1.3
ZARC	Zaragoza, Cauc	125.89	317	*e*P	PKPdf	19 33 19.0	-5.4
CLDB	Colider	125.95	284	*e*P	PKPdf	19 33 23.7	-0.8
UREC	San Jos de Ur	126.05	318	*e*P	PKPdf	19 33 22.9	-1.9
SPB	Sao Paulo	126.12	266	*e*P	PKPdf	19 33 24.4	-0.1
RUSC	La Rusia	126.19	314	*e*P	PKPdf	19 33 25.7	+0.1
QSPA	South Pole Qui	126.26	180	PKP	PKPdf	19 33 22.0	-1.6
	comp=Z,61nm,1.1s,baz=294,slow=2.0,SNR=5.0						
QSPA				pPKP	pPKPdf	19 34 17.9	-0.5
	comp=Z,133nm,1.1s,baz=275,slow=4.6,SNR=2.7						
QSPA	South Pole Qui	126.26	180	PKPdf	PKPdf	19 33 22.5	-1.1
PET01	Itanhaem-SP	126.33	265	*e*P	PKiKP	19 33 25.6	+0.2
PTBC	PUERTO BERRIO,	126.45	316	*e*P	PKPdf	19 33 23.8	-1.7
ITRB	Iturama	126.55	272	*e*P	PKPdf	19 33 25.0	-0.5
SPBC	San Pablo de B	126.96	315	*e*P	PKPdf	19 33 23.8	-2.8
PTGC	Puerto Gaitan,	126.99	312	*e*P	PKPdf	19 33 25.7	-0.8
DBBC	Dabeiba	127.02	318	*e*P	PKPdf	19 33 26.7	-0.1
BCIP	Isla Barro Col	127.06	323	*e*P	PKPdf	19 33 25.7	-0.9
PDRB	Porto dos Gac	127.12	284	*e*P	PKPdf	19 33 26.2	-0.6
HELC	Santa Helena	127.34	317	*e*P	PKPdf	19 33 26.7	-1.0
CHIC	Chingaza	127.59	314	*e*P	PKPdf	19 33 27.6	-0.6
ROSC	El Rosal	127.76	314	PKhKP	PKPpre	19 33 25.1	
	comp=Z,162nm,1.1s,baz=55,slow=7.0,SNR=5.7						
ROSC				PKP	PKPdf	19 33 28.6	+0.1
	comp=Z,563nm,0.9s,baz=258,slow=3.3,SNR=26						
ROSC				SKP	SKPdf	19 36 34.6	-9.5
	comp=Z,187nm,0.9s,baz=164,slow=5.6,SNR=6.1						
ROSC	El Rosal	127.76	314	*e*P	PKPdf	19 33 28.6	+0.1
PTAC	Punta Ardita,	127.76	320	*e*P	PKPdf	19 33 25.7	-2.3
CBOC	Ciudad Bolivar	127.87	317	*e*P	PKPdf	19 33 28.6	+0.1
VILC	Villavicencio,	127.98	313	*e*P	PKPdf	19 33 28.6	0.0
GUY2C	Guyana, Caldas	128.04	316	*e*P	PKPdf	19 33 26.7	-2.5
TIJ01	Guaruva-PR	128.20	265	*e*P	PKiKP	19 33 29.1	-0.2
PCMB	Pacaembu	128.24	270	*e*P	PKPdf	19 33 27.9	-0.8
HOPE	Hope Point	128.51	226	PKIKP	PKPdf	19 33 27.0	-1.1
HOPE	Hope Point	128.51	226		PKPdf	19 33 27.0	-1.1
GUVC	San Jose del G	128.59	311	*e*P	PKPdf	19 33 26.7	-3.0
PEZE	Perez Zeledon,	128.63	328		PKPdf	19 33 27.2	-2.6
SALV	Santo Antonio	128.79	279	*e*P	PKPdf	19 33 29.4	-0.5
PLMC	San Jos del P	128.82	317	*e*P	PKPdf	19 33 26.7	-3.5
PRAC	Prado	129.00	314	*e*P	PKPdf	19 33 28.6	-1.9
ORTC	Ortega, Tolima	129.05	315	*e*P	PKPdf	19 33 29.6	-1.0
PP1B	Ponte de Pedra	129.07	277	*e*P	PKPdf	19 33 30.0	-0.4
YOTC	Yotoco, Valle	129.61	316	*e*P	PKPdf	19 33 29.6	-2.2
MACC	Macarena, Meta	129.65	312	*e*P	PKPdf	19 33 29.6	-2.1
TER01	Tubaro-SC	129.72	261	*e*P	PKiKP	19 33 31.7	-0.4
MARP	Paez Belalcaza	130.32	315	*e*P	PKPdf	19 33 32.4	-0.9
GARC	Garzon, Huila	130.59	314	*e*P	PKPdf	19 33 33.4	-0.4
POPC	Popayan, Colom	130.98	315	*e*P	PKPdf	19 33 33.4	-1.1
PCON	Cinco Dias	130.99	315	*e*P	PKiKP	19 33 36.2	+0.4
FLOC	Florencia	131.17	313	*e*P	PKPdf	19 33 33.4	-1.2
AQDB	Aquidauana	131.24	274		PKPpre	19 33 17.9	
AQDB				PKPdf	PKPdf	19 33 33.2	-1.1
PTLB	Pontes e Lacer	131.26	282	*e*P	PKPdf	19 33 33.0	-1.5
SOTA	Rioblanco	131.27	315	*e*P	PKPdf	19 33 35.3	-0.1
ITAB	Concordia	131.56	264	*e*P	PKiKP	19 33 35.6	-0.2
ITAB	Concordia	131.56	264		PKPdf	19 33 32.0	-2.8
PTLC	Puerto Leguiza	131.78	311	*e*P	PKPdf	19 33 35.3	-0.4
TBTG	Tabatinga, AM	131.95	303	*e*P	PKPdf	19 33 35.8	-0.2
TBTG	Tabatinga, AM	131.95	303		PKPdf	19 33 33.8	-2.1
GCUF	Volcan Galeras	132.43	315	*e*P	PKPdf	19 33 37.2	-0.3
SIV	San Ignacio	133.10	283	PKhKP	PKPpre	19 33 31.3	
	comp=Z,8.3nm,0.8s,baz=65,slow=5.5,SNR=5.0						
SIV				PKP	PKPdf	19 33 38.4	+0.4
	comp=Z,40nm,0.7s,baz=76,slow=1.8,SNR=36						
SIV				pPKP	pPKPdf	19 34 33.1	+0.8
	comp=Z,11nm,0.7s,baz=201,slow=2.2,SNR=1.8						
SIV				SKPab	SKPab	19 36 49.2	+0.7
	comp=Z,16nm,0.8s,baz=84,slow=2.2,SNR=2.4						
ETMB	Extrema	133.23	294	*e*P	PKPdf	19 33 37.1	-1.2
ETMB	Extrema	133.23	294		PKPpre	19 33 22.4	
ETMB				PKPdf	PKPdf	19 33 36.5	-1.8
RAR	Rarotonga	133.38	85	PKP	PKPdf	19 33 38.0	-0.3
	comp=Z,106nm,1.2s,baz=24,slow=2.3,SNR=9.5						
OTAV	Otavalo	133.87	315	PKHKP	PKPpre	19 33 24.5	
OTAV						19 33 39.1	
OTAV	Otavalo	133.87	315	*e*P	PKPdf	19 33 38.2	-2.0
OTAV	Otavalo	133.87	315		PKPpre	19 33 24.5	
OTAV				PKPdf	PKPdf	19 33 39.1	-1.1
CPSB	Cacapava Do Su	133.91	261	*e*P	PKPdf	19 33 38.5	-0.7
PLTB	Pedras Altas	134.56	259	*e*P	PKPdf	19 33 39.0	-1.3
CPUP	Villa Florida	135.35	268	PKhKP	PKPpre	19 33 29.8	
	comp=Z,8.0nm,0.8s,baz=144,slow=0.8,SNR=8.6						
CPUP				PKP	PKPdf	19 33 40.7	-1.2
	comp=Z,88nm,0.7s,baz=53,slow=2.2,SNR=24						
CPUP				SKPbc	SKPbc	19 36 52.8	-0.6
	comp=Z,71nm,1.1s,baz=48,slow=7.3,SNR=4.4						
CPUP	Villa Florida	135.35	268	PKHKP	PKPpre	19 33 27.2	
CPUP						19 33 39.8	
CPUP	Villa Florida	135.35	268	*e*P	PKPdf	19 33 41.4	-0.6
CPUP	Villa Florida	135.35	268		PKPpre	19 33 27.1	
CPUP				PKPdf	PKPdf	19 33 39.8	-2.1
CZSB	Cruzeiro do Su	136.42	302	*e*P	PKPdf	19 33 43.7	-0.6
LPAZ	La Paz	138.75	288	PKhKP	PKPpre	19 33 37.6	
	comp=Z,12nm,0.9s,baz=31,slow=3.9,SNR=20						
LPAZ				PKP	PKPdf	19 33 49.8	+0.5
	comp=Z,42nm,0.8s,baz=308,slow=3.4,SNR=26						
PMOR	Pomariorio Ree	139.21	69	*e*PKIKP	PKPdf	19 33 45.6	-3.7
	comp=Z,949nm,1.4s						
PPT	Papeete	139.47	73	PKhKP	PKPpre	19 33 44.7	
	comp=Z,131nm,1.0s,baz=264,slow=10,SNR=6.9						
PPT				PKP	PKiKP	19 33 51.5	-0.7
	comp=Z,470nm,0.9s,baz=110,slow=1.4,SNR=14						
PPT2	Papeete2	139.49	73	*e*PKIKP	PKPdf	19 33 46.3	-3.6
	comp=Z,603nm,1.1s						
PAE	Paea	139.53	74	*e*PKIKP	PKPdf	19 33 46.0	-3.8
	comp=Z,85nm,1.1s						
VAH	Vaihoa	139.55	69	*e*PKIKP	PKPdf	19 33 46.2	-3.7
	comp=Z,484nm,1.2s						
TIAR	Tiarei	139.65	73	*e*PKIKP	PKPdf	19 33 45.8	-4.3
	comp=Z,1.0nm,0.8s						
ATAH	Atahualpa	139.71	309	PKhKP	PKPpre	19 33 46.0	
	comp=Z,29nm,0.8s,baz=34,slow=3.5,SNR=9.7						
TAOE	Nuku Hiva Isla	140.45	54	*e*PKIKP	PKPdf	19 33 47.4	-4.4
	comp=Z,508nm,0.9s						
TAOE	Nuku Hiva Isla	140.45	54		PKPpre	19 33 45.0	
SMAI	San Martin Ant	140.72	203		PKPpre	19 33 44.2	
MEH	Mehetia	140.82	72	*e*PKIKP	PKPdf	19 33 48.7	-3.5
	comp=Z,104nm,1.2s						
PB16	IPOC Station P	141.02	287	*e*P	PKPpre	19 33 46.2	
PMSA	Palmer Station	141.25	209	PKhKP	PKPpre	19 33 45.1	
	comp=Z,54nm,0.8s,baz=79,slow=0.9,SNR=19						
PMSA				pPKP	pPKPdf	19 34 44.5	-1.8
	comp=Z,36nm,1.1s,baz=357,slow=3.9,SNR=1.5						
PMSA				SKPbc	SKPbc	19 37 08.7	0.0
	comp=Z,23nm,0.6s,baz=26,slow=1.9,SNR=6.7						
PMSA	Palmer Station	141.25	209	*e*P	PKPdf	19 33 49.2	-2.3
PMSA	Palmer Station	141.25	209		PKPpre	19 33 45.6	
EFI	East Falkland	141.31	230	PKIKP	PKPdf	19 33 50.6	-1.4
EFI	East Falkland	141.31	230		PKPdf	19 33 50.6	-1.4
PB08	IPOC Station P	141.77	284	*e*P	PKPdf	19 33 49.2	-5.2
PB12	IPOC Station P	141.81	287	*e*P	PKPdf	19 33 50.1	-4.0
PB11	IPOC Station P	141.95	285	*e*P	PKPpre	19 33 48.6	
NNA	Nana	142.29	302	PKhKP	PKPpre	19 33 48.2	
	comp=Z,176nm,1.2s,baz=358,slow=4.9,SNR=14						
NNA				PKP	PKPdf	19 33 53.4	-1.6
	comp=Z,131nm,0.8s,baz=314,slow=3.9,SNR=20						
NNA	Nana	142.29	302		PKPdf	19 33 50.7	-4.3
PB01	IPOC Station P	142.52	283	*e*P	PKPdf	19 33 50.5	-4.8
TA02	Huaiquique	142.60	285		PKPdf	19 33 51.1	-4.2
TBI	Tubuai	142.70	81	*e*PKIKP	PKPdf	19 33 52.2	-3.2
	comp=Z,2µm,1.2s						
PB09	IPOC Station P	142.73	282	*e*P	PKPdf	19 33 51.8	-3.9
TA01	Diego Aracena	142.81	285	*e*P	PKPdf	19 33 51.4	-4.3
LVC	Limon Verde	142.89	281	PKhKP	PKPpre	19 33 52.6	
	comp=Z,144nm,0.8s,baz=39,slow=4.3,SNR=15						
LVC				pPKP	pPKPdf	19 34 50.9	+0.4
	comp=Z,34nm,1.0s,baz=331,slow=1.7,SNR=1.0						
LVC				SKP	SKPdf	19 37 11.0	0.0
	comp=Z,83nm,1.1s,baz=0.0,slow=5.1,SNR=2.1						
PB07	IPOC Station P	143.20	283	*i* P	PKPab	19 33 52.6	-0.2
PB07	IPOC Station P	143.20	283	PKPdf	PKPab	19 33 52.9	+0.1
PB03	IPOC Station P	143.27	282	⇑*i*P	PKPab	19 33 52.5	-0.5
PB06	IPOC Station P	143.47	281	⇑*i*P	PKPab	19 33 53.4	-0.4
PB15	IPOC Station P	143.64	280	*e*P	PKPab	19 33 54.3	-0.2
PB04	IPOC Station P	143.73	282	⇑*i*P	PKPab	19 33 54.5	-0.4
PB05	IPOC Station P	144.04	281	⇑*i*P	PKPab	19 33 54.7	-1.3
PB10	IPOC Station P	144.65	281	*e*P	PKPab	19 33 57.0	-1.2
PB10	IPOC Station P	144.65	281		PKPab	19 33 57.4	-0.8
AC02	Maricunga	145.07	274		PKPbc	19 33 59.3	-0.8
PB14	IPOC Station P	145.08	279	*e*P	PKPbc	19 33 58.1	-1.8
VCA	Vinchina	145.12	271	⇑*i*P	PKPdf	19 33 59.6	-0.1
GO03	Copiap	146.29	274		PKPdf	19 34 00.9	-0.7
GO03				pPKPdf	pPKPdf	19 34 56.5	+0.3
MG01	Puerto William	146.44	223	*e*P	PKPbc	19 34 02.3	-0.3
MG01	Puerto William	146.44	223		PKPbc	19 34 01.7	-0.9
MG01				pPKPdf	pPKPab	19 34 58.9	+2.1
USHA	Ushuaia	146.91	223	PKPbc	PKPbc	19 34 04.2	+0.2
	comp=Z,236nm,0.9s,baz=110,slow=4.8,SNR=36						
USHA				pPKPbc	pPKPbc	19 34 57.8	-0.1
	comp=Z,82nm,0.9s,baz=90,slow=5.1,SNR=1.4						
AC04	Llanos de Chal	147.22	274		PKPdf	19 34 03.0	-0.1
LCO	Las Campanas	147.24	272	PKIKP	PKPdf	19 34 03.2	-0.3
LCO	Las Campanas	147.24	272		PKPdf	19 34 03.2	-0.3
CO03	El Pedregal	147.91	269		PKPdf	19 34 04.2	-0.1
MG02	Cerro Sombrero	147.92	227	*e*P	PKPbc	19 34 05.9	-0.8
CO05	La Serena	148.02	271		PKPdf	19 34 03.5	-0.8
MG03	Isla Dawson	148.34	224	*e*P	PKPbc	19 34 06.0	-1.8
VA03	San Esteban	148.42	265	⇑*i*P	PKPdf	19 34 05.1	+0.1
LMEL	Las Melosas	148.45	263	*e*P	PKPdf	19 34 05.5	+0.3
PEL	Peldehue	148.64	265	*e*P	PKPdf	19 34 04.6	-0.7
MT05	Renca	148.75	264	*e*P	PKPdf	19 34 05.5	0.0
ROCH	El Roble	148.85	265	*e*P	PKPdf	19 34 05.7	-0.2
ROCH				*e*P	PKPdf	19 34 05.8	-0.2
GO10	Punta Arenas	148.88	226		PKPdf	19 34 04.6	-0.5
VA06	Catapilco	148.96	266	*e*P	PKPdf	19 34 05.6	-0.2
MT02	Curacav	149.03	265	*e*P	PKPdf	19 34 02.3	-3.7
MT09	Talagante	149.06	264	*e*P	PKPdf	19 34 04.0	-2.1
MG04	Isla Riesco	149.27	226	*e*P	PKPbc	19 34 08.1	-2.1
MG04	Isla Riesco	149.27	226		PKPdf	19 34 04.6	-0.9
MT01	Popeta	149.29	264	*e*P	PKPdf	19 34 02.0	-4.3
VA01	Torpederas	149.38	265	*e*P	PKPdf	19 34 06.0	-0.4
VA01	Torpederas	149.38	265		PKPdf	19 34 05.7	-0.7
VA05	Santo Domingo	149.53	264	*e*P	PKPdf	19 34 04.7	-2.0
ML02	Panimavida	149.89	260	*e*P	PKPdf	19 34 06.7	-0.5
PLCA	Paso Flores	149.94	250	PKP	PKPdf	19 34 07.1	-0.1
	comp=Z,73nm,1.1s,baz=90,slow=1.8,SNR=24						
PLCA				PKPbc	PKiKP	19 34 13.4	+0.3
	comp=Z,597nm,1.0s,baz=89,slow=4.4,SNR=57						
PLCA	Paso Flores	149.94	250	*e*P	PKPdf	19 34 07.0	-0.1
PLCA	Paso Flores	149.94	250	*e*P	PKPdf	19 34 07.0	-0.2
PLCA	Paso Flores	149.94	250		PKPdf	19 34 06.5	-0.7
PLCA				PKPbc	PKPbc	19 34 12.0	-0.3
LC01	Cunco	150.78	254		PKPdf	19 34 07.3	-1.2
LC01				PKPbc	PKPbc	19 34 14.0	-0.3
LC01				pPKPdf	pPKPdf	19 35 04.0	+0.7
LR03	Panguipulli	151.22	253	*e*P	PKPdf	19 34 09.0	-0.1
LR04	Corral	152.07	252	*e*P	PKPdf	19 34 10.6	+0.3
LL05	Los Muermos	152.19	249		PKPdf	19 34 09.4	-1.1
LL05				PKPbc	PKPbc	19 34 17.5	+0.1
LL07	Hotel Espejo d	152.19	246		PKPdf	19 34 09.4	-1.0
LL07				PKPbc	PKPbc	19 34 16.3	-1.0
RPN	Rapa Nui	170.68	3	PKP	PKPdf	19 34 32.0	+2.0
	comp=Z,303nm,1.0s,baz=330,slow=4.1						
RPN	Rapa Nui	170.68	3	PKIKP	PKPdf	19 34 32.0	+2.0
VA02	Isla de Pascua	170.71	3	*e*P	PKPdf	19 34 27.6	-2.5

NEIC ***25*** *19:18:25.6±2.7, 6°.31S±0°.08×147°.56E±0°.09, h54^{km}±9^{km}, mb4.3/14 Error ellipse: s-maj=13.1km s-min=10.8km az=121.0*

IDC ***25*** *19:18:31.3±3.6, 6°.63S×147°.25E, h83^{km}±25^{km}, mb3.9/5, mb1 4.0/10, mb1mx3.9/44, mbtmp4.2/10, MS3.2/1, Ms1 3.2/1, ms1mx2.9/47, Error ellipse: s-maj=43.6km s-min=22.3km az=58.0*

ISC 25 19:18:25.7±0.7, 6°.30S±0°.08×147°.52E±0°.09, h50km, n31, σ1ˢ95/31, mb4.2/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.11	187	P	Pn	19 19 13.3	+1.1
	6.4nm,0.3s,baz=8.5,slow=7.1,SNR=45						
PMG				S	Sn	19 19 52.8	+4.6
	15nm,0.3s,baz=1.4,slow=14,SNR=7.1						
PMG				LR	LR	19 20 44.8	
	comp=Z,476nm,20.4s,baz=8.5,slow=48						
PMG	Port Moresby	3.11	187		Pn	19 19 12.5	+0.2
RABL	Rabaul	5.07	66		Pn	19 19 39.8	+0.5
JAY	Jayapura	7.77	299	P	Pn	19 20 20.1	+3.9
	1.3nm,0.3s,baz=139,slow=20,SNR=2.4						
COEN	Coen	8.73	209	Pn	Pn	19 20 28.8	-0.7
CTA	Charters Tower	13.76	185	P	Pn	19 21 40.2	+2.0
	0.2nm,0.3s,baz=12,slow=13,SNR=6.6						
CTAO	Charters Tower	13.76	185	Pn	Pn	19 21 39.3	+1.1
SIJI	Sorong	17.09	288	P	Pn	19 22 22.2	+0.9
	0.4nm,0.3s,baz=81,slow=13,SNR=2.8						
WB0	Warramunga Arr	18.50	222	P	P	19 22 34.2	-3.6
WB0				IAmb	IAmb	19 22 58.7	
	comp=Z,10nm,1.1s						
WR0	Warramunga Arr	18.53	222	P	P	19 22 36.8	-1.5
WR0				IAmb	IAmb	19 22 40.0	
	comp=Z,14nm,1.1s						
WRAB	Tennant Creek	18.64	222	P	P	19 22 36.3	-3.2
WRAB				IAmb	IAmb	19 22 41.3	
	comp=Z,23nm,1.4s						
WB2	Warramunga Arr	18.65	222	P	P	19 22 38.0	-1.5
WB2				IAmb	IAmb	19 22 41.5	
	comp=Z,31nm,1.6s						
WRA	Warramunga Arr	18.65	222	P	P	19 22 38.2	-1.4
	comp=Z,0.8nm,0.3s,baz=50,slow=11,SNR=35						
WRA	Warramunga Arr	18.65	222	P	P	19 22 37.2	-2.4
KNRA	Kununurra	20.62	242	P	P	19 22 59.0	-2.1
AS31	Alice Springs	21.67	216	P	P	19 23 11.5	-0.9
ASAR	Alice Springs	21.67	216	P	P	19 23 11.6	-0.8
	comp=Z,6.3nm,0.7s,baz=55,slow=8.2,SNR=69						
ASAR	Alice Springs	21.67	216	P	P	19 23 11.0	-1.4
ARMA	Armidale	24.30	171	P	P	19 23 37.9	-0.9
ARMA				IAmb	IAmb	19 23 57.5	
	comp=Z,35nm,1.4s						
FITZ	Fitzroy Crossi	24.36	239	P	P	19 23 37.8	-1.5
	comp=Z,14nm,0.9s,baz=39,slow=8.7,SNR=9.6						
LUWI	Luwuk	25.24	281	P	P	19 23 46.6	-0.7
STKA	Stephens Creek	26.04	192	P	P	19 23 53.6	-0.8
	comp=Z,3.5nm,0.6s,baz=347,slow=9.1,SNR=14						
STKA	Stephens Creek	26.04	192	P	P	19 23 51.8	-2.6
GIRL	Giralia	35.97	240	P	P	19 25 20.1	-1.8
VNDA	Vanda	71.59	177	P	P	19 29 41.6	+0.4
	comp=Z,0.6nm,0.6s,baz=8.1,slow=6.2,SNR=1.5						
VNDA	Vanda	71.59	177	P	P	19 29 42.0	+0.8
VNDA				IAmb	IAmb	19 29 51.8	
	comp=Z,9.9nm,1.6s						
QSPA	South Pole Qui	83.67	180	P	P	19 30 48.6	-0.4
	comp=Z,2.0nm,0.8s,baz=305,slow=2.4,SNR=9.0						
QSPA	South Pole Qui	83.67	180	IAmb	IAmb	19 30 48.8	
	comp=Z,25nm,1.8s						
NLWA	Neilton Lookou	93.64	43	P	P	19 31 35.9	-1.0
TORD	Torodi Ar. Bea	145.67	284	PKPbc	PKPab	19 38 00.6	+0.2
	comp=Z,2.6nm,1.0s,baz=60,slow=1.5,SNR=8.3						
TORD	Torodi Ar. Bea	145.67	284		PKPdf	19 37 57.7	-2.0

JMA 25 19:21:15.3, 32°.45N×129°.96E, h13km±1km, M0.8, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHD	Hondo	0.15	84	P	Pg	19 21 19.0	0.0
JHD				S	Sg	19 21 21.5	0.0
NGSJ	Nagasakinomoza	0.23	323	P	Pg	19 21 20.2	0.0
NGSJ				*e*S	Sg	19 21 23.5	-0.1
JZO	Okuchi	0.62	120	*e*S	Sg	19 21 35.6	-0.1
JTA	Tamana	0.70	43	P	Pg	19 21 28.8	-0.2
JIU3	Izumi3	0.73	82	*e*S	Sg	19 21 39.2	+0.2

KMA 25 19:37:33.2±0.3, 37°.80N×124°.77E, h13km±3km, Error ellipse: s-maj=9.4km s-min=5.9km az=38.0, South Korea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DACB	Daecheong-do R	0.06	303	P	Pg	19 37 35.9	+0.2
	SNR=1472						
DACB				S	Sg	19 37 37.4	-0.2
DACB	Daecheong-do R	0.06	303	P	Pg	19 37 35.9	+0.2
	SNR=1472						
DACB				S	Sg	19 37 37.4	-0.2
KSBAR	Backryungdo	0.18	346	P	Pg	19 37 37.5	+0.1
	SNR=634						
KSBAR	Backryungdo	0.18	346	P	Pg	19 37 37.5	+0.1
	SNR=634						
YPDB	Yeonpyeongdo	0.77	104	P	Pg	19 37 48.2	0.0
	SNR=14						
YPDB	Yeonpyeongdo	0.77	104	P	Pg	19 37 48.2	0.0
	SNR=14						
KSDEI	Deokjeokdo	1.19	117	P	Pn	19 37 55.4	-0.1
KSGAH	Ganghwa	1.33	93	P	Pn	19 37 57.7	+0.2
	SNR=42						
KSGAH				S	Sb	19 38 14.8	-0.2
KSGAH	Ganghwa	1.33	93	P	Pn	19 37 57.7	+0.2
	SNR=42						
KSMUS	Musan	1.58	86	P	Pb	19 38 02.0	-0.2
	SNR=6.0						
SHHB	Siheung-si	1.60	106	P	Pn	19 38 01.0	-0.1
KSSES	Seosan	1.68	126	P	Pn	19 38 02.3	+0.1
KSSES	Seosan	1.68	126	P	Pn	19 38 02.3	+0.1
HAWB	Hwaseong-si	1.75	114	P	Pn	19 38 03.2	0.0
HAWB	Hwaseong-si	1.75	114	P	Pn	19 38 03.2	0.0

EAF 25 19:37:45.2±2.4, 21°.30S×33°.26E, h0km±35km, MD4.4

BUL 25 19:37:45.7±1.9, 21°.33S×33°.24E, h0km±26km, MD4.8, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSNA	Messina	3.15	251	*i* P	Pn	19 38 36.8	+0.1
MSNA				*i* Sg	Sb	19 39 23.0	+1.3
MSNA	Messina	3.15	251	*i* P	Pn	19 38 36.8	+0.1
MSNA				*i* Sg	Sb	19 39 23.0	+1.3
MATP	Matopo	4.52	281	*i* P	Pn	19 38 55.9	+0.3
MATP	Matopo	4.52	281	*i* P	Pn	19 38 55.9	+0.3
CNG	Changalane	5.03	191	*i* P	Pn	19 39 02.8	+0.3
CNG				*i* S	Sn	19 39 55.9	-5.4
CNG	Changalane	5.03	191	*i* P	Pn	19 39 02.8	+0.3
CNG				*i* S	Sn	19 39 55.9	-5.4
TETE	Tete	5.17	4	*i* Sg	Sb	19 40 23.6	+3.9
TETE	Tete	5.17	4	*i* Sg	Sb	19 40 23.6	+3.9

IDC 25 19:53:01.6±1.8, 0°.74N×123°.02E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.2/42, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=131.0km s-min=26.5km az=65.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	18.89	172	P	P	19 57 23.9	0.0
	0.2nm,0.3s,baz=349,slow=8.8,SNR=12						
WRA	Warramunga Arr	23.36	152	P	P	19 58 12.2	+0.2
	0.8nm,0.6s,baz=330,slow=11,SNR=8.2						
ASAR	Alice Springs	26.46	157	P	P	19 58 40.5	-0.1
	0.6nm,0.9s,baz=344,slow=15,SNR=7.0						
MKAR	Makanchi Array	58.00	328	P	P	20 02 56.1	-0.2
	0.7nm,1.1s,baz=132,slow=9.3,SNR=1.2						

IDC 25 20:11:15.7±1.5, 32°.42S×72°.34W, h0km, mb4.2/4, mb1 4.1/9, mb1mx4.0/31, mbtmp4.1/9, ML4.0/5, Error ellipse: s-maj=53.0km s-min=22.6km az=107.0

SJA 25 20:11:16.7±0.8, 32°.35S×72°.24W, h20km±3km, ML4.1, MW4.4

NEIC 25 20:11:17.6±2.5, 32°.34S±0°.04×72°.10W±0°.09, h9km±5km, mb4.4/12, ML4.1(GUC), Error ellipse: s-maj=10.7km s-min=5.1km az=77.0

GUC 25 20:11:18.9±0.7, 32°.33S×72°.17W, h42km±2km, ML4.1

ISC 25 20:11:15.3±1.3, 32°.33S±0°.02×72°.24W±0°.04, h2km±8km, n125, σ2ˢ03/157, mb4.4/7, 8C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	0.83	107	⇓*i*P	Pn	20 11 33.3	-0.7
VA06				*i* S	Sn	20 11 44.4	-2.4
VA06				IAML		20 11 46.4	
	comp=N,34µm,0.4s						
VA01	Torpederas	0.85	145	*e*P	Pb	20 11 34.0	+1.1
VA01				*i* S	Sn	20 11 45.8	-1.6
VA01				IAML		20 11 47.2	
	comp=N,5µm,0.4s						
VA01	Torpederas	0.85	145		Pb	20 11 33.2	+0.3
VA01	Torpederas	0.85	145	*e*P	Pb	20 11 34.0	+1.1
VA01				*e*S	Sn	20 11 47.3	-0.2
ROC1	El Roble	1.22	123	*e*P	Pn	20 11 39.5	-0.2
ROC1				*e*S	Sn	20 11 56.4	-0.4
ROCH	El Roble	1.22	122	⇓*i*P	Pb	20 11 39.9	+0.6
ROCH				⇓*i*P	Pn	20 11 39.5	-0.1
ROCH				*i* S	Sn	20 11 55.2	-1.6
ROCH				*i* S	Sb	20 11 56.0	+0.5
ROCH				IAML		20 11 59.0	
	comp=N,9µm,0.3s						
ROCH				IAML		20 11 59.5	
	comp=N,11µm,0.5s						
MT02	Curacav	1.31	135	*e*P	Pg	20 11 41.1	+0.6
MT02				*i* S	Sn	20 11 58.4	-0.4
MT02				IAML		20 12 00.5	
	comp=E,2µm,0.3s						
MT02	Curacav	1.31	135		Pb	20 11 41.0	+0.3
MT02	Curacav	1.31	135	*e*P	Pg	20 11 41.2	+0.7
MT02				*e*S	Sn	20 11 59.4	+0.6
MT02				IAML		20 12 00.6	
	comp=Z,2µm,0.7s						
VA05	Santo Domingo	1.43	159	*e*P	Pb	20 11 43.3	+0.7
VA05				IAML		20 12 10.7	
	comp=E,4µm,0.3s						
VA05	Santo Domingo	1.43	159		Pn	20 11 43.1	+0.8
VA03	San Esteban	1.49	108	⇓*i*P	Pg	20 11 44.0	+0.1
VA03				*i* S	Sg	20 12 02.3	-0.9
VA03				IAML		20 12 07.5	
	comp=N,7µm,0.5s						
VA03	San Esteban	1.49	108		Pb	20 11 43.8	0.0
VA03	San Esteban	1.49	108	*e*P	Pg	20 11 44.1	+0.3
VA03				*e*S	Sg	20 12 04.8	+1.6
VA03				IAML		20 12 06.6	
	comp=Z,3µm,1.0s						
PEL	Peldehue	1.54	122	⇓*i*P	Pg	20 11 45.1	+0.3
PEL				*i* S	Sg	20 12 04.8	0.0
PEL				IAML		20 12 09.9	
	comp=N,7µm,0.5s						
PEL	Peldehue	1.54	122	*e*P	Pg	20 11 45.2	+0.3
PEL				*e*S	Sg	20 12 07.4	+2.5
MT05	Renca	1.65	131	*e*P	Pb	20 11 47.0	+0.5
MT05				*i* S	Sg	20 12 07.4	-0.9
MT05				IAML		20 12 13.1	
	comp=E,7µm,0.3s						
MT05	Renca	1.65	131		Pb	20 11 46.7	+0.2
MT05	Renca	1.65	131	*e*P	Pn	20 11 41.5	-3.9
MT05				*e*P	Pb	20 11 47.0	+0.5
MT05				*e*S	Sn	20 12 06.0	-1.2
MT05				IAML		20 12 15.7	
	comp=Z,3µm,0.8s						
CO06	Fray Jorge	1.73	17	⇑*i*P	Pn	20 11 47.5	+1.1
CO06				IAML		20 12 21.4	
	comp=N,1µm,0.5s						
CO06	Fray Jorge	1.73	17		Pn	20 11 47.3	+0.9
MT01	Popeta	1.74	152	⇑*e*P	Pn	20 11 47.4	+0.8
MT01				*i* S	Sn	20 12 09.4	-0.1
MT01				IAML		20 12 16.0	
	comp=E,2µm,0.3s						
MT01	Popeta	1.74	152	Pn	Pn	20 11 47.2	+0.5
MT01	Popeta	1.74	152	*e*P	Pb	20 11 48.0	-0.1
MT01				*e*S	Sg	20 12 11.0	-0.4
MT01				IAML		20 12 18.1	
	comp=Z,2µm,0.7s						
MT09	Talagante	1.79	144	⇑*i*P	Pb	20 11 48.8	-0.1
MT09				*i* S	Sb	20 12 10.9	-0.9
MT09				IAML		20 12 19.1	
	comp=N,3µm,0.5s						
MT09	Talagante	1.79	144		Pn	20 11 48.3	+0.9
FCH	Farellones	1.92	122	⇑*i*P	Pb	20 11 50.9	-0.4
FCH				*i* S	Sb	20 12 14.8	-0.9
FCH				IAML		20 12 22.4	
	comp=E,2µm,0.5s						
CO03	El Pedregal	1.98	42	⇑*i*P	Pn	20 11 51.4	+1.3
CO03				IAML		20 12 27.5	
	comp=E,2µm,0.1s						
CO03	El Pedregal	1.98	42	Pn	Pn	20 11 51.7	+1.7
CO03	El Pedregal	1.98	42	*e*P	Pb	20 11 52.0	-0.2
CO03				*e*S	Sg	20 12 18.5	-0.6
CO03				IAML		20 12 25.4	
	comp=Z,1µm,0.5s						
BO04	La Punta	2.15	141	⇑*i*P	Pb	20 11 54.0	-0.9
BO04				*i* S	Sn	20 12 19.3	-0.2
BO04				IAML		20 12 30.4	
	comp=N,2µm,0.5s						
BO01	Tunca	2.27	155	*e*P	Pn	20 11 55.3	+1.4
BO01				*i* S	Sn	20 12 22.6	0.0
BO01				IAML		20 12 29.9	
	comp=E,596nm,0.4s						
BO01	Tunca	2.27	155	Pn	Pn	20 11 54.7	+0.8
BO01	Tunca	2.27	155	*e*P	Pn	20 11 55.0	+1.1
BO01				*e*S	Sn	20 12 22.0	-0.6
BO01				IAML		20 12 29.9	
	comp=Z,622nm,0.5s						
LMEL	Las Melosas	2.28	132	⇑*e*P	Pb	20 11 56.4	-0.9
LMEL				*i* S	Sn	20 12 23.0	-0.1
LMEL				IAML		20 12 32.5	
	comp=N,2µm,0.3s						
AUSP	Uspallata	2.41	88	*e*P	Pb	20 12 00.0	+0.3
GO04	Tololo Observa	2.47	30	⇑*i*P	Pn	20 11 58.0	+1.0
GO04				*i* S	Sg	20 12 36.5	+1.7
GO04	Tololo Observa	2.47	30		Pn	20 11 58.4	+1.5
GO04	Tololo Observa	2.47	30	*e*P	Pn	20 11 58.7	+1.8
GO04				*e*S	Sg	20 12 34.0	-0.9
CO05	La Serena	2.55	20	*e*P	Pn	20 11 59.3	+1.6
CO05				IAML		20 12 49.1	
	comp=E,2µm,0.6s						
CO05	La Serena	2.55	20		Pn	20 11 59.4	+1.6
RTLS	Leoncito	2.55	79	*e*P	Pb	20 12 02.0	0.0
RTLS				IAML		20 12 45.7	
	comp=Z,813nm,1.0s						
GO05	Huala	2.69	175	*e*P	Pn	20 12 00.6	+0.8
GO05				*i* S	Sg	20 12 42.4	+0.6
GO05				IAML		20 12 51.7	
	comp=N,397nm,0.4s						
GO05	Huala	2.69	175		Pn	20 12 00.5	+0.8
GO05	Huala	2.69	175	*e*P	Pn	20 12 01.0	+1.3
GO05				*e*S	Sg	20 12 41.5	-0.3
BO02	Sierra Bellavi	2.74	154	*e*P	Pn	20 12 02.6	+2.1
BO02				*i* S	Sn	20 12 32.9	-1.4
BO02				IAML		20 12 49.6	
	comp=E,1µm,0.5s						
BO02	Sierra Bellavi	2.74	154		Pn	20 12 01.5	+1.0
BO02	Sierra Bellavi	2.74	154	*e*P	Pn	20 11 45.6	-15
BO02				*e*S	Sb	20 12 39.0	-0.3
BO02				IAML		20 12 51.7	
	comp=Z,944nm,0.8s						
ARCO	CERRO ARCO	2.83	101	*e*P	Pn	20 12 03.0	+1.2
ARCO				*e*S	Sg	20 12 50.7	+4.3
ARCO				IAML		20 12 53.1	
	comp=Z,478nm,0.5s						
ZON	Zonda	3.12	77	Pn	Pn	20 12 05.9	+0.2
RTCV	Cerro Valdivia	3.17	83	*e*P	Pb	20 12 10.9	-1.5
RTCV				*e*S	Sb	20 12 52.7	+1.1
ACCO	Cerro Coronel	3.21	58	*e*P	Pb	20 12 12.0	-1.4
ACCO				*e*S	Sg	20 13 01.9	+3.2
ML02	Panimavida	3.49	169	*e*P	Pn	20 12 13.3	+2.5
ML02				IAML		20 13 15.9	
	comp=E,863nm,0.5s						
ML02	Panimavida	3.49	169	Pn	Pn	20 12 12.8	+2.1
LCO	Las Campanas	3.56	22	*e*P	Pn	20 12 13.2	+1.4
LCO				*i* S	Sg	20 13 08.6	-1.1
LCO	Las Campanas	3.56	22	Pn	Pn	20 12 13.1	+1.2
LCO	Las Campanas	3.56	22	*e*P	Pn	20 12 13.0	+1.2
RFA	San Rafael	3.98	129	*e*P	Pn	20 12 18.5	+1.0
RFA				*e*S	Sg	20 13 20.5	-2.8
RFA				IAML		20 13 29.9	
	comp=Z,154nm,0.9s						
AC04	Llanos de Chal	4.23	14	*e*P	Pn	20 12 21.2	+0.4
AC04	Llanos de Chal	4.23	14	Pn	Pn	20 12 21.2	+0.4
AC04	Llanos de Chal	4.23	14	*e*P	Pn	20 12 22.5	+1.7
AC04				*e*S	Sb	20 13 26.5	+4.5
AVFE	Valle Fertil	4.41	69	*e*P	Pn	20 12 27.0	+3.6
AVFE				*e*S	Sb	20 13 22.0	-5.2
AVFE				IAML		20 13 37.4	
	comp=Z,287nm,1.3s						
ACHE	Chepes	4.89	78	*e*P	Pn	20 12 35.0	+5.0
ACHE				*e*S	Sb	20 13 33.5	-7.6
VCA	Vinchina	4.99	45	*e*P	Pn	20 12 36.0	+4.6
VCA				*e*S	Sb	20 13 46.5	+2.5
VCA				*e*S	Sg	20 13 50.7	-4.9
GO03	Copiap	5.03	21		Pn	20 12 32.7	+0.8
GO03	Copiap	5.03	21	*e*P	Pn	20 12 34.2	+2.4
GO03				*e*P	Pn	20 12 35.0	+3.2
GO03				*e*S	Sb	20 13 44.5	-0.5
APLL	PUNTA DE LOS L	5.25	70	*e*P	Pn	20 12 33.5	-1.4
APLL				*e*S	Sn	20 13 33.1	-2.9
ACLC	CERRO LA CRUZ	5.38	59	*e*P	Pn	20 12 40.0	+3.1
MRA	San Martin	5.51	93	*e*P	Pn	20 12 43.0	+4.4
MRA				*e*S	Sn	20 13 43.0	+0.3
MRA				*e*S	Sn	20 13 44.2	+1.5
H03N1	Juan Fernandez	5.73	257	T	T	20 18 47.6	
	baz=84,slow=72,SNR=458						
H03N3	Juan Fernandez	5.74	257	T	T	20 18 47.7	
	baz=84,slow=72,SNR=410						
H03N2	Juan Fernandez	5.74	257	T	T	20 18 48.7	
	baz=84,slow=72,SNR=676						
H03S3	Juan Fernandez	5.80	253	T	T	20 19 27.4	
	baz=80,SNR=21						
H03S1	Juan Fernandez	5.80	253	T	T	20 19 21.9	
	baz=80,SNR=24						
H03S2	Juan Fernandez	5.81	253	T	T	20 19 30.2	
	baz=80,SNR=28						
AC02	Maricunga	6.10	27	Pn	Pn	20 12 46.9	-0.2
LC01	Cunco	6.56	178		Pn	20 12 53.9	+1.0
LC01	Cunco	6.56	178	*e*P	Pn	20 12 55.0	+2.1
LR03	Panguipulli	7.29	181	Pn	Pn	20 13 02.6	-0.3
PB14	IPOC Station P	7.84	12	Pn	Pn	20 13 10.8	+0.1
PLCA	Paso Flores	8.50	171	Pn	Pn	20 13 21.0	+1.5
	comp=Z,0.4nm,0.3s,baz=338,slow=13,SNR=5.3						
PLCA	Paso Flores	8.50	171	Pn	Pn	20 13 19.2	-0.4
PB10	IPOC Station P	8.90	10	Pn	Pn	20 13 24.8	-0.3
PB15	IPOC Station P	9.41	16	Pn	Pn	20 13 32.2	+0.1
PB06	IPOC Station P	9.87	14	Pn	Pn	20 13 37.8	-0.7
LL01	San Ignacio de	10.04	181	Pn	Pn	20 13 38.1	-2.3
LVC	Limon Verde	10.12	18	Pn	Pn	20 13 45.0	+3.0
	comp=Z,0.3nm,0.3s,baz=222,slow=12,SNR=1.2						
LVC				Sn	Sn	20 15 44.2	+7.9
	comp=Z,0.6nm,0.3s,baz=192,slow=20,SNR=1.8						
LVC	Limon Verde	10.12	18	Pn	Pn	20 13 39.3	-2.7
PB04	IPOC Station P	10.12	11	Pn	Pn	20 13 39.6	-2.4
PB07	IPOC Station P	10.76	12	Pn	Pn	20 13 48.5	-2.2
PB09	IPOC Station P	10.82	15	Pn	Pn	20 13 47.9	-3.6
HJA	Humahuaca	10.91	35	*e*P	Pn	20 13 57.0	+4.1
TA01	Diego Aracena	11.86	9	Pn	Pn	20 13 58.9	-6.6
PB08	IPOC Station P	12.45	14	Pn	Pn	20 14 05.7	-8.2
PB11	IPOC Station P	12.72	11	Pn	Pn	20 14 11.2	-6.4
ITQB	Itaqui	13.65	83		Pn	20 14 26.3	-3.7
PB12	IPOC Station P	13.76	8	Pn	Pn	20 14 28.7	-2.9
PB16	IPOC Station P	14.15	11	Pn	Pn	20 14 35.9	-1.5
CPUP	Villa Florida	14.30	69	Pn	Pn	20 14 42.4	+3.5
	comp=Z,0.5nm,0.3s,baz=228,slow=9.2,SNR=7.3						
CPUP				Sn	S	20 17 27.6	-11
	comp=Z,0.3nm,0.3s,baz=184,slow=19,SNR=2.2						
CPUP	Villa Florida	14.30	69	Pn	Pn	20 14 38.6	-0.3
LPAZ	La Paz	16.40	14	Pn	Pn	20 15 09.5	+2.2
	comp=Z,0.3nm,0.3s,baz=174,slow=6.7,SNR=20						
LPAZ	La Paz	16.40	14		Pn	20 15 03.7	-3.6
LPAZ	La Paz	16.40	14		Pn	20 15 04.6	-2.7
LPAZ				IAmb	IAmb	20 15 16.6	
	comp=Z,7.3nm,0.7s						
SIV	San Ignacio	19.16	35	P	Pn	20 15 41.4	+0.4
	comp=Z,0.6nm,0.3s,baz=206,slow=10,SNR=20						
PTLB	Pontes e Lacer	20.60	38	P	P	20 15 54.9	-1.0
VILB	Vilhena	22.22	33	P	P	20 16 10.1	-3.2
VILB				IAmb	IAmb	20 16 22.2	
	comp=Z,12nm,0.8s						
ETMB	Extrema	23.08	15	P	P	20 16 22.7	+0.2
ETMB				IAmb	IAmb	20 16 35.5	
	comp=Z,5.1nm,1.0s						
BDFB	Brasilia	27.57	59	P	P	20 17 04.7	+0.7
	comp=Z,3.8nm,0.5s,baz=243,slow=9.1,SNR=11						
BDFB	Brasilia	27.57	59	P	P	20 17 03.4	-0.6
BDFB				IAmb	IAmb	20 17 05.5	
	comp=Z,6.1nm,0.8s						
MACA	Manacapuru-AM	30.97	23	P	P	20 17 35.0	+0.9
BOAV	Boa Vista	36.27	20	P	P	20 18 16.8	-3.4
SNAA	Sanae	53.20	158	P	P	20 20 36.1	+1.5
SNAA				IAmb	IAmb	20 20 50.0	
	comp=Z,5.2nm,1.2s						
QSPA	South Pole Qui	57.91	180	P	P	20 21 07.2	-1.4
	comp=Z,0.8nm,1.0s,baz=352,slow=3.9,SNR=1.7						
QSPA	South Pole Qui	57.91	180	IAmb	IAmb	20 21 26.5	
	comp=Z,5.2nm,1.2s						
VNDA	Vanda	65.71	191	P	P	20 22 01.9	+1.0
DBIC	Dimbokro	74.81	72	P	P	20 22 59.0	+1.5
	comp=Z,2.2nm,0.6s,baz=212,slow=3.8,SNR=6.6						
DBIC	Dimbokro	74.81	72	P	P	20 22 58.2	+0.7
TORD	Torodi Ar. Bea	83.80	70	P	P	20 23 48.5	+1.8
	comp=Z,1.9nm,0.6s,baz=245,slow=3.1,SNR=18						
TORD	Torodi Ar. Bea	83.80	70	P	P	20 23 47.9	+1.3
TORD				IAmb	IAmb	20 23 49.3	
	comp=Z,1.9nm,0.7s						
H11S2	WAKE ISLAND Hy	125.61	270	T	T	22 49 33.2	
	baz=118,slow=74,SNR=4.0						
H11S1	WAKE ISLAND Hy	125.62	270	T	T	22 49 32.1	
	baz=118,slow=74,SNR=3.3						
H11S3	WAKE ISLAND Hy	125.63	270	T	T	22 49 32.8	
	baz=118,slow=74,SNR=4.4						
ZALV	Zalesovo Beam	152.88	30	PKPbc	PKPbc	20 31 14.7	+1.1
	comp=Z,1.3nm,0.6s,baz=321,slow=3.6,SNR=8.1						
ZALV				PKPab	PKPab	20 31 25.7	+1.0
	comp=Z,1.5nm,0.6s,baz=290,slow=3.0,SNR=4.3						
MKAR	Makanchi Array	155.76	46	PKPab	PKPab	20 31 38.5	+1.3
	comp=Z,0.6nm,0.6s,baz=307,slow=3.4,SNR=5.9						
HHC	Hu-ho-hao-te	170.96	341	*e*P	PKPdf	20 31 20.5	-4.8

IDC 25 20:21:25.2±2.9, 6°.32S×147°.09E, h0km, mb3.8/3, mb1 3.9/5, mb1mx3.7/35, mbtmp3.8/5, ML3.8/1, MS3.7/1, Ms1 3.7/1, ms1mx3.0/30, Error ellipse: s-maj=56.8km s-min=33.0km az=78.0

ISC 25 20:21:32.5±3.0, 6°.4S±0°.2×146°.9E±0°.4, h50km, n6, σ0ˢ92/7, mb3.8/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.00	175	Pn	Pn	20 22 16.7	-0.8
	3.1nm,0.3s,baz=49,slow=4.2,SNR=11						
PMG				Sn	Sn	20 22 53.4	+1.2
	2.7nm,0.3s,baz=59,slow=11,SNR=4.6						
WRA	Warramunga Arr	18.17	221	P	P	20 25 41.1	0.0
	0.3nm,0.3s,baz=46,slow=11,SNR=14						
ASAR	Alice Springs	21.24	215	P	P	20 26 14.3	-0.1
	1.1nm,0.5s,baz=51,slow=7.9,SNR=39						
FITZ	Fitzroy Crossi	23.78	239	P	P	20 26 40.5	-0.2
	2.6nm,0.8s,baz=58,slow=13,SNR=1.6						
FITZ				LR	LR	20 37 49.3	
	comp=Z,184nm,20.0s,baz=288,slow=41						
STKA	Stephens Creek	25.83	190	P	P	20 26 58.8	-0.4
	2.8nm,1.0s,baz=336,slow=12,SNR=4.4						
TORD	Torodi Ar. Bea	145.10	284	PKPbc	PKPab	20 41 06.1	+1.1
	0.4nm,0.6s,baz=77,slow=4.2,SNR=4.0						

IDC 25 20:23:48.3±3.3, 32°.77S×179°.23W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.7/34, mbtmp3.7/3, ML3.8/1, Error ellipse: s-maj=70.9km s-min=36.9km az=105.0

WEL 25 20:23:53.6±0.7, 33°S±13°×17°9W±3°2, h33km, M4.3/10, mB4.8/6, ML4.6/13, MLv4.4/10, Mw(mB)4.1/6, Error ellipse: s-maj=0.0km s-min=0.0km az=111.0

NEIC 25 20:23:55.4±1.1, 33°.09S±0°.09×179°.4W±0°.2, h35km±2km, mb4.4/5, Error ellipse: s-maj=31.8km s-min=3.1km az=120.0

ISC 25 20:23:53.7±1.2, 32°.72S±0°.08×179°.5W±0°.2, h35km, n38, σ1ˢ71/52, mb4.3/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.71	22	S	Sn	20 25 31.0	-0.1
MXZ	Matakaoa Point	5.15	200	P	Pn	20 25 09.7	+1.5
MXZ				S	Sn	20 26 06.6	+0.3
MXZ	Matakaoa Point	5.15	200	Pn	Pn	20 25 07.3	-0.9
WMGZ	Waiomatatini S	5.36	198	P	Pn	20 25 11.4	+0.2
WMGZ				S	Sn	20 26 13.5	+1.9
HAZ	Te Kaha	5.49	203	P	Pn	20 25 14.0	+1.1

HAZ				S	Sn	20 26 19.5	+4.8
PKGZ	Pakihiroa	5.51	200	P	Pn	20 25 13.6	+0.2
PKGZ				S	Sn	20 26 16.8	+1.2
PUZ	Puketiti	5.64	198	P	Pn	20 25 14.6	-0.4
PUZ				S	Sn	20 26 17.4	-1.1
RUGZ	Raukumara Rang	5.71	203	P	Pn	20 25 16.5	+0.4
RUGZ				S	Sn	20 26 21.5	+1.1
TWGZ	Tauwhareparae	5.81	200	P	Pn	20 25 18.7	+1.3
TWGZ				S	Sn	20 26 24.6	+1.8
OPRZ	Ohinepanea	6.03	211	P	Pn	20 25 24.5	+4.1
CNGZ	Carnagh Statio	6.04	197	P	Pn	20 25 20.4	-0.1
MWZ	Matawai	6.09	202	P	Pn	20 25 22.1	+0.8
MWZ				S	Sn	20 26 29.2	-0.5
TKGZ	Te Karaka	6.09	200	P	Pn	20 25 23.5	+2.3
TKGZ				S	Sn	20 26 30.4	+0.8
URZ	Urewera	6.17	205	Pn	Pn	20 25 22.1	-0.2
	2.1nm,0.3s,baz=285,slow=13,SNR=9.2						
URZ				Sn	Sn	20 26 31.7	+0.2
	3.5nm,0.3s,baz=308,slow=20,SNR=3.6						
URZ	Urewera	6.17	205	P	Pn	20 25 22.3	+0.1
URZ				S	Sn	20 26 32.2	+0.7
URZ	Urewera	6.17	205		Pn	20 25 20.6	-1.6
RIGZ	Rimuhau	6.37	199	P	Pn	20 25 24.3	-0.7
RIGZ				S	Sn	20 26 34.2	-2.3
RTZ	Ruatahuna	6.53	205	P	Pn	20 25 26.5	-0.8
PRGZ	Paritu Road	6.54	198	P	Pn	20 25 26.4	-0.9
PRGZ				S	Sn	20 26 40.1	-0.6
SNGZ	Shannon Statio	6.56	202	P	Pn	20 25 28.3	+0.6
SNGZ				S	Sn	20 26 40.5	-0.8
MTHZ	Maungataniwha	6.79	205	P	Pn	20 25 31.1	+0.2
MTHZ				S	Sn	20 26 47.2	+0.3
BKZ	Black Stump Fm	7.20	205	Pn	Pn	20 25 34.6	-1.8
HIZ	Hauiti	7.37	217	Pn	Pn	20 25 37.3	-1.4
BFZ	Birch Farm	8.64	202	Pn	Pn	20 25 53.5	-2.7
SNZO	South Karori	9.73	207	Pn	Pn	20 26 08.9	-2.2
TUWZ	Tuamarina	10.13	209	Pn	Pn	20 26 14.2	-2.4
NNZ	Nelson	10.20	212	Pn	Pn	20 26 14.5	-3.0
QRZ	Quartz Range	10.29	216	Pn	Pn	20 26 16.3	-2.5
BSWZ	Blackbirch Sta	10.40	208	Pn	Pn	20 26 17.7	-2.6
THZ	Tophouse	10.85	212	Pn	Pn	20 26 23.8	-2.7
KHZ	Kahutara	11.13	208	Pn	Pn	20 26 26.4	-3.8
ASAR	Alice Springs	41.74	270	P	P	20 31 41.8	+2.1
	0.3nm,0.4s,baz=109,slow=7.6,SNR=6.5						
WR0	Warramunga Arr	42.77	276	P	P	20 31 49.9	+1.9
WB2	Warramunga Arr	42.94	275	P	P	20 31 50.9	+1.5
WB2				IAmb	IAmb	20 32 21.0	
	comp=Z,7.0nm,1.1s						
WRA	Warramunga Arr	42.95	275	P	P	20 31 51.1	+1.6
	comp=Z,0.4nm,0.3s,baz=114,slow=7.8,SNR=12						
WB0	Warramunga Arr	42.98	276	P	P	20 31 51.9	+2.1
WB0				IAmb	IAmb	20 32 01.9	
	comp=Z,10nm,1.3s						
QSPA	South Pole Qui	57.40	180	P	P	20 33 37.5	-0.9
QSPA				IAmb	IAmb	20 33 46.6	
	comp=Z,5.4nm,1.4s						
FINES	FINESS Array B	146.83	338	PKPbc	PKPbc	20 43 31.1	-0.3
	comp=Z,3.2nm,0.9s,baz=66,slow=3.4,SNR=1.3						

IDC ***25*** *20:24:51.0±1.3, 18°.68N×145°.93E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/41, mbtmp3.7/7, Error ellipse: s-maj=42.5km s-min=21.0km az=89.0*

ISC 25 20:25:08.0±1.4**, 18°.6N**±0°.2×**145°.8E**±0°.3**, h145km, n7, σ0ˢ.40**/7**, mb3.4**/7**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	39.89	197	P	P	20 32 28.4	+0.6
	0.6nm,0.4s,baz=19,slow=6.3,SNR=12						
FITZ	Fitzroy Crossi	41.46	210	P	P	20 32 40.7	-0.1
	4.9nm,1.0s,baz=40,slow=6.1,SNR=8.3						
SONM	Songino Array	43.27	321	P	P	20 32 55.0	-0.3
	0.4nm,0.6s,baz=137,slow=7.9,SNR=2.3						
ASAR	Alice Springs	43.55	196	P	P	20 32 57.5	-0.1
	0.3nm,0.4s,baz=12,slow=6.5,SNR=9.8						
CMAR	Chiang Mai Arr	44.28	278	P	P	20 33 03.7	+0.1
	1.0nm,0.4s,baz=78,slow=6.8,SNR=4.7						
MKAR	Makanchi Array	58.58	314	P	P	20 34 50.0	+0.4
	0.3nm,0.6s,baz=87,slow=8.3,SNR=7.9						
YKA	Yellowknife Ar	78.07	28	P	P	20 36 50.4	-0.1
	0.2nm,0.4s,baz=286,slow=5.1,SNR=4.6						

TRN ***25*** *20:45:19.6, 18°.05N×63°.34W, h18km, MD3.3*

NEIC ***25*** *20:45:22.1±2.3, 18°.03N±0°.06×63°.39W±0°.04, h28km±10km, ML2.8/20, Md3.0/10(RSPR), Error ellipse: s-maj=9.2km s-min=4.1km az=203.0*

RSPR ***25*** *20:45:24.7, 18°.49N×63°.53W, h86km±5km, MD3.0/5*

ISC 25 20:45:21.0±1.0**, 18°.10N**±0°.05×**63°.38W**±0°.03**, h17km**±7km**, n35, σ0ˢ.70**/50**, 8C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMRT	St. Maarten	0.29	100	eP	Pg	20 45 27.2	-0.1
SMRT				eS	Sg	20 45 31.4	-0.2
SMRT	St. Maarten	0.29	100		Pg	20 45 27.3	0.0
SMRT				Sg	Sg	20 45 31.4	-0.2
SMRT				IAML		20 45 32.0	
	comp=E,2µm,0.2s						
SABA	Saba	0.49	165	eP	Pg	20 45 31.4	+0.4
SABA				eS	Sb	20 45 38.3	+0.1
SABA	Saba	0.49	165		Pg	20 45 30.1	-0.8
SABA				Sg	Sg	20 45 37.4	-0.2
SABA				IAML		20 45 41.4	
	comp=N,806nm,0.2s						
SEUS	St. Eustatius	0.71	148	eP	Pg	20 45 34.9	-0.1
SEUS				eS	Sb	20 45 44.9	+0.4
SEUS	St. Eustatius	0.71	148		Pg	20 45 34.3	-0.7
SEUS					Sb	20 45 45.7	+1.3
SEUS				IAML		20 45 48.4	
	comp=N,376nm,0.3s						
SKI	Saint Kitts	0.97	141	eP	Pb	20 45 39.6	+0.2
SKI				eS	Sg	20 45 52.9	+0.2
NVDO	Nevis, Disaste	1.21	143	eP	Pg	20 45 44.6	+0.1
NVDO				eS	Sg	20 45 60.0	-0.4
TBVI	Tortola	1.22	285	⇑eP	Pn	20 45 44.1	+0.8
TBVI	Tortola	1.22	285	⇑eP	Pn	20 45 44.1	+0.8
TBVI				eS	Sb	20 45 58.6	-0.5
CDVI	St. Croix	1.37	256	⇑eP	Pg	20 45 48.1	+0.7
CDVI	St. Croix	1.37	256	eP	Pn	20 45 45.5	+0.2
CDVI				eS	Sg	20 46 06.9	+1.6
CDVI	St. Croix	1.37	256	Pn	Pn	20 45 43.3	-2.0
CDVI				IAML		20 46 10.7	
	comp=E,168nm,0.5s						
CDVI				IAML		20 46 15.7	
	comp=N,138nm,0.8s						
STVI	Saint Thomas	1.52	280	⇑eP	Pn	20 45 48.4	+1.0
STVI	Saint Thomas	1.52	280	⇑eP	Pn	20 45 48.4	+1.0
STVI				eS	Sn	20 46 06.3	-0.5
STVI	Saint Thomas	1.52	280	Pn	Pn	20 45 46.4	-1.0
STVI	Saint Thomas	1.52	280		Sn	20 46 06.3	-0.5
ANWB	Willy Bob	1.57	106	eP	Pn	20 45 48.1	-0.1
ANWB				eS	Sn	20 46 08.3	+0.2
ANWB	Willy Bob	1.57	106	Pn	Pn	20 45 48.0	-0.1
ANWB				IAML		20 46 09.2	
	comp=N,135nm,1.2s						
ANWB				IAML		20 46 34.7	
	comp=N,134nm,2.2s						
ANDO	Antigua, Disas	1.77	123	eS	Sn	20 46 13.2	+0.2
CUPR	Culebra, Puert	1.82	277	⇑eP	Pn	20 45 51.9	+0.3
CUPR	Culebra, Puert	1.82	277	eS	Sn	20 46 13.8	-0.6
CUPR	Culebra, Puert	1.82	277	Pn	Pn	20 45 51.6	0.0
CUPR	Culebra, Puert	1.82	277		Sn	20 46 13.8	-0.6
ANBD	Bethesda, Anti	1.86	124	eP	Pn	20 45 52.2	+0.1
ANBD				eS	Sn	20 46 14.8	-0.4
MTP	Monte Pirata	2.07	270	⇑eP	Pn	20 45 55.5	+0.5
MTP	Monte Pirata	2.07	270	⇑eP	Pn	20 45 55.5	+0.5
MTP				eS	Sn	20 46 19.8	-0.7
MTP	Monte Pirata	2.07	270	Pn	Pn	20 45 55.4	+0.5
MTP	Monte Pirata	2.07	270		Sn	20 46 19.8	-0.7
HUMP	Col San Antoni	2.35	271	Pn	Pn	20 45 59.4	+0.5
CBYP	Canovanas	2.36	275	Pn	Pn	20 45 58.9	-0.2
PDPR	Patillas Dam,	2.52	269	Pn	Pn	20 46 01.6	+0.4
PDPR					Pg	20 46 08.5	-0.9
PDPR				IAML		20 46 37.3	
	comp=E,59nm,2.5s						
GCPR	Guaynabo City	2.58	275	Pn	Pn	20 46 01.8	-0.2
AOPR	Arecibo Observ	3.22	275	eP	Pn	20 46 11.5	+0.7
PRSN	Puerto Rico Se	3.58	272		Pn	20 46 14.3	-1.5

IDC ***25*** *20:51:20.0±1.1, 59°.51S×25°.87W, h0km, mb4.1/4, mb1 4.3/5, mb1mx3.8/24, mbtmp4.3/5, Error ellipse: s-maj=48.5km s-min=32.4km az=69.0*

NEIC ***25*** *20:51:21.5±2.8, 59°.5S±0°.1×25°.6W±0°.2, h10km±4km, mb4.7/20, Error ellipse: s-maj=18.8km s-min=12.1km az=222.0*

ISC 25 20:51:25.0±0.6**, 59°.56S**±0°.09×**25°.60W**±0°.09**, h32km, n33, σ1ˢ.74**/33**, mb4.6**/13**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	7.96	307		Pn	20 53 18.8	+0.6
VNA1	Neumayer--Stat	13.23	154	P	Pn	20 54 31.5	+1.2
VNA1				S	Sn	20 56 50.1	-5.9
VNA3	Neumayer Olymp	13.40	157	P	Pn	20 54 33.6	+1.0
VNA3				S	Sn	20 56 49.9	-10
VNA2	Neumayer--Watz	13.63	154	P	Pn	20 54 35.9	+0.2
	baz=321,slow=14						
VNA2				S	Sn	20 56 57.5	-8.3
	baz=313,slow=20						
SNAA	Sanae	15.21	152	P	Pn	20 54 58.0	+0.9
SNAA				S	Sn	20 57 33.6	-10
SNAA	Sanae	15.21	152	Pn	Pn	20 54 57.8	+0.8
	baz=311,slow=16						
SNAA				Sn	Sn	20 57 33.2	-11
	0.2nm,0.3s,baz=345,slow=16,SNR=2.6						
SNAA	Sanae	15.21	152		Pn	20 54 57.7	+0.7
SNAA				IAmb	IAmb	20 54 59.2	
	comp=Z,20nm,0.5s						
ESPZ	Base Esperanza	15.38	242		P	20 55 06.5	+2.9
DSPA	Despedida	23.72	265	P	P	20 56 31.7	-2.0
MG02	Cerro Sombrero	24.83	266	P	P	20 56 42.2	-1.7
GO09	Cerro Castillo	27.27	267	P	P	20 57 03.6	-2.4
GO09				IAmb	IAmb	20 57 32.7	
	comp=Z,23nm,1.4s						
QSPA	South Pole Qui	30.68	180	P	P	20 57 37.6	+1.3
PLCA	Paso Flores	33.56	284	P	P	20 58 00.7	-1.1
PLCA				IAmb	IAmb	20 58 23.6	
	comp=Z,12nm,1.5s						
LC01	Cunco	35.62	284	P	P	20 58 18.0	-1.4
LC01				IAmb	IAmb	20 58 31.7	
	comp=Z,10nm,1.4s						
GO05	Huala	38.73	288	P	P	20 58 44.0	-1.8
GO05				IAmb	IAmb	20 59 13.6	
	comp=Z,39nm,1.5s						
MT09	Talagante	39.27	290	P	P	20 58 49.2	-1.3
MT01	Popeta	39.33	290	P	P	20 58 49.1	-1.7
MT01				IAmb	IAmb	20 58 56.2	
	comp=Z,37nm,1.6s						
MT02	Curacav	39.77	291	P	P	20 58 53.1	-1.5
MT02				IAmb	IAmb	20 59 11.6	
	comp=Z,23nm,1.2s						
VNDA	Vanda	43.10	182	P	P	20 59 24.6	+3.4
BOSA	Boshof	46.16	71	P	P	20 59 46.9	+0.5
LVC	Limon Verde	47.83	301	P	P	20 59 59.9	+0.1
LVC				IAmb	IAmb	21 00 23.7	
	comp=Z,9.4nm,1.1s						
PB09	IPOC Station P	48.69	301	P	P	21 00 04.8	-1.4
LBTB	Lobatse	49.35	69	P	P	21 00 11.4	+0.2
LBTB				IAmb	IAmb	21 00 33.6	
	comp=Z,14nm,1.4s						
LPAZ	La Paz	53.11	306	P	P	21 00 38.8	-1.2
	comp=Z,1.2nm,0.7s,baz=174,slow=9.2,SNR=4.5						
LPAZ	La Paz	53.11	306	IAmb	IAmb	21 00 40.6	
	comp=Z,2.0nm,1.1s						
LSZ	Lusaka	58.96	65	P	P	21 01 20.9	-0.4
LSZ				IAmb	IAmb	21 01 33.1	
	comp=Z,4.1nm,1.1s						
TORD	Torodi Ar. Bea	75.74	27	P	P	21 03 07.2	+0.1
	comp=Z,2.5nm,0.6s,baz=197,slow=6.2,SNR=17						
TORD	Torodi Ar. Bea	75.74	27	P	P	21 03 07.4	+0.2
KOWA	Kowa	75.85	22	P	P	21 03 08.3	+0.6
	comp=Z,0.8nm,0.7s,baz=207,slow=2.3,SNR=1.4						
ASAR	Alice Springs	95.38	161	P	P	21 04 46.4	+0.4
	comp=Z,0.5nm,0.7s,baz=183,slow=3.8,SNR=8.9						
YKA	Yellowknife Ar	139.30	315	PKP	PKPdf	21 10 46.7	-0.3
	comp=Z,1.0nm,0.7s,baz=127,slow=2.3,SNR=12						
ZALV	Zalesovo Beam	143.05	67	PKP	PKPdf	21 10 54.2	+0.2
	comp=Z,0.4nm,0.5s,baz=253,slow=4.4,SNR=3.6						
SONM	Songino Array	149.94	91	PKPbc	PKPbc	21 11 11.0	0.0
	comp=Z,0.6nm,0.3s,baz=201,slow=2.1,SNR=9.2						

IDC 25 21:03:46.1±1.6**, 4°.02S**×**128°.71E, h0km, mb3.4**/2**, mb1 3.7**/4**, mb1mx3.3**/40**, mbtmp3.5**/4**, ML3.1**/2**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx2.9**/27**, Error ellipse: s-maj=41.4km s-min=25.4km az=92.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.04	39	Pn	Pn	21 04 51.3	+2.0
	1.1nm,0.3s,baz=222,slow=23,SNR=13						
SIJI				Sn	Sn	21 05 36.9	-0.5
	2.3nm,0.3s,baz=200,slow=23,SNR=12						
WRA	Warramunga Arr	16.75	161	Pn	Pn	21 07 43.1	+0.8
	0.1nm,0.3s,baz=344,slow=12,SNR=4.7						
ASAR	Alice Springs	20.16	166	P	P	21 08 21.8	-0.4
	1.5nm,0.5s,baz=346,slow=11,SNR=32						
JNU	Nakatsue	37.00	3	LR	LR	21 25 31.2	
	comp=Z,256nm,19.9s,baz=66,slow=35						
MKAR	Makanchi Array	65.05	327	P	P	21 14 28.0	-0.4
	0.2nm,0.4s,baz=117,slow=7.7,SNR=4.5						

IDC ***25*** *21:10:03.0±1.9, 24°.60N×121°.15E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.2/51, mbtmp3.5/4, Error ellipse: s-maj=157.6km s-min=23.0km az=65.0*

JMA ***25*** *21:10:05.5±0.4, 24°.76N×121°.25E, h0km, M3.2*

NEIC ***25*** *21:10:05.3±1.5, 24°.81N±0°.03×121°.19E±0°.05, h12km±9km, Error ellipse: s-maj=7.0km s-min=3.5km az=122.0*

TAP ***25*** *21:10:05.0, 24°.80N×121°.23E, h11km, ML3.7, B*

ISC 25 21:10:05.7±0.7**, 24°.79N**±0°.01×**121°.24E**±0°.01**, h16km**±4km**, n140, σ0ˢ.72**/222**, mb3.4**/4**, 3C-27D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NSK	Sanguang	0.16	137	⇓iP	Pg	21 10 09.5	-0.4
	baz=127						
NSK				iS	Sg	21 10 12.4	-0.2
	baz=127						
YHNB	Yeheng	0.18	134	⇓iP	Pg	21 10 09.7	-0.4
	baz=126						
YHNB				iS	Sg	21 10 12.3	-0.8
	baz=126						
YHNB	Yeheng	0.18	134	Pg	Pg	21 10 09.7	-0.4
YHNB				Sg	Sg	21 10 13.3	+0.2
NCUH	Zhongli	0.18	345	⇓iP	Pb	21 10 10.0	-0.7
	baz=346						
NCUH				iS	Sg	21 10 14.4	+1.4
	baz=346						
NCU	National Centr	0.18	346	⇓iP	Pb	21 10 09.9	-0.7
	baz=349						
NCU				S	Sg	21 10 14.0	+0.9
	baz=349						
HSN1	Hsinchu	0.20	265	P	Pb	21 10 10.6	-0.4
	baz=272						
HSN1				S	Sg	21 10 14.2	+0.7
	baz=272						
NTY	Taoyuan	0.21	15	⇓iP	Pb	21 10 10.7	-0.5
	baz=17						
NTY				iS	Sg	21 10 14.6	+0.7
	baz=17						
SBCB	Hsinchu	0.23	270	⇓iP	Pb	21 10 11.2	-0.3
	baz=281						
SBCB				iS	Sg	21 10 15.2	+0.9
	baz=281						
HSN	Hsinchu	0.24	272	P	Pg	21 10 10.7	-0.4
	baz=292						
HSN				eS	Sg	21 10 14.2	-0.5
	baz=292						
NWLT	Wulai	0.24	94	⇓iP	Pg	21 10 10.7	-0.3
	baz=92						
NWLT				S	Sg	21 10 14.2	-0.6
	baz=92						
LIOB	Emei	0.25	234	⇓iP	Pb	21 10 11.3	-0.5
	baz=236						
LIOB				eS	Sg	21 10 15.8	+0.9
	baz=236						
NSTT	Nanjuang	0.27	233	⇓iP	Pb	21 10 11.5	-0.6
	baz=234						
NSTT				eS	Sb	21 10 16.6	+0.1
	baz=234						
NHW	Xinwu Township	0.27	321	P	Pb	21 10 12.0	-0.2
	baz=45						
NHW				eS	Sb	21 10 17.3	+0.6
	baz=45						
BACT	New Taipei Cit	0.28	43	eP	Pb	21 10 11.8	-0.5
	baz=48						
BACT				eS	Sb	21 10 16.6	-0.2
	baz=48						
TATO	Taipei	0.29	52	iP	Pb	21 10 12.1	-0.5
	baz=57						
TATO	Taipei	0.29	52	Pg	Pb	21 10 12.1	-0.5
TATO				Sg	Sb	21 10 16.4	-0.7
NHDH	Xindian Distri	0.31	57	iP	Pg	21 10 12.2	0.0
	baz=56						
NHDH				iS	Sg	21 10 16.9	+0.1
	baz=56						
NDT	Datong Townshi	0.32	127	⇓iP	Pg	21 10 12.3	0.0
	baz=125						
NDT				S	Sg	21 10 16.7	-0.1
	baz=125						
ENTT	Nioudou	0.34	117	⇓iP	Pb	21 10 12.8	-0.5
	baz=122						
ENTT				eS	Sg	21 10 16.8	-0.7
	baz=122						
TAP	Taipei	0.35	45	eP	Pb	21 10 13.1	-0.4
	baz=45						
TAP				eS	Sb	21 10 18.4	-0.4
	baz=45						
TWS1	Kuangyinshan	0.35	28	⇓iP	Pb	21 10 13.6	+0.1
	baz=28						
TWS1				eS	Sb	21 10 19.0	+0.2
	baz=28						
NJN	Zhunan	0.35	252	eP	Pb	21 10 13.9	+0.3
	baz=255						
NJN				eS	Sb	21 10 19.2	+0.4
	baz=255						
TWA	Mucha	0.37	59	⇑iP	Pb	21 10 13.5	-0.3
	baz=59						
TWA				iS	Sb	21 10 18.8	-0.5
	baz=59						
NNS	Nan Shan	0.37	161	⇓iP	Pg	21 10 13.5	+0.1
	baz=146						
NNS				eS	Sb	21 10 19.3	-0.4
	baz=146						
NNSB	Datong	0.39	160	⇓iP	Pg	21 10 13.6	0.0
	baz=146						
NNSB				eS	Sg	21 10 18.7	-0.3
	baz=146						
NHY	Taipei	0.39	51	eP	Pb	21 10 14.1	-0.1
	baz=50						
NHY				eS	Sb	21 10 19.9	-0.1
	baz=50						
TWE	Neicheng	0.40	100	⇓iP	Pb	21 10 14.0	-0.3
	baz=106						
TWE				eS	Sb	21 10 20.4	+0.2
	baz=106						
NTST	Danshui	0.42	28	P	Pb	21 10 14.8	+0.1
	baz=15						
NTST				iS	Sb	21 10 21.4	+0.6
	baz=15						
YM01	YM01	0.46	41	⇓iP	Pb	21 10 15.5	0.0
	baz=25						
YM01				S	Sb	21 10 22.4	+0.2
	baz=25						
NDS	Dongshan	0.47	110	⇓iP	Pg	21 10 15.0	0.0
	baz=108						
ILA	Ilan	0.47	93	eP	Pb	21 10 15.5	0.0
	baz=92						
ILA				eS	Sb	21 10 22.2	+0.1
	baz=92						
ANP	Anpu	0.47	33	⇓iP	Pb	21 10 15.6	-0.1
	baz=20						
ANP				S	Sb	21 10 22.4	+0.1
	baz=20						
NMLH	Miaoli	0.48	238	eP	Pb	21 10 16.2	+0.5
	baz=241						
NMLH				eS	Sb	21 10 23.5	+0.9
	baz=241						
YM08	YM08	0.51	39	P	Pb	21 10 15.8	-0.4
	baz=25						
YM08				eS	Sg	21 10 22.5	-0.1
	baz=25						
TWT	Tachien	0.54	186	⇓iP	Pg	21 10 16.4	-0.1
	baz=189						
TWT				eS	Sg	21 10 23.8	+0.1
	baz=189						
NTC	Toucheng	0.54	84	eP	Pb	21 10 16.5	-0.4
	baz=81						
NTC				eS	Sg	21 10 23.9	+0.2
	baz=81						
TDCB	Techi	0.54	188	⇓iP	Pg	21 10 16.3	-0.2
	baz=189						
TDCB				eS	Sg	21 10 23.7	0.0
	baz=189						
FUSS	Fushou	0.54	179	⇓iP	Pg	21 10 16.5	0.0
	baz=177						
FUSS				eS	Sg	21 10 23.1	-0.7
	baz=177						
NWRT	Kuosheng	0.56	43	P	Pb	21 10 17.1	-0.1
	baz=52						
NWRT				eS	Sb	21 10 25.9	+1.0
	baz=52						
TIPB	Shuangxi	0.56	72	⇑iP	Pb	21 10 17.0	-0.2
	baz=82						
TIPB				eS	Sg	21 10 24.2	-0.1
	baz=82						
NWF	Wu-fen Shan	0.57	61	P	Pb	21 10 17.1	-0.1
	baz=59						
NWF				eS	Sb	21 10 25.9	+0.7
	baz=59						
WFSB	Wu-fen Shan	0.57	61	P	Pb	21 10 17.1	-0.1
	baz=60						
WFSB				eS	Sb	21 10 26.1	+1.0
	baz=60						
NSY	Sanyi	0.57	229	⇑P	Pb	21 10 18.4	+1.0
	baz=230						
NSY				eS	Sb	21 10 26.7	+1.4
	baz=230						
WHP	Taichung City	0.58	207	⇓iP	Pb	21 10 17.3	-0.2
	baz=209						
WHP				eS	Sb	21 10 25.6	+0.1
	baz=209						
TWY	Chenhua	0.58	34	eP	Pb	21 10 17.9	+0.4
	baz=24						
TWY				eS	Sb	21 10 26.3	+0.7
	baz=24						
ENA	Nanau	0.59	128	⇓iP	Pb	21 10 17.3	-0.2
	baz=126						
ENA				eS	Sg	21 10 25.2	+0.2
	baz=126						
NSM	Shimen	0.59	33	P	Pb	21 10 18.1	+0.5
	baz=32						
NSM				eS	Sb	21 10 26.9	+1.3
	baz=32						
TWC	Suao	0.59	108	⇓iP	Pg	21 10 17.2	0.0
	baz=108						
TNOU	National Taiwa	0.60	54	P	Pb	21 10 17.8	-0.1
	baz=52						
TNOU				eS	Sb	21 10 27.1	+1.0
	baz=52						
EWUT	Wuta	0.60	125	eP	Pg	21 10 17.5	0.0
	baz=123						
EWUT				eS	Sg	21 10 25.1	-0.5
	baz=123						
TWQ1	Liyutan	0.61	224	eP	Pb	21 10 18.3	+0.3
	baz=213						
TWQ1				eS	Sb	21 10 27.5	+1.1
	baz=213						
ETLH	Xiulin Townshi	0.63	159	⇓iP	Pb	21 10 18.3	0.0
	baz=152						
ETLH				eS	Sb	21 10 27.1	+0.2
	baz=152						
EGS		0.63	85	eP	Pb	21 10 18.5	+0.1
	baz=85						
WHF	Hehuan Shan	0.65	178	eP	Pb	21 10 18.9	+0.1
	baz=176						
NACB	Ninganchiao	0.70	152	⇓iP	Pb	21 10 19.4	-0.1
	baz=149						
NACB				eS	Sg	21 10 28.6	0.0
	baz=149						
NACB	Ninganchiao	0.70	152	Pg	Pb	21 10 19.4	-0.1
WDJ	Dajia District	0.70	231	eP	Pn	21 10 20.4	-0.6
	baz=234						
WDJ				eS	Sb	21 10 30.2	+1.3
	baz=234						
TWB1	Santiao Chiao	0.72	72	P	Pb	21 10 19.9	+0.1
	baz=80						
TWB1				eS	Sb	21 10 31.0	+1.6
	baz=80						
ETL	Fush Village	0.72	151	eP	Pb	21 10 19.9	-0.1
	baz=148						
ETL				eS	Sg	21 10 29.5	+0.1

	baz=148						
CHGB	**Renai**	0.73	184	⇓*i*P	Pg	21 10 19.9	-0.2
	baz=185						
CHGB				S	Sg	21 10 29.1	-0.6
	baz=185						
TWD	**Chiawan**	0.78	155	P	Pb	21 10 20.9	0.0
	baz=152						
TWD				*e*S	Sb	21 10 31.9	+0.6
	baz=152						
WCS	**Beigang Elemen**	0.79	202	*e*P	Pb	21 10 21.0	-0.1
	baz=196						
WCS				*e*S	Sb	21 10 32.5	+0.9
	baz=196						
WPL	**Puli Township**	0.82	198	*e*P	Pg	21 10 21.4	-0.2
	baz=194						
WPL				*e*S	Sb	21 10 33.1	+0.7
	baz=194						
TCU	**Taichung**	0.82	219	*e*P	Pn	21 10 22.4	-0.2
	baz=212						
TCU				*e*S	Sn	21 10 35.5	+1.0
	baz=212						
OWD	**Renai**	0.84	184	*e*P	Pg	21 10 21.4	-0.6
	baz=184						
HWA	**Hwalien**	0.88	157	*e*P	Pb	21 10 23.0	+0.5
	baz=153						
HWA				*e*S	Sn	21 10 36.1	+0.2
	baz=153						
WCHH	**Zhanghua**	0.94	221	*e*P	Pb	21 10 24.0	+0.4
	baz=226						
WCHH				*e*S	Sb	21 10 36.6	+0.7
	baz=226						
TYC	**Yuchr**	0.95	201	P	Pn	21 10 24.5	+0.1
	baz=197						
TYC				*e*S	Sn	21 10 38.2	+0.5
	baz=197						
SMLT	**Sun Moon Lake**	0.96	199	*e*P	Pb	21 10 24.4	+0.4
	baz=194						
SMLT				*e*S	Sn	21 10 38.2	+0.3
	baz=194						
ESL	**Shilin**	0.99	170	*e*P	Pb	21 10 24.7	+0.2
	baz=166						
ESL				*e*S	Sb	21 10 38.0	+0.7
	baz=166						
SSLB	**Suanglung**	1.03	194	P	Pb	21 10 25.0	-0.2
	baz=185						
SSLB	**Suanglung**	1.03	194	Pn	Pb	21 10 25.1	-0.2
VWDT	**VWDT**	1.04	185	P	Pb	21 10 24.9	-0.4
	baz=186						
VWDT				*e*S	Sn	21 10 40.0	+0.2
	baz=186						
WNT	**Mingjian**	1.04	209	*e*P	Pn	21 10 25.9	+0.2
	baz=212						
WJS	**Zhushan**	1.07	206	*e*P	Pg	21 10 26.2	-0.3
	baz=211						
WJS				*e*S	Sn	21 10 42.1	+1.4
	baz=211						
EGFH	**Guangfu**	1.13	171	*e*P	Pg	21 10 27.4	-0.2
	baz=169						
EGFH				*e*S	Sb	21 10 40.4	-1.0
	baz=169						
WRL	**Guolierlin Hig**	1.19	222	*e*P	Pb	21 10 27.0	-0.8
	baz=225						
WDLH	**Douliu**	1.27	210	*e*P	Pn	21 10 28.3	-0.5
	baz=214						
EHY	**Hungye**	1.28	176	*e*P	Pb	21 10 29.8	+0.3
	baz=174						
EHY				*e*S	Sb	21 10 46.3	+0.5
	baz=174						
CHN5	**Tsauling**	1.30	203	*e*P	Pn	21 10 29.3	+0.1
	baz=209						
CHN5				*e*S	Sg	21 10 47.4	-0.2
	baz=209						
HGSD	**Ruisui**	1.31	172	*e*P	Pg	21 10 30.5	-0.4
	baz=168						
HGSD				*e*S	Sg	21 10 47.9	-0.1
	baz=168						
YUS	**Yu-Shan**	1.32	191	P	Pb	21 10 30.4	0.0
	baz=196						
YUS				*e*S	Sg	21 10 49.0	+0.4
	baz=196						
ALS	**Alishan**	1.34	197	*e*P	Pb	21 10 30.8	+0.3
	baz=220						
ALS				*e*S	Sg	21 10 50.0	+1.0
	baz=220						
WTK	**Tuku**	1.35	215	*e*P	Pn	21 10 29.5	-0.3
	baz=221						
WTK				*e*S	Sb	21 10 47.5	0.0
	baz=221						
YULB	**Yu-li**	1.40	178	*e*P	Pb	21 10 31.3	-0.1
	baz=165						
YULB				*e*S	Sb	21 10 49.7	+0.7
	baz=165						
YULB	**Yu-li**	1.40	178	Pn	Pb	21 10 31.5	+0.1
EYUL	**Yuli**	1.44	177	*e*P	Pb	21 10 32.6	+0.4
	baz=176						
TPUB	**Ta-pu**	1.59	201	*e*P	Pn	21 10 33.5	+0.3
	baz=223						
TPUB	**Ta-pu**	1.59	201	Pn	Pn	21 10 34.0	+0.9
FULB	**Fuli**	1.59	178	*e*P	Pg	21 10 35.4	-0.9
	baz=173						
JYNG	**Yonagunijimaku**	1.59	102	P	Pb	21 10 34.4	-0.3
JYNG				*e*S	Sb	21 10 55.0	+0.4
ELDTW	**Lidau**	1.61	187	*e*P	Pb	21 10 35.1	0.0
	baz=170						
ELDTW				*e*S	Sb	21 10 56.0	+0.8
	baz=170						
WTP	**Ta-pu**	1.64	200	*e*P	Pn	21 10 34.5	+0.5
	baz=222						
YOJ	**Yonaguni jima**	1.65	101	*e*P	Pn	21 10 33.1	-0.9
	baz=82						
YOJ	**Yonaguni jima**	1.65	101	P	Pn	21 10 33.6	-0.4
YOJ				*e*S	Sb	21 10 56.7	+0.5
YOJ	**Yonaguni jima**	1.65	101	Pn	Pn	21 10 33.2	-0.8
TWK	**Hsinying**	1.67	204	*e*P	Pn	21 10 34.8	+0.5
	baz=210						
TWK				*e*S	Sb	21 10 57.0	+0.1
	baz=210						
STYH	**Taoyuan**	1.67	195	*e*P	Pn	21 10 35.1	+0.8
	baz=200						
STYH				*e*S	Sb	21 10 57.4	+0.5
	baz=200						
ICHU	**Yijhu**	1.67	212	*e*P	Pn	21 10 34.4	0.0
	baz=216						
CHKT	**Chengkung**	1.69	176	*e*P	Pb	21 10 36.4	0.0
	baz=156						
SNST	**Tainan City**	1.71	203	*e*P	Pg	21 10 37.5	-1.0
	baz=224						
CHN8	**Yiju**	1.72	213	*e*P	Pn	21 10 35.2	+0.3
	baz=217						
CHN1	**Nanshi**	1.73	202	*e*P	Pn	21 10 35.9	+0.8
	baz=223						
MATB	**Ma-tsu**	1.79	319	*e*P	Pn	21 10 35.3	-0.6
	baz=322						
SGST	**Jiashian**	1.81	199	*e*P	Pn	21 10 36.7	+0.5
	baz=222						
EDH	**Donghe**	1.81	178	*e*P	Pn	21 10 37.2	+1.0
	baz=202						
SLGT	**Liugui**	1.87	197	*e*P	Pb	21 10 38.5	-1.1
	baz=201						
LONT	**Longtian**	1.88	183	*e*P	Pb	21 10 39.6	-0.1
	baz=184						
PTMZ	**Houxiangcun**	1.94	278	*e*P	Pn	21 10 36.6	-1.4
	baz=282						
PNG	**Penghu**	1.96	232	*e*P	Pn	21 10 37.1	-1.2
	baz=238						
TWG	**Pinlang**	1.97	184	Pn	Pn	21 10 39.6	+1.1
TWGBT	**Beinan**	1.97	184	*e*P	Pn	21 10 39.4	+0.9
	baz=187						
PHUB	**P'eng-hu**	1.98	230	*e*P	Pn	21 10 37.4	-1.2
	baz=237						
TWM1	**Shoushan**	2.10	201	*e*P	Pb	21 10 42.7	-0.7
	baz=205						
SSD	**Sandimen**	2.11	195	*e*P	Pb	21 10 43.5	-0.1
	baz=200						
TSMG	**Majia**	2.15	195	*e*P	Pb	21 10 44.1	-0.2
	baz=200						
LYJJ	**Jianjiangzhen**	2.20	323	*e*P	Pn	21 10 40.6	-0.9
	baz=325						
ECL	**Taimali**	2.20	187	*e*P	Pb	21 10 43.8	-1.4
	baz=171						
MASBT	**Mashibuluo**	2.24	194	*e*P	Pn	21 10 43.0	+0.9
	baz=200						
IRIF	**Iriomote-Funau**	2.32	101	P	Pn	21 10 42.8	-0.4
IRIF				*e*S	Sn	21 11 12.7	+1.4
XPSS	**Dashiqiu**	2.33	336	*e*P	Pn	21 10 42.0	-1.3
	baz=339						
SSPT	**Xinbi**	2.38	195	*e*P	Pb	21 10 46.9	-1.3
	baz=200						
EAST	**Anshuo**	2.43	189	*e*P	Pb	21 10 47.1	-1.9
	baz=193						
TAW	**Tawu**	2.44	187	*e*P	Pb	21 10 47.9	-1.4
	baz=192						
HATJ	**Hateruma jima**	2.45	107	*e*S	Sb	21 11 18.0	-1.4
SCZT	**Fangliau**	2.48	193	*e*P	Pn	21 10 47.1	+1.7
	baz=198						
KNM	**Kinmen**	2.58	262	*e*P	Pn	21 10 47.6	+0.8
	baz=269						
JKRS	**Kuro-shima**	2.59	102	P	Pn	21 10 47.9	+1.0
JKRS				*e*S	Sn	21 11 19.2	+1.2
SLIU	**Shizi**	2.60	189	*e*P	Pn	21 10 47.6	+0.6
	baz=194						
KNMB	**Chin-men Tao**	2.61	263	*e*P	Pn	21 10 45.4	-1.8
	baz=269						
KNMB	**Chin-men Tao**	2.61	263	Pn	Pn	21 10 46.4	-0.8
JIJ	**Ishigaki jima**	2.68	99	P	Pn	21 10 48.2	0.0
JIJ				*e*S	Sn	21 11 21.3	+0.9
JISG	**Ishigakijimahi**	2.80	94	P	Pn	21 10 50.6	+0.7
JISG				*e*S	Sn	21 11 26.8	+3.4
TWKBT	**Hengchun**	2.87	188	*e*P	Pb	21 10 54.5	-2.0
	baz=208						
AXDP	**Jialang**	2.97	273	*e*P	Pn	21 10 51.2	-0.9
	baz=276						
JOW	**Kunigami**	6.66	71	Pn	Pn	21 11 43.8	+0.9
SONM	**Songino Array**	25.83	337	P	P	21 15 37.7	+1.3
	0.6nm,0.8s,baz=161,slow=9.2,SNR=4.2						
MKAR	**Makanchi Array**	37.94	315	P	P	21 17 22.6	+0.2
	0.4nm,0.8s,baz=93,slow=9.0,SNR=4.4						
WRA	**Warramunga Arr**	46.26	163	P	P	21 18 28.5	-2.0
	1.2nm,1.1s,baz=346,slow=8.8,SNR=6.2						
ASAR	**Alice Springs**	49.71	165	P	P	21 18 56.4	-0.9
	0.3nm,0.6s,baz=346,slow=6.5,SNR=4.4						

NEIC ***25*** *21:18:04.0±1.1, 19°.9S±0°.2×177°.4W±0°.1, h401^{km}±9^{km}, mb4.2/24, Error ellipse: s-maj=25.2km s-min=15.0km az=196.0*

IDC ***25*** *21:18:29.0±74.0, 19°.96S×179°.71W, h526^{km}±294^{km}, mb3.3/3, mb1 3.5/4, mb1mx2.7/40, mbtmp4.4/4, Error ellipse: s-maj=931.5km s-min=108.9km az=77.0*

ISC 25 21:18:03.3±0.8**, 19°.9S**±0°.2×**177°.35W**±0°.08**, h400**^{km}**, n36, σ0.^{s}81**/36**, mb4.0**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	4.85	295		Pn	21 19 24.3	+0.4
NIUE	**Niue**	7.05	85		P	21 19 48.8	+0.6
NIUE					S	21 21 12.2	-0.5
MARNC	**Mare, Loyalty**	13.78	261	P	P	21 21 02.6	0.0
PINNC	**Pines Island,**	14.44	256	P	P	21 21 11.2	+1.5
DZM	**Mont Dzumac**	15.29	259	P	P	21 21 19.3	+0.1
	0.8nm,0.3s,baz=80,slow=18,SNR=9.4						
DZM	**Mont Dzumac**	15.29	259	P	P	21 21 19.4	+0.3
DZM				IAmb	IAmb	21 21 21.3	
	comp=Z,11nm,0.6s						
MXZ	**Matakaoa Point**	18.03	191	P	P	21 21 45.7	-2.4
URZ	**Urewera**	18.95	194	P	P	21 21 57.1	-0.5
URZ				IAmb	IAmb	21 22 15.5	
	comp=Z,9.0nm,1.1s						
BKZ	**Black Stump Fm**	19.95	194	P	P	21 22 07.2	0.0
BKZ				IAmb	IAmb	21 22 22.5	
	comp=Z,7.9nm,1.1s						
PLWZ	**Palliser**	22.53	195	P	P	21 22 30.5	-0.2
QRZ	**Quartz Range**	22.61	200	P	P	21 22 32.3	+0.9
QRZ				IAmb	IAmb	21 22 36.4	
	comp=Z,14nm,1.2s						
NNZ	**Nelson**	22.70	198	P	P	21 22 32.9	+0.7
TUWZ	**Tuamarina**	22.73	197	P	P	21 22 33.0	+0.5
KHZ	**Kahutara**	23.76	197	P	P	21 22 41.9	+0.2
KHZ				IAmb	IAmb	21 22 47.9	
	comp=Z,16nm,1.2s						
LTZ	**Lake Taylor**	24.46	199	P	P	21 22 49.8	+1.7
LTZ				IAmb	IAmb	21 22 52.1	
	comp=Z,8.5nm,1.2s						
FOZ	**Fox Glacier**	25.93	202	P	P	21 23 02.5	+1.4
WHZ	**Wether Hill Ro**	28.64	202	P	P	21 23 25.3	+0.3
WHZ				IAmb	IAmb	21 23 26.1	
	comp=Z,14nm,1.2s						
EIDS	**Eidsvold**	29.61	253	P	P	21 23 33.6	-0.1
ARMA	**Armidale**	29.89	243	P	P	21 23 36.3	0.0
ARMA				IAmb	IAmb	21 23 40.6	
	comp=Z,7.8nm,1.1s						
CTAO	**Charters Tower**	34.16	263	P	P	21 24 13.2	+0.1
STKA	**Stephens Creek**	38.61	244	P	P	21 24 50.1	0.0
	comp=Z,2.0nm,0.5s,baz=101,slow=10,SNR=7.1						
STKA	**Stephens Creek**	38.61	244	P	P	21 24 50.1	0.0
STKA	**Stephens Creek**	38.61	244	IAmb	IAmb	21 24 50.2	
	comp=Z,1.1nm,1.1s						
BBOO	**Buckleboo**	43.37	243	P	P	21 25 27.8	-0.6
BBOO				IAmb	IAmb	21 25 37.8	
	comp=Z,5.7nm,0.9s						
AS31	**Alice Springs**	45.26	256	P	P	21 25 43.0	-0.3
ASAR	**Alice Springs**	45.26	256	P	P	21 25 42.8	-0.5
	comp=Z,5.2nm,0.6s,baz=91,slow=8.5,SNR=118						
ASAR	**Alice Springs**	45.26	256	P	P	21 25 42.8	-0.5
WB0	**Warramunga Arr**	45.27	262	P	P	21 25 42.7	-0.7
WB2	**Warramunga Arr**	45.28	261	P	P	21 25 42.6	-0.9
WRAB	**Tennant Creek**	45.29	261	P	P	21 25 42.6	-0.9
WRAB				IAmb	IAmb	21 25 43.0	
	comp=Z,7.3nm,1.1s						
WRA	**Warramunga Arr**	45.30	261	P	P	21 25 42.5	-1.0
	comp=Z,0.8nm,0.3s,baz=96,slow=7.4,SNR=60						
WRA	**Warramunga Arr**	45.30	261	P	P	21 25 42.7	-0.9
MTN	**Manton Dam**	49.77	270	P	P	21 26 17.1	-0.5
MTN				IAmb	IAmb	21 26 36.0	
	comp=Z,25nm,1.1s						
FORT	**Forrest**	50.10	246	P	P	21 26 19.1	-0.7
KNRA	**Kununurra**	51.31	266	P	P	21 26 28.7	-0.2
KNRA				IAmb	IAmb	21 26 41.7	
	comp=Z,13nm,1.0s						
TNTI	**Ternate**	57.90	284	P	P	21 27 15.1	-0.5

SOME ***25*** *21:23:10.4, 39°.23N×72°.98E, h0^{km}*

KRNET ***25*** *21:23:13.1±0.1, 39°.09N×73°.40E, h20^{km}, mb2.9*

NNC ***25*** *21:23:13.1±4.8, 39°.21N×73°.23E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=35.2km s-min=18.7km az=171.0*

ISC 25 21:23:14.6±1.6**, 39°.27N**±0°.08×**73°.24E**±0°.04**, h10**^{km}**, n33, σ2.^{s}44**/53**, 19C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	0.77	15	⇑*e*P	Pb	21 23 30.3	0.0
	baz=5.0						
SFK				⇑*e*S	Sn	21 23 43.4	-0.2
	baz=5.0						
DRK	**Karamyk**	1.14	281	⇑*i*P	Pn	21 23 37.1	+0.2
	baz=88						
DRK				⇑*i*S	Sn	21 23 54.4	+1.7
	baz=88						
OHH	**Osh**	1.30	344	⇓*i*P	Pg	21 23 40.9	+1.3
	baz=42						
OHH				⇓*i*S	Sg	21 24 00.8	+4.2
	baz=42						
SALK	**Salom-Alik**	1.67	15	⇑*e*P	Pg	21 23 46.0	-0.7
	baz=10.0						
SALK				⇑*e*S	Sg	21 24 09.3	+1.0
	baz=10.0						
BTK	**Batken**	2.03	294	⇑*i*P	Pb	21 23 51.1	-0.5
	baz=97						
BTK				⇑*i*S	Sg	21 24 19.1	-0.8
	baz=97						
ARK	**Arkit**	2.71	339	⇑*i*P	Pb	21 24 00.9	-2.3
	baz=38						
ARK				⇑*i*S	Sb	21 24 36.0	-0.6
	baz=38						
ARLS	**Aral**	2.72	17	⇑*i*P	Pn	21 24 00.0	+1.5
	baz=14						
ARLS				⇑*i*S	Sn	21 24 34.2	+2.7
	baz=14						
TRKS	**Terek-Say**	2.77	325	⇑*i*P	Pn	21 24 00.8	+1.6
	baz=25						
TRKS				⇑*i*S	Sb	21 24 35.9	-2.5
	baz=25						
MNAS	**Manas**	3.27	350	⇑*i*P	Pn	21 24 08.6	+2.6
	baz=49						
MNAS				⇑*i*S	Sb	21 24 49.0	-3.6
	baz=49						
MRKS	**Merke**	3.47	360	*e*P	Pb	21 24 14.7	-1.5
	7.0nm,0.7s						
MRKS				*e*S	Sb	21 24 59.9	+1.4
	7.2nm,0.5s						
MRKS	**Merke**	3.47	360	Pg	Pb	21 24 14.7	-1.5
	7.0nm,0.7s						
MRKS				Lg	Lg	21 24 59.9	
	7.2nm,0.5s						
AAK	**Ala-Archa**	3.50	15	⇓Pg	Pb	21 24 14.4	-2.3
	9.0nm,0.9s						
AAK				⇑Lg	Lg	21 25 08.2	
	10.0nm,0.7s						
IUG	**Iuzhnay**	3.77	321	*e*P	Pb	21 24 19.3	-2.0
IUG				*e*S	Sb	21 25 08.0	+0.8
IUG	**Iuzhnay**	3.77	321	Pg	Pb	21 24 19.3	-2.0
IUG				Lg	Lg	21 25 08.0	
TKM2	**Tokmak 2**	4.06	25	⇑Pg	Pg	21 24 31.1	-1.3
	5.7nm,0.9s						
TKM2				⇓Lg	Lg	21 25 29.5	
	4.2nm,0.7s						
KST	**Kastek**	4.29	28	*e*P	Pb	21 24 33.0	+2.7
	5.1nm,0.8s						
KST				*e*S	Sg	21 25 31.7	-0.8
	6.1nm,0.5s						
KST	**Kastek**	4.29	28	Pg	Pb	21 24 33.0	+2.7
	5.1nm,0.8s						
KST				Lg	Lg	21 25 31.7	
	6.1nm,0.5s						
KK08	**Karatay Array**	4.36	332	⇑Pn	Pn	21 24 23.7	+2.7
	1.4nm,0.5s						
KK08				⇓Sn	Sb	21 25 20.5	-3.5
	5.1nm,0.5s						
DGS	**Degeres**	4.41	25	*e*P	Pb	21 24 34.2	+2.1
	3.7nm,0.6s						
DGS				*e*S	Sg	21 25 33.7	-2.3
	3.2nm,0.6s						
DGS	**Degeres**	4.41	25	Pg	Pb	21 24 34.2	+2.1
	3.7nm,0.6s						
DGS				Lg	Lg	21 25 33.7	
	3.2nm,0.6s						
MTBS	**Maitube**	4.55	31	*e*P	Pb	21 24 35.5	+1.0
	2.5nm,1.0s						
MTBS				*e*S	Sg	21 25 35.6	-5.0
	1.0nm,0.1s						
MTBS	**Maitube**	4.55	31	Pg	Pb	21 24 35.5	+1.0
	2.5nm,1.0s						
MTBS				Lg	Lg	21 25 35.6	
	1.0nm,0.1s						
BRLS	**Borolday**	4.55	327	*e*P	Pb	21 24 32.6	-2.0
	1.6nm,0.7s						
BRLS				*e*S	Sb	21 25 31.2	+1.7
	4.1nm,0.5s						
BRLS	**Borolday**	4.55	327	Pg	Pb	21 24 32.6	-2.0
	1.6nm,0.7s						
BRLS				Lg	Lg	21 25 31.2	
	4.1nm,0.5s						
TNSS	**Tian-Shan**	4.69	35	*e*P	Pg	21 24 40.9	-3.5
	3.2nm,0.4s						
TNSS				*e*S	Sg	21 25 45.2	0.0
	2.5nm,0.7s						
TNSS	**Tian-Shan**	4.69	35	Pg	Pg	21 24 40.9	-3.5
	3.2nm,0.4s						
TNSS				Lg	Lg	21 25 45.2	
	2.5nm,0.7s						
KRBS	**Karabastau**	4.79	22	*e*P	Pg	21 24 42.6	-3.6
	2.1nm,0.9s						
KRBS				*e*S	Sg	21 25 48.7	+0.4
	3.8nm,0.8s						
KRBS	**Karabastau**	4.79	22	Pg	Pg	21 24 42.6	-3.6
	2.1nm,0.9s						
KRBS				Lg	Lg	21 25 48.7	
	3.8nm,0.8s						
KTBS	**Karatobe**	5.14	29	*e*P	Pg	21 24 48.5	-4.4
	1.8nm,0.7s						
KTBS				*e*S	Sg	21 25 58.5	-1.0
	6.8nm,0.7s						
KTBS	**Karatobe**	5.14	29	Pg	Pg	21 24 48.6	-4.4
	1.8nm,0.7s						
KTBS				Lg	Lg	21 25 58.5	
	6.8nm,0.7s						
KUU	**Kurty**	5.17	26	*e*P	Pb	21 24 48.2	+3.1
	4.4nm,0.7s						
KUU				*e*S	Sg	21 25 57.9	-2.7
	3.0nm,0.9s						
KUU	**Kurty**	5.17	26	Pg	Pb	21 24 48.2	+3.1
	4.4nm,0.7s						
KUU				Lg	Lg	21 25 57.9	
	3.0nm,0.9s						
AB31	**Akbulak array**	13.78	321	P	Pn	21 26 31.8	+1.8
	0.2nm,0.5s,baz=132,slow=13,SNR=7.9						

MAN ***25*** *21:40:55.7, 5°.15N×126°.07E, h36^{km}, mb5.4, ML4.4, MS4.7*

BJI ***25*** *21:40:58.0±0.0, 5°.30N×125°.90E, h40^{km}, mB5.1/24, mb4.5/45, Ms4.6/8, Ms7 4.2/7*

KLM ***25*** *21:41:00, 5°.41N×126°.08E, h47^{km}, mb4.7*

IDC ***25*** *21:41:00.5±1.6, 5°.27N×125°.67E, h59^{km}±14^{km}, mb4.3/28, mb1 4.4/31, mb1mx4.3/50, mbtmp4.6/31, MS3.8/6, Ms1 3.9/6, ms1mx3.4/42, Error ellipse: s-maj=16.5km s-min=9.0km az=73.0*

NEIC ***25*** *21:41:01.0±1.9, 5°.26N±0°.06×125°.76E±0°.07, h52^{km}±6^{km}, mb4.9/84, Error ellipse: s-maj=10.7km s-min=8.0km az=78.0*

DJA ***25*** *21:41:01.1±0.4, 5°N±3°×12°6E±°, h51^{km}±3^{km}, M4.7/41, mB5.2/13, mb4.8/41, MLv4.8/14, Mw(mB)4.5/13*

ISC 25 21:41:00.2±0.3**, 5°.27N**±0°.04×**125°.77E**±0°.05**, h50**^{km}**, n235, σ1.^{s}64**/235**, mb4.8**/100**, MS4.0**/5**, 7C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	1.15	315	⇓*e*P	Pn	21 41 18.1	-2.0
GSPH				*e*S	Sn	21 41 34.0	-0.7
SGSI	**Sangihe**	1.59	189	P	Pn	21 41 26.2	+0.2
MATI	**Mati**	1.73	16	⇓*e*P	Pn	21 41 25.1	-2.9
MATI				*i* S	Sn	21 41 51.9	+3.0
DAV	**Davao City (W)**	1.80	354	P	Pn	21 41 29.0	+0.2
	48nm,0.3s,baz=180,slow=2.0,SNR=2.8						
DAV				S	Sn	21 41 55.1	+4.7
	289nm,0.3s,baz=202,slow=19,SNR=6.2						
DAV				LR	LR	21 41 59.0	
	comp=Z,492nm,21.6s,baz=136,slow=33						
DAV	**Davao City (W)**	1.80	354		Pn	21 41 29.2	+0.4
DAV	**Davao City (W)**	1.80	354	P	Pn	21 41 32.0	+3.2
KCP	**Kidapawan**	1.85	339	⇑*e*P	Pn	21 41 30.2	+0.6
KCP				*i* S	Sn	21 41 54.0	+2.1
BIPH	**Bislig**	2.95	12	⇑*e*P	Pn	21 41 55.0	+10
BIPH				*e*S	Sn	21 42 23.0	+4.1
PAGZ	**Pagadian**	3.49	317	⇑*e*P	Pn	21 41 53.9	+1.9
ZCP	**Zamboanga City**	4.02	294	⇓*i*P	Pn	21 41 59.5	+0.2
ZCP				*i* S	Sn	21 42 46.7	+1.4
SCPH	**Surigao**	4.49	357	⇑*e*P	Pn	21 42 05.0	-0.7
TNTI	**Ternate**	4.75	160	P	Pn	21 42 09.1	-0.2
TNTI	**Ternate**	4.75	160	Pn	Pn	21 42 08.5	-0.7
TNTI	**Ternate**	4.75	160	P	Pn	21 42 11.0	+1.7
SNPH	**Sibulan**	4.76	328	*e*P	Pn	21 42 21.7	+12
MSLP	**Maasin**	4.92	350	⇑*e*P	Pn	21 42 13.6	+2.0
MSLP				*e*S	Sn	21 43 08.9	+1.8
KMSI	**Cibinong**	4.99	201	P	Pn	21 42 12.8	+0.2
	1.6nm3μm258nm,0.7s						
LLP	**Lapu-Lapu**	5.32	341	*e*P	Pn	21 42 23.8	+6.6
LLP				*e*S	Sn	21 43 37.9	+21
GTOI	**Gorontalo**	5.36	211	P	Pn	21 42 16.2	-1.5
	0.4nm1μm119nm,0.6s						
MRSI	**Marisa**	6.10	219	P	Pn	21 42 27.6	-0.3
	0.7nm3μm163nm,0.6s						
LBMI	**Labuha**	6.12	163	P	Pn	21 42 29.8	+1.7
	0.4nm908nm65nm,1.0s						
TOLI2	**Tolitoli**	6.47	230	Pn	Pn	21 42 30.3	-2.6
TOLI2	**Tolitoli**	6.47	230	P	Pn	21 42 30.6	-2.3
RCP	**Roxas**	6.93	335	⇑*e*P	Pn	21 42 42.2	+3.0
LUWI	**Luwuk**	6.95	206	P	Pn	21 42 41.9	+2.5
	1.2nm2μm253nm,0.8s						
LUWI	**Luwuk**	6.95	206	Pn	Pn	21 42 40.6	+1.1
MYLDM	**Lahad Datu**	7.24	270	Pn	Pn	21 42 45.0	+1.6
SANI	**Sanana**	7.28	178	P	Pn	21 42 42.8	-1.2
	0.2nm1μm43nm,0.8s						
SANI	**Sanana**	7.28	178	P	Pn	21 42 44.4	+0.4
APSI	**Ampana**	7.39	214	P	Pn	21 42 48.0	+2.5
	0.4nm1μm93nm,0.7s						
MPSI	**Mapaga**	7.64	230	P	Pn	21 42 48.4	-0.5
	0.1nm703nm31nm,0.9s						
SIJI	**Sorong**	8.21	138	P	Pn	21 42 56.6	-0.2
	3.7nm,0.3s,baz=337,slow=15,SNR=11						
SIJI				S	Sn	21 44 26.5	-1.8
	1.1nm,0.3s,baz=170,slow=19,SNR=1.4						
SIJI				LR	LR	21 46 10.4	
	comp=Z,310nm,21.1s,baz=45,slow=38						
KKM	**Kota Kinabalu**	9.54	275	Pn	Pn	21 43 16.6	+1.6
LQP	**Lukban**	9.72	335	⇓*e*P	Pn	21 43 19.9	+2.2
TTSI	**Tana Toraja**	10.17	216	P	Pn	21 43 25.4	+1.7

	787nm52nm,1.0s						
FAKI	**Fak Fak**	**10.40**	**141**	Pn	**Pn**	**21 43 26.6**	**-0.2**
FAKI	**Fak Fak**	**10.40**	**141**	P	**Pn**	**21 43 27.0**	**+0.2**
SPSI	**Sidrap Palu**	**10.96**	**213**	P	**Pn**	**21 43 35.8**	**+1.4**
	26nm,1.0s						
BKB	**Balikpapan**	**10.98**	**234**	Pn	**Pn**	**21 43 33.2**	**-1.5**
KAPI	**Kappang**	**11.85**	**211**	P	**Pn**	**21 43 50.7**	**+4.1**
	1.3nm,0.3s,baz=45,slow=6.4,SNR=7.2						
KAPI				LR	LR	21 48 33.8	
	comp=Z,226nm,20.6s,baz=72,slow=38						
MTKI	**Muara Teweh, K**	**12.49**	**241**	P	**Pn**	**21 43 57.5**	**+2.2**
	2µm22nm,1.1s						
KBKI	**Kotabaru**	**12.82**	**229**	P	**P**	**21 44 13.8**	**+4.4**
SBUM	**Sibu**	**13.80**	**259**	P	**P**	**21 44 18.0**	**-2.3**
SBUM	**Sibu**	**13.80**	**259**	Pn	**Pn**	**21 44 15.1**	**+1.9**
BBKI	**Banjar Baru**	**13.94**	**232**	P	**P**	**21 44 23.7**	**+1.8**
	45nm,1.0s						
SOEI	**Soe**	**15.00**	**186**	Pn	**Pn**	**21 44 27.8**	**-1.5**
SOEI	**Soe**	**15.00**	**186**	P	**Pn**	**21 44 28.2**	**-1.1**
STKI	**Sintang**	**15.18**	**251**	P	**P**	**21 44 40.5**	**+4.9**
BATI	**Baumata**	**15.52**	**188**	P	**Pn**	**21 44 36.9**	**+1.0**
	0.9nm,0.3s,baz=98,slow=15,SNR=2.5						
KSM	**Kuching**	**15.88**	**257**	P	**P**	**21 44 43.8**	**+0.3**
JAY	**Jayapura**	**16.81**	**117**	P	**P**	**21 44 54.4**	**+0.6**
	0.9nm,0.3s,baz=243,slow=7.8,SNR=3.8						
JAGI	**Jajag, Banyuwa**	**17.90**	**220**		**Pn**	**21 45 05.7**	**0.0**
DRS	**Darwin Rock St**	**18.31**	**164**	P	**Pn**	**21 45 13.5**	**+2.8**
	37nm,1.0s						
DLV	**T Lat**	**18.32**	**292**	P	**P**	**21 45 11.5**	**+0.9**
YULB	**Yu-li**	**18.52**	**347**	P	**P**	**21 45 12.7**	**0.0**
MTN	**Manton Dam**	**18.77**	**164**	P	**P**	**21 45 14.7**	**-0.7**
MTN				IAmb	IAmb	21 45 16.8	
	comp=Z,66nm,1.4s						
MTN	**Manton Dam**	**18.77**	**164**	P	**P**	**21 45 15.1**	**-0.3**
	comp=Z,28nm,1.8s						
KDU	**Kakadu**	**19.05**	**160**	P	**P**	**21 45 19.3**	**+0.9**
	comp=Z,26nm,1.3s						
TPI	**Tanjungpandan**	**19.77**	**247**	P	**Pn**	**21 45 29.1**	**+0.9**
	comp=Z,20nm,0.9s						
KNRA	**Kununurra**	**21.02**	**172**	P	**P**	**21 45 40.2**	**+0.3**
KNRA				IAmb	IAmb	21 45 56.9	
	comp=Z,35nm,0.9s						
KNRA	**Kununurra**	**21.02**	**172**	P	**P**	**21 45 39.5**	**-0.3**
	comp=Z,44nm,1.0s						
LEM	**Lembang**	**21.74**	**237**	P	**P**	**21 45 51.1**	**+3.4**
	comp=Z,20nm,0.5s,baz=351,slow=23,SNR=6.5						
CBJI	**Citeko**	**22.17**	**239**	P	**P**	**21 45 56.3**	**+4.1**
UBPT	**Khong Chiam**	**22.29**	**298**	P	**P**	**21 45 53.3**	**-0.1**
UBPT				IAmb	IAmb	21 46 01.4	
	comp=Z,32nm,1.2s						
PMBI	**Palembang**	**22.50**	**249**	P	**P**	**21 46 00.6**	**+4.9**
	comp=Z,6µmcomp=Z,299nm,1.1s						
KLI	**Kotabumi**	**23.18**	**245**	P	**P**	**21 46 05.6**	**+2.8**
	comp=Z,83nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.22**	**180**	P	**P**	**21 46 03.0**	**-0.1**
	comp=Z,16nm,0.8s,baz=5.0,slow=9.9,SNR=28						
KLSI		**23.22**	**245**	P	**P**	**21 46 05.9**	**+2.7**
	comp=Z,20nm,1.0s						
CGJI	**Cibinong**	**23.25**	**240**	P	**P**	**21 46 06.2**	**+2.7**
	comp=Z,48nm,0.8s						
MDSI	**Maura Dua**	**23.64**	**246**	P	**P**	**21 46 10.3**	**+3.2**
	comp=Z,22nm,0.9s						
KASI	**Kota Agung**	**23.79**	**244**	P	**P**	**21 46 11.8**	**+3.3**
	comp=Z,47nm,0.8s						
LWLI	**Liwa**	**23.96**	**245**	P	**P**	**21 46 13.7**	**+3.4**
	comp=Z,24µmcomp=Z,115nm,0.9s						
LWLI				pP	**pwP**	**21 46 25.3**	**+0.3**
	comp=Z,24µmcomp=Z,115nm,0.9s						
LHSI	**Lahat**	**23.98**	**248**	P	**P**	**21 46 13.5**	**+3.2**
	comp=Z,32nm,0.8s						
IPM	**Ipoh**	**24.66**	**269**	P	**P**	**21 46 19.0**	**+2.4**
IPM	**Ipoh**	**24.66**	**269**	P	**P**	**21 46 18.1**	**+1.5**
MASI	**Maura Aman, Be**	**24.94**	**251**	P	**P**	**21 46 23.3**	**+4.2**
	comp=Z,154nm,0.9s						
KULM	**Kulim**	**25.01**	**271**	P	**P**	**21 46 22.0**	**+2.3**
KULM	**Kulim**	**25.01**	**271**	P	**P**	**21 46 21.4**	**+1.7**
COEN	**Coen**	**25.76**	**138**	P	**P**	**21 46 25.9**	**-0.5**
COEN	**Coen**	**25.76**	**138**	P	**P**	**21 46 26.3**	**-0.2**
	comp=Z,21nm,0.8s						
PMG	**Port Moresby**	**25.83**	**124**	P	**P**	**21 46 27.0**	**-0.1**
	comp=Z,13nm,0.5s,baz=254,slow=12,SNR=13						
PMG	**Port Moresby**	**25.83**	**124**	P	**P**	**21 46 26.8**	**-0.4**
PMG				IAmb	IAmb	21 46 28.1	
	comp=Z,20nm,0.8s						
PPI	**Padang Panjang**	**25.97**	**258**	P	**P**	**21 46 30.3**	**+1.9**
WB0	**Warramunga Arr**	**26.29**	**161**	P	**P**	**21 46 31.5**	**+0.3**
WRAB	**Tennant Creek**	**26.43**	**162**	P	**P**	**21 46 31.7**	**-0.8**
WRAB				IAmb	IAmb	21 46 43.8	
	comp=Z,13nm,0.7s						
WRAB	**Tennant Creek**	**26.43**	**162**	P	**P**	**21 46 33.0**	**+0.5**
WRA	**Warramunga Arr**	**26.44**	**162**	P	**P**	**21 46 31.6**	**-0.9**
	comp=Z,7.6nm,0.6s,baz=343,slow=10,SNR=34						
WRA	**Warramunga Arr**	**26.44**	**162**	P	**P**	**21 46 33.2**	**+0.7**
WB2	**Warramunga Arr**	**26.44**	**162**	P	**P**	**21 46 31.9**	**-0.7**
WR0	**Warramunga Arr**	**26.52**	**161**	P	**P**	**21 46 34.0**	**+0.8**
MNSI	**Mandailing Nat**	**26.52**	**261**	P	**P**	**21 46 34.6**	**+1.2**
	comp=Z,1µmcomp=Z,13nm,0.8s						
JCJ	**Chichijima**	**26.76**	**34**	P	**P**	**21 46 32.1**	**-3.3**
PSI	**Prapat**	**26.88**	**266**	P	**P**	**21 46 37.2**	**+0.3**
	comp=Z,4.3nm,0.6s,baz=45,slow=7.1,SNR=7.8						
PSI				LR	LR	21 58 32.3	
	comp=Z,189nm,21.8s,baz=83,slow=39						
PSA00	**Pilbara Seismi**	**27.30**	**192**	P	**P**	**21 46 39.7**	**-0.6**
PSA00				IAmb	IAmb	21 46 40.6	
	comp=Z,39nm,0.9s						
PSA00	**Pilbara Seismi**	**27.30**	**192**	IAmb	IAmb	21 46 40.6	
	comp=Z,17nm,0.9s						
PSA00	**Pilbara Seismi**	**27.30**	**192**	P	**P**	**21 46 39.5**	**-0.8**
	comp=Z,54nm,0.9s						
NJ2	**Nanjing**	**27.42**	**347**	*e*P	**P**	**21 46 42.8**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
JNU	**Nakatsue**	**28.12**	**9**	P	**P**	**21 46 47.2**	**-0.3**
	comp=Z,23nm,0.4s,baz=280,slow=0.8,SNR=5.7						
GSI	**Gunungsitoli**	**28.41**	**263**	P	**P**	**21 46 51.5**	**+1.1**
	comp=Z,43nm,0.9s						
GSI	**Gunungsitoli**	**28.41**	**263**	P	**P**	**21 46 50.1**	**-0.2**
GSI				IAmb	IAmb	21 46 52.2	
	comp=Z,32nm,0.8s						
GSI	**Gunungsitoli**	**28.41**	**263**	P	**P**	**21 46 52.7**	**+2.3**
QIS	**Mount Isa**	**29.05**	**153**	P	**P**	**21 46 57.2**	**+1.3**
	comp=Z,14nm,0.8s						
CMAR	**Chiang Mai Arr**	**29.28**	**299**	P	**P**	**21 46 56.8**	**-1.2**
	comp=Z,4.4nm,0.6s,baz=116,slow=7.3,SNR=30						
CMAR				LR	LR	21 59 41.8	
	comp=Z,208nm,18.1s,baz=164,slow=38						
JMN	**Monobe**	**29.30**	**14**	P	**P**	**21 46 58.8**	**+0.7**
CHTO	**Chiang Mai**	**29.42**	**300**	P	**P**	**21 46 59.7**	**+0.4**
CHTO	**Chiang Mai**	**29.42**	**300**	P	**P**	**21 47 02.1**	**+2.8**
MTSU	**Mount Surprise**	**29.59**	**142**	P	**P**	**21 47 04.5**	**+3.7**
	comp=Z,7.3nm,0.7s						
KMI	**Kunming**	**29.62**	**314**	⇑P	**P**	**21 47 02.0**	**+0.8**
KMI				pP	sP	21 47 18.3	-1.7
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KMI				LR	LR		
	comp=Z,230nm,16.9s						
KMI				LR	LR		
	comp=Z,180nm,20.1s						
ASAR	**Alice Springs**	**29.84**	**165**	P	**P**	**21 47 02.0**	**-0.9**
	comp=Z,1.9nm,0.5s,baz=342,slow=7.2,SNR=47						
ASAR				PcP	**PcP**	**21 50 03.3**	**-2.1**
	comp=Z,1.2nm,0.8s,baz=316,slow=1.8,SNR=5.3						
ASAR				ScP	**ScP**	**21 53 42.5**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=344,slow=3.0,SNR=6.1						
ASAR	**Alice Springs**	**29.84**	**165**	P	**P**	**21 47 02.1**	**-0.8**
JHS	**Saijyo**	**30.35**	**12**	P	**P**	**21 47 08.8**	**+1.5**
JHS				IAmb	IAmb	21 47 18.7	
	comp=Z,33nm,1.2s						
JWT	**Wachi**	**31.16**	**15**	P	**P**	**21 47 14.7**	**+0.3**
INU	**Inuyama**	**31.68**	**18**	P	**P**	**21 47 18.9**	**-0.1**
JGF	**Kuroka**	**32.02**	**18**	P	**P**	**21 47 22.1**	**+0.1**
JGF				IAmb	IAmb	21 47 23.5	
	comp=Z,12nm,0.7s						
KSAR	**Wonju Array Be**	**32.08**	**3**	P	**P**	**21 47 24.0**	**+1.6**
KSRS	**Korea Array**	**32.09**	**3**	P	**P**	**21 47 22.4**	**-0.2**
	comp=Z,5.7nm,0.7s,baz=181,slow=9.8,SNR=16						
CTAO	**Charters Tower**	**32.26**	**142**	P	**P**	**21 47 25.8**	**+1.5**
XAN	**Xi'an**	**32.62**	**333**	P	**P**	**21 47 26.3**	**-1.0**
XAN				sP	pP	21 47 39.0	-0.8
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CD2	**Chengdu**	**32.84**	**324**	P	**P**	**21 47 30.5**	**+1.2**
MAJO	**Matsushiro**	**33.15**	**18**	P	**P**	**21 47 30.8**	**-1.1**
MAJO				IAmb	IAmb	21 47 31.6	
	comp=Z,19nm,0.8s						
MAT	**Matsushiro**	**33.15**	**18**	P	**P**	**21 47 30.5**	**-1.4**
MJAR	**Matsushiro Arr**	**33.15**	**19**	P	**P**	**21 47 30.9**	**-1.0**
	comp=Z,12nm,0.8s,baz=201,slow=9.1,SNR=23						
MJAR				PcP	**PcP**	**21 50 12.5**	**-1.5**
	comp=Z,1.5nm,0.6s,baz=180,slow=3.0,SNR=4.3						
MJAR	**Matsushiro Arr**	**33.15**	**19**	P	**P**	**21 47 30.8**	**-1.1**
MJB9	**Matsu-Tunnel**	**33.15**	**18**	P	**P**	**21 47 31.0**	**-1.0**
MJB9				IAmb	IAmb	21 47 31.6	
	comp=Z,18nm,0.8s						
OOD	**Oodnadatta**	**34.24**	**164**	P	**P**	**21 47 41.4**	**0.0**
	comp=Z,17nm,0.8s						
MORW	**Morawa**	**35.40**	**195**	P	**P**	**21 47 49.7**	**-1.7**
MORW				IAmb	IAmb	21 48 09.5	
	comp=Z,18nm,1.0s						
FORT	**Forrest**	**35.91**	**177**	P	**P**	**21 47 55.5**	**-0.3**
FORT	**Forrest**	**35.91**	**177**	P	**P**	**21 47 54.7**	**-1.1**
	comp=Z,44nm,0.8s						
MULG	**Mulgathing**	**36.23**	**168**	P	**P**	**21 47 59.2**	**+0.7**
	comp=Z,18nm,2.3s						
LZH	**Lanzhou**	**36.70**	**330**	*e*P	**P**	**21 48 04.5**	**+1.9**
LZH				pP	pP	21 48 13.5	-1.7
LZH				sP	sP	21 48 17.5	-3.4
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
BLDU	**Ballidu**	**36.72**	**193**	P	**P**	**21 48 02.9**	**+0.2**
	comp=Z,18nm,1.2s						
MUN	**Mundaring**	**38.14**	**193**	P	**P**	**21 48 13.8**	**-0.9**
	comp=Z,24nm,1.6s						
SHL	**Shillong**	**38.20**	**305**	P	**P**	**21 48 15.8**	**+0.2**
CN2	**Changchun**	**38.38**	**360**	*e*P	**P**	**21 48 14.3**	**-2.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.9s						
NWAO	**Narrogin (SRO)**	**38.84**	**191**	P	**P**	**21 48 20.8**	**+0.2**
NWAO	**Narrogin (SRO)**	**38.84**	**191**	P	**P**	**21 48 19.8**	**-0.8**
BBOO	**Buckleboo**	**39.11**	**166**	P	**P**	**21 48 22.2**	**-0.7**
BBOO				IAmb	IAmb	21 48 28.9	
	comp=Z,28nm,1.1s						
BBOO	**Buckleboo**	**39.11**	**166**	P	**P**	**21 48 22.2**	**-0.7**
	comp=Z,24nm,1.3s						
EIDS	**Eidsvold**	**39.15**	**142**	P	**P**	**21 48 22.4**	**-0.8**
EIDS				IAmb	IAmb	21 48 23.3	
	comp=Z,12nm,0.8s						
USA0B	**Ussuriysk Arra**	**39.16**	**7**	P	**P**	**21 48 23.5**	**+0.5**
USA0B				IAmb	IAmb	21 48 25.5	
	comp=Z,16nm,0.8s						
USRK	**Ussuriysk Ar.**	**39.16**	**7**	P	**P**	**21 48 23.9**	**+0.8**
	comp=Z,15nm,0.8s,baz=193,slow=7.8,SNR=27						
USRK	**Ussuriysk Ar.**	**39.16**	**7**	P	**P**	**21 48 23.3**	**+0.2**
MDJ	**Mudanjiang**	**39.33**	**4**	P	**P**	**21 48 25.5**	**+1.0**
MDJ				pP	pwP	21 48 39.8	-1.1
MDJ				ScP	**ScP**	**21 54 15.0**	**-1.9**
MDJ				PcS	**PcS**	**21 54 21.0**	**-1.0**
MDJ				S	**S**	**21 54 24.5**	**+2.4**
MDJ				pmax	pmax		
	comp=Z,23nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,310nm,3.8s						
MDJ				LR	LR		
	comp=Z,420nm,5.7s						
MDJ				LR	LR		
	comp=Z,420nm,5.1s						
MDJ				LR	LR		
	comp=Z,370nm,4.8s						
ERM	**Erimo**	**39.73**	**20**	P	**P**	**21 48 28.9**	**+1.0**
STKA	**Stephens Creek**	**39.90**	**159**	P	**P**	**21 48 29.4**	**-0.1**
	comp=Z,13nm,0.7s,baz=334,slow=7.9,SNR=16						
STKA	**Stephens Creek**	**39.90**	**159**	P	**P**	**21 48 29.3**	**-0.1**
HTT	**Hallett**	**40.46**	**163**	P	**P**	**21 48 34.9**	**+0.8**
	comp=Z,16nm,2.1s						
LSA	**Lhasa**	**40.71**	**311**	P	**P**	**21 48 37.7**	**+1.0**
GTA	**Gaotai**	**41.29**	**329**	*e*P	**P**	**21 48 43.5**	**+2.5**
GTA				pP	sP	21 48 58.0	-1.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JKA	**Kamikawa-asahi**	**41.42**	**18**	P	**P**	**21 48 42.8**	**+1.0**
H11S3	**WAKE ISLAND Hy**	**42.03**	**68**	T	T	22 33 59.8	
	baz=258,slow=75,SNR=4.8						
H11S1	**WAKE ISLAND Hy**	**42.04**	**68**	T	T	22 34 02.1	
	baz=258,slow=75,SNR=4.1						
H11S2	**WAKE ISLAND Hy**	**42.04**	**68**	T	T	22 34 00.7	
	baz=258,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**42.50**	**67**	T	T	22 34 46.0	
	baz=255,slow=75,SNR=13						
H11N2	**WAKE ISLAND Hy**	**42.51**	**66**	T	T	22 34 45.3	
	baz=255,slow=75,SNR=7.6						
H11N3	**WAKE ISLAND Hy**	**42.52**	**67**	T	T	22 34 48.4	
	baz=255,slow=75,SNR=8.8						
ARMA	**Armidale**	**43.27**	**147**	P	**P**	**21 48 57.3**	**+0.1**
ARMA				IAmb	IAmb	21 49 03.6	
	comp=Z,19nm,1.0s						
JIRN	**Jiri**	**43.70**	**305**	*e*P	**P**	**21 49 01.1**	**+0.1**
	comp=Z,73nm,0.7s						
YSS	**Yuzh-Sakhalins**	**44.04**	**17**	P	**P**	**21 49 02.9**	**0.0**
YSS				IAmb	IAmb	21 49 05.3	
	comp=Z,19nm,0.6s						
GUN	**Gumba**	**44.05**	**305**	*e*P	**P**	**21 49 04.0**	**+0.2**
	comp=Z,86nm,0.7s						
PKI	**Pulchoki**	**44.30**	**305**	*e*P	**P**	**21 49 05.3**	**-0.5**
	comp=Z,26nm,0.8s						
PKIN	**Phulchoki**	**44.32**	**305**	*e*P	**P**	**21 49 05.3**	**-0.6**
	comp=Z,20nm,0.8s						
KKN	**Kakani**	**44.49**	**305**	*e*P	**P**	**21 49 06.8**	**-0.4**
	comp=Z,38nm,0.9s						
DMN	**Daman**	**44.57**	**305**	*e*P	**P**	**21 49 07.7**	**-0.1**
	comp=Z,48nm,1.0s						
GKN	**Gorkha**	**45.10**	**305**	*e*P	**P**	**21 49 11.7**	**-0.3**
	comp=Z,38nm,1.0s						
SONM	**Songino Array**	**45.54**	**342**	P	**P**	**21 49 15.4**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=158,slow=8.5,SNR=6.4						
SONM				PcP	**PcP**	**21 50 52.6**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=165,slow=4.0,SNR=2.9						
SONM	**Songino Array**	**45.54**	**342**	P	**P**	**21 49 16.4**	**+1.3**
CAN	**Canberra**	**45.91**	**153**	P	**P**	**21 49 18.4**	**+0.3**
DANN	**Dangsing**	**45.95**	**305**	*e*P	**P**	**21 49 18.8**	**0.0**
	comp=Z,87nm,0.6s						
TOO	**Toolangi**	**46.42**	**158**	P	**P**	**21 49 22.3**	**+0.3**
PYUN	**Piuthan**	**46.49**	**304**	*e*P	**P**	**21 49 23.2**	**+0.2**
	comp=Z,86nm,0.9s						
HYB	**Hyderabad**	**47.70**	**289**	*i* P	**P**	**21 49 33.0**	**+0.6**
DZM	**Mont Dzumac**	**48.21**	**126**	P	**P**	**21 49 36.2**	**0.0**
LIFNC	**LIFOU**	**48.24**	**124**	P	**P**	**21 49 35.6**	**-0.8**
OUENC	**Ouen Island, N**	**48.70**	**126**	P	**P**	**21 49 39.6**	**-0.3**
WMQ	**Urumqi**	**50.92**	**325**	*e*P	**P**	**21 49 58.5**	**+1.9**
PEA0B	**Petropavlovsk-**	**54.39**	**23**	P	**P**	**21 50 22.8**	**+0.8**
PETK	**Petropavlovsk-**	**54.39**	**23**	P	**P**	**21 50 22.4**	**+0.4**
	comp=Z,15nm,0.6s,baz=203,slow=3.8,SNR=35						
PETK	**Petropavlovsk-**	**54.39**	**23**	P	**P**	**21 50 22.2**	**+0.2**
PET	**Petropavlovsk**	**54.70**	**24**	P	**P**	**21 50 24.4**	**+0.2**
MKAR	**Makanchi Array**	**55.75**	**325**	P	**P**	**21 50 30.9**	**-1.1**
	comp=Z,4.7nm,0.6s,baz=126,slow=8.0,SNR=47						
MKAR				ScP	**ScP**	**21 55 23.8**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=91,slow=5.8,SNR=4.0						
MKAR	**Makanchi Array**	**55.75**	**325**	P	**P**	**21 50 31.1**	**-0.8**
MAKZ	**Makanchi**	**55.94**	**325**	P	**P**	**21 50 32.1**	**-1.2**
MAKZ				IAmb	IAmb	21 50 32.9	
	comp=Z,6.7nm,0.8s						
KDJ	**Kajisay**	**56.56**	**318**	P	**P**	**21 50 37.5**	**-0.6**
KDJ				IAmb	IAmb	21 50 39.4	
	comp=Z,6.2nm,0.7s						
YAK	**Yakutsk**	**56.71**	**2**	P	**P**	**21 50 38.2**	**-0.2**
MA2	**Magadan**	**57.46**	**15**	P	**P**	**21 50 44.1**	**+0.3**
ZALV	**Zalesovo Beam**	**58.79**	**333**	P	**P**	**21 50 51.1**	**-2.1**
	comp=Z,0.7nm,0.4s,baz=104,slow=6.3,SNR=5.3						
KURBB	**Kurchatov Arra**	**59.93**	**327**	P	**P**	**21 51 00.1**	**-1.1**
	comp=Z,5.5nm,0.8s,baz=125,slow=6.1,SNR=23						
KURK	**Kurchatov**	**59.93**	**327**	P	**P**	**21 50 60.0**	**-1.2**
KURK				IAmb	IAmb	21 51 00.4	
	comp=Z,9.0nm,0.8s						
CHGR	**Chuyangaron**	**60.93**	**312**	P	**P**	**21 51 07.9**	**-0.5**
CHGR				IAmb	IAmb	21 51 09.9	
	comp=Z,6.2nm,0.7s						
KKAR	**Karatay Array**	**61.46**	**317**	P	**P**	**21 51 10.7**	**-1.1**
LBZ	**Lake Benmore**	**63.49**	**146**	P	**P**	**21 51 25.1**	**-0.1**
THZ	**Tophouse**	**63.50**	**142**	P	**P**	**21 51 25.1**	**-0.3**
THZ				IAmb	IAmb	21 51 26.3	
	comp=Z,14nm,0.9s						
LTZ	**Lake Taylor**	**63.71**	**143**	P	**P**	**21 51 27.4**	**+0.6**
LTZ				IAmb	IAmb	21 51 41.7	
	comp=Z,23nm,1.4s						
OXZ	**Oxford**	**63.90**	**144**	P	**P**	**21 51 27.8**	**-0.1**
OXZ				IAmb	IAmb	21 51 28.3	
	comp=Z,8.2nm,0.8s						
ODZ	**Otahua Downs**	**64.16**	**146**	P	**P**	**21 51 30.6**	**+1.0**
ODZ				IAmb	IAmb	21 51 35.4	
	comp=Z,22nm,1.5s						
KHZ	**Kahutara**	**64.26**	**143**	P	**P**	**21 51 29.2**	**-1.1**
KHZ				IAmb	IAmb	21 51 30.0	
	comp=Z,13nm,1.0s						
BKZ	**Black Stump Fm**	**64.36**	**138**	P	**P**	**21 51 30.7**	**-0.4**
BKZ				IAmb	IAmb	21 51 33.0	
	comp=Z,18nm,1.2s						
BVAR	**Borovoye Array**	**65.51**	**327**	P	**P**	**21 51 37.0**	**-1.3**
	comp=Z,2.4nm,0.7s,baz=152,slow=9.6,SNR=13						
BRVK	**Borovoye**	**65.58**	**327**	P	**P**	**21 51 37.3**	**-1.5**
BRVK				IAmb	IAmb	21 51 48.7	
	comp=Z,5.2nm,0.8s						
TIXI	**Tiksi**	**66.33**	**1**	P	**P**	**21 51 42.4**	**-0.7**
	comp=Z,5.4nm,0.5s,baz=172,slow=3.2,SNR=22						
TIXI	**Tiksi**	**66.33**	**1**	P	**P**	**21 51 42.0**	**-1.2**
TIXI				IAmb	IAmb	21 51 53.8	
	comp=Z,14nm,0.9s						
NRIK	**Noril'sk**	**68.72**	**346**	P	**P**	**21 51 57.1**	**-1.2**
	comp=Z,5.3nm,0.7s,baz=135,slow=4.9,SNR=8.9						
NRIK	**Noril'sk**	**68.72**	**346**	P	**P**	**21 51 57.0**	**-1.2**
NRIK				IAmb	IAmb	21 51 57.6	
	comp=Z,7.1nm,0.8s						
ABKAR	**Akbulak array**	**70.36**	**321**	P	**P**	**21 52 07.5**	**-1.3**
AKTO	**Aktyubinsk**	**71.86**	**321**	P	**P**	**21 52 16.2**	**-1.7**
	comp=Z,3.2nm,0.6s,baz=105,slow=7.7,SNR=9.7						
ARU	**Arti**	**73.13**	**328**	P	**P**	**21 52 23.3**	**-2.0**
	comp=Z,0.7nm,0.4s,baz=38,slow=8.5,SNR=5.2						
ARU				LR	LR	22 26 36.4	
	comp=Z,106nm,18.8s,baz=82,slow=37						
ARU	**Arti**	**73.13**	**328**	IAmb	IAmb	21 52 25.4	
	comp=Z,21nm,1.5s						
RAYN	**Ar Rayn**	**79.00**	**293**	P	**P**	**21 52 58.0**	**-1.5**
J20K	**Nowinta River**	**80.96**	**26**	IAmb	IAmb	21 53 21.9	
	comp=Z,18nm,1.1s						
H21K	**Melozitna Rive**	**81.69**	**24**	IAmb	IAmb	21 53 15.4	
	comp=Z,6.7nm,0.8s						
CAST	**Castle Rocks**	**81.80**	**27**	P	**P**	**21 53 14.7**	**+1.0**
COLD	**Coldfoot**	**82.86**	**23**	P	**P**	**21 53 20.6**	**+1.5**
COLD				IAmb	IAmb	21 53 22.9	
	comp=Z,8.3nm,0.6s						
I23K	**Minto, Yukon-K**	**83.09**	**25**	P	**P**	**21 53 21.8**	**+1.5**
I23K				IAmb	IAmb	21 53 23.2	
	comp=Z,10nm,0.6s						
TOLK	**Toolik Lake Re**	**83.17**	**22**	IAmb	IAmb	21 53 24.9	
	comp=Z,8.2nm,0.7s						
MCK	**McKinley**	**83.22**	**27**	IAmb	IAmb	21 53 33.0	
	comp=Z,16nm,1.0s						
RND	**Reindeer**	**83.25**	**27**	P	**P**	**21 53 21.4**	**+0.1**
RND				IAmb	IAmb	21 53 33.8	
	comp=Z,14nm,1.0s						
H24K	**Noodor Dome**	**83.73**	**24**	IAmb	IAmb	21 53 26.0	
	comp=Z,9.8nm,0.8s						
IL31		**84.14**	**25**	IAmb	IAmb	21 53 36.0	
	comp=Z,14nm,1.3s						
ILAR	**Eielson Array**	**84.14**	**25**	P	**P**	**21 53 24.5**	**-1.2**
	comp=Z,2.0nm,0.7s,baz=240,slow=4.9,SNR=32						
BMAR	**Burnt Mountain**	**85.04**	**23**	P	**P**	**21 53 32.0**	**+1.7**
VNDA	**Vanda**	**85.07**	**173**	P	**P**	**21 53 29.8**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=293,slow=3.5,SNR=4.6						
BRTR	**Keskin Array B**	**88.30**	**310**	P	**P**	**21 53 44.3**	**-2.6**
	comp=Z,0.8nm,0.8s,baz=108,slow=4.0,SNR=5.6						
KMBO	**Kilima Mbogo**	**88.62**	**269**	P	**P**	**21 53 48.8**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=40,slow=10,SNR=5.3						
ARCES	**ARCESS Array B**	**88.68**	**340**	P	**P**	**21 53 47.1**	**-0.8**
	comp=Z,4.3nm,0.8s,baz=45,slow=5.6,SNR=2.5						
SPITS	**Spitsbergen Ar**	**88.79**	**349**	P	**P**	**21 53 46.2**	**-2.1**
	comp=Z,14nm,0.9s,baz=94,slow=12,SNR=6.1						
FINES	**FINESS Array B**	**90.03**	**332**	P	**P**	**21 53 51.6**	**-2.7**
	comp=Z,9.7nm,1.1s,baz=64,slow=8.7,SNR=4.7						
NOA	**NORSAR Array B**	**96.99**	**334**	LR	LR	22 40 56.4	
	comp=Z,90nm,18.1s,baz=0.0,slow=37						
YKA	**Yellowknife Ar**	**98.50**	**24**	P	**P**	**21 54 33.1**	**0.0**
	comp=Z,1.2nm,0.7s,baz=299,slow=4.6,SNR=20						
YKA				PKKPbc	**PKKPbc**	**22 11 00.9**	**-4.4**
	comp=Z,0.3nm,0.6s,baz=114,slow=1.9,SNR=5.1						
CLL	**Collm**	**99.83**	**324**	*e*P	**Pdif**	**21 54 42.0**	**+2.7**
PDAR	**Pinedale Array**	**110.82**	**40**	PKKPab	PKKPab	22 10 34.0	-3.8
	comp=Z,0.5nm,0.8s,baz=127,slow=6.9,SNR=4.3						
TXAR	**Lajitas Array**	**121.40**	**51**	PKP	**PKPdf**	**21 59 49.2**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=194,slow=0.4,SNR=12						
TXAR				PKKPbc	**PKKPbc**	**22 09 48.4**	**-1.8**
	comp=Z,0.3nm,0.7s,baz=134,slow=3.9,SNR=5.1						
TXAR	**Lajitas Array**	**121.40**	**51**	PKPdf	**PKPdf**	**21 59 49.3**	**+0.5**
TORD	**Torodi Ar. Bea**	**121.52**	**289**	PKP	**PKPdf**	**21 59 47.8**	**-1.5**
	comp=Z,1.3nm,0.7s,baz=17,slow=2.8,SNR=9.8						
DBIC	**Dimbokro**	**129.31**	**283**	PKP	**PKPdf**	**22 00 03.0**	**-1.3**
	comp=Z,1.6nm,0.9s,baz=0.0,slow=0.0,SNR=1.6						

IDC 25 22:32:35.5±12.0**, 8°.13S**×**129°.65E, h170**^{km}±149^{km}**,**
mb2.6/1**, mb1 2.8**/3**, mb1mx2.7**/21**, mbtmp3.2**/3**, ML3.3**/2**,**
Error ellipse: s-maj=117.7km s-min=68.8km az=80.0,
Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.60**	**159**	P	Pn	22 35 28.7	-0.3
	0.2nm,0.3s,baz=343,slow=12,SNR=9.6						
WRA				S	Sn	22 37 48.9	+0.2
	0.9nm,0.3s,baz=340,slow=22,SNR=8.9						
ASAR	**Alice Springs**	**15.98**	**166**	P	P	22 36 11.9	+0.6
	0.1nm,0.3s,baz=336,slow=9.0,SNR=5.2						
ASAR				S	S	22 39 08.6	-0.1
	0.2nm,0.3s,baz=325,slow=16,SNR=2.8						
MKAR	**Makanchi Array**	**68.97**	**327**	P	P	22 43 22.4	0.0
	0.1nm,0.4s,baz=126,slow=7.4,SNR=1.3						

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*JMA **25** 22:41:59.9*±*0.2, 23°.90N*×*122°.38E, h23*^{km}*, M2.5*
*TAP **25** 22:42:00.5, 23°.96N*×*122°.35E, h21*^{km}±*1*^{km}*, ML2.9, D*
ISC 25 22:41:59.6±1.3**, 23°.90N**±0°.03×**122°.37E**±0°.02**, h20**^{km}±5^{km}**,**
n63, σ0^{s}.45/88**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.73**	**285**	*e*P	**Pb**	**22 42 13.8**	**+0.2**
	baz=265						
TWD				*e*S	**Sg**	**22 42 24.0**	**+0.2**
	baz=265						
ETL	**Fush Village**	**0.73**	**291**	*e*P	**Pb**	**22 42 14.0**	**+0.3**
	baz=287						
NACB	**Ninganchiao**	**0.76**	**291**	P	**Pb**	**22 42 14.2**	**+0.1**
	baz=273						
NACB				*e*S	**Sg**	**22 42 24.9**	**+0.2**
	baz=273						
JYNG	**Yonagunijimaku**	**0.76**	**43**	P	**Pb**	**22 42 14.1**	**-0.1**
JYNG				S	**Sb**	**22 42 22.8**	**-1.3**
EWUT	**Wuta**	**0.77**	**315**	*e*P	**Pb**	**22 42 14.2**	**0.0**
	baz=312						
EWUT				*e*S	**Sg**	**22 42 24.9**	**-0.1**
	baz=312						
ENA	**Nanau**	**0.78**	**313**	P	**Pb**	**22 42 14.5**	**-0.1**
	baz=310						
ENA				*e*S	**Sb**	**22 42 24.9**	**+0.2**
	baz=310						
YOJ	**Yonaguni jima**	**0.81**	**46**	*e*P	**Pb**	**22 42 15.1**	**+0.1**
	baz=50						
YOJ	**Yonaguni jima**	**0.81**	**46**	P	**Pb**	**22 42 15.2**	**+0.1**
YOJ				*e*S	**Sb**	**22 42 24.3**	**-1.3**
TWC	**Suao**	**0.85**	**326**	*e*P	**Pb**	**22 42 15.4**	**-0.4**
	baz=325						
TWC				*e*S	**Sb**	**22 42 26.1**	**-0.7**
	baz=325						
ESL	**Shilin**	**0.86**	**265**	*e*P	**Pb**	**22 42 15.6**	**-0.3**
	baz=249						
ESL				*e*S	**Sb**	**22 42 26.8**	**-0.2**
	baz=249						
ETLH	**Xiulin Townshi**	**0.87**	**291**	*e*P	**Pb**	**22 42 16.0**	**0.0**
	baz=287						
ETLH				*e*S	**Sg**	**22 42 28.1**	**-0.1**
	baz=287						
NDS	**Dongshan**	**0.95**	**321**	*e*P	**Pb**	**22 42 17.5**	**+0.1**
	baz=325						
NDS				*e*S	**Sg**	**22 42 30.5**	**0.0**
	baz=325						
HGSD	**Ruisui**	**0.96**	**245**	*e*P	**Pb**	**22 42 17.4**	**-0.1**
	baz=241						
HGSD				*e*S	**Sb**	**22 42 29.4**	**-0.3**
	baz=241						
EHY	**Hungye**	**1.04**	**248**	*e*P	**Pb**	**22 42 18.8**	**-0.1**
	baz=245						
EHY				*e*S	**Sb**	**22 42 32.0**	**0.0**
	baz=245						
WHF	**Hehuan Shan**	**1.04**	**284**	*e*P	**Pb**	**22 42 19.0**	**-0.2**
	baz=280						
TWE	**Neicheng**	**1.04**	**322**	*e*P	**Pb**	**22 42 19.1**	**+0.1**
	baz=329						
TWE				*e*S	**Sb**	**22 42 32.3**	**+0.1**

	baz=329						
ENTT	Nioudou	1.04	315	P	Pn	22 42 19.5	+0.4
	baz=325						
ENTT				*e*S	Sb	22 42 32.8	+0.6
	baz=325						
NNSB	Datong	1.05	301	*e*P	Pb	22 42 19.0	-0.1
	baz=285						
NNSB				*e*S	Sb	22 42 32.0	-0.4
	baz=285						
NDT	Datong Townshi	1.05	312	*e*P	Pb	22 42 18.8	-0.3
	baz=309						
NNS	Nan Shan	1.06	301	*e*P	Pb	22 42 19.2	-0.1
	baz=298						
NTC	Toucheng	1.07	333	*e*P	Pb	22 42 19.5	0.0
	baz=330						
NTC				*e*S	Sn	22 42 34.1	+0.3
	baz=330						
FUSS	Fushou	1.09	289	*e*P	Pb	22 42 19.9	0.0
	baz=286						
OWD	Renai	1.09	273	*e*P	Pb	22 42 19.8	-0.1
	baz=270						
OWD				*e*S	Sb	22 42 33.2	-0.7
	baz=270						
YULB	Yu-li	1.10	243	*e*P	Pn	22 42 19.8	-0.1
	baz=258						
YULB				*e*S	Sb	22 42 34.1	+0.1
	baz=258						
CHGB	Renai	1.11	279	*e*P	Pb	22 42 19.9	-0.3
	baz=263						
EYUL	Yuli	1.11	241	*e*P	Pn	22 42 20.1	+0.1
	baz=237						
VWDT	VWDT	1.13	263	*e*P	Pn	22 42 20.5	+0.2
	baz=250						
TIPB	Shuangxi	1.18	335	*e*P	Pb	22 42 21.4	+0.1
	baz=333						
TIPB				*e*S	Sb	22 42 36.3	0.0
	baz=333						
NWLT	Wulai	1.18	318	*e*P	Pb	22 42 21.6	+0.3
	baz=300						
YHNB	Yeheng	1.19	311	*e*P	Pn	22 42 21.4	+0.2
	baz=308						
FULB	Fuli	1.21	235	*e*P	Pn	22 42 21.2	-0.1
	baz=232						
NSK	Sanguang	1.21	310	*e*P	Pn	22 42 21.8	+0.3
	baz=308						
NWF	Wu-fen Shan	1.29	335	*e*P	Pn	22 42 22.4	-0.1
	baz=333						
NWF				*e*S	Sb	22 42 40.1	+0.8
	baz=333						
TWA	Mucha	1.30	327	*e*P	Pg	22 42 24.4	-0.3
	baz=325						
SSLB	Suanglung	1.30	266	*e*P	Pn	22 42 22.7	0.0
	baz=262						
NHDH	Xindian Distri	1.31	324	*e*P	Pb	22 42 23.8	+0.3
	baz=322						
IRIF	Iriomote-Funau	1.32	70	P	Pn	22 42 23.3	+0.4
IRIF				*e*S	Sn	22 42 40.2	+0.3
HATJ	Hateruma jima	1.32	83	P	Pn	22 42 23.4	+0.5
HATJ				*e*S	Sb	22 42 40.8	+0.5
WCS	Beigang Elemen	1.34	277	*e*P	Pb	22 42 24.0	-0.1
	baz=274						
SMLT	Sun Moon Lake	1.35	270	*e*P	Pn	22 42 23.8	+0.5
	baz=267						
SMLT				*e*S	Sn	22 42 40.3	-0.5
	baz=267						
WHP	Taichung City	1.36	287	*e*P	Pb	22 42 24.5	+0.1
	baz=272						
TYC	Yuchr	1.39	271	*e*P	Pn	22 42 24.2	+0.4
	baz=267						
ELDTW	Lidau	1.43	241	*e*P	Pn	22 42 24.2	-0.3
	baz=237						
YM01	YM01	1.44	330	*e*P	Pn	22 42 25.0	+0.4
	baz=345						
LIOB	Emei	1.44	301	*e*P	Pb	22 42 26.3	+0.5
	baz=299						
NSTT	Nanjuang	1.45	301	*e*P	Pb	22 42 26.1	+0.3
	baz=298						
ALS	Alishan	1.48	255	P	Pb	22 42 26.4	-0.2
	baz=253						
ALS				*e*S	Sn	22 42 44.9	+0.4
	baz=253						
TWQ1	Liyutan	1.53	287	*e*P	Pb	22 42 27.6	+0.4
	baz=284						
NSY	Sanyi	1.56	290	*e*P	Pb	22 42 27.5	-0.3
	baz=287						
STYH	Taoyuan	1.63	244	*e*P	Pn	22 42 27.8	+0.6
	baz=229						
JIJ	Ishigaki jima	1.69	74	P	Pn	22 42 27.8	-0.1
JIJ				*e*S	Sn	22 42 48.9	-0.1
TPUB	Ta-pu	1.70	250	*e*P	Pb	22 42 30.2	0.0
	baz=247						
WTP	Ta-pu	1.74	248	*e*P	Pb	22 42 30.5	-0.4
	baz=234						
SLGT	Liugui	1.82	241	*e*P	Pb	22 42 33.0	+0.8
	baz=228						
WRL	Guolierlin Hig	1.82	271	*e*P	Pb	22 42 31.7	-0.6
	baz=268						
CHN1	Nanshi	1.83	248	*e*P	Pb	22 42 32.2	-0.2
	baz=245						
TWK	Hsinying	1.84	250	*e*P	Pb	22 42 31.7	-0.9
	baz=248						
JISG	Ishigakijimahi	1.90	68	P	Pn	22 42 31.1	+0.2
SSD	Sandimen	1.96	235	*e*P	Pb	22 42 34.5	-0.2
	baz=224						
TSMG	Majia	1.98	234	*e*P	Pb	22 42 33.9	-1.1
	baz=222						
MASBT	Mashibuluo	2.05	232	*e*P	Pn	22 42 33.7	+0.8
	baz=221						
EAST	Anshuo	2.06	223	*e*P	Pn	22 42 34.7	+1.6
	baz=221						
PTMZ	Houxiangcun	3.17	292	*e*P	Pn	22 42 47.9	-0.5
	baz=289						

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*IDC **25** 23:14:19.0±2.8, 29°.78N×137°.76E, h503^{km}±32^{km}, mb3.0/10, mb1 3.1/12, mb1mx2.9/37, mbtmp3.8/12, Error ellipse: s-maj=32.5km s-min=12.4km az=82.0*
*JMA **25** 23:14:19.0±0.4, 29°.85N×138°.02E, h496^{km}±5^{km}, M3.3*
ISC 25 23:14:18.4±0.8**, 29°.80N**±0°.09×**137°.8E**±0°.2**, h497**^{km}**, n16, σ1^{s}.14**/18**, mb3.3**/10**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BSO3	Boso 3	5.47	24	P	P	23 15 50.0	+0.9
JHU	Hanno	6.15	11	P	P	23 15 56.9	+1.0
JRY	Ryogami san	6.26	8	P	P	23 15 58.1	+1.1
JAG	Ashikaga	6.74	11	*e*S	S	23 17 23.1	-3.4
KSRS	Korea Array	11.24	315	P	P	23 16 49.0	+0.2
	0.4nm,0.3s,baz=125,slow=11,SNR=8.1						
USRK	Ussuriysk Ar.	15.11	344	P	P	23 17 30.3	+0.8
	baz=157,slow=8.3,SNR=4.3						
MKAR	Makanchi Array	45.80	308	P	P	23 21 54.9	+0.1
	0.1nm,0.3s,baz=82,slow=10,SNR=4.3						
MKAR				PcP	PcP	23 23 21.7	-0.4
	0.1nm,0.4s,baz=70,slow=4.1,SNR=1.9						
WRA	Warramunga Arr	49.57	184	P	P	23 22 23.1	-0.3
	0.6nm,0.4s,baz=360,slow=7.6,SNR=12						
WRA				PcP	PcP	23 23 36.0	0.0
	0.5nm,0.9s,baz=360,slow=4.4,SNR=1.8						
ASAR	Alice Springs	53.30	185	P	P	23 22 50.9	+0.5
	0.3nm,0.8s,baz=22,slow=11,SNR=10						
ILAR	Eielson Array	57.22	30	P	P	23 23 17.2	0.0
	0.2nm,0.6s,baz=264,slow=7.2,SNR=1.6						
STKA	Stephens Creek	61.44	176	P	P	23 23 44.6	-1.2
	3.0nm,0.9s,baz=344,slow=15,SNR=3.3						
ARCES	ARCESS Array B	69.71	340	P	P	23 24 37.8	+0.5
	4.6nm,1.0s,baz=66,slow=9.0,SNR=3.8						
YKA	Yellowknife Ar	71.56	28	P	P	23 24 49.7	+1.4
	0.1nm,0.5s,baz=300,slow=6.3,SNR=2.4						
FINES	FINESS Array B	73.81	332	P	P	23 25 01.2	-0.1
	8.4nm,1.0s,baz=62,slow=3.8,SNR=6.5						
NOA	NORSAR Array B	79.65	337	P	P	23 25 32.8	-0.6
	1.2nm,0.8s,baz=46,slow=5.5,SNR=2.0						
BRTR	Keskin Array B	81.36	311	P	P	23 25 42.7	-0.2
	0.8nm,0.8s,baz=106,slow=5.3,SNR=5.5						

IDC 25 23:35:46.3±1.8**, 4°.23S**×**129°.30E, h0**^{km}**, mb3.6**/1**, mb1 3.6**/3**, mb1mx3.4**/22**, mbtmp3.4**/3**, ML3.1**/2**, Error ellipse: s-maj=175.5km s-min=9.2km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.37	163	Pn	Pn	23 39 37.8	+0.1
	0.1nm,0.3s,baz=343,slow=9.1,SNR=2.3						
ASAR	Alice Springs	19.83	167	P	P	23 40 18.7	-0.1
	0.1nm,0.3s,baz=347,slow=11,SNR=5.9						
MKAR	Makanchi Array	65.55	326	P	P	23 46 31.8	0.0
	0.3nm,0.4s,baz=114,slow=8.3,SNR=12						

IDC 25 23:42:41.2±2.2**, 5°.84S**×**151°.11E, h0**^{km}**, mb3.4**/2**, mb1 3.8**/2**, mb1mx3.3**/26**, mbtmp3.5**/2**, Error ellipse: s-maj=110.3km s-min=19.0km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.50	228	P	P	23 47 31.9	0.0
	0.5nm,0.4s,baz=54,slow=10,SNR=6.1						
ASAR	Alice Springs	24.26	221	P	P	23 48 00.2	-0.1
	1.1nm,0.7s,baz=55,slow=8.6,SNR=7.2						
TORD	Torodi Ar. Bea	149.00	286	PKPbc	PKPbc	00 02 31.8	-0.5
	0.5nm,0.8s,baz=69,slow=2.8,SNR=3.4						

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*DJA **26** 00:29:08.6±0.4, 5°N±3°×12°6E±°, h10^{km}, M4.6/12, mb4.8/10, mB5.0/6, MLv4.7/12, Mw(mB)4.3/6*
*MAN **26** 00:29:09.5, 5°.32N×125°.98E, h16^{km}, mb5.3, ML4.3, MS4.5*
*NEIC **26** 00:29:16.4±1.6, 5°.26N±0°.06×125°.77E±0°.07, h89^{km}±5^{km}, mb4.6/46, Error ellipse: s-maj=10.8km s-min=8.4km az=70.0*
*IDC **26** 00:29:17.4±1.7, 5°.27N×125°.75E, h104^{km}±16^{km}, mb4.0/29, mb1 4.1/31, mb1mx3.9/50, mbtmp4.4/31, MS3.4/7, Ms1 3.4/7, ms1mx3.0/42, Error ellipse: s-maj=15.3km s-min=9.1km az=77.0*
ISC 26 00:29:13.0±0.8**, 5°.30N**±0°.03×**125°.82E**±0°.06**, h60**^{km}±8^{km}**, n142, σ1^{s}.44**/136**, mb4.6**/64**, 3C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.80	352	⇓*e*P	Pn	00 29 24.8	-3.8
DDMP				*e*S	Sn	00 29 41.7	+1.7
GSPH	General Santos	1.16	312	⇑*e*P	Pn	00 29 29.8	-3.6
GSPH				*i* S	Sn	00 29 45.2	-3.3
SGSI	Sangihe	1.63	190	P	Pn	00 29 38.3	-1.2
SGSI				S	Sn	00 29 59.2	-0.4
MATI	Mati	1.69	15	⇓*e*P	Pn	00 29 35.7	-4.6
MATI				*e*S	Sn	00 29 59.8	-1.1
DAV	Davao City (W)	1.77	352	P	Pn	00 29 47.7	+6.3
	105nm,0.3s,baz=155,slow=4.0,SNR=8.6						
DAV				S	Sn	00 30 05.8	+2.9
	130nm,0.3s,baz=291,slow=22,SNR=2.9						
DAV	Davao City (W)	1.77	352		Pn	00 29 46.5	+5.1
KCP	Kidapawan	1.84	337	⇓*e*P	Pn	00 29 41.9	-0.5
KCP				*i* S	Sn	00 30 00.6	-4.1
BIPH	Bislig	2.91	11	⇓*e*P	Pn	00 29 59.5	+2.5
BIPH				*e*S	Sn	00 30 31.4	+0.6
PAGZ	Pagadian	3.50	316	⇓*e*P	Pn	00 30 05.9	+0.9
BUTP	Butuan	3.65	357	⇓*e*P	Pn	00 30 06.3	-0.7
BUTP				*e*S	Sn	00 30 59.3	+11
TNTI	Ternate	4.76	161	Pn	Pn	00 30 25.1	+2.8
TBP	Tagbilaran	4.77	336	*e*P	Pn	00 30 24.3	+1.9
MSLP	Maasin	4.89	349	⇑*i*P	Pn	00 30 21.3	-2.7
KMSI	Cibinong	5.04	201	P	Pn	00 30 26.6	+0.4
	1.0nm137nm,0.7s						
GTOI	Gorontalo	5.42	211	P	Pn	00 30 27.9	-3.4
	0.4nm1μm87nm,0.6s						
MRSI	Marisa	6.16	219	P	Pn	00 30 39.4	-2.1
	0.5nm2μm145nm,0.7s						
TOLI2	Tolitoli	6.53	231	Pn	Pn	00 30 42.9	-3.6
LUWI	Luwuk	7.00	206	P	Pn	00 30 53.5	+0.5
	0.8nm6μm164nm,0.9s						
LUWI	Luwuk	7.00	206		Pn	00 30 54.4	+1.4
MYLDM	Lahad Datu	7.29	269		Pn	00 30 57.4	+0.5
SANI	Sanana	7.31	179	P	Pn	00 30 54.4	-2.8
	0.1nm695nm30nm,0.8s						
SANI	Sanana	7.31	179	P	Pn	00 30 56.0	-1.2
APSI	Ampana	7.45	214	P	Pn	00 30 58.9	-0.2
	0.3nm919nm74nm,0.6s						
MPSI	Mapaga	7.70	230	P	Pn	00 31 00.5	-2.1
	0.1nm2μm22nm,0.8s						
SIJI	Sorong	8.20	138	P	Pn	00 31 08.5	-0.9
	3.0nm,0.3s,baz=310,slow=14,SNR=5.5						
SIJI				S	Sn	00 32 39.0	-1.6
	0.6nm,0.3s,baz=197,slow=19,SNR=1.3						
LQP	Lukban	9.71	335	⇑*e*P	Pn	00 31 33.7	+3.4
FAKI	Fak Fak	10.39	142	Pn	Pn	00 31 38.4	-1.0
FAKI	Fak Fak	10.39	142	P	Pn	00 31 38.8	-0.6
KAPI	Kappang	11.91	211	P	Pn	00 32 01.1	+1.0
	0.5nm,0.3s,baz=46,slow=11,SNR=5.2						
KAPI				LR	LR	00 37 14.2	
	comp=Z,156nm,18.2s,baz=52,slow=40						
SBUM	Sibu	13.86	259		P	00 32 35.9	+2.8
SOEI	Soe	15.04	186	P	P	00 32 48.2	+1.9
BATI	Baumata	15.56	188	P	P	00 32 51.6	-0.4
	4.7nm,0.3s,baz=270,slow=5.1,SNR=3.5						
BATI				LR	LR	00 39 03.9	
	comp=Z,272nm,18.6s,baz=340,slow=38						
TPUB	Ta-pu	18.58	345	P	P	00 33 25.1	-0.2
TPUB				IAmb	IAmb	00 33 38.9	
	comp=Z,19nm,0.9s						
MTN	Manton Dam	18.79	164	P	P	00 33 26.3	-1.3
MTN				IAmb	IAmb	00 33 35.1	
	comp=Z,34nm,1.1s						
SSLB	Suanglung	18.96	346	P	P	00 33 29.9	+0.4
GUMO	Guam	20.50	65	LR	LR	00 40 39.8	
	comp=Z,79nm,19.6s,baz=114,slow=33						
KNRA	Kununurra	21.05	172	P	P	00 33 51.5	-0.6
KNRA				IAmb	IAmb	00 34 03.9	
	comp=Z,28nm,0.8s						
KNRA	Kununurra	21.05	172	P	P	00 33 51.5	-0.6
	comp=Z,30nm,1.8s						
LEM	Lembang	21.80	237	LR	LR	00 43 00.8	
	comp=Z,123nm,19.5s,baz=83,slow=38						
UBPT	Khong Chiam	22.32	298	P	P	00 34 07.0	+1.1
FITZ	Fitzroy Crossi	23.25	180	P	P	00 34 15.5	+0.1
	comp=Z,27nm,0.7s,baz=33,slow=2.1,SNR=59						
COEN	Coen	25.75	138	P	P	00 34 38.5	+0.3
PMG	Port Moresby	25.80	124	P	P	00 34 39.3	+0.5
	comp=Z,5.6nm,0.3s,baz=335,slow=4.3,SNR=4.9						
PMG				LR	LR	00 44 59.3	
	comp=Z,41nm,19.6s,baz=290,slow=36						
WB0	Warramunga Arr	26.30	162	P	P	00 34 43.4	+0.2
WB0				IAmb	IAmb	00 34 54.1	
	comp=Z,13nm,0.9s						
WRAB	Tennant Creek	26.45	162	P	P	00 34 44.6	+0.1
WRA	Warramunga Arr	26.45	162	P	P	00 34 44.3	-0.2
	comp=Z,3.3nm,0.5s,baz=341,slow=10,SNR=22						
WB2	Warramunga Arr	26.45	162	P	P	00 34 44.5	0.0
PSI	Prapat	26.94	266	P	P	00 34 50.6	+1.4
	comp=Z,3.2nm,0.7s,baz=133,slow=12						
PSI				LR	LR	00 46 39.0	
	comp=Z,65nm,19.6s,baz=172,slow=39						
WHN	Wuhan	27.33	338	P	P	00 34 55.3	+3.0
PSA00	Pilbara Seismi	27.34	192	P	P	00 34 51.6	-0.9
PSA00				IAmb	IAmb	00 34 51.9	
	comp=Z,12nm,0.9s						
PSA00	Pilbara Seismi	27.34	192	P	P	00 34 50.8	-1.7
PSA00				IAmb	IAmb	00 34 51.9	
	comp=Z,21nm,0.8s						
QIS	Mount Isa	29.05	153	P	P	00 35 07.8	0.0
	comp=Z,11nm,2.1s						
CMAR	Chiang Mai Arr	29.31	299	P	P	00 35 11.2	+1.0
	comp=Z,2.7nm,0.7s,baz=119,slow=7.4,SNR=12						
CMAR				LR	LR	00 47 38.0	
	comp=Z,92nm,18.0s,baz=148,slow=38						
AS31	Alice Springs	29.86	165	P	P	00 35 15.1	+0.2
ASAR	Alice Springs	29.86	165	P	P	00 35 14.2	-0.6
	comp=Z,1.0nm,0.3s,baz=342,slow=7.0,SNR=27						
WRKA	Warakurna	30.25	176	P	P	00 35 18.3	-0.1
JWT	Wachi	31.12	15	P	P	00 35 25.7	-0.2
MEEK	Meekatharra	32.51	192	P	P	00 35 36.8	-1.4
	comp=Z,23nm,2.7s						
XAN	Xi'an	32.61	333	P	P	00 35 46.0	+6.9
XAN				pP	pP	00 35 53.5	0.0
XAN				sP	pwP	00 35 57.5	+1.7
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				LR	LR		
	comp=N,600nm,13.7s						
XAN				LR	LR		
	comp=E,330nm,14.4s						
MJAR	Matsushiro Arr	33.10	18	P	P	00 35 42.6	-0.7
	comp=E,6.7nm,0.7s,baz=199,slow=8.9,SNR=9.5						
OOD	Oodnadatta	34.26	164	P	P	00 35 53.0	-0.4
	comp=E,17nm,2.0s						
JMM	Marumori	35.17	21	P	P	00 36 01.8	+0.7
MORW	Morawa	35.45	195	P	P	00 36 02.6	-1.0
FORT	Forrest	35.94	177	P	P	00 36 07.0	-0.9
FORT	Forrest	35.94	177	P	P	00 36 07.7	-0.1
	comp=E,44nm,1.3s						
MULG	Mulgathing	36.25	168	P	P	00 36 10.8	+0.3
	comp=E,37nm,2.2s						
BLDU	Ballidu	36.77	193	P	P	00 36 13.4	-1.5
	comp=E,31nm,1.9s						
JTM	Tenmabayashi	37.89	19	P	P	00 36 24.0	-0.3
MUN	Mundaring	38.19	193	P	P	00 36 25.6	-1.3
	comp=E,21nm,2.0s						
SHL	Shillong	38.22	305	P	P	00 36 27.5	-0.1
NWAO	Narrogin (SRO)	38.88	192	P	P	00 36 32.1	-0.6
USA0B	Ussuriysk Arra	39.12	7	P	P	00 36 35.5	+0.9
USA0B				IAmb	IAmb	00 36 36.4	
	comp=Z,9.3nm,0.8s						
USRK	Ussuriysk Ar.	39.12	7	P	P	00 36 35.3	+0.8
	comp=Z,9.1nm,0.7s,baz=197,slow=6.7,SNR=12						
BBOO	Buckleboo	39.13	166	P	P	00 36 34.4	-0.5
BBOO				IAmb	IAmb	00 36 52.1	
	comp=Z,12nm,0.9s						
BBOO	Buckleboo	39.13	166	P	P	00 36 34.3	-0.5
	comp=Z,12nm,1.1s						
EIDS	Eidsvold	39.14	142	P	P	00 36 34.7	-0.3
EIDS				IAmb	IAmb	00 36 35.1	
	comp=Z,4.9nm,0.8s						
ERM	Erimo	39.68	20	P	P	00 36 38.7	-0.6
STKA	Stephens Creek	39.91	159	P	P	00 36 41.3	0.0
	comp=Z,9.5nm,0.9s,baz=333,slow=7.6,SNR=3.2						
STKA	Stephens Creek	39.91	159	IAmb	IAmb	00 36 41.7	
	comp=Z,2.7nm,1.0s						
GTA	Gaotai	41.29	329	*e*P	P	00 36 54.8	+2.0
GTA				pP	sP	00 37 11.8	-2.5
GTA				sP	pwP	00 37 18.5	+8.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,77nm,4.9s						
GTA				LR	LR		
	comp=N,140nm,14.5s						
GTA				LR	LR		
	comp=E,140nm,14.5s						
GTA				LR	LR		
	comp=Z,210nm,16.7s						
ASAJ	Asahikawa	41.38	18	P	P	00 36 54.5	+1.3
	comp=Z,14nm,0.7s,baz=217,slow=10,SNR=5.3						
JKA	Kamikawa-asahi	41.38	18	P	P	00 36 53.8	+0.6
JKA				IAmb	IAmb	00 37 09.3	
	comp=Z,12nm,0.8s						
H11S3	WAKE ISLAND Hy	41.96	68	T	T	01 22 10.1	
	baz=258,slow=75,SNR=6.1						
H11S1	WAKE ISLAND Hy	41.98	68	T	T	01 22 11.0	
	baz=258,slow=75,SNR=5.7						
H11S2	WAKE ISLAND Hy	41.98	68	T	T	01 22 11.3	
	baz=258,slow=75,SNR=9.2						
H11N1	WAKE ISLAND Hy	42.44	67	T	T	01 23 01.0	
	baz=254						
H11N2	WAKE ISLAND Hy	42.45	67	T	T	01 23 01.8	
	baz=254						
H11N3	WAKE ISLAND Hy	42.45	67	T	T	01 23 01.0	
	baz=254						
ARMA	Armidale	43.27	147	P	P	00 37 09.1	+0.1
ARMA				IAmb	IAmb	00 37 16.2	
	comp=Z,6.8nm,0.8s						
JIRN	Jiri	43.73	305	*e*P	P	00 37 12.9	-0.1
	comp=Z,43nm,0.7s						
KLR	Kul'dur	44.06	6	P	P	00 37 15.1	+0.2
	comp=Z,1.9nm,0.4s,baz=182,slow=8.9,SNR=7.2						
GUN	Gumba	44.08	305	*e*P	P	00 37 15.8	0.0
	comp=Z,53nm,0.7s						
PKI	Pulchoki	44.33	305	*e*P	P	00 37 16.9	-0.9
	comp=Z,24nm,1.0s						
PKIN	Phulchoki	44.34	305	*e*P	P	00 37 16.8	-1.0
KKN	Kakani	44.52	305	*e*P	P	00 37 18.7	-0.5
	comp=Z,19nm,0.8s						
DMN	Daman	44.59	304	*e*P	P	00 37 19.5	-0.3
GKN	Gorkha	45.13	305	*e*P	P	00 37 23.1	-0.8
	comp=Z,16nm,0.7s						
SONM	Songino Array	45.53	342	P	P	00 37 26.6	-0.1
	comp=Z,0.5nm,0.6s,baz=158,slow=8.5,SNR=4.6						
DANN	Dangsing	45.97	305	*e*P	P	00 37 30.4	-0.4
	comp=Z,61nm,0.6s						
PYUN	Piuthan	46.51	304	*e*P	P	00 37 34.9	-0.1
	comp=Z,39nm,0.6s						
DZM	Mont Dzumac	48.18	126	P	P	00 37 48.7	+0.9
	comp=Z,7.8nm,0.8s,baz=138,slow=15,SNR=5.5						
DZM	Mont Dzumac	48.18	126	IAmb	IAmb	00 38 03.4	
	comp=Z,13nm,1.0s						
PEA0B	Petropavlovsk-	54.34	23	P	P	00 38 34.5	+1.2
PETK	Petropavlovsk-	54.34	23	P	P	00 38 34.5	+1.2
	comp=Z,9.3nm,0.6s,baz=198,slow=4.4,SNR=14						
PETK	Petropavlovsk-	54.34	23	P	P	00 38 34.0	+0.7
PET	Petropavlovsk	54.65	24	P	P	00 38 36.2	+0.6
MK31	Makanchi Array	55.75	325	P	P	00 38 43.1	-0.6
MKAR	Makanchi Array	55.75	325	P	P	00 38 42.8	-0.9
	comp=Z,2.4nm,0.5s,baz=119,slow=7.1,SNR=51						
MKAR	Makanchi Array	55.75	325	P	P	00 38 42.7	-1.0
MAKZ	Makanchi	55.94	325	P	P	00 38 43.9	-1.1
MAKZ				IAmb	IAmb	00 38 55.4	
	comp=Z,4.2nm,0.8s						
KSH	Kashi	56.30	315	P	P	00 38 49.5	+1.6
KSH				sP	pP	00 38 56.5	-6.8
KSH				PcP	PcP	00 39 46.3	+1.6
KSH				pmax	pmax		
	comp=Z,6.0nm,1.6s						
KSH				LR	LR		
	comp=E,550nm,5.8s						
KSH				LR	LR		
	comp=Z,320nm,6.2s						
KDJ	Kajisay	56.58	318	P	P	00 38 49.4	-0.4
KDJ				IAmb	IAmb	00 39 03.2	
	comp=Z,7.1nm,1.0s						
YAK	Yakutsk	56.68	2	P	P	00 38 50.0	+0.1
	comp=Z,5.8nm,0.4s,baz=358,slow=3.6,SNR=6.5						
MA2	Magadan	57.41	15	P	P	00 38 56.3	+1.1
AAK	Ala-Archa	58.59	318	P	P	00 39 04.6	+0.7
	comp=Z,0.8nm,0.5s,baz=156,slow=4.6,SNR=4.1						
ZALV	Zalesovo Beam	58.78	333	P	P	00 39 02.7	-2.2
	comp=Z,0.4nm,0.4s,baz=121,slow=7.1,SNR=3.9						
KBL	Kabul	59.85	307	P	P	00 39 11.9	-1.0
KBL				IAmb	IAmb	00 39 20.7	
	comp=Z,2.7nm,0.7s						
KURBB	Kurchatov Arra	59.93	327	P	P	00 39 11.7	-1.2
	comp=Z,2.4nm,0.7s,baz=126,slow=6.1,SNR=21						
CHGR	Chuyangaron	60.95	312	P	P	00 39 20.0	-0.2
CHGR				IAmb	IAmb	00 39 32.5	
	comp=Z,7.7nm,1.1s						
KKAR	Karatay Array	61.47	317	P	P	00 39 22.9	-0.6
QRZ	Quartz Range	62.72	142	P	P	00 39 32.0	+0.1
QRZ				IAmb	IAmb	00 39 39.6	
	comp=Z,8.3nm,1.0s						
LBZ	Lake Benmore	63.49	146	P	P	00 39 37.5	+0.6
THZ	Tophouse	63.49	142	P	P	00 39 36.9	-0.1
THZ				IAmb	IAmb	00 39 43.2	
	comp=Z,6.1nm,0.8s						
BKZ	Black Stump Fm	64.35	138	P	P	00 39 42.5	-0.2
BKZ				IAmb	IAmb	00 39 43.9	
	comp=Z,9.9nm,0.9s						
BVAR	Borovoye Array	65.51	327	P	P	00 39 48.9	-1.1
	comp=Z,1.3nm,0.7s,baz=166,slow=9.0,SNR=6.7						
BRVK	Borovoye	65.59	327	P	P	00 39 49.4	-1.0
TIXI	Tiksi	66.29	1	P	P	00 39 54.0	-0.6
	comp=Z,3.5nm,0.5s,baz=163,slow=6.0,SNR=3.3						
TIXI	Tiksi	66.29	1	P	P	00 39 54.2	-0.4
TIXI				IAmb	IAmb	00 40 05.5	
	comp=Z,8.3nm,0.9s						
NRIK	Noril'sk	68.69	346	P	P	00 40 09.2	-0.6
	comp=Z,1.9nm,0.6s,baz=90,slow=6.2,SNR=4.1						
NRIK	Noril'sk	68.69	346	IAmb	IAmb	00 40 09.3	
	comp=Z,2.9nm,0.8s						
ARU	Arti	73.13	328	P	P	00 40 35.6	-1.4
	comp=Z,0.7nm,0.5s,baz=95,slow=8.1,SNR=5.4						
CAST	Castle Rocks	81.74	27	P	P	00 41 26.1	+1.1
CAST				IAmb	IAmb	00 41 36.9	
	comp=Z,11nm,1.0s						
COLD	Coldfoot	82.81	23	IAmb	IAmb	00 41 34.6	
	comp=Z,4.8nm,0.6s						
H24K	Noodor Dome	83.68	24	P	P	00 41 36.8	+1.7
H24K				IAmb	IAmb	00 41 48.3	
	comp=Z,6.6nm,0.9s						
ILAR	Eielson Array	84.08	25	P	P	00 41 36.7	-0.3
	comp=Z,0.8nm,0.7s,baz=246,slow=4.5,SNR=13						
BRTR	Keskin Array B	88.33	310	P	P	00 41 56.8	-1.8
	comp=Z,0.3nm,0.4s,baz=131,slow=4.0,SNR=2.4						
ARCES	ARCESS Array B	88.67	340	P	P	00 41 58.7	-0.7
	comp=Z,7.8nm,1.0s,baz=96,slow=5.5,SNR=2.8						
KMBO	Kilima Mbogo	88.68	269	P	P	00 42 00.1	-0.8
	comp=Z,0.4nm,0.3s,baz=58,slow=8.6,SNR=4.0						

FINES	FINESS Array B	90.03	332	P	P	00 42 04.6	-1.3
	comp=Z,1.4nm,0.8s,baz=9.5,slow=4.6,SNR=3.9						
YKA	Yellowknife Ar	98.44	24	P	P	00 42 44.1	-0.3
	comp=Z,0.6nm,0.8s,baz=298,slow=5.0,SNR=8.9						
TXAR	Lajitas Array	121.34	51	PKP	PKPdf	00 48 00.1	-0.2
	comp=Z,0.5nm,0.6s,baz=336,slow=2.7,SNR=6.2						
TORD	Torodi Ar. Bea	121.56	289	PKP	PKPdf	00 47 59.5	-1.3
	comp=Z,0.6nm,0.6s,baz=49,slow=1.5,SNR=5.9						

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*BGR **26** 00:29:02.4±0.0,21°.19S×177°.24W,h33km*
*NOU **26** 00:30:02.3,20°.29S×178°.04W,h602km,MLv4.9/6,Fiji Islands Region*
*NEIC **26** 00:30:04.8±2.7,20°.5S±0°.1×177°.9W±0°.1,h519km±6km, mb4.6/41,Error ellipse: s-maj=16.5km s-min=14.9km az=152.0*
*IDC **26** 00:30:07.1±1.2,20°.52S×178°.20W,h544km±11km, mb3.7/15,mb1 3.9/18,mb1mx3.6/42,mbtmp4.6/18,Error ellipse: s-maj=14.8km s-min=10.6km az=153.0*
ISC 26 00:30:05.4±0.4,**20°.39S**±0°.06×**177°.96W**±0°.06,**h534**km, **n186,**σ1ˢ.**47**/197,**mb4.5**/33,**33C-1D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVE	Taveuni	4.10	333	P	P	00 31 27.8	+0.7
MSVF	Nonsavu	4.61	304	P	P	00 31 31.7	+0.5
	12nm,0.3s,baz=248,slow=21,SNR=55						
MSVF				S	S	00 32 42.3	+1.3
	baz=107,slow=19,SNR=0.9						
DGTI	Dogotuki	4.62	331	P	P	00 31 31.5	+0.3
NIUE	Niue	7.67	82	P	P	00 31 59.4	-0.1
NIUE	Niue	7.67	82	P	P	00 31 59.2	-0.3
AFI	Afiamalu	8.74	43	P	P	00 32 08.1	-2.2
	15nm,0.3s,baz=35,slow=3.2,SNR=18						
AFI				S	S	00 33 45.5	-7.3
	13nm,0.3s,baz=75,slow=20,SNR=3.2						
RAO	Raoul Island	8.82	180	S	S	00 33 52.5	-1.5
	17nm,0.3s,baz=107,slow=19,SNR=1.3						
GLKZ	Green Lake	8.83	180	P	P	00 32 05.4	-5.6
GLKZ				S	S	00 33 49.1	-5.0
MARNC	Mare, Loyalty	13.14	263	P	P	00 32 54.5	-1.3
PINNC	Pines Island,	13.77	258	P	P	00 33 01.7	-0.6
LIFNC	LIFOU	13.87	266	P	P	00 33 00.5	-2.9
YATNC	Mamie plateau,	14.23	261	P	P	00 33 05.6	-1.6
OUENC	Ouen Island, N	14.30	259	P	P	00 33 07.9	0.0
DZM	Mont Dzumac	14.64	261	P	P	00 33 10.3	-1.2
	1.0nm,0.3s,baz=82,slow=17,SNR=12						
DZM	Mont Dzumac	14.64	261	*e*P	P	00 33 10.2	-1.4
	39nm,0.9s						
DZM	Mont Dzumac	14.64	261	P	P	00 33 12.1	+0.6
DZM	Mont Dzumac	14.64	261	P	P	00 33 10.2	-1.4
SANVU	Saraoutou	14.95	287	P	P	00 33 14.3	-0.4
SANVU	Saraoutou	14.95	287	P	P	00 33 11.2	-3.5
OUZ	Omahuta	16.54	205	P	P	00 33 29.7	-0.7
OUZ	Omahuta	16.54	205	P	P	00 33 30.9	+0.5
OUZ	Omahuta	16.54	205	P	P	00 33 30.2	-0.3
WCZ	Waipu Caves	16.90	202	P	P	00 33 34.8	+1.0
KUZ	Kuaotunu	17.21	197	P	P	00 33 35.6	-1.0
WMGZ	Waiomatatini S	17.65	190	P	P	00 33 39.1	-1.6
HAZ	Te Kaha	17.70	191	P	P	00 33 39.9	-1.2
HAZ				S	S	00 36 49.5	+13
RUGZ	Raukumara Rang	17.92	191	P	P	00 33 40.1	-3.1
PUZ	Puketiti	17.92	190	P	P	00 33 42.7	-0.5
PUZ				S	S	00 36 48.2	+7.5
TWGZ	Tauwhareparae	18.07	190	P	P	00 33 45.0	+0.4
TWGZ				S	S	00 37 00.4	+17
MWZ	Matawai	18.30	191	P	P	00 33 44.7	-2.0
MWZ				S	S	00 37 02.6	+16
URZ	Urewera	18.31	192	P	P	00 33 44.7	-2.0
	1.5nm,0.3s,baz=301,slow=23,SNR=8.4						
URZ	Urewera	18.31	192	P	P	00 33 44.8	-2.0
URZ				S	S	00 37 06.8	+20
URZ	Urewera	18.31	192	P	P	00 33 45.1	-1.6
URZ				IAmb	IAmb	00 33 50.8	
	comp=Z,16nm,0.8s						
URZ	Urewera	18.31	192	P	P	00 33 44.8	-2.0
RTZ	Ruatahuna	18.68	192	P	P	00 33 49.0	-1.2
HIZ	Hauiti	19.10	197	P	P	00 33 54.9	+1.0
HIZ	Hauiti	19.10	197	P	P	00 33 55.2	+1.3
HIZ	Hauiti	19.10	197	P	P	00 33 54.2	+0.3
BKZ	Black Stump Fm	19.31	193	P	P	00 33 52.8	-3.1
BKZ	Black Stump Fm	19.31	193	P	P	00 33 53.9	-2.0
BKZ				IAmb	IAmb	00 33 60.0	
	comp=Z,9.5nm,0.7s						
BKZ	Black Stump Fm	19.31	193	P	P	00 33 53.8	-2.1
MCHZ	McNeill Hill	19.54	192	P	P	00 33 56.2	-1.7
MCHZ				S	S	00 37 29.1	+22
KAHZ	Kahuranaki	19.84	192	P	P	00 33 59.3	-1.4
BFZ	Birch Farm	20.82	192	P	P	00 34 07.1	-2.4
BFZ				IAmb	IAmb	00 34 18.3	
	comp=Z,19nm,0.9s						
MSWZ	Moikau Station	21.74	194	P	P	00 34 16.6	-1.2
SNZO	South Karori	21.77	195	P	P	00 34 15.9	-2.1
PLWZ	Palliser	21.88	194	P	P	00 34 18.8	-0.3
QRZ	Quartz Range	21.93	200	P	P	00 34 17.9	-1.5
QRZ				IAmb	IAmb	00 34 28.5	
	comp=Z,26nm,1.1s						
NNZ	Nelson	22.03	198	P	P	00 34 18.8	-1.6
NNZ				IAmb	IAmb	00 34 29.4	
	comp=Z,18nm,1.2s						
TUWZ	Tuamarina	22.07	196	P	P	00 34 21.5	+0.8
BSWZ	Blackbirch Sta	22.36	196	P	P	00 34 24.3	+0.9
THZ	Tophouse	22.67	198	P	P	00 34 24.6	-1.6
THZ				IAmb	IAmb	00 34 34.5	
	comp=Z,9.5nm,0.7s						
KHZ	Kahutara	23.10	196	P	P	00 34 27.9	-2.0
KHZ				IAmb	IAmb	00 34 35.1	
	comp=Z,23nm,1.0s						
LTZ	Lake Taylor	23.79	198	P	P	00 34 33.6	-2.6
LTZ				IAmb	IAmb	00 34 37.7	
	comp=Z,11nm,0.7s						
OXZ	Oxford	24.36	198	P	P	00 34 38.6	-2.5
OXZ				IAmb	IAmb	00 34 49.6	
	comp=Z,15nm,0.9s						
FOZ	Fox Glacier	25.24	201	P	P	00 34 47.4	-1.5
FOZ				IAmb	IAmb	00 34 51.0	
	comp=Z,17nm,1.1s						
LBZ	Lake Benmore	25.88	200	P	P	00 34 54.6	0.0
LBZ				IAmb	IAmb	00 34 57.3	
	comp=Z,20nm,1.1s						
PPTF	Pamatai, Papee	26.98	89	P	P	00 35 04.3	-0.4
MLZ	Mavora Lakes	27.43	202	P	P	00 35 07.9	-0.3
DCZ	Deep Cove	27.86	203	P	P	00 35 10.4	-1.5
DCZ				IAmb	IAmb	00 35 16.5	
	comp=Z,12nm,0.9s						
WHZ	Wether Hill Ro	27.95	201	P	P	00 35 13.0	+0.3
WHZ				IAmb	IAmb	00 35 14.5	
	comp=Z,25nm,1.0s						
EIDS	Eidsvold	28.91	254	P	P	00 35 20.2	-1.2
ARMA	Armidale	29.15	244	P	P	00 35 23.2	-0.4
CTAO	Charters Tower	33.54	264	P	P	00 36 00.9	-0.2
CTAO				IAmb	IAmb	00 36 01.5	
	comp=Z,21nm,1.0s						
PMG	Port Moresby	35.36	283	P	P	00 36 16.1	-0.3
	comp=Z,29nm,0.7s,baz=85,slow=6.2,SNR=13						
PMG	Port Moresby	35.36	283	P	P	00 36 16.3	-0.1
COEN	Coen	37.62	273	P	P	00 36 34.8	-0.2
JAY	Jayapura	44.05	288	P	P	00 37 26.3	0.0
	comp=Z,44nm,0.5s,baz=130,slow=4.3,SNR=24						
AS31	Alice Springs	44.58	257	P	P	00 37 29.8	-0.5
ASAR	Alice Springs	44.58	257	P	P	00 37 29.6	-0.7
	comp=Z,18nm,0.8s,baz=90,slow=8.3,SNR=80						
ASAR				PcP	PcP	00 39 01.8	-0.1
	comp=Z,3.4nm,0.8s,baz=105,slow=3.9,SNR=8.0						
ASAR				S	S	00 43 24.9	-2.5
	comp=Z,2.9nm,0.8s,baz=94,slow=15,SNR=13						
ASAR	Alice Springs	44.58	257	P	P	00 37 29.4	-0.9
WB2	Warramunga Arr	44.64	262	IAmb	IAmb	00 37 30.3	
	comp=Z,12nm,0.7s						
WRA	Warramunga Arr	44.66	262	P	P	00 37 29.6	-1.2
	comp=Z,7.4nm,0.6s,baz=97,slow=8.5,SNR=28						
WRA				PcP	PcP	00 39 02.1	0.0
	comp=Z,2.7nm,0.9s,baz=92,slow=2.9,SNR=4.6						
WRA				S	S	00 43 23.5	-5.0
	comp=Z,1.5nm,0.9s,baz=99,slow=13,SNR=3.5						
WRA	Warramunga Arr	44.66	262	P	P	00 37 29.3	-1.6
MTN	Manton Dam	49.20	270	P	P	00 38 04.2	-1.0
MTN				IAmb	IAmb	00 38 04.9	
	comp=Z,26nm,0.8s						
KNRA	Kununurra	50.71	266	P	P	00 38 15.8	-0.4
KNRA				IAmb	IAmb	00 38 15.9	
	comp=Z,25nm,0.8s						
FAKI	Fak Fak	51.51	283	P	P	00 38 21.1	-1.0
FAKI				IAmb	IAmb	00 38 35.9	
	comp=Z,21nm,1.0s						
FITZ	Fitzroy Crossi	53.08	262	P	P	00 38 32.7	-0.6
	comp=Z,4.8nm,0.6s,baz=115,slow=2.3,SNR=9.7						
SOEI	Soe	56.54	272	P	P	00 38 58.7	+1.0
PSA00	Pilbara Seismi	57.73	257	P	P	00 39 04.5	-1.1
PSA00				IAmb	IAmb	00 39 06.3	
	comp=Z,26nm,1.1s						
PSA00	Pilbara Seismi	57.73	257	IAmb	IAmb	00 39 05.1	
	comp=Z,9.4nm,1.1s						
VNDA	Vanda	58.02	185	P	P	00 39 07.5	+0.9
	comp=Z,1.1nm,0.7s,baz=31,slow=8.2,SNR=5.6						
VNDA	Vanda	58.02	185	P	P	00 39 07.8	+1.2
GIRL	Giralia	62.62	254	P	P	00 39 37.5	-0.5
TOLI2	Tolitoli	63.62	282	P	P	00 39 44.2	-0.3
TOLI2				IAmb	IAmb	00 39 44.9	
	comp=Z,12nm,1.0s						
QSPA	South Pole Qui	69.68	180	P	P	00 40 21.9	+0.7
MJAR	Matsushiro Arr	70.15	324	P	P	00 40 25.0	+0.7
	comp=Z,5.4nm,0.7s,baz=161,slow=5.8,SNR=7.7						
PETK	Petropavlovsk-	76.18	345	P	P	00 40 59.5	+1.1
	comp=Z,6.2nm,0.7s,baz=130,slow=6.5,SNR=8.0						
NVAR	Mina Array Bea	80.92	43	P	P	00 41 26.4	+2.0
	comp=Z,1.4nm,0.8s,baz=229,slow=10,SNR=5.2						
KLR	Kul'dur	82.45	329	P	P	00 41 33.1	+1.5
	comp=Z,1.9nm,0.7s,baz=64,slow=3.0,SNR=5.1						
F10A	Beach Ranch, E	85.89	38	P	P	00 41 50.4	+1.6
TXAR	Lajitas Array	86.96	57	P	P	00 41 56.8	+2.5
	comp=Z,0.7nm,0.6s,baz=221,slow=6.9,SNR=11						
CCB	Clear Creek Bu	87.90	12	P	P	00 41 57.9	+0.2
CCB				IAmb	IAmb	00 41 58.8	
	comp=Z,9.7nm,0.9s						
ILAR	Eielson Array	88.20	13	P	P	00 41 59.5	+0.4
	comp=Z,2.0nm,0.9s,baz=224,slow=6.0,SNR=7.1						
ILAR	Eielson Array	88.20	13	P	P	00 41 59.7	+0.7
PDAR	Pinedale Array	88.86	43	P	P	00 42 04.7	+1.7
	comp=Z,0.7nm,0.6s,baz=210,slow=3.5,SNR=9.0						
CMAR	Chiang Mai Arr	90.12	290	P	P	00 42 10.6	+1.6
	comp=Z,2.4nm,0.4s,baz=118,slow=2.8,SNR=22						
CHTO	Chiang Mai	90.25	290	P	P	00 42 11.3	+1.7
735A	Kenedy	91.46	60	P	P	00 42 11.7	-3.4
SONM	Songino Array	95.70	319	P	P	00 42 34.9	+0.8
	comp=Z,0.4nm,0.6s,baz=110,slow=4.3,SNR=5.7						
ZALV	Zalesovo Beam	110.43	321	PKiKP	PKiKP	00 47 35.5	-1.2
	comp=Z,0.6nm,0.6s,baz=71,slow=2.4,SNR=4.3						
MKAR	Makanchi Array	111.15	313	PKiKP	PKiKP	00 47 37.6	-0.7
	comp=Z,0.8nm,0.7s,baz=334,slow=0.2,SNR=8.6						
KURBB	Kurchatov Arra	113.99	317	PKiKP	PKiKP	00 47 42.9	-0.7
	comp=Z,0.9nm,0.6s,baz=99,slow=1.6,SNR=7.0						
BVAR	Borovoye Array	119.02	320	PKP	PKPdf	00 47 52.9	-0.3
	comp=Z,1.6nm,0.5s,baz=204,slow=3.3,SNR=13						
ARU	Arti	125.14	325	PKP	PKPdf	00 48 05.2	+0.4
	comp=Z,0.4nm,0.3s,baz=105,slow=3.6,SNR=5.3						
ARCES	ARCESS Array B	128.82	350	PKP	PKPdf	00 48 12.1	+0.6
	comp=Z,4.7nm,1.1s,baz=14,slow=0.4,SNR=3.9						
FINES	FINESS Array B	135.68	344	PKP	PKPdf	00 48 23.1	-1.5
	comp=Z,1.7nm,0.8s,baz=128,slow=2.3,SNR=4.5						
AKASG	Malin Array Be	142.94	331	PKhKP	PKPpre	00 48 35.3	
	comp=Z,15nm,0.6s,baz=43,slow=4.5,SNR=92						
AKBB	Malin Array Si	142.94	331	PKPdf	PKPdf	00 48 35.5	-2.6
LODK	Lodwar	143.42	247	PKPdf	PKPbc	00 48 39.1	+0.3
SORM	Soroca	145.13	329	⇑P	PKPbc	00 48 43.1	+0.2
GAZ	Gaziantep	145.18	306	PKPdf	PKPdf	00 48 43.1	+0.6
PURM	Purcari	145.42	325	⇑P	PKPbc	00 48 44.6	+0.8
BNN	Bunyan	145.59	310	PKPbc	PKPbc	00 48 45.5	+0.8
MILM	Milestii Mici	145.72	327	⇑P	PKPbc	00 48 44.4	-0.2
BSEG	Bad Segeberg	145.92	351	*e*PKPbc	PKPbc	00 48 45.7	+0.8
	baz=18,slow=2.7						
BR131	Keskin Array S	146.80	312	PKPbc	PKPbc	00 48 48.3	+0.3
BRTR	Keskin Array B	146.80	312	PKPbc	PKPbc	00 48 48.0	0.0
	comp=Z,4.3nm,0.7s,baz=132,slow=4.7,SNR=34						
VLDR	Vladesti	146.81	326	⇑P	PKPbc	00 48 48.5	+0.9
TLCR		146.84	324	⇓P	PKPbc	00 48 47.5	-0.3
BURAR	Bucovina Array	146.99	331	⇑P	PKiKP	00 48 50.1	0.0
GHRR		147.02	327	⇑P	PKPbc	00 48 49.2	+1.0
JURR	Jurilovca	147.08	324	⇑P	PKPbc	00 48 49.1	+0.7
CFR	Carcaliu	147.22	325	⇑P	PKPbc	00 48 49.5	+0.7
TPGR	Topolog	147.27	324	⇑P	PKPbc	00 48 49.8	+0.8
FLTG	Flechtingen	147.33	350	*e*PKPbc	PKPbc	00 48 49.2	+0.4
	baz=18,slow=2.7						
VRI	Vrincioaia	147.50	327	⇑P	PKPbc	00 48 49.8	+0.2
TIRR	Tirgusor	147.53	324	⇑P	PKPbc	00 48 50.4	+0.8
PLOR	Plostina	147.55	327	⇑P	PKPbc	00 48 50.1	+0.4
HARR	Harsova	147.65	324	⇑P	PKPbc	00 48 50.8	+0.9
TLBR	Topalu	147.68	324	⇑P	PKPbc	00 48 50.9	+0.9
BMR	Baia Mare	147.71	332	⇑P	PKPbc	00 48 50.9	+0.9
TRPA	Tarpa	147.76	334	⇑P	PKPbc	00 48 51.0	+0.9
COVR	Voineasa-Covas	147.78	328	⇑P	PKPbc	00 48 49.9	-0.4
OSTC	Ostas	147.88	343	*e*PKP	PKiKP	00 48 51.7	-0.1
CHVC	Chvalec	147.89	343	*e*PKP	PKiKP	00 48 51.5	-0.3
CLL	Collm	147.97	347	*i* PKPbc	PKPbc	00 48 51.1	+0.6
	comp=Z,14nm,0.7s						
CLL				*i* PKPab	PKPab	00 48 55.7	+0.6
	comp=Z,12nm,0.8s						
CLL	Collm	147.97	347	*e*PKPbc	PKPbc	00 48 51.3	+0.8
	baz=18,slow=2.7						
CLL	Collm	147.97	347		PKPbc	00 48 50.6	+0.1
UPC	Upice	147.98	343	*e*PKP	PKPbc	00 48 51.5	+0.9
UPC				*e*x	PKPab	00 48 56.4	+1.2
DPC	Dobruska-Polom	148.03	343	*e*PKP	PKiKP	00 48 51.8	-0.3
DOPR	Dopca	148.10	328	⇑P	PKiKP	00 48 52.4	0.0
KRLC	Kraliky	148.15	342	*e*PKP	PKPbc	00 48 51.8	+0.7
KRLC				*e*x	PKPab	00 48 57.0	+1.0
MLR	Muntele Rosu	148.16	327	⇑P	PKPbc	00 48 51.8	+0.5
BRG	Berggiesshubel	148.16	346	*e*PKPbc	PKPbc	00 48 51.9	+0.9
	baz=18,slow=2.7						
FBE	Freiberg	148.25	346	*e*PKPbc	PKPbc	00 48 52.0	+0.8
	baz=18,slow=2.7						
GTTG	Gottingen	148.29	351	*e*PKPbc	PKPbc	00 48 52.1	+0.8
	baz=18,slow=2.7						
PVCC	Panska Ves	148.34	345	*e*PKP	PKiKP	00 48 52.7	0.0
CJR	Cluj-Napoca	148.40	331	⇑P	PKiKP	00 48 52.8	-0.1
LTVH	Ltavrtes, Hu	148.61	334	⇑P	PKiKP	00 48 54.5	+1.2
VOIR		148.64	328	⇑P	PKPab	00 48 59.2	+1.0
DRGR		148.73	332	⇑P	PKPbc	00 48 53.2	+0.5
PRA	Prague	148.79	345	*e*PKP	PKiKP	00 48 53.6	0.0
PRU	Pruhonice	148.84	344	*e*PKP	PKPbc	00 48 53.4	+0.7
PRU				*e*x	PKPab	00 48 59.9	+1.2
CSS	Mathiatis	148.87	304	PKPab	PKPab	00 48 59.9	+0.5
MOX	Moxa	148.88	348	*e*PKPbc	PKPbc	00 48 53.6	+0.8
	baz=18,slow=2.7						
VRAC	Vranov	148.89	341	⇑P	PKPbc	00 48 53.0	+0.2
ARR	Arges	148.90	328	⇑P	PKiKP	00 48 54.9	+0.8
TANN	Tannenbergstha	148.92	347	*e*PKPbc	PKiKP	00 48 54.1	+0.1
	baz=18,slow=2.7						
WERD	Werda	148.93	347	*e*PKPbc	PKPbc	00 48 53.7	+0.8
	baz=18,slow=2.7						
GUNZ	Gunzen	149.00	347	*e*PKPbc	PKiKP	00 48 54.0	-0.1
	baz=18,slow=2.7						
WERN	Wernitzgruen	149.06	347	*e*PKPbc	PKiKP	00 48 54.4	+0.1
	baz=18,slow=2.7						
NKC	Novy Kostel	149.10	347	*e*PKP	PKiKP	00 48 54.5	+0.2
HUMR	Humele	149.32	327	⇑P	PKPbc	00 48 54.2	+0.2
MANZ	Manzenberg	149.40	347	*e*PKPbc	PKiKP	00 48 55.1	+0.2
	baz=18,slow=2.7						
ROTZ	Rotzenmuhle	149.59	347	*e*PKPbc	PKiKP	00 48 55.4	+0.1
	baz=18,slow=2.7						
SIRR	Siria	149.60	333	⇑P	PKPbc	00 48 55.2	+0.5
GZR	Gura Zlata	149.77	330	⇑P	PKPbc	00 48 54.8	-0.4
GRF	Grafenberg Arr	149.86	348	*e*PKPbc	PKiKP	00 48 56.2	+0.4
	baz=18,slow=2.7						
KHC	Kasperske Hory	149.87	345	*e*PKP	PKPdf	00 48 50.8	+1.0
KHC				*e*x	PKPbc	00 48 56.1	+0.8
KHC				*e*x	PKPab	00 49 04.2	+1.1
CKRC	Cesky Krumlov	149.97	344	*e*PKP	PKiKP	00 48 57.2	+1.1
CKRC				*e*x	PKPab	00 49 05.7	+2.2
WET	Wettzell	150.03	346	*e*PKPbc	PKiKP	00 48 56.8	+0.5
	baz=18,slow=2.7						
SRE	Strehaia	150.11	329	⇑P	PKPbc	00 48 56.4	+0.5
GEC2	GERESS Array S	150.11	344	*e*PKPbc	PKiKP	00 48 56.8	+0.3
	baz=18,slow=2.7						
GERES	GERESS Array B	150.11	344	PKPbc	PKPbc	00 48 56.2	+0.3
	comp=Z,2.4nm,0.7s,baz=40,slow=2.0,SNR=22						
GERES				PKPab	PKPab	00 49 04.8	+0.6
	comp=Z,1.9nm,0.8s,baz=18,slow=4.8,SNR=9.6						
BZS	Buzias	150.12	332	⇑P	PKPbc	00 48 55.7	-0.3
HERR	Herculane	150.32	330	⇑P	PKPbc	00 48 56.3	-0.1
RJOB	Jochberg	151.36	345	*e*PKPbc	PKiKP	00 49 00.1	+1.0
	baz=18,slow=2.7						
VTS	Vitosha	151.56	326	⇑P	PKPbc	00 48 59.5	0.0
VTS	Vitosha	151.56	326		PKPbc	00 48 59.7	+0.2
BOVS	Bovan	151.59	329	⇑P	PKPbc	00 48 58.6	-0.7
CTI	Castel Tesino	153.22	345		PKPab	00 49 17.9	+0.5
ESDC	Sonseca Array	160.10	14	PKPab	PKPab	00 49 48.4	+1.2
	comp=Z,1.6nm,1.1s,baz=356,slow=3.1,SNR=4.3						
KEST	Kesra	163.42	339	PKPab	PKPab	00 50 02.8	+0.8
	comp=Z,1.6nm,0.6s,baz=125,slow=2.2,SNR=4.2						
DBIC	Dimbokro	164.81	153	PKPab	PKPab	00 50 09.1	+0.6
	comp=Z,2.5nm,1.0s,baz=180,slow=6.1,SNR=2.1						
TORD	Torodi Ar. Bea	172.79	177	PKPab	PKPab	00 50 43.9	+0.2
	comp=Z,0.8nm,0.8s,baz=197,slow=3.2,SNR=4.3						

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*NIED **26** 00:31:25.7,31°.09N×128°.62E,h12km,MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.24; $M_{\theta\theta}$0.90; $M_{\phi\phi}$-0.67; $M_{r\theta}$0.72; $M_{\theta\phi}$0.80; $M_{\phi r}$-0.42; Fault plane solution: $M_0$1.42000×10^{15} NP1: ϕ_s289.00000°,δ82.00000°,λ-37.00000°. NP2:ϕ_s25.00000°, δ53.00000°,λ-170.00000°.*
*JMA **26** 00:31:25.6±0.4,31°.09N×128°.62E,h12km±4km,M4.0*
*IDC **26** 00:31:27.4±1.6,31°.08N×128°.62E,h0km,mb3.5/2, mb1 3.6/4,mb1mx3.1/48,mbtmp3.6/4,ML3.1/2,MS3.0/4, Ms1 3.0/4,ms1mx2.8/32,Error ellipse: s-maj=27.4km s-min=17.1km az=119.0*
ISC 26 00:31:27.5±1.2,**31°.14N**±0°.06×**128°.83E**±0°.08,**h6**km,**n15,** σ**0ˢ.89**/15,**Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.93	54	P	Pb	00 31 45.8	-0.3
JSJ				*e*S	Sn	00 32 00.3	-0.5
JKC	Kuchinoerabu	1.35	119	P	Pb	00 31 52.8	-0.4
JKC				*e*S	Sn	00 32 11.9	+0.7
JSU	Suzuyama	1.44	75	P	Pb	00 31 54.5	-0.2
JFU	Fukue jima 2	1.52	357	P	Pn	00 31 53.9	-1.3
JYAK	Yakushimahirau	1.70	121	P	Pn	00 31 56.5	-1.2
JTN	Tanegashima 3	1.91	104	P	Pn	00 32 00.4	-0.2
JMTN	Minamitane	1.93	112	P	Pn	00 32 00.5	-0.3
JTZ	Takazaki	2.07	68	P	Pn	00 32 03.8	+0.9
JNU	Nakatsue	2.63	41	Pn	Pb	00 32 13.7	-1.5
	3.6nm,0.3s,baz=192,slow=16,SNR=7.2						
JNU				Pg	Pg	00 32 18.4	+0.4
	47nm,0.3s,baz=326,slow=6.6,SNR=20						
JNU				Lg	Lg	00 32 55.4	
	26nm,0.3s,baz=62,slow=22,SNR=8.0						
JOW	Kunigami	4.32	187	LR	LR	00 34 16.2	
	comp=Z,236nm,19.4s,baz=6.5,slow=40						
KSRS	Korea Array	6.35	353	Pn	Pn	00 33 02.9	+1.3
	0.6nm,0.3s,baz=174,slow=14,SNR=5.3						
KSRS				LR	LR	00 34 50.4	
	comp=Z,49nm,20.1s,baz=175,slow=32						
KSRS				Lg	Lg	00 34 50.4	
	1.1nm,0.3s,baz=180,slow=32,SNR=6.4						
MJAR	Matsushiro Arr	9.48	53	LR	LR	00 37 47.7	
	comp=Z,62nm,20.7s,baz=230,slow=39						
SONM	Songino Array	23.91	321	P	P	00 36 42.3	+0.1
	0.8nm,0.9s,baz=140,slow=11,SNR=8.4						
ZALV	Zalesovo Beam	38.78	319	LR	LR	00 56 02.1	
	comp=Z,74nm,18.2s,baz=98,slow=38						
ASAR	Alice Springs	54.71	174	P	P	00 40 58.1	+0.5
	0.5nm,0.7s,baz=4.5,slow=13,SNR=4.4						

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*TUL **26** 00:43:15.6±1.2,36°.75N±0°.01×97°.57W±0°.01,h4km±7km, ML2.5,mb_Lg2.6/7(NEIC),Error ellipse: s-maj=2.1km s-min=1.2km az=203.0*
NEIC 26 00:43:15.7±0.7,**36°.74N**±0°.01×**97°.56W**±0°.01,**h4**km±7km, **Error ellipse: s-maj=2.0km s-min=1.4km az=208.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.27	294	Pg	Pg	00 43 21.0	+0.1
GC02				Sg	Sg	00 43 24.7	+0.3
BLOK	Blackwell	0.27	86	Pg	Pg	00 43 21.4	+0.4
BLOK				Sg	Sg	00 43 25.0	+0.3
KAN13	South Haven SW	0.28	13	Pg	Pg	00 43 21.4	+0.2
KAN13				Sg	Sg	00 43 25.2	+0.4
KAN14	Manchester OK	0.39	303	Pg	Pg	00 43 23.3	0.0
KAN14				Sg	Sg	00 43 28.4	0.0
CROK	Carrier	0.42	236		Pg	00 43 24.0	+0.2
KAN01	Argonia South	0.44	338		Pg	00 43 24.2	-0.1
KAN01				Sg	Sg	00 43 30.3	+0.3
KAN05	Bluff City Nor	0.45	325		Pg	00 43 24.3	0.0
OK032	Salt Plains WL	0.53	277		Pg	00 43 25.9	0.0
KAN06	Argonia West S	0.56	334		Pg	00 43 26.4	-0.1
KAN10	Anthony SW Sta	0.58	312	Pg	Pg	00 43 26.7	-0.1
KAN08	Anthony NE Sta	0.59	326		Pg	00 43 26.9	-0.1
KAN16	Harper SW Stat	0.63	320	Pg	Pg	00 43 27.7	-0.2
KAN12	Harper NE Stat	0.66	328	Pg	Pg	00 43 28.3	-0.1
T35A	Sooner Cattle	0.85	78		Pg	00 43 32.1	-0.1
OK033	Mehan	0.86	144	Pg	Pg	00 43 32.1	0.0
QUOK	Quay	0.89	130	Pg	Pg	00 43 32.8	0.0
OK029	Liberty Lake	0.95	175		Pg	00 43 33.7	-0.2
OK031	S. Brethren Rd	0.98	143	Pg	Pg	00 43 34.4	-0.1
OK034	N. Norfolk Rd.	1.00	137	Pg	Pg	00 43 34.7	-0.1
OK030	Cody Creek RV	1.02	142		Pg	00 43 35.3	-0.1
BCOK	Bluff Creek, N	1.08	182		Pg	00 43 36.2	-0.3
OK025	Westminster Rd	1.17	171		Pg	00 43 37.9	-0.3
U32A	Winter Ranch,	1.22	253	Pg	Pg	00 43 38.1	-1.0
OKCFA	Oklahoma City	1.33	176	Pn	Pn	00 43 40.3	-0.7
OKCSW	OKLAHOMA CITY	1.34	176	Pn	Pn	00 43 40.6	-0.6
FNO	Franklin	1.49	175		Pn	00 43 43.2	-0.1
TUL1	Leonard	1.65	120		Pn	00 43 45.6	+0.1
W35A	Tecumseh	1.68	161		Pn	00 43 46.1	+0.1
R32A	Long Quarter,	1.91	332		Pn	00 43 50.1	+1.0
X34A	Smith Ranch, M	2.15	186	Pn	Pn	00 43 52.8	+0.5
X34A				IAmb_Lg		00 44 28.5	
	comp=Z,20nm,0.7s						
WMOK	Wichita Mounta	2.23	207	Pn	Pn	00 43 53.8	+0.2
U38A	Gravette	2.57	96	IAmb_Lg		00 44 38.2	
	comp=Z,20nm,1.0s						
LOOK	Love County	2.76	174	Pn	Pn	00 44 01.1	+0.3
X37A	Clayton	2.79	140	Pn	Pn	00 44 01.7	+0.5
Z35A	Perchaven, San	3.41	176	Pn	Pn	00 44 09.8	+0.1
S39A	Bolivar	3.51	73		Pn	00 44 12.0	+0.9
U40A	Yellville	3.81	94	IAmb_Lg		00 45 22.6	
	comp=Z,14nm,0.8s						
WHAR	Wooly Hollow	4.51	107	IAmb_Lg		00 45 43.3	
	comp=Z,11nm,1.1s						
L34A	Svendsen Farm,	5.30	10	IAmb_Lg		00 46 11.1	
	comp=Z,12nm,0.9s						

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*NEIC **26** 01:06:22.9±1.6,6°.44S±0°.07×147°.5E±0°.1,h74km±7km, mb4.3/17,Error ellipse: s-maj=14.9km s-min=9.7km az=97.0*
*IDC **26** 01:06:23.5±2.0,6°.30S×147°.42E,h75km±20km,mb4.0/14, mb1 4.2/17,mb1mx4.0/45,mbtmp4.4/17,MS3.4/9, Ms1 3.4/9,ms1mx3.1/33,Error ellipse: s-maj=29.4km s-min=10.7km az=103.0*
*DJA **26** 01:06:25.5±0.5,7°S±4°×14°7E±°,h68km±10km,M4.5/9, mB5.3/4,mb4.5/9,MLv4.4/2,Mw(mB)4.7/4*
ISC 26 01:06:22.1±0.5,**6°.36S**±0°.05×**147°.48E**±0°.09,**h63**km,**n79,** σ**1ˢ.33**/77,**mb4.5**/34,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.05	186	P	Pn	01 07 08.2	+0.3
	31nm,0.3s,baz=9.5,slow=6.0,SNR=50						
PMG				S	Sn	01 07 48.4	+5.2
	44nm,0.3s,baz=3.2,slow=14,SNR=7.0						
PMG				LR	LR	01 08 40.2	
	comp=Z,639nm,20.1s,baz=3.0,slow=44						
PMG	Port Moresby	3.05	186		Pn	01 07 07.7	-0.2
PMG	Port Moresby	3.05	186	P	Pn	01 07 08.4	+0.5
PMG	Port Moresby	3.05	186	P	Pn	01 07 08.4	+0.5
MANU	Manus Island	4.29	359	Pn	Pn	01 07 26.6	+1.7
RABL	Rabaul	5.14	65	Pn	Pn	01 07 36.9	+0.4
JAY	Jayapura	7.75	299	P	Pn	01 08 15.4	+3.0
	2.4nm,0.3s,baz=127,slow=7.6,SNR=5.8						
JAY				LR	LR	01 11 47.5	
	comp=Z,252nm,18.3s,baz=178,slow=42						
COEN	Coen	8.66	209		Pn	01 08 23.6	-1.2
COEN					Sn	01 10 02.2	+1.2
COEN	Coen	8.66	209	P	Pn	01 08 23.5	-1.2
	24nm,1.0s						
MTSU	Mount Surprise	12.11	194	P	Pn	01 09 12.3	+0.4
	12nm,1.0s						
CTA	Charters Tower	13.70	185	P	Pn	01 09 35.1	+1.6
	1.0nm,0.3s,baz=2.6,slow=15,SNR=16						
CTAO	Charters Tower	13.70	185		Pn	01 09 33.8	+0.3
CTAO	Charters Tower	13.70	185	P	Pn	01 09 35.1	+1.6
QIS	Mount Isa	16.05	208	P	Pn	01 10 03.5	-0.5
	14nm,0.7s						

SWI	Sorong	17.07	288	P	P	01 10 18.4	+0.7
	32nm,0.7s						
WB0	Warramunga Arr	18.42	222	P	P	01 10 30.3	-2.2
WB0				IAmb	IAmb	01 10 54.6	
	comp=Z,14nm,1.1s						
WRAB	Tennant Creek	18.57	222	P	P	01 10 32.8	-1.3
WB2	Warramunga Arr	18.57	222	P	P	01 10 33.1	-1.1
WB2				IAmb	IAmb	01 10 39.9	
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	18.58	222	P	P	01 10 32.9	-1.4
	comp=Z,2.6nm,0.3s,baz=45,slow=11,SNR=57						
WRA				LR	LR	01 18 16.8	
	comp=Z,95nm,18.2s,baz=65,slow=38						
EIDS	Eidsvold	19.22	170	P	P	01 10 39.7	-1.5
GUMO	Guam	19.98	353	LR	LR	01 18 40.5	
	comp=Z,140nm,18.2s,baz=116,slow=37						
RMQ	Roma	20.06	177	P	Pn	01 10 52.8	+0.2
	comp=Z,14nm,0.7s						
QLP	Quilpie	20.35	188	P	Pn	01 10 54.5	-1.5
	comp=Z,183nm,0.7s						
KNRA	Kununurra	20.56	242	P	P	01 10 53.6	-2.1
KNRA	Kununurra	20.56	242	P	P	01 10 53.8	-2.0
	comp=Z,38nm,1.6s						
AS31	Alice Springs	21.60	216	P	P	01 11 05.8	-1.2
AS31				IAmb	IAmb	01 11 10.0	
	comp=Z,8.7nm,0.5s						
ASAR	Alice Springs	21.60	216	P	P	01 11 06.1	-0.9
	comp=Z,10nm,0.5s,baz=53,slow=8.2,SNR=113						
ASAR				S	S	01 15 05.1	+2.0
	comp=Z,2.5nm,0.8s,baz=30,slow=22,SNR=5.8						
ASAR				LR	LR	01 19 36.5	
	comp=Z,98nm,19.5s,baz=30,slow=37						
INKA	Innaminka	22.21	196	P	P	01 11 13.6	+0.2
	comp=Z,49nm,0.8s						
OOD	Oodnadatta	24.08	206	P	P	01 11 30.7	-1.1
	comp=Z,56nm,0.8s						
ARMA	Armidale	24.25	171	P	P	01 11 32.8	-0.7
ARMA	Armidale	24.25	171	P	P	01 11 34.5	+1.1
	comp=Z,22nm,1.0s						
FITZ	Fitzroy Crossi	24.29	239	P	P	01 11 32.0	-1.7
	comp=Z,34nm,1.1s,baz=57,slow=8.7,SNR=29						
FITZ				LR	LR	01 22 29.8	
	comp=Z,117nm,21.2s,baz=65,slow=40						
CMSA	Cobar Meteorol	25.11	184	P	P	01 11 41.9	+0.8
	comp=Z,12nm,2.4s						
GTOI	Gorontalo	25.39	285	P	P	01 11 46.3	+2.5
LCRK	Leigh Creek	25.50	199	P	P	01 11 43.8	-0.8
	comp=Z,56nm,0.8s						
STKA	Stephens Creek	25.98	191	P	P	01 11 48.4	-0.6
	comp=Z,6.4nm,0.5s,baz=1.2,slow=9.3,SNR=23						
STKA				LR	LR	01 22 40.9	
	comp=Z,111nm,18.8s,baz=27,slow=38						
STKA	Stephens Creek	25.98	191	P	P	01 11 47.6	-1.4
STKA	Stephens Creek	25.98	191	P	P	01 11 50.7	+1.7
	comp=Z,3.3nm,0.5s						
WRKA	Warakurna	26.12	223	P	P	01 11 48.4	-2.0
	comp=Z,13nm,0.7s						
MULG	Mulgathing	26.94	206	P	P	01 11 56.7	-1.0
	comp=Z,15nm,1.6s						
HTT	Hallett	28.09	195	P	P	01 12 10.2	+2.2
	comp=Z,12nm,0.4s						
BBOO	Buckleboo	28.39	201	P	P	01 12 08.9	-1.7
BBOO	Buckleboo	28.39	201	P	P	01 12 11.0	+0.4
	comp=Z,31nm,1.8s						
FORT	Forrest	30.37	214	P	P	01 12 26.7	-1.5
FORT	Forrest	30.37	214	P	P	01 12 26.8	-1.4
	comp=Z,34nm,2.5s						
MBWA	Marble Bar	30.62	239	P	P	01 12 29.9	-0.7
	comp=Z,26nm,0.5s						
MEEK	Meekatharra	34.09	230	P	P	01 12 59.5	-1.4
	comp=Z,26nm,1.9s						
MORW	Morawa	37.29	229	P	P	01 13 27.6	-0.7
	comp=Z,20nm,2.5s						
KLBR	Kellerberrin	37.45	224	P	P	01 13 27.9	-1.6
	comp=Z,56nm,0.7s						
BLDU	Ballidu	37.63	226	P	P	01 13 30.0	-1.1
NWAO	Narrogin (SRO)	38.59	223	P	P	01 13 38.4	-0.7
	comp=Z,27nm,2.4s						
MUN	Mundaring	38.75	225	P	P	01 13 41.0	+0.5
	comp=Z,26nm,2.2s						
MJAR	Matsushiro Arr	43.55	349	P	P	01 14 18.7	-1.0
	comp=Z,3.7nm,0.5s,baz=177,slow=8.5,SNR=7.0						
MJAR	Matsushiro Arr	43.55	349	P	P	01 14 19.8	0.0
MJAR				IAmb	IAmb	01 14 37.9	
	comp=Z,7.5nm,1.1s						
KSRS	Korea Array	47.25	339	P	P	01 14 49.0	0.0
	comp=Z,2.6nm,1.0s,baz=162,slow=9.1,SNR=5.5						
KSRS				LR	LR	01 32 09.9	
	comp=Z,38nm,22.0s,baz=146,slow=33						
KSAR	Wonju Array Be	47.26	339	P	P	01 14 49.3	+0.2
KLR	Kul'dur	57.03	348	P	P	01 16 02.3	+0.8
	comp=Z,1.3nm,0.6s,baz=269,slow=2.9,SNR=4.7						
PETK	Petropavlovsk-	59.87	7	LR	LR	01 41 59.2	
	comp=Z,22nm,18.6s,baz=277,slow=36						
ULN	Ulaanbaatar	64.65	331	P	P	01 16 52.3	-1.1
ULN				IAmb	IAmb	01 16 55.6	
	comp=Z,4.0nm,1.1s						
SONM	Songino Array	64.94	331	P	P	01 16 55.7	+0.5
	comp=Z,2.6nm,0.8s,baz=124,slow=4.6,SNR=14						
SONM	Songino Array	64.94	331	P	P	01 16 55.8	+0.5
SONM				IAmb	IAmb	01 16 57.7	
	comp=Z,2.7nm,0.8s						
VNDA	Vanda	71.53	177	P	P	01 17 36.4	+0.5
	comp=Z,2.6nm,0.6s,baz=326,slow=6.9,SNR=12						
MK31	Makanchi Array	78.07	320	P	P	01 18 13.3	-0.9
MKAR	Makanchi Array	78.07	320	P	P	01 18 14.6	+0.4
	comp=Z,1.0nm,0.6s,baz=98,slow=8.3,SNR=20						
MKAR	Makanchi Array	78.07	320	P	P	01 18 13.3	-0.9
ZAA0	Zalesovo Array	79.56	328	P	P	01 18 21.5	-0.7
ZAA0				IAmb	IAmb	01 18 22.3	
	comp=Z,3.1nm,0.6s						
ZALV	Zalesovo Beam	79.56	328	P	P	01 18 21.4	-0.8
	comp=Z,3.4nm,0.5s,baz=109,slow=5.7,SNR=16						
ZALV	Zalesovo Beam	79.56	328	P	P	01 18 21.8	-0.4
KURK	Kurchatov	81.78	323	P	P	01 18 34.1	0.0
KURK	Kurchatov	81.78	323	IAmb	IAmb	01 18 36.7	
	comp=Z,1.7nm,0.8s						
KURBB	Kurchatov Arra	81.80	323	P	P	01 18 34.1	-0.1
	comp=Z,0.4nm,0.4s,baz=100,slow=5.5,SNR=3.8						
AAK	Ala-Archa	81.93	315	P	P	01 18 35.6	+0.3
	comp=Z,1.0nm,0.5s,baz=180,slow=4.4,SNR=5.2						
AAK	Ala-Archa	81.93	315	IAmb	IAmb	01 18 37.4	
	comp=Z,5.1nm,1.4s						
QSPA	South Pole Qui	83.61	180	P	P	01 18 42.3	-1.2
QSPA				IAmb	IAmb	01 18 44.0	
	comp=Z,4.7nm,0.7s						
KKAR	Karatay Array	84.88	314	P	P	01 18 50.2	0.0
ILAR	Eielson Array	85.62	23	P	P	01 18 52.4	-1.1
	comp=Z,0.8nm,0.8s,baz=254,slow=4.9,SNR=8.5						
BVAR	Borovoye Array	87.33	324	P	P	01 19 01.8	-0.3
	comp=Z,1.4nm,0.6s,baz=131,slow=6.1,SNR=9.7						
ABKAR	Akbulak array	93.16	319	P	P	01 19 27.9	-1.5
TORD	Torodi Ar. Bea	145.64	284	PKPbc	PKPdf	01 25 54.3	-0.1
	comp=Z,3.3nm,0.5s,baz=66,slow=3.8,SNR=27						

IDC ***26*** *01:19:45.2±5.0, 36°.49N×71°.19E, h190^{km}±38^{km}, mb3.4/4, mb1 3.3/9, mb1mx3.0/53, mbtmp3.8/9, MS3.5/1, Ms1 3.5/1, ms1mx2.6/39, Error ellipse: s-maj=56.8km s-min=32.4km az=142.0*

NNC ***26*** *01:19:53.2±9.0, 37°.05N×70°.51E, h117^{km}±220^{km}, mb3.3, mpv3.8, Error ellipse: s-maj=72.2km s-min=53.1km az=9.0*

ISC 26 01:19:45.4±0.9**, 36°.54N**±0°.07×**71°.15E**±0°.10**, h200^{km}, n22,** σ**1^{s}97**/25**, mb3.4**/4**, 4C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	Karatay Array	6.57	356	⇑P	Pn	01 21 20.4	+0.3
	1.5nm,0.2s,baz=178,slow=13						
KK02				⇓S	Sn	01 22 30.1	-5.0
	18nm,0.5s,baz=184,slow=25						
AAK	Ala-Archa	6.62	22	P	Pn	01 21 22.1	+1.4
	2.1nm,0.3s,baz=180,slow=8.0,SNR=29						
AAK				S	Sn	01 22 34.8	-1.5
	1.0nm,0.3s,baz=335,slow=24,SNR=26						
AAK	Ala-Archa	6.62	22	⇓P	Pn	01 21 21.9	+1.1
	2.6nm,0.4s						
AAK				⇑S	Sn	01 22 34.3	-2.0
	15nm,0.8s						
TKM2	Tokmak 2	7.24	27	⇓P	Pn	01 21 37.2	+8.4
	18nm,1.1s						
TKM2				⇑S	Sn	01 22 53.4	+2.5
	8.0nm,1.1s						
PYUN	Piuthan	13.07	127	eP	Pn	01 22 41.9	-2.1
	9.5nm,0.3s						
MKAR	Makanchi Array	13.19	36	P	Pn	01 22 46.1	+0.9
	0.5nm,0.3s,baz=216,slow=15,SNR=13						
DANN	Dangsing	13.41	124	eP	Pn	01 22 46.8	-1.6
	8.3nm,0.3s						
GKN	Gorkha	14.22	123	eP	Pn	01 22 56.9	-1.4
	12nm,0.3s						
KKN	Kakani	14.80	122	eP	Pn	01 23 04.1	-1.3
	13nm,0.5s						
PKIN	Phulchoki	15.01	122	eP	P	01 23 07.7	-1.1
	15nm,0.5s						
PKI	Pulchoki	15.03	122	eP	P	01 23 08.1	-0.9
	9.0nm,0.3s						
KURBB	Kurchatov Arra	15.05	18	P	Pn	01 23 07.7	-0.3
	0.1nm,0.3s,baz=202,slow=11,SNR=6.4						
AB31	Akbulak array	15.11	331	⇑P	P	01 23 10.8	+1.6
	1.3nm,0.6s,baz=222,slow=8.6,SNR=26						
AB31				⇓S	S	01 25 51.9	-4.4
	1.9nm,0.8s,baz=154,slow=22,SNR=2.7						
GUN	Gumba	15.13	120	eP	Pn	01 23 08.7	-1.0
	6.1nm,0.4s						
JIRN	Jiri	15.51	121	eP	Pn	01 23 13.2	-1.0
	13nm,0.4s						
BVAR	Borovoye Array	16.49	358	P	Pn	01 23 25.6	+0.2
	0.3nm,0.3s,baz=175,slow=14,SNR=4.7						
ZALV	Zalesovo Beam	19.83	24	P	P	01 24 01.6	+0.9
	0.6nm,0.3s,baz=225,slow=9.6,SNR=7.6						
FINES	FINESS Array B	37.52	326	P	P	01 26 41.6	+1.9
	7.0nm,1.1s,baz=140,slow=15,SNR=3.6						
ARCES	ARCESS Array B	41.15	338	P	P	01 27 10.8	+1.1
	0.9nm,0.6s,baz=123,slow=6.7,SNR=4.0						
TIXI	Tiksi	45.69	22	LR	LR	01 50 09.0	
	comp=Z,55nm,19.1s,baz=248,slow=40						
TORD	Torodi Ar. Bea	65.84	269	P	P	01 30 10.2	+0.4
	0.3nm,0.5s,baz=55,slow=5.9,SNR=5.1						
YKA	Yellowknife Ar	81.20	3	P	P	01 31 39.5	+1.1
	0.2nm,0.4s,baz=351,slow=5.5,SNR=6.1						

WEL 26 01:29:00.5±0.8**, 33°S**±7°×**17°9E**±1°6**, h33^{km}, M4.5**/15**, mB5.0**/8**, ML4.7**/16**, MLv4.7**/15**, Mw(mB)4.3**/8**, Error ellipse: s-maj=0.0km s-min=0.0km az=112.8, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.09	39	S	Sn	01 30 41.7	-5.8
MXZ	Matakaoa Point	5.09	188	P	Pn	01 30 17.2	+2.7
MXZ				S	Sn	01 31 14.9	+2.7
WMGZ	Waiomatatini S	5.34	186	P	Pn	01 30 20.9	+3.0
WMGZ				S	Sn	01 31 20.7	+2.5
HAZ	Te Kaha	5.36	192	P	Pn	01 30 19.3	+1.1
HAZ				S	Sn	01 31 21.2	+2.5
PKGZ	Pakihiroa	5.45	189	P	Pn	01 30 22.2	+2.8
PKGZ				S	Sn	01 31 24.1	+3.2
RUGZ	Raukumara Rang	5.58	192	P	Pn	01 30 23.4	+2.0
RUGZ				S	Sn	01 31 25.7	+1.3
PUZ	Puketiti	5.60	187	P	Pn	01 30 23.2	+1.7
PUZ				S	Sn	01 31 24.7	-0.1
TWGZ	Tauwhareparae	5.74	189	P	Pn	01 30 26.0	+2.5
MWZ	Matawai	5.97	192	P	Pn	01 30 28.3	+1.7
MWZ				S	Sn	01 31 34.1	+0.3
URZ	Urewera	5.98	196	P	Pn	01 30 29.1	+2.4
URZ				S	Sn	01 31 35.7	+1.7
CNGZ	Carnagh Statio	6.02	187	P	Pn	01 30 29.1	+1.9
TKGZ	Te Karaka	6.02	190	P	Pn	01 30 26.9	-0.3
TKGZ				S	Sn	01 31 35.2	+0.3
MUGZ	Murupara	6.27	197	P	Pn	01 30 33.0	+2.3
RIGZ	Rimuhau	6.29	190	P	Pn	01 30 32.0	+1.0
RIGZ				S	Sn	01 31 41.3	-0.5
RTZ	Ruatahuna	6.35	196	P	Pn	01 30 32.9	+1.1
RTZ				S	Sn	01 31 42.2	-1.1
SNGZ	Shannon Statio	6.44	193	P	Pn	01 30 33.4	+0.4
SNGZ				S	Sn	01 31 45.2	-0.1
MTHZ	Maungataniwha	6.61	196	P	Pn	01 30 37.0	+1.7
MTHZ				S	Sn	01 31 49.3	-0.3
RAHZ	Arahi	6.62	194	P	Pn	01 30 36.2	+0.8
RAHZ				S	Sn	01 31 49.8	0.0
NMHZ	Naumai	6.85	195	P	Pn	01 30 38.0	-0.8
NMHZ				S	Sn	01 31 54.9	-0.6
ARHZ	Aropaoanui	6.97	194	P	Pn	01 30 40.4	+0.2
ARHZ				S	Sn	01 31 58.3	-0.1
BKZ	Black Stump Fm	6.99	197	P	Pn	01 30 41.2	+0.6
NTVZ	North Tongarir	7.16	202	P	Pn	01 30 44.7	+1.6
WTVZ	West Tongariro	7.20	203	P	Pn	01 30 45.2	+1.6
MCHZ	McNeill Hill	7.21	195	P	Pn	01 30 43.7	+0.2
MCHZ				S	Sn	01 32 02.4	-1.8
OTVZ	Oturere	7.22	202	P	Pn	01 30 45.3	+1.4
OTVZ				S	Sn	01 32 01.9	-3.0
KWHZ	Kaweka Forest	7.25	197	P	Pn	01 30 44.0	-0.2
KWHZ				S	Sn	01 32 02.7	-2.7
SNVZ	South Ngauruho	7.25	202	P	Pn	01 30 45.1	+0.8
WNVZ	Wahianoa	7.39	202	P	Pn	01 30 46.5	+0.2
BHHZ	Black Hill Sta	7.41	199	P	Pn	01 30 45.8	-0.5
BHHZ				S	Sn	01 32 07.5	-1.7
MOVZ	Moawhango	7.42	201	P	Pn	01 30 46.0	-0.5
MOVZ				S	Sn	01 32 06.9	-2.7
PKVZ	Pokaka	7.44	203	P	Pn	01 30 47.7	+0.9
KRHZ	Kereru	7.47	197	P	Pn	01 30 46.4	-0.8
KAHZ	Kahuranaki	7.50	194	P	Pn	01 30 46.8	-0.9
KAHZ				S	Sn	01 32 06.8	-4.9
PXZ	Pawanui	7.74	193	P	Pn	01 30 49.0	-1.8
PNHZ	Pukenui	7.77	197	P	Pn	01 30 49.5	-1.8
TSZ	Takapari Road	7.97	198	P	Pn	01 30 51.6	-2.4
WAZ	Wanganui	7.98	204	P	Pn	01 30 53.8	-0.4
DVHZ	Dannevirke	8.14	196	P	Pn	01 30 53.8	-2.6
POWZ	Post Office Ro	8.33	198	P	Pn	01 30 56.4	-2.5
PRWZ	Pori Road	8.43	197	P	Pn	01 30 57.5	-2.8
BFZ	Birch Farm	8.49	195	P	Pn	01 30 58.0	-3.2
MRZ	Mangatainoka R	8.63	198	P	Pn	01 30 59.2	-3.9
TIWZ	Tintock	8.66	197	P	Pn	01 31 00.4	-3.2
HOWZ	Holdsworth Sta	8.87	198	P	Pn	01 31 02.1	-4.3
OGWZ	Otaki Gorge	8.89	200	P	Pn	01 31 02.5	-4.1
TMWZ	Te Maipa	8.98	196	P	Pn	01 31 03.6	-4.2
MTW	Mount Morrison	9.12	198	P	Pn	01 31 05.0	-4.8
TRWZ	Traveller	9.30	196	P	Pn	01 31 07.4	-4.8

DJA ***26*** *01:31:01.4±0.8, 3°N±5°×9°6E±°, h10^{km}, M3.7/7, MLv3.7/7*

IDC ***26*** *01:31:02.6±10.0, 3°.32N×96°.24E, h59^{km}±72^{km}, mb3.3/3, mb1 3.6/4, mb1mx3.2/40, mbtmp3.7/4, ML4.2/1, Error ellipse: s-maj=147.0km s-min=27.6km az=59.0*

ISC 26 01:31:00.1±1.3**, 2°.91N**±0°.08×**96°.2E**±0°.1**, h50^{km}, n14,** σ**2^{s}54**/12**, mb3.4**/3**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPTI		1.02	70	P	Pn	01 31 17.2	-1.0
TPTI				S	Sn	01 31 29.2	-2.3
KCSI	Kotacane, Aceh	1.67	69	P	Pn	01 31 27.9	+0.9
GSI	Gunungsitoli	2.10	140	P	Pn	01 31 32.4	-0.5
LHMI	Lhok Sumawe	2.41	18	P	Pn	01 31 40.8	+3.7
TSI	Tuntungan	2.42	76	P	Pn	01 31 39.6	+2.4
PSI	Prapat	2.71	92	P	Pn	01 31 43.8	+2.5
	baz=331,slow=11						
MNSI	Mandailing Nat	3.97	122	P	Pn	01 32 00.6	+2.1
CMAR	Chiang Mai Arr	15.68	10	P	Pn	01 34 36.2	-1.6
	0.3nm,0.3s,baz=194,slow=10,SNR=4.5						
H08S2	Diego Garcia H	25.89	246	T	T	02 02 49.6	
	baz=71						
H08S3	Diego Garcia H	25.89	246	T	T	02 03 01.5	
	baz=71						
H08S1	Diego Carcia H	25.90	246	T	T	02 02 58.7	
	baz=71						
WRA	Warramunga Arr	43.78	123	P	P	01 39 04.6	+3.4
	0.2nm,0.4s,baz=299,slow=8.9,SNR=1.5						
MKAR	Makanchi Array	45.35	347	P	P	01 39 11.6	-1.8
	0.6nm,0.4s,baz=159,slow=9.0,SNR=17						
SONM	Songino Array	45.60	10	P	P	01 39 13.7	-1.8
	0.4nm,0.7s,baz=190,slow=6.9,SNR=3.9						

NEIC ***26*** *01:36:40.8±1.9, 31°.20S±0°.05×68°.71W±0°.07, h94^{km}±4^{km}, mb4.9/243, Md4.6(SJA), Error ellipse: s-maj=9.5km s-min=7.2km az=72.0*

SJA ***26*** *01:36:40.2±1.8, 31°.24S×68°.78W, h112^{km}±6^{km}, ML4.7, MW4.5*

IDC ***26*** *01:36:42.0±0.5, 31°.23S×68°.72W, h106^{km}±3^{km}, mb4.3/13, mb1 4.5/14, mb1mx4.2/27, mbtmp4.7/14, MS3.3/3, Ms1 3.3/3, ms1mx2.9/22, Error ellipse: s-maj=15.5km s-min=13.0km az=73.0*

VAO ***26*** *01:36:41.1±0.3, 31°.27S×68°.77W, h102^{km}, mb4.5*

ISC 26 01:36:41.1±0.4**, 31°.23S**±0°.03×**68°.79W**±0°.03**, h102^{km}**±3^{km}**, n458,** σ**1^{s}20**/426**, mb4.9**/127**, 14C-1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.29	111	eP	Pn	01 36 56.2	+0.2
RTLL				eS	Sn	01 37 08.4	+1.3
ZON	Zonda	0.33	163		Pn	01 36 56.6	+0.4
ZON				Sn	Sn	01 37 08.2	+0.6
ZON	Zonda	0.33	163	eP	Pn	01 36 56.7	+0.4
ZON				eS	Sn	01 37 09.4	+1.9
RTCV	Cerro Valdivia	0.67	161	eP	Pn	01 36 59.1	+0.5
RTLS	Leoncito	0.71	217	eP	Pn	01 37 00.0	+0.7
RTLS				eS	Sn	01 37 14.6	+1.8
RTLS				IAML		01 37 15.5	
	comp=Z,7µm,0.2s						
AUSP	Uspallata	1.12	207	eP	Pn	01 37 04.1	+0.8
AVFE	Valle Fertil	1.28	64	eP	Pn	01 37 05.7	+0.7
AVFE				eS	Sn	01 37 24.4	+1.4
AVFE				IAML		01 37 25.5	
	comp=Z,13µm,0.4s						
ASAL	Salagasta	1.36	182	eP	Pn	01 37 06.9	+0.9
ASAL				eS	Sn	01 37 26.4	+1.7
ARCO	CERRO ARCO	1.61	184	eP	Pn	01 37 10.1	+1.0
ARCO				eS	Sn	01 37 26.4	-3.9
ARCO				eS	Sn	01 37 31.5	+1.2
ARCO				IAML		01 37 33.0	
	comp=Z,7µm,0.7s						
CO03	El Pedregal	1.68	283	⇓iP	Pn	01 37 11.0	+1.2
CO03				iS	Sn	01 37 32.9	+1.4
CO03				IAML		01 37 35.0	
	comp=E,5µm,0.2s						
CO03	El Pedregal	1.68	283		Pn	01 37 11.0	+1.2
CO03				Sn	Sn	01 37 33.7	+2.1
ACHE	Chepes	1.82	88	eP	Pn	01 37 12.6	+0.9
AAGR	Agrelo	1.85	181	eP	Pn	01 37 13.0	+0.9
AAGR				eS	Sn	01 37 37.5	+2.0
GO04	Tololo Observa	2.02	301	eP	Pn	01 37 14.9	+0.6
GO04				iS	Sn	01 37 41.1	+1.4
GO04	Tololo Observa	2.02	301		Pn	01 37 15.1	+0.6
GO04				Sn	Sn	01 37 41.3	+1.6
GO04	Tololo Observa	2.02	301	eP	Pn	01 37 15.0	+0.6
GO04				eS	Sn	01 37 41.4	+1.7
APLL	PUNTA DE LOS L	2.12	67	eP	Pn	01 37 15.9	+0.6
VA03	San Esteban	2.14	224	⇑iP	Pn	01 37 16.8	+1.1
VA03				iS	Sn	01 37 43.2	+1.0
VA03				IAML		01 37 50.3	
	comp=E,7µm,0.3s						
VA03	San Esteban	2.14	224		Pn	01 37 16.8	+1.1
ACLC	CERRO LA CRUZ	2.40	42	eP	Pn	01 37 19.7	+0.5
ACLC				eS	Sn	01 37 37.9	-10
ACLC				IAML		01 38 20.0	
	comp=Z,3µm,0.7s						
FCH	Farellones	2.45	211	⇑iP	Pn	01 37 21.4	+1.4
FCH				iS	Sn	01 37 52.4	+2.7
FCH				IAML		01 38 00.5	
	comp=E,3µm,0.3s						
CO05	La Serena	2.48	301		Pn	01 37 19.8	-0.3
PEL	Peldehue	2.50	220		Pn	01 37 20.5	+0.2
PEL	Peldehue	2.50	220	eP	Pn	01 37 20.5	+0.2
PEL				eS	Sn	01 37 52.5	+2.1
CO06	Fray Jorge	2.51	282	⇑iP	Pn	01 37 19.4	-1.0
CO06	Fray Jorge	2.51	282		Pn	01 37 19.6	-0.8
VA06	Catapilco	2.51	237	⇑iP	Pn	01 37 19.7	-0.8
VA06				IAML		01 37 56.3	
	comp=E,2µm,0.3s						
VCA	Vinchina	2.53	12	eP	Pn	01 37 22.2	+1.2
VCA				eS	Sn	01 37 53.5	+2.0
VCA				eS	Sn	01 37 55.1	+3.7
VCA				IAML		01 37 55.2	
	comp=Z,3µm,0.8s						
VCA				eS	Sn	01 37 56.7	+5.3
ROCH	El Roble	2.56	227	⇑iP	Pn	01 37 21.3	-0.1
ROCH				⇑iP	Pn	01 37 20.9	-0.5
ROCH				iS	Sn	01 37 51.8	-0.4
ROCH				iS	Sn	01 37 52.6	+0.3
ROCH				IAML		01 37 54.8	
	comp=E,3µm,0.3s						
ROCH				IAML		01 37 58.9	
	comp=N,3µm,0.2s						
ROC1	El Roble	2.57	227	eP	Pn	01 37 21.0	-0.5
ROC1				eS	Sn	01 37 53.1	+0.7
MT05	Renca	2.72	217	⇑iP	Pn	01 37 23.7	+0.4
MT05				iS	Sn	01 37 56.7	+1.1
MT05				IAML		01 38 01.6	
	comp=E,6µm,0.4s						
MT05	Renca	2.72	217		Pn	01 37 23.5	+0.2
MT05	Renca	2.72	217	eP	Pn	01 37 23.6	+0.4
MT05				eS	Sn	01 37 57.7	+2.2
MT05				eS	Sn	01 37 57.8	+2.2
MT05				IAML		01 37 58.9	
	comp=Z,2µm,0.6s						
LCO	Las Campanas	2.76	323	⇑iP	Pn	01 37 24.4	+0.4
LCO				iS	Sn	01 37 56.9	-0.1
LCO	Las Campanas	2.76	323	Pn	Pn	01 37 24.3	+0.3
LCO	Las Campanas	2.76	323	eP	Pn	01 37 24.4	+0.4
MT02	Curacav	2.84	224	⇑iP	Pn	01 37 24.1	-0.7
MT02	Curacav	2.84	224		Pn	01 37 24.1	-0.7
MT02	Curacav	2.84	224	eP	Pn	01 37 24.3	-0.5
MT02				eS	Sn	01 37 58.1	-0.3
LMEL	Las Melosas	2.87	204	eP	Pn	01 37 26.3	+0.9
MRA	San Martin	2.87	115	eP	Pn	01 37 25.4	+0.1
MRA				eS	Sn	01 37 59.2	-0.2
MRA				IAML		01 38 00.8	
	comp=Z,3µm,0.4s						
VA01	Torpederas	3.01	233	eP	Pn	01 37 25.8	-1.3
VA01				IAML		01 38 11.3	
	comp=N,1µm,0.3s						
VA01	Torpederas	3.01	233	Pn	Pn	01 37 25.8	-1.3
MT09	Talagante	3.15	216	⇑iP	Pn	01 37 28.4	-0.6
MT09				iS	Sn	01 38 05.7	-0.2
MT09				IAML		01 38 11.3	
	comp=N,2µm,0.6s						
MT09	Talagante	3.15	216		Pn	01 37 28.1	-0.9
BO04	La Punta	3.15	209	⇑iP	Pn	01 37 29.6	+0.6
BO04				IAML		01 38 11.7	
	comp=E,1µm,0.5s						
MT01	Popeta	3.35	218	⇑iP	Pn	01 37 30.4	-1.3
MT01	Popeta	3.35	218	Pn	Pn	01 37 30.3	-1.3
VA05	Santo Domingo	3.40	224	eP	Pn	01 37 31.1	-1.2
VA05				iS	Sn	01 38 10.5	-1.3
VA05				IAML		01 38 22.2	
	comp=E,2µm,0.3s						
VA05	Santo Domingo	3.40	224		Pn	01 37 31.1	-1.1
RFA	San Rafael	3.54	176	eP	Pn	01 37 34.0	-0.3
RFA				eS	Sn	01 38 15.4	+0.1
RFA				IAML		01 38 44.4	
	comp=Z,2µm,0.5s						
AC04	Llanos de Chal	3.61	326	Pn	Pn	01 37 34.9	-0.2
AC04	Llanos de Chal	3.61	326	eP	Pn	01 37 34.9	-0.2
AC04				eS	Sn	01 38 19.7	+2.8
AC04				IAML		01 38 24.4	
	comp=Z,1µm,0.9s						
BO01	Tunca	3.70	211	Pn	Pn	01 37 35.1	-1.2
GO03	Copiap	3.83	340	⇑iP	Pn	01 37 38.3	+0.1
GO03				iS	Sn	01 38 21.5	-0.9
GO03	Copiap	3.83	340	Pn	Pn	01 37 38.4	+0.1
GO03	Copiap	3.83	340	eP	Pn	01 37 38.3	+0.1
GO03				eS	Sn	01 38 21.9	-0.5
BO02	Sierra Bellavi	3.93	205	⇑iP	Pn	01 37 39.4	-0.1
BO02	Sierra Bellavi	3.93	205		Pn	01 37 39.3	-0.1
BO02	Sierra Bellavi	3.93	205	eP	Pn	01 37 39.4	-0.1
BO02				eS	Sn	01 38 28.3	+3.7
BO02				IAML		01 38 33.0	
	comp=Z,603nm,0.7s						
AC02	Maricunga	4.39	356	Pn	Pn	01 37 47.1	+1.0
AC02	Maricunga	4.39	356	eP	Pn	01 37 47.1	+1.0
AC02				eS	Sn	01 38 38.8	+2.5
AC02				IAML		01 38 40.6	
	comp=Z,504nm,1.1s						
EDS3	Malargue	4.56	186	eP	Pn	01 37 48.0	0.0
EDS3				eS	Sn	01 38 36.9	-3.1
GO05	Huala	4.60	214		Pn	01 37 45.8	-2.7
ML02	Panimavida	5.03	205	Pn	Pn	01 37 51.5	-2.7
AHML	Horco Molle	5.36	35	eP	Pn	01 37 57.8	-1.0
AHML				eS	Sn	01 38 58.1	-1.3
AHML				IAML		01 39 36.0	
	comp=Z,242nm,0.7s						
FSA	Cafayete	5.66	27	eP	Pn	01 38 03.0	-0.1
FSA				eS	Sn	01 39 08.6	+1.6
PB14	IPOC Station P	6.73	347	Pn	Pn	01 38 15.3	-2.4
PB14	IPOC Station P	6.73	347	eS	Sn	01 39 36.9	+3.9

AZAP	Zapla	7.72	26	*e*P	Pn	01 38 30.0	-1.0
PB10	IPOC Station P	7.84	348		Pn	01 38 29.1	-3.5
PB15	IPOC Station P	8.01	356		Pn	01 38 32.9	-2.1
PB15	IPOC Station P	8.01	356	*e*P	Pn	01 38 33.0	-2.1
LC01	Cunco	8.06	197	Pn	Pn	01 38 31.4	-4.0
LC01	Cunco	8.06	197	*e*P	Pn	01 38 33.0	-2.4
ASTB	Santa Barbara	8.21	29	*e*P	Pn	01 38 36.7	-0.9
PB06	IPOC Station P	8.52	355	*e*P	Pn	01 38 39.4	-2.4
PB06				*e*P	Pn	01 38 39.4	-2.4
ALOL	LOMAS DE OLMED	8.53	31	*e*P	Pn	01 38 34.9	-6.9
ALOL				*e*P	Pn	01 38 40.0	-1.9
LVC	Limon Verde	8.58	359	P	Pn	01 38 40.7	-2.3
	comp=Z,10.0nm,0.3s,baz=171,slow=11,SNR=117						
LVC				S	Sn	01 40 14.8	-3.5
	comp=Z,2.9nm,0.3s,baz=155,slow=13,SNR=1.8						
LVC	Limon Verde	8.58	359	Pn	Pn	01 38 40.6	-2.4
H03N1	Juan Fernandez	8.84	253	P	Pn	01 38 46.2	+0.3
	baz=228,slow=74,SNR=11						
H03N1				T	T	01 46 00.2	
	baz=81,slow=73,SNR=322						
H03N3	Juan Fernandez	8.86	253	P	Pn	01 38 46.0	-0.1
	baz=228,slow=74,SNR=9.8						
H03N3				T	T	01 45 48.2	
	baz=81,slow=73,SNR=233						
H03N2	Juan Fernandez	8.86	253	P	Pn	01 38 46.3	+0.3
	baz=228,slow=74,SNR=11						
H03N2				T	T	01 45 53.5	
	baz=81,slow=73,SNR=281						
LR03	Panguipulli	8.87	198		Pn	01 38 43.0	-3.4
PB09	IPOC Station P	9.40	357		Pn	01 38 51.4	-2.5
PLCA	Paso Flores	9.59	188	P	Pn	01 38 54.4	-1.9
	comp=Z,2.2nm,0.3s,baz=3.3,slow=11,SNR=38						
PLCA	Paso Flores	9.59	188	*e*P	Pn	01 38 55.4	-0.9
PLCA	Paso Flores	9.59	188	Pn	Pn	01 38 53.8	-2.4
PB01	IPOC Station P	10.16	356	Pn	Pn	01 38 59.5	-4.7
LL03	Petrohue	10.31	195		Pn	01 39 02.6	-3.4
ITQB	Itaqui	10.61	85	*e*P	Pn	01 39 08.6	-1.6
ITQB	Itaqui	10.61	85	Pn	Pn	01 39 07.7	-2.5
PB08	IPOC Station P	11.04	358		Pn	01 39 14.1	-2.3
CPUP	Villa Florida	11.17	67	P	Pn	01 39 14.4	-3.3
	comp=Z,1.1nm,0.3s,baz=244,slow=12,SNR=17						
CPUP				LR	LR	01 44 02.5	
	comp=Z,97nm,18.5s,baz=254,slow=40						
CPUP	Villa Florida	11.17	67	*e*P	Pn	01 39 17.0	-0.7
CPUP	Villa Florida	11.17	67	Pn	Pn	01 39 15.0	-2.7
PB11	IPOC Station P	11.45	356	Pn	Pn	01 39 21.6	0.0
PB12	IPOC Station P	12.64	353		Pn	01 39 36.7	-0.7
PB16	IPOC Station P	12.85	357		Pn	01 39 40.0	-0.6
PLTB	Pedras Altas	12.97	96	*e*P	Pn	01 39 41.8	+0.2
PLTB	Pedras Altas	12.97	96		Pn	01 39 38.7	-2.9
CPSB	Cacapava Do Su	13.22	90	*e*P	Pn	01 39 43.6	-1.2
COYC	Coyhaique	14.55	189		Pn	01 40 01.0	-0.9
LPAZ	La Paz	14.88	2	P	Pn	01 40 08.2	+1.3
	comp=Z,0.8nm,0.3s,baz=172,slow=7.5,SNR=93						
LPAZ				LR	LR	01 47 19.3	
	comp=Z,112nm,20.0s,baz=216,slow=43						
LPAZ	La Paz	14.88	2	*e*P	Pn	01 40 07.9	+1.0
LPAZ	La Paz	14.88	2		Pn	01 40 06.3	-0.6
ITAB	Concordia	15.08	79	*e*P	Pn	01 40 07.7	-1.1
ITAB	Concordia	15.08	79	Pn	Pn	01 40 07.2	-1.6
AQDB	Aquidauana	15.90	51	Pn	Pn	01 40 17.3	-1.8
SIV	San Ignacio	16.72	27	P	Pn	01 40 26.1	-3.2
	comp=Z,1.7nm,0.3s,baz=194,slow=8.5,SNR=46						
PTLB	Pontes e Lacer	18.02	32	*e*P	Pn	01 40 44.5	-0.5
PTLB	Pontes e Lacer	18.02	32	P	P	01 40 42.7	-1.4
PCMB	Pacaembu	18.37	63	*e*P	Pn	01 40 49.1	-0.1
TIJ01	Guaruva-PR	18.38	76	*e*P	P	01 40 47.3	-0.9
PP1B	Ponte de Pedra	18.54	46	*e*P	P	01 40 49.5	-0.3
FRTB	Fartura	18.79	70	*e*P	Pn	01 40 53.7	-0.5
SALV	Santo Antonio	19.38	41	*e*P	P	01 40 59.8	+0.7
VILB	Vilhena	19.84	25	*e*P	P	01 41 04.4	+0.4
VILB	Vilhena	19.84	25		P	01 41 03.4	-0.6
VILB				IAmb	IAmb	01 41 05.6	
	comp=Z,36nm,0.7s						
ITRB	Iturama	20.18	60	*e*P	P	01 41 08.6	+0.9
GO09	Cerro Castillo	20.20	186	P	P	01 41 07.4	-0.2
SPB	Sao Paulo	20.41	73	*e*P	P	01 41 10.9	+0.9
SPB	Sao Paulo	20.41	73	P	Pn	01 41 11.4	-1.7
MG05	Puerto Natales	20.62	187	P	P	01 41 12.2	+0.1
BB19B	Bebedouro	20.78	66	*e*P	P	01 41 13.8	-0.3
RCLB	Rio Claro- Sao	20.88	70	*e*P	P	01 41 15.3	+0.2
VAO	Valinhos	21.06	72	*e*P	P	01 41 17.5	+0.3
ETMB	Extrema	21.44	7	*e*P	P	01 41 21.5	+0.3
ETMB	Extrema	21.44	7	P	P	01 41 20.8	-0.3
MG02	Cerro Sombrero	21.54	181	P	P	01 41 22.2	+0.3
ARAG	Araguaiana, MT	21.89	49	*e*P	P	01 41 24.7	-1.3
EFI	East Falkland	21.91	162	P	P	01 41 24.7	-1.1
EFI				IAmb	IAmb	01 41 28.4	
	comp=Z,125nm,1.3s						
GO10	Punta Arenas	21.97	184	P	P	01 41 27.7	+1.1
PDRB	Porto dos Gac	22.48	32	*e*P	P	01 41 32.4	+0.2
IPMB	Ipameri, GO	22.84	60	*e*P	P	01 41 36.9	+1.1
CLDB	Colider	23.56	34	*e*P	P	01 41 42.0	-0.6
USHA	Ushuaia	23.59	179	P	P	01 41 43.5	+1.1
	comp=Z,56nm,0.7s,baz=353,slow=7.5,SNR=34						
USHA				LR	LR	01 52 08.6	
	comp=Z,89nm,19.1s,baz=342,slow=39						
CZSB	Cruzeiro do Su	23.66	350	*e*P	P	01 41 43.6	+0.2
CZSB	Cruzeiro do Su	23.66	350	P	P	01 41 42.7	-0.7
CZSB				IAmb	IAmb	01 41 45.2	
	comp=Z,34nm,0.8s						
BDFB	Brasilia	24.51	55	P	P	01 41 50.7	-0.5
	comp=Z,4.5nm,0.6s,baz=221,slow=8.9,SNR=10						
BDFB				pP	pP	01 42 13.2	-0.5
	comp=Z,12nm,0.8s,baz=214,slow=11,SNR=7.5						
BDFB	Brasilia	24.51	55	P	P	01 41 49.8	-1.4
SNDB	Serra Nova Dou	25.07	44	*e*P	P	01 41 56.5	+0.3
PEXB	Peixe	26.83	49	*e*P	P	01 42 14.2	+2.1
TBTG	Tabatinga, AM	26.92	358	*e*P	P	01 42 13.0	+0.1
TBTG	Tabatinga, AM	26.92	358	P	P	01 42 12.7	-0.1
NPGB	Novo Progresso	27.14	30	*e*P	P	01 42 15.4	+0.5
JANB	Januaria	27.57	60	*e*P	P	01 42 18.5	-0.3
SDBA	SAO DESIDERIO	28.91	55	*e*P	P	01 42 30.2	-0.5
MACA	Manacapuru-AM	28.95	17	*e*P	P	01 42 30.8	-0.1
MACA	Manacapuru-AM	28.95	17	P	P	01 42 30.2	-0.7
ITTB	Itaituba	29.41	27	*e*P	P	01 42 33.8	-1.2
SMTB	Santa Maria do	29.75	46	*e*P	P	01 42 39.2	+1.2
PTGA	Pitinga	31.46	17	P	P	01 42 52.6	-0.5
	comp=Z,3.3nm,0.6s,baz=185,slow=11,SNR=7.4						
MALB	Monte Alegre	32.28	28	*e*P	P	01 43 00.4	+0.1
OTAV	Otavalo	32.61	342	*e*P	P	01 43 03.0	-0.6
OTAV	Otavalo	32.61	342	P	P	01 43 03.8	+0.2
ESPZ	Base Esperanza	33.05	170	P	P	01 43 07.4	+0.9
ESPZ				IAmb	IAmb	01 43 34.2	
	comp=Z,38nm,1.2s						
BOAV	Boa Vista	34.35	15	*e*P	P	01 43 18.2	-0.1
BOAV	Boa Vista	34.35	15	P	P	01 43 16.8	-1.5
MCPB	Macapa, AP	34.55	31	*e*P	P	01 43 20.4	+0.4
SMAI	San Martin Ant	36.95	179	P	P	01 43 40.8	+0.9
SDV	Santo Domingo	39.92	357	*e*P	P	01 44 05.0	-0.6
SJCC	San Jacinto, C	41.35	350	P	P	01 44 16.4	-0.7
TOSP	Speyside	43.02	12	P	P	01 44 30.6	0.0
TGUH	Tegucigalpa,Un	48.40	336	P	P	01 45 13.6	+0.5
MTO3	Montecristo	49.48	333	IAmb	IAmb	01 45 23.4	
	comp=Z,9.4nm,0.8s						
VNA3	Neumayer Olymp	50.92	159	P	P	01 45 32.3	+0.8
VNA2	Neumayer--Watz	51.53	158	P	P	01 45 36.9	+0.8
	baz=286,slow=8.4						
SNAA	Sanae	53.14	159	P	P	01 45 48.6	+0.6
SNAA	Sanae	53.14	159	P	P	01 45 48.3	+0.3
	comp=Z,4.5nm,0.8s,baz=287,slow=6.2,SNR=12						
SNAA				pP	pP	01 46 12.7	-0.1
	comp=Z,8.5nm,0.8s,baz=272,slow=11,SNR=7.0						
SNAA	Sanae	53.14	159	P	P	01 45 48.4	+0.3
SNAA				IAmb	IAmb	01 46 14.4	
	comp=Z,11nm,1.0s						
TLIG	Tlapa	56.32	325	P	P	01 46 12.6	+1.0
TLIG				IAmb	IAmb	01 46 14.5	
	comp=Z,12nm,1.1s						
QSPA	South Pole Qui	59.00	180	P	P	01 46 30.2	+0.3
QSPA				IAmb	IAmb	01 46 59.6	
	comp=Z,8.7nm,0.8s						
TIGA	Tifton	63.89	346	P	P	01 47 02.6	-0.3
	baz=166						
BRAL	Brewton	64.43	343	P	P	01 47 06.6	+0.1
	baz=163						
NHSC	New Hope	64.89	349	P	P	01 47 09.8	+0.4
	baz=169						
GOGA	Godfrey	65.77	347	P	P	01 47 15.8	+0.7
	baz=166						
833A	Chaparral WMA,	66.01	331	P	P	01 47 18.2	+1.4
	baz=152,SNR=17						
HKT	Hockley	66.05	334	P	P	01 47 16.9	0.0
Y52A	Lilburn	66.33	346	IAmb	IAmb	01 47 18.9	
	comp=Z,13nm,0.7s						
VBMS	Vicksburg	66.37	340	P	P	01 47 20.0	+1.1
	baz=160						
CNNC	Cliffs of the	66.67	352	P	P	01 47 21.3	+0.6
	baz=172						
KMSC	Kings Mountain	67.06	349	P	P	01 47 23.2	-0.1
	baz=168						
143A	Socs Landing,	67.09	339	P	P	01 47 24.4	+0.9
NATX	Nacogdoches	67.27	336	P	P	01 47 25.7	+1.0
	baz=156						
435B	Jarrell	67.46	333	IAmb	IAmb	01 47 27.8	
	comp=Z,13nm,0.9s						
435B	Jarrell	67.46	333	P	P	01 47 26.8	+0.9
	baz=154						
X48A	Hartselle	67.56	344	IAmb	IAmb	01 47 27.5	
	comp=Z,23nm,1.0s						
HPIG		67.71	325	P	P	01 47 27.9	+0.1
HPIG				IAmb	IAmb	01 47 30.1	
	comp=Z,14nm,1.2s						
W50A	Signal Mountai	67.88	345	IAmb	IAmb	01 47 29.0	
	comp=Z,14nm,0.8s						
CPCT	Cooper Cave	67.95	346	IAmb	IAmb	01 47 29.2	
	comp=Z,9.8nm,0.8s						
SWET	Sewanee	68.03	345	IAmb	IAmb	01 47 30.3	
	comp=Z,28nm,0.9s						
Z41A	Richland Creek	68.03	338	P	P	01 47 30.0	+0.6
	baz=158						
JCT	Junction City	68.07	331	IAmb	IAmb	01 47 31.7	
	comp=Z,19nm,0.8s						
JCT	Junction City	68.07	331	P	P	01 47 30.6	+0.8
	baz=152,SNR=14						
WHTX	Lake Whitney,	68.49	334	IAmb	IAmb	01 47 33.5	
	comp=Z,11nm,0.8s						
WHTX	Lake Whitney,	68.49	334	P	P	01 47 32.9	+0.5
	baz=154,SNR=7.1						
U54A	Nelsons Funny	68.49	349	IAmb	IAmb	01 47 32.6	
	comp=Z,12nm,0.7s						
V48A	Smith Brothers	68.73	344	IAmb	IAmb	01 47 34.6	
	comp=Z,18nm,0.8s						
Z38A	Mt. Pleasant	68.75	337	P	P	01 47 34.0	+0.2
Z38A				IAmb	IAmb	01 47 35.9	
	comp=Z,31nm,1.1s						
TXAR	Lajitas Array	68.76	328	P	P	01 47 35.0	+0.8
	comp=Z,3.7nm,0.7s,baz=151,slow=8.1,SNR=56						
TXAR				PcP	PcP	01 47 59.2	+1.0
	comp=Z,1.1nm,0.8s,baz=163,slow=4.3,SNR=4.1						
TX31	Lajitas Ar. Si	68.77	328	IAmb	IAmb	01 47 36.2	
	comp=Z,14nm,0.8s						
X40A	Basin Creek Fa	69.18	339	P	P	01 47 36.8	+0.2
	baz=158						
WVT	Waverly	69.35	344	P	P	01 47 37.4	-0.1
WVT	Waverly	69.35	344	P	P	01 47 37.3	-0.3
	baz=163						
R58B	Mineral	69.36	352	IAmb	IAmb	01 47 39.4	
	comp=Z,14nm,1.1s						
MIAR	Mount Ida	69.47	338	IAmb	IAmb	01 47 39.8	
	comp=Z,29nm,1.4s						
MIAR	Mount Ida	69.47	338	P	P	01 47 38.7	+0.4
	baz=158,SNR=6.6						
CBN	Corbin Frederi	69.54	353	P	P	01 47 39.0	+0.4
	baz=172						
W41B	Gary Mavity, V	69.64	340	P	P	01 47 39.6	+0.3
	baz=159,SNR=9.9						
WHAR	Wooly Hollow	69.76	340	IAmb	IAmb	01 47 41.4	
	comp=Z,13nm,1.0s						
UTMT	University of	69.80	343	P	P	01 47 40.3	0.0
ABTX	Abilene, Hawle	69.89	333	IAmb	IAmb	01 47 42.7	
	comp=Z,29nm,1.1s						
ABTX	Abilene, Hawle	69.89	333	P	P	01 47 41.6	+0.6
	baz=152,SNR=8.3						
R55A	Marlinton	69.96	351	IAmb	IAmb	01 47 43.1	
	comp=Z,15nm,0.8s						
X37A	Clayton	70.09	337	IAmb	IAmb	01 47 44.3	
	comp=Z,18nm,1.2s						
W39A	Magazine	70.13	338	P	P	01 47 43.2	+0.8
	baz=157,SNR=15						
LCAR	Lake Charles	70.16	341	P	P	01 47 42.6	+0.2
P57A	Homestead Farm	70.87	352	IAmb	IAmb	01 47 48.8	
	comp=Z,14nm,0.9s						
U40A	Yellville	70.92	340	IAmb	IAmb	01 47 48.3	
	comp=Z,23nm,0.8s						
U40A	Yellville	70.92	340	P	P	01 47 47.3	+0.2
	baz=158,SNR=16						
Q52A	Bidwell	70.95	349	IAmb	IAmb	01 47 48.0	
	comp=Z,14nm,1.1s						
WCI	Wyandotte Cave	71.00	345	P	P	01 47 47.0	-0.7
WCI				IAmb	IAmb	01 47 47.7	
	comp=Z,14nm,0.8s						
WCI	Wyandotte Cave	71.00	345	P	P	01 47 46.9	-0.7
	baz=164						
W35A	Tecumseh	71.12	336	IAmb	IAmb	01 47 48.9	
	comp=Z,11nm,0.8s						
HHAR	Hobbs	71.18	339	IAmb	IAmb	01 47 50.0	
	comp=Z,24nm,0.9s						
S44A	Carbondale	71.18	343	IAmb	IAmb	01 47 48.9	
	comp=Z,14nm,0.7s						
SIUC	Southern Illin	71.19	343	IAmb	IAmb	01 47 49.4	
	comp=Z,50nm,1.4s						
Q51A	Peebles	71.20	348	IAmb	IAmb	01 47 49.5	
	comp=Z,12nm,0.9s						
MCWV	Mont Chateau	71.27	351	P	P	01 47 49.5	+0.3
	baz=170						
LIC	Lamto	71.28	70	*e*P	P	01 47 49.5	-0.4
	comp=Z,48nm,1.1s						
P53A	Whipple	71.32	350	IAmb	IAmb	01 47 50.4	
	comp=Z,16nm,1.2s						
FNO	Franklin	71.40	336	IAmb	IAmb	01 47 51.8	
	comp=Z,19nm,0.8s						
WMOK	Wichita Mounta	71.43	334	P	P	01 47 50.2	-0.1
	baz=153,SNR=8.4						
TUL1	Leonard	71.44	337		P	01 47 50.3	+0.1
TUL1				IAmb	IAmb	01 47 51.9	
	comp=Z,26nm,0.8s						
TUL1	Leonard	71.44	337	P	P	01 47 50.5	+0.3
	baz=156,SNR=9.6						
MGMO	Mountain Grove	71.49	340	IAmb	IAmb	01 47 51.9	
	comp=Z,15nm,0.9s						
TIC	Toumodi	71.53	70	*e*P	P	01 47 51.0	-0.4
MNTX	Cornudas Mount	71.55	328	IAmb	IAmb	01 47 51.8	
	comp=Z,10nm,0.8s						
MNTX	Cornudas Mount	71.55	328	P	P	01 47 50.7	-0.3
	baz=148,SNR=14						
P52A	Corning	71.58	349	IAmb	IAmb	01 47 51.6	
	comp=Z,17nm,0.9s						
P52A	Corning	71.58	349	P	P	01 47 50.3	-0.8
	baz=168,SNR=5.5						
KIC	Kosan Boka	71.59	70	*e*P	P	01 47 51.8	+0.1
	comp=Z,22nm,0.8s						
P51A	Williamsport	71.59	348	IAmb	IAmb	01 47 51.6	
	comp=Z,12nm,0.9s						
DBIC	Dimbokro	71.68	70	P	P	01 47 52.5	+0.3
	comp=Z,13nm,0.8s,baz=224,slow=5.7,SNR=19						
DBIC	Dimbokro	71.68	70	P	P	01 47 51.6	-0.6
DBIC				IAmb	IAmb	01 47 53.4	
	comp=Z,16nm,0.9s						
O56A	Blue Knob Stat	71.71	352	P	P	01 47 52.0	+0.1
	baz=171						
FVM	French Village	71.76	342	P	P	01 47 52.5	+0.3
FVM				IAmb	IAmb	01 47 53.2	
	comp=Z,29nm,0.8s						
OK030	Cody Creek RV	71.79	336	IAmb	IAmb	01 47 53.5	
	comp=Z,25nm,0.7s						
OK031	S. Brethren Rd	71.83	336	IAmb	IAmb	01 47 53.8	
	comp=Z,27nm,0.8s						
OK034	N. Norfolk Rd.	71.84	336	IAmb	IAmb	01 47 53.8	
	comp=Z,20nm,0.7s						
OK029	Liberty Lake	71.90	336	IAmb	IAmb	01 47 54.7	
	comp=Z,28nm,0.9s						
P49A	Miami Univ. Ec	71.94	347	P	P	01 47 52.7	-0.6
	baz=166						
OK033	Mehan	71.94	336	IAmb	IAmb	01 47 54.7	
	comp=Z,34nm,1.1s						
BLO	Bloomington	71.96	346	IAmb	IAmb	01 47 53.5	
	comp=Z,14nm,0.7s						
QUOK	Quay	71.98	337	IAmb	IAmb	01 47 55.0	
	comp=Z,41nm,1.3s						
SSPA	Standing Stone	72.00	353	P	P	01 47 53.5	0.0
	baz=172						
P48A	Milroy	72.01	347	IAmb	IAmb	01 47 53.3	
	comp=Z,12nm,0.8s						
PAL	Palisades	72.03	356	P	P	01 47 53.8	+0.2
	baz=175						
CCM	Cathedral Cave	72.04	342	P	P	01 47 53.9	+0.1
CCM				IAmb	IAmb	01 47 55.0	
	comp=Z,42nm,1.2s						
CCM	Cathedral Cave	72.04	342	P	P	01 47 54.0	+0.2
	baz=160						
O53A	New Philadelph	72.04	350	P	P	01 47 54.1	+0.3
	baz=169						
N59A	State Game Lan	72.07	354	P	P	01 47 54.2	+0.2
	baz=174						
ACSO	Alum Creek Sta	72.31	349	IAmb	IAmb	01 47 56.0	
	comp=Z,20nm,0.8s						
ACSO	Alum Creek Sta	72.31	349	P	P	01 47 54.9	-0.5
	baz=167,SNR=7.5						
MSTX	Muleshoe	72.34	331	P	P	01 47 56.1	+0.2
	baz=150,SNR=19						
O49A	Covington	72.50	348	IAmb	IAmb	01 47 56.6	
	comp=Z,16nm,0.9s						
P46A	Rosedale	72.53	345	IAmb	IAmb	01 47 56.9	
	comp=Z,28nm,1.0s						
N54A	Moraine State	72.57	351	IAmb	IAmb	01 47 58.2	
	comp=Z,14nm,0.9s						
N54A	Moraine State	72.57	351	P	P	01 47 57.2	+0.3
	baz=170						
AMTX	Amarillo	72.68	332	IAmb	IAmb	01 47 59.5	
	comp=Z,16nm,0.8s						
AMTX	Amarillo	72.68	332	P	P	01 47 58.2	+0.4
	baz=151						
BLOK	Blackwell	72.69	336	IAmb	IAmb	01 47 59.3	
	comp=Z,30nm,0.9s						
M55A	Ridgway	72.92	352	IAmb	IAmb	01 48 00.1	
	comp=Z,11nm,0.7s						
U32A	Winter Ranch,	72.98	335		P	01 47 59.6	+0.2
GC02	Grant County #	72.99	336	P	P	01 47 59.2	-0.3
M54A	Oil Creek Stat	73.07	351	P	P	01 47 59.6	-0.3
	baz=170						
OK032	Salt Plains WL	73.07	336	IAmb	IAmb	01 48 01.5	
	comp=Z,22nm,0.7s						
P43A	Skaggs, Pawnee	73.09	343	IAmb	IAmb	01 48 00.5	
	comp=Z,23nm,0.8s						
KAN14	Manchester OK	73.12	336	IAmb	IAmb	01 48 01.7	
	comp=Z,17nm,1.0s						
M53A	WI Miller and	73.13	351	P	P	01 48 00.2	-0.1
	baz=169						
319A	Douglas	73.14	325	IAmb	IAmb	01 48 03.3	
	comp=Z,20nm,0.8s						
SFIN	Lafayette	73.24	345	P	P	01 48 00.5	-0.3
	baz=164						
121A	Cookes Peak, D	73.36	326	IAmb	IAmb	01 48 04.9	
	comp=Z,19nm,0.9s						
121A	Cookes Peak, D	73.36	326	P	P	01 48 02.4	+0.3
	baz=146,SNR=14						
BINY	Binghamton	73.36	354	P	P	01 48 02.0	+0.4
	baz=174						
L61B	Northampton	73.40	357	P	P	01 48 02.3	+0.5
	baz=176						
HRV	Adam Dziewonsk	73.42	358	P	P	01 48 02.3	+0.4
	baz=178						
N47A	Urbana	73.43	347	IAmb	IAmb	01 48 02.0	
	comp=Z,26nm,1.1s						
ERPA	Erie	73.71	351	P	P	01 48 03.8	+0.2
	baz=170						
TRY	Troy	73.73	356	IAmb	IAmb	01 48 06.3	
	comp=Z,17nm,1.2s						
SUR	Sutherland	73.74	118	P	P	01 48 05.5	+1.0
SUR				IAmb	IAmb	01 48 06.6	
	comp=Z,36nm,1.2s						
WVNY	West Valley, N	73.83	352	P	P	01 48 04.2	-0.1
WVNY				IAmb	IAmb	01 48 05.8	
	comp=Z,18nm,0.9s						
HDIL	Hopedale	73.91	344	P	P	01 48 04.7	-0.1
	baz=162						
P38A	Dawn	74.15	340	IAmb	IAmb	01 48 06.7	
	comp=Z,14nm,0.6s						
L48A	N Adams	74.22	348	IAmb	IAmb	01 48 06.9	
	comp=Z,14nm,0.8s						
KSU1	Kansas State U	74.61	338	P	P	01 48 08.9	0.0
	baz=156						
TUC	Tucson	74.65	324	P	P	01 48 10.2	+0.8
	baz=144						
R32A	Long Quarter,	74.70	336	IAmb	IAmb	01 48 11.1	
	comp=Z,19nm,0.8s						
ANMO	Albuquerque	74.76	329	P	P	01 48 10.3	+0.2
ANMO	Albuquerque	74.76	329	P	P	01 48 10.6	+0.5
	baz=147						
I63A	Otisfield	74.93	359	IAmb	IAmb	01 48 13.1	
	comp=Z,24nm,1.1s						
N38A	Joes South For	75.15	341	IAmb	IAmb	01 48 12.8	
	comp=Z,19nm,0.7s						
LBNH	Lisbon	75.16	358	P	P	01 48 13.0	+1.0
	baz=177						
CBKS	Cedar Bluff	75.41	335	IAmb	IAmb	01 48 15.4	
	comp=Z,35nm,1.0s						
CBKS	Cedar Bluff	75.41	335	P	P	01 48 14.5	+1.0
	baz=153						
214A	Organ Pipe Nat	75.41	322	IAmb	IAmb	01 48 16.6	
	comp=Z,16nm,1.2s						
214A	Organ Pipe Nat	75.41	322	P	P	01 48 14.4	+0.7
	baz=142						
LONY	Lake Ozonia	75.67	356	P	P	01 48 15.6	+0.7
	baz=175						
T25A	Trinidad	75.74	331	IAmb	IAmb	01 48 18.3	
	comp=Z,23nm,0.9s						
T25A	Trinidad	75.74	331	P	P	01 48 16.5	+0.7
	baz=149,SNR=9.1						
PKME	Peaks-Kenny Pk	76.13	360	P	P	01 48 18.3	+0.9
	baz=180						
SCIA	State Center	76.18	341	P	P	01 48 18.8	+1.0
	baz=159						
JFWS	Jewell Farm	76.37	344	IAmb	IAmb	01 48 20.0	
	comp=Z,27nm,1.3s						
JFWS	Jewell Farm	76.37	344	P	P	01 48 19.1	+0.2
	baz=161						
KSCO	Kaye Shedlock’	76.65	334	IAmb	IAmb	01 48 23.1	
	comp=Z,44nm,1.3s						
KSCO	Kaye Shedlock’	76.65	334	P	P	01 48 21.8	+1.0
	baz=151,SNR=5.5						
X16A	Lo Mia Camp, P	76.67	325	IAmb	IAmb	01 48 23.7	
	comp=Z,14nm,1.1s						
SDCO	Great Sand Dun	76.71	331	P	P	01 48 22.2	+0.9
	baz=148						
K38A	Parkersburg	76.75	342	IAmb	IAmb	01 48 21.5	
	comp=Z,20nm,0.8s						
KOWA	Kowa	76.98	64	P	P	01 48 22.4	-0.5
KOWA				IAmb	IAmb	01 48 24.2	
	comp=Z,13nm,0.7s						
BGNE	Belgrade	77.19	338	P	P	01 48 24.0	+0.4
	baz=154,SNR=6.2						
TRQ	Mont Tremblant	77.26	356	IAmb	IAmb	01 48 24.9	
	comp=Z,15nm,0.9s						
S22A	4UR Ranch, Cre	77.27	330	P	P	01 48 25.0	+0.5
	baz=147,SNR=7.8						
TSUM	Tsumeb	77.30	105	P	P	01 48 26.0	+1.0
GLA	Glamis	77.33	322	P	P	01 48 25.4	+0.9
	baz=141						
I40A	Norwalk	77.38	344	IAmb	IAmb	01 48 25.2	
	comp=Z,11nm,0.8s						
WUAZ	Wupatki	77.52	326	P	P	01 48 26.8	+1.1
WUAZ				IAmb	IAmb	01 48 28.5	
	comp=Z,15nm,1.0s						
WUAZ	Wupatki	77.52	326	P	P	01 48 27.1	+1.3
	baz=144,SNR=6.9						
MVCO	Mesa Verde	77.56	329	IAmb	IAmb	01 48 28.3	
	comp=Z,15nm,1.1s						
MVCO	Mesa Verde	77.56	329	P	P	01 48 27.0	+1.0
	baz=146,SNR=8.7						
Q24A	Divide	77.60	332	P	P	01 48 27.4	+1.1
	baz=149,SNR=14						
OGNE	Ogallala	78.11	335	IAmb	IAmb	01 48 30.9	
	comp=Z,18nm,1.0s						
OGNE	Ogallala	78.11	335	P	P	01 48 29.7	+0.9
	baz=151						
BC3	Big Chuckawall	78.12	322	P	P	01 48 30.4	+1.3
	baz=140						
I37A	Lemond, Waseca	78.19	342	P	P	01 48 29.1	+0.1
IRM	Iron Mountain	78.35	322	P	P	01 48 31.2	+1.0
	baz=141						
ISCO	Idaho Springs	78.50	332	P	P	01 48 32.3	+1.1
	baz=148,SNR=10						
SMCO	Snowmass	78.53	331	IAmb	IAmb	01 48 34.4	
	comp=Z,15nm,0.9s						
TPFO	Pinon Flats	78.62	321	P	P	01 48 33.1	+1.3
	baz=140						
PFO	Pinyon Flats O	78.63	321	P	P	01 48 32.3	+0.4
	baz=140						
ECSD	EROS Data Cent	78.83	340	IAmb	IAmb	01 48 33.6	
	comp=Z,22nm,0.8s						
ECSD	EROS Data Cent	78.83	340	P	P	01 48 32.8	+0.2
	baz=156,SNR=25						
BOSA	Boshof	78.89	117	P	P	01 48 33.8	+0.2
	comp=Z,8.2nm,0.8s,baz=240,slow=4.2,SNR=16						
BOSA				pP	pP	01 49 00.7	+0.5
	comp=Z,7.8nm,0.8s,baz=246,slow=5.4,SNR=6.3						
BOSA	Boshof	78.89	117	P	P	01 48 33.6	0.0

BOSA				IAmb	IAmb	01 48 35.0	
	comp=Z,15nm,0.9s						
MURC	Murrieta	79.02	321	P	P	01 48 34.6	+0.7
	baz=139						
GMRC	Granite Mounta	79.10	322	P	P	01 48 35.5	+1.1
	baz=140						
SPMN	Marine on St.	79.16	343	IAmb	IAmb	01 48 34.3	
	comp=Z,8.6nm,0.6s						
SPMN	Marine on St.	79.16	343	P	P	01 48 33.9	-0.5
	baz=159,SNR=5.1						
KNB	Kanab	79.42	326	P	P	01 48 37.5	+1.3
KNB				IAmb	IAmb	01 48 38.9	
	comp=Z,15nm,1.0s						
HEC	Hector,Ludlow	79.49	322	P	P	01 48 37.2	+0.7
	baz=140						
N23A	Red Feather La	79.56	332	P	P	01 48 38.1	+1.1
	baz=148,SNR=6.6						
BFSC	Mount Baldy Ra	79.75	321	P	P	01 48 39.3	+1.4
	baz=139						
O20A	White River Ci	79.87	330	P	P	01 48 39.5	+0.9
	baz=146,SNR=6.1						
CCUT	Cedar City	80.10	326	P	P	01 48 41.4	+1.5
CCUT				IAmb	IAmb	01 48 42.9	
	comp=Z,12nm,0.9s						
GSC	Goldstone, Bar	80.10	322	P	P	01 48 41.2	+1.4
	baz=140						
DECC	Green Verdugo	80.13	320	P	P	01 48 41.1	+1.2
	baz=139						
P18A	Preston Nutter	80.32	329	IAmb	IAmb	01 48 42.9	
	comp=Z,10nm,0.8s						
EDW2	Edwards Air Fo	80.42	321	P	P	01 48 42.4	+1.0
	baz=139						
TORD	Torodi Ar. Bea	80.67	69	P	P	01 48 43.2	+0.1
	comp=Z,17nm,0.9s,baz=267,slow=5.1,SNR=91						
TORD				pP	pP	01 49 10.1	+0.3
	comp=Z,4.2nm,0.7s,baz=261,slow=4.9,SNR=3.5						
TORD	Torodi Ar. Bea	80.67	69	P	P	01 48 42.6	-0.5
TORD				IAmb	IAmb	01 48 44.2	
	comp=Z,10nm,0.8s						
LRMC	Laurel Mtn Rad	80.70	321	P	P	01 48 44.3	+1.3
	baz=139						
RWWY	Rawlins	80.74	332	IAmb	IAmb	01 48 44.4	
	comp=Z,24nm,0.9s						
RDMU	Red Mountain	80.80	330	IAmb	IAmb	01 48 45.4	
	comp=Z,14nm,0.8s						
PRN	Pahroc Range	80.82	324	IAmb	IAmb	01 48 46.4	
	comp=Z,15nm,1.1s						
LBTB	Lobatse	80.94	114	P	P	01 48 44.8	+0.1
FURC	Furnace Creek,	81.02	323	P	P	01 48 46.0	+1.5
	baz=140						
MPMC	Manual Prospec	81.04	322	P	P	01 48 46.1	+1.2
	baz=139						
TPNV	Topopah Spring	81.07	323	P	P	01 48 46.5	+1.5
	baz=140						
ISA	Isabella, Lake	81.26	321	P	P	01 48 47.2	+1.3
	baz=139						
K22A	Casper	81.28	333	IAmb	IAmb	01 48 48.2	
	comp=Z,26nm,1.1s						
K22A	Casper	81.28	333	P	P	01 48 47.6	+1.6
	baz=148						
EYMN	Ely	81.41	345	P	P	01 48 46.2	-0.2
	baz=160						
PKM	Mcpherson Peak	81.42	320	P	P	01 48 49.0	+2.0
	baz=138						
RSSD	Black Hills	81.61	335	P	P	01 48 48.0	+0.3
RSSD	Black Hills	81.61	335	P	P	01 48 48.2	+0.5
	baz=150						
CWC	Cottonwood Cre	81.64	322	P	P	01 48 49.0	+1.0
	baz=139						
VES	Vestal, Richgr	81.73	321	P	P	01 48 49.2	+1.0
	baz=138						
R11A	Troy Canyon, C	81.82	325	P	P	01 48 49.9	+1.0
	baz=141,SNR=9.0						
DUG	Dugway, Tooele	81.94	327	P	P	01 48 50.4	+0.9
	baz=143,SNR=6.2						
B35A	Bob, Littlefor	82.32	344	IAmb	IAmb	01 48 51.8	
	comp=Z,13nm,0.8s						
TPH	Tonopah	82.43	323	IAmb	IAmb	01 48 54.4	
	comp=Z,33nm,1.0s						
BW06	Boulder Array	82.60	331	P	P	01 48 53.0	0.0
	baz=146,SNR=6.9						
PDAR	Pinedale Array	82.60	331	P	P	01 48 53.2	+0.2
	comp=Z,4.0nm,0.8s,baz=134,slow=6.9,SNR=28						
PDAR				pP	pP	01 49 22.0	+1.8
	comp=Z,1.3nm,0.7s,baz=123,slow=5.5,SNR=4.1						
AGMN	Agassiz Nation	82.80	342	P	P	01 48 53.7	+0.1
	baz=157						
NVAR	Mina Array Bea	83.25	323	P	P	01 48 57.5	+1.1
	comp=Z,3.3nm,0.8s,baz=156,slow=6.0,SNR=20						
NVAR	Mina Array Bea	83.25	323	P	P	01 48 56.9	+0.5
MDND	Maddock	83.44	340	P	P	01 48 57.3	+0.4
	baz=154						
YERR	Yerington	84.15	323	IAmb	IAmb	01 49 03.4	
	comp=Z,12nm,1.1s						
FLWY	Flagg Ranch	84.16	331	IAmb	IAmb	01 49 02.8	
	comp=Z,20nm,1.4s						
PNTR	Pine Nut	84.42	323	IAmb	IAmb	01 49 04.8	
	comp=Z,16nm,0.8s						
RLMT	Red Lodge	84.43	332	IAmb	IAmb	01 49 03.6	
	comp=Z,7.3nm,0.8s						
RLMT	Red Lodge	84.43	332	P	P	01 49 03.1	+0.8
	baz=146,SNR=5.3						
ULM	Lac du Bonnet	84.60	343	P	P	01 49 02.6	-0.1
	comp=Z,11nm,0.7s,baz=157,slow=3.5,SNR=15						
ULM	Lac du Bonnet	84.60	343	P	P	01 49 02.0	-0.7
ULM				IAmb	IAmb	01 49 03.7	
	comp=Z,12nm,0.8s						
LAO	LASA Array	84.60	335	P	P	01 49 03.4	+0.5
	baz=148						
YMR	Madison River	84.75	331	IAmb	IAmb	01 49 06.2	
	comp=Z,15nm,1.0s						
PAHR	Pah Rah Range	84.77	323	IAmb	IAmb	01 49 06.4	
	comp=Z,21nm,1.5s						
YHH	Holmes Hill	84.80	331	IAmb	IAmb	01 49 06.3	
	comp=Z,8.8nm,0.9s						
HLID	Hailey	85.34	329	IAmb	IAmb	01 49 09.0	
	comp=Z,9.9nm,1.0s						
HLID	Hailey	85.34	329	P	P	01 49 07.9	+1.1
	baz=142,SNR=12						
DGMT	Dagmar	85.43	337	P	P	01 49 07.5	+0.6
	baz=150,SNR=11						
SCHQ	Schefferville	85.72	1	P	P	01 49 07.9	-0.3
	comp=Z,6.7nm,0.9s,baz=182,slow=5.0,SNR=6.9						
ORV	Oroville	85.75	322	IAmb	IAmb	01 49 11.1	
	comp=Z,17nm,1.5s						
BOZ	Bozeman (W)	85.78	331	P	P	01 49 09.4	+0.5
	baz=144						
DLMT	Dillon	85.99	331	IAmb	IAmb	01 49 12.0	
	comp=Z,12nm,1.4s						
MOD	Modoc Plateau	86.86	324	P	P	01 49 14.7	+0.3
MOD				IAmb	IAmb	01 49 16.3	
	comp=Z,8.1nm,0.8s						
EGMT	Eagleton	87.03	334	IAmb	IAmb	01 49 15.9	
	comp=Z,9.1nm,0.8s						
EGMT	Eagleton	87.03	334	P	P	01 49 14.8	0.0
	baz=146,SNR=5.7						
PLID	Pearl Lake	87.24	329	IAmb	IAmb	01 49 17.9	
	comp=Z,16nm,0.9s						
M04C	Macdoel	87.55	323	P	P	01 49 18.6	+0.9
	baz=137						
MSO	Missoula	87.72	331	P	P	01 49 19.3	+1.1
	baz=143						
L04D	Klamath Falls	88.11	323	P	P	01 49 20.8	+0.6
	baz=136						
K04D	Chiloquin, OR	88.12	324	P	P	01 49 21.3	+1.0
	baz=137						
J05D	Fort Rock, OR	88.35	325	P	P	01 49 22.1	+0.8
	baz=137,SNR=5.8						
L02E	Cave Junction	88.73	323	P	P	01 49 24.7	+1.6
	baz=136						
J04D	Umpqua Nationa	88.75	324	P	P	01 49 24.6	+1.3
	baz=137						
K02D	Willamette Mer	89.15	323	P	P	01 49 26.3	+1.3
	baz=136						
I05D	Terrebonne, OR	89.17	325	P	P	01 49 26.4	+1.3
	baz=137						
WALA	Waterton Lakes	89.48	332	IAmb	IAmb	01 49 28.1	
	comp=Z,18nm,1.3s						
G05D	Wamic, OR	89.82	326	P	P	01 49 29.9	+1.8
	baz=137						
HAWA	Hanford	89.84	328	IAmb	IAmb	01 49 29.9	
	comp=Z,7.8nm,1.2s						
ESDC	Sonseca Array	92.68	44	P	P	01 49 41.4	-0.1
	comp=Z,0.4nm,0.7s,baz=247,slow=2.8,SNR=5.2						
YKA	Yellowknife Ar	100.35	340	P	Pdif	01 50 15.5	0.0
	comp=Z,0.7nm,0.6s,baz=144,slow=4.2,SNR=9.9						
ILAR	Eielson Array	112.98	333	PKiKP	PKiKP	01 55 05.2	-0.1
	comp=Z,0.5nm,0.8s,baz=144,slow=1.7,SNR=3.3						
TOLK	Toolik Lake Re	115.45	336	P	PKiKP	01 55 10.8	+0.7
	baz=110						
H21K	Melozitna Rive	115.62	333	P	PKiKP	01 55 11.0	+0.6
	baz=109						
BRTR	Keskin Array B	118.07	59	PKP	PKPdf	01 55 15.8	-0.3
	comp=Z,0.7nm,0.7s,baz=163,slow=2.4,SNR=6.7						
BRTR				pPKP	pPKPdf	01 55 44.3	-0.4
	comp=Z,0.7nm,0.8s,baz=188,slow=2.5,SNR=4.2						
AKASG	Malin Array Be	118.30	46	PKP	PKPdf	01 55 15.1	-0.9
	comp=Z,0.8nm,0.6s,baz=261,slow=3.0,SNR=5.3						
ASAR	Alice Springs	121.25	204	PKP	PKPdf	01 55 21.6	-1.1
	comp=Z,1.1nm,0.6s,baz=140,slow=2.0,SNR=17						
ASAR				pPKP	pPKPdf	01 55 49.1	-2.3
	comp=Z,0.7nm,0.8s,baz=136,slow=2.5,SNR=3.4						
ASAR				PKKPbc	PKKPbc	02 05 24.1	0.0
	comp=Z,0.7nm,0.7s,baz=322,slow=3.8,SNR=5.1						
WRA	Warramunga Arr	124.49	207	PKP	PKPdf	01 55 28.2	-0.8
	comp=Z,2.3nm,0.6s,baz=169,slow=1.7,SNR=22						
WRA				pPKP	pPKPdf	01 55 55.5	-2.2
	comp=Z,1.3nm,0.7s,baz=172,slow=1.6,SNR=3.2						
KLMR	Klimovskoe	125.56	35	*e*PKPdf	PKPdf	01 55 28.7	-0.9
KLMR				AMP		01 55 43.0	
	comp=Z,39nm,1.5s						
ABKAR	Akbulak array	137.81	50	PKPdf	PKPdf	01 55 53.0	-0.1
HRA	Herat	139.04	72	PKPdf	PKPdf	01 55 54.7	-1.4
KBL	Kabul	144.62	73	PKPdf	PKPab	01 56 04.2	-0.8
TAS	Tashkent	145.03	61	PKPbc	PKPab	01 56 06.0	-0.1
KKAR	Karatay Array	145.78	58	PKPbc	PKPdf	01 56 07.8	+0.2
BTK	Batken	146.25	64	PKPbc	PKPdf	01 56 09.1	+0.5
YAK	Yakutsk	146.93	344	PKPbc	PKPbc	01 56 11.2	+0.2
HYB	Hyderabad	147.36	107	*i* PKP	PKPab	01 56 14.5	-1.1
HYB				*e*		01 56 43.0	
TOLI2	Tolitoli	148.71	199	PKPbc	PKPbc	01 56 15.9	-1.2
AAK	Ala-Archa	148.75	58	PKP	PKPdf	01 56 14.2	+1.5
	comp=Z,13nm,0.7s,baz=225,slow=1.7,SNR=33						
AAK				PKPbc	PKiKP	01 56 17.7	-0.3
	comp=Z,13nm,0.7s,baz=221,slow=2.5,SNR=45						
AAK				pPKPbc	pPKPbc	01 56 46.0	+1.1
	comp=Z,7.4nm,0.7s,baz=182,slow=1.9,SNR=5.0						
AAK	Ala-Archa	148.75	58	P	PKiKP	01 56 17.8	-0.3
	SNR=13						
AAK	Ala-Archa	148.75	58	PKPbc	PKPbc	01 56 17.2	+0.5
UCH	Uchtor	148.83	59	P	PKiKP	01 56 18.1	-0.4
	SNR=15						
KURBB	Kurchatov Arra	148.98	42	PKP	PKPdf	01 56 13.3	+0.7
	comp=Z,5.0nm,0.7s,baz=301,slow=3.1,SNR=43						
KURBB				PKPbc	PKPbc	01 56 17.1	+0.3
	comp=Z,5.9nm,0.7s,baz=304,slow=3.0,SNR=40						
KURBB				pPKP	pPKPdf	01 56 42.6	+1.5
	comp=Z,4.4nm,0.8s,baz=298,slow=2.8,SNR=8.4						
KURBB				pPKPbc	pPKPbc	01 56 45.7	+0.7
	comp=Z,4.4nm,0.8s,baz=297,slow=3.0,SNR=8.0						
KURK	Kurchatov	148.99	42	PKPbc	PKPbc	01 56 16.8	+0.1
KBK	Karagaybulak	149.08	58	P	PKiKP	01 56 18.4	-0.4
	SNR=9.3						
TKM2	Tokmak 2	149.50	57	P	PKiKP	01 56 19.1	-0.6
	SNR=11						
KSH	Kashi	150.25	64	pPKP	pPKPdf	01 56 48.0	+4.3
KSH	Kashi	150.25	64	PKPbc	PKPdf	01 56 16.0	+0.8
ZALV	Zalesovo Beam	150.43	32	PKP	PKPdf	01 56 14.7	-0.1
	comp=Z,0.4nm,0.3s,baz=292,slow=2.8,SNR=3.7						
ZALV				PKPbc	PKPbc	01 56 20.3	+0.1
	comp=Z,20nm,0.6s,baz=313,slow=3.3,SNR=63						
ZALV				PKPab	PKPab	01 56 26.8	-0.2
	comp=Z,2.0nm,0.6s,baz=306,slow=5.1,SNR=5.0						
ZALV				pPKPbc	pPKPbc	01 56 48.7	+0.2
	comp=Z,19nm,0.9s,baz=304,slow=3.4,SNR=10						
ZALV	Zalesovo Beam	150.43	32		PKPbc	01 56 19.6	-0.6
MKAR	Makanchi Array	152.88	47	PKPbc	PKPbc	01 56 25.9	-0.1
	comp=Z,6.4nm,0.8s,baz=303,slow=2.1,SNR=49						
MKAR				PKPab	PKPab	01 56 37.8	+0.2
	comp=Z,6.1nm,0.7s,baz=299,slow=4.1,SNR=20						
MKAR				pPKPbc	pPKPbc	01 56 54.6	+0.1
	comp=Z,6.7nm,0.8s,baz=313,slow=2.2,SNR=9.8						
MJAR	Matsushiro Arr	157.00	291	PKPab	PKPab	01 56 56.3	+0.7
	comp=Z,3.9nm,0.9s,baz=111,slow=2.3,SNR=7.0						
SONM	Songino Array	163.01	11	PKP	PKPdf	01 56 31.8	+0.5
	comp=Z,0.6nm,0.8s,baz=298,slow=3.2,SNR=4.1						
SONM				PKPab	PKPab	01 57 21.9	+0.6
	comp=Z,2.1nm,0.7s,baz=322,slow=4.5,SNR=13						
CMAR	Chiang Mai Arr	163.12	136	PKP	PKPdf	01 56 32.9	+0.8
	comp=Z,1.0nm,0.3s,baz=235,slow=1.0,SNR=5.0						
XAN	Xi'an	176.60	34	PKP	PKPdf	01 56 38.3	-1.2

KRNET 26 01:55:35.1±0.1, 40°.50N×77°.65E, mb2.7, 12C, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	1.24	5	⇑*i*P	Pg	01 55 57.7	-1.1
	baz=5.0						
TARG				⇑*i*S	Sg	01 56 14.3	-0.5
	baz=5.0						
KDJ	Kajisay	1.67	348	⇑*i*P	Pn	01 56 04.4	-1.4
	baz=48						
KDJ				⇑*i*S	Sn	01 56 25.6	-2.4
	baz=48						
ULHL	Ulahol	2.04	329	⇑*i*P	Pn	01 56 09.8	-1.1
	baz=29						
ULHL				⇑*i*S	Sn	01 56 34.9	-2.4
	baz=29						
PRZ	Przheval'sk	2.06	16	⇑*i*P	Pn	01 56 10.0	-1.2
	baz=16						
PRZ				⇑*i*S	Sn	01 56 35.9	-1.8
	baz=16						
ANVS	Anan'yevo	2.28	0	⇑*e*P	Pn	01 56 13.1	-1.1
	baz=0.0						
ANVS				⇑*i*S	Sn	01 56 40.7	-2.5
	baz=0.0						
BOOM	Boomskoye usch	2.37	328	⇑*i*P	Pn	01 56 14.4	-1.0
	baz=28						
BOOM				⇑*i*S	Sn	01 56 42.7	-2.5
	baz=28						

BJI ***26*** *02:17:22.6±0.0, 21°.69N×143°.32E, h288^{km}, mB4.8/34, mb4.5/64*

MOS ***26*** *02:17:22.5±0.8, 21°.57N×143°.29E, h289^{km}, mb5.0/62, Error ellipse: s-maj=8.9km s-min=4.3km az=112.4*

IDC ***26*** *02:17:23.8±0.9, 21°.58N×143°.22E, h289^{km}±8^{km}, mb4.3/32, mb1 4.5/35, mb1mx4.4/43, mbtmp5.0/35, Error ellipse: s-maj=10.0km s-min=7.1km az=86.0*

GCMT ***26*** *02:17:23.4±0.4, 21°.62N±0°.03×143°.22E±0°.04, h295^{km}±2^{km}, MW5.2/79, Moment Tensor Solution. s79,c105; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.80±.04; M$_{\theta\theta}$-0.48±.05; M$_{\phi\phi}$-0.31±.06; M$_{r\theta}$-0.47±.06; M$_{\theta\phi}$-0.30±.05; M$_{\phi r}$-0.11±.06; Best double couple: M$_0$0.89600×10^{17} NP1:φ$_s$44.00000°, δ30.00000°, λ73.00000°. NP2:φ$_s$244.00000°, δ61.00000°, λ100.00000°. Principal axes: T 0.9560, Plg72.0000°, Azm178.0000°; N -0.1210, Plg9.0000°, Azm59.0000°; P -0.8350, Plg15.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

NEIC ***26*** *02:17:24.4±1.6, 21°.57N±0°.07×143°.3E±0°.1, h290^{km}±5^{km}, mb4.8/235 Error ellipse: s-maj=14.9km s-min=10.0km az=83.0*

ISC 26 02:17:23.8±0.4, 21°.61N±0°.03×143°.35E±0°.05, h292^{km}±3^{km}, h293^{km}:pP-P, n669, σ1^{s}21/663, mb4.8/211, 15C-15D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	5.56	349	P	Pn	02 18 47.7	+0.1
CBIJ				S	S	02 19 55.5	+0.5
JCJ	Chichijima	5.56	349	Pn	Pn	02 18 48.2	+0.6
GUMO	Guam	8.11	169	P	Pn	02 19 19.6	+0.8
	43nm,0.3s,baz=34,slow=2.3,SNR=15						
GUMO	Guam	8.11	169	Pn	Pn	02 19 18.8	0.0
GUMO	Guam	8.11	169	P	Pn	02 19 21.7	+2.9
GUMO	Guam	8.11	169	P	Pn	02 19 20.1	+1.3
JHJ2	Mitsune	11.88	345	Pn	Pn	02 20 05.2	+0.3
JHJ2	Mitsune	11.88	345	P	P	02 20 07.7	+1.1
JHJ	Hachijo jima 2	11.89	345	P	Pn	02 20 05.8	+0.7
	66nm,0.3s,baz=274,slow=22,SNR=11						
JHJ				S	S	02 22 13.8	-3.6
	8.9nm,0.3s,baz=91,slow=24,SNR=1.9						
JSG	Sagara	13.78	342		Pn	02 20 28.7	+0.8
JIE	Ise	14.01	337	P	Pn	02 20 31.3	+0.6
JOD2	Odawara 2	14.11	346	P	Pn	02 20 32.4	+0.6
JOD2				S	S	02 23 02.1	-4.8
JMN	Monobe	14.69	327	P	Pn	02 20 41.2	+2.4
JMN	Monobe	14.69	327		Pn	02 20 39.5	+0.7
JOW	Kunigami	14.70	294	P	Pn	02 20 40.8	+1.9
	3.8nm,0.3s,baz=133,slow=8.6,SNR=9.4						
JOW				S	S	02 23 20.3	+1.1
	1.0nm,0.3s,baz=76,slow=9.0,SNR=3.6						
JOW	Kunigami	14.70	294	P	Pn	02 20 40.4	+1.4
INU	Inuyama	14.77	339		Pn	02 20 39.4	-0.2
INU	Inuyama	14.77	339	P	Pn	02 20 40.4	+0.7
JYT	Yasato	14.82	350	P	Pn	02 20 40.5	+0.2
JYT				S	S	02 23 18.7	-2.8
JYT	Yasato	14.82	350		Pn	02 20 39.8	-0.5
JRY	Ryogami san	14.87	346	P	Pn	02 20 40.8	-0.1
JRY				S	S	02 23 17.0	-5.6
JGF	Kuroka	14.89	341	P	Pn	02 20 41.5	+0.3
JGF	Kuroka	14.89	341	P	Pn	02 20 41.4	+0.3
JSU	Suzuyama	15.16	313	P	Pn	02 20 44.8	+0.5
JSU	Suzuyama	15.16	313		Pn	02 20 44.0	-0.3
JWT	Wachi	15.30	335	P	Pn	02 20 46.2	+0.3
JWT	Wachi	15.30	335	P	P	02 20 44.6	+0.2
JGN	Niukaw	15.48	341	P	Pn	02 20 48.0	-0.1
JAD	Aida	15.53	331	P	Pn	02 20 48.7	0.0
MJAR	Matsushiro Arr	15.54	344	P	P	02 20 47.6	+0.5
	2.7nm,0.3s,baz=161,slow=8.5,SNR=108						
MJAR				ScP	ScP	02 28 35.0	-1.5
	0.2nm,0.3s,baz=228,slow=3.4,SNR=6.9						
MJAR	Matsushiro Arr	15.54	344	P	P	02 20 47.0	-0.1
MJAR				pmax	pmax		
	comp=Z,97nm,0.8s						
MJAR	Matsushiro Arr	15.54	344	P	P	02 20 47.0	-0.1
MAJO	Matsushiro	15.54	344	*c i*P	Pn	02 20 48.1	-0.6
MAJO				pmax	pmax		
	comp=Z,125nm,0.7s						
MAJO	Matsushiro	15.54	344		P	02 20 47.7	+0.6
MAJO	Matsushiro	15.54	344	P	Pn	02 20 48.9	+0.2
MAT	Matsushiro	15.54	344	P	Pn	02 20 48.1	-0.6
MAT				S	S	02 23 30.0	-5.9
MAT	Matsushiro	15.54	344	P	Pn	02 20 48.1	-0.6
MAT				S	S	02 23 32.3	-3.6
MJB9	Matsu-Tunnel	15.54	344	P	P	02 20 47.7	+0.5
JNU	Nakatsue	15.92	319	P	Pn	02 20 54.0	+0.6
	comp=Z,4.0nm,0.3s,baz=120,slow=5.1,SNR=25						
JNU	Nakatsue	15.92	319	P	Pn	02 20 53.7	+0.4
JNU				S	S	02 23 44.4	+0.6
JNU	Nakatsue	15.92	319	P	P	02 20 51.8	+0.4
JNU	Nakatsue	15.92	319	P	Pn	02 20 54.8	+1.5
JHS	Saijyo	16.08	328	P	Pn	02 20 55.2	+0.1
JHS	Saijyo	16.08	328	P	Pn	02 20 55.2	+0.1
JMM	Marumori	16.35	353	P	Pn	02 20 57.8	-0.3
JSD	Sado	16.95	346	P	P	02 21 02.7	+0.3
JSD				*e*S	S	02 23 53.1	-11
JSD	Sado	16.95	346	P	P	02 21 03.2	+0.8
JFU	Fukue jima 2	17.00	313	P	Pn	02 21 04.9	-1.0
JYA	Atsumi	17.21	350	P	Pn	02 21 07.8	-0.5
JOM	Ohasama	17.89	355	P	Pn	02 21 14.5	-1.7
JOM				S	S	02 24 31.8	+9.2
JTM	Tenmabayashi	19.21	355	P	P	02 21 28.3	+1.6
JTM	Tenmabayashi	19.21	355	P	P	02 21 28.6	+1.9
JOT	Ohata	19.81	355	P	P	02 21 34.4	+1.4
TJN	Taejon	20.25	320	*c i*P	P	02 21 38.8	+1.1
ERM	Erimo	20.34	360	P	P	02 21 39.3	+0.7
ERM				pmax	pmax		
	comp=Z,135nm,0.7s						
ERM	Erimo	20.34	360	P	P	02 21 39.3	+0.7
ERM	Erimo	20.34	360	P	Pn	02 21 41.7	-2.5
JEM	Erimo	20.34	360	P	P	02 21 40.9	+2.3
YHNB	Yeheng	20.43	283	P	P	02 21 39.3	-0.5
YHNB				IAmb	IAmb	02 21 41.1	
	comp=Z,85nm,1.5s						
KSRS	Korea Array	20.67	323	P	P	02 21 40.1	-1.8
	comp=Z,54nm,0.6s,baz=148,slow=9.1,SNR=125						
KSRS				ScP	ScP	02 28 47.7	+0.3
	comp=Z,12nm,1.1s,baz=146,slow=2.5,SNR=17						
KSAR	Wonju Array Be	20.69	323	P	P	02 21 41.6	-0.5
KSAR	Wonju Array Be	20.69	323	P	P	02 21 41.6	-0.5
KS19	Wonju Array Si	20.74	323	P	P	02 21 42.0	-0.7
SSLB	Suanglung	20.77	280	P	P	02 21 43.4	+0.3
SSLB				IAmb	IAmb	02 21 54.1	
	comp=Z,48nm,1.2s						
SSLB	Suanglung	20.77	280	P	P	02 21 45.4	+2.2
JSH	Shimam	21.15	353	P	P	02 21 47.8	+1.3
JEW	Eniwo	21.23	356	P	P	02 21 48.7	+1.5
JEW	Eniwo	21.23	356	P	P	02 21 48.5	+1.2
INCN	Inchon	21.43	321	P	P	02 21 50.5	+1.3
INCN				pmax	pmax		
	comp=Z,81nm,1.2s						
INCN	Inchon	21.43	321	P	P	02 21 50.5	+1.3
INCN				IAmb	IAmb	02 21 53.3	
	comp=Z,81nm,1.2s						
INCN	Inchon	21.43	321	P	P	02 21 51.2	+2.0
ASAJ	Asahikawa	22.45	359	P	P	02 21 59.6	+1.2
	comp=Z,40nm,0.6s,baz=273,slow=4.2,SNR=16						
ASAJ	Asahikawa	22.45	359	P	P	02 22 00.1	+1.7
ASAJ	Asahikawa	22.45	359	P	P	02 21 58.5	+0.1
ASAJ				pmax	pmax		
	comp=Z,49nm,0.8s						
JKA	Kamikawa-asahi	22.45	359	P	P	02 21 58.5	+0.1
JKA				IAmb	IAmb	02 22 04.2	
	comp=Z,50nm,0.8s						
VLA	Vladivostok	23.48	339	⇓*i*P	P	02 22 09.3	+1.6
VLA				pmax	pmax		
	comp=Z,85nm,0.7s						
KUR	Kuril'sk	23.85	8	⇑*e*P	P	02 22 12.9	+1.9
NJ2	Nanjing	24.15	301	*e*P	P	02 22 15.0	+1.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USA0B	Ussuriysk Arra	24.41	340	P	P	02 22 16.6	+0.5
USA0B				pmax	pmax		
	comp=Z,35nm,0.7s						
USA0B	Ussuriysk Arra	24.41	340	P	P	02 22 16.6	+0.5
USA0B				IAmb	IAmb	02 22 19.2	
	comp=Z,35nm,0.7s						
USRK	Ussuriysk Ar.	24.41	340	P	P	02 22 17.1	+0.9
	comp=Z,34nm,0.7s,baz=164,slow=9.3,SNR=73						
USRK	Ussuriysk Ar.	24.41	340	P	P	02 22 16.9	+0.7
SIJI	Sorong	25.27	209	P	P	02 22 23.6	-0.6
	comp=Z,19nm,0.7s,baz=37,slow=17,SNR=5.6						
YSS	Yuzh-Sakhalins	25.29	359	*e*P	P	02 22 24.2	+0.3
YSS				*e*S	S	02 26 26.6	-1.0
YSS				*e**SS	sS	02 28 01.3	-4.3
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				smax	smax		
	comp=N,300nm,5.1s						
DL2	Dalian	25.37	318	P	P	02 22 27.5	+2.7
DL2				pmax	pmax		
	comp=N,72nm,0.8s						
MDJ	Mudanjiang	25.60	337	P	P	02 22 29.0	+2.2
MDJ				pmax	pmax		
	comp=N,28nm,0.9s						
MDJ				pmax	pmax		
	comp=N,230nm,3.6s						
MDJ	Mudanjiang	25.60	337	IAmb	IAmb	02 22 29.8	
	comp=Z,27nm,1.0s						
MDJ	Mudanjiang	25.60	337	P	P	02 22 28.7	+1.9
CN2	Changchun	26.65	330	*e*P	P	02 22 36.5	+0.3
CN2				*e*S	S	02 26 48.5	-0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FAKI	Fak Fak	26.69	205	P	P	02 22 35.6	-1.3
FAKI				IAmb	IAmb	02 22 51.8	
	comp=Z,80nm,1.5s						
FAKI	Fak Fak	26.69	205	P	P	02 22 36.0	-0.9
TIA	Tai'an	27.07	308	⇑P	P	02 22 40.5	+0.5
TIA				pmax	pmax		
	comp=Z,22nm,1.0s						
WHN	Wuhan	27.46	295	⇑P	P	02 22 44.0	+0.5
GTOI	Gorontalo	28.77	226	P	P	02 22 55.6	+0.3
	comp=Z,15nm,1.3s						
KLR	Kul'dur	29.06	344	P	P	02 22 58.1	+0.6
	comp=Z,82nm,0.6s,baz=152,slow=7.7,SNR=267						
KLR	Kul'dur	29.06	344	*d i*P	P	02 22 57.9	+0.4
KLR				pmax	pmax		
	comp=Z,83nm,0.6s						
MYLDM	Lahad Datu	29.09	239	P	P	02 22 58.2	+0.1
BJI	Beijing	29.52	315	P	P	02 23 00.5	-1.1
BJI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GRNR	Gornyy	29.60	351	⇓*i*P	P	02 23 03.4	+1.2
GRNR				pmax	pmax		
	comp=N,8.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,220nm,10.0s						

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GRNR                              MLR     MLR
      comp=N,120nm,13.0s
GRNR                              MLR     MLR
      comp=Z,320nm,16.0s
MRSI  Marisa            29.62 228  P      P       02 23 02.0 -0.7
      comp=Z,38nm,1.3s
TOLI2 Tolitoli          29.98 230  P      P       02 23 05.4 -0.5
TOLI2                              IAmb   IAmb    02 23 09.9
      comp=Z,25nm,1.2s
TOLI2 Tolitoli          29.98 230  P      P       02 23 06.1 +0.2
SPMM  Sapulut           31.01 241  P      P       02 23 16.0 +1.0
PMG   Port Moresby      31.05 173  P      P       02 23 14.6 -0.7
PMG                                pmax   pmax
      comp=Z,28nm,0.7s
PMG   Port Moresby      31.05 173  P      P       02 23 14.6 -0.7
PMG                                IAmb   IAmb    02 23 15.6
      comp=Z,28nm,0.7s
PMG   Port Moresby      31.05 173  P      P       02 23 15.5 +0.2
PMG   Port Moresby      31.05 173  P      P       02 23 15.4 +0.2
ENH   Enshi             31.55 293  P      P       02 23 18.9 -0.7
XAN   Xi'an             32.71 300  P      P       02 23 29.8 +0.2
XAN                                pP     pwP     02 24 29.3 -1.1
XAN                                sP     sP      02 25 02.0 +3.3
XAN                                PcP    PcP     02 26 09.3 +1.6
XAN                                S      S       02 28 21.0 -3.1
XAN                                ScP    ScP     02 29 24.0 +0.5
XAN                                pmax   pmax
      comp=Z,17nm,1.0s
XAN                                LR     LR
      comp=Z,300nm,12.4s
XAN                                LR     LR
      comp=Z,200nm,13.1s
HHC   Hu-ho-hao-te      33.00 313 eP      P       02 23 32.5 +0.4
HHC                                sP     sP      02 25 07.3 +4.6
HHC                                S      S       02 28 29.0 +0.4
HHC                                pmax   pmax
      comp=Z,13nm,1.2s
HHC                                pmax   pmax
      comp=Z,74nm,6.6s
PETK  Petropavlovsk-    33.32  16  P      P       02 23 35.9 +1.4
      comp=Z,5.0nm,0.8s,baz=176,slow=7.1,SNR=11
PETK  Petropavlovsk-    33.32  16  P      P       02 23 35.0 +0.6
HIA   Hailar            33.36 332  P      P       02 23 35.5 +0.5
HIA                                pmax   pmax
      comp=Z,46nm,0.7s
HIA   Hailar            33.36 332  P      P       02 23 35.5 +0.5
PET   Petropavlovsk     33.49  17 eP      P       02 23 36.3 +0.4
PET                               eS      S       02 28 32.3 -3.1
PET                                pmax   pmax
      comp=Z,95nm,1.3s
PET                                MLR    MLR
      comp=Z,200nm,19.0s
PET   Petropavlovsk     33.49  17  P      P       02 23 35.6 -0.3
GYA   Guiyang           33.77 286 ⇑P      P       02 23 44.5 +5.6
GYA                                pmax   pmax
      comp=Z,20nm,0.8s
BTO   Baotou            33.97 312 eP      P       02 23 42.0 +1.6
ZEA   Zeya              34.34 343 eP      P       02 23 44.0 +0.8
ZEA                                pmax   pmax
      comp=N,50nm,0.9s
ZEA                                pmax   pmax
      comp=Z,50nm,0.5s
BKB   Balikpapan        34.42 232  P      P       02 23 44.3 -0.1
COEN  Coen              35.35 180  P      P       02 23 52.1 -0.1
COEN                               IAmb   IAmb    02 23 53.5
      comp=Z,42nm,1.2s
COEN  Coen              35.35 180  P      P       02 23 52.8 +0.6
      comp=Z,31nm,1.1s
SBUM  Sibu              35.77 242  P      P       02 23 57.0 +1.1
SBUM  Sibu              35.77 242  P      P       02 23 56.5 +0.7
SBUM                               IAmb   IAmb    02 23 57.7
      comp=Z,38nm,1.5s
MTN   Manton Dam        36.28 200  P      P       02 23 58.7 -1.4
MTN   Manton Dam        36.28 200  P      P       02 23 58.4 -1.7
      comp=Z,58nm,0.6s
CD2   Chengdu           36.53 293  P      P       02 24 02.3 +0.1
CD2                                S      S       02 29 19.0 -3.5
CD2                                pmax   pmax
      comp=Z,10.0nm,0.8s
SLVN  Son La            36.64 277  P      P       02 24 03.4 +0.2
LZH   Lanzhou           37.22 302 eP      P       02 24 08.5 +0.4
LZH                                pmax   pmax
      comp=Z,34nm,1.6s
MA2   Magadan           38.30   6  P      P       02 24 17.4 +1.0
MA2                                pmax   pmax
      comp=Z,24nm,1.1s
MA2   Magadan           38.30   6  P      P       02 24 17.4 +1.0
ULN   Ulaanbaatar       39.13 321d iP     P       02 24 24.2 +0.5
ULN                                pmax   pmax
      comp=Z,22nm,0.7s
ULN   Ulaanbaatar       39.13 321  P      P       02 24 24.6 +0.9
ULN                                IAmb   IAmb    02 24 25.6
      comp=Z,21nm,0.7s
SONM  Songino Array     39.50 320  P      P       02 24 27.5 +0.7
      comp=Z,21nm,0.6s,baz=132,slow=7.9,SNR=115
SONM                               PcP    PcP     02 26 29.0 +1.0
      comp=Z,1.9nm,0.5s,baz=144,slow=1.1,SNR=4.4
SONM                               ScP    ScP     02 29 48.8 +0.3
      comp=Z,9.1nm,1.1s,baz=138,slow=2.6,SNR=20
SONM  Songino Array     39.50 320  P      P       02 24 27.4 +0.6
SONM                               IAmb   IAmb    02 24 30.7
      comp=Z,21nm,0.7s
KNRA  Kununurra         39.72 202  P      P       02 24 27.8 -0.9
KNRA  Kununurra         39.72 202  P      P       02 24 27.5 -1.2
      comp=Z,151nm,0.7s
KNRA  Kununurra         39.72 202  P      P       02 24 28.4 -0.3
      comp=Z,151nm,0.7s
GTA   Gaotai            41.05 306 eP      P       02 24 39.8 +0.3
GTA                                pP     pwP     02 25 40.5 -0.9
GTA                                PcP    PcP     02 26 34.5 +1.3
GTA                                ScP    ScP     02 29 55.5 +0.8
GTA                                PcS    PcS     02 30 28.0 +3.2
GTA                                pmax   pmax
      comp=Z,5.0nm,1.0s
GTA                                pmax   pmax
      comp=Z,140nm,5.4s
GTA                                LR     LR
      comp=Z,210nm,15.6s
GTA                                LR     LR
      comp=Z,290nm,13.8s
GTA                                LR     LR
      comp=Z,190nm,12.7s
YAK   Yakutsk           41.48 350⇓iP      P       02 24 42.3 -0.1
YAK                               eAP     pwP     02 25 46.0 +0.1
YAK                               eS      S       02 30 34.0 -1.0
YAK                                pmax   pmax
      comp=Z,106nm,0.9s
YAK   Yakutsk           41.48 350  P      P       02 24 42.5 +0.1
CTA   Charters Tower    41.54 176  P      P       02 24 43.8 +0.3
      comp=Z,51nm,1.1s
CTAO  Charters Tower    41.54 176  P      P       02 24 43.1 -0.4
CTAO                               pmax   pmax
      comp=Z,31nm,0.7s
CTAO  Charters Tower    41.54 176  P      P       02 24 43.1 -0.4
CTAO                               IAmb   IAmb    02 24 44.5
      comp=Z,31nm,0.7s
CTAO  Charters Tower    41.54 176  P      P       02 24 43.9 +0.5
CTAO  Charters Tower    41.54 176  P      P       02 24 43.7 +0.3
      comp=Z,52nm,1.1s
CHTO  Chiang Mai        41.66 274  P      P       02 24 44.4 -0.1
CHTO                               pmax   pmax
      comp=Z,5.0nm,0.7s
CHTO  Chiang Mai        41.66 274  P      P       02 24 44.4 -0.1
CHTO  Chiang Mai        41.66 274  P      P       02 24 45.1 +0.6
CMAR  Chiang Mai Arr    41.73 274  P      P       02 24 45.6 +0.5
      comp=Z,3.3nm,0.6s,baz=60,slow=7.4,SNR=14
CMAR  Chiang Mai Arr    41.73 274ceP      P       02 24 46.5 +1.4
CMAR                               pmax   pmax
      comp=Z,3.0nm,0.6s
SEY   Seymchan          41.75   6⇑iP      P       02 24 45.1 +0.5
WB0   Warramunga Arr    42.05 193  P      P       02 24 46.6 -0.9
WB0                                IAmb   IAmb    02 24 48.0
      comp=Z,42nm,0.9s
QIS   Mount Isa         42.07 185  P      P       02 24 48.3 +0.6
      comp=Z,26nm,1.8s
WRAB  Tennant Creek     42.22 193  P      P       02 24 48.4 -0.5
WRAB                               pmax   pmax
      comp=Z,97nm,1.1s
WRAB  Tennant Creek     42.22 193  P      P       02 24 48.4 -0.5
WRAB                               IAmb   IAmb    02 24 49.5
      comp=Z,97nm,1.1s
WRAB  Tennant Creek     42.22 193  P      P       02 24 48.5 -0.5
WRAB  Tennant Creek     42.22 193  P      P       02 24 48.8 -0.1
WB2   Warramunga Arr    42.23 193  P      P       02 24 48.2 -0.7
WB2                                IAmb   IAmb    02 24 49.6
      comp=Z,70nm,0.9s
WRA   Warramunga Arr    42.23 193  P      P       02 24 48.4 -0.6
      comp=Z,35nm,0.8s,baz=16,slow=8.9,SNR=103
WRA                                PcP    PcP     02 26 37.3 +0.2
      comp=Z,7.6nm,0.8s,baz=6.6,slow=3.6,SNR=7.6
WRA                                ScP    ScP     02 30 00.3 +0.8
      comp=Z,3.0nm,1.0s,baz=6.6,slow=4.4,SNR=5.2
WRA                                S      S       02 30 44.4 -2.6
      comp=Z,2.5nm,1.1s,baz=5.4,slow=13,SNR=4.6
ZAK   Zakamensk         42.51 322 eP      P       02 24 51.6 +0.6
ZAK                               e               02 30 49.1
ZAK                                pmax   pmax
      comp=Z,45nm,0.9s
TLY   Talaya            42.92 324 eP      P       02 24 55.8 +1.6
TLY                               eS      S       02 30 59.6 +3.1
TLY                                pmax   pmax
      comp=Z,53nm,0.8s
TLY   Talaya            42.92 324  P      P       02 24 54.8 +0.6
MYKOM Kota Tinggi       43.19 248  P      P       02 24 59.0 +2.2
JRMM  Jerantut          43.39 252  P      P       02 24 59.0 +0.6
MOY   Mondy             44.38 323 eP      P       02 25 06.5 +0.7
MOY                                pmax   pmax
      comp=Z,24nm,1.4s
KULM  Kulim             44.39 255  P      P       02 25 07.0 +0.7
KULM  Kulim             44.39 255  P      P       02 25 07.1 +0.7
IPM   Ipoh              44.41 254  P      P       02 25 08.0 +1.5
IPM   Ipoh              44.41 254  P      P       02 25 06.8 +0.3
IPM                                IAmb   IAmb    02 25 08.4
      comp=Z,41nm,1.2s
IPM   Ipoh              44.41 254  P      P       02 25 08.4 +1.9
      comp=Z,30nm,1.6s
ATKA  Atka Island       44.67  36  P      P       02 25 08.1 +0.1
RK1H  Rockhampton Ha    45.27 171  P      P       02 25 12.4 -0.5
      comp=Z,23nm,0.7s
RK1H  Rockhampton Ha    45.27 171  P      P       02 25 12.6 -0.3
AS31  Alice Springs     45.93 192  P      P       02 25 17.4 -0.8
ASAR  Alice Springs     45.94 192  P      P       02 25 17.0 -1.2
      comp=Z,9.1nm,0.7s,baz=14,slow=9.6,SNR=62
ASAR                               PcP    PcP     02 26 50.0 +0.2
      comp=Z,5.9nm,0.8s,baz=27,slow=3.5,SNR=11
ASAR                               ScP    ScP     02 30 16.4 +1.9
      comp=Z,1.1nm,0.7s,baz=8.8,slow=4.2,SNR=5.2
ASAR                               S      S       02 31 37.4 -3.0
      comp=Z,2.9nm,0.8s,baz=21,slow=20,SNR=11
ASAR  Alice Springs     45.94 192  P      P       02 25 17.3 -1.0
BKNI  Bangkinang        46.35 248  P      P       02 25 22.1 +0.5
SHL   Shillong          47.09 285  P      P       02 25 27.1 -0.4
SHL                                pmax   pmax
      comp=Z,8.0nm,0.7s
SHL   Shillong          47.09 285  P      P       02 25 27.1 -0.4
EIDS  Eidsvold          47.30 170  P      P       02 25 27.9 -0.8
EIDS  Eidsvold          47.30 170  P      P       02 25 27.9 -0.8
      comp=Z,16nm,1.2s
LSA   Lhasa             47.41 291  P      P       02 25 30.0 -0.2
LSA                                pmax   pmax
      comp=Z,10.0nm,0.6s
LSA   Lhasa             47.41 291  P      P       02 25 30.0 -0.2
QLP   Quilpie           47.92 179  P      P       02 25 32.4 -0.9
      comp=Z,48nm,1.3s
QLP   Quilpie           47.92 179  P      P       02 25 32.5 -0.9
RMQ   Roma              48.10 173  P      P       02 25 34.4 -0.3
      comp=Z,12nm,0.7s
RMQ   Roma              48.10 173  P      P       02 25 34.5 -0.3
BILL  Bilibino          48.57  11c iP     P       02 25 39.0 +1.2
BILL                              e*PP    pP      02 26 36.9 -0.6
BILL                              e               02 27 37.9
BILL                              eS      S       02 32 16.9 +0.6
BILL                              eSS     SS      02 35 45.5 -4.7
BILL                               pmax   pmax
      comp=Z,44nm,0.7s
BILL  Bilibino          48.57  11  P      P       02 25 38.8 +1.0
BILL                               IAmb   IAmb    02 25 40.0
      comp=Z,42nm,0.7s
WRKA  Warakurna         48.62 198  P      P       02 25 37.3 -1.5
      comp=Z,41nm,0.9s
WRKA  Warakurna         48.62 198  P      P       02 25 38.4 -0.4
PSA00 Pilbara Seismi    48.67 210  P      P       02 25 38.0 -1.2
XMIS  Christmas Isla    48.85 233  P      P       02 25 38.7 -2.0
XMIS                               IAmb   IAmb    02 25 40.5
      comp=Z,72nm,1.2s
DZM   Mont Dzumac       48.91 151 eP      P       02 25 41.0 -0.1
      comp=Z,63nm,1.1s
DZM   Mont Dzumac       48.91 151  P      P       02 25 41.1  0.0
DZM   Mont Dzumac       48.91 151  P      P       02 25 41.6 +0.5
GSI   Gunungsitoli      48.91 252  P      P       02 25 40.6 -0.6
GSI                                IAmb   IAmb    02 25 42.1
      comp=Z,95nm,1.4s
GSI   Gunungsitoli      48.91 252  P      P       02 25 42.7 +1.5
INKA  Innaminka         49.13 183  P      P       02 25 42.0 -0.5
UNV   Unalaska Valle    49.59  37  P      P       02 25 46.5 +0.8
      baz=250
OOD   Oodnadatta        49.67 189  P      P       02 25 46.8 +0.2
TIXI  Tiksi             50.75 354⇓eP      P       02 25 53.9 -0.1
TIXI  Tiksi             50.75 354  P      P       02 25 54.0  0.0
WMQ   Urumqi            50.75 309 eP      P       02 25 56.0 +1.3
WMQ                                PcP    PcP     02 27 08.3 +1.1
WMQ                                pmax   pmax
      comp=Z,22nm,1.1s
WMQ                                pmax   pmax
      comp=Z,270nm,3.7s
WMQ                                LR     LR
      comp=Z,320nm,21.5s
FALS  False Pass        51.62  36  P      P       02 26 01.6 +0.8
      baz=252
GAMB  Gambell           51.64  24  P      P       02 26 02.3 +1.6
GAMB                               IAmb   IAmb    02 26 03.9
      comp=Z,44nm,1.3s
GAMB  Gambell           51.64  24  P      P       02 26 02.3 +1.6
      baz=237
DGZ   Jazzator, Alta    51.90 317ceP      P       02 26 04.1 +1.0
DGZ                                pmax   pmax
      comp=Z,19nm,0.7s
JIRN  Jiri              51.92 289 eP      P       02 26 04.3 +0.4
      comp=Z,45nm,0.6s
LCRK  Leigh Creek       51.99 186  P      P       02 26 03.9 +0.1
GUN   Gumba             52.17 289 eP      P       02 26 05.9 +0.2
      comp=Z,25nm,0.6s
MULG  Mulgathing        52.36 190  P      P       02 26 06.8 +0.3
PKI   Pulchoki          52.62 289 eP      P       02 26 08.7 -0.3
      comp=Z,14nm,0.6s
PKIN  Phulchoki         52.63 289 eP      P       02 26 08.9 -0.1
      comp=Z,16nm,0.6s
KKN   Kakani            52.71 289 eP      P       02 26 09.3 -0.2
      comp=Z,6.2nm,0.2s
DMN   Daman             52.88 289 eP      P       02 26 10.5 -0.3
ZSN   Zaisan            53.20 314 eP      P       02 26 13.0 +0.6
      baz=314
ZSN                               i S     S       02 33 21.1 +0.9
      baz=314
ZSN   Zaisan            53.20 314 eP      P       02 26 13.0 +0.6
STKA  Stephens Creek    53.21 182  P      P       02 26 12.1 -0.6
      comp=Z,11nm,0.7s,baz=0.4,slow=7.6,SNR=23
STKA  Stephens Creek    53.21 182  P      P       02 26 11.4 -1.2
STKA                               pmax   pmax
      comp=Z,3.0nm,0.8s
STKA  Stephens Creek    53.21 182  P      P       02 26 11.4 -1.2
STKA  Stephens Creek    53.21 182  P      P       02 26 12.3 -0.3
GKN   Gorkha            53.25 289 eP      P       02 26 13.4 +0.1
SDPT  Sand Point        53.39  36  P      P       02 26 14.4 +0.8
      baz=254
CHNA  Chernabura Isl    53.74  37  P      P       02 26 17.3 +1.1
      baz=256
TNA   Tin City          53.96  23  P      P       02 26 19.0 +1.4
      baz=240
DANN  Dangsing          53.97 290 eP      P       02 26 19.1 +0.4
FORT  Forrest           54.12 196  P      P       02 26 19.1 -0.1
FORT  Forrest           54.12 196  P      P       02 26 19.4 +0.2
ZAA0  Zalesovo Array    54.37 322  IAmb   IAmb    02 26 22.3
      comp=Z,48nm,0.9s
ZALV  Zalesovo Beam     54.37 322  P      P       02 26 20.8  0.0
      comp=Z,52nm,0.8s,baz=99,slow=6.8,SNR=168
ZALV                               PcP    PcP     02 27 20.2 -0.3
      comp=Z,7.0nm,0.5s,baz=115,slow=4.5,SNR=11
ZALV                               ScP    ScP     02 30 49.8 -0.6
      comp=Z,2.2nm,0.6s,baz=120,slow=5.3,SNR=7.1
ZALV                               S      S       02 33 33.9 -1.7
      comp=Z,0.2nm,0.3s,baz=101,slow=7.5,SNR=1.7
ZALV  Zalesovo Beam     54.37 322 i P     P       02 26 21.0 +0.3
ZALV                               pmax   pmax
      comp=Z,53nm,0.8s
ZALV  Zalesovo Beam     54.37 322  P      P       02 26 20.5 -0.2
ANM   Nome              54.43  24  P      P       02 26 22.5 +1.5
      baz=243
PYUN  Piuthan           54.68 290 eP      P       02 26 23.7  0.0
      comp=Z,27nm,0.7s
CHGN  Chignik           54.76  35  P      P       02 26 24.0 +0.5
      baz=256
MK31  Makanchi Array    54.87 313  P      P       02 26 24.6 +0.1
MK31                               pmax   pmax
      comp=Z,12nm,0.8s
MK31  Makanchi Array    54.87 313  P      P       02 26 24.6 +0.1
MKAR  Makanchi Array    54.87 313  P      P       02 26 25.0 +0.5
      comp=Z,16nm,0.6s,baz=92,slow=9.2,SNR=169
MKAR                               PcP    PcP     02 27 22.4 -0.3
      comp=Z,2.6nm,0.4s,baz=79,slow=3.4,SNR=14
MKAR                               ScP    ScP     02 30 53.0 +0.2
      comp=Z,6.7nm,0.9s,baz=88,slow=6.2,SNR=13
MKAR                               S      S       02 33 42.9 +0.4
      comp=Z,2.0nm,1.0s,baz=96,slow=15,SNR=8.6
MAKZ  Makanchi          55.08 313  P      P       02 26 26.4 +0.4
MAKZ                               pmax   pmax
      comp=Z,22nm,0.8s
MAKZ  Makanchi          55.08 313  P      P       02 26 26.4 +0.4
MAKZ                               IAmb   IAmb    02 26 27.7
      comp=Z,22nm,0.8s
SEM   Semipalatinsk     56.58 317 eP      P       02 26 35.9 -0.9
      comp=Z,16nm,0.5s,baz=317
SEM   Semipalatinsk     56.58 317 eP      P       02 26 35.8 -0.9
SEM                                pmax   pmax
      comp=Z,16nm,0.5s
SHLS  Shalkode          56.68 308 eP      P       02 26 35.6 -1.9
      baz=308
SHLS  Shalkode          56.68 308 eP      P       02 26 35.6 -1.9
UZB   Uzynbulak         57.00 308 eP      P       02 26 40.0 +0.3
      baz=308
UZB   Uzynbulak         57.00 308 eP      P       02 26 40.0 +0.3
SII   Sitkinak Islan    57.11  36  P      P       02 26 41.6 +1.6
      baz=259
KPKS  Kokpek            57.25 309 eP      P       02 26 41.5 +0.1
      baz=309
KPKS  Kokpek            57.25 309 eP      P       02 26 42.1 +0.7
KPKS                               pmax   pmax
      comp=Z,3.0nm,0.4s
SVW2  Sparrevohn        57.40  30  P      P       02 26 43.9 +1.8
SVW2                               IAmb   IAmb    02 26 44.5
      comp=Z,19nm,0.5s
ZHN   Zhinishke         57.43 308 eP      P       02 26 43.2 +0.5
      baz=308
ZHN   Zhinishke         57.43 308 eP      P       02 26 43.2 +0.5
SATY  Saty              57.45 308 eP      P       02 26 43.6 +0.7
      baz=308
SATY  Saty              57.45 308 eP      P       02 26 43.6 +0.7
PRZ   Przheval'sk       57.46 307  IAmb   IAmb    02 26 45.8
      comp=Z,24nm,0.8s
TDK   Taldyqorghan      57.47 310 eP      P       02 26 43.7 +0.8
      comp=Z,19nm,0.9s,baz=310
TDK   Taldyqorghan      57.47 310 eP      P       02 26 43.6 +0.8
TDK                                pmax   pmax
      comp=Z,19nm,0.9s
KURK  Kurchatov         57.64 317  P      P       02 26 44.0 +0.2
KURK                               pmax   pmax
      comp=Z,32nm,0.8s
KURK  Kurchatov         57.64 317  P      P       02 26 44.0 +0.2
KURK                               IAmb   IAmb    02 26 45.1
      comp=Z,32nm,0.8s
TTA   Tatalina          57.70  28  P      P       02 26 45.5 +1.3
      baz=254
OHAK  Old Harbor        57.71  35  P      P       02 26 45.6 +1.4
      baz=260
O19K  Port Alsworth     57.79  32  P      P       02 26 45.9 +1.3
      baz=257
N19K  Bonanza Creek     57.85  31  P      P       02 26 46.9 +1.7
      baz=256
Q19K  Cape Douglas,     57.85  33  P      P       02 26 45.2  0.0
      baz=258
ARXS  Arharly           57.88 309 eP      P       02 26 46.4 +0.7
GCSA  Galena City Sc    57.88  26  P      P       02 26 46.4 +1.2
      baz=252
TARG  Taragay, Kyrgy    57.91 306  P      P       02 26 47.0 +0.6
ARPS  Mount Arapiles    58.08 181  P      P       02 26 48.0 +1.0
NRIK  Noril'sk          58.13 340  P      P       02 26 47.2 +0.4
      comp=Z,29nm,0.7s,baz=113,slow=10,SNR=53
NRIK                               ScP    ScP     02 31 06.7 +0.1
      comp=Z,2.5nm,0.5s,baz=113,slow=3.8,SNR=5.7
NRIK  Noril'sk          58.13 340ceP      P       02 26 47.1 +0.2
NRIK                               pmax   pmax
      comp=Z,36nm,0.8s
NRIK  Noril'sk          58.13 340  IAmb   IAmb    02 26 48.1
      comp=Z,34nm,0.8s
KDAK  Kodiak Island     58.18  35  P      P       02 26 48.6 +1.2
      comp=Z,21nm,0.5s,baz=289,slow=4.7,SNR=39
KDAK  Kodiak Island     58.18  35  P      P       02 26 48.6 +1.2
KDAK                               pmax   pmax
      comp=Z,117nm,1.5s
KDAK  Kodiak Island     58.18  35  P      P       02 26 48.4 +0.9
      baz=260
MDOK  Medeo             58.45 308 eP      P       02 26 50.3 +0.5
      baz=308
MDOK  Medeo             58.45 308 eP      P       02 26 50.2 +0.5
CHKK  Chushkaly         58.48 309 eP      P       02 26 50.2 +0.4
      baz=309
TNSS  Tian-Shan         58.52 308 eP      P       02 26 50.8 +0.2
      baz=308
L20K  Farewell, AK      58.53  29  P      P       02 26 51.2 +1.3
      baz=256
O20K  Slope Mountain    58.59  32  P      P       02 26 51.4 +1.1
      baz=258
TOO   Toolangi          58.90 178  P      P       02 26 52.5 -0.1
TOO                                pmax   pmax
      comp=Z,35nm,1.4s
TOO   Toolangi          58.90 178  P      P       02 26 52.5 -0.1
TOO                                IAmb   IAmb    02 27 12.5
      comp=Z,35nm,1.4s
KUU   Kurty             58.95 309 eP      P       02 26 53.6 +0.6
      comp=Z,36nm,0.7s,baz=309
KUU   Kurty             58.95 309 eP      P       02 26 53.6 +0.6
KUU                                pmax   pmax
      comp=Z,36nm,0.7s
CNPM  China Poot        59.18  33  P      P       02 26 55.1 +0.9
BOOM  Boomskoye usch    59.28 307  P      P       02 26 56.4 +0.9
BOOM                               pmax   pmax
      comp=Z,16nm,0.6s
BOOM  Boomskoye usch    59.28 307  P      P       02 26 56.4 +0.9
BOOM                               IAmb   IAmb    02 26 57.5
      comp=Z,16nm,0.6s
PPLA  Purkeypile        59.39  29  P      P       02 26 57.1 +1.3
      baz=257
BRLK  Bradley Lake      59.40  32  P      P       02 26 55.8  0.0
KSH   Kashi             59.40 304  P      P       02 27 00.5 +4.2
KSH                                pP     pwP     02 28 06.5 +4.5
KSH                                pmax   pmax
      comp=Z,14nm,0.7s
BRSE  Bradley Lake S    59.46  32  P      P       02 26 57.4 +1.1
      baz=260
IMAR  Indian Mountai    59.50  25  P      P       02 26 57.7 +1.4
TKM2  Tokmak 2          59.52 308  P      P       02 26 58.1 +0.9
      SNR=7.8
CAST  Castle Rocks      59.55  28  IAmb   IAmb    02 26 59.5
      comp=Z,25nm,1.2s
CAST  Castle Rocks      59.55  28  P      P       02 26 58.0 +1.2
      baz=257,SNR=7.9
CHUM  Lake Minchumin    59.55  28  P      P       02 26 58.4 +1.7
      baz=257
H21K  Melozitna Rive    59.78  26  IAmb   IAmb    02 27 02.3
      comp=Z,38nm,1.4s
H21K  Melozitna Rive    59.78  26  P      P       02 26 60.0 +1.6
      baz=255
KBK   Karagaybulak      60.00 308  P      P       02 27 01.4 +1.0
      SNR=13
O22K  Cooper Landing    60.09  32  P      P       02 27 01.5 +1.1
      baz=261
M22K  Willow            60.11  30  P      P       02 27 01.2 +0.7
      baz=260
CUT   Chulitna          60.16  29  P      P       02 27 01.6 +0.8
      baz=259
SEW   Seward            60.16  32  P      P       02 27 01.5 +0.6
      baz=261
BPAW  Bear Paw Mtn.     60.17  27  P      P       02 27 02.0 +1.0
      baz=258
RC01  Rabbit Creek A    60.18  31  P      P       02 27 01.7 +0.7
      baz=261
SGDS  Sogindy           60.20 309 eP      P       02 27 01.8 +0.2
      baz=309
A21K  Barrow            60.24  19  P      P       02 27 02.3 +1.1
      baz=248
USP   Ospenovka         60.31 308  P      P       02 27 03.0 +0.7
      SNR=14
AAK   Ala-Archa         60.34 308  P      P       02 27 03.7 +1.0
      SNR=7.1
AAK   Ala-Archa         60.34 308d iP     P       02 27 03.5 +0.8
AAK                                pmax   pmax
      comp=Z,24nm,0.9s
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AAK   Ala-Archa          60.34 308   P        P        02 27 03.4 +0.7
TRF   Thorofare Moun     60.34  28   IAmb     IAmb     02 27 04.3
      comp=Z,26nm,1.1s
TRF   Thorofare Moun     60.34  28   P        P        02 27 03.0 +0.7
      baz=259
UCH   Uchtor             60.35 307   P        P        02 27 04.5 +1.5
      SNR=21
PMR   Palmer             60.55  30   P        P        02 27 03.7 +0.2
PMR                                  pmax     pmax
      comp=Z,57nm,1.4s
PMR   Palmer             60.55  30   P        P        02 27 03.7 +0.2
PMR                                  IAmb     IAmb     02 27 04.9
      comp=Z,57nm,1.4s
PMR   Palmer             60.55  30   P        P        02 27 04.3 +0.9
      baz=261
BTLS  Baital             60.56 310  eP        P        02 27 04.3 +0.4
      baz=310
BTLS  Baital             60.56 310  eP        P        02 27 04.6 +0.7
BTLS                                 pmax     pmax
      comp=Z,6.0nm,0.6s
GHO   Glory Hole Cre     60.67  30   IAmb     IAmb     02 27 05.9
      comp=Z,16nm,0.6s
PWL   Port Wells         60.82  31   P        P        02 27 05.9 +0.6
      baz=262
KNK   Knik Glacier       60.84  31   P        P        02 27 06.2 +0.7
      baz=262
EKS2  Erkin-Say          60.87 308   P        P        02 27 07.0 +0.9
      SNR=7.4
SML   Sawmill            60.95  30   P        P        02 27 07.2 +0.9
      baz=262
AML   Almayashu          60.96 307   P        P        02 27 08.4 +1.3
      SNR=17
MCK   McKinley           60.99  28   P        P        02 27 07.6 +1.1
      baz=260
WAT1  Susitna Watana     61.01  29   P        P        02 27 07.2 +0.6
      baz=261
I23K  Minto, Yukon-K     61.07  26   P        P        02 27 07.9 +1.0
      baz=259,SNR=8.1
NEA2  Nenana             61.09  27   P        P        02 27 08.1 +1.0
      baz=259
COLD  Coldfoot           61.18  24   P        P        02 27 09.0 +1.4
COLD  Coldfoot           61.18  24   P        P        02 27 09.1 +1.4
      baz=257
WAT6  Susitna Watana     61.34  29   P        P        02 27 09.9 +0.9
      baz=262
GLI   Glacier Island     61.42  31   P        P        02 27 10.4 +1.0
      baz=263
SCM   Sheep Creek Mo     61.43  30   P        P        02 27 10.3 +0.8
      baz=262
MDM   Murphy Dome        61.51  27   IAmb     IAmb     02 27 12.5
      comp=Z,11nm,0.5s
DHY   Denali Highway     61.58  29   P        P        02 27 11.2 +0.7
      baz=262
TCOL  CIGO, UAF Yank     61.65  27   P        P        02 27 11.7 +1.0
      baz=260
COLA  College            61.65  27⇓eP       P        02 27 11.9 +1.1
COLA  College            61.65  27   P        P        02 27 11.5 +0.7
      baz=260
TOLK  Toolik Lake Re     61.74  23   P        P        02 27 12.8 +1.4
TOLK  Toolik Lake Re     61.74  23   P        P        02 27 12.9 +1.5
      baz=257
H24K  Noodor Dome        61.81  26   IAmb     IAmb     02 27 14.2
      comp=Z,7.7nm,0.5s
H24K  Noodor Dome        61.81  26   P        P        02 27 12.9 +1.0
      baz=260
POKR  Poker Plat Res     61.87  27   P        P        02 27 13.4 +1.1
      baz=260,SNR=7.0
HDA   Harding Lake       61.96  27   IAmb     IAmb     02 27 14.2
      comp=Z,8.0nm,0.5s
HDA   Harding Lake       61.96  27   P        P        02 27 12.9  0.0
      baz=261
ILAR  Eielson Array      62.05  27   P        P        02 27 13.1 -0.4
      comp=Z,3.7nm,0.4s,baz=266,slow=5.4,SNR=83
ILAR  Eielson Array      62.05  27   P        P        02 27 13.2 -0.2
ILAR  Eielson Array      62.05  27   P        P        02 27 13.2 -0.2
KLU   Klutina            62.05  31   IAmb     IAmb     02 27 17.9
      comp=Z,26nm,1.2s
KLU   Klutina            62.05  31   P        P        02 27 14.6 +0.9
      baz=264
PAX   Paxson             62.43  29   P        P        02 27 16.9 +0.8
      baz=264
HARP  HAARP              62.51  30   P        P        02 27 17.7 +1.1
      baz=264
BMRM  Bremner River      62.64  32   IAmb     IAmb     02 27 19.6
      comp=Z,49nm,1.5s
BMRM  Bremner River      62.64  32   P        P        02 27 18.8 +1.3
      baz=265
N25K  Chitina, Valde     62.70  31   P        P        02 27 19.0 +1.2
      baz=265
PRP   Porcupine Dome     62.72  26   P        P        02 27 19.0 +1.0
      baz=262
BRVK  Borovoye           62.90 320   P        P        02 27 19.9 +0.7
BRVK                                 pmax     pmax
      comp=Z,50nm,0.9s
BRVK  Borovoye           62.90 320   P        P        02 27 19.9 +0.7
SCRK  Sand Creek         63.20  28   IAmb     IAmb     02 27 23.3
      comp=Z,35nm,1.4s
SCRK  Sand Creek         63.20  28   P        P        02 27 21.5 +0.3
      baz=264,SNR=10
KKAR  Karatay Array      63.23 308   P        P        02 27 22.3 +0.7
KKAR  Karatay Array      63.23 308   P        P        02 27 22.3 +0.7
BMAR  Burnt Mountain     63.36  24   P        P        02 27 23.4 +1.3
CRQE  Cirque             63.36  32   P        P        02 27 23.5 +1.2
      baz=267
L26K  Log Cabin Wild     63.40  29   P        P        02 27 23.4 +1.0
      baz=265
J26L  Joseph Creek       63.43  28   P        P        02 27 23.8 +1.2
      baz=264,SNR=7.9
M26K  Nabesna, AK        63.51  30   P        P        02 27 24.2 +1.1
      baz=266
IUG   Iuzhnay            63.67 307  i P       P        02 27 25.2 +0.6
      baz=307
IUG   Iuzhnay            63.67 307  eP        P        02 27 25.6 +0.9
IUG                                  pmax     pmax
      comp=Z,76nm,0.6s
BRLS  Borolday           63.73 308  eP        P        02 27 26.2 +1.2
      baz=308
BRLS  Borolday           63.73 308  eP        P        02 27 26.1 +1.2
M27K  Edge Creek, AK     64.03  30   P        P        02 27 28.2 +1.5
      baz=267
L27K  Beaver Creek,      64.09  29   P        P        02 27 28.3 +1.4
      baz=267
CTG   Chitna Glacier     64.23  32   P        P        02 27 29.4 +1.5
      baz=268
EGAK  Eagle              64.49  27   P        P        02 27 30.3 +1.0
      baz=266
BVCY  Beaver Creek       64.51  30   P        P        02 27 30.9 +1.3
      baz=268
YUK3  Moose Creek        64.68  31   P        P        02 27 32.2 +1.3
      baz=269
PINM  Pinnacle           64.75  33   P        P        02 27 32.4 +1.2
      baz=270
PNL   Peninsula          65.18  33   P        P        02 27 34.9 +1.0
      baz=270
DAWY  Dawson             65.22  28   P        P        02 27 35.2 +1.1
      baz=268
KBL   Kabul              65.51 299   P        P        02 27 36.5 -0.2
KBL                                  pmax     pmax
      comp=Z,15nm,0.8s
KBL   Kabul              65.51 299   P        P        02 27 36.5 -0.2
KBL                                  IAmb     IAmb     02 27 37.9
      comp=Z,15nm,0.8s
I29M  Ogilvie Camp,      65.72  27   P        P        02 27 38.5 +1.3
      baz=269
J29M  Klondike Camp      65.74  28   P        P        02 27 38.8 +1.3
      baz=269
N31M  Braeburn, Yuko     66.92  31   P        P        02 27 46.2 +1.4
      baz=273
SKAG  Skagway            67.26  33   P        P        02 27 48.4 +1.4
      baz=274
WHY   Whitehorse         67.40  32   IAmb     IAmb     02 27 50.3
      comp=Z,23nm,1.4s
WHY   Whitehorse         67.40  32   P        P        02 27 49.3 +1.2
      baz=274
SIT   Sitka              67.46  36   P        P        02 27 50.1 +1.8
      baz=275
M31M  Drury Creek, Y     67.53  30   P        P        02 27 50.0 +1.3
      baz=274
INK   Inuvik             67.58  24   P        P        02 27 49.4 +0.5
      comp=Z,5.8nm,0.5s,baz=302,slow=6.3,SNR=24
INK   Inuvik             67.58  24   IAmb     IAmb     02 27 51.3
      comp=Z,8.2nm,0.6s
INK   Inuvik             67.58  24   P        P        02 27 49.3 +0.5
      baz=272
BKZ   Black Stump Fm     67.95 153   P        P        02 27 51.1 -0.5
SVE   Sverdlovsk         68.23 324  eP        P        02 27 53.5 +0.4
SVE                                  pmax     pmax
      comp=Z,26nm,0.8s
P33M  Teslin, Yukon      68.46  32   P        P        02 27 55.2 +0.7
      baz=276
ARU   Arti               69.42 324c iP        P        02 28 00.5 +0.1
ARU                                                    02 28 21.6
ARU                                                    02 29 06.3
ARU                                  S        S        02 36 44.3 +1.1
ARU                                  SS       SS       02 41 14.1 -2.3
ARU                                  pmax     pmax
      comp=Z,12nm,0.6s
ARU   Arti               69.42 324   P        P        02 28 00.5 +0.1
PLWZ  Palliser           69.47 155   P        P        02 28 00.1 -0.8
AB31  Akbulak array      69.72 316   P        P        02 28 02.3  0.0
ABKAR Akbulak array      69.72 316   P        P        02 28 02.4  0.0
RPZ   Rata Peaks         69.81 159   P        P        02 28 02.0 -0.8
A36M  Sachs Harbour      70.07  19   P        P        02 28 04.5 +0.5
      baz=278
DLBC  Dease Lake         70.11  34   P        P        02 28 06.4 +1.8
      comp=Z,3.0nm,0.7s,baz=238,slow=1.8,SNR=7.3
DLBC  Dease Lake         70.11  34   P        P        02 28 05.2 +0.5
DLBC                                 IAmb     IAmb     02 28 07.9
      comp=Z,25nm,1.4s
BBB   Bella Bella        72.35  40   P        P        02 28 19.0 +1.0
      comp=Z,11nm,0.9s,baz=293,slow=7.7,SNR=1.8
GEYT  Alibeck            73.42 305   P        P        02 28 24.7 +0.1
      comp=Z,6.5nm,0.8s,baz=264,slow=9.1,SNR=7.3
GEYT  Alibeck            73.42 305   P        P        02 28 24.7 +0.1
KIRV  Kirov              73.83 327deP       P        02 28 26.8 +0.3
PRGR  Permogore          74.81 331  eP        P        02 28 32.5 +0.5
PRGR                                 pmax     pmax
      comp=Z,47nm,0.6s
YKA   Yellowknife Ar     76.46  28   P        P        02 28 41.7 +0.4
      comp=Z,15nm,0.4s,baz=291,slow=5.9,SNR=280
YKA                                  PKKPbc   PKKPbc   02 47 50.1 -2.4
      comp=Z,0.3nm,0.6s,baz=120,slow=2.4,SNR=4.4
LLLB  Lillooet           76.53  41   IAmb     IAmb     02 28 48.8
      comp=Z,15nm,1.1s
BELG  Belogornoye        76.56 321⇓eP       P        02 28 42.6 +0.5
BELG                                 pmax     pmax
      comp=Z,6.0nm,0.6s
D03D  Eldon              76.70  44   P        P        02 28 44.4 +1.5
      baz=287
B05A  Bryant             77.11  43   P        P        02 28 46.2 +0.9
      baz=288
G03D  McMinnville, O     77.28  46   P        P        02 28 47.6 +1.3
      baz=288
E04D  Cinebar            77.33  45   P        P        02 28 47.4 +0.9
      baz=288
I03D  Drain, OR          77.69  48   P        P        02 28 49.6 +1.1
      baz=288
K02D  Willamette Mer     77.78  49   P        P        02 28 50.1 +0.9
      baz=288,SNR=7.8
H04D  Lebanon            77.85  47   P        P        02 28 50.3 +0.8
      baz=288
KLMR  Klimovskoe         77.85 331  eP        P        02 28 49.1  0.0
KLMR                                 pmax     pmax
      comp=Z,17nm,0.8s
KLMR  Klimovskoe         77.85 331  eP        P        02 28 49.1  0.0
KLMR                                 AMP               02 28 50.5
      comp=Z,17nm,0.8s
F05D  White Salmon       78.28  45   P        P        02 28 52.7 +0.9
      baz=289
HUMO  Hull Mountain      78.31  49   IAmb     IAmb     02 28 54.3
      comp=Z,25nm,1.3s
LTY   Liberty            78.34  44   IAmb     IAmb     02 28 53.7
      comp=Z,26nm,1.4s
G05D  Wamic, OR          78.58  46   P        P        02 28 54.4 +1.0
      baz=289
J04D  Umpqua Nationa     78.69  48   P        P        02 28 55.2 +0.8
      baz=289
YBH   Yreka Blue Hor     78.76  50   P        P        02 28 55.8 +1.2
      comp=Z,14nm,0.9s,baz=274,slow=0.6,SNR=8.5
YBH   Yreka Blue Hor     78.76  50   P        P        02 28 55.8 +1.2
YBH                                  pmax     pmax
      comp=Z,18nm,0.9s
YBH   Yreka Blue Hor     78.76  50   P        P        02 28 55.8 +1.2
YBH                                  IAmb     IAmb     02 28 57.4
      comp=Z,18nm,0.9s
M02C  Callahan           78.77  50   P        P        02 28 55.8 +1.2
      baz=289
B08A  Colville Reser     78.83  42   IAmb     IAmb     02 28 56.9
      comp=Z,20nm,1.1s
I05D  Terrebonne, OR     78.86  47   P        P        02 28 55.7 +0.7
      baz=289
L04D  Klamath Falls      78.89  49   P        P        02 28 56.4 +1.0
      baz=289,SNR=9.8
N02D  Trinity Center     79.01  50   P        P        02 28 57.0 +1.1
      baz=289
ARCES ARCESS Array B     79.05 342   P        P        02 28 56.0 +0.5
      comp=Z,17nm,0.5s,baz=72,slow=8.2,SNR=88
ARCES                                PKKPbc   PKKPbc   02 47 44.6 -2.6
      comp=Z,8.8nm,1.2s,baz=264,slow=5.0,SNR=3.7
ARCES ARCESS Array B     79.05 342   P        P        02 28 56.0 +0.5
K04D  Chiloquin, OR      79.14  48   P        P        02 28 57.5 +0.8
      baz=289
O02D  Mt. Diablo Mer     79.21  51   P        P        02 28 58.7 +1.6
      baz=289,SNR=6.0
WDC   Whiskeytown Da     79.25  51   P        P        02 28 58.1 +1.0
WDC                                  pmax     pmax
      comp=Z,36nm,1.5s
WDC   Whiskeytown Da     79.25  51   P        P        02 28 58.1 +1.0
WDC                                  IAmb     IAmb     02 28 59.7
      comp=Z,36nm,1.4s
J05D  Fort Rock, OR      79.28  48   P        P        02 28 58.7 +1.3
      baz=290,SNR=11
F07A  Phinny Hill Vi     79.28  45   IAmb     IAmb     02 28 59.9
      comp=Z,21nm,1.4s
M04C  Macdoel            79.36  49   P        P        02 28 58.8 +0.9
      baz=289,SNR=6.5
HAWA  Hanford            79.37  44   P        P        02 28 58.8 +1.2
HAWA                                 IAmb     IAmb     02 28 59.6
      comp=Z,15nm,1.2s
D08A  Wollman Farm,      79.54  44   P        P        02 28 59.6 +1.1
D08A                                 IAmb     IAmb     02 29 00.8
      comp=Z,20nm,1.1s
E08A  Dider Farm, El     79.64  44   IAmb     IAmb     02 29 01.0
      comp=Z,19nm,1.3s
GDXM  Geysers            79.65  52   IAmb     IAmb     02 29 02.3
      comp=Z,24nm,1.1s
C09A  Chrisman Ranch     79.69  43   IAmb     IAmb     02 29 01.4
      comp=Z,12nm,0.8s
O03E  Paynes Creek       79.88  51   P        P        02 29 01.1 +0.5
      baz=290,SNR=6.5
NEW   Newport            80.24  42   P        P        02 29 03.7 +1.4
NEW                                  pmax     pmax
      comp=Z,13nm,0.8s
NEW   Newport            80.24  42   P        P        02 29 03.7 +1.4
NEW                                  IAmb     IAmb     02 29 04.4
      comp=Z,13nm,0.8s
ORV   Oroville           80.35  51   IAmb     IAmb     02 29 04.9
      comp=Z,26nm,1.2s
VRH   Novokhopyorsk      80.41 321  eP        P        02 29 02.4 -0.6
VRH                                  pmax     pmax
      comp=Z,20nm,0.7s
EDM   Edmonton           80.57  36   P        P        02 29 04.9 +1.0
EDM                                  pmax     pmax
      comp=Z,43nm,1.4s
EDM   Edmonton           80.57  36   P        P        02 29 04.9 +1.0
MOS   Moscow             80.83 327  eP        P        02 29 04.0 -1.2
J08A  Circle Bar Ran     81.14  47   IAmb     IAmb     02 29 09.6
      comp=Z,16nm,0.9s
WVOR  Wild Horse Val     81.37  48   IAmb     IAmb     02 29 14.3
      comp=Z,12nm,0.9s
BMO   Blue Mountains     81.38  45   IAmb     IAmb     02 29 10.6
      comp=Z,12nm,0.8s
LPSR  Galich'ya Gora     81.44 323  eP        P        02 29 08.0 -0.4
LPSR                                 pmax     pmax
      comp=Z,40nm,0.8s
OBN   Obninsk            81.64 326⇓eP       P        02 29 10.1 +0.7
OBN                                 e                  02 32 25.0
OBN                                 ePPP      PPP      02 34 12.1
OBN                                 eS        SKSac    02 39 04.7 +4.0
OBN                                  pmax     pmax
      comp=Z,41nm,1.3s
CMB   Columbia Colle     81.69  52   P        P        02 29 10.5 +0.3
CMB                                  pmax     pmax
      comp=Z,23nm,0.8s
CMB   Columbia Colle     81.69  52   P        P        02 29 10.4 +0.3
VCNR  Virginia City      81.78  51   IAmb     IAmb     02 29 13.1
      comp=Z,9.9nm,1.0s
PAHR  Pah Rah Range      81.83  51   IAmb     IAmb     02 29 13.0
      comp=Z,14nm,1.1s
VSR   Storozhevoye       81.88 322  eP        P        02 29 10.5 -0.2
VSR                                  pmax     pmax
      comp=Z,30nm,0.5s
PNTR  Pine Nut           81.89  51   IAmb     IAmb     02 29 13.8
      comp=Z,20nm,0.9s
WALA  Waterton Lakes     81.91  40   IAmb     IAmb     02 29 13.8
      comp=Z,15nm,1.1s
VORD  Divnogorie         81.91 322  eP        P        02 29 10.3 -0.6
VORD                                 pmax     pmax
      comp=Z,20nm,0.7s
NCK   Nalchik            82.16 314⇑eP       P        02 29 12.9 +0.5
NCK                                  pmax     pmax
      comp=Z,50nm,1.6s
YERR  Yerington          82.19  51   IAmb     IAmb     02 29 15.1
      comp=Z,16nm,0.8s
KBZ   Khabaz             82.54 314   P        P        02 29 14.8 +0.5
      comp=Z,16nm,0.9s,baz=90,slow=3.5,SNR=27
KBZ   Khabaz             82.54 314deP       P        02 29 15.2 +0.9
KBZ                                  pmax     pmax
      comp=Z,23nm,0.9s
KIV   Kislovodsk         82.59 314  eP        P        02 29 16.6 +1.9
KIV                                  pmax     pmax
      comp=Z,17nm,1.1s
KIV                                  MLR      MLR
      comp=Z,87nm,19.0s
KIV   Kislovodsk         82.59 314   P        P        02 29 16.6 +1.9
KIV                                  IAmb     IAmb     02 29 18.8
      comp=Z,29nm,1.3s
ONI   Oni                82.60 313   IAmb     IAmb     02 29 18.2
      comp=Z,20nm,1.0s
PAGB  Antelope Grade     82.62  55   IAmb     IAmb     02 29 17.4
      comp=Z,25nm,1.0s
GNI   Garni              82.62 310   P        P        02 29 16.5 +1.4
GNI                                  pmax     pmax
      comp=Z,17nm,1.4s
GNI   Garni              82.62 310   P        P        02 29 16.5 +1.4
GNI                                  IAmb     IAmb     02 29 19.2
      comp=Z,17nm,1.4s
MSO   Missoula           82.78  42   P        P        02 29 15.9 +0.2
      baz=294
NEY   Neytrino           82.84 314⇓eP       P        02 29 17.6 +1.5
NEY                                  pmax     pmax
      comp=Z,3.0nm,1.1s
RYN   Ryan               82.84  51   IAmb     IAmb     02 29 18.4
      comp=Z,12nm,0.8s
MLAC  Mammoth, Mammo     82.98  52   P        P        02 29 18.3 +1.3
      baz=292
LHV   Little Huntoon     83.00  52   IAmb     IAmb     02 29 19.5
      comp=Z,15nm,0.7s
VOG   Valley Oaks Go     83.06  54   P        P        02 29 18.1 +0.9
      baz=292
NVAR  Mina Array Bea     83.08  52   P        P        02 29 18.3 +0.8
      comp=Z,13nm,0.6s,baz=278,slow=5.6,SNR=102
BMN   Battle Mountai     83.10  49   IAmb     IAmb     02 29 18.9
      comp=Z,17nm,1.3s
NV11  Mina Array Sit     83.18  51   IAmb     IAmb     02 29 20.0
      comp=Z,12nm,0.8s
PKM   Mcpherson Peak     83.26  55   P        P        02 29 19.3 +0.8
      baz=292
FINES FINESS Array B     83.32 335   P        P        02 29 17.3 -0.7
      comp=Z,16nm,0.5s,baz=73,slow=4.8,SNR=202
VES   Vestal, Richgr     83.46  54   P        P        02 29 19.4 +0.2
      baz=292,SNR=6.6
TIN   Tinemaha, Big      83.65  53   P        P        02 29 20.8 +0.5
      baz=292
HLID  Hailey             83.80  46   IAmb     IAmb     02 29 23.3
      comp=Z,13nm,1.2s
HLID  Hailey             83.80  46   P        P        02 29 21.2 +0.2
      baz=294,SNR=14
ARVC  Arvin              83.92  55   P        P        02 29 21.9 +0.4
      baz=292
ISA   Isabella, Lake     83.99  54   P        P        02 29 21.9  0.0
      baz=292
CWC   Cottonwood Cre     83.99  53   P        P        02 29 22.5 +0.4
      baz=292
DLMT  Dillon             84.24  43   IAmb     IAmb     02 29 25.2
      comp=Z,30nm,1.5s
GRAC  Grapevine Rang     84.31  53   P        P        02 29 24.0 +0.5
      baz=293,SNR=5.2
ELK   Elko               84.37  48   IAmb     IAmb     02 29 26.2
      comp=Z,26nm,1.1s
MPMC  Manual Prospec     84.58  53   P        P        02 29 25.4 +0.4
      baz=293,SNR=14
DECC  Green Verdugo      84.63  55   P        P        02 29 25.4 +0.2
      baz=292
EDW2  Edwards Air Fo     84.65  55   P        P        02 29 25.7 +0.4
      baz=292
LRMC  Laurel Mtn Rad     84.65  54   P        P        02 29 25.7 +0.3
      baz=293,SNR=9.4
BOZ   Bozeman (W)        84.76  43   P        P        02 29 26.5 +0.8
BOZ                                  pmax     pmax
      comp=Z,8.0nm,0.7s
BOZ   Bozeman (W)        84.76  43   P        P        02 29 26.5 +0.8
BOZ                                  IAmb     IAmb     02 29 27.7
      comp=Z,8.1nm,0.7s
BOZ   Bozeman (W)        84.76  43   P        P        02 29 25.9 +0.2
      baz=296,SNR=12
EGMT  Eagleton           84.85  40   IAmb     IAmb     02 29 27.9
      comp=Z,21nm,1.2s
EGMT  Eagleton           84.85  40   P        P        02 29 26.2 +0.2
      baz=297,SNR=6.1
FURC  Furnace Creek,     84.89  53   P        P        02 29 26.9 +0.6
      baz=293,SNR=5.9
R11A  Troy Canyon, C     85.08  51   IAmb     IAmb     02 29 29.7
      comp=Z,18nm,1.1s
R11A  Troy Canyon, C     85.08  51   P        P        02 29 28.0 +0.5
      baz=294,SNR=18
TPNV  Topopah Spring     85.15  52   IAmb     IAmb     02 29 29.8
      comp=Z,11nm,0.8s
TPNV  Topopah Spring     85.15  52   P        P        02 29 28.7 +0.9
      baz=293,SNR=17
GURO  Guroymak-BITLI     85.17 310   P        P        02 29 28.2 +0.3
GURO                                 IAmb     IAmb     02 30 08.4
      comp=Z,9.3nm,0.6s
GSC   Goldstone, Bar     85.38  54   P        P        02 29 29.7 +0.7
      baz=293,SNR=6.7
SHOC  Shoshone, Teco     85.55  53   P        P        02 29 30.3 +0.7
      baz=293
YMR   Madison River      85.58  44   P        P        02 29 31.2 +1.3
YHH   Holmes Hill        85.60  43   IAmb     IAmb     02 29 32.8
      comp=Z,30nm,1.5s
HVU   Hansel Valley      85.63  47   IAmb     IAmb     02 29 31.9
      comp=Z,22nm,1.3s
MURC  Murrieta           85.75  56   P        P        02 29 31.1 +0.4
      baz=293
PRN   Pahroc Range       85.84  51   IAmb     IAmb     02 29 33.4
      comp=Z,18nm,0.9s
HEC   Hector,Ludlow      85.92  54   P        P        02 29 32.2 +0.6
      baz=293,SNR=7.0
H17A  Grant Village      85.95  44   IAmb     IAmb     02 29 35.8
      comp=Z,18nm,1.1s
H17A  Grant Village      85.95  44   P        P        02 29 33.3 +1.5
      baz=296
TUQ   Turquoise Moun     85.99  54   P        P        02 29 33.0 +1.0
      baz=294
FLWY  Flagg Ranch        86.01  44   IAmb     IAmb     02 29 35.0
      comp=Z,14nm,0.9s
SUMG  Summit             86.05   1   P        P        02 29 32.4 +0.6
SUMG                                 pmax     pmax
      comp=Z,17nm,1.2s
SUMG  Summit             86.05   1   P        P        02 29 32.4 +0.6
SUMG                                 IAmb     IAmb     02 29 34.0
      comp=Z,17nm,1.2s
YMP   Mirror Lake Pl     86.07  43   IAmb     IAmb     02 29 35.6
      comp=Z,20nm,1.0s
109C  Camp Elliot, M     86.10  56   P        P        02 29 33.6 +1.3
      baz=293
SHPR  Sheep Range        86.13  52   IAmb     IAmb     02 29 35.0
      comp=Z,13nm,0.9s
MOOW  Moose Ponds        86.13  44   IAmb     IAmb     02 29 34.4
      comp=Z,13nm,1.4s
DUG   Dugway, Tooele     86.28  48   IAmb     IAmb     02 29 35.3
      comp=Z,14nm,0.8s
DUG   Dugway, Tooele     86.28  48   P        P        02 29 34.0 +0.7
      baz=295,SNR=23
PFO   Pinyon Flats O     86.31  55   P        P        02 29 33.7 +0.1
PFO                                  pmax     pmax
      comp=Z,16nm,0.9s
PFO   Pinyon Flats O     86.31  55   P        P        02 29 33.7 +0.1
PFO                                  IAmb     IAmb     02 29 35.3
      comp=Z,16nm,0.8s
PFO   Pinyon Flats O     86.31  55   P        P        02 29 34.0 +0.4
      baz=293
TPFO  Pinon Flats        86.32  55   P        P        02 29 33.9 +0.3
      baz=293
MNK   Minsk              86.33 328  i P       P        02 29 32.4 -0.6
MNK                                 i *PP     pwP      02 30 43.3 -2.0
MNK                                 i *SP     sP       02 31 14.9 +3.6
MNK                                 i                  02 32 58.0
MNK                                 i PPP     PPP      02 34 54.4
MNK                                 i S       SKSac    02 39 28.6 -2.2
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MNK				i SS	SS	02 45 31.4	+2.4
MNK				i SSS	SSS	02 49 09.6	
MNK				pmax	pmax		
	comp=E,5.0nm,1.1s						
MNK				pmax	pmax		
	comp=Z,13nm,0.9s						
MNK				pmax	pmax		
	comp=N,20nm,1.0s						
MNK	Minsk	86.33	328	i P	P	02 29 32.4	-0.6
	comp=E,5.0nm,1.1s						
MNK				i P	P	02 29 32.4	-0.6
	comp=N,20nm,1.0s						
MNK				i P	P	02 29 32.4	-0.6
	comp=Z,13nm,0.8s,baz=237						
MNK				i pP	pwP	02 30 43.3	-2.0
MNK				i sP	sP	02 31 15.0	+3.6
MNK				i PP	PP	02 32 58.1	+0.1
MNK				i PPP	PPP	02 34 54.5	
MNK				i S	SKSac	02 39 28.7	-2.2
MNK				i sS	sS	02 41 41.1	-3.1
MNK				i SS	SS	02 45 31.4	+2.4
MNK				i SSS	SSS	02 49 09.7	
MNK				i LRM	MLR	03 10 04.7	
MNK				i LRM	MLR	03 10 04.7	
MNK				i LRM	MLR	03 10 04.7	
AHID	Auburn Hatcher	86.33	45	IAmb	IAmb	02 29 35.6	
	comp=Z,9.7nm,1.1s						
GMRC	Granite Mounta	86.45	54	P	P	02 29 34.5	+0.3
	baz=294						
RLMT	Red Lodge	86.46	43	IAmb	IAmb	02 29 37.8	
	comp=Z,13nm,0.8s						
RLMT	Red Lodge	86.46	43	P	P	02 29 34.8	+0.6
	baz=297,SNR=15						
BELC	Belle Mtn. Jos	86.51	55	P	P	02 29 34.8	+0.3
	baz=294,SNR=6.5						
MONP2	Monument Peak	86.62	56	P	P	02 29 35.5	+0.3
	baz=294						
IIGN	Ignalina	86.66	329	eP	P	02 29 34.4	-0.2
CTU	Camp Tracy	86.80	47	IAmb	IAmb	02 29 37.6	
	comp=Z,13nm,1.1s						
NLU	North Lily Min	86.89	48	IAmb	IAmb	02 29 37.7	
	comp=Z,12nm,1.3s						
IKP	In-Ko-Pah, Jac	86.96	56	P	P	02 29 37.1	+0.5
	baz=294						
FCC	Fort Churchill	87.05	26	IAmb	IAmb	02 29 37.6	
	comp=Z,8.3nm,0.7s						
BC3	Big Chuckawall	87.06	55	P	P	02 29 37.9	+0.8
	baz=294,SNR=9.1						
SWSC	Sam W. Stewart	87.08	56	P	P	02 29 37.8	+0.7
	baz=294						
IRM	Iron Mountain	87.09	54	P	P	02 29 38.1	+0.9
	baz=294						
NEE2	Needles Airpor	87.24	54	P	P	02 29 38.6	+0.8
	baz=294						
LCMT	Little Creek M	87.32	51	IAmb	IAmb	02 29 40.6	
	comp=Z,12nm,0.9s						
BW06	Boulder Array	87.34	45	P	P	02 29 39.0	+0.6
	baz=297						
PDAR	Pinedale Array	87.35	45	P	P	02 29 38.9	+0.4
	comp=Z,0.9nm,0.5s,baz=176,slow=1.8,SNR=18						
LAO	LASA Array	87.59	40	IAmb	IAmb	02 29 41.5	
	comp=Z,28nm,1.4s						
LAO	LASA Array	87.59	40	P	P	02 29 40.3	+0.9
	baz=299						
PABE	Paberze	87.62	330	eP	P	02 29 39.2	+0.1
AKASG	Malin Array Be	87.66	324	P	P	02 29 38.2	-1.2
	comp=Z,2.1nm,0.5s,baz=52,slow=4.9,SNR=16						
AKASG	Malin Array Be	87.66	324	ceP	P	02 29 38.4	-1.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	87.66	324	⇓eP	P	02 29 38.9	-0.5
AKBB				pmax	pmax		
	comp=Z,15nm,1.4s						
AKBB	Malin Array Si	87.66	324	P	P	02 29 38.8	-0.6
AKBB				IAmb	IAmb	02 29 39.5	
	comp=Z,16nm,1.4s						
GLA	Glamis	87.79	55	P	P	02 29 41.1	+0.6
GLA				pmax	pmax		
	comp=Z,26nm,0.7s						
GLA	Glamis	87.79	55	P	P	02 29 41.1	+0.6
GLA	Glamis	87.79	55	P	P	02 29 41.3	+0.8
	baz=294,SNR=8.3						
PDMCI	Parker Dam,Lak	87.79	54	P	P	02 29 41.1	+0.7
	baz=295,SNR=6.4						
DGMT	Dagmar	87.89	38	P	P	02 29 41.0	+0.3
	baz=301						
Q16A	Castle Valley	87.97	49	IAmb	IAmb	02 29 44.6	
	comp=Z,10nm,0.7s						
P17A	Butcher Ranch,	88.03	48	IAmb	IAmb	02 29 43.6	
	comp=Z,8.7nm,0.9s						
U15A	North Rim	88.26	51	IAmb	IAmb	02 29 45.2	
	comp=Z,16nm,1.3s						
P18A	Preston Nutter	88.30	48	IAmb	IAmb	02 29 45.6	
	comp=Z,6.8nm,0.7s						
RDMU	Red Mountain	88.34	47	IAmb	IAmb	02 29 45.0	
	comp=Z,10nm,1.0s						
SRU	San Rafael Swe	88.34	48	IAmb	IAmb	02 29 44.7	
	comp=Z,9.4nm,0.6s						
SUW	Suwalki	88.88	329	eP	P	02 29 44.1	-1.0
NB2	NORSAR Subarra	89.08	339	P	P	02 29 44.7	-1.3
	comp=Z,23nm,1.4s,baz=44,slow=5.1						
NB2	NORSAR Subarra	89.08	339	P	P	02 29 44.7	-1.3
	baz=44,slow=5.1						
NOA	NORSAR Array B	89.08	339	P	P	02 29 44.9	-1.1
	comp=Z,4.7nm,0.8s,baz=48,slow=4.7,SNR=10						
NOA				PP	PP	02 33 20.1	+0.4
	comp=Z,2.2nm,1.0s,baz=47,slow=7.8,SNR=3.5						
GAZ	Gaziantep	89.21	310	P	P	02 29 45.9	-1.2
GAZ				IAmb	IAmb	02 29 47.1	
	comp=Z,10nm,1.1s						
WUAZ	Wupatki	89.33	52	IAmb	IAmb	02 29 49.5	
	comp=Z,11nm,1.2s						
WUAZ	Wupatki	89.33	52	P	P	02 29 48.4	+0.6
	baz=296						
K22A	Casper	89.37	44	P	P	02 29 48.4	+0.5
	baz=299						
BNN	Bunyan	89.41	312	IAmb	IAmb	02 29 49.0	
	comp=Z,21nm,1.1s						
O20A	White River Ci	89.44	47	IAmb	IAmb	02 29 49.8	
	comp=Z,12nm,0.9s						
O20A	White River Ci	89.44	47	P	P	02 29 48.6	+0.3
	baz=298						
214A	Organ Pipe Nat	89.79	56	P	P	02 29 50.8	+0.9
	baz=295						
RSSD	Black Hills	90.21	42	P	P	02 29 51.5	-0.3
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.6s						
RSSD	Black Hills	90.21	42	P	P	02 29 51.5	-0.3
RSSD				IAmb	IAmb	02 29 53.1	
	comp=Z,7.1nm,0.6s						
RSSD	Black Hills	90.21	42	P	P	02 29 52.4	+0.5
	baz=301						
BRTR	Keskin Array B	90.51	313	P	P	02 29 51.8	-1.4
	comp=Z,1.8nm,0.7s,baz=93,slow=3.2,SNR=15						
BRTR	Keskin Array B	90.51	313	ceP	P	02 29 52.2	-1.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	90.51	313	P	P	02 29 52.4	-0.8
N23A	Red Feather La	90.61	45	P	P	02 29 54.6	+0.8
	baz=300						
MVCO	Mesa Verde	90.63	49	IAmb	IAmb	02 29 55.9	
	comp=Z,11nm,1.4s						
MVCO	Mesa Verde	90.63	49	P	P	02 29 54.5	+0.6
	baz=298						
W18A	Petrified Fore	90.70	52	P	P	02 29 54.8	+0.5
	baz=297						
SMCO	Snowmass	90.75	47	IAmb	IAmb	02 29 56.7	
	comp=Z,11nm,0.9s						
MDND	Maddock	90.82	37	P	P	02 29 55.0	+0.7
	baz=304						
E28A	Huff	90.91	38	IAmb	IAmb	02 29 56.5	
	comp=Z,19nm,0.9s						
TUC	Tucson	91.18	55	P	P	02 29 56.8	+0.4
TUC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TUC	Tucson	91.18	55	P	P	02 29 56.8	+0.4
TUC	Tucson	91.18	55	P	P	02 29 57.1	+0.7
	baz=296						
ISCO	Idaho Springs	91.37	46	IAmb	IAmb	02 29 59.6	
	comp=Z,7.4nm,0.9s						
ISCO	Idaho Springs	91.37	46	P	P	02 29 58.0	+0.6
	baz=300						
S22A	4UR Ranch, Cre	91.54	48	P	P	02 29 58.9	+0.7
	baz=299						
BUR08	Bucovina Ar. S	91.55	323	P	P	02 29 57.7	-0.1
Q24A	Divide	92.10	47	P	P	02 30 01.6	+0.8
	baz=300						
SDCO	Great Sand Dun	92.46	48	P	P	02 30 02.4	0.0
SDCO	Great Sand Dun	92.46	48	P	P	02 30 03.0	+0.6
	baz=300						
AGMN	Agassiz Nation	92.61	35	P	P	02 30 02.7	+0.1
	baz=307						
ANMO	Albuquerque	93.16	51	P	P	02 30 05.6	0.0
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ANMO	Albuquerque	93.16	51	P	P	02 30 05.6	0.0
ANMO	Albuquerque	93.16	51	P	P	02 30 06.3	+0.7
	baz=299						
121A	Cookes Peak, D	93.34	53	P	P	02 30 07.5	+1.0
	baz=298						
T25A	Trinidad	93.52	48	P	P	02 30 08.0	+0.7
	baz=300						
ECSD	EROS Data Cent	94.90	39	P	P	02 30 12.9	-0.2
	baz=306						
CLL	Collm	95.34	331	eP	P	02 30 17.0	+2.1
MNTX	Cornudas Mount	95.53	53	P	P	02 30 16.5	+0.2
	baz=300						
CBKS	Cedar Bluff	95.77	44	P	P	02 30 17.4	+0.2
	baz=304						
GERES	GERESS Array B	96.74	329	P	P	02 30 20.4	-1.0
	comp=Z,0.9nm,0.6s,baz=38,slow=5.8,SNR=9.8						
TXAR	Lajitas Array	97.98	54	P	Pdif	02 30 28.4	+0.9
	comp=Z,0.6nm,0.7s,baz=283,slow=2.7,SNR=10.0						
ESDC	Sonseca Array	111.81	333	PP	PP	02 36 04.7	-6.1
	comp=Z,0.7nm,0.8s,baz=17,slow=6.5,SNR=5.4						
ESDC				PKKPbc	PKKPbc	02 46 18.6	-0.3
	comp=Z,0.3nm,0.6s,baz=214,slow=3.8,SNR=5.0						
ESDC				PKKPab	PKKPab	02 46 29.2	-1.6
	comp=Z,2.0nm,0.9s,baz=208,slow=4.2,SNR=8.3						
SNAA	Sanae	126.30	193	PKPdf	PKPdf	02 35 51.3	+0.2
SNAA	Sanae	126.30	193	PKP	PKPdf	02 35 51.2	+0.1
	comp=Z,9.1nm,0.9s,baz=200,slow=5.3,SNR=19						
SNAA				SKPbc	SKPbc	02 38 43.0	
	comp=Z,3.0nm,0.9s,baz=172,slow=4.7,SNR=4.5						
SNAA	Sanae	126.30	193	d iPKIKP	PKPdf	02 35 50.9	-0.2
VNA2	Neumayer--Watz	127.79	192	PKPdf	PKiKP	02 35 54.6	+0.1
	baz=125,slow=0.7						
VNA3	Neumayer Olymp	127.93	191	PKPdf	PKiKP	02 35 54.6	-0.2
VNA1	Neumayer--Stat	128.18	192	PKPdf	PKiKP	02 35 55.4	+0.2
TORD	Torodi Ar. Bea	128.91	309	PKP	PKPdf	02 35 57.7	0.0
	comp=Z,2.2nm,0.5s,baz=16,slow=1.5,SNR=44						
TORD				SKPbc	SKPbc	02 38 50.0	
	comp=Z,3.8nm,0.8s,baz=26,slow=3.4,SNR=16						
TORD	Torodi Ar. Bea	128.91	309	PKPdf	PKPdf	02 35 57.9	+0.2
SDV	Santo Domingo	134.94	51	PKPdf	PKPdf	02 36 08.3	-1.1
DBIC	Dimbokro	138.02	309	PKP	PKPdf	02 36 15.4	+0.6
	comp=Z,2.7nm,0.5s,baz=62,slow=2.0,SNR=11						
DBIC				SKPbc	SKPbc	02 39 20.6	-0.3
	comp=Z,8.8nm,0.9s,baz=42,slow=2.3,SNR=9.9						
KIC	Kosan Boka	138.14	308	ePKIKP	PKiKP	02 36 17.5	+0.3
	comp=Z,11nm,0.5s						
TIC	Toumodi	138.15	309	ePKIKP	PKiKP	02 36 17.0	-0.2
LIC	Lamto	138.44	308	ePKIKP	PKiKP	02 36 17.5	-0.3
	comp=Z,71nm,1.8s						
TBTG	Tabatinga, AM	143.38	66	PKPdf	PKPbc	02 36 22.0	-0.5
LL04	Puerto Octay	144.22	131	PKPdf	PKPbc	02 36 24.0	-0.1
LC01	Cunco	145.30	128	PKPbc	PKPab	02 36 28.0	-0.1
PLCA	Paso Flores	145.59	131	PKPbc	PKPab	02 36 29.0	-0.2
	comp=Z,46nm,0.6s,baz=238,slow=4.0,SNR=110						
PLCA				SKPbc	SKPbc	02 39 39.4	+0.1
	comp=Z,2.7nm,0.7s,baz=228,slow=3.2,SNR=4.1						
PLCA	Paso Flores	145.59	131	PKP2	PKPab	02 36 29.0	-0.2
PLCA	Paso Flores	145.59	131	PKPbc	PKPab	02 36 29.5	+0.4
BOAV	Boa Vista	146.62	47	PKPbc	PKPbc	02 36 31.3	-0.7
MT01	Popeta	147.19	119	PKPbc	PKPbc	02 36 32.8	-0.3
HOPE	Hope Point	147.38	180	PKP2	PKPbc	02 36 32.6	-0.3
HOPE	Hope Point	147.38	180	PKPbc	PKPbc	02 36 32.6	-0.3
VA03	San Esteban	148.00	118	PKPbc	PKPbc	02 36 35.1	-0.2
PB11	IPOC Station P	149.10	93	PKPdf	PKPdf	02 36 33.5	-0.6
PB11				PKPbc	PKPbc	02 36 38.1	-0.5
MDP	Montagnes des	149.17	32	PKPbc	PKiKP	02 36 39.5	-0.3
	comp=Z,16nm,0.5s,baz=305,slow=3.9,SNR=22						
PTGA	Pitinga	149.22	51	PKP	PKPdf	02 36 35.1	+0.8
	comp=Z,5.2nm,0.8s,baz=342,slow=3.2,SNR=7.7						
PTGA				PKPbc	PKiKP	02 36 39.5	-0.4
	comp=Z,19nm,0.8s,baz=311,slow=4.7,SNR=11						
ETMB	Extrema	149.29	72	PKPbc	PKPbc	02 36 38.1	-0.9
ZON	Zonda	149.79	116	PKHKP	PKPpre	02 36 39.9	
ZON	Zonda	149.79	116	PKPbc	PKPbc	02 36 39.9	+0.1
LPAZ	La Paz	149.79	85	PKP	PKPdf	02 36 36.9	+1.0
	comp=Z,28nm,0.5s,baz=329,slow=3.0,SNR=67						
LPAZ				PKPbc	PKiKP	02 36 42.1	+0.3
	comp=Z,28nm,0.5s,baz=347,slow=3.9,SNR=48						
LPAZ	La Paz	149.79	85	PKHKP	PKPpre	02 36 35.9	
LPAZ	La Paz	149.79	85	PKPdf	PKPdf	02 36 35.9	+0.1
LPAZ					PKiKP	02 36 41.8	0.0
AC02	Maricunga	149.98	106	PKPbc	PKPbc	02 36 40.8	-0.2
LVC	Limon Verde	150.13	98	PKPbc	PKiKP	02 36 42.5	+0.5
	comp=Z,18nm,0.8s,baz=267,slow=4.8,SNR=16						
SIV	San Ignacio	156.23	81	PKP	PKPdf	02 36 44.6	+0.2
	comp=Z,2.5nm,0.9s,baz=233,slow=0.7,SNR=12						
SIV				PKPab	PKPab	02 37 14.1	+0.1
	comp=Z,2.8nm,0.8s,baz=279,slow=5.5,SNR=6.9						
CPUP	Villa Florida	160.54	108	PKPab	PKPab	02 37 33.1	+0.7
	comp=Z,6.1nm,1.1s,baz=289,slow=6.7,SNR=3.8						
BDFB	Brasilia	167.71	63	PKPab	PKPab	02 38 03.4	-0.9
	comp=Z,2.9nm,0.8s,baz=330,slow=7.6,SNR=4.6						
BDFB	Brasilia	167.71	63	PKIKP	PKPdf	02 36 55.7	-0.4
BDFB						02 38 02.6	
BDFB	Brasilia	167.71	63	PKPdf	PKPdf	02 36 55.7	-0.4
BDFB					PKPab	02 38 02.6	-1.7

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*TIR **26** 02:21:37.2, 41°.57N×19°.30E, h23km±2km, Md2.8, Ml2.3*
*SKO **26** 02:21:38.4, 41°.42N×19°.18E, h13km*
*RHSSO **26** 02:21:38.5±0.8, 41°.44N×19°.49E, h4km±2km, ML2.5/7*
*ATH **26** 02:21:39.6, 41°.48N×19°.28E, h8km±4km, ML2.3/2, Error ellipse: s-maj=5.8km s-min=1.8km az=12.0*
*BEO **26** 02:21:41.7±0.5, 41°.67N×19°.71E, h11km±7km, ML2.1/12*
ISC 26 02:21:39.9±1.0**, 41°.50N**±0°.02×**19°.35E**±0°.02**, h14**km±8km**,**
n57, σ1^{s}17/104**, 3C, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.42	112	P	Pg	02 21 48.0	-0.3
TIR				S	Sg	02 21 54.9	+1.0
TIR				AML	AML	02 21 56.1	
	comp=N,974µm,0.2s						
TIR				AML	AML	02 21 56.6	
	comp=E,1190µm,0.6s						
TIR	Tirane	0.42	112	i Pg	Pg	02 21 48.0	-0.3
TIR	Tirane	0.42	112	P	Pg	02 21 47.3	-1.0
	baz=117						
TIR				S	Sg	02 21 54.4	+0.4
	baz=117						
TIR				AMP			
	comp=N,0.8nm,0.1s,baz=117						
TIR	Tirane	0.42	112	ePg	Pg	02 21 48.2	-0.1
TIR				eSg	Sg	02 21 54.4	+0.4
ULC	Ulcinj	0.47	351	i Pg	Pg	02 21 48.2	-0.9
DRME	Dracevica, Mon	0.69	350	ePg	Pb	02 21 52.5	-1.3
DRME				eSg	Sg	02 22 03.6	+1.1
PHP	Peshkopia	0.84	77	P	Pb	02 21 54.0	-2.3
	baz=81						
PHP				S	Sb	02 22 06.7	-0.9
	baz=81						
PHP				AMP			
	comp=N,0.5nm,0.1s,baz=81						
PDG	Podgorica	0.93	356	⇑iPg	Pb	02 21 56.6	-1.2
PDG				eSg	Sb	02 22 10.3	+0.3
PDG	Podgorica	0.93	356	i Pg	Pb	02 21 56.2	-1.6
PDG				i Sg	Sg	02 22 10.8	+0.8
PDG	Podgorica	0.93	356	ePg	Pb	02 21 57.8	0.0
PDG				eSg	Sb	02 22 09.5	-0.5
BCI	Bajram Curri	1.02	32	P	Pb	02 21 56.1	-3.3
	baz=35						
BCI				S	Sb	02 22 10.6	-2.0
	baz=35						
BCI				AMP			
	comp=N,0.3nm,0.3s,baz=35						
HCY	Herceg Novi	1.14	326	⇑iPg	Pn	02 22 01.1	-0.3
HCY				eSg	Sg	02 22 17.9	+1.3
OHR	Ohrid	1.16	109	i Pg	Pn	02 22 01.4	-0.5
OHR				i Sg	Sg	02 22 19.4	+2.0
OHR				eLg	Lg	02 22 20.0	
	comp=N,26nm,0.5s						
OHR	Ohrid	1.16	109	ePg	Pn	02 22 01.1	-0.7
OHR				eSg	Sb	02 22 14.0	-2.8
TREB	Trebinje	1.42	329	⇑iPn	Pb	02 22 06.2	0.0
TREB				eSg	Sg	02 22 26.0	+0.3
TREB	Trebinje	1.42	329	ePg	Pb	02 22 06.5	+0.3
TREB				eSg	Sg	02 22 27.1	+1.4
BEY	Berane	1.43	16	i Pg	Pn	02 22 06.1	+0.6
BRY	Bratogost	1.52	337	ePn	Pb	02 22 07.7	-0.3
BRY				eSn	Sg	02 22 29.4	+0.5
SKO	Skopje	1.64	73	i Pg	Pb	02 22 10.1	+0.2
SKO				i Sg	Sb	02 22 31.5	+1.1
SKO				eLg	Lg	02 22 32.1	
	comp=N,7.3nm,0.4s						
NEST	Nestorio	1.69	130	P	Pb	02 22 11.4	+0.6
FNA	Florina	1.69	114	P	Pb	02 22 10.7	-0.2
FNA				S	Sb	02 22 33.4	+1.4
FNA				AML	AML	02 22 37.1	
	comp=E,128µm,0.3s						
FNA				AML	AML	02 22 37.2	
	comp=N,137µm,0.5s						
FNA	Florina	1.69	114	i Pg	Pb	02 22 11.0	+0.1
FNA				i Sg	Sb	02 22 33.5	+1.4
SRN	Sarande	1.70	163	P	Pb	02 22 09.9	-1.0
	baz=162						
SRN				S	Sg	02 22 34.0	-0.4
	baz=162						
UPM	Unac-Piva	1.73	349	ePn	Pn	02 22 10.0	+0.2
UPM				eSn	Sb	02 22 34.0	+0.7
SJES	Sjenica	1.82	15	ePg	Pn	02 22 10.9	0.0
SJES				eSg	Sn	02 22 33.7	-0.1
KEK	Kerkira	1.82	169	P	Pb	02 22 12.1	-0.9
KEK				S	Sb	02 22 35.2	-0.5
STON	Ston	1.83	319	ePn	Pb	02 22 12.6	-0.6
STON				eSn	Sg	02 22 37.8	-1.1
STON	Ston	1.83	319	ePn	Pb	02 22 12.7	-0.6
STON				Sn	Sb	02 22 35.6	-0.4
NOCI	Noci	1.86	248	P	Pb	02 22 12.3	-1.5
RUDO	Rudo	2.11	0	ePn	Pn	02 22 15.1	+0.2
RUDO				eSn	Sb	02 22 43.1	-1.0
STIP	Stip	2.14	84	i Pn	Pb	02 22 18.9	+0.5
STIP				i Sn	Sb	02 22 47.1	+2.3
STIP				eLg	Lg	02 22 48.9	
	comp=E,3.9nm,0.3s						
IVAS	Ivanjica	2.15	16	ePg	Pn	02 22 15.7	+0.2
IVAS				eSg	Sb	02 22 44.1	-1.3
SELS	Selova	2.16	37	ePg	Pn	02 22 15.4	-0.1
SELS				eSg	Sn	02 22 40.8	-1.4
JAN	Janina	2.17	148	P	Pb	02 22 18.5	-0.5
KPRO	Kipourio	2.18	135	P	Pb	02 22 18.7	-0.4
LSTV	Lastovo	2.22	306	ePn	Pb	02 22 19.6	-0.2
LSTV				Sn	Sb	02 22 47.9	+0.7
BARS	Barje	2.26	54	i Pn	Pn	02 22 17.7	+0.9
BARS	Barje	2.26	54	ePg	Pn	02 22 16.4	-0.4
BARS				eSg	Sn	02 22 42.9	-1.6
BBLS	Lazići	2.36	1	ePn	Pn	02 22 18.9	+0.6
BBLS				eSn	Sn	02 22 48.8	+1.6
BBLS	Lazići	2.36	1	ePg	Pb	02 22 22.1	-0.2
BBLS				eSg	Sb	02 22 52.6	+1.3
MAKA	Makarska	2.48	317	ePn	Pn	02 22 20.9	+1.1
MAKA				Sn	Sn	02 22 50.2	+0.3
BOSS	Bosilegrad	2.54	66	ePg	Pn	02 22 21.2	+0.5
BOSS				eSg	Sn	02 22 51.2	-0.3
RICI	Ricice	2.58	321	ePn	Pn	02 22 21.6	+0.4
RICI				Sn	Sn	02 22 51.7	-0.6
DIVS	Divibare	2.64	10	ePn	Pn	02 22 22.3	+0.2
DIVS				eSn	Sn	02 22 55.2	+1.2
DIVS	Divibare	2.64	10	ePg	Pn	02 22 24.6	+2.5
DIVS				eSg	Sb	02 22 58.6	-0.6
HVAR	Hvar	2.72	309	ePn	Pn	02 22 24.7	+1.5
HVAR				Sn	Sb	02 22 58.4	-3.2
TRUS	Trudelj	2.83	16	ePg	Pn	02 22 27.5	+2.8
ZAGS	Zajecar	3.14	42	ePg	Pn	02 22 31.5	+2.5
KIJV	Kijevo	3.31	320	ePn	Pn	02 22 31.9	+0.6
KIJV				Sn	Sn	02 23 09.4	-1.0
ZIRJ	Zirje	3.48	309	ePn	Pn	02 22 35.6	+2.0
ZIRJ				Sn	Sn	02 23 15.8	+1.3
MORI	Morici	3.57	313	ePn	Pn	02 22 36.0	+1.1
MORI				Sn	Sn	02 23 18.7	+1.7
MRAK	Mrakovica	3.94	334	ePn	Pn	02 22 40.3	+0.3
MRAK				eSn	Sn	02 23 27.0	+1.0
UDBI	Udbina	4.00	320	ePn	Pn	02 22 41.5	+0.7
UDBI				Sn	Sn	02 23 27.3	-0.4
DUGI	Dugi Otok	4.02	310	ePn	Pn	02 22 42.6	+1.6
DUGI				Sn	Sn	02 23 29.0	+1.0
PLIT	Plitvice	4.33	322	ePn	Pn	02 22 44.9	-0.6
PLIT				Sn	Sn	02 23 34.5	-1.2
NVLJ	Novalja	4.48	314	ePn	Pn	02 22 48.1	+0.7
NVLJ				Sn	Sn	02 23 39.0	-0.3
BRJN	Brijuni	5.32	312	ePn	Pn	02 22 59.8	+1.0
BRJN				Sn	Sn	02 24 00.1	+0.2

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*VAO **26** 03:24:37.1±0.9, 22°.17S×69°.39W, h156km, mb4.0*
*GUC **26** 03:24:41.1±0.7, 21°.95S×68°.79W, h116km±4km, ML3.7*
ISC 26 03:24:40.2±0.8**, 21°.97S**±0°.04×**68°.85W**±0°.07**, h124**km±8km**,**
n38, σ1^{s}00/50**, 9C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.40	296	⇑iP	Pn	03 24 58.4	0.0
PB09				i S	Sn	03 25 11.3	-0.7
PB09				IAML		03 25 13.2	
	comp=E,3µm,0.3s						
LVC	Limon Verde	0.64	185	eP	Pn	03 24 58.8	-1.2
LVC				i S	Sn	03 25 13.7	-1.2
LVC	Limon Verde	0.64	185	eP	Pn	03 24 59.7	-0.3
PB03	IPOC Station P	0.84	265	⇑iP	Pn	03 25 01.6	+0.3
PB03				i S	Sn	03 25 17.5	+0.2
PB03				IAML		03 25 18.7	
	comp=N,1µm,0.1s						
PB06	IPOC Station P	0.99	222	⇑iP	Pn	03 25 03.2	+0.5
PB06				i S	Sn	03 25 20.3	+0.5
PB06				IAML		03 25 21.4	
	comp=E,3µm,0.2s						
PB07	IPOC Station P	0.99	284	⇑iP	Pn	03 25 03.2	+0.4
PB07				i S	Sn	03 25 19.9	+0.1
PB07				IAML		03 25 23.8	
	comp=E,2µm,0.2s						
PB01	IPOC Station P	1.10	327	⇓iP	Pn	03 25 03.5	-0.2
PB01				i S	Sn	03 25 20.9	-0.6
PB01				IAML		03 25 22.4	
	comp=E,3µm,0.3s						
PB04	IPOC Station P	1.26	253	⇑iP	Pn	03 25 06.0	+0.6
PB04				i S	Sn	03 25 24.7	+0.2
PB04				IAML		03 25 31.9	
	comp=N,905nm,0.1s						
PB15	IPOC Station P	1.36	205	⇑iP	Pn	03 25 07.2	+0.6
PB15				i S	Sn	03 25 27.9	+1.4
PB05	IPOC Station P	1.53	235	⇑iP	Pn	03 25 08.9	+0.6
PB05				i S	Sn	03 25 30.0	+0.2
PB05				IAML		03 25 31.3	
	comp=N,570nm,0.6s						
PB08	IPOC Station P	1.84	351	⇓iP	Pn	03 25 12.9	+0.5
PB08				i S	Sn	03 25 37.5	+0.6
PB08				IAML		03 25 39.1	
	comp=E,670nm,0.2s						
TA01	Diego Aracena	1.87	318	⇑iP	Pn	03 25 11.8	-0.5
TA01				i S	Sn	03 25 36.5	-0.4
TA01				IAML		03 25 39.4	
	comp=E,1µm,0.5s						
TA02	Huaiquique	2.07	325	eP	Pn	03 25 14.3	-0.6
TA02				IAML		03 25 47.0	
	comp=N,889nm,0.1s						
PB10	IPOC Station P	2.20	225	⇑iP	Pn	03 25 16.4	+0.1
PB10				i S	Sn	03 25 43.0	-1.0
LPAZ	La Paz	5.70	7	eP	Pn	03 26 04.6	+1.3
PTLB	Pontes e Lacer	11.26	56	eP	Pn	03 27 20.8	+3.2
SALV	Santo Antonio	13.83	66	eP	Pn	03 27 53.2	+2.0
PDRB	Porto dos Gac	15.51	50	eP	P	03 28 13.7	-0.3
ITAB	Concordia	16.08	112	eP	P	03 28 20.3	+0.1
CPSB	Cacapava Do Su	16.17	124	eP	Pn	03 28 20.0	-0.4
PCMB	Pacaembu	16.34	92	eP	Pn	03 28 24.2	+1.6
CLDB	Colider	16.68	51	eP	Pn	03 28 27.5	+0.8
ARAG	Araguaiana, MT	17.28	72	eP	P	03 28 33.0	-0.7
ITRB	Iturama	17.43	86	eP	P	03 28 35.2	0.0
FRTB	Fartura	17.86	98	eP	P	03 28 39.5	-0.4
BB19B	Bebedouro	18.93	91	eP	P	03 28 51.0	-0.7
TER01	Tubaro-SC	18.98	114	eP	P	03 28 50.4	-1.8
NPGB	Novo Progresso	19.74	43	eP	P	03 28 58.7	-1.8
IPMB	Ipameri, GO	19.80	82	eP	P	03 29 00.8	-0.3
PET01	Itanhaem-SP	19.97	101	eP	P	03 29 01.8	-1.1
VAO	Valinhos	20.25	97	eP	P	03 29 05.2	-0.7
MACA	Manacapuru-AM	20.31	24	eP	P	03 29 05.2	-1.4
PARB	Paraibuna	21.48	98	eP	P	03 29 18.3	-0.9
ITTB	Itaituba	21.63	38	eP	P	03 29 19.7	-1.1
PEXB	Peixe	21.94	67	eP	P	03 29 23.2	-0.8

MC01	**Montes Claros**	24.07	82	*e*P	**P**	03 29 43.6	-0.7
PRPB	**Parauapebas**	24.19	52	*e*P	**P**	03 29 45.2	-0.2
JANB	**Januaria**	24.24	78	*e*P	**P**	03 29 44.5	-1.4

*MAN **26** 03:31:35.2, 5°.45N×126°.20E, h68^{km}, mb4.7, ML3.6, MS3.5*

*NEIC **26** 03:31:37.5±1.5, 5°.77N±0°.05×126°.1E±0°.1, h106^{km}±7^{km}, mb4.5/14, Error ellipse: s-maj=18.5km s-min=3.7km az=68.0*

*IDC **26** 03:31:38.1±1.0, 5°.78N×126°.18E, h117^{km}±11^{km}, mb3.5/5, mb1 3.8/7, mb1mx3.4/36, mbtmp4.0/7, MS2.8/1, Ms1 3.0/1, ms1mx2.4/33, Error ellipse: s-maj=44.4km s-min=13.0km az=69.0*

*DJA **26** 03:31:39.9±0.9, 6°N±6°×12°6E±°, h85^{km}±23^{km}, M4.6/9, mb4.6/6, mB4.8/2, MLv4.6/9, Mw(mB)4.0/2*

ISC 26 03:31:37.1±0.8**, 5°.68N**±0°.04×**126°.08E**±0°.06**, h105**^{km}±7^{km}**, n47, σ1^{s}95**/56**, mb4.3**/13**, 8C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.56**	**319**	⇑*i*P	**Pn**	**03 31 53.1**	**-0.8**
DDMP				*i* S	**Sn**	**03 32 05.7**	**-0.8**
GSPH	**General Santos**	**1.20**	**290**	⇑*e*P	**Pn**	**03 32 00.0**	**-0.2**
GSPH				*e*S	**Sn**	**03 32 18.4**	**+0.6**
MATI	**Mati**	**1.27**	**8**	⇑*i*P	**Pn**	**03 31 59.4**	**-1.6**
MATI				*i* S	**Sn**	**03 32 17.5**	**-1.5**
DAV	**Davao City (W)**	**1.47**	**340**	P	**Pn**	**03 32 04.4**	**+1.1**
	52nm,0.3s,baz=311,slow=5.9,SNR=2.4						
DAV				S	**Sn**	**03 32 24.2**	**+1.0**
	121nm,0.3s,baz=81,slow=22,SNR=7.4						
DAV	**Davao City (W)**	**1.47**	**340**		**Pn**	**03 32 03.4**	**+0.1**
DAV					**Sn**	**03 32 21.5**	**-1.7**
KCP	**Kidapawan**	**1.65**	**323**	⇑*e*P	**Pn**	**03 32 06.6**	**+1.0**
KCP				*i* S	**Sn**	**03 32 29.4**	**+2.2**
SGSI	**Sangihe**	**2.06**	**196**	P	**Pn**	**03 32 11.7**	**+1.1**
BUKP	**Musuan**	**2.41**	**335**	⇑*e*P	**Pn**	**03 32 17.0**	**+1.8**
BUKP				*e*S	**Sn**	**03 32 44.7**	**+0.2**
BIPH	**Bislig**	**2.50**	**6**	⇑*e*P	**Pn**	**03 32 18.7**	**+2.2**
BIPH				*e*S	**Sn**	**03 32 50.8**	**+4.1**
BUTP	**Butuan**	**3.30**	**352**	⇑*i*P	**Pn**	**03 32 29.9**	**+2.9**
BUTP				*i* S	**Sn**	**03 33 10.8**	**+5.3**
PAGZ	**Pagadian**	**3.44**	**309**	⇑*i*P	**Pn**	**03 32 29.7**	**+0.8**
PAGZ	**Pagadian**	**3.44**	**309**	*e*P	**Pn**	**03 32 32.0**	**+3.1**
PAGZ				*e*S	**Sn**	**03 33 06.0**	**-2.9**
TBP	**Tagbilaran**	**4.55**	**331**	*e*P	**Pn**	**03 32 46.5**	**+2.7**
TNTI	**Ternate**	**5.04**	**165**	P	**Pn**	**03 32 51.7**	**+1.2**
TNTI	**Ternate**	**5.04**	**165**	Pn	**Pn**	**03 32 49.9**	**-0.6**
TNTI					**Sn**	**03 33 48.4**	**+0.9**
GTOI	**Gorontalo**	**5.87**	**212**	P	**Pn**	**03 33 04.0**	**+2.2**
	0.2nm518nm44nm,0.8s						
LBMI	**Labuha**	**6.43**	**167**	P	**Pn**	**03 33 10.3**	**+0.9**
	0.5nm43nm,0.8s						
MRSI	**Marisa**	**6.62**	**219**	P	**Pn**	**03 33 15.1**	**+3.2**
	0.3nm99nm,0.9s						
TOLI2	**Tolitoli**	**6.97**	**230**		**Pn**	**03 33 19.4**	**+2.7**
SANI	**Sanana**	**7.68**	**181**	P	**Pn**	**03 33 24.7**	**-1.6**
	0.3nm1μm52nm,1.0s						
SANI				S	**Sn**	**03 34 45.9**	**-5.8**
	0.3nm1μm52nm,1.0s						
SIJI	**Sorong**	**8.31**	**141**	P	**Pn**	**03 33 36.4**	**+1.5**
	2.5nm,0.3s,baz=183,slow=22,SNR=4.3						
TTSI	**Tana Toraja**	**10.69**	**216**	P	Pn	03 34 12.3	+5.1
KAPI	**Kappang**	**12.36**	**211**	P	**Pn**	**03 34 32.6**	**+3.1**
	0.8nm,0.3s,baz=68,slow=6.6,SNR=5.6						
SBUM	**Sibu**	**14.19**	**257**	Pn	**Pn**	**03 34 52.6**	**-0.8**
KNRA	**Kununurra**	**21.38**	**173**	P	**P**	**03 36 16.5**	**+0.1**
KNRA				IAmb	IAmb	03 36 20.4	
	comp=Z,30nm,0.9s						
MYKOM	**Kota Tinggi**	**22.52**	**261**	P	**P**	**03 36 28.1**	**-0.2**
WB0	**Warramunga Arr**	**26.58**	**162**	P	**P**	**03 37 05.8**	**+0.2**
WB0				IAmb	IAmb	03 37 14.2	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**26.73**	**163**	P	**P**	**03 37 07.1**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=344,slow=10,SNR=7.7						
WRA	**Warramunga Arr**	**26.73**	**163**	IAmb	IAmb	03 37 12.5	
	comp=Z,0.4nm,1.2s						
WB2	**Warramunga Arr**	**26.73**	**162**	P	**P**	**03 37 06.6**	**-0.3**
WB2				IAmb	IAmb	03 37 09.0	
	comp=Z,13nm,1.3s						
PSA00	**Pilbara Seismi**	**27.77**	**193**	P	**P**	**03 37 16.6**	**+0.5**
PSA00				IAmb	IAmb	03 37 28.5	
	comp=Z,35nm,1.4s						
CMAR	**Chiang Mai Arr**	**29.36**	**298**	LR	LR	03 51 21.4	
	comp=Z,15nm,18.5s,baz=185,slow=40						
AS31	**Alice Springs**	**30.15**	**166**	P	**P**	**03 37 36.8**	**-0.5**
ASAR	**Alice Springs**	**30.15**	**166**	P	**P**	**03 37 37.4**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=345,slow=6.9,SNR=37						
BJT	**Baijiatuau**	**35.34**	**347**	P	**P**	**03 38 21.5**	**-0.8**
BJT				IAmb	IAmb	03 38 28.7	
	comp=Z,10nm,1.4s						
USRK	**Ussuriysk Ar.**	**38.72**	**7**	P	**P**	**03 38 48.6**	**-2.2**
BBOO	**Buckleboo**	**39.43**	**167**	P	**P**	**03 38 57.6**	**+0.6**
STKA	**Stephens Creek**	**40.17**	**159**	P	**P**	**03 39 03.8**	**+0.7**
	comp=Z,1.5nm,0.4s,baz=328,slow=9.9,SNR=6.6						
MK31	**Makanchi Array**	**55.60**	**325**	P	**P**	**03 41 01.1**	**-0.8**
MK31				IAmb	IAmb	03 41 18.8	
	comp=Z,1.9nm,1.1s						
MKAR	**Makanchi Array**	**55.60**	**325**	P	**P**	**03 41 01.8**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=122,slow=8.0,SNR=18						
KURK	**Kurchatov**	**59.76**	**327**	P	**P**	**03 41 30.9**	**0.0**
KURK				IAmb	IAmb	03 41 41.4	
	comp=Z,2.7nm,0.5s						
ABKAR	**Akbulak array**	**70.25**	**320**	P	**P**	**03 42 39.3**	**+0.4**
ILAR	**Eielson Array**	**83.63**	**26**	P	**P**	**03 43 52.9**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=249,slow=5.8,SNR=2.3						
KIBK	**Kibwezi**	**88.28**	**267**	P	**P**	**03 44 17.5**	**-0.2**
KIBK				IAmb	IAmb	03 44 28.9	
	comp=Z,4.0nm,1.0s						
A36M	**Sachs Harbour**	**90.33**	**17**	P	**P**	**03 44 24.8**	**-1.1**
TORD	**Torodi Ar. Bea**	**121.69**	**289**	PKP	**PKPdf**	**03 50 18.2**	**-1.5**
	comp=Z,0.7nm,1.0s,baz=28,slow=1.7,SNR=4.1						
TORD	**Torodi Ar. Bea**	**121.69**	**289**		**PKPdf**	**03 50 17.5**	**-2.2**

IDC 26 03:47:41.7±1.9**, 0°.75N×97°.12E, h0**^{km}**, mb4.0**/3**, mb1 4.1**/4**, mb1mx3.5**/44**, mbtmp4.0**/4**, Error ellipse: s-maj=53.0km s-min=26.9km az=60.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.72**	**42**	Pn	Pn	03 48 25.3	-1.5
	baz=217,slow=10						
CMAR	**Chiang Mai Arr**	**17.68**	**6**	P	P	03 51 51.4	+0.8
	baz=192,slow=12,SNR=1.7						
H08S2	**Diego Garcia H**	**25.94**	**251**	T	T	04 20 09.0	
	baz=72,slow=75,SNR=366						
H08S3	**Diego Garcia H**	**25.94**	**251**	T	T	04 20 12.3	
	baz=72,slow=75,SNR=606						
H08S1	**Diego Carcia H**	**25.96**	**251**	T	T	04 20 10.5	
	baz=72,slow=75,SNR=165						
H01W3	**Cape Leeuwin H**	**38.87**	**157**	T	T	04 36 26.5	
	baz=334,slow=76,SNR=20						
H01W2	**Cape Leeuwin H**	**38.88**	**157**	T	T	04 36 26.4	
	baz=334,slow=76,SNR=18						
H01W1	**Cape Leeuwin H**	**38.88**	**157**	T	T	04 36 26.6	
	baz=334,slow=76,SNR=20						
ASAR	**Alice Springs**	**43.19**	**127**	P	P	03 55 44.8	0.0
	0.8nm,0.9s,baz=296,slow=7.6,SNR=6.8						
MKAR	**Makanchi Array**	**47.65**	**346**	P	P	03 56 19.6	-0.2
	0.8nm,0.5s,baz=163,slow=9.2,SNR=19						
ZALV	**Zalesovo Beam**	**53.98**	**351**	P	P	03 57 06.9	-0.4
	2.3nm,0.4s,baz=167,slow=6.7,SNR=13						

*PGC **26** 03:57:03.1±3.5, 50°.48N×130°.19W, h10^{km}, MLSn3.4/37, Mw4.3, 197km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

*NEIC **26** 03:57:03.7, 50°.48N×130°.19W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.01; $M_{\theta\theta}$-3.27; $M_{\phi\phi}$3.04; $M_{r\theta}$-0.15; $M_{\theta\phi}$0.61; $M_{\phi r}$-0.83; Fault plane solution: $M_0$3.30000×10^{15} NP1:ϕ_s231.00000°, δ81.00000°, λ11.00000°. NP2:ϕ_s140.00000°, δ79.00000°, λ171.00000°. Principal axes: T 3.3940, Plg14.0000°, Azm96.0000°; N -0.1419, Plg76.0000°, Azm270.0000°; P -3.2522, Plg1.0000°, Azm5.0000°;*

*NEIC **26** 03:57:04.5±2.3, 50°.65N±0°.09×130°.0W±0°.1, h15^{km}±6^{km} Error ellipse: s-maj=15.2km s-min=6.6km az=217.0*

*IDC **26** 03:57:05.0±1.4, 50°.56N×129°.79W, h0^{km}, mb3.5/3, mb1 3.9/8, mb1mx3.6/47, mbtmp3.5/8, ML3.6/5, MS3.3/9, Ms1 3.3/9, ms1mx3.1/31, Error ellipse: s-maj=23.6km s-min=11.4km az=75.0*

ISC 26 03:57:02.1±1.8**, 50°.53N**±0°.05×**130°.10W**±0°.05**, h2**^{km}±12^{km}**, n150, σ1^{s}56**/158**, mb3.9**/7**, MS3.3**/4**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.26**	**84**	Pn	**Pg**	**03 57 25.5**	**-0.6**
HOLB	**Holberg**	**1.26**	**84**	P	**Pg**	**03 57 25.6**	**-0.6**
HOLB				S	**Sg**	**03 57 41.5**	**-1.0**
BPBC	**Brooks Peninsu**	**1.54**	**103**		**Pn**	**03 57 28.5**	**-2.1**
BPBC	**Brooks Peninsu**	**1.54**	**103**	Pn	**Pn**	**03 57 28.5**	**-2.1**
PACB	**Port Alice, BC**	**1.67**	**92**	Pn	**Pn**	**03 57 30.9**	**-1.4**
PACB	**Port Alice, BC**	**1.67**	**92**	Pn	**Pn**	**03 57 30.9**	**-1.4**
PACB				Sn	**Sn**	**03 57 50.2**	**-4.0**
PHC	**Port Hardy**	**1.71**	**83**	Pn	**Pn**	**03 57 32.2**	**-0.7**
PHC				Sn	**Sn**	**03 57 52.5**	**-2.8**
PHC	**Port Hardy**	**1.71**	**83**	Pn	**Pn**	**03 57 32.2**	**-0.7**
PHC				Sn	**Sn**	**03 57 52.5**	**-2.8**
MAYB	**Maynard**	**1.88**	**93**	Pn	**Pn**	**03 57 34.1**	**-1.2**
HG4B	**Hotspring**	**1.89**	**339**	Pn	**Pn**	**03 57 33.8**	**-1.6**
HG4B	**Hotspring**	**1.89**	**339**	Pn	**Pn**	**03 57 33.6**	**-1.8**
HG4B				Sn	**Sn**	**03 57 56.5**	**-3.3**
EDB	**Eliza Dome**	**2.02**	**108**	Pn	**Pn**	**03 57 34.9**	**-2.3**
BBB	**Bella Bella**	**2.07**	**36**	Pn	**Pn**	**03 57 37.6**	**-0.2**
	17nm,0.3s,baz=238,slow=9.2,SNR=63						
BBB				Sn	**Sn**	**03 58 01.5**	**-2.7**
	95nm,0.3s,baz=240,slow=18,SNR=8.2						
BBB				LR	LR	03 58 14.6	
	comp=Z,120nm,18.9s,baz=92,slow=36						
BBB	**Bella Bella**	**2.07**	**36**	Pn	**Pn**	**03 57 37.5**	**-0.4**
BBB				Sn	**Sn**	**03 58 00.8**	**-3.4**
TLCB	**Telegraph Cove**	**2.08**	**88**		**Pn**	**03 57 37.5**	**-0.6**
TLCB	**Telegraph Cove**	**2.08**	**88**	Pn	**Pn**	**03 57 37.4**	**-0.6**
TLCB				Sn	**Sn**	**03 58 01.7**	**-2.8**
BNB	**Barry Inlet**	**2.29**	**334**	Pn	**Pn**	**03 57 38.9**	**-2.1**
WOSB	**Woss**	**2.29**	**98**	Pn	**Pn**	**03 57 40.3**	**-0.7**
ETB	**Estevan Point**	**2.58**	**115**	Pn	**Pn**	**03 57 43.1**	**-1.7**
NCRB	**Newcastle Ridg**	**2.59**	**91**	Pn	**Pn**	**03 57 44.4**	**-0.7**
HG1B	**Mitchell Dam**	**2.72**	**333**	Pn	**Pn**	**03 57 47.0**	**+0.3**
GDR	**Gold River**	**2.72**	**104**	Pn	**Pn**	**03 57 45.5**	**-1.3**
BUTB	**Butedale**	**2.73**	**21**	Pn	**Pn**	**03 57 47.3**	**+0.3**
BUTB				Sn	**Sn**	**03 58 19.0**	**-1.7**
BNKB	**Banks Island**	**2.81**	**2**	Pn	**Pn**	**03 57 47.2**	**-0.8**
BNKB				Sn	**Sn**	**03 58 19.6**	**-2.8**
SPLB	**Strathcona Par**	**2.93**	**101**	Pn	**Pn**	**03 57 48.6**	**-1.1**
BNAB	**Bonilla**	**2.98**	**354**	Pn	**Pn**	**03 57 49.2**	**-1.2**
BNAB				Sn	**Sn**	**03 58 23.3**	**-3.4**
TOFB	**Tofino**	**3.04**	**115**	Pn	**Pn**	**03 57 49.6**	**-1.6**
TOFB				Sn	**Sn**	**03 58 22.9**	**-5.3**
DIB	**Dawson Inlet,**	**3.05**	**332**		**Pn**	**03 57 50.0**	**-1.3**
DIB	**Dawson Inlet,**	**3.05**	**332**	Pn	**Pn**	**03 57 49.9**	**-1.5**
H02S1	**DAWSON INLET T**	**3.05**	**332**	Pn	**Pn**	**03 57 49.9**	**-1.4**
CBB	**Campbell River**	**3.08**	**98**	Pn	**Pn**	**03 57 51.5**	**-0.3**
CBB	**Campbell River**	**3.08**	**98**	Pn	**Pn**	**03 57 51.4**	**-0.3**
HWKB	**Hawksbury Isla**	**3.13**	**10**	Pn	**Pn**	**03 57 52.0**	**-0.4**
HWKB				Sn	**Sn**	**03 58 27.7**	**-2.7**
BTB	**Buttle Lake**	**3.14**	**108**	Pn	**Pn**	**03 57 51.7**	**-1.0**
MWAB	**Mount Washingt**	**3.19**	**103**	Pn	**Pn**	**03 57 52.8**	**-0.6**
GRNB	**Grenville Isla**	**3.32**	**1**	Pn	**Pn**	**03 57 54.0**	**-1.1**
GRNB	**Grenville Isla**	**3.32**	**1**	Pn	**Pn**	**03 57 53.4**	**-1.7**
GRNB				Sn	**Sn**	**03 58 32.7**	**-2.4**
KITB	**Kitimat**	**3.66**	**14**	Pn	**Pn**	**03 57 59.8**	**+0.1**
KITB				Sn	**Sn**	**03 58 41.8**	**-1.7**
TXB	**Texada**	**3.74**	**101**	Pn	**Pn**	**03 58 00.0**	**-0.8**
RUBB	**Prince Rupert**	**3.80**	**359**	Pn	**Pn**	**03 58 01.4**	**-0.2**
RUBB	**Prince Rupert**	**3.80**	**359**	Pn	**Pn**	**03 58 01.4**	**-0.2**
RUBB				Sn	**Sn**	**03 58 44.6**	**-2.3**
SHB	**Sechelt**	**4.12**	**101**	Pn	**Pn**	**03 58 05.9**	**-0.2**
NLLB	**Nanaimo Lost L**	**4.16**	**106**	Pn	**Pn**	**03 58 05.8**	**-0.8**
PFB	**Port Renfrew**	**4.17**	**116**	Pn	**Pn**	**03 58 06.4**	**-0.4**
OCP	**Olym-Cheeka Pk**	**4.22**	**120**	Pn	**Pn**	**03 58 06.9**	**-0.5**
B926	**Mesachie Lake**	**4.24**	**112**	Pn	**Pn**	**03 58 07.4**	**-0.2**
CLRS	**Cowichan Lake**	**4.24**	**112**	Pn	**Pn**	**03 58 08.2**	**+0.5**
CLRS	**Cowichan Lake**	**4.24**	**112**	Pn	**Pn**	**03 58 07.8**	**+0.2**
WPB	**Watts Point**	**4.52**	**99**	Pn	**Pn**	**03 58 11.8**	**+0.3**
BIB	**Bowen Island**	**4.53**	**102**	Pn	**Pn**	**03 58 11.3**	**-0.3**
GOBB	**Galiano Island**	**4.56**	**108**	Pn	**Pn**	**03 58 12.1**	**0.0**
WSLR	**Whistler**	**4.62**	**92**	Pn	**Pn**	**03 58 12.9**	**0.0**
OBC	**Olympics--Boni**	**4.67**	**120**	Pn	**Pn**	**03 58 13.8**	**+0.2**
B010	**North Saanich**	**4.72**	**111**	Pn	**Pn**	**03 58 13.1**	**-1.1**
B009	**North Saanich**	**4.72**	**111**	Pn	**Pn**	**03 58 14.2**	**0.0**
PGC	**Sidney**	**4.72**	**111**	Pn	**Pn**	**03 58 14.2**	**0.0**
PGC	**Sidney**	**4.72**	**111**	Pn	**Pn**	**03 58 13.2**	**-1.0**
B011	**North Saanich**	**4.72**	**111**	Pn	**Pn**	**03 58 13.9**	**-0.3**
PA01	**PA01 North**	**4.72**	**111**	Pn	**Pn**	**03 58 13.8**	**-0.5**
PA12	**PA12 Sannich**	**4.72**	**111**	Pn	**Pn**	**03 58 13.9**	**-0.3**
SNB	**Saturna Island**	**4.83**	**109**	Pn	**Pn**	**03 58 16.7**	**+0.9**
STW	**Striped Peak**	**4.83**	**117**	Pn	**Pn**	**03 58 16.0**	**+0.2**
VGZ	**Gonzales**	**4.90**	**113**	Pn	**Pn**	**03 58 16.1**	**-0.6**
B04A	**Port Angeles**	**4.98**	**117**	Pn	**Pn**	**03 58 18.2**	**+0.4**
OSD	**Olympics--Snow**	**5.00**	**120**	Pn	**Pn**	**03 58 18.0**	**-0.3**
HNBB	**Haney**	**5.02**	**101**	Pn	**Pn**	**03 58 18.6**	**+0.2**
NLWA	**Neilton Lookou**	**5.17**	**125**	Pn	**Pn**	**03 58 20.5**	**0.0**
LLLB	**Lillooet**	**5.24**	**86**	Pn	**Pn**	**03 58 22.1**	**+0.7**
LLLB	**Lillooet**	**5.24**	**86**	Pn	**Pn**	**03 58 21.8**	**+0.4**
CRAG	**Craig**	**5.27**	**341**	Pn	**Pn**	**03 58 21.3**	**-0.5**
FSB	**Fort Saint Jam**	**5.29**	**40**	Pn	**Pn**	**03 58 23.5**	**+1.3**
FSB				Sn	**Sn**	**03 59 21.4**	**-2.4**
FSJB	**Fort St James**	**5.29**	**40**	Pn	**Pn**	**03 58 23.3**	**+1.1**
FSJB				Sn	**Sn**	**03 59 21.6**	**-2.2**
VDB	**Vedder Mountai**	**5.40**	**103**	Pn	**Pn**	**03 58 25.1**	**+1.5**
WISH	**Wishkah**	**5.40**	**127**	Pn	**Pn**	**03 58 24.1**	**+0.6**
A05A	**Maple Falls**	**5.42**	**103**	Pn	**Pn**	**03 58 25.2**	**+1.4**
CMW	**Cultus Mountai**	**5.61**	**109**	Pn	**Pn**	**03 58 28.0**	**+1.4**
GNW	**Green Mountain**	**5.63**	**119**	Pn	**Pn**	**03 58 26.6**	**-0.2**
HOPB	**Hope**	**5.72**	**98**	Pn	**Pn**	**03 58 28.6**	**+0.7**
JCW	**Jim Creek**	**5.83**	**111**	Pn	**Pn**	**03 58 30.4**	**+0.9**
B06A	**Marblemount**	**5.96**	**106**		**Pn**	**03 58 32.4**	**+1.1**
B06A	**Marblemount**	**5.96**	**106**	Pn	**Pn**	**03 58 32.0**	**+0.7**
RPW	**Rockport**	**5.97**	**107**	Pn	**Pn**	**03 58 32.1**	**+0.6**
D05A	**Enumclaw**	**6.31**	**119**	Pn	**Pn**	**03 58 37.9**	**+1.8**
FMW	**Mount Fremont**	**6.64**	**120**	Pn	**Pn**	**03 58 42.7**	**+2.0**
PNT	**Penticton**	**6.88**	**96**	Pn	**Pn**	**03 58 44.5**	**+0.6**
LTY	**Liberty**	**7.03**	**114**		**Pn**	**03 58 46.9**	**+0.9**
LTY	**Liberty**	**7.03**	**114**	Pn	**Pn**	**03 58 47.1**	**+1.1**
BMBC	**Bull Mountain**	**7.30**	**38**	P	**Pn**	**03 58 51.7**	**+2.0**
BMBC				S	**Sn**	**04 00 12.6**	**-0.5**
B08A	**Colville Reser**	**7.35**	**103**	Pn	**Pn**	**03 58 51.2**	**+0.8**
B08A	**Colville Reser**	**7.35**	**103**	Pn	**Pn**	**03 58 51.3**	**+0.8**
MNB	**Mounoet Dainar**	**7.52**	**73**	P	**Pn**	**03 58 54.9**	**+1.9**
E07A	**Sunnyside**	**7.88**	**116**		**Pn**	**03 58 58.5**	**+0.9**
DLBC	**Dease Lake**	**7.92**	**0**	Pn	**Pn**	**03 59 00.9**	**+2.7**
	1.2nm,0.3s,baz=173,slow=5.4,SNR=32						
DLBC				Sn	**Sn**	**04 00 29.8**	**+1.3**
	0.6nm,0.3s,baz=284,slow=23,SNR=3.2						
DLBC				LR	LR	04 02 05.0	
	comp=Z,363nm,18.2s,baz=270,slow=38						
DLBC	**Dease Lake**	**7.92**	**0**	Pn	**Pn**	**03 58 59.3**	**+1.0**
DLBC	**Dease Lake**	**7.92**	**0**	P	**Pn**	**03 59 00.6**	**+2.3**
H04A	**Detroit Lake**	**7.92**	**135**	Pn	**Pn**	**03 59 00.3**	**+2.0**
HAWA	**Hanford**	**8.15**	**116**	Pn	**Pn**	**03 59 02.3**	**+0.9**
D08A	**Wollman Farm,**	**8.16**	**111**	Pn	**Pn**	**03 59 01.8**	**+0.4**
C09A	**Chrisman Ranch**	**8.22**	**105**	Pn	**Pn**	**03 59 02.9**	**+0.6**
C09A	**Chrisman Ranch**	**8.22**	**105**	P	**Pn**	**03 59 03.0**	**+0.7**
F07A	**Phinny Hill Vi**	**8.22**	**120**	Pn	**Pn**	**03 59 03.9**	**+1.5**
NBC5	**NorthernBC 5**	**8.25**	**29**	P	**Pn**	**03 59 04.4**	**+1.6**
NEW	**Newport**	**8.77**	**100**	Pn	**Pn**	**03 59 11.1**	**+1.3**
SWHSA	**Sweathouse Loo**	**9.20**	**56**	P	**Pn**	**03 59 16.0**	**+0.2**
FNBB	**Fort Nelson**	**9.32**	**23**	P	**Pn**	**03 59 16.7**	**-0.6**
NBC2	**NorthernBC 2**	**10.23**	**22**	P	**Pn**	**03 59 32.3**	**+2.5**
BSMT	**Bassoo Peak**	**10.38**	**99**	P	**Pn**	**03 59 33.0**	**+0.9**
WHY	**Whitehorse**	**10.50**	**347**	P	**Pn**	**03 59 32.3**	**-1.3**
WALA	**Waterton Lakes**	**10.57**	**92**	Pn	**Pn**	**03 59 36.9**	**+2.2**
PLID	**Pearl Lake**	**10.93**	**114**	Pn	**Pn**	**03 59 40.4**	**+0.8**
LRM	**Limekiln Ridge**	**12.68**	**105**	Pn	**Pn**	**04 00 03.4**	**-0.2**
YMR	**Madison River**	**14.16**	**107**		**Pn**	**04 00 25.0**	**+1.2**
ELK	**Elko**	**14.25**	**128**	LR	LR	04 05 47.8	
	comp=Z,58nm,20.1s,baz=309,slow=37						
H17A	**Grant Village**	**14.54**	**107**	Pn	**Pn**	**04 00 29.5**	**+0.4**
YKA	**Yellowknife Ar**	**14.67**	**29**	Pn	**Pn**	**04 00 30.0**	**-0.4**
	0.1nm,0.3s,baz=218,slow=12,SNR=9.7						
YKA				LR	LR	04 05 49.6	
	comp=Z,116nm,19.5s,baz=0.0,slow=36						
YKA	**Yellowknife Ar**	**14.67**	**29**	Pn	**Pn**	**04 00 30.3**	**-0.1**
NVAR	**Mina Array Bea**	**14.72**	**141**	Pn	**Pn**	**04 00 34.4**	**+3.0**
	0.1nm,0.3s,baz=310,slow=10,SNR=1.7						
AHID	**Auburn Hatcher**	**15.16**	**114**	IAmb	IAmb	04 00 47.2	
	comp=Z,5.0nm,0.9s						
DUG	**Dugway, Tooele**	**15.91**	**124**	Pn	**Pn**	**04 00 46.9**	**-0.3**
DUG				IAmb	IAmb	04 00 59.9	
	comp=Z,14nm,1.6s						
BW06	**Boulder Array**	**16.07**	**111**		**Pn**	**04 00 51.7**	**+2.5**
PD31	**Pinedale Array**	**16.07**	**111**		**Pn**	**04 00 51.3**	**+2.0**
PDAR	**Pinedale Array**	**16.07**	**111**	Pn	**Pn**	**04 00 52.1**	**+2.9**
	comp=Z,0.2nm,0.3s,baz=310,slow=10,SNR=20						
PDAR				LR	LR	04 06 57.5	
	comp=Z,75nm,21.2s,baz=332,slow=37						
PDAR	**Pinedale Array**	**16.07**	**111**		**Pn**	**04 00 52.0**	**+2.7**
NLU	**North Lily Min**	**16.48**	**123**	Pn	**Pn**	**04 00 54.2**	**-0.3**
ILAR	**Eielson Array**	**16.77**	**335**	Pn	**P**	**04 01 03.4**	**+3.2**
	comp=Z,0.1nm,0.3s,baz=145,slow=9.8,SNR=18						
ILAR	**Eielson Array**	**16.77**	**335**	Pn	**Pn**	**04 00 57.2**	**-0.7**
PPLA	**Purkeypile**	**17.21**	**324**	Pn	**Pn**	**04 01 00.4**	**-3.1**
INK	**Inuvik**	**17.91**	**356**	LR	LR	04 08 24.2	
	comp=Z,107nm,19.2s,baz=186,slow=38						
BMAR	**Burnt Mountain**	**18.43**	**342**	P	**Pn**	**04 01 18.1**	**-0.3**
COLD	**Coldfoot**	**19.53**	**336**	P	**P**	**04 01 29.4**	**-1.1**
COLD				IAmb	IAmb	04 01 55.6	
	comp=Z,18nm,1.7s						
MDND	**Maddock**	**20.04**	**86**	P	**P**	**04 01 37.2**	**+0.9**
MVCO	**Mesa Verde**	**20.39**	**122**	P	**P**	**04 01 41.2**	**+0.8**
MVCO				IAmb	IAmb	04 01 50.8	
	comp=Z,26nm,2.0s						
TOLK	**Toolik Lake Re**	**20.48**	**340**		**P**	**04 01 42.2**	**+1.3**
TOLK				IAmb	IAmb	04 01 55.0	
	comp=Z,11nm,1.1s						
OGNE	**Ogallala**	**21.69**	**105**	P	**P**	**04 01 55.1**	**+0.9**
OGNE				IAmb	IAmb	04 02 46.1	
	comp=Z,25nm,1.6s						
AGMN	**Agassiz Nation**	**22.27**	**82**	P	**P**	**04 02 01.7**	**+1.4**
AGMN				IAmb	IAmb	04 02 06.5	
	comp=Z,5.7nm,0.6s						
KSCO	**Kaye Shedlock'**	**22.51**	**110**	P	**P**	**04 02 04.5**	**+1.4**
KSCO				IAmb	IAmb	04 02 07.8	
	comp=Z,16nm,1.2s						
TUC	**Tucson**	**23.14**	**135**	P	**P**	**04 02 10.9**	**+1.2**
TUC				IAmb	IAmb	04 02 13.4	
	comp=Z,3.7nm,0.9s						
ANMO	**Albuquerque**	**23.18**	**123**	P	**P**	**04 02 12.8**	**+2.6**
	comp=Z,1.3nm,1.1s,baz=311,slow=7.8,SNR=3.2						
ANMO				LR	LR	04 12 44.6	
	comp=Z,67nm,18.4s,baz=346,slow=41						
ECSD	**EROS Data Cent**	**23.63**	**94**	P	**P**	**04 02 15.8**	**+1.5**
AMTX	**Amarillo**	**25.88**	**116**	P	**P**	**04 02 36.7**	**+1.5**
RES	**Resolute Bay**	**28.26**	**19**	LR	LR	04 14 03.3	
	comp=Z,70nm,19.2s,baz=122,slow=36						
TXAR	**Lajitas Array**	**29.05**	**127**	P	**P**	**04 03 05.6**	**+2.0**
	comp=Z,0.6nm,0.8s,baz=319,slow=7.4,SNR=6.8						
TXAR				LR	LR	04 15 24.1	
	comp=Z,64nm,18.4s,baz=0.0,slow=38						
H11N2	**WAKE ISLAND Hy**	**57.91**	**262**	T	T	05 09 27.7	
	baz=42,slow=76,SNR=360						
H11N3	**WAKE ISLAND Hy**	**57.91**	**262**	T	T	05 09 27.7	
	baz=42,slow=76,SNR=324						
H11N1	**WAKE ISLAND Hy**	**57.92**	**262**	T	T	05 09 28.9	
	baz=42,slow=76,SNR=197						
ARCES	**ARCESS Array B**	**58.92**	**10**	LR	LR	04 33 07.4	
	comp=Z,53nm,18.6s,baz=255,slow=37						
H11S1	**WAKE ISLAND Hy**	**58.94**	**261**	T	T	05 10 44.2	
	baz=40,slow=74,SNR=14						
H11S2	**WAKE ISLAND Hy**	**58.95**	**261**	T	T	05 10 54.3	
	baz=40,slow=74,SNR=16						
H11S3	**WAKE ISLAND Hy**	**58.96**	**261**	T	T	05 10 45.6	
	baz=40,slow=74,SNR=19						
MKAR	**Makanchi Array**	**79.10**	**338**	P	P	04 09 10.5	+2.7
	comp=Z,0.3nm,0.7s,baz=15,slow=6.0,SNR=2.2						

*AEIC **26** 04:04:37±1.3, 52°.78N±0°.07×168°.21W±0°.07, h50^{km}±5^{km}, Error ellipse: s-maj=10.7km s-min=4.3km az=150.0*

*NEIC **26** 04:04:38.1±1.1, 52°.73N±0°.06×168°.16W±0°.05, h42^{km}±7^{km}, ML3.8(AEIC), Error ellipse: s-maj=9.6km s-min=3.8km az=159.0*

*IDC **26** 04:04:40.6±5.8, 53°.01N×168°.27W, h51^{km}±48^{km}, mb3.6/12, mb1 3.8/14, mb1mx3.4/53, mbtmp3.9/14, ML3.4/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/44, Error ellipse: s-maj=45.0km s-min=23.0km az=6.0*

ISC 26 04:04:39.0±1.6**, 52°.8N**±0°.1×**168°.23W**±0°.07**, h46**^{km}±10^{km}**, n44, σ0^{s}72**/43**, mb3.8**/12**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.42**	**296**		**Pn**	**04 04 48.7**	**-0.3**
NIKH					**Sn**	**04 04 56.3**	**+0.2**
OKSP	**Okmok Steeple**	**0.46**	**355**		**Pn**	**04 04 49.1**	**-0.4**
OKSO	**Okmok South**	**0.57**	**4**		**Pn**	**04 04 50.5**	**-0.4**
OKSO					**Sn**	**04 04 59.5**	**+0.1**
OKTU	**Okmok Mt. Tuli**	**0.60**	**11**		**Pn**	**04 04 51.1**	**-0.2**
OKCE	**Okmok Cone E**	**0.64**	**3**		**Pn**	**04 04 51.6**	**-0.1**
OKCE					**Sn**	**04 05 01.4**	**+0.4**
OKFG	**Magazine Ridge**	**0.65**	**17**		**Pn**	**04 04 51.4**	**-0.5**
OKFG					**Sn**	**04 05 01.2**	**+0.1**
OKNC	**Okmok New Cone**	**0.67**	**5**		**Pn**	**04 04 52.4**	**+0.3**
OKNC					**Sn**	**04 05 03.0**	**+1.3**
MAPS	**Pakushin South**	**1.28**	**37**		**Pn**	**04 04 59.4**	**-1.0**
MAPS					**Sn**	**04 05 15.6**	**-0.7**
MSW	**Makushin Switc**	**1.42**	**37**		**Pn**	**04 05 01.6**	**-0.7**
MNAT	**Makushin Natee**	**1.43**	**40**		**Pn**	**04 05 01.2**	**-1.3**
UNV	**Unalaska Valle**	**1.48**	**44**		**Pn**	**04 05 02.2**	**-0.8**
MTBL	**Makushin Table**	**1.50**	**38**		**Pn**	**04 05 02.6**	**-0.9**
AKMO	**Akutan Morgan**	**1.86**	**45**		**Pn**	**04 05 08.2**	**-0.1**
AKMO					**Sn**	**04 05 30.5**	**-0.1**
AKRB	**Akutan Reef Bi**	**1.86**	**43**		**Pn**	**04 05 08.8**	**+0.4**
AKBBA	**Akutan Broad B**	**1.90**	**45**		**Pn**	**04 05 09.2**	**+0.4**
AKUT	**Akutan**	**1.99**	**47**		**Pn**	**04 05 09.1**	**-1.0**
WECS	**Westdahl Cape**	**2.69**	**48**		**Pn**	**04 05 20.6**	**+0.8**
FALS	**False Pass**	**3.52**	**52**	Pn	**Pn**	**04 05 30.5**	**-0.6**
ATKA	**Atka Island**	**3.69**	**263**	Pn	**Pn**	**04 05 32.8**	**-0.7**
KDAK	**Kodiak Island**	**10.22**	**55**	P	**Pn**	**04 07 03.3**	**+0.5**
	0.4nm,0.3s,baz=241,slow=6.3,SNR=2.4						
ILAR	**Eielson Array**	**16.21**	**34**	P	**Pn**	**04 08 22.7**	**-0.5**
	0.1nm,0.3s,baz=239,slow=10,SNR=9.5						
YKA	**Yellowknife Ar**	**29.44**	**50**	P	**P**	**04 10 37.9**	**+0.1**
	0.3nm,0.6s,baz=274,slow=7.9,SNR=8.2						
H11N2	**WAKE ISLAND Hy**	**38.22**	**220**	T	T	04 53 02.3	
	baz=24,slow=76,SNR=54						
H11N3	**WAKE ISLAND Hy**	**38.23**	**220**	T	T	04 52 51.4	
	baz=24,slow=76,SNR=57						
H11N1	**WAKE ISLAND Hy**	**38.24**	**220**	T	T	04 52 49.2	
	baz=24,slow=76,SNR=42						
H11S1	**WAKE ISLAND Hy**	**39.41**	**219**	T	T	04 54 31.9	
	baz=24,slow=76,SNR=85						
H11S2	**WAKE ISLAND Hy**	**39.42**	**219**	T	T	04 54 16.5	
	baz=24,slow=76,SNR=44						
H11S3	**WAKE ISLAND Hy**	**39.42**	**219**	T	T	04 54 25.7	
	baz=24,slow=76,SNR=53						
KSRS	**Korea Array**	**46.04**	**277**	LR	LR	04 31 44.5	
	comp=Z,13nm,20.1s,baz=50,slow=35						
SONM	**Songino Array**	**51.68**	**301**	P	**P**	**04 13 41.5**	**+0.4**
	0.6nm,0.9s,baz=34,slow=5.4,SNR=3.0						
SONM				PcP	**PcP**	**04 14 53.6**	**-0.5**
	0.4nm,0.6s,baz=86,slow=5.0,SNR=4.1						
TXAR	**Lajitas Array**	**52.05**	**90**	P	**P**	**04 13 44.8**	**+0.8**
	0.6nm,1.0s,baz=303,slow=6.2,SNR=6.9						
KURBB	**Kurchatov Arra**	**62.62**	**319**	P	**P**	**04 14 58.0**	**-0.1**
	0.2nm,0.4s,baz=36,slow=7.5,SNR=4.3						
BVAR	**Borovoye Array**	**63.76**	**325**	P	**P**	**04 15 05.6**	**0.0**
	1.7nm,0.6s,baz=66,slow=3.6,SNR=7.2						
MKAR	**Makanchi Array**	**64.02**	**314**	P	**P**	**04 15 05.9**	**-1.5**
	0.4nm,0.7s,baz=49,slow=7.4,SNR=3.4						
MKAR				PcP	**PcP**	**04 15 43.2**	**+0.7**
	0.3nm,0.6s,baz=54,slow=5.4,SNR=2.0						
FINES	**FINESS Array B**	**65.54**	**353**	P	**P**	**04 15 16.4**	**-0.6**
	4.1nm,0.9s,baz=5.7,slow=7.7,SNR=5.8						
AKASG	**Malin Array Be**	**75.83**	**349**	P	**P**	**04 16 18.8**	**-1.0**
	1.5nm,0.6s,baz=17,slow=5.9,SNR=3.8						
CMAR	**Chiang Mai Arr**	**77.20**	**284**	P	**P**	**04 16 29.3**	**+1.3**
	2.1nm,0.7s,baz=22,slow=6.3,SNR=8.3						
GERES	**GERESS Array B**	**78.72**	**359**	P	**P**	**04 16 36.6**	**+0.4**
	0.5nm,0.7s,baz=343,slow=4.2,SNR=5.1						
BRTR	**Keskin Array B**	**85.92**	**343**	P	**P**	**04 17 15.1**	**+1.1**
	1.4nm,0.8s,baz=48,slow=2.1,SNR=6.1						
BRTR	**Keskin Array B**	**85.92**	**343**	P	**P**	**04 17 13.3**	**-0.7**
ESDC	**Sonseca Array**	**86.90**	**12**	P	**P**	**04 17 19.2**	**+0.6**
	0.4nm,0.5s,baz=347,slow=4.5,SNR=11						
H03N2	**Juan Fernandez**	**115.44**	**112**	T	T	06 29 05.3	
	baz=322,slow=78,SNR=4.9						
H03N1	**Juan Fernandez**	**115.45**	**112**	T	T	06 29 18.1	
	baz=322,slow=78,SNR=6.3						
H03N3	**Juan Fernandez**	**115.45**	**112**	T	T	06 29 26.1	
	baz=322,slow=78,SNR=6.5						

*IDC **26** 04:05:20.9±0.7, 24°.19N×121°.84E, h0^{km}, mb3.9/16, mb1 4.0/17, mb1mx3.8/50, mbtmp3.9/17, ML3.6/1, MS3.5/2,*

Ms1 3.6/2, ms1mx2.9/51, Error ellipse: s-maj=22.5km
s-min=15.8km az=70.0
*JMA **26** 04:05:23.2±0.1, 24°.15N×121°.66E, $h18^{km}\pm1^{km}$, M3.8*
*ASIES **26** 04:05:23.9, 24°.21N×121°.69E, $h18^{km}$, MW4.0*
*NIED **26** 04:05:23.2, 24°.15N×121°.66E, $h18^{km}$, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.37; $M_{\theta\theta}$-0.84; $M_{\phi\phi}$-0.53; $M_{r\theta}$1.37; $M_{\theta\phi}$-0.67; $M_{\phi r}$1.14; Fault plane solution: $M_0$2.25000×10^{15} NP1:ϕ_s51.00000°, δ71.00000°, λ89.00000°. NP2:ϕ_s232.00000°, δ19.00000°, λ92.00000°.*
*BJI **26** 04:05:23.2±0.0, 24°.19N×121°.82E, $h18^{km}$, mB4.4/4, mb4.0/9, ML3.9/4, Ms4.0/10, Ms7 3.9/10*
*TAP **26** 04:05:24.1, 24°.21N×121°.68E, $h16^{km}$, ML4.4, C*
*NEIC **26** 04:05:24.1±2.4, 24°.14N±0°.02×121°.73E±0°.05, $h20^{km}\pm5^{km}$, mb4.1/12, ML4.1(TAP), Error ellipse: s-maj=6.5km s-min=2.5km az=99.0*
ISC 26 04:05:23.8±0.7, **24°.19N**±0°.01×**121°.73E**±0°.01, **$h16^{km}$**$\pm4^{km}$, **n184,** $\sigma0^{s}.84$/290, **mb3.9**/22, **MS3.6**/3, **4C-22D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	Fush Village baz=226	0.10	251	⇓*i*P	Pg	04 05 27.4	+0.3
ETL	baz=226			*i* S	Sg	04 05 29.9	+0.5
EHP	Heping Village baz=31	0.12	6	⇑*i*P	Pg	04 05 27.8	+0.4
EHP	baz=31			*i* S	Sg	04 05 30.4	+0.7
NACB	Ninganchiao baz=245	0.12	262	⇓*i*P	Pg	04 05 27.5	+0.1
NACB	baz=245			*i* S	Sg	04 05 29.8	0.0
NACB	Ninganchiao	0.12	262		Pg	04 05 27.4	+0.1
TWD	Chiawan baz=210	0.16	227	⇓*i*P	Pg	04 05 28.1	+0.2
TWD	baz=210			*i* S	Sg	04 05 31.3	+0.6
ETLH	Xiulin Townshi baz=268	0.23	274	⇓*i*P	Pg	04 05 28.9	0.0
ETLH	baz=268			*i* S	Sg	04 05 32.2	-0.2
ENA	Nanau baz=14	0.24	3	⇑*i*P	Pg	04 05 29.4	+0.3
ENA	baz=14			*i* S	Sg	04 05 32.9	+0.2
HWA	Hwalien baz=197	0.24	208	⇓*i*P	Pb	04 05 30.0	+0.2
HWA	baz=197			S	Sb	04 05 35.1	+1.2
EWUT	Wuta baz=19	0.26	10	P	Pg	04 05 29.8	+0.4
EWUT	baz=19			S	Sg	04 05 33.3	+0.1
ETM	Tongmen baz=217	0.31	224	P	Pg	04 05 30.6	+0.3
ETM	baz=217			*e*S	Sg	04 05 34.5	-0.3
TEYL	Yanliau Villag baz=195	0.34	200	P	Pb	04 05 31.8	+0.3
TEYL	baz=195			S	Sn	04 05 39.0	-1.7
NNSB	Datong baz=308	0.39	307	⇓*i*P	Pg	04 05 31.7	-0.2
NNSB	baz=308			*i* S	Sg	04 05 36.7	-0.6
NNS	Nan Shan baz=309	0.41	307	⇓*i*P	Pg	04 05 31.9	-0.2
NNS	baz=309			*i* S	Sg	04 05 37.3	-0.4
WHF	Hehuan Shan baz=260	0.42	264	⇓*i*P	Pg	04 05 32.4	-0.1
WHF	baz=260			*i* S	Sg	04 05 38.0	-0.5
TWC	Suao baz=15	0.43	15	⇑*i*P	Pg	04 05 32.8	+0.4
TWC	baz=15			S	Sg	04 05 38.8	+0.5
NDS	Dongshan baz=3.0	0.44	359	*i* P	Pg	04 05 33.1	+0.4
NDS	baz=3.0			S	Sg	04 05 38.5	-0.1
FUSS	Fushou baz=275	0.45	277	⇓*i*P	Pg	04 05 32.9	+0.1
FUSS	baz=275			S	Sg	04 05 38.5	-0.4
NDT	Datong Townshi baz=337	0.45	334	⇓*i*P	Pg	04 05 33.0	+0.1
NDT	baz=337			S	Sg	04 05 39.4	+0.3
ESL	Shilin baz=217	0.46	216	⇓*i*P	Pg	04 05 32.9	-0.1
ESL	baz=217			S	Sg	04 05 39.8	+0.5
ENTT	Nioudou baz=346	0.47	342	⇓*i*P	Pg	04 05 33.3	+0.1
ENTT	baz=346			*i* S	Sg	04 05 39.5	0.0
TWT	Tachien baz=274	0.51	277	⇓*i*P	Pg	04 05 34.3	+0.4
TWT	baz=274			*i* S	Sg	04 05 40.6	-0.2
TEGC	Jichi Village baz=199	0.51	200	*e*P	Pn	04 05 35.4	-1.0
TEGC	baz=199			*e*S	Sn	04 05 44.8	-0.1
CHGB	Renai baz=247	0.52	256	⇓*i*P	Pg	04 05 34.3	+0.1
CHGB	baz=247			S	Sg	04 05 41.3	+0.1
TDCB	Techi baz=275	0.52	277	⇓*i*P	Pg	04 05 34.3	+0.1
TDCB	baz=275			S	Sg	04 05 40.6	-0.7
TWE	Neicheng baz=359	0.53	354	P	Pb	04 05 34.7	-0.1
TWE	baz=359			S	Sb	04 05 41.9	-0.3
OWD	Renai baz=237	0.56	245	P	Pg	04 05 34.9	+0.1
OWD	baz=237			*e*S	Sg	04 05 42.2	-0.1
ILA	Ilan baz=1.0	0.57	2	P	Pb	04 05 36.1	+0.7
ILA	baz=1.0			S	Sb	04 05 43.9	+0.5
YHNB	Yeheng baz=327	0.57	326	⇓*i*P	Pg	04 05 35.0	-0.1
YHNB	baz=327			S	Sg	04 05 42.4	-0.4
YHNB	Yeheng	0.57	326		Pg	04 05 35.0	-0.1
EGFH	Guangfu baz=216	0.59	208	P	Pb	04 05 36.1	+0.3
EGFH	baz=216			*e*S	Sb	04 05 44.5	+0.6
NSK	Sanguang baz=327	0.59	325	⇓*i*P	Pg	04 05 35.2	-0.2
NSK	baz=327			*i* S	Sg	04 05 42.6	-0.7
NWLT	Wulai baz=333	0.62	341	P	Pb	04 05 36.1	-0.2
NWLT	baz=333			*e*S	Sg	04 05 43.4	-0.8
NTC	Toucheng baz=2.0	0.67	8	*i* P	Pg	04 05 37.5	+0.7
NTC	baz=2.0			S	Sb	04 05 45.2	-0.9
EGS	baz=27	0.68	16	*e*P	Pn	04 05 38.0	-0.7
VWDT	VWDT baz=222	0.69	231	⇓*i*P	Pb	04 05 37.3	-0.2
VWDT	baz=222			S	Sb	04 05 46.5	-0.3
WHP	Taichung City baz=276	0.72	277	P	Pb	04 05 37.8	-0.2
WHP	baz=276			S	Sb	04 05 47.0	-0.7
DPDB	Guoxing baz=248	0.75	258	*i* P	Pb	04 05 38.5	0.0
DPDB	baz=248			S	Sb	04 05 48.2	-0.3
HGSD	Ruisui baz=212	0.75	202	P	Pn	04 05 40.1	+0.4
HGSD	baz=212			S	Sn	04 05 52.8	+2.0
WCS	Beigang Elemen baz=258	0.76	260	*e*P	Pb	04 05 38.1	-0.5
WCS	baz=258			*e*S	Sb	04 05 47.9	-0.8
EHY	Hungye baz=206	0.78	209	P	Pb	04 05 37.8	-1.2
TIPB	Shuangxi baz=1.0	0.78	7	P	Pg	04 05 39.5	+0.5
TIPB	baz=1.0			*e*S	Sb	04 05 48.7	-0.8
NHDH	Xindian Distri baz=348	0.79	347	P	Pn	04 05 40.0	-0.3
NHDH	baz=348			S	Sb	04 05 49.2	-0.5
LIOB	Emei baz=305	0.79	305	P	Pb	04 05 39.3	+0.1
LIOB	baz=305			*e*S	Sb	04 05 49.0	-0.8
NSTT	Nanjuang baz=303	0.79	304	⇓*i*P	Pb	04 05 39.1	-0.1
NSTT	baz=303			S	Sb	04 05 48.7	-1.1
NJD	Zhudong baz=313	0.80	313	*e*P	Pn	04 05 40.6	+0.2
TWA	Mucha baz=353	0.80	351	P	Pg	04 05 39.5	+0.2
TWA	baz=353			S	Sb	04 05 49.8	-0.1
TATO	Taipei baz=346	0.81	344	*e*P	Pn	04 05 40.6	0.0
TATO	baz=346			*e*S	Sb	04 05 49.3	-0.9
TATO	Taipei	0.81	344		Pg	04 05 39.8	+0.3
SSLB	Suanglung baz=239	0.81	241	⇓*i*P	Pb	04 05 39.1	-0.5
SSLB	baz=239			S	Sb	04 05 49.0	-1.4
SSLB	Suanglung	0.81	241		Pb	04 05 39.2	-0.5
SMLT	Sun Moon Lake baz=239	0.82	248	⇓*i*P	Pb	04 05 39.4	-0.2
SMLT	baz=239			S	Sb	04 05 50.1	-0.4
TYC	Yuchr baz=241	0.85	250	⇓*i*P	Pb	04 05 39.7	-0.4
TYC	baz=241			S	Sg	04 05 51.4	+0.1
TWB1	Santiao Chiao baz=12	0.85	16	*e*P	Pn	04 05 40.8	-0.3
TWB1	baz=12			*e*S	Sb	04 05 50.9	-0.4
TAP	Taipei baz=348	0.87	347	P	Pn	04 05 41.5	+0.2
TAP	baz=348			S	Sb	04 05 51.8	-0.1
HSN1	Hsinchu baz=312	0.87	312	*e*P	Pn	04 05 41.8	+0.4
NWF	Wu-fen Shan baz=358	0.88	3	P	Pn	04 05 41.3	-0.3
NWF	baz=358			*e*S	Sg	04 05 53.2	+0.8
WFSB	Wu-fen Shan baz=5.0	0.88	3	P	Pn	04 05 42.0	+0.4
TWQ1	Liyutan baz=279	0.89	280	*e*P	Pn	04 05 41.5	-0.1
YULB	Yu-li baz=204	0.89	206	*e*P	Pb	04 05 39.5	-1.4
YULB	Yu-li	0.89	206		Pb	04 05 39.2	-1.6
SBCB	Hsinchu baz=311	0.90	312	*e*P	Pn	04 05 42.2	+0.3
SBCB	baz=311			*e*S	Sg	04 05 53.6	+0.5
ECBN	Changbin baz=211	0.91	196	P	Pn	04 05 41.8	-0.1
NSY	Sanyi baz=283	0.91	284	*e*P	Pn	04 05 42.1	+0.2
NSY	baz=283			*e*S	Sn	04 05 55.2	+0.4
NCUH	Zhongli baz=328	0.92	328	*e*P	Pn	04 05 42.2	+0.2
NCUH	baz=328			*e*S	Sn	04 05 55.2	+0.2
NCU	National Centr baz=328	0.92	328	*e*P	Pg	04 05 41.9	+0.3
NCU	baz=328			*e*S	Sn	04 05 55.3	+0.3
EYUL	Yuli baz=214	0.92	204	*e*P	Pn	04 05 42.2	+0.1
HSN	Hsinchu baz=314	0.92	312	*e*P	Pn	04 05 42.2	+0.1
HSN	baz=314			*e*S	Sg	04 05 54.0	+0.3
NMLH	Miaoli baz=291	0.92	292	*e*P	Pn	04 05 42.6	+0.4
NMLH	baz=291			*e*S	Sb	04 05 53.6	+0.2
TWF1	Yuli baz=213	0.92	205	*e*P	Pb	04 05 41.6	+0.1
TWS1	Kuangyinshan baz=351	0.95	343	P	Pg	04 05 42.5	+0.4
TWS1	baz=351			S	Sn	04 05 56.1	+0.4
TNOU	National Taiwa baz=4.0	0.95	2	*e*P	Pg	04 05 43.0	+0.7
TCU	Taichung baz=266	0.96	268	*e*P	Pg	04 05 43.7	+1.3
TCU	baz=266			*e*S	Sn	04 05 57.2	+1.2
YM01	YM01 baz=339	0.96	351	*e*P	Pg	04 05 42.9	+0.5
YM01	baz=339			*e*S	Sg	04 05 55.6	+0.5
WJS	Zhushan baz=244	0.98	248	*e*P	Pg	04 05 43.4	+0.6
WJS	baz=244			*e*S	Sn	04 05 57.6	+0.9
YUS	Yu-Shan baz=233	1.00	226	*i* P	Pb	04 05 42.9	-0.1
NTST	Danshui baz=354	1.00	345	*e*P	Pg	04 05 43.3	+0.2
NTST	baz=354			*e*S	Sn	04 05 57.1	+0.1
WDJ	Dajia District baz=278	1.00	279	*e*P	Pg	04 05 44.2	+1.0
WDJ	baz=278			*e*S	Sn	04 05 58.1	+1.0
WNT	Mingjian baz=247	1.00	252	*e*P	Pg	04 05 44.1	+0.9
WNT	baz=247			*e*S	Sn	04 05 58.1	+1.0
ANP	Anpu baz=350	1.01	349	*e*P	Pn	04 05 43.2	-0.2
FULB	Fuli baz=212	1.06	202	*e*P	Pb	04 05 43.5	-0.3
WCHH	Zhanghua baz=263	1.07	264	P	Pg	04 05 45.3	+0.8
WCHH	baz=263			S	Sg	04 06 00.0	+1.4
ALS	Alishan baz=218	1.08	231	⇑P	Pn	04 05 44.5	-0.2
ALS	baz=218			S	Sg	04 06 00.4	+1.4
TWY	Chenhua baz=344	1.09	354	*e*P	Pg	04 05 45.2	+0.5
TWY	baz=344			*e*S	Sg	04 06 00.3	+1.3
CHN5	Tsauling baz=239	1.13	239	*e*P	Pb	04 05 45.3	+0.3
CHN5	baz=239			*e*S	Sg	04 06 01.4	+1.0
CHKT	Chengkung baz=215	1.14	197	*e*P	Pn	04 05 44.7	-0.3
CHKT	baz=215			*e*S	Sb	04 05 59.7	0.0
JYNG	Yonagunijimaku	1.14	77	P	Pg	04 05 45.6	-0.2
JYNG				*e*S	Sg	04 06 01.9	+1.2
WGK	Gukeng baz=244	1.18	245	P	Pg	04 05 47.1	+0.6
WGK	baz=244			S	Sg	04 06 03.6	+1.7
ELDTW	Lidau baz=214	1.19	213	*e*P	Pn	04 05 45.6	-0.4
ELDTW	baz=214			*e*S	Sg	04 06 02.4	0.0
WDLH	Douliu baz=234	1.20	246	*e*P	Pg	04 05 47.1	+0.2
WDLH	baz=234			*e*S	Sg	04 06 03.8	+1.3
YOJ	Yonaguni jima baz=75	1.20	77	*e*P	Pb	04 05 46.4	+0.2
YOJ	baz=75			*e*S	Sg	04 06 03.3	+0.6
YOJ	Yonaguni jima	1.20	77	P	Pb	04 05 46.5	+0.3
YOJ				*e*S	Sg	04 06 03.3	+0.6
YOJ	Yonaguni jima	1.20	77		Pb	04 05 46.1	-0.1
WRL	Guolierlin Hig baz=256	1.27	257	*e*P	Pb	04 05 47.6	+0.3
WRL	baz=256			*e*S	Sg	04 06 04.8	+0.1
EDH	Donghe baz=200	1.27	198	P	Pg	04 05 49.0	+0.6
EDH	baz=200			S	Sg	04 06 04.8	-0.2
CHN2	Minshiung baz=241	1.32	240	P	Pg	04 05 49.4	+0.2
CHN2	baz=241			S	Sg	04 06 08.2	+1.7
WTK	Tuku baz=259	1.32	248	*e*P	Pb	04 05 48.7	+0.5
WTK	baz=259			*e*S	Sg	04 06 06.8	+0.3
CHN4	Tsaushan baz=221	1.33	231	P	Pg	04 05 49.2	-0.3
CHN4	baz=221			S	Sg	04 06 07.8	+0.9
STYH	Taoyuan baz=213	1.34	221	*e*P	Pb	04 05 49.0	+0.5
STYH	baz=213			*e*S	Sg	04 06 07.2	+0.2
TPUB	Ta-pu baz=218	1.34	229	P	Pb	04 05 48.9	+0.3
TPUB	baz=218			S	Sg	04 06 06.8	-0.3
TPUB	Ta-pu	1.34	229		Pb	04 05 48.5	-0.1
STYT	Tauyuan baz=221	1.36	221	P	Pb	04 05 48.7	-0.1
WTCT	Ta-ch'eng baz=256	1.36	256	*e*P	Pb	04 05 48.5	-0.4
WTCT	baz=256			*e*S	Sg	04 06 08.1	+0.4
CHY	Chiayi baz=240	1.38	240	*e*P	Pg	04 05 50.2	-0.2
CHY	baz=240			*e*S	Sg	04 06 08.7	+0.4
WTP	Ta-pu baz=219	1.39	228	P	Pb	04 05 49.9	+0.5
WTP	baz=219			S	Sg	04 06 09.9	+1.3
LONT	Longtian baz=204	1.39	203	*e*P	Pg	04 05 51.1	+0.5
TWK	Hsinying baz=219	1.46	231	P	Pb	04 05 50.9	+0.2
TWK	baz=219			S	Sg	04 06 10.9	0.0
PCYT	Pengchaiyu baz=13	1.47	12	*e*P	Pb	04 05 50.7	0.0
WSF	Szhu baz=258	1.48	248	P	Pb	04 05 51.1	+0.1
WSF	baz=258			S	Sg	04 06 11.2	-0.4
SNST	Tainan City baz=218	1.49	230	*e*P	Pb	04 05 51.2	+0.2
SNST	baz=218			*e*S	Sg	04 06 11.5	-0.2
CHN1	Nanshi baz=230	1.49	228	P	Pb	04 05 51.2	+0.1
CHN1	baz=230			S	Sg	04 06 11.4	-0.4
TWG	Pinlang	1.49	204		Pn	04 05 47.6	-2.4
TWGBT	Beinan baz=189	1.49	204	*e*P	Pn	04 05 48.9	-1.1
SGST	Jiashian baz=214	1.52	224	*e*P	Pb	04 05 51.2	-0.5
SGST	baz=214			*e*S	Sg	04 06 12.5	-0.4
LDUT	Ludao baz=190	1.53	189	*e*P	Pn	04 05 49.0	-1.5
ICHU	Yijhu baz=225	1.56	238	*e*P	Pb	04 05 52.3	0.0
ICHU	baz=225			*e*S	Sg	04 06 13.9	-0.3
CHN8	Yiju baz=227	1.62	239	*e*P	Pb	04 05 53.0	-0.4
CHN8	baz=227			*e*S	Sg	04 06 15.7	-0.4
CHN3	Shinhua baz=232	1.67	229	*e*P	Pg	04 05 56.6	+0.7
CHN3	baz=232			*e*S	Sg	04 06 18.8	+1.1
SCLT	Jiali baz=222	1.73	235	*e*P	Pg	04 05 56.4	-0.6
SCLT	baz=222			*e*S	Sg	04 06 18.3	-1.3
ECL	Taimali baz=193	1.74	204	*e*P	Pb	04 05 54.6	-0.7
SSD	Sandimen baz=219	1.76	215	P	Pb	04 05 55.4	-0.2
SSD	baz=219			*e*S	Sb	04 06 17.9	+0.5
TSMG	Majia baz=219	1.78	214	*e*P	Pb	04 05 55.7	-0.4
TSMG	baz=219			*e*S	Sb	04 06 19.4	+1.2
TWM1	Shoushan baz=225	1.81	222	*e*P	Pb	04 05 57.2	+0.6
TWM1	baz=225			*e*S	Sg	04 06 21.9	-0.3
IRIF	Iriomote-Funau	1.83	85	P	Pn	04 05 54.9	+0.2
SGLT	Jiouru baz=220	1.85	218	*e*P	Pb	04 05 57.9	+0.6
MASBT	Mashibuluo baz=219	1.87	213	*e*P	Pb	04 05 57.0	-0.6
MASBT	baz=219			*e*S	Sb	04 06 20.7	+0.1
HATJ	Hateruma jima	1.90	94	P	Pn	04 05 56.4	+0.8
HATJ				S	Sb	04 06 20.5	-1.2
EAST	Anshuo baz=195	1.97	204	*e*P	Pb	04 05 59.4	0.0
TAW	Tawu baz=193	1.98	203	*e*P	Pb	04 05 59.4	0.0
SSPT	Xinbi baz=216	2.01	212	*e*P	Pb	04 05 59.4	-0.5
SCZT	Fangliau baz=213	2.08	210	*e*P	Pb	04 06 00.1	-1.1
PNG	Penghu baz=252	2.08	253	*e*P	Pn	04 05 58.7	+0.6
PNG	baz=252			*e*S	Sn	04 06 24.8	+1.1
JKRS	Kuro-shima	2.08	88	P	Pn	04 05 59.0	+0.9
JKRS				*e*S	Sb	04 06 25.8	-1.1
PHUB	P'eng-hu baz=250	2.09	252	*e*P	Pn	04 05 58.7	+0.5
PHUB	baz=250			*e*S	Sn	04 06 24.3	+0.5
WDGT	Dungji baz=245	2.11	244	*e*P	Pn	04 05 58.9	+0.4
WDGT	baz=245			*e*S	Sb	04 06 26.5	-1.1
SLIU	Shizi baz=194	2.14	204	*e*P	Pb	04 06 01.5	-0.8
LYUB	Lan-yu baz=185	2.18	183	*e*P	Pn	04 05 57.6	-1.9
JIJ	Ishigaki jima	2.21	85	P	Pn	04 06 00.1	+0.2
JIJ				*e*S	Sn	04 06 27.5	+0.6
VCHM	Qimei baz=233	2.32	246	*e*P	Pn	04 06 01.7	+0.3
VCHM	baz=233			*e*S	Sn	04 06 30.9	+1.3
JISG	Ishigakijimahi	2.39	80	P	Pn	04 06 02.4	+0.1
JISG				S	Sn	04 06 32.5	+1.2
TWK1	Hengchun baz=194	2.39	201	*e*P	Pb	04 06 05.5	-1.1
TWKBT	Hengchun baz=194	2.39	201	*e*P	Pn	04 06 04.3	+1.9
PTMZ	Houxiangcun baz=288	2.52	290	*e*P	Pn	04 06 03.8	-0.3
PTMZ	baz=288			*e*S	Sn	04 06 32.8	-1.7
MATB	Ma-tsu baz=318	2.53	321	*e*P	Pn	04 06 03.3	-1.0
JTJ	Tarama	2.75	80	P	Pn	04 06 08.3	+1.1
JTJ				*e*S	Sn	04 06 41.2	+1.0
LYJJ	Jianjiangzhen baz=321	2.95	323	*e*P	Pn	04 06 09.1	-0.9
QZH	Quanzhou	2.95	285	Pn	Pn	04 06 09.8	-0.2
QZH				Sn	Sn	04 06 43.5	-1.7
QZH				smax	smax		

	comp=N,510nm,0.7s						
QZH				smax	smax		
	comp=E,290nm,0.8s						
QZH				LR	LR		
	comp=N,580nm,7.6s						
QZH				LR	LR		
	comp=E,1µm,9.8s						
QZH				LR	LR		
	comp=Z,1µm,10.1s						
KNM	Kinmen	3.01	275	eP	Pn	04 06 12.3	+1.4
	baz=272						
KNMB	Chin-men Tao	3.06	276	eP	Pn	04 06 11.2	-0.3
	baz=273						
KNMB	Chin-men Tao	3.06	276		Pn	04 06 11.3	-0.2
XPSS	Dashiqiu	3.06	333	eP	Pn	04 06 10.6	-1.0
	baz=331						
AXDP	Jialang	3.49	282	eP	Pn	04 06 17.0	-0.5
	baz=280						
ZPLA	Ao Xicun	3.65	267	eP	Pn	04 06 19.7	+0.1
	baz=263						
JOW	Kunigami	6.47	65	Pn	Pn	04 06 58.2	-0.3
	2.7nm,0.3s,baz=136,slow=21,SNR=8.4						
NJ2	Nanjing	8.23	343	eP	Pn	04 07 12.3	-10
NJ2				S	Sn	04 08 45.8	-9.5
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,360nm,4.7s						
NJ2				smax	smax		
	comp=N,58nm,0.9s						
NJ2				smax	smax		
	comp=E,69nm,1.2s						
NJ2				LR	LR		
	comp=N,380nm,7.7s						
NJ2				LR	LR		
	comp=E,370nm,6.8s						
NJ2				LR	LR		
	comp=Z,520nm,11.9s						
WHN	Wuhan	9.11	316	P	Pn	04 07 37.3	+2.7
WHN				S	Sn	04 09 19.8	+2.9
WHN				LR	LR		
	comp=Z,1µm,8.9s						
WHN				LR	LR		
	comp=Z,1µm,8.9s						
WHN				LR	LR		
	comp=Z,2µm,12.5s						
QIZ	Qiongzhong	12.19	247	P	Pn	04 08 18.3	+1.4
QIZ				S	Sn	04 10 38.5	+6.0
QIZ				LR	LR		
	comp=Z,230nm,17.5s						
QIZ				LR	LR		
	comp=Z,210nm,12.7s						
XAN	Xi'an	14.87	314	P	P	04 08 57.5	-1.7
XAN				sP	Pn	04 09 06.5	+13
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				LR	LR		
	comp=Z,530nm,11.7s						
XAN				LR	LR		
	comp=Z,620nm,13.7s						
CHTO	Chiang Mai	21.85	260	P	P	04 10 15.9	0.0
CHTO				IAmb	IAmb	04 10 27.6	
	comp=Z,5.4nm,1.1s						
CMAR	Chiang Mai Arr	21.97	259	P	P	04 10 19.0	+1.8
	comp=Z,0.7nm,0.3s,baz=77,slow=7.8,SNR=1.7						
CMAR				LR	LR	04 19 19.8	
	comp=Z,86nm,19.3s,baz=132,slow=38						
GTA	Gaotai	23.93	315	eP	P	04 10 37.5	+0.2
GTA				pP	pP	04 10 43.0	+1.2
GTA				sP	sP	04 10 46.5	+2.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,53nm,4.7s						
GTA				LR	LR		
	comp=Z,220nm,12.0s						
GTA				LR	LR		
	comp=Z,190nm,13.1s						
GTA				LR	LR		
	comp=Z,230nm,11.6s						
HIA	Hailar	25.08	357	P	P	04 10 45.5	-2.0
HIA				IAmb	IAmb	04 10 46.4	
	comp=Z,7.6nm,1.0s						
KLR	Kul'dur	26.20	15	P	P	04 10 58.4	+0.7
	comp=Z,1.5nm,0.5s,baz=193,slow=5.5,SNR=9.1						
SONM	Songino Array	26.56	337	P	P	04 11 02.1	+1.0
	comp=Z,1.3nm,0.8s,baz=151,slow=9.3,SNR=7.6						
SHL	Shillong	27.09	279	P	P	04 11 04.7	-1.4
WMQ	Urumqi	34.01	314	eP	P	04 12 09.0	+2.0
MK31	Makanchi Array	38.68	316	P	P	04 12 46.0	-0.9
MK31				IAmb	IAmb	04 12 54.7	
	comp=Z,2.6nm,0.9s						
MKAR	Makanchi Array	38.68	316	P	P	04 12 46.5	-0.3
	comp=Z,2.5nm,0.8s,baz=100,slow=9.8,SNR=10						
MAKZ	Makanchi	38.88	316	P	P	04 12 48.7	+0.2
MAKZ				IAmb	IAmb	04 12 57.0	
	comp=Z,5.1nm,1.1s						
ZALV	Zalesovo Beam	40.51	327	P	P	04 13 01.4	-0.5
	comp=Z,0.8nm,0.5s,baz=106,slow=9.4,SNR=5.9						
ZALV				LR	LR	04 31 04.0	
	comp=Z,85nm,18.7s,baz=6.5,slow=38						
KURK	Kurchatov	42.41	320	P	P	04 13 18.5	+1.0
KURBB	Kurchatov Arra	42.42	320	P	P	04 13 18.5	+0.9
	comp=Z,0.5nm,0.7s,baz=106,slow=10,SNR=4.6						
WRA	Warramunga Arr	45.56	163	P	P	04 13 42.3	-0.8
	comp=Z,0.8nm,0.5s,baz=345,slow=8.9,SNR=4.5						
TIXI	Tiksi	47.66	3	P	P	04 13 58.1	-0.9
	comp=Z,1.0nm,0.4s,baz=157,slow=5.7,SNR=4.1						
BVAR	Borovoye Array	47.98	321	P	P	04 14 01.7	-0.1
	comp=Z,0.8nm,0.6s,baz=134,slow=8.5,SNR=4.8						
ASAR	Alice Springs	49.02	165	P	P	04 14 09.3	-0.8
	comp=Z,0.7nm,0.7s,baz=336,slow=6.9,SNR=9.8						
ABKAR	Akbulak array	53.79	314	P	P	04 14 45.8	+0.3
ABKAR				IAmb	IAmb	04 14 48.1	
	comp=Z,1.2nm,0.6s						
STKA	Stephens Creek	58.90	160	P	P	04 15 22.0	-0.2
	comp=Z,1.8nm,0.7s,baz=329,slow=14,SNR=3.4						
STKA	Stephens Creek	58.90	160	IAmb	IAmb	04 15 26.6	
	comp=Z,4.1nm,1.5s						
IL31		68.98	27	P	P	04 16 28.6	+0.5
ILAR	Eielson Array	68.98	27	P	P	04 16 27.0	-1.1
	comp=Z,0.5nm,0.9s,baz=283,slow=4.8,SNR=2.5						
FINES	FINESS Array B	71.69	330	P	P	04 16 44.2	-0.5
	comp=Z,4.4nm,1.0s,baz=65,slow=7.8,SNR=1.7						
INK	Inuvik	73.03	22	P	P	04 16 51.6	-1.0
	comp=Z,0.6nm,0.4s,baz=314,slow=5.2,SNR=3.7						
BRTR	Keskin Array B	73.57	307	P	P	04 16 56.2	-0.4
	comp=Z,0.2nm,0.5s,baz=100,slow=5.2,SNR=2.5						
YKA	Yellowknife Ar	82.77	23	P	P	04 17 45.6	-1.2
	comp=Z,1.5nm,0.8s,baz=311,slow=5.0,SNR=17						

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*SNET **26** 04:15:33.2±1.2, 14.°12N×89.°72W, h6^{km}±4^{km}, ML3.0*

*GCG **26** 04:15:35.6±0.7, 14.°25N×89.°83W, h0^{km}±4^{km}, MD3.1*

ISC 26 04:15:33.1±0.9**, 14.°09N**±0.°03×**89.°69W**±0.°03**, h14**^{km}±6^{km}**, n26, σ0.^{s}51**/40**, 2C-3D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLOZ	Alcaldia de Sa	0.11	233	eP	Pg	04 15 36.2	-0.3
SLOZ				eS	Sg	04 15 38.2	-0.5
RTR	El Retiro	0.20	167	⇓iP	Pb	04 15 38.8	+0.1
NUBE	Las Nubes	0.21	204	⇓iP	Pg	04 15 38.3	+0.3
NUBE				eS	Sg	04 15 41.5	+0.3
NUBE				eS	Sg	04 15 41.6	+0.3
NUBE				IAML		04 15 42.5	
	comp=Z,2µm,0.5s						
SNJE	San Jose	0.24	159	eP	Pb	04 15 39.6	+0.2
SBLS	San Blas	0.26	165	eP	Pb	04 15 39.6	-0.2
CEVE	Cerro Verde	0.27	166	eP	Pb	04 15 40.0	+0.1
CEVE				eS	Sb	04 15 44.9	+0.4
CEVE				IAML		04 15 47.8	
	comp=Z,3µm,0.5s						
TACO	Tacachico	0.35	110	⇑iP	Pb	04 15 41.4	+0.2
TACO				eS	Sb	04 15 46.9	+0.3
CEDA	San Andres	0.41	135	eP	Pb	04 15 42.3	+0.1
CEDA				eS	Sb	04 15 49.0	+0.8
CEDA				IAML		04 15 51.8	
	comp=Z,2µm,0.3s						
MTO3	Montecristo	0.44	47	⇑iP	Pb	04 15 42.8	-0.1
MTO3				eS	Sb	04 15 49.5	+0.1
JAYA	Jayaque - finc	0.50	151	eP	Pb	04 15 43.9	+0.2
JAYA				IAML		04 15 53.2	
	comp=Z,876nm,0.2s						
BOQS	Boqueron	0.54	132	eP	Pb	04 15 44.9	+0.5
ESQI	Esquipulas	0.58	36	⇓iP	Pb	04 15 45.2	+0.1
ESQI				eS	Sb	04 15 53.4	+0.3
UEES	Universidad Ev	0.58	130	eP	Pb	04 15 45.5	+0.4
UEES				IAML		04 15 57.0	
	comp=Z,709nm,0.4s						
SNET	Serv Nac Est T	0.60	132	eP	Pb	04 15 45.6	+0.1
OPAM	Oficina de Pla	0.61	128	eP	Pb	04 15 45.9	+0.3
OPAM				eS	Sn	04 15 55.6	-1.5
LFU	La Fuente	0.66	121	eP	Pb	04 15 47.0	+0.6
LALI	Alcalda de L	0.70	149	eP	Pb	04 15 47.7	+0.6
LALI				eS	Sn	04 15 58.7	-0.5
LBRS	Las Brisas	0.72	119	eP	Pn	04 15 48.1	-0.8
LFRS	El Faro	0.77	127	eP	Pb	04 15 48.8	+0.4
NBG	Las Nubes	0.80	308	i P	Pn	04 15 49.5	-0.7
NBG				eS	Sb	04 16 00.1	+0.3
PAVA	Las Pavas	0.83	117	eP	Pn	04 15 49.7	-0.7
MRL	Marmol	0.98	1	i P	Pn	04 15 52.9	+0.2
MRL				eS	Sn	04 16 06.8	+0.3
SCLA	Alcaldia de Sa	1.01	112	eP	Pn	04 15 53.1	+0.1
TECO	Alcaldia de Te	1.04	122	eP	Pn	04 15 53.5	+0.1
FUG	Fuego 3	1.17	288	i P	Pb	04 15 55.3	+0.1
FUG				eS	Sb	04 16 10.5	+0.2
STG3	Santiaguito 3,	1.92	289	i P	Pb	04 16 08.0	0.0
STG3				eS	Sb	04 16 33.1	+1.2

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*IDC **26** 04:24:29.8±4.0, 3.°12N×128.°43E, h139^{km}±44^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.3/45, mbtmp3.8/6, Error ellipse: s-maj=100.3km s-min=18.0km az=70.0*

ISC 26 04:24:30.7±1.1**, 3.°1N**±0.°3×**128.°6E**±0.°5**, h150**^{km}**, n6, σ0.^{s}49**/7**, mb3.5**/5**, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.82	146	P	Pn	04 25 41.3	-0.6
	13nm,0.3s,baz=332,slow=21,SNR=16						
SIJI				S	Sn	04 26 37.7	+0.4
	5.1nm,0.3s,baz=218,slow=22,SNR=5.8						
WRA	Warramunga Arr	23.64	166	P	P	04 29 28.4	-0.1
	0.9nm,0.4s,baz=346,slow=10,SNR=12						
ASAR	Alice Springs	27.15	169	P	P	04 30 00.2	+0.1
	0.2nm,0.3s,baz=355,slow=9.8,SNR=7.5						
STKA	Stephens Creek	36.97	161	P	P	04 31 26.0	+0.4
	1.8nm,0.4s,baz=341,slow=11,SNR=7.4						
SONM	Songino Array	48.45	340	P	P	04 32 58.4	+0.4
	0.4nm,0.7s,baz=159,slow=6.2,SNR=3.1						
MKAR	Makanchi Array	59.08	325	P	P	04 34 14.8	-0.4
	0.4nm,0.6s,baz=117,slow=7.0,SNR=7.5						

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*IDC **26** 04:32:33.4±16.0, 51.°23N×178.°68W, h0^{km}, mb3.4/4, mb1 3.8/4, mb1mx3.4/49, mbtmp3.4/4, Error ellipse: s-maj=326.2km s-min=67.0km az=82.0*

*AEIC **26** 04:32:36±0.6, 51.°20N±0.°08×179.°2W±0.°1, h43^{km}±8^{km}, Error ellipse: s-maj=14.4km s-min=2.3km az=140.0*

*NEIC **26** 04:32:37.8±0.4, 51.°36N±0.°05×179.°2W±0.°2, h47^{km}±11^{km}, ML3.3(AEIC), Error ellipse: s-maj=18.5km s-min=6.6km az=89.0*

ISC 26 04:32:37.2±3.3**, 51.°3N**±0.°3×**179.°2W**±0.°3**, h44**^{km}**, n18, σ0.^{s}38**/15**, mb3.4**/4**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GASW	Gareloi Southw	0.54	26		Pn	04 32 48.6	0.0
GALAA	Gareloi Lava P	0.55	32		Pn	04 32 49.1	+0.3
GAEA	Gareloi East	0.58	32		Pn	04 32 49.3	+0.2
GANO	Gareloi North	0.59	27		Pn	04 32 49.1	-0.2
TASE	Tanaga Southea	0.92	54		Pn	04 32 53.7	-0.1
TAFL	Tanaga Flats	0.95	60		Pn	04 32 54.0	-0.1
TAPA	Tanaga Point A	1.03	59		Pn	04 32 55.1	-0.1
KIMD	Kanaga Island	1.33	69		Pn	04 32 58.8	-0.6
KIWB	Kanaga Island	1.42	66		Pn	04 33 00.4	-0.1
ADK	Adak	1.70	69		Pn	04 33 04.3	+0.1
GSMY	Great Sitkin M	2.12	68		Pn	04 33 11.0	+1.0
ILAR	Eielson Array	21.48	39	P	P	04 37 21.4	-0.2
	0.5nm,0.8s,baz=234,slow=8.2,SNR=5.4						
YKA	Yellowknife Ar	35.49	46	P	P	04 39 28.9	-0.2
	0.3nm,0.6s,baz=281,slow=8.1,SNR=5.0						
PDAR	Pinedale Array	46.59	72	P	P	04 41 01.2	+0.4
	0.8nm,0.5s,baz=321,slow=3.6,SNR=18						
TXAR	Lajitas Array	58.94	81	P	P	04 42 31.8	-0.2
	0.2nm,0.6s,baz=308,slow=4.5,SNR=4.8						
H03N2	Juan Fernandez	121.39	105	T	T	07 04 34.1	
	baz=317,slow=77,SNR=9.1						
H03N1	Juan Fernandez	121.40	105	T	T	07 04 35.1	
	baz=317,slow=77,SNR=8.9						
H03N3	Juan Fernandez	121.40	105	T	T	07 04 34.7	
	baz=317,slow=77,SNR=11						

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*IDC **26** 04:43:13.6±1.1, 41.°99S×84.°68E, h0^{km}, mb4.3/9, mb1 4.4/9, mb1mx3.9/47, mbtmp4.3/9, MS4.7/17, Ms1 4.7/17, ms1mx4.6/20, Error ellipse: s-maj=36.4km s-min=23.1km az=90.0*

*NEIC **26** 04:43:14.8, 42.°06S×84.°65E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.12; $M_{\theta\theta}$1.71; $M_{\phi\phi}$-1.60; $M_{r\theta}$0.20; $M_{\theta\phi}$0.19; $M_{\phi r}$0.05; Fault plane solution: $M_0$1.68000×10^{17} NP1:ϕ_s131.82000°, δ84.55000°, λ3.29000°. NP2:ϕ_s41.51000°, δ86.72000°, λ174.54000°. Principal axes: T 1.7456, Plg6.0000°, Azm357.0000°; N -0.1374, Plg84.0000°, Azm191.0000°; P -1.6082, Plg2.0000°, Azm87.0000°;*

*NEIC **26** 04:43:15.2±2.9, 42.°0S±0.°1×84.°6E±0.°2, h10^{km}±1^{km}, mb5.0/21, Ms_20 4.8/37, Mwb5.4/8 Error ellipse: s-maj=21.4km s-min=18.4km az=217.0*

*GCMT **26** 04:43:20.2±0.1, 41.°70S±0.°01×84.°91E±0.°01, h15^{km}, MW5.4/125, Moment Tensor Solution. s94,c155; s125,c243; Duration: 1.^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.11±.02; $M_{\theta\theta}$1.70±.03; $M_{\phi\phi}$-1.59±.03; $M_{r\theta}$0.11±.04; $M_{\theta\phi}$-0.04±.02; $M_{\phi r}$0.02±.04; Best double couple: $M_0$1.64900×10^{17} NP1:ϕ_s136.00000°, δ87.00000°, λ2.00000°. NP2:ϕ_s46.00000°, δ88.00000°, λ177.00000°. Principal axes: T 1.7070, Plg3.0000°, Azm1.0000°; N -0.1130, Plg86.0000°, Azm192.0000°; P -1.5910, Plg1.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 04:43:14.9±0.5**, 42.°08S**±0.°10×**84.°4E**±0.°1**, h10**^{km}**, n87, σ1.^{s}76**/47**, mb4.8**/21**, MS4.8**/42**, 2C-3D, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIS	Amsterdam Isla	6.79	307	Pn	Pn	04 44 53.7	-0.9
H01W2	Cape Leeuwin H	24.25	83	T	T	05 13 04.8	
	baz=245,slow=74,SNR=120						
H01W3	Cape Leeuwin H	24.25	83	T	T	05 13 05.9	
	baz=245,slow=74,SNR=110						
H01W1	Cape Leeuwin H	24.26	83	T	T	05 13 06.5	
	baz=245,slow=74,SNR=123						
NWAO	Narrogin (SRO)	27.44	81	IAMs_20	IAMs_20	04 56 47.9	
	comp=Z,3µm,22.0s						
MAW	Mawson	28.11	197	LR	LR	04 58 05.9	
	comp=Z,785nm,21.2s,baz=39,slow=32						
CASY	Casey	28.23	158	IAMs_20	IAMs_20	04 57 08.8	
	comp=Z,2µm,21.0s						
SYO	Syowa Base	35.60	206	⇓eP	P	04 50 11.6	-0.6
H08S2	Diego Garcia H	35.89	340	T	T	05 27 44.6	
	baz=164,slow=76,SNR=147						
H08S1	Diego Carcia H	35.89	339	T	T	05 27 43.4	
	baz=164,slow=76,SNR=77						
H08S3	Diego Garcia H	35.91	340	T	T	05 27 46.1	
	baz=164,slow=76,SNR=257						
MBWA	Marble Bar	36.23	66	IAMs_20	IAMs_20	05 01 58.2	
	comp=Z,2µm,19.0s						
PMBI	Palembang	43.03	31	IAMs_20	IAMs_20	05 05 46.8	
	comp=Z,2µm,20.0s						
ASAR	Alice Springs	44.76	82	P	P	04 51 25.8	-2.9
	comp=Z,3.3nm,0.9s,baz=228,slow=7.1,SNR=17						
ASAR				LR	LR	05 07 58.1	
	comp=Z,3µm,20.1s,baz=242,slow=33						
ASAR	Alice Springs	44.76	82	P	P	04 51 26.2	-2.5
AS31	Alice Springs	44.76	82	P	P	04 51 26.4	-2.4
GSI	Gunungsitoli	44.80	19	IAMs_20	IAMs_20	05 04 30.4	
	comp=Z,2µm,19.0s						
STKA	Stephens Creek	46.02	97	LR	LR	05 07 00.3	
	comp=Z,1µm,21.6s,baz=240,slow=31						
VNDA	Vanda	46.61	163	P	P	04 51 42.8	+0.2
	comp=Z,1.0nm,0.7s,baz=281,slow=8.2,SNR=2.2						
VNDA				LR	LR	05 09 18.5	
	comp=Z,1µm,21.3s,baz=274,slow=34						
VNDA	Vanda	46.61	163	P	P	04 51 43.2	+0.7
VNDA				IAmb	IAmb	04 52 14.2	
	comp=Z,18nm,1.8s						
MYKOM	Kota Tinggi	47.08	27	IAMs_20	IAMs_20	05 07 36.4	
	comp=Z,954nm,20.0s						
WRA	Warramunga Arr	47.36	78	P	P	04 51 49.3	+0.1
	comp=Z,5.7nm,0.9s,baz=230,slow=7.7,SNR=12						
WRA				LR	LR	05 09 12.6	
	comp=Z,706nm,21.0s,baz=240,slow=33						
WRA	Warramunga Arr	47.36	78	P	P	04 51 49.3	+0.1
WRAB	Tennant Creek	47.37	78	IAMs_20	IAMs_20	05 09 01.8	
	comp=Z,748nm,19.0s						
WR0	Warramunga Arr	47.49	78	P	P	04 51 49.6	-0.6
WB0	Warramunga Arr	47.51	78	P	P	04 51 49.6	-0.7
WB0				IAmb	IAmb	04 53 28.9	
	comp=Z,39nm,1.7s						
QSPA	South Pole Qui	48.07	180	P	P	04 51 55.2	+0.8
	comp=Z,4.6nm,1.0s,baz=279,slow=1.7,SNR=9.1						
QSPA	South Pole Qui	48.07	180	P	P	04 51 55.2	+0.8
QSPA				IAmb	IAmb	04 52 13.3	
	comp=Z,20nm,1.4s						
QSPA	South Pole Qui	48.07	180	IAMs_20	IAMs_20	05 09 57.8	
	comp=Z,1µm,22.0s						
IPM	Ipoh	48.74	22	IAMs_20	IAMs_20	05 08 16.8	
	comp=Z,1µm,20.0s						
BOSA	Boshof	49.20	266	LR	LR	05 09 09.1	
	comp=Z,1µm,19.0s,baz=135,slow=32						
KSM	Kuching	49.27	35	IAMs_20	IAMs_20	05 08 33.9	
	comp=Z,1µm,21.0s						
LBTB	Lobatse	50.93	270	P	P	04 52 17.3	+0.7
LBTB				IAmb	IAmb	04 53 39.7	
	comp=Z,36nm,1.8s						
SBUM	Sibu	50.98	37	P	P	04 52 15.2	-1.7
SBUM				IAmb	IAmb	04 53 01.0	
	comp=Z,8.0nm,0.3s						
CTAO	Charters Tower	56.06	87	P	P	04 52 51.6	-2.6
CTAO				IAmb	IAmb	04 54 19.0	
	comp=Z,40nm,2.0s						
CTAO	Charters Tower	56.06	87	IAMs_20	IAMs_20	05 15 23.7	
	comp=Z,651nm,19.0s						
MLZ	Mavora Lakes	57.91	124	IAMs_20	IAMs_20	05 11 41.1	
	comp=Z,871nm,18.0s						
DLV	T Lat	58.13	28	IAMs_20	IAMs_20	05 13 52.5	
	comp=Z,658nm,19.0s						
KMBO	Kilima Mbogo	58.74	301	LR	LR	05 12 57.8	
	comp=Z,261nm,21.4s,baz=102,slow=30						
TSUM	Tsumeb	60.34	270	IAMs_20	IAMs_20	05 15 22.3	
	comp=Z,1µm,22.0s						
CM31	Chiang Mai Arr	61.71	16	P	P	04 53 32.8	-0.5
CMAR	Chiang Mai Arr	61.71	16	P	P	04 53 31.4	-1.9
	comp=Z,2.5nm,0.4s,baz=208,slow=7.0,SNR=10						
CMAR				LR	LR	05 16 02.5	
	comp=Z,380nm,21.8s,baz=235,slow=32						
CMAR	Chiang Mai Arr	61.71	16	P	P	04 53 31.4	-1.9
CHTO	Chiang Mai	62.06	16	IAMs_20	IAMs_20	05 16 11.1	
	comp=Z,529nm,20.0s						
PMG	Port Moresby	63.58	78	IAMs_20	IAMs_20	05 18 10.0	
	comp=Z,971nm,20.0s						
SLVN	Son La	65.62	20	IAMs_20	IAMs_20	05 17 25.0	
	comp=Z,795nm,22.0s						
HKPS	Hong Kong Po S	69.69	29	IAMs_20	IAMs_20	05 20 52.3	
	comp=Z,728nm,19.0s						
DZM	Mont Dzumac	69.79	102	eS	S	05 03 39.4	+4.2
	comp=Z,300nm,30.6s						
DZM	Mont Dzumac	69.79	102	eLR	LR	05 15 28.6	
	comp=Z,1µm,22.4s						
LSA	Lhasa	71.70	6	P	P	04 54 37.4	+0.1
LSA				IAmb	IAmb	04 54 41.3	
	comp=Z,10nm,1.0s						
HNR	Honiara	73.00	87	IAMs_20	IAMs_20	05 19 15.5	
	comp=Z,464nm,20.0s						
RAYN	Ar Rayn	74.54	323	P	P	04 54 55.1	+1.3
KBL	Kabul	77.55	347	P	P	04 55 10.3	-0.6
XAN	Xi'an	79.02	21	P	P	04 55 19.5	+0.6
XAN				pP	PcP	04 55 27.3	-0.1
XAN				sP	pwP	04 55 31.3	+6.1
XAN				S	S	05 05 23.0	+5.3
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XAN				LR	LR		
	comp=Z,570nm,24.7s						
XAN				LR	LR		
	comp=Z,1µm,21.3s						
LZH	Lanzhou	79.80	16	eP	P	04 55 27.5	+4.3
LZH				sP	PcP	04 55 38.3	+7.4
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
CHGR	Chuyangaron	81.56	348	P	P	04 55 32.7	+0.2
GTA	Gaotai	82.31	12	eP	P	04 55 37.8	+1.3
GTA				pP	pwP	04 55 44.8	+1.9
GTA				sP	PcP	04 55 48.5	+6.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,52nm,4.5s						
GTA				LR	LR		
	comp=Z,340nm,21.4s						
GTA				LR	LR		
	comp=Z,390nm,22.9s						
GTA				LR	LR		
	comp=Z,330nm,21.1s						
BTK	Batken	82.69	350	P	P	04 55 38.7	+0.3
BTK				IAmb	IAmb	04 55 59.0	
	comp=Z,21nm,1.4s						
GEYT	Alibeck	83.17	339	LR	LR	05 26 51.6	
	comp=Z,240nm,21.4s,baz=65,slow=32						
GEYT	Alibeck	83.17	339	P	P	04 55 41.4	+0.5
GYA0B	ALIBECK ARRAY	83.17	339	P	P	04 55 39.9	-1.0
KKAR	Karatay Array	85.72	350	P	P	04 55 51.4	-2.2
MK31	Makanchi Array	88.52	359	⇑Pg	P	04 56 05.6	-1.6
	comp=Z,1.8nm,0.9s,baz=106,slow=17,SNR=7.5						
MK31				⇓Lg	Lg	04 56 38.3	
	comp=Z,1.7nm,0.6s,baz=98,slow=30,SNR=6.5						
MK31	Makanchi Array	88.52	359	P	P	04 56 05.8	-1.3
MK31				IAmb	IAmb	04 56 30.6	
	comp=Z,10nm,1.8s						
MKAR	Makanchi Array	88.52	359	P	P	04 56 07.0	-0.2
	comp=Z,1.3nm,0.8s,baz=162,slow=5.8,SNR=7.0						
MKAR				LR	LR	05 33 10.7	
	comp=Z,737nm,20.6s,baz=182,slow=34						
MKAR	Makanchi Array	88.52	359	P	P	04 56 07.0	-0.2
MAKZ	Makanchi	88.53	358	⇑Pg	P	04 56 07.8	+0.5
	comp=Z,5.9nm,1.1s						
MAKZ				⇓Lg	Lg	04 56 45.2	
	comp=Z,2.0nm,1.1s						
MAKZ	Makanchi	88.53	358	P	P	04 56 04.8	-2.5
KSRS	Korea Array	88.54	33	P	P	04 56 08.5	+1.1
	comp=Z,2.2nm,1.0s,baz=224,slow=6.7,SNR=4.6						
KSRS	Korea Array	88.54	33	P	P	04 56 08.5	+1.1
SONM	Songino Array	91.62	15	P	P	04 56 22.4	+0.7
	comp=Z,2.7nm,0.9s,baz=191,slow=6.8,SNR=9.2						
SONM				LR	LR	05 34 52.2	
	comp=Z,294nm,21.9s,baz=190,slow=34						
SONM	Songino Array	91.62	15	P	P	04 56 20.7	-1.1
ULN	Ulaanbaatar	91.78	15	P	P	04 56 20.6	-1.9
ULN				IAmb	IAmb	04 59 00.9	
	comp=Z,8.0nm,1.2s						
MJAR	Matsushiro Arr	92.38	41	LR	LR	05 40 22.6	
	comp=Z,49nm,18.1s,baz=200,slow=37						
KURBB	Kurchatov Arra	92.47	356	P	P	04 56 25.0	-0.4
	comp=Z,2.0nm,1.0s,baz=187,slow=4.2,SNR=5.9						
TORD	Torodi Ar. Bea	93.40	285	LR	LR	05 35 52.2	
	comp=Z,445nm,20.0s,baz=110,slow=34						
BRTR	Keskin Array B	93.56	323	LR	LR	05 34 52.0	
	comp=Z,297nm,20.0s,baz=151,slow=33						
DBIC	Dimbokro	93.89	275	LR	LR	05 33 00.8	
	comp=Z,497nm,21.9s,baz=140,slow=32						
PLCA	Paso Flores	94.51	199	LR	LR	05 38 48.8	
	comp=Z,395nm,20.6s,baz=256,slow=35						
ZALV	Zalesovo Beam	95.66	0	LR	LR	05 37 06.0	
	comp=Z,410nm,21.5s,baz=172,slow=34						
TBI	Tubuai	98.05	131	eLQ	LQ	05 24 51.7	
	comp=Z,281nm,36.0s						
TBI				eLR	LR	05 28 56.1	
	comp=Z,169nm,22.8s						
PPT2	Papeete2	102.52	128	eLQ	LQ	05 26 39.0	
	comp=Z,710nm,29.5s						
PPT2				eLR	LR	05 30 56.5	
	comp=Z,440nm,28.2s						
TAOE	Nuku Hiva Isla	114.95	130	ePS	PS	05 12 28.1	-5.9
	comp=Z,59nm,30.0s						
TAOE	Nuku Hiva Isla	114.95	130	eLR	LR	05 36 52.7	
	comp=Z,163nm,25.5s						
BCAR	Beaver Creek A	146.00	36	PKPdf	PKPdf	05 02 51.9	-1.2
A36M	Sachs Harbour	146.70	16	PKPbc	PKPab	05 02 56.7	-0.1
RES	Resolute Bay	147.30	360	PKPbc	PKPab	05 02 58.5	-0.6

IDC ***26*** *04:48:36.8±2.1, 29°.11N×81°.05E, h0^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.5/63, mbtmp3.8/9, ML4.2/2, Error ellipse: s-maj=70.6km s-min=20.3km az=70.0*

NEIC ***26*** *04:48:40.0±1.8, 29°.2N±0°.1×81°.4E±0°.1, h10^{km}±1^{km}, mb4.1/7, Error ellipse: s-maj=22.7km s-min=13.4km az=202.0*

NDI ***26*** *04:48:43.4±4.3, 29°.25N×81°.52E, h10^{km}, ML3.7, mb4.1(NEIC)*

ISC 26 04:48:42.9±0.6**, 29°.28N**±0°.05×**81°.60E**±0°.06**, h27**^{km}**, n36,** σ1^{s}**55**/40**, mb3.8**/9**, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTH	Pithoragarh	1.24	283	ePG	Pn	04 49 03.0	-1.6
PTH				eSG	Sn	04 49 20.5	0.0
NDI	New Delhi	3.89	262	eP	Pn	04 49 42.0	+1.1
SMLA	Simla	4.26	297	eP	Pn	04 49 48.2	+2.2
SMLA				eS	Sn	04 50 36.9	+2.2
SMLA				IAML		04 50 38.4	
	comp=N,234nm,0.3s						
SMLA				IAML		04 50 39.6	
	comp=E,217nm,0.4s						
KUDL	Kundal	4.63	257	eP	Pn	04 49 52.5	+1.4
JHNI	Jhansi	4.68	216	eP	Pn	04 49 51.5	-0.2
DHRM	DHARAMSHALA	5.44	304	eP	Pn	04 50 06.0	+3.6
DHRM				eS	Sn	04 51 05.0	+0.9
DHRM				IAML		04 51 07.1	
	comp=E,130nm,0.3s						
DHRM				IAML		04 51 09.9	
	comp=N,98nm,0.4s						
JBP	Jabalpur	6.26	194	eP	Pn	04 50 15.0	+1.5
JBP				eS	Sn	04 51 26.6	+2.3
BOK	Bokaro	6.68	144	eP	Pn	04 50 20.5	+1.2
BOK				eS	Sn	04 51 31.6	-2.9
BHPL	Bhopal	7.09	213	eP	Pn	04 50 25.3	+0.4
BHPL				eS	Sn	04 51 42.8	-1.9
BHPL				IAML		04 51 45.0	
	comp=E,62nm,0.3s						
BHPL				IAML		04 51 46.3	
	comp=N,53nm,0.4s						
LSA	Lhasa	8.33	85	Pn	Pn	04 50 43.6	+1.2
LSA					Sn	04 52 16.5	+0.7
SHL	Shillong	9.86	110	Pn	Pn	04 51 03.7	+0.7
KBL	Kabul	11.88	299	Pn	Pn	04 51 29.5	-1.3
HYB	Hyderabad	12.14	194	iP	Pn	04 51 34.0	-0.2
TARG	Taragay, Kyrgy	12.79	347	Pn	Pn	04 51 42.9	-0.5
POO	Poona	12.83	215	eS	Sn	04 53 54.0	-12
DRK	Karamyk	12.99	324	Pn	Pn	04 51 45.6	-0.3
AAK	Ala-Archa	14.51	339	Pn	Pn	04 52 06.1	-0.5
KKAR	Karatay Array	16.42	330		P	04 52 34.1	+0.2
MKAR	Makanchi Array	17.49	2	P	Pn	04 52 42.6	-2.2
	comp=N,0.1nm,0.3s,baz=182,slow=11,SNR=13						
MKAR	Makanchi Array	17.49	2	P	P	04 52 45.7	-0.1
MAKZ	Makanchi	17.50	1	Pn	Pn	04 52 43.8	-1.1
MAKZ				IAmb	IAmb	04 52 47.4	
	comp=Z,23nm,1.9s						
CMAR	Chiang Mai Arr	19.15	120	P	Pn	04 53 06.4	+1.1
	comp=Z,1.2nm,0.3s,baz=310,slow=12,SNR=4.6						
KURBB	Kurchatov Arra	21.44	355	P	P	04 53 28.2	-0.6
	comp=Z,2.3nm,0.7s,baz=178,slow=10,SNR=18						
KURK	Kurchatov	21.52	355	P	P	04 53 29.5	-0.2
KURK				IAmb	IAmb	04 53 33.2	
	comp=Z,18nm,1.6s						
ZAA0	Zalesovo Array	24.76	5	P	P	04 54 01.9	-0.2
ZALV	Zalesovo Beam	24.76	5	P	P	04 54 02.1	+0.1
	comp=Z,2.2nm,0.8s,baz=196,slow=11,SNR=8.3						
ABKAR	Akbulak array	25.89	326	P	P	04 54 08.1	-4.3
SONM	Songino Array	26.63	39	P	P	04 54 20.9	+1.7
	comp=Z,1.0nm,0.7s,baz=236,slow=8.6,SNR=8.0						
SONM	Songino Array	26.63	39	IAmb	IAmb	04 54 32.8	
	comp=Z,3.3nm,1.2s						
WB0	Warramunga Arr	70.49	127	P	P	04 59 53.7	-1.7
WB0				IAmb	IAmb	05 01 19.1	
	comp=Z,53nm,1.9s						
WRA	Warramunga Arr	70.57	127	P	P	04 59 55.5	-0.4
	comp=Z,0.6nm,0.5s,baz=308,slow=4.7,SNR=4.6						
WRA	Warramunga Arr	70.57	127	IAmb	IAmb	05 01 48.3	
	comp=Z,1.9nm,1.9s						
WRAB	Tennant Creek	70.57	127	P	P	04 59 55.8	0.0
ASAR	Alice Springs	72.81	131	P	P	05 00 08.8	-0.5
	comp=Z,0.3nm,0.3s,baz=316,slow=6.3,SNR=6.8						
ILAR	Eielson Array	78.96	19	P	P	05 00 43.6	-0.2
	comp=Z,0.8nm,0.8s,baz=299,slow=3.9,SNR=6.0						
YKA	Yellowknife Ar	87.62	7	P	P	05 01 28.1	-0.3
	comp=Z,0.5nm,0.8s,baz=338,slow=5.1,SNR=5.8						

NNC ***26*** *04:49:10.1±0.8, 43°.47N×78°.83E, h8^{km}±7^{km}, mb2.7, mpv2.9, Error ellipse: s-maj=6.6km s-min=6.0km az=31.0*

SOME ***26*** *04:49:11.3, 43°.50N×78°.80E, h10^{km}*

KRNET ***26*** *04:49:24.0±0.1, 40°.61N×77°.37E, h35^{km}, mb2.5*

ISC 26 04:49:11.1±0.9**, 43°.49N**±0°.02×**78°.83E**±0°.02**, h14**^{km}±6^{km}**, n25,** σ1^{s}**62**/47**, 6C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPKS	Kokpek	0.11	259	eP	Pg	04 49 14.8	+0.4
	89nm,0.1s						
KPKS				eS	Sg	04 49 17.7	+1.0
	123nm,0.1s						
UZB	Uzynbulak	0.37	158	eP	Pg	04 49 17.8	-0.8
	7.4nm,0.1s						
UZB				eS	Sg	04 49 22.7	-0.9
	51nm,0.1s						
UZB	Uzynbulak	0.37	158	P	Pg	04 49 17.8	-0.8
	7.4nm,0.1s						
UZB				S	Sg	04 49 22.7	-0.9
	51nm,0.1s						
ZHN	Zhinishke	0.43	222	eP	Pg	04 49 19.3	-0.4
	4.6nm,0.1s						
ZHN				eS	Sg	04 49 25.3	-0.3
	125nm,0.2s						
ZHN	Zhinishke	0.43	222	P	Pg	04 49 19.3	-0.4
	4.6nm,0.1s						
ZHN				S	Sg	04 49 25.3	-0.3
	125nm,0.2s						
SATY	Saty	0.53	216	eP	Pg	04 49 21.0	-0.5
	4.1nm,0.1s						
SATY				eS	Sg	04 49 28.5	-0.1
	39nm,0.2s						
SATY	Saty	0.53	216	P	Pg	04 49 21.0	-0.5
	4.1nm,0.1s						
SATY				S	Sg	04 49 28.5	-0.1
	39nm,0.2s						
SHLS	Shalkode	0.56	126	eP	Pn	04 49 26.2	+1.4
	1.6nm,0.1s						
SHLS				eS	Sn	04 49 36.9	+2.8
	6.9nm,0.1s						
BLB	Baldybastay	0.66	337	P	Pg	04 49 23.9	-0.1
	15nm,0.1s						
BLB				S	Sg	04 49 33.0	+0.2
	24nm,0.1s						
ARXS	Arharly	1.03	315	eP	Pg	04 49 30.1	-0.8
	0.4nm,0.1s						
ARXS				eS	Sg	04 49 43.6	-0.7
	2.0nm,0.1s						
ARXS	Arharly	1.03	315	P	Pg	04 49 30.1	-0.8
	0.4nm,0.1s						
ARXS				S	Sg	04 49 43.6	-0.7
	2.0nm,0.1s						
PRZ	Przheval'sk	1.05	198	⇑iP	Pn	04 49 57.7	+26
	baz=22						
PRZ				⇑iS	Sn	04 50 22.2	+36
	baz=22						
DJR	Jarkent	1.09	39	eP	Pb	04 49 31.1	-0.7
	0.9nm,0.1s						
DJR				eS	Sg	04 49 45.4	-1.0
	6.7nm,0.2s						
DJR	Jarkent	1.09	39	P	Pb	04 49 31.1	-0.7
	0.9nm,0.1s						
DJR				S	Sg	04 49 45.4	-1.0
	6.7nm,0.2s						
CHKK	Chushkaly	1.39	286	eP	Pn	04 49 35.6	-0.5
	0.3nm,0.0s						
CHKK				eS	Sb	04 49 53.0	-1.4
	2.5nm,0.2s						
CHKK	Chushkaly	1.39	286	P	Pn	04 49 35.6	-0.5
	0.3nm,0.0s						
CHKK				S	Sb	04 49 53.0	-1.4
	2.5nm,0.2s						
TNSS	Tian-Shan	1.45	253	eP	Pb	04 49 38.0	-0.1
	0.6nm,0.1s						
TNSS				eS	Sg	04 49 57.0	-0.8
	1.3nm,0.2s						
KDJ	Kajisay	1.82	222	⇑iP	Pg	04 49 50.4	+4.4
	baz=55						
KDJ				⇑iS	Sg	04 50 09.6	-0.1
	baz=55						
KAPS	Kapalarasan	1.84	12	eP	Pb	04 49 44.9	+0.4
	1.3nm,0.5s						
KAPS				eS	Sb	04 50 09.0	+1.6
	1.2nm,0.1s						
KAPS	Kapalarasan	1.84	12	P	Pb	04 49 44.9	+0.4
	1.3nm,0.5s						
KAPS				S	Sb	04 50 09.0	+1.6
	1.2nm,0.1s						
TARG	Taragay, Kyrgy	1.91	204	⇑iP	Pb	04 49 45.4	-0.6
	baz=16						
TARG				⇑iS	Sn	04 50 01.1	-6.6
	baz=16						
ULHL	Ulahol	2.27	238	⇓iP	Pg	04 49 54.9	+0.2
	baz=33						
ULHL				⇓iS	Sn	04 50 17.5	+1.2
	baz=33						
KRBS	Karabastau	2.30	276	eP	Pb	04 49 53.0	+0.5
	0.4nm,0.1s						
KRBS				eS	Sb	04 50 22.1	+1.3
	1.2nm,0.3s						
KRBS	Karabastau	2.30	276	Pg	Pb	04 49 53.0	+0.5
	0.4nm,0.1s						
KRBS				Lg	Lg	04 50 22.1	
	1.2nm,0.3s						
BOOM	Boomskoye usch	2.34	246	⇓iP	Pg	04 49 59.6	+3.6
	baz=31						
BOOM				⇓iS	Sg	04 50 25.2	-1.2
	baz=31						

ISK ***26*** *04:51:45.6, 35°.50N×31°.22E, h5^{km}, ML4.1/41*

NEIC ***26*** *04:51:46.6±2.5, 35°.41N±0°.04×31°.20E±0°.04, h10^{km}±1^{km}, mb4.2/12, ML4.3(NIC), ML4.1(ISK), Error ellipse: s-maj=7.7km s-min=3.2km az=140.0*

NIC ***26*** *04:51:46.5±0.0, 35°.52N×31°.16E, h11^{km}±1^{km}, Ml4.3/6*

DDA ***26*** *04:51:48.4, 35°.39N×31°.17E, h31^{km}±1^{km}, MW4.1*

IDC ***26*** *04:51:48.6±2.6, 35°.63N×31°.12E, h36^{km}±26^{km}, mb3.8/13, mb1 3.9/21, mb1mx3.7/52, mbtmp4.0/21, ML4.1/7, MS3.1/4, Ms1 3.1/4, ms1mx2.7/39, Error ellipse: s-maj=16.7km s-min=12.5km az=153.0*

THE ***26*** *04:51:51.7, 35°.51N×30°.80E, h7^{km}±18^{km}, ML3.1/1, Error ellipse: s-maj=25.0km s-min=1.3km az=119.0*

ISC 26 04:51:47.9±1.1**, 35°.48N**±0°.03×**31°.14E**±0°.02**, h30**^{km}±9^{km}**, n217,** σ1^{s}**27**/252**, mb3.9**/13**, 1C, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	1.06	323	iP	Pn	04 52 06.7	0.0
AKUM				iS	Sb	04 52 23.9	+2.6
AKMS	Akamas	1.08	115	⇑eP	Pn	04 52 07.1	+0.1
AKMS				S	Sb	04 52 22.5	+0.6
AKMS				AML	AML	04 52 28.6	
	27nm,0.9s						
AKMS				AML	AML	04 52 28.6	
	27nm,0.9s						
AKMS				AML	AML	04 52 30.3	
	28nm,0.4s						
AKMS				AML	AML	04 52 30.3	
	28nm,0.4s						
GAZI	Gazipasa	1.22	51	iP	Pn	04 52 07.2	-1.7
GAZI	Gazipasa	1.22	51	PN	Pn	04 52 07.5	-1.4
KEMT	Kemer-ANTALYA	1.22	337	PN	Pn	04 52 09.5	+0.6
ALFC	Alefka	1.24	105	P	Pn	04 52 08.9	-0.2
ALFC				AML	AML	04 52 30.0	
	19nm,0.5s						
ALFC				AML	AML	04 52 31.7	
	14nm,0.4s						
DEMR	Demre-Antalya	1.26	307	PN	Pb	04 52 10.5	-0.5
NATA	Nata	1.36	120	P	Pb	04 52 12.1	-0.8
NATA				S	Sb	04 52 30.9	+0.9
NATA				AML	AML	04 52 34.5	
	16nm,1.1s						
NATA				AML	AML	04 52 34.5	
	16nm,1.1s						
NATA				AML	AML	04 52 36.5	
	18nm,0.5s						
NATA				AML	AML	04 52 36.5	
	18nm,0.5s						
KSL	Kastellorizon	1.43	298	P	Pn	04 52 12.3	+0.5
KSL	Kastellorizon	1.43	298	P	Pn	04 52 12.3	+0.5
KSL				S	Sb	04 52 32.0	+0.2
KSL				AML	AML	04 52 43.2	
	1.6nm,0.6s						
KSL				AML	AML	04 52 43.2	
	1.6nm,0.6s						
KSL				AML	AML	04 52 47.6	
	1.0nm,0.6s						
KSL				AML	AML	04 52 47.6	
	1.0nm,0.6s						
AKAS	Kas	1.46	302	iP	Pb	04 52 14.3	-0.2
AKAS	Kas	1.46	302	PN	Pb	04 52 13.6	-0.9
AKAS	Kas	1.46	302		Pb	04 52 15.7	+1.2
KEPZ	Antalya-Kepez	1.47	15	iP	Pn	04 52 11.6	-0.8
KEPZ				iS	Sn	04 52 29.7	-1.0
ANTB	Antalya	1.47	345	PN	Pn	04 52 12.6	+0.2
ANTB				SN	Sb	04 52 33.3	+0.3
LEF	Lefka	1.48	104	PN	Pn	04 52 12.5	+0.1
LEF				SN	Sn	04 52 31.3	+0.6
AKDN	Akdeniz- Kıbrı	1.50	96	PN	Pn	04 52 13.6	+0.8
ELL	Elmali	1.61	322	PN	Pb	04 52 16.4	-0.7
ELL	Elmali	1.61	322	P	Pb	04 52 15.9	-1.2
ELL				S	Sb	04 52 37.4	+0.2
ELL	Elmali	1.61	322		Pb	04 52 16.9	-0.3
BOZY	Bozyazi-Mersin	1.62	67	PN	Pn	04 52 13.5	-0.9
KORT	Korkueli	1.65	337	iP	Pb	04 52 17.1	-0.6
TEKE	Tekeli-Mersin	1.74	67	PN	Pn	04 52 15.4	-0.6
HDMB	Hadim	1.84	36	PN	Pn	04 52 18.1	+0.5
ASGA	Asgata	1.86	111	P	Pn	04 52 18.6	+0.8
ASGA				S	Sb	04 52 43.6	-0.5
ASGA				AML	AML	04 52 50.3	
	5.7nm,0.6s						
ASGA				AML	AML	04 52 50.3	
	5.7nm,0.6s						
ASGA				AML	AML	04 52 53.0	
	9.7nm,0.5s						
ASGA				AML	AML	04 52 53.0	
	9.7nm,0.5s						
CSS	Mathiatis	1.87	105	PN	Pn	04 52 18.2	+0.4
CSS	Mathiatis	1.87	105	P	Pn	04 52 18.0	+0.2
CSS	Mathiatis	1.87	105	Pn	Pn	04 52 17.8	0.0
ATHAL	Athalassa	1.88	100	P	Pn	04 52 18.3	+0.3
BERE	Bereket-Mersin	1.90	62	PN	Pn	04 52 18.2	-0.2
BUCA	Burdur, Bucak-	1.90	346	iP	Pb	04 52 20.9	-1.1
YORU	Yoruktepe-Mers	1.96	69	PN	Pn	04 52 19.1	0.0
LFK	Lefkose	1.96	95	PN	Pn	04 52 19.6	+0.4
OSC1	CSNet OBS 1	1.98	177	P	Pn	04 52 20.4	+1.1
OSC1				S	Sb	04 52 46.5	-1.0
SEYD	Seydisehir-KON	2.00	16	PN	Pn	04 52 20.6	+0.8
OREN	Orenkoy-Mersin	2.02	68	PN	Pn	04 52 20.0	+0.1
BCK	Bucak	2.03	348	PN	Pn	04 52 21.9	+1.8
FETY	Fethiye	2.03	305	P	Pn	04 52 21.1	+1.1
FETY				S	Sn	04 52 43.9	-0.5
FETY	Fethiye	2.03	305	iP	Pn	04 52 21.2	+1.1
FETY	Fethiye	2.03	305	PN	Pn	04 52 20.9	+0.8
SEDI	Konya, Seydise	2.03	14	iP	Pn	04 52 20.8	+0.6
SEDI				iS	Sn	04 52 45.0	+0.4
AKK1	Akkuyu-Mersin	2.06	71	PN	Pn	04 52 20.7	+0.2
AKK2	Akkuyu-Mersin	2.06	71	PN	Pn	04 52 20.6	+0.1
AKKU	Akkuyu-Mersin	2.07	70	PN	Pn	04 52 20.5	-0.2
GULN	MERSIN_Gulnar	2.08	70	iP	Pn	04 52 20.3	-0.4
GULN				iS	Sn	04 52 45.9	+0.4
CAME	Cameli-Denizli	2.08	315	PN	Pn	04 52 22.6	+1.6
TEPK	Tepekoy-MERSIN	2.09	68	PN	Pn	04 52 21.6	+0.7
MVOU	Mavrovouni	2.09	102	P	Pn	04 52 20.8	-0.1
MVOU				S	Sn	04 52 47.9	+2.0
MVOU				AML	AML	04 53 06.5	
	5.1nm,0.9s						
MVOU				AML	AML	04 53 06.5	
	5.1nm,0.9s						
MVOU				AML	AML	04 53 07.1	
	6.6nm,0.7s						
MVOU				AML	AML	04 53 07.1	
	6.6nm,0.7s						
TEVE	Tevekalti-Mers	2.10	62	PN	Pn	04 52 21.6	+0.5
YESI	Yesilovacik-Me	2.15	70	PN	Pn	04 52 22.3	+0.5
GOLH	Golhisar	2.17	324	iP	Pb	04 52 24.4	-2.2
TISA	Tisan-Mersin	2.17	71	PN	Pn	04 52 22.9	+0.9
IKL	Isikli	2.20	69	PN	Pn	04 52 22.6	+0.2
CAEL	Denizli, Camel	2.20	319	iP	Pb	04 52 25.6	-1.6
KARG	Kargicak-Mersi	2.21	70	PN	Pn	04 52 22.8	+0.3
KKBE	Karaman, Kazim	2.27	39	iP	Pn	04 52 24.6	+1.2
KKBE				iS	Sn	04 52 50.0	-0.4
KEBE	Keben-Mersin	2.30	64	PN	Pn	04 52 24.4	+0.6
BRDR	BURDUR-Merkez	2.38	339	iP	Pb	04 52 28.1	-2.1
BRDR				iS	Sb	04 52 56.4	-2.6
ISP	Isparta	2.39	348	PN	Pn	04 52 26.1	+1.0
ISP	Isparta	2.39	348	Pn	Pn	04 52 27.5	+2.4
SILI	Silifke-Mersin	2.43	68	PN	Pn	04 52 26.4	+0.9
SLFK	Silifke-Mersin	2.45	67	PN	Pn	04 52 26.8	+0.9
EREN	Erenkoy	2.47	88	iP	Pn	04 52 26.7	+0.6
EREN				iS	Sn	04 52 56.4	+1.1
EREN	Erenkoy	2.47	88	PN	Pn	04 52 26.8	+0.6
KMER	Konya-Meram	2.49	23	iP	Pn	04 52 29.0	+2.5
KMER				iS	Sn	04 52 57.2	+1.3
BAGO	Egridir - ISPA	2.52	354	iP	Pn	04 52 29.5	+2.6
ARG	Arkhangelos	2.56	288	P	Pn	04 52 28.0	+0.7
ARG				S	Sn	04 52 56.3	-1.1
	245nm,0.4s						
ARG	Arkhangelos	2.56	288	P	Pn	04 52 27.9	+0.6
OSC2	CSNet OBS 4	2.57	158	P	Pn	04 52 28.9	+1.4
BASM	Basmaki-Afyon	2.59	341	PN	Pn	04 52 30.1	+2.3
KIZK	Mersin	2.63	67	iP	Pn	04 52 29.0	+0.7
KIZK				iS	Sn	04 53 00.3	+1.0
KIZK	Mersin	2.63	67	PN	Pn	04 52 29.2	+0.8
KONT	Konya--Tatoy	2.65	21	iP	Pn	04 52 30.3	+1.7
KONT				iS	Sn	04 52 59.5	-0.2
KONT	Konya--Tatoy	2.65	21	PN	Pn	04 52 30.3	+1.7
DOGA	KONYA_Doganhis	2.66	9	iP	Pn	04 52 30.6	+1.8
DOGA				iS	Sn	04 53 02.1	+2.0
TAVA	DENIZLI_Tavas	2.67	318	iP	Pn	04 52 30.9	+1.9
TURN	Turunc	2.68	300	iP	Pn	04 52 30.2	+1.3
TURN	Turunc	2.68	300	PN	Pn	04 52 30.1	+1.2
YVAC	Isparta, Yalva	2.79	2	iP	Pn	04 52 32.7	+2.1
YVAC				iS	Sn	04 53 03.1	-0.2
YER	Yerkesik	2.84	306	P	Pn	04 52 33.1	+1.9
YER				S	Sn	04 53 04.0	-0.4
YER	Yerkesik	2.84	306	PN	Pn	04 52 33.1	+1.9
MULA	Mugla, Merkez-	2.88	309	iP	Pn	04 52 33.9	+2.0
KZIL	AFYON_Kizioren	2.89	344	iP	Pn	04 52 34.4	+2.4
LADK	Ladik-KONYA	2.89	20	PN	Pn	04 52 33.3	+1.3
MERS	Mersin	3.07	62	PN	Pn	04 52 35.9	+1.5
KERG	Konya-Eregli	3.09	50	iP	Pn	04 52 36.4	+1.7
KERG				iS	Sn	04 53 11.6	+0.9
SHUT	Suhut-Afyon	3.10	351	PN	Pn	04 52 36.6	+1.6
KDHN	Kadinhani	3.13	14	iP	Pn	04 52 36.4	+1.0
DAT	Datca	3.14	294	P	Pn	04 52 36.6	+1.1
DAT	Datca	3.14	294	iP	Pn	04 52 36.2	+0.7
PASA	Karahalli, USA	3.15	336	iP	Pn	04 52 37.2	+1.6
DED	Mersin	3.31	62	iP	Pn	04 52 39.5	+1.9
SULT	Sultanhani-AKS	3.32	34	PN	Pn	04 52 39.3	+1.5
AFYO	Afyonkarahisar	3.37	349	iP	Pn	04 52 40.7	+2.1
AFYO				iS	Sn	04 53 19.2	+1.6
BDRM	Kayabasi	3.38	299	iP	Pn	04 52 39.8	+1.1
CHBY	Cihanbeyli	3.40	24	PN	Pn	04 52 40.5	+1.5
AYDN	Tasoluk	3.41	311	iP	Pn	04 52 39.3	+0.2
BODT	Bodrum	3.47	298	P	Pn	04 52 40.9	+1.0
BODT				S	Sn	04 53 18.2	-1.9
KRTS	Karatas	3.60	71	PN	Pn	04 52 42.6	+0.9
KARA	Karaisali	3.62	59	PN	Pn	04 52 43.8	+1.8
USAK	Uak-Merkez	3.65	333	iP	Pn	04 52 42.7	+0.4
DDIM	Aydin, Didim	3.71	303	iP	Pn	04 52 44.0	+0.9
GULA	Gulagac	3.79	40	PN	Pn	04 52 46.1	+1.8
CMRD	Camardi-Nigde	3.79	54	PN	Pn	04 52 45.7	+1.3
AKSY	AKSARAY - Alti	3.80	33	iP	Pn	04 52 46.2	+1.8
AUKIR	Kırka- Seyitga	3.82	353	iP	Pn	04 52 46.2	+1.4
GDZ	Gediz	3.84	340	iP	Pn	04 52 45.7	+0.6
GDZ				iS	Sn	04 53 28.2	-1.0
GCAM	G?zelcaml?	3.85	306	iP	Pn	04 52 44.6	-0.4
KULU	Kulu	3.85	22	PN	Pn	04 52 46.4	+1.1
NIDE	Nigde/Merkez-G	3.85	48	iP	Pn	04 52 48.0	+2.7
ASUZ	Hatay-Arsuz	3.86	77	iP	Pn	04 52 46.9	+1.7
CIFT	Cifteler, Eski	3.88	359	PN	Pn	04 52 47.2	+1.7
YURE	YUREGIR	3.88	68	iP	Pn	04 52 46.1	+0.6
YURE				iS	Sn	04 53 27.2	-2.8
KKUL	Konya-Kulu	3.95	20	iP	Pn	04 52 48.0	+1.4
SERE	Sereflikochisa	3.96	28	PN	Pn	04 52 47.5	+0.7
AUSIV	SIVRIHISAR	3.97	4	iP	Pn	04 52 46.3	-0.5
AKO	Adana	3.99	59	iP	Pn	04 52 48.8	+1.7
CEYT	Ceyhan	4.03	66	PN	Pn	04 52 47.9	+0.4
BHL	Bhannes	4.04	112	eP	Pn	04 52 47.8	0.0
ZKR	Zakros	4.04	266	P	Pn	04 52 48.9	+1.1
SGAZ	Eskisehir, Sey	4.05	357	iP	Pn	04 52 49.5	+1.6
YAYL	Yayladag	4.08	81	PN	Pn	04 52 48.7	+0.4
HWQ	Hawqa	4.13	105	eP	Pn	04 52 50.2	+1.2
ANDZ	Kutahya, Merke	4.14	347	iP	Pn	04 52 50.8	+1.6
TAHT	Tahtakopru-Hat	4.19	76	PN	Pn	04 52 50.9	+1.1
KIRS	Kırehir-Merke	4.27	30	iP	Pn	04 52 52.2	+1.3
KIRS				iS	Sn	04 53 38.1	-1.6
KOZT	Kozan	4.27	61	PN	Pn	04 52 51.7	+0.8
DGB	zmir	4.28	308	iP	Pn	04 52 50.8	-0.1
YAHY	KAYSERI_Yahyal	4.28	51	iP	Pn	04 52 52.3	+1.2
MMAI	Mount Meron Ar	4.30	124	Pn	Pn	04 52 51.7	+0.3
	20nm,0.3s,baz=305,slow=12,SNR=171						
MMAI				Sn	Sn	04 53 40.0	-0.6
	35nm,0.3s,baz=310,slow=27,SNR=11						
MMAI				LR	LR	04 54 56.2	
	comp=Z,103nm,18.1s,baz=315,slow=43						
RCY	Rachaya	4.35	116	eP	Pn	04 52 52.4	+0.3
SHBL	Chebaa	4.36	118	eP	Pn	04 52 52.8	+0.6
KAMT	Kaman	4.39	27	PN	Pn	04 52 53.7	+1.1
BORA	Eskisehir	4.43	353	iP	Pn	04 52 54.4	+1.3
BORA	Eskisehir	4.43	353	Pn	Pn	04 52 54.9	+1.8
AVNS	Nevsehir-Avano	4.45	41	iP	Pn	04 52 56.6	+3.2
BR231	Keskin MP Arra	4.54	16		Pn	04 52 56.8	+2.0
ANTO	Ankara	4.57	16		Pn	04 52 56.6	+1.5
ZEYE	Izmir, Urla-Ze	4.63	308	iP	Pn	04 52 55.9	+0.2
DURS	Dursunbey	4.63	334	iP	Pn	04 52 56.7	+0.8
URLA	Izmir	4.64	310	iP	Pn	04 52 56.4	+0.5
BR131	Keskin Array S	4.68	24	Pn	Pn	04 52 57.8	+1.1
BRTR	Keskin Array B	4.68	24	Pn	Pn	04 52 57.3	+0.7
	3.4nm,0.3s,baz=196,slow=16,SNR=75						
BRTR				LR	LR	04 55 13.1	
	comp=Z,323nm,20.9s,baz=228,slow=45						
ANDN	Andirin	4.69	62	iP	Pn	04 52 57.2	+0.5
SAIM	ADANA	4.69	56	iP	Pn	04 52 57.7	+1.0
ZEDA	zmir-Bergama	4.76	318	iP	Pn	04 52 58.0	+0.4
KAMA	Osmaniye	4.78	67	iP	Pn	04 52 58.0	0.0
KAMA				iS	Sn	04 53 50.3	-2.0
BILE	Bilecik/Merkez	4.78	348	iP	Pn	04 52 59.0	+1.0
CDAG	Cicekdag	4.87	31	iP	Pn	04 53 01.4	+2.3
CDAG				iS	Sn	04 53 52.9	-1.7
BALB	Balikesir	4.89	329	Pn	Pn	04 53 00.4	+1.0
ULDT	Uludag	4.92	342	iP	Pn	04 53 01.6	+1.6
KIBS	BOLU	4.96	6	iP	Pn	04 53 01.5	+1.0
KUZU	Kuzuini	4.97	73	iP	Pn	04 53 01.9	+1.3
KUZU				iS	Sn	04 53 57.5	+0.4
MDUB	Mudurnu	4.98	1		Pn	04 53 03.3	+2.5
IGD	Bursa	5.02	343	iP	Pn	04 53 02.2	+1.1
IGD				iS	Sn	04 53 59.5	+1.5
DELI	KIRIKKALE	5.02	25	iP	Pn	04 53 02.4	+1.1
DELI				iS	Sn	04 53 56.0	-2.4
GEYV	SAKARYA_Geyve	5.04	353	iP	Pn	04 53 05.2	+3.8
GEYV				iS	Sn	04 53 58.8	+0.2
BNN	Bunyan	5.04	47	Pn	Pn	04 53 03.1	+1.5
IDI	Anoyia	5.11	270	Pn	Pn	04 53 02.8	+0.4
	4.7nm,0.3s,baz=67,slow=7.9,SNR=40						
IDI				Sn	Sn	04 53 58.2	-2.2
	29nm,0.3s,baz=343,slow=12,SNR=21						
CMDR	Camlidere-ANKA	5.12	11	iP	Pn	04 53 03.7	+1.1
KAHM	Kahramanmaras,	5.13	65	iP	Pn	04 53 03.6	+0.9
KAHM				iS	Sn	04 53 58.4	-2.5
BUHA	Balikesir, Bur	5.15	322	iP	Pn	04 53 03.8	+0.8
GAZ	Gaziantep	5.18	69	Pn	Pn	04 53 03.0	-0.5
GHAJ	Ghor Haditha	5.57	137		Pn	04 53 09.2	+0.4
ASF	Jabal al Asfar	5.82	123	Pn	Pn	04 53 14.2	+2.0
	1.7nm,0.3s,baz=318,slow=4.1,SNR=15						
TOKA	Tokat	6.42	40		Pn	04 53 22.7	+2.3
EIL	Elat	6.62	150	Pn	Pn	04 53 24.4	+1.2
	6.9nm,0.3s,baz=296,slow=3.5,SNR=78						
EIL				Sn	Sn	04 54 36.4	-1.4
	3.3nm,0.3s,baz=45,slow=13,SNR=2.3						
ALN	Alexandroupoli	6.73	325	Pn	Pn	04 53 26.7	+2.0
MARD	Mardin	7.99	74		Pn	04 53 43.0	+0.9
GURO	Guroymak-BITLI	9.23	67	Pn	Pn	04 53 59.4	+0.2
SIRT	Sirnak	9.32	74	Pn	Pn	04 54 01.3	+1.0
MLR	Muntele Rosu	10.75	340	LR	LR	04 59 24.7	
	comp=Z,156nm,19.9s,baz=140,slow=43						
GNI	Garni	11.72	63	LR	LR	04 59 50.3	
	comp=Z,57nm,18.3s,baz=251,slow=41						
ONI	Oni	11.91	50	Pn	Pn	04 54 37.1	+1.4

SOKA	Soboth	16.48	318	i P	Pn	04 55 37.3	+0.4
	2.6nm,0.8s						
ZOU	Zoufplan	17.57	315		P	04 55 53.2	+1.6
ZOU				IAmb	IAmb	04 56 02.6	
	comp=Z,33nm,1.9s						
KBA	Koelnbreinsper	17.65	316	eP	Pn	04 55 51.6	-0.1
	comp=Z,5.7nm,0.9s						
KEST	Kesra	17.73	277	Pn	P	04 55 53.6	+0.4
	comp=Z,0.1nm,0.3s,baz=13,slow=1.6,SNR=9.2						
KEST	Kesra	17.73	277	Pn	Pn	04 55 51.8	-0.7
ABTA	Abfaltersbach	17.94	315	eP	P	04 55 55.9	+0.4
	comp=Z,2.3nm,0.8s						
CKRC	Cesky Krumlov	18.20	322	eP	P	04 56 00.9	+2.6
GEC2	GERESS Array S	18.53	321	P	P	04 56 02.4	+0.5
GERES	GERESS Array B	18.53	321	Pn	P	04 56 02.2	+0.3
	comp=Z,0.7nm,0.3s,baz=133,slow=9.2,SNR=36						
GERES	GERESS Array B	18.53	321	P	P	04 56 02.4	+0.5
CHVC	Chvalec	18.64	329	eP	P	04 55 54.4	-8.7
WTTA	Wattenberg	18.73	315	i P	Pn	04 56 04.9	+0.2
	comp=Z,3.9nm,0.9s						
KHC	Kasperske Hory	18.77	322	eP	P	04 56 04.4	-0.2
KHC	Kasperske Hory	18.77	322	P	P	04 56 04.6	0.0
KHC				IAmb	IAmb	04 56 06.1	
	comp=Z,6.1nm,0.6s						
WATA	Walderalm	18.80	315	i P	P	04 56 05.5	+0.5
	comp=Z,5.8nm,1.1s						
SQTA	Sankt Quirin	18.95	314	eP	P	04 56 07.2	+0.6
	comp=Z,3.9nm,0.6s,SNR=6.4						
MOTA	Moosalm	19.08	315	eP	P	04 56 08.3	+0.3
	comp=Z,5.6nm,1.0s,SNR=7.6						
FETA	Feichten	19.13	313	eP	P	04 56 08.8	+0.2
	comp=Z,5.8nm,1.1s						
RETA	Reutte	19.35	315	eP	P	04 56 11.0	+0.1
	comp=Z,3.8nm,0.5s,SNR=9.4						
DAVOX	Davos/Dischmat	19.53	312	Pn	P	04 56 13.8	+0.8
	baz=107,slow=12						
DAVA	Damuels	19.77	313	i P	P	04 56 15.6	0.0
	comp=Z,5.3nm,0.7s						
BELG	Belogornoye	20.58	30	P	P	04 56 23.8	-0.3
	comp=Z,15nm,0.7s,baz=199,slow=6.2,SNR=5.7						
STU	Stuttgart	20.91	316	P	P	04 56 27.7	-0.2
STU				IAmb	IAmb	04 57 23.6	
	comp=Z,18nm,1.4s						
AKTO	Aktyubinsk	24.52	44	P	P	04 57 04.9	+0.2
	comp=Z,1.9nm,0.5s,baz=230,slow=8.7,SNR=5.5						
ABKAR	Akbulak array	25.16	48	P	P	04 57 11.1	+0.7
ABKAR				IAmb	IAmb	04 57 30.8	
	comp=Z,8.0nm,1.6s						
FINES	FINESS Array B	26.18	354	P	P	04 57 17.1	-2.4
	comp=Z,2.0nm,0.6s,baz=162,slow=12,SNR=6.9						
HFS	Hagfors	27.13	341	P	P	04 57 26.5	-1.6
	comp=Z,5.1nm,1.0s,baz=122,slow=14,SNR=4.4						
ESDC	Sonseca Array	28.02	289	P	P	04 57 36.8	+0.5
	comp=Z,1.3nm,0.7s,baz=80,slow=9.4,SNR=14						
NOA	NORSAR Array B	28.57	340	P	P	04 57 38.3	-2.6
	comp=Z,0.6nm,0.7s,baz=134,slow=7.7,SNR=1.7						
ARCES	ARCESS Array B	34.25	356	P	P	04 58 28.9	-1.8
	comp=Z,3.5nm,0.8s,baz=228,slow=1.5,SNR=6.1						
ARCES	ARCESS Array B	34.25	356	P	P	04 58 32.2	+1.4
TORD	Torodi Ar. Bea	34.62	237	P	P	04 58 35.2	+0.7
	comp=Z,1.7nm,0.9s,baz=26,slow=9.6,SNR=10.0						
TORD	Torodi Ar. Bea	34.62	237	IAmb	IAmb	04 58 36.1	
	comp=Z,2.8nm,1.1s						
KOWA	Kowa	37.81	245	P	P	04 59 01.6	-0.2
	comp=Z,1.3nm,0.7s,baz=48,slow=14,SNR=4.4						
MK31	Makanchi Array	39.50	57	P	P	04 59 15.7	-0.1
MKAR	Makanchi Array	39.50	57	P	P	04 59 15.1	-0.6
	comp=Z,1.1nm,0.6s,baz=262,slow=9.8,SNR=14						
MKAR	Makanchi Array	39.50	57	P	P	04 59 16.9	+1.2
ZALV	Zalesovo Beam	41.25	46	P	P	04 59 28.0	-2.1
	comp=Z,0.5nm,0.4s,baz=265,slow=9.6,SNR=1.9						
ZALV	Zalesovo Beam	41.25	46	P	P	04 59 31.4	+1.4
SPB2	Spitsbergen Ar	43.27	356	P	P	04 59 47.5	+1.3
DBIC	Dimbokro	43.73	238	P	P	04 59 50.9	+0.3
	comp=Z,2.0nm,0.7s,baz=35,slow=8.2,SNR=4.1						
SONM	Songino Array	55.46	52	P	P	05 01 19.6	-0.3
	comp=Z,0.6nm,0.5s,baz=292,slow=7.9,SNR=3.9						
SONM	Songino Array	55.46	52	IAmb	IAmb	05 02 44.5	
	comp=Z,12nm,1.9s						

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*ISK **26** 05:16:17.7, 35°.60N×31°.48E, h8^{km}, ML2.6/16*
*NIC **26** 05:16:18.3±0.0, 35°.74N×31°.40E, h37^{km}±19^{km}, Ml2.6/3*
*DDA **26** 05:16:18.6, 35°.71N×31°.42E, h21^{km}±1^{km}, ML2.1*
ISC 26 05:16:17.1±1.2, **35°.63N**±0°.03×**31°.39E**±0°.03, **h9**^{km}±11^{km}, **n42**, σ**1^{s}33**/52, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.96	51	i P	Pb	05 16 36.0	-0.1
GAZI	Gazipasa	0.96	51	PG	Pg	05 16 35.9	+0.2
AKMS	Akamas	0.99	128	P	Pg	05 16 35.9	-0.2
AKMS				S	Sg	05 16 51.0	+2.1
AKMS				AML	AML	05 16 57.0	
	0.6nm,0.4s						
AKMS				AML	AML	05 16 57.0	
	0.6nm,0.4s						
AKMS				AML	AML	05 16 58.7	
	0.7nm,0.3s						
AKMS				AML	AML	05 16 58.7	
	0.7nm,0.3s						
AKUM	Antalya-Kumluc	1.09	309	i P	Pg	05 16 36.0	-2.1
AKUM				i S	Sb	05 16 54.0	+1.4
AKUM				IAML		05 17 00.0	
	comp=N,35nm,0.3s						
ALFC	Alefka	1.10	115	P	Pg	05 16 37.6	-0.6
ALFC				S	Sg	05 16 53.1	+0.6
ALFC				AML	AML	05 16 59.9	
	comp=N,0.4nm,0.2s						
ALFC				AML	AML	05 16 59.9	
	comp=N,0.4nm,0.2s						
ALFC				AML	AML	05 17 00.4	
	comp=N,0.5nm,0.2s						
ALFC				AML	AML	05 17 00.4	
	comp=N,0.5nm,0.2s						
KEPZ	Antalya-Kepez	1.28	8	i P	Pg	05 16 40.2	-1.5
KEPZ				i S	Sn	05 16 58.2	-0.4
KEPZ				IAML		05 17 02.0	
	comp=E,43nm,0.8s						
NATA	Nata	1.29	131	P	Pn	05 16 40.8	-0.5
LEF	Lefka	1.33	112	PN	Pn	05 16 41.4	-0.5
LEF				SN	Sg	05 16 58.5	-1.4
TEKE	Tekeli-Mersin	1.49	70	PN	Pn	05 16 43.8	-0.4
TEKE				SN	Sn	05 17 04.2	+0.4
KSL	Kastellorizon	1.55	290	S	Sn	05 17 02.7	-2.6
AKAS	Kas	1.57	293	i P	Pb	05 16 48.3	+1.9
AKAS				IAML		05 17 20.0	
	comp=N,27nm,0.9s						
AKAS				IAML		05 17 22.0	
	comp=E,21nm,1.2s						
AKAS	Kas	1.57	293	PN	Pn	05 16 47.5	+2.2
ERMK	Ermenek	1.59	50	i P	Pb	05 16 47.0	+0.1
ERMK				IAML		05 17 16.0	
	comp=N,26nm,0.5s						
HDMB	Hadim	1.60	33	PN	Pn	05 16 46.1	+0.3
KORT	Korkueli	1.60	329	PN	Pb	05 16 47.9	+0.9
BERE	Bereket-Mersin	1.65	64	PN	Pn	05 16 47.1	+0.6
ASGA	Asgata	1.74	118	P	Pn	05 16 47.5	-0.1
ASGA				AML	AML	05 17 21.1	
	comp=N,0.2nm,0.4s						
ASGA				AML	AML	05 17 22.3	
	comp=N,0.2nm,0.6s						
LFK	Lefkose	1.79	101	PN	Pn	05 16 48.7	+0.4
SEYD	Seydisehir-KON	1.81	11	PN	Pb	05 16 50.6	+0.1
BUCA	Burdur, Bucak-	1.82	339	i P	Pg	05 16 53.9	+1.8
BUCA				IAML		05 17 27.0	
	comp=E,18nm,0.7s						
AKKU	Akkuyu-Mersin	1.83	73	PN	Pn	05 16 49.5	+0.6
GULN	MERSIN_Gulnar	1.83	72	i P	Pn	05 16 50.3	+1.4
GULN				i S	Sb	05 17 14.7	+0.8
GULN				IAML		05 17 19.0	
	comp=N,22nm,0.6s						
SEDI	Konya, Seydise	1.84	9	i P	Pn	05 16 50.0	+0.9
SEDI				i S	Sg	05 17 15.0	-1.3
SEDI				IAML		05 17 17.0	
	comp=E,22nm,0.7s						
SEDI				IAML		05 17 19.0	
	comp=N,25nm,0.6s						
TEVE	Tevekalti-Mers	1.85	64	PN	Pn	05 16 50.6	+1.4
TISA	Tisan-Mersin	1.93	73	PN	Pn	05 16 50.9	+0.7
IKL	Isikli	1.96	71	PN	Pn	05 16 51.3	+0.7
KKBE	Karaman, Kazim	2.02	38	i P	Pb	05 16 53.4	-0.7
KKBE				i S	Sg	05 17 22.4	+0.3
KEBE	Keben-Mersin	2.05	66	PN	Pn	05 16 53.2	+1.3
FETY	Fethiye	2.12	299	i P	Pn	05 16 49.7	-3.1
EREN	Erenkoy	2.27	92	PN	Pn	05 16 56.0	+1.1
KIZK	Mersin	2.39	68	PN	Pn	05 16 57.6	+1.1
BAGO	Egridir - ISPA	2.40	349	i P	Pn	05 16 58.0	+1.2
BAGO				i S	Sb	05 17 30.0	-0.4
KONT	Konya--Tatoy	2.44	18	i P	Pb	05 17 00.7	-0.5
KONT	Konya--Tatoy	2.44	18	PN	Pn	05 16 59.1	+1.9
DOGA	KONYA_Doganhis	2.48	5	i P	Pn	05 16 59.0	+1.2
DOGA				i S	Sb	05 17 31.4	-1.3
YVAC	Isparta, Yalva	2.64	357	i P	Pn	05 17 01.2	+1.2
YVAC				i S	Sb	05 17 34.7	-2.5
LADK	Ladik-KONYA	2.68	17	PN	Pn	05 17 02.8	+2.2
TAVA	DENIZLI_Tavas	2.71	313	i P	Pn	05 16 58.8	-2.2
MERS	Mersin	2.82	63	PN	Pn	05 17 03.7	+1.2
KDHN	Kadinhani	2.94	11	i P	Pn	05 17 06.5	+2.3
DAT	Datca	3.27	291	i P	Pn	05 17 05.3	-3.4
CMRD	Camardi-Nigde	3.54	54	PN	Pn	05 17 14.2	+1.8

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*DDA **26** 05:32:08.7, 36°.12N×30°.88E, h31^{km}±2^{km}, ML2.7*
*ISK **26** 05:32:09.2, 36°.10N×30°.81E, h19^{km}, ML2.9/35*
*NIC **26** 05:32:10.2±0.0, 36°.05N×30°.92E, h29^{km}±3^{km}, Ml2.9/3*
ISC 26 05:32:09.1±1.1, **36°.07N**±0°.03×**30°.88E**±0°.02, **h14**^{km}±9^{km}, **n75**, σ**1^{s}03**/67, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.50	301	i P	Pg	05 32 19.4	+0.4
AKUM				i S	Sg	05 32 27.2	+1.5
AKUM				IAML		05 32 31.0	
	comp=E,474nm,0.4s						
AKUM				IAML		05 32 31.0	
	comp=N,556nm,0.5s						
KEMT	Kemer-ANTALYA	0.59	334	PG	Pg	05 32 20.4	-0.4
KEMT				SG	Sg	05 32 28.9	+0.2
DEMR	Demre-Antalya	0.80	282	PG	Pg	05 32 24.3	-0.4
ANTB	Antalya	0.85	348	PG	Pg	05 32 25.3	-0.3
KEPZ	Antalya-Kepez	1.02	35	i P	Pg	05 32 27.9	-0.9
KEPZ				i S	Sg	05 32 41.2	-0.8
KORT	Korkueli	1.02	336	i P	Pg	05 32 27.0	-1.9
KORT	Korkueli	1.02	336	PG	Pg	05 32 28.4	-0.5
KORT				SG	Sg	05 32 42.0	-0.3
ELL	Elmali	1.03	311	PG	Pg	05 32 28.4	-0.7
ELL				SG	Sg	05 32 42.7	0.0
ELL	Elmali	1.03	311	P	Pg	05 32 28.6	-0.5
ELL				S	Sg	05 32 44.3	+1.6
AKAS	Kas	1.04	279	i P	Pg	05 32 28.7	-0.6
AKAS				IAML		05 32 52.0	
	comp=E,167nm,0.4s						
AKAS				IAML		05 32 52.0	
	comp=N,327nm,1.0s						
AKAS	Kas	1.04	279	PG	Pg	05 32 28.9	-0.4
KSL	Kastellorizon	1.05	275	P	Pg	05 32 28.9	-0.5
KSL				S	Sg	05 32 43.9	+0.8
KSL				AML	AML	05 32 51.1	
	comp=N,0.4nm,0.5s						
KSL				AML	AML	05 32 51.1	
	comp=N,0.4nm,0.5s						
KSL				AML	AML	05 32 51.9	
	comp=N,0.6nm,0.4s						
KSL				AML	AML	05 32 51.9	
	comp=N,0.6nm,0.4s						
GAZI	Gazipasa	1.18	81	i P	Pg	05 32 30.5	-1.3
GAZI				i S	Sg	05 32 46.0	-1.2
GAZI				IAML		05 32 50.0	
	comp=E,242nm,0.6s						
GAZI				IAML		05 32 51.0	
	comp=N,241nm,0.6s						
GAZI	Gazipasa	1.18	81	PN	Pg	05 32 30.7	-1.1
BUCA	Burdur, Bucak-	1.28	349	i P	Pg	05 32 32.5	-1.3
BUCA				i S	Sg	05 32 51.2	+0.6
BCK	Bucak	1.41	351	PN	Pn	05 32 33.9	-0.6
CAME	Cameli-Denizli	1.54	305	PN	Pn	05 32 35.9	-0.5
SEYD	Seydisehir-KON	1.54	30	PN	Pn	05 32 35.9	-0.5
SEDI	Konya, Seydise	1.55	27	i P	Pn	05 32 36.3	-0.2
SEDI				i S	Sn	05 32 55.7	-0.8
FETY	Fethiye	1.55	292	i P	Pn	05 32 36.3	-0.2
FETY				i S	Sn	05 32 55.3	-1.1
FETY	Fethiye	1.55	292	PN	Pn	05 32 35.7	-0.8
GOLH	Golhisar	1.57	318	i P	Pn	05 32 37.8	+1.0
GOLH				i S	Sn	05 32 57.9	+0.8
GOLH				IAML		05 33 08.0	
	comp=N,78nm,0.5s						
GOLH				IAML		05 33 10.0	
	comp=E,110nm,1.4s						
HDMB	Hadim	1.57	55	PN	Pn	05 32 36.8	-0.1
AKMS	Akamas	1.58	131	P	Pn	05 32 36.4	-0.5
AKMS				AML	AML	05 33 09.8	
	comp=E,0.5nm,0.6s						
AKMS				AML	AML	05 33 10.3	
	comp=E,0.7nm,0.7s						
CAEL	Denizli, Camel	1.64	310	i P	Pn	05 32 38.1	+0.3
CAEL				IAML		05 33 03.0	
	comp=N,72nm,0.6s						
CAEL				IAML		05 33 05.0	
	comp=E,93nm,0.5s						
ALFC	Alefka	1.67	122	P	Pn	05 32 37.4	-0.7
ALFC				AML	AML	05 33 10.9	
	comp=E,0.4nm,0.2s						
ALFC				AML	AML	05 33 12.1	
	comp=E,0.5nm,0.5s						
BRDR	BURDUR-Merkez	1.75	338	i P	Pn	05 32 39.0	-0.2
ISP	Isparta	1.77	351	PN	Pn	05 32 39.2	-0.4
TEKE	Tekeli-Mersin	1.81	87	PN	Pn	05 32 40.7	+0.7
LEF	Lefka	1.90	119	PN	Pn	05 32 40.5	-0.6
BERE	Bereket-Mersin	1.92	81	PN	Pn	05 32 42.8	+1.2
BAGO	Egridir - ISPA	1.92	358	i P	Pn	05 32 37.7	-3.8
BASM	Basmaki-Afyon	1.96	341	PN	Pn	05 32 41.9	-0.2
KKBE	Karaman, Kazim	2.02	55	i P	Pn	05 32 44.3	+1.3
KKBE				IAML		05 33 13.0	
	comp=E,54nm,0.4s						
KMER	Konya-Meram	2.08	35	i P	Pn	05 32 45.5	+1.8
KMER				IAML		05 33 13.0	
	comp=E,46nm,0.5s						
KMER				IAML		05 33 14.0	
	comp=N,51nm,0.5s						
TAVA	DENIZLI_Tavas	2.10	312	i P	Pn	05 32 44.0	-0.1
TEVE	Tevekalti-Mers	2.11	79	PN	Pn	05 32 45.4	+1.3
DOGA	KONYA_Doganhis	2.13	17	i P	Pn	05 32 45.8	+1.3
DOGA				IAML		05 33 16.0	
	comp=N,70nm,0.5s						
DOGA				IAML		05 33 17.0	
	comp=E,53nm,0.7s						
GULN	MERSIN_Gulnar	2.16	86	i P	Pn	05 32 46.8	+2.0
GULN				i S	Sn	05 33 12.9	+1.5
AKKU	Akkuyu-Mersin	2.17	87	PN	Pn	05 32 46.5	+1.6
YVAC	Isparta, Yalva	2.22	7	i P	Pn	05 32 45.8	+0.2
KONT	Konya--Tatoy	2.22	32	i P	Pn	05 32 46.8	+1.2
KONT	Konya--Tatoy	2.22	32	PN	Pn	05 32 46.9	+1.3
ARG	Arkhangelos	2.23	275	PN	Pn	05 32 45.5	-0.2
TURN	Turunc	2.24	289	i P	Pn	05 32 45.9	0.0
TURN	Turunc	2.24	289	PN	Pn	05 32 45.1	-0.7
KZIL	AFYON_Kizioren	2.26	345	i P	Pn	05 32 46.3	0.0
IKL	Isikli	2.28	85	PN	Pn	05 32 48.7	+2.3
CSS	Mathiatis	2.29	118	PN	Pn	05 32 48.1	+1.6
CSS	Mathiatis	2.29	118	P	Pn	05 32 45.2	-1.3
LFK	Lefkose	2.30	109	PN	Pn	05 32 48.1	+1.3
KEBE	Keben-Mersin	2.32	80	PN	Pn	05 32 48.9	+1.8
YER	Yerkesik	2.34	298	PN	Pn	05 32 47.4	+0.1
MULA	Mugla, Merkez-	2.37	301	i P	Pn	05 32 48.2	+0.4
LADK	Ladik-KONYA	2.44	29	PN	Pn	05 32 49.6	+0.9
MVOU	Mavrovouni	2.48	114	P	Pn	05 32 48.2	-1.0
MVOU				S	Sn	05 33 17.3	-1.9
SHUT	Suhut-Afyon	2.49	354	PN	Pn	05 32 49.8	+0.3
PASA	Karahalli, USA	2.53	334	i P	Pn	05 32 49.9	-0.1
PASA				i S	Sn	05 33 20.6	-0.1
KDHN	Kadinhani	2.64	22	i P	Pn	05 32 51.6	+0.1
KIZK	Mersin	2.67	80	PN	Pn	05 32 53.2	+1.4
ALIN	Konya, Altinte	2.74	35	i P	Pn	05 32 50.1	-2.7
DAT	Datca	2.74	285	i P	Pn	05 32 52.9	0.0
DAT				IAML		05 33 27.0	
	comp=N,30nm,0.3s						
DAT	Datca	2.74	285	PN	Pn	05 32 52.8	0.0
AYDN	Tasoluk	2.88	304	i P	Pn	05 32 54.0	-0.8
BDRM	Kayabasi	2.94	291	i P	Pn	05 32 55.5	0.0
BDRM				IAML		05 33 31.0	
	comp=E,20nm,0.3s						
BDRM				IAML		05 33 32.0	
	comp=N,36nm,0.6s						
CHBY	Cihanbeyli	2.98	32	PN	Pn	05 32 57.4	+1.3
SULT	Sultanhani-AKS	2.99	44	PN	Pn	05 32 57.6	+1.3
KULA	Kula-Manisa	3.01	325	PN	Pn	05 32 56.3	-0.3
USAK	Uak-Merkez	3.03	331	i P	Pn	05 32 56.0	-0.7
AYDB	Zeytinkoy-Aydi	3.04	309	PN	Pn	05 32 56.5	-0.5
BODT	Bodrum	3.04	290	PN	Pn	05 32 56.7	-0.2
OSC2	CSNet OBS 4	3.20	159	S	Sn	05 33 36.1	-0.9
GDZ	Gediz	3.21	340	i P	Pn	05 32 59.2	-0.2
SVRH	Sivrihisar-ESK	3.41	8	PN	Pn	05 33 02.9	+0.8
TVSB	Tavsanli	3.56	342	PN	Pn	05 33 03.6	-0.5

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*IDC **26** 05:35:12.5±0.9, 9°.16S×158°.23E, h0^{km}, mb4.1/8, mb1 4.3/8, mb1mx4.0/31, mbtmp4.1/8, MS3.8/6, Ms1 3.8/6, ms1mx3.3/29, Error ellipse: s-maj=31.2km s-min=18.7km az=174.0*
*NEIC **26** 05:35:14.4±1.8, 9°.1S±0°.1×158°.29E±0°.05, h10^{km}±1^{km}, mb4.6/9, Error ellipse: s-maj=22.5km s-min=8.2km az=179.0*
ISC 26 05:35:17.2±0.6, **9°.2S**±0°.1×**158°.26E**±0°.08, **h29**^{km}, **n30**, σ**0^{s}87**/22, **mb4.3**/12, **MS3.7**/5, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.68	99	Pn	Pn	05 35 43.7	-0.9
	136nm,0.3s,baz=245,slow=6.5,SNR=15						
HNR				Sn	Sn	05 36 05.6	+0.4
	228nm,0.3s,baz=168,slow=13,SNR=7.5						
HNR				LR	LR	05 36 41.6	
	comp=Z,1μm,20.1s,baz=291,slow=52						
HNR	Honiara	1.68	99		Pn	05 35 44.0	-0.6
PMG	Port Moresby	10.96	268	LR	LR	05 41 55.9	
	comp=Z,708nm,18.9s,baz=167,slow=37						
WB0	Warramunga Arr	25.36	243	P	P	05 40 42.6	+0.5
WB0				IAmb	IAmb	05 40 50.0	
	comp=Z,24nm,1.4s						
WRA	Warramunga Arr	25.47	243	P	P	05 40 42.5	-0.6
	comp=Z,2.1nm,0.9s,baz=67,slow=9.2,SNR=6.1						
WRA				LR	LR	05 50 15.8	
	comp=Z,245nm,19.4s,baz=70,slow=36						
WRA	Warramunga Arr	25.47	243	IAmb	IAmb	05 40 50.2	
	comp=Z,0.6nm,1.4s						
STKA	Stephens Creek	27.37	212	LR	LR	05 51 49.5	
	comp=Z,98nm,18.4s,baz=24,slow=36						
ASAR	Alice Springs	27.38	235	P	P	05 40 59.7	-0.6
	comp=Z,1.1nm,0.9s,baz=66,slow=9.2,SNR=6.7						
ASAR				LR	LR	05 51 05.6	
	comp=Z,195nm,20.3s,baz=40,slow=35						
AFI	Afiamalu	29.71	102	LR	LR	05 51 03.2	
	comp=Z,138nm,18.9s,baz=336,slow=32						
H11N1	WAKE ISLAND Hy	29.94	16	T	T	06 11 42.1	
	baz=195,slow=75,SNR=5.1						
H11N3	WAKE ISLAND Hy	29.95	16	T	T	06 11 32.7	
	baz=195,slow=75,SNR=4.7						
RAO	Raoul Island	29.96	135	LR	LR	05 50 56.2	
	comp=Z,331nm,19.8s,baz=130,slow=32						
H11N2	WAKE ISLAND Hy	29.96	16	T	T	06 11 33.5	
	baz=195,slow=75,SNR=3.2						
BBOO	Buckleboo	31.21	218	P	P	05 41 34.5	+0.4
KHZ	Kahutara	35.72	160	P	P	05 42 12.2	-1.0
KHZ				IAmb	IAmb	05 42 27.3	
	comp=Z,14nm,1.2s						
USA0B	Ussuriysk Arra	58.22	338	P	P	05 45 07.9	-0.9
USRK	Ussuriysk Ar.	58.22	338	P	P	05 45 07.7	-1.0
CMAR	Chiang Mai Arr	64.64	295	P	P	05 45 53.2	+0.5
ULN	Ulaanbaatar	72.58	327	P	P	05 46 42.4	+0.4
ULN				IAmb	IAmb	05 46 44.1	
	comp=Z,8.0nm,1.1s						
SONM	Songino Array	72.93	326	P	P	05 46 44.0	+0.1
	comp=Z,2.4nm,0.9s,baz=134,slow=5.3,SNR=11						
SONM	Songino Array	72.93	326	IAmb	IAmb	05 46 46.0	
	comp=Z,5.7nm,1.2s						
QSPA	South Pole Qui	80.81	180	P	P	05 47 29.0	+0.9
QSPA				IAmb	IAmb	05 47 31.2	
	comp=Z,7.9nm,1.4s						
ILAR	Eielson Array	84.24	21	P	P	05 47 44.8	-0.9
	comp=Z,2.1nm,1.0s,baz=260,slow=4.8,SNR=10						
BCAR	Beaver Creek A	85.18	23	P	P	05 47 51.4	+0.9
BMAR	Burnt Mountain	86.53	19	P	P	05 47 56.6	-0.6
MK31	Makanchi Array	87.18	318	P	P	05 48 00.1	-0.6
MKAR	Makanchi Array	87.18	318	P	P	05 48 00.3	-0.5
	comp=Z,1.0nm,0.6s,baz=101,slow=6.1,SNR=7.8						
ZALV	Zalesovo Beam	87.80	325	P	P	05 48 02.4	-1.1
	comp=Z,0.8nm,0.6s,baz=121,slow=5.7,SNR=4.0						
NVAR	Mina Array Bea	90.54	51	P	P	05 48 19.1	+2.0
	comp=Z,0.5nm,0.6s,baz=242,slow=5.7,SNR=4.5						
YKA	Yellowknife Ar	96.75	28	P	P	05 48 45.1	+0.4
	comp=Z,0.3nm,0.9s,baz=255,slow=4.7,SNR=3.9						

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*THE **26** 05:40:08.9, 38°.52N×20°.53E, h15^{km}, ML2.7/7, Error ellipse: s-maj=1.5km s-min=0.3km az=291.0*
*ATH **26** 05:40:09.3, 38°.51N×20°.58E, h13^{km}±1^{km}, ML2.6/3, Error ellipse: s-maj=2.0km s-min=0.7km az=286.0*
ISC 26 05:40:08.0±0.9, **38°.51N**±0°.02×**20°.53E**±0°.03, **h18**^{km}±2^{km}, **n43**, σ**1^{s}45**/69, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.06	152	P	Pg	05 40 11.5	+0.2
FSK				S	Sg	05 40 13.0	-0.7
FSK				AML	AML	05 40 13.2	
	comp=N,13826μm,0.2s						
FSK				AML	AML	05 40 13.4	
	comp=E,52442μm,0.2s						
EVGI	Lefkada island	0.15	43	P	Pg	05 40 12.7	+0.4
EVGI				S	Sg	05 40 15.2	+0.1
	comp=E,9μm,0.1s						
EVGI	Lefkada island	0.15	43	P	Pg	05 40 12.6	+0.4
EVGI				S	Sg	05 40 15.2	+0.1
DRAG	Dragano-Lefkad	0.17	13	P	Pg	05 40 13.0	+0.4
DRAG				S	Sg	05 40 16.1	+0.4
	comp=E,22μm,0.2s						
DRAG	Dragano-Lefkad	0.17	13	P	Pg	05 40 13.0	+0.4
DRAG				S	Sg	05 40 16.2	+0.4
NYDR	Nydri-Lefkada	0.24	34	P	Pb	05 40 14.1	+0.5
NYDR	Nydri-Lefkada	0.24	34	P	Pb	05 40 14.1	+0.5
NYDR				S	Sb	05 40 18.0	+0.7
LKD2	Lefkada island	0.29	21	P	Pg	05 40 15.1	+0.6
LKD2				S	Sb	05 40 19.9	+0.7
	comp=E,678nm,0.2s						
LKD2	Lefkada island	0.29	21	P	Pg	05 40 15.1	+0.6
LKD2				S	Sg	05 40 19.6	+0.7
LKD2				AML	AML	05 40 21.5	
	comp=N,1442μm,0.3s						
LKD2				AML	AML	05 40 21.7	
	comp=E,1461μm,0.2s						
DMLN	Damoulianata-K	0.30	204	P	Pb	05 40 15.3	+0.5
DMLN				S	Sb	05 40 20.3	+1.0
	comp=E,2μm,0.4s						
DMLN	Damoulianata-K	0.30	204	P	Pb	05 40 15.3	+0.5
LXRA	Lixouri, Kepha	0.32	193	P	Pb	05 40 15.6	+0.4
LXRA				S	Sb	05 40 21.2	+1.2
TSLK	Tsoukalades, L	0.33	18	P	Pg	05 40 15.7	+0.7
TSLK				S	Sg	05 40 20.7	+0.9
	comp=E,618nm,0.2s						
TSLK	Tsoukalades, L	0.33	18	P	Pb	05 40 15.9	+0.6
ARGA	Argostoli. Kep	0.34	186	P	Pb	05 40 16.3	+0.9
ARGA				S	Sb	05 40 21.5	+1.0
VLS	Valsamata	0.34	171	P	Pb	05 40 15.8	+0.3
VLS				S	Sb	05 40 21.4	+0.8
	comp=E,2μm,0.2s						
VLS	Valsamata	0.34	171	P	Pb	05 40 15.8	+0.3
VLS				S	Sb	05 40 21.1	+0.6
VLS				AML	AML	05 40 21.6	
	comp=N,3251μm,0.2s						
VLS				AML	AML	05 40 21.8	
	comp=E,3437μm,0.2s						
KEF3	Kipouria, Keph	0.34	204	P	Pg	05 40 15.6	+0.4
KEF3				S	Sb	05 40 20.7	+0.1
	comp=E,3μm,0.2s						
KEF3	Kipouria, Keph	0.34	204	P	Pg	05 40 15.4	+0.2
KEF3				S	Sg	05 40 20.4	+0.3
PSDA	Pessada-Kefalo	0.40	173	P	Pb	05 40 16.9	+0.3
PSDA	Pessada-Kefalo	0.40	173	P	Pb	05 40 16.9	+0.3
LTHK	Lithakia	0.84	163	P	Pb	05 40 24.3	+0.3
LTHK	Lithakia	0.84	163	P	Pb	05 40 24.2	+0.2
RLS	Riolos of Patr	0.87	121	P	Pg	05 40 25.3	+0.4
RLS	Riolos of Patr	0.87	121	P	Pb	05 40 24.9	+0.5
EFP	Efpalio	1.09	94	P	Pb	05 40 28.3	+0.1
DRO	Drossia	1.09	121	P	Pg	05 40 29.1	+0.1
ANX	Ano Chora	1.10	85	P	Pn	05 40 29.1	+0.6
LAKA	Lakka	1.17	103	P	Pn	05 40 29.8	+0.4
SERG	Sergoula	1.21	94	P	Pb	05 40 30.7	+0.5
TRIZ	Trizonia	1.22	96	P	Pb	05 40 30.9	+0.4
KEK	Kerkira	1.32	335	P	Pg	05 40 34.3	+0.8

KLV	Kalavryta, Ach	1.36	110	P	Pb	05 40 33.1	+0.1
STON	Ston	4.85	335	*e*Pn	Pn	05 41 20.6	+0.6
STON				Sn	Sn	05 42 11.7	-4.0
LSTV	Lastovo	5.07	328	*e*Pn	Pn	05 41 24.6	+1.6
LSTV				Sn	Sn	05 42 18.6	-2.4
MAKA	Makarska	5.46	332	*e*Pn	Pn	05 41 29.4	+1.1
MAKA				Sn	Sn	05 42 26.8	-3.9
HVAR	Hvar	5.59	328	*e*Pn	Pn	05 41 32.0	+1.8
HVAR				Sn	Sn	05 42 31.8	-2.1
RICI	Ricice	5.60	334	*e*Pn	Pn	05 41 30.9	+0.6
RICI				Sn	Sn	05 42 31.2	-2.9
KIJV	Kijevo	6.30	332	*e*Pn	Pn	05 41 41.1	+1.1
KIJV				Sn	Sn	05 42 48.5	-2.9
ZIRJ	Zirje	6.32	326	*e*Pn	Pn	05 41 41.5	+1.3
ZIRJ				Sn	Sn	05 42 48.6	-3.3
MORI	Morici	6.46	327	*e*Pn	Pn	05 41 43.5	+1.3
MORI				Sn	Sn	05 42 52.4	-3.0
DUGI	Dugi Otok	6.85	325	*e*Pn	Pn	05 41 48.9	+1.4
DUGI				Sn	Sn	05 43 02.0	-2.8
UDBI	Udbina	6.99	331	*e*Pn	Pn	05 41 51.5	+2.1
UDBI				Sn	Sn	05 43 04.3	-4.2

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*IDC **26** 05:40:09.7±5.6, 35°.74S×99°.01W, h0km, mb3.7/4, mb1 4.1/4, mb1mx3.9/19, mbtmp3.8/4, MS4.2/6, Ms1 4.1/6, ms1mx4.0/15, Error ellipse: s-maj=198.4km s-min=32.0km az=35.0*

*GCMT **26** 05:40:12.0±0.3, 36°.32S±0°.01×99°.35W±0°.02, h19km±1km, MW5.0/115, Moment Tensor Solution. s37,c48; s115,c153; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.31±.20; $M_{\theta\theta}$-0.64±.16; $M_{\phi\phi}$1.94±.15; $M_{r\theta}$0.84±.34; $M_{\theta\phi}$-4.50±.13; $M_{\phi r}$-0.60±.32; Best double couple: $M_0$4.77100×10^{16} NP1:ϕ_s188.00000°, δ79.00000°, λ1.00000°. NP2:ϕ_s98.00000°, δ89.00000°, λ169.00000°. Principal axes: T 5.4770, Plg8.0000°, Azm53.0000°; N -1.4180, Plg79.0000°, Azm272.0000°; P -4.0650, Plg7.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 26 05:40:11.0±1.5**, 35°.8S**±0°.3×**99°.0W**±0°.3**, h10km, n21, σ0s.32**/5**, mb3.7**/4**, MS4.2**/10**, 1C-1D, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	16.63	89	T	T	06 01 35.9	
	baz=254,SNR=9.4						
H03S1	Juan Fernandez	16.65	89	T	T	06 01 29.5	
	baz=254,SNR=4.2						
H03S3	Juan Fernandez	16.65	89	T	T	06 01 32.7	
	baz=254,SNR=3.9						
H03N2	Juan Fernandez	16.72	88	T	T	06 01 36.1	
	baz=247,slow=72						
H03N3	Juan Fernandez	16.72	88	T	T	06 01 37.3	
	baz=247,slow=72						
H03N1	Juan Fernandez	16.73	88	T	T	06 01 36.1	
	baz=247,slow=72						
PLCA	Paso Flores	22.84	111	P	P	05 45 14.6	+0.2
	1.9nm,0.9s,baz=256,slow=15,SNR=2.8						
PLCA				LR	LR	05 51 50.7	
	comp=Z,838nm,20.2s,baz=274,slow=31						
CPUP	Villa Florida	36.72	87	LR	LR	06 01 06.3	
	comp=Z,173nm,19.2s,baz=246,slow=34						
TBI	Tubuai	45.13	272	*e*LQ	LQ	05 58 31.8	
	316nm,23.2s						
TBI				*e*LR	LR	06 00 35.8	
	comp=Z,367nm,27.8s,baz=115						
TAOE	Nuku Hiva Isla	46.03	295	*e*S	S	05 55 08.3	-12
	174nm,23.7s						
TAOE				*e*LR	LR	06 01 14.3	
	comp=Z,179nm,25.3s						
ROSC	El Rosal	46.62	35	LR	LR	06 05 07.4	
	comp=Z,412nm,20.2s,baz=228,slow=32						
PPT2	Papeete2	48.11	278	*e*LR	LR	06 01 57.6	
	comp=Z,335nm,26.0s,baz=118						
PPT	Papeete	48.12	278	LR	LR	06 03 33.0	
	comp=Z,170nm,18.0s,baz=125,slow=29						
BDFB	Brasilia	49.56	80	P	P	05 49 02.4	-0.1
	1.4nm,0.6s,baz=221,slow=9.3,SNR=4.0						
SYO	Syowa Base	71.11	165⇑	*e*X	P	05 51 29.0	-0.1
SYO	Syowa Base	71.11	165⇓	*e*X	P	05 51 39.0	+10
NVAR	Mina Array Bea	76.00	345	P	P	05 51 58.7	+0.3
	0.4nm,0.7s,baz=173,slow=6.9,SNR=3.6						
PDAR	Pinedale Array	78.80	352	P	P	05 52 13.7	-0.2
	0.5nm,0.6s,baz=150,slow=6.2,SNR=5.9						
DZM	Mont Dzumac	80.90	249	*e*LR	LR	06 17 09.3	
	comp=Z,352nm,27.1s						
STKA	Stephens Creek	91.89	228	LR	LR	06 27 29.4	
	comp=Z,143nm,18.5s,baz=182,slow=31						
BOSA	Boshof	97.18	133	LR	LR	06 31 18.5	
	comp=Z,63nm,19.3s,baz=197,slow=32						

TAP 26 06:14:15.2, 21°.29N×121°.95E, h179km±1km, ML3.9, 1D, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYUB	Lan-yu	0.78	334	P	Pn	06 14 40.9	-0.4
	baz=334						
LYUB				S	Sn	06 15 00.9	-0.6
	baz=334						
LAY	Lan-yu	0.83	333	*i* P	Pn	06 14 40.5	-1.1
	baz=333						
LAY				S	Sn	06 15 01.2	-1.0
	baz=333						
TSEB	Hengchuen, Pin	1.15	302	*i* P	Pn	06 14 44.7	+0.8
	baz=300						
TSEB				S	Sn	06 15 06.0	-0.1
	baz=300						
TWKBT	Hengchun	1.24	302	P	Pn	06 14 45.1	+0.5
	baz=301						
TWKBT				S	Sn	06 15 06.2	-1.2
	baz=301						
TWK1	Hengchun	1.25	301	*i* P	Pn	06 14 45.2	+0.5
	baz=301						
TWK1				S	Sn	06 15 06.4	-1.2
	baz=301						
SNW	Nanwan	1.30	301	P	Pn	06 14 45.5	+0.3
	baz=300						
SNW				S	Sn	06 15 07.4	-1.0
	baz=300						
HEN	Hengchun	1.33	302	*i* P	Pn	06 14 45.8	+0.4
	baz=302						
HEN				S	Sn	06 15 07.6	-1.4
	baz=302						
TAW	Tawu	1.44	317	*i* P	Pn	06 14 46.3	-0.1
	baz=317						
TAW				S	Sn	06 15 08.9	-1.9
	baz=317						
LDUT	Ludao	1.45	342	P	Pn	06 14 46.0	-0.4
	baz=341						
LDUT				S	Sn	06 15 09.8	-1.1
	baz=341						
EAST	Anshuo	1.49	317	*i* P	Pn	06 14 46.7	-0.3
	baz=316						
EAST				*e*S	Sn	06 15 08.4	-3.3
	baz=316						
SCZT	Fangliau	1.64	311	*i* P	Pn	06 14 48.3	-0.1
	baz=311						
SCZT				*i* S	Sn	06 15 12.1	-2.0
	baz=311						
TWGBT	Beinan	1.72	332	P	Pn	06 14 48.9	-0.3
	baz=331						
TWGBT				*e*S	Sn	06 15 13.0	-2.7
	baz=331						
SSPT	Xinbi	1.75	313	*i* P	Pn	06 14 49.9	+0.4
	baz=312						
SSPT				S	Sn	06 15 14.9	-1.2
	baz=312						
EDH	Donghe	1.78	340	*i* P	Pn	06 14 50.1	+0.3
	baz=340						
EDH				S	Sn	06 15 14.6	-2.1
	baz=340						
LONT	Longtian	1.78	335	S	Sn	06 15 15.2	-1.6
	baz=334						
MASBT	Mashibuluo	1.79	317	P	Pn	06 14 50.1	+0.2
	baz=317						
MASBT				*e*S	Sn	06 15 13.9	-3.2
	baz=317						
WLCH	Liuqiu	1.80	306	*e*P	Pn	06 14 51.3	+1.3
	baz=305						
WLCH				*e*S	Sn	06 15 18.5	+1.5
	baz=305						
TWP	Hsiaoliuchiu	1.81	306	*i* P	Pn	06 14 50.6	+0.5
	baz=305						
TWP				*e*S	Sn	06 15 19.2	+2.0
	baz=305						
TSMG	Majia	1.86	319	*i* P	Pn	06 14 50.5	-0.1
	baz=319						
TSMG				S	Sn	06 15 17.4	-0.7
	baz=319						
CHKT	Chengkung	1.88	343	*e*P	Pn	06 14 48.7	-2.1
	baz=343						
CHKT				S	Sn	06 15 17.0	-1.6
	baz=343						
SSD	Sandimen	1.89	320	*i* P	Pn	06 14 50.9	-0.1
	baz=319						
SSD				S	Sn	06 15 16.7	-2.2
	baz=319						
FULB	Fuli	1.99	342	P	Pn	06 14 52.8	+0.7
	baz=342						
FULB				S	Sn	06 15 20.5	-0.4
	baz=342						
SLGT	Liugui	2.08	325	*i* P	Pn	06 14 53.0	0.0
	baz=324						
SLGT				S	Sn	06 15 21.4	-1.1
	baz=324						
TWF1	Yuli	2.14	344	P	Pn	06 14 54.0	+0.3
	baz=343						
TWF1				S	Sn	06 15 22.3	-1.4
	baz=343						
STYH	Taoyuan	2.16	330	P	Pn	06 14 54.2	+0.3
	baz=329						
STYH				S	Sn	06 15 22.7	-1.4
	baz=329						
STYT	Tauyuan	2.17	329	*e*P	Pn	06 14 55.3	+1.3
	baz=329						
STYT				S	Sn	06 15 22.8	-1.6
	baz=329						
YULB	Yu-li	2.17	344	P	Pn	06 14 54.1	0.0
	baz=343						
YULB				*e*S	Sn	06 15 21.5	-3.0
	baz=343						
SGST	Jiashian	2.19	325	S	Sn	06 15 23.2	-1.5
	baz=324						
HGSD	Ruisui	2.24	348	*e*P	Pn	06 14 56.5	+1.7
	baz=347						
HGSD				*e*S	Sn	06 15 26.7	+0.9
	baz=347						
EHY	Hungye	2.28	345	P	Pn	06 14 55.6	+0.4
	baz=345						
EHY				S	Sn	06 15 25.0	-1.5
	baz=345						
CHN1	Nanshi	2.30	325	*i* P	Pn	06 14 56.0	+0.5
	baz=325						
CHN1				S	Sn	06 15 26.2	-0.8
	baz=325						
WTP	Ta-pu	2.31	328	P	Pn	06 14 55.2	-0.4
	baz=327						
WTP				S	Sn	06 15 25.7	-1.4
	baz=327						
TPUB	Ta-pu	2.34	329	P	Pn	06 14 56.1	+0.1
	baz=328						
TPUB				S	Sn	06 15 26.1	-1.7
	baz=328						
TWK	Hsinying	2.39	326	P	Pn	06 14 56.9	+0.4
	baz=325						
TWK				S	Sn	06 15 27.6	-1.2
	baz=325						
CHN4	Tsaushan	2.40	329	*i* P	Pn	06 14 57.0	+0.3
	baz=328						
CHN4				S	Sn	06 15 28.3	-0.7
	baz=328						
ALS	Alishan	2.45	335	P	Pn	06 14 57.9	+0.4
	baz=334						
ALS				*e*S	Sn	06 15 29.8	-0.7
	baz=334						
VWDT	VWDT	2.56	343	P	Pn	06 14 59.8	+1.4
	baz=342						
VWDT				*e*S	Sn	06 15 32.4	+0.1
	baz=342						
ICHU	Yijhu	2.58	323	P	Pn	06 14 59.0	+0.3
	baz=323						
ICHU				S	Sn	06 15 31.0	-1.6
	baz=323						
CHY	Chiayi	2.61	328	P	Pn	06 14 59.6	+0.6
	baz=327						
CHY				S	Sn	06 15 31.7	-1.6
	baz=327						
SSLB	Suanglung	2.65	340	P	Pn	06 14 59.8	+0.2
	baz=339						
SSLB				S	Sn	06 15 32.9	-1.4
	baz=339						
SMLT	Sun Moon Lake	2.75	340	*i* P	Pn	06 15 01.1	+0.2
	baz=339						
SMLT				S	Sn	06 15 34.7	-1.9
	baz=339						
TYC	Yuchr	2.79	339	*i* P	Pn	06 15 02.0	+0.8
	baz=338						
TYC				*i* S	Sn	06 15 35.5	-1.7
	baz=338						
WUSB	Renai	2.79	344	*e*P	Pn	06 15 00.3	-1.2
	baz=343						
WUSB				*e*S	Sn	06 15 37.9	+0.4
	baz=343						
CHGB	Renai	2.85	346	*e*P	Pn	06 15 03.4	+1.2
	baz=345						
CHGB				*e*S	Sn	06 15 40.3	+1.5
	baz=345						
NACB	Ninganchiao	2.89	354	P	Pn	06 15 02.8	+0.4
	baz=353						
NACB				*e*S	Sn	06 15 39.3	0.0
	baz=353						
WDGT	Dungji	2.89	313	*i* P	Pn	06 15 02.3	-0.1
	baz=312						
WDGT				S	Sn	06 15 38.0	-1.2
	baz=312						
WHF	Hehuan Shan	2.91	348	*e*P	Pn	06 15 04.3	+1.2
	baz=347						
WHF				*e*S	Sn	06 15 40.4	-0.1
	baz=347						
ETLH	Xiulin Townshi	2.93	352	P	Pn	06 15 03.6	+0.6
	baz=351						
ETLH				S	Sn	06 15 38.5	-2.0
	baz=351						
APYP	Conner	3.48	191⇓	*e*P	Pn	06 15 08.1	-1.7
APYP				*e*S	Sn	06 15 47.4	-4.9

JMA 26 06:15:05.5±0.2**, 38°.51N×144°.61E, h39km, M3.7, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.37	285	P	Pn	06 15 43.4	+1.6
MIYJ	Miyakonagasawa	2.42	297	P	Pn	06 15 43.8	+1.3
MIYJ				*e*S	Sn	06 16 12.0	+1.1
JKMT	Kesennumamotoy	2.47	278	P	Pn	06 15 44.8	+1.6
JIKH	Ishinomakikobu	2.48	266	P	Pn	06 15 44.7	+1.4
JIKH				*e*S	Sn	06 16 14.1	+1.8
JMK	Ichinoseki	2.69	280	P	Pn	06 15 48.2	+2.0
JOM	Ohasama	2.76	291	P	Pn	06 15 49.2	+2.0
JOM				*e*S	Sn	06 16 21.8	+2.6
JANG	Nango	3.03	309	P	Pn	06 15 52.0	+1.0
JYK	Kaneyama	3.35	278	P	Pn	06 15 57.9	+2.6
JFT	Otama	3.52	255	S	Sn	06 16 40.4	+2.4
JOT	Ohata	3.96	317	P	Pn	06 16 06.5	+2.8
JCH	Churui	4.21	347	P	Pn	06 16 07.1	0.0
JCH				*e*S	Sn	06 16 53.5	-1.4
JKB	Kayabe	4.34	322	P	Pn	06 16 11.3	+2.4
JKB				*e*S	Sn	06 16 58.6	+0.3
NEM2	Nemuro 2	4.93	10	P	Pn	06 16 14.6	-2.3
NEM2				*e*S	Sn	06 17 06.5	-6.1
JRY	Ryogami san	5.19	243	P	Pn	06 16 22.2	+1.6
JRY				S	Sn	06 17 19.0	-0.2
JTKR	Abashiri--Toko	5.48	355	P	Pn	06 16 24.0	-0.5
JTKR				*e*S	Sn	06 17 22.9	-3.4

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*BJI **26** 06:44:35.1±0.0, 7°.90S×129°.51E, h176km, mB4.9/24, mb4.6/38*

*IDC **26** 06:44:41.1±1.2, 7°.17S×129°.12E, h162km±11km, mb4.2/24, mb1 4.3/27, mb1mx4.0/57, mbtmp4.7/27, MS3.2/4, Ms1 3.2/4, ms1mx2.8/37, Error ellipse: s-maj=11.8km s-min=9.2km az=66.0*

*NEIC **26** 06:44:41.5±2.1, 7°.13S±0°.06×129°.17E±0°.07, h162km±7km, mb4.9/50, Error ellipse: s-maj=10.4km s-min=8.4km az=75.0*

*DJA **26** 06:44:42.4±0.2, 7°S±2°×12°9E±°, h165km±3km, M4.8/58, mb4.9/58, mB5.3/30, MLv5.1/12, Mw(mB)4.7/30, MwMwp5.7/1, Mwp5.8/1*

*KLM **26** 06:44:45, 7°.21S×129°.34E, h208km, mb5.1*

ISC 26 06:44:40.3±0.3**, 7°.24S**±0°.04×**129°.17E**±0°.04**, h156km, n218, σ1s.71**/228**, mb4.8**/71**, 29C-23D, Fault plane solution: NP1:**ϕ_s56.22122°, δ85.49951°, λ46.35283°. **NP2:** ϕ_s321.51846°, δ43.83207°, λ173.49425°. **Principal axes:** T Plg34.4421°, Azm289.9364°; N Plg43.4789°, Azm60.5017°; P Plg27.0394°, Azm179.4477°; **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.24	109	P	Pn	06 45 21.4	+2.8
SAUI				S	Sn	06 45 47.2	-1.0
SAUI	Saumlaki	2.24	109	Pn	Pn	06 45 20.6	+2.0
SAUI	Saumlaki	2.24	109	P	Pn	06 45 21.4	+2.8
BNDI	Bandanaira	2.80	15	P	Pn	06 45 28.7	+3.3
AAI	Ambon	3.66	345	P	Pn	06 45 38.8	+2.4
MSAI	Masohi	3.87	356	P	Pn	06 45 44.4	+5.3
FAKI	Fak Fak	5.28	36	P	Pn	06 45 56.5	-1.0
FAKI	Fak Fak	5.28	36	Pn	Pn	06 45 56.3	-1.3
DRS	Darwin Rock St	5.44	162	P	Pn	06 46 00.3	+0.7
	1μm,0.7s						
SOEI	Soe	5.45	242	P	Pn	06 46 02.2	+2.2
	6.0nm10μm820nm,0.7s						
SOEI	Soe	5.45	242	Pn	Pn	06 46 01.9	+1.9
SOEI	Soe	5.45	242	P	Pn	06 46 01.7	+1.7
MTN	Manton Dam	5.90	161	P	Pn	06 46 06.8	+1.1
	baz=5.9,SNR=221						
MTN	Manton Dam	5.90	161	Pn	Pn	06 46 06.9	+1.2
MTN	Manton Dam	5.90	161	P	Pn	06 46 06.1	+0.3
	1μm,0.4s						
SANI	Sanana	6.05	328	P	Pn	06 46 11.6	+3.8
	0.3nm1μm55nm,1.3s						
SANI	Sanana	6.05	328	P	Pn	06 46 11.6	+3.8
BATI	Baumata	6.19	241	P	Pn	06 46 11.5	+1.9
	433nm,0.3s,baz=112,slow=3.2,SNR=103						
BATI				S	Sn	06 47 19.0	-0.7
	194nm,0.3s,baz=97,slow=22,SNR=26						
BATI	Baumata	6.19	241	P	Pn	06 46 11.6	+1.9
	3.8nm13μm936nm,0.5s						
KDU	Kakadu	6.32	149	P	Pn	06 46 11.9	+0.6
	baz=6.3,SNR=426						
KDU	Kakadu	6.32	149	P	Pn	06 46 11.2	-0.2
SIJI	Sorong	6.66	18	P	Pn	06 46 15.6	-0.4
	7.8nm,0.3s,baz=189,slow=23,SNR=29						
SIJI				S	Sn	06 47 26.7	-4.4
	13nm,0.3s,baz=294,slow=21,SNR=7.4						
SIJI				LR	LR	06 49 19.0	
	comp=Z,118nm,20.6s,baz=190,slow=42						
SWI	Sorong	6.67	18	P	Pn	06 46 16.8	+0.8
	0.8nm2μm52nm,0.5s						
LBMI	Labuha	6.76	346	P	Pn	06 46 20.6	+3.3
	0.5nm2μm120nm,0.6s						
EDFI	Ende, Flores	7.55	258	P	Pn	06 46 30.4	+2.5
	0.3nm728nm31nm,0.6s						
KNRA	Kununurra	8.40	183	P	Pn	06 46 38.8	-0.1
	baz=8.4,SNR=146						
KNRA	Kununurra	8.40	183	Pn	Pn	06 46 38.9	-0.1
KNRA	Kununurra	8.40	183	P	Pn	06 46 38.2	-0.8
	250nm,0.6s						
BAKI	Biak	9.16	49	P	Pn	06 46 50.9	+1.7
BKSI	Bulukumba	9.19	281	P	Pn	06 46 52.4	+2.8
	1μm68nm,0.9s						
BNSI	Bone	9.44	287	P	Pn	06 46 56.2	+3.3
	51nm,1.3s						
APSI	Ampana	9.78	310	P	Pn	06 47 00.6	+3.2
	37nm,0.7s						
SPSI	Sidrap Palu	9.90	289	P	Pn	06 47 01.7	+2.7
	80nm,0.7s						
WBSI	Waikabubak, Su	9.96	255	P	Pn	06 47 00.8	+1.0
	138nm,0.8s						
TTSI	Tana Toraja	10.20	294	P	P	06 47 08.4	-4.2
	86nm,1.6s						
MRSI	Marisa	10.52	316	P	Pn	06 47 10.7	+3.5
	2μm220nm,1.2s						
FITZ	Fitzroy Crossi	11.33	197	P	Pn	06 47 16.4	-1.3
	16nm,0.3s,baz=33,slow=10,SNR=214						
FITZ				S	Sn	06 49 15.6	-7.5
	28nm,0.3s,baz=91,slow=22,SNR=9.8						
FITZ	Fitzroy Crossi	11.33	197	P	Pn	06 47 16.4	-1.3
	baz=11,SNR=56						
TOLI2	Tolitoli	11.78	314	Pn	Pn	06 47 24.4	+0.7
TOLI2	Tolitoli	11.78	314	P	P	06 47 27.8	-2.7
MPSI	Mapaga	11.92	309	P	P	06 47 29.7	-2.3
	2μm25nm,0.7s						
KBKI	Kotabaru	13.52	286	P	P	06 47 49.7	-0.1
	1μm107nm,0.6s						
WRA	Warramunga Arr	13.59	159	P	Pn	06 47 44.5	-2.5
	4.7nm,0.3s,baz=345,slow=13,SNR=50						
WRA				S	Sn	06 50 07.0	-11
	22nm,0.3s,baz=331,slow=23,SNR=11						
WRA				LR	LR	06 54 07.9	
	comp=Z,124nm,21.8s,baz=315,slow=42						
BKB	Balikpapan	13.60	295	P	P	06 47 52.0	+1.4
BKB	Balikpapan	13.60	295	P	P	06 47 51.1	+0.5
WB2	Warramunga Arr	13.60	159	Pn	Pn	06 47 44.5	-2.4
BBKI	Banjar Baru	14.74	284	P	P	06 48 05.3	+1.9
	4μm462nm,1.0s						
JAGI	Jajag, Banyuwa	14.92	264	P	Pn	06 48 02.2	-1.5
JAGI	Jajag, Banyuwa	14.92	264	P	P	06 48 06.0	+0.6
COEN	Coen	15.30	117		P	06 48 09.3	-0.2
COEN				IAmb	IAmb	06 48 12.2	
	comp=Z,39nm,0.8s						
BLJI	Banyuglugur	15.45	267	P	P	06 48 12.9	+1.7
	comp=Z,67nm,0.8s						
MTKI	Muara Teweh, K	15.54	293	P	P	06 48 15.5	+3.2
	comp=Z,5μmcomp=Z,173nm,0.6s						
BWJI	Bawean	16.46	274	P	Pn	06 48 25.4	+2.9
	comp=Z,238nm,1.2s						
MBWA	Marble Bar	16.58	212	P	Pn	06 48 24.2	+0.3
QIS	Mount Isa	16.66	144	P	Pn	06 48 25.0	+0.1
	baz=17,SNR=73						
QIS	Mount Isa	16.66	144	P	Pn	06 48 24.9	0.0
	comp=Z,83nm,0.8s						
PSA00	Pilbara Seismi	16.86	211	P	Pn	06 48 28.0	+0.8
PSA00	Pilbara Seismi	16.86	211	P	Pn	06 48 27.4	+0.2
PSA00				IAmb	IAmb	06 48 30.3	
	comp=Z,43nm,1.0s						
PSA00	Pilbara Seismi	16.86	211	P	Pn	06 48 28.0	+0.8
AS31	Alice Springs	16.96	165	P	Pn	06 48 29.4	+0.9
AS31				IAmb	IAmb	06 48 30.7	
	comp=Z,40nm,0.5s						
ASAR	Alice Springs	16.96	165	P	Pn	06 48 28.5	0.0
	comp=Z,14nm,0.3s,baz=342,slow=10,SNR=1013						
ASAR				S	S	06 51 29.1	-7.6
	comp=Z,11nm,0.3s,baz=319,slow=15,SNR=8.1						
ASAR				LR	LR	06 54 46.5	
	comp=Z,75nm,22.0s,baz=291,slow=36						
ASAR	Alice Springs	16.96	165	P	Pn	06 48 28.4	-0.1
ASAR					P	06 48 29.2	+1.4
SPMM	Sapulut	17.36	313	P	Pn	06 48 36.0	+2.6
WRKA	Warakurna	17.72	183	P	Pn	06 48 37.9	+0.3
	baz=18,SNR=128						
WRKA	Warakurna	17.72	183	P	Pn	06 48 37.3	-0.3
	comp=Z,93nm,0.8s						
PCJI	Pacitan	17.85	266	P	P	06 48 36.9	-0.8
	comp=Z,88nm,0.5s						
PMG	Port Moresby	17.93	98	P	P	06 48 39.3	+0.7
	comp=Z,2.9nm,0.3s,baz=280,slow=4.4,SNR=27						
PMG	Port Moresby	17.93	98		P	06 48 39.0	+0.4
PMG				IAmb	IAmb	06 48 43.9	
	comp=Z,72nm,0.8s						
PBKI	Pangkalan Bun	18.00	284	P	Pn	06 48 41.8	+0.9
	comp=Z,7μmcomp=Z,479nm,1.0s						
WOJI	Wonogiri, Jawa	18.09	267	P	Pn	06 48 41.9	-0.2
	comp=Z,67nm,0.8s						
MTSU	Mount Surprise	18.31	128	P	Pn	06 48 44.5	0.0
	baz=18,SNR=16						
MTSU	Mount Surprise	18.31	128	P	Pn	06 48 44.2	-0.3
	comp=Z,39nm,0.7s						
KKM	Kota Kinabalu	18.47	315	P	P	06 48 44.0	-0.5
KKM	Kota Kinabalu	18.47	315	P	Pn	06 48 48.6	+2.1
UGM	Wanagama	18.49	267	P	P	06 48 44.4	-0.3
UGM	Wanagama	18.49	267	P	Pn	06 48 47.2	+0.4
MANU	Manus Island	18.86	75	P	P	06 48 49.5	+0.9
MANU				IAmb	IAmb	06 48 52.6	
	comp=Z,59nm,0.7s						
STKI	Sintang	19.07	292	P	Pn	06 48 53.0	-0.6
	comp=Z,67nm,0.9s						
SBUM	Sibu	19.46	299	P	Pn	06 48 58.0	0.0
SBUM	Sibu	19.46	299	P	Pn	06 48 56.7	-1.3
SBUM				IAmb	IAmb	06 48 59.3	

	comp=Z,43nm,0.8s						
KPJI	Karang Pucung	20.07	268	P	P	06 49 00.8	-1.0
	comp=Z,44nm,0.6s						
KSM	Kuching	20.71	294	P	P	06 49 09.0	+0.4
KSM	Kuching	20.71	294	P	P	06 49 07.6	-1.0
KSM	Kuching	20.71	294	P	Pn	06 49 11.0	-2.0
CTA	Charters Tower	20.92	129	P	P	06 49 12.7	+1.9
	comp=Z,16nm,0.7s,baz=300,slow=14,SNR=23						
CTAO	Charters Tower	20.92	129	P	P	06 49 12.4	+1.6
CTAO				IAmb	IAmb	06 49 15.4	
	comp=Z,34nm,0.9s						
CTAO	Charters Tower	20.92	129	P	P	06 49 12.7	+1.9
GIRL	Giralia	21.01	222	P	P	06 49 14.7	+3.0
OOD	Oodnadatta	21.36	164	P	P	06 49 15.5	+0.1
	comp=Z,87nm,0.6s						
LEM	Lembang	21.39	270	P	P	06 49 16.4	+0.3
	comp=Z,55nm,0.6s,baz=18,slow=4.9,SNR=7.7						
LEM	Lembang	21.39	270	P	P	06 49 16.8	+0.7
	comp=Z,39nm,0.7s						
MEEK	Meekatharra	21.75	206	P	P	06 49 20.1	+0.5
	baz=22,SNR=12						
MEEK	Meekatharra	21.75	206	P	P	06 49 19.9	+0.3
	comp=Z,30nm,0.5s						
CNJI	Cibinong	21.86	268	P	P	06 49 18.5	-2.3
	comp=Z,117nm,0.7s						
TPI	Tanjungpandan	21.88	281	P	P	06 49 22.7	+1.6
	comp=Z,725nmcomp=Z,70nm,1.2s						
INKA	Innaminka	23.16	153	P	P	06 49 34.3	+1.3
	comp=Z,304nm,0.9s						
CGJI	Cibinong	23.31	270	P	P	06 49 31.7	-2.9
	comp=Z,31nm,1.1s						
MULG	Mulgathing	23.38	169	P	P	06 49 35.5	+0.5
	comp=Z,121nm,0.9s						
FORT	Forrest	23.44	182	P	P	06 49 36.7	+1.1
	baz=24,SNR=26						
FORT	Forrest	23.44	182	P	P	06 49 37.0	+1.4
FORT	Forrest	23.44	182	P	P	06 49 36.2	+0.6
	comp=Z,107nm,0.9s						
PPBI	Pangkal Pinang	23.49	281	P	P	06 49 37.1	+0.8
QLP	Quilpie	23.99	145	P	P	06 49 43.2	+2.5
	baz=24,SNR=7.4						
LCRK	Leigh Creek	24.60	161	P	P	06 49 46.8	+0.7
	comp=Z,122nm,0.7s						
MORW	Morawa	25.00	208	P	P	06 49 53.2	+3.4
	baz=25,SNR=5.7						
MORW	Morawa	25.00	208	P	P	06 49 51.2	+1.4
MDSI	Maura Dua	25.00	275	P	P	06 49 51.9	+1.9
	comp=Z,1μmcomp=Z,7.2nm,0.9s						
DSRI	Dabo	25.42	284	P	P	06 49 55.7	+1.9
	comp=Z,19nm,0.6s						
BLDU	Ballidu	26.02	205	P	P	06 50 00.4	+1.4
	comp=Z,16nm,1.3s						
BBOO	Buckleboo	26.24	167	P	P	06 50 01.6	+0.6
	baz=26,SNR=15						
BBOO	Buckleboo	26.24	167	P	P	06 50 01.5	+0.6
BBOO				IAmb	IAmb	06 50 05.8	
	comp=Z,47nm,1.1s						
BBOO	Buckleboo	26.24	167	P	P	06 50 01.2	+0.3
	comp=Z,56nm,1.8s						
KLBR	Kellerberrin	26.47	202	P	P	06 50 05.1	+2.1
	comp=Z,30nm,0.8s						
RMQ	Roma	26.72	138	P	P	06 50 06.8	+1.5
	baz=27,SNR=9.5						
STKA	Stephens Creek	27.12	156	P	P	06 50 09.8	+1.0
	comp=Z,12nm,0.6s,baz=324,slow=9.2,SNR=20						
STKA				LR	LR	07 02 35.7	
	comp=Z,124nm,19.9s,baz=337,slow=40						
STKA	Stephens Creek	27.12	156	P	P	06 50 09.7	+1.0
	baz=27,SNR=9.7						
STKA	Stephens Creek	27.12	156	P	P	06 50 09.5	+0.7
STKA	Stephens Creek	27.12	156	P	P	06 50 09.5	+0.7
	comp=Z,3.3nm,0.6s						
HTT	Hallett	27.59	162	P	P	06 50 14.5	+1.5
	baz=28,SNR=17						
HTT	Hallett	27.59	162	P	P	06 50 14.2	+1.2
	comp=Z,16nm,1.7s						
CMSA	Cobar Meteorol	28.68	150	P	P	06 50 23.8	+1.1
	baz=29,SNR=7.0						
CMSA	Cobar Meteorol	28.68	150	P	P	06 50 23.7	+1.0
	comp=Z,26nm,2.8s						
JRMM	Jerantut	28.84	292	P	P	06 50 26.0	+1.7
IPM	Ipoh	30.40	292	P	P	06 50 40.0	+1.9
MNSI	Mandailing Nat	30.57	284	P	P	06 50 39.1	-0.5
	comp=Z,3μmcomp=Z,37nm,0.6s						
KULM	Kulim	31.06	293	P	P	06 50 46.0	+2.1
ARMA	Armidale	31.23	140	P	P	06 50 48.3	+3.0
	baz=31,SNR=9.7						
ARMA	Armidale	31.23	140	P	P	06 50 44.3	-1.1
ARMA				IAmb	IAmb	06 51 36.1	
	comp=Z,33nm,1.8s						
ARMA	Armidale	31.23	140	P	P	06 50 47.6	+2.2
	comp=Z,12nm,1.5s						
TPUB	Ta-pu	31.48	345	P	P	06 50 44.9	-2.5
ARPS	Mount Arapiles	31.59	160	P	P	06 50 50.0	+1.7
	baz=32,SNR=37						
ARPS	Mount Arapiles	31.59	160	P	P	06 50 49.4	+1.2
	comp=Z,95nm,0.6s						
UBPT	Khong Chiam	32.43	314	P	P	06 50 56.0	+0.1
GSI	Gunungsitoli	32.64	284	P	P	06 50 57.0	-0.8
	comp=Z,32nm,1.0s						
GSI	Gunungsitoli	32.64	284	P	P	06 50 57.0	-0.8
GSI				IAmb	IAmb	06 50 58.7	
	comp=Z,45nm,1.2s						
CAN	Canberra	33.36	150	P	P	06 51 06.3	+2.5
CAN	Canberra	33.36	150	P	P	06 51 05.0	+1.2
TOO	Toolangi	33.64	156	P	P	06 51 08.8	+2.6
	baz=34,SNR=15						
TOO	Toolangi	33.64	156	P	P	06 51 08.6	+2.4
TOO				IAmb	IAmb	06 51 10.6	
	comp=Z,75nm,1.6s						
TOO	Toolangi	33.64	156	P	P	06 51 08.3	+2.1
	comp=Z,26nm,2.8s						
SANVU	Saraoutou	38.12	106	P	P	06 51 46.6	+2.0
NOUC	Port Laguerre	38.71	116	P	P	06 51 51.0	+1.6
DZM	Mont Dzumac	38.83	116	P	P	06 51 51.8	+1.3
	comp=Z,7.0nm,0.6s,baz=134,slow=8.3,SNR=8.9						
DZM	Mont Dzumac	38.83	116	IAmb	IAmb	06 51 52.5	
	comp=Z,10nm,0.8s						
DZM	Mont Dzumac	38.83	116	P	P	06 51 52.1	+1.6
YATNC	Mamie plateau,	39.22	116	P	P	06 51 55.3	+1.6
	comp=Z,25nm,1.5s						
CM31	Chiang Mai Arr	39.26	311	P	P	06 51 53.7	-0.2
CM31				IAmb	IAmb	06 51 55.3	
	comp=Z,39nm,1.4s						
CMAR	Chiang Mai Arr	39.26	311	P	P	06 51 54.4	+0.4
	comp=Z,9.2nm,0.6s,baz=142,slow=7.2,SNR=51						
CMAR				PcP	PcP	06 54 01.3	+1.4
	comp=Z,1.5nm,0.3s,baz=161,slow=1.8,SNR=6.9						
CMAR				ScP	ScP	06 57 34.5	+0.5
	comp=Z,0.8nm,0.3s,baz=126,slow=4.6,SNR=4.5						
CMAR	Chiang Mai Arr	39.26	311	P	P	06 51 53.9	-0.1
CHTO	Chiang Mai	39.47	311	P	P	06 51 56.0	+0.2
CHTO				IAmb	IAmb	06 51 57.4	
	comp=Z,27nm,0.8s						
NJ2	Nanjing	40.29	346	eP	P	06 52 05.0	+2.7
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI	Kunming	41.19	322	⇑P	P	06 52 10.5	+0.4
KMI				pmax	pmax		
	comp=Z,19nm,1.2s						
JWT	Wachi	42.70	8	P	P	06 52 20.3	-1.5
MJAR	Matsushiro Arr	44.37	10	P	P	06 52 33.6	-1.6
	comp=Z,2.8nm,0.7s,baz=187,slow=9.2,SNR=5.4						
KSRS	Korea Array	44.47	359	P	P	06 52 35.8	-0.2
	comp=Z,2.1nm,0.6s,baz=175,slow=8.5,SNR=6.6						
XAN	Xi'an	45.31	336	P	P	06 52 44.3	+1.5
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BJI	Beijing	48.55	347	P	P	06 53 07.0	-0.7
BJI				sP	sP	06 54 02.8	+4.4
BJI				PcP	PcP	06 54 31.0	-0.1
BJI				pmax	pmax		
	comp=Z,17nm,0.7s						
MSVF	Nonsavu	48.72	107	P	P	06 53 08.3	-1.3
SHL	Shillong	48.76	313	P	P	06 53 06.7	-3.1
SHL				IAmb	IAmb	06 53 10.3	
	comp=Z,35nm,1.0s						
SHL				PcP	PcP	06 54 32.6	+0.1
LZH	Lanzhou	49.23	333	eP	P	06 53 13.3	+0.1
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
HHC	Hu-ho-hao-te	50.52	343	eP	P	06 53 26.3	+3.5
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,5.7s						
FOZ	Fox Glacier	50.70	142	P	P	06 53 25.5	+1.5
FOZ				IAmb	IAmb	06 54 13.8	
	comp=Z,26nm,1.3s						
USRK	Ussuriysk Ar.	51.26	3	P	P	06 53 27.9	-0.1
	comp=Z,2.4nm,0.5s,baz=184,slow=7.0,SNR=10						
LSA	Lhasa	51.80	317	P	P	06 53 32.9	-0.1
LSA				IAmb	IAmb	06 53 34.7	
	comp=Z,17nm,0.5s						
BKZ	Black Stump Fm	53.02	134	P	P	06 53 42.2	+0.9
BKZ				IAmb	IAmb	06 53 47.0	
	comp=Z,32nm,1.5s						
GTA	Gaotai	53.79	332	⇑P	P	06 53 46.5	-0.5
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
JIRN	Jiri	54.12	312	eP	P	06 53 49.4	-0.5
	comp=Z,41nm,0.4s						
GUN	Gumba	54.49	312	eP	P	06 53 52.1	-0.4
	comp=Z,74nm,0.4s						
PKI	Pulchoki	54.65	311	eP	P	06 53 52.8	-0.9
	comp=Z,24nm,0.5s						
PKIN	Phulchoki	54.67	311	eP	P	06 53 52.9	-0.8
	comp=Z,23nm,0.4s						
KKN	Kakani	54.87	311	eP	P	06 53 54.5	-0.6
	comp=Z,22nm,0.4s						
DMN	Daman	54.90	311	eP	P	06 53 55.0	-0.4
	comp=Z,10nm,0.3s						
GKN	Gorkha	55.46	311	eP	P	06 53 58.8	-0.5
	comp=Z,68nm,0.3s						
HYB	Hyderabad	55.68	297	iP	P	06 54 00.0	-0.9
DANN	Dangsing	56.30	311	eP	P	06 54 04.5	-0.9
	comp=Z,15nm,0.3s						
PYUN	Piuthan	56.75	310	eP	P	06 54 08.1	-0.4
SONM	Songino Array	58.41	342	P	P	06 54 19.4	-0.2
	comp=Z,2.2nm,0.6s,baz=160,slow=6.7,SNR=22						
SONM				ScP	ScP	06 58 53.1	-1.3
	comp=Z,0.8nm,0.7s,baz=152,slow=6.5,SNR=5.5						
SONM	Songino Array	58.41	342	P	P	06 54 19.7	+0.1
WMQ	Urumqi	63.15	328	eP	P	06 54 52.0	+0.4
WMQ				PcP	pP	06 55 27.3	-0.4
WMQ				sP	sP	06 55 50.5	+6.2
WMQ				pmax	pmax		
	comp=Z,19nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,95nm,3.7s						
KSH	Kashi	67.64	318	P	P	06 55 22.5	+1.8
KSH				pP	pwP	06 56 00.5	-0.8
KSH				ScP		06 59 32.3	
KSH				pmax	pmax		
	comp=Z,17nm,0.7s						
KSH				LR	LR		
	comp=Z,400nm,5.5s						
KSH				LR	LR		
	comp=Z,310nm,6.2s						
MK31	Makanchi Array	67.97	327	P	P	06 55 22.4	-0.1
MKAR	Makanchi Array	67.97	327	P	P	06 55 22.4	-0.1
	comp=Z,8.2nm,0.6s,baz=128,slow=7.6,SNR=87						
MAKZ	Makanchi	68.15	327	P	P	06 55 23.4	-0.2
YAK	Yakutsk	69.06	0	P	P	06 55 28.5	-0.4
	comp=Z,6.9nm,0.3s,baz=16,slow=1.5,SNR=6.4						
YAK	Yakutsk	69.06	0	IAmb	IAmb	06 55 29.3	
	comp=Z,36nm,1.0s						
BOOM	Boomskoye usch	69.20	321	P	P	06 55 31.0	+0.6
AAK	Ala-Archa	70.19	320	P	P	06 55 36.7	+0.2
	comp=Z,3.5nm,0.6s,baz=158,slow=5.1,SNR=8.4						
KBL	Kabul	70.28	311	P	P	06 55 37.1	-0.1
KBL				IAmb	IAmb	06 55 44.7	
	comp=Z,7.2nm,0.6s						
DRK	Karamyk	70.44	316	P	P	06 55 38.4	+0.2
ZAA0	Zalesovo Array	71.43	334	P	P	06 55 42.4	-1.0
ZALV	Zalesovo Beam	71.43	334	P	P	06 55 42.4	-1.1
	comp=Z,4.8nm,0.5s,baz=129,slow=6.0,SNR=22						
ZALV	Zalesovo Beam	71.43	334	P	P	06 55 42.0	-1.5
CHGR	Chuyangaron	71.91	314	P	P	06 55 46.2	-0.7
CHGR				IAmb	IAmb	06 55 47.9	
	comp=Z,26nm,0.9s						
SEY	Seymchan	72.19	11	P	P	06 55 48.5	+0.7
	comp=Z,9.2nm,0.6s,baz=210,slow=8.1,SNR=18						
KURBB	Kurchatov Arra	72.28	329	P	P	06 55 48.2	-0.4
	comp=Z,4.7nm,0.4s,baz=127,slow=4.9,SNR=14						
KURK	Kurchatov	72.29	329	P	P	06 55 48.3	-0.4
KURK				IAmb	IAmb	06 55 51.1	
	comp=Z,6.5nm,0.6s						
VNDA	Vanda	72.31	173	P	P	06 55 48.9	+0.5
	comp=Z,1.9nm,0.7s,baz=316,slow=6.1,SNR=8.3						
VNDA	Vanda	72.31	173	P	P	06 55 48.7	+0.3
VNDA				IAmb	IAmb	06 57 37.5	
	comp=Z,32nm,1.9s						
KKAR	Karatay Array	72.97	319	P	P	06 55 52.1	-0.8
WSAR	Wadi Sarin	75.23	296	P	P	06 56 06.3	-0.1
	comp=Z,6.6nm,0.6s,baz=133,slow=7.1,SNR=8.9						
HRA	Herat	75.45	308	P	P	06 56 07.6	-0.1
BVAR	Borovoye Array	77.82	328	P	P	06 56 19.6	-0.8
	comp=Z,1.0nm,0.3s,baz=99,slow=6.5,SNR=8.0						
BRVK	Borovoye	77.90	328	P	P	06 56 20.3	-0.5
TIXI	Tiksi	78.72	360	P	P	06 56 24.1	-0.8
	comp=Z,6.1nm,0.4s,baz=176,slow=3.7,SNR=18						
TIXI	Tiksi	78.72	360	P	P	06 56 24.1	-0.8
TIXI				IAmb	IAmb	06 56 24.9	
	comp=Z,8.3nm,0.5s						
NRIK	Noril'sk	81.59	346	P	P	06 56 40.4	+0.1
	comp=Z,6.1nm,0.5s,baz=114,slow=6.6,SNR=6.6						
NRIK	Noril'sk	81.59	346	P	P	06 56 40.1	-0.2
NRIK				IAmb	IAmb	06 56 41.8	
	comp=Z,10nm,0.8s						
ABKAR	Akbulak array	82.18	322	P	P	06 56 42.9	-0.9
ABKAR	Akbulak array	82.18	322	P	P	06 56 42.7	-1.1
ABKAR				IAmb	IAmb	06 56 45.5	
	comp=Z,7.7nm,1.0s						
QSPA	South Pole Qui	82.74	180	P	P	06 56 46.7	+0.1
	comp=Z,2.6nm,0.6s,baz=179,slow=0.8,SNR=27						
AKTO	Aktyubinsk	83.75	322	P	P	06 56 51.6	-0.3
	comp=Z,1.9nm,0.4s,baz=140,slow=6.6,SNR=6.9						
ARU	Arti	85.47	328	P	P	06 56 59.5	-0.9
	comp=Z,2.3nm,0.2s,baz=174,slow=1.3,SNR=6.8						
ILAR	Eielson Array	93.91	25	P	P	06 57 38.0	-1.9
	comp=Z,0.4nm,0.7s,baz=249,slow=4.7,SNR=4.8						
BERG	Berg Lake	94.82	30	P	P	06 57 43.7	-0.4
ARCES	ARCESS Array B	101.51	340	P	Pdif	06 58 12.7	-1.4
	comp=Z,5.6nm,0.9s,baz=80,slow=7.4,SNR=5.1						
TXAR	Lajitas Array	125.76	59	PKP	PKiKP	07 03 25.1	+0.4
	comp=Z,0.1nm,0.4s,baz=165,slow=3.2,SNR=4.1						
TORD	Torodi Ar. Bea	128.04	281	PKP	PKPdf	07 03 28.6	-0.2
	comp=Z,1.1nm,0.5s,baz=46,slow=1.7,SNR=11						
DBIC	Dimbokro	134.37	272	PKP	PKiKP	07 03 42.0	-0.3
	comp=Z,1.6nm,0.4s,baz=71,slow=4.0,SNR=5.7						
DBIC				SKPbc	SKPbc	07 06 53.1	-3.1
	comp=Z,2.3nm,0.7s,baz=132,slow=2.2,SNR=5.6						

NAO ***26*** *06:54:25.0±2.9, 78°.48N×7°.28E, h0^{km}±20^{km}, ML3.1*
IDC ***26*** *06:54:26.6±1.3, 78°.49N×7°.53E, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.4/60, mbtmp3.9/7, ML3.1/2, MS3.1/2, Ms1 3.0/2, ms1mx2.6/44, Error ellipse: s-maj=26.3km s-min=14.3km az=174.0*
BER ***26*** *06:54:27.0±3.1, 78°.33N×7°.28E, h20^{km}±13^{km}, ML2.8, ML3.1(NAO), Confirmed Earthquake*
DNK ***26*** *06:54:28.5±1.8, 78°.38N×7°.19E, h36^{km}±33^{km}, ML3.0*
IEPN ***26*** *06:54:30.0, 78°.34N×8°.73E, h10^{km}*
ISC 26 06:54:25.9±1.9**, 78°.42N**±0°.06×**7°.62E**±0°.06**, h5**^{km}±12^{km}**, n38,** σ**2**^{s}**.57**/29**, mb3.6**/5**, 1C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.00	57	Pg	Pg	06 54 45.9	+0.9
KBS				Lg	Lg	06 54 58.0	
KBS	Kingsbay	1.00	57	iP	Pg	06 54 46.1	+1.1
KBS				IAML		06 54 59.5	
	comp=Z,1μm,0.8s						
KBS	Kingsbay	1.00	57	eP	Pg	06 54 45.7	+0.7
KBS				eS	Sg	06 54 57.9	+0.1
KBS				IAML		06 55 00.9	
	comp=Z,296nm,0.8s						
KBS	Kingsbay	1.00	57	eP	Pg	06 54 45.6	+0.6
KBS				eS	Sg	06 54 56.0	-1.9
BRBB	Barentsburg B	1.39	100	Pn	Pn	06 54 50.9	-1.1
BRBB				Pg	Pg	06 54 52.5	+0.1
BRBB				Sn	Sg	06 55 07.5	-3.0
BRBB				Lg	Lg	06 55 10.3	
BRBB	Barentsburg B	1.39	100	eP	Pn	06 54 50.8	-1.1
BRBB				ePg	Pg	06 54 52.6	+0.1
BRBB				eS	Sg	06 55 07.6	-2.8
BRBB				eSg	Sg	06 55 10.1	-0.3
SPA0	Spitsbergen Ar	1.80	93	Pn	Pn	06 54 57.6	-0.1
	baz=265,slow=10						
SPA0				Lg	Lg	06 55 20.8	
	baz=278,slow=22						
SPA0	Spitsbergen Ar	1.80	93	Pn	Pn	06 54 57.6	-0.1
	baz=265,slow=10						
SPA0				Sg	Sn	06 55 20.8	0.0
	baz=278,slow=22						
SPA0				IAML		06 55 32.8	
	comp=Z,175nm,0.6s						
SPA0	Spitsbergen Ar	1.80	93	⇑iP	Pn	06 54 57.5	-0.1
SPA0				eS	Sn	06 55 18.3	-2.5
SPITS	Spitsbergen Ar	1.80	93	Pn	Pn	06 54 57.5	-0.1
	baz=268,slow=12,SNR=785						
SPITS				Sn	Sn	06 55 20.7	-0.1
	baz=244,slow=13,SNR=8.3						
HSPB	Hornsund (broa	2.21	126	Pn	Pn	06 55 01.5	-1.7
HSPB				Sn	Sn	06 55 26.3	-4.6
HSPB	Hornsund (broa	2.21	126	eP	Pn	06 55 01.5	-1.7
HSPB				eS	Sn	06 55 26.2	-4.7
HSPB				IAML		06 55 29.0	
	comp=Z,88nm,0.6s						
HSPB	Hornsund (broa	2.21	126	eP	Pn	06 55 01.4	-1.8
HSPB				eS	Sn	06 55 24.7	-6.1
HOPEN	Hopen	4.23	108	Pn	Pn	06 55 30.7	-0.3
HOPEN				Sn	Sn	06 56 17.6	-3.1
HOPEN	Hopen	4.23	108	eP	Pn	06 55 30.3	-0.7
HOPEN				eS	Sn	06 56 17.1	-3.6
HOPEN				IAML		06 56 18.1	
	comp=Z,53nm,0.4s						
HOPEN	Hopen	4.23	108	eP	Pn	06 55 30.6	-0.4
HOPEN				eS	Sn	06 56 16.6	-4.1
NOR	Nord	5.25	319	Pn	Pn	06 55 43.4	-1.6
NOR				Sn	Sn	06 56 40.0	-5.6
NOR	Nord	5.25	319	iP	Pn	06 55 43.0	-1.9
NOR	Nord	5.25	319	iP	Pn	06 55 43.0	-1.9
DAG	Danmarks Havn	5.86	267	iP	Pn	06 55 49.0	-4.3
DAG				eS	Sn	06 56 49.8	-11
DAG				IAML		06 56 59.8	
	comp=Z,12nm,2.8s						
DAG	Danmarks Havn	5.86	267	iP	Pn	06 55 49.0	-4.3
DAG				eS	Sn	06 56 49.8	-11
DAG				IAML		06 56 59.8	
	comp=Z,12nm,2.8s						
ZFI	Zemlya Franca-	7.47	53	eP	Pn	06 56 16.2	+0.8
ZFI				eS	Sn	06 57 35.4	-5.0
ZFI2	Zemlya Franca-	7.47	53	eP	Pn	06 56 16.1	+0.7
ZFI2				eS	Sn	06 57 33.9	-6.5
	comp=Z,43nm,2.3s						
DBG	Daneborg	7.68	252	Pn	Pn	06 56 14.2	-4.0
DBG	Daneborg	7.68	252	eP	Pn	06 56 14.9	-3.3
DBG	Daneborg	7.68	252	eP	Pn	06 56 15.6	-2.6
DBG				eS	Sn	06 57 31.7	-14
ARA0	ARCESS Array S	10.12	142	Pn	Pn	06 56 51.4	-0.3
	baz=332,slow=11						
ARA0				Sn	Sn	06 58 33.9	-11
	baz=332,slow=16						
ARA0	ARCESS Array S	10.12	142	Pn	Pn	06 56 51.4	-0.3
	baz=332,slow=11						
ARA0				Sn	Sn	06 58 33.9	-11
	baz=332,slow=16						
ARCES	ARCESS Array B	10.12	142	Pn	Pn	06 56 52.1	+0.5
	baz=345,slow=8.9,SNR=7.2						
ARCES				Sn	Sn	06 58 37.2	-8.2
	baz=347,slow=20,SNR=5.2						
ARCES				LR	LR	07 01 52.0	
	comp=Z,54nm,18.7s,baz=295,slow=44						
HFS	Hagfors	18.48	170	Pn	Pn	06 58 42.4	+0.1
	comp=Z,0.1nm,0.3s,baz=13,slow=14,SNR=5.1						
HFS	Hagfors	18.48	170	Pn	Pn	06 58 42.2	-0.1
	baz=8.0,slow=12						
HFS	Hagfors	18.48	170	Pn	Pn	06 58 42.2	-0.1
	baz=8.0,slow=12						
RES	Resolute Bay	21.17	314	LR	LR	07 07 35.3	
	comp=Z,74nm,19.2s,baz=86,slow=37						
KURBB	Kurchatov Arra	37.15	95	P	P	07 01 39.5	+2.4
	comp=Z,1.0nm,0.2s,baz=338,slow=7.3,SNR=2.1						
ESDC	Sonseca Array	39.15	194	P	P	07 01 55.4	+1.3
	comp=Z,1.2nm,1.0s,baz=8.9,slow=10,SNR=4.5						
MKAR	Makanchi Array	41.56	93	P	P	07 02 16.4	+2.4
	comp=Z,0.5nm,0.8s,baz=354,slow=5.0,SNR=2.7						
TORD	Torodi Ar. Bea	65.34	186	P	P	07 05 10.2	+1.4
	comp=Z,0.6nm,0.5s,baz=354,slow=6.9,SNR=4.9						
TXAR	Lajitas Array	65.59	297	P	P	07 05 11.6	+1.2
	comp=Z,0.4nm,0.9s,baz=46,slow=6.4,SNR=2.0						

AEIC ***26*** *06:59:51±2.5, 55°.45N±0°.06×135°.17W±0°.09, h8^{km}±8^{km}, ML2.6, ML3.0/18(NEIC), Error ellipse: s-maj=10.3km s-min=4.7km az=221.0*
PGC ***26*** *06:59:52.4±1.9, 55°.46N×134°.97W, h10^{km}, ML2.6, ML3.0/7, 179km Sse of Sitka, Ak Southeastern Alaska*
NEIC ***26*** *06:59:53.1±1.4, 55°.52N±0°.06×134°.9W±0°.2, h16^{km}±8^{km}, Error ellipse: s-maj=13.7km s-min=7.2km az=58.0*
ISC 26 06:59:51.1±1.2**, 55°.50N**±0°.04×**134°.89W**±0°.07**, h9**^{km}**, n30,** σ**1**^{s}**.43**/33**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRAG	Craig	1.00	91		Pb	07 00 11.3	+0.7
SIT	Sitka	1.58	351		Pn	07 00 18.5	-0.8
LIB	Langara Island	1.63	139	Pn	Pn	07 00 20.5	+0.6
LIB				Sg	Sg	07 00 44.6	+1.1
WRAK	Wrangell Islan	1.70	56		Pn	07 00 21.4	+0.5
NDB	Naden	1.91	143	Sg	Sg	07 00 52.7	+0.2
DIB	Dawson Inlet,	2.70	147		Pn	07 00 35.2	+0.7
DIB	Dawson Inlet,	2.70	147	IAML		07 01 19.5	
	comp=E,59nm,2.6s						
DIB				IAML		07 01 22.8	
	comp=N,42nm,2.0s						
DIB	Dawson Inlet,	2.70	147	Pn	Pn	07 00 35.4	+0.8
DIB				Sn	Sn	07 01 06.6	-0.7
JIS	Juneau Island	2.80	5		Pn	07 00 36.2	+0.2
JIS	Juneau Island	2.80	5	IAML		07 00 56.2	
	comp=E,34nm,3.2s						
JIS				IAML		07 01 14.0	
	comp=N,34nm,3.9s						
MOBC	Moresby Island	2.91	143	Pn	Pn	07 00 38.9	+1.3
MOBC				Sg	Sg	07 01 23.2	-1.3
RUBB	Prince Rupert	2.92	112		Pn	07 00 38.8	+1.2
RUBB	Prince Rupert	2.92	112	IAML		07 01 33.6	
	comp=N,30nm,1.2s						
RUBB				IAML		07 01 52.8	
	comp=E,32nm,4.8s						
RUBB	Prince Rupert	2.92	112	Pn	Pn	07 00 39.6	+1.9
RUBB				Sg	Sg	07 01 23.7	-1.1
BESE	Bessie Mountai	3.09	0		Pn	07 00 40.4	+0.3
BESE	Bessie Mountai	3.09	0	Pn	Pn	07 00 40.8	+0.7
BESE				Sn	Sn	07 01 16.2	-1.0
GRNB	Grenville Isla	3.30	118	Pn	Pn	07 00 44.4	+1.4
GRNB				IAML		07 02 03.3	
	comp=N,38nm,2.8s						
GRNB				IAML		07 02 10.4	
	comp=E,35nm,4.8s						
GRNB	Grenville Isla	3.30	118	Pn	Pn	07 00 44.7	+1.7
GRNB				Sn	Sn	07 01 21.4	-1.0
BNB	Barry Inlet	3.46	146	Sg	Sg	07 01 39.6	-2.5
HG4B	Hotspring	3.88	144	Sg	Sg	07 01 52.1	-3.5
DLBC	Dease Lake	3.97	40		Pn	07 00 53.2	+1.0
DLBC	Dease Lake	3.97	40	IAML		07 02 07.9	
	comp=N,24nm,4.0s						
DLBC				IAML		07 02 23.4	
	comp=E,23nm,4.2s						
DLBC	Dease Lake	3.97	40	Pn	Pn	07 00 53.9	+1.7
DLBC				Sg	Sg	07 01 56.6	-1.9
P33M	Teslin, Yukon	4.86	12		Pn	07 01 05.1	+0.7
WHY	Whitehorse	5.18	0		Pn	07 01 10.0	+1.2
WHY	Whitehorse	5.18	0	Sn	Sn	07 02 07.9	-0.8
PCA	Pinnacle	5.43	330	Pn	Pn	07 01 13.3	+1.0
LOGN	Logan Glacier	6.25	331	Pn	Pn	07 01 25.3	+1.8
CTGM	Chitina Glacie	6.45	331	Pn	Pn	07 01 27.9	+1.6
BARN	Barnard Glacie	6.62	330	Pn	Pn	07 01 30.8	+2.1

IDC ***26*** *07:00:39.1±4.9, 36°.41N×70°.85E, h187^{km}±43^{km}, mb3.1/4, mb1 3.2/8, mb1mx3.0/55, mbtmp3.8/8, MS3.1/1, Ms1 3.1/1, ms1mx2.4/29, Error ellipse: s-maj=38.9km s-min=35.8km az=172.0*
ISC 26 07:00:39.2±1.3**, 36°.4N**±0°.2×**70°.9E**±0°.2**, h188**^{km}**, n9,** σ**0**^{s}**.77**/8**, mb3.2**/3**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	6.83	23	P	Pn	07 02 17.5	+0.4
	5.4nm,0.3s,baz=172,slow=5.2,SNR=38						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.43	36	P	Pn	07 03 41.8	-0.5
	0.3nm,0.3s,baz=222,slow=13,SNR=12						
KURBB	Kurchatov Arra	15.25	19	P	Pn	07 04 03.1	-1.5
	0.1nm,0.3s,baz=211,slow=11,SNR=2.4						
BVAR	Borovoye Array	16.62	359	P	Pn	07 04 21.3	0.0
	0.3nm,0.3s,baz=179,slow=13,SNR=4.6						
ZALV	Zalesovo Beam	20.05	25	P	P	07 04 57.5	-0.1
	2.7nm,0.5s,baz=223,slow=11,SNR=13						
AKASG	Malin Array Be	32.92	309	LR	LR	07 22 14.6	
	comp=Z,28nm,18.0s,baz=340,slow=39						
TORD	Torodi Ar. Bea	65.61	269	P	P	07 11 03.0	-0.2
	0.5nm,0.8s,baz=46,slow=5.9,SNR=2.9						
YKA	Yellowknife Ar	81.34	3	P	P	07 12 34.4	+0.2
	0.2nm,0.4s,baz=350,slow=5.2,SNR=4.3						
ASAR	Alice Springs	84.29	125	P	P	07 12 50.2	+0.2
	0.5nm,1.0s,baz=312,slow=4.8,SNR=4.6						

NAO ***26*** *07:04:52.9±7.2, 76°.86N×7°.39E, h19^{km}±61^{km}, ML3.5*
IDC ***26*** *07:04:53.3±1.0, 76°.90N×7°.82E, h0^{km}, mb3.8/8, mb1 3.9/10, mb1mx3.6/48, mbtmp3.8/10, ML3.7/2, MS3.6/20, Ms1 3.6/20, ms1mx3.3/51, Error ellipse: s-maj=18.1km s-min=15.3km az=140.0*
BER ***26*** *07:04:54.7±2.8, 76°.89N×7°.74E, h26^{km}±29^{km}, ML2.8, ML2.4(DNK), Confirmed Earthquake*
IEPN ***26*** *07:04:56.0, 77°.07N×7°.65E, h10^{km}*
DNK ***26*** *07:04:56.8±4.2, 77°.02N×7°.41E, h35^{km}±86^{km}, ML2.4*
ISC 26 07:04:50.5±2.8, **77°.02N**±0°.05×**7°.55E**±0°.04, **h3**^{km}±19^{km}, **n63, σ2ˢ.74**/70, **mb3.8**/8, **MS3.5**/16, **2C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRBB	Barentsburg B	1.80	50	Pn	Pb	07 05 23.0	-1.0
BRBB				Sn	Sn	07 05 43.6	-2.1
BRBB	Barentsburg B	1.80	50	*e*P	Pb	07 05 23.1	-1.0
BRBB				*e*S	Sn	07 05 42.2	-3.5
HSPB	Hornsund (broa	1.81	87	Pn	Pn	07 05 21.7	-0.7
HSPB				Sn	Sn	07 05 41.5	-4.3
HSPB	Hornsund (broa	1.81	87	*e*P	Pn	07 05 21.9	-0.6
HSPB				*e*S	Sn	07 05 41.3	-4.5
HSPB				*e*S	Sb	07 05 42.6	-4.4
HSPB				IAML		07 05 43.9	
	comp=Z,88nm,0.3s						
KBS	Kingsbay	2.13	24	Pn	Pb	07 05 29.7	+0.1
KBS				Sn	Sb	07 05 54.1	-2.2
KBS	Kingsbay	2.13	24	*i* P	Pb	07 05 28.4	-1.2
KBS	Kingsbay	2.13	24	*e*P	Pb	07 05 28.0	-1.6
KBS				*e*S	Sn	07 05 52.2	-1.5
KBS				IAML		07 05 56.6	
	comp=Z,90nm,0.6s						
KBS	Kingsbay	2.13	24	*e*P	Pb	07 05 28.7	-0.9
KBS				*i* S	Sn	07 05 52.5	-1.2
SPA0	Spitsbergen Ar	2.23	54	Pn	Pb	07 05 30.1	-1.4
	baz=230,slow=12						
SPA0				Sn	Sn	07 05 56.4	+0.1
	baz=246,slow=18						
SPA0	Spitsbergen Ar	2.23	54	Pn	Pb	07 05 30.1	-1.4
	baz=230,slow=12						
SPA0				⇑*i*P	Pb	07 05 30.2	-1.2
SPA0				*e*S	Sn	07 05 54.4	-1.9
SPA0				Sn	Sn	07 05 56.4	+0.1
	baz=246,slow=18						
SPA0				IAML		07 06 02.0	
	comp=Z,260nm,0.5s						
SPA0	Spitsbergen Ar	2.23	54	⇑*i*P	Pb	07 05 30.2	-1.2
SPA0				*i* S	Sn	07 05 56.3	0.0
SPITS	Spitsbergen Ar	2.23	54	Pn	Pb	07 05 30.2	-1.2
	baz=222,slow=15,SNR=617						
SPITS				Sn	Sb	07 05 56.9	-2.4
	baz=241,slow=19,SNR=20						
HOPEN	Hopen	4.04	89	Pn	Pn	07 05 54.2	+1.1
HOPEN				Sn	Sn	07 06 38.0	-2.9
HOPEN	Hopen	4.04	89	*e*P	Pn	07 05 54.0	+0.8
HOPEN				*e*S	Sn	07 06 37.5	-3.3
HOPEN				IAML		07 06 53.0	
	comp=Z,38nm,0.5s						
HOPEN	Hopen	4.04	89	*e*P	Pn	07 05 53.9	+0.8
HOPEN				*e*S	Sn	07 06 37.9	-2.9
DAG	Danmarks Havn	5.94	280	*i* P	Pn	07 06 18.0	-1.1
DAG				*e*S	Sn	07 07 20.0	-7.4
DAG				IAML		07 07 22.5	
	comp=Z,18nm,0.4s						
DAG	Danmarks Havn	5.94	280	*e*P	Pn	07 06 18.4	-0.7
DAG				*e*S	Sn	07 07 20.0	-7.4
DAG				IAML		07 07 22.5	
	comp=Z,18nm,0.4s						
NOR	Nord	6.36	327	Pn	Pn	07 06 25.6	+0.6
NOR				Sn	Sn	07 07 35.5	-2.4
NOR	Nord	6.36	327	*i* P	Pn	07 06 27.0	+2.0
NOR				*e*S	Sn	07 07 33.3	-4.7
NOR				IAML		07 07 38.0	
	comp=Z,11nm,0.5s						
NOR	Nord	6.36	327	*e*P	Pn	07 06 26.0	+1.0
NOR				*e*S	Sn	07 07 35.2	-2.7
NOR				IAML		07 07 38.0	
	comp=Z,11nm,0.5s						
DBG	Daneborg	7.35	262	Pn	Pn	07 06 38.8	+0.3
DBG	Daneborg	7.35	262	*i* P	Pn	07 06 38.8	+0.3
DBG	Daneborg	7.35	262	*e*P	Pn	07 06 37.4	-1.1
DBG				*e*S	Sn	07 07 54.9	-7.4
JMIC	Jan Mayen	7.47	224	LR	LR	07 08 42.8	
	comp=Z,177nm,18.6s,baz=72,slow=31						
ZFI2	Zemlya Franca-	8.41	45	*e*P	Pn	07 06 55.2	+2.2
ZFI2				*e*S	Sn	07 08 23.1	-5.2
ZFI	Zemlya Franca-	8.41	45	*e*P	Pn	07 06 55.2	+2.1
ZFI				*e*S	Sn	07 08 23.0	-5.3
ARA0	ARCESS Array S	9.06	137	Pn	Pn	07 06 59.9	-2.1
	baz=328,slow=12						
ARA0				Sn	Sn	07 08 31.4	-13
	baz=338,slow=22						
ARA0	ARCESS Array S	9.06	137	Pn	Pn	07 06 59.9	-2.1
	baz=328,slow=12						
ARA0				Sn	Sn	07 08 31.4	-13
	baz=338,slow=22						
ARCES	ARCESS Array B	9.06	137	Pn	Pn	07 07 00.8	-1.2
	baz=322,slow=11,SNR=2.2						
ARCES				Sn	Sn	07 08 33.0	-11
	baz=331,slow=18,SNR=4.4						
ARCES				LR	LR	07 10 38.2	
	comp=Z,158nm,19.1s,baz=320,slow=39						
SCO	Scoresbysund	10.40	246	*i* P	Pn	07 07 21.0	+0.8
SCO	Scoresbysund	10.40	246	*i* P	Pn	07 07 21.0	+0.8
APA0	Apatity Array	12.04	128	Pn	Pn	07 07 42.0	-0.7
	baz=319,slow=10						
APA0	Apatity Array	12.04	128	Pn	Pn	07 07 42.0	-0.7
	baz=319,slow=10						
NEEM	North Greenlan	12.51	300	*e*P	Pn	07 07 48.6	-0.7
NEEM				*e*S	Sn	07 09 54.8	-14
NEEM				IAML		07 09 58.4	
	comp=Z,7.3nm,0.5s						
NEEM	North Greenlan	12.51	300	*e*P	Pn	07 07 48.6	-0.7
NEEM				*e*S	Sn	07 09 54.8	-14
NEEM				IAML		07 09 58.4	
	comp=Z,7.3nm,0.5s						
SUMG	Summit	12.54	273	*i* P	Pn	07 07 48.0	-1.8
SUMG	Summit	12.54	273	*i* P	Pn	07 07 48.0	-1.8
BORG	Borgarnes	15.24	232	LR	LR	07 12 43.8	
	comp=Z,145nm,18.3s,baz=8.6,slow=31						
FINES	FINESS Array B	16.81	148	LR	LR	07 14 35.8	
	comp=Z,144nm,20.9s,baz=329,slow=35						
LSH	Leshukonskoye	16.91	115	P	Pn	07 08 47.2	-0.5
PRGR	Permogore	19.81	120	P	P	07 09 20.3	-1.4
RES	Resolute Bay	22.16	317	LR	LR	07 18 47.8	
	comp=Z,56nm,19.1s,baz=90,slow=37						
NRIK	Noril'sk	22.39	67	P	P	07 09 53.1	+3.7
	comp=Z,12nm,0.9s,baz=338,slow=7.5,SNR=16						
NRIK				LR	LR	07 21 28.9	
	comp=Z,134nm,18.7s,baz=344,slow=44						
KIRV	Kirov	23.37	118	LR	LR	07 19 26.2	
	comp=Z,152nm,18.8s,baz=336,slow=38						
FRB	Frobisher Bay	26.28	283	LR	LR	07 21 12.3	
	comp=Z,209nm,18.8s,baz=40,slow=37						
ARU	Arti	27.26	109	LR	LR	07 24 44.6	
	comp=Z,59nm,19.0s,baz=316,slow=44						
BELG	Belogornoye	28.86	125	LR	LR	07 22 20.8	
	comp=Z,133nm,19.8s,baz=331,slow=36						
AKTO	Aktyubinsk	32.76	114	LR	LR	07 25 29.4	
	comp=Z,98nm,18.4s,baz=4.7,slow=38						
BVAR	Borovoye Array	33.00	99	P	P	07 11 28.8	+2.5
	comp=Z,0.8nm,0.6s,baz=325,slow=7.4,SNR=3.9						
SCHQ	Schefferville	33.93	273	LR	LR	07 24 10.3	
	comp=Z,72nm,19.2s,baz=84,slow=34						
ZALV	Zalesovo Beam	35.40	85	P	P	07 11 49.7	+2.7
	comp=Z,0.7nm,0.6s,baz=333,slow=12,SNR=3.7						
KURBB	Kurchatov Arra	37.07	93	P	P	07 12 04.2	+2.8
	comp=Z,1.4nm,0.9s,baz=336,slow=7.5,SNR=7.5						
ILAR	Eielson Array	37.56	342	P	P	07 12 10.5	+5.2
	comp=Z,1.7nm,0.9s,baz=5.0,slow=7.0,SNR=12						
BRTR	Keskin Array B	39.05	147	LR	LR	07 30 29.8	
	comp=Z,72nm,18.3s,baz=10,slow=40						
GNI	Garni	40.21	134	LR	LR	07 29 30.3	
	comp=Z,78nm,18.2s,baz=348,slow=37						
MKAR	Makanchi Array	41.53	91	P	P	07 12 41.6	+3.0
	comp=Z,1.1nm,0.9s,baz=332,slow=7.4,SNR=6.1						
ULM	Lac du Bonnet	44.51	297	LR	LR	07 30 54.7	
	comp=Z,101nm,18.4s,baz=7.5,slow=35						
SADO	Sadowa	46.13	279	LR	LR	07 31 55.4	
	comp=Z,96nm,18.4s,baz=14,slow=35						
PDAR	Pinedale Array	54.32	306	LR	LR	07 37 40.5	
	comp=Z,62nm,19.1s,baz=33,slow=36						
TKL	Tuckaleechee C	55.87	280	LR	LR	07 38 01.7	
	comp=Z,117nm,18.0s,baz=14,slow=36						
KSRS	Korea Array	60.07	52	LR	LR	07 42 18.9	
	comp=Z,30nm,19.0s,baz=322,slow=37						
TORD	Torodi Ar. Bea	63.95	186	P	P	07 15 27.5	+3.0
	comp=Z,0.8nm,1.0s,baz=355,slow=9.8,SNR=2.9						
TXAR	Lajitas Array	66.21	297	P	P	07 15 41.9	+2.6
	comp=Z,0.6nm,0.9s,baz=32,slow=4.5,SNR=5.0						
TXAR				LR	LR	07 45 54.6	
	comp=Z,85nm,18.8s,baz=0.0,slow=37						

NOU 26 07:04:58.3, 15°.45S×167°.41E, h120^{km}**, MLv4.7**/7, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	2.38	162	P	Pn	07 05 36.6	0.0
YATNC	Mamie plateau,	6.59	184	P	Pn	07 06 32.3	-0.5
DZM	Mont Dzumac	6.65	188	P	Pn	07 06 33.9	+0.3

ISU ***26*** *07:18:33, 39°.20N×70°.80E, h5^{km}*
NNC ***26*** *07:18:35.8±8.2, 39°.26N×71°.48E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=73.2km s-min=35.5km az=168.0*
ISC 26 07:18:33.2±3.9, **39°.0N**±0°.2×**71°.1E**±0°.2, **h10**^{km}**, n6, σ2ˢ.53**/7, **5C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.05	349	*i* P	Pg	07 18 52.0	-1.4
BTK				*i* S	Sg	07 19 06.0	-1.1
FRG	Fergana	1.45	22	*e*P	Sn	07 19 22.0	+3.4
CHMG	Chimgan	2.65	342	*e*P	Sg	07 19 58.0	-0.4
KK02	Karatay Array	4.10	354	⇑Pn	Pn	07 19 38.2	+2.3
	1.8nm,0.4s,baz=177,slow=12						
KK02				⇑Lg	Lg	07 20 41.2	
	12nm,0.8s,baz=171,slow=28						
AAK	Ala-Archa	4.44	35	⇓Pg	Pb	07 19 49.8	-1.4
	1.0nm,0.4s						
AAK				⇑Lg	Lg	07 20 43.7	
	2.3nm,0.6s						
TKM2	Tokmak 2	5.17	40	⇑Pg	Pb	07 20 02.0	-1.8
	2.0nm,0.8s						
TKM2				⇑Lg	Lg	07 21 04.5	
	3.1nm,0.9s						

RSNC 26 07:20:22.0±1.8, **4°.36N×73°.74W, h4**^{km}±8^{km}**, ML3.1, Mw3.7, 1C-2D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VILC	Villavicencio,	0.25	168	⇑*i*Pg	Pg	07 20 25.8	-1.1
VILC				⇓*e*P		07 20 27.6	
CHIC	Chingaza	0.27	3	⇓*i*Pg	Pg	07 20 25.8	-1.6
CHIC				*e*P	Pb	07 20 27.5	-2.2
CHIC				*e*Sg	Sg	07 20 31.4	+0.4
CHIC				*e*S	Sb	07 20 32.6	-2.3
CHIC				*i*		07 20 37.1	
	comp=Z,2µm,0.6s						
ROSC	El Rosal	0.75	310	*e*P	Pg	07 20 36.6	+0.2
ROSC				*i*		07 20 58.0	
	comp=Z,330nm,0.4s						
PRAC	Prado	1.31	241	*e*P	Pg	07 20 43.2	-3.9
PRAC				*e*S	Sg	07 21 01.9	-2.1
PRAC				*i*		07 21 10.6	
	comp=Z,771nm,0.6s						
SPBC	San Pablo de B	1.33	346	*e*P	Pn	07 20 47.2	-0.2
SPBC				*i*		07 21 15.7	
	comp=Z,228nm,0.6s						
ORTC	Ortega, Tolima	1.56	254	*e*P	Pn	07 20 47.9	-2.7
ORTC				*e*Pg	Pb	07 20 49.7	-1.8
ORTC				*e*Sg	Sn	07 21 09.3	-2.0
ORTC				*i*		07 21 13.6	
	comp=Z,218nm,0.4s						
PTGC	Puerto Gaitan,	1.61	96	*e*P	Pb	07 20 51.9	-0.5
PTGC				*e*S	Sg	07 21 15.7	+1.8
PTGC				*i*		07 21 19.4	
	comp=Z,417nm,0.4s						
NORC	Norcasia	1.64	317	*e*P	Pn	07 20 49.9	-1.8
NORC				*e*Pg	Pb	07 20 51.3	-1.6
NORC				*e*Sg	Sn	07 21 12.9	-0.4
NORC				*i*		07 21 16.4	
	comp=Z,74nm,0.2s						
ANIL	Santa Ana	1.66	275	*e*P	Pn	07 20 49.8	-2.4
ANIL				*e*S	Sn	07 21 10.1	-3.9
ANIL				*i*		07 21 23.7	
	comp=Z,383nm,0.4s						
RUSC	La Rusia	1.66	23	*e*P	Pg	07 20 54.4	+0.5
RUSC				*e*S	Sg	07 21 18.3	+2.8
RUSC				*i*		07 21 25.9	
	comp=Z,240nm,0.4s						
GUY2C	Guyana, Caldas	1.83	298	*e*P	Pn	07 20 53.8	-0.9
GUY2C				*i*		07 21 22.4	
	comp=Z,495nm,0.0s						
GUVC	San Jose del G	2.12	148	*e*P	Pb	07 20 59.7	-1.3
GUVC				*e*S	Sb	07 21 27.9	+0.2
MACC	Macarena, Meta	2.20	183	*e*P	Pn	07 20 58.8	-0.6
MACC				*e*S	Sn	07 21 26.9	-0.1
MACC				*i*		07 21 38.2	
	comp=Z,241nm,0.4s						
PTBC	PUERTO BERRIO,	2.28	342	*e*P	Pn	07 21 00.6	+0.1
PTBC				*e*Pg	Pb	07 21 03.4	-0.4
PTBC				*e*S	Sn	07 21 29.5	+0.4
PTBC				*i*		07 21 39.9	
	comp=Z,53nm,0.4s						
BARC	Barichara	2.29	14	*e*P	Pb	07 21 02.8	-1.3
BARC				*e*S	Sb	07 21 31.6	-1.3
BARC				*i*		07 21 39.6	
	comp=Z,73nm,0.3s						
BETC	Betania	2.38	226	*e*P	Pn	07 21 01.7	-0.1
BETC				*e*S	Sn	07 21 28.1	-3.3
BETC				*i*		07 21 36.3	
	comp=Z,323nm,0.9s						
HELC	Santa Helena	2.54	316	*e*P	Pn	07 21 03.6	-0.8
HELC				*e*Pg	Pb	07 21 06.1	-2.4
HELC				*e*S	Sn	07 21 37.5	+1.5
HELC				*i*		07 21 39.9	
	comp=Z,59nm,0.4s						
PLMC	San Jos del P	2.59	282	*e*P	Pn	07 21 04.3	-0.4
PLMC				*e*Pg	Pb	07 21 06.8	-2.3
PLMC				*e*S	Sn	07 21 36.0	-0.7
PLMC				*i*		07 21 44.1	
	comp=Z,41nm,0.6s						
YOTC	Yotoco, Valle	2.62	262	*e*P	Pn	07 21 04.7	-0.5
YOTC				*e*Pg	Pb	07 21 07.6	-2.1
YOTC				*e*S	Sn	07 21 37.9	+0.3
YOTC				*i*		07 21 42.0	
	comp=Z,43nm,0.6s						
MARP	Paez Belalcaza	2.67	236	*e*P	Pn	07 21 06.7	+0.6
MARP				*e*Pg	Pb	07 21 09.6	-1.0
MARP				*e*S	Sn	07 21 40.9	+1.9
CBOC	Ciudad Bolivar	2.71	304	*e*P	Pn	07 21 07.7	+1.2
CBOC				*e*Pg	Pb	07 21 09.5	-1.7
CBOC				*e*S	Sn	07 21 39.8	-0.1
CBOC				*e*Sg	Sb	07 21 43.5	-1.3
CBOC				*i*		07 21 45.2	
	comp=Z,51nm,0.6s						
BRRC	Barranca, Sant	2.73	1	*e*P	Pn	07 21 06.7	0.0
BRRC				*e*Pg	Pb	07 21 08.8	-2.7
BRRC				*e*Sg	Sb	07 21 47.2	+1.9
BRRC				*i*		07 21 53.2	
	comp=Z,25nm,0.6s						
GARC	Garzon, Huila	2.77	219	*e*P	Pn	07 21 08.1	+0.6
GARC				*e*Pg	Pb	07 21 09.9	-2.4
GARC				*e*S	Sn	07 21 41.8	+0.2
GARC				*i*		07 21 50.7	
	comp=Z,254nm,0.2s						
TAMC	Tame, Arauca	2.84	43	*e*P	Pn	07 21 10.4	+2.3
TAMC				*e*S	Sb	07 21 48.0	-0.4
TAMC				*i*		07 22 07.4	
	comp=Z,57nm,0.4s						
PAMC	Pamplona, Colo	3.14	19	*e*P	Pb	07 21 15.9	-2.8
PAMC				*e*Sg	Sg	07 22 01.3	-1.7
PAMC				*i*		07 22 07.3	
	comp=Z,34nm,0.7s						
ZARC	Zaragoza, Cauc	3.31	340	*e*P	Pn	07 21 15.2	+0.6
ZARC				*e*Pg	Pb	07 21 16.9	-4.3
ZARC				*e*S	Sn	07 21 55.2	+0.9
ZARC				*i*		07 22 03.6	
	comp=Z,27nm,0.5s						
PCON	Cinco Dias	3.33	233	*e*P	Pn	07 21 16.5	+1.1
PCON				*e*S	Sb	07 22 02.4	-0.7
PCON				*i*		07 22 09.1	
	comp=Z,99nm,0.3s						
FLOC	Florencia	3.35	215	*e*P	Pn	07 21 15.8	+0.5
FLOC				*e*Pg	Pb	07 21 18.5	-3.5
FLOC				*e*S	Sn	07 21 56.9	+1.4
FLOC				*i*		07 22 06.5	
	comp=Z,150nm,0.7s						
POPC	Popayan, Colom	3.44	238	*e*P	Pn	07 21 17.9	+1.3
POPC				*e*S	Sn	07 22 01.5	+3.5
POPC				*i*		07 22 08.0	
	comp=Z,19nm,0.4s						
DBBC	Dabeiba	3.61	317	*e*P	Pn	07 21 22.1	+3.3
DBBC				*e*Pg	Pb	07 21 24.3	-2.1
DBBC				*e*S	Sn	07 22 00.3	-1.6
DBBC				*i*		07 22 33.4	
	comp=Z,76nm,0.4s						
SOTA	Rioblanco	3.61	232	*e*P	Pn	07 21 21.1	+1.9
SOTA				*e*Pg	Pb	07 21 25.4	-1.3
SOTA				*e*S	Sb	07 22 08.1	-3.0
SOTA				*i*		07 22 14.6	
	comp=Z,36nm,0.5s						
BBAC	Balboa, Cauca	4.20	237	*e*P	Pn	07 21 27.7	+0.7
BBAC				*e*S	Sn	07 22 16.2	-0.5
BBAC				*e*Sg	Sb	07 22 29.2	+1.5
BBAC				*i*		07 22 33.5	
	comp=N,42nm,0.7s						
SMLC	San Martn de	4.43	356	*e*P	Pn	07 21 31.1	+1.2
SMLC				*e*S	Sn	07 22 23.7	+1.7
SMLC				*i*		07 22 35.2	
	comp=Z,9.8nm,0.3s						

ISK ***26*** *07:37:06.6, 41°.82N×43°.12E, h7^{km}, ML3.0/7*
NORS ***26*** *07:37:07.7±0.0, 41°.89N×43°.12E, h5^{km}, MPVA3.6*
TIF ***26*** *07:37:07.4, 41°.77N×43°.14E, h18^{km}*
DDA ***26*** *07:37:12.0, 41°.51N×42°.88E, h2^{km}±18^{km}, ML2.4*
ISC 26 07:37:08.0±1.0, **41°.78N**±0°.02×**43°.13E**±0°.02, **h9**^{km}±9^{km}, **n38, σ1ˢ.28**/71, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABS	Abastumani	0.24	263	P	Pg	07 37 12.6	-0.3
ABS				S	Sg	07 37 17.2	+1.1
EPOS	Posof	0.41	227	*i* P	Pg	07 37 16.0	-0.1
EPOS				*i* S	Sg	07 37 21.9	+0.4
AKH	Akhalkalaki	0.46	144	P	Pg	07 37 16.7	-0.3
AKH				S	Sg	07 37 23.9	+0.8
AKH	Akhalkalaki	0.46	144	PG	Pg	07 37 16.8	-0.3
AKH				SG	Sg	07 37 24.0	+0.9
BRNG	Burnasheti	0.55	107	P	Pg	07 37 18.5	-0.1
TKB	Tkibuli	0.58	350	P	Pb	07 37 19.2	-1.2
TKB				S	Sb	07 37 27.1	-1.6
BGD	Bogdanovka	0.63	146	P	Pg	07 37 19.6	-0.5
BGD				S	Sg	07 37 28.9	+0.6
TRLG	Trialeti	0.77	108	P	Pg	07 37 22.2	-0.6
TRLG				S	Sg	07 37 33.3	+0.5
ONI	Oni	0.84	16	P	Pb	07 37 23.7	-1.2
ONI				S	Sb	07 37 36.0	-0.3
DMNI	Dmanisi	0.92	119	P	Pg	07 37 24.4	-1.2
DMNI				S	Sg	07 37 36.9	-0.6
BATM	Batumi	1.09	261	P	Pg	07 37 27.7	-1.3
BATM				S	Sg	07 37 42.7	-0.4
BATM	Batumi	1.09	261	PN	Pg	07 37 27.9	-1.1
BATM				SN	Sb	07 37 43.2	-0.2
KARS	Kars	1.16	182	PN	Pg	07 37 30.5	+0.3
ZEI	Tsey	1.16	29	*e*Pg	Pb	07 37 29.7	-0.7
ZEI				*e*Sg	Sn	07 37 46.5	-0.2
DIGR	Digorskoe uzhe	1.17	17	*i* Pg	Pn	07 37 30.1	-0.7
DIGR				*e*Sg	Sn	07 37 46.8	-0.2
BTNK	Botanikuri	1.25	94	P	Pn	07 37 29.4	-2.4
BTNK				S	Sg	07 37 46.4	-2.0
HOPA	Hopa-Artvin	1.32	253	PN	Pn	07 37 32.2	-0.5
HOPA				SN	Sb	07 37 50.3	+0.2
SENK	Senkaya-Erzuru	1.35	206	PN	Pn	07 37 33.2	-0.2
SENK				SN	Sn	07 37 52.5	+0.9
LACR	Lac	1.36	39	*e*Pg	Pg	07 37 35.4	+1.3
LACR				*e*Sg	Sn	07 37 52.6	+1.1
MTEO	Meteo	1.38	49	P	Pn	07 37 33.4	-0.5
MTEO				S	Sn	07 37 52.5	+0.1
PNSH	Pansheti	1.39	52	P	Pn	07 37 33.6	-0.3
PNSH				S	Sg	07 37 52.0	-0.9
KORR	Kora	1.48	28	*e*Pg	Pg	07 37 35.2	-1.2
KORR				*e*Sg	Sg	07 37 58.3	+2.9
NEY	Neytrino	1.50	349	*e*Pg	Pg	07 37 36.2	-0.5
NEY				*e*Sg	Sg	07 37 56.3	+0.2
LSNR	Lesken	1.58	19	*e*Pg	Pg	07 37 38.2	-0.1
LSNR				*e*Sg	Sg	07 38 01.2	+2.4
ARNR	Ardon	1.64	31	*e*Pg	Pg	07 37 41.5	+2.1
ARNR				*e*Sg	Sg	07 38 04.3	+3.7
STDR	Stavd-Durt	1.73	23	*e*Pg	Pg	07 37 43.0	+1.8
STDR				*e*Sg	Sg	07 38 08.1	+4.5
EATA	Eleskirt	1.98	194	*i* P	Pb	07 37 44.6	+0.2
EATA				*i* S	Sb	07 38 10.8	+1.5
KOTA	Agri, Merkez-K	1.98	178	*i* P	Pb	07 37 44.7	+0.3
KOTA				*i* S	Sg	07 38 12.5	+0.9
SHA1	Shidzhatmaz	1.98	350	*e*Pg	Pg	07 37 45.2	-0.9
SHA1				*e*Sg	Sg	07 38 11.9	+0.1
KOPR	Koprukoy-ERZUR	2.04	209	PN	Pn	07 37 43.1	+0.4
KRIK	Erzurum-spir	2.21	230	*i* P	Pg	07 37 49.5	-0.8
KRIK				*i* S	Sb	07 38 17.4	+1.7
ERZM	Erzurum	2.30	216	*i* P	Pg	07 37 52.4	+0.2
ERZM				*i* S	Sb	07 38 20.5	+1.9
ERZM	Erzurum	2.30	216	PN	Pn	07 37 46.6	+0.1
LGD	Lagodekhi	2.33	88	P	Pb	07 37 48.5	-1.7
LGD				S	Sb	07 38 20.1	+1.1
EJDE	Erzurum, Palan	2.39	216	*i* P	Pg	07 37 53.4	-0.5
EJDE				*i* S	Sg	07 38 27.0	+2.1
EJDE				IAML		07 38 33.0	
	comp=E,58nm,0.8s						
EJDE				IAML		07 38 36.0	
	comp=N,24nm,0.9s						
EMRE	Erzurum,Aziziy	2.39	224	*i* P	Pg	07 37 53.6	-0.3
EMRE				*i* S	Sg	07 38 24.4	-0.5
EMRE				IAML		07 38 29.0	
	comp=N,28nm,1.1s						
EMRE				IAML		07 38 52.0	
	comp=E,39nm,0.7s						
BAYT	Aydıntepe-Bayb	2.65	239	PN	Pn	07 37 51.4	+0.2
BAYB	BAYBURT	2.65	236	*i* P	Pb	07 37 54.4	-1.5
BAYB				*i* S	Sb	07 38 28.8	+0.2
BAYB				IAML		07 38 31.0	
	comp=E,26nm,0.4s						
BAYB				IAML		07 38 34.0	
	comp=N,22nm,0.3s						

IDC ***26*** *07:43:13.9±4.1, 53°.84N×91°.03E, h0^{km}, mb1 3.3/3, mb1mx2.8/42, mbtmp3.3/3, ML2.7/3, Error ellipse: s-maj=38.1km s-min=26.8km az=64.0*
NNC ***26*** *07:43:16.2±4.6, 53°.73N×90°.71E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=34.0km s-min=25.5km az=57.0, Suspected Mining explosion.*
ISC 26 07:43:15.4±4.1, **53°.8N**±0°.1×**90°.8E**±0°.2, **h0**^{km}**, n10, σ1ˢ.88**/14, **7C-7D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.57	276	⇑Pg	Pb	07 44 17.8	-1.6
	2.3nm,0.8s						
ZAA0				⇑Lg	Lg	07 45 09.3	
	16nm,0.9s						
ZALV	Zalesovo Beam	3.57	276	Pn	Pn	07 44 13.6	+1.6
	0.4nm,0.3s,baz=93,slow=14,SNR=4.1						
ZALV				Pg	Pb	07 44 17.8	-1.6
	1.6nm,0.3s,baz=92,slow=15,SNR=14						
ZALV				Lg	Lg	07 45 08.3	

	3.9nm,0.3s,baz=93,slow=27,SNR=9.1						
KURK	Kurchatov	8.09	253	⇑Pn	Pn	07 45 17.4	+3.3
	1.3nm,0.7s						
KURK				⇓Sn	Sn	07 46 48.6	+2.4
	7.9nm,1.0s						
KURK				⇓Lg	Lg	07 47 31.6	
	30nm,1.0s						
KURBB	Kurchatov Arra	8.19	252	Pn	Pn	07 45 15.5	+0.1
	0.2nm,0.3s,baz=64,slow=15,SNR=6.6						
KURBB	Kurchatov Arra	8.19	252	⇑Pn	Pn	07 45 15.2	-0.1
	1.9nm,0.4s						
KURBB				⇓Sn	Sn	07 46 45.9	-2.6
	23nm,0.9s						
KURBB				⇑Lg	Lg	07 47 32.4	
	57nm,0.9s						
MK31	Makanchi Array	8.85	222	⇓Pn	Pn	07 45 24.9	+0.3
	0.9nm,0.7s,baz=42,slow=14,SNR=14						
MK31				⇓Sn	Sn	07 47 06.5	+1.5
	4.5nm,0.8s,baz=46,slow=23,SNR=4.8						
MK31				⇓Lg	Lg	07 47 58.1	
	11nm,0.8s,baz=39,slow=25,SNR=4.2						
MKAR	Makanchi Array	8.85	222	Pn	Pn	07 45 25.2	+0.6
	0.3nm,0.3s,baz=41,slow=14,SNR=14						
MKAR				Sn	Sn	07 47 06.8	+1.9
	0.3nm,0.3s,baz=41,slow=24,SNR=5.6						
MKAR				Lg	Lg	07 47 53.6	
	0.1nm,0.3s,baz=34,slow=22,SNR=6.9						
MAKZ	Makanchi	8.97	223	⇑Pn	Pn	07 45 25.5	-0.6
	1.3nm,0.8s						
MAKZ				⇓Sn	Sn	07 47 06.6	-1.2
	2.0nm,0.7s						
MAKZ				⇑Lg	Lg	07 47 56.2	
	15nm,1.1s						
SONM	Songino Array	11.48	115	Lg	Lg	07 49 11.4	
	0.1nm,0.3s,baz=303,slow=29,SNR=9.7						
I34MN	SONGINO INFRAS	11.51	115	*i*		08 49 30.0	
	baz=310,slow=333,SNR=2.2						

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*PAS **26** 08:04:30.9±1.2, 35°.21N±0°.02×117°.28W±0°.04, h1^{km}±7^{km}, Mwr3.7/6, ML3.5/68(NEIC), Error ellipse: s-maj=5.2km s-min=3.0km az=114.0*

*ANF **26** 08:04:30.3±0.1, 35°.21N×117°.29W, h9^{km}±1^{km}, ML3.9/41, Error ellipse: s-maj=1.2km s-min=0.9km az=40.0*

*NEIC **26** 08:04:30.9, 35°.21N×117°.28W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.34; $M_{\theta\theta}$-3.06; $M_{\phi\phi}$2.73; $M_{r\theta}$0.04; $M_{\theta\phi}$4.01; $M_{\phi r}$1.23; Fault plane solution: $M_0$5.10000×10^{14} NP1:ϕ_s73.00000°, δ77.00000°, λ6.00000°. NP2:ϕ_s341.00000°, δ85.00000°, λ167.00000°. Principal axes: T 5.0417, Plg13.0000°, Azm296.0000°; N 0.1220, Plg76.0000°, Azm140.0000°; P -5.1637, Plg6.0000°, Azm28.0000°;*

*NEIC **26** 08:04:30.8±1.3, 35°.19N±0°.02×117°.24W±0°.05, h4^{km}±8^{km} Error ellipse: s-maj=6.9km s-min=0.9km az=114.0*

*IDC **26** 08:04:31.1±0.8, 35°.20N×117°.08W, h0^{km}, mb1 3.4/4, mb1mx3.0/50, mbtmp3.0/4, ML3.5/4, Error ellipse: s-maj=18.6km s-min=5.6km az=77.0*

ISC 26 08:04:30.9±1.0, **35°.21N**±0°.02×**117°.27W**±0°.02, **h7**^{km}±9^{km}, **n85,** σ**0^{s}.88**/114, **Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSC	Goldstone, Bar	0.39	76		Pg	08 04 38.9	+0.3
GSC	Goldstone, Bar	0.39	76	P	Pg	08 04 38.9	+0.3
	baz=257,SNR=1000						
GSC				S	Sg	08 04 44.4	+0.6
	baz=257						
RRX	Edison Barstow	0.40	146	P	Pg	08 04 39.0	+0.3
	baz=326,SNR=100						
RRX				S	Sg	08 04 44.5	+0.5
	baz=326						
LRMC	Laurel Mtn Rad	0.43	309	P	Pg	08 04 39.2	-0.2
	baz=129,SNR=52						
LRMC				S	Sg	08 04 44.5	-0.5
	baz=129						
EDW2	Edwards Air Fo	0.68	241	P	Pg	08 04 43.5	-0.4
	baz=60,SNR=196						
EDW2				S	Sg	08 04 52.2	-0.6
	baz=60						
QSM	Queen of Sheba	0.82	23	Pg	Pg	08 04 46.5	-0.2
QSM				IAML		08 05 00.6	
	comp=E,3μm,0.4s						
HEC	Hector,Ludlow	0.85	116	P	Pg	08 04 47.0	-0.3
	baz=297,SNR=455						
HEC				S	Sb	08 04 59.9	0.0
	baz=297						
MPMC	Manual Prospec	0.87	348	P	Pg	08 04 46.9	-0.7
	baz=169,SNR=447						
MPMC				S	Sg	08 04 58.6	-0.2
	baz=169						
BBRC	Big Bear Solar	0.99	163	P	Pg	08 04 49.6	-0.3
	baz=343,SNR=49						
BBRC				S	Sg	08 05 02.8	+0.1
	baz=343						
BFSC	Mount Baldy Ra	1.02	198	P	Pg	08 04 49.9	-0.6
	baz=18,SNR=128						
BFSC				S	Sg	08 05 03.9	+0.1
	baz=18						
SHOC	Shoshone, Teco	1.06	49	P	Pg	08 04 51.0	-0.4
	baz=230,SNR=238						
SHOC				S	Sb	08 05 05.9	+0.1
	baz=230						
ISA	Isabella, Lake	1.08	295	Pg	Pg	08 04 51.1	-0.7
ISA				IAML		08 05 07.7	
	comp=N,1μm,0.6s						
ISA				IAML		08 05 07.9	
	comp=E,1μm,0.6s						
ISA	Isabella, Lake	1.08	295	P	Pg	08 04 51.0	-0.7
	baz=114,SNR=1000						
ISA				S	Sg	08 05 05.4	-0.4
	baz=114						
GWY	Greenwater Val	1.09	26	Pg	Pg	08 04 51.5	-0.4
TUQ	Turquoise Moun	1.12	78	P	Pg	08 04 51.9	-0.6
	baz=259,SNR=111						
TUQ				S	Sb	08 05 06.9	-0.8
	baz=259						
MWC	Mount Wilson	1.18	214		Pg	08 04 52.7	-0.8
RSBC	Riverside Bore	1.23	182		Pg	08 04 53.9	-0.7
PASC	Pasadena Art C	1.28	216		Pg	08 04 54.6	-0.9
PASC				IAML		08 05 14.2	
	comp=N,752nm,0.9s						
PASC				IAML		08 05 17.7	
	comp=E,1μm,0.7s						
ARVC	Arvin	1.28	267	P	Pg	08 04 54.4	-1.1
	baz=86,SNR=103						
ARVC				S	Sg	08 05 10.8	-1.3
	baz=86						
DECC	Green Verdugo	1.29	223	P	Pg	08 04 54.8	-0.9
	baz=42,SNR=124						
DECC				S	Sg	08 05 11.8	-0.8
	baz=42						
FURC	Furnace Creek,	1.30	15	P	Pg	08 04 54.3	-1.6
	baz=195,SNR=455						
FURC				S	Sg	08 05 12.5	-0.2
	baz=195						
OSI	Osito Audit: C	1.33	244		Pn	08 04 56.3	+0.2
OSI	Osito Audit: C	1.33	244	P	Pn	08 04 54.9	-1.1
	baz=63,SNR=74						
OSI				S	Sg	08 05 12.8	-1.0
	baz=63						
GVRC	Garvey Reservo	1.35	211		Pn	08 04 56.4	+0.1
GR2C	Griffith Obs.	1.38	218		Pn	08 04 56.8	+0.1
GMRC	Granite Mounta	1.39	107	P	Pn	08 04 55.2	-1.7
	baz=288,SNR=622						
GMRC				S	Sn	08 05 15.4	-0.2
	baz=288						
CWC	Cottonwood Cre	1.39	332	P	Pn	08 04 56.2	-0.8
	baz=152						
CWC				S	Sg	08 05 14.9	-0.9
	baz=152						
BELC	Belle Mtn. Jos	1.60	139	P	Pn	08 04 58.9	-0.9
	baz=319,SNR=154						
BELC				Sb	Sg	08 05 22.0	-0.3
	baz=319						
MURC	Murrieta	1.61	178	P	Pn	08 04 59.2	-0.5
	baz=358,SNR=174						
MURC				Sb	Sb	08 05 21.9	+0.5
	baz=358						
VES	Vestal, Richgr	1.61	294	P	Pn	08 04 58.8	-1.0
	baz=113,SNR=292						
VES				Sb	Sn	08 05 21.6	+0.8
	baz=113						
FMP	Fort Macarthur	1.71	210	Pb	Pn	08 05 02.2	+1.0
	baz=29						
PFO	Pinyon Flats O	1.73	157	Pn	Pn	08 05 00.8	-0.7
	comp=E,10nm,0.3s,baz=344,slow=17,SNR=65						
PFO				Sn	Sn	08 05 22.5	-1.4
	comp=E,72nm,0.3s,baz=330,slow=21,SNR=18						
PFO				Lg	Lg	08 05 25.6	
	comp=E,90nm,0.3s,baz=85,slow=14,SNR=17						
PFO	Pinyon Flats O	1.73	157		Pn	08 05 00.9	-0.6
PFO				IAML		08 05 26.2	
	comp=E,444nm,0.5s						
PFO	Pinyon Flats O	1.73	157	P	Pn	08 05 00.8	-0.7
	baz=337,SNR=22						
PFO				S	Sn	08 05 22.3	-1.6
	baz=337						
GRAC	Grapevine Rang	1.79	358	P	Pn	08 05 01.9	-0.3
	baz=178,SNR=173						
TPNV	Topopah Spring	1.92	25		Pn	08 05 04.3	0.0
TPNV				IAML		08 05 39.7	
	comp=E,300nm,0.6s						
TPNV	Topopah Spring	1.92	25	P	Pn	08 05 04.0	-0.3
	baz=206,SNR=343						
TPNV				S	Sn	08 05 28.4	-0.4
	baz=206						
TIN	Tinemaha, Big	2.00	337	P	Pn	08 05 05.2	-0.1
	baz=157,SNR=18						
CIS	Catalina Islan	2.04	208	P	Pn	08 05 06.1	+0.5
	baz=27						
CIS				Sb	Sb	08 05 34.9	+1.1
	baz=27						
IRM	Iron Mountain	2.04	120	P	Pn	08 05 04.2	-1.5
	baz=302,SNR=36						
IRM				Sb	Sg	08 05 34.9	-1.6
	baz=302						
LCH	Last Change Ra	2.04	352		Pn	08 05 06.2	+0.3
LCH				IAML		08 05 38.0	
	comp=E,244nm,0.6s						
VOG	Valley Oaks Go	2.04	303	P	Pn	08 05 05.6	-0.2
	baz=122,SNR=51						
PKM	Mcpherson Peak	2.11	262	P	Pn	08 05 05.3	-1.5
	baz=80,SNR=23						
SHPR	Sheep Range	2.15	52	Pn	Pn	08 05 07.2	-0.2
SHPR				IAML		08 05 41.8	
	comp=E,308nm,0.8s						
BC3	Big Chuckawall	2.16	135	Pb	Pb	08 05 10.5	+0.1
	baz=316						
NEE2	Needles Airpor	2.22	101	Pb	Pb	08 05 11.3	-0.1
	baz=282						
109C	Camp Elliot, M	2.32	177		Pn	08 05 09.6	+0.1
109C				IAML		08 05 44.0	
	comp=N,196nm,0.5s						
109C				IAML		08 05 46.4	
	comp=E,400nm,0.8s						
109C	Camp Elliot, M	2.32	177	P	Pn	08 05 09.3	-0.2
	baz=356,SNR=13						
109C				Sb	Sb	08 05 41.7	-0.2
	baz=356						
MONP2	Monument Peak	2.42	163	Pb	Pb	08 05 14.9	+0.1
	baz=343						
MONP2				Sb	Sb	08 05 45.8	+0.9
	baz=343						
PAGB	Antelope Grade	2.49	283		Pn	08 05 11.9	0.0
PAGB				IAML		08 05 57.0	
	comp=N,277nm,1.2s						
PAGB				IAML		08 06 11.3	
	comp=E,294nm,1.0s						
SWSC	Sam W. Stewart	2.57	151	Pg	Pg	08 05 19.0	-1.1
	baz=332						
BAR	Barrett	2.57	169		Pn	08 05 12.7	-0.4
BAR				IAML		08 05 52.8	
	comp=E,210nm,0.6s						
BAR				IAML		08 05 52.9	
	comp=N,151nm,0.2s						
TKX	Tecate	2.69	168		Pn	08 05 14.9	+0.2
TKX				IAML		08 05 57.4	
	comp=N,169nm,0.2s						
TKX				IAML		08 05 57.6	
	comp=E,142nm,0.2s						
TJX	Tijuana	2.70	176		Pn	08 05 15.5	+0.8
MLAC	Mammoth, Mammo	2.73	333	Pg	Pb	08 05 21.5	+1.3
	baz=152						
IKP	In-Ko-Pah, Jac	2.73	159	P	Pn	08 05 14.3	-1.0
	baz=340						
PDMCI	Parker Dam,Lak	2.73	108	P	Pn	08 05 14.5	-0.7
	baz=290						
PRN	Pahroc Range	2.83	39		Pn	08 05 16.3	-0.5
PRN				IAML		08 05 36.8	
	comp=N,243nm,0.6s						
TPH	Tonopah	2.86	1		Pn	08 05 17.6	+0.3
GLA	Glamis	2.96	136	Pb	Pb	08 05 25.4	+1.4
	baz=317						
PMPB	Monarch Peak	3.04	290		Pn	08 05 19.0	-0.6
PMPB				IAML		08 06 23.8	
	comp=N,248nm,0.8s						
LHV	Little Huntoon	3.19	342		Pn	08 05 22.8	+1.2
LHV				IAML		08 06 21.8	
	comp=E,184nm,0.8s						
LHV				IAML		08 06 25.9	
	comp=N,120nm,0.8s						
NV11	Mina Array Sit	3.29	348	Pn	Pn	08 05 23.6	+0.5
NVAR	Mina Array Bea	3.32	346	Pn	Pn	08 05 24.1	+0.6
	comp=N,2.3nm,0.3s,baz=169,slow=15,SNR=17						
NVAR				Pg	Pg	08 05 33.2	-1.3
	comp=N,14nm,0.3s,baz=163,slow=18,SNR=45						
NVAR				Lg	Lg	08 06 17.4	
	comp=N,6.9nm,0.3s,baz=162,slow=33,SNR=4.3						
R11A	Troy Canyon, C	3.41	23		Pn	08 05 24.6	-0.2
R11A	Troy Canyon, C	3.41	23	P	Pn	08 05 24.2	-0.6
	baz=204						
RYN	Ryan	3.56	344		Pn	08 05 27.3	+0.5
RYN				IAML		08 06 28.4	
	comp=E,72nm,1.5s						
LCMT	Little Creek M	3.72	60		Pn	08 05 29.6	+0.6
LCMT				IAML		08 06 36.6	
	comp=N,55nm,1.9s						
SAO	San Andreas Ge	3.73	296	Pn	Pn	08 05 29.2	+0.3
CMB	Columbia Colle	3.77	319		Pn	08 05 30.6	+1.0
CMB				IAML		08 06 29.9	
	comp=E,101nm,1.3s						
CMB				IAML		08 06 29.9	
	comp=N,112nm,1.1s						
KVN	Kaiserville	3.89	350	Pn	Pn	08 05 32.0	+0.6
KVN				IAML		08 06 39.5	
	comp=N,52nm,0.8s						
CCUT	Cedar City	3.92	52		Pn	08 05 33.0	+1.2
KNB	Kanab	4.03	62		Pn	08 05 34.0	+0.7
KNB				IAML		08 06 44.7	
	comp=E,51nm,1.0s						
KNB				IAML		08 06 49.7	
	comp=N,86nm,1.0s						
YERR	Yerington	4.09	338		Pn	08 05 35.2	+1.1
YERR				IAML		08 06 52.1	
	comp=E,65nm,1.7s						
PAHR	Pah Rah Range	4.79	340		Pn	08 05 45.5	+1.7
WUAZ	Wupatki	4.83	85	P	Pn	08 05 44.9	+0.7
	baz=268						
X16A	Lo Mia Camp, P	4.86	98		Pn	08 05 45.5	+0.8
214A	Organ Pipe Nat	4.94	130	P	Pn	08 05 44.1	-1.5
	baz=312						
MTPU	Mount Pierson	4.97	54		Pn	08 05 48.0	+1.7
MTPU				IAML		08 07 11.3	
	comp=N,27nm,1.4s						
MTPU				IAML		08 07 20.6	
	comp=E,21nm,1.2s						
BMN	Battle Mountai	5.21	0		Pn	08 05 50.2	+0.7
BMN				IAML		08 07 22.8	
	comp=N,24nm,0.9s						
ELK	Elko	5.75	16	Pn	Pn	08 05 57.6	+0.6
	comp=N,0.7nm,0.3s,baz=200,slow=11,SNR=23						
ELK				Sn	Sn	08 07 03.0	-0.4
	comp=N,1.0nm,0.3s,baz=276,slow=23,SNR=6.5						
ELK				Lg	Lg	08 07 32.3	
	comp=N,3.1nm,0.3s,baz=93,slow=20,SNR=7.6						
TUC	Tucson	6.13	116	P	Pn	08 06 00.7	-1.3
	baz=300						
MVCO	Mesa Verde	7.37	72	Pg	Pg	08 06 50.2	-1.8
	baz=257						
PDAR	Pinedale Array	9.64	36	Pn	Pn	08 06 53.4	+3.1
	comp=N,0.1nm,0.3s,baz=234,slow=12,SNR=4.1						
TXAR	Lajitas Array	12.91	113	Pn	Pn	08 07 36.4	+1.4
	comp=N,0.1nm,0.3s,baz=294,slow=13,SNR=8.3						

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*JMA **26** 08:06:06.1, 38°.72N×141°.56E, h58^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s63.00000°, δ58.00000°, λ12.00000°. NP2:ϕ_s326.00000°, δ79.00000°, λ148.00000°. Principal axes: T Plg30.0000°, Azm280.0000°; N Plg56.0000°, Azm130.0000°; P Plg14.0000°, Azm18.0000°;*

JMA Felt I J1.

*NIED **26** 08:06:06.1, 38°.72N×141°.56E, h58^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.13; $M_{\theta\theta}$-6.07; $M_{\phi\phi}$6.20; $M_{r\theta}$0.39; $M_{\theta\phi}$7.08; $M_{\phi r}$3.23; Fault plane solution: $M_0$9.88000×10^{14} NP1: ϕ_s339.00000°, δ83.00000°, λ164.00000°. NP2: ϕ_s71.00000°, δ74.00000°, λ7.00000°.*

*IDC **26** 08:06:07.2±2.2, 38°.70N×141°.45E, h64^{km}±21^{km}, mb3.5/9, mb1 3.8/13, mb1mx3.5/49, mbtmp3.9/13, MS2.7/6, Ms1 2.7/6, ms1mx2.5/43 Error ellipse: s-maj=21.7km s-min=15.6km az=102.0*

ISC 26 08:06:06.3±0.8, **38°.70N**±0°.04×**141°.62E**±0°.06, **h56**^{km}±6^{km}, **n35,** σ**1^{s}.04**/41, **mb3.8**/9, **4C-7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKMT	Kesennumamotoy	0.16	315	⇑P	Pn	08 06 14.9	-0.1
JKMT				S	Sn	08 06 20.9	-0.4
JIO	Ouri	0.32	221	⇓P	Pn	08 06 16.0	-0.1
JIO				S	Sn	08 06 22.8	-0.4
OFUJ	Ofunato	0.38	6	⇓P	Pn	08 06 16.6	-0.1
OFUJ				S	Sn	08 06 23.7	-0.5
JMK	Ichinoseki	0.40	309	⇑P	Pn	08 06 16.4	-0.5
JMK				S	Sn	08 06 23.7	-0.8
JIKH	Ishinomakikobu	0.41	197	⇓P	Pn	08 06 16.9	0.0
JIKH				S	Sn	08 06 24.3	-0.3
JOM	Ohasama	0.81	342	⇓P	Pn	08 06 21.2	-0.5
JOM				S	Sn	08 06 32.3	-0.8
JOU	Okura	0.82	246	⇓P	Pn	08 06 21.2	-0.6
JOU				S	Sn	08 06 32.4	-0.8
JYK	Kaneyama	1.01	283	⇑P	Pn	08 06 23.6	-0.7
JYK				S	Sn	08 06 36.6	-1.0
JRG	Rokugo	1.04	313	⇑P	Pn	08 06 24.0	-0.6
JRG				*e*S	Sn	08 06 37.8	-0.4
JMM	Marumori	1.05	218	⇓P	Pn	08 06 24.1	-0.8
JMM				S	Sn	08 06 37.4	-1.3
JYS	Shirataka	1.31	249	P	Pn	08 06 28.3	0.0
JYS				S	Sn	08 06 45.1	+0.3
JFK	Kawauchi	1.45	204	⇓P	Pn	08 06 29.9	-0.4
JFK				S	Sn	08 06 47.6	-0.7
MJAR	Matsushiro Arr	3.46	233	P	Pn	08 06 59.0	+1.3
	1.5nm,0.3s,baz=40,slow=12,SNR=83						
MAT	Matsushiro	3.46	233	P	Pn	08 06 58.7	+1.0
MAT				*e*S	Sn	08 07 39.2	+1.8
ASAJ	Asahikawa	5.46	7	P	Pn	08 07 24.5	-0.6
	4.1nm,0.3s,baz=232,slow=9.8,SNR=20						
ASAJ				LR	LR	08 09 54.3	
	comp=Z,49nm,19.2s,baz=94,slow=42						
JHJ	Hachijo jima 2	5.76	196	P	Pn	08 07 28.3	-0.9
	24nm,0.3s,baz=105,slow=22,SNR=7.2						
JHJ				S	Sn	08 08 31.3	-2.6
	11nm,0.3s,baz=241,slow=22,SNR=1.2						
JHJ				LR	LR	08 09 42.6	
	comp=Z,183nm,21.9s,baz=344,slow=38						
USRK	Ussuriysk Ar.	9.08	310	P	Pn	08 08 14.7	+0.2
	baz=125,slow=17,SNR=10						
USRK				LR	LR	08 11 58.8	
	comp=Z,20nm,21.2s,baz=127,slow=39						
KSRS	Korea Array	10.87	268	P	Pn	08 08 42.0	+2.9
	0.5nm,0.3s,baz=76,slow=14,SNR=8.3						
KSRS				LR	LR	08 12 24.5	
	comp=Z,22nm,20.0s,baz=90,slow=35						
JOW	Kunigami	16.29	227	LR	LR	08 16 08.8	
	comp=Z,27nm,21.9s,baz=114,slow=37						
YAK	Yakutsk	24.49	346	LR	LR	08 22 07.9	
	comp=Z,46nm,18.0s,baz=88,slow=39						
H11N2	WAKE ISLAND Hy	28.90	124	T	T	08 42 16.7	
	baz=316,slow=76,SNR=104						
H11N1	WAKE ISLAND Hy	28.91	124	T	T	08 42 17.4	
	baz=316,slow=76,SNR=165						
H11N3	WAKE ISLAND Hy	28.91	124	T	T	08 42 18.1	
	baz=316,slow=76,SNR=151						
H11S1	WAKE ISLAND Hy	29.66	126	T	T	08 43 13.7	
	baz=318,slow=76,SNR=120						
H11S3	WAKE ISLAND Hy	29.66	126	T	T	08 43 13.9	
	baz=318,slow=76,SNR=127						
H11S2	WAKE ISLAND Hy	29.68	126	T	T	08 43 15.0	
	baz=318,slow=76,SNR=108						
ZALV	Zalesovo Beam	40.93	311	P	P	08 13 42.2	-0.7
	3.9nm,0.5s,baz=84,slow=8.0,SNR=19						
MKAR	Makanchi Array	43.39	301	P	P	08 14 02.4	-0.8
	5.5nm,0.7s,baz=86,slow=9.5,SNR=44						
ILAR	Eielson Array	48.01	33	P	P	08 14 39.9	+0.6
	1.0nm,0.7s,baz=265,slow=6.1,SNR=13						
WRA	Warramunga Arr	58.73	188	P	P	08 15 57.7	-0.6
	0.4nm,0.4s,baz=5.0,slow=7.3,SNR=2.5						
YKA	Yellowknife Ar	62.29	31	P	P	08 16 22.5	+0.4
	0.4nm,0.8s,baz=297,slow=6.3,SNR=3.7						
ASAR	Alice Springs	62.46	188	P	P	08 16 23.4	-0.3
	0.4nm,0.8s,baz=356,slow=4.4,SNR=9.7						
AKASG	Malin Array Be	73.08	322	P	P	08 17 28.6	-1.6
	0.7nm,0.6s,baz=47,slow=5.6,SNR=4.6						
NVAR	Mina Array Bea	73.87	54	P	P	08 17 37.4	+1.9
	0.4nm,0.8s,baz=292,slow=6.4,SNR=3.5						
PDAR	Pinedale Array	76.39	46	P	P	08 17 50.5	+0.6
	0.5nm,0.5s,baz=274,slow=1.3,SNR=7.7						

NOU 26 08:11:11.3, 14°.53S×167°.54E, h148^{km}**, MLv4.6**/15, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.97	200	P	Pn	08 11 35.2	-0.4
DVP	Devils Point	3.24	169	P	Pn	08 12 02.0	+0.4
LIFNC	LIFOU	6.22	183	P	Pn	08 12 39.0	-1.9
KOUNC	Koumac, New Ca	6.74	207	P	Pn	08 12 48.4	+0.5
MARNC	Mare, Loyalty	6.93	176	P	Pn	08 12 48.9	-1.5
YATNC	Mamie plateau,	7.51	185	P	Pn	08 12 57.2	-1.0
DZM	Mont Dzumac	7.57	188	P	Pn	08 12 59.3	+0.2
NOUC	Port Laguerre	7.62	189	P	Pn	08 13 01.2	+1.6
ONTNC	Ouen Toro	7.80	187	P	Pn	08 13 02.5	+0.4
OUENC	Ouen Island, N	7.87	185	P	Pn	08 13 03.8	+0.8

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*MOS **26** 08:23:35.3±2.0, 52°.98N×98°.83E, h10^{km}, mb3.7/2, Error ellipse: s-maj=19.6km s-min=9.8km az=31.8*

*BYKL **26** 08:23:36.4±0.4, 52°.88N×99°.14E*

ISC 26 08:23:31.9±1.2, **52°.99N**±0°.04×**99°.21E**±0°.02, **h4**^{km}±8^{km}, **n50,** σ**1^{s}.94**/92, **4C-3D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORL	Orlik	0.58	140	⇓*i*Pg	Pn	08 23 46.0	-1.1
	386nm,0.5s						
ORL				⇑*i*Pg	Pn	08 23 46.0	-1.1
	504nm,0.5s						
ORL				⇑*i*Pg	Pn	08 23 46.0	-1.1
	445nm,0.5s						
ORL				*e*Sg	Sb	08 23 53.5	+0.2
ORL				Pmax			
	223nm,0.2s						
ORL				Smax			
	884nm,0.3s						
ORL	Orlik	0.58	140	⇑*i*PG	Pn	08 23 46.0	-1.1
ORL				pmax	pmax		
	comp=Z,225nm,0.1s						
MOY	Mondy	1.72	140	*e*Pg	Pg	08 24 06.4	+1.6
MOY				*e*		08 24 09.1	
MOY				*e*Sg	Sg	08 24 28.8	+1.8
MOY				max			
	comp=Z,328nm,0.4s						
MOY				Smax			
	comp=Z,684nm,0.8s						
MOY	Mondy	1.72	140	⇑*i*PN	Pg	08 24 06.5	+1.6
MOY				*e*		08 24 28.4	
MOY				pmax	pmax		
	comp=Z,336nm,0.3s						
MOY				smax	smax		
	comp=E,689nm,1.3s						
ARS	Arshan	2.24	117	*e*Pg	Pg	08 24 16.2	+1.4
ARS				*e*Sg	Sg	08 24 45.4	+1.6
ARS				Pmax			
	comp=E,512nm,0.5s						
ARS				Smax			
	comp=E,2μm,0.6s						
ARS	Arshan	2.24	117	⇓*i*PN	Pg	08 24 16.3	+1.4
ARS				*e*		08 24 45.4	
ARS				pmax	pmax		
	comp=Z,503nm,0.4s						
ARS				smax	smax		
	comp=E,2μm,0.6s						

KNGR	**Kungurtug, Tuv**	**2.60**	**204**	Pg	**Pg**	**08 24 22.0**	**+0.3**
KNGR				Sg	**Sg**	**08 24 54.7**	**-0.8**
KNGR	**Kungurtug, Tuv**	**2.60**	**204**	*e*Pn	**Pb**	**08 24 19.0**	**-0.2**
KNGR				*e*Pg	**Pg**	**08 24 22.1**	**+0.3**
KNGR				*e*		08 24 24.4	
KNGR				*e*Sg	**Sg**	**08 24 55.4**	**-0.1**
TLY	**Talaya**	**3.02**	**114**	Pg	**Pg**	**08 24 29.5**	**-0.2**
TLY				Sg	**Sg**	**08 25 09.2**	**+0.3**
TLY	**Talaya**	**3.02**	**114**	*e*Pg	**Pg**	**08 24 29.5**	**-0.2**
TLY				*e*		08 24 31.4	
TLY				*e*Sg	**Sg**	**08 25 09.6**	**+0.7**
TLY				max			
	comp=E,45nm,0.5s						
TLY				Smax			
	comp=E,264nm,0.7s						
TLY	**Talaya**	**3.02**	**114**	*e*PN	**Pg**	**08 24 29.5**	**-0.2**
TLY				*e*		08 25 09.6	
TLY				pmax	pmax		
	comp=Z,46nm,0.4s						
TLY				smax	smax		
	comp=E,286nm,0.4s						
IRK	**Irkutsk**	**3.18**	**102**	*e*Sg	**Sg**	**08 25 14.2**	**+0.3**
IRK				Smax			
	comp=E,915nm,0.5s						
IRK	**Irkutsk**	**3.18**	**102**	*e*PN	**Pg**	**08 24 31.8**	**-0.9**
IRK				*e*		08 25 13.3	
IRK				pmax	pmax		
	comp=Z,181nm,0.2s						
IRK				smax	smax		
	comp=E,909nm,0.4s						
KZLR	**Kyzyl**	**3.18**	**248**	Pg	**Pg**	**08 24 32.5**	**-0.3**
KZLR				Sg	**Sg**	**08 25 13.7**	**-0.5**
KZLR	**Kyzyl**	**3.18**	**248**	*e*Pg	**Pg**	**08 24 32.0**	**-0.9**
KZLR				*e*Sg	**Sg**	**08 25 12.0**	**-2.1**
IVK	**Ivanovka**	**3.41**	**108**	*e*	**Pb**	**08 24 32.9**	**+0.1**
IVK				*e*Pg	**Pg**	**08 24 36.2**	**-0.9**
IVK				*e*Sg	**Sg**	**08 25 20.7**	**-0.5**
IVK				Pmax			
	comp=E,49nm,0.7s						
IVK				Smax			
	comp=E,267nm,1.1s						
LSTR	**Listvyanka**	**3.62**	**106**	*e*Pn	**Pb**	**08 24 32.6**	**-3.9**
LSTR				*e*Pg	**Pg**	**08 24 41.0**	**-0.3**
LSTR				*e*Sn	**Sn**	**08 25 14.8**	**+2.8**
LSTR				*e*Sg	**Sg**	**08 25 29.0**	**+0.8**
LSTR				Pmax			
	comp=E,28nm,0.5s						
LSTR				Smax			
	comp=E,256nm,1.0s						
ZAK	**Zakamensk**	**3.64**	**134**	Pg	**Pg**	**08 24 40.2**	**-1.3**
ZAK				Sg	**Sg**	**08 25 28.1**	**-0.5**
ZAK	**Zakamensk**	**3.64**	**134**	*e*Pg	**Pg**	**08 24 40.7**	**-0.9**
ZAK				*e*Sg	**Sg**	**08 25 28.3**	**-0.4**
ZAK				Pmax			
	comp=E,46nm,0.5s						
ZAK				Smax			
	comp=E,197nm,0.9s						
ZAK	**Zakamensk**	**3.64**	**134**	*e*PN	**Pg**	**08 24 40.0**	**-1.6**
ZAK				*e*		08 25 29.2	
ZAK				pmax	pmax		
	comp=Z,46nm,0.4s						
ZAK				smax	smax		
	comp=N,197nm,0.7s						
BGT	**Bolshoye Golou**	**3.90**	**101**	*e*Pn	**Pb**	**08 24 36.9**	**-4.4**
BGT				*e*Pg	**Pg**	**08 24 47.1**	**+0.4**
BGT				*e*		08 25 27.3	
BGT				*e*Sg	**Sg**	**08 25 38.3**	**+1.1**
BGT				Pmax			
	comp=N,33nm,0.3s						
BGT				Smax			
	comp=N,338nm,1.2s						
BLRR	**Bol’shaya Rech**	**4.09**	**273**	Pg	Pg	08 24 56.0	+5.7
BLRR				Sg	**Sg**	**08 25 48.0**	**+4.7**
TRG	**Tyrgan**	**4.33**	**90**	*e*Pn	**Pn**	**08 24 42.3**	**+3.7**
TRG				*e*Sn	**Sn**	**08 25 31.1**	**+1.5**
TRG				*e*Sg	**Sg**	**08 25 51.5**	**+0.5**
TRG				max			
	comp=N,21nm,0.6s						
TRG				Smax			
	comp=N,148nm,0.5s						
TRG	**Tyrgan**	**4.33**	**90**	*e*PN	**Pn**	**08 24 42.8**	**+4.2**
TRG				*e*		08 25 50.3	
TRG				pmax	pmax		
	comp=Z,17nm,0.2s						
TRG				smax	smax		
	comp=N,165nm,0.3s						
STDB	**Stepnoy Dvoret**	**4.44**	**98**	*e*Pn	**Pn**	**08 24 44.3**	**+4.2**
STDB				*e*Sg	**Sg**	**08 25 54.2**	**-0.3**
KAB	**Kabansk**	**4.64**	**99**	*e*Sg	**Sg**	**08 26 00.7**	**-0.3**
KAB				Smax			
	comp=N,623nm,0.8s						
FFNB	**Fofonovo**	**4.71**	**98**	*e*Pg	**Pg**	**08 25 02.0**	**-0.1**
FFNB				*e*Sg	**Sg**	**08 26 03.3**	**+0.2**
DJO	**Djoy, Khakassi**	**4.84**	**271**	Pg	**Pg**	**08 25 03.4**	**-1.2**
DJO				Sg	**Sg**	**08 26 04.2**	**-3.1**
HRMR	**Khuramsha**	**4.95**	**103**	*e*Pn	Pn	08 24 52.1	+5.1
HRMR				*e*Pg	**Pg**	**08 25 06.3**	**-0.3**
HRMR				*e*Sn	**Sn**	**08 25 47.2**	**+2.6**
HRMR				*e*Sg	**Sg**	**08 26 10.5**	**-0.1**
HRMR				Pmax			
	comp=N,43nm,0.4s						
HRMR				Smax			
	comp=N,517nm,0.7s						
OGRR	**Ongureny**	**5.07**	**79**	*e*Pn	Pn	08 24 54.2	+5.5
OGRR				*e*Pg	**Pg**	**08 25 09.4**	**+0.4**
OGRR				*e*Sn	**Sn**	**08 25 51.7**	**+4.0**
OGRR				*e*Sg	**Sg**	**08 26 16.5**	**+1.8**
OGRR				Pmax			
	comp=N,12nm,0.3s						
OGRR				Smax			
	comp=N,183nm,1.0s						
OGRR	**Ongureny**	**5.07**	**79**	*e*PN	**Pb**	**08 24 57.0**	**-4.2**
OGRR				*e*		08 25 11.4	
OGRR				*e*		08 26 16.4	
OGRR				pmax	pmax		
	comp=Z,12nm,0.3s						
OGRR				smax	smax		
	comp=N,183nm,1.0s						
UUDB	**Ulan-Yde**	**5.30**	**99**	*e*Pn	Pb	08 24 58.1	-6.9
UUDB				*e*Pg	**Pg**	**08 25 12.7**	**-0.6**
UUDB				*e*Sn	**Sn**	**08 25 56.3**	**+3.1**
UUDB				*e*Sg	**Sg**	**08 26 22.3**	**+0.4**
UUDB				Pmax			
	comp=N,45nm,1.1s						
UUDB				Smax			
	comp=N,178nm,1.5s						
KELR	**Kotokel**	**5.38**	**89**	*e*Pg	**Pg**	**08 25 13.8**	**-1.1**
KELR				*e*Sg	**Sg**	**08 26 23.8**	**-0.8**
MXMB	**Maximikha**	**5.75**	**83**	*e*Pg	**Pg**	**08 25 20.5**	**-1.5**
MXMB				*e*Sn	**Sn**	**08 26 07.5**	**+3.1**
MXMB				*e*Sg	**Sg**	**08 26 35.2**	**-1.3**
SYVR	**Suvo**	**6.50**	**80**	*e*Pn	Pn	08 25 14.6	+6.3
SYVR				*e*		08 26 28.9	
SYVR				*e*Sg	**Sg**	**08 27 00.6**	**0.0**
SYVR				max			
	comp=N,5.0nm,0.4s						
SYVR				Smax			
	comp=N,79nm,1.2s						
SYVR	**Suvo**	**6.50**	**80**	*e*PN	Pn	08 25 14.2	+5.9
SYVR				*e*S	**Sg**	**08 27 00.4**	**-0.2**
SYVR				smax	smax		
	comp=E,84nm,1.0s						
NIZ	**Nizh Angarsk**	**6.65**	**61**	⇓*i*Pn	Pn	08 25 17.4	+7.0
NIZ				*e*Sn	**Sn**	**08 26 28.9**	**+2.3**
NIZ				*e*Sg	**Sg**	**08 27 05.6**	**+0.3**
NIZ				max			
	comp=E,54nm,0.5s						
NIZ				Smax			
	comp=E,115nm,1.4s						
SONM	**Songino Array**	**6.90**	**135**	*e*PN	Pg	08 25 39.2	-4.9
ULN	**Ulaanbaatar**	**7.17**	**133**	*i* P	Pn	08 25 25.1	+7.5
YLYR	**Ulyunkhan**	**7.31**	**70**	*e*Pn	Pn	08 25 25.8	+6.4
YLYR				*e*		08 26 47.4	
YLYR				*e*Sg	**Sg**	**08 27 24.4**	**-2.0**
YLYR				max			
	comp=E,5.0nm,0.4s						
YLYR				Smax			
	comp=E,53nm,1.4s						
KMO	**Kumora**	**7.57**	**63**	*e*Pn	Pn	08 25 29.8	+6.8
KMO				*e*Sn	**Sn**	**08 26 51.1**	**+1.8**
KMO				*e*Sg	**Sg**	**08 27 33.5**	**-1.4**
KMO				max			
	comp=E,27nm,0.5s						
KMO				Smax			
	comp=E,80nm,1.3s						
UKT	**Uakit**	**8.81**	**68**	*e*Pn	Pn	08 25 46.0	+6.0
UKT				*e*		08 25 56.0	
UKT				*e*Sn	**Sn**	**08 27 20.1**	**+0.3**
UKT				*e*Sg	**Sg**	**08 28 11.8**	**-2.7**
UKT				max			
	comp=E,6.0nm,1.1s						
UKT				Smax			
	comp=E,26nm,1.8s						
KPC	**Khapcheranga**	**8.88**	**106**	*e*Pn	Pn	08 25 45.9	+5.0
KPC				*e*Pg	Pg	08 26 16.1	-5.7
KPC				*e*Sn	**Sn**	**08 27 21.5**	**+0.1**
KPC				*e*Sg	**Sg**	**08 28 11.6**	**-5.0**
KPC				Smax			
	comp=E,46nm,1.9s						
KURK	**Kurchatov**	**12.92**	**268**	*i* P	**Pn**	**08 26 38.0**	**+1.8**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ZEA	**Zeya**	**16.72**	**76**	*i* P	P	08 27 36.6	+7.5
BRVK	**Borovoye**	**17.35**	**282**	*i* P	**P**	**08 27 39.8**	**+3.6**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KLR	**Kul'dur**	**20.67**	**87**	*i* P	Pn	08 28 21.8	+6.9
KLR				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ARU	**Arti**	**23.48**	**295**	*i* P	**P**	**08 28 43.7**	**+1.3**
ARU				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MNK	**Minsk**	**40.54**	**302**	*i* P	**P**	**08 31 10.3**	**-1.5**
MNK				*i* S	**S**	**08 37 18.0**	**-3.2**
MNK				*i* SS	**SS**	**08 40 19.9**	**-0.4**
MNK				*i*		08 41 16.6	
MNK				MLR	MLR		
	comp=N,142nm,13.0s						
MNK				MLR	MLR		
	comp=Z,33nm,8.0s						
MNK				MLR	MLR		
	comp=E,11nm,9.0s						
MNK	**Minsk**	**40.54**	**302**	*i* P	**P**	**08 31 10.4**	**-1.4**
	comp=E,3.0nm,1.1s						
MNK				*i* P	**P**	**08 31 10.4**	**-1.4**
	comp=N,16nm,0.8s						
MNK				*i* P	**P**	**08 31 10.4**	**-1.4**
	comp=Z,8.0nm,0.8s,baz=244						
MNK				*i* PP	**PP**	**08 32 43.5**	**-1.3**
MNK				*i* PPP	PPP	08 33 08.2	
MNK				*i* S	**S**	**08 37 18.0**	**-3.2**
MNK				*i* SS	**SS**	**08 40 19.9**	**-0.3**
MNK				*i* SSS	SSS	08 40 42.7	
MNK				*i* LR	LR	08 47 01.1	
MNK				*i* LRM	MLR	08 49 35.8	
	comp=N,142nm,12.9s						
MNK				*i* LRM	MLR	08 49 39.0	
	comp=Z,33nm,7.7s						
MNK				*i* LRM	MLR	08 49 55.8	
	comp=E,11nm,9.0s						

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*IDC **26** 09:01:51.7±1.1, 23°.27N×141°.98E, h0^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.6/56, mbtmp3.9/6, MS3.1/1, Ms1 3.1/1, ms1mx2.5/34, Error ellipse: s-maj=59.3km s-min=23.5km az=90.0*

ISC 26 09:01:57.0±1.2, 23°.2N±0°.2×141°.9E±0°.4, h35^{km}, n13, σ0^{s}.43/6, mb3.9/6, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**18.57**	**323**	LR	LR	09 13 14.1	
	comp=Z,55nm,18.6s,baz=298,slow=37						
H11N1	**WAKE ISLAND Hy**	**23.51**	**94**	T	T	09 30 50.0	
	baz=283,slow=75,SNR=785						
H11N2	**WAKE ISLAND Hy**	**23.52**	**94**	T	T	09 30 50.5	
	baz=283,slow=75,SNR=757						
H11N3	**WAKE ISLAND Hy**	**23.53**	**94**	T	T	09 30 51.3	
	baz=283,slow=75,SNR=883						
H11S3	**WAKE ISLAND Hy**	**23.63**	**97**	T	T	09 30 59.8	
	baz=286,slow=75,SNR=31						
H11S1	**WAKE ISLAND Hy**	**23.64**	**97**	T	T	09 30 59.0	
	baz=286,slow=75,SNR=27						
H11S2	**WAKE ISLAND Hy**	**23.65**	**97**	T	T	09 31 01.0	
	baz=286,slow=75,SNR=20						
WRA	**Warramunga Arr**	**43.55**	**190**	P	**P**	**09 09 57.7**	**+0.1**
	2.1nm,0.8s,baz=14,slow=8.5,SNR=5.4						
ASAR	**Alice Springs**	**47.27**	**190**	P	**P**	**09 10 26.9**	**-0.1**
	1.0nm,0.7s,baz=15,slow=11,SNR=9.6						
MKAR	**Makanchi Array**	**52.78**	**312**	P	**P**	**09 11 08.4**	**-0.3**
	0.3nm,0.7s,baz=95,slow=6.8,SNR=2.2						
YKA	**Yellowknife Ar**	**75.65**	**28**	P	**P**	**09 13 38.1**	**-0.2**
	0.2nm,0.6s,baz=294,slow=6.0,SNR=5.0						
FINES	**FINESS Array B**	**81.28**	**334**	P	**P**	**09 14 10.0**	**+0.6**
	2.9nm,0.7s,baz=76,slow=8.0,SNR=5.5						
HFS	**Hagfors**	**86.85**	**337**	P	**P**	**09 14 37.9**	**+0.1**
	2.0nm,0.6s,baz=90,slow=5.8,SNR=5.9						

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*FUNV **26** 09:16:26.5, 8°.63N×71°.55W, h4^{km}, MW3.2*

ISC 26 09:16:24.3±1.2, 8°.61N±0°.03×71°.47W±0°.02, h1^{km}±12^{km}, n19, σ1^{s}.73/33, 1D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIGV	**El Vigia**	**0.25**	**25**	*e*S	**Sg**	**09 16 35.8**	**+3.5**
SOCV	**Socops**	**0.69**	**118**	*e*P	**Pg**	**09 16 37.2**	**-0.4**
SOCV				*e*S	**Sg**	**09 16 44.0**	**-2.5**
SDV	**Santo Domingo**	**0.87**	**72**	*e*P	**Pb**	**09 16 42.1**	**-0.3**
SDV				*e*S	**Sb**	**09 16 54.2**	**-0.5**
CAPV	**Capacho**	**1.12**	**228**	*e*P	**Pg**	**09 16 46.0**	**+0.3**
TORV	**Torococo**	**1.55**	**52**	*e*P	**Pg**	**09 16 54.0**	**+0.1**
TORV				*e*S	**Sg**	**09 17 14.2**	**+0.1**
PAMC	**Pamplona, Colo**	**1.75**	**224**	*e*P	**Pg**	**09 16 58.4**	**+0.4**
PAMC				*e*S	**Sg**	**09 17 22.6**	**+1.9**
OCAC	**Ocana**	**1.86**	**259**	*e*P	**Pb**	**09 16 59.6**	**+0.3**
OCAC				*e*S	**Sg**	**09 17 24.9**	**+0.7**
TAMC	**Tame, Arauca**	**2.19**	**188**	*e*P	**Pb**	**09 17 03.8**	**-0.9**
TAMC				*e*S	**Sb**	**09 17 31.9**	**-0.5**
ELOV	**Elorza**	**2.54**	**129**	*e*P	**Pn**	**09 17 08.3**	**+1.7**
ELOV				*e*S	**Sb**	**09 17 40.3**	**-2.2**
SMLC	**San Martn de**	**2.58**	**274**	*e*P	**Pb**	**09 17 09.3**	**-2.1**
SMLC				*e*S	**Sb**	**09 17 40.4**	**-3.2**
SIQV	**Siquisique**	**2.60**	**39**	*e*P	**Pn**	**09 17 08.8**	**+1.2**
BARC	**Barichara**	**2.63**	**220**	*e*P	**Pb**	**09 17 10.6**	**-1.7**
BARC				*e*S	**Sb**	**09 17 43.3**	**-1.9**
BRRC	**Barranca, Sant**	**2.68**	**236**	*e*P	**Pb**	**09 17 11.0**	**-2.1**
BRRC				*e*S	**Sg**	**09 17 50.2**	**-0.1**
CRJC	**Cerrejon, Guaj**	**2.77**	**330**	*e*P	**Pb**	**09 17 12.0**	**-2.7**
CRJC				*e*S	**Sb**	**09 17 47.5**	**-1.6**
RUSC	**La Rusia**	**3.14**	**211**	*e*P	**Pn**	**09 17 17.2**	**+1.8**
RUSC				*e*S	**Sn**	**09 17 55.8**	**+2.0**
BAUV	**El Baul**	**3.41**	**84**	*e*P	**Pn**	**09 17 20.2**	**+1.6**
ZARC	**Zaragoza, Cauc**	**3.53**	**252**	*e*P	**Pn**	**09 17 22.2**	**+1.8**
PTBC	**PUERTO BERRIO,**	**3.60**	**235**	⇓*e*P	**Pn**	**09 17 22.1**	**+0.7**
PTBC				*e*S	**Sb**	**09 18 14.2**	**+1.0**
CHIC	**Chingaza**	**4.55**	**210**	*e*P	**Pn**	**09 17 36.6**	**+1.9**
CHIC				*e*S	**Sn**	**09 18 27.9**	**-0.6**

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*IDC **26** 10:04:58.6±1.5, 3°.68N×126°.94E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.7/42, mbtmp3.8/6, MS2.9/4, Ms1 2.9/4, ms1mx2.6/52, Error ellipse: s-maj=215.1km s-min=17.8km az=68.0*

*NEIC **26** 10:05:06.2±1.6, 3°.6N±0°.1×126°.8E±0°.1, h54^{km}±11^{km}, mb4.2/11, Error ellipse: s-maj=21.0km s-min=4.9km az=47.0*

ISC 26 10:05:05.1±0.7, 3°.57N±0°.06×126°.8E±0°.1, h50^{km}, n30, σ1^{s}.27/28, mb3.9/9, MS3.1/3, 3C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**2.73**	**337**	⇑*i*P	**Pn**	**10 05 46.5**	**-0.1**
DDMP				*e*S	**Sn**	**10 06 16.5**	**-1.9**
TNTI	**Ternate**	**2.84**	**168**	Pn	**Pn**	**10 05 49.6**	**+1.6**
KCP	**Kidapawan**	**3.81**	**334**	⇑*e*P	**Pn**	**10 06 05.6**	**+4.2**
BUKP	**Musuan**	**4.61**	**338**	⇑*i*P	**Pn**	**10 06 13.9**	**+1.5**
SIJI	**Sorong**	**6.29**	**134**	LR	LR	10 09 19.8	
	comp=Z,94nm,18.4s,baz=344,slow=42						
TOLI2	**Tolitoli**	**6.47**	**248**	Pn	**Pn**	**10 06 38.5**	**+0.7**
MYLDM	**Lahad Datu**	**8.41**	**281**	Pn	**Pn**	**10 07 05.9**	**+1.4**
MTN	**Manton Dam**	**16.87**	**165**	Pn	**Pn**	**10 08 56.1**	**-1.8**
MTN				IAmb	IAmb	10 08 58.6	
	comp=Z,52nm,1.1s						
KNRA	**Kununurra**	**19.22**	**174**	P	**P**	**10 09 26.0**	**+0.7**
KNRA				IAmb	IAmb	10 09 28.4	
	comp=Z,26nm,1.1s						
JOW	**Kunigami**	**23.18**	**3**	LR	LR	10 20 15.5	
	comp=Z,11nm,20.8s,baz=342,slow=40						
WB0	**Warramunga Arr**	**24.37**	**162**	P	**P**	**10 10 18.5**	**-0.2**
WB0				IAmb	IAmb	10 10 42.5	
	comp=Z,23nm,1.4s						
WRA	**Warramunga Arr**	**24.52**	**163**	P	**P**	**10 10 19.9**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=342,slow=11,SNR=24						
WRA	**Warramunga Arr**	**24.52**	**163**	P	**P**	**10 10 19.3**	**-0.8**
WB2	**Warramunga Arr**	**24.52**	**163**	P	**P**	**10 10 19.2**	**-0.9**
WB2				IAmb	IAmb	10 10 39.4	
	comp=Z,14nm,1.3s						
AS31	**Alice Springs**	**27.95**	**166**	P	**P**	**10 10 51.8**	**+0.8**
ASAR	**Alice Springs**	**27.95**	**166**	P	**P**	**10 10 51.3**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=355,slow=15,SNR=14						
ASAR	**Alice Springs**	**27.95**	**166**	P	**P**	**10 10 50.6**	**-0.5**
STKA	**Stephens Creek**	**37.96**	**159**	P	**P**	**10 12 19.5**	**+1.4**
	comp=Z,1.7nm,0.7s,baz=342,slow=7.5,SNR=5.0						
STKA	**Stephens Creek**	**37.96**	**159**	P	**P**	**10 12 18.7**	**+0.6**
STKA				IAmb	IAmb	10 12 36.4	
	comp=Z,1.4nm,1.4s						
SHL	**Shillong**	**40.01**	**307**	P	**P**	**10 12 34.7**	**-0.9**
USRK	**Ussuriysk Ar.**	**40.72**	**6**	P	**P**	**10 12 40.0**	**-1.0**
SONM	**Songino Array**	**47.46**	**341**	P	**P**	**10 13 34.9**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=154,slow=6.2,SNR=2.9						
SONM				LR	LR	10 37 16.6	
	comp=Z,37nm,19.2s,baz=280,slow=41						
SONM	**Songino Array**	**47.46**	**341**	P	**P**	**10 13 35.1**	**0.0**
SONM				IAmb	IAmb	10 13 47.2	
	comp=Z,2.1nm,1.4s						
PETK	**Petropavlovsk-**	**55.56**	**22**	LR	LR	10 36 28.0	
	comp=Z,17nm,21.1s,baz=42,slow=34						
MK31	**Makanchi Array**	**57.71**	**325**	P	**P**	**10 14 51.3**	**+0.5**
MK31				IAmb	IAmb	10 15 19.3	
	comp=Z,1.6nm,0.9s						
MKAR	**Makanchi Array**	**57.71**	**325**	P	**P**	**10 14 51.7**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=122,slow=7.8,SNR=20						
MKAR	**Makanchi Array**	**57.71**	**325**	P	**P**	**10 14 50.9**	**+0.1**
ZALV	**Zalesovo Beam**	**60.75**	**333**	P	**P**	**10 15 10.8**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=135,slow=9.2,SNR=2.1						
ZALV	**Zalesovo Beam**	**60.75**	**333**	P	**P**	**10 15 11.6**	**-0.1**
KURK	**Kurchatov**	**61.90**	**328**	P	**P**	**10 15 19.4**	**0.0**

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*IDC **26** 10:16:51.8±1.6, 5°.59S×102°.62E, h0^{km}, mb4.2/10, mb1 4.3/10, mb1mx3.9/47, mbtmp4.2/10, MS3.1/3, Ms1 3.2/3, ms1mx2.7/50, Error ellipse: s-maj=58.6km s-min=17.7km az=57.0*

*NEIC **26** 10:16:54.5±0.9, 5°.7S±0°.1×102°.6E±0°.2, h19^{km}±7^{km}, mb4.4/14, Error ellipse: s-maj=31.0km s-min=4.4km az=48.0*

*DJA **26** 10:16:56.6±0.7, 6°S±8°×10°3E±°, h10^{km}, M4.3/12, mb4.3/1, MLv4.3/12*

ISC 26 10:16:52.8±0.7, 5°.70S±0°.07×102°.63E±0°.06, h10^{km}, n51, σ1^{s}.07/46, mb4.4/18, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	**Liwa**	**1.57**	**64**	P	**Pg**	**10 17 23.5**	**+0.5**
KASI	**Kota Agung**	**1.86**	**85**	P	**Pg**	**10 17 28.6**	**0.0**
MDSI	**Maura Dua**	**1.96**	**52**	P	**Pb**	**10 17 28.3**	**-0.3**
LHSI	**Lahat**	**2.06**	**25**	P	**Pb**	**10 17 30.0**	**-0.4**
KLSI		**2.32**	**64**	P	**Pb**	**10 17 33.6**	**-1.1**
KLI	**Kotabumi**	**2.37**	**69**	P	**Pg**	**10 17 37.0**	**-1.2**
MASI	**Maura Aman, Be**	**2.57**	**351**	P	**Pb**	**10 17 37.9**	**-1.2**
BLSI	**Bandar Lampung**	**2.62**	**83**	P	**Pb**	**10 17 39.0**	**-0.9**
CGJI	**Cibinong**	**3.17**	**107**	P	**Pn**	**10 17 45.1**	**+2.3**
KRJI	**Kerinci**	**3.77**	**342**	P	**Pn**	**10 17 53.8**	**+2.6**
PPSI	**Pulau Pagai**	**3.92**	**318**	P	**Pn**	**10 17 56.9**	**+3.8**
LEM	**Lembang**	**5.08**	**103**	LR	LR	10 20 16.2	
	comp=Z,122nm,21.8s,baz=282,slow=40						
DSRI	**Dabo**	**5.54**	**21**	P	**Pn**	**10 18 18.2**	**+2.8**
XMIS	**Christmas Isla**	**5.61**	**148**	Pn	**Pn**	**10 18 16.5**	**+0.1**
UGM	**Wanagama**	**8.14**	**106**	Pn	**Pn**	**10 18 50.8**	**-0.3**
GSI	**Gunungsitoli**	**8.60**	**324**	Pn	**Pn**	**10 18 56.5**	**-1.0**
JAGI	**Jajag, Banyuwa**	**11.76**	**104**	Pn	**Pn**	**10 19 41.5**	**+0.7**
PSA00	**Pilbara Seismi**	**22.95**	**135**	P	**P**	**10 21 57.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**24.28**	**351**	P	**P**	**10 22 09.9**	**-0.6**
	5.5nm,0.7s,baz=183,slow=8.8,SNR=29						
CMAR				LR	LR	10 32 18.2	
	comp=Z,55nm,18.4s,baz=196,slow=38						
CMAR	**Chiang Mai Arr**	**24.28**	**351**	P	**P**	**10 22 10.0**	**-0.5**
CHTO	**Chiang Mai**	**24.63**	**352**	P	**P**	**10 22 12.9**	**-0.7**
CHTO				IAmb	IAmb	10 22 14.3	
	comp=Z,6.8nm,0.8s						
PALK	**Pallekele**	**25.40**	**300**	LR	LR	10 30 28.4	
	comp=Z,58nm,21.2s,baz=237,slow=32						
H08S2	**Diego Garcia H**	**30.00**	**265**	T	T	10 54 10.3	
	baz=88,slow=76,SNR=19						
H08S3	**Diego Garcia H**	**30.00**	**265**	T	T	10 54 06.4	
	baz=88,slow=76,SNR=21						
H08S1	**Diego Carcia H**	**30.01**	**265**	T	T	10 54 11.8	
	baz=88,slow=76,SNR=7.4						
WB0	**Warramunga Arr**	**33.90**	**117**	P	**P**	**10 23 36.3**	**+0.1**
WB0				IAmb	IAmb	10 23 39.6	
	comp=Z,8.9nm,1.1s						
WRA	**Warramunga Arr**	**33.91**	**118**	P	**P**	**10 23 37.3**	**+0.9**
	comp=Z,0.9nm,0.9s,baz=304,slow=8.9,SNR=1.9						
WR0	**Warramunga Arr**	**34.09**	**118**	P	**P**	**10 23 37.2**	**-0.7**
WR0				IAmb	IAmb	10 23 52.7	
	comp=Z,5.0nm,0.9s						
AS31	**Alice Springs**	**34.99**	**124**	P	**P**	**10 23 46.0**	**+0.3**
ASAR	**Alice Springs**	**34.99**	**124**	P	**P**	**10 23 46.7**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=301,slow=7.9,SNR=7.1						
ASAR	**Alice Springs**	**34.99**	**124**	P	**P**	**10 23 45.5**	**-0.2**
STKA	**Stephens Creek**	**44.75**	**131**	P	**P**	**10 25 07.7**	**+1.0**
	comp=Z,1.1nm,0.4s,baz=295,slow=4.8,SNR=5.4						
STKA	**Stephens Creek**	**44.75**	**131**	P	**P**	**10 25 06.2**	**-0.5**
KSRS	**Korea Array**	**48.98**	**27**	P	**P**	**10 25 39.4**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=228,slow=7.1,SNR=7.9						
SONM	**Songino Array**	**53.41**	**3**	P	**P**	**10 26 13.4**	**+0.5**
	comp=Z,8.9nm,0.7s,baz=181,slow=9.4,SNR=86						
SONM	**Songino Array**	**53.41**	**3**	P	**P**	**10 26 13.6**	**+0.7**
BOOM	**Boomskoye usch**	**53.76**	**336**	P	**P**	**10 26 15.6**	**-0.1**
MK31	**Makanchi Array**	**55.30**	**343**	P	**P**	**10 26 26.8**	**+0.2**
MK31				IAmb	IAmb	10 26 27.2	
	comp=Z,1.9nm,0.8s						
MKAR	**Makanchi Array**	**55.30**	**343**	P	**P**	**10 26 26.3**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=146,slow=7.9,SNR=24						
USA0B	**Ussuriysk Arra**	**56.27**	**25**	P	**P**	**10 26 33.3**	**-0.2**
USRK	**Ussuriysk Ar.**	**56.27**	**25**	P	**P**	**10 26 32.6**	**-0.9**
	comp=Z,3.4nm,0.6s,baz=215,slow=6.3,SNR=12						
USRK	**Ussuriysk Ar.**	**56.27**	**25**	P	**P**	**10 26 33.6**	**+0.1**
KURK	**Kurchatov**	**59.89**	**343**	P	**P**	**10 26 59.0**	**+0.2**
KURK				IAmb	IAmb	10 26 59.1	
	comp=Z,2.9nm,0.8s						
ZAA0	**Zalesovo Array**	**61.29**	**348**	P	**P**	**10 27 07.6**	**-0.7**
ZAA0				IAmb	IAmb	10 27 10.9	
	comp=Z,3.9nm,1.0s						
ZALV	**Zalesovo Beam**	**61.29**	**348**	P	**P**	**10 27 07.6**	**-0.6**
	comp=Z,2.6nm,0.4s,baz=170,slow=6.0,SNR=14						
ZALV	**Zalesovo Beam**	**61.29**	**348**	P	**P**	**10 27 08.0**	**-0.2**
BRVK	**Borovoye**	**64.61**	**339**	P	**P**	**10 27 29.8**	**-0.6**
BRVK				IAmb	IAmb	10 27 56.6	
	comp=Z,2.2nm,1.1s						
ABKAR	**Akbulak array**	**66.13**	**331**	P	**P**	**10 27 40.0**	**-0.3**
ABKAR				IAmb	IAmb	10 27 40.6	
	comp=Z,3.0nm,1.1s						
FINES	**FINESS Array B**	**88.59**	**332**	P	**P**	**10 29 45.6**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=107,slow=13,SNR=3.5						
TXAR	**Lajitas Array**	**145.80**	**43**	PKPbc	**PKPab**	**10 36 33.5**	**0.0**
	comp=Z,2.0nm,0.7s,baz=246,slow=0.8,SNR=33						
TXAR	**Lajitas Array**	**145.80**	**43**		**PKPab**	**10 36 34.0**	**+0.5**

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*GUC **26** 10:42:28.4±0.7, 31°.54S×71°.46W, h38^{km}±2^{km}, ML3.9*

*IDC **26** 10:42:29.3±3.7, 31°.53S×71°.43W, h41^{km}±35^{km}, mb3.7/4, mb1 3.7/5, mb1mx3.5/24, mbtmp3.9/5, ML3.7/1, MS2.6/1, Ms1 2.6/1, ms1mx2.4/21, Error ellipse: s-maj=40.6km s-min=26.7km az=130.0*

ISC 26 10:42:29.8±0.8, 31°.52S±0°.03×71°.52W±0°.06, h46^{km}±7^{km}, n34, σ0^{s}.65/42, mb4.0/4, 1C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.85**	**353**	⇑*i*P	**Pn**	**10 42 45.4**	**0.0**
CO06				*i* S	**Sn**	**10 42 56.1**	**-0.7**
CO03	**El Pedregal**	**0.98**	**46**	⇓*i*P	**Pn**	**10 42 47.1**	**-0.2**
CO03				*i* S	**Sn**	**10 43 00.1**	**0.0**
CO03				IAML		10 43 02.4	
	comp=E,5μm,0.1s						
GO04	**Tololo Observa**	**1.48**	**25**	⇓*i*P	**Pn**	**10 42 54.5**	**+0.3**

GO04				iS	Sn	10 43 13.8	+1.3
GO04				IAML		10 43 17.4	
	comp=N,8µm,0.6s						
VA03	San Esteban	1.48	147	⇓iP	Pn	10 42 53.9	-0.2
VA03				iS	Sn	10 43 12.3	-0.1
VA03				IAML		10 43 15.0	
	comp=E,3µm,0.3s						
VA01	Torpederas	1.50	184	eP	Pn	10 42 54.0	-0.2
ROCH	El Roble	1.51	164	eP	Pn	10 42 54.5	-0.1
ROCH				eP	Pn	10 42 54.1	-0.4
ROCH				eS	Sn	10 43 14.0	+0.9
ROCH				eS	Sn	10 43 14.1	+0.9
ROCH				IAML		10 43 15.7	
	comp=N,2µm,0.4s						
ROCH				IAML		10 43 16.1	
	comp=N,3µm,0.2s						
CO05	La Serena	1.62	9	eP	Pn	10 42 56.5	+0.7
CO05				IAML		10 43 25.7	
	comp=E,911nm,0.3s						
MT02	Curacav	1.76	170	eP	Pn	10 42 57.8	0.0
MT02				eS	Sn	10 43 20.4	+1.4
PEL	Peldehue	1.76	157	iP	Pn	10 42 58.1	+0.1
PEL				iS	Sn	10 43 20.1	+0.9
PEL				IAML		10 43 22.0	
	comp=E,2µm,0.3s						
MT05	Renca	1.98	161	eP	Pn	10 43 00.9	0.0
MT05				eS	Sn	10 43 25.5	+1.0
MT05				IAML		10 43 29.0	
	comp=E,3µm,0.2s						
FCH	Farellones	2.08	150	eP	Pn	10 43 02.6	+0.2
FCH				IAML		10 43 36.0	
	comp=E,827nm,0.1s						
VA05	Santo Domingo	2.13	182	eP	Pn	10 43 02.5	-0.3
VA05				IAML		10 43 35.5	
	comp=E,1µm,0.3s						
MT09	Talagante	2.29	169	eP	Pn	10 43 05.8	+0.5
MT09				eS	Sn	10 43 33.4	+1.1
MT09				IAML		10 43 46.0	
	comp=E,733nm,0.3s						
LCO	Las Campanas	2.60	16	eP	Pn	10 43 10.5	+0.9
LCO				eS	Sn	10 43 41.2	+1.1
BO02	Sierra Bellavi	3.32	169	eP	Pn	10 43 19.4	+0.1
H03N1	Juan Fernandez	6.53	251	P	Pn	10 44 03.9	+0.8
	baz=120,slow=18,SNR=22						
H03N1				T	T	10 50 46.2	
	baz=82,slow=73,SNR=1896						
H03N3	Juan Fernandez	6.55	251	P	Pn	10 44 03.6	+0.3
	baz=120,slow=18,SNR=62						
H03N3				T	T	10 50 46.4	
	baz=82,slow=73,SNR=1242						
H03N2	Juan Fernandez	6.55	251	P	Pn	10 44 03.7	+0.4
	baz=120,slow=18,SNR=22						
H03N2				T	T	10 50 47.8	
	baz=82,slow=73,SNR=1523						
H03S2	Juan Fernandez	6.66	248	P	Pn	10 44 03.9	-0.8
SIV	San Ignacio	18.16	34	P	P	10 46 38.0	-0.5
	comp=E,0.2nm,0.3s,baz=205,slow=8.9,SNR=7.1						
NNA	Nana	20.05	345	LR	LR	10 52 01.0	
	comp=E,16nm,20.2s,baz=314,slow=28						
QSPA	South Pole Qui	58.71	180	P	P	10 52 23.1	+0.5
	comp=E,0.8nm,0.7s,baz=145,slow=3.1,SNR=2.2						
QSPA				pP	pP	10 52 34.8	-0.7
	comp=E,1.8nm,1.0s,baz=35,slow=2.9,SNR=2.9						
TXAR	Lajitas Array	67.81	330	P	P	10 53 23.7	+0.6
	comp=E,0.2nm,0.6s,baz=138,slow=7.3,SNR=2.3						
DBIC	Dimbokro	73.98	72	P	P	10 54 00.2	-0.6
	comp=E,3.2nm,0.6s,baz=225,slow=6.7,SNR=4.1						
TORD	Torodi Ar. Bea	82.95	70	P	P	10 54 49.9	-0.4
	comp=E,0.9nm,0.7s,baz=256,slow=4.0,SNR=6.3						
WRA	Warramunga Arr	123.13	209	PKP	PKPdf	11 01 21.2	-0.7
	comp=E,0.6nm,0.8s,baz=153,slow=1.8,SNR=1.9						
H11S2	WAKE ISLAND Hy	126.21	271	T	T	13 20 21.2	
	baz=116,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	126.23	271	T	T	13 20 18.1	
	baz=116,slow=75,SNR=25						
H11S3	WAKE ISLAND Hy	126.23	271	T	T	13 20 23.0	
	baz=116,slow=75,SNR=24						
H11N3	WAKE ISLAND Hy	126.56	272	T	T	13 20 44.3	
	baz=116,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	126.58	272	T	T	13 20 46.0	
	baz=116,slow=75,SNR=4.8						
H11N2	WAKE ISLAND Hy	126.58	272	T	T	13 20 49.1	
	baz=116,slow=75,SNR=18						
ZALV	Zalesovo Beam	151.89	30	PKPbc	PKPbc	11 02 18.9	-0.1
	comp=E,2.7nm,0.5s,baz=303,slow=2.9,SNR=13						
ZALV				pPKPbc	sPKPdf	11 02 32.0	0.0
	comp=E,1.6nm,0.6s,baz=296,slow=3.2,SNR=5.3						
MKAR	Makanchi Array	154.76	45	PKPbc	PKPbc	11 02 25.1	-0.6
	comp=E,0.2nm,0.8s,baz=272,slow=3.2,SNR=3.6						
MKAR				PKPab	PKPab	11 02 41.2	+0.3
	comp=E,0.3nm,0.6s,baz=273,slow=5.6,SNR=2.6						

IDC 26 10:46:08.9±6.0,5°.03S×133°.93E,h0km,mb3.5/1, mb1 3.7/3,mb1mx3.4/24,mbtmp3.5/3,ML3.5/2,Error ellipse: s-maj=333.8km s-min=33.4km az=78.0,Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.83	178	Pn	Pn	10 49 38.6	-1.4
	0.2nm,0.3s,baz=356,slow=13,SNR=2.0						
ASAR	Alice Springs	18.53	180	P	Pn	10 50 27.6	+0.4
	0.2nm,0.3s,baz=5.3,slow=12,SNR=18						
MKAR	Makanchi Array	68.80	325	P	P	10 57 15.0	0.0
	0.4nm,0.7s,baz=106,slow=7.5,SNR=3.2						

IDC 26 10:58:29.6±3.2,6°.02S×147°.05E,h0km,mb3.5/1, mb1 3.8/3,mb1mx3.5/39,mbtmp3.6/3,ML3.7/1,MS2.6/2, Ms1 2.6/2,ms1mx2.4/24,Error ellipse: s-maj=67.2km s-min=35.7km az=84.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.37	178	Pn	Pn	10 59 23.9	+0.3
	1.7nm,0.3s,baz=0.0,slow=13,SNR=5.3						
PMG				Sn	Sn	11 00 03.5	-0.8
	4.2nm,0.3s,baz=36,slow=18,SNR=7.4						
PMG				LR	LR	11 00 28.2	
	comp=Z,40nm,21.2s,baz=88,slow=35						
SIJI	Sorong	16.56	287	LR	LR	11 09 19.0	
	comp=Z,45nm,19.2s,baz=192,slow=39						
WRA	Warramunga Arr	18.55	221	P	Pn	11 02 48.3	0.0
	0.2nm,0.3s,baz=43,slow=12,SNR=8.7						
ASAR	Alice Springs	21.63	214	P	P	11 03 21.6	-0.1
	1.0nm,0.5s,baz=50,slow=7.9,SNR=34						
TORD	Torodi Ar. Bea	145.14	284	PKPbc	PKPbc	11 18 09.0	-0.8
	0.5nm,0.8s,baz=80,slow=3.2,SNR=2.1						

ATH ***26*** *11:00:49.9,35°.61N×27°.25E,h66km±6km,ML5.2/9,Error ellipse: s-maj=6.7km s-min=1.3km az=83.0*

HLW ***26*** *11:00:49.3,35°.49N×27°.54E,h27km±11km,Ml5.4*

ISK ***26*** *11:00:50.5,35°.52N×27°.35E,h19km,ML5.4/35*

NIC ***26*** *11:00:50.3±0.0,35°.33N×27°.51E,h26km±3km,Ml5.4/6*

BJI ***26*** *11:00:50.1±0.0,35°.29N×27°.08E,h58km,mB5.4/44, mb5.5/79,Ms4.9/34,Ms7 4.6/33*

IDC ***26*** *11:00:51.9±1.1,35°.64N×27°.35E,h34km±8km,mb4.9/41, mb1 4.9/50,mb1mx4.8/55,mbtmp5.0/50,ML4.5/8,MS4.3/36, Ms1 4.3/36,ms1mx4.1/55,Error ellipse: s-maj=9.6km s-min=8.2km az=141.0*

MED_RC ***26*** *11:00:52.0±0.3,35°.41N×27°.43E,h40km±1km,MW5.2/36, Moment Tensor Solution. Body waves: s9,c10;Mantle waves: s36,c62; Duration: 1s4 Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*-0.11±.03;* $M_{\theta\theta}$*-0.70±.02;* $M_{\phi\phi}$*0.81±.02;* $M_{r\theta}$*0.11±.02;* $M_{\theta\phi}$*0.04±.02;* $M_{\phi r}$*-0.28±.02; Best double couple:* M_0*0.80000×*10^{17} *NP1:*ϕ_s*227.00000°,δ71.00000°, λ3.00000°. NP2:*ϕ_s*136.00000°,δ87.00000°,λ161.00000°. Principal axes: T 0.8800, Plg16.0000°, Azm90.0000°; N -0.1600, Plg70.0000°, Azm309.0000°; P -0.7200, Plg12.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

NEIC ***26*** *11:00:53.0±2.3,35°.52N±0°.06×27°.39E±0°.07,h37km±5km, mb5.2/148,Mww5.2,ML5.2(ATH) Error ellipse: s-maj=8.2km s-min=7.7km az=202.0*

DDA ***26*** *11:00:52.6,35°.63N×27°.36E,h13km±1km,MW5.2*

THE ***26*** *11:00:53.0,35°.52N×27°.36E,h65km±6km,ML5.2/9,Error ellipse: s-maj=6.9km s-min=0.8km az=16.0*

GCMT ***26*** *11:00:53.0±0.2,35°.44N±0°.01×27°.46E±0°.01,h33km±1km, MW5.2/133,Moment Tensor Solution. s71,c89; s133,c204; Duration: 1s0 Moment tensor: Scale* 10^{17} *Nm;* M_{rr}*0.04±.02;* $M_{\theta\theta}$*-0.71±.01;* $M_{\phi\phi}$*0.67±.01;* $M_{r\theta}$*0.11±.02;* $M_{\theta\phi}$*0.09±.01;* $M_{\phi r}$*-0.44±.03; Best double couple:* M_0*0.82200×*10^{17} *NP1:*ϕ_s*232.00000°,δ63.00000°, λ11.00000°. NP2:*ϕ_s*137.00000°,δ80.00000°,λ152.00000°. Principal axes: T 0.9000, Plg27.0000°, Azm91.0000°; N -0.1560, Plg60.0000°, Azm298.0000°; P -0.7440, Plg12.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***26*** *11:00:53.1±1.1,35°.57N×27°.43E,h57km,mb5.5/69 Error ellipse: s-maj=4.0km s-min=2.6km az=78.1*

BGR ***26*** *11:00:55.5±0.0,35°.50N×27°.54E,h33km,Ms4.2*

NEIC ***26*** *11:00:57,35°.48N×27°.39E,h30km,Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale* 10^{16}*Nm;* M_{rr}*-0.10;* $M_{\theta\theta}$*-6.60;* $M_{\phi\phi}$*6.70;* $M_{r\theta}$*0.69;* $M_{\theta\phi}$*0.20;* $M_{\phi r}$*-1.88; Fault plane solution:* M_0*6.94000×*10^{16} *NP1:* ϕ_s*227.00000°,δ75.00000°,λ6.00000°. NP2:*ϕ_s*135.00000°, δ84.00000°,λ165.00000°. Principal axes: T 7.1810, Plg14.0000°, Azm90.0000°; N -0.4989, Plg74.0000°, Azm295.0000°; P -6.6821, Plg7.0000°, Azm182.0000°;*

ISC 26 11:00:50.9±0.4,35°.46N±0°.02×27°.39E±0°.02,h30km±2km, h32km:pP-P,n1342,σ1s78/1448,mb5.3/194,MS4.3/39, 109C-68D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	Arkhangelos	0.96	38	P	Pb	11 01 09.8	+0.8
ARG				S	Sb	11 01 23.4	+2.0
	491µm,1.0s						
ARG	Arkhangelos	0.96	38	P	Pb	11 01 09.3	+0.3
ARG				S	Sb	11 01 22.4	+1.0
ARG				AML	AML	11 01 27.6	
ARG				AML	AML	11 01 30.0	
ARG	Arkhangelos	0.96	38	P	Pb	11 01 09.8	+0.8
ARG				S	Sb	11 01 22.9	+1.5
ARG	Arkhangelos	0.96	38	PG	Pb	11 01 09.3	+0.3
ARG				SG	Sb	11 01 22.6	+1.2
ARG	Arkhangelos	0.96	38	P	Pb	11 01 08.7	-0.3
ARG				S	Sb	11 01 22.9	+1.5
ARG	Arkhangelos	0.96	38	⇑P	Pb	11 01 09.1	+0.1
ZKR	Zakros	1.02	251	P	Pb	11 01 09.9	-0.1
ZKR				S	Sb	11 01 24.2	+1.2
	58µm,0.7s						
ZKR	Zakros	1.02	251	P	Pn	11 01 09.3	+0.2
ZKR				AML	AML	11 01 32.6	
ZKR				AML	AML	11 01 33.2	
	comp=N,97215µm,0.8s						
ZKR	Zakros	1.02	251	PG	Pn	11 01 09.5	+0.4
ZKR	Zakros	1.02	251	P	Pn	11 01 09.5	+0.4
ZKR				AML	AML	11 01 31.7	
	comp=N,94nm,0.7s						
ZKR				AML	AML	11 01 32.8	
	comp=N,124nm,1.2s						
STIA	Sitia Lasithi	1.09	257	P	Pb	11 01 10.7	-0.5
STIA				S	Sb	11 01 26.0	+0.9
NISR	Nisiros	1.17	350	P	Pn	11 01 11.1	0.0
NISR				S	Sn	11 01 26.4	+0.4
	comp=N,128µm,0.6s						
NISR	Nisiros	1.17	350	P	Pn	11 01 10.8	-0.3
NISR				S	Sn	11 01 25.0	-1.0
NISR				AML	AML	11 01 36.1	
NISR				AML	AML	11 01 36.5	
DAT	Datca	1.27	7	P	Pn	11 01 13.0	+0.3
DAT				S	Sb	11 01 29.8	-0.7
DAT	Datca	1.27	7	iP	Pn	11 01 12.8	+0.1
DAT				iS	Sn	11 01 29.5	+0.7
DAT	Datca	1.27	7	PN	Pn	11 01 12.8	+0.1
DAT				SN	Sb	11 01 29.7	-0.7
KOSK	Kos Island	1.33	346	P	Pn	11 01 13.6	+0.2
KOSK				S	Sb	11 01 31.0	-0.9
	comp=N,75µm,0.8s						
KOSK	Kos Island	1.33	346	PN	Pn	11 01 13.5	+0.2
FRMA	Ierapetra Chan	1.43	252	P	Pn	11 01 15.2	+0.5
FRMA				S	Sn	11 01 32.4	0.0
NPS	Neapolis	1.47	263	P	Pb	11 01 16.6	-0.9
NPS				S	Sb	11 01 36.0	+0.2
	comp=N,46µm,0.7s						
NPS	Neapolis	1.47	263	P	Pb	11 01 16.4	-1.1
NPS				S	Sn	11 01 34.2	+0.8
NPS				AML	AML	11 01 48.5	
	comp=N,89475µm,0.9s						
NPS				AML	AML	11 01 51.7	
NPS	Neapolis	1.47	263	P	Pb	11 01 16.6	-0.9
NPS				S	Sb	11 01 36.0	+0.2
TURN	Turunc	1.48	28	PN	Pn	11 01 16.6	+1.2
TURN				SN	Sb	11 01 35.4	-0.8
BODT	Bodrum	1.60	358	P	Pn	11 01 17.5	+0.4
BODT				S	Sn	11 01 37.5	+0.8
BODT	Bodrum	1.60	358	PN	Pn	11 01 17.9	+0.8
BDRM	Kayabasi	1.60	2	iP	Pn	11 01 17.6	+0.5
BDRM				iP	Pb	11 01 18.2	-1.6
BDRM				iS	Sn	11 01 35.4	-1.4
BDRM				iS	Sb	11 01 35.8	-3.9
YKAV	Yalikavak-Bodr	1.66	357	PN	Pn	11 01 18.6	+0.7
FETY	Fethiye	1.81	49	P	Pb	11 01 21.9	-1.4
FETY	Fethiye	1.81	49	iP	Pn	11 01 21.3	+1.4
FETY				iS	Sb	11 01 47.8	+2.3
FETY	Fethiye	1.81	49	PN	Pn	11 01 21.3	+1.4
SANT	Santorini	1.81	301	⇑P	Pn	11 01 20.4	+0.4
SANT	Santorini	1.81	301	P	Pn	11 01 20.4	+0.4
SANT	Santorini	1.81	301	P	Pn	11 01 20.6	+0.5
SANT				S	Sn	11 01 41.7	-0.3
SANT				AML	AML	11 01 54.9	
SANT				AML	AML	11 01 55.0	
	comp=N,69187µm,1.2s						
SANT	Santorini	1.81	301	PN	Pn	11 01 20.7	+0.7
SANT	Santorini	1.81	301	⇑P	Pn	11 01 20.4	+0.4
SANT	Santorini	1.81	301		Pn	11 01 20.5	+0.5
THR8	Santorini-Mono	1.82	302	P	Pn	11 01 20.1	+0.1
YER	Yerkesik	1.82	23	P	Pn	11 01 21.4	+1.3
YER	Yerkesik	1.82	23	P	Pn	11 01 21.4	+1.3
YER	Yerkesik	1.82	23	PN	Pn	11 01 21.5	+1.3
THR6	Thira Island,	1.85	300	P	Pn	11 01 21.0	+0.5
THR6	Thira Island,	1.85	300	P	Pn	11 01 20.9	+0.5
SFIR	Foira Santorin	1.86	302	P	Pn	11 01 21.0	+0.4
STAX	Taxiarchis Har	1.86	301	P	Pn	11 01 21.0	+0.3
THT2	Imerovigli	1.87	302	P	Pn	11 01 21.2	+0.4
THT2	Imerovigli	1.87	302	P	Pn	11 01 21.1	+0.4
THR3	Thira Island,	1.87	301	P	Pn	11 01 20.8	0.0
HRKL	Herakleio	1.88	266	P	Pn	11 01 22.1	+1.3
HRKL				S	Sb	11 01 45.8	-1.7
	comp=N,57µm,0.7s						
HRKL	Herakleio	1.88	266	PN	Pb	11 01 22.8	-1.6
THR9	Santorini-Faro	1.88	299	P	Pn	11 01 21.6	+0.7
THR9	Santorini-Faro	1.88	299	P	Pn	11 01 21.5	+0.7
CMBO	Columbo, Santo	1.90	303	P	Pn	11 01 21.4	+0.2
CMBO				S	Sn	11 01 44.6	+0.5
	comp=N,85µm,0.6s						
CMBO	Columbo, Santo	1.90	303	P	Pn	11 01 20.5	-0.7
CMBO				S	Sn	11 01 44.4	+0.4
CMBO				AML	AML	11 01 50.0	
CMBO				AML	AML	11 01 53.0	
IACM	Heraklion	1.90	266	P	Pb	11 01 23.1	-1.7
IACM	Heraklion	1.90	266	P	Pb	11 01 23.2	-1.7
KSL	Kastellorizon	1.91	68	P	Pb	11 01 23.4	-1.6
KSL	Kastellorizon	1.91	68	P	Pn	11 01 21.1	-0.3
KSL				AML	AML	11 02 17.4	
	comp=N,78nm,1.4s						
KSL				AML	AML	11 02 22.8	
	comp=N,76nm,1.1s						
THR5	Thira Island,	1.91	301	P	Pn	11 01 21.8	+0.4
THR5	Thira Island,	1.91	301	P	Pn	11 01 21.6	+0.2
MULA	Mugla, Merkez-	1.94	22	iP	Pb	11 01 24.2	-1.4
MULA				iS	Sb	11 01 48.8	-0.8
AKAS	Kas	1.96	66	iP	Pn	11 01 23.2	+1.1
AKAS				iS	Sb	11 02 03.2	+13
AKAS	Kas	1.96	66	PN	Pn	11 01 23.3	+1.1
AKAS	Kas	1.96	66		Pn	11 01 23.0	+0.9
DDIM	Aydin, Didim	2.00	357	iP	Pn	11 01 24.4	+1.9
DDIM				iS	Sn	11 01 47.5	+1.0
IDI	Anoyia	2.05	266	Pn	Pn	11 01 24.4	+1.1
	comp=N,250nm,0.3s,baz=50,slow=14,SNR=408						
IDI				LR	LR	11 01 58.9	
	comp=N,3µm,21.3s,baz=30,slow=33						
IDI	Anoyia	2.05	266	P	Pn	11 01 24.6	+1.2
IDI				S	Sn	11 01 49.3	+1.4
	comp=N,16µm,0.8s						
IDI	Anoyia	2.05	266	P	Pn	11 01 24.5	+1.2
IDI				S	Sb	11 01 52.2	-0.4
IDI				AML	AML	11 02 03.5	
	comp=N,34265µm,0.7s						
IDI				AML	AML	11 02 10.8	
	comp=E,32286µm,0.8s						
CAME	Cameli-Denizli	2.14	46	PN	Pn	11 01 26.1	+1.5
SIVA	Sivas	2.16	259	P	Pb	11 01 27.6	-1.7
SIVA				AML	AML	11 02 12.1	
	comp=E,68755µm,0.7s						
SIVA				AML	AML	11 02 14.3	
	comp=N,60912µm,0.7s						
APE	Apeiranthos	2.20	317	⇓P	Pn	11 01 26.5	+1.2
APE	Apeiranthos	2.20	317	P	Pn	11 01 25.4	+0.1
APE				S	Sn	11 01 52.0	+0.5
	comp=N,18µm,0.5s						
APE	Apeiranthos	2.20	317	P	Pn	11 01 25.2	-0.2
APE				AML	AML	11 01 55.5	
	comp=E,30770µm,0.5s						
APE				AML	AML	11 01 56.6	
	comp=N,44657µm,0.6s						
APE	Apeiranthos	2.20	317	P	Pb	11 01 30.0	0.0
APE				S	Sn	11 01 52.0	+0.5
APE	Apeiranthos	2.20	317	PN	Pn	11 01 26.4	+1.1
APE	Apeiranthos	2.20	317	⇑P	Pn	11 01 25.1	-0.3
AYDN	Tasoluk	2.23	10	iP	Pn	11 01 26.9	+1.1
AYDN				iS	Sn	11 01 52.7	+0.3
GCAM	G?zelcaml?	2.24	357	iP	Pn	11 01 27.0	+1.1
GCAM				iS	Sn	11 01 53.0	+0.6
GCAM	G?zelcaml?	2.24	357	PN	Pn	11 01 27.2	+1.4
CAEL	Denizli, Camel	2.28	43	iP	Pb	11 01 29.1	-2.3
CAEL				iS	Sb	11 02 05.4	+6.2
SMG	Samos	2.29	349	P	Pn	11 01 26.5	0.0
SMG	Samos	2.29	349	P	Pn	11 01 26.4	-0.2
TAVA	DENIZLI_Tavas	2.35	31	iP	Pb	11 01 30.0	-2.5
TAVA				iS	Sb	11 02 00.4	-0.7
ELL	Elmali	2.41	57	P	Pn	11 01 29.8	+1.5
ELL	Elmali	2.41	57	PN	Pn	11 01 30.7	+2.4
ELL	Elmali	2.41	57	P	Pn	11 01 28.1	-0.3
ELL	Elmali	2.41	57	Pn	Pn	11 01 29.8	+1.5
GOLH	Golhisar	2.49	44	iP	Pn	11 01 31.8	+2.3
GOLH				iS	Sb	11 02 08.2	+2.9
AYDB	Zeytinkoy-Aydi	2.51	9	PN	Pn	11 01 31.0	+1.2
AKUM	Antalya-Kumluc	2.55	69	iP	Pn	11 01 30.9	+0.8
VAM	Vamos	2.60	270	P	Pb	11 01 34.8	-2.1
DGB	zmir	2.62	351	iP	Pn	11 01 30.8	-0.2
DGB				iS	Sn	11 02 04.1	+2.3
MHLO	Agia Marina, M	2.71	298	P	Pn	11 01 34.0	+1.6
GVDS	Gavdos	2.77	258	PN	Pn	11 01 35.6	+2.4
GVD	Gavdhos	2.78	258	PN	Pn	11 01 35.2	+2.0
IMMV	Iera Moni Meta	2.78	271	PN	Pn	11 01 34.4	+1.1
KORT	Korkueli	2.84	56	iP	Pn	11 01 36.5	+2.2
KORT	Korkueli	2.84	56	PN	Pn	11 01 36.2	+1.9
ZEYE	Izmir, Urla-Ze	2.86	346	iP	Pn	11 01 35.0	+0.5
ZEYE				iS	Sb	11 02 22.4	+6.5
BLCB	Balcova	2.93	355	PN	Pn	11 01 36.2	+0.8
URLA	Izmir	2.96	348	iP	Pn	11 01 37.1	+1.3
URLA	Izmir	2.96	348	PN	Pn	11 01 37.0	+1.2
ANTB	Antalya	3.01	61	PN	Pn	11 01 38.6	+2.2
BRDR	BURDUR-Merkez	3.10	43	iP	Pn	11 01 39.4	+1.6
BUCA	Burdur, Bucak-	3.16	53	iP	Pn	11 01 41.0	+2.4
KULA	Kula-Manisa	3.21	18	PN	Pn	11 01 40.6	+1.3
BASM	Basmaki-Afyon	3.25	40	PN	Pn	11 01 40.8	+0.9
BCK	Bucak	3.26	51	PN	Pn	11 01 42.6	+2.6
PASA	Karahalli, USA	3.34	30	iP	Pn	11 01 42.3	+1.3
AKHS	Akhisar	3.43	6	iP	Pn	11 01 43.5	+1.3
ISP	Isparta	3.45	46	P	Pn	11 01 43.7	+1.1
ISP	Isparta	3.45	46	PN	Pn	11 01 44.4	+1.8
ISP	Isparta	3.45	46	Pn	Pn	11 01 43.7	+1.1
USAK	Uak-Merkez	3.50	21	iP	Pn	11 01 44.5	+1.3
ZEDA	zmir-Bergama	3.51	356	iP	Pn	11 01 43.6	+0.3
KZIL	AFYON_Kizioren	3.56	38	iP	Pn	11 01 45.8	+1.7
DKL	Dikili	3.62	354	PN	Pn	11 01 45.7	+0.8
BAGO	Egridir - ISPA	3.72	46	iP	Pn	11 01 47.2	+0.9
DEMI	Demirci	3.73	16	iP	Pn	11 01 47.4	+0.9
OSC1	CSNet OBS 1	3.76	120	P	Pn	11 01 45.1	-1.7
OSC1				S	Sn	11 02 27.4	-2.5
SIMA	Simav-Kutahya	3.83	19	PN	Pn	11 01 49.7	+1.8
SMAA	Simav-Kutahya	3.85	19	PN	Pn	11 01 49.8	+1.8
AYVA	Ayvalik	3.88	352	iP	Pn	11 01 50.3	+1.9
STEP	BALIKESIR_Sava	3.92	4	iP	Pn	11 01 50.3	+1.3
GEDZ	Gediz	3.92	24	PN	Pn	11 01 50.9	+1.8
SIGR	SIGRI	3.94	342	PN	Pn	11 01 50.2	+1.0
GDZ	Gediz	3.99	24	iP	Pn	11 01 51.3	+1.3
SHUT	Suhut-Afyon	3.99	38	PN	Pn	11 01 51.5	+1.4
BUHA	Balikesir, Bur	4.04	357	iP	Pn	11 01 52.0	+1.4
SEDI	Konya, Seydise	4.04	59	iP	Pn	11 01 53.6	+2.9
AFYO	Afyonkarahisar	4.05	34	iP	Pn	11 01 53.0	+2.2
AKMS	Akamas	4.07	95	P	Pn	11 01 49.4	-1.6
AKMS				AML	AML	11 02 34.5	
	comp=N,18nm,0.7s						
AKMS				AML	AML	11 02 34.5	
	comp=N,18nm,0.7s						
AKMS				S	Sn	11 02 37.4	-0.3
AKMS				AML	AML	11 02 37.7	
	comp=N,28nm,0.9s						
AKMS				AML	AML	11 02 37.7	
	comp=N,28nm,0.9s						
GAZI	Gazipasa	4.08	78	iP	Pn	11 01 50.8	-0.3
SEYD	Seydisehir-KON	4.08	60	PN	Pn	11 01 54.1	+2.8
MATC	Matruh	4.11	182	AMP		11 02 00.0	
	baz=184						
KOCA	Canakkale, Ayv	4.16	347	iP	Pn	11 01 53.4	+1.1
YVAC	Isparta, Yalva	4.17	47	iP	Pn	11 01 54.5	+2.0
BALB	Balikesir	4.19	5	PN	Pn	11 01 54.3	+1.6
BALB	Balikesir	4.19	5	Pn	Pn	11 01 54.0	+1.4
DURS	Dursunbey	4.22	11	iP	Pn	11 01 54.4	+1.2
DST	Dursunbey	4.25	13	PN	Pn	11 01 54.8	+1.2
ALFC	Alefka	4.27	93	P	Pn	11 01 52.1	-1.7
ALFC				AML	AML	11 02 39.3	
	comp=N,20nm,0.8s						
ALFC				AML	AML	11 02 39.3	
	comp=N,20nm,0.8s						
ALFC				AML	AML	11 02 41.4	
	comp=N,20nm,0.5s						
ALFC				AML	AML	11 02 41.4	
	comp=N,20nm,0.5s						
ALFC				S	Sn	11 02 41.6	-1.1
BALY	Balya	4.28	2	iP	Pn	11 01 54.7	+0.8
NATA	Nata	4.30	98	P	Pn	11 01 53.2	-1.0
NATA				S	Sn	11 02 42.4	-0.9
TVSB	Tavsanli	4.31	22	PN	Pn	11 01 56.3	+1.9
BAYC	CANAKKALE_Bayr	4.33	351	iP	Pn	11 01 55.7	+1.1
DOGA	KONYA_Doganhis	4.33	51	iP	Pn	11 01 57.2	+2.4
SLUM	Salum	4.36	205	P	Pn	11 01 54.7	-0.3
	baz=207						
SLUM				AMP		11 02 00.0	
	baz=207						
HDMB	Hadim	4.38	69	PN	Pn	11 01 57.8	+2.2
BOZC	Bozcaada	4.50	347	iP	Pn	11 01 57.4	+0.5
ANDZ	Kutahya, Merke	4.51	26	iP	Pn	11 01 57.8	+0.7
AUKIR	Kırka- Seyitga	4.56	32	iP	Pn	11 01 60.0	+2.2
KMER	Konya-Meram	4.62	59	iP	Pn	11 02 01.8	+3.1
ECEA	Canakkale, Ece	4.68	348	iP	Pn	11 02 01.6	+2.3
OSC2	CSNet OBS 4	4.69	119	P	Pn	11 01 58.7	-0.8
KONT	Konya--Tatoy	4.70	57	iP	Pn	11 02 02.0	+2.3
ITM	Ithomi	4.73	293	⇓P	Pn	11 02 02.7	+2.5
ITM	Ithomi	4.73	293		Pn	11 02 02.9	+2.7
KNL	Balıkesir	4.80	1	iP	Pn	11 02 02.0	+0.9
KKBE	Karaman, Kazim	4.81	67	iP	Pn	11 02 03.7	+2.4
ASGA	Asgata	4.85	96	P	Pn	11 02 00.5	-1.3
ASGA				S	Sn	11 02 55.3	-1.5
ASGA				AML	AML	11 02 55.6	
	comp=N,13nm,0.7s						
ASGA				AML	AML	11 02 55.6	
	comp=N,13nm,0.7s						
ASGA				AML	AML	11 02 56.4	
	comp=N,12nm,0.9s						
ASGA				AML	AML	11 02 56.4	
	comp=N,12nm,0.9s						
KDHN	Kadinhani	4.86	50	iP	Pn	11 02 03.4	+1.4
GOKA	anakkale-Gk	4.87	346	iP	Pn	11 02 03.2	+1.3
ULDT	Uludag	4.87	16	iP	Pn	11 02 03.6	+1.4
CSS	Mathiatis	4.89	94	P	Pn	11 02 01.2	-1.1
CSS	Mathiatis	4.89	94	⇑P	Pn	11 02 01.2	-1.1
CSS	Mathiatis	4.89	94	Pn	Pn	11 02 01.4	-0.9
SGAZ	Eskisehir, Sey	4.90	33	iP	Pn	11 02 04.1	+1.6
ATHAL	Athalassa	4.92	92	P	Pn	11 02 02.5	-0.2
IGD	Bursa	5.00	16	iP	Pn	11 02 06.0	+2.2
BORA	Eskisehir	5.04	28	iP	Pn	11 02 05.5	+1.2
BORA	Eskisehir	5.04	28	Pn	Pn	11 02 06.3	+1.9
BILE	Bilecik/Merkez	5.09	22	iP	Pn	11 02 07.1	+2.0
MVOU	Mavrovouni	5.13	93	P	Pn	11 02 04.4	-1.2

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MVOU                                AML    AML   11 03 02.0
       comp=N,6.3nm,0.9s
MVOU                                AML    AML   11 03 05.2
       comp=N,4.8nm,0.9s
AUSIV  SIVRIHISAR         5.16  39 iP     Pn    11 02 08.5 +2.3
CAVK   Edirne/Enez-Ca     5.31 350 iP     Pn    11 02 10.1 +2.0
KURT   Yalova, Merkez     5.32  15 iP     Pn    11 02 09.3 +1.1
KESN   Edirne-Kesan       5.39 354 iP     Pn    11 02 10.4 +1.0
PARAL  Paralimni          5.46  93 P      Pn    11 02 10.1  0.0
ALN    Alexandroupoli     5.53 349 P      Pn    11 02 13.1 +2.0
ALN    Alexandroupoli     5.53 349 Pn     Pn    11 02 13.1 +2.0
MDUB   Mudurnu            5.84  30        Pn    11 02 17.9 +2.5
RDO    Rodhopi            5.86 346 ⇓P     Pn    11 02 16.7 +1.1
BR231  Keskin MP Arra     6.11  43        Pn    11 02 21.2 +2.0
ANTO   Ankara             6.14  43 P      Pn    11 02 21.7 +2.1
ANTO   Ankara             6.14  43        Pn    11 02 21.6 +2.1
THE    Thessaloniki       6.23 327 P      Pn    11 02 27.1 +6.4
       baz=57
LKD2   Lefkada island     6.32 304 P      Pn    11 02 25.4 +3.4
       baz=86
HMYD   Mayadein           6.34 152 P      Pn    11 02 21.2 -1.0
       baz=153
SWA2                      6.41 195 P      Pn    11 02 22.9 -0.3
       baz=197
HNAT   Natroun            6.42 154 P      Pn    11 02 22.9 -0.5
       baz=155
HNAT                               AMP          11 03 00.0
       baz=155
BR131  Keskin Array S     6.54  48 P      Pn    11 02 26.6 +1.6
BR131  Keskin Array S     6.54  48 P      Pn    11 02 26.6 +1.6
       SNR=115
BR131                              S      Sn    11 03 41.8 +3.2
BR131  Keskin Array S     6.54  48 Pn     Pn    11 02 26.6 +1.6
BRTR   Keskin Array B     6.54  48 Pn     Pn    11 02 25.7 +0.6
       comp=N,24nm,0.3s,baz=216,slow=15,SNR=326
BRTR                               LR     LR    11 05 44.7
       comp=N,6μm,18.0s,baz=239,slow=45
BRTR                               ScP    ScP   11 12 48.2 -0.7
       comp=N,0.1nm,0.3s,baz=188,slow=1.6,SNR=9.4
BRTR   Keskin Array B     6.54  48 P      Pn    11 02 26.3 +1.2
BRTR   Keskin Array B     6.54  48 Pn     Pn    11 02 26.3 +1.2
KDZE   Karadeniz Ereo     6.65  27 ⇑P     Pn    11 02 28.8 +2.3
KOT    Kottamia           6.67 145 P      Pn    11 02 24.9 -1.9
       baz=145
KOT                                AMP          11 03 00.0
       baz=145
HHAG   Hagoal             6.78 143 P      Pn    11 02 26.6 -1.6
       baz=143
HHAG                               S      Sn    11 03 38.9 -5.5
       baz=143
HSAF   As Saff            6.80 148 P      Pn    11 02 27.5 -1.1
       baz=148
GLL    Jalalah            6.91 147 P      Pn    11 02 28.7 -1.4
       baz=148
VAY    Valandovo          6.97 329 iP     Pn    11 02 35.4 +4.6
DQRL   Deir Qamar         6.97 102 eP     Pn    11 02 29.0 -2.0
BHL    Bhannes            6.98 100 eP     Pn    11 02 28.3 -2.9
MMAI   Mount Meron Ar     7.07 108 Pn     Pn    11 02 29.8 -2.5
       comp=N,47nm,0.3s,baz=303,slow=12,SNR=136
MMAI                               Sn     Sn    11 03 48.8 -2.9
       comp=N,167nm,0.3s,baz=309,slow=25,SNR=14
MMAI                               LR     LR    11 06 41.2
       comp=N,952nm,20.6s,baz=265,slow=49
FNA    Florina            7.12 320 P      Pn    11 02 37.4 +4.5
FNA    Florina            7.12 320 ⇑P     Pn    11 02 36.2 +3.3
FNA    Florina            7.12 320 Pn     Pn    11 02 37.4 +4.5
FNA    Florina            7.12 320 P      Pn    11 02 37.5 +4.5
       baz=41
LSK    Leskovik           7.13 313 P      Pn    11 02 37.5 +4.5
       baz=41
HWQ    Hawqa              7.13  97 eP     Pn    11 02 31.7 -1.6
SHBL   Chebaa             7.22 105 eP     Pn    11 02 32.4 -2.0
RCY    Rachaya            7.25 103 eP     Pn    11 02 32.8 -2.0
KBN    Korca              7.33 317 P      Pn    11 02 41.3 +5.5
       baz=36
KEK    Kerkira            7.37 307 ⇑P     Pn    11 02 39.0 +2.6
STIP   Stip               7.44 328 iP     Pn    11 02 40.1 +2.8
ILGA   Ilgaz              7.48  40        Pn    11 02 40.0 +1.9
ZAF    Zafarana           7.55 143 AMP          11 04 00.0
       baz=144
BNN    Bunyan             7.55  61 Pn     Pn    11 02 41.7 +2.7
NBNS   Bani Suef          7.58 153 P      Pn    11 02 38.7 -0.5
       baz=154
ZNM    Zenema             7.63 141 P      Pn    11 02 39.1 -0.9
       baz=142
OHR    Ohrid              7.66 319 iP     Pn    11 02 45.7 +5.4
VTS    Vitosha            7.84 337 ⇓P     Pn    11 02 45.6 +2.6
VTS    Vitosha            7.84 337 P      Pn    11 02 44.9 +1.9
VTS    Vitosha            7.84 337 ⇓P     Pn    11 02 45.6 +2.6
VTS    Vitosha            7.84 337 Pn     Pn    11 02 44.9 +1.9
KALB   Balgarevo          7.97   5 ⇓P     Pn    11 02 47.1 +2.5
SKO    Skopje             7.99 326 iP     Pn    11 02 49.4 +4.5
BOSS   Bosilegrad         8.00 333 eP     Pn    11 02 47.6 +2.6
GHAJ   Ghor Haditha       8.00 119        Pn    11 02 44.8 -0.1
GAZ    Gaziantep          8.11  75        Pn    11 02 45.3 -1.3
RAZG   Razgrad            8.12 355 ⇓P     Pn    11 02 48.6 +1.9
BZK    Bozkurt            8.29  37 ⇓P     Pn    11 02 52.3 +3.3
BZK    Bozkurt            8.29  37        Pn    11 02 52.3 +3.3
TAMRE  El Minia           8.32 158 P      Pn    11 02 48.0 -1.3
       baz=158
HFRF   Wahat Farafira     8.32 174 P      Pn    11 02 50.0 +0.5
       baz=175
TIR    Tirane             8.33 317 P      Pn    11 02 53.5 +4.0
TIR    Tirane             8.33 317 Pn     Pn    11 02 53.5 +4.0
HRDS   Abu Rudays         8.39 142 P      Pn    11 02 49.0 -1.4
       baz=142
MANR   Mangalia           8.40   6 ⇑P     Pn    11 02 52.7 +2.3
GRB    Gharib             8.51 146 P      Pn    11 02 51.5 -0.5
       baz=146
BARS   Barje              8.52 331 eP     Pn    11 02 55.6 +3.4
BARS   Barje              8.52 331 eP     Pn    11 03 06.5  +14
ASF    Jabal al Asfar     8.56 110 Pn     Pn    11 02 52.6 -0.2
       comp=N,15nm,0.3s,baz=290,slow=5.9,SNR=62
EIL    Elat               8.60 130 Pn     Pn    11 02 51.0 -2.3
       comp=N,16nm,0.3s,baz=290,slow=3.7,SNR=111
EIL                                Sn     Sn    11 04 22.1 -7.2
       comp=N,55nm,0.3s,baz=294,slow=20,SNR=14
EIL    Elat               8.60 130 ⇑P     Pn    11 02 51.0 -2.3
ZAPS   Zavoj              8.63 336 eP     Pn    11 02 57.6 +4.0
ICOR   Ion Corvin         8.65   2 ⇑P     Pn    11 02 56.2 +2.3
EFOR   EFORIE             8.66   6 ⇑P     Pn    11 02 56.8 +2.8
TOKA   Tokat              8.67  53 Pn     Pn    11 02 56.9 +2.7
MFTR   Murfatlar          8.74   5 ⇓P     Pn    11 02 57.4 +2.3
RASA   Rasa               8.74 359 ⇑P     Pn    11 02 57.0 +1.8
HBST   Basata             8.79 133 P      Pn    11 02 54.6 -1.3
       baz=133
SGRR   Singureni          8.82 353 ⇓P     Pn    11 02 58.7 +2.5
COPA   Copaceanca         8.82 350 ⇑P     Pn    11 02 59.1 +2.9
VLAD   Vladila            8.83 346 ⇓P     Pn    11 02 59.2 +2.9
TR2    Tor 2              8.87 141 P      Pn    11 02 55.1 -1.9
       baz=141
NUB    Nuweibaa           8.88 134 P      Pn    11 02 56.9 -0.2
       baz=135
HKAT   Jabal Katrina      8.90 139 P      Pn    11 02 56.2 -1.3
       baz=140
HKAT                               S      Sn    11 04 28.8 -8.1
       baz=140
BUC1   Bucharest          8.94 354 ⇓P     Pn    11 03 01.3 +3.5
BCI    Bajram Curri       8.95 323 P      Pn    11 03 05.1 +7.1
       baz=12
SNOP   Sinop              8.95  41        Pn    11 03 00.4 +2.4
LEHL   Lehliu             9.01 357 ⇑P     Pn    11 03 01.4 +2.6
TIRR   Tirgusor           9.02   5 ⇑P     Pn    11 03 00.4 +1.5
TIRR   Tirgusor           9.02   5 P      Pn    11 03 01.0 +2.0
TIRR   Tirgusor           9.02   5 ⇓P     Pn    11 03 00.7 +1.8
TIRR   Tirgusor           9.02   5        Pn    11 03 01.0 +2.0
TLBR   Topalu             9.09   3 ⇑P     Pn    11 03 02.0 +2.1
AMRR   Amara              9.14 360 ⇑P     Pn    11 03 03.5 +2.9
SELS   Selova             9.14 330 eP     Pn    11 03 04.0 +3.3
HARR   Harsova            9.23   2 ⇑P     Pn    11 03 03.7 +1.9
ZAGS   Zajecar            9.24 336 eP     Pn    11 03 04.7 +2.8
HUMR   Humele             9.24 349 ⇑P     Pn    11 03 04.9 +2.9
TIP    Timpagrande        9.24 297 ⇓P     Pn    11 03 01.2 -0.9
TIP    Timpagrande        9.24 297 ⇑P     Pn    11 03 01.0 -1.2
SULR                      9.25 355 ⇓P     Pn    11 03 05.4 +3.3
BOVS   Bovan              9.27 333 eP     Pn    11 03 05.1 +2.8
DRME   Dracevica, Mon     9.28 319 ePn    Pn    11 03 06.0 +3.5
PDG    Podgorica          9.41 320 ⇑P     Pn    11 03 06.9 +2.7
PDG    Podgorica          9.41 320 ePn    Pn    11 03 07.5 +3.2
PDG    Podgorica          9.41 320 ⇑P     Pn    11 03 07.6 +3.4
PDG    Podgorica          9.41 320        Pn    11 03 07.4 +3.2
TPGR   Topolog            9.42   4 ⇓P     Pn    11 03 05.7 +1.3
PGOR   Pogoanele          9.44 358 ⇓P     Pn    11 03 08.2 +3.5
PUNG   Punghina           9.45 340 ⇓P     Pn    11 03 06.4 +1.7
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STFAR  Stefanesti-Arg     9.57 350 ⇓P     Pn    11 03 09.9 +3.3
SECR                      9.62 354 ⇑P     Pn    11 03 10.2 +3.0
CEL    Celeste            9.63 290 ⇑P     Pn    11 03 10.2 +2.9
CEL    Celeste            9.63 290        Pn    11 03 09.2 +1.8
ISR    Istrita            9.67 356 ⇓P     Pn    11 03 11.4 +3.5
SJES   Sjenica            9.67 326 eP     Pn    11 03 12.6 +4.6
CFR    Carcaliu           9.72   3 ⇓P     Pn    11 03 09.7 +1.2
SRE    Strehaia           9.73 342 ⇑P     Pn    11 03 10.8 +2.1
TLCR                      9.78   6 ⇑P     Pn    11 03 11.3 +2.0
HCY    Herceg Novi        9.83 318 ePn    Pn    11 03 11.8 +1.8
IVAS   Ivanjica           9.84 328 eP     Pn    11 03 14.3 +4.0
GRUS   Gruza              9.86 331 eP     Pn    11 03 13.6 +3.1
MATE   Matera             9.89 305 ⇓P     Pn    11 03 10.9 +0.1
MATE   Matera             9.89 305 ⇑P     Pn    11 03 11.6 +0.8
GRER                      9.91 358 ⇑P     Pn    11 03 13.9 +2.8
MTUR   Matau              9.91 350 ⇓P     Pn    11 03 14.7 +3.4
KUBS   Kucevo             9.96 336 eP     Pn    11 03 14.4 +2.6
NEHR   Nehoiu             9.99 356 ⇓P     Pn    11 03 15.8 +3.5
GIUM   Giurgiulesti      10.03   3 ⇓P     Pn    11 03 14.7 +1.9
IZVR   Izvoarele         10.08   2 ⇓P     Pn    11 03 16.6 +3.2
MLR    Muntele Rosu      10.08 354 ⇑P     Pn    11 03 16.8 +3.2
MLR    Muntele Rosu      10.08 354 Pn     Pn    11 03 17.2 +3.6
       comp=N,3.5nm,0.3s,baz=190,slow=5.7,SNR=91
MLR                                LR     LR    11 07 52.8
       comp=N,4μm,19.8s,baz=176,slow=42
TREB   Trebinje          10.09 319 ePn    Pn    11 03 14.7 +1.1
BISRR  Bisoca            10.09 357 ⇑P     Pn    11 03 16.9 +3.2
BRY    Bratogost         10.11 320 ePn    Pn    11 03 16.4 +2.3
ARR    Arges             10.12 349 ⇑P     Pn    11 03 17.5 +3.4
VOIR                     10.12 351 ⇓P     Pn    11 03 17.0 +2.8
VOIR                     10.12 351 P      Pn    11 03 17.1 +3.0
TATR   Tatarca           10.14   3 ⇑P     Pn    11 03 16.9 +2.6
UPM    Unac-Piva         10.14 322 ePn    Pn    11 03 18.2 +3.7
SCTR   Scanteiesti       10.21   2 ⇑P     Pn    11 03 18.1 +2.8
RUDO   Rudo              10.23 325 ePn    Pn    11 03 19.0 +3.5
TRUS   Trudelj           10.26 331 eP     Pn    11 03 21.2 +5.2
ODBI   Odobesti          10.29 359 ⇓P     Pn    11 03 19.1 +2.7
DIVS   Divibare          10.33 329 ePn    Pn    11 03 20.5 +3.5
DIVS   Divibare          10.33 329 ⇑P     Pn    11 03 20.6 +3.7
DIVS   Divibare          10.33 329        Pn    11 03 20.1 +3.1
DIVS   Divibare          10.33 329 eP     Pn    11 03 20.5 +3.5
LOT    Lotru             10.35 346 ⇓P     Pn    11 03 19.4 +2.2
VLDR   Vladesti          10.39   3 ⇓P     Pn    11 03 19.8 +2.2
PLOR   Plostina          10.39 357 ⇓P     Pn    11 03 20.6 +2.7
PLOR   Plostina          10.39 357 P      Pn    11 03 20.5 +2.7
BBLS   Lazi&#263;i       10.40 326 ePn    Pn    11 03 20.7 +2.7
BBLS   Lazi&#263;i       10.40 326 eP     Pn    11 03 22.7 +4.7
VRI    Vrincioaia        10.41 357 ⇓P     Pn    11 03 20.8 +2.9
VRI    Vrincioaia        10.41 357 P      Pn    11 03 20.6 +2.6
COVR   Voineasa-Covas    10.41 355 ⇑P     Pn    11 03 21.4 +3.3
MRVN   Minervino Murg    10.42 306 ⇑P     Pn    11 03 18.2  0.0
VARL   Varlezi           10.43   2 ⇑P     Pn    11 03 21.5 +3.2
STON   Ston              10.55 317 ePn    Pn    11 03 19.2 -0.6
STON   Ston              10.55 317 ePn    Pn    11 03 18.9 -0.9
STON                               Sn     Sn    11 05 09.0 -7.8
GHRR                     10.59   0 ⇑P     Pn    11 03 23.5 +3.1
DOPR   Dopca             10.61 352 ⇓P     Pn    11 03 23.2 +2.5
VAE    Valguarnera       10.64 285 Pn     Pn    11 03 25.4 +4.1
       comp=N,3.2nm,0.3s,baz=92,slow=5.3,SNR=10
VAE                                Sn     Sn    11 05 14.0 -5.5
       comp=N,3.6nm,0.3s,baz=202,slow=22,SNR=1.2
VAE                                LR     LR    11 08 08.8
       comp=N,995nm,18.3s,baz=56,slow=41
RAFF   Raffo Rosso       10.65 283        Pn    11 03 20.4 -1.0
OZUR                     10.69 354 ⇓P     Pn    11 03 25.1 +3.2
SIM    Simferopol'       10.78  26 eP     Pn    11 03 25.0 +2.0
SIM                                eS     Sn    11 05 22.0 -0.6
SIM                                pmax   pmax
       comp=Z,165nm,0.8s
TEKS   Tekeris           10.89 329 ePn    Pn    11 03 27.8 +3.2
TEKS   Tekeris           10.89 329 eP     Pn    11 03 28.0 +3.4
LSTV   Lastovo           10.94 315 ePn    Pn    11 03 23.4 -1.8
LSTV                               Sn     Sn    11 05 16.7  -10
MARD   Mardin            10.95  76        Pn    11 03 25.1 -0.5
TESR   Tescani           11.05 357 ⇓P     Pn    11 03 28.7 +1.9
SGRT   San Giovanni R    11.06 308        Pn    11 03 28.0 +1.0
KTUT   Trabzon           11.19  57 ⇑P     Pn    11 03 30.0 +1.4
MAKA   Makarska          11.20 317 ePn    Pn    11 03 27.9 -0.8
MAKA                               Sn     Sn    11 05 24.7 -8.0
RICI   Ricice            11.27 318 ePn    Pn    11 03 29.5 -0.3
RICI                               Sn     Sn    11 05 27.4 -7.2
FRGS   Fruska Gora       11.28 331 ⇑P     Pn    11 03 32.6 +2.7
FRGS   Fruska Gora       11.28 331 ePn    Pn    11 03 32.5 +2.7
FRGS   Fruska Gora       11.28 331 eP     Pn    11 03 33.5 +3.6
KOPT   Kop Dagi          11.33  62        Pn    11 03 34.2 +3.3
HVAR   Hvar              11.45 316 ePn    Pn    11 03 30.9 -1.3
HVAR                               Sn     Sn    11 05 29.3  -10
MILM   Milestii Mici     11.50   5 ⇓P     Pn    11 03 35.2 +2.3
CORL   Corleone          11.57 286        Pn    11 03 35.2 +1.3
KIS    Kishinev          11.58   5 eP     Pn    11 03 37.0 +3.1
       comp=Z,130nm,1.2s
KIS    Kishinev          11.58   5 ePP    Pn    11 03 44.0  +10
       comp=Z,240nm,0.8s
KIS                                eLR    LR    11 07 34.0
       comp=Z,1μm,12.0s
KIS    Kishinev          11.58   5 eP     Pn    11 03 37.0 +3.1
KIS                                pmax   pmax
       comp=Z,130nm,1.2s
KIS                                MLR    MLR
       comp=Z,1μm,12.0s
CJR    Cluj-Napoca       11.60 347 ⇑P     Pn    11 03 37.3 +3.0
CLTB   Caltabellotta     11.60 285        Pn    11 03 37.8 +3.4
SIRR   Siria             11.63 340 ⇑P     Pn    11 03 36.6 +1.9
CBBR   Cluj-Babes-Bol    11.66 347 ⇓P     Pn    11 03 37.7 +2.6
ARCR   ARCALIA           11.84 350 ⇑P     Pn    11 03 40.3 +2.8
DRGR                     11.85 344 ⇑P     Pn    11 03 40.1 +2.3
DRGR                     11.85 344 P      Pn    11 03 40.4 +2.6
MGRS   Mrkonjic Grad     11.93 322 ePn    Pn    11 03 38.7 -0.1
KIJV   Kijevo            12.00 319 ePn    Pn    11 03 39.5 -0.3
KIJV                               Sn     Sn    11 05 44.9 -7.7
GURO   Guroymak-BITLI    12.11  71        Pn    11 03 42.3 +0.9
BLY    Banja Luka        12.12 323 ePn    Pn    11 03 41.8 +0.4
BLY    Banja Luka        12.12 323 ⇑P     Pn    11 03 45.3 +3.9
ZIRJ   Zirje             12.20 316 ePn    Pn    11 03 40.6 -1.8
ZIRJ                               Sn     Sn    11 05 48.6 -8.8
BURAR  Bucovina Array    12.25 353 ⇓P     Pn    11 03 46.5 +3.3
BURAR  Bucovina Array    12.25 353 P      Pn    11 03 45.9 +2.6
BURAR  Bucovina Array    12.25 353        Pn    11 03 45.9 +2.6
BUR08  Bucovina Ar. S    12.28 353        Pn    11 03 46.3 +2.6
SIRT   Sirnak            12.29  76        Pn    11 03 45.5 +1.7
MORI   Morici            12.30 317 ePn    Pn    11 03 42.5 -1.3
MORI                               Sn     Sn    11 05 51.6 -8.2
MRAK   Mrakovica         12.45 323 ePn    Pn    11 03 47.5 +1.6
SOC    Sochi             12.49  46 eP     Pn    11 03 46.5  0.0
SOC                                e            11 06 06.0
SOC                                pmax   pmax
       comp=Z,21nm,0.9s
SOC                                MLR    MLR
       comp=Z,561nm,11.0s
BMR    Baia Mare         12.54 348 ⇓P     Pn    11 03 50.5 +3.4
LTVH   Ltavrtes, Hu      12.60 343 ePN    Pn    11 03 51.7 +3.8
MORH   Mrgy, Hungar      12.61 331 ⇑P     Pn    11 03 50.0 +1.9
MORH   Mrgy, Hungar      12.61 331 ePN    Pn    11 03 50.5 +2.4
MORH   Mrgy, Hungar      12.61 331 ePn    Pn    11 03 50.9 +2.9
SORM   Soroca            12.69   3 ⇑P     Pn    11 03 50.3 +1.3
UDBI   Udbina            12.69 319 ePn    Pn    11 03 48.7 -0.6
UDBI                               Sn     Sn    11 06 01.8 -7.8
KOVH   Kovagotottos      12.73 329 ePN    Pn    11 03 51.5 +1.8
DUGI   Dugi Otok         12.74 316 ePn    Pn    11 03 48.5 -1.4
DUGI                               Sn     Sn    11 06 01.5 -9.2
BATM   Batumi            12.76  57 ⇑P     Pn    11 03 51.6 +1.4
GEVA   Gevas             12.86  73        Pn    11 03 54.3 +2.6
AQU    L'Aquila          12.88 306 ePn    P     11 03 58.0 -4.2
MOSL   Moslavina         12.96 325 ePn    Pn    11 03 53.8 +1.0
MOSL                               Sn     Sn    11 06 11.9 -4.1
PLIT   Plitvice          13.00 320 ePn    Pn    11 03 52.8 -0.7
PLIT                               Sn     Sn    11 06 11.1 -5.9
TRPA   Tarpa             13.16 346 ⇑P     Pn    11 03 58.2 +2.6
TRPA   Tarpa             13.16 346 ePN    Pn    11 03 57.9 +2.3
NVLJ   Novalja           13.20 317 ePn    Pn    11 03 54.8 -1.4
NVLJ                               Sn     Sn    11 06 13.8 -8.1
NRCA   Norcia            13.29 308        Pn    11 04 01.7 +4.2
KARS   Kars              13.39  63 P      Pn    11 04 02.3 +3.3
KARS   Kars              13.39  63        Pn    11 04 02.3 +3.3
TIH    Tihany            13.47 331 ePN    Pn    11 04 01.9 +2.1
CHVG   Ch'k'valeri       13.51  53 ⇑P     Pn    11 04 02.9 +2.6
BUD    Budapest          13.54 335 ePN    Pn    11 04 02.3 +1.6
OZLJ   Ozalj             13.59 322 ePn    Pn    11 04 01.0 -0.4
OZLJ                               Sn     Sn    11 06 26.0 -5.2
BOJS   Bojanci           13.62 321 ePn    Pn    11 04 03.1 +1.3
PSZ    Piszkesteto       13.64 338 ⇓P     Pn    11 04 04.6 +2.4
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PSZ    Piszkesteto       13.64 338 ePN    Pn    11 04 04.4 +2.2
PSZ    Piszkesteto       13.64 338 P      Pn    11 04 05.7 +3.5
PSZ    Piszkesteto       13.64 338 ⇑P     Pn    11 04 05.2 +3.0
PSZ    Piszkesteto       13.64 338        Pn    11 04 05.7 +3.5
UZH    Uzhgorod          13.69 346 ⇓iP    Pn    11 04 06.4 +3.6
UZH                                eS     Sn    11 06 38.0 +4.3
UZH                                MLR    MLR
       comp=Z,300nm,12.0s
CSKK   Cskako            13.71 333 ePN    Pn    11 04 03.3 +0.2
CRES   Cresnjev          13.74 323 ePn    Pn    11 04 05.4 +1.9
CRES   Cresnjev          13.74 323 ePn    Pn    11 04 03.7 +0.2
MPLH   Magyarpolny       13.83 331 ePN    Pn    11 04 07.2 +2.5
GBRS   Gornja Briga      13.87 320 iPn    Pn    11 04 06.7 +1.4
MURB   Monte Urbino      13.88 309        Pn    11 04 04.4 -1.1
SMRN   Sveta Marina      13.90 317 ePn    Pn    11 04 04.5 -1.2
SMRN                               Sn     Sn    11 06 30.7 -8.0
RIY    Rijeka            13.90 319 ePn    Pn    11 04 06.2 +0.5
AKH    Akhalkalaki       13.94  60 ⇑P     Pn    11 04 08.3 +1.9
AKH    Akhalkalaki       13.94  60 P      Pn    11 04 08.3 +1.9
KECS   Kecovo            13.98 341 eP     P     11 04 11.2 -3.2
KECS   Kecovo            13.98 341 ePN    P     11 04 11.2 -3.2
KOLS   Kolonicke sedl    13.98 346 eP     Pn    11 04 10.1 +3.3
KOLS   Kolonicke sedl    13.98 346 ePN    Pn    11 04 10.1 +3.3
BRJN   Brijuni           14.04 316 ePn    Pn    11 04 06.0 -1.6
BRJN                               Sn     Sn    11 06 33.1 -9.2
SRO    Srobarova         14.07 334 eP     P     11 04 12.0 -3.4
SRO    Srobarova         14.07 334 ePN    P     11 04 12.0 -3.4
EGYH   Egyhazaskeszo     14.11 331 ePN    Pn    11 04 11.0 +2.4
NEY    Neytrino          14.17  52 iP     Pn    11 04 09.8 +0.2
NEY                                pmax   pmax
       comp=Z,72nm,1.5s
CEY    Cerknica          14.21 320 ePn    Pn    11 04 10.4 +0.5
IZAB   Izabela           14.28 339 eP     P     11 04 14.8 -2.9
LJU    Ljubljana         14.36 321 ePn    Pn    11 04 11.9 -0.1
LJU    Ljubljana         14.36 321 ePn    Pn    11 04 11.7 -0.3
ONI    Oni               14.36  55 P      Pn    11 04 12.1  0.0
ONI    Oni               14.36  55        Pn    11 04 12.1  0.0
SHA1   Shidzhatmaz       14.37  50 iP     Pn    11 04 15.2 +2.9
VYHS   Vyhne             14.48 337 eP     Pn    11 04 15.8 +2.2
VYHS   Vyhne             14.48 337 ePN    Pn    11 04 15.8 +2.2
GNI    Garni             14.49  66 Pn     Pn    11 04 16.1 +2.2
       comp=Z,2.3nm,0.3s,baz=237,slow=2.5,SNR=21
GNI                                LR     LR    11 11 14.1
       comp=Z,2μm,20.0s,baz=276,slow=43
GNI    Garni             14.49  66 P      Pn    11 04 16.9 +2.9
GNI    Garni             14.49  66 P      Pn    11 04 16.2 +2.2
GNI    Garni             14.49  66 ⇑P     Pn    11 04 16.1 +2.2
KIV    Kislovodsk        14.49  50 ⇓P     Pn    11 04 16.5 +2.6
KIV    Kislovodsk        14.49  50 iP     P     11 04 17.3 -3.0
       SNR=26
KIV    Kislovodsk        14.49  50 eP     Pn    11 04 15.6 +1.7
KIV                                eS     Sn    11 06 56.0 +2.5
KIV                                pmax   pmax
       comp=Z,377nm,1.1s
KIV                                MLR    MLR
       comp=Z,699nm,13.0s
KIV    Kislovodsk        14.49  50 P      P     11 04 17.4 -2.8
KIV                                P      P     11 04 17.4 -2.8
KIV    Kislovodsk        14.49  50 ⇑p     P     11 04 21.8 +1.6
KIV    Kislovodsk        14.49  50        Pn    11 04 16.6 +2.7
KVAR   Kislovodsk Arr    14.50  50 Pn     P     11 04 17.3 -3.0
       baz=86,slow=23,SNR=26
KBZ    Khabaz            14.51  51 Pn     Pn    11 04 16.4 +2.3
       comp=Z,0.7nm,0.3s,baz=234,slow=9.2,SNR=18
KBZ                                ScP    ScP   11 12 58.5 -0.4
       comp=Z,0.2nm,0.3s,baz=213,slow=1.8,SNR=4.3
SOKA   Soboth            14.55 324 ePn    Pn    11 04 17.2 +2.5
       comp=Z,72nm,0.9s,SNR=26
LVV    L'vov             14.56 351 eP     Pn    11 04 17.6 +3.0
LVV                                eS     Sn    11 07 00.3 +5.4
LVV                                MLR    MLR
       comp=Z,1μm,9.0s
KWP    Kalwaria Pacla    14.57 348 eP     Pn    11 04 06.8 -8.0
SOP    Sopron            14.64 330 ePN    Pn    11 04 16.8 +1.1
STHS   Stebnicka Huta    14.66 344 eP     P     11 04 22.1 +0.1
STHS   Stebnicka Huta    14.66 344 ePN    P     11 04 22.0 +0.1
OBKA   Obir              14.67 323 ePn    Pn    11 04 18.1 +1.9
       comp=Z,34nm,0.9s,SNR=9.2
KEST   Kesra             14.69 276 Pn     Pn    11 04 18.4 +1.9
       comp=Z,0.4nm,0.3s,baz=28,slow=7.0,SNR=14
KEST   Kesra             14.69 276 P      Pn    11 04 19.3 +2.7
       SNR=28
KEST                               P      Pn    11 04 19.3 +2.7
       SNR=28
KEST   Kesra             14.69 276        Pn    11 04 15.7 -0.8
KOLL   Kolacno           14.70 336 ePN    Pn    11 04 18.9 +2.4
ARSA   Arzberg           14.75 327 ePn    Pn    11 04 18.8 +1.6
       comp=Z,28nm,1.0s,SNR=9.0
CASP   Castiglione de    14.75 305        P     11 04 20.7 -2.3
PYA1   Pyatigorsk        14.80  50 iP     Pn    11 04 19.8 +1.8
OSSC   Osservatorio P    14.82 308        Pn    11 04 19.2 +0.9
NCK    Nalchik           14.85  52 iP     Pn    11 04 19.2 +0.6
VSL    Villasalto        14.86 291 ⇑p     P     11 04 28.8 +4.6
VSL    Villasalto        14.86 291        Pn    11 04 20.4 +1.7
LANS   Liptovska Anna    14.87 339 eP     P     11 04 24.0 -0.3
LANS   Liptovska Anna    14.87 339 ePN    P     11 04 24.0 -0.3
NAX    Nakhchivan        14.88  70 P      P     11 04 21.9 -2.6
NIE    Niedzica          14.89 342 eP     P     11 04 22.7 -1.7
MODS   Modra-Piesok      14.92 333 eP     P     11 04 26.4 +1.6
MODS   Modra-Piesok      14.92 333 ePN    P     11 04 26.4 +1.6
CONA   Conrad Observa    15.12 329 iPn    Pn    11 04 24.2 +1.9
       comp=Z,32nm,1.5s
JAVC   Velka Javorina    15.19 335 ePN    P     11 04 26.1 -1.7
PTCC   Patocco-Chiusa    15.21 320 ⇑P     Pn    11 04 24.1 +0.7
MYKA   Terra Mystica     15.21 321 ePn    Pn    11 04 25.2 +1.8
       comp=Z,22nm,0.8s
AKASG  Malin Array Be    15.29   4 Pn     Pn    11 04 22.8 -1.6
       comp=Z,2.1nm,0.3s,baz=193,slow=11,SNR=23
AKASG                              LR     LR    11 10 26.4
       comp=Z,722nm,21.6s,baz=185,slow=38
AKASG                              ScP    ScP   11 12 58.3 -1.8
       comp=Z,0.2nm,0.3s,baz=216,slow=1.0,SNR=9.6
AKASG  Malin Array Be    15.29   4 Pn     Pn    11 04 23.4 -1.0
AKBB   Malin Array Si    15.29   4 P      Pn    11 04 23.3 -1.1
AKBB                               pmax   pmax
       comp=Z,88nm,1.1s
AKBB   Malin Array Si    15.29   4        Pn    11 04 23.3 -1.1
GOF    Gofitskoye        15.30  46⇑eP     Pn    11 04 25.6 +1.1
GOF                                pmax   pmax
       comp=Z,436nm,0.8s
ZCCA   Zocca             15.39 310        Pn    11 04 25.7 -0.1
STAL   STALIGIAL         15.46 319        Pn    11 04 27.2 +0.5
TEOL   Teolo             15.50 314        Pn    11 04 27.9 +0.7
TEOL                               IAmb   IAmb  11 04 35.4
       comp=Z,124nm,0.7s
ZOU    Zoufplan          15.51 320        Pn    11 04 28.6 +1.2
ZOU                                IAmb   IAmb  11 04 44.0
       comp=Z,222nm,1.2s
KBA    Koelnbreinsper    15.66 322 ePn    P     11 04 31.5 -1.8
       comp=Z,264nm,1.1s,SNR=48
OJC    Ojcow             15.75 342 eP     P     11 04 34.9 +0.8
OJC    Ojcow             15.75 342 ⇓P     P     11 04 35.6 +1.5
MOA    Molln             15.76 326 ePn    Pn    11 04 32.4 +1.8
       comp=Z,73nm,1.2s,SNR=10
GANJ   Ganja             15.78  65 P      P     11 04 33.8 -0.6
KRUC   Moravsky          15.82 333 ePN    Pn    11 04 32.4 +1.2
ABTA   Abfaltersbach     15.87 320 iPn    Pn    11 04 33.3 +1.3
       comp=Z,58nm,0.7s,SNR=14
OKC    Ostrava-Krasne    15.88 338 eP     P     11 04 38.2 +2.8
OKC                                epP    sP    11 04 45.7 -1.2
OKC    Ostrava-Krasne    15.88 338 eP     P     11 04 38.2 +2.8
CTI    Castel Tesino     15.91 316 P      Pn    11 04 32.4 -0.2
CTI                                pmax   pmax
       comp=Z,133nm,1.0s
CTI    Castel Tesino     15.91 316        Pn    11 04 32.4 -0.2
CTI                                IAmb   IAmb  11 04 52.0
       comp=Z,133nm,1.0s
VRAC   Vranov            15.95 333 ⇓P     P     11 04 35.7 -0.6
VRAC   Vranov            15.95 333 Pn     P     11 04 34.7 -1.5
       comp=Z,2.2nm,0.3s,baz=143,slow=10,SNR=50
VRAC                               LR     LR    11 11 54.1
       comp=Z,1μm,19.0s,baz=155,slow=42
VRAC   Vranov            15.95 333 ePN    Pn    11 04 34.1 +1.2
VRAC   Vranov            15.95 333 P      P     11 04 38.2 +2.0
PRMA   PARMA             16.00 311        P     11 04 35.3 -1.5
MORC   Moravsky Berou    16.02 336 ⇑P     P     11 04 36.2 -0.9
MORC   Moravsky Berou    16.02 336 ePN    P     11 04 35.7 -1.3
MORC   Moravsky Berou    16.02 336 P      Pn    11 04 34.8 +1.0
MORC                               pmax   pmax
       comp=Z,43nm,0.9s
MORC   Moravsky Berou    16.02 336 ⇓P     P     11 04 38.1 +1.1
MORC   Moravsky Berou    16.02 336        Pn    11 04 34.8 +1.0
ABSA   Djebel Ababsia    16.16 279 P      P     11 04 44.0 +5.2
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GROC	Groznyy	16.18	56	eP	P	11 04 37.5	-1.4
GROC				eS	Sn	11 07 36.9	+2.4
GROC				pmax	pmax		
	comp=Z,280nm,1.6s						
GROC				MLR	MLR		
	comp=Z,316nm,10.0s						
CMAH	Djebel Manchou	16.20	280	P	P	11 04 38.9	-0.3
ZKTA	Zakatala	16.25	62	P	P	11 04 40.2	+0.6
BTLR	Botlikh	16.28	58	i P	Pn	11 04 37.5	+0.2
MSSA	Maissana	16.30	308		Pn	11 04 37.4	0.0
SALO	Salr	16.32	314	⇑P	P	11 04 41.7	+1.3
SALO	Salr	16.32	314	P	Pn	11 04 38.2	+0.5
SALO				IAmb	IAmb	11 05 02.3	
	comp=Z,187nm,1.3s						
TREC	Trest	16.35	331	eP	P	11 04 42.2	+1.4
TREC	Trest	16.35	331	eP	P	11 04 42.2	+1.4
MNGR	Mingechevir, A	16.37	65	P	P	11 04 41.3	+0.3
RJOB	Jochberg	16.38	323	eP	P	11 04 41.3	+0.2
	baz=134,slow=11						
CKRC	Cesky Krumlov	16.47	328	eP	P	11 04 43.0	+1.0
CKRC				epP	pwP	11 04 51.3	-0.5
CKRC				AMS	AMS	11 11 00.0	
	comp=Z,2µm,16.4s						
KRLC	Kraliky	16.53	335	eP	P	11 04 42.8	+0.1
KRLC				epP	sP	11 04 53.1	-1.0
KRLC	Kraliky	16.53	335	eP	P	11 04 42.8	+0.1
BOB	Bobbio (Coli)	16.55	310	⇑P	P	11 04 43.3	+0.3
SEKA	Sheki	16.56	64	P	P	11 04 44.6	+1.5
WTTA	Wattenberg	16.66	320	ePn	P	11 04 45.3	+0.9
	comp=Z,137nm,1.5s,SNR=26						
WATA	Walderalm	16.74	320	ePn	P	11 04 45.1	-0.1
	comp=Z,115nm,1.2s,SNR=39						
WATA				eSn	Sn	11 07 49.2	+1.0
	comp=Z,35nm,1.3s						
GEC2	GERESS Array S	16.75	327	eP	P	11 04 45.7	+0.4
	baz=134,slow=11						
GEC2	GERESS Array S	16.75	327		P	11 04 44.8	-0.4
GERES	GERESS Array B	16.75	327	Pn	Pn	11 04 44.2	+0.9
	comp=Z,1.0nm,0.3s,baz=139,slow=12,SNR=53						
GERES				LR	LR	11 11 28.2	
	comp=Z,1µm,19.3s,baz=141,slow=38						
GERES				ScP	ScP	11 13 02.2	-1.0
	comp=Z,0.1nm,0.3s,baz=176,slow=3.5,SNR=5.3						
GERES	GERESS Array B	16.75	327		P	11 04 45.3	0.0
CKFL	Kef-Lekhel	16.77	279	P	P	11 04 46.3	+0.7
SQTA	Sankt Quirin	16.86	319	ePn	P	11 04 46.1	-0.4
	comp=Z,58nm,0.9s,SNR=25						
DPC	Dobruska-Polom	16.92	335	eP	P	11 04 47.4	+0.4
DPC				AMS	AMS	11 12 00.0	
	comp=Z,2µm,13.3s						
DPC	Dobruska-Polom	16.92	335	eP	P	11 04 47.4	+0.4
DPC				MLR	MLR		
	comp=Z,2µm,13.3s						
MOTA	Moosalm	17.00	319	ePn	P	11 04 48.2	+0.2
	comp=Z,73nm,0.8s,SNR=18						
MOTA				Sn	Sn	11 07 53.0	-1.4
	comp=Z,47nm,1.4s						
FETA	Feichten	17.00	318	ePn	P	11 04 48.3	+0.2
	comp=Z,99nm,1.0s,SNR=29						
KHC	Kasperske Hory	17.02	328	eP	P	11 04 48.5	+0.4
KHC				epP	sP	11 04 59.5	+0.1
KHC	Kasperske Hory	17.02	328	eP	P	11 04 48.5	+0.4
KHC	Kasperske Hory	17.02	328	⇓P	Pn	11 04 47.1	+0.6
BEL	Belsk	17.04	346	eP	P	11 04 48.8	+0.5
BEL	Belsk	17.04	346	⇓P	P	11 04 50.4	+2.1
OSTC	Ostas	17.13	335	eP	P	11 04 50.0	+0.7
UPC	Upice	17.16	335	eP	P	11 04 50.6	+1.0
UPC	Upice	17.16	335	eP	P	11 04 50.6	+1.0
CHVC	Chvalec	17.21	335	eP	P	11 04 51.2	+1.0
CHVC				AMS	AMS	11 12 10.0	
	comp=Z,2µm,16.0s						
RETA	Reutte	17.27	319	ePn	P	11 04 51.6	+0.7
	comp=Z,59nm,1.3s,SNR=12						
RETA				eSn	S	11 08 09.4	+0.3
	comp=Z,49nm,1.2s						
MAK	Makhachkala	17.27	58	eP	P	11 04 51.3	+0.4
MAK				eS	Sn	11 08 03.9	+3.1
MAK				pmax	pmax		
	comp=Z,2µm,1.1s						
MAK				MLR	MLR		
	comp=Z,371nm,16.0s						
PRU	Pruhonice	17.28	331	eP	P	11 04 51.2	+0.3
PRU				epP	pwP	11 05 00.5	-0.1
PRU				AMS	AMS	11 10 50.0	
PRU	Pruhonice	17.28	331	eP	P	11 04 51.2	+0.3
DAVOX	Davos/Dischmat	17.33	316	Pn	P	11 04 53.1	+1.3
	comp=Z,1.8nm,0.3s,baz=172,slow=2.9,SNR=17						
DAVOX				LR	LR	11 11 50.1	
	comp=Z,2µm,21.6s,baz=120,slow=38						
WET	Wettzell	17.34	326	eP	P	11 04 51.9	+0.2
	baz=134,slow=11						
KSP	Ksiaz	17.34	336	eP	P	11 04 53.0	+1.3
KSP	Ksiaz	17.34	336	⇑P	P	11 04 52.8	+1.2
LKRN	Lenkeran, Azer	17.37	73	P	P	11 04 53.2	+1.2
PRA	Prague	17.39	331	eP	P	11 04 53.3	+1.2
PRA				epP	sP	11 05 05.4	+1.9
PRA	Prague	17.39	331	eP	P	11 04 53.3	+1.2
FUR	Furstenfeldbru	17.43	322	eP	P	11 04 52.6	0.0
	baz=134,slow=11						
DFRA	Djebel Bou Aff	17.44	280	P	P	11 04 53.5	+0.5
RST	Umm Al-Ruwaisa	17.57	104	eP	Pn	11 04 52.0	-1.5
DAVA	Damuels	17.62	317	ePn	P	11 04 55.0	+0.1
	comp=Z,61nm,0.9s,SNR=15						
DAVA				eSn	Sn	11 08 09.3	-0.3
	comp=Z,44nm,0.8s						
PVCC	Panska Ves	17.70	332	eP	P	11 04 57.1	+1.5
PVCC	Panska Ves	17.70	332	eP	P	11 04 57.1	+1.5
MIB	Mutribah	17.71	103	eP	Pn	11 04 53.3	-2.0
VORD	Divnogorie	17.72	25	eP	P	11 04 55.9	+0.1
VORD				pmax	pmax		
	comp=Z,110nm,0.6s						
UBR	Ueberruh	17.73	319	eP	P	11 04 56.3	+0.2
	baz=134,slow=11						
VSR	Storozhevoye	17.89	25	eP	Pn	11 04 56.8	-0.4
VSR				pmax	pmax		
	comp=Z,100nm,1.0s						
ROTZ	Rotzenmuhle	18.09	327	eP	P	11 05 01.5	+1.6
	baz=134,slow=11						
UMR	Umm Al-Rimmam	18.12	103	eP	Pn	11 04 58.4	-1.8
BRG	Berggiesshubel	18.21	332	eP	P	11 05 01.7	+0.5
	baz=134,slow=11						
RDF	Al-Radifah	18.25	105	eP	P	11 05 00.1	-1.7
VORR	Voronezh	18.29	24	eP	P	11 05 02.0	0.0
VORR				pmax	pmax		
	comp=Z,300nm,1.0s						
MANZ	Manzenberg	18.30	327	eP	Pn	11 05 04.0	+1.7
	baz=134,slow=11						
NKC	Novy Kostel	18.33	328	eP	Pn	11 05 03.7	+1.0
NKC	Novy Kostel	18.33	328	eP	Pn	11 05 03.7	+1.0
WERN	Wernitzgruen	18.40	328	eP	Pn	11 05 05.0	+1.4
	baz=134,slow=11						
BNI	Bardonecchia	18.44	308	P	P	11 05 02.8	-1.1
BNI				pmax	pmax		
	comp=Z,37nm,1.0s						
BNI	Bardonecchia	18.44	308	⇑P	Pn	11 05 05.8	+1.6
BNI	Bardonecchia	18.44	308	P	P	11 05 02.8	-1.1
TANN	Tannenbergstha	18.46	329	eP	Pn	11 05 05.3	+1.0
	baz=134,slow=11						
GUNZ	Gunzen	18.48	328	eP	Pn	11 05 06.1	+1.6
	baz=134,slow=11						
FBE	Freiberg	18.48	331	eP	Pn	11 05 05.2	+0.7
	baz=134,slow=11						
GRA1	Grafenberg Arr	18.49	325	P	P	11 05 04.4	+0.1
GRF	Grafenberg Arr	18.49	325	P	P	11 05 04.4	+0.1
GRF				pmax	pmax		
	comp=Z,80nm,0.9s						
GRF	Grafenberg Arr	18.49	325	eP	Pn	11 05 06.8	+2.1
	baz=134,slow=11						
GRF				eL	L	11 12 52.9	
	comp=Z,1µm,20.6s						
GRFO	Grafenberg	18.49	325	P	Pn	11 05 05.3	+0.7
GRFO				pmax	pmax		
	comp=Z,73nm,0.9s						
GRFO	Grafenberg	18.49	325	P	Pn	11 05 05.3	+0.7
WERD	Werda	18.55	328	eP	Pn	11 05 06.5	+1.1
	baz=134,slow=11						
SUW	Suwalki	18.78	352	eP	Pn	11 05 08.2	+0.2
SUW	Suwalki	18.78	352	eP	Pn	11 05 08.0	-0.1
SUW	Suwalki	18.78	352	P	P	11 05 07.5	0.0
SUW				pmax	pmax		
	comp=Z,476nm,1.0s						
SUW	Suwalki	18.78	352	⇓P	Pn	11 05 08.0	-0.1
SUW	Suwalki	18.78	352	P	P	11 05 07.5	0.0
MAHO	Mahon	18.82	290	⇑P	Pn	11 05 12.7	+4.1
VRH	Novokhopyorsk	18.82	29	eP	Pn	11 05 08.6	+0.1
VRH				pmax	pmax		
	comp=Z,440nm,0.6s						
RUSF	Rustrel	18.82	303	⇑P	Pn	11 05 13.2	+4.5
STU	Stuttgart	18.89	320	P	Pn	11 05 10.6	+1.2
STU				pmax	pmax		
	comp=Z,63nm,0.7s						
STU	Stuttgart	18.89	320	eP	Pn	11 05 10.7	+1.2
	baz=134,slow=11						
STU	Stuttgart	18.89	320	⇓P	Pn	11 05 11.6	+2.2
STU	Stuttgart	18.89	320	P	Pn	11 05 10.6	+1.2
CLL	Collm	18.92	331	i P	Pn	11 05 10.6	+0.8
CLL				pmax	pmax		
	comp=Z,21nm,0.7s						
CLL	Collm	18.92	331	i P	Pn	11 05 10.6	+0.8
	comp=Z,21nm,0.7s						
CLL				e(pP)	pP	11 05 16.0	-0.7
CLL				i pPP		11 05 29.5	
	comp=Z,80nm,1.3s						
CLL				eS	S	11 08 47.0	+4.9
CLL				Lm	MLR	11 13 00.0	
	comp=N,2µm,18.0s						
CLL				Lm	MLR	11 13 00.0	
	comp=E,2µm,22.0s						
CLL	Collm	18.92	331	eP	Pn	11 05 10.5	+0.8
	baz=134,slow=11						
CLL	Collm	18.92	331	P	Pn	11 05 10.1	+0.2
MOX	Moxa	18.99	328	P	Pn	11 05 12.2	+1.5
MOX				pmax	pmax		
	comp=Z,53nm,1.0s						
MOX	Moxa	18.99	328	eP	Pn	11 05 12.1	+1.4
	baz=134,slow=11						
MOX				eL	L	11 13 41.7	
	comp=Z,1µm,20.2s						
LPSR	Galich'ya Gora	19.00	22	eP	P	11 05 10.1	+0.3
LPSR				pmax	pmax		
	comp=Z,100nm,0.8s						
MNK	Minsk	19.04	1	i P	P	11 05 09.3	-1.0
MNK				i S	Sn	11 08 41.4	-2.1
MNK				pmax	pmax		
	comp=Z,281nm,1.0s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,337nm,1.1s						
MNK				MLR	MLR		
	comp=N,544nm,16.0s						
MNK				MLR	MLR		
	comp=Z,697nm,16.0s						
MNK				MLR	MLR		
	comp=E,40nm,15.0s						
MNK	Minsk	19.04	1	i P	P	11 05 09.3	-1.0
	comp=E,4.0nm,0.8s						
MNK				i P	P	11 05 09.3	-1.0
	comp=N,337nm,1.1s						
MNK				i P	P	11 05 09.3	-1.0
	comp=Z,281nm,1.0s,baz=1.5						
MNK				i PP	PnPn	11 05 23.1	-0.9
MNK				i S	Sn	11 08 41.4	-2.1
MNK				i SS	SnSn	11 08 57.1	-0.6
MNK				i LQ	LQ	11 10 52.7	
MNK				i LR	LR	11 12 05.8	
MNK				i LRM	MLR	11 13 22.3	
	comp=N,544nm,15.8s						
MNK				i LRM	MLR	11 13 25.9	
	comp=Z,697nm,15.8s						
MNK				i LRM	MLR	11 13 45.4	
	comp=E,40nm,14.9s						
BFO	Black Forest	19.08	318	P	P	11 05 11.1	+0.2
BFO				pmax	pmax		
	comp=Z,39nm,0.8s						
BFO	Black Forest	19.08	318	eP	Pn	11 05 12.0	+0.2
	baz=134,slow=11						
BFO	Black Forest	19.08	318	P	P	11 05 10.9	+0.1
BFO	Black Forest	19.08	318	P	P	11 05 11.1	+0.2
GKP	Gorka Klasztor	19.19	341	eP	P	11 05 09.5	-2.5
GKP	Gorka Klasztor	19.19	341	eP	P	11 05 12.3	+0.4
NEUB	Neuenburg	19.34	329	eP	Pn	11 05 14.7	-0.2
	baz=134,slow=11						
NACGM	Naroch	19.45	359	i P	Pn	11 05 16.0	0.0
RUE	Ruedersdorf	19.57	335	eP	Pn	11 05 17.3	-0.3
RUE	Ruedersdorf	19.57	335	eP	P	11 05 16.8	+0.7
	baz=134,slow=11						
ECH	Echery	19.66	317	P	Pn	11 05 18.7	-0.1
ECH				pmax	pmax		
	comp=Z,59nm,1.2s						
ECH	Echery	19.66	317	⇑P	Pn	11 05 18.9	+0.2
ECH	Echery	19.66	317	P	Pn	11 05 18.6	-0.1
RAYN	Ar Rayn	19.71	122	i P	Pn	11 05 19.2	-0.4
	SNR=11						
RAYN	Ar Rayn	19.71	122	P	Pn	11 05 19.5	-0.1
RAYN				pmax	pmax		
	comp=Z,110nm,1.1s						
RAYN	Ar Rayn	19.71	122	P	Pn	11 05 21.0	+1.5
RAYN	Ar Rayn	19.71	122	⇑P	Pn	11 05 19.7	+0.2
RAYN	Ar Rayn	19.71	122	P	Pn	11 05 19.5	-0.1
RAYN				IAmb	IAmb	11 05 22.3	
	comp=Z,110nm,1.1s						
UBBA	Unterbreizbach	19.84	326	eP	Pn	11 05 20.8	+0.2
	baz=134,slow=11						
IDID	Didziasalis	19.86	359	eP	P	11 05 18.7	-0.5
IIGN	Ignalina	19.91	358	eP	P	11 05 20.5	+0.8
SSB	Saint Sauveur	19.92	306	P	P	11 05 20.1	0.0
SSB				pmax	pmax		
	comp=Z,46nm,1.1s						
SSB	Saint Sauveur	19.92	306	⇑P	P	11 05 20.8	+0.7
SSB	Saint Sauveur	19.92	306	P	P	11 05 20.1	0.0
ISAL	Salakas	20.13	358	eP	P	11 05 22.3	+0.1
TNS	Taunus Mts	20.18	323	eP	Pn	11 05 24.5	-0.3
	baz=134,slow=11						
PABE	Paberze	20.18	354	eP	P	11 05 22.9	+0.2
PABE	Paberze	20.18	354	P	P	11 05 21.7	-1.0
GTTG	Gottingen	20.37	327	eP	Pn	11 05 26.2	-0.7
	baz=134,slow=11						
CLZ	Clausthal	20.40	329	eP	P	11 05 24.6	-0.6
	baz=134,slow=11						
FLTG	Flechtingen	20.41	331	eP	P	11 05 25.7	+0.4
	baz=134,slow=11						
FLTG	Flechtingen	20.41	331	P	Pn	11 05 26.5	-0.9
ASSE	Asse, Remlinge	20.49	330	eP	P	11 05 26.4	+0.4
	baz=134,slow=11						
OBN	Obninsk	20.65	15	P	P	11 05 27.3	-0.5
	comp=Z,24nm,0.4s,baz=317,slow=1.6,SNR=12						
OBN	Obninsk	20.65	15c	iP	P	11 05 26.9	-0.9
OBN				e		11 05 44.2	
OBN				eS	S	11 09 16.0	-0.8
OBN				pmax	pmax		
	comp=Z,320nm,1.1s						
OBN				MLR	MLR		
	comp=Z,991nm,17.0s						
OBN	Obninsk	20.65	15	⇑P	P	11 05 27.3	-0.5
OBN	Obninsk	20.65	15	P	P	11 05 27.3	-0.5
PBUR	Paburge	20.90	351	eP	P	11 05 30.8	+0.3
NRDL	Niedersach Rie	20.99	330	eP	P	11 05 32.1	+0.6
	baz=134,slow=11						
WLF	Walferdange	21.02	319	dP	P	11 05 34.5	+2.6
WLF	Walferdange	21.02	319	P	P	11 05 31.1	-0.8
WLF				pmax	pmax		
	comp=Z,72nm,1.0s						
WLF	Walferdange	21.02	319	eP	P	11 05 31.9	0.0
	baz=134,slow=11						
WLF	Walferdange	21.02	319	⇑P	P	11 05 33.2	+1.3
WLF	Walferdange	21.02	319	P	P	11 05 31.1	-0.8
AHRW	Bad Neuenahr-A	21.06	322	eP	P	11 05 34.0	+1.7
	baz=134,slow=11						
BSD	Bornholm Skovb	21.46	340	eP	P	11 05 37.6	+1.1
BSD	Bornholm Skovb	21.46	340	i P	P	11 05 35.0	-1.5
BSD	Bornholm Skovb	21.46	340	⇑P	P	11 05 35.4	-1.1
MOS	Moscow	21.46	16	eP	P	11 05 34.0	-2.5
MOS				e		11 06 01.5	
MOS				eS	S	11 09 27.6	-5.2
MOS				e		11 16 55.3	
MOS				pmax	pmax		
	comp=Z,235nm,1.2s						
MOS				MLR	MLR		
	comp=Z,1µm,20.0s						
BHOU	Houvegnez	21.50	320	dP	P	11 05 39.2	+2.2
BUG	Bochum--Univer	21.53	324	eP	P	11 05 39.2	+1.9
	baz=134,slow=11						
BTNL	Ternell	21.57	321	dP	P	11 05 40.6	+2.8
MEM	Membach	21.65	321	dP	P	11 05 40.3	+1.7
OJGS	Djebel Guires	21.68	278	P	P	11 05 40.0	+0.9
RCHB	Rochefort	21.79	319	dP	P	11 05 42.0	+1.9
BSTI	Sart Tilman	21.86	320	dP	P	11 05 43.3	+2.5
BCLA	Clavier	21.90	320	dP	P	11 05 44.0	+2.7
BEBN	Eben Emael	21.93	321	dP	P	11 05 43.9	+2.4
OJBR	Djebel Berber	21.99	278	P	P	11 05 58.0	+15
BGES	Gesves	22.00	320	dP	P	11 05 43.5	+1.2
BSEG	Bad Segeberg	22.00	332	eP	P	11 05 43.0	+0.7
	baz=134,slow=11						
DOU	Dourbes	22.10	318	dP	P	11 05 44.8	+1.3
BMRD	Maredsous	22.12	319	dP	P	11 05 45.4	+1.8
BELG	Belogornoye	22.21	34	P	P	11 05 44.2	-0.3
	comp=Z,273nm,0.6s,baz=341,slow=1.1,SNR=96						
BELG				ScP	ScP	11 13 14.3	-1.0
	comp=Z,24nm,1.1s,baz=264,slow=4.4,SNR=3.8						
BELG				LR	LR	11 16 51.0	
	comp=Z,580nm,18.8s,baz=223,slow=43						
BELG	Belogornoye	22.21	34	i P	P	11 05 44.0	-0.6
BELG				pmax	pmax		
	comp=Z,16nm,0.6s						
SHMA	Al-Shehemyia	22.38	109	P	P	11 05 47.4	+0.7
ODJA	Bouhanifia	22.43	278	P	P	11 05 50.0	+2.8
CLF	Chambon-Foret	22.45	312	⇓P	P	11 05 48.4	+1.2
CLF	Chambon-Foret	22.45	312	P	P	11 05 48.0	+0.8
CLF				IAmb	IAmb	11 06 04.1	
	comp=Z,106nm,0.9s						
SNF	Seneffe	22.49	319	dP	P	11 05 49.9	+2.2
COP	Copenhagen	22.68	338	eP	P	11 05 49.0	-0.5
KHOR	Al-Khor Airpor	22.92	109	P	P	11 05 53.4	+1.0
OTSS	Djebel Tessala	22.95	278	P	P	11 06 13.0	+20
VSU	Vasula	23.02	359	eP	P	11 05 53.9	+0.9
VSU	Vasula	23.02	359	i P	P	11 05 53.0	0.0
VSU				pmax	pmax		
	comp=Z,104nm,0.9s						
TRNA	Turayna	23.16	111	P	P	11 05 55.5	+0.7
MTSE	Matsula	23.38	355	eP	P	11 05 57.2	+0.5
PUL	Pulkovo	24.40	4	i P	P	11 06 07.7	+1.5
PUL				pmax	pmax		
	comp=Z,88nm,1.1s						
GEYT	Alibeck	24.71	75	P	P	11 06 10.1	+0.7
	comp=Z,36nm,0.6s,baz=284,slow=7.5,SNR=33						
GEYT	Alibeck	24.71	75	P	P	11 06 09.8	+0.5
GEYT				IAmb	IAmb	11 06 11.9	
	comp=Z,45nm,0.7s						
GYA0	ALIBECK ARRAY	24.71	75	P	P	11 06 09.8	+0.4
GYA0				pmax	pmax		
	comp=Z,130nm,1.2s						
GYA0B	ALIBECK ARRAY	24.71	75	P	P	11 06 09.8	+0.5
GYA0B				IAmb	IAmb	11 06 20.2	
	comp=Z,130nm,1.2s						
GHWR	Ruwais	24.85	111	P	P	11 06 12.0	+1.3
ESDC	Sonseca Array	25.14	289	P	P	11 06 13.7	+0.5
	comp=Z,12nm,0.6s,baz=82,slow=9.5,SNR=64						
ESDC				ScP	ScP	11 13 23.7	+0.1
	comp=Z,2.0nm,1.0s,baz=30,slow=2.1,SNR=5.4						
ESDC	Sonseca Array	25.14	289	P	P	11 06 14.4	+1.2
AAL	Aland	25.19	351	eP	P	11 06 12.9	-0.5
UPP	Uppsala	25.23	348	eP	P	11 06 14.3	+0.6
PAB	San Pablo	25.43	289	P	P	11 06 17.2	+1.3
PAB				pmax	pmax		
	comp=Z,36nm,1.0s						
PAB	San Pablo	25.43	289	⇑P	P	11 06 17.4	+1.5
PAB	San Pablo	25.43	289	P	P	11 06 17.2	+1.3
FINES	FINESS Array B	26.02	359	P	P	11 06 19.4	-1.5
	comp=Z,29nm,0.7s,baz=161,slow=11,SNR=49						
FINES				ScP	ScP	11 13 23.4	-2.2
	comp=Z,5.1nm,0.9s,baz=90,slow=2.7,SNR=5.1						
FINES				LR	LR	11 18 36.0	
	comp=Z,399nm,19.0s,baz=224,slow=41						
FINES	FINESS Array B	26.02	359	P	P	11 06 20.5	-0.4
FIA1	FINESS Array S	26.02	359	P	P	11 06 20.7	-0.2
FIA1				IAmb	IAmb	11 06 38.0	
	comp=Z,61nm,1.0s						
HOMB	Homborsund	26.04	337	eP	P	11 06 21.4	+0.4
HFS	Hagfors	26.24	344	P	P	11 06 21.5	-1.4
	comp=Z,20nm,0.5s,baz=154,slow=11,SNR=78						
HFS				LR	LR	11 18 03.2	
	comp=Z,705nm,19.7s,baz=162,slow=40						
SHME	Shamm	26.35	103	i P	P	11 06 24.6	+0.3
	SNR=8.0						
ASUD	Al Ashush, Dub	26.40	106	P	P	11 06 26.6	+1.8
NAZ	Nazwa, Dubai	26.48	105	i P	P	11 06 26.6	+1.1
	SNR=23						
BANOM	Banah	26.54	103	i P	P	11 06 26.9	+0.9
	SNR=13						
BANOM	Banah	26.54	103	P	P	11 06 29.0	+3.0
	SNR=5.0						
FAQ	Al Faqa, Dubai	26.55	106	i P	P	11 06 27.1	+1.0
	SNR=11						
MDT	Midelt	26.55	274	P	P	11 06 27.9	+1.7
	comp=Z,7.0nm,0.8s,baz=83,slow=12,SNR=9.3						
MDT				LR	LR	11 18 30.4	
	comp=Z,304nm,21.9s,baz=95,slow=40						
KLMR	Klimovskoe	26.58	13	eP	P	11 06 23.9	-2.0
KLMR				eS	S	11 10 59.6	+1.2
KLMR				pmax	pmax		
	comp=Z,115nm,1.0s						
KLMR				MLR	MLR		
	comp=Z,1µm,10.0s						
KLMR	Klimovskoe	26.58	13	eP	P	11 06 24.0	-2.0
KLMR				AMP		11 06 43.0	
	comp=Z,115nm,1.0s						
KLMR				eS	S	11 10 59.6	+1.2
KLMR				eS	S	11 10 59.6	+1.2
KLMR				LQ	LQ	11 14 49.2	
KLMR				LQ	LQ	11 14 49.2	
KLMR				LR	LR	11 15 52.5	
KLMR				AMP		11 17 59.4	
	comp=Z,1µm,9.8s						
MASF	Masafi	26.69	104	P	P	11 06 28.5	+1.2
MSFE	Esma-Masafi	26.69	104	i P	P	11 06 28.3	+0.8
	SNR=8.0						
AKTO	Aktyubinsk	26.71	46	P	P	11 06 27.2	-0.1
	comp=Z,64nm,0.7s,baz=251,slow=8.4,SNR=59						
AKTO				ScP	ScP	11 13 26.8	-1.1
	comp=Z,1.7nm,0.7s,baz=190,slow=2.9,SNR=4.9						
AKTO				LR	LR	11 19 32.7	
	comp=Z,291nm,19.0s,baz=240,slow=42						
OSL	Oslo	26.78	341	eP	P	11 06 26.6	-1.1
KONO	Kongsberg	26.84	340	eP	P	11 06 26.9	-1.4
KONO	Kongsberg	26.84	340	⇓P	P	11 06 26.9	-1.4
UOSS	Minazif	26.93	105	i P	P	11 06 30.0	+0.5
	SNR=8.7						
UOSS	Minazif	26.93	105	P	P	11 06 30.3	+0.8
UOSS	Minazif	26.93	105	⇑P	P	11 06 30.3	+0.8
UOSS	Minazif	26.93	105	P	P	11 06 29.8	+0.3
UOSS				IAmb	IAmb	11 06 31.3	
	comp=Z,46nm,0.6s						
HATD	Hatta, Dubai	26.93	105	i P	P	11 06 30.4	+0.8
	SNR=12						
HATD	Hatta, Dubai	26.93	105	P	P	11 06 31.0	+1.4
	SNR=6.0						
ASHO	Ashiyiah	26.95	106	i P	P	11 06 30.5	+0.8
	SNR=12						
ASHO	Ashiyiah	26.95	106	P	P	11 06 32.0	+2.3
	SNR=7.4						
ALNE	Al Ain	27.02	107	i P	P	11 06 31.4	+1.0
	SNR=15						
NC602	NORSAR Array S	27.27	343	eP	P	11 06 30.2	-1.9
NC602	NORSAR Array S	27.27	343	P	P	11 06 31.3	-0.9
NC602				IAmb	IAmb	11 06 49.3	
	comp=Z,99nm,1.2s						
PBRG	Braganca	27.28	294	eP	P	11 06 33.8	+1.2
	comp=Z,71nm,1.1s						
KIRV	Kirov	27.33	25	P	P	11 06 31.9	-0.8
	comp=Z,60nm,0.5s,baz=243,slow=1.1,SNR=17						
KIRV				LR	LR	11 19 14.5	
	comp=Z,456nm,20.3s,baz=241,slow=41						
KIRV	Kirov	27.33	25c	eP	P	11 06 31.7	-1.0
MVO	Moncorvo	27.48	292	eP	P	11 06 37.4	+3.0
	comp=Z,108nm,1.3s						
AB31	Akbulak array	27.48	50	i P	P	11 06 34.1	-0.1
ABKAR	Akbulak array	27.48	50	⇑P	P	11 06 34.2	-0.1
ABKAR	Akbulak array	27.48	50	P	P	11 06 34.1	-0.1
ABKAR	Akbulak array	27.48	50	P	P	11 06 34.1	-0.1
ABKAR				IAmb	IAmb	11 06 57.8	
	comp=Z,26nm,0.7s						
SOHO	SOHO	27.60	106	i P	P	11 06 36.1	+0.6
	SNR=12						
BLS5	Blasjo	27.60	337	eP	P	11 06 33.6	-1.7
NB2	NORSAR Subarra	27.61	343	P	P	11 06 33.4	-1.9
	comp=Z,8.9nm,0.7s,baz=151,slow=9.3						
NB2	NORSAR Subarra	27.61	343	P	P	11 06 33.4	-1.9
	baz=151,slow=9.3						
NOA	NORSAR Array B	27.61	343	P	P	11 06 33.1	-2.2
	comp=Z,4.9nm,0.6s,baz=147,slow=11,SNR=26						
NOA				LR	LR	11 18 51.8	
	comp=Z,1µm,18.7s,baz=160,slow=39						
PMRV	Marv??o	27.79	289	eP	P	11 06 37.9	+0.7

	comp=Z,41nm,1.4s						
PCBR	Castelo Branco	27.84	290	eP	P	11 06 39.5	+2.0
	comp=Z,43nm,1.4s						
MTE	Manteigas	27.88	291	eP	P	11 06 47.5	+10
	comp=Z,52nm,1.6s						
ODD1	Odda	27.93	338	eP	P	11 06 37.0	-1.2
PESTR	Estremoz	27.98	287	eP	P	11 06 39.4	+0.6
	comp=Z,48nm,1.5s						
PESTR	Estremoz	27.98	287	⇑P	P	11 06 39.7	+0.9
PESTR	Estremoz	27.98	287	P	P	11 06 39.4	+0.6
SKAR	Skarslia	28.06	340	eP	P	11 06 38.1	-1.3
POLO	Lamas de Olo	28.06	293	eP	P	11 06 37.7	-1.9
	comp=Z,28nm,1.4s						
PVIS	Viseu	28.14	291	eP	P	11 06 43.6	+3.3
	comp=Z,82nm,1.5s						
PVAQ	Vaqueiros	28.22	284	eP	P	11 06 42.2	+1.2
	comp=Z,84nm,1.2s						
PVAQ	Vaqueiros	28.22	284	P	P	11 06 42.1	+1.2
PVAQ				IAmb	IAmb	11 07 02.9	
	comp=Z,51nm,1.1s						
PBEJ	Beja	28.27	286	eP	P	11 06 48.8	+7.4
	comp=Z,55nm,1.4s						
PBDV	Barranco-do-Ve	28.41	284	eP	P	11 06 43.3	+0.6
	comp=Z,110nm,1.5s						
PGAV	Gavieira, Arco	28.43	294	eP	P	11 06 41.8	-1.1
	comp=Z,99nm,1.8s						
PCVE	Castro Verde	28.45	285	eP	P	11 06 43.7	+0.7
	comp=Z,56nm,1.4s						
PMTG	Montargil	28.46	288	eP	P	11 06 41.1	-2.0
	comp=Z,38nm,1.4s						
HOQ	Hoqain	28.49	106	P	P	11 06 44.3	+0.8
	SNR=17						
HRA	Herat	28.51	82	P	P	11 06 45.2	+1.4
HRA				IAmb	IAmb	11 06 46.0	
	comp=Z,46nm,0.8s						
PCAS	Casmilo, Conde	28.62	290	eP	P	11 06 51.7	+7.2
	comp=Z,56nm,1.6s						
PRGR	Permogore	28.63	18	eP	P	11 06 43.2	-1.1
PRGR				eS	S	11 11 24.1	-6.6
PRGR				pmax	pmax		
	comp=Z,284nm,1.5s						
BER	Bergen	28.71	337	eP	P	11 06 45.5	+0.5
ASK	Askoy	28.83	337	eP	P	11 06 45.5	-0.6
BSY	Bisya	28.84	108	P	P	11 06 48.0	+1.3
	SNR=15						
EKA	Eskdalemuir Ar	28.87	323	P	P	11 06 46.1	-0.5
	comp=Z,2.7nm,0.5s,baz=126,slow=10,SNR=10						
ESK	Eskdalemuir	28.89	323	P	P	11 06 46.3	-0.4
ESK				pmax	pmax		
	comp=Z,37nm,1.1s						
ESK	Eskdalemuir	28.89	323	P	P	11 06 46.3	-0.4
DOK	Doka	29.00	118	P	P	11 06 50.0	+2.0
	SNR=10						
DOMB	Dombas	29.00	342	eP	P	11 06 47.5	-0.2
HYA	Hoyanger	29.06	339	eP	P	11 06 47.6	-0.5
BIDO	Bidbid	29.16	106	P	P	11 06 52.1	+2.6
	SNR=5.9						
WHFO	Wadi Hawf	29.20	120	P	P	11 06 53.0	+3.1
	SNR=5.3						
ABTO	Aybut	29.25	121	P	P	11 06 53.0	+2.7
	SNR=7.8						
SMDO	Samad	29.34	107	P	P	11 06 52.1	+0.9
	SNR=24						
AKN	Aaknes	29.65	341	eP	P	11 06 52.9	-0.5
WSAR	Wadi Sarin	29.70	106	P	P	11 06 54.8	+0.5
	comp=Z,10nm,0.6s,baz=292,slow=10,SNR=14						
FOO	Floro	29.74	339	eP	P	11 06 52.6	-1.5
ARU	Arti	29.74	35	P	P	11 06 53.7	-0.6
	comp=Z,3.4nm,0.4s,baz=231,slow=9.7,SNR=15						
ARU				ScP	ScP	11 13 36.5	-0.7
	comp=Z,4.3nm,0.8s,baz=22,slow=4.8,SNR=4.0						
ARU				LR	LR	11 21 32.0	
	comp=Z,392nm,21.0s,baz=312,slow=42						
ARU	Arti	29.74	35	d iP	P	11 06 53.8	-0.5
ARU						11 07 50.3	
ARU				S	S	11 11 49.3	+1.0
ARU				pmax	pmax		
	comp=Z,39nm,1.9s						
ARU	Arti	29.74	35	⇓P	P	11 06 53.9	-0.3
ARU	Arti	29.74	35	P	P	11 06 53.8	-0.5
JMDO	Jabal Madar	29.75	108	P	P	11 06 56.0	+1.3
	SNR=12						
RBK	Rabkut	29.78	120	P	P	11 06 57.0	+1.9
	SNR=8.5						
DMTO	DMTO	30.17	119	P	P	11 07 00.0	+1.6
	SNR=6.4						
WBK	Wadi Bani Khal	30.30	106	P	P	11 07 02.1	+2.5
	SNR=9.5						
SHAO	Shalim	30.46	117	iP	P	11 07 01.9	+0.9
	SNR=7.9						
SHAO	Shalim	30.46	117	P	P	11 07 02.5	+1.5
NSS	Namsos	30.57	347	eP	P	11 07 00.7	-0.7
JLN	Jalan Bani Buh	30.89	107	P	P	11 07 06.1	+1.4
	SNR=20						
SVE	Sverdlovsk	30.93	36	eP	P	11 07 21.1	+16
SVE				pmax	pmax		
	comp=Z,66nm,1.5s						
MOR8	Moi Rana	31.68	350	eP	P	11 07 10.9	-0.3
TORD	Torodi Ar. Bea	32.10	233	P	P	11 07 15.5	+0.1
	comp=Z,30nm,0.8s,baz=39,slow=8.2,SNR=144						
TORD				ScP	ScP	11 13 44.9	-0.8
	comp=Z,1.2nm,0.9s,baz=9.3,slow=2.6,SNR=3.6						
TORD				LR	LR	11 22 03.5	
	comp=Z,586nm,20.8s,baz=45,slow=40						
TORD	Torodi Ar. Bea	32.10	233	P	P	11 07 14.9	-0.5
TORD				IAmb	IAmb	11 07 17.6	
	comp=Z,28nm,0.8s						
KONS	Konsvik	32.18	349	eP	P	11 07 14.9	-0.7
APA	Apatity	32.34	4	⇓iP	P	11 07 17.8	+0.8
APA				pmax	pmax		
	comp=Z,14nm,0.9s						
APA				MLR	MLR		
	comp=Z,3μm,10.0s						
FAUS	Fauske	32.72	351	eP	P	11 07 20.0	-0.3
LODK	Lodwar	32.72	165	P	P	11 07 23.8	+2.8
	SNR=7.2						
LODK	Lodwar	32.72	165	P	P	11 07 22.7	+1.8
LVZ	Lovozero	32.75	5	iP	P	11 07 21.3	+0.7
LVZ				pmax	pmax		
	comp=Z,38nm,1.2s						
STEI	Steigen	33.25	352	eP	P	11 07 24.4	-0.5
CHGR	Chuyangaron	33.28	72	P	P	11 07 26.6	+0.9
SOCY	Socotra	33.40	127	P	P	11 07 26.5	-0.4
SOCY	Socotra	33.40	127	⇑P	P	11 07 26.2	-0.7
SOCY	Socotra	33.40	127	P	P	11 07 26.0	-0.9
BRLS	Borolday	33.45	64	eP	P	11 07 25.3	-1.8
	baz=64						
BRLS	Borolday	33.45	64	eP	P	11 07 25.2	-1.8
KTK1	Kautokeino	33.68	357	eP	P	11 07 27.4	-1.4
KKAR	Karatay Array	33.94	64	P	P	11 07 31.6	+0.3
KKAR	Karatay Array	33.94	64	P	P	11 07 31.6	+0.3
KBL	Kabul	33.95	79	P	P	11 07 32.6	+0.9
KBL				pmax	pmax		
	comp=Z,49nm,1.2s						
KBL	Kabul	33.95	79	P	P	11 07 32.6	+0.9
KBL				IAmb	IAmb	11 07 35.9	
	comp=Z,49nm,1.1s						
ARA0	ARCESS Array S	34.15	359	eP	P	11 07 31.5	-1.2
ARCES	ARCESS Array B	34.15	359	P	P	11 07 31.3	-1.5
	comp=Z,5.0nm,0.6s,baz=9.7,slow=8.6,SNR=45						
ARCES				LR	LR	11 21 46.7	
	comp=Z,486nm,19.1s,baz=190,slow=37						
ARCES	ARCESS Array B	34.15	359	P	P	11 07 31.5	-1.3
ARCES				pmax	pmax		
	comp=Z,46nm,1.2s						
ARCES	ARCESS Array B	34.15	359	P	P	11 07 31.5	-1.3
ARCES				IAmb	IAmb	11 07 49.5	
	comp=Z,46nm,1.1s						
JETT	Jettan, Norway	34.37	356	eP	P	11 07 33.3	-1.4
BTK	Batken	34.38	69	P	P	11 07 35.8	+0.5
BTK				pmax	pmax		
	comp=Z,69nm,1.3s						
BTK	Batken	34.38	69	P	P	11 07 35.8	+0.5
BTK				IAmb	IAmb	11 07 37.3	
	comp=Z,69nm,1.2s						
DZA	Taraz	34.55	64	eP	P	11 07 36.8	+0.1
	comp=Z,13nm,0.8s,baz=64						
DZA	Taraz	34.55	64	eP	P	11 07 36.7	+0.1
DZA				pmax	pmax		
	comp=Z,13nm,0.8s						
BRVK	Borovoye	34.77	46	ceP	P	11 07 38.6	+0.3
BRVK				pmax	pmax		
	comp=Z,42nm,1.7s						
BRVK	Borovoye	34.77	46	⇑P	P	11 07 38.7	+0.4
BRVK	Borovoye	34.77	46	P	P	11 07 38.5	+0.3
BRVK				IAmb	IAmb	11 07 53.7	
	comp=Z,33nm,1.2s						
BVAR	Borovoye Array	34.82	46	P	P	11 07 38.2	-0.6
	comp=Z,9.5nm,0.8s,baz=242,slow=9.4,SNR=30						
KOWA	Kowa	35.06	241	⇑P	P	11 07 41.4	+0.2
KOWA	Kowa	35.06	241	P	P	11 07 41.8	+0.6
KOWA				IAmb	IAmb	11 08 04.3	
	comp=Z,20nm,0.9s						
DRK	Karamyk	35.21	70	P	P	11 07 43.8	+1.1
MBAR	Mbarara	36.01	174	P	P	11 07 51.1	+1.6
	comp=Z,4.8nm,0.2s,baz=15,slow=2.7,SNR=8.1						
MBAR	Mbarara	36.01	174	P	P	11 07 50.0	+0.5
MBAR				pmax	pmax		
	comp=Z,26nm,1.4s						
MBAR	Mbarara	36.01	174	⇓P	P	11 07 52.7	+3.1
MBAR	Mbarara	36.01	174	P	P	11 07 50.0	+0.5
AML	Almayashu	36.34	65	P	P	11 07 53.2	+0.7
	SNR=13						
AML	Almayashu	36.34	65	iP	P	11 07 53.2	+0.7
	SNR=13						
EKS2	Erkin-Say	36.36	64	P	P	11 07 53.2	+0.9
	SNR=35						
BTLS	Baital	36.43	60	eP	P	11 07 52.6	-0.1
	baz=60						
BTLS	Baital	36.43	60	eP	P	11 07 52.6	-0.1
USP	Ospenovka	36.84	63	P	P	11 07 56.6	+0.3
	SNR=12						
AAK	Ala-Archa	36.89	64	P	P	11 07 58.1	+1.3
	comp=Z,31nm,0.5s,baz=259,slow=10,SNR=91						
AAK				PP	PP	11 09 18.2	-2.8
	comp=Z,20nm,1.1s,baz=245,slow=9.7,SNR=4.3						
AAK	Ala-Archa	36.89	64	P	P	11 07 58.2	+1.3
	SNR=7.8						
AAK	Ala-Archa	36.89	64	iP	P	11 07 57.8	+1.0
	SNR=5.2						
AAK	Ala-Archa	36.89	64	P	P	11 07 57.5	+0.7
AAK				pmax	pmax		
	comp=Z,40nm,0.7s						
AAK	Ala-Archa	36.89	64	⇑P	P	11 07 58.0	+1.2
AAK	Ala-Archa	36.89	64	P	P	11 07 57.5	+0.7
AAK				IAmb	IAmb	11 07 59.4	
	comp=Z,40nm,0.7s						
SGDS	Sogindy	36.92	63	eP	P	11 07 56.2	-0.8
	baz=63						
SGDS	Sogindy	36.92	63	eP	P	11 07 56.9	-0.1
SGDS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
UCH	Uchtor	36.94	65	P	P	11 07 58.7	+1.0
	SNR=19						
FRU1	Bishkek	36.97	64	P	P	11 07 58.0	+0.5
FRU1				pmax	pmax		
	comp=Z,72nm,0.9s						
FRU1	Bishkek	36.97	64	P	P	11 07 58.0	+0.5
CHMS	Chumysh	37.05	64	P	P	11 07 58.9	+0.9
	SNR=22						
KBK	Karagaybulak	37.22	64	P	P	11 08 01.2	+1.5
	SNR=18						
KMBO	Kilima Mbogo	37.55	164	P	P	11 08 05.6	+2.9
	comp=Z,2.8nm,0.8s,baz=349,slow=9.6,SNR=8.5						
KMBO				PcP	PcP	11 10 22.5	+2.1
	comp=Z,3.2nm,0.9s,baz=344,slow=4.9,SNR=4.9						
KMBO				ScP	ScP	11 14 06.8	+1.3
	comp=Z,2.9nm,0.8s,baz=12,slow=7.2,SNR=6.8						
KMBO				LR	LR	11 23 49.4	
	comp=Z,479nm,20.6s,baz=88,slow=36						
KMBO	Kilima Mbogo	37.55	164	iP	P	11 08 03.3	+0.7
	SNR=5.7						
TKM2	Tokmak 2	37.67	64	P	P	11 08 04.3	+0.8
	SNR=43						
TKM2	Tokmak 2	37.67	64	iP	P	11 08 03.6	+0.1
TKM2				pmax	pmax		
	comp=Z,20nm,0.5s						
BOOM	Boomskoye usch	37.96	64	P	P	11 08 07.1	+1.1
BOOM				pmax	pmax		
	comp=Z,21nm,0.8s						
BOOM	Boomskoye usch	37.96	64	P	P	11 08 07.1	+1.1
BOOM				IAmb	IAmb	11 08 09.6	
	comp=Z,22nm,0.8s						
KUU	Kurty	38.13	62	eP	P	11 08 07.1	0.0
	comp=Z,28nm,0.7s,baz=62						
KUU	Kurty	38.13	62	eP	P	11 08 07.1	0.0
KUU				pmax	pmax		
	comp=Z,28nm,0.7s						
ULHL	Ulahol	38.21	65	P	P	11 08 09.8	+1.7
	SNR=53						
KSH	Kashi	38.39	69	P	P	11 08 09.5	-0.1
KSH				pP	sP	11 08 21.8	+0.3
KSH				PP	PnPn	11 09 40.5	+1.0
KSH				PcP	PcP	11 10 23.5	+0.9
KSH				S	S	11 13 54.5	-8.0
KSH				pmax	pmax		
	comp=Z,83nm,0.5s						
MDOK	Medeo	38.71	63	eP	P	11 08 11.6	-0.7
	baz=63						
MDOK	Medeo	38.71	63	eP	P	11 08 11.5	-0.7
KIBK	Kibwezi	38.91	163	P	P	11 08 16.8	+2.8
KDJ	Kajisay	38.92	65	P	P	11 08 15.2	+1.2
KDJ				pmax	pmax		
	comp=Z,61nm,1.2s						
KDJ	Kajisay	38.92	65	P	P	11 08 15.2	+1.2
KDJ				IAmb	IAmb	11 08 16.8	
	comp=Z,61nm,1.1s						
ARXS	Arharly	39.17	61	eP	P	11 08 16.0	0.0
TARG	Taragay, Kyrgy	39.43	65	P	P	11 08 20.1	+1.5
TARG				IAmb	IAmb	11 08 21.8	
	comp=Z,76nm,1.2s						
KURBB	Kurchatov Arra	39.51	51	P	P	11 08 19.1	+0.4
	comp=Z,36nm,0.7s,baz=276,slow=8.8,SNR=274						
KURBB				PP	PnPn	11 09 52.6	+0.1
	comp=Z,18nm,1.0s,baz=275,slow=12,SNR=15						
KURBB				PcP	PcP	11 10 26.9	+1.1
	comp=Z,16nm,0.7s,baz=274,slow=3.8,SNR=11						
KURBB	Kurchatov Arra	39.51	51	P	P	11 08 18.2	-0.4
TDK	Taldyqorghan	39.52	60	eP	P	11 08 18.8	0.0
	baz=60						
TDK	Taldyqorghan	39.52	60	eP	P	11 08 18.8	0.0
KURK	Kurchatov	39.57	51	ceP	P	11 08 19.4	+0.3
KURK				pmax	pmax		
	comp=Z,67nm,1.3s						
KURK	Kurchatov	39.57	51	⇑P	P	11 08 19.2	+0.1
KURK	Kurchatov	39.57	51	P	P	11 08 19.2	+0.1
KURK				IAmb	IAmb	11 08 20.5	
	comp=Z,50nm,1.0s						
SATY	Saty	39.71	63	eP	P	11 08 20.4	-0.1
	comp=Z,24nm,0.8s,baz=63						
SATY	Saty	39.71	63	eP	P	11 08 20.4	-0.1
SATY				pmax	pmax		
	comp=Z,24nm,0.8s						
ZHN	Zhinishke	39.72	63	eP	P	11 08 20.3	-0.3
	baz=63						
ZHN	Zhinishke	39.72	63	eP	P	11 08 20.2	-0.3
PRZ	Przheval'sk	39.77	64	P	P	11 08 22.7	+1.6
PRZ				pmax	pmax		
	comp=Z,122nm,1.5s						
PRZ	Przheval'sk	39.77	64	P	P	11 08 22.7	+1.6
KPKS	Kokpek	39.86	62	eP	P	11 08 21.8	0.0
	baz=62						
KPKS	Kokpek	39.86	62	eP	P	11 08 22.4	+0.6
KPKS				pmax	pmax		
	comp=Z,58nm,3.0s						
UZB	Uzynbulak	40.15	63	eP	P	11 08 23.7	-0.5
	baz=63						
UZB	Uzynbulak	40.15	63	eP	P	11 08 25.1	+0.9
UZB				pmax	pmax		
	comp=Z,1.0nm,0.2s						
SHLS	Shalkode	40.46	63	eP	P	11 08 28.6	+1.8
	baz=63						
SHLS	Shalkode	40.46	63	eP	P	11 08 28.6	+1.8
SEM	Semipalatinsk	40.60	52	eP	P	11 08 27.4	-0.5
	baz=52						
SEM	Semipalatinsk	40.60	52	eP	P	11 08 27.4	-0.5
HOPEN	Hopen	41.16	359	eP	P	11 08 32.4	+0.5
DBIC	Dimbokro	41.20	234	P	P	11 08 32.3	-0.5
	comp=Z,12nm,0.7s,baz=43,slow=8.4,SNR=17						
DBIC				LR	LR	11 29 48.7	
	comp=Z,561nm,18.4s,baz=52,slow=42						
DBIC	Dimbokro	41.20	234	P	P	11 08 33.0	+0.1
DBIC				pmax	pmax		
	comp=Z,50nm,1.4s						
DBIC	Dimbokro	41.20	234	⇑P	P	11 08 32.4	-0.5
DBIC	Dimbokro	41.20	234	P	P	11 08 33.0	+0.1
DBIC				IAmb	IAmb	11 08 52.6	
	comp=Z,50nm,1.4s						
TIC	Toumodi	41.32	234	eP	P	11 08 34.4	+0.4
KIC	Kosan Boka	41.35	233	eP	P	11 08 33.8	-0.4
	comp=Z,39nm,0.7s						
LIC	Lamto	41.64	233	eP	P	11 08 37.1	+0.5
	comp=Z,84nm,0.9s						
MAKZ	Makanchi	41.87	57	P	P	11 08 38.6	+0.5
MAKZ				pmax	pmax		
	comp=Z,22nm,0.7s						
MAKZ	Makanchi	41.87	57	⇑P	P	11 08 38.8	+0.6
MAKZ	Makanchi	41.87	57	P	P	11 08 38.6	+0.5
MAKZ				IAmb	IAmb	11 08 39.3	
	comp=Z,22nm,0.7s						
MK31	Makanchi Array	42.08	57	iP	P	11 08 40.1	+0.2
MK31				pmax	pmax		
	comp=Z,33nm,0.5s						
MK31	Makanchi Array	42.08	57	P	P	11 08 39.9	-0.1
MK31				IAmb	IAmb	11 08 41.4	
	comp=Z,35nm,0.7s						
MKAR	Makanchi Array	42.08	57	P	P	11 08 39.6	-0.3
	comp=Z,37nm,0.6s,baz=279,slow=6.8,SNR=313						
MKAR				ScP	ScP	11 14 21.2	-1.2
	comp=Z,5.1nm,0.8s,baz=274,slow=3.9,SNR=8.3						
MKAR	Makanchi Array	42.08	57	iP	P	11 08 40.2	+0.3
MKAR				pmax	pmax		
	comp=Z,38nm,0.6s						
MKAR	Makanchi Array	42.08	57	P	P	11 08 39.9	-0.1
NDI	New Delhi	42.40	85	eP	P	11 08 44.0	+1.3
SPA0	Spitsbergen Ar	43.08	357	eP	P	11 08 47.1	-0.5
SPITS	Spitsbergen Ar	43.08	357	P	P	11 08 46.9	-0.7
	comp=Z,5.7nm,0.3s,baz=151,slow=12,SNR=67						
SPITS				PcP	PcP	11 10 37.4	+0.4
	comp=Z,6.3nm,0.5s,baz=126,slow=5.7,SNR=4.4						
ZAA0	Zalesovo Array	43.48	46	P	P	11 08 50.6	-0.4
ZAA0				IAmb	IAmb	11 08 51.8	
	comp=Z,25nm,0.7s						
ZALV	Zalesovo Beam	43.48	46	P	P	11 08 50.6	-0.5
	comp=Z,27nm,0.6s,baz=268,slow=8.6,SNR=130						
ZALV				PcP	PcP	11 10 37.6	-1.1
	comp=Z,3.8nm,0.5s,baz=256,slow=3.0,SNR=4.5						
ZALV	Zalesovo Beam	43.48	46	iP	P	11 08 50.9	-0.2
ZALV				pmax	pmax		
	comp=Z,27nm,0.6s						
SCO	Scoresbysund	43.72	338	iP	P	11 08 53.0	+0.2
ZSN	Zaisan	43.78	56	eP	P	11 08 52.8	-0.9
	baz=56						
ZSN	Zaisan	43.78	56	eP	P	11 08 52.7	-0.9
DBG	Daneborg	45.13	344	⇑P	P	11 09 03.8	-0.2
DGZ	Jazzator, Alta	45.26	52	iP	P	11 09 06.2	+0.7
DGZ				pmax	pmax		
	comp=Z,26nm,0.6s						
DAG	Danmarks Havn	46.17	347	iP	P	11 09 10.0	-2.2
DAG	Danmarks Havn	46.17	347	⇑P	P	11 09 10.9	-1.2
WMQ	Urumqi	46.27	60	eP	P	11 09 15.0	+1.4
WMQ				sP	sP	11 09 35.5	+10
WMQ				PP	PP	11 11 06.0	+3.7
WMQ				pmax	pmax		
	comp=Z,110nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,210nm,3.8s						
WMQ				LR	LR		
	comp=Z,1μm,29.0s						
WMQ				LR	LR		
	comp=Z,2μm,28.8s						
WMQ				LR	LR		
	comp=Z,360nm,26.7s						
NRIK	Noril'sk	46.84	25	P	P	11 09 18.3	+0.8
	comp=Z,41nm,0.6s,baz=238,slow=4.4,SNR=77						
NRIK	Noril'sk	46.84	25	ceP	P	11 09 18.3	+0.8
NRIK				pmax	pmax		
	comp=Z,37nm,0.9s						
NRIK	Noril'sk	46.84	25	P	P	11 09 18.0	+0.5
PYUN	Piuthan	47.31	83	eP	P	11 09 23.1	+1.1
	comp=Z,301nm,0.8s						
DANN	Dangsing	47.83	82	eP	P	11 09 27.6	+1.4
	comp=Z,1μm,0.9s						
HYB	Hyderabad	48.66	98	iP	P	11 09 32.5	+0.2
	comp=Z,115nm,0.8s						
GKN	Gorkha	48.68	82	eP	P	11 09 33.1	+0.5
NOR	Nord	48.89	352	iP	P	11 09 31.3	-1.9
NOR	Nord	48.89	352	⇑P	P	11 09 31.4	-1.9
DMN	Daman	49.22	82	eP	P	11 09 37.6	+0.8
KKN	Kakani	49.28	82	eP	P	11 09 37.7	+0.4
	comp=Z,96nm,0.5s						
SUMG	Summit	49.35	339	iP	P	11 09 35.0	-2.4
PKIN	Phulchoki	49.47	82	eP	P	11 09 39.2	+0.5
PKI	Pulchoki	49.48	82	eP	P	11 09 39.2	+0.3
GUN	Gumba	49.72	81	eP	P	11 09 41.2	+0.4
LSZ	Lusaka	50.46	179	P	P	11 09 48.8	+2.7
	comp=Z,6.4nm,0.6s,baz=12,slow=8.7,SNR=16						
LSZ	Lusaka	50.46	179	P	P	11 09 48.5	+2.4
LSZ				pmax	pmax		
	comp=Z,12nm,1.0s						
LSZ	Lusaka	50.46	179	P	P	11 09 48.5	+2.4
DY2G	Dye2	51.59	331	iP	P	11 09 53.2	-1.0
DY2G				IAmb	IAmb	11 09 56.1	
	comp=Z,43nm,0.5s						
LSA	Lhasa	53.22	77	P	P	11 10 07.5	+0.4
LSA				pmax	pmax		
	comp=Z,140nm,0.9s						
LSA	Lhasa	53.22	77	P	P	11 10 08.1	+1.0
SFJD	Kangerlussuaq	53.29	331	⇑P	P	11 10 06.0	-0.4
MOY	Mondy	53.46	48	eP	P	11 10 09.6	+1.5
MOY				pmax	pmax		
	comp=Z,64nm,1.5s						
TSUM	Tsumeb	55.15	191	⇑P	P	11 10 23.0	+2.3
TSUM	Tsumeb	55.15	191	P	P	11 10 22.5	+1.8
ZAK	Zakamensk	55.17	49	eP	P	11 10 20.9	+0.3
ZAK				pmax	pmax		
	comp=Z,46nm,1.2s						
IRK	Irkutsk	55.29	47	eP	P	11 10 21.2	-0.1
IRK				pmax	pmax		
	comp=Z,90nm,1.8s						
SHL	Shillong	55.57	81	P	P	11 10 23.4	-0.5
SHL				pmax	pmax		
	comp=Z,62nm,1.2s						
SHL	Shillong	55.57	81	P	P	11 10 23.4	-0.5
MATP	Matopo	55.59	179	iP	P	11 10 27.1	+3.3
MATP	Matopo	55.59	179	iP	P	11 10 27.1	+3.3
PALK	Pallekele	56.19	107	P	P	11 10 28.5	+0.3
PALK				pmax	pmax		
	comp=Z,80nm,1.5s						
PALK	Pallekele	56.19	107	P	P	11 10 28.5	+0.3
GTA	Gaotai	56.21	63	⇑P	P	11 10 29.0	+0.8
GTA				pP	sP	11 10 39.3	-1.2
GTA				pmax	pmax		
	comp=Z,37nm,0.9s						
GTA				pmax	pmax		
	comp=Z,180nm,7.5s						
GTA				LR	LR		
	comp=Z,340nm,20.4s						
GTA				LR	LR		
	comp=Z,250nm,18.5s						
GTA				LR	LR		
	comp=Z,440nm,19.6s						
TULEG	Thule	57.26	344	iP	P	11 10 33.0	-1.9
MSNA	Messina	57.54	177	iP	P	11 10 40.1	+2.6
MSNA	Messina	57.54	177	iP	P	11 10 40.1	+2.6
SONM	Songino Array	57.88	51	P	P	11 10 40.7	+0.8
	comp=Z,16nm,0.7s,baz=288,slow=7.8,SNR=140						
SONM				ScP	ScP	11 15 29.3	-0.6
	comp=Z,1.4nm,0.7s,baz=251,slow=4.4,SNR=3.5						
SONM	Songino Array	57.88	51	P	P	11 10 40.7	+0.8
SONM				IAmb	IAmb	11 10 41.4	
	comp=Z,19nm,0.8s						
ULN	Ulaanbaatar	58.29	51	ceP	P	11 10 43.6	+0.8
ULN				pmax	pmax		
	comp=Z,64nm,1.7s						
ULN	Ulaanbaatar	58.29	51	⇑P	P	11 10 43.7	+0.8
ULN				⇑P	pP	11 10 43.8	-7.7
ULN	Ulaanbaatar	58.29	51	P	P	11 10 42.8	0.0
MOPA	Mopani	58.78	176	iP	P	11 10 51.9	+5.7
MOPA	Mopani	58.78	176	iP	P	11 10 51.9	+5.7
BOD	Bodaibo	59.09	39	eP	P	11 10 47.4	-0.6
BOD				pmax	pmax		
	comp=Z,62nm,0.8s						
EUNU	Eureka	59.24	349	P	P	11 10 48.2	-0.6
LBTB	Lobatse	60.17	182	P	P	11 10 57.0	+1.2
LBTB				pmax	pmax		
	comp=Z,30nm,1.1s						
LBTB	Lobatse	60.17	182	P	P	11 10 57.0	+1.2
LBTB				IAmb	IAmb	11 11 12.2	
	comp=Z,30nm,1.1s						
TIXI	Tiksi	60.24	21	ceP	P	11 10 55.7	0.0
TIXI				pmax	pmax		
	comp=Z,25nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,509nm,17.0s						
LZH	Lanzhou	60.42	65	eP	P	11 10 58.5	+0.7

LZH				pP	sP	11 11 16.8	+6.7
LZH				pmax	pmax		
	comp=Z,80nm,1.1s						
LZH				pmax	pmax		
	comp=Z,270nm,5.4s						
CD2	Chengdu	62.58	70	⇑P	P	11 11 12.8	+0.6
CD2				S	S	11 19 35.5	-2.7
CD2				pmax	pmax		
	comp=Z,130nm,0.8s						
CD2				pmax	pmax		
	comp=Z,110nm,4.2s						
BTO	Baotou	62.99	58	*e*P	P	11 11 14.8	-0.1
BTO				S	S	11 19 34.0	-9.2
BTO				LR	LR		
	comp=Z,2µm,20.4s						
BTO				LR	LR		
	comp=Z,1µm,21.2s						
BOSA	Boshof	63.76	182	P	P	11 11 21.2	+1.2
	comp=Z,8.0nm,0.8s,baz=7.0,slow=6.8,SNR=15						
BOSA				LR	LR	11 39 12.6	
	comp=Z,301nm,21.1s,baz=3.0,slow=36						
BOSA	Boshof	63.76	182	P	P	11 11 21.8	+1.9
BOSA				pmax	pmax		
	comp=Z,21nm,1.2s						
BOSA	Boshof	63.76	182	P	P	11 11 21.8	+1.9
BOSA				IAmb	IAmb	11 11 34.0	
	comp=Z,21nm,1.2s						
RES	Resolute Bay	63.84	346	P	P	11 11 19.7	-0.1
RES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RES	Resolute Bay	63.84	346	P	P	11 11 19.7	-0.1
HHC	Hu-ho-hao-te	63.95	57	*e*P	P	11 11 22.3	+1.1
HHC				pmax	pmax		
	comp=Z,120nm,1.0s						
HHC				pmax	pmax		
	comp=Z,320nm,5.7s						
SCHQ	Schefferville	64.13	320	P	P	11 11 20.3	-1.8
	comp=Z,24nm,0.6s,baz=63,slow=5.3,SNR=77						
SCHQ				LR	LR	11 39 07.8	
	comp=Z,117nm,18.2s,baz=87,slow=36						
SCHQ	Schefferville	64.13	320	P	P	11 11 21.0	-1.0
SCHQ				IAmb	IAmb	11 11 22.8	
	comp=Z,24nm,0.6s						
KMI	Kunming	64.47	76	⇑P	P	11 11 25.0	0.0
KMI				pP	sP	11 11 37.0	-0.4
KMI				sP	pP	11 11 43.5	+10
KMI				S	S	11 19 58.5	-3.8
KMI				pmax	pmax		
	comp=Z,31nm,0.9s						
KMI				pmax	pmax		
	comp=Z,190nm,4.2s						
KMI				LR	LR		
	comp=Z,210nm,25.1s						
KMI				LR	LR		
	comp=Z,140nm,25.9s						
KMI				LR	LR		
	comp=Z,280nm,29.8s						
CHTO	Chiang Mai	64.55	84	P	P	11 11 24.8	-0.5
CHTO				pmax	pmax		
	comp=Z,55nm,1.2s						
CHTO	Chiang Mai	64.55	84	P	P	11 11 24.8	-0.5
CHTO	Chiang Mai	64.55	84	P	P	11 11 25.3	0.0
	comp=Z,24nm,1.1s						
YAK	Yakutsk	64.70	31	*e*P	P	11 11 25.0	-0.6
YAK				*e**PP	pwP	11 11 35.6	-1.2
YAK				*e*		11 11 55.0	
YAK				*e*		11 13 47.9	
YAK				*e*S	S	11 20 03.6	+0.1
YAK				*e**SS	sS	11 20 28.1	+10
YAK				*e*		11 21 19.0	
YAK				*e*SS	SS	11 24 18.8	+4.9
YAK				pmax	pmax		
	comp=Z,28nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,12nm,1.3s						
YAK				pmax	pmax		
	comp=Z,668nm,3.7s						
YAK				pmax	pmax		
	comp=E,524nm,4.0s						
YAK				smax	smax		
	comp=E,543nm,4.4s						
YAK				smax	smax		
	comp=N,396nm,4.9s						
YAK	Yakutsk	64.70	31	P	P	11 11 25.1	-0.4
CM31	Chiang Mai Arr	64.73	85	P	P	11 11 26.4	-0.1
CMAR	Chiang Mai Arr	64.73	85	P	P	11 11 26.0	-0.5
	comp=N,28nm,0.8s,baz=298,slow=8.1,SNR=142						
CMAR				PP	PP	11 13 43.6	-5.4
	comp=N,7.5nm,0.9s,baz=294,slow=9.7,SNR=4.9						
CMAR				LR	LR	11 44 46.1	
	comp=N,104nm,20.8s,baz=333,slow=41						
CMAR	Chiang Mai Arr	64.73	85	*i* P	P	11 11 26.7	+0.2
CMAR				pmax	pmax		
	comp=Z,28nm,0.9s						
CMAR	Chiang Mai Arr	64.73	85	P	P	11 11 26.6	+0.1
XAN	Xi'an	65.06	65	⇑P	P	11 11 29.8	+1.3
XAN				pP	sP	11 11 45.5	+4.5
XAN				sP	PcP	11 11 53.0	-8.2
XAN				pmax	pmax		
	comp=Z,68nm,0.8s						
XAN				LR	LR		
	comp=Z,410nm,18.6s						
XAN				LR	LR		
	comp=Z,430nm,19.2s						
TIY	Taiyuan	65.94	60	*e*P	P	11 11 35.0	+0.8
TIY				pmax	pmax		
	comp=Z,52nm,0.5s						
HAL	Halifax	66.77	309	P	P	11 11 40.3	+1.1
HAL				pmax	pmax		
	comp=Z,36nm,0.9s						
HAL	Halifax	66.77	309	P	P	11 11 40.3	+1.1
HAL				IAmb	IAmb	11 11 51.2	
	comp=Z,36nm,0.9s						
GYA	Guiyang	66.91	73	⇑P	P	11 11 40.5	-0.1
GYA				sP	sP	11 12 00.0	+6.9
GYA				pmax	pmax		
	comp=Z,57nm,1.0s						
LMN	Caledonia Moun	66.97	311	P	P	11 11 41.2	+0.6
LMN				IAmb	IAmb	11 11 56.2	
	comp=Z,23nm,0.9s						
BATG	Bathurst New B	67.07	312	P	P	11 11 42.1	+0.9
SLVN	Son La	67.27	79	P	P	11 11 42.8	-0.1
SLVN				IAmb	IAmb	11 11 44.5	
	comp=Z,43nm,1.3s						
BJI	Beijing	67.46	56	P	P	11 11 44.0	+0.3
BJI				pmax	pmax		
	comp=Z,58nm,0.9s						
ZEA	Zeya	67.57	39	*e*P	P	11 11 45.3	+1.1
ZEA				pmax	pmax		
	comp=E,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SUR	Sutherland	67.77	186	P	P	11 11 48.2	+2.4
SUR				IAmb	IAmb	11 11 49.8	
	comp=Z,22nm,0.8s						
D62A	Allapoint, All	68.96	313	P	P	11 11 53.8	+0.9
E62A	Clayton Lake	69.47	313	P	P	11 11 56.9	+0.7
TIA	Tai'an	69.95	59	⇑P	P	11 11 59.5	+0.1
TIA				pmax	pmax		
	comp=Z,69nm,0.9s						
WHN	Wuhan	70.77	66	⇑*i*P	P	11 12 05.3	+0.9
WHN				sP	PcP	11 12 21.8	-3.3
WHN				pmax	pmax		
	comp=Z,50nm,0.7s						
A36M	Sachs Harbour	71.14	351	P	P	11 12 05.9	0.0
A36M				IAmb	IAmb	11 12 18.5	
	comp=Z,16nm,0.8s						
A36M	Sachs Harbour	71.14	351	P	P	11 12 05.9	0.0
	baz=23						
SNY	Shenyang	71.46	52	⇑P	P	11 12 08.3	-0.1
SNY				pP	sP	11 12 21.8	+1.2
SNY				sP	PcP	11 12 26.5	-1.3
SNY				S	S	11 21 25.8	+0.9
SNY				pmax	pmax		
	comp=Z,42nm,0.7s						
SNY				pmax	pmax		
	comp=Z,450nm,4.8s						
SNY				LR	LR		
	comp=Z,390nm,5.0s						
SNY				LR	LR		
	comp=Z,430nm,5.7s						
SNY				LR	LR		
	comp=Z,510nm,17.2s						
CN2	Changchun	71.61	49	*e*P	P	11 12 09.8	+0.5
CN2				pmax	pmax		
	comp=Z,50nm,1.1s						
TPTI		71.69	99	P	P	11 12 09.5	-0.7
	comp=Z,41nm,0.6s						
KCSI	Kotacane, Aceh	72.01	99	P	P	11 12 10.4	-1.7
	comp=Z,48nm,0.8s						
LBNH	Lisbon	72.15	312	P	P	11 12 12.7	+0.2
	baz=58						
BILL	Bilibino	72.31	15	*de*P	P	11 12 12.6	-0.5
BILL				*e*		11 14 54.5	
BILL				pmax	pmax		
	comp=Z,28nm,1.3s						
BILL	Bilibino	72.31	15	P	P	11 12 13.2	+0.1
BILL				IAmb	IAmb	11 12 18.1	
	comp=Z,32nm,1.3s						
KLR	Kul'dur	72.34	42	*ce*P	P	11 12 14.0	+0.4
KLR				pmax	pmax		
	comp=Z,40nm,1.3s						
KLR				MLR	MLR		
	comp=Z,132nm,18.0s						
SEY	Seymchan	72.58	23	*i* P	P	11 12 16.2	+1.5
HNH	Hanover	72.65	311	P	P	11 12 17.1	+1.5
HNH				IAmb	IAmb	11 12 37.0	
	comp=Z,33nm,1.1s						
FRNY	Flat Rock	72.83	313	P	P	11 12 17.3	+0.7
FRNY				IAmb	IAmb	11 12 37.1	
	comp=Z,36nm,1.3s						
J61A	Chester	73.01	311	P	P	11 12 19.5	+1.8
J61A				IAmb	IAmb	11 12 43.6	
	comp=Z,34nm,1.4s						
VLDQ	Val d'Or	73.23	317	P	P	11 12 20.0	+1.2
VLDQ				IAmb	IAmb	11 12 21.6	
	comp=Z,21nm,0.6s						
NJ2	Nanjing	73.30	62	⇑P	P	11 12 18.0	-1.6
NJ2				pmax	pmax		
	comp=Z,49nm,1.0s						
KULM	Kulim	73.32	95	P	P	11 12 20.0	+0.1
KULM	Kulim	73.32	95	P	P	11 12 19.8	-0.1
A21K	Barrow	73.48	1	P	P	11 12 20.1	+0.3
	baz=357,SNR=24						
LONY	Lake Ozonia	73.54	313	P	P	11 12 21.7	+0.9
LONY				IAmb	IAmb	11 12 41.1	
	comp=Z,19nm,1.0s						
LONY	Lake Ozonia	73.54	313	P	P	11 12 21.1	+0.4
	baz=56						
L61B	Northampton	73.58	311	P	P	11 12 21.8	+0.7
	baz=57						
ACCN	Adirondack Com	73.67	312	P	P	11 12 23.0	+1.4
ACCN				IAmb	IAmb	11 12 40.4	
	comp=Z,27nm,1.1s						
MDJ	Mudanjiang	73.68	47	P	P	11 12 23.0	+1.4
MDJ				sP	PcP	11 12 39.3	+2.0
MDJ				pmax	pmax		
	comp=Z,24nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,420nm,3.7s						
MDJ	Mudanjiang	73.68	47	P	P	11 12 22.8	+1.2
	comp=Z,26nm,0.9s						
IPM	Ipoh	74.09	96	P	P	11 12 24.0	-0.5
IPM	Ipoh	74.09	96	P	P	11 12 23.9	-0.5
IPM				IAmb	IAmb	11 12 25.6	
	comp=Z,24nm,0.9s						
IPM	Ipoh	74.09	96	P	P	11 12 23.8	-0.7
	comp=Z,36nm,1.0s						
MA2	Magadan	74.42	26	*ce*P	P	11 12 26.6	+1.0
MA2				pmax	pmax		
	comp=Z,55nm,1.3s						
MA2	Magadan	74.42	26	P	P	11 12 26.0	+0.4
MA2				IAmb	IAmb	11 12 26.8	
	comp=Z,34nm,0.7s						
MA2	Magadan	74.42	26	P	P	11 12 26.6	+1.0
	comp=Z,57nm,0.9s						
MNSI	Mandailing Nat	75.07	100	P	P	11 12 29.6	-0.5
	comp=Z,21nm,0.8s						
PAL	Palisades	75.14	310	P	P	11 12 30.4	+0.3
	baz=56						
USA0B	Ussuriysk Arra	75.33	46	P	P	11 12 31.5	+0.3
USA0B				pmax	pmax		
	comp=Z,75nm,0.8s						
USA0B	Ussuriysk Arra	75.33	46	P	P	11 12 31.5	+0.3
USRK	Ussuriysk Ar.	75.33	46	P	P	11 12 31.3	+0.1
	comp=Z,68nm,0.7s,baz=292,slow=4.7,SNR=146						
USRK				LR	LR	11 49 53.3	
	comp=Z,166nm,21.7s,baz=302,slow=39						
USRK	Ussuriysk Ar.	75.33	46	P	P	11 12 31.9	+0.8
USRK	Ussuriysk Ar.	75.33	46	P	P	11 12 31.9	+0.8
INK	Inuvik	75.56	353	P	P	11 12 31.3	-0.7
	baz=16						
JRMM	Jerantut	75.61	96	P	P	11 12 33.0	-0.2
BINY	Binghamton	75.75	312	P	P	11 12 34.0	+0.3
	baz=55						
INCN	Inchon	75.78	54	P	P	11 12 34.3	+0.4
INCN				pmax	pmax		
	comp=Z,52nm,0.7s						
INCN	Inchon	75.78	54	P	P	11 12 34.3	+0.4
INCN	Inchon	75.78	54	P	P	11 12 34.8	+0.9
	comp=Z,73nm,1.5s						
VLA	Vladivostok	75.89	47	*i* P	P	11 12 34.8	+0.4
VLA				pmax	pmax		
	comp=Z,117nm,1.0s						
KSPA	Keystone Colle	75.98	311	P	P	11 12 36.4	+1.5
KSPA				IAmb	IAmb	11 13 04.5	
	comp=Z,22nm,1.0s						
SADO	Sadowa	76.12	315	P	P	11 12 36.9	+1.2
TOLK	Toolik Lake Re	76.19	359	P	P	11 12 36.3	+0.6
TOLK				IAmb	IAmb	11 12 51.2	
	comp=Z,32nm,1.5s						
TOLK	Toolik Lake Re	76.19	359	P	P	11 12 35.4	-0.3
	baz=2.5,SNR=5.7						
N59A	State Game Lan	76.35	311	P	P	11 12 37.2	0.0
	baz=55,SNR=5.3						
RDOG	Red Dog Mine	76.51	4	P	P	11 12 45.1	+7.6
	baz=351,SNR=8.3						
KS19	Wonju Array Si	76.58	54	P	P	11 12 39.5	+1.1
KSAR	Wonju Array Be	76.63	54	P	P	11 12 39.4	+0.7
KSAR	Wonju Array Be	76.63	54	P	P	11 12 39.4	+0.7
KSRS	Korea Array	76.64	54	P	P	11 12 39.1	+0.3
	comp=Z,49nm,0.7s,baz=306,slow=4.6,SNR=133						
KSRS				LR	LR	11 49 48.4	
	comp=Z,306nm,21.6s,baz=310,slow=38						
TJN	Taejon	76.88	55	*ce*P	P	11 12 40.6	+0.5
TJN	Taejon	76.88	55	P	P	11 12 40.4	+0.3
	comp=Z,289nm,1.1s						
WVNY	West Valley, N	77.20	313	P	P	11 12 42.4	+0.5
WVNY				IAmb	IAmb	11 13 00.1	
	comp=Z,37nm,1.2s						
BMAR	Burnt Mountain	77.25	357	P	P	11 12 41.6	-0.1
COLD	Coldfoot	77.61	359	P	P	11 12 44.0	+0.3
COLD				IAmb	IAmb	11 12 46.0	
	comp=Z,40nm,1.4s						
COLD	Coldfoot	77.61	359	P	P	11 12 43.4	-0.3
	baz=2.0,SNR=15						
YKA	Yellowknife Ar	77.71	343	P	P	11 12 43.1	-1.2
	comp=Z,4.9nm,0.6s,baz=30,slow=5.3,SNR=80						
YKA				LR	LR	11 47 53.5	
	comp=Z,232nm,20.2s,baz=0.0,slow=36						
EPYK	Eagle Plains	77.76	354	P	P	11 12 43.6	-1.0
	baz=13						
SSPA	Standing Stone	77.82	311	P	P	11 12 46.0	+0.6
SSPA				IAmb	IAmb	11 13 08.3	
	comp=Z,16nm,1.0s						
SSPA	Standing Stone	77.82	311	P	P	11 12 45.7	+0.4
	baz=54						
MYKOM	Kota Tinggi	77.94	96	P	P	11 12 47.0	+0.6
ERPA	Erie	78.20	314	P	P	11 12 47.9	+0.5
	baz=53						
KRJI	Kerinci	78.29	101	P	P	11 12 48.7	+0.3
	comp=Z,13µmcomp=Z,273nm,0.9s						
M54A	Oil Creek Stat	78.38	313	P	P	11 12 48.5	+0.1
	baz=53						
O56A	Blue Knob Stat	78.45	311	P	P	11 12 49.0	+0.1
	baz=53						
TNA	Tin City	78.60	6	P	P	11 12 48.6	-0.5
TNA	Tin City	78.60	6	P	P	11 12 48.7	-0.4
	baz=347						
IMAR	Indian Mountai	78.88	0	P	P	11 12 50.7	0.0
I29M	Ogilvie Camp,	78.89	354	P	P	11 12 50.1	-0.7
	baz=12,SNR=22						
N54A	Moraine State	78.90	313	P	P	11 12 51.5	+0.1
	baz=52,SNR=5.3						
CBN	Corbin Frederi	78.94	309	P	P	11 12 51.6	+0.1
	baz=53						
H24K	Noodor Dome	78.96	358	P	P	11 12 51.6	+0.4
H24K				IAmb	IAmb	11 12 52.5	
	comp=Z,29nm,1.5s						
H24K	Noodor Dome	78.96	358	P	P	11 12 51.0	-0.2
	baz=3.9						
GLMI	Grayling	79.16	318	P	P	11 12 50.2	-2.4
GLMI	Grayling	79.16	318	P	P	11 12 52.9	+0.2
	baz=50						
PRP	Porcupine Dome	79.20	357	P	P	11 12 52.7	0.0
	baz=5.9						
H21K	Melozitna Rive	79.21	0	P	P	11 12 53.4	+0.8
H21K				IAmb	IAmb	11 12 54.2	
	comp=Z,46nm,1.4s						
H21K	Melozitna Rive	79.21	0	P	P	11 12 53.1	+0.5
	baz=360						
E43A	Lone Tree Farm	79.43	320	P	P	11 12 54.2	+0.1
YSS	Yuzh-Sakhalins	79.56	39	*ce*P	P	11 12 55.9	+1.1
YSS				pmax	pmax		
	comp=Z,122nm,1.8s						
YSS	Yuzh-Sakhalins	79.56	39	P	P	11 12 55.4	+0.7
YSS	Yuzh-Sakhalins	79.56	39	P	P	11 12 55.9	+1.1
	comp=Z,75nm,1.0s						
Q56A	Snyder Ridge,	79.58	311	P	P	11 12 56.0	+0.9
Q56A				IAmb	IAmb	11 13 18.9	
	comp=Z,23nm,0.9s						
MCWV	Mont Chateau	79.61	311	P	P	11 12 55.5	+0.3
MCWV				IAmb	IAmb	11 13 19.2	
	comp=Z,28nm,0.9s						
MCWV	Mont Chateau	79.61	311	P	P	11 12 55.4	+0.3
	baz=52,SNR=7.0						
POKR	Poker Plat Res	79.67	358	P	P	11 12 55.1	0.0
	baz=4.3,SNR=6.7						
EGAK	Eagle	79.69	355	P	P	11 12 54.9	-0.3
	baz=9.5						
I21K	Tanana	79.69	360	P	P	11 12 55.3	+0.2
	baz=0.5						
I23K	Minto, Yukon-K	79.69	359	P	P	11 12 54.1	-1.0
	baz=2.7						
J29M	Klondike Camp	79.77	354	P	P	11 12 55.7	0.0
	baz=12						
ANM	Nome	79.80	6	P	P	11 12 55.5	-0.3
	baz=350						
COLA	College	79.92	358	P	P	11 12 56.0	-0.3
	baz=3.9						
TCOL	CIGO, UAF Yank	79.93	358	P	P	11 12 56.0	-0.4
	baz=3.9						
GAMB	Gambell	79.94	8	P	P	11 12 56.5	0.0
	baz=344						
IL31		80.00	358	P	P	11 12 56.7	-0.1
ILAR	Eielson Array	80.00	358	P	P	11 12 55.6	-1.2
	comp=Z,5.2nm,0.6s,baz=343,slow=3.8,SNR=92						
ILAR				PKKPbc	PKKPbc	11 31 40.9	-0.8
	comp=Z,0.9nm,0.9s,baz=214,slow=2.3,SNR=5.4						
ILAR				LR	LR	11 50 27.9	
	comp=Z,57nm,18.3s,baz=19,slow=37						
ILAR	Eielson Array	80.00	358	P	P	11 12 56.7	-0.1
ILAR	Eielson Array	80.00	358	P	P	11 12 56.7	-0.1
GCSA	Galena City Sc	80.07	2	P	P	11 12 57.0	-0.1
	baz=356						
O53A	New Philadelph	80.07	313	P	P	11 12 57.6	-0.1
	baz=52						
J26L	Joseph Creek	80.11	356	P	P	11 12 57.1	-0.5
	baz=7.5,SNR=14						
AAM	Ann Arbor	80.22	315	P	P	11 12 58.3	-0.1
	baz=50						
NEA2	Nenana	80.24	358	P	P	11 12 58.0	-0.2
	baz=2.9						
DAWY	Dawson	80.25	354	P	P	11 12 58.1	-0.1
DAWY				IAmb	IAmb	11 12 58.9	
	comp=Z,37nm,1.4s						
DAWY	Dawson	80.25	354	P	P	11 12 57.9	-0.4
	baz=11,SNR=9.8						
WRH	Wood River Hil	80.34	358	P	P	11 12 58.2	-0.4
HDA	Harding Lake	80.36	358	P	P	11 12 58.0	-0.8
	baz=4.7						
EYMN	Ely	80.65	323	P	P	11 13 00.6	-0.1
	baz=46						
SCRK	Sand Creek	80.66	356	P	P	11 13 00.4	-0.1
	baz=7.1,SNR=5.8						
J20K	Nowinta River	80.69	1	P	P	11 13 00.7	+0.2
	baz=359						
BPAW	Bear Paw Mtn.	80.76	359	P	P	11 13 00.7	-0.3
	baz=1.3						
LHSI	Lahat	80.97	101	P	P	11 13 02.8	0.0
	comp=Z,2µmcomp=Z,82nm,1.0s						
CHUM	Lake Minchumin	80.99	360	P	P	11 13 02.0	-0.2
	baz=0.2						
P52A	Corning	81.01	313	P	P	11 13 02.3	-0.5
	baz=51						
ULM	Lac du Bonnet	81.06	327	P	P	11 13 01.9	-0.9
	comp=Z,9.2nm,0.5s,baz=43,slow=5.5,SNR=14						
ULM				LR	LR	11 49 09.3	
	comp=Z,221nm,20.6s,baz=18,slow=36						
MCK	McKinley	81.10	358	P	P	11 13 01.9	-0.9
	baz=3.0						
ACSO	Alum Creek Sta	81.14	313	P	P	11 13 03.0	-0.4
ACSO				IAmb	IAmb	11 13 26.8	
	comp=Z,18nm,0.9s						
ACSO	Alum Creek Sta	81.14	313	P	P	11 13 03.1	-0.4
	baz=51						
TRF	Thorofare Moun	81.41	359	P	P	11 13 03.4	-1.2
	baz=1.9						
BCAR	Beaver Creek A	81.43	355	P	P	11 13 04.8	+0.2
L27K	Beaver Creek,	81.44	355	P	P	11 13 03.8	-0.8
	baz=8.9						
CAST	Castle Rocks	81.45	360	P	P	11 13 04.2	-0.5
	baz=0.4,SNR=7.5						
M31M	Drury Creek, Y	81.57	351	P	P	11 13 04.9	-0.4
	baz=15						
L26K	Log Cabin Wild	81.57	356	P	P	11 13 05.1	-0.2
	baz=7.6						
DHY	Denali Highway	81.71	358	P	P	11 13 05.6	-0.6
	baz=4.3,SNR=8.5						
PAX	Paxson	81.74	357	P	P	11 13 05.5	-0.8
	baz=5.9						
PETK	Petropavlovsk-	81.81	28	LR	LR	11 54 00.3	
	comp=Z,173nm,18.8s,baz=309,slow=39						
MDSI	Maura Dua	81.89	101	P	P	11 13 06.3	-1.4
	comp=Z,870nmcomp=Z,46nm,0.9s						
TTA	Tatalina	81.91	2	P	P	11 13 07.1	-0.1
	baz=357						
PPLA	Purkeypile	81.98	360	P	P	11 13 07.7	0.0
PPLA	Purkeypile	81.98	360	P	P	11 13 07.2	-0.4
	baz=0.3						
BVCY	Beaver Creek	82.00	355	P	P	11 13 07.8	+0.2
	baz=9.7,SNR=6.1						
LWLI	Liwa	82.11	102	P	P	11 13 08.4	-0.6
	comp=Z,18µmcomp=Z,127nm,1.0s						
M27K	Edge Creek, AK	82.14	355	P	P	11 13 08.3	-0.2
	baz=8.8						
M26K	Nabesna, AK	82.17	355	P	P	11 13 07.8	-0.8
	baz=7.9						
WAT6	Susitna Watana	82.22	358	P	P	11 13 08.6	-0.3
	baz=4.0						
HARP	HAARP	82.30	357	P	P	11 13 09.2	+0.1
	baz=6.1						
L20K	Farewell, AK	82.39	1	P	P	11 13 09.3	-0.4
	baz=359						
N31M	Braeburn, Yuko	82.43	352	P	P	11 13 09.2	-0.6
	baz=14						
KLSI		82.45	101	P	P	11 13 09.5	-1.1
	comp=Z,20nm,0.9s						
CUT	Chulitna	82.46	359	P	P	11 13 09.5	-0.4
	baz=1.9						
AGMN	Agassiz Nation	82.47	326	P	P	11 13 09.4	-0.9
	baz=43						
YUK3	Moose Creek	82.60	354	P	P	11 13 10.7	-0.3
	baz=10.0						
P49A	Miami Univ. Ec	82.61	314	P	P	11 13 10.9	-0.3
	baz=50						
L44A	Lake County Fo	82.70	317	P	P	11 13 11.4	-0.2
	baz=48						
KASI	Kota Agung	82.76	102	P	P	11 13 12.4	+0.2
	comp=Z,73nm,0.9s						
SCM	Sheep Creek Mo	82.95	357	P	P	11 13 11.9	-0.7
	baz=4.3						
SML	Sawmill	83.01	358	P	P	11 13 12.2	-0.7
	baz=3.5						
JOW	Kunigami	83.02	62	P	P	11 13 13.6	+0.1
	comp=Z,25nm,0.7s,baz=312,slow=7.0,SNR=6.2						
N25K	Chitina, Valde	83.06	356	P	P	11 13 12.5	-0.7
	baz=6.6						
M22K	Willow	83.11	359	P	P	11 13 13.4	+0.2
	baz=2.0						
WHY	Whitehorse	83.12	351	P	P	11 13 12.5	-1.1
	baz=14						
SPMN	Marine on St.	83.20	322	P	P	11 13 13.4	-0.7
	baz=45						
KLU	Klutina	83.24	357	P	P	11 13 13.9	-0.2
	baz=5.5						
PMR	Palmer	83.25	358	P	P	11 13 13.5	-0.5

	baz=2.9						
BLSI	Bandar Lampung	83.26	101	P	P	11 13 14.2	-0.7
	comp=Z,70nm,0.4s						
P33M	Teslin, Yukon	83.29	350	P	P	11 13 13.7	-0.7
	baz=16						
KMSC	Kings Mountain	83.33	309	P	P	11 13 14.9	-0.1
	baz=51						
KSM	Kuching	83.38	93	P	P	11 13 17.0	+1.5
KSM	Kuching	83.38	93	P	P	11 13 17.4	+1.9
	comp=Z,34nm,1.2s						
KNK	Knik Glacier	83.41	358	P	P	11 13 14.6	-0.3
	baz=3.4						
SFIN	Lafayette	83.44	316	P	P	11 13 14.6	-0.8
	baz=48						
JFWS	Jewell Farm	83.47	319	P	P	11 13 15.2	-0.4
	baz=47						
CTG	Chitna Glacier	83.48	354	P	P	11 13 14.9	-0.5
	baz=9.2						
SPCR	Spurr Chakacha	83.68	360	P	P	11 13 15.8	-0.6
	baz=0.3						
BMRM	Bremner River	83.69	356	P	P	11 13 16.4	0.0
	baz=6.6						
MAJO	Matsushiro	83.76	49	P	P	11 13 17.8	+0.6
MAJO				pmax	pmax		
	comp=Z,62nm,1.0s						
MAJO	Matsushiro	83.76	49	P	P	11 13 17.8	+0.6
MAJO	Matsushiro	83.76	49	P	P	11 13 18.2	+1.0
	comp=Z,68nm,1.3s						
MAT	Matsushiro	83.76	49	P	P	11 13 17.2	0.0
MJAR	Matsushiro Arr	83.76	49	P	P	11 13 17.6	+0.4
	comp=Z,45nm,1.0s,baz=312,slow=5.3,SNR=31						
MJAR				LR	LR	11 54 13.0	
	comp=Z,144nm,21.2s,baz=305,slow=38						
MJAR	Matsushiro Arr	83.76	49	P	P	11 13 18.7	+1.5
MJAR				pmax	pmax		
	comp=Z,52nm,1.2s						
MJAR	Matsushiro Arr	83.76	49	P	P	11 13 18.7	+1.5
RC01	Rabbit Creek A	83.77	359	P	P	11 13 16.4	-0.4
	baz=2.4						
CRQE	Cirque	83.81	355	P	P	11 13 16.6	-0.5
	baz=7.8						
TZTN	Tazewell	83.83	311	P	P	11 13 17.4	-0.2
	baz=50						
GLI	Glacier Island	83.90	357	P	P	11 13 17.5	+0.1
	baz=4.5						
N19K	Bonanza Creek	84.06	1	P	P	11 13 17.6	-0.7
	baz=358						
EYAK	Cordova Ski Ar	84.17	357	P	P	11 13 18.6	-0.1
	baz=5.6						
PINM	Pinnacle	84.25	354	P	P	11 13 19.0	-0.2
	baz=10						
SKAG	Skagway	84.35	351	P	P	11 13 19.2	-0.4
	baz=14						
CGJI	Cibinong	84.36	102	P	P	11 13 19.7	-0.7
	comp=Z,4µmcomp=Z,74nm,1.0s						
SBUM	Sibu	84.38	91	P	P	11 13 23.0	+2.4
WCI	Wyandotte Cave	84.39	314	P	P	11 13 20.4	0.0
WCI				pmax	pmax		
	comp=Z,17nm,0.9s						
WCI	Wyandotte Cave	84.39	314	P	P	11 13 20.4	0.0
WCI				IAmb	IAmb	11 13 44.0	
	comp=Z,17nm,0.9s						
WCI	Wyandotte Cave	84.39	314	P	P	11 13 20.2	-0.1
	baz=48						
F33A	5 Mile Ranch,	84.46	324	P	P	11 13 20.0	-0.5
F33A				IAmb	IAmb	11 13 45.9	
	comp=Z,18nm,1.1s						
JMM	Marumori	84.47	47	P	P	11 13 20.9	+0.2
MDND	Maddock	84.49	327	P	P	11 13 20.3	-0.4
	baz=41						
TKL	Tuckaleechee C	84.54	310	P	P	11 13 21.8	+0.7
TKL				pmax	pmax		
	comp=Z,15nm,0.7s						
TKL	Tuckaleechee C	84.54	310	P	P	11 13 21.8	+0.7
TKL				IAmb	IAmb	11 13 23.3	
	comp=Z,15nm,0.7s						
DLBC	Dease Lake	84.56	348	P	P	11 13 22.1	+1.1
DLBC				IAmb	IAmb	11 13 45.6	
	comp=Z,18nm,1.2s						
HDIL	Hopedale	84.56	317	P	P	11 13 20.8	-0.4
	baz=47						
O19K	Port Alsworth	84.68	1	P	P	11 13 20.2	-1.1
	baz=359						
KAIM	Kayak Island	84.72	356	P	P	11 13 21.9	+0.3
	baz=6.7						
SEW	Seward	84.75	358	P	P	11 13 21.3	-0.3
	baz=2.6						
O18K	Koktuh Hills	85.01	1	P	P	11 13 22.5	-0.5
	baz=358						
CPCT	Cooper Cave	85.14	311	P	P	11 13 25.0	+0.9
CPCT				IAmb	IAmb	11 13 48.5	
	comp=Z,28nm,1.0s						
STKI	Sintang	85.14	93	P	P	11 13 25.5	+1.1
	comp=Z,8µmcomp=Z,54nm,0.9s						
EDM	Edmonton	85.33	338	P	P	11 13 23.9	-0.9
EDM				pmax	pmax		
	comp=Z,52nm,1.1s						
EDM	Edmonton	85.33	338	P	P	11 13 23.9	-0.9
GOGA	Godfrey	85.79	308	P	P	11 13 28.4	+1.0
GOGA				pmax	pmax		
	comp=Z,12nm,0.9s						
GOGA	Godfrey	85.79	308	P	P	11 13 28.4	+1.0
GOGA				IAmb	IAmb	11 13 51.6	
	comp=Z,12nm,0.9s						
GOGA	Godfrey	85.79	308	P	P	11 13 27.7	+0.2
	baz=50						
DGMT	Dagmar	85.96	330	P	P	11 13 27.8	-0.2
	baz=38						
ECSD	EROS Data Cent	86.16	323	P	P	11 13 29.2	+0.1
ECSD				IAmb	IAmb	11 13 29.6	
	comp=Z,35nm,1.4s						
ECSD	EROS Data Cent	86.16	323	P	P	11 13 28.9	-0.2
	baz=43,SNR=19						
SPMM	Sapulut	86.55	87	P	P	11 13 33.0	+1.5
WVT	Waverly	86.71	313	P	P	11 13 30.8	-1.1
WVT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WVT	Waverly	86.71	313	P	P	11 13 30.8	-1.1
WVT				IAmb	IAmb	11 13 32.6	
	comp=Z,8.3nm,0.7s						
WVT	Waverly	86.71	313	P	P	11 13 31.1	-0.8
	baz=48						
TIGA	Tifton	87.14	307	P	P	11 13 33.5	-0.5
	baz=50						
CCM	Cathedral Cave	87.38	316	P	P	11 13 34.9	-0.2
CCM				pmax	pmax		
	comp=Z,28nm,0.6s						
CCM	Cathedral Cave	87.38	316	P	P	11 13 34.9	-0.2
CCM	Cathedral Cave	87.38	316	P	P	11 13 34.7	-0.4
	baz=46						
BDFB	Brasilia	87.51	249	P	P	11 13 37.9	+1.7
	comp=Z,8.4nm,0.8s,baz=47,slow=5.0,SNR=14						
BDFB				LR	LR	11 55 08.1	
	comp=Z,147nm,18.7s,baz=80,slow=37						
BDFB	Brasilia	87.51	249	P	P	11 13 38.0	+1.9
BDFB				pmax	pmax		
	comp=Z,23nm,1.3s						
BDFB	Brasilia	87.51	249	P	P	11 13 38.0	+1.9
BDFB				IAmb	IAmb	11 13 56.7	
	comp=Z,23nm,1.3s						
P38A	Dawn	87.54	318	P	P	11 13 36.4	+0.5
P38A				IAmb	IAmb	11 13 37.6	
	comp=Z,10nm,0.6s						
OHAK	Old Harbor	87.67	0	P	P	11 13 36.0	-0.1
	baz=359						
DWPF	Disney Wildern	87.82	303	P	P	11 13 37.5	+0.1
	baz=50						
K31A	O'Neill	88.03	323	P	P	11 13 37.4	-0.9
LAO	LASA Array	88.21	330	P	P	11 13 39.5	+0.4
LAO	LASA Array	88.21	330	P	P	11 13 39.0	0.0
	baz=36,SNR=11						
EGMT	Eagleton	88.49	333	P	P	11 13 40.2	-0.1
	baz=34,SNR=14						
BGNE	Belgrade	88.65	322	P	P	11 13 40.7	-0.5
	baz=42,SNR=10						
WALA	Waterton Lakes	89.09	336	P	P	11 13 42.7	-0.5
WALA				IAmb	IAmb	11 13 59.0	
	comp=Z,17nm,1.2s						
RSSD	Black Hills	89.33	327	P	P	11 13 44.1	-0.4
RSSD				pmax	pmax		
	comp=Z,19nm,1.3s						
RSSD	Black Hills	89.33	327	P	P	11 13 44.0	-0.4
RSSD				IAmb	IAmb	11 13 45.6	
	comp=Z,19nm,1.2s						
RSSD	Black Hills	89.33	327	P	P	11 13 44.2	-0.4
	baz=38						
FCAR	Ozark Folk Cen	89.40	315	P	P	11 13 44.7	0.0
U40A	Yellville	89.49	316	P	P	11 13 45.0	-0.1
U40A				IAmb	IAmb	11 13 45.6	
	comp=Z,18nm,1.4s						
U40A	Yellville	89.49	316	P	P	11 13 44.7	-0.5
	baz=45						
PCJI	Pacitan	89.67	100	P	P	11 13 47.1	+0.8
W41B	Gary Mavity, V	89.97	315	P	P	11 13 46.9	-0.5
	baz=45						
RLMT	Red Lodge	90.71	331	P	P	11 13 50.4	-0.6
	baz=34						
X40A	Basin Creek Fa	90.80	314	P	P	11 13 50.7	-0.6
	baz=45						
W39A	Magazine	90.84	316	P	P	11 13 50.9	-0.6
	baz=44						
OGNE	Ogallala	90.90	324	P	P	11 13 51.0	-0.8
	baz=39						
VBMS	Vicksburg	91.00	311	P	P	11 13 52.8	+0.5
	baz=46						
MSO	Missoula	91.02	335	P	P	11 13 51.4	-0.8
	baz=31,SNR=6.0						
MIAR	Mount Ida	91.19	315	P	P	11 13 53.2	+0.1
	baz=44						
BOZ	Bozeman (W)	91.23	333	P	P	11 13 53.2	-0.1
	baz=32,SNR=16						
CBKS	Cedar Bluff	91.40	321	P	P	11 13 53.9	-0.1
	baz=40						
TUL1	Leonard	91.46	317	P	P	11 13 54.1	-0.3
	baz=43						
K22A	Casper	91.59	328	P	P	11 13 53.9	-1.1
	baz=36,SNR=6.6						
Z41A	Richland Creek	91.65	314	P	P	11 13 55.0	-0.2
	baz=45						
YHL	Hebgen Lake	91.69	332	P	P	11 13 56.3	+0.7
YHL				IAmb	IAmb	11 14 25.0	
	comp=Z,9.4nm,1.1s						
MPSI	Mapaga	91.85	88	P	P	11 13 57.9	+1.4
B05A	Bryant	92.31	340	P	P	11 13 57.5	-0.5
	baz=24						
DAV	Davao City (W)	92.57	80	LR	LR	12 03 07.3	
	comp=Z,52nm,18.2s,baz=299,slow=40						
N23A	Red Feather La	92.75	326	P	P	11 13 59.9	-0.7
	baz=36,SNR=6.1						
BW06	Boulder Array	92.78	330	P	P	11 13 59.8	-0.8
	baz=34						
PD31	Pinedale Array	92.78	330	P	P	11 13 58.4	-2.2
PDAR	Pinedale Array	92.78	330	P	P	11 13 59.2	-1.4
	comp=Z,1.1nm,0.7s,baz=68,slow=4.1,SNR=11						
PDAR				LR	LR	11 59 00.3	
	comp=Z,115nm,18.3s,baz=38,slow=38						
PDAR	Pinedale Array	92.78	330	P	P	11 13 59.5	-1.1
ISCO	Idaho Springs	93.48	326	P	P	11 14 03.8	-0.2
ISCO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ISCO	Idaho Springs	93.48	326	P	P	11 14 03.8	-0.2
ISCO	Idaho Springs	93.48	326	P	P	11 14 03.3	-0.7
	baz=37						
Q24A	Divide	93.93	325	P	P	11 14 05.5	-0.6
	baz=37						
WMOK	Wichita Mounta	93.97	318	P	P	11 14 05.9	0.0
	baz=41						
E04D	Cinebar	93.99	340	P	P	11 14 05.5	-0.3
	baz=24						
HLID	Hailey	94.00	333	P	P	11 14 06.2	0.0
	baz=30						
F05D	White Salmon	94.28	339	P	P	11 14 06.2	-0.9
	baz=25						
KAPI	Kappang	94.80	93	P	P	11 14 10.6	+0.6
	comp=Z,8.2nm,0.9s,baz=226,slow=7.9,SNR=3.8						
G05D	Wamic, OR	94.82	338	P	P	11 14 09.7	0.0
	baz=25						
T25A	Trinidad	95.03	323	P	P	11 14 10.6	-0.5
	baz=38						
SDCO	Great Sand Dun	95.07	324	P	P	11 14 10.5	-0.8
	baz=37						
I05D	Terrebonne, OR	95.65	338	P	P	11 14 13.0	-0.5
	baz=25						
S22A	4UR Ranch, Cre	95.69	325	P	P	11 14 13.7	-0.5
	baz=36						
DUG	Dugway, Tooele	96.27	330	P	P	11 14 16.4	-0.1
DUG				pmax	pmax		
	comp=Z,8.0nm,1.4s						
DUG	Dugway, Tooele	96.27	330	P	P	11 14 16.4	-0.1
DUG	Dugway, Tooele	96.27	330	P	P	11 14 15.9	-0.6
	baz=32						
J05D	Fort Rock, OR	96.57	337	P	P	11 14 17.8	-0.1
	baz=25						
MSTX	Muleshoe	96.68	320	P	P	11 14 17.8	-0.7
	baz=39						
MVCO	Mesa Verde	96.90	326	P	P	11 14 19.1	-0.5
	baz=35						
WBSI	Waikabubak, Su	97.14	97	P	Pdif	11 14 29.6	+8.8
L04D	Klamath Falls	97.87	338	P	P	11 14 22.9	-0.8
	baz=24						
SIV	San Ignacio	97.88	256	PKKP	PKKPbc	11 30 59.6	+2.4
	comp=Z,0.8nm,0.4s,baz=261,slow=8.0,SNR=7.0						
M04C	Macdoel	98.12	337	P	P	11 14 24.0	-0.8
	baz=25						
N02D	Trinity Center	99.12	338	P	Pdif	11 14 28.6	-0.7
	baz=24						
O03E	Paynes Creek	99.45	337	P	Pdif	11 14 30.1	-0.7
	baz=25						
WUAZ	Wupatki	99.60	327	P	Pdif	11 14 30.9	-0.7
	baz=33						
MNTX	Cornudas Mount	99.82	321	P	Pdif	11 14 31.9	-0.6
	baz=37						
NVAR	Mina Array Bea	99.91	333	P	Pdif	11 14 32.8	-0.3
	comp=Z,0.9nm,0.8s,baz=35,slow=4.5,SNR=5.8						
NVAR				PKKPbc	PKKPbc	11 30 53.0	+1.0
	comp=Z,0.6nm,0.7s,baz=178,slow=2.9,SNR=3.8						
NVAR				LR	LR	12 01 39.0	
	comp=Z,192nm,18.7s,baz=55,slow=37						
TXAR	Lajitas Array	100.76	318	P	Pdif	11 14 36.7	-0.1
	comp=Z,0.7nm,0.9s,baz=64,slow=4.3,SNR=6.7						
WRA	Warramunga Arr	114.82	97	PKP	PKPdf	11 19 28.5	-0.3
	comp=Z,2.2nm,0.9s,baz=318,slow=1.5,SNR=6.2						
AS31	Alice Springs	116.31	101	PKPdf	PKPdf	11 19 31.0	-0.7
ASAR	Alice Springs	116.31	101	PKP	PKPdf	11 19 31.5	-0.2
	comp=Z,2.9nm,0.8s,baz=306,slow=1.7,SNR=55						
ASAR				PKKPab	PKKPab	11 30 02.9	-1.4
	comp=Z,0.6nm,1.1s,baz=114,slow=4.1,SNR=2.0						
CTAO	Charters Tower	124.58	91	PKIKP	PKiKP	11 19 48.6	+0.7
CTAO	Charters Tower	124.58	91	PKPdf	PKiKP	11 19 48.6	+0.7
QSPA	South Pole Qui	125.31	180	PKPdf	PKiKP	11 19 48.1	+0.1
STKA	Stephens Creek	126.04	106	PKP	PKiKP	11 19 50.5	+0.1
	comp=Z,6.7nm,1.0s,baz=39,slow=6.0,SNR=7.0						
DCZ	Deep Cove	148.09	121		PKiKP	11 20 34.2	-0.7
MSVF	Nonsavu	148.55	64	PKP2	PKiKP	11 20 36.9	+0.1
MSVF	Nonsavu	148.55	64		PKiKP	11 20 36.9	+0.1
WHZ	Wether Hill Ro	148.61	122		PKiKP	11 20 35.2	-0.7
JCZ	Jackson Bay	149.34	118	P	PKiKP	11 20 37.1	-0.6
EAZ	Earnscleugh	149.62	120	P	PKiKP	11 20 38.8	+0.7
FOZ	Fox Glacier	150.11	117	P	PKiKP	11 20 39.2	+0.1
FOZ	Fox Glacier	150.11	117		PKiKP	11 20 39.5	+0.4
GCSZ	Gaunt Creek Bo	150.49	117	P	PKiKP	11 20 40.2	+0.3
ODZ	Otahua Downs	150.59	120	P	PKiKP	11 20 41.0	+0.9
ODZ	Otahua Downs	150.59	120		PKiKP	11 20 40.8	+0.8
WVZ	Waitaha Valley	150.80	116	P	PKiKP	11 20 40.4	-0.1
TMZ	Timaru	150.91	119	P	PKiKP	11 20 41.3	+0.5
RPZ	Rata Peaks	150.99	118	P	PKiKP	11 20 41.4	+0.4
RPZ	Rata Peaks	150.99	118		PKiKP	11 20 41.2	+0.3
ARCZ	Arundel	151.07	118	P	PKiKP	11 20 42.3	+1.1
TAOE	Nuku Hiva Isla	151.17	334	*e*LR	LR	12 10 06.5	
	comp=Z,162nm,29.2s						
INZ	Inchbonnie	151.34	116	P	PKPbc	11 20 40.8	-0.4
DSZ	Denniston Nort	151.63	114	P	PKPbc	11 20 41.6	-0.4
OXZ	Oxford	151.74	117	P	PKiKP	11 20 42.8	+0.3
OXZ	Oxford	151.74	117		PKiKP	11 20 42.9	+0.3
LTZ	Lake Taylor	151.94	116	P	PKiKP	11 20 43.0	0.0
LTZ	Lake Taylor	151.94	116		PKiKP	11 20 43.3	+0.3
LTZ				PKPab	pPKPbc	11 20 53.2	+1.0
MQZ	McQueen's Vall	152.15	118	P	PKiKP	11 20 43.5	+0.2
QRZ	Quartz Range	152.19	112	P	PKPbc	11 20 43.0	-0.3
THZ	Tophouse	152.46	114	P	PKPbc	11 20 43.4	-0.5
THZ	Tophouse	152.46	114		PKPbc	11 20 43.6	-0.2
THZ				PKPab	PKPab	11 20 54.8	+0.5
AFI	Afiamalu	152.47	44	PKPbc	PKiKP	11 20 46.5	+1.6
	comp=Z,21nm,0.7s,baz=23,slow=2.8,SNR=5.0						
GVZ	Greta Valley S	152.49	116	P	PKiKP	11 20 44.7	+0.6
NNZ	Nelson	152.83	112	P	PKPbc	11 20 43.2	-1.4
KHZ	Kahutara	152.90	115		PKiKP	11 20 45.5	+0.6
WEL	Wellington	153.87	113	P	PKPab	11 20 54.2	-6.0
BKZ	Black Stump Fm	155.21	108	P	PKPab	11 21 07.0	+1.0
PPT2	Papeete2	162.00	351	*e*LR	LR	12 15 05.9	
	comp=Z,153nm,27.0s						
TBI	Tubuai	167.62	346	*e*LR	LR	12 17 44.0	
	comp=Z,163nm,24.8s						

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*ATH **26** 11:05:56.0, 41°.05N×20°.00E, h43^{km}±5^{km}, ML2.8/2, Error ellipse: s-maj=5.4km s-min=1.1km az=335.0*

*TIR **26** 11:05:55.8, 40°.97N×20°.03E, h2^{km}, Md2.9, Ml2.8*

*SKO **26** 11:05:58.1, 40°.98N×19°.98E, h8^{km}*

ISC 26 11:05:56.8±1.1**, 40°.97N**±0°.02×**19°.96E**±0°.03**, h16**^{km}±9^{km}**,**
n43, σ1^{s}26/72**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.38	349	P	Pb	11 06 04.7	-0.5
TIR				S	Sb	11 06 11.7	+0.9
TIR				AML	AML	11 06 17.2	
	comp=N,4094µm,0.3s						
TIR				AML	AML	11 06 17.5	
	comp=E,3468µm,0.3s						
TIR	Tirane	0.38	349	*i* Pg	Pb	11 06 04.7	-0.5
TIR	Tirane	0.38	349	P	Pb	11 06 04.7	-0.5
	baz=343						
TIR				S	Sb	11 06 11.4	+0.6
	baz=343						
TIR				AMP			
	comp=E,2.7nm,0.3s,baz=343						
VLO	Vlora	0.62	215	P	Pb	11 06 08.9	-0.2
	baz=220						
VLO				S	Sb	11 06 19.0	+1.5
	baz=220						
VLO				AMP			
	comp=N,5.6nm,0.3s,baz=220						
OHR	Ohrid	0.65	77	*i* Pg	Pb	11 06 08.9	-0.8
OHR				*i* Sg	Sb	11 06 19.2	+0.7
OHR				*e*Lg	Lg	11 06 19.4	
	comp=N,242nm,0.8s						
KBN	Korca	0.72	119	P	Pg	11 06 09.8	-1.0
	baz=120						
KBN				S	Sb	11 06 20.4	-0.2
	baz=120						
KBN				AMP			
	comp=N,1.0nm,1.0s,baz=120						
PHP	Peshkopia	0.80	27	P	Pb	11 06 11.6	-0.7
	baz=23						
PHP				S	Sn	11 06 24.2	-0.7
	baz=23						
PHP				AMP			
	comp=N,1.3nm,0.4s,baz=23						
LSK	Leskovik	0.95	149	P	Pb	11 06 14.5	-0.4
	baz=151						
LSK				S	Sn	11 06 29.1	+0.2
	baz=151						
LSK				AMP			
	comp=N,2.3nm,0.6s,baz=151						
NEST	Nestorio	1.00	124	P	Pg	11 06 14.9	-1.2
FNA	Florina	1.09	100	P	Pg	11 06 15.8	-2.0
FNA				S	Sg	11 06 29.9	-2.2
FNA				AML	AML	11 06 36.7	
	comp=E,676µm,0.6s						
FNA				AML	AML	11 06 36.8	
	comp=N,842µm,0.5s						
FNA	Florina	1.09	100	*i* Pg	Pn	11 06 17.3	-0.1
FNA				*i* Sg	Sn	11 06 32.9	+0.8
FNA	Florina	1.09	100	P	Pn	11 06 17.1	-0.3
	baz=99						
SRN	Sarande	1.09	178	P	Pn	11 06 17.8	+0.5
	baz=182						
SRN				S	Sn	11 06 34.3	+2.2
	baz=182						
SRN				AMP			
	comp=E,0.9nm,0.6s,baz=182						
ULC	Ulcinj	1.13	332	*i* Pg	Pn	11 06 19.0	+1.1
PENT	Pentalofos	1.19	131	P	Pn	11 06 18.6	-0.1
KASA	Kassiopi	1.23	181	P	Pg	11 06 20.3	-0.1
KASA				S	Sn	11 06 36.6	+1.2
KEK	Kerkira	1.27	186	P	Pb	11 06 20.2	0.0
KEK				S	Sn	11 06 37.9	+1.5
BCI	Bajram Curri	1.40	3	P	Pg	11 06 23.8	+0.2
	baz=1.0						
BCI				S	Sg	11 06 44.5	+2.7
	baz=1.0						
BCI				AMP			
	comp=N,0.9nm,0.6s,baz=1.0						
SCTE	Santa Cesarea	1.45	232	P	Pn	11 06 23.1	+0.8
KPRO	Kipourio	1.48	133	P	Pg	11 06 23.9	-1.3
KPRO				S	Sg	11 06 43.2	-1.2
JAN	Janina	1.48	152	P	Pb	11 06 23.7	-0.2
KZN	Kozani	1.53	115	P	Pb	11 06 24.2	-0.5
PDG	Podgorica	1.55	340	*i* Pn	Pg	11 06 26.6	+0.1
STIP	Stip	1.82	66	*i* Pn	Pg	11 06 32.2	+0.4
STIP				*e*Sn	Sg	11 07 00.4	+4.9
STIP				*e*Lg	Lg	11 07 01.4	
	comp=E,5.5nm,0.4s						
BEY	Berane	1.90	358	*i* Pn	Pg	11 06 32.7	-0.5
THL	Klokotos Trika	2.11	131	P	Pb	11 06 34.3	-0.3
EVR	Evrytania	2.50	145	P	Pb	11 06 39.7	-1.5
STON	Ston	2.54	319	*e*Pn	Pn	11 06 37.4	+0.2
STON				Sn	Sn	11 07 07.5	-0.3
MAKR	Makrakomi, Fth	2.57	139	P	Pb	11 06 41.5	-0.9
PLG	Polygyros	2.72	102	P	Pn	11 06 41.9	+2.2
LSTV	Lastovo	2.91	309	*e*Pn	Pn	11 06 42.4	0.0
LSTV				Sn	Sn	11 07 14.7	-2.3
MAKA	Makarska	3.18	318	*e*Pn	Pn	11 06 46.2	+0.1
MAKA				Sn	Sn	11 07 22.9	-0.8
RICI	Ricice	3.28	321	*e*Pn	Pn	11 06 47.9	+0.4
RICI				Sn	Sn	11 07 25.4	-0.7
HVAR	Hvar	3.42	311	*e*Pn	Pn	11 06 48.3	-1.1
HVAR				Sn	Sn	11 07 28.0	-1.5
KIJV	Kijevo	4.01	320	*e*Pn	Pn	11 06 58.8	+1.3
KIJV				Sn	Sn	11 07 44.3	+0.1
ZIRJ	Zirje	4.17	311	*e*Pn	Pn	11 06 59.5	-0.2
ZIRJ				Sn	Sn	11 07 46.5	-1.6
MORI	Morici	4.28	314	*e*Pn	Pn	11 07 01.1	0.0
MORI				Sn	Sn	11 07 49.2	-1.4
UDBI	Udbina	4.71	320	*e*Pn	Pn	11 07 08.1	+0.9
UDBI				Sn	Sn	11 08 01.1	-0.3
DUGI	Dugi Otok	4.72	311	*e*Pn	Pn	11 07 07.2	0.0
DUGI				Sn	Sn	11 07 59.9	-1.6
PLIT	Plitvice	5.04	322	*e*Pn	Pn	11 07 12.0	+0.4
PLIT				Sn	Sn	11 08 09.8	+0.3
NVLJ	Novalja	5.19	315	*e*Pn	Pn	11 07 13.2	-0.4
NVLJ				Sn	Sn	11 08 10.9	-2.2
SMRN	Sveta Marina	5.88	316	*e*Pn	Pn	11 07 23.2	0.0
SMRN				Sn	Sn	11 08 27.9	-2.3
BRJN	Brijuni	6.02	313	*e*Pn	Pn	11 07 24.7	-0.4
BRJN				Sn	Sn	11 08 31.3	-2.2

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*DDA **26** 11:06:30.8, 35°.57N×27°.35E, h12^{km}±3^{km}, ML3.0*

*ISK **26** 11:06:31.8, 35°.50N×27°.31E, h18^{km}, ML3.1/10*

*ATH **26** 11:06:32.5, 35°.60N×27°.22E, h50^{km}±7^{km}, ML2.6/1, Error ellipse: s-maj=8.0km s-min=1.0km az=144.0*

ISC 26 11:06:31.6±1.3**, 35°.56N**±0°.05×**27°.30E**±0°.04**, h15**^{km}±10^{km}**,**
n26, σ1^{s}07/42**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.94	45	P	Pn	11 06 50.9	+0.7
ARG				S	Sn	11 07 04.4	+1.1
ARG	Arkhangelos	0.94	45	PG	Pn	11 06 51.1	+0.9
ARG				SG	Sn	11 07 04.6	+1.3
ZKR	Zakros	0.99	244	P	Pb	11 06 50.7	+0.2
ZKR				S	Sg	11 07 04.2	+0.4
ZKR				AML	AML	11 07 10.8	
	comp=E,1234µm,0.6s						
ZKR				AML	AML	11 07 12.4	
	comp=N,358µm,0.7s						
ZKR	Zakros	0.99	244	PG	Pn	11 06 50.8	-0.2
ZKR				SG	Sn	11 07 05.3	+0.6
DAT	Datca	1.19	11	*i* P	Pg	11 06 55.0	+0.5
DAT				*i* S	Sg	11 07 09.7	-0.3
DAT	Datca	1.19	11	PN	Pg	11 06 55.2	+0.7
DAT				SN	Sg	11 07 11.9	+1.9
NPS	Neapolis	1.41	258	P	Pb	11 06 57.9	+0.2
NPS				S	Sb	11 07 15.6	+0.1
TURN	Turunc	1.43	32	*i* P	Pg	11 06 58.7	-0.4
TURN				*i* S	Sg	11 07 17.7	0.0
TURN	Turunc	1.43	32	PN	Pg	11 06 58.6	-0.5
BDRM	Kayabasi	1.50	4	*i* P	Pb	11 06 58.5	-0.8
BDRM				*i* S	Sb	11 07 18.3	+0.1
THR8	Santorini-Mono	1.70	300	P	Pb	11 07 01.8	-0.8
YER	Yerkesik	1.76	26	PN	Pb	11 07 03.1	-0.5
FETY	Fethiye	1.80	53	*i* P	Pb	11 07 03.6	-0.6
FETY				*i* S	Sb	11 07 27.4	+0.9
FETY				IAML		11 07 28.0	
	comp=E,92nm,1.7s						

FETY	Fethiye	1.80	53	PN	Pb	11 07 03.4	-0.8
MULA	Mugla, Merkez-	1.88	26	iP	Pb	11 07 06.0	+0.3
MULA				iS	Sg	11 07 30.8	-1.4
AKAS	Kas	1.99	70	iP	Pn	11 07 05.6	+0.9
AKAS				iS	Sn	11 07 27.1	-2.4
AKAS				IAML		11 07 56.0	
	comp=E,162nm,2.4s						
AKAS	Kas	1.99	70	PN	Pn	11 07 05.4	+0.6
IDI	Anoyia	1.99	263	P	Pb	11 07 07.0	-0.5
IDI				S	Sb	11 07 31.2	-0.9
APE	Apeiranthos	2.08	317	PN	Pn	11 07 07.0	+1.1
SIVA	Sivas	2.11	256	P	Pb	11 07 08.3	-1.2
CAME	Cameli-Denizli	2.12	49	PN	Pn	11 07 07.9	+1.2
AYDN	Tasoluk	2.15	12	iP	Pb	11 07 09.3	-0.9
AYDN				iS	Sn	11 07 32.2	-1.0
TAVA	DENIZLI_Tavas	2.30	34	iP	Pb	11 07 10.9	-1.9
TAVA				iS	Sb	11 07 41.2	+0.1
TAVA				IAML		11 07 48.0	
	comp=N,81nm,1.1s						
TAVA				IAML		11 08 08.0	
	comp=E,84nm,3.8s						
AYDB	Zeytinkoy-Aydi	2.43	11	PN	Pb	11 07 12.7	-2.3
GOLH	Golhisar	2.47	47	iP	Pn	11 07 13.3	+1.8
GOLH				iS	Sb	11 07 46.1	+0.1
GOLH				IAML		11 07 47.0	
	comp=E,153nm,3.2s						
GOLH				IAML		11 08 15.0	
	comp=N,101nm,3.3s						
IMMV	Iera Moni Meta	2.71	269	P	Pb	11 07 18.2	-1.6

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*NOU **26** 11:24:26.8, 14°.84S×173°.77W, h0^{km}, MLv3.8/4, Samoa Islands Region*

IDC 26 11:24:27.6±12.0**, 15°.53S×173°.09W, h0**^{km}**, mb4.3**/1**, mb1 4.2**/2**, mb1mx3.6**/33**, mbtmp4.1**/2**, ML3.4**/1**, MS3.3**/5**, Ms1 3.3**/5**, ms1mx3.1**/41**, Error ellipse: s-maj=642.2km s-min=28.3km az=140.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.05	39	Pn	Pn	11 25 02.9	-0.5
	13nm,0.3s,baz=192,slow=3.2,SNR=24						
AFI				Sn	Sn	11 25 26.0	-3.8
	27nm,0.3s,baz=256,slow=10,SNR=8.8						
RAR	Rarotonga	13.85	116	LR	LR	11 31 56.1	
	comp=Z,137nm,21.2s,baz=292,slow=32						
RAO	Raoul Island	14.37	197	LR	LR	11 31 55.2	
	comp=Z,111nm,18.1s,baz=129,slow=31						
PPT	Papeete	22.63	98	LR	LR	11 36 06.3	
	comp=Z,50nm,21.5s,baz=286,slow=31						
URZ	Urewera	24.24	199	LR	LR	11 38 36.4	
	comp=Z,107nm,19.8s,baz=31,slow=35						
H11S2	WAKE ISLAND Hy	39.22	329	T	T	12 12 58.7	
	baz=149,slow=76,SNR=6.7						
H11S3	WAKE ISLAND Hy	39.23	329	T	T	12 13 01.4	
	baz=149,slow=76,SNR=6.3						
H11S1	WAKE ISLAND Hy	39.24	329	T	T	12 12 49.0	
	baz=149,slow=76,SNR=5.0						
H11N3	WAKE ISLAND Hy	40.16	330	T	T	12 13 58.5	
	baz=150,slow=76,SNR=3.3						
H11N1	WAKE ISLAND Hy	40.17	330	T	T	12 13 59.2	
	baz=150,slow=76,SNR=4.3						
H11N2	WAKE ISLAND Hy	40.18	330	T	T	12 13 54.3	
	baz=150,slow=76,SNR=6.1						
ASAR	Alice Springs	50.35	252	P	P	11 33 26.4	-0.4
	3.3nm,0.8s,baz=85,slow=8.3,SNR=18						
CMAR	Chiang Mai Arr	92.93	288	LR	LR	12 19 28.4	
	comp=Z,10nm,18.1s,baz=350,slow=36						
GERES	GERESS Array B	146.31	352	PKPbc	PKPbc	11 44 10.3	-0.2
	0.5nm,0.8s,baz=350,slow=5.2,SNR=2.8						
BRTR	Keskin Array B	146.44	321	PKPbc	PKPbc	11 44 10.6	-0.6
	0.8nm,0.9s,baz=36,slow=2.7,SNR=1.8						

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*IDC **26** 11:31:44.5±2.4, 39°.22N×73°.70E, h0^{km}, mb3.7/3, mb1 3.6/9, mb1mx3.4/49, mbtmp3.5/9, ML2.8/6, Error ellipse: s-maj=44.4km s-min=20.9km az=123.0*

*KRNET **26** 11:31:48.4±0.1, 39°.57N×73°.29E, h14^{km}, mb3.6*

*NNC **26** 11:31:51.3±2.2, 39°.52N×73°.61E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=17.1km s-min=9.4km az=170.0*

*SOME **26** 11:31:52.5, 39°.82N×73°.30E, h10^{km}*

ISC 26 11:31:49.4±0.9**, 39°.59N**±0°.05×**73°.32E**±0°.03**, h10**^{km}**, n78, σ2^{s}.72**/117**, mb3.7**/3**, 32C-19D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.44	18	⇓eP	Pg	11 31 57.6	-0.5
	baz=20						
SFK				⇓eS	Sg	11 32 04.8	+0.8
	baz=20						
OHH	Osh	1.02	336	⇑iP	Pg	11 32 08.2	-0.8
	baz=38						
OHH				⇑iS	Sb	11 32 22.2	-0.4
	baz=38						
DRK	Karamyk	1.18	265	⇑iP	Pg	11 32 10.6	-1.6
	baz=66						
DRK				⇑iS	Sn	11 32 26.5	-2.1
	baz=66						
BTK	Batken	1.98	284	⇑iP	Pb	11 32 24.9	-0.8
	baz=85						
BTK				⇑eS	Sg	11 32 51.6	-1.6
	baz=85						
ARLS	Aral	2.39	18	⇑iP	Pb	11 32 31.0	-1.6
	baz=19						
ARLS				⇑iS	Sb	11 33 02.6	+0.4
	baz=19						
ARK	Arkit	2.43	335	⇓iP	Pb	11 32 31.7	-1.6
	baz=36						
ARK				⇓iS	Sb	11 33 03.3	-0.1
	baz=36						
AML	Almayashu	2.55	6	P	Pb	11 32 33.9	-1.6
	SNR=62						
AML	Almayashu	2.55	6	⇑iP	Pb	11 32 33.8	-1.7
	baz=7.0						
AML				⇑iS	Sb	11 33 06.5	-0.6
	baz=7.0						
TRKS	Terek-Say	2.55	320	⇓eP	Pb	11 32 32.5	-2.9
	baz=20						
TRKS				⇓iS	Sb	11 33 04.3	-2.6
	baz=20						
UCH	Uchtor	2.78	19	P	Pb	11 32 37.2	-2.3
	SNR=21						
UCH	Uchtor	2.78	19	⇓iP	Pb	11 32 37.1	-2.3
	baz=19						
UCH				⇓iS	Sb	11 33 12.1	-1.7
	baz=19						
MNAS	Manas	2.96	348	⇓eP	Pb	11 32 39.2	-3.1
	baz=49						
MNAS				⇓iS	Sb	11 33 16.0	-2.5
	baz=49						
EKS2	Erkin-Say	3.08	6	P	Pb	11 32 41.9	-2.5
	SNR=16						
EKS2	Erkin-Say	3.08	6	⇑iP	Pb	11 32 40.9	-3.5
	baz=7.0						
EKS2				⇑iS	Sb	11 33 19.3	-2.9
	baz=7.0						
MRKS	Merke	3.15	359	eP	Pb	11 32 46.5	+1.0
	18nm,0.1s						
MRKS				eS	Sb	11 33 24.9	+0.8
	34nm,0.2s						
MRKS	Merke	3.15	359	Pg	Pb	11 32 46.5	+1.0
	20nm,0.5s						
MRKS				Lg	Lg	11 33 24.9	
	53nm,0.3s						
AAK	Ala-Archa	3.17	16	Pn	Pb	11 32 42.8	-3.1
	3.0nm,0.3s,baz=192,slow=9.2,SNR=47						
AAK				Sn	Sb	11 33 26.6	+2.0
	4.2nm,0.3s,baz=328,slow=21,SNR=10						
AAK	Ala-Archa	3.17	16	P	Pb	11 32 42.9	-2.9
	SNR=28						
AAK	Ala-Archa	3.17	16	⇓Pn	Pb	11 32 43.0	-2.9
	28nm,0.6s						
AAK				⇑Lg	Lg	11 33 32.8	
	48nm,0.6s						
AAK	Ala-Archa	3.17	16	⇑iP	Pb	11 32 42.5	-3.4
	baz=16						
AAK				⇑iS	Sb	11 33 21.4	-3.2
	baz=16						
KBK	Karagaybulak	3.30	21	P	Pg	11 32 50.4	-2.2
	SNR=10						
KBK	Karagaybulak	3.30	21	⇑iP	Pn	11 32 43.8	+2.6
	baz=22						
KBK				⇑iS	Sb	11 33 24.5	-3.8
	baz=22						
FRU1	Bishkek	3.36	17	⇑iP	Pn	11 32 44.7	+2.7
	baz=17						
FRU1				⇑iS	Sb	11 33 26.5	-3.6
	baz=17						
ULHL	Ulahol	3.45	39	P	Pb	11 32 50.8	+0.1
	SNR=25						
ULHL	Ulahol	3.45	39	⇑iP	Pn	11 32 46.1	+2.7
	baz=39						
ULHL				⇑iS	Sn	11 33 28.0	+3.6
	baz=39						
BOOM	Boomskoye usch	3.50	34	⇓eP	Pn	11 32 46.9	+2.8
	baz=34						
BOOM				⇓iS	Sn	11 33 29.8	+4.1
	baz=34						
CHMS	Chumysh	3.57	17	P	Pb	11 32 48.3	-4.4
	SNR=7.1						
CHMS	Chumysh	3.57	17	⇑iP	Pn	11 32 47.6	+2.8
	baz=17						
CHMS				⇑iS	Sn	11 33 31.0	+3.9
	baz=17						
DZA	Taraz	3.62	336	eP	Pb	11 32 55.1	+1.6
	43nm,0.1s						
DZA				eS	Sb	11 33 39.0	+1.5
	136nm,0.1s						
DZA	Taraz	3.62	336	Pg	Pb	11 32 55.1	+1.6
	43nm,0.1s						
DZA				Lg	Lg	11 33 39.0	
	136nm,0.1s						
TKM2	Tokmak 2	3.74	27	⇑Pg	Pb	11 32 55.8	+0.1
	7.4nm,0.5s						
TKM2				⇑Lg	Lg	11 33 49.1	
	48nm,0.6s						
TKM2	Tokmak 2	3.74	27	⇓iP	Pn	11 32 50.1	+2.7
	baz=27						
TKM2				⇓iS	Sn	11 33 35.2	+3.6
	baz=27						
USP	Ospenovka	3.77	13	P	Pn	11 32 50.7	+2.9
	SNR=9.1						
USP	Ospenovka	3.77	13	⇓iP	Pn	11 32 50.6	+2.9
	baz=13						
USP				⇓iS	Sn	11 33 36.0	+3.8
	baz=13						
KDJ	Kajisay	3.87	48	⇑iP	Pn	11 32 51.9	+2.8
	baz=48						
KDJ				⇑iS	Sn	11 33 38.6	+3.9
	baz=48						
KST	Kastek	3.98	29	eP	Pg	11 33 05.0	-0.6
	14nm,0.4s						
KST				eS	Sg	11 33 55.9	-1.2
	58nm,0.2s						
KST	Kastek	3.98	29	Pg	Pg	11 33 05.0	-0.6
	14nm,0.4s						
KST				Lg	Lg	11 33 55.9	
	56nm,0.8s						
SGDS	Sogindy	3.98	14	Pg	Pg	11 33 04.6	-1.0
	8.6nm,0.7s						
SGDS				Lg	Lg	11 33 55.1	
	24nm,0.4s						
DGS	Degeres	4.08	26	eP	Pg	11 33 05.2	-2.4
	15nm,0.2s						
DGS				eS	Sg	11 33 56.3	-4.2
	51nm,0.7s						
DGS	Degeres	4.08	26	Pg	Pg	11 33 05.2	-2.4
	15nm,0.5s						
DGS				Lg	Lg	11 33 56.3	
	51nm,0.7s						
KK02	Karatay Array	4.10	330	⇓Pn	Pn	11 32 54.6	+2.5
	12nm,0.7s,baz=154,slow=14						
KK02				⇑Sn	Sb	11 33 51.6	+0.4
	8.4nm,0.5s,baz=146,slow=19						
KK02				⇑Lg	Lg	11 34 08.5	
	9.6nm,0.5s,baz=150,slow=28						
MTBS	Maitube	4.24	32	eP	Pg	11 33 08.8	-1.7
	17nm,0.7s						
MTBS				eS	Sg	11 34 02.4	-3.0
	32nm,0.6s						
MTBS	Maitube	4.24	32	Pg	Pg	11 33 08.8	-1.7
	17nm,0.7s						
MTBS				Lg	Lg	11 34 02.4	
	32nm,0.6s						
BRLS	Borolday	4.32	324	eP	Pb	11 33 06.5	+1.1
	5.1nm,0.2s						
BRLS				eS	Sb	11 33 58.9	+1.2
	8.1nm,0.2s						
BRLS	Borolday	4.32	324	Pg	Pb	11 33 06.6	+1.1
	8.1nm,0.6s						
BRLS				Lg	Lg	11 33 58.9	
	3.4nm,0.5s						
TNSS	Tian-Shan	4.39	37	eP	Pg	11 33 10.6	-2.9
	5.8nm,0.4s						
TNSS				eS	Sg	11 34 06.2	-4.2
	17nm,0.4s						
TNSS	Tian-Shan	4.39	37	Pg	Pg	11 33 10.6	-2.9
	5.8nm,0.4s						
TNSS				Lg	Lg	11 34 06.2	
	17nm,0.4s						
KRBS	Karabastau	4.46	22	eP	Pg	11 33 11.3	-3.5
	10nm,0.2s						
KRBS				eS	Sb	11 34 06.7	+5.0
	17nm,0.4s						
KRBS	Karabastau	4.46	22	Pg	Pg	11 33 11.3	-3.5
	14nm,0.6s						
KRBS				Lg	Lg	11 34 06.7	
	27nm,0.7s						
MDOK	Medeo	4.54	37	eP	Pg	11 33 14.1	-2.1
	7.0nm,0.6s						
MDOK				eS	Sg	11 34 11.5	-3.5
	37nm,0.3s						
MDOK	Medeo	4.54	37	Pg	Pg	11 33 12.3	-3.9
	7.9nm,0.6s						
MDOK				Lg	Lg	11 34 12.9	
	40nm,0.6s						
MDOK	Medeo	4.54	37	Pg	Pg	11 33 14.1	-2.1
	7.0nm,0.6s						
MDOK				Lg	Lg	11 34 11.5	
	37nm,0.8s						
KNDC	Almaty	4.54	36	⇑Pg	Pb	11 33 12.0	+2.8
	23nm,0.4s						
KNDC				⇑Lg	Lg	11 34 13.8	
	119nm,0.8s						
KOTS	Kotyrbulak	4.62	37	eP	Pg	11 33 15.8	-2.0
	11nm,0.3s						
KOTS				eS	Sg	11 34 14.5	-3.2
	126nm,0.3s						
KOTS	Kotyrbulak	4.62	37	Pg	Pg	11 33 15.8	-2.0
	11nm,0.6s						
KOTS				Lg	Lg	11 34 14.5	
	126nm,1.0s						
KTBS	Karatobe	4.82	30	eP	Pg	11 33 19.7	-2.1
	6.2nm,0.3s						
KTBS				eS	Sg	11 34 21.1	-3.1
	33nm,0.4s						
KTBS	Karatobe	4.82	30	Pg	Pg	11 33 19.7	-2.1
	6.3nm,0.5s						
KTBS				Lg	Lg	11 34 22.3	
	33nm,0.4s						
KUU	Kurty	4.85	27	eP	Pg	11 33 20.7	-1.6
	6.1nm,0.4s						
KUU				eS	Sg	11 34 22.7	-2.4
	34nm,0.3s						
KUU	Kurty	4.85	27	Pg	Pg	11 33 20.7	-1.6
	6.1nm,0.4s						
KUU				Lg	Lg	11 34 22.7	
	34nm,0.7s						
CHKK	Chushkaly	5.06	32	eP	Pg	11 33 23.8	-2.5
	6.7nm,0.8s						
CHKK				eS	Sg	11 34 28.5	-3.4
	28nm,0.2s						
CHKK	Chushkaly	5.06	32	Pg	Pg	11 33 23.8	-2.5
	6.7nm,0.8s						
CHKK				Lg	Lg	11 34 28.5	
	27nm,0.5s						
SATY	Saty	5.16	46	eP	Pg	11 33 24.0	-4.2
	16nm,0.4s						
SATY				eS	Sg	11 34 29.5	-5.5
	28nm,1.2s						
SATY	Saty	5.16	46	Pg	Pb	11 33 22.1	+2.3
	16nm,0.8s						
SATY				Lg	Lg	11 34 25.2	
	28nm,1.2s						
UZB	Uzynbulak	5.56	49	eP	Pg	11 33 32.6	-3.3
	7.0nm,0.4s						
UZB				eS	Sg	11 34 43.1	-5.0
	11nm,0.7s						
UZB	Uzynbulak	5.56	49	Pg	Pg	11 33 32.7	-3.3
	7.0nm,0.4s						
UZB				Lg	Lg	11 34 43.1	
	11nm,0.7s						
ARXS	Arharly	5.71	35	eP	Pg	11 33 34.6	-4.1
	5.7nm,0.3s						
ARXS				eS	Sg	11 34 47.4	-5.2
	31nm,0.2s						
ARXS	Arharly	5.71	35	Pg	Pg	11 33 34.6	-4.1
	5.7nm,0.7s						
ARXS				Lg	Lg	11 34 47.4	
	31nm,0.4s						
SHLS	Shalkode	5.83	50	eP	Pg	11 33 42.8	+1.7
	6.4nm,0.6s						
SHLS				eS	Sg	11 35 00.4	+3.9
	9.2nm,0.4s						
SHLS	Shalkode	5.83	50	Pg	Pg	11 33 42.7	+1.7
	6.4nm,0.6s						
SHLS				Lg	Lg	11 35 00.4	
	8.3nm,0.8s						
KURBB	Kurchatov Arra	11.62	17	Pn	Pn	11 34 35.5	+0.3
	0.0nm,0.3s,baz=211,slow=12,SNR=2.1						
KURBB				Lg	Lg	11 37 57.6	
	0.0nm,0.3s,baz=207,slow=29,SNR=5.9						
AB31	Akbulak array	13.57	320	⇑Pn	P	11 35 05.7	-5.2
	0.7nm,0.6s,baz=133,slow=13,SNR=9.5						
AB31				⇓Sn	Sn	11 37 38.4	+5.7
	1.3nm,0.8s						
BVAR	Borovoye Array	13.59	352	Pn	Pn	11 35 01.8	-0.2
	0.1nm,0.3s,baz=252,slow=42,SNR=2.6						
AKTO	Aktyubinsk	15.29	320	Pn	Pn	11 35 25.8	+0.6
	0.2nm,0.3s,baz=119,slow=11,SNR=5.3						
ZALV	Zalesovo Beam	16.34	25	Pn	Pn	11 35 37.4	-1.3
	0.1nm,0.3s,baz=209,slow=11,SNR=3.0						
ARU	Arti	19.45	335	P	Pn	11 36 17.1	0.0
	0.0nm,0.3s,baz=160,slow=9.0,SNR=3.2						
FINES	FINESS Array B	36.03	323	P	P	11 38 51.0	+0.5
	4.8nm,1.0s,baz=113,slow=11,SNR=4.9						
TORD	Torodi Ar. Bea	67.62	269	P	P	11 42 44.8	-1.9
	0.3nm,0.6s,baz=40,slow=5.8,SNR=2.6						
YKA	Yellowknife Ar	78.06	4	P	P	11 43 47.0	-0.8
	0.2nm,0.7s,baz=349,slow=5.9,SNR=4.0						

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*NEIC **26** 11:42:18.3±1.1, 18°.41S±0°.04×70°.2W±0°.1, h52^{km}±8^{km}, mb4.7/12, ML4.1(GUC), Error ellipse: s-maj=19.2km s-min=1.8km az=75.0*

*GUC **26** 11:42:18.5±0.6, 18°.42S×70°.01W, h40^{km}±1^{km}, ML4.1*

*IDC **26** 11:42:18.8±3.8, 18°.28S×69°.73W, h51^{km}±39^{km}, mb3.7/9, mb1 4.0/11, mb1mx3.7/35, mbtmp4.0/11, ML4.3/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/24, Error ellipse: s-maj=27.8km s-min=22.5km az=66.0*

ISC 26 11:42:17.9±0.7**, 18°.36S**±0°.05×**70°.08W**±0°.06**, h46**^{km}±7^{km}**, n57, σ0^{s}.97**/55**, mb4.4**/15**, 2C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	Chacalluta	0.25	268	⇑iP	Pn	11 42 26.5	+0.2
AP01				iS	Sn	11 42 32.7	+0.6
AP01				IAML		11 42 33.6	
	comp=N,60μm,0.4s						
AP01	Chacalluta	0.25	268	Pn	Pn	11 42 26.4	+0.2
PB12	IPOC Station P	0.34	224	eP	Pn	11 42 26.8	-0.6
PB12				eS	Sn	11 42 33.2	-0.8
PB12				IAML		11 42 34.3	
	comp=E,47μm,0.3s						
PB12	IPOC Station P	0.34	224	Pn	Pn	11 42 27.0	-0.3
PB16	IPOC Station P	0.54	87	⇑iP	Pn	11 42 29.8	-0.3
PB16				iS	Sn	11 42 38.5	-0.1
PB11	IPOC Station P	1.45	164	⇓iP	Pn	11 42 41.4	-0.4
PB11				eS	Sn	11 42 58.7	-1.0
PB11				IAML		11 43 06.5	
	comp=E,2μm,0.2s						
TA02	Huaiquique	1.90	182	eP	Pn	11 42 46.9	-0.9
TA02				IAML		11 43 24.1	
	comp=N,2μm,0.2s						
PB08	IPOC Station P	1.97	154	⇓iP	Pn	11 42 50.2	+0.9
PB08				iS	Sn	11 43 14.3	+1.3
PB08				IAML		11 43 20.7	
	comp=E,2μm,0.4s						
TA01	Diego Aracena	2.19	183	eP	Pn	11 42 51.2	-0.7
TA01				IAML		11 43 29.2	
	comp=E,1μm,0.5s						
TA01	Diego Aracena	2.19	183	Pn	Pn	11 42 51.2	-0.7
PB01	IPOC Station P	2.72	168	eP	Pn	11 42 58.8	-0.4
PB01				IAML		11 43 47.8	
	comp=E,1μm,0.4s						
PB07	IPOC Station P	3.35	177	eP	Pn	11 43 08.2	+0.3
PB07				IAML		11 44 04.1	
	comp=E,446nm,0.3s						
PB09	IPOC Station P	3.50	167	eP	Pn	11 43 11.0	+0.9
PB09				IAML		11 44 10.6	
	comp=E,444nm,0.6s						
PB03	IPOC Station P	3.68	175	eP	Pn	11 43 12.3	-0.2
LVC	Limon Verde	4.36	166	P	Pn	11 43 23.5	+1.5
	comp=E,13nm,0.3s,baz=35,slow=9.1,SNR=66						
LVC				S	Sn	11 44 13.4	+1.6
	comp=E,13nm,0.3s,baz=207,slow=6.3,SNR=3.7						
LVC				LR	LR	11 45 03.1	
	comp=E,117nm,18.2s,baz=337,slow=38						
LVC	Limon Verde	4.36	166	Pn	Pn	11 43 23.7	+1.7
AC02	Maricunga	8.48	174		Pn	11 44 17.8	-0.8
SIV	San Ignacio	8.92	76	P	Pn	11 44 24.4	+0.1
	comp=E,0.9nm,0.3s,baz=264,slow=9.9,SNR=18						
ETMB	Extrema	9.29	24	Pn	Pn	11 44 29.4	+0.2
AC04	Llanos de Chal	9.84	185	Pn	Pn	11 44 35.2	-1.6
VILB	Vilhena	10.93	62	Pn	Pn	11 44 53.1	+1.3
MT02	Curacav	14.86	183	Pn	Pn	11 45 44.5	-0.6
H03N1	Juan Fernandez	16.98	206	T	T	12 03 14.3	
	baz=30,slow=73,SNR=132						
H03N2	Juan Fernandez	16.98	206	T	T	12 03 36.9	
	baz=30,slow=73,SNR=84						
H03N3	Juan Fernandez	16.99	206	T	T	12 03 34.2	
	baz=30,slow=73,SNR=92						
PTGA	Pitinga	20.14	31	P	P	11 46 46.4	-2.0
	comp=E,1.1nm,0.3s,baz=195,slow=16,SNR=16						
PLCA	Paso Flores	22.30	181	P	P	11 47 12.8	+1.4
	comp=E,1.6nm,0.8s,baz=1.8,slow=14,SNR=3.4						
BOAV	Boa Vista	22.67	25	P	P	11 47 15.7	+0.1
PCRV	Puerto La Cruz	28.86	11	LR	LR	12 01 22.3	
	comp=E,294nm,19.2s,slow=40						
BIRD	Birdtown, Kers	53.63	349	P	P	11 51 34.5	-0.1
BIRD				IAmb	IAmb	11 51 40.2	
	comp=Z,10nm,1.3s						
V53A	Saluda	55.08	347	P	P	11 51 45.2	0.0
V53A				IAmb	IAmb	11 52 10.8	
	comp=Z,8.1nm,1.2s						
CPCT	Cooper Cave	55.24	346	P	P	11 51 46.2	-0.2
TKL	Tuckaleechee C	55.27	346	P	P	11 51 45.6	-1.0
TKL				IAmb	IAmb	11 51 48.2	
	comp=Z,4.3nm,0.8s						
V52A	Sevierville	55.41	347	P	P	11 51 47.2	-0.4
V52A				IAmb	IAmb	11 51 47.5	
	comp=Z,6.1nm,0.7s						
U49A	Red Boiling Sp	56.56	345	P	P	11 51 55.0	-0.8
U49A				IAmb	IAmb	11 51 55.5	
	comp=Z,4.6nm,0.6s						
WVT	Waverly	56.74	343	P	P	11 51 56.5	-0.6
WVT				IAmb	IAmb	11 52 02.9	
	comp=Z,10nm,1.4s						
S54A	Dingess, Beckl	56.85	349	P	P	11 51 57.3	-0.6
TXAR	Lajitas Array	57.44	325	P	P	11 52 02.8	+0.5
	comp=Z,0.2nm,0.7s,baz=144,slow=6.3,SNR=2.3						
R53A	Hurricane	57.48	349	P	P	11 52 01.7	-0.6
O52A	Adamsville	59.20	350	P	P	11 52 13.7	-0.5
DBIC	Dimbokro	68.95	75	P	P	11 53 17.0	-1.8
	comp=Z,2.7nm,1.0s,baz=245,slow=7.4,SNR=4.6						
PDAR	Pinedale Array	70.86	330	P	P	11 53 30.9	+0.7
	comp=Z,0.2nm,0.6s,baz=113,slow=6.9,SNR=2.8						
ULM	Lac du Bonnet	72.01	343	P	P	11 53 37.6	+1.0
	comp=Z,1.8nm,0.3s,baz=148,slow=5.9,SNR=2.9						
ELK	Elko	72.23	326	P	P	11 53 39.9	+1.4
	comp=Z,0.6nm,0.6s,baz=132,slow=7.7,SNR=3.7						
NVAR	Mina Array Bea	72.36	322	P	P	11 53 40.5	+1.2
	comp=Z,0.9nm,0.9s,baz=160,slow=9.0,SNR=4.7						
TORD	Torodi Ar. Bea	77.37	71	P	P	11 54 06.6	-1.9
	comp=Z,1.8nm,0.6s,baz=253,slow=5.3,SNR=9.7						
TORD				pP	PcP	11 54 20.6	+1.7
	comp=Z,0.9nm,0.6s,baz=255,slow=5.7,SNR=5.0						
TORD	Torodi Ar. Bea	77.37	71	P	P	11 54 06.7	-1.8
YKA	Yellowknife Ar	87.88	341	P	P	11 55 01.9	-0.1
	comp=Z,3.4nm,0.5s,baz=134,slow=4.7,SNR=112						
YKA	Yellowknife Ar	87.88	341	P	P	11 55 01.7	-0.3
H11S2	WAKE ISLAND Hy	126.33	280	T	T	14 20 26.9	
	baz=100,slow=74,SNR=42						
H11N3	WAKE ISLAND Hy	126.33	281	T	T	14 20 21.2	
	baz=101,slow=74,SNR=4.8						
H11S1	WAKE ISLAND Hy	126.34	280	T	T	14 20 27.4	
	baz=100,slow=74,SNR=28						
H11N2	WAKE ISLAND Hy	126.35	281	T	T	14 20 22.5	

	baz=101,slow=74,SNR=6.0						
H11S3	**WAKE ISLAND Hy**	**126.35**	**280**	T	T	14 20 28.1	
	baz=100,slow=74,SNR=27						
H11N1	**WAKE ISLAND Hy**	**126.35**	**281**	T	T	14 20 35.5	
	baz=101,slow=74,SNR=3.5						
ZALV	**Zalesovo Beam**	**139.55**	**23**	PKP	**PKPdf**	**12 01 40.2**	**0.0**
	comp=Z,0.8nm,0.6s,baz=297,slow=5.1,SNR=3.7						
SONM	**Songino Array**	**150.46**	**5**	PKPbc	**PKPbc**	**12 02 05.0**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=338,slow=1.8,SNR=5.6						
SONM				PKPab	**PKPab**	**12 02 11.5**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=334,slow=3.8,SNR=3.9						

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*IDC **26** 11:44:28.7±1.4, 52°.37S×13°.24E, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx3.9/31, mbtmp4.2/4, MS3.6/6, Ms1 3.6/6, ms1mx3.3/26, Error ellipse: s-maj=65.2km s-min=32.9km az=86.0*

ISC 26 11:44:29.7±1.6, **52°.3S**±0°.2×**13°.1E**±0°.4, **h10^{km}, n17,** σ**0^{s}.34**/9, **mb4.1**/3, **MS3.6**/6, **Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**20.66**	**194**	P	**P**	**11 49 09.4**	**+0.1**
SNAA	**Sanae**	**20.66**	**194**	P	**P**	**11 49 09.5**	**+0.2**
	7.9nm,0.8s,baz=11,slow=11,SNR=13						
VNA2	**Neumayer--Watz**	**20.82**	**199**	P	**P**	**11 49 11.5**	**+0.5**
	baz=34,slow=13						
VNA3	**Neumayer Olymp**	**21.54**	**200**	P	**P**	**11 49 18.1**	**-0.6**
BOSA	**Boshof**	**25.37**	**26**	LR	LR	11 58 35.0	
	comp=Z,96nm,19.5s,baz=190,slow=33						
QSPA	**South Pole Qui**	**37.91**	**180**	P	**P**	**11 51 46.7**	**-0.2**
	1.6nm,0.5s,baz=212,slow=7.1,SNR=24						
LSZ	**Lusaka**	**38.87**	**24**	LR	LR	12 06 57.2	
	comp=Z,84nm,20.5s,baz=181,slow=35						
H10S2	**ASCENSION HYDR**	**48.77**	**322**	T	T	12 46 06.2	
	baz=157,slow=74,SNR=5.2						
H10S3	**ASCENSION HYDR**	**48.78**	**322**	T	T	12 46 07.2	
	baz=63,slow=74,SNR=10						
VNDA	**Vanda**	**48.98**	**171**	P	**P**	**11 53 15.8**	**+0.1**
	1.3nm,0.7s,baz=211,slow=6.3,SNR=8.0						
MBAR	**Mbarara**	**53.63**	**22**	LR	LR	12 15 54.6	
	comp=Z,136nm,18.6s,baz=129,slow=35						
DBIC	**Dimbokro**	**60.72**	**340**	LR	LR	12 16 05.2	
	comp=Z,38nm,18.6s,baz=150,slow=31						
ATD	**Arta Tunnel**	**68.58**	**32**	LR	LR	12 23 28.9	
	comp=Z,22nm,19.0s,baz=120,slow=34						
ASAR	**Alice Springs**	**88.48**	**128**	P	**P**	**11 57 22.4**	**-0.1**
	2.0nm,0.8s,baz=201,slow=5.3,SNR=14						
KBZ	**Khabaz**	**99.08**	**21**	LR	LR	12 43 46.6	
	comp=Z,31nm,18.5s,baz=264,slow=36						
NVAR	**Mina Array Bea**	**143.82**	**267**	PKP	**PKPdf**	**12 04 04.9**	**+0.1**
	0.4nm,0.6s,baz=93,slow=3.6,SNR=3.0						
YKA	**Yellowknife Ar**	**150.85**	**311**	PKPbc	**PKiKP**	**12 04 21.6**	**0.0**
	2.5nm,0.6s,baz=94,slow=2.2,SNR=41						

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*KRNET **26** 11:51:44.9±0.1, 39°.47N×73°.43E, h6^{km}, mb3.4*
*SOME **26** 11:51:45.7, 39°.48N×73°.53E, h5^{km}*
*NNC **26** 11:51:49.4±1.7, 39°.66N×73°.44E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=13.3km s-min=7.9km az=168.0*

ISC 26 11:51:45.5±0.9, **39°.54N**±0°.05×**73°.41E**±0°.03, **h10^{km}, n62,** σ**2^{s}.60**/94, **18C-28D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.47**	**8**	⇑*e*P	**Pg**	**11 51 55.4**	**+0.6**
	baz=6.0						
SFK				⇑*e*S	**Sg**	**11 52 03.4**	**+2.3**
	baz=6.0						
OHH	**Osh**	**1.09**	**334**	⇑*i*P	**Pb**	**11 52 06.9**	**+0.4**
	baz=35						
OHH				⇑*i*S	**Sn**	**11 52 23.4**	**+1.2**
	baz=35						
DRK	**Karamyk**	**1.25**	**268**	⇑*i*P	**Pg**	**11 52 09.2**	**-0.3**
	baz=71						
DRK				⇑*i*S	**Sn**	**11 52 26.5**	**+0.2**
	baz=71						
BTK	**Batken**	**2.06**	**285**	⇓*i*P	**Pb**	**11 52 23.5**	**+0.4**
	baz=87						
BTK				⇓*i*S	**Sg**	**11 52 51.5**	**-0.4**
	baz=87						
ARLS	**Aral**	**2.42**	**16**	⇑*i*P	**Pb**	**11 52 28.2**	**-1.0**
	baz=16						
ARLS				⇑*i*S	**Sb**	**11 53 00.6**	**+1.5**
	baz=16						
ARK	**Arkit**	**2.51**	**334**	⇓*i*P	**Pb**	**11 52 30.1**	**-0.6**
	baz=35						
ARK				⇓*i*S	**Sb**	**11 53 03.2**	**+1.5**
	baz=35						
AML	**Almayashu**	**2.59**	**5**	P	**Pb**	**11 52 32.3**	**-0.1**
	SNR=28						
AML	**Almayashu**	**2.59**	**5**	⇓*i*P	**Pb**	**11 52 31.6**	**-0.7**
	baz=4.0						
AML				⇓*i*S	**Sb**	**11 53 05.4**	**+1.0**
	baz=4.0						
TRKS	**Terek-Say**	**2.63**	**320**	⇓*e*P	**Pn**	**11 52 30.9**	**+2.7**
	baz=20						
TRKS				⇓*i*S	**Sb**	**11 53 04.1**	**-1.2**
	baz=20						
UCH	**Uchtor**	**2.81**	**17**	P	**Pb**	**11 52 35.4**	**-0.6**
	SNR=19						
UCH	**Uchtor**	**2.81**	**17**	⇓*e*P	**Pb**	**11 52 34.5**	**-1.5**
	baz=16						
UCH				⇓*i*S	**Sb**	**11 53 10.3**	**-0.3**
	baz=16						
MNAS	**Manas**	**3.02**	**347**	⇑*e*P	**Pb**	**11 52 37.1**	**-2.3**
	baz=47						
MNAS				⇑*i*S	**Sb**	**11 53 15.9**	**-0.5**
	baz=47						
EKS2	**Erkin-Say**	**3.13**	**5**	P	**Pb**	**11 52 40.2**	**-1.0**
	SNR=7.7						
EKS2	**Erkin-Say**	**3.13**	**5**	⇓*i*P	**Pb**	**11 52 39.1**	**-2.1**
	baz=5.0						
EKS2				⇓*i*S	**Sb**	**11 53 18.2**	**-1.3**
	baz=5.0						
AAK	**Ala-Archa**	**3.20**	**14**	P	**Pb**	**11 52 41.1**	**-1.3**
	SNR=9.8						
AAK	**Ala-Archa**	**3.20**	**14**	Pg	**Pg**	**11 52 45.5**	**-1.2**
	16nm,0.6s						
AAK				Lg	Lg	11 53 25.5	
	31nm,0.7s						
AAK	**Ala-Archa**	**3.20**	**14**	⇓*e*P	**Pb**	**11 52 40.0**	**-2.5**
	baz=14						
AAK				⇓*i*S	**Sb**	**11 53 19.4**	**-2.1**
	baz=14						
MRKS	**Merke**	**3.20**	**358**	*e*P	**Pg**	**11 52 45.4**	**-1.4**
	13nm,0.4s						
MRKS				*e*S	**Sg**	**11 53 29.0**	**+0.7**
	18nm,0.3s						
MRKS	**Merke**	**3.20**	**358**	Pg	**Pg**	**11 52 45.4**	**-1.4**
	13nm,0.4s						
MRKS				Lg	Lg	11 53 29.0	
	18nm,0.3s						
KBK	**Karagaybulak**	**3.32**	**20**	P	**Pg**	**11 52 48.7**	**-0.3**
	SNR=10						
KBK	**Karagaybulak**	**3.32**	**20**	⇓*i*P	**Pb**	**11 52 41.6**	**-2.9**
	baz=19						
KBK				⇓*i*S	**Sb**	**11 53 22.3**	**-2.8**
	baz=19						
FRU1	**Bishkek**	**3.39**	**15**	⇓*i*P	**Pn**	**11 52 42.4**	**+3.9**
	baz=15						
FRU1				⇓*i*S	**Sb**	**11 53 24.6**	**-2.4**
	baz=15						
CHGR	**Chuyangaron**	**3.43**	**256**	⇑*i*P	**Pn**	**11 52 41.6**	**+2.6**
	baz=58						
CHGR				⇑*i*S	**Sb**	**11 53 23.3**	**-4.8**
	baz=58						
ULHL	**Ulahol**	**3.45**	**38**	P	**Pb**	**11 52 49.3**	**+2.5**
	SNR=8.9						
ULHL	**Ulahol**	**3.45**	**38**	⇓*i*P	**Pn**	**11 52 42.9**	**+3.5**
	baz=37						
ULHL				⇓*i*S	**Sn**	**11 53 25.3**	**+4.9**
	baz=37						
BOOM	**Boomskoye usch**	**3.51**	**32**	⇑*e*P	**Pn**	**11 52 43.6**	**+3.3**
	baz=31						
BOOM				⇑*i*S	**Sn**	**11 53 26.8**	**+4.9**
	baz=31						
CHMS	**Chumysh**	**3.60**	**16**	⇓*i*P	**Pn**	**11 52 45.2**	**+3.9**
	baz=15						
CHMS				⇓*i*S	**Sn**	**11 53 29.2**	**+5.3**
	baz=15						
TKM2	**Tokmak 2**	**3.75**	**25**	P	**Pg**	**11 52 55.8**	**-1.6**
	SNR=6.7						
TKM2	**Tokmak 2**	**3.75**	**25**	⇓Pg	**Pg**	**11 52 56.0**	**-1.4**
	3.2nm,0.5s						
TKM2				⇓Lg	Lg	11 53 47.3	
	18nm,0.7s						
TKM2	**Tokmak 2**	**3.75**	**25**	⇑*i*P	**Pn**	**11 52 47.6**	**+3.9**
	baz=25						
TKM2				⇑*i*S	**Sn**	**11 53 33.2**	**+5.2**
	baz=25						
USP	**Ospenovka**	**3.81**	**12**	⇓*e*P	**Pn**	**11 52 48.1**	**+3.9**
	baz=12						
USP				⇓*i*S	**Sn**	**11 53 34.2**	**+5.1**
	baz=12						
KDJ	**Kajisay**	**3.85**	**47**	⇑*i*P	**Pn**	**11 52 48.4**	**+3.4**
	baz=46						
KDJ				⇑*i*S	**Sn**	**11 53 34.7**	**+4.3**
	baz=46						
KST	**Kastek**	**3.99**	**28**	*e*P	**Pg**	**11 53 00.6**	**-1.3**
	8.7nm,0.5s						
KST				*e*S	**Sg**	**11 53 54.6**	**+1.0**
	25nm,0.9s						
KST	**Kastek**	**3.99**	**28**	Pg	**Pg**	**11 53 00.6**	**-1.3**
	8.7nm,0.5s						
KST				Lg	Lg	11 53 54.6	
	25nm,0.9s						
SGDS	**Sogindy**	**4.01**	**13**	Pg	**Pb**	**11 52 56.7**	**+0.5**
	4.4nm,0.4s						
SGDS				Lg	Lg	11 53 48.1	
	4.7nm,0.6s						
DGS	**Degeres**	**4.10**	**25**	*e*P	**Pg**	**11 53 02.3**	**-1.7**
	7.3nm,0.6s						
DGS				*e*S	**Sg**	**11 53 57.6**	**+0.5**
	20nm,0.7s						
DGS	**Degeres**	**4.10**	**25**	Pg	**Pg**	**11 53 02.3**	**-1.7**
	7.3nm,0.6s						
DGS				Lg	Lg	11 53 57.6	
	20nm,0.7s						
KK02	**Karatay Array**	**4.17**	**329**	⇓Pn	**Pn**	**11 52 53.9**	**+4.7**
	3.2nm,0.5s						
KK02				⇓Lg	Lg	11 53 49.1	
	5.1nm,0.5s						
MTBS	**Maitube**	**4.24**	**31**	*e*P	**Pb**	**11 53 03.8**	**+3.6**
	5.6nm,0.4s						
MTBS				*e*S	**Sg**	**11 54 00.2**	**-1.5**
	12nm,0.5s						
MTBS	**Maitube**	**4.24**	**31**	Pg	**Pb**	**11 53 03.8**	**+3.6**
	5.6nm,0.4s						
MTBS				Lg	Lg	11 54 00.2	
	12nm,0.5s						
TNSS	**Tian-Shan**	**4.39**	**36**	*e*P	**Pg**	**11 53 07.3**	**-2.2**
	3.2nm,0.5s						
TNSS				*e*S	**Sg**	**11 54 07.0**	**+0.6**
	6.1nm,0.9s						
TNSS	**Tian-Shan**	**4.39**	**36**	Pg	**Pg**	**11 53 07.3**	**-2.2**
	3.2nm,0.5s						
TNSS				Lg	Lg	11 54 07.0	
	6.1nm,0.9s						
BRLS	**Borolday**	**4.40**	**323**	*e*P	**Pg**	**11 53 07.3**	**-2.5**
	8.0nm,0.4s						
BRLS				*e*S	**Sg**	**11 54 06.2**	**-0.7**
	8.1nm,0.4s						
BRLS	**Borolday**	**4.40**	**323**	Pg	**Pg**	**11 53 07.3**	**-2.5**
	8.0nm,0.4s						
BRLS				Lg	Lg	11 54 06.2	
	8.1nm,0.4s						
KRBS	**Karabastau**	**4.48**	**21**	*e*P	**Pg**	**11 53 08.8**	**-2.5**
	7.8nm,0.7s						
KRBS				*e*S	**Sg**	**11 54 08.8**	**-0.6**
	4.7nm,0.6s						
KRBS	**Karabastau**	**4.48**	**21**	Pg	**Pg**	**11 53 08.8**	**-2.5**
	7.8nm,0.7s						
KRBS				Lg	Lg	11 54 08.8	
	4.7nm,0.6s						
MDOK	**Medeo**	**4.53**	**36**	*e*P	**Pg**	**11 53 09.2**	**-3.1**
	4.0nm,0.6s						
MDOK				*e*S	**Sg**	**11 54 09.4**	**-1.6**
	14nm,0.7s						
MDOK	**Medeo**	**4.53**	**36**	Pg	**Pg**	**11 53 09.2**	**-3.1**
	4.0nm,0.6s						
MDOK				Lg	Lg	11 54 09.4	
	14nm,0.7s						
KOTS	**Kotyrbulak**	**4.62**	**36**	*e*P	**Pg**	**11 53 12.1**	**-1.8**
	5.0nm,0.6s						
KOTS				*e*S	**Sg**	**11 54 14.3**	**+0.6**
	42nm,0.8s						
KOTS	**Kotyrbulak**	**4.62**	**36**	Pg	**Pg**	**11 53 12.1**	**-1.8**
	5.0nm,0.6s						
KOTS				Lg	Lg	11 54 14.3	
	42nm,0.8s						
KTBS	**Karatobe**	**4.83**	**29**	*e*P	**Pg**	**11 53 15.1**	**-2.9**
	2.5nm,0.5s						
KTBS				*e*S	**Sg**	**11 54 19.5**	**-1.1**
	23nm,0.8s						
KTBS	**Karatobe**	**4.83**	**29**	Pg	**Pg**	**11 53 15.1**	**-2.9**
	2.5nm,0.5s						
KTBS				Lg	Lg	11 54 19.5	
	23nm,0.8s						
KUU	**Kurty**	**4.87**	**26**	*e*P	**Pg**	**11 53 15.6**	**-3.1**
	3.2nm,0.7s						
KUU				*e*S	**Sg**	**11 54 20.3**	**-1.3**
	12nm,0.8s						
KUU	**Kurty**	**4.87**	**26**	Pg	**Pg**	**11 53 15.6**	**-3.1**
	3.2nm,0.7s						
KUU				Lg	Lg	11 54 20.3	
	12nm,0.8s						
SATY	**Saty**	**5.14**	**45**	*e*P	**Pb**	**11 53 19.9**	**+4.2**
	6.6nm,0.7s						
SATY				*e*S	**Sg**	**11 54 27.6**	**-3.0**
	13nm,1.4s						
SATY	**Saty**	**5.14**	**45**	Pg	**Pb**	**11 53 19.9**	**+4.2**
	6.6nm,0.7s						
SATY				Lg	Lg	11 54 27.6	
	13nm,1.4s						
UZB	**Uzynbulak**	**5.55**	**48**	*e*P	Pg	11 53 27.6	-4.1
	4.0nm,0.3s						
UZB				*e*S	**Sg**	**11 54 41.3**	**-2.3**
	8.4nm,1.0s						
UZB	**Uzynbulak**	**5.55**	**48**	Pg	Pg	11 53 27.6	-4.1
	4.0nm,0.3s						
UZB				Lg	Lg	11 54 41.3	
	8.4nm,1.0s						
KPKS	**Kokpek**	**5.57**	**44**	*e*P	**Pg**	**11 53 28.1**	**-4.0**
	4.0nm,0.2s						
KPKS				*e*S	**Sg**	**11 54 41.8**	**-2.4**
	14nm,0.5s						
ARXS	**Arharly**	**5.71**	**34**	*e*P	Pg	11 53 30.6	-4.2
	3.1nm,0.6s						
ARXS				*e*S	**Sg**	**11 54 46.1**	**-2.7**
	9.0nm,0.5s						
ARXS	**Arharly**	**5.71**	**34**	Pg	Pg	11 53 30.6	-4.2
	3.1nm,0.6s						
ARXS				Lg	Lg	11 54 46.1	
	9.0nm,0.5s						
BLB	**Baldybastay**	**5.92**	**38**	Pg	**Pg**	**11 53 35.9**	**-2.9**
	7.3nm,0.5s						
BLB				Lg	Lg	11 54 55.1	
	8.4nm,0.7s						

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*ANF **26** 11:55:15.7±0.1, 35°.21N×117°.29W, h10^{km}±1^{km}, ML4.2/42, Error ellipse: s-maj=1.1km s-min=1.0km az=34.0*
*PAS **26** 11:55:16.2±1.9, 35°.21N±0°.02×117°.28W±0°.03, h0^{km}±7^{km}, Mwr3.8/5, ML3.7/78(NEIC), Error ellipse: s-maj=3.3km s-min=2.1km az=120.0*
*NEIC **26** 11:55:16.2, 35°.21N×117°.28W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.28; $M_{\theta\theta}$-3.28; $M_{\phi\phi}$3.00; $M_{r\theta}$-0.59; $M_{\theta\phi}$3.93; $M_{\phi r}$2.71; Fault plane solution: $M_0$5.74000×10^{14} NP1:ϕ_s72.00000°, δ61.00000°, λ4.00000°. NP2:ϕ_s340.00000°, δ86.00000°, λ151.00000°. Principal axes: T 5.7944, Plg23.0000°, Azm292.0000°; N -0.0992, Plg61.0000°, Azm153.0000°; P -5.6952, Plg17.0000°, Azm29.0000°;*
*NEIC **26** 11:55:16.3±1.8, 35°.20N±0°.02×117°.30W±0°.03, h4^{km}±8^{km} Error ellipse: s-maj=3.8km s-min=2.1km az=132.0*
*IDC **26** 11:55:17.4±1.0, 35°.18N×117°.25W, h16^{km}±8^{km}, mb3.0/1, mb1 3.6/5, mb1mx3.1/53, mbtmp3.2/5, ML3.6/4, Error ellipse: s-maj=19.9km s-min=5.3km az=75.0*

ISC 26 11:55:16.3±1.0, **35°.21N**±0°.02×**117°.29W**±0°.02, **h6^{km}**±9^{km}, **n102,** σ**0^{s}.98**/146, **Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSC	**Goldstone, Bar**	**0.41**	**76**		**Pg**	**11 55 24.3**	**+0.1**
GSC				Sg	**Sg**	**11 55 29.6**	**0.0**
GSC	**Goldstone, Bar**	**0.41**	**76**	P	**Pg**	**11 55 24.2**	**+0.1**
	baz=257,SNR=1000						
GSC				S	**Sg**	**11 55 29.5**	**0.0**
	baz=257						
RRX	**Edison Barstow**	**0.41**	**144**	P	**Pg**	**11 55 24.5**	**+0.3**
	baz=326,SNR=75						
RRX				S	**Sg**	**11 55 30.0**	**+0.5**
	baz=326						
LRMC	**Laurel Mtn Rad**	**0.42**	**310**	P	**Pg**	**11 55 24.7**	**+0.1**
	baz=129,SNR=285						
LRMC				S	**Sg**	**11 55 29.9**	**-0.2**
	baz=129						
EDW2	**Edwards Air Fo**	**0.67**	**241**	P	**Pg**	**11 55 28.9**	**-0.1**
	baz=60,SNR=419						
EDW2				S	**Sg**	**11 55 37.7**	**0.0**
	baz=60						
QSM	**Queen of Sheba**	**0.83**	**24**	Pg	**Pg**	**11 55 31.8**	**-0.4**
QSM				Sg	**Sb**	**11 55 44.2**	**-0.5**
QSM				IAML		11 55 45.5	
	comp=E,4µm,0.5s						
QSM				IAML		11 55 46.0	
	comp=N,5µm,0.5s						
MPMC	**Manual Prospec**	**0.87**	**349**	P	**Pg**	**11 55 32.3**	**-0.6**
	baz=169,SNR=761						
MPMC				S	**Sg**	**11 55 44.1**	**-0.1**
	baz=169						
HEC	**Hector,Ludlow**	**0.87**	**115**	P	**Pg**	**11 55 32.3**	**-0.6**
	baz=297,SNR=374						
HEC				S	**Sb**	**11 55 44.6**	**-1.1**
	baz=297						
BBRC	**Big Bear Solar**	**0.99**	**162**	P	**Pg**	**11 55 35.0**	**-0.3**
	baz=343,SNR=110						
BBRC				S	**Sg**	**11 55 48.0**	**-0.1**
	baz=343						
BFSC	**Mount Baldy Ra**	**1.01**	**198**	P	**Pg**	**11 55 35.2**	**-0.5**
	baz=18,SNR=357						
BFSC				S	**Sg**	**11 55 49.1**	**+0.3**
	baz=18						
ISA	**Isabella, Lake**	**1.07**	**296**	Pg	**Pg**	**11 55 36.4**	**-0.5**
ISA				Sg	**Sg**	**11 55 50.3**	**-0.5**
ISA	**Isabella, Lake**	**1.07**	**296**	P	**Pg**	**11 55 36.4**	**-0.5**
	baz=114,SNR=1000						
ISA				S	**Sg**	**11 55 50.3**	**-0.5**
	baz=114						
SHOC	**Shoshone, Teco**	**1.08**	**50**	P	**Pg**	**11 55 36.3**	**-0.6**
	baz=230,SNR=136						
SHOC				S	**Sb**	**11 55 51.3**	**-0.4**
	baz=230						
GWY	**Greenwater Val**	**1.10**	**27**	Pg	**Pg**	**11 55 36.6**	**-0.8**
GWY				Sg	**Sb**	**11 55 51.9**	**-0.6**
GWY				IAML		11 55 56.5	
	comp=N,3µm,0.7s						
TUQ	**Turquoise Moun**	**1.14**	**78**	P	**Pg**	**11 55 37.2**	**-0.9**
	baz=259,SNR=115						
TUQ				S	**Sg**	**11 55 52.4**	**-0.5**
	baz=259						
MWC	**Mount Wilson**	**1.17**	**213**		**Pg**	**11 55 37.9**	**-0.8**
MWC				Sg	**Sb**	**11 55 54.4**	**-0.1**
RSBC	**Riverside Bore**	**1.23**	**182**		**Pg**	**11 55 39.2**	**-0.7**
ARVC	**Arvin**	**1.27**	**267**	P	**Pg**	**11 55 39.6**	**-1.0**
	baz=86,SNR=253						
ARVC				S	**Sg**	**11 55 56.0**	**-1.0**
	baz=86						
PASC	**Pasadena Art C**	**1.27**	**216**		**Pg**	**11 55 39.7**	**-0.9**
PASC				Sg	**Sb**	**11 55 57.2**	**-0.1**
PASC				IAML		11 56 01.1	
	comp=N,2µm,0.7s						
DECC	**Green Verdugo**	**1.28**	**223**	P	**Pg**	**11 55 40.2**	**-0.7**
	baz=42,SNR=295						
DECC				S	**Sg**	**11 55 57.2**	**-0.3**
	baz=42						
FURC	**Furnace Creek,**	**1.30**	**15**	P	**Pn**	**11 55 39.7**	**-1.4**
	baz=195,SNR=598						
FURC				S	**Sg**	**11 55 57.6**	**-0.6**
	baz=195						
OSI	**Osito Audit: C**	**1.32**	**244**		**Pn**	**11 55 40.2**	**-1.2**
OSI				Sg	**Sg**	**11 55 58.6**	**-0.2**
OSI	**Osito Audit: C**	**1.32**	**244**	P	**Pn**	**11 55 40.1**	**-1.2**
	baz=63,SNR=232						
OSI				S	**Sg**	**11 55 58.1**	**-0.6**
	baz=63						
GVRC	**Garvey Reservo**	**1.34**	**211**		**Pn**	**11 55 41.5**	**-0.1**
CWC	**Cottonwood Cre**	**1.39**	**333**	P	**Pn**	**11 55 41.4**	**-1.0**
	baz=152						
CWC				S	**Sg**	**11 56 00.3**	**-0.7**
	baz=152						
GMRC	**Granite Mounta**	**1.40**	**107**	P	**Pn**	**11 55 40.5**	**-2.1**
	baz=288,SNR=1000						
GMRC				S	**Sg**	**11 56 00.8**	**-0.5**
	baz=288						
DJJ	**Donna J Jenkin**	**1.46**	**222**		**Pg**	**11 55 44.0**	**-0.3**
VES	**Vestal, Richgr**	**1.60**	**294**	P	**Pn**	**11 55 44.4**	**-0.7**
	baz=113,SNR=352						
VES				Sb	**Sb**	**11 56 07.0**	**+0.3**
	baz=113						
MURC	**Murrieta**	**1.60**	**177**	P	**Pn**	**11 55 44.6**	**-0.7**
	baz=358,SNR=420						
MURC				S	**Sn**	**11 56 06.2**	**-0.1**
	baz=358						
BELC	**Belle Mtn. Jos**	**1.60**	**138**	P	**Pn**	**11 55 44.3**	**-1.1**
	baz=319,SNR=655						
BELC				Sb	**Sg**	**11 56 07.6**	**-0.3**
	baz=319						
FMP	**Fort Macarthur**	**1.71**	**209**	Pb	**Pn**	**11 55 47.2**	**+0.6**
	baz=29,SNR=22						
FMP				Sb	**Sb**	**11 56 09.9**	**+0.1**
	baz=29						
PFO	**Pinyon Flats O**	**1.73**	**157**	Pn	**Pn**	**11 55 46.2**	**-0.9**
	comp=N,43nm,0.3s,baz=333,slow=16,SNR=94						
PFO				Pg	**Pg**	**11 55 48.8**	**-0.7**
	comp=N,44nm,0.3s,baz=334,slow=14,SNR=63						
PFO				Sn	**Sn**	**11 56 07.5**	**-2.0**
	comp=N,55nm,0.3s,baz=312,slow=16,SNR=7.8						
PFO				Lg	Lg	11 56 10.8	
	comp=N,394nm,0.3s,baz=71,slow=15,SNR=28						
PFO	**Pinyon Flats O**	**1.73**	**157**	Pn	**Pn**	**11 55 46.2**	**-0.9**
PFO				IAML		11 56 14.8	
	comp=N,867nm,0.5s						
PFO	**Pinyon Flats O**	**1.73**	**157**	P	**Pn**	**11 55 46.1**	**-0.9**
	baz=337,SNR=66						
PFO				S	**Sn**	**11 56 07.8**	**-1.8**
	baz=337						
TPFO	**Pinon Flats**	**1.74**	**156**	P	**Pn**	**11 55 46.2**	**-1.0**
	baz=337,SNR=71						
GRAC	**Grapevine Rang**	**1.79**	**358**	P	**Pn**	**11 55 47.4**	**-0.4**
	baz=178,SNR=214						
GRAC				Sn	**Sg**	**11 56 13.7**	**-0.1**
	baz=178						
TPNV	**Topopah Spring**	**1.93**	**25**		**Pn**	**11 55 49.3**	**-0.6**
TPNV				IAML		11 56 20.9	
	comp=N,424nm,0.7s						
TPNV	**Topopah Spring**	**1.93**	**25**	P	**Pn**	**11 55 49.3**	**-0.6**
	baz=206,SNR=285						
TPNV				S	**Sn**	**11 56 13.5**	**-1.1**
	baz=206						
TIN	**Tinemaha, Big**	**2.00**	**338**	P	**Pn**	**11 55 50.6**	**-0.1**
	baz=157,SNR=13						
TIN				Sg	**Sg**	**11 56 21.8**	**+1.4**
	baz=157						
CIS	**Catalina Islan**	**2.03**	**208**	Pg	**Pb**	**11 55 54.1**	**+0.5**
	baz=27						
CIS				Sb	**Sg**	**11 56 20.4**	**-1.0**
	baz=27						
VOG	**Valley Oaks Go**	**2.04**	**304**	P	**Pn**	**11 55 51.0**	**-0.1**
	baz=122,SNR=66						
VOG				Sb	**Sb**	**11 56 20.0**	**+0.7**
	baz=122						
LCH	**Last Change Ra**	**2.04**	**352**	Pn	**Pn**	**11 55 51.0**	**-0.5**
IRM	**Iron Mountain**	**2.05**	**120**	P	**Pn**	**11 55 49.7**	**-1.7**
	baz=302,SNR=51						
IRM				Sb	**Sb**	**11 56 20.2**	**+0.4**
	baz=302						
PKM	**Mcpherson Peak**	**2.10**	**262**	P	**Pn**	**11 55 51.4**	**-0.8**
	baz=80,SNR=37						
PKM				Sb	**Sb**	**11 56 22.1**	**+0.9**
	baz=80						
SHPR	**Sheep Range**	**2.16**	**52**	Pn	**Pn**	**11 55 52.2**	**-0.8**
SHPR				IAML		11 56 27.0	
	comp=E,402nm,0.8s						
BC3	**Big Chuckawall**	**2.17**	**135**	P	**Pn**	**11 55 51.7**	**-1.3**
	baz=316,SNR=89						
BC3				Sb	**Sg**	**11 56 24.7**	**-1.2**
	baz=316						
NEE2	**Needles Airpor**	**2.23**	**101**	P	**Pn**	**11 55 52.0**	**-1.9**
	baz=282,SNR=64						
NEE2				Sb	**Sb**	**11 56 25.5**	**+0.5**
	baz=282						
109C	**Camp Elliot, M**	**2.32**	**176**	Pn	**Pn**	**11 55 54.8**	**-0.2**
109C				IAML		11 56 31.6	
	comp=E,692nm,0.7s						
109C	**Camp Elliot, M**	**2.32**	**176**	P	**Pn**	**11 55 54.5**	**-0.5**
	baz=356,SNR=22						
109C				S	**Sn**	**11 56 23.6**	**-0.2**

	baz=356						
MONP2	Monument Peak	2.42	162	Pb	Pb	11 56 00.1	-0.3
	baz=343,SNR=68						
MONP2				Sb	Sb	11 56 31.2	+0.7
	baz=343						
SCI2	San Clemente I	2.46	206	Pb	Pb	11 56 01.1	+0.2
	baz=25,SNR=6.0						
PAGB	Antelope Grade	2.48	283		Pn	11 55 57.1	-0.1
PAGB				IAML		11 56 42.3	
	comp=N,457nm,0.9s						
PAGB				IAML		11 56 43.6	
	comp=E,355nm,1.1s						
BAR	Barrett	2.57	168		Pn	11 55 57.9	-0.6
BAR				IAML		11 56 38.0	
	comp=E,534nm,0.5s						
BAR				IAML		11 56 38.2	
	comp=N,407nm,0.2s						
SWSC	Sam W. Stewart	2.57	151	Pb	Pb	11 56 03.1	+0.3
	baz=332,SNR=18						
SWSC				Sb	Sb	11 56 36.0	+1.3
	baz=332						
SNCC	San Nicolas Is	2.69	224		Pn	11 56 01.2	+1.1
SNCC				IAML		11 56 43.9	
	comp=E,348nm,0.5s						
SNCC				IAML		11 56 51.6	
	comp=N,281nm,0.9s						
MLAC	Mammoth, Mammo	2.72	333	Pb	Pg	11 56 07.0	-1.5
	baz=152,SNR=94						
IKP	In-Ko-Pah, Jac	2.73	159	Sb	Sb	11 56 41.1	+1.7
	baz=340						
PDMCI	Parker Dam,Lak	2.74	108	P	Pn	11 56 00.8	-0.1
	baz=290,SNR=12						
PDMCI				Sb	Sg	11 56 42.0	-2.3
	baz=290						
TPH	Tonopah	2.86	1		Pn	11 56 02.7	0.0
GLA	Glamis	2.96	136	Pg	Pb	11 56 10.9	+1.4
	baz=317,SNR=39						
PMPB	Monarch Peak	3.03	290		Pn	11 56 05.3	+0.4
PMPB				IAML		11 56 59.1	
	comp=E,394nm,0.7s						
PMPB				IAML		11 57 16.6	
	comp=N,324nm,0.8s						
LHV	Little Huntoon	3.19	343		Pn	11 56 08.3	+1.3
LHV				IAML		11 57 05.5	
	comp=N,140nm,1.0s						
LHV				IAML		11 57 06.7	
	comp=E,209nm,0.8s						
NV11	Mina Array Sit	3.29	348	Pn	Pn	11 56 08.7	+0.1
NVAR	Mina Array Bea	3.32	346	Pn	Pn	11 56 09.3	+0.3
	comp=E,3.6nm,0.3s,baz=170,slow=16,SNR=62						
NVAR				Pg	Pg	11 56 18.3	-1.6
	comp=E,20nm,0.3s,baz=165,slow=19,SNR=55						
NVAR				Lg	Lg	11 57 02.4	
	comp=E,5.8nm,0.3s,baz=170,slow=32,SNR=2.6						
NVAR	Mina Array Bea	3.32	346	Pn	Pn	11 56 09.2	+0.2
CCX	Cicese	3.37	171		Pn	11 56 09.8	+0.4
CCX				IAML		11 57 04.7	
	comp=E,246nm,0.7s						
CCX				IAML		11 57 07.1	
	comp=N,197nm,0.8s						
R11A	Troy Canyon, C	3.42	23		Pn	11 56 09.6	-0.8
R11A	Troy Canyon, C	3.42	23	P	Pn	11 56 09.6	-0.8
	baz=204						
RYN	Ryan	3.56	344		Pn	11 56 11.7	-0.5
RYN				IAML		11 57 13.8	
	comp=E,81nm,2.0s						
SAO	San Andreas Ge	3.71	296	Pn	Pn	11 56 13.8	-0.5
LCMT	Little Creek M	3.74	60		Pn	11 56 15.1	+0.4
LCMT				IAML		11 57 17.3	
	comp=N,80nm,1.0s						
CMB	Columbia Colle	3.77	319		Pn	11 56 15.8	+0.8
CMB				IAML		11 57 15.2	
	comp=E,145nm,1.3s						
CMB				IAML		11 57 15.3	
	comp=N,179nm,1.1s						
KVN	Kaiserville	3.89	351		Pn	11 56 17.3	+0.4
KVN				IAML		11 57 24.8	
	comp=N,63nm,0.8s						
CCUT	Cedar City	3.94	52		Pn	11 56 18.3	+0.8
KNB	Kanab	4.04	62		Pn	11 56 18.7	-0.2
KNB				IAML		11 57 35.0	
	comp=N,97nm,0.9s						
KNB				IAML		11 57 39.9	
	comp=E,78nm,1.1s						
YERR	Yerington	4.08	338		Pn	11 56 20.4	+0.9
YERR				IAML		11 57 44.0	
	comp=E,88nm,0.5s						
YERR				IAML		11 57 50.9	
	comp=N,64nm,0.8s						
SZCU	Shurtz Canyon	4.14	54		Pn	11 56 20.7	+0.4
SZCU				IAML		11 57 32.7	
	comp=E,58nm,0.7s						
PKCU	Pink Cliffs	4.60	59		Pn	11 56 28.0	+1.4
PKCU				IAML		11 57 44.8	
	comp=N,110nm,1.5s						
PAHR	Pah Rah Range	4.79	340		Pn	11 56 28.1	-1.1
WUAZ	Wupatki	4.84	85		Pn	11 56 31.0	+1.1
X16A	Lo Mia Camp, P	4.87	98		Pn	11 56 31.7	+1.3
214A	Organ Pipe Nat	4.95	130		Pn	11 56 30.8	-0.4
214A				IAML		11 57 59.5	
	comp=E,59nm,1.3s						
214A				IAML		11 58 03.3	
	comp=N,69nm,0.8s						
214A	Organ Pipe Nat	4.95	130	P	Pn	11 56 29.3	-1.9
	baz=312						
MTPU	Mount Pierson	4.98	54		Pn	11 56 32.7	+0.7
MTPU				IAML		11 57 54.1	
	comp=E,32nm,1.7s						
MTPU				IAML		11 57 56.1	
	comp=N,32nm,1.7s						
TCRU	Three Creeks R	5.16	47		Pn	11 56 34.4	+0.2
TCRU				IAML		11 58 13.0	
	comp=N,41nm,1.8s						
TCRU				IAML		11 58 13.2	
	comp=E,52nm,1.6s						
BMN	Battle Mountai	5.22	1	Pn	Pn	11 56 35.5	+0.5
BMN				IAML		11 58 04.7	
	comp=N,29nm,0.5s						
MVU	Marysvale	5.23	50		Pn	11 56 35.9	+0.6
MSU	Marysvale	5.26	50		Pn	11 56 34.8	-0.9
ELK	Elko	5.76	16	Pn	Pn	11 56 42.9	+0.3
	comp=N,1.1nm,0.3s,baz=200,slow=12,SNR=30						
ELK				Lg	Lg	11 58 18.4	
	comp=N,3.6nm,0.3s,baz=278,slow=22,SNR=4.5						
ELK	Elko	5.76	16		Pn	11 56 42.4	-0.2
TUC	Tucson	6.14	116	Pn	Pn	11 56 46.5	-1.1
TUC	Tucson	6.14	116	P	Pn	11 56 46.1	-1.5
	baz=300						
SRU	San Rafael Swe	6.66	52		Pn	11 56 57.2	+2.4
P17A	Butcher Ranch,	6.73	49		Pn	11 56 58.0	+2.2
P18A	Preston Nutter	7.13	50		Pn	11 57 04.8	+3.3
MVCO	Mesa Verde	7.38	72		Pn	11 57 06.1	+1.3
319A	Douglas	7.71	117		Pn	11 57 09.2	-0.1
O20A	White River Ci	8.69	53		Pn	11 57 25.0	+2.1
ANMO	Albuquerque	8.88	89	Pg	Pg	11 57 59.8	-6.5
	comp=N,0.1nm,0.3s,baz=268,slow=12,SNR=4.2						
ANMO				Lg	Lg	11 59 51.1	
	comp=N,0.2nm,0.3s,baz=130,slow=16,SNR=5.6						
PDAR	Pinedale Array	9.65	36	Pn	Pn	11 57 38.8	+2.8
	comp=N,0.1nm,0.3s,baz=233,slow=10.0,SNR=5.2						
TXAR	Lajitas Array	12.92	113	Pn	Pn	11 58 22.2	+1.6
	comp=N,0.2nm,0.3s,baz=292,slow=13,SNR=12						
YKA	Yellowknife Ar	27.36	3	P	P	12 01 03.1	+1.1
	comp=N,0.2nm,0.8s,baz=182,slow=9.5,SNR=1.7						

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*ANF **26** 12:13:22.9±0.3, 47°.55N×121°.74W, h8km±3km, ML2.3/5, Error ellipse: s-maj=2.7km s-min=1.9km az=142.0*

*NEIC **26** 12:13:23.6±1.8, 47°.570N±0°.007×121°.77W±0°.02, h11km±8km, Error ellipse: s-maj=2.3km s-min=0.8km az=70.0*

*PNSN **26** 12:13:24.4, 47°.57N×121°.68W, h15km, MD2.1, Fault plane solution: NP1:φs120.00000°, δ50.00000°, λ170.00000°.*

*SEA **26** 12:13:24.6±1.8, 47°.56N±0°.01×121°.75W±0°.01, h11km±7km, Md2.5/8, ML2.2/32(NEIC), Error ellipse: s-maj=2.2km s-min=0.9km az=149.0*

ISC 26 12:13:23.9±0.9, **47°.57N**±0°.02×**121°.75W**±0°.02, **h15**km±7km, **n73**, σ**0s69**/79, **Washington**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
C05A	Tolt Reservoir	0.13	17		Pg	12 13 27.7	+0.1
RATT	Rattlesnake La	0.15	195		Pg	12 13 27.9	+0.1
HTW	Haystack Looko	0.24	356		Pg	12 13 29.4	+0.2
GSM	Grass Mountain	0.37	185		Pg	12 13 31.4	0.0
D05A	Enumclaw	0.41	203		Pg	12 13 32.8	+0.5
GHW	Garrison Hill	0.64	214		Pg	12 13 35.9	-0.4
JCW	Jim Creek	0.64	349		Pg	12 13 36.1	-0.3
FMW	Mount Fremont	0.64	175		Pg	12 13 35.7	-0.8
B941	Kapowsin	0.67	209		Pg	12 13 36.2	-0.7
OBSR	Observation Ro	0.67	184		Pg	12 13 36.7	-0.4
C06D	Leavenworth	0.68	58		Pg	12 13 37.0	-0.2
C06D	Leavenworth	0.68	58	P	Pg	12 13 36.4	-0.8
	baz=236,SNR=14						
C06D				S	Sg	12 13 45.2	-0.9
	baz=236						
RCS	Mount Rainier-	0.70	179		Pg	12 13 37.0	-0.6
GMW	Gold Mountain	0.70	269		Pg	12 13 37.3	-0.3
PANH	Panhandle Gap,	0.71	174		Pg	12 13 37.0	-0.9
GNW	Green Mountain	0.73	270		Pg	12 13 37.7	-0.4
B05A	Bryant	0.73	342		Pg	12 13 37.9	-0.3
B05A	Bryant	0.73	342	P	Pg	12 13 37.6	-0.6
	baz=158,SNR=18						
B05A				S	Sg	12 13 47.9	0.0
	baz=158						
LTY	Liberty	0.80	113		Pg	12 13 38.8	-0.6
LTY				IAML		12 13 49.4	
	comp=E,96nm,0.3s						
LTY				IAML		12 13 49.5	
	comp=N,85nm,0.2s						
D04E	Lakebay	0.80	241	Pb	Pb	12 13 39.2	-0.3
	baz=62,SNR=5.2						
D04E				Sb	Sb	12 13 50.9	+0.8
	baz=62						
LON	Longmire	0.82	183		Pg	12 13 38.8	-1.0
B013	Quilcene	0.82	288		Pb	12 13 39.0	-0.9
B013	Quilcene	0.82	288		Pb	12 13 39.0	-0.9
C04A	Brinnon	0.84	281		Pb	12 13 39.9	-0.3
SLFW	Sugar Loaf	0.85	77		Pg	12 13 40.0	-0.4
TBM	Table Mountain	0.88	117		Pb	12 13 40.5	-0.4
WPW	White Pass	0.88	171		Pb	12 13 39.9	-1.1
CMW	Cultus Mountai	0.89	344		Pb	12 13 41.0	-0.2
RPW	Rockport	0.89	10		Pb	12 13 40.5	-0.7
D03D	Eldon	0.91	268		Pb	12 13 40.7	-0.7
D03D	Eldon	0.91	268	P	Pb	12 13 40.5	-0.9
	baz=88,SNR=22						
D03D				S	Sb	12 13 53.3	0.0
	baz=88						
ETW	Entiat	0.96	87		Pb	12 13 41.7	-0.6
B06A	Marblemount	0.97	10		Pb	12 13 41.5	-0.8
B06A				IAML		12 13 54.9	
	comp=E,67nm,0.2s						
B06A				IAML		12 13 55.3	
	comp=N,83nm,0.3s						
EBG	Ellensburg	1.04	129		Pb	12 13 43.5	-0.1
NAC	Naches	1.04	143		Pb	12 13 43.3	-0.4
NLW	Nelson Butte	1.08	61		Pb	12 13 44.1	-0.3
E04D	Cinebar	1.16	209		Pn	12 13 44.9	-0.7
E04D	Cinebar	1.16	209	P	Pn	12 13 44.7	-0.8
	baz=31,SNR=14						
E04D				S	Sb	12 14 00.6	+0.2
	baz=31						
B04A	Port Angeles	1.28	293		Pn	12 13 46.5	-0.8
B04A	Port Angeles	1.28	293		Pn	12 13 46.7	-0.6
SHUK	Shuksan-Mt. Ba	1.29	2		Pn	12 13 47.5	0.0
B201	Coldwater, Mou	1.31	196		Pn	12 13 47.1	-0.7
A04D	Lummi Island	1.32	331	S	Sn	12 14 05.9	+0.8
	baz=149						
ERK	Elk Rock	1.33	198		Pn	12 13 47.5	-0.6
SOSW	Source of Smit	1.35	192		Pn	12 13 47.9	-0.5
STD	Studebaker Rid	1.37	194		Pn	12 13 48.6	-0.1
VALT	Mount Saint He	1.39	193		Pn	12 13 48.8	-0.1
FL2	Flat Top 2	1.43	197		Pn	12 13 49.3	-0.2
WISH	Wishkah	1.45	253	Pn	Pn	12 13 50.4	+0.9
NLWA	Neilton Lookou	1.45	264	Pn	Pb	12 13 51.6	+0.9
NLWA				IAML		12 14 08.3	
	comp=N,30nm,3.9s						
VDB	Vedder Mountai	1.48	351		Pn	12 13 50.5	+0.5
TRW	Toppenish Ridg	1.52	147		Pb	12 13 51.4	-0.4
RVW	Rose Valley	1.58	206		Pn	12 13 51.8	+0.5
B019	Raymond	1.59	236		Pn	12 13 52.6	+1.1
E03A	Lebam	1.61	231	Pn	Pn	12 13 52.2	+0.5
E07A	Sunnyside	1.64	127		Pb	12 13 53.7	-0.2
E07A				IAML		12 14 17.1	
	comp=N,38nm,0.4s						
E07A				IAML		12 14 18.3	
	comp=E,43nm,0.4s						
MDW	Midway	1.66	124		Pb	12 13 54.0	-0.2
F04D	Rainier, OR	1.72	211	P	Pn	12 13 53.2	-0.1
	baz=31						
F04D				S	Sn	12 14 16.5	+1.5
	baz=31						
BENWA	Benson Ranch	1.74	126		Pb	12 13 55.1	-0.4
LOCW	Locke Island	1.80	117		Pb	12 13 56.3	-0.2
B08A	Colville Reser	1.81	63		Pb	12 13 55.7	-0.9
SNIWA	Snively Ranch	1.81	127		Pb	12 13 56.4	-0.3
GBL	Gable Mountain	1.84	121		Pb	12 13 56.6	-0.6
RSW	Rattlesnake Hi	1.89	128		Pb	12 13 57.4	-0.7
HAWA	Hanford	1.92	127		Pn	12 13 57.0	+0.9
HAWA				IAML		12 14 21.7	
	comp=E,13nm,4.0s						
D08A	Wollman Farm,	1.99	104		Pb	12 13 58.9	-1.0
D08A				IAML		12 14 25.8	
	comp=E,11nm,2.3s						
D08A				IAML		12 14 28.4	
	comp=N,15nm,2.3s						
REDWA	Red Mountain	2.03	128		Pb	12 13 60.0	-0.5
F07A	Phinny Hill Vi	2.09	143	Pn	Pn	12 13 58.6	+0.3
F07A				IAML		12 14 24.0	
	comp=N,15nm,5.0s						
F07A				IAML		12 14 29.9	
	comp=E,16nm,1.2s						
C09A	Chrisman Ranch	2.36	83	Pn	Pn	12 14 02.9	+0.8
E09A	Wood Farm, Sta	2.68	112	Pn	Pn	12 14 08.1	+1.6
E09A				IAML		12 15 31.6	
	comp=E,12nm,4.5s						
E09A				IAML		12 15 48.5	
	comp=N,13nm,4.8s						
G08A	Pilot Rock	2.98	139	Pn	Pn	12 14 12.9	+2.1
G08A				IAML		12 14 45.7	
	comp=E,10nm,4.6s						
G08A				IAML		12 14 52.0	
	comp=N,8.6nm,4.7s						
F10A	Beach Ranch, E	3.49	116	Pn	Pn	12 14 17.8	0.0
I02E	Swisshome, OR	3.76	204	P	Pn	12 14 21.1	-0.2
	baz=23,SNR=18						

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*IDC **26** 12:33:12.9±3.0, 8°.83S×119°.05E, h114km±26km, mb3.7/8, mb1 3.8/11, mb1mx3.3/47, mbtmp4.1/11, Error ellipse: s-maj=44.0km s-min=11.3km az=63.0*

*NEIC **26** 12:33:12.7±1.8, 8°.9S±0°.1×119°.04E±0°.07, h109km±8km, mb4.1/13, Error ellipse: s-maj=16.4km s-min=10.6km az=191.0*

*DJA **26** 12:33:13.3±0.2, 9°S±2°×11°9E±°, h87km±5km, M4.5/25, mb4.5/9, mB4.8/2, MLv4.5/25, Mw(mB)4.1/2*

ISC 26 12:33:11.8±0.5, **8°.92S**±0°.04×**119°.05E**±0°.03, **h102**km, **n64**, σ**1s60**/77, **mb4.1**/10, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	0.79	155	P	Pn	12 33 30.4	0.0
WBSI				S	Sn	12 33 44.4	+0.1
BASI	Baing, Sumba	1.99	131	P	Pn	12 33 46.6	+2.3
BASI				S	Sn	12 34 11.5	+2.4
TWSI	Taliwang, Sumb	2.15	275	P	Pn	12 33 48.3	+1.9
TWSI				S	Sn	12 34 15.0	+2.1
EDFI	Ende, Flores	2.62	87	P	Pn	12 33 53.7	+1.0
EDFI				S	Sn	12 34 25.5	+1.5
BSSI	Bau Bau, Buton	3.11	28	P	Pn	12 34 00.2	+1.1
BSSI				S	Sn	12 34 35.5	0.0
MMRI	Maumere	3.17	85	P	Pn	12 34 01.5	+1.6
MMRI				S	Sn	12 34 40.1	+3.2
MMRI	Maumere	3.17	85		Pn	12 34 01.2	+1.4
BKSI	Bulukumba	3.73	17	P	Pn	12 34 08.9	+1.5
BKSI				S	Sn	12 34 49.7	-0.8
DNP	Denpasar	3.80	273	P	Pn	12 34 12.2	+3.8
IGBI	Denpasar	3.86	271	P	Pn	12 34 10.8	+1.7
IGBI				S	Sn	12 34 54.7	+1.1
SRBI	Singaraja	3.88	282	P	Pn	12 34 10.8	+1.3
SRBI				S	Sn	12 34 54.6	+0.4
KAPI	Kappang	3.94	10	P	Pn	12 34 11.9	+1.6
	8.6nm,0.3s,baz=192,slow=11,SNR=22						
KAPI				S	Sn	12 34 55.3	-0.3
	21nm,0.3s,baz=282,slow=23,SNR=15						
BNSI	Bone	4.61	13	P	Pn	12 34 20.4	+1.1
BATI	Baumata	4.73	106	P	Pn	12 34 22.3	+1.4
	27nm,0.3s,baz=226,slow=2.5,SNR=27						
BATI	Baumata	4.73	106	P	Pn	12 34 21.5	+0.6
BATI				S	Sn	12 35 13.5	-1.2
JAGI	Jajag, Banyuwa	4.86	275	P	Pn	12 34 21.8	-0.9
JAGI				S	Sn	12 35 16.3	-1.6
JAGI	Jajag, Banyuwa	4.86	275	Pn	Pn	12 34 22.1	-0.6
BBSI	Bau Bau	4.88	46	P	Pn	12 34 25.1	+2.1
ABJI	Asem Bagus	4.89	283	P	Pn	12 34 26.1	+3.0
SPSI	Sidrap Palu	4.97	8	P	Pn	12 34 27.0	+2.7
SOEI	Soe	5.22	100	P	Pn	12 34 29.3	+1.6
	0.5nm104nm,0.7s						
SOEI	Soe	5.22	100		Pn	12 34 29.5	+1.8
BLJI	Banyuglugur	5.52	282	P	Pn	12 34 34.4	+2.7
	0.3nm38nm,0.5s						
GMJI	Gumukmas	5.58	276	P	Pn	12 34 31.8	-0.6
TTSI	Tana Toraja	5.89	8	P	Pn	12 34 40.1	+3.5
	0.1nm924nm12nm,0.5s						
KBKI	Kotabaru	6.27	333	P	Pn	12 34 43.4	+1.5
	0.1nm22nm,0.5s						
BBKI	Banjar Baru	6.85	322	P	Pn	12 34 54.3	+4.6
	0.2nm28nm,0.9s						
PCJI	Pacitan	7.82	275	P	Pn	12 35 02.6	-0.3
	0.3nm37nm,1.3s						
UGM	Wanagama	8.49	276	P	Pn	12 35 11.8	-0.3
UGM	Wanagama	8.49	276	Pn	Pn	12 35 16.1	+4.0
FITZ	Fitzroy Crossi	11.15	146	P	Pn	12 35 46.7	-1.5
	0.5nm,0.3s,baz=333,slow=12,SNR=12						
KNRA	Kununurra	11.62	126	Pn	Pn	12 35 53.3	-1.3
MTN	Manton Dam	12.49	109		Pn	12 36 04.4	-1.6
PSA00	Pilbara Seismi	12.61	177	Pn	Pn	12 36 09.0	+1.5
GIRL	Giralia	14.41	198		P	12 36 33.6	-1.3
FAKI	Fak Fak	14.41	66	Pn	Pn	12 36 30.5	-0.7
WB0	Warramunga Arr	18.35	128	P	P	12 37 18.5	0.0
WB0				IAmb	IAmb	12 37 45.7	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	18.40	128	P	P	12 37 19.2	0.0
	comp=Z,0.9nm,0.3s,baz=290,slow=11,SNR=28						
WRA	Warramunga Arr	18.40	128	P	P	12 37 18.3	-0.9
WB2	Warramunga Arr	18.41	128	P	P	12 37 19.4	+0.2
WB2				IAmb	IAmb	12 37 21.7	
	comp=Z,6.4nm,0.7s						
WR0	Warramunga Arr	18.57	128	P	P	12 37 20.9	0.0
WR0				IAmb	IAmb	12 37 24.0	
	comp=Z,11nm,0.8s						
AS31	Alice Springs	20.42	138	P	P	12 37 41.8	+0.7
ASAR	Alice Springs	20.42	138	P	P	12 37 41.8	+0.7
	comp=Z,3.6nm,0.6s,baz=316,slow=11,SNR=116						
ASAR				ScP	ScP	12 45 16.2	-0.8
	comp=Z,0.8nm,0.7s,baz=326,slow=1.7,SNR=5.8						
ASAR	Alice Springs	20.42	138	P	P	12 37 41.5	+0.5
COEN	Coen	24.16	104	P	P	12 38 18.7	-0.1
BBOO	Buckleboo	28.51	149	P	P	12 38 58.1	+0.3
STKA	Stephens Creek	30.98	141	P	P	12 39 20.6	+0.9
	comp=Z,2.5nm,0.4s,baz=318,slow=8.7,SNR=15						
STKA	Stephens Creek	30.98	141	P	P	12 39 20.4	+0.7
CMAR	Chiang Mai Arr	33.67	324	P	P	12 39 43.3	+0.1
	comp=Z,0.7nm,0.5s,baz=155,slow=6.5,SNR=4.4						
SONM	Songino Array	57.61	350	P	P	12 42 51.0	-0.2
	comp=Z,1.1nm,0.6s,baz=168,slow=8.2,SNR=15						
SONM	Songino Array	57.61	350	P	P	12 42 50.8	-0.5
SONM				IAmb	IAmb	12 42 52.2	
	comp=Z,2.8nm,1.3s						
MK31	Makanchi Array	64.41	333	P	P	12 43 36.3	-0.8
MK31				IAmb	IAmb	12 43 36.4	
	comp=Z,3.7nm,1.3s						
MKAR	Makanchi Array	64.41	333	P	P	12 43 36.3	-0.9
	comp=Z,1.9nm,0.5s,baz=156,slow=6.8,SNR=29						
MKAR	Makanchi Array	64.41	333	P	P	12 43 36.0	-1.1
BOOM	Boomskoye usch	64.54	326	P	P	12 43 37.5	-0.7
BOOM				IAmb	IAmb	12 43 53.2	
	comp=Z,1.8nm,1.1s						
MAKZ	Makanchi	64.56	333	P	P	12 43 37.1	-1.1
AAK	Ala-Archa	65.44	325	P	P	12 43 44.0	-0.1
	comp=Z,1.1nm,0.6s,baz=141,slow=6.4,SNR=4.8						
KURBB	Kurchatov Arra	68.92	334	P	P	12 44 04.3	-1.4
	comp=Z,0.6nm,0.5s,baz=142,slow=5.8,SNR=7.0						
ZALV	Zalesovo Beam	68.98	339	P	P	12 44 04.2	-1.8
	comp=Z,1.7nm,0.6s,baz=142,slow=5.5,SNR=11						
ZALV	Zalesovo Beam	68.98	339	P	P	12 44 04.4	-1.6
VNDA	Vanda	72.06	171	P	P	12 44 25.4	+1.0
VNDA				IAmb	IAmb	12 44 44.6	
	comp=Z,5.3nm,1.4s						
ABKAR	Akbulak array	77.52	325	P	P	12 44 55.6	-0.7
TORD	Torodi Ar. Bea	118.49	280	PKP	PKPdf	12 51 48.2	-0.5
	comp=Z,0.2nm,0.5s,baz=354,slow=1.5,SNR=1.7						
TORD	Torodi Ar. Bea	118.49	280		PKPdf	12 51 47.8	-0.9

SJA 26 12:41:37.5±0.6, **20°.97S**×**69°.19W**, **h112**km±6km, **ML4.0**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	IPOC Station P	0.29	254	*e*P	Pn	12 41 54.0	+0.4
PB01				IAML		12 42 08.1	
	comp=Z,57nm,0.1s						
PB08	IPOC Station P	0.82	2	*e*P	Pn	12 41 58.0	+0.4
PB09	IPOC Station P	0.83	183	*e*P	Pn	12 41 58.0	+0.6
PB09				IAML		12 42 15.2	
	comp=Z,28nm,0.5s						
PB07	IPOC Station P	1.00	220	*e*P	Pn	12 42 00.0	+0.9
TA01	Diego Aracena	1.01	293	*e*P	Pn	12 42 01.0	+2.0
PB03	IPOC Station P	1.20	206	*e*P	Pn	12 42 02.0	+0.8
PB03				IAML		12 42 22.6	
	comp=Z,19nm,0.2s						
PB11	IPOC Station P	1.27	340	*e*P	Pn	12 42 03.0	+0.9
LVC	Limon Verde	1.66	171	*e*P	Pn	12 42 08.0	+1.3
PB06	IPOC Station P	1.77	192	*e*P	Pn	12 42 09.0	+1.1
PB06				IAML		12 42 41.6	
	comp=Z,8.3nm,0.9s						
PB05	IPOC Station P	2.10	206	*e*P	Pn	12 42 13.0	+1.0
PB05				IAML		12 42 57.0	
	comp=Z,16nm,3.5s						
PB12	IPOC Station P	2.57	335	*e*P	Pn	12 42 19.0	+0.9
PB12				IAML		12 43 07.2	
	comp=Z,9.8nm,3.5s						
PB16	IPOC Station P	2.63	353	*e*P	Pn	12 42 21.0	+1.7
PB16				IAML		12 43 11.7	
	comp=Z,6.0nm,3.0s						
AC02	Maricunga	5.84	179	*e*P	Pn	12 43 02.0	-0.2
ACDV	Cuesta del Vie	9.17	180	*e*P	Pn	12 43 48.0	+1.1

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*SOME **26** 12:50:15.3, 47°.55N×80°.95E, h0km*

*NNC **26** 12:50:19.2±0.5, 47°.33N×81°.57E, h0km, mb3.0, mpv2.2, Error ellipse: s-maj=2.9km s-min=2.3km az=73.0*

ISC 26 12:50:20.7±1.1, **47°.29N**±0°.06×**81°.61E**±0°.05, **h10**km, **n6**, σ**1s25**/10, **5C-3D**, **Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAKZ	Makanchi	0.54	152	⇑P	Pg	12 50 30.8	-0.5
	1.0nm,0.3s						
MAKZ				⇑S	Sg	12 50 39.2	+0.7
	3.0nm,0.3s						
MK31	Makanchi Array	0.68	137	⇓P	Pg	12 50 33.5	-0.3
	0.7nm,0.2s,baz=318,slow=16,SNR=109						
MK31				⇑S	Sb	12 50 43.4	-0.8
	2.8nm,0.3s,baz=317,slow=29,SNR=6.3						
ZSN	Zaisan	2.22	85	*e*P	Pb	12 50 59.7	-1.2
	2.1nm,0.5s						
ZSN				*e*S	Sg	12 51 34.4	+2.4
	5.7nm,0.5s						
KAPS	Kapalarasan	2.54	219	*e*P	Pn	12 51 02.9	+0.9
	0.8nm,0.2s						
KAPS				*e*S	Sb	12 51 37.9	+0.1
	8.6nm,0.4s						
KURBB	Kurchatov Arra	3.90	330	⇓Pg	Pb	12 51 29.3	-0.3
	1.4nm,0.9s						
KURBB				⇓Lg	Lg	12 52 21.2	
	3.4nm,0.4s						
KURK	Kurchatov	3.95	331	⇑Pg	Pb	12 51 29.3	-1.2
	0.9nm,0.7s						
KURK				⇑Lg	Lg	12 52 23.9	
	3.7nm,0.6s						

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*RSNC **26** 13:04:59.7±0.9, 6°.84N×73°.13W, h151km±3km, ML4.2, Mw4.1, Fault plane solution: NP1:φs38.00000°, δ36.00000°, λ154.00000°.*

*IDC **26** 13:04:59.5±1.2, 6°.75N×72°.98W, h167km±14km, mb3.5/6, mb1 3.8/9, mb1mx3.5/30, mbtmp4.0/9, Error ellipse: s-maj=19.9km s-min=17.1km az=154.0*

ISC 26 13:04:58.7±0.7, **6°.83N**±0°.03×**73°.11W**±0°.03, **h159**km±5km, n55,σ1ˢ48/97,mb3.7/6,4C-3D,Northern Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.25	198⇑	eP	Pn	13 05 20.1	-0.4
BARC				eS	Sn	13 05 35.4	-1.7
BARC				i		13 05 37.7	
	comp=Z,3µm,0.2s						
PAMC	Pamplona, Colo	0.65	38⇓	eP	Pn	13 05 23.0	+0.6
PAMC				eS	Sn	13 05 40.2	-0.3
PAMC				i		13 05 42.3	
	comp=Z,5µm,0.5s						
BRRC	Barranca, Sant	0.66	295⇑	iP	Pn	13 05 21.9	0.0
BRRC				eS	Sn	13 05 38.9	-0.7
BRRC				i		13 05 42.9	
	comp=Z,3µm,0.3s						
RUSC	La Rusia	0.93	179⇑	eP	Pn	13 05 24.2	-0.1
RUSC				eS	Sn	13 05 43.1	-0.9
RUSC				i		13 05 44.0	
	comp=Z,3µm,0.3s						
TAMC	Tame, Arauca	1.36	107⇓	eP	Pn	13 05 28.6	+1.0
TAMC				eS	Sn	13 05 50.0	+0.2
PTBC	PUERTO BERRIO,	1.37	258	eP	Pn	13 05 26.6	-1.0
PTBC				eS	Sn	13 05 47.5	-2.4
PTBC				i		13 05 54.9	
	comp=Z,2µm,0.4s						
OCAC	Ocana	1.42	351	eP	Pn	13 05 28.1	-0.1
OCAC				eS	Sn	13 05 50.3	-0.8
OCAC				i		13 05 56.6	
	comp=Z,3µm,0.3s						
SPBC	San Pablo de B	1.51	219	eP	Pn	13 05 28.9	-0.3
SPBC				eS	Sn	13 05 51.4	-1.2
SPBC				i		13 05 53.7	
	comp=Z,3µm,0.3s						
ZARC	Zaragoza, Cauc	1.86	291	eP	Pn	13 05 32.4	-0.4
ZARC				eS	Sn	13 05 58.5	-0.6
ZARC				i		13 06 06.9	
	comp=Z,1µm,0.2s						
NORC	Norcasia	2.16	234	eP	Pn	13 05 36.0	-0.3
NORC				eS	Sn	13 06 04.5	-0.7
NORC				i		13 06 11.9	
	comp=Z,2µm,0.2s						
SMLC	San Martn de	2.18	334	eP	Pn	13 05 36.4	0.0
SMLC				eS	Sn	13 06 04.9	-0.8
SMLC				i		13 06 08.5	
	comp=Z,2µm,0.3s						
CHIC	Chingaza	2.27	196	eP	Pn	13 05 38.0	0.0
CHIC				eS	Sn	13 06 07.5	-0.7
CHIC				i		13 06 11.1	
	comp=Z,1µm,0.5s						
ROSC	El Rosal	2.32	212	P	Pn	13 05 39.7	+1.3
	comp=Z,636nm,0.3s,baz=77,slow=16,SNR=264						
ROSC				S	Sn	13 06 11.2	+2.1
	comp=Z,424nm,0.3s,baz=21,slow=23,SNR=18						
ROSC	El Rosal	2.32	212	eP	Pn	13 05 39.8	+1.3
ROSC				eS	Sn	13 06 11.2	+2.1
ROSC				i		13 06 18.4	
	comp=Z,2µm,0.3s						
HELC	Santa Helena	2.49	255	eP	Pn	13 05 41.2	+0.7
HELC				eS	Sn	13 06 12.2	-0.5
HELC				i		13 06 17.7	
	comp=Z,872nm,0.4s						
UREC	San Jos de Ur	2.58	291	eP	Pn	13 05 39.8	-1.4
UREC				eS	Sn	13 06 12.4	-1.7
UREC				i		13 06 24.7	
	comp=Z,985nm,0.2s						
SOCV	Socops	2.66	57	eP	Pn	13 05 42.0	-0.2
SOCV				eS	Sn	13 06 14.4	-1.5
LL1C	La Loma 1 Cana	2.73	351	eP	Pn	13 05 44.7	+1.7
LL1C				eS	Sn	13 06 20.8	+3.3
LL1C				i		13 06 26.0	
	comp=Z,3µm,0.3s						
GUY2C	Guyana, Caldas	2.75	235	eP	Pn	13 05 44.8	+1.0
GUY2C				eS	Sn	13 06 19.1	+0.3
GUY2C				i		13 06 30.3	
	comp=Z,1µm,0.5s						
VILC	Villavicencio,	2.76	192	eP	Pn	13 05 43.3	-0.3
VILC				eS	Sn	13 06 18.4	0.0
PTGC	Puerto Gaitan,	2.79	160	eP	Pn	13 05 43.7	-0.1
PTGC				eS	Sn	13 06 16.7	-2.0
PTGC				i		13 06 21.6	
	comp=Z,2µm,0.3s						
LL6C	La Loma 6 Bece	2.89	357	eP	Pn	13 05 44.9	-0.2
LL6C				eS	Sn	13 06 20.0	-1.1
LL6C				i		13 06 22.8	
	comp=Z,333nm,0.4s						
CBOC	Ciudad Bolivar	3.04	252	eP	Pn	13 05 47.8	+0.7
CBOC				eS	Sn	13 06 23.9	-0.7
CBOC				i		13 06 35.2	
	comp=Z,291nm,0.4s						
DBBC	Dabeiba	3.09	274⇓	iP	Pn	13 05 47.5	-0.1
DBBC				eS	Sn	13 06 23.3	-2.1
SDV	Santo Domingo	3.19	50	eP	Pn	13 05 49.6	+0.7
SDV				eS	Sn	13 06 27.8	-0.2
SDV				i		13 06 30.4	
	comp=Z,392nm,0.3s						
ARGC	Ariguani, Magd	3.21	340	eP	Pn	13 05 50.2	+1.0
ARGC				eS	Sn	13 06 27.5	-0.8
ARGC				i		13 06 40.5	
	comp=Z,390nm,0.3s						
ANIL	Santa Ana	3.26	225	eP	Pn	13 05 50.6	+0.6
ANIL				eS	Sn	13 06 30.1	+0.4
PRAC	Prado	3.57	210	eP	Pn	13 05 54.1	+0.4
PRAC				eS	Sn	13 06 36.7	+0.3
PRAC				i		13 06 44.4	
	comp=Z,587nm,0.4s						
ORTC	Ortega, Tolima	3.60	216	eP	Pn	13 05 54.4	+0.3
ORTC				eS	Sn	13 06 38.2	+1.0
ORTC				i		13 06 41.5	
	comp=Z,497nm,0.3s						
SJCC	San Jacinto, C	3.67	326	eP	Pn	13 05 53.7	-1.4
SJCC				eS	Sn	13 06 35.7	-3.2
SJCC				i		13 06 43.0	
	comp=Z,255nm,0.2s						
PLMC	San Jos del P	3.69	239	eP	Pn	13 05 55.4	+0.1
PLMC				eS	Sn	13 06 38.7	-0.7
PLMC				i		13 06 44.2	
	comp=Z,375nm,0.7s						
LCBC	Los crdobas,	3.81	302	eP	Pn	13 05 56.3	-0.4
LCBC				eS	Sn	13 06 41.5	-0.3
LCBC				i		13 06 50.9	
	comp=Z,297nm,0.4s						
CRJC	Cerrejon, Guaj	4.17	3	eP	Pn	13 06 00.4	-1.1
CRJC				eS	Sn	13 06 47.8	-2.7
CRJC				i		13 06 52.6	
	comp=Z,440nm,0.2s						
GUVC	San Jose del G	4.28	174	eP	Pn	13 06 02.0	-0.9
GUVC				eS	Sn	13 06 51.3	-1.7
GUVC				i		13 06 56.1	
	comp=Z,689nm,0.6s						
YOTC	Yotoco, Valle	4.29	229	eP	Pn	13 06 02.6	-0.5
YOTC				eS	Sn	13 06 55.0	+1.8
YOTC				i		13 07 04.8	
	comp=Z,210nm,0.9s						
SMRC	Santa Marta, M	4.45	346	eP	Pn	13 06 04.3	-0.7
SMRC				eS	Sn	13 06 52.9	-3.9
SMRC				i		13 06 56.5	
	comp=Z,266nm,0.5s						
PTAC	Punta Ardita,	4.68	274	eP	Pn	13 06 06.5	-1.5
PTAC				eS	Sn	13 06 58.9	-3.3
MACC	Macarena, Meta	4.71	189	eP	Pn	13 06 06.9	-1.6
MACC				eS	Sn	13 06 56.2	-6.9
MACC				i		13 07 05.7	
	comp=Z,264nm,0.8s						
BETC	Betania	4.73	210	eP	Pn	13 06 08.2	-0.6
BETC				eS	Sn	13 06 52.5	-11
BETC				i		13 07 05.7	
	comp=Z,103nm,0.5s						
MARP	Paez Belalcaza	4.87	216	eP	Pn	13 06 11.1	+0.2
MARP				eS	Sn	13 07 04.2	-3.0
PCON	Cinco Dias	5.54	216	eP	Pn	13 06 21.0	+1.0
POPC	Popayan, Colom	5.55	220	eP	Pn	13 06 19.6	-0.2
POPC				eS	Sn	13 07 20.8	-2.4
FLOC	Florencia	5.80	206	eP	Pn	13 06 22.3	-0.6
FLOC				eS	Sn	13 07 29.0	+0.2
FLOC				i		13 08 00.1	
	comp=Z,55nm,0.4s						
SOTA	Rioblanco	5.83	217⇑	eP	Pn	13 06 24.4	+0.7
SOTA				i		13 07 47.5	
	comp=Z,49nm,0.6s						
PCRV	Puerto La Cruz	9.01	68	P	Pn	13 07 05.8	+0.2
	comp=Z,1.6nm,0.3s,baz=270,slow=3.4,SNR=14						
PTGA	Pitinga	15.11	119	P	Pn	13 08 23.3	-0.9
	comp=Z,0.4nm,0.3s,baz=318,slow=22,SNR=2.1						
TXAR	Lajitas Array	36.47	312	P	P	13 11 49.8	+1.1
	comp=Z,1.6nm,0.6s,baz=126,slow=9.3,SNR=23						
TXAR				PcP	PcP	13 14 11.2	+1.9
	comp=Z,0.2nm,0.6s,baz=120,slow=5.5,SNR=3.6						
PDAR	Pinedale Array	48.08	324	P	P	13 13 23.2	+0.7
	comp=Z,0.5nm,0.5s,baz=126,slow=8.8,SNR=10						
SCHQ	Schefferville	48.13	5	P	P	13 13 23.5	+1.0
	comp=Z,5.9nm,0.6s,baz=217,slow=6.6,SNR=10						
NVAR	Mina Array Bea	51.49	315	P	P	13 13 49.3	+1.0
	comp=Z,0.6nm,0.6s,baz=120,slow=7.5,SNR=5.6						
YKA	Yellowknife Ar	63.26	340	P	P	13 15 10.6	+0.6
	comp=Z,1.2nm,0.6s,baz=133,slow=6.6,SNR=27						
TORD	Torodi Ar. Bea	73.72	78	P	P	13 16 14.8	-1.1
	comp=Z,0.1nm,0.3s,baz=283,slow=6.4,SNR=2.0						
MKAR	Makanchi Array	122.31	20	PKP	PKPdf	13 23 33.7	-1.4
	comp=Z,0.2nm,0.4s,baz=345,slow=2.5,SNR=4.5						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	13 24 28.6	-0.6
	comp=Z,1.3nm,0.5s,baz=118,slow=3.8,SNR=5.8						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	13 24 32.0	-0.2
	comp=Z,1.1nm,0.4s,baz=109,slow=2.8,SNR=8.0						

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*IDC **26** 13:08:55.1±1.6, 7°65S×13°62W, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.6/31, mbtmp3.7/3, MS3.5/8, Ms1 3.5/8, ms1mx3.2/30, Error ellipse: s-maj=62.9km s-min=17.8km az=141.0*

ISC 26 13:08:56.7±1.2,**7°7S**±0°1×**13°7W**±0°1,**h10**km,**n15**,σ**0ˢ73**/8,**mb3.8**/3,**MS3.6**/7,**Ascension Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H10N1	ASCENSION HYDR	0.84	257	Pn	Pn	13 09 14.2	-0.2
H10N1				T	T	13 10 32.5	
	baz=79,slow=74,SNR=3671						
H10N2	ASCENSION HYDR	0.84	258	Pn	Pn	13 09 14.3	-0.1
H10N2				T	T	13 10 29.0	
	baz=79,slow=74,SNR=2744						
H10N3	ASCENSION HYDR	0.86	257	Pn	Pn	13 09 14.5	-0.1
H10N3				T	T	13 10 30.7	
	baz=79,slow=74,SNR=3639						
H10S2	ASCENSION HYDR	1.63	217	Pn	Pn	13 09 25.2	-0.1
H10S2				T	T	13 11 15.4	
	baz=177,slow=74,SNR=28						
H10S3	ASCENSION HYDR	1.64	218	Pn	Pn	13 09 25.3	-0.1
H10S3				T	T	13 11 24.1	
	baz=43,slow=74,SNR=374						
DBIC	Dimbokro	16.71	32	LR	LR	13 17 38.5	
	comp=Z,143nm,20.4s,baz=208,slow=31						
TORD	Torodi Ar. Bea	25.68	37	P	P	13 14 25.8	-1.3
	2.6nm,1.1s,baz=222,slow=8.3,SNR=6.2						
TORD				LR	LR	13 22 59.2	
	comp=Z,70nm,20.8s,baz=240,slow=33						
BOSA	Boshof	42.17	125	LR	LR	13 31 18.7	
	comp=Z,53nm,18.9s,baz=190,slow=32						
CPUP	Villa Florida	45.44	240	LR	LR	13 34 47.8	
	comp=Z,61nm,18.4s,baz=64,slow=34						
KMBO	Kilima Mbogo	51.13	85	LR	LR	13 37 56.4	
	comp=Z,65nm,19.6s,baz=100,slow=34						
LPAZ	La Paz	53.84	255	LR	LR	13 38 52.5	
	comp=Z,39nm,21.8s,baz=110,slow=33						
PLCA	Paso Flores	60.17	227	LR	LR	13 44 01.3	
	comp=Z,46nm,18.1s,baz=136,slow=35						
GERES	GERESS Array B	61.16	20	P	P	13 19 12.4	+0.9
	0.5nm,0.6s,baz=215,slow=4.4,SNR=4.1						
SNAA	Sanae	64.31	176	LR	LR	13 40 18.8	
	comp=Z,44nm,19.9s,baz=3.0,slow=29						
AKASG	Malin Array Be	68.91	28	P	P	13 20 01.9	+0.2
	0.2nm,0.3s,baz=231,slow=7.2,SNR=4.0						

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*IDC **26** 13:12:19.0±1.7, 7°30S×128°65E, h155km±16km, mb3.4/5, mb1 3.7/8, mb1mx3.4/33, mbtmp4.1/8, MS2.4/1, Ms1 2.4/1, ms1mx2.2/21, Error ellipse: s-maj=20.0km s-min=13.2km az=113.0*

ISC 26 13:12:17.9±0.7,**7°42S**±0°07×**128°79E**±0°10,**h150**km,**n11**,σ**1ˢ53**/13,**mb3.7**/5,**Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.77	241	P	Pn	13 13 42.9	+1.2
	12nm,0.3s,baz=307,slow=4.1,SNR=22						
BATI				S	Sn	13 14 46.6	-0.6
	30nm,0.3s,baz=58,slow=4.8,SNR=10.0						
SIJI	Sorong	6.96	21	P	Pn	13 13 59.1	+1.5
	2.5nm,0.3s,baz=170,slow=23,SNR=23						
SIJI				S	Sn	13 15 14.2	-1.5
	1.7nm,0.3s,baz=94,slow=23,SNR=7.0						
SIJI				LR	LR	13 17 39.1	
	comp=Z,28nm,18.4s,baz=240,slow=46						
FITZ	Fitzroy Crossi	11.04	196	P	Pn	13 14 50.2	-1.6
FITZ				S	Sn	13 16 44.5	-10
	5.5nm,0.3s,baz=114,slow=23,SNR=6.4						
WRA	Warramunga Arr	13.56	157	P	Pn	13 15 23.1	-1.2
	3.6nm,0.3s,baz=339,slow=13,SNR=120						
WRA				S	Sn	13 17 45.8	-8.8
	8.3nm,0.3s,baz=331,slow=22,SNR=8.5						
ASAR	Alice Springs	16.88	164	P	P	13 16 06.3	+1.2
	3.6nm,0.3s,baz=332,slow=11,SNR=453						
ASAR				S	S	13 19 01.9	-11
	0.8nm,0.3s,baz=338,slow=18,SNR=5.7						
STKA	Stephens Creek	27.10	156	P	P	13 17 49.8	+3.0
	1.2nm,0.6s,baz=338,slow=9.0,SNR=4.1						
CMAR	Chiang Mai Arr	39.10	311	P	P	13 19 30.4	-0.5
	0.7nm,0.7s,baz=143,slow=7.4,SNR=6.5						
SONM	Songino Array	58.47	342	P	P	13 21 58.1	-0.2
	0.7nm,0.8s,baz=157,slow=6.8,SNR=3.9						
MKAR	Makanchi Array	67.93	327	P	P	13 23 00.2	-0.4
	1.3nm,0.7s,baz=126,slow=7.9,SNR=11						
ZALV	Zalesovo Beam	71.44	334	P	P	13 23 20.4	-1.4
	0.9nm,0.5s,baz=104,slow=5.0,SNR=6.4						
LPAZ	La Paz	151.09	145	PKPbc	PKPbc	13 31 55.2	+0.1
	0.3nm,0.4s,baz=0.0,slow=2.0,SNR=3.8						

IDC 26 13:21:46.9±2.2,**15°48S**×**175°92W**,**h0**km,**mb3.9**/3,**mb1 4.2**/4,**mb1mx3.8**/27,**mbtmp3.9**/4,**ML3.6**/1,**MS3.5**/12,**Ms1 3.5**/12,**ms1mx3.3**/37,**Error ellipse: s-maj=216.6km s-min=26.1km az=157.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.30	69	Pn	Pn	13 22 52.7	-0.9
	3.2nm,0.3s,baz=200,slow=3.0,SNR=5.3						
AFI				Sn	Sn	13 23 38.7	-5.8
	2.8nm,0.3s,baz=125,slow=20,SNR=2.2						
AFI				LR	LR	13 24 27.1	
	comp=Z,321nm,19.3s,baz=293,slow=37						
MSVF	Nonsavu	6.21	248	LR	LR	13 25 25.8	
	comp=Z,260nm,19.7s,baz=53,slow=35						
RAR	Rarotonga	16.35	113	LR	LR	13 30 51.0	
	comp=Z,122nm,18.9s,baz=280,slow=33						
HNR	Honiara	24.31	281	LR	LR	13 35 05.7	
	comp=Z,184nm,19.7s,baz=134,slow=33						
PAE	Paea	25.33	99	eT	T	13 53 26.6	
	1.1nm,0.3s						
PPT	Papeete	25.33	98	LR	LR	13 34 42.7	
	comp=Z,53nm,20.5s,baz=254,slow=31						
PPT2	Papeete2	25.33	98	eLR	LR	13 33 37.3	
	comp=Z,193nm,26.5s						
TBI	Tubuai	26.12	112	eLR	LR	13 34 06.2	
	comp=Z,262nm,26.8s						
TAOE	Nuku Hiva Isla	35.54	84	eLR	LR	13 38 09.1	
	comp=Z,100nm,30.0s						
PMG	Port Moresby	36.52	275	LR	LR	13 42 17.9	
	comp=Z,74nm,18.2s,baz=84,slow=34						
H11N3	WAKE ISLAND Hy	38.84	334	T	T	14 09 26.5	
	baz=152,slow=76,SNR=3.9						
H11N1	WAKE ISLAND Hy	38.84	334	T	T	14 09 43.5	
	baz=152,slow=76,SNR=8.0						
H11N2	WAKE ISLAND Hy	38.85	334	T	T	14 09 31.2	
	baz=152,slow=76,SNR=5.9						
WRA	Warramunga Arr	47.46	257	P	P	13 30 23.1	-0.8
	1.2nm,0.8s,baz=92,slow=7.6,SNR=4.6						
WRA				LR	LR	13 49 10.2	
	comp=Z,92nm,19.2s,baz=220,slow=35						
ASAR	Alice Springs	47.78	252	P	P	13 30 26.7	+0.3
	3.7nm,0.7s,baz=84,slow=8.1,SNR=59						
ASAR				LR	LR	13 48 24.0	
	comp=Z,26nm,21.6s,baz=112,slow=33						
KSRS	Korea Array	74.53	317	LR	LR	14 02 35.4	
	comp=Z,17nm,19.5s,baz=355,slow=33						
LEM	Lembang	75.20	267	LR	LR	14 08 44.5	
	comp=Z,40nm,18.5s,baz=199,slow=38						
USRK	Ussuriysk Ar.	76.01	324	LR	LR	14 00 35.2	
	comp=Z,55nm,20.5s,baz=141,slow=31						
PDAR	Pinedale Array	83.95	43	P	P	13 34 20.1	+0.8
	0.6nm,0.8s,baz=186,slow=3.3,SNR=2.1						
H03S2	Juan Fernandez	87.17	124	T	T	15 11 03.0	
	baz=248						
H03S1	Juan Fernandez	87.19	124	T	T	15 11 07.8	
	baz=248						
H03S3	Juan Fernandez	87.19	124	T	T	15 11 06.6	
	baz=248						
H03N2	Juan Fernandez	87.28	124	T	T	15 11 13.0	
	baz=258,slow=72,SNR=32						
H03N3	Juan Fernandez	87.28	124	T	T	15 11 06.3	
	baz=258,slow=72,SNR=25						
H03N1	Juan Fernandez	87.30	124	T	T	15 11 14.6	
	baz=258,slow=72,SNR=22						
CMAR	Chiang Mai Arr	90.34	289	LR	LR	14 11 22.2	
	comp=Z,22nm,19.5s,baz=188,slow=33						
BRTR	Keskin Array B	144.65	319	PKP	PKPbc	13 41 24.9	0.0
	2.5nm,0.8s,baz=33,slow=3.7,SNR=6.0						

WEL 26 13:27:18.9±1.1,**36°S**±12°×**17°9E**±1°4,**h200**km±17km,**M3.4**/13,**ML3.7**/15,**MLv3.4**/13,**Error ellipse: s-maj=0.0km s-min=0.0km az=89.2,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.02	186	P	Pn	13 27 57.5	-0.1
MXZ				S	Sn	13 28 27.5	-0.4
WMGZ	Waiomatatini S	2.27	183	P	Pn	13 28 00.9	+0.7
WMGZ				S	Sn	13 28 33.4	+0.8
HAZ	Te Kaha	2.29	196	P	Pn	13 28 00.2	-0.2
HAZ				S	Sn	13 28 33.6	+0.6
PKGZ	Pakihiroa	2.37	189	P	Pn	13 28 01.6	+0.3
PKGZ				S	Sn	13 28 35.0	+0.4
RUGZ	Raukumara Rang	2.52	196	P	Pn	13 28 02.6	-0.4
RUGZ				S	Sn	13 28 37.2	-0.4
PUZ	Puketiti	2.53	186	P	Pn	13 28 03.1	0.0
PUZ				S	Sn	13 28 36.6	-1.2
KUZ	Kuaotunu	2.59	242	P	Pn	13 28 02.8	-1.0
TWGZ	Tauwhareparae	2.67	190	P	Pn	13 28 05.3	+0.7
TWGZ				S	Sn	13 28 41.0	+0.5
OPRZ	Ohinepanea	2.81	215	P	Pn	13 28 07.4	+1.2
MWZ	Matawai	2.90	196	P	Pn	13 28 07.6	+0.2
TKGZ	Te Karaka	2.94	191	P	Pn	13 28 07.8	0.0
TKGZ				S	Sn	13 28 45.7	-0.5
CNGZ	Carnagh Statio	2.94	185	P	Pn	13 28 08.4	+0.6
URZ	Urewera	2.95	203	P	Pn	13 28 07.7	-0.1
RIGZ	Rimuhau	3.22	191	P	Pn	13 28 10.7	-0.4
RIGZ				S	Sn	13 28 52.7	+0.6
MUGZ	Murupara	3.26	206	P	Pn	13 28 11.7	+0.2
TOZ	Tahuroa Road	3.29	228	P	Pn	13 28 12.4	+0.5
RTZ	Ruatahuna	3.31	202	P	Pn	13 28 11.9	-0.4
SNGZ	Shannon Statio	3.37	197	P	Pn	13 28 13.0	0.0
SNGZ				S	Sn	13 28 56.2	+0.8
ALRZ	Allen Road	3.50	210	P	Pn	13 28 15.0	+0.6
KNZ	Kokohu	3.54	191	P	Pn	13 28 14.0	-0.9
RAHZ	Arahi	3.56	199	P	Pn	13 28 15.0	-0.3
RAHZ				S	Sn	13 29 00.1	+0.6
MTHZ	Maungataniwha	3.57	202	P	Pn	13 28 14.7	-0.7
MHGZ	Mahia Peninsul	3.64	188	P	Pn	13 28 15.9	-0.2
NMHZ	Naumai	3.81	201	P	Pn	13 28 17.5	-0.8
ARHZ	Aropaoanui	3.91	198	P	Pn	13 28 18.9	-0.6
ARHZ				S	Sn	13 29 07.5	+0.2
BKZ	Black Stump Fm	3.97	204	P	Pn	13 28 19.8	-0.5
BKZ				S	Sn	13 29 08.1	-0.5
MCHZ	McNeill Hill	4.16	200	P	Pn	13 28 21.9	-0.7
MCHZ				S	Sn	13 29 12.7	-0.2
NTVZ	North Tongarir	4.23	212	P	Pn	13 28 23.6	0.0
KWHZ	Kaweka Forest	4.23	203	P	Pn	13 28 22.6	-0.9
KWHZ				S	Sn	13 29 13.4	-1.0
TMVZ	Te Maari	4.23	212	P	Pn	13 28 23.5	-0.1
OTVZ	Oturere	4.29	212	P	Pn	13 28 24.2	-0.2
SNVZ	South Ngauruho	4.32	212	P	Pn	13 28 22.6	-2.1
BHHZ	Black Hill Sta	4.41	206	P	Pn	13 28 24.7	-1.1
BHHZ				S	Sn	13 29 17.2	-1.3
KRHZ	Kereru	4.45	202	P	Pn	13 28 24.6	-1.6
KRHZ				S	Sn	13 29 17.3	-2.0
WNVZ	Wahianoa	4.45	211	P	Pn	13 28 26.3	-0.1
PXZ	Pawanui	4.67	196	P	Pn	13 28 27.1	-1.9
PXZ				S	Sn	13 29 21.3	-3.1
PNHZ	Pukenui	4.74	203	P	Pn	13 28 28.4	-1.6
PNHZ				S	Sn	13 29 23.3	-2.8
PRHZ	Porangahau	4.95	197	P	Pn	13 28 31.1	-1.5
PRHZ				S	Sn	13 29 29.9	-0.9
TSZ	Takapari Road	4.95	204	P	Pn	13 28 31.1	-1.6
TSZ				S	Sn	13 29 28.8	-2.1
TIWZ	Tintock	5.63	201	P	Pn	13 28 39.1	-2.2
TIWZ				S	Sn	13 29 42.1	-4.5
OGWZ	Otaki Gorge	5.90	206	P	Pn	13 28 42.3	-2.5
OGWZ				S	Sn	13 29 48.2	-4.6
TMWZ	Te Maipa	5.94	200	P	Pn	13 28 43.1	-2.2
TMWZ				S	Sn	13 29 50.8	-2.9

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*WEL **26** 13:43:34.2±0.5, 33°S±8°×18°0E±2°0, h248km±14km, M3.7/20, mB4.1/10, ML4.7/14, MLv4.4/20, Mw(mB)3.2/10, Error ellipse: s-maj=0.0km s-min=0.0km az=112.3*

ISC 26 13:43:32.3±0.9,**32°70S**±0°06×**179°2E**±0°1,**h250**km,**n65**,σ**2ˢ51**/89,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.24	37	P	Pn	13 44 36.1	-2.9
GLKZ				S	S	13 45 25.6	-6.4
MXZ	Matakaoa Point	4.90	188	P	Pn	13 44 50.0	+3.2
MXZ				S	S	13 45 48.5	+2.4
WMGZ	Waiomatatini S	5.14	187	P	Pn	13 44 53.7	+3.9
WMGZ				S	S	13 45 55.9	+4.4
HAZ	Te Kaha	5.17	192	P	Pn	13 44 53.5	+3.4
HAZ				S	S	13 45 55.3	+3.1
PKGZ	Pakihiroa	5.25	190	P	Pn	13 44 55.0	+3.8
PKGZ				S	S	13 45 56.6	+2.5
OUZ	Omahuta	5.28	240	P	Pn	13 44 51.7	+0.3
RUGZ	Raukumara Rang	5.39	193	P	Pn	13 44 56.9	+4.0
RUGZ				S	S	13 46 00.3	+2.9
PUZ	Puketiti	5.41	188	P	Pn	13 44 55.4	+2.4
PUZ				S	S	13 45 59.2	+1.6
MWZ	Matawai	5.78	193	P	Pn	13 45 00.3	+2.7
MWZ				S	S	13 46 07.8	+1.9
URZ	Urewera	5.79	196	P	Pn	13 45 01.0	+3.2
MUGZ	Murupara	6.09	198	P	Pn	13 45 05.4	+4.0
MUGZ				S	S	13 46 16.1	+3.4
RIGZ	Rimuhau	6.10	190	P	Pn	13 45 05.9	+4.3
RIGZ				S	S	13 46 14.0	+0.9
RTZ	Ruatahuna	6.17	196	S	S	13 46 17.6	+2.9
SNGZ	Shannon Statio	6.25	193	P	Pn	13 45 06.3	+2.9
SNGZ				S	S	13 46 18.7	+2.3
ALRZ	Allen Road	6.29	201	P	Pn	13 45 08.7	+4.8
TLZ	Tolley Road	6.35	207	P	Pn	13 45 07.3	+2.6
KUTZ	Kaahu Road	6.39	204	P	Pn	13 45 12.3	+7.1
MTHZ	Maungataniwha	6.42	197	P	Pn	13 45 06.8	+1.1
MTHZ				S	S	13 46 24.0	+3.5
RAHZ	Arahi	6.43	195	P	Pn	13 45 08.1	+2.4
RAHZ				S	S	13 46 22.0	+1.5
MRHZ	Matea Rd	6.52	199	P	Pn	13 45 10.6	+3.7
NMHZ	Naumai	6.67	196	P	Pn	13 45 11.7	+3.0
ARHZ	Aropaoanui	6.78	195	P	Pn	13 45 12.8	+2.7
HIZ	Hauiti	6.78	210	P	Pn	13 45 15.4	+5.3
BKZ	Black Stump Fm	6.81	198	P	Pn	13 45 11.4	+0.9
BKZ	Black Stump Fm	6.81	198	P	Pn	13 45 13.3	+2.8
NTVZ	North Tongarir	6.99	203	P	Pn	13 45 17.8	+4.9
TMVZ	Te Maari	6.99	203	P	Pn	13 45 18.1	+5.3
MCHZ	McNeill Hill	7.02	196	P	Pn	13 45 17.0	+3.9
MCHZ				S	S	13 46 35.5	+1.4
OTVZ	Oturere	7.05	203	P	Pn	13 45 14.2	+0.6
WNVZ	Wahianoa	7.22	203	P	Pn	13 45 17.3	+1.5
BHHZ	Black Hill Sta	7.23	200	P	Pn	13 45 17.8	+2.0
BHHZ				S	S	13 46 38.7	-0.3
MOVZ	Moawhango	7.24	202	P	Pn	13 45 19.3	+3.3
MOVZ				S	S	13 46 39.8	+0.5
PKVZ	Pokaka	7.27	204	P	Pn	13 45 20.6	+4.2
KRHZ	Kereru	7.29	197	P	Pn	13 45 16.7	+0.1
KRHZ				S	S	13 46 39.7	-0.6
KAHZ	Kahuranaki	7.32	194	P	Pn	13 45 17.0	+0.1
KAHZ				S	S	13 46 41.6	+0.6
VRZ	Vera Road	7.34	208	P	Pn	13 45 23.0	+5.8
PXZ	Pawanui	7.55	194	P	Pn	13 45 20.3	+0.5
PXZ				S	S	13 46 44.4	-1.8
PKE	Pukeiti	7.72	212	P	Pn	13 45 29.8	+7.7
NEZ	North Egmont	7.74	211	P	Pn	13 45 29.3	+7.0
TSZ	Takapari Road	7.79	199	P	Pn	13 45 23.6	+0.8
TSZ				S	S	13 46 49.1	-2.7

KHEZ	Kahui Hut	7.79	211	P	Pn	13 45 31.2	+8.2
WAZ	Wanganui	7.81	205	P	Pn	13 45 25.9	+2.8
WAZ				S	S	13 46 53.5	+1.2
PRHZ	Porangahau	7.82	194	P	Pn	13 45 22.5	-0.8
PRHZ				S	S	13 46 51.6	-0.9
DVHZ	Dannevirke	7.96	197	P	Pn	13 45 26.3	+1.3
DVHZ				S	S	13 46 54.3	-1.4
ANWZ	Angora Road	8.04	195	P	Pn	13 45 27.4	+1.4
ANWZ				S	S	13 46 55.3	-2.3
PRWZ	Pori Road	8.25	197	P	Pn	13 45 30.5	+1.8
PRWZ				S	S	13 46 59.4	-3.1
BFZ	Birch Farm	8.30	196	P	Pn	13 45 30.5	+1.2
BFZ				S	S	13 46 59.7	-4.0
BFZ	Birch Farm	8.30	196	P	Pn	13 45 30.2	+0.9
MRZ	Mangatainoka R	8.45	199	P	Pn	13 45 29.3	-1.8
MRZ				S	S	13 47 03.9	-3.2
TIWZ	Tintock	8.48	197	P	Pn	13 45 31.2	-0.4
TIWZ				S	S	13 47 05.5	-2.3
HOWZ	Holdsworth Sta	8.69	199	P	Pn	13 45 34.0	-0.2
HOWZ				S	S	13 47 09.0	-3.7
OGWZ	Otaki Gorge	8.71	201	P	Pn	13 45 32.8	-1.7
OGWZ				S	S	13 47 10.8	-2.3
TMWZ	Te Maipa	8.79	196	P	Pn	13 45 35.9	+0.4
TMWZ				S	S	13 47 12.0	-3.1
KIW	Kapiti Island	8.83	202	P	Pn	13 45 36.2	+0.2
KIW				S	S	13 47 13.2	-2.8
MTW	Mount Morrison	8.94	198	P	Pn	13 45 36.7	-0.6
MTW				S	S	13 47 12.8	-5.6
CAW	Cannon Point	9.01	200	P	Pn	13 45 36.5	-1.8
CAW				S	S	13 47 16.9	-3.2
DUWZ	D'Urville Isla	9.12	206	P	Pn	13 45 41.2	+1.5
DUWZ				S	S	13 47 22.0	-0.6
MSWZ	Moikau Station	9.24	199	P	Pn	13 45 41.2	0.0
TCW	Tory Channel	9.35	203	P	Pn	13 45 42.3	-0.2
TCW				S	S	13 47 23.8	-4.2
PLWZ	Palliser	9.39	198	P	Pn	13 45 42.4	-0.7
PLWZ				S	S	13 47 22.8	-6.1
TUWZ	Tuamarina	9.66	204	P	Pn	13 45 46.1	-0.4
TUWZ				S	S	13 47 32.5	-2.6
QRZ	Quartz Range	9.70	211	P	Pn	13 45 47.9	+0.9
BSWZ	Blackbirch Sta	9.94	204	P	Pn	13 45 51.1	+1.2
THZ	Tophouse	10.33	207	P	Pn	13 45 55.1	+0.1
THZ				S	S	13 47 48.5	-2.4
KHZ	Kahutara	10.68	203	P	Pn	13 45 59.9	+0.7

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*JMA **26** 14:04:29.9±0.1, 35°.51N×139°.88E, h20^{km}±2^{km}, M2.9*
JMA Felt I J1.
*IDC **26** 14:04:30.9±4.7, 35°.38N×139°.82E, h46^{km}±30^{km}, mb3.3/2, mb1 3.5/3, mb1mx2.8/49, mbtmp3.6/3, ML2.9/1, Error ellipse: s-maj=104.2km s-min=13.8km az=73.0*
ISC 26 14:04:29.4±1.2, **35°.45N**±0°.05×**139°.92E**±0°.06, **h35^{km}, n13,** σ**0^{s}.91**/16, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOK	Tokyo	0.27	332	P	Pn	14 04 36.0	-1.0
JYO	Yokosk	0.30	223	P	Pn	14 04 37.1	-0.3
JSMT	Sammumatsuo	0.48	65	P	Pn	14 04 40.0	+0.3
JOD2	Odawara 2	0.70	255	P	Pn	14 04 43.0	+0.1
JOD2				S	Sn	14 04 51.6	-0.9
JRY	Ryogami san	1.00	305	S	Sn	14 04 59.6	-0.4
JFNN	Fujinakano	1.04	256	S	Sn	14 05 00.7	-0.1
JAG	Ashikaga	1.05	339	S	Sn	14 05 00.0	-1.1
JYN	Shimob	1.12	273	S	Sn	14 05 03.1	+0.1
MJAR	Matsushiro Arr	1.77	309	P	Pn	14 04 58.2	+0.7
	2.4nm,0.3s,baz=136,slow=10.0,SNR=65						
MAT	Matsushiro	1.77	309	P	Pn	14 04 58.4	+0.8
MAT				S	Sn	14 05 21.2	+2.3
JHJ	Hachijo jima 2	2.32	183	P	Pn	14 05 05.3	+0.1
	7.4nm,0.3s,baz=103,slow=18,SNR=0.9						
JHJ				S	Sn	14 05 33.2	+0.7
	20nm,0.3s,baz=66,slow=24,SNR=10						
WRA	Warramunga Arr	55.34	186	P	P	14 13 59.5	-0.3
	0.8nm,0.7s,baz=6.9,slow=8.1,SNR=5.1						
ASAR	Alice Springs	59.06	186	P	P	14 14 26.0	-0.1
	0.8nm,1.1s,baz=15,slow=8.7,SNR=2.0						

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*BJI **26** 14:19:06.3±0.0, 41°.91N×83°.90E, h7^{km}, mB4.3/2, mb4.1/10, ML4.1/12, Ms3.7/8, Ms7 3.6/6*
*IDC **26** 14:19:06.1±0.7, 42°.05N×83°.98E, h0^{km}, mb4.1/17, mb1 4.1/24, mb1mx3.9/75, mbtmp4.0/24, ML3.6/7, MS2.8/2, Ms1 2.8/2, ms1mx2.5/43, Error ellipse: s-maj=16.1km s-min=11.1km az=47.0*
*SOME **26** 14:19:07.4, 42°.03N×83°.90E, h0^{km}, MS3.8*
*MOS **26** 14:19:08.8±1.4, 42°.11N×83°.90E, h24^{km}, mb4.5/9, Error ellipse: s-maj=8.7km s-min=5.1km az=124.0*
*NNC **26** 14:19:10.1±2.2, 42°.08N×83°.87E, h12^{km}±10^{km}, mb4.6, mpv4.4, Error ellipse: s-maj=15.7km s-min=9.6km az=143.0*
ISC 26 14:19:09.2±0.4, **42°.07N**±0°.04×**83°.82E**±0°.03, **h10^{km}, n126,** σ**2^{s}.24**/142, **mb4.2**/21, **23C-12D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	2.90	299	eP	Pb	14 20 02.0	+0.8
	63nm,0.1s						
KTMS				eS	Sg	14 20 42.0	-0.3
	631nm,0.6s						
KTMS	Ketmen	2.90	299	Pg	Pb	14 20 02.0	+0.8
	142nm,0.6s						
KTMS				Lg	Lg	14 20 42.1	
	631nm,0.6s						
WMQ	Urumqi	3.34	57	ePn	Pn	14 20 02.3	+0.8
WMQ				Sn	Sn	14 20 43.5	+2.3
WMQ				Sg	Sb	14 20 50.5	+1.3
WMQ				smax	smax		
	comp=N,640nm,0.9s						
WMQ				smax	smax		
	comp=E,620nm,0.7s						
SHLS	Shalkode	3.40	290	eP	Pn	14 20 06.7	+4.4
	162nm,0.5s						
SHLS				eS	Sb	14 20 49.5	-1.4
	500nm,0.6s						
SHLS	Shalkode	3.40	290	ePn	Pn	14 19 58.9	-3.4
	baz=285						
SHLS	Shalkode	3.40	290	eP	Pn	14 19 58.9	-3.4
SHLS	Shalkode	3.40	290	Pg	Pn	14 20 06.7	+4.4
	162nm,0.5s						
SHLS				Lg	Lg	14 20 49.5	
	500nm,0.6s						
UZB	Uzynbulak	3.70	288	eP	Pb	14 20 17.0	+2.2
	47nm,0.5s						
UZB				eS	Sg	14 21 07.0	-1.1
	174nm,0.6s						
UZB	Uzynbulak	3.70	288	ePn	Pn	14 20 07.1	+0.4
	baz=283						
UZB	Uzynbulak	3.70	288	eP	Pn	14 20 07.0	+0.4
UZB	Uzynbulak	3.70	288	Pg	Pb	14 20 17.0	+2.2
	47nm,0.5s						
UZB				Lg	Lg	14 21 07.0	
	174nm,0.6s						
DJR	Jarkent	3.71	309	eP	Pg	14 20 19.2	-1.1
	55nm,0.3s						
DJR				eS	Sg	14 21 11.2	+2.8
	110nm,0.2s						
DJR	Jarkent	3.71	309	Pg	Pg	14 20 19.2	-1.1
	146nm,0.5s						
DJR				Lg	Lg	14 21 11.2	
	121nm,0.7s						
KPKS	Kokpek	4.03	292	eP	Pb	14 20 24.3	+4.0
	108nm,0.7s						
KPKS				eS	Sg	14 21 19.8	+1.2
	316nm,0.5s						
KPKS	Kokpek	4.03	292	ePn	Pn	14 20 11.1	0.0
	baz=287						
KPKS	Kokpek	4.03	292	eP	Pn	14 20 11.1	0.0
SATY	Saty	4.12	286	eP	Pg	14 20 27.7	-0.4
	64nm,0.3s						
SATY				eS	Sg	14 21 25.5	+4.0
	305nm,0.8s						
SATY	Saty	4.12	286	ePn	Pn	14 20 12.7	+0.4
	baz=281						
SATY				ePg	Pg	14 20 26.5	-1.7
	baz=281						
SATY	Saty	4.12	286	eP	Pn	14 20 12.7	+0.4
SATY	Saty	4.12	286	Pg	Pg	14 20 27.7	-0.4
	144nm,0.6s						
SATY				Lg	Lg	14 21 25.5	
	305nm,0.8s						
ZHN	Zhinishke	4.12	287	eP	Pb	14 20 24.2	+2.3
	38nm,0.5s						
ZHN				eS	Sg	14 21 19.4	-2.2
	96nm,0.1s						
ZHN	Zhinishke	4.12	287	ePn	Pn	14 20 12.4	0.0
	baz=282						
ZHN	Zhinishke	4.12	287	eP	Pn	14 20 12.3	0.0
ZHN	Zhinishke	4.12	287	Pg	Pb	14 20 24.2	+2.3
	38nm,0.5s						
ZHN				Lg	Lg	14 21 19.4	
	145nm,0.6s						
BLB	Baldybastay	4.41	299	Pg	Pb	14 20 30.6	+3.8
	125nm,0.6s						
BLB				Lg	Lg	14 21 30.8	
	176nm,0.8s						
KAPS	Kapalarasan	4.56	316	eP	Pg	14 20 34.5	-2.1
	44nm,0.1s						
KAPS				eS	Sg	14 21 37.8	+2.1
	100nm,0.2s						
KAPS	Kapalarasan	4.56	316	Pg	Pg	14 20 34.5	-2.1
	78nm,0.8s						
KAPS				Lg	Lg	14 21 37.8	
	184nm,0.6s						
MK31	Makanchi Array	4.85	347	P	Pn	14 20 24.1	+1.9
MK31	Makanchi Array	4.85	347	⇑Pn	Pn	14 20 24.0	+1.9
	1.2nm,0.3s,baz=157,slow=15,SNR=107						
MK31				⇓Pg	Pg	14 20 39.5	-2.5
	35nm,0.5s,baz=169,slow=15,SNR=5.2						
MK31				⇑Lg	Lg	14 21 45.1	
	152nm,0.6s,baz=157,slow=28,SNR=4.5						
MKAR	Makanchi Array	4.85	347	Pn	Pn	14 20 22.9	+0.7
	1.7nm,0.3s,baz=151,slow=14,SNR=35						
MKAR				Lg	Lg	14 21 42.3	
	13nm,0.3s,baz=163,slow=29,SNR=6.7						
MKAR				LR	LR	14 22 31.2	
	comp=Z,109nm,18.3s,baz=72,slow=42						
MKAR	Makanchi Array	4.85	347	i P	Pn	14 20 23.2	+1.0
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARXS	Arharly	4.88	298	eP	Pg	14 20 41.2	-1.4
	comp=Z,64nm,0.7s						
ARXS				eS	Sg	14 21 49.2	+3.4
	comp=Z,212nm,0.8s						
ARXS	Arharly	4.88	298	eP	Pn	14 20 23.4	+0.7
ARXS	Arharly	4.88	298	Pg	Pg	14 20 41.0	-1.7
	comp=Z,64nm,0.7s						
ARXS				Lg	Lg	14 21 49.2	
	comp=Z,212nm,0.8s						
TDK	Taldyqorghan	4.91	308	eP	Pg	14 20 42.6	-0.6
	comp=Z,130nm,0.3s						
TDK				eS	Sg	14 21 50.4	+3.7
	comp=Z,390nm,0.2s						
TDK	Taldyqorghan	4.91	308	ePn	Pn	14 20 21.6	-1.4
	baz=305						
TDK	Taldyqorghan	4.91	308	eP	Pn	14 20 21.6	-1.4
MAKZ	Makanchi	4.92	345	P	Pn	14 20 24.2	+1.1
MAKZ	Makanchi	4.92	345	⇓Pn	Pn	14 20 24.2	+1.1
	comp=Z,2.5nm,0.5s						
MAKZ				⇑Pg	Pb	14 20 39.6	+4.3
	comp=Z,110nm,1.1s						
MAKZ				⇓Lg	Lg	14 21 44.4	
	comp=Z,143nm,1.2s						
MDOK	Medeo	5.12	285	ePn	Pn	14 20 26.1	+0.1
	baz=280						
MDOK				ePg	Pg	14 20 45.3	-1.9
	baz=280						
MDOK	Medeo	5.12	285	eP	Pn	14 20 26.1	+0.1
MDOK	Medeo	5.12	285	Pn	Pn	14 20 29.0	+2.9
	comp=Z,20nm,0.8s						
MDOK				Pg	Pb	14 20 44.4	+5.5
	comp=Z,36nm,0.7s						
MDOK				Lg	Lg	14 21 53.1	
	comp=Z,179nm,0.9s						
TNSS	Tian-Shan	5.17	283	ePn	Pn	14 20 27.4	+0.4
	baz=279						
KNDC	Almaty	5.19	285	⇓Pg	Pg	14 20 46.6	-1.9
	comp=Z,132nm,0.7s						
KNDC				⇑Lg	Lg	14 21 56.4	
	comp=Z,555nm,0.9s						
CHKK	Chushkaly	5.32	292	ePn	Pn	14 20 28.5	-0.2
	baz=288						
CHKK				ePg	Pg	14 20 48.1	-3.0
	baz=288						
ZSN	Zaisan	5.43	8	eP	Pb	14 20 48.7	+4.6
	comp=Z,39nm,0.3s						
ZSN				eS	Sg	14 22 01.5	-1.9
	comp=Z,201nm,0.1s						
KUU	Kurty	5.78	291	ePn	Pn	14 20 34.7	-0.3
	baz=287						
KUU				ePg	Pg	14 20 56.6	-3.3
	baz=287						
KUU	Kurty	5.78	291	eP	Pn	14 20 34.7	-0.3
TKM2	Tokmak 2	6.14	281	P	Pn	14 20 42.7	+2.6
TKM2	Tokmak 2	6.14	281	⇓Pn	Pn	14 20 42.7	+2.6
	comp=Z,5.1nm,0.5s						
TKM2				⇑Lg	Lg	14 22 26.2	
	comp=Z,110nm,1.1s						
KSH	Kashi	6.48	249	Pn	Pn	14 20 52.5	+7.8
KSH				Sn	Sn	14 22 06.0	+7.2
KSH				smax	smax		
	comp=Z,140nm,1.2s						
KSH				smax	smax		
	comp=Z,110nm,1.1s						
KSH				LR	LR		
	comp=Z,550nm,8.9s						
SGDS	Sogindy	6.91	285	ePn	Pn	14 20 51.2	+0.7
	baz=282						
AAK	Ala-Archa	6.93	278	Pn	Pn	14 20 52.7	+1.7
	comp=Z,0.7nm,0.3s,baz=102,slow=8.4,SNR=11						
AAK				Lg	Lg	14 22 50.4	
	comp=Z,1.3nm,0.3s,baz=281,slow=19,SNR=6.6						
AAK				LR	LR	14 24 08.0	
	comp=Z,75nm,18.6s,baz=77,slow=43						
AAK	Ala-Archa	6.93	278	ceP	Pn	14 20 52.7	+1.7
AAK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AAK	Ala-Archa	6.93	278	⇓Pg	Pb	14 21 16.3	+6.5
	comp=Z,13nm,0.6s						
AAK				⇓Lg	Lg	14 22 51.0	
	comp=Z,86nm,1.1s						
DGZ	Jazzator, Alta	8.03	17	c iP	Pn	14 21 06.6	+0.6
DGZ				pmax	pmax		
	comp=Z,17nm,0.8s						
SEM	Semipalatinsk	8.70	345	ePn	Pn	14 21 12.1	-3.1
	baz=344						
SEM	Semipalatinsk	8.70	345	eP	Pn	14 21 12.1	-3.1
KURBB	Kurchatov Arra	9.30	339	Pn	Pn	14 21 22.9	-0.3
	comp=Z,0.2nm,0.3s,baz=162,slow=12,SNR=18						
KURBB				Lg	Lg	14 24 01.8	
	comp=Z,0.3nm,0.3s,baz=160,slow=30,SNR=6.4						
KURBB	Kurchatov Arra	9.30	339	P	Pn	14 21 22.8	-0.4
KURBB	Kurchatov Arra	9.30	339	⇓Pn	Pn	14 21 22.8	-0.4
	comp=Z,7.7nm,0.5s						
KURBB				⇑Lg	Lg	14 24 05.8	
	comp=Z,104nm,0.7s						
KURK	Kurchatov	9.36	339	i P	Pn	14 21 23.7	-0.4
KURK	Kurchatov	9.36	339	⇑Pn	Pn	14 21 25.1	+1.1
	comp=Z,6.9nm,0.7s						
KURK				⇑Lg	Lg	14 24 06.9	
	comp=Z,87nm,0.9s						
KK02	Karatay Array	9.87	280	⇑Pg	Pn	14 22 15.6	+44
	comp=Z,3.5nm,0.7s						
KK02				⇓Lg	Lg	14 24 24.5	
	comp=Z,9.8nm,0.8s						
OTUK	Ortayu	10.19	311	P	Pn	14 21 32.1	-3.3
OTUK	Ortayu	10.19	311	⇑Pn	Pn	14 21 32.1	-3.3
	comp=Z,2.9nm,0.7s						
OTUK				⇓Lg	Lg	14 24 40.1	
	comp=Z,42nm,1.0s						
BRLS	Borolday	10.37	280	ePn	Pn	14 21 40.5	+2.6
	baz=277						
BRLS	Borolday	10.37	280	eP	Pn	14 21 40.5	+2.6
CHCP	Chirah Chowk	11.83	228	P	Pn	14 21 55.5	-2.5
ZAA0	Zalesovo Array	11.90	3	⇑P	Pn	14 21 57.5	-1.3
	comp=Z,1.2nm,0.7s						
ZALV	Zalesovo Beam	11.90	3	Pn	Pn	14 21 56.2	-2.7
	comp=Z,1.4nm,0.3s,baz=179,slow=13,SNR=20						
ZALV				Lg	Lg	14 25 19.5	
	baz=188,slow=27,SNR=1.8						
ZALV	Zalesovo Beam	11.90	3	i P	Pn	14 21 58.4	-0.4
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.4s						
GTA	Gaotai	12.42	97	eP	Pn	14 22 05.5	-0.6
GTA				pP		14 22 08.5	
GTA				sP		14 22 11.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CEP	Cherat	12.49	233	P	Pn	14 22 03.4	-3.7
CEP				S	Sn	14 24 21.0	-5.3
DANN	Dangsing	13.69	180	eP	P	14 22 32.2	-0.3
	comp=Z,12nm,0.5s						
GKN	Gorkha	14.05	177	eP	P	14 22 34.3	-2.1
	comp=Z,34nm,0.4s						
BVAR	Borovoye Array	14.20	325	Pn	Pn	14 22 29.6	-0.6
	comp=Z,0.5nm,0.3s,baz=134,slow=8.5,SNR=15						
BVAR				Lg	Lg	14 26 31.3	
	comp=Z,0.2nm,0.3s,baz=148,slow=17,SNR=5.3						
BRVK	Borovoye	14.27	325	ceP	Pn	14 22 30.6	-0.5
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	Borovoye	14.27	325	⇑P	Pn	14 22 31.8	+0.7
	comp=Z,7.3nm,0.7s						
KKN	Kakani	14.30	175	eP	P	14 22 36.7	-2.5
	comp=Z,33nm,0.5s						
DMN	Daman	14.47	175	eP	P	14 22 38.8	-2.3
	comp=Z,15nm,0.6s						
PKIN	Phulchoki	14.52	174	eP	Pn	14 22 39.1	+4.2
	comp=Z,20nm,0.5s						
PKI	Pulchoki	14.52	174	eP	Pn	14 22 39.3	+4.2
	comp=Z,16nm,0.4s						
ZAK	Zakamensk	15.79	52	eP	Pn	14 22 53.0	+1.4
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SONM	Songino Array	16.96	62	Pn	Pn	14 23 04.3	-2.3
	comp=Z,0.3nm,0.3s,baz=254,slow=11,SNR=6.2						
SONM				Lg	Lg	14 28 04.2	
	comp=Z,0.1nm,0.3s,baz=257,slow=25,SNR=3.2						
ULN	Ulaanbaatar	17.40	63	ceP	Pn	14 23 12.2	+0.1
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AB31	Akbulak array	18.12	301	eP	Pn	14 23 18.4	-2.4
AB31	Akbulak array	18.12	301	⇓P	Pn	14 23 18.5	-2.4
	comp=Z,3.3nm,0.8s,baz=102,slow=14,SNR=9.2						
AKTO	Aktyubinsk	19.63	304	P	P	14 23 38.1	+0.4
	comp=Z,0.4nm,0.3s,baz=93,slow=15,SNR=14						
AKTO	Aktyubinsk	19.63	304	P	P	14 23 38.6	+0.9
AKTO	Aktyubinsk	19.63	304	⇑P	P	14 23 38.7	+0.9
	comp=Z,6.6nm,0.8s						
GEYT	Alibeck	20.09	267	P	P	14 23 44.2	+1.3
	comp=Z,3.6nm,0.7s,baz=109,slow=8.0,SNR=4.9						
SVE	Sverdlovsk	20.95	323	eP	P	14 23 51.6	-0.4
SVE				pmax	pmax		
	comp=Z,18nm,0.9s						
XAN	Xi'an	21.27	104	P	P	14 23 56.5	+0.8
XAN				pP	sP	14 24 01.5	+0.9
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARU	Arti	21.70	320	P	P	14 23 59.7	-0.3
	comp=Z,2.6nm,0.4s,baz=113,slow=7.5,SNR=13						
ARU	Arti	21.70	320	c iP	P	14 24 00.2	+0.2
ARU						14 24 19.6	
ARU				S	S	14 27 54.6	-5.4
ARU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BELG	Belogornoye	26.40	306	P	P	14 24 45.1	-0.5
	comp=Z,5.9nm,0.6s,baz=317,slow=2.0,SNR=3.5						
CMAR	Chiang Mai Arr	26.83	147	P	P	14 24 47.6	-2.1
	comp=Z,2.9nm,0.6s,baz=329,slow=9.5,SNR=26						
NRIK	Noril'sk	27.40	3	P	P	14 24 53.8	-0.7
	comp=Z,4.9nm,0.5s,baz=170,slow=8.5,SNR=8.7						
NRIK	Noril'sk	27.40	3	ceP	P	14 24 55.4	+0.9
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KBZ	Khabaz	29.81	287	i P	P	14 25 17.7	+1.5
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.6s						
VORD	Divnogorie	31.48	302	eP	P	14 25 43.7	+13
VORD				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VSR	Storozhevoye	31.56	302	eP	P	14 25 42.2	+11
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN	Obninsk	33.20	310	⇓eP	P	14 25 48.3	+2.5
OBN				e		14 26 57.1	
OBN				eS	S	14 31 01.0	-4.3
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KLR	Kul'dur	33.78	61	P	P	14 25 49.0	-2.0
	comp=Z,1.3nm,0.5s,baz=265,slow=9.1,SNR=2.4						
KLR	Kul'dur	33.78	61	P	P	14 25 49.0	-2.0
TJN	Taejon	33.92	85	ceP	P	14 25 55.9	+3.5
BRTR	Keskin Array B	37.57	284	P	P	14 26 23.4	-0.4
	comp=Z,1.3nm,0.8s,baz=98,slow=7.7,SNR=6.2						
BRTR	Keskin Array B	37.57	284	ceP	P	14 26 26.1	+2.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	39.07	320	P	P	14 26 35.2	-0.8
	comp=Z,4.8nm,0.9s,baz=101,slow=10,SNR=4.6						
FINES	FINESS Array B	39.07	320	ceP	P	14 26 38.0	+2.0
FINES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARCES	ARCESS Array B	40.32	332	P	P	14 26 45.7	-0.6
	comp=Z,9.4nm,1.1s,baz=92,slow=8.5,SNR=3.8						
HFS	Hagfors	45.20	318	P	P	14 27 25.0	-1.0
	comp=Z,1.6nm,0.6s,baz=116,slow=6.9,SNR=7.5						
NB2	NORSAR Subarra	46.25	320	P	P	14 27 32.8	-1.5
	comp=Z,5.0nm,0.8s,baz=79,slow=7.9						
NOA	NORSAR Array B	46.25	320	P	P	14 27 33.1	-1.2
	comp=Z,1.2nm,0.6s,baz=80,slow=8.0,SNR=4.3						
CLL	Collm	47.68	307	eP	P	14 27 49.0	+3.4
CLL	Collm	47.68	307	eP	P	14 27 49.0	+3.4
ESDC	Sonseca Array	63.47	300	P	P	14 29 38.5	-0.9
	comp=Z,0.5nm,0.6s,baz=54,slow=6.0,SNR=5.5						
ILAR	Eielson Array	66.35	21	P	P	14 29 55.7	-1.9
	comp=Z,0.7nm,0.7s,baz=325,slow=4.4,SNR=7.6						
ILAR	Eielson Array	66.35	21	P	P	14 29 56.2	-1.5
ILAR	Eielson Array	66.35	21	P	P	14 29 56.1	-1.5
YKA	Yellowknife Ar	74.73	9	P	P	14 30 46.6	-2.1
	comp=Z,0.6nm,0.5s,baz=340,slow=6.1,SNR=14						
YKA	Yellowknife Ar	74.73	9	ceP	P	14 30 53.7	+5.0
TORD	Torodi Ar. Bea	75.51	275	P	P	14 30 52.0	-2.0
	comp=Z,0.8nm,0.5s,baz=38,slow=5.1,SNR=5.9						
WRA	Warramunga Arr	77.35	132	P	P	14 31 02.4	-1.8
	comp=Z,0.8nm,0.6s,baz=329,slow=5.5,SNR=7.9						
ASAR	Alice Springs	80.12	134	P	P	14 31 17.5	-1.9
	comp=Z,0.9nm,0.8s,baz=324,slow=5.5,SNR=9.7						

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*NAO **26** 14:19:51.5±2.0, 71°.46N×3°.81W, ML3.9*
*NEIC **26** 14:19:54.0±2.4, 71°.45N±0°.10×3°.9W±0°.5, h10^{km}±2^{km}, mb4.5/8, Error ellipse: s-maj=28.2km s-min=15.8km az=258.0*
*IDC **26** 14:19:53.6±0.9, 71°.41N×3°.43W, h0^{km}, mb3.7/7, mb1 4.0/13, mb1mx3.6/72, mbtmp3.9/13, ML3.5/6, MS3.5/25, Ms1 3.5/25, ms1mx3.3/45, Error ellipse: s-maj=25.6km s-min=15.1km az=54.0*
*BER **26** 14:19:54.9±3.2, 71°.39N×4°.25W, h15^{km}, ML2.5, MW3.5, ML2.9(DNK), Confirmed Earthquake*
*DNK **26** 14:20:01.3±5.0, 72°.02N×4°.79W, h35^{km}±633^{km}, ML2.9*
ISC 26 14:19:52.5±0.6, **71°.53N**±0°.06×**3°.75W**±0°.05, **h10^{km}, n129,** σ**3^{s}.25**/123, **mb4.2**/20, **MS3.4**/20, **2D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBG	Daneborg	5.59	308	Pn	Pn	14 21 15.0	-0.5
DBG				Sn	Sn	14 22 13.2	-6.4
DBG	Daneborg	5.59	308	i P	Pn	14 21 14.6	-0.9
DBG				eS	Sn	14 22 11.4	-8.3
DBG				IAML		14 22 11.9	
	comp=Z,3.8nm,0.7s						
DBG	Daneborg	5.59	308	eP	Pn	14 21 15.2	-0.3
DBG				eS	Sn	14 22 11.4	-8.3
DBG				IAML		14 22 11.9	
	comp=Z,3.8nm,0.7s						
SCO	Scoresbysund	6.03	269	i P	Pn	14 21 22.0	+0.4
SCO	Scoresbysund	6.03	269	i P	Pn	14 21 22.0	+0.4
DAG	Danmarks Havn	6.64	329	i P	Pn	14 21 28.0	-1.9
DAG				i P	Pn	14 21 29.0	-0.9
DAG				IAML		14 22 42.1	
	comp=Z,14nm,3.4s						
DAG	Danmarks Havn	6.64	329	i P	Pn	14 21 29.0	-0.9
DAG				IAML		14 22 42.1	
	comp=Z,14nm,3.4s						
LOF	Lofoten	6.87	111	eP	Pn	14 21 32.9	-0.1
LOF				eS	Sn	14 22 44.4	-6.7
LOF				IAML		14 22 52.1	
	comp=Z,11nm,0.6s						
N2VA	Vr¸y	6.92	116	eP	Pn	14 21 32.9	-0.8
N2VI	Vinje	6.95	109	eP	Pn	14 21 34.5	+0.4
STEI	Steigen	7.50	110	⇓iP	Pn	14 21 41.8	+0.1
STEI				eS	Sn	14 22 59.8	-6.8

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HSPB  Hornsund (broa   7.54  35   Pn     Pn     14 21 43.8 +1.5
HSPB  Hornsund (broa   7.54  35   eP     Pn     14 21 43.9 +1.6
N2IH  Innhavet         7.68 108   eP     Pn     14 21 44.5 +0.3
NBB30 Finnes           7.69 118   eP     Pn     14 21 43.3 -1.0
N2TV  T¥rnvik          7.69 112   eP     Pn     14 21 44.0 -0.3
NBB05 Inndyr           7.72 117   eP     Pn     14 21 44.2 -0.6
TRO   Tromso           7.77  93   eP     Pn     14 21 44.4 -1.0
TRO                               IAML          14 24 47.3
      comp=Z,8.4nm,0.9s
FAUS  Fauske           7.86 113   eP     Pn     14 21 46.4 -0.2
FAUS                              eS     Sn     14 23 08.0 -7.5
KONS  Konsvik          7.86 122   eP     Pn     14 21 46.3 -0.3
KONS                              eS     Sn     14 23 07.6 -7.9
STOK  Stokkvaagen      7.95 123   eP     Pn     14 21 47.6 -0.3
STOK                              eS     Sn     14 23 08.6 -9.2
BRBA  Barentsburg A    8.03  27   Pn     Pn     14 21 50.5 +1.5
BRBA  Barentsburg A    8.03  27   eP     Pn     14 21 52.2 +3.3
BRBB  Barentsburg B    8.05  27   eP     Pn     14 21 52.9 +3.6
JETT  Jettan, Norway   8.27  92   Pn     Pn     14 21 51.9 -0.5
JETT                              Sn     Sn     14 23 18.0 -7.7
SPA0  Spitsbergen Ar   8.43  29   Pn     Pn     14 21 57.2 +2.7
      baz=224,slow=16
SPA0  Spitsbergen Ar   8.43  29⇓iP     Pn     14 21 57.2 +2.7
SPA0                              Pn     Pn     14 21 57.2 +2.7
      baz=224,slow=16
SPA0  Spitsbergen Ar   8.43  29   eP     Pn     14 21 56.5 +2.0
SPB2  Spitsbergen Ar   8.43  29   Pn     Pn     14 21 57.1 +2.6
SPITS Spitsbergen Ar   8.43  29   Pn     Pn     14 21 57.2 +2.7
      baz=214,slow=15,SNR=43
MOR8  Moi Rana         8.46 120   eP     Pn     14 21 55.2 +0.3
KIF   Kilpisjarvi      8.65  95   Pn     Pn     14 21 57.4  0.0
KIF                               Sn     Sn     14 23 27.9 -6.9
KIF   Kilpisjarvi      8.65  95   eP     Pn     14 21 57.0 -0.4
KIF                               eS     Sn     14 23 26.6 -8.2
NSS   Namsos           9.13 132   eP     Pn     14 22 04.2 +0.1
KTK1  Kautokeino       9.42  92   eP     Pn     14 22 08.2 +0.2
KTK1                              IAML          14 23 52.1
      comp=Z,2.4nm,0.5s
HEF   Hetta            9.85  95   eP     Pn     14 22 13.8 -0.1
ARA0  ARCESS Array S   9.90  87   Pn     Pn     14 22 14.4 -0.3
      baz=284,slow=11
ARA0  ARCESS Array S   9.90  87   Pn     Pn     14 22 14.4 -0.3
      baz=284,slow=11
ARA0                              eP     Pn     14 22 15.1 +0.4
ARCES ARCESS Array B   9.90  87   Pn     Pn     14 22 14.6 -0.1
      baz=293,slow=11,SNR=9.6
ARCES                             LR     LR     14 25 27.5
      comp=Z,160nm,19.4s,baz=285,slow=34
AKN   Aaknes          10.27 151   Pn     Pn     14 22 20.1 +0.4
AKN                               Sn     Sn     14 24 05.8 -9.0
AKN   Aaknes          10.27 151   Pn     Pn     14 22 20.1 +0.4
AKN                               Sn     Sn     14 24 05.8 -9.0
KEV   Kevo            10.29  85   eP     Pn     14 22 19.8 -0.2
NOR   Nord            10.51 350   Pn     Pn     14 22 22.4 -0.5
NOR                               Sn     Sn     14 24 16.4 -4.0
NOR   Nord            10.51 350   iP     Pn     14 22 22.0 -0.9
NOR                               IAML          14 24 22.1
      comp=Z,3.4nm,0.8s
NOR   Nord            10.51 350   iP     Pn     14 22 22.0 -0.9
NOR                               IAML          14 24 22.1
      comp=Z,3.4nm,0.8s
SUMG  Summit          10.66 292   iP     Pn     14 22 29.0 +3.7
SUMG  Summit          10.66 292   iP     Pn     14 22 29.0 +3.7
NOD   Norderasen      10.74 130   eP     Pn     14 22 25.3 -0.8
DOMB  Dombas          10.75 146   eP     Pn     14 22 26.1 -0.2
HYA   Hoyanger        11.12 154   eP     Pn     14 22 32.7 +1.4
ASK   Askoy           11.65 158   eP     Pn     14 22 38.4 -0.2
NC204 NORSAR Array S  11.77 144   Pn     Pn     14 22 41.3 +1.0
NB2   NORSAR Subarra  12.07 143   Pn     Pn     14 22 45.2 +0.8
      baz=323,slow=14
NB2   NORSAR Subarra  12.07 143   Pn     Pn     14 22 45.2 +0.8
      baz=323,slow=14
NOA   NORSAR Array B  12.07 143   Pn     Pn     14 22 44.4  0.0
      comp=Z,0.0nm,0.3s,baz=336,slow=13,SNR=5.7
NOA                               LR     LR     14 26 59.3
      comp=Z,266nm,20.4s,baz=330,slow=36
NRA0  NORESS Array S  12.42 143   Pn     Pn     14 22 48.6 -0.4
      baz=341,slow=14
NRA0  NORESS Array S  12.42 143   Pn     Pn     14 22 48.6 -0.4
      baz=341,slow=14
BLS5  Blasjo          12.84 156   eP     Pn     14 22 54.1 -0.8
APA0  Apatity Array   13.25  89   Pn     Pn     14 23 00.5 +0.1
      baz=318,slow=12
APA0  Apatity Array   13.25  89   Pn     Pn     14 23 00.5 +0.1
      baz=318,slow=12
HFS   Hagfors         13.40 140   Pn     Pn     14 23 02.9 +0.5
      comp=Z,1.0nm,0.3s,baz=344,slow=9.9,SNR=22
HFS                               LR     LR     14 27 10.8
      comp=Z,282nm,19.7s,baz=330,slow=33
HFS   Hagfors         13.40 140   Pn     Pn     14 23 03.1 +0.7
      baz=336,slow=14
HFS   Hagfors         13.40 140   Pn     Pn     14 23 03.1 +0.7
      baz=336,slow=14
NEEM  North Greenlan  13.55 317   eP     Pn     14 23 02.2 -2.5
NEEM  North Greenlan  13.55 317   eP     Pn     14 23 02.2 -2.5
FIA0  FINESS Array S  15.39 116   P      Pn     14 23 29.0 -0.4
      baz=334,slow=12
FIA0  FINESS Array S  15.39 116   P      Pn     14 23 29.0 -0.4
      baz=334,slow=12
FINES FINESS Array B  15.39 116   Pn     Pn     14 23 28.7 -0.7
      comp=Z,0.4nm,0.3s,baz=325,slow=9.7,SNR=14
FINES                             LR     LR     14 28 47.2
      comp=Z,192nm,19.9s,baz=314,slow=35
EKA   Eskdalemuir Ar  16.26 179   Pn     Pn     14 23 39.4 -1.2
      baz=357,slow=13,SNR=1.7
SFJD  Kangerlussuaq   16.82 278   LR     LR     14 29 34.4
      comp=Z,132nm,19.0s,baz=76,slow=34
LSH   Leshukonskoye   19.00  86   P      Pn     14 24 18.0 +3.5
      comp=Z,268nm,3.8s
EUNU  Eureka          19.87 330   P      Pn     14 24 25.4 +0.5
KLMR  Klimovskoe      19.93 100   eP     P      14 24 23.6 -0.4
      comp=Z,53nm,1.2s
KLMR  Klimovskoe      19.93 100   ePn    P      14 24 23.0 -1.0
KLMR                              AMP           14 24 31.8
      comp=Z,45nm,1.2s
PABE  Paberze         19.94 129   P      Pn     14 24 26.1 +0.3
SUW   Suwalki         21.11 132   P      P      14 24 37.3 +0.5
NACGM Naroch          21.20 126   iP     P      14 24 39.8 +2.0
PRGR  Permogore       21.27  92   iP     P      14 24 37.5 -1.0
CLL   Collm           21.65 151   eP     P      14 24 45.0 +2.3
CLL   Collm           21.65 151   P      P      14 24 42.7  0.0
NKC   Novy Kostel     22.61 152   eP     P      14 24 57.3 +4.3
CHVC  Chvalec         22.86 146   eP     P      14 24 58.6 +3.0
OSTC  Ostas           22.91 146   eP     P      14 25 01.9 +5.7
GRF   Grafenberg Arr  22.96 155   eP     P      14 25 03.2 +6.5
      comp=Z,3.3nm,0.9s,baz=346,slow=9.4
DPC   Dobruska-Polom  23.13 146   eP     P      14 25 00.5 +2.0
PRU   Pruhonice       23.18 149   eP     P      14 25 03.7 +4.8
KHC   Kasperske Hory  23.86 151   eP     P      14 25 10.9 +5.3
MORC  Moravsky Berou  23.91 144   eP     P      14 25 09.6 +3.5
OJC   Ojcow           23.92 141   P      P      14 25 08.7 +2.5
OJC                               IAmb   IAmb   14 25 14.6
      comp=Z,8.0nm,0.8s
BFO   Black Forest    23.95 160   P      P      14 25 10.7 +4.2
BFO                               IAmb   IAmb   14 25 15.3
      comp=Z,16nm,1.2s
GERES GERESS Array B  24.15 151   P      P      14 25 10.9 +2.4
      comp=Z,1.9nm,0.8s,baz=358,slow=9.8,SNR=9.7
GERES                             LR     LR     14 33 43.8
      comp=Z,140nm,18.5s,baz=316,slow=35
GERES GERESS Array B  24.15 151   P      P      14 25 11.2 +2.7
VRAC  Vranov          24.18 146   LR     LR     14 33 22.9
      comp=Z,104nm,18.8s,baz=346,slow=34
VRAC  Vranov          24.18 146   eP     P      14 25 13.5 +4.8
RES   Resolute Bay    24.21 320   LR     LR     14 33 08.4
      comp=Z,88nm,19.8s,baz=104,slow=33
KRUC  Moravsky        24.39 147   eP     P      14 25 15.4 +4.9
FRB   Frobisher Bay   24.59 285   LR     LR     14 34 10.6
      comp=Z,118nm,18.8s,baz=17,slow=35
LANS  Liptovska Anna  24.87 142   eP     P      14 25 21.8 +6.9
DAVA  Damuels         25.15 158   eP     P      14 25 23.1 +5.5
      comp=Z,8.5nm,1.5s
MODS  Modra-Piesok    25.21 146   eP     P      14 25 25.1 +7.2
KOLL  Kolacno         25.21 144   eP     P      14 25 26.3 +8.3
WATA  Walderalm       25.32 155   eP     P      14 25 22.9 +3.8
      comp=Z,11nm,1.0s
VYHS  Vyhne           25.38 143   eP     P      14 25 27.1 +7.6
SQTA  Sankt Quirin    25.39 156   eP     P      14 25 25.0 +5.3
      comp=Z,16nm,1.4s
CONA  Conrad Observa  25.39 148   eP     P      14 25 24.8 +5.1
      comp=Z,12nm,0.8s
WTTA  Wattenberg      25.40 155   eP     P      14 25 24.3 +4.4
      comp=Z,23nm,1.1s
FETA  Feichten        25.52 157   eP     P      14 25 25.3 +4.3
      comp=Z,8.0nm,1.4s
AKASG Malin Array Be  25.64 127   P      P      14 25 22.8 +1.0
      comp=Z,3.0nm,0.6s,baz=337,slow=9.5,SNR=8.3
AKASG                             LR     LR     14 35 08.6
      comp=Z,186nm,18.9s,baz=340,slow=36
AKBB  Malin Array Si  25.64 127          P      14 25 21.9 +0.1
AKBB                              IAmb   IAmb   14 25 28.6
      comp=Z,22nm,1.4s
DAVOX Davos/Dischmat  25.65 158   LR     LR     14 36 21.9
      comp=Z,35nm,20.8s,baz=9.5,slow=39
KBA   Koelnbreinsper  25.82 153   eP     P      14 25 27.8 +4.1
      comp=Z,7.0nm,0.9s
ARSA  Arzberg         25.99 149   iP     P      14 25 31.1 +6.0
      comp=Z,5.7nm,0.9s
CTI   Castel Tesino   26.59 156   P      P      14 25 32.6 +2.0
CTI                               IAmb   IAmb   14 25 40.1
      comp=Z,14nm,1.3s
BELG  Belogornoye     29.43 103   LR     LR     14 36 35.2
      comp=Z,142nm,18.5s,baz=119,slow=34
ARU   Arti            29.49  88   LR     LR     14 37 12.6
      comp=Z,98nm,18.7s,baz=341,slow=35
MLR   Muntele Rosu    29.72 135   LR     LR     14 37 50.0
      comp=Z,210nm,20.9s,baz=338,slow=36
ESDC  Sonseca Array   31.93 180   LR     LR     14 39 11.2
      comp=Z,19nm,19.0s,baz=320,slow=36
BRTR  Keskin Array B  36.99 129   P      P      14 27 04.7 +2.8
      comp=Z,1.5nm,0.8s,baz=350,slow=6.7,SNR=4.2
BRTR                              LR     LR     14 40 55.3
      comp=Z,55nm,18.3s,baz=350,slow=34
YKA   Yellowknife Ar  38.11 315   P      P      14 27 13.8 +2.9
      comp=Z,0.8nm,1.0s,baz=27,slow=8.7,SNR=6.0
YKA                               PcP    PcP    14 29 28.6 +3.2
      comp=Z,1.2nm,0.8s,baz=23,slow=2.7,SNR=13
YKA                               LR     LR     14 42 02.2
      comp=Z,82nm,18.0s,baz=0.0,slow=35
YKA   Yellowknife Ar  38.11 315   P      P      14 27 12.3 +1.4
ZALV  Zalesovo Beam   39.71  68   LR     LR     14 48 14.5
      comp=Z,30nm,18.4s,baz=13,slow=43
ILAR  Eielson Array   41.66 337   P      P      14 27 44.8 +4.4
      comp=Z,0.5nm,0.8s,baz=14,slow=8.4,SNR=6.1
ILAR                              LR     LR     14 45 18.4
      comp=Z,46nm,21.4s,baz=68,slow=36
ULM   Lac du Bonnet   44.02 293   LR     LR     14 45 23.3
      comp=Z,50nm,18.3s,baz=4.5,slow=35
GEYT  Alibeck         45.65 103   LR     LR     14 46 20.6
      comp=Z,38nm,20.3s,baz=335,slow=35
SONM  Songino Array   51.21  54   LR     LR     14 53 11.4
      comp=Z,34nm,18.1s,baz=48,slow=39
PDAR  Pinedale Array  54.74 300   LR     LR     14 51 56.4
      comp=Z,62nm,19.7s,baz=57,slow=35
TORD  Torodi Ar. Bea  58.44 174   P      P      14 29 49.5 +1.3
      comp=Z,0.8nm,0.7s,baz=342,slow=7.1,SNR=4.6
TORD                              LR     LR     14 55 04.8
      comp=Z,46nm,18.7s,baz=315,slow=36
TXAR  Lajitas Array   65.54 289   LR     LR     14 58 12.3
      comp=Z,44nm,20.0s,baz=0.0,slow=35
CMAR  Chiang Mai Arr  76.60  72   P      P      14 31 45.1 +2.2
      comp=Z,0.3nm,0.3s,baz=331,slow=6.8,SNR=5.3
```

NEIC ***26*** *14:20:53.9±0.7, 35°.41N±0°.03×139°.96E±0°.07, h33^{km}±7^{km}, mb4.4/6, Error ellipse: s-maj=7.9km s-min=4.5km az=86.0*

JMA ***26*** *14:20:54.2±0.2, 35°.51N×139°.85E, h23^{km}±3^{km}, M3.4 Broadband fault plane solution: P waves. NP1: φs301.00000°, δ15.00000°, λ-103.00000°. NP2: φs135.00000°, δ75.00000°, λ-86.00000°. Principal axes: T Plg30.0000°, Azm222.0000°; N Plg3.0000°, Azm314.0000°; P Plg60.0000°, Azm50.0000°;*

JMA Felt II J1.

IDC ***26*** *14:20:58.1±2.0, 35°.19N×139°.18E, h56^{km}±16^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.1/67, mbtmp4.0/4, ML3.5/1, MS2.8/4, Ms1 2.8/4, ms1mx2.7/34 Error ellipse: s-maj=77.3km s-min=10.6km az=70.0*

ISC 26 14:20:53.4±1.1**, 35°.45N**±0°.04×**139°.90E**±0°.04**, h30**^{km}±9^{km}**, n42,** σ**0^{s}.85**/38**, mb4.4**/7**, 3C-2D, Near south coast of eastern Honshu**

```
Code  Station Name      Δ°   AZ°     Phase ID        Time     Res
                                   Op     ISC     h  m  s    ISC
JCN   Nagara           0.25  97  ⇑P      Pn     14 21 01.4 +0.3
TOK   Tokyo            0.26 334  ⇑P      Pb     14 21 00.5 +0.2
JYO   Yokosk           0.30 221  ⇓P      Pn     14 21 01.5 -0.2
JSMT  Sammumatsuo      0.49  66   P      Pn     14 21 04.5 +0.1
JHU   Hanno            0.64 309  ⇓P      Pb     14 21 05.3 -0.9
JOD2  Odawara 2        0.69 255  ⇑P      Pb     14 21 06.4 -0.6
JOD2                              S      Sb     14 21 15.7 -0.5
JYT   Yasato           0.81  17          Pn     14 21 08.2 -0.7
BSO3  Boso 3           0.82 142   P      Pb     14 21 09.5 +0.6
JRY   Ryogami san      0.99 305   P      Pn     14 21 11.1 -0.2
JAG   Ashikaga         1.04 340   P      Pn     14 21 11.8 -0.2
JSG   Sagara           1.60 242   Pn     Pn     14 21 20.3 +0.6
MJAR  Matsushiro Arr   1.75 309   P      Pn     14 21 23.1 +1.3
      16nm,0.3s,baz=150,slow=13,SNR=93
MAJO  Matsushiro       1.75 309   Pn     Pn     14 21 22.9 +1.0
MAT   Matsushiro       1.75 309   P      Pn     14 21 22.9 +1.1
MAT                               S      Sn     14 21 45.5 +2.3
MJB9  Matsu-Tunnel     1.76 309   Pn     Pn     14 21 22.9 +1.0
JGF   Kuroka           2.08 275   Pn     Pn     14 21 27.2 +0.9
JHJ   Hachijo jima 2   2.33 182   P      Pn     14 21 30.2 +0.6
      32nm,0.3s,baz=96,slow=22,SNR=8.6
JHJ                               S      Sn     14 21 57.6 +0.3
      90nm,0.3s,baz=237,slow=23,SNR=17
JHJ2  Mitsune          2.33 182   Pn     Pn     14 21 30.2 +0.5
INU   Inuyama          2.36 268   Pn     Pn     14 21 30.9 +0.9
JMM   Marumori         2.52  16          Pn     14 21 33.7 +1.4
JWT   Wachi            3.68 269   Pn     Pn     14 21 48.8 +0.5
JTM   Tenmabayashi     5.41   9   Pn     Pn     14 22 11.9 -0.1
JNU   Nakatsue         7.82 255   LR     LR     14 24 53.7
      comp=Z,38nm,20.1s,baz=52,slow=33
KSRS  Korea Array      9.86 285   LR     LR     14 27 18.9
      comp=Z,45nm,18.4s,baz=83,slow=41
PETK  Petropavlovsk-  21.67  30   LR     LR     14 33 30.5
      comp=Z,48nm,22.0s,baz=89,slow=34
YAK   Yakutsk         27.38 350   LR     LR     14 37 43.4
      comp=Z,36nm,18.2s,baz=100,slow=36
H11N2 WAKE ISLAND Hy  28.47 116   T      T      14 56 21.5
      baz=308,slow=75,SNR=26
H11N1 WAKE ISLAND Hy  28.48 116   T      T      14 56 30.9
      baz=308,slow=75,SNR=16
H11N3 WAKE ISLAND Hy  28.49 116   T      T      14 56 35.9
      baz=308,slow=75,SNR=20
MKAR  Makanchi Array  43.94 303   P      P      14 28 57.6  0.0
MAKZ  Makanchi        44.16 303   P      P      14 29 00.8 +1.5
MAKZ                              IAmb   IAmb   14 29 01.0
      comp=Z,10nm,1.5s
KURK  Kurchatov       45.96 309   P      P      14 29 13.3 -0.3
KURK                              IAmb   IAmb   14 29 26.8
      comp=Z,6.8nm,1.2s
KURBB Kurchatov Arra  46.03 309   P      P      14 29 13.6 -0.5
      comp=Z,1.1nm,0.6s,baz=83,slow=7.5,SNR=6.4
BCAR  Beaver Creek A  53.89  34   P      P      14 30 13.5 -0.1
WB0   Warramunga Arr  55.16 186   P      P      14 30 22.4 -0.9
WB2   Warramunga Arr  55.34 186   P      P      14 30 23.6 -0.9
WB2                               IAmb   IAmb   14 30 24.5
      comp=Z,7.9nm,0.9s
WRA   Warramunga Arr  55.34 186   P      P      14 30 23.8 -0.7
      comp=Z,3.8nm,0.8s,baz=2.4,slow=7.5,SNR=20
WRA   Warramunga Arr  55.34 186   P      P      14 30 23.2 -1.3
ABKAR Akbulak array   58.03 310   P      P      14 30 43.0 -0.4
AS31  Alice Springs   59.06 186   P      P      14 30 50.4 -0.4
AS31                              IAmb   IAmb   14 31 18.2
      comp=Z,2.1nm,1.4s
ASAR  Alice Springs   59.07 186   P      P      14 30 50.4 -0.4
      comp=Z,0.7nm,0.7s,baz=12,slow=8.7,SNR=15
ASAR  Alice Springs   59.07 186   P      P      14 30 50.3 -0.6
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NOU ***26*** *14:30:02.9, 21°.45S×178°.62W, h566^{km}, ML4.9/11, Fiji Islands Region*

IDC ***26*** *14:30:03.5±1.9, 21°.45S×178°.80W, h582^{km}±20^{km}, mb3.1/7, mb1 3.4/10, mb1mx3.2/22, mbtmp4.1/10, Error ellipse: s-maj=31.4km s-min=16.5km az=142.0*

ISC 26 14:30:04.9±0.8**, 21°.31S**±0°.10×**178°.9W**±0°.1**, h600**^{km}**, n43,** σ**2^{s}.11**/46**, mb3.6**/7**, Fiji Islands region**

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Code  Station Name      Δ°   AZ°     Phase ID        Time     Res
                                   Op     ISC     h  m  s    ISC
MSVF  Nonsavu          4.56 321   P      P      14 31 32.8 -1.8
      3.5nm,0.3s,baz=267,slow=24,SNR=20
MSVF  Nonsavu          4.56 321   P      P      14 31 32.7 -1.9
MARNC Mare, Loyalty   12.15 267   P      P      14 32 44.9 -0.3
      1.1nm,0.8s
DZM   Mont Dzumac     13.62 264   P      P      14 32 59.4 -0.8
      0.4nm,0.3s,baz=81,slow=23,SNR=1.9
OUZ   Omahuta         15.33 204   P      P      14 33 15.6 -0.3
KOUNC Koumac, New Ca  15.70 270   P      P      14 33 22.2 +2.7
KUZ   Kuaotunu        16.07 196   P      P      14 33 23.6 +1.0
WIAZ  Waiheke Island  16.27 197   P      P      14 33 25.8 +1.3
ETAZ  East Tamaki Re  16.47 198   P      P      14 33 28.3 +1.9
HAZ   Te Kaha         16.63 189   P      P      14 33 27.0 -0.8
HAZ                               S      S      14 36 08.4 -4.6
RUGZ  Raukumara Rang  16.85 189   P      P      14 33 29.9 -0.1
TWGZ  Tauwhareparae   17.02 188   P      P      14 33 31.6 +0.2
KMRZ  Kaimai          17.06 194   P      P      14 33 25.5 -6.3
URZ   Urewera         17.23 191   P      P      14 33 30.3 -3.0
      0.8nm,0.3s,baz=302,slow=24,SNR=10.0
URZ   Urewera         17.23 191   P      P      14 33 30.5 -2.8
URZ   Urewera         17.23 191   P      P      14 33 31.6 -1.7
MWZ   Matawai         17.23 189   P      P      14 33 32.1 -1.3
MUGZ  Murupara        17.50 191   P      P      14 33 34.6 -1.2
RIGZ  Rimuhau         17.57 189   P      P      14 33 36.2 -0.2
TLZ   Tolley Road     17.62 195   P      P      14 33 38.5 +1.6
BKZ   Black Stump Fm  18.22 191   P      P      14 33 39.8 -2.6
BKZ                               S      S      14 36 39.0 +0.1
BKZ   Black Stump Fm  18.22 191   P      P      14 33 40.5 -1.9
KWHZ  Kaweka Forest   18.48 191   P      P      14 33 42.3 -2.5
VRZ   Vera Road       18.56 196   P      P      14 33 49.2 +3.8
BHHZ  Black Hill Sta  18.62 192   P      P      14 33 45.4 -0.6
TSZ   Takapari Road   19.19 192   P      P      14 33 50.2 -0.9
TSZ                               S      S      14 36 59.2 +4.8
DUWZ  D’Urville Isla  20.35 196   P      P      14 33 57.9 -3.8
TCW   Tory Channel    20.65 195   P      P      14 34 03.8 -0.5
QRZ   Quartz Range    20.76 199   P      P      14 34 05.2 -0.1
QRZ   Quartz Range    20.76 199   P      P      14 34 05.0 -0.3
NNZ   Nelson          20.88 196   P      P      14 34 04.7 -1.6
THZ   Tophouse        21.52 197   P      P      14 34 11.0 -1.1
DSZ   Denniston Nort  21.82 199   P      P      14 34 14.0 -0.8
STKA  Stephens Creek  36.65 245   P      P      14 36 23.4 +1.0
      3.0nm,0.8s,baz=77,slow=10.0,SNR=5.7
ASAR  Alice Springs   43.49 258   P      P      14 37 18.0 +1.0
      1.7nm,0.7s,baz=82,slow=8.6,SNR=8.7
ASAR                              PcP    PcP    14 38 52.3 +1.1
      0.7nm,0.6s,baz=95,slow=3.9,SNR=4.6
WRA   Warramunga Arr  43.63 263   P      P      14 37 18.2 +0.1
      0.6nm,0.5s,baz=92,slow=4.5,SNR=4.7
NVAR  Mina Array Bea  82.21  44   P      P      14 41 25.4 +0.7
      0.9nm,0.6s,baz=223,slow=8.6,SNR=8.4
TXAR  Lajitas Array   88.23  58   P      P      14 41 55.2 +1.5
      0.9nm,0.8s,baz=225,slow=7.3,SNR=8.6
ILAR  Eielson Array   89.30  13   P      P      14 41 57.4 -0.4
      0.6nm,0.7s,baz=217,slow=5.6,SNR=5.2
PDAR  Pinedale Array  90.15  44   P      P      14 42 02.9 +0.4
      0.8nm,0.7s,baz=218,slow=3.5,SNR=9.3
AKASG Malin Array Be 143.29 330   PKP    PKPbc  14 48 29.7 -0.5
      1.4nm,0.4s,baz=43,slow=4.5,SNR=12
BRTR  Keskin Array B 146.72 311   PKPbc  PKPbc  14 48 39.4 -1.5
      0.5nm,0.6s,baz=123,slow=3.5,SNR=4.0
GERES GERESS Array B 150.73 343   PKPbc  PKiKP  14 48 50.6 -0.1
      0.6nm,0.5s,baz=29,slow=3.0,SNR=7.9
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IDC ***26*** *14:43:40.6±0.6, 16°.47S×66°.74E, h0^{km}, mb4.2/12, mb1 4.3/12, mb1mx3.9/38, mbtmp4.2/12, MS3.8/18, Ms1 3.8/18, ms1mx3.6/37, Error ellipse: s-maj=19.7km s-min=18.3km az=165.0*

NEIC ***26*** *14:43:41.9±1.9, 16°.43S±0°.06×66°.67E±0°.10, h10^{km}±1^{km}, mb4.5/19, Error ellipse: s-maj=17.2km s-min=9.2km az=246.0*

ISC 26 14:43:41.8±0.6**, 16°.5S**±0°.1×**66°.70E**±0°.09**, h10**^{km}**, n75,** σ**1^{s}.02**/57**, mb4.5**/26**, MS3.9**/18**, 10C-4D, Mid-Indian Ridge**

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Code  Station Name      Δ°   AZ°     Phase ID        Time     Res
                                   Op     ISC     h  m  s    ISC
H08S1 Diego Carcia H  10.42  33   T      T      14 56 50.9
      baz=212,slow=75,SNR=238
H08S2 Diego Garcia H  10.43  34   T      T      14 56 50.0
      baz=212,slow=75,SNR=171
H08S3 Diego Garcia H  10.44  33   T      T      14 56 52.2
      baz=212,slow=75,SNR=313
DGAR  Diego Garcia    10.61  33   Pn     Pn     14 46 14.5 +0.5
MSEY  Mahe Island     16.08 316   Pn     Pn     14 47 27.3 -0.9
MSEY                              IAmb   IAmb   14 47 31.6
      comp=Z,50nm,1.1s
KAAM  Kaadhehdhoo     17.95  21          Pn     14 47 51.4 -0.3
PALK  Pallekele       27.35  31   LR     LR     14 58 20.6
      comp=Z,133nm,18.9s,baz=314,slow=32
KMBO  Kilima Mbogo    32.77 295   LR     LR     15 00 44.0
      comp=Z,242nm,20.3s,baz=96,slow=31
KMBO  Kilima Mbogo    32.77 295   P      P      14 50 14.8 -0.9
LBTB  Lobatse         39.25 251   P      P      14 51 11.5 +0.6
      comp=Z,6.1nm,0.9s,baz=66,slow=9.2,SNR=8.0
LBTB  Lobatse         39.25 251   P      P      14 51 09.3 -1.6
LBTB                              IAmb   IAmb   14 51 12.2
      comp=Z,8.9nm,1.0s
IPM   Ipoh            39.81  61   P      P      14 51 14.8 -0.7
IPM                               IAmb   IAmb   14 51 18.5
      comp=Z,10.0nm,0.9s
BOSA  Boshof          39.96 245   P      P      14 51 17.7 +0.9
      comp=Z,3.4nm,1.0s,baz=55,slow=12,SNR=2.6
SUR   Sutherland      44.34 240   LR     LR     15 06 14.3
      comp=Z,48nm,20.4s,baz=36,slow=30
H01W3 Cape Leeuwin H  46.06 123   T      T      15 41 19.3
      baz=277,slow=75,SNR=24
H01W2 Cape Leeuwin H  46.06 123   T      T      15 41 17.1
      baz=277,slow=75,SNR=23
H01W1 Cape Leeuwin H  46.07 123   T      T      15 41 20.4
      baz=277,slow=75,SNR=27
TSUM  Tsumeb          46.72 259   LR     LR     15 09 58.1
      comp=Z,96nm,20.8s,baz=136,slow=34
CMAR  Chiang Mai Arr  47.02  44   P      P      14 52 14.8 +1.1
      comp=Z,2.0nm,1.0s,baz=233,slow=8.4,SNR=15
CMAR  Chiang Mai Arr  47.02  44   P      P      14 52 13.6 -0.1
SBUM  Sibu            48.72  72   P      P      14 52 27.4 +0.5
SBUM                              IAmb   IAmb   14 52 30.1
      comp=Z,8.1nm,1.2s
GEYT  Alibeck         54.70 352   LR     LR     15 13 32.7
      comp=Z,63nm,19.8s,baz=35,slow=33
AAK   Ala-Archa       59.24   7   P      P      14 53 46.1 +2.6
AAK                               IAmb   IAmb   14 53 57.2
      comp=Z,3.0nm,1.0s
ASAR  Alice Springs   63.04 109   P      P      14 54 09.5 -0.2
      comp=Z,1.9nm,0.7s,baz=272,slow=5.9,SNR=35
ASAR                              LR     LR     15 18 28.0
      comp=Z,349nm,19.3s,baz=264,slow=33
ASAR  Alice Springs   63.04 109   P      P      14 54 08.9 -0.8
AS31  Alice Springs   63.05 109   P      P      14 54 06.9 -2.9
KBZ   Khabaz          63.74 341   LR     LR     15 21 13.4
      comp=Z,63nm,18.1s,baz=204,slow=35
BRTR  Keskin Array B  63.84 332   P      P      14 54 14.8 +0.2
      comp=Z,0.9nm,0.7s,baz=140,slow=9.7,SNR=6.2
BRTR                              LR     LR     15 20 10.5
      comp=Z,77nm,20.2s,baz=147,slow=34
WRA   Warramunga Arr  63.96 104   P      P      14 54 16.2 +0.4
      comp=Z,7.9nm,1.1s,baz=267,slow=5.8,SNR=18
WRA                               LR     LR     15 17 20.5
      comp=Z,77nm,20.5s,baz=335,slow=32
WRA   Warramunga Arr  63.96 104   P      P      14 54 15.0 -0.8
MKAR  Makanchi Array  64.51  12   P      P      14 54 18.6 -0.1
      comp=Z,0.8nm,0.7s,baz=221,slow=9.1,SNR=6.3
MKAR  Makanchi Array  64.51  12   P      P      14 54 18.0 -0.8
ABKAR Akbulak array   65.70 355   P      P      14 54 25.1 -1.3
ABKAR                             IAmb   IAmb   14 54 38.7
      comp=Z,4.0nm,0.9s
KURK  Kurchatov       67.70   8   P      P      14 54 38.5 -0.6
KURK                              IAmb   IAmb   14 54 46.3
      comp=Z,4.1nm,0.9s
STKA  Stephens Creek  68.85 118   P      P      14 54 47.0  0.0
      comp=Z,1.8nm,0.8s,baz=299,slow=7.6,SNR=3.8
STKA                              LR     LR     15 20 19.8
      comp=Z,120nm,20.8s,baz=208,slow=32
STKA  Stephens Creek  68.85 118   P      P      14 54 46.4 -0.6
BRVK  Borovoye        69.30   2   P      P      14 54 48.1 -1.0
BRVK                              IAmb   IAmb   14 54 55.3
      comp=Z,2.8nm,0.8s
CFR   Carcaliu        70.64 332  ⇓P      P      14 54 58.0 +0.5
TORD  Torodi Ar. Bea  70.66 291   P      P      14 54 59.6 +1.4
      comp=Z,0.8nm,0.9s,baz=108,slow=3.0,SNR=4.5
TORD                              LR     LR     15 24 42.3
      comp=Z,74nm,18.4s,baz=135,slow=35
VTS   Vitosha         71.09 328  ⇑P      P      14 55 00.1 -0.4
VRI   Vrincioaia      71.80 332  ⇑P      P      14 55 03.3 -1.3
PLOR  Plostina        71.82 332  ⇑P      P      14 55 02.5 -2.3
ZAA0  Zalesovo Array  71.83  11   P      P      14 55 03.4 -1.1
ZAA0                              IAmb   IAmb   14 55 11.3
      comp=Z,4.2nm,0.9s
ZALV  Zalesovo Beam   71.83  11   P      P      14 55 04.3 -0.2
      comp=Z,1.8nm,0.7s,baz=207,slow=6.0,SNR=10.0
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ZALV				LR	LR	15 24 30.7	
	comp=Z,80nm,18.3s,baz=214,slow=34						
ZALV	Zalesovo Beam	71.83	11	P	P	14 55 03.5	-0.9
MLR	Muntele Rosu	71.88	331	⇓P	P	14 55 04.0	-1.1
COVR	Voineasa-Covas	72.02	331	⇑P	P	14 55 05.6	-0.3
VOIR		72.25	331	⇓P	P	14 55 07.3	-0.1
HERR	Herculane	73.12	329	⇑P	P	14 55 13.1	+0.6
SONM	Songino Array	73.18	27	P	P	14 55 14.0	+1.1
	comp=Z,2.2nm,0.9s,baz=215,slow=7.1,SNR=14						
SONM				LR	LR	15 26 11.5	
	comp=Z,107nm,19.9s,baz=248,slow=35						
GZR	Gura Zlata	73.31	329	⇑P	P	14 55 15.9	+2.3
QSPA	South Pole Qui	73.63	180	P	P	14 55 15.7	+0.4
	comp=Z,5.3nm,1.0s,baz=299,slow=1.4,SNR=13						
QSPA	South Pole Qui	73.63	180	P	P	14 55 16.2	+0.9
BURAR	Bucovina Array	73.80	332	⇑P	P	14 55 24.7	+8.2
DIVS	Divibare	73.82	327	P	P	14 55 15.2	-1.4
BZS	Buzias	74.05	329	⇑P	P	14 55 18.4	+0.5
DRGR		74.35	330	⇓P	P	14 55 20.0	+0.3
SIRR	Siria	74.48	329	⇑P	P	14 55 21.5	+1.1
KEST	Kesra	75.09	315	LR	LR	15 29 32.9	
	comp=Z,94nm,18.8s,baz=290,slow=37						
MORH	Mrgy, Hungar	75.96	328	⇑P	P	14 55 28.8	0.0
KOWA	Kowa	76.30	290	P	P	14 55 31.8	+0.3
KOWA				IAmb	IAmb	14 55 34.7	
	comp=Z,5.2nm,0.8s						
CASP	Castiglione de	78.11	322	P	P	14 55 42.1	+1.0
SOKA	Soboth	78.14	327	*e*P	P	14 55 41.3	+0.1
	comp=Z,3.5nm,1.1s						
ARSA	Arzberg	78.25	327	*e*P	P	14 55 41.8	0.0
	comp=Z,6.8nm,1.2s						
CONA	Conrad Observa	78.52	328	*e*P	P	14 55 44.2	+0.9
	comp=Z,11nm,1.5s						
KSRS	Korea Array	78.63	45	LR	LR	15 28 30.0	
	comp=Z,32nm,21.7s,baz=246,slow=34						
MOA	Molln	79.29	327	*e*P	P	14 55 48.3	+0.8
	comp=Z,7.1nm,1.2s						
ABTA	Abfaltersbach	79.54	325	*e*P	P	14 55 49.8	+0.9
	comp=Z,7.2nm,1.3s						
MOTA	Moosalm	80.67	325	*e*P	P	14 55 56.1	+0.9
	comp=Z,5.6nm,1.0s						
MJAR	Matsushiro Arr	85.52	50	LR	LR	15 34 11.0	
	comp=Z,26nm,20.2s,baz=315,slow=35						
ESDC	Sonseca Array	86.21	313	LR	LR	15 34 01.2	
	comp=Z,44nm,19.4s,baz=120,slow=35						
NRIK	Noril'sk	86.85	7	LR	LR	15 33 28.7	
	comp=Z,78nm,19.7s,baz=225,slow=34						
ILAR	Eielson Array	126.66	17	PKP	PKPdf	15 02 45.0	0.0
	comp=Z,0.6nm,1.0s,baz=325,slow=4.5,SNR=3.1						
YKA	Yellowknife Ar	134.01	1	PKP	PKPdf	15 02 58.8	-0.2
	comp=Z,0.7nm,1.0s,baz=358,slow=1.9,SNR=5.8						
PDAR	Pinedale Array	153.59	354	PKPbc	PKPbc	15 03 40.8	-0.5
	comp=Z,0.4nm,0.7s,baz=108,slow=0.5,SNR=4.5						

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*IDC **26** 15:02:05.1±0.7, 59°.64S×26°.04W, h0^{km}, mb4.2/8, mb1 4.3/9, mb1mx4.1/28, mbtmp4.2/9, ML4.7/1, MS3.6/11, Ms1 3.5/11, ms1mx3.5/22, Error ellipse: s-maj=31.0km s-min=18.1km az=67.0*

*NEIC **26** 15:02:11.7±0.9, 59°.8S±0°.1×26°.4W±0°.2, h53^{km}±8^{km}, mb4.6/19, Error ellipse: s-maj=23.1km s-min=14.2km az=218.0*

ISC 26 15:02:09.9±0.7**, 59°.8S**±0°.1×**26°.3W**±0°.1**, h35**^{km}**, n49,** σ1^{s}.**03**/36**, mb4.4**/15**, MS3.6**/10**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.20	153	P	Pn	15 05 13.7	-0.8
VNA3	Neumayer Olymp	13.34	156	P	Pn	15 05 15.4	-1.2
VNA2	Neumayer--Watz	13.60	153	P	Pn	15 05 18.4	-1.5
	baz=312,slow=17						
SNAA	Sanae	15.18	151	P	Pn	15 05 41.1	-0.3
SNAA	Sanae	15.18	151	Pn	Pn	15 05 40.6	-0.9
	2.8nm,0.3s,baz=320,slow=14,SNR=37						
SNAA	Sanae	15.18	151		Pn	15 05 40.3	-1.1
PMSA	Palmer Station	18.07	238	LR	LR	15 12 37.9	
	comp=Z,208nm,18.3s,baz=58,slow=35						
EFI	East Falkland	19.48	280	P	P	15 06 33.1	-0.4
EFI				IAmb	IAmb	15 06 40.3	
	comp=Z,28nm,0.8s						
USHA	Ushuaia	23.00	264	LR	LR	15 14 04.9	
	comp=Z,266nm,20.4s,baz=99,slow=31						
DSPA	Despedida	23.36	266	P	P	15 07 14.6	-0.2
MG02	Cerro Sombrero	24.48	267	P	P	15 07 24.2	-1.0
MG05	Puerto Natales	26.76	267	P	P	15 07 45.7	-0.3
MG05				IAmb	IAmb	15 07 46.5	
	comp=Z,7.2nm,0.6s						
GO09	Cerro Castillo	26.92	268	P	P	15 07 46.9	-0.5
GO09				IAmb	IAmb	15 07 48.4	
	comp=Z,37nm,1.5s						
QSPA	South Pole Qui	30.47	180	P	P	15 08 21.1	+2.0
	comp=Z,3.8nm,0.6s,baz=216,slow=2.1,SNR=39						
QSPA				LR	LR	15 19 58.2	
	comp=Z,137nm,19.2s,baz=224,slow=35						
QSPA	South Pole Qui	30.47	180	P	P	15 08 19.8	+0.7
PLCA	Paso Flores	33.28	285	P	P	15 08 44.2	+0.3
	comp=Z,1.1nm,0.7s,baz=151,slow=16,SNR=4.6						
PLCA				LR	LR	15 22 39.0	
	comp=Z,52nm,19.5s,baz=162,slow=37						
PLCA	Paso Flores	33.28	285	P	P	15 08 44.0	+0.2
PLCA				IAmb	IAmb	15 08 51.8	
	comp=Z,11nm,1.4s						
PLTB	Pedras Altas	33.41	315	P	P	15 08 44.5	-0.4
PLTB				IAmb	IAmb	15 09 08.1	
	comp=Z,5.5nm,0.9s						
LC01	Cunco	35.35	285	P	P	15 08 58.8	-2.8
LC01				IAmb	IAmb	15 09 26.6	
	comp=Z,8.4nm,1.2s						
MAW	Mawson	36.91	140	LR	LR	15 23 00.2	
	comp=Z,100nm,19.5s,baz=239,slow=34						
MT09	Talagante	39.03	291	P	P	15 09 32.3	-0.8
MT09				IAmb	IAmb	15 09 38.0	
	comp=Z,14nm,1.1s						
MT01	Popeta	39.08	291	P	P	15 09 33.0	-0.4
MT01				IAmb	IAmb	15 09 45.1	
	comp=Z,18nm,1.3s						
MT02	Curacav	39.52	292	P	P	15 09 37.4	+0.3
CPUP	Villa Florida	39.69	314	P	P	15 09 39.6	+1.2
	comp=Z,1.1nm,0.4s,baz=158,slow=10,SNR=3.6						
CPUP				LR	LR	15 23 29.8	
	comp=Z,42nm,21.7s,baz=154,slow=32						
CPUP	Villa Florida	39.69	314	P	P	15 09 39.1	+0.6
CPUP				IAmb	IAmb	15 09 57.9	
	comp=Z,15nm,1.4s						
VNDA	Vanda	42.87	183	P	P	15 10 06.9	+2.8
	comp=Z,2.3nm,0.8s,baz=176,slow=8.6,SNR=7.8						
VNDA	Vanda	42.87	183	P	P	15 10 03.7	-0.4
BOSA	Boshof	46.55	71	LR	LR	15 26 34.1	
	comp=Z,64nm,18.3s,baz=190,slow=32						
BDFB	Brasilia	46.84	331	P	P	15 10 37.0	+0.6
	comp=Z,1.9nm,0.6s,baz=132,slow=9.0,SNR=3.4						
PB07	IPOC Station P	48.84	302	P	P	15 10 52.4	+0.5
PB01	IPOC Station P	49.27	302	P	P	15 10 55.0	-0.2
PB01				IAmb	IAmb	15 10 57.1	
	comp=Z,17nm,1.4s						
H10S2	ASCENSION HYDR	51.45	15	T	T	16 06 49.4	
	baz=187						
H10S3	ASCENSION HYDR	51.46	15	T	T	16 06 52.5	
	baz=33,SNR=3.2						
H10N1	ASCENSION HYDR	52.57	15	T	T	16 08 03.6	
	baz=196						
H10N3	ASCENSION HYDR	52.57	15	T	T	16 08 14.0	
	baz=196,slow=74,SNR=4.0						
H10N2	ASCENSION HYDR	52.59	15	T	T	16 08 15.2	
	baz=196,slow=74,SNR=3.3						
LPAZ	La Paz	52.96	307	P	P	15 11 23.8	+0.4
	comp=Z,1.0nm,0.4s,baz=52,slow=13,SNR=6.6						
LPAZ				LR	LR	15 34 39.7	
	comp=Z,24nm,20.3s,baz=158,slow=37						
LPAZ	La Paz	52.96	307	P	P	15 11 22.9	-0.6
LPAZ				IAmb	IAmb	15 11 39.6	
	comp=Z,7.6nm,1.5s						
MBAR	Mbarara	73.47	61	LR	LR	15 41 20.0	
	comp=Z,63nm,21.8s,baz=182,slow=32						
ROSC	El Rosal	74.64	310	LR	LR	15 51 21.3	
	comp=Z,20nm,18.2s,baz=252,slow=40						
TORD	Torodi Ar. Bea	76.09	28	P	P	15 13 54.4	+0.7
	comp=Z,3.1nm,0.6s,baz=198,slow=6.1,SNR=25						
TORD	Torodi Ar. Bea	76.09	28	P	P	15 13 53.6	0.0
KOWA	Kowa	76.17	22	LR	LR	15 40 50.3	
	comp=Z,54nm,19.6s,baz=212,slow=31						
ASAR	Alice Springs	95.29	162	P	P	15 15 30.0	-0.1
	comp=Z,0.7nm,0.5s,baz=180,slow=4.1,SNR=17						
CMAR	Chiang Mai Arr	123.26	112	PKP	PKPdf	15 21 01.7	-1.0
	comp=Z,0.4nm,0.3s,baz=222,slow=2.3,SNR=4.9						
YKA	Yellowknife Ar	139.20	315	PKP	PKPdf	15 21 30.9	-0.4
	comp=Z,0.4nm,0.5s,baz=132,slow=2.3,SNR=14						
ZALV	Zalesovo Beam	143.45	68	PKhKP	PKPpre	15 21 35.8	
	comp=Z,1.0nm,0.5s,baz=254,slow=4.2,SNR=5.9						
SONM	Songino Array	150.28	92	PKPbc	PKPbc	15 21 56.4	+0.1
	comp=Z,2.0nm,0.7s,baz=221,slow=3.0,SNR=15						
ILAR	Eielson Array	152.84	306	PKPbc	PKPbc	15 22 00.8	-0.7
	comp=Z,0.5nm,0.6s,baz=338,slow=1.1,SNR=9.2						

WEL 26 15:05:06.9±0.6**, 34°S**±12°×**17°9W**±2°6**, h33**^{km}**, M4.0**/14**, mB4.7**/6**, ML4.3**/19**, MLv4.1**/14**, Mw(mB)3.9**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=113.5, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.43	16	P	Pn	15 06 09.4	-2.4
RIZ	Raoul Island	4.45	16	P	Pn	15 06 09.2	-2.8
MXZ	Matakaoa Point	4.45	205	P	Pn	15 06 13.2	+1.2
MXZ				S	Sn	15 07 02.9	+0.2
WMGZ	Waiomatatini S	4.65	203	P	Pn	15 06 16.4	+1.6
WMGZ				S	Sn	15 07 09.0	+1.5
HAZ	Te Kaha	4.82	208	P	Pn	15 06 18.8	+1.7
HAZ				S	Sn	15 07 14.0	+2.3
PKGZ	Pakihiroa	4.82	205	P	Pn	15 06 17.9	+0.7
PKGZ				S	Sn	15 07 11.7	-0.3
PUZ	Puketiti	4.93	203	P	Pn	15 06 17.7	-0.9
PUZ				S	Sn	15 07 13.4	-1.1
RUGZ	Raukumara Rang	5.04	208	P	Pn	15 06 22.2	+1.9
RUGZ				S	Sn	15 07 18.8	+1.3
TWGZ	Tauwhareparae	5.12	205	P	Pn	15 06 21.8	+0.6
TWGZ				S	Sn	15 07 21.4	+2.2
CNGZ	Carnagh Statio	5.32	201	P	Pn	15 06 22.7	-1.3
TKGZ	Te Karaka	5.40	204	P	Pn	15 06 24.0	-1.0
TKGZ				S	Sn	15 07 25.0	-1.0
MWZ	Matawai	5.42	207	P	Pn	15 06 25.7	+0.3
MWZ				S	Sn	15 07 26.3	-0.4
OPRZ	Ohinepanea	5.45	217	P	Pn	15 06 27.7	+2.0
URZ	Urewera	5.52	211	P	Pn	15 06 28.0	+1.3
URZ				S	Sn	15 07 29.4	+0.3
RAGZ	Rawiri	5.60	207	P	Pn	15 06 29.3	+1.4
RIGZ	Rimuhau	5.67	204	P	Pn	15 06 28.8	0.0
RIGZ				S	Sn	15 07 30.8	-1.9
MUGZ	Murupara	5.85	212	P	Pn	15 06 32.7	+1.4
MUGZ				S	Sn	15 07 37.0	-0.2
SNGZ	Shannon Statio	5.88	206	P	Pn	15 06 33.0	+1.3
SNGZ				S	Sn	15 07 38.0	0.0
TOZ	Tahuroa Road	5.93	224	P	Pn	15 06 38.0	+5.6
RAHZ	Arahi	6.10	207	P	Pn	15 06 35.8	+1.1
RAHZ				S	Sn	15 07 42.0	-1.2
MTHZ	Maungataniwha	6.14	209	P	Pn	15 06 37.1	+1.8
MTHZ				S	Sn	15 07 45.7	+1.4
BKZ	Black Stump Fm	6.55	210	P	Pn	15 06 41.7	+0.8
BKZ				S	Sn	15 07 50.1	-4.4
KWHZ	Kaweka Forest	6.80	209	P	Pn	15 06 45.2	+0.9
NTVZ	North Tongarir	6.86	215	P	Pn	15 06 47.0	+1.9

IDC 26 15:09:46.3±6.5**, 19°.29S**×**177°.88W, h570**^{km}±56^{km}**, mb3.0**/3**, mb1 3.4**/4**, mb1mx3.0**/27**, mbtmp4.0**/4**, Error ellipse: s-maj=250.9km s-min=28.1km az=157.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.16	291	P	P	15 11 10.8	0.0
	13nm,0.3s,baz=278,slow=22,SNR=78						
WRA	Warramunga Arr	44.89	261	P	P	15 17 10.9	-0.2
	0.8nm,0.4s,baz=97,slow=7.6,SNR=18						
ASAR	Alice Springs	44.91	256	P	P	15 17 11.2	-0.1
	2.3nm,0.5s,baz=92,slow=7.4,SNR=48						
TXAR	Lajitas Array	86.31	57	P	P	15 21 28.8	-0.1
	0.4nm,0.8s,baz=210,slow=7.2,SNR=4.3						

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*ATH **26** 15:17:58.5, 35°.55N×27°.34E, h93^{km}±5^{km}, ML3.4/7, Error ellipse: s-maj=5.7km s-min=1.6km az=145.0*

*NIC **26** 15:18:00.3±0.0, 35°.33N×27°.53E, h5^{km}±4^{km}, Ml3.8/2*

*ISK **26** 15:18:01.6, 35°.49N×27°.36E, h17^{km}, ML3.3/17*

*DDA **26** 15:18:02.1, 35°.61N×27°.04E, h10^{km}±3^{km}, ML3.3*

*THE **26** 15:18:02.6, 35°.44N×27°.39E, h8^{km}±3^{km}, ML2.8/2, Error ellipse: s-maj=4.6km s-min=0.9km az=151.0*

ISC 26 15:18:01.4±1.4**, 35°.47N**±0°.03×**27°.40E**±0°.02**, h13**^{km}±11^{km}**, n72,** σ1^{s}.**05**/99**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.95	38	P	Pn	15 18 21.1	+0.7
ARG				S	Sb	15 18 33.9	+1.8
ARG	Arkhangelos	0.95	38	P	Pn	15 18 20.8	+0.4
ARG				S	Sn	15 18 34.5	+0.8
ARG				AML	AML	15 18 38.7	
	comp=N,6139µm,0.7s						
ARG				AML	AML	15 18 40.0	
	comp=E,4808µm,0.6s						
ARG	Arkhangelos	0.95	38	PG	Pn	15 18 20.8	+0.4
ARG				SG	Sn	15 18 34.4	+0.6
ARG	Arkhangelos	0.95	38	P	Pb	15 18 20.4	+0.8
ARG				S	Sn	15 18 34.6	+0.8
ZKR	Zakros	1.03	250	P	Pb	15 18 21.1	-0.1
ZKR				S	Sb	15 18 35.0	+0.4
ZKR	Zakros	1.03	250	P	Pb	15 18 21.0	-0.1
ZKR				S	Sn	15 18 37.7	+1.8
ZKR				AML	AML	15 18 41.8	
	comp=E,2604µm,0.5s						
ZKR				AML	AML	15 18 44.5	
	comp=N,1020µm,0.5s						
ZKR	Zakros	1.03	250	PG	Pb	15 18 21.2	+0.1
ZKR				SG	Sn	15 18 36.0	+0.1
ZKR	Zakros	1.03	250	P	Pg	15 18 20.9	-0.4
ZKR				S	Sn	15 18 37.9	+2.0
STIA	Sitia Lasithi	1.10	256	P	Pb	15 18 22.4	+0.1
STIA				S	Sn	15 18 38.9	+1.3
NISR	Nisiros	1.16	349	P	Pb	15 18 22.8	-0.5
DAT	Datca	1.26	6	P	Pn	15 18 24.9	+0.1
DAT				S	Sn	15 18 43.6	+1.9
DAT	Datca	1.26	6	PN	Pn	15 18 24.8	0.0
DAT				SN	Sg	15 18 41.9	-0.3
KOSK	Kos Island	1.32	345	PN	Pn	15 18 25.4	-0.1
TURN	Turunc	1.47	27	*i* P	Pn	15 18 28.3	+0.8
TURN				*i* S	Sn	15 18 46.1	-0.5
TURN	Turunc	1.47	27	PN	Pn	15 18 28.4	+0.8
TURN				SN	Sn	15 18 47.4	+0.8
NPS	Neapolis	1.48	262	P	Pb	15 18 28.4	-0.3
NPS				S	Sb	15 18 47.2	-0.2
NPS				AML	AML	15 18 52.9	
	comp=E,2300µm,0.9s						
NPS				AML	AML	15 18 54.1	
	comp=N,1915µm,0.8s						
BODT	Bodrum	1.59	357	PN	Pn	15 18 28.9	-0.3
BDRM	Kayabasi	1.59	1	*i* P	Pn	15 18 28.6	-0.6
BDRM				*i* S	Sn	15 18 47.5	-2.2
FETY	Fethiye	1.79	49	P	Pn	15 18 32.9	+0.9
FETY	Fethiye	1.79	49	PN	Pn	15 18 33.1	+1.1
YER	Yerkesik	1.81	23	P	Pn	15 18 33.0	+0.7
YER	Yerkesik	1.81	23	PN	Pn	15 18 33.5	+1.2
SANT	Santorini	1.81	300	PN	Pn	15 18 32.4	0.0
THR8	Santorini-Mono	1.82	301	P	Pn	15 18 31.8	-0.5
THR6	Thira Island,	1.85	299	P	Pn	15 18 32.6	-0.2
STAX	Taxiarchis Har	1.87	300	P	Pn	15 18 32.6	-0.4
THR2	Thira island,	1.87	302	P	Pn	15 18 32.3	-0.8
THT2	Imerovigli	1.87	301	P	Pn	15 18 31.7	-1.4
THR3	Thira Island,	1.87	301	P	Pn	15 18 32.6	-0.5
HRKL	Herakleio	1.89	266	PN	Pn	15 18 34.2	+0.9
KSL	Kastellorizon	1.90	68	P	Pn	15 18 33.9	+0.5
KSL				S	Sn	15 18 58.9	+1.7
	comp=N,118nm,0.5s						
KSL	Kastellorizon	1.90	68	P	Pn	15 18 33.7	+0.3
KSL	Kastellorizon	1.90	68	P	Pn	15 18 33.5	+0.1
KSL				S	Sn	15 18 57.8	+0.6
CMBO	Columbo, Santo	1.90	302	P	Pn	15 18 33.1	-0.4
CMBO				AML	AML	15 19 00.1	
	comp=N,3101µm,0.5s						
CMBO				AML	AML	15 19 05.7	
	comp=E,2891µm,0.4s						
THR5	Thira Island,	1.92	300	P	Pn	15 18 32.3	-1.4
MULA	Mugla, Merkez-	1.93	22	*i* P	Pn	15 18 35.1	+1.1
MULA				*i* S	Sb	15 19 00.8	+0.3
AKAS	Kas	1.94	66	*i* P	Pn	15 18 34.6	+0.4
AKAS				*i* S	Sn	15 18 57.7	-0.9
AKAS				IAML		15 19 03.0	
	comp=N,246nm,0.4s						
AKAS	Kas	1.94	66	PN	Pn	15 18 34.4	+0.2
DDIM	Aydin, Didim	1.99	356	*i* P	Pn	15 18 35.7	+1.0
DDIM				*i* S	Sn	15 18 57.1	-2.2
DDIM				IAML		15 19 06.0	
	comp=E,227nm,1.1s						
IDI	Anoyia	2.06	266	P	Pn	15 18 36.4	+0.6
IDI				S	Sn	15 19 01.1	-0.3
	comp=E,208nm,0.4s						
IDI	Anoyia	2.06	266	P	Pn	15 18 36.4	+0.6
IDI				AML	AML	15 19 09.4	
	comp=E,336µm,0.5s						
IDI				AML	AML	15 19 14.2	
	comp=N,488µm,0.5s						
CAME	Cameli-Denizli	2.13	46	PN	Pn	15 18 37.9	+1.2
SIVA	Sivas	2.17	259	P	Pn	15 18 37.8	+0.6
SIVA				AML	AML	15 19 23.8	
	comp=N,652µm,0.6s						
SIVA				AML	AML	15 19 24.3	
	comp=E,1044µm,0.6s						
APE	Apeiranthos	2.20	317	P	Pn	15 18 36.7	-0.9
APE				AML	AML	15 19 06.8	
	comp=E,339µm,0.3s						
APE				AML	AML	15 19 07.8	
	comp=N,356µm,0.2s						
APE	Apeiranthos	2.20	317	PN	Pn	15 18 37.0	-0.6
AYDN	Tasoluk	2.22	10	*i* P	Pn	15 18 38.2	+0.2
AYDN				*i* S	Sn	15 19 06.0	+0.7
GCAM	G?zelcaml?	2.23	357	*i* P	Pn	15 18 38.1	+0.1
GCAM				*i* S	Sn	15 19 02.9	-2.5
GCAM	G?zelcaml?	2.23	357	PN	Pn	15 18 38.6	+0.6
CAEL	Denizli, Camel	2.26	43	*i* P	Pg	15 18 45.4	+0.7
CAEL				IAML		15 19 26.0	
	comp=N,247nm,0.6s						
CAEL				IAML		15 19 35.0	
	comp=Z,203nm,0.9s						
CAEL				IAML		15 19 39.0	
	comp=E,250nm,1.1s						
SMG	Samos	2.28	349	P	Pn	15 18 38.1	-0.7
TAVA	DENIZLI_Tavas	2.33	31	*i* P	Pn	15 18 40.5	+0.9
TAVA				*i* S	Sb	15 19 11.2	-0.9
TAVA				IAML		15 19 18.0	
	comp=N,166nm,1.1s						
TAVA				IAML		15 19 18.0	
	comp=E,182nm,0.7s						
ELL	Elmali	2.40	57	PN	Pn	15 18 41.5	+1.1
GOLH	Golhisar	2.48	44	*i* P	Pn	15 18 42.9	+1.4
GOLH				*i* S	Sb	15 19 16.3	0.0
AYDB	Zeytinkoy-Aydi	2.50	9	PN	Pn	15 18 42.5	+0.6
AKUM	Antalya-Kumluc	2.53	70	*i* P	Pn	15 18 42.5	+0.3
DGB	zmir	2.61	351	*i* P	Pn	15 18 42.1	-1.2
DGB				*i* S	Sn	15 19 11.5	-3.2
VAM	Vamos	2.62	270	P	Pn	15 18 45.4	+2.1
GVD	Gavdhos	2.79	258	P	Pn	15 18 46.7	+1.0
IMMV	Iera Moni Meta	2.79	271	P	Pn	15 18 47.1	+1.3
KORT	Korkueli	2.83	57	*i* P	Pn	15 18 47.2	+0.8
KORT				IAML		15 19 25.0	
	comp=E,76nm,0.5s						
KORT	Korkueli	2.83	57	PN	Pn	15 18 47.2	+0.8
URLA	Izmir	2.95	348	PN	Pn	15 18 48.1	+0.1
KULA	Kula-Manisa	3.20	18	PN	Pn	15 18 52.1	+0.7
PASA	Karahalli, USA	3.32	30	*i* P	Pn	15 18 53.4	+0.3
DEMI	Demirci	3.71	16	*i* P	Pn	15 18 59.0	+0.4
OSC1	CSNet OBS 1	3.76	120	P	Pn	15 18 56.6	-2.4
OSC1				S	Sn	15 19 41.8	-1.3
AKMS	Akamas	4.06	95	P	Pn	15 19 02.4	-0.8
AKMS				AML	AML	15 19 47.9	
	comp=E,0.3nm,0.7s						
AKMS				AML	AML	15 19 48.1	
	comp=E,0.3nm,0.5s						
ALFC	Alefka	4.26	93	P	Pn	15 19 04.5	-1.5
ALFC				AML	AML	15 19 52.6	
	comp=E,0.5nm,0.8s						
ALFC				AML	AML	15 19 52.9	
	comp=E,0.4nm,0.8s						
OSC2	CSNet OBS 4	4.68	119	P	Pn	15 19 10.9	-0.8
ASGA	Asgata	4.84	96	P	Pn	15 19 12.1	-1.8
CSS	Mathiatis	4.88	94	P	Pn	15 19 13.2	-1.3
MVOU	Mavrovouni	5.12	93	P	Pn	15 19 16.2	-1.5

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*NEIC **26** 15:46:38.0±2.1, 18°.99N±0°.09×145°.6E±0°.2, h207^{km}±12^{km}, mb4.3/21, Error ellipse: s-maj=29.6km s-min=11.8km az=75.0*

*IDC **26** 15:46:41.4±2.6, 18°.97N×145°.60E, h235^{km}±25^{km}, mb3.5/12, mb1 3.7/14, mb1mx3.3/49, mbtmp4.1/14, Error ellipse: s-maj=20.5km s-min=11.3km az=95.0*

ISC 26 15:46:38.6±0.6**, 19°.01N**±0°.06×**145°.5E**±0°.1**, h214**^{km}**, n47,** σ1^{s}.**10**/50**, mb4.2**/24**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.42	187	P	Pn	15 48 02.3	+3.5
	9.0nm,0.3s,baz=0.6,slow=19,SNR=1.2						
GUMO				S	S	15 49 02.0	0.0
	24nm,0.3s,baz=30,slow=21,SNR=5.9						
GUMO	Guam	5.42	187		Pn	15 47 56.8	-2.0
JCJ	Chichijima	8.62	340	Pn	Pn	15 48 39.3	-0.5
JWT	Wachi	18.53	333	P	P	15 50 39.0	-0.2
JWT				IAmb	IAmb	15 50 58.0	
	comp=Z,4.4nm,0.8s						
MJAR	Matsushiro Arr	18.62	341	P	Pn	15 50 42.3	-0.8
	comp=Z,0.1nm,0.3s,baz=165,slow=10,SNR=6.4						
MJAR	Matsushiro Arr	18.62	341	P	Pn	15 50 42.3	-0.8
MAJO	Matsushiro	18.62	341	P	Pn	15 50 42.2	-0.9
MAJO				IAmb	IAmb	15 50 54.6	
	comp=Z,13nm,1.1s						
MANU	Manus Island	20.99	175	P	P	15 51 04.3	-1.4
PMG	Port Moresby	28.28	177	P	P	15 52 11.8	-0.5
	comp=Z,3.2nm,0.5s,baz=354,slow=13,SNR=4.0						
PMG	Port Moresby	28.28	177	P	P	15 52 11.1	-1.1
PMG				IAmb	IAmb	15 52 28.2	
	comp=Z,7.1nm,1.1s						
COEN	Coen	32.84	184	P	P	15 52 51.2	-1.1
COEN				IAmb	IAmb	15 53 08.9	
	comp=Z,14nm,1.1s						
COEN	Coen	32.84	184	P	P	15 52 51.7	-0.6
	comp=Z,14nm,2.0s						
KDU	Kakadu	34.02	203	P	P	15 53 04.6	+2.1
MTN	Manton Dam	34.68	205	P	P	15 53 08.0	-0.2
MTN	Manton Dam	34.68	205	P	P	15 53 09.7	+1.5
	comp=Z,52nm,1.7s						
SBUM	Sibu	36.51	247	P	P	15 53 23.0	-0.8
MTSU	Mount Surprise	36.93	182	P	P	15 53 27.1	-0.1
	comp=Z,5.3nm,0.7s						
KNRA	Kununurra	38.21	207	P	P	15 53 38.8	+0.8
KNRA	Kununurra	38.21	207	P	P	15 53 39.8	+1.8
	comp=Z,41nm,1.7s						
CTAO	Charters Tower	38.86	179	P	P	15 53 43.3	0.0
CTAO				IAmb	IAmb	15 53 50.8	
	comp=Z,5.8nm,1.1s						
CTAO	Charters Tower	38.86	179	P	P	15 53 43.4	0.0
QIS	Mount Isa	39.74	189	P	P	15 53 51.9	+1.2
	comp=Z,8.3nm,3.0s						
WB0	Warramunga Arr	40.05	196	P	P	15 53 53.2	0.0
WB0				IAmb	IAmb	15 53 55.3	
	comp=Z,7.7nm,0.8s						
WR0	Warramunga Arr	40.20	196	P	P	15 53 53.1	-1.2
WR0				IAmb	IAmb	15 53 56.6	
	comp=Z,16nm,1.1s						
WRAB	Tennant Creek	40.22	196	P	P	15 53 54.8	+0.2
WRAB	Tennant Creek	40.22	196	P	P	15 53 55.4	+0.8
WB2	Warramunga Arr	40.23	196	P	P	15 53 55.5	+0.8
WB2				IAmb	IAmb	15 53 56.9	
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	40.23	196	P	P	15 53 55.3	+0.6
	comp=Z,5.0nm,0.4s,baz=20,slow=8.5,SNR=64						
WRA				PcP	PcP	15 55 54.1	-0.2
	comp=Z,1.1nm,0.5s,baz=18,slow=3.4,SNR=6.2						
WRA	Warramunga Arr	40.23	196	P	P	15 53 54.4	-0.3
FITZ	Fitzroy Crossi	41.73	209	P	P	15 54 07.9	+1.0
	comp=Z,4.4nm,0.2s,baz=24,slow=7.9,SNR=65						
SONM	Songino Array	42.81	321	P	P	15 54 16.4	+0.9
	comp=Z,0.2nm,0.4s,baz=132,slow=11,SNR=2.6						
AS31	Alice Springs	43.90	195	P	P	15 54 24.6	+0.3
ASAR	Alice Springs	43.90	195	P	P	15 54 24.5	+0.2
	comp=Z,1.8nm,0.5s,baz=11,slow=6.9,SNR=56						
ASAR				PcP	PcP	15 56 06.8	+0.3
	comp=Z,0.9nm,0.6s,baz=27,slow=2.9,SNR=6.1						
CMAR	Chiang Mai Arr	44.02	277	P	P	15 54 27.5	+2.1
	comp=Z,0.4nm,0.3s,baz=72,slow=6.1,SNR=5.8						
DZM	Mont Dzumac	45.66	152	P	P	15 54 37.8	-0.5
DZM				IAmb	IAmb	15 54 40.2	

	comp=Z,13nm,1.1s						
PSA00	**Pilbara Seismi**	**47.52**	**213**	P	**P**	**15 54 51.1**	**-1.5**
PSA00				IAmb	IAmb	15 54 55.6	
	comp=Z,15nm,0.9s						
FORT	**Forrest**	**52.27**	**199**	P	**P**	**15 55 26.9**	**-1.2**
MORW	**Morawa**	**55.63**	**211**	P	**P**	**15 55 52.4**	**-0.1**
MORW				IAmb	IAmb	15 55 53.0	
	comp=Z,10.0nm,1.1s						
MKAR	**Makanchi Array**	**58.14**	**314**	P	**P**	**15 56 11.2**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=104,slow=5.1,SNR=5.0						
MKAR	**Makanchi Array**	**58.14**	**314**	P	**P**	**15 56 09.4**	**-0.6**
MAKZ	**Makanchi**	**58.35**	**314**	P	**P**	**15 56 10.1**	**-1.4**
ILAR	**Eielson Array**	**63.44**	**26**	P	**P**	**15 56 45.1**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=259,slow=5.9,SNR=5.9						
YKA	**Yellowknife Ar**	**77.79**	**28**	P	**P**	**15 58 12.4**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=289,slow=5.6,SNR=8.9						
NVAR	**Mina Array Bea**	**83.08**	**52**	P	**P**	**15 58 42.1**	**+1.3**
	comp=Z,1.9nm,0.7s,baz=266,slow=5.4,SNR=11						
FINES	**FINESS Array B**	**86.54**	**335**	P	**P**	**15 58 56.6**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=67,slow=4.8,SNR=14						
PDAR	**Pinedale Array**	**87.72**	**45**	P	**P**	**15 59 03.9**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=197,slow=2.1,SNR=6.5						
LPAZ	**La Paz**	**147.84**	**91**	PKPbc	**PKPbc**	**16 06 00.6**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=303,slow=1.7,SNR=7.4						

IDC ***26*** *15:53:34.6±0.8, 19°.68N×70°.57W, h0^{km}, mb3.9/8, mb1 4.2/9, mb1mx3.8/40, mbtmp4.0/9, ML4.8/1, Error ellipse: s-maj=31.9km s-min=15.7km az=56.0*

NEIC ***26*** *15:53:37.5±2.9, 19°.67N±0°.03×70°.68W±0°.02, h23^{km}±7^{km}, mb4.1/11, Error ellipse: s-maj=5.4km s-min=1.4km az=205.0*

OSPL ***26*** *15:53:39.1±1.4, 19°.60N×70°.72W, h14^{km}±10^{km}, ML3.9*

ISC 26 15:53:37.4±0.5, **19°.64N**±0°.04×**70°.63W**±0°.04, **h25**^{km}**, n57,** σ**1^{s}64**/61, **mb3.8**/9, **Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SC01	**Santiago de lo**	**0.23**	**204**	Pg	**Pb**	**15 53 42.8**	**-0.7**
SC01	**Santiago de lo**	**0.23**	**204**	*i* P	**Pb**	**15 53 43.0**	**-0.6**
SC01				IAML		15 53 48.1	
	comp=Z,15μm,0.2s						
LOPP1	**Punta Rusia, P**	**0.58**	**292**	*i* P	**Pb**	**15 53 49.2**	**+0.2**
LOPP1				IAML		15 54 03.4	
	comp=Z,12μm,0.4s						
LONA1	**Toro Cenizo, N**	**0.77**	**110**	*i* P	**Pn**	**15 53 53.2**	**+0.6**
LONA1				*e*S	**Sn**	**15 54 05.4**	**+2.0**
LONA1				IAML		15 54 12.0	
	comp=Z,6μm,0.6s						
SDDR	**Presa de Saban**	**0.90**	**224**		**Pb**	**15 53 52.6**	**-1.9**
SDDR				Sg	**Sb**	**15 54 05.5**	**-0.7**
SDDR	**Presa de Saban**	**0.90**	**224**	*i* P	**Pb**	**15 53 53.0**	**-1.5**
SDDR				IAML		15 54 06.0	
	comp=Z,3μm,0.7s						
LONE2	**Loma La Sidra**	**1.34**	**217**	*i* P	**Pn**	**15 54 01.2**	**+0.5**
SDD	**Santo Domingo**	**1.35**	**150**	Pn	**Pb**	**15 54 02.5**	**+0.4**
SDD				Sn	**Sb**	**15 54 21.0**	**+1.9**
NQUSE	**US Embassy, Po**	**1.87**	**235**	Pn	**Pn**	**15 54 07.9**	**0.0**
GRTK	**Grand Turk**	**1.92**	**346**		**Pn**	**15 54 09.0**	**+0.4**
GRTK	**Grand Turk**	**1.92**	**346**	*i* P	**Pn**	**15 54 09.5**	**+1.0**
LGNH	**Logne**	**2.18**	**239**		**Pn**	**15 54 13.6**	**+1.4**
JAKH	**Jacmel**	**2.27**	**232**		**Pn**	**15 54 15.3**	**+2.0**
PCDR	**Punta Cana, DR**	**2.40**	**117**	Pn	**Pb**	**15 54 17.9**	**-2.1**
AGPR	**Aguadilla, PR**	**3.52**	**109**		**Pn**	**15 54 32.1**	**+1.4**
PRSN	**Puerto Rico Se**	**3.59**	**113**		**Pn**	**15 54 33.5**	**+2.0**
CRPR	**Cabo Rojo, PR**	**3.71**	**115**	Pn	**Pn**	**15 54 36.2**	**+3.1**
MLPR	**Magueyes Islan**	**3.78**	**115**	Pn	**Pn**	**15 54 37.0**	**+2.8**
AOPR	**Arecibo Observ**	**3.88**	**109**		**Pn**	**15 54 36.9**	**+1.3**
OBIP	**Obispado Ponce**	**4.13**	**112**		**Pn**	**15 54 41.3**	**+2.4**
CELP	**Cerrillos**	**4.14**	**111**		**Pn**	**15 54 41.6**	**+2.5**
GTBY	**Guantanamo Bay**	**4.23**	**275**		**Pn**	**15 54 39.3**	**-1.0**
GCPR	**Guaynabo City**	**4.50**	**106**		**Pn**	**15 54 45.0**	**+1.0**
SJG	**San Juan**	**4.50**	**109**		**Pn**	**15 54 44.7**	**+0.6**
PDPR	**Patillas Dam,**	**4.65**	**110**	Pn	**Pn**	**15 54 47.5**	**+1.4**
CBYP	**Canovanas**	**4.72**	**106**		**Pn**	**15 54 47.1**	**+0.1**
HUMP	**Col San Antoni**	**4.76**	**107**		**Pn**	**15 54 48.7**	**+1.0**
MTP	**Monte Pirata**	**5.04**	**107**	Pn	**Pn**	**15 54 51.9**	**+0.3**
CUPR	**Culebra, Puert**	**5.23**	**104**	Pn	**Pn**	**15 54 53.7**	**-0.3**
MTDJ	**Mount Denham**	**6.69**	**259**	Pn	**Pn**	**15 55 14.8**	**+0.6**
SMRT	**St. Maarten**	**7.33**	**101**		**Pn**	**15 55 22.9**	**0.0**
H05N1	**Guadeloupe/Mar**	**9.69**	**108**	Pn	**Pn**	**15 55 56.3**	**+1.0**
BIRV	**Birongo**	**10.03**	**155**		**Pn**	**15 56 02.7**	**+2.6**
PCRV	**Puerto La Cruz**	**11.04**	**148**	Pn	**Pn**	**15 56 16.3**	**+2.3**
	comp=Z,7.2nm,0.3s,baz=338,slow=6.3,SNR=20						
PCRV				Sn	**Sn**	**15 58 12.2**	**-4.6**
	comp=Z,1.8nm,0.3s,baz=329,slow=7.8,SNR=5.7						
ZARC	**Zaragoza, Cauc**	**12.75**	**199**		**Pn**	**15 56 39.5**	**+2.2**
BCIP	**Isla Barro Col**	**13.70**	**222**	Pn	**Pn**	**15 56 49.5**	**-0.8**
BBSR	**BB Station**	**13.75**	**22**	Pn	**Pn**	**15 56 49.5**	**-1.3**
BIRD	**Birdtown, Kers**	**17.30**	**332**	Pn	**Pn**	**15 57 35.1**	**-2.3**
BIRD				IAmb	IAmb	15 57 52.3	
	comp=Z,11nm,1.3s						
JSC	**Jenkinsville**	**17.37**	**329**	Pn	**Pn**	**15 57 36.4**	**-1.9**
GOGA	**Godfrey**	**17.87**	**323**		**Pn**	**15 57 42.7**	**-1.6**
GOGA				IAmb	IAmb	15 57 59.3	
	comp=Z,14nm,1.4s						
KMSC	**Kings Mountain**	**18.11**	**331**		**Pn**	**15 57 46.1**	**-1.3**
T59A	**Double "B" Far**	**18.30**	**342**		**P**	**15 57 48.6**	**-1.0**
T59A				IAmb	IAmb	15 58 16.1	
	comp=Z,19nm,1.4s						
BOAV	**Boa Vista**	**19.78**	**149**	P	**P**	**15 58 06.0**	**0.0**
BOAV				IAmb	IAmb	15 58 16.4	
	comp=Z,16nm,1.0s						
CCIG	**Comitan**	**20.73**	**264**	P	**P**	**15 58 15.5**	**-1.0**
PTGA	**Pitinga**	**22.79**	**151**	P	**P**	**15 58 38.1**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=340,slow=18,SNR=6.9						
TXAR	**Lajitas Array**	**31.49**	**294**	P	**P**	**15 59 58.8**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=126,slow=11,SNR=6.6						
LPAZ	**La Paz**	**35.79**	**176**	P	**P**	**16 00 37.8**	**+2.3**
	comp=Z,1.6nm,0.5s,baz=5.7,slow=6.7,SNR=9.3						
LPAZ	**La Paz**	**35.79**	**176**	P	**P**	**16 00 35.0**	**-0.4**
LPAZ				IAmb	IAmb	16 00 39.4	
	comp=Z,2.0nm,0.6s						
PB16	**IPOC Station P**	**37.75**	**178**	P	**P**	**16 00 50.4**	**-1.8**
PB16				IAmb	IAmb	16 00 51.5	
	comp=Z,5.0nm,1.0s						
PB12	**IPOC Station P**	**38.02**	**180**	P	**P**	**16 00 51.1**	**-2.8**
BDFB	**Brasilia**	**41.52**	**146**	P	**P**	**16 01 22.6**	**-0.5**
	comp=Z,4.9nm,0.5s,baz=321,slow=8.4,SNR=7.2						
BDFB	**Brasilia**	**41.52**	**146**	P	**P**	**16 01 21.7**	**-1.3**
BDFB				IAmb	IAmb	16 01 23.6	
	comp=Z,4.9nm,0.8s						
NVAR	**Mina Array Bea**	**45.15**	**305**	P	**P**	**16 01 54.9**	**+2.5**
	comp=Z,0.7nm,0.7s,baz=87,slow=6.8,SNR=2.7						
YKA	**Yellowknife Ar**	**52.35**	**336**	P	**P**	**16 02 47.2**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=117,slow=6.9,SNR=6.0						
ILAR	**Eielson Array**	**66.56**	**333**	P	**P**	**16 04 25.4**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=91,slow=5.9,SNR=6.4						
FINES	**FINESS Array B**	**76.11**	**29**	P	**P**	**16 05 24.4**	**+1.5**
	comp=Z,5.5nm,1.0s,baz=263,slow=3.3,SNR=9.0						
ASAR	**Alice Springs**	**156.86**	**256**	PKPab	**PKPab**	**16 14 02.0**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=103,slow=4.5,SNR=7.9						

IDC ***26*** *16:01:00.7±19.0, 12°.67S×169°.19E, h487^{km}±267^{km}, mb3.2/7, mb1 3.5/7, mb1mx3.2/37, mbtmp4.0/7, Error ellipse: s-maj=179.4km s-min=48.3km az=168.0*

ISC 26 16:01:01.5±2.7, **12°.8S**±0°.6×**169°.2E**±0°.4, **h500**^{km}**, n7,** σ**0^{s}30**/6, **mb3.5**/6, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.16**	**253**	P	**P**	**16 07 04.6**	**-0.1**
	2.0nm,0.5s,baz=84,slow=8.6,SNR=23						
ASAR	**Alice Springs**	**35.16**	**247**	P	**P**	**16 07 12.8**	**-0.1**
	2.8nm,0.5s,baz=75,slow=9.8,SNR=120						
CMAR	**Chiang Mai Arr**	**75.90**	**293**	P	**P**	**16 11 57.2**	**+0.4**
	0.6nm,0.7s,baz=126,slow=3.7,SNR=5.9						
SONM	**Songino Array**	**82.06**	**323**	P	**P**	**16 12 28.9**	**-0.3**
	0.5nm,0.7s,baz=149,slow=5.2,SNR=3.0						
ILAR	**Eielson Array**	**84.09**	**17**	P	**P**	**16 12 38.6**	**-0.1**
	0.6nm,0.6s,baz=242,slow=5.2,SNR=12						
YKA	**Yellowknife Ar**	**94.94**	**27**	P	**P**	**16 13 29.7**	**+0.2**
	0.3nm,0.7s,baz=257,slow=5.1,SNR=3.8						
MKAR	**Makanchi Array**	**97.09**	**316**	P	Pdif	16 13 38.6	-1.1
	0.1nm,0.4s,baz=116,slow=2.8,SNR=4.8						

IDC ***26*** *16:03:13.9±1.0, 13°.70S×169°.74E, h0^{km}, mb4.3/9, mb1 4.5/11, mb1mx4.2/36, mbtmp4.4/11, ML5.1/2, MS4.0/22, Ms1 4.0/22, ms1mx3.9/27, Error ellipse: s-maj=30.5km s-min=21.3km az=131.0*

NEIC ***26*** *16:03:14.2±1.6, 13°.71S±0°.08×169°.82E±0°.07, h10^{km}±1^{km}, mb4.7/10, Error ellipse: s-maj=13.4km s-min=12.4km az=6.0*

GCMT ***26*** *16:03:19.1±0.2, 13°.83S±0°.01×169°.75E±0°.01, h20^{km}±1^{km}, MW5.0/93, Moment Tensor Solution. s33,c43; s93,c137; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.48±.12; $M_{\theta\theta}$0.27±.11; $M_{\phi\phi}$0.20±.10; $M_{r\theta}$0.26±.19; $M_{\theta\phi}$3.47±.09; $M_{\phi r}$-0.12±.19; Best double couple: $M_0$3.48500×10^{16} NP1:ϕ_s0.00000°, δ85.00000°, λ-177.00000°. NP2: ϕ_s270.00000°, δ87.00000°, λ-5.00000°. Principal axes: T 3.7110, Plg1.0000°, Azm315.0000°; N -0.4540, Plg84.0000°, Azm59.0000°; P -3.2580, Plg6.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 16:03:18.3±0.7, **13°.89S**±0°.10×**169°.66E**±0°.09, **h35**^{km}**, n50,** σ**1^{s}25**/32, **mb4.5**/15, **MS4.0**/21, **1D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**2.84**	**237**		**Pn**	**16 04 00.4**	**-0.7**
LIFNC	**LIFOU**	**7.23**	**198**	Pn	**Pn**	**16 05 00.5**	**-1.1**
DZM	**Mont Dzumac**	**8.69**	**200**	Pn	**Pn**	**16 05 22.8**	**+1.1**
	9.0nm,0.3s,baz=295,slow=23,SNR=78						
DZM				LR	LR	16 08 23.1	
	comp=Z,1μm,21.3s,baz=22,slow=35						
DZM	**Mont Dzumac**	**8.69**	**200**	*e*P	**Pn**	**16 05 22.7**	**+1.0**
	110nm,1.1s						
DZM				*e*LR	LR	16 07 18.1	
	comp=Z,2μm,25.0s						
DZM	**Mont Dzumac**	**8.69**	**200**		**Pn**	**16 05 23.0**	**+1.2**
OUENC	**Ouen Island, N**	**8.89**	**197**	Pn	**Pn**	**16 05 25.3**	**+0.9**
ONTNC	**Ouen Toro**	**8.91**	**200**		**Pn**	**16 05 25.9**	**+1.3**
PINNC	**Pines Island,**	**8.93**	**193**	Pn	**Pn**	**16 05 26.5**	**+1.7**
MSVF	**Nonsavu**	**8.93**	**116**	Pn	**Pn**	**16 05 26.0**	**+1.0**
	0.9nm,0.3s,baz=279,slow=11,SNR=20						
MSVF				LR	LR	16 08 09.5	
	comp=Z,3μm,19.9s,baz=284,slow=33						
MSVF	**Nonsavu**	**8.93**	**116**		**Pn**	**16 05 24.4**	**-0.6**
HNR	**Honiara**	**10.49**	**294**	LR	LR	16 09 30.2	
	comp=Z,694nm,20.6s,baz=131,slow=36						
FUNA	**Funafuti**	**10.77**	**61**	Pn	Pn	16 05 41.2	-8.9
PMG	**Port Moresby**	**22.48**	**279**	LR	LR	16 15 47.8	
	comp=Z,676nm,18.4s,baz=12,slow=34						
CTAO	**Charters Tower**	**23.20**	**251**	P	**P**	**16 08 22.8**	**+0.4**
CTAO				IAmb	IAmb	16 08 34.1	
	comp=Z,19nm,1.0s						
ARMA	**Armidale**	**23.38**	**222**	P	**P**	**16 08 25.3**	**+1.1**
ARMA				IAmb	IAmb	16 08 28.5	
	comp=Z,33nm,1.1s						
URZ	**Urewera**	**25.16**	**166**	P	**P**	**16 08 40.2**	**-0.1**
URZ				IAmb	IAmb	16 08 49.7	
	comp=Z,31nm,1.2s						
BKZ	**Black Stump Fm**	**25.89**	**168**	P	**P**	**16 08 46.6**	**-0.4**
BKZ				IAmb	IAmb	16 08 55.2	
	comp=Z,12nm,0.8s						
STKA	**Stephens Creek**	**31.30**	**230**	P	**P**	**16 09 38.6**	**+3.3**
	comp=Z,30nm,1.0s,baz=44,slow=8.0,SNR=30						
STKA				LR	LR	16 21 03.1	
	comp=Z,257nm,21.1s,baz=43,slow=34						
STKA	**Stephens Creek**	**31.30**	**230**	P	**P**	**16 09 34.5**	**-0.9**
H11S2	**WAKE ISLAND Hy**	**32.31**	**355**	T	T	16 43 59.4	
	baz=173,slow=76,SNR=8.6						
H11S3	**WAKE ISLAND Hy**	**32.31**	**355**	T	T	16 43 58.7	
	baz=173,slow=76,SNR=7.5						
H11S1	**WAKE ISLAND Hy**	**32.33**	**355**	T	T	16 43 48.2	
	baz=173,slow=76,SNR=5.5						
WB0	**Warramunga Arr**	**34.21**	**255**	P	**P**	**16 10 01.5**	**+0.5**
WB0				IAmb	IAmb	16 10 10.5	
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	**34.28**	**255**	P	**P**	**16 10 02.3**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=88,slow=9.6,SNR=5.3						
WRA				LR	LR	16 23 17.6	
	comp=Z,391nm,18.6s,baz=100,slow=35						
AS31	**Alice Springs**	**35.13**	**249**	P	**P**	**16 10 08.8**	**-0.1**
ASAR	**Alice Springs**	**35.13**	**249**	P	**P**	**16 10 09.8**	**+0.9**
	comp=Z,5.8nm,0.7s,baz=80,slow=8.8,SNR=47						
ASAR				LR	LR	16 23 15.5	
	comp=Z,498nm,20.1s,baz=82,slow=34						
ASAR	**Alice Springs**	**35.13**	**249**	P	**P**	**16 10 09.6**	**+0.7**
BBOO	**Buckleboo**	**35.92**	**233**	P	**P**	**16 10 13.1**	**-2.4**
PPT2	**Papeete2**	**39.35**	**101**	*e*S	S	16 16 17.7	-26
	comp=Z,62nm,26.0s						
PPT2				*e*LQ	LQ	16 20 02.0	
	comp=Z,1μm,33.2s						
PPT2				*e*LR	LR	16 21 44.6	
	comp=Z,371nm,32.5s						
KNRA	**Kununurra**	**39.54**	**262**	P	**P**	**16 10 46.3**	**0.0**
TBI	**Tubuai**	**39.75**	**110**	*e*S	S	16 16 22.2	-28
	comp=Z,113nm,24.4s						
TBI				*e*LQ	LQ	16 20 16.5	
	comp=Z,508nm,33.8s						
TBI				*e*LR	LR	16 22 00.8	
	comp=Z,367nm,32.5s						
MJAR	**Matsushiro Arr**	**58.28**	**330**	LR	LR	16 34 35.7	
	comp=Z,86nm,21.8s,baz=115,slow=32						
VNDA	**Vanda**	**63.76**	**182**	LR	LR	16 37 20.0	
	comp=Z,78nm,19.4s,baz=337,slow=32						
KSRS	**Korea Array**	**64.39**	**324**	P	**P**	**16 13 51.8**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=138,slow=7.6,SNR=4.4						
KSRS				LR	LR	16 38 51.8	
	comp=Z,38nm,20.1s,baz=139,slow=33						
USRK	**Ussuriysk Ar.**	**67.22**	**332**	LR	LR	16 38 54.1	
	comp=Z,62nm,21.4s,baz=140,slow=32						
PETK	**Petropavlovsk-**	**67.51**	**352**	LR	LR	16 38 24.3	
	comp=Z,99nm,21.8s,baz=144,slow=31						
QSPA	**South Pole Qui**	**76.13**	**180**	P	**P**	**16 15 02.2**	**-0.4**
QSPA				IAmb	IAmb	16 15 21.7	
	comp=Z,6.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**76.74**	**293**	P	**P**	**16 15 08.8**	**+2.1**
	comp=Z,1.7nm,0.8s,baz=123,slow=4.3,SNR=16						
CMAR				LR	LR	16 49 22.4	
	comp=Z,22nm,18.2s,baz=185,slow=36						
CMAR	**Chiang Mai Arr**	**76.74**	**293**	P	**P**	**16 15 06.4**	**-0.3**
SONM	**Songino Array**	**83.22**	**323**	P	**P**	**16 15 42.2**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=140,slow=5.7,SNR=2.6						
SONM				LR	LR	16 50 12.4	
	comp=Z,59nm,21.7s,baz=64,slow=34						
MAW	**Mawson**	**83.52**	**202**	LR	LR	16 47 36.1	
	comp=Z,68nm,21.8s,baz=60,slow=32						
NVAR	**Mina Array Bea**	**84.97**	**49**	LR	LR	16 46 37.7	
	comp=Z,132nm,19.6s,baz=262,slow=31						
ILAR	**Eielson Array**	**85.03**	**17**	P	**P**	**16 15 49.4**	**-0.6**
	comp=Z,2.0nm,0.8s,baz=232,slow=4.2,SNR=12						
ILAR				LR	LR	16 47 16.0	
	comp=Z,90nm,19.9s,baz=224,slow=31						
SYO	**Syowa Base**	**90.16**	**196**⇓	*e*X	**P**	**16 16 12.2**	**-2.4**
PDAR	**Pinedale Array**	**92.68**	**47**	LR	LR	16 51 00.1	
	comp=Z,72nm,19.6s,baz=264,slow=31						
TXAR	**Lajitas Array**	**93.84**	**61**	LR	LR	16 49 46.8	
	comp=Z,57nm,21.4s,baz=0.0,slow=30						
YKA	**Yellowknife Ar**	**95.75**	**27**	P	**P**	**16 16 39.9**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=258,slow=4.6,SNR=5.9						
ZALV	**Zalesovo Beam**	**98.09**	**324**	LR	LR	16 58 39.4	
	comp=Z,40nm,21.8s,baz=46,slow=34						
MKAR	**Makanchi Array**	**98.20**	**316**	P	**P**	**16 16 51.8**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=45,slow=2.2,SNR=1.6						
MKAR				LR	LR	17 02 22.1	
	comp=Z,44nm,19.6s,baz=48,slow=36						
NRIK	**Noril'sk**	**100.12**	**339**	LR	LR	16 59 51.0	
	comp=Z,92nm,20.0s,baz=43,slow=34						

IDC ***26*** *16:03:26.8±2.5, 24°.54N×109°.15W, h0^{km}, mb3.9/2, mb1 4.3/8, mb1mx3.9/40, mbtmp4.0/8, ML3.6/6, MS3.7/17, Ms1 3.7/17, ms1mx3.6/36, Error ellipse: s-maj=40.6km s-min=10.3km az=141.0*

ANF ***26*** *16:03:29.3±0.8, 24°.55N×109°.31W, h10^{km}, Error ellipse: s-maj=11.0km s-min=4.3km az=10.0*

MEX ***26*** *16:03:31.9±0.7, 24°.85N×109°.36W, h16^{km}±199^{km}, MD4.8*

ISC 26 16:03:30.2±0.6, **24°.71N**±0°.05×**109°.28W**±0°.05, **h10**^{km}**, n122,** σ**1^{s}66**/118, **MS3.7**/10, **Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSIG	**Topolobambo**	**0.91**	**14**	*i* P	Pg	16 03 44.4	-3.4
TSIG				*i* S	**Sg**	**16 03 54.4**	**-5.3**
LPIG	**La Paz**	**1.11**	**237**	Pg	**Pg**	**16 03 49.8**	**-1.8**
	93nm,0.3s,baz=31,slow=1.2,SNR=40						
LPIG				Lg	Lg	16 04 03.1	
	825nm,0.3s,baz=155,slow=8.6,SNR=12						
SLBS	**Sierra La Lagu**	**1.19**	**211**	*i* P	**Pn**	**16 03 51.5**	**-1.4**
SLBS				*i* S	**Sn**	**16 04 06.3**	**-2.9**
CSIG	**Choix**	**2.27**	**21**	*i* P	**Pn**	**16 04 04.5**	**-3.2**
CSIG				*i* S	Sn	16 04 28.5	-7.2
MAIG	**Mazatlaan**	**3.02**	**120**	*i* P	**Pn**	**16 04 17.3**	**-0.8**
MAIG				*e*S	**Sn**	**16 04 54.6**	**+0.3**
GUYB	**Guaymas**	**3.48**	**336**	*e*P	Pn	16 04 20.5	-3.9
GUYB				*i* S	Sn	16 04 58.5	-7.2
PDIG	**Papasquiaro**	**3.54**	**84**	*i* P	**Pn**	**16 04 24.8**	**-0.7**
PDIG				*i* S	**Sn**	**16 05 04.8**	**-2.8**
HPIG		**3.94**	**55**	*i* P	**Pn**	**16 04 29.0**	**-2.0**
HPIG				*i* S	**Sn**	**16 05 12.8**	**-4.5**
HSIG		**4.54**	**341**	*i* P	**Pn**	**16 04 35.8**	**-3.2**
HSIG				*i* S	Sn	16 05 24.2	-7.7
NZIG	**Nacozari, Sono**	**5.65**	**358**	*i* P	**Pn**	**16 04 52.7**	**-1.6**
NZIG				*i* P	**Pn**	**16 04 52.8**	**-1.6**
NZIG				*i* S	**Sn**	**16 05 57.4**	**-2.0**
CGIG		**5.75**	**11**	*i* P	**Pn**	**16 04 54.8**	**-1.0**
CGIG				*i* S	**Sn**	**16 06 00.2**	**-1.7**
ZAIG	**Zacatecas**	**6.45**	**106**	*i* P	**Pn**	**16 05 06.2**	**+0.7**
ZAIG				*i* S	**Sn**	**16 06 20.4**	**+1.1**
TXAR	**Lajitas Array**	**6.80**	**46**	Pn	**Pn**	**16 05 07.9**	**-2.3**
	0.4nm,0.3s,baz=225,slow=13,SNR=24						
TXAR				Lg	Lg	16 07 02.8	
	2.9nm,0.3s,baz=216,slow=29,SNR=2.8						
TXAR				LR	LR	16 08 00.1	
	comp=Z,566nm,18.9s,baz=0.0,slow=40						
MCIG	**Muzquiz**	**7.68**	**64**	*i* P	**Pn**	**16 05 22.7**	**+0.6**
MCIG				*i* S	**Sn**	**16 06 47.5**	**-1.7**
TUC	**Tucson**	**7.69**	**350**	P	**Pn**	**16 05 21.4**	**-0.8**
	baz=170						
TUC				S	**Sn**	**16 06 52.2**	**+2.7**
	baz=170						
121A	**Cookes Peak, D**	**7.90**	**9**	P	**Pn**	**16 05 23.8**	**-1.5**
	baz=190,SNR=18						
Y22D	**IRIS PASSCAL I**	**9.55**	**12**	P	**Pn**	**16 05 48.2**	**+0.2**
	baz=193						
833A	**Chaparral WMA,**	**9.56**	**66**	P	**Pn**	**16 05 47.9**	**0.0**
	baz=249						
GLA	**Glamis**	**9.62**	**331**	P	**Pn**	**16 05 48.8**	**0.0**
	baz=149						
IKP	**In-Ko-Pah, Jac**	**9.92**	**324**	P	**Pn**	**16 05 54.4**	**+1.4**
	baz=142						
JCT	**Junction City**	**10.18**	**54**	P	**Pn**	**16 05 59.0**	**+2.5**
	baz=237						
MONP2	**Monument Peak**	**10.28**	**324**	P	**Pn**	**16 05 59.8**	**+1.9**
	baz=141						
W18A	**Petrified Fore**	**10.38**	**358**	P	**Pn**	**16 06 02.2**	**+2.9**
	baz=178,SNR=36						
BC3	**Big Chuckawall**	**10.41**	**330**	P	**Pn**	**16 06 02.1**	**+2.4**
	baz=148						
PDMCI	**Parker Dam,Lak**	**10.45**	**337**	P	**Pn**	**16 06 03.1**	**+3.0**
	baz=155						
ANMO	**Albuquerque**	**10.49**	**13**	Pn	**Pn**	**16 06 02.6**	**+1.8**
	0.1nm,0.3s,baz=196,slow=12,SNR=28						
ANMO				Lg	Lg	16 09 04.5	
	0.2nm,0.3s,baz=54,slow=13,SNR=8.3						
ANMO				LR	LR	16 10 24.3	
	comp=Z,626nm,18.2s,baz=185,slow=39						
ANMO	**Albuquerque**	**10.49**	**13**	P	**Pn**	**16 06 02.9**	**+2.0**
	baz=194						
IRM	**Iron Mountain**	**10.71**	**333**	P	**Pn**	**16 06 05.5**	**+1.8**
	baz=151						
MSTX	**Muleshoe**	**10.83**	**30**	P	**Pn**	**16 06 07.4**	**+1.9**
	baz=213						
PFO	**Pinyon Flats O**	**10.86**	**326**	Pn	**Pn**	**16 06 08.9**	**+3.1**
	0.1nm,0.3s,baz=107,slow=3.2,SNR=3.9						
PFO				LR	LR	16 09 46.5	
	comp=Z,222nm,21.9s,baz=225,slow=34						
PFO	**Pinyon Flats O**	**10.86**	**326**	P	**Pn**	**16 06 08.6**	**+2.8**
	baz=144						
WUAZ	**Wupatki**	**10.92**	**351**	P	**Pn**	**16 06 09.0**	**+2.3**
	baz=170						
BELC	**Belle Mtn. Jos**	**10.95**	**329**	P	**Pn**	**16 06 09.5**	**+2.4**
	baz=147						
GMRC	**Granite Mounta**	**11.46**	**333**	P	**Pn**	**16 06 15.9**	**+1.8**
	baz=150						
ABTX	**Abilene, Hawle**	**11.56**	**45**	P	**Pn**	**16 06 17.0**	**+1.7**
	baz=229						
HEC	**Hector,Ludlow**	**11.79**	**330**	P	**Pn**	**16 06 19.6**	**+1.1**
	baz=148						
BFSC	**Mount Baldy Ra**	**11.97**	**324**	P	**Pn**	**16 06 22.1**	**+1.1**
	baz=141						
GSC	**Goldstone, Bar**	**12.40**	**330**	P	**Pn**	**16 06 28.2**	**+1.4**
	baz=147						
MVCO	**Mesa Verde**	**12.48**	**3**	P	**Pn**	**16 06 28.9**	**+0.8**
	baz=183						
EDW2	**Edwards Air Fo**	**12.64**	**325**	P	**Pn**	**16 06 32.3**	**+2.1**
	baz=142						
T25A	**Trinidad**	**13.07**	**17**	P	**Pn**	**16 06 38.0**	**+1.9**
	baz=200						
S22A	**4UR Ranch, Cre**	**13.16**	**9**	P	**Pn**	**16 06 39.2**	**+1.8**
	baz=190						
ARVC	**Arvin**	**13.27**	**324**	P	**Pn**	**16 06 42.2**	**+3.5**
	baz=140						
MPMC	**Manual Prospec**	**13.34**	**330**	P	**Pn**	**16 06 42.1**	**+2.4**
	baz=146,SNR=7.2						
SDCO	**Great Sand Dun**	**13.39**	**13**	P	**Pn**	**16 06 42.0**	**+1.4**
	baz=195						
FURC	**Furnace Creek,**	**13.41**	**333**	P	**Pn**	**16 06 42.4**	**+1.9**
	baz=149						
ISA	**Isabella, Lake**	**13.49**	**326**	P	**Pn**	**16 06 44.3**	**+2.5**
	baz=142,SNR=9.0						
WMOK	**Wichita Mounta**	**13.52**	**40**	P	**Pn**	**16 06 44.4**	**+2.3**
	baz=225						
TPNV	**Topopah Spring**	**13.58**	**336**	P	**Pn**	**16 06 45.3**	**+2.2**
	baz=152						
CWC	**Cottonwood Cre**	**13.92**	**329**	P	**Pn**	**16 06 50.3**	**+2.5**
	baz=145						
VES	**Vestal, Richgr**	**13.95**	**325**	P	**Pn**	**16 06 49.4**	**+1.5**
	baz=141						
GRAC	**Grapevine Rang**	**14.07**	**332**	P	**Pn**	**16 06 50.4**	**+0.7**
	baz=149						
R11A	**Troy Canyon, C**	**14.61**	**340**	P	**Pn**	**16 06 59.0**	**+1.8**
	baz=157						
ISCO	**Idaho Springs**	**15.36**	**11**	P	**Pn**	**16 07 08.2**	**+0.9**
	baz=193,SNR=9.0						
O20A	**White River Ci**	**15.40**	**3**	P	**Pn**	**16 07 08.3**	**+0.5**
	baz=184,SNR=12						
CMIG	**Matias Romero**	**15.43**	**117**	LR	LR	16 13 10.1	
	comp=Z,462nm,20.4s,baz=287,slow=38						
NVAR	**Mina Array Bea**	**15.68**	**333**	Pn	**Pn**	**16 07 13.5**	**+2.2**
	0.1nm,0.3s,baz=148,slow=12,SNR=20						
NVAR				LR	LR	16 12 55.9	
	comp=Z,209nm,19.8s,baz=152,slow=36						
DUG	**Dugway, Tooele**	**15.72**	**350**	P	**Pn**	**16 07 12.1**	**+0.2**
	baz=168,SNR=6.2						
N23A	**Red Feather La**	**16.38**	**9**	P	**Pn**	**16 07 21.6**	**+1.1**
	baz=191						
ELK	**Elko**	**16.75**	**344**	Pn	**Pn**	**16 07 26.1**	**+0.9**
	0.1nm,0.3s,baz=192,slow=8.2,SNR=13						
ELK				LR	LR	16 14 20.3	
	comp=Z,274nm,19.5s,baz=170,slow=39						
MIAR	**Mount Ida**	**16.79**	**51**	P	**P**	**16 07 27.7**	**0.0**
	baz=238						
W39A	**Magazine**	**17.00**	**48**	P	**P**	**16 07 30.1**	**+0.2**
	baz=236						
OGNE	**Ogallala**	**17.29**	**19**	P	**Pn**	**16 07 32.5**	**+0.8**
	baz=203						
X40A	**Basin Creek Fa**	**17.29**	**52**	P	**P**	**16 07 33.4**	**+0.3**
	baz=240						
BW06	**Boulder Array**	**18.01**	**359**	P	**Pn**	**16 07 41.2**	**+0.4**
	baz=179						
PDAR	**Pinedale Array**	**18.01**	**359**	P	**Pn**	**16 07 40.9**	**0.0**
	0.1nm,0.3s,baz=167,slow=11,SNR=22						
PDAR				LR	LR	16 14 52.1	
	comp=Z,261nm,19.6s,baz=191,slow=38						
K22A	**Casper**	**18.04**	**7**	P	**Pn**	**16 07 42.2**	**+1.1**
	baz=188						
W41B	**Gary Mavity, V**	**18.05**	**51**	P	**P**	**16 07 42.7**	**+1.2**
	baz=239,SNR=6.0						
U40A	**Yellville**	**18.27**	**47**	P	**Pn**	**16 07 43.7**	**-0.2**
	baz=235						
O03E	**Paynes Creek**	**18.75**	**329**	P	**P**	**16 07 50.0**	**+0.6**
	baz=143						
BGNE	**Belgrade**	**19.06**	**26**	P	**P**	**16 07 53.6**	**+0.9**
	baz=212						
HLID	**Hailey**	**19.27**	**349**	P	**P**	**16 07 56.5**	**+1.3**
	baz=166,SNR=7.1						
H17A	**Grant Village**	**19.67**	**357**	P	**P**	**16 08 00.3**	**+0.8**
	baz=177						
RSSD	**Black Hills**	**19.83**	**11**	P	**P**	**16 08 01.7**	**+0.4**
	baz=194						
M04C	**Macdoel**	**19.97**	**332**	P	**P**	**16 08 03.2**	**+0.6**
	baz=145						
CCM	**Cathedral Cave**	**20.30**	**45**	P	**P**	**16 08 07.7**	**+1.4**
	baz=234						
YBH	**Yreka Blue Hor**	**20.31**	**330**	LR	LR	16 16 08.9	
	comp=Z,134nm,18.1s,baz=177,slow=37						
RLMT	**Red Lodge**	**20.36**	**0**	P	**P**	**16 08 06.1**	**-1.0**

	baz=180						
K04D	Chiloquin, OR	20.62	333	P	P	16 08 09.6	-0.3
	baz=146						
BOZ	Bozeman (W)	20.93	355	P	P	16 08 14.4	+1.3
	baz=174,SNR=5.6						
J05D	Fort Rock, OR	20.97	335	P	P	16 08 14.1	+0.5
	baz=149,SNR=11						
ECSD	EROS Data Cent	21.63	26	P	P	16 08 19.8	-0.7
	baz=213,SNR=7.0						
WVT	Waverly	21.67	53	P	P	16 08 21.8	+0.7
	baz=244						
I05D	Terrebonne, OR	21.91	336	P	P	16 08 24.4	+0.8
	baz=150						
J01E	Myrtle Point	22.00	330	P	P	16 08 24.8	+0.4
	baz=142						
LAO	LASA Array	22.07	6	P	P	16 08 25.3	+0.1
	baz=187						
MSO	Missoula	22.39	352	P	P	16 08 28.7	0.0
	baz=169,SNR=7.1						
HDIL	Hopedale	23.00	42	P	P	16 08 36.1	+0.9
	baz=232						
EGMT	Eagleton	23.27	359	P	P	16 08 38.1	+0.1
	baz=179						
F05D	White Salmon	23.30	338	P	P	16 08 37.4	-0.7
	baz=151						
GOGA	Godfrey	24.13	63	P	P	16 08 45.7	-0.6
	baz=255						
TKL	Tuckaleechee C	24.53	58	LR	LR	16 18 45.4	
	comp=Z,341nm,18.6s,baz=256,slow=38						
TZTN	Tazewell	25.01	56	P	P	16 08 54.8	+0.5
	baz=249						
D03D	Eldon	25.28	338	P	P	16 08 58.2	+1.5
	baz=150						
KMSC	Kings Mountain	26.28	60	P	P	16 09 06.0	+0.1
	baz=254						
SADO	Sadowa	31.57	43	LR	LR	16 23 14.4	
	comp=Z,217nm,18.8s,baz=236,slow=38						
YKA	Yellowknife Ar	37.94	356	P	P	16 10 47.4	-0.2
	2.5nm,1.1s,baz=173,slow=7.7,SNR=14						
YKA				LR	LR	16 26 56.7	
	comp=Z,224nm,21.5s,baz=0.0,slow=37						
ROSC	El Rosal	38.96	115	LR	LR	16 26 39.2	
	comp=Z,78nm,18.4s,baz=104,slow=36						
ATAH	Atahualpa	43.68	132	LR	LR	16 26 07.2	
	comp=Z,92nm,20.5s,baz=327,slow=31						
DAWY	Dawson	44.00	341	P	P	16 11 37.0	-0.6
	baz=139						
EGAK	Eagle	45.05	341	P	P	16 11 44.2	-1.6
	baz=137						
J26L	Joseph Creek	45.57	340	P	P	16 11 49.9	-0.2
	baz=134						
ILAR	Eielson Array	46.81	339	P	P	16 12 00.5	+0.7
	2.0nm,1.1s,baz=152,slow=5.9,SNR=9.6						
MCK	McKinley	46.85	337	P	P	16 11 59.4	-0.8
	baz=128						
PRP	Porcupine Dome	46.88	340	P	P	16 12 01.0	+0.5
	baz=133						
TRF	Thorofare Moun	47.17	336	P	P	16 12 02.8	0.0
	baz=126						
POKR	Poker Plat Res	47.21	339	P	P	16 12 02.3	-0.6
	baz=130						
N19K	Bonanza Creek	47.43	332	P	P	16 12 03.4	-1.4
	baz=119						
PPLA	Purkeypile	47.57	335	P	P	16 12 07.1	+1.2
	baz=123						
CAST	Castle Rocks	47.82	336	P	P	16 12 07.5	-0.2
	baz=124						
H24K	Noodor Dome	47.82	340	P	P	16 12 07.7	0.0
	baz=130						
A36M	Sachs Harbour	48.15	353	P	P	16 12 10.1	0.0
	baz=160						
NNA	Nana	48.30	135	LR	LR	16 28 15.3	
	comp=Z,40nm,20.0s,baz=4.0,slow=31						
J20K	Nowinta River	49.00	336	P	P	16 12 16.9	+0.1
	baz=122						
COLD	Coldfoot	49.42	340	P	P	16 12 19.4	-0.5
	baz=128						
TOLK	Toolik Lake Re	50.14	342	P	P	16 12 24.8	-0.6
	baz=130						
LPAZ	La Paz	57.19	131	LR	LR	16 35 21.1	
	comp=Z,50nm,20.1s,baz=312,slow=34						
PPT	Papeete	57.52	227	LR	LR	16 31 12.6	
	comp=Z,49nm,18.2s,baz=351,slow=29						
H03N2	Juan Fernandez	64.64	152	T	T	17 24 26.9	
	baz=331,slow=78,SNR=35						
H03N1	Juan Fernandez	64.65	152	T	T	17 24 49.3	
	baz=331,slow=78,SNR=46						
H03N3	Juan Fernandez	64.66	152	T	T	17 24 44.9	
	baz=331,slow=78,SNR=42						
ESDC	Sonseca Array	85.47	48	LR	LR	16 51 20.5	
	comp=Z,67nm,21.7s,baz=255,slow=34						

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*SCB **26** 16:18:32.8±2.7, 20°.42S×63°.91W, h45^{km}±97^{km}, ML3.9/1, Error ellipse: s-maj=44.5km s-min=38.7km az=0.0*

*IDC **26** 16:18:44.4±3.6, 20°.91S×64°.11W, h38^{km}±27^{km}, mb3.7/6, mb1 4.0/9, mb1mx3.8/27, mbtmp3.9/9, ML4.1/3, MS3.1/5, Ms1 3.1/5, ms1mx2.8/25, Error ellipse: s-maj=34.9km s-min=22.5km az=38.0*

ISC 26 16:18:43.9±0.8**, 20°.94S**±0°.07×**64°.03W**±0°.06**, h35^{km}, n20, σ1^{s}.13**/21**, mb3.9**/5**, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	Mochara	1.53	258	Pg	Pn	16 19 07.0	-2.2
YJA	Yavi	1.85	228	Pg	Pn	16 19 14.8	+1.3
LVC	Limon Verde	4.83	249	LR	LR	16 22 19.9	
	comp=Z,72nm,20.7s,baz=62,slow=45						
BBOE	La Paz, Chanca	5.55	317	P	Pn	16 20 04.3	-0.3
SIV	San Ignacio	5.67	30	Pn	Pn	16 20 05.4	-0.3
	16nm,0.3s,baz=211,slow=10,SNR=144						
SIV				Sn	Sn	16 21 10.3	+0.7
	11nm,0.3s,baz=183,slow=19,SNR=8.0						
SIV	San Ignacio	5.67	30	P	Pn	16 20 04.3	-1.4
SIV				S	Sn	16 21 09.2	-0.4
SIV				IAML		16 21 20.9	
	70nm,0.4s						
PB16	IPOC Station P	5.78	296	P	Pn	16 20 10.4	+2.7
LPAZ	La Paz	6.04	319	Pn	Pn	16 20 12.0	+0.6
	1.7nm,0.3s,baz=110,slow=9.5,SNR=25						
LPAZ				Sn	Sn	16 21 19.4	-0.3
	2.8nm,0.3s,baz=296,slow=15,SNR=1.5						
LPAZ				LR	LR	16 22 57.1	
	comp=Z,68nm,20.0s,baz=69,slow=42						
LPAZ	La Paz	6.04	319	P	Pn	16 20 11.6	+0.2
BBOD	La Paz, Gloria	6.08	314	P	Pn	16 20 12.6	+0.7
CPUP	Villa Florida	8.16	132	Pn	Pn	16 20 41.1	+1.3
	0.4nm,0.3s,baz=303,slow=11,SNR=5.5						
CPUP				LR	LR	16 24 32.0	
	comp=Z,91nm,19.0s,baz=312,slow=42						
PTGA	Pitinga	20.48	12	P	P	16 23 18.8	0.0
	1.7nm,0.3s,baz=179,slow=15,SNR=4.7						
MDP	Montagnes des	28.19	25	LR	LR	16 35 33.6	
	comp=Z,84nm,21.2s,baz=260,slow=36						
TXAR	Lajitas Array	62.91	321	P	P	16 29 06.4	-0.5
	0.4nm,0.8s,baz=140,slow=7.1,SNR=2.8						
TORD	Torodi Ar. Bea	72.90	68	P	P	16 30 10.9	+0.9
	1.3nm,0.6s,baz=255,slow=5.9,SNR=9.4						
TORD				LR	LR	17 03 24.6	
	comp=Z,55nm,18.0s,baz=290,slow=37						
PDAR	Pinedale Array	76.00	327	P	P	16 30 27.6	-0.1
	0.3nm,0.4s,baz=125,slow=7.9,SNR=8.3						
ULM	Lac du Bonnet	76.27	340	P	P	16 30 28.1	-0.7
	2.3nm,0.5s,baz=141,slow=3.5,SNR=3.0						
YKA	Yellowknife Ar	92.24	339	P	P	16 31 49.0	-0.7
	0.3nm,0.6s,baz=125,slow=4.4,SNR=6.5						
ASAR	Alice Springs	132.34	202	PKP	PKPdf	16 37 53.8	-1.4
	0.2nm,0.5s,baz=147,slow=1.7,SNR=4.9						
SONM	Songino Array	152.08	14	PKPbc	PKiKP	16 38 36.2	+0.2
	0.4nm,0.4s,baz=312,slow=1.1,SNR=8.8						

MAN 26 16:24:16.8, 16°.53N×120°.08E, h24^{km}, mb4.4, ML3.2, MS3.0, Luzon

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*SOME **26** 16:40:10.0, 40°.23N×77°.42E, h5^{km}*

*KRNET **26** 16:40:11.9±0.1, 40°.33N×77°.40E, mb2.9*

*NNC **26** 16:40:11.2±0.8, 40°.26N×77°.42E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=5.3km s-min=4.2km az=169.0*

ISC 26 16:40:12.1±2.4**, 40°.3N**±0°.1×**77°.32E**±0°.04**, h10^{km}, n50, σ1^{s}.66**/77**, 16C-9D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	1.45	14	⇑iP	Pb	16 40 38.9	-0.5
	baz=12						
TARG				⇑iS	Sg	16 40 59.1	+0.4
	baz=12						
KDJ	Kajisay	1.80	357	⇓iP	Pb	16 40 45.5	+0.2
	baz=55						
KDJ				⇓iS	Sg	16 41 10.2	+0.1
	baz=55						
ULHL	Ulahol	2.08	337	⇓iP	Pb	16 40 50.7	+0.6
	baz=36						
ULHL				⇓eS	Sg	16 41 18.8	-0.2
	baz=36						
PRZ	Przheval'sk	2.30	20	⇑iP	Pb	16 40 53.2	-0.6
	baz=19						
PRZ				⇑iS	Sb	16 41 23.2	+0.9
	baz=19						
BOOM	Boomskoye usch	2.40	335	⇑eP	Pb	16 40 54.7	-0.7
	baz=34						
BOOM				⇑eS	Sb	16 41 26.3	+1.2
	baz=34						
ANVS	Anan'yevo	2.47	6	⇑iP	Pb	16 40 55.6	-1.0
	baz=5.0						
ANVS				⇑iS	Sb	16 41 27.5	+0.4
	baz=5.0						
TNSS	Tian-Shan	2.72	354	eP	Pb	16 41 02.6	+1.5
	16nm,0.4s						
TNSS				eS	Sg	16 41 40.4	+0.9
	11nm,0.6s						
TNSS	Tian-Shan	2.72	354	Pg	Pb	16 41 02.6	+1.5
	16nm,0.4s						
TNSS				Lg	Lg	16 41 41.3	
	11nm,0.6s						
ARLS	Aral	2.74	305	⇑eP	Pb	16 40 59.9	-1.3
	baz=4.0						
ARLS				⇑iS	Sb	16 41 35.0	+0.2
	baz=4.0						
MDOK	Medeo	2.84	356	eP	Pg	16 41 04.9	-1.6
	8.2nm,0.4s						
MDOK				eS	Sg	16 41 44.3	+1.0
	22nm,0.5s						
MDOK	Medeo	2.84	356	⇓Pg	Pb	16 41 04.1	+1.1
	5.2nm,0.5s						
MDOK				Lg	Lg	16 41 43.7	
	17nm,0.6s						
MDOK	Medeo	2.84	356	Pg	Pg	16 41 04.9	-1.6
	8.2nm,0.4s						
MDOK				Lg	Lg	16 41 44.3	
	22nm,0.5s						
UCH	Uchtor	2.84	313	⇑eP	Pb	16 41 01.7	-1.5
	baz=12						
UCH				⇑iS	Sb	16 41 37.7	-0.5
	baz=12						
SATY	Saty	2.85	16	eP	Pg	16 41 05.0	-1.7
	4.0nm,0.5s						
SATY				eS	Sg	16 41 44.3	+0.8
	13nm,0.5s						
SATY	Saty	2.85	16	Pg	Pg	16 41 05.0	-1.7
	4.0nm,0.5s						
SATY				Lg	Lg	16 41 44.3	
	13nm,0.5s						
MTBS	Maitube	2.88	347	eP	Pg	16 41 05.6	-1.6
	5.1nm,0.3s						
MTBS				eS	Sg	16 41 45.7	+1.2
	19nm,0.4s						
MTBS	Maitube	2.88	347	Pg	Pg	16 41 05.6	-1.6
	5.1nm,0.3s						
MTBS				Lg	Lg	16 41 45.7	
	19nm,0.4s						
TKM2	Tokmak 2	2.90	334	⇑Pg	Pb	16 41 05.5	+1.6
	4.8nm,0.8s						
TKM2				⇓Lg	Lg	16 41 46.1	
	12nm,0.7s						
TKM2	Tokmak 2	2.90	334	⇑iP	Pb	16 41 01.8	-2.1
	baz=33						
TKM2				⇑iS	Sb	16 41 38.2	-1.3
	baz=33						
KST	Kastek	2.90	340	eP	Pg	16 41 06.5	-1.1
	3.8nm,0.3s						
KST				eS	Sg	16 41 47.0	+1.9
	23nm,0.6s						
KST	Kastek	2.90	340	Pg	Pg	16 41 06.5	-1.1
	3.8nm,0.3s						
KST				Lg	Lg	16 41 47.0	
	23nm,0.6s						
KNDC	Almaty	2.90	355	⇓Pg	Pb	16 41 03.2	-0.7
	7.4nm,0.3s						
KNDC				⇓Lg	Lg	16 41 46.1	
	36nm,0.4s						
KOTS	Kotyrbulak	2.91	357	eP	Pg	16 41 06.4	-1.4
	7.7nm,0.4s						
KOTS				eS	Sg	16 41 47.4	+2.0
	19nm,0.3s						
KOTS	Kotyrbulak	2.91	357	Pg	Pg	16 41 06.4	-1.4
	7.7nm,0.4s						
KOTS				Lg	Lg	16 41 47.4	
	19nm,0.3s						
ZHN	Zhinishke	2.96	16	eP	Pg	16 41 06.3	-2.4
	7.7nm,0.2s						
ZHN				eS	Sg	16 41 46.6	-0.4
	36nm,0.3s						
ZHN	Zhinishke	2.96	16	Pg	Pg	16 41 06.4	-2.4
	7.7nm,0.2s						
ZHN				Lg	Lg	16 41 46.6	
	36nm,0.3s						
UZB	Uzynbulak	3.09	24	eP	Pb	16 41 08.3	+1.1
	2.9nm,0.3s						
UZB				eS	Sg	16 41 49.9	-1.4
	7.5nm,0.6s						
UZB	Uzynbulak	3.09	24	Pg	Pb	16 41 08.3	+1.1
	2.9nm,0.3s						
UZB				Lg	Lg	16 41 49.9	
	7.5nm,0.6s						
DGS	Degeres	3.13	339	eP	Pg	16 41 10.5	-1.6
	3.6nm,0.4s						
DGS				eS	Sg	16 41 54.1	+1.4
	13nm,0.6s						
DGS	Degeres	3.13	339	Pg	Pg	16 41 10.5	-1.6
	3.6nm,0.4s						
DGS				Lg	Lg	16 41 54.1	
	13nm,0.6s						
AAK	Ala-Archa	3.14	318	⇓Pg	Pb	16 41 10.2	+2.2
	4.3nm,0.8s						
AAK				⇑Lg	Lg	16 41 54.1	
	5.6nm,0.5s						
SHLS	Shalkode	3.25	29	eP	Pg	16 41 13.8	-0.5
	3.0nm,0.5s						
SHLS				eS	Sg	16 41 59.5	+3.1
	9.7nm,0.5s						
SHLS	Shalkode	3.25	29	Pg	Pg	16 41 13.8	-0.5
	3.0nm,0.5s						
SHLS				Lg	Lg	16 41 59.5	
	9.7nm,0.5s						
KPKS	Kokpek	3.30	18	eP	Pb	16 41 11.8	+1.1
	3.7nm,0.3s						
KPKS				eS	Sg	16 41 56.2	-1.7
	13nm,0.4s						
KTBS	Karatobe	3.42	352	eP	Pg	16 41 15.1	-2.4
	2.0nm,0.4s						
KTBS				eS	Sg	16 42 02.3	+0.6
	10nm,0.5s						
KTBS	Karatobe	3.42	352	Pg	Pg	16 41 15.1	-2.4
	2.0nm,0.4s						
KTBS				Lg	Lg	16 42 02.3	
	10nm,0.5s						
CHKK	Chushkaly	3.53	356	eP	Pb	16 41 17.0	+2.3
	3.6nm,0.4s						
CHKK				eS	Sg	16 42 05.5	0.0
	10nm,0.3s						
CHKK	Chushkaly	3.53	356	Pg	Pb	16 41 17.0	+2.3
	3.6nm,0.4s						
CHKK				Lg	Lg	16 42 05.5	
	10nm,0.3s						
KRBS	Karabastau	3.58	341	eP	Pg	16 41 18.5	-2.2
	3.5nm,0.5s						
KRBS				eS	Sg	16 42 07.9	+0.8
	11nm,0.6s						
KRBS	Karabastau	3.58	341	Pg	Pg	16 41 18.5	-2.2
	3.5nm,0.5s						
KRBS				Lg	Lg	16 42 07.9	
	11nm,0.6s						
KUU	Kurty	3.64	349	eP	Pb	16 41 18.7	+2.2
	1.5nm,0.7s						
KUU				eS	Sg	16 42 07.9	-0.9
	6.9nm,0.5s						
KUU	Kurty	3.64	349	Pg	Pb	16 41 18.7	+2.2
	1.5nm,0.7s						
KUU				Lg	Lg	16 42 07.9	
	6.9nm,0.5s						
SGDS	Sogindy	3.71	328	Pg	Pb	16 41 20.7	+2.9
	3.4nm,0.9s						
SGDS				Lg	Lg	16 42 11.2	
	6.1nm,0.8s						
BLB	Baldybastay	3.86	12	Pg	Pb	16 41 22.1	+1.8
	3.8nm,0.3s						
BLB				Lg	Lg	16 42 14.3	
	11nm,0.3s						
ARXS	Arharly	3.90	5	eP	Pb	16 41 23.2	+2.3
	2.3nm,0.5s						
ARXS				eS	Sg	16 42 16.4	-0.8
	8.7nm,0.4s						
ARXS	Arharly	3.90	5	Pg	Pb	16 41 23.3	+2.3
	2.3nm,0.5s						
ARXS				Lg	Lg	16 42 16.4	
	8.7nm,0.4s						
MRKS	Merke	3.91	309	eP	Pb	16 41 24.3	+3.2
	2.8nm,0.5s						
MRKS				eS	Sg	16 42 17.7	+0.1
	4.2nm,0.5s						
MRKS	Merke	3.91	309	Pg	Pb	16 41 24.3	+3.2
	2.8nm,0.5s						
MRKS				Lg	Lg	16 42 17.7	
	4.2nm,0.5s						
DJR	Jarkent	4.40	24	eP	Pb	16 41 31.8	+2.4
	1.9nm,0.9s						
DJR				eS	Sg	16 42 30.6	-2.6
	5.8nm,0.5s						
DJR	Jarkent	4.40	24	Pg	Pb	16 41 31.8	+2.4
	1.9nm,0.9s						
DJR				Lg	Lg	16 42 30.6	
	5.8nm,0.5s						

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*IDC **26** 16:47:48.0±3.1, 20°.02S×176°.09W, h138^{km}±29^{km}, mb3.6/5, mb1 4.0/7, mb1mx3.7/29, mbtmp4.2/7, Error ellipse: s-maj=39.0km s-min=16.8km az=140.0*

*NEIC **26** 16:47:50.6±2.4, 19°.9S±0°.2×175°.8W±0°.1, h181^{km}±17^{km}, mb4.4/16, Error ellipse: s-maj=24.6km s-min=15.9km az=182.0*

ISC 26 16:47:48.8±0.6**, 19°.98S**±0°.10×**175°.91W**±0°.09**, h150^{km}, n32, σ1^{s}.52**/32**, mb4.3**/11**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	5.71	82	Pn	Pn	16 49 12.4	+0.8
MSVF	Nonsavu	6.14	290	Pn	Pn	16 49 19.6	+2.1
AFI	Afiamalu	7.21	34	P	Pn	16 49 32.9	+1.1
	3.5nm,0.3s,baz=240,slow=5.4,SNR=5.5						
AFI				S	Sn	16 50 48.9	-3.6
	5.3nm,0.3s,baz=123,slow=22,SNR=6.0						
PINNC	Pines Island,	15.74	257		Pn	16 51 22.2	-0.1
OUENC	Ouen Island, N	16.27	258		Pn	16 51 27.8	-1.1
OUENC				IAmb	IAmb	16 51 28.5	
	comp=Z,24nm,1.1s						
KNTN	Kanton	17.58	14	P	P	16 51 40.4	-3.1
URZ	Urewera	19.20	197	P	P	16 51 59.8	-1.2
	comp=Z,3.1nm,0.3s,baz=302,slow=23,SNR=22						
URZ	Urewera	19.20	197	P	P	16 51 59.9	-1.2
URZ				IAmb	IAmb	16 52 01.9	
	comp=Z,22nm,1.0s						
THZ	Tophouse	23.70	201	P	P	16 52 46.4	-0.5
THZ				IAmb	IAmb	16 52 49.3	
	comp=Z,12nm,1.0s						
LTZ	Lake Taylor	24.82	201	P	P	16 52 55.3	-1.8
OXZ	Oxford	25.39	201	P	P	16 53 00.9	-1.2
OXZ				IAmb	IAmb	16 53 06.8	
	comp=Z,15nm,0.8s						
FOZ	Fox Glacier	26.36	204	P	P	16 53 09.4	-1.4
ARMA	Armidale	31.06	244	P	P	16 53 52.1	-0.7
CTAO	Charters Tower	35.50	263	P	P	16 54 32.0	+0.6
CTAO				IAmb	IAmb	16 54 33.1	
	comp=Z,7.6nm,0.5s						
COEN	Coen	39.52	272	P	P	16 55 04.6	-0.6
COEN				IAmb	IAmb	16 55 07.5	
	comp=Z,5.2nm,0.8s						
STKA	Stephens Creek	39.78	244	P	P	16 55 05.4	-1.8
BBOO	Buckleboo	44.54	243	P	P	16 55 45.5	-0.2
BBOO				IAmb	IAmb	16 55 46.3	
	comp=Z,9.1nm,1.0s						
AS31	Alice Springs	46.55	256	P	P	16 56 01.0	-0.7
ASAR	Alice Springs	46.55	256	P	P	16 56 01.4	-0.3
	comp=Z,4.4nm,0.7s,baz=97,slow=8.3,SNR=73						
ASAR	Alice Springs	46.55	256	P	P	16 56 00.8	-0.9
WB0	Warramunga Arr	46.60	261	P	P	16 56 01.4	-0.7
WB0				IAmb	IAmb	16 56 02.2	
	comp=Z,5.5nm,0.7s						
WB2	Warramunga Arr	46.61	261	P	P	16 56 01.9	-0.3
WRA	Warramunga Arr	46.62	261	P	P	16 56 00.5	-1.8
	comp=Z,0.9nm,0.2s,baz=96,slow=7.5,SNR=28						
WRA	Warramunga Arr	46.62	261	P	P	16 56 01.3	-0.9
NVAR	Mina Array Bea	79.31	42	P	P	16 59 39.4	+1.3
	comp=Z,1.0nm,0.7s,baz=229,slow=8.2,SNR=5.5						
TXAR	Lajitas Array	85.12	57	P	P	17 00 10.2	+1.9
	comp=Z,0.7nm,0.9s,baz=238,slow=3.1,SNR=4.8						
ILAR	Eielson Array	87.38	12	P	P	17 00 19.0	+0.5
	comp=Z,0.5nm,0.9s,baz=234,slow=5.1,SNR=4.6						
AKASG	Malin Array Be	143.48	333	PKhKP	PKPpre	17 07 01.9	
	comp=Z,0.2nm,0.3s,baz=44,slow=3.8,SNR=5.4						
BRTR	Keskin Array B	147.91	314	PKPbc	PKPdf	17 07 16.6	+3.1
	comp=Z,1.5nm,0.6s,baz=128,slow=5.0,SNR=9.0						
KHC	Kasperske Hory	149.93	348	ePKP	PKPbc	17 07 21.3	0.0
CKRC	Cesky Krumlov	150.07	346	ePKP	PKPbc	17 07 22.9	+1.3
GERES	GERESS Array B	150.18	347	PKPbc	PKPbc	17 07 22.1	+0.1
	comp=Z,0.8nm,0.8s,baz=27,slow=3.3,SNR=8.5						

IDC 26 16:58:30.3±4.6**, 4°.07S**×**129°.63E, h59^{km}**±49^{km}**, mb3.6**/2**, mb1 3.6**/4**, mb1mx3.2**/28**, mbtmp3.7**/4**, ML3.6**/2**, Error ellipse: s-maj=47.8km s-min=22.1km az=83.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.57	27	P	Pn	16 59 22.5	-0.8
	8.0nm,0.3s,baz=231,slow=22,SNR=24						
SIJI				S	Sn	17 00 05.1	+0.8
	7.1nm,0.3s,baz=227,slow=23,SNR=6.0						
WRA	Warramunga Arr	16.43	164	P	Pn	17 02 13.1	-4.1
	0.1nm,0.3s,baz=344,slow=13,SNR=1.7						
ASAR	Alice Springs	19.92	168	P	P	17 02 57.5	+0.2
	0.1nm,0.3s,baz=347,slow=11,SNR=9.1						
ASAR				PcP	PcP	17 07 12.0	-0.5
	0.0nm,0.3s,baz=10,slow=1.3,SNR=4.2						
CMAR	Chiang Mai Arr	37.62	307	P	P	17 05 39.9	+0.2
	0.3nm,0.3s,baz=134,slow=7.8,SNR=5.0						
MKAR	Makanchi Array	65.59	326	P	P	17 09 07.9	-0.1
	0.6nm,0.4s,baz=115,slow=7.9,SNR=22						

IDC 26 17:13:12.2±19.0**, 12°.35S**×**166°.79E, h271^{km}**±230^{km}**, mb3.1**/3**, mb1 3.3**/4**, mb1mx3.0**/27**, mbtmp3.7**/4**, Error ellipse: s-maj=212.4km s-min=29.1km az=156.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	9.67	182	P	Pn	17 15 26.7	+0.1
	0.2nm,0.3s,baz=30,slow=22,SNR=1.4						
WRA	Warramunga Arr	32.02	252	P	P	17 19 14.0	-0.1
	0.7nm,0.8s,baz=82,slow=8.8,SNR=4.5						
ASAR	Alice Springs	33.15	246	P	P	17 19 23.6	-0.2
	0.5nm,0.6s,baz=69,slow=10,SNR=16						
ILAR	Eielson Array	84.43	18	P	P	17 25 14.3	+0.1
	0.6nm,0.6s,baz=243,slow=5.6,SNR=12						

IDC 26 17:21:53.7±3.0**, 6°.14S**×**147°.16E, h0^{km}, mb3.4**/1**, mb1 3.7**/3**, mb1mx3.4**/26**, mbtmp3.5**/3**, ML3.7**/1**, MS2.5**/1**, Ms1 2.5**/1**, ms1mx2.2**/24**, Error ellipse: s-maj=63.4km s-min=34.6km az=88.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.25	180	Pn	Pn	17 22 47.2	+1.2
	4.5nm,0.3s,baz=353,slow=13,SNR=20						
PMG				Sn	Sn	17 23 26.6	+1.3
	3.0nm,0.3s,baz=175,slow=21,SNR=7.7						
PMG				LR	LR	17 24 10.4	
	comp=Z,79nm,19.6s,baz=78,slow=42						
WRA	Warramunga Arr	18.54	221	P	P	17 26 12.0	-0.1
	0.2nm,0.3s,baz=49,slow=11,SNR=12						
ASAR	Alice Springs	21.60	215	P	P	17 26 45.2	-0.2
	1.1nm,0.5s,baz=51,slow=7.9,SNR=38						
TORD	Torodi Ar. Bea	145.28	284	PKPbc	PKPbc	17 41 32.9	-1.4
	0.5nm,0.5s,baz=102,slow=4.1,SNR=3.0						

MAN 26 17:34:03.9, 13°.30N×124°.95E, h15^{km}, mb4.9, ML3.8, MS3.8, 6D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCSP	San Jose Seism	1.44	285	⇓eP	Pn	17 34 28.4	-1.0
SCSP				i S	Sb	17 34 48.6	+0.1
JCNP	Jose Panganiba	2.40	295	⇓iP	Pn	17 34 43.9	+1.2
JCNP				i S	Sn	17 35 13.5	+1.6
GQP	Guinayangan	2.51	284	⇓eP	Pn	17 34 44.8	+0.6
GQP				eS	Sn	17 35 15.9	+1.4
RCP	Roxas	2.76	232	⇓eP	Pn	17 34 48.1	+0.4
RCP				eS	Sn	17 35 22.1	+1.4
BOAC	Boac	3.03	273	⇓eP	Pn	17 34 52.5	+1.2
BOAC				i S	Sn	17 35 26.7	-0.7
MSLP	Maasin	3.14	182	eP	Pn	17 34 55.8	+2.9
MSLP				eS	Sg	17 35 42.2	-2.8
CAUP	Cauayan	4.72	321	⇓eP	Pn	17 35 14.7	+0.1

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*IDC **26** 17:37:38.9±2.0, 6°.21S×147°.02E, h0^{km}, mb3.8/4, mb1 3.9/6, mb1mx3.4/34, mbtmp3.8/6, ML1.3/1, MS3.0/3, Ms1 3.0/3, ms1mx2.6/40, Error ellipse: s-maj=75.4km s-min=20.2km az=89.0*

ISC 26 17:37:44.8±1.4, **6°.25S**±0°.09×**147°.1E**±0°.2, **h49^{km}, n18, σ1^{s}26**/16, **mb3.7**/7, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.13	180	Pn	Pn	17 38 30.6	-1.1
	2.7nm,0.3s,baz=29,slow=11,SNR=26						
PMG				Sn	Sn	17 39 10.5	+2.5
	5.3nm,0.3s,baz=171,slow=19,SNR=8.8						
PMG				LR	LR	17 40 03.2	
	comp=Z,133nm,19.4s,baz=272,slow=45						
PMG	Port Moresby	3.13	180	P	Pn	17 38 30.9	-0.8
PMG	Port Moresby	3.13	180	P	Pn	17 38 30.9	-0.8
COEN	Coen	8.59	207	P	Pn	17 39 47.5	+0.8
	15nm,1.6s						
SIJI	Sorong	16.71	288	LR	LR	17 47 33.9	
	comp=Z,32nm,21.4s,baz=172,slow=36						
WRAB	Tennant Creek	18.42	221	P	Pn	17 41 55.7	-1.0
WRA	Warramunga Arr	18.43	221	P	Pn	17 41 55.7	-1.2
	0.4nm,0.3s,baz=50,slow=11,SNR=21						
QLP	Quilpie	20.41	187	P	Pn	17 42 17.7	-2.6
	26nm,0.7s						
ASAR	Alice Springs	21.49	215	P	P	17 42 28.9	-0.7
	1.3nm,0.5s,baz=51,slow=8.0,SNR=37						
OOD	Oodnadatta	24.02	206	P	P	17 42 54.1	-1.2
	13nm,2.0s						
LCRK	Leigh Creek	25.49	198	P	P	17 43 08.5	-0.1
WRKA	Warakurna	25.97	222	P	P	17 43 11.5	-1.6
	8.5nm,2.6s						
STKA	Stephens Creek	26.01	191	P	P	17 43 13.7	+0.4
	0.8nm,0.5s,baz=24,slow=10,SNR=4.2						
MULG	Mulgathing	26.88	206	P	P	17 43 21.7	+0.5
	21nm,2.1s						
SONM	Songino Array	64.69	331	P	P	17 48 19.7	+1.8
	0.6nm,0.8s,baz=129,slow=3.9,SNR=4.4						
ZALV	Zalesovo Beam	79.30	328	P	P	17 49 44.6	-0.5
	0.6nm,0.6s,baz=98,slow=9.6,SNR=4.1						
KIRV	Kirov	99.33	328	LR	LR	18 40 58.0	
	comp=Z,23nm,19.6s,baz=223,slow=38						
TORD	Torodi Ar. Bea	145.29	284	PKPbc	PKPbc	17 57 18.0	-0.1
	0.7nm,0.5s,baz=71,slow=4.0,SNR=4.5						

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*KISR **26** 17:38:07.2±0.8, 30°.98N×50°.05E, h0^{km}±109^{km}, ML3.6*
*TEH **26** 17:38:07.6, 31°.21N×50°.27E, h9^{km}, ML3.3*

ISC 26 17:38:08.7±0.9, **31°.18N**±0°.04×**50°.23E**±0°.04, **h10^{km}, n31, σ1^{s}14**/36, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABEH	Behbahan	0.58	178	ePg	Pg	17 38 20.2	+0.2
ABEH				eSg	Sb	17 38 29.3	0.0
AMIS	Naft Sefid	0.94	301	ePg	Pg	17 38 24.8	-1.9
AMIS				eSg	Sb	17 38 40.6	+1.1
IBRJ	Brojen	1.14	50	ePg	Pb	17 38 28.5	-2.2
IBRJ				e		17 38 49.3	
	comp=Z,4µm,0.5s						
KLNJ	Kolanjah	1.19	98	ePg	Pb	17 38 29.5	-2.0
KLNJ				e		17 38 53.8	
	comp=Z,12µm,0.6s						
AHWZ	Ahwaz	1.36	277	ePg	Pn	17 38 34.1	+0.3
AHWZ				eSg	Sg	17 38 54.8	+2.3
IGAR	Gharneh	1.97	51	ePn	Pn	17 38 43.7	+1.4
IGAR				e		17 38 47.2	
	comp=Z,1µm,0.3s						
IKLH	Kolahrood	2.42	28	ePn	Pn	17 38 49.2	+0.6
IKLH				e		17 38 53.9	
	comp=Z,972nm,0.2s						
AHBU	AHRAM	2.49	158	ePn	Pn	17 38 49.5	+0.2
KHMZ	Khomeyn	2.56	355	ePn	Pn	17 38 52.1	+1.6
UMR	Umm Al-Rimmam	2.71	234	eP	Pn	17 38 52.6	+0.3
NASN	Na'in	2.72	53	ePn	Pn	17 38 53.8	+1.0
MIB	Mutribah	2.85	242	eP	Pn	17 38 54.6	+0.4
IKFM	Kafar-mosalman	3.08	320	ePn	Pn	17 38 57.9	+0.5
IKFM				e		17 39 57.7	
	comp=Z,2µm,0.6s						
IDOB	Doab	3.12	327	ePn	Pn	17 38 58.7	+0.5
QRN	Al-Qurain	3.15	220	eP	Pn	17 38 57.9	-0.4
QRN				eS	Sn	17 39 37.4	+1.4
RDF	Al-Radifah	3.23	227	eP	Pn	17 39 00.1	+0.7
RDF				eS	Sn	17 39 38.7	+0.7
RDF				IAML		17 39 42.6	
	comp=Z,181nm,0.3s						
RST	Umm Al-Ruwaisa	3.25	240	eP	Pn	17 39 00.1	+0.3
HSAM	Samen	3.31	336	ePn	Pn	17 39 01.6	+0.7
HSAM				e		17 39 13.9	
	comp=Z,483nm,0.3s						
ASAO	Ashtian	3.36	357	ePn	Pn	17 39 03.3	+1.8
GHVR	GHOM	3.41	15	ePn	Pn	17 39 03.4	+1.4
ANAR	Anarak	3.58	55	ePn	Pn	17 39 05.6	+1.2
ICHK	Chekchek	3.72	72	ePn	Pn	17 39 07.0	+0.6
HAGD	Aghdareh	3.74	346	ePn	Pn	17 39 07.2	+0.5
HAGD				e		17 40 11.4	
	comp=Z,462nm,0.8s						
GHIR	Ghir-Karzin	3.76	140	ePn	Pn	17 39 07.2	+0.4
IBZA	Bozab	3.83	329	ePn	Pn	17 39 08.3	+0.3
IBZA				e		17 40 26.6	
	comp=Z,344nm,0.8s						
YZKH	Yazd	3.91	71	ePn	Pn	17 39 10.3	+1.4
IALM	Almabolaq	4.05	335	ePn	Pn	17 39 11.5	+0.4
IGHG	Ghaleghazi	4.40	316	ePn	Pn	17 39 15.8	+0.1
IGHG				e		17 40 55.3	
	comp=Z,375nm,0.8s						
IDHR	Dehrash	4.76	318	ePn	Pn	17 39 21.4	+0.6
IFIR	Firoozkooh	4.92	25	ePn	Pn	17 39 24.1	+1.1
SHRO	Shahrood	6.80	44	ePn	Pn	17 39 50.3	+1.6

TAP 26 17:51:04.9, 24°.22N×121°.66E, h15^{km}, ML1.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.06	209	i P	Pg	17 51 08.3	+0.4
	baz=208						
ETL				i S	Sg	17 51 10.5	+0.7
	baz=208						
NACB	Ninganchiao	0.07	234	i P	Pg	17 51 08.4	+0.5
	baz=234						
NACB				i S	Sg	17 51 10.6	+0.8
	baz=234						
TWD	Chiawan	0.14	203	P	Pg	17 51 09.0	+0.3
	baz=199						
ETLH	Xiulin Townshi	0.16	267	i P	Pb	17 51 09.8	+0.1
	baz=266						
ETLH				i S	Sb	17 51 13.2	+0.3
	baz=266						
ENA	Nanau	0.23	20	eP	Pg	17 51 10.3	+0.3
	baz=21						
EWUT	Wuta	0.26	26	eP	Pg	17 51 10.3	-0.2
	baz=25						
ETM	Tongmen	0.29	211	P	Pg	17 51 11.1	+0.1
	baz=211						
NNSB	Datong	0.33	310	P	Pb	17 51 12.3	-0.3
	baz=310						
NNSB				S	Sb	17 51 17.8	+0.1
	baz=310						
LATG	Datong	0.34	340	P	Pb	17 51 12.9	+0.1
	baz=339						
LATG				S	Sb	17 51 18.2	+0.1
	baz=339						
NNS	Nan Shan	0.34	311	eP	Pb	17 51 12.9	0.0
	baz=311						
NNS				eS	Sb	17 51 18.2	0.0
	baz=311						
WHF	Hehuan Shan	0.36	259	P	Pb	17 51 13.1	-0.3
	baz=258						
WHF				S	Sb	17 51 18.9	-0.2
	baz=258						
FUSS	Fushou	0.38	275	eP	Pb	17 51 13.3	-0.2
	baz=274						
NDS	Dongshan	0.42	7	eP	Pb	17 51 14.1	-0.1
	baz=7.0						
ENTT	Nioudou	0.43	349	eP	Pb	17 51 14.7	+0.4
	baz=349						
ENTT				S	Sb	17 51 20.8	+0.2
	baz=349						
ESL	Shilin	0.45	207	eP	Pb	17 51 14.3	-0.2
	baz=206						
TDCB	Techi	0.46	275	P	Pb	17 51 15.1	+0.3
	baz=274						
TDCB				S	Sb	17 51 21.7	+0.3
	baz=274						
CHGB	Renai	0.47	251	eP	Pb	17 51 15.7	+0.7
	baz=250						
TWE	Neicheng	0.50	1	eP	Pb	17 51 15.7	+0.2
	baz=2.0						
YHNB	Yeheng	0.52	331	P	Pb	17 51 16.3	+0.4
	baz=330						
YHNB				S	Sb	17 51 23.6	+0.4
	baz=330						
NSK	Sanguang	0.53	329	eP	Pb	17 51 16.6	+0.6
	baz=329						
NSK				eS	Sb	17 51 23.9	+0.2
	baz=329						
WUSB	Renai	0.54	246	P	Pb	17 51 16.9	+0.7
	baz=245						
WUSB				S	Sb	17 51 24.2	+0.4
	baz=245						

JMA 26 17:51:07.3±0.1, **24°.35N×123°.18E, h51^{km}**±2^{km}, **M1.3, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.19	306	P	Pn	17 51 15.6	-0.1
YOJ				eS	Sn	17 51 21.7	0.0
JYNG	Yonagunijimaku	0.24	295	P	Pn	17 51 15.8	-0.2
JYNG				S	Sn	17 51 21.7	-0.5
IRIF	Iriomote-Funau	0.50	92	P	Pn	17 51 18.4	-0.2
IRIF				S	Sn	17 51 26.7	-0.1
JKRS	Kuro-shima	0.77	98	P	Pn	17 51 22.2	+0.3
JKRS				S	Sn	17 51 33.2	+0.6
JIJ	Ishigaki jima	0.88	89	P	Pn	17 51 23.3	-0.1
JIJ				S	Sn	17 51 35.0	-0.2
JISG	Ishigakijimahi	1.06	77	P	Pn	17 51 25.9	+0.1
JISG				eS	Sn	17 51 40.0	+0.5

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*SJA **26** 17:58:04.2±0.6, 31°.73S×72°.45W, h9^{km}, ML4.9, MW4.8*

*IDC **26** 17:58:07.9±0.5, 31°.72S×72°.03W, h0^{km}, mb4.6/19, mb1 4.6/23, mb1mx4.5/49, mbtmp4.5/23, ML4.5/4, MS4.4/10, Ms1 4.4/10, ms1mx4.2/17, Error ellipse: s-maj=16.2km s-min=14.0km az=67.0*

*NEIC **26** 17:58:08.7, 31°.75S×72°.16W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.87; $M_{\theta\theta}$0.32; $M_{\phi\phi}$-3.19; $M_{r\theta}$0.29; $M_{\theta\phi}$0.14; $M_{\phi r}$-1.41; Fault plane solution: $M_0$3.37000×10^{16} NP1:ϕ_s173.31000°, δ57.70000°, λ84.89000°. NP2:ϕ_s2.82000°, δ32.66000°, λ98.03000°. Principal axes: T 3.2065, Plg77.0000°, Azm67.0000°; N 0.3094, Plg4.0000°, Azm176.0000°; P -3.5159, Plg13.0000°, Azm267.0000°;*

*NEIC **26** 17:58:08.2±1.9, 31°.75S±0°.02×72°.18W±0°.08, h12^{km}±1^{km}, mb5.0/70, Mwr5.0/49, Mww5.0, ML4.9(GUC) Error ellipse: s-maj=9.4km s-min=3.3km az=90.0*

*VAO **26** 17:58:09.5±0.4, 31°.73S×72°.01W, h13^{km}, mb4.8*

*GUC **26** 17:58:09.4±0.8, 31°.76S×72°.10W, h32^{km}±2^{km}, ML4.9*

*NEIC **26** 17:58:11, 31°.85S×72°.27W, h26^{km}, Moment Tensor Solution. Duration: 6^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.90; $M_{\theta\theta}$0.09; $M_{\phi\phi}$-2.98; $M_{r\theta}$0.70; $M_{\theta\phi}$0.58; $M_{\phi r}$-3.24; Fault plane solution: $M_0$4.47000×10^{16} NP1: ϕ_s351.00000°, δ21.00000°, λ93.00000°. NP2: ϕ_s168.00000°, δ69.00000°, λ89.00000°. Principal axes: T 4.3710, Plg66.0000°, Azm76.0000°; N 0.1919, Plg1.0000°, Azm169.0000°; P -4.5629, Plg24.0000°, Azm259.0000°;*

*BJI **26** 17:58:12.0±0.0, 31°.70S×72°.00W, h30^{km}, mB5.1/1*

*GCMT **26** 17:58:13.2±0.3, 31°.80S±0°.02×72°.33W±0°.02, h30^{km}, MW5.2/86, Moment Tensor Solution. s45,c54; s86,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.58±.24; $M_{\theta\theta}$-0.75±.16; $M_{\phi\phi}$-4.83±.17; $M_{r\theta}$0.18±.21; $M_{\theta\phi}$2.36±.11; $M_{\phi r}$-4.18±.24; Best double couple: $M_0$7.11200×10^{16} NP1:ϕ_s323.00000°, δ29.00000°, λ67.00000°. NP2: ϕ_s168.00000°, δ63.00000°, λ102.00000°. Principal axes: T 7.1010, Plg69.0000°, Azm103.0000°; N 0.0270, Plg11.0000°, Azm343.0000°; P -7.1240, Plg17.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 17:58:07.7±1.3, **31°.73S**±0°.02×**72°.12W**±0°.04, **h6^{km}**±7^{km}, **n287, σ1^{s}34**/308, **mb5.0**/43, **MS4.5**/11, **14C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	1.08	140	⇑eP	Pb	17 58 28.5	-0.3
VA06				i S	Sb	17 58 42.3	-1.0
VA06				IAML		17 58 48.2	
	comp=E,56µm,0.5s						
CO06	Fray Jorge	1.13	22	⇑iP	Pb	17 58 29.8	+0.2
CO06				eS	Sg	17 58 44.9	+0.9
CO06				IAML		17 58 53.4	
	comp=N,21µm,0.3s						
CO06	Fray Jorge	1.13	22		Pb	17 58 29.9	+0.2
CO06				Sg	Sg	17 58 45.0	+0.9
VA01	Torpederas	1.35	163	⇑eP	Pn	17 58 32.7	-0.4
VA01				i S	Sn	17 58 49.7	-1.7
VA01	Torpederas	1.35	163	Pn	Pn	17 58 32.6	-0.5
VA01				Sg	Sn	17 58 49.0	-2.4
VA01	Torpederas	1.35	163	eP	Pn	17 58 33.0	-0.1
CO03	El Pedregal	1.51	54	⇑iP	Pn	17 58 35.3	-0.1
CO03				i S	Sb	17 58 55.6	-0.1
CO03				IAML		17 58 58.8	
	comp=E,20µm,0.8s						
CO03	El Pedregal	1.51	54	Pn	Pn	17 58 35.8	+0.4
CO03				Sn	Sb	17 58 55.5	-0.1
CO03	El Pedregal	1.51	54	eP	Pb	17 58 36.0	-0.2
CO03				IAML		17 59 01.5	
	comp=Z,10µm,0.9s						
ROCH	El Roble	1.55	143	⇑eP	Pb	17 58 36.1	-0.9
ROCH				⇑eP	Pn	17 58 35.7	-0.4
ROCH				i S	Sn	17 58 55.8	-0.8
ROCH				i S	Sn	17 58 55.9	-0.8
ROCH				IAML		17 59 04.1	
	comp=E,38µm,0.5s						
ROCH				IAML		17 59 04.2	
	comp=E,39µm,0.8s						
ROC1	El Roble	1.56	143	eP	Pn	17 58 35.0	-1.2
VA03	San Esteban	1.68	128	⇑iP	Pn	17 58 37.6	-0.1
VA03				i S	Sn	17 58 59.0	-0.8
VA03				IAML		17 59 05.7	
	comp=N,42µm,0.6s						
VA03	San Esteban	1.68	128		Pn	17 58 38.1	+0.4
VA03				Sn	Sn	17 58 58.9	-0.8
VA03	San Esteban	1.68	128	eP	Pn	17 58 38.0	+0.2
VA03				IAML		17 59 06.8	
	comp=Z,16µm,1.0s						
MT02	Curacav	1.74	152	⇑iP	Pn	17 58 38.4	-0.1
MT02				i S	Sn	17 59 00.7	-0.2
MT02				IAML		17 59 06.5	
	comp=N,9µm,0.5s						
MT02	Curacav	1.74	152		Pn	17 58 38.4	-0.1
MT02	Curacav	1.74	152	eP	Pn	17 58 38.0	-0.4
MT02				IAML		17 59 08.0	
	comp=Z,14µm,0.6s						
PEL	Peldehue	1.86	140		Pn	17 58 40.5	+0.4
PEL				Sn	Sn	17 59 02.9	-1.1
PEL	Peldehue	1.86	140	eP	Pn	17 58 41.0	+0.8
GO04	Tololo Observa	1.92	36	⇑iP	Pn	17 58 41.4	+0.2
GO04				i S	Sb	17 59 06.6	-1.0
GO04	Tololo Observa	1.92	36		Pn	17 58 41.6	+0.5
GO04	Tololo Observa	1.92	36	eP	Pn	17 58 42.0	+0.8
CO05	La Serena	1.96	23	eP	Pn	17 58 42.4	+1.0
CO05				i S	Sb	17 59 08.2	-0.2
CO05				IAML		17 59 15.7	
	comp=N,9µm,0.6s						
CO05	La Serena	1.96	23		Pn	17 58 41.8	+0.4
VA05	Santo Domingo	1.97	168	eP	Pg	17 58 50.0	+4.6
VA05				i S	Sg	17 59 13.3	+2.3
VA05				IAML		17 59 19.6	
	comp=N,27µm,0.5s						
VA05	Santo Domingo	1.97	168		Pn	17 58 41.5	-0.2
MT05	Renca	2.03	145	⇑eP	Pn	17 58 42.5	0.0
MT05				i S	Sn	17 59 08.5	+0.3
MT05				IAML		17 59 15.9	
	comp=E,16µm,0.4s						
MT05	Renca	2.03	145	Pn	Pn	17 58 42.8	+0.3
MT05	Renca	2.03	145	eP	Pn	17 58 43.2	+0.7
MT05				IAML		17 59 17.7	
	comp=Z,9µm,0.8s						
FCH	Farellones	2.22	136	⇑eP	Pn	17 58 45.9	+0.5
FCH				i S	Sn	17 59 14.4	+1.1
FCH				IAML		17 59 22.3	
	comp=E,7µm,0.8s						
MT01	Popeta	2.25	161	⇑iP	Pn	17 58 45.5	-0.1
MT01				i S	Sn	17 59 11.5	-2.1
MT01				IAML		17 59 26.8	
	comp=E,7µm,0.6s						
MT01	Popeta	2.25	161		Pn	17 58 45.6	+0.1
MT01	Popeta	2.25	161	eP	Pn	17 58 45.0	-0.5
MT01				eS	Sn	17 59 09.9	-3.7
MT01				IAML		17 59 27.1	
	comp=Z,5µm,0.7s						
MT09	Talagante	2.25	155	⇑iP	Pn	17 58 46.3	+0.7
MT09				i S	Sn	17 59 13.0	-0.9
MT09				IAML		17 59 26.5	
	comp=N,15µm,0.8s						
MT09	Talagante	2.25	155		Pn	17 58 46.3	+0.7
AUSP	Uspallata	2.37	103	eP	Pn	17 58 44.9	-2.5
AUSP				eP	Pb	17 58 50.0	-1.0
RTLS	Leoncito	2.40	92	eP	Pb	17 58 51.0	-0.5
LMEL	Las Melosas	2.66	143	⇑eP	Pn	17 58 52.4	+1.1
LMEL				i S	Sn	17 59 24.1	+0.2
LMEL				IAML		17 59 36.4	
	comp=N,5µm,0.3s						
AROD	Rodeo	2.75	56	eP	Pb	17 58 56.0	-1.5
BO01	Tunca	2.79	162	Pn	Pn	17 58 53.3	+0.3
BO01	Tunca	2.79	162	eP	Pn	17 58 53.0	0.0
BO01				eS	Sb	17 59 29.9	-2.6
ACCO	Cerro Coronel	2.85	67	eP	Pb	17 58 58.0	-1.2
ASAL	Salagasta	2.91	108	eP	Pb	17 58 59.0	-1.1
ARCO	CERRO ARCO	2.92	113	eP	Pb	17 58 59.0	-1.2
ZON	Zonda	2.94	87	Pn	Pb	17 58 58.0	-2.5
ZON	Zonda	2.94	87	eP	Pb	17 58 59.0	-1.5
LCO	Las Campanas	2.97	25	Pn	Pn	17 58 56.0	+0.4
LCO	Las Campanas	2.97	25	eP	Pn	17 58 56.0	+0.4
RTCV	Cerro Valdivia	3.05	93	eP	Pb	17 59 00.0	-2.4
AAGR	Agrelo	3.09	117	eP	Pb	17 59 01.0	-2.2
BO02	Sierra Bellavi	3.25	160		Pn	17 58 60.0	+0.6
BO02	Sierra Bellavi	3.25	160	eP	Pn	17 59 00.0	+0.6
BO02				eP	Pn	17 59 00.3	+0.9
BO02				eS	Sb	17 59 44.4	-1.5
GO05	Huala	3.28	177	eP	Pn	17 58 59.0	-0.6
GO05				IAML		18 00 07.4	
	comp=N,3µm,0.8s						
GO05	Huala	3.28	177	Pn	Pn	17 58 59.2	-0.4
GO05	Huala	3.28	177	eP	Pn	17 58 59.0	-0.6
GO05				eS	Sg	17 59 51.9	-1.1
AC04	Llanos de Chal	3.63	15	Pn	Pn	17 59 03.6	-0.8
AC04	Llanos de Chal	3.63	15	eP	Pn	17 59 05.0	+0.6
AC04				eS	Sn	17 59 44.9	-2.7
AC04				eS	Sb	17 59 51.9	-4.6
ML02	Panimavida	4.07	172	Pn	Pn	17 59 10.6	+0.2
AVFE	Valle Fertil	4.13	76	eP	Pn	17 59 08.4	-3.1
AVFE				eP	Pb	17 59 14.0	-6.9
AVFE				eS	Sb	18 00 08.4	-2.8
RFA	San Rafael	4.31	136	eP	Pn	17 59 16.0	+2.1
RFA				eS	Sg	18 00 23.9	-2.2
GO03	Copiap	4.43	22	Pn	Pn	17 59 15.8	+0.2
GO03	Copiap	4.43	22	eP	Pn	17 59 17.0	+1.4
GO03				eS	Sb	18 00 21.4	+1.6
VCA	Vinchina	4.51	50	eP	Pn	17 59 20.0	+3.3
VCA				eS	Sb	18 00 24.4	+2.3
ACHE	Chepes	4.70	85	eP	Pn	17 59 23.0	+3.8
ACHE				eS	Sb	18 00 23.5	-3.9
APLL	PUNTA DE LOS L	4.98	76	eP	Pn	17 59 25.0	+2.0
ACLC	CERRO LA CRUZ	5.01	64	eP	Pn	17 59 26.0	+2.4
MRA	San Martin	5.48	99	eP	Pn	17 59 31.0	+1.1
AC02	Maricunga	5.53	29	Pn	Pn	17 59 31.5	+0.5
AC02	Maricunga	5.53	29	eP	Pn	17 59 32.0	+1.0
H03N1	Juan Fernandez	5.98	252	Pn	Pn	17 59 37.6	+1.1
	baz=280,slow=74,SNR=113						
H03N1				T	T	18 06 26.9	
	baz=69						
H03N3	Juan Fernandez	6.00	252	Pn	Pn	17 59 37.3	+0.6
	baz=109,slow=74,SNR=114						
H03N3				T	T	18 06 17.7	
	baz=69						
H03N2	Juan Fernandez	6.00	252	Pn	Pn	17 59 37.5	+0.8
H03N2				T	T	18 06 12.7	
	baz=69						
H03S3	Juan Fernandez	6.09	248	Pn	Pn	17 59 37.8	-0.3
H03S3				T	T	18 06 34.8	
	baz=75						
H03S1	Juan Fernandez	6.09	248	Pn	Pn	17 59 37.7	-0.3
H03S1				T	T	18 06 36.1	
	baz=75						
H03S2	Juan Fernandez	6.11	248	Pn	Pn	17 59 37.9	-0.3
H03S2				T	T	18 06 27.8	
	baz=75						
LC01	Cunco	7.16	178	Pn	Pn	17 59 52.7	-0.2
LC01	Cunco	7.16	178	eP	Pn	17 59 53.0	+0.1
PB14	IPOC Station P	7.24	12	Pn	Pn	17 59 53.3	-1.0
AHML	Horco Molle	7.70	52	eP	Pn	17 59 57.9	-2.6
AHML				eP	Pn	18 00 04.0	+3.5
FSA	Cafayete	7.76	45	eP	Pn	18 00 04.0	+2.6
LR03	Panguipulli	7.89	181		Pn	18 00 02.8	-0.1
PB10	IPOC Station P	8.30	10	Pn	Pn	18 00 08.2	-0.4
PB15	IPOC Station P	8.81	16		Pn	18 00 14.7	-1.0
PLCA	Paso Flores	9.07	172	Pn	Pn	18 00 20.4	+1.1
	comp=N,2.4nm,0.3s,baz=340,slow=11,SNR=21						
PLCA				LR	LR	18 04 10.2	
	comp=N,4µm,18.5s,baz=350,slow=40						
PLCA	Paso Flores	9.07	172	eP	Pn	18 00 20.1	+0.9
PLCA	Paso Flores	9.07	172	Pn	Pn	18 00 20.0	+0.7
PLCA	Paso Flores	9.07	172	eP	Pn	18 00 20.0	+0.7
LL04	Puerto Octay	9.17	181		Pn	18 00 20.2	-0.3
PB06	IPOC Station P	9.27	15	Pn	Pn	18 00 21.4	-0.6
LVC	Limon Verde	9.52	18	Pn	Pn	18 00 23.6	-2.1
	comp=N,0.8nm,0.3s,baz=162,slow=5.4,SNR=7.3						
LVC				LR	LR	18 04 11.1	
	comp=N,2µm,20.4s,baz=202,slow=38						
LVC	Limon Verde	9.52	18	eP	Pn	18 00 25.2	-0.5
LVC	Limon Verde	9.52	18	Pn	Pn	18 00 23.8	-1.9
PB04	IPOC Station P	9.52	11	Pn	Pn	18 00 24.1	-1.4
LL05	Los Muermos	9.72	186	Pn	Pn	18 00 26.3	-1.8
PB07	IPOC Station P	10.16	12	Pn	Pn	18 00 33.0	-1.3
PB09	IPOC Station P	10.22	15	Pn	Pn	18 00 34.0	-1.1
PB01	IPOC Station P	10.90	13	Pn	Pn	18 00 43.7	-0.6
LL07	Hotel Espejo d	11.14	185	Pn	Pn	18 00 46.4	-1.0
TA01	Diego Aracena	11.25	9	Pn	Pn	18 00 49.6	+0.5
PB12	IPOC Station P	13.16	7		Pn	18 01 14.1	-1.1
ITQB	Itaqui	13.49	85	eP	Pn	18 01 19.1	-0.6
ITQB	Itaqui	13.49	85	Pn	Pn	18 01 17.6	-2.0
PB16	IPOC Station P	13.54	11	Pn	Pn	18 01 20.6	-0.4
CPUP	Villa Florida	14.01	71	eP	Pn	18 01 27.8	+1.0
	comp=N,0.5nm,0.3s,baz=242,slow=10.0,SNR=10.0						
CPUP				LR	LR	18 07 06.5	
	comp=N,3µm,21.2s,baz=248,slow=39						
CPUP	Villa Florida	14.01	71	eP	Pn	18 01 26.6	-0.2
CPUP	Villa Florida	14.01	71		Pn	18 01 27.0	+0.3
PLTB	Pedras Altas	15.75	95	eP	Pn	18 01 50.7	+0.5
PLTB	Pedras Altas	15.75	95		Pn	18 01 48.6	-1.6
LPAZ	La Paz	15.79	14	Pn	Pn	18 01 52.6	+1.3
	comp=N,0.4nm,0.3s,baz=180,slow=7.0,SNR=30						
LPAZ	La Paz	15.79	14	eP	Pn	18 01 52.4	+1.0
LPAZ	La Paz	15.79	14		Pn	18 01 50.5	-0.9
CPSB	Capacapava Do Su	16.06	90	eP	Pn	18 01 53.4	-0.8
ITAB	Concordia	17.96	81	eP	P	18 02 18.8	+0.1
ITAB	Concordia	17.96	81	P	Pn	18 02 16.1	-2.0
ITAB				IAmb	IAmb	18 02 28.2	
	comp=Z,222nm,2.0s						

AQDB	Aquidauana	18.49	57	eP	Pn	18 02 25.1	+0.4
AQDB	Aquidauana	18.49	57	P	P	18 02 23.0	-1.5
SIV	San Ignacio	18.62	35	P	Pn	18 02 26.2	-0.1
	comp=Z,0.5nm,0.3s,baz=220,slow=11,SNR=26						
GO09	Cerro Castillo	19.53	180	P	P	18 02 34.6	-1.1
PTLB	Pontes e Lacer	20.07	39	eP	P	18 02 41.8	-0.1
PTLB	Pontes e Lacer	20.07	39	P	P	18 02 41.0	-0.9
NNA	Nana	20.12	346	LR	LR	18 09 10.8	
	comp=Z,662nm,18.8s,baz=163,slow=33						
NNA	Nana	20.12	346	P	P	18 02 39.6	-2.9
TER01	Tubaro-SC	20.13	87	eP	P	18 02 42.8	+0.3
PP1B	Ponte de Pedra	21.01	52	eP	P	18 02 52.1	0.0
PCMB	Pacaembu	21.16	67	eP	P	18 02 53.5	-0.2
TIJ01	Guaruva-PR	21.27	78	eP	P	18 02 55.8	+0.9
FRTB	Fartura	21.64	73	eP	P	18 02 58.6	-0.3
VILB	Vilhena	21.66	33	eP	P	18 02 59.4	+0.3
VILB	Vilhena	21.66	33	P	P	18 02 58.7	-0.4
VILB				IAmb	IAmb	18 03 03.3	
	comp=Z,44nm,0.8s						
SALV	Santo Antonio	21.73	47	eP	P	18 02 59.4	-0.4
EFI	East Falkland	22.45	157	P	P	18 03 08.2	+1.0
ETMB	Extrema	22.48	15	eP	P	18 03 09.1	+1.2
ETMB	Extrema	22.48	15	P	P	18 03 09.0	+1.2
ETMB				IAmb	IAmb	18 03 10.8	
	comp=Z,64nm,1.1s						
ITRB	Iturama	22.92	64	eP	P	18 03 11.5	-1.1
PET01	Itanhaem-SP	23.12	78	eP	P	18 03 13.8	-0.7
USHA	Ushuaia	23.24	175	LR	LR	18 13 20.7	
	comp=Z,2μm,18.5s,baz=354,slow=39						
SPB	Sao Paulo	23.28	76	eP	P	18 03 16.6	+0.4
SPB	Sao Paulo	23.28	76	P	P	18 03 15.8	-0.4
BB19B	Bebedouro	23.60	69	eP	P	18 03 18.4	-1.1
RCLB	Rio Claro- Sao	23.73	73	eP	P	18 03 20.4	-0.4
CZSB	Cruzeiro do Su	23.88	359	eP	P	18 03 24.4	+2.2
CZSB	Cruzeiro do Su	23.88	359	P	P	18 03 22.7	+0.5
CZSB				IAmb	IAmb	18 03 26.0	
	comp=Z,52nm,0.9s						
VAO	Valinhos	23.93	75	eP	P	18 03 22.6	0.0
ARAG	Araguaiana, MT	24.43	54	eP	P	18 03 27.0	-0.2
PDRB	Porto dos Gac	24.54	39	eP	P	18 03 28.8	+0.5
PARB	Paraibuna	24.89	77	eP	P	18 03 31.8	+0.3
ATAH	Atahualpa	25.16	345	LR	LR	18 11 36.9	
	comp=Z,448nm,19.6s,baz=189,slow=32						
IPMB	Ipameri, GO	25.57	63	eP	P	18 03 37.1	-0.6
CLDB	Colider	25.66	40	eP	P	18 03 38.9	+0.5
MAN01	Angra dos Reis	26.47	78	eP	P	18 03 47.1	+1.3
BSCB	Bom Sucesso	26.66	73	eP	P	18 03 46.7	-0.9
VAS01	Vassouras-RJ	27.16	77	eP	P	18 03 52.3	+0.3
BDFB	Brasilia	27.18	59	P	P	18 03 51.7	-0.6
	comp=Z,19nm,0.5s,baz=222,slow=9.7,SNR=28						
BDFB				LR	LR	18 16 20.3	
	comp=Z,2μm,20.2s,baz=235,slow=40						
BDFB	Brasilia	27.18	59	P	P	18 03 51.4	-0.9
BDFB				IAmb	IAmb	18 03 53.5	
	comp=Z,50nm,1.2s						
SNDB	Serra Nova Dou	27.47	49	eP	P	18 03 54.7	-0.1
TBTG	Tabatinga, AM	27.48	5	eP	P	18 03 55.9	+1.1
TBTG	Tabatinga, AM	27.48	5	P	P	18 03 54.2	-0.6
DIAM	Diamantina, MG	28.94	69	eP	P	18 04 08.4	+0.4
NPGB	Novo Progresso	29.12	36	eP	P	18 04 08.6	-0.8
PEXB	Peixe	29.37	54	eP	P	18 04 11.2	-0.5
MC01	Montes Claros	29.61	66	eP	P	18 04 13.9	-0.1
JANB	Januaria	30.31	63	eP	P	18 04 19.8	-0.4
MACA	Manacapuru-AM	30.39	23	eP	P	18 04 20.7	0.0
MACA	Manacapuru-AM	30.39	23	P	P	18 04 19.9	-0.7
MACA				IAmb	IAmb	18 04 21.6	
	comp=Z,19nm,0.6s						
SJMB	Sao Joao De Ma	30.73	72	eP	P	18 04 23.6	-0.1
BSFB	Barra de Sao F	30.94	73	eP	P	18 04 25.6	0.0
ITTB	Itaituba	31.27	33	eP	P	18 04 28.4	-0.1
SDBA	SAO DESIDERIO	31.56	59	eP	P	18 04 31.0	-0.1
SMTB	Santa Maria do	32.20	50	eP	P	18 04 36.7	-0.1
OTAV	Otavalo	32.35	348	eP	P	18 04 39.1	+0.6
OTAV	Otavalo	32.35	348	P	P	18 04 38.4	-0.1
OTAV				IAmb	IAmb	18 04 53.4	
	comp=Z,25nm,1.4s						
RPN	Rapa Nui	32.63	268	P	P	18 04 38.0	-2.4
PRPB	Parauapebas	32.88	44	eP	P	18 04 42.1	-0.6
PTGA	Pitinga	32.90	23	P	P	18 04 43.1	+0.2
	comp=Z,8.3nm,0.6s,baz=203,slow=9.4,SNR=13						
ESPZ	Base Esperanza	33.11	168	P	P	18 04 41.8	-2.4
PMSA	Palmer Station	33.45	174	LR	LR	18 18 29.3	
	comp=Z,796nm,20.0s,baz=346,slow=36						
PMSA	Palmer Station	33.45	174	eP	P	18 04 46.5	-0.6
CMC01	Camacan, BA	33.87	69	eP	P	18 04 51.2	-0.1
ORCD	Orcadas	34.15	156	P	P	18 04 52.0	-1.2
MALB	Monte Alegre	34.16	33	eP	P	18 04 53.3	-0.4
GDU01	Guandu, BA	34.77	66	eP	P	18 04 58.4	-0.8
PAYG	Puerto Ayora	35.34	327	P	P	18 05 02.6	-1.5
BOAV	Boa Vista	35.68	20	eP	P	18 05 07.4	+0.5
BOAV	Boa Vista	35.68	20	P	P	18 05 06.4	-0.5
BOAV				IAmb	IAmb	18 05 08.5	
	comp=Z,18nm,1.0s						
ROSC	El Rosal	36.42	356	P	P	18 05 13.0	-0.7
ROSC				IAmb	IAmb	18 05 30.0	
	comp=Z,19nm,0.8s						
MCPB	Macapa, AP	36.52	35	eP	P	18 05 14.3	+0.2
SMAI	San Martin Ant	36.56	177	P	P	18 05 13.5	-0.4
ZARC	Zaragoza, Cauc	39.09	356	P	P	18 05 33.8	-2.0
OCAC	Ocana	39.76	358	P	P	18 05 39.5	-2.1
SJCC	San Jacinto, C	41.49	355	P	P	18 05 57.7	+1.9
SJCC				IAmb	IAmb	18 07 04.8	
	comp=Z,30nm,1.3s						
BIRV	Birongo	42.34	9	P	P	18 06 00.2	-2.4
VNA3	Neumayer Olymp	51.49	158	P	P	18 07 15.1	+1.5
VNA2	Neumayer--Watz	52.13	158	P	P	18 07 19.9	+1.5
	baz=287,slow=8.5						
SNAA	Sanae	53.71	158	P	P	18 07 31.5	+1.4
SNAA	Sanae	53.71	158	P	P	18 07 31.3	+1.1
	comp=Z,7.9nm,0.6s,baz=276,slow=7.2,SNR=48						
SNAA	Sanae	53.71	158	P	P	18 07 30.8	+0.6
QSPA	South Pole Qui	58.50	180	P	P	18 08 06.2	+1.7
	comp=Z,3.6nm,0.6s,baz=163,slow=1.4,SNR=43						
QSPA	South Pole Qui	58.50	180	P	P	18 08 05.7	+1.2
BBSR	BB Station	64.14	7	P	P	18 08 42.0	-0.8
VNDA	Vanda	66.31	191	LR	LR	18 32 57.2	
	comp=Z,106nm,20.5s,baz=120,slow=32						
VNDA	Vanda	66.31	191	P	P	18 08 57.7	+1.2
TAOE	Nuku Hiva Isla	66.73	274	eLR	LR	18 29 12.6	
	comp=Z,429nm,25.5s						
JCT	Junction City	67.21	334	P	P	18 09 01.4	-1.4
JCT				IAmb	IAmb	18 10 43.3	
	comp=Z,17nm,1.1s						
TX31	Lajitas Ar. Si	67.73	330	P	P	18 09 04.5	-1.7
TX31				IAmb	IAmb	18 10 47.8	
	comp=Z,14nm,0.9s						
TX32	Lajitas Array	67.73	330	P	P	18 09 04.8	-1.4
TXAR	Lajitas Array	67.73	330	P	P	18 09 08.0	+1.8
	comp=Z,1.2nm,0.8s,baz=147,slow=8.5,SNR=12						
TXAR	Lajitas Array	67.73	330	P	P	18 09 05.8	-0.3
TBI	Tubuai	67.80	256	eS	S	18 18 11.7	+6.2
	comp=Z,189nm,25.2s						
TBI	Tubuai	67.80	256	eLR	LR	18 29 41.9	
	comp=Z,846nm,26.5s,baz=111						
TBI	Tubuai	67.80	256	eT	T	19 22 56.7	
	comp=Z,4.3nm,0.3s						
V52A	Sevierville	68.07	350	P	P	18 09 07.9	-0.2
V48A	Smith Brothers	68.52	347	P	P	18 09 10.4	-0.4
V48A				IAmb	IAmb	18 09 23.0	
	comp=Z,16nm,1.0s						
CLTN	Cedars of Leba	68.77	348	P	P	18 09 11.7	-0.7
CLTN				IAmb	IAmb	18 10 51.2	
	comp=Z,15nm,1.2s						
WVT	Waverly	69.09	346	P	P	18 09 14.8	+0.4
WVT				IAmb	IAmb	18 10 53.2	
	comp=Z,17nm,0.9s						
W39A	Magazine	69.62	341	P	P	18 09 16.0	-1.7
W39A				IAmb	IAmb	18 10 48.4	
	comp=Z,13nm,0.8s						
U40A	Yellville	70.46	342	P	P	18 09 22.5	-0.4
U40A				IAmb	IAmb	18 10 52.8	
	comp=Z,9.1nm,0.8s						
MNTX	Cornudas Mount	70.51	330	P	P	18 09 21.9	-1.4
PPT2	Papeete2	70.51	261	eS	S	18 18 41.1	+3.3
	comp=Z,192nm,24.2s						
PPT2	Papeete2	70.51	261	eLR	LR	18 30 58.0	
	comp=Z,316nm,24.2s						
HHAR	Hobbs	70.68	341	P	P	18 09 23.4	-0.8
HHAR				IAmb	IAmb	18 10 54.0	
	comp=Z,8.8nm,0.8s						
CCM	Cathedral Cave	71.68	344	P	P	18 09 30.9	+0.7
CCM				IAmb	IAmb	18 11 00.1	
	comp=Z,13nm,0.9s						
S39A	Bolivar	71.84	342	P	P	18 09 31.0	-0.2
S39A				IAmb	IAmb	18 11 01.1	
	comp=Z,14nm,1.1s						
R40A	Maddies Statio	72.15	343	P	P	18 09 33.1	+0.1
R40A				IAmb	IAmb	18 11 02.8	
	comp=Z,16nm,0.9s						
P40A	Paris	73.27	344	P	P	18 09 39.7	0.0
ANMO	Albuquerque	73.76	331	P	P	18 09 44.8	+1.8
	comp=Z,0.4nm,0.4s,baz=141,slow=6.5,SNR=4.0						
ANMO	Albuquerque	73.76	331	P	P	18 09 41.5	-1.4
LIC	Lamto	74.13	72	eP	P	18 09 45.7	+0.4
	comp=Z,49nm,1.2s						
TIC	Toumodi	74.38	72	eP	P	18 09 47.2	+0.4
KIC	Kosan Boka	74.44	72	eP	P	18 09 47.6	+0.4
	comp=Z,42nm,1.1s						
DBIC	Dimbokro	74.53	72	P	P	18 09 47.9	+0.3
	comp=Z,9.2nm,0.7s,baz=234,slow=5.6,SNR=15						
DBIC	Dimbokro	74.53	72	P	P	18 09 46.0	-1.6
SUR	Sutherland	75.99	119	P	P	18 09 57.4	+1.3
	comp=Z,16nm,1.1s,baz=192,slow=6.1,SNR=5.9						
SUR	Sutherland	75.99	119	P	P	18 09 57.3	+1.2
ISCO	Idaho Springs	77.66	334	P	P	18 10 06.2	+1.0
KNB	Kanab	78.27	328	P	P	18 10 09.8	+1.2
KNB				IAmb	IAmb	18 10 23.1	
	comp=Z,43nm,1.8s						
ECSD	EROS Data Cent	78.37	342	P	P	18 10 09.1	+0.3
D62A	Allapoint, All	78.50	2	P	P	18 10 08.9	-0.4
SRU	San Rafael Swe	79.01	331	P	P	18 10 11.0	-1.6
KOWA	Kowa	79.77	66	P	P	18 10 17.4	+0.3
TSUM	Tsumeb	79.90	106	P	P	18 10 19.3	+1.2
	comp=Z,5.2nm,0.9s,baz=246,slow=5.5,SNR=3.4						
K22A	Casper	80.48	335	P	P	18 10 20.4	-0.1
K22A				IAmb	IAmb	18 12 01.3	
	comp=Z,28nm,1.5s						
TPH	Tonopah	81.18	326	P	P	18 10 23.7	-0.7
BOSA	Boshof	81.19	118	P	P	18 10 25.6	+0.8
	comp=Z,4.5nm,0.8s,baz=264,slow=5.7,SNR=6.3						
BOSA	Boshof	81.19	118	P	P	18 10 24.5	-0.3
PDAR	Pinedale Array	81.71	333	P	P	18 10 27.6	+0.5
	comp=Z,0.5nm,0.6s,baz=137,slow=7.4,SNR=5.6						
NVAR	Mina Array Bea	81.99	325	P	P	18 10 31.0	+2.3
	comp=Z,2.6nm,0.9s,baz=151,slow=6.2,SNR=11						
NVAR	Mina Array Bea	81.99	325	P	P	18 10 27.1	-1.6
HVU	Hansel Valley	82.18	331	P	P	18 10 28.1	-1.4
KVN	Kaiserville	82.38	326	P	P	18 10 29.7	-1.0
ELK	Elko	82.40	328	P	P	18 10 31.9	+1.1
	comp=Z,2.2nm,0.8s,baz=178,slow=4.1,SNR=8.9						
ELK	Elko	82.40	328	P	P	18 10 30.2	-0.6
LBTB	Lobatse	83.32	115	P	P	18 10 36.4	+0.4
	comp=Z,4.4nm,0.7s,baz=248,slow=4.4,SNR=10						
LBTB	Lobatse	83.32	115	P	P	18 10 35.0	-1.0
TORD	Torodi Ar. Bea	83.50	70	P	P	18 10 37.2	+0.4
	comp=Z,9.7nm,0.8s,baz=266,slow=4.9,SNR=41						
TORD	Torodi Ar. Bea	83.50	70		P	18 10 36.2	-0.6
YHH	Holmes Hill	83.92	333	P	P	18 10 38.4	-0.2
YHH				IAmb	IAmb	18 10 52.0	
	comp=Z,12nm,1.5s						
ULM	Lac du Bonnet	84.29	345	P	P	18 10 41.2	+1.2
	comp=Z,1.7nm,0.4s,baz=138,slow=6.5,SNR=3.4						
HLID	Hailey	84.33	331	P	P	18 10 41.0	+0.4
ORV	Oroville	84.44	324	P	P	18 10 40.6	-0.4
ORV				IAmb	IAmb	18 12 12.2	
	comp=Z,7.9nm,1.1s						
DGMT	Dagmar	84.84	339	P	P	18 10 41.8	-1.1
J08A	Circle Bar Ran	85.93	328	P	P	18 10 47.1	-1.4
PLID	Pearl Lake	86.23	331	P	P	18 10 50.4	+0.2
YBH	Yreka Blue Hor	86.68	325	P	P	18 10 53.9	+1.7
	comp=Z,1.6nm,0.9s,baz=124,slow=11,SNR=2.6						
LSZ	Lusaka	90.58	108	P	P	18 11 13.8	+2.3
	comp=Z,2.5nm,0.2s,baz=250,slow=7.9,SNR=5.0						
SFJD	Kangerlussuaq	99.77	8	LR	LR	18 56 25.6	
	comp=Z,79nm,18.6s,baz=198,slow=35						
YKA	Yellowknife Ar	99.89	341	P	Pdif	18 11 52.5	-0.1
	comp=Z,0.3nm,0.6s,baz=146,slow=4.6,SNR=6.6						
DZM	Mont Dzumac	102.52	234	eLR	LR	18 45 48.5	
	comp=Z,394nm,22.4s						
ASAR	Alice Springs	119.55	208	PKP	PKiKP	18 16 59.0	-0.1
	comp=Z,0.5nm,1.0s,baz=135,slow=1.9,SNR=2.0						
WRA	Warramunga Arr	122.70	210	PKP	PKiKP	18 17 05.3	0.0
	comp=Z,0.7nm,0.6s,baz=153,slow=1.8,SNR=10						
H11S3	WAKE ISLAND Hy	125.72	271	T	T	20 36 04.4	
	SNR=31						
H11N3	WAKE ISLAND Hy	126.06	272	T	T	20 36 32.6	
	baz=116,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	126.08	272	T	T	20 36 36.1	
	baz=116,slow=76,SNR=3.7						
H11N2	WAKE ISLAND Hy	126.08	272	T	T	20 36 32.7	
	baz=116,slow=76,SNR=32						
YAK	Yakutsk	146.57	341	PKPbc	PKPab	18 17 50.9	+0.6
	comp=Z,4.2nm,0.5s,baz=38,slow=1.2,SNR=6.5						
YAK	Yakutsk	146.57	341		PKPab	18 17 50.6	+0.3
HYB	Hyderabad	149.88	111	i PKP	PKiKP	18 18 00.0	-0.4
ZALV	Zalesovo Beam	152.32	30	PKPbc	PKiKP	18 18 04.3	0.0
	comp=Z,8.8nm,0.5s,baz=300,slow=3.5,SNR=48						
MKAR	Makanchi Array	155.27	45	PKPbc	PKPbc	18 18 11.2	
	comp=Z,0.6nm,0.6s,baz=267,slow=2.6,SNR=6.6						
MKAR				PKPab	PKPab	18 18 28.1	+1.3
	comp=Z,3.2nm,0.9s,baz=272,slow=4.6,SNR=7.5						
MKAR	Makanchi Array	155.27	45		PKPdf	18 18 02.3	+0.6
MKAR				PKPbc	pPKPbc	18 18 10.8	-0.8
WMQ	Urumqi	160.05	47	ePKP	PKPdf	18 18 08.0	+0.2
SONM	Songino Array	163.87	4	PKPab	PKPab	18 19 06.1	+1.9
	comp=Z,1.5nm,0.9s,baz=342,slow=4.1,SNR=7.4						
CMAR	Chiang Mai Arr	164.51	146	PKP	PKPdf	18 18 14.1	+1.1
	comp=Z,0.5nm,0.9s,baz=287,slow=3.7,SNR=5.3						
GTA	Gaotai	169.91	38	ePKPbc	PKPdf	18 18 28.3	+12
GTA				PKPab	PKPab	18 19 32.0	+0.9
GTA	Gaotai	169.91	38	eP	PKPab	18 19 32.3	+1.2
GTA				pP	sPKPab	18 19 38.3	+6.0
GTA				sP	pPKPab	18 19 41.5	+9.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC	Hu-ho-hao-te	170.43	343	ePKP	PKPdf	18 18 12.0	-4.7
NJ2	Nanjing	170.66	275	ePKP	PKPdf	18 18 16.0	-0.9
LZH	Lanzhou	174.51	37	eP	PKPab	18 19 53.8	+2.1
LZH				pP	sPKPab	18 19 56.8	+4.0
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						

MOS ***26*** *17:59:36.2±1.0, 31°.67S×72°.02W, h14^{km}, mb5.2/6, Error ellipse: s-maj=14.3km s-min=8.0km az=96.4*

NEIC ***26*** *17:59:37.1, 31°.76S×72°.07W, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.07; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-0.99; $M_{r\theta}$0.15; $M_{\theta\phi}$-0.02; $M_{\phi r}$-0.19; Fault plane solution: $M_0$1.06000×10^{16} NP1:ϕ_s173.39000°, δ50.56000°, λ80.39000°. NP2:ϕ_s8.31000°, δ40.41000°, λ101.47000°. Principal axes: T 1.1058, Plg81.0000°, Azm35.0000°; N -0.1019, Plg7.0000°, Azm180.0000°; P -1.0039, Plg5.0000°, Azm270.0000°;*

NEIC ***26*** *17:59:37.1±1.6, 31°.76S±0°.04×72°.07W±0°.09, h10^{km}±1^{km}, mb5.1/85, Mwr4.6/18, ML4.8(GUC) Error ellipse: s-maj=12.7km s-min=5.9km az=271.0*

GUC ***26*** *17:59:39.4±0.7, 31°.76S×71°.93W, h44^{km}±3^{km}, ML4.8*

VAO ***26*** *17:59:39.1±0.5, 31°.81S×72°.07W, h41^{km}, mb5.0*

BJI ***26*** *17:59:40.9±0.0, 31°.80S×71°.90W, h30^{km}, mB5.3/1, Ms7 4.8/1*

IDC ***26*** *17:59:40.2±0.5, 31°.71S×71°.96W, h29^{km}±3^{km}, mb4.6/24, mb1 4.7/27, mb1mx4.5/48, mbtmp4.8/27, ML4.5/3, MS4.4/1, Ms1 4.6/1, ms1mx3.8/14, Error ellipse: s-maj=17.2km s-min=12.2km az=68.0*

ISC 26 17:59:38.5±0.4, **31°.73S**±0°.02×**72°.03W**±0°.05, **h23^{km}**±2^{km}, **n286,** $\sigma 1^{s}$**29**/300, **mb5.0**/64, **3C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	1.03	143	⇓iP	Pn	17 59 57.1	-0.5
VA06				i S	Sb	18 00 10.1	-0.7
VA06				IAML		18 00 12.9	
	comp=E,68μm,0.5s						
CO06	Fray Jorge	1.11	18	eP	Pb	17 59 58.8	-0.2
CO06				eS	Sn	18 00 14.4	+1.3
CO06	Fray Jorge	1.11	18		Pn	17 59 57.6	-0.9
CO06				Sg	Sb	18 00 12.8	-0.2
VA01	Torpederas	1.33	166	eP	Pn	18 00 01.7	+0.1
VA01				eS	Sn	18 00 17.0	-1.6
VA01	Torpederas	1.33	166	Pn	Pn	18 00 00.5	-1.1
VA01				Sn	Sn	18 00 17.1	-1.5
CO03	El Pedregal	1.45	52	eP	Pn	18 00 03.8	+0.4
CO03				eS	Sn	18 00 21.9	+0.2
CO03				IAML		18 00 30.6	
	comp=N,17μm,0.5s						
CO03	El Pedregal	1.45	52	Pn	Pn	18 00 03.9	+0.5
ROCH	El Roble	1.51	146	⇓eP	Pb	18 00 04.9	-1.1
ROCH				⇑eP	Pn	18 00 04.3	0.0
ROCH				eS	Sn	18 00 23.5	+0.2
ROCH				eS	Sb	18 00 24.0	-0.7
ROCH				IAML		18 00 30.0	
	comp=N,25μm,0.6s						
ROCH				IAML		18 00 33.9	
	comp=E,20μm,0.5s						
VA03	San Esteban	1.62	130	⇑eP	Pn	18 00 06.6	+0.9
VA03				eS	Sn	18 00 25.9	-0.1
VA03				IAML		18 00 33.4	
	comp=E,28μm,0.5s						
VA03	San Esteban	1.62	130	Pn	Pn	18 00 06.5	+0.7
MT02	Curacav	1.70	154	eS	Sn	18 00 27.3	-0.5
MT02	Curacav	1.70	154	Pn	Pn	18 00 06.9	+0.2
PEL	Peldehue	1.81	142	P	Pn	18 00 09.3	+1.0
PEL	Peldehue	1.81	142	Pn	Pn	18 00 09.3	+1.0
GO04	Tololo Observa	1.88	34	eP	Pn	18 00 10.1	+0.7
GO04				eS	Sb	18 00 34.1	-1.2
GO04	Tololo Observa	1.88	34	Pn	Pb	18 00 11.0	-1.3
CO05	La Serena	1.93	21	eP	Pn	18 00 10.6	+0.7
CO05				eS	Sb	18 00 35.2	-1.4
CO05				IAML		18 00 46.0	
	comp=E,14μm,0.5s						
CO05	La Serena	1.93	21	Pn	Pn	18 00 10.6	+0.7
VA05	Santo Domingo	1.95	170	eP	Pb	18 00 14.4	+1.0
VA05				eS	Sn	18 00 33.3	-0.7
VA05				IAML		18 00 47.0	
	comp=N,13μm,0.5s						
VA05	Santo Domingo	1.95	170	Pn	Pn	18 00 10.5	+0.3
MT05	Renca	1.98	147	eP	Pb	18 00 12.8	-1.1
MT05				eS	Sn	18 00 34.8	-0.1
MT05				IAML		18 00 42.2	
	comp=E,11μm,0.4s						
MT05	Renca	1.98	147	Pn	Pn	18 00 10.9	+0.2
FCH	Farellones	2.16	138	eP	Pn	18 00 14.6	+1.2
FCH				eS	Sn	18 00 39.5	-0.2
MT09	Talagante	2.22	157	eP	Pn	18 00 14.9	+0.8
MT09				eS	Sn	18 00 41.2	+0.4
MT09				IAML		18 00 55.3	
	comp=N,7μm,0.3s						
MT09	Talagante	2.22	157	Pn	Pn	18 00 13.6	-0.5
MT01	Popeta	2.23	163	eP	Pb	18 00 16.3	-1.8
MT01				eS	Sn	18 00 41.6	+0.8
MT01				IAML		18 00 51.9	
	comp=E,6μm,0.5s						
MT01	Popeta	2.23	163	Pn	Pn	18 00 12.9	-1.1
LMEL	Las Melosas	2.61	144	eP	Pn	18 00 20.6	+1.1
LMEL				eS	Sn	18 00 50.3	-0.2
LMEL				IAML		18 01 04.8	
	comp=E,4μm,0.3s						
BO01	Tunca	2.77	164	Pn	Pn	18 00 21.3	-0.2
ZON	Zonda	2.86	87	P	Pn	18 00 22.9	+0.1
ZON	Zonda	2.86	87	Pn	Pn	18 00 22.9	+0.1
LCO	Las Campanas	2.94	23	eP	Pn	18 00 24.4	+0.3
LCO	Las Campanas	2.94	23	Pn	Pn	18 00 23.9	-0.3
BO02	Sierra Bellavi	3.23	161	Pn	Pn	18 00 28.2	+0.4
H03N1	Juan Fernandez	6.06	252	Pn	Pn	18 01 06.6	+0.2
	baz=208,slow=74,SNR=5.5						
H03N1				T	T	18 07 56.4	
	baz=80,slow=72,SNR=1792						
H03N3	Juan Fernandez	6.07	252	Pn	Pn	18 01 06.3	-0.3
H03N3				T	T	18 07 50.6	
	baz=80,slow=72,SNR=1129						
H03N2	Juan Fernandez	6.07	252	Pn	Pn	18 01 06.6	0.0
	baz=54,slow=74,SNR=81						
H03N2				T	T	18 07 51.6	
	baz=80,slow=72,SNR=990						
H03S3	Juan Fernandez	6.16	248	T	T	18 07 51.6	
	baz=76						
H03S1	Juan Fernandez	6.17	248	T	T	18 08 01.9	
	baz=76						
H03S2	Juan Fernandez	6.18	248	T	T	18 07 54.0	
	baz=76						
LR03	Panguipulli	7.89	182	Pn	Pn	18 01 29.2	-2.6
PB10	IPOC Station P	8.29	9	Pn	Pn	18 01 37.2	-0.2
PB15	IPOC Station P	8.79	16	Pn	Pn	18 01 42.4	-2.0
PLCA	Paso Flores	9.06	173	Pn	Pn	18 01 48.4	+0.5
	comp=E,1.9nm,0.3s,baz=333,slow=15,SNR=3.3						
PLCA	Paso Flores	9.06	173	Pn	Pn	18 01 47.6	-0.4
LL04	Puerto Octay	9.16	182	Pn	Pn	18 01 48.0	-1.3
PB06	IPOC Station P	9.25	14	Pn	Pn	18 01 49.0	-1.7
LVC	Limon Verde	9.50	18	P	Pn	18 01 52.5	-1.8
LVC	Limon Verde	9.50	18	Pn	Pn	18 01 52.5	-1.8
PB04	IPOC Station P	9.51	11	Pn	Pn	18 01 52.5	-1.7
PB07	IPOC Station P	10.15	11	Pn	Pn	18 02 01.8	-1.2
TA02	Huaiquique	11.54	9	Pn	Pn	18 02 20.2	-1.7
LPAZ	La Paz	15.78	14	Pn	Pn	18 03 20.5	+0.6
	comp=E,0.8nm,0.3s,baz=218,slow=7.4,SNR=4.5						
LPAZ				LR	LR	18 09 29.0	
	comp=E,2μm,19.8s,baz=182,slow=37						
LPAZ	La Paz	15.78	14	Pn	Pn	18 03 19.1	-0.8
ITAB	Concordia	17.89	81		Pn	18 03 44.5	-1.3
AQDB	Aquidauana	18.43	56	P	Pn	18 03 52.6	+0.1
SIV	San Ignacio	18.57	35	Pn	Pn	18 03 54.3	0.0
	comp=E,0.7nm,0.3s,baz=233,slow=11,SNR=3.8						
GO09	Cerro Castillo	19.52	181	P	P	18 04 03.4	-0.7
MG05	Puerto Natales	19.93	181	P	P	18 04 05.8	-2.7
PTLB	Pontes e Lacer	20.02	39	eP	P	18 04 08.5	-1.3
PTLB	Pontes e Lacer	20.02	39	P	P	18 04 08.8	-1.0
TER01	Tubaro-SC	20.05	87	eP	P	18 04 10.0	-0.1
NNA	Nana	20.14	346	P	P	18 04 08.8	-2.4
NNA				pmax	pmax		
	comp=Z,64nm,1.6s						
NNA	Nana	20.14	346	P	P	18 04 08.8	-2.4
PP1B	Ponte de Pedra	20.95	52	eP	P	18 04 19.6	-0.3
PCMB	Pacaembu	21.09	66	eP	P	18 04 20.9	-0.5
GO10	Punta Arenas	21.42	178	P	P	18 04 24.2	-0.5
GO10				IAmb	IAmb	18 04 37.2	
	comp=Z,66nm,0.9s						
FRTB	Fartura	21.57	73	eP	P	18 04 26.6	0.0
VILB	Vilhena	21.62	33	eP	P	18 04 26.7	-0.4
VILB	Vilhena	21.62	33	P	P	18 04 26.3	-0.8
VILB				IAmb	IAmb	18 04 44.9	
	comp=Z,48nm,0.8s						
SALV	Santo Antonio	21.67	47	eP	P	18 04 26.4	-1.2
EFI	East Falkland	22.42	157	i P	P	18 04 43.1	+7.8
EFI				pmax	pmax		
	comp=Z,37nm,1.0s						
EFI	East Falkland	22.42	157	P	P	18 04 35.6	+0.3
EFI				IAmb	IAmb	18 04 37.2	
	comp=Z,37nm,0.8s						
ETMB	Extrema	22.46	15	eP	P	18 04 37.0	+0.9
ETMB	Extrema	22.46	15	P	P	18 04 36.0	-0.2
ETMB				IAmb	IAmb	18 04 38.1	
	comp=Z,64nm,1.0s						
ITRB	Iturama	22.85	64	eP	P	18 04 38.3	-2.0
PET01	Itanhaem-SP	23.04	77	eP	P	18 04 41.4	-0.8
SPB	Sao Paulo	23.21	76	eP	P	18 04 44.5	+0.6
SPB	Sao Paulo	23.21	76	P	P	18 04 43.4	-0.4
MG01	Puerto William	23.40	174	P	P	18 04 44.2	-1.2
MG01				IAmb	IAmb	18 04 58.3	
	comp=Z,50nm,0.9s						
BB19B	Bebedouro	23.53	69	eP	P	18 04 46.1	-1.0
RCLB	Rio Claro- Sao	23.66	73	eP	P	18 04 46.8	-1.6
VAO	Valinhos	23.85	75	eP	P	18 04 49.8	-0.5
CZSB	Cruzeiro do Su	23.89	358	eP	P	18 04 49.4	-1.1
CZSB	Cruzeiro do Su	23.89	358	P	P	18 04 50.1	-0.4
CZSB				IAmb	IAmb	18 04 53.4	
	comp=Z,58nm,0.9s						
ARAG	Araguaiana, MT	24.36	54	eP	P	18 04 52.9	-2.0
PDRB	Porto dos Gac	24.50	39	eP	P	18 04 56.0	-0.1
PARB	Paraibuna	24.82	77	eP	P	18 04 57.9	-1.2
IPMB	Ipameri, GO	25.50	63	eP	P	18 05 05.0	-0.3
CLDB	Colider	25.61	39	eP	P	18 05 06.8	+0.6
BSCB	Bom Sucesso	26.59	73	eP	P	18 05 14.4	-0.7
BDFB	Brasilia	27.11	59	P	P	18 05 19.6	-0.4
	comp=Z,39nm,0.8s,baz=221,slow=8.8,SNR=10						
BDFB	Brasilia	27.11	59	P	P	18 05 19.4	-0.5
BDFB				pmax	pmax		
	comp=Z,57nm,1.0s						
BDFB	Brasilia	27.11	59	P	P	18 05 19.4	-0.5
BDFB				IAmb	IAmb	18 05 20.3	
	comp=Z,57nm,1.0s						
SNDB	Serra Nova Dou	27.41	49	eP	P	18 05 20.9	-1.6
TBTG	Tabatinga, AM	27.47	5	P	P	18 05 23.1	+0.1
DUB01	Friburgo-RJ	28.06	77	eP	P	18 05 26.5	-1.8
DIAM	Diamantina, MG	28.87	69	eP	P	18 05 34.2	-1.5
NPGB	Novo Progresso	29.07	36	eP	P	18 05 36.5	-0.9
PEXB	Peixe	29.31	54	eP	P	18 05 39.5	+0.1
MC01	Montes Claros	29.55	66	eP	P	18 05 40.5	-1.1

ALF01	Guarapari-ES	30.09	76	*e*P	P	18 05 43.6	-2.7
JANB	Januaria	30.24	63	*e*P	P	18 05 45.4	-2.3
MACA	Manacapuru-AM	30.36	23	*e*P	P	18 05 48.4	-0.3
MACA	Manacapuru-AM	30.36	23	P	P	18 05 48.4	-0.3
MACA				IAmb	IAmb	18 05 49.4	
	comp=Z,23nm,0.7s						
SJMB	Sao Joao De Ma	30.65	72	*e*P	P	18 05 50.1	-1.2
BSFB	Barra de Sao F	30.86	73	*e*P	P	18 05 51.7	-1.4
RIB01	Linhares ES	30.99	74	*e*P	P	18 05 53.5	-0.7
ITTB	Itaituba	31.23	33	*e*P	P	18 05 55.4	-1.0
SDBA	SAO DESIDERIO	31.50	58	*e*P	P	18 05 58.0	-0.8
SMTB	Santa Maria do	32.14	50	*e*P	P	18 06 05.2	+0.7
OTAV	Otavalo	32.37	348	P	P	18 06 06.2	-0.7
OTAV				pmax	pmax		
	comp=Z,33nm,1.7s						
OTAV	Otavalo	32.37	348	P	P	18 06 06.2	-0.7
OTAV				IAmb	IAmb	18 06 20.5	
	comp=Z,32nm,1.7s						
PRPB	Parauapebas	32.83	44	*e*P	P	18 06 09.9	-0.5
PTGA	Pitinga	32.88	23	P	P	18 06 10.7	-0.1
	comp=Z,12nm,0.7s,baz=208,slow=10,SNR=7.0						
PMSA	Palmer Station	33.44	174	*e*P	P	18 06 13.3	-1.9
CMC01	Camacan, BA	33.80	69	*e*P	P	18 06 17.1	-1.8
HOPE	Hope Point	33.85	142	P	P	18 06 19.0	+0.1
HOPE				pmax	pmax		
	comp=Z,368nm,2.0s						
HOPE	Hope Point	33.85	142	P	P	18 06 19.0	+0.1
MALB	Monte Alegre	34.12	33	*e*P	P	18 06 19.9	-1.8
GDU01	Guandu, BA	34.70	66	*e*P	P	18 06 25.5	-1.2
BOAV	Boa Vista	35.66	20	*e*P	P	18 06 34.5	-0.4
BOAV	Boa Vista	35.66	20	P	P	18 06 34.8	-0.1
BOAV				IAmb	IAmb	18 06 35.9	
	comp=Z,19nm,0.9s						
MCPB	Macapa, AP	36.47	35	*e*P	P	18 06 40.9	-1.0
TMAB	Tom-Au,PA,Br	36.90	42	*e*P	P	18 06 44.4	-1.1
ROSB	Rosrio	38.89	48	*e*P	P	18 07 02.0	-0.4
ZARC	Zaragoza, Cauc	39.10	356	P	P	18 07 04.6	+0.5
OCAC	Ocana	39.76	358	P	P	18 07 09.0	-0.8
SDV	Santo Domingo	40.41	2	*e*P	P	18 07 13.4	-1.8
SDV	Santo Domingo	40.41	2	P	P	18 07 14.8	-0.4
SDV				IAmb	IAmb	18 07 26.3	
	comp=Z,35nm,1.6s						
MOTC	Monteria, Cord	40.43	354	P	P	18 07 13.2	-2.0
BAUV	El Baul	40.62	6	P	P	18 07 16.0	-0.8
MDP	Montagnes des	41.02	30	P	P	18 07 20.2	0.0
	comp=Z,27nm,0.9s,baz=169,slow=6.5,SNR=3.5						
SJCC	San Jacinto, C	41.50	355	P	P	18 07 23.6	-0.4
BIRV	Birongo	42.33	8	P	P	18 07 30.7	-0.1
BIRV				IAmb	IAmb	18 07 43.0	
	comp=Z,67nm,1.5s						
MLPR	Magueyes Islan	49.65	6	P	P	18 08 28.4	+0.1
CRPR	Cabo Rojo, PR	49.68	6	P	P	18 08 29.5	+1.0
OBIP	Obispado Ponce	49.76	7	P	P	18 08 29.8	+0.6
CELP	Cerrillos	49.80	7	P	P	18 08 30.0	+0.5
CELP				IAmb	IAmb	18 08 46.6	
	comp=Z,40nm,1.1s						
PDPR	Patillas Dam,	49.80	7	P	P	18 08 28.9	-0.6
PDPR				IAmb	IAmb	18 08 41.9	
	comp=Z,52nm,1.3s						
HUMP	Col San Antoni	49.94	8	P	P	18 08 32.3	+1.7
HUMP				IAmb	IAmb	18 08 33.7	
	comp=Z,26nm,0.9s						
SDD	Santo Domingo	49.94	3	P	P	18 08 31.1	+0.5
VNA3	Neumayer Olymp	51.45	159	P	P	18 08 42.6	+1.1
VNA1	Neumayer--Stat	51.76	158	P	P	18 08 45.3	+1.6
VNA2	Neumayer--Watz	52.10	158	P	P	18 08 47.2	+0.9
	baz=287,slow=8.0						
SNAA	Sanae	53.68	158	P	P	18 08 59.1	+1.0
SNAA	Sanae	53.68	158	P	P	18 08 59.0	+1.0
	comp=Z,31nm,0.8s,baz=279,slow=7.3,SNR=18						
SNAA	Sanae	53.68	158	*i* P	P	18 09 05.6	+7.6
SNAA				pmax	pmax		
	comp=Z,13nm,0.9s						
SNAA	Sanae	53.68	158	P	P	18 08 59.0	+0.9
SOR	Soroa	55.22	348	P	P	18 09 10.6	+0.9
SOR				pmax	pmax		
	comp=Z,55nm,1.4s						
SOR	Soroa	55.22	348	P	P	18 09 10.6	+0.9
NVL	N'lazarevskaya	58.40	157	*e*P	P	18 09 34.4	+2.7
NVL				pmax	pmax		
	comp=Z,27nm,1.1s						
QSPA	South Pole Qui	58.50	180	P	P	18 09 34.1	+1.4
	comp=Z,14nm,0.8s,baz=175,slow=0.7,SNR=8.8						
QSPA	South Pole Qui	58.50	180	P	P	18 09 33.8	+1.1
QSPA				IAmb	IAmb	18 09 46.6	
	comp=Z,19nm,0.9s						
BBSR	BB Station	64.13	7	P	P	18 10 11.3	+0.5
833A	Chaparral WMA,	65.16	333	P	P	18 10 18.8	+1.2
	baz=154						
VNDA	Vanda	66.32	191	P	P	18 10 26.3	+1.7
VNDA				pmax	pmax		
	comp=Z,25nm,1.9s						
VNDA	Vanda	66.32	191	P	P	18 10 26.3	+1.7
VNDA				IAmb	IAmb	18 10 27.3	
	comp=Z,24nm,1.9s						
TX32	Lajitas Array	67.77	330	P	P	18 10 35.5	+1.0
TXAR	Lajitas Array	67.77	330	P	P	18 10 35.7	+1.2
	comp=Z,2.0nm,0.7s,baz=152,slow=7.9,SNR=7.9						
TXAR				pP	pwP	18 10 45.3	+0.5
	comp=Z,3.3nm,0.9s,baz=148,slow=6.4,SNR=6.1						
V53A	Saluda	67.81	351	P	P	18 10 34.9	+0.4
V53A				IAmb	IAmb	18 10 35.8	
	comp=Z,9.9nm,0.9s						
TKL	Tuckaleechee C	67.94	350	P	P	18 10 35.9	+0.6
	comp=Z,3.0nm,0.7s,baz=189,slow=10,SNR=2.6						
TKL	Tuckaleechee C	67.94	350	P	P	18 10 35.3	0.0
TKL				pmax	pmax		
	comp=Z,48nm,1.9s						
TKL	Tuckaleechee C	67.94	350	P	P	18 10 35.3	0.0
V52A	Sevierville	68.09	350	P	P	18 10 36.2	-0.1
V52A				IAmb	IAmb	18 10 49.6	
	comp=Z,31nm,1.5s						
Z35A	Perchaven, San	68.95	338	P	P	18 10 42.5	+0.9
ABTX	Abilene, Hawle	69.13	335	P	P	18 10 44.1	+1.3
	baz=155						
W39A	Magazine	69.64	341	P	P	18 10 46.7	+0.8
	baz=160						
U40A	Yellville	70.49	342	P	P	18 10 51.8	+0.8
	baz=161						
MNTX	Cornudas Mount	70.55	330	P	P	18 10 51.4	-0.2
TUL1	Leonard	70.89	340	P	P	18 10 54.2	+0.7
	baz=159						
OK025	Westminster Rd	71.05	338	P	P	18 10 55.4	+0.9
MSTX	Muleshoe	71.49	333	P	P	18 10 57.5	+0.2
MSTX				IAmb	IAmb	18 10 59.1	
	comp=Z,17nm,0.8s						
MSTX	Muleshoe	71.49	333	P	P	18 10 58.0	+0.6
	baz=153						
P52A	Corning	71.62	352	P	P	18 10 58.2	+0.3
	baz=171						
121A	Cookes Peak, D	72.30	329	P	P	18 11 04.2	+1.8
121A				IAmb	IAmb	18 11 05.5	
	comp=Z,9.8nm,0.9s						
121A	Cookes Peak, D	72.30	329	P	P	18 11 04.0	+1.7
	baz=149						
N54A	Moraine State	72.70	354	P	P	18 11 05.3	+1.0
	baz=173						
P40A	Paris	73.30	344	P	P	18 11 08.2	+0.3
P40A				IAmb	IAmb	18 11 09.5	
	comp=Z,15nm,0.8s						
LENM	Lemitar	73.35	330	P	P	18 11 09.7	+1.2
L61B	Northampton	73.82	359	P	P	18 11 11.9	+1.0
	baz=179						
DBIC	Dimbokro	74.45	72	P	P	18 11 15.7	+0.5
	comp=Z,25nm,0.8s,baz=230,slow=6.2,SNR=12						
DBIC	Dimbokro	74.45	72	P	P	18 11 15.7	+0.5
DBIC				IAmb	IAmb	18 11 16.7	
	comp=Z,27nm,0.8s						
T25A	Trinidad	74.91	334	P	P	18 11 19.3	+1.7
T25A				IAmb	IAmb	18 11 20.5	
	comp=Z,17nm,0.9s						
T25A	Trinidad	74.91	334	P	P	18 11 19.2	+1.6
	baz=152						
MAW	Mawson	75.35	164	P	P	18 11 20.9	+1.4
	comp=Z,7.0nm,0.9s,baz=197,slow=7.5,SNR=4.2						
SUR	Sutherland	75.92	119	P	P	18 11 25.2	+1.4
	comp=Z,9.7nm,0.8s,baz=242,slow=7.1,SNR=6.4						
S22A	4UR Ranch, Cre	76.37	332	P	P	18 11 27.3	+1.2
	baz=150						
SADO	Sadowa	76.41	355	P	P	18 11 26.3	+0.6
	comp=Z,6.6nm,0.8s,baz=242,slow=2.9,SNR=4.3						
G62A	West of Eustis	76.60	1	P	P	18 11 28.1	+1.3
G62A				IAmb	IAmb	18 11 30.0	
	comp=Z,25nm,0.9s						
GGN	Saint George	76.63	4	P	P	18 11 28.8	+1.9
Q24A	Divide	76.79	334	P	P	18 11 30.0	+1.6
	baz=152						
F62A	Pittston Farm,	77.29	1	P	P	18 11 31.6	+0.9
F62A				IAmb	IAmb	18 11 33.5	
	comp=Z,21nm,0.9s						
F64A	Sherman	77.30	3		P	18 11 32.4	+1.6
F64A				IAmb	IAmb	18 11 33.5	
	comp=Z,26nm,0.9s						
PFO	Pinyon Flats O	77.33	323	P	P	18 11 32.0	+0.6
	comp=Z,2.3nm,0.3s,baz=167,slow=7.5,SNR=4.2						
PFO	Pinyon Flats O	77.33	323	P	P	18 11 32.0	+0.6
PFO	Pinyon Flats O	77.33	323	IAmb	IAmb	18 13 09.1	
	comp=Z,35nm,1.6s						
LMN	Caledonia Moun	77.50	5	P	P	18 11 32.9	+1.0
E62A	Clayton Lake	78.02	2	P	P	18 11 36.3	+1.6
E62A				IAmb	IAmb	18 11 37.5	
	comp=Z,24nm,0.8s						
HEC	Hector,Ludlow	78.23	324	P	P	18 11 38.2	+1.9
	baz=143						
ECSD	EROS Data Cent	78.40	342		P	18 11 37.6	+0.7
ECSD				IAmb	IAmb	18 11 38.5	
	comp=Z,12nm,0.8s						
D62A	Allapoint, All	78.50	2	P	P	18 11 39.0	+1.6
GSC	Goldstone, Bar	78.84	324	P	P	18 11 41.6	+2.0
	baz=142						
O20A	White River Ci	78.99	333	P	P	18 11 42.2	+1.7
	baz=149						
EDW2	Edwards Air Fo	79.11	323	P	P	18 11 42.8	+1.7
	baz=142						
KOWA	Kowa	79.70	66		P	18 11 44.7	0.0
KOWA				IAmb	IAmb	18 11 46.3	
	comp=Z,21nm,0.8s						
TSUM	Tsumeb	79.83	106	P	P	18 11 46.4	+0.8
	comp=Z,4.4nm,0.8s,baz=242,slow=3.5,SNR=5.9						
TSUM	Tsumeb	79.83	106	IAmb	IAmb	18 11 47.5	
	comp=Z,9.3nm,0.9s						
ISA	Isabella, Lake	79.96	323	P	P	18 11 47.2	+1.4
ISA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ISA	Isabella, Lake	79.96	323	P	P	18 11 47.2	+1.4
ISA	Isabella, Lake	79.96	323	P	P	18 11 47.7	+2.0
	baz=141						
VES	Vestal, Richgr	80.41	323	P	P	18 11 49.6	+1.5
	baz=141						
K22A	Casper	80.52	335	P	P	18 11 49.9	+1.2
	baz=151						
R11A	Troy Canyon, C	80.67	327	P	P	18 11 50.9	+1.3
R11A	Troy Canyon, C	80.67	327	P	P	18 11 51.4	+1.8
	baz=144						
LCH	Last Change Ra	80.77	325	P	P	18 11 51.0	+0.9
BOSA	Boshof	81.12	118	P	P	18 11 52.6	+0.2
	comp=Z,16nm,0.9s,baz=247,slow=4.0,SNR=11						
BOSA	Boshof	81.12	118	P	P	18 11 52.4	0.0
BOSA				pmax	pmax		
	comp=Z,18nm,0.9s						
BOSA	Boshof	81.12	118	P	P	18 11 52.4	0.0
BOSA				IAmb	IAmb	18 11 53.8	
	comp=Z,18nm,0.9s						
PDAR	Pinedale Array	81.75	333	P	P	18 11 55.9	+0.5
	comp=Z,0.7nm,0.6s,baz=135,slow=7.6,SNR=6.0						
NVAR	Mina Array Bea	82.03	325	P	P	18 11 58.7	+1.7
	comp=Z,4.1nm,0.8s,baz=152,slow=6.2,SNR=11						
NVAR				pP	pwP	18 12 08.1	+0.6
	comp=Z,3.2nm,0.7s,baz=149,slow=5.3,SNR=6.6						
NVAR	Mina Array Bea	82.03	325		P	18 11 57.7	+0.8
HVU	Hansel Valley	82.22	330	P	P	18 11 57.5	-0.2
HVU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HVU	Hansel Valley	82.22	330	P	P	18 11 57.5	-0.2
HVU				IAmb	IAmb	18 11 59.4	
	comp=Z,7.7nm,0.9s						
KVN	Kaiserville	82.42	326	P	P	18 11 59.8	+0.9
KVN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KVN	Kaiserville	82.42	326	P	P	18 11 59.8	+0.9
ELK	Elko	82.44	328	P	P	18 12 00.1	+1.1
	comp=Z,5.1nm,0.8s,baz=162,slow=4.4,SNR=9.9						
ELK	Elko	82.44	328	P	P	18 11 59.2	+0.2
ELK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ELK	Elko	82.44	328	P	P	18 11 59.2	+0.2
MDND	Maddock	83.00	342	P	P	18 12 02.5	+1.1
MDND	Maddock	83.00	342	P	P	18 12 02.6	+1.2
	baz=157						
PNTR	Pine Nut	83.18	325	P	P	18 12 04.1	+1.2
PNTR				IAmb	IAmb	18 12 05.9	
	comp=Z,9.4nm,0.8s						
LBTB	Lobatse	83.25	115	P	P	18 12 03.9	+0.2
	comp=Z,13nm,0.7s,baz=220,slow=5.6,SNR=11						
LBTB	Lobatse	83.25	115	IAmb	IAmb	18 12 04.8	
	comp=Z,16nm,0.8s						
TORD	Torodi Ar. Bea	83.43	70	P	P	18 12 04.8	+0.4
	comp=Z,19nm,0.8s,baz=259,slow=4.6,SNR=16						
PAHR	Pah Rah Range	83.56	325	P	P	18 12 05.5	+0.8
PAHR				IAmb	IAmb	18 12 07.2	
	comp=Z,6.0nm,0.8s						
RLMT	Red Lodge	83.65	334	P	P	18 12 05.6	+0.4
RLMT				IAmb	IAmb	18 12 16.1	
	comp=Z,32nm,1.9s						
ULM	Lac du Bonnet	84.32	345	P	P	18 12 08.1	-0.1
	comp=Z,1.6nm,0.4s,baz=121,slow=4.0,SNR=3.2						
ULM				pP	sP	18 12 17.7	+0.6
	comp=Z,6.7nm,0.9s,baz=174,slow=4.1,SNR=4.7						
ULM	Lac du Bonnet	84.32	345	IAmb	IAmb	18 12 18.4	
	comp=Z,13nm,1.1s						
HLID	Hailey	84.37	330		P	18 12 09.5	+0.7
MCMT	McKenzie Canyo	84.77	332	P	P	18 12 11.3	+0.4
DGMT	Dagmar	84.87	339	P	P	18 12 11.5	+0.5
DGMT				IAmb	IAmb	18 12 23.0	
	comp=Z,19nm,0.9s						
J08A	Circle Bar Ran	85.98	328	P	P	18 12 17.8	+1.1
J08A				IAmb	IAmb	18 12 19.3	
	comp=Z,10nm,0.7s						
PLID	Pearl Lake	86.27	330	P	P	18 12 18.1	-0.3
PLID				IAmb	IAmb	18 12 29.8	
	comp=Z,25nm,1.8s						
M04C	Macdoel	86.34	325	P	P	18 12 19.6	+1.0
	baz=139						
YBH	Yreka Blue Hor	86.73	325	P	P	18 12 21.1	+0.6
	comp=Z,1.5nm,0.7s,baz=71,slow=13,SNR=4.5						
PINE	Pine Mountain	87.44	327	P	P	18 12 24.9	+0.8
PINE				IAmb	IAmb	18 12 26.8	
	comp=Z,8.8nm,0.8s						
LSZ	Lusaka	90.50	108	P	P	18 12 41.0	+1.9
	comp=Z,2.5nm,0.2s,baz=220,slow=2.5,SNR=8.4						
ESDC	Sonseca Array	95.00	46	P	P	18 12 59.3	+0.1
	comp=Z,1.4nm,1.0s,baz=234,slow=5.2,SNR=4.3						
HOLB	Holberg	95.80	328	P	P	18 13 00.3	-2.2
YKA	Yellowknife Ar	99.92	341	P	Pdif	18 13 20.6	-0.1
	comp=Z,1.0nm,0.7s,baz=144,slow=4.4,SNR=8.7						
YKA				pP	sP	18 13 30.5	+0.7
	comp=Z,0.7nm,0.5s,baz=145,slow=4.6,SNR=6.6						
ASAR	Alice Springs	119.58	207	PKP	PKPdf	18 18 26.3	-0.7
	comp=Z,0.9nm,0.8s,baz=162,slow=2.3,SNR=5.2						
ASAR				pPKP	sPKPdf	18 18 36.2	0.0
	comp=Z,1.2nm,0.8s,baz=130,slow=1.5,SNR=6.1						
ASAR				PKKPbc	PKKPbc	18 28 38.1	+0.7
	comp=Z,0.8nm,0.7s,baz=340,slow=3.0,SNR=6.5						
AKASG	Malin Array Be	120.64	46	PKP	PKPdf	18 18 27.4	-0.5
	comp=Z,2.2nm,0.9s,baz=255,slow=3.6,SNR=4.7						
BRTR	Keskin Array B	120.70	60	PKP	PKiKP	18 18 28.8	+0.1
	comp=Z,0.8nm,0.8s,baz=205,slow=5.5,SNR=4.4						
MNK	Minsk	120.71	42	*i* PKIKP	PKPdf	18 18 17.4	-11
MNK				*i*		18 25 29.5	
MNK				*i* SS	SS	18 36 21.9	-3.8
MNK				pmax	pmax		
	comp=N,22nm,0.9s						
MNK				pmax	pmax		
	comp=E,5.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,18nm,0.7s						
MNK				MLR	MLR		
	comp=Z,213nm,15.0s						
MNK				MLR	MLR		
	comp=E,37nm,15.0s						
MNK				MLR	MLR		
	comp=N,158nm,15.0s						
MNK	Minsk	120.71	42	*i* PKP	PKPpre	18 18 17.5	
	comp=E,5.0nm,0.9s						
MNK				*i* PKP	PKPpre	18 18 17.5	
	comp=N,22nm,0.8s						
MNK				*i* PKP	PKPpre	18 18 17.5	
	comp=Z,18nm,0.7s,baz=79						
MNK				*i* PP	PP	18 19 46.1	-10
MNK				*i* PPP	PPP	18 22 18.7	
MNK				*i* SKS	SKSac	18 25 29.5	+5.5
MNK				*i* PS	PS	18 29 36.6	-11
MNK				*i* SS	SS	18 36 21.9	-3.7
MNK				*i* SSS	SSS	18 40 44.7	
MNK				*i* LR	LR	19 09 57.4	
MNK				*i* LRM	MLR	19 12 46.2	
	comp=Z,213nm,14.8s						
MNK				*i* LRM	MLR	19 12 48.8	
	comp=E,37nm,15.4s						
MNK				*i* LRM	MLR	19 12 52.0	
	comp=N,158nm,14.8s						
VSU	Vasula	120.89	37	*i* PKIKP	sPKPdf	18 18 38.7	+1.4
WRA	Warramunga Arr	122.74	210	PKP	PKPdf	18 18 32.8	-0.3
	comp=N,1.0nm,0.5s,baz=157,slow=1.8,SNR=7.8						
WRA				pPKP	sPKPdf	18 18 42.9	+0.6
	comp=N,2.0nm,0.6s,baz=151,slow=1.6,SNR=5.5						
OBN	Obninsk	125.77	42⇑	*e*PKIKP	PKPdf	18 18 36.7	-0.9
OBN				*e*		18 20 28.8	
OBN				*e*SS	SS	18 37 32.4	+2.7
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
H11S2	WAKE ISLAND Hy	125.78	271	T	T	20 37 31.5	
	baz=117,slow=75,SNR=46						
H11S1	WAKE ISLAND Hy	125.80	271	T	T	20 37 42.5	
	baz=117,slow=75,SNR=32						
H11S3	WAKE ISLAND Hy	125.80	271	T	T	20 37 26.1	
	baz=117,slow=75,SNR=6.6						
H11N3	WAKE ISLAND Hy	126.14	272	T	T	20 38 02.6	
	baz=154,slow=74,SNR=12						
H11N2	WAKE ISLAND Hy	126.16	272	T	T	20 38 03.5	
	baz=120,slow=74,SNR=17						
KLMR	Klimovskoe	127.56	35	*e*PKIKP	PKPdf	18 18 40.2	-0.6
KLMR				pmax	pmax		
	comp=Z,26nm,1.3s						
KLMR	Klimovskoe	127.56	35	*e*PKPdf	PKPdf	18 18 40.3	-0.6
KLMR				AMP		18 18 55.1	
	comp=Z,26nm,1.3s						
KIV	Kislovodsk	128.26	57	*i* PKIKP	PKiKP	18 18 44.9	+1.4
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBZ	Khabaz	128.38	57	*i* PKIKP	PKPdf	18 18 43.1	+0.1
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BRVK	Borovoye	145.51	41	PKIKP	PKPdf	18 19 14.0	-0.2
BRVK	Borovoye	145.51	41		PKPdf	18 19 14.0	-0.2
POO	Poona	146.57	105	*e*P	PKPdf	18 19 15.0	-2.1
YAK	Yakutsk	146.59	342	PKPbc	PKPab	18 19 18.4	0.0
	comp=Z,8.2nm,0.7s,baz=226,slow=1.5,SNR=2.8						
YAK				pPKPbc	sPKPab	18 19 27.8	+0.3
	comp=Z,15nm,0.6s,baz=153,slow=0.4,SNR=6.2						
YAK	Yakutsk	146.59	342	*e*PKP2	PKPab	18 19 17.9	-0.5
YAK				pmax	pmax		
	comp=Z,26nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK	Yakutsk	146.59	342	PKPdf	PKPdf	18 19 14.4	-1.3
HYB	Hyderabad	149.80	111	*i* PKP	PKPbc	18 19 26.0	-1.2
KURK	Kurchatov	151.18	40	PKIKP	PKPdf	18 19 22.7	-0.8
KURK						18 19 29.9	
KURK	Kurchatov	151.18	40	PKPdf	PKPdf	18 19 22.7	-0.8
KURK					PKiKP	18 19 29.9	0.0
IPM	Ipoh	152.12	165		PKPbc	18 19 31.6	-1.1
ZALV	Zalesovo Beam	152.28	30	PKPbc	PKiKP	18 19 32.5	+0.4
	comp=E,22nm,0.5s,baz=312,slow=3.0,SNR=16						
ZALV				pPKPbc	sPKPbc	18 19 41.4	+0.4
	comp=E,24nm,0.7s,baz=300,slow=3.3,SNR=7.5						
MKAR	Makanchi Array	155.22	45	PKPbc	pPKPbc	18 19 38.6	-6.8
	comp=E,2.2nm,0.8s,baz=302,slow=1.6,SNR=4.2						
MKAR				PKPab	PKPab	18 19 55.0	+0.5
	comp=E,4.8nm,0.9s,baz=291,slow=3.8,SNR=6.4						
WMQ	Urumqi	160.00	47	*e*PKP	PKPdf	18 19 36.3	+0.6
WMQ				LR	LR		
	comp=E,190nm,29.1s						
ZAK	Zakamensk	161.04	9	*e*PKP2	PKPab	18 20 19.4	-0.2
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SONM	Songino Array	163.87	4	PKPab	PKPab	18 20 33.5	+1.4
	comp=Z,2.5nm,0.8s,baz=336,slow=4.4,SNR=9.6						
CMAR	Chiang Mai Arr	164.47	146	PKP	PKPdf	18 19 41.6	+0.8
	comp=Z,0.5nm,0.7s,baz=252,slow=2.3,SNR=4.5						
CMAR				pPKP	sPKPdf	18 19 51.0	+0.9
	comp=Z,1.6nm,1.1s,baz=248,slow=2.4,SNR=3.4						
NJ2	Nanjing	170.74	275	*e*PKP	PKPdf	18 19 45.0	+0.1
XAN	Xi'an	177.56	341	PKP	PKPdf	18 19 48.5	+1.3

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*NEIC **26** 18:17:47.7±1.4, 20°.4S±0°.2×178°.1W±0°.2, h493km±10km, mb4.5/12, Error ellipse: s-maj=27.8km s-min=21.5km az=184.0*

*IDC **26** 18:17:50.7±7.6, 20°.98S×177°.99W, h547km±49km, mb3.3/4, mb1 3.6/5, mb1mx3.0/26, mbtmp4.2/5, Error ellipse: s-maj=159.0km s-min=25.3km az=142.0*

ISC 26 18:17:50.6±0.8**, 20°.7S**±0°.2×**178°.0W**±0°.1**, h534**km**, n26, σ1.62**/24**, mb4.4**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.75	308	P	P	18 19 20.5	+2.9
	5.4nm,0.3s,baz=156,slow=20,SNR=29						
MSVF	Nonsavu	4.75	308	P	P	18 19 19.9	+2.3
NIUE	Niue	7.78	79	P	P	18 19 44.5	-1.2
EIDS	Eidsvold	28.78	255	P	P	18 23 04.3	-1.2
EIDS				IAmb	IAmb	18 23 07.8	
	comp=Z,24nm,1.6s						
CTAO	Charters Tower	33.45	265	P	P	18 23 44.8	-0.9
CTAO				IAmb	IAmb	18 23 45.2	
	comp=Z,5.8nm,0.5s						
WR0	Warramunga Arr	44.37	262	P	P	18 25 12.6	-1.2
WR0				IAmb	IAmb	18 25 48.7	
	comp=Z,59nm,1.9s						
AS31	Alice Springs	44.45	257	P	P	18 25 13.4	-1.1
ASAR	Alice Springs	44.46	257	P	P	18 25 13.4	-1.1
	comp=Z,4.0nm,0.5s,baz=89,slow=8.0,SNR=108						
ASAR				PcP	PcP	18 26 46.0	-0.6
	comp=Z,0.8nm,0.7s,baz=113,slow=3.9,SNR=5.5						
ASAR	Alice Springs	44.46	257	P	P	18 25 13.1	-1.4
WB0	Warramunga Arr	44.54	263	P	P	18 25 13.6	-1.6
WB0				IAmb	IAmb	18 25 48.1	
	comp=Z,30nm,1.6s						
WB2	Warramunga Arr	44.55	262	P	P	18 25 13.3	-1.9
WB2				IAmb	IAmb	18 26 29.4	
	comp=Z,43nm,1.7s						
WRA	Warramunga Arr	44.56	262	P	P	18 25 13.6	-1.8
	comp=Z,1.5nm,0.3s,baz=96,slow=7.6,SNR=64						
WRA	Warramunga Arr	44.56	262	P	P	18 25 12.7	-2.7
MTN	Manton Dam	49.15	271	P	P	18 25 48.4	-1.6
KNRA	Kununurra	50.63	266	P	P	18 25 59.4	-1.5
TOLI2	Tolitoli	63.63	282	P	P	18 27 30.0	+0.1
CASY	Casey	63.77	205	P	P	18 27 41.1	+11
QSPA	South Pole Qui	69.36	180	P	P	18 28 07.4	+2.8
QSPA				IAmb	IAmb	18 28 34.5	
	comp=Z,22nm,1.9s						
ILAR	Eielson Array	88.52	13	P	P	18 29 45.2	-0.6
	comp=Z,0.8nm,0.9s,baz=221,slow=5.7,SNR=5.5						
SDCO	Great Sand Dun	89.50	49		pP	18 31 39.4	-8.9
CMAR	Chiang Mai Arr	90.17	290	P	P	18 29 54.7	+0.2
	comp=Z,0.3nm,0.3s,baz=79,slow=1.7,SNR=4.6						
AKASG	Malin Array Be	143.19	331	PKP	PKPab	18 36 20.2	-1.4
	comp=Z,2.1nm,0.5s,baz=42,slow=4.4,SNR=14						
BRTR	Keskin Array B	146.97	312	PKPbc	PKPdf	18 36 32.0	+1.3
	comp=Z,0.8nm,0.6s,baz=114,slow=1.7,SNR=5.9						
MMAI	Mount Meron Ar	147.90	299	PKPbc	PKPbc	18 36 36.1	-0.1
	comp=Z,1.1nm,0.5s,baz=74,slow=6.2,SNR=7.2						
CLL	Collm	148.26	347	*e*PKPbc	PKPbc	18 36 36.0	-0.4
GERES	GERESS Array B	150.39	344	PKPbc	PKPbc	18 36 41.3	-0.5
	comp=Z,0.4nm,0.6s,baz=9.1,slow=3.4,SNR=5.2						

NEIC 26 18:25:21.1±1.3**, 35°.38N**±0°.06×**101°.20W**±0°.06**, h5**km±3km**, mb_Lg2.7**/34**, Error ellipse: s-maj=8.4km s-min=7.5km az=175.0, Northwestern Texas-Oklahoma border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSTX	Muleshoe	1.91	223		Pn	18 25 55.2	+0.8
MSTX				Sg	Sb	18 26 20.5	-0.2
U32A	Winter Ranch,	2.05	60		Pn	18 25 57.0	+0.6
WMOK	Wichita Mounta	2.09	107		Pn	18 25 57.8	+1.0
WMOK				IAmb_Lg		18 26 28.8	
	comp=Z,37nm,0.9s						
CROK	Carrier	2.85	66	Pn	Pn	18 26 08.8	+1.6
X34A	Smith Ranch, M	2.87	105	Pn	Pn	18 26 09.1	+1.5
X34A				IAmb_Lg		18 26 59.2	
	comp=Z,18nm,0.8s						

BCOK	**Bluff Creek, N**	**2.95**	**84**		Pn	18 26 08.4	-0.2
ABTX	**Abilene, Hawle**	**3.04**	**154**		Pn	18 26 10.4	+0.5
ABTX				IAmb_Lg		18 27 00.4	
	comp=Z,35nm,1.0s						
KAN14	**Manchester OK**	**3.06**	**58**	IAmb_Lg		18 27 04.8	
	comp=Z,44nm,0.7s						
OKCFA	**Oklahoma City**	**3.07**	**88**	Pn	Pn	18 26 09.2	-1.1
OKCSW	**OKLAHOMA CITY**	**3.08**	**88**	Pn	Pn	18 26 09.8	-0.6
OK029	**Liberty Lake**	**3.08**	**81**		Pn	18 26 10.4	-0.1
OK029				IAmb_Lg		18 26 58.0	
	comp=Z,16nm,1.0s						
FNO	**Franklin**	**3.11**	**91**		Pn	18 26 11.5	+0.6
T25A	**Trinidad**	**3.13**	**305**		Pn	18 26 12.4	+1.1
T25A				IAmb_Lg		18 27 05.2	
	comp=Z,45nm,0.7s						
KAN16	**Harper SW Stat**	**3.14**	**53**	Pn	Pn	18 26 12.6	+1.3
OK025	**Westminster Rd**	**3.16**	**85**	Pn	Pn	18 26 10.7	-0.9
KAN06	**Argonia West S**	**3.29**	**54**	IAmb_Lg		18 27 09.2	
	comp=Z,44nm,0.7s						
BLOK	**Blackwell**	**3.52**	**66**	Pn	Pn	18 26 16.1	-0.3
OK033	**Mehan**	**3.54**	**78**	Pn	Pn	18 26 16.7	0.0
W35A	**Tecumseh**	**3.55**	**92**		Pn	18 26 17.0	+0.1
LOOK	**Love County**	**3.59**	**111**	Pn	Pn	18 26 17.3	-0.2
OK031	**S. Brethren Rd**	**3.60**	**80**	Pn	Pn	18 26 16.9	-0.7
CBKS	**Cedar Bluff**	**3.63**	**18**		Pn	18 26 18.2	+0.2
R32A	**Long Quarter,**	**3.64**	**33**		Pn	18 26 18.0	-0.1
OK030	**Cody Creek RV**	**3.64**	**80**	Pn	Pn	18 26 17.9	-0.2
OK034	**N. Norfolk Rd.**	**3.71**	**79**	Pn	Pn	18 26 18.1	-1.0
QUOK	**Quay**	**3.74**	**76**	Pn	Pn	18 26 19.8	+0.2
Z35A	**Perchaven, San**	**3.85**	**121**	Pn	Pn	18 26 21.0	-0.1
Z35A				IAmb_Lg		18 27 26.0	
	comp=Z,20nm,1.0s						
T35A	**Sooner Cattle**	**4.10**	**67**		Pn	18 26 24.0	-0.4
T35A				IAmb_Lg		18 27 30.8	
	comp=Z,12nm,0.9s						
SDCO	**Great Sand Dun**	**4.19**	**306**	IAmb_Lg		18 27 33.6	
	comp=Z,16nm,0.9s						
ANMO	**Albuquerque**	**4.33**	**266**	Pn	Pn	18 26 27.2	-0.5
TUL1	**Leonard**	**4.44**	**82**	Pn	Pn	18 26 27.4	-1.7
TUL1				IAmb_Lg		18 27 48.4	
	comp=Z,12nm,0.9s						
WHTX	**Lake Whitney,**	**4.60**	**136**	Pn	Pn	18 26 31.8	+0.5
BNM	**Barren Site**	**4.63**	**256**	Pn	Pn	18 26 32.2	+0.3
X37A	**Clayton**	**4.85**	**98**	Pn	Pn	18 26 34.7	-0.1
LENM	**Lemitar**	**4.90**	**257**	Pn	Pn	18 26 35.2	-0.4
JCT	**Junction City**	**5.02**	**166**	Pn	Pn	18 26 37.5	+0.3
JCT				IAmb_Lg		18 28 14.3	
	comp=Z,12nm,0.8s						
MNTX	**Cornudas Mount**	**5.06**	**225**	Pn	Pn	18 26 39.3	+1.6
Z38A	**Mt. Pleasant**	**5.56**	**111**	Pn	Pn	18 26 41.8	-2.8
HHAR	**Hobbs**	**5.97**	**79**	Pn	Pn	18 26 50.0	-0.2
HHAR				IAmb_Lg		18 28 30.7	
	comp=Z,8.6nm,0.8s						
W39A	**Magazine**	**6.07**	**90**	Pn	Pn	18 26 50.2	-1.4
W39A				IAmb_Lg		18 28 44.6	
	comp=Z,10nm,0.9s						
121A	**Cookes Peak, D**	**6.16**	**244**	Pn	Pn	18 26 52.6	-0.3
MIAR	**Mount Ida**	**6.32**	**95**	Pn	Pn	18 26 54.7	-0.2
MIAR				IAmb_Lg		18 28 50.7	
	comp=Z,7.6nm,0.7s						
TX31	**Lajitas Ar. Si**	**6.38**	**200**		Pn	18 26 55.3	-0.5
TX32	**Lajitas Array**	**6.38**	**200**		Pn	18 26 55.8	-0.1
TXAR	**Lajitas Array**	**6.38**	**200**	Pn	Pn	18 26 54.5	-1.4
S39A	**Bolivar**	**6.75**	**68**	IAmb_Lg		18 29 01.8	
	comp=Z,14nm,1.1s						
WHAR	**Wooly Hollow**	**7.29**	**88**	Pn	Pn	18 27 07.3	-0.9
O20A	**White River Ci**	**7.32**	**313**	Pn	Pn	18 27 06.7	-2.2
FCAR	**Ozark Folk Cen**	**7.41**	**83**	Pn	Pn	18 27 09.6	-0.4
L34A	**Svendsen Farm,**	**7.58**	**28**	IAmb_Lg		18 29 25.4	
	comp=Z,13nm,0.7s						
ECSD	**EROS Data Cent**	**9.07**	**22**	Pn	Pn	18 27 32.5	-0.1

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*SJA **26** 18:53:19.9±0.8, 31°.68S×72°.45W, h23^{km}±7^{km}, ML4.4, MW4.6*

*IDC **26** 18:53:21.8±0.8, 31°.70S×71°.97W, h0^{km}, mb4.3/7, mb1 4.3/11, mb1mx4.2/30, mbtmp4.2/11, ML3.9/4, MS3.6/8, Ms1 3.6/8, ms1mx3.4/21, Error ellipse: s-maj=25.3km s-min=19.7km az=146.0*

*NEIC **26** 18:53:22.9, 31°.74S×72°.16W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.41; M$_{\theta\theta}$0.24; M$_{\phi\phi}$-2.65; M$_{r\theta}$-0.01; M$_{\theta\phi}$-0.11; M$_{\phi r}$-1.07; Fault plane solution: M$_0$2.76000×10^{15} NP1:φ$_s$181.50000°, δ56.44000°, λ89.13000°. NP2:φ$_s$3.08000°, δ33.57000°, λ91.31000°. Principal axes: T 2.6304, Plg79.0000°, Azm88.0000°; N 0.2430, Plg1.0000°, Azm182.0000°; P -2.8734, Plg11.0000°, Azm272.0000°;*

*NEIC **26** 18:53:22.6±2.5, 31°.75S±0°.03×72°.14W±0°.09, h10^{km}±4^{km}, mb4.6/15, Mwr4.2/39, ML4.2(GUC) Error ellipse: s-maj=11.6km s-min=4.6km az=98.0*

*GUC **26** 18:53:24.7±0.8, 31°.73S×72°.02W, h38^{km}±2^{km}, ML4.2*

ISC 26 18:53:21.6±1.3**, 31°.73S**±0°.02×**72°.14W**±0°.04**, h6**^{km}±8^{km}**, n128, σ1^{s}75**/173**, mb4.6**/12**, MS3.8**/5**, 12C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	**Catapilco**	**1.09**	**139**	⇓*i*P	**Pn**	**18 53 43.5**	**+0.1**
VA06				*i* S	**Sg**	**18 53 56.6**	**-0.3**
VA06				IAML		18 54 02.1	
	comp=N,16μm,0.6s						
CO06	**Fray Jorge**	**1.14**	**22**	⇑*i*P	**Pg**	**18 53 44.2**	**+0.7**
CO06				*i* S	**Sg**	**18 53 58.7**	**+0.5**
CO06				IAML		18 54 06.3	
	comp=N,4μm,0.2s						
CO06	**Fray Jorge**	**1.14**	**22**		**Pn**	**18 53 44.1**	**0.0**
VA01	**Torpederas**	**1.36**	**162**	*e*P	**Pg**	**18 53 47.9**	**+0.3**
VA01				*i* S	**Sb**	**18 54 03.4**	**-1.6**
VA01				IAML		18 54 12.6	
	comp=E,2μm,0.6s						
VA01	**Torpederas**	**1.36**	**162**	Pn	**Pb**	**18 53 47.5**	**+0.2**
VA01				Sn	**Sb**	**18 54 03.4**	**-1.6**
VA01	**Torpederas**	**1.36**	**162**	*e*P	**Pb**	**18 53 47.6**	**+0.2**
VA01				*e*S	**Sg**	**18 54 07.8**	**+2.5**
CO03	**El Pedregal**	**1.53**	**55**	⇑*i*P	**Pb**	**18 53 50.0**	**-0.4**
CO03				*i* S	**Sb**	**18 54 08.5**	**-1.6**
CO03				IAML		18 54 12.6	
	comp=E,4μm,0.3s						
CO03	**El Pedregal**	**1.53**	**55**	Pn	**Pb**	**18 53 50.3**	**-0.1**
CO03				Sn	**Sb**	**18 54 09.0**	**-1.0**
CO03	**El Pedregal**	**1.53**	**55**	*e*P	**Pb**	**18 53 50.4**	**0.0**
CO03				*e*S	**Sg**	**18 54 10.9**	**+0.2**
CO03				IAML		18 54 13.8	
	comp=Z,3μm,0.5s						
ROC1	**El Roble**	**1.56**	**143**	*e*P	**Pb**	**18 53 50.5**	**-0.7**
ROCH	**El Roble**	**1.56**	**143**	⇑*i*P	**Pb**	**18 53 50.9**	**-0.3**
ROCH				*i* S	**Sb**	**18 54 10.8**	**-0.5**
ROCH				IAML		18 54 16.6	
	comp=N,7μm,0.3s						
VA03	**San Esteban**	**1.70**	**128**	⇑*i*P	**Pb**	**18 53 52.9**	**-0.5**
VA03				*i* S	**Sb**	**18 54 13.7**	**-1.2**
VA03				IAML		18 54 22.8	
	comp=N,7μm,0.5s						
VA03	**San Esteban**	**1.70**	**128**		**Pb**	**18 53 52.8**	**-0.5**
VA03				Sn	**Sn**	**18 54 12.5**	**-1.4**
VA03	**San Esteban**	**1.70**	**128**	*e*P	**Pb**	**18 53 53.1**	**-0.2**
VA03				*e*S	**Sg**	**18 54 19.7**	**+3.5**
VA03				IAML		18 54 23.5	
	comp=Z,3μm,0.7s						
MT02	**Curacav**	**1.75**	**151**	⇑*i*P	**Pb**	**18 53 53.2**	**-0.8**
MT02				*i* S	**Sn**	**18 54 12.9**	**-2.1**
MT02				IAML		18 54 23.5	
	comp=E,2μm,0.6s						
MT02	**Curacav**	**1.75**	**151**		**Pb**	**18 53 53.3**	**-0.8**
MT02				Sn	**Sn**	**18 54 13.6**	**-1.4**
MT02	**Curacav**	**1.75**	**151**	*e*P	Pn	18 53 47.7	-4.8
MT02				*e*P	**Pb**	**18 53 53.4**	**-0.7**
MT02				*e*S	**Sg**	**18 54 17.2**	**-0.6**
MT02				IAML		18 54 22.4	
	comp=Z,3μm,0.6s						
PEL	**Peldehue**	**1.87**	**139**	⇑*i*P	**Pb**	**18 53 55.3**	**-0.9**
PEL				*i* S	**Sb**	**18 54 18.4**	**-1.5**
PEL				IAML		18 54 24.1	
	comp=N,4μm,0.8s						
PEL	**Peldehue**	**1.87**	**139**		**Pb**	**18 53 55.3**	**-0.9**
PEL	**Peldehue**	**1.87**	**139**	*e*P	**Pn**	**18 53 49.7**	**-4.5**
PEL				*e*P	**Pb**	**18 53 55.4**	**-0.9**
PEL				*e*S	**Sg**	**18 54 24.7**	**+2.9**
GO04	**Tololo Observa**	**1.93**	**37**	⇑*i*P	**Pn**	**18 53 55.7**	**+0.5**
GO04				*i* S	**Sb**	**18 54 20.6**	**-1.3**
GO04				IAML		18 54 28.2	
	comp=E,4μm,0.6s						
GO04	**Tololo Observa**	**1.93**	**37**		**Pn**	**18 53 56.0**	**+0.8**
GO04	**Tololo Observa**	**1.93**	**37**	*e*P	**Pn**	**18 53 56.0**	**+0.8**
GO04				*e*S	**Sg**	**18 54 22.5**	**-1.3**
CO05	**La Serena**	**1.96**	**23**	*e*P	**Pn**	**18 53 56.3**	**+0.9**
CO05				*i* S	**Sb**	**18 54 23.6**	**+1.1**
CO05				IAML		18 54 37.7	
	comp=E,4μm,0.4s						
CO05	**La Serena**	**1.96**	**23**		**Pn**	**18 53 55.8**	**+0.4**
VA05	**Santo Domingo**	**1.97**	**167**	IAML		18 54 34.0	
	comp=E,6μm,0.5s						
VA05	**Santo Domingo**	**1.97**	**167**		**Pn**	**18 53 56.0**	**+0.5**
MT05	**Renca**	**2.04**	**145**	*e*P	**Pb**	**18 53 57.6**	**-1.5**
MT05				*i* S	**Sb**	**18 54 22.4**	**-2.3**
MT05				IAML		18 54 31.1	
	comp=E,6μm,0.3s						
MT05	**Renca**	**2.04**	**145**	Pn	**Pb**	**18 53 57.6**	**-1.5**
MT05	**Renca**	**2.04**	**145**	*e*P	**Pb**	**18 53 58.0**	**-1.1**
MT05				*e*S	**Sg**	**18 54 27.8**	**+0.7**
MT05				IAML		18 54 32.1	
	comp=Z,2μm,0.7s						
FCH	**Farellones**	**2.23**	**136**	⇑*e*P	**Pb**	**18 54 00.6**	**-2.0**
FCH				*i* S	**Sb**	**18 54 27.6**	**-2.9**
MT01	**Popeta**	**2.26**	**161**	⇑*i*P	**Pn**	**18 54 00.3**	**+0.7**
MT01				*i* S	**Sn**	**18 54 26.5**	**-1.1**
MT01				IAML		18 54 43.7	
	comp=E,2μm,0.3s						
MT01	**Popeta**	**2.26**	**161**		**Pn**	**18 54 00.2**	**+0.7**
MT01	**Popeta**	**2.26**	**161**	*e*P	**Pn**	**18 53 55.2**	**-4.3**
MT01				*e*P	**Pn**	**18 54 00.2**	**+0.7**
MT01				*e*S	**Sn**	**18 54 26.8**	**-0.8**
MT01				IAML		18 54 40.9	
	comp=Z,1μm,0.8s						
MT09	**Talagante**	**2.26**	**155**	⇑*e*P	**Pb**	**18 54 01.1**	**-1.8**
MT09				*i* S	**Sb**	**18 54 28.6**	**-2.6**
MT09				IAML		18 54 45.8	
	comp=N,3μm,0.5s						
MT09	**Talagante**	**2.26**	**155**		**Pn**	**18 54 00.8**	**+1.2**
AUSP	**Uspallata**	**2.39**	**103**	*e*P	**Pb**	**18 54 05.0**	**-0.3**
AUSP				*e*S	**Sg**	**18 54 38.7**	**+0.2**
RTLS	**Leoncito**	**2.42**	**92**	*e*P	**Pb**	**18 54 05.6**	**-0.2**
RTLS				*e*S	**Sg**	**18 54 38.5**	**-1.1**
RTLS				IAML		18 54 41.0	
	comp=Z,2μm,0.8s						
BO04	**La Punta**	**2.60**	**151**	⇑*e*P	**Pn**	**18 54 05.7**	**+1.5**
BO04				*i* S	**Sn**	**18 54 36.4**	**+0.3**
BO04				IAML		18 54 52.0	
	comp=E,2μm,0.5s						
LMEL	**Las Melosas**	**2.67**	**143**	⇑*i*P	**Pn**	**18 54 07.0**	**+1.7**
LMEL				IAML		18 54 51.5	
AROD	**Rodeo**	**2.77**	**56**	*e*P	**Pb**	**18 54 10.0**	**-1.7**
AROD				*e*S	**Sb**	**18 54 44.2**	**-1.9**
AROD				*e*S	**Sg**	**18 54 49.7**	**-1.0**
BO01	**Tunca**	**2.80**	**162**	Pn	**Pn**	**18 54 07.8**	**+0.9**
BO01	**Tunca**	**2.80**	**162**	*e*P	**Pn**	**18 54 08.0**	**+1.0**
BO01				*e*S	**Sb**	**18 54 44.2**	**-2.4**
BO01				IAML		18 55 03.5	
	comp=Z,774nm,0.7s						
ACCO	**Cerro Coronel**	**2.87**	**67**	*e*P	**Pb**	**18 54 11.9**	**-1.6**
ACCO				*e*S	**Sb**	**18 54 47.7**	**-1.3**
ASAL	**Salagasta**	**2.93**	**108**	*e*P	**Pb**	**18 54 13.0**	**-1.4**
ASAL				*e*S	**Sg**	**18 55 01.9**	**+6.0**
ARCO	**CERRO ARCO**	**2.93**	**113**	*e*P	**Pb**	**18 54 14.0**	**-0.5**
ARCO				*e*S	**Sb**	**18 54 49.7**	**-0.9**
ARCO				IAML		18 54 54.6	
	comp=Z,930nm,1.6s						
ZON	**Zonda**	**2.96**	**87**	*e*P	**Pb**	**18 54 13.0**	**-1.8**
ZON				*e*S	**Sb**	**18 54 48.7**	**-2.5**
ZON				IAML		18 54 58.5	
	comp=Z,968nm,1.4s						
LCO	**Las Campanas**	**2.98**	**25**	Pn	**Pn**	**18 54 10.1**	**+0.4**
LCO	**Las Campanas**	**2.98**	**25**	*e*P	**Pn**	**18 54 10.0**	**+0.3**
RTCV	**Cerro Valdivia**	**3.07**	**93**	*e*P	**Pb**	**18 54 14.0**	**-2.7**
RTCV				*e*S	**Sb**	**18 54 55.2**	**+0.8**
AAGR	**Agrelo**	**3.11**	**117**	*e*P	**Pb**	**18 54 15.8**	**-1.6**
AAGR				*e*S	**Sg**	**18 55 02.6**	**+1.0**
BO02	**Sierra Bellavi**	**3.26**	**160**		**Pn**	**18 54 14.0**	**+0.6**
BO02	**Sierra Bellavi**	**3.26**	**160**	*e*P	**Pn**	**18 54 14.8**	**+1.4**
BO02				*e*S	**Sb**	**18 54 55.5**	**-4.5**
BO02				IAML		18 55 10.1	
	comp=Z,2μm,0.7s						
GO05	**Huala**	**3.28**	**177**	Pn	**Pn**	**18 54 13.9**	**+0.4**
GO05	**Huala**	**3.28**	**177**	*e*P	**Pn**	**18 54 13.9**	**+0.4**
GO05				*e*P	**Pn**	**18 54 14.0**	**+0.5**
GO05				*e*S	**Sn**	**18 54 50.2**	**-2.6**
AC04	**Llanos de Chal**	**3.63**	**15**	Pn	**Pn**	**18 54 18.3**	**-0.1**
AC04	**Llanos de Chal**	**3.63**	**15**	*e*P	Pn	18 54 10.0	-8.4
AC04				*e*P	**Pn**	**18 54 19.0**	**+0.6**
AC04				*e*S	**Sb**	**18 55 13.2**	**+2.6**
AC04				IAML		18 55 27.4	
	comp=Z,452nm,1.6s						
ML02	**Panimavida**	**4.07**	**172**	Pn	**Pn**	**18 54 23.9**	**-0.4**
AVFE	**Valle Fertil**	**4.15**	**76**	*e*P	**Pn**	**18 54 28.5**	**+2.8**
AVFE				*e*S	**Sb**	**18 55 20.2**	**-5.4**
AVFE				IAML		18 55 32.4	
	comp=Z,675nm,0.6s						
RFA	**San Rafael**	**4.32**	**136**	*e*P	**Pn**	**18 54 30.8**	**+2.9**
RFA				*e*S	**Sb**	**18 55 34.2**	**+3.7**
RFA				IAML		18 55 41.4	
	comp=Z,300nm,1.8s						
GO03	**Copiap**	**4.44**	**22**	Pn	**Pn**	**18 54 29.6**	**0.0**
GO03	**Copiap**	**4.44**	**22**	*e*P	**Pn**	**18 54 31.0**	**+1.4**
GO03				*e*S	**Sb**	**18 55 27.2**	**-6.8**
VCA	**Vinchina**	**4.53**	**50**	*e*P	**Pn**	**18 54 35.0**	**+4.2**
VCA				*e*S	**Sb**	**18 55 38.7**	**+2.2**
ACLC	**CERRO LA CRUZ**	**5.03**	**64**	*e*P	**Pn**	**18 54 34.2**	**-3.6**
ACLC				*e*P	**Pn**	**18 54 40.1**	**+2.4**
AC02	**Maricunga**	**5.54**	**29**	Pn	**Pn**	**18 54 45.3**	**+0.2**
H03N1	**Juan Fernandez**	**5.96**	**252**	Pn	**Pn**	**18 54 52.1**	**+1.9**
	baz=123,slow=19,SNR=36						
H03N1				T	T	19 01 27.4	
	baz=82,slow=72,SNR=441						
H03N3	**Juan Fernandez**	**5.98**	**251**	Pn	**Pn**	**18 54 52.1**	**+1.7**
	baz=123,slow=19,SNR=21						
H03N3				T	T	19 01 30.5	
	baz=82,slow=72,SNR=290						
H03N2	**Juan Fernandez**	**5.98**	**252**	Pn	**Pn**	**18 54 52.2**	**+1.7**
	baz=123,slow=19,SNR=16						
H03N2				T	T	19 01 39.5	
	baz=82,slow=72,SNR=334						
H03S3	**Juan Fernandez**	**6.07**	**248**	Pn	**Pn**	**18 54 52.7**	**+1.0**
	SNR=5.6						
H03S3				T	T	19 01 44.2	
	baz=79						
H03S1	**Juan Fernandez**	**6.08**	**248**	Pn	**Pn**	**18 54 52.8**	**+1.1**
	SNR=7.3						
H03S1				T	T	19 01 43.4	
	baz=79						
H03S2	**Juan Fernandez**	**6.09**	**248**	Pn	**Pn**	**18 54 52.5**	**+0.6**
	SNR=12						
H03S2				T	T	19 01 41.9	
	baz=79						
LC01	**Cunco**	**7.16**	**178**		**Pn**	**18 55 07.0**	**+0.2**
PB14	**IPOC Station P**	**7.24**	**13**		**Pn**	**18 55 07.9**	**-0.4**
LR03	**Panguipulli**	**7.89**	**181**		**Pn**	**18 55 17.1**	**+0.3**
PB10	**IPOC Station P**	**8.30**	**10**	Pn	**Pn**	**18 55 20.8**	**-1.9**
PB15	**IPOC Station P**	**8.81**	**16**	Pn	**Pn**	**18 55 29.2**	**-0.6**
PLCA	**Paso Flores**	**9.08**	**172**	Pn	**Pn**	**18 55 34.8**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=328,slow=11,SNR=10						
PLCA				LR	LR	18 59 25.4	
	comp=Z,326nm,19.4s,baz=350,slow=40						
PLCA	**Paso Flores**	**9.08**	**172**	Pn	**Pn**	**18 55 34.0**	**+0.8**
PLCA	**Paso Flores**	**9.08**	**172**	*e*P	**Pn**	**18 55 35.0**	**+1.7**
LL04	**Puerto Octay**	**9.16**	**181**	Pn	**Pn**	**18 55 34.4**	**0.0**
PB06	**IPOC Station P**	**9.27**	**15**	Pn	**Pn**	**18 55 37.1**	**+1.0**
PB04	**IPOC Station P**	**9.53**	**11**	Pn	**Pn**	**18 55 38.4**	**-1.1**
LVC	**Limon Verde**	**9.53**	**18**	Pn	**Pn**	**18 55 37.8**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=192,slow=9.3,SNR=1.7						
LVC				LR	LR	18 59 05.9	
	comp=Z,188nm,19.6s,baz=193,slow=36						
LVC	**Limon Verde**	**9.53**	**18**	Pn	**Pn**	**18 55 37.6**	**-2.1**
PB07	**IPOC Station P**	**10.16**	**12**	Pn	**Pn**	**18 55 46.9**	**-1.4**
PB09	**IPOC Station P**	**10.23**	**15**	Pn	**Pn**	**18 55 47.7**	**-1.5**
PB01	**IPOC Station P**	**10.90**	**13**	Pn	**Pn**	**18 55 56.1**	**-2.2**
TA01	**Diego Aracena**	**11.26**	**9**	Pn	**Pn**	**18 56 03.1**	**+0.1**
PB08	**IPOC Station P**	**11.85**	**14**	Pn	**Pn**	**18 56 08.3**	**-3.2**
ITQB	**Itaqui**	**13.51**	**85**	Pn	**Pn**	**18 56 32.7**	**-1.1**
CPUP	**Villa Florida**	**14.03**	**71**	LR	LR	19 02 20.5	
	comp=Z,242nm,20.8s,baz=243,slow=39						
CPUP	**Villa Florida**	**14.03**	**71**	Pn	**Pn**	**18 56 40.5**	**-0.4**
PLTB	**Pedras Altas**	**15.77**	**95**	Pn	**Pn**	**18 57 04.8**	**+0.4**
LPAZ	**La Paz**	**15.80**	**14**	Pn	**Pn**	**18 57 06.7**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=195,slow=5.7,SNR=9.6						
LPAZ	**La Paz**	**15.80**	**14**	Pn	**Pn**	**18 57 06.2**	**+0.8**
ITAB	**Concordia**	**17.98**	**81**	Pn	**Pn**	**18 57 30.3**	**-2.0**
AQDB	**Aquidauana**	**18.51**	**57**	P	**P**	**18 57 37.0**	**-1.7**
SIV	**San Ignacio**	**18.63**	**35**	P	**P**	**18 57 39.7**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=228,slow=12,SNR=11						
MG05	**Puerto Natales**	**19.93**	**181**		**P**	**18 57 50.3**	**-3.7**
MG05				IAmb	IAmb	18 57 53.0	
	comp=Z,25nm,1.1s						
VILB	**Vilhena**	**21.67**	**33**	P	**P**	**18 58 11.7**	**-1.5**
VILB				IAmb	IAmb	18 58 46.1	
	comp=Z,18nm,1.0s						
ETMB	**Extrema**	**22.49**	**15**	P	**P**	**18 58 22.1**	**+0.3**
ETMB				IAmb	IAmb	18 58 24.4	
	comp=Z,12nm,1.0s						
SPB	**Sao Paulo**	**23.30**	**76**	P	**P**	**18 58 29.4**	**-1.0**
CZSB	**Cruzeiro do Su**	**23.88**	**359**	P	**P**	**18 58 36.8**	**+0.8**
CZSB				IAmb	IAmb	18 58 54.2	
	comp=Z,18nm,0.9s						
BDFB	**Brasilia**	**27.19**	**60**	P	**P**	**18 59 05.7**	**-0.7**
	comp=Z,9.0nm,0.8s,baz=226,slow=9.0,SNR=12						
BDFB				LR	LR	19 11 34.3	
	comp=Z,149nm,21.9s,baz=305,slow=40						
BDFB	**Brasilia**	**27.19**	**60**	P	**P**	**18 59 05.6**	**-0.7**
BDFB				IAmb	IAmb	18 59 07.7	
	comp=Z,9.7nm,0.7s						
HOPE	**Hope Point**	**33.91**	**142**	P	**P**	**19 00 04.0**	**-1.1**
ROSC	**El Rosal**	**36.42**	**356**	LR	LR	19 13 43.5	
	comp=Z,54nm,20.0s,baz=184,slow=34						
VNA3	**Neumayer Olymp**	**51.49**	**158**	P	**P**	**19 02 28.9**	**+1.4**
VNA1	**Neumayer--Stat**	**51.80**	**158**	P	**P**	**19 02 31.6**	**+1.8**
VNA2	**Neumayer--Watz**	**52.14**	**158**	P	**P**	**19 02 34.1**	**+1.8**
	baz=285,slow=8.8						
SNAA	**Sanae**	**53.72**	**158**	P	**P**	**19 02 45.5**	**+1.4**
SNAA	**Sanae**	**53.72**	**158**	P	**P**	**19 02 45.1**	**+1.0**
TXAR	**Lajitas Array**	**67.72**	**330**	P	**P**	**19 04 22.0**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=161,slow=9.6,SNR=2.1						
LIC	**Lamto**	**74.15**	**72**	*e*P	**P**	**19 04 59.7**	**+0.4**
	comp=Z,20nm,1.0s						
TIC	**Toumodi**	**74.40**	**72**	*e*P	**P**	**19 05 01.3**	**+0.5**
KIC	**Kosan Boka**	**74.46**	**72**	*e*P	**P**	**19 05 01.5**	**+0.3**
	comp=Z,12nm,0.9s						
DBIC	**Dimbokro**	**74.55**	**72**	P	**P**	**19 05 01.8**	**+0.2**
	comp=Z,5.7nm,0.8s,baz=253,slow=6.2,SNR=7.6						
DBIC				LR	LR	19 34 26.1	
	comp=Z,50nm,20.9s,baz=178,slow=33						
DBIC	**Dimbokro**	**74.55**	**72**	IAmb	IAmb	19 05 03.1	
	comp=Z,6.8nm,0.9s						
MAW	**Mawson**	**75.38**	**164**	LR	LR	19 39 31.4	
	comp=Z,62nm,18.0s,baz=236,slow=37						
KOWA	**Kowa**	**79.78**	**66**	P	**P**	**19 05 31.4**	**+0.4**
KOWA				IAmb	IAmb	19 05 32.6	
	comp=Z,4.3nm,0.7s						
BOSA	**Boshof**	**81.20**	**118**	P	**P**	**19 05 39.9**	**+1.1**
	comp=Z,4.3nm,0.8s,baz=210,slow=3.0,SNR=6.4						
BOSA				LR	LR	19 38 03.9	
	comp=Z,51nm,19.4s,baz=190,slow=33						
NVAR	**Mina Array Bea**	**81.98**	**325**	P	**P**	**19 05 44.9**	**+2.4**
	comp=Z,0.5nm,0.5s,baz=154,slow=5.9,SNR=4.8						
TORD	**Torodi Ar. Bea**	**83.52**	**70**	P	**P**	**19 05 51.3**	**+0.4**
	comp=Z,5.1nm,0.8s,baz=260,slow=4.8,SNR=27						
TORD	**Torodi Ar. Bea**	**83.52**	**70**	P	**P**	**19 05 51.2**	**+0.4**
TORD				IAmb	IAmb	19 05 52.3	
	comp=Z,5.6nm,0.8s						
YKA	**Yellowknife Ar**	**99.89**	**341**	P	**Pdif**	**19 07 07.2**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=147,slow=4.5,SNR=3.0						
WRA	**Warramunga Arr**	**122.69**	**210**	PKP	**PKiKP**	**19 12 19.7**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=157,slow=1.8,SNR=1.7						
ZALV	**Zalesovo Beam**	**152.33**	**30**	PKPbc	**PKiKP**	**19 13 19.0**	**+0.8**
	comp=Z,5.0nm,0.5s,baz=308,slow=3.3,SNR=24						
ZALV				PKPab	**PKPab**	**19 13 28.0**	**+0.1**
	comp=Z,5.4nm,0.6s,baz=303,slow=3.2,SNR=11						
ZALV	**Zalesovo Beam**	**152.33**	**30**		**PKiKP**	**19 13 18.7**	**+0.5**

IDC 26 19:07:23.3±75.0**, 22°.94S**×**178°.16E, h0**^{km}**, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.7**/20**, mbtmp3.8**/3**, Error ellipse: s-maj=1331.0km s-min=159.7km az=85.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**33.53**	**247**	P	P	19 14 05.3	+0.4
	0.4nm,0.3s,baz=93,slow=12,SNR=4.0						
ASAR	**Alice Springs**	**40.53**	**260**	P	P	19 15 04.0	-0.6
	0.8nm,0.9s,baz=96,slow=9.3,SNR=7.3						
WRA	**Warramunga Arr**	**40.79**	**266**	P	P	19 15 06.6	-0.1
	0.7nm,0.6s,baz=102,slow=8.3,SNR=13						

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*IDC **26** 19:17:25.2±5.4, 12°.83S×168°.90E, h605^{km}±85^{km}, mb3.2/8, mb1 3.4/9, mb1mx3.2/28, mbtmp4.1/9, Error ellipse: s-maj=79.5km s-min=26.7km az=159.0*

*NEIC **26** 19:17:26.5±1.2, 12°.9S±0°.1×169°.0E±0°.1, h624^{km}±11^{km}, mb4.5/29, Error ellipse: s-maj=23.4km s-min=10.2km az=135.0*

ISC 26 19:17:26.3±0.7**, 12°.98S**±0°.09×**168°.9E**±0°.1**, h625**^{km}**, n48, σ0^{s}95**/49**, mb4.4**/22**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**2.93**	**213**	P	**P**	**19 18 45.6**	**-1.6**
SANVU				S	**S**	**19 19 48.7**	**-4.4**
DZM	**Mont Dzumac**	**9.33**	**194**	P	**P**	**19 19 40.5**	**+1.4**
	0.3nm,0.3s,baz=81,slow=13,SNR=2.3						
ONTNC	**Ouen Toro**	**9.55**	**194**	P	**P**	**19 19 41.7**	**+0.4**
OUENC	**Ouen Island, N**	**9.58**	**191**	P	**P**	**19 19 42.8**	**+1.3**
PINNC	**Pines Island,**	**9.67**	**188**	P	**P**	**19 19 43.1**	**+0.8**
EIDS	**Eidsvold**	**20.80**	**231**	P	**P**	**19 21 25.4**	**-0.7**
EIDS				IAmb	IAmb	19 21 34.1	
	comp=Z,7.9nm,1.1s						
CTAO	**Charters Tower**	**22.78**	**249**	P	**P**	**19 21 44.3**	**+0.5**
CTAO				IAmb	IAmb	19 22 04.9	
	comp=Z,11nm,1.4s						
COEN	**Coen**	**25.00**	**265**	P	**P**	**19 22 03.6**	**+0.1**
COEN				IAmb	IAmb	19 22 09.1	
	comp=Z,28nm,1.4s						
HIZ	**Hauiti**	**25.98**	**169**	P	**P**	**19 22 12.7**	**+1.0**
BKZ	**Black Stump Fm**	**26.94**	**167**	P	**P**	**19 22 20.0**	**-0.2**
BKZ				IAmb	IAmb	19 22 20.3	
	comp=Z,10nm,0.4s						
BHW	**Baring Head**	**28.80**	**171**	P	**P**	**19 22 35.5**	**-0.7**
STKA	**Stephens Creek**	**31.30**	**229**	P	**P**	**19 22 59.1**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=58,slow=9.3,SNR=7.3						
STKA	**Stephens Creek**	**31.30**	**229**	P	**P**	**19 22 58.3**	**+0.5**
WB0	**Warramunga Arr**	**33.71**	**254**	P	**P**	**19 23 18.3**	**0.0**
WB0				IAmb	IAmb	19 23 18.8	
	comp=Z,9.8nm,0.6s						
WB2	**Warramunga Arr**	**33.77**	**254**	P	**P**	**19 23 18.5**	**-0.2**
WB2				IAmb	IAmb	19 23 19.4	
	comp=Z,7.7nm,0.8s						
WRA	**Warramunga Arr**	**33.78**	**254**	P	**P**	**19 23 18.8**	**-0.1**
	comp=Z,4.0nm,0.5s,baz=84,slow=8.7,SNR=45						
WRA	**Warramunga Arr**	**33.78**	**254**	P	**P**	**19 23 17.9**	**-0.9**
AS31	**Alice Springs**	**34.76**	**247**	P	**P**	**19 23 27.1**	**+0.2**
ASAR	**Alice Springs**	**34.76**	**247**	P	**P**	**19 23 27.1**	**+0.2**
	comp=Z,5.4nm,0.5s,baz=75,slow=9.8,SNR=141						
ASAR	**Alice Springs**	**34.76**	**247**	P	**P**	**19 23 26.6**	**-0.4**
BBOO	**Buckleboo**	**35.87**	**231**	P	**P**	**19 23 36.6**	**+0.7**
BBOO				IAmb	IAmb	19 23 53.0	
	comp=Z,20nm,1.4s						
MTN	**Manton Dam**	**36.76**	**266**	P	**P**	**19 23 43.9**	**+0.5**
KNRA	**Kununurra**	**38.91**	**261**	P	**P**	**19 24 00.9**	**+0.2**
FORT	**Forrest**	**41.52**	**238**	P	**P**	**19 24 21.7**	**+0.4**
FORT				IAmb	IAmb	19 24 28.1	
	comp=Z,23nm,1.1s						
PSA00	**Pilbara Seismi**	**47.42**	**253**	P	**P**	**19 25 06.3**	**-0.2**
PSA00	**Pilbara Seismi**	**47.42**	**253**	P	**P**	**19 25 06.8**	**+0.3**
PSA00				IAmb	IAmb	19 25 18.3	
	comp=Z,15nm,1.1s						
BKB	**Balikpapan**	**52.75**	**278**	P	**P**	**19 25 44.4**	**-0.9**
JMM	**Marumori**	**57.02**	**334**	P	**P**	**19 26 15.2**	**+0.7**
JMM				IAmb	IAmb	19 26 20.8	
	comp=Z,69nm,1.4s						
MJAR	**Matsushiro Arr**	**57.11**	**331**	P	**P**	**19 26 15.1**	**-0.1**
MAJO	**Matsushiro**	**57.12**	**331**	P	**P**	**19 26 14.9**	**-0.3**
MAJO				IAmb	IAmb	19 26 20.7	
	comp=Z,21nm,1.5s						
JSD	**Sado**	**58.30**	**332**	P	**P**	**19 26 23.4**	**+0.3**
PEA0B	**Petropavlovsk-**	**66.52**	**353**	P	**P**	**19 27 16.0**	**+0.5**
UBPT	**Khong Chiam**	**68.72**	**292**	P	**P**	**19 27 30.3**	**+0.6**
UBPT				IAmb	IAmb	19 27 51.7	
	comp=Z,27nm,1.4s						
CMAR	**Chiang Mai Arr**	**75.68**	**293**	P	**P**	**19 28 11.2**	**+1.5**
	comp=Z,1.3nm,0.9s,baz=120,slow=3.9,SNR=11						

CMAR	Chiang Mai Arr	75.68	293	P	P	19 28 09.9	+0.2
CM31	Chiang Mai Arr	75.68	293	P	P	19 28 10.4	+0.7
SONM	Songino Array	82.03	323	P	P	19 28 43.1	+0.4
	comp=Z,0.5nm,0.7s,baz=138,slow=6.8,SNR=4.4						
SONM	Songino Array	82.03	323	P	P	19 28 42.4	-0.3
RND	Reindeer	82.80	18	P	P	19 28 46.2	+0.1
RND				IAmb	IAmb	19 28 47.0	
	comp=Z,18nm,1.4s						
CCB	Clear Creek Bu	84.04	17	P	P	19 28 52.3	+0.2
CCB				IAmb	IAmb	19 29 00.9	
	comp=Z,6.9nm,1.4s						
RIDG	Independent Ri	84.28	19	P	P	19 28 52.3	-1.1
IL31		84.40	17	P	P	19 28 53.3	-0.6
ILAR	Eielson Array	84.40	17	P	P	19 28 52.9	-1.1
	comp=Z,0.5nm,0.5s,baz=239,slow=5.0,SNR=10						
ILAR	Eielson Array	84.40	17	P	P	19 28 53.3	-0.6
YKA	Yellowknife Ar	95.29	27	P	P	19 29 44.3	-0.2
	comp=Z,0.1nm,0.4s,baz=259,slow=4.5,SNR=5.2						
MK31	Makanchi Array	97.02	316		P	19 29 53.2	+0.6
MK31				IAmb	IAmb	19 30 12.4	
	comp=Z,7.6nm,1.5s						
MKAR	Makanchi Array	97.02	316	P	P	19 29 53.1	+0.5
	comp=Z,0.4nm,0.6s,baz=93,slow=5.9,SNR=6.6						
MKAR	Makanchi Array	97.02	316	P	P	19 29 52.9	+0.2

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*NEIC **26** 19:24:48.5±1.9, 13°.62S±0°.08×169°.74E±0°.07, h10^{km}±1^{km}, mb4.6/12, Error ellipse: s-maj=17.9km s-min=3.0km az=321.0*

*IDC **26** 19:24:48.2±1.6, 13°.76S×169°.73E, h0^{km}, mb4.1/6, mb1 4.3/7, mb1mx4.0/27, mbtmp4.1/7, ML4.1/1, MS3.7/15, Ms1 3.7/15, ms1mx3.6/24, Error ellipse: s-maj=61.1km s-min=24.3km az=130.0*

*NOU **26** 19:25:09.0, 15°.07S×168°.82E, h0^{km}, mb4.3/9, Vanuatu Islands*

ISC 26 19:24:48.7±0.7, **13°.7S**±0°.1×**169°.71E**±0°.08, **h10**^{km}, **n44**, σ**1^{s}37**/36, **mb4.5**/12, **MS3.8**/12, **Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.02	233	Pn	Pn	19 25 34.9	-1.7
RTV	Rentapao	4.30	197	P	Pn	19 25 55.1	+0.9
KOUNC	Koumac, New Ca	8.60	216	P	Pn	19 26 53.0	-0.3
YATNC	Mamie plateau,	8.78	197	P	Pn	19 26 55.3	-0.6
DZM	Mont Dzumac	8.93	200	Pn	Pn	19 26 56.8	-1.2
	2.1nm,0.3s,baz=274,slow=15,SNR=21						
DZM				LR	LR	19 30 06.1	
	comp=Z,543nm,18.1s,baz=15,slow=36						
DZM	Mont Dzumac	8.93	200	*e*Pn	Pn	19 26 56.5	-1.5
	6.4nm,0.4s						
DZM				*e*LR	LR	19 29 04.3	
	comp=Z,727nm,24.6s						
DZM	Mont Dzumac	8.93	200	Pn	Pn	19 26 57.4	-0.6
DZM	Mont Dzumac	8.93	200	P	Pn	19 26 57.1	-0.9
MSVF	Nonsavu	9.00	118	Pn	Pn	19 27 01.8	+2.9
	0.2nm,0.3s,baz=279,slow=11,SNR=7.4						
MSVF				LR	LR	19 29 43.1	
	comp=Z,1µm,18.2s,baz=312,slow=33						
MSVF	Nonsavu	9.00	118		Pn	19 26 59.1	+0.3
OUENC	Ouen Island, N	9.14	197	Pn	Pn	19 26 58.2	-2.5
ONTNC	Ouen Toro	9.15	199	Pn	Pn	19 26 59.2	-1.7
ONTNC	Ouen Toro	9.15	199	P	Pn	19 27 00.9	0.0
PINNC	Pines Island,	9.17	193	Pn	Pn	19 27 00.5	-0.6
HNR	Honiara	10.44	293	LR	LR	19 31 04.0	
	comp=Z,236nm,21.6s,baz=130,slow=36						
FUNA	Funafuti	10.61	62	Pn	Pn	19 27 17.8	-3.0
EIDS	Eidsvold	21.05	234		P	19 29 33.1	+0.1
PMG	Port Moresby	22.49	278	LR	LR	19 37 40.4	
	comp=Z,152nm,19.7s,baz=23,slow=34						
CTAO	Charters Tower	23.33	251	P	P	19 29 57.6	+0.3
CTAO				IAmb	IAmb	19 30 07.9	
	comp=Z,25nm,1.4s						
ARMA	Armidale	23.59	222	P	P	19 29 59.5	-0.4
ARMA				IAmb	IAmb	19 30 04.3	
	comp=Z,24nm,1.3s						
BKZ	Black Stump Fm	26.11	168	P	P	19 30 21.4	-1.5
STKA	Stephens Creek	31.50	230	P	P	19 31 12.3	+1.4
	comp=Z,8.9nm,0.7s,baz=43,slow=8.5,SNR=19						
STKA				LR	LR	19 42 37.4	
	comp=Z,130nm,19.0s,baz=30,slow=34						
STKA	Stephens Creek	31.50	230	P	P	19 31 11.9	+1.0
WB0	Warramunga Arr	34.32	255	P	P	19 31 34.7	-1.1
WB0				IAmb	IAmb	19 31 42.3	
	comp=Z,4.5nm,0.9s						
WRA	Warramunga Arr	34.39	255	P	P	19 31 36.4	0.0
	comp=Z,1.2nm,0.8s,baz=86,slow=9.2,SNR=3.8						
AS31	Alice Springs	35.27	248	P	P	19 31 43.0	-1.0
ASAR	Alice Springs	35.27	248	P	P	19 31 44.0	0.0
	comp=Z,3.9nm,0.7s,baz=80,slow=8.6,SNR=40						
ASAR				LR	LR	19 44 39.3	
	comp=Z,190nm,21.0s,baz=82,slow=34						
ASAR	Alice Springs	35.27	248	P	P	19 31 42.6	-1.4
BBOO	Buckleboo	36.11	232	P	P	19 31 50.4	-0.7
FORT	Forrest	41.88	239	P	P	19 32 39.5	+0.1
FORT				IAmb	IAmb	19 32 46.9	
	comp=Z,16nm,0.8s						
PSA00	Pilbara Seismi	48.01	253	P	P	19 33 29.8	+1.4
PSA00				IAmb	IAmb	19 33 33.2	
	comp=Z,10nm,1.4s						
MORW	Morawa	51.87	244	P	P	19 33 57.1	-0.5
VNDA	Vanda	64.00	182	P	P	19 35 21.8	-0.2
VNDA				IAmb	IAmb	19 35 29.0	
	comp=Z,6.0nm,1.2s						
PETK	Petropavlovsk-	67.28	352	LR	LR	20 00 13.0	
	comp=Z,66nm,21.2s,baz=218,slow=32						
CMAR	Chiang Mai Arr	76.69	293	P	P	19 36 43.3	+2.7
	comp=Z,0.4nm,0.8s,baz=123,slow=4.5,SNR=3.2						
CMAR				LR	LR	20 07 49.1	
	comp=Z,12nm,21.7s,baz=15,slow=34						
CMAR	Chiang Mai Arr	76.69	293	P	P	19 36 40.0	-0.6
SONM	Songino Array	83.06	323	LR	LR	20 12 29.7	
	comp=Z,22nm,20.2s,baz=286,slow=34						
MAW	Mawson	83.76	202	LR	LR	20 09 20.8	
	comp=Z,53nm,21.1s,baz=234,slow=32						
NVAR	Mina Array Bea	84.78	49	LR	LR	20 07 41.0	
	comp=Z,52nm,19.5s,baz=272,slow=30						
ILAR	Eielson Array	84.79	17	P	P	19 37 23.6	+0.6
	comp=Z,1.1nm,0.9s,baz=242,slow=5.0,SNR=5.2						
ILAR				LR	LR	20 06 43.8	
	comp=Z,53nm,21.4s,baz=302,slow=30						
ILAR	Eielson Array	84.79	17	P	P	19 37 22.6	-0.4
PDAR	Pinedale Array	92.48	47	LR	LR	20 12 54.4	
	comp=Z,37nm,19.2s,baz=320,slow=31						
TXAR	Lajitas Array	93.69	61	LR	LR	20 15 58.8	
	comp=Z,24nm,18.0s,baz=0.0,slow=33						
YKA	Yellowknife Ar	95.51	27	P	P	19 38 15.8	+2.2
	comp=Z,0.4nm,0.8s,baz=255,slow=4.7,SNR=5.1						
YKA				LR	LR	20 15 26.9	
	comp=Z,25nm,21.3s,baz=0.0,slow=32						

MAN 26 19:33:01.0, 13°.37N×119°.90E, h24^{km}, mb4.0, ML2.8, MS2.4, Philippine Islands region

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*TUL **26** 19:40:15.7±1.2, 35°.59N±0°.02×97°.38W±0°.05, h6^{km}±6^{km}, ML3.0, mb_Lg2.8/36(NEIC), Error ellipse: s-maj=5.8km s-min=2.4km az=104.0*

*ANF **26** 19:40:15.4±0.3, 35°.61N×97°.38W, h6^{km}, ML3.2/7, Error ellipse: s-maj=3.4km s-min=2.7km az=141.0*

NEIC 26 19:40:15.7±1.2, **35°.61N**±0°.02×**97°.41W**±0°.05, **h9**^{km}±5^{km}, **Error ellipse: s-maj=5.8km s-min=2.7km az=98.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK009	Oakdale Elemen	0.03	204		Pg	19 40 17.1	-0.3
OK025	Westminster Rd	0.06	112		Pg	19 40 17.3	-0.5
OK025				Sg	Sg	19 40 18.5	-0.7
OK001	Jones High Sch	0.11	114	Pg	Pg	19 40 17.9	-0.3
OK001				Sg	Sg	19 40 19.7	-0.4
BCOK	Bluff Creek, N	0.17	288	Pg	Pg	19 40 19.9	+0.6
BCOK				Sg	Sg	19 40 23.2	+1.4
OKCFA	Oklahoma City	0.19	190		Pg	19 40 19.8	+0.1
OKCFA	Oklahoma City	0.19	190	P	Pg	19 40 19.8	+0.1
	baz=18						
OKCFA				S	Sg	19 40 22.8	+0.3
	baz=18						
OKCSW	OKLAHOMA CITY	0.20	187	Pg	Pg	19 40 19.8	0.0
OKCSW				Sg	Sg	19 40 23.0	+0.4
FNO	Franklin	0.35	179	Pg	Pg	19 40 22.5	0.0
OK031	S. Brethren Rd	0.58	53	Pg	Pg	19 40 26.8	-0.1
OK033	Mehan	0.58	41	Pg	Pg	19 40 27.0	0.0
OK030	Cody Creek RV	0.60	58		Pg	19 40 27.1	-0.3
W35A	Tecumseh	0.63	136	Pg	Pg	19 40 27.3	-0.5
OK034	N. Norfolk Rd.	0.70	54	Pg	Pg	19 40 28.5	-0.6
QUOK	Quay	0.80	45	Pg	Pg	19 40 30.7	-0.4
X34A	Smith Ranch, M	1.06	199		Pg	19 40 36.0	-0.1
BLOK	Blackwell	1.16	8	Pg	Pb	19 40 37.8	-0.2
GC02	Grant County #	1.30	344		Pn	19 40 40.1	+0.1
TUL1	Leonard	1.35	77		Pn	19 40 39.5	-1.2
TUL1	Leonard	1.35	77	P	Pn	19 40 39.6	-1.1
	baz=256						
TUL1				S	Sb	19 40 58.0	-0.6
	baz=256						
WMOK	Wichita Mounta	1.42	233	Pn	Pn	19 40 41.5	-0.2
WMOK	Wichita Mounta	1.42	233	P	Pn	19 40 41.4	-0.2
	baz=53						
WMOK				S	Sb	19 41 00.7	+0.2
	baz=53						
KAN14	Manchester OK	1.42	342		Pb	19 40 42.2	-0.2
T35A	Sooner Cattle	1.50	29		Pn	19 40 43.0	+0.2
T35B	Sooner Cattle	1.50	29	P	Pn	19 40 42.9	+0.1
	baz=208						
T35B				S	Sg	19 41 03.4	-0.5
	baz=208						
U32A	Winter Ranch,	1.50	301		Pb	19 40 43.6	-0.2
U32A	Winter Ranch,	1.50	301	P	Pb	19 40 43.6	-0.3
	baz=121						
U32A				S	Sg	19 41 04.6	+0.5
	baz=121						
OK035	E0210 Rd and N	1.52	317	Pn	Pn	19 40 43.5	+0.4
KAN01	Argonia South	1.57	350	IAmb_Lg		19 41 07.8	
	comp=Z,98nm,1.0s						
LOOK	Love County	1.62	173		Pn	19 40 44.9	+0.5
KAN12	Harper NE Stat	1.75	344		Pn	19 40 46.7	+0.4
X37A	Clayton	1.96	121		Pn	19 40 50.1	+1.0
X37A				IAmb_Lg		19 41 19.4	
	comp=Z,38nm,0.8s						
X37A	Clayton	1.96	121	P	Pn	19 40 50.0	+1.0
	baz=302						
X37A				Sb	Sb	19 41 16.9	+0.9
	baz=302						
U38A	Gravette	2.59	70	Pn	Pn	19 40 58.5	+0.7
HHAR	Hobbs	2.90	76		Pn	19 41 01.2	-0.8
W39A	Magazine	2.99	97		Pn	19 41 03.1	-0.2
W39A	Magazine	2.99	97	P	Pn	19 41 03.6	+0.3
	baz=279						
R32A	Long Quarter,	3.00	340		Pn	19 41 03.3	-0.1
MIAR	Mount Ida	3.32	107	Pn	Pn	19 41 08.1	+0.3
MIAR	Mount Ida	3.32	107	S	Sn	19 41 48.2	+0.9
	baz=290						
ABTX	Abilene, Hawle	3.50	213		Pn	19 41 10.0	-0.4
KSU1	Kansas State U	3.55	10	Pn	Pn	19 41 09.8	-1.2
KSU1				IAmb_Lg		19 42 11.2	
	comp=Z,21nm,1.0s						
CBKS	Cedar Bluff	3.70	331	IAmb_Lg		19 42 20.4	
	comp=Z,17nm,0.7s						
U40A	Yellville	3.77	77		Pn	19 41 13.4	-0.6
S39A	Bolivar	3.89	56		Pn	19 41 15.7	0.0
S39A				IAmb_Lg		19 42 27.6	
	comp=Z,11nm,0.8s						
X40A	Basin Creek Fa	3.92	105	Pn	Pn	19 41 16.9	+0.9
X40A				IAmb_Lg		19 42 24.6	
	comp=Z,32nm,0.8s						
WHAR	Wooly Hollow	4.19	93	Pn	Pn	19 41 20.0	+0.2
WHAR				IAmb_Lg		19 42 38.1	
	comp=Z,14nm,0.9s						
FCAR	Ozark Folk Cen	4.31	85		Pn	19 41 22.3	+0.9
FCAR				IAmb_Lg		19 42 37.7	
	comp=Z,12nm,0.8s						
MGMO	Mountain Grove	4.43	68	IAmb_Lg		19 42 40.5	
	comp=Z,16nm,0.8s						
435B	Jarrell	4.81	182	IAmb_Lg		19 42 53.2	
	comp=Z,28nm,0.8s						
R40A	Maddies Statio	4.91	55	Pn	Pn	19 41 29.0	-0.7
P38A	Dawn	5.06	36		Pn	19 41 33.5	+1.9
P38A				IAmb_Lg		19 43 07.0	
	comp=Z,12nm,0.8s						
LCAR	Lake Charles	5.10	83	IAmb_Lg		19 43 03.9	
	comp=Z,11nm,0.8s						
CCM	Cathedral Cave	5.52	62	IAmb_Lg		19 43 20.3	
	comp=Z,8.7nm,0.8s						
PBMO	Poplar Bluff	5.76	76	IAmb_Lg		19 43 21.1	
	comp=Z,17nm,0.8s						
P40A	Paris	5.79	46	IAmb_Lg		19 43 24.4	
	comp=Z,13nm,0.8s						
S44A	Carbondale	6.88	70	IAmb_Lg		19 43 54.5	
	comp=Z,12nm,0.8s						
SIUC	Southern Illin	6.91	70	IAmb_Lg		19 43 55.8	
	comp=Z,20nm,0.8s						
K38A	Parkersburg	7.90	26	IAmb_Lg		19 44 35.5	
	comp=Z,17nm,1.0s						

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*TUL **26** 19:41:17.8±0.9, 35°.59N±0°.01×97°.38W±0°.02, h6^{km}±4^{km}, ML3.2, mb_Lg3.0/36(NEIC), Error ellipse: s-maj=2.8km s-min=1.7km az=121.0*

NEIC 26 19:41:17.7±0.9, **35°.62N**±0°.02×**97°.42W**±0°.04, **h9**^{km}±6^{km}, **Error ellipse: s-maj=5.4km s-min=1.4km az=117.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK009	Oakdale Elemen	0.04	180	Pg	Pg	19 41 19.2	-0.3
OK009				Sg	Sg	19 41 20.2	-0.6
OK025	Westminster Rd	0.08	121	Pg	Pg	19 41 19.4	-0.5
OK025				Sg	Sg	19 41 20.6	-0.9
OK001	Jones High Sch	0.12	120	Pg	Pg	19 41 20.1	-0.5
BCOK	Bluff Creek, N	0.15	283	Pg	Pg	19 41 22.1	+1.0
BCOK				Sg	Sg	19 41 25.2	+1.8
OK005	Luther M Schoo	0.19	80	Pg	Pg	19 41 21.7	0.0
OK005				Sg	Sg	19 41 24.6	+0.2
OKCFA	Oklahoma City	0.21	186	Pg	Pg	19 41 21.9	-0.1
OKCFA				Sg	Sg	19 41 24.9	0.0
OKCSW	OKLAHOMA CITY	0.22	183	Pg	Pg	19 41 22.0	-0.2
OKCSW				Sg	Sg	19 41 25.1	0.0
FNO	Franklin	0.37	177	Pg	Pg	19 41 24.6	-0.3
FNO				Sg	Sg	19 41 29.7	0.0
OK033	Mehan	0.58	43	Pg	Pg	19 41 29.1	+0.2
OK031	S. Brethren Rd	0.58	55	Pg	Pg	19 41 28.8	-0.1
OK030	Cody Creek RV	0.60	59	Pg	Pg	19 41 29.2	-0.2
W35A	Tecumseh	0.65	136	Pg	Pg	19 41 29.4	-0.9
OK034	N. Norfolk Rd.	0.69	56	Pg	Pg	19 41 30.8	-0.3
QUOK	Quay	0.80	46	Pg	Pg	19 41 32.9	-0.2
X34A	Smith Ranch, M	1.07	198	Pg	Pg	19 41 38.1	-0.3
BLOK	Blackwell	1.15	8	Pg	Pb	19 41 39.7	-0.1
GC02	Grant County #	1.28	344	Pn	Pg	19 41 42.1	-0.1
TUL1	Leonard	1.36	77	Pn	Pn	19 41 41.6	-1.3
KAN13	South Haven SW	1.39	358		Pg	19 41 44.2	-0.2
KAN14	Manchester OK	1.40	342		Pb	19 41 44.3	+0.2
WMOK	Wichita Mounta	1.42	232	Pn	Pn	19 41 43.6	-0.1
T35A	Sooner Cattle	1.49	29	Pn	Pn	19 41 45.0	+0.4
U32A	Winter Ranch,	1.49	301	Pn	Pb	19 41 45.6	+0.1
OK035	E0210 Rd and N	1.50	317	Pn	Pb	19 41 45.7	-0.1
LOOK	Love County	1.64	173	Pn	Pn	19 41 47.0	+0.2
KAN12	Harper NE Stat	1.73	345	Pn	Pb	19 41 49.5	-0.3
X37A	Clayton	1.97	121	Pn	Pn	19 41 52.3	+1.0
X37A				IAmb_Lg		19 42 21.5	
	comp=Z,56nm,0.8s						
X40A	Basin Creek Fa	3.93	105	IAmb_Lg		19 43 25.4	
	comp=Z,38nm,0.9s						
WLAR	White Oak Lake	4.04	117	IAmb_Lg		19 43 30.8	
	comp=Z,32nm,0.9s						
WHAR	Wooly Hollow	4.21	93		Pn	19 42 22.1	+0.1
WHAR				IAmb_Lg		19 43 37.7	
	comp=Z,19nm,0.8s						
FCAR	Ozark Folk Cen	4.32	85		Pn	19 42 23.3	-0.3
435B	Jarrell	4.83	182		Pn	19 42 31.0	+0.4
435B				IAmb_Lg		19 43 52.2	
	comp=Z,28nm,0.7s						
R40A	Maddies Statio	4.91	56		Pn	19 42 32.2	+0.5
P38A	Dawn	5.05	37		Pn	19 42 34.7	+1.1
CCM	Cathedral Cave	5.52	62		Pn	19 42 40.7	+0.6
PBMO	Poplar Bluff	5.77	76	IAmb_Lg		19 44 21.5	
	comp=Z,23nm,0.7s						
P40A	Paris	5.78	46	IAmb_Lg		19 44 26.6	
	comp=Z,20nm,0.8s						
T25A	Trinidad	5.84	287	IAmb_Lg		19 44 27.5	
	comp=Z,19nm,0.9s						
FVM	French Village	6.09	65	IAmb_Lg		19 44 32.9	
	comp=Z,15nm,1.0s						
OGNE	Ogallala	6.43	327	IAmb_Lg		19 44 47.4	
	comp=Z,29nm,1.2s						
S44A	Carbondale	6.88	70	IAmb_Lg		19 44 57.0	
	comp=Z,15nm,0.8s						
SIUC	Southern Illin	6.92	70	IAmb_Lg		19 44 57.1	
	comp=Z,24nm,0.8s						
K31A	O'Neill	7.07	352	IAmb_Lg		19 45 20.5	
	comp=Z,24nm,0.7s						
SCIA	State Center	7.08	26	IAmb_Lg		19 45 17.5	
	comp=Z,21nm,0.7s						
T45A	Paducah	7.22	76	IAmb_Lg		19 45 08.2	
	comp=Z,23nm,0.8s						
N41A	Harden Midland	7.25	44	IAmb_Lg		19 45 09.9	
	comp=Z,27nm,0.8s						
HDIL	Hopedale	8.08	50	IAmb_Lg		19 45 40.2	
	comp=Z,18nm,0.8s						
PHWY	Pilot Hill	8.47	314	IAmb_Lg		19 46 09.0	
	comp=Z,9.6nm,1.3s						

IDC 26 19:43:14.7±2.1, **2°.36N**×**76°.37W**, **h0**^{km}, **mb3.4**/2, **mb1 3.5**/3, **mb1mx3.4**/25, **mbtmp3.4**/3, **ML2.1**/1, **MS2.9**/2, **Ms1 3.0**/2, **ms1mx2.7**/21, **Error ellipse: s-maj=53.1km s-min=24.6km az=135.0, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	3.20	40	Pn	Pn	19 44 07.4	+0.7
	4.2nm,0.3s,baz=100,slow=22,SNR=3.4						
ROSC				Pg	Pg	19 44 14.4	-1.7
	16nm,0.3s,baz=217,slow=20,SNR=12						
ROSC				Lg	Lg	19 44 55.5	
	17nm,0.3s,baz=52,slow=20,SNR=8.7						
NNA	Nana	14.26	182	LR	LR	19 53 34.7	
	comp=Z,30nm,19.5s,baz=8.0,slow=44						
LPAZ	La Paz	20.24	157	LR	LR	19 56 00.9	
	comp=Z,58nm,20.4s,baz=32,slow=38						
YKA	Yellowknife Ar	66.38	342	P	P	19 54 05.1	-0.2
	0.2nm,0.6s,baz=134,slow=6.1,SNR=4.6						
TORD	Torodi Ar. Bea	77.85	77	P	P	19 55 14.8	-0.1
	0.3nm,0.5s,baz=277,slow=6.8,SNR=4.1						

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*IDC **26** 19:52:28.4±1.0, 22°.05S×67°.10W, h178^{km}±14^{km}, mb3.3/2, mb1 3.5/6, mb1mx3.3/23, mbtmp3.9/6, MS3.1/1, Ms1 3.1/1, ms1mx2.5/13, Error ellipse: s-maj=22.8km s-min=14.0km az=108.0*

*NEIC **26** 19:52:28.4±1.7, 22°.10S±0°.07×67°.1W±0°.1, h176^{km}±8^{km}, mb4.2/6, ML4.2(GUC), Error ellipse: s-maj=14.8km s-min=10.6km az=90.0*

*GUC **26** 19:52:29.2±0.6, 22°.08S×67°.48W, h219^{km}±6^{km}, ML4.2*

*SCB **26** 19:52:32.1±1.6, 22°.10S×67°.21W, h159^{km}±11^{km}, ML4.1/8, Error ellipse: s-maj=5.7km s-min=3.5km az=0.0*

ISC 26 19:52:28.0±0.7, **22°.05S**±0°.04×**67°.15W**±0°.05, **h181**^{km}±7^{km}, **n71**, σ**1^{s}54**/97, **mb3.9**/4, **4C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	1.52	95	P	Pn	19 53 02.1	+1.4
MOCB	Mochara	1.61	61	P	Pn	19 53 03.0	+1.3
MOCB				S	Sn	19 53 27.5	-0.2
MOCB				IAML		19 53 29.4	
	1µm,0.4s						
LVC	Limon Verde	1.72	251	P	Pn	19 53 03.7	+1.0
	18nm,0.3s,baz=51,slow=7.4,SNR=123						
LVC				S	Sn	19 53 29.7	+0.3
	11nm,0.3s,baz=308,slow=21,SNR=4.1						
LVC	Limon Verde	1.72	251	⇓*i*P	Pn	19 53 03.6	+1.0
LVC				*i* S	Sn	19 53 30.1	+0.7
LVC	Limon Verde	1.72	251	P	Pn	19 53 03.6	+1.0
PB09	IPOC Station P	1.96	277	*e*P	Pn	19 53 06.2	+1.3
PB09				*i* S	Sn	19 53 34.2	+0.6
PB09	IPOC Station P	1.96	277	P	Pn	19 53 06.3	+1.3
PB09	IPOC Station P	1.96	277		Pn	19 53 06.1	+1.3
PB06	IPOC Station P	2.34	253	*e*P	Pn	19 53 09.4	+0.3
PB06				*i* S	Sn	19 53 40.1	-0.8
PB06				IAML		19 53 48.0	
	comp=N,118nm,0.3s						
PB06	IPOC Station P	2.34	253	P	Pn	19 53 09.5	+0.5
PB06				S	Sn	19 53 38.0	-2.9
PB06				IAML		19 53 49.2	
	comp=N,476nm,0.3s						
PB06	IPOC Station P	2.34	253		Pn	19 53 09.4	+0.3
PB01	IPOC Station P	2.40	294	⇓*i*P	Pn	19 53 10.3	+0.5
PB01				*i* S	Sn	19 53 41.8	-0.3
PB01				IAML		19 53 43.5	
	comp=N,1µm,0.4s						
PB01	IPOC Station P	2.40	294	P	Pn	19 53 10.2	+0.5
PB01				S	Sn	19 53 41.2	-0.9
PB01				IAML		19 53 43.5	
	comp=N,973nm,0.5s						
PB01	IPOC Station P	2.40	294		Pn	19 53 10.0	+0.3
PB03	IPOC Station P	2.42	270	⇑*e*P	Pn	19 53 10.3	+0.3
PB03				*i* S	Sn	19 53 41.9	-0.7
PB03				IAML		19 53 42.8	
	comp=N,295nm,0.1s						
PB03	IPOC Station P	2.42	270	P	Pn	19 53 10.2	+0.3
PB03				S	Sn	19 53 40.6	-2.0
PB03				IAML		19 53 43.4	
	comp=N,504nm,0.4s						
PB15	IPOC Station P	2.44	241	⇑*i*P	Pn	19 53 10.8	+0.6
PB15				*i* S	Sn	19 53 43.0	-0.1
PB15				IAML		19 53 47.2	
	comp=E,988nm,0.3s						
PB15	IPOC Station P	2.44	241	P	Pn	19 53 11.1	+0.9
PB15				S	Sn	19 53 40.4	-2.7
PB15				IAML		19 53 50.1	
	comp=E,952nm,0.3s						
PB15	IPOC Station P	2.44	241		Pn	19 53 10.8	+0.6
PB07	IPOC Station P	2.56	277	*e*P	Pn	19 53 12.3	+0.6
PB07				*i* S	Sn	19 53 44.1	-1.6
PB07				IAML		19 53 48.5	
	comp=E,409nm,0.3s						
PB07	IPOC Station P	2.56	277	P	Pn	19 53 12.1	+0.4
PB07	IPOC Station P	2.56	277		Pn	19 53 12.2	+0.5
PB02	IPOC Station P	2.66	285	⇑*i*P	Pn	19 53 13.3	+0.5
PB02				*i* S	Sn	19 53 46.0	-1.5
PB02				IAML		19 53 47.6	
	comp=N,957nm,0.3s						
PB02	IPOC Station P	2.66	285	P	Pn	19 53 13.1	+0.4
PB02				S	Sn	19 53 45.8	-1.7
PB02				IAML		19 53 47.5	
	comp=N,807nm,0.2s						
PB08	IPOC Station P	2.67	315	*e*P	Pn	19 53 15.2	+2.0
PB08				*i* S	Sn	19 53 49.5	+1.3
PB08				IAML		19 53 51.0	
	comp=N,417nm,0.7s						
PB08	IPOC Station P	2.67	315	P	Pn	19 53 15.2	+2.0
PB04	IPOC Station P	2.80	264	*e*P	Pn	19 53 14.5	+0.1
PB04				*i* S	Sn	19 53 48.3	-2.2
PB04				IAML		19 53 53.8	
	comp=N,201nm,0.3s						
PB04	IPOC Station P	2.80	264	P	Pn	19 53 15.0	+0.6
PB04				S	Sn	19 53 48.6	-2.0
PB04	IPOC Station P	2.80	264		Pn	19 53 14.2	-0.2
PB05	IPOC Station P	2.94	254	*e*P	Pn	19 53 16.1	0.0
PB05				*i* S	Sn	19 53 51.1	-2.4
PB05				IAML		19 54 00.5	
	comp=E,934nm,1.1s						
PB05	IPOC Station P	2.94	254	P	Pn	19 53 16.3	+0.2
TA01	Diego Aracena	3.19	297	*e*P	Pn	19 53 18.9	-0.1
TA01				*i* S	Sn	19 53 56.6	-2.3
TA01				IAML		19 53 58.4	
	comp=N,787nm,0.4s						
TA01	Diego Aracena	3.19	297		Pn	19 53 18.6	-0.4
PB11	IPOC Station P	3.27	314	*e*P	Pn	19 53 20.6	+0.4
PB11				*i* S	Sn	19 54 00.3	-0.6
PB11	IPOC Station P	3.27	314		Pn	19 53 20.6	+0.4
TA02	Huaiquique	3.30	302	IAML		19 54 04.1	
	comp=E,1µm,0.1s						
TA02	Huaiquique	3.30	302		Pn	19 53 20.1	-0.3
PB10	IPOC Station P	3.46	245	⇑*e*P	Pn	19 53 22.3	-0.1
PB10				*i* S	Sn	19 54 01.8	-3.1
PB10	IPOC Station P	3.46	245	P	Pn	19 53 23.0	+0.6
PB10				S	Sn	19 54 00.9	-4.0
PB10				IAML		19 54 02.9	
	comp=E,487nm,0.3s						
PB10	IPOC Station P	3.46	245		Pn	19 53 22.0	-0.4
PB14	IPOC Station P	3.94	229	Pn	Pn	19 53 28.1	-0.6
PB16	IPOC Station P	4.31	329	*e*P	Pn	19 53 35.4	+1.6
PB16				*i* S	Sn	19 54 24.8	-0.4
PB16	IPOC Station P	4.31	329	P	Pn	19 53 35.5	+1.8
PB16				S	Sn	19 54 23.3	-1.8
PB16				IAML		19 54 28.0	
	comp=E,104nm,0.5s						
PB16	IPOC Station P	4.31	329		Pn	19 53 35.4	+1.6
PB12	IPOC Station P	4.54	318	*e*P	Pn	19 53 35.3	-0.9

PB12				i S	Sn	19 54 26.8	-2.9
PB12	IPOC Station P	4.54	318		Pn	19 53 35.9	-0.3
AC02	Maricunga	5.09	200		Pn	19 53 43.5	-0.1
BBOE	La Paz, Chanca	5.27	351	P	Pn	19 53 48.8	+2.7
BBOD	La Paz, Gloria	5.56	345	P	Pn	19 53 52.2	+2.4
LPAZ	La Paz	5.81	351	P	Pn	19 53 55.0	+1.9
	comp=E,2.3nm,0.3s,baz=155,slow=5.7,SNR=36						
LPAZ				S	Sn	19 55 01.1	+0.9
	comp=E,0.6nm,0.3s,baz=2.1,slow=17,SNR=5.0						
LPAZ	La Paz	5.81	351	P	Pn	19 53 55.1	+1.9
LPAZ	La Paz	5.81	351		Pn	19 53 54.6	+1.4
GO03	Copiap	6.19	206	Pn	Pn	19 53 56.0	-1.5
SIV	San Ignacio	8.33	45	P	Pn	19 54 24.3	-1.4
	comp=E,6.5nm,0.3s,baz=245,slow=10.0,SNR=22						
SIV				S	Sn	19 55 51.8	-7.3
	comp=E,1.8nm,0.3s,baz=305,slow=21,SNR=9.1						
CO03	El Pedregal	9.31	199	Pn	Pn	19 54 36.1	-2.4
CPUP	Villa Florida	9.92	117	P	Pn	19 54 47.7	+1.2
	comp=E,0.4nm,0.3s,baz=284,slow=10,SNR=4.8						
CPUP	Villa Florida	9.92	117		Pn	19 54 46.1	-0.4
PTLB	Pontes e Lacer	10.03	50	Pn	Pn	19 54 46.0	-2.0
VILB	Vilhena	11.21	37		Pn	19 55 03.4	0.0
PLCA	Paso Flores	18.84	188	P	P	19 56 35.0	+0.7
	comp=E,0.2nm,0.3s,baz=0.8,slow=12,SNR=6.4						
PLCA	Paso Flores	18.84	188	P	P	19 56 35.0	+0.7
PLCA				IAmb	IAmb	19 56 35.8	
	comp=Z,5.7nm,0.8s						
LL04	Puerto Octay	19.32	192	P	P	19 56 39.3	0.0
LL04				IAmb	IAmb	19 56 40.3	
	comp=Z,9.2nm,0.7s						
CMIG	Matias Romero	47.45	323	LR	LR	20 21 55.7	
	comp=Z,21nm,20.7s,baz=44,slow=37						
SNAA	Sanae	61.22	161	P	P	20 02 24.0	+0.6
SNAA				IAmb	IAmb	20 02 24.1	
	comp=Z,6.6nm,1.4s						
TXAR	Lajitas Array	62.03	324	P	P	20 02 30.2	+0.8
TX31	Lajitas Ar. Si	62.03	324	P	P	20 02 30.3	+0.9
QSPA	South Pole Qui	68.14	180	P	P	20 03 09.3	+1.0
QSPA				IAmb	IAmb	20 03 18.9	
	comp=Z,5.3nm,1.4s						
TORD	Torodi Ar. Bea	76.01	69	P	P	20 03 55.7	0.0
	comp=Z,0.8nm,0.5s,baz=257,slow=5.3,SNR=8.5						
TORD	Torodi Ar. Bea	76.01	69	P	P	20 03 55.5	-0.2
YKA	Yellowknife Ar	92.26	340	P	P	20 05 17.0	+0.2
	comp=Z,0.1nm,0.3s,baz=116,slow=4.5,SNR=1.1						
MKAR	Makanchi Array	145.09	38	PKPbc	PKPdf	20 11 45.0	+1.2
	comp=Z,1.2nm,1.1s,baz=335,slow=5.4,SNR=2.0						

MAN 26 20:02:36.5, 15°.56N×119°.87E, h40^{km}, mb4.1, ML2.9, MS2.6, Luzon

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*IDC **26** 20:17:60.0±1.9, 2°.59N×96°.19E, h0^{km}, mb3.7/5, mb1 3.7/6, mb1mx3.5/33, mbtmp3.6/6, ML2.8/1, Error ellipse: s-maj=60.6km s-min=22.5km az=58.0*

ISC 26 20:18:06.6±1.5, **2°.9N**±0°.2×**96°.7E**±0°.2, **h33^{km}, n9, σ0^{s}.37**/6, **mb3.6**/5, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	2.22	92	Pn	Pb	20 18 46.2	-0.1
	1.5nm,0.3s,baz=285,slow=12,SNR=6.8						
H08S2	Diego Garcia H	26.31	246	T	T	20 50 07.1	
	baz=68,slow=76,SNR=5.0						
H08S3	Diego Garcia H	26.31	247	T	T	20 50 07.5	
	baz=68,slow=76,SNR=3.4						
H08S1	Diego Carcia H	26.33	246	T	T	20 50 07.8	
	baz=68,slow=76,SNR=4.7						
WRA	Warramunga Arr	43.35	123	P	P	20 26 06.0	-0.1
	0.4nm,0.4s,baz=302,slow=8.9,SNR=7.1						
ASAR	Alice Springs	44.80	128	P	P	20 26 17.5	-0.2
	0.5nm,0.7s,baz=299,slow=7.7,SNR=11						
MKAR	Makanchi Array	45.52	346	P	P	20 26 22.6	-0.4
	0.5nm,0.6s,baz=164,slow=8.1,SNR=7.7						
SONM	Songino Array	45.58	9	P	P	20 26 24.0	+0.4
	0.3nm,0.4s,baz=180,slow=10,SNR=3.6						
STKA	Stephens Creek	54.84	133	P	P	20 27 34.2	+0.2
	1.3nm,0.7s,baz=315,slow=11,SNR=3.6						

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*TIF **26** 20:24:15.0, 42°.93N×45°.14E, h1^{km}±1^{km}*
*NORS **26** 20:24:49.3±0.0, 42°.78N×45°.14E, h2^{km}, MPVA3.7*
*MOS **26** 20:24:50.7±0.0, 42°.75N×45°.10E, h17^{km}, MPVA3.8*
*DRS **26** 20:24:52.6±0.0, 42°.77N×45°.08E, h16^{km}*

ISC 26 20:24:52.8±1.0, **42°.83N**±0°.02×**45°.09E**±0°.01, **h10^{km}**±8^{km}, **n114, σ1^{s}.50**/208, **4C, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMGR	Komgaron	0.28	324	ePG	Pg	20 24 57.4	-1.1
KMGR				eS	Sg	20 25 03.4	+1.1
VLKR	Vladikavkaz	0.37	305	ePG	Pb	20 25 01.1	-0.5
VLKR				eS	Sb	20 25 08.1	+0.6
VLKR	Vladikavkaz	0.37	305	ePg	Pg	20 25 00.3	+0.1
VLKR				eSg	Sb	20 25 06.7	-0.8
PNSH	Pansheti	0.40	241	P	Pg	20 25 00.3	-0.5
PNSH				S	Sb	20 25 06.9	-1.5
PNSH	Pansheti	0.40	241	PG	Pg	20 25 00.3	-0.5
PNSH				S	Sb	20 25 06.9	-1.5
MTEO	Meteo	0.44	250	P	Pg	20 25 01.1	-0.4
MTEO				S	Sb	20 25 09.6	-0.2
GUDG	Gudauri	0.58	231	P	Pn	20 25 06.1	-1.3
GUDG				S	Sn	20 25 16.8	-0.4
GUDG	Gudauri	0.58	231	PG	Pn	20 25 06.1	-1.3
GUDG				S	Sn	20 25 16.8	-0.4
LACR	Lac	0.59	270	⇑iPG	Pb	20 25 03.9	-1.3
LACR				eS	Sb	20 25 13.4	-0.3
LACR	Lac	0.59	270	i Pg	Pg	20 25 03.7	-0.4
LACR				eSg	Sb	20 25 13.2	-0.5
GROC	Groznyy	0.64	54	⇑iPG	Pg	20 25 04.5	-0.6
GROC				e		20 25 14.6	
GROC				pmax	pmax		
	comp=Z,164nm,0.4s						
GROC				smax	smax		
	comp=N,533nm,1.0s						
GROC				smax	smax		
	comp=N,727nm,0.8s						
GROC				smax	smax		
	comp=E,449nm,0.5s						
GROC	Groznyy	0.64	54	i Pg	Pg	20 25 04.6	-0.6
GROC				eSg	Sb	20 25 15.8	+0.8
BTKR	Batakoyurt	0.68	323	ePG	Pn	20 25 07.6	-0.9
BTKR	Batakoyurt	0.68	323	ePg	Pn	20 25 07.4	-1.1
BTKR				eSg	Sn	20 25 18.1	-1.1
ARNR	Ardon	0.69	301	ePG	Pn	20 25 07.1	-1.6
ARNR				eS	Sn	20 25 20.2	+0.7
ARNR	Ardon	0.69	301	ePg	Pn	20 25 07.0	-1.7
ARNR				eSg	Sn	20 25 18.9	-0.6
DVE	Vedeno	0.77	80	ePG	Pg	20 25 06.1	-1.5
DVE				eS	Sb	20 25 18.6	-0.3
DVE	Vedeno	0.77	80	ePg	Pg	20 25 06.1	-1.5
DVE				eSg	Sb	20 25 18.6	-0.3
KORR	Kora	0.80	289	ePG	Pn	20 25 10.3	+0.1
KORR				eS	Sn	20 25 25.5	+3.4
KORR	Kora	0.80	289	ePg	Pn	20 25 09.2	-0.9
KORR				eSg	Sn	20 25 22.5	+0.4
BTLR	Botlikh	0.85	101	ePG	Pb	20 25 08.1	-1.6
BTLR				eS	Sb	20 25 20.5	-0.7
BTLR	Botlikh	0.85	101	ePg	Pb	20 25 08.1	-1.6
BTLR				eSg	Sb	20 25 20.6	-0.7
ZEI	Tsey	0.88	268	ePG	Pn	20 25 10.0	-1.5
ZEI				eS	Sn	20 25 25.2	+0.8
ZEI	Tsey	0.88	268	ePg	Pg	20 25 08.5	-1.3
ZEI				eSg	Sn	20 25 21.6	-2.8
STDR	Stavd-Durt	0.93	306	ePG	Pn	20 25 12.2	+0.3
STDR				eS	Sn	20 25 28.2	+2.9
STDR	Stavd-Durt	0.93	306	ePg	Pn	20 25 11.8	-0.2
STDR				eSg	Sn	20 25 27.9	+2.5
TRKR	Terskaya	0.93	344	ePG	Pn	20 25 11.8	-0.2
TRKR				eS	Sn	20 25 26.8	+1.4
TRKR	Terskaya	0.93	344	ePg	Pn	20 25 11.4	-0.6
TRKR				eSg	Sn	20 25 26.2	+0.9
LSNR	Lesken	1.03	296	ePG	Pn	20 25 13.4	0.0
LSNR				eS	Sn	20 25 31.6	+3.6
LSNR	Lesken	1.03	296	ePg	Pn	20 25 13.3	-0.1
LSNR				eSg	Sn	20 25 31.6	+3.6
SEAG	Tbilisi Sea	1.09	191	P	Pg	20 25 14.5	+0.8
SEAG	Tbilisi Sea	1.09	191	PG	Pg	20 25 14.5	+0.8
PRTR	Priterechnaya	1.09	328	ePG	Pg	20 25 13.9	+0.1
PRTR				eS	Sn	20 25 32.7	+3.2
PRTR	Priterechnaya	1.09	328	ePg	Pg	20 25 13.7	-0.2
PRTR				eSg	Sn	20 25 32.6	+3.2
DIGR	Digorskoe uzhe	1.11	274	ePG	Pg	20 25 13.5	-0.7
DIGR				eS	Sn	20 25 30.3	+0.1
DIGR	Digorskoe uzhe	1.11	274	ePg	Pb	20 25 13.1	-1.2
DIGR				eSg	Sn	20 25 29.3	-0.9
DLMR	Dylym	1.15	78	ePG	Pb	20 25 14.2	-0.7
DLMR				i S	Sg	20 25 31.9	+1.9
DLMR	Dylym	1.15	78	ePg	Pb	20 25 14.2	-0.7
DLMR				i Sg	Sg	20 25 31.9	+1.9
BTNK	Botanikuri	1.17	191	P	Pg	20 25 14.0	-1.2
BTNK				S	Sg	20 25 32.1	+1.8
BTNK	Botanikuri	1.17	191	PG	Pg	20 25 14.0	-1.2
BTNK				S	Sg	20 25 32.2	+1.8
XNZR	Khunzakh	1.22	103	ePG	Pn	20 25 14.5	-1.7
XNZR				eS	Sg	20 25 32.8	+0.6
XNZR	Khunzakh	1.22	103	ePg	Pn	20 25 14.5	-1.7
XNZR				eSg	Sg	20 25 32.8	+0.6
ONI	Oni	1.23	259	P	Pg	20 25 15.6	-0.9
ONI	Oni	1.23	259	PG	Pg	20 25 15.6	-0.9
UNCR	Uncukul	1.26	95	ePG	Pn	20 25 15.1	-1.4
UNCR				eS	Sg	20 25 33.3	0.0
UNCR				pmax	pmax		
	comp=Z,114nm,0.4s						
UNCR				smax	smax		
	comp=E,616nm,0.5s						
UNCR				smax	smax		
	comp=N,649nm,0.5s						
UNCR				smax	smax		
	comp=N,574nm,0.5s						
UNCR	Uncukul	1.26	95	ePg	Pn	20 25 15.2	-1.4
UNCR				eSg	Sg	20 25 33.4	0.0
NCK	Nalchik	1.28	302	ePG	Pg	20 25 16.9	-0.5
NCK				eS	Sg	20 25 38.1	+4.1
NCK	Nalchik	1.28	302	ePg	Pg	20 25 16.9	-0.5
NCK				eSg	Sg	20 25 38.1	+4.1
DBC	Dubki	1.29	81	ePG	Pn	20 25 15.9	-1.1
DBC				eS	Sg	20 25 34.6	+0.3
DBC	Dubki	1.29	81	i Pg	Pn	20 25 15.8	-1.2
DBC				eSg	Sg	20 25 34.6	+0.3
LGD	Lagodekhi	1.31	139	P	Pb	20 25 16.7	-0.8
LGD	Lagodekhi	1.31	139	PG	Pg	20 25 21.3	+3.4
KRNR	Karanay	1.33	90	i PG	Pn	20 25 16.7	-0.9
KRNR				eS	Sg	20 25 36.1	+0.3
KRNR	Karanay	1.33	90	i Pg	Pn	20 25 16.7	-0.9
KRNR				eSg	Sg	20 25 36.1	+0.3
DGRG	David-gareji	1.40	171	P	Pg	20 25 20.0	+0.4
DGRG	David-gareji	1.40	171	PG	Pg	20 25 20.0	+0.4
ARKR	Arakani	1.42	99	ePG	Pn	20 25 16.7	-2.1
ARKR				eS	Sg	20 25 39.1	+0.6
ARKR	Arakani	1.42	99	ePg	Pn	20 25 16.7	-2.1
ARKR				eSg	Sg	20 25 39.1	+0.6
GNBR	Gunib	1.45	107	ePG	Pb	20 25 19.0	-0.9
GNBR				eS	Sg	20 25 39.7	+0.3
GNBR	Gunib	1.45	107	ePg	Pb	20 25 19.0	-0.9
GNBR				eSg	Sg	20 25 39.7	+0.3
BUJR	Buynaksk	1.48	90	ePG	Pb	20 25 19.9	-0.6
BUJR				i S	Sg	20 25 42.9	+2.4
BUJR				pmax	pmax		
	comp=Z,105nm,0.5s						
BUJR				smax	smax		
	comp=E,445nm,0.5s						
BUJR	Buynaksk	1.48	90	ePg	Pb	20 25 19.9	-0.6
BUJR				eSg	Sg	20 25 42.4	+1.9
TRLG	Trialeti	1.49	210	P	Pg	20 25 20.8	-0.5
TRLG				S	Sg	20 25 44.2	+3.6
TRLG	Trialeti	1.49	210	PG	Pg	20 25 20.8	-0.5
TRLG				S	Sg	20 25 44.2	+3.6
BRNG	Burnasheti	1.53	218	P	Pg	20 25 21.9	-0.2
BRNG				S	Sg	20 25 45.1	+3.1
KZRT	Kazreti	1.53	200	PG	Pg	20 25 22.4	+0.2
KBTC	Kuba-Taba	1.57	309	ePG	Pb	20 25 20.7	-1.4
KBTC				eS	Sg	20 25 45.4	+1.9
KBTC	Kuba-Taba	1.57	309	ePg	Pb	20 25 20.7	-1.4
KBTC				eSg	Sg	20 25 45.4	+1.9
DDFL	Dedoflistskaro	1.58	151	PN	Pg	20 25 25.6	+2.5
TKB	Tkibuli	1.62	254	P	Pg	20 25 22.9	-1.0
TKB				S	Sg	20 25 49.0	+4.0
TKB	Tkibuli	1.62	254	PN	Pg	20 25 22.9	-1.0
TKB				S	Sg	20 25 49.0	+4.0
KMKR	Kumukh	1.64	115	ePN	Pn	20 25 21.5	-0.4
KMKR				eS	Sg	20 25 44.8	-0.8
KMKR	Kumukh	1.64	115	ePg	Pn	20 25 21.5	-0.4
KMKR				eSg	Sg	20 25 44.8	-0.8
DMNI	Dmanisi	1.64	204	P	Pg	20 25 22.9	-1.4
DMNI				S	Sg	20 25 47.1	+1.5
DMNI	Dmanisi	1.64	204	PN	Pg	20 25 22.9	-1.4
DMNI				S	Sg	20 25 47.1	+1.5
ZKTA	Zakatala	1.65	136	PN	Pb	20 25 22.6	-0.7
MAK	Makhachkala	1.78	85	ePN	Pb	20 25 24.3	-1.2
MAK				eS	Sg	20 25 50.5	+0.6
MAK	Makhachkala	1.78	85	ePg	Pg	20 25 27.4	+0.6
MAK				eSg	Sg	20 25 51.6	+1.7
NEY	Neytrino	1.79	284	ePN	Pb	20 25 25.3	-0.5
NEY				eS	Sg	20 25 51.3	+1.0
NEY	Neytrino	1.79	284	ePg	Pn	20 25 23.4	-0.6
NEY				eSg	Sg	20 25 49.6	-0.6
KANR	Karaman	1.79	77	ePN	Pb	20 25 24.2	-1.6
KANR				eS	Sb	20 25 48.3	0.0
KANR	Karaman	1.79	77	ePg	Pb	20 25 24.2	-1.6
KANR				eSg	Sb	20 25 48.3	0.0
KBZ	Khabaz	1.84	300	ePN	Pn	20 25 23.4	-1.0
KBZ				eS	Sg	20 25 50.3	-1.5
KBZ	Khabaz	1.84	300	ePg	Pn	20 25 23.4	-1.0
KBZ				eSg	Sg	20 25 50.3	-1.5
AKH	Akhalkalaki	1.85	221	P	Pb	20 25 25.9	-1.0
AKH				S	Sg	20 25 53.5	+1.1
AKH	Akhalkalaki	1.85	221	PN	Pb	20 25 25.9	-1.0
AKH				S	Sg	20 25 53.5	+1.1
PYA1	Pyatigorsk	1.91	311	ePN	Pn	20 25 23.9	-1.5
PYA1	Pyatigorsk	1.91	311	ePg	Pn	20 25 23.9	-1.5
PYA1				eSg	Sb	20 25 50.0	-1.6
BGD	Bogdanovka	1.92	216	P	Pg	20 25 28.1	-1.5
BGD				S	Sg	20 25 56.0	+1.5
BGD	Bogdanovka	1.92	216	PN	Pg	20 25 28.1	-1.5
BGD				S	Sg	20 25 56.0	+1.5
SGKR	Sergokala	1.93	100	ePN	Pb	20 25 26.9	-1.2
SGKR				i S	Sg	20 25 55.8	+1.0
SGKR				pmax	pmax		
	comp=Z,37nm,0.4s						
SGKR				smax	smax		
	comp=N,155nm,1.0s						
SGKR	Sergokala	1.93	100	ePg	Pg	20 25 29.0	-0.7
SGKR				eSg	Sg	20 25 55.1	+0.4
URKR	Urkarakh	1.99	109	ePN	Pb	20 25 27.9	-1.3
URKR				i S	Sg	20 25 56.8	0.0
URKR				pmax	pmax		
	comp=Z,26nm,0.4s						
URKR				smax	smax		
	comp=E,51nm,0.4s						
URKR	Urkarakh	1.99	109	ePg	Pb	20 25 28.0	-1.3
URKR				i Sg	Sg	20 25 56.3	-0.5
SHA1	Shidzhatmaz	2.00	298	⇑iPN	Pb	20 25 28.5	-0.9
SHA1				eS	Sg	20 25 57.6	+0.6
SHA1	Shidzhatmaz	2.00	298	ePg	Pb	20 25 27.4	-1.9
SHA1				eSg	Sb	20 25 53.9	-0.5
ABS	Abastumani	2.00	238	P	Pg	20 25 29.2	-2.0
ABS				S	Sg	20 25 57.3	+0.1
ABS	Abastumani	2.00	238	PN	Pg	20 25 29.2	-2.0
ABS				S	Sg	20 25 57.3	+0.1
BEYR	Belyy Ugol+	2.04	306	ePN	Pn	20 25 26.1	-1.1
BEYR	Belyy Ugol+	2.04	306	ePg	Pn	20 25 26.1	-1.1
BEYR				eSg	Sn	20 25 52.8	+0.1
KIV0	Kislovodsk Arr	2.08	304	ePg	Pn	20 25 26.8	-1.1
KIV0				eSg	Sb	20 25 55.2	-1.4
KIV	Kislovodsk	2.08	303	ePN	Pb	20 25 28.5	-2.2
KIV	Kislovodsk	2.08	303	ePg	Pb	20 25 28.6	-2.2
KIV				eSg	Sb	20 25 56.5	-0.3
SEKA	Sheki	2.25	135	PN	Pb	20 25 33.7	0.0
GANJ	Ganja	2.37	157	PN	Pb	20 25 34.3	-1.3
AKT	Akhty	2.38	124	ePN	Pb	20 25 33.3	-2.6
AKT				eS	Sb	20 26 05.8	+0.5
AKT	Akhty	2.38	124	ePn	Pb	20 25 33.3	-2.6
AKT				eSn	Sb	20 26 05.8	+0.5
KSMR	Kasumkent	2.57	118	ePN	Pb	20 25 36.5	-2.5
KSMR				eS	Sn	20 26 06.3	+0.4
KSMR	Kasumkent	2.57	118	ePn	Pb	20 25 36.5	-2.5
KSMR				eSn	Sn	20 26 06.3	+0.4
GOF	Gofitskoye	2.67	327	ePN	Pb	20 25 40.3	-0.4
GOF				eS	Sb	20 26 11.9	-1.8
GOF	Gofitskoye	2.67	327	ePn	Pb	20 25 40.4	-0.4
GOF				eSn	Sb	20 26 11.9	-1.8
GNI	Garni	2.69	186	PN	Pb	20 25 41.2	0.0
ARXR	Arkhyz	2.89	286	ePN	Pn	20 25 36.2	-2.8
ARXR				eS	Sb	20 26 17.4	-2.5
OBN	Obninsk	13.49	339	⇑eP	Pn	20 28 06.8	+2.7
OBN				eS	Sn	20 30 43.0	+9.0
OBN				pmax	pmax		
	comp=Z,10.0nm,0.3s						
OBN				MLR	MLR		
	comp=Z,59nm,7.0s						

IDC 26 20:32:56.6±8.8, **5°.23S×151°.68E, h75^{km}**±63^{km}, **mb3.1**/2, **mb1 3.4**/3, **mb1mx2.7**/39, **mbtmp3.5**/3, **ML1.5**/1, **MS2.4**/1, **Ms1 2.4**/1, **ms1mx2.2**/14, **Error ellipse: s-maj=116.0km s-min=55.9km az=125.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.11	227	P	Pn	20 34 24.9	+0.7
	0.7nm,0.3s,baz=60,slow=11,SNR=5.2						
PMG				S	Sn	20 35 34.4	+1.6
	0.8nm,0.3s,baz=121,slow=22,SNR=1.4						
PMG				LR	LR	20 36 30.3	
	comp=Z,32nm,18.7s,baz=336,slow=35						
WRA	Warramunga Arr	22.32	228	P	P	20 37 47.2	-1.1
	0.3nm,0.5s,baz=52,slow=11,SNR=4.6						
ASAR	Alice Springs	25.08	221	P	P	20 38 14.3	-0.1
	1.2nm,0.7s,baz=58,slow=8.8,SNR=11						
TORD	Torodi Ar. Bea	149.37	287	PKPbc	PKPbc	20 52 38.0	0.0
	0.1nm,0.4s,baz=86,slow=1.1,SNR=1.5						

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*NEIC **26** 20:39:16.4±1.1, 56°.37N±0°.06×156°.9W±0°.1, h9^{km}±11^{km}, Error ellipse: s-maj=10.0km s-min=7.4km az=144.0*

AEIC 26 20:39:17±1.0, **56°.36N**±0°.06×**156°.93W**±0°.09, **h9^{km}**±6^{km}, **ML2.7, ML3.5**/20(NEIC), **Error ellipse: s-maj=9.5km s-min=6.9km az=162.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHGN	Chignik	0.83	266	Pg	Pg	20 39 32.2	-0.8
CHGN				IAML		20 39 45.3	
	comp=E,1μm,0.1s						
CHGN				IAML		20 39 45.8	
	comp=N,1μm,0.1s						
CHIR	Chirikof Islan	0.91	126		Pg	20 39 33.5	-1.0
PLK1	Peulik 1	1.46	7		Pn	20 39 42.1	-1.3
SII	Sitkinak Islan	1.54	81		Pn	20 39 43.4	-1.2
SII				IAML		20 40 10.0	
	comp=E,314nm,2.4s						
CAHL	Cahill	1.91	27		Pn	20 39 48.0	-1.8
KABR	Katmai Barrier	2.07	30		Pn	20 39 50.6	-1.4
OHAK	Old Harbor	2.18	65		Pn	20 39 51.9	-1.6
SDPT	Sand Point	2.24	245		Pn	20 39 54.1	-0.1
SDPT	Sand Point	2.24	245	IAML		20 40 53.5	
	comp=N,307nm,3.1s						
SDPT				IAML		20 41 03.7	
	comp=E,381nm,3.7s						
KDAK	Kodiak Island	2.77	57		Pn	20 40 00.4	-1.1
KDAK	Kodiak Island	2.77	57	IAML		20 41 14.5	
	comp=E,113nm,4.7s						
KDAK				IAML		20 41 14.7	
	comp=E,138nm,4.2s						
Q19K	Cape Douglas,	3.12	33	Pn	Pn	20 40 06.3	-0.1
Q19K				IAML		20 40 28.6	
	comp=N,194nm,1.9s						
CNPM	China Poot	4.39	41	Pn	Pn	20 40 22.8	-1.0
N19K	Bonanza Creek	4.64	15	Pn	Pn	20 40 26.7	-0.7
N19K				IAML		20 41 40.3	
	comp=E,48nm,4.7s						
N19K				IAML		20 42 07.2	
	comp=N,55nm,4.3s						
BRLK	Bradley Lake	4.68	41	Pn	Pn	20 40 25.9	-2.0
L19K	White Mountain	5.94	9	Pn	Pn	20 40 44.4	-0.6
PWL	Port Wells	6.36	41	Pn	Pn	20 40 48.7	-2.1
KNK	Knik Glacier	6.70	37	Pn	Pn	20 40 54.6	-0.9
GHO	Glory Hole Cre	6.81	34	Pn	Pn	20 40 56.8	-0.3
FID	Port Fidalgo	7.01	47	Pn	Pn	20 40 57.6	-2.2
SCM	Sheep Creek Mo	7.38	38	Pn	Pn	20 41 04.2	-0.7
KLU	Klutina	7.67	43	Pn	Pn	20 41 06.6	-2.2
TRF	Thorofare Moun	7.85	22	Pn	Pn	20 41 10.5	-0.9
WAX	Waxell Ridge	8.45	55	Pn	Pn	20 41 18.5	-1.0
TABL	Table Mountain	9.23	57	Pn	Pn	20 41 29.3	-1.1

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*IDC **26** 20:43:06.0±1.3, 31°.64S×72°.04W, h0^{km}, mb4.2/3, mb1 4.0/5, mb1mx3.8/26, mbtmp3.9/5, ML3.6/2, MS3.2/4, Ms1 3.2/4, ms1mx2.9/26, Error ellipse: s-maj=41.9km s-min=25.1km az=121.0*

*NEIC **26** 20:43:07, 31°.69S×72°.18W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}6.28; $M_{\theta\theta}$0.80; $M_{\phi\phi}$-7.07; $M_{r\theta}$0.52; $M_{\theta\phi}$0.99; $M_{\phi r}$0.57; Fault plane solution: $M_0$6.83000×10^{14} NP1:ϕ_s358.99000°, δ47.45000°, λ98.38000°. NP2:ϕ_s166.70000°, δ43.21000°, λ80.98000°. Principal axes: T 6.3594, Plg83.0000°, Azm334.0000°; N 0.8566, Plg6.0000°, Azm173.0000°; P -7.2161, Plg2.0000°, Azm83.0000°;*

*NEIC **26** 20:43:07.1±1.6, 31°.70S±0°.04×72°.16W±0°.09, h10^{km}±1^{km}, mb4.2/6, Mwr3.8/26, ML3.7(GUC) Error ellipse: s-maj=13.8km s-min=5.4km az=282.0*

*GUC **26** 20:43:09.5±0.8, 31°.68S×71°.87W, h40^{km}±4^{km}, ML3.7*

ISC 26 20:43:06.6±1.5, **31°.72S**±0°.02×**72°.04W**±0°.06, **h5^{km}**±10^{km}, **n63, σ0^{s}.96**/78, **mb4.2**/4, **9C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	1.05	143	⇓iP	Pn	20 43 27.7	-0.2
VA06				i S	Sb	20 43 41.6	+0.3
VA06				IAML		20 43 47.9	
	comp=N,5μm,0.5s						
CO06	Fray Jorge	1.09	18	⇑iP	Pb	20 43 28.1	+0.2
CO06				eS	Sg	20 43 41.5	-0.3
CO06				IAML		20 43 49.2	
	comp=E,2μm,0.3s						
CO06	Fray Jorge	1.09	18		Pb	20 43 28.2	+0.2
VA01	Torpederas	1.34	166		Pg	20 43 32.1	-0.2
VA01				Sn	Sn	20 43 50.0	-0.2
CO03	El Pedregal	1.45	53	⇓iP	Pb	20 43 34.0	-0.1
CO03				eS	Sb	20 43 49.9	-3.0
CO03				IAML		20 43 56.9	
	comp=E,2μm,0.4s						
CO03	El Pedregal	1.45	53		Pg	20 43 34.1	-0.2
CO03				Sn	Sb	20 43 52.5	-0.3
ROCH	El Roble	1.52	146	⇑iP	Pb	20 43 35.1	-0.4
ROCH				⇑iP	Pn	20 43 34.7	0.0
ROCH				eS	Sb	20 43 54.3	-0.9
ROCH				eS	Sn	20 43 54.6	-0.5
ROCH				IAML		20 43 56.8	
	comp=N,1μm,0.5s						
ROCH				IAML		20 43 57.2	
	comp=N,2μm,0.4s						
VA03	San Esteban	1.64	130	eP	Pb	20 43 37.0	-0.2
VA03				eS	Sn	20 43 56.7	-0.9
VA03				IAML		20 44 03.6	
	comp=E,3μm,0.3s						
VA03	San Esteban	1.64	130		Pb	20 43 37.1	-0.2
MT02	Curacav	1.72	154	⇑eP	Pn	20 43 37.7	+0.6
MT02				eS	Sn	20 43 57.8	-1.6
MT02	Curacav	1.72	154		Pn	20 43 37.6	+0.4
PEL	Peldehue	1.83	142	⇑eP	Pb	20 43 39.5	-1.0
PEL				eS	Sn	20 44 02.3	0.0
PEL				IAML		20 44 11.2	
	comp=N,897nm,0.6s						
PEL	Peldehue	1.83	142		Pb	20 43 39.5	-1.0
GO04	Tololo Observa	1.87	35	⇑eP	Pn	20 43 39.8	+0.4
GO04				eS	Sn	20 44 02.3	-1.3
GO04	Tololo Observa	1.87	35		Pn	20 43 39.9	+0.4
CO05	La Serena	1.92	21	eP	Pb	20 43 42.5	+0.5
CO05				eS	Sn	20 44 02.9	-1.5
CO05				IAML		20 44 13.4	
	comp=E,2μm,0.5s						
CO05	La Serena	1.92	21		Pn	20 43 40.4	+0.5
VA05	Santo Domingo	1.97	170	eP	Pb	20 43 42.3	-0.6
VA05				eS	Sn	20 44 03.9	-1.7
VA05				IAML		20 44 17.8	
	comp=N,2μm,0.5s						
VA05	Santo Domingo	1.97	170		Pn	20 43 40.0	-0.5
MT05	Renca	2.00	147	eP	Pn	20 43 41.8	+0.8
MT05				eS	Sn	20 44 04.0	-2.5
MT05				IAML		20 44 23.1	
	comp=E,1μm,0.3s						

MT05	Renca	2.00	147		Pn	20 43 41.6	+0.6
FCH	Farellones	2.18	138	⇑eP	Pn	20 43 44.7	+0.9
FCH				eS	Sn	20 44 12.1	+0.8
FCH				IAML		20 44 20.4	
	comp=E,721nm,0.3s						
MT09	Talagante	2.24	157	⇑eP	Pn	20 43 45.7	+1.3
MT09				eS	Sn	20 44 12.9	+0.5
MT09				IAML		20 44 30.8	
	comp=N,527nm,0.5s						
MT09	Talagante	2.24	157		Pn	20 43 45.0	+0.6
MT01	Popeta	2.24	163	⇑eP	Pn	20 43 44.9	+0.5
MT01				eS	Sn	20 44 11.4	-1.0
MT01				IAML		20 44 26.3	
	comp=N,438nm,0.6s						
MT01	Popeta	2.24	163		Pn	20 43 44.8	+0.4
LMEL	Las Melosas	2.63	144	eP	Pn	20 43 51.5	+1.7
LMEL				eS	Sn	20 44 22.6	+0.4
LMEL				IAML		20 44 37.7	
	comp=N,482nm,0.3s						
BO01	Tunca	2.79	164		Pn	20 43 52.4	+0.6
ZON	Zonda	2.87	87		Pb	20 43 56.6	-1.7
LCO	Las Campanas	2.93	24		Pn	20 43 54.9	+0.8
BO02	Sierra Bellavi	3.24	161		Pn	20 43 58.7	+0.5
GO05	Huala	3.29	178		Pn	20 43 58.2	-0.6
AC04	Llanos de Chal	3.60	14		Pn	20 44 03.7	+0.7
ML02	Panimavida	4.07	173		Pn	20 44 08.6	-0.8
GO03	Copiap	4.40	21		Pn	20 44 15.5	+1.4
AC02	Maricunga	5.49	28		Pn	20 44 29.4	0.0
H03N1	Juan Fernandez	6.05	252	Pn	Pn	20 44 36.7	+0.3
	baz=54,slow=76,SNR=4.4						
H03N1				T	T	20 51 21.9	
	baz=80,slow=72,SNR=596						
H03N3	Juan Fernandez	6.07	252	Pn	Pn	20 44 36.8	+0.1
	baz=54,slow=76,SNR=4.6						
H03N3				T	T	20 51 24.3	
	baz=80,slow=72,SNR=915						
H03N2	Juan Fernandez	6.07	252	Pn	Pn	20 44 36.9	+0.3
	baz=54,slow=76,SNR=4.7						
H03N2				T	T	20 51 21.8	
	baz=80,slow=72,SNR=566						
LC01	Cunco	7.17	179	Pn	Pn	20 44 50.8	-1.2
PLCA	Paso Flores	9.08	173	Pn	Pn	20 45 19.2	+0.9
	comp=N,0.2nm,0.3s,baz=331,slow=13,SNR=1.6						
PLCA	Paso Flores	9.08	173		Pn	20 45 18.6	+0.3
LVC	Limon Verde	9.49	18	LR	LR	20 48 58.4	
	comp=N,92nm,20.1s,baz=216,slow=38						
ITQB	Itaqui	13.42	85	Pn	Pn	20 46 20.9	+3.2
CPUP	Villa Florida	13.94	71	LR	LR	20 52 12.1	
	comp=N,124nm,19.2s,baz=234,slow=39						
CPUP	Villa Florida	13.94	71	Pn	Pn	20 46 26.2	+1.4
LPAZ	La Paz	15.77	14	Pn	Pn	20 46 48.8	-1.1
SIV	San Ignacio	18.57	35	P	Pn	20 47 25.1	+0.4
	comp=N,0.1nm,0.3s,baz=244,slow=13,SNR=3.6						
SIV				LR	LR	20 55 50.7	
	comp=N,26nm,20.6s,baz=132,slow=41						
GO09	Cerro Castillo	19.54	181	P	P	20 47 35.5	+0.6
GO09				IAmb	IAmb	20 47 38.1	
	comp=Z,24nm,1.3s						
ETMB	Extrema	22.45	15	P	P	20 48 06.3	-0.3
ETMB				IAmb	IAmb	20 48 10.1	
	comp=Z,3.1nm,0.9s						
BDFB	Brasilia	27.11	59	P	P	20 48 50.0	-0.7
	comp=Z,3.1nm,0.9s,baz=219,slow=6.5,SNR=3.9						
BDFB				LR	LR	21 00 59.1	
	comp=Z,168nm,18.1s,baz=322,slow=40						
BDFB	Brasilia	27.11	59	P	P	20 48 50.5	-0.2
BDFB				IAmb	IAmb	20 48 51.5	
	comp=Z,8.3nm,1.3s						
VNA3	Neumayer Olymp	51.47	159	P	P	20 52 12.9	+0.4
VNA2	Neumayer--Watz	52.12	158	P	P	20 52 17.8	+0.5
	baz=304,slow=7.8						
SNAA	Sanae	53.70	158	P	P	20 52 29.8	+0.7
SNAA	Sanae	53.70	158	P	P	20 52 30.1	+1.0
	comp=Z,2.6nm,0.8s,baz=279,slow=8.8,SNR=8.5						
SNAA	Sanae	53.70	158	P	P	20 52 29.6	+0.5
TORD	Torodi Ar. Bea	83.44	70	P	P	20 55 35.3	-0.2
	comp=Z,1.4nm,0.8s,baz=256,slow=4.9,SNR=9.1						
TORD	Torodi Ar. Bea	83.44	70	P	P	20 55 35.0	-0.5
TORD				IAmb	IAmb	20 55 36.1	
	comp=Z,1.4nm,0.8s						
H11N3	WAKE ISLAND Hy	126.13	272	T	T	23 21 27.8	
	baz=121						
H11N2	WAKE ISLAND Hy	126.15	272	T	T	23 21 28.4	
	baz=153,SNR=6.3						
ZALV	Zalesovo Beam	152.28	30	PKPbc	PKPbc	21 03 02.9	0.0
	comp=Z,1.6nm,0.5s,baz=300,slow=3.6,SNR=9.0						
ZALV	Zalesovo Beam	152.28	30		PKPbc	21 03 02.6	-0.3

NNC 26 20:46:31.7±6.4**, 36°.97N×70°.50E, h0^{km}, mb3.7, mpv3.4, 3C-3D, Error ellipse: s-maj=53.7km s-min=49.7km az=121.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK02	Karatay Array	6.12	0	⇓P	Pn	20 48 03.9	+0.4
	0.5nm,0.3s						
KK02				⇑S	Sn	20 49 15.0	+0.7
	1.0nm,0.4s						
AAK	Ala-Archa	6.44	27	⇑P	Pn	20 48 08.4	+0.5
	2.3nm,0.7s						
AAK				⇓S	Sn	20 49 24.8	+2.6
	3.1nm,0.6s						
TKM2	Tokmak 2	7.11	32	⇑P	Pn	20 48 16.3	-0.9
	1.9nm,0.5s						
TKM2				⇓S	Sn	20 49 38.8	-0.1
	1.5nm,0.9s						

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*JMA **26** 21:16:18.6±0.2, 30°.83N×138°.08E, h503^{km}±4^{km}, M4.0*

*BJI **26** 21:16:20.1±0.0, 30°.81N×137°.87E, h462^{km}, mB4.9/26, mb4.9/64*

*MOS **26** 21:16:20.5±0.7, 30°.81N×137°.72E, h454^{km}, mb4.3/19, Error ellipse: s-maj=8.7km s-min=5.2km az=108.9*

*IDC **26** 21:16:22.1±0.7, 30°.86N×137°.72E, h456^{km}±6^{km}, mb3.8/33, mb1 3.9/38, mb1mx3.7/56, mbtmp4.6/38, Error ellipse: s-maj=8.8km s-min=8.4km az=101.0*

*NEIC **26** 21:16:23.0±1.5, 30°.87N±0°.08×137°.8E±0°.1, h463^{km}±7^{km}, mb4.4/135, Error ellipse: s-maj=13.2km s-min=11.7km az=106.0*

ISC 26 21:16:22.4±0.3**, 30°.87N**±0°.04×**137°.82E**±0°.04**, h462^{km}, n552,** σ**1^{s}02**/582**, mb4.4**/142**, 12C-7D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	2.29	46	P	P	21 17 25.5	-0.1
JAOM				eS	S	21 18 17.7	+0.6
JHCJ	Hachijojimakas	2.76	37	P	P	21 17 28.3	-0.3
JHJ	Hachijo jima 2	2.79	36	P	P	21 17 28.8	0.0
	66nm,0.3s,baz=107,slow=22,SNR=37						
JHJ				S	S	21 18 22.2	-0.6
	100nm,0.3s,baz=54,slow=23,SNR=11						
JHJ2	Mitsune	2.80	37	P	P	21 17 28.7	-0.1
JHJ2				eS	S	21 18 22.5	-0.5
JHJ2	Mitsune	2.80	37	P	P	21 17 28.8	-0.1
JHJ2				S	S	21 18 21.9	-1.1
JHJ2	Mitsune	2.80	37	P	P	21 17 28.8	-0.1
TTO1	TONANKAI O.B.S	2.88	343	P	P	21 17 30.8	+1.8
TK02	Tokai 2	3.06	359	P	P	21 17 31.7	+1.2
JTNC	Tanabenakahech	3.48	328	P	P	21 17 35.0	+1.0
JTNC				eS	S	21 18 33.0	+0.7
JIE	Ise	3.63	345	P	P	21 17 35.8	+0.7
JIE				S	S	21 18 35.5	+1.1
JSG	Sagara	3.80	5	P	P	21 17 37.0	+0.4
JMN	Monobe	4.39	311		P	21 17 43.0	+1.3
JMN				S	S	21 18 43.6	-2.7
JOD2	Odawara 2	4.50	13	P	P	21 17 41.6	-1.1
JOD2				eS	S	21 18 47.7	-0.5
INU	Inuyama	4.51	352		P	21 17 43.5	+0.8
INU	Inuyama	4.51	352	P	P	21 17 43.5	+0.8
BSO1	Boso 1	4.61	34	P	P	21 17 41.3	-1.7
BSO1				S	S	21 18 44.5	-4.4
JTO	Tosashimizu	4.71	296	P	P	21 17 45.8	+1.2
JTO				eS	S	21 18 52.4	+0.8
JGF	Kuroka	4.73	355	P	P	21 17 45.3	+0.6
JWT	Wachi	4.84	336		P	21 17 46.3	+0.5
JRY	Ryogami san	5.21	10	P	P	21 17 48.5	-0.8
JRY				S	S	21 18 56.8	-3.5
CBIJ	Chichi jima	5.36	133	P	P	21 17 47.5	-3.5
CBIJ				S	S	21 18 56.6	-6.5
JCJ	Chichijima	5.37	133		P	21 17 47.5	-3.5
MJAR	Matsushiro Arr	5.66	3	P	P	21 17 52.6	-1.1
	1.4nm,0.3s,baz=184,slow=11,SNR=60						
MJAR	Matsushiro Arr	5.66	3	P	P	21 17 52.8	-0.9
MJAR	Matsushiro Arr	5.66	3	P	P	21 17 52.8	-0.9
MAJO	Matsushiro	5.66	3	P	P	21 17 53.0	-0.8
MAJO	Matsushiro	5.66	3		P	21 17 53.0	-0.8
MAJO	Matsushiro	5.66	3	P	P	21 17 52.9	-0.8
MAT	Matsushiro	5.66	3	P	P	21 17 52.7	-1.0
MAT				eS	S	21 19 04.1	-4.3
MJB9	Matsu-Tunnel	5.67	3	P	P	21 17 52.7	-1.1
JYT	Yasato	5.70	20	P	P	21 17 51.3	-2.7
JHS	Saijyo	5.71	317	P	P	21 17 55.2	+1.0
JHS				eS	S	21 19 09.2	0.0
JHS	Saijyo	5.71	317	P	P	21 17 55.2	+1.0
JNU	Nakatsue	6.31	293	P	P	21 18 01.9	+1.6
	5.1nm,0.3s,baz=110,slow=3.6,SNR=56						
JNU	Nakatsue	6.31	293	P	P	21 18 02.1	+1.8
JSU	Suzuyama	6.34	278	P	P	21 18 01.5	+0.8
JSJ	Shimokoshiki	6.98	279	P	P	21 18 08.1	+0.9
JSJ				eS	S	21 19 34.5	+1.4
JMM	Marumori	7.39	19	P	P	21 18 10.5	-0.9
JAMN	Amaminishikomi	7.97	253	P	P	21 18 17.2	-0.5
JAMN				eS	S	21 19 52.4	+0.1
JTU	Tsushima	7.98	299	P	P	21 18 18.7	+1.1
JTU	Tsushima	7.98	299	P	P	21 18 18.2	+0.5
JMK	Ichinoseki	8.53	18	P	P	21 18 22.4	-1.1
YNDB	Yeoundo	9.16	295	P	P	21 18 31.7	+1.3
	SNR=20						
KSNAH	Namhae	9.20	298	P	P	21 18 32.1	+1.2
	SNR=7.2						
JOW	Kunigami	9.29	247	P	P	21 18 33.4	+1.5
	5.3nm,0.3s,baz=91,slow=9.9,SNR=21						
JOW	Kunigami	9.29	247	P	P	21 18 33.1	+1.2
JOW	Kunigami	9.29	247		P	21 18 33.2	+1.3
GWYB	Gwangyang	9.43	298	P	P	21 18 35.0	+1.7
	SNR=6.9						
HAMB	Hamyang	9.62	301	P	P	21 18 37.0	+1.6
	SNR=8.9						
KOHB	KOHEUNG	9.63	296	P	P	21 18 37.1	+1.6
	SNR=7.3						
BOSB	Boseong-gun	9.73	296	P	P	21 18 38.0	+1.5
	SNR=6.7						
YOJB	Youngju	9.78	310	P	P	21 18 38.1	+1.1
	SNR=7.3						
KSCPR	CHUPUNGNYEONG	9.79	306	P	P	21 18 38.3	+1.1
	SNR=13						
KSMGY	Mungyeong	9.96	308	P	P	21 18 40.4	+1.5
	SNR=6.8						
OKCB	Cheongsan-myeo	9.98	306	P	P	21 18 40.1	+0.9
	SNR=9.1						
KSYOW	Yeongwol	9.99	311	P	P	21 18 40.4	+1.1
	SNR=20						
KSBON	Boeun	10.06	307	P	P	21 18 41.4	+1.3
	SNR=9.0						
JECH	Jecheon	10.15	311	P	P	21 18 42.2	+1.1
	SNR=13						
JTM	Tenmabayashi	10.24	14	P	P	21 18 41.8	-0.1
TJN	Taejon	10.30	305	ceP	P	21 18 42.8	+0.2
TJN	Taejon	10.30	305	P	P	21 18 43.7	+1.1
KSWJU	Wonju	10.38	311	P	P	21 18 45.0	+1.4
	SNR=17						
KSRS	Korea Array	10.50	311	P	P	21 18 45.3	+0.5
	2.5nm,0.3s,baz=127,slow=10,SNR=122						
KSAR	Wonju Array Be	10.52	311	P	P	21 18 45.5	+0.5
KSAR	Wonju Array Be	10.52	311	P	P	21 18 45.5	+0.5
KS19	Wonju Array Si	10.56	311	P	P	21 18 45.8	+0.3
KSSKC	Sokcho	10.65	317	P	P	21 18 47.1	+0.8
	SNR=12						
KSIJA	INJE	10.70	314	P	P	21 18 48.1	+1.1
	SNR=16						
JKE	Kume jima 2	10.70	248	P	P	21 18 47.6	+0.4
KSCHC	Chuncheon	10.76	312	P	P	21 18 49.0	+1.3
	SNR=14						
SEHB	SEOHWA	10.79	316	P	P	21 18 49.1	+1.1
	SNR=11						
JEW	Eniwo	12.29	13	P	P	21 19 05.2	+1.1
ASAJ	Asahikawa	13.75	15	P	P	21 19 21.2	+1.5
JKA	Kamikawa-asahi	13.75	15	P	P	21 19 21.1	+1.4
USA0B	Ussuriysk Arra	14.08	343	P	P	21 19 23.3	+0.1
USA0B	Ussuriysk Arra	14.08	343	P	P	21 19 23.3	+0.1
USRK	Ussuriysk Ar.	14.08	343	P	P	21 19 23.6	+0.3
	baz=152,slow=11,SNR=51						
USRK	Ussuriysk Ar.	14.08	343	P	P	21 19 23.4	+0.1
YOJ	Yonaguni jima	14.59	248	P	P	21 19 28.5	-0.5
MDJ	Mudanjiang	15.17	337	P	P	21 19 35.2	+0.3
MDJ				IAmb	IAmb	21 19 35.7	
	comp=Z,11nm,0.7s						
YHNB	Yeheng	15.81	251	P	P	21 19 40.3	-1.7
YHNB	Yeheng	15.81	251	P	P	21 19 40.2	-1.8
NACB	Ninganchiao	15.86	249	P	P	21 19 39.5	-2.9
CN2	Changchun	16.20	326	eP	P	21 19 45.8	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YULB	Yu-li	16.48	247	P	P	21 19 46.8	-2.2
YSS	Yuzh-Sakhalins	16.50	12	eP	P	21 19 49.4	+0.5
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SSLB	Suanglung	16.56	249	P	P	21 19 48.8	-1.1
SSLB	Suanglung	16.56	249	P	P	21 19 49.0	-0.9
TPUB	Ta-pu	17.05	248	P	P	21 19 55.1	0.0
TPUB	Ta-pu	17.05	248	P	P	21 19 54.2	-0.9
TIA	Tai'an	18.05	293	⇑P	P	21 20 03.5	-1.5
TIA				pmax	pmax		
	comp=Z,94nm,0.8s						
KLR	Kul'dur	18.90	348	P	P	21 20 12.8	-0.1
	comp=Z,1.0nm,0.3s,baz=167,slow=7.7,SNR=24						
KLR	Kul'dur	18.90	348	i P	P	21 20 12.8	-0.1
KLR				pmax	pmax		
	comp=Z,30nm,2.8s						
BJT	Baijiatuau	19.82	303	P	P	21 20 20.0	-1.4
BJT				pmax	pmax		
	comp=Z,30nm,1.1s						
BJT	Baijiatuau	19.82	303	P	P	21 20 20.0	-1.4
WHN	Wuhan	20.18	275	⇑P	P	21 20 25.5	+0.8
WHN				pmax	pmax		
	comp=Z,120nm,0.5s						
TIY	Taiyuan	22.02	295	eP	P	21 20 41.5	+0.1
TIY				pmax	pmax		
	comp=Z,39nm,0.5s						
HIA	Hailar	22.89	328	P	P	21 20 48.5	-0.6
HIA				pmax	pmax		
	comp=Z,13nm,0.7s						
HIA	Hailar	22.89	328	P	P	21 20 48.5	-0.6
HIA				IAmb	IAmb	21 20 50.1	
	comp=Z,13nm,0.7s						
HHC	Hu-ho-hao-te	23.42	302	eP	P	21 20 53.8	-0.2
HHC				pmax	pmax		
	comp=Z,37nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,6.6s						
ZEA	Zeya	24.10	345	eP	P	21 21 00.4	+0.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ENH	Enshi	24.38	276	P	P	21 21 01.7	-0.9
XAN	Xi'an	24.55	285	P	P	21 21 04.3	+0.1
XAN				pmax	pmax		
	comp=Z,79nm,0.9s						
PETK	Petropavlovsk-	26.51	27	P	P	21 21 22.7	+1.5
	comp=Z,3.5nm,0.8s,baz=161,slow=3.7,SNR=7.8						
PETK	Petropavlovsk-	26.51	27	P	P	21 21 20.9	-0.3
GYA	Guiyang	27.64	269	⇓P	P	21 21 31.0	-0.7
GYA				pmax	pmax		
	comp=Z,27nm,0.7s						
LZH	Lanzhou	28.72	290	⇓P	P	21 21 41.0	-0.1
LZH				pmax	pmax		
	comp=Z,60nm,1.4s						
ULN	Ulaanbaatar	28.96	315	ceP	P	21 21 43.2	+0.2
ULN				pmax	pmax		
	comp=Z,18nm,1.0s						
ULN	Ulaanbaatar	28.96	315	P	P	21 21 43.1	+0.1
ULN				IAmb	IAmb	21 21 44.2	
	comp=Z,15nm,0.9s						
CD2	Chengdu	29.17	279	⇓P	P	21 21 44.5	-0.4
CD2				pmax	pmax		
	comp=Z,60nm,0.6s						
SONM	Songino Array	29.35	314	P	P	21 21 46.5	+0.1
	comp=Z,4.3nm,0.5s,baz=124,slow=8.3,SNR=90						
SONM				ScP	ScP	21 27 35.4	-0.6
	comp=Z,1.1nm,0.6s,baz=133,slow=3.0,SNR=9.1						
SONM	Songino Array	29.35	314	P	P	21 21 46.1	-0.3
SONM				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SONM	Songino Array	29.35	314	P	P	21 21 46.1	-0.3
MA2	Magadan	30.00	13	P	P	21 21 51.9	+0.2
MA2				pmax	pmax		
	comp=Z,54nm,1.4s						
MA2	Magadan	30.00	13	P	P	21 21 51.9	+0.2
MYLDM	Lahad Datu	31.36	219	P	P	21 22 04.5	+0.5
MYLDM				IAmb	IAmb	21 22 25.5	
	comp=Z,26nm,1.3s						
KMI	Kunming	31.41	268	⇑P	P	21 22 04.5	-0.2
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK	Yakutsk	31.62	353	ScP	ScP	21 27 42.8	-0.2
	comp=Z,2.3nm,0.3s,baz=153,slow=1.0,SNR=4.4						
YAK	Yakutsk	31.62	353	i P	P	21 22 04.9	-0.7
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SLVN	Son La	31.80	261	P	P	21 22 08.4	+0.6
SLVN				IAmb	IAmb	21 22 09.2	
	comp=Z,16nm,0.7s						
GTA	Gaotai	32.04	296	⇓P	P	21 22 09.5	-0.2
GTA				sP	sP	21 24 23.8	-0.6
GTA				ScP	ScP	21 27 45.0	-0.2
GTA				pmax	pmax		
	comp=Z,33nm,0.8s						
ZAK	Zakamensk	32.26	317	eP	P	21 22 10.6	-0.8
ZAK				pmax	pmax		
	comp=Z,14nm,1.1s						
DLV	T Lat	33.01	242	P	P	21 22 19.1	+0.7
SEY	Seymchan	33.41	12	P	P	21 22 21.7	+0.8
	comp=Z,2.1nm,0.6s,baz=221,slow=9.5,SNR=7.7						
UBPT	Khong Chiam	33.41	250	P	P	21 22 22.0	+0.4
UBPT				IAmb	IAmb	21 22 23.0	
	comp=Z,24nm,1.1s						
TOLI2	Tolitoli	33.72	212	P	P	21 22 23.5	-0.7
TOLI2	Tolitoli	33.72	212	P	P	21 22 23.9	-0.3
FAKI	Fak Fak	34.02	190	P	P	21 22 26.1	-0.6
FAKI	Fak Fak	34.02	190	P	P	21 22 26.8	+0.1
MOY	Mondy	34.09	318	eP	P	21 22 26.7	-0.3
SANI	Sanana	34.63	201	P	P	21 22 30.8	-1.0
	comp=Z,39nm,0.6s						
SANI	Sanana	34.63	201	P	P	21 22 30.4	-1.4
APSI	Ampana	35.15	209	P	P	21 22 36.0	-0.2
	comp=Z,18nm,0.6s						
AAI	Ambon	35.58	197	P	P	21 22 40.5	+0.8
	comp=Z,54nm,0.6s						
CHTO	Chiang Mai	37.09	260	P	P	21 22 52.3	0.0
CHTO				pmax	pmax		
	comp=Z,17nm,0.9s						
CHTO	Chiang Mai	37.09	260	P	P	21 22 52.3	0.0
CHTO				IAmb	IAmb	21 22 53.2	
	comp=Z,17nm,0.8s						
CHTO	Chiang Mai	37.09	260	P	P	21 22 52.6	+0.3
CM31	Chiang Mai Arr	37.25	260	P	P	21 22 53.4	-0.3
CM31				IAmb	IAmb	21 22 54.7	
	comp=Z,7.6nm,0.7s						
CMAR	Chiang Mai Arr	37.25	260	P	P	21 22 53.6	0.0
	comp=Z,5.1nm,0.7s,baz=55,slow=6.8,SNR=60						
CMAR				ScP	ScP	21 28 04.9	+0.7
	comp=Z,1.6nm,0.9s,baz=33,slow=3.7,SNR=11						
CMAR	Chiang Mai Arr	37.25	260	P	P	21 22 53.9	+0.2
MTKI	Muara Teweh, K	38.42	219	P	P	21 23 03.7	+0.4
BNSI	Bone	38.95	209	P	P	21 23 09.0	+1.5
	comp=Z,11nm,1.4s						
KSM	Kuching	39.16	227	P	P	21 23 10.1	+0.8
KSM				IAmb	IAmb	21 23 11.2	
	comp=Z,18nm,1.0s						
KSM	Kuching	39.16	227	P	P	21 23 10.7	+1.4
LSA	Lhasa	40.09	281	P	P	21 23 18.1	+0.8
LSA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LSA	Lhasa	40.09	281	P	P	21 23 18.1	+0.8
BILL	Bilibino	40.76	16	deP	P	21 23 22.2	+0.8
BILL				e*PP	pP	21 24 51.4	+4.5
BILL				e		21 25 08.9	
BILL				pmax	pmax		
	comp=Z,12nm,0.9s						
BILL	Bilibino	40.76	16	P	P	21 23 22.3	+0.8
BILL				IAmb	IAmb	21 23 23.3	
	comp=Z,14nm,0.9s						
ATKA	Atka Island	40.83	44	P	P	21 23 21.8	-0.5
TIXI	Tiksi	41.12	356	P	P	21 23 24.0	-0.3
TIXI				pmax	pmax		
	comp=Z,11nm,1.4s						
TIXI	Tiksi	41.12	356	P	P	21 23 24.0	-0.3
WMQ	Urumqi	41.30	303	eP	P	21 23 27.0	+0.7
WMQ				pmax	pmax		
	comp=Z,27nm,0.7s						
DGZ	Jazzator, Alta	41.90	311	i P	P	21 23 31.2	+0.1
DGZ				pmax	pmax		
	comp=Z,22nm,0.9s						
SOEI	Soe	42.44	200	P	P	21 23 35.1	-0.5
KULM	Kulim	43.20	242	P	P	21 23 41.4	-0.1
KULM				IAmb	IAmb	21 23 44.2	
	comp=Z,31nm,1.4s						
IPM	Ipoh	43.44	240	P	P	21 23 43.0	-0.6
IPM				IAmb	IAmb	21 23 44.2	
	comp=Z,14nm,0.9s						
MTN	Manton Dam	43.94	189	P	P	21 23 46.5	-0.8
ZAA0	Zalesovo Array	44.13	317	P	P	21 23 47.7	-0.7
ZALV	Zalesovo Beam	44.13	317	P	P	21 23 47.6	-0.7
	comp=Z,3.9nm,0.5s,baz=95,slow=8.1,SNR=19						
ZALV				ScP	ScP	21 28 29.2	-1.6
	comp=Z,1.6nm,0.5s,baz=120,slow=4.2,SNR=6.8						
ZALV	Zalesovo Beam	44.13	317	i P	P	21 23 47.9	-0.4
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ZALV	Zalesovo Beam	44.13	317	P	P	21 23 47.3	-1.1
NIKH	Nikolski High	44.17	44	P	P	21 23 47.5	-1.2
	baz=262						
COEN	Coen	44.87	173	P	P	21 23 54.6	+0.1
COEN				IAmb	IAmb	21 23 55.8	
	comp=Z,14nm,1.1s						
GUN	Gumba	45.02	280	eP	P	21 23 55.7	-0.4
	comp=Z,53nm,0.5s						
MK31	Makanchi Array	45.14	307	P	P	21 23 56.1	-0.2
MK31				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MK31	Makanchi Array	45.14	307	P	P	21 23 56.1	-0.2
MK31				IAmb	IAmb	21 23 57.1	
	comp=Z,9.5nm,0.8s						
MKAR	Makanchi Array	45.14	307	P	P	21 23 56.2	-0.1
	comp=Z,10nm,0.7s,baz=86,slow=10,SNR=113						
MKAR				PcP	PcP	21 25 27.1	-0.1
	comp=Z,0.3nm,0.3s,baz=76,slow=4.0,SNR=5.1						
MKAR				ScP	ScP	21 28 34.2	-1.1
	comp=Z,1.4nm,0.6s,baz=81,slow=5.7,SNR=8.7						
MAKZ	Makanchi	45.36	307	P	P	21 23 58.0	0.0
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MAKZ	Makanchi	45.36	307	P	P	21 23 58.0	0.0
MAKZ				IAmb	IAmb	21 23 59.6	
	comp=Z,8.0nm,0.7s						
PKI	Pulchoki	45.52	280	eP	P	21 23 59.1	-0.8
	comp=Z,8.1nm,0.4s						
GAMB	Gambell	45.53	29	P	P	21 23 58.8	-0.1
	baz=248						
PKIN	Phulchoki	45.53	280	eP	P	21 23 58.9	-1.0
	comp=Z,9.8nm,0.4s						
KKN	Kakani	45.56	280	eP	P	21 23 59.9	-0.2
	comp=Z,18nm,0.3s						
DMN	Daman	45.77	280	eP	P	21 24 01.6	-0.1
GKN	Gorkha	46.05	280	eP	P	21 24 03.5	-0.2
	comp=Z,22nm,0.4s						
UGM	Wanagama	46.60	219	P	P	21 24 07.3	-0.6
UGM	Wanagama	46.60	219	P	P	21 24 07.4	-0.5
DANN	Dangsing	46.69	281	eP	P	21 24 08.9	+0.1
	comp=Z,54nm,0.5s						
KPJI	Karang Pucung	47.00	221	P	P	21 24 10.6	-0.3
	comp=Z,15nm,1.4s						
KNRA	Kununurra	47.09	192	P	P	21 24 11.3	-0.2
KNRA	Kununurra	47.09	192	P	P	21 24 10.8	-0.7
SHLS	Shalkode	47.31	302	eP	P	21 24 10.2	-2.8
SHLS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PYUN	Piuthan	47.41	281	eP	P	21 24 14.5	+0.4
	comp=Z,84nm,0.5s						
KLSI		47.43	228	P	P	21 24 14.0	-0.1
	comp=Z,8.5nm,0.6s						
KLI	Kotabumi	47.48	227	P	P	21 24 14.5	0.0
	comp=Z,1μmcomp=Z,38nm,0.5s						
KURK	Kurchatov	47.62	312	ceP	P	21 24 14.7	-0.4
KURK				pmax	pmax		
	comp=Z,28nm,1.3s						
KURK	Kurchatov	47.62	312	P	P	21 24 14.6	-0.4
KURK				IAmb	IAmb	21 24 15.6	
	comp=Z,22nm,1.0s						
KURBB	Kurchatov Arra	47.68	312	P	P	21 24 15.1	-0.4
	comp=Z,13nm,0.5s,baz=93,slow=7.4,SNR=90						

TNA	Tin City	47.68	27	P	P	21 24 16.0	+0.7
TNA				IAmb	IAmb	21 24 18.0	
	comp=Z,15nm,1.2s						
TNA	Tin City	47.68	27	P	P	21 24 15.1	-0.2
	baz=251						
NRIK	Noril'sk	47.74	338	P	P	21 24 15.8	+0.1
	comp=Z,4.6nm,0.4s,baz=109,slow=10,SNR=7.4						
NRIK				ScP	ScP	21 28 45.6	-0.1
	comp=Z,5.1nm,0.7s,baz=103,slow=4.4,SNR=6.9						
NRIK	Noril'sk	47.74	338	ceP	P	21 24 16.3	+0.6
NRIK				pmax	pmax		
	comp=Z,11nm,1.3s						
NRIK	Noril'sk	47.74	338	P	P	21 24 15.8	+0.1
NRIK				IAmb	IAmb	21 24 16.3	
	comp=Z,6.1nm,0.6s						
GSI	Gunungsitoli	48.11	240	P	P	21 24 19.4	0.0
GSI	Gunungsitoli	48.11	240	P	P	21 24 19.5	+0.2
ARXS	Arharly	48.39	304	eP	P	21 24 20.1	-1.0
ANM	Nome	48.41	29	P	P	21 24 22.1	+1.3
ANM				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ANM	Nome	48.41	29	P	P	21 24 22.1	+1.3
ANM	Nome	48.41	29	P	P	21 24 20.8	0.0
	baz=254						
TARG	Taragay, Kyrgy	48.68	300	P	P	21 24 24.0	+0.3
TARG				IAmb	IAmb	21 24 25.3	
	comp=Z,12nm,0.9s						
KDJ	Kajisay	49.09	301	P	P	21 24 26.7	+0.2
KDJ				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KDJ	Kajisay	49.09	301	P	P	21 24 26.7	+0.2
KDJ				IAmb	IAmb	21 24 27.3	
	comp=Z,8.4nm,0.5s						
SDPT	Sand Point	49.31	42	P	P	21 24 27.2	-0.4
ULHL	Ulahol	49.77	301	P	P	21 24 29.9	-1.7
	SNR=5.4						
BOOM	Boomskoye usch	49.96	302	P	P	21 24 33.4	+0.5
BOOM				pmax	pmax		
	comp=Z,12nm,0.6s						
BOOM	Boomskoye usch	49.96	302	P	P	21 24 33.4	+0.5
BOOM				IAmb	IAmb	21 24 34.0	
	comp=Z,12nm,0.6s						
TKM2	Tokmak 2	50.15	302	P	P	21 24 34.8	+0.5
	SNR=12						
KSH	Kashi	50.40	298	P	P	21 24 40.0	+3.8
KSH				pP	pwP	21 26 09.5	+0.5
KSH				pmax	pmax		
	comp=Z,20nm,0.7s						
WB0	Warramunga Arr	50.46	184	P	P	21 24 36.0	-0.6
WB0				IAmb	IAmb	21 24 36.9	
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	50.62	184	ceP	P	21 24 37.2	-0.6
WRAB				pmax	pmax		
	comp=Z,21nm,1.7s						
WRAB	Tennant Creek	50.62	184	P	P	21 24 37.4	-0.4
WRA	Warramunga Arr	50.63	184	P	P	21 24 37.5	-0.4
	comp=Z,9.6nm,0.7s,baz=360,slow=7.5,SNR=87						
WRA				PcP	PcP	21 25 48.0	+0.6
	comp=Z,2.0nm,0.7s,baz=357,slow=4.2,SNR=3.3						
WRA	Warramunga Arr	50.63	184	i P	P	21 24 37.5	-0.4
WRA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
WRA	Warramunga Arr	50.63	184	P	P	21 24 36.7	-1.1
WR0	Warramunga Arr	50.64	184	P	P	21 24 37.5	-0.4
WR0				IAmb	IAmb	21 24 38.4	
	comp=Z,14nm,1.0s						
KBK	Karagaybulak	50.66	302	P	P	21 24 38.4	+0.3
	SNR=18						
CHMS	Chumysh	50.75	302	P	P	21 24 39.0	+0.4
	SNR=5.7						
SGDS	Sogindy	50.78	303	eP	P	21 24 38.5	-0.3
SGDS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
USP	Ospenovka	50.90	303	P	P	21 24 39.7	0.0
	SNR=10						
BTLS	Baital	50.99	305	eP	P	21 24 39.8	-0.4
BTLS				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AAK	Ala-Archa	50.99	302	P	P	21 24 40.6	+0.2
	comp=Z,9.0nm,0.6s,baz=118,slow=6.0,SNR=33						
AAK	Ala-Archa	50.99	302	P	P	21 24 40.7	+0.2
	SNR=10.0						
AAK	Ala-Archa	50.99	302	ceP	P	21 24 40.7	+0.2
AAK				pmax	pmax		
	comp=Z,18nm,0.7s						
AAK	Ala-Archa	50.99	302	P	P	21 24 40.7	+0.2
AAK				IAmb	IAmb	21 24 41.3	
	comp=Z,9.3nm,0.7s						
UCH	Uchtor	51.04	301	P	P	21 24 42.0	+0.8
	SNR=12						
QIS	Mount Isa	51.16	178	P	P	21 24 41.0	-0.7
CTAO	Charters Tower	51.31	170	P	P	21 24 42.4	-0.4
CTAO				pmax	pmax		
	comp=Z,10.0nm,1.5s						
CTAO	Charters Tower	51.31	170	P	P	21 24 42.4	-0.4
EKS2	Erkin-Say	51.51	302	P	P	21 24 44.4	+0.1
	SNR=7.5						
AML	Almayashu	51.66	301	P	P	21 24 46.5	+0.9
	SNR=24						
GCSA	Galena City Sc	52.02	30	P	P	21 24 47.0	-0.3
	baz=262						
TTA	Tatalina	52.19	32	P	P	21 24 49.5	+0.8
TTA	Tatalina	52.19	32	P	P	21 24 49.5	+0.8
TTA	Tatalina	52.19	32	P	P	21 24 48.7	0.0
	baz=264						
P18K	Big Mountain,	52.34	36	P	P	21 24 49.9	0.0
	baz=268						
O18K	Koktuh Hills	52.37	36	P	P	21 24 52.1	+2.1
O18K				IAmb	IAmb	21 24 53.1	
	comp=Z,23nm,0.7s						
O18K	Koktuh Hills	52.37	36	P	P	21 24 49.7	-0.3
	baz=268						
L19K	White Mountain	52.67	33	P	P	21 24 53.1	+1.0
	baz=266						
BVAR	Borovoye Array	52.68	315	P	P	21 24 52.0	-0.4
	comp=Z,9.5nm,0.7s,baz=123,slow=7.3,SNR=59						
BVAR				ScP	ScP	21 29 06.2	-1.1
	comp=Z,1.1nm,0.5s,baz=165,slow=1.9,SNR=7.0						
BVAR				S	S	21 31 41.5	-2.8
	comp=Z,0.4nm,0.5s,baz=128,slow=9.6,SNR=4.0						
BVAR	Borovoye Array	52.68	315	P	P	21 24 52.0	-0.4
BRVK	Borovoye	52.74	316	ceP	P	21 24 52.7	-0.1
BRVK				pmax	pmax		
	comp=Z,14nm,1.0s						
BRVK	Borovoye	52.74	316	P	P	21 24 52.6	-0.1
BRVK				IAmb	IAmb	21 24 53.6	
	comp=Z,12nm,0.9s						
N19K	Bonanza Creek	52.77	35	P	P	21 24 53.1	+0.1
	baz=268						
O19K	Port Alsworth	52.83	36	P	P	21 24 52.2	-1.0
	baz=268						
SII	Sitkinak Islan	52.87	40	P	P	21 24 52.4	-1.3
	baz=271						
J20K	Nowinta River	53.14	31	P	P	21 24 57.1	+1.7
J20K				IAmb	IAmb	21 24 57.5	
	comp=Z,12nm,0.6s						
J20K	Nowinta River	53.14	31	P	P	21 24 55.7	+0.3
	baz=265,SNR=7.2						
L20K	Farewell, AK	53.14	33	P	P	21 24 55.7	+0.2
	baz=267						
A21K	Barrow	53.27	21	P	P	21 24 57.6	+1.3
A21K				IAmb	IAmb	21 25 16.4	
	comp=Z,48nm,1.4s						
A21K	Barrow	53.27	21	P	P	21 24 56.4	+0.2
	baz=258						
OHAK	Old Harbor	53.35	39	P	P	21 24 57.3	+0.3
	baz=271						
P19K	Oil Pt	53.36	36	P	P	21 24 57.8	+0.6
	baz=270						
IMAR	Indian Mountai	53.47	28	P	P	21 24 58.6	+0.8
O20K	Slope Mountain	53.67	36	P	P	21 24 59.7	+0.3
	baz=270						
KDAK	Kodiak Island	53.72	39	P	P	21 24 59.8	+0.2
KDAK				pmax	pmax		
	comp=Z,27nm,0.8s						
KDAK	Kodiak Island	53.72	39	P	P	21 24 59.8	+0.2
KDAK				IAmb	IAmb	21 25 00.4	
	comp=Z,27nm,0.8s						
KDAK	Kodiak Island	53.72	39	P	P	21 24 59.5	-0.2
	baz=271						
KKAR	Karatay Array	53.80	303	P	P	21 25 00.6	0.0
KKAR	Karatay Array	53.80	303	P	P	21 25 00.6	0.0
H21K	Melozitna Rive	53.83	29	P	P	21 25 01.9	+1.5
H21K	Melozitna Rive	53.83	29	P	P	21 25 01.1	+0.8
	baz=265						
SPCR	Spurr Chakacha	53.89	34	P	P	21 25 01.0	+0.1
	baz=269						
CHUM	Lake Minchumin	53.92	31	P	P	21 25 01.1	+0.1
	baz=267						
PPLA	Purkeypile	53.94	32	P	P	21 25 01.1	-0.3
	baz=268						
CAST	Castle Rocks	54.01	32	P	P	21 25 02.1	+0.5
	baz=268						
I21K	Tanana	54.14	29	P	P	21 25 02.4	-0.1
	baz=267						
BTK	Batken	54.19	299	P	P	21 25 03.2	-0.2
BTK				pmax	pmax		
	comp=Z,12nm,1.3s						
BTK	Batken	54.19	299	P	P	21 25 03.2	-0.2
AS31	Alice Springs	54.36	184	P	P	21 25 04.6	-0.1
ASAR	Alice Springs	54.36	184	P	P	21 25 04.3	-0.4
	comp=Z,3.4nm,0.6s,baz=12,slow=13,SNR=57						
ASAR	Alice Springs	54.36	184	P	P	21 25 04.4	-0.3
MBWA	Marble Bar	54.58	201	P	P	21 25 06.2	0.0
MLY	Manley	54.66	30	P	P	21 25 06.3	+0.1
	baz=268						
TRF	Thorofare Moun	54.81	32	P	P	21 25 07.3	-0.2
	baz=269						
CUT	Chulitna	54.82	33	P	P	21 25 07.6	+0.3
	baz=270						
M22K	Willow	54.89	34	P	P	21 25 08.2	+0.4
	baz=271						
PSA00	Pilbara Seismi	54.93	201	P	P	21 25 07.8	-0.9
RC01	Rabbit Creek A	55.09	34	P	P	21 25 09.7	+0.4
RC01				IAmb	IAmb	21 25 34.9	
	comp=Z,19nm,1.4s						
RC01	Rabbit Creek A	55.09	34	P	P	21 25 09.8	+0.5
	baz=272						
TOLK	Toolik Lake Re	55.30	25	P	P	21 25 11.5	+0.8
	baz=266						
NEA2	Nenana	55.36	30	P	P	21 25 11.6	+0.5
	baz=270						
PMR	Palmer	55.37	34	P	P	21 25 11.1	-0.1
	baz=272						
MCK	McKinley	55.42	31	P	P	21 25 11.7	+0.1
MCK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MCK	McKinley	55.42	31	P	P	21 25 11.7	+0.1
MCK	McKinley	55.42	31	P	P	21 25 11.8	+0.2
	baz=270						
WAT1	Susitna Watana	55.61	32	P	P	21 25 12.8	-0.2
	baz=271						
KNK	Knik Glacier	55.70	34	P	P	21 25 13.3	-0.3
	baz=272						
SML	Sawmill	55.74	33	P	P	21 25 13.7	-0.2
	baz=272						
CHGR	Chuyangaron	55.77	298	P	P	21 25 14.5	-0.1
PWL	Port Wells	55.78	35	P	P	21 25 14.0	-0.2
	baz=273						
H24K	Noodor Dome	55.87	29	P	P	21 25 15.5	+0.8
	baz=270						
TCOL	CIGO, UAF Yank	55.88	30	P	P	21 25 15.6	+0.9
	baz=270						
COLA	College	55.88	30	P	P	21 25 15.7	+1.0
	baz=270						
WAT6	Susitna Watana	55.99	33	P	P	21 25 16.1	+0.3
	baz=272						
POKR	Poker Plat Res	56.06	29	P	P	21 25 16.6	+0.6
	baz=271						
DHY	Denali Highway	56.13	32	P	P	21 25 16.7	-0.1
	baz=272						
SCM	Sheep Creek Mo	56.22	33	P	P	21 25 17.2	0.0
	baz=273						
HDA	Harding Lake	56.28	30	P	P	21 25 17.7	+0.1
	baz=272						
IL31		56.30	30	P	P	21 25 17.3	-0.3
ILAR	Eielson Array	56.30	30	P	P	21 25 17.2	-0.5
	comp=Z,1.9nm,0.7s,baz=260,slow=4.6,SNR=26						
ILAR	Eielson Array	56.30	30	P	P	21 25 17.5	-0.2
ILAR	Eielson Array	56.30	30	P	P	21 25 17.5	-0.2
WRKA	Warakurna	56.34	190	P	P	21 25 17.9	-0.6
GLI	Glacier Island	56.38	35	P	P	21 25 18.6	+0.3
	baz=274						
PRP	Porcupine Dome	56.85	29	P	P	21 25 22.5	+0.9
	baz=272						
Q23K	Middleton Isla	56.88	36	P	P	21 25 22.5	+0.8
	baz=276						
KLU	Klutina	56.91	34	P	P	21 25 22.8	+0.8
	baz=274						
KBL	Kabul	56.97	293	P	P	21 25 23.3	+0.2
KBL				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KBL	Kabul	56.97	293	P	P	21 25 23.3	+0.2
KBL				IAmb	IAmb	21 25 24.3	
	comp=Z,6.9nm,0.6s						
PAX	Paxson	57.01	32	P	P	21 25 23.4	+0.7
	baz=274						
EYAK	Cordova Ski Ar	57.07	35	P	P	21 25 23.8	+0.8
	baz=275						
BMAR	Burnt Mountain	57.16	27	P	P	21 25 25.5	+1.8
HARP	HAARP	57.20	33	P	P	21 25 24.6	+0.6
	baz=275						
RIDG	Independent Ri	57.24	31	P	P	21 25 25.1	+0.8
	baz=274						
EIDS	Eidsvold	57.35	166	P	P	21 25 25.7	+0.3
N25K	Chitina, Valde	57.53	34	P	P	21 25 27.2	+0.9
	baz=276						
BMRM	Bremner River	57.59	34	P	P	21 25 27.2	+0.5
	baz=276						
SCRK	Sand Creek	57.60	31	P	P	21 25 27.2	+0.4
SCRK				IAmb	IAmb	21 25 27.9	
	comp=Z,8.5nm,0.6s						
SCRK	Sand Creek	57.60	31	P	P	21 25 26.9	+0.1
	baz=275,SNR=6.1						
J26L	Joseph Creek	57.74	30	P	P	21 25 27.7	0.0
	baz=275,SNR=9.0						
MENT	Mentasta	57.81	32	P	P	21 25 29.5	+1.3
MENT				IAmb	IAmb	21 25 34.1	
	comp=Z,23nm,1.3s						
L26K	Log Cabin Wild	57.97	32	P	P	21 25 30.4	+1.2
	baz=276						
PALK	Pallekele	58.18	259	P	P	21 25 31.5	+0.1
PALK				pmax	pmax		
	comp=Z,33nm,1.4s						
PALK	Pallekele	58.18	259	P	P	21 25 31.5	+0.1
PALK				IAmb	IAmb	21 25 41.9	
	comp=Z,33nm,1.4s						
M26K	Nabesna, AK	58.20	33	P	P	21 25 31.6	+0.8
	baz=276						
MCARA	McCarthy VSAT	58.30	34	P	P	21 25 32.3	+0.8
	baz=277						
CRQE	Cirque	58.35	35	P	P	21 25 33.0	+1.0
	baz=277						
OOD	Oodnadatta	58.38	182	P	P	21 25 32.4	+0.1
L27K	Beaver Creek,	58.65	32	P	P	21 25 34.7	+0.8
	baz=277						
BCAR	Beaver Creek A	58.67	32	P	P	21 25 35.2	+1.2
M27K	Edge Creek, AK	58.72	33	P	P	21 25 35.3	+0.8
	baz=277						
EGAK	Eagle	58.74	30	P	P	21 25 34.6	+0.2
EGAK	Eagle	58.74	30	P	P	21 25 34.9	+0.5
	baz=277						
MESA	MESA	58.99	35	P	P	21 25 36.6	+0.2
	baz=279						
ARU	Arti	59.10	320	P	P	21 25 36.5	-0.4
	comp=Z,3.3nm,0.4s,baz=91,slow=5.0,SNR=22						
ARU	Arti	59.10	320	di P	P	21 25 35.7	-1.2
ARU				S	S	21 33 08.2	+0.7
ARU				SS	SS	21 37 08.5	-2.1
ARU				pmax	pmax		
	comp=Z,41nm,2.5s						
ARU	Arti	59.10	320	P	P	21 25 36.4	-0.6
ARU				IAmb	IAmb	21 25 37.3	
	comp=Z,14nm,0.9s						
CTG	Chitna Glacier	59.17	34	P	P	21 25 37.8	+0.3
	baz=279						
BVCY	Beaver Creek	59.18	32	P	P	21 25 38.0	+0.6
	baz=278						
NOUC	Port Laguerre	59.34	149	P	P	21 25 40.3	+1.3
DZM	Mont Dzumac	59.38	149	P	P	21 25 40.7	+1.3
DZM				IAmb	IAmb	21 25 41.7	
	comp=Z,12nm,0.8s						
DZM	Mont Dzumac	59.38	149	P	P	21 25 41.1	+1.7
YUK3	Moose Creek	59.46	33	P	P	21 25 39.8	+0.2
	baz=279						
DAWY	Dawson	59.60	30	P	P	21 25 40.7	+0.5
	baz=278						
ABKAR	Akbulak array	59.73	312	P	P	21 25 41.0	-0.3
ABKAR	Akbulak array	59.73	312	P	P	21 25 41.1	-0.3
ABKAR				IAmb	IAmb	21 25 41.8	
	comp=Z,17nm,0.6s						
OUENC	Ouen Island, N	59.86	149	P	P	21 25 43.6	+1.1
I29M	Ogilvie Camp,	59.86	29	P	P	21 25 42.6	+0.6
	baz=279						
EPYK	Eagle Plains	60.35	28	P	P	21 25 46.6	+1.3
EPYK	Eagle Plains	60.35	28	P	P	21 25 46.0	+0.7
	baz=280						
MULG	Mulgathing	60.92	184	P	P	21 25 49.0	-0.4
LCRK	Leigh Creek	60.98	180	P	P	21 25 50.4	+0.6
INK	Inuvik	61.22	25	P	P	21 25 51.4	+0.6
	comp=Z,5.3nm,0.3s,baz=274,slow=5.0,SNR=53						
INK	Inuvik	61.22	25	P	P	21 25 51.5	+0.6
INK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
INK	Inuvik	61.22	25	P	P	21 25 51.5	+0.6
INK				IAmb	IAmb	21 25 51.8	
	comp=Z,7.4nm,0.5s						
INK	Inuvik	61.22	25	P	P	21 25 51.2	+0.4
	baz=281						
N31M	Braeburn, Yuko	61.71	33	P	P	21 25 53.8	-0.5
	baz=283						
FORT	Forrest	62.01	190	P	P	21 25 56.7	+0.2
M31M	Drury Creek, Y	62.19	32	P	P	21 25 57.0	-0.4
	baz=284						
WHY	Whitehorse	62.33	34	P	P	21 25 58.3	-0.2
	baz=284						
HRA	Herat	62.34	295	P	P	21 25 59.3	+0.1
HRA				IAmb	IAmb	21 25 59.8	
	comp=Z,4.7nm,0.6s						
ARMA	Armidale	62.35	167	P	P	21 25 59.2	+0.3
ARMA				IAmb	IAmb	21 26 03.7	
	comp=Z,21nm,1.4s						
STKA	Stephens Creek	62.51	176	P	P	21 26 00.0	+0.2
	comp=Z,4.1nm,0.6s,baz=326,slow=8.9,SNR=13						
STKA	Stephens Creek	62.51	176	P	P	21 25 59.6	-0.2
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
STKA	Stephens Creek	62.51	176	P	P	21 25 59.6	-0.2
A36M	Sachs Harbour	63.06	20	P	P	21 26 04.0	+1.2
A36M				IAmb	IAmb	21 26 04.7	
	comp=Z,9.2nm,0.8s						
A36M	Sachs Harbour	63.06	20	P	P	21 26 03.9	+1.0
	baz=287						
MORW	Morawa	63.12	201	P	P	21 26 03.6	-0.2
MORW				IAmb	IAmb	21 26 24.7	
	comp=Z,15nm,1.1s						
MORW	Morawa	63.12	201	P	P	21 26 03.4	-0.4
BBOO	Buckleboo	63.36	182	P	P	21 26 05.1	-0.2
BBOO				IAmb	IAmb	21 26 11.9	
	comp=Z,27nm,1.4s						
BBOO	Buckleboo	63.36	182	P	P	21 26 06.1	+0.8
KIRV	Kirov	63.42	324	ceP	P	21 26 05.9	+0.6
P33M	Teslin, Yukon	63.44	34	P	P	21 26 06.5	+0.9
	baz=286						
BLDU	Ballidu	64.36	200	P	P	21 26 11.5	-0.2
DLBC	Dease Lake	65.34	35	P	P	21 26 19.3	+1.6
	comp=Z,5.4nm,0.9s,baz=27,slow=25,SNR=6.2						
DLBC	Dease Lake	65.34	35	P	P	21 26 18.6	+0.9
DLBC				IAmb	IAmb	21 26 27.6	
	comp=Z,24nm,1.5s						
BELG	Belogornoye	66.32	318	i P	P	21 26 24.4	+0.6
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NWAO	Narrogin (SRO)	66.38	199	P	P	21 26 24.3	-0.1
CAN	Canberra	66.68	170	P	P	21 26 26.8	+0.5
CAN				pmax	pmax		
	comp=Z,40nm,1.4s						
CAN	Canberra	66.68	170	P	P	21 26 26.8	+0.5
EUNU	Eureka	66.69	8	P	P	21 26 26.4	+0.6
EUNU				IAmb	IAmb	21 26 27.3	
	comp=Z,4.6nm,0.7s						
ARCES	ARCESS Array B	68.70	340	P	P	21 26 38.8	+0.5
	comp=Z,8.8nm,0.9s,baz=54,slow=6.8,SNR=8.2						
ARCES	ARCESS Array B	68.70	340	P	P	21 26 38.6	+0.3
ARCES				pmax	pmax		
	comp=Z,36nm,1.4s						
ARCES	ARCESS Array B	68.70	340	P	P	21 26 38.6	+0.3
RES	Resolute Bay	69.28	13	P	P	21 26 42.5	+0.9
	comp=Z,2.1nm,0.7s,baz=313,slow=8.6,SNR=8.1						
RES	Resolute Bay	69.28	13	P	P	21 26 42.3	+0.7
RES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RES	Resolute Bay	69.28	13	P	P	21 26 42.3	+0.7
YKA	Yellowknife Ar	70.63	28	P	P	21 26 50.1	+0.2
	comp=Z,6.2nm,0.8s,baz=297,slow=6.1,SNR=70						
YKA	Yellowknife Ar	70.63	28	P	P	21 26 49.9	0.0
LKRN	Lenkeran, Azer	70.78	304	P	P	21 26 51.4	+0.2
SEKA	Sheki	70.85	307	P	P	21 26 51.7	0.0
ZKTA	Zakatala	71.06	308	P	P	21 26 53.3	+0.4
MNGR	Mingechevir, A	71.11	307	P	P	21 26 53.5	+0.4
OBN	Obninsk	71.24	323	⇓eP	P	21 26 53.9	+0.3
OBN				e*PP	pP	21 28 33.1	+2.3
OBN				e		21 29 44.4	
OBN				ePPP	PPP	21 31 28.7	
OBN				eS	SKSac	21 36 03.9	-7.4
OBN				pmax	pmax		
	comp=Z,18nm,0.4s						
GANJ	Ganja	71.69	307	P	P	21 26 56.9	+0.3
KBZ	Khabaz	72.65	311	P	P	21 27 02.3	+0.2
	comp=Z,9.2nm,0.8s,baz=86,slow=3.3,SNR=25						
KBZ	Khabaz	72.65	311	ceP	P	21 27 02.8	+0.7
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KIV	Kislovodsk	72.69	311	eP	P	21 27 03.8	+1.3
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV	Kislovodsk	72.69	311	P	P	21 27 02.8	+0.4
KIV				IAmb	IAmb	21 27 04.4	
	comp=Z,8.0nm,0.8s						
ONI	Oni	72.79	310	P	P	21 27 03.4	+0.4
ONI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ONI	Oni	72.79	310	P	P	21 27 03.4	+0.4
FIA1	FINESS Array S	72.86	332	P	P	21 27 02.5	-0.4
FINES	FINESS Array B	72.86	332	P	P	21 27 02.7	-0.2
	comp=Z,3.4nm,0.5s,baz=59,slow=6.1,SNR=35						
NAX	Nakhchivan	72.89	306	P	P	21 27 03.8	+0.1
NLWA	Neilton Lookou	73.13	45	P	P	21 27 06.2	+1.3
NLWA				IAmb	IAmb	21 27 21.2	
	comp=Z,23nm,1.2s						
A04D	Lummi Island	73.21	43	P	P	21 27 05.7	+0.5
	baz=298						
D03D	Eldon	73.53	44	P	P	21 27 07.8	+0.7
	baz=298						
B05A	Bryant	73.78	43	P	P	21 27 08.9	+0.3
	baz=298						
E04D	Cinebar	74.31	45	P	P	21 27 12.5	+1.0
	baz=298						
F04A	Amboy	74.69	45	P	P	21 27 15.0	+1.2
KEBM	Edson Butte	74.94	49	P	P	21 27 17.0	+1.7
BUCK	Buck Mountain	75.17	47	P	P	21 27 18.4	+1.8
I03D	Drain, OR	75.18	48	P	P	21 27 18.0	+1.4
	baz=299						
F05D	White Salmon	75.30	45	P	P	21 27 18.2	+0.9
	baz=299						
B08A	Colville Reser	75.35	42	P	P	21 27 17.9	+0.5
B08A				IAmb	IAmb	21 27 19.3	
	comp=Z,9.0nm,0.8s						
K02D	Willamette Mer	75.45	49	P	P	21 27 18.9	+0.7
	baz=299						
DBO	Dodson Butte	75.52	48	P	P	21 27 19.9	+1.3
DBO				IAmb	IAmb	21 27 21.0	
	comp=Z,7.5nm,0.7s						
GURO	Guroymak-BITLI	75.59	306	P	P	21 27 19.4	+0.3
G05D	Wamic, OR	75.71	46	P	P	21 27 20.4	+0.9
	baz=300						
I04A	Tendick Farm,	75.73	47	P	P	21 27 20.9	+1.2
	baz=299						
MIB	Mutribah	75.75	296	eP	P	21 27 18.6	-1.4
MNK	Minsk	75.89	326	i P	P	21 27 06.2	-14
MNK				i *PP	pP	21 28 45.9	-13
MNK				i *SP	sP	21 29 34.2	-13
MNK				pmax	pmax		
	comp=N,12nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MNK	Minsk	75.89	326	i P	P	21 27 06.2	-14
	comp=E,2.0nm,0.9s						
MNK				i P	P	21 27 06.2	-14
	comp=N,12nm,0.9s						
MNK				i P	P	21 27 06.2	-14
	comp=Z,8.0nm,0.8s,baz=236						
MNK				i pP	pP	21 28 45.9	-13
MNK				i sP	sP	21 29 34.3	-13
MNK				i PP	PP	21 30 03.9	-14

MNK				*i* PPP	PPP	21 31 53.5	
MNK				*i* S	S	21 36 09.7	-15
MNK				*i* sS	sS	21 39 09.1	-12
MNK				*i* SS	SS	21 41 15.9	-12
MNK				*i* SSS	SSS	21 44 42.9	
MNK				*i* LRM	MLR	22 03 32.6	
MNK				*i* LRM	MLR	22 03 32.6	
MNK				*i* LRM	MLR	22 03 32.6	
RDF	Al-Radifah	75.99	295	*e*P	P	21 27 20.4	-1.0
EDM	Edmonton	76.05	36	P	P	21 27 21.4	+0.1
EDM				pmax	pmax		
	comp=Z,12nm,0.8s						
EDM	Edmonton	76.05	36	P	P	21 27 21.4	+0.1
EDM				IAmb	IAmb	21 27 22.8	
	comp=Z,12nm,0.8s						
I05D	Terrebonne, OR	76.14	47	P	P	21 27 22.9	+1.0
	baz=300						
RST	Umm Al-Ruwaisa	76.15	296	*e*P	P	21 27 20.8	-1.4
J04D	Umpqua Nationa	76.19	48	P	P	21 27 23.5	+1.0
	baz=299						
HAWA	Hanford	76.22	44	P	P	21 27 23.3	+1.1
HAWA				IAmb	IAmb	21 27 24.4	
	comp=Z,14nm,1.2s						
YBH	Yreka Blue Hor	76.54	49	P	P	21 27 25.7	+1.4
	comp=Z,3.6nm,0.7s,baz=38,slow=2.4,SNR=8.0						
L04D	Klamath Falls	76.57	49	P	P	21 27 25.5	+1.0
	baz=300						
M02C	Callahan	76.61	50	P	P	21 27 25.5	+0.8
	baz=299						
NEW	Newport	76.67	42	P	P	21 27 25.6	+0.8
NEW				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NEW	Newport	76.67	42	P	P	21 27 25.6	+0.8
NEW				IAmb	IAmb	21 27 26.6	
	comp=Z,8.3nm,0.8s						
K04D	Chiloquin, OR	76.72	48	P	P	21 27 26.2	+0.9
	baz=300						
J05D	Fort Rock, OR	76.72	47	P	P	21 27 26.5	+1.2
	baz=300						
SUMG	Summit	76.80	359	P	P	21 27 26.4	+0.9
SUMG				pmax	pmax		
	comp=Z,13nm,1.5s						
SUMG	Summit	76.80	359	*i* P	P	21 27 26.0	+0.5
SUMG	Summit	76.80	359	P	P	21 27 26.4	+0.9
SUMG				IAmb	IAmb	21 27 41.3	
	comp=Z,13nm,1.5s						
N02D	Trinity Center	76.92	50	P	P	21 27 27.2	+0.8
	baz=300						
M04C	Macdoel	77.08	49	P	P	21 27 28.5	+1.2
	baz=300						
PABE	Paberze	77.17	328	P	P	21 27 27.6	+0.3
O02D	Mt. Diablo Mer	77.25	51	P	P	21 27 29.3	+1.0
	baz=300						
AKASG	Malin Array Be	77.31	322	P	P	21 27 27.5	-0.7
	comp=Z,2.0nm,0.4s,baz=52,slow=5.6,SNR=13						
AKASG	Malin Array Be	77.31	322	*i* P	P	21 27 27.5	-0.7
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKBB	Malin Array Si	77.31	322	P	P	21 27 27.7	-0.5
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKBB	Malin Array Si	77.31	322	P	P	21 27 27.7	-0.5
AKBB				IAmb	IAmb	21 27 28.1	
	comp=Z,4.4nm,0.5s						
O03E	Paynes Creek	77.85	50	P	P	21 27 31.8	+0.4
	baz=300						
WALA	Waterton Lakes	78.03	40	P	P	21 27 32.7	+0.4
WALA				IAmb	IAmb	21 27 34.3	
	comp=Z,8.4nm,0.7s						
BMO	Blue Mountains	78.35	45	P	P	21 27 34.8	+0.7
BMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BMO	Blue Mountains	78.35	45	P	P	21 27 34.8	+0.7
ORV	Oroville	78.42	51	P	P	21 27 34.7	+0.2
ORV				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ORV	Oroville	78.42	51	P	P	21 27 34.7	+0.2
BKZ	Black Stump Fm	78.42	150	P	P	21 27 34.1	-0.2
BKZ				IAmb	IAmb	21 28 00.8	
	comp=Z,20nm,1.2s						
JTMT	Jette	78.55	41	P	P	21 27 36.0	+0.8
JTMT				IAmb	IAmb	21 27 37.2	
	comp=Z,12nm,1.1s						
SOCY	Socotra	78.61	277	P	P	21 27 33.9	-2.1
NOA	NORSAR Array B	78.67	337	P	P	21 27 35.1	-0.3
	comp=Z,0.6nm,0.7s,baz=43,slow=5.3,SNR=2.0						
MSO	Missoula	79.25	42	P	P	21 27 39.6	+0.7
	baz=304						
BSWZ	Blackbirch Sta	79.52	153	P	P	21 27 39.5	-0.5
PNTR	Pine Nut	79.93	50	P	P	21 27 43.5	+0.8
PNTR				IAmb	IAmb	21 27 46.2	
	comp=Z,6.9nm,0.6s						
CMB	Columbia Colle	79.95	52	P	P	21 27 43.0	+0.3
CMB				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMB	Columbia Colle	79.95	52	P	P	21 27 43.0	+0.3
MFID	Camas Ranch	80.02	45	P	P	21 27 43.9	+0.9
MFID				IAmb	IAmb	21 27 45.3	
	comp=Z,9.4nm,1.2s						
RAYN	Ar Rayn	80.17	291	P	P	21 27 44.0	-0.1
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RAYN	Ar Rayn	80.17	291	P	P	21 27 44.0	-0.1
HRY	Holter Researc	80.52	41	P	P	21 27 46.7	+1.1
BR131	Keskin Array S	80.64	311	P	P	21 27 45.9	-0.5
BR131				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BR131	Keskin Array S	80.64	311	P	P	21 27 45.9	-0.5
BRTR	Keskin Array B	80.64	311	P	P	21 27 46.0	-0.5
	comp=Z,1.8nm,0.8s,baz=114,slow=4.2,SNR=9.3						
BRTR				PP	PP	21 30 58.4	+0.8
	comp=Z,0.7nm,0.9s,baz=19,slow=7.9,SNR=3.6						
BRTR	Keskin Array B	80.64	311	*i* P	P	21 27 46.5	+0.1
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	80.64	311	P	P	21 27 46.5	+0.1
LRM	Limekiln Ridge	80.67	42	P	P	21 27 47.6	+1.0
HLID	Hailey	80.80	45	P	P	21 27 48.0	+0.8
HLID	Hailey	80.80	45	P	P	21 27 47.7	+0.6
	baz=304						
RYN	Ryan	80.88	50	P	P	21 27 48.9	+1.2
EGMT	Eagleton	80.89	39	P	P	21 27 48.3	+0.8
EGMT	Eagleton	80.89	39	P	P	21 27 48.4	+0.9
	baz=306						
KVN	Kaiserville	80.94	50	P	P	21 27 48.8	+0.8
KVN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KVN	Kaiserville	80.94	50	P	P	21 27 48.8	+0.8
KVN				IAmb	IAmb	21 27 49.8	
	comp=Z,7.5nm,0.7s						
NVAR	Mina Array Bea	81.13	51	P	P	21 27 50.0	+0.9
	comp=Z,3.7nm,0.6s,baz=290,slow=5.3,SNR=29						
NV11	Mina Array Sit	81.23	50	P	P	21 27 50.4	+0.9
BURAR	Bucovina Array	81.23	321	P	P	21 27 49.5	+0.2
BOZ	Bozeman (W)	81.28	42	P	P	21 27 50.6	+1.0
BOZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BOZ	Bozeman (W)	81.28	42	P	P	21 27 50.5	+1.0
BOZ				IAmb	IAmb	21 27 51.5	
	comp=Z,6.6nm,0.7s						
BOZ	Bozeman (W)	81.28	42	P	P	21 27 50.5	+1.0
	baz=306,SNR=10						
QLMT	Earthquake Lak	81.83	42	P	P	21 27 53.9	+1.3
ELK	Elko	81.86	47	P	P	21 27 54.1	+1.3
	comp=Z,2.0nm,0.5s,baz=316,slow=4.1,SNR=16						
ELK	Elko	81.86	47	P	P	21 27 53.9	+1.1
ELK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ELK	Elko	81.86	47	P	P	21 27 53.9	+1.1
TIN	Tinemaha, Big	81.92	52	P	P	21 27 53.9	+0.8
	baz=303						
PKM	Mcpherson Peak	81.99	54	P	P	21 27 54.1	+0.6
	baz=302						
LCH	Last Change Ra	82.22	51	P	P	21 27 55.3	+0.7
LCH				IAmb	IAmb	21 27 56.3	
	comp=Z,5.9nm,0.7s						
CWC	Cottonwood Cre	82.35	52	P	P	21 27 55.3	0.0
	baz=303						
ISA	Isabella, Lake	82.50	53	P	P	21 27 56.3	+0.3
	baz=303						
ARVC	Arvin	82.54	54	P	P	21 27 57.1	+1.0
	baz=303						
H17A	Grant Village	82.58	42	P	P	21 27 59.3	+2.8
	baz=306,SNR=12						
YMP	Mirror Lake Pl	82.62	42	P	P	21 27 58.2	+1.5
YMP				IAmb	IAmb	21 27 59.5	
	comp=Z,7.4nm,0.9s						
MOOW	Moose Ponds	82.87	43	P	P	21 27 59.6	+1.8
RLMT	Red Lodge	82.90	41	P	P	21 27 59.2	+1.2
RLMT				IAmb	IAmb	21 28 00.3	
	comp=Z,5.4nm,0.8s						
RLMT	Red Lodge	82.90	41	P	P	21 27 59.0	+1.0
	baz=307,SNR=7.8						
MPMC	Manual Prospec	82.96	52	P	P	21 27 58.9	+0.5
	baz=303,SNR=5.1						
R11A	Troy Canyon, C	82.97	49	P	P	21 27 59.1	+0.7
	baz=304,SNR=5.6						
FURC	Furnace Creek,	83.16	52	P	P	21 27 59.9	+0.8
	baz=304						
EDW2	Edwards Air Fo	83.25	53	P	P	21 28 00.6	+0.9
	baz=303,SNR=5.8						
TPNV	Topopah Spring	83.31	51	P	P	21 28 01.1	+1.0
TPNV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TPNV	Topopah Spring	83.31	51	P	P	21 28 01.1	+1.0
TPNV				IAmb	IAmb	21 28 01.7	
	comp=Z,6.8nm,0.8s						
TPNV	Topopah Spring	83.31	51	P	P	21 28 00.9	+0.8
	baz=304,SNR=8.0						
FRB	Frobisher Bay	83.41	11	P	P	21 27 59.9	0.0
	comp=Z,3.0nm,0.5s,baz=352,slow=6.8,SNR=10						
DGMT	Dagmar	83.53	36	P	P	21 28 01.5	+0.6
	baz=310						
LAO	LASA Array	83.61	39	P	P	21 28 01.9	+0.6
	baz=309						
DUG	Dugway, Tooele	83.69	47	P	P	21 28 02.7	+0.7
DUG				pmax	pmax		
	comp=Z,15nm,1.4s						
DUG	Dugway, Tooele	83.69	47	P	P	21 28 02.7	+0.7
DUG				IAmb	IAmb	21 28 04.2	
	comp=Z,15nm,1.4s						
DUG	Dugway, Tooele	83.69	47	P	P	21 28 02.9	+1.0
	baz=305,SNR=6.3						
CIS	Catalina Islan	83.76	55	P	P	21 28 03.3	+1.1
	baz=303						
BFSC	Mount Baldy Ra	83.84	54	P	P	21 28 03.8	+1.0
	baz=303						
GSC	Goldstone, Bar	83.84	52	P	P	21 28 03.3	+0.6
	baz=304,SNR=5.1						
BW06	Boulder Array	84.15	43	P	P	21 28 04.7	+0.4
	baz=307						
PD31	Pinedale Array	84.15	43	P	P	21 28 05.0	+0.7
PDAR	Pinedale Array	84.15	43	P	P	21 28 04.7	+0.4
	comp=Z,2.4nm,0.9s,baz=360,slow=0.8,SNR=14						
PDAR	Pinedale Array	84.15	43	P	P	21 28 04.9	+0.6
SHPR	Sheep Range	84.28	51	P	P	21 28 06.0	+1.0
SHPR				IAmb	IAmb	21 28 06.9	
	comp=Z,5.2nm,0.8s						
HEC	Hector,Ludlow	84.42	53	P	P	21 28 06.2	+0.6
	baz=304,SNR=5.0						
GMRC	Granite Mounta	84.91	52	P	P	21 28 08.5	+0.4
	baz=304						
PFO	Pinyon Flats O	85.01	54	P	P	21 28 09.2	+0.6
	comp=Z,11nm,0.8s,baz=321,slow=7.2,SNR=11						
PFO	Pinyon Flats O	85.01	54	P	P	21 28 08.9	+0.3
PFO				pmax	pmax		
	comp=Z,16nm,1.0s						
PFO	Pinyon Flats O	85.01	54	P	P	21 28 08.9	+0.3
PFO	Pinyon Flats O	85.01	54	P	P	21 28 09.0	+0.5
	baz=304,SNR=5.4						
TPFO	Pinon Flats	85.02	54	P	P	21 28 09.2	+0.6
	baz=304						
BELC	Belle Mtn. Jos	85.11	53	P	P	21 28 10.1	+1.0
	baz=304						
MONP2	Monument Peak	85.44	54	P	P	21 28 10.8	0.0
	baz=304						
IKP	In-Ko-Pah, Jac	85.79	54	P	P	21 28 12.9	+0.6
	baz=304						
SWSC	Sam W. Stewart	85.84	54	P	P	21 28 13.1	+0.6
	baz=304						
K22A	Casper	85.98	42	P	P	21 28 13.6	+0.4
	baz=309						
MDND	Maddock	86.24	35	P	P	21 28 14.8	+0.7
	baz=314						
RSSD	Black Hills	86.44	40	P	P	21 28 15.7	+0.3
	baz=311						
GLA	Glamis	86.46	53	P	P	21 28 15.9	+0.4
	baz=305						
N23A	Red Feather La	87.43	43	P	P	21 28 21.1	+0.9
	baz=310						
ISCO	Idaho Springs	88.32	44	P	P	21 28 25.0	+0.6
	baz=310						
ECSD	EROS Data Cent	90.62	36	P	P	21 28 35.1	+0.5
	baz=316						
T25A	Trinidad	90.75	45	P	P	21 28 35.8	+0.1
	baz=311						
ANMO	Albuquerque	90.88	48	P	P	21 28 38.0	+1.8
	comp=Z,2.4nm,0.9s,baz=318,slow=3.6,SNR=6.8						
ANMO	Albuquerque	90.88	48	P	P	21 28 37.4	+1.1
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ANMO	Albuquerque	90.88	48	P	P	21 28 37.4	+1.1
ANMO				IAmb	IAmb	21 28 39.0	
	comp=Z,7.3nm,1.4s						
ANMO	Albuquerque	90.88	48	P	P	21 28 37.3	+1.1
	baz=309						
121A	Cookes Peak, D	91.53	50	P	P	21 28 39.7	+0.4
	baz=309						
AMTX	Amarillo	93.90	45	P	P	21 28 51.0	+1.0
	baz=312						
KSU1	Kansas State U	93.92	39	P	P	21 28 50.1	+0.2
	baz=316						
TXAR	Lajitas Array	96.29	51	P	P	21 29 02.0	+1.1
	comp=Z,0.5nm,0.5s,baz=292,slow=3.1,SNR=7.4						
TXAR	Lajitas Array	96.29	51	P	P	21 29 02.0	+1.1
NHSC	New Hope	106.92	33	P	PKiKP	21 33 55.8	+0.7
	baz=326						
LPAZ	La Paz	152.23	64	PKPbc	PKiKP	21 35 26.8	+0.3
	comp=Z,1.1nm,0.5s,baz=0.0,slow=2.0,SNR=6.4						

MAN 26 21:23:33.4, 7°.81N×125°.39E, h1^{km}, mb4.4, ML3.2, MS3.0, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	Davao City--Mi	0.73	171	⇑*e*P	Pb	21 23 48.6	-0.3
DMPH				*e*S	Sn	21 24 02.2	-0.5
KCP	Kidapawan	0.85	201	⇓*e*P	Pg	21 23 48.8	-1.0
MATI	Mati	1.21	135	⇑*i*P	Pg	21 23 53.9	-2.8
MATI				*i* S	Sn	21 24 15.2	+0.7
PAGZ	Pagadian	1.99	271	⇓*e*P	Pn	21 24 08.0	-0.2
PAGZ				*e*S	Sb	21 24 35.0	-0.7

KMA 26 21:38:27.4±0.1, 35°.75N×129°.36E, h6^{km}, Error ellipse: s-maj=1.0km s-min=0.4km az=283.0, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSUSN	Ulsan	0.20	257	P	Pg	21 38 32.2	+0.8
	SNR=656						
KSDAG	Daegu	0.38	273	P	Pg	21 38 35.3	+0.6
	SNR=253						
KSYOC	YEONGCHEON	0.40	304	P	Pg	21 38 35.8	+0.6
	SNR=46						
KSPHA	Pohang	0.44	1	P	Pg	21 38 36.4	+0.4
	SNR=62						
KSBUS	Busan	0.54	202	P	Pg	21 38 37.9	+0.1
	SNR=69						
MIYA	Miryang-si	0.56	243	P	Pg	21 38 38.6	+0.3
	SNR=25						
KSBSA	Busan_acc	0.70	203	P	Pg	21 38 40.9	+0.1
	SNR=16						
KSADO	Andong	0.74	333	P	Pg	21 38 41.7	0.0
	SNR=158						
KSMAS	Masan	0.86	228	P	Pg	21 38 43.8	-0.2
	SNR=55						
KSULJ	Uljin	0.95	2	P	Pg	21 38 45.3	-0.4
	SNR=112						
KSULJ	Uljin	0.95	2	P	Pg	21 38 45.3	-0.4
	SNR=112						
EURB	Uiryeong-eup	0.97	244	P	Pg	21 38 45.7	-0.4
	SNR=34						
EURB	Uiryeong-eup	0.97	244	P	Pg	21 38 45.7	-0.4
	SNR=34						
KUJA	Jangpyeong	1.06	216	P	Pg	21 38 47.1	-0.5
	SNR=8.4						
KUJA	Jangpyeong	1.06	216	P	Pg	21 38 47.1	-0.5
	SNR=8.4						
KSGIC	Gimchen	1.07	288	P	Pg	21 38 47.6	-0.4
	SNR=13						
KSGIC	Gimchen	1.07	288	P	Pg	21 38 47.6	-0.4
	SNR=13						
KSSAJ	Sangju	1.18	304	P	Pg	21 38 49.4	-0.5
	SNR=24						
KSSAJ	Sangju	1.18	304	P	Pg	21 38 49.4	-0.5
	SNR=24						
KSKCH	Geochang	1.18	264	P	Pg	21 38 49.3	-0.8
	SNR=44						
KSKCH	Geochang	1.18	264	P	Pg	21 38 49.3	-0.8
	SNR=44						
KSCPR	CHUPUNGNYEONG	1.22	293	P	Pg	21 38 50.1	-0.8
	SNR=24						
KSCPR	CHUPUNGNYEONG	1.22	293	P	Pg	21 38 50.1	-0.8
	SNR=24						
HAMB	Hamyang	1.34	260	P	Pn	21 38 52.0	-0.6
	SNR=24						
HAMB	Hamyang	1.34	260	P	Pn	21 38 52.0	-0.6
	SNR=24						
KSMGY	Mungyeong	1.39	311	P	Pn	21 38 52.6	-0.8
	SNR=19						
KSMGY	Mungyeong	1.39	311	P	Pn	21 38 52.6	-0.8
	SNR=19						
OKCB	Cheongsan-myeo	1.40	296	P	Pn	21 38 53.4	-0.2
	SNR=22						
OKCB	Cheongsan-myeo	1.40	296	P	Pn	21 38 53.4	-0.2
	SNR=22						
KSTBA	Taebaek	1.41	347	P	Pn	21 38 53.5	-0.2
	SNR=65						
KSTBA	Taebaek	1.41	347	P	Pn	21 38 53.5	-0.2
	SNR=65						
KSHAD	HADONG	1.46	243	P	Pn	21 38 54.0	-0.4
	SNR=23						
KSHAD	HADONG	1.46	243	P	Pn	21 38 54.0	-0.4
	SNR=23						
KSBON	Boeun	1.47	301	P	Pb	21 38 55.3	+0.1
	SNR=28						
KSBON	Boeun	1.47	301	P	Pb	21 38 55.3	+0.1
	SNR=28						
IMWB	Imwonan-gil	1.49	359	P	Pn	21 38 54.7	0.0
	SNR=10						
IMWB	Imwonan-gil	1.49	359	P	Pn	21 38 54.7	0.0
	SNR=10						
GWYB	Gwangyang	1.58	240	P	Pn	21 38 56.2	+0.2
	SNR=16						
GWYB	Gwangyang	1.58	240	P	Pn	21 38 56.2	+0.2
	SNR=16						
KSCHJ	Chungju	1.59	315	P	Pb	21 38 56.7	-0.5
	SNR=24						
KSCHJ	Chungju	1.59	315	P	Pb	21 38 56.7	-0.5
	SNR=24						
KSYOW	Yeongwol	1.60	333	P	Pn	21 38 56.6	+0.3
	SNR=5.4						
KSYOW	Yeongwol	1.60	333	P	Pn	21 38 56.6	+0.3
	SNR=5.4						
NAWB	Namwon	1.64	259	P	Pn	21 38 57.0	+0.3
	SNR=23						
NAWB	Namwon	1.64	259	P	Pn	21 38 57.0	+0.3
	SNR=23						
KSJEO	Jeonju	1.69	277	P	Pn	21 38 58.0	+0.4
	SNR=84						
KSJEO	Jeonju	1.69	277	P	Pn	21 38 58.0	+0.4
	SNR=84						
KSJEU	Jeongeup	2.00	263	P	Pb	21 39 03.0	-1.2
	SNR=17						
KSJEU	Jeongeup	2.00	263	P	Pb	21 39 03.0	-1.2
	SNR=17						
BOSB	Boseong-gun	2.02	241	P	Pn	21 39 03.0	+1.1
	SNR=34						
BOSB	Boseong-gun	2.02	241	P	Pn	21 39 03.0	+1.1
	SNR=34						
KSKWJ	Gwangju	2.02	254	P	Pn	21 39 03.1	+1.0
	SNR=32						
KSKWJ	Gwangju	2.02	254	P	Pn	21 39 03.1	+1.0
	SNR=32						
KOHB	KOHEUNG	2.05	237	P	Pb	21 39 03.9	-1.1
	SNR=35						
KOHB	KOHEUNG	2.05	237	P	Pb	21 39 03.9	-1.1
	SNR=35						

BJI ***26*** *22:11:05.0±0.0, 9°.28N×126°.36E, h28^{km}, mB5.2/44, mb5.1/79, Ms4.5/48, Ms7 4.3/44*

MAN ***26*** *22:11:15.3, 10°.01N×126°.17E, h29^{km}, mb5.8, ML4.8, MS5.2*

GCMT ***26*** *22:11:16.3±0.3, 9°.95N±0°.02×126°.22E±0°.02, h43^{km}±1^{km}, MW5.0/68, Moment Tensor Solution. s54,c67; s68,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.91±.19; $M_{\theta\theta}$0.80±.13; $M_{\phi\phi}$-4.71±.12; $M_{r\theta}$0.91±.10; $M_{\theta\phi}$-0.29±.09; $M_{\phi r}$1.19±.13; Best double couple: $M_0$4.59400×10^{16} NP1:ϕ_s169.00000°, δ39.00000°, λ68.00000°. NP2: ϕ_s16.00000°, δ54.00000°, λ106.00000°. Principal axes: T 4.2870, Plg74.0000°, Azm334.0000°; N 0.6140, Plg13.0000°, Azm186.0000°; P -4.9010, Plg8.0000°, Azm94.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***26*** *22:11:16.4±1.6, 9°.96N×125°.99E, h54^{km}±14^{km}, mb4.8/37, mb1 4.8/40, mb1mx4.7/48, mbtmp5.0/40, ML4.5/3, MS4.0/39, Ms1 4.0/39, ms1mx3.9/45 Error ellipse: s-maj=14.4km s-min=8.0km az=87.0*

MOS ***26*** *22:11:16.4±1.1, 10°.05N×125°.87E, h67^{km}, mb5.4/23, Error ellipse: s-maj=8.3km s-min=4.2km az=115.1*

NEIC ***26*** *22:11:17.3±1.9, 9°.97N±0°.06×126°.03E±0°.09, h58^{km}±4^{km}, mb5.2/190, Error ellipse: s-maj=12.8km s-min=8.9km az=82.0*

DJA ***26*** *22:11:18.2±0.4, 10°N±2°×12°6E±°, h81^{km}±3^{km}, M5.0/88, mb5.0/88, mB5.4/33, MLv5.7/3, Mw(mB)4.8/33, MwMwp4.8/2, Mwp5.1/2*

KLM ***26*** *22:11:20, 9°.85N×126°.28E, h95^{km}, mb5.0*

BGR ***26*** *22:11:23.6±0.0, 10°.03N×125°.98E, h100^{km}*

ISC 26 22:11:17.9±0.4, **9°.94N**±0°.03×**126°.09E**±0°.04, **h71**^{km}±3^{km}, **h71**^{km}**:pP-P, n898,** σ1^{s}**41**/951, **mb5.2**/233, **112C-56D, Fault plane solution: NP1:**ϕ_s212.45473°, δ41.22807°, λ115.50221°. **NP2:**ϕ_s0.06937°, δ53.49841°, λ69.32916°. **Principal axes:** T Plg72.2561°, Azm215.0821°; N Plg16.4844°, Azm12.7185°; P Plg6.3839°, Azm104.6158°; **Fault plane solution: NP1:**ϕ_s155.17458°, δ36.05239°, λ30.57339°. **NP2:**ϕ_s39.64419°, δ72.58154°, λ122.07706°. **Principal axes:** T Plg51.5685°, Azm346.8106°; N Plg30.4447°, Azm209.0182°; P Plg21.1008°, Azm105.9094°; **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.61	255	⇓*i*P	Pn	22 11 28.5	-3.4
SCPH				*i* S	Sn	22 11 38.2	-4.0
BUTP	Butuan	1.07	206	⇑*i*P	Pn	22 11 35.0	-2.4
BUTP				*i* S	Sn	22 11 51.4	-0.5
MSLP	Maasin	1.23	279	⇓*i*P	Pn	22 11 38.2	-1.1
MSLP				*i* S	Sn	22 11 56.0	+0.6
BIPH	Bislig	1.77	171	⇓*i*P	Pn	22 11 45.9	-0.5
BIPH				*i* S	Sn	22 12 07.3	-0.8
BESP	Borongan	1.77	339	⇓*e*P	Pn	22 11 45.2	-1.3
BESP				*i* S	Sn	22 12 10.9	+2.8
LLP	Lapu-Lapu	2.13	280	⇓*i*P	Pn	22 11 51.3	+0.1
LLP				*e*S	Sn	22 12 16.2	-0.6
SNPH	Sibulan	2.88	258	⇓*e*P	Pn	22 12 01.5	0.0
SNPH				*i* S	Sn	22 12 40.0	+4.9
DAV	Davao City (W)	2.90	190	P	Pn	22 12 00.7	-1.1
	294nm,0.3s,baz=289,slow=2.8,SNR=17						
DAV				LR	LR	22 13 43.6	
	comp=Z,5µm,18.1s,baz=351,slow=51						
DAV	Davao City (W)	2.90	190	Pn	Pn	22 12 01.3	-0.5
DAV				Sn	Sn	22 12 37.7	+2.2
DAV	Davao City (W)	2.90	190	P	Pn	22 12 03.5	+1.7
DMPH	Davao City--Mi	2.90	192	⇓*i*P	Pn	22 12 02.3	+0.5
DMPH				*e*S	Sn	22 12 38.5	+2.9
MATI	Mati	2.98	177	⇓*e*P	Pn	22 12 02.2	-0.7
MATI				*e*S	Sn	22 12 46.1	+8.6
DCPH	Dipolog City	3.02	244	⇓*e*P	Pn	22 12 03.3	-0.1
DCPH				*e*S	Sn	22 12 41.2	+2.6
KCP	Kidapawan	3.08	199	⇑*i*P	Pn	22 12 04.6	+0.4
KCP				*i* S	Sn	22 12 41.9	+1.9
PAGZ	Pagadian	3.39	232	⇓*e*P	Pn	22 12 08.7	+0.2
PAGZ				*e*S	Sn	22 12 48.1	+0.6
CNOP	Candoni, Negro	3.40	268	⇓*i*P	Pn	22 12 09.0	+0.4
CNOP				*i* S	Sn	22 12 48.2	+0.4
RCP	Roxas	3.66	296	⇓*e*P	Pn	22 12 12.6	+0.4
DDMP	Don Marcelino,	3.83	186	⇑*i*P	Pn	22 12 13.5	-1.0
DDMP				*e*S	Sn	22 13 00.2	+1.9
GSPH	General Santos	3.99	197	⇑*e*P	Pn	22 12 18.4	+1.5

JAP	San Jose, Anti	4.16	281	⇓eP	Pn	22 12 21.0	+2.1
SCSP	San Jose Seism	4.47	326	⇑iP	Pn	22 12 22.5	-0.7
CUYO	Cuyo Island	5.07	281	⇑iP	Pn	22 12 32.2	+0.8
GQP	Guinayangan	5.31	318	⇓eP	Pn	22 12 34.8	+0.1
GQP				eS	Sn	22 13 32.8	-1.8
BOAC	Boac	5.43	310	⇑iP	Pn	22 12 37.2	+0.8
JCNP	Jose Panganiba	5.45	323	⇓iP	Pn	22 12 35.7	-0.9
JCNP				i S	Sn	22 13 37.6	-0.4
LQP	Lukban	6.08	313	⇑eP	Pn	22 12 46.1	+0.7
SGSI	Sangihe	6.24	185	P	Pn	22 12 50.0	+2.6
	3.1nm8µm562nm,0.9s						
TGY	Tagaytay City	6.52	310	P	Pn	22 12 54.2	+2.9
	46nm,0.3s,baz=201,slow=1.6,SNR=23						
ENPP	El Nido	6.67	281	⇓eP	Pn	22 12 54.0	+0.7
MACP	Maragondon, Ca	6.79	310	⇑iP	Pn	22 12 55.7	+0.9
LUBP	Lubang	6.85	304	eP	Pn	22 12 58.5	+2.7
CAUP	Cauayan	8.10	330	⇓eP	Pn	22 13 11.8	-1.1
SMPP	San Manuel, Pa	8.12	320	⇓eP	Pn	22 13 11.4	-1.7
SCZP	Santa Cruz	8.36	315	⇓eP	Pn	22 13 18.9	+2.5
I39PW	PALAU INFRASON	8.69	105	i		23 02 00.0	
	baz=286,slow=310,SNR=1.4						
SAMP	Sagada Mountai	8.71	325	⇑iP	Pn	22 13 20.1	-1.1
BOLP	Bolinao	8.78	317	⇓eP	Pn	22 13 23.0	+0.8
MYLDM	Lahad Datu	8.89	238	Pn	Pn	22 13 24.8	+1.2
TNTI	Ternate	9.20	172	P	Pn	22 13 30.7	+2.8
	1µm88nm,1.0s						
TNTI	Ternate	9.20	172	Pn	Pn	22 13 27.6	-0.2
KMSI	Cibinong	9.54	193	P	Pn	22 13 33.0	+0.5
	169nm,0.9s						
GTOI	Gorontalo	9.74	199	P	Pn	22 13 34.7	-0.6
	707nm85nm,0.7s						
TOLI2	Tolitoli	10.24	211	Pn	Pn	22 13 40.9	-1.3
TOLI2	Tolitoli	10.24	211	P	Pn	22 13 45.1	+3.0
MRSI	Marisa	10.27	204	P	Pn	22 13 43.6	+1.1
	779nm68nm,0.9s						
KKM	Kota Kinabalu	10.52	249	Pn	Pn	22 13 46.2	+0.2
LBMI	Labuha	10.60	172	P	Pn	22 13 48.5	+1.4
	804nm45nm,0.9s						
SPMM	Sapulut	10.87	242	P	Pn	22 13 54.0	+3.2
MPSI	Mapaga	11.36	213	P	Pn	22 14 01.9	+4.5
	16nm,1.0s						
APSI	Ampana	11.65	203	P	Pn	22 14 04.9	+3.5
	688nm57nm,0.8s						
SWI	Sorong	11.90	154	P	Pn	22 14 04.8	0.0
	1µm42nm,0.9s						
SIJI	Sorong	11.91	154	P	Pn	22 14 04.1	-0.8
	2.0nm,0.3s,baz=321,slow=20,SNR=4.2						
SIJI				LR	LR	22 19 29.6	
	comp=Z,466nm,20.2s,baz=40,slow=41						
SANI	Sanana	11.91	181	P	Pn	22 14 04.5	-0.4
	852nm80nm,0.7s						
MSAI	Masohi	13.50	168	P	P	22 14 31.1	-2.1
	2µm7.9nm,0.6s						
SMKI	Samarinda	13.59	221	P	P	22 14 32.7	-1.5
YULB	Yu-li	14.14	342		P	22 14 37.8	-2.4
FAKI	Fak Fak	14.17	154	P	Pn	22 14 33.4	-1.9
	80nm,0.8s						
FAKI	Fak Fak	14.17	154	Pn	Pn	22 14 34.4	-0.9
FAKI	Fak Fak	14.17	154	P	Pn	22 14 34.4	-0.9
TPUB	Ta-pu	14.27	339		Pn	22 14 36.0	-0.6
TPUB	Ta-pu	14.27	339	P	P	22 14 40.3	-1.5
TTSI	Tana Toraja	14.34	206	P	Pn	22 14 39.6	+2.2
BKB	Balikpapan	14.41	220	P	P	22 14 42.8	-0.5
	1µm114nm,1.0s						
BKB	Balikpapan	14.41	220		P	22 14 41.1	-2.1
SSLB	Suanglung	14.62	341	Pn	Pn	22 14 41.9	+0.9
SSLB	Suanglung	14.62	341	P	P	22 14 44.1	-1.5
YOJ	Yonaguni jima	14.74	349	P	Pn	22 14 43.2	+0.7
YOJ	Yonaguni jima	14.74	349	Pn	Pn	22 14 43.2	+0.7
NACB	Ninganchiao	14.79	344	P	P	22 14 46.1	-1.4
SPSI	Sidrap Palu	15.18	205	P	P	22 14 50.9	-1.0
	755nm42nm,1.0s						
YHNB	Yeheng	15.32	344		P	22 14 53.3	-0.1
YHNB	Yeheng	15.32	344	P	P	22 14 54.0	+0.6
BNSI	Bone	15.45	203	P	P	22 14 54.3	-0.5
	1µm97nm,1.2s						
MTKI	Muara Teweh, K	15.53	226	P	P	22 14 55.7	0.0
TATO	Taipei	15.58	344		Pn	22 14 54.7	+1.4
TATO				IAmb	IAmb	22 15 25.4	
	comp=Z,213nm,1.4s						
SBUM	Sibu	15.66	243	P	P	22 14 58.0	+0.8
SBUM	Sibu	15.66	243		P	22 14 58.0	+0.8
KAPI	Kappang	16.14	203	P	Pn	22 15 01.3	+0.7
	comp=Z,0.6nm,0.3s,baz=58,slow=6.0,SNR=7.9						
KAPI				LR	LR	22 21 43.5	
	comp=Z,493nm,19.9s,baz=34,slow=39						
BKSI	Bulukumba	16.29	202	P	Pn	22 15 03.0	+0.7
	comp=Z,31nm,0.9s						
KBKI	Kotabaru	16.45	217	P	P	22 15 08.1	+2.1
	comp=Z,1µmcomp=Z,50nm,1.1s						
QZH	Quanzhou	16.54	335	eP	P	22 15 07.0	+0.2
QZH				S	Sn	22 18 11.0	+2.6
QZH				LR	LR		
	comp=Z,460nm,15.6s						
QZH				LR	LR		
	comp=Z,390nm,15.1s						
QZH				LR	LR		
	comp=Z,570nm,14.2s						
HKPS	Hong Kong Po S	16.79	318		P	22 15 10.2	+0.6
JOW	Kunigami	16.93	7	P	P	22 15 13.8	+2.6
	comp=Z,6.2nm,0.3s,baz=176,slow=9.3,SNR=15						
JOW				LR	LR	22 20 45.6	
	comp=Z,449nm,21.1s,baz=136,slow=34						
JOW	Kunigami	16.93	7	P	P	22 15 14.3	+3.2
SMPI	Sarmi	17.27	133	P	Pn	22 15 13.9	-0.7
	comp=Z,57nm,1.1s						
DLV	T Lat	17.40	278		P	22 15 18.3	+1.6
BBKI	Banjar Baru	17.41	221	P	P	22 15 19.6	+3.1
	comp=Z,5µmcomp=Z,29nm,0.9s						
STKI	Sintang	17.54	237	P	P	22 15 21.7	+3.7
	comp=Z,2µmcomp=Z,29nm,0.9s						
KSM	Kuching	17.80	243	P	Pn	22 15 22.4	+1.4
KSM	Kuching	17.80	243	P	Pn	22 15 24.6	+3.5
QIZ	Qiongzhong	18.13	302	P	Pn	22 15 25.8	+0.8
QIZ				S	S	22 18 47.5	-0.3
QIZ				pmax	pmax		
	comp=Z,23nm,0.9s						
QIZ				LR	LR		
	comp=Z,440nm,23.9s						
QIZ				LR	LR		
	comp=Z,520nm,20.0s						
QIZ				LR	LR		
	comp=Z,690nm,20.1s						
QIZ	Qiongzhong	18.13	302	P	P	22 15 22.9	-1.5
QIZ	Qiongzhong	18.13	302	P	Pn	22 15 25.7	+0.8
GUMO	Guam	18.73	77	LR	LR	22 21 16.1	
	comp=Z,336nm,19.4s,baz=248,slow=32						
GENI	Genyem	18.75	131	P	P	22 15 31.0	-0.3
	comp=Z,3µmcomp=Z,159nm,1.4s						
MMRI	Maumere	18.85	192	P	Pn	22 15 36.0	+2.3
	comp=Z,3µmcomp=Z,74nm,0.8s						
EDFI	Ende, Flores	19.08	193	P	Pn	22 15 39.1	+2.6
	comp=Z,30nm,0.8s						
SOEI	Soe	19.65	185	P	Pn	22 15 42.7	-0.6
	comp=Z,160nm,1.0s						
SOEI	Soe	19.65	185	P	P	22 15 41.4	+0.1
SOEI				IAmb	IAmb	22 16 05.9	
	comp=Z,122nm,0.9s						
SOEI	Soe	19.65	185	P	Pn	22 15 42.9	-0.4
BATI	Baumata	20.16	187	P	P	22 15 47.5	+0.7
	comp=Z,139nm,0.9s,baz=282,slow=2.4,SNR=9.5						
BATI				LR	LR	22 24 42.8	
	comp=Z,365nm,20.5s,baz=335,slow=40						
BATI	Baumata	20.16	187	P	P	22 15 47.4	+0.7
	comp=Z,104nm,0.9s						
TWSI	Taliwang, Sumb	20.70	207	P	Pn	22 15 54.9	-0.6
	comp=Z,27nm,1.2s						
UBPT	Khong Chiam	20.80	287	P	P	22 15 53.4	-0.3
SRBI	Singaraja	20.93	212	P	Pn	22 15 57.6	-0.6
	comp=Z,33nm,0.9s						
SSE	Sheshan	21.54	348	P	P	22 16 02.0	+0.7
SSE				S	S	22 20 01.8	+5.5
SSE				pmax	pmax		
	comp=Z,65nm,0.7s						
SSE				pmax	pmax		
	comp=Z,240nm,3.7s						
SSE				LR	LR		
	comp=Z,56nm,14.5s						
SSE				LR	LR		
	comp=Z,110nm,14.3s						
JAGI	Jajag, Banyuwa	21.82	213	P	P	22 16 05.9	+1.5
JSU	Suzuyama	21.84	10	P	P	22 16 03.6	-0.9
TPI	Tanjungpandan	22.28	236	P	P	22 16 13.0	+3.5
DRS	Darwin Rock St	22.73	168	P	P	22 16 13.7	-0.6
	comp=Z,96nm,1.0s						
JCJ	Chichijima	22.84	40	P	P	22 16 13.3	-2.0
JCJ				IAmb	IAmb	22 16 36.6	
	comp=Z,121nm,0.8s						
JCJ	Chichijima	22.84	40	P	P	22 16 14.0	-1.3
NJ2	Nanjing	23.00	344	⇑P	P	22 16 14.3	-2.5
NJ2				PP	PnPn	22 16 50.3	+5.4
NJ2				S	S	22 20 23.3	+1.4
NJ2				sS	Sn	22 20 41.5	-2.0
NJ2				pmax	pmax		
	comp=Z,36nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,480nm,3.5s						
NJ2				LR	LR		
	comp=Z,780nm,17.9s						
NJ2				LR	LR		
	comp=Z,1µm,16.7s						
NJ2				LR	LR		
	comp=Z,430nm,16.2s						
MTN	Manton Dam	23.18	167	P	P	22 16 18.2	-0.6
	baz=23,SNR=28						
MTN	Manton Dam	23.18	167	P	P	22 16 18.0	-0.8
MTN				IAmb	IAmb	22 16 29.9	
	comp=Z,123nm,1.1s						
MTN	Manton Dam	23.18	167	P	P	22 16 17.7	-1.1
	comp=Z,101nm,1.2s						
PPBI	Pangkal Pinang	23.23	240	P	P	22 16 21.0	+1.8
WHN	Wuhan	23.23	334	⇑P	P	22 16 18.3	-0.8
WHN				pmax	pmax		
	comp=Z,110nm,1.1s						
WOJI	Wonogiri, Jawa	23.24	221	P	P	22 16 22.0	+2.7
	comp=Z,45nm,1.1s						
KDU	Kakadu	23.36	164	P	P	22 16 19.3	-1.1
	baz=23,SNR=51						
KDU	Kakadu	23.36	164	P	P	22 16 19.0	-1.4
	comp=Z,142nm,0.7s						
JNU	Nakatsue	23.49	10	P	P	22 16 21.1	-0.4
	comp=Z,14nm,0.8s,baz=256,slow=4.9,SNR=6.4						
JNU				LR	LR	22 24 31.0	
	comp=Z,231nm,19.9s,baz=182,slow=34						
JNU	Nakatsue	23.49	10	P	P	22 16 21.0	-0.5
JNU	Nakatsue	23.49	10	P	P	22 16 21.4	-0.1
MYKOM	Kota Tinggi	23.54	251	P	P	22 16 23.0	+0.8
MYKOM	Kota Tinggi	23.54	251	P	P	22 16 23.2	+1.1
MYKOM				IAmb	IAmb	22 16 24.8	
	comp=Z,64nm,0.8s						
UGM	Wanagama	23.56	222	P	P	22 16 24.3	+2.0
UGM				IAmb	IAmb	22 16 48.4	
	comp=Z,165nm,1.1s						
SLVN	Son La	24.14	301	P	P	22 16 27.2	-0.4
JRMM	Jerantut	24.19	257	P	P	22 16 29.0	+1.0
KPJI	Karang Pucung	24.22	226	P	P	22 16 31.1	+2.9
	comp=Z,2µmcomp=Z,46nm,0.9s						
GYA	Guiyang	24.65	314	⇑P	P	22 16 33.0	+0.8
GYA				S	S	22 20 50.5	+1.6
GYA				pmax	pmax		
	comp=Z,15nm,0.6s						
GYA				LR	LR		
	comp=Z,510nm,15.3s						
GYA				LR	LR		
	comp=Z,420nm,10.5s						
GYA				LR	LR		
	comp=Z,770nm,16.1s						
JMN	Monobe	24.73	16	P	P	22 16 33.0	+0.3
JMN				IAmb	IAmb	22 16 34.4	
	comp=Z,81nm,1.2s						
LEM	Lembang	24.82	229	P	P	22 16 34.9	+1.0
	comp=Z,28nm,0.6s,baz=162,slow=16,SNR=7.3						
LEM				LR	LR	22 27 42.8	
	comp=Z,415nm,19.4s,baz=51,slow=40						
LEM	Lembang	24.82	229	P	P	22 16 35.3	+1.4
	comp=Z,29nm,0.9s						
TNG	Tangerang	25.13	231	P	P	22 16 27.9	-8.6
TNG				P	P	22 16 26.0	-11
CBJI	Citeko	25.13	230	P	P	22 16 40.4	+3.9
DBJI	Dramaga	25.29	230	P	P	22 16 40.8	+2.8
	comp=Z,4µmcomp=Z,18nm,0.8s						
IPM	Ipoh	25.44	259	P	P	22 16 41.0	+1.6
IPM	Ipoh	25.44	259	P	P	22 16 40.2	+0.7
IPM				IAmb	IAmb	22 16 42.2	
	comp=Z,59nm,0.6s						
IPM	Ipoh	25.44	259	P	P	22 16 40.8	+1.4
ENH	Enshi	25.47	325	P	P	22 16 37.8	-1.8
KNRA	Kununurra	25.59	174	P	P	22 16 40.4	-0.2
	baz=26,SNR=45						
KNRA	Kununurra	25.59	174	P	P	22 16 40.5	-0.2
KNRA				IAmb	IAmb	22 16 43.2	
	comp=Z,78nm,0.6s						
KNRA	Kununurra	25.59	174	P	P	22 16 39.8	-0.8
	comp=Z,130nm,0.7s						
KULM	Kulim	25.63	261	P	P	22 16 41.8	+0.7
KLI	Kotabumi	25.77	236	P	P	22 16 44.0	+1.7
	comp=Z,50nm,0.8s						
KLSI		25.77	237	P	P	22 16 43.6	+1.2
	comp=Z,13nm,1.0s						
MDSI	Maura Dua	26.12	238	P	P	22 16 45.3	-0.2
	comp=Z,750nmcomp=Z,16nm,0.9s						
CGJI	Cibinong	26.14	232	P	P	22 16 47.0	+1.3
	comp=Z,633nmcomp=Z,30nm,1.2s						
JHJ	Hachijo jima 2	26.29	27	LR	LR	22 26 44.2	
	comp=Z,268nm,20.1s,baz=106,slow=35						
KASI	Kota Agung	26.44	235	P	P	22 16 48.3	-0.1
	comp=Z,26nm,0.8s						
LWLI	Liwa	26.51	237	P	P	22 16 50.7	+1.6
	comp=Z,92nm,0.9s						
JWT	Wachi	26.62	17	P	P	22 16 49.9	+0.1
JWT				IAmb	IAmb	22 17 16.4	
	comp=Z,156nm,1.6s						
BKNI	Bangkinang	26.69	251	P	P	22 16 53.1	+2.4
	comp=Z,1µmcomp=Z,95nm,1.0s						
BKNI	Bangkinang	26.69	251	P	P	22 16 51.8	+1.1
BKNI				IAmb	IAmb	22 16 54.6	
	comp=Z,84nm,0.8s						
KMI	Kunming	26.83	307	⇑P	P	22 16 58.0	+5.9
KMI				pP	pP	22 17 11.5	+2.6
KMI				sP	sP	22 17 18.3	+1.1
KMI				S	S	22 21 22.5	-1.2
KMI				sS	sS	22 21 55.8	+3.6
KMI				SS	SnSn	22 22 49.8	+15
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KMI				LR	LR		
	comp=N,280nm,17.5s						
KMI				LR	LR		
	comp=E,430nm,20.9s						
KMI				LR	LR		
	comp=Z,500nm,25.3s						
MASI	Maura Aman, Be	27.08	242	P	P	22 16 54.0	-0.2
	comp=Z,68nm,1.0s						
INU	Inuyama	27.18	20	P	P	22 16 54.4	-0.5
INU				IAmb	IAmb	22 17 26.4	
	comp=Z,174nm,2.0s						
INU	Inuyama	27.18	20	P	P	22 16 54.8	0.0
KRJI	Kerinci	27.29	245	P	P	22 16 56.8	+0.7
	comp=Z,111nm,1.0s						
TIA	Tai'an	27.39	344	⇑P	P	22 16 56.0	-0.7
TIA				pmax	pmax		
	comp=Z,18nm,1.3s						
KSAR	Wonju Array Be	27.43	3	P	P	22 16 56.7	-0.3
KSAR	Wonju Array Be	27.43	3	P	P	22 16 56.7	-0.3
KSRS	Korea Array	27.44	3	P	P	22 16 57.1	0.0
	comp=Z,7.8nm,0.8s,baz=182,slow=10,SNR=15						
KSRS				LR	LR	22 31 04.4	
	comp=Z,117nm,18.1s,baz=188,slow=43						
KS19	Wonju Array Si	27.49	3	P	P	22 16 57.2	-0.4
KS19				IAmb	IAmb	22 17 17.6	
	comp=Z,75nm,1.6s						
PPI	Padang Panjang	27.58	249	P	P	22 16 59.6	+1.0
	comp=Z,457nmcomp=Z,17nm,0.9s						
CM31	Chiang Mai Arr	27.62	291	P	P	22 16 59.0	+0.1
CM31				IAmb	IAmb	22 17 01.0	
	comp=Z,28nm,0.7s						
CMAR	Chiang Mai Arr	27.62	291	P	P	22 16 59.0	+0.1
	comp=Z,19nm,0.7s,baz=105,slow=7.4,SNR=74						
CMAR				PcP	PcP	22 20 16.0	+0.9
	comp=Z,5.6nm,0.8s,baz=91,slow=0.9,SNR=14						
CMAR				LR	LR	22 28 13.5	
	comp=Z,450nm,19.2s,baz=168,slow=37						
CMAR	Chiang Mai Arr	27.62	291	P	P	22 16 59.0	+0.1
CHTO	Chiang Mai	27.70	292	P	P	22 16 59.2	-0.6
CHTO				pmax	pmax		
	comp=Z,31nm,1.0s						
CHTO	Chiang Mai	27.70	292	P	P	22 16 59.2	-0.6
CHTO	Chiang Mai	27.70	292	P	P	22 16 59.7	0.0
FITZ	Fitzroy Crossi	27.86	181	P	P	22 17 01.2	+0.2
	comp=Z,9.1nm,0.4s,baz=12,slow=8.1,SNR=62						
FITZ				PcP	PcP	22 20 16.1	+0.6
	comp=Z,5.0nm,0.6s,baz=270,slow=2.0,SNR=1.9						
FITZ				LR	LR	22 30 02.4	
	comp=Z,149nm,20.4s,baz=18,slow=40						
FITZ	Fitzroy Crossi	27.86	181	P	P	22 17 00.5	-0.5
	baz=28,SNR=30						
MNSI	Mandailing Nat	27.89	253	P	P	22 17 01.1	-0.3
	comp=Z,53nm,0.6s						
PSI	Prapat	27.90	257	P	P	22 17 01.9	+0.3
	comp=Z,6.1nm,0.8s,baz=63,slow=4.4,SNR=6.8						
PSI				PcP	PcP	22 20 15.5	-0.5
	comp=Z,7.7nm,0.9s,baz=142,slow=2.8,SNR=5.5						
PSI				LR	LR	22 30 36.9	
	comp=Z,255nm,18.2s,baz=88,slow=42						
PMG	Port Moresby	28.44	132	P	P	22 17 05.6	-0.7
PMG				pmax	pmax		
	comp=Z,21nm,0.9s						
PMG	Port Moresby	28.44	132	P	P	22 17 05.6	-0.7
MAJO	Matsushiro	28.67	21	i P	P	22 17 02.4	-5.7
MAJO				pmax	pmax		
	comp=Z,62nm,2.0s						
MJAR	Matsushiro Arr	28.67	21	P	P	22 17 06.7	-1.4
	comp=Z,2.5nm,0.6s,baz=198,slow=8.7,SNR=4.1						
MJAR				PcP	PcP	22 20 17.8	+0.5
	comp=Z,2.4nm,0.8s,baz=137,slow=2.8,SNR=4.1						
MJAR				LR	LR	22 28 21.7	
	comp=Z,260nm,19.8s,baz=200,slow=36						
XAN	Xi'an	28.69	329	⇑P	P	22 17 07.5	-0.9
XAN				PcP	PcP	22 20 18.5	+1.0
XAN				pmax	pmax		
	comp=Z,150nm,0.8s						
XAN				LR	LR		
	comp=Z,440nm,15.1s						
XAN				LR	LR		
	comp=Z,490nm,17.2s						
COEN	Coen	29.17	144	P	P	22 17 11.7	-1.0
COEN	Coen	29.17	144	P	P	22 17 12.6	-0.2
	comp=Z,27nm,1.3s						
LHMI	Lhok Sumawe	29.26	263	P	P	22 17 13.4	-0.2
LHMI				IAmb	IAmb	22 17 56.7	
	comp=Z,86nm,1.0s						
CD2	Chengdu	29.44	318	P	P	22 17 15.5	+0.5
CD2				S	S	22 22 08.8	+4.5
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,4.9s						
CD2				LR	LR		
	comp=Z,890nm,20.3s						
CD2				LR	LR		
	comp=Z,820nm,17.8s						
TPTI		29.46	259	P	P	22 17 18.5	+3.1
	comp=Z,12nm,1.1s						
GSI	Gunungsitoli	29.62	255	P	P	22 17 17.2	+0.4
GSI				IAmb	IAmb	22 18 23.9	
	comp=Z,37nm,0.9s						
GSI	Gunungsitoli	29.62	255	P	P	22 17 18.0	+1.2
TIY	Taiyuan	30.27	338	eP	P	22 17 22.8	+0.5
TIY				pmax	pmax		
	comp=Z,33nm,0.6s						
WB0	Warramunga Arr	30.63	165	P	P	22 17 24.1	-1.6
WRAB	Tennant Creek	30.78	165	P	P	22 17 25.5	-1.4
WRA	Warramunga Arr	30.79	165	P	P	22 17 25.5	-1.5
	comp=Z,4.3nm,0.6s,baz=341,slow=9.1,SNR=19						
WRA				ScP	ScP	22 24 00.4	+0.7
	comp=Z,3.6nm,0.8s,baz=344,slow=3.7,SNR=5.9						
WRA				LR	LR	22 32 02.0	
	comp=Z,127nm,19.9s,baz=25,slow=40						
WRA	Warramunga Arr	30.79	165	P	P	22 17 25.4	-1.5
WB2	Warramunga Arr	30.79	165	P	P	22 17 25.1	-1.9
BJT	Baijiatuau	31.23	345	P	P	22 17 30.1	-0.6
BJT				pmax	pmax		
	comp=Z,69nm,1.5s						
BJT	Baijiatuau	31.23	345	P	P	22 17 30.1	-0.6
BJT				IAmb	IAmb	22 17 31.8	
	comp=Z,69nm,1.5s						
BJI	Beijing	31.25	345	P	P	22 17 30.5	-0.3
BJI				PcP	PcP	22 20 25.0	+1.1
BJI				pmax	pmax		
	comp=Z,37nm,1.2s						
MBWA	Marble Bar	31.53	191	P	P	22 17 33.0	-0.5
SNY	Shenyang	31.84	356	⇑P	P	22 17 36.5	+0.5
SNY				pmax	pmax		
	comp=Z,58nm,0.8s						
PSA00	Pilbara Seismi	31.91	191	P	P	22 17 36.0	-0.8
PSA00	Pilbara Seismi	31.91	191	P	P	22 17 35.6	-1.3
PSA00				IAmb	IAmb	22 17 50.4	
	comp=Z,23nm,0.9s						
PSA00	Pilbara Seismi	31.91	191	P	P	22 17 35.8	-1.1
LZH	Lanzhou	32.95	326	eP	P	22 17 46.0	0.0
LZH				pP	pP	22 17 50.5	-12
LZH				sP	sP	22 17 54.0	-17
LZH				PcP	PcP	22 20 29.3	+0.4
LZH				pmax	pmax		
	comp=Z,44nm,1.1s						
LZH				pmax	pmax		
	comp=Z,320nm,5.4s						
LZH				LR	LR		
	comp=Z,400nm,18.4s						
LZH				LR	LR		
	comp=Z,550nm,15.7s						
LZH				LR	LR		
	comp=Z,510nm,15.2s						
QIS	Mount Isa	33.09	156	P	P	22 17 46.6	-0.6
	baz=33,SNR=22						
QIS	Mount Isa	33.09	156	P	P	22 17 46.0	-1.3
	comp=Z,49nm,1.1s						
MTSU	Mount Surprise	33.20	147	P	P	22 17 48.4	+0.2
	baz=33,SNR=8.1						
MTSU	Mount Surprise	33.20	147	P	P	22 17 48.9	+0.7
	comp=Z,18nm,1.0s						
HHC	Hu-ho-hao-te	33.36	340	eP	P	22 17 49.8	+0.3
HHC				pmax	pmax		
	comp=Z,63nm,0.9s						
HHC				pmax	pmax		
	comp=Z,260nm,5.7s						
BTO	Baotou	33.70	338	eP	P	22 17 50.5	-1.9
CN2	Changchun	33.74	359	eP	P	22 17 52.5	-0.1
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
AS31	Alice Springs	34.26	167	P	P	22 17 56.6	-0.8
ASAR	Alice Springs	34.27	167	P	P	22 17 56.6	-0.8
	comp=Z,5.8nm,0.5s,baz=352,slow=7.3,SNR=99						
ASAR				PcP	PcP	22 20 32.8	+0.2
	comp=Z,6.8nm,0.8s,baz=351,slow=2.5,SNR=9.7						
ASAR				S	S	22 23 17.2	-2.3
	comp=Z,6.1nm,1.0s,baz=355,slow=20,SNR=9.7						
ASAR				LR	LR	22 33 44.6	
	comp=Z,140nm,18.2s,baz=343,slow=39						
USA0B	Ussuriysk Arra	34.51	7	P	P	22 17 58.5	-0.8
USA0B				pmax	pmax		
	comp=Z,20nm,0.9s						
USA0B	Ussuriysk Arra	34.51	7	P	P	22 17 58.5	-0.8
USA0B				IAmb	IAmb	22 18 21.2	
	comp=Z,20nm,0.9s						
USRK	Ussuriysk Ar.	34.51	7	P	P	22 17 59.9	+0.6
	comp=Z,6.6nm,0.7s,baz=179,slow=7.8,SNR=13						
USRK				PcP	PcP	22 20 33.2	+0.4
	comp=Z,2.2nm,0.5s,baz=158,slow=1.3,SNR=5.7						
USRK				LR	LR	22 31 08.1	
	comp=Z,116nm,20.2s,baz=180,slow=34						
USRK	Ussuriysk Ar.	34.51	7	P	P	22 17 58.8	-0.5
MDJ	Mudanjiang	34.68	4	P	P	22 18 01.8	+1.1
MDJ				pmax	pmax		
	comp=Z,38nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,1µm,6.5s						
MDJ	Mudanjiang	34.68	4	P	P	22 18 00.8	0.0
MDJ				IAmb	IAmb	22 18 03.0	
	comp=Z,57nm,1.3s						
WRKA	Warakurna	34.83	176	P	P	22 18 02.4	+0.1
	baz=35,SNR=102						
WRKA	Warakurna	34.83	176	P	P	22 18 01.9	-0.4
	comp=Z,98nm,0.8s						
CTAO	Charters Tower	35.84	146	P	P	22 18 11.1	+0.1
CTAO				pmax	pmax		
	comp=Z,41nm,1.3s						
CTAO	Charters Tower	35.84	146	P	P	22 18 11.1	+0.1
CTAO				IAmb	IAmb	22 18 22.8	
	comp=Z,41nm,1.3s						
CTAO	Charters Tower	35.84	146	P	P	22 18 08.9	-2.1
SHL	Shillong	35.95	300	P	P	22 18 10.9	-1.2
SHL				pmax	pmax		
	comp=Z,50nm,0.6s						
SHL	Shillong	35.95	300	P	P	22 18 10.9	-1.2
MEEK	Meekatharra	37.08	191	P	P	22 18 20.7	-0.8
	baz=37,SNR=15						

MEEK	Meekatharra	37.08	191	P	P	22 18 20.6	-0.8
	comp=Z,39nm,1.3s						
GTA	Gaotai	37.55	326	⇑P	P	22 18 25.0	-0.5
GTA				pP	pP	22 18 39.3	-3.4
GTA				PcP	PcP	22 20 42.8	+0.5
GTA				ScP	ScP	22 24 26.8	+3.2
GTA				PcS	PcS	22 24 29.3	-1.7
GTA				pmax	pmax		
	comp=Z,390nm,6.0s						
GTA				LR	LR		
	comp=Z,330nm,14.5s						
GTA				LR	LR		
	comp=Z,340nm,15.3s						
GTA				LR	LR		
	comp=Z,550nm,16.0s						
LSA	Lhasa	38.08	306	P	P	22 18 29.8	-0.7
LSA				pmax	pmax		
	comp=Z,22nm,0.6s						
LSA	Lhasa	38.08	306	P	P	22 18 30.3	-0.2
LSA	Lhasa	38.08	306	P	P	22 18 30.2	-0.2
LSA				pmax	pmax		
	comp=Z,12nm,0.7s						
LSA	Lhasa	38.08	306	P	P	22 18 30.2	-0.2
OOD	Oodnadatta	38.65	166	P	P	22 18 34.0	-0.6
	comp=Z,39nm,0.7s						
KLR	Kul'dur	39.45	6	P	P	22 18 41.6	+0.5
	comp=Z,6.9nm,0.5s,baz=192,slow=8.2,SNR=25						
KLR				PcP	PcP	22 20 48.3	+0.5
	comp=Z,3.1nm,0.8s,baz=300,slow=4.7,SNR=3.7						
KLR	Kul'dur	39.45	6	ceP	P	22 18 40.5	-0.6
KLR				pmax	pmax		
	comp=Z,33nm,1.5s						
YSS	Yuzh-Sakhalins	39.51	18	eP	P	22 18 43.5	+1.9
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
HIA	Hailar	39.56	353	P	P	22 18 41.7	-0.3
HIA				pmax	pmax		
	comp=Z,28nm,0.8s						
HIA	Hailar	39.56	353	P	P	22 18 41.7	-0.3
HIA				IAmb	IAmb	22 18 43.1	
	comp=Z,28nm,0.8s						
MORW	Morawa	39.98	194	P	P	22 18 45.7	+0.1
	baz=40,SNR=9.3						
MORW	Morawa	39.98	194	P	P	22 18 45.8	+0.1
MORW				IAmb	IAmb	22 19 06.7	
	comp=Z,113nm,1.9s						
MORW	Morawa	39.98	194	P	P	22 18 45.9	+0.2
	comp=Z,28nm,1.0s						
H11S3	WAKE ISLAND Hy	40.18	73	T	T	23 01 43.1	
	baz=262,slow=75,SNR=804						
H11S1	WAKE ISLAND Hy	40.20	73	T	T	23 01 39.0	
	baz=262,slow=75,SNR=367						
H11S2	WAKE ISLAND Hy	40.20	73	T	T	23 01 45.1	
	baz=262,slow=75,SNR=264						
H11N1	WAKE ISLAND Hy	40.52	71	T	T	23 02 15.0	
	baz=265,slow=74,SNR=1384						
FORT	Forrest	40.53	177	P	P	22 18 50.8	+0.6
	baz=41,SNR=20						
FORT	Forrest	40.53	177	P	P	22 18 50.7	+0.5
FORT	Forrest	40.53	177	P	P	22 18 49.9	-0.3
	comp=Z,324nm,0.6s						
H11N2	WAKE ISLAND Hy	40.53	71	T	T	23 02 14.6	
	baz=265,slow=74,SNR=998						
H11N3	WAKE ISLAND Hy	40.54	71	T	T	23 02 16.4	
	baz=265,slow=74,SNR=1190						
MULG	Mulgathing	40.72	169	P	P	22 18 51.5	-0.3
	comp=Z,65nm,1.0s						
ULN	Ulaanbaatar	41.07	340	P	P	22 18 54.7	0.0
ULN				pmax	pmax		
	comp=Z,37nm,0.8s						
ULN	Ulaanbaatar	41.07	340	P	P	22 18 54.7	0.0
ULN				IAmb	IAmb	22 18 55.9	
	comp=Z,37nm,0.8s						
SONM	Songino Array	41.26	340	P	P	22 18 56.2	-0.1
	comp=Z,14nm,0.8s,baz=159,slow=9.5,SNR=107						
SONM				PcP	PcP	22 20 53.9	+0.1
	comp=Z,4.6nm,0.7s,baz=152,slow=2.6,SNR=5.1						
SONM				ScP	ScP	22 24 40.4	+2.6
	comp=Z,3.8nm,0.9s,baz=154,slow=4.7,SNR=13						
SONM				LR	LR	22 37 41.7	
	comp=Z,193nm,19.5s,baz=144,slow=38						
SONM	Songino Array	41.26	340	P	P	22 18 56.0	-0.2
SONM				PcP	PcP	22 20 54.0	+0.1
SONM					ScP	22 24 40.0	+2.2
BLDU	Ballidu	41.32	192	P	P	22 18 56.8	+0.1
	comp=Z,22nm,1.1s						
GRNR	Gornyy	41.59	10	⇑iP	P	22 19 00.2	+1.5
GRNR				pmax	pmax		
	comp=N,10.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,570nm,14.0s						
GUN	Gumba	41.78	301	eP	P	22 19 00.1	-1.0
	comp=Z,109nm,0.7s						
LCRK	Leigh Creek	41.81	164	P	P	22 19 00.5	-0.3
	comp=Z,60nm,0.8s						
KLBR	Kellerberrin	42.06	191	P	P	22 19 03.1	+0.3
	baz=42,SNR=18						
KLBR	Kellerberrin	42.06	191	P	P	22 19 02.6	-0.2
	comp=Z,68nm,0.6s						
PKI	Pulchoki	42.08	300	eP	P	22 19 02.1	-1.4
	comp=Z,29nm,0.5s						
PKIN	Phulchoki	42.10	300	eP	P	22 19 02.1	-1.5
	comp=Z,22nm,0.5s						
KKN	Kakani	42.26	301	eP	P	22 19 03.6	-1.2
	comp=Z,18nm,0.5s						
DMN	Daman	42.35	300	eP	P	22 19 05.0	-0.6
	comp=Z,22nm,0.4s						
EIDS	Eidsvold	42.72	146	P	P	22 19 07.2	-1.0
MUN	Mundaring	42.74	192	P	P	22 19 09.3	+1.0
	baz=43,SNR=7.6						
MUN	Mundaring	42.74	192	P	P	22 19 08.6	+0.3
	comp=Z,35nm,0.8s						
GKN	Gorkha	42.86	301	eP	P	22 19 08.8	-0.8
	comp=Z,17nm,0.4s						
NWAO	Narrogin (SRO)	43.46	191	P	P	22 19 14.9	+0.8
BBOO	Buckleboo	43.56	168	P	P	22 19 15.6	+0.7
	baz=44,SNR=7.3						
BBOO	Buckleboo	43.56	168	P	P	22 19 15.2	+0.3
BBOO	Buckleboo	43.56	168	P	P	22 19 14.5	-0.4
	comp=Z,144nm,1.3s						
ZEA	Zeya	43.69	1	eP	P	22 19 16.1	+0.4
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
DANN	Dangsing	43.70	301	eP	P	22 19 15.1	-1.5
	comp=Z,52nm,0.5s						
STKA	Stephens Creek	44.15	161	P	P	22 19 19.6	0.0
	comp=Z,9.8nm,0.5s,baz=335,slow=8.8,SNR=31						
STKA				LR	LR	22 41 04.2	
	comp=Z,58nm,19.6s,baz=2.2,slow=40						
STKA	Stephens Creek	44.15	161	P	P	22 19 19.8	0.0
	baz=44,SNR=17						
STKA	Stephens Creek	44.15	161	P	P	22 19 19.6	0.0
STKA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
STKA	Stephens Creek	44.15	161	P	P	22 19 19.6	0.0
STKA	Stephens Creek	44.15	161	P	P	22 19 19.2	-0.4
	comp=Z,5.7nm,1.2s						
PYUN	Piuthan	44.29	300	eP	P	22 19 20.2	-1.0
	comp=Z,48nm,0.5s						
ZAK	Zakamensk	44.51	339	eP	P	22 19 21.4	-1.0
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HTT	Hallett	44.83	165	P	P	22 19 25.4	+0.3
	baz=45,SNR=18						
HTT	Hallett	44.83	165	P	P	22 19 25.2	+0.1
	comp=Z,46nm,0.7s						
CMSA	Cobar Meteorol	45.32	156	P	P	22 19 29.5	+0.5
	baz=46,SNR=5.2						
CMSA	Cobar Meteorol	45.32	156	P	P	22 19 29.3	+0.4
MOY	Mondy	46.38	339	eP	P	22 19 37.5	+0.3
HYB	Hyderabad	46.69	285	i P	P	22 19 40.0	0.0
	comp=Z,77nm,0.8s						
ARMA	Armidale	47.04	149	P	P	22 19 43.1	+0.4
ARMA				IAmb	IAmb	22 20 44.5	
	comp=Z,76nm,1.9s						
WMQ	Urumqi	47.37	322	eP	P	22 19 45.0	-0.1
WMQ				pP	pP	22 19 59.0	-3.8
WMQ				PcP	PcP	22 21 13.5	-1.3
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,25nm,3.9s						
WMQ				LR	LR		
	comp=Z,110nm,28.3s						
BOD	Bodaibo	48.67	351	eP	P	22 19 55.0	+0.3
BOD				pmax	pmax		
	comp=Z,39nm,1.2s						
ARPS	Mount Arapiles	48.77	163	P	P	22 19 56.5	+0.8
	baz=49,SNR=6.6						
ARPS	Mount Arapiles	48.77	163	P	P	22 19 55.6	-0.1
	comp=Z,40nm,0.8s						
CAN	Canberra	49.96	155	P	P	22 20 05.0	+0.1
CAN				pmax	pmax		
	comp=Z,50nm,1.2s						
CAN	Canberra	49.96	155	P	P	22 20 05.0	+0.1
CAN				IAmb	IAmb	22 20 17.2	
	comp=Z,50nm,1.2s						
CAN	Canberra	49.96	155	P	P	22 20 05.6	+0.7
PEA0B	Petropavlovsk-	50.01	24	P	P	22 20 06.2	+1.2
PEA0B						22 21 24.9	
PEA0B	Petropavlovsk-	50.01	24	P	P	22 20 06.2	+1.2
PEA0B				PcP	PcP	22 21 24.9	+0.9
PETK	Petropavlovsk-	50.01	24	P	P	22 20 05.2	+0.2
	comp=Z,7.2nm,0.5s,baz=212,slow=5.8,SNR=25						
PETK				LR	LR	22 40 46.0	
	comp=Z,105nm,21.1s,baz=221,slow=35						
PETK	Petropavlovsk-	50.01	24	P	P	22 20 05.7	+0.7
PETK	Petropavlovsk-	50.01	24	P	P	22 20 05.7	+0.7
PETK				PcP	PcP	22 21 24.3	+0.3
CNB	Canberra Magne	50.10	155	P	P	22 20 07.4	+1.4
	baz=50,SNR=5.2						
CNB	Canberra Magne	50.10	155	P	P	22 20 04.9	-1.1
TOO	Toolangi	50.64	160	P	P	22 20 11.2	+1.2
	baz=51,SNR=13						
TOO	Toolangi	50.64	160	P	P	22 20 11.1	+1.1
TOO				pmax	pmax		
	comp=Z,84nm,1.8s						
TOO	Toolangi	50.64	160	P	P	22 20 11.1	+1.1
TOO	Toolangi	50.64	160	P	P	22 20 10.8	+0.8
	comp=Z,29nm,0.7s						
LIFNC	LIFOU	50.68	127	P	P	22 20 11.2	+0.7
LIFNC	LIFOU	50.68	127	P	P	22 20 10.1	-0.4
NOUC	Port Laguerre	50.69	129	P	P	22 20 10.2	-0.4
DZM	Mont Dzumac	50.78	129	LR	LR	22 40 42.0	
	comp=Z,95nm,18.2s,baz=282,slow=35						
DZM	Mont Dzumac	50.78	129	eP	P	22 20 11.6	+0.2
	comp=Z,24nm,0.6s						
DZM	Mont Dzumac	50.78	129	P	P	22 20 11.3	0.0
DZM				IAmb	IAmb	22 20 14.1	
	comp=Z,22nm,1.0s						
DZM	Mont Dzumac	50.78	129	P	P	22 20 10.9	-0.5
DGZ	Jazzator, Alta	50.95	329	i P	P	22 20 10.3	-2.1
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ZSN	Zaisan	51.03	325	eP	P	22 20 10.3	-2.6
	baz=325						
ZSN	Zaisan	51.03	325	eP	P	22 20 10.3	-2.6
POO	Poona	51.20	286	eP	P	22 20 11.0	-3.6
OUENC	Ouen Island, N	51.28	129	P	P	22 20 16.2	+1.3
OUENC				IAmb	IAmb	22 20 27.8	
	comp=Z,28nm,1.0s						
PINNC	Pines Island,	51.85	129	P	P	22 20 21.1	+1.9
YAK	Yakutsk	52.06	2	P	P	22 20 20.5	+0.3
	comp=Z,48nm,0.6s,baz=187,slow=1.6,SNR=49						
YAK	Yakutsk	52.06	2	eP	P	22 20 20.1	-0.1
YAK				e*PP	pwP	22 20 42.3	+0.9
YAK				e		22 21 31.2	
YAK				e		22 22 19.4	
YAK				eS	S	22 27 36.1	-2.4
YAK				e		22 29 55.9	
YAK				eSS	SS	22 31 17.8	+1.4
YAK				pmax	pmax		
	comp=Z,137nm,0.9s						
YAK				pmax	pmax		
	comp=N,32nm,0.9s						
YAK				pmax	pmax		
	comp=E,16nm,1.0s						
YAK				pmax	pmax		
	comp=Z,766nm,5.1s						
YAK				pmax	pmax		
	comp=N,761nm,4.8s						
YAK				pmax	pmax		
	comp=E,691nm,4.0s						
YAK				smax	smax		
	comp=N,645nm,4.3s						
YAK				smax	smax		
	comp=E,515nm,4.1s						
YAK	Yakutsk	52.06	2	P	P	22 20 21.1	+0.9
MK31	Makanchi Array	52.18	323	P	P	22 20 20.9	-0.6
MK31				pmax	pmax		
	comp=Z,27nm,0.7s						
MK31	Makanchi Array	52.18	323	P	P	22 20 20.9	-0.6
MK31				IAmb	IAmb	22 20 21.8	
	comp=Z,27nm,0.7s						
MKAR	Makanchi Array	52.18	323	P	P	22 20 20.9	-0.6
	comp=Z,37nm,0.7s,baz=122,slow=8.2,SNR=310						
MKAR				PcP	PcP	22 21 32.2	-0.1
	comp=Z,11nm,0.8s,baz=108,slow=3.6,SNR=4.9						
MKAR				LR	LR	22 44 18.9	
	comp=Z,308nm,20.3s,baz=114,slow=38						
SHLS	Shalkode	52.27	318	eP	P	22 20 18.0	-4.3
	baz=318						
SHLS	Shalkode	52.27	318	eP	P	22 20 18.0	-4.3
MAKZ	Makanchi	52.38	323	P	P	22 20 22.2	-0.7
MAKZ				pmax	pmax		
	comp=Z,30nm,1.0s						
MAKZ	Makanchi	52.38	323	P	P	22 20 22.2	-0.7
MAKZ				IAmb	IAmb	22 20 23.2	
	comp=Z,30nm,0.9s						
UZB	Uzynbulak	52.56	318	eP	P	22 20 22.1	-2.4
	baz=318						
UZB	Uzynbulak	52.56	318	eP	P	22 20 22.0	-2.4
TARG	Taragay, Kyrgy	52.81	315	P	P	22 20 26.6	-0.1
MA2	Magadan	52.90	15	P	P	22 20 27.2	+0.8
MA2				pmax	pmax		
	comp=Z,150nm,2.0s						
MA2	Magadan	52.90	15	P	P	22 20 27.2	+0.8
KPKS	Kokpek	52.91	318	eP	P	22 20 24.4	-2.6
	baz=318						
KPKS	Kokpek	52.91	318	eP	P	22 20 24.4	-2.6
SATY	Saty	52.93	317	eP	P	22 20 25.2	-2.0
	comp=Z,10nm,0.8s,baz=317						
SATY	Saty	52.93	317	eP	P	22 20 25.2	-2.0
SATY				pmax	pmax		
	comp=Z,11nm,0.8s						
ZHN	Zhinishke	52.96	317	eP	P	22 20 26.2	-1.2
	baz=317						
ZHN	Zhinishke	52.96	317	eP	P	22 20 26.2	-1.2
KSH	Kashi	53.32	312	P	P	22 20 31.5	+1.4
KSH				sS	sS	22 28 24.3	-3.1
KSH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KSH				LR	LR		
	comp=Z,320nm,7.7s						
KSH				LR	LR		
	comp=Z,550nm,7.4s						
KSH				LR	LR		
	comp=Z,500nm,16.5s						
KDJ	Kajisay	53.40	316	P	P	22 20 30.3	-0.4
KDJ				pmax	pmax		
	comp=Z,12nm,0.8s						
KDJ	Kajisay	53.40	316	P	P	22 20 30.2	-0.4
TDK	Taldyqorghan	53.74	319	eP	P	22 20 31.2	-1.8
	comp=Z,18nm,0.7s,baz=319						
TDK	Taldyqorghan	53.74	319	eP	P	22 20 31.1	-1.8
TDK				pmax	pmax		
	comp=Z,18nm,0.7s						
MDOK	Medeo	53.88	317	eP	P	22 20 31.8	-2.5
	baz=317						
MDOK	Medeo	53.88	317	eP	P	22 20 31.7	-2.5
TNSS	Tian-Shan	53.90	317	eP	P	22 20 32.9	-1.8
	baz=317						
CHKK	Chushkaly	54.20	318	eP	P	22 20 34.4	-1.9
	baz=318						
BOOM	Boomskoye usch	54.38	316	P	P	22 20 37.0	-0.9
BOOM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BOOM	Boomskoye usch	54.38	316	P	P	22 20 37.0	-0.9
KUU	Kurty	54.64	317	eP	P	22 20 36.7	-2.9
	comp=Z,19nm,0.7s,baz=317						
KUU	Kurty	54.64	317	eP	P	22 20 36.6	-2.9
KUU				pmax	pmax		
	comp=Z,19nm,0.7s						
TKM2	Tokmak 2	54.78	316	P	P	22 20 40.0	-0.7
	SNR=8.4						
ZAA0	Zalesovo Array	54.83	332	P	P	22 20 39.4	-1.2
ZAA0				IAmb	IAmb	22 20 40.2	
	comp=Z,21nm,0.8s						
ZALV	Zalesovo Beam	54.83	332	P	P	22 20 39.4	-1.3
	comp=Z,23nm,0.6s,baz=119,slow=6.8,SNR=87						
ZALV				PcP	PcP	22 21 41.1	-1.0
	comp=Z,4.8nm,0.5s,baz=120,slow=5.1,SNR=5.9						
ZALV				LR	LR	22 46 33.4	
	comp=Z,187nm,18.1s,baz=152,slow=39						
KBK	Karagaybulak	55.13	316	P	P	22 20 43.0	-0.3
	SNR=10						
SEM	Semipalatinsk	55.18	326	eP	P	22 20 41.2	-2.4
	baz=326						
SEM	Semipalatinsk	55.18	326	eP	P	22 20 41.2	-2.4
UCH	Uchtor	55.28	315	P	P	22 20 44.6	-0.1
	SNR=24						
CHMS	Chumysh	55.38	316	P	P	22 20 44.2	-0.7
	SNR=6.7						
AAK	Ala-Archa	55.44	315	P	P	22 20 44.9	-0.5
AAK	Ala-Archa	55.44	315	P	P	22 20 45.0	-0.5
AAK				pmax	pmax		
	comp=Z,27nm,1.9s						
AAK	Ala-Archa	55.44	315	P	P	22 20 45.0	-0.5
SGDS	Sogindy	55.63	316	eP	P	22 20 44.2	-2.5
	baz=316						
USP	Ospenovka	55.65	316	P	P	22 20 46.1	-0.7
	SNR=17						
AML	Almayashu	55.82	315	P	P	22 20 48.4	-0.1
	SNR=14						
AML	Almayashu	55.82	315	i P	P	22 20 48.2	-0.3
	SNR=14						
EKS2	Erkin-Say	55.94	315	P	P	22 20 48.8	-0.2
	SNR=8.0						
SEY	Seymchan	56.18	14	P	P	22 20 52.0	+1.8
	comp=Z,6.6nm,0.6s,baz=201,slow=7.6,SNR=28						
SEY				PcP	PcP	22 21 48.3	+1.1
	comp=Z,2.5nm,0.6s,baz=140,slow=1.5,SNR=5.3						
KURK	Kurchatov	56.24	326	P	P	22 20 50.3	-0.5
KURK				pmax	pmax		
	comp=Z,58nm,0.8s						
KURK	Kurchatov	56.24	326	P	P	22 20 50.3	-0.5
KURBB	Kurchatov Arra	56.24	326	P	P	22 20 50.1	-0.7
	comp=Z,34nm,0.7s,baz=125,slow=6.8						
BTLS	Baital	56.60	318	eP	P	22 20 51.1	-2.4
	comp=Z,5.0nm,0.5s,baz=318						
BTLS	Baital	56.60	318	eP	P	22 20 51.1	-2.4
BTLS				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BTK	Batken	57.27	311	P	P	22 20 57.6	-0.9
BTK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BTK	Batken	57.27	311	P	P	22 20 57.6	-0.9
KBL	Kabul	57.37	305	P	P	22 20 58.7	-0.7
KBL				pmax	pmax		
	comp=Z,14nm,0.8s						
KBL	Kabul	57.37	305	P	P	22 20 58.7	-0.7
KBL				IAmb	IAmb	22 20 59.5	
	comp=Z,14nm,0.8s						
DZA	Taraz	57.72	315	eP	P	22 20 59.1	-2.4
	baz=315						
DZA	Taraz	57.72	315	eP	P	22 20 59.1	-2.4
CHGR	Chuyangaron	58.16	309	P	P	22 21 03.5	-1.2
CHGR				IAmb	IAmb	22 21 38.3	
	comp=Z,22nm,0.8s						
MSVF	Nonsavu	58.22	118	LR	LR	22 41 43.2	
	comp=Z,153nm,20.8s,baz=316,slow=31						
KKAR	Karatay Array	58.36	315	P	P	22 21 04.5	-1.4
KKAR	Karatay Array	58.36	315	P	P	22 21 04.5	-1.4
BRLS	Borolday	58.81	315	eP	P	22 21 07.2	-1.9
	baz=314						
BRLS	Borolday	58.81	315	eP	P	22 21 07.2	-1.9
TIXI	Tiksi	61.68	1	P	P	22 21 28.2	+0.1
	comp=Z,76nm,0.8s,baz=162,slow=6.3,SNR=54						
TIXI	Tiksi	61.68	1	ceP	P	22 21 28.3	+0.2
TIXI				pmax	pmax		
	comp=Z,65nm,0.9s						
TIXI	Tiksi	61.68	1	P	P	22 21 28.0	-0.1
BRVK	Borovoye	61.91	326	ceP	P	22 21 29.3	-0.7
BRVK				pmax	pmax		
	comp=Z,38nm,1.0s						
BRVK	Borovoye	61.91	326	P	P	22 21 29.0	-0.9
HRA	Herat	62.90	304	P	P	22 21 36.4	-0.8
HRA				IAmb	IAmb	22 21 36.9	
	comp=Z,13nm,0.9s						
BILL	Bilibino	63.77	16	ceP	P	22 21 43.1	+1.0
BILL				e		22 23 58.2	
BILL				eS	S	22 30 27.5	+16
BILL				pmax	pmax		
	comp=Z,62nm,2.5s						
BILL	Bilibino	63.77	16	P	P	22 21 42.7	+0.6
BILL				IAmb	IAmb	22 21 44.0	
	comp=Z,20nm,0.9s						
ATKA	Atka Island	63.83	36	P	P	22 21 42.8	0.0
NRIK	Noril'sk	64.29	346	P	P	22 21 45.2	-0.2
	comp=Z,14nm,0.5s,baz=121,slow=6.5,SNR=28						
NRIK				PcP	PcP	22 22 19.8	+0.3
	comp=Z,9.3nm,0.5s,baz=142,slow=4.7,SNR=5.1						
NRIK				LR	LR	22 53 04.5	
	comp=Z,202nm,18.6s,baz=160,slow=39						
NRIK	Noril'sk	64.29	346	ceP	P	22 21 45.4	0.0
NRIK				pmax	pmax		
	comp=Z,18nm,0.7s						
NRIK	Noril'sk	64.29	346	P	P	22 21 45.5	0.0
NRIK				IAmb	IAmb	22 21 45.8	
	comp=Z,17nm,0.7s						
AFI	Afiamalu	66.03	110	LR	LR	22 45 25.4	
	comp=Z,180nm,21.7s,baz=285,slow=31						
QRZ	Quartz Range	66.20	143	P	P	22 21 58.8	+0.6
GEYT	Alibeck	66.60	307	P	P	22 22 00.8	-0.2
	comp=Z,18nm,0.9s,baz=243,slow=19,SNR=18						
GEYT				LR	LR	22 56 07.5	
	comp=Z,102nm,19.4s,baz=230,slow=40						
GEYT	Alibeck	66.60	307	P	P	22 22 01.0	0.0
GEYT				IAmb	IAmb	22 22 02.2	
	comp=Z,25nm,1.1s						
GYA0B	ALIBECK ARRAY	66.60	307	P	P	22 22 00.9	-0.2
GYA0B				IAmb	IAmb	22 22 02.1	
	comp=Z,26nm,0.9s						
THZ	Tophouse	67.01	144	P	P	22 22 03.8	+0.3
THZ				IAmb	IAmb	22 22 22.1	
	comp=Z,22nm,0.9s						
ABKAR	Akbulak array	67.01	319	P	P	22 22 02.5	-0.9
ABKAR				IAmb	IAmb	22 22 03.5	
	comp=Z,23nm,1.2s						
ABKAR	Akbulak array	67.01	319	P	P	22 22 02.5	-0.9
RPZ	Rata Peaks	67.21	146	P	P	22 22 05.1	+0.4
RPZ				IAmb	IAmb	22 22 23.3	
	comp=Z,32nm,1.0s						
SOHO	SOHO	67.41	292	P	P	22 22 05.5	-0.9
URZ	Urewera	67.54	139	LR	LR	22 51 29.2	
	comp=Z,100nm,20.6s,baz=31,slow=36						
URZ	Urewera	67.54	139	P	P	22 22 08.2	+1.4
URZ				IAmb	IAmb	22 22 46.3	
	comp=Z,50nm,1.5s						
BANOM	Banah	67.60	294	P	P	22 22 07.0	-0.6
BKZ	Black Stump Fm	67.65	140	P	P	22 22 08.3	+0.8
BKZ				IAmb	IAmb	22 22 29.7	
	comp=Z,34nm,0.9s						
UOSS	Minazif	67.70	293	P	P	22 22 06.6	-1.7
UOSS	Minazif	67.70	293	P	P	22 22 07.0	-1.2
UOSS				IAmb	IAmb	22 22 43.3	
	comp=Z,25nm,1.1s						
SHME	Shamm	67.74	294	P	P	22 22 08.1	-0.3
HATD	Hatta, Dubai	67.77	293	i P	P	22 22 08.2	-0.5
	SNR=5.9						
ASHO	Ashiyiah	67.84	293	P	P	22 22 08.2	-0.9
ALNE	Al Ain	68.13	292	i P	P	22 22 10.4	-0.5
	SNR=16						
NAZ	Nazwa, Dubai	68.19	293	P	P	22 22 10.6	-0.7
FAQ	Al Faqa, Dubai	68.26	293	P	P	22 22 10.6	-1.1
BFZ	Birch Farm	68.37	141	P	P	22 22 12.5	+0.6
BFZ				IAmb	IAmb	22 23 02.7	
	comp=Z,32nm,1.1s						
SVE	Sverdlovsk	68.39	327	⇓eP	P	22 22 10.7	-1.2
SVE				pmax	pmax		
	comp=Z,51nm,0.9s						
ASUD	Al Ashush, Dub	68.50	293	P	P	22 22 12.5	-0.7
SHAO	Shalim	68.52	285	i P	P	22 22 13.5	0.0
	SNR=31						
UNV	Unalaska Valle	68.75	36	P	P	22 22 15.0	+0.8
	baz=257						
GAMB	Gambell	69.04	25	P	P	22 22 16.7	+1.0
GAMB	Gambell	69.04	25	P	P	22 22 17.3	+1.6
	baz=249,SNR=5.4						
ARU	Arti	69.40	327	c iP	P	22 22 16.9	-1.3
ARU				S	S	22 31 18.5	-1.2
ARU				SS	SS	22 35 43.7	-4.2

ARU				pmax	pmax		
	comp=Z,45nm,0.5s						
ARU	Arti	69.40	327	P	P	22 22 17.1	-1.1
SOCY	Socotra	70.61	279	P	P	22 22 25.3	-1.2
FALS	False Pass	70.72	35	P	P	22 22 27.0	+0.7
	baz=260						
TNA	Tin City	71.17	24	P	P	22 22 29.5	+0.7
TNA	Tin City	71.17	24	P	P	22 22 30.1	+1.3
	baz=252,SNR=8.1						
ANM	Nome	71.92	25	P	P	22 22 34.8	+1.5
ANM				pmax	pmax		
	comp=Z,14nm,0.9s						
ANM	Nome	71.92	25	P	P	22 22 34.8	+1.5
ANM	Nome	71.92	25	P	P	22 22 34.9	+1.5
	baz=255,SNR=10						
CHGN	Chignik	73.74	34	P	P	22 22 44.7	+0.4
CHGN	Chignik	73.74	34	P	P	22 22 44.9	+0.7
	baz=263						
RDOG	Red Dog Mine	73.77	22	P	P	22 22 55.0	+11
	baz=256,SNR=13						
LKRN	Lenkeran, Azer	73.97	307	P	P	22 22 45.5	-0.5
KIRV	Kirov	74.63	328	ceP	P	22 22 48.6	-0.8
QRN	Al-Qurain	74.97	297	eP	P	22 22 50.5	-1.4
UMR	Umm Al-Rimmam	75.10	298	eP	P	22 22 51.0	-1.7
BELG	Belogornoye	75.15	322	i P	P	22 22 51.9	-0.6
BELG				pmax	pmax		
	comp=Z,17nm,0.8s						
SEKA	Sheki	75.18	310	P	P	22 22 52.3	-0.8
MNGR	Mingechevir, A	75.27	310	P	P	22 22 53.3	-0.2
RDF	Al-Radifah	75.28	297	eP	P	22 22 51.6	-2.1
MIB	Mutribah	75.41	298	eP	P	22 22 53.0	-1.5
GCSA	Galena City Sc	75.53	26	P	P	22 22 55.7	+1.3
	baz=262,SNR=9.2						
ZKTA	Zakatala	75.61	310	P	P	22 22 54.9	-0.6
TTA	Tatalina	75.70	27	P	P	22 22 56.8	+1.2
TTA				pmax	pmax		
	comp=Z,58nm,1.9s						
TTA	Tatalina	75.70	27	P	P	22 22 56.8	+1.2
TTA				IAmb	IAmb	22 24 00.2	
	comp=Z,58nm,1.9s						
TTA	Tatalina	75.70	27	P	P	22 22 56.6	+1.0
	baz=264						
SVW2	Sparrevohn	75.71	29	P	P	22 22 57.2	+1.6
SVW2				IAmb	IAmb	22 23 57.3	
	comp=Z,79nm,1.9s						
RST	Umm Al-Ruwaisa	75.73	298	eP	P	22 22 54.1	-2.3
O18K	Koktuh Hills	75.79	31	P	P	22 22 57.8	+1.7
O18K	Koktuh Hills	75.79	31	P	P	22 22 57.7	+1.6
	baz=265						
GANJ	Ganja	75.85	309	P	P	22 22 56.5	-0.4
L19K	White Mountain	76.16	28	P	P	22 22 59.4	+1.2
L19K				IAmb	IAmb	22 23 55.4	
	comp=Z,64nm,1.8s						
L19K	White Mountain	76.16	28	P	P	22 22 59.5	+1.4
	baz=265						
GROC	Groznyy	76.21	312	eP	P	22 22 58.2	-0.6
GROC				eS	S	22 32 36.0	-1.6
GROC				pmax	pmax		
	comp=Z,41nm,1.0s						
N19K	Bonanza Creek	76.22	30	P	P	22 22 59.6	+0.9
N19K				IAmb	IAmb	22 23 01.6	
	comp=Z,22nm,0.8s						
N19K	Bonanza Creek	76.22	30	P	P	22 22 59.8	+1.1
	baz=266						
O19K	Port Alsworth	76.26	30	P	P	22 22 59.6	+1.0
	baz=266						
NAX	Nakhchivan	76.53	308	P	P	22 23 01.0	+0.2
A21K	Barrow	76.57	19	P	P	22 23 01.7	+1.5
A21K	Barrow	76.57	19	P	P	22 23 01.8	+1.6
	baz=261						
OHAK	Old Harbor	76.63	33	P	P	22 23 01.9	+1.1
	baz=268						
J20K	Nowinta River	76.65	26	P	P	22 23 02.3	+1.4
J20K	Nowinta River	76.65	26	P	P	22 23 02.6	+1.8
	baz=265,SNR=9.7						
PRGR	Permogore	76.78	331	eP	P	22 22 59.4	-2.2
PRGR				e*PP	PcP	22 23 15.2	+2.6
PRGR				pmax	pmax		
	comp=Z,22nm,0.6s						
CASY	Casey	76.87	186	P	P	22 23 02.3	+0.4
IMAR	Indian Mountai	76.97	24	P	P	22 23 04.1	+1.4
KDAK	Kodiak Island	77.03	33	P	P	22 23 04.0	+0.9
KDAK				pmax	pmax		
	comp=Z,175nm,1.7s						
KDAK	Kodiak Island	77.03	33	P	P	22 23 04.0	+0.9
KDAK	Kodiak Island	77.03	33	P	P	22 23 04.2	+1.1
	baz=268						
GNI	Garni	77.07	309	P	P	22 23 04.6	+0.6
GNI	Garni	77.07	309	P	P	22 23 04.2	+0.3
GNI				pmax	pmax		
	comp=Z,15nm,0.7s						
GNI	Garni	77.07	309	P	P	22 23 04.2	+0.3
GNI				IAmb	IAmb	22 23 12.7	
	comp=Z,15nm,0.7s						
H21K	Melozitna Rive	77.33	25	P	P	22 23 06.5	+1.8
H21K				IAmb	IAmb	22 23 07.5	
	comp=Z,22nm,0.8s						
H21K	Melozitna Rive	77.33	25	P	P	22 23 06.2	+1.5
	baz=266						
SPCR	Spurr Chakacha	77.35	29	P	P	22 23 05.9	+0.9
	baz=268						
CHUM	Lake Minchumin	77.43	27	P	P	22 23 06.8	+1.5
	baz=267,SNR=6.4						
CAST	Castle Rocks	77.51	27	P	P	22 23 06.4	+0.6
CAST				IAmb	IAmb	22 23 08.1	
	comp=Z,24nm,0.8s						
CAST	Castle Rocks	77.51	27	P	P	22 23 06.9	+1.2
	baz=267,SNR=13						
RAYN	Ar Rayn	77.53	292	i P	P	22 23 06.2	-0.5
	SNR=20						
RAYN	Ar Rayn	77.53	292	P	P	22 23 06.2	-0.5
RAYN				pmax	pmax		
	comp=Z,57nm,1.5s						
RAYN	Ar Rayn	77.53	292	P	P	22 23 06.2	-0.5
RAYN				IAmb	IAmb	22 23 07.1	
	comp=Z,57nm,1.4s						
I21K	Tanana	77.65	25	P	P	22 23 07.9	+1.5
I21K				IAmb	IAmb	22 23 09.2	
	comp=Z,36nm,0.8s						
I21K	Tanana	77.65	25	P	P	22 23 07.7	+1.3
	baz=267						
ONI	Oni	77.94	312	P	P	22 23 08.9	+0.3
ONI				pmax	pmax		
	comp=Z,15nm,0.7s						
ONI	Oni	77.94	312	P	P	22 23 08.9	+0.3
ONI				IAmb	IAmb	22 23 10.3	
	comp=Z,15nm,0.7s						
BRLK	Bradley Lake	77.97	31	P	P	22 23 08.7	+0.4
AKH	Akhalkalaki	77.97	310	⇑P	P	22 23 09.3	+0.4
BPAW	Bear Paw Mtn.	78.03	26	P	P	22 23 09.6	+1.0
	baz=268,SNR=7.7						
BRSE	Bradley Lake S	78.04	31	P	P	22 23 09.8	+1.1
	baz=269						
MLY	Manley	78.17	26	P	P	22 23 10.9	+1.5
MLY				IAmb	IAmb	22 23 11.7	
	comp=Z,32nm,0.7s						
MLY	Manley	78.17	26	P	P	22 23 10.1	+0.7
	baz=268						
KBZ	Khabaz	78.30	313	P	P	22 23 09.7	-0.8
	comp=Z,20nm,1.0s,baz=116,slow=2.7,SNR=28						
KBZ				LR	LR	23 01 42.8	
	comp=Z,140nm,19.6s,baz=60,slow=39						
KBZ	Khabaz	78.30	313	ceP	P	22 23 10.1	-0.3
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CUT	Chulitna	78.31	28	P	P	22 23 10.3	+0.2
	baz=269						
KARS	Kars	78.32	310	P	P	22 23 11.4	+0.5
KARS				pmax	pmax		
	comp=Z,102nm,0.7s						
KARS	Kars	78.32	310	P	P	22 23 11.3	+0.5
TRF	Thorofare Moun	78.32	27	P	P	22 23 11.3	+0.9
TRF				IAmb	IAmb	22 23 13.3	
	comp=Z,25nm,0.9s						
TRF	Thorofare Moun	78.32	27	P	P	22 23 11.0	+0.6
	baz=269,SNR=6.3						
M22K	Willow	78.37	29	P	P	22 23 10.8	+0.4
	baz=269						
KIV	Kislovodsk	78.44	313	⇑P	P	22 23 10.8	-0.6
KIV	Kislovodsk	78.44	313	i P	P	22 23 11.0	-0.4
	SNR=22						
KIV	Kislovodsk	78.44	313	eP	P	22 23 11.4	0.0
KIV				pmax	pmax		
	comp=Z,53nm,1.0s						
KIV				MLR	MLR		
	comp=Z,86nm,19.0s						
KIV	Kislovodsk	78.44	313	P	P	22 23 11.3	-0.1
KIV				IAmb	IAmb	22 23 12.6	
	comp=Z,42nm,0.8s						
COLD	Coldfoot	78.46	23	P	P	22 23 12.9	+2.0
COLD				IAmb	IAmb	22 23 13.7	
	comp=Z,26nm,0.7s						
COLD	Coldfoot	78.46	23	P	P	22 23 12.5	+1.6
	baz=268						
GEVA	Gevas	78.47	307	P	P	22 23 11.9	+0.1
SHA1	Shidzhatmaz	78.47	313	i P	P	22 23 10.8	-1.0
RC01	Rabbit Creek A	78.55	30	P	P	22 23 11.8	+0.3
	baz=270						
O22K	Cooper Landing	78.55	30	P	P	22 23 12.5	+1.0
	baz=270						
TOLK	Toolik Lake Re	78.74	22	P	P	22 23 14.2	+1.7
TOLK				IAmb	IAmb	22 23 15.2	
	comp=Z,27nm,0.7s						
TOLK	Toolik Lake Re	78.74	22	P	P	22 23 14.0	+1.6
	baz=268						
I23K	Minto, Yukon-K	78.75	25	P	P	22 23 14.0	+1.5
I23K				IAmb	IAmb	22 23 14.9	
	comp=Z,24nm,0.6s						
I23K	Minto, Yukon-K	78.75	25	P	P	22 23 13.8	+1.2
	baz=269,SNR=20						
VRH	Novokhopyorsk	78.81	320	eP	P	22 23 11.4	-1.7
VRH				pmax	pmax		
	comp=Z,60nm,0.6s						
PMR	Palmer	78.84	29	P	P	22 23 13.6	+0.5
	baz=270,SNR=5.5						
NEA2	Nenana	78.87	26	P	P	22 23 14.1	+0.9
	baz=270,SNR=11						
MCK	McKinley	78.93	27	P	P	22 23 14.0	+0.5
	baz=270,SNR=24						
CHVG	Ch'k'valeri	78.95	312	⇑P	P	22 23 14.3	+0.2
RND	Reindeer	78.97	27	P	P	22 23 14.3	+0.5
RND				pmax	pmax		
	comp=Z,48nm,1.4s						
RND	Reindeer	78.97	27	P	P	22 23 14.3	+0.5
RND				IAmb	IAmb	22 23 15.1	
	comp=Z,48nm,1.4s						
SIRT	Sirnak	79.01	306	P	P	22 23 14.4	-0.2
WAT1	Susitna Watana	79.11	28	P	P	22 23 14.7	+0.2
	baz=270						
KNK	Knik Glacier	79.17	29	P	P	22 23 15.5	+0.6
	baz=271						
SML	Sawmill	79.22	29	P	P	22 23 15.8	+0.6
	baz=271						
MDM	Murphy Dome	79.23	26	P	P	22 23 16.0	+0.8
MDM				IAmb	IAmb	22 23 18.4	
	comp=Z,23nm,1.1s						
PWL	Port Wells	79.23	30	P	P	22 23 15.8	+0.5
	baz=271						
GURO	Guroymak-BITLI	79.26	307	P	P	22 23 16.4	+0.4
WRH	Wood River Hil	79.30	26	P	P	22 23 16.1	+0.6
WRH				IAmb	IAmb	22 23 17.1	
	comp=Z,36nm,1.4s						
H24K	Noodor Dome	79.37	25	P	P	22 23 16.9	+0.9
	baz=270						
TCOL	CIGO, UAF Yank	79.39	26	P	P	22 23 16.2	+0.2
	baz=271						
COLA	College	79.39	26	P	P	22 23 16.1	+0.1
COLA				pmax	pmax		
	comp=Z,19nm,0.7s						
COLA	College	79.39	26	P	P	22 23 16.1	+0.1
COLA				IAmb	IAmb	22 23 19.0	
	comp=Z,19nm,0.7s						
COLA	College	79.39	26	P	P	22 23 16.5	+0.5
	baz=271						
CCB	Clear Creek Bu	79.42	26	P	P	22 23 16.3	+0.2
CCB				IAmb	IAmb	22 23 17.2	
	comp=Z,11nm,0.5s						
WAT6	Susitna Watana	79.48	28	P	P	22 23 17.5	+0.7
	baz=271,SNR=10						
POKR	Poker Plat Res	79.57	25	P	P	22 23 18.4	+1.5
POKR	Poker Plat Res	79.57	25	P	P	22 23 18.5	+1.5
	baz=271,SNR=7.3						
DHY	Denali Highway	79.64	28	P	P	22 23 18.4	+0.8
DHY	Denali Highway	79.64	28	P	P	22 23 18.3	+0.7
	baz=271,SNR=6.5						
SCM	Sheep Creek Mo	79.70	29	P	P	22 23 19.0	+1.1
SCM				pmax	pmax		
	comp=Z,40nm,1.0s						
SCM	Sheep Creek Mo	79.70	29	P	P	22 23 19.0	+1.1
SCM				IAmb	IAmb	22 23 19.9	
	comp=Z,40nm,1.0s						
SCM	Sheep Creek Mo	79.70	29	P	P	22 23 17.8	0.0
	baz=272						
KLMR	Klimovskoe	79.72	330	eP	P	22 23 15.9	-2.0
KLMR				pmax	pmax		
	comp=Z,32nm,0.8s						
KLMR	Klimovskoe	79.72	330	eP	P	22 23 15.9	-2.0
KLMR				AMP		22 23 18.6	
	comp=Z,32nm,0.8s						
HDA	Harding Lake	79.79	26	P	P	22 23 18.3	+0.1
HDA				IAmb	IAmb	22 23 18.9	
	comp=Z,23nm,0.6s						
HDA	Harding Lake	79.79	26	P	P	22 23 18.1	-0.1
	baz=272						
IL31		79.81	26	P	P	22 23 17.8	-0.5
ILAR	Eielson Array	79.81	26	P	P	22 23 17.8	-0.6
	comp=Z,10.0nm,0.7s,baz=237,slow=4.7,SNR=92						
ILAR				PKKPbc	PKKPbc	22 42 04.2	-2.6
	comp=Z,0.4nm,0.5s,baz=109,slow=1.7,SNR=6.4						
ILAR	Eielson Array	79.81	26	P	P	22 23 17.4	-0.9
GLI	Glacier Island	79.84	30	P	P	22 23 18.7	+0.1
	baz=272						
M24K	Tolsona, Glenn	80.23	28	P	P	22 23 21.0	+0.3
	baz=273						
VORD	Divnogorie	80.35	320	eP	P	22 23 20.2	-1.2
VORD				pmax	pmax		
	comp=Z,20nm,0.6s						
PRP	Porcupine Dome	80.36	25	P	P	22 23 21.2	-0.3
	baz=273						
KLU	Klutina	80.38	29	P	P	22 23 21.6	0.0
	baz=273						
VSR	Storozhevoye	80.41	320	eP	P	22 23 20.0	-1.8
VSR				pmax	pmax		
	comp=Z,40nm,0.9s						
LPSR	Galich'ya Gora	80.46	322	eP	P	22 23 20.8	-1.2
LPSR				pmax	pmax		
	comp=Z,60nm,0.7s						
DIV	Divide	80.47	29	P	P	22 23 23.4	+1.4
DIV				IAmb	IAmb	22 23 25.8	
	comp=Z,23nm,0.8s						
PAX	Paxson	80.51	28	P	P	22 23 23.4	+1.1
	baz=273,SNR=7.3						
SOC	Sochi	80.61	313	eP	P	22 23 20.5	-2.6
SOC				e		22 26 22.9	
SOC				ePPP	PPP	22 28 13.2	
SOC				eS	S	22 33 22.7	-2.1
SOC				eSS	SS	22 38 32.4	-6.1
SOC				eSSS	SSS	22 42 04.5	
SOC				pmax	pmax		
	comp=Z,31nm,0.7s						
BMAR	Burnt Mountain	80.64	23	P	P	22 23 24.5	+1.8
HARP	HAARP	80.69	28	P	P	22 23 24.0	+0.9
	baz=274						
RIDG	Independent Ri	80.75	27	P	P	22 23 23.8	+0.3
	baz=274						
MOS	Moscow	81.00	325	eP	P	22 23 19.6	-5.3
MOS				pmax	pmax		
	comp=Z,72nm,0.8s						
N25K	Chitina, Valde	81.01	29	P	P	22 23 24.5	-0.4
	baz=274						
SCRK	Sand Creek	81.11	27	P	P	22 23 26.4	+0.9
SCRK				IAmb	IAmb	22 23 27.5	
	comp=Z,35nm,1.4s						
SCRK	Sand Creek	81.11	27	P	P	22 23 26.1	+0.7
	baz=274,SNR=8.1						
J26L	Joseph Creek	81.25	26	P	P	22 23 26.7	+0.5
	baz=275,SNR=9.6						
MENT	Mentasta	81.31	28	P	P	22 23 27.7	+1.3
MENT				IAmb	IAmb	22 23 29.4	
	comp=Z,15nm,0.6s						
LVZ	Lovozero	81.41	338	P	P	22 23 26.1	-0.8
LVZ				pmax	pmax		
	comp=Z,229nm,1.7s						
LVZ	Lovozero	81.41	338	P	P	22 23 26.1	-0.8
L26K	Log Cabin Wild	81.47	27	P	P	22 23 28.5	+1.2
	baz=275,SNR=5.2						
VRDI	Verde Repeater	81.59	29	P	P	22 23 29.3	+1.2
VRDI				IAmb	IAmb	22 23 30.4	
	comp=Z,58nm,1.4s						
OBN	Obninsk	81.66	325	⇓P	P	22 23 27.2	-1.1
OBN	Obninsk	81.66	325	deP	P	22 23 27.4	-0.9
OBN				e		22 26 33.7	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,125nm,17.0s						
OBN	Obninsk	81.66	325	P	P	22 23 27.2	-1.1
OBN				IAmb	IAmb	22 23 27.7	
	comp=Z,24nm,0.7s						
M26K	Nabesna, AK	81.69	28	P	P	22 23 29.5	+1.0
M26K				IAmb	IAmb	22 23 31.0	
	comp=Z,24nm,1.2s						
M26K	Nabesna, AK	81.69	28	P	P	22 23 29.7	+1.2
	baz=275						
CRQE	Cirque	81.81	30	P	P	22 23 29.7	+0.5
	baz=276						
WAX	Waxell Ridge	81.95	30	P	P	22 23 31.3	+1.4
L27K	Beaver Creek,	82.16	27	P	P	22 23 32.4	+1.5
	baz=276,SNR=13						
BCAR	Beaver Creek A	82.18	27	P	P	22 23 32.3	+1.3
M27K	Edge Creek, AK	82.22	28	P	P	22 23 32.6	+1.3
	baz=276						
EGAK	Eagle	82.26	26	P	P	22 23 32.3	+1.0
EGAK	Eagle	82.26	26	P	P	22 23 32.4	+1.1
	baz=277						
MESA	MESA	82.43	30	P	P	22 23 32.9	+0.4
	baz=277						
CTG	Chitna Glacier	82.63	29	P	P	22 23 35.1	+1.5
	baz=277,SNR=20						
CTGM	Chitina Glacie	82.64	29	P	P	22 23 35.4	+1.9
BVCY	Beaver Creek	82.68	28	P	P	22 23 35.3	+1.7
	baz=277,SNR=7.5						
ABPO	Ambohimpanom	82.85	249	P	P	22 23 35.2	-0.3
ABPO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ABPO	Ambohimpanom	82.85	249	P	P	22 23 35.2	-0.3
YUK3	Moose Creek	82.95	29	P	P	22 23 36.8	+1.6
	baz=278,SNR=7.8						
DAWY	Dawson	83.11	26	P	P	22 23 37.2	+1.3
DAWY				IAmb	IAmb	22 23 38.6	
	comp=Z,21nm,1.1s						
DAWY	Dawson	83.11	26	P	P	22 23 37.6	+1.8
	baz=278,SNR=13						
GAZ	Gaziantep	83.19	306	P	P	22 23 36.0	-0.9
GAZ				IAmb	IAmb	22 23 36.9	
	comp=Z,33nm,0.7s						
PINM	Pinnacle	83.28	30	P	P	22 23 38.1	+1.3
	baz=278						
I29M	Ogilvie Camp,	83.37	25	P	P	22 23 38.5	+1.4
	baz=279						
PNL	Peninsula	83.77	31	P	P	22 23 41.1	+1.8
	baz=279						
EPYK	Eagle Plains	83.84	24	P	P	22 23 40.6	+1.1
EPYK				IAmb	IAmb	22 23 41.7	
	comp=Z,30nm,0.9s						
EPYK	Eagle Plains	83.84	24	P	P	22 23 40.3	+0.8
	baz=280						
KEV	Kevo	83.88	340	P	P	22 23 39.0	-0.5
KEV				pmax	pmax		
	comp=Z,403nm,2.0s						
KEV	Kevo	83.88	340	P	P	22 23 39.0	-0.5
VOI	Vohitsoka	83.90	247	P	P	22 23 39.6	-1.1
VOI				IAmb	IAmb	22 23 44.9	
	comp=Z,49nm,1.7s						
BNN	Bunyan	84.04	308	P	P	22 23 40.9	-0.4
SPB2	Spitsbergen Ar	84.30	349	P	P	22 23 41.4	-0.2
SPA0	Spitsbergen Ar	84.30	349	eP	P	22 23 41.7	0.0
SPITS	Spitsbergen Ar	84.30	349	P	P	22 23 41.6	0.0
SPITS				pmax	pmax		
	comp=Z,71nm,0.9s						
ARA0	ARCESS Array S	84.44	340	eP	P	22 23 42.4	0.0
ARCES	ARCESS Array B	84.44	340	P	P	22 23 42.1	-0.3
	comp=Z,7.9nm,0.4s,baz=84,slow=6.4,SNR=66						
ARCES				LR	LR	23 03 21.8	
	comp=Z,46nm,18.2s,baz=295,slow=37						
ARCES	ARCESS Array B	84.44	340	P	P	22 23 42.0	-0.5
ARCES				pmax	pmax		
	comp=Z,209nm,1.7s						
ARCES	ARCESS Array B	84.44	340	P	P	22 23 42.0	-0.5
INK	Inuvik	84.65	22	P	P	22 23 44.5	+1.0
	comp=Z,12nm,0.6s,baz=298,slow=4.4,SNR=43						
INK	Inuvik	84.65	22	P	P	22 23 44.0	+0.5
INK				pmax	pmax		
	comp=Z,37nm,1.2s						
INK	Inuvik	84.65	22	P	P	22 23 44.0	+0.5
INK				IAmb	IAmb	22 23 45.6	
	comp=Z,37nm,1.2s						
INK	Inuvik	84.65	22	P	P	22 23 44.3	+0.8
	baz=283						
HAMF	Hammerfest	84.77	341	eP	P	22 23 43.9	-0.1
KBS	Kingsbay	84.81	350	P	P	22 23 43.9	-0.3
KBS				pmax	pmax		
	comp=Z,106nm,1.4s						
KBS	Kingsbay	84.81	350	P	P	22 23 43.9	-0.3
BZK	Bozkurt	84.98	312	P	P	22 23 45.6	-0.1
N31M	Braeburn, Yuko	85.20	28	P	P	22 23 48.5	+2.1
	baz=282,SNR=9.7						
ILGA	Ilgaz	85.33	311	P	P	22 23 47.2	-0.6
KTK1	Kautokeino	85.35	339	eP	P	22 23 46.8	-0.2
GHAJ	Ghor Haditha	85.36	301	P	P	22 23 48.0	+0.2
BR131	Keskin Array S	85.60	309	P	P	22 23 47.7	-1.4
BR131				pmax	pmax		
	comp=Z,18nm,0.8s						
BR131	Keskin Array S	85.60	309	P	P	22 23 47.7	-1.4
BR131				IAmb	IAmb	22 23 49.0	
	comp=Z,18nm,0.8s						
BRTR	Keskin Array B	85.60	309	P	P	22 23 48.0	-1.1
	comp=Z,12nm,0.8s,baz=102,slow=4.3,SNR=65						
BRTR				LR	LR	23 07 57.2	
	comp=Z,80nm,18.7s,baz=84,slow=40						
BRTR	Keskin Array B	85.60	309	P	P	22 23 48.0	-1.1
M31M	Drury Creek, Y	85.69	28	P	P	22 23 50.3	+1.4
	baz=283,SNR=8.1						
WHY	Whitehorse	85.81	29	P	P	22 23 51.5	+1.9
	baz=283,SNR=10						
SKAG	Skagway	85.85	30	P	P	22 23 51.3	+1.7
	baz=282						
FIA1	FINESS Array S	86.09	332	P	P	22 23 50.3	-0.5
FINES	FINESS Array B	86.09	332	P	P	22 23 50.1	-0.7
	comp=Z,25nm,0.6s,baz=74,slow=4.8,SNR=299						
FINES				LR	LR	23 06 23.9	
	comp=Z,130nm,18.2s,baz=48,slow=38						
FINES	FINESS Array B	86.09	332	P	P	22 23 50.3	-0.5
FINES	FINESS Array B	86.09	332	P	P	22 23 50.3	-0.5
JETT	Jettan, Norway	86.16	340	eP	P	22 23 51.3	+0.3
ANTO	Ankara	86.22	310	P	P	22 23 50.7	-1.3
ANTO				pmax	pmax		
	comp=Z,21nm,1.1s						
ANTO	Ankara	86.22	310	P	P	22 23 50.7	-1.3
ANTO				IAmb	IAmb	22 23 52.2	
	comp=Z,21nm,1.1s						
BR231	Keskin MP Arra	86.24	310	P	P	22 23 51.0	-1.2
BR231				IAmb	IAmb	22 23 52.4	
	comp=Z,14nm,1.1s						
A36M	Sachs Harbour	86.28	17	P	P	22 23 53.2	+1.7
	baz=291						
VSU	Vasula	86.46	329	eP	P	22 23 53.3	+0.7
TRO	Tromso	86.62	340	eP	P	22 23 52.0	-1.2
CSS	Mathiatis	86.62	305	P	P	22 23 53.3	-0.8
AKASG	Malin Array Be	86.71	321	P	P	22 23 52.9	-1.2
	comp=Z,11nm,0.5s,baz=62,slow=5.0,SNR=49						
AKASG				LR	LR	23 07 33.4	
	comp=Z,67nm,18.2s,baz=315,slow=39						
AKASG	Malin Array Be	86.71	321	P	P	22 23 52.9	-1.2
AKASG				IAmb	IAmb	22 23 53.9	
	comp=Z,22nm,0.7s						
AKBB	Malin Array Si	86.71	321	P	P	22 23 53.0	-1.0
AKBB				pmax	pmax		
	comp=Z,24nm,0.9s						
AKBB	Malin Array Si	86.71	321	P	P	22 23 53.0	-1.0
AKBB				IAmb	IAmb	22 23 56.0	
	comp=Z,24nm,0.9s						
MNK	Minsk	86.72	325	i P	P	22 23 53.8	-0.2
MNK				i *PP	pP	22 24 13.0	-0.4
MNK				i *SP	sP	22 24 20.9	-0.2
MNK				i		22 27 16.2	
MNK				i PPP	PPP	22 29 11.0	
MNK				i S	SKSac	22 34 13.4	-1.2
MNK				i SS	SS	22 40 09.2	+1.2
MNK				i SSS	SSS	22 43 42.1	
MNK				pmax	pmax		
	comp=Z,17nm,0.8s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,33nm,0.8s						

MNK				MLR	MLR		
	comp=Z,80nm,13.0s						
MNK				MLR	MLR		
	comp=N,37nm,8.0s						
MNK				MLR	MLR		
	comp=E,12nm,14.0s						
MNK	Minsk	86.72	325	i P	P	22 23 53.9	-0.2
	comp=E,4.0nm,1.0s						
MNK				i P	P	22 23 53.9	-0.2
	comp=N,33nm,0.8s						
MNK				i P	P	22 23 53.9	-0.2
	comp=Z,17nm,0.8s,baz=78						
MNK				i pP	pP	22 24 13.1	-0.3
MNK				i sP	sP	22 24 21.0	-0.1
MNK				i PP	PP	22 27 16.3	-0.6
MNK				i PPP	PPP	22 29 11.0	
MNK				i S	SKSac	22 34 13.4	-1.2
MNK				i sS	pS	22 34 48.1	-2.2
MNK				i SS	SS	22 40 09.3	+1.3
MNK				i SSS	SSS	22 43 42.1	
MNK				i LQ	LQ	22 57 11.9	
MNK				i LR	LR	23 03 00.8	
MNK				i LRM	MLR	23 04 05.9	
	comp=E,12nm,14.2s						
MNK				i LRM	MLR	23 04 05.9	
	comp=N,37nm,7.8s						
MNK				i LRM	MLR	23 04 05.9	
	comp=Z,80nm,12.6s						
NOR	Nord	86.89	355	i P	P	22 23 55.0	+0.6
NOR				IAmb	IAmb	22 23 55.4	
	comp=Z,15nm,0.8s						
P33M	Teslin, Yukon	86.91	29	P	P	22 23 56.2	+1.2
	baz=284						
LEF	Lefka	86.95	305	⇓P	P	22 23 54.8	-0.8
PURM	Purcari	87.11	317	⇑P	P	22 23 55.1	-1.0
IDID	Didziasalis	87.18	326	eP	P	22 23 56.0	-0.2
IIGN	Ignalina	87.46	326	eP	P	22 23 58.0	+0.4
ISAL	Salakas	87.46	326	eP	P	22 23 57.9	+0.3
PPT	Papeete	87.63	108	LR	LR	22 56 01.3	
	comp=Z,91nm,21.5s,baz=204,slow=31						
PPT2	Papeete2	87.63	108	eLR	LR	22 51 39.1	
	comp=Z,194nm,23.8s						
MILM	Milestii Mici	87.75	317	⇓P	P	22 23 57.6	-1.5
SORM	Soroca	87.80	318	⇑P	P	22 23 58.1	-1.3
MTSE	Matsula	87.88	329	eP	P	22 23 58.6	-0.9
BORA	Eskisehir	87.99	310	P	P	22 23 59.5	-1.1
TLCR		88.11	315	⇑P	P	22 24 00.1	-0.8
N2IH	Innhavet	88.24	339	eP	P	22 23 59.7	-1.3
TPGR	Topolog	88.45	315	⇑P	P	22 24 01.4	-1.2
VLDR	Vladesti	88.47	316	⇑P	P	22 24 02.1	-0.5
KIBK	Kibwezi	88.47	267	P	P	22 24 03.4	0.0
KIBK				IAmb	IAmb	22 24 04.7	
	comp=Z,12nm,0.7s						
STEI	Steigen	88.49	339	eP	P	22 24 00.8	-1.4
IAS	Iasi	88.52	318	⇓P	P	22 24 01.9	-0.9
TIRR	Tirgusor	88.54	315	⇑P	P	22 24 01.9	-1.1
CFR	Carcaliu	88.58	316	⇑P	P	22 24 02.2	-0.9
EUNU	Eureka	88.60	5	P	P	22 24 03.2	+0.6
EUNU				IAmb	IAmb	22 24 04.2	
	comp=Z,15nm,0.8s						
PABE	Paberze	88.66	326	eP	P	22 24 02.9	-0.3
PABE	Paberze	88.66	326	P	P	22 24 02.6	-0.7
N2TV	T¥rnvik	88.68	339	eP	P	22 24 01.8	-1.3
FAUS	Fauske	88.69	339	eP	P	22 24 01.9	-1.2
IZVR	Izvoarele	88.75	316	⇓P	P	22 24 03.8	-0.1
DLBC	Dease Lake	88.76	31	P	P	22 24 05.0	+1.1
	comp=Z,3.1nm,0.8s,baz=264,slow=16,SNR=3.3						
HARR	Harsova	88.83	315	⇓P	P	22 24 04.1	-0.3
TBI	Tubuai	88.85	114	eLR	LR	22 52 17.7	
	comp=Z,273nm,28.0s						
ELL	Elmali	89.03	307	P	P	22 24 04.5	-1.1
ELL				pmax	pmax		
	comp=Z,34nm,0.6s						
ELL	Elmali	89.03	307	P	P	22 24 04.5	-1.1
ICOR	Ion Corvin	89.05	315	⇓P	P	22 24 04.9	-0.4
KMBO	Kilima Mbogo	89.05	269	P	P	22 24 06.3	0.0
	comp=Z,9.1nm,0.9s,baz=52,slow=7.7,SNR=25						
KMBO				LR	LR	23 03 47.8	
	comp=Z,52nm,18.2s,baz=86,slow=35						
KMBO	Kilima Mbogo	89.05	269	i P	P	22 24 06.8	+0.5
	SNR=13						
KMBO	Kilima Mbogo	89.05	269	P	P	22 24 06.1	-0.2
KMBO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KMBO	Kilima Mbogo	89.05	269	P	P	22 24 06.1	-0.2
KMBO				IAmb	IAmb	22 24 07.7	
	comp=Z,9.9nm,0.9s						
NBB05	Inndyr	89.28	339	eP	P	22 24 04.4	-1.5
TESR	Tescani	89.29	317	⇑P	P	22 24 05.9	-0.6
MAW	Mawson	89.33	200	P	P	22 24 06.4	+0.4
	comp=Z,9.6nm,0.6s,baz=65,slow=5.1,SNR=16						
MAW				LR	LR	22 59 13.1	
	comp=Z,59nm,21.7s,baz=64,slow=32						
MAW	Mawson	89.33	200	P	P	22 24 06.7	+0.7
	baz=90,SNR=8.9						
MAW	Mawson	89.33	200	P	P	22 24 05.7	-0.3
MAW				pmax	pmax		
	comp=Z,7.0nm,1.4s						
MAW	Mawson	89.33	200	P	P	22 24 05.7	-0.3
VRI	Vrincioaia	89.39	316	⇓P	P	22 24 06.9	-0.1
NBB30	Finnes	89.41	339	eP	P	22 24 05.2	-1.3
PLOR	Plostina	89.44	316	⇓P	P	22 24 07.2	-0.1
MOR8	Moi Rana	89.48	338	eP	P	22 24 04.7	-2.2
SUW	Suwalki	89.51	325	eP	P	22 24 06.4	-0.9
SUW	Suwalki	89.51	325	eP	P	22 24 06.3	-0.9
SUW	Suwalki	89.51	325	P	P	22 24 05.9	-1.4
SUW				pmax	pmax		
	comp=Z,57nm,1.1s						
SUW	Suwalki	89.51	325	P	P	22 24 05.9	-1.4
VNDA	Vanda	89.63	173	P	P	22 24 07.5	+0.2
	comp=Z,5.4nm,0.8s,baz=323,slow=5.8,SNR=14						
VNDA				LR	LR	23 05 50.9	
	comp=Z,84nm,19.0s,baz=336,slow=36						
VNDA	Vanda	89.63	173	P	P	22 24 07.7	+0.4
VNDA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VNDA	Vanda	89.63	173	P	P	22 24 07.7	+0.4
BURAR	Bucovina Array	89.97	318	⇑P	P	22 24 09.3	-0.4
BURAR	Bucovina Array	89.97	318	P	P	22 24 09.5	-0.2
OZUR		89.97	317	⇓P	P	22 24 09.7	0.0
BUR08	Bucovina Ar. S	89.97	318	P	P	22 24 09.4	-0.4
BUR08				IAmb	IAmb	22 24 10.9	
	comp=Z,18nm,1.0s						
MLR	Muntele Rosu	90.01	316	⇑P	P	22 24 09.5	-0.5
MLR	Muntele Rosu	90.01	316	P	P	22 24 08.8	-1.2
MLR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MLR	Muntele Rosu	90.01	316	P	P	22 24 08.8	-1.2
LVV	L'vov	90.15	321	eP	P	22 24 09.9	-0.5
DOPR	Dopca	90.27	317	⇑P	P	22 24 10.3	-0.8
VOIR		90.63	316	⇑P	P	22 24 11.6	-1.3
ARCR	ARCALIA	90.67	318	⇑P	P	22 24 12.4	-0.5
HUMR	Humele	90.91	315	⇓P	P	22 24 12.9	-1.2
ARR	Arges	90.93	316	⇓P	P	22 24 13.4	-0.8
KWP	Kalwaria Pacla	91.03	321	eP	P	22 24 14.7	+0.1
KWP	Kalwaria Pacla	91.03	321	P	P	22 24 14.2	-0.3
KWP	Kalwaria Pacla	91.03	321	P	P	22 24 14.2	-0.3
DAG	Danmarks Havn	91.05	352	i P	P	22 24 12.0	-2.1
BMR	Baia Mare	91.08	319	⇑P	P	22 24 14.2	-0.6
NSS	Namsos	91.11	337	eP	P	22 24 13.1	-1.4
CJR	Cluj-Napoca	91.27	318	⇑P	P	22 24 15.2	-0.6
CBBR	Cluj-Babes-Bol	91.29	318	⇓P	P	22 24 15.6	-0.2
VLAD	Vladila	91.45	315	⇑P	P	22 24 15.6	-1.0
LOT	Lotru	91.50	317	⇓P	P	22 24 16.1	-0.9
KOLS	Kolonicke sedl	91.50	320	eP	P	22 24 16.6	-0.1
KOLS	Kolonicke sedl	91.50	320	eP	P	22 24 16.6	-0.1
BEL	Belsk	91.54	323	eP	P	22 24 17.3	+0.5
TRPA	Tarpa	91.56	319	⇑P	P	22 24 16.4	-0.6
TRPA	Tarpa	91.56	319	eP	P	22 24 16.0	-1.0
UZH	Uzhgorod	91.58	320	⇑iP	P	22 24 16.9	-0.2
DRGR		91.83	318	⇑P	P	22 24 17.7	-0.7
DEV	Deva	91.96	317	⇑P	P	22 24 18.4	-0.5
GZR	Gura Zlata	92.19	317	⇓P	P	22 24 19.1	-0.9
TBLU	Trondheim	92.36	336	eP	P	22 24 18.9	-1.5
PUNG	Punghina	92.39	316	⇑P	P	22 24 20.4	-0.6
HERR	Herculane	92.58	316	⇑P	P	22 24 20.7	-1.0
NIE	Niedzica	92.59	321	eP	P	22 24 23.0	+1.2
OJC	Ojcow	92.64	322	eP	P	22 24 21.8	-0.2
OJC	Ojcow	92.64	322	P	P	22 24 21.7	-0.2
OJC				pmax	pmax		
	comp=Z,13nm,0.7s						
OJC	Ojcow	92.64	322	P	P	22 24 21.7	-0.3
VTS	Vitosha	92.64	314	⇑P	P	22 24 21.5	-0.8
VTS	Vitosha	92.64	314	P	P	22 24 21.0	-1.3
VTS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VTS	Vitosha	92.64	314	P	P	22 24 21.0	-1.3
SIRR	Siria	92.68	318	⇑P	P	22 24 21.9	-0.4
NEEM	North Greenlan	92.75	359	i P	P	22 24 23.0	+0.7
BZS	Buzias	92.90	317	⇑P	P	22 24 22.2	-1.1
NB2	NORSAR Subarra	92.97	334	P	P	22 24 21.7	-1.6
	comp=Z,6.9nm,0.7s,baz=65,slow=4.6						
NB2	NORSAR Subarra	92.97	334	P	P	22 24 21.7	-1.6
	baz=65,slow=4.6						
NOA	NORSAR Array B	92.97	334	P	P	22 24 21.8	-1.6
	comp=Z,4.5nm,0.7s,baz=66,slow=4.6,SNR=23						
NOA				LR	LR	23 09 10.7	
	comp=Z,130nm,19.6s,baz=60,slow=37						
GKP	Gorka Klasztor	93.10	325	eP	P	22 24 19.1	-4.9
LANS	Liptovska Anna	93.19	321	eP	P	22 24 25.3	+0.7
LANS	Liptovska Anna	93.19	321	eP	P	22 24 25.3	+0.7
DBG	Daneborg	93.33	351	i P	P	22 24 24.6	0.0
BOVS	Bovan	93.43	315	⇓P	P	22 24 24.3	-1.4
KOLL	Kolacno	94.05	321	eP	P	22 24 28.8	+0.3
YKA	Yellowknife Ar	94.13	24	P	P	22 24 29.2	+0.7
	comp=Z,12nm,0.8s,baz=299,slow=4.7,SNR=151						
YKA				PKKP	PKKPdf	22 41 28.5	-1.8
	comp=Z,0.9nm,0.6s,baz=123,slow=2.8,SNR=16						
YKA	Yellowknife Ar	94.13	24	P	P	22 24 29.3	+0.8
MORC	Moravsky Berou	94.16	322	⇑P	P	22 24 28.6	-0.4
MORC	Moravsky Berou	94.16	322	eP	P	22 24 28.3	-0.7
MORC	Moravsky Berou	94.16	322	P	P	22 24 28.8	-0.2
MORC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MORC	Moravsky Berou	94.16	322	P	P	22 24 28.8	-0.2
FRGS	Fruska Gora	94.26	317	⇑P	P	22 24 28.2	-1.3
SRO	Srobarova	94.36	320	eP	P	22 24 30.2	+0.3
SRO	Srobarova	94.36	320	eP	P	22 24 30.2	+0.3
JAVC	Velka Javorina	94.41	321	eP	P	22 24 30.9	+0.7
DIVS	Divibare	94.47	316	P	P	22 24 29.7	-1.0
DIVS				IAmb	IAmb	22 24 30.5	
	comp=Z,5.9nm,0.9s						
KRLC	Kraliky	94.52	322	eP	P	22 24 30.3	-0.4
KRLC	Kraliky	94.52	322	eP	P	22 24 30.3	-0.4
KSP	Ksiaz	94.53	323	eP	P	22 24 21.1	-9.5
DPC	Dobruska-Polom	94.69	323	eP	P	22 24 31.1	-0.3
DPC	Dobruska-Polom	94.69	323	eP	P	22 24 31.1	-0.3
CHVC	Chvalec	94.76	323	eP	P	22 24 31.8	+0.1
UPC	Upice	94.82	323	eP	P	22 24 31.9	-0.1
UPC	Upice	94.82	323	eP	P	22 24 31.9	-0.1
VRAC	Vranov	94.91	322	⇓P	P	22 24 32.3	-0.2
VRAC	Vranov	94.91	322	eP	P	22 24 32.4	0.0
MPLH	Magyarpolny	95.08	320	eP	P	22 24 32.3	-0.9
KOVH	Kovagotottos	95.08	318	eP	P	22 24 31.1	-2.2
KRUC	Moravsky	95.12	322	eP	P	22 24 33.3	-0.1
EGYH	Egyhazaskeszo	95.12	320	eP	P	22 24 31.7	-1.7
TAOE	Nuku Hiva Isla	95.17	98	eLR	LR	22 55 05.0	
	comp=Z,283nm,27.7s						
HOMB	Homborsund	95.48	332	eP	P	22 24 33.4	-1.3
PDG	Podgorica	95.51	315	⇓P	P	22 24 34.0	-1.3
PDG	Podgorica	95.51	315	P	P	22 24 33.5	-1.7
PDG				IAmb	IAmb	22 24 34.7	
	comp=Z,8.5nm,0.8s						
CONA	Conrad Observa	95.86	321	i P	P	22 24 36.6	-0.3
	comp=Z,4.8nm,1.1s						
PRU	Pruhonice	95.89	323	eP	P	22 24 36.1	-0.7
PRU	Pruhonice	95.89	323	eP	P	22 24 36.1	-0.7
CLL	Collm	96.26	324	i P	P	22 24 37.5	-1.0
CLL	Collm	96.26	324	i P	P	22 24 37.5	-1.0
ARSA	Arzberg	96.33	320	eP	P	22 24 38.6	-0.3
	comp=Z,4.4nm,1.1s						
CKRC	Cesky Krumlov	96.48	322	eP	P	22 24 40.5	+0.9
CKRC				eP	P	22 24 40.6	+0.9
KHC	Kasperske Hory	96.80	322	eP	P	22 24 40.9	-0.2
KHC	Kasperske Hory	96.80	322	P	P	22 24 40.5	-0.6
KHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KHC	Kasperske Hory	96.80	322	P	P	22 24 40.5	-0.6
KHC				IAmb	IAmb	22 24 41.4	
	comp=Z,5.9nm,0.9s						
GEC2	GERESS Array S	96.84	322	P	P	22 24 40.9	-0.4
GEC2				IAmb	IAmb	22 24 41.9	
	comp=Z,8.4nm,0.9s						
GERES	GERESS Array B	96.84	322	P	P	22 24 40.9	-0.4
	comp=Z,5.8nm,0.8s,baz=68,slow=4.7,SNR=52						
GERES				PKiKP	PKiKP	22 29 18.5	+1.0
	comp=Z,0.2nm,0.5s,baz=48,slow=2.0,SNR=5.2						
GERES				LR	LR	23 10 16.8	
	comp=Z,97nm,18.6s,baz=86,slow=37						
SOKA	Soboth	96.86	320	eP	P	22 24 40.1	-1.3
	comp=Z,5.0nm,1.2s						
SCO	Scoresbysund	96.86	350	eP	P	22 24 41.7	+0.9
MOA	Molln	96.89	321	eP	P	22 24 41.4	-0.1
	comp=Z,18nm,0.9s						
SUMG	Summit	97.04	355	P	P	22 24 41.9	-0.2
SUMG				pmax	pmax		
	comp=Z,39nm,2.0s						
SUMG	Summit	97.04	355	i P	P	22 24 42.0	-0.2
SUMG	Summit	97.04	355	P	P	22 24 41.9	-0.2
OBKA	Obir	97.23	320	i P	P	22 24 41.9	-1.2
	comp=Z,3.8nm,1.1s						
KBA	Koelnbreinsper	97.77	320	eP	P	22 24 44.4	-1.3
	comp=Z,5.0nm,0.8s,SNR=5.2						
SYO	Syowa Base	97.95	201	⇓ePdiff	Pdif	22 24 51.7	+6.1
GRF	Grafenberg Arr	97.97	323	ePKPbc	Pdif	22 24 46.6	+0.2
	baz=66,slow=4.0						
B08A	Colville Reser	98.36	38	P	Pdif	22 24 48.4	+0.3
ABTA	Abfaltersbach	98.42	320	eP	P	22 24 47.0	-1.5
	comp=Z,8.6nm,1.0s,SNR=6.8						
STAL	STALIGIAL	98.50	320	P	P	22 24 47.3	-1.5
STAL				IAmb	IAmb	22 24 48.4	
	comp=Z,9.6nm,1.1s						
WTTA	Wattenberg	98.75	321	eP	P	22 24 49.3	-0.8
	comp=Z,15nm,0.9s,SNR=18						
WATA	Walderalm	98.76	321	i P	P	22 24 49.1	-0.9
	comp=Z,10nm,1.1s,SNR=8.3						
SQTA	Sankt Quirin	99.04	321	eP	Pdif	22 24 50.5	-0.8
	comp=Z,7.8nm,0.7s,SNR=12						
MOTA	Moosalm	99.05	321	eP	Pdif	22 24 50.3	-1.1
	comp=Z,8.7nm,0.9s,SNR=8.6						
RETA	Reutte	99.20	322	i P	Pdif	22 24 50.5	-1.4
	comp=Z,4.6nm,1.0s						
FETA	Feichten	99.42	321	eP	Pdif	22 24 52.5	-0.6
	comp=Z,6.5nm,0.9s,SNR=10						
NVAR	Mina Array Bea	103.19	47	Pdiff	Pdif	22 25 11.9	+1.9
	comp=Z,0.5nm,0.5s,baz=345,slow=4.6,SNR=4.0						
NVAR				PKKPbc	PKKPbc	22 41 05.5	-0.9
	comp=Z,1.0nm,0.7s,baz=141,slow=4.2,SNR=7.8						
SNAA	Sanae	111.01	195	PKiKP	PKiKP	22 29 42.3	-0.4
VNA2	Neumayer--Watz	112.64	195	PKiKP	PKiKP	22 29 45.7	0.0
VNA3	Neumayer Olymp	112.99	194	PKiKP	PKiKP	22 29 46.0	-0.4
T25A	Trinidad	113.43	42	P	PKiKP	22 29 49.0	+0.4
	baz=304						
TXAR	Lajitas Array	118.17	49	PKP	PKiKP	22 29 58.8	+1.0
	comp=Z,0.8nm,0.5s,baz=354,slow=2.7,SNR=7.6						
S39A	Bolivar	119.96	36	PKPdf	PKiKP	22 30 00.9	0.0
R40A	Maddies Statio	120.13	34		PKPdf	22 30 01.0	-0.2
U38A	Gravette	120.19	37	PKPdf	PKiKP	22 30 01.4	0.0
TORD	Torodi Ar. Bea	120.22	292	PKP	PKPdf	22 30 01.1	-0.8
	comp=Z,5.0nm,0.7s,baz=46,slow=1.7,SNR=34						
TORD				PKKPab	PKKPab	22 40 11.5	0.0
	comp=Z,0.6nm,0.7s,baz=278,slow=4.1,SNR=3.9						
JCT	Junction City	120.36	46	P	PKiKP	22 30 02.1	+0.2
	baz=305						
CCM	Cathedral Cave	120.87	34	P	PKPdf	22 30 02.6	0.0
	baz=316						
U40A	Yellville	121.15	36		PKPdf	22 30 03.1	0.0
U40A	Yellville	121.15	36	P	PKPdf	22 30 03.2	0.0
	baz=314						
W39A	Magazine	121.39	38	P	PKiKP	22 30 03.8	+0.1
	baz=312						
T42A	Van Buren	121.69	35		PKPdf	22 30 03.5	-0.6
833A	Chaparral WMA,	121.87	48	P	PKiKP	22 30 05.8	+0.9
	baz=304						
MIAR	Mount Ida	121.95	38	P	PKiKP	22 30 05.5	+0.6
	baz=312						
ACSO	Alum Creek Sta	123.29	26	P	PKPdf	22 30 06.7	-0.4
	baz=325						
WCI	Wyandotte Cave	123.33	30	P	PKPdf	22 30 07.3	0.0
	baz=321						
M54A	Oil Creek Stat	123.58	23	P	PKPdf	22 30 07.7	0.0
	baz=329						
N54A	Moraine State	123.92	24	P	PKPdf	22 30 07.6	-0.8
	baz=329						
WVT	Waverly	124.13	33	PKIKP	PKPdf	22 30 09.0	+0.1
WVT	Waverly	124.13	33	PKPdf	PKPdf	22 30 09.0	+0.1
WVT	Waverly	124.13	33	P	PKPdf	22 30 08.8	-0.1
	baz=318						
P52A	Corning	124.15	26	P	PKPdf	22 30 08.6	-0.2
	baz=326						
BINY	Binghamton	124.30	20	P	PKPdf	22 30 08.9	-0.2
	baz=333						
KOWA	Kowa	124.89	295	PKPdf	PKPdf	22 30 10.5	-0.3
T50A	Nancy	125.00	30		PKiKP	22 30 10.8	-0.1
MCWV	Mont Chateau	125.09	24	P	PKPdf	22 30 10.5	-0.1
	baz=328						
HRV	Adam Dziewonsk	125.36	16	P	PKPdf	22 30 10.9	-0.2
	baz=338						
TZTN	Tazewell	126.00	29	P	PKPdf	22 30 12.5	0.0
	baz=323						
TKL	Tuckaleechee C	126.60	30	PKP	PKiKP	22 30 14.1	0.0
	comp=Z,5.1nm,0.6s,baz=139,slow=6.7,SNR=12						
KMSC	Kings Mountain	128.20	29	P	PKiKP	22 30 17.1	-0.2
	baz=325						
KIC	Kosan Boka	128.42	286	ePKIKP	PKiKP	22 30 18.5	+0.2
	comp=Z,15nm,0.6s						
DBIC	Dimbokro	128.43	287	PKP	PKPdf	22 30 17.8	+0.2
	comp=Z,7.6nm,0.9s,baz=122,slow=1.0,SNR=11						
DBIC	Dimbokro	128.43	287	PKPdf	PKPdf	22 30 17.6	-0.1
GOGA	Godfrey	128.52	32	P	PKPdf	22 30 17.4	0.0
	baz=322						
TIC	Toumodi	128.59	287	ePKIKP	PKiKP	22 30 18.6	-0.1
LIC	Lamto	128.73	286	ePKIKP	PKiKP	22 30 18.9	0.0
	comp=Z,36nm,0.9s						
CMIG	Matias Romero	131.40	57	PKP	PKiKP	22 30 23.7	-0.4
	comp=Z,0.7nm,0.3s,baz=289,slow=3.7,SNR=4.4						
DWPF	Disney Wildern	133.74	34	P	PKPdf	22 30 27.2	-0.1
	baz=321						
PLCA	Paso Flores	145.97	157	PKPbc	PKPab	22 30 51.1	+0.5
	comp=Z,12nm,0.8s,baz=222,slow=3.5,SNR=20						
PLCA	Paso Flores	145.97	157	PKP2	PKPbc	22 30 50.2	+0.2
PLCA	Paso Flores	145.97	157		PKPbc	22 30 50.2	+0.2
SDDR	Presa de Saban	146.54	31	eP	PKiKP	22 31 00.3	+5.2
LC01	Cunco	146.99	154		PKPbc	22 30 53.1	+0.2
BCIP	Isla Barro Col	147.96	54	eP	PKPdf	22 30 52.7	-0.5
CAPC	Capurgana	150.25	52	eP	PKPdf	22 30 57.5	+0.6
SMRC	Santa Marta, M	150.88	44	eP	PKPbc	22 31 01.3	-2.2
SJCC	San Jacinto, C	151.08	48	eP	PKPbc	22 31 04.1	+0.1
DBBC	Dabeiba	152.12	54	eP	PKPbc	22 31 06.0	-0.5
UREC	San Jos de Ur	152.20	52	eP	PKPbc	22 31 05.1	-1.5
SMLC	San Martn de	152.62	48	eP	PKPbc	22 31 07.0	-0.5
ZARC	Zaragoza, Cauc	152.88	51	eP	PKPdf	22 31 01.3	+0.4
CBOC	Ciudad Bolivar	152.96	55	eP	PKPbc	22 31 07.9	-0.5
PLMC	San Jos del P	153.27	57	eP	PKiKP	22 31 10.8	+1.6
OTAV	Otavalo	153.57	69	eP	PKPbc	22 31 09.8	-0.3
YOTC	Yotoco, Valle	153.71	59	eP	PKPdf	22 31 00.3	-1.9
GUY2C	Guyana, Caldas	153.85	56	eP	PKPbc	22 31 10.8	0.0
RAC02	Cali,SGC	153.87	61	eP	PKPab	22 31 17.5	-6.2
BRRC	Barranca, Sant	154.00	50	eP	PKPdf	22 30 57.5	-5.0
POPC	Popayan, Colom	154.16	62	eP	PKiKP	22 31 11.8	+0.5
SOTA	Rioblanco	154.41	63	eP	PKPbc	22 31 11.8	-0.3
PAMC	Pamplona, Colo	154.60	48	eP	PKPbc	22 31 11.8	-0.7
SPBC	San Pablo de B	154.63	53	eP	PKPbc	22 31 10.8	-1.2
BARC	Barichara	154.73	50	eP	PKiKP	22 31 12.7	+0.3
CHIC	Chingaza	155.51	55	eP	PKPdf	22 31 04.1	-0.9
PLTB	Pedras Altas	158.28	181	PKPab	PKPab	22 31 42.4	+0.6
CPUP	Villa Florida	163.38	169	PKP	PKPdf	22 31 14.0	+0.8
	comp=Z,3.2nm,1.1s,baz=195,slow=3.6,SNR=2.8						
CPUP				PKPab	PKPab	22 32 04.8	+0.7
	comp=Z,1.4nm,0.6s,baz=134,slow=2.9,SNR=5.6						
LPAZ	La Paz	164.78	116	PKP	PKPdf	22 31 16.6	+1.1
	comp=Z,4.3nm,0.9s,baz=342,slow=1.6,SNR=12						
LPAZ				PKPab	PKPab	22 32 14.1	+2.5
	comp=Z,1.8nm,0.9s,baz=201,slow=1.1,SNR=3.5						
LPAZ	La Paz	164.78	116	eP	PKPdf	22 31 15.6	0.0
LPAZ	La Paz	164.78	116		PKPdf	22 31 14.8	-0.7

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*NOU **26** 22:24:22.7, 32°.64S×179°.70E, h369^{km}, mb3.8/7, South of Kermadec Islands*

WEL 26 22:24:15.2±0.8, **32°S**±11°×**18°0W**±2°3, **h417**^{km}±16^{km}, **M4.0**/13, **mB4.3**/7, **ML4.5**/12, **MLv4.5**/13, **Mw(mB)3.4**/7, **Error ellipse: s-maj=0.0km s-min=0.0km az=112.2, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.67	197	P	P	22 25 46.3	+1.7
MXZ				S	S	22 26 56.6	-1.3
GRZ	Great Barrier	5.77	223	P	P	22 25 44.7	-1.0
WMGZ	Waiomatatini S	5.89	195	P	P	22 25 48.6	+1.7
WMGZ				S	S	22 27 03.8	+1.6
HAZ	Te Kaha	6.00	200	P	P	22 25 47.7	-0.3
HAZ				S	S	22 27 04.6	+0.4
PKGZ	Pakihiroa	6.04	197	P	P	22 25 49.5	+0.9
PKGZ				S	S	22 27 02.1	-3.1
PUZ	Puketiti	6.17	195	P	P	22 25 51.9	+2.1
PUZ				S	S	22 27 06.9	-0.7
RUGZ	Raukumara Rang	6.22	200	P	P	22 25 50.7	+0.2
RUGZ				S	S	22 27 07.5	-1.2
TWGZ	Tauwhareparae	6.34	197	P	P	22 25 53.0	+1.3
TWGZ				S	S	22 27 13.4	+2.5
OUZ	Omahuta	6.41	239	P	P	22 25 50.6	-1.9
CNGZ	Carnagh Statio	6.58	195	P	P	22 25 55.6	+0.8
MWZ	Matawai	6.61	200	P	P	22 25 54.0	-1.1
MWZ				S	S	22 27 17.4	+1.2
URZ	Urewera	6.67	202	P	P	22 25 54.0	-1.7
URZ				S	S	22 27 17.6	+0.3
URZ	Urewera	6.67	202	P	P	22 25 54.3	-1.4
RIGZ	Rimuhau	6.89	197	P	P	22 25 56.6	-1.7
RIGZ				S	S	22 27 22.3	+0.3
MUGZ	Murupara	6.98	204	P	P	22 25 58.4	-0.7
RAHZ	Arahi	7.28	200	P	P	22 26 02.3	-0.1
RAHZ				S	S	22 27 29.5	-0.2
TLZ	Tolley Road	7.33	211	P	P	22 26 05.4	+2.3
NMHZ	Naumai	7.53	201	P	P	22 26 06.3	+1.1
NMHZ				S	S	22 27 38.2	+3.3
BKZ	Black Stump Fm	7.69	203	P	P	22 26 05.1	-1.9
BKZ				S	S	22 27 37.9	-0.4
BKZ	Black Stump Fm	7.69	203	P	P	22 26 05.0	-2.0
HIZ	Hauiti	7.79	214	P	P	22 26 10.4	+2.4
HIZ	Hauiti	7.79	214	P	P	22 26 06.2	-1.9
KWHZ	Kaweka Forest	7.95	203	P	P	22 26 09.0	-0.8
KWHZ				S	S	22 27 43.6	+0.1
WTVZ	West Tongariro	7.97	208	P	P	22 26 09.8	-0.4
OTVZ	Oturere	7.99	207	P	P	22 26 10.1	-0.3
FWVZ	Far West T-bar	8.11	207	P	P	22 26 11.1	-0.6
KAHZ	Kahuranaki	8.15	199	P	P	22 26 12.3	+0.4
KAHZ				S	S	22 27 49.1	+1.4
WNVZ	Wahianoa	8.15	207	P	P	22 26 11.2	-0.9
WNVZ				S	S	22 27 51.3	+3.4
KRHZ	Kereru	8.16	202	P	P	22 26 11.7	-0.4
KRHZ				S	S	22 27 46.9	-1.0
MOVZ	Moawhango	8.16	206	P	P	22 26 11.9	-0.3
MOVZ				S	S	22 27 47.8	-0.3
PXZ	Pawanui	8.37	199	P	P	22 26 13.5	-0.8
PXZ				S	S	22 27 53.2	+1.0
PNHZ	Pukenui	8.46	202	P	P	22 26 13.9	-1.5
PNHZ				S	S	22 27 54.0	-0.1
TSZ	Takapari Road	8.67	203	P	P	22 26 17.5	-0.2
TSZ				S	S	22 27 57.9	-0.6
BFZ	Birch Farm	9.15	200	P	P	22 26 22.8	-0.1
QRZ	Quartz Range	10.71	214	P	P	22 26 40.1	-0.1
KHZ	Kahutara	11.61	206	P	P	22 26 50.6	+0.6

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*NEIC **26** 22:43:55.6±1.7, 12°.8S±0°.1×169°.4E±0°.1, h646^{km}±6^{km}, mb4.4/61, Error ellipse: s-maj=15.8km s-min=15.6km az=211.0*

*NOU **26** 22:43:56.9, 12°.99S×169°.22E, h657^{km}, mb4.4/44, Santa Cruz Islands Region*

*IDC **26** 22:43:57.2±1.1, 12°.84S×169°.28E, h673^{km}±13^{km}, mb3.7/19, mb1 3.8/23, mb1mx3.6/36, mbtmp4.7/23, Error ellipse: s-maj=13.0km s-min=9.6km az=154.0*

ISC 26 22:43:55.3±0.3, **12°.76S**±0°.06×**169°.34E**±0°.06, **h650**^{km}, **n173**, σ**0^s.80**/178, **mb4.4**/65, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.38	218	P	P	22 45 19.9	-0.7
SANVU	Saraoutou	3.38	218	P	P	22 45 20.0	-0.7
DVP	Devils Point	5.06	193	P	P	22 45 31.8	0.0
RTV	Rentapao	5.08	190	P	P	22 45 32.6	+0.7
LIFNC	LIFOU	8.22	194	P	P	22 45 58.4	0.0
LIFNC	LIFOU	8.22	194	P	P	22 45 58.5	+0.1
MARNC	Mare, Loyalty	8.76	188	P	P	22 46 03.3	0.0
MARNC	Mare, Loyalty	8.76	188	P	P	22 46 03.5	+0.1
KOUNC	Koumac, New Ca	9.14	211	P	P	22 46 08.0	+1.1
DZM	Mont Dzumac	9.66	196	P	P	22 46 13.2	+1.2

	1.6nm,0.3s,baz=262,slow=12,SNR=16						
DZM	Mont Dzumac	9.66	196	P	P	22 46 12.8	+0.9
MSVF	Nonsavu	9.75	122	P	P	22 46 13.2	+0.4
	3.7nm,0.3s,baz=284,slow=13,SNR=18						
MSVF	Nonsavu	9.75	122	P	P	22 46 12.8	0.0
MSVF	Nonsavu	9.75	122	P	P	22 46 13.2	+0.4
HNR	Honiara	9.80	289	P	P	22 46 13.9	+0.6
	25nm,0.3s,baz=189,slow=5.5,SNR=5.7						
HNR	Honiara	9.80	289	P	P	22 46 13.5	+0.2
ONTNC	Ouen Toro	9.89	196	P	P	22 46 15.0	+1.1
OUENC	Ouen Island, N	9.90	194	P	P	22 46 15.5	+1.5
PINNC	Pines Island,	9.96	190	P	P	22 46 15.4	+0.7
FUNA	Funafuti	10.56	67	P	P	22 46 25.9	+5.3
AFI	Afiamalu	18.41	96	P	P	22 47 33.3	+0.5
	2.4nm,0.3s,baz=230,slow=4.6,SNR=4.3						
EIDS	Eidsvold	21.30	231	P	P	22 47 58.6	0.0
PMG	Port Moresby	22.02	276	P	P	22 48 06.3	+1.3
	12nm,0.6s,baz=354,slow=1.7,SNR=3.8						
PMG	Port Moresby	22.02	276	P	P	22 48 06.2	+1.1
PMG				IAmb	IAmb	22 48 07.1	
	comp=Z,13nm,0.6s						
ARMA	Armidale	24.02	220	P	P	22 48 23.2	+0.5
ARMA				IAmb	IAmb	22 48 41.9	
	comp=Z,21nm,1.4s						
COEN	Coen	25.48	264	P	P	22 48 36.5	+0.8
COEN				IAmb	IAmb	22 48 38.1	
	comp=Z,28nm,1.4s						
COEN	Coen	25.48	264	P	P	22 48 36.3	+0.6
	comp=Z,14nm,1.3s						
BKZ	Black Stump Fm	27.05	168	P	P	22 48 48.0	-1.0
BKZ				IAmb	IAmb	22 48 48.7	
	comp=Z,11nm,0.9s						
BKZ	Black Stump Fm	27.05	168	P	P	22 48 48.2	-0.8
QRZ	Quartz Range	28.10	175	P	P	22 48 59.3	+1.3
BFZ	Birch Farm	28.47	169	P	P	22 48 59.6	-1.6
CMSA	Cobar Meteorol	28.68	226	P	P	22 49 03.5	+0.3
SNZO	South Karori	28.83	172	P	P	22 49 03.9	-0.3
TUWZ	Tuamarina	28.84	173	P	P	22 49 04.0	-0.4
QIS	Mount Isa	29.49	251	P	P	22 49 10.7	+0.4
	comp=Z,6.1nm,1.0s						
KHZ	Kahutara	29.77	174	P	P	22 49 11.7	-0.6
STKA	Stephens Creek	31.80	229	P	P	22 49 30.7	+1.0
	comp=Z,4.3nm,0.4s,baz=52,slow=9.5,SNR=17						
STKA				PcP	PcP	22 51 60.0	0.0
	comp=Z,1.8nm,0.5s,baz=357,slow=5.7,SNR=3.9						
STKA	Stephens Creek	31.80	229	P	P	22 49 30.4	+0.7
STKA	Stephens Creek	31.80	229	P	P	22 49 30.4	+0.7
	comp=Z,2.2nm,2.8s						
TOO	Toolangi	32.62	217	P	P	22 49 37.0	+0.4
TOO	Toolangi	32.62	217	P	P	22 49 37.7	+1.1
LCRK	Leigh Creek	33.71	234	P	P	22 49 45.5	-0.3
	comp=Z,21nm,0.7s						
GLAD	Gladstone	33.76	210	P	P	22 49 46.2	+0.2
	comp=Z,26nm,1.2s						
WB0	Warramunga Arr	34.22	254	P	P	22 49 50.0	-0.2
WRAB	Tennant Creek	34.28	253	P	P	22 49 50.3	-0.4
WRA	Warramunga Arr	34.29	253	P	P	22 49 50.4	-0.4
	comp=Z,8.1nm,0.5s,baz=84,slow=8.6,SNR=65						
WRA				PcP	PcP	22 52 07.5	+0.1
	comp=Z,1.7nm,0.6s,baz=80,slow=3.0,SNR=8.3						
WRA				S	S	22 54 31.5	-3.1
	comp=Z,6.3nm,1.1s,baz=84,slow=13,SNR=6.2						
WRA	Warramunga Arr	34.29	253	P	P	22 49 49.6	-1.2
WRA					PcP	22 52 07.0	-0.3
HTT	Hallett	34.52	228	P	P	22 49 52.7	+0.1
	comp=Z,20nm,2.2s						
OOD	Oodnadatta	34.79	239	P	P	22 49 55.3	+0.6
	comp=Z,12nm,1.4s						
AS31	Alice Springs	35.27	247	P	P	22 49 58.6	-0.2
ASAR	Alice Springs	35.27	247	P	P	22 49 58.8	-0.1
	comp=Z,14nm,0.4s,baz=78,slow=9.8,SNR=376						
ASAR				PcP	PcP	22 52 09.8	-0.4
	comp=Z,3.6nm,0.8s,baz=86,slow=3.3,SNR=14						
ASAR				S	S	22 54 46.0	-3.2
	comp=Z,3.5nm,0.8s,baz=77,slow=15,SNR=14						
KDU	Kakadu	35.95	266	P	P	22 50 03.9	-0.5
	comp=Z,33nm,1.9s						
BBOO	Buckleboo	36.37	231	P	P	22 50 08.1	+0.4
BBOO	Buckleboo	36.37	231	P	P	22 50 07.0	-0.7
	comp=Z,26nm,0.7s						
MULG	Mulgathing	36.96	236	P	P	22 50 12.0	-0.5
	comp=Z,23nm,0.8s						
MTN	Manton Dam	37.24	266	P	P	22 50 15.2	+0.2
MTN	Manton Dam	37.24	266	P	P	22 50 14.9	0.0
	comp=Z,30nm,2.6s						
DRS	Darwin Rock St	37.50	266	P	P	22 50 17.2	+0.2
	comp=Z,21nm,1.0s						
FAKI	Fak Fak	37.97	282	P	P	22 50 20.8	-0.1
KNRA	Kununurra	39.40	261	P	P	22 50 32.2	-0.1
KNRA	Kununurra	39.40	261	P	P	22 50 31.6	-0.7
	comp=Z,35nm,0.6s						
WRKA	Warakurna	40.55	246	P	P	22 50 41.1	-0.3
	comp=Z,32nm,0.5s						
FORT	Forrest	42.04	238	P	P	22 50 53.0	+0.1
FORT	Forrest	42.04	238	P	P	22 50 52.4	-0.4
	comp=Z,69nm,0.6s						
FITZ	Fitzroy Crossi	42.39	257	P	P	22 50 55.9	+0.2
	comp=Z,4.0nm,0.5s,baz=89,slow=6.3,SNR=28						
BATI	Baumata	44.80	268	P	P	22 51 16.1	+1.8
	comp=Z,40nm,0.5s,baz=182,slow=1.2,SNR=8.9						
PSA00	Pilbara Seismi	47.93	252	P	P	22 51 37.9	+0.2
PSA00	Pilbara Seismi	47.93	252	P	P	22 51 37.2	-0.4
PSA00				IAmb	IAmb	22 51 38.4	
	comp=Z,6.7nm,0.6s						
PSA00	Pilbara Seismi	47.93	252	P	P	22 51 37.3	-0.4
	comp=Z,29nm,0.8s						
MBWA	Marble Bar	48.02	253	P	P	22 51 38.9	+0.5
MEEK	Meekatharra	49.41	246	P	P	22 51 47.9	-0.6
	comp=Z,33nm,0.6s						
TOLI2	Tolitoli	50.11	282	P	P	22 51 53.6	-0.1
TOLI2				IAmb	IAmb	22 51 54.3	
	comp=Z,12nm,1.2s						
TOLI2	Tolitoli	50.11	282	P	P	22 51 55.5	+1.8
KLBR	Kellerberrin	50.83	240	P	P	22 51 57.8	-0.9
NWAO	Narrogin (SRO)	51.49	238	P	P	22 52 03.3	-0.1
BLDU	Ballidu	51.56	241	P	P	22 52 04.3	+0.3
	comp=Z,17nm,2.0s						
MORW	Morawa	51.94	243	P	P	22 52 06.9	+0.2
MORW				IAmb	IAmb	22 52 07.2	
	comp=Z,9.8nm,0.8s						
MORW	Morawa	51.94	243	P	P	22 52 06.5	-0.2
	comp=Z,17nm,1.1s						
MUN	Mundaring	52.19	239	P	P	22 52 09.5	+1.1
	comp=Z,12nm,0.5s						
GIRL	Giralia	53.16	251	P	P	22 52 16.4	+1.0
GIRL	Giralia	53.16	251	P	P	22 52 16.4	+1.0
	comp=Z,122nm,2.2s						
KKM	Kota Kinabalu	56.00	286	P	P	22 52 35.0	-0.3
KKM				IAmb	IAmb	22 52 46.8	
	comp=Z,20nm,1.2s						
JOW	Kunigami	56.03	315	P	P	22 52 36.0	+0.8
JOW				IAmb	IAmb	22 52 54.1	
	comp=Z,15nm,1.0s						
MJAR	Matsushiro Arr	57.15	330	P	P	22 52 42.8	+0.2
	comp=Z,2.0nm,0.6s,baz=166,slow=7.6,SNR=8.5						
MJAR	Matsushiro Arr	57.15	330	P	P	22 52 43.0	+0.3
MAJO	Matsushiro	57.15	330	P	P	22 52 42.8	+0.1
MAJO				IAmb	IAmb	22 53 11.2	
	comp=Z,22nm,1.4s						
JMN	Monobe	57.25	325	P	P	22 52 44.0	+0.6
JMN				IAmb	IAmb	22 53 12.7	
	comp=Z,40nm,1.3s						
UGM	Wanagama	57.97	269	P	P	22 52 48.4	-0.3
JHS	Saijyo	58.61	325	P	P	22 52 53.2	+0.7
TPUB	Ta-pu	59.63	307	P	P	22 52 58.8	-0.7
TPUB				IAmb	IAmb	22 52 59.6	
	comp=Z,21nm,0.8s						
SSLB	Suanglung	59.64	307	P	P	22 52 58.8	-0.7
SSLB				IAmb	IAmb	22 53 06.8	
	comp=Z,20nm,1.1s						
VNDA	Vanda	64.87	182	P	P	22 53 32.5	+0.4
	comp=Z,1.5nm,0.7s,baz=354,slow=7.0,SNR=11						
VNDA	Vanda	64.87	182	P	P	22 53 32.3	+0.1
USRK	Ussuriysk Ar.	66.09	331	P	P	22 53 41.0	+0.8
	comp=Z,2.5nm,0.6s,baz=208,slow=6.5,SNR=14						
USRK	Ussuriysk Ar.	66.09	331	P	P	22 53 41.2	+1.0
USA0B	Ussuriysk Arra	66.09	331	P	P	22 53 41.2	+1.0
USA0B				IAmb	IAmb	22 53 56.1	
	comp=Z,25nm,1.4s						
PETK	Petropavlovsk-	66.36	352	P	P	22 53 42.0	+0.3
UBPT	Khong Chiam	69.08	292	P	P	22 53 59.2	+0.3
UBPT				IAmb	IAmb	22 54 21.3	
	comp=Z,10nm,1.3s						
IPM	Ipoh	69.98	280	P	P	22 54 04.8	+0.4
IPM				IAmb	IAmb	22 54 05.1	
	comp=Z,10nm,0.7s						
RPSI	Rantau Prapat	71.56	277	P	P	22 54 13.3	-0.3
PSI	Prapat	71.58	277	P	P	22 54 13.3	-0.6
	comp=Z,4.6nm,0.6s,baz=63,slow=2.3,SNR=3.9						
GSI	Gunungsitoli	72.53	275	P	P	22 54 19.8	+0.7
CM31	Chiang Mai Arr	76.02	293	P	P	22 54 39.3	+0.8
CM31				IAmb	IAmb	22 54 40.9	
	comp=Z,7.3nm,0.8s						
CMAR	Chiang Mai Arr	76.02	293	P	P	22 54 39.7	+1.2
	comp=Z,6.2nm,0.9s,baz=118,slow=3.9,SNR=33						
CMAR	Chiang Mai Arr	76.02	293	P	P	22 54 39.5	+1.0
CHTO	Chiang Mai	76.13	293	P	P	22 54 39.8	+0.6
CHTO				IAmb	IAmb	22 54 40.7	
	comp=Z,5.7nm,0.7s						
QSPA	South Pole Qui	77.26	180	P	P	22 54 44.6	+0.1
QSPA				IAmb	IAmb	22 54 45.5	
	comp=Z,12nm,0.9s						
CNPM	China Poot	78.74	19	P	P	22 54 53.0	+0.7
ANM	Nome	79.45	11	P	P	22 54 56.9	+1.0
L19K	White Mountain	79.78	16	P	P	22 54 58.3	+0.6
L19K				IAmb	IAmb	22 55 02.2	
	comp=Z,13nm,1.2s						
TTA	Tatalina	80.09	15	P	P	22 55 00.3	+1.0
RC01	Rabbit Creek A	80.42	19	P	P	22 55 01.4	+0.5
RC01				IAmb	IAmb	22 55 02.3	
	comp=Z,24nm,1.1s						
BILL	Bilibino	80.61	359	P	P	22 55 01.9	+0.1
KNK	Knik Glacier	81.07	19	P	P	22 55 04.9	+0.6
KNK				IAmb	IAmb	22 55 14.3	
	comp=Z,36nm,1.4s						
PPLA	Purkeypile	81.10	17	P	P	22 55 04.2	-0.4
PPLA				IAmb	IAmb	22 55 05.5	
	comp=Z,17nm,1.2s						
CAST	Castle Rocks	81.54	16	P	P	22 55 06.5	-0.2
ULN	Ulaanbaatar	81.77	323	P	P	22 55 08.4	0.0
ULN				IAmb	IAmb	22 55 09.9	
	comp=Z,9.9nm,1.2s						
SONM	Songino Array	82.14	323	P	P	22 55 10.3	+0.1
	comp=Z,1.8nm,0.6s,baz=132,slow=4.9,SNR=16						
SONM	Songino Array	82.14	323	P	P	22 55 10.2	+0.1
YBH	Yreka Blue Hor	82.61	44	P	P	22 55 13.4	+0.7
H21K	Melozitna Rive	83.13	15	P	P	22 55 14.7	+0.1
IMAR	Indian Mountai	83.16	14	P	P	22 55 15.4	+0.7
CCB	Clear Creek Bu	83.69	17	P	P	22 55 16.4	-1.0
HDA	Harding Lake	83.77	18	P	P	22 55 17.9	+0.2
HDA				IAmb	IAmb	22 55 18.6	
	comp=Z,9.3nm,0.8s						
MDM	Murphy Dome	83.81	17	P	P	22 55 17.0	-0.9
MDM				IAmb	IAmb	22 55 30.0	
	comp=Z,10nm,1.2s						
IL31		84.05	17	P	P	22 55 18.2	-0.9
IL31				IAmb	IAmb	22 55 20.0	
	comp=Z,6.9nm,0.9s						
ILAR	Eielson Array	84.05	17	P	P	22 55 17.9	-1.2
	comp=Z,4.0nm,0.7s,baz=237,slow=5.1,SNR=42						
ILAR	Eielson Array	84.05	17	P	P	22 55 18.1	-1.0
K05A	Summer Lake	84.24	44	P	P	22 55 21.3	+0.5
SHL	Shillong	84.43	298	P	P	22 55 21.6	-0.5
SHL				IAmb	IAmb	22 55 23.5	
	comp=Z,7.8nm,0.7s						
BCAR	Beaver Creek A	84.44	20	P	P	22 55 20.7	-0.5
MAW	Mawson	84.45	202	P	P	22 55 21.0	-0.1
	comp=Z,4.2nm,0.6s,baz=94,slow=9.1,SNR=4.5						
MAW	Mawson	84.45	202	P	P	22 55 21.4	+0.3
NVAR	Mina Array Bea	84.47	49	P	P	22 55 22.8	+0.7
	comp=Z,1.5nm,0.8s,baz=233,slow=5.8,SNR=9.0						
NVAR	Mina Array Bea	84.47	49	P	P	22 55 22.3	+0.2
EGAK	Eagle	85.80	19	P	P	22 55 27.2	-0.3
EGAK				IAmb	IAmb	22 55 28.0	
	comp=Z,3.6nm,0.8s						
BMAR	Burnt Mountain	86.63	16	P	P	22 55 31.9	+0.4
BMO	Blue Mountains	87.45	43	P	P	22 55 35.8	0.0
F10A	Beach Ranch, E	87.89	42	P	P	22 55 38.1	+0.2
F10A				IAmb	IAmb	22 55 39.2	
	comp=Z,5.4nm,0.7s						
A36M	Sachs Harbour	94.72	16	P	P	22 56 08.1	-0.4
A36M				IAmb	IAmb	22 56 08.9	
	comp=Z,4.5nm,0.8s						
YKA	Yellowknife Ar	94.89	27	P	P	22 56 08.8	-0.7
	comp=Z,2.0nm,0.8s,baz=255,slow=4.7,SNR=28						
YKA				S	SKSac	23 05 40.0	-3.3
	comp=Z,0.5nm,0.8s,baz=257,slow=4.7,SNR=4.9						
YKA	Yellowknife Ar	94.89	27	P	P	22 56 09.3	-0.2
ZALV	Zalesovo Beam	97.01	324	P	Pdif	22 56 18.4	-0.8
	comp=Z,0.8nm,0.5s,baz=123,slow=5.3,SNR=4.7						
MKAR	Makanchi Array	97.18	316	P	P	22 56 20.5	+0.3
	comp=Z,1.1nm,0.5s,baz=81,slow=6.6,SNR=30						
NRIK	Noril'sk	98.96	339	P	P	22 56 27.5	-0.1
	comp=Z,1.6nm,0.6s,baz=127,slow=5.1,SNR=4.2						
LPAZ	La Paz	116.27	115	PKP	PKPdf	23 01 28.0	-0.3
	comp=Z,0.8nm,0.6s,baz=82,slow=3.4,SNR=4.2						
ARCES	ARCESS Array B	118.85	346	PKP	PKPdf	23 01 30.4	-0.7
	comp=Z,4.3nm,0.5s,baz=74,slow=1.9,SNR=26						
ARCES	ARCESS Array B	118.85	346		PKPdf	23 01 30.6	-0.4
CPUP	Villa Florida	120.26	131	PKP	PKPdf	23 01 34.3	-0.8
	comp=Z,2.0nm,0.8s,baz=172,slow=4.2,SNR=3.6						
FINES	FINESS Array B	124.62	340	PKP	PKPdf	23 01 42.0	-0.3
	comp=Z,3.5nm,0.8s,baz=79,slow=3.2,SNR=10						
FINES	FINESS Array B	124.62	340		PKPdf	23 01 41.9	-0.3
BOSA	Boshof	126.17	220	PKP	PKiKP	23 01 46.9	-0.2
	comp=Z,2.4nm,0.9s,baz=303,slow=1.0,SNR=5.1						
NB2	NORSAR Subarra	129.23	346	PKPdf	PKPdf	23 01 51.4	+0.2
	comp=Z,0.9nm,0.6s,baz=31,slow=1.9						
NOA	NORSAR Array B	129.23	346	PKP	PKPdf	23 01 51.4	+0.2
	comp=Z,1.2nm,0.7s,baz=22,slow=2.4,SNR=4.1						
BRTR	Keskin Array B	132.71	313	PKP	PKPdf	23 01 58.5	0.0
	comp=Z,0.7nm,0.6s,baz=138,slow=2.4,SNR=4.5						
BDFB	Brasilia	133.50	126	PKP	PKPdf	23 02 00.9	+0.3
	comp=Z,1.6nm,0.7s,baz=173,slow=8.1,SNR=3.3						
GERES	GERESS Array B	138.75	336	PKhKP	PKPpre	23 02 00.7	
	comp=Z,0.5nm,0.7s,baz=54,slow=3.4,SNR=4.6						
TEOL	Teolo	142.37	334		PKPdf	23 02 13.8	-2.1
SALO	Salr	142.64	335		PKPdf	23 02 13.9	-2.4
SGRT	San Giovanni R	143.08	326		PKPbc	23 02 15.6	-0.3
SENIN	Lac Senin/Sane	143.23	339		PKPbc	23 02 16.1	-0.2
ZCCA	Zocca	143.47	334		PKPdf	23 02 17.3	-0.6
OSSC	Osservatorio P	144.00	333		PKPbc	23 02 17.8	-0.8
TIP	Timpagrande	144.22	322		PKPab	23 02 19.6	-0.3
PAOL	Paolisi	144.22	327		PKPdf	23 02 18.7	-0.6
BNI	Bardonecchia	144.58	339		PKPbc	23 02 20.5	+0.1
CLTB	Caltabellotta	147.36	323		PKPbc	23 02 27.2	-1.1
VSL	Villasalto	148.02	330		PKPbc	23 02 29.5	-0.3
KEST	Kesra	150.87	325	PKPbc	PKiKP	23 02 36.9	-0.2
	comp=Z,6.0nm,0.7s,baz=240,slow=2.6,SNR=12						
KEST				PKPab	PKPab	23 02 47.9	+0.8
	comp=Z,2.9nm,0.7s,baz=103,slow=12,SNR=5.2						
KEST	Kesra	150.87	325		PKPbc	23 02 36.6	-0.1
KEST				PKPab	PKPab	23 02 47.0	-0.2
ESDC	Sonseca Array	152.55	349	PKPbc	PKPbc	23 02 40.1	-0.2
	comp=Z,0.8nm,0.8s,baz=5.6,slow=5.7,SNR=7.2						
ESDC				PKPab	PKPab	23 02 54.7	+0.6
	comp=Z,0.9nm,0.6s,baz=12,slow=3.8,SNR=9.9						
ESDC	Sonseca Array	152.55	349		PKPbc	23 02 39.2	-1.1
ESDC				PKPab	PKPab	23 02 54.6	+0.6
TORD	Torodi Ar. Bea	167.95	273	PKP	PKPdf	23 02 48.9	-0.9
	comp=Z,1.6nm,1.0s,baz=38,slow=1.1,SNR=5.4						
TORD				PKPab	PKPab	23 04 02.4	+0.1
	comp=Z,2.3nm,1.0s,baz=88,slow=4.4,SNR=8.1						

NOU ***26*** *22:53:16.0, 12.°51S×169.°53E, h661^{km}, mb4.5/46, Santa Cruz Islands Region*

NEIC ***26*** *22:53:18.8±1.5, 12.°8S±0.°1×169.°4E±0.°1, h645^{km}±7^{km}, mb4.7/37, Error ellipse: s-maj=15.9km s-min=14.6km az=129.0*

IDC ***26*** *22:53:19.4±1.1, 12.°89S×169.°27E, h662^{km}±12^{km}, mb3.5/15, mb1 3.7/19, mb1mx3.4/46, mbtmp4.6/19, Error ellipse: s-maj=12.2km s-min=10.1km az=1.0*

NOU ***26*** *22:53:24.2, 13.°15S×169.°33E, h603^{km}, ML3.3/8, Vanuatu Islands Region*

ISC 26 22:53:18.3±0.3**, 12.°79S**±0.°06×**169.°36E**±0.°06**, h650**^{km}**,**
n169, σ1.^{s}04/174**, mb4.5**/49**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.37	218	P	P	22 54 42.4	-1.2
SANVU				S	S	22 55 51.1	-2.0
SANVU	Saraoutou	3.37	218	P	P	22 54 43.0	-0.5
SANVU	Saraoutou	3.37	218	P	P	22 54 43.1	-0.5
DVP	Devils Point	5.04	193	P	P	22 54 54.8	+0.3
	272µm,0.7s						
RTV	Rentapao	5.05	190	P	P	22 54 55.5	+0.8
	145µm,1.4s						
LIFNC	LIFOU	8.20	194	P	P	22 55 20.7	-0.5
LIFNC	LIFOU	8.20	194	P	P	22 55 21.3	+0.2
MARNC	Mare, Loyalty	8.74	188	P	P	22 55 26.2	+0.2
MARNC	Mare, Loyalty	8.74	188	P	P	22 55 26.3	+0.2
MARNC	Mare, Loyalty	8.74	188	P	P	22 55 26.4	+0.3
KOUNC	Koumac, New Ca	9.12	212	P	P	22 55 31.1	+1.4
KOUNC	Koumac, New Ca	9.12	212	P	P	22 55 30.9	+1.2
YATNC	Mamie plateau,	9.51	194	P	P	22 55 33.5	+0.1
DZM	Mont Dzumac	9.64	196	P	P	22 55 36.0	+1.3
	2.6nm,0.3s,baz=258,slow=12,SNR=26						
DZM	Mont Dzumac	9.64	196	P	P	22 55 33.5	-1.2
DZM	Mont Dzumac	9.64	196	P	P	22 55 36.8	+2.1
	50nm,0.9s						
NOUC	Port Laguerre	9.71	197	P	P	22 55 36.7	+1.5
MSVF	Nonsavu	9.72	121	P	P	22 55 36.3	+0.8
	2.3nm,0.3s,baz=279,slow=13,SNR=17						
MSVF	Nonsavu	9.72	121	P	P	22 55 35.1	-0.4
MSVF	Nonsavu	9.72	121	P	P	22 55 34.3	-1.2
HNR	Honiara	9.82	289	P	P	22 55 36.7	+0.2
	18nm,0.3s,baz=229,slow=4.8,SNR=2.0						
ONTNC	Ouen Toro	9.86	196	P	P	22 55 37.4	+0.7
ONTNC	Ouen Toro	9.86	196	P	P	22 55 38.2	+1.5
ONTNC	Ouen Toro	9.86	196	P	P	22 55 38.5	+1.8
OUENC	Ouen Island, N	9.87	194	P	P	22 55 37.8	+1.0
OUENC	Ouen Island, N	9.87	194	P	P	22 55 38.2	+1.4
OUENC	Ouen Island, N	9.87	194	P	P	22 55 37.8	+1.0
PINNC	Pines Island,	9.94	190	P	P	22 55 37.7	+0.3
FUNA	Funafuti	10.55	67	P	P	22 55 42.8	-0.7
AFI	Afiamalu	18.39	96	P	P	22 56 56.3	+0.8
	3.5nm,0.3s,baz=85,slow=3.6,SNR=6.4						
EIDS	Eidsvold	21.30	231	P	P	22 57 21.8	+0.3
EIDS	Eidsvold	21.30	231	P	P	22 57 21.9	+0.4
	7.2nm,0.9s						
KWAJ	Kwajalein Atol	21.52	355	P	P	22 57 19.0	-4.6
PMG	Port Moresby	22.04	277	P	P	22 57 29.5	+1.3
	16nm,0.6s,baz=60,slow=9.5,SNR=6.1						
PMG	Port Moresby	22.04	277	P	P	22 57 28.7	+0.5
PMG				IAmb	IAmb	22 57 30.0	
	comp=Z,22nm,0.8s						
OUZ	Omahuta	22.66	171	P	P	22 57 34.5	+1.1
OUZ	Omahuta	22.66	171	P	P	22 57 34.9	+1.5
	comp=Z,16nm,1.2s						
CTAO	Charters Tower	23.30	249	P	P	22 57 39.9	+0.5
CTAO				IAmb	IAmb	22 57 48.0	
	comp=Z,11nm,0.5s						
CTAO	Charters Tower	23.30	249	P	P	22 57 40.2	+0.8
RMQ	Roma	23.66	232	P	P	22 57 42.9	+0.5
	comp=Z,27nm,0.7s						
ARMA	Armidale	24.01	220	P	P	22 57 46.6	+1.0
ARMA				IAmb	IAmb	22 58 06.8	
	comp=Z,29nm,1.4s						
TOZ	Tahuroa Road	25.44	169	P	P	22 57 58.8	+1.0
COEN	Coen	25.50	264	P	P	22 57 59.6	+0.9
COEN				IAmb	IAmb	22 58 00.5	
	comp=Z,20nm,0.9s						
COEN	Coen	25.50	264	P	P	22 57 59.1	+0.3
	comp=Z,29nm,0.7s						
MXZ	Matakaoa Point	25.93	164	P	P	22 58 01.0	-1.2
HAZ	Te Kaha	25.98	165	P	P	22 58 01.9	-0.7
TLZ	Tolley Road	26.02	169	P	P	22 58 04.2	+1.2
HIZ	Hauiti	26.08	170	P	P	22 58 05.0	+1.5
HIZ	Hauiti	26.08	170	P	P	22 58 05.2	+1.7
RUGZ	Raukumara Rang	26.15	165	P	P	22 58 02.9	-1.3
URZ	Urewera	26.29	166	P	P	22 58 04.7	-0.5
	comp=Z,12nm,0.6s,baz=301,slow=23,SNR=17						
URZ	Urewera	26.29	166	P	P	22 58 04.9	-0.4
URZ	Urewera	26.29	166	P	P	22 58 04.9	-0.4
URZ				IAmb	IAmb	22 58 08.1	
	comp=Z,15nm,0.8s						
URZ	Urewera	26.29	166	P	P	22 58 04.3	-1.0
	comp=Z,94nm,0.8s						
MUGZ	Murupara	26.42	167	P	P	22 58 06.3	-0.2
TWGZ	Tauwhareparae	26.42	165	P	P	22 58 06.1	-0.4
SNGZ	Shannon Statio	26.84	166	P	P	22 58 09.4	-0.7
RIGZ	Rimuhau	26.87	165	P	P	22 58 09.3	-1.1
TRVZ	Turoa	26.97	169	P	P	22 58 12.8	+1.3
BKZ	Black Stump Fm	27.02	168	P	P	22 58 11.1	-0.6
BKZ	Black Stump Fm	27.02	168	P	P	22 58 11.5	-0.2
QLP	Quilpie	27.28	236	P	P	22 58 14.2	+0.1
	comp=Z,39nm,0.7s						
TSZ	Takapari Road	27.78	169	P	P	22 58 17.3	-0.9
QRZ	Quartz Range	28.07	175	P	P	22 58 22.2	+1.5
BFZ	Birch Farm	28.43	169	P	P	22 58 22.4	-1.5
BFZ	Birch Farm	28.43	169	P	P	22 58 22.4	-1.5
NNZ	Nelson	28.54	174	P	P	22 58 25.4	+0.7
CMSA	Cobar Meteorol	28.67	226	P	P	22 58 26.4	+0.3
	comp=Z,13nm,2.4s						
SNZO	South Karori	28.80	172	P	P	22 58 26.2	-0.8
SNZO	South Karori	28.80	172	P	P	22 58 26.4	-0.5
BHW	Baring Head	28.91	171	P	P	22 58 26.9	-1.1
QIS	Mount Isa	29.50	251	P	P	22 58 33.2	-0.1
	comp=Z,18nm,0.6s						
KHZ	Kahutara	29.74	174	P	P	22 58 33.7	-1.2
KHZ	Kahutara	29.74	174	P	P	22 58 33.8	-1.2
OXZ	Oxford	30.52	176	P	P	22 58 41.4	-0.3
RPZ	Rata Peaks	30.85	178	P	P	22 58 46.2	+1.7
STKA	Stephens Creek	31.79	229	P	P	22 58 53.5	+0.9
	comp=Z,3.2nm,0.3s,baz=66,slow=7.8,SNR=6.8						
STKA				PcP	PcP	23 01 22.9	0.0
	comp=Z,2.1nm,0.5s,baz=27,slow=2.3,SNR=3.3						
STKA	Stephens Creek	31.79	229	P	P	22 58 53.0	+0.4
ODZ	Otahua Downs	32.16	178	P	P	22 58 55.1	-0.4
TOO	Toolangi	32.61	217	P	P	22 58 59.5	+0.1
TOO				IAmb	IAmb	22 59 15.0	
	comp=Z,31nm,1.4s						
TOO	Toolangi	32.61	217	P	P	22 59 00.4	+0.9
LCRK	Leigh Creek	33.70	234	P	P	22 59 08.4	-0.3
	comp=Z,14nm,0.6s						
GLAD	Gladstone	33.74	210	P	P	22 59 09.0	+0.2
	comp=Z,27nm,0.8s						
WB0	Warramunga Arr	34.23	254	P	P	22 59 12.9	-0.3
WB2	Warramunga Arr	34.28	253	P	P	22 59 13.3	-0.4
WB2				IAmb	IAmb	22 59 13.7	
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	34.28	253	P	P	22 59 13.2	-0.5
WRA	Warramunga Arr	34.30	253	P	P	22 59 13.4	-0.4
	comp=Z,10nm,0.5s,baz=84,slow=8.7,SNR=76						
WRA				PcP	PcP	23 01 30.4	0.0
	comp=Z,0.6nm,0.5s,baz=80,slow=2.9,SNR=5.0						
WRA				S	S	23 03 54.4	-3.3
	comp=Z,7.5nm,1.0s,baz=87,slow=14,SNR=8.7						
WRA	Warramunga Arr	34.30	253	P	P	22 59 12.7	-1.1
HTT	Hallett	34.52	228	P	P	22 59 15.9	+0.4
	comp=Z,14nm,2.2s						
OOD	Oodnadatta	34.79	239	P	P	22 59 18.1	+0.4
	comp=Z,9.1nm,0.6s						
AS31	Alice Springs	35.28	247	P	P	22 59 21.8	-0.1
ASAR	Alice Springs	35.28	247	P	P	22 59 21.8	-0.1
	comp=Z,15nm,0.4s,baz=76,slow=9.9,SNR=200						
ASAR				PcP	PcP	23 01 32.9	-0.3
	comp=Z,3.5nm,0.8s,baz=82,slow=3.4,SNR=9.9						
ASAR				S	S	23 04 09.2	-3.1
	comp=Z,5.1nm,0.9s,baz=76,slow=15,SNR=15						
TAU	Tasmania Unive	35.56	208	P	P	22 59 24.6	+0.9
BBOO	Buckleboo	36.37	231	P	P	22 59 31.1	+0.5
BBOO				IAmb	IAmb	22 59 32.1	
	comp=Z,11nm,0.8s						
BBOO	Buckleboo	36.37	231	P	P	22 59 30.7	+0.1
	comp=Z,28nm,2.1s						
MULG	Mulgathing	36.96	236	P	P	22 59 34.9	-0.6
	comp=Z,11nm,0.8s						
MTN	Manton Dam	37.25	266	P	P	22 59 38.3	+0.3
MTN	Manton Dam	37.25	266	P	P	22 59 37.8	-0.2
	comp=Z,56nm,1.4s						
KNRA	Kununurra	39.42	261	P	P	22 59 55.2	-0.2
KNRA				IAmb	IAmb	23 00 21.4	
	comp=Z,59nm,1.3s						
KNRA	Kununurra	39.42	261	P	P	22 59 54.6	-0.8
	comp=Z,32nm,1.5s						
WRKA	Warakurna	40.56	246	P	P	23 00 04.1	-0.3
	comp=Z,12nm,0.7s						
FORT	Forrest	42.04	238	P	P	23 00 16.1	+0.3
FORT				IAmb	IAmb	23 00 34.3	
	comp=Z,26nm,1.1s						
FORT	Forrest	42.04	238	P	P	23 00 15.4	-0.4
	comp=Z,32nm,2.6s						
FITZ	Fitzroy Crossi	42.40	257	P	P	23 00 19.2	+0.4
	comp=Z,2.6nm,0.6s,baz=72,slow=5.7,SNR=14						
AIN	Ainahou	47.14	48	P	P	23 00 55.4	+0.4
PSA00	Pilbara Seismi	47.94	252	P	P	23 01 00.6	-0.2
PSA00	Pilbara Seismi	47.94	252	P	P	23 01 00.9	+0.2
PSA00				IAmb	IAmb	23 01 13.4	
	comp=Z,10.0nm,1.0s						
PSA00	Pilbara Seismi	47.94	252	P	P	23 01 00.5	-0.2
	comp=Z,9.4nm,0.7s						

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MEEK   Meekatharra        49.42 246  P        P        23 01 10.8 -0.7
              comp=Z,12nm,1.4s
NWAO   Narrogin (SRO)     51.49 238  P        P        23 01 25.7 -0.7
MORW   Morawa             51.94 243  P        P        23 01 29.6 -0.1
MORW                                 IAmb     IAmb     23 01 58.1
              comp=Z,25nm,1.4s
KKM    Kota Kinabalu      56.02 286  P        P        23 01 58.7 +0.3
YHNB   Yeheng             59.82 309  P        P        23 02 24.2 +0.5
YHNB                                 IAmb     IAmb     23 02 44.2
              comp=Z,58nm,1.5s
VNDA   Vanda              64.84 182  P        P        23 02 55.3 +0.4
              comp=Z,3.3nm,0.5s,baz=356,slow=7.8,SNR=28
VNDA   Vanda              64.84 182  P        P        23 02 55.1 +0.2
SBA    Scott Base         65.08 181  P        P        23 02 57.7 +1.3
SBA                                  IAmb     IAmb     23 03 07.9
              comp=Z,44nm,1.4s
NJ2    Nanjing            65.75 314 eP        P        23 03 03.8 +2.4
NJ2                                  pmax     pmax
              comp=Z,5.0nm,0.5s
CASY   Casey              66.08 202  P        P        23 03 02.6 -0.2
CASY                                 IAmb     IAmb     23 03 02.7
              comp=Z,50nm,1.4s
USRK   Ussuriysk Ar.      66.12 331  P        P        23 03 04.5 +1.1
              comp=Z,2.7nm,0.7s,baz=220,slow=9.9,SNR=4.5
UBPT   Khong Chiam        69.10 292  P        P        23 03 22.7 +0.7
KLR    Kul'dur            70.09 335  P        P        23 03 27.6 +0.4
              comp=Z,1.6nm,0.6s,baz=138,slow=8.2,SNR=6.1
PSI    Prapat             71.60 277  P        P        23 03 36.2 -0.7
              comp=Z,1.5nm,0.3s,baz=86,slow=4.2,SNR=4.5
GSI    Gunungsitoli       72.55 275  P        P        23 03 41.5 -0.7
CMAR   Chiang Mai Arr     76.05 293  P        P        23 04 02.9 +1.2
              comp=Z,3.3nm,0.8s,baz=119,slow=4.3,SNR=19
CMAR   Chiang Mai Arr     76.05 293  P        P        23 04 02.4 +0.8
QSPA   South Pole Qui     77.23 180  P        P        23 04 07.5 +0.2
              baz=6.3,slow=2.9
QSPA   South Pole Qui     77.23 180  P        P        23 04 07.5 +0.2
QSPA                                 IAmb     IAmb     23 04 08.3
              comp=Z,33nm,1.1s
LZH    Lanzhou            78.55 311 eP        P        23 04 03.5  -11
LZH                                  pP       PcP      23 04 08.5  -13
LZH                                  pmax     pmax
              comp=Z,21nm,1.4s
L19K   White Mountain     79.81  16  P        P        23 04 22.3 +1.5
SONM   Songino Array      82.17 323  P        P        23 04 33.5 +0.2
              comp=Z,1.0nm,0.6s,baz=131,slow=5.4,SNR=8.1
SONM   Songino Array      82.17 323  P        P        23 04 33.2 -0.2
M24K   Tolsona, Glenn     82.34  19  P        P        23 04 36.0 +2.3
M24K                                 IAmb     IAmb     23 04 52.5
              comp=Z,58nm,1.5s
GTA    Gaotai             82.82 313 eP        P        23 04 37.8 +1.0
GTA                                  pmax     pmax
              comp=Z,10.0nm,0.9s
ILAR   Eielson Array      84.07  17  P        P        23 04 41.2 -0.9
              comp=Z,0.7nm,0.7s,baz=236,slow=5.2,SNR=11
MAW    Mawson             84.43 202  P        P        23 04 44.1 +0.1
              comp=Z,5.5nm,0.5s,baz=81,slow=3.5,SNR=12
MAW    Mawson             84.43 202  P        P        23 04 44.2 +0.3
SMAI   San Martin Ant     89.88 162  P        P        23 05 10.4 +0.9
SMAI                                 IAmb     IAmb     23 05 11.4
              comp=Z,9.4nm,1.0s
WMQ    Urumqi             92.83 314 eP        P        23 05 26.0 +2.3
WMQ                                  LR       LR
              comp=N,360nm,29.1s
WMQ                                  LR       LR
              comp=E,1µm,29.1s
WMQ                                  LR       LR
              comp=Z,100nm,29.2s
SNAA   Sanae              95.57 182  P        P        23 05 36.4 +0.8
SNAA   Sanae              95.57 182  P        P        23 05 34.5 -1.1
SNAA                                 IAmb     IAmb     23 05 41.3
              comp=Z,5.4nm,1.3s
VNA3   Neumayer Olymp     96.17 180  P        P        23 05 37.0 -1.2
VNA2   Neumayer--Watz     96.46 181  Pdiff    P        23 05 38.5 -1.0
              baz=193,slow=5.3
VNA1   Neumayer--Stat     96.75 181  Pdiff    P        23 05 38.7 -2.0
MK31   Makanchi Array     97.21 316  Pdif     Pdif     23 05 43.2 -0.1
MK31                                 IAmb     IAmb     23 05 44.6
              comp=Z,2.7nm,1.3s
MKAR   Makanchi Array     97.21 316  P        Pdif     23 05 43.3  0.0
              comp=Z,0.6nm,0.5s,baz=84,slow=6.5,SNR=13
LPAZ   La Paz            116.24 115  PKP      PKPdf    23 10 50.8 -0.5
              comp=Z,0.9nm,0.5s,baz=322,slow=1.6,SNR=2.8
LPAZ   La Paz            116.24 115           PKPdf    23 10 50.6 -0.7
ARCES  ARCESS Array B    118.88 346  PKP      PKPdf    23 10 53.1 -0.9
              comp=Z,3.4nm,0.5s,baz=68,slow=2.1,SNR=26
CPUP   Villa Florida     120.23 131  PKP      PKPdf    23 10 57.1 -0.8
              comp=Z,1.5nm,0.5s,baz=66,slow=3.5,SNR=4.1
PTLB   Pontes e Lacer    124.41 119           PKPdf    23 11 05.6 -0.6
FINES  FINESS Array B    124.66 340  PKP      PKPdf    23 11 04.8 -0.5
              comp=Z,8.4nm,1.1s,baz=99,slow=0.6,SNR=11
FINES                                PKKPbc   PKKPab   23 20 49.6 -1.0
              comp=Z,4.4nm,1.0s,baz=179,slow=5.2,SNR=6.9
BOSA   Boshof            126.16 220  PKP      PKPdf    23 11 09.3 -0.1
              comp=Z,1.4nm,0.7s,baz=194,slow=1.4,SNR=6.0
NB2    NORSAR Subarra    129.26 346  PKPdf    PKPdf    23 11 14.0 -0.2
              comp=Z,0.2nm,0.4s,baz=27,slow=1.8
NOA    NORSAR Array B    129.26 346  PKP      PKPdf    23 11 14.4 +0.2
              comp=Z,0.6nm,0.5s,baz=37,slow=2.7,SNR=2.2
NOA                                  SKPbc    SKPbc    23 13 37.7 +1.2
              comp=Z,4.7nm,0.8s,baz=30,slow=3.0,SNR=13
AKASG  Malin Array Be    130.24 328  PKP      PKPdf    23 11 16.3  0.0
              comp=Z,0.6nm,0.5s,baz=84,slow=1.4,SNR=1.8
AKASG                                SKPbc    SKPab    23 13 41.5 +0.7
              comp=Z,0.9nm,0.5s,baz=44,slow=4.5,SNR=7.2
BRTR   Keskin Array B    132.74 313  PKP      PKPdf    23 11 21.5 -0.1
              comp=Z,0.7nm,0.8s,baz=44,slow=5.5,SNR=4.3
BRTR                                 SKPbc    SKPbc    23 13 47.1 -2.6
              comp=Z,0.7nm,0.9s,baz=64,slow=3.4,SNR=3.0
BRTR   Keskin Array B    132.74 313           PKPdf    23 11 21.8 +0.2
CLL    Collm             137.07 338 ePKPdf    PKPdf    23 11 30.0 +1.0
CLL                                 eSKPdf    SKPdf    23 14 04.0 +0.2
GERES  GERESS Array B    138.79 336  PKhKP    PKPpre   23 11 23.7
              comp=Z,0.2nm,0.4s,baz=354,slow=5.0,SNR=1.6
GERES                                SKPbc    SKPbc    23 14 08.7 +1.1
              comp=Z,1.1nm,0.8s,baz=52,slow=2.2,SNR=7.3
SALO   Salr              142.67 335           PKPdf    23 11 37.0 -2.4
SGRT   San Giovanni R    143.11 326           PKPab    23 11 38.4 -0.2
SENIN  Lac Senin/Sane    143.26 339           PKPab    23 11 39.1 -0.1
NRCA   Norcia            143.69 330           PKPbc    23 11 40.6 -0.1
OSSC   Osservatorio P    144.04 333           PKPbc    23 11 40.6 -1.0
BNI    Bardonecchia      144.62 339           PKPdf    23 11 43.6 +0.6
KEST   Kesra             150.90 325  PKPbc    PKPbc    23 11 59.8  0.0
              comp=Z,3.8nm,0.7s,baz=272,slow=0.7,SNR=8.2
KEST   Kesra             150.90 325           PKPbc    23 11 59.4 -0.4
TORD   Torodi Ar. Bea    167.97 273  PKP      PKPdf    23 12 12.0 -0.8
              comp=Z,0.6nm,0.8s,baz=345,slow=1.6,SNR=4.4
TORD                                 PKPab    PKPab    23 13 25.3 -0.1
              comp=Z,1.2nm,0.9s,baz=97,slow=4.0,SNR=5.2
TORD   Torodi Ar. Bea    167.97 273           PKPdf    23 12 11.5 -1.3
TORD                                          PKPab    23 13 24.7 -0.6
```

IDC ***26*** *23:00:54.3±2.4, 16°.25S×173°.30W, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.6/36, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=137.3km s-min=23.8km az=145.0*

ISC 26 23:01:01.5±3.0, **16°S**±1°×**173°.7W**±0°.8, **h42**^{km}, **n5**, σ**0**^{s}.**56**/6, **mb3.7**/4, **Tonga Islands**

```
Code   Station Name        Δ°   AZ°    Phase ID           Time     Res
                                     Op       ISC        h  m  s   ISC
AFI    Afiamalu            2.51  46  Pn       Pn       23 01 39.5 -0.4
              6.4nm,0.3s,baz=208,slow=6.9,SNR=7.9
AFI                                  Sn       Sn       23 02 09.6 +0.2
              29nm,0.3s,baz=41,slow=23,SNR=6.5
WRA    Warramunga Arr     49.55 257  P        P        23 09 48.6  0.0
              0.5nm,0.8s,baz=90,slow=7.5,SNR=1.8
ASAR   Alice Springs      49.80 252  P        P        23 09 50.4 -0.1
              1.1nm,0.6s,baz=89,slow=8.5,SNR=26
NVAR   Mina Array Bea     74.68  42  P        P        23 12 37.9 +0.8
              0.5nm,0.5s,baz=221,slow=6.8,SNR=3.0
PDAR   Pinedale Array     82.62  42  P        P        23 13 20.5 -0.2
              0.3nm,0.7s,baz=199,slow=2.5,SNR=2.5
```

IDC ***26*** *23:09:51.0±2.2, 7°.08S×130°.01E, h132^{km}±25^{km}, mb3.6/1, mb1 3.7/6, mb1mx3.2/32, mbtmp4.1/6, Error ellipse: s-maj=37.3km s-min=20.2km az=94.0*

ISC 26 23:09:50.3±0.9, **7°.09S**±0°.06×**130°.06E**±0°.09, **h150**^{km}, **n14**, σ**3**^{s}.**00**/17, **Tanimbar Islands region**

```
Code   Station Name        Δ°   AZ°    Phase ID           Time     Res
                                     Op       ISC        h  m  s   ISC
SAUI   Saumlaki            1.52 126  P        Pn       23 10 25.9 +5.9
FAKI   Fak Fak             4.68  28  P        Pn       23 11 00.4 +0.9
DRS    Darwin Rock St      5.38 171  P        Pn       23 11 11.6 +2.9
              57nm,0.8s
MTN    Manton Dam          5.82 170  P        Pn       23 11 17.5 +2.9
              48nm,0.4s
KDU    Kakadu              6.05 157  P        Pn       23 11 21.0 +3.3
              67nm,0.6s
SIJI   Sorong              6.29  11  P        Pn       23 11 21.2 +0.2
              4.1nm,0.3s,baz=194,slow=22,SNR=40
SIJI                                 S        Sn       23 12 26.1 -5.9
              3.1nm,0.3s,baz=261,slow=23,SNR=10
SOEI   Soe                 6.31 245  P        Pn       23 11 22.7 +1.4
BATI   Baumata             7.04 243  P        Pn       23 11 32.5 +1.6
              11nm,0.3s,baz=67,slow=4.1,SNR=8.9
BATI                                 S        Sn       23 12 48.6 -1.3
              6.3nm,0.3s,baz=113,slow=13,SNR=6.8
KNRA   Kununurra           8.63 188  P        Pn       23 11 53.1 +1.0
              39nm,1.9s
FITZ   Fitzroy Crossi     11.76 201  P        Pn       23 12 32.9 -0.7
              0.9nm,0.3s,baz=27,slow=8.6,SNR=22
FITZ                                 S        Sn       23 14 34.9 -8.7
              1.4nm,0.3s,baz=127,slow=21,SNR=10
WRAB   Tennant Creek      13.43 162  P        Pn       23 12 56.2 +1.1
WRA    Warramunga Arr     13.44 162  P        Pn       23 12 56.0 +0.9
              1.0nm,0.3s,baz=342,slow=12,SNR=19
WRA                                  S        Sn       23 15 18.8 -5.2
              0.6nm,0.3s,baz=336,slow=22,SNR=3.9
ASAR   Alice Springs      16.89 168  P        Pn       23 13 41.0 +3.1
              0.5nm,0.3s,baz=345,slow=10.0,SNR=37
ASAR                                 S        S        23 16 42.6 -3.3
              0.1nm,0.3s,baz=347,slow=26,SNR=2.5
MKAR   Makanchi Array     68.33 327  P        P        23 20 37.9 +2.5
              0.7nm,0.5s,baz=119,slow=7.9,SNR=15
```

IDC ***26*** *23:48:09.9±0.7, 35°.36S×106°.13W, h0^{km}, mb4.4/13, mb1 4.5/14, mb1mx4.4/31, mbtmp4.4/14, ML4.3/1, MS4.2/11, Ms1 4.2/11, ms1mx4.0/16, Error ellipse: s-maj=22.4km s-min=17.0km az=66.0*

NEIC ***26*** *23:48:12.9±1.6, 35°.4S±0°.1×105°.9W±0°.2, h10^{km}±1^{km}, mb4.8/52, Error ellipse: s-maj=25.5km s-min=19.5km az=267.0*

GCMT ***26*** *23:48:14.9±0.2, 35°.26S±0°.01×106°.20W±0°.01, h14^{km}±1^{km}, MW5.0/115, Moment Tensor Solution. s53,c67; s115,c161; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.70±.11; $M_{\theta\theta}$-0.86±.10; $M_{\phi\phi}$1.57±.10; $M_{r\theta}$0.40±.21; $M_{\theta\phi}$-3.74±.10; $M_{\phi r}$-0.50±.20; Best double couple: $M_0$3.97300×10^{16} NP1:ϕ_s189.00000°, δ85.00000°, λ5.00000°. NP2:ϕ_s99.00000°, δ85.00000°, λ174.00000°. Principal axes: T 4.3670, Plg7.0000°, Azm54.0000°; N -0.7830, Plg83.0000°, Azm239.0000°; P -3.5800, Plg1.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 23:48:12.8±0.5, **35°.30S**±0°.08×**105°.9W**±0°.1, **h15**^{km}, **n111**, σ**1**^{s}.**06**/96, **mb4.8**/36, **MS4.1**/13, **1C**, **Southern East Pacific Rise**

```
Code   Station Name        Δ°   AZ°    Phase ID           Time     Res
                                     Op       ISC        h  m  s   ISC
RPN    Rapa Nui            8.66 339  Pn       Pn       23 50 16.0 -1.5
              3.5nm,0.3s,baz=163,slow=1.9,SNR=3.9
RPN                                  LR       LR       23 52 41.4
              comp=Z,2µm,20.7s,baz=161,slow=31
H03N2  Juan Fernandez     22.32  93  T        T        00 16 40.2
              baz=247,slow=72,SNR=6.0
H03N3  Juan Fernandez     22.32  93  T        T        00 16 32.8
              baz=247,slow=72,SNR=6.2
H03N1  Juan Fernandez     22.34  93  T        T        00 16 30.4
              baz=247,slow=72,SNR=7.4
LR03   Panguipulli        26.89 109  P        P        23 53 53.6 +0.5
LR03                                 IAmb     IAmb     23 54 27.8
              comp=Z,44nm,1.4s
LC01   Cunco              27.28 108  P        P        23 53 56.9 +0.2
VA05   Santo Domingo      28.23  97  P        P        23 54 05.3 +0.1
PLCA   Paso Flores        28.25 112  P        P        23 54 06.0 +0.7
              comp=Z,5.3nm,0.8s,baz=267,slow=8.3,SNR=10
PLCA                                 LR       LR       00 02 10.5
              comp=Z,271nm,18.1s,baz=287,slow=30
PLCA   Paso Flores        28.25 112  P        P        23 54 06.2 +0.9
MT09   Talagante          28.71  97  P        P        23 54 08.1 -1.5
MT09                                 IAmb     IAmb     23 54 12.2
              comp=Z,18nm,0.8s
MG05   Puerto Natales     28.91 135  P        P        23 54 10.2 -0.8
DSPA   Despedida          32.12 137  P        P        23 54 40.3 +1.0
PB06   IPOC Station P     33.98  78  P        P        23 54 55.3 -0.7
LVC    Limon Verde        34.55  79  P        P        23 55 00.2 -1.1
PB09   IPOC Station P     34.70  77  P        P        23 55 02.4 +0.1
LPAZ   La Paz             38.62  70  P        P        23 55 37.6 +1.3
              comp=Z,2.4nm,0.7s,baz=251,slow=9.6,SNR=5.5
LPAZ   La Paz             38.62  70  P        P        23 55 36.5 +0.2
SMAI   San Martin Ant     39.45 158  P        P        23 55 41.8  0.0
TBI    Tubuai             39.51 275 eLQ       LQ       00 04 11.3
              comp=Z,1µm,33.0s
TBI                                 eLR       LR       00 05 50.3
              comp=Z,398nm,27.5s
TAOE   Nuku Hiva Isla     40.87 302 eLR       LR       00 06 22.4
              comp=Z,399nm,27.7s
CZSB   Cruzeiro do Su     40.96  56  P        P        23 55 55.4 +0.4
CZSB                                 IAmb     IAmb     23 56 03.8
              comp=Z,10nm,0.6s
ITQB   Itaqui             41.60  97  P        P        23 56 00.6 +0.3
ITQB                                 IAmb     IAmb     23 56 02.4
              comp=Z,23nm,1.1s
CPUP   Villa Florida      42.31  92  P        P        23 56 08.3 +2.2
              comp=Z,2.3nm,0.8s,baz=305,slow=6.5,SNR=3.0
CPUP                                 LR       LR       00 10 46.4
              comp=Z,207nm,21.7s,baz=252,slow=32
PLTB   Pedras Altas       43.33 101  P        P        23 56 14.4 +0.2
PLTB                                 IAmb     IAmb     23 56 19.2
              comp=Z,33nm,1.6s
OTAV   Otavalo            43.66  42  P        P        23 56 17.1 -0.5
ETMB   Extrema            44.13  65  P        P        23 56 21.5 +0.7
SIV    San Ignacio        44.32  76  P        P        23 56 23.0 +0.6
              comp=Z,9.8nm,0.9s,baz=238,slow=8.7,SNR=22
PTLB   Pontes e Lacer     46.17  77  P        P        23 56 37.1 +0.1
AQDB   Aquidauana         46.30  85  P        P        23 56 38.1  0.0
AQDB                                 IAmb     IAmb     23 56 46.6
              comp=Z,8.4nm,0.7s
VILB   Vilhena            46.76  73  P        P        23 56 41.7 -0.1
ROSC   El Rosal           49.75  43  P        P        23 57 06.1 +0.9
              comp=Z,14nm,0.9s,baz=294,slow=19,SNR=7.4
ROSC                                 LR       LR       00 14 12.2
              comp=Z,515nm,21.6s,baz=222,slow=31
ROSC   El Rosal           49.75  43  P        P        23 57 05.5 +0.3
ZARC   Zaragoza, Cauc     51.66  41  P        P        23 57 18.5 -0.6
ZARC                                 IAmb     IAmb     23 57 19.9
              comp=Z,14nm,1.4s
MOTC   Monteria, Cord     52.32  39  P        P        23 57 23.6 -0.4
MACA   Manacapuru-AM      52.64  63  P        P        23 57 25.6 -0.9
MACA                                 IAmb     IAmb     23 57 29.6
              comp=Z,17nm,1.0s
QSPA   South Pole Qui     54.90 180  P        P        23 57 42.3 -0.3
              comp=Z,7.1nm,0.9s,baz=124,slow=3.2,SNR=15
QSPA   South Pole Qui     54.90 180  P        P        23 57 41.6 -1.0
QSPA                                 IAmb     IAmb     23 57 46.1
              comp=Z,12nm,1.1s
BDFB   Brasilia           55.04  85  P        P        23 57 45.5 +1.3
              comp=Z,5.9nm,1.1s,baz=240,slow=4.9,SNR=4.2
BDFB                                 LR       LR       00 19 21.8
              comp=Z,153nm,18.4s,baz=19,slow=34
VNDA   Vanda              56.32 195  LR       LR       00 17 34.6
              comp=Z,102nm,18.2s,baz=103,slow=31
VNA3   Neumayer Olymp     58.96 158  P        P        23 58 10.2 -0.9
VNA1   Neumayer--Stat     59.59 157  P        P        23 58 14.8 -0.6
VNA2   Neumayer--Watz     59.77 158  P        P        23 58 15.9 -0.7
              baz=234,slow=5.3
SNAA   Sanae              60.84 159  P        P        23 58 22.9 -1.2
SNAA   Sanae              60.84 159  P        P        23 58 22.8 -1.2
              comp=Z,6.1nm,0.9s,baz=255,slow=3.0,SNR=11
SNAA   Sanae              60.84 159  P        P        23 58 22.7 -1.3
SNAA                                 IAmb     IAmb     23 58 28.3
              comp=Z,5.4nm,0.8s
TX32   Lajitas Array      64.33   2  P        P        23 58 48.2 +0.4
TX32                                 IAmb     IAmb     23 59 23.9
              comp=Z,16nm,1.7s
TXAR   Lajitas Array      64.33   2  P        P        23 58 48.5 +0.7
              comp=Z,1.3nm,0.9s,baz=188,slow=5.5,SNR=5.5
TXAR   Lajitas Array      64.33   2  P        P        23 58 47.7  0.0
JCT    Junction City      65.68   6  P        P        23 58 58.1 +1.6
JCT                                  IAmb     IAmb     23 59 04.2
              comp=Z,6.3nm,0.7s
435B   Jarrell            66.20   8  P        P        23 59 00.9 +1.1
WLAR   White Oak Lake     69.67  11  P        P        23 59 22.4 +0.9
ISA    Isabella, Lake     71.57 349  P        P        23 59 34.6 +1.4
ISA                                  IAmb     IAmb     23 59 38.1
              comp=Z,15nm,1.4s
CCUT   Cedar City         72.82 354  P        P        23 59 42.0 +1.2
CCUT                                 IAmb     IAmb     23 59 45.0
              comp=Z,12nm,1.4s
SYO    Syowa Base         72.92 168⇑epP       P        23 59 41.2 +0.4
TPH    Tonopah            73.76 351  P        P        23 59 47.3 +1.0
V53A   Saluda             73.82  19  P        P        23 59 47.0 +0.4
V53A                                 IAmb     IAmb     23 59 55.4
              comp=Z,13nm,1.2s
Q16A   Castle Valley      74.01 356  P        P        23 59 48.1 +0.4
LHV    Little Huntoon     74.11 350  P        P        23 59 49.5 +1.5
LHV                                  IAmb     IAmb     00 00 02.6
              comp=Z,12nm,1.1s
SMCO   Snowmass           74.12 359  P        P        23 59 50.2 +1.6
SMCO                                 IAmb     IAmb     00 00 12.1
              comp=Z,14nm,1.6s
CMB    Columbia Colle     74.19 348  P        P        23 59 49.7 +1.0
NV11   Mina Array Sit     74.24 350  P        P        23 59 50.2 +1.1
NV11                                 IAmb     IAmb     23 59 53.9
              comp=Z,19nm,1.6s
NVAR   Mina Array Bea     74.26 350  P        P        23 59 50.7 +1.4
              comp=Z,5.2nm,1.1s,baz=179,slow=6.5,SNR=17
NVAR                                 LR       LR       00 25 11.3
              comp=Z,86nm,18.6s,baz=166,slow=30
NVAR   Mina Array Bea     74.26 350  P        P        23 59 50.1 +0.8
RYN    Ryan               74.48 350  P        P        23 59 52.1 +1.6
RYN                                  IAmb     IAmb     00 00 16.9
              comp=Z,14nm,1.7s
P17A   Butcher Ranch,     74.54 356  P        P        23 59 51.8 +1.0
P17A                                 IAmb     IAmb     00 00 11.8
              comp=Z,17nm,1.7s
KVN    Kaiserville        74.84 350  P        P        23 59 52.5 -0.1
KVN                                  IAmb     IAmb     00 00 06.8
              comp=Z,11nm,1.3s
YERR   Yerington          74.94 349  P        P        23 59 54.5 +1.3
YERR                                 IAmb     IAmb     00 00 07.4
              comp=Z,12nm,1.4s
DUG    Dugway, Tooele     75.40 355  P        P        23 59 57.3 +1.6
RDMU   Red Mountain       75.58 357  P        P        23 59 57.6 +0.8
DZM    Mont Dzumac        75.76 253 eLR       LR       00 22 48.3
              comp=Z,285nm,24.2s
Q51A   Peebles            76.84  18  P        P        00 00 04.1 +0.3
MAW    Mawson             77.06 176  LR       LR       00 31 18.0
              comp=Z,113nm,18.8s,baz=234,slow=34
K22A   Casper             77.58 360  P        P        00 00 09.7 +1.6
BW06   Boulder Array      77.77 357  P        P        00 00 08.4 -0.7
PDAR   Pinedale Array     77.77 357  P        P        00 00 07.6 -1.6
              comp=Z,3.3nm,0.8s,baz=144,slow=7.0,SNR=18
PDAR   Pinedale Array     77.77 357  P        P        00 00 08.2 -1.0
REDW   Red Top Meadow     78.42 356  P        P        00 00 14.1 +1.3
REDW                                 IAmb     IAmb     00 00 20.3
              comp=Z,11nm,1.2s
TPAW   Teton Pass         78.55 356  P        P        00 00 13.9 +0.3
TPAW                                 IAmb     IAmb     00 00 20.6
              comp=Z,10.0nm,1.1s
HLID   Hailey             78.87 354  P        P        00 00 15.8 +0.5
HLID                                 IAmb     IAmb     00 00 18.6
              comp=Z,9.8nm,1.1s
ECSD   EROS Data Cent     79.12   7  P        P        00 00 17.6 +1.2
QLMT   Earthquake Lak     79.92 356  P        P        00 00 22.0 +1.0
ULM    Lac du Bonnet      85.64   6  P        P        00 00 50.3 +0.1
              comp=Z,2.5nm,0.5s,baz=90,slow=1.6,SNR=2.7
STKA   Stephens Creek     87.94 232  LR       LR       00 33 45.4
              comp=Z,234nm,18.5s,baz=197,slow=31
SCHQ   Schefferville      95.84  22  LR       LR       00 37 38.7
              comp=Z,141nm,21.7s,baz=276,slow=31
YKA    Yellowknife Ar     97.71 356  P        P        00 01 44.2 -2.1
              comp=Z,0.1nm,0.6s,baz=158,slow=4.4,SNR=2.1
ASAR   Alice Springs      98.48 233  LR       LR       00 41 42.3
              comp=Z,249nm,18.2s,baz=171,slow=33
H01W1  Cape Leeuwin H    100.78 213  T        T        01 54 52.5
              baz=145
H01W2  Cape Leeuwin H    100.78 213  T        T        01 55 03.1
              baz=145
H01W3  Cape Leeuwin H    100.80 213  T        T        01 54 49.1
              baz=145
ESDC   Sonseca Array     119.76  60  PKP      PKPdf    00 07 02.1 -0.1
              comp=Z,0.5nm,0.9s,baz=284,slow=4.1,SNR=2.0
BURAR  Bucovina Array    141.96  56  PKPdf    PKPdf    00 07 43.3 -0.4
HIA    Hailar            144.02 307  PKPdf    PKPab    00 07 45.6 +0.9
AKASG  Malin Array Be    144.35  50  PKP      PKPab    00 07 46.2 +0.3
              comp=Z,0.3nm,0.3s,baz=273,slow=3.6,SNR=6.7
AKASG  Malin Array Be    144.35  50  PKPdf    PKPab    00 07 46.4 +0.6
ELL    Elmali            144.47  74  PKPdf    PKPbc    00 07 47.6 +0.4
NRIK   Noril'sk          145.10 352  PKPbc    PKPbc    00 07 46.3 -1.7
              comp=Z,3.8nm,0.9s,baz=225,slow=1.0,SNR=5.9
NRIK   Noril'sk          145.10 352           PKPbc    00 07 46.5 -1.5
BORA   Eskisehir         145.38  69           PKPbc    00 07 48.6 -1.4
CSS    Mathiatis         146.82  79  PKPdf    PKPdf    00 07 53.2 +0.7
BR231  Keskin MP Arra    147.15  70           PKPdf    00 07 54.4 +1.3
ANTO   Ankara            147.16  70  PKPdf    PKPdf    00 07 53.8 +0.8
BR131  Keskin Array S    147.80  70           PKPdf    00 07 55.8 +1.5
BRTR   Keskin Array B    147.80  70  PKPbc    PKPdf    00 07 55.6 +1.5
              comp=Z,3.6nm,0.9s,baz=192,slow=2.9,SNR=16
BNN    Bunyan            149.43  72  PKPdf    PKPdf    00 07 58.4 +1.6
ENH    Enshi             149.93 271  PKPdf    PKPdf    00 07 58.1 +0.3
XAN    Xi'an             151.41 278  PKPbc    PKiKP    00 08 09.3 +2.7
XAN                                  pPKP     sPKPab   00 08 20.3 +0.8
CMAR   Chiang Mai Arr    152.32 239  PKPbc    PKPbc    00 08 08.5  0.0
              comp=Z,2.4nm,0.3s,baz=176,slow=2.3,SNR=5.7
CMAR   Chiang Mai Arr    152.32 239           PKPbc    00 08 07.3 -1.2
RAYN   Ar Rayn           152.56 108  PKPbc    PKiKP    00 08 10.0 +0.8
SONM   Songino Array     152.99 308  PKPbc    PKPbc    00 08 09.1 -0.2
              comp=Z,3.0nm,0.8s,baz=135,slow=2.2,SNR=14
SONM   Songino Array     152.99 308           PKPbc    00 08 08.0 -1.4
```

SJA ***26*** *23:50:28.7±0.8, 31°.80S×72°.12W, h10^{km}, ML4.0, MW3.7*

NEIC ***26*** *23:50:30.2±1.2, 31°.76S±0°.02×72°.08W±0°.10, h10^{km}±1^{km}, mb4.1/7, ML3.8(GUC), Error ellipse: s-maj=14.0km s-min=3.0km az=269.0*

GUC ***26*** *23:50:32.1±0.8, 31°.75S×71°.96W, h36^{km}±3^{km}, ML3.8*

ISC 26 23:50:27.9±1.5, **31°.74S**±0°.02×**72°.17W**±0°.05, **h0**^{km}±10^{km}, **n67**, σ**1**^{s}.**79**/109, **mb4.2**/4, **4C**, **Off coast of central Chile**

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Code   Station Name        Δ°   AZ°    Phase ID           Time     Res
                                     Op       ISC        h  m  s   ISC
VA06   Catapilco           1.10 138⇑eP        Pg       23 50 49.8 +0.8
VA06                                i S       Sg       23 51 03.3  0.0
VA06                                 IAML              23 51 09.5
              comp=N,6µm,0.5s
CO06   Fray Jorge          1.16  23 eP        Pb       23 50 51.2 +0.4
CO06                                i S       Sb       23 51 07.0 +0.6
CO06                                 IAML              23 51 10.9
              comp=E,2µm,0.3s
CO06   Fray Jorge          1.16  23           Pb       23 50 51.1 +0.4
CO06                                 Sg       Sb       23 51 05.8 -0.6
VA01   Torpederas          1.35 161 eP        Pn       23 50 54.3 +0.3
VA01                                 IAML              23 51 12.4
              comp=N,1µm,0.2s
VA01   Torpederas          1.35 161           Pn       23 50 54.4 +0.4
VA01                                 Sg       Sb       23 51 10.4 -1.4
CO03   El Pedregal         1.55  55⇑iP        Pn       23 50 56.7 -0.1
CO03                                i S       Sn       23 51 14.9 -2.8
CO03                                 IAML              23 51 16.1
              comp=N,2µm,0.2s
CO03   El Pedregal         1.55  55  Pn       Pn       23 50 56.8 -0.1
CO03                                 Sn       Sn       23 51 14.6 -3.2
CO03   El Pedregal         1.55  55 eP        Pn       23 50 57.0 +0.1
CO03                                eP        Pb       23 50 57.2 -0.4
CO03                                eS        Sn       23 51 15.5 -2.3
CO03                                 IAML              23 51 16.1
              comp=Z,985nm,0.2s
ROCH   El Roble            1.57 142⇑iP        Pn       23 50 57.4 +0.2
ROCH                                i S       Sn       23 51 16.8 -1.5
ROCH                                 IAML              23 51 22.1
              comp=N,3µm,0.5s
ROC1   El Roble            1.57 142 eP        Pn       23 50 57.0 -0.2
ROC1                                eS        Sn       23 51 17.1 -1.2
VA03   San Esteban         1.71 127⇑iP        Pn       23 50 59.2 +0.2
VA03                                i S       Sn       23 51 19.6 -1.9
VA03                                 IAML              23 51 26.6
              comp=E,4µm,0.4s
VA03   San Esteban         1.71 127           Pn       23 50 59.2 +0.2
VA03   San Esteban         1.71 127 eP        Pn       23 50 59.1 +0.1
VA03                                eS        Sb       23 51 22.1 -0.1
VA03                                 IAML              23 51 25.2
              comp=Z,2µm,0.8s
MT02   Curacav             1.74 150           Pn       23 51 00.1 +0.6
MT02   Curacav             1.74 150 eP        Pn       23 50 59.9 +0.5
MT02                                eS        Sb       23 51 23.2 -0.1
PEL    Peldehue            1.88 138 eP        Pn       23 51 01.6 +0.3
PEL                                 i S       Sn       23 51 24.5 -1.2
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PEL				IAML		23 51 29.6	
	comp=E,1µm,0.5s						
PEL	**Peldehue**	**1.88**	**138**		**Pn**	**23 51 01.6**	**+0.3**
PEL				Sn	**Sn**	**23 51 23.9**	**-1.8**
PEL	**Peldehue**	**1.88**	**138**	*e*P	**Pn**	**23 51 01.9**	**+0.7**
PEL				*e*P	**Pn**	**23 51 02.0**	**+0.7**
PEL				*e*S	**Sg**	**23 51 28.6**	**+0.4**
GO04	**Tololo Observa**	**1.96**	**37**	Pn	**Pn**	**23 51 03.4**	**+0.8**
VA05	**Santo Domingo**	**1.96**	**166**	*e*P	**Pn**	**23 51 04.1**	**+1.6**
VA05				*i* S	**Sn**	**23 51 26.0**	**-1.8**
VA05				IAML		23 51 39.9	
	comp=N,2µm,0.3s						
VA05	**Santo Domingo**	**1.96**	**166**		**Pn**	**23 51 03.0**	**+0.6**
CO05	**La Serena**	**1.99**	**24**	*e*P	**Pn**	**23 51 04.4**	**+1.6**
CO05				*i* S	**Sn**	**23 51 28.6**	**+0.3**
CO05				IAML		23 51 37.4	
	comp=E,966nm,0.8s						
CO05	**La Serena**	**1.99**	**24**		**Pn**	**23 51 03.4**	**+0.7**
MT05	**Renca**	**2.04**	**144**	*e*P	**Pn**	**23 51 04.4**	**+0.9**
MT05				*i* S	**Sn**	**23 51 29.3**	**-0.4**
MT05				IAML		23 51 37.8	
	comp=E,2µm,0.5s						
MT05	**Renca**	**2.04**	**144**	Pn	**Pn**	**23 51 03.9**	**+0.3**
MT05	**Renca**	**2.04**	**144**	*e*P	**Pn**	**23 51 04.4**	**+0.9**
MT05				*e*S	**Sg**	**23 51 35.0**	**+1.6**
MT01	**Popeta**	**2.25**	**160**		**Pn**	**23 51 07.0**	**+0.6**
MT01	**Popeta**	**2.25**	**160**	*e*P	Pn	23 51 01.9	-4.5
MT01				*e*P	**Pb**	**23 51 07.4**	**-2.0**
MT01				*e*S	**Sn**	**23 51 34.4**	**-0.5**
MT09	**Talagante**	**2.26**	**154**	*e*P	**Pn**	**23 51 08.4**	**+1.8**
MT09				*i* S	**Sn**	**23 51 34.9**	**-0.3**
MT09				IAML		23 51 41.9	
	comp=N,787nm,0.3s						
MT09	**Talagante**	**2.26**	**154**		**Pn**	**23 51 07.2**	**+0.5**
BO01	**Tunca**	**2.79**	**161**	Pn	**Pn**	**23 51 14.6**	**+0.8**
BO01	**Tunca**	**2.79**	**161**	*e*P	**Pn**	**23 51 15.0**	**+1.2**
BO01				*e*S	**Sn**	**23 51 47.1**	**-1.1**
BO01				IAML		23 52 01.1	
	comp=Z,374nm,0.7s						
ACCO	**Cerro Coronel**	**2.90**	**67**	*e*P	**Pb**	**23 51 19.0**	**-1.7**
ACCO				*e*S	**Sn**	**23 51 51.9**	**+0.6**
ASAL	**Salagasta**	**2.95**	**108**	*e*P	**Pb**	**23 51 20.0**	**-1.4**
ASAL				*e*S	**Sg**	**23 52 05.0**	**+2.3**
ZON	**Zonda**	**2.98**	**87**	Pn	**Pn**	**23 51 18.4**	**+1.9**
RTCV	**Cerro Valdivia**	**3.09**	**93**	*e*P	**Pn**	**23 51 15.4**	**-2.6**
RTCV				*e*P	**Pb**	**23 51 20.9**	**-2.9**
RTCV				*e*S	**Sn**	**23 51 56.4**	**+0.8**
AAGR	**Agrelo**	**3.12**	**116**	*e*P	**Pn**	**23 51 17.9**	**-0.6**
AAGR				*e*P	**Pb**	**23 51 22.0**	**-2.4**
AAGR				*e*S	**Sb**	**23 52 01.9**	**-1.2**
BO02	**Sierra Bellavi**	**3.25**	**159**		**Pn**	**23 51 21.2**	**+1.0**
BO02	**Sierra Bellavi**	**3.25**	**159**	*e*P	**Pn**	**23 51 22.0**	**+1.7**
BO02				*e*S	**Sn**	**23 52 01.9**	**+2.2**
BO02				*e*S	**Sb**	**23 52 04.4**	**-2.4**
BO02				IAML		23 52 11.8	
	comp=Z,474nm,0.8s						
GO05	**Huala**	**3.26**	**177**	*e*P	Pn	23 51 06.4	-14
GO05				IAML		23 51 58.6	
	comp=N,111nm,0.2s						
GO05	**Huala**	**3.26**	**177**	Pn	**Pn**	**23 51 21.1**	**+0.8**
AC04	**Llanos de Chal**	**3.65**	**15**	Pn	**Pn**	**23 51 27.3**	**+1.7**
AC04	**Llanos de Chal**	**3.65**	**15**	*e*P	**Pn**	**23 51 29.0**	**+3.3**
AC04				*e*S	**Sb**	**23 52 15.4**	**-2.8**
AC04				*e*S	**Sg**	**23 52 20.9**	**-4.4**
AC04				IAML		23 52 41.5	
	comp=Z,125nm,0.9s						
ML02	**Panimavida**	**4.06**	**171**		**Pn**	**23 51 32.1**	**+0.9**
AVFE	**Valle Fertil**	**4.18**	**76**	*e*P	**Pn**	**23 51 35.0**	**+2.0**
AVFE				*e*S	**Sn**	**23 52 25.4**	**+2.8**
AVFE				IAML		23 52 32.6	
	comp=Z,189nm,0.7s						
GO03	**Copiap**	**4.46**	**23**	Pn	**Pn**	**23 51 37.6**	**+0.7**
GO03	**Copiap**	**4.46**	**23**	*e*P	**Pn**	**23 51 41.0**	**+4.1**
GO03				*e*S	**Sb**	**23 52 37.4**	**-4.2**
VCA	**Vinchina**	**4.55**	**50**	*e*P	**Pn**	**23 51 42.0**	**+3.8**
VCA				*e*S	**Sn**	**23 52 35.4**	**+3.5**
VCA				*e*S	**Sb**	**23 52 39.4**	**-4.9**
VCA				*e*S	Sg	23 52 43.4	-11
VCA				IAML		23 53 01.1	
	comp=Z,383nm,1.0s						
ACHE	**Chepes**	**4.74**	**84**	*e*P	**Pn**	**23 51 44.1**	**+3.4**
ACHE				*e*S	**Sn**	**23 52 39.4**	**+2.9**
APLL	**PUNTA DE LOS L**	**5.02**	**76**	*e*P	**Pn**	**23 51 47.0**	**+2.5**
APLL				*e*P	**Pn**	**23 51 47.0**	**+2.5**
APLL				*e*S	**Sn**	**23 52 47.4**	**+4.1**
ACLC	**CERRO LA CRUZ**	**5.06**	**64**	*e*P	**Pn**	**23 51 47.0**	**+1.9**
ACLC				*e*S	**Sn**	**23 52 43.4**	**-0.9**
ACLC				IAML		23 52 54.5	
	comp=Z,375nm,0.9s						
MRA	**San Martin**	**5.52**	**99**	*e*P	**Pn**	**23 51 52.0**	**+0.6**
MRA				*e*S	**Sn**	**23 52 56.9**	**+1.3**
AC02	**Maricunga**	**5.56**	**29**	Pn	**Pn**	**23 51 52.4**	**0.0**
LC01	**Cunco**	**7.14**	**178**	Pn	**Pn**	**23 52 14.3**	**+0.7**
PB14	**IPOC Station P**	**7.26**	**13**	Pn	**Pn**	**23 52 15.7**	**+0.1**
AHML	**Horco Molle**	**7.75**	**52**	*e*P	**Pn**	**23 52 25.1**	**+3.1**
PB15	**IPOC Station P**	**8.83**	**16**	Pn	**Pn**	**23 52 37.9**	**+0.8**
PLCA	**Paso Flores**	**9.06**	**172**	Pn	**Pn**	**23 52 41.2**	**+1.1**
PLCA	**Paso Flores**	**9.06**	**172**	*e*P	**Pn**	**23 52 42.0**	**+1.9**
ITQB	**Itaqui**	**13.53**	**85**	Pn	**Pn**	**23 53 41.4**	**+0.2**
PLTB	**Pedras Altas**	**15.79**	**95**	P	**Pn**	**23 54 13.6**	**+1.9**
PLTB				IAmb	IAmb	23 54 36.6	
	comp=Z,9.2nm,1.4s						
LPAZ	**La Paz**	**15.82**	**14**	P	**P**	**23 54 16.7**	**0.0**
EFI	**East Falkland**	**22.45**	**157**	P	**P**	**23 55 27.0**	**-1.3**
ETMB	**Extrema**	**22.51**	**15**	P	**P**	**23 55 29.9**	**+0.7**
ETMB				IAmb	IAmb	23 55 33.0	
	comp=Z,4.1nm,1.0s						
SNAA	**Sanae**	**53.71**	**158**	P	**P**	**23 59 52.0**	**+0.7**
SNAA				IAmb	IAmb	00 00 12.7	
	comp=Z,6.6nm,1.3s						
KOWA	**Kowa**	**79.81**	**66**	P	**P**	**00 02 37.4**	**-1.0**
KOWA				IAmb	IAmb	00 02 56.4	
	comp=Z,3.4nm,1.2s						
TORD	**Torodi Ar. Bea**	**83.55**	**70**	P	**P**	**00 02 58.4**	**+0.2**
TORD				IAmb	IAmb	00 02 59.1	
	comp=Z,1.9nm,1.0s						

NNC 26 23:56:34.0±9.5**,36°.87N**×**70°.62E,h0^{km},mb4.0,mpv3.6, 2C-4D,Error ellipse: s-maj=74.4km s-min=67.2km az=157.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	**Karatay Array**	**6.23**	**359**	⇑P	Pn	23 58 07.3	+0.1
	1.6nm,0.3s,baz=178,slow=11						
KK02				⇓S	Sn	23 59 21.2	+2.0
	1.0nm,0.6s,baz=186,slow=19						
AAK	**Ala-Archa**	**6.49**	**26**	⇑P	Pn	23 58 11.4	+0.5
	1.5nm,0.4s						
AAK				⇓S	Sn	23 59 28.4	+2.7
	2.2nm,0.8s						
TKM2	**Tokmak 2**	**7.16**	**31**	⇓P	Pn	23 58 20.1	0.0
	3.7nm,0.5s						
TKM2				⇓S	Sn	23 59 39.8	-2.4
	1.0nm,0.8s						

IDC ***26*** *23:56:59.8±1.6, 11°.62N×124°.92E, h0^{km}, mb3.4/4, mb1 3.5/4, mb1mx3.4/33, mbtmp3.4/4, Error ellipse: s-maj=175.2km s-min=22.5km az=69.0*

MAN ***26*** *23:57:04.0, 12°.05N×125°.47E, h31^{km}, mb4.6, ML3.5, MS3.3*

ISC 26 23:57:04.4±1.2**,12°.05N**±0°.08×**125°.6E**±0°.2**,h35^{km},n10, σ1^{s}36**/10**,mb3.4**/4**,2C,Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.47**	**199**	⇑*i*P	**Pn**	**23 57 15.1**	**+0.4**
BESP				*e*S	**Sn**	**23 57 21.6**	**-0.3**
MSLP	**Maasin**	**2.04**	**201**	*e*P	**Pn**	**23 57 37.4**	**+1.1**
MSLP				*e*S	**Sn**	**23 58 01.7**	**+1.2**
RCP	**Roxas**	**2.83**	**260**	⇑*e*P	**Pn**	**23 57 46.3**	**-0.9**
WRA	**Warramunga Arr**	**32.94**	**165**	P	**P**	**00 03 34.1**	**-1.8**
	0.1nm,0.4s,baz=339,slow=8.9,SNR=1.1						
ASAR	**Alice Springs**	**36.42**	**167**	P	**P**	**00 04 04.8**	**-1.1**
	0.2nm,0.3s,baz=343,slow=7.0,SNR=6.2						
ASAR				PcP	**PcP**	**00 06 28.3**	**-1.5**
	0.7nm,1.0s,baz=337,slow=3.2,SNR=4.3						
SONM	**Songino Array**	**39.13**	**339**	P	**P**	**00 04 29.7**	**+1.0**
	0.4nm,0.6s,baz=166,slow=7.0,SNR=4.6						
H11N1	**WAKE ISLAND Hy**	**40.36**	**74**	T	T	00 48 07.2	
	baz=265,slow=75,SNR=5.5						
H11N2	**WAKE ISLAND Hy**	**40.37**	**74**	T	T	00 48 06.6	
	baz=265,slow=75,SNR=5.2						
H11N3	**WAKE ISLAND Hy**	**40.38**	**74**	T	T	00 48 10.0	
	baz=265,slow=75,SNR=6.9						
MKAR	**Makanchi Array**	**50.22**	**322**	P	**P**	**00 05 58.2**	**+1.2**
	0.5nm,0.8s,baz=124,slow=7.8,SNR=5.3						

UPP ***27*** *00:42:02.8±0.7, 67°.83N×20°.28E, h0^{km}, ML3.6, Explosion*

HEL ***27*** *00:42:03.5±0.2, 67°.82N×20°.23E, h0^{km}, ML1.7, ML3.6(UPP), Explosion*

ISC 27 00:42:01.8±1.5**,67°.77N**±0°.04×**20°.19E**±0°.09**,h0^{km},n13, σ0^{s}96**/20**,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOVU	**Salmi**	**0.46**	**358**	P	**Pg**	**00 42 10.5**	**0.0**
KOVU				S	**Sg**	**00 42 16.0**	**-0.4**
KOVU	**Salmi**	**0.46**	**358**	*i* P	**Pg**	**00 42 10.5**	**0.0**
KOVU				*i* S	**Sg**	**00 42 16.0**	**-0.4**
KIF	**Kilpisjarvi**	**1.26**	**10**	*e*P	**Pb**	**00 42 26.1**	**-0.3**
KIF	**Kilpisjarvi**	**1.26**	**10**	*e*PB	**Pn**	**00 42 26.7**	**+0.1**
KIF				MSG		00 42 42.0	
	comp=Z,9.7nm,0.2s						
KIF				*e*SB	**Sg**	**00 42 42.1**	**-0.1**
PAJU	**Pajala**	**1.35**	**122**	P	**Pn**	**00 42 28.0**	**+0.1**
PAJU	**Pajala**	**1.35**	**122**	*e*P	**Pn**	**00 42 28.0**	**+0.1**
HEF	**Hetta**	**1.45**	**62**	*e*P	**Pn**	**00 42 29.0**	**-0.2**
HEF	**Hetta**	**1.45**	**62**	*e*PG	**Pn**	**00 42 29.0**	**-0.2**
	baz=250						
HEF				MSG		00 42 47.1	
	comp=Z,3.4nm,0.2s						
HEF				*e*SN	**Sn**	**00 42 51.9**	**+3.0**
KALU	**Kalix**	**2.29**	**145**	*e*SG	**Sg**	**00 43 15.6**	**+0.3**
TOF	**Tornio**	**2.35**	**134**	*e*PB	**Pb**	**00 42 44.6**	**-0.3**
TOF				MSG		00 43 13.0	
	comp=Z,3.9nm,0.2s						
TOF				*e*SG	**Sg**	**00 43 16.3**	**-0.9**
SGF	**Sodankyl**	**2.45**	**95**	*e*PG	**Pb**	**00 42 47.2**	**+0.6**
RNF	**Rovaniemi**	**2.55**	**115**	*e*PB	**Pb**	**00 42 48.0**	**-0.4**
RNF				*e*SG	**Sg**	**00 43 21.8**	**-1.8**
ARA0	**ARCESS Array S**	**2.63**	**45**	*e*PB	**Pb**	**00 42 48.4**	**-1.3**
ARA0				*e*SG	**Sb**	**00 43 22.2**	**-0.3**

IDC ***27*** *01:03:55.8±1.6, 63°.21N×151°.25W, h101^{km}±17^{km}, mb3.3/4, mb1 3.4/8, mb1mx3.0/45, mbtmp3.6/8, Error ellipse: s-maj=22.3km s-min=11.3km az=111.0*

ANF ***27*** *01:03:58.6±0.1, 63°.20N×150°.71W, h127^{km}±2^{km}, ML3.6/53, Error ellipse: s-maj=1.3km s-min=1.1km az=83.0*

NEIC ***27*** *01:03:58.6±0.8, 63°.21N±0°.03×150°.73W±0°.07, h131^{km}±4^{km}, Error ellipse: s-maj=5.1km s-min=4.0km az=127.0*

AEIC ***27*** *01:03:59.2±1.0, 63°.20N±0°.04×150°.73W±0°.07, h127^{km}±4^{km}, ML3.4/158, ML3.6/154(NEIC), Error ellipse: s-maj=5.4km s-min=4.5km az=208.0*

ISC 27 01:03:58.6±0.8**,63°.20N**±0°.02×**150°.75W**±0°.03**, h134^{km}**±5^{km}**,n261,σ0^{s}75**/270**,mb3.6**/4**,Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.32**	**40**		**Pn**	**01 04 17.5**	**0.0**
TRF					**Sn**	**01 04 31.1**	**-0.8**
TRF	**Thorofare Moun**	**0.32**	**40**	P	**Pn**	**01 04 17.4**	**0.0**
	baz=218,SNR=238						
TRF				S	**Sn**	**01 04 31.0**	**-0.8**
	baz=218						
KTH	**Kantishna Hill**	**0.36**	**348**		**Pn**	**01 04 17.5**	**0.0**
KTH	**Kantishna Hill**	**0.36**	**348**		**Sn**	**01 04 30.9**	**-1.0**
KTH	**Kantishna Hill**	**0.36**	**348**	IAML		01 04 19.0	
	comp=E,145nm,0.6s						
CAST	**Castle Rocks**	**0.64**	**290**		**Pn**	**01 04 18.7**	**-0.3**
CAST					**Sn**	**01 04 33.3**	**-1.1**
CAST	**Castle Rocks**	**0.64**	**290**	P	**Pn**	**01 04 18.7**	**-0.3**
	baz=109,SNR=244						
CAST				S	**Sn**	**01 04 33.1**	**-1.3**
	baz=109						
PPLA	**Purkeypile**	**0.72**	**245**		**Pn**	**01 04 19.8**	**+0.1**
PPLA					**Sn**	**01 04 35.5**	**-0.2**
PPLA	**Purkeypile**	**0.72**	**245**	P	**Pn**	**01 04 19.8**	**+0.1**
	baz=65,SNR=60						
PPLA				S	**Sn**	**01 04 35.3**	**-0.5**
	baz=65						
CUT	**Chulitna**	**0.83**	**164**		**Pn**	**01 04 20.3**	**-0.1**
CUT					**Sn**	**01 04 36.5**	**-0.3**
CUT	**Chulitna**	**0.83**	**164**	IAML		01 04 38.0	
	comp=E,3µm,0.5s						
CUT	**Chulitna**	**0.83**	**164**	P	**Pn**	**01 04 20.2**	**-0.1**
	baz=345,SNR=45						
CUT				S	**Sn**	**01 04 36.2**	**-0.7**
	baz=345						
RND	**Reindeer**	**0.88**	**76**		**Pn**	**01 04 20.8**	**0.0**
RND					**Sn**	**01 04 37.1**	**-0.7**
RND	**Reindeer**	**0.88**	**76**	IAML		01 04 38.6	
	comp=E,775nm,0.3s						
BPAW	**Bear Paw Mtn.**	**0.91**	**353**		**Pn**	**01 04 20.8**	**-0.2**
BPAW					**Sn**	**01 04 37.0**	**-1.2**
BPAW	**Bear Paw Mtn.**	**0.91**	**353**	P	**Pn**	**01 04 20.8**	**-0.2**
	baz=173,SNR=163						
BPAW				S	**Sn**	**01 04 36.9**	**-1.2**
	baz=173						
WAT7	**Susitna Watana**	**0.94**	**112**		**Pn**	**01 04 20.9**	**-0.5**
WAT7					**Sn**	**01 04 37.9**	**-0.9**
MCK	**McKinley**	**0.97**	**56**		**Pn**	**01 04 21.6**	**-0.1**
MCK					**Sn**	**01 04 37.9**	**-1.2**
MCK	**McKinley**	**0.97**	**56**	P	**Pn**	**01 04 21.5**	**-0.1**
	baz=237,SNR=87						
MCK				S	**Sn**	**01 04 37.9**	**-1.2**
	baz=237						
CHUM	**Lake Minchumin**	**0.98**	**315**		**Pn**	**01 04 21.7**	**+0.1**
CHUM					**Sn**	**01 04 38.6**	**-0.4**
CHUM	**Lake Minchumin**	**0.98**	**315**	P	**Pn**	**01 04 21.7**	**+0.1**
	baz=133,SNR=400						
CHUM				S	**Sn**	**01 04 38.4**	**-0.7**
	baz=133						
WAT1	**Susitna Watana**	**1.07**	**110**		**Pn**	**01 04 22.2**	**-0.3**
WAT1					**Sn**	**01 04 40.4**	**-0.3**
WAT1	**Susitna Watana**	**1.07**	**110**	P	**Pn**	**01 04 22.2**	**-0.3**
	baz=291						
WAT1				S	**Sn**	**01 04 40.0**	**-0.7**
	baz=291						
BWN	**Browne**	**1.13**	**30**		**Pn**	**01 04 23.5**	**+0.5**
BWN	**Browne**	**1.13**	**30**	IAML		01 04 42.1	
	comp=E,742nm,0.6s						
BWN				IAML		01 04 42.3	
	comp=N,767nm,1.0s						
M22K	**Willow**	**1.49**	**168**		**Pn**	**01 04 26.8**	**+0.1**
M22K					**Sn**	**01 04 48.4**	**+0.2**
M22K	**Willow**	**1.49**	**168**	P	**Pn**	**01 04 26.2**	**-0.5**
	baz=349,SNR=12						
M22K				S	**Sn**	**01 04 48.0**	**-0.2**
	baz=349						
WAT6	**Susitna Watana**	**1.51**	**113**		**Pn**	**01 04 26.7**	**-0.6**
WAT6	**Susitna Watana**	**1.51**	**113**	P	**Pn**	**01 04 26.7**	**-0.6**
	baz=296,SNR=86						
WAT6				S	**Sn**	**01 04 47.9**	**-1.2**
	baz=296						
DHY	**Denali Highway**	**1.54**	**93**		**Pn**	**01 04 27.4**	**-0.2**
DHY					**Sn**	**01 04 49.3**	**-0.3**
DHY	**Denali Highway**	**1.54**	**93**	IAML		01 04 50.7	
	comp=E,1µm,0.6s						
DHY				IAML		01 04 51.6	
	comp=N,1µm,0.4s						
DHY	**Denali Highway**	**1.54**	**93**	P	**Pn**	**01 04 27.4**	**-0.2**
	baz=276,SNR=127						
DHY				S	**Sn**	**01 04 48.7**	**-0.9**
	baz=276						
NEA2	**Nenana**	**1.58**	**27**		**Pn**	**01 04 27.4**	**-0.5**
NEA2	**Nenana**	**1.58**	**27**	IAML		01 04 49.4	
	comp=N,292nm,0.8s						
NEA2	**Nenana**	**1.58**	**27**	P	**Pn**	**01 04 27.3**	**-0.5**
	baz=208,SNR=54						
NEA2				S	**Sn**	**01 04 48.1**	**-2.1**
	baz=208						
L20K	**Farewell, AK**	**1.61**	**245**		**Pn**	**01 04 28.2**	**-0.1**
L20K	**Farewell, AK**	**1.61**	**245**	P	**Pn**	**01 04 28.1**	**-0.1**
	baz=62						
L20K				S	**Sn**	**01 04 49.6**	**-1.2**
	baz=62						
GHO	**Glory Hole Cre**	**1.67**	**149**		**Pn**	**01 04 28.8**	**-0.1**
GHO					**Sn**	**01 04 52.4**	**+0.4**
WRH	**Wood River Hil**	**1.73**	**42**		**Pn**	**01 04 29.3**	**-0.3**
PMR	**Palmer**	**1.79**	**154**		**Pn**	**01 04 29.7**	**-0.5**
PMR	**Palmer**	**1.79**	**154**	IAML		01 04 54.4	
	comp=E,684nm,0.3s						
PMR				IAML		01 05 01.8	
	comp=N,461nm,0.7s						
PMR	**Palmer**	**1.79**	**154**	P	**Pn**	**01 04 29.5**	**-0.6**
	baz=336,SNR=20						
PMR				S	**Sn**	**01 04 53.2**	**-1.1**
	baz=336						
STLK	**Strandline Lak**	**1.79**	**197**		**Pn**	**01 04 30.3**	**0.0**
SML	**Sawmill**	**1.80**	**140**		**Pn**	**01 04 29.8**	**-0.6**
SML					**Sn**	**01 04 54.6**	**0.0**
SML	**Sawmill**	**1.80**	**140**	IAML		01 04 55.9	
	comp=N,909nm,0.7s						
SML	**Sawmill**	**1.80**	**140**	P	**Pn**	**01 04 29.7**	**-0.6**
	baz=323,SNR=15						
SML				S	**Sn**	**01 04 54.2**	**-0.5**
	baz=323						
J20K	**Nowinta River**	**1.80**	**304**		**Pn**	**01 04 30.4**	**0.0**
J20K	**Nowinta River**	**1.80**	**304**	P	**Pn**	**01 04 30.4**	**0.0**
	baz=121						
J20K				S	**Sn**	**01 04 53.4**	**-1.2**
	baz=121						
MLY	**Manley**	**1.83**	**0**		**Pn**	**01 04 30.6**	**-0.2**
MLY	**Manley**	**1.83**	**0**	P	**Pn**	**01 04 30.6**	**-0.2**
	baz=180						
MLY				S	**Sn**	**01 04 54.8**	**-0.7**
	baz=180						
CCB	**Clear Creek Bu**	**1.95**	**41**		**Pn**	**01 04 31.8**	**-0.3**
CCB	**Clear Creek Bu**	**1.95**	**41**	IAML		01 04 57.9	
	comp=E,310nm,0.6s						
SPCG	**Spurr Capps Gl**	**2.01**	**198**		**Pn**	**01 04 33.1**	**0.0**
SPCG					**Sn**	**01 04 58.7**	**-0.6**
I23K	**Minto, Yukon-K**	**2.04**	**17**		**Pn**	**01 04 33.2**	**-0.1**
I23K	**Minto, Yukon-K**	**2.04**	**17**	IAML		01 04 59.9	
	comp=N,191nm,1.1s						
I23K	**Minto, Yukon-K**	**2.04**	**17**	P	**Pn**	**01 04 33.1**	**-0.1**
	baz=198,SNR=114						
I23K				S	**Sn**	**01 04 58.3**	**-1.5**
	baz=198						
I21K	**Tanana**	**2.06**	**345**		**Pn**	**01 04 33.4**	**0.0**
I21K	**Tanana**	**2.06**	**345**	P	**Pn**	**01 04 33.4**	**0.0**
	baz=164						
HDA	**Harding Lake**	**2.08**	**53**		**Pn**	**01 04 33.4**	**-0.3**
HDA	**Harding Lake**	**2.08**	**53**	IAML		01 05 03.7	
	comp=N,268nm,0.3s						
HDA				IAML		01 05 04.5	
	comp=E,272nm,0.3s						
HDA	**Harding Lake**	**2.08**	**53**	P	**Pn**	**01 04 33.3**	**-0.3**
	baz=236						
HDA				S	**Sn**	**01 04 59.8**	**-0.7**
	baz=236						
HDA				S	**Sn**	**01 04 59.8**	**-0.7**
	baz=236						
MDM	**Murphy Dome**	**2.08**	**31**		**Pn**	**01 04 33.5**	**-0.2**
FIS	**Fire Island**	**2.08**	**173**	Pn	**Pn**	**01 04 33.7**	**0.0**
FIS				IAML		01 05 09.7	
	comp=N,830nm,0.8s						
KNK	**Knik Glacier**	**2.09**	**148**		**Pn**	**01 04 33.6**	**-0.4**
KNK	**Knik Glacier**	**2.09**	**148**	IAML		01 05 03.9	
	comp=N,634nm,0.4s						
KNK	**Knik Glacier**	**2.09**	**148**	P	**Pn**	**01 04 33.5**	**-0.4**
	baz=330,SNR=16						
KNK				S	**Sn**	**01 05 00.4**	**-0.5**
	baz=330						
SPCN	**Chakachatna No**	**2.10**	**199**		**Pn**	**01 04 34.4**	**+0.4**
SCM	**Sheep Creek Mo**	**2.10**	**129**		**Pn**	**01 04 33.5**	**-0.6**
SCM	**Sheep Creek Mo**	**2.10**	**129**	IAML		01 05 02.6	
	comp=E,566nm,0.6s						
SCM				IAML		01 05 09.7	
	comp=N,478nm,0.5s						
SCM	**Sheep Creek Mo**	**2.10**	**129**	P	**Pn**	**01 04 33.4**	**-0.7**
	baz=312,SNR=40						
SCM				S	**Sn**	**01 05 00.0**	**-1.2**
	baz=312						
TCOL	**CIGO, UAF Yank**	**2.10**	**36**		**Pn**	**01 04 33.9**	**-0.1**
TCOL	**CIGO, UAF Yank**	**2.10**	**36**	IAML		01 05 05.2	
	comp=N,317nm,0.7s						
TCOL				IAML		01 05 06.1	
	comp=E,352nm,0.5s						
TCOL	**CIGO, UAF Yank**	**2.10**	**36**	P	**Pn**	**01 04 33.6**	**-0.3**
	baz=218,SNR=20						
TCOL				S	**Sn**	**01 04 59.2**	**-1.9**
	baz=218						
COLA	**College**	**2.11**	**36**		**Pn**	**01 04 33.8**	**-0.2**
COLA	**College**	**2.11**	**36**	IAML		01 05 03.3	
	comp=E,352nm,0.6s						
COLA				IAML		01 05 06.1	
	comp=E,387nm,0.5s						
COLA	**College**	**2.11**	**36**	P	**Pn**	**01 04 33.8**	**-0.2**
	baz=218						
COLA				S	**Sn**	**01 04 60.0**	**-1.2**
	baz=218						
SPU	**Mount Spurr**	**2.12**	**197**		**Pn**	**01 04 34.5**	**+0.2**
SPCR	**Spurr Chakacha**	**2.12**	**199**	P	**Pn**	**01 04 34.5**	**+0.1**
	baz=18						
L19K	**White Mountain**	**2.15**	**243**		**Pn**	**01 04 34.4**	**-0.2**
L19K	**White Mountain**	**2.15**	**243**	P	**Pn**	**01 04 34.5**	**-0.2**
	baz=60,SNR=12						
L19K				S	**Sn**	**01 05 01.0**	**-1.3**
	baz=60						
RC01	**Rabbit Creek A**	**2.17**	**167**		**Pn**	**01 04 34.6**	**-0.3**
RC01	**Rabbit Creek A**	**2.17**	**167**	IAML		01 05 02.8	
	comp=N,767nm,0.3s						
RC01				IAML		01 05 04.0	
	comp=E,546nm,0.4s						
RC01	**Rabbit Creek A**	**2.17**	**167**	P	**Pn**	**01 04 34.6**	**-0.3**
	baz=348,SNR=7.3						
RC01				S	**Sn**	**01 05 01.8**	**-1.0**
	baz=348						
PS08	**TAPS Pump Stn8**	**2.20**	**51**		**Pn**	**01 04 34.9**	**-0.3**
PS10	**TAPS Pump St10**	**2.26**	**82**		**Pn**	**01 04 37.2**	**+1.2**
IL31		**2.32**	**46**		**Pn**	**01 04 36.2**	**-0.4**
ILAR	**Eielson Array**	**2.32**	**46**	P	**Pn**	**01 04 36.2**	**-0.4**
	comp=E,16nm,0.3s,baz=226,slow=12,SNR=971						
ILAR				S	**Sn**	**01 05 04.1**	**-1.8**
	comp=E,10nm,0.3s,baz=225,slow=15,SNR=4.3						
ILAR	**Eielson Array**	**2.32**	**46**	Pn	**Pn**	**01 04 36.5**	**-0.2**
M24K	**Tolsona, Glenn**	**2.38**	**116**		**Pn**	**01 04 37.6**	**0.0**
M24K	**Tolsona, Glenn**	**2.38**	**116**	P	**Pn**	**01 04 37.5**	**0.0**
	baz=300,SNR=39						
POKR	**Poker Plat Res**	**2.41**	**36**		**Pn**	**01 04 37.8**	**0.0**
POKR	**Poker Plat Res**	**2.41**	**36**	P	**Pn**	**01 04 37.8**	**0.0**
	baz=218,SNR=24						
POKR				S	**Sn**	**01 05 07.0**	**-0.8**
	baz=218						
TTA	**Tatalina**	**2.41**	**266**	Pn	**Pn**	**01 04 38.0**	**+0.1**
TTA				IAML		01 05 08.1	
	comp=E,146nm,1.1s						
TTA	**Tatalina**	**2.41**	**266**	P	**Pn**	**01 04 37.7**	**-0.2**
	baz=81,SNR=12						
TTA				S	**Sn**	**01 05 07.3**	**-0.7**
	baz=81						
PAX	**Paxson**	**2.41**	**93**		**Pn**	**01 04 37.8**	**-0.2**
PAX	**Paxson**	**2.41**	**93**	P	**Pn**	**01 04 37.9**	**0.0**
	baz=278,SNR=90						
PAX				S	**Sn**	**01 05 07.4**	**-0.7**
	baz=278						
TT01	**Tatalina**	**2.42**	**265**		**Pn**	**01 04 37.7**	**-0.2**
CAPN	**Captain Cook N**	**2.45**	**185**		**Pn**	**01 04 40.0**	**+1.7**
PWL	**Port Wells**	**2.61**	**153**		**Pn**	**01 04 39.9**	**-0.6**
PWL	**Port Wells**	**2.61**	**153**	IAML		01 05 13.8	
	comp=N,450nm,0.4s						
PWL				IAML		01 05 23.7	
	comp=E,469nm,0.5s						
PWL	**Port Wells**	**2.61**	**153**	P	**Pn**	**01 04 39.8**	**-0.6**
	baz=335						
PWL				S	**Sn**	**01 05 10.6**	**-1.9**
	baz=335						
H21K	**Melozitna Rive**	**2.62**	**341**		**Pn**	**01 04 40.2**	**-0.2**
H21K	**Melozitna Rive**	**2.62**	**341**	IAML		01 05 12.8	
	comp=N,98nm,0.7s						
H21K	**Melozitna Rive**	**2.62**	**341**	P	**Pn**	**01 04 40.2**	**-0.2**
	baz=159,SNR=131						
H21K				S	**Sn**	**01 05 11.0**	**-1.7**
	baz=159						
PS11	**TAPS Pump St11**	**2.69**	**112**		**Pn**	**01 04 41.5**	**+0.2**
HARP	**HAARP**	**2.69**	**105**		**Pn**	**01 04 41.6**	**+0.3**
HARP	**HAARP**	**2.69**	**105**	P	**Pn**	**01 04 41.1**	**-0.2**
	baz=290,SNR=28						
PS06	**TAPS Pump Stn6**	**2.70**	**9**		**Pn**	**01 04 41.6**	**+0.2**
RIDG	**Independent Ri**	**2.70**	**76**		**Pn**	**01 04 41.8**	**+0.2**
RIDG	**Independent Ri**	**2.70**	**76**	IAML		01 05 20.2	
	comp=E,256nm,0.7s						
RIDG				IAML		01 05 20.3	
	comp=N,307nm,0.8s						
RIDG	**Independent Ri**	**2.70**	**76**	P	**Pn**	**01 04 41.7**	**+0.2**

	baz=261,SNR=13						
SLKM	Skilak Lake	2.72	174		Pn	01 04 41.9	+0.1
O22K	Cooper Landing	2.78	169		Pn	01 04 42.4	0.0
O22K	Cooper Landing	2.78	169	P	Pn	01 04 42.2	-0.2
	baz=351						
DFR	Drift River	2.78	200		Pn	01 04 42.7	+0.1
RDJH	Redoubt Jeurge	2.80	201		Pn	01 04 43.1	+0.3
KLU	Klutina	2.83	125		Pn	01 04 42.1	-1.1
KLU	Klutina	2.83	125	IAML		01 05 17.2	
	comp=E,353nm,0.3s						
KLU				IAML		01 05 29.3	
	comp=N,356nm,0.3s						
KLU	Klutina	2.83	125	P	Pn	01 04 42.2	-1.0
	baz=310,SNR=46						
NCT	North Crescent	2.85	202		Pn	01 04 44.3	+0.8
GLI	Glacier Island	2.90	142		Pn	01 04 43.1	-1.0
GLI	Glacier Island	2.90	142	P	Pn	01 04 43.0	-1.0
	baz=325						
RDWB	Redoubt West	2.90	201		Pn	01 04 44.5	+0.3
RSO	Redoubt South	2.91	200		Pn	01 04 44.3	-0.1
H24K	Noodor Dome	2.92	24		Pn	01 04 44.1	-0.2
H24K	Noodor Dome	2.92	24	P	Pn	01 04 44.0	-0.2
	baz=206,SNR=16						
RED	Redoubt Volcan	2.96	200		Pn	01 04 45.0	+0.2
N19K	Bonanza Creek	2.98	218		Pn	01 04 45.1	0.0
N19K	Bonanza Creek	2.98	218	P	Pn	01 04 45.0	0.0
	baz=35,SNR=5.5						
DOT	Dot Lake	3.04	79		Pn	01 04 45.3	-0.5
IM03		3.08	336		Pn	01 04 46.0	-0.1
IMAR	Indian Mountai	3.08	336		Pn	01 04 45.3	-0.9
SVW2	Sparrevohn	3.10	229		Pn	01 04 46.2	-0.4
GCSA	Galena City Sc	3.11	303		Pn	01 04 46.6	-0.1
GCSA	Galena City Sc	3.11	303	P	Pn	01 04 46.6	-0.1
	baz=117						
SCRK	Sand Creek	3.12	73		Pn	01 04 46.4	-0.6
SCRK	Sand Creek	3.12	73	IAML		01 05 28.0	
	comp=E,172nm,0.7s						
SCRK				IAML		01 05 28.4	
	comp=N,206nm,0.7s						
SCRK	Sand Creek	3.12	73	P	Pn	01 04 46.7	-0.3
	baz=258,SNR=57						
DIV	Divide	3.13	129		Pn	01 04 45.7	-1.3
PS12	TAPS Pump St12	3.14	121		Pn	01 04 46.3	-0.8
SEW	Seward	3.17	168		Pn	01 04 47.0	-0.5
SEW	Seward	3.17	168	P	Pn	01 04 47.0	-0.5
	baz=350						
FID	Port Fidalgo	3.18	139		Pn	01 04 46.8	-0.9
MENT	Mentasta	3.21	92		Pn	01 04 47.8	-0.2
MENT				IAML		01 05 35.1	
	comp=N,179nm,0.5s						
MENT				IAML		01 05 41.3	
	comp=E,271nm,0.6s						
PRP	Porcupine Dome	3.25	42		Pn	01 04 48.5	-0.1
PRP	Porcupine Dome	3.25	42	P	Pn	01 04 48.3	-0.3
	baz=226,SNR=12						
O20K	Slope Mountain	3.26	197		Pn	01 04 48.8	+0.1
O20K	Slope Mountain	3.26	197	P	Pn	01 04 48.8	+0.1
	baz=15						
N25K	Chitina, Valde	3.28	117		Pn	01 04 48.7	-0.3
N25K	Chitina, Valde	3.28	117	IAML		01 05 29.5	
	comp=E,122nm,0.3s						
N25K				IAML		01 05 29.8	
	comp=N,229nm,0.4s						
N25K	Chitina, Valde	3.28	117	P	Pn	01 04 48.6	-0.4
	baz=302,SNR=14						
L26K	Log Cabin Wild	3.37	90		Pn	01 04 49.9	-0.2
L26K	Log Cabin Wild	3.37	90	IAML		01 05 38.2	
	comp=N,223nm,0.3s						
L26K				IAML		01 05 39.3	
	comp=E,269nm,0.4s						
L26K	Log Cabin Wild	3.37	90	P	Pn	01 04 49.9	-0.2
	baz=276,SNR=54						
IVE	Iliamna Volcan	3.38	200		Pn	01 04 50.5	+0.1
J26L	Joseph Creek	3.44	65		Pn	01 04 51.0	0.0
J26L	Joseph Creek	3.44	65	P	Pn	01 04 50.9	-0.1
	baz=251,SNR=98						
BRLK	Bradley Lake	3.45	181		Pn	01 04 51.2	-0.1
BRLK	Bradley Lake	3.45	181	IAML		01 05 32.6	
	comp=E,92nm,0.9s						
BRLK				IAML		01 05 33.1	
	comp=N,128nm,0.4s						
O19K	Port Alsworth	3.46	211	Pn	Pn	01 04 51.3	0.0
O19K				IAML		01 05 34.3	
	comp=E,86nm,0.5s						
O19K				IAML		01 06 19.7	
	comp=N,81nm,0.5s						
O19K	Port Alsworth	3.46	211	P	Pn	01 04 51.4	0.0
	baz=28						
BRSE	Bradley Lake S	3.48	180		Pn	01 04 51.5	0.0
BRSE	Bradley Lake S	3.48	180	P	Pn	01 04 51.1	-0.4
	baz=0.1						
EYAK	Cordova Ski Ar	3.56	136		Pn	01 04 52.1	-0.5
EYAK	Cordova Ski Ar	3.56	136	P	Pn	01 04 51.9	-0.7
	baz=321						
HOM	Homer	3.58	187		Pn	01 04 53.5	+0.6
HOM	Homer	3.58	187	P	Pn	01 04 52.7	-0.3
	baz=6.7						
PS05	TAPS Pump Stn5	3.62	1		Pn	01 04 53.7	+0.3
M26K	Nabesna, AK	3.65	99		Pn	01 04 53.6	-0.2
M26K	Nabesna, AK	3.65	99	IAML		01 05 52.8	
	comp=N,85nm,0.5s						
M26K				IAML		01 05 53.6	
	comp=E,78nm,0.6s						
M26K	Nabesna, AK	3.65	99	P	Pn	01 04 53.3	-0.6
	baz=286						
BMRM	Bremner River	3.66	125		Pn	01 04 52.8	-1.2
BMRM	Bremner River	3.66	125	IAML		01 05 52.0	
	comp=E,173nm,0.6s						
BMRM	Bremner River	3.66	125	P	Pn	01 04 52.7	-1.2
	baz=311						
GLB	Gilahina Butte	3.69	116		Pn	01 04 53.9	-0.4
GLB	Gilahina Butte	3.69	116	IAML		01 05 38.2	
	comp=N,181nm,0.9s						
CNPM	China Poot	3.70	184		Pn	01 04 54.3	-0.2
CNPM	China Poot	3.70	184	IAML		01 05 40.1	
	comp=N,138nm,0.6s						
CNPM				IAML		01 05 51.0	
	comp=E,181nm,0.6s						
P19K	Oil Pt	3.76	200		Pn	01 04 55.3	+0.1
P19K	Oil Pt	3.76	200	IAML		01 05 39.9	
	comp=E,147nm,2.6s						
P19K				IAML		01 06 20.1	
	comp=N,150nm,3.9s						
GOAT	Goat Mountain	3.88	130		Pn	01 04 56.1	-0.8
VRDI	Verde Repeater	3.95	117		Pn	01 04 57.1	-0.8
VRDI	Verde Repeater	3.95	117	IAML		01 05 44.2	
	comp=N,99nm,0.5s						
VRDI				IAML		01 05 47.0	
	comp=E,78nm,0.7s						
O18K	Koktuh Hills	3.98	214	Pn	Pn	01 04 59.0	+0.8
O18K				IAML		01 05 39.4	
	comp=N,66nm,3.7s						
O18K				IAML		01 07 29.5	
	comp=E,115nm,4.8s						
RAGM	Ragged Mountai	4.04	132		Pn	01 04 58.4	-0.5
COLD	Coldfoot	4.05	3		Pn	01 04 58.9	0.0
COLD	Coldfoot	4.05	3	P	Pn	01 04 58.9	0.0
	baz=183,SNR=25						
L27K	Beaver Creek,	4.05	88		Pn	01 04 58.3	-0.8
L27K	Beaver Creek,	4.05	88	IAML		01 05 50.0	
	comp=N,34nm,0.7s						
L27K	Beaver Creek,	4.05	88	P	Pn	01 04 58.3	-0.8
	baz=276						
BC03		4.07	88		Pn	01 04 58.5	-0.7
BCAR	Beaver Creek A	4.07	88	Pn	Pn	01 04 58.2	-1.1
FYU	Fort Yukon	4.11	32		Pn	01 04 59.9	+0.1
FYU				IAML		01 06 29.7	
	comp=E,86nm,4.6s						
FYU				IAML		01 06 35.7	
	comp=N,108nm,4.6s						
M27K	Edge Creek, AK	4.16	98		Pn	01 05 00.7	0.0
M27K	Edge Creek, AK	4.16	98	IAML		01 06 11.3	
	comp=N,42nm,1.2s						
M27K				IAML		01 06 12.3	
	comp=E,44nm,1.1s						
M27K	Edge Creek, AK	4.16	98	P	Pn	01 05 00.8	+0.2
	baz=286						
HMT	Hamilton	4.22	130	Pn	Pn	01 05 00.6	-0.7
CRQM	Cirque	4.35	121		Pn	01 05 02.5	-0.7
CRQE	Cirque	4.37	121	P	Pn	01 05 02.6	-0.9
	baz=308						
BERG	Berg Lake	4.38	127	Pn	Pn	01 05 03.0	-0.4
PTPK	Patty Peak	4.38	114		Pn	01 05 03.5	0.0
TGL	Tana Glacier	4.47	120		Pn	01 05 03.9	-0.9
TGL	Tana Glacier	4.47	120	IAML		01 05 56.6	
	comp=N,110nm,0.5s						
TGL				IAML		01 06 17.8	
	comp=E,109nm,0.7s						
BALM	Baldy	4.51	115		Pn	01 05 04.5	-0.7
KHIT	Khitrov Hills	4.51	125		Pn	01 05 04.1	-1.1
EGAK	Eagle	4.51	65		Pn	01 05 04.9	-0.2
EGAK	Eagle	4.51	65	IAML		01 06 10.9	
	comp=E,74nm,2.1s						
EGAK				IAML		01 06 13.1	
	comp=E,85nm,0.9s						
EGAK	Eagle	4.51	65	P	Pn	01 05 04.5	-0.6
	baz=254,SNR=21						
Q19K	Cape Douglas,	4.51	199		Pn	01 05 04.9	-0.4
Q19K	Cape Douglas,	4.51	199	P	Pn	01 05 04.8	-0.5
	baz=17						
KIAG	Kiagna River	4.56	116		Pn	01 05 05.0	-1.1
BVCY	Beaver Creek	4.61	95		Pn	01 05 06.4	0.0
BVCY	Beaver Creek	4.61	95	P	Pn	01 05 05.9	-0.6
	baz=284,SNR=5.9						
WAX	Waxell Ridge	4.65	123		Pn	01 05 06.7	-0.4
ISLE	Juniper Island	4.76	120		Pn	01 05 07.4	-1.1
ISLE	Juniper Island	4.76	120	IAML		01 06 27.4	
	comp=E,89nm,1.4s						
BARN	Barnard Glacie	4.78	113		Pn	01 05 09.1	+0.2
BARN	Barnard Glacie	4.78	113	IAML		01 06 06.6	
	comp=E,44nm,0.6s						
BARN				IAML		01 06 36.3	
	comp=N,38nm,2.6s						
YUK2	White River	4.81	103		Pn	01 05 09.6	+0.3
SNH	Sunshine Point	4.84	125		Pn	01 05 09.6	+0.1
BAGL	Bagley Icefiel	4.92	120		Pn	01 05 09.9	-0.7
BM03	Burnt Mountain	4.95	29		Pn	01 05 10.8	-0.2
CTG	Chitna Glacier	4.96	113	P	Pn	01 05 10.7	-0.6
	baz=301						
CTGM	Chitina Glacie	4.96	113		Pn	01 05 11.5	+0.2
CTGM	Chitina Glacie	4.96	113	IAML		01 06 16.6	
	comp=N,42nm,3.8s						
CTGM				IAML		01 06 21.3	
	comp=E,34nm,3.8s						
BMAR	Burnt Mountain	4.97	29	Pn	Pn	01 05 11.0	-0.2
YUK3	Moose Creek	4.98	102		Pn	01 05 12.1	+0.4
YUK3	Moose Creek	4.98	102	P	Pn	01 05 11.9	+0.2
	baz=291,SNR=15						
BM01	Burnt Mountain	5.00	29		Pn	01 05 11.3	-0.2
YAH	Yahtse	5.14	120		Pn	01 05 13.0	-0.7
DAWY	Dawson	5.14	75		Pn	01 05 13.2	-0.4
DAWY	Dawson	5.14	75	IAML		01 06 28.5	
	comp=E,33nm,0.6s						
DAWY				IAML		01 06 28.8	
	comp=N,52nm,0.8s						
DAWY	Dawson	5.14	75	P	Pn	01 05 13.2	-0.4
	baz=265,SNR=60						
MESA	MESA	5.17	122		Pn	01 05 13.4	-0.7
MESA	MESA	5.17	122	P	Pn	01 05 13.7	-0.5
	baz=310						
LOGN	Logan Glacier	5.17	113		Pn	01 05 13.7	-0.5
LOGN	Logan Glacier	5.17	113	IAML		01 06 45.2	
	comp=E,48nm,3.3s						
LOGN				IAML		01 06 47.6	
	comp=N,47nm,4.8s						
TABL	Table Mountain	5.33	117	Pn	Pn	01 05 16.3	0.0
TABL				IAML		01 07 33.2	
	comp=N,61nm,4.6s						
TOLK	Toolik Lake Re	5.48	5		Pn	01 05 19.5	+1.4
TOLK	Toolik Lake Re	5.48	5	P	Pn	01 05 18.9	+0.8
	baz=186						
KDAK	Kodiak Island	5.51	190	P	Pn	01 05 16.5	-2.1
	comp=N,0.9nm,0.3s,baz=60,slow=6.4,SNR=38						
KDAK				S	Sn	01 06 16.0	-4.8
	comp=N,4.8nm,0.3s,baz=147,slow=23,SNR=16						
KDAK	Kodiak Island	5.51	190		Pn	01 05 17.1	-1.5
KDAK	Kodiak Island	5.51	190	P	Pn	01 05 17.1	-1.5
	baz=8.8						
CHX	Chaix Hills	5.57	120		Pn	01 05 19.2	-0.2
J29M	Klondike Camp	5.69	72		Pn	01 05 21.0	+0.1
I29M	Ogilvie Camp,	5.83	63	P	Pn	01 05 22.3	-0.5
	baz=254,SNR=11						
PCA	Pinnacle	5.89	117		Pn	01 05 23.8	+0.1
PINM	Pinnacle	5.89	117	P	Pn	01 05 22.9	-0.7
	baz=306						
BCPM	Bancas Point	6.23	117		Pn	01 05 27.8	-0.3
M30M	Minto, Yukon	6.41	89		Pn	01 05 29.8	-0.8
M30M	Minto, Yukon	6.41	89	P	Pn	01 05 29.9	-0.8
	baz=282						
PNL	Peninsula	6.50	118		Pn	01 05 31.5	-0.2
PNL	Peninsula	6.50	118	P	Pn	01 05 31.2	-0.5
	baz=308						
INK	Inuvik	8.72	47	P	Pn	01 06 01.9	+0.4
	comp=N,0.1nm,0.3s,baz=238,slow=13,SNR=5.0						
BESE	Bessie Mountai	9.02	114		Pn	01 06 04.6	-1.0
A36M	Sachs Harbour	12.99	37	Pn	Pn	01 06 56.4	-1.4
YKA	Yellowknife Ar	16.38	76	P	P	01 07 42.6	+1.8
	comp=N,0.1nm,0.3s,baz=292,slow=14,SNR=6.5						
PDAR	Pinedale Array	31.33	111	P	P	01 10 08.0	+1.7
	comp=N,0.3nm,0.5s,baz=328,slow=5.3,SNR=3.9						
NVAR	Mina Array Bea	31.55	126	P	P	01 10 10.6	+2.4
	comp=N,0.4nm,0.5s,baz=314,slow=8.1,SNR=1.7						
ZALV	Zalesovo Beam	55.42	324	P	P	01 13 18.0	-0.5
	comp=N,0.4nm,0.3s,baz=355,slow=6.7,SNR=3.5						
MKAR	Makanchi Array	62.58	322	P	P	01 14 07.4	-0.6
	comp=N,0.4nm,0.4s,baz=47,slow=6.8,SNR=12						

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*TUL **27** 01:08:18.8±1.0, 35.°94N±0.°01×96.°79W±0.°02, h5km±4km, ML2.8, mb_Lg2.3/17(NEIC), Error ellipse: s-maj=2.1km s-min=1.7km az=65.0*

NEIC 27 01:08:19.1±0.9**, 35.°95N**±0.°02×**96.°79W**±0.°03**, h6**km±4km**, Error ellipse: s-maj=3.4km s-min=1.8km az=125.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK030	Cody Creek RV	0.02	158		Pg	01 08 19.9	-0.2
OK030				Sg	Sg	01 08 20.6	-0.3
OK031	S. Brethren Rd	0.04	279	Pg	Pg	01 08 20.1	-0.2
OK031				Sg	Sg	01 08 21.0	-0.2
OK034	N. Norfolk Rd.	0.09	46		Pg	01 08 21.3	+0.2
OK034				Sg	Sg	01 08 22.9	+0.4
QUOK	Quay	0.23	17	Pg	Pg	01 08 23.9	+0.2
QUOK				Sg	Sg	01 08 27.5	+0.7
OK025	Westminster Rd	0.57	231	Pg	Pg	01 08 29.8	-0.3
OK025				Sg	Sg	01 08 38.0	+0.5
BCOK	Bluff Creek, N	0.72	247		Pg	01 08 31.7	-1.3
BCOK				Sg	Sg	01 08 42.8	+0.5
OKCSW	OKLAHOMA CITY	0.75	224	Pg	Pg	01 08 33.6	+0.1
OKCSW				Sg	Sg	01 08 43.5	+0.3
OKCFA	Oklahoma City	0.75	225		Pg	01 08 33.7	+0.2
W35A	Tecumseh	0.80	185	Pg	Pg	01 08 33.8	-0.6
TUL1	Leonard	0.81	92		Pg	01 08 34.3	-0.3
FNO	Franklin	0.85	216	Pg	Pg	01 08 33.7	-1.6
T35A	Sooner Cattle	0.99	13		Pg	01 08 37.7	-0.5
CROK	Carrier	1.11	300	Pg	Pg	01 08 39.9	-0.5
KAN14	Manchester OK	1.38	317		Pn	01 08 44.8	-0.1
KAN06	Argonia West S	1.56	327	Pn	Pn	01 08 47.0	-0.4
X34A	Smith Ranch, M	1.59	213	Pn	Pn	01 08 47.9	+0.1
X34A				IAmb_Lg		01 09 08.8	
	comp=Z,15nm,1.1s						
X37A	Clayton	1.79	139		Pn	01 08 50.6	+0.2
X37A				IAmb_Lg		01 09 17.9	
	comp=Z,17nm,0.8s						
U32A	Winter Ranch,	1.84	284	Pn	Pn	01 08 51.6	+0.4
U32A				IAmb_Lg		01 09 21.3	
	comp=Z,14nm,0.9s						
LOOK	Love County	1.98	189	Pn	Pn	01 08 53.4	+0.3
WMOK	Wichita Mounta	2.02	234	Pn	Pn	01 08 53.9	+0.1
WMOK				IAmb_Lg		01 09 22.7	
	comp=Z,18nm,0.9s						
HHAR	Hobbs	2.33	81	Pn	Pn	01 08 58.0	0.0
W39A	Magazine	2.56	106	Pn	Pn	01 09 01.1	-0.1
MIAR	Mount Ida	2.98	117	Pn	Pn	01 09 06.3	-0.6
KSU1	Kansas State U	3.15	3	Pn	Pn	01 09 08.7	-0.5
U40A	Yellville	3.21	82	Pn	Pn	01 09 09.8	-0.3
U40A				IAmb_Lg		01 10 07.5	
	comp=Z,7.9nm,0.7s						
X40A	Basin Creek Fa	3.55	113	Pn	Pn	01 09 14.8	0.0
FCAR	Ozark Folk Cen	3.79	89	Pn	Pn	01 09 16.7	-1.4
FCAR				IAmb_Lg		01 10 23.2	
	comp=Z,6.5nm,0.7s						
R40A	Maddies Statio	4.31	56	IAmb_Lg		01 10 37.3	
	comp=Z,7.0nm,0.9s						
T42A	Van Buren	4.72	75	Pn	Pn	01 09 30.8	0.0
T42A				IAmb_Lg		01 10 57.5	
	comp=Z,4.8nm,0.8s						
CCM	Cathedral Cave	4.91	63	IAmb_Lg		01 11 07.2	
	comp=Z,6.6nm,0.8s						

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*IDC **27** 01:08:54.3±8.0, 19.°37S×168.°94E, h128km±55km, mb3.6/3, mb1 3.7/4, mb1mx3.0/30, mbtmp3.9/4, Error ellipse: s-maj=132.9km s-min=64.8km az=126.0*

*NOU **27** 01:08:55.0, 19.°55S×169.°13E, h103km, MLv4.0/14, Vanuatu Islands*

ISC 27 01:08:51.3±2.2**, 19.°59S**±0.°07×**169.°4E**±0.°2**, h100**km**, n15, σ2.s53**/16**, mb3.8**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.99	334	P	Pn	01 09 26.5	+2.7
DVP	Devils Point	2.15	329	P	Pn	01 09 28.2	+2.3
MARNC	Mare, Loyalty	2.26	213	P	Pn	01 09 28.9	+1.7
LIFNC	LIFOU	2.31	239	P	Pn	01 09 28.9	+0.9
YATNC	Mamie plateau,	3.37	223	P	Pn	01 09 43.3	+1.2
PINNC	Pines Island,	3.50	210	P	Pn	01 09 46.4	+2.6
OUENC	Ouen Island, N	3.67	219	P	Pn	01 09 49.5	+3.5
DZM	Mont Dzumac	3.68	227	P	Pn	01 09 48.3	+2.1
	2.4nm,0.3s,baz=37,slow=20,SNR=85						
DZM				S	Sn	01 10 30.3	+1.5
	8.3nm,0.3s,baz=130,slow=22,SNR=14						
DZM	Mont Dzumac	3.68	227	P	Pn	01 09 48.6	+2.3
NOUC	Port Laguerre	3.79	228	P	Pn	01 09 50.1	+2.3
ONTNC	Ouen Toro	3.83	224	P	Pn	01 09 50.3	+2.1
KOUNC	Koumac, New Ca	4.86	258	P	Pn	01 10 04.5	+2.4
STKA	Stephens Creek	27.75	238	P	P	01 14 29.6	-1.1
	2.5nm,1.0s,baz=90,slow=14,SNR=3.4						
WRA	Warramunga Arr	32.92	263	P	P	01 15 13.2	-3.3
	0.4nm,0.5s,baz=94,slow=8.2,SNR=2.1						
ASAR	Alice Springs	33.15	257	P	P	01 15 15.8	-2.7
	2.0nm,0.6s,baz=86,slow=9.0,SNR=36						

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*NEIC **27** 01:15:32.2±1.8, 32.°3S±0.°1×179.°6W±0.°2, h357km±15km, mb4.1/11, Error ellipse: s-maj=27.6km s-min=19.7km az=108.0*

*IDC **27** 01:15:35.5±1.7, 31.°96S×179.°90E, h353km±20km, mb3.8/5, mb1 4.0/9, mb1mx3.5/31, mbtmp4.6/9, Error ellipse: s-maj=25.9km s-min=14.7km az=138.0*

*NOU **27** 01:15:35.9, 32.°16S×179.°76W, h387km, mb4.4/26, South of Kermadec Islands*

*WEL **27** 01:15:37.4±0.7, 32°S±7°×17°9W±1°8, h346km±9km, M4.7/47, mB5.2/38, ML5.4/41, MLv5.3/47, Mw(mB)4.6/38, Error ellipse: s-maj=0.0km s-min=0.0km az=109.6*

ISC 27 01:15:35.0±0.4**, 31.°97S**±0.°02×**179.°75E**±0.°05**, h350**km**, n134, σ2.s22**/127**, mb4.0**/13**, 4D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.37	37	P	Pn	01 16 38.7	+0.9
GLKZ				S	S	01 17 25.3	-3.0
RIZ	Raoul Island	3.37	37	P	Pn	01 16 38.9	+1.0
RIZ				S	S	01 17 29.8	+1.3
GRZ	Great Barrier	5.56	219	P	Pn	01 17 05.4	+4.8
MXZ	Matakaoa Point	5.71	192	P	Pn	01 17 04.3	+2.0
MXZ				S	S	01 18 13.3	+0.2
MXZ	Matakaoa Point	5.71	192		Pn	01 16 58.6	-3.7
MXZ				Sn	S	01 18 10.6	-2.5
KUZ	Kuaotunu	5.81	214	P	Pn	01 17 09.3	+5.8
WMGZ	Waiomatatini S	5.94	190	P	Pn	01 17 07.4	+2.4
WMGZ				S	S	01 18 20.2	+2.2
HAZ	Te Kaha	6.00	195	P	Pn	01 17 07.0	+1.4
HAZ				S	S	01 18 21.2	+2.0
MYRZ	Mayor Island	6.04	208	P	Pn	01 17 13.8	+7.7
PKGZ	Pakihiroa	6.06	193	P	Pn	01 17 11.2	+4.7
OUZ	Omahuta	6.07	236		Pn	01 17 08.3	+1.8
OUZ	Omahuta	6.07	236	P	Pn	01 17 12.1	+5.6
PUZ	Puketiti	6.21	191	P	Pn	01 17 09.5	+1.4
PUZ				S	S	01 18 24.1	+0.4
RUGZ	Raukumara Rang	6.22	195	P	Pn	01 17 10.5	+2.1
RUGZ				S	S	01 18 21.9	-2.2
WHRZ	Whale Island	6.30	200	P	Pn	01 17 15.3	+6.2
WHRZ				S	S	01 18 30.7	+5.2
TWGZ	Tauwhareparae	6.36	193	P	Pn	01 17 15.5	+5.6
TWGZ				S	S	01 18 29.0	+2.1
OPRZ	Ohinepanea	6.42	203	P	Pn	01 17 15.3	+4.8
TGRZ	Tauranga	6.42	206	P	Pn	01 17 16.3	+5.8
EDRZ	Edgecumbe	6.60	201	P	Pn	01 17 17.7	+5.0
MWZ	Matawai	6.61	195	P	Pn	01 17 17.9	+5.2
MWZ				S	S	01 18 31.8	-0.2
CNGZ	Carnagh Statio	6.62	191	P	Pn	01 17 14.0	+1.2
URZ	Urewera	6.64	198	P	Pn	01 17 13.4	+0.4
	14nm,0.3s,baz=301,slow=23,SNR=48						
URZ				S	S	01 18 35.2	+2.5
	23nm,0.3s,baz=241,slow=23,SNR=9.5						
URZ	Urewera	6.64	198	P	Pn	01 17 13.5	+0.4
URZ	Urewera	6.64	198	P	Pn	01 17 13.4	+0.4
TKGZ	Te Karaka	6.64	193	P	Pn	01 17 14.9	+1.8
TKGZ				S	S	01 18 33.6	+0.9
KMRZ	Kaimai	6.64	207	P	Pn	01 17 18.9	+5.8
TOZ	Tahuroa Road	6.72	210	P	Pn	01 17 19.7	+5.7
RAGZ	Rawiri	6.79	196	P	Pn	01 17 17.1	+2.3
TARZ	Mount Tarawera	6.79	202	P	Pn	01 17 20.7	+5.8
HLRZ	Highlands Stat	6.86	203	P	Pn	01 17 20.9	+5.3
RRRZ	Republican Roa	6.88	202	P	Pn	01 17 21.3	+5.4
RIGZ	Rimuhau	6.92	193	P	Pn	01 17 17.4	+1.2
MUGZ	Murupara	6.94	200	P	Pn	01 17 18.4	+1.9
HSRZ	Hossack Road	6.95	203	P	Pn	01 17 22.4	+5.8
HRRZ	Handcock Road	7.01	203	P	Pn	01 17 22.5	+5.2
RTZ	Ruatahuna	7.01	198	P	Pn	01 17 19.4	+2.0
GRRZ	Galatos Road	7.03	204	P	Pn	01 17 23.3	+5.6
PRGZ	Paritu Road	7.10	192	P	Pn	01 17 20.1	+1.6
ALRZ	Allen Road	7.14	202	P	Pn	01 17 22.5	+3.6
WPRZ	Whakapapatarin	7.16	203	P	Pn	01 17 24.5	+5.3
TLZ	Tolley Road	7.22	207	P	Pn	01 17 26.0	+6.2
KNZ	Kokohu	7.24	193	P	Pn	01 17 20.8	+0.8
KUTZ	Kaahu Road	7.25	205	P	Pn	01 17 25.6	+5.4
RAHZ	Arahi	7.26	197	P	Pn	01 17 21.6	+1.3
MTHZ	Maungataniwha	7.27	198	P	Pn	01 17 22.9	+2.5
MHGZ	Mahia Peninsul	7.32	191	P	Pn	01 17 23.2	+2.1
WHTZ	Whakaora	7.36	204	P	Pn	01 17 26.5	+5.0
MRHZ	Matea Rd	7.37	201	P	Pn	01 17 24.9	+3.3
NMHZ	Naumai	7.50	198	P	Pn	01 17 24.3	+1.0
RATZ	Rangitukua	7.61	204	P	Pn	01 17 28.6	+4.2
ARHZ	Aropaoanui	7.62	196	P	Pn	01 17 25.8	+1.3
BKZ	Black Stump Fm	7.65	199	P	Pn	01 17 25.5	+0.5
BKZ	Black Stump Fm	7.65	199	Pn	Pn	01 17 21.0	-4.0
BKZ	Black Stump Fm	7.65	199	P	Pn	01 17 26.0	+1.0
HIZ	Hauiti	7.66	210		Pn	01 17 30.4	+5.4
HIZ	Hauiti	7.66	210	P	Pn	01 17 29.2	+4.2
RITZ	Rihia Road	7.68	203	P	Pn	01 17 28.8	+3.6
KATZ	Kakaramea	7.73	204	P	Pn	01 17 29.6	+3.6
NTVZ	North Tongarir	7.85	204	P	Pn	01 17 30.5	+3.1
TMVZ	Te Maari	7.85	204	P	Pn	01 17 30.5	+3.0
KRVZ	Karewarewa	7.86	204	P	Pn	01 17 30.8	+3.4
MCHZ	McNeill Hill	7.86	198	P	Pn	01 17 28.9	+1.6
NNVZ	North Ngauruho	7.90	204	P	Pn	01 17 31.1	+3.1
TWVZ	Taurewa	7.91	205	P	Pn	01 17 31.2	+3.2
OTVZ	Oturere	7.91	204	P	Pn	01 17 31.2	+3.1
KWHZ	Kaweka Forest	7.92	199	P	Pn	01 17 29.7	+1.6
SNVZ	South Ngauruho	7.94	204	P	P	01 17 31.8	+3.4
TUVZ	Tukino	8.01	203	P	Pn	01 17 32.4	+3.1
FWVZ	Far West T-bar	8.03	204	P	Pn	01 17 32.2	+2.5
BHHZ	Black Hill Sta	8.08	201	P	Pn	01 17 30.4	+0.4
WNVZ	Wahianoa	8.08	204	P	Pn	01 17 30.9	+0.8
MOVZ	Moawhango	8.10	203	P	Pn	01 17 32.1	+1.8
BFZ	Birch Farm	9.14	197	P	Pn	01 17 42.5	-0.1
MSWZ	Moikau Station	10.09	200		Pn	01 17 49.6	-4.3
SNZO	South Karori	10.16	202	P	Pn	01 17 55.2	+0.6
SNZO					S	01 19 45.5	-3.8
SNZO	South Karori	10.16	202	P	Pn	01 17 55.3	+0.6
BHW	Baring Head	10.20	201		Pn	01 17 51.5	-3.6
TUWZ	Tuamarina	10.53	205	P	Pn	01 17 58.7	-0.4
NNZ	Nelson	10.55	207	P	Pn	01 17 59.5	+0.1
NNZ					S	01 19 54.1	-3.8
QRZ	Quartz Range	10.58	211	P	Pn	01 18 00.3	+0.7
QRZ	Quartz Range	10.58	211	P	Pn	01 17 59.2	-0.5
CMWZ	Cape Campbell	10.72	203	P	Pn	01 17 59.4	-1.9
CMWZ					S	01 19 58.6	-3.0
BSWZ	Blackbirch Sta	10.80	204	P	Pn	01 18 02.4	+0.1
BSWZ					S	01 20 00.7	-2.7
THZ	Tophouse	11.20	207	P	Pn	01 18 04.6	-2.6
KHZ	Kahutara	11.54	204	P	Pn	01 18 10.4	-0.7
KHZ					S	01 20 14.8	-5.0
KHZ	Kahutara	11.54	204	P	Pn	01 18 11.0	-0.1
LTZ	Lake Taylor	12.31	207	P	P	01 18 19.1	-0.9

OXZ	Oxford	12.87	206	P	P	01 18 24.6	-1.5
MQZ	McQueen's Vall	12.98	203	P	P	01 18 22.9	-4.3
MQZ					S	01 20 44.4	-5.6
RPZ	Rata Peaks	13.58	208	P	P	01 18 32.0	-1.9
RPZ					S	01 21 00.6	-1.6
RPZ	Rata Peaks	13.58	208	P	P	01 18 33.7	-0.2
MSVF	Nonsavu	14.26	353	P	P	01 18 40.8	-0.9
	0.8nm,0.3s,baz=225,slow=6.1,SNR=6.9						
MSVF	Nonsavu	14.26	353	P	P	01 18 41.1	-0.6
MSVF	Nonsavu	14.26	353	P	Pn	01 18 44.9	+1.4
PINNC	Pines Island,	14.36	307	P	Pn	01 18 44.9	+0.4
ODZ	Otahua Downs	14.86	206	P	P	01 18 47.5	-0.4
OUENC	Ouen Island, N	14.90	307	P	Pn	01 18 51.5	+0.7
OUENC	Ouen Island, N	14.90	307	P	Pn	01 18 52.2	+1.4
YATNC	Mamie plateau,	15.11	308	P	Pn	01 18 54.5	+1.3
ONTNC	Ouen Toro	15.24	306	P	Pn	01 18 55.4	+0.7
DZM	Mont Dzumac	15.40	307	P	Pn	01 18 56.6	-0.1
	1.1nm,0.3s,baz=170,slow=20,SNR=10						
DZM	Mont Dzumac	15.40	307	P	Pn	01 18 57.0	+0.2
DZM				IAmb	IAmb	01 19 02.7	
	comp=Z,16nm,0.8s						
DZM	Mont Dzumac	15.40	307	P	Pn	01 18 57.7	+1.0
NIUE	Niue	15.85	38	P	P	01 18 55.0	-4.0
AFI	Afiamalu	19.58	25	P	P	01 19 38.3	-0.6
	comp=Z,6.7nm,0.3s,baz=88,slow=4.4,SNR=8.4						
EIDS	Eidsvold	25.95	277	P	P	01 20 37.9	+1.1
EIDS				IAmb	IAmb	01 20 39.8	
	comp=Z,3.2nm,0.9s						
CMSA	Cobar Meteorol	28.89	262	P	P	01 21 05.2	+2.4
CTA	Charters Tower	32.21	283	P	P	01 21 33.4	+1.5
	comp=Z,6.0nm,0.5s,baz=106,slow=12,SNR=13						
CTAO	Charters Tower	32.21	283	P	P	01 21 32.0	+0.2
CTAO				IAmb	IAmb	01 21 34.2	
	comp=Z,7.5nm,0.6s						
CTAO	Charters Tower	32.21	283	P	P	01 21 34.0	+2.1
STKA	Stephens Creek	32.27	260	P	P	01 21 34.7	+2.4
	comp=Z,3.2nm,0.4s,baz=107,slow=11,SNR=17						
STKA	Stephens Creek	32.27	260	P	P	01 21 32.2	-0.1
STKA	Stephens Creek	32.27	260	P	P	01 21 34.3	+2.0
HTT	Hallett	34.23	256	P	P	01 21 50.4	+1.3
	comp=Z,11nm,1.7s						
LCRK	Leigh Creek	35.40	261	P	P	01 21 59.9	+0.9
	comp=Z,37nm,1.6s						
BBOO	Buckleboo	36.71	257	P	P	01 22 10.3	+0.4
BBOO				IAmb	IAmb	01 22 18.5	
	comp=Z,8.2nm,1.1s						
BBOO	Buckleboo	36.71	257	P	P	01 22 10.5	+0.6
	comp=Z,12nm,1.3s						
QIS	Mount Isa	37.55	278	P	P	01 22 17.7	+0.6
	comp=Z,5.4nm,1.6s						
COEN	Coen	37.91	290	P	P	01 22 21.2	+1.1
COEN				IAmb	IAmb	01 22 38.2	
	comp=Z,7.8nm,1.1s						
MULG	Mulgathing	38.93	260	P	P	01 22 28.5	+0.2
AS31	Alice Springs	41.13	270	P	P	01 22 45.4	-1.0
ASAR	Alice Springs	41.13	270	P	P	01 22 47.0	+0.5
	comp=Z,3.6nm,0.4s,baz=107,slow=7.3,SNR=99						
ASAR	Alice Springs	41.13	270	P	P	01 22 45.6	-0.8
WB2	Warramunga Arr	42.26	275	P	P	01 22 55.8	+0.3
WB2				IAmb	IAmb	01 22 56.3	
	comp=Z,11nm,0.5s						
WRAB	Tennant Creek	42.26	275	P	P	01 22 56.0	+0.5
WRA	Warramunga Arr	42.27	275	P	P	01 22 55.9	+0.3
	comp=Z,5.7nm,0.3s,baz=112,slow=7.8,SNR=96						
WB0	Warramunga Arr	42.30	275	P	P	01 22 55.5	-0.3
WB0				IAmb	IAmb	01 22 57.0	
	comp=Z,12nm,1.1s						
BNDI	Bandanaira	54.01	290	P	P	01 24 24.9	+0.4
NVAR	Mina Array Bea	90.70	44	P	P	01 27 59.7	+0.9
	comp=Z,0.5nm,0.6s,baz=201,slow=6.5,SNR=2.8						
FINES	FINESS Array B	145.90	338	PKPbc	PKPdf	01 34 32.5	+0.8
	comp=Z,3.1nm,0.6s,baz=37,slow=5.3,SNR=14						
BRTR	Keskin Array B	151.58	295	PKPbc	PKPbc	01 34 47.3	-1.0
	comp=Z,0.3nm,0.5s,baz=169,slow=5.1,SNR=2.2						
MEM	Membach	160.80	348	*d*PKPab	PKPab	01 35 32.4	-5.1
BCLA	Clavier	161.11	349	*d*PKPdf	PKPdf	01 34 48.3	-5.0
BCLA				*d*PKPab	PKPab	01 35 34.8	-4.0
RCHB	Rochefort	161.38	349	*d*PKPab	PKPab	01 35 34.6	-5.4

NOU 27 01:24:25.8, 16°.69S×167°.67E, h17^{km}, MLv4.6/14, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.14	154	P	Pn	01 24 46.5	-0.5
RTV	Rentapao	1.31	147	P	Pn	01 24 49.5	+0.1
SANVU	Saraoutou	1.31	340	P	Pn	01 24 49.0	-0.4
KOUNC	Koumac, New Ca	5.00	219	P	Pn	01 25 40.0	-0.2
YATNC	Mamie plateau,	5.39	188	P	Pn	01 25 44.8	-0.7
DZM	Mont Dzumac	5.48	192	P	Pn	01 25 46.5	-0.2
NOUC	Port Laguerre	5.54	193	P	Pn	01 25 47.7	+0.2
ONTNC	Ouen Toro	5.70	191	P	Pn	01 25 51.2	+1.4

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*DSN **27** 01:51:32.8±2.8, 29°.49N×59°.31E, h15^{km}, ML4.0/4, Error ellipse: s-maj=39.5km s-min=24.7km az=113.0*

*NEIC **27** 01:52:00.7±2.5, 27°.82N±0°.02×57°.93E±0°.09, h10^{km}±1^{km}, mb4.1/10, mb_Lg3.8(TEH), Error ellipse: s-maj=13.8km s-min=3.0km az=103.0*

*THR **27** 01:52:02.8±0.4, 27°.88N×57°.77E, h18^{km}±9^{km}, ML3.4*

*TEH **27** 01:52:02.0, 27°.99N×57°.80E, h17^{km}, ML3.8*

*IDC **27** 01:52:18.9±0.7, 27°.83N×57°.79E, h0^{km}, mb3.8/4, mb1 3.8/4, mb1mx3.4/29, mbtmp3.8/4, Error ellipse: s-maj=16.2km s-min=9.2km az=138.0*

*KISR **27** 01:52:49.8±0.5, 28°.41N×54°.88E, h0^{km}±561^{km}, ML4.0*

ISC 27 01:51:59.5±0.6**, 27°.78N**±0°.04×**57°.96E**±0°.04**, h10**^{km}**, n65, σ1**^{s}**.87**/58**, mb4.0**/7**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBND	Bandar-abas	1.30	256	*e*Pg	Pg	01 52 25.8	+1.3
IBND				*e*		01 52 47.8	
	comp=Z,25µm,0.2s						
KBAM	BAM	1.42	18	*e*Pg	Pb	01 52 26.3	+0.1
KBAM				*e*		01 53 09.1	
	comp=Z,22µm,0.3s						
GENO	Geno	1.63	257	*e*Pg	Pb	01 52 30.6	+0.8
GENO				*e*		01 53 23.7	
	comp=Z,10µm,0.4s						
GENO	Geno	1.63	257		Pb	01 52 30.6	+0.8
CHMN	Cheshme madani	2.11	350	*e*Pg	Pb	01 52 37.3	-0.8
CHMN				*e*		01 53 01.0	
	comp=Z,4µm,0.6s						
CHMN	Cheshme madani	2.11	350		Pb	01 52 37.3	-0.8
NGRK	Negar Kerman	2.15	330	*e*Pg	Pn	01 52 37.0	+1.1
NGRK	Negar Kerman	2.15	330		Pn	01 52 36.9	+1.1
SHME	Shamm	2.36	224	P	Pn	01 52 39.4	+1.0
BANOM	Banah	2.37	219	P	Pb	01 52 41.9	-0.4
BANOM				S	Sg	01 53 32.3	+17
TVBK	TV Kerman	2.44	335	*e*Pn	Pn	01 52 40.8	+1.1
TVBK				*e*		01 53 05.5	
	comp=Z,9µm,0.2s						
TVBK	TV Kerman	2.44	335	Pn	Pn	01 52 40.8	+1.1
KHGB	Koh Gabri	2.89	334	*e*Pn	Pn	01 52 46.9	+1.0
KHGB	Koh Gabri	2.89	334	Pn	Pn	01 52 46.9	+1.0
ZHDN	Zahedan	2.98	57	*e*Pn	Pb	01 52 50.3	-2.6
ZHSF	Zahedan	3.08	53	*e*Pn	Pb	01 52 54.2	-0.3
ZHSF	Zahedan	3.08	53	*e*Pn	Pb	01 52 54.2	-0.3
ZHSF	Zahedan	3.08	53	Pn	Pb	01 52 54.1	-0.3
CHBR	Chabahar	3.14	133	*e*Pn	Pb	01 52 55.9	+0.5
CHBR	Chabahar	3.14	133	*e*Pn	Pb	01 52 55.9	+0.5
UOSS	Minazif	3.23	210	P	Pn	01 52 50.5	+0.2
UOSS	Minazif	3.23	210	Pn	Pn	01 52 51.6	+1.3
HATD	Hatta, Dubai	3.37	210	P	Pn	01 52 51.6	-0.6
ASHO	Ashiyiah	3.52	209	P	Pn	01 52 57.3	+3.0
NHDN	Nehbandan	4.04	26	*e*Pn	Pn	01 53 05.3	+3.7
BSRN	Basiran	4.29	13	*e*Pn	Pn	01 53 08.6	+3.5
BSRN				IAML		01 54 44.9	
	comp=E,41nm,0.7s						
BSRN				IAML		01 54 45.0	
	comp=N,31nm,0.5s						
BSRN	Basiran	4.29	13	*e*Pn	Pn	01 53 08.6	+3.5
GHIR	Ghir-Karzin	4.42	278	*e*Pn	Pn	01 53 08.9	+2.1
GHIR				*e*Sg	Sb	01 54 14.5	+3.6
GHIR				IAML		01 54 18.9	
	comp=N,44nm,0.4s						
GHIR				IAML		01 54 24.3	
	comp=E,33nm,0.4s						
GHIR	Ghir-Karzin	4.42	278	*e*Pn	Pn	01 53 08.9	+2.1
GHIR	Ghir-Karzin	4.42	278	Pn	Pn	01 53 08.9	+2.1
IKOO	Kooshah	4.72	11	*e*Pn	Pn	01 53 12.1	+1.1
ITEG	Tejag	5.15	7	*e*Pn	Pn	01 53 19.5	+2.6
ITEG				*e*		01 55 18.0	
	comp=Z,550nm,0.8s						
YZKH	Yazd	5.44	328	*e*P	Pn	01 53 23.2	+2.4
YZKH				IAML		01 55 22.2	
	comp=N,10nm,0.6s						
YZKH				IAML		01 55 31.6	
	comp=E,11nm,0.6s						
YZKH	Yazd	5.44	328	*e*Pn	Pn	01 53 23.2	+2.4
AFRZ	Afriz	5.70	9	*e*Pn	Pn	01 53 27.2	+2.8
TABS	Tabas	5.90	353	*e*Pn	Pg	01 53 52.3	-0.2
SHRT	Shahrakht	6.18	18	*e*Pn	Pn	01 53 35.1	+4.1
SHRT	Shahrakht	6.18	18	*e*Pn	Pn	01 53 35.1	+4.1
KLNJ	Kolanjah	6.42	302	*e*Pn	Pn	01 53 34.4	-0.1
HRA	Herat	7.54	28	Pn	Pn	01 53 50.5	+0.7
IPIR	Pirpir	7.83	310	*e*Pn	Pn	01 53 54.0	+0.2
QRN	Al-Qurain	8.90	279	*e*P	Pn	01 54 27.1	+19
UMR	Umm Al-Rimmam	9.17	284	*e*P	Pn	01 54 30.2	+18
MIB	Mutribah	9.53	285	*e*P	Pn	01 54 36.0	+19
MIB				*e*S	Sn	01 55 55.0	-9.1
MIB				IAML		01 56 11.3	
	comp=Z,32nm,0.5s						
RST	Umm Al-Ruwaisa	9.78	283	*e*P	Pn	01 54 39.1	+19
GEYT	Alibeck	10.12	1	Pn	Pn	01 54 24.5	-0.5
RAYN	Ar Rayn	12.00	252	P	Pn	01 54 46.4	-4.4
RAYN	Ar Rayn	12.00	252	Pn	Pn	01 54 50.6	-0.3
SIRT	Sirnak	16.25	311	Pn	Pn	01 55 46.7	-1.4
SIRT				IAmb	IAmb	01 56 10.6	
	comp=Z,16nm,0.8s						
GURO	Guroymak-BITLI	17.10	313	Pn	Pn	01 55 57.9	-0.9
MARD	Mardin	17.30	308	Pn	Pn	01 56 00.3	-1.1
ABKAR	Akbulak array	21.50	4	P	P	01 56 47.7	-0.7
BR131	Keskin Array S	23.39	307	P	P	01 57 07.5	-1.2
BR131				IAmb	IAmb	01 57 29.4	
	comp=Z,4.3nm,0.9s						
BRTR	Keskin Array B	23.39	307	P	P	01 57 27.9	+19
	comp=Z,1.8nm,0.8s,baz=102,slow=12,SNR=11						
MAKZ	Makanchi	26.77	38	P	P	01 57 39.8	+0.3
MAKZ				IAmb	IAmb	01 57 40.9	
	comp=Z,9.8nm,1.7s						
MK31	Makanchi Array	26.93	39	P	P	01 57 42.8	+1.8
MK31				IAmb	IAmb	01 58 01.6	
	comp=Z,4.0nm,1.6s						
MKAR	Makanchi Array	26.93	39	P	P	01 58 02.2	+21
	comp=Z,0.2nm,0.4s,baz=222,slow=7.6,SNR=5.2						
MKAR	Makanchi Array	26.93	39	P	P	01 57 43.1	+2.1
ZAA0	Zalesovo Array	32.74	30	P	P	01 58 32.1	-0.2
ZALV	Zalesovo Beam	32.74	30	P	P	01 58 53.6	+21
	comp=Z,0.8nm,0.3s,baz=235,slow=8.4,SNR=4.6						
ZALV	Zalesovo Beam	32.74	30	P	P	01 58 32.9	+0.6
SONM	Songino Array	42.39	48	P	P	01 59 54.5	+0.3
SONM				IAmb	IAmb	02 00 35.1	
	comp=Z,6.1nm,1.8s						
ENH	Enshi	44.81	74	P	P	02 00 13.9	+0.1
TORD	Torodi Ar. Bea	54.26	266	P	P	02 01 45.9	+20
	comp=Z,1.2nm,0.4s,baz=63,slow=7.4,SNR=22						
TORD	Torodi Ar. Bea	54.26	266	P	P	02 01 27.1	+1.1
TORD				IAmb	IAmb	02 02 31.7	
	comp=Z,7.8nm,1.8s						

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*IDC **27** 02:04:21.3±1.4, 31°.89N×69°.68E, h0^{km}, mb3.7/7, mb1 3.9/9, mb1mx3.5/46, mbtmp3.8/9, ML3.7/2, Error ellipse: s-maj=36.9km s-min=25.8km az=134.0*

ISC 27 02:04:23.1±1.0**, 31°.9N**±0°.1×**69°.48E**±0°.08**, h10**^{km}**, n16, σ1**^{s}**.41**/17**, mb3.8**/7**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	5.32	83	*e*P	Pb	02 05 57.5	+1.5
THN				*e*S	Sn	02 06 45.5	+1.7
AAK	Ala-Archa	11.44	19	Pn	Pn	02 07 05.7	-0.9
	0.9nm,0.3s,baz=124,slow=4.1,SNR=9.1						
PYUN	Piuthan	12.30	104	*e*P	Pn	02 07 18.2	-0.4
	8.0nm,0.2s						
DANN	Dangsing	12.85	102	*e*P	Pn	02 07 26.3	+0.1
	3.5nm,0.2s						
GKN	Gorkha	13.70	103	*e*P	Pn	02 07 36.4	-1.2
	6.9nm,0.3s						
PKIN	Phulchoki	14.48	103	*e*P	Pn	02 07 46.6	-1.8
	1.5nm,0.2s						
PKI	Pulchoki	14.49	103	*e*P	Pn	02 07 46.5	-2.1
	3.4nm,0.2s						
GUN	Gumba	14.77	101	*e*P	Pn	02 07 51.2	-1.1
	9.5nm,0.3s						
MKAR	Makanchi Array	17.84	30	P	Pn	02 08 29.6	-1.8
	0.1nm,0.3s,baz=207,slow=12,SNR=10						
BVAR	Borovoye Array	21.13	2	P	P	02 09 08.2	+0.3
	0.7nm,0.4s,baz=178,slow=13,SNR=5.6						
ZALV	Zalesovo Beam	24.63	22	P	P	02 09 42.2	-1.4
	0.7nm,0.3s,baz=214,slow=11,SNR=3.6						
KEST	Kesra	49.44	292	P	P	02 13 15.8	+2.3
	1.0nm,0.6s,baz=36,slow=8.7,SNR=4.7						
TORD	Torodi Ar. Bea	64.40	270	P	P	02 14 59.0	-0.8
	1.0nm,0.9s,baz=51,slow=4.7,SNR=4.2						
INK	Inuvik	78.64	9	P	P	02 16 25.1	+0.3
	0.8nm,0.6s,baz=317,slow=4.8,SNR=4.1						
WRA	Warramunga Arr	80.69	120	P	P	02 16 36.1	-0.5
	0.7nm,0.7s,baz=284,slow=3.4,SNR=1.5						
YKA	Yellowknife Ar	85.89	2	P	P	02 17 02.7	-0.1
	0.3nm,0.5s,baz=349,slow=5.2,SNR=6.3						

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*IDC **27** 02:20:54.9±2.1, 23°.31S×66°.63W, h206^{km}±21^{km}, mb3.3/1, mb1 3.3/5, mb1mx3.1/23, mbtmp3.8/5, Error ellipse: s-maj=49.3km s-min=22.2km az=162.0*

*NEIC **27** 02:20:55.7±1.6, 23°.36S±0°.09×66°.9W±0°.2, h229^{km}±9^{km}, mb4.0/2, Error ellipse: s-maj=24.8km s-min=13.2km az=93.0*

*GUC **27** 02:20:55.6±0.6, 23°.31S×66°.80W, h226^{km}±8^{km}, ML4.2*

ISC 27 02:20:54.6±0.9**, 23°.34S**±0°.07×**66°.84W**±0°.08**, h230**^{km}±10^{km}**, n39, σ1**^{s}**.08**/49**, 10C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	San Lorenzo	1.84	139	*i* P	Pn	02 21 34.5	+0.4
LVC	Limon Verde	2.04	290	P	Pn	02 21 37.5	+1.1
	45nm,0.3s,baz=108,slow=5.7,SNR=346						
LVC				S	S	02 22 08.7	0.0
	32nm,0.3s,baz=323,slow=18,SNR=19						
LVC	Limon Verde	2.04	290	⇑*i*P	Pn	02 21 37.4	+1.1
LVC				*i* S	S	02 22 08.0	-0.8
LVC	Limon Verde	2.04	290		Pn	02 21 37.0	+0.7
PB15	IPOC Station P	2.43	273	⇑*i*P	Pn	02 21 41.3	+1.3
PB15				*i* S	S	02 22 15.8	+0.5
PB15	IPOC Station P	2.43	273		Pn	02 21 41.2	+1.2
PB06	IPOC Station P	2.60	283	⇑*i*P	Pn	02 21 43.0	+1.3
PB06				*i* S	S	02 22 18.2	-0.3
PB06				IAML		02 22 20.7	
	comp=N,377nm,0.1s						
PB06	IPOC Station P	2.60	283		Pn	02 21 43.2	+1.5
PB09	IPOC Station P	2.70	304	⇑*i*P	Pn	02 21 44.4	+1.5
PB09				*i* S	S	02 22 20.9	+0.3
PB09				IAML		02 22 23.8	
	comp=E,120nm,0.2s						
PB09	IPOC Station P	2.70	304		Pn	02 21 44.3	+1.4
PB03	IPOC Station P	2.98	295	⇑*i*P	Pn	02 21 46.9	+0.9
PB03				*i* S	S	02 22 24.5	-1.6
PB03				IAML		02 22 27.5	
	comp=N,368nm,0.3s						
PB05	IPOC Station P	3.14	278	⇑*i*P	Pn	02 21 48.7	+1.1
PB05				*i* S	S	02 22 27.6	-1.5
PB05				IAML		02 22 29.8	
	comp=N,112nm,0.2s						
PB04	IPOC Station P	3.22	287	⇑*i*P	Pn	02 21 49.6	+1.0
PB04				*i* S	S	02 22 29.8	-1.0
PB04				IAML		02 22 34.6	
	comp=E,298nm,0.3s						
PB04	IPOC Station P	3.22	287		Pn	02 21 49.5	+1.0
PB07	IPOC Station P	3.25	299	⇑*i*P	Pn	02 21 49.8	+0.9
PB07				*i* S	S	02 22 29.7	-1.7
PB07				IAML		02 22 32.1	
	comp=E,440nm,0.4s						
PB07	IPOC Station P	3.25	299		Pn	02 21 49.6	+0.7
PB01	IPOC Station P	3.35	312	*i* P	Pn	02 21 50.8	+0.7
PB01				*i* S	S	02 22 33.2	-0.5
PB01	IPOC Station P	3.35	312		Pn	02 21 50.8	+0.7
PB10	IPOC Station P	3.42	266	⇑*i*P	Pn	02 21 52.0	+1.3
PB10				*i* S	S	02 22 33.5	-1.2
PB10	IPOC Station P	3.42	266		Pn	02 21 51.6	+0.9
PB02	IPOC Station P	3.47	305	⇑*i*P	Pn	02 21 52.1	+0.6
PB02				*i* S	S	02 22 33.7	-2.5
PB14	IPOC Station P	3.51	248		Pn	02 21 52.4	+0.4
PB08	IPOC Station P	3.84	325		Pn	02 21 57.0	+0.9
AC02	Maricunga	4.05	210		Pn	02 21 59.6	+1.0
TA01	Diego Aracena	4.15	311		Pn	02 21 59.5	+0.1
TA02	Huaiquique	4.32	314		Pn	02 22 01.9	+0.4
PB11	IPOC Station P	4.42	323		Pn	02 22 03.1	+0.2
GO03	Copiap	5.23	215		Pn	02 22 12.8	0.0
PB16	IPOC Station P	5.57	333		Pn	02 22 18.0	+0.5
PB12	IPOC Station P	5.72	325	Pn	Pn	02 22 18.1	-0.9
AC04	Llanos de Chal	6.17	217	Pn	Pn	02 22 22.9	-1.6
LCO	Las Campanas	6.63	211	Pn	Pn	02 22 29.8	-0.8
LPAZ	La Paz	7.12	350	P	Pn	02 22 37.4	+0.1
	comp=E,0.4nm,0.3s,baz=155,slow=7.3,SNR=9.9						
SIV	San Ignacio	9.10	38	P	Pn	02 23 00.5	-1.7
	comp=E,0.7nm,0.3s,baz=215,slow=10.0,SNR=19						
BDFB	Brasilia	19.31	70	P	P	02 25 03.7	+0.8
	comp=E,0.3nm,0.3s,baz=236,slow=11,SNR=6.4						
BDFB	Brasilia	19.31	70	IAmb	IAmb	02 25 05.2	
	comp=Z,3.9nm,0.8s						
TORD	Torodi Ar. Bea	76.19	69	P	P	02 32 18.6	+0.6
	comp=Z,0.4nm,0.4s,baz=256,slow=5.0,SNR=14						
TORD	Torodi Ar. Bea	76.19	69	IAmb	IAmb	02 32 30.1	
	comp=Z,3.3nm,0.8s						
MKAR	Makanchi Array	145.92	39	PKPbc	PKiKP	02 40 10.4	+0.3
	comp=Z,0.8nm,0.8s,baz=293,slow=2.9,SNR=6.2						

IDC 27 02:25:48.8±4.8**, 6°.05S**×**131°.85E, h0**^{km}**, mb3.9**/1**, mb1 3.8**/3**, mb1mx3.5**/28**, mbtmp3.6**/3**, ML3.6**/2**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.7**/24**, Error ellipse: s-maj=332.5km s-min=31.1km az=74.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.02	170	Pn	Pn	02 29 09.2	+0.3
	0.3nm,0.3s,baz=351,slow=13,SNR=6.4						
WRA				Sn	Sn	02 31 32.9	-13
	0.4nm,0.3s,baz=352,slow=23,SNR=6.7						
ASAR	Alice Springs	17.63	174	P	Pn	02 29 55.8	-0.3
	0.2nm,0.3s,baz=347,slow=11,SNR=12						
ASAR				S	Sn	02 33 01.9	-11
	0.1nm,0.3s,baz=357,slow=28,SNR=4.2						
AFI	Afiamalu	55.96	103	LR	LR	02 58 11.1	
	comp=Z,33nm,18.2s,baz=68,slow=35						
MKAR	Makanchi Array	68.46	326	P	P	02 36 52.9	0.0
	0.4nm,0.3s,baz=118,slow=7.6,SNR=10						
ZALV	Zalesovo Beam	71.56	333	LR	LR	03 12 43.9	
	comp=Z,22nm,19.0s,baz=62,slow=39						

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*ISK **27** 02:28:09.6, 35°.75N×23°.19E, h9^{km}, ML2.6/6*

*THE **27** 02:28:10.7, 35°.95N×23°.41E, h1^{km}±1^{km}, ML1.9/7, Error ellipse: s-maj=1.8km s-min=0.5km az=265.0*

*ATH **27** 02:28:10.0, 35°.82N×23°.22E, h15^{km}±1^{km}, ML2.1/1, Error ellipse: s-maj=4.9km s-min=1.0km az=48.0*

ISC 27 02:28:09.0±1.2**, 35°.77N**±0°.05×**23°.15E**±0°.05**, h13**^{km}±8^{km}**, n25, σ0**^{s}**.49**/38**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANKY	Antikythira Is	0.16	53	P	Pg	02 28 13.0	+0.2
ANKY				S	Sg	02 28 15.3	-0.1
	1µm,0.2s						
ANKY	Antikythira Is	0.16	53	P	Pg	02 28 12.9	+0.1
ANKY				S	Sg	02 28 15.3	-0.1
ANKY				AML	AML	02 28 16.1	
	comp=N,3168µm,0.2s						
ANKY				AML	AML	02 28 16.6	
	comp=E,2043µm,0.2s						
KTHA	Kythira Island	0.49	352	P	Pg	02 28 18.5	-0.1
KTHA				S	Sg	02 28 25.3	+0.1
	comp=E,550nm,0.2s						
KTHA	Kythira Island	0.49	352	P	Pg	02 28 18.6	-0.1
KTHA				S	Sg	02 28 25.5	+0.2
RODP	Rodopos	0.54	113	P	Pg	02 28 20.2	+0.6
RODP				S	Sb	02 28 27.6	-0.5
	comp=E,52nm,0.1s						
RODP	Rodopos	0.54	113	PG	Pg	02 28 19.9	+0.3
KNDR	Palaiochora Ch	0.69	140	PG	Pg	02 28 22.0	-0.5
KNDR				SG	Sg	02 28 31.3	-0.3
IMMV	Iera Moni Meta	0.75	114	P	Pg	02 28 23.3	-0.2
IMMV				S	Sg	02 28 33.2	-0.2
	comp=E,142nm,0.3s						
IMMV	Iera Moni Meta	0.75	114	P	Pg	02 28 23.3	-0.2
IMMV				S	Sg	02 28 33.4	0.0
IMMV	Iera Moni Meta	0.75	114	PG	Pg	02 28 23.5	0.0
IMMV				SG	Sb	02 28 33.9	-0.2
MNVA	Monemvasia	0.92	355	P	Pb	02 28 25.8	-1.0
VAM	Vamos	0.93	113	P	Pb	02 28 27.0	-0.1
VAM				S	Sg	02 28 38.8	-0.4
	comp=E,122nm,0.3s						
VAM	Vamos	0.93	113	P	Pb	02 28 26.9	-0.1
VLI	Veliai	0.96	350	P	Pb	02 28 27.0	-0.6
VLI				S	Sb	02 28 39.1	-1.1
	comp=E,120nm,0.5s						
VLI	Veliai	0.96	350	P	Pb	02 28 27.0	-0.6
GVD	Gavdhos	1.21	140	P	Pn	02 28 31.8	+0.2
GVD	Gavdhos	1.21	140	PN	Pg	02 28 32.4	+0.1
IDI	Anoyia	1.50	108	P	Pb	02 28 36.7	-0.1
IDI				S	Sb	02 28 56.1	+0.3
	comp=E,30nm,0.5s						
IDI	Anoyia	1.50	108	P	Pn	02 28 36.3	+0.5
SIVA	Sivas	1.55	118	P	Pb	02 28 37.5	-0.2
PYL	PYLOS	1.59	315	P	Pb	02 28 38.4	0.0
ITM	Ithomi	1.71	325	P	Pb	02 28 40.8	+0.4
ITM	Ithomi	1.71	325	PN	Pb	02 28 41.1	+0.7
ITM				SN	Sg	02 29 03.9	-0.3
SANT	Santorini	1.97	72	PN	Pn	02 28 43.5	+1.4
NPS	Neapolis	2.08	103	P	Pb	02 28 45.7	-0.9

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*NIED **27** 02:32:21.6, 31°.20N×128°.70E, h16^{km}, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.37; $M_{\theta\theta}$-0.03; $M_{\phi\phi}$0.40; $M_{r\theta}$-0.38; $M_{\theta\phi}$1.59; $M_{\phi r}$0.13; Fault plane solution: $M_0$1.67000×10^{14} NP1:ϕ_s85.00000°, δ80.00000°, λ-16.00000°. NP2:ϕ_s177.00000°, δ74.00000°, λ-170.00000°.*

JMA 27 02:32:21.6±0.4**, 31°.20N**×**128°.70E, h16**^{km}±4^{km}**, M3.5, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.99	61	P	Pb	02 32 39.6	-0.8
JSJ				*e*S	Sb	02 32 52.8	-0.4
JFU	Fukue jima 2	1.45	2	P	Pn	02 32 47.6	+0.4
JKC	Kuchinoerabu	1.48	119	P	Pb	02 32 48.5	-0.3
JSU	Suzuyama	1.53	78	P	Pn	02 32 48.4	+0.1
JNN	Nakanoshima	1.69	143	P	Pn	02 32 50.7	+0.2
JYAK	Yakushimahirau	1.83	121	P	Pn	02 32 51.9	-0.5
JTN	Tanegashima 3	2.03	105	P	Pn	02 32 55.4	+0.2
JMTN	Minamitane	2.06	112	P	Pn	02 32 56.1	+0.6

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*IDC **27** 02:36:29.9±1.1, 0°.27N×97°.84E, h0^{km}, mb3.8/10, mb1 3.8/11, mb1mx3.6/40, mbtmp3.8/11, ML3.1/1, MS2.7/2, Ms1 2.8/2, ms1mx2.5/38, Error ellipse: s-maj=36.2km s-min=18.3km az=56.0*

*NEIC **27** 02:36:35.6±1.5, 0°.52N±0°.05×97°.69E±0°.09, h30^{km}±7^{km}, mb4.2/9, Error ellipse: s-maj=12.5km s-min=7.0km az=82.0*

*DJA **27** 02:36:36.1±1.2, 1°N±6°×9°9E±1°7, h175^{km}±14^{km}, M3.7/6, MLv3.7/6*

ISC 27 02:36:34.5±0.7**, 0°.45N**±0°.06×**97°.79E**±0°.07**, h29**^{km}**, n33, σ1**^{s}**.27**/30**, mb4.1**/14**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	0.88	346		Pn	02 36 50.4	-0.6
SBSI	Sibolga	1.55	45	P	Pb	02 37 03.6	+1.0
MNSI	Mandailing Nat	1.82	79	P	Pn	02 37 02.4	-1.5
MNSI				S	Sn	02 37 24.1	-1.9
SISI	Saibi	2.19	144	P	Pb	02 37 13.2	-0.2
RPSI	Rantau Prapat	2.51	27		Pn	02 37 14.0	+0.7
PSI	Prapat	2.60	26	Pn	Pn	02 37 14.0	-0.7
	3.3nm,0.3s,baz=198,slow=16,SNR=9.6						
PSI				LR	LR	02 38 25.6	
	comp=Z,138nm,21.3s,baz=24,slow=44						
TPTI		2.86	348	P	Pb	02 37 24.5	-0.4
BKNI	Bangkinang	3.25	92	Pn	Pn	02 37 25.7	+2.1
IPM	Ipoh	5.15	39	Pn	Pn	02 37 50.5	+0.8
KULM	Kulim	5.60	31	Pn	Pn	02 37 56.9	+1.1
CMAR	Chiang Mai Arr	17.94	4	LR	LR	02 48 45.8	
	comp=Z,27nm,18.3s,baz=195,slow=41						

SHL	Shillong	25.62	348	P	P	02 42 00.2	-1.5
SHL				IAmb	IAmb	02 42 22.7	
	comp=Z,3.9nm,0.6s						
H08S2	Diego Garcia H	26.48	252	T	T	03 09 34.7	
	baz=74,slow=75,SNR=367						
H08S3	Diego Garcia H	26.48	252	T	T	03 09 35.0	
	baz=74,slow=75,SNR=442						
H08S1	Diego Carcia H	26.49	252	T	T	03 09 35.8	
	baz=74,slow=75,SNR=119						
WRA	Warramunga Arr	41.14	122	P	P	02 44 14.2	-2.3
	comp=Z,0.5nm,0.8s,baz=304,slow=9.1,SNR=1.8						
WB2	Warramunga Arr	41.15	122	P	P	02 44 17.8	+1.3
ASAR	Alice Springs	42.47	127	P	P	02 44 25.1	-2.2
	comp=Z,0.2nm,0.4s,baz=301,slow=7.2,SNR=4.9						
ASAR	Alice Springs	42.47	127	P	P	02 44 28.9	+1.5
BJT	Baijiatuau	42.80	21	P	P	02 44 27.6	-2.1
BJT				IAmb	IAmb	02 44 47.8	
	comp=Z,6.6nm,1.0s						
KSRS	Korea Array	46.14	34	P	P	02 44 56.7	+0.3
	comp=Z,1.6nm,0.7s,baz=221,slow=8.6,SNR=6.7						
SONM	Songino Array	47.79	8	P	P	02 45 10.0	+0.7
	comp=Z,0.7nm,0.6s,baz=190,slow=8.3,SNR=5.9						
MK31	Makanchi Array	48.11	346	P	P	02 45 11.4	-0.3
MK31				IAmb	IAmb	02 45 38.6	
	comp=Z,2.3nm,1.1s						
MKAR	Makanchi Array	48.11	346	P	P	02 45 13.2	+1.5
	comp=Z,1.1nm,0.7s,baz=156,slow=8.4,SNR=11						
MKAR	Makanchi Array	48.11	346	P	P	02 45 11.7	-0.1
STKA	Stephens Creek	52.42	132	P	P	02 45 44.4	-0.2
	comp=Z,1.4nm,0.6s,baz=300,slow=2.1,SNR=5.4						
ZAA0	Zalesovo Array	54.39	351	P	P	02 45 58.4	-0.3
ZALV	Zalesovo Beam	54.39	351	P	P	02 45 59.8	+1.1
	comp=Z,2.1nm,0.4s,baz=167,slow=7.4,SNR=10						
BRVK	Borovoye	57.22	341	P	P	02 46 18.2	-0.7
BRVK				IAmb	IAmb	02 46 20.4	
	comp=Z,1.8nm,0.8s						
ABKAR	Akbulak array	58.45	332	P	P	02 46 28.4	+0.7
BRTR	Keskin Array B	70.05	312	P	P	02 47 45.0	+0.9
	comp=Z,0.6nm,0.7s,baz=134,slow=9.1,SNR=5.2						
AKASG	Malin Array Be	76.21	322	P	P	02 48 20.3	+0.1
	comp=Z,0.4nm,0.4s,baz=100,slow=4.3,SNR=2.4						
FINES	FINESS Array B	80.94	332	P	P	02 48 47.3	+1.4
	comp=Z,3.1nm,1.0s,baz=199,slow=16,SNR=3.5						

IDC 27 02:47:39.6±1.2**, 6°.87S×129°.06E, h0^{km}, mb3.6**/1**, mb1 3.7**/4**, mb1mx3.3**/36**, mbtmp3.5**/4**, ML3.4**/2**, Error ellipse: s-maj=20.4km s-min=13.9km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.65	196	Pn	Pn	02 50 27.1	-0.1
	baz=11,slow=12						
FITZ				Sn	Sn	02 52 21.2	-17
	0.2nm,0.3s,baz=185,slow=11,SNR=1.9						
WRA	Warramunga Arr	13.97	159	Pn	Pn	02 50 58.6	-0.4
	0.2nm,0.3s,baz=340,slow=12,SNR=7.3						
WRA				Sn	Sn	02 53 20.4	-15
	0.4nm,0.3s,baz=336,slow=21,SNR=8.9						
ASAR	Alice Springs	17.34	165	P	Pn	02 51 43.5	+0.3
	0.1nm,0.3s,baz=337,slow=9.8,SNR=9.7						
ASAR				S	Sn	02 54 42.0	-15
	0.1nm,0.3s,baz=344,slow=26,SNR=4.2						
MKAR	Makanchi Array	67.61	327	P	P	02 58 38.3	0.0
	0.6nm,1.0s,baz=134,slow=5.8,SNR=3.0						

SNET ***27*** *02:57:08.2±0.7, 14°.36N×91°.07W, h21^{km}±5^{km}, ML3.5*
GCG ***27*** *02:57:09.7±0.3, 14°.04N×91°.29W, h30^{km}±3^{km}, MD3.4*
ISC 27 02:57:07.6±2.4**, 13°.9N**±0°.1×**91°.3W**±0°.1**, h35^{km}, n15, σ1^{s}.00**/20**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.74	38	*e*P	Pn	02 57 21.9	+0.1
PCG	Pacaya	0.86	52	*e*P	Pn	02 57 24.6	+1.0
PCG				*e*S	Sn	02 57 35.0	-0.1
STG3	Santiaguito 3,	0.88	344	*e*P	Pn	02 57 24.0	+0.2
STG3				*e*S	Sn	02 57 35.0	-0.5
NBG	Las Nubes	1.18	52	*e*P	Pn	02 57 27.0	-1.0
NBG				*e*S	Sn	02 57 44.7	+1.6
NUBE	Las Nubes	1.49	88	*e*P	Pn	02 57 31.6	-0.5
LOAL	Lomas de Alarc	1.49	84	*e*P	Pn	02 57 30.6	-1.5
SLOZ	Alcaldia de Sa	1.49	83	*e*P	Pn	02 57 30.9	-1.1
RTR	El Retiro	1.62	88	*e*P	Pn	02 57 33.4	-0.5
CEVE	Cerro Verde	1.64	91	*i* P	Pn	02 57 34.9	+0.7
CEVE				*e*S	Sn	02 57 55.0	+0.8
CEVE				IAML		02 57 58.1	
	comp=Z,584nm,0.2s						
SBLS	San Blas	1.64	90	*e*P	Pn	02 57 34.3	+0.1
SNJE	San Jose	1.66	89	*e*P	Pn	02 57 34.5	+0.1
JAYA	Jayaque - finc	1.82	96	*e*P	Pn	02 57 36.1	-0.5
JAYA				*e*P	Pn	02 57 37.0	+0.3
JAYA				IAML		02 58 02.6	
	comp=N,680nm,0.3s						
TACO	Tacachico	1.91	86	*e*P	Pn	02 57 36.4	-1.3
MTO3	Montecristo	1.97	74	*e*P	Pn	02 57 36.6	-2.1
LFRS	El Faro	2.20	96	*e*P	Pn	02 57 42.4	+0.6
LFRS				IAML		02 58 11.4	
	comp=Z,332nm,0.5s						

IDC ***27*** *03:48:51.3±3.4, 27°.79N×57°.88E, h0^{km}, mb3.7/3, mb1 3.7/3, mb1mx3.3/29, mbtmp3.7/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/41, Error ellipse: s-maj=87.2km s-min=36.1km az=149.0*
TEH ***27*** *03:48:55.3, 28°.04N×57°.70E, h8^{km}, ML3.4*
THR ***27*** *03:48:56.0±0.3, 27°.99N×57°.69E, h14^{km}±8^{km}, ML3.0*
OMAN ***27*** *03:49:10.2±3.1, 26°.73N×57°.73E, h1^{km}±29^{km}, ml2.8/5, Error ellipse: s-maj=21.6km s-min=2.8km az=2.0*
ISC 27 03:48:55.2±0.8**, 27°.87N**±0°.04×**57°.80E**±0°.05**, h10^{km}, n53, σ2^{s}.00**/58**, mb4.0**/3**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBND	Bandar-abas	1.20	250	*e*Pg	Pb	03 49 19.0	+1.0
IBND				*e*		03 49 50.6	
	comp=Z,12μm,0.3s						
KBAM	BAM	1.39	24	*e*Pg	Pn	03 49 20.1	-0.6
KBAM				*e*Sg	Sb	03 49 37.4	-1.6
KBAM				*e*		03 49 43.1	
	comp=Z,5μm,0.3s						
GENO	Geno	1.52	252	*e*Pg	Pn	03 49 23.8	+1.2
GENO				*e*		03 49 48.0	
	comp=Z,5μm,0.3s						
CHMN	Cheshme madani	2.00	353	*e*Pn	Pn	03 49 29.9	+0.5
CHMN				*e*		03 49 33.8	
	comp=Z,2μm,0.4s						
NGRK	Negar Kerman	2.00	332	*e*Pn	Pn	03 49 28.9	-0.6
NGRK				*e*		03 50 01.9	
	comp=Z,3μm,0.2s						
TVBK	TV Kerman	2.30	337	*e*Pn	Pn	03 49 33.8	+0.3
TVBK				*e*		03 50 11.9	
	comp=Z,5μm,0.5s						
SHME	Shamm	2.34	220	*e*Pn	Pn	03 49 36.2	+2.4
BANOM	Banah	2.36	215	*e*Pn	Pn	03 49 35.5	+1.5
BANOM	Banah	2.36	215	P	Pn	03 49 35.6	+1.6
	SNR=7.9						
KHGB	Koh Gabri	2.75	335	*e*	Sb	03 50 24.1	+5.5
	comp=Z,1μm,0.6s						
ZHDN	Zahedan	3.05	59	*e*Pn	Pn	03 49 46.3	+2.6
ZHSF	Zahedan	3.13	56	*e*Pn	Pn	03 49 47.4	+2.6
ZHSF	Zahedan	3.13	56	*e*Pn	Pn	03 49 47.4	+2.6
UOSS	Minazif	3.25	207	P	Pn	03 49 47.6	+1.4
HATD	Hatta, Dubai	3.38	207	*e*Pn	Pn	03 49 51.2	+3.1
HATD	Hatta, Dubai	3.38	207	P	Pn	03 49 50.1	+2.0
NAZ	Nazwa, Dubai	3.45	214	*e*Pn	Pn	03 49 52.1	+3.0
NAZ	Nazwa, Dubai	3.45	214	P	Pn	03 49 52.6	+3.5
ASHO	Ashiyiah	3.54	207	*e*Pn	Pn	03 49 52.8	+2.5
ASHO	Ashiyiah	3.54	207	P	Pn	03 49 52.7	+2.4
	SNR=8.1						
SOHO	SOHO	3.89	197	P	Pn	03 49 56.4	+1.3
NHDN	Nehbandan	4.02	29	*e*Pn	Pn	03 49 59.0	+2.0
SRVN	Saravan	4.10	95	*e*Pn	Pn	03 50 02.5	+4.4
BSRN	Basiran	4.24	15	*e*Pn	Pn	03 50 01.1	+1.1
BSRN				*e*Sg	Sb	03 51 04.8	+3.5
BSRN				IAML		03 51 20.1	
	comp=N,9.3nm,0.6s						
BSRN				IAML		03 51 26.3	
	comp=E,13nm,0.6s						
BSRN	Basiran	4.24	15	*e*Pn	Pn	03 50 01.1	+1.1
GHIR	Ghir-Karzin	4.28	277	*e*Pn	Pn	03 50 01.2	+0.7
GHIR				IAML		03 50 56.5	
	comp=N,16nm,0.4s						
GHIR				IAML		03 50 58.8	
	comp=E,14nm,0.6s						
GHIR	Ghir-Karzin	4.28	277	*e*Pn	Pn	03 50 01.2	+0.7
HOQ	Hoqain	4.29	186	P	Pn	03 50 01.2	+0.6
HOQ				S	Sn	03 50 49.2	-1.6
IKOO	Kooshah	4.66	13	*e*Pn	Pn	03 50 06.7	+0.9
ARQ	Araqi	4.66	195	P	Pn	03 50 06.7	+1.0
	SNR=9.2						
WSAR	Wadi Sarin	4.67	171	P	Pn	03 50 07.1	+1.2
WSAR				S	Sn	03 50 58.7	-1.4
SMDO	Samad	4.79	177	P	Pn	03 50 08.3	+0.7
ITEG	Tejag	5.08	9	*e*Pn	Pn	03 50 12.4	+0.8
BSY	Bisya	5.13	186	P	Pn	03 50 12.8	+0.6
IDAH	Dahanechah	5.17	20	*e*Pn	Pn	03 50 15.0	+2.1
TPRV	Parvadeh(Tabas	5.23	350	*e*Pn	Pn	03 50 15.1	+1.5
YZKH	Yazd	5.29	329	*e*Pn	Pn	03 50 15.1	+0.6
YZKH				*e*Sg	Sb	03 51 35.2	+3.6
YZKH				IAML		03 51 53.7	
	comp=E,4.9nm,0.5s						
YZKH				IAML		03 51 55.5	
	comp=N,3.5nm,0.5s						
YZKH	Yazd	5.29	329	*e*Pn	Pn	03 50 15.1	+0.6
WBK	Wadi Bani Khal	5.34	168	P	Pn	03 50 16.1	+1.1
TABS	Tabas	5.79	354	*e*Pn	Pn	03 50 22.1	+0.8
TABS				IAML		03 52 26.6	
	comp=E,5.8nm,0.9s						
TABS				IAML		03 52 29.5	
	comp=N,4.4nm,0.7s						
TABS	Tabas	5.79	354	*e*Pn	Pn	03 50 22.1	+0.8
JLN	Jalan Bani Buh	5.88	165	P	Pn	03 50 24.0	+1.6
JLN				S	Sn	03 51 27.0	-2.9
IRAM	Ramesheh	6.13	311	*e*Pn	Pn	03 50 26.2	+0.1
SHRT	Shahrakht	6.14	20	*e*Pn	Pn	03 50 27.8	+1.7
SHRT	Shahrakht	6.14	20	*e*Pn	Pn	03 50 27.8	+1.7
KLNJ	Kolanjah	6.25	301	*e*Pn	Pn	03 50 28.0	+0.1
IBRJ	Brojen	6.96	307	*e*Pn	Pn	03 50 37.8	+0.3
IPIR	Pirpir	7.66	310	*e*Pn	Pn	03 50 47.6	+0.4
RDF	Al-Radifah	9.09	279	*e*P	Pn	03 51 04.6	-1.9
BRTR	Keskin Array B	23.23	307	P	P	03 54 01.4	-1.3
	comp=N,0.4nm,0.6s,baz=110,slow=11,SNR=3.6						
AKASG	Malin Array Be	31.43	324	LR	LR	04 08 49.1	
	comp=N,26nm,20.7s,baz=305,slow=38						
ZALV	Zalesovo Beam	32.72	30	P	P	03 55 25.8	-2.1
	comp=N,0.5nm,0.3s,baz=233,slow=8.0,SNR=2.3						
ZALV				LR	LR	04 09 08.3	
	comp=N,25nm,18.8s,baz=354,slow=37						
TORD	Torodi Ar. Bea	54.13	266	P	P	03 58 18.9	-1.9
	comp=N,1.1nm,0.4s,baz=62,slow=7.5,SNR=25						

MAN ***27*** *04:02:44.6, 6°.62N×127°.56E, h94^{km}, mb4.1, ML2.9, MS2.5*
IDC ***27*** *04:02:52.5±3.6, 6°.35N×127°.06E, h111^{km}±27^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.1/43, mbtmp3.8/4, Error ellipse: s-maj=68.3km s-min=8.2km az=65.0*
ISC 27 04:02:51.0±1.3**, 6°.4N**±0°.1×**127°.2E**±0°.1**, h100^{km}, n9, σ0^{s}.99**/12**, mb3.5**/4**, 4C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.75	293	P	Pn	04 03 20.8	+0.4
	64nm,0.3s,baz=214,slow=3.0,SNR=2.5						
DAV				S	Sn	04 03 42.7	0.0
	36nm,0.3s,baz=301,slow=23,SNR=1.6						
DMPH	Davao City--Mi	1.82	293⇑	*e*P	Pn	04 03 21.4	+0.1
DMPH				*e*S	Sn	04 03 43.3	-1.1
BIPH	Bislig	1.98	335⇑	*e*P	Pn	04 03 11.1	-12
BIPH				*e*S	Sn	04 03 47.1	-0.9
KCP	Kidapawan	2.19	287⇑	*i*P	Pn	04 03 24.8	-1.2
KCP				*i* S	Sn	04 03 54.3	+1.4
BUKP	Musuan	2.59	305⇑	*e*P	Pn	04 03 32.9	+1.5
BUKP				*e*S	Sn	04 04 11.4	+9.0
FITZ	Fitzroy Crossi	24.36	184	P	P	04 07 59.6	-0.3
	3.8nm,1.1s,baz=2.6,slow=11,SNR=1.9						
WRA	Warramunga Arr	27.08	165	P	P	04 08 25.3	+0.9
	0.6nm,0.5s,baz=348,slow=10,SNR=5.0						
ASAR	Alice Springs	30.57	168	P	P	04 08 55.6	+0.1
	0.2nm,0.3s,baz=355,slow=7.8,SNR=2.4						
MKAR	Makanchi Array	55.68	324	P	P	04 12 16.7	-0.3
	1.0nm,0.4s,baz=119,slow=7.6,SNR=29						

MOS ***27*** *04:07:21.9±0.0, 42°.07N×46°.13E, h18^{km}, MPVA3.4*
NORS ***27*** *04:07:22.6±0.0, 42°.04N×46°.18E, h21^{km}, MPVA3.2*
DRS ***27*** *04:07:22.3±0.0, 42°.02N×45°.97E, h15^{km}*
ISC 27 04:07:22.0±1.0**, 42°.00N**±0°.03×**46°.08E**±0°.02**, h20^{km}**±4^{km}**, n25, σ1^{s}.04**/47**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGD	Lagodekhi	0.21	144	P	Pg	04 07 27.5	+0.3
LGD				S	Sg	04 07 31.4	+0.6
BTLR	Botlikh	0.67	9	*i* Pg	Pn	04 07 35.0	-1.4
	49nm,0.2s						
BTLR				*e*Sg	Sn	04 07 44.4	-2.0
XNZR	Khunzakh	0.71	41	*e*Pg	Pn	04 07 36.2	-0.9
XNZR				*e*Sg	Sn	04 07 46.3	-1.4
GNBR	Gunib	0.76	59	*e*Pg	Pn	04 07 37.2	-0.6
	25nm,0.1s						
GNBR				*e*Sg	Sn	04 07 48.1	-0.7
KMKR	Kumukh	0.77	80	*e*Pg	Pn	04 07 37.5	-0.4
KMKR				*e*Sg	Sn	04 07 48.3	-0.8
UNCR	Uncukul	0.89	37	*e*Pg	Pn	04 07 39.2	-0.2
UNCR				*e*Sg	Sn	04 07 51.2	-0.6
ARKR	Arakani	0.91	48	*i* Pg	Pn	04 07 39.6	-0.2
ARKR				*e*Sg	Sn	04 07 52.0	-0.2
DVE	Vedeno	0.95	2	*e*Pg	Pn	04 07 40.4	0.0
DVE				*e*Sg	Sn	04 07 53.6	+0.2
BTNK	Botanikuri	1.01	252	P	Pb	04 07 39.3	-1.5
KRNR	Karanay	1.03	36	*e*Pg	Pn	04 07 41.6	+0.1
KRNR				*e*Sg	Sn	04 07 55.4	+0.1
BUJR	Buynaksk	1.12	43	*e*Pg	Pg	04 07 43.6	-0.1
BUJR				*e*Sg	Sg	04 07 58.7	+0.2
DLMR	Dylym	1.14	21	*e*Pg	Pg	04 07 44.0	-0.1
DLMR				*e*Sg	Sg	04 07 59.8	+0.6
DBC	Dubki	1.16	28	*e*Pg	Pg	04 07 43.7	-0.8
	13nm,0.3s						
DBC				*e*Sg	Sg	04 07 59.4	-0.3
GROC	Groznyy	1.22	350	*e*Pg	Pg	04 07 48.4	+2.8
	30nm,0.3s						
GROC				*e*Sg	Sg	04 08 03.8	+2.2
PNSH	Pansheti	1.25	301	P	Pb	04 07 45.3	+0.1
SGKR	Sergokala	1.26	68	*e*Pg	Pg	04 07 46.5	+0.1
SGKR				*e*Sg	Sg	04 08 04.2	+1.3
MTEO	Meteo	1.33	301	P	Pg	04 07 47.5	-0.3
AKT	Akhty	1.34	112	*e*Pg	Pg	04 07 47.8	-0.1
	5.6nm,0.2s						
AKT				*e*Sg	Sg	04 08 06.0	+0.4
TRLG	Trialeti	1.55	253	P	Pn	04 07 49.3	+0.7
TRLG				S	Sb	04 08 10.5	+1.2
LACR	Lac	1.56	303	*e*Pg	Pg	04 07 51.6	-0.4
	7.4nm,0.3s						
LACR				*e*Sg	Sg	04 08 12.5	+0.2
DMNI	Dmanisi	1.57	245	P	Pn	04 07 49.1	+0.3
DMNI				S	Sn	04 08 10.3	+1.7
ZEI	Tsey	1.79	297	*e*Pg	Pb	04 07 55.1	+0.8
ZEI				*e*Sg	Sg	04 08 19.6	-0.3
ONI	Oni	2.04	288	P	Pb	04 07 58.0	-0.3
ONI				S	Sg	04 08 25.9	-1.7
DIGR	Digorskoe uzhe	2.05	297	*e*Pg	Pg	04 08 00.2	-1.3
DIGR				*e*Sg	Sg	04 08 26.6	-1.6
ABS	Abastumani	2.45	265	P	Pb	04 08 04.5	-1.0
ABS				S	Sb	04 08 37.1	+1.8

CNRM ***27*** *04:29:13.8, 36°.39N×7°.89W, h99^{km}, ml2.7*
MDD ***27*** *04:29:17.7±0.9, 36°.54N×7°.58W, h30^{km}±17^{km}, mbLg2.7/17, Error ellipse: s-maj=10.2km s-min=3.8km az=24.0, PRXIMO*
INMG ***27*** *04:29:18.0±1.6, 36°.50N×7°.62W, h31^{km}±8^{km}, ML2.5, Error ellipse: s-maj=3.5km s-min=2.3km az=51.0*
ISC 27 04:29:16.0±5.1**, 36°.52N**±0°.03×**7°.56W**±0°.03**, h35^{km}**±11^{km}**, n85, σ1^{s}.57**/151**, 1C-2D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFARO	Faro	0.58	330	*e*S	Sn	04 29 37.3	+1.1
PTAV	Tavira	0.61	353	*e*S	Sn	04 29 38.5	+1.7
PBDV	Barranco-do-Ve	0.78	337	*e*P	Pn	04 29 31.6	+1.0
PBDV				*e*S	Sn	04 29 41.5	+0.4
PBDV				A	A	04 29 46.0	
	60nm,0.3s						
PBDV	Barranco-do-Ve	0.78	337	P	Pn	04 29 31.6	+1.0
PBDV				S	Sn	04 29 41.5	+0.4
	60nm,0.3s						
PVAQ	Vaqueiros	0.89	352⇓	*e*P	Pn	04 29 33.3	+1.3
PVAQ				*e*S	Sn	04 29 44.0	+0.3
PVAQ				A	A	04 29 45.4	
	133nm,0.1s						
PVAQ	Vaqueiros	0.89	352	P	Pn	04 29 33.3	+1.3
PVAQ				S	Sn	04 29 44.0	+0.3
	133nm,0.1s						
EGRO	El Granado	1.01	3	P	Pn	04 29 35.1	+1.4
	2.8nm,0.1s,SNR=18						
EGRO				S	Sn	04 29 47.5	+0.8
	77nm,0.1s,SNR=34						
PCVE	Castro Verde	1.18	341	*e*P	Pn	04 29 37.2	+1.3
PCVE				*e*S	Sn	04 29 51.5	+0.8
PCVE				A	A	04 29 52.4	
	56nm,0.2s						
PCVE	Castro Verde	1.18	341	P	Pn	04 29 37.2	+1.3
PCVE				S	Sn	04 29 51.5	+0.8
	56nm,0.2s						
MORF	Marmelete	1.18	312	*e*P	Pn	04 29 36.6	+0.6
MORF				*e*S	Sn	04 29 50.4	-0.4
MORF				A	A	04 29 51.0	
	35nm,0.1s						
MORF	Marmelete	1.18	312	P	Pn	04 29 36.6	+0.6
MORF				S	Sn	04 29 50.4	-0.4
	35nm,0.1s						
PFVI	Vila Bisbo	1.19	301	*e*P	Pn	04 29 36.6	+0.5
PFVI				*e*S	Sn	04 29 50.5	-0.5
PFVI				A	A	04 29 58.9	
	23nm,0.5s						
PFVI	Vila Bisbo	1.19	301	P	Pn	04 29 36.4	+0.3
	4.9nm,0.2s,SNR=7.9						
PFVI				S	Sn	04 29 50.3	-0.7
	21nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	1.19	301	P	Pn	04 29 36.6	+0.5
PFVI				S	Sn	04 29 50.5	-0.5
PTEO	Sao Teotonio	1.39	318	*e*P	Pn	04 29 39.7	+0.9
PTEO				*e*S	Sn	04 29 55.8	-0.1
PTEO				A	A	04 29 57.1	
	24nm,0.1s						
PTEO	Sao Teotonio	1.39	318	P	Pn	04 29 39.7	+0.9
PTEO				S	Sn	04 29 55.8	-0.1
	12nm,0.1s						
ESPR	Espera	1.41	75	P	Pn	04 29 40.7	+1.5
	4.7nm,0.2s,SNR=14						
ESPR				S	Sn	04 29 58.4	+1.9
	31nm,0.2s						
EMIN	Mina Concepcio	1.43	29	P	Pn	04 29 40.7	+1.2
	0.6nm,0.1s,SNR=8.7						
EMIN				S	Sn	04 29 57.2	+0.2
	7.8nm,0.1s,SNR=12						
PBEJ	Beja	1.52	351	*e*P	Pn	04 29 42.0	+1.3
PBEJ				*e*S	Sn	04 29 59.6	+0.3
PBEJ				A	A	04 30 00.2	
	28nm,0.3s						
PBEJ	Beja	1.52	351	P	Pn	04 29 42.0	+1.3
PBEJ				S	Sn	04 29 59.6	+0.3
	14nm,0.3s						
PBAR	Barrancos	1.70	14	*e*Sn	Sn	04 30 04.1	+0.4
PBAR	Barrancos	1.70	14	S	Sn	04 30 04.1	+0.4
PNCL	Nicolau / Gran	1.77	334⇑	*e*Pn	Pn	04 29 45.0	+0.9
PNCL				*e*Sn	Sn	04 30 04.9	-0.4
PNCL				A	A	04 30 06.1	
	14nm,0.2s						
PNCL	Nicolau / Gran	1.77	334	P	Pn	04 29 45.0	+0.9
PNCL				S	Sn	04 30 04.9	-0.4
	14nm,0.2s						
ECEU	Ceuta	1.87	109	P	Pn	04 29 47.5	+2.0
	5.9nm,0.1s,SNR=4.7						
EMIJ	Mijas	2.24	88	P	Pn	04 29 52.3	+1.7
	0.5nm,0.1s,SNR=7.9						
EMIJ				S	Sn	04 30 17.2	+0.1
	1.6nm,0.2s,SNR=7.9						
EBAD	Badajoz	2.27	11	P	Pn	04 29 52.1	+1.0
	0.8nm,0.1s,SNR=29						
EBAD				S	Sn	04 30 17.1	-0.6
	7.7nm,0.1s,SNR=13						
ECAB	El Cabril	2.31	47	P	Pn	04 29 52.7	+1.2
	0.5nm,0.1s,SNR=22						
ECAB				S	Sn	04 30 17.7	-0.9
	1.7nm,0.1s,SNR=11						
PESTR	Estremoz	2.34	359	*e*Pn	Pn	04 29 53.1	+1.1
PESTR				*e*Sn	Sn	04 30 19.0	-0.6
PESTR				A	A	04 30 20.9	
	6.2nm,0.1s						
PESTR	Estremoz	2.34	359	P	Pn	04 29 52.5	+0.5
PESTR				S	Sn	04 30 20.7	+1.2
PMST	Lisbon--Monsan	2.56	330	*e*Sn	Sn	04 30 24.1	-0.8
PMST				A	A	04 30 36.3	
	22nm,0.7s						
PMTG	Montargil	2.60	348⇓	*e*Pn	Pn	04 29 56.8	+1.3
PMTG				*e*Sn	Sn	04 30 25.9	+0.1
PMTG				A	A	04 30 38.9	
	9.4nm,0.2s						
PMTG	Montargil	2.60	348	P	Pn	04 29 56.8	+1.3
PMTG				S	Sn	04 30 25.9	+0.1
	9.4nm,0.2s						
PMAFR	Mafra	2.79	331	*e*Pn	Pn	04 29 59.2	+1.1
PMAFR				*e*Sn	Sn	04 30 29.8	-0.8
PMAFR				A	A	04 30 31.6	
	39nm,0.2s						
PMAFR	Mafra	2.79	331	P	Pn	04 29 59.0	+0.8
	1.3nm,0.2s,SNR=7.9						
PMAFR				S	Sn	04 30 29.0	-1.6
	46nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	2.83	77	P	Pn	04 30 00.8	+2.0
	0.5nm,0.2s,SNR=7.9						
EGOR				S	Sn	04 30 32.8	+1.2
	1.8nm,0.1s,SNR=7.9						
EADA	Adamuz	2.89	54	P	Pn	04 30 00.8	+1.3
	1.5nm,0.2s,SNR=18						
EADA				S	Sn	04 30 31.7	-1.3
	14nm,0.1s,SNR=21						
PMRV	Marv??o	2.91	3	*e*Pn	Pn	04 30 00.9	+1.1
PMRV				*e*Sn	Sn	04 30 32.3	-1.1
PMRV				A	A	04 30 34.6	
	6.7nm,0.3s						
PMRV	Marv??o	2.91	3	P	Pn	04 30 00.9	+1.1
PMRV				S	Sn	04 30 32.3	-1.1
	6.7nm,0.3s						
PSBE	So Bento	3.15	342	*e*Pn	Pn	04 30 04.6	+1.6
PSBE				*e*Sn	Sn	04 30 38.7	-0.7
PSBE				A	A	04 30 42.0	
	6.6nm,0.4s						
ZHG	ZHG	3.16	166	P	Pn	04 30 03.1	-0.2
ZHG				S	Sn	04 30 41.5	+1.7
ELGU	Los Guajares,	3.18	83	P	Pn	04 30 04.7	+1.2
	0.3nm,0.2s,SNR=7.9						
ELGU				S	Sn	04 30 41.7	+1.4
	2.2nm,0.1s,SNR=7.9						
PCBR	Castelo Branco	3.31	1	*e*Pn	Pn	04 30 06.7	+1.4
PCBR				*e*Sn	Sn	04 30 42.6	-0.9
PCBR				A	A	04 30 44.8	
	10nm,0.2s						
PCBR	Castelo Branco	3.31	1	P	Pn	04 30 06.7	+1.4
PCBR				S	Sn	04 30 42.6	-0.9
	5.1nm,0.2s						
PCAS	Casmilo, Conde	3.60	348	*e*Pn	Pn	04 30 17.8	+8.5
PCAS				*e*Sn	Sn	04 30 50.5	-0.1
PCAS				A	A	04 31 08.9	
	4.3nm,0.6s						
PCAS	Casmilo, Conde	3.60	348	S	Sn	04 30 50.5	-0.1
	4.3nm,0.6s						
AKLM	AKL	3.62	123	P	Pn	04 30 08.8	-0.8
AKLM				S	Sn	04 30 52.7	+1.5
GORA	Gorafe	3.74	74	P	Pn	04 30 08.3	-2.9
	3.2nm,0.2s,SNR=7.9						
GORA				S	Sn	04 30 56.2	+2.1
	57nm,0.2s,SNR=7.9						
COI	Coimbra	3.74	350	*e*Sn	Sn	04 30 55.4	+1.4
COI	Coimbra	3.74	350	S	Sn	04 30 55.4	+1.4
EBER	Berja	3.77	83	P	Pn	04 30 13.5	+1.7
	0.3nm,0.2s,SNR=7.9						
EBER				S	Sn	04 30 56.8	+1.8
	SNR=7.9						
EQES	Quesada	3.80	69	P	Pn	04 30 13.5	+1.3
	0.2nm,0.1s,SNR=7.9						
EQES				S	Sn	04 30 54.6	-1.1
	0.7nm,0.1s,SNR=7.9						
MTE	Manteigas	3.87	0	*e*Pn	Pn	04 30 14.2	+1.1
MTE				*e*Sn	Sn	04 30 56.0	-1.4
MTE				A	A	04 30 58.4	
	6.6nm,0.8s						

MTE	Manteigas	3.87	0	P	Pn	04 30 14.2	+1.1
MTE				S	Sn	04 30 56.0	-1.4
	3.3nm,0.8s						
PAB	San Pablo	3.94	39	P	Pn	04 30 15.4	+1.4
	0.3nm,0.2s,SNR=7.9						
PAB				S	Sn	04 30 55.1	-4.0
	0.8nm,0.1s,SNR=7.9						
PVIS	Viseu	4.20	356	*e*Pn	Pn	04 30 18.8	+1.3
PVIS				*e*Sn	Sn	04 31 05.0	-0.3
PVIS	Viseu	4.20	356	P	Pn	04 30 18.8	+1.3
PVIS				S	Sn	04 31 05.0	-0.3
ESDC	Sonseca Array	4.24	41	P	Pn	04 30 19.1	+1.0
	0.2nm,0.1s,baz=224,slow=13,SNR=9.5						
ESDC				S	Sn	04 31 03.8	-2.5
	0.8nm,0.2s,baz=229,slow=22,SNR=7.2						
SESP	Santiago Espad	4.30	67	P	Pn	04 30 20.3	+1.2
	0.3nm,0.2s,SNR=7.9						
SESP				S	Sn	04 31 06.8	-1.2
	1.8nm,0.1s,SNR=7.9						
MD31	MD31	4.31	147	P	Pn	04 30 19.0	-0.1
MD31				S	Sn	04 31 06.6	-1.6
MDT	Midelt	4.42	146	P	Pn	04 30 20.4	-0.3
MDT				S	Sn	04 31 08.6	-2.4
MVO	Moncorvo	4.66	5	*e*Pn	Pn	04 30 24.9	+1.1
MVO				*e*Sn	Sn	04 31 14.7	-1.9
MVO				A	A	04 31 17.2	
	9.8nm,0.5s						
MVO	Moncorvo	4.66	5	P	Pn	04 30 24.7	+0.9
	1.4nm,0.1s,SNR=7.9						
MVO				S	Sn	04 31 14.1	-2.6
	5.3nm,0.1s,SNR=7.9						
PVRL	Vila Real	4.75	359	*e*Pn	Pn	04 30 12.7	-12
PVRL				*e*Sn	Sn	04 31 17.2	-1.7
PVRL				A	A	04 31 19.5	
	10.0nm,0.1s						
PVRL	Vila Real	4.75	359	S	Sn	04 31 17.2	-1.7
	5.0nm,0.1s						
POLO	Lamas de Olo	4.85	358	*e*Pn	Pn	04 30 27.6	+1.1
POLO				*e*Sn	Sn	04 31 20.8	-0.7
POLO				A	A	04 31 22.3	
	2.9nm,0.3s						
POLO	Lamas de Olo	4.85	358	P	Pn	04 30 27.6	+1.1
POLO				S	Sn	04 31 20.8	-0.7
	2.9nm,0.3s						
GUD	Guadarrama	4.90	32	P	Pn	04 30 29.0	+1.7
	0.5nm,0.2s,SNR=9.7						
GUD				S	Sn	04 31 21.1	-1.8
	0.9nm,0.3s,SNR=5.6						
PCAB	Cabril	5.20	356	*e*Sn	Sn	04 31 29.5	-0.4
EMUR	La Murta	5.21	73	P	Pn	04 30 32.8	+1.3
	0.1nm,0.1s,SNR=4.0						
EMUR				S	Sn	04 31 28.2	-2.2
	0.4nm,0.2s,SNR=7.9						
ETOB	Tobarra	5.22	64	P	Pn	04 30 32.0	+0.4
	0.2nm,0.2s,SNR=10.0						
ETOB				S	Sn	04 31 28.4	-2.2
	1.1nm,0.1s,SNR=8.0						
OUK	Oukaimeden	5.31	183	P	Pn	04 30 31.9	-1.1
OUK				S	Sn	04 31 27.6	-5.5
PBRG	Braganca	5.32	7	*e*Pn	Pn	04 30 34.0	+1.1
PBRG				*e*Sn	Sn	04 31 30.0	-2.9
PBRG				A	A	04 31 34.0	
	2.7nm,0.2s						
PBRG	Braganca	5.32	7	P	Pn	04 30 34.0	+1.1
PBRG				S	Sn	04 31 30.0	-2.9
	1.4nm,0.2s						
ELOB	Lobios	5.35	356	S	Sn	04 31 30.7	-3.2
	4.7nm,0.1s,SNR=12						
ECAL	Calabor	5.45	6	P	Pn	04 30 34.4	-0.4
	0.6nm,0.3s,SNR=6.7						
ECAL				S	Sn	04 31 33.3	-3.0
	2.9nm,0.1s,SNR=7.3						
PGAV	Gavieira, Arco	5.46	354	*e*Pn	Pn	04 30 36.4	+1.4
PGAV				*e*Sn	Sn	04 31 35.2	-1.4
PGAV				A	A	04 31 43.6	
	4.0nm,0.6s						
PGAV	Gavieira, Arco	5.46	354	P	Pn	04 30 36.4	+1.4
PGAV				S	Sn	04 31 35.2	-1.4
	4.0nm,0.6s						
TZRR	Tazzarine	5.96	163	P	Pn	04 30 39.8	-2.0
TZRR				S	Sn	04 31 47.4	-1.4
TTIG	Tnine Tigouga,	6.00	187	P	Pn	04 30 37.7	-4.7
TTIG				S	Sn	04 31 42.3	-7.8
ECHE	Chera	6.03	57	S	Sn	04 31 46.2	-4.3
	0.3nm,0.2s,SNR=4.0						
ETOR	Torete	6.08	43	P	Pn	04 30 44.8	+1.4
	2.3nm,0.2s,SNR=7.9						
ETOR				S	Sn	04 31 47.9	-3.8
	4.4nm,0.2s						
EAGO	Agolada(Pontev	6.29	356	S	Sn	04 31 53.0	-3.8
	0.8nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	6.75	53	S	Sn	04 32 06.2	-2.3
	0.5nm,0.2s,SNR=4.0						
ATE	Arette	8.41	37	P	Pn	04 31 17.4	+2.0
	0.2nm,0.2s,SNR=7.9						
ATE				S	Sn	04 32 44.9	-4.1
	0.2nm,0.2s,SNR=7.9						

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*IDC **27** 04:30:21.5±0.9, 0°.37N×97°.99E, h0km, mb3.8/10, mb1 4.0/11, mb1mx3.7/35, mbtmp3.8/11, ML4.6/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/46, Error ellipse: s-maj=26.0km s-min=19.9km az=73.0*

*DJA **27** 04:30:24.1±0.5, 0°N±3°×9°8E±°, h10km, M4.2/9, mb4.2/2, MLv4.2/9*

*NEIC **27** 04:30:25.8±1.9, 0°.4N±0°.1×97°.8E±0°.1, h27km±6km, mb4.3/8, Error ellipse: s-maj=21.2km s-min=9.1km az=224.0*

ISC 27 04:30:23.2±0.6, 0°.44N±0°.05×97°.92E±0°.07, h10km, n34, σ0s.93/33, mb4.0/13, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	Pulau Batu	0.60	144	P	Pb	04 30 35.9	0.0
PBSI				S	Sg	04 30 43.6	+0.6
GSI	Gunungsitoli	0.93	338	P	Pg	04 30 42.0	+0.8
GSI	Gunungsitoli	0.93	338		Pg	04 30 41.8	+0.6
MNSI	Mandailing Nat	1.70	78	P	Pn	04 30 53.1	+0.2
MNSI				S	Sb	04 31 15.8	-0.2
SISI	Saibi	2.10	146	P	Pn	04 30 59.4	+0.8
RPSI	Rantau Prapat	2.46	24		Pn	04 31 04.7	+1.3
PSI	Prapat	2.56	23	Pn	Pn	04 31 04.7	-0.2
	baz=228,slow=12						
PSI				LR	LR	04 32 05.2	
	comp=Z,72nm,20.2s,baz=15,slow=42						
PPI	Padang Panjang	2.63	110	P	Pn	04 31 05.8	0.0
BKNI	Bangkinang	3.12	92	Pn	Pn	04 31 14.6	+2.1
PPSI	Pulau Pagai	3.80	147	P	Pn	04 31 23.2	+1.3
IPM	Ipoh	5.08	38		Pn	04 31 41.5	+2.0
KULM	Kulim	5.54	29	Pn	Pn	04 31 46.7	+0.9
SBUM	Sibu	14.43	82	Pn	Pn	04 33 48.2	+0.4
CMAR	Chiang Mai Arr	17.94	3	P	Pn	04 34 33.2	+0.3
	0.7nm,0.3s,baz=196,slow=12,SNR=4.5						
SHL	Shillong	25.66	347	P	P	04 35 53.1	-0.4
SHL				IAmb	IAmb	04 36 13.8	
	comp=Z,4.0nm,0.7s						
H08S2	Diego Garcia H	26.59	252	T	T	05 03 25.7	
	baz=74,slow=75,SNR=116						
H08S3	Diego Garcia H	26.60	252	T	T	05 03 26.8	
	baz=74,slow=75,SNR=112						
H08S1	Diego Carcia H	26.61	252	T	T	05 03 26.5	
	baz=74,slow=75,SNR=106						
BATI	Baumata	27.71	113	LR	LR	04 50 13.0	
	comp=Z,138nm,18.9s,baz=290,slow=43						
WRA	Warramunga Arr	41.02	122	P	P	04 38 05.7	-1.3
	comp=Z,0.3nm,0.5s,baz=302,slow=9.8,SNR=1.3						
AS31	Alice Springs	42.36	127	P	P	04 38 17.1	-0.9
ASAR	Alice Springs	42.36	127	P	P	04 38 16.9	-1.1
	comp=Z,0.3nm,0.5s,baz=299,slow=7.3,SNR=6.4						
KSRS	Korea Array	46.08	34	P	P	04 38 46.1	-1.3
	comp=Z,1.7nm,0.7s,baz=220,slow=8.5,SNR=5.5						
SONM	Songino Array	47.78	8	P	P	04 39 01.7	+0.8
	comp=Z,0.8nm,0.7s,baz=190,slow=10,SNR=8.6						
SONM				PcP	PcP	04 40 30.3	+0.4
	comp=Z,0.4nm,0.6s,baz=198,slow=3.8,SNR=2.7						
SONM	Songino Array	47.78	8	P	P	04 38 59.8	-1.1
MK31	Makanchi Array	48.16	346	P	P	04 39 03.6	0.0
MK31				IAmb	IAmb	04 39 31.2	
	comp=Z,4.1nm,1.2s						
MKAR	Makanchi Array	48.16	346	P	P	04 39 04.5	+0.8
	comp=Z,1.0nm,0.6s,baz=155,slow=8.1,SNR=12						
ZAA0	Zalesovo Array	54.42	351	P	P	04 39 49.4	-1.1
ZAA0				IAmb	IAmb	04 39 57.7	
	comp=Z,6.4nm,1.4s						
ZALV	Zalesovo Beam	54.42	351	P	P	04 39 50.9	+0.4
	comp=Z,1.7nm,0.4s,baz=178,slow=7.4,SNR=8.9						
ABKAR	Akbulak array	58.52	332	P	P	04 40 19.4	-0.4
BRTR	Keskin Array B	70.16	312	P	P	04 41 36.0	-0.4
	comp=Z,0.6nm,0.7s,baz=119,slow=6.7,SNR=4.8						
BOSA	Boshof	75.03	240	P	P	04 42 06.6	+0.9
	comp=Z,0.9nm,0.6s,baz=72,slow=9.6,SNR=3.5						
FINES	FINESS Array B	81.00	332	P	P	04 42 37.5	-0.5
	comp=Z,1.3nm,0.7s,baz=168,slow=9.8,SNR=7.6						
GERES	GERESS Array B	85.86	319	P	P	04 43 03.6	+0.2
	comp=Z,0.2nm,0.6s,baz=72,slow=3.2,SNR=2.5						

ATH 27 05:00:53.1, 38°.38N×21°.89E, h8km±3km, ML1.4/2, Error ellipse: s-maj=3.7km s-min=1.3km az=46.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EFP	Efpalio	0.05	17	P	Pg	05 00 54.5	-0.3
EFP				S	Sg	05 00 56.1	0.0
EFP				AML	AML	05 00 56.4	
	comp=E,726µm,0.1s						
EFP				AML	AML	05 00 57.2	
	comp=N,1041µm,0.2s						
SERG	Sergoula	0.14	74	P	Pg	05 00 56.0	-0.1
SERG				S	Sg	05 00 58.3	+0.1
SERG				AML	AML	05 00 58.9	
	comp=N,754µm,0.1s						
SERG				AML	AML	05 00 59.6	
	comp=E,565µm,0.3s						
LAKA	Lakka	0.15	151	P	Pg	05 00 56.6	+0.2
ANX	Ano Chora	0.22	7	P	Pg	05 00 57.5	-0.1
ANX				S	Sg	05 01 00.8	+0.2
KLV	Kalavryta, Ach	0.39	148	P	Pg	05 01 00.5	-0.3

THE 27 05:01:21.2, 38°.60N×20°.56E, h11km±2km, ML1.6/4, Error ellipse: s-maj=2.5km s-min=0.4km az=95.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVGI	Lefkada island	0.08	76	P	Pg	05 01 23.8	+0.2
EVGI				S	Sg	05 01 25.3	-0.1
DRAG	Dragano-Lefkad	0.08	8	P	Pg	05 01 23.7	0.0
NYDR	Nydri-Lefkada	0.15	44	P	Pg	05 01 24.8	+0.1
LKD2	Lefkada island	0.20	22	P	Pg	05 01 25.6	+0.1
LKD2				S	Sg	05 01 28.2	-0.3
	212nm,0.2s						
TSLK	Tsoukalades, L	0.23	19	P	Pg	05 01 26.4	+0.3
KEF4	Livadi, Kephal	0.36	197	P	Pg	05 01 28.2	-0.2
KEF4				S	Sg	05 01 34.2	+1.0
DMLN	Damoulianata-K	0.39	202	P	Pg	05 01 28.9	-0.1
DMLN				S	Sg	05 01 35.0	+0.8
	162nm,0.3s						
VLS	Valsamata	0.43	177	P	Pg	05 01 29.3	-0.3
VLS				S	Sg	05 01 35.6	+0.4
	152nm,0.1s						
KEF3	Kipouria, Keph	0.43	203	P	Pg	05 01 29.2	-0.5
KEF3				S	Sg	05 01 35.4	0.0
PSDA	Pessada-Kefalo	0.49	178	P	Pg	05 01 30.4	-0.3
PSDA				S	Sg	05 01 38.0	+0.8
	22nm,0.2s						

IDC 27 05:09:21.8±8.7, 31°.09S×179°.92E, h390km±101km, mb2.7/2, mb1 3.0/3, mb1mx2.5/31, mbtmp3.6/3, Error ellipse: s-maj=104.5km s-min=43.3km az=5.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.52	197	P	P	05 11 12.0	+0.4
	1.7nm,0.3s,baz=118,slow=22,SNR=20						
URZ				S	S	05 12 38.7	-1.5
	3.0nm,0.3s,baz=299,slow=23,SNR=7.6						
ASAR	Alice Springs	41.30	269	P	P	05 16 31.9	+0.6
	0.2nm,0.5s,baz=104,slow=7.2,SNR=1.8						
WRA	Warramunga Arr	42.35	274	P	P	05 16 39.2	-0.5
	0.3nm,0.3s,baz=111,slow=7.9,SNR=6.2						
FINES	FINESS Array B	145.15	338	PKPbc	PKPdf	05 28 12.2	-0.5
	1.8nm,0.6s,baz=58,slow=4.1,SNR=11						

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*BJI **27** 05:23:26.0±0.0, 5°.83S×149°.03E, h107km, mB5.1/11, mb4.7/16*

*IDC **27** 05:23:27.0±1.7, 5°.84S×149°.03E, h105km±15km, mb4.1/16, mb1 4.2/17, mb1mx4.0/30, mbtmp4.4/17, Error ellipse: s-maj=18.6km s-min=9.6km az=104.0*

*NEIC **27** 05:23:27.9±2.0, 5°.89S±0°.06×149°.06E±0°.07, h110km±7km, mb4.7/36, Error ellipse: s-maj=9.9km s-min=9.0km az=101.0*

*DJA **27** 05:23:27.5±0.5, 6°S±5°×14°9E±°, h108km±9km, M4.7/7, mb4.4/7, MLv4.9/3*

ISC 27 05:23:26.5±0.4, 5°.86S±0°.05×149°.06E±0°.07, h100km, n81, σ1s.27/82, mb4.7/32, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.51	62		Pn	05 24 19.7	+0.6
PMG	Port Moresby	3.99	208	P	Pn	05 24 26.1	+0.5
	10nm,0.3s,baz=0.0,slow=6.7,SNR=9.9						
PMG				S	Sn	05 25 13.0	+1.6
	59nm,0.3s,baz=165,slow=21,SNR=15						
PMG	Port Moresby	3.99	208	Pn	Pn	05 24 26.2	+0.5
PMG				Sn	Sn	05 25 10.7	-0.7
PMG	Port Moresby	3.99	208	P	Pn	05 24 27.9	+2.3
PMG	Port Moresby	3.99	208	P	Pn	05 24 27.4	+1.8
MANU	Manus Island	4.15	336		Pn	05 24 29.8	+2.0
COEN	Coen	9.91	215	Pn	Pn	05 25 46.8	+0.7
CTAO	Charters Tower	14.40	191		Pn	05 26 45.2	-0.5
MTN	Manton Dam	18.99	247	P	P	05 27 40.0	-0.4
MTN				IAmb	IAmb	05 27 41.2	
	comp=Z,67nm,1.4s						
EIDS	Eidsvold	19.49	175	P	P	05 27 46.4	+0.6
EIDS				IAmb	IAmb	05 27 47.9	
	comp=Z,13nm,0.7s						
EIDS	Eidsvold	19.49	175	P	P	05 27 47.2	+1.4
	comp=Z,20nm,1.2s						
GUMO	Guam	19.77	348	P	P	05 27 48.6	-0.2
WB0	Warramunga Arr	19.86	225	P	P	05 27 49.7	-0.2
WB0				IAmb	IAmb	05 27 50.7	
	comp=Z,21nm,0.8s						
WR0	Warramunga Arr	19.89	224	P	P	05 27 50.0	-0.1
WR0				IAmb	IAmb	05 27 51.0	
	comp=Z,24nm,1.0s						
WRAB	Tennant Creek	20.00	224	P	P	05 27 51.2	-0.2
WB2	Warramunga Arr	20.01	224	P	P	05 27 51.0	-0.4
WB2				IAmb	IAmb	05 27 52.3	
	comp=Z,20nm,0.6s						
WRA	Warramunga Arr	20.02	224	P	P	05 27 51.5	0.0
	comp=Z,17nm,0.6s,baz=50,slow=11,SNR=68						
WRA	Warramunga Arr	20.02	224	P	P	05 27 50.6	-0.9
SANVU	Saraoutou	20.20	120	P	P	05 27 54.0	+0.5
RMQ	Roma	20.51	181	P	P	05 27 59.2	+2.4
	comp=Z,8.8nm,0.7s						
QLP	Quilpie	21.11	192	P	P	05 28 05.9	+2.7
	comp=Z,26nm,2.4s						
KNRA	Kununurra	22.17	242	P	P	05 28 13.5	-1.1
KNRA				IAmb	IAmb	05 28 17.0	
	comp=Z,32nm,0.7s						
KNRA	Kununurra	22.17	242	P	P	05 28 16.3	+1.7
	comp=Z,55nm,0.7s						
AS31	Alice Springs	22.93	218	P	P	05 28 22.0	-0.4
ASAR	Alice Springs	22.94	218	P	P	05 28 22.2	-0.2
	comp=Z,4.1nm,0.4s,baz=52,slow=9.4,SNR=53						
ASAR				S	S	05 32 26.7	+1.8
	comp=Z,4.1nm,1.0s,baz=31,slow=21,SNR=12						
ASAR	Alice Springs	22.94	218	P	P	05 28 20.9	-1.5
DZM	Mont Dzumac	23.29	135	P	P	05 28 25.7	-0.1
	comp=Z,21nm,0.8s,baz=262,slow=6.9,SNR=13						
DZM	Mont Dzumac	23.29	135	*e*P	P	05 28 25.2	-0.6
	comp=Z,63nm,1.1s						
DZM	Mont Dzumac	23.29	135	P	P	05 28 25.4	-0.3
DZM				IAmb	IAmb	05 28 27.4	
	comp=Z,38nm,1.2s						
ARMA	Armidale	24.55	175	P	P	05 28 36.6	-0.5
ARMA				IAmb	IAmb	05 28 40.0	
	comp=Z,35nm,1.4s						
SOEI	Soe	24.86	259	P	P	05 28 37.5	-2.6
SOEI				IAmb	IAmb	05 29 06.2	
	comp=Z,71nm,1.4s						
FITZ	Fitzroy Crossi	25.89	240	P	P	05 28 48.6	-0.7
	comp=Z,35nm,0.6s,baz=66,slow=7.2,SNR=126						
STKA	Stephens Creek	26.81	194	P	P	05 28 57.9	+0.5
	comp=Z,1.2nm,0.5s,baz=45,slow=12,SNR=4.9						
STKA	Stephens Creek	26.81	194	P	P	05 28 54.7	-2.7
FORT	Forrest	31.68	216	P	P	05 29 39.3	-1.3
FORT				IAmb	IAmb	05 29 43.6	
	comp=Z,12nm,0.7s						
TOO	Toolangi	31.73	185	P	P	05 29 40.5	-0.5
TOO				IAmb	IAmb	05 29 46.9	
	comp=Z,26nm,1.4s						
PSA00	Pilbara Seismi	32.30	238	P	P	05 29 44.7	-1.4
TAU	Tasmania Unive	36.93	182	P	P	05 30 25.4	-0.3
GIRL	Giralia	37.50	240	P	P	05 30 31.2	+0.3
SBUM	Sibu	37.70	282	P	P	05 30 31.2	-1.5
JOW	Kunigami	38.23	329	P	P	05 30 36.9	0.0
JOW				IAmb	IAmb	05 30 38.1	
	comp=Z,13nm,0.8s						
MORW	Morawa	38.80	230	P	P	05 30 39.5	-2.2
MORW				IAmb	IAmb	05 30 41.9	
	comp=Z,24nm,1.5s						
NACB	Ninganchiao	40.10	319	P	P	05 30 52.9	+0.3
URZ	Urewera	41.09	146	P	P	05 31 01.3	+0.8
	comp=Z,5.6nm,0.7s,baz=307,slow=20,SNR=1.3						
THZ	Tophouse	41.58	153	P	P	05 31 04.7	+0.1
THZ				IAmb	IAmb	05 31 26.7	
	comp=Z,26nm,1.4s						
MSWZ	Moikau Station	42.41	151	P	P	05 31 11.0	-0.3
JNU	Nakatsue	42.44	337	P	P	05 31 12.1	+0.5
	comp=Z,14nm,0.7s,baz=114,slow=4.1,SNR=13						
JNU	Nakatsue	42.44	337	IAmb	IAmb	05 31 12.8	
	comp=Z,17nm,0.7s						
MJAR	Matsushiro Arr	43.39	347	P	P	05 31 19.1	-0.1
	comp=Z,3.8nm,0.7s,baz=167,slow=6.9,SNR=7.6						
MJAR	Matsushiro Arr	43.39	347	IAmb	IAmb	05 31 20.4	
	comp=Z,2.5nm,0.8s						
MAJO	Matsushiro	43.39	347	P	P	05 31 19.6	+0.5
MAJO				IAmb	IAmb	05 31 20.4	
	comp=Z,16nm,1.1s						
MAT	Matsushiro	43.39	347	P	P	05 31 19.2	0.0
KSRS	Korea Array	47.39	337	P	P	05 31 51.4	+0.7
	comp=Z,5.4nm,0.7s,baz=154,slow=8.8,SNR=12						
NJ2	Nanjing	47.43	325	*e*P	P	05 31 52.8	+1.7
NJ2				pmax	pmax		
	comp=Z,46nm,0.5s						
USA0B	Ussuriysk Arra	52.15	344	P	P	05 32 27.9	+1.2
USA0B				IAmb	IAmb	05 32 28.7	
	comp=Z,7.8nm,0.9s						
USRK	Ussuriysk Ar.	52.15	344	P	P	05 32 27.7	+1.0
	comp=Z,3.5nm,0.7s,baz=168,slow=7.3,SNR=5.0						
XAN	Xi'an	54.90	319	P	P	05 32 46.5	-0.6
XAN				pP	pP	05 33 12.5	+1.2
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CMAR	Chiang Mai Arr	55.00	297	P	P	05 32 46.4	-1.6
	comp=Z,0.7nm,0.4s,baz=124,slow=5.5,SNR=4.2						
HHC	Hu-ho-hao-te	57.81	327	*e*P	P	05 33 08.3	+0.6
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,220nm,5.9s						
WMR	Waimanalo Ridg	58.79	61	P	P	05 33 14.3	-0.4
PEA0B	Petropavlovsk-	59.20	6	P	P	05 33 17.8	+0.8
PETK	Petropavlovsk-	59.20	6	P	P	05 33 17.9	+0.9
	comp=Z,4.3nm,0.6s,baz=162,slow=6.4,SNR=8.9						
PET	Petropavlovsk	59.22	7	P	P	05 33 17.0	0.0
LZH	Lanzhou	59.46	318	*e*P	P	05 33 21.8	+2.5
LZH				pP	pP	05 33 48.3	+4.2
LZH				sP	sP	05 33 58.8	+3.5
LZH				pmax	pmax		
	comp=Z,12nm,1.4s						
SHL	Shillong	63.67	302	P	P	05 33 45.9	-2.0
SONM	Songino Array	65.30	330	P	P	05 33 59.0	+1.1
	comp=Z,1.0nm,0.4s,baz=145,slow=5.5,SNR=16						
SONM	Songino Array	65.30	330	P	P	05 33 58.2	+0.3
WMQ	Urumqi	74.03	319	*e*P	P	05 34 53.3	+1.7
MK31	Makanchi Array	78.70	320	P	P	05 35 15.5	-2.4
MK31				IAmb	IAmb	05 35 40.7	
	comp=Z,9.6nm,1.5s						
MKAR	Makanchi Array	78.70	320	P	P	05 35 16.2	-1.7
	comp=Z,0.6nm,0.5s,baz=99,slow=8.1,SNR=11						
MKAR	Makanchi Array	78.70	320	P	P	05 35 15.9	-2.0
ZAA0	Zalesovo Array	79.99	327	P	P	05 35 23.0	-1.7
ZALV	Zalesovo Beam	79.99	327	P	P	05 35 22.7	-2.0
	comp=Z,1.7nm,0.6s,baz=108,slow=6.3,SNR=8.5						
ZALV	Zalesovo Beam	79.99	327	P	P	05 35 23.1	-1.6
BOOM	Boomskoye usch	81.64	314	P	P	05 35 33.5	-0.5
RC01	Rabbit Creek A	81.71	25	P	P	05 35 34.8	+1.1
RC01				IAmb	IAmb	05 35 45.2	
	comp=Z,30nm,1.4s						
ILAR	Eielson Array	84.56	23	P	P	05 35 46.3	-2.0
	comp=Z,0.6nm,0.7s,baz=230,slow=4.6,SNR=6.5						
KKAR	Karatay Array	85.66	314	P	P	05 35 54.3	-0.1
GERES	GERESS Array B	122.94	326	PKP	PKPdf	05 42 10.1	-1.2
	comp=Z,0.2nm,0.6s,baz=70,slow=3.2,SNR=2.4						
LPAZ	La Paz	137.13	121	PKP	PKPdf	05 42 41.2	+1.5
	comp=Z,2.5nm,1.0s,baz=210,slow=8.9,SNR=4.4						
TORD	Torodi Ar. Bea	147.03	285	PKPbc	PKPdf	05 42 57.2	+0.6
	comp=Z,1.9nm,0.3s,baz=87,slow=2.8,SNR=42						

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*TEH **27** 05:35:54.3, 31°.23N×50°.24E, h8km, ML3.5*

*KISR **27** 05:35:55.0±0.7, 31°.06N×50°.26E, h30km±262km, ML3.9*

*THR **27** 05:35:55.5±1.4, 31°.18N×50°.25E, h15km, ML3.3*

ISC 27 05:35:55.9±0.9, 31°.20N±0°.03×50°.20E±0°.04, h10km, n65, σ0s.91/68, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABEH	Behbahan	0.60	175	*e*Sg	Sg	05 36 16.1	+0.8
ABEH				*e*Pg	Pg	05 36 06.6	-0.8
AMIS	Naft Sefid	0.91	301	*e*Pg	Pg	05 36 11.2	-2.2
AMIS				*e*Sg	Sg	05 36 26.9	+1.6
KLNJ	Kolanjah	1.21	99	*e*Pg	Pb	05 36 16.0	-3.1
KLNJ				*e*Sg	Sb	05 36 35.1	+0.2
SHK1	Shahrekord	1.27	27	*e*Pg	Pn	05 36 17.4	-2.5
AHWZ	Ahwaz	1.34	276	*e*Sg	Sg	05 36 40.8	+1.8
IPIR	Pirpir	1.60	21	*e*Pg	Pn	05 36 24.7	+0.2
IPIR				*e*		05 36 26.0	
	comp=Z,5µm,0.4s						
IRAM	Ramesheh	1.96	71	*e*Pn	Pn	05 36 30.3	+0.9
IGAR	Gharneh	1.98	52	*e*Pn	Pn	05 36 30.3	+0.6
IGAR				*e*		05 37 05.5	
	comp=Z,3µm,0.9s						
KAZ1	Kazerun	2.00	141	*e*Pn	Pn	05 36 30.4	+0.6
IKLH	Kolahrood	2.42	29	*e*Pn	Pn	05 36 36.7	+1.0
IKLH				*e*		05 37 21.9	
	comp=Z,2µm,0.5s						
IZEF	Zefreh	2.48	46	*e*Pn	Pn	05 36 37.1	+0.5
IZEF				*e*		05 36 41.5	
	comp=Z,1µm,0.3s						
AHBU	AHRAM	2.51	157	*e*Pn	Pn	05 36 37.5	+0.7
SHI	Shiraz	2.53	127	*e*Pn	Pn	05 36 38.1	+0.9
SHI				*e*		05 37 22.1	
	comp=Z,2µm,0.4s						
KHMZ	Khomeyn	2.54	355	*e*Pn	Pn	05 36 38.7	+1.3
KHMZ				IAML		05 37 28.4	
	comp=N,100nm,0.6s						
KHMZ	Khomeyn	2.54	355	*e*Pn	Pn	05 36 38.7	+1.3
UMR	Umm Al-Rimmam	2.70	233	*e*P	Pn	05 36 39.3	-0.1
QAMS	Qamsar	2.73	21	*e*Pn	Pn	05 36 41.1	+1.1
NASN	Na'in	2.73	54	*e*Pn	Pn	05 36 40.8	+0.7
NASN	Na'in	2.73	54	*e*Pn	Pn	05 36 40.8	+0.7
MIB	Mutribah	2.83	241	*e*P	Pn	05 36 41.0	-0.1
MIB				*e*S	Sn	05 37 15.6	+0.2
MIB				IAML		05 37 23.9	
	comp=Z,504nm,0.6s						
IKFM	Kafar-mosalman	3.06	320	*e*Pn	Pn	05 36 44.9	+0.6
ISAD	Sadrabad	3.06	76	*e*Pn	Pn	05 36 45.3	+0.7
IDOB	Doab	3.10	327	*e*Pn	Pn	05 36 45.2	+0.2
QRN	Al-Qurain	3.14	220	*e*P	Pn	05 36 44.8	-0.7
QRN				*e*S	Sn	05 37 22.0	-1.1
QRN				IAML		05 37 25.5	
	comp=Z,346nm,0.3s						
KRSH	Karshahi	3.21	30	*e*Pn	Pn	05 36 47.8	+1.2
RDF	Al-Radifah	3.22	226	*e*P	Pn	05 36 45.9	-0.7
RDF				*e*S	Sn	05 37 24.7	-0.4
RDF				IAML		05 37 34.4	
	comp=Z,305nm,0.4s						
RST	Umm Al-Ruwaisa	3.24	239	*e*P	Pn	05 36 46.4	-0.5
HSAM	Samen	3.29	336	*e*Pn	Pn	05 36 48.4	+0.6
HSAM				*e*		05 37 46.9	
	comp=Z,1µm,0.8s						
ASAO	Ashtian	3.35	358	*e*Pn	Pn	05 36 49.7	+1.2
ASAO				IAML		05 37 51.0	
	comp=N,50nm,1.0s						
ASAO				IAML		05 37 59.6	

	comp=E,50nm,0.7s						
ASAO	Ashtian	3.35	358	ePn	Pn	05 36 49.7	+1.2
GHVR	GHOM	3.40	15	ePn	Pn	05 36 50.2	+1.2
GHVR				IAML		05 37 56.2	
	comp=E,31nm,0.6s						
GHVR	GHOM	3.40	15	ePn	Pn	05 36 50.3	+1.2
ISFB	Sefidab	3.59	28	ePn	Pn	05 36 51.9	+0.3
ANAR	Anarak	3.59	55	ePn	Pn	05 36 52.0	+0.2
IQOM	Qom	3.71	11	ePn	Pn	05 36 53.8	+0.3
HAGD	Aghdareh	3.72	346	ePn	Pn	05 36 53.8	+0.1
HAGD				e		05 38 01.8	
	comp=Z,892nm,0.9s						
ICHK	Chekchek	3.73	73	ePn	Pn	05 36 54.1	+0.3
ICHK				e		05 37 48.7	
	comp=Z,610nm,0.5s						
GHIR	Ghir-Karzin	3.78	139	ePn	Pn	05 36 54.5	+0.1
GHIR				IAML		05 38 02.2	
	comp=N,48nm,0.6s						
GHIR				IAML		05 38 20.4	
	comp=E,49nm,0.8s						
GHIR	Ghir-Karzin	3.78	139	ePn	Pn	05 36 54.5	+0.1
IBZA	Bozab	3.81	330	ePn	Pn	05 36 55.1	+0.2
YZKH	Yazd	3.92	71	ePn	Pn	05 36 56.8	+0.5
YZKH				IAML		05 37 45.3	
	comp=E,18nm,0.4s						
YZKH	Yazd	3.92	71	ePn	Pn	05 36 56.8	+0.5
IVRN	Varamin	4.00	18	ePn	Pn	05 36 57.7	+0.4
IALM	Almabolaq	4.03	336	ePn	Pn	05 36 57.5	-0.5
KER	Kermanshah	4.10	322	ePn	Pn	05 37 00.0	+1.3
IRAZ	Razeghan	4.20	357	ePn	Pn	05 37 00.0	-0.2
IGHG	Ghaleghazi	4.37	317	ePn	Pn	05 37 03.1	+0.5
IMHD	Mahdasht	4.49	5	ePn	Pn	05 37 04.7	+0.6
QABG	Abgarm-Qazvin	4.53	354	ePn	Pn	05 37 04.9	+0.2
ILIN	Lien	4.60	325	ePn	Pn	05 37 05.3	-0.4
ILIN				e		05 38 30.0	
	comp=Z,741nm,0.6s						
DAMV	Damavand	4.66	18	ePn	Pn	05 37 07.7	+1.1
DAMV	Damavand	4.66	18	ePn	Pn	05 37 07.7	+1.1
IDHR	Dehrash	4.74	318	ePn	Pn	05 37 07.9	+0.3
CHTH	Charan	4.76	9	ePn	Pn	05 37 09.6	+1.6
CHTH	Charan	4.76	9	ePn	Pn	05 37 09.6	+1.6
IFIR	Firoozkooh	4.92	25	ePn	Pn	05 37 10.6	+0.4
IGLO	Ghaloghah	6.09	29	ePn	Pn	05 37 27.0	+0.8
TABS	Tabas	6.34	65	ePn	Pn	05 37 30.0	+0.5
TABS	Tabas	6.34	65	ePn	Pn	05 37 30.0	+0.5
SHRO	Shahrood	6.81	44	ePn	Pn	05 37 37.0	+1.1
SHRO	Shahrood	6.81	44	ePn	Pn	05 37 37.0	+1.1
BSRN	Basiran	7.66	82	ePn	Pn	05 37 47.3	-0.3
BSRN	Basiran	7.66	82	ePn	Pn	05 37 47.3	-0.3
SHRT	Shahrakht	8.87	71	ePn	Pn	05 38 09.8	+5.6
SHRT	Shahrakht	8.87	71	ePn	Pn	05 38 09.8	+5.6

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*NERS **27** 05:40:46.3±0.0, 64°.85N×157°.79E, h0^{km}*

*IDC **27** 05:40:49.5±0.7, 65°.13N×157°.29E, h0^{km}, mb3.8/20, mb1 4.1/22, mb1mx4.0/44, mbtmp3.9/22, ML6.2/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/45, Error ellipse: s-maj=16.8km s-min=11.2km az=143.0*

ISC 27 05:40:50.0±0.5**, 65°.00N**±0°.05×**157°.31E**±0°.06**, h10^{km}, n29, σ2^{s}63**/37**, mb3.9**/19**, 2D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OMS	Omsukchan	2.59	196	⇓iPg	Pn	05 41 32.8	+0.9
OMS				Pgmax		05 41 33.3	
	360nm,0.3s						
OMS				eSg	Sn	05 42 04.3	+0.9
OMS				Sgmax		05 42 05.4	
	3µm,0.4s						
OMS				Sgmax		05 42 05.4	
	1µm,0.3s						
SEY	Seymchan	3.01	229	Pn	Pn	05 41 37.2	-0.5
	12nm,0.3s,baz=72,slow=11,SNR=182						
SEY				Pg	Pb	05 41 43.9	+0.3
	87nm,0.3s,baz=48,slow=19,SNR=43						
SEY				Lg	Lg	05 42 24.8	
	167nm,0.3s,baz=314,slow=13,SNR=9.2						
SEY	Seymchan	3.01	229	iP	Pn	05 41 37.1	-0.5
SEY				ePg	Pb	05 41 43.6	+0.1
SEY				Pgmax		05 41 48.6	
	130nm,0.4s						
SEY				eSg	Sb	05 42 22.6	+2.3
SEY				Sgmax		05 42 31.6	
	820nm,0.2s						
SUUS	Susuman	4.62	245	⇓iP	Pn	05 42 01.2	+1.5
SUUS				Pmax		05 42 02.2	
	90nm,0.3s						
SUUS				eSg	Sg	05 43 14.7	-3.3
SUUS				Sgmax		05 43 29.3	
	520nm,0.7s						
BILL	Bilibino	4.70	46	eP	Pn	05 42 02.1	+1.2
BILL				eSg	Sg	05 43 13.6	-7.2
MA2	Magadan	6.24	212	eP	Pn	05 42 20.7	-1.3
MA2				eS	Sn	05 43 31.9	-1.4
MA2				eSg	Sg	05 44 02.6	-7.5
NMA2	New Magadan St	6.26	212	eP	Pn	05 42 21.1	-1.1
NMA2				Pgmax		05 42 22.0	
	30nm,0.2s						
NMA2				eSg	Sg	05 44 04.1	-6.5
NMA2				Sgmax		05 44 21.0	
	660nm,0.8s						
PETK	Petropavlovsk-	11.93	179	LR	LR	05 48 09.7	
	comp=Z,77nm,21.5s,baz=349,slow=36						
TIXI	Tiksi	12.32	315	Pn	Pn	05 43 45.9	+0.7
	5.4nm,0.3s,baz=117,slow=17,SNR=68						
TIXI				Sn	Sn	05 45 56.9	-5.4
	0.6nm,0.3s,baz=158,slow=19,SNR=1.9						
TIXI				Lg	Lg	05 47 17.6	
	baz=140,slow=15,SNR=3.4						
KLR	Kul'dur	20.79	233	P	Pn	05 45 33.3	-0.1
	1.7nm,0.5s,baz=20,slow=14,SNR=4.4						
ILAR	Eielson Array	23.04	65	P	P	05 45 53.8	-1.1
	1.0nm,0.7s,baz=284,slow=7.9,SNR=10						
USRK	Ussuriysk Ar.	25.15	226	P	P	05 46 17.0	+2.0
	2.4nm,0.8s,baz=14,slow=13,SNR=3.0						
INK	Inuvik	26.29	52	P	P	05 46 26.3	+1.2
	2.8nm,1.0s,baz=294,slow=16,SNR=7.0						
SONM	Songino Array	31.85	262	P	P	05 47 17.5	+2.7
	1.6nm,1.0s,baz=40,slow=7.7,SNR=6.4						
YKA	Yellowknife Ar	36.06	52	P	P	05 47 51.1	+0.1
	0.2nm,0.5s,baz=308,slow=8.0,SNR=5.7						
ZALV	Zalesovo Beam	36.32	288	P	P	05 47 53.6	+0.3
	0.3nm,0.3s,baz=74,slow=6.3,SNR=3.6						
ARCES	ARCESS Array B	41.60	337	P	P	05 48 36.8	-0.6
	7.4nm,1.1s,baz=24,slow=9.3,SNR=4.4						
MKAR	Makanchi Array	42.84	283	P	P	05 48 49.2	+1.4
	0.2nm,0.5s,baz=39,slow=7.8,SNR=1.9						
FINES	FINESS Array B	48.75	331	P	P	05 49 34.3	+0.1
	2.0nm,0.6s,baz=28,slow=8.6,SNR=12						
NOA	NORSAR Array B	51.74	340	P	P	05 49 55.8	-1.1
	2.4nm,0.8s,baz=17,slow=7.5,SNR=4.2						
PDAR	Pinedale Array	53.46	66	P	P	05 50 11.4	+1.3
	0.5nm,0.7s,baz=0.0,slow=3.4,SNR=5.0						
NVAR	Mina Array Bea	53.63	76	P	P	05 50 12.9	+1.5
	0.7nm,0.8s,baz=314,slow=8.4,SNR=4.0						
AKASG	Malin Array Be	57.86	324	P	P	05 50 41.3	0.0
	0.7nm,0.5s,baz=25,slow=7.3,SNR=3.9						
KBZ	Khabaz	60.25	311	P	P	05 50 59.0	+1.2
	1.4nm,0.3s,baz=54,slow=1.7,SNR=5.1						
GERES	GERESS Array B	63.02	334	P	P	05 51 16.6	-0.1
	0.5nm,0.7s,baz=36,slow=5.0,SNR=6.3						
BRTR	Keskin Array B	66.76	316	P	P	05 51 41.9	+0.6
	0.6nm,0.7s,baz=81,slow=3.9,SNR=4.0						
ESDC	Sonseca Array	74.63	345	P	P	05 52 29.2	+0.2
	0.9nm,1.0s,baz=5.7,slow=5.5,SNR=5.2						
WRA	Warramunga Arr	86.50	202	P	P	05 53 34.5	+1.9
	1.7nm,1.0s,baz=9.7,slow=5.7,SNR=5.0						
ASAR	Alice Springs	90.22	201	P	P	05 53 52.0	+1.8
	0.5nm,0.8s,baz=19,slow=5.9,SNR=3.3						

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*MOS **27** 06:19:18.8±0.8, 42°.33N×144°.35E, h56^{km}, mb4.2/1, Error ellipse: s-maj=19.5km s-min=9.6km az=75.7*

*SKHL **27** 06:19:23.9±0.1, 42°.70N×144°.40E, h76^{km}±2^{km}, mb4.5/3*

*JMA **27** 06:19:23.7±0.1, 42°.76N×144°.36E, h67^{km}±1^{km}, M3.4*

*IDC **27** 06:19:23.8±6.0, 42°.55N×144°.29E, h74^{km}±40^{km}, mb3.3/8, mb1 3.6/9, mb1mx3.2/69, mbtmp3.6/9, ML2.7/1, MS2.2/1, Ms1 2.2/1, ms1mx2.1/21, Error ellipse: s-maj=55.7km s-min=20.1km az=177.0*

ISC 27 06:19:23.5±0.9**, 42°.65N**±0°.06×**144°.41E**±0°.03**, h65^{km}**±6^{km}**, n47, σ0^{s}99**/61**, mb3.4**/8**, 8C-1D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAK	Akkeshi	0.41	31	P	Pn	06 19 34.8	-0.1
JAK				eS	Sn	06 19 43.1	-0.1
AKK	Akkeshi	0.49	40	eP	Pn	06 19 35.7	+0.1
AKK				eS	Sn	06 19 44.1	-0.5
JOB	Onbets	0.50	301	⇑P	Pn	06 19 35.7	-0.1
JOB				eS	Sn	06 19 44.3	-0.5
JKHN	Kushirohamanak	0.70	51	P	Pn	06 19 38.2	+0.2
JCH	Churui	0.78	268	⇓P	Pn	06 19 39.0	+0.1
JCH				eS	Sn	06 19 49.8	-0.4
JAR	Ashorobuto	0.81	324	⇑P	Pn	06 19 38.4	-0.8
JAR				eS	Sn	06 19 49.1	-1.8
JNK	Nakash	0.97	13	⇑P	Pn	06 19 40.2	-1.0
JNK				eS	Sn	06 19 52.7	-1.7
NMR	Nemuro--Hokkai	1.21	53	⇑iPN	Pn	06 19 43.6	-0.7
NMR				eS	Sn	06 19 58.3	-1.6
NMR	Nemuro--Hokkai	1.21	53	iP	Pn	06 19 43.6	-0.7
NMR				eS	Sn	06 19 58.3	-1.6
NEM2	Nemuro 2	1.21	53	P	Pn	06 19 43.6	-0.8
NEM2				eS	Sn	06 19 58.9	-1.1
JNBK	Urakawa-nobuka	1.28	254	P	Pn	06 19 45.2	-0.1
GLVR	Golovnino	1.36	36	ePN	Pn	06 19 46.1	-0.2
GLVR				eS	Sn	06 20 03.1	-0.4
GLVR				pmax	pmax		
	comp=N,147nm,0.3s						
GLVR				pmax	pmax		
	comp=E,151nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,209nm,0.3s						
GLVR				smax	smax		
	comp=N,1µm,0.4s						
GLVR				smax	smax		
	comp=E,1µm,0.4s						
GLVR	Golovnino	1.36	36	eP	Pn	06 19 46.1	-0.2
GLVR				AMB	AMB	06 19 48.0	
	comp=E,210nm,0.3s						
GLVR				eS	Sn	06 20 02.7	-0.8
GLVR				A	A	06 20 04.0	
	comp=E,1µm,0.4s						
GLVR				A	A	06 20 04.0	
	comp=E,1µm,0.4s						
JTKR	Abashiri--Toko	1.38	345	⇑P	Pn	06 19 46.2	-0.4
JTKR				eS	Sn	06 20 03.2	-0.7
JRA	Rausu	1.39	22	P	Pn	06 19 46.4	-0.4
JRA				eS	Sn	06 20 03.1	-1.2
JFR	Furan	1.44	292	P	Pn	06 19 46.8	-0.6
JFR				eS	Sn	06 20 03.6	-1.8
JBT2	Biratori 2	1.52	276	P	Pn	06 19 47.7	-0.8
JMP	Maruseppu	1.56	331	⇑P	Pn	06 19 48.3	-0.8
JMP				eS	Sn	06 20 06.6	-1.9
RUSJ	Misakicho	1.58	22	⇑iPN	Pn	06 19 49.6	+0.3
RUSJ				eS	Sn	06 20 08.8	0.0
JKK2	Kamakawa 2	1.73	316	⇑P	Pn	06 19 50.9	-0.4
YUK	Yuzh-Kuril'sk	1.74	37	ePN	Pn	06 19 51.7	+0.3
YUK				iS	Sn	06 20 12.5	-0.2
YUK				pmax	pmax		
	comp=Z,231nm,0.2s						
YUK				smax	smax		
	comp=N,814nm,0.5s						
YUK				smax	smax		
	comp=E,635nm,0.5s						
YUK	Yuzh-Kuril'sk	1.74	37	eP	Pn	06 19 51.8	+0.3
YUK				AMB	AMB	06 19 53.0	
	comp=E,230nm,0.3s						
YUK				iS	Sn	06 20 12.0	-0.7
YUK				A	A	06 20 12.9	
	comp=E,810nm,0.5s						
YUK				A	A	06 20 12.9	
	comp=E,640nm,0.5s						
JKA	Kamikawa-asahi	1.98	319	eP	Pn	06 19 54.7	0.0
ASAJ	Asahikawa	1.98	319	P	Pn	06 19 54.6	0.0
	comp=E,20nm,0.3s,baz=147,slow=9.7,SNR=53						
ASAJ				S	Sn	06 20 20.3	+1.8
	comp=E,9.9nm,0.3s,baz=209,slow=23,SNR=10.0						
SHO	Shikotan	2.15	54	ePN	Pn	06 19 56.3	-0.6
SHO				eS	Sn	06 20 19.7	-2.8
SHO				pmax	pmax		
	comp=Z,14nm,0.3s						
SHO				smax	smax		
	comp=N,127nm,0.3s						
SHO				smax	smax		
	comp=E,232nm,0.3s						
SHO	Shikotan	2.15	54	eP	Pn	06 19 56.6	-0.3
SHO				AMB	AMB	06 19 59.7	
	comp=E,20nm,0.2s						
SHO				eS	Sn	06 20 21.2	-1.3
SHO				A	A	06 20 23.0	
	comp=E,130nm,0.3s						
SHO				A	A	06 20 23.0	
	comp=E,200nm,0.3s						
YSS	Yuzh-Sakhalins	4.47	345	ePN	Pn	06 20 28.9	+0.3
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS	Yuzh-Sakhalins	4.47	345	eP	Pn	06 20 28.9	+0.3
YSS				AMB	AMB	06 20 29.4	
	comp=Z,20nm,0.6s						
MJAR	Matsushiro Arr	7.75	220	LR	LR	06 24 34.2	
	comp=Z,18nm,20.0s,baz=335,slow=41						
PETK	Petropavlovsk-	13.72	36	P	Pn	06 22 37.0	+2.1
	comp=Z,0.2nm,0.3s,baz=203,slow=11,SNR=2.0						
PETK	Petropavlovsk-	13.72	36	P	Pn	06 22 37.0	+2.1
SONM	Songino Array	27.07	294	P	P	06 24 59.8	-0.1
	comp=Z,0.6nm,0.6s,baz=71,slow=8.9,SNR=4.7						
H11N2	WAKE ISLAND Hy	29.69	133	T	T	06 56 44.0	
	baz=326,slow=75,SNR=23						
H11N1	WAKE ISLAND Hy	29.70	133	T	T	06 56 43.1	
	baz=326,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	29.70	133	T	T	06 56 45.6	
	baz=326,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	30.59	135	T	T	06 57 58.5	
	baz=327,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	30.60	135	T	T	06 57 50.7	
	baz=327,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	30.61	135	T	T	06 58 03.4	
	baz=327,slow=76,SNR=13						
MKAR	Makanchi Array	43.33	298	P	P	06 27 17.9	-1.0
	comp=Z,0.4nm,0.7s,baz=85,slow=15,SNR=4.6						
ILAR	Eielson Array	43.55	35	P	P	06 27 20.9	+0.4
	comp=Z,0.6nm,0.6s,baz=286,slow=10,SNR=8.8						
KURK	Kurchatov	44.49	304	P	P	06 27 27.9	-0.2
KURK	Kurchatov	44.49	304	eP	P	06 27 27.9	-0.2
KURBB	Kurchatov Arra	44.57	304	P	P	06 27 27.9	-0.9
	comp=Z,0.5nm,0.5s,baz=73,slow=9.1,SNR=4.6						
YKA	Yellowknife Ar	57.82	33	P	P	06 29 08.0	+0.3
	comp=Z,0.1nm,0.4s,baz=306,slow=7.6,SNR=2.6						
FINES	FINESS Array B	64.93	332	P	P	06 29 54.8	-0.9
	comp=Z,5.7nm,1.1s,baz=46,slow=8.2,SNR=9.3						
NVAR	Mina Array Bea	69.86	56	P	P	06 30 28.5	+1.0
	comp=Z,0.3nm,0.7s,baz=300,slow=9.2,SNR=2.2						
PDAR	Pinedale Array	72.14	48	P	P	06 30 41.2	-0.1
	comp=Z,0.2nm,0.4s,baz=338,slow=1.9,SNR=3.7						

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*IDC **27** 06:21:32.7±0.6, 24°.31N×125°.06E, h0^{km}, mb4.2/23, mb1 4.3/25, mb1mx4.0/64, mbtmp4.1/25, ML3.1/3, MS3.5/14, Ms1 3.5/14, ms1mx3.1/51, Error ellipse: s-maj=19.2km s-min=14.7km az=72.0*

*BJI **27** 06:21:35.0±0.0, 24°.30N×125°.00E, h16^{km}, mB4.8/17, mb4.4/31, Ms4.3/3, Ms7 4.1/3*

*NEIC **27** 06:21:37.5±1.6, 24°.21N±0°.08×125°.18E±0°.05, h33^{km}±4^{km}, mb4.6/30, Error ellipse: s-maj=12.0km s-min=6.7km az=174.0*

*JMA **27** 06:21:37.2±0.2, 24°.28N×125°.18E, h35^{km}, M3.9*

*NIED **27** 06:21:37.3, 24°.28N×125°.18E, h35^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.09; $M_{\theta\theta}$-1.09; $M_{\phi\phi}$0.01; $M_{r\theta}$2.07; $M_{\theta\phi}$-0.80; $M_{\phi r}$1.55; Fault plane solution: $M_0$2.90000×10^{15} NP1:ϕ_s53.00000°, δ77.00000°, λ84.00000°. NP2:ϕ_s257.00000°, δ14.00000°, λ113.00000°.*

ISC 27 06:21:36.7±1.3**, 24°.24N**±0°.06×**125°.18E**±0°.04**, h29^{km}**±8^{km}**, n105, σ1^{s}03**/103**, mb4.3**/40**, MS3.3**/12**, 1C-1D, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMJ2	Miyako jima3	0.52	15	P	Pb	06 21 47.2	-0.3
JMJ2				S	Sb	06 21 54.7	-0.1
JOGS	Gusukube	0.56	22	P	Pb	06 21 48.0	-0.1
JOGS				iS	Sb	06 21 56.3	+0.4
JIRB	Irabujima	0.59	360	P	Pb	06 21 47.9	-0.7
JIRB				S	Sb	06 21 56.5	-0.2
JTJ	Tarama	0.59	313	P	Pb	06 21 48.6	0.0
JTJ				eS	Sb	06 21 56.3	-0.4
JIKM	Ikemajima	0.69	5	P	Pb	06 21 49.6	-0.6
JIKM				eS	Sb	06 21 59.2	-0.2
JISG	Ishigakijimahi	0.86	294	P	Pn	06 21 52.6	-0.3
JISG				eS	Sb	06 22 03.9	-0.5
JIJ	Ishigaki jima	0.95	278	P	Pb	06 21 54.4	-0.3
JIJ				eS	Sb	06 22 07.4	+0.5
JKRS	Kuro-shima	1.07	270	P	Pb	06 21 57.1	+0.5
HATJ	Hateruma jima	1.27	262	P	Pb	06 21 59.4	-0.6
HATJ				eS	Sb	06 22 15.7	-0.2
IRIF	Iriomote-Funau	1.32	274	P	Pb	06 22 00.4	-0.5
IRIF				eS	Sb	06 22 19.2	+1.7
YOJ	Yonaguni jima	1.99	277		Pn	06 22 08.7	+0.3
NACB	Ninganchiao	3.27	270		Pn	06 22 26.0	0.0
YHNB	Yeheng	3.49	278		Pn	06 22 31.0	+1.8
YULB	Yu-li	3.65	257	Pn	Pn	06 22 30.8	-0.5
JOW	Kunigami	3.81	47	Pn	Pn	06 22 33.4	0.0
	2.9nm,0.3s,baz=138,slow=15,SNR=16						
JOW	Kunigami	3.81	47	Pn	Pn	06 22 33.8	+0.4
SSLB	Suanglung	3.89	264	Pn	Pn	06 22 35.3	+0.8
TWG	Pinlang	4.02	250		Pn	06 22 35.6	-0.7
TPUB	Ta-pu	4.27	258		Pn	06 22 41.4	+1.6
NJ2	Nanjing	9.57	326	eP	Pn	06 23 53.0	+0.4
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
KSRS	Korea Array	13.38	9	Pn	Pn	06 24 44.5	-0.2
	0.1nm,0.3s,baz=175,slow=11,SNR=2.4						
KSRS				LR	LR	06 30 12.8	
	comp=Z,86nm,19.9s,baz=186,slow=39						
MAT	Matsushiro	16.61	39	P	P	06 25 30.6	+0.8
MJAR	Matsushiro Arr	16.62	39	Pn	P	06 25 28.8	-1.0
	0.1nm,0.3s,baz=234,slow=10,SNR=5.1						
MJAR	Matsushiro Arr	16.62	39		Pn	06 25 27.3	-0.2
DAV	Davao City (W)	17.07	179	LR	LR	06 33 28.5	
	comp=Z,70nm,18.7s,baz=20,slow=42						
XAN	Xi'an	17.21	308	⇑P	P	06 25 37.5	+1.0
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN				LR	LR		
	comp=E,370nm,13.1s						
JMM	Marumori	19.03	41	P	Pn	06 25 58.2	+0.9
JMM				IAmb	IAmb	06 26 27.3	
	comp=Z,81nm,1.4s						
HHC	Hu-ho-hao-te	20.11	329	eP	P	06 26 09.0	+0.8
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,310nm,5.4s						
KMI	Kunming	20.41	277	⇓P	P	06 26 12.5	+0.8
KMI				pP	pP	06 26 18.0	-1.3
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
USRK	Ussuriysk Ar.	20.68	14	LR	LR	06 33 39.9	
	comp=Z,80nm,19.4s,baz=190,slow=35						
GUMO	Guam	21.40	116	LR	LR	06 32 26.8	
	comp=Z,86nm,20.5s,baz=96,slow=30						
LZH	Lanzhou	21.85	308	eP	P	06 26 34.8	+7.7
LZH				pP	sP	06 26 41.5	+3.1
LZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ASAJ	Asahikawa	24.42	31	LR	LR	06 36 05.0	
	comp=Z,48nm,20.0s,baz=322,slow=36						
SBUM	Sibu	25.02	212	P	P	06 26 56.5	-1.9
CMAR	Chiang Mai Arr	25.08	262	P	P	06 26 59.9	+1.0
	comp=Z,0.7nm,0.3s,baz=68,slow=7.7,SNR=1.9						
CMAR				LR	LR	06 37 33.9	
	comp=Z,53nm,18.9s,baz=52,slow=38						
CMAR	Chiang Mai Arr	25.08	262	P	P	06 26 58.3	-0.6
KLR	Kul'dur	25.48	10	LR	LR	06 36 46.5	
	comp=Z,59nm,19.6s,baz=320,slow=36						
SIJI	Sorong	25.65	166	LR	LR	06 35 03.4	
	comp=Z,99nm,21.8s,baz=242,slow=32						
GTA	Gaotai	26.21	311	eP	P	06 27 08.5	-0.6
GTA				pP	pwP	06 27 18.5	+1.1
GTA				sP	sP	06 27 22.0	+1.5
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SONM	Songino Array	27.88	332	P	P	06 27 22.8	-1.2
	comp=Z,0.6nm,0.3s,baz=146,slow=10,SNR=5.6						
SONM				LR	LR	06 40 06.7	
	comp=Z,175nm,18.4s,baz=218,slow=40						
SONM	Songino Array	27.88	332	P	P	06 27 23.1	-0.9
WMQ	Urumqi	36.29	312	eP	P	06 28 39.0	+1.3
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
PETK	Petropavlovsk-	37.84	32	P	P	06 28 50.7	+0.1
	comp=Z,8.2nm,1.0s,baz=203,slow=14,SNR=3.3						
PETK	Petropavlovsk-	37.84	32	P	P	06 28 51.4	+0.8
MK31	Makanchi Array	40.87	314	P	P	06 29 16.0	-0.1
MKAR	Makanchi Array	40.87	314	P	P	06 29 15.8	-0.3
	comp=Z,3.5nm,0.4s,baz=102,slow=9.7,SNR=93						
MKAR				PcP	PcP	06 31 16.5	+0.1
	comp=Z,0.4nm,0.7s,baz=92,slow=4.3,SNR=2.1						
MAKZ	Makanchi	41.08	314	P	P	06 29 17.8	0.0
MAKZ				IAmb	IAmb	06 29 18.9	
	comp=Z,6.1nm,0.9s						
FITZ	Fitzroy Crossi	42.08	179	P	P	06 29 26.9	+0.8
	comp=Z,9.5nm,1.2s,baz=282,slow=8.5,SNR=3.2						
ZAA0	Zalesovo Array	42.23	325	P	P	06 29 25.8	-1.2
ZALV	Zalesovo Beam	42.23	325	P	P	06 29 25.7	-1.3
	comp=Z,2.1nm,0.4s,baz=110,slow=9.0,SNR=11						
ZALV				LR	LR	06 48 41.7	
	comp=Z,72nm,18.6s,baz=82,slow=39						
KDJ	Kajisay	43.34	306	P	P	06 29 38.0	+1.4
KDJ				IAmb	IAmb	06 29 38.0	
	comp=Z,5.1nm,0.8s						
KSH	Kashi	43.94	302	P	P	06 29 45.8	+4.5
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	Kurchatov	44.42	319	P	P	06 29 44.6	-0.2
KURK				IAmb	IAmb	06 29 46.1	
	comp=Z,7.0nm,1.1s						
KURBB	Kurchatov Arra	44.45	319	P	P	06 29 43.9	-1.1
	comp=Z,1.2nm,0.4s,baz=98,slow=8.8,SNR=13						
WB0	Warramunga Arr	44.65	168	P	P	06 29 47.4	+0.5
WB0				IAmb	IAmb	06 29 55.4	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	44.81	168	P	P	06 29 48.6	+0.4
	comp=Z,1.6nm,0.5s,baz=348,slow=8.9,SNR=11						
WRA	Warramunga Arr	44.81	168	P	P	06 29 49.6	+1.4
AAK	Ala-Archa	45.38	307	P	P	06 29 52.3	-0.5
	comp=Z,0.7nm,0.4s,baz=138,slow=3.1,SNR=3.7						
AAK	Ala-Archa	45.38	307	P	P	06 29 52.8	0.0
GIRL	Giralia	47.80	194	P	P	06 30 10.6	-1.0
KKAR	Karatay Array	48.34	307	P	P	06 30 17.2	+1.4
ASAR	Alice Springs	48.37	169	P	P	06 30 17.4	+1.4
	comp=Z,0.8nm,0.6s,baz=354,slow=14,SNR=12						
ASAR	Alice Springs	48.37	169	P	P	06 30 15.8	-0.2
CHGR	Chuyangaron	49.20	301	P	P	06 30 21.8	-0.7
CHGR				IAmb	IAmb	06 30 23.8	
	comp=Z,7.8nm,0.7s						
KBL	Kabul	49.43	296	P	P	06 30 25.3	+0.9
KBL				IAmb	IAmb	06 30 26.4	
	comp=Z,7.0nm,0.7s						
BRVK	Borovoye	50.03	320	P	P	06 30 28.7	+0.2
BRVK				IAmb	IAmb	06 30 38.5	
	comp=Z,2.7nm,1.1s						
ABKAR	Akbulak array	56.02	314	P	P	06 31 12.1	-0.5
ABKAR				IAmb	IAmb	06 31 13.7	
	comp=Z,8.7nm,0.7s						
ARU	Arti	57.27	323	P	P	06 31 21.1	-0.3
	comp=Z,0.9nm,0.5s,baz=43,slow=2.4,SNR=6.5						
AKTO	Aktyubinsk	57.29	316	P	P	06 31 21.4	-0.2
	comp=Z,1.2nm,0.5s,baz=113,slow=17,SNR=8.2						
GEYT	Alibeck	57.91	301	P	P	06 31 26.8	+0.5
	comp=Z,1.3nm,0.4s,baz=61,slow=12,SNR=4.4						
GEYT	Alibeck	57.91	301	IAmb	IAmb	06 31 29.2	
	comp=Z,4.3nm,0.7s						
TTA	Tatalina	63.64	30	P	P	06 32 04.2	-0.8
BELG	Belogornoye	63.69	318	P	P	06 32 05.2	-0.1
	comp=Z,15nm,0.8s,baz=283,slow=2.7,SNR=5.3						
IMAR	Indian Mountai	64.50	27	P	P	06 32 13.3	+2.8
CAST	Castle Rocks	65.39	29	P	P	06 32 17.1	+0.8
CAST				IAmb	IAmb	06 32 30.5	
	comp=Z,5.6nm,1.0s						
KTH	Kantishna Hill	65.89	29	P	P	06 32 22.8	+3.2
KTH				IAmb	IAmb	06 32 48.6	
	comp=Z,8.4nm,1.4s						
TOLK	Toolik Lake Re	65.95	24	P	P	06 32 22.5	+2.7
TOLK				IAmb	IAmb	06 32 33.5	
	comp=Z,4.4nm,0.8s						
I23K	Minto, Yukon-K	66.39	27	P	P	06 32 24.4	+1.7
RND	Reindeer	66.83	29	P	P	06 32 25.5	-0.1
MDM	Murphy Dome	66.89	28	P	P	06 32 27.3	+1.4
MDM				IAmb	IAmb	06 32 40.1	
	comp=Z,4.4nm,0.8s						

ILAR	Eielson Array	67.48	28	P	P	06 32 31.0	+1.4
	comp=Z,0.5nm,0.6s,baz=295,slow=9.0,SNR=11						
ILAR	Eielson Array	67.48	28	P	P	06 32 29.1	-0.5
GNI	Garni	67.76	305	LR	LR	07 08 29.9	
	comp=Z,18nm,18.9s,baz=324,slow=42						
BMAR	Burnt Mountain	67.97	25	P	P	06 32 32.9	+0.2
KBZ	Khabaz	68.28	309	P	P	06 32 35.2	+0.2
	comp=Z,1.2nm,0.3s,baz=32,slow=9.5,SNR=1.8						
BCAR	Beaver Creek A	70.04	29	P	P	06 32 46.6	+1.0
FIA1	FINESS Array S	73.22	330	P	P	06 33 05.2	+0.5
FINES	FINESS Array B	73.22	330	P	P	06 33 04.5	-0.2
	comp=Z,4.7nm,0.6s,baz=61,slow=5.8,SNR=28						
FINES				LR	LR	07 09 02.7	
	comp=Z,174nm,18.9s,baz=50,slow=39						
FINES	FINESS Array B	73.22	330	P	P	06 33 05.1	+0.4
EUNU	Eureka	74.53	5	P	P	06 33 12.5	+0.3
AKASG	Malin Array Be	75.23	319	P	P	06 33 15.6	-1.1
	comp=Z,0.5nm,0.4s,baz=59,slow=6.2,SNR=4.6						
AKASG	Malin Array Be	75.23	319	IAmb	IAmb	06 33 23.6	
	comp=Z,0.9nm,0.9s						
BRTR	Keskin Array B	76.06	307	P	P	06 33 21.4	-0.4
	comp=Z,0.7nm,0.8s,baz=73,slow=4.8,SNR=2.8						
BRTR	Keskin Array B	76.06	307	P	P	06 33 21.9	+0.1
RES	Resolute Bay	78.00	10	P	P	06 33 31.6	-0.2
RES				IAmb	IAmb	06 33 43.5	
	comp=Z,2.7nm,0.9s						
THZ	Tophouse	79.14	146	P	P	06 33 38.1	-0.5
MLR	Muntele Rosu	79.21	315	LR	LR	07 14 33.3	
	comp=Z,39nm,18.3s,baz=312,slow=40						
HFS	Hagfors	79.27	332	P	P	06 33 39.3	+0.2
	comp=Z,3.3nm,0.7s,baz=87,slow=6.1,SNR=9.1						
NC300	NORSAR Array S	79.65	333	P	P	06 33 41.5	+0.3
NB2	NORSAR Subarra	79.85	333	P	P	06 33 41.8	-0.5
	comp=Z,2.4nm,0.9s,baz=61,slow=5.3						
NOA	NORSAR Array B	79.85	333	P	P	06 33 41.7	-0.7
	comp=Z,1.2nm,0.7s,baz=57,slow=5.5,SNR=6.9						
YKA	Yellowknife Ar	81.47	24	P	P	06 33 51.1	+0.2
	comp=Z,1.0nm,0.7s,baz=304,slow=5.2,SNR=11						
VRAC	Vranov	83.21	321	LR	LR	07 13 50.2	
	comp=Z,51nm,19.5s,baz=24,slow=38						
GERES	GERESS Array B	85.08	322	P	P	06 34 09.2	-0.8
	comp=Z,0.5nm,0.6s,baz=72,slow=4.3,SNR=6.2						
GERES	GERESS Array B	85.08	322	P	P	06 34 09.6	-0.3

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*TEH **27** 06:47:15.1, 30°.02N×50°.43E, h8km, ML3.2*

*KISR **27** 06:47:16.3±0.8, 29°.93N×49°.99E, h176km±54km, ML3.4*

ISC 27 06:47:16.0±1.2, **29°.98N**±0°.05×**50°.33E**±0°.04, **h10**km, **n30**, σ**1**$\overset{s}{.}$**03**/32, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABEH	Behbahan	0.63	354	*e*Pg	Pg	06 47 27.6	-0.6
AHBU	AHRAM	1.39	143	*e*Pg	Pn	06 47 41.7	+0.3
KLNJ	Kolanjah	1.50	46	*e*Pg	Pn	06 47 41.9	-1.4
KLNJ				*e*		06 48 15.6	
	comp=Z,2µm,0.5s						
AMIS	Naft Sefid	1.91	332	*e*Pn	Pn	06 47 49.1	+0.5
SHI	Shiraz	1.92	99	*e*Pg	Pn	06 47 50.0	+1.0
SHI				*e*		06 48 23.0	
	comp=Z,2µm,0.9s						
IBRJ	Brojen	2.08	22	*e*Pn	Pn	06 47 52.4	+1.1
IBRJ				*e*		06 48 27.9	
	comp=Z,1µm,0.5s						
UMR	Umm Al-Rimmam	2.31	260	*e*P	Pn	06 47 55.6	+1.5
SHK1	Shahrekord	2.39	11	*e*Pn	Pn	06 47 56.4	+0.9
QRN	Al-Qurain	2.44	240	*e*P	Pn	06 47 56.6	+0.7
QRN				*e*S	Sb	06 48 28.1	-2.0
QRN				IAML		06 48 34.8	
	comp=Z,133nm,0.3s						
IRAM	Ramesheh	2.54	43	*e*Pn	Pn	06 47 58.5	+1.0
IRAM				*e*		06 47 59.6	
	comp=Z,3µm,0.2s						
MIB	Mutribah	2.61	267	*e*P	Pn	06 47 59.1	+0.9
MIB				*e*S	Sn	06 48 30.5	+0.6
MIB				IAML		06 48 45.4	
	comp=Z,187nm,0.6s						
RDF	Al-Radifah	2.64	247	*e*P	Pn	06 47 59.3	+0.6
IPIR	Pirpir	2.74	10	*e*Pn	Pn	06 48 01.9	+1.5
IPIR				*e*		06 48 55.6	
	comp=Z,517nm,0.8s						
IGAR	Gharneh	2.83	31	*e*Pn	Pn	06 48 02.0	+0.5
GHIR	Ghir-Karzin	2.87	125	*e*Pn	Pn	06 48 03.2	+1.3
RST	Umm Al-Ruwaisa	2.94	262	*e*P	Pn	06 48 03.2	+0.5
IZEF	Zefreh	3.37	30	*e*		06 48 11.2	
	comp=Z,941nm,0.2s						
IZEF				*e*Pn	Pn	06 48 09.6	+0.6
ISAD	Sadrabad	3.47	55	*e*Pn	Pn	06 48 11.2	+0.9
IKLH	Kolahrood	3.50	17	*e*Pn	Pn	06 48 11.8	+1.1
IKLH				*e*		06 48 13.8	
	comp=Z,396nm,0.2s						
QAMS	Qamsar	3.86	13	*e*Pn	Pn	06 48 17.2	+1.6
IMEH	Mehriz	3.95	68	*e*Pn	Pn	06 48 17.3	+0.4
IMEH				*e*		06 48 22.9	
	comp=Z,150nm,0.2s						
ICHK	Chekchek	4.16	56	*e*Pn	Pn	06 48 20.0	+0.2
ICHK				*e*		06 48 20.9	
	comp=Z,230nm,0.2s						
KRSH	Karshahi	4.27	21	*e*Pn	Pn	06 48 22.2	+1.0
ANAR	Anarak	4.32	41	*e*Pn	Pn	06 48 22.2	+0.3
YZKH	Yazd	4.37	56	*e*Pn	Pn	06 48 22.8	+0.2
ASAO	Ashtian	4.57	357	*e*Pn	Pn	06 48 27.2	+1.8
ISFB	Sefidab	4.65	20	*e*Pn	Pn	06 48 26.9	+0.5
HAGD	Aghdareh	4.94	349	*e*Pn	Pn	06 48 30.2	-0.3
IVRN	Varamin	5.14	13	*e*Pn	Pn	06 48 34.4	+1.3
ILIN	Lien	5.69	331	*e*Pn	Pn	06 48 40.7	-0.2
ILIN				*e*		06 48 45.5	
	comp=Z,169nm,0.2s						

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*TUL **27** 06:52:15.8±1.1, 36°.37N±0°.01×97°.06W±0°.01, h3km±7km, ML2.6, mb_Lg2.5/14(NEIC), Error ellipse: s-maj=1.6km s-min=1.5km az=178.0*

NEIC 27 06:52:16.2±1.1, **36°.371N**±0°.008×**97°.06W**±0°.01, **h3**km±7km, **Error ellipse: s-maj=1.7km s-min=0.8km az=126.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QUOK	Quay	0.35	125		Pg	06 52 23.1	+0.2
QUOK				Sg	Sg	06 52 27.9	+0.4
BLOK	Blackwell	0.41	343		Pg	06 52 24.2	+0.2
OK031	S. Brethren Rd	0.46	156	Pg	Pg	06 52 24.4	-0.5
OK031				Sg	Sg	06 52 31.5	+0.6
OK034	N. Norfolk Rd.	0.46	142	Pg	Pg	06 52 24.9	0.0
OK034				Sg	Sg	06 52 31.4	+0.5
OK030	Cody Creek RV	0.50	153	Pg	Pg	06 52 25.8	+0.1
OK030				Sg	Sg	06 52 32.7	+0.5
T35A	Sooner Cattle	0.70	39		Pg	06 52 29.7	0.0
T35A				Sg	Sg	06 52 39.1	+0.4
CROK	Carrier	0.75	280	Pg	Pg	06 52 30.5	-0.1
GC02	Grant County #	0.80	307	Pg	Pg	06 52 31.4	-0.2
GC02				Sg	Sg	06 52 42.1	+0.2
OK025	Westminster Rd	0.82	196		Pg	06 52 31.8	-0.1
BCOK	Bluff Creek, N	0.84	212		Pg	06 52 32.0	-0.3
BCOK				Sg	Sg	06 52 43.5	+0.4
KAN14	Manchester OK	0.93	309	Pg	Pg	06 52 33.8	-0.2
KAN14				Sg	Sg	06 52 46.3	+0.3
OKCFA	Oklahoma City	1.00	198		Pg	06 52 35.0	-0.4
OKCSW	OKLAHOMA CITY	1.01	198		Pg	06 52 35.2	-0.4
TUL1	Leonard	1.13	114		Pg	06 52 37.2	-0.6
FNO	Franklin	1.15	194	Pg	Pg	06 52 37.2	-0.9
KAN12	Harper NE Stat	1.19	321	IAmb_Lg		06 52 56.3	
	comp=Z,55nm,0.8s						
W35A	Tecumseh	1.23	173		Pg	06 52 38.5	-1.1
OK035	E0210 Rd and N	1.37	285	Pn	Pn	06 52 41.6	-0.6
U32A	Winter Ranch,	1.56	271		Pn	06 52 44.9	0.0
X34A	Smith Ranch, M	1.87	200	Pn	Pb	06 52 50.2	-0.9
U38A	Gravette	2.16	87		Pn	06 52 54.2	+1.2
X37A	Clayton	2.25	142	Pn	Pn	06 52 54.2	-0.1
HHAR	Hobbs	2.52	91		Pn	06 52 57.9	-0.2
HHAR				IAmb_Lg		06 53 35.6	
	comp=Z,16nm,0.8s						
S39A	Bolivar	3.27	65	IAmb_Lg		06 54 05.7	
	comp=Z,10nm,0.9s						
MIAR	Mount Ida	3.38	122	Pn	Pn	06 53 10.5	+0.7
U40A	Yellville	3.40	89		Pn	06 53 10.9	+0.8
MGMO	Mountain Grove	3.93	77	IAmb_Lg		06 54 22.2	
	comp=Z,9.9nm,0.9s						
X40A	Basin Creek Fa	3.93	117	Pn	Pn	06 53 16.7	-0.7
R40A	Maddies Statio	4.28	62	IAmb_Lg		06 54 32.4	
	comp=Z,12nm,0.8s						
P38A	Dawn	4.28	40	IAmb_Lg		06 54 43.2	
	comp=Z,9.1nm,1.0s						
P40A	Paris	5.07	50	IAmb_Lg		06 54 54.7	
	comp=Z,11nm,0.8s						
N38A	Joes South For	5.34	33	IAmb_Lg		06 55 07.8	
	comp=Z,11nm,0.8s						

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*JMA **27** 07:00:37.6±0.1, 24°.53N×122°.53E, h96km±2km, M3.8*

*IDC **27** 07:00:38.2±3.2, 24°.72N×122°.53E, h103km±29km, mb3.6/18, mb1 3.8/20, mb1mx3.5/64, mbtmp4.0/20, MS2.9/1, Ms1 3.1/1, ms1mx2.5/30, Error ellipse: s-maj=23.7km s-min=14.0km az=67.0*

*NEIC **27** 07:00:38.1±2.0, 24°.62N±0°.07×122°.58E±0°.06, h97km±6km, mb4.6/16, ML4.6(TAP), Error ellipse: s-maj=9.9km s-min=7.1km az=192.0*

*TAP **27** 07:00:38.2, 24°.57N×122°.59E, h94km, ML4.8, C*

ISC 27 07:00:37.2±0.6, **24°.58N**±0°.03×**122°.60E**±0°.02, **h96**km±4km, **n193**, σ**1**$\overset{s}{.}$**39**/302, **mb4.1**/26, **47C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.34	113	P	Pn	07 00 52.3	+0.8
JYNG				*e*S	Sn	07 01 02.9	+0.8
YOJ	Yonaguni jima	0.39	108	⇑*i*P	Pn	07 00 52.8	+1.0
	baz=109						
YOJ				*i* S	Sn	07 01 03.1	+0.5
	baz=109						
YOJ	Yonaguni jima	0.39	108	P	Pn	07 00 52.8	+1.0
YOJ				S	Sn	07 01 03.2	+0.5
YOJ	Yonaguni jima	0.39	108		Pn	07 00 52.8	+1.0
YOJ	Yonaguni jima	0.39	108	P	Pn	07 00 52.6	+0.8
TWC	Suao	0.68	272	⇑*i*P	Pn	07 00 54.6	+0.6
	baz=275						
TWC				*e*S	Sn	07 01 06.1	-0.5
	baz=275						
TWB1	Santiao Chiao	0.70	307	*e*P	Pn	07 00 55.1	+0.9
	baz=306						
TWB1				*e*S	Sn	07 01 06.9	0.0
	baz=306						
NTC	Toucheng	0.75	291	*e*P	Pn	07 00 55.7	+1.1
	baz=286						
NTC				*e*S	Sn	07 01 08.1	+0.4
	baz=286						
EWUT	Wuta	0.76	260	⇑P	Pn	07 00 55.5	+0.7
	baz=256						
EWUT				*e*S	Sn	07 01 08.6	+0.7
	baz=256						
ILA	Ilan	0.80	283	*i* P	Pn	07 00 56.3	+1.2
	baz=280						
ILA				S	Sn	07 01 09.3	+0.7
	baz=280						
ENA	Nanau	0.80	259	⇓*i*P	Pn	07 00 56.2	+1.0
	baz=255						
ENA				*e*S	Sn	07 01 09.7	+1.1
	baz=255						
TIPB	Shuangxi	0.80	299	⇑*i*P	Pn	07 00 56.2	+1.0
	baz=297						
TIPB				*e*S	Sn	07 01 08.8	0.0
	baz=297						
NDS	Dongshan	0.81	274	*e*P	Pn	07 00 56.6	+1.4
	baz=278						
NDS				*e*S	Sn	07 01 09.0	+0.2
	baz=278						
EHP	Heping Village	0.83	251	*e*P	Pn	07 00 56.3	+0.8
	baz=246						
EHP				*e*S	Sn	07 01 10.4	+1.2
	baz=246						
TWE	Neicheng	0.86	279	⇑*i*P	Pn	07 00 56.9	+1.1
	baz=278						
TWE				*e*S	Sn	07 01 10.3	+0.7
	baz=278						
NWF	Wu-fen Shan	0.89	303	P	Pn	07 00 57.4	+1.3
	baz=297						
NWF				S	Sn	07 01 11.1	+0.7
	baz=297						
WFSB	Wu-fen Shan	0.89	303	P	Pn	07 00 57.5	+1.4
	baz=297						
WFSB				*e*S	Sn	07 01 11.5	+1.2
	baz=297						
TNOU	National Taiwa	0.94	307	*e*P	Pn	07 00 57.6	+1.0
	baz=303						
TNOU				*e*S	Sn	07 01 11.6	+0.4
	baz=303						
ENTT	Nioudou	0.94	274	*i* P	Pn	07 00 58.0	+1.4
	baz=274						
ENTT				*e*S	Sn	07 01 12.2	+0.8
	baz=274						
ETL	Fush Village	0.99	245	*e*P	Pn	07 00 57.7	+0.5
	baz=238						
ETL				*e*S	Sn	07 01 12.0	-0.2
	baz=238						
NDT	Datong Townshi	0.99	271	⇑*i*P	Pn	07 00 58.7	+1.6
	baz=273						
NDT				*e*S	Sn	07 01 13.7	+1.5
	baz=273						
NACB	Ninganchiao	1.00	246	⇑*i*P	Pn	07 00 57.6	+0.3
	baz=241						
NACB				*e*S	Sn	07 01 11.5	-0.9
	baz=241						
NACB	Ninganchiao	1.00	246		Pn	07 00 57.5	+0.3
TWA	Mucha	1.00	293	⇑*i*P	Pn	07 00 58.4	+1.1
	baz=286						
TWA				*e*S	Sn	07 01 12.6	+0.1
	baz=286						
NWLT	Wulai	1.02	281	P	Pn	07 00 58.7	+1.2
	baz=288						
NWLT				*e*S	Sn	07 01 12.9	+0.1
	baz=288						
TWD	Chiawan	1.04	241	⇑*i*P	Pn	07 00 58.2	+0.4
	baz=235						
TWD				*i* S	Sn	07 01 13.2	0.0
	baz=235						
NHDH	Xindian Distri	1.05	291	⇑P	Pn	07 00 59.0	+1.2
	baz=284						
NHDH				S	Sn	07 01 13.4	+0.1
	baz=284						
IRIF	Iriomote-Funau	1.06	103	P	Pn	07 00 59.1	+1.2
IRIF				S	Sn	07 01 14.4	+0.9
TATO	Taipei	1.08	291		Pn	07 00 59.1	+0.9
TATO				Sn	Sn	07 01 13.7	-0.3
ETLH	Xiulin Townshi	1.09	250	⇑*i*P	Pn	07 00 58.9	+0.6
	baz=250						
ETLH				*e*S	Sn	07 01 14.3	+0.1
	baz=250						
HWA	Hwalien	1.09	237	⇑*i*P	Pn	07 00 59.1	+0.8
	baz=237						
HWA				*e*S	Sn	07 01 15.0	+0.8
	baz=237						
YM01	YM01	1.09	301	⇑*i*P	Pn	07 00 59.4	+1.1
	baz=293						
YM01				*e*S	Sn	07 01 14.7	+0.4
	baz=293						
TAP	Taipei	1.09	295	*e*P	Pn	07 00 59.4	+1.1
	baz=287						
TAP				*e*S	Sn	07 01 14.2	0.0
	baz=287						
YHNB	Yeheng	1.12	275		Pn	07 00 59.7	+1.1
NNSB	Datong	1.12	262	⇑*i*P	Pn	07 00 59.7	+0.9
	baz=255						
NNSB				*e*S	Sn	07 01 15.1	+0.1
	baz=255						
NNS	Nan Shan	1.13	263	⇑*i*P	Pn	07 00 59.8	+0.9
	baz=256						
NNS				*e*S	Sn	07 01 15.5	+0.3
	baz=256						
NSK	Sanguang	1.13	275	⇑*i*P	Pn	07 01 00.2	+1.4
	baz=275						
NSK				*e*S	Sn	07 01 15.5	+0.3
	baz=275						
TWY	Chenhua	1.14	307	*e*P	Pn	07 01 00.3	+1.4
	baz=307						
TWY				*e*S	Sn	07 01 16.5	+1.3
	baz=307						
PCYT	Pengchaiyu	1.15	335	⇓*i*P	Pn	07 01 00.7	+1.8
	baz=326						
PCYT				*e*S	Sn	07 01 17.1	+1.7
	baz=326						
ANP	Anpu	1.15	302	*e*P	Pn	07 01 00.2	+1.1
	baz=294						
ANP				*e*S	Sn	07 01 15.4	-0.1
	baz=294						
TWS1	Kuangyinshan	1.19	296	*e*P	Pn	07 01 00.7	+1.2
	baz=291						
TWS1				*e*S	Sn	07 01 16.7	+0.5
	baz=291						
NTST	Danshui	1.19	299	*e*P	Pn	07 01 00.9	+1.4
	baz=293						
NTST				*e*S	Sn	07 01 17.0	+0.7
	baz=293						
HATJ	Hateruma jima	1.22	115	P	Pn	07 01 01.3	+1.5
HATJ				*e*S	Sn	07 01 19.0	+2.2
FUSS	Fushou	1.28	255	⇑P	Pn	07 01 02.0	+1.2
	baz=251						
FUSS				*e*S	Sn	07 01 19.8	+1.2
	baz=251						
WHF	Hehuan Shan	1.29	251	⇑*i*P	Pn	07 01 02.0	+0.9
	baz=251						
WHF				S	Sn	07 01 19.3	+0.2
	baz=251						
ESL	Shilin	1.31	235	⇑*i*P	Pn	07 01 01.2	+0.3
	baz=234						
ESL				*e*S	Sn	07 01 18.1	-0.7
	baz=234						
JKRS	Kuro-shima	1.33	105	P	Pn	07 01 02.5	+1.4
JKRS				S	Sn	07 01 20.1	+0.9
TWT	Tachien	1.34	256	⇑*i*P	Pn	07 01 03.1	+1.7
	baz=256						
TWT				*e*S	Sn	07 01 20.1	+0.4
	baz=256						
NCU	National Centr	1.34	287	P	Pn	07 01 02.7	+1.5
	baz=287						
NCU				S	Sn	07 01 21.0	+1.6
	baz=287						
NCUH	Zhongli	1.34	287	*e*P	Pn	07 01 02.9	+1.7
	baz=287						
NCUH				*e*S	Sn	07 01 20.9	+1.4
	baz=287						
TDCB	Techi	1.35	256	⇑*i*P	Pn	07 01 03.0	+1.5
	baz=256						
TDCB				S	Sn	07 01 20.1	+0.1
	baz=256						
CHGB	Renai	1.40	248	⇑*i*P	Pn	07 01 03.4	+1.2
	baz=242						
CHGB				S	Sn	07 01 20.8	-0.3
	baz=242						
JIJ	Ishigaki jima	1.42	99	P	Pn	07 01 03.2	+1.0
JIJ				*e*S	Sn	07 01 21.3	+0.1
LIOB	Emei	1.44	273	⇑*i*P	Pn	07 01 04.0	+1.5
	baz=273						
LIOB				*e*S	Sn	07 01 22.6	+0.9
	baz=273						
OWD	Renai	1.44	245	P	Pn	07 01 03.5	+0.9
	baz=240						
OWD				*e*S	Sn	07 01 21.6	-0.3
	baz=240						
NSTT	Nanjuang	1.46	272	⇑*i*P	Pn	07 01 03.9	+1.3
	baz=272						
NSTT				*e*S	Sn	07 01 22.6	+0.6
	baz=272						
SBCB	Hsinchu	1.48	278	*i* P	Pn	07 01 04.2	+1.3
	baz=278						
SBCB				S	Sn	07 01 23.8	+1.2
	baz=278						
HSN	Hsinchu	1.50	279	⇑*i*P	Pn	07 01 04.2	+1.1
	baz=280						
HSN				S	Sn	07 01 23.0	+0.1
	baz=280						
HGSD	Ruisui	1.53	225	⇑*i*P	Pn	07 01 04.1	+0.5
	baz=224						
HGSD				S	Sn	07 01 23.2	-0.4
	baz=224						
WHP	Taichung City	1.54	259	⇑*i*P	Pn	07 01 06.0	+2.2
	baz=257						
WHP				*e*S	Sn	07 01 25.4	+1.5
	baz=257						
JISG	Ishigakijimahi	1.56	90	P	Pn	07 01 05.1	+1.2
JISG				S	Sn	07 01 24.8	+0.6
VWDT	VWDT	1.57	238	⇑*i*P	Pn	07 01 05.2	+1.2
	baz=233						
VWDT				S	Sn	07 01 24.5	+0.1
	baz=233						
EHY	Hungye	1.59	228	⇑*i*P	Pn	07 01 04.3	0.0
	baz=228						
EHY				*e*S	Sn	07 01 23.9	-1.0
	baz=228						
NMLH	Miaoli	1.65	269	*e*P	Pn	07 01 06.7	+1.7
	baz=269						
NMLH				*e*S	Sn	07 01 27.1	+0.8
	baz=269						
TWQ1	Liyutan	1.68	262	⇑*i*P	Pn	07 01 07.0	+1.6
	baz=262						
TWQ1				*e*S	Sn	07 01 27.4	+0.4
	baz=262						
YULB	Yu-li	1.68	225	⇑*i*P	Pn	07 01 05.7	+0.2
	baz=233						
YULB				*e*S	Sn	07 01 26.4	-0.6
	baz=233						
YULB	Yu-li	1.68	225		Pn	07 01 05.6	+0.1
NSY	Sanyi	1.68	265	⇑*i*P	Pn	07 01 07.3	+1.7
	baz=265						
NSY				S	Sn	07 01 28.9	+1.8
	baz=265						
EYUL	Yuli	1.70	224	⇑P	Pn	07 01 06.4	+0.7
	baz=232						
EYUL				*e*S	Sn	07 01 28.1	+0.7
	baz=232						
SSLB	Suanglung	1.70	243	⇑*i*P	Pn	07 01 06.8	+1.0
	baz=239						
SSLB				*e*S	Sn	07 01 27.8	+0.3
	baz=239						
SSLB	Suanglung	1.70	243		Pn	07 01 06.7	+0.9
SSLB	Suanglung	1.70	243	P	Pn	07 01 06.8	+1.0
SMLT	Sun Moon Lake	1.70	246	⇑*i*P	Pn	07 01 07.3	+1.5
	baz=240						
SMLT				*e*S	Sn	07 01 28.8	+1.2
	baz=240						
TYC	Yuchr	1.73	247	⇑*i*P	Pn	07 01 07.6	+1.6
	baz=241						
TYC				S	Sn	07 01 29.7	+1.6
	baz=241						
WDJ	Dajia District	1.80	263	*e*P	Pn	07 01 08.4	+1.5
	baz=263						
WDJ				*e*S	Sn	07 01 30.1	+0.4
	baz=263						
TCU	Taichung	1.81	256	*e*P	Pn	07 01 08.7	+1.6
	baz=266						
TCU				*e*S	Sn	07 01 30.6	+0.7
	baz=266						
FULB	Fuli	1.82	221	P	Pn	07 01 07.7	+0.4
	baz=215						
FULB				*e*S	Sn	07 01 30.0	-0.3
	baz=215						
CHKT	Chengkung	1.86	218	⇑*i*P	Pn	07 01 07.8	0.0
	baz=213						
CHKT				*e*S	Sn	07 01 29.3	-1.7
	baz=213						
WJS	Zhushan	1.87	246	P	Pn	07 01 10.0	+2.1
	baz=257						
WJS				*e*S	Sn	07 01 33.7	+2.4
	baz=257						
WNT	Mingjian	1.89	249	⇑P	Pn	07 01 10.0	+2.0
	baz=248						
WNT				*e*S	Sn	07 01 34.3	+2.7
	baz=248						
JTJ	Tarama	1.91	88	P	Pn	07 01 10.1	+1.7
JTJ				S	Sn	07 01 33.6	+1.3
WCHH	Zhanghua	1.93	255	P	Pn	07 01 09.9	+1.3
	baz=262						
WCHH				*e*S	Sn	07 01 33.3	+0.7
	baz=262						
ALS	Alishan	1.96	237	⇑*i*P	Pn	07 01 11.1	+1.8
	baz=232						
ALS				*e*S	Sn	07 01 34.6	+0.8
	baz=232						
EDH	Donghe	2.00	217	⇑*i*P	Pn	07 01 09.6	+0.1
	baz=213						
EDH				*e*S	Sn	07 01 32.7	-1.5
	baz=213						
ELDTW	Lidau	2.01	227	⇑*i*P	Pn	07 01 10.2	+0.4
	baz=226						
ELDTW				*e*S	Sn	07 01 33.9	-0.7
	baz=226						
CHN5	Tsauling	2.01	241	⇑*i*P	Pn	07 01 11.7	+1.9
	baz=234						
CHN5				*e*S	Sn	07 01 37.3	+2.6
	baz=234						
WDLH	Douliu	2.08	245	*e*P	Pn	07 01 12.6	+1.9
	baz=256						
WDLH				*e*S	Sn	07 01 39.1	+2.8
	baz=256						
WRL	Guolierlin Hig	2.14	252	⇑*i*P	Pn	07 01 12.5	+1.2
	baz=261						
WRL				*e*S	Sn	07 01 37.7	+0.2
	baz=261						

LONT	Longtian	2.15	219	eP	Pn	07 01 11.6	+0.1
	baz=227						
LONT				eS	Sn	07 01 37.2	-0.5
	baz=227						
LDUT	Ludao	2.17	209	eP	Pn	07 01 11.6	-0.1
	baz=206						
LDUT				eS	Sn	07 01 35.9	-2.3
	baz=206						
STYH	Taoyuan	2.18	230	⇑P	Pn	07 01 13.8	+1.9
	baz=230						
STYH				eS	Sn	07 01 38.8	+0.2
	baz=230						
CHN2	Minshiung	2.21	242	eP	Pn	07 01 15.2	+2.9
	baz=253						
CHN2				eS	Sn	07 01 42.9	+3.8
	baz=253						
CHN4	Tsaushan	2.21	237	⇑iP	Pn	07 01 14.2	+1.9
	baz=237						
CHN4				eS	Sn	07 01 41.8	+2.6
	baz=237						
WTK	Tuku	2.21	247	P	Pn	07 01 14.1	+1.8
	baz=247						
WTK				eS	Sn	07 01 40.5	+1.4
	baz=247						
TPUB	Ta-pu	2.21	235	⇑iP	Pn	07 01 14.1	+1.8
	baz=235						
TPUB				eS	Sn	07 01 40.9	+1.7
	baz=235						
TPUB	Ta-pu	2.21	235		Pn	07 01 14.1	+1.8
TPUB	Ta-pu	2.21	235	P	Pn	07 01 14.3	+2.0
WTCT	Ta-ch'eng	2.23	252	eP	Pn	07 01 12.1	-0.5
	baz=252						
WTCT				eS	Sn	07 01 40.2	+0.4
	baz=252						
TWGBT	Beinan	2.24	219	P	Pn	07 01 12.9	+0.1
	baz=219						
TWGBT				eS	Sn	07 01 38.7	-1.3
	baz=219						
TWG	Pinlang	2.25	219		Pn	07 01 13.1	+0.3
WTP	Ta-pu	2.25	234	⇑iP	Pn	07 01 14.7	+1.8
	baz=234						
WTP				eS	Sn	07 01 42.7	+2.4
	baz=234						
TTN	Taitung	2.26	216	eP	Pn	07 01 13.4	+0.5
	baz=212						
TTN				eS	Sn	07 01 40.7	+0.4
	baz=212						
CHY	Chiayi	2.26	242	eP	Pn	07 01 14.9	+1.9
	baz=253						
CHY				eS	Sn	07 01 42.4	+1.9
	baz=253						
TWK	Hsinying	2.33	236	eP	Pn	07 01 15.9	+1.9
	baz=236						
TWK				eS	Sn	07 01 44.5	+2.2
	baz=236						
CHN1	Nanshi	2.35	234	P	Pn	07 01 16.0	+1.8
	baz=234						
CHN1				eS	Sn	07 01 43.5	+0.9
	baz=234						
JIRB	Irabujima	2.35	84	P	Pn	07 01 15.6	+1.4
JIRB				S	Sn	07 01 43.1	+0.5
SNST	Tainan City	2.35	235	eP	Pn	07 01 16.8	+2.5
	baz=235						
SNST				eS	Sn	07 01 45.5	+2.9
	baz=235						
WSF	Szhu	2.37	247	eP	Pn	07 01 15.8	+1.4
	baz=255						
WSF				eS	Sn	07 01 44.1	+1.2
	baz=255						
SGST	Jiashian	2.38	231	P	Pn	07 01 16.0	+1.5
	baz=241						
SGST				eS	Sn	07 01 45.6	+2.4
	baz=241						
SLGT	Liugui	2.39	229	P	Pn	07 01 16.9	+2.2
	baz=239						
SLGT				S	Sn	07 01 46.2	+2.7
	baz=239						
JIKM	Ikemajima	2.43	81	S	Sn	07 01 45.9	+1.5
ICHU	Yijhu	2.45	241	eP	Pn	07 01 16.7	+1.2
	baz=241						
ICHU				eS	Sn	07 01 45.5	+0.7
	baz=241						
JMJ	Miyako jima 2	2.46	84	P	Pn	07 01 19.5	+3.9
JMJ2	Miyako jima3	2.49	86	P	Pn	07 01 18.1	+2.2
JMJ2				eS	Sn	07 01 46.4	+0.7
ECL	Taimali	2.49	218	P	Pn	07 01 16.0	0.0
	baz=218						
ECL				eS	Sn	07 01 44.1	-1.6
	baz=218						
CHN8	Yiju	2.51	241	eP	Pn	07 01 17.0	+0.7
	baz=241						
CHN3	Shinhua	2.54	234	eP	Pn	07 01 19.8	+3.2
	baz=244						
JOGS	Gusukube	2.56	85	eS	Sn	07 01 48.8	+1.3
SSD	Sandimen	2.57	225	eP	Pn	07 01 19.4	+2.4
	baz=225						
SSD				eS	Sn	07 01 49.1	+1.4
	baz=225						
TSMG	Majia	2.59	224	eP	Pn	07 01 19.9	+2.6
	baz=224						
TSMG				eS	Sn	07 01 50.0	+1.8
	baz=224						
SCLT	Jiali	2.61	238	eP	Pn	07 01 18.3	+0.7
	baz=238						
SCLT				eS	Sn	07 01 51.5	+2.8
	baz=238						
TWM1	Shoushan	2.66	229	eP	Pn	07 01 21.7	+3.5
	baz=237						
TWM1				eS	Sn	07 01 53.8	+4.0
	baz=237						
MASBT	Mashibuluo	2.67	223	eP	Pn	07 01 20.0	+1.7
	baz=223						
LAY	Lan-yu	2.71	201	eP	Pn	07 01 18.7	-0.3
	baz=196						
EAST	Anshuo	2.72	217	eP	Pn	07 01 19.7	+0.6
	baz=216						
LYUB	Lan-yu	2.73	200	eP	Pn	07 01 18.6	-0.7
	baz=204						
SSPT	Xinbi	2.80	222	eP	Pn	07 01 23.1	+2.9
	baz=222						
SCZT	Fangliau	2.85	220	eP	Pn	07 01 22.5	+1.6
	baz=231						
MATB	Ma-tsu	2.86	304	eP	Pn	07 01 21.5	+0.5
	baz=302						
SLIU	Shizi	2.88	215	eP	Pn	07 01 20.8	-0.4
	baz=215						
PNG	Penghu	2.96	251	eP	Pn	07 01 22.6	+0.4
	baz=250						
PHUB	P'eng-hu	2.97	250	eP	Pn	07 01 21.8	-0.5
	baz=249						
WDGT	Dungji	3.00	244	eP	Pn	07 01 23.2	+0.5
	baz=244						
WLCH	Liuqiu	3.02	223	eP	Pn	07 01 27.1	+4.0
	baz=223						
TWKBT	Hengchun	3.10	212	eP	Pn	07 01 25.1	+0.9
	baz=212						
TWK1	Hengchun	3.10	212	eP	Pn	07 01 25.9	+1.7
	baz=212						
XPSS	Dashiqiu	3.19	318	eP	Pn	07 01 25.5	+0.1
	baz=316						
PTMZ	Houxiangcun	3.19	279	eP	Pn	07 01 25.7	+0.3
	baz=278						
VCHM	Qimei	3.21	245	eP	Pn	07 01 23.8	-1.8
	baz=237						
LYJJ	Jianjiangzhen	3.23	308	eP	Pn	07 01 26.0	+0.2
	baz=307						
KNM	Kinmen	3.80	268	eP	Pn	07 01 35.8	+2.2
	baz=268						
KNMB	Chin-men Tao	3.84	269	eP	Pn	07 01 33.9	-0.2
	baz=268						
KNMB	Chin-men Tao	3.84	269	Pn	Pn	07 01 34.3	+0.3
AXDP	Jialang	4.22	275	eP	Pn	07 01 39.8	+0.5
	baz=267						
ZPLA	Ao Xicun	4.47	263	eP	Pn	07 01 43.1	+0.4
	baz=262						
JOW	Kunigami	5.59	65	P	Pn	07 01 57.6	-0.2
	10nm,0.3s,baz=103,slow=24,SNR=87						
JOW				S	Sn	07 02 58.4	-2.3
	4.0nm,0.3s,baz=103,slow=23,SNR=2.0						
JOW	Kunigami	5.59	65		Pn	07 01 57.5	-0.3
JOW	Kunigami	5.59	65	P	Pn	07 01 57.6	-0.2
APYP	Conner	6.81	191	⇓eP	Pn	07 02 17.0	+2.6
JMN	Monobe	13.41	45	Pn	Pn	07 03 39.3	-4.3
KSAR	Wonju Array Be	13.59	18	Pn	Pn	07 03 43.9	-1.9
KSRS	Korea Array	13.61	18	P	Pn	07 03 47.3	+1.2
	0.7nm,0.3s,baz=196,slow=12,SNR=8.8						
KS19	Wonju Array Si	13.64	18	Pn	Pn	07 03 44.2	-2.3
USRK	Ussuriysk Ar.	21.02	19	P	P	07 05 12.2	-0.7
	6.6nm,0.7s,baz=198,slow=11,SNR=10						
USRK	Ussuriysk Ar.	21.02	19	P	P	07 05 10.8	-2.1
CMAR	Chiang Mai Arr	22.82	259	LR	LR	07 15 59.4	
	comp=Z,28nm,19.3s,baz=198,slow=40						
SBUM	Sibu	24.18	206	P	P	07 05 44.7	0.0
KLR	Kul'dur	25.63	14	P	P	07 05 57.8	+0.2
	1.4nm,0.6s,baz=234,slow=6.3,SNR=5.4						
SONM	Songino Array	26.53	335	P	P	07 06 05.4	-0.4
	4.0nm,0.9s,baz=150,slow=9.0,SNR=21						
SONM	Songino Array	26.53	335	P	P	07 06 06.2	+0.4
MK31	Makanchi Array	38.96	315	P	P	07 07 53.8	-0.1
MKAR	Makanchi Array	38.96	315	P	P	07 07 53.8	-0.1
	0.9nm,0.6s,baz=96,slow=7.7,SNR=7.8						
MKAR				PcP	PcP	07 10 01.6	-1.0
	1.2nm,0.8s,baz=88,slow=4.0,SNR=6.3						
MKAR	Makanchi Array	38.96	315	P	P	07 07 54.3	+0.5
ZALV	Zalesovo Beam	40.62	326	P	P	07 08 06.5	-0.9
	1.6nm,0.4s,baz=122,slow=8.4,SNR=6.3						
ZALV	Zalesovo Beam	40.62	326	P	P	07 08 06.9	-0.5
KURBB	Kurchatov Arra	42.64	319	P	P	07 08 22.2	-1.8
	0.5nm,0.5s,baz=104,slow=8.0,SNR=6.8						
WB0	Warramunga Arr	45.55	164	P	P	07 08 48.7	+1.2
WB0				IAmb	IAmb	07 08 51.9	
	comp=Z,8.4nm,1.1s						
WRA	Warramunga Arr	45.71	164	P	P	07 08 49.7	+0.9
	comp=Z,2.0nm,0.6s,baz=346,slow=8.8,SNR=14						
WB2	Warramunga Arr	45.71	164	P	P	07 08 50.0	+1.2
WB2				IAmb	IAmb	07 08 53.0	
	comp=Z,20nm,1.4s						
BVAR	Borovoye Array	48.19	320	P	P	07 09 07.4	-0.4
	comp=Z,0.8nm,0.6s,baz=125,slow=7.8,SNR=3.8						
BVAR				PcP	PcP	07 10 33.0	-0.6
	comp=Z,0.5nm,0.6s,baz=64,slow=3.4,SNR=4.4						
ASAR	Alice Springs	49.20	166	P	P	07 09 18.1	+2.2
	comp=Z,0.5nm,0.6s,baz=350,slow=7.4,SNR=8.1						
ABKAR	Akbulak array	54.09	314	P	P	07 09 52.4	+0.5
ANM	Nome	60.37	28	P	P	07 10 37.4	+1.5
ANM				IAmb	IAmb	07 10 44.0	
	comp=Z,3.5nm,1.2s						
TTA	Tatalina	64.52	30	P	P	07 11 04.8	+1.2
TTA				IAmb	IAmb	07 11 24.1	
	comp=Z,6.3nm,1.4s						
ILAR	Eielson Array	68.27	27	P	P	07 11 27.0	-0.4
	comp=Z,0.7nm,0.6s,baz=296,slow=8.2,SNR=9.6						
SPITS	Spitsbergen Ar	69.37	348	P	P	07 11 33.1	-0.9
	comp=Z,11nm,0.9s,baz=101,slow=7.5,SNR=1.9						
FINES	FINESS Array B	71.75	330	P	P	07 11 47.9	-0.9
	comp=Z,0.6nm,0.4s,baz=66,slow=4.2,SNR=11						
FINES	FINESS Array B	71.75	330	P	P	07 11 48.6	-0.2
AKASG	Malin Array Be	73.43	319	P	P	07 11 58.3	-0.6
	comp=Z,0.2nm,0.3s,baz=68,slow=6.5,SNR=1.7						
HFS	Hagfors	77.85	331	P	P	07 12 23.8	-0.1
	comp=Z,1.9nm,0.7s,baz=79,slow=7.5,SNR=1.6						
NOA	NORSAR Array B	78.47	332	P	P	07 12 25.7	-1.7
	comp=Z,0.8nm,0.8s,baz=60,slow=5.5,SNR=3.4						
YKA	Yellowknife Ar	82.10	23	P	P	07 12 46.4	-0.4
	comp=Z,0.4nm,0.6s,baz=310,slow=5.2,SNR=7.8						
CLL	Collm	82.51	323	eP	P	07 12 51.0	+1.9
GERES	GERESS Array B	83.35	321	P	P	07 12 53.1	-0.6
	comp=Z,0.5nm,0.7s,baz=76,slow=5.6,SNR=5.5						
B08A	Colville Reser	88.71	36	P	P	07 13 21.1	+1.2
E07A	Sunnyside	89.49	38	P	P	07 13 25.5	+1.9
C09A	Chrisman Ranch	89.61	36	P	P	07 13 25.9	+1.8
C09A				IAmb	IAmb	07 13 26.0	
	comp=Z,3.8nm,0.6s						
D08A	Wollman Farm,	89.71	37	P	P	07 13 25.6	+0.9
HAWA	Hanford	89.77	38	P	P	07 13 26.5	+1.6
HAWA				IAmb	IAmb	07 13 27.0	
	comp=Z,3.3nm,0.8s						
BMO	Blue Mountains	91.94	38	P	P	07 13 35.3	+0.1
BMO				IAmb	IAmb	07 13 41.6	
	comp=Z,3.9nm,1.4s						
MOD	Modoc Plateau	91.97	42	P	P	07 13 36.1	+0.6
MOD				IAmb	IAmb	07 13 37.4	
	comp=Z,4.9nm,1.0s						
J08A	Circle Bar Ran	92.19	40	P	P	07 13 36.4	0.0
NVAR	Mina Array Bea	95.26	44	P	P	07 13 51.8	+1.1
	comp=Z,0.5nm,0.7s,baz=312,slow=6.3,SNR=4.8						

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*IDC **27** 07:02:52.0±0.7, 30°.73S×59°.63E, h0^{km}, mb4.0/13, mb1 4.1/13, mb1mx3.8/61, mbtmp4.0/13, MS3.4/2, Ms1 3.4/2, ms1mx2.7/33, Error ellipse: s-maj=25.7km s-min=19.6km az=21.0*

*NEIC **27** 07:02:53.3±1.4, 30°.73S±0°.06×59°.6E±0°.1, h10^{km}±1^{km}, mb4.6/16, Error ellipse: s-maj=16.9km s-min=10.5km az=268.0*

ISC 27 07:02:52.9±0.5**, 30°.72S**±0°.09×**59°.62E**±0°.09**, h10^{km}, n39, σ0^{s}.92**/35**, mb4.3**/15**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	Riviere de l'E	10.14	339	Pn	Pn	07 05 17.7	-0.9
VOI	Vohitsoka	14.46	304	Pn	Pn	07 06 17.9	+0.1
ABPO	Ambohimpanom	16.18	313	Pn	Pn	07 06 39.7	-0.9
AIS	Amsterdam Isla	16.42	120	Pn	Pn	07 06 43.0	-0.3
CRZF	Crozet Islands	16.80	199	Pn	Pn	07 06 47.1	-1.1
CRZF				IAmb	IAmb	07 06 59.4	
	comp=Z,66nm,1.4s						
DGAR	Diego Garcia	26.12	30	P	P	07 08 25.3	-1.9
BOSA	Boshof	29.87	265	P	P	07 09 01.6	+0.8
	comp=Z,1.1nm,0.7s,baz=85,slow=11,SNR=3.3						
BOSA	Boshof	29.87	265	P	P	07 09 00.6	-0.3
BOSA				IAmb	IAmb	07 09 06.2	
	comp=Z,23nm,1.6s						
LBTB	Lobatse	30.54	272	P	P	07 09 04.3	-2.4
LBTB				IAmb	IAmb	07 09 18.3	
	comp=Z,7.0nm,1.0s						
MAW	Mawson	36.97	178	LR	LR	07 23 15.9	
	comp=Z,78nm,19.4s,baz=36,slow=33						
MAW	Mawson	36.97	178	P	P	07 10 02.0	+0.1
TSUM	Tsumeb	39.59	277	P	P	07 10 24.2	-0.6
TSUM				IAmb	IAmb	07 10 27.6	
	comp=Z,16nm,1.6s						
H01W2	Cape Leeuwin H	45.54	110	T	T	07 59 59.2	
	baz=259,slow=75,SNR=12						
H01W3	Cape Leeuwin H	45.54	110	T	T	08 00 04.5	
	baz=259,slow=75,SNR=12						
H01W1	Cape Leeuwin H	45.55	110	T	T	08 00 03.2	
	baz=259,slow=75,SNR=10						
CASY	Casey	46.80	154	P	P	07 11 22.7	+0.4
MORW	Morawa	48.49	103	P	P	07 11 35.9	-0.1
QSPA	South Pole Qui	59.44	180	P	P	07 12 56.3	+0.7
	comp=Z,1.9nm,0.7s,baz=271,slow=1.4,SNR=12						
QSPA	South Pole Qui	59.44	180	P	P	07 12 56.0	+0.3
QSPA				IAmb	IAmb	07 12 59.7	
	comp=Z,7.8nm,1.4s						
CMAR	Chiang Mai Arr	61.81	43	P	P	07 13 12.5	+0.3
	comp=Z,1.0nm,0.3s,baz=228,slow=7.5,SNR=5.8						
ASAR	Alice Springs	65.37	104	P	P	07 13 36.2	+0.4
	comp=Z,1.0nm,0.7s,baz=244,slow=6.0,SNR=10						
ASAR	Alice Springs	65.37	104	P	P	07 13 35.0	-0.9
WRA	Warramunga Arr	67.30	100	P	P	07 13 49.1	+0.9
	comp=Z,1.7nm,1.0s,baz=240,slow=5.6,SNR=4.6						
TORD	Torodi Ar. Bea	70.70	299	P	P	07 14 09.7	+0.4
	comp=Z,1.2nm,0.7s,baz=108,slow=5.0,SNR=8.3						
DBIC	Dimbokro	71.95	289	P	P	07 14 17.9	+1.0
	comp=Z,2.3nm,0.8s,baz=154,slow=7.3,SNR=2.6						
DBIC				LR	LR	07 44 58.9	
	comp=Z,20nm,19.1s,baz=165,slow=35						
ISP	Isparta	73.41	336	P	P	07 14 25.4	+0.1
FAKI	Fak Fak	73.59	84	P	P	07 14 25.8	-0.9
BRTR	Keskin Array B	74.13	339	P	P	07 14 30.7	+1.2
	comp=Z,0.5nm,0.6s,baz=171,slow=11,SNR=3.7						
KOWA	Kowa	75.88	297	P	P	07 14 40.9	+0.9
	comp=Z,1.8nm,0.7s,baz=116,slow=8.9,SNR=5.2						
EIDS	Eidsvold	78.65	113	P	P	07 14 55.4	-0.1
ABKAR	Akbulak array	79.62	0	P	P	07 15 01.0	+1.0
KURBB	Kurchatov Arra	82.70	12	P	P	07 15 18.1	+1.8
	comp=Z,0.7nm,0.7s,baz=211,slow=6.1,SNR=6.1						
AKASG	Malin Array Be	85.41	341	P	P	07 15 30.0	-0.1
	comp=Z,0.1nm,0.3s,baz=158,slow=4.0,SNR=4.2						
AKASG	Malin Array Be	85.41	341	P	P	07 15 30.2	0.0
AKASG				IAmb	IAmb	07 15 41.6	
	comp=Z,4.6nm,1.6s						
ZAA0	Zalesovo Array	87.10	15	P	P	07 15 39.0	+0.6
ZALV	Zalesovo Beam	87.10	15	P	P	07 15 38.9	+0.5
	comp=Z,1.4nm,0.7s,baz=256,slow=3.0,SNR=5.4						
DAVOX	Davos/Dischmat	89.24	328	P	P	07 15 49.4	+0.4
	comp=Z,2.1nm,1.0s,baz=115,slow=9.5,SNR=4.1						
YKA	Yellowknife Ar	148.00	355	PKPbc	PKiKP	07 22 38.5	-1.1
	comp=Z,1.4nm,0.6s,baz=356,slow=3.4,SNR=24						
YKA	Yellowknife Ar	148.00	355		PKiKP	07 22 38.8	-0.8

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*IDC **27** 07:07:46.3±1.9, 38°.37N×21°.54E, h0^{km}, mb3.8/8, mb1 3.7/13, mb1mx3.5/49, mbtmp3.6/13, ML3.4/5, Error ellipse: s-maj=35.2km s-min=17.4km az=45.0*

*THE **27** 07:07:48.7, 38°.38N×21°.79E, h10^{km}±1^{km}, ML3.3/8, Error ellipse: s-maj=1.2km s-min=0.6km az=303.0*

*ATH **27** 07:07:48.5, 38°.38N×21°.77E, h12^{km}±1^{km}, ML3.3/20, Error ellipse: s-maj=1.4km s-min=0.7km az=80.0*

*KRSZO **27** 07:08:53.9±2.2, 42°.85N×19°.37E, h10^{km}, M3.3/6, Error ellipse: s-maj=28.2km s-min=12.4km az=11.0*

ISC 27 07:07:48.3±0.8**, 38°.39N**±0°.02×**21°.75E**±0°.02**, h13^{km}**±5^{km}**, n129, σ1^{s}.72**/164**, mb3.7**/8**, 8C-4D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	University Cam	0.11	164	P	Pg	07 07 51.3	-0.1
UPR				S	Sg	07 07 54.0	+0.4
EFP	Efpalio	0.13	72	P	Pg	07 07 51.2	-0.5
EFP				S	Sg	07 07 53.6	-0.5
LAKA	Lakka	0.23	129	P	Pg	07 07 52.9	-0.5
LAKA				S	Sg	07 07 56.1	-0.7
LAKA				AML	AML	07 07 56.7	
	comp=E,88051µm,0.2s						
LAKA				AML	AML	07 07 56.7	
	comp=N,72073µm,0.1s						
SERG	Sergoula	0.24	84	P	Pg	07 07 53.1	-0.4
SERG				S	Sg	07 07 57.2	+0.1
SERG				AML	AML	07 07 58.2	
	comp=E,62063µm,0.3s						
SERG				AML	AML	07 07 58.3	
	comp=N,87071µm,0.2s						
ANX	Ano Chora	0.24	33	P	Pg	07 07 53.6	0.0
ANX				S	Sg	07 07 58.0	+0.8
	comp=N,15µm,0.4s						
ANX	Ano Chora	0.24	33	P	Pg	07 07 53.6	0.0
ANX				S	Sg	07 07 57.3	+0.1
ANX				AML	AML	07 07 59.5	
	comp=E,25780µm,0.3s						
ANX				AML	AML	07 08 01.5	
	comp=N,35841µm,0.4s						
RLS	Riolos of Patr	0.40	214	P	Pg	07 07 56.5	+0.2
RLS				S	Sb	07 08 03.2	0.0
	comp=N,8µm,0.4s						
RLS	Riolos of Patr	0.40	214	P	Pg	07 07 56.5	+0.2
RLS				S	Sb	07 08 02.9	-0.3
RLS				AML	AML	07 08 03.3	
	comp=N,15188µm,0.6s						
RLS				AML	AML	07 08 04.8	
	comp=E,15265µm,0.3s						
DRO	Drossia	0.44	184	P	Pg	07 07 56.8	-0.2
DRO	Drossia	0.44	184	P	Pg	07 07 56.8	-0.2
DRO				S	Sg	07 08 03.2	+0.4
DRO				AML	AML	07 08 04.2	
	comp=E,44199µm,0.2s						
DRO				AML	AML	07 08 04.5	
	comp=N,29253µm,0.4s						
KLV	Kalavryta, Ach	0.47	137	P	Pg	07 07 57.1	-0.5
KLV				S	Sg	07 08 03.0	-0.8
	comp=N,1µm,0.1s						
KLV	Kalavryta, Ach	0.47	137	P	Pg	07 07 56.9	-0.7
KLV				S	Sg	07 08 03.1	-0.7
KLV				AML	AML	07 08 07.2	
	comp=E,3488µm,0.2s						
KLV				AML	AML	07 08 08.2	
	comp=N,2987µm,0.2s						
EVR	Evrytania	0.53	5	P	Pg	07 07 58.8	0.0
EVR				S	Sb	07 08 06.8	-0.3
	comp=N,4µm,0.5s						
EVR	Evrytania	0.53	5	P	Pg	07 07 58.8	0.0
EVR				S	Sb	07 08 06.9	-0.3
EVR				AML	AML	07 08 11.3	
	comp=E,8458µm,0.3s						
EVR				AML	AML	07 08 13.0	
	comp=N,7511µm,0.3s						
DLFA	Delphi	0.59	81	P	Pg	07 07 58.9	-1.0
DLFA				S	Sg	07 08 08.1	+0.3
VTN	Vitineika	0.65	224	P	Pb	07 08 01.7	+0.3
MAKR	Makrakomi, Fth	0.69	26	P	Pg	07 08 01.9	0.0
MAKR				S	Sg	07 08 11.2	+0.3
MAKR				AML	AML	07 08 14.8	
	comp=E,6580µm,0.3s						
MAKR				AML	AML	07 08 15.1	
	comp=N,4317µm,0.4s						
THAL	Thalero	0.80	116	P	Pg	07 08 03.1	-0.7
THAL				S	Sg	07 08 14.6	+0.2
THAL				AML	AML	07 08 19.9	
	comp=N,6624µm,0.2s						
THAL				AML	AML	07 08 21.2	
	comp=E,10966µm,0.4s						
NYDR	Nydri-Lefkada	0.89	292	P	Pg	07 08 05.0	-0.5
EVGI	Lefkada island	0.89	286	P	Pg	07 08 05.2	-0.3
FSK	Fiskardo	0.94	275	P	Pb	07 08 06.3	-0.1
VLS	Valsamata	0.94	257	P	Pb	07 08 05.9	-0.5
VLS				AML	AML	07 08 22.4	
	comp=N,4618µm,0.2s						
VLS				AML	AML	07 08 22.7	
	comp=E,3025µm,0.1s						
LKD2	Lefkada island	0.94	295	P	Pg	07 08 06.8	+0.2
PSDA	Pessada-Kefalo	0.96	254	P	Pb	07 08 06.2	-0.5
TSLK	Tsoukalades, L	0.96	297	P	Pb	07 08 06.9	+0.1
TSLK				AML	AML	07 08 30.9	
	comp=N,2378µm,0.5s						
TSLK				AML	AML	07 08 31.4	
	comp=E,2162µm,0.6s						
DRAG	Dragano-Lefkad	0.97	288	P	Pb	07 08 06.6	-0.3
LTHK	Lithakia	0.99	227	P	Pb	07 08 07.0	-0.3
LTHK				S	Sn	07 08 22.4	+0.7
	comp=E,3µm,0.4s						
LTHK	Lithakia	0.99	227	P	Pb	07 08 06.8	-0.5
LKR	Lokris	1.01	75	P	Pb	07 08 06.5	-1.3
LKR				S	Sg	07 08 21.7	+0.5
	comp=E,2µm,0.2s						
LKR	Lokris	1.01	75	P	Pb	07 08 06.6	-1.2
LKR				AML	AML	07 08 26.0	
	comp=E,5088µm,0.4s						
LKR				AML	AML	07 08 27.0	
	comp=N,4821µm,0.2s						
ARGA	Argostoli. Kep	1.02	258	P	Pb	07 08 07.6	-0.2
LTK	Loutraki	1.03	110	P	Pb	07 08 08.1	+0.2
ATAL	Atalanti	1.04	73	P	Pb	07 08 07.0	-1.2
ATAL				AML	AML	07 08 26.7	
	comp=E,2193µm,0.5s						
ATAL				AML	AML	07 08 28.4	
	comp=N,1897µm,0.7s						
LXRA	Lixouri, Kepha	1.05	260	P	Pb	07 08 08.1	-0.2
KEF4	Livadi, Kephal	1.05	263	P	Pb	07 08 07.9	-0.4
KEF3	Kipouria, Keph	1.12	261	P	Pb	07 08 08.5	-0.9
THL	Klokotos Trika	1.19	10	P	Pb	07 08 11.2	+0.4
THL				AML	AML	07 08 33.2	
	comp=E,1861µm,0.8s						
THL				AML	AML	07 08 33.8	
	comp=N,1124µm,0.6s						
VIL2	Platees	1.21	98	P	Pg	07 08 11.8	+0.2
VIL2				AML	AML	07 08 34.2	
	comp=N,3069µm,0.4s						
VIL2				AML	AML	07 08 37.5	
	comp=E,2976µm,0.3s						
ITM	Ithomi	1.21	173	P	Pn	07 08 10.6	-0.4
ITM				S	Sg	07 08 28.4	+0.9
	comp=E,790nm,0.4s						
ITM	Ithomi	1.21	173	P	Pn	07 08 10.6	-0.4
ITM				AML	AML	07 08 34.9	
	comp=N,1493µm,0.4s						
ITM				AML	AML	07 08 36.0	
	comp=E,1760µm,0.3s						
EPID	Epidavros	1.33	125	P	Pn	07 08 12.8	+0.2
JAN	Janina	1.45	331	P	Pg	07 08 16.2	0.0
JAN				AML	AML	07 08 42.5	
	comp=E,1431µm,1.1s						
JAN				AML	AML	07 08 45.9	
	comp=N,1160µm,0.4s						
NEO	Neokhori	1.47	51	P	Pb	07 08 15.3	-0.3
PYL	PYLOS	1.49	180	P	Pb	07 08 15.5	-0.4
KRND	KRANIDI	1.50	132	P	Pn	07 08 15.0	+0.2
KRND				S	Sn	07 08 34.4	+0.2
	comp=N,788nm,0.6s						
KRND	KRANIDI	1.50	132	P	Pb	07 08 15.4	-0.5
ATH	Athens Observa	1.60	104	P	Pb	07 08 17.4	-0.4
ATH				AML	AML	07 08 43.2	
	comp=N,1027µm,0.5s						
ATH				AML	AML	07 08 44.0	
	comp=E,1212µm,0.7s						
ATHU	Athens Univers	1.66	104	P	Pn	07 08 17.8	+0.7
VLY	Voula,Athens	1.70	108	P	Pn	07 08 18.4	+0.7

PTL	Penteli	1.70	101	P	Pn	07 08 18.5	+0.8
PTL				AML	AML	07 08 45.2	
	comp=N,818µm,0.4s						
PTL				AML	AML	07 08 45.3	
	comp=E,934µm,0.5s						
DION	Dionisos Attik	1.75	100	P	Pn	07 08 19.3	+0.9
DION				AML	AML	07 08 52.3	
	comp=E,1577µm,0.5s						
DION				AML	AML	07 08 52.9	
	comp=N,1799µm,0.4s						
OHR	Ohrid	2.82	345	*i* Pn	Pb	07 08 38.5	0.0
VAY	Valandovo	3.00	12	*i* Pn	Pn	07 08 38.4	+2.9
APE	Apeiranthos	3.27	113	⇑P	Pn	07 08 40.4	+1.0
APE				⇓S	Sn	07 09 18.3	+0.1
STIP	Stip	3.32	6	*i* Pn	Pb	07 08 43.6	-3.4
TIP	Timpagrande	3.98	283	⇑P	Pn	07 08 51.2	+2.1
TIP				⇑S	Sn	07 09 38.7	+3.1
IDI	Anoyia	3.99	140	Pn	Pn	07 08 52.1	+2.9
	comp=N,2.3nm,0.3s,baz=333,slow=7.9,SNR=11						
IDI				Sn	Sb	07 09 41.7	-5.0
	comp=N,2.4nm,0.3s,baz=312,slow=18,SNR=1.7						
BOSS	Bosilegrad	4.14	8	*e*P	Pn	07 08 54.4	+3.1
DRME	Dracevica, Mon	4.27	333	*e*Pn	Pn	07 08 53.5	+0.5
VTS	Vitosha	4.38	15	⇑P	Pn	07 08 57.4	+2.8
VTS	Vitosha	4.38	15	Pg	Sn	07 09 47.0	+1.5
BARS	Barje	4.42	1	*e*P	Pn	07 08 58.2	+3.1
PDG	Podgorica	4.46	336	⇑P	Pn	07 08 58.5	+2.9
SELS	Selova	4.85	355	*e*P	Pn	07 09 04.3	+3.3
ZAPS	Zavoj	4.93	8	*e*P	Pn	07 09 06.1	+4.0
SJES	Sjenica	5.05	345	*e*P	Pn	07 09 07.1	+3.3
BRY	Bratogost	5.13	333	*e*Pn	Pn	07 09 05.6	+0.7
BOVS	Bovan	5.24	360	⇓P	Pn	07 09 08.7	+2.4
BOVS	Bovan	5.24	360	*e*P	Pn	07 09 08.3	+1.9
UPM	Unac-Piva	5.27	337	*e*Pn	Pn	07 09 09.5	+2.6
ZAGS	Zajecar	5.43	4	*e*P	Pn	07 09 11.6	+2.6
STON	Ston	5.43	327	*e*Pn	Pn	07 09 09.0	+0.1
STON	Ston	5.43	327	*e*Pn	Pn	07 09 09.1	+0.1
STON				Sn	Sn	07 10 08.9	-2.4
RUDO	Rudo	5.53	342	*e*Pn	Pn	07 09 11.1	+0.8
GRUS	Gruza	5.55	352	*e*P	Pn	07 09 14.9	+4.3
LSTV	Lastovo	5.73	321	*e*Pn	Pn	07 09 12.5	-0.5
LSTV				Sn	Sn	07 10 15.5	-3.1
BBLS	Lazići	5.75	343	*e*Pn	Pn	07 09 14.9	+1.5
BBLS	Lazići	5.75	343	*e*P	Pn	07 09 13.9	+0.5
DIVS	Divibare	5.86	347	*e*Pn	Pn	07 09 15.5	+0.6
DIVS	Divibare	5.86	347	Pn	Pn	07 09 17.3	+2.4
DIVS	Divibare	5.86	347	*e*P	Pn	07 09 17.1	+2.2
TRUS	Trudelj	5.92	351	*e*P	Pn	07 09 20.7	+5.1
MAKA	Makarska	6.07	325	*e*Pn	Pn	07 09 18.3	+0.7
MAKA				Sn	Sn	07 10 24.7	-2.2
RICI	Ricice	6.18	327	*e*Pn	Pn	07 09 19.6	+0.4
RICI				Sn	Sn	07 10 28.3	-1.5
HVAR	Hvar	6.25	322	*e*Pn	Pn	07 09 20.1	-0.1
HVAR				Sn	Sn	07 10 27.5	-4.0
HERR	Herculane	6.51	4	⇑P	Pn	07 09 25.6	+1.8
KIJV	Kijevo	6.91	326	*e*Pn	Pn	07 09 29.9	+0.6
KIJV				Sn	Sn	07 10 44.8	-2.8
FRGS	Fruska Gora	6.92	349	*e*Pn	Pn	07 09 30.1	+0.7
ZIRJ	Zirje	7.00	321	*e*Pn	Pn	07 09 30.9	+0.5
ZIRJ				Sn	Sn	07 10 45.6	-4.2
GZR	Gura Zlata	7.04	6	⇑P	Pn	07 09 33.6	+2.5
MORI	Morici	7.12	322	*e*Pn	Pn	07 09 32.8	+0.7
MORI				Sn	Sn	07 10 49.7	-3.2
BZS	Buzias	7.22	359	⇓P	Pn	07 09 36.0	+2.4
VOIR		7.46	18	⇓P	Pn	07 09 38.4	+1.5
DUGI	Dugi Otok	7.53	320	*e*Pn	Pn	07 09 37.2	-0.6
DUGI				Sn	Sn	07 10 59.8	-3.3
UDBI	Udbina	7.60	326	*e*Pn	Pn	07 09 39.6	+0.8
UDBI				Sn	Sn	07 11 02.9	-1.9
MLR	Muntele Rosu	7.75	22	⇑P	Pn	07 09 44.1	+3.2
MLR	Muntele Rosu	7.75	22	Pn	Pn	07 09 44.5	+3.5
	comp=N,0.4nm,0.3s,baz=133,slow=18,SNR=2.3						
SIRR	Siria	7.88	360	Pn	Pn	07 09 52.1	+10
PLIT	Plitvice	7.94	327	*e*Pn	Pn	07 09 43.9	+0.5
PLIT				Sn	Sn	07 11 10.1	-3.1
NVLJ	Novalja	8.04	322	*e*Pn	Pn	07 09 45.4	+0.6
NVLJ				Sn	Sn	07 11 12.2	-3.4
MORH	Mrgy, Hungar	8.15	345	*e*PN	Pn	07 09 47.4	+1.1
MORH	Mrgy, Hungar	8.15	345	*e*Pn	Pn	07 09 45.2	-1.1
MORH	Mrgy, Hungar	8.15	345	Pn	Pn	07 09 47.4	+1.1
KOVH	Kovagotottos	8.16	342	*e*PN	Pn	07 09 47.8	+1.5
KOVH	Kovagotottos	8.16	342	Pn	Pn	07 09 47.8	+1.5
SMRN	Sveta Marina	8.74	322	*e*Pn	Pn	07 09 54.5	+0.2
SMRN				Sn	Sn	07 11 28.5	-4.1
CRES	Cresnjev	8.78	330	*e*Pn	Pn	07 09 53.7	-1.2
CRES	Cresnjev	8.78	330	Pn	Pn	07 09 55.6	+0.7
BRJN	Brijuni	8.84	320	*e*Pn	Pn	07 09 55.9	+0.2
BRJN				Sn	Sn	07 11 31.7	-3.4
CEY	Cerknica	9.14	326	*e*Pn	Pn	07 09 59.0	-0.9
BRTR	Keskin Array B	9.35	78	Pn	Pn	07 10 06.4	+3.6
	comp=N,0.1nm,0.3s,baz=261,slow=12,SNR=2.9						
PSZ	Piszkesteto	9.62	353	*e*PN	Pn	07 10 10.5	+4.0
PSZ	Piszkesteto	9.62	353	Pn	Pn	07 10 10.5	+4.0
SOKA	Soboth	9.65	331	*e*Pn	Pn	07 10 07.6	+0.7
	comp=N,1.0nm,0.4s						
OBKA	Obir	9.70	329	*e*Pn	Pn	07 10 09.0	+1.4
	comp=N,0.4nm,0.2s						
OBKA	Obir	9.70	329	Pn	Pn	07 10 10.3	+2.8
ABTA	Abfaltersbach	10.77	324	*e*Pn	Pn	07 10 22.7	+0.5
	comp=N,0.8nm,0.4s						
WTTA	Wattenberg	11.56	323	*e*Pn	Pn	07 10 34.1	+0.9
	comp=N,0.5nm,0.3s						
GERES	GERESS Array B	11.96	333	Pn	Pn	07 10 39.2	+0.7
	comp=N,0.1nm,0.3s,baz=159,slow=13,SNR=4.4						
AKASG	Malin Array Be	13.40	21	Pn	Pn	07 10 59.7	+1.5
	comp=N,0.1nm,0.3s,baz=205,slow=12,SNR=1.8						
HFS	Hagfors	22.36	349	P	P	07 12 45.6	-0.2
	comp=N,1.5nm,0.5s,baz=156,slow=11,SNR=8.1						
FINES	FINESS Array B	23.24	5	P	P	07 12 53.9	-1.0
	comp=N,2.3nm,0.9s,baz=195,slow=5.9,SNR=4.1						
NB2	NORSAR Subarra	23.61	347	P	P	07 12 58.8	0.0
	comp=Z,0.5nm,0.5s,baz=160,slow=11						
NOA	NORSAR Array B	23.61	347	P	P	07 12 58.9	+0.1
	comp=Z,0.3nm,0.6s,baz=164,slow=9.6,SNR=3.8						
EKA	Eskdalemuir Ar	23.82	323	P	P	07 13 00.0	-0.8
	comp=Z,1.1nm,0.6s,baz=124,slow=9.7,SNR=2.4						
KURBB	Kurchatov Arra	41.33	54	P	P	07 15 34.7	+1.2
	comp=Z,0.4nm,0.4s,baz=277,slow=8.7,SNR=4.5						
MKAR	Makanchi Array	44.37	59	P	P	07 15 59.1	+0.8
	comp=Z,3.8nm,0.4s,baz=276,slow=7.5,SNR=33						
ZALV	Zalesovo Beam	44.83	48	P	P	07 16 02.3	+0.5
	comp=Z,2.0nm,0.4s,baz=270,slow=8.5,SNR=7.4						
SONM	Songino Array	59.58	51	P	P	07 17 51.9	+0.2
	comp=Z,0.2nm,0.4s,baz=287,slow=5.9,SNR=1.9						

NNC ***27*** *07:09:38.0±0.4, 50°.01N×78°.68E, h0^{km}, mb3.3, mpv3.1,*
Error ellipse: s-maj=4.4km s-min=1.9km az=72.0,
Suspected Mining explosion.
IDC ***27*** *07:09:39.1±0.9, 50°.08N×78°.80E, h0^{km}, mb1 3.1/2,*
mb1mx2.9/48, mbtmp3.1/2, ML2.6/2, Error ellipse:
s-maj=13.0km s-min=6.0km az=64.0
ISC 27 07:09:39.5±0.8**, 50°.10N**±0°.05×**78°.76E**±0°.05**, h0^{km}, n22,**
σ**0^{s}85**/35**, 16C-11D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	Kurchatov Arra	0.51	342	⇓P	Pg	07 09 49.6	+0.3
KUR07				⇑S	Sb	07 09 58.6	-0.8
KUR06	Kurchatov Arra	0.53	343	⇓P	Pg	07 09 49.9	+0.3
KUR06				⇑S	Sb	07 09 58.9	-0.9
KUR14	Kurchatov Arra	0.53	348	⇑P	Pg	07 09 49.9	+0.2
KUR14				⇑S	Sb	07 09 59.0	-0.9
KUR15	Kurchatov Arra	0.54	346	⇑P	Pg	07 09 50.0	+0.1
KUR15				⇑S	Sb	07 09 59.4	-0.7
KURBB	Kurchatov Arra	0.55	344	Pg	Pg	07 09 50.1	+0.1
	2.1nm,0.3s,baz=167,slow=18,SNR=66						
KURBB				Lg	Lg	07 09 58.8	
	4.3nm,0.3s,baz=160,slow=33,SNR=34						
KURBB	Kurchatov Arra	0.55	344	⇑P	Pg	07 09 50.1	+0.1
	15nm,0.4s						
KURBB				⇑S	Sb	07 09 58.8	-1.6
	173nm,0.7s						
KUR16	Kurchatov Arra	0.56	343	⇓P	Pg	07 09 50.3	+0.1
KUR16				⇑S	Sb	07 09 59.9	-0.8
KUR05	Kurchatov Arra	0.57	345	⇑P	Pg	07 09 50.4	+0.1
KUR05				⇓S	Sb	07 09 59.6	-1.3
KUR17	Kurchatov Arra	0.57	341	⇓P	Pg	07 09 50.4	0.0
KUR17				⇓S	Sb	07 10 00.0	-1.0
KUR04	Kurchatov Arra	0.58	346	⇓P	Pg	07 09 50.9	+0.2
KUR04				⇓S	Sb	07 10 00.0	-1.4
KURK	Kurchatov	0.63	352	⇑P	Pg	07 09 51.4	-0.2
	12nm,0.7s						
KURK				⇑S	Sb	07 10 01.6	-1.0
	67nm,1.0s						
SEM	Semipalatinsk	1.01	71	P	Pg	07 09 58.8	0.0
	7.8nm,0.1s						
SEM				S	Sb	07 10 14.4	+0.6
	34nm,0.2s						
MAKZ	Makanchi	3.92	146	⇑Pg	Pb	07 10 49.9	+0.4
	1.3nm,0.5s						
MAKZ				⇑Lg	Lg	07 11 38.9	
	7.8nm,0.6s						
MK31	Makanchi Array	4.05	143	⇑Pn	Pn	07 10 42.4	-0.4
	0.9nm,0.6s,baz=324,slow=10,SNR=34						
MK31				⇑Pg	Pb	07 10 50.3	-1.5
	0.8nm,0.4s,baz=328,slow=14,SNR=12						
MK31				⇓Lg	Lg	07 11 43.5	
	15nm,0.8s,baz=329,slow=26,SNR=13						
MKAR	Makanchi Array	4.05	143	Pn	Pn	07 10 41.2	-1.5
	0.4nm,0.3s,baz=320,slow=10,SNR=37						
MKAR				Pg	Pb	07 10 50.6	-1.1
	0.9nm,0.3s,baz=321,slow=13,SNR=16						
MKAR				Sn	Sn	07 11 31.5	+0.6
	0.7nm,0.3s,baz=204,slow=33,SNR=6.3						
MKAR				Lg	Lg	07 11 43.6	
	2.4nm,0.3s,baz=330,slow=26,SNR=16						
OTUK	Ortayu	4.60	249	⇓Pn	Pn	07 10 49.6	-0.7
	2.1nm,0.7s						
OTUK				⇓Lg	Lg	07 12 03.1	
	5.0nm,0.6s						
I46RU	ZALESOVO INFRA	5.37	42	*i*		07 41 50.0	
	baz=222,slow=315,SNR=2.7						
ZALV	Zalesovo Beam	5.37	42	Pn	Pn	07 11 02.3	+1.5
	0.8nm,0.3s,baz=232,slow=14,SNR=8.8						
ZALV				Lg	Lg	07 12 27.3	
	0.2nm,0.3s,baz=229,slow=30,SNR=1.7						
DJR	Jarkent	5.81	173	Pg	Pb	07 11 22.3	+0.7
	0.7nm,0.1s						
DJR				Lg	Lg	07 12 37.9	
	6.4nm,0.6s						
ARXS	Arharly	5.92	187	Pg	Pb	07 11 23.8	+0.3
	1.5nm,0.4s						
ARXS				Lg	Lg	07 12 40.0	
	10nm,0.6s						
BVAR	Borovoye Array	5.99	303	Sn	Sn	07 12 18.6	+0.1
	1.4nm,0.3s,baz=118,slow=25,SNR=15						
BVAR				Lg	Lg	07 12 50.3	
	0.7nm,0.3s,baz=126,slow=26,SNR=4.9						
BLB	Baldybastay	6.00	182	Pg	Pb	07 11 26.2	+1.2
	1.6nm,0.5s						
BLB				Lg	Lg	07 12 44.1	
	12nm,0.9s						

IDC ***27*** *07:50:44.2±3.1, 36°.28N×70°.89E, h151^{km}±25^{km}, mb3.5/10,*
mb1 3.6/15, mb1mx3.3/52, mbtmp3.9/15, MS3.3/1,
Ms1 3.3/1, ms1mx2.5/34, Error ellipse: s-maj=24.6km
s-min=17.4km az=171.0
NNC ***27*** *07:50:49.1±7.9, 37°.10N×70°.23E, h0^{km}, mb4.4, mpv4.1,*
Error ellipse: s-maj=63.4km s-min=41.3km az=174.0
ISC 27 07:50:47.9±0.8**, 36°.52N**±0°.06×**70°.89E**±0°.08**, h200^{km}, n37,**
σ**2^{s}22**/34**, mb3.7**/9**, 6C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.81	162	P	Pn	07 51 36.6	+1.1
CEP				S	Sn	07 52 12.0	-0.7
CHCP	Chirah Chowk	3.45	145	P	Pn	07 51 44.3	+1.3
THW	Thamme Wali	3.78	169	P	Pn	07 51 48.0	+1.0
AML	Almayashu	6.01	20	P	Pn	07 52 16.1	+0.5
	SNR=44						
UCH	Uchtor	6.35	25	P	Pn	07 52 20.9	+0.8
	SNR=9.1						
EKS2	Erkin-Say	6.53	19	P	Pn	07 52 22.4	+0.5
	SNR=11						
KK09	Karatay Array	6.60	358	⇓P	Pn	07 52 21.6	-1.2
	10nm,0.3s,baz=184,slow=12						
KK09				⇑S	Sn	07 53 31.6	-6.6
	26nm,0.5s,baz=191,slow=26						
AAK	Ala-Archa	6.71	23	P	Pn	07 52 24.8	+0.4
	1.9nm,0.3s,baz=187,slow=4.6,SNR=17						
AAK				S	Sn	07 53 38.9	-2.2
	2.6nm,0.3s,baz=343,slow=21,SNR=16						
AAK	Ala-Archa	6.71	23	P	Pn	07 52 25.2	+0.8
	SNR=7.9						
AAK	Ala-Archa	6.71	23	⇑P	Pn	07 52 25.0	+0.5
	8.8nm,0.8s						
AAK				⇑S	Sn	07 53 39.0	-2.1
	22nm,0.9s						
USP	Ospenovka	7.29	21	P	Pn	07 52 32.4	+0.6
	SNR=5.5						
TKM2	Tokmak 2	7.35	28	P	Pn	07 52 33.7	+1.0
	SNR=15						
TKM2	Tokmak 2	7.35	28	⇓P	Pn	07 52 33.2	+0.5
	8.4nm,0.6s						
TKM2				⇓S	Sn	07 53 55.8	-0.3
	8.7nm,0.8s						
GEYT	Alibeck	10.29	282	P	Pn	07 53 08.2	-2.5
	1.1nm,0.3s,baz=125,slow=13,SNR=6.5						
PYUN	Piuthan	13.22	126	*e*P	P	07 53 47.2	-4.1
	6.4nm,0.3s						
MKAR	Makanchi Array	13.33	36	P	P	07 53 51.3	-0.8
	0.1nm,0.3s,baz=225,slow=12,SNR=5.0						
DANN	Dangsing	13.57	123	*e*P	P	07 53 53.0	-2.3
	19nm,0.4s						
DMN	Daman	14.96	122	*e*P	P	07 54 10.3	-0.3
	14nm,0.4s						
KKN	Kakani	14.96	121	*e*P	P	07 54 09.9	-0.7
	22nm,0.6s						
AB31	Akbulak array	15.03	331	⇑P	P	07 54 13.3	+2.5
	1.5nm,0.3s,baz=162,slow=11,SNR=18						
AB31				⇑S	S	07 56 54.0	-2.9
	1.1nm,0.5s,baz=151,slow=24,SNR=5.2						
PKIN	Phulchoki	15.18	122	*e*P	P	07 54 12.7	-0.3
	59nm,0.6s						
PKI	Pulchoki	15.19	122	*e*P	P	07 54 13.1	-0.1
	51nm,0.6s						
BVAR	Borovoye Array	16.51	359	P	Pn	07 54 30.9	+2.9
	0.3nm,0.3s,baz=173,slow=13,SNR=8.6						
AKTO	Aktyubinsk	16.72	330	P	Pn	07 54 32.0	+1.4
	0.7nm,0.3s,baz=147,slow=9.2,SNR=11						
AKTO	Aktyubinsk	16.72	330	⇓P	Pn	07 54 34.0	+3.4
	4.0nm,0.9s						
AKTO				⇑S	S	07 57 33.4	-0.4
	3.5nm,1.1s						
ZALV	Zalesovo Beam	19.93	25	P	Pn	07 55 06.7	-1.9
	1.5nm,0.6s,baz=224,slow=10.0,SNR=6.3						
AKASG	Malin Array Be	32.87	309	P	P	07 57 05.7	+3.0
	2.2nm,0.6s,baz=81,slow=7.0,SNR=12						
FINES	FINESS Array B	37.42	326	P	P	07 57 44.1	+2.8
	2.1nm,0.7s,baz=128,slow=9.0,SNR=9.6						
ARCES	ARCESS Array B	41.09	338	P	P	07 58 14.3	+2.6
	4.9nm,0.9s,baz=108,slow=7.8,SNR=7.0						
GERES	GERESS Array B	42.85	305	P	P	07 58 28.6	+2.4
	0.4nm,0.7s,baz=86,slow=6.0,SNR=2.3						
NB2	NORSAR Subarra	44.31	323	P	P	07 58 40.0	+2.4
	comp=Z,0.9nm,0.5s,baz=95,slow=7.9						
NOA	NORSAR Array B	44.31	323	P	P	07 58 40.3	+2.6
	comp=Z,1.9nm,0.7s,baz=97,slow=7.8,SNR=8.1						
KSRS	Korea Array	44.96	71	LR	LR	08 22 07.8	
	comp=Z,35nm,18.7s,baz=218,slow=42						
TORD	Torodi Ar. Bea	65.63	269	P	P	08 01 11.2	+0.3
	comp=Z,0.5nm,0.5s,baz=47,slow=6.2,SNR=5.6						
INK	Inuvik	73.90	9	P	P	08 02 03.2	+2.9
	comp=Z,1.1nm,0.7s,baz=344,slow=8.6,SNR=4.7						
YKA	Yellowknife Ar	81.23	3	P	P	08 02 44.0	+3.0
	comp=Z,0.8nm,0.4s,baz=350,slow=5.4,SNR=23						
ASAR	Alice Springs	84.34	125	P	P	08 02 59.1	+1.5
	comp=Z,0.7nm,0.6s,baz=316,slow=5.6,SNR=9.3						

NOU ***27*** *08:06:01.6, 20°.95S×178°.68W, h565^{km}, mb5.1/80, Fiji*
Islands Region
MOS ***27*** *08:06:01.1±0.9, 20°.82S×178°.77W, h567^{km}, mb4.9/24,*
Error ellipse: s-maj=9.3km s-min=8.3km az=76.2
NEIC ***27*** *08:06:01.4±2.1, 20°.90S±0°.09×178°.70W±0°.09,*
h555^{km}±5^{km}, mb4.9/177, Error ellipse: s-maj=13.5km
s-min=11.6km az=151.0
IDC ***27*** *08:06:02.3±0.6, 20°.86S×178°.72W, h572^{km}±6^{km}, mb4.1/25,*
mb1 4.3/28, mb1mx4.1/33, mbtmp5.0/28, Error ellipse:
s-maj=10.4km s-min=9.5km az=132.0
BGR ***27*** *08:06:02.3±0.0, 20°.93S×178°.77W, h568^{km}*
BJI ***27*** *08:06:03.5±0.0, 20°.45S×178°.27W, h601^{km}, mB5.3/20,*
mb4.9/41
GCMT ***27*** *08:06:04.4±0.3, 20°.63S±0°.04×178°.82W±0°.04,*
h571^{km}±2^{km}, MW5.3/62, Moment Tensor Solution.
s62,c76; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm;
M_{rr}-0.38±.04; $M_{\theta\theta}$0.47±.06; $M_{\phi\phi}$-0.08±.06; $M_{r\theta}$-0.53±.06;
$M_{\theta\phi}$0.24±.06; $M_{\phi r}$-1.08±.05; Best double couple:
$M_0$1.29800×10^{17} NP1:ϕ_s276.00000°, δ18.00000°,
λ-26.00000°. NP2:ϕ_s31.00000°, δ82.00000°,
λ-106.00000°. Principal axes: T 1.2370, Plg35.0000°,
Azm135.0000°; N 0.1210, Plg16.0000°, Azm33.0000°; P
-1.3580, Plg50.0000°, Azm283.0000°; nsta1 refers to
body waves, cutoff=40s. Triangular moment-rate function
ISC 27 08:06:01.4±0.4**, 20°.95S**±0°.04×**178°.66W**±0°.05**,**
h570^{km}±4^{km}**, h571^{km}:pP-P, n1012,** σ**1^{s}22**/1131**, mb5.0**/183**,**
33C-113D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.46	315	P	P	08 07 28.9	+0.5
	70nm,0.3s,baz=113,slow=4.9,SNR=435						
MSVF	Nonsavu	4.46	315	P	P	08 07 28.7	+0.3
MSVF	Nonsavu	4.46	315	P	P	08 07 28.7	+0.3
MSVF	Nonsavu	4.46	315	P	P	08 07 28.6	+0.2
RIZ	Raoul Island	8.28	176	S	S	08 09 47.0	+5.4
RAO	Raoul Island	8.29	176	S	S	08 09 39.4	-2.4
	101nm,0.3s,baz=96,slow=22,SNR=5.6						
GLKZ	Green Lake	8.30	176	P	P	08 08 00.8	-1.8
GLKZ				S	S	08 09 40.2	-1.7
NIUE	Niue	8.42	79	P	P	08 08 03.4	-0.5
	baz=8.4,SNR=11						
NIUE	Niue	8.42	79	P	P	08 08 03.1	-0.8
NIUE	Niue	8.42	79	P	P	08 08 03.5	-0.4
AFI	Afiamalu	9.60	44	P	P	08 08 12.8	-3.0
	13nm,0.3s,baz=358,slow=2.0,SNR=25						
AFI				S	S	08 09 58.8	-7.2
	21nm,0.3s,baz=146,slow=12,SNR=6.0						
MARNC	Mare, Loyalty	12.43	265	P	P	08 08 43.9	-0.5
MARNC	Mare, Loyalty	12.43	265	P	P	08 08 44.4	-0.1
PINNC	Pines Island,	13.02	260	P	P	08 08 50.5	0.0
PINNC	Pines Island,	13.02	260	P	P	08 08 50.5	0.0
LIFNC	LIFOU	13.19	268	P	P	08 08 50.9	-1.4
YATNC	Mamie plateau,	13.50	263	P	P	08 08 54.8	-0.7
OUENC	Ouen Island, N	13.56	261	P	P	08 08 55.7	-0.5
OUENC	Ouen Island, N	13.56	261	P	P	08 08 55.9	-0.2
DZM	Mont Dzumac	13.91	263	P	P	08 08 58.4	-1.4
	5.8nm,0.3s,baz=134,slow=15,SNR=56						
DZM	Mont Dzumac	13.91	263	*e*P	P	08 08 59.3	-0.5
	112nm,0.9s						
DZM	Mont Dzumac	13.91	263	P	P	08 08 59.4	-0.4
ONTNC	Ouen Toro	13.91	262	P	P	08 08 59.4	-0.3
ONTNC	Ouen Toro	13.91	262	P	P	08 08 59.4	-0.3
NOUC	Port Laguerre	14.04	263	P	P	08 09 00.5	-0.6
SANVU	Saraoutou	14.51	290	P	P	08 09 06.0	+0.3
OUZ	Omahuta	15.76	204	P	P	08 09 20.7	+3.0
OUZ	Omahuta	15.76	204	P	P	08 09 19.6	+1.9
OUZ				IAmb	IAmb	08 09 21.1	
	comp=Z,23nm,0.6s						
WCZ	Waipu Caves	16.14	201	P	P	08 09 23.7	+2.4
KUZ	Kuaotunu	16.48	196	P	P	08 09 25.7	+1.3
MXZ	Matakaoa Point	16.76	188	P	P	08 09 28.2	+1.4
HAZ	Te Kaha	17.03	190	P	P	08 09 29.2	-0.1
RUGZ	Raukumara Rang	17.25	190	P	P	08 09 30.6	-0.8
RUGZ				S	S	08 12 18.1	-4.4
TGRZ	Tauranga	17.29	194	P	P	08 09 33.8	+2.1
TWGZ	Tauwhareparae	17.41	189	P	P	08 09 32.5	-0.3
TWGZ				S	S	08 12 21.5	-3.5
TOZ	Tahuroa Road	17.47	196	P	P	08 09 35.7	+2.4
KMRZ	Kaimai	17.47	194	P	P	08 09 31.5	-1.9
KARZ	Kaharoa	17.57	193	P	P	08 09 36.9	+2.6
RAR	Rarotonga	17.63	94	P	P	08 09 34.5	-0.4
	comp=Z,2.1nm,0.3s,baz=266,slow=8.9,SNR=7.5						
RAR	Rarotonga	17.63	94	P	P	08 09 34.7	-0.3
RAR	Rarotonga	17.63	94	P	P	08 09 35.7	+0.7
RAR	Rarotonga	17.63	94	P	P	08 09 36.3	+1.3
URZ	Urewera	17.63	191	P	P	08 09 33.7	-1.1
	comp=Z,4.4nm,0.3s,baz=121,slow=23,SNR=26						
URZ				S	S	08 12 22.9	-5.5
	comp=Z,2.8nm,0.3s,baz=104,slow=22,SNR=7.1						
URZ	Urewera	17.63	191	P	P	08 09 33.1	-1.6
URZ				S	S	08 12 21.5	-7.0
URZ	Urewera	17.63	191	P	P	08 09 35.0	+0.2
MWZ	Matawai	17.63	190	P	P	08 09 34.4	-0.5
MWZ				S	S	08 12 21.9	-6.7
TKGZ	Te Karaka	17.69	189	P	P	08 09 35.2	0.0
TKGZ				S	S	08 12 24.0	-5.3
HRRZ	Handcock Road	17.92	193	P	P	08 09 37.9	+0.5
RIGZ	Rimuhau	17.96	189	P	P	08 09 38.4	+0.5
RIGZ				S	S	08 12 29.3	-4.6
PRRZ	Plateau Road	18.00	193	P	P	08 09 36.8	-1.4
RTZ	Ruatahuna	18.00	191	P	P	08 09 37.9	-0.3
RTZ				S	S	08 12 27.1	-7.5
TLZ	Tolley Road	18.03	195	P	P	08 09 41.2	+2.7
SNGZ	Shannon Statio	18.10	190	P	P	08 09 38.7	-0.4
SNGZ				S	S	08 12 33.4	-2.7
RAHZ	Arahi	18.28	191	P	P	08 09 40.6	-0.1
RAHZ				S	S	08 12 35.7	-3.2
HIZ	Hauiti	18.38	196	P	P	08 09 44.0	+2.4
WHHZ	Waihua	18.41	190	P	P	08 09 44.3	+2.4
NMHZ	Naumai	18.50	191	P	P	08 09 42.5	-0.3
TMVZ	Te Maari	18.74	194	P	P	08 09 45.7	+0.6
TWVZ	Taurewa	18.76	194	P	P	08 09 45.3	+0.1
WTVZ	West Tongariro	18.77	194	P	P	08 09 45.7	+0.4
NNVZ	North Ngauruho	18.78	194	P	P	08 09 45.9	+0.5
OTVZ	Oturere	18.80	194	P	P	08 09 44.8	-0.8
OTVZ				S	S	08 12 45.0	-2.6
SNVZ	South Ngauruho	18.82	194	P	P	08 09 45.4	-0.5
MCHZ	McNeill Hill	18.86	191	P	P	08 09 44.7	-1.3
MCHZ				S	S	08 12 44.9	-3.4
KWHZ	Kaweka Forest	18.89	192	P	P	08 09 44.6	-1.8
KWHZ				S	S	08 12 42.7	-6.3
TUVZ	Tukino	18.90	194	P	P	08 09 42.2	-4.4
WNVZ	Wahianoa	18.97	194	P	P	08 09 46.8	-0.4
PKVZ	Pokaka	18.99	194	P	P	08 09 48.7	+1.5
MOVZ	Moawhango	19.01	193	P	P	08 09 46.6	-0.8
MOVZ				S	S	08 12 46.4	-4.5
BHHZ	Black Hill Sta	19.02	193	P	P	08 09 46.1	-1.5
BHHZ				S	S	08 12 45.9	-5.2
KRHZ	Kereru	19.11	192	P	P	08 09 47.6	-0.8
KRHZ				S	S	08 12 46.5	-5.9
KAHZ	Kahuranaki	19.17	191	P	P	08 09 49.2	+0.4
KAHZ				S	S	08 12 50.3	-3.0
NEZ	North Egmont	19.29	197	P	P	08 09 53.3	+3.3
KNTN	Kanton	19.29	21	P	P	08 09 49.5	-0.7
KHEZ	Kahui Hut	19.34	197	P	P	08 09 54.7	+4.3
PXZ	Pawanui	19.40	190	P	P	08 09 50.6	-0.3
PXZ				S	S	08 12 53.8	-3.1
PNHZ	Pukenui	19.41	192	P	P	08 09 50.5	-0.5
PNHZ				S	S	08 12 51.2	-6.0
TSZ	Takapari Road	19.59	192	P	P	08 09 51.1	-1.6
PRHZ	Porangahau	19.67	191	P	P	08 09 53.2	-0.1
DVHZ	Dannevirke	19.79	192	P	P	08 09 54.3	-0.1
DVHZ				S	S	08 12 57.5	-5.7
ANWZ	Angora Road	19.88	191	P	P	08 09 53.8	-1.4
BFZ	Birch Farm	20.14	191	P	P	08 09 56.7	-0.9
MRZ	Mangatainoka R	20.25	193	P	P	08 09 57.4	-1.2
KIW	Kapiti Island	20.59	194	P	P	08 10 01.3	-0.3
QRZ	Quartz Range	21.18	199	P	P	08 10 07.4	+0.4
QRZ				IAmb	IAmb	08 10 07.9	
	comp=Z,25nm,0.7s						
QRZ	Quartz Range	21.18	199	P	P	08 10 07.2	+0.2
KHZ	Kahutara	22.39	195	P	P	08 10 16.4	-1.3
FOZ	Fox Glacier	24.49	201	P	P	08 10 35.9	-0.4
FOZ				IAmb	IAmb	08 10 38.6	
	comp=Z,18nm,0.9s						
PAE	Paea	27.62	88	*e*P	P	08 11 04.8	+0.6
	comp=Z,18nm,1.1s						
PPT2	Papeete2	27.64	88	*e*P	P	08 11 05.0	+0.5
	comp=Z,86nm,1.1s						
PPT	Papeete	27.64	88	P	P	08 11 04.2	-0.3
	comp=Z,77nm,0.9s,baz=8.8,slow=10.0,SNR=5.9						
PPTF	Pamatai, Papee	27.65	88	P	P	08 11 05.1	+0.6
PPTF	Pamatai, Papee	27.65	88	P	P	08 11 05.2	+0.6
TIAR	Tiarei	27.86	88	*e*P	P	08 11 07.0	+0.6
	comp=Z,0.5nm,0.8s						
EIDS	Eidsvold	28.14	255	P	P	08 11 08.8	+0.2
	baz=28,SNR=32						
EIDS	Eidsvold	28.14	255	P	P	08 11 08.9	+0.2
EIDS				IAmb	IAmb	08 11 09.4	
	comp=Z,40nm,0.8s						
EIDS	Eidsvold	28.14	255	P	P	08 11 08.7	0.0
	comp=Z,80nm,0.7s						
ARMA	Armidale	28.32	245	P	P	08 11 11.6	+1.2
	baz=28,SNR=48						

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ARMA  Armidale          28.32 245 P     P     08 11 11.6 +1.2
ARMA                              IAmb  IAmb  08 11 12.4
      comp=Z,42nm,0.8s
ARMA  Armidale          28.32 245 P     P     08 11 11.7 +1.3
      comp=Z,60nm,0.8s
RK1H  Rockhampton Ha    28.65 259 P     P     08 11 13.1  0.0
      comp=Z,41nm,0.8s
MEH   Mehetia           28.99  89 eP    P     08 11 16.9 +0.7
      comp=Z,40nm,1.0s
MGCD  Mangrove Creek    29.45 239 P     P     08 11 21.3 +1.4
      baz=30,SNR=14
PMOR  Pomariorio Ree    29.82  84 eP    P     08 11 24.0 +0.6
      comp=Z,120nm,1.1s
SYDH  Sydney Hard Ro    29.91 238 P     P     08 11 25.2 +1.3
      comp=Z,96nm,0.7s
VAH   Vaihoa            30.01  84 eP    P     08 11 25.3 +0.3
      comp=Z,80nm,1.0s
RMQ   Roma              30.29 253 P     P     08 11 28.4 +1.1
      baz=30,SNR=20
RMQ   Roma              30.29 253 P     P     08 11 28.1 +0.8
      comp=Z,72nm,1.2s
CNB   Canberra Magne    31.46 236 P     P     08 11 38.5 +1.2
      baz=32,SNR=57
CNB   Canberra Magne    31.46 236 P     P     08 11 38.5 +1.2
      comp=Z,143nm,1.0s
CAN   Canberra          31.75 236 P     P     08 11 40.7 +1.0
CAN                               pmax  pmax
      comp=Z,48nm,0.9s
CAN   Canberra          31.75 236 P     P     08 11 40.7 +1.0
CAN                               IAmb  IAmb  08 11 41.6
      comp=Z,48nm,0.9s
CAN   Canberra          31.75 236 P     P     08 11 40.5 +0.8
MILA  Mila              32.21 233 P     P     08 11 44.1 +0.5
      baz=32,SNR=3.8
CTA   Charters Tower    32.84 265 P     P     08 11 49.2 +0.1
      comp=Z,204nm,0.8s
CTAO  Charters Tower    32.84 265 P     P     08 11 49.7 +0.6
CTAO                              pmax  pmax
      comp=Z,187nm,1.0s
CTAO  Charters Tower    32.84 265 P     P     08 11 49.7 +0.6
CTAO  Charters Tower    32.84 265 P     P     08 11 49.5 +0.4
CMSA  Cobar Meteorol    33.54 244 P     P     08 11 55.3 +0.5
      baz=34,SNR=149
CMSA  Cobar Meteorol    33.54 244 P     P     08 11 55.0 +0.2
      comp=Z,120nm,0.8s
QLP   Quilpie           34.34 253 P     P     08 12 01.8 +0.2
      baz=34,SNR=35
QLP   Quilpie           34.34 253 P     P     08 12 01.4 -0.2
      comp=Z,151nm,1.1s
PMG   Port Moresby      34.85 284 P     P     08 12 06.2 +0.2
PMG                               pmax  pmax
      comp=Z,209nm,0.9s
PMG   Port Moresby      34.85 284 P     P     08 12 06.2 +0.2
PMG   Port Moresby      34.85 284 P     P     08 12 06.2 +0.2
PMG   Port Moresby      34.85 284 P     P     08 12 06.1 +0.1
MTSU  Mount Surprise    34.96 268 P     P     08 12 07.2 +0.3
      baz=35,SNR=65
MTSU  Mount Surprise    34.96 268 P     P     08 12 06.9  0.0
      comp=Z,96nm,0.7s
TOO   Toolangi          35.13 234 P     P     08 12 08.8 +0.7
      baz=35,SNR=38
TOO   Toolangi          35.13 234 P     P     08 12 08.9 +0.7
TOO                               pmax  pmax
      comp=Z,46nm,0.8s
TOO   Toolangi          35.13 234 P     P     08 12 08.9 +0.7
TOO                               IAmb  IAmb  08 12 09.7
      comp=Z,46nm,0.8s
TOO   Toolangi          35.13 234 P     P     08 12 08.6 +0.5
      comp=Z,79nm,0.8s
TAU   Tasmania Unive    35.87 225 P     P     08 12 14.7 +0.6
TAU                               pmax  pmax
      comp=Z,30nm,1.2s
TAU   Tasmania Unive    35.87 225 P     P     08 12 14.7 +0.6
TAU                               IAmb  IAmb  08 12 34.4
      comp=Z,30nm,1.1s
BRAT  Ballarat          36.31 235 P     P     08 12 19.0 +1.2
      comp=Z,50nm,0.8s
COEN  Coen              37.00 275 P     P     08 12 24.3 +0.6
COEN  Coen              37.00 275 P     P     08 12 24.1 +0.3
      comp=Z,175nm,1.3s
STKA  Stephens Creek    37.04 245 P     P     08 12 24.6 +0.7
      comp=Z,35nm,0.5s,baz=94,slow=11,SNR=195
STKA  Stephens Creek    37.04 245 P     P     08 12 24.6 +0.7
      baz=37,SNR=209
STKA  Stephens Creek    37.04 245 P     P     08 12 24.4 +0.5
STKA                              pmax  pmax
      comp=Z,14nm,1.0s
STKA  Stephens Creek    37.04 245 P     P     08 12 24.4 +0.5
STKA  Stephens Creek    37.04 245 P     P     08 12 24.2 +0.3
      comp=Z,15nm,0.8s
INKA  Innaminka         37.47 251 P     P     08 12 28.4 +1.0
      comp=Z,153nm,0.9s
MCQ   Macquarie Isla    37.55 201 P     P     08 12 28.8 +1.2
MCQ                               pmax  pmax
      comp=Z,279nm,1.5s
MCQ   Macquarie Isla    37.55 201 P     P     08 12 28.8 +1.2
ARPS  Mount Arapiles    37.73 237 P     P     08 12 29.4  0.0
      baz=38,SNR=19
ARPS  Mount Arapiles    37.73 237 P     P     08 12 29.6 +0.2
      comp=Z,83nm,0.8s
MANU  Manus Island      38.08 295 P     P     08 12 33.3 +0.8
MANU                              IAmb  IAmb  08 12 34.0
      comp=Z,63nm,1.1s
QIS   Mount Isa         38.95 263 P     P     08 12 39.0 -0.5
      baz=39,SNR=16
QIS   Mount Isa         38.95 263 P     P     08 12 39.5 -0.1
      comp=Z,24nm,0.7s
TAOE  Nuku Hiva Isla    39.00  78 eP    P     08 12 40.0 -0.1
      comp=Z,402nm,1.0s
TAOE  Nuku Hiva Isla    39.00  78 P     P     08 12 41.0 +1.0
TAOE  Nuku Hiva Isla    39.00  78 P     P     08 12 40.9 +0.8
HTT   Hallett           39.47 243 P     P     08 12 43.9 +0.3
      baz=40,SNR=48
HTT   Hallett           39.47 243 P     P     08 12 43.7 +0.1
      comp=Z,98nm,0.8s
LCRK  Leigh Creek       39.79 247 P     P     08 12 46.3 +0.2
      comp=Z,195nm,0.8s
WHYH  Whyalla           40.55 243 P     P     08 12 52.3 +0.2
      comp=Z,107nm,0.8s
BBOO  Buckleboo         41.80 244 P     P     08 13 02.0  0.0
      baz=42,SNR=181
BBOO  Buckleboo         41.80 244 P     P     08 13 02.1 +0.1
BBOO  Buckleboo         41.80 244 P     P     08 13 01.7 -0.3
      comp=Z,131nm,0.8s
OOD   Oodnadatta        41.95 251 P     P     08 13 03.9 +0.6
      comp=Z,111nm,1.5s
WAKE  Wake Island       42.50 339 P     P     08 13 07.4 -0.1
MULG  Mulgathing        43.38 248 P     P     08 13 14.0 -0.4
      comp=Z,181nm,0.8s
WR0   Warramunga Arr    43.74 263 P     P     08 13 17.0 -0.4
WR0                               IAmb  IAmb  08 13 18.0
      comp=Z,37nm,0.7s
AS31  Alice Springs     43.82 257 P     P     08 13 17.9  0.0
AS31                              IAmb  IAmb  08 13 18.7
      comp=Z,55nm,1.2s
ASAR  Alice Springs     43.82 257 P     P     08 13 17.9 -0.1
      comp=Z,105nm,0.7s,baz=89,slow=8.4,SNR=996
ASAR                              PcP   PcP   08 14 52.1 +0.5
      comp=Z,10nm,0.6s,baz=105,slow=4.0,SNR=7.9
ASAR                              ScP   ScP   08 17 50.5 +1.0
      comp=Z,6.1nm,0.7s,baz=107,slow=4.4,SNR=11
ASAR                              S     S     08 19 05.9 -2.3
      comp=Z,1.1nm,0.8s,baz=92,slow=14,SNR=4.2
ASAR  Alice Springs     43.82 257 P     P     08 13 18.1 +0.2
WB0   Warramunga Arr    43.91 263 P     P     08 13 18.4 -0.3
WB2   Warramunga Arr    43.92 263 P     P     08 13 18.2 -0.5
WRAB  Tennant Creek     43.92 263 P     P     08 13 18.3 -0.5
WRAB                              pmax  pmax
      comp=Z,97nm,1.0s
WRAB  Tennant Creek     43.92 263 P     P     08 13 18.3 -0.5
WRAB  Tennant Creek     43.92 263 P     P     08 13 18.0 -0.8
WRA   Warramunga Arr    43.93 263 P     P     08 13 18.1 -0.8
      comp=Z,22nm,0.3s,baz=97,slow=7.1,SNR=393
WRA   Warramunga Arr    43.93 263 P     P     08 13 18.3 -0.5
WRA                               pmax  pmax
      comp=Z,7.0nm,1.0s
WRA   Warramunga Arr    43.93 263 P     P     08 13 18.3 -0.5
GENI  Genyem            44.05 289 P     P     08 13 20.4 +0.6
SMPI  Sarmi             45.61 289 P     P     08 13 31.7 -0.1
      comp=Z,96nm,1.1s
DHH   Diamond Head      46.65  27 P     P     08 13 39.8 +0.4
DHH   Diamond Head      46.65  27 P     P     08 13 39.8 +0.4
KDU   Kakadu            47.35 272 P     P     08 13 44.3 -0.5
      baz=47,SNR=109
KDU   Kakadu            47.35 272 P     P     08 13 44.5 -0.3
      comp=Z,119nm,1.3s
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BAKI  Biak              48.29 288 P     P     08 13 52.0 +0.1
      comp=Z,3µmcomp=Z,236nm,0.9s
FORT  Forrest           48.55 247 P     P     08 13 53.1 -0.5
      baz=48,SNR=60
FORT  Forrest           48.55 247 P     P     08 13 53.2 -0.4
FORT  Forrest           48.55 247 P     P     08 13 53.0 -0.6
      comp=Z,177nm,0.7s
MTN   Manton Dam        48.55 271 P     P     08 13 53.1 -0.8
      baz=48,SNR=60
MTN   Manton Dam        48.55 271 P     P     08 13 53.3 -0.5
MTN   Manton Dam        48.55 271 P     P     08 13 53.2 -0.6
      comp=Z,145nm,0.7s
WRKA  Warakurna         48.75 255 P     P     08 13 55.0 -0.2
      baz=49,SNR=117
WRKA  Warakurna         48.75 255 P     P     08 13 54.7 -0.5
      comp=Z,158nm,0.7s
DRS   Darwin Rock St    48.89 272 P     P     08 13 56.2 -0.1
      comp=Z,63nm,0.9s
GUMO  Guam              49.62 311 P     P     08 14 02.1 +0.5
GUMO                              pmax  pmax
      comp=Z,289nm,0.9s
GUMO  Guam              49.62 311 P     P     08 14 02.1 +0.5
KNRA  Kununurra         50.02 267 P     P     08 14 04.3 -0.3
      baz=50,SNR=73
KNRA  Kununurra         50.02 267 P     P     08 14 04.4 -0.3
KNRA  Kununurra         50.02 267 P     P     08 14 04.3 -0.3
      comp=Z,150nm,0.7s
FAKI  Fak Fak           51.01 284 P     P     08 14 11.5 -0.3
      comp=Z,58nm,1.2s
FAKI  Fak Fak           51.01 284 P     P     08 14 11.4 -0.5
FAKI                              IAmb  IAmb  08 14 12.5
      comp=Z,79nm,1.1s
SWI   Sorong            52.77 286 P     P     08 14 24.8 +0.3
      comp=Z,4µmcomp=Z,517nm,0.8s
SOEI  Soe               55.90 272 P     P     08 14 47.3 +0.7
      comp=Z,3µmcomp=Z,319nm,0.7s
SOEI  Soe               55.90 272 P     P     08 14 48.0 +1.4
SOEI  Soe               55.90 272 P     P     08 14 47.4 +0.8
LBMI  Labuha            56.27 284 P     P     08 14 48.4 -0.5
      comp=Z,1µmcomp=Z,116nm,0.9s
BATI  Baumata           56.32 272 P     P     08 14 49.6 +0.2
      comp=Z,92nm,0.8s
PSA00 Pilbara Seismi    56.97 257 P     P     08 14 52.7 -1.0
PSA00                             IAmb  IAmb  08 14 54.3
      comp=Z,47nm,0.8s
PSA00 Pilbara Seismi    56.97 257 P     P     08 14 53.3 -0.4
PSA00                             IAmb  IAmb  08 14 54.2
      comp=Z,98nm,0.8s
TNTI  Ternate           56.98 285 P     P     08 14 53.9 +0.1
      comp=Z,1µmcomp=Z,133nm,1.1s
TNTI  Ternate           56.98 285 P     P     08 14 54.2 +0.4
TNTI                              IAmb  IAmb  08 14 54.9
      comp=Z,106nm,0.9s
TNTI  Ternate           56.98 285 P     P     08 14 53.9 +0.1
SANI  Sanana            57.07 282 P     P     08 14 53.9 -0.5
      comp=Z,1µmcomp=Z,98nm,1.0s
SANI  Sanana            57.07 282 P     P     08 14 54.0 -0.5
MBWA  Marble Bar        57.16 258 P     P     08 14 54.4 -0.5
MEEK  Meekatharra       57.19 251 P     P     08 14 54.4 -0.7
      baz=57,SNR=30
KLBR  Kellerberrin      57.31 245 P     P     08 14 55.6 -0.2
      baz=57,SNR=29
SBA   Scott Base        57.38 184 P     P     08 14 59.4 +3.9
SBA                               pmax  pmax
      comp=Z,25nm,1.3s
SBA   Scott Base        57.38 184 P     P     08 14 59.4 +3.9
VNDA  Vanda             57.41 185 P     P     08 14 58.5 +2.8
      comp=Z,4.3nm,0.6s,baz=14,slow=7.1,SNR=26
VNDA                              ScP   ScP   08 18 49.3 +2.4
      comp=Z,2.1nm,0.8s,baz=343,slow=4.1,SNR=4.4
VNDA  Vanda             57.41 185 P     P     08 14 58.7 +3.0
VNDA                              pmax  pmax
      comp=Z,8.0nm,1.1s
VNDA  Vanda             57.41 185 P     P     08 14 58.7 +3.0
NWAO  Narrogin (SRO)    57.62 244 P     P     08 14 58.3 +0.4
MMRI  Maumere           58.16 273 P     P     08 15 01.5 -0.3
      comp=Z,113nm,0.8s
MMRI  Maumere           58.16 273 P     P     08 15 01.6 -0.3
MMRI                              IAmb  IAmb  08 15 02.3
      comp=Z,115nm,1.0s
MMRI  Maumere           58.16 273 P     P     08 15 01.8  0.0
BLDU  Ballidu           58.31 246 P     P     08 15 02.3 -0.3
      baz=58,SNR=45
MUN   Mundaring         58.58 245 P     P     08 15 04.6 +0.2
      baz=58,SNR=13
MUN   Mundaring         58.58 245 P     P     08 15 04.7 +0.3
      comp=Z,68nm,1.1s
EDFI  Ende, Flores      58.63 272 P     P     08 15 04.8 -0.3
      comp=Z,662nmcomp=Z,64nm,0.9s
MORW  Morawa            59.09 248 P     P     08 15 07.6 -0.2
      baz=59,SNR=19
MORW  Morawa            59.09 248 P     P     08 15 07.7 -0.2
MORW                              IAmb  IAmb  08 15 08.2
      comp=Z,29nm,0.8s
LUWI  Luwuk             60.41 281 P     P     08 15 17.2 +0.3
      comp=Z,3µmcomp=Z,152nm,1.1s
LUWI  Luwuk             60.41 281 P     P     08 15 17.1 +0.3
LUWI  Luwuk             60.41 281 P     P     08 15 17.2 +0.3
GTOI  Gorontalo         60.87 283 P     P     08 15 20.7 +0.8
      comp=Z,620nmcomp=Z,51nm,0.8s
DAV   Davao City (W)    61.42 291 P     P     08 15 23.7 +0.3
APSI  Ampana            61.50 281 P     P     08 15 23.5 -0.5
      comp=Z,1µmcomp=Z,77nm,1.6s
BNSI  Bone              61.61 276 P     P     08 15 24.9 +0.2
      comp=Z,781nmcomp=Z,60nm,1.4s
MRSI  Marisa            61.78 282 P     P     08 15 24.8 -1.0
      comp=Z,33nm,0.7s
GIRL  Giralia           61.84 255 P     P     08 15 27.1 +1.0
      baz=62,SNR=6.0
GIRL  Giralia           61.84 255 P     P     08 15 26.6 +0.5
TOLI2 Tolitoli          63.10 282 P     P     08 15 33.6 -0.7
TOLI2                             IAmb  IAmb  08 15 36.2
      comp=Z,36nm,0.8s
TOLI2 Tolitoli          63.10 282 P     P     08 15 34.1 -0.2
CASY  Casey             63.29 205 P     P     08 15 35.2 +0.6
CASY                              IAmb  IAmb  08 15 35.5
      comp=Z,99nm,1.5s
SPMM  Sapulut           68.50 284 P     P     08 16 09.0 +1.0
JYT   Yasato            68.91 325 P     P     08 16 10.1 +0.2
JYT                               IAmb  IAmb  08 16 11.1
      comp=Z,44nm,0.9s
QSPA  South Pole Qui    69.12 180 P     P     08 16 12.6 +1.7
QSPA                              IAmb  IAmb  08 16 13.1
      comp=Z,19nm,0.8s
KKM   Kota Kinabalu     69.28 285 P     P     08 16 12.9 +0.2
KKM                               IAmb  IAmb  08 16 13.6
      comp=Z,41nm,0.9s
UGM   Wanagama          69.34 269 P     P     08 16 12.9 -0.2
JOW   Kunigami          69.99 311 P     P     08 16 16.9 +0.3
JOW                               IAmb  IAmb  08 16 18.3
      comp=Z,36nm,0.8s
JOW   Kunigami          69.99 311 P     P     08 16 17.6 +1.1
JGF   Kuroka            70.00 323 P     P     08 16 17.1 +0.6
JGF                               IAmb  IAmb  08 16 40.1
      comp=Z,44nm,1.5s
MJAR  Matsushiro Arr    70.21 324 P     P     08 16 17.1 -0.6
      comp=Z,17nm,0.8s,baz=158,slow=5.4,SNR=23
MJAR  Matsushiro Arr    70.21 324 P     P     08 16 17.5 -0.2
MJAR                              pmax  pmax
      comp=Z,14nm,0.9s
MJAR  Matsushiro Arr    70.21 324 P     P     08 16 17.5 -0.2
MAJO  Matsushiro        70.21 324 P     P     08 16 17.4 -0.3
MAJO                              pmax  pmax
      comp=Z,28nm,1.0s
MAJO  Matsushiro        70.21 324 P     P     08 16 17.4 -0.3
MAJO                              IAmb  IAmb  08 16 18.0
      comp=Z,28nm,0.9s
MAJO  Matsushiro        70.21 324 P     P     08 16 17.6 -0.1
MAT   Matsushiro        70.21 324 P     P     08 16 17.0 -0.7
MJB9  Matsu-Tunnel      70.22 324 P     P     08 16 17.6 -0.1
MJB9                              IAmb  IAmb  08 16 18.0
      comp=Z,27nm,0.9s
JWT   Wachi             70.89 322 P     P     08 16 22.4 +0.7
JWT                               IAmb  IAmb  08 16 49.2
      comp=Z,111nm,1.5s
JSU   Suzuyama          71.41 316 P     P     08 16 25.3 +0.4
JSU                               IAmb  IAmb  08 16 26.2
      comp=Z,34nm,0.9s
SBUM  Sibu              71.48 280 P     P     08 16 27.0 +1.4
SBUM  Sibu              71.48 280 P     P     08 16 25.9 +0.3
JHS   Saijyo            72.05 320 P     P     08 16 28.6 +0.1
JNU   Nakatsue          72.19 317 P     P     08 16 29.2 -0.1
JNU   Nakatsue          72.19 317 P     P     08 16 29.8 +0.4
JNU                               IAmb  IAmb  08 16 30.5
      comp=Z,77nm,1.2s
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JNU   Nakatsue          72.19 317 P     P     08 16 29.7 +0.4
KIWB  Kanaga Island     72.50   1 P     P     08 16 30.7 +0.1
ADK   Adak              72.54   1 P     P     08 16 30.1 -0.7
ADK                               pmax  pmax
      comp=Z,80nm,0.9s
ADK   Adak              72.54   1 P     P     08 16 30.1 -0.7
KSM   Kuching           72.87 278 P     P     08 16 34.0 +0.3
KSM   Kuching           72.87 278 P     P     08 16 33.9 +0.3
KSM                               IAmb  IAmb  08 16 35.2
      comp=Z,50nm,0.8s
KSM   Kuching           72.87 278 P     P     08 16 34.2 +0.6
TWG   Pinlang           73.11 303 P     P     08 16 33.2 -1.6
TWG                               IAmb  IAmb  08 16 34.5
      comp=Z,34nm,0.6s
YULB  Yu-li             73.24 304 P     P     08 16 35.1 -0.5
YULB                              IAmb  IAmb  08 16 39.5
      comp=Z,22nm,0.9s
NACB  Ninganchiao       73.42 305 P     P     08 16 36.0 -0.6
NACB                              IAmb  IAmb  08 16 37.0
      comp=Z,80nm,1.1s
TPUB  Ta-pu             73.71 303 P     P     08 16 37.5 -0.7
TPUB  Ta-pu             73.71 303 P     P     08 16 37.1 -1.1
SSLB  Suanglung         73.71 304 P     P     08 16 37.4 -0.9
SSLB                              IAmb  IAmb  08 16 38.1
      comp=Z,45nm,0.8s
SSLB  Suanglung         73.71 304 P     P     08 16 37.4 -0.9
ASAJ  Asahikawa         73.83 332 P     P     08 16 38.7 +0.3
      comp=Z,12nm,0.7s,baz=142,slow=20,SNR=2.5
NIKH  Nikolski High     74.10   6 P     P     08 16 40.3 +0.6
NIKH  Nikolski High     74.10   6 P     P     08 16 39.1 -0.6
      baz=190
UNV   Unalaska Valle    75.22   7 P     P     08 16 45.6 -0.3
      baz=192
TJN   Taejon            76.49 318⇑eP  P     08 16 54.1 +0.7
PEA0B Petropavlovsk-    76.55 346 P     P     08 16 53.4  0.0
PEA0B                             pmax  pmax
      comp=Z,57nm,1.3s
PEA0B Petropavlovsk-    76.55 346 P     P     08 16 53.4  0.0
PEA0B                             IAmb  IAmb  08 17 19.0
      comp=Z,57nm,1.2s
PETK  Petropavlovsk-    76.55 346 P     P     08 16 52.6 -0.7
      comp=Z,13nm,0.6s,baz=146,slow=5.9,SNR=20
PETK  Petropavlovsk-    76.55 346 P     P     08 16 53.0 -0.4
PETK  Petropavlovsk-    76.55 346 P     P     08 16 53.0 -0.4
KSRS  Korea Array       76.82 319 P     P     08 16 55.4 +0.2
      comp=Z,4.9nm,0.8s,baz=136,slow=6.3,SNR=11
KSAR  Wonju Array Be    76.84 319 P     P     08 16 56.2 +0.9
KSAR  Wonju Array Be    76.84 319 P     P     08 16 56.1 +0.9
CHNA  Chernabura Isl    77.22  11 P     P     08 16 56.9 -0.1
      baz=198
SDPT  Sand Point        77.56  11 P     P     08 16 58.8  0.0
SDPT  Sand Point        77.56  11 P     P     08 16 58.6 -0.2
      baz=197
VLA   Vladivostok       78.30 325deP  P     08 17 02.1 -0.9
VLA                               pmax  pmax
      comp=Z,40nm,1.0s
SMAI  San Martin Ant    78.41 159 P     P     08 17 04.9 +1.7
SMAI                              IAmb  IAmb  08 17 06.2
      comp=Z,58nm,0.9s
CHGN  Chignik           78.83  11 P     P     08 17 05.5  0.0
      baz=199
MYKOM Kota Tinggi       78.97 276 P     P     08 17 07.7 +0.4
MYKOM                             IAmb  IAmb  08 17 08.5
      comp=Z,36nm,0.7s
USA0B Ussuriysk Arra    78.99 326 P     P     08 17 07.2 +0.5
USA0B                             pmax  pmax
      comp=Z,63nm,1.4s
USA0B Ussuriysk Arra    78.99 326 P     P     08 17 07.2 +0.5
USA0B                             IAmb  IAmb  08 17 09.0
      comp=Z,63nm,1.4s
USRK  Ussuriysk Ar.     78.99 326 P     P     08 17 08.1 +1.4
      comp=Z,17nm,0.9s,baz=119,slow=4.2,SNR=14
USRK  Ussuriysk Ar.     78.99 326 P     P     08 17 07.6 +0.9
USRK  Ussuriysk Ar.     78.99 326 P     P     08 17 07.6 +0.9
KMRM  Mail Ridge        79.49  40 P     P     08 17 11.7 +2.1
NJ2   Nanjing           79.70 310 ⇑P   P     08 17 09.8 -0.9
NJ2                               pmax  pmax
      comp=Z,11nm,0.5s
VES   Vestal, Richgr    79.78  45 P     P     08 17 12.5 +1.4
      baz=235
MURC  Murrieta          79.81  48 P     P     08 17 12.1 +0.8
      baz=236
SII   Sitkinak Islan    79.92  13 P     P     08 17 12.1 +0.8
SII   Sitkinak Islan    79.92  13 P     P     08 17 12.6 +1.3
      baz=203
O02D  Mt. Diablo Mer    80.02  40 P     P     08 17 14.2 +2.0
      baz=232
IKP   In-Ko-Pah, Jac    80.06  49 P     P     08 17 14.1 +1.4
      baz=237
ISA   Isabella, Lake    80.09  46 P     P     08 17 14.3 +1.5
      baz=235
CMB   Columbia Colle    80.21  43 P     P     08 17 14.4 +1.1
CMB                               pmax  pmax
      comp=Z,11nm,1.4s
CMB   Columbia Colle    80.21  43 P     P     08 17 14.4 +1.1
WDC   Whiskeytown Da    80.41  40 P     P     08 17 16.0 +1.8
WDC                               pmax  pmax
      comp=Z,6.0nm,1.0s
WDC   Whiskeytown Da    80.41  40 P     P     08 17 16.0 +1.8
SWSC  Sam W. Stewart    80.44  49 P     P     08 17 16.1 +1.6
      baz=238
MDJ   Mudanjiang        80.54 325 P     P     08 17 16.0 +1.3
MDJ                               pmax  pmax
      comp=Z,33nm,1.1s
MDJ                               pmax  pmax
      comp=Z,680nm,3.6s
MDJ   Mudanjiang        80.54 325 P     P     08 17 15.1 +0.4
MDJ                               IAmb  IAmb  08 17 17.0
      comp=Z,54nm,1.3s
MDJ   Mudanjiang        80.54 325 P     P     08 17 16.1 +1.3
N02D  Trinity Center    80.56  39 P     P     08 17 16.5 +1.4
      baz=232
O03E  Paynes Creek      80.68  40 P     P     08 17 17.1 +1.4
      baz=232
M02C  Callahan          80.73  39 P     P     08 17 17.6 +1.7
      baz=232
L02E  Cave Junction     80.77  38 P     P     08 17 18.0 +1.9
      baz=231
CWC   Cottonwood Cre    80.79  45 P     P     08 17 18.0 +1.5
      baz=236
MAW   Mawson            80.93 200 P     P     08 17 17.6 +1.1
      comp=Z,3.9nm,0.6s,baz=152,slow=7.5,SNR=10
MAW   Mawson            80.93 200 P     P     08 17 17.5 +1.1
MLAC  Mammoth, Mammo80.97  44 P     P     08 17 18.4 +0.9
      baz=235
MPMC  Manual Prospec    80.97  46 P     P     08 17 18.4 +0.9
      baz=236
GSC   Goldstone, Bar    81.02  47 P     P     08 17 18.6 +1.0
      baz=236
JRMM  Jerantut          81.02 278 P     P     08 17 19.0 +1.0
YBH   Yreka Blue Hor    81.03  39 P     P     08 17 18.9 +1.4
      comp=Z,6.8nm,0.8s,baz=163,slow=1.6,SNR=24
YBH   Yreka Blue Hor    81.03  39 P     P     08 17 20.0 +2.5
YBH                               pmax  pmax
      comp=Z,7.0nm,0.8s
YBH   Yreka Blue Hor    81.03  39 P     P     08 17 19.9 +2.5
TIN   Tinemaha, Big     81.04  45 P     P     08 17 19.2 +1.5
      baz=235
K02D  Willamette Mer    81.08  38 P     P     08 17 19.8 +2.1
      baz=231
HEC   Hector,Ludlow     81.08  48 P     P     08 17 19.3 +1.4
      baz=237
PMSA  Palmer Station    81.12 157 P     P     08 17 19.2 +1.8
PMSA                              IAmb  IAmb  08 17 19.5
      comp=Z,20nm,0.8s
GLA   Glamis            81.19  50 P     P     08 17 20.5 +2.0
GLA                               pmax  pmax
      comp=Z,16nm,0.9s
GLA   Glamis            81.19  50 P     P     08 17 20.4 +2.0
GLA   Glamis            81.19  50 P     P     08 17 20.7 +2.2
      baz=238
PNTR  Pine Nut          81.33  42 P     P     08 17 20.7 +1.4
KDAK  Kodiak Island     81.40  14 P     P     08 17 19.8 +1.0
      comp=Z,11nm,0.7s,baz=209,slow=5.4,SNR=7.3
KDAK  Kodiak Island     81.40  14 P     P     08 17 20.0 +1.2
KDAK                              pmax  pmax
      comp=Z,96nm,1.5s
KDAK  Kodiak Island     81.40  14 P     P     08 17 20.0 +1.2
KDAK                              IAmb  IAmb  08 17 23.5
      comp=Z,96nm,1.5s
KDAK  Kodiak Island     81.40  14 P     P     08 17 21.7 +2.9
      baz=205
VCNR  Virginia City     81.42  42 P     P     08 17 21.2 +1.5
HUMO  Hull Mountain     81.43  38 P     P     08 17 21.3 +1.9
YERR  Yerington         81.50  43 P     P     08 17 21.6 +1.5
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GMRC	Granite Mounta	81.52	48	P	P	08 17 21.7	+1.5
	baz=237						
LHV	Little Huntoon	81.54	44	P	P	08 17 22.2	+2.2
IRM	Iron Mountain	81.55	49	P	P	08 17 21.6	+1.3
	baz=238						
L04D	Klamath Falls	81.56	39	P	P	08 17 22.1	+1.8
	baz=232						
M04C	Macdoel	81.57	39	P	P	08 17 22.1	+1.8
	baz=232						
FURC	Furnace Creek,	81.62	46	P	P	08 17 21.9	+1.4
	baz=236						
TUQ	Turquoise Moun	81.69	47	P	P	08 17 22.2	+1.1
	baz=237						
NVAR	Mina Array Bea	81.77	44	P	P	08 17 22.9	+1.4
	comp=Z,3.6nm,0.8s,baz=225,slow=8.5,SNR=22						
NVAR				pP	pwP	08 19 25.1	-0.3
	comp=Z,2.0nm,0.8s,baz=225,slow=9.2,SNR=7.3						
NVAR				PKKPbc	PKKPbc	08 35 49.3	-0.1
	comp=Z,0.4nm,0.6s,baz=68,slow=1.8,SNR=4.7						
NV11	Mina Array Sit	81.87	44	P	P	08 17 23.4	+1.4
KVN	Kaiserville	82.26	43	P	P	08 17 25.3	+1.3
KVN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KVN	Kaiserville	82.26	43	P	P	08 17 25.3	+1.3
TPH	Tonopah	82.28	44	P	P	08 17 25.6	+1.5
TPH				pmax	pmax		
	comp=Z,47nm,1.1s						
TPH	Tonopah	82.28	44	P	P	08 17 25.6	+1.5
TPH				IAmb	IAmb	08 17 26.5	
	comp=Z,47nm,1.1s						
CN2	Changchun	82.28	323	*e*P	P	08 17 23.5	-0.2
CN2				pmax	pmax		
	comp=Z,30nm,1.6s						
TPNV	Topopah Spring	82.30	46	P	P	08 17 25.8	+1.6
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TPNV	Topopah Spring	82.30	46	P	P	08 17 25.8	+1.6
TPNV	Topopah Spring	82.30	46	P	P	08 17 25.9	+1.6
	baz=237						
J04D	Umpqua Nationa	82.31	38	P	P	08 17 25.7	+1.5
	baz=232						
PDMCI	Parker Dam,Lak	82.33	49	P	P	08 17 26.0	+1.8
	baz=238						
I04A	Tendick Farm,	82.48	37	P	P	08 17 26.4	+1.6
	baz=232						
MOD	Modoc Plateau	82.56	40	P	P	08 17 27.1	+1.7
IPM	Ipoh	82.58	278	P	P	08 17 26.0	+0.1
IPM	Ipoh	82.58	278	P	P	08 17 26.2	+0.2
IPM				IAmb	IAmb	08 17 27.6	
	comp=Z,42nm,0.8s						
IPM	Ipoh	82.58	278	P	P	08 17 26.6	+0.7
KLR	Kul'dur	82.61	330	P	P	08 17 26.3	+1.1
	comp=Z,4.7nm,0.9s,baz=152,slow=1.8,SNR=9.8						
KLR	Kul'dur	82.61	330	⇓*e*P	P	08 17 25.5	+0.3
KLR				pmax	pmax		
	comp=Z,48nm,3.0s						
HEBO	Mount Hebo	82.62	36	P	P	08 17 27.9	+2.4
K05A	Summer Lake	82.70	39	P	P	08 17 28.2	+2.1
SHPR	Sheep Range	82.79	47	P	P	08 17 28.6	+1.9
J05D	Fort Rock, OR	82.84	38	P	P	08 17 28.5	+1.8
	baz=232						
G03D	McMinnville, O	82.89	36	P	P	08 17 28.3	+1.6
	baz=231						
P19K	Oil Pt	82.97	13	P	P	08 17 26.7	-0.2
	baz=204						
KULM	Kulim	83.23	278	P	P	08 17 28.9	-0.3
KULM				IAmb	IAmb	08 17 30.6	
	comp=Z,24nm,0.8s						
O19K	Port Alsworth	83.25	12	P	P	08 17 28.6	+0.4
O19K	Port Alsworth	83.25	12	P	P	08 17 28.1	-0.1
	baz=203						
HOM	Homer	83.31	13	P	P	08 17 29.0	+0.5
	baz=205						
PINE	Pine Mountain	83.32	38	P	P	08 17 31.5	+2.4
I05D	Terrebonne, OR	83.42	37	P	P	08 17 30.2	+0.7
	baz=232						
BRSE	Bradley Lake S	83.58	14	P	P	08 17 30.3	+0.4
	baz=206						
BMN	Battle Mountai	83.60	42	P	P	08 17 32.0	+1.4
BMN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BMN	Battle Mountai	83.60	42	P	P	08 17 32.0	+1.4
TUC	Tucson	83.74	52	P	P	08 17 33.0	+1.6
	baz=240						
N19K	Bonanza Creek	83.79	12	P	P	08 17 30.3	-0.7
	baz=203						
RSO	Redoubt South	83.81	13	P	P	08 17 31.1	-0.1
SVW2	Sparrevohn	83.86	11	P	P	08 17 31.3	+0.1
G05D	Wamic, OR	83.99	37	P	P	08 17 33.7	+1.5
	baz=232						
MA2	Magadan	84.06	345	⇓*e*P	P	08 17 31.0	-1.2
MA2				pmax	pmax		
	comp=Z,75nm,2.5s						
SEW	Seward	84.20	14	P	P	08 17 32.7	-0.1
	baz=207						
F05D	White Salmon	84.30	36	P	P	08 17 32.3	-1.4
	baz=232						
Q23K	Middleton Isla	84.36	16	P	P	08 17 32.9	-0.7
	baz=210						
O22K	Cooper Landing	84.48	14	P	P	08 17 34.0	-0.1
	baz=207						
SPCR	Spurr Chakacha	84.59	13	P	P	08 17 34.6	-0.3
	baz=205						
GAMB	Gambell	84.62	3	P	P	08 17 35.5	+0.7
	baz=187						
GSI	Gunungsitoli	84.64	273	P	P	08 17 36.9	+0.7
WUAZ	Wupatki	84.90	49	P	P	08 17 35.6	-1.6
	baz=240						
RC01	Rabbit Creek A	85.02	14	P	P	08 17 36.7	-0.2
RC01				IAmb	IAmb	08 17 37.7	
	comp=Z,19nm,0.8s						
RC01	Rabbit Creek A	85.02	14	P	P	08 17 36.6	-0.2
	baz=207						
ELK	Elko	85.03	43	P	P	08 17 38.3	+0.6
ELK	Elko	85.03	43	P	P	08 17 38.3	+0.6
PWL	Port Wells	85.13	14	P	P	08 17 37.0	-0.4
	baz=208						
G08A	Pilot Rock	85.35	38	P	P	08 17 40.4	+1.4
A04D	Lummi Island	85.40	33	P	P	08 17 37.8	-1.1
	baz=231						
B05A	Bryant	85.43	34	P	P	08 17 37.8	-1.3
	baz=232						
GLI	Glacier Island	85.44	15	P	P	08 17 38.9	0.0
GLI	Glacier Island	85.44	15	P	P	08 17 38.9	0.0
	baz=209						
L20K	Farewell, AK	85.45	11	P	P	08 17 39.1	+0.2
	baz=203						
TTA	Tatalina	85.50	10	P	P	08 17 39.8	+0.6
TTA				pmax	pmax		
	comp=Z,32nm,1.4s						
TTA	Tatalina	85.50	10	P	P	08 17 39.8	+0.6
TTA				IAmb	IAmb	08 17 40.6	
	comp=Z,32nm,1.4s						
TTA	Tatalina	85.50	10	P	P	08 17 39.0	-0.2
	baz=201						
M22K	Willow	85.53	13	P	P	08 17 38.9	-0.3
	baz=207						
KNK	Knik Glacier	85.59	14	P	P	08 17 39.3	-0.3
	baz=208						
E07A	Sunnyside	85.59	36	P	P	08 17 41.1	+1.2
PMR	Palmer	85.60	14	P	P	08 17 39.4	-0.2
	baz=208						
HAWA	Hanford	85.67	37	P	P	08 17 41.7	+1.3
BJI	Beijing	85.78	316	P	P	08 17 41.5	+0.5
BJI				pmax	pmax		
	comp=Z,19nm,1.8s						
ENH	Enshi	85.79	304	P	P	08 17 41.5	+0.2
GHO	Glory Hole Cre	85.81	14	P	P	08 17 40.6	-0.1
ANM	Nome	85.86	6	P	P	08 17 40.9	+0.1
	baz=192						
SML	Sawmill	85.97	14	P	P	08 17 41.6	+0.1
	baz=208						
BMO	Blue Mountains	86.05	39	P	P	08 17 43.6	+1.3
BMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BMO	Blue Mountains	86.05	39	P	P	08 17 43.6	+1.3
CUT	Chulitna	86.08	13	P	P	08 17 42.0	+0.1
CUT	Chulitna	86.08	13	P	P	08 17 41.6	-0.3
	baz=206,SNR=5.2						
BMRM	Bremner River	86.13	16	P	P	08 17 42.5	+0.3
BMRM				IAmb	IAmb	08 17 43.0	
	comp=Z,16nm,0.7s						
BMRM	Bremner River	86.13	16	P	P	08 17 42.1	-0.2
	baz=212						
PPLA	Purkeypile	86.14	12	P	P	08 17 42.0	-0.4
PPLA				IAmb	IAmb	08 17 47.7	
	comp=Z,27nm,1.5s						
PPLA	Purkeypile	86.14	12	P	P	08 17 42.3	-0.1
	baz=205						
SYO	Syowa Base	86.15	193	⇑*e*P	P	08 17 42.0	-0.3
WAX	Waxell Ridge	86.16	17	P	P	08 17 43.5	+1.1
WAX				IAmb	IAmb	08 17 44.2	
	comp=Z,22nm,0.8s						
MESA	MESA	86.18	17	P	P	08 17 43.0	+0.4
	baz=214						
SCM	Sheep Creek Mo	86.22	14	P	P	08 17 43.0	+0.3
SCM				pmax	pmax		
	comp=Z,49nm,0.6s						
SCM	Sheep Creek Mo	86.22	14	P	P	08 17 43.0	+0.3
SCM	Sheep Creek Mo	86.22	14	P	P	08 17 42.8	+0.1
	baz=209,SNR=9.6						
KLU	Klutina	86.26	15	P	P	08 17 43.4	+0.5
KLU				IAmb	IAmb	08 17 44.0	
	comp=Z,12nm,0.8s						
KLU	Klutina	86.26	15	P	P	08 17 42.8	-0.1
	baz=210						
DUG	Dugway, Tooele	86.30	44	P	P	08 17 42.7	-1.0
	baz=239						
GYA	Guiyang	86.34	300	⇑P	P	08 17 45.3	+1.2
GYA				pmax	pmax		
	comp=Z,15nm,1.1s						
CRQE	Cirque	86.35	17	P	P	08 17 43.5	+0.2
	baz=213						
WRAK	Wrangell Islan	86.38	24	P	P	08 17 43.7	+0.4
	baz=223						
D08A	Wollman Farm,	86.41	36	P	P	08 17 44.6	+0.8
PNL	Peninsula	86.50	19	P	P	08 17 44.2	+0.2
	baz=216						
SLVN	Son La	86.51	294	P	P	08 17 44.8	-0.1
SLVN				IAmb	IAmb	08 17 49.0	
	comp=Z,26nm,1.5s						
E09A	Wood Farm, Sta	86.52	37	P	P	08 17 44.5	+0.1
PINM	Pinnacle	86.60	18	P	P	08 17 44.8	+0.4
	baz=216						
TABL	Table Mountain	86.62	18	P	P	08 17 45.6	+0.8
TABL				IAmb	IAmb	08 17 46.1	
	comp=Z,30nm,0.7s						
TNA	Tin City	86.63	4	P	P	08 17 44.9	+0.5
TNA	Tin City	86.63	4	P	P	08 17 44.3	0.0
	baz=190,SNR=6.2						
CAST	Castle Rocks	86.64	12	P	P	08 17 43.6	-0.9
CAST				IAmb	IAmb	08 17 44.2	
	comp=Z,24nm,0.8s						
CAST	Castle Rocks	86.64	12	P	P	08 17 43.7	-0.8
	baz=205,SNR=11						
SEY	Seymchan	86.67	347	P	P	08 17 44.9	+0.3
	comp=Z,17nm,0.8s,baz=140,slow=6.0,SNR=30						
SEY	Seymchan	86.67	347	⇓*i*P	P	08 17 44.6	-0.1
N25K	Chitina, Valde	86.68	16	P	P	08 17 45.5	+0.6
N25K				IAmb	IAmb	08 17 46.1	
	comp=Z,23nm,0.6s						
N25K	Chitina, Valde	86.68	16	P	P	08 17 44.9	0.0
	baz=212,SNR=9.2						
M24K	Tolsona, Glenn	86.73	15	P	P	08 17 45.1	0.0
	baz=210						
F10A	Beach Ranch, E	86.73	38	P	P	08 17 46.1	+0.6
F10A				IAmb	IAmb	08 17 47.6	
	comp=Z,17nm,0.8s						
GLB	Gilahina Butte	86.74	16	P	P	08 17 45.6	+0.5
GLB				IAmb	IAmb	08 17 46.1	
	comp=Z,19nm,0.6s						
WAT6	Susitna Watana	86.78	14	P	P	08 17 45.2	-0.3
	baz=209,SNR=11						
WAT1	Susitna Watana	86.83	13	P	P	08 17 44.7	-0.8
	baz=208						
PLID	Pearl Lake	86.95	39	P	P	08 17 47.7	+1.0
B08A	Colville Reser	86.95	35	P	P	08 17 47.1	+0.8
B08A				IAmb	IAmb	08 17 47.9	
	comp=Z,11nm,0.7s						
J20K	Nowinta River	86.97	10	P	P	08 17 45.5	-0.5
	baz=203						
LOGN	Logan Glacier	86.98	17	P	P	08 17 46.7	+0.4
LOGN				IAmb	IAmb	08 17 47.7	
	comp=Z,19nm,0.7s						
KTH	Kantishna Hill	86.99	12	P	P	08 17 45.5	-0.7
KTH				IAmb	IAmb	08 17 46.1	
	comp=Z,21nm,0.8s						
BARN	Barnard Glacie	86.99	17	P	P	08 17 47.5	+1.0
BARN				IAmb	IAmb	08 17 48.0	
	comp=Z,22nm,0.7s						
CTG	Chitna Glacier	87.00	17	P	P	08 17 45.6	-0.8
	baz=215,SNR=5.5						
CTGM	Chitina Glacie	87.00	17	P	P	08 17 47.4	+0.9
CTGM				IAmb	IAmb	08 17 47.9	
	comp=Z,23nm,0.7s						
TRF	Thorofare Moun	87.02	12	P	P	08 17 46.1	-0.4
TRF	Thorofare Moun	87.02	12	P	P	08 17 45.6	-0.9
	baz=206,SNR=17						
CHUM	Lake Minchumin	87.02	11	P	P	08 17 45.3	-1.0
	baz=205,SNR=6.1						
GCSA	Galena City Sc	87.06	9	P	P	08 17 46.5	+0.1
	baz=200,SNR=5.0						
HLID	Hailey	87.07	41	P	P	08 17 49.3	+2.1
HLID	Hailey	87.07	41	P	P	08 17 47.8	+0.6
	baz=237						
C09A	Chrisman Ranch	87.20	36	P	P	08 17 48.0	+0.5
HARP	HAARP	87.22	15	P	P	08 17 47.6	+0.3
	baz=211						
SRU	San Rafael Swe	87.28	46	P	P	08 17 50.0	+1.6
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SRU	San Rafael Swe	87.28	46	P	P	08 17 50.0	+1.6
DHY	Denali Highway	87.30	14	P	P	08 17 47.5	-0.3
	baz=209						
LL02	Futaleuf	87.43	136	P	P	08 17 48.0	-0.9
LL02				IAmb	IAmb	08 17 52.0	
	comp=Z,15nm,1.1s						
BPAW	Bear Paw Mtn.	87.47	12	P	P	08 17 47.8	-0.6
	baz=206						
MNTX	Cornudas Mount	87.51	55	P	P	08 17 49.5	+0.1
MNTX				IAmb	IAmb	08 17 52.2	
	comp=Z,20nm,1.4s						
MNTX	Cornudas Mount	87.51	55	P	P	08 17 48.9	-0.5
	baz=244						
MCK	McKinley	87.55	13	P	P	08 17 48.8	0.0
MCK				pmax	pmax		
	comp=Z,25nm,0.7s						
MCK	McKinley	87.55	13	P	P	08 17 48.8	0.0
MCK				IAmb	IAmb	08 17 50.3	
	comp=Z,25nm,0.7s						
MCK	McKinley	87.55	13	P	P	08 17 48.1	-0.7
	baz=208,SNR=14						
SKAG	Skagway	87.62	21	P	P	08 17 49.7	+0.6
	baz=220						
PAX	Paxson	87.64	14	P	P	08 17 48.8	-0.6
	baz=211						
ZEA	Zeya	87.73	331	*e*P	P	08 17 50.8	+1.0
VNA3	Neumayer Olymp	87.73	176	P	P	08 17 49.8	+0.1
M26K	Nabesna, AK	87.76	16	P	P	08 17 50.2	+0.4
	baz=213						
BWN	Browne	87.83	12	P	P	08 17 50.2	+0.1
YUK3	Moose Creek	87.91	17	P	P	08 17 50.8	+0.1
	baz=215,SNR=17						
XAN	Xi'an	87.92	308	⇑P	P	08 17 51.8	+0.5
XAN				pP	pwP	08 20 01.5	+3.7
XAN				pmax	pmax		
	comp=Z,25nm,1.3s						
M27K	Edge Creek, AK	88.01	16	P	P	08 17 52.2	+1.1
M27K				IAmb	IAmb	08 17 52.9	
	comp=Z,28nm,1.0s						
M27K	Edge Creek, AK	88.01	16	P	P	08 17 51.4	+0.3
	baz=214						
MENT	Mentasta	88.03	15	P	P	08 17 52.1	+1.0
MENT				IAmb	IAmb	08 17 52.4	
	comp=Z,14nm,0.9s						
LL04	Puerto Octay	88.07	133	P	P	08 17 53.4	+1.5
LL04				IAmb	IAmb	08 17 54.5	
	comp=Z,14nm,1.1s						
ANMO	Albuquerque	88.17	51	P	P	08 17 53.8	+1.2
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ANMO	Albuquerque	88.17	51	P	P	08 17 53.8	+1.2
ANMO	Albuquerque	88.17	51	P	P	08 17 52.3	-0.3
	baz=243						
VNA2	Neumayer--Watz	88.17	177	P	P	08 17 52.1	+0.4
	baz=184,slow=3.4						
L26K	Log Cabin Wild	88.20	15	P	P	08 17 52.6	+0.7
L26K				IAmb	IAmb	08 17 59.1	
	comp=Z,15nm,1.4s						
L26K	Log Cabin Wild	88.20	15	P	P	08 17 52.1	+0.2
	baz=213,SNR=5.1						
I21K	Tanana	88.27	11	P	P	08 17 52.4	+0.4
I21K				IAmb	IAmb	08 17 52.8	
	comp=Z,26nm,0.8s						
I21K	Tanana	88.27	11	P	P	08 17 52.1	+0.1
	baz=205						
NEA2	Nenana	88.28	12	IAmb	IAmb	08 17 52.5	
	comp=Z,13nm,0.6s						
NEA2				P	P	08 17 52.5	+0.3
NEA2	Nenana	88.28	12	P	P	08 17 51.7	-0.5
	baz=208						
BVCY	Beaver Creek	88.33	17	P	P	08 17 52.6	+0.1
	baz=215,SNR=13						
MLY	Manley	88.36	11	P	P	08 17 52.2	-0.4
MLY				IAmb	IAmb	08 17 52.6	
	comp=Z,14nm,0.6s						
MLY	Manley	88.36	11	P	P	08 17 52.2	-0.4
	baz=206						
WRH	Wood River Hil	88.38	13	P	P	08 17 52.7	+0.1
VNA1	Neumayer--Stat	88.40	177	P	P	08 17 53.2	+0.4
RIDG	Independent Ri	88.45	14	P	P	08 17 53.3	+0.2
	baz=211						
H21K	Melozitna Rive	88.56	10	P	P	08 17 53.8	+0.3
H21K				IAmb	IAmb	08 17 55.6	
	comp=Z,12nm,0.7s						
H21K	Melozitna Rive	88.56	10	P	P	08 17 53.8	+0.3
	baz=204						
HDA	Harding Lake	88.56	13	P	P	08 17 53.4	-0.1
HDA	Harding Lake	88.56	13	P	P	08 17 53.2	-0.3
	baz=210						
CCB	Clear Creek Bu	88.59	13	P	P	08 17 53.0	-0.6
L27K	Beaver Creek,	88.61	16	P	P	08 17 54.3	+0.6
L27K				IAmb	IAmb	08 17 55.1	
	comp=Z,7.4nm,0.8s						
L27K	Beaver Creek,	88.61	16	P	P	08 17 54.5	+0.7
	baz=214						
BCAR	Beaver Creek A	88.62	16	P	P	08 17 54.4	+0.5
LR03	Panguipulli	88.67	132	P	P	08 17 56.6	+1.8
WHY	Whitehorse	88.68	20	P	P	08 17 55.1	+0.8
WHY				IAmb	IAmb	08 17 56.0	
	comp=Z,12nm,0.8s						
WHY	Whitehorse	88.68	20	P	P	08 17 54.8	+0.5
	baz=220						
MCMT	McKenzie Canyo	88.69	40	P	P	08 17 56.4	+1.5
IMAR	Indian Mountai	88.70	10	P	P	08 17 54.3	+0.2
DLBC	Dease Lake	88.71	23	P	P	08 17 55.0	+0.6
	comp=Z,5.8nm,0.8s,baz=227,slow=5.1,SNR=11						
I23K	Minto, Yukon-K	88.72	12	P	P	08 17 53.6	-0.6
I23K				IAmb	IAmb	08 17 54.6	
	comp=Z,8.0nm,0.5s						
I23K	Minto, Yukon-K	88.72	12	P	P	08 17 53.3	-0.8
	baz=207,SNR=7.9						
TCOL	CIGO, UAF Yank	88.78	13	P	P	08 17 54.0	-0.4
TCOL	CIGO, UAF Yank	88.78	13	P	P	08 17 53.7	-0.7
	baz=209,SNR=14						
MDM	Murphy Dome	88.78	12	P	P	08 17 53.9	-0.6
MDM				IAmb	IAmb	08 17 54.7	
	comp=Z,25nm,0.8s						
COLA	College	88.78	13	*d i*P	P	08 17 53.6	-0.8
COLA				*i* *PP	pwP	08 20 01.8	+1.7
COLA				pmax	pmax		
	comp=Z,27nm,0.8s						
COLA	College	88.78	13	P	P	08 17 54.0	-0.4
COLA	College	88.78	13	P	P	08 17 53.8	-0.7
	baz=209						
SCRK	Sand Creek	88.85	15	P	P	08 17 55.6	+0.6
SCRK				IAmb	IAmb	08 17 57.4	
	comp=Z,10.0nm,0.8s						
SCRK	Sand Creek	88.85	15	P	P	08 17 54.5	-0.5
	baz=212,SNR=8.7						
IL31		88.89	13	P	P	08 17 54.4	-0.5
IL31				IAmb	IAmb	08 17 55.3	
	comp=Z,11nm,0.8s						
ILAR	Eielson Array	88.89	13	P	P	08 17 54.2	-0.7
	comp=Z,12nm,0.8s,baz=222,slow=5.6,SNR=134						
ILAR				pP	pP	08 20 01.0	+2.3
	comp=Z,1.8nm,1.1s,baz=239,slow=6.1,SNR=4.3						
ILAR				PP	PP	08 21 37.9	+2.5
	comp=Z,0.9nm,0.8s,baz=218,slow=7.6,SNR=4.3						
ILAR				PKiKP	PKiKP	08 22 49.4	-0.8
	comp=Z,0.2nm,0.4s,baz=267,slow=3.0,SNR=6.0						
KMI	Kunming	89.01	297	⇓P	P	08 17 58.5	+1.7
KMI				pmax	pmax		
	comp=Z,21nm,0.8s						
P33M	Teslin, Yukon	89.02	21	P	P	08 17 56.4	+0.6
	baz=222						
N31M	Braeburn, Yuko	89.04	19	P	P	08 17 56.4	+0.6
	baz=220						
POKR	Poker Plat Res	89.08	13	P	P	08 17 55.5	-0.3
POKR				IAmb	IAmb	08 17 56.0	
	comp=Z,12nm,0.7s						
POKR	Poker Plat Res	89.08	13	P	P	08 17 55.0	-0.9
	baz=209,SNR=9.4						
S22A	4UR Ranch, Cre	89.18	49	P	P	08 17 58.0	+0.7
	baz=243						
REDW	Red Top Meadow	89.18	42	P	P	08 17 58.0	+0.8
REDW				IAmb	IAmb	08 18 00.2	
	comp=Z,13nm,1.2s						
HHC	Hu-ho-hao-te	89.23	315	*e*P	P	08 17 57.8	+0.5
HHC				pmax	pmax		
	comp=Z,22nm,1.2s						
HHC				pmax	pmax		
	comp=Z,200nm,5.8s						
O20A	White River Ci	89.31	46	P	P	08 17 58.4	+0.6
	baz=242						
J26L	Joseph Creek	89.39	14	P	P	08 17 57.8	+0.4
	baz=213,SNR=21						
PLCA	Paso Flores	89.41	134	P	P	08 17 59.6	+1.4
	comp=Z,5.8nm,0.8s,baz=215,slow=6.0,SNR=21						
PLCA	Paso Flores	89.41	134	P	P	08 18 00.2	+1.9
PLCA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PLCA	Paso Flores	89.41	134	P	P	08 18 00.1	+1.9
PLCA				IAmb	IAmb	08 18 00.6	
	comp=Z,9.3nm,0.9s						
BILL	Bilibino	89.42	354	*i* P	P	08 17 56.6	-0.8
BILL				*i* *PP	pP	08 20 01.6	+0.3
BILL				*i*		08 21 38.2	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BILL	Bilibino	89.42	354	P	P	08 17 57.8	+0.4
M30M	Minto, Yukon	89.59	18	P	P	08 17 58.5	+0.2
	baz=219						
H24K	Noodor Dome	89.62	12	P	P	08 17 57.4	-1.0
H24K	Noodor Dome	89.62	12	P	P	08 17 57.5	-1.0
	baz=209						
CMAR	Chiang Mai Arr	89.69	290	P	P	08 18 00.8	+1.0
	comp=Z,8.2nm,0.7s,baz=125,slow=3.0,SNR=58						
CMAR				PP	PP	08 21 44.3	+1.7
	comp=Z,1.5nm,0.6s,baz=125,slow=5.5,SNR=8.4						
CMAR	Chiang Mai Arr	89.69	290	*ce*P	P	08 18 01.5	+1.7
CMAR				pmax	pmax		
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	89.69	290	P	P	08 18 01.1	+1.3
BW06	Boulder Array	89.71	43	P	P	08 18 00.1	+0.4
BW06	Boulder Array	89.71	43	P	P	08 18 00.2	+0.6
	baz=241						
PD31	Pinedale Array	89.71	43	P	P	08 18 00.2	+0.5
PDAR	Pinedale Array	89.71	43	P	P	08 18 00.3	+0.7
	comp=Z,2.8nm,0.8s,baz=206,slow=3.1,SNR=23						
PDAR				pP	pwP	08 20 05.8	-0.6
	comp=Z,0.4nm,0.8s,baz=267,slow=4.5,SNR=2.6						
PDAR				PKKPbc	PKKPbc	08 35 29.4	-1.3
	comp=Z,0.6nm,0.9s,baz=64,slow=3.4,SNR=4.5						
PDAR	Pinedale Array	89.71	43	P	P	08 18 00.1	+0.5
SMCO	Snowmass	89.73	48	P	P	08 18 00.5	+0.4
CHTO	Chiang Mai	89.82	290	P	P	08 18 01.1	+0.7
CHTO				pmax	pmax		
	comp=Z,17nm,0.9s						
CHTO	Chiang Mai	89.82	290	P	P	08 18 01.1	+0.7
CHTO				IAmb	IAmb	08 18 02.3	
	comp=Z,17nm,0.8s						
CHTO	Chiang Mai	89.82	290	P	P	08 18 01.5	+1.1
PRP	Porcupine Dome	89.83	13	P	P	08 17 59.6	+0.1
PRP				IAmb	IAmb	08 18 01.0	
	comp=Z,21nm,1.5s						
PRP	Porcupine Dome	89.83	13	P	P	08 17 59.8	+0.3
	baz=211						
BOZ	Bozeman (W)	89.83	40	P	P	08 18 00.5	+0.5
	baz=239						
H17A	Grant Village	89.87	42	P	P	08 18 00.9	+0.5
	baz=240						
M31M	Drury Creek, Y	90.01	19	P	P	08 18 00.0	-0.3
	baz=221						
DAWY	Dawson	90.06	16	P	P	08 18 01.1	+0.6
DAWY				IAmb	IAmb	08 18 01.9	
	comp=Z,16nm,0.8s						
DAWY	Dawson	90.06	16	P	P	08 18 00.7	+0.2

	baz=216						
SDCO	Great Sand Dun	90.11	49	P	P	08 18 02.8	+1.1
	baz=243						
EGAK	Eagle	90.20	15	P	P	08 18 01.4	+0.4
EGAK				IAmb	IAmb	08 18 02.2	
	comp=Z,17nm,0.7s						
EGAK	Eagle	90.20	15	P	P	08 18 01.0	0.0
	baz=215						
COLD	Coldfoot	90.43	11	P	P	08 18 02.5	+0.4
COLD				IAmb	IAmb	08 18 03.6	
	comp=Z,12nm,0.8s						
COLD	Coldfoot	90.43	11	P	P	08 18 02.3	+0.2
	baz=206,SNR=9.5						
833A	Chaparral WMA,	90.82	60	P	P	08 18 05.9	+1.1
	baz=247						
ISCO	Idaho Springs	90.95	47	P	P	08 18 07.1	+1.6
	baz=243						
RLMT	Red Lodge	91.04	42	P	P	08 18 07.3	+1.6
	baz=241						
ML02	Panimavida	91.06	129	P	P	08 18 06.7	+0.8
ML02				IAmb	IAmb	08 18 07.3	
	comp=Z,15nm,0.8s						
N23A	Red Feather La	91.22	46	P	P	08 18 08.4	+1.7
	baz=243						
I29M	Ogilvie Camp,	91.38	16	P	P	08 18 06.3	-0.3
	baz=217						
TOLK	Toolik Lake Re	91.81	10	P	P	08 18 08.0	-0.4
	baz=207						
YAK	Yakutsk	92.30	338	P	P	08 18 10.6	-0.2
	comp=Z,3.7nm,0.3s,baz=29,slow=1.2,SNR=6.4						
YAK	Yakutsk	92.30	338	*de*P	P	08 18 09.8	-1.0
YAK				pmax	pmax		
	comp=Z,16nm,0.8s						
LZH	Lanzhou	92.56	308	⇑P	P	08 18 14.0	+1.2
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
EPYK	Eagle Plains	92.58	16	P	P	08 18 12.4	+0.3
EPYK				IAmb	IAmb	08 18 13.0	
	comp=Z,11nm,0.8s						
EPYK	Eagle Plains	92.58	16	P	P	08 18 12.7	+0.6
	baz=219						
LAO	LASA Array	93.65	41	P	P	08 18 18.1	+0.7
	baz=243						
INK	Inuvik	94.87	15	P	P	08 18 21.9	-0.4
	comp=Z,4.3nm,0.9s,baz=220,slow=3.8,SNR=12						
INK	Inuvik	94.87	15	P	P	08 18 22.2	-0.1
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	Inuvik	94.87	15	P	P	08 18 22.2	-0.1
INK				IAmb	IAmb	08 18 22.8	
	comp=Z,3.8nm,0.8s						
INK	Inuvik	94.87	15	P	P	08 18 22.2	-0.1
	baz=222						
ULN	Ulaanbaatar	95.30	319	⇑*e*P	P	08 18 24.9	-0.1
ULN				pmax	pmax		
	comp=Z,9.0nm,2.5s						
SONM	Songino Array	95.69	319	P	P	08 18 27.4	+0.7
	comp=Z,0.8nm,0.8s,baz=145,slow=5.3,SNR=4.3						
SONM				PP	PP	08 22 23.9	-4.6
	comp=Z,1.0nm,1.0s,baz=142,slow=5.5,SNR=4.2						
OK031	S. Brethren Rd	95.73	54	P	P	08 18 26.9	-0.2
YKA	Yellowknife Ar	97.18	25	P	P	08 18 32.9	0.0
	comp=Z,1.3nm,0.7s,baz=244,slow=4.6,SNR=22						
YKA				pP	pwP	08 20 39.5	-0.9
	comp=Z,0.4nm,0.9s,baz=244,slow=4.1,SNR=3.1						
YKA				PKiKP	PKiKP	08 23 04.2	-0.3
	comp=Z,0.2nm,0.6s,baz=246,slow=1.4,SNR=4.5						
YKA				PKKPbc	PKKPbc	08 35 08.5	-3.1
	comp=Z,0.1nm,0.5s,baz=32,slow=2.4,SNR=5.1						
TIXI	Tiksi	99.03	345	⇓*e*P	Pdif	08 18 43.0	+2.1
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.6s						
A36M	Sachs Harbour	99.47	15	P	Pdif	08 18 42.8	0.0
	baz=230						
X43A	Marvell	99.82	57	P	Pdif	08 18 43.9	-1.4
	baz=251						
RES	Resolute Bay	108.40	16	PKiKP	PKiKP	08 23 23.7	-1.0
	comp=Z,1.1nm,0.7s,baz=313,slow=2.6,SNR=4.7						
ZALV	Zalesovo Beam	110.46	321	PKiKP	PKiKP	08 23 28.0	-1.1
	comp=Z,4.6nm,0.6s,baz=145,slow=1.2,SNR=25						
NRIK	Noril'sk	110.75	338	PKiKP	PKiKP	08 23 28.7	-0.5
	comp=Z,1.6nm,0.4s,baz=105,slow=2.0,SNR=4.6						
NRIK	Noril'sk	110.75	338	⇑*i*PKIKP	PKiKP	08 23 28.9	-0.3
MK31	Makanchi Array	111.06	313	*c i*PKIKP	PKiKP	08 23 29.6	-0.9
MKAR	Makanchi Array	111.06	313	PKiKP	PKiKP	08 23 29.5	-1.1
	comp=Z,2.1nm,0.6s,baz=196,slow=0.7,SNR=30						
MKAR				PKKPbc	PKKPbc	08 34 29.7	-0.2
	comp=Z,1.0nm,0.6s,baz=270,slow=3.6,SNR=7.2						
KURK	Kurchatov	113.91	317	*c i*PKIKP	PKiKP	08 23 34.8	-1.0
KURK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KURBB	Kurchatov Arra	113.96	317	PKiKP	PKiKP	08 23 34.9	-1.0
	comp=Z,4.0nm,0.2s,baz=96,slow=1.8,SNR=13						
KURBB				PP	PP	08 24 38.0	-3.2
	comp=Z,3.3nm,0.2s,baz=95,slow=6.8,SNR=5.2						
AAK	Ala-Archa	116.09	308	⇑*i*PKIKP	PKPdf	08 23 39.9	-0.6
NEEM	North Greenlan	118.14	11	*i* P	PKPdf	08 23 43.2	-0.4
BTK	Batken	118.65	305	PKIKP	PKPdf	08 23 45.0	-0.4
BTK	Batken	118.65	305	PKPdf	PKPdf	08 23 45.0	-0.4
KKAR	Karatay Array	119.05	308	PKIKP	PKPdf	08 23 45.0	-1.0
KKAR	Karatay Array	119.05	308	PKPdf	PKPdf	08 23 45.0	-1.0
BRVK	Borovoye	119.09	320	*c i*PKIKP	PKPdf	08 23 45.2	-0.5
BRVK				pmax	pmax		
	comp=Z,29nm,2.5s						
BRVK	Borovoye	119.09	320	PKPdf	PKPdf	08 23 45.0	-0.7
KBL	Kabul	119.57	299	PKIKP	PKiKP	08 23 47.6	0.0
KBL	Kabul	119.57	299		PKiKP	08 23 47.6	0.0
CHGR	Chuyangaron	119.83	303	PKIKP	PKPdf	08 23 47.4	-0.3
CHGR	Chuyangaron	119.83	303	PKPdf	PKPdf	08 23 47.4	-0.3
OPO	Ambohidratompo	120.34	232	PKP	PKPdf	08 23 49.4	0.0
	comp=Z,3.0nm,0.6s,baz=179,slow=4.6,SNR=4.1						
SPITS	Spitsbergen Ar	122.28	356	PKP	PKPdf	08 23 50.9	-0.3
	comp=Z,12nm,0.7s,baz=87,slow=5.9,SNR=12						
DAG	Danmarks Havn	123.25	5	*i* P	PKPdf	08 23 51.0	-2.1
SUMG	Summit	123.73	13	*i* P	PKPdf	08 23 53.0	-1.6
SUR	Sutherland	123.79	200	PKP	PKiKP	08 23 56.1	0.0
	comp=Z,8.8nm,0.7s,baz=196,slow=1.9,SNR=13						
SVE	Sverdlovsk	124.01	325	*e*PKIKP	PKPdf	08 23 54.1	-0.9
SVE				pmax	pmax		
	comp=Z,16nm,0.7s						
HRA	Herat	125.16	298		PKPdf	08 23 58.2	-0.1
ARU	Arti	125.22	325	PKP	PKPdf	08 23 57.5	+0.1
	comp=Z,7.2nm,0.5s,baz=76,slow=1.5,SNR=43						
ARU				PP	PP	08 25 53.2	-3.7
	comp=Z,0.5nm,0.3s,baz=110,slow=6.4,SNR=4.5						
ARU	Arti	125.22	325	*i* PKIKP	PKPdf	08 23 56.7	-0.7
ARU						08 30 14.1	
ARU	Arti	125.22	325	PKPdf	PKPdf	08 23 57.3	0.0
DBG	Daneborg	125.36	7	*i* P	PKPdf	08 23 56.8	-0.4
BOSA	Boshof	125.58	206	PKP	PKiKP	08 24 00.1	+0.4
	comp=Z,2.0nm,0.7s,baz=172,slow=4.2,SNR=6.0						
ABKAR	Akbulak array	125.99	316	PKPdf	PKPdf	08 23 58.8	-0.3
ABKAR	Akbulak array	125.99	316		PKPdf	08 23 58.7	-0.4
AKTO	Aktyubinsk	126.99	318	PKP	PKiKP	08 24 01.4	-0.1
	comp=Z,7.3nm,0.7s,baz=85,slow=3.2,SNR=26						
GEYT	Alibeck	128.51	302	PKP	PKiKP	08 24 05.2	+0.1
	comp=Z,5.4nm,0.7s,baz=72,slow=4.8,SNR=7.3						
GEYT				SKPbc	SKPdf	08 26 32.5	-13
	comp=Z,2.4nm,0.6s,baz=34,slow=0.5,SNR=4.9						
GEYT	Alibeck	128.51	302		PKiKP	08 24 04.8	-0.2
LBTB	Lobatse	128.59	208	PKP	PKPdf	08 24 05.0	0.0
	comp=Z,1.8nm,0.6s,baz=178,slow=3.6,SNR=5.1						
KIRV	Kirov	129.05	330	PKP	PKPdf	08 24 04.6	0.0
	comp=Z,23nm,0.6s,baz=83,slow=1.3,SNR=11						
KIRV	Kirov	129.05	330	⇑*i*PKIKP	PKPdf	08 24 03.9	-0.7
ARCES	ARCESS Array B	129.25	349	PKP	PKPdf	08 24 05.0	+0.3
	comp=Z,8.6nm,0.6s,baz=9.3,slow=1.5,SNR=32						
ARCES	ARCESS Array B	129.25	349	PKIKP	PKPdf	08 24 05.0	+0.3
KLMR	Klimovskoe	132.04	336	*e*PKIKP	PKPdf	08 24 09.3	-0.9
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KLMR	Klimovskoe	132.04	336	*e*PKPdf	PKPdf	08 24 09.4	-0.8
KLMR				AMP		08 24 11.8	
	comp=Z,10.0nm,1.2s						
KLMR				*e*PP	PP	08 26 35.9	-4.5
BELG	Belogornoye	132.59	323	*c i*PKIKP	PKPdf	08 24 11.0	-0.5
LSZ	Lusaka	135.38	218	PKP	PKPdf	08 24 18.1	+0.1
	comp=Z,4.5nm,0.6s,baz=144,slow=4.1,SNR=7.7						
FINES	FINESS Array B	136.03	343	PKhKP	PKPpre	08 24 08.7	
	comp=Z,3.3nm,0.9s,baz=31,slow=3.2,SNR=3.5						
FINES				PKP	PKPdf	08 24 17.9	+0.3
	comp=Z,5.3nm,0.6s,baz=70,slow=3.3,SNR=12						
FINES				SKPbc	SKPbc	08 26 57.5	+1.0
	comp=Z,14nm,0.9s,baz=66,slow=6.5,SNR=12						
OBN	Obninsk	136.86	331	⇑*e*PKIKP	PKPdf	08 24 19.5	+0.2
OBN				*e*		08 27 06.7	
OBN				pmax	pmax		
	comp=Z,13nm,0.8s						
QRN	Al-Qurain	137.25	290	*e*P	PKPdf	08 24 20.4	-0.5
RDF	Al-Radifah	137.57	290	*e*P	PKPdf	08 24 21.1	-0.4
RST	Umm Al-Ruwaisa	138.05	291	*e*P	PKPdf	08 24 21.8	-0.6
GOF	Gofitskoye	138.19	315	⇑*e*PKIKP	PKiKP	08 24 36.2	+12
KMBO	Kilima Mbogo	138.59	242	PKhKP	PKPpre	08 24 16.6	
	comp=Z,0.7nm,0.6s,baz=75,slow=5.3,SNR=4.2						
KMBO				PKP	PKiKP	08 24 25.7	-0.7
	comp=Z,2.5nm,0.9s,baz=153,slow=2.6,SNR=5.4						
RAYN	Ar Rayn	139.16	282	PKIKP	PKPdf	08 24 24.8	+0.1
RAYN	Ar Rayn	139.16	282		PKPdf	08 24 24.8	+0.1
NB2	NORSAR Subarra	139.35	353	PKP	PKPpre	08 24 15.5	
	comp=Z,2.7nm,0.9s,baz=10,slow=3.2						
NOA	NORSAR Array B	139.35	353	PKhKP	PKPpre	08 24 15.8	
	comp=Z,3.3nm,0.7s,baz=12,slow=2.3,SNR=14						
NOA				PKP	PKPdf	08 24 24.8	+1.0
	comp=Z,1.3nm,0.6s,baz=14,slow=4.0,SNR=9.1						
NOA				SKPbc	SKiKP	08 27 07.7	-1.0
	comp=Z,2.7nm,0.7s,baz=15,slow=4.3,SNR=6.9						
IDID	Didziasalis	140.75	337	*e*P	PKPdf	08 24 21.8	-4.6
IIGN	Ignalina	140.91	338	*e*P	PKPdf	08 24 22.6	-4.1
MNK	Minsk	140.94	336	*i* PKIKP	PKPdf	08 24 24.9	-1.9
MNK				*i*		08 27 40.0	
MNK				*i* SS	SS	08 45 16.8	-0.3
MNK				pmax	pmax		
	comp=E,1.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,17nm,1.0s						
MNK				pmax	pmax		
	comp=Z,17nm,1.0s						
MNK	Minsk	140.94	336	*i* PKP	PKPdf	08 24 25.0	-1.8
	comp=E,1.0nm,1.0s						
MNK				*i* PKP	PKPdf	08 24 25.0	-1.8
	comp=N,17nm,1.0s						
MNK				*i* PKP	PKPdf	08 24 25.0	-1.8
	comp=Z,17nm,1.0s,baz=42						
MNK				*i* pPKP	pPKPdf	08 26 37.7	-1.3
MNK				*i* PP	PP	08 27 40.1	+4.9
MNK				*i* SKP		08 28 19.1	
MNK				*i* PKS	PKSab	08 28 27.8	+6.4
MNK				*i* PPP	PPP	08 31 11.6	
MNK				*i* SKS	SKSdf	08 31 19.4	+36
MNK				*i* SKKS	SKKSac	08 33 50.2	+19
MNK				*i* SS	SS	08 45 16.9	-0.3
MNK				*i* SSS	SSS	08 49 26.0	
NACGM	Naroch	141.05	337	*i* PKP	PKPdf	08 24 22.6	-4.4
PABE	Paberze	141.55	339	*e*P	PKPdf	08 24 23.8	-4.0
PBUR	Paburge	141.76	341	*e*P	PKPdf	08 24 23.6	-4.6
MARD	Mardin	142.20	304		PKPdf	08 24 26.5	-3.3
LODK	Lodwar	142.60	247		PKPdf	08 24 29.1	-2.0
SUW	Suwalki	143.04	339	*e*PKP	PKPab	08 24 28.2	0.0
SUW	Suwalki	143.04	339	*e*P	PKPab	08 24 28.4	+0.1
AKASG	Malin Array Be	143.10	330	PKhKP	PKPpre	08 24 27.9	
	comp=Z,44nm,0.6s,baz=43,slow=4.4,SNR=221						
AKASG				SKPbc	SKiKP	08 27 17.0	+0.3
	comp=Z,5.0nm,0.8s,baz=40,slow=3.1,SNR=11						
MCD	Coleburn Disti	143.26	4	*e*P	PKPab	08 24 28.3	-0.7
KPL	Plockton	143.30	6	*e*P	PKPab	08 24 29.1	0.0
MDO	Dochfour	143.32	5	*e*P	PKPab	08 24 28.9	-0.3
KLNR	Kaliningrad	143.49	342	*i* PKIKP	PKPbc	08 24 30.0	0.0
SIM	Simferopol'	143.94	319	*e*PKIKP	PKPbc	08 24 31.3	-0.5
SIM				pmax	pmax		
	comp=Z,207nm,0.8s						
DRUM	Mains of Drumt	143.98	4	*e*P	PKPbc	08 24 30.9	-0.6
MUD	Monsted U'grnd	144.07	353	*i* P	PKPab	08 24 31.9	-0.1
MBAR	Mbarara	144.15	237	PKP	PKPdf	08 24 34.6	+0.6
	comp=Z,12nm,0.4s,baz=120,slow=4.1,SNR=32						
MBAR	Mbarara	144.15	237		PKPdf	08 24 34.1	+0.1
EDU	Dundee	144.31	4	*e*P	PKPab	08 24 33.0	0.0
BSD	Bornholm Skovb	144.39	347	*i* P	PKPdf	08 24 32.8	0.0
ESY	Stoneypath	144.96	4	*e*P	PKPbc	08 24 34.2	-0.4
GAZ	Gaziantep	144.97	305	PKPdf	PKPdf	08 24 34.9	+0.3
EBL	Broad Law	145.07	4	*e*P	PKPbc	08 24 35.1	+0.1
SORM	Soroca	145.26	328	⇓P	PKPbc	08 24 35.4	-0.3
SORM	Soroca	145.26	328	⇓PKIKP	PKPbc	08 24 35.4	-0.3
BZK	Bozkurt	145.46	315	⇓P	PKPab	08 24 37.5	-0.4
BZK	Bozkurt	145.46	315		PKPab	08 24 38.0	+0.1
PURM	Purcari	145.50	324	⇓P	PKPbc	08 24 36.6	+0.2
GKP	Gorka Klasztor	145.50	343	*e*PKP	PKPbc	08 24 36.4	+0.2
GKP	Gorka Klasztor	145.50	343	*e*P	PKPbc	08 24 36.7	+0.5
ESK	Eskdalemuir	145.52	5	*e*P	PKPbc	08 24 35.9	-0.4
NEWG	New Galloway	145.63	6	*e*P	PKPbc	08 24 35.8	-0.7
BEL	Belsk	145.66	339	*e*PKP	PKPbc	08 24 37.1	+0.4
MILM	Milestii Mici	145.82	326	⇓P	PKPbc	08 24 36.9	-0.5
MILM	Milestii Mici	145.82	326	⇓PKIKP	PKPbc	08 24 36.9	-0.5
GAL1	Galloway	145.83	6	*e*P	PKPbc	08 24 37.0	-0.1
LVV	L'vov	146.04	333	*e*PKIKP	PKPbc	08 24 37.2	-0.7
ILGA	Ilgaz	146.06	314		PKPab	08 24 39.6	-1.1
EDMD	Edmundbyers	146.08	3	*e*P	PKPbc	08 24 37.5	-0.3
KESW	Keswick, Cumbr	146.25	5	*e*P	PKPbc	08 24 38.4	+0.1
BSEG	Bad Segeberg	146.37	350	*e*PKPbc	PKPbc	08 24 39.3	+0.7
	baz=18,slow=2.3						
BSEG				*e*PKPab	PKPab	08 24 42.0	+0.9
	baz=18,slow=2.3						
LEOM	Leova	146.41	326	⇓P	PKPbc	08 24 39.4	+0.4
LEOM	Leova	146.41	326	⇓PKP2	PKPbc	08 24 39.4	+0.4
IOMK	Kirk Michael	146.44	6	*e*P	PKPbc	08 24 37.9	-0.9
VASR	Vaslui	146.54	326	⇓P	PKPbc	08 24 39.9	+0.6
WIM	Isle of Man	146.54	6	*e*P	PKPbc	08 24 39.1	0.0
BR131	Keskin Array S	146.68	311	PKIKP	PKPdf	08 24 36.4	-1.1
BR131	Keskin Array S	146.68	311	PKPdf	PKPdf	08 24 36.4	-1.1
BR131				PKPbc	PKPbc	08 24 40.0	-0.2
BRTR	Keskin Array B	146.68	311	PKPbc	PKPdf	08 24 38.2	+0.7
	comp=Z,13nm,0.6s,baz=101,slow=1.9,SNR=75						
BRTR				SKKPbc	SKKPbc	08 35 14.9	-0.7
	comp=Z,1.6nm,0.9s,baz=328,slow=1.6,SNR=5.7						
BRTR	Keskin Array B	146.68	311	PKPdf	PKPdf	08 24 36.2	-1.3
KWP	Kalwaria Pacla	146.73	334	*e*PKP	PKPbc	08 24 39.9	+0.1
KWP	Kalwaria Pacla	146.73	334	PKP2	PKPbc	08 24 40.5	+0.7
KWP	Kalwaria Pacla	146.73	334		PKPbc	08 24 40.5	+0.7
PRAR	RASCA	146.84	328	⇓P	PKPbc	08 24 40.6	+0.5
VLDR	Vladesti	146.90	325	⇓P	PKPbc	08 24 40.9	+0.6
TLCR		146.91	323	⇓P	PKPbc	08 24 40.6	+0.3
TLCR		146.91	323	⇓PKP2	PKPbc	08 24 40.7	+0.3
HPK	Haverah Park	146.97	3	*e*P	PKPbc	08 24 40.4	+0.1
RUE	Ruedersdorf	147.09	346	*e*P	PKiKP	08 24 41.4	-1.0
RUE	Ruedersdorf	147.09	346	*e*PKPbc	PKiKP	08 24 41.4	-1.0
	baz=18,slow=2.3						
RUE				*e*PKPab	PKPab	08 24 43.8	-0.2
	baz=18,slow=2.3						
GHRR		147.12	326	⇓P	PKiKP	08 24 42.3	-0.4
JURR	Jurilovca	147.13	323	⇓P	PKPbc	08 24 41.3	+0.4
BUR08	Bucovina Ar. S	147.13	330		PKPbc	08 24 41.8	+0.7
BURAR	Bucovina Array	147.15	330	⇓P	PKPbc	08 24 41.7	+0.6
BURAR	Bucovina Array	147.15	330	⇓PKP2	PKPbc	08 24 41.7	+0.6
BURAR	Bucovina Array	147.15	330	PKPdf	PKPdf	08 24 38.8	+0.9
BURAR					PKiKP	08 24 42.0	-0.9
ANTO	Ankara	147.21	312	PKIKP	PKPdf	08 24 38.8	+0.6
ANTO	Ankara	147.21	312	PKPdf	PKPdf	08 24 38.8	+0.6
ANTO					PKPbc	08 24 41.9	+0.5
TESR	Tescani	147.21	327	⇓P	PKPbc	08 24 41.0	-0.2
BR231	Keskin MP Arra	147.23	312		PKPbc	08 24 42.0	+0.4
IZVR	Izvoarele	147.26	325	⇓P	PKPbc	08 24 42.0	+0.7
CFR	Carcaliu	147.29	324	⇓P	PKPbc	08 24 41.6	+0.2
CFR	Carcaliu	147.29	324	⇓PKP2	PKPbc	08 24 41.6	+0.2
WME	Myndd Eilian	147.32	6	*e*P	PKPbc	08 24 41.1	0.0
TPGR	Topolog	147.33	323	⇓P	PKPbc	08 24 41.9	+0.3
OJC	Ojcow	147.35	338	*e*PKP	PKPbc	08 24 41.4	0.0
OJC	Ojcow	147.35	338	PKP2	PKPbc	08 24 41.8	+0.4
OJC	Ojcow	147.35	338		PKPbc	08 24 41.8	+0.4
OJC				PKPab	PKPab	08 24 45.7	+0.5
WLF1	Llynfaes	147.42	6	*e*P	PKPbc	08 24 40.6	-0.8
KOLS	Kolonicke sedl	147.45	334	*e*PKP2	PKiKP	08 24 42.5	-0.8
KOLS	Kolonicke sedl	147.45	334	*e*PKP	PKiKP	08 24 42.5	-0.8
ODBI	Odobesti	147.50	326	⇓P	PKiKP	08 24 43.4	0.0
LBWR	Ladybower, Pea	147.52	3	*e*P	PKPbc	08 24 41.2	-0.5
TIRR	Tirgusor	147.58	323	⇓P	PKPbc	08 24 42.4	+0.2
TIRR	Tirgusor	147.58	323	⇓PKP2	PKPbc	08 24 42.4	+0.2
VRI	Vrincioaia	147.60	326	⇓P	PKPbc	08 24 42.1	-0.1
VRI	Vrincioaia	147.60	326	⇓PKP2	PKPbc	08 24 42.1	-0.1
PLOR	Plostina	147.65	326	⇓P	PKPbc	08 24 42.1	-0.3
PLOR	Plostina	147.65	326	⇓PKP2	PKPbc	08 24 42.1	-0.3
UZH	Uzhgorod	147.68	334	*e*PKP2	PKPbc	08 24 42.1	-0.2
HARR	Harsova	147.71	323	⇓P	PKPbc	08 24 43.1	+0.6
HARR	Harsova	147.71	323	⇓PKP2	PKPbc	08 24 43.1	+0.6
MFTR	Murfatlar	147.75	322	⇓P	PKPbc	08 24 42.8	+0.3
FLTG	Flechtingen	147.75	349	*e*PKPbc	PKPbc	08 24 42.7	+0.4
	baz=18,slow=2.3						
FLTG				*e*PKPab	PKPab	08 24 46.6	-0.2
	baz=18,slow=2.3						
NRDL	Niedersach Rie	147.79	350	*e*PKPbc	PKPbc	08 24 42.9	+0.6
	baz=18,slow=2.3						
NRDL				*e*PKPab	PKPab	08 24 47.3	+0.4
	baz=18,slow=2.3						
NIE	Niedzica	147.83	337	*e*PKP	PKiKP	08 24 44.3	+0.2
COVR	Voineasa-Covas	147.89	326	⇓P	PKPbc	08 24 42.9	0.0
BMR	Baia Mare	147.90	331	⇓P	PKPbc	08 24 43.4	+0.5
BMR	Baia Mare	147.90	331	⇓PKP2	PKPbc	08 24 43.4	+0.5
OZUR		147.93	327	⇓P	PKPbc	08 24 43.6	+0.5
ARCR	ARCALIA	147.93	330	⇓P	PKiKP	08 24 43.6	-0.7
KSP	Ksiaz	147.94	342	*e*PKP	PKiKP	08 24 43.5	-0.7
TRPA	Tarpa	147.97	333	⇓P	PKPbc	08 24 43.1	+0.1
TRPA	Tarpa	147.97	333	*e*PKP	PKPbc	08 24 42.9	-0.1
MDUB	Mudurnu	148.02	314		PKPbc	08 24 43.8	+0.2
NEHR	Nehoiu	148.12	326	P	PKPbc	08 24 43.8	+0.2
ISR	Istrita	148.19	325	⇓P	PKPbc	08 24 44.3	+0.5
ISR	Istrita	148.19	325	⇓PKP2	PKPbc	08 24 44.3	+0.5
OSTC	Ostas	148.21	342	*e*PKPDF	PKPdf	08 24 40.6	+1.1
OSTC				⇑*e*PKP	PKiKP	08 24 44.4	-0.4
OSTC				*e*pPKP	pPKPab	08 26 57.5	+2.1
DOPR	Dopca	148.22	327	⇓P	PKiKP	08 24 44.6	-0.4
CHVC	Chvalec	148.23	342	⇑*e*PKP	PKiKP	08 24 44.3	-0.6
OKC	Ostrava-Krasne	148.24	339	⇑*e*PKP	PKiKP	08 24 44.3	-0.6
OKC	Ostrava-Krasne	148.24	339	*e*PKP2	PKiKP	08 24 44.3	-0.6
MLR	Muntele Rosu	148.26	326	⇓P	PKPbc	08 24 44.4	+0.4
MLR	Muntele Rosu	148.26	326	PKHKP	PKPpre	08 24 43.8	
MLR	Muntele Rosu	148.26	326		PKPbc	08 24 43.8	-0.3
UPC	Upice	148.31	342	⇑*e*PKP	PKiKP	08 24 44.6	-0.4
UPC				*e*PKPAB	PKPab	08 24 49.9	+0.7
UPC	Upice	148.31	342	*e*PKP2	PKiKP	08 24 44.6	-0.4
HLM1	Long Mynd	148.32	5	*e*P	PKPbc	08 24 43.1	-0.6
CLL	Collm	148.36	346	PKP2	PKPbc	08 24 44.1	+0.2
CLL	Collm	148.36	346	⇓*i*PKPbc	PKPbc	08 24 44.1	+0.2
	comp=Z,49nm,0.9s						
CLL				⇑*i*PKPab	PKPab	08 24 49.2	-0.1
	comp=Z,25nm,0.7s						
CLL				*e*(pPKPab)	pPKPab	08 26 56.0	+0.1
CLL	Collm	148.36	346	*e*PKPbc	PKPbc	08 24 44.3	+0.4
	baz=18,slow=2.3						
CLL				*e*PKPab	PKPab	08 24 49.4	+0.1
	baz=18,slow=2.3						
CLL	Collm	148.36	346		PKPbc	08 24 44.1	+0.2
CLL				PKPab	PKPab	08 24 49.4	+0.1
LANS	Liptovska Anna	148.36	337	*e*PKP2	PKiKP	08 24 45.3	+0.1
LANS	Liptovska Anna	148.36	337	*e*PKP	PKiKP	08 24 45.3	+0.1
LANS				*e*	PKPab	08 24 50.7	+1.2
DPC	Dobruska-Polom	148.37	342	*e*PKPDF	PKPdf	08 24 40.6	+0.9
DPC				⇑*e*PKP	PKiKP	08 24 44.7	-0.5
DPC				*e*pPKP	pPKPab	08 26 58.9	+3.0
DPC	Dobruska-Polom	148.37	342	*e*PKHKP	PKPpre	08 24 40.6	
CLZ	Clausthal	148.38	349	*e*PKPbc	PKPbc	08 24 44.5	+0.5
	baz=18,slow=2.3						
CLZ				*e*PKPab	PKPab	08 24 49.8	+0.4
	baz=18,slow=2.3						
KRLC	Kraliky	148.47	341	⇑*e*PKP	PKiKP	08 24 44.8	-0.6
KRLC				*e*PKPAB	PKPab	08 24 50.4	+0.5
KRLC	Kraliky	148.47	341	*e*PKP2	PKiKP	08 24 44.8	-0.6
MORC	Moravsky Berou	148.49	340	⇓P	PKiKP	08 24 45.0	-0.4
MORC	Moravsky Berou	148.49	340	*e*PKP	PKPbc	08 24 44.7	+0.3
MORC	Moravsky Berou	148.49	340	PKP2	PKPbc	08 24 44.7	+0.3
MORC	Moravsky Berou	148.49	340		PKPbc	08 24 44.7	+0.3
MORC				PKPab	PKPab	08 24 50.7	+0.7
SECR		148.50	325	⇓P	PKPbc	08 24 44.9	+0.4
KECS	Kecovo	148.53	335	*e*PKP2	PKiKP	08 24 45.6	+0.1
KECS	Kecovo	148.53	335	*e*PKP	PKiKP	08 24 45.6	+0.1
KECS				*e*	PKPab	08 24 50.9	+0.8
BRG	Berggiesshubel	148.54	345	*e*PKPbc	PKPbc	08 24 44.8	+0.4
	baz=18,slow=2.3						
BRG				*e*PKPab	PKPab	08 24 50.0	0.0
	baz=18,slow=2.3						
CBBR	Cluj-Babes-Bol	148.54	330	⇓P	PKiKP	08 24 45.3	-0.3
CJR	Cluj-Napoca	148.56	330	⇓P	PKiKP	08 24 45.3	-0.4
CJR	Cluj-Napoca	148.56	330	⇓PKP2	PKiKP	08 24 45.3	-0.4
MDB	Medias	148.60	329	⇓P	PKiKP	08 24 45.7	0.0
MDB	Medias	148.60	329	⇓PKP2	PKiKP	08 24 45.7	0.0
FBE	Freiberg	148.63	345	*e*PKPbc	PKiKP	08 24 45.3	-0.3
	baz=18,slow=2.3						
FBE				*e*PKPab	PKPab	08 24 50.9	+0.4
	baz=18,slow=2.3						
CSS	Mathiatis	148.64	303		PKPbc	08 24 45.0	-0.2
CSS				PKPab	PKPab	08 24 49.0	-2.1
PVCC	Panska Ves	148.69	344	⇑*e*PKP	PKiKP	08 24 45.5	-0.3
PVCC	Panska Ves	148.69	344	*e*PKP2	PKiKP	08 24 45.5	-0.3
RSBS	Rosebush, Pemb	148.70	7	*e*P	PKPbc	08 24 44.4	-0.3
NEUB	Neuenburg	148.71	347	*e*PKPbc	PKiKP	08 24 45.5	-0.3
	baz=18,slow=2.3						
NEUB				*e*PKPab	PKPab	08 24 50.8	0.0
	baz=18,slow=2.3						
GTTG	Gottingen	148.73	350	*e*PKPbc	PKiKP	08 24 45.4	-0.4
	baz=18,slow=2.3						
VOIR		148.76	327	⇓P	PKPbc	08 24 44.9	-0.3
VOIR		148.76	327	⇓PKHKP	PKPpre	08 24 44.9	
BORA	Eskisehir	148.81	314		PKPbc	08 24 45.4	-0.2
DRGR		148.91	331	⇓P	PKPbc	08 24 45.8	+0.3
DRGR		148.91	331	⇓PKHKP	PKPpre	08 24 45.8	
LEF	Lefka	148.93	304	⇓P	PKPbc	08 24 46.0	+0.1
ARR	Arges	149.02	327	⇓P	PKiKP	08 24 47.6	+0.9
VYHS	Vyhne	149.14	337	*e*PKHKP	PKPpre	08 24 46.4	
VYHS				*e*		08 24 53.2	
VYHS	Vyhne	149.14	337	*e*PKP	PKiKP	08 24 46.4	-0.4
VYHS				*e*	PKPab	08 24 53.2	+0.5
PRA	Prague	149.15	343	⇑*e*PKP	PKiKP	08 24 46.5	-0.2
PRA	Prague	149.15	343	*e*PKHKP	PKPpre	08 24 46.5	
PRU	Pruhonice	149.19	343	⇑*e*PKP	PKPbc	08 24 46.3	+0.3
PRU				*e*PKPAB	PKPab	08 24 53.2	+0.4
PRU	Pruhonice	149.19	343	*e*PKHKP	PKPpre	08 24 46.3	
PRU				*e*		08 24 53.2	
VRAC	Vranov	149.20	340	⇓P	PKiKP	08 24 46.6	-0.3
VRAC	Vranov	149.20	340	*e*PKP	PKPbc	08 24 46.2	+0.1
VRAC	Vranov	149.20	340	⇓PKHKP	PKPpre	08 24 46.6	
RAZG	Razgrad	149.21	323	⇓P	PKPbc	08 24 46.0	-0.2
PSZ	Piszkesteto	149.22	335	⇓P	PKPbc	08 24 46.5	+0.3
PSZ	Piszkesteto	149.22	335	*e*PKP	PKiKP	08 24 46.8	-0.3
PSZ	Piszkesteto	149.22	335	PKHKP	PKPpre	08 24 46.6	
PSZ	Piszkesteto	149.22	335		PKPbc	08 24 46.6	+0.3
BUG	Bochum--Univer	149.22	353	*e*PKPbc	PKiKP	08 24 46.4	-0.4
	baz=18,slow=2.3						
BUG				*e*PKPab	PKPab	08 24 53.1	+0.3
	baz=18,slow=2.3						
JAVC	Velka Javorina	149.24	339	*e*PKP	PKiKP	08 24 47.5	+0.4
MOX	Moxa	149.28	347	*e*PKPbc	PKiKP	08 24 46.6	-0.5
	baz=18,slow=2.3						
MOX				*e*PKPab	PKPab	08 24 53.1	-0.1
	baz=18,slow=2.3						
TANN	Tannenbergstha	149.31	346	*e*PKPbc	PKiKP	08 24 46.9	-0.3
	baz=18,slow=2.3						
TANN				*e*PKPab	PKPab	08 24 53.5	+0.2
	baz=18,slow=2.3						
WERD	Werda	149.32	346	*e*PKPbc	PKiKP	08 24 46.7	-0.4
	baz=18,slow=2.3						
GUNZ	Gunzen	149.39	346	*e*PKPbc	PKiKP	08 24 46.9	-0.4
	baz=18,slow=2.3						
GUNZ				*e*PKPab	PKPab	08 24 54.1	+0.4
	baz=18,slow=2.3						
LOT	Lotru	149.40	328	⇓P	PKPbc	08 24 46.2	-0.6
HUMR	Humele	149.42	326	⇓P	PKPbc	08 24 45.2	-1.5
UBBA	Unterbreizbach	149.42	349	*e*PKPbc	PKiKP	08 24 47.1	0.0
	baz=18,slow=2.3						
WERN	Wernitzgruen	149.45	346	*e*PKPbc	PKiKP	08 24 47.2	-0.2
	baz=18,slow=2.3						
WERN				*e*PKPab	PKPab	08 24 54.6	+0.7
	baz=18,slow=2.3						
KRUC	Moravsky	149.48	340	*e*PKP	PKPbc	08 24 46.9	+0.2
NKC	Novy Kostel	149.49	346	⇑*e*PKP	PKiKP	08 24 47.1	-0.4
NKC				*e*PKPAB	PKPab	08 24 54.5	+0.4
NKC	Novy Kostel	149.49	346	*e*PKHKP	PKPpre	08 24 47.1	
NKC				*e*		08 24 54.5	
DEV	Deva	149.50	330	⇓P	PKPbc	08 24 46.6	-0.2
DEV	Deva	149.50	330	⇓PKHKP	PKPpre	08 24 46.6	
TREC	Trest	149.55	342	⇑*e*PKP	PKiKP	08 24 47.3	-0.3
TREC	Trest	149.55	342	*e*PKHKP	PKPpre	08 24 47.3	
ISP	Isparta	149.69	310	PKHKP	PKPpre	08 24 46.5	
ISP	Isparta	149.69	310		PKPbc	08 24 46.5	-1.2
SIRR	Siria	149.78	331	⇓P	PKiKP	08 24 48.1	-0.1
MODS	Modra-Piesok	149.79	339	*e*PKHKP	PKPpre	08 24 47.1	
MODS				*e*		08 24 55.5	
MODS	Modra-Piesok	149.79	339	*e*PKP	PKPbc	08 24 47.1	-0.4
MODS				*e*	PKPab	08 24 55.5	+0.1
MANZ	Manzenberg	149.79	346	*e*PKPbc	PKiKP	08 24 47.8	-0.4
	baz=18,slow=2.3						
SRO	Srobarova	149.90	337	*e*PKHKP	PKPpre	08 24 48.1	
SRO				*e*		08 24 56.8	
SRO	Srobarova	149.90	337	*e*PKP	PKiKP	08 24 48.1	-0.2

SRO				e	PKPab	08 24 56.8	+1.0
GZR	Gura Zlata	149.92	329	⇑P	PKPbc	08 24 47.5	-0.4
GZR	Gura Zlata	149.92	329	⇑PKIKP	PKPbc	08 24 47.5	-0.4
ROTZ	Rotzenmuhle	149.98	346	ePKPbc	PKPbc	08 24 48.0	+0.1
	baz=18,slow=2.3						
ROTZ				ePKPab	PKPab	08 24 56.4	+0.3
	baz=18,slow=2.3						
ZST	Bratislava	150.00	339	ePKHKP	PKPpre	08 24 48.6	
ZST				e		08 24 55.3	
ZST	Bratislava	150.00	339	ePKP	PKiKP	08 24 48.6	0.0
ZST				e	PKPab	08 24 55.3	-0.9
BEBN	Eben Emael	150.02	354	dPKPbc	PKPbc	08 24 47.8	-0.1
BEBN				dPKiKP	PKiKP	08 24 48.4	0.0
BEBN				dPKPab	PKPab	08 24 55.9	-0.3
AHRW	Bad Neuenahr-A	150.13	353	ePKPbc	PKiKP	08 24 48.6	-0.1
	baz=18,slow=2.3						
MEM	Membach	150.18	354	dPKiKP	PKiKP	08 24 48.6	-0.2
MEM				dPKPab	PKPab	08 24 56.6	-0.2
BTNL	Ternell	150.19	354	dPKP	PKPbc	08 24 48.5	+0.2
KHC	Kasperske Hory	150.23	344	ePKPDF	PKPdf	08 24 43.2	+0.5
KHC				⇑ePKP	PKiKP	08 24 48.9	-0.1
KHC				ePKPAB	PKPab	08 24 58.1	+0.9
KHC				epPKP	pPKPab	08 27 05.9	+2.5
KHC	Kasperske Hory	150.23	344	PKIKP	PKPdf	08 24 41.5	-1.2
KHC						08 24 57.9	
KHC	Kasperske Hory	150.23	344	PKPdf	PKPdf	08 24 41.5	-1.2
KHC				PKPbc	PKiKP	08 24 49.0	-0.1
KHC				PKPab	PKPab	08 24 57.9	+0.6
SRE	Strehaia	150.24	328	⇓P	PKiKP	08 24 49.3	+0.1
SRE	Strehaia	150.24	328	⇓PKIKP	PKiKP	08 24 49.3	+0.1
BSTI	Sart Tilman	150.24	355	dPKPbc	PKiKP	08 24 48.6	-0.3
TNS	Taunus Mts	150.25	351	ePKPbc	PKiKP	08 24 49.1	0.0
	baz=18,slow=2.3						
TNS				ePKPab	PKPab	08 24 57.6	+0.3
	baz=18,slow=2.3						
GRA1	Grafenberg Arr	150.26	347		PKiKP	08 24 49.3	+0.2
GRA1				PKPab	PKPab	08 24 58.2	+0.9
GRF	Grafenberg Arr	150.26	347	PKIKP	PKiKP	08 24 49.3	+0.2
GRF						08 24 58.2	
GRF	Grafenberg Arr	150.26	347	ePKPbc	PKiKP	08 24 49.0	-0.1
	baz=18,slow=2.3						
GRF				ePKPab	PKPab	08 24 57.7	+0.3
	baz=18,slow=2.3						
GRFO	Grafenberg	150.27	347	PKIKP	PKiKP	08 24 48.9	-0.2
GRFO						08 24 58.1	
GRFO	Grafenberg	150.27	347		PKiKP	08 24 48.9	-0.2
GRFO				PKPab	PKPab	08 24 58.1	+0.8
BZS	Buzias	150.30	331	⇓P	PKPbc	08 24 48.9	+0.2
BZS	Buzias	150.30	331	⇓PKIKP	PKPbc	08 24 48.9	+0.2
CKRC	Cesky Krumlov	150.32	343	ePKPDF	PKPdf	08 24 44.4	+1.6
CKRC				⇑ePKP	PKiKP	08 24 50.1	+0.9
CKRC				epPKP	pPKPab	08 27 07.0	+3.5
WET	Wettzell	150.40	345	ePKPbc	PKPbc	08 24 49.1	+0.2
	baz=18,slow=2.3						
WET				ePKPab	PKPab	08 24 58.5	+0.6
	baz=18,slow=2.3						
SNF	Seneffe	150.41	356	dPKP	PKPbc	08 24 49.0	+0.2
SNF				dPKPab	PKPab	08 24 57.8	0.0
BCLA	Clavier	150.43	355	dPKPab	PKPab	08 24 57.4	-0.5
BHOU	Houvegnez	150.43	354	dPKiKP	PKiKP	08 24 49.3	-0.1
BHOU				dPKPab	PKPab	08 24 58.1	+0.1
GEC2	GERESS Array S	150.46	343	ePKPbc	PKiKP	08 24 49.4	-0.2
	baz=18,slow=2.3						
GEC2				ePKPab	PKPab	08 24 59.0	+0.7
	baz=18,slow=2.3						
GEC2	GERESS Array S	150.46	343		PKiKP	08 24 49.3	-0.2
GERES	GERESS Array B	150.46	343	PKP	PKPdf	08 24 43.5	+0.3
	comp=Z,0.5nm,0.7s,baz=104,slow=0.6,SNR=6.7						
GERES				PKPbc	PKPbc	08 24 49.0	-0.2
	comp=Z,13nm,0.8s,baz=34,slow=2.6,SNR=64						
GERES	GERESS Array B	150.46	343		PKiKP	08 24 49.4	-0.2
GERES				PKPab	PKPab	08 24 58.2	-0.1
HERR	Herculane	150.47	329	⇓P	PKPbc	08 24 49.1	0.0
BGES	Gesves	150.48	355	dPKPbc	PKPbc	08 24 48.7	-0.3
BGES				dPKPab	PKPab	08 24 57.7	-0.5
BMRD	Maredsous	150.59	356	dPKP	PKPbc	08 24 49.3	+0.1
ELL	Elmali	150.59	309	PKIKP	PKPbc	08 24 49.8	-0.1
ELL	Elmali	150.59	309		PKPbc	08 24 49.8	-0.1
EGYH	Egyhazaskeszo	150.59	338	ePKP	PKiKP	08 24 50.0	+0.2
SOP	Sopron	150.63	339	ePKP	PKiKP	08 24 49.6	-0.3
CONA	Conrad Observa	150.65	340	i P	PKiKP	08 24 49.8	-0.2
	comp=Z,16nm,0.6s,SNR=10						
BANR	Banloc	150.69	331	⇓P	PKiKP	08 24 50.7	+0.7
RCHB	Rochefort	150.69	355	dPKPbc	PKPbc	08 24 49.3	-0.2
MPLH	Magyarpolny	150.73	337	ePKP	PKPbc	08 24 49.6	-0.1
DOU	Dourbes	150.80	356	dPKPbc	PKPbc	08 24 49.4	-0.4
DOU				dPKiKP	PKiKP	08 24 50.1	-0.1
DOU				dPKPab	PKPab	08 24 59.2	-0.3
TIH	Tihany	150.82	336	ePKP	PKPbc	08 24 49.3	-0.6
MDVR	Moldovita	150.88	329	⇓P	PKPbc	08 24 49.5	-0.7
AKAS	Kas	151.02	308		PKPbc	08 24 50.6	-0.3
WLF	Walferdange	151.09	354	dPKiKP	PKiKP	08 24 50.7	-0.1
WLF				dPKPab	PKPab	08 25 00.6	-0.1
WLF	Walferdange	151.09	354	PKIKP	PKiKP	08 24 51.3	+0.5
WLF	Walferdange	151.09	354	ePKPbc	PKiKP	08 24 51.2	+0.5
	baz=18,slow=2.3						
WLF				ePKPab	PKPab	08 25 01.0	+0.2
	baz=18,slow=2.3						
WLF	Walferdange	151.09	354		PKiKP	08 24 51.3	+0.5
MORH	Mrgy, Hungar	151.10	335	⇓iP	PKPbc	08 24 50.1	-0.4
KUBS	Kucevo	151.17	329	eP	PKPbc	08 24 49.2	-1.6
MOA	Molln	151.21	342	i P	PKPbc	08 24 50.8	+0.1
	comp=Z,6.0nm,0.5s						
ZAGS	Zajecar	151.33	327	eP	PKPbc	08 24 50.0	-1.1
ARSA	Arzberg	151.35	340	i P	PKPbc	08 24 51.1	0.0
	comp=Z,1.3nm,0.3s						
KOVH	Kovagotottos	151.42	335	ePKP	PKPbc	08 24 51.0	-0.3
FRGS	Fruska Gora	151.46	332	⇓P	PKPbc	08 24 51.4	0.0
FRGS	Fruska Gora	151.46	332	⇓iP	PKPbc	08 24 51.0	-0.4
FRGS	Fruska Gora	151.46	332	eP	PKPbc	08 24 51.2	-0.2
ZAPS	Zavoj	151.51	326	eP	PKiKP	08 24 52.0	+0.1
STU	Stuttgart	151.54	349	PKIKP	PKPdf	08 24 45.2	+0.6
STU						08 25 02.3	
STU	Stuttgart	151.54	349	ePKPbc	PKiKP	08 24 51.8	+0.1
	baz=18,slow=2.3						
STU				ePKPab	PKPab	08 25 02.9	+0.3
	baz=18,slow=2.3						
STU	Stuttgart	151.54	349	PKPdf	PKPdf	08 24 45.2	+0.6
STU					PKiKP	08 24 51.9	+0.2
STU				PKPab	PKPab	08 25 02.3	-0.3
VTS	Vitosha	151.64	325	⇓P	PKiKP	08 24 52.2	-0.1
VTS	Vitosha	151.64	325	PKIKP	PKPbc	08 24 52.1	0.0
VTS						08 25 04.4	
VTS	Vitosha	151.64	325		PKPbc	08 24 52.1	0.0
VTS				PKPab	PKPab	08 25 04.4	+0.8
FUR	Furstenfeldbru	151.69	346	ePKPbc	PKPbc	08 24 51.9	0.0
	baz=18,slow=2.3						
FUR				ePKPab	PKPab	08 25 04.0	+0.7
	baz=18,slow=2.3						
RJOB	Jochberg	151.72	344	ePKPbc	PKPbc	08 24 51.9	-0.1
	baz=18,slow=2.3						
RJOB				ePKPab	PKPab	08 25 04.2	+0.6
	baz=18,slow=2.3						
BOVS	Bovan	151.72	328	⇓P	PKPbc	08 24 51.3	-0.7
BOVS	Bovan	151.72	328	eP	PKPbc	08 24 51.2	-0.8
TRUS	Trudelj	151.91	330	eP	PKiKP	08 24 52.5	-0.1
SOKA	Soboth	152.02	340	i P	PKPbc	08 24 52.4	-0.3
	comp=Z,4.8nm,0.5s,SNR=6.5						
GRUS	Gruza	152.02	329	eP	PKPbc	08 24 52.6	-0.1
TEKS	Tekeris	152.06	332	⇓iP	PKPab	08 25 04.4	-0.7
BFO	Black Forest	152.11	350	PKIKP	PKPbc	08 24 52.8	0.0
BFO						08 25 05.0	
BFO	Black Forest	152.11	350	ePKPbc	PKiKP	08 24 52.9	0.0
	baz=18,slow=2.3						
BFO				ePKPab	PKPab	08 25 05.0	-0.2
	baz=18,slow=2.3						
BFO	Black Forest	152.11	350		PKPbc	08 24 52.8	0.0
BFO				PKPab	PKPab	08 25 05.0	-0.2
BOSS	Bosilegrad	152.13	325	eP	PKPbc	08 24 52.8	-0.2
KBA	Koelnbreinsper	152.17	342	eP	PKPbc	08 24 52.5	-0.6
	comp=Z,12nm,0.9s,SNR=7.3						
DIVS	Divibare	152.20	330	⇓iP	PKPbc	08 24 52.8	-0.4
DIVS	Divibare	152.20	330	PKPdf	PKPdf	08 24 45.5	-0.4
DIVS				PKPbc	PKiKP	08 24 53.4	+0.1
DIVS				PKPab	PKPab	08 25 06.2	+0.4
DIVS	Divibare	152.20	330	eP	PKPbc	08 24 53.2	0.0
BARS	Barje	152.26	326	eP	PKPdf	08 24 48.8	+2.9
BARS	Barje	152.26	326	eP	PKiKP	08 24 53.3	-0.1
SELS	Selova	152.32	328	eP	PKPbc	08 24 53.1	-0.3
OBKA	Obir	152.32	340	eP	PKPbc	08 24 52.7	-0.6
	comp=Z,4.5nm,0.8s						
WATA	Walderalm	152.40	345	eP	PKPbc	08 24 53.2	-0.5
	comp=Z,5.5nm,0.5s						
WATA				eP	PKPab	08 25 06.7	+0.1
	comp=Z,11nm,0.7s						
UBR	Ueberruh	152.41	347	ePKPbc	PKPbc	08 24 53.4	-0.1
	baz=18,slow=2.3						
RETA	Reutte	152.45	346	eP	PKPbc	08 24 53.6	-0.1
	comp=Z,5.8nm,0.6s						
RETA				i P	PKPab	08 25 06.9	+0.2
	comp=Z,9.8nm,0.6s						
WTTA	Wattenberg	152.45	345	eP	PKPbc	08 24 53.5	-0.3
	comp=Z,9.5nm,0.4s,SNR=7.5						
WTTA				i P	PKPab	08 25 07.2	+0.4
	comp=Z,15nm,0.6s						
MYKA	Terra Mystica	152.49	341	eP	PKPbc	08 24 53.1	-0.6
	comp=Z,5.2nm,0.5s,SNR=5.6						
MYKA				eP	PKPab	08 25 06.4	-0.5
	comp=Z,5.9nm,0.7s						
MOTA	Moosalm	152.51	346	eP	PKPdf	08 24 46.0	-0.3
	comp=Z,3.6nm,0.9s						
MOTA				eP	PKPbc	08 24 53.5	-0.3
	comp=Z,13nm,0.8s						
MOTA				eP	PKPab	08 25 07.1	+0.1
	comp=Z,11nm,0.6s						
PDKS	Podkum	152.57	339	i PKPbc	PKPbc	08 24 53.6	-0.3
PDKS				i PKPab	PKPab	08 25 07.0	-0.2
SQTA	Sankt Quirin	152.60	345	eP	PKPdf	08 24 46.3	-0.2
	comp=Z,3.8nm,0.9s						
SQTA				i P	PKPbc	08 24 53.7	-0.3
	comp=Z,14nm,0.7s						
SQTA				eP	PKPab	08 25 07.1	-0.3
	comp=Z,12nm,1.1s						
CRES	Cresnjev	152.62	338	⇓iP	PKPbc	08 24 53.6	-0.4
BBLS	Lazići	152.65	331	⇓iP	PKPbc	08 24 54.1	-0.1
BBLS	Lazići	152.65	331	eP	PKiKP	08 24 54.3	0.0
ABTA	Abfaltersbach	152.71	343	eP	PKPdf	08 24 45.9	-0.6
	comp=Z,5.0nm,0.9s						
ABTA				eP	PKPbc	08 24 53.8	-0.4
	comp=Z,19nm,0.7s,SNR=7.6						
ABTA				eP	PKPab	08 25 07.4	-0.4
	comp=Z,8.9nm,0.7s						
LJU	Ljubljana	152.74	340	i PKPbc	PKPbc	08 24 54.0	-0.2
LJU	Ljubljana	152.74	340	⇓iP	PKPbc	08 24 53.8	-0.4
ZOU	Zoufplan	152.75	342	PKPab	PKPab	08 25 07.2	-0.9
MRAK	Mrakovica	152.78	335	⇓iP	PKPbc	08 24 54.1	-0.3
DAVA	Damuels	152.83	347	i P	PKPbc	08 24 54.4	-0.2
	comp=Z,11nm,1.1s						
DAVA				eP	PKPab	08 25 08.4	0.0
	comp=Z,8.3nm,0.7s						
STIP	Stip	152.84	324	i P	PKPbc	08 24 54.0	-0.5
SJES	Sjenica	152.85	329	eP	PKiKP	08 24 54.7	0.0
RUDO	Rudo	152.86	330	eP	PKPbc	08 24 53.8	-0.7
VAY	Valandovo	152.88	323	i P	PKPab	08 25 08.9	+0.3
FETA	Feichten	152.90	346	eP	PKPdf	08 24 46.8	-0.1
	comp=Z,5.9nm,0.8s						
FETA				eP	PKPbc	08 24 54.6	-0.1
	comp=Z,10nm,0.7s						
BOJS	Bojanci	152.97	338	i PKPbc	PKiKP	08 24 54.8	0.0
CEY	Cerknica	153.04	340	⇓iP	PKPbc	08 24 53.9	-1.0
SKO	Skopje	153.05	326	i P	PKPbc	08 24 54.9	-0.1
STAL	STALIGIAL	153.10	342	PKPdf	PKPdf	08 24 46.5	-0.5
STAL				PKPbc	PKPbc	08 24 54.2	-0.8
STAL				PKPab	PKPab	08 25 08.7	-0.7
RIY	Rijeka	153.39	339	eP	PKPbc	08 24 55.0	-0.6
UPM	Unac-Piva	153.39	330	eP	PKPbc	08 24 54.9	-1.0
CTI	Castel Tesino	153.58	344	PKIKP	PKPbc	08 24 55.6	-0.6
CTI						08 25 11.2	
CTI	Castel Tesino	153.58	344		PKPbc	08 24 55.6	-0.6
CTI				PKPab	PKPab	08 25 11.2	-0.4
BRY	Bratogost	153.80	331	eP	PKPbc	08 24 55.9	-0.8
FNA	Florina	153.91	324	PKIKP	PKPbc	08 24 56.2	-0.8
FNA	Florina	153.91	324		PKPbc	08 24 56.1	-0.8
OHR	Ohrid	154.00	325	i P	PKiKP	08 24 57.4	+0.2
TREB	Trebinje	154.03	331	eP	PKPbc	08 24 56.2	-0.8
TEOL	Teolo	154.21	343		PKiKP	08 24 57.5	+0.2
TEOL				PKPab	PKPab	08 25 14.2	0.0
SALO	Salr	154.27	345		PKiKP	08 24 57.1	-0.4
SALO				PKPab	PKPab	08 25 14.2	-0.3
BNI	Bardonecchia	155.56	351	PKP2	PKPab	08 25 20.4	+0.3
BNI	Bardonecchia	155.56	351	PKPab	PKPab	08 25 20.4	+0.3
VLC	Villacollemand	155.67	344		PKPab	08 25 19.8	-0.7
OSSC	Osservatorio P	156.02	342		PKPab	08 25 21.4	-0.6
NRCA	Norcia	156.05	338		PKPab	08 25 21.9	-0.4
ESDC	Sonseca Array	160.79	13	PKPab	PKPab	08 25 42.4	-0.6
	comp=Z,3.7nm,0.9s,baz=344,slow=4.3,SNR=14						
ESDC	Sonseca Array	160.79	13	PKPab	PKPab	08 25 43.1	+0.2
KEST	Kesra	163.69	336	PKPab	PKPab	08 25 55.5	-0.4
	comp=Z,5.4nm,0.8s,baz=311,slow=4.2,SNR=7.3						
LIC	Lamto	164.11	156	ePKIKP	PKPdf	08 25 00.6	-0.2
	comp=Z,26nm,0.8s						
LIC	Lamto	164.11	156	ePKP2	PKPab	08 25 59.0	+0.9
	comp=Z,56nm,1.4s						
KIC	Kosan Boka	164.34	157	ePKIKP	PKPdf	08 25 00.7	-0.3
	comp=Z,16nm,0.9s						
KIC	Kosan Boka	164.34	157	ePKP2	PKPab	08 25 59.9	+0.8
	comp=Z,14nm,1.0s						
TIC	Toumodi	164.50	156	ePKIKP	PKPdf	08 25 01.0	-0.2
TIC	Toumodi	164.50	156	ePKP2	PKPab	08 26 00.6	+0.8
DBIC	Dimbokro	164.58	156	PKP	PKPdf	08 24 59.8	-1.4
	comp=Z,3.7nm,0.8s,baz=265,slow=1.3,SNR=5.2						
DBIC				PKPab	PKPab	08 26 01.4	+1.3
	comp=Z,5.5nm,0.8s,baz=191,slow=5.2,SNR=5.3						
KOWA	Kowa	171.80	141	PKPab	PKPab	08 26 32.2	+0.1
	comp=Z,7.2nm,0.8s,baz=208,slow=5.1,SNR=17						
KOWA	Kowa	171.80	141	PKPdf	PKPdf	08 25 05.2	-0.7
KOWA					PKPab	08 26 32.6	+0.5
TORD	Torodi Ar. Bea	172.23	183	PKP	PKPdf	08 25 05.3	-0.8
	comp=Z,3.0nm,0.8s,baz=327,slow=1.0,SNR=16						
TORD				PKPab	PKPab	08 26 33.1	-0.8
	comp=Z,1.2nm,0.7s,baz=164,slow=4.2,SNR=4.9						

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*IDC **27** 08:15:39.3±1.9, 56°.59S×142°.86W, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx4.0/23, mbtmp4.1/4, MS3.7/9, Ms1 3.7/9, ms1mx3.6/12, Error ellipse: s-maj=56.6km s-min=44.5km az=47.0*

*GCMT **27** 08:15:43.0±0.3, 56°.89S±0°.03×141°.90W±0°.03, h23^{km}±2^{km}, MW4.9/60, Moment Tensor Solution. s20,c26; s60,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.17±.19; $M_{\theta\theta}$1.97±.18; $M_{\phi\phi}$-2.14±.16; $M_{r\theta}$-0.41±.23; $M_{\theta\phi}$1.19±.09; $M_{\phi r}$-0.33±.18; Best double couple: $M_0$2.43500×10^{16} NP1:ϕ_s301.00000°,δ78.00000°,λ5.00000°. NP2: ϕ_s209.00000°,δ85.00000°,λ168.00000°. Principal axes: T 2.3930, Plg12.0000°, Azm164.0000°; N 0.0800, Plg77.0000°, Azm6.0000°; P -2.4760, Plg5.0000°, Azm255.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 27 08:15:39.6±1.8, **56°.6S**±0°.3×**142°.4W**±0°.3, **h10**^{km}, **n34**, σ**1^{s}.61**/11, **mb4.2**/4, **MS3.8**/12, **1C, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	28.25	202	LR	LR	08 29 21.5	
	comp=Z,122nm,20.3s,baz=78,slow=29						
URZ	Urewera	32.37	287	LR	LR	08 32 44.2	
	comp=Z,100nm,19.6s,baz=119,slow=32						
QSPA	South Pole Qui	33.55	180	P	P	08 22 20.7	+1.5
	1.8nm,1.0s,baz=89,slow=12,SNR=3.1						
TBI	Tubuai	33.63	348	eLR	LR	08 30 48.6	
	comp=Z,406nm,29.0s						
TBI	Tubuai	33.63	348	eT	T	08 57 18.2	
	19nm,0.3s						
MEH	Mehetia	38.91	351	eT	T	09 03 55.0	
	13nm,0.2s						
PAE	Paea	39.26	349	eT	T	09 04 19.8	
	1.0nm,0.3s						
PPT2	Papeete2	39.33	349	eLR	LR	08 33 28.0	
	comp=Z,398nm,27.5s						
PPT2	Papeete2	39.33	349	eT	T	09 04 25.5	
	2.6nm,0.3s						
PPT	Papeete	39.35	349	LR	LR	08 35 10.5	
	comp=Z,103nm,20.2s,baz=178,slow=30						
VAH	Vaihoa	41.49	352	eT	T	09 07 08.8	
	16nm,0.3s						
H03S2	Juan Fernandez	48.11	90	T	T	09 15 53.9	
	SNR=39						
H03S1	Juan Fernandez	48.12	90	T	T	09 15 50.2	
	SNR=32						
H03S3	Juan Fernandez	48.13	90	T	T	09 15 47.7	
	SNR=43						
VNA3	Neumayer Olymp	48.15	161	P	P	08 24 17.5	-1.7
H03N3	Juan Fernandez	48.40	89	T	T	09 16 03.9	
	baz=222,slow=72,SNR=69						
H03N2	Juan Fernandez	48.40	89	T	T	09 16 05.5	
	baz=222,slow=72,SNR=60						
H03N1	Juan Fernandez	48.41	89	T	T	09 16 02.9	
	baz=222,slow=72,SNR=109						
VNA2	Neumayer--Watz	48.82	162	P	P	08 24 22.9	-1.4
	baz=185,slow=2.2						
SNAA	Sanae	48.90	164	P	P	08 24 23.6	-1.4
VNA1	Neumayer--Stat	48.90	161	P	P	08 24 24.0	-0.9
DZM	Mont Dzumac	50.76	291	eLR	LR	08 38 31.6	
	comp=Z,144nm,24.8s						
SYO	Syowa Base	54.68	181	⇑eP	P	08 25 08.7	+0.7
MAW	Mawson	54.69	192	LR	LR	08 45 48.0	
	comp=Z,104nm,21.5s,baz=242,slow=33						
STKA	Stephens Creek	56.55	262	P	P	08 25 22.7	+0.7
	2.7nm,0.8s,baz=156,slow=10.0,SNR=4.2						
STKA				LR	LR	08 44 53.3	
	comp=Z,78nm,21.6s,baz=197,slow=31						
ASAR	Alice Springs	67.18	261	P	P	08 26 33.6	-0.1
	2.9nm,1.0s,baz=135,slow=6.8,SNR=12						
ASAR				LR	LR	08 52 48.5	
	comp=Z,56nm,19.8s,baz=204,slow=33						
H01W1	Cape Leeuwin H	68.38	239	T	T	09 41 59.3	
	baz=144,slow=76,SNR=36						
H01W2	Cape Leeuwin H	68.39	239	T	T	09 41 59.7	
	baz=144,slow=76,SNR=47						
H01W3	Cape Leeuwin H	68.40	239	T	T	09 42 00.6	
	baz=144,slow=76,SNR=33						
WRA	Warramunga Arr	69.93	264	P	P	08 26 49.0	-1.9
	1.4nm,1.0s,baz=146,slow=6.0,SNR=2.6						
WRA				LR	LR	08 53 18.8	
	comp=Z,57nm,21.6s,baz=200,slow=32						
BOSA	Boshof	94.46	169	LR	LR	09 08 57.1	
	comp=Z,48nm,18.1s,baz=185,slow=34						
NVAR	Mina Array Bea	96.84	19	LR	LR	09 02 24.1	
	comp=Z,62nm,21.8s,baz=215,slow=29						
ILAR	Eielson Array	121.11	358	PKP	PKiKP	08 34 33.1	+2.2
	0.5nm,0.9s,baz=195,slow=2.7,SNR=4.7						
MKAR	Makanchi Array	151.13	269	PKPbc	PKPbc	08 35 30.8	-1.2
	0.5nm,0.7s,baz=104,slow=5.1,SNR=3.7						

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*ATH **27** 08:22:49.6, 37°.98N×21°.35E, h15^{km}±1^{km}, ML2.4/7, Error ellipse: s-maj=1.7km s-min=0.8km az=326.0*

*THE **27** 08:22:50.0, 37°.99N×21°.35E, h11^{km}±3^{km}, ML2.1/5, Error ellipse: s-maj=3.2km s-min=0.8km az=350.0*

ISC 27 08:22:49.5±0.9, **37°.98N**±0°.03×**21°.36E**±0°.03, **h14**^{km}±6^{km}, **n23**, σ**0^{s}.46**/37, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.12	47	P	Pg	08 22 52.6	-0.2
RLS				S	Sg	08 22 55.1	0.0
	1µm,0.1s						
RLS	Riolos of Patr	0.12	47	P	Pg	08 22 52.5	-0.3
RLS				S	Sg	08 22 55.1	0.0
RLS				AML	AML	08 22 55.5	
	comp=N,3763µm,0.1s						
RLS				AML	AML	08 22 56.0	
	comp=E,2008µm,0.1s						
VTN	Vitineika	0.15	246	P	Pg	08 22 53.3	+0.2
VTN				S	Sb	08 22 56.9	-0.2
DRO	Drossia	0.28	95	P	Pg	08 22 55.4	0.0
DRO	Drossia	0.28	95	P	Pg	08 22 55.4	0.0
DRO				S	Sg	08 23 00.5	+1.1
DRO				AML	AML	08 23 02.0	
	comp=E,3610µm,0.2s						
DRO				AML	AML	08 23 02.7	
	comp=N,4538µm,0.3s						
UPR	University Cam	0.46	48	P	Pb	08 22 59.5	+0.1
UPR				S	Sb	08 23 06.4	+0.4
LTHK	Lithakia	0.49	237	P	Pg	08 22 58.9	-0.2
LTHK				S	Sb	08 23 07.4	+0.5
	comp=N,1µm,0.4s						
LTHK	Lithakia	0.49	237	P	Pg	08 22 58.9	-0.2
LTHK				S	Sg	08 23 06.6	+0.9
LAKA	Lakka	0.56	62	P	Pg	08 23 00.4	0.0
LAKA				S	Sg	08 23 08.5	+0.7
LAKA				AML	AML	08 23 11.3	
	comp=E,2606µm,0.6s						
LAKA				AML	AML	08 23 12.3	
	comp=N,1262µm,0.5s						
EFP	Efpalio	0.62	44	P	Pg	08 23 01.7	0.0
EFP				AML	AML	08 23 13.9	
	comp=E,593µm,0.4s						
EFP				AML	AML	08 23 13.9	
	comp=N,998µm,0.3s						
KLV	Kalavryta, Ach	0.63	84	P	Pg	08 23 01.3	-0.5
KLV				S	Sb	08 23 11.3	+0.2
	comp=N,125nm,0.3s						
KLV	Kalavryta, Ach	0.63	84	P	Pg	08 23 01.3	-0.5
KLV				S	Sg	08 23 10.8	+0.6
KLV				AML	AML	08 23 14.9	
	comp=E,220µm,0.3s						
KLV				AML	AML	08 23 15.6	
	comp=N,321µm,0.3s						
SERG	Sergoula	0.70	51	P	Pg	08 23 03.0	-0.1
SERG				S	Sg	08 23 13.0	+0.6
SERG				AML	AML	08 23 15.7	
	comp=N,934µm,0.3s						
SERG				AML	AML	08 23 16.4	
	comp=E,778µm,0.3s						
ANX	Ano Chora	0.76	36	P	Pg	08 23 04.2	-0.1
ANX				S	Sb	08 23 14.9	0.0
	comp=E,290nm,0.4s						
ANX	Ano Chora	0.76	36	P	Pg	08 23 04.1	-0.1
ANX				S	Sg	08 23 14.7	+0.4
ANX				AML	AML	08 23 18.7	
	comp=E,509µm,0.4s						
ANX				AML	AML	08 23 19.0	
	comp=N,653µm,0.5s						
ITM	Ithomi	0.92	150	P	Pg	08 23 07.4	+0.2
ITM				S	Sn	08 23 21.5	+0.5
	comp=N,78nm,0.4s						
ITM	Ithomi	0.92	150	P	Pg	08 23 07.3	+0.1
EVR	Evrytania	1.00	21	P	Pb	08 23 08.7	0.0
THAL	Thalero	1.03	86	P	Pb	08 23 08.3	-0.8
PYL	PYLOS	1.12	164	P	Pb	08 23 09.8	-0.9
MAKR	Makrakomi, Fth	1.20	30	P	Pn	08 23 11.3	-0.6
LTK	Loutraki	1.27	87	P	Pn	08 23 12.6	-0.3
ATAL	Atalanti	1.49	61	P	Pn	08 23 16.1	+0.1

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*THE **27** 08:23:37.9, 38°.53N×20°.54E, h14^{km}, ML2.4/6, Error ellipse: s-maj=1.4km s-min=0.3km az=290.0*

*ATH **27** 08:23:38.0, 38°.53N×20°.57E, h16^{km}±2^{km}, ML2.5/4, Error ellipse: s-maj=2.9km s-min=0.7km az=285.0*

ISC 27 08:23:37.5±0.9, **38°.53N**±0°.02×**20°.55E**±0°.06, **h17**^{km}±6^{km}, **n24**, σ**0^{s}.25**/45, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.07	169	P	Pg	08 23 40.8	+0.1
FSK				S	Sg	08 23 42.5	-0.5
FSK				AML	AML	08 23 42.8	
	comp=N,17658µm,0.2s						
FSK				AML	AML	08 23 43.2	
	comp=E,17444µm,0.1s						
EVGI	Lefkada island	0.13	43	P	Pb	08 23 41.5	0.0
EVGI				S	Sg	08 23 44.0	0.0
	comp=E,9µm,0.1s						
EVGI	Lefkada island	0.13	43	P	Pb	08 23 41.4	0.0
EVGI				S	Sg	08 23 44.0	0.0
DRAG	Dragano-Lefkad	0.16	8	P	Pb	08 23 41.9	-0.1
DRAG				S	Sg	08 23 44.7	+0.1
DRAG	Dragano-Lefkad	0.16	8	P	Pb	08 23 41.9	-0.1
DRAG				S	Sb	08 23 45.0	0.0
NYDR	Nydri-Lefkada	0.22	33	P	Pg	08 23 42.9	+0.3
NYDR	Nydri-Lefkada	0.22	33	P	Pg	08 23 42.9	+0.3
NYDR				S	Sb	08 23 46.5	-0.2
LKD2	Lefkada island	0.28	19	P	Pg	08 23 43.8	+0.2
LKD2				S	Sg	08 23 47.9	+0.2
	comp=E,575nm,0.2s						
LKD2	Lefkada island	0.28	19	P	Pg	08 23 43.7	+0.2
LKD2				S	Sg	08 23 47.2	-0.5
LKD2				AML	AML	08 23 48.8	
	comp=E,1114µm,0.1s						
LKD2				AML	AML	08 23 49.4	
	comp=N,1164µm,0.2s						
KEF4	Livadi, Kephal	0.29	199	P	Pb	08 23 44.1	0.0
KEF4				S	Sb	08 23 48.5	-0.1
KEF4	Livadi, Kephal	0.29	199	P	Pb	08 23 44.1	0.0
KEF4				S	Sb	08 23 48.8	+0.2
TSLK	Tsoukalades, L	0.31	16	P	Pb	08 23 44.6	0.0
TSLK	Tsoukalades, L	0.31	16	P	Pb	08 23 44.6	0.0

TSLK				S	Sg	08 23 48.5	-0.1
TSLK				AML	AML	08 23 51.3	
	comp=E,1074μm,0.4s						
TSLK				AML	AML	08 23 54.9	
	comp=N,1490μm,0.5s						
DMLN	Damoulianata-K	0.32	205	P	Pg	08 23 44.5	+0.2
DMLN				S	Sg	08 23 49.2	+0.3
	comp=N,2μm,0.3s						
LXRA	Lixouri, Kepha	0.34	195	P	Pb	08 23 44.9	-0.1
LXRA				S	Sb	08 23 50.6	+0.5
VLS	Valsamata	0.35	174	P	Pg	08 23 45.1	+0.2
VLS				S	Sg	08 23 50.2	+0.3
	comp=N,2μm,0.1s						
VLS	Valsamata	0.35	174	P	Pg	08 23 45.0	+0.2
VLS				S	Sb	08 23 50.5	0.0
VLS				AML	AML	08 23 50.9	
	comp=N,3962μm,0.2s						
VLS				AML	AML	08 23 51.5	
	comp=E,2395μm,0.1s						
ARGA	Argostoli. Kep	0.35	188	P	Pb	08 23 45.6	+0.3
ARGA				S	Sb	08 23 50.4	-0.2
KEF3	Kipouria, Keph	0.36	206	P	Pg	08 23 44.7	-0.2
KEF3				S	Sg	08 23 50.0	0.0
KEF3	Kipouria, Keph	0.36	206	P	Pg	08 23 44.8	-0.2
KEF3				S	Sg	08 23 50.1	+0.1
PSDA	Pessada-Kefalo	0.41	176	P	Pg	08 23 46.2	+0.3
PSDA				S	Sb	08 23 52.6	+0.3
	comp=E,268nm,0.2s						
PSDA	Pessada-Kefalo	0.41	176	P	Pg	08 23 46.0	0.0
PSDA				S	Sb	08 23 52.7	+0.3
LTHK	Lithakia	0.85	164	P	Pb	08 23 53.4	-0.3
LTHK				S	Sn	08 24 06.3	-0.3
	comp=E,308nm,0.3s						
LTHK	Lithakia	0.85	164	P	Pb	08 23 53.3	-0.5

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*IDC **27** 09:11:14.4±2.9, 31°.02S×177°.63W, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.8/18, mbtmp3.8/4, ML2.8/1, Error ellipse: s-maj=66.9km s-min=27.8km az=114.0*

ISC 27 09:11:14.4±3.0, **30°.89S**±0°.09×**177°.4W**±0°.4, **h10**^{km}, **n6,** σ**1^s.69**/8, **mb3.8**/3, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.69	345	Pn	Pb	09 11 47.2	+1.6
	71nm,0.3s,baz=215,slow=22,SNR=6.8						
RAO				Sn	Sn	09 12 03.7	-2.1
	340nm,0.3s,baz=282,slow=23,SNR=11						
URZ	Urewera	8.63	210	Pn	Pn	09 13 17.8	-1.6
	0.1nm,0.3s,baz=122,slow=24,SNR=2.2						
URZ				Sn	Sn	09 14 58.2	+1.5
	0.5nm,0.3s,baz=127,slow=20,SNR=1.6						
STKA	Stephens Creek	34.87	257	P	P	09 18 07.2	+1.2
	1.4nm,0.6s,baz=86,slow=9.9,SNR=4.1						
ASAR	Alice Springs	43.60	267	P	P	09 19 18.4	-0.7
	0.4nm,0.6s,baz=104,slow=7.5,SNR=8.2						
WRA	Warramunga Arr	44.63	272	P	P	09 19 26.5	-0.9
	0.6nm,0.4s,baz=111,slow=8.0,SNR=9.6						
FINES	FINESS Array B	145.78	340	PKPbc	PKPab	09 30 53.9	+0.4
	1.3nm,0.5s,baz=66,slow=3.4,SNR=14						

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*IDC **27** 09:21:05.1±1.6, 27°.62S×66°.26W, h0^{km}, mb3.8/2, mb1 3.9/2, mb1mx3.6/15, mbtmp3.9/2, Error ellipse: s-maj=174.8km s-min=30.5km az=150.0*

*GUC **27** 09:21:38.6±0.4, 23°.49S×66°.96W, h236^{km}±6^{km}, ML4.1*

ISC 27 09:21:37.9±1.4, **23°.53S**±0°.10×**66°.9W**±0°.2, **h232**^{km}±19^{km}, **n15,** σ**0^s.81**/27, **10C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	2.03	296	⇑iP	Pn	09 22 20.0	+0.4
LVC				iS	S	09 22 51.3	-0.8
PB15	IPOC Station P	2.35	277	⇑iP	Pn	09 22 23.3	+0.8
PB15				iS	S	09 22 57.4	0.0
PB15				IAML		09 23 03.5	
	comp=E,979nm,0.2s						
PB06	IPOC Station P	2.56	288	⇑iP	Pn	09 22 25.6	+0.9
PB06				iS	S	09 23 00.9	-0.3
PB06				IAML		09 23 01.5	
	comp=N,289nm,0.1s						
PB09	IPOC Station P	2.73	309	⇑iP	Pn	09 22 27.7	+1.1
PB09				iS	S	09 23 04.7	0.0
PB09				IAML		09 23 07.3	
	comp=N,130nm,0.2s						
PB03	IPOC Station P	2.98	299	⇑iP	Pn	09 22 30.0	+0.7
PB03				iS	S	09 23 08.5	-1.1
PB05	IPOC Station P	3.08	282	⇑iP	Pn	09 22 30.9	+0.6
PB05				iS	S	09 23 10.6	-0.7
PB04	IPOC Station P	3.19	291	⇑eP	Pn	09 22 32.4	+0.8
PB04				eS	S	09 23 13.3	-0.4
PB07	IPOC Station P	3.26	303	⇑iP	Pn	09 22 33.0	+0.6
PB07				iS	S	09 23 13.8	-1.4
PB10	IPOC Station P	3.32	269	⇑iP	Pn	09 22 33.9	+1.1
PB10				iS	S	09 23 16.1	0.0
PB14	IPOC Station P	3.35	250	⇑eP	Pn	09 22 34.0	+0.5
PB14				eS	S	09 23 16.2	-1.1
PB01	IPOC Station P	3.42	316	eP	Pn	09 22 34.5	+0.4
PB01				iS	S	09 23 17.4	-0.9
PB08	IPOC Station P	3.94	328	eP	Pn	09 22 42.0	+1.3
PB08				eS	S	09 23 29.6	-0.6
BDFB	Brasilia	19.47	70	P	P	09 25 47.1	-0.5
	comp=N,3.3nm,0.6s,baz=233,slow=9.5,SNR=6.2						
TORD	Torodi Ar. Bea	76.35	69	P	P	09 33 01.8	-0.2
	comp=N,0.3nm,0.4s,baz=254,slow=6.1,SNR=5.2						
MKAR	Makanchi Array	146.12	39	PKPbc	PKiKP	09 40 53.8	+0.2
	comp=N,0.7nm,0.8s,baz=301,slow=3.0,SNR=4.4						

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*FUNV **27** 09:26:40.4, 10°.60N×72°.24W, h27^{km}, MW3.0*

*RSNC **27** 09:26:40.8±0.5, 11°.24N×72°.80W, h112^{km}±4^{km}, ML2.4*

ISC 27 09:26:38.9±1.6, **10°.62N**±0°.04×**72°.13W**±0°.03, **h10**^{km}±12^{km}, **n15,** σ**1^s.23**/27, **1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQV	Machiques	0.69	215	eP	Pg	09 26 52.3	0.0
MCQV				eS	Sg	09 27 01.8	+0.3
CRJC	Cerrejon, Guaj	0.84	298	⇓eP	Pn	09 26 56.1	-0.7
CRJC				eS	Sn	09 27 08.4	-0.8
CRJC				i		09 27 09.6	
	comp=Z,87nm,0.2s						
URIC	Uribia, Colomb	1.08	7	eP	Pn	09 27 00.6	+0.5
URIC				eS	Sn	09 27 16.5	+1.3
URIC				i		09 27 20.3	
	comp=Z,26nm,0.1s						
CVALL	Valledupar, Ce	1.11	264	eP	Pn	09 27 00.2	-0.4
CVALL				eS	Sn	09 27 14.8	-1.3
CVALL				i		09 27 18.9	
	comp=E,63nm,0.1s						
DABV	Dabajuro	1.50	78	eP	Pn	09 27 06.2	+0.3
DABV				eS	Sn	09 27 26.7	+1.2
CURV	Curarigua	2.22	106	eP	Pn	09 27 15.7	-0.1
CURV				eS	Sn	09 27 42.7	-0.7
SDV	Santo Domingo	2.27	139	eP	Pb	09 27 20.8	+0.7
SDV				eS	Sn	09 27 42.3	-2.5
SDV				i		09 27 51.5	
	comp=Z,9.9nm,0.3s						
SIQV	Siquisique	2.28	89	eP	Pn	09 27 17.2	+0.6
SIQV				eS	Sn	09 27 44.8	-0.1
MONV	Montecano	2.50	58	eP	Pn	09 27 20.4	+0.8
MONV				eS	Sn	09 27 49.9	-0.2
SMLC	San Martn de	2.63	227	eP	Pn	09 27 23.0	+1.5
SMLC				eS	Sn	09 27 55.4	+1.9
SMLC				i		09 28 01.4	
	comp=Z,20nm,0.1s						
OCAC	Ocana	2.64	206	eP	Pb	09 27 26.4	-0.1
OCAC				eS	Sb	09 27 58.3	-0.7
SANV	Sanarito	2.79	113	eP	Pn	09 27 24.7	+1.0
PAMC	Pamplona, Colo	3.31	190	eP	Pb	09 27 37.2	-0.8
PAMC				eS	Sn	09 28 13.6	+2.7
PAMC				i		09 28 26.1	
	comp=Z,8.5nm,0.8s						
BAUV	El Baul	4.36	112	eP	Pn	09 27 44.2	-1.1
BENV	Beln	4.51	98	eP	Pn	09 27 45.6	-1.7

IDC 27 09:44:38.6±2.9, **3°.46S**×**135°.39E, h0**^{km}**, mb3.5**/2, **mb1 3.8**/4, **mb1mx3.5**/31, **mbtmp3.6**/4, **ML3.6**/2, **Error ellipse: s-maj=85.7km s-min=28.6km az=70.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.86	302	Pn	Pn	09 45 51.8	-1.3
	4.3nm,0.3s,baz=232,slow=23,SNR=27						
SIJI				Sn	Sn	09 46 44.1	-6.0
	1.6nm,0.3s,baz=302,slow=23,SNR=1.5						
WRA	Warramunga Arr	16.41	184	Pn	P	09 48 32.2	-1.2
	0.2nm,0.3s,baz=4.3,slow=12,SNR=9.0						
ASAR	Alice Springs	20.14	184	P	P	09 49 13.7	-0.9
	2.0nm,0.7s,baz=7.6,slow=11,SNR=8.1						
MKAR	Makanchi Array	68.39	324	P	P	09 55 42.8	+0.6
	0.2nm,0.5s,baz=116,slow=7.2,SNR=2.9						

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*MAN **27** 10:13:33.4, 6°.17N×125°.57E, h75^{km}, mb5.4, ML4.4, MS4.6*

*NEIC **27** 10:13:35.5±1.9, 6°.33N±0°.05×125°.45E±0°.06, h66^{km}±7^{km}, mb4.6/25, Error ellipse: s-maj=11.4km s-min=3.9km az=130.0*

*DJA **27** 10:13:35.8±0.5, 6°N±4°×12°6E±°, h60^{km}±5^{km}, M4.8/19, mb4.9/19, mB5.2/7, MLv5.0/11, Mw(mB)4.6/7, MwMwp5.6/1, Mwp5.7/1*

*IDC **27** 10:13:36.0±0.7, 6°.34N×125°.58E, h80^{km}±9^{km}, mb4.4/5, mb1 4.6/8, mb1mx3.7/57, mbtmp4.8/8, MS2.8/3, Ms1 2.8/3, ms1mx2.6/28, Error ellipse: s-maj=29.5km s-min=12.0km az=70.0*

ISC 27 10:13:36.3±0.6, **6°.28N**±0°.04×**125°.54E**±0°.06, **h75**^{km}±6^{km}, **n103,** σ**1^s.23**/108, **mb4.5**/37, **6C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.79	3	P	Pn	10 13 51.6	-1.0
	351nm,0.3s,baz=125,slow=1.8,SNR=88						
DAV				LR	LR	10 13 58.3	
	comp=Z,274nm,19.9s,baz=74,slow=31						
DAV				S	Sn	10 14 05.6	+0.9
	676nm,0.3s,baz=131,slow=23,SNR=5.4						
DAV	Davao City (W)	0.79	3	Pn	Pn	10 13 51.4	-1.2
DMPH	Davao City--Mi	0.80	357	⇑iP	Pn	10 13 51.6	-1.2
DMPH				eS	Sn	10 14 07.8	+2.8
KCP	Kidapawan	0.85	328	⇑iP	Pn	10 13 51.9	-1.6
KCP				iS	Sn	10 14 05.2	-1.0
BUKP	Musuan	1.66	343	⇑eP	Pn	10 14 03.5	-0.1
BUKP				eS	Sn	10 14 35.4	+11
BIPH	Bislig	2.06	23	⇓iP	Pn	10 14 07.1	-1.8
BIPH				iS	Sn	10 14 33.7	-0.1
SGSI	Sangihe	2.58	180	P	Pn	10 14 14.1	-1.8
SGSI				S	Sn	10 14 45.9	-0.4
PAGZ	Pagadian	2.65	306	⇑eP	Pn	10 14 15.7	-1.3
SCPH	Surigao	3.48	359	⇓eP	Pn	10 14 29.8	+1.6
TBP	Tagbilaran	3.78	334	eP	Pn	10 14 32.0	-0.2
MSLP	Maasin	3.89	350	⇓eP	Pn	10 14 33.0	-0.8
MSLP				eS	Sn	10 15 19.4	+1.2
LLP	Lapu-Lapu	4.30	339	eP	Pn	10 14 45.1	+5.7
LLP				eS	Sn	10 15 42.5	+14
JAP	San Jose, Anti	5.69	322	⇓eP	Pn	10 14 59.1	+0.7
TNTI	Ternate	5.76	162	P	Pn	10 15 00.1	+0.7
	0.5nm68nm,0.5s						
TNTI	Ternate	5.76	162	Pn	Pn	10 15 00.1	+0.7
KMSI	Cibinong	5.88	195	P	Pn	10 15 01.4	+0.5
	1.1nm252nm,0.6s						
RCP	Roxas	5.93	332	⇑eP	Pn	10 15 02.5	+0.8
GTOI	Gorontalo	6.15	204	P	Pn	10 15 03.2	-1.4
	0.6nm1μm152nm,0.6s						
MRSI	Marisa	6.79	212	P	Pn	10 15 12.6	-0.8
	0.6nm1μm136nm,0.6s						
TOLI2	Tolitoli	6.99	223	Pn	Pn	10 15 13.5	-2.7
MYLDM	Lahad Datu	7.09	262	Pn	Pn	10 15 18.9	+1.3
LBMI	Labuha	7.14	164	P	Pn	10 15 18.3	+0.1
	0.4nm1μm55nm,0.8s						
LUWI	Luwuk	7.78	201	P	Pn	10 15 28.8	+1.9
	0.6nm2μm158nm,0.8s						
LUWI	Luwuk	7.78	201	Pn	Pn	10 15 29.4	+2.4
APSI	Ampana	8.13	209	P	Pn	10 15 31.7	0.0
	674nm59nm,0.7s						
SANI	Sanana	8.29	177	P	Pn	10 15 30.7	-3.1
	2μm188nm,0.6s						
SIJI	Sorong	9.11	141	P	Pn	10 15 45.1	-0.1
	2.0nm,0.3s,baz=352,slow=22,SNR=5.1						
SIJI				S	Sn	10 17 26.9	+0.7
	1.5nm,0.3s,baz=178,slow=20,SNR=2.2						
AAI	Ambon	10.25	165	P	Pn	10 16 00.4	-0.2
	108nm,0.8s						
TTSI	Tana Toraja	10.88	212	P	Pn	10 16 10.6	+1.3
	37nm,0.7s						
FAKI	Fak Fak	11.33	144	Pn	Pn	10 16 16.0	+0.6
KAPI	Kappang	12.62	207	P	Pn	10 16 32.5	-0.5
	0.5nm,0.3s,baz=23,slow=8.9,SNR=7.6						
KAPI				LR	LR	10 20 58.5	
	comp=Z,41nm,20.8s,baz=22,slow=35						
EDFI	Ende, Flores	15.41	194	P	Pn	10 17 10.1	+0.4
	14nm,0.8s						
SOEI	Soe	15.98	185		Pn	10 17 15.4	-1.4
SOEI				IAmb	IAmb	10 17 30.9	
	comp=Z,48nm,0.7s						
SOEI	Soe	15.98	185	P	P	10 17 23.1	+4.1
	comp=Z,76nm,1.2s						
BATI	Baumata	16.48	187	P	Pn	10 17 23.3	+0.3
	comp=Z,8.7nm,0.3s,baz=349,slow=1.3,SNR=12						
BATI	Baumata	16.48	187	P	P	10 17 24.2	-0.3
	comp=Z,52nm,0.6s						
DRS	Darwin Rock St	19.34	164	P	Pn	10 17 56.9	-0.7
	comp=Z,68nm,0.7s						
DRS	Darwin Rock St	19.34	164	P	P	10 17 55.7	-0.1
	comp=Z,68nm,0.7s						
MTN	Manton Dam	19.79	164	P	P	10 18 01.2	+0.4
MTN				IAmb	IAmb	10 18 22.8	
	comp=Z,74nm,1.4s						
MTN	Manton Dam	19.79	164	P	P	10 18 00.6	-0.2
	comp=Z,33nm,0.9s						
KDU	Kakadu	20.06	160	P	P	10 18 03.5	-0.2
	comp=Z,77nm,0.7s						
JOW	Kunigami	20.61	7	LR	LR	10 24 43.7	
	comp=Z,36nm,21.5s,baz=196,slow=32						
KNRA	Kununurra	22.05	172	P	P	10 18 24.3	-0.7
KNRA	Kununurra	22.05	172	P	P	10 18 25.6	+0.6
	comp=Z,106nm,0.7s						
KNRA	Kununurra	22.05	172	P	P	10 18 23.9	-1.1
	comp=Z,106nm,0.7s						
LEM	Lembang	22.12	234	P	P	10 18 27.0	+0.9
	comp=Z,23nm,0.6s,baz=66,slow=23,SNR=4.8						
KLSI		23.46	243	P	P	10 18 40.6	+1.1
	comp=Z,8.0nm,0.8s						
MDSI	Maura Dua	23.86	244	P	P	10 18 44.5	+1.5
	comp=Z,6.5nm,1.0s						
FITZ	Fitzroy Crossi	24.22	180	P	P	10 18 45.7	-0.5
	comp=Z,9.0nm,0.6s,baz=7.2,slow=7.3,SNR=22						
NJ2	Nanjing	26.39	347	eP	P	10 19 05.8	0.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
PMG	Port Moresby	26.59	126	P	P	10 19 07.6	-0.1
PMG				IAmb	IAmb	10 19 09.1	
	comp=Z,19nm,1.1s						
COEN	Coen	26.65	139	P	P	10 19 07.7	-0.7
COEN				IAmb	IAmb	10 19 24.8	
	comp=Z,22nm,1.2s						
COEN	Coen	26.65	139	P	P	10 19 07.8	-0.5
	comp=Z,19nm,1.4s						
WB0	Warramunga Arr	27.31	162	P	P	10 19 13.3	-0.8
WB0				IAmb	IAmb	10 19 30.1	
	comp=Z,18nm,1.1s						
WRAB	Tennant Creek	27.45	162	P	P	10 19 14.3	-1.1
	comp=Z,12nm,1.7s						
WRA	Warramunga Arr	27.46	162	P	P	10 19 14.7	-0.8
	comp=Z,4.4nm,0.6s,baz=342,slow=9.3,SNR=26						
WRA	Warramunga Arr	27.46	162	P	P	10 19 14.0	-1.5
WB2	Warramunga Arr	27.46	162	P	P	10 19 14.2	-1.3
WB2				IAmb	IAmb	10 19 30.6	
	comp=Z,29nm,1.5s						
WR0	Warramunga Arr	27.54	161	P	P	10 19 15.0	-1.1
PSA00	Pilbara Seismi	28.24	191	P	P	10 19 20.8	-1.6
PSA00				IAmb	IAmb	10 19 21.9	
	comp=Z,16nm,1.2s						
KMI	Kunming	28.77	313	⇑P	P	10 19 29.0	+1.6
KMI				pP	pP	10 19 48.0	+2.8
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
QIS	Mount Isa	30.04	153	P	P	10 19 38.1	-0.3
	comp=Z,6.9nm,0.5s						
MTSU	Mount Surprise	30.52	143	P	P	10 19 43.9	+1.1
	comp=Z,4.0nm,0.6s						
AS31	Alice Springs	30.86	165	P	P	10 19 45.3	-0.3
ASAR	Alice Springs	30.86	165	P	P	10 19 45.0	-0.6
	comp=Z,4.2nm,0.5s,baz=343,slow=7.2,SNR=116						
ASAR				ScP	ScP	10 26 15.4	-1.9
	comp=Z,0.9nm,0.8s,baz=355,slow=3.9,SNR=5.2						
ASAR	Alice Springs	30.86	165	P	P	10 19 45.5	-0.2
KSRS	Korea Array	31.11	4	LR	LR	10 34 09.9	
	comp=Z,15nm,18.4s,baz=125,slow=40						
WRKA	Warakurna	31.24	175	P	P	10 19 48.3	-0.7
	comp=Z,7.6nm,1.9s						
XAN	Xi'an	31.62	333	P	P	10 19 55.8	+3.5
XAN				pP	pP	10 20 08.8	-1.3
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CTAO	Charters Tower	33.19	143	P	P	10 20 06.9	+0.8
CTAO				IAmb	IAmb	10 20 12.8	
	comp=Z,8.1nm,1.1s						
MEEK	Meekatharra	33.40	191	P	P	10 20 12.7	+4.8
OOD	Oodnadatta	35.26	164	P	P	10 20 23.8	-0.1
	comp=Z,23nm,0.7s						
OOD	Oodnadatta	35.26	164	P	P	10 20 23.3	-0.6
	comp=Z,23nm,0.7s						
MORW	Morawa	36.31	194	P	P	10 20 32.2	-0.7
MORW				IAmb	IAmb	10 20 47.1	
	comp=Z,15nm,1.1s						
HHC	Hu-ho-hao-te	36.62	342	eP	P	10 20 35.0	-0.6
HHC				pmax	pmax		
	comp=Z,100nm,4.4s						
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
INKA	Innaminka	36.87	157	P	P	10 20 38.4	+0.7
	comp=Z,47nm,1.0s						
FORT	Forrest	36.93	176	P	P	10 20 37.2	-0.9
MULG	Mulgathing	37.26	168	P	P	10 20 40.7	-0.2
	comp=Z,23nm,1.8s						
SHL	Shillong	37.44	305	P	P	10 20 42.8	0.0
SHL				IAmb	IAmb	10 20 44.2	
	comp=Z,7.4nm,0.7s						
KMBL	Kambalda	37.60	185	P	P	10 20 56.8	+13
	comp=Z,0.6nm,0.8s						
LCRK	Leigh Creek	38.48	162	P	P	10 20 52.3	+1.1
	comp=Z,20nm,0.8s						
BBOO	Buckleboo	40.14	166	P	P	10 21 05.2	+0.3
BBOO	Buckleboo	40.14	166	P	P	10 21 05.3	+0.3
	comp=Z,64nm,0.6s						
GTA	Gaotai	40.32	329	eP	P	10 21 06.0	-0.6
GTA				pP	pP	10 21 24.5	-0.4
GTA				sP	sP	10 21 31.8	-1.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WHYH	Whyalla	40.73	164	P	P	10 21 11.1	+1.2
	comp=Z,32nm,0.6s						
STKA	Stephens Creek	40.92	159	P	P	10 21 11.8	+0.4
	comp=Z,16nm,0.6s,baz=333,slow=8.9,SNR=36						
STKA	Stephens Creek	40.92	159	P	P	10 21 11.8	+0.4
STKA	Stephens Creek	40.92	159	P	P	10 21 11.8	+0.4
	comp=Z,5.8nm,0.7s						
ARMA	Armidale	44.23	147		P	10 21 37.3	-1.2
ARMA				IAmb	IAmb	10 22 00.5	
	comp=Z,19nm,1.1s						
CAN	Canberra	46.91	154	P	P	10 22 00.9	+1.4
TOO	Toolangi	47.43	158	P	P	10 22 05.0	+1.6
TOO				IAmb	IAmb	10 22 05.5	
	comp=Z,6.6nm,0.7s						
TARA	Tarawa	47.51	94	P	P	10 22 05.0	+0.5
WMQ	Urumqi	49.97	325	eP	P	10 22 24.0	+1.0
MK31	Makanchi Array	54.80	325	P	P	10 22 57.4	-1.2
MKAR	Makanchi Array	54.80	325	P	P	10 22 57.6	-1.0
	comp=Z,0.6nm,0.5s,baz=125,slow=7.5,SNR=10						
MKAR				pP	pP	10 23 15.9	-1.9
	comp=Z,1.0nm,0.9s,baz=115,slow=7.9,SNR=4.3						
MKAR	Makanchi Array	54.80	325	P	P	10 22 57.4	-1.2
KURBB	Kurchatov Arra	58.97	327	P	P	10 23 26.4	-1.6
	comp=Z,0.6nm,0.7s,baz=126,slow=7.5,SNR=6.2						
KURBB				pP	pP	10 23 45.9	-1.6
	comp=Z,0.8nm,0.8s,baz=125,slow=7.4,SNR=2.6						
KURK	Kurchatov	58.97	327	P	P	10 23 26.8	-1.2
KURK				IAmb	IAmb	10 23 54.2	
	comp=Z,5.8nm,1.4s						
BKZ	Black Stump Fm	65.26	138	P	P	10 24 10.6	+0.3
ABKAR	Akbulak array	69.44	320	P	P	10 24 35.1	-1.5
IMAR	Indian Mountai	80.51	24	P	P	10 25 40.0	0.0
TOLK	Toolik Lake Re	82.32	22	P	P	10 25 50.0	+0.4
BMAR	Burnt Mountain	84.20	23	P	P	10 26 00.9	+1.7

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*RSNC **27** 10:14:29.2±0.9, 5°.29N×73°.77W, h143^{km}±5^{km}, ML3.0, Mw3.4*

*IDC **27** 10:14:29.1±2.0, 5°.17N×74°.89W, h151^{km}±43^{km}, mb3.2/1, mb1 3.6/1, mb1mx2.9/31, mbtmp3.6/1, Error ellipse: s-maj=177.0km s-min=43.5km az=93.0*

ISC 27 10:14:28.1±1.0, **5°.32N**±0°.05×**73°.76W**±0°.06, **h150**^{km}±7^{km}, **n16,** σ**0^s.79**/29, **2C, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPBC	San Pablo de B	0.46	317	⇑iP	Pn	10 14 49.6	+0.3
SPBC				eS	Sn	10 15 05.3	-0.3
SPBC				i		10 15 09.5	
	comp=Z,477nm,0.3s						
CHIC	Chingaza	0.68	178	eP	Pn	10 14 50.7	-0.3
CHIC				eS	Sn	10 15 07.5	-1.0
CHIC				i		10 15 10.8	
	comp=Z,185nm,0.3s						
ROSC	El Rosal	0.73	230	P	Pn	10 14 52.5	+1.1
	comp=Z,128nm,0.3s,baz=299,slow=19,SNR=135						
ROSC				S	Sn	10 15 10.2	+1.3
	comp=Z,84nm,0.3s,baz=193,slow=23,SNR=30						
RUSC	La Rusia	0.89	50	eP	Pn	10 14 53.1	+0.5
RUSC				eS	Sn	10 15 11.1	0.0
RUSC				i		10 15 12.9	
	comp=Z,107nm,0.2s						
NORC	Norcasia	1.13	283	eP	Pn	10 14 54.2	+0.1
NORC				eS	Sn	10 15 13.3	-0.6
NORC				i		10 15 15.8	
	comp=Z,420nm,0.1s						
VILC	Villavicencio,	1.20	177	⇑iP	Pn	10 14 54.1	-0.8
VILC				eS	Sn	10 15 14.3	-1.0
BARC	Barichara	1.39	24	eP	Pn	10 14 56.9	0.0
BARC				eS	Sn	10 15 18.0	-0.8
BARC				i		10 15 24.6	
	comp=Z,102nm,0.3s						
PTBC	PUERTO BERRIO,	1.40	330	eP	Pn	10 14 56.3	-0.4
PTBC				eS	Sn	10 15 18.1	-0.5
PTBC				i		10 15 21.6	
	comp=Z,117nm,0.5s						
GUY2C	Guyana, Caldas	1.60	267	eP	Pn	10 14 59.2	-0.1
GUY2C				eS	Sn	10 15 22.6	-0.4
GUY2C				i		10 15 27.1	
	comp=Z,75nm,0.3s						
BRRC	Barranca, Sant	1.78	2	eP	Pn	10 15 01.6	+0.8
BRRC				eS	Sn	10 15 26.4	+0.5
BRRC				i		10 15 29.1	
	comp=Z,85nm,0.2s						
ANIL	Santa Ana	1.83	243	eP	Pn	10 15 01.5	-0.1
ANIL				eS	Sn	10 15 27.1	-0.1
ANIL				i		10 15 28.0	
	comp=Z,171nm,0.3s						
HELC	Santa Helena	1.96	296	iP	Pn	10 15 03.8	+0.6
HELC				eS	Sn	10 15 30.1	0.0
HELC				i		10 15 32.1	
	comp=Z,45nm,0.4s						
ZARC	Zaragoza, Cauc	2.42	333	iP	Pn	10 15 07.2	-1.1
ZARC				eS	Sn	10 15 38.1	-1.2
ZARC				i		10 15 41.0	
	comp=Z,126nm,0.4s						
YKA	Yellowknife Ar	64.45	340	P	P	10 24 47.5	-0.7
	comp=Z,0.4nm,0.6s,baz=136,slow=6.2,SNR=5.1						
ASAR	Alice Springs	147.71	233	PKPbc	PKPdf	10 33 53.7	+0.6
	comp=Z,0.4nm,0.9s,baz=126,slow=3.1,SNR=2.0						
WRA	Warramunga Arr	149.04	239	PKPbc	PKPdf	10 33 57.0	+1.7
	comp=Z,0.3nm,0.6s,baz=110,slow=2.8,SNR=1.9						

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*NNC **27** 10:17:06.1±2.2, 44°.33N×82°.95E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=18.2km s-min=7.7km az=131.0*

*SOME **27** 10:17:07.0, 44°.32N×82°.87E, h15^{km}*

ISC 27 10:17:08.1±1.6, **44°.38N**±0°.07×**82°.87E**±0°.07, **h17**^{km}, **n16,** σ**1^s.84**/25, **3C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	2.21	270	eP	Pb	10 17 48.2	+0.6
	3.5nm,0.3s						
DJR				eS	Sg	10 18 18.4	-0.8
	4.0nm,0.1s						
DJR	Jarkent	2.21	270	Pg	Pb	10 17 48.2	+0.6
	3.5nm,0.3s						

DJR				Lg	Lg	10 18 18.4	
	4.0nm,0.1s						
MK31	**Makanchi Array**	2.45	351	⇑Pg	Pb	10 17 51.4	-0.3
	0.1nm,0.2s,baz=174,slow=16,SNR=52						
MK31				⇑Lg	Lg	10 18 23.6	
	0.7nm,0.3s,baz=168,slow=27,SNR=12						
MAKZ	**Makanchi**	2.51	346	⇓Pg	Pb	10 17 53.6	+0.9
	1.4nm,0.6s						
MAKZ				⇑Lg	Lg	10 18 25.4	
	2.0nm,0.8s						
KNOS	**Konyrlen**	2.65	271	Pg	Pb	10 17 55.6	+0.5
	1.8nm,0.4s						
KNOS				Lg	Lg	10 18 30.8	
	5.1nm,0.3s						
KAPS	**Kapalarasan**	2.66	291	eP	Pb	10 17 56.3	+1.0
	0.6nm,0.1s						
KAPS				eS	Sg	10 18 31.7	-1.9
	3.4nm,0.2s						
KAPS	**Kapalarasan**	2.66	291	Pg	Pg	10 17 58.3	-0.8
	0.8nm,0.3s						
KAPS				Lg	Lg	10 18 35.5	
	9.3nm,0.1s						
SHLS	**Shalkode**	2.75	245	eP	Pn	10 17 51.6	+0.1
	3.8nm,0.1s						
SHLS				eS	Sn	10 18 24.0	-0.5
	8.3nm,1.0s						
UZB	**Uzynbulak**	3.05	248	eP	Pb	10 18 02.1	+0.2
	3.3nm,0.2s						
UZB				eS	Sb	10 18 41.9	+3.0
	3.3nm,0.1s						
UZB	**Uzynbulak**	3.05	248	Pg	Pb	10 18 02.1	+0.2
	3.3nm,0.2s						
UZB				Lg	Lg	10 18 41.9	
	3.3nm,0.1s						
KPKS	**Kokpek**	3.16	255	eP	Pb	10 18 03.4	-0.4
	1.4nm,0.2s						
KPKS				eS	Sb	10 18 44.2	+2.1
	8.8nm,0.0s						
BLB	**Baldybastay**	3.17	266	Pg	Pb	10 18 05.1	+1.1
	1.9nm,0.0s						
BLB				Lg	Lg	10 18 47.4	
	9.4nm,0.1s						
ZSN	**Zaisan**	3.37	24	eP	Pb	10 18 07.2	-0.3
	0.9nm,0.5s						
ZSN				eS	Sb	10 18 50.4	+2.3
	3.0nm,0.7s						
ZHN	**Zhinishke**	3.43	251	eP	Pb	10 18 09.2	+0.7
	5.5nm,0.1s						
ZHN				eS	Sg	10 18 53.9	-4.5
	9.4nm,0.1s						
SATY	**Saty**	3.50	249	eP	Pb	10 18 09.9	+0.4
	1.3nm,0.4s						
SATY				eS	Sb	10 18 55.4	+3.6
	3.9nm,0.3s						
ARXS	**Arharly**	3.63	269	eP	Pb	10 18 13.2	+1.4
	0.6nm,0.0s						
ARXS				eS	Sg	10 19 01.3	-3.2
	2.8nm,0.1s						

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*KRNET **27** 10:38:36.7±0.1, 39°.92N×77°.69E, h12^{km}, mb3.7*
*IDC **27** 10:38:36.4±0.9, 40°.02N×77°.55E, h0^{km}, mb3.6/2, mb1 3.5/3, mb1mx3.1/34, mbtmp3.4/3, ML2.9/1, Error ellipse: s-maj=29.7km s-min=6.8km az=119.0*
*NNC **27** 10:38:44.0±1.5, 40°.17N×77°.52E, h0^{km}, mb4.2, mpv4.0, Error ellipse: s-maj=10.3km s-min=7.9km az=165.0*
*SOME **27** 10:38:44.1, 40°.22N×77°.37E, h10^{km}*
ISC 27 10:38:36.4±2.1**, 39°.95N**±0°.07×**77°.55E**±0°.03**, h3**^{km}±13^{km}**, n69, σ1^{s}88**/100**, 22C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	1.79	6	⇑iP	Pg	10 39 10.8	0.0
	baz=3.0						
TARG				⇑iS	Sg	10 39 35.4	+1.3
	baz=3.0						
KDJ	**Kajisay**	2.20	353	⇑eP	Pb	10 39 17.3	+0.3
	baz=51						
KDJ				⇑eS	Sb	10 39 46.5	+1.7
	baz=51						
ULHL	**Ulahol**	2.50	337	P	Pb	10 39 24.2	+2.0
	SNR=11						
ULHL	**Ulahol**	2.50	337	⇑iP	Pb	10 39 21.9	-0.3
	baz=35						
ULHL				⇑iS	Sb	10 39 54.4	+1.0
	baz=35						
PRZ	**Przheval'sk**	2.62	14	⇓iP	Pb	10 39 22.9	-1.2
	baz=12						
PRZ				⇓iS	Sb	10 39 56.2	-0.6
	baz=12						
BOOM	**Boomskoye usch**	2.82	335	⇑iP	Pb	10 39 26.3	-1.2
	baz=33						
BOOM				⇑iS	Sb	10 40 02.0	-0.5
	baz=33						
ANVS	**Anan'yevo**	2.84	2	⇓iP	Pb	10 39 26.1	-1.8
	baz=60						
ANVS				⇓iS	Sb	10 40 01.7	-1.4
	baz=60						
ARLS	**Aral**	3.10	309	⇑eP	Pb	10 39 30.5	-1.9
	baz=8.0						
ARLS				⇑iS	Sb	10 40 09.3	-1.4
	baz=8.0						
TNSS	**Tian-Shan**	3.12	352	eP	Pg	10 39 38.1	+1.8
	73nm,0.1s						
TNSS				eS	Sg	10 40 16.6	-0.2
	46nm,0.8s						
TNSS	**Tian-Shan**	3.12	352	Pg	Pg	10 39 38.1	+1.8
	73nm,0.1s						
TNSS				Lg	Lg	10 40 16.6	
	46nm,0.8s						
IZV	**Izvestkoviy**	3.17	348	eP	Pg	10 39 38.8	+1.7
	44nm,0.5s						
IZV				eS	Sg	10 40 18.2	0.0
	101nm,0.4s						
IZV	**Izvestkoviy**	3.17	348	Pg	Pg	10 39 38.8	+1.7
	44nm,0.5s						
IZV				Lg	Lg	10 40 18.2	
	101nm,0.4s						
SATY	**Saty**	3.18	11	eP	Pg	10 39 38.5	+1.2
	74nm,0.6s						
SATY				eS	Sg	10 40 16.9	-1.6
	70nm,0.7s						
SATY	**Saty**	3.18	11	Pg	Pg	10 39 38.5	+1.2
	74nm,0.6s						
SATY				Lg	Lg	10 40 16.9	
	70nm,0.7s						
UCH	**Uchtor**	3.23	316	P	Pb	10 39 33.5	-1.2
	SNR=32						
UCH	**Uchtor**	3.23	316	⇑eP	Pn	10 39 32.3	+3.8
	baz=15						
UCH				⇑eS	Sb	10 40 12.6	-2.1
	baz=15						
MDOK	**Medeo**	3.24	354	eP	Pg	10 39 40.5	+2.1
	51nm,0.5s						
MDOK				eS	Sg	10 40 20.5	+0.1
	133nm,0.2s						
MDOK	**Medeo**	3.24	354	Pg	Pb	10 39 37.0	+2.3
	76nm,0.9s						
MDOK				⇑Lg	Lg	10 40 20.1	
	111nm,0.6s						
MDOK	**Medeo**	3.24	354	Pg	Pg	10 39 40.5	+2.1
	51nm,0.5s						
MDOK				Lg	Lg	10 40 20.5	
	133nm,0.2s						
MTBS	**Maitube**	3.29	346	eP	Pg	10 39 41.4	+1.9
	26nm,0.3s						
MTBS				eS	Sg	10 40 21.8	-0.3
	63nm,0.3s						
MTBS	**Maitube**	3.29	346	Pg	Pg	10 39 41.3	+1.9
	26nm,0.3s						
MTBS				Lg	Lg	10 40 21.8	
	63nm,0.3s						
KNDC	**Almaty**	3.30	353	⇓Pg	Pg	10 39 39.0	-0.7
	64nm,0.5s						
KNDC				⇓Lg	Lg	10 40 24.0	
	253nm,0.7s						
KOTS	**Kotyrbulak**	3.30	355	eP	Pg	10 39 41.5	+1.8
	48nm,0.9s						
KOTS				eS	Sg	10 40 21.8	-0.8
	117nm,0.4s						
KOTS	**Kotyrbulak**	3.30	355	Pg	Pg	10 39 41.5	+1.8
	48nm,0.9s						
KOTS				Lg	Lg	10 40 21.8	
	117nm,0.4s						
TKM2	**Tokmak 2**	3.31	334	P	Pb	10 39 34.8	-1.2
	SNR=14						
TKM2	**Tokmak 2**	3.31	334	⇑Pg	Pb	10 39 37.5	+1.5
	28nm,1.2s						
TKM2				⇓Lg	Lg	10 40 24.2	
	36nm,0.8s						
TKM2	**Tokmak 2**	3.31	334	⇑eP	Pb	10 39 33.2	-2.8
	baz=33						
TKM2				⇑eS	Sb	10 40 14.1	-2.7
	baz=33						
KST	**Kastek**	3.31	340	eP	Pg	10 39 42.2	+2.2
	28nm,0.0s						
KST				eS	Sg	10 40 23.4	+0.5
	51nm,0.3s						
KST	**Kastek**	3.31	340	Pg	Pg	10 39 42.2	+2.2
	28nm,0.0s						
KST				Lg	Lg	10 40 23.4	
	51nm,0.3s						
KBK	**Karagaybulak**	3.34	325	P	Pb	10 39 39.3	+2.8
	SNR=14						
KBK	**Karagaybulak**	3.34	325	⇑eP	Pb	10 39 33.8	-2.7
	baz=24						
KBK				⇑iS	Sb	10 40 15.0	-2.6
	baz=24						
UZB	**Uzynbulak**	3.39	19	eP	Pg	10 39 42.0	+0.7
	15nm,0.0s						
UZB				eS	Sg	10 40 22.7	-2.5
	38nm,0.2s						
UZB	**Uzynbulak**	3.39	19	Pg	Pg	10 39 42.0	+0.7
	15nm,0.0s						
UZB				Lg	Lg	10 40 22.7	
	38nm,0.2s						
SHLS	**Shalkode**	3.52	24	eP	Pg	10 39 47.3	+3.5
	23nm,0.6s						
SHLS				eS	Sg	10 40 31.9	+2.4
	64nm,0.1s						
SHLS	**Shalkode**	3.52	24	Pg	Pg	10 39 47.3	+3.5
	23nm,0.6s						
SHLS				Lg	Lg	10 40 31.9	
	64nm,0.1s						
AAK	**Ala-Archa**	3.54	320	⇑Pg	Pg	10 39 43.9	-0.3
	13nm,0.7s						
AAK				⇑Lg	Lg	10 40 30.4	
	76nm,0.8s						
DGS	**Degeres**	3.55	339	eP	Pg	10 39 46.1	+1.6
	19nm,0.4s						
DGS				eS	Sg	10 40 30.2	-0.4
	47nm,0.6s						
DGS	**Degeres**	3.55	339	Pg	Pg	10 39 46.1	+1.6
	19nm,0.4s						
DGS				Lg	Lg	10 40 30.2	
	47nm,0.6s						
KPKS	**Kokpek**	3.62	13	eP	Pg	10 39 46.3	+0.5
	38nm,0.5s						
KPKS				eS	Sg	10 40 30.3	-2.4
	81nm,0.4s						
AML	**Almayashu**	3.64	308	P	Pb	10 39 39.6	-2.0
	SNR=68						
CHMS	**Chumysh**	3.70	326	P	Pb	10 39 40.1	-2.4
	SNR=7.1						
KTBS	**Karatobe**	3.82	351	eP	Pg	10 39 50.4	+0.8
	9.3nm,0.4s						
KTBS				eS	Sg	10 40 37.1	-2.0
	60nm,0.1s						
KTBS	**Karatobe**	3.82	351	Pg	Pg	10 39 50.4	+0.8
	9.3nm,0.4s						
KTBS				Lg	Lg	10 40 37.1	
	60nm,0.1s						
EKS2	**Erkin-Say**	3.93	315	P	Pb	10 39 43.9	-2.5
	SNR=13						
KRBS	**Karabastau**	4.00	340	eP	Pg	10 39 54.0	+1.0
	8.8nm,0.5s						
KRBS				eS	Sg	10 40 43.7	-1.2
	32nm,0.7s						
KRBS	**Karabastau**	4.00	340	Pg	Pg	10 39 54.0	+1.0
	8.8nm,0.5s						
KRBS				Lg	Lg	10 40 43.7	
	32nm,0.7s						
USP	**Ospenovka**	4.03	326	P	Pg	10 39 54.4	+0.8
	SNR=11						
KUU	**Kurty**	4.05	348	eP	Pg	10 39 54.3	+0.3
	13nm,0.8s						
KUU				eS	Sg	10 40 43.9	-2.5
	45nm,1.1s						
KUU	**Kurty**	4.05	348	Pg	Pg	10 39 54.3	+0.3
	13nm,0.8s						
KUU				Lg	Lg	10 40 43.9	
	45nm,1.1s						
KTMS	**Ketmen**	4.08	30	eP	Pg	10 39 55.2	+0.6
	12nm,0.5s						
KTMS				eS	Sg	10 40 45.2	-2.3
	23nm,0.8s						
KTMS	**Ketmen**	4.08	30	Pg	Pg	10 39 55.2	+0.6
	12nm,0.5s						
KTMS				Lg	Lg	10 40 45.2	
	23nm,0.8s						
BLB	**Baldybastay**	4.21	9	Pg	Pg	10 39 57.3	+0.2
	58nm,0.2s						
BLB				Lg	Lg	10 40 49.3	
	46nm,0.5s						
ARXS	**Arharly**	4.27	3	eP	Pg	10 39 58.7	+0.4
	11nm,0.5s						
ARXS				eS	Sg	10 40 51.4	-2.2
	36nm,1.4s						
ARXS	**Arharly**	4.27	3	Pg	Pg	10 39 58.7	+0.4
	11nm,0.5s						
ARXS				Lg	Lg	10 40 51.4	
	36nm,1.4s						
MRKS	**Merke**	4.29	312	eP	Pb	10 39 57.0	+4.4
	7.9nm,0.5s						
MRKS				eS	Sb	10 40 48.9	+4.1
	20nm,0.5s						
MRKS	**Merke**	4.29	312	Pg	Pb	10 39 57.0	+4.4
	7.9nm,0.5s						
MRKS				Lg	Lg	10 40 48.9	
	20nm,0.5s						
KNOS	**Konyrlen**	4.58	15	Pg	Pg	10 40 04.1	0.0
	7.2nm,0.7s						
KNOS				Lg	Lg	10 41 01.4	
	22nm,0.7s						
DJR	**Jarkent**	4.69	20	eP	Pg	10 40 05.2	-1.1
	4.7nm,0.4s						
DJR				eS	Sg	10 41 02.5	-4.5
	17nm,0.3s						
DJR	**Jarkent**	4.69	20	Pg	Pg	10 40 05.2	-1.1
	4.7nm,0.4s						
DJR				Lg	Lg	10 41 02.5	
	17nm,0.3s						
KAPS	**Kapalarasan**	5.50	13	eP	Pg	10 40 22.8	+1.0
	13nm,1.0s						
KAPS				eS	Sg	10 41 32.7	-0.4
	14nm,0.7s						
KAPS	**Kapalarasan**	5.50	13	Pg	Pg	10 40 22.8	+1.0
	13nm,1.0s						
KAPS				Lg	Lg	10 41 32.7	
	14nm,0.7s						
BTLS	**Baital**	5.71	334	eP	Pg	10 40 24.4	-1.5
	6.6nm,0.1s						
BTLS				eS	Sg	10 41 36.1	-3.7
	12nm,0.7s						
BTLS	**Baital**	5.71	334	Pg	Pg	10 40 24.4	-1.5
	6.6nm,0.1s						
BTLS				Lg	Lg	10 41 36.1	
	12nm,0.7s						
KK09	**Karatay Array**	6.17	303	⇑Pg	Pg	10 40 33.3	-1.3
	2.1nm,0.7s,baz=124,slow=14						
KK09				⇑Lg	Lg	10 41 52.5	
	4.8nm,0.7s,baz=119,slow=28						
BRLS	**Borolday**	6.56	301	eP	Pg	10 40 42.2	+0.2
	1.1nm,0.1s						
BRLS				eS	Sg	10 42 05.9	-1.1
	4.9nm,0.4s						
BRLS	**Borolday**	6.56	301	Pg	Pg	10 40 42.2	+0.2
	1.1nm,0.1s						
BRLS				Lg	Lg	10 42 05.9	
	4.9nm,0.4s						
MKAR	**Makanchi Array**	7.67	25	Pn	Pn	10 40 30.5	+1.4
	0.2nm,0.3s,baz=207,slow=12,SNR=6.9						
MKAR				Lg	Lg	10 42 36.6	
	0.2nm,0.3s,baz=207,slow=28,SNR=5.8						
TORD	**Torodi Ar. Bea**	70.88	271	P	P	10 49 54.6	-0.5
	0.7nm,0.6s,baz=48,slow=5.2,SNR=4.9						
ASAR	**Alice Springs**	82.23	130	P	P	10 50 58.2	-1.0
	0.3nm,0.8s,baz=322,slow=5.9,SNR=1.6						

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*NEIC **27** 10:39:56.1±1.2, 19°.84S±0°.08×69°.08W±0°.08, h107^{km}±6^{km}, mb4.0/5, ML3.9(GUC), Error ellipse: s-maj=12.8km s-min=8.6km az=219.0*
*GUC **27** 10:39:56.9±0.8, 19°.98S×69°.07W, h105^{km}±3^{km}, ML3.9*
*IDC **27** 10:39:56.5±2.5, 19°.96S×68°.80W, h111^{km}±22^{km}, mb3.5/6, mb1 3.7/8, mb1mx3.5/22, mbtmp4.0/8, Error ellipse: s-maj=40.4km s-min=17.1km az=115.0*
ISC 27 10:39:55.7±0.7**, 19°.93S**±0°.04×**69°.08W**±0°.07**, h108**^{km}±6^{km}**, n32, σ1^{s}11**/46**, mb4.0**/6**, 4C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	0.22	199	⇑iP	Pn	10 40 11.8	+0.3
PB08				i S	Sn	10 40 23.5	+0.2
PB08				IAML		10 40 24.1	
	comp=N,13µm,0.2s						
PB08	**IPOC Station P**	0.22	199		Pn	10 40 11.8	+0.3
PB11	**IPOC Station P**	0.57	287	i P	Pn	10 40 13.2	+0.1
PB11				i S	Sn	10 40 26.1	+0.1
PB11				IAML		10 40 26.7	
	comp=N,5µm,0.3s						
PB11	**IPOC Station P**	0.57	287		Pn	10 40 13.2	+0.1
TA02	**Huaiquique**	1.05	251	⇑iP	Pn	10 40 17.4	+0.2
TA02				i S	Sn	10 40 33.8	+0.3
TA02				IAML		10 40 34.8	
	comp=E,5µm,0.1s						
TA02	**Huaiquique**	1.05	251	Pn	Pn	10 40 17.4	+0.2
PB01	**IPOC Station P**	1.17	199	⇑iP	Pn	10 40 19.0	+0.2
PB01				i S	Sn	10 40 36.1	0.0
PB01				IAML		10 40 37.0	
	comp=N,3µm,0.3s						
TA01	**Diego Aracena**	1.22	238	⇑iP	Pn	10 40 18.9	-0.2
TA01				i S	Sn	10 40 36.0	-0.8
PB12	**IPOC Station P**	1.76	318	i P	Pn	10 40 26.2	+0.4
PB12				i S	Sn	10 40 48.8	+0.1
PB12				IAML		10 40 55.2	
	comp=E,655nm,0.3s						
PB09	**IPOC Station P**	1.86	185	eP	Pn	10 40 27.7	+0.6
PB09				eS	Sn	10 40 51.5	+0.5
PB09				IAML		10 40 59.7	
	comp=E,678nm,0.6s						
PB07	**IPOC Station P**	1.94	203	i P	Pn	10 40 28.1	0.0
PB07				i S	Sn	10 40 52.0	-0.7
PB07				IAML		10 40 56.3	
	comp=N,772nm,0.7s						
PB03	**IPOC Station P**	2.20	197	eP	Pn	10 40 31.3	-0.1
PB03				eS	Sn	10 40 57.3	-1.4
PB03				IAML		10 41 03.3	
	comp=E,622nm,0.5s						
PB04	**IPOC Station P**	2.59	203	eP	Pn	10 40 36.6	+0.1
PB04				eS	Sn	10 41 05.0	-2.8
PB04				IAML		10 41 29.0	
	comp=N,387nm,0.4s						
LVC	**Limon Verde**	2.67	177	P	Pn	10 40 40.1	+2.4
	comp=N,32nm,0.3s,baz=11,slow=12,SNR=237						
LVC				S	Sn	10 41 10.1	+0.2
	comp=N,39nm,0.3s,baz=228,slow=19,SNR=16						
LVC	**Limon Verde**	2.67	177	eP	Pn	10 40 39.0	+1.4
LVC				eS	Sn	10 41 09.7	-0.2
LVC	**Limon Verde**	2.67	177		Pn	10 40 39.1	+1.4
PB06	**IPOC Station P**	2.80	189	eP	Pn	10 40 39.2	0.0
PB06				eS	Sn	10 41 10.1	-2.5
PB06				IAML		10 41 21.6	
	comp=N,397nm,0.5s						
PB05	**IPOC Station P**	3.09	200	eP	Pn	10 40 42.6	-0.4
PB05				IAML		10 41 31.1	
	comp=E,360nm,0.4s						
AC02	**Maricunga**	6.87	180	Pn	Pn	10 41 34.1	-0.3
SIV	**San Ignacio**	8.56	64	P	Pn	10 41 55.3	-1.7
	comp=E,7.1nm,0.3s,baz=242,slow=12,SNR=255						
ETMB	**Extrema**	10.43	16	Pn	Pn	10 42 22.1	-0.1
BDFB	**Brasilia**	20.50	81	P	P	10 44 24.7	-0.8
	comp=E,1.4nm,0.4s,baz=226,slow=12,SNR=3.3						
PLCA	**Paso Flores**	20.77	183	P	P	10 44 28.9	+0.7
	comp=E,1.6nm,0.8s,baz=343,slow=12,SNR=5.7						
PLCA	**Paso Flores**	20.77	183	P	P	10 44 30.4	+2.2
PTGA	**Pitinga**	21.06	26	P	P	10 44 29.5	-1.9
	comp=E,1.4nm,0.2s,baz=220,slow=18,SNR=8.1						
BOAV	**Boa Vista**	23.72	22	P	P	10 44 57.7	-0.4
BOAV				IAmb	IAmb	10 45 24.0	
	comp=Z,13nm,1.5s						
DBIC	**Dimbokro**	68.45	74	P	P	10 50 45.2	-1.4
	comp=Z,4.0nm,0.8s,baz=252,slow=7.2,SNR=4.9						
DBIC	**Dimbokro**	68.45	74	P	P	10 50 45.7	-1.0
QSPA	**South Pole Qui**	70.25	180	P	P	10 50 58.7	+1.6
QSPA				IAmb	IAmb	10 51 17.1	
	comp=Z,3.6nm,1.1s						
TORD	**Torodi Ar. Bea**	76.98	71	P	P	10 51 36.2	-1.0
	comp=Z,1.3nm,0.7s,baz=232,slow=7.0,SNR=20						
TORD	**Torodi Ar. Bea**	76.98	71	P	P	10 51 36.4	-0.7
TORD				IAmb	IAmb	10 51 39.0	
	comp=Z,1.6nm,1.0s						
YKA	**Yellowknife Ar**	89.66	341	P	P	10 52 43.0	+1.9
	comp=Z,0.2nm,0.8s,baz=138,slow=4.9,SNR=2.8						
YKA				pP	pP	10 53 10.5	+0.2
	comp=Z,0.3nm,0.6s,baz=136,slow=4.6,SNR=5.8						

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*IDC **27** 10:50:53.5±6.1, 8°.28S×114°.97E, h0^{km}, mb3.6/3, mb1 3.9/4, mb1mx3.3/35, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=186.2km s-min=86.2km az=38.0*
*DJA **27** 10:51:16.9±0.3, 9°S±6°×11°6E±°, h80^{km}±4^{km}, M3.7/13, mb3.7/3, MLv3.6/13*
ISC 27 10:51:15.4±1.0**, 8°.9S**±0°.1×**116°.08E**±0°.05**, h100**^{km}**, n17, σ1^{s}10**/20**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	0.81	78	P	Pn	10 51 35.1	+1.3
TWSI				S	Sn	10 51 47.4	-0.3
DNP	**Denpasar**	0.89	284	P	Pn	10 51 35.2	+0.5
IGBI	**Denpasar**	0.93	275	P	Pn	10 51 36.4	+1.3
IGBI				S	Sn	10 51 49.9	0.0
SRBI	**Singaraja**	1.18	313	P	Pn	10 51 37.8	-0.1
JAGI	**Jajag, Banyuwa**	1.96	283	P	Pn	10 51 47.5	+0.1
ABJI	**Asem Bagus**	2.13	301	P	Pn	10 51 50.1	+0.4
GMJI	**Gumukmas**	2.68	283	P	Pn	10 51 57.0	+0.1
BLJI	**Banyuglugur**	2.72	295	P	Pn	10 51 57.0	-0.4
WBSI	**Waikabubak, Su**	3.35	103	P	Pn	10 52 06.7	+0.8
PCJI	**Pacitan**	4.90	278	P	Pn	10 52 27.7	+0.9
BSSI	**Bau Bau, Buton**	5.16	58	P	Pn	10 52 30.0	-0.3
	0.1nm19nm,1.5s						
BKSI	**Bulukumba**	5.36	49	P	Pn	10 52 32.8	-0.2
	0.1nm19nm,1.1s						
EDFI	**Ende, Flores**	5.54	89	P	Pn	10 52 36.2	+0.5
FITZ	**Fitzroy Crossi**	13.03	136	Pn	Pn	10 54 16.4	-0.4
	0.1nm,0.3s,baz=309,slow=6.5,SNR=1.6						
FITZ				Sn	Sn	10 56 36.6	-3.5
	0.2nm,0.3s,baz=258,slow=6.8,SNR=1.6						
WRA	**Warramunga Arr**	20.79	124	P	P	10 55 49.1	+0.4
	0.5nm,0.5s,baz=298,slow=12,SNR=6.8						
ASAR	**Alice Springs**	22.50	133	P	P	10 56 07.2	+0.2
	0.7nm,0.3s,baz=307,slow=9.2,SNR=36						
STKA	**Stephens Creek**	32.91	138	P	P	10 57 41.6	+1.3
	1.3nm,0.7s,baz=312,slow=16,SNR=3.1						

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*SJA **27** 10:57:24.3±1.7, 31°.74S×72°.19W, h15^{km}, ML4.0, MW4.2*
*GUC **27** 10:57:27.6±0.7, 31°.70S×72°.02W, h42^{km}±5^{km}, ML4.1*
*NEIC **27** 10:57:28.9, 31°.68S×72°.05W, h23^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.39; $M_{\theta\theta}$0.16; $M_{\phi\phi}$-1.55; $M_{r\theta}$0.28; $M_{\theta\phi}$-0.03; $M_{\phi r}$-0.25; Fault plane solution: $M_0$1.52000×10^{15} NP1:ϕ_s169.35000°, δ50.94000°, λ74.53000°. NP2:ϕ_s13.06000°, δ41.56000°, λ108.19000°. Principal axes: T 1.4690, Plg77.0000°, Azm22.0000°; N 0.1018, Plg12.0000°, Azm179.0000°; P -1.5709, Plg5.0000°, Azm270.0000°;*
*NEIC **27** 10:57:28.9±1.3, 31°.68S±0°.04×72°.1W±0°.2, h35^{km}±2^{km}, mb4.4/6, Mwr4.1/46, ML4.1(GUC) Error ellipse: s-maj=32.3km s-min=6.0km az=277.0*
*IDC **27** 10:57:29.5±0.9, 31°.70S×71°.81W, h28^{km}±5^{km}, mb3.9/7, mb1 3.9/9, mb1mx3.8/28, mbtmp4.0/9, ML3.7/2, MS3.3/4, Ms1 3.4/4, ms1mx3.1/17, Error ellipse: s-maj=30.8km s-min=22.8km az=79.0*
ISC 27 10:57:27.4±0.8**, 31°.69S**±0°.03×**72°.28W**±0°.06**, h26**^{km}±5^{km}**, n87, σ1^{s}35**/100**, mb4.2**/9**, 8C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	1.15	29	⇑iP	Pn	10 57 46.6	-1.2
CO06				i S	Sn	10 58 01.0	-1.7
CO06	**Fray Jorge**	1.15	29		Pn	10 57 46.6	-1.2
VA01	**Torpederas**	1.43	158	eP	Pn	10 57 51.1	-0.6
VA01				eS	Sn	10 58 07.2	-2.4
VA01	**Torpederas**	1.43	158		Pn	10 57 51.1	-0.6

VA01	Torpederas	1.43	158	iP	Pn	10 57 51.0	-0.6
VA01				eS	Sn	10 58 07.9	-1.7
VA01				IAML		10 58 19.8	
	comp=Z,601nm,0.8s						
CO03	El Pedregal	1.60	58	⇓iP	Pn	10 57 52.6	-1.5
CO03				iS	Sn	10 58 11.0	-3.0
CO03				IAML		10 58 19.1	
	comp=E,4µm,0.9s						
ROC1	El Roble	1.67	141	iP	Pn	10 57 53.0	-2.1
ROC1				eS	Sn	10 58 14.8	-1.0
ROCH	El Roble	1.67	140	⇑iP	Pn	10 57 54.0	-1.1
ROCH				⇑iP	Pn	10 57 53.6	-1.6
ROCH				iS	Sn	10 58 14.4	-1.4
ROCH				iS	Sn	10 58 14.4	-1.4
ROCH				IAML		10 58 15.9	
	comp=N,3µm,0.5s						
ROCH				IAML		10 58 18.6	
	comp=N,4µm,0.4s						
VA03	San Esteban	1.81	127	⇑iP	Pn	10 57 56.0	-1.0
VA03				iS	Sn	10 58 17.1	-2.1
VA03				IAML		10 58 27.1	
	comp=N,4µm,0.5s						
VA03	San Esteban	1.81	127	iP	Pn	10 57 56.0	-1.0
VA03				eS	Sn	10 58 17.8	-1.4
VA03				IAML		10 58 24.9	
	comp=Z,2µm,0.9s						
MT02	Curacav	1.84	149	⇑eP	Pn	10 57 56.4	-0.8
MT02	Curacav	1.84	149		Pn	10 57 56.7	-0.5
MT02	Curacav	1.84	149	iP	Pn	10 57 56.0	-1.2
MT02				eS	Sn	10 58 19.6	-0.1
MT02				IAML		10 58 24.1	
	comp=Z,1µm,0.6s						
GO04	Tololo Observa	1.98	40	eP	Pn	10 57 58.6	-0.7
GO04				eS	Sn	10 58 23.7	+0.3
GO04				IAML		10 58 30.5	
	comp=N,6µm,0.5s						
GO04	Tololo Observa	1.98	40		Pn	10 57 58.8	-0.6
GO04	Tololo Observa	1.98	40	iP	Pn	10 57 59.0	-0.3
GO04				eS	Sb	10 58 25.2	-1.9
CO05	La Serena	1.98	27	eP	Pn	10 57 59.0	-0.2
CO05				IAML		10 58 33.9	
	comp=E,2µm,0.6s						
PEL	Peldehue	1.98	138	⇑iP	Pn	10 57 58.5	-0.8
PEL				iS	Sn	10 58 21.4	-1.8
PEL				IAML		10 58 31.0	
	comp=N,2µm,0.8s						
PEL	Peldehue	1.98	138		Pn	10 57 58.4	-0.8
PEL	Peldehue	1.98	138	iP	Pn	10 57 58.0	-1.2
PEL				eS	Sn	10 58 23.5	+0.2
VA05	Santo Domingo	2.04	164	eP	Pn	10 57 59.9	-0.1
VA05				eS	Sn	10 58 23.1	-1.5
VA05				IAML		10 58 37.6	
	comp=N,3µm,0.3s						
MT05	Renca	2.14	143	eP	Pn	10 58 00.6	-0.9
MT05				eS	Sn	10 58 25.3	-1.9
MT05				IAML		10 58 34.3	
	comp=E,4µm,0.4s						
MT05	Renca	2.14	143	iP	Pn	10 58 01.0	-0.4
MT05				IAML		10 58 32.9	
	comp=Z,1µm,0.5s						
MT01	Popeta	2.33	158	iP	Pn	10 58 04.0	-0.1
MT01				IAML		10 58 44.2	
	comp=Z,434nm,0.7s						
FCH	Farellones	2.34	135	⇑iP	Pn	10 58 03.7	-0.8
FCH				iS	Sn	10 58 31.3	-1.3
FCH				IAML		10 58 37.7	
	comp=E,987nm,0.4s						
MT09	Talagante	2.35	153	⇑eP	Pn	10 58 04.6	+0.3
MT09				eS	Sn	10 58 31.0	-1.4
MT09				IAML		10 58 42.8	
	comp=N,1µm,0.4s						
AUSP	Uspallata	2.52	103	iP	Pn	10 58 07.0	+0.2
RTLS	Leoncito	2.54	93	iP	Pn	10 58 08.0	+0.8
RTLS				IAML		10 58 43.1	
	comp=Z,293nm,0.9s						
AROD	Rodeo	2.85	59	iP	Pn	10 58 13.0	+1.6
BO01	Tunca	2.88	160	Pn	Pn	10 58 11.2	-0.3
BO01	Tunca	2.88	160	iP	Pn	10 58 11.0	-0.5
BO01				IAML		10 58 58.7	
	comp=Z,353nm,1.2s						
ACCO	Cerro Coronel	2.97	69	iP	Pn	10 58 14.0	+1.0
ACCO				IAML		10 59 00.8	
	comp=Z,555nm,1.2s						
LCO	Las Campanas	3.00	27	eP	Pn	10 58 12.7	-0.7
LCO				eS	Sn	10 58 47.9	-0.7
LCO	Las Campanas	3.00	27		Pn	10 58 12.7	-0.7
LCO	Las Campanas	3.00	27	iP	Pn	10 58 13.0	-0.4
LCO				IAML		10 59 00.6	
	comp=Z,2µm,1.0s						
ASAL	Salagasta	3.06	108	iP	Pn	10 58 16.0	+1.9
ASAL				IAML		10 59 01.6	
	comp=Z,368nm,1.0s						
ARCO	CERRO ARCO	3.06	113	iP	Pn	10 58 17.0	+2.8
ARCO				IAML		10 59 02.2	
	comp=Z,656nm,0.7s						
ZON	Zonda	3.08	88	iP	Pn	10 58 16.0	+1.7
ZON				IAML		10 59 01.1	
	comp=Z,486nm,1.8s						
ACDV	Cuesta del Vie	3.11	62	iP	Pn	10 58 17.0	+2.1
ACDV				IAML		10 58 58.9	
	comp=Z,426nm,1.4s						
RTCV	Cerro Valdivia	3.19	94	iP	Pn	10 58 17.0	+1.2
RTCV				IAML		10 59 03.0	
	comp=Z,139nm,3.5s						
AAGR	Agrelo	3.23	116	iP	Pn	10 58 19.0	+2.5
AAGR				IAML		10 59 13.8	
	comp=Z,843nm,2.0s						
GO05	Huala	3.32	175	eP	Pn	10 58 17.3	-0.4
GO05	Huala	3.32	175	iP	Pn	10 58 18.0	+0.3
BO02	Sierra Bellavi	3.34	158	eP	Pn	10 58 18.0	+0.1
BO02				eS	Sn	10 58 55.2	-1.6
BO02				IAML		10 59 16.0	
	comp=E,909nm,0.4s						
BO02	Sierra Bellavi	3.34	158	iP	Pn	10 58 18.0	+0.1
BO02				IAML		10 59 16.4	
	comp=Z,601nm,0.7s						
AC04	Llanos de Chal	3.63	17	Pn	Pn	10 58 21.9	0.0
AC04	Llanos de Chal	3.63	17	iP	Pn	10 58 21.0	-0.8
AC04				IAML		10 59 29.3	
	comp=Z,190nm,0.8s						
AVFE	Valle Fertil	4.26	77	iP	Pn	10 58 32.0	+1.4
AVFE				IAML		10 59 30.6	
	comp=Z,242nm,0.7s						
RFA	San Rafael	4.43	135	iP	Pn	10 58 34.0	+1.0
RFA				IAML		10 59 45.0	
	comp=Z,153nm,1.9s						
VCA	Vinchina	4.59	51	iP	Pn	10 58 38.0	+2.7
VCA				IAML		10 59 47.2	
	comp=Z,398nm,0.6s						
ACHE	Chepes	4.83	85	iP	Pn	10 58 39.0	+0.5
APLL	PUNTA DE LOS L	5.10	77	iP	Pn	10 58 43.0	+0.8
APLL				IAML		10 59 50.2	
	comp=Z,226nm,1.2s						
ACLC	CERRO LA CRUZ	5.12	65	iP	Pn	10 58 43.0	+0.5
ACLC				IAML		10 59 51.8	
	comp=Z,402nm,0.9s						
MRA	San Martin	5.62	99	iP	Pn	10 58 49.0	-0.3
MRA				IAML		11 00 20.8	
	comp=Z,43nm,0.7s						
H03N1	Juan Fernandez	5.87	251	T	T	11 05 33.7	
	baz=80,slow=71,SNR=438						
H03N3	Juan Fernandez	5.88	251	T	T	11 05 32.7	
	baz=80,slow=71,SNR=450						
H03N2	Juan Fernandez	5.88	251	T	T	11 05 45.2	
	baz=80,slow=71,SNR=405						
H03S1	Juan Fernandez	5.98	247	T	T	11 05 42.7	
	SNR=7.2						
H03S2	Juan Fernandez	5.99	247	T	T	11 05 44.6	
	SNR=7.7						
PLCA	Paso Flores	9.13	172	Pn	Pn	10 59 38.0	+0.5
	comp=Z,0.3nm,0.3s,baz=340,slow=11,SNR=7.8						
PLCA				LR	LR	11 03 28.8	
	comp=Z,187nm,19.7s,baz=348,slow=40						
PLCA	Paso Flores	9.13	172		Pn	10 59 37.5	+0.1
PLCA	Paso Flores	9.13	172	iP	Pn	10 59 39.0	+1.5
LVC	Limon Verde	9.53	19	LR	LR	11 03 25.4	
	comp=Z,155nm,18.8s,baz=200,slow=38						
CPUP	Villa Florida	14.12	72	LR	LR	11 06 22.4	
	comp=Z,140nm,19.5s,baz=238,slow=39						
LPAZ	La Paz	15.79	15	P	Pn	11 01 08.7	+0.1
SIV	San Ignacio	18.67	36	P	P	11 01 41.9	-1.6
	comp=Z,0.1nm,0.3s,baz=196,slow=12,SNR=6.3						
ETMB	Extrema	22.48	16	P	P	11 02 22.3	-2.5
ETMB				IAmb	IAmb	11 02 28.4	
	comp=Z,7.0nm,1.0s						
BDFB	Brasilia	27.27	60	P	P	11 03 08.3	-1.6
	comp=Z,5.1nm,0.9s,baz=206,slow=4.7,SNR=6.3						
SMAI	San Martin Ant	36.60	177	P	P	11 04 31.1	+0.2
SNAA	Sanae	53.80	158	P	P	11 06 48.5	+1.2
SNAA	Sanae	53.80	158	P	P	11 06 47.6	+0.3
	comp=Z,4.0nm,0.7s,baz=264,slow=9.0,SNR=9.8						
SNAA	Sanae	53.80	158	P	P	11 06 47.4	+0.1
SNAA				IAmb	IAmb	11 06 49.5	
	comp=Z,4.2nm,0.8s						
QSPA	South Pole Qui	58.54	180	P	P	11 07 23.4	+2.1
QSPA				IAmb	IAmb	11 07 36.6	
	comp=Z,9.8nm,1.3s						
DBIC	Dimbokro	74.65	72	P	P	11 09 05.0	+0.2
	comp=Z,3.1nm,0.8s,baz=217,slow=4.1,SNR=4.6						
BOSA	Boshof	81.33	118	P	P	11 09 42.3	+0.4
	comp=Z,2.0nm,0.8s,baz=204,slow=8.6,SNR=3.8						
PDAR	Pinedale Array	81.61	333	P	P	11 09 45.0	+2.0
	comp=Z,0.1nm,0.6s,baz=101,slow=4.7,SNR=1.7						
PDAR				pP	pwP	11 09 56.0	+1.0
	comp=Z,0.3nm,0.6s,baz=151,slow=3.4,SNR=3.2						
NVAR	Mina Array Bea	81.88	325	P	P	11 09 47.5	+3.0
	comp=Z,0.5nm,0.8s,baz=140,slow=5.9,SNR=5.5						
NVAR				pP	pwP	11 09 57.1	+0.7
	comp=Z,0.8nm,0.7s,baz=164,slow=6.5,SNR=5.6						
TORD	Torodi Ar. Bea	83.62	70	P	P	11 09 54.1	+0.3
	comp=Z,2.9nm,0.8s,baz=257,slow=4.8,SNR=16						
TORD	Torodi Ar. Bea	83.62	70	P	P	11 09 53.0	-0.8
TORD				IAmb	IAmb	11 09 55.0	
	comp=Z,2.7nm,0.8s						
ESDC	Sonseca Array	95.12	46	LR	LR	11 51 02.4	
	comp=Z,19nm,21.0s,baz=15,slow=34						
H11S2	WAKE ISLAND Hy	125.57	271	T	T	13 35 21.5	
	baz=99,slow=74,SNR=6.0						
H11S3	WAKE ISLAND Hy	125.58	271	T	T	13 35 21.2	
	baz=110,slow=74,SNR=5.2						
H11N2	WAKE ISLAND Hy	125.94	272	T	T	13 35 46.7	
	SNR=5.0						
KURBB	Kurchatov Arra	151.29	40	PKPbc	PKiKP	11 17 19.1	+0.6
	comp=Z,1.4nm,0.7s,baz=302,slow=2.8,SNR=11						
ZALV	Zalesovo Beam	152.35	30	PKPbc	PKiKP	11 17 21.8	+1.1
	comp=Z,2.9nm,0.7s,baz=308,slow=2.5,SNR=13						
ZALV				pPKPbc	sPKPbc	11 17 30.0	-0.3
	comp=Z,1.9nm,0.6s,baz=318,slow=3.6,SNR=4.0						
ZALV	Zalesovo Beam	152.35	30		PKiKP	11 17 21.2	+0.6
MKAR	Makanchi Array	155.34	45	pPKPbc	PKPab	11 17 39.4	-4.1
	comp=Z,0.5nm,1.0s,baz=270,slow=4.3,SNR=2.4						

IDC ***27*** *11:32:19.9±1.2, 35°.08N×53°.06E, h0^{km}, mb3.8/13, mb1 3.9/17, mb1mx3.7/47, mbtmp3.8/17, ML3.6/4, MS3.0/9, Ms1 3.0/9, ms1mx2.8/41, Error ellipse: s-maj=25.9km s-min=16.1km az=176.0*

THR ***27*** *11:32:21.7±1.1, 35°.27N×53°.18E, h14^{km}±7^{km}, ML3.9*

TEH ***27*** *11:32:21.1, 35°.25N×53°.19E, h7^{km}, ML4.3*

MOS ***27*** *11:32:22.3±1.4, 35°.29N×53°.13E, h17^{km}, mb4.3/9, Error ellipse: s-maj=11.9km s-min=7.3km az=82.2*

NNC ***27*** *11:32:23.1±3.4, 35°.65N×52°.90E, h0^{km}, mb4.3, Error ellipse: s-maj=29.7km s-min=19.0km az=10.0*

ISC 27 11:32:21.8±0.5**, 35°.24N**±0°.03×**53°.20E**±0°.02**, h10**^{km}**, n157, σ1^{s}.95**/164**, mb3.9**/20**, MS3.1**/4**, 8C-8D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILAS	Lasjerd	0.24	307	ePg	Pg	11 32 26.8	-0.1
IFIR	Firoozkooh	0.54	318	ePg	Pg	11 32 31.3	-1.1
ISHM	Shahmirzad	0.57	8	ePg	Pb	11 32 33.4	-0.8
ISHM				e		11 32 47.5	
	comp=Z,24µm,0.4s						
IANJ	Anjilo	0.63	69	ePg	Pg	11 32 33.7	-0.4
IDMV	Damavand	1.01	290	ePg	Pg	11 32 40.3	-1.0
DAMV	Damavand	1.07	292	ePg	Pg	11 32 41.3	-1.2
DAMV	Damavand	1.07	292	ePg	Pg	11 32 41.3	-1.2
ISFB	Sefidab	1.18	222	ePg	Pg	11 32 44.1	-0.5
IPRN	Peran	1.22	325	ePg	Pb	11 32 44.2	-0.9
IPRN				e		11 33 14.0	
	comp=Z,52µm,0.8s						
IVRN	Varamin	1.23	259	ePg	Pb	11 32 44.4	-0.8
IVRN				eSg	Sn	11 33 05.1	+3.3
IGLO	Ghaloghah	1.36	22	ePg	Pg	11 32 47.2	-0.8
IGLO				e		11 33 15.1	
	comp=Z,79µm,0.9s						
KRSH	Karshahi	1.54	215	ePg	Pb	11 32 50.1	-0.5
KRSH				e		11 33 23.0	
	comp=Z,44µm,0.7s						
TEHA	Amirabad Tehra	1.56	289	ePg	Pg	11 32 50.6	-1.2
TEHA				e		11 33 21.7	
	comp=Z,39µm,0.5s						
TEH	Tehran	1.56	289	ePg	Pb	11 32 50.5	-0.4
TEH				e		11 33 24.0	
	comp=Z,49µm,0.7s						
IHSB	Hasanabad	1.58	278	ePg	Pb	11 32 50.3	-1.0
GHVR	GHOM	1.74	245	ePg	Pb	11 32 53.6	-0.3
GHVR				IAML		11 33 22.6	
	comp=E,3µm,0.7s						
GHVR				IAML		11 33 27.6	
	comp=N,1µm,0.7s						
GHVR	GHOM	1.74	245	ePg	Pb	11 32 53.6	-0.3
IQOM	Qom	1.79	258	ePn	Pb	11 32 54.0	-0.9
IQOM				e		11 33 20.7	
	comp=Z,28µm,0.8s						
CHTH	Charan	1.81	292	ePg	Pb	11 32 54.5	-0.8
CHTH				IAML		11 33 26.3	
	comp=E,1µm,0.6s						
CHTH	Charan	1.81	292	ePg	Pb	11 32 54.5	-0.8
THKV	Tehran--Karaj	2.00	290	ePn	Pn	11 32 56.3	+0.3
THKV	Tehran--Karaj	2.00	290	ePn	Pn	11 32 56.3	+0.3
ANAR	Anarak	2.09	168	ePn	Pb	11 32 58.2	-1.8
IMHD	Mahdasht	2.11	283	ePn	Pb	11 32 58.5	-1.8
IMHD				e		11 33 37.3	
	comp=Z,11µm,0.6s						
QAMS	Qamsar	2.11	225	ePn	Pb	11 32 58.5	-1.9
QAMS				e		11 33 33.3	
	comp=Z,13µm,0.4s						
IKLH	Kolahrood	2.34	215	ePn	Pn	11 33 01.3	+0.7
IKLH				e		11 33 52.6	
	comp=Z,12µm,0.6s						
QALM	Alamut, Qazvin	2.39	301	ePn	Pb	11 33 03.2	-1.9
QALM				e		11 33 48.8	
	comp=Z,14µm,0.7s						
SHRO	Shahrood	2.41	71	ePn	Pb	11 33 02.8	-2.7
SHRO				eSg	Sg	11 33 37.7	-1.7
SHRO				IAML		11 33 44.8	
	comp=N,593nm,0.4s						
SHRO				IAML		11 33 48.9	
	comp=E,656nm,0.5s						
SHRO	Shahrood	2.41	71	ePn	Pb	11 33 02.8	-2.7
IZEF	Zefreh	2.45	197	ePn	Pn	11 33 03.1	+1.0
NASN	Na'in	2.46	188	ePn	Pb	11 33 03.8	-2.5
NASN				IAML		11 33 58.9	
	comp=E,355nm,0.5s						
NASN	Na'in	2.46	188	ePn	Pb	11 33 03.8	-2.5
IGZV	Ghazvin	2.68	296	e		11 33 57.3	
	comp=Z,8µm,1.0s						
IGZV				ePn	Pn	11 33 06.6	+1.4
IRAZ	Razeghan	2.68	274	e		11 33 49.9	
	comp=Z,18µm,0.8s						
IRAZ				ePn	Pn	11 33 06.0	+0.8
IMND	Minoodasht	2.69	41	ePn	Pn	11 33 06.8	+1.6
ASAO	Ashtian	2.69	256	ePn	Pn	11 33 06.8	+1.3
ASAO				IAML		11 33 49.1	
	comp=N,331nm,0.6s						
ASAO				IAML		11 33 49.7	
	comp=E,267nm,0.4s						
ASAO	Ashtian	2.69	256	ePn	Pn	11 33 06.8	+1.3
QCNT	Qazvin	2.79	293	ePn	Pb	11 33 09.2	-2.8
QABG	Abgarm-Qazvin	2.98	280	ePn	Pn	11 33 09.5	0.0
QABG				e		11 34 00.8	
	comp=Z,8µm,1.2s						
IGAR	Gharneh	2.99	199	ePn	Pb	11 33 11.8	-3.5
KHMZ	Khomeyn	3.06	242	ePn	Pn	11 33 12.8	+2.2
KHMZ				IAML		11 34 22.7	
	comp=N,128nm,0.6s						
KHMZ	Khomeyn	3.06	242	ePn	Pn	11 33 12.8	+2.2
YZKH	Yazd	3.07	157	ePn	Pn	11 33 12.5	+2.0
YZKH	Yazd	3.07	157	ePn	Pn	11 33 12.5	+2.0
TNSJ	Nastanj	3.09	113	ePn	Pn	11 33 12.4	+1.6
JIR1	Jirandeh	3.12	299	ePn	Pn	11 33 12.4	+1.2
ICHK	Chekchek	3.15	161	ePn	Pn	11 33 13.4	+1.6
LHJ2	Lahijan - Gila	3.18	308	ePn	Pb	11 33 14.7	-3.7
IPIR	Pirpir	3.19	218	ePn	Pb	11 33 15.1	-3.7
IPIR				e		11 34 34.3	
	comp=Z,4µm,0.9s						
ISAD	Sadrabad	3.34	173	ePn	Pn	11 33 16.2	+1.8
HAGD	Aghdareh	3.35	264	ePn	Pn	11 33 16.5	+2.0
MRVT	Maraveh tapeh	3.36	43	ePn	Pn	11 33 15.4	+1.0
MRVT				IAML		11 34 18.2	
	comp=N,200nm,0.6s						
MRVT				IAML		11 34 19.8	
	comp=E,178nm,0.7s						
MRVT	Maraveh tapeh	3.36	43	ePn	Pn	11 33 15.4	+1.0
SHK1	Shahrekord	3.48	214	ePn	Pn	11 33 18.2	+1.9
IRAM	Ramesheh	3.49	191	ePn	Pn	11 33 18.3	+1.9
TABS	Tabas	3.61	115	ePn	Pn	11 33 19.8	+1.9
TABS				IAML		11 34 28.1	
	comp=N,227nm,0.5s						
TABS				IAML		11 34 31.6	
	comp=E,142nm,0.6s						
TABS	Tabas	3.61	115	ePn	Pn	11 33 19.8	+1.9
TKDS	Koohdasht(Taba	3.63	115	ePn	Pn	11 33 20.0	+1.8
TKDS				e		11 34 32.1	
	comp=Z,6µm,0.7s						
TPRV	Parvadeh(Tabas	3.64	126	ePn	Pn	11 33 20.3	+2.0
TPRV				e		11 34 39.6	
	comp=Z,9µm,0.5s						
IBRJ	Brojen	3.69	206	ePn	Pb	11 33 22.9	-4.5
SBZV	Sabzevar	3.77	71	ePn	Pn	11 33 21.8	+1.6
ZNJK	Zanjan	3.93	293	ePn	Pn	11 33 24.5	+2.0
ZNJK				IAML		11 34 42.9	
	comp=N,93nm,0.6s						
ZNJK	Zanjan	3.93	293	ePn	Pn	11 33 24.5	+2.0
IMEH	Mehriz	4.02	162	ePn	Pn	11 33 25.4	+1.7
IMEH				e		11 34 45.7	
	comp=Z,4µm,0.6s						
IALM	Almabolaq	4.14	266	ePn	Pn	11 33 27.9	+2.5
BJRD	Bojnurd	4.19	53	ePn	Pn	11 33 27.2	+1.3
BJRD				IAML		11 34 24.5	
	comp=N,57nm,0.6s						
BJRD	Bojnurd	4.19	53	ePn	Pn	11 33 27.2	+1.3
ISFR	Sfrayin	4.29	64	ePn	Pn	11 33 29.3	+1.9
IDOB	Doab	4.39	252	ePn	Pn	11 33 30.4	+1.6
KLNJ	Kolanjah	4.43	198	ePn	Pn	11 33 31.9	+2.5
IBZA	Bozab	4.45	262	ePn	Pn	11 33 31.3	+1.6
IAKL	Akhelmad	4.71	72	ePn	Pn	11 33 35.3	+2.0
IKFM	Kafar-mosalman	4.74	250	ePn	Pn	11 33 36.1	+2.7
GEYT	Alibeck	4.79	54	Pn	Pn	11 33 35.9	+1.8
	comp=N,4.0nm,0.3s,baz=228,slow=14,SNR=22						
GEYT				LR	LR	11 35 23.2	
	comp=N,42nm,19.2s,baz=175,slow=37						
GYA0	ALIBECK ARRAY	4.79	54	P	Pn	11 33 35.8	+1.8
GYA0				S	Sn	11 34 33.4	+3.8
GYA0B	ALIBECK ARRAY	4.79	54	⇓P	Pn	11 33 35.8	+1.8
GYA0B				⇓S	Sn	11 34 33.4	+3.9
SNGE	Sanandaj	4.79	270	ePn	Pn	11 33 34.8	+0.5
SNGE				IAML		11 35 04.6	
	comp=N,65nm,0.8s						
SNGE	Sanandaj	4.79	270	ePn	Pn	11 33 34.8	+0.5
AMIS	Naft Sefid	4.83	224	ePn	Pn	11 33 37.8	+3.1
IEMG	Emamgholi	4.91	62	ePn	Pn	11 33 37.7	+1.7
ILIN	Lien	5.12	268	ePn	Pn	11 33 39.8	+1.0
AFRZ	Afriz	5.14	109	ePn	Pn	11 33 41.0	+1.9
ISRB	Sarab	5.14	302	ePn	Pn	11 33 40.8	+1.7
KCHF	Cheshme Sefid,	5.16	261	ePn	Pn	11 33 40.2	+0.9
ITEG	Tejag	5.17	115	ePn	Pn	11 33 41.4	+2.0
IKRD	Kardeh	5.35	72	ePn	Pn	11 33 44.3	+2.3
IGHG	Ghaleghazi	5.53	262	ePn	Pn	11 33 46.0	+1.6
GRMI	Germi	5.54	312	ePn	Pn	11 33 46.4	+1.9
GRMI	Germi	5.54	312	ePn	Pn	11 33 46.4	+1.9
KHGB	Koh Gabri	5.58	149	ePn	Pn	11 33 45.8	+0.6
IKOO	Kooshah	5.59	119	ePn	Pn	11 33 47.3	+2.0
IDHR	Dehrash	5.62	266	ePn	Pn	11 33 47.7	+2.1
IMYA	Miami	5.72	77	ePn	Pn	11 33 49.2	+2.2
IMON	Monand	5.74	109	ePn	Pn	11 33 49.8	+2.5
IHRS	Heris	5.82	304	ePn	Pn	11 33 50.2	+1.8
TBJM	Torbat-e-JAM	5.84	88	ePn	Pn	11 33 50.6	+2.0
JRKH	Jarkhoshk	5.87	81	ePn	Pn	11 33 51.4	+2.4
BSRN	Basiran	5.93	122	ePn	Pn	11 33 51.9	+2.0
BSRN	Basiran	5.93	122	ePn	Pn	11 33 51.9	+2.0
KRBR	Kerman	6.04	149	ePn	Pn	11 33 53.3	+1.7
KRBR	Kerman	6.04	149	ePn	Pn	11 33 53.3	+1.7
SHRT	Shahrakht	6.07	103	ePn	Pn	11 33 54.6	+2.8
SHRT	Shahrakht	6.07	103	ePn	Pn	11 33 54.6	+2.8
IDAH	Dahanechah	6.08	112	ePn	Pn	11 33 54.3	+2.3
NGRK	Negar Kerman	6.33	151	ePn	Pn	11 33 57.8	+2.2
CHMN	Cheshme madani	6.50	144	ePn	Pn	11 34 00.9	+3.1
AHBU	AHRAM	6.56	195	ePn	Pn	11 34 00.3	+1.9
NHDN	Nehbandan	6.90	122	ePn	Pn	11 34 05.3	+2.1
GHIR	Ghir-Karzin	6.94	182	ePn	Pn	11 34 06.5	+2.8
GHIR	Ghir-Karzin	6.94	182	ePn	Pn	11 34 06.5	+2.8
KBAM	BAM	7.54	142	ePn	Pn	11 34 13.7	+1.7
AKT	Akhty	7.56	327	⇑eP	Pn	11 34 14.1	+1.8
GNI	Garni	8.30	309	LR	LR	11 37 45.6	
	comp=N,78nm,19.3s,baz=118,slow=39						
ZHSF	Zahedan	8.52	129	ePn	Pn	11 34 27.6	+2.2
ZHSF	Zahedan	8.52	129	ePn	Pn	11 34 27.6	+2.2
GROC	Groznyy	9.80	326	P	Pn	11 34 39.5	-3.3
GROC				eS	Sn	11 36 33.4	+0.5
GROC				smax	smax		
	comp=E,40nm,0.6s						
GROC				smax	smax		
	comp=N,64nm,1.5s						
WSAR	Wadi Sarin	12.86	157	LR	LR	11 41 31.3	
	comp=N,45nm,18.0s,baz=29,slow=43						
AB31	Akbulak array	14.86	17	P	Pn	11 35 50.8	-1.1
AB31				S	Sn	11 38 33.2	-3.4
AB31	Akbulak array	14.86	17	⇑P	Pn	11 35 50.8	-1.1
	comp=N,1.8nm,0.6s,baz=202,slow=13,SNR=29						
AB31				⇓S	Sn	11 38 33.2	-3.4
	comp=N,1.2nm,0.5s,baz=205,slow=23,SNR=5.2						
MMAI	Mount Meron Ar	14.90	267	LR	LR	11 41 56.6	
	comp=N,34nm,20.6s,baz=45,slow=39						
AKTO	Aktyubinsk	15.59	12	Pn	Pn	11 36 01.4	-0.2
	comp=N,0.6nm,0.3s,baz=182,slow=13,SNR=7.7						
AKTO				LR	LR	11 43 37.6	
	comp=N,68nm,18.4s,baz=158,slow=43						
AKTO	Aktyubinsk	15.59	12	P	Pn	11 36 01.1	-0.4
AKTO				S	Sn	11 38 49.9	-4.3
AKTO	Aktyubinsk	15.59	12	⇑P	Pn	11 36 01.1	-0.4
	comp=N,7.8nm,0.8s						
AKTO				⇑S	Sn	11 38 49.1	-5.1
	comp=N,7.5nm,1.1s						
BRTR	Keskin Array B	16.15	292	Pn	P	11 36 10.1	-2.2
	comp=N,0.1nm,0.3s,baz=101,slow=13,SNR=6.9						
BELG	Belogornoye	17.60	349	⇑eP	P	11 36 29.2	+1.1
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK	Ala-Archa	18.11	60	P	P	11 36 36.6	+2.5
	comp=Z,0.2nm,0.3s,baz=230,slow=15,SNR=6.2						
KSH	Kashi	18.59	70	P	P	11 36 35.8	-3.4
ARU	Arti	21.51	8	P	P	11 37 11.8	+1.1
	comp=Z,1.7nm,0.5s,baz=194,slow=9.0,SNR=9.9						
ARU				LR	LR	11 47 06.1	
	comp=Z,47nm,18.2s,baz=215,slow=41						
ARU	Arti	21.51	8	d iP	P	11 37 11.7	+1.0
ARU						11 37 31.6	
ARU				S	Sn	11 41 12.8	-4.3
ARU				SS	SnSn	11 41 36.0	+3.7
ARU				pmax	pmax		
	comp=Z,18nm,1.1s						
BRVK	Borovoye	21.53	29	⇓eP	P	11 37 12.1	+1.2
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BVAR	Borovoye Array	21.55	29	P	P	11 37 12.3	+1.2
	comp=Z,7.7nm,0.7s,baz=209,slow=15,SNR=34						
SVE	Sverdlovsk	22.18	11	eP	P	11 37 19.0	+1.2
OBN	Obninsk	22.96	335	⇓eP	P	11 37 25.7	-0.5
OBN				e		11 37 50.8	
OBN				eS	S	11 41 38.1	+1.9
OBN				pmax	pmax		
	comp=Z,11nm,1.3s						
AKASG	Malin Array Be	23.23	319	P	P	11 37 28.4	-0.6
	comp=Z,0.3nm,0.3s,baz=125,slow=9.1,SNR=5.5						
AKASG	Malin Array Be	23.23	319	eP	P	11 37 30.9	+1.9
AKBB	Malin Array Si	23.23	319	⇑iP	P	11 37 29.2	+0.2
KIRV	Kirov	23.49	355	P	P	11 37 32.6	+1.1
	comp=Z,17nm,0.8s,baz=198,slow=16,SNR=8.1						
KIRV				LR	LR	11 49 24.5	
	comp=Z,65nm,18.6s,baz=85,slow=43						
KIRV	Kirov	23.49	355	⇓eP	P	11 37 33.7	+2.2
KURBB	Kurchatov Arra	23.93	42	P	P	11 37 36.0	+0.1
	comp=Z,0.7nm,0.7s,baz=244,slow=9.8,SNR=5.5						
KURK	Kurchatov	24.02	42	⇑eP	P	11 37 37.1	+0.3
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MK31	Makanchi Array	24.66	53	⇑eP	P	11 37 43.3	+0.6

MKAR	**Makanchi Array**	**24.66**	**53**	P	**P**	**11 37 44.4**	**+1.7**
	comp=Z,1.5nm,0.6s,baz=248,slow=8.8,SNR=16						
KLMR	**Klimovskoe**	**27.10**	**345**	*e*P	**P**	**11 38 03.8**	**-0.7**
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KLMR	**Klimovskoe**	**27.10**	**345**	*e*P	**P**	**11 38 03.9**	**-0.6**
KLMR				AMP		11 38 05.7	
	comp=Z,9.0nm,1.0s						
ZALV	**Zalesovo Beam**	**28.92**	**40**	P	**P**	**11 38 22.6**	**+1.7**
	comp=Z,0.7nm,0.4s,baz=251,slow=12,SNR=2.2						
GERES	**GERESS Array B**	**31.95**	**307**	P	**P**	**11 38 47.7**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=96,slow=12,SNR=4.6						
GERES	**GERESS Array B**	**31.95**	**307**	*e*P	**P**	**11 38 48.3**	**+0.5**
GTA	**Gaotai**	**36.99**	**69**	*e*P	**P**	**11 39 33.5**	**+1.9**
GTA				pP	sP	11 39 37.5	+1.1
GTA				sP	pP	11 39 40.5	+5.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	**NORSAR Array B**	**37.07**	**327**	P	**P**	**11 39 30.5**	**-1.4**
	comp=Z,0.9nm,0.9s,baz=100,slow=7.7,SNR=1.8						
NOA				LR	LR	11 57 39.7	
	comp=Z,28nm,18.0s,baz=265,slow=41						
ULN	**Ulaanbaatar**	**41.43**	**55**	⇓*e*P	**P**	**11 40 10.7**	**+2.0**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**43.70**	**100**	P	**P**	**11 40 26.8**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=301,slow=8.1,SNR=5.4						
CMAR	**Chiang Mai Arr**	**43.70**	**100**	*e*P	**P**	**11 40 28.0**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TORD	**Torodi Ar. Bea**	**51.23**	**258**	P	**P**	**11 41 25.1**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=49,slow=8.0,SNR=8.2						
KSRS	**Korea Array**	**58.71**	**64**	P	**P**	**11 42 20.2**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=276,slow=6.2,SNR=6.5						
BILL	**Bilibino**	**65.70**	**22**	*i* P	**P**	**11 43 05.6**	**-0.5**
BILL				*i*		11 43 39.1	
BILL				*i*		11 45 41.3	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SIJI	**Sorong**	**80.76**	**98**	LR	LR	12 27 38.7	
	comp=Z,37nm,18.1s,baz=130,slow=41						
YKA	**Yellowknife Ar**	**82.11**	**354**	P	**P**	**11 44 42.5**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=6.3,slow=5.1,SNR=11						

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*IDC **27** 11:34:19.1±1.1, 7°.47N×91°.80E, h0^{km}, mb4.0/8, mb1 4.2/10, mb1mx3.8/51, mbtmp4.1/10, ML4.5/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/42, Error ellipse: s-maj=36.0km s-min=17.8km az=58.0*

*NDI **27** 11:34:24.9±3.1, 7°.65N×91°.46E, h60^{km}±71^{km}, mb4.5, ML3.7, mb4.3(NEIC)*

*NEIC **27** 11:34:24.1±0.9, 7°.51N±0°.06×91°.78E±0°.09, h29^{km}±6^{km}, mb4.3/7, Error ellipse: s-maj=15.0km s-min=6.5km az=60.0*

ISC 27 11:34:23.3±0.8**, 7°.62N**±0°.08×**91°.81E**±0°.09**, h24^{km}, n39, σ1^s.39**/36**, mb4.2**/13**, 1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**4.11**	**13**	*e*P	**Pn**	**11 35 25.0**	**+0.4**
PBA				*e*S	**Sn**	**11 36 10.9**	**-1.1**
PBA				IAML		11 36 13.1	
	comp=N,251nm,0.4s						
PBA	**Port Blair**	**4.11**	**13**	Pn	**Pn**	**11 35 26.1**	**+1.5**
DGPR	**DIGLIPUR**	**5.63**	**11**	*e*P	**Pn**	**11 35 47.1**	**+1.6**
DGPR				*e*S	**Sn**	**11 36 45.2**	**-4.2**
DGPR				IAML		11 36 52.8	
	comp=N,67nm,0.4s						
DGPR				IAML		11 36 55.6	
	comp=E,121nm,0.4s						
SRIT	**Nakonsritamara**	**7.77**	**82**	Pn	**Pn**	**11 36 17.4**	**+2.4**
PSI	**Prapat**	**8.55**	**124**	LR	LR	11 39 12.0	
	comp=E,85nm,21.4s,baz=336,slow=34						
KULM	**Kulim**	**9.08**	**104**	Pn	**Pn**	**11 36 32.4**	**-0.6**
IPM	**Ipoh**	**9.68**	**108**	Pn	**Pn**	**11 36 40.4**	**-0.8**
PALK	**Pallekele**	**11.02**	**269**	Pn	**Pn**	**11 36 59.4**	**-0.3**
	comp=E,9.7nm,0.3s,baz=188,slow=14,SNR=40						
PALK				Sn	Sn	11 38 49.5	-13
	comp=E,9.7nm,0.3s,baz=278,slow=19,SNR=10						
PALK	**Pallekele**	**11.02**	**269**		**Pn**	**11 36 58.5**	**-1.1**
CM31	**Chiang Mai Arr**	**12.81**	**32**	Pn	**Pn**	**11 37 25.4**	**+1.3**
CMAR	**Chiang Mai Arr**	**12.81**	**32**	Pn	**Pn**	**11 37 24.8**	**+0.7**
	comp=E,0.4nm,0.3s,baz=229,slow=14,SNR=24						
CMAR	**Chiang Mai Arr**	**12.81**	**32**		**Pn**	**11 37 25.4**	**+1.3**
SHL	**Shillong**	**17.84**	**0**	*e*P	**Pn**	**11 38 28.8**	**-1.4**
KOHI	**KOHIMA**	**18.13**	**7**	*e*P	**Pn**	**11 38 31.6**	**-2.2**
KOHI				IAmb	IAmb	11 38 36.1	
	comp=Z,84nm,1.4s						
MOKO	**MOKOCHONG**	**18.77**	**8**	*e*P	**P**	**11 38 40.0**	**-1.0**
MOKO				IAmb	IAmb	11 38 45.3	
	comp=Z,10nm,0.5s						
H08S3	**Diego Garcia H**	**24.51**	**232**	T	T	12 06 00.4	
	baz=53,slow=75,SNR=17						
H08S2	**Diego Garcia H**	**24.52**	**232**	T	T	12 05 56.5	
	baz=53,slow=75,SNR=13						
H08S1	**Diego Carcia H**	**24.53**	**232**	T	T	12 05 58.2	
	baz=53,slow=75,SNR=8.8						
GTA	**Gaotai**	**32.46**	**12**	⇓P	**P**	**11 40 53.5**	**+1.6**
GTA				pP	pP	11 40 59.0	+1.1
GTA				sP	sP	11 41 02.0	+1.6
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MK31	**Makanchi Array**	**39.88**	**350**	P	**P**	**11 41 55.2**	**+0.1**
MK31				IAmb	IAmb	11 41 58.9	
	comp=Z,3.1nm,1.2s						
MKAR	**Makanchi Array**	**39.88**	**350**	P	**P**	**11 41 56.0**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=167,slow=8.7,SNR=17						
MKAR	**Makanchi Array**	**39.88**	**350**	P	**P**	**11 41 55.4**	**+0.3**
SONM	**Songino Array**	**41.95**	**15**	P	**P**	**11 42 13.1**	**+0.8**
	comp=Z,3.0nm,0.7s,baz=195,slow=8.9,SNR=20						
SONM	**Songino Array**	**41.95**	**15**	P	**P**	**11 42 12.7**	**+0.4**
SONM				IAmb	IAmb	11 42 14.1	
	comp=Z,3.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**42.05**	**128**	P	**P**	**11 42 12.7**	**-0.7**
	comp=Z,4.5nm,0.9s,baz=315,slow=8.6,SNR=2.5						
GEYT	**Alibeck**	**42.88**	**320**	LR	LR	12 00 42.8	
	comp=Z,19nm,21.8s,baz=155,slow=37						
KURBB	**Kurchatov Arra**	**44.27**	**348**	P	**P**	**11 42 32.0**	**+1.2**
	comp=Z,2.0nm,0.7s,baz=172,slow=7.5,SNR=21						
KURK	**Kurchatov**	**44.34**	**348**	P	**P**	**11 42 32.6**	**+1.2**
KURK				IAmb	IAmb	11 43 01.5	
	comp=Z,5.7nm,1.5s						
ZALV	**Zalesovo Beam**	**46.54**	**354**	P	**P**	**11 42 49.1**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=166,slow=7.2,SNR=7.5						
ZALV	**Zalesovo Beam**	**46.54**	**354**	P	**P**	**11 42 49.6**	**+0.8**
ABKAR	**Akbulak array**	**49.37**	**333**	P	**P**	**11 43 12.7**	**+1.9**
WB0	**Warramunga Arr**	**49.98**	**124**	P	**P**	**11 43 14.8**	**-1.1**
WB0				IAmb	IAmb	11 43 31.3	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	**50.02**	**124**	P	**P**	**11 43 15.1**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=311,slow=7.8,SNR=3.1						
WB2	**Warramunga Arr**	**50.02**	**124**	P	**P**	**11 43 15.3**	**-0.9**
WB2				IAmb	IAmb	11 43 22.0	
	comp=Z,13nm,1.3s						
AS31	**Alice Springs**	**51.55**	**128**	P	**P**	**11 43 27.6**	**-0.1**
ASAR	**Alice Springs**	**51.55**	**128**	P	**P**	**11 43 26.2**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=299,slow=8.0,SNR=14						
ASAR	**Alice Springs**	**51.55**	**128**	P	**P**	**11 43 26.6**	**-1.2**
TIXI	**Tiksi**	**67.94**	**12**	P	**P**	**11 45 19.7**	**0.0**
FINES	**FINESS Array B**	**71.86**	**333**	P	**P**	**11 45 43.1**	**-0.9**
	comp=Z,4.5nm,1.1s,baz=108,slow=6.2,SNR=4.8						

IDC 27 11:36:00.5±1.7**, 0°.70N×126°.56E, h0^{km}, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.2**/32**, mbtmp3.3**/4**, Error ellipse: s-maj=209.8km s-min=11.1km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.89**	**160**	P	P	11 40 54.6	-0.6
	0.5nm,0.3s,baz=338,slow=11,SNR=0.7						
ASAR	**Alice Springs**	**25.25**	**164**	P	P	11 41 28.8	+0.2
	0.2nm,0.3s,baz=346,slow=12,SNR=6.6						
MKAR	**Makanchi Array**	**59.95**	**326**	P	P	11 46 08.1	-0.5
	0.2nm,0.4s,baz=120,slow=7.8,SNR=6.7						
KURBB	**Kurchatov Arra**	**64.19**	**328**	P	P	11 46 37.7	+0.7
	0.2nm,0.5s,baz=136,slow=6.3,SNR=4.7						

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*IDC **27** 11:48:30.6±2.2, 7°.68S×129°.92E, h59^{km}±20^{km}, mb3.7/4, mb1 3.7/8, mb1mx3.4/31, mbtmp3.7/8, ML3.3/4, Error ellipse: s-maj=51.4km s-min=21.3km az=83.0*

ISC 27 11:48:28.9±0.8**, 7°.72S**±0°.06×**130°.1E**±0°.1**, h50^{km}, n8, σ2^s.33**/13**, mb3.9**/4**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.91**	**10**	P	**Pn**	**11 50 09.9**	**+2.3**
	0.9nm,0.3s,baz=191,slow=22,SNR=12						
SIJI				S	**Sn**	**11 51 21.0**	**-4.0**
	0.7nm,0.3s,baz=92,slow=23,SNR=1.4						
FITZ	**Fitzroy Crossi**	**11.18**	**202**	P	**Pn**	**11 51 08.2**	**+2.2**
	0.2nm,0.3s,baz=22,slow=10,SNR=24						
FITZ				S	**Sn**	**11 53 06.0**	**-3.6**
	0.4nm,0.3s,baz=147,slow=5.9,SNR=6.0						
WRA	**Warramunga Arr**	**12.85**	**162**	P	**Pn**	**11 51 30.6**	**+1.7**
	0.1nm,0.3s,baz=346,slow=13,SNR=1.5						
WRA				S	**Sn**	**11 53 48.1**	**-2.4**
	0.5nm,0.3s,baz=336,slow=21,SNR=3.4						
ASAR	**Alice Springs**	**16.29**	**167**	P	**Pn**	**11 52 16.2**	**+1.9**
	0.1nm,0.3s,baz=352,slow=13,SNR=6.6						
ASAR				S	**Sn**	**11 55 12.7**	**-1.5**
	0.1nm,0.3s,baz=355,slow=27,SNR=2.8						
ASAR				ScP	**ScP**	**12 00 36.5**	**-0.2**
	0.0nm,0.3s,baz=359,slow=1.4,SNR=5.4						
CMAR	**Chiang Mai Arr**	**40.23**	**311**	P	**P**	**11 56 00.5**	**-0.5**
	0.8nm,0.3s,baz=146,slow=7.2,SNR=6.1						
SONM	**Songino Array**	**59.13**	**342**	P	**P**	**11 58 24.6**	**+0.1**
	0.3nm,0.6s,baz=154,slow=4.2,SNR=2.8						
MKAR	**Makanchi Array**	**68.85**	**327**	P	**P**	**11 59 28.7**	**+0.5**
	1.9nm,0.5s,baz=116,slow=8.4,SNR=45						
ZALV	**Zalesovo Beam**	**72.24**	**334**	P	**P**	**11 59 47.9**	**-0.8**
	0.5nm,0.3s,baz=146,slow=3.2,SNR=3.8						

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*SOF **27** 11:53:07.6, 40°.43N×26°.10E, h18^{km}, MD2.5*

*DDA **27** 11:53:07.5, 40°.42N×26°.15E, h20^{km}±2^{km}, ML2.4*

*ATH **27** 11:53:08.6, 40°.46N×26°.08E, h31^{km}±6^{km}, ML2.2/10, Error ellipse: s-maj=6.1km s-min=1.3km az=348.0*

*ISK **27** 11:53:08.0, 40°.41N×26°.17E, h12^{km}, ML2.6/19*

*THE **27** 11:53:09.3, 40°.46N×26°.06E, h18^{km}±1^{km}, ML2.2/7, Error ellipse: s-maj=1.7km s-min=0.8km az=340.0*

ISC 27 11:53:07.8±0.9**, 40°.44N**±0°.02×**26°.11E**±0°.02**, h16^{km}**±8^{km}**, n61, σ0^s.54**/95**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAVK	**Edirne/Enez-Ca**	**0.26**	**9**	*i* P	**Pb**	**11 53 14.2**	**0.0**
CAVK				*i* S	**Sb**	**11 53 18.4**	**+0.1**
CAVK				IAML		11 53 21.0	
	comp=E,364nm,0.2s						
CAVK				IAML		11 53 23.0	
	comp=N,221nm,0.2s						
GELI	**Tayfur-Gelibol**	**0.28**	**98**	PG	**Pg**	**11 53 13.6**	**-0.2**
GELI				SG	**Sg**	**11 53 17.4**	**-0.5**
GOKA	**anakkale-Gk**	**0.29**	**213**	*i* P	**Pb**	**11 53 14.6**	**-0.1**
GOKA				*i* S	**Sb**	**11 53 19.7**	**+0.5**
GOKA				IAML		11 53 20.0	
	comp=E,2μm,0.3s						
GADA	**Gvkgeada**	**0.29**	**214**	PG	**Pb**	**11 53 14.7**	**0.0**
GADA				SG	**Sb**	**11 53 19.6**	**+0.3**
ENEZ	**Enez**	**0.30**	**6**	PG	**Pb**	**11 53 15.1**	**+0.3**
ERIK	**Erikli-Kesan**	**0.39**	**52**	PG	**Pg**	**11 53 15.8**	**+0.2**
ECEA	**Canakkale, Ece**	**0.39**	**173**	*i* P	**Pg**	**11 53 16.1**	**+0.4**
ECEA				*i* S	**Sb**	**11 53 22.5**	**+0.3**
ECEA				IAML		11 53 23.0	
	comp=E,488nm,0.4s						
ECEA				IAML		11 53 23.0	
	comp=N,606nm,0.2s						
SMTH	**Samothraki Isl**	**0.45**	**275**	P	**Pb**	**11 53 17.6**	**+0.3**
SMTH				S	**Sb**	**11 53 23.8**	**+0.1**
	comp=N,535nm,0.2s						
SMTH	**Samothraki Isl**	**0.45**	**275**	P	**Pb**	**11 53 17.4**	**+0.1**
SMTH				S	**Sb**	**11 53 24.4**	**+0.7**
SMTH				AML	AML	11 53 28.0	
	comp=E,1081μm,0.1s						
SMTH				AML	AML	11 53 28.1	
	comp=N,1453μm,0.1s						
ALN	**Alexandroupoli**	**0.46**	**354**	P	**Pb**	**11 53 17.9**	**+0.3**
ALN				S	**Sb**	**11 53 24.6**	**+0.4**
	comp=N,228nm,0.3s						
ALN	**Alexandroupoli**	**0.46**	**354**	P	**Pb**	**11 53 17.9**	**+0.3**
ALN				S	**Sg**	**11 53 24.0**	**+0.6**
ALN				AML	AML	11 53 25.2	
	comp=E,478μm,0.4s						
ALN				AML	AML	11 53 25.3	
	comp=N,434μm,0.3s						
ALN	**Alexandroupoli**	**0.46**	**354**	PG	**Pb**	**11 53 18.4**	**+0.8**
LPK	**Lapseki**	**0.50**	**97**	PG	**Pg**	**11 53 17.7**	**0.0**
LPK				SG	**Sg**	**11 53 24.6**	**+0.2**
KESN	**Edirne-Kesan**	**0.58**	**48**	*i* P	**Pg**	**11 53 18.9**	**-0.5**
KESN				*i* S	**Sg**	**11 53 26.7**	**-0.5**
KESN				IAML		11 53 31.0	
	comp=N,136nm,0.1s						
KESN				IAML		11 53 33.0	
	comp=E,223nm,0.2s						
BOZC	**Bozcaada**	**0.59**	**184**	*i* P	**Pg**	**11 53 19.2**	**-0.3**
BOZC				*i* P	**Pb**	**11 53 19.8**	**-0.1**
BOZC				*i* S	**Sg**	**11 53 27.4**	**0.0**
BOZC				*i* S	**Sb**	**11 53 27.6**	**-0.3**
BOZC				IAML		11 53 28.0	
	comp=N,117nm,0.2s						
BOZC				IAML		11 53 28.0	
	comp=E,342nm,0.2s						
BOZC				IAML		11 53 29.0	
	comp=N,129nm,0.2s						
BOZC				IAML		11 53 29.0	
	comp=E,270nm,0.3s						
BOZC	**Bozcaada**	**0.59**	**184**	PG	**Pg**	**11 53 19.6**	**+0.1**
EZN	**Ezine**	**0.63**	**165**	PG	**Pg**	**11 53 20.4**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**0.77**	**154**	*i* P	**Pb**	**11 53 22.4**	**-0.4**
BAYC				*i* S	**Sb**	**11 53 32.7**	**-0.3**
BAYC				IAML		11 53 36.0	
	comp=N,62nm,0.2s						
UKOP	**Uzunkopru-Edir**	**0.80**	**30**	PG	**Pg**	**11 53 24.1**	**+0.8**
RDO	**Rodhopi**	**0.83**	**329**	P	**Pn**	**11 53 24.5**	**-0.3**
RDO				S	**Sb**	**11 53 34.4**	**-0.5**
	comp=N,132nm,0.2s						
RDO	**Rodhopi**	**0.83**	**329**	P	**Pn**	**11 53 24.6**	**-0.3**
RDO				S	**Sb**	**11 53 34.9**	**0.0**
RDO				AML	AML	11 53 38.2	
	comp=E,292μm,0.2s						
RDO				AML	AML	11 53 39.6	
	comp=N,263μm,0.2s						
RDO	**Rodhopi**	**0.83**	**329**	PG	**Pn**	**11 53 24.6**	**-0.3**
RKY	**Sarkoy-Tekirda**	**0.85**	**72**	PG	**Pb**	**11 53 24.0**	**-0.2**
RKY				SG	**Sg**	**11 53 36.2**	**+0.7**
SART	**Tekirdag**	**0.85**	**72**	*i* P	**Pb**	**11 53 23.6**	**-0.6**
SART				*i* S	**Sb**	**11 53 35.1**	**-0.4**
SART				IAML		11 53 36.0	
	comp=N,58nm,0.3s						
SART				IAML		11 53 36.0	
	comp=E,68nm,0.3s						
LIA	**Limnos Island**	**0.89**	**233**	P	**Pn**	**11 53 25.6**	**-0.1**
LIA				S	**Sn**	**11 53 37.9**	**-0.3**
	comp=E,148nm,0.3s						
LIA	**Limnos Island**	**0.89**	**233**	P	**Pn**	**11 53 25.5**	**-0.1**
LIA				S	**Sg**	**11 53 37.0**	**+0.2**
LIA				AML	AML	11 53 40.9	
	comp=N,276μm,0.3s						
LIA				AML	AML	11 53 41.0	
	comp=E,308μm,0.3s						
KRBG	**Karabiga-Canak**	**0.91**	**92**	PG	**Pb**	**11 53 24.7**	**-0.4**
MAR6	**Marsite Statio**	**0.92**	**73**	PG	**Pb**	**11 53 25.8**	**+0.5**
KOCA	**Canakkale, Ayv**	**0.93**	**179**	*i* P	**Pb**	**11 53 25.3**	**-0.3**
KOCA				*i* S	**Sb**	**11 53 37.6**	**-0.1**
KOCA				IAML		11 53 40.0	
	comp=N,77nm,0.2s						
KOCA				IAML		11 53 42.0	
	comp=E,84nm,0.3s						
MAR3	**Marsite Statio**	**0.95**	**71**	PG	**Pb**	**11 53 25.6**	**-0.3**
THAS	**Thassos island**	**1.07**	**280**	P	**Pb**	**11 53 27.8**	**-0.2**
THAS				S	**Sg**	**11 53 43.3**	**+0.7**
	comp=E,92nm,0.2s						
THAS	**Thassos island**	**1.07**	**280**	P	**Pb**	**11 53 27.7**	**-0.3**
THAS				S	**Sn**	**11 53 42.2**	**-0.6**
THAS				AML	AML	11 53 45.4	
	comp=N,207μm,0.2s						
THAS				AML	AML	11 53 46.3	
	comp=E,160μm,0.3s						
KNL	**Balıkesir**	**1.09**	**98**	*i* P	**Pb**	**11 53 27.8**	**-0.5**
KNL				*i* S	**Sb**	**11 53 42.4**	**+0.1**
KNL				IAML		11 53 45.0	
	comp=N,198nm,0.5s						
KNL				IAML		11 53 45.0	
	comp=E,224nm,0.3s						
MRMT	**Marmara Adasi**	**1.14**	**81**	PN	**Pn**	**11 53 28.7**	**-0.5**
BUHA	**Balikesir, Bur**	**1.19**	**141**	*i* P	**Pn**	**11 53 29.8**	**0.0**
BUHA				*i* S	**Sb**	**11 53 44.6**	**-0.6**
BUHA				IAML		11 53 47.0	
	comp=N,47nm,0.6s						
BUHA				IAML		11 53 47.0	
	comp=E,102nm,0.4s						
PRK	**Paraskevi**	**1.19**	**174**	P	**Pg**	**11 53 31.2**	**+0.4**
PRK				S	**Sg**	**11 53 46.9**	**+0.5**
	comp=E,245nm,0.4s						
PRK	**Paraskevi**	**1.19**	**174**	P	**Pg**	**11 53 30.9**	**+0.1**
PRK				S	**Sg**	**11 53 47.3**	**+0.9**
PRK				AML	AML	11 53 49.3	
	comp=N,470μm,0.4s						
PRK				AML	AML	11 53 49.4	
	comp=E,504μm,0.4s						
AYVA	**Ayvalik**	**1.21**	**158**	*i* P	**Pb**	**11 53 30.6**	**+0.3**
AYVA				*i* S	**Sn**	**11 53 46.0**	**-0.1**
AYVA				IAML		11 53 47.0	
	comp=E,140nm,0.5s						
AYVA				IAML		11 53 48.0	
	comp=N,188nm,0.8s						
TKR	**Tekirdag**	**1.22**	**62**	PN	**Pb**	**11 53 30.9**	**+0.5**
SIGR	**SIGRI**	**1.24**	**189**	P	**Pb**	**11 53 30.8**	**0.0**
SIGR				S	**Sg**	**11 53 47.7**	**-0.1**
	comp=N,158nm,0.4s						
SIGR	**SIGRI**	**1.24**	**189**	P	**Pb**	**11 53 30.7**	**0.0**
SIGR				S	**Sg**	**11 53 47.7**	**-0.1**
SIGR				AML	AML	11 53 48.9	
	comp=E,255μm,0.4s						
SIGR				AML	AML	11 53 49.6	
	comp=N,370μm,0.4s						
SIGR	**SIGRI**	**1.24**	**189**	PN	**Pb**	**11 53 30.7**	**0.0**
GONE	**Gonen-Balikesi**	**1.27**	**107**	PN	**Pb**	**11 53 31.5**	**+0.3**
KDZ	**Kurdzhali**	**1.32**	**337**	P	**Pb**	**11 53 32.4**	**+0.2**
KAVA	**Kavala**	**1.34**	**295**	P	**Pb**	**11 53 32.4**	**-0.1**
KAVA	**Kavala**	**1.34**	**295**	P	**Pb**	**11 53 32.2**	**-0.3**
EDRB	**Edirne**	**1.49**	**18**	PN	**Pb**	**11 53 35.6**	**+0.5**
KIRK	**Kırklareli**	**1.54**	**29**	*i* P	**Pn**	**11 53 34.9**	**+0.3**
KIRK				*i* S	**Sb**	**11 53 55.2**	**+0.1**
BALB	**Balikesir**	**1.57**	**120**	PN	**Pb**	**11 53 36.8**	**+0.3**
STEP	**BALIKESIR_Sava**	**1.63**	**130**	*i* P	**Pb**	**11 53 36.8**	**-0.6**
STEP				IAML		11 54 00.0	
	comp=N,59nm,0.7s						
STEP				IAML		11 54 02.0	
	comp=E,32nm,0.5s						
OUR	**Ouranopolis**	**1.63**	**267**	P	**Pn**	**11 53 35.7**	**-0.1**
OUR	**Ouranopolis**	**1.63**	**267**	P	**Pn**	**11 53 35.9**	**+0.1**
OUR				AML	AML	11 54 03.3	
	comp=N,160μm,0.3s						
OUR				AML	AML	11 54 03.7	
	comp=E,162μm,0.5s						
RZN	**Rozhen**	**1.64**	**320**	P	**Pb**	**11 53 37.1**	**-0.6**
ZEDA	**zmir-Bergama**	**1.65**	**153**	*i* P	**Pn**	**11 53 36.7**	**+0.7**
ZEDA				IAML		11 54 00.0	
	comp=N,46nm,0.3s						
ZEDA				IAML		11 54 01.0	
	comp=E,20nm,0.6s						
DIM	**Dimitrovgrad**	**1.67**	**345**	P	**Pb**	**11 53 37.6**	**-0.6**
VIZE	**Kirklareli, Vi**	**1.74**	**48**	*i* P	**Pn**	**11 53 37.0**	**-0.3**
VIZE				*i* S	**Sb**	**11 54 02.1**	**+1.3**
VIZE				IAML		11 54 05.0	
	comp=N,20nm,0.6s						
VIZE				IAML		11 54 06.0	
	comp=E,20nm,0.3s						
ARMN	**Kirklareli, Me**	**1.74**	**34**	*i* P	**Pn**	**11 53 37.3**	**0.0**
NVR	**Nevrokopi**	**1.94**	**299**	P	**Pn**	**11 53 40.9**	**+0.8**
NVR				AML	AML	11 54 13.6	
	comp=E,30μm,0.2s						
NVR				AML	AML	11 54 14.6	
	comp=N,25μm,0.3s						
DURS	**Dursunbey**	**2.00**	**114**	*i* P	**Pb**	**11 53 43.2**	**-0.6**
DURS				*i* S	**Sb**	**11 54 10.0**	**+1.6**
DURS				IAML		11 54 10.0	
	comp=N,68nm,0.5s						
DURS				IAML		11 54 11.0	
	comp=E,42nm,0.6s						
PLG	**Polygyros**	**2.04**	**269**	P	**Pb**	**11 53 44.7**	**+0.2**
PLG				AML	AML	11 54 15.6	
	comp=N,66μm,0.4s						
PLG				AML	AML	11 54 16.2	
	comp=E,79μm,0.3s						
VTS	**Vitosha**	**3.07**	**316**	P	**Pb**	**11 53 59.1**	**-3.0**

IDC 27 12:18:35.3±6.3**, 7°.07S×155°.87E, h0^{km}, mb3.4**/3**, mb1 3.5**/3**, mb1mx3.4**/29**, mbtmp3.4**/3**, Error ellipse: s-maj=196.8km s-min=26.9km az=111.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.49**	**236**	P	P	12 23 56.7	+0.3
	0.5nm,0.7s,baz=61,slow=9.2,SNR=1.6						
ASAR	**Alice Springs**	**26.77**	**230**	P	P	12 24 17.0	-0.2
	0.3nm,0.9s,baz=62,slow=9.6,SNR=4.9						
MKAR	**Makanchi Array**	**84.03**	**318**	P	P	12 31 07.9	0.0
	0.8nm,1.0s,baz=104,slow=5.1,SNR=3.8						

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*IDC **27** 12:27:42.6±0.7, 6°.46S×128°.69E, h0^{km}, mb3.4/1, mb1 3.7/4, mb1mx3.5/22, mbtmp3.6/4, ML3.6/3, MS2.6/1, Ms1 2.6/1, ms1mx2.3/15, Error ellipse: s-maj=21.5km s-min=2.3km az=95.0*

ISC 27 12:27:53.3±1.0**, 6°.22S**±0°.07×**130°.1E**±0°.2**, h100^{km}, n14, σ1^s.63**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**3.92**	**33**	P	**Pn**	**12 28 53.6**	**+2.2**
SIJI	**Sorong**	**5.44**	**12**	Pn	**Pn**	**12 29 14.3**	**+2.2**
	2.1nm,0.3s,baz=234,slow=22,SNR=18						
SIJI				Sn	**Sn**	**12 30 11.8**	**-1.7**
	1.8nm,0.3s,baz=290,slow=23,SNR=8.6						
DRS	**Darwin Rock St**	**6.22**	**173**	P	**Pn**	**12 29 24.7**	**+2.0**
	19nm,1.0s						
MTN	**Manton Dam**	**6.66**	**171**	P	**Pn**	**12 29 30.0**	**+1.3**
	36nm,1.6s						
KDU	**Kakadu**	**6.84**	**160**	P	**Pn**	**12 29 30.3**	**-0.8**
KNRA	**Kununurra**	**9.49**	**188**	P	**Pn**	**12 30 07.0**	**-0.2**
	29nm,2.0s						
GENI	**Genyem**	**10.66**	**71**	P	**Pn**	**12 30 23.5**	**+0.4**
	42nm,0.6s						
WRAB	**Tennant Creek**	**14.24**	**164**	P	**Pn**	**12 31 09.1**	**-1.4**
WRA	**Warramunga Arr**	**14.25**	**164**	Pn	**Pn**	**12 31 08.9**	**-1.7**
	0.3nm,0.3s,baz=337,slow=12,SNR=8.6						
WRA				Sn	Sn	12 33 36.8	-11
	0.2nm,0.3s,baz=243,slow=11,SNR=6.0						
ASAR	**Alice Springs**	**17.73**	**168**	P	**P**	**12 31 52.5**	**-0.9**
	0.1nm,0.3s,baz=343,slow=10,SNR=15						
WRKA	**Warakurna**	**18.79**	**185**	P	**Pn**	**12 32 05.7**	**-0.9**
	3.9nm,2.2s						
RMQ	**Roma**	**26.88**	**141**	P	**P**	**12 33 25.3**	**+0.3**
	11nm,0.6s						
MJAR	**Matsushiro Arr**	**43.21**	**10**	LR	LR	12 55 53.9	
	comp=Z,6.8nm,18.0s,baz=85,slow=39						
MKAR	**Makanchi Array**	**67.64**	**327**	P	**P**	**12 38 37.7**	**-1.9**
	0.2nm,0.4s,baz=112,slow=8.8,SNR=4.9						

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*SJA **27** 12:28:48.9±0.6, 23°.14S×66°.76W, h228^{km}±3^{km}, ML4.4, MW4.3*

*NEIC **27** 12:28:50.1±2.2, 23°.15S±0°.06×66°.69W±0°.07, h190^{km}±5^{km}, mb4.5/22, ML5.1(GUC), Error ellipse: s-maj=11.8km s-min=5.8km az=49.0*

*VAO **27** 12:28:50.4±0.3, 23°.06S×66°.63W, h195^{km}, mb4.4*

*IDC **27** 12:28:51.2±0.7, 23°.12S×66°.60W, h211^{km}±5^{km}, mb3.8/10, mb1 3.9/17, mb1mx3.8/27, mbtmp4.3/17, Error ellipse: s-maj=15.2km s-min=12.2km az=22.0*

*GUC **27** 12:28:51.3±0.5, 23°.10S×67°.03W, h238^{km}±7^{km}, ML5.1*

ISC 27 12:28:50.2±0.5**, 23°.18S**±0°.04×**66°.82W**±0°.03**, h208^{km}**±5^{km}**, n184, σ1^s.57**/239**, mb4.3**/21**, 14C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YJA	**Yavi**	**1.56**	**51**	*e*P	**Pn**	**12 29 26.2**	**+0.6**
YJA				*e*S	**S**	**12 29 54.5**	**+1.7**
YJA				IAML		12 29 57.6	
	comp=Z,187nm,0.6s						
AZAP	**Zapla**	**1.91**	**123**	*e*P	**Pn**	**12 29 28.8**	**+0.1**
AZAP				*e*S	**S**	**12 29 59.6**	**+1.4**
AZAP				IAML		12 30 02.9	
	comp=Z,746nm,1.4s						
SLA	**San Lorenzo**	**1.95**	**142**	⇓*i*P	**Pn**	**12 29 30.5**	**+1.6**
SLA				*e*S	**S**	**12 30 00.3**	**+1.4**
SLA	**San Lorenzo**	**1.95**	**142**	*e*P	**Pn**	**12 29 30.5**	**+1.6**

SLA				eS	S	12 30 00.2	+1.4
SLA				IAML		12 30 03.5	
	comp=Z,489nm,1.1s						
LVC	Limon Verde	2.01	286	P	Pn	12 29 31.0	+1.2
	comp=Z,178nm,0.3s,baz=103,slow=6.9,SNR=1293						
LVC				S	S	12 30 01.0	+0.8
	comp=Z,138nm,0.3s,baz=270,slow=19,SNR=19						
LVC	Limon Verde	2.01	286	⇑iP	Pn	12 29 30.9	+1.2
LVC				eS	S	12 30 00.9	+0.8
LVC	Limon Verde	2.01	286	eP	Pn	12 29 31.2	+1.3
LVC	Limon Verde	2.01	286		Pn	12 29 31.1	+1.3
LVC	Limon Verde	2.01	286	eP	Pn	12 29 31.0	+1.2
LVC				eS	S	12 30 04.8	+4.6
LVC				IAML		12 30 08.2	
	comp=Z,288nm,0.3s						
ASTB	Santa Barbara	2.30	110	eP	Pn	12 29 32.7	+0.2
ASTB				IAML		12 30 08.0	
	comp=Z,35nm,0.6s						
PB15	IPOC Station P	2.44	269	⇑iP	Pn	12 29 35.4	+1.3
PB15				eS	S	12 30 09.2	+1.3
PB15	IPOC Station P	2.44	269		Pn	12 29 35.3	+1.1
PB06	IPOC Station P	2.58	280	⇑iP	Pn	12 29 36.6	+0.9
PB06				eS	S	12 30 11.0	+0.4
PB06				IAML		12 30 13.6	
	comp=E,3µm,0.1s						
PB06	IPOC Station P	2.58	280	eP	Pn	12 29 36.7	+1.1
PB06				eS	S	12 30 11.7	+1.0
PB06				IAML		12 30 14.4	
	comp=Z,1µm,0.1s						
PB09	IPOC Station P	2.63	301	⇑iP	Pn	12 29 37.7	+1.4
PB09				eS	S	12 30 12.7	+1.1
PB09				IAML		12 30 15.3	
	comp=E,2µm,0.5s						
PB09	IPOC Station P	2.63	301	eP	Pn	12 29 36.4	+0.1
PB09				eS	S	12 30 13.1	+1.5
PB09				IAML		12 30 14.7	
	comp=Z,2µm,0.7s						
ALOL	LOMAS DE OLMED	2.68	104	eP	Pn	12 29 36.3	-0.3
ALOL				eS	S	12 30 11.2	-1.2
PB03	IPOC Station P	2.94	292	⇑iP	Pn	12 29 40.3	+0.6
PB03				i S	S	12 30 17.4	-0.5
PB03				IAML		12 30 19.7	
	comp=E,6µm,0.2s						
PB03	IPOC Station P	2.94	292	eP	Pn	12 29 40.4	+0.7
PB03				eS	S	12 30 17.8	-0.1
PB03				IAML		12 30 20.6	
	comp=Z,4µm,0.2s						
FSA	Cafayete	3.02	166	eP	Pn	12 29 41.7	+1.1
FSA				eS	S	12 30 20.8	+1.1
PB05	IPOC Station P	3.14	275	⇑iP	Pn	12 29 42.6	+0.6
PB05				eS	S	12 30 21.2	-0.7
PB05	IPOC Station P	3.14	275	eP	Pn	12 29 42.8	+0.8
PB05				eS	S	12 30 16.6	-5.4
PB05				eS	S	12 30 22.3	+0.4
PB05				IAML		12 30 24.1	
	comp=Z,1µm,0.4s						
PB07	IPOC Station P	3.19	296	⇑iP	Pn	12 29 43.2	+0.6
PB07				eS	S	12 30 22.1	-1.1
PB04	IPOC Station P	3.19	285	⇑iP	Pn	12 29 43.3	+0.6
PB04				eS	S	12 30 22.8	-0.3
PB04	IPOC Station P	3.19	285	eP	Pn	12 29 43.4	+0.7
PB04				eS	S	12 30 23.6	+0.4
PB04				IAML		12 30 25.7	
	comp=Z,2µm,0.1s						
PB01	IPOC Station P	3.26	310	⇑iP	Pn	12 29 43.9	+0.4
PB01				eS	S	12 30 24.4	-0.3
PB01	IPOC Station P	3.26	310	eP	Pn	12 29 44.0	+0.5
PB01				eS	S	12 30 24.6	-0.1
PB01				IAML		12 30 27.7	
	comp=Z,2µm,0.2s						
PB02	IPOC Station P	3.40	302	⇑iP	Pn	12 29 45.3	+0.2
PB02				eS	S	12 30 26.4	-1.2
PB10	IPOC Station P	3.45	264	⇑iP	Pn	12 29 46.5	+0.9
PB10				eS	S	12 30 27.2	-1.3
PB10	IPOC Station P	3.45	264	eP	Pn	12 29 46.4	+0.8
PB10				eS	S	12 30 29.0	+0.5
PB10				IAML		12 30 31.2	
	comp=Z,602nm,0.4s						
PB14	IPOC Station P	3.58	246	⇑iP	Pn	12 29 48.2	+0.7
PB14				eS	S	12 30 31.1	-0.8
PB14	IPOC Station P	3.58	246	eP	Pn	12 29 48.5	+1.0
PB14				eS	S	12 30 32.4	+0.4
PB14				IAML		12 30 37.1	
	comp=Z,991nm,0.4s						
PB08	IPOC Station P	3.72	324	⇑iP	Pn	12 29 50.5	+1.2
PB08				eS	S	12 30 35.3	+0.2
AHML	Horco Molle	3.83	160	eP	Pn	12 29 50.7	+0.4
AHML				eS	S	12 30 36.7	-0.4
AHML				IAML		12 30 45.8	
	comp=Z,46nm,0.8s						
TA01	Diego Aracena	4.07	309	⇑iP	Pn	12 29 52.2	-0.8
TA01				eS	S	12 30 39.5	-2.6
TA01	Diego Aracena	4.07	309	Pn	Pn	12 29 52.5	-0.6
AC02	Maricunga	4.20	209	Pn	Pn	12 29 55.8	+0.6
TA02	Huaiquique	4.23	313	eP	Pn	12 29 55.0	-0.1
TA02				eS	S	12 30 43.3	-2.4
PB11	IPOC Station P	4.31	322	eP	Pn	12 29 55.6	-0.7
PB11				eS	S	12 30 45.5	-2.4
GO03	Copiap	5.37	214	Pn	Pn	12 30 08.6	-1.0
GO03	Copiap	5.37	214	eP	Pn	12 30 09.1	-0.5
GO03				eS	S	12 31 09.8	-2.3
PB16	IPOC Station P	5.44	332	eP	Pn	12 30 11.1	0.0
PB16				eS	S	12 31 09.8	-4.6
PB16	IPOC Station P	5.44	332	eP	Pn	12 30 11.0	0.0
PB16				eP	Pn	12 30 11.7	+0.7
PB16				eS	S	12 31 12.6	-1.9
PB16				IAML		12 31 17.9	
	comp=Z,159nm,0.5s						
PB12	IPOC Station P	5.60	324	eP	Pn	12 30 10.9	-1.7
PB12				eS	S	12 31 10.9	-6.7
PB12	IPOC Station P	5.60	324	eP	Pn	12 30 11.0	-1.7
PB12				eP	Pn	12 30 11.2	-1.4
PB12				eS	S	12 31 13.9	-3.6
PB12				IAML		12 31 17.5	
	comp=Z,258nm,0.4s						
VCA	Vinchina	5.67	192	eP	Pn	12 30 15.1	+1.6
VCA				eS	S	12 31 16.6	-2.7
VCA				IAML		12 31 31.3	
	comp=Z,50nm,2.1s						
ACLC	CERRO LA CRUZ	6.22	181	eP	Pn	12 30 20.8	+0.2
ACLC				eS	S	12 31 31.8	-0.3
ACLC				IAML		12 31 33.7	
	comp=Z,36nm,0.6s						
AC04	Llanos de Chal	6.31	217	eP	Pn	12 30 19.6	-1.9
AC04				eS	S	12 31 26.9	-6.8
AC04	Llanos de Chal	6.31	217	Pn	Pn	12 30 20.2	-1.2
LCO	Las Campanas	6.78	210	Pn	Pn	12 30 26.1	-1.7
LCO	Las Campanas	6.78	210	eP	Pn	12 30 26.0	-1.8
LCO				IAML		12 31 49.0	
	comp=Z,1µm,0.8s						
LPAZ	La Paz	6.97	350	eP	Pn	12 30 29.9	-0.8
LPAZ	La Paz	6.97	350	Pn	Pn	12 30 31.0	+0.2
APLL	PUNTA DE LOS L	7.19	178	eP	Pn	12 30 32.4	-0.6
APLL				eP	Pn	12 30 32.5	-0.5
APLL				eS	S	12 31 50.0	-4.7
AROD	Rodeo	7.35	198	eP	Pn	12 30 36.2	+0.9
AROD				eP	Pn	12 30 36.3	+0.9
AROD				eP	Pn	12 30 36.4	+1.0
AROD				eS	S	12 31 53.0	-5.9
AVFE	Valle Fertil	7.47	184	eP	Pn	12 30 36.0	-0.6
AVFE				eS	S	12 31 57.5	-3.9
AVFE				IAML		12 31 59.4	
	comp=Z,20nm,0.6s						
ACCO	Cerro Coronel	7.65	195	eP	Pn	12 30 39.8	+0.6
ACCO				eS	S	12 32 05.5	-0.4
ACCO				IAML		12 32 09.6	
	comp=Z,44nm,0.5s						
CO05	La Serena	7.79	210		Pn	12 30 38.4	-2.3
GO04	Tololo Observa	7.82	206		Pn	12 30 39.6	-1.7
CO03	El Pedregal	8.37	204	eP	Pn	12 30 48.2	-0.1
RTCV	Cerro Valdivia	8.78	190	eP	Pn	12 30 53.2	-0.4
SIV	San Ignacio	8.97	38	P	Pn	12 30 53.0	-3.1
	comp=Z,5.6nm,0.3s,baz=213,slow=13,SNR=65						
CPUP	Villa Florida	9.18	112	P	Pn	12 30 56.0	-2.7
	comp=Z,0.1nm,0.3s,baz=305,slow=12,SNR=3.2						
CPUP	Villa Florida	9.18	112	eP	Pn	12 30 57.5	-1.2
CPUP	Villa Florida	9.18	112		Pn	12 30 56.8	-1.8
MRA	San Martin	9.26	174	eP	Pn	12 30 58.6	-1.2
AUSP	Uspallata	9.29	194	eP	Pn	12 31 00.9	+0.5
AUSP				eP	Pn	12 31 00.9	+0.5
ASAL	Salagasta	9.54	190	eP	Pn	12 31 03.4	-0.1
VA03	San Esteban	10.10	198		Pn	12 31 10.7	0.0
PTLB	Pontes e Lacer	10.57	45	eP	Pn	12 31 14.7	-1.9
PTLB	Pontes e Lacer	10.57	45		Pn	12 31 15.1	-1.6
AQDB	Aquidauana	10.67	78	eP	Pn	12 31 16.3	-1.7
AQDB	Aquidauana	10.67	78		Pn	12 31 17.8	-0.2
MT02	Curacav	10.74	200	Pn	Pn	12 31 17.8	-1.0
MT09	Talagante	11.18	198	Pn	Pn	12 31 24.1	-0.4
ITQB	Itaqui	11.19	127	eP	Pn	12 31 23.9	-0.6
ITQB	Itaqui	11.19	127	Pn	Pn	12 31 23.4	-1.1
RFA	San Rafael	11.64	187	eP	Pn	12 31 29.6	-0.7
BO01	Tunca	11.78	198		Pn	12 31 32.7	+0.6
VILB	Vilhena	11.96	33	eP	Pn	12 31 32.6	-1.9
VILB	Vilhena	11.96	33		Pn	12 31 33.8	-0.7
PP1B	Ponte de Pedra	12.49	66	eP	Pn	12 31 39.0	-2.2
SALV	Santo Antonio	12.74	57	eP	Pn	12 31 42.8	-1.5
ML02	Panimavida	13.16	197		Pn	12 31 49.3	-0.1
ETMB	Extrema	13.30	3	eP	Pn	12 31 50.7	-0.6
ETMB	Extrema	13.30	3		Pn	12 31 50.4	-0.9
ITAB	Concordia	13.89	110	eP	Pn	12 31 58.0	-0.6
ITAB	Concordia	13.89	110	P	P	12 32 00.2	-0.2
CPSB	Cacapava Do Su	13.94	124	eP	Pn	12 31 58.7	-0.4
PCMB	Pacaembu	14.47	87	eP	Pn	12 32 05.0	-0.8
PLTB	Pedras Altas	14.50	129	eP	Pn	12 32 04.6	-1.4
PLTB	Pedras Altas	14.50	129	P	P	12 32 07.6	+0.5
NNA	Nana	14.66	318	P	P	12 32 09.8	+0.8
	comp=Z,1.5nm,0.3s,baz=129,slow=5.1,SNR=4.8						
PDRB	Porto dos Gac	14.99	42	eP	Pn	12 32 12.0	-0.2
ITRB	Iturama	15.71	80	eP	P	12 32 20.0	-0.5
FRTB	Fartura	15.86	94	eP	P	12 32 21.9	-0.2
ARAG	Araguaiana, MT	15.98	65	eP	P	12 32 23.0	-0.5
CLDB	Colider	16.14	43	eP	P	12 32 24.2	-1.0
TIJ01	Guaruva-PR	16.39	101	eP	P	12 32 28.0	-0.1
TER01	Tubaro-SC	16.79	112	eP	P	12 32 32.3	0.0
BB19B	Bebedouro	17.08	86	eP	P	12 32 35.3	-0.3
PLCA	Paso Flores	17.78	189	P	Pn	12 32 44.5	-0.7
	comp=Z,0.3nm,0.3s,baz=7.8,slow=13,SNR=11						
PLCA	Paso Flores	17.78	189	eP	Pn	12 32 45.3	0.0
PLCA	Paso Flores	17.78	189	P	P	12 32 44.1	+0.9
RCLB	Rio Claro- Sao	17.80	91	eP	P	12 32 43.0	-0.5
SPB	Sao Paulo	17.80	95	eP	P	12 32 43.0	-0.4
PET01	Itanhaem-SP	17.93	97	eP	P	12 32 44.4	-0.4
IPMB	Ipameri, GO	18.17	77	eP	P	12 32 47.0	-0.6
VAO	Valinhos	18.27	93	eP	P	12 32 47.8	-0.8
LL04	Puerto Octay	18.29	194	P	Pn	12 32 49.9	-1.3
SNDB	Serra Nova Dou	18.50	56	eP	P	12 32 49.6	-1.5
TBTG	Tabatinga, AM	19.12	351	eP	P	12 32 58.6	+0.8
BDFB	Brasilia	19.24	70	P	P	12 32 58.5	-0.8
	comp=Z,3.5nm,0.3s,baz=246,slow=11,SNR=51						
BDFB	Brasilia	19.24	70	P	P	12 32 58.7	-0.5
ATAH	Atahualpa	19.45	323	P	Pn	12 33 04.2	-1.4
	comp=Z,0.6nm,0.3s,baz=129,slow=6.3,SNR=5.5						
NPGB	Novo Progresso	19.46	36	eP	P	12 32 58.7	-2.8
PARB	Paraibuna	19.48	95	eP	P	12 33 00.9	-0.7
BSCB	Bom Sucesso	20.54	88	eP	P	12 33 13.0	-0.1
MACA	Manacapuru-AM	20.77	18	eP	P	12 33 13.9	-1.4
MACA	Manacapuru-AM	20.77	18	P	P	12 33 13.1	-2.3
PEXB	Peixe	20.77	61	eP	P	12 33 13.7	-1.8
ITTB	Itaituba	21.55	31	eP	P	12 33 20.9	-2.6
VAS01	Vassouras-RJ	21.58	92	eP	P	12 33 23.6	-0.2
DIAM	Diamantina, MG	22.17	82	eP	P	12 33 28.9	-0.9
MC01	Montes Claros	22.43	77	eP	P	12 33 30.6	-1.5
DUB01	Friburgo-RJ	22.58	92	eP	P	12 33 33.9	+0.6
JANB	Januaria	22.73	73	eP	P	12 33 32.7	-1.9
CAM01	Campos-RJ	23.28	92	eP	P	12 33 38.8	-0.7
SMTB	Santa Maria do	23.28	55	eP	P	12 33 38.3	-1.3
PTGA	Pitinga	23.29	18	P	P	12 33 38.8	-0.8
	comp=Z,8.9nm,0.6s,baz=198,slow=10,SNR=14						
SDBA	SAO DESIDERIO	23.42	67	eP	P	12 33 39.5	-1.4
PRPB	Parauapebas	23.54	47	eP	P	12 33 40.5	-1.5
ALF01	Guarapari-ES	24.33	89	eP	P	12 33 48.6	-0.6
SJMB	Sao Joao De Ma	24.34	84	eP	P	12 33 48.2	-1.0
MALB	Monte Alegre	24.45	32	eP	P	12 33 49.6	-0.5
BSFB	Barra de Sao F	24.61	85	eP	P	12 33 50.5	-1.2
RIB01	Linhares ES	24.91	86	eP	P	12 33 53.2	-1.1
OTAV	Otavalo	25.88	332	eP	P	12 34 04.5	+0.8
BOAV	Boa Vista	26.15	14	eP	P	12 34 05.5	0.0
BOAV	Boa Vista	26.15	14	P	P	12 34 05.2	-0.3
BOAV				IAmb	IAmb	12 34 06.8	
	comp=Z,12nm,1.0s						
GUA01	Guaratinga, BA	26.21	80	eP	P	12 34 04.6	-1.5
MCPB	Macapa, AP	26.84	34	eP	P	12 34 09.9	-1.8
CMC01	Camacan, BA	26.88	78	eP	P	12 34 11.3	-0.8
GDU01	Guandu, BA	27.46	75	eP	P	12 34 15.5	-1.7
TMAB	Tom-Au,PA,Br	27.52	44	eP	P	12 34 17.0	-0.7
MDP	Montagnes des	31.33	28	P	P	12 34 50.3	-1.0
	comp=Z,7.8nm,0.5s,baz=206,slow=9.7						
MTO3	Montecristo	43.38	327	P	P	12 36 34.9	+2.2
MTO3				IAmb	IAmb	12 36 35.3	
	comp=Z,28nm,1.5s						
VNA3	Neumayer Olymp	57.87	161	P	P	12 38 21.8	+1.9
VNA2	Neumayer--Watz	58.43	161	P	P	12 38 26.0	+2.2
	baz=255,slow=12						
SNAA	Sanae	60.07	161	P	P	12 38 36.6	+1.5
SNAA	Sanae	60.07	161	P	P	12 38 36.9	+1.8
SNAA				IAmb	IAmb	12 38 38.1	
	comp=Z,15nm,1.5s						
V55A	Taylorsville	60.27	347	P	P	12 38 37.8	+1.1
V55A				IAmb	IAmb	12 38 38.6	
	comp=Z,8.0nm,0.7s						
CCM	Cathedral Cave	65.09	339	P	P	12 39 08.9	+0.4
S39A	Bolivar	65.48	337	P	P	12 39 11.8	+0.8
S39A				IAmb	IAmb	12 39 12.3	
	comp=Z,5.5nm,0.6s						
QSPA	South Pole Qui	67.02	180	P	P	12 39 22.8	+2.1
QSPA				IAmb	IAmb	12 39 24.1	
	comp=Z,5.4nm,0.9s						
P38A	Dawn	67.28	338	P	P	12 39 22.8	+0.4
P38A				IAmb	IAmb	12 39 23.4	
	comp=Z,7.1nm,0.6s						
DBIC	Dimbokro	67.39	72	P	P	12 39 22.2	-1.4
	comp=Z,3.8nm,0.7s,baz=226,slow=7.6,SNR=7.7						
DBIC	Dimbokro	67.39	72	P	P	12 39 22.7	-1.0
ANMO	Albuquerque	68.96	326	P	P	12 39 35.3	+2.1
KNB	Kanab	73.92	323	P	P	12 40 04.8	+2.0
KNB				IAmb	IAmb	12 40 06.8	
	comp=Z,17nm,1.3s						
TORD	Torodi Ar. Bea	76.12	69	P	P	12 40 14.6	-1.0
	comp=Z,2.8nm,0.4s,baz=258,slow=5.6,SNR=68						
TORD				pP	pP	12 41 04.4	-1.9
	comp=Z,3.8nm,0.8s,baz=253,slow=5.5,SNR=5.9						
TORD	Torodi Ar. Bea	76.12	69	P	P	12 40 14.5	-1.0
TORD				IAmb	IAmb	12 40 15.7	
	comp=Z,7.5nm,1.3s						
BW06	Boulder Array	76.53	329	P	P	12 40 19.4	+1.8
PD31	Pinedale Array	76.53	329	P	P	12 40 19.2	+1.6
PDAR	Pinedale Array	76.53	329	P	P	12 40 17.6	-0.1
	comp=Z,0.6nm,0.5s,baz=131,slow=8.0,SNR=11						
PDAR	Pinedale Array	76.53	329	P	P	12 40 18.4	+0.8
NVAR	Mina Array Bea	78.01	321	P	P	12 40 27.9	+2.0
	comp=Z,0.4nm,0.5s,baz=138,slow=5.1,SNR=4.7						
NVAR				pP	pP	12 41 19.1	+1.9
	comp=Z,0.4nm,0.5s,baz=0.0,slow=3.0,SNR=1.9						
FLWY	Flagg Ranch	78.07	329	P	P	12 40 28.9	+2.7
FLWY				IAmb	IAmb	12 40 29.8	
	comp=Z,14nm,1.5s						
RLMT	Red Lodge	78.21	331	P	P	12 40 29.1	+2.2
YHL	Hebgen Lake	78.88	330	P	P	12 40 33.4	+2.8
YHL				IAmb	IAmb	12 40 34.5	
	comp=Z,4.3nm,0.6s						
MCMT	McKenzie Canyo	79.65	329	P	P	12 40 36.5	+1.7
BOSA	Boshof	80.96	117	P	P	12 40 41.6	-0.4
	comp=Z,1.2nm,0.4s,baz=252,slow=4.1,SNR=9.7						
MDT	Midelt	81.36	49	P	P	12 40 44.4	+0.5
	comp=Z,1.4nm,0.5s,baz=4.4,slow=4.3,SNR=5.8						
PLID	Pearl Lake	81.38	327	P	P	12 40 46.1	+2.2
PLID				IAmb	IAmb	12 40 46.4	
	comp=Z,3.7nm,0.7s						
ESDC	Sonseca Array	85.69	44	P	P	12 41 06.5	+0.7
	comp=Z,1.1nm,0.8s,baz=249,slow=4.6,SNR=4.9						
YKA	Yellowknife Ar	93.42	340	P	P	12 41 41.7	+0.4
	comp=Z,0.2nm,0.4s,baz=130,slow=4.8,SNR=9.4						
YKA				pP	pP	12 42 35.3	+1.1
	comp=Z,0.2nm,0.6s,baz=133,slow=4.0,SNR=2.6						
ASAR	Alice Springs	129.27	205	PKP	PKPdf	12 47 34.4	-0.2
	comp=Z,0.3nm,0.5s,baz=134,slow=1.6,SNR=6.8						
ASAR	Alice Springs	129.27	205		PKiKP	12 47 35.4	+0.2
WRA	Warramunga Arr	132.43	207	PKP	PKiKP	12 47 41.2	-0.5
	comp=Z,0.6nm,0.9s,baz=158,slow=1.8,SNR=6.1						
KSH	Kashi	144.58	54	PKP	PKPdf	12 48 02.5	+0.3
MKAR	Makanchi Array	145.78	39	PKPbc	PKPbc	12 48 05.2	+0.3
	comp=Z,2.3nm,0.7s,baz=306,slow=3.0,SNR=20						
MKAR				pPKPbc	pPKPab	12 48 59.2	0.0
	comp=Z,1.4nm,1.0s,baz=264,slow=4.9,SNR=2.5						
MKAR	Makanchi Array	145.78	39		PKPab	12 48 05.9	+0.3
CMAR	Chiang Mai Arr	165.88	107	PKPab	PKPab	12 49 32.3	+0.4
	comp=Z,1.1nm,0.5s,baz=253,slow=5.7,SNR=7.6						
CMAR	Chiang Mai Arr	165.88	107	PKPdf	PKPdf	12 48 30.6	-0.3
CMAR					PKPab	12 49 31.8	-0.1

SJA ***27*** *12:34:26.7±0.7, 20°.67S×68°.91W, h118^{km}±4^{km}, ML4.4, MW4.1*
NEIC ***27*** *12:34:27.5±2.2, 20°.60S±0°.05×68°.73W±0°.09, h95^{km}±2^{km}, mb4.4/20, ML4.5(GUC), Error ellipse: s-maj=11.9km s-min=7.7km az=79.0*
VAO ***27*** *12:34:27.8±0.6, 20°.61S×68°.65W, h95^{km}, mb4.3*
IDC ***27*** *12:34:28.2±0.7, 20°.68S×68°.59W, h110^{km}±6^{km}, mb3.7/10, mb1 3.9/12, mb1mx3.8/28, mbtmp4.2/12, Error ellipse: s-maj=18.5km s-min=8.3km az=106.0*
GUC ***27*** *12:34:28.1±0.7, 20°.69S×68°.80W, h105^{km}±3^{km}, ML4.5*
ISC 27 12:34:27.3±0.5, **20°.66S**±0°.03×**68°.80W**±0°.04, **h101**^{km}±4^{km}, **n120,** σ**1**^{s}**70**/163, **mb4.3**/15, **11C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.61	327	eP	Pn	12 34 46.0	+1.5
PB08				i S	Sn	12 34 59.0	+1.7
PB08				IAML		12 34 59.9	
	comp=N,13µm,0.3s						
PB08	IPOC Station P	0.61	327		Pn	12 34 45.9	+1.4
PB08	IPOC Station P	0.61	327	eP	Pn	12 34 46.0	+1.5
PB08				eP	Pn	12 34 50.8	+6.3
PB08				eS	Sn	12 34 53.8	-3.5
PB08				eP	Sn	12 34 53.8	-3.5
PB08				IAML		12 35 00.3	
	comp=Z,7µm,0.2s						
PB01	IPOC Station P	0.74	239	⇑iP	Pn	12 34 45.9	+0.5
PB01				i S	Sn	12 34 59.4	+0.6
PB01				IAML		12 35 00.4	
	comp=N,36µm,0.2s						
PB01	IPOC Station P	0.74	239	eP	Sn	12 34 56.9	-1.9
PB01				eS	Sn	12 35 00.1	+1.3
PB01				IAML		12 35 00.4	
	comp=Z,18µm,0.2s						
PB09	IPOC Station P	1.20	200	⇑iP	Pn	12 34 51.2	+0.9
PB09				i S	Sn	12 35 08.8	+1.3
PB09				IAML		12 35 12.1	
	comp=E,6µm,0.5s						
PB09	IPOC Station P	1.20	200	eP	Pn	12 34 51.5	+1.2
PB09				eS	Sn	12 35 09.6	+2.1
PB09				IAML		12 35 10.1	
	comp=Z,4µm,0.6s						
PB11	IPOC Station P	1.20	318	⇑iP	Pn	12 34 51.2	+0.9
PB11				i S	Sn	12 35 08.9	+1.4
PB11				IAML		12 35 09.6	
	comp=N,14µm,0.4s						
PB11	IPOC Station P	1.20	318	eP	Pn	12 34 50.8	+0.6
PB11				eP	Pn	12 34 51.2	+0.9
PB11				eS	Sn	12 35 09.2	+1.7
PB11				IAML		12 35 12.4	
	comp=Z,6µm,0.2s						
PB02	IPOC Station P	1.21	237	⇑iP	Pn	12 34 50.7	+0.4
PB02				i S	Sn	12 35 08.2	+0.6
PB02				IAML		12 35 09.8	
	comp=E,16µm,0.4s						
PB02	IPOC Station P	1.21	237	eP	Pn	12 34 50.8	+0.5
PB02				eS	Sn	12 35 08.8	+1.1
PB02				eS	Sn	12 35 09.2	+1.6
PB02				IAML		12 35 09.4	
	comp=Z,9µm,0.3s						
TA01	Diego Aracena	1.29	274	⇑iP	Pn	12 34 51.4	+0.3
TA01				i S	Sn	12 35 09.5	+0.3
TA01				IAML		12 35 11.2	
	comp=E,10µm,0.4s						
TA01	Diego Aracena	1.29	274		Pn	12 34 51.4	+0.3
TA01	Diego Aracena	1.29	274	eP	Pn	12 34 51.5	+0.3
TA01				eS	Sn	12 35 10.8	+1.7
TA01				IAML		12 35 13.9	
	comp=Z,2µm,0.8s						
TA02	Huaiquique	1.30	287	⇑iP	Pn	12 34 51.7	+0.5
TA02				i S	Sn	12 35 10.1	+0.8
TA02				IAML		12 35 14.8	
	comp=E,23µm,0.2s						
TA02	Huaiquique	1.30	287	eP	Pn	12 34 51.8	+0.6
TA02				eS	Sn	12 35 11.5	+2.1
TA02				IAML		12 35 14.5	
	comp=Z,7µm,0.1s						
PB07	IPOC Station P	1.47	223	⇑iP	Pn	12 34 53.7	+0.3
PB07				i S	Sn	12 35 13.2	+0.1
PB07				IAML		12 35 14.9	
	comp=E,12µm,0.3s						
PB07	IPOC Station P	1.47	223	eP	Pn	12 34 53.8	+0.4
PB07				eS	Sn	12 35 14.2	+1.1
PB07				IAML		12 35 14.8	
	comp=Z,4µm,0.3s						
PB03	IPOC Station P	1.64	213	⇑iP	Pn	12 34 55.8	+0.3
PB03				i S	Sn	12 35 17.0	0.0
PB03				IAML		12 35 20.9	
	comp=N,3µm,0.5s						
PB03	IPOC Station P	1.64	213	eP	Pn	12 34 50.8	-4.7
PB03				eP	Pn	12 34 56.1	+0.6
PB03				eS	Sn	12 35 17.9	+1.0
PB03				IAML		12 35 20.0	
	comp=Z,3µm,0.3s						
LVC	Limon Verde	1.94	183	P	Pn	12 35 01.1	+1.5
	comp=Z,34nm,0.3s,baz=38,slow=11,SNR=221						
LVC				S	Sn	12 35 25.6	+1.6
	comp=Z,95nm,0.3s,baz=121,slow=20,SNR=26						
LVC	Limon Verde	1.94	183	⇑iP	Pn	12 35 00.3	+0.8
LVC				i S	Sn	12 35 25.1	+1.0
LVC	Limon Verde	1.94	183	eP	Pn	12 35 01.1	+1.5
LVC	Limon Verde	1.94	183	Pn	Pn	12 35 00.9	+1.3
LVC	Limon Verde	1.94	183	eP	Pn	12 35 01.0	+1.5
LVC				eS	Sn	12 35 28.2	+4.2
PB04	IPOC Station P	2.08	217	eP	Pn	12 35 01.6	+0.4
PB04				i S	Sn	12 35 27.0	-0.1
PB04				IAML		12 35 37.6	
	comp=E,3µm,0.7s						
PB04	IPOC Station P	2.08	217	eP	Pn	12 35 01.0	-0.2
PB04				eP	Pn	12 35 01.3	+0.1
PB04				eS	Sn	12 35 26.6	-0.4
PB04				eS	Sn	12 35 29.6	+2.6
PB04				IAML		12 35 42.7	
	comp=Z,2µm,0.3s						
PB06	IPOC Station P	2.16	199	⇑iP	Pn	12 35 01.9	-0.3
PB06				i S	Sn	12 35 28.8	+0.1
PB06	IPOC Station P	2.16	199	eP	Pn	12 35 02.7	+0.6
PB06				eS	Sn	12 35 29.6	+0.9
PB06				IAML		12 35 36.0	
	comp=Z,916nm,0.6s						
PB16	IPOC Station P	2.41	344	⇑iP	Pn	12 35 06.0	+0.2
PB16				i S	Sn	12 35 37.4	+2.2
PB16				IAML		12 35 45.8	
	comp=N,731nm,0.4s						
PB16	IPOC Station P	2.41	344	eP	Pn	12 35 08.0	+2.2
PB16				eS	Sn	12 35 18.3	-17
PB16				eS	Sn	12 35 43.8	+8.6
PB16				IAML		12 35 44.0	
	comp=Z,617nm,0.4s						
PB12	IPOC Station P	2.49	325	⇓iP	Pn	12 35 06.5	+0.1
PB12				i S	Sn	12 35 37.3	+0.8
PB12				IAML		12 35 47.3	
	comp=E,3µm,0.3s						
PB12	IPOC Station P	2.49	325	eP	Pn	12 35 06.7	+0.2
PB12				eS	Sn	12 35 37.6	+1.1
PB12				IAML		12 35 44.9	
	comp=Z,1µm,0.4s						
PB05	IPOC Station P	2.54	211	IAML		12 35 46.1	
	comp=E,1µm,0.4s						
PB05	IPOC Station P	2.54	211	eP	Pn	12 35 07.3	+0.2
PB05				eP	Pn	12 35 08.0	+0.9
PB05				eS	Sn	12 35 37.1	-0.5
PB05				IAML		12 35 47.1	
	comp=Z,860nm,0.7s						
PB15	IPOC Station P	2.61	194	eP	Pn	12 35 09.2	+1.1
PB15				i S	Sn	12 35 37.4	-2.0
PB15	IPOC Station P	2.61	194	eP	Pn	12 35 09.4	+1.3
PB15				eS	Sn	12 35 41.8	+2.4
PB15				IAML		12 35 50.5	
	comp=Z,4µm,0.3s						
AP01	Chacalluta	2.70	327	eP	Pn	12 35 09.4	+0.3
AP01				i S	Sn	12 35 42.6	+1.3
AP01				IAML		12 35 54.5	
	comp=N,6µm,0.4s						
AP01	Chacalluta	2.70	327		Pn	12 35 09.4	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AP01	Chacalluta	2.70	327	eP	Pn	12 35 12.0	+2.9
AP01				IAML		12 35 52.2	
	comp=Z,2μm,0.8s						
PB10	IPOC Station P	3.27	209	eP	Pn	12 35 16.7	0.0
PB10				i S	Sn	12 36 02.5	+7.7
PB10				IAML		12 36 09.9	
	comp=N,694nm,0.6s						
PB10	IPOC Station P	3.27	209	eP	Pn	12 35 16.7	0.0
PB10				eS	Sn	12 35 41.8	-13
PB10				eS	Sn	12 35 42.3	-12
PB10				IAML		12 36 07.5	
	comp=Z,425nm,0.8s						
YJA	Yavi	3.41	117	eP	Pn	12 35 22.0	+2.9
YJA				eS	Sn	12 36 09.5	+11
HJA	Humahuaca	4.04	129	eP	Pn	12 35 30.0	+2.5
LPAZ	La Paz	4.40	8	eP	Pn	12 35 36.0	+3.5
AZAP	Zapla	4.95	136	eP	Pn	12 35 42.0	+2.4
ASTB	Santa Barbara	5.19	130	eP	Pn	12 35 43.8	+1.1
ASTB				eS	Sn	12 36 42.0	+0.5
ASTB				eS	Sn	12 36 42.0	+0.5
ALOL	LOMAS DE OLMED	5.46	126	eP	Pn	12 35 42.3	-3.9
ALOL				eP	Pn	12 35 47.8	+1.5
AC02	Maricunga	6.15	183		Pn	12 35 56.0	-0.1
SIV	San Ignacio	8.69	59	P	Pn	12 36 27.7	-2.6
	comp=Z,8.9nm,0.3s,baz=242,slow=11,SNR=35						
PTLB	Pontes e Lacer	10.55	62	eP	Pn	12 36 54.5	-1.1
ETMB	Extrema	11.07	13	eP	Pn	12 37 01.7	-0.9
ETMB	Extrema	11.07	13	Pn	Pn	12 37 01.4	-1.2
VILB	Vilhena	11.25	48	eP	Pn	12 37 04.8	-0.3
VILB	Vilhena	11.25	48	Pn	Pn	12 37 05.4	+0.4
CPUP	Villa Florida	11.94	120	P	Pn	12 37 12.4	-1.8
	comp=Z,0.2nm,0.3s,baz=314,slow=12,SNR=3.9						
CPUP	Villa Florida	11.94	120		Pn	12 37 11.1	-3.1
AQDB	Aquidauana	12.28	91	eP	Pn	12 37 17.8	-0.8
CLDB	Colider	15.84	54	eP	Pn	12 38 04.7	-0.1
PCMB	Pacaembu	16.39	96	eP	Pn	12 38 10.7	-0.8
ITAB	Concordia	16.58	116	eP	Pn	12 38 13.8	+0.1
ITAB	Concordia	16.58	116	P	Pn	12 38 13.8	+0.1
ITAB				IAmb	IAmb	12 38 14.9	
	comp=Z,12nm,0.7s						
CPSB	Cacapava Do Su	16.91	128	eP	Pn	12 38 17.7	0.0
ITRB	Iturama	17.34	90	eP	Pn	12 38 24.5	+1.3
FRTB	Fartura	18.04	102	eP	P	12 38 30.1	-0.6
NPGB	Novo Progresso	18.78	46	eP	P	12 38 37.7	-1.1
SNDB	Serra Nova Dou	18.88	65	eP	P	12 38 39.3	-0.6
BB19B	Bebedouro	18.95	95	eP	P	12 38 40.5	-0.2
IPMB	Ipameri, GO	19.61	86	eP	P	12 38 47.1	-0.9
RCLB	Rio Claro- Sao	19.86	99	eP	P	12 38 49.7	-1.0
PLCA	Paso Flores	20.06	184	P	Pn	12 38 54.4	-0.9
	comp=Z,2.4nm,0.7s,baz=1.7,slow=12,SNR=8.3						
PLCA	Paso Flores	20.06	184	P	Pn	12 38 54.4	-0.9
BDFB	Brasilia	20.37	79	P	P	12 38 54.6	-1.6
	comp=Z,2.1nm,0.5s,baz=247,slow=11,SNR=3.9						
BDFB	Brasilia	20.37	79	P	P	12 38 54.9	-1.3
VAO	Valinhos	20.40	101	eP	P	12 38 54.8	-1.7
PEXB	Peixe	21.41	70	eP	P	12 39 06.0	-1.3
PTGA	Pitinga	21.61	25	P	P	12 39 07.4	-1.9
	comp=Z,3.0nm,0.4s,baz=202,slow=17,SNR=8.8						
PARB	Paraibuna	21.65	101	eP	P	12 39 08.2	-1.6
BSCB	Bom Sucesso	22.46	95	eP	P	12 39 16.7	-1.6
PRPB	Parauapebas	23.38	55	eP	P	12 39 25.6	-1.7
SMTB	Santa Maria do	23.59	63	eP	P	12 39 28.7	-0.5
DIAM	Diamantina, MG	23.80	89	eP	P	12 39 30.4	-0.8
MC01	Montes Claros	23.87	85	eP	P	12 39 30.4	-1.3
JANB	Januaria	23.95	81	eP	P	12 39 31.2	-1.3
BOAV	Boa Vista	24.31	20	eP	P	12 39 36.3	+0.7
BOAV	Boa Vista	24.31	20	P	P	12 39 34.9	-0.7
SDBA	SAO DESIDERIO	24.31	74	eP	P	12 39 35.2	-0.5
GUA01	Guaratinga, BA	27.76	86	eP	P	12 40 06.9	+0.2
ZARC	Zaragoza, Cauc	28.60	347	P	P	12 40 12.8	-1.5
ZARC				IAmb	IAmb	12 40 14.1	
	comp=Z,4.5nm,0.5s						
SJCC	San Jacinto, C	31.01	348	P	P	12 40 36.8	+1.2
CELP	Cerrillos	38.56	3	P	P	12 41 39.7	-0.7
BIRD	Birdtown, Kers	56.11	348	P	P	12 43 56.2	+0.1
SWET	Sewanee	57.90	343	P	P	12 44 07.7	-1.2
U49A	Red Boiling Sp	59.09	344	P	P	12 44 15.5	-1.5
U49A				IAmb	IAmb	12 44 40.8	
	comp=Z,4.8nm,1.1s						
MIAR	Mount Ida	59.74	336	P	P	12 44 21.4	-0.2
MIAR				IAmb	IAmb	12 44 21.7	
	comp=Z,3.6nm,0.7s						
S39A	Bolivar	62.46	338	P	P	12 44 39.2	-0.7
SNAA	Sanae	63.04	161	P	P	12 44 47.8	+4.4
SNAA				IAmb	IAmb	12 44 49.5	
	comp=Z,2.2nm,0.6s						
DBIC	Dimbokro	68.40	74	P	P	12 45 17.5	-1.2
	comp=Z,2.1nm,0.5s,baz=260,slow=5.0,SNR=6.3						
DBIC	Dimbokro	68.40	74	P	P	12 45 17.1	-1.6
DBIC				IAmb	IAmb	12 45 21.4	
	comp=Z,11nm,1.3s						
QSPA	South Pole Qui	69.53	180	P	P	12 45 25.9	+0.9
KNB	Kanab	70.81	324	P	P	12 45 34.8	+1.5
KNB				IAmb	IAmb	12 45 36.3	
	comp=Z,7.4nm,1.2s						
KOWA	Kowa	72.59	67	P	P	12 45 43.2	-1.0
	comp=Z,1.9nm,0.6s,baz=249,slow=4.5,SNR=5.9						
PDAR	Pinedale Array	73.44	330	P	P	12 45 49.4	+0.5
	comp=Z,0.4nm,0.6s,baz=129,slow=8.8,SNR=5.5						
PDAR	Pinedale Array	73.44	330	P	P	12 45 49.1	+0.3
ULM	Lac du Bonnet	74.55	342	P	P	12 45 54.2	-0.6
	comp=Z,2.6nm,0.4s,baz=160,slow=10,SNR=3.0						
NVAR	Mina Array Bea	74.90	322	P	P	12 45 58.5	+1.0
	comp=Z,0.5nm,0.7s,baz=147,slow=6.1,SNR=4.1						
FLWY	Flagg Ranch	74.98	330	P	P	12 45 59.1	+1.3
FLWY				IAmb	IAmb	12 45 59.8	
	comp=Z,5.0nm,0.8s						
YHH	Holmes Hill	75.59	331	P	P	12 46 03.1	+1.7
YHH				IAmb	IAmb	12 46 04.6	
	comp=Z,4.9nm,0.9s						
TORD	Torodi Ar. Bea	76.98	70	P	P	12 46 08.4	-1.1
	comp=Z,1.9nm,0.5s,baz=258,slow=5.4,SNR=20						
TORD				pP	pP	12 46 36.5	-0.2
	comp=Z,0.5nm,0.4s,baz=276,slow=5.2,SNR=2.1						
TORD				sP	sP	12 46 49.6	+1.5
	comp=Z,1.3nm,0.6s,baz=250,slow=5.3,SNR=3.5						
TORD	Torodi Ar. Bea	76.98	70	P	P	12 46 08.2	-1.3
YKA	Yellowknife Ar	90.43	341	P	P	12 47 17.1	+0.1
	comp=Z,1.0nm,0.6s,baz=134,slow=4.3,SNR=24						
YKA				pP	pP	12 47 45.9	+1.0
	comp=Z,1.0nm,0.9s,baz=136,slow=4.9,SNR=4.3						
ASAR	Alice Springs	130.70	208	PKP	PKPdf	12 53 26.9	-0.4
	comp=Z,0.3nm,0.5s,baz=129,slow=1.6,SNR=9.6						
ASAR	Alice Springs	130.70	208		PKPdf	12 53 26.5	-0.9
WRA	Warramunga Arr	133.72	211	PKP	PKPdf	12 53 33.4	+0.3
	comp=Z,0.5nm,0.5s,baz=159,slow=1.8,SNR=5.6						
WRA	Warramunga Arr	133.72	211		PKPdf	12 53 33.0	-0.1
ZALV	Zalesovo Beam	141.16	25	PKP	PKPdf	12 53 45.8	+0.1
	comp=Z,1.2nm,0.5s,baz=302,slow=1.7,SNR=6.0						
MKAR	Makanchi Array	144.90	35	PKP	PKPbc	12 53 52.1	+0.2
	comp=Z,1.8nm,0.6s,baz=354,slow=2.6,SNR=21						
USRK	Ussuriysk Ar.	150.85	328	PKPbc	PKiKP	12 54 08.6	-0.1
	comp=Z,2.3nm,0.7s,baz=97,slow=4.4,SNR=4.1						
SONM	Songino Array	152.61	7	PKPbc	PKPbc	12 54 12.1	-0.2
	comp=Z,1.1nm,0.6s,baz=288,slow=1.3,SNR=5.7						
SONM	Songino Array	152.61	7		PKPbc	12 54 11.4	-0.8

IDC 27 12:50:30.1±1.4**, 9°.70S**×**121°.54E, h0^{km}, mb3.3**/1**, mb1 3.5**/3**, mb1mx2.8**/36**, mbtmp3.3**/3**, ML3.1**/2**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.4**/17**, Error ellipse: s-maj=115.0km s-min=15.2km az=53.0, Savu Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.25	155	Sn	Sn	12 54 14.9	-15
	0.4nm,0.3s,baz=172,slow=19,SNR=2.9						
WRA	Warramunga Arr	16.01	131	Pn	Pn	12 54 16.8	-0.1
	0.1nm,0.3s,baz=306,slow=14,SNR=1.1						
ASAR	Alice Springs	18.23	141	P	Pn	12 54 44.8	0.0
	0.1nm,0.3s,baz=314,slow=12,SNR=8.3						
URZ	Urewera	57.18	129	LR	LR	13 26 21.4	
	comp=Z,28nm,18.8s,baz=30,slow=38						
MKAR	Makanchi Array	66.24	332	P	P	13 01 20.0	0.0
	0.2nm,0.7s,baz=128,slow=9.3,SNR=1.8						

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*IDC **27** 12:56:32.3±3.9, 11°.66S×117°.03E, h0^{km}, mb3.5/2, mb1 4.0/4, mb1mx3.1/39, mbtmp3.7/4, ML4.0/2, MS3.1/2, Ms1 3.1/2, ms1mx2.6/24, Error ellipse: s-maj=247.6km s-min=25.6km az=46.0*

*DJA **27** 12:56:33.0±1.0, 12°S±11°×11°7E±°, h10^{km}, M4.3/12, mb4.4/7, mB5.0/3, MLv4.3/12, Mw(mB)4.3/3*

ISC 27 12:56:35.5±1.0**, 11°.8S**±0°.1×**117°.22E**±0°.08**, h35^{km}, n19, σ2^{s}.62**/20**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	3.02	45	P	Pn	12 57 20.3	-0.6
TWSI	Taliwang, Sumb	3.05	354	P	Pn	12 57 19.4	-1.9
IGBI	Denpasar	3.59	325	P	Pn	12 57 27.8	-0.9
SRBI	Singaraja	4.18	332	P	Pn	12 57 36.9	+0.1
JAGI	Jajag, Banyuwa	4.47	317	P	Pn	12 57 38.7	-2.2
ABJI	Asem Bagus	4.94	323	P	Pn	12 57 45.1	-2.2
GMJI	Gumukmas	5.11	313	P	Pn	12 57 47.7	-1.9
	0.3nm2μm36nm,1.2s						
EDFI	Ende, Flores	5.33	56	P	Pn	12 57 52.8	0.0
	0.1nm529nm6.6nm,2.0s						
BLJI	Banyuglugur	5.38	318	P	Pn	12 57 52.9	-0.4
	0.3nm3μm32nm,0.6s						
BSSI	Bau Bau, Buton	6.47	30	P	Pn	12 58 09.0	+0.6
	0.2nm24nm,0.7s						
PCJI	Pacitan	6.94	300	P	Pn	12 58 14.1	-0.8
	0.4nm71nm,1.7s						
SOEI	Soe	7.21	74	P	Pn	12 58 19.4	+0.8
	0.2nm32nm,1.8s						
UGM	Wanagama	7.64	300	P	Pn	12 58 23.5	-1.0
FITZ	Fitzroy Crossi	10.27	129	Pn	Pn	12 59 03.0	+2.6
	1.3nm,0.3s,baz=309,slow=11,SNR=55						
FITZ				Sn	Sn	13 00 52.9	-1.5
	1.0nm,0.3s,baz=1.8,slow=21,SNR=2.4						
WRA	Warramunga Arr	18.34	118	P	Pn	13 00 50.1	+2.8
	0.4nm,0.3s,baz=285,slow=14,SNR=15						
WRA				S	Sn	13 04 03.2	-8.0
	0.4nm,0.3s,baz=290,slow=22,SNR=11						
ASAR	Alice Springs	19.77	129	P	Pn	13 01 07.8	+3.3
	3.2nm,0.8s,baz=312,slow=13,SNR=23						
ASAR				S	S	13 04 42.1	-1.8
	0.9nm,0.8s,baz=299,slow=22,SNR=5.0						
DAV	Davao City (W)	20.50	24	LR	LR	13 09 22.7	
	comp=Z,33nm,21.0s,baz=36,slow=38						
PSI	Prapat	23.26	307	LR	LR	13 11 47.4	
	comp=Z,89nm,18.3s,baz=175,slow=40						
MKAR	Makanchi Array	66.17	335	P	P	13 07 20.4	+0.8
	0.2nm,0.5s,baz=133,slow=7.3,SNR=5.1						

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*IDC **27** 13:16:02.7±60.0, 17°.62S×178°.48W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.8/24, mbtmp4.0/3, Error ellipse: s-maj=1102.0km s-min=172.5km az=79.0*

*NEIC **27** 13:16:32.7±0.9, 17°.5S±0°.5×176°.2W±0°.2, h485^{km}±28^{km}, mb4.2/10, Error ellipse: s-maj=70.5km s-min=20.9km az=185.0*

ISC 27 13:16:32.3±2.2**, 17°.3S**±0°.5×**176°.2W**±0°.2**, h500^{km}, n17, σ0^{s}.86**/16**, mb4.1**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.49	265	P	P	13 18 04.0	+0.1
RAR	Rarotonga	16.00	107	P	P	13 19 52.4	-0.6
RAR				IAmb	IAmb	13 20 14.2	
	comp=Z,4.6nm,0.7s						
ARMA	Armidale	32.05	240	P	P	13 22 16.8	-0.7
CTAO	Charters Tower	35.61	260	P	P	13 22 46.9	-0.6
CTAO				IAmb	IAmb	13 23 14.4	
	comp=Z,6.8nm,1.2s						
TOO	Toolangi	39.17	231	P	P	13 23 14.2	-2.4
TOO				IAmb	IAmb	13 23 37.8	
	comp=Z,12nm,1.1s						
STKA	Stephens Creek	40.75	241	P	P	13 23 29.3	0.0
	comp=Z,0.8nm,0.5s,baz=104,slow=8.3,SNR=1.3						
STKA	Stephens Creek	40.75	241	P	P	13 23 29.3	0.0
BBOO	Buckleboo	45.53	241	P	P	13 24 07.0	+0.4
WB0	Warramunga Arr	46.77	259	P	P	13 24 16.9	+0.5
WB0				IAmb	IAmb	13 24 26.7	
	comp=Z,13nm,1.4s						
WB2	Warramunga Arr	46.79	259	P	P	13 24 16.8	+0.3
WB2				IAmb	IAmb	13 24 32.1	
	comp=Z,9.6nm,1.2s						
WRA	Warramunga Arr	46.80	259	P	P	13 24 16.7	+0.2
	comp=Z,1.3nm,0.9s,baz=96,slow=8.4,SNR=8.3						
WRA	Warramunga Arr	46.80	259	P	P	13 24 16.7	+0.2
WRA	Warramunga Arr	46.80	259	IAmb	IAmb	13 24 22.7	
	comp=Z,0.5nm,1.4s						
AS31	Alice Springs	46.97	254	P	P	13 24 18.4	+0.6
ASAR	Alice Springs	46.97	254	P	P	13 24 18.5	+0.7
	comp=Z,3.0nm,0.5s,baz=89,slow=8.4,SNR=107						
ASAR	Alice Springs	46.97	254	P	P	13 24 17.8	-0.1
QSPA	South Pole Qui	72.75	180	P	P	13 27 10.2	+1.2
QSPA				IAmb	IAmb	13 27 11.0	
	comp=Z,6.3nm,1.5s						

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*IASPEI **27** 13:18:58.8±1.1, 36°.80N±0°.03×97°.79W±0°.03, h7^{km}±9^{km}, Error ellipse: s-maj=4.2km s-min=3.8km az=22.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*TUL **27** 13:18:58.8±0.8, 36°.83N±0°.03×97°.79W±0°.04, h5^{km}±6^{km}, ML3.5, mb_Lg3.4/91(NEIC), Error ellipse: s-maj=5.9km s-min=2.5km az=46.0*

*NEIC **27** 13:18:58.9±0.6, 36°.80N±0°.02×97°.78W±0°.03, h3^{km}±7^{km}, Error ellipse: s-maj=4.0km s-min=2.2km az=50.0*

*ANF **27** 13:18:59.1±0.2, 36°.81N×97°.81W, h5^{km}, ML4.0/10, Error ellipse: s-maj=2.6km s-min=2.3km az=143.0*

ISC 27 13:18:58.9±1.0**, 36°.80N**±0°.02×**97°.79W**±0°.02**, h4^{km}**±8^{km}**, n98, σ0^{s}.36**/82**, Oklahoma**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GC02	Grant County #	0.07	311	Pg	Pg	13 19 00.6	+0.1
GC02				Sg	Sg	13 19 01.8	+0.1
KAN14	Manchester OK	0.21	318		Pg	13 19 03.0	0.0
KAN05	Bluff City Nor	0.31	348	Pg	Pg	13 19 05.0	0.0
KAN13	South Haven SW	0.33	50	Pg	Pg	13 19 05.3	+0.1
KAN13				Sg	Sg	13 19 09.6	+0.1
CROK	Carrier	0.34	207	Pg	Pg	13 19 06.0	+0.5
KAN01	Argonia South	0.35	4		Pg	13 19 05.6	-0.1
KAN01				Sg	Sg	13 19 10.3	0.0
KAN10	Anthony SW Sta	0.40	323	Pg	Pg	13 19 06.6	-0.1
KAN10				Sg	Sg	13 19 11.8	-0.2
KAN06	Argonia West S	0.45	353		Pg	13 19 07.4	-0.2
KAN06				Sg	Sg	13 19 13.1	-0.3
KAN08	Anthony NE Sta	0.45	341	Pg	Pg	13 19 07.4	-0.1
BLOK	Blackwell	0.46	95	Pg	Pg	13 19 08.0	+0.1
KAN16	Harper SW Stat	0.47	333	Pg	Pg	13 19 08.0	-0.1
KAN12	Harper NE Stat	0.52	341	Pg	Pg	13 19 08.7	-0.2
OK035	E0210 Rd and N	0.74	263	Pg	Pg	13 19 12.9	-0.3
T35A	Sooner Cattle	1.03	83		Pg	13 19 18.2	-0.5
T35A				Sg	Sg	13 19 31.5	-0.6
T35B	Sooner Cattle	1.03	83	P	Pg	13 19 18.4	-0.4
	baz=266,SNR=314						
U32A	Winter Ranch,	1.06	247		Pg	13 19 18.8	-0.5
U32A	Winter Ranch,	1.06	247	P	Pg	13 19 18.9	-0.5
	baz=64,SNR=75						
U32A				S	Sb	13 19 33.8	-0.4
	baz=64						
QUOK	Quay	1.08	126		Pg	13 19 19.3	-0.3
OK031	S. Brethren Rd	1.15	138		Pg	13 19 20.6	-0.3
BCOK	Bluff Creek, N	1.16	173		Pg	13 19 20.7	-0.4
OK034	N. Norfolk Rd.	1.18	132		Pg	13 19 21.2	-0.3
OK009	Oakdale Elemen	1.26	166		Pg	13 19 22.8	-0.2
OK025	Westminster Rd	1.27	163		Pg	13 19 23.0	-0.4
OK001	Jones High Sch	1.30	162		Pn	13 19 23.7	-0.3
OKCFA	Oklahoma City	1.41	169		Pn	13 19 25.2	-0.2
OKCFA				IAmb_Lg		13 19 46.6	
	comp=Z,175nm,0.8s						
OKCFA	Oklahoma City	1.41	169	P	Pn	13 19 25.2	-0.2
	baz=349,SNR=30						
OKCFA				S	Sg	13 19 45.0	+0.7
	baz=349						
OKCSW	OKLAHOMA CITY	1.43	168		Pn	13 19 25.5	0.0
FNO	Franklin	1.58	168		Pn	13 19 27.9	+0.2
FNO				IAmb_Lg		13 19 51.3	
	comp=Z,162nm,0.8s						
R32A	Long Quarter,	1.77	336		Pn	13 19 30.8	+0.4
R32A	Long Quarter,	1.77	336	P	Pn	13 19 30.7	+0.3
	baz=155						
R32A				S	Sb	13 19 54.2	-0.4
	baz=155						
W35A	Tecumseh	1.81	155		Pn	13 19 31.2	+0.4
TUL1	Leonard	1.84	118		Pn	13 19 31.7	+0.4
TUL1				IAmb_Lg		13 20 00.5	
	comp=Z,151nm,0.8s						
TUL1	Leonard	1.84	118	P	Pn	13 19 32.1	+0.8
	baz=300,SNR=59						
TUL1				S	Sb	13 19 57.2	+0.6
	baz=300						
X34A	Smith Ranch, M	2.20	181		Pn	13 19 36.5	+0.3
WMOK	Wichita Mounta	2.21	202	Pn	Pn	13 19 36.7	+0.2
WMOK	Wichita Mounta	2.21	202	S	Sb	13 20 07.3	0.0
	baz=21						
KSU1	Kansas State U	2.48	22		Pn	13 19 40.3	+0.3
KSU1	Kansas State U	2.48	22	P	Pn	13 19 40.5	+0.4
	baz=203						
KSU1				S	Sn	13 20 11.8	+1.1
	baz=203						
CBKS	Cedar Bluff	2.53	323		Pn	13 19 41.1	+0.3
U38A	Gravette	2.76	97		Pn	13 19 44.2	+0.2
LOOK	Love County	2.85	170		Pn	13 19 45.6	+0.4
X37A	Clayton	2.96	138	Pn	Pn	13 19 47.0	+0.3
X37A				IAmb_Lg		13 20 40.8	
	comp=Z,143nm,0.8s						
HHAR	Hobbs	3.15	98		Pn	13 19 49.6	+0.4
HHAR				IAmb_Lg		13 20 42.9	
	comp=Z,110nm,0.8s						
Z35A	Perchaven, San	3.49	173	Pn	Pn	13 19 53.7	-0.3
S39A	Bolivar	3.67	75		Pn	13 19 56.3	-0.2
S39A				IAmb_Lg		13 21 02.5	
	comp=Z,66nm,0.8s						
S39A	Bolivar	3.67	75	P	Pn	13 19 56.4	-0.1
	baz=258,SNR=22						
N33A	J Bar K, Exete	3.94	4	Pn	Pn	13 19 59.9	-0.2
N33A				IAmb_Lg		13 21 10.1	
	comp=Z,79nm,0.8s						
U40A	Yellville	4.00	95		Pn	13 20 01.0	0.0
U40A	Yellville	4.00	95	P	Pn	13 20 01.3	+0.3
	baz=278						
U40A				P	Pn	13 20 01.3	+0.3
	baz=278						
MIAR	Mount Ida	4.11	122	IAmb_Lg		13 21 15.6	
	comp=Z,75nm,0.7s						
Z38A	Mt. Pleasant	4.22	146	IAmb_Lg		13 21 24.5	
	comp=Z,89nm,0.8s						
P38A	Dawn	4.38	49	Pn	Pn	13 20 06.5	+0.4
KSCO	Kaye Shedlock’	4.41	301	IAmb_Lg		13 21 29.9	
	comp=Z,110nm,0.9s						
MGMO	Mountain Grove	4.43	84		Pn	13 20 07.1	+0.1
MGMO				IAmb_Lg		13 21 18.2	
	comp=Z,67nm,0.7s						
ABTX	Abilene, Hawle	4.44	201	IAmb_Lg		13 21 18.6	
	comp=Z,85nm,1.1s						
BGNE	Belgrade	4.61	357	Pn	Pn	13 20 09.1	-0.2
BGNE				IAmb_Lg		13 21 29.2	
	comp=Z,122nm,1.0s						
R40A	Maddies Statio	4.63	70		Pn	13 20 09.3	-0.4
R40A	Maddies Statio	4.63	70	P	Pn	13 20 09.4	-0.2
	baz=253,SNR=36						
X40A	Basin Creek Fa	4.65	118	Pn	Pn	13 20 10.0	+0.1
X40A				IAmb_Lg		13 21 38.5	
	comp=Z,51nm,0.9s						
FCAR	Ozark Folk Cen	4.66	100	Pn	Pn	13 20 09.8	-0.3
FCAR				IAmb_Lg		13 21 27.8	
	comp=Z,82nm,0.7s						
WHAR	Wooly Hollow	4.71	107	Pn	Pn	13 20 10.6	-0.1
WHAR				IAmb_Lg		13 21 30.4	
	comp=Z,73nm,0.8s						
WHTX	Lake Whitney,	4.81	177	Pn	Pn	13 20 12.0	-0.1
WHTX				IAmb_Lg		13 21 45.7	
	comp=Z,58nm,1.2s						
WHTX	Lake Whitney,	4.81	177	P	Pn	13 20 12.2	+0.1
	baz=357,SNR=13						
WLAR	White Oak Lake	4.93	128	IAmb_Lg		13 21 41.8	
	comp=Z,66nm,0.9s						
237A	Washetta, Mont	5.06	161	Pn	Pn	13 20 15.6	0.0
L34A	Svendsen Farm,	5.27	12	IAmb_Lg		13 21 41.4	
	comp=Z,67nm,0.8s						
P40A	Paris	5.28	57	Pn	Pn	13 20 18.3	-0.2
P40A				IAmb_Lg		13 21 53.7	
	comp=Z,65nm,0.8s						
OGNE	Ogallala	5.30	323	IAmb_Lg		13 21 54.5	
	comp=Z,77nm,0.8s						
T25A	Trinidad	5.31	276	IAmb_Lg		13 21 54.0	
	comp=Z,67nm,0.7s						
N38A	Joes South For	5.34	40	Pn	Pn	13 20 19.3	-0.1
N38A				IAmb_Lg		13 21 53.4	
	comp=Z,106nm,0.8s						
CCM	Cathedral Cave	5.36	75	Pn	Pn	13 20 19.1	-0.6
PBMO	Poplar Bluff	5.91	88	IAmb_Lg		13 22 12.1	
	comp=Z,75nm,0.8s						
SCIA	State Center	6.21	33	IAmb_Lg		13 22 19.9	
	comp=Z,76nm,0.9s						
SLM	Saint Louis	6.26	71	IAmb_Lg		13 22 14.3	
	comp=Z,50nm,0.9s						
JCT	Junction City	6.53	195	Pn	Pn	13 20 35.0	-0.8
JCT				IAmb_Lg		13 22 42.5	
	comp=Z,83nm,1.2s						
N41A	Harden Midland	6.67	52	IAmb_Lg		13 22 33.2	
	comp=Z,73nm,0.9s						
ISCO	Idaho Springs	6.84	298	IAmb_Lg		13 22 43.6	
	comp=Z,40nm,0.9s						
S44A	Carbondale	6.87	80	Pn	Pn	13 20 40.4	+0.1
S44A				IAmb_Lg		13 22 41.5	
	comp=Z,72nm,0.9s						
ECSD	EROS Data Cent	6.98	7	Pn	Pn	13 20 41.1	-0.8
P43A	Skaggs, Pawnee	7.10	64	Pn	Pn	13 20 43.8	+0.3
P43A				IAmb_Lg		13 22 44.6	
	comp=Z,59nm,0.8s						
Q44A	Meyer Farm, Va	7.25	71	IAmb_Lg		13 23 01.4	
	comp=Z,48nm,1.0s						
T45A	Paducah	7.33	86	IAmb_Lg		13 22 49.5	
	comp=Z,71nm,0.7s						
Y45A	Yeager Farm, C	7.35	111	IAmb_Lg		13 23 12.8	
	comp=Z,48nm,0.9s						
PHWY	Pilot Hill	7.46	309	IAmb_Lg		13 23 10.3	
	comp=Z,26nm,0.8s						
HDIL	Hopedale	7.63	58	IAmb_Lg		13 23 19.5	
	comp=Z,53nm,0.8s						
SUSD	Miller	7.68	354	IAmb_Lg		13 23 08.8	
	comp=Z,42nm,0.8s						
OLIL	Olney	7.91	73	IAmb_Lg		13 23 21.9	
	comp=Z,41nm,0.9s						
Y22D	IRIS PASSCAL I	7.93	253	IAmb_Lg		13 23 28.7	
	comp=Z,48nm,0.9s						
I37A	Lemond, Waseca	7.94	24	IAmb_Lg		13 23 25.6	
	comp=Z,47nm,1.0s						
O44A	Mansfield	8.04	63	IAmb_Lg		13 23 19.2	
	comp=Z,39nm,0.8s						
JFWS	Jewell Farm	8.42	41	IAmb_Lg		13 23 32.2	
	comp=Z,48nm,0.7s						
RWWY	Rawlins	8.78	307	IAmb_Lg		13 23 43.5	
	comp=Z,50nm,1.2s						
K22A	Casper	8.90	314	IAmb_Lg		13 23 48.7	
	comp=Z,28nm,0.8s						
I40A	Norwalk	8.95	35	IAmb_Lg		13 23 47.1	
	comp=Z,32nm,1.0s						
BLO	Bloomington	9.21	72	Pn	Pn	13 21 12.2	-0.2
WCI	Wyandotte Cave	9.25	78	Pn	Pn	13 21 13.0	+0.1
F36A	Milaca	9.60	18	Pn	Pn	13 21 17.5	-0.4
I42A	Draeger Farm,	9.79	41	IAmb_Lg		13 24 22.7	
	comp=Z,28nm,0.9s						

IDC 27 13:30:49.4±2.1**, 3°.06N**×**128°.09E, h0^{km}, mb3.4**/5**, mb1 3.7**/5**, mb1mx3.5**/31**, mbtmp3.4**/5**, Error ellipse: s-maj=88.0km s-min=21.5km az=65.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.16	186	P	P	13 35 38.0	+1.7
	3.2nm,1.0s,baz=17,slow=8.3,SNR=1.5						
WRA	Warramunga Arr	23.67	165	P	P	13 36 02.5	-0.3
	0.8nm,0.8s,baz=343,slow=10.0,SNR=8.0						
ASAR	Alice Springs	27.16	168	P	P	13 36 33.8	-1.0
	0.3nm,0.5s,baz=356,slow=8.5,SNR=14						
CMAR	Chiang Mai Arr	32.38	300	P	P	13 37 20.4	-0.6
	0.3nm,0.4s,baz=114,slow=9.0,SNR=1.9						
MKAR	Makanchi Array	58.88	325	P	P	13 40 51.0	+0.8
	0.5nm,1.0s,baz=113,slow=8.1,SNR=4.5						

IDC 27 13:54:07.5±5.4**, 5°.47S**×**152°.61E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/32**, mbtmp3.4**/3**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.4**/22**, Error ellipse: s-maj=171.2km s-min=38.9km az=110.0, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.86	229	P	P	13 59 12.6	-0.2

	0.4nm,0.5s,baz=53,slow=9.7,SNR=5.2						
ASAR	**Alice Springs**	**25.53**	**223**	P	P	13 59 38.0	-0.2
	0.3nm,0.7s,baz=56,slow=9.0,SNR=8.8						
JNU	**Nakatsue**	**43.56**	**333**	LR	LR	14 18 46.3	
	comp=Z,28nm,18.2s,baz=240,slow=34						
ZALV	**Zalesovo Beam**	**81.60**	**326**	P	P	14 06 27.5	+0.3
	0.5nm,0.4s,baz=116,slow=6.6,SNR=1.8						

IDC 27 13:58:05.2±48.0, 18°.39S×178°.98W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.7/28, mbtmp4.0/3, Error ellipse: s-maj=876.7km s-min=155.1km az=79.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.92**	**242**	P	P	14 05 24.7	+0.2
	1.1nm,0.5s,baz=82,slow=14,SNR=3.8						
WRA	**Warramunga Arr**	**44.01**	**260**	P	P	14 06 14.9	0.0
	0.8nm,0.4s,baz=97,slow=7.7,SNR=19						
ASAR	**Alice Springs**	**44.14**	**255**	P	P	14 06 15.4	-0.5
	1.8nm,0.7s,baz=85,slow=8.3,SNR=33						

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*IDC **27** 14:13:30.1±1.1, 20°.49N×122°.01E, h0^{km}, mb3.6/5, mb1 3.7/7, mb1mx3.5/40, mbtmp3.7/7, ML3.7/2, Error ellipse: s-maj=39.8km s-min=20.9km az=74.0*

*JMA **27** 14:13:34.1±0.4, 20°.75N×121°.98E, h27^{km}, M4.1*

ISC 27 14:13:32.4±0.9, 20°.57N±0°.10×122°.3E±0°.1, h10^{km}, n15, σ1^{s}.27/21, mb3.4/5, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	**Basco**	**0.32**	**247**	⇑*i*P	**Pg**	**14 13 39.7**	**+0.9**
BBP				*e*S	**Sg**	**14 13 43.8**	**+0.6**
HATJ	**Hateruma jima**	**3.75**	**22**	P	**Pn**	**14 14 31.5**	**+1.2**
HATJ				*e*S	**Sn**	**14 15 14.2**	**-0.2**
IRIF	**Iriomote-Funau**	**3.98**	**19**	P	**Pn**	**14 14 34.9**	**+1.4**
IRIF				*e*S	**Sn**	**14 15 19.3**	**-0.9**
JKRS	**Kuro-shima**	**3.98**	**23**	P	**Pn**	**14 14 34.3**	**+0.8**
JKRS				*e*S	**Sn**	**14 15 20.8**	**+0.5**
JIJ	**Ishigaki jima**	**4.15**	**24**	P	**Pn**	**14 14 37.0**	**+1.2**
JIJ				S	**Sn**	**14 15 22.9**	**-1.5**
JISG	**Ishigakijimahi**	**4.42**	**25**	P	**Pn**	**14 14 40.7**	**+1.2**
JISG				S	**Sn**	**14 15 29.9**	**-1.1**
JTJ	**Tarama**	**4.63**	**28**	S	**Sn**	**14 15 36.2**	**0.0**
JIRB	**Irabujima**	**5.01**	**32**	P	**Pn**	**14 14 49.8**	**+2.2**
JOW	**Kunigami**	**8.31**	**40**	Pn	**Pn**	**14 15 34.9**	**+2.0**
	3.1nm,0.3s,baz=121,slow=27,SNR=27						
KSRS	**Korea Array**	**17.52**	**15**	P	**P**	**14 17 38.9**	**+1.0**
	0.1nm,0.3s,baz=198,slow=12,SNR=4.2						
MKAR	**Makanchi Array**	**41.66**	**318**	P	**P**	**14 21 19.6**	**-1.5**
	0.6nm,0.5s,baz=108,slow=9.4,SNR=13						
WRA	**Warramunga Arr**	**41.96**	**163**	P	**P**	**14 21 23.0**	**-0.7**
	0.3nm,0.6s,baz=344,slow=8.7,SNR=1.5						
ZALV	**Zalesovo Beam**	**43.83**	**329**	P	**P**	**14 21 36.8**	**-1.7**
	2.8nm,0.7s,baz=116,slow=7.1,SNR=9.0						
ASAR	**Alice Springs**	**45.41**	**165**	P	**P**	**14 21 50.5**	**-0.9**
	0.3nm,0.7s,baz=348,slow=7.4,SNR=6.2						
YKA	**Yellowknife Ar**	**85.89**	**23**	P	**P**	**14 26 11.8**	**-0.5**
	0.2nm,0.7s,baz=306,slow=4.4,SNR=3.1						

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*IDC **27** 14:29:03.0±1.1, 33°.57S×109°.72W, h0^{km}, mb4.3/8, mb1 4.4/8, mb1mx4.2/31, mbtmp4.2/8, MS4.0/16, Ms1 4.0/16, ms1mx3.9/28, Error ellipse: s-maj=40.0km s-min=22.7km az=20.0*

*NEIC **27** 14:29:07.3±1.7, 33°.7S±0°.1×109°.5W±0°.2, h15^{km}±4^{km}, mb4.7/40, Error ellipse: s-maj=23.8km s-min=18.1km az=83.0*

*GCMT **27** 14:29:13.3±0.3, 33°.66S±0°.02×109°.54W±0°.02, h31^{km}±1^{km}, MW5.0/78, Moment Tensor Solution. s24,c26; s78,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.50±.23; M$_{\theta\theta}$0.15±.21; M$_{\phi\phi}$-0.65±.20; M$_{r\theta}$-0.30±.25; M$_{\theta\phi}$-4.41±.15; M$_{\phi r}$-1.39±.27; Best double couple: M$_{0}$4.63800×10^{16} NP1:φ$_{s}$88.00000°,δ73.00000°,λ-179.00000°. NP2: φ$_{s}$357.00000°,δ89.00000°,λ-17.00000°. Principal axes: T 4.3190, Plg11.0000°, Azm44.0000°; N 0.6380, Plg73.0000°, Azm174.0000°; P -4.9570, Plg13.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 14:29:05.4±0.7, 33°.6S±0°.1×109°.6W±0°.1, h10^{km}, n96, σ1^{s}.20/68, mb4.7/24, MS4.1/20, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**25.48**	**99**	T	T	15 01 06.8	
	SNR=529						
H03S3	**Juan Fernandez**	**25.50**	**99**	T	T	15 01 01.7	
	SNR=375						
H03S1	**Juan Fernandez**	**25.50**	**99**	T	T	15 01 03.1	
	SNR=560						
H03N2	**Juan Fernandez**	**25.54**	**98**	T	T	15 01 00.7	
	baz=266,slow=73,SNR=337						
H03N3	**Juan Fernandez**	**25.54**	**98**	T	T	15 01 07.5	
	baz=266,slow=73,SNR=518						
H03N1	**Juan Fernandez**	**25.55**	**98**	T	T	15 01 09.8	
	baz=266,slow=73,SNR=374						
PLCA	**Paso Flores**	**31.73**	**114**	P	**P**	**14 35 29.2**	**-0.3**
	1.2nm,0.9s,baz=266,slow=9.4,SNR=1.9						
PLCA				LR	LR	14 45 21.3	
	comp=Z,110nm,21.3s,baz=278,slow=31						
PLCA	**Paso Flores**	**31.73**	**114**	*e*P	**P**	**14 35 33.7**	**+4.2**
GO09	**Cerro Castillo**	**32.23**	**134**	P	**P**	**14 35 33.1**	**-0.6**
AC02	**Maricunga**	**35.46**	**90**	P	**P**	**14 36 03.0**	**+0.3**
USHA	**Ushuaia**	**35.62**	**139**	LR	LR	14 46 59.7	
	comp=Z,488nm,18.5s,baz=268,slow=30						
TBI	**Tubuai**	**36.29**	**276**	*e*LR	LR	14 45 54.8	
	comp=Z,432nm,28.5s,baz=108						
TBI	**Tubuai**	**36.29**	**276**	*e*T	T	15 14 11.8	
	8.8nm,0.3s						
NNA	**Nana**	**36.85**	**62**	LR	LR	14 47 15.8	
	comp=Z,475nm,21.0s,baz=218,slow=30						
LVC	**Limon Verde**	**37.33**	**84**	P	**P**	**14 36 18.5**	**0.0**
	9.5nm,1.2s,baz=238,slow=6.6,SNR=4.8						
LVC	**Limon Verde**	**37.33**	**84**	P	**P**	**14 36 16.9**	**-1.6**
LVC				IAmb	IAmb	14 36 25.5	
	comp=Z,19nm,1.2s						
TAOE	**Nuku Hiva Isla**	**37.39**	**304**	*e*LR	LR	14 46 33.4	
	comp=Z,416nm,26.4s						
PB09	**IPOC Station P**	**37.42**	**82**	P	**P**	**14 36 19.4**	**+0.4**
PB09				IAmb	IAmb	14 36 21.5	
	comp=Z,17nm,0.9s						
PB01	**IPOC Station P**	**37.56**	**81**	P	**P**	**14 36 20.6**	**+0.4**
PB01				IAmb	IAmb	14 36 22.1	
	comp=Z,19nm,1.2s						
MEH	**Mehetia**	**37.77**	**285**	*e*T	T	15 16 02.4	
	comp=Z,14nm,0.2s						
PB11	**IPOC Station P**	**38.04**	**79**	P	**P**	**14 36 23.8**	**-0.5**
PB11				IAmb	IAmb	14 36 50.1	
	comp=Z,19nm,1.3s						
PB12	**IPOC Station P**	**38.07**	**77**	P	**P**	**14 36 23.8**	**-0.6**
PB12				IAmb	IAmb	14 36 25.5	
	comp=Z,19nm,1.0s						
PB08	**IPOC Station P**	**38.27**	**80**	P	**P**	**14 36 25.7**	**-0.8**
TIAR	**Tiarei**	**38.97**	**284**	*e*T	T	15 17 34.2	
	comp=Z,0.8nm,0.2s						
ATAH	**Atahualpa**	**39.09**	**55**	P	**P**	**14 36 32.4**	**-1.0**
	comp=Z,4.6nm,0.8s,baz=112,slow=4.6,SNR=4.0						
PPT2	**Papeete2**	**39.14**	**284**	*e*LR	LR	14 47 25.2	
	comp=Z,224nm,24.5s						
PPT	**Papeete**	**39.15**	**284**	LR	LR	14 48 16.9	
	comp=Z,134nm,20.8s,baz=162,slow=30						
LPAZ	**La Paz**	**41.07**	**76**	P	**P**	**14 36 50.0**	**-0.1**
PMSA	**Palmer Station**	**41.56**	**153**	LR	LR	14 49 04.0	
	comp=Z,301nm,21.8s,baz=293,slow=29						
CZSB	**Cruzeiro do Su**	**42.71**	**61**	*e*P	**P**	**14 37 03.1**	**+0.3**
CZSB	**Cruzeiro do Su**	**42.71**	**61**	P	**P**	**14 37 02.5**	**-0.3**
OTAV	**Otavalo**	**44.63**	**47**	P	**P**	**14 37 18.5**	**-0.3**
CPUP	**Villa Florida**	**45.48**	**95**	LR	LR	14 53 12.2	
	comp=Z,184nm,18.7s,baz=256,slow=32						
ETMB	**Extrema**	**46.30**	**69**	*e*P	**P**	**14 37 30.7**	**-0.9**
ETMB	**Extrema**	**46.30**	**69**	P	**P**	**14 37 30.3**	**-1.3**
SIV	**San Ignacio**	**46.98**	**80**	P	**P**	**14 37 36.8**	**-0.2**
	comp=Z,7.7nm,0.8s,baz=236,slow=7.6,SNR=28						
PTLB	**Pontes e Lacer**	**48.86**	**81**	P	**P**	**14 37 50.1**	**-1.3**
PTLB				IAmb	IAmb	14 37 57.5	
	comp=Z,12nm,1.1s						
AQDB	**Aquidauana**	**49.28**	**89**	P	**P**	**14 37 53.6**	**-1.0**
VILB	**Vilhena**	**49.31**	**78**	P	**P**	**14 37 54.1**	**-0.9**
VILB				IAmb	IAmb	14 38 15.9	
	comp=Z,16nm,1.3s						
ITAB	**Concordia**	**49.44**	**99**	P	**P**	**14 37 55.7**	**-0.1**
ROSC	**El Rosal**	**50.77**	**48**	LR	LR	14 56 24.6	
	comp=Z,203nm,18.8s,baz=234,slow=32						
BCIP	**Isla Barro Col**	**51.11**	**39**	P	**P**	**14 38 07.8**	**-0.7**
BOAB	**BOACO BROADBAN**	**51.19**	**31**	P	**P**	**14 38 09.2**	**+0.2**
SALV	**Santo Antonio**	**51.48**	**84**	*e*P	**P**	**14 38 09.5**	**-1.8**
PCMB	**Pacaembu**	**52.47**	**93**	*e*P	**P**	**14 38 18.9**	**+0.2**
ZARC	**Zaragoza, Cauc**	**52.53**	**45**	P	**P**	**14 38 18.3**	**-0.8**
ZARC				IAmb	IAmb	14 38 25.4	
	comp=Z,8.7nm,0.9s						
PDRB	**Porto dos Gac**	**52.88**	**79**	*e*P	**P**	**14 38 21.9**	**+0.2**
MOTC	**Monteria, Cord**	**53.09**	**44**	P	**P**	**14 38 23.6**	**+0.4**
MOTC				IAmb	IAmb	14 38 24.9	
	comp=Z,7.9nm,0.9s						
CLDB	**Colider**	**54.05**	**78**	*e*P	**P**	**14 38 29.9**	**-0.4**
ITRB	**Iturama**	**54.09**	**91**	*e*P	**P**	**14 38 30.9**	**+0.3**
MACA	**Manacapuru-AM**	**54.72**	**67**	*e*P	**P**	**14 38 39.5**	**+4.2**
MACA	**Manacapuru-AM**	**54.72**	**67**	P	**P**	**14 38 33.1**	**-2.2**
ARAG	**Araguaiana, MT**	**54.80**	**86**	*e*P	**P**	**14 38 36.1**	**+0.3**
QSPA	**South Pole Qui**	**56.57**	**180**	P	**P**	**14 38 48.2**	**+0.2**
QSPA				IAmb	IAmb	14 39 09.5	
	comp=Z,11nm,1.3s						
VNDA	**Vanda**	**57.14**	**195**	LR	LR	14 58 19.2	
	comp=Z,48nm,20.6s,baz=106,slow=31						
SNDB	**Serra Nova Dou**	**57.16**	**82**	*e*P	**P**	**14 38 52.7**	**0.0**
BDFB	**Brasilia**	**58.00**	**88**	P	**P**	**14 38 58.8**	**+0.1**
	comp=Z,3.5nm,0.9s,baz=356,slow=4.9,SNR=3.5						
BDFB	**Brasilia**	**58.00**	**88**	IAmb	IAmb	14 39 09.6	
	comp=Z,9.4nm,1.3s						
URZ	**Urewera**	**58.07**	**243**	LR	LR	14 58 19.9	
	comp=Z,265nm,19.8s,baz=31,slow=30						
VNA3	**Neumayer Olymp**	**61.65**	**159**	P	**P**	**14 39 22.5**	**-0.5**
SMTB	**Santa Maria do**	**61.90**	**82**	*e*P	P	14 39 31.6	+6.2
VNA1	**Neumayer--Stat**	**62.30**	**158**	P	**P**	**14 39 27.8**	**+0.5**
VNA2	**Neumayer--Watz**	**62.46**	**159**	P	**P**	**14 39 28.1**	**-0.3**
	baz=208,slow=5.9						
JCT	**Junction City**	**64.43**	**9**	P	**P**	**14 39 41.6**	**-0.2**
X18A	**Snowflake**	**67.80**	**360**	P	**P**	**14 40 04.6**	**+1.0**
X18A				IAmb	IAmb	14 40 11.1	
	comp=Z,6.0nm,0.9s						
ANWB	**Willy Bob**	**68.42**	**49**	P	**P**	**14 40 07.5**	**-0.1**
WMOK	**Wichita Mounta**	**68.76**	**10**	P	**P**	**14 40 11.4**	**+2.0**
SHPR	**Sheep Range**	**69.96**	**355**	P	**P**	**14 40 18.6**	**+1.6**
SHPR				IAmb	IAmb	14 40 24.8	
	comp=Z,8.0nm,1.3s						
CCUT	**Cedar City**	**70.90**	**357**	P	**P**	**14 40 23.6**	**+0.9**
NV11	**Mina Array Sit**	**72.13**	**353**	P	**P**	**14 40 31.2**	**+1.1**
NV11				IAmb	IAmb	14 40 41.0	
	comp=Z,9.9nm,1.3s						
NVAR	**Mina Array Bea**	**72.14**	**353**	P	**P**	**14 40 30.3**	**+0.1**
	comp=Z,3.8nm,0.9s,baz=180,slow=7.6,SNR=7.8						
NVAR				LR	LR	15 05 34.5	
	comp=Z,103nm,18.2s,baz=199,slow=30						
NVAR	**Mina Array Bea**	**72.14**	**353**	P	**P**	**14 40 30.6**	**+0.4**
KVN	**Kaiserville**	**72.73**	**353**	P	**P**	**14 40 35.3**	**+1.6**
KVN				IAmb	IAmb	14 40 44.8	
	comp=Z,9.1nm,1.3s						
P17A	**Butcher Ranch,**	**72.74**	**359**	P	**P**	**14 40 36.0**	**+2.3**
ISCO	**Idaho Springs**	**73.15**	**3**	P	**P**	**14 40 37.2**	**+0.9**
DZM	**Mont Dzumac**	**73.28**	**254**	*e*LR	LR	15 03 05.2	
	comp=Z,276nm,30.8s						
BMN	**Battle Mountai**	**74.02**	**354**	P	**P**	**14 40 43.0**	**+1.7**
BMN				IAmb	IAmb	14 40 52.0	
	comp=Z,10nm,1.3s						
ELK	**Elko**	**74.18**	**356**	LR	LR	15 08 08.3	
	comp=Z,63nm,19.2s,baz=168,slow=32						
WCI	**Wyandotte Cave**	**74.70**	**19**	P	**P**	**14 40 45.8**	**+0.8**
WCI				IAmb	IAmb	14 41 07.1	
	comp=Z,15nm,1.4s						
YBH	**Yreka Blue Hor**	**75.95**	**350**	LR	LR	15 06 48.1	
	comp=Z,121nm,21.5s,baz=180,slow=30						
BW06	**Boulder Array**	**76.02**	**0**	P	**P**	**14 40 52.7**	**-0.2**
BW06				IAmb	IAmb	14 40 59.6	
	comp=Z,9.2nm,1.2s						
PD31	**Pinedale Array**	**76.02**	**0**	P	**P**	**14 40 52.5**	**-0.3**
PD31				IAmb	IAmb	14 40 59.6	
	comp=Z,8.4nm,1.2s						
PDAR	**Pinedale Array**	**76.02**	**0**	P	**P**	**14 40 51.6**	**-1.2**
	comp=Z,3.2nm,1.1s,baz=156,slow=7.5,SNR=9.1						
PDAR				LR	LR	15 08 58.1	
	comp=Z,75nm,20.7s,baz=212,slow=32						
PDAR	**Pinedale Array**	**76.02**	**0**	P	**P**	**14 40 52.7**	**-0.2**
MCMT	**McKenzie Canyo**	**78.14**	**358**	P	**P**	**14 41 05.8**	**+1.1**
MAW	**Mawson**	**78.93**	**177**	LR	LR	15 13 53.1	
	comp=Z,68nm,18.9s,baz=246,slow=34						
SCHQ	**Schefferville**	**95.46**	**23**	LR	LR	15 20 45.7	
	comp=Z,88nm,19.4s,baz=184,slow=32						
YKA	**Yellowknife Ar**	**95.86**	**358**	P	**P**	**14 42 29.1**	**-2.4**
	comp=Z,0.4nm,0.8s,baz=171,slow=3.9,SNR=5.5						
ASAR	**Alice Springs**	**96.96**	**236**	LR	LR	15 22 45.8	
	comp=Z,115nm,18.7s,baz=168,slow=33						
AKASG	**Malin Array Be**	**145.57**	**48**	PKPbc	**PKPdf**	**14 48 41.9**	**-1.5**
	comp=Z,1.9nm,0.8s,baz=277,slow=3.5,SNR=5.8						
SONM	**Songino Array**	**149.54**	**309**	PKPbc	**PKPdf**	**14 48 51.2**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=132,slow=2.2,SNR=6.0						
SONM	**Songino Array**	**149.54**	**309**		**PKPdf**	**14 48 50.9**	**+0.6**
BRTR	**Keskin Array B**	**150.06**	**68**	PKPbc	**PKPbc**	**14 48 55.1**	**-1.3**
	comp=Z,1.0nm,0.9s,baz=298,slow=5.5,SNR=4.0						
CMAR	**Chiang Mai Arr**	**150.35**	**247**	PKPbc	**PKPbc**	**14 48 57.5**	**0.0**
	comp=Z,1.8nm,0.8s,baz=189,slow=1.8,SNR=12						
CMAR	**Chiang Mai Arr**	**150.35**	**247**		**PKPbc**	**14 48 56.9**	**-0.6**
MKAR	**Makanchi Array**	**164.03**	**329**	PKPab	**PKPab**	**14 50 01.7**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=67,slow=3.7,SNR=2.3						

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*IDC **27** 14:30:45.5±1.4, 31°.22S×69°.20W, h0^{km}, mb4.0/1, mb1 3.6/2, mb1mx3.5/22, mbtmp3.6/2, ML3.5/1, Error ellipse: s-maj=97.6km s-min=40.6km az=116.0*

ISC 27 14:30:59.2±1.7, 32°.0S±0°.3×68°.6W±0°.7, h100^{km}, n6, σ0^{s}.66/6, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**8.90**	**189**	Pn	**Pn**	**14 33 04.8**	**-0.1**
	0.1nm,0.3s,baz=16,slow=13,SNR=4.8						
TORD	**Torodi Ar. Bea**	**80.81**	**68**	P	**P**	**14 43 02.4**	**+0.2**
	1.2nm,0.9s,baz=254,slow=5.6,SNR=4.7						
ASAR	**Alice Springs**	**120.64**	**204**	PKP	**PKPdf**	**14 49 39.8**	**-0.1**
	0.3nm,0.9s,baz=134,slow=1.9,SNR=1.1						
WRA	**Warramunga Arr**	**123.90**	**206**	PKP	**PKPdf**	**14 49 47.0**	**+0.9**
	0.2nm,0.3s,baz=161,slow=1.7,SNR=8.7						
ZALV	**Zalesovo Beam**	**150.96**	**33**	PKPbc	**PKPbc**	**14 50 39.3**	**-0.4**
	0.8nm,0.4s,baz=318,slow=1.9,SNR=2.8						
MKAR	**Makanchi Array**	**153.27**	**48**	PKPbc	**PKPbc**	**14 50 44.7**	**-0.6**
	0.3nm,0.7s,baz=315,slow=2.0,SNR=2.0						

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*IDC **27** 14:56:24.1±1.5, 0°.04N×125°.75E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx2.9/44, mbtmp3.2/3, MS2.5/1, Ms1 2.5/1, ms1mx2.1/17, Error ellipse: s-maj=184.0km s-min=15.8km az=64.0*

*DJA **27** 14:56:27.6±0.3, 0°S±4°×12°5E±°, h10^{km}, M3.9/11, mb4.2/2, MLv3.8/11*

ISC 27 14:56:30.1±1.1, 0°.29S±0°.09×125°.32E±0°.06, h35^{km}, n12, σ0^{s}.91/12, mb3.1/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.59**	**303**	P	**Pn**	**14 56 55.1**	**-0.7**
KMSI				S	**Sn**	**14 57 16.9**	**+1.7**
SANI	**Sanana**	**1.87**	**159**	P	**Pn**	**14 56 59.0**	**-0.7**
LBMI	**Labuha**	**2.21**	**99**	P	**Pn**	**14 57 04.5**	**+0.2**
LUWI	**Luwuk**	**2.65**	**254**	P	**Pn**	**14 57 10.4**	**0.0**
MRSI	**Marisa**	**3.46**	**283**	P	**Pn**	**14 57 21.3**	**-0.3**
APSI	**Ampana**	**3.72**	**260**	P	**Pn**	**14 57 24.8**	**-0.3**
BNSI	**Bone**	**6.62**	**232**	P	**Pn**	**14 58 05.0**	**0.0**
	0.1nm16nm,1.7s						
SPSI	**Sidrap Palu**	**6.64**	**237**	P	**Pn**	**14 58 04.9**	**-0.4**
KAPI	**Kappang**	**7.28**	**230**	LR	LR	15 02 24.7	
	comp=Z,32nm,19.3s,baz=328,slow=46						
WRA	**Warramunga Arr**	**21.43**	**156**	P	**P**	**15 01 16.9**	**+1.4**
	0.7nm,1.0s,baz=338,slow=12,SNR=1.8						
ASAR	**Alice Springs**	**24.68**	**161**	P	**P**	**15 01 47.5**	**-0.5**
	0.6nm,1.0s,baz=337,slow=9.0,SNR=4.4						
MKAR	**Makanchi Array**	**60.09**	**327**	P	**P**	**15 06 33.0**	**-0.9**
	0.2nm,0.4s,baz=136,slow=6.6,SNR=4.4						

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*DJA **27** 15:03:37.4±1.0, 4°S±9°×12°9E±°, h19^{km}±10^{km}, M3.5/7, MLv3.5/7*

*IDC **27** 15:03:45.5±6.9, 3°.98S×130°.19E, h117^{km}±92^{km}, mb2.9/1, mb1 3.1/4, mb1mx2.7/42, mbtmp3.5/4, ML3.4/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/12, Error ellipse: s-maj=159.8km s-min=20.2km az=83.0*

ISC 27 15:03:38.8±1.1, 4°.03S±0°.09×129°.27E±0°.06, h36^{km}, n11, σ0^{s}.90/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.76**	**333**	P	**Pn**	**15 03 52.7**	**-0.4**
AAI	**Ambon**	**1.13**	**288**	P	**Pn**	**15 03 57.6**	**-0.5**
FAKI	**Fak Fak**	**3.17**	**70**	P	**Pn**	**15 04 26.2**	**0.0**
SIJI	**Sorong**	**3.72**	**32**	P	**Pn**	**15 04 34.5**	**+0.7**
	12nm,0.3s,baz=173,slow=23,SNR=210						
SIJI				S	**Sn**	**15 05 14.8**	**-1.6**
	baz=242,slow=23,SNR=0.8						
SWI	**Sorong**	**3.72**	**32**	P	**Pn**	**15 04 34.5**	**+0.7**
LBMI	**Labuha**	**3.81**	**332**	P	**Pn**	**15 04 35.3**	**+0.3**
SANI	**Sanana**	**3.82**	**301**	P	**Pn**	**15 04 35.8**	**+0.6**
WRA	**Warramunga Arr**	**16.57**	**163**	P	**Pn**	**15 07 29.1**	**+0.6**
	0.1nm,0.3s,baz=350,slow=12,SNR=1.4						
PMG	**Port Moresby**	**18.55**	**108**	LR	LR	15 15 30.9	
	comp=Z,87nm,20.2s,baz=159,slow=40						
ASAR	**Alice Springs**	**20.03**	**168**	P	**P**	**15 08 07.8**	**-1.0**
	0.2nm,0.3s,baz=348,slow=11,SNR=15						
MKAR	**Makanchi Array**	**65.36**	**326**	P	**P**	**15 14 18.5**	**+0.8**
	0.2nm,0.5s,baz=130,slow=7.5,SNR=1.7						

IDC 27 15:13:30.7±5.0, 57°.67S×27°.67W, h0^{km}, mb3.7/1, mb1 3.7/1, mb1mx3.5/23, mbtmp3.7/1, Error ellipse: s-maj=329.1km s-min=47.1km az=143.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**74.59**	**30**	P	P	15 25 11.4	0.0
	0.4nm,0.5s,baz=191,slow=7.0,SNR=2.6						
YKA	**Yellowknife Ar**	**137.19**	**317**	PKP	PKPdf	15 32 53.8	-0.4
	0.3nm,0.6s,baz=132,slow=2.3,SNR=6.7						
ILAR	**Eielson Array**	**150.97**	**310**	PKPbc	PKPbc	15 33 23.4	-0.3
	0.6nm,0.7s,baz=128,slow=1.5,SNR=8.5						

IDC 27 15:14:43.4±7.3, 19°.04S×176°.74W, h0^{km}, mb3.7/2, mb1 4.0/2, mb1mx3.6/26, mbtmp3.7/2, Error ellipse: s-maj=309.6km s-min=114.5km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.99**	**260**	P	P	15 23 08.8	0.0
	0.3nm,0.3s,baz=97,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**46.02**	**255**	P	P	15 23 08.8	-0.2
	1.3nm,0.8s,baz=93,slow=7.5,SNR=23						
AKASG	**Malin Array Be**	**142.29**	**333**	PKP	PKPdf	15 34 17.1	-0.7
	0.5nm,0.4s,baz=45,slow=4.1,SNR=6.3						

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*IDC **27** 15:19:42.1±1.0, 33°.77S×109°.66W, h0^{km}, mb4.5/10, mb1 4.6/10, mb1mx4.4/24, mbtmp4.5/10, MS4.7/18, Ms1 4.6/18, ms1mx4.6/23, Error ellipse: s-maj=35.0km s-min=19.6km az=20.0*

*NEIC **27** 15:19:49.1±1.5, 33°.01S±0°.09×108°.8W±0°.2, h10^{km}±1^{km}, mb4.8/87, Mwc5.3(GCMT), Error ellipse: s-maj=28.3km s-min=4.2km az=238.0*

*GCMT **27** 15:19:51.1±0.1, 33°.67S±0°.01×109°.60W±0°.01, h16^{km}, MW5.3/139, Moment Tensor Solution. s92,c147; s139,c220; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.03±.02; M$_{\theta\theta}$-0.35±.02; M$_{\phi\phi}$0.38±.02; M$_{r\theta}$-0.07±.04; M$_{\theta\phi}$-0.95±.02; M$_{\phi r}$-0.49±.06; Best double couple: M$_{0}$1.13600×10^{17} NP1:φ$_{s}$100.00000°,δ64.00000°, λ-180.00000°. NP2:φ$_{s}$10.00000°,δ90.00000°, λ-26.00000°. Principal axes: T 1.1580, Plg18.0000°, Azm58.0000°; N -0.0440, Plg64.0000°, Azm190.0000°; P -1.1140, Plg18.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 15:19:46.4±0.5, 33°.3S±0°.1×108°.98W±0°.08, h10^{km}, n154, σ1^{s}.79/130, mb4.8/50, MS4.7/22, 14C, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**25.00**	**100**	T	T	15 51 52.0	
	SNR=1116						
H03S3	**Juan Fernandez**	**25.02**	**100**	T	T	15 51 44.1	
	SNR=838						
H03S1	**Juan Fernandez**	**25.02**	**100**	T	T	15 51 47.9	
	SNR=1349						
H03N2	**Juan Fernandez**	**25.05**	**99**	T	T	15 51 50.0	
	baz=266,slow=73,SNR=612						
H03N3	**Juan Fernandez**	**25.05**	**99**	T	T	15 51 51.6	
	baz=266,slow=73,SNR=1534						
H03N1	**Juan Fernandez**	**25.07**	**99**	T	T	15 51 50.8	
	baz=266,slow=73,SNR=664						
COYC	**Coyhaique**	**30.74**	**124**	P	**P**	**15 26 04.2**	**+2.6**
COYC				IAmb	IAmb	15 26 09.8	
	comp=Z,8.4nm,0.8s						
PLCA	**Paso Flores**	**31.36**	**115**	P	**P**	**15 26 08.6**	**+1.3**
	comp=Z,1.8nm,0.9s,baz=268,slow=11,SNR=4.4						
PLCA				LR	LR	15 35 60.0	
	comp=Z,606nm,18.2s,baz=277,slow=31						
PLCA	**Paso Flores**	**31.36**	**115**	P	**P**	**15 26 09.1**	**+1.8**
CO03	**El Pedregal**	**32.42**	**96**	P	**P**	**15 26 18.6**	**+2.0**
CO03				IAmb	IAmb	15 26 20.2	
	comp=Z,16nm,1.1s						
GO04	**Tololo Observa**	**32.50**	**95**	P	**P**	**15 26 19.8**	**+2.3**
ZON	**Zonda**	**33.91**	**98**	P	**P**	**15 26 32.0**	**+2.3**
ZON				IAmb	IAmb	15 26 38.8	
	comp=Z,8.8nm,0.9s						
PB14	**IPOC Station P**	**34.68**	**86**	P	**P**	**15 26 38.7**	**+2.0**
PB14				IAmb	IAmb	15 26 40.7	
	comp=Z,18nm,1.1s						
AC02	**Maricunga**	**34.92**	**90**	P	**P**	**15 26 40.8**	**+1.8**
AC02				IAmb	IAmb	15 26 43.4	
	comp=Z,16nm,1.0s						
PB06	**IPOC Station P**	**36.17**	**83**	P	**P**	**15 26 47.9**	**-1.4**
TA01	**Diego Aracena**	**36.64**	**80**	P	**P**	**15 26 51.4**	**-1.8**
LVC	**Limon Verde**	**36.76**	**84**	P	**P**	**15 26 57.9**	**+3.3**
	comp=Z,10nm,1.0s,baz=238,slow=4.3,SNR=6.2						
LVC	**Limon Verde**	**36.76**	**84**	P	**P**	**15 26 55.2**	**+0.6**
TBI	**Tubuai**	**36.80**	**275**	*e*S	**S**	**15 32 42.7**	**+4.0**
	comp=Z,246nm,27.9s						
TBI				*e*LQ	LQ	15 35 07.8	
	comp=Z,2μm,35.5s						
TBI				*e*LR	LR	15 36 49.0	
	comp=Z,2μm,29.0s,baz=114						
TBI	**Tubuai**	**36.80**	**275**	*e*T	T	16 04 47.0	
	comp=Z,7.8nm,0.3s						
TA02	**Huaiquique**	**36.82**	**79**	P	**P**	**15 26 55.5**	**+0.8**
PB09	**IPOC Station P**	**36.85**	**82**	P	**P**	**15 26 57.7**	**+2.5**
PB01	**IPOC Station P**	**36.99**	**81**	P	**P**	**15 26 58.7**	**+2.5**
PB01				IAmb	IAmb	15 27 06.0	
	comp=Z,22nm,1.1s						
PB11	**IPOC Station P**	**37.46**	**79**	P	**P**	**15 27 02.1**	**+1.8**
PB11				IAmb	IAmb	15 27 04.4	
	comp=Z,21nm,1.0s						
PB12	**IPOC Station P**	**37.48**	**77**	P	**P**	**15 27 00.6**	**+0.2**
TAOE	**Nuku Hiva Isla**	**37.67**	**303**	*e*S	**S**	**15 32 52.5**	**+0.2**
	comp=Z,175nm,26.9s						
TAOE				*e*LR	LR	15 37 11.1	
	comp=Z,2μm,26.2s						
MEH	**Mehetia**	**38.22**	**284**	*e*T	T	16 06 36.6	
	comp=Z,17nm,0.2s						
PB16	**IPOC Station P**	**38.29**	**77**	P	**P**	**15 27 07.9**	**0.0**
ATAH	**Atahualpa**	**38.49**	**54**	P	**P**	**15 27 13.5**	**+4.1**
	comp=Z,11nm,0.7s,baz=147,slow=12,SNR=4.4						
PPT2	**Papeete2**	**39.59**	**283**	*e*S	**S**	**15 33 23.5**	**+2.2**
	comp=Z,416nm,26.2s						
PPT2				*e*LQ	LQ	15 36 11.2	
	comp=Z,2μm,29.0s						
PPT2				*e*LR	LR	15 38 05.8	
	comp=Z,1μm,23.5s,baz=120						
PPT	**Papeete**	**39.60**	**283**	LR	LR	15 38 44.9	
	comp=Z,854nm,20.1s,baz=126,slow=29						
LPAZ	**La Paz**	**40.48**	**75**	P	**P**	**15 27 25.6**	**-0.6**
OTAV	**Otavalo**	**44.03**	**47**	P	**P**	**15 27 53.2**	**-1.7**
ITQB	**Itaqui**	**44.41**	**100**	P	**P**	**15 27 59.0**	**+1.6**
CPUP	**Villa Florida**	**44.97**	**95**	P	**P**	**15 28 02.5**	**+0.6**
	comp=Z,6.6nm,1.1s,baz=259,slow=8.6,SNR=5.1						
CPUP				LR	LR	15 43 51.4	
	comp=Z,746nm,19.2s,baz=255,slow=32						
CPUP	**Villa Florida**	**44.97**	**95**	P	**P**	**15 28 01.9**	**0.0**
CPUP				IAmb	IAmb	15 28 09.0	

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      comp=Z,13nm,1.1s
ETMB  Extrema            45.70  69 P      P       15 28 08.7 +0.9
ETMB                               IAmb   IAmb    15 28 15.9
      comp=Z,9.2nm,1.0s
PLTB  Pedras Altas       46.23 104 P      P       15 28 11.8  0.0
PLTB                               IAmb   IAmb    15 28 29.4
      comp=Z,11nm,1.0s
RAR   Rarotonga          46.33 272 LR     LR      15 42 12.4
      comp=Z,977nm,21.8s,baz=122,slow=30
SIV   San Ignacio        46.41  80 P      P       15 28 15.5 +2.1
      comp=Z,12nm,0.8s,baz=243,slow=8.4,SNR=46
PTLB  Pontes e Lacer     48.28  81 P      P       15 28 29.7 +1.7
VILB  Vilhena            48.72  77 P      P       15 28 31.4  0.0
AQDB  Aquidauana         48.73  89 P      P       15 28 32.6 +1.2
ROSC  El Rosal           50.17  48 P      P       15 28 46.2 +3.3
      comp=Z,16nm,0.7s,baz=251,slow=22,SNR=5.1
ROSC                               LR     LR      15 47 04.2
      comp=Z,862nm,19.2s,baz=230,slow=32
TLIG  Tlapa              51.57  13 P      P       15 28 53.1 +0.2
TLIG                               IAmb   IAmb    15 29 16.3
      comp=Z,12nm,1.0s
ZARC  Zaragoza, Cauc     51.94  45 P      P       15 28 55.0 -0.7
ZARC                               IAmb   IAmb    15 29 04.8
      comp=Z,14nm,0.9s
PRVC  Isla de Provid     53.39  34 P      P       15 29 04.8 -1.5
PRVC                               IAmb   IAmb    15 29 06.7
      comp=Z,17nm,1.0s
SJCC  San Jacinto, C     53.69  43 P      P       15 29 07.8 -0.9
MACA  Manacapuru-AM      54.11  67 P      P       15 29 12.0 +0.3
SDV   Santo Domingo      55.60  48 P      P       15 29 22.6 -0.1
URIC  Uribia, Colomb     56.98  45 P      P       15 29 30.6 -1.7
BAUV  El Baul            57.28  50 P      P       15 29 34.7 +0.2
BDFB  Brasilia           57.45  88 P      P       15 29 36.6 +0.7
      comp=Z,4.6nm,0.9s,baz=284,slow=5.5,SNR=5.6
BDFB                               LR     LR      15 52 03.6
      comp=Z,493nm,19.2s,baz=253,slow=34
BDFB  Brasilia           57.45  88 P      P       15 29 36.2 +0.3
BDFB                               IAmb   IAmb    15 29 43.9
      comp=Z,13nm,1.0s
VNDA  Vanda              57.56 195 LR     LR      15 48 36.5
      comp=Z,533nm,21.4s,baz=98,slow=30
BOAV  Boa Vista          57.85  62 P      P       15 29 38.9 +0.3
BOAV                               IAmb   IAmb    15 29 40.4
      comp=Z,18nm,1.3s
RAO   Raoul Island       58.08 254 LR     LR      15 47 44.6
      comp=Z,542nm,21.9s,baz=128,slow=29
URZ   Urewera            58.68 242 LR     LR      15 48 49.1
      comp=Z,1µm,20.5s,baz=31,slow=30
VNA3  Neumayer Olymp     61.73 159 P      P       15 30 02.0 -2.4
VNA2  Neumayer--Watz     62.54 159 P      P       15 30 06.7 -3.2
      baz=254,slow=5.1
JCT   Junction City      64.05   9 P      P       15 30 20.2 -0.1
MNTX  Cornudas Mount     64.77   3 P      P       15 30 25.0  0.0
MNTX                               IAmb   IAmb    15 30 36.6
      comp=Z,8.0nm,1.1s
TUC   Tucson             65.31 358 P      P       15 30 29.2 +0.7
MSVF  Nonsavu            66.47 264 LR     LR      15 52 04.3
      comp=Z,651nm,21.8s,baz=107,slow=30
X18A  Snowflake          67.50 359 P      P       15 30 42.7  0.0
ANMO  Albuquerque        67.96   2 P      P       15 30 45.6  0.0
GSC   Goldstone, Bar     68.66 353 P      P       15 30 51.1 +1.2
GSC                                IAmb   IAmb    15 31 00.5
      comp=Z,9.5nm,1.1s
X37A  Clayton            68.75  12 P      P       15 30 50.7 +0.4
QSM   Queen of Sheba     69.33 353 P      P       15 30 56.5 +2.6
QSM                                IAmb   IAmb    15 31 10.1
      comp=Z,9.8nm,1.2s
W39A  Magazine           69.64  13 P      P       15 30 55.8  0.0
W39A                               IAmb   IAmb    15 31 20.8
      comp=Z,14nm,1.3s
SHPR  Sheep Range        69.71 355 P      P       15 30 57.6 +1.1
MVCO  Mesa Verde         70.18   0 P      P       15 31 00.9 +1.6
MVCO                               IAmb   IAmb    15 31 08.7
      comp=Z,9.0nm,1.2s
CCUT  Cedar City         70.63 356 P      P       15 31 02.5 +0.4
CCUT                               IAmb   IAmb    15 31 13.9
      comp=Z,7.5nm,1.0s
FCAR  Ozark Folk Cen     70.64  14 P      P       15 31 02.3 +0.4
SDCO  Great Sand Dun     70.78   3 P      P       15 31 02.8 -0.3
U40A  Yellville          70.94  14 P      P       15 31 04.0 +0.3
U40A                               IAmb   IAmb    15 31 05.4
      comp=Z,9.4nm,1.1s
TPH   Tonopah            71.45 353 P      P       15 31 08.0 +0.9
R11A  Troy Canyon, C     71.58 355 P      P       15 31 09.0 +1.2
TCRU  Three Creeks R     71.64 357 P      P       15 31 10.0 +1.7
TCRU                               IAmb   IAmb    15 31 15.6
      comp=Z,7.0nm,1.0s
LHV   Little Huntoon     71.76 352 P      P       15 31 10.5 +1.9
LHV                                IAmb   IAmb    15 31 19.7
      comp=Z,11nm,1.0s
NV11  Mina Array Sit     71.90 352 P      P       15 31 10.7 +0.9
NV11                               IAmb   IAmb    15 31 21.1
      comp=Z,9.1nm,1.1s
NVAR  Mina Array Bea     71.92 352 P      P       15 31 09.4 -0.5
      comp=Z,5.2nm,0.9s,baz=193,slow=6.9,SNR=16
NVAR                               LR     LR      15 56 05.2
      comp=Z,411nm,20.6s,baz=178,slow=30
NVAR  Mina Array Bea     71.92 352 P      P       15 31 10.6 +0.7
RYN   Ryan               72.14 352 P      P       15 31 11.7 +0.6
KVN   Kaiserville        72.51 353 P      P       15 31 15.7 +2.3
KVN                                IAmb   IAmb    15 31 19.1
      comp=Z,8.2nm,1.0s
YERR  Yerington          72.58 352 P      P       15 31 14.5 +0.7
PNTR  Pine Nut           72.72 351 P      P       15 31 15.5 +0.8
V52A  Sevierville        72.79  21 P      P       15 31 14.8 -0.1
V52A                               IAmb   IAmb    15 31 29.7
      comp=Z,11nm,1.2s
T47A  Sharon Grove       72.87  18 P      P       15 31 15.0 -0.3
T47A                               IAmb   IAmb    15 31 27.0
      comp=Z,11nm,1.0s
ORV   Oroville           73.44 350 P      P       15 31 19.2 +0.5
RDMU  Red Mountain       73.53 360 P      P       15 31 19.4 -0.1
RDMU                               IAmb   IAmb    15 31 31.0
      comp=Z,12nm,1.1s
BMN   Battle Mountai     73.79 353 P      P       15 31 21.7 +0.8
BMN                                IAmb   IAmb    15 31 31.1
      comp=Z,8.5nm,1.0s
DZM   Mont Dzumac        73.88 254 eS     S       15 40 58.3 +4.2
      comp=Z,235nm,24.9s
DZM   Mont Dzumac        73.88 254 eLR    LR      15 53 46.0
      comp=Z,1µm,30.9s,baz=129
WCI   Wyandotte Cave     74.25  18 P      P       15 31 24.6 +1.1
WCI                                IAmb   IAmb    15 31 33.2
      comp=Z,17nm,1.4s
WDC   Whiskeytown Da     74.60 349 P      P       15 31 26.8 +1.4
RWWY  Rawlins            74.67   1 P      P       15 31 26.9 +0.8
BW06  Boulder Array      75.73 360 P      P       15 31 31.6 -0.6
BW06                               IAmb   IAmb    15 31 43.7
      comp=Z,9.9nm,1.1s
PD31  Pinedale Array     75.73 360 P      P       15 31 31.5 -0.7
PD31                               IAmb   IAmb    15 31 43.7
      comp=Z,9.3nm,1.1s
PDAR  Pinedale Array     75.73 360 P      P       15 31 31.4 -0.7
      comp=Z,5.3nm,1.1s,baz=130,slow=6.0,SNR=12
PDAR                               LR     LR      15 59 56.1
      comp=Z,325nm,18.6s,baz=184,slow=32
WVOR  Wild Horse Val     75.91 353 P      P       15 31 34.3 +1.2
WVOR                               IAmb   IAmb    15 31 55.8
      comp=Z,12nm,1.1s
ECR   Eagle Creek        76.04 358 P      P       15 31 34.5 +0.5
LOHW  Long Hollow        76.58 359 P      P       15 31 37.8 +0.8
LOHW                               IAmb   IAmb    15 31 48.2
      comp=Z,13nm,1.4s
HLID  Hailey             76.68 356 P      P       15 31 37.8 +0.3
MOOW  Moose Ponds        76.72 359 P      P       15 31 38.2 +0.5
J08A  Circle Bar Ran     76.81 353 P      P       15 31 39.9 +1.8
J08A                               IAmb   IAmb    15 31 48.6
      comp=Z,12nm,1.4s
FLWY  Flagg Ranch        77.06 359 P      P       15 31 38.5 -1.1
FLWY                               IAmb   IAmb    15 32 01.5
      comp=Z,12nm,1.2s
RSSD  Black Hills        77.21   4 P      P       15 31 40.7 +0.2
RSSD                               IAmb   IAmb    15 31 52.5
      comp=Z,7.9nm,1.0s
ECSD  EROS Data Cent     77.52   9 P      P       15 31 41.9  0.0
YHH   Holmes Hill        77.76 359 P      P       15 31 44.9 +1.2
MCMT  McKenzie Canyo     77.86 357 P      P       15 31 44.9 +0.8
BMO   Blue Mountains     78.18 354 P      P       15 31 47.1 +1.4
I37A  Lemond, Waseca     78.27  11 P      P       15 31 47.6 +1.5
PLID  Pearl Lake         78.31 355 P      P       15 31 48.0 +1.4
DLMT  Dillon             78.39 357 P      P       15 31 49.3 +2.4
DLMT                               IAmb   IAmb    15 32 01.6
      comp=Z,16nm,1.5s
BOZ   Bozeman (W)        78.59 358 P      P       15 31 49.6 +1.5
BOZ                                IAmb   IAmb    15 31 59.8
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      comp=Z,14nm,1.5s
GCMT  Greycliff          78.75 360 P      P       15 31 49.6 +0.6
G08A  Pilot Rock         78.77 353 P      P       15 31 50.3 +1.3
G08A                               IAmb   IAmb    15 31 59.0
      comp=Z,7.6nm,1.0s
MAW   Mawson             79.19 177 LR     LR      16 03 34.9
      comp=Z,231nm,19.4s,baz=216,slow=33
F36A  Milaca             80.05  11 P      P       15 31 55.7 -0.1
F36A                               IAmb   IAmb    15 32 23.2
      comp=Z,9.5nm,1.0s
JTMT  Jette              80.84 356 P      P       15 31 59.6 -0.6
JTMT                               IAmb   IAmb    15 32 10.4
      comp=Z,14nm,1.2s
STKA  Stephens Creek     87.11 233 LR     LR      16 06 02.9
      comp=Z,462nm,18.3s,baz=140,slow=32
SCHQ  Schefferville      94.98  23 LR     LR      16 11 37.3
      comp=Z,233nm,21.9s,baz=262,slow=33
YKA   Yellowknife Ar     95.59 357 P      P       15 33 09.8 -1.4
      comp=Z,0.9nm,0.9s,baz=171,slow=4.2,SNR=10
YKA                                LR     LR      16 11 22.3
      comp=Z,237nm,19.1s,baz=0.0,slow=32
ASAR  Alice Springs      97.57 235 LR     LR      16 11 49.4
      comp=Z,564nm,19.1s,baz=150,slow=32
WRA   Warramunga Arr     99.69 239 LR     LR      16 14 54.4
      comp=Z,380nm,18.1s,baz=150,slow=34
H01W1 Cape Leeuwin H    101.00 215 T      T       17 26 10.4
      baz=1.6,slow=74,SNR=4.0
H01W2 Cape Leeuwin H    101.01 215 T      T       17 26 01.1
      baz=142,slow=74,SNR=4.2
ARR   Arges             142.65  57 ⇑P     PKPdf   15 39 14.5 -5.1
BURAR Bucovina Array    142.90  54 ⇑P     PKPdf   15 39 15.2 -4.8
VOIR                    142.94  57 ⇑P     PKPdf   15 39 14.6 -5.5
MLR   Muntele Rosu      143.56  57 ⇑P     PKPab   15 39 17.7 -0.1
SGRR  Singureni         143.64  59 ⇑P     PKPab   15 39 15.1 -2.8
TESR  Tescani           143.98  55 ⇑P     PKPab   15 39 18.6 -0.5
PLOR  Plostina          144.03  56 ⇑P     PKPab   15 39 16.2 -3.2
VRI   Vrincioaia        144.09  56 ⇑P     PKPab   15 39 19.1 -0.5
AKASG Malin Array Be    144.98  48 PKPbc  PKPab   15 39 20.4 -2.2
      comp=Z,4.4nm,0.9s,baz=279,slow=3.6,SNR=15
VLDR  Vladesti          145.03  56 ⇑P     PKPbc   15 39 21.7 -1.4
CFR   Carcaliu          145.13  57 ⇑P     PKPbc   15 39 21.1 -2.2
TPGR  Topolog           145.35  58 ⇑P     PKPbc   15 39 22.6 -1.5
TIRR  Tirgusor          145.38  59 ⇑P     PKPbc   15 39 22.0 -2.2
MILM  Milestii Mici     145.41  54 ⇑P     PKPbc   15 39 22.2 -1.9
JURR  Jurilovca         145.69  58 ⇑P     PKPdf   15 39 24.0 -0.8
KLMR  Klimovskoe        145.72  27 e      PKPdf   15 39 22.2 -2.1
KLMR                               AMP            15 39 24.0
      comp=Z,30nm,1.1s
HHC   Hu-ho-hao-te      147.03 295 eP     PKPdf   15 39 23.5 -3.9
XAN   Xi'an             148.57 282 PKPbc  PKPdf   15 39 26.3 -3.8
XAN                                pPKP   sPKPbc  15 39 36.8  0.0
BRTR  Keskin Array B    149.45  67 PKPbc  PKPdf   15 39 33.1 +1.7
      comp=Z,2.4nm,1.0s,baz=207,slow=2.5,SNR=7.9
SONM  Songino Array     149.78 309 PKPbc  PKPdf   15 39 32.0 +0.4
      comp=Z,2.6nm,0.9s,baz=119,slow=1.5,SNR=12
CMAR  Chiang Mai Arr    150.96 246 PKPbc  PKPdf   15 39 36.2 +2.0
      comp=Z,4.5nm,0.8s,baz=185,slow=1.8,SNR=36
CMAR  Chiang Mai Arr    150.96 246 PKPdf  PKPdf   15 39 34.9 +0.6
LZH   Lanzhou           152.95 285 ePKPbc PKPbc   15 39 43.0 -1.2
ZALV  Zalesovo Beam     157.17 339 PKP    PKPdf   15 39 38.9 -3.0
      comp=Z,0.6nm,0.4s,baz=48,slow=2.2,SNR=4.1
ZALV                               PKPab  PKPab   15 40 12.3 -0.3
      comp=Z,0.6nm,0.4s,baz=37,slow=3.6,SNR=2.1
WMQ   Urumqi            163.31 314 eP     PKPdf   15 39 51.5 +2.4
WMQ                                LR     LR
      comp=Z,200nm,19.7s
MKAR  Makanchi Array    164.04 331 PKPab  PKPab   15 40 42.2 -0.6
      comp=Z,0.3nm,0.7s,baz=49,slow=4.8,SNR=2.1
```

MDD ***27*** *15:33:54.0±1.4, 39.°00N×13.°59W, h30^{km}, mb4.4/19, Error ellipse: s-maj=13.0km s-min=9.0km az=74.0, PRXIMO*
IGIL ***27*** *15:33:54.7, 39.°04N×13.°55W, h30^{km}, ML2.8*
LDG ***27*** *15:33:54.8±0.3, 39.°05N×13.°46W, h10^{km}, Ml3.4/4, Error ellipse: s-maj=6.2km s-min=3.7km az=73.0*
INMG ***27*** *15:33:56.0±1.4, 38.°96N×13.°72W, h10^{km}, ML2.9, Error ellipse: s-maj=6.4km s-min=4.0km az=79.0*
CNRM ***27*** *15:34:03.0, 38.°24N×12.°80W, h30^{km}, ml3.6*
ISC 27 15:33:49.2±2.1**, 38.°97N**±0.°05×**13.°4W**±0.°1**, h10**^{km}**, n85,** σ**2**^{s}**98**/157**, Azores-Cape St. Vincent Ridge**

```
Code  Station Name        Δ°    AZ°  Phase ID          Time      Res
                                   Op     ISC      h  m  s       ISC
PMAFR Mafra               3.22  89 ePn    Pb      15 34 44.4 -2.1
PMAFR                              eSn    Sn      15 35 20.0 +1.7
PMAFR                              A      A       15 35 22.9
      53nm,0.4s
PMAFR Mafra               3.22  89 P      Pb      15 34 44.4 -2.1
      5.4nm,0.1s,SNR=7.9
PMAFR                              S      Sn      15 35 20.6 +2.3
      42nm,0.2s,SNR=7.9
PMST  Lisbon--Monsan      3.31  93 ePn    Pb      15 34 47.1 -0.9
PMST                               eSn    Sn      15 35 24.0 +3.5
PMST                               A      A       15 35 28.2
      37nm,0.2s
LIS   Lisbon              3.34  93 eSn    Sn      15 35 24.4 +3.2
LIS   Lisbon              3.34  93 S      Sn      15 35 24.4 +3.2
INMG  Instituto de M      3.35  92 eSn    Sb      15 35 26.9 -2.7
PSBE  So Bento            3.63  80 ePn    Pn      15 34 49.9 +4.4
PSBE                               eSn    Sn      15 35 30.0 +1.6
PSBE                               A      A       15 35 37.7
      10nm,0.3s
PNCL  Nicolau / Gran      3.93 101 ePn    Pn      15 34 53.1 +3.6
PNCL                               eSn    Sn      15 35 37.0 +1.4
PNCL                               A      A       15 35 43.8
      14nm,0.3s
PNCL  Nicolau / Gran      3.93 101 P      Pn      15 34 53.1 +3.6
PNCL                               S      Sn      15 35 37.0 +1.4
      14nm,0.3s
PCAS  Casmilo, Conde      3.96  73 ePn    Pn      15 34 53.0 +3.0
PCAS                               eSn    Sn      15 35 37.0 +0.6
PCAS                               A      A       15 35 40.8
      9.0nm,0.6s
PCAS  Casmilo, Conde      3.96  73 P      Pn      15 34 53.0 +3.0
PCAS                               S      Sn      15 35 37.0 +0.6
      9.0nm,0.6s
PTEO  Sao Teotonio        3.96 110 ePn    Pn      15 34 53.3 +3.4
PTEO                               eSn    Sn      15 35 35.3 -1.1
PTEO                               A      A       15 35 38.7
      16nm,0.2s
PTEO  Sao Teotonio        3.96 110 P      Pn      15 34 53.3 +3.4
PTEO                               S      Sn      15 35 35.3 -1.1
      7.9nm,0.2s
PMTG  Montargil           4.04  87 ePn    Pn      15 34 55.2 +4.0
PMTG                               eSn    Sn      15 35 40.2 +1.6
PMTG                               A      A       15 35 43.3
      9.7nm,0.5s
PMTG  Montargil           4.04  87 P      Pn      15 34 55.2 +4.0
PMTG                               S      Sn      15 35 40.2 +1.6
      9.7nm,0.5s
PFVI  Vila Bisbo          4.06 115 ePn    Pn      15 34 54.6 +3.3
PFVI                               eSn    Sn      15 35 39.3 +0.4
PFVI                               A      A       15 35 44.1
      11nm,0.3s
PFVI  Vila Bisbo          4.06 115 P      Pn      15 34 54.7 +3.3
      9.4nm,0.1s,SNR=7.9
PFVI                               S      Sn      15 35 38.8 -0.2
      12nm,0.1s,SNR=7.9
PFVI  Vila Bisbo          4.06 115 P      Pn      15 34 54.1 +2.7
PFVI                               S      Sn      15 35 35.0 -3.9
COI   Coimbra             4.06  71 eSn    Sn      15 35 40.1 +1.1
COI   Coimbra             4.06  71 S      Sn      15 35 40.1 +1.1
MORF  Marmelete           4.11 112 eP     Pn      15 34 55.8 +3.7
MORF                               eS     Sn      15 35 40.3 +0.2
MORF                               IAML           15 35 41.9
      comp=N,20nm,0.1s
MORF  Marmelete           4.11 112 ePn    Pn      15 34 55.9 +3.8
MORF                               eSn    Sn      15 35 40.4 +0.2
MORF                               A      A       15 35 47.1
      comp=N,20nm,0.2s
MORF  Marmelete           4.11 112 P      Pn      15 34 55.8 +3.7
MORF                               S      Sn      15 35 40.3 +0.2
PCVE  Castro Verde        4.43 106 ePn    Pn      15 35 00.5 +4.0
PCVE                               eSn    Sn      15 35 48.1 -0.1
PCVE                               A      A       15 35 53.9
      comp=N,10nm,0.2s
PCVE  Castro Verde        4.43 106 P      Pn      15 35 00.5 +4.0
PCVE                               S      Sn      15 35 48.1 -0.1
      comp=N,10nm,0.2s
PBEJ  Beja                4.45 100 ePn    Pn      15 35 01.5 +4.7
PBEJ                               eSn    Sn      15 35 49.8 +1.1
PBEJ                               A      A       15 35 52.7
      comp=N,11nm,0.5s
PBEJ  Beja                4.45 100 P      Pn      15 35 01.5 +4.7
PBEJ                               S      Sn      15 35 49.8 +1.1
      comp=N,5.3nm,0.5s
PESTR Estremoz            4.55  89 ePn    Pn      15 35 02.8 +4.7
PESTR                              eSn    Sn      15 35 51.7 +0.7
PESTR                              A      A       15 35 58.8
      comp=N,6.4nm,0.3s
PESTR Estremoz            4.55  89 P      Pn      15 35 01.8 +3.7
PESTR                              S      Sn      15 35 49.6 -1.4
PVIS  Viseu               4.60  66 ePn    Pn      15 35 02.8 +4.0
PVIS                               eSn    Sn      15 35 51.7 -0.6
PVIS                               A      A       15 35 59.7
      comp=N,12nm,0.1s
PVIS  Viseu               4.60  66 P      Pn      15 35 02.8 +4.0
PVIS                               S      Sn      15 35 51.7 -0.6
      comp=N,5.8nm,0.1s
PBDV  Barranco-do-Ve      4.66 110 ePn    Pn      15 35 03.8 +4.2
PBDV                               eSn    Sn      15 35 54.1 +0.4
PBDV                               A      A       15 35 59.7
      comp=N,12nm,0.5s
PBDV  Barranco-do-Ve      4.66 110 P      Pn      15 35 03.8 +4.2
PBDV                               S      Sn      15 35 54.1 +0.4
      comp=N,12nm,0.5s
PCBR  Castelo Branco      4.68  77 ePn    Pn      15 35 03.1 +3.2
PCBR                               eSn    Sn      15 35 54.8 +0.5
PCBR                               A      A       15 35 57.0
      comp=N,5.3nm,0.3s
PCBR  Castelo Branco      4.68  77 P      Pn      15 35 03.1 +3.2
PCBR                               S      Sn      15 35 54.8 +0.5
      comp=N,2.7nm,0.3s
PMRV  Marv??o             4.70  82 ePn    Pn      15 35 03.3 +3.1
PMRV                               eSn    Sn      15 35 55.3 +0.4
PMRV                               A      A       15 35 59.3
      comp=N,12nm,0.3s
PMRV  Marv??o             4.70  82 P      Pn      15 35 03.3 +3.1
PMRV                               S      Sn      15 35 55.3 +0.4
      comp=N,12nm,0.3s
MTE   Manteigas           4.75  71 ePn    Pn      15 35 04.2 +3.3
MTE                                eSn    Sn      15 35 58.3 +2.2
MTE                                A      A       15 36 01.6
      comp=N,11nm,0.4s
MTE   Manteigas           4.75  71 P      Pn      15 35 04.2 +3.3
MTE                                S      Sn      15 35 58.3 +2.2
      comp=N,5.7nm,0.4s
PVAQ  Vaqueiros           4.75 107 ePn    Pn      15 35 05.0 +4.1
PVAQ                               eSn    Sn      15 35 56.0  0.0
PVAQ                               A      A       15 36 01.8
      comp=N,15nm,0.3s
PVAQ  Vaqueiros           4.75 107 P      Pn      15 35 05.0 +4.1
PVAQ                               S      Sn      15 35 56.0  0.0
      comp=N,15nm,0.3s
PVAQ  Vaqueiros           4.75 107 P      Pn      15 35 04.7 +3.8
PVAQ                               S      Sn      15 35 53.0 -3.0
EZAM  Zamans              4.80  47 P      Pn      15 35 03.7 +2.2
      comp=N,1.7nm,0.1s,SNR=7.9
EZAM                               S      Sn      15 35 53.5 -3.7
      comp=N,3.1nm,0.1s,SNR=7.9
EGRO  El Granado          4.88 105 P      Pn      15 35 06.6 +3.9
      comp=N,1.5nm,0.1s,SNR=9.2
EGRO                               S      Sn      15 35 58.3 -1.0
      comp=N,7.3nm,0.2s,SNR=5.4
POLO  Lamas de Olo        4.93  59 ePn    Pn      15 35 07.6 +4.1
POLO                               eSn    Sn      15 35 59.7 -0.9
POLO                               A      A       15 36 07.1
      comp=N,2.1nm,0.4s
POLO  Lamas de Olo        4.93  59 P      Pn      15 35 07.6 +4.1
POLO                               S      Sn      15 35 59.7 -0.9
      comp=N,2.1nm,0.4s
PGAV  Gavieira, Arco      4.94  51 ePn    Pn      15 35 06.5 +3.0
PGAV                               eSn    Sn      15 35 59.9 -0.9
PGAV                               A      A       15 36 04.4
      comp=N,7.9nm,0.6s
PGAV  Gavieira, Arco      4.94  51 P      Pn      15 35 06.5 +3.0
PGAV                               S      Sn      15 35 59.9 -0.9
      comp=N,7.9nm,0.6s
PVRL  Vila Real           4.94  60 ePn    Pn      15 35 07.8 +4.3
PVRL                               eSn    Sn      15 35 59.2 -1.6
PVRL                               A      A       15 36 05.8
      comp=N,12nm,0.3s
PVRL  Vila Real           4.94  60 P      Pn      15 35 07.8 +4.3
PVRL                               S      Sn      15 35 59.2 -1.6
      comp=N,6.2nm,0.3s
PCAB  Cabril              4.95  55 ePn    Pn      15 35 07.3 +3.7
PCAB                               eSn    Sn      15 35 59.3 -1.6
PCAB                               A      A       15 36 08.0
      comp=N,11nm,0.3s
PCAB  Cabril              4.95  55 P      Pn      15 35 07.3 +3.7
PCAB                               S      Sn      15 35 59.3 -1.6
      comp=N,5.5nm,0.3s
EBAD  Badajoz             5.00  90 P      Pn      15 35 08.0 +3.7
      comp=N,1.5nm,0.1s,SNR=15
EBAD                               S      Sn      15 36 02.5 +0.3
      comp=N,5.4nm,0.2s,SNR=9.1
ELOB  Lobios              5.01  53 P      Pn      15 35 07.2 +2.7
      comp=N,6.5nm,0.1s,SNR=25
ELOB                               S      Sn      15 35 59.9 -2.6
      comp=N,2.0nm,0.0s,SNR=4.5
PBAR  Barrancos           5.06  97 eSn    Sn      15 36 05.7 +2.1
PBAR  Barrancos           5.06  97 S      Sn      15 36 05.7 +2.1
EMAZ  Mazaricos           5.21  39 P      Pn      15 35 09.4 +2.2
      comp=N,2.7nm,0.1s,SNR=7.9
EMAZ                               S      Sn      15 36 04.2 -3.1
      comp=N,6.2nm,0.1s,SNR=4.0
MVO   Moncorvo            5.37  64 ePn    Pn      15 35 13.2 +3.8
MVO                                eSn    Sn      15 36 10.2 -1.2
MVO                                A      A       15 36 13.9
      comp=N,9.9nm,0.2s
MVO   Moncorvo            5.37  64 P      Pn      15 35 12.8 +3.3
      comp=N,2.8nm,0.1s,SNR=7.9
MVO                                S      Sn      15 36 09.1 -2.3
      comp=N,3.6nm,0.1s,SNR=7.9
EMIN  Mina Concepcio      5.43 101 P      Pn      15 35 14.0 +3.7
      comp=N,0.8nm,0.1s,SNR=11
EMIN                               S      Sn      15 36 11.4 -1.4
      comp=N,5.1nm,0.2s,SNR=7.3
EAGO  Agolada(Pontev      5.57  45 P      Pn      15 35 14.9 +2.8
      comp=N,3.0nm,0.1s,SNR=7.9
EAGO                               S      Sn      15 36 13.3 -2.8
      comp=N,3.1nm,0.1s,SNR=7.9
PBRG  Braganca            5.83  59 ePn    Pn      15 35 19.7 +3.9
PBRG                               eSn    Sn      15 36 22.1 -0.6
PBRG                               A      A       15 36 26.9
      comp=N,4.2nm,0.2s
PBRG  Braganca            5.83  59 P      Pn      15 35 19.7 +3.9
PBRG                               S      Sn      15 36 22.1 -0.6
      comp=N,2.1nm,0.2s
ECAL  Calabor             5.90  58 P      Pn      15 35 19.9 +3.2
      comp=N,2.9nm,0.1s,SNR=18
ECAL                               S      Sn      15 36 22.2 -2.2
      comp=N,3.5nm,0.1s,SNR=8.7
ESPR  Espera              6.33 107 S      Sn      15 36 34.5 -0.4
      comp=N,24nm,1.2s,SNR=7.9
ECAB  El Cabril           6.33  96 P      Pn      15 35 26.5 +3.9
      comp=N,0.4nm,0.1s,SNR=7.9
ECAB                               S      Sn      15 36 34.2 -0.8
      comp=N,2.4nm,0.2s,SNR=7.9
EPON  Pontenova           6.43  45 P      Pn      15 35 26.0 +2.1
      comp=N,1.1nm,0.1s,SNR=10.0
EPON                               S      Sn      15 36 33.8 -3.5
      comp=N,2.1nm,0.2s,SNR=7.9
EADA  Adamuz              6.97  94 P      Pn      15 35 35.3 +3.9
      comp=N,0.9nm,0.1s,SNR=7.9
EADA                               S      Sn      15 36 50.4 -0.4
      comp=N,1.0nm,0.1s,SNR=7.9
PAB   San Pablo           7.06  82 P      Pn      15 35 36.0 +3.3
      comp=N,1.2nm,0.2s,SNR=7.9
PAB                                S      Sn      15 36 52.0 -1.0
      comp=N,1.1nm,0.1s,SNR=7.9
GUD   Guadarrama          7.33  74 P      Pn      15 35 40.9 +4.5
      comp=N,0.4nm,0.2s,SNR=7.9
GUD                                S      Sn      15 36 57.2 -2.4
      comp=N,1.2nm,0.8s,SNR=6.2
ESDC  Sonseca Array       7.36  82 P      Pn      15 35 40.4 +3.6
      comp=N,0.7nm,0.1s,baz=270,slow=13,SNR=4.8
ESDC                               S      Sn      15 36 58.5 -1.9
      comp=N,0.2nm,0.1s,baz=266,slow=23,SNR=6.8
EARI  Arriondas           7.56  52 P      Pn      15 35 43.2 +3.7
      comp=N,2.0nm,0.2s,SNR=7.9
EARI                               S      Sn      15 37 02.8 -2.4
      comp=N,1.1nm,1.2s,SNR=7.9
ZHG   ZHG                 7.76 133 P      Pn      15 35 43.8 +1.5
ZHG                                S      Sn      15 37 01.9 -8.4
SRHM  Skhour des Reh      7.88 144 P      Pn      15 35 43.1 -0.9
SRHM                               S      Sn      15 37 05.1 -8.1
ELAN  Lanestosa           8.66  57 P      Pn      15 35 58.8 +4.3
      comp=N,1.0nm,0.2s,SNR=6.8
ELAN                               S      Sn      15 37 29.7 -2.5
```

	comp=N,1.3nm,1.3s,SNR=7.9						
ETOR	Torete	8.93	74	P	Pn	15 36 01.3	+3.0
	comp=N,2.1nm,0.1s,SNR=7.9						
ETOR				S	Sn	15 37 37.5	-1.4
	SNR=7.9						
OUK	Oukaimeden	8.97	148	P	Pn	15 36 01.6	+2.4
OUK				S	Sn	15 37 30.5	-10
MD31	MD31	9.29	128	P	Pn	15 36 03.9	+0.6
MD31				S	Sn	15 37 38.6	-9.3
MDT	Midelt	9.42	128	P	Pn	15 36 06.4	+1.4
MDT				S	Sn	15 37 40.8	-10
OUZM	OUZ	9.71	144	P	Pn	15 36 09.3	+0.2
OUZM				S	Sn	15 37 49.2	-9.2
SJPF	Ste Jean	10.10	62	*e*Pn	Pn	15 36 18.9	+4.7
SJPF				*e*Sn	Sn	15 38 04.0	-3.5
	comp=N,1.2nm,0.3s						
ETSF	Etsaut	10.49	64	*e*Pn	Pn	15 36 23.5	+3.8
ETSF				*e*Sn	Sn	15 38 13.2	-4.1
	comp=N,1.0nm,0.3s						
EPF	Esparros	11.16	64	*e*Pn	Pn	15 36 32.5	+3.7
EPF				*e*Sn	Sn	15 38 29.5	-4.1
	comp=N,2.3nm,0.5s						
SGMF	Saint Gilles	12.16	37	*e*Pn	Pn	15 36 43.3	+0.9
MFF	Saint Martin d	12.37	48	*e*Pn	Pn	15 36 48.0	+2.7
MFF				*e*Sn	Sn	15 38 57.3	-5.8
	comp=N,0.3nm,0.3s						

*DJA **27** 15:46:26.8±0.7, 4°S±7°×12°9E±°, h10^{km}, M3.6/7, MLv3.6/7*
*IDC **27** 15:46:31.2±6.2, 3°.22S×133°.84E, h150^{km}±45^{km}, mb2.7/2, mb1 2.8/4, mb1mx2.7/32, mbtmp3.2/4, Error ellipse: s-maj=125.1km s-min=18.4km az=69.0*
ISC 27 15:46:25.1±1.0, **4°.20S**±0°.07×**129°.44E**±0°.06, **h10**^{km}, **n10**, σ**1^{s}.02**/12, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.98	329	P	Pg	15 46 44.0	0.0
MSAI				S	Sb	15 46 56.6	-0.7
AAI	Ambon	1.34	292	P	Pn	15 46 50.0	+0.2
FAKI	Fak Fak	3.08	66	P	Pn	15 47 15.0	+1.2
SIJI	Sorong	3.77	29	P	Pn	15 47 24.2	+0.8
	3.6nm,0.3s,baz=109,slow=22,SNR=30						
SIJI				S	Sn	15 48 06.8	-1.1
	3.8nm,0.3s,baz=50,slow=23,SNR=6.8						
SWI	Sorong	3.78	29	P	Pn	15 47 23.7	+0.3
LBMI	Labuha	4.03	331	P	Pn	15 47 27.4	+0.5
SANI	Sanana	4.05	302	P	Pn	15 47 28.7	+1.5
WRA	Warramunga Arr	16.36	163	P	Pn	15 50 13.5	-1.5
	0.1nm,0.3s,baz=357,slow=9.3,SNR=1.5						
ASAR	Alice Springs	19.83	168	P	P	15 50 56.4	+0.2
	0.9nm,0.6s,baz=352,slow=11,SNR=15						
MKAR	Makanchi Array	65.59	326	P	P	15 57 09.8	+0.5
	0.3nm,0.6s,baz=111,slow=7.7,SNR=8.3						

*NEIC **27** 15:56:22.3±2.1, 56°.3S±0°.1×26°.6W±0°.2, h67^{km}±7^{km}, mb4.6/19, Error ellipse: s-maj=22.8km s-min=10.8km az=46.0*
*IDC **27** 15:56:22.2±0.7, 56°.31S×26°.51W, h66^{km}±6^{km}, mb4.2/6, mb1 4.2/7, mb1mx3.7/21, mbtmp4.4/7, Error ellipse: s-maj=30.5km s-min=17.3km az=90.0*
ISC 27 15:56:24.3±0.6, **56°.33S**±0°.10×**26°.6W**±0°.1, **h88**^{km}, **n44**, σ**0^{s}.97**/42, **mb4.5**/12, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.99	286	Pn	Pn	15 57 48.2	-2.1
VNA1	Neumayer--Stat	16.42	158	P	P	16 00 09.6	-0.6
VNA3	Neumayer Olymp	16.63	161	P	P	16 00 12.2	-0.3
VNA2	Neumayer--Watz	16.82	158	P	P	16 00 14.7	+0.1
	baz=319,slow=12						
SNAA	Sanae	18.36	156	P	P	16 00 31.3	-0.4
SNAA	Sanae	18.36	156	P	P	16 00 30.6	-1.1
	1.0nm,0.3s,baz=308,slow=10,SNR=19						
SNAA	Sanae	18.36	156	P	P	16 00 29.9	-1.7
PMSA	Palmer Station	19.96	230	P	P	16 00 50.3	+1.3
	9.3nm,0.9s,baz=66,slow=6.6,SNR=1.9						
PMSA	Palmer Station	19.96	230	P	P	16 00 49.7	+0.7
PMSA				IAmb	IAmb	16 00 53.7	
	comp=Z,24nm,1.1s						
DSPA	Despedida	23.66	258	P	P	16 01 28.7	+1.3
PLTB	Pedras Altas	30.92	311	P	P	16 02 33.4	+0.9
QSPA	South Pole Qui	33.92	180	P	P	16 02 58.6	-0.1
	comp=Z,12nm,0.6s,baz=355,slow=1.2,SNR=151						
QSPA	South Pole Qui	33.92	180	P	P	16 02 58.4	-0.2
QSPA				IAmb	IAmb	16 03 00.2	
	comp=Z,14nm,0.6s						
MT02	Curacav	38.17	288	P	P	16 03 35.9	+0.9
MAW	Mawson	39.74	143	P	P	16 03 47.8	+0.2
	comp=Z,3.1nm,0.3s,baz=219,slow=6.4,SNR=24						
MAW	Mawson	39.74	143	P	P	16 03 47.6	0.0
AC04	Llanos de Chal	42.15	293	P	P	16 04 08.9	+1.0
LVC	Limon Verde	45.71	300	P	P	16 04 34.9	-1.9
SBA	Scott Base	45.83	184	P	P	16 04 37.7	+1.0
SBA				IAmb	IAmb	16 04 52.2	
	comp=Z,30nm,1.4s						
VNDA	Vanda	46.31	183	P	P	16 04 41.0	+0.5
	comp=Z,2.9nm,0.8s,baz=184,slow=8.1,SNR=12						
VNDA	Vanda	46.31	183	P	P	16 04 40.6	+0.1
VNDA				IAmb	IAmb	16 04 43.6	
	comp=Z,5.4nm,0.9s						
PB01	IPOC Station P	47.32	300	P	P	16 04 48.9	-0.3
PB01				IAmb	IAmb	16 05 03.0	
	comp=Z,19nm,1.5s						
H10S2	ASCENSION HYDR	48.18	16	T	T	16 57 36.3	
	baz=189,slow=74,SNR=29						
H10S3	ASCENSION HYDR	48.18	16	T	T	16 57 36.6	
	baz=31,slow=74,SNR=59						
PB11	IPOC Station P	48.50	301	P	P	16 04 58.3	0.0
PB11				IAmb	IAmb	16 05 16.1	
	comp=Z,5.2nm,0.9s						
H10N1	ASCENSION HYDR	49.30	16	T	T	16 59 06.5	
	baz=188,slow=75,SNR=20						
H10N3	ASCENSION HYDR	49.30	16	T	T	16 59 00.5	
	baz=188,slow=75,SNR=93						
H10N2	ASCENSION HYDR	49.31	16	T	T	16 59 04.4	
	baz=188,slow=75,SNR=26						
PB16	IPOC Station P	49.66	302	P	P	16 05 07.7	+0.1
PB16				IAmb	IAmb	16 05 25.3	
	comp=Z,6.5nm,1.3s						
PB12	IPOC Station P	49.80	301	P	P	16 05 08.5	+0.4
PB12				IAmb	IAmb	16 05 10.4	
	comp=Z,15nm,1.1s						
LPAZ	La Paz	50.79	305	P	P	16 05 15.7	-0.6
LPAZ				IAmb	IAmb	16 05 37.7	
	comp=Z,3.4nm,0.7s						
CASY	Casey	53.54	160	P	P	16 05 35.4	+0.1
BOAV	Boa Vista	64.69	322	P	P	16 06 52.3	-0.6
BOAV				IAmb	IAmb	16 07 15.4	
	comp=Z,5.4nm,1.2s						
TORD	Torodi Ar. Bea	73.14	29	P	P	16 07 46.5	+1.4
	comp=Z,0.7nm,0.4s,baz=203,slow=6.2,SNR=8.0						
TORD				pP	PcP	16 08 02.3	+1.0
	comp=Z,1.4nm,0.6s,baz=197,slow=6.6,SNR=6.1						
TORD	Torodi Ar. Bea	73.14	29	P	P	16 07 46.1	+0.9
TORD				IAmb	IAmb	16 08 08.6	
	comp=Z,3.1nm,0.6s						
ASAR	Alice Springs	98.63	162	P	P	16 09 52.4	-1.1
	comp=Z,0.6nm,0.6s,baz=188,slow=3.5,SNR=11						
NOA	NORSAR Array B	120.76	20	PKP	PKPdf	16 15 02.9	-1.7
	comp=Z,0.4nm,0.6s,baz=180,slow=1.7,SNR=3.5						
FINES	FINESS Array B	124.48	28	PKP	PKPdf	16 15 11.3	-0.3
	comp=Z,1.4nm,0.7s,baz=142,slow=6.5,SNR=8.1						
FINES				pPKP	pPKPdf	16 15 32.6	-2.5
	comp=Z,1.7nm,0.7s,baz=132,slow=2.8,SNR=2.0						
YKA	Yellowknife Ar	136.59	318	PKP	PKPdf	16 15 34.3	-0.2
	comp=Z,0.7nm,0.6s,baz=128,slow=2.3,SNR=18						
INK	Inuvik	146.22	320	PKPbc	PKPbc	16 15 52.8	0.0
	comp=Z,1.7nm,0.4s,baz=47,slow=1.7,SNR=18						
INK	Inuvik	146.22	320	PKPdf	PKPbc	16 15 53.0	+0.1
SONM	Songino Array	150.43	87	PKPbc	PKPbc	16 16 04.9	+0.2
	comp=Z,1.9nm,0.6s,baz=219,slow=3.4,SNR=11						
ILAR	Eielson Array	150.53	311	PKPbc	PKPbc	16 16 04.3	+0.1
	comp=Z,1.8nm,0.7s,baz=142,slow=5.2,SNR=36						
ILAR				pPKPbc	pPKPdf	16 16 23.4	+1.0
	comp=Z,2.9nm,0.9s,baz=148,slow=1.7,SNR=8.1						
ILAR	Eielson Array	150.53	311	PKPbc	PKPbc	16 16 04.1	-0.1

*IDC **27** 16:13:41.5±3.2, 31°.08S×71°.14W, h0^{km}, mb4.2/2, mb1 4.3/2, mb1mx3.8/21, mbtmp4.2/2, Error ellipse: s-maj=244.7km s-min=69.9km az=159.0*
*GUC **27** 16:13:49.3±0.6, 30°.64S×71°.16W, h59^{km}±2^{km}, ML4.1*
*NEIC **27** 16:13:51.4±2.7, 30°.69S±0°.03×71°.33W±0°.08, h49^{km}±8^{km}, mb4.0/3, ML4.1(GUC), Error ellipse: s-maj=10.4km s-min=3.6km az=73.0*
ISC 27 16:13:51.1±0.9, **30°.64S**±0°.03×**71°.24W**±0°.05, **h55**^{km}±7^{km}, **n48**, σ**1^{s}.16**/67, **mb4.0**/3, **2C-2D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.34	264	⇑*i*P	Pn	16 14 01.1	0.0
CO06				*e*S	Sn	16 14 09.8	+1.5
CO06				IAML		16 14 13.0	
	comp=E,12µm,0.2s						
CO06	Fray Jorge	0.34	264	Pn	Pn	16 14 01.1	0.0
CO03	El Pedregal	0.52	113	⇓*i*P	Pn	16 14 02.6	-0.4
CO03				*e*S	Sn	16 14 11.4	-0.3
CO03				IAML		16 14 12.2	
	comp=E,27µm,0.1s						
CO03	El Pedregal	0.52	113	Pn	Pn	16 14 02.6	-0.4
CO03				Sn	Sn	16 14 11.0	-0.7
GO04	Tololo Observa	0.60	40	⇓*i*P	Pn	16 14 04.1	0.0
GO04				*e*S	Sn	16 14 13.9	+0.3
GO04				IAML		16 14 16.2	
	comp=N,38µm,0.5s						
GO04	Tololo Observa	0.60	40	Pn	Pn	16 14 04.1	0.0
GO04				Sn	Sn	16 14 13.8	+0.2
CO05	La Serena	0.71	0	⇑*i*P	Pn	16 14 05.3	0.0
CO05				*e*S	Sn	16 14 15.9	+0.3
CO05				IAML		16 14 16.6	
	comp=N,15µm,0.3s						
CO05	La Serena	0.71	0	Pn	Pn	16 14 05.2	-0.1
CO05				Sn	Sn	16 14 15.7	+0.1
LCO	Las Campanas	1.69	16	*e*P	Pn	16 14 18.4	-0.1
LCO				*e*S	Sn	16 14 39.5	+0.4
LCO	Las Campanas	1.69	16	Sn	Sn	16 14 39.3	+0.1
VA06	Catapilco	1.92	181	*e*P	Pn	16 14 21.6	+0.2
VA06				*e*S	Sn	16 14 45.6	+1.2
VA06				IAML		16 14 53.8	
	comp=E,2µm,0.4s						
VA03	San Esteban	2.20	165	*e*P	Pn	16 14 24.9	-0.5
VA03				*e*S	Sn	16 14 52.4	+0.9
VA03				IAML		16 14 57.1	
	comp=E,1µm,0.4s						
VA03	San Esteban	2.20	165	Pn	Pn	16 14 25.2	-0.1
ROCH	El Roble	2.34	175	*e*P	Pn	16 14 28.1	+0.8
ROCH				*e*S	Sn	16 14 56.7	+1.7
ROCH				IAML		16 15 07.0	
	comp=N,1µm,0.4s						
ZON	Zonda	2.38	113	Pn	Pn	16 14 29.2	+1.5
VA01	Torpederas	2.41	188		Pn	16 14 27.1	-0.9
AC04	Llanos de Chal	2.43	4	*e*P	Pn	16 14 28.4	0.0
AC04				*e*S	Sn	16 14 58.0	+1.1
AC04				IAML		16 15 09.5	
	comp=E,880nm,0.4s						
AC04	Llanos de Chal	2.43	4	Pn	Pn	16 14 30.0	+1.6
PEL	Peldehue	2.54	169	*e*P	Pn	16 14 31.3	+1.3
PEL				*e*S	Sn	16 15 00.8	+0.9
PEL				IAML		16 15 17.4	
	comp=E,671nm,0.5s						
PEL	Peldehue	2.54	169	Pn	Pn	16 14 30.4	+0.4
MT02	Curacav	2.62	178	*e*P	Pn	16 14 31.0	+0.1
MT02				*e*S	Sn	16 15 02.4	+0.8
MT02	Curacav	2.62	178	Pn	Pn	16 14 30.3	-0.6
MT05	Renca	2.78	171	*e*P	Pn	16 14 32.3	-1.0
MT05				*e*S	Sn	16 15 07.9	+2.2
MT05	Renca	2.78	171	Pn	Pn	16 14 31.3	-1.9
FCH	Farellones	2.80	163	*e*P	Pn	16 14 35.2	+1.4
FCH				*e*S	Sn	16 15 08.8	+2.2
FCH				IAML		16 15 23.8	
	comp=E,331nm,0.3s						
VA05	Santo Domingo	3.03	186	*e*P	Pn	16 14 35.1	-1.4
VA05				*e*S	Sn	16 15 10.2	-1.4
VA05				IAML		16 15 25.1	
	comp=E,1µm,0.4s						
VA05	Santo Domingo	3.03	186	Pn	Pn	16 14 36.1	-0.5
MT09	Talagante	3.14	176	*e*P	Pn	16 14 37.4	-0.9
MT09				*e*S	Sn	16 15 15.4	+0.8
MT09				IAML		16 15 34.0	
	comp=N,470nm,0.4s						
MT09	Talagante	3.14	176	Pn	Pn	16 14 38.6	+0.3
GO03	Copiap	3.16	16	Pn	Pn	16 14 39.4	+0.9
MT01	Popeta	3.22	180	*e*P	Pn	16 14 39.9	+0.7
MT01				*e*S	Sn	16 15 16.6	+0.3
MT01				IAML		16 15 28.3	
	comp=E,321nm,0.5s						
MT01	Popeta	3.22	180	Pn	Pn	16 14 39.5	+0.3
BO01	Tunca	3.75	178	Pn	Pn	16 14 46.8	+0.4
BO02	Sierra Bellavi	4.16	175	Pn	Pn	16 14 51.7	-0.5
AC02	Maricunga	4.22	27	Pn	Pn	16 14 54.4	+1.0
GO05	Huala	4.40	187	Pn	Pn	16 14 53.6	-1.8
PB14	IPOC Station P	6.03	7		Pn	16 15 20.7	+2.6
PB15	IPOC Station P	7.56	12		Pn	16 15 40.9	+1.8
PB06	IPOC Station P	8.04	11		Pn	16 15 47.6	+2.2
LC01	Cunco	8.26	183	Pn	Pn	16 15 46.9	-1.3
LVC	Limon Verde	8.26	15		Pn	16 15 50.0	+1.4
PB01	IPOC Station P	9.68	10		Pn	16 16 09.5	+1.6
ETMB	Extrema	21.24	14	P	P	16 18 34.9	+2.2
ETMB				IAmb	IAmb	16 18 36.6	
	comp=Z,11nm,1.4s						
BDFB	Brasilia	25.98	60	P	P	16 19 17.6	-1.4
	comp=Z,3.0nm,0.5s,baz=235,slow=6.6,SNR=6.9						
BDFB	Brasilia	25.98	60	P	P	16 19 17.4	-1.6
BDFB				IAmb	IAmb	16 19 27.7	
	comp=Z,6.1nm,1.2s						
TORD	Torodi Ar. Bea	82.43	70	P	P	16 26 06.5	-1.4
	comp=Z,1.6nm,0.8s,baz=253,slow=3.5,SNR=8.2						
TORD	Torodi Ar. Bea	82.43	70	P	P	16 26 06.8	-1.0
TORD				IAmb	IAmb	16 26 08.1	
	comp=Z,2.1nm,1.0s						
ZALV	Zalesovo Beam	151.00	30	PKPbc	PKiKP	16 33 36.4	-1.4
	comp=Z,1.6nm,0.5s,baz=316,slow=3.1,SNR=6.6						

*NEIC **27** 16:22:29.6±1.7, 21°.64S±0°.05×68°.40W±0°.08, h119^{km}±7^{km}, Error ellipse: s-maj=11.1km s-min=6.8km az=73.0*
*IDC **27** 16:22:29.1±1.0, 21°.62S×68°.18W, h102^{km}±14^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.7/29, mbtmp4.1/8, Error ellipse: s-maj=28.9km s-min=15.3km az=150.0*
*VAO **27** 16:22:30.8±0.5, 21°.74S×68°.26W, h124^{km}, mb4.2*
*GUC **27** 16:22:30.6±0.6, 21°.68S×68°.46W, h124^{km}±4^{km}, ML4.0*
ISC 27 16:22:29.1±0.6, **21°.64S**±0°.04×**68°.35W**±0°.05, **h121**^{km}±6^{km}, **n110**, σ**1^{s}.60**/132, **mb4.5**/17, **13C**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.84	259	⇑*i*P	Pn	16 22 50.6	+0.6
PB09				*e*S	Sn	16 23 05.7	-0.1
PB09				IAML		16 23 07.0	
	comp=N,3µm,0.3s						
PB09	IPOC Station P	0.84	259		Pn	16 22 50.4	+0.4
PB09				Sn	Sn	16 23 04.8	-1.0
LVC	Limon Verde	1.10	208	P	Pn	16 22 53.1	+0.5
	comp=N,68nm,0.3s,baz=54,slow=5.3,SNR=1018						
LVC				S	Sn	16 23 09.6	-0.9
	comp=N,246nm,0.3s,baz=42,slow=2.9,SNR=20						
LVC				LR	LR	16 23 37.1	
	comp=N,123nm,20.4s,baz=24,slow=56						
LVC	Limon Verde	1.10	208	*e*P	Pn	16 22 52.5	-0.1
LVC				*e*S	Sn	16 23 09.1	-1.4
LVC	Limon Verde	1.10	208	*e*P	Pn	16 22 53.3	+0.6
PB01	IPOC Station P	1.21	299	⇑*i*P	Pn	16 22 53.9	+0.3
PB01				*e*S	Sn	16 23 12.2	+0.2
PB01	IPOC Station P	1.21	299		Pn	16 22 53.8	+0.2
PB01				Sn	Sn	16 23 10.9	-1.1
PB03	IPOC Station P	1.37	252	⇑*i*P	Pn	16 22 55.2	-0.1
PB03				*e*S	Sn	16 23 13.9	-1.3
PB03				IAML		16 23 14.9	
	comp=N,5µm,0.4s						
PB07	IPOC Station P	1.43	266	⇑*i*P	Pn	16 22 55.9	-0.1
PB07				*e*S	Sn	16 23 15.5	-1.0
PB07				IAML		16 23 17.5	
	comp=N,2µm,0.3s						
PB07	IPOC Station P	1.43	266		Pn	16 22 55.8	-0.3
PB07				Sn	Sn	16 23 14.8	-1.7
PB02	IPOC Station P	1.47	282	⇑*i*P	Pn	16 22 56.4	0.0
PB02				*e*S	Sn	16 23 16.8	-0.5
PB02				IAML		16 23 19.3	
	comp=E,1µm,0.4s						
PB06	IPOC Station P	1.55	227	⇑*i*P	Pn	16 22 57.7	+0.2
PB06				*e*S	Sn	16 23 18.3	-0.7
PB06				IAML		16 23 19.8	
	comp=N,3µm,0.1s						
PB06	IPOC Station P	1.55	227		Pn	16 22 57.6	+0.2
PB08	IPOC Station P	1.67	333	⇑*i*P	Pn	16 23 01.1	+2.0
PB08				*e*S	Sn	16 23 23.5	+1.8
PB08				IAML		16 23 24.9	
	comp=E,831nm,0.5s						
PB08	IPOC Station P	1.67	333		Pn	16 23 00.8	+1.8
PB04	IPOC Station P	1.81	247	⇑*i*P	Pn	16 23 00.1	-0.4
PB04				*i* S	Sn	16 23 23.0	-1.3
PB04				IAML		16 23 30.2	
	comp=N,2µm,0.2s						
PB04	IPOC Station P	1.81	247	Pn	Pn	16 22 59.9	-0.6
PB15	IPOC Station P	1.88	213	⇑*e*P	Pn	16 23 01.8	+0.4
PB15				*e*S	Sn	16 23 26.0	+0.1
PB15	IPOC Station P	1.88	213		Pn	16 23 01.8	+0.4
TA01	Diego Aracena	2.01	302	⇑*i*P	Pn	16 23 02.9	0.0
TA01				*e*S	Sn	16 23 27.4	-1.2
TA01				IAML		16 23 29.8	
	comp=E,2µm,0.3s						
TA01	Diego Aracena	2.01	302		Pn	16 23 02.8	0.0
PB05	IPOC Station P	2.10	234	⇑*i*P	Pn	16 23 03.5	-0.5
PB05				*e*S	Sn	16 23 28.1	-2.6
TA02	Huaiquique	2.15	309	⇑*i*P	Pn	16 23 04.4	-0.1
TA02				*e*S	Sn	16 23 30.0	-1.7
TA02				IAML		16 23 31.8	
	comp=N,1µm,0.3s						
TA02	Huaiquique	2.15	309		Pn	16 23 04.2	-0.4
PB11	IPOC Station P	2.23	327	⇑*i*P	Pn	16 23 06.5	+0.7
PB11				*e*S	Sn	16 23 33.8	0.0
PB11				IAML		16 23 35.7	
	comp=E,2µm,0.6s						
PB11	IPOC Station P	2.23	327		Pn	16 23 06.2	+0.5
PB10	IPOC Station P	2.76	227	*e*P	Pn	16 23 11.7	-0.8
PB10				*e*S	Sn	16 23 40.7	-5.0
PB10				IAML		16 23 56.6	
	comp=E,388nm,0.3s						
PB10	IPOC Station P	2.76	227		Pn	16 23 11.6	-0.8
PB16	IPOC Station P	3.46	341	*e*P	Pn	16 23 23.9	+1.8
PB16				*e*S	Sn	16 23 57.2	-5.8
PB16	IPOC Station P	3.46	341	Pn	Pn	16 23 23.2	+1.1
PB14	IPOC Station P	3.52	212	Pn	Pn	16 23 22.0	-0.6
PB12	IPOC Station P	3.54	328	*e*P	Pn	16 23 22.1	-0.6
PB12				*e*S	Sn	16 23 56.1	-8.0
PB12	IPOC Station P	3.54	328	Pn	Pn	16 23 21.8	-0.8
AP01	Chacalluta	3.75	330	Pn	Pn	16 23 24.4	-1.1
AC02	Maricunga	5.22	188	Pn	Pn	16 23 45.1	-0.4
LPAZ	La Paz	5.33	2	*e*P	Pn	16 23 50.1	+3.0
LPAZ	La Paz	5.33	2	Pn	Pn	16 23 49.7	+2.6
GO03	Copiap	6.17	196	Pn	Pn	16 23 55.3	-2.7
GO04	Tololo Observa	8.78	194	Pn	Pn	16 24 29.2	-4.2
SIV	San Ignacio	8.89	52	P	Pn	16 24 33.1	-1.6
	comp=E,2.4nm,0.3s,baz=234,slow=11,SNR=48						
SIV				S	Sn	16 26 08.9	-4.3
	comp=E,0.2nm,0.3s,baz=310,slow=22,SNR=4.2						
CO03	El Pedregal	9.40	192	Pn	Pn	16 24 37.4	-4.2
PTLB	Pontes e Lacer	10.69	56	Pn	Pn	16 24 58.2	-0.7
CPUP	Villa Florida	11.11	117	P	Pn	16 25 02.4	-2.0
	comp=E,0.4nm,0.3s,baz=313,slow=7.5,SNR=3.1						
VILB	Vilhena	11.62	43	*e*P	Pn	16 25 12.8	+1.4
VILB	Vilhena	11.62	43	Pn	Pn	16 25 11.5	+0.1
AQDB	Aquidauana	11.87	87	*e*P	Pn	16 25 15.1	+0.4
AQDB	Aquidauana	11.87	87	Pn	Pn	16 25 13.9	-0.8
ETMB	Extrema	11.93	10	Pn	Pn	16 25 13.1	-2.4
SALV	Santo Antonio	13.27	67	*e*P	Pn	16 25 32.6	-0.3
PP1B	Ponte de Pedra	13.31	75	*e*P	Pn	16 25 33.8	+0.4
PDRB	Porto dos Gac	14.94	50	*e*P	P	16 25 56.1	-0.6
ITAB	Concordia	15.78	114	*e*P	P	16 26 05.9	-0.2
ITAB	Concordia	15.78	114	P	P	16 26 07.3	+1.3
PCMB	Pacaembu	15.89	93	*e*P	P	16 26 06.2	-1.2
CPSB	Cacapava Do Su	15.98	126	*e*P	P	16 26 07.2	-1.1
CLDB	Colider	16.11	50	*e*P	P	16 26 11.3	+1.6
PLTB	Pedras Altas	16.58	131	*e*P	Pn	16 26 13.2	-1.2
PLTB	Pedras Altas	16.58	131		P	16 26 15.2	+0.4
ARAG	Araguaiana, MT	16.74	72	*e*P	P	16 26 17.4	+0.7
ITRB	Iturama	16.95	87	*e*P	P	16 26 18.4	-0.6
BB19B	Bebedouro	18.48	92	*e*P	Pn	16 26 36.7	-0.7
SNDB	Serra Nova Dou	18.93	62	*e*P	Pn	16 26 41.3	-1.4
NPGB	Novo Progresso	19.18	43	*e*P	Pn	16 26 44.2	-1.5
IPMB	Ipameri, GO	19.29	83	*e*P	Pn	16 26 45.6	-1.4
RCLB	Rio Claro- Sao	19.32	96	*e*P	Pn	16 26 45.9	-1.4
SPB	Sao Paulo	19.41	100	P	Pn	16 26 46.7	-1.5
SPB				IAmb	IAmb	16 27 06.3	
	comp=Z,19nm,1.4s						
PET01	Itanhaem-SP	19.58	102	*e*P	Pn	16 26 48.9	-1.4
MACA	Manacapuru-AM	19.82	23	*e*P	Pn	16 26 53.1	0.0
MACA	Manacapuru-AM	19.82	23	P	P	16 26 50.0	-0.4
MACA				IAmb	IAmb	16 26 53.9	
	comp=Z,20nm,0.7s						
VAO	Valinhos	19.83	98	*e*P	P	16 26 50.9	+0.3
ITTB	Itaituba	21.09	37	*e*P	P	16 27 05.1	+1.1
PEXB	Peixe	21.38	67	*e*P	P	16 27 07.6	+0.4
BSCB	Bom Sucesso	21.97	93	*e*P	P	16 27 14.7	+1.1
PTGA	Pitinga	22.33	23	P	P	16 27 18.5	+1.5
	comp=Z,2.6nm,0.4s,baz=139,slow=20,SNR=2.3						
PRPB	Parauapebas	23.62	52	*e*P	P	16 27 29.9	+0.6
JANB	Januaria	23.72	78	*e*P	P	16 27 30.7	+0.4
BOAV	Boa Vista	25.08	19	P	P	16 27 43.9	+1.3
GUA01	Guaratinga, BA	27.41	84	*e*P	P	16 28 04.9	+1.3
CELP	Cerrillos	39.51	3	P	P	16 29 48.7	+0.6
SWET	Sewanee	58.95	343	P	P	16 32 16.6	+0.8
V52A	Sevierville	58.96	346	P	P	16 32 16.7	+0.9
U49A	Red Boiling Sp	60.13	344	P	P	16 32 24.8	+1.0
U49A				IAmb	IAmb	16 32 25.7	
	comp=Z,11nm,1.4s						
WVT	Waverly	60.34	342	P	P	16 32 25.2	0.0
WVT				IAmb	IAmb	16 32 26.7	
	comp=Z,10nm,1.1s						
S54A	Dingess, Beckl	60.36	348	P	P	16 32 26.4	+0.9
S54A				IAmb	IAmb	16 32 27.6	
	comp=Z,6.1nm,0.7s						
T50A	Nancy	60.38	345	P	P	16 32 25.6	+0.1
T50A				IAmb	IAmb	16 32 32.4	
	comp=Z,5.4nm,1.1s						
R55A	Marlinton	60.62	349	P	P	16 32 27.9	+0.8
R55A				IAmb	IAmb	16 32 42.6	
	comp=Z,11nm,1.2s						
WCI	Wyandotte Cave	61.89	344	P	P	16 32 35.9	+0.3
P49A	Miami Univ. Ec	62.75	346	P	P	16 32 41.1	-0.2
FVM	French Village	62.83	340	P	P	16 32 43.0	+1.1
FVM				IAmb	IAmb	16 32 43.9	
	comp=Z,4.6nm,0.6s						
BLO	Bloomington	62.84	344	P	P	16 32 42.4	+0.5
CCM	Cathedral Cave	63.16	340	P	P	16 32 45.2	+1.2
CCM				IAmb	IAmb	16 32 45.4	
	comp=Z,3.3nm,0.8s						
S39A	Bolivar	63.52	338	P	P	16 32 47.6	+1.1
S39A				IAmb	IAmb	16 32 48.5	
	comp=Z,4.2nm,0.6s						
R40A	Maddies Statio	63.70	339	P	P	16 32 48.9	+1.2
R40A				IAmb	IAmb	16 33 07.2	
	comp=Z,11nm,1.4s						
MOQ	Mont Orford	66.72	357	P	P	16 33 06.3	-0.8
I42A	Draeger Farm,	67.88	344	P	P	16 33 15.0	+0.7
DBIC	Dimbokro	68.28	73	P	P	16 33 18.2	+0.7
	comp=Z,2.8nm,0.6s,baz=246,slow=7.0,SNR=6.1						
DBIC	Dimbokro	68.28	73	P	P	16 33 17.1	-0.4
DBIC				IAmb	IAmb	16 33 19.6	
	comp=Z,3.4nm,0.7s						
SDCO	Great Sand Dun	68.63	329	P	P	16 33 21.0	+1.5
MVCO	Mesa Verde	69.69	327	P	P	16 33 25.4	-0.7
F36A	Milaca	70.96	342	P	P	16 33 33.5	+0.2
F36A				IAmb	IAmb	16 34 00.7	
	comp=Z,9.5nm,1.5s						
P18A	Preston Nutter	72.42	327	P	P	16 33 42.6	0.0
P18A				IAmb	IAmb	16 33 46.4	
	comp=Z,3.8nm,0.7s						
PDAR	Pinedale Array	74.49	330	P	P	16 33 56.5	+1.9
	comp=Z,0.5nm,0.7s,baz=122,slow=8.1,SNR=4.0						
PDAR	Pinedale Array	74.49	330	P	P	16 33 54.6	+0.1
NVAR	Mina Array Bea	75.92	322	P	P	16 34 05.5	+2.7
	comp=Z,0.7nm,0.8s,baz=140,slow=7.1,SNR=4.3						
YHH	Holmes Hill	76.64	330	P	P	16 34 07.0	+0.2
TORD	Torodi Ar. Bea	76.91	70	P	P	16 34 10.0	+1.4
	comp=Z,1.2nm,0.6s,baz=251,slow=5.4,SNR=7.8						
TORD	Torodi Ar. Bea	76.91	70	P	P	16 34 08.2	-0.4
YKA	Yellowknife Ar	91.49	340	P	P	16 35 23.1	+1.8
	comp=Z,2.1nm,0.7s,baz=135,slow=4.5,SNR=41						
MKAR	Makanchi Array	145.44	36	PKPbc	PKPab	16 41 55.1	+1.8
	comp=Z,0.6nm,0.6s,baz=313,slow=4.1,SNR=6.8						
MKAR	Makanchi Array	145.44	36		PKPbc	16 41 54.2	+1.2

*IDC **27** 16:43:23.7±1.0, 9°.16S×158°.21E, h0^{km}, mb4.1/8, mb1 4.3/8, mb1mx3.9/36, mbtmp4.1/8, Error ellipse: s-maj=33.6km s-min=21.4km az=166.0*

*NEIC **27** 16:43:25.4±1.6, 9°.1S±0°.2×158°.3E±0°.1, h10^{km}±1^{km}, mb4.2/8, Error ellipse: s-maj=26.2km s-min=17.2km az=196.0*

ISC 27 16:43:25.6±0.7**, 9°.1S**±0°.1×**158°.22E**±0°.07**, h10^{km}, n17, σ1^{s}47**/16**, mb4.2**/9**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.73	100	Pn	Pn	16 43 54.8	-1.0
	60nm,0.3s,baz=225,slow=5.9,SNR=11						
HNR				Sn	Sg	16 44 23.1	+1.7
	146nm,0.3s,baz=236,slow=20,SNR=15						
OUENC	Ouen Island, N	15.59	149	Pn	Pn	16 47 03.4	-2.1
OUENC				IAmb	IAmb	16 47 16.9	
	comp=Z,29nm,1.3s						
CTAO	Charters Tower	15.88	225	P	P	16 47 16.2	+3.1
CTAO				IAmb	IAmb	16 47 23.5	
	comp=Z,19nm,1.4s						
WB0	Warramunga Arr	25.34	243	P	P	16 48 53.4	+0.5
WRAB	Tennant Creek	25.44	242	P	P	16 48 53.9	+0.1
WRA	Warramunga Arr	25.45	242	P	P	16 48 53.3	-0.6
	comp=Z,2.6nm,0.8s,baz=70,slow=9.5,SNR=6.1						
WRA	Warramunga Arr	25.45	242	IAmb	IAmb	16 48 54.8	
	comp=Z,0.5nm,1.2s						
AS31	Alice Springs	27.36	235	P	P	16 49 10.3	-0.9
ASAR	Alice Springs	27.37	235	P	P	16 49 10.8	-0.5
	comp=Z,1.0nm,0.9s,baz=68,slow=8.0,SNR=6.8						
PSA00	Pilbara Seismi	38.90	247	P	P	16 50 51.2	-0.4
PSA00				IAmb	IAmb	16 50 59.4	
	comp=Z,7.5nm,1.3s						
CMAR	Chiang Mai Arr	64.58	295	P	P	16 54 04.2	+0.5
	comp=Z,0.6nm,0.4s,baz=107,slow=5.3,SNR=5.6						
SONM	Songino Array	72.86	326	P	P	16 54 55.4	+0.5
	comp=Z,2.2nm,1.0s,baz=108,slow=4.8,SNR=7.6						
SONM	Songino Array	72.86	326	IAmb	IAmb	16 54 59.9	
	comp=Z,1.7nm,0.9s						
ILAR	Eielson Array	84.21	21	P	P	16 55 56.1	-0.9
	comp=Z,2.2nm,1.0s,baz=252,slow=5.1,SNR=7.5						
MKAR	Makanchi Array	87.11	318	P	P	16 56 11.1	-0.8
	comp=Z,0.8nm,0.7s,baz=90,slow=5.4,SNR=5.4						
ZALV	Zalesovo Beam	87.73	325	P	P	16 56 12.8	-1.8
	comp=Z,0.5nm,0.3s,baz=110,slow=7.8,SNR=1.7						
NVAR	Mina Array Bea	90.55	51	P	P	16 56 30.2	+1.7
	comp=Z,1.5nm,1.1s,baz=249,slow=5.8,SNR=3.7						

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*IDC **27** 16:47:01.6±0.9, 40°.54S×174°.65E, h0^{km}, mb3.4/2, mb1 3.6/3, mb1mx3.2/32, mbtmp3.3/3, ML2.7/1, Error ellipse: s-maj=25.8km s-min=4.6km az=142.0*

*NOU **27** 16:47:07.7, 40°.69S×174°.80E, h71^{km}, MLv3.8/10, Cook Strait, New Zealand*

*WEL **27** 16:47:08.6, 41°S±3°×17°5E±°, h50^{km}±7^{km}, M3.8/37, ML4.0/37, MLv3.8/37, Error ellipse: s-maj=0.0km s-min=0.0km az=82.8*

ISC 27 16:47:06.9±1.3**, 40°.61S**±0°.02×**174°.73E**±0°.02**, h17**^{km}±10^{km}**, n145, σ1^{s}33**/154**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.29	151	P	Pn	16 47 17.7	+1.4
KIW				S	Sn	16 47 24.2	+1.9
OGWZ	Otaki Gorge	0.40	122	P	Pn	16 47 19.0	+1.2
OGWZ				S	Sn	16 47 26.5	+1.6
CAW	Cannon Point	0.56	153	P	Pn	16 47 20.9	+0.8
OHWZ	Ohakea	0.60	48	P	Pn	16 47 21.9	+1.2
OHWZ				S	Sn	16 47 32.1	+2.1
DUWZ	D'Urville Isla	0.64	252	P	Pn	16 47 21.3	+0.1
DUWZ				S	Sn	16 47 31.6	+0.5
MRZ	Mangatainoka R	0.65	95	P	Pn	16 47 21.8	+0.5
MRZ				S	Sn	16 47 32.0	+0.8
HOWZ	Holdsworth Sta	0.66	116	P	Pn	16 47 21.9	+0.4
WEL	Wellington	0.68	177	P	Pn	16 47 22.4	+0.8
WEL				S	Sn	16 47 32.8	+0.9
TCW	Tory Channel	0.69	209	P	Pn	16 47 22.4	+0.5
TCW				S	Sn	16 47 32.2	0.0
SNZO	South Karori	0.70	181	P	Pn	16 47 22.7	+0.7
MTW	Mount Morrison	0.80	133	P	Pn	16 47 23.5	0.0
BHW	Baring Head	0.81	172	P	Pn	16 47 23.7	+0.3
BHW				S	Sn	16 47 35.5	+0.5
POWZ	Post Office Ro	0.82	75	P	Pn	16 47 24.1	+0.4
WAZ	Wanganui	0.88	13	P	Pn	16 47 25.4	+0.9
TIWZ	Tintock	0.90	101	P	Pg	16 47 24.8	+0.4
MSWZ	Moikau Station	0.90	154	P	Pg	16 47 24.8	+0.4
PAWZ	Paruwai Farm	0.94	146	P	Pb	16 47 25.1	+0.4
PRWZ	Pori Road	0.95	87	P	Pg	16 47 25.9	+0.5
TUWZ	Tuamarina	1.01	216	P	Pg	16 47 27.1	+0.5
TMWZ	Te Maipa	1.01	120	P	Pb	16 47 26.1	+0.1
PLWZ	Palliser	1.04	158	P	Pb	16 47 26.4	-0.1
TRWZ	Traveller	1.07	138	P	Pg	16 47 28.4	+0.7
TSZ	Takapari Road	1.09	60	P	Pb	16 47 27.5	+0.2
DVHZ	Dannevirke	1.14	75	P	Pn	16 47 27.8	-0.3
BFZ	Birch Farm	1.16	94	P	Pn	16 47 27.8	-0.5
BFZ	Birch Farm	1.16	94	P	Pn	16 47 27.9	-0.4
CPWZ	Castlepoint	1.16	105	P	Pn	16 47 28.6	+0.3
LREZ	Lake Rotokare	1.17	348	P	Pg	16 47 29.6	0.0
NNZ	Nelson	1.19	239	P	Pb	16 47 29.2	+0.2
CMWZ	Cape Campbell	1.20	199	P	Pg	16 47 30.2	0.0
BSWZ	Blackbirch Sta	1.28	210	P	Pb	16 47 30.6	0.0
PNHZ	Pukenui	1.32	59	P	Pn	16 47 30.3	-0.3
PREZ	Palmer Road	1.34	341	P	Pg	16 47 32.2	-0.5
ANWZ	Angora Road	1.34	84	P	Pn	16 47 30.4	-0.4
MTVZ	Mangateitei	1.35	25	P	Pb	16 47 32.1	+0.3
NMEZ	Namu Road	1.36	331	P	Pb	16 47 32.2	+0.3
PKVZ	Pokaka	1.40	20	P	Pb	16 47 32.5	-0.1
WPHZ	Waipukurau	1.42	68	P	Pn	16 47 31.5	-0.4
KHEZ	Kahui Hut	1.42	337	P	Pb	16 47 33.2	+0.1
NEZ	North Egmont	1.42	340	P	Pb	16 47 33.2	+0.1
MOVZ	Moawhango	1.44	34	P	Pn	16 47 32.4	+0.2
WNVZ	Wahianoa	1.45	28	P	Pb	16 47 33.4	-0.1
TRVZ	Turoa	1.45	26	P	Pb	16 47 33.5	-0.1
DREZ	Durham Road	1.48	344	P	Pb	16 47 34.1	+0.2
DRZ	Dome Shelter	1.48	26	P	Pb	16 47 34.2	+0.1
WHVZ	Whangaehu Hut	1.48	27	P	Pb	16 47 34.1	0.0
VRZ	Vera Road	1.48	1	P	Pb	16 47 33.5	-0.5
FWVZ	Far West T-bar	1.49	25	P	Pb	16 47 34.1	-0.3
NBEZ	Newall Road No	1.49	333	P	Pb	16 47 34.0	-0.2
PRHZ	Porangahau	1.50	77	P	Pn	16 47 32.8	-0.2
BHHZ	Black Hill Sta	1.52	43	P	Pn	16 47 33.6	+0.3
TUVZ	Tukino	1.52	28	P	Pb	16 47 34.4	-0.3
PKE	Pukeiti	1.52	338	P	Pb	16 47 34.3	-0.4
MHEZ	Mangahewa	1.56	348	P	Pb	16 47 35.6	+0.2
NGZ	Ngauruhoe	1.58	25	P	Pb	16 47 35.4	-0.4
SNVZ	South Ngauruho	1.58	27	P	Pb	16 47 35.5	-0.3
KRHZ	Kereru	1.59	53	P	Pn	16 47 33.8	-0.4
OTVZ	Oturere	1.61	27	P	Pb	16 47 35.8	-0.5
NNVZ	North Ngauruho	1.63	25	P	Pb	16 47 35.9	-0.6
TWVZ	Taurewa	1.63	20	P	Pn	16 47 35.6	+0.7
WTVZ	West Tongariro	1.63	24	P	Pb	16 47 35.9	-0.7
ETVZ	East Tongariro	1.66	28	P	Pb	16 47 36.3	-0.7
KRVZ	Karewarewa	1.67	25	P	Pb	16 47 36.4	-0.8
TMVZ	Te Maari	1.67	27	P	Pn	16 47 36.4	+1.0
NTVZ	North Tongarir	1.68	26	P	Pb	16 47 36.8	-0.6
QRZ	Quartz Range	1.68	262	P	Pn	16 47 35.6	0.0
QRZ	Quartz Range	1.68	262	P	Pn	16 47 35.5	0.0
PXZ	Pawanui	1.73	71	P	Pn	16 47 35.9	-0.3
KWHZ	Kaweka Forest	1.76	48	P	Pn	16 47 36.3	-0.3
THZ	Tophouse	1.79	229	P	Pn	16 47 37.4	+0.3
KATZ	Kakaramea	1.79	25	P	Pb	16 47 38.4	-1.0
KAHZ	Kahuranaki	1.84	64	P	Pn	16 47 36.9	-0.8
RITZ	Rihia Road	1.85	29	P	Pb	16 47 40.3	+0.1
MCHZ	McNeill Hill	1.91	53	P	Pn	16 47 38.7	+0.1
RATZ	Rangitukua	1.92	25	P	Pb	16 47 40.5	-0.9
BKZ	Black Stump Fm	1.98	44	P	Pn	16 47 39.2	-0.5
BKZ	Black Stump Fm	1.98	44	P	Pn	16 47 39.2	-0.5
HATZ	Hinemaiaia	2.01	32	P	Pb	16 47 42.3	-0.7
KHZ	Kahutara	2.01	206	P	Pn	16 47 40.0	0.0
KHZ	Kahutara	2.01	206	P	Pn	16 47 40.0	-0.1
WATZ	Wairara	2.05	23	P	Pn	16 47 41.6	+0.9
HIZ	Hauiti	2.10	3	P	Pn	16 47 42.5	+1.3
HIZ	Hauiti	2.10	3	P	Pn	16 47 42.5	+1.3
WHTZ	Whakaora	2.16	26	P	Pb	16 47 45.7	+0.1
MRHZ	Matea Rd	2.20	37	P	Pn	16 47 41.8	-0.9
NMHZ	Naumai	2.20	47	P	Pn	16 47 42.2	-0.5
ARHZ	Aropaoanui	2.20	53	P	Pg	16 47 49.3	+0.1
KUTZ	Kaahu Road	2.28	22	P	Pb	16 47 48.0	+0.4
TLZ	Tolley Road	2.36	16	P	Pn	16 47 45.4	+0.5
WPRZ	Whakapapatarin	2.36	28	P	Pb	16 47 47.4	-1.7
MTHZ	Maungataniwha	2.40	44	P	Pn	16 47 44.3	-1.0
ALRZ	Allen Road	2.40	32	P	Pn	16 47 44.9	-0.5
PRRZ	Plateau Road	2.47	32	P	Pn	16 47 48.5	+2.1
DSZ	Denniston Nort	2.48	242	P	Pn	16 47 46.3	-0.3
RAHZ	Arahi	2.48	48	P	Pg	16 47 53.2	-1.4
RTZ	Ruatahuna	2.65	42	P	Pn	16 47 49.5	+0.6
GVZ	Greta Valley S	2.67	208	P	Pn	16 47 48.3	-0.9
SNGZ	Shannon Statio	2.72	49	P	Pn	16 47 48.0	-1.8
TARZ	Mount Tarawera	2.74	31	P	Pb	16 47 53.1	-2.4
LTZ	Lake Taylor	2.84	219	P	Pn	16 47 50.7	-0.8
TOZ	Tahuroa Road	2.94	12	P	Pn	16 47 54.3	+1.6
RAGZ	Rawiri	2.96	45	P	Pn	16 47 51.4	-1.8
URZ	Urewera	2.99	39	Pn	Pn	16 47 51.2	-2.2
	1.0nm,0.3s,baz=227,slow=7.9,SNR=2.1						
URZ				Pg	Pb	16 47 55.8	-3.8
	10nm,0.3s,baz=125,slow=24,SNR=32						
URZ				Lg	Lg	16 48 34.5	
	11nm,0.3s,baz=30,slow=16,SNR=7.2						
URZ	Urewera	2.99	39	P	Pn	16 47 51.4	-2.0
URZ	Urewera	2.99	39	P	Pn	16 47 52.4	-1.0
AMCZ	Amberley	3.00	210	P	Pn	16 47 52.4	-1.2
RIGZ	Rimuhau	3.02	52	P	Pn	16 47 51.8	-2.1
MARZ	Manawahe	3.02	31	P	Pn	16 47 57.1	+3.1
TGRZ	Tauranga	3.11	23	P	Pn	16 47 55.5	+0.3
MWZ	Matawai	3.14	45	P	Pn	16 47 53.7	-1.9
INZ	Inchbonnie	3.24	228	P	Pn	16 47 56.0	-1.0
OKCZ	Okains Bay	3.35	201	P	Pn	16 47 57.0	-1.5
OXZ	Oxford	3.38	216	P	Pn	16 47 56.7	-2.1
MQZ	McQueen's Vall	3.46	206	P	Pn	16 47 57.4	-2.5
RUGZ	Raukumara Rang	3.50	42	P	Pn	16 47 59.1	-1.4
TWGZ	Tauwhareparae	3.50	47	P	Pn	16 47 58.9	-1.7
AKCZ	Akaroa Harbour	3.53	202	P	Pn	16 47 59.1	-1.8
AWAZ	Awhitu Peninsu	3.54	359	P	Pn	16 48 02.0	+0.9
ETAZ	East Tamaki Re	3.65	3	P	Pn	16 48 03.9	+1.3
RACZ	Rakaia	3.66	211	P	Pn	16 48 00.4	-2.3
WTAZ	Waiatarua	3.67	358	P	Pn	16 48 04.2	+1.2
HAZ	Te Kaha	3.71	41	P	Pn	16 48 01.8	-1.6
MHCZ	Mount Hutt	3.75	218	P	Pn	16 48 08.4	+4.4
PKGZ	Pakihiroa	3.76	45	P	Pn	16 48 02.4	-1.8
WIAZ	Waiheke Island	3.82	5	P	Pn	16 48 06.2	+1.3
RVAZ	Riverhead Bore	3.83	358	P	Pn	16 48 05.9	+0.8
MBAZ	Motutapu North	3.84	2	P	Pn	16 48 06.6	+1.4
WVZ	Waitaha Valley	3.87	229	P	Pn	16 48 05.9	+0.4
KUZ	Kuaotunu	3.94	12	P	Pn	16 48 08.0	+1.5
ABAZ	Army Bay	4.00	1	P	Pn	16 48 08.4	+1.0
RPZ	Rata Peaks	4.13	220	P	Pn	16 48 13.9	+4.7
RPZ	Rata Peaks	4.13	220	P	Pn	16 48 07.7	-1.5
ARCZ	Arundel	4.25	217	P	Pn	16 48 09.8	-1.1
GCSZ	Gaunt Creek Bo	4.25	229	P	Pn	16 48 10.7	-0.2
TMZ	Timaru	4.67	215	P	Pn	16 48 14.7	-1.9
FOZ	Fox Glacier	4.68	230	P	Pn	16 48 15.2	-1.5
ODZ	Otahua Downs	5.35	213	P	Pn	16 48 23.4	-2.6
ODZ	Otahua Downs	5.35	213	P	Pn	16 48 24.0	-2.0
OUZ	Omahuta	5.45	350	P	Pn	16 48 27.7	+0.3
JCZ	Jackson Bay	5.60	230	P	Pn	16 48 27.6	-1.9
CTZ	Chatham Island	7.15	119	P	Pn	16 48 48.8	-1.7
RIZ	Raoul Island	12.83	30	P	Pn	16 50 12.1	+3.6
ASAR	Alice Springs	38.09	284	P	P	16 54 21.6	-3.3
	0.2nm,0.4s,baz=121,slow=7.1,SNR=6.0						
WRA	Warramunga Arr	40.06	289	P	P	16 54 37.4	-3.9
	0.6nm,0.7s,baz=126,slow=8.3,SNR=4.5						
TORD	Torodi Ar. Bea	151.97	195	PKPbc	PKPdf	17 06 57.0	+2.0
	0.4nm,0.5s,baz=161,slow=3.7,SNR=4.2						

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*KMA **27** 16:50:05.3±1.3, 33°.44N×127°.07E, h29^{km}±3^{km}, Error ellipse: s-maj=16.3km s-min=3.9km az=155.0*

JMA 27 16:49:34.3±0.3**, 31°.33N×127°.61E, h3^{km}, M3.3, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFU	Fukue jima 2	1.64	36	P	Pn	16 50 04.2	+0.2
JFU				*e*S	Sb	16 50 26.0	-0.2
JSJ	Shimokoshiki	1.83	79	P	Pn	16 50 06.7	0.0
GMDB	Geomundo	2.72	354	P	Pn	16 50 17.8	-1.0
	SNR=8.6						
CJD	Chujado	2.85	337	P	Pn	16 50 21.1	+0.4
KOHB	KOHEUNG	3.29	355	P	Pn	16 50 25.6	-1.1
	SNR=22						
HANB	Haenam	3.33	345	P	Pn	16 50 26.0	-1.3
	SNR=21						
BOSB	Boseong-gun	3.44	355	P	Pn	16 50 27.9	-0.9
	SNR=18						

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*IDC **27** 16:49:58.4±0.6, 9°.11S×158°.21E, h0^{km}, mb4.5/20, mb1 4.6/21, mb1mx4.4/40, mbtmp4.5/21, ML3.9/1, MS4.0/20, Ms1 4.0/20, ms1mx3.8/28, Error ellipse: s-maj=20.0km s-min=14.7km az=137.0*

*NEIC **27** 16:50:00.1±1.5, 9°.11S±0°.04×158°.32E±0°.07, h10^{km}±1^{km}, mb4.9/41, Error ellipse: s-maj=12.1km s-min=4.3km az=111.0*

*GCMT **27** 16:50:02.1±0.3, 9°.15S±0°.04×158°.17E±0°.02, h21^{km}±1^{km}, MW4.9/81, Moment Tensor Solution. s22,c23; s81,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.25±.21; $M_{\theta\theta}$-1.22±.13; $M_{\phi\phi}$-2.03±.13; $M_{r\theta}$-0.11±.27; $M_{\theta\phi}$0.85±.07; $M_{\phi r}$-0.95±.22; Best double couple: $M_0$3.04400×10^{16} NP1:ϕ_s321.00000°, δ38.00000°, λ77.00000°. NP2: ϕ_s157.00000°, δ53.00000°, λ100.00000°. Principal axes: T 3.4290, Plg79.0000°, Azm107.0000°; N -0.7690, Plg8.0000°, Azm331.0000°; P -2.6600, Plg7.0000°, Azm240.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **27** 16:50:03.5±0.0, 9°.03S×158°.83E, h69^{km}, mB5.3/30, mb4.7/48, Ms4.9/3, Ms7 4.4/3*

ISC 27 16:50:00.2±0.3**, 9°.08S**±0°.06×**158°.28E**±0°.04**, h10^{km}, n118, σ1^{s}46**/104**, mb4.8**/51**, MS4.1**/21**, 1D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.69	102	Pn	Pb	16 50 30.0	-1.3
	114nm,0.3s,baz=212,slow=3.9,SNR=21						
HNR				Sn	Sg	16 50 58.9	+4.5
	832nm,0.3s,baz=255,slow=23,SNR=9.6						
HNR	Honiara	1.69	102		Pn	16 50 29.8	+0.1
HNR	Honiara	1.69	102	P	Pg	16 50 32.0	-0.6
RABL	Rabaul	7.77	308	Pn	Pn	16 51 59.4	+5.9
RABL	Rabaul	7.77	308	P	Pn	16 52 02.1	+8.6
SANVU	Saraoutou	10.78	127	Pn	Pn	16 52 36.5	+1.9
PMG	Port Moresby	10.98	267	Pn	Pn	16 52 38.9	+1.4
	0.2nm,0.3s,baz=87,slow=6.6,SNR=3.5						
PMG				LR	LR	16 56 42.1	
	comp=Z,3μm,19.1s,baz=113,slow=37						
PMG	Port Moresby	10.98	267		Pn	16 52 39.5	+2.0
PMG	Port Moresby	10.98	267	P	Pn	16 52 45.1	+7.7
	21nm,1.1s						
PMG	Port Moresby	10.98	267	P	Pn	16 52 45.1	+7.7
	21nm,1.1s						
DZM	Mont Dzumac	15.12	150	LR	LR	16 58 51.7	
	comp=Z,393nm,18.7s,baz=27,slow=35						
DZM	Mont Dzumac	15.12	150	*e*P	Pn	16 53 34.3	+0.3
	51nm,1.4s						
DZM				*e*LR	LR	16 57 02.8	
	comp=Z,331nm,27.1s						
DZM	Mont Dzumac	15.12	150	P	P	16 53 37.5	-1.8
COEN	Coen	15.57	250	Pn	Pn	16 53 38.0	-2.0
COEN				IAmb	IAmb	16 53 52.2	
	comp=Z,77nm,1.4s						
PATS	Pohnpei	15.81	0	Pn	Pn	16 53 42.0	-1.1
PATS				IAmb	IAmb	16 53 59.8	
	comp=Z,167nm,1.2s						
CTA	Charters Tower	15.96	225	Pn	Pn	16 53 41.7	-3.3
	comp=Z,0.3nm,0.3s,baz=165,slow=0.4,SNR=6.8						
CTAO	Charters Tower	15.96	225	Pn	Pn	16 53 43.9	-1.1
CTAO	Charters Tower	15.96	225	P	P	16 53 49.3	+0.7
EIDS	Eidsvold	17.59	202	Pn	Pn	16 54 03.8	-1.8
EIDS	Eidsvold	17.59	202	P	P	16 54 09.3	+2.7
	comp=Z,31nm,1.7s						
GENI	Genyem	19.12	289	P	Pn	16 54 27.1	+2.7
	comp=Z,2μmcomp=Z,62nm,1.0s						
GENI	Genyem	19.12	289	P	Pn	16 54 29.8	+5.4
RMQ	Roma	19.52	206	P	Pn	16 54 30.2	+1.1
	comp=Z,31nm,1.4s						
QIS	Mount Isa	21.33	236	P	P	16 54 49.9	+2.4
	comp=Z,38nm,1.6s						
QLP	Quilpie	21.91	216	P	P	16 54 55.2	+1.5
	comp=Z,61nm,1.7s						
CMSA	Cobar Meteorol	25.23	206	P	P	16 55 27.5	+1.2
	comp=Z,25nm,1.5s						
WR0	Warramunga Arr	25.36	242	P	P	16 55 25.7	-2.0
WR0				IAmb	IAmb	16 55 41.1	
	comp=Z,23nm,0.9s						
WB0	Warramunga Arr	25.42	243	P	P	16 55 27.5	-0.7
WRAB	Tennant Creek	25.52	242	P	P	16 55 28.3	-0.8
WRAB				IAmb	IAmb	16 55 36.2	
	comp=Z,43nm,1.2s						
WB2	Warramunga Arr	25.52	242	P	P	16 55 28.4	-0.8
WB2				IAmb	IAmb	16 55 36.3	
	comp=Z,44nm,1.2s						
WRA	Warramunga Arr	25.53	242	P	P	16 55 28.1	-1.1
	comp=Z,10.0nm,0.9s,baz=67,slow=9.2,SNR=19						
WRA				PcP	PcP	16 59 00.8	0.0
	comp=Z,2.5nm,0.8s,baz=65,slow=2.8,SNR=6.3						
WRA				LR	LR	17 05 02.4	
	comp=Z,919nm,19.3s,baz=80,slow=36						
WRA	Warramunga Arr	25.53	242	P	P	16 55 28.8	-0.4
GUMO	Guam	26.16	329	LR	LR	17 05 31.6	
	comp=Z,64nm,19.9s,baz=134,slow=36						
AS31	Alice Springs	27.45	235	P	P	16 55 45.4	-1.2
ASAR	Alice Springs	27.45	235	P	P	16 55 45.5	-1.2
	comp=Z,4.8nm,1.0s,baz=65,slow=8.9,SNR=19						
ASAR				PcP	PcP	16 59 05.6	+0.3
	comp=Z,1.8nm,0.9s,baz=60,slow=3.5,SNR=5.9						
ASAR				LR	LR	17 06 13.2	
	comp=Z,667nm,19.3s,baz=68,slow=36						
ASAR	Alice Springs	27.45	235	P	P	16 55 46.2	-0.4
STKA	Stephens Creek	27.47	212	P	P	16 55 46.4	-0.3
	comp=Z,4.2nm,1.0s,baz=28,slow=16,SNR=4.5						
STKA				LR	LR	17 06 06.4	
	comp=Z,505nm,20.4s,baz=33,slow=35						
STKA	Stephens Creek	27.47	212	P	P	16 55 46.2	-0.4
SIJI	Sorong	28.09	285	LR	LR	17 08 46.5	
	comp=Z,271nm,19.8s,baz=96,slow=40						
KNRA	Kununurra	29.54	254	P	P	16 56 04.7	-0.6
KNRA				IAmb	IAmb	16 56 17.9	
	comp=Z,32nm,1.1s						
TOO	Toolangi	30.63	200	P	P	16 56 13.3	-1.4
TOO				IAmb	IAmb	16 56 16.6	
	comp=Z,21nm,1.3s						
BBOO	Buckleboo	31.30	218	P	P	16 56 20.0	-0.6
BBOO				IAmb	IAmb	16 56 22.7	
	comp=Z,24nm,0.9s						
FITZ	Fitzroy Crossi	32.92	251	P	P	16 56 33.7	-1.3
	comp=Z,4.3nm,0.7s,baz=99,slow=19						
FITZ				LR	LR	17 08 57.2	
	comp=Z,548nm,21.3s,baz=92,slow=35						
URZ	Urewera	33.64	153	LR	LR	17 08 00.7	
	comp=Z,232nm,18.8s,baz=31,slow=32						
BATI	Baumata	34.13	265	LR	LR	17 12 38.3	
	comp=Z,682nm,18.3s,baz=104,slow=40						
APSI	Ampana	37.35	280	P	P	16 57 13.3	0.0
	comp=Z,15nm,1.1s						
BNSI	Bone	38.17	274	P	P	16 57 20.3	0.0
	comp=Z,20nm,1.0s						
KAPI	Kappang	38.43	273	P	P	16 57 22.2	-0.2
	comp=Z,5.7nm,0.5s,baz=95,slow=11,SNR=6.6						
KAPI	Kappang	38.43	273	P	P	16 57 21.7	-0.8
KAPI				IAmb	IAmb	16 57 45.2	
	comp=Z,33nm,1.3s						
PSA00	Pilbara Seismi	38.97	247	P	P	16 57 25.6	-1.3
BBKI	Banjar Baru	43.51	275	P	P	16 58 04.9	+0.6
	comp=Z,2μmcomp=Z,22nm,0.7s						
MORW	Morawa	44.28	237	P	P	16 58 11.0	+0.7
MORW				IAmb	IAmb	16 58 16.1	
	comp=Z,9.3nm,0.9s						
KKM	Kota Kinabalu	44.53	288	P	P	16 58 12.1	-0.6
STKI	Sintang	47.48	278	P	P	16 58 37.4	+1.6
TPUB	Ta-pu	48.91	312	P	P	16 58 45.9	-0.7
KSM	Kuching	48.92	280	P	P	16 58 46.2	-0.8
KSM				IAmb	IAmb	16 59 02.8	
	comp=Z,24nm,1.2s						
JWT	Wachi	49.13	335	P	P	16 58 47.7	-0.5
MJAR	Matsushiro Arr	49.15	339	P	P	16 58 49.5	+1.2
	comp=Z,2.0nm,0.9s,baz=171,slow=9.5,SNR=4.1						
MJAR				LR	LR	17 18 55.6	
	comp=Z,29nm,20.5s,baz=235,slow=35						
PPT	Papeete	51.31	105	LR	LR	17 16 09.4	
	comp=Z,111nm,21.2s,baz=266,slow=31						
PPT2	Papeete2	51.31	105	*e*LR	LR	17 13 47.7	
	comp=Z,497nm,31.0s,baz=270						
TBI	Tubuai	51.88	112	*e*LQ	LQ	17 11 56.8	
	comp=Z,405nm,33.5s						
TBI				*e*LR	LR	17 14 03.8	
	comp=Z,272nm,31.8s						
CGJI	Cibinong	52.11	269	P	P	16 59 09.6	-1.5
KSRS	Korea Array	54.32	330	P	P	16 59 26.1	-0.8
	comp=Z,6.2nm,1.1s,baz=148,slow=6.7,SNR=7.2						
NJ2	Nanjing	55.59	319	*e*P	P	16 59 37.5	+1.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Ar.	58.13	338	P	P	16 59 54.3	+0.3
	comp=Z,12nm,1.0s,baz=158,slow=6.0,SNR=9.9						
USRK	Ussuriysk Ar.	58.13	338	P	P	16 59 54.1	+0.1
MDJ	Mudanjiang	59.40	337	P	P	17 00 03.0	+0.2
MDJ				pmax	pmax		
	comp=Z,11nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,430nm,5.0s						
CN2	Changchun	60.48	333	*e*P	P	17 00 09.3	-1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TAOE	Nuku Hiva Isla	60.75	95	*e*LR	LR	17 18 04.7	
	comp=Z,352nm,27.6s						
ENH	Enshi	61.03	312	P	P	17 00 12.8	-1.6
ENH				IAmb	IAmb	17 00 22.8	
	comp=Z,12nm,1.1s						
PEA0B	Petropavlovsk-	61.95	360	P	P	17 00 20.0	0.0
PETK	Petropavlovsk-	61.95	360	P	P	17 00 19.2	-0.8
	comp=Z,8.0nm,1.0s,baz=144,slow=5.3,SNR=3.7						
PETK				LR	LR	17 26 18.3	
	comp=Z,43nm,19.5s,baz=177,slow=35						
PETK	Petropavlovsk-	61.95	360	P	P	17 00 19.8	-0.2
KLR	Kul'dur	62.55	341	P	P	17 00 24.0	-0.2
	comp=Z,11nm,1.2s,baz=127,slow=7.1,SNR=8.9						
XAN	Xi'an	63.46	315	P	P	17 00 34.0	+3.4
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KMI	Kunming	63.87	304	⇓P	P	17 00 35.0	+1.3
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
CM31	Chiang Mai Arr	64.61	295	P	P	17 00 38.0	-0.5
CM31				IAmb	IAmb	17 00 39.9	
	comp=Z,5.2nm,0.9s						
CMAR	Chiang Mai Arr	64.61	295	P	P	17 00 38.5	+0.1
	comp=Z,3.8nm,1.0s,baz=114,slow=4.8,SNR=20						
CMAR				LR	LR	17 29 57.3	
	comp=Z,35nm,18.4s,baz=150,slow=37						
CMAR	Chiang Mai Arr	64.61	295	P	P	17 00 37.8	-0.6
HHC	Hu-ho-hao-te	65.70	323	*e*P	P	17 00 47.5	+2.3
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,92nm,4.4s						
VNDA	Vanda	68.44	179	LR	LR	17 26 32.8	
	comp=Z,90nm,19.0s,baz=354,slow=32						
MA2	Magadan	68.69	356	P	P	17 01 03.0	-0.7
GTA	Gaotai	72.48	316	*e*P	P	17 01 28.0	+0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	Ulaanbaatar	72.51	327	P	P	17 01 27.9	+0.5
ULN				IAmb	IAmb	17 01 30.8	
	comp=Z,12nm,1.1s						
SONM	Songino Array	72.85	326	P	P	17 01 29.5	+0.2
	comp=Z,6.7nm,1.0s,baz=134,slow=3.8,SNR=24						
SONM	Songino Array	72.85	326	P	P	17 01 29.6	+0.2
SONM				IAmb	IAmb	17 01 32.6	
	comp=Z,10nm,1.1s						
YAK	Yakutsk	74.30	346	P	P	17 01 37.4	0.0
YAK				IAmb	IAmb	17 01 39.2	
	comp=Z,9.7nm,0.7s						
BILL	Bilibino	77.14	3	P	P	17 01 52.5	-1.1
BILL				IAmb	IAmb	17 01 56.3	
	comp=Z,12nm,1.1s						
ANM	Nome	78.34	15	P	P	17 01 58.6	-1.7
ANM				IAmb	IAmb	17 02 03.9	
	comp=Z,11nm,1.3s						
WMQ	Urumqi	82.56	316	*e*P	P	17 02 24.5	+0.9
WMQ				pmax	pmax		
	comp=Z,16nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.1s						
RND	Reindeer	82.63	21	P	P	17 02 22.3	-1.2
MCK	McKinley	82.80	21	P	P	17 02 23.5	-0.8

TIXI	Tiksi	82.89	351	P	P	17 02 23.6	-1.0
	comp=Z,1.2nm,0.6s,baz=129,slow=3.3,SNR=4.5						
NEA2	Nenana	83.28	20	P	P	17 02 25.8	-1.0
MAW	Mawson	83.73	203	LR	LR	17 37 16.0	
	comp=Z,65nm,19.0s,baz=50,slow=34						
MDM	Murphy Dome	83.79	20	P	P	17 02 28.2	-1.3
MDM				IAmb	IAmb	17 02 31.5	
	comp=Z,14nm,1.2s						
IL31		84.14	21	P	P	17 02 29.4	-1.8
ILAR	Eielson Array	84.14	21	P	P	17 02 30.6	-0.6
	comp=Z,7.3nm,1.1s,baz=246,slow=4.3,SNR=20						
ILAR				LR	LR	17 35 33.0	
	comp=Z,108nm,21.4s,baz=248,slow=32						
ILAR	Eielson Array	84.14	21	P	P	17 02 29.5	-1.7
SCRK	Sand Creek	84.73	22	P	P	17 02 33.7	-0.6
SCRK				IAmb	IAmb	17 02 42.6	
	comp=Z,8.3nm,1.2s						
MK31	Makanchi Array	87.11	318	P	P	17 02 45.1	-1.3
MKAR	Makanchi Array	87.11	318	P	P	17 02 45.8	-0.6
	comp=Z,2.2nm,0.6s,baz=94,slow=5.6,SNR=26						
MKAR	Makanchi Array	87.11	318	P	P	17 02 45.5	-1.0
ZALV	Zalesovo Beam	87.72	325	P	P	17 02 48.0	-1.2
	comp=Z,1.5nm,0.4s,baz=122,slow=6.3,SNR=5.5						
KSH	Kashi	89.83	310	P	P	17 03 01.0	+1.4
KSH				PP	PP	17 06 36.0	+3.8
KSH				SS	SS	17 19 53.8	+4.1
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NVAR	Mina Array Bea	90.47	51	P	P	17 03 04.6	+1.8
	comp=Z,2.5nm,0.9s,baz=245,slow=6.0,SNR=13						
NVAR				LR	LR	17 39 35.3	
	comp=Z,66nm,18.4s,baz=271,slow=33						
NVAR	Mina Array Bea	90.47	51	P	P	17 03 02.4	-0.4
INK	Inuvik	90.53	20	P	P	17 03 01.4	-0.5
INK				IAmb	IAmb	17 03 05.1	
	comp=Z,9.7nm,1.4s						
BVAR	Borovoye Array	95.91	323	P	P	17 03 25.7	-1.5
	comp=Z,1.1nm,0.6s,baz=158,slow=4.2,SNR=3.6						
YKA	Yellowknife Ar	96.65	28	P	P	17 03 30.1	-0.1
	comp=Z,1.0nm,0.8s,baz=258,slow=4.6,SNR=11						
YKA				LR	LR	17 40 02.8	
	comp=Z,115nm,21.8s,baz=0.0,slow=31						
PDAR	Pinedale Array	97.67	48	P	Pdif	17 03 36.1	+0.3
	comp=Z,0.8nm,0.8s,baz=220,slow=1.2,SNR=5.5						
PDAR				LR	LR	17 40 50.7	
	comp=Z,43nm,21.7s,baz=312,slow=31						
AKASG	Malin Array Be	121.11	325	PKP	PKPdf	17 08 50.6	-2.6
	comp=Z,0.9nm,0.7s,baz=59,slow=2.4,SNR=6.7						
AKASG	Malin Array Be	121.11	325		PKPdf	17 08 52.0	-1.2
GERES	GERESS Array B	130.49	330	PKP	PKPdf	17 09 11.4	0.0
	comp=Z,0.4nm,0.6s,baz=122,slow=1.7,SNR=4.3						
BDFB	Brasilia	144.20	133	PKP	PKPbc	17 09 35.8	+0.1
	comp=Z,5.8nm,0.9s,baz=177,slow=4.9,SNR=7.7						
BDFB	Brasilia	144.20	133		PKPab	17 09 35.0	-0.3
ESDC	Sonseca Array	145.65	335	PKPbc	PKPdf	17 09 38.7	-0.7
	comp=Z,2.2nm,0.9s,baz=22,slow=3.1,SNR=9.4						
TORD	Torodi Ar. Bea	156.67	282	PKPbc	PKPdf	17 10 06.6	+10
	comp=Z,1.8nm,1.0s,baz=86,slow=4.6,SNR=5.8						

IDC 27 16:55:54.7±6.1, 8°.75S×158°.07E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.5/42, mbtmp3.7/3, Error ellipse: s-maj=184.6km s-min=29.2km az=118.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.50	242	P	P	17 01 25.4	+0.3
	2.1nm,0.8s,baz=68,slow=9.6,SNR=5.5						
ASAR	Alice Springs	27.47	234	P	P	17 01 42.2	-0.6
	0.4nm,0.8s,baz=65,slow=9.7,SNR=2.2						
MKAR	Makanchi Array	86.73	318	P	P	17 08 40.8	0.0
	0.6nm,0.9s,baz=100,slow=3.1,SNR=3.5						

*IDC **27** 16:59:30.0±0.9, 15°.84S×173°.38W, h0^{km}, mb4.2/11, mb1 4.5/12, mb1mx4.2/40, mbtmp4.3/12, ML4.8/1, MS3.6/4, Ms1 3.6/4, ms1mx3.2/21, Error ellipse: s-maj=42.2km s-min=15.3km az=137.0*

*NEIC **27** 16:59:31.2±2.1, 15°.77S±0°.07×173°.3W±0°.1, h10^{km}±1^{km}, mb4.8/30, Error ellipse: s-maj=19.8km s-min=12.3km az=99.0*

ISC 27 16:59:30.5±0.5, 15°.80S±0°.06×173°.19W±0°.08, h10^{km}, n60, σ1^{s}.46/54, mb4.6/25, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.33	36	Pn	Pn	17 00 09.4	+0.5
	220nm,0.3s,baz=200,slow=2.6,SNR=87						
AFI				Sn	Sn	17 00 33.6	-4.0
	693nm,0.3s,baz=42,slow=23,SNR=26						
NIUE	Niue	4.50	137		Pn	17 00 40.2	+1.4
MSVF	Nonsavu	8.61	256	LR	LR	17 04 26.0	
	comp=Z,387nm,19.7s,baz=153,slow=35						
MSVF	Nonsavu	8.61	256		Pn	17 01 44.6	+9.3
KNTN	Kanton	13.03	7	Pn	Pn	17 02 35.0	-0.8
RAR	Rarotonga	13.81	115	Pn	Pn	17 02 43.6	-2.8
RAO	Raoul Island	14.08	197	LR	LR	17 07 17.9	
	comp=Z,170nm,21.3s,baz=130,slow=33						
RAO	Raoul Island	14.08	197	Pn	Pn	17 02 49.2	-0.8
DZM	Mont Dzumac	20.24	249	P	P	17 04 04.6	-1.4
	13nm,1.0s,baz=268,slow=14,SNR=2.3						
DZM	Mont Dzumac	20.24	249	P	P	17 04 05.6	-0.4
URZ	Urewera	23.95	199	P	P	17 04 45.0	+0.2
	6.8nm,0.7s,baz=122,slow=24,SNR=9.8						
URZ	Urewera	23.95	199	IAmb	IAmb	17 05 03.3	
	comp=Z,38nm,1.5s						
BKZ	Black Stump Fm	24.97	199	P	P	17 04 53.4	-0.9
BKZ				IAmb	IAmb	17 05 17.8	
	comp=Z,18nm,1.4s						
QRZ	Quartz Range	27.84	204	P	P	17 05 21.4	+1.2
QRZ				IAmb	IAmb	17 05 25.5	
	comp=Z,32nm,1.3s						
EIDS	Eidsvold	34.68	248	P	P	17 06 19.3	-1.3
EIDS				IAmb	IAmb	17 06 29.7	
	comp=Z,15nm,1.4s						
ARMA	Armidale	35.31	239	P	P	17 06 25.6	-0.5
ARMA				IAmb	IAmb	17 06 52.5	
	comp=Z,31nm,1.4s						
CAN	Canberra	38.95	233	P	P	17 06 57.0	+0.1
CAN				IAmb	IAmb	17 07 16.9	
	comp=Z,34nm,1.5s						
H11N3	WAKE ISLAND Hy	40.36	330	T	T	17 50 21.8	
	baz=150,slow=76,SNR=18						
H11N1	WAKE ISLAND Hy	40.36	330	T	T	17 50 07.3	
	baz=150,slow=76,SNR=17						
H11N2	WAKE ISLAND Hy	40.38	330	T	T	17 50 06.9	
	baz=150,slow=76,SNR=22						
COEN	Coen	42.16	267	P	P	17 07 24.2	+0.6
COEN				IAmb	IAmb	17 07 29.9	
	comp=Z,24nm,1.2s						
STKA	Stephens Creek	44.01	240	P	P	17 07 37.0	-1.4
	comp=Z,4.2nm,0.7s,baz=97,slow=12,SNR=8.9						
STKA				LR	LR	17 24 44.9	
	comp=Z,95nm,18.3s,baz=19,slow=35						
STKA	Stephens Creek	44.01	240	P	P	17 07 37.0	-1.4
MCQ	Macquarie Isla	44.25	203	P	P	17 07 40.0	0.0
BBOO	Buckleboo	48.79	240	P	P	17 08 15.0	-0.9
BBOO				IAmb	IAmb	17 08 23.0	
	comp=Z,13nm,1.1s						
WB0	Warramunga Arr	49.91	257	P	P	17 08 23.3	-1.4
WB0				IAmb	IAmb	17 08 25.8	
	comp=Z,6.6nm,1.1s						
WB2	Warramunga Arr	49.94	257	P	P	17 08 23.5	-1.5
WB2				IAmb	IAmb	17 08 24.4	
	comp=Z,13nm,1.2s						
WRA	Warramunga Arr	49.95	257	P	P	17 08 24.4	-0.6
	comp=Z,1.7nm,0.5s,baz=83,slow=6.0,SNR=51						
WRA	Warramunga Arr	49.95	257	P	P	17 08 23.3	-1.7
AS31	Alice Springs	50.18	252	P	P	17 08 25.6	-1.2
ASAR	Alice Springs	50.18	252	P	P	17 08 25.6	-1.2
	comp=Z,9.1nm,0.5s,baz=90,slow=7.5,SNR=188						
ASAR				LR	LR	17 28 17.8	
	comp=Z,71nm,19.4s,baz=100,slow=35						
ASAR	Alice Springs	50.18	252	P	P	17 08 25.0	-1.8
MTN	Manton Dam	53.90	265	P	P	17 08 54.5	-0.1
FORT	Forrest	55.42	243	P	P	17 09 04.3	-1.0
KNRA	Kununurra	55.71	262	P	P	17 09 07.6	0.0
PSA00	Pilbara Seismi	63.28	254	P	P	17 09 58.4	-1.5
PSA00				IAmb	IAmb	17 09 59.7	
	comp=Z,5.7nm,0.9s						
JMN	Monobe	70.49	315	P	P	17 10 45.4	-0.1
PETK	Petropavlovsk-	73.07	342	P	P	17 11 02.2	+1.6
	comp=Z,2.6nm,0.8s,baz=150,slow=12,SNR=2.1						
QSPA	South Pole Qui	74.24	180	P	P	17 11 09.7	+2.0
NVAR	Mina Array Bea	74.49	42	P	P	17 11 11.9	+2.4
	comp=Z,2.4nm,0.8s,baz=225,slow=10,SNR=15						
NVAR	Mina Array Bea	74.49	42	P	P	17 11 11.4	+1.8
NV11	Mina Array Sit	74.59	42	P	P	17 11 10.9	+0.9
NV11				IAmb	IAmb	17 11 13.7	
	comp=Z,7.0nm,1.2s						
KVN	Kaiserville	74.98	41	P	P	17 11 14.2	+1.8
TPH	Tonopah	74.99	43	P	P	17 11 14.7	+2.2
TPH				IAmb	IAmb	17 11 16.1	
	comp=Z,14nm,0.8s						
K05A	Summer Lake	75.47	37	P	P	17 11 18.1	+3.0
K05A				IAmb	IAmb	17 11 19.7	
	comp=Z,14nm,1.2s						
PINE	Pine Mountain	76.10	36	P	P	17 11 21.3	+2.6
PINE				IAmb	IAmb	17 11 22.3	
	comp=Z,7.2nm,0.9s						
BERG	Berg Lake	79.56	14	P	P	17 11 37.7	+0.3
GHO	Glory Hole Cre	79.68	11	P	P	17 11 39.2	+1.1
PLID	Pearl Lake	79.72	37	P	P	17 11 39.0	+0.1
PDAR	Pinedale Array	82.43	42	P	P	17 11 55.2	+1.9
	comp=Z,0.9nm,0.8s,baz=199,slow=3.5,SNR=8.5						
CCB	Clear Creek Bu	82.52	11	P	P	17 11 53.4	+0.5
CCB				IAmb	IAmb	17 11 54.7	
	comp=Z,5.3nm,1.1s						
ILAR	Eielson Array	82.80	11	P	P	17 11 55.2	+0.8
	comp=Z,0.7nm,0.7s,baz=226,slow=6.4,SNR=14						
ILAR	Eielson Array	82.80	11	P	P	17 11 54.8	+0.3
YKA	Yellowknife Ar	90.39	23	P	P	17 12 33.1	+1.4
	comp=Z,0.2nm,0.7s,baz=235,slow=4.8,SNR=5.1						
CMAR	Chiang Mai Arr	92.93	288	P	P	17 12 45.7	+1.2
	comp=Z,0.3nm,0.4s,baz=90,slow=2.7,SNR=5.2						
KMBO	Kilima Mbogo	145.54	244	PKPbc	PKPab	17 19 11.4	+0.7
	comp=Z,1.9nm,0.8s,baz=289,slow=4.8,SNR=4.9						
KMBO	Kilima Mbogo	145.54	244	PKPdf	PKPdf	17 19 09.4	-0.9
GERES	GERESS Array B	146.57	352	PKPbc	PKPab	17 19 13.6	+0.2
	comp=Z,0.4nm,0.7s,baz=17,slow=1.4,SNR=4.1						
BRTR	Keskin Array B	146.59	321	PKPbc	PKPab	17 19 13.9	+0.1
	comp=Z,1.8nm,0.6s,baz=99,slow=1.7,SNR=11						
BRTR	Keskin Array B	146.59	321		PKPbc	17 19 13.3	+0.5

PGC 27 17:01:30.6±1.9, 49°.30N×128°.33W, h10^{km}, MLSn3.0/16, Mw3.7/16, Mw3.7/16, 166km west of Gold R., Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDB	Eliza Dome	0.97	53	P	Pg	17 01 47.6	-1.7
EDB				S	Sg	17 01 59.4	-2.6
PACB	Port Alice, BC	1.26	25	P	Pn	17 01 52.0	-2.2
PACB				S	Sb	17 02 07.0	-3.7
MAYB	Maynard	1.34	34	P	Pn	17 01 53.3	-2.1
MAYB				S	Sb	17 02 09.2	-3.8
HOLB	Holberg	1.35	5	Pn	Pn	17 01 53.1	-2.4
HOLB				Sn	Sb	17 02 08.9	-4.4
WOSB	Woss	1.43	52	Pn	Pn	17 01 54.7	-2.0
WOSB				Sn	Sn	17 02 11.9	-3.6
PHC	Port Hardy	1.52	22	Pn	Pn	17 01 55.9	-2.0
PHC				Sn	Sn	17 02 13.7	-4.0
GDR	Gold River	1.57	71	Pn	Pn	17 01 56.1	-2.4
TLCB	Telegraph Cove	1.58	37	Pn	Pn	17 01 57.2	-1.4
TLCB				Sn	Sn	17 02 15.3	-3.8
TOFB	Tofino	1.59	94	Pn	Pn	17 01 56.0	-2.8
TOFB				Sn	Sn	17 02 13.9	-5.4
SPLB	Strathcona Par	1.84	70	Pn	Pn	17 02 00.2	-2.0
NCRB	Newcastle Ridg	1.84	52	Pn	Pn	17 02 00.9	-1.4
NCRB				Sn	Sn	17 02 22.6	-3.1
BTB	Buttle Lake	1.84	84	Pn	Pn	17 02 00.0	-2.3
MGB	Mount Grey	2.41	96	Sn	Sn	17 02 34.6	-5.1
OCP	Olym-Cheeka Pk	2.64	111	Pn	Pn	17 02 12.0	-1.2
OCP				Sn	Sn	17 02 40.4	-5.0
GHNB	Nanoose	2.68	88	Pn	Pn	17 02 10.6	-3.1
NLLB	Nanaimo Lost L	2.84	90	Pn	Pn	17 02 14.7	-1.2
BBB	Bella Bella	2.90	3	Pn	Pn	17 02 15.7	-0.9
BBB				Sn	Sn	17 02 47.7	-3.8
BIB	Bowen Island	3.29	86	Pn	Pn	17 02 18.9	-3.1
WPB	Watts Point	3.36	82	Pn	Pn	17 02 21.8	-1.2
HG4B	Hotspring	3.51	330	Pn	Pn	17 02 24.9	-0.2
WSLR	Whistler	3.60	75	Pn	Pn	17 02 26.1	-0.4
HNBB	Haney	3.77	88	Pn	Pn	17 02 27.4	-1.2
BUTB	Butedale	3.77	359	Pn	Pn	17 02 27.9	-0.9
BUTB				Sn	Sn	17 03 08.8	-4.5
VDB	Vedder Mountai	4.09	91	Pn	Pn	17 02 32.3	-0.9
A05A	Maple Falls	4.11	92	Pn	Pn	17 02 32.7	-0.7
BNKB	Banks Island	4.16	347	Pn	Pn	17 02 32.8	-1.2
BNKB				Sn	Sn	17 03 18.1	-4.7
HWKB	Hawksbury Isla	4.34	353	Pn	Pn	17 02 35.8	-0.8
HWKB				Sn	Sn	17 03 22.8	-4.4
LLLB	Lillooet	4.36	70	Pn	Pn	17 02 35.8	-1.1
JCW	Jim Creek	4.37	102	Pn	Pn	17 02 35.9	-1.2
HOPB	Hope	4.52	86	Pn	Pn	17 02 38.2	-0.7
GRNB	Grenville Isla	4.67	348	Pn	Pn	17 02 40.2	-0.9
GRNB				Sn	Sn	17 03 30.3	-4.9
RUBB	Prince Rupert	5.18	347	Pn	Pn	17 02 47.4	-0.6
PNT	Penticton	5.70	87	Pn	Pn	17 02 54.1	-1.1
MNB	Mounoet Dainar	6.95	62	Pn	Pn	17 03 12.2	-0.3

*DJA **27** 17:05:23.9±2.0, 3°N±10°×12°9E±1°4, h247^{km}±14^{km}, M4.3/10, mb4.3/7, mB4.8/5, MLv4.4/10, Mw(mB)4.0/5*

*NEIC **27** 17:05:27.1±2.2, 2°.8N±0°.1×128°.7E±0°.1, h225^{km}±9^{km}, mb4.1/18, Error ellipse: s-maj=20.1km s-min=15.0km az=90.0*

*IDC **27** 17:05:28.3±1.7, 2°.79N×128°.76E, h234^{km}±17^{km}, mb3.5/16, mb1 3.6/19, mb1mx3.3/49, mbtmp4.1/19, Error ellipse: s-maj=17.9km s-min=9.9km az=78.0*

ISC 27 17:05:28.2±0.7, 2°.72N±0°.07×128°.58E±0°.09, h250^{km}, n51, σ1^{s}.88/38, mb3.8/23, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.28	212	P	Pn	17 06 11.4	-2.0
TNTI	Ternate	2.28	212	Pn	Pn	17 06 11.0	-2.4
SGSI	Sangihe	3.19	288	P	Pn	17 06 20.2	-2.7
LBMI	Labuha	3.50	198	P	Pn	17 06 23.6	-2.8
SIJI	Sorong	4.46	143	P	Pn	17 06 37.2	-0.4
	1.8nm,0.3s,baz=335,slow=18,SNR=11						
KMSI	Cibinong	5.07	245	P	Pn	17 06 42.9	-2.0
	1.4nm1μm67nm,0.5s						
SANI	Sanana	5.40	209	P	Pn	17 06 46.2	-2.8
	0.8nm3μm166nm,0.6s						
GTOI	Gorontalo	5.94	250	P	Pn	17 06 55.2	-0.5
	0.1nm10nm,0.7s						
LUWI	Luwuk	6.91	237	P	Pn	17 07 06.2	-1.6
	0.6nm1μm59nm,0.5s						
LUWI	Luwuk	6.91	237	Pn	Pn	17 07 05.1	-2.7
APSI	Ampana	7.81	243	P	Pn	17 07 18.2	-1.0
KAPI	Kappang	11.70	229	P	P	17 08 11.7	+0.2
	1.5nm,0.3s,baz=354,slow=1.5,SNR=4.0						
KAPI	Kappang	11.70	229		P	17 08 08.9	-2.6
SOEI	Soe	13.12	199	Pn	P	17 08 27.0	-0.5
BATI	Baumata	13.74	201	P	P	17 08 35.0	+0.7
	4.7nm,0.3s,baz=83,slow=4.3,SNR=5.7						
SBUM	Sibu	16.34	269	P	Pn	17 09 04.7	+0.2
SBUM				IAmb	IAmb	17 09 08.5	
	comp=Z,4.9nm,0.8s						
KNRA	Kununurra	18.28	179	P	Pn	17 09 24.8	-2.5
KSM	Kuching	18.30	266	P	Pn	17 09 26.4	-1.1
TPUB	Ta-pu	21.86	340	P	P	17 10 01.8	+0.7
LEM	Lembang	22.97	246	P	P	17 10 15.5	+4.0
	comp=Z,49nm,1.2s,baz=344,slow=10,SNR=5.0						
WB0	Warramunga Arr	23.07	166	P	P	17 10 13.3	+1.2
WB0				IAmb	IAmb	17 10 15.9	
	comp=Z,6.4nm,0.9s						
WRA	Warramunga Arr	23.22	166	P	P	17 10 14.3	+0.8
	comp=Z,1.1nm,0.3s,baz=341,slow=10,SNR=13						
WRA	Warramunga Arr	23.22	166	P	P	17 10 14.7	+1.2
WB2	Warramunga Arr	23.22	166	P	P	17 10 14.5	+0.9
WB2				IAmb	IAmb	17 10 18.3	
	comp=Z,8.5nm,1.1s						
AS31	Alice Springs	26.73	169	P	P	17 10 46.3	+1.2
ASAR	Alice Springs	26.73	169	P	P	17 10 46.4	+1.2
	comp=Z,0.6nm,0.4s,baz=353,slow=7.0,SNR=12						
ASAR				PcP	PcP	17 14 03.9	+2.2
	comp=Z,0.6nm,0.4s,baz=353,slow=2.1,SNR=12						
ASAR				ScP	ScP	17 17 21.4	+3.5
	comp=Z,0.3nm,0.5s,baz=348,slow=2.8,SNR=5.4						
ASAR	Alice Springs	26.73	169	P	P	17 10 43.9	-1.3
ASAR				PcP	PcP	17 14 03.9	+2.2
KULM	Kulim	27.98	276	P	P	17 10 58.0	+1.7
KULM				IAmb	IAmb	17 11 04.6	
	comp=Z,8.0nm,1.0s						
GSI	Gunungsitoli	31.02	268	P	P	17 11 22.7	-0.4
GSI				IAmb	IAmb	17 11 37.7	
	comp=Z,8.2nm,1.1s						
CMAR	Chiang Mai Arr	32.97	300	P	P	17 11 42.1	+2.0
	comp=Z,0.5nm,0.7s,baz=119,slow=6.7,SNR=7.1						
KSRS	Korea Array	34.57	359	P	P	17 11 53.9	+0.5
	comp=Z,1.8nm,1.1s,baz=176,slow=9.5,SNR=2.0						
MJAR	Matsushiro Arr	34.81	14	P	P	17 11 55.4	-0.2
	comp=Z,1.1nm,0.6s,baz=188,slow=9.6,SNR=5.5						
MJAR	Matsushiro Arr	34.81	14	P	P	17 11 52.5	-3.1
MJAR				IAmb	IAmb	17 11 58.1	
	comp=Z,2.4nm,1.0s						
BBOO	Buckleboo	36.04	169	P	P	17 12 06.3	+0.3
BBOO				IAmb	IAmb	17 12 20.1	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	36.56	161	P	P	17 12 12.6	+2.1
	comp=Z,1.1nm,0.4s,baz=350,slow=8.4,SNR=7.9						
STKA	Stephens Creek	36.56	161	P	P	17 12 10.8	+0.4
SONM	Songino Array	48.85	340	P	P	17 13 51.0	+2.2
	comp=Z,0.3nm,0.5s,baz=161,slow=9.2,SNR=2.1						
PETK	Petropavlovsk-	55.69	21	P	P	17 14 40.0	+1.3
	comp=Z,2.4nm,0.8s,baz=197,slow=4.6,SNR=4.4						
YAK	Yakutsk	59.18	1	P	P	17 15 03.7	+1.0
	comp=Z,2.9nm,0.4s,baz=242,slow=1.8,SNR=6.3						
YAK	Yakutsk	59.18	1	P	P	17 15 02.5	-0.3
MK31	Makanchi Array	59.44	325	P	P	17 15 06.2	+1.2
MKAR	Makanchi Array	59.44	325	P	P	17 15 06.9	+2.0
	comp=Z,0.7nm,0.5s,baz=117,slow=8.2,SNR=20						
MKAR	Makanchi Array	59.44	325	P	P	17 15 06.4	+1.5
KURBB	Kurchatov Arra	63.58	327	P	P	17 15 34.3	+1.9
	comp=Z,1.7nm,0.5s,baz=127,slow=6.1,SNR=24						
KURK	Kurchatov	63.58	327	P	P	17 15 33.1	+0.7
KURK				IAmb	IAmb	17 15 47.3	
	comp=Z,2.5nm,1.1s						
TIXI	Tiksi	68.83	0	P	P	17 16 06.4	+1.1
	comp=Z,1.4nm,0.4s,baz=161,slow=4.7,SNR=9.4						
TIXI	Tiksi	68.83	0	P	P	17 16 07.0	+1.7
TIXI				IAmb	IAmb	17 16 20.7	
	comp=Z,3.0nm,1.1s						
BVAR	Borovoye Array	69.17	327	P	P	17 16 09.0	+1.3
	comp=Z,0.5nm,0.3s,baz=128,slow=6.6,SNR=4.5						
BRVK	Borovoye	69.24	327	P	P	17 16 08.8	+0.6
BRVK				IAmb	IAmb	17 16 18.7	
	comp=Z,1.6nm,1.1s						
ILAR	Eielson Array	85.22	25	P	P	17 17 38.5	+2.1
	comp=Z,0.3nm,0.8s,baz=254,slow=5.3,SNR=4.6						
ARCES	ARCESS Array B	92.03	340	P	P	17 18 09.6	+1.1
	comp=Z,5.2nm,0.9s,baz=29,slow=2.8,SNR=4.3						

*NEIC **27** 17:31:11.1±1.5, 6°.08S±0°.09×152°.5E±0°.2, h39^{km}±9^{km}, mb4.5/11, Error ellipse: s-maj=23.5km s-min=11.3km az=106.0*

*IDC **27** 17:31:13.8±4.6, 6°.15S×152°.23E, h56^{km}±41^{km}, mb4.0/12, mb1 4.2/13, mb1mx4.0/30, mbtmp4.3/13, ML2.4/1, MS3.3/7, Ms1 3.3/7, ms1mx3.1/24, Error ellipse: s-maj=24.4km s-min=23.0km az=178.0*

ISC 27 17:31:11.0±0.7, 6°.11S±0°.09×152°.4E±0°.1, h35^{km}, n38, σ0^{s}.83/33, mb4.5/21, MS3.5/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.92	353	Pn	Pn	17 31 40.9	-0.4
PMG	Port Moresby	6.13	237	P	Pn	17 32 39.5	+0.4
	6.6nm,0.3s,baz=56,slow=9.5,SNR=22						
PMG				S	Sn	17 33 48.4	+0.3
	20nm,0.3s,baz=188,slow=20,SNR=10						
PMG				LR	LR	17 35 12.0	
	comp=Z,117nm,18.7s,baz=52,slow=40						
PMG	Port Moresby	6.13	237	Pn	Pn	17 32 38.9	-0.3
HNR	Honiara	8.18	114	LR	LR	17 36 38.9	
	comp=Z,155nm,18.1s,baz=287,slow=39						
EIDS	Eidsvold	19.19	184	P	P	17 35 32.0	+0.2
EIDS				IAmb	IAmb	17 35 55.5	
	comp=Z,11nm,1.1s						
DZM	Mont Dzumac	20.88	141	P	Pn	17 35 53.0	-0.1
	comp=Z,4.6nm,0.8s,baz=250,slow=15,SNR=2.0						
DZM	Mont Dzumac	20.88	141	*e*P	Pn	17 35 52.5	-0.5
	comp=Z,11nm,0.8s						
DZM				*e*LR	LR	17 40 58.6	
	comp=Z,366nm,25.1s						
MTN	Manton Dam	22.00	251	P	P	17 36 02.3	-0.1
MTN				IAmb	IAmb	17 36 19.3	
	comp=Z,24nm,0.9s						
WB0	Warramunga Arr	22.14	231	P	P	17 36 03.9	-0.1
WB0				IAmb	IAmb	17 36 08.3	
	comp=Z,27nm,1.2s						
WB2	Warramunga Arr	22.28	230	P	P	17 36 05.1	-0.2
WB2				IAmb	IAmb	17 36 09.8	
	comp=Z,25nm,1.3s						
WRA	Warramunga Arr	22.29	230	P	P	17 36 04.1	-1.4
	comp=Z,8.0nm,0.8s,baz=57,slow=10.0,SNR=19						
AS31	Alice Springs	24.92	224	P	P	17 36 30.6	-0.4
ASAR	Alice Springs	24.92	224	P	P	17 36 30.4	-0.6
	comp=Z,9.0nm,0.8s,baz=58,slow=9.6,SNR=69						
ASAR				LR	LR	17 47 40.2	
	comp=Z,45nm,18.2s,baz=179,slow=40						
ASAR	Alice Springs	24.92	224	P	P	17 36 30.3	-0.7
KNRA	Kununurra	25.05	246	P	P	17 36 31.9	-0.3
STKA	Stephens Creek	27.55	200	P	P	17 36 55.1	+0.5
	comp=Z,4.7nm,1.0s,baz=22,slow=13,SNR=3.7						
STKA				LR	LR	17 47 51.4	
	comp=Z,109nm,18.2s,baz=22,slow=36						
STKA	Stephens Creek	27.55	200	P	P	17 36 56.1	+1.4
FITZ	Fitzroy Crossi	28.69	243	P	P	17 37 04.0	-1.0
	comp=Z,12nm,0.6s,baz=53,slow=9.4						
MJAR	Matsushiro Arr	44.46	344	LR	LR	17 56 11.1	
	comp=Z,12nm,21.1s,baz=125,slow=34						
NJ2	Nanjing	49.61	322	*e*P	P	17 40 00.0	+0.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
XAN	Xi'an	57.30	317	P	P	17 40 56.0	+0.5
XAN				sP	pwP	17 41 13.8	+1.1
XAN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
CMAR	Chiang Mai Arr	58.08	296	P	P	17 41 01.0	-0.2
	comp=Z,1.0nm,0.7s,baz=120,slow=5.3,SNR=10						
HHC	Hu-ho-hao-te	59.88	325	*e*P	P	17 41 14.8	+1.3
HHC				pmax	pmax		
	comp=Z,110nm,5.7s						
HHC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
LZH	Lanzhou	61.89	317	*e*P	P	17 41 33.8	+6.5
LZH				pP	pwP	17 41 43.8	-0.8
LZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GTA	Gaotai	66.34	318	*e*P	P	17 41 56.3	-0.2
GTA				pP	sP	17 42 06.8	-1.6
GTA				sP	pwP	17 42 10.8	-3.1
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
SONM	Songino Array	67.22	328	P	P	17 42 02.6	+0.8
	comp=Z,0.7nm,0.7s,baz=148,slow=4.8,SNR=5.8						
SONM				LR	LR	18 09 56.0	
	comp=Z,35nm,21.3s,baz=147,slow=35						
SONM	Songino Array	67.22	328	P	P	17 42 02.5	+0.6
SONM				IAmb	IAmb	17 42 22.7	
	comp=Z,1.9nm,1.1s						
MKAR	Makanchi Array	81.04	319	P	P	17 43 23.1	+0.6
	comp=Z,1.9nm,0.9s,baz=115,slow=5.5,SNR=8.4						
ZALV	Zalesovo Beam	82.01	327	P	P	17 43 26.9	-0.4
	comp=Z,4.2nm,0.7s,baz=114,slow=5.6,SNR=15						
ILAR	Eielson Array	83.52	22	P	P	17 43 35.0	0.0
	comp=Z,3.1nm,0.8s,baz=253,slow=5.1,SNR=23						
ILAR	Eielson Array	83.52	22	P	P	17 43 33.5	-1.5
QSPA	South Pole Qui	83.86	180	P	P	17 43 35.8	-1.1
QSPA				IAmb	IAmb	17 43 40.0	
	comp=Z,7.3nm,1.0s						
MAW	Mawson	84.21	203	LR	LR	18 16 35.2	
	comp=Z,54nm,21.7s,baz=244,slow=32						
KURK	Kurchatov	84.55	322	P	P	17 43 38.7	-1.8
TOLK	Toolik Lake Re	84.58	18	P	P	17 43 39.7	-0.7
TOLK				IAmb	IAmb	17 43 43.0	
	comp=Z,6.2nm,0.9s						
NVAR	Mina Array Bea	93.21	52	P	P	17 44 23.6	+1.2
	comp=Z,0.3nm,0.5s,baz=255,slow=3.4,SNR=4.0						
YKA	Yellowknife Ar	96.77	28	P	P	17 44 38.5	+0.8
	comp=Z,0.5nm,0.7s,baz=270,slow=4.6,SNR=8.3						
TORD	Torodi Ar. Bea	150.30	286	PKPbc	PKPbc	17 50 59.1	-0.5
	comp=Z,8.6nm,0.8s,baz=60,slow=2.5,SNR=44						

*IDC **27** 18:22:18.8±0.8, 5°.85S×146°.63E, h118^{km}±7^{km}, mb3.8/8, mb1 4.0/12, mb1mx3.8/35, mbtmp4.2/12, MS2.9/1,*

Ms1 2.9/1, ms1mx2.3/27, Error ellipse: s-maj=20.0km s-min=12.1km az=103.0

ISC 27 18:22:18.2±0.5**, 5°.89S**±0°.06×**146°.47E**±0°.08**, h100^{km}, n51, σ1^{s}.46**/53**, mb4.2**/18**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.56	169	P	Pn	18 23 11.0	-0.4
	56nm,0.3s,baz=9.7,slow=5.6,SNR=287						
PMG				S	Sn	18 23 50.4	-2.1
	34nm,0.3s,baz=360,slow=11,SNR=4.8						
PMG	Port Moresby	3.56	169	P	Pn	18 23 10.9	-0.5
PMG	Port Moresby	3.56	169	P	Pn	18 23 10.9	-0.5
RABL	Rabaul	5.92	74	P	Pn	18 23 45.2	+1.8
COEN	Coen	8.65	202	P	Pn	18 24 21.4	+0.8
	67nm,0.8s						
MTSU	Mount Surprise	12.35	190	P	Pn	18 25 11.9	+1.3
	5.6nm,0.6s						
CTA	Charters Tower	14.11	181	P	Pn	18 25 34.9	+1.2
	3.3nm,0.3s,baz=228,slow=0.2,SNR=37						
CTAO	Charters Tower	14.11	181	P	P	18 25 37.3	-0.9
KDU	Kakadu	15.37	243	P	Pn	18 25 50.8	+1.1
	33nm,1.7s						
SIJI	Sorong	15.98	288	P	Pn	18 25 57.7	+0.4
	0.3nm,0.3s,baz=78,slow=14,SNR=1.5						
MTN	Manton Dam	16.63	244	P	Pn	18 26 05.9	+0.5
	24nm,1.0s						
WRAB	Tennant Creek	18.27	219	P	P	18 26 24.5	+0.4
WRA	Warramunga Arr	18.28	219	P	P	18 26 24.5	+0.2
	1.0nm,0.3s,baz=34,slow=10,SNR=40						
WRA				PcP	PcP	18 30 51.4	-1.1
	0.3nm,0.3s,baz=26,slow=2.1,SNR=6.1						
GUMO	Guam	19.42	355	LR	LR	18 32 28.2	
	comp=Z,32nm,18.4s,baz=151,slow=31						
EIDS	Eidsvold	19.86	168	P	Pn	18 26 44.9	+0.9
	22nm,1.1s						
KNRA	Kununurra	19.91	239	P	P	18 26 42.4	+0.3
	34nm,2.1s						
RMQ	Roma	20.59	174	P	Pn	18 26 52.5	0.0
	8.7nm,0.7s						
QLP	Quilpie	20.68	186	P	Pn	18 26 53.5	0.0
	14nm,0.6s						
ASAR	Alice Springs	21.42	213	P	P	18 26 58.8	+0.5
	2.4nm,0.6s,baz=51,slow=8.5,SNR=60						
ASAR				S	S	18 30 51.5	+1.1
	2.3nm,0.9s,baz=28,slow=21,SNR=7.1						
INKA	Innaminka	22.40	193	P	P	18 27 09.6	+1.1
	38nm,1.0s						
FITZ	Fitzroy Crossi	23.68	237	P	P	18 27 21.6	+0.7
	21nm,0.7s,baz=48,slow=6.8,SNR=74						
OOD	Oodnadatta	24.07	204	P	P	18 27 24.9	+0.6
	9.6nm,0.8s						
ARMA	Armidale	24.88	169	P	P	18 27 32.0	+0.2
DZM	Mont Dzumac	25.13	132	P	P	18 27 32.8	-1.3
	3.8nm,0.6s,baz=299,slow=19,SNR=2.0						
DZM	Mont Dzumac	25.13	132	P	P	18 27 37.4	+3.3
CMSA	Cobar Meteorol	25.52	182	P	P	18 27 37.8	+0.3
LCRK	Leigh Creek	25.63	197	P	P	18 27 38.3	-0.2
	17nm,0.7s						
WRKA	Warakurna	25.80	221	P	P	18 27 40.2	0.0
	6.9nm,0.6s						
STKA	Stephens Creek	26.25	189	P	P	18 27 42.8	-1.3
	1.0nm,0.4s,baz=359,slow=7.8,SNR=8.4						
STKA	Stephens Creek	26.25	189	P	P	18 27 43.7	-0.4
	1.3nm,2.8s						
MULG	Mulgathing	26.93	204	P	P	18 27 51.5	+1.3
PSA00	Pilbara Seismi	30.12	236	P	P	18 28 19.0	+0.4
	12nm,0.8s						
MEEK	Meekatharra	33.63	229	P	P	18 28 49.5	+0.1
	16nm,1.2s						
MORW	Morawa	36.85	228	P	P	18 29 17.0	0.0
	14nm,3.0s						
KLBR	Kellerberrin	37.09	223	P	P	18 29 18.5	-0.5
	20nm,0.5s						
BLDU	Ballidu	37.24	225	P	P	18 29 19.9	-0.3
RPZ	Rata Peaks	43.43	154	P	P	18 30 12.1	+0.9
BFZ	Birch Farm	43.70	147	P	P	18 30 13.3	-0.1
KSRS	Korea Array	46.47	340	P	P	18 30 34.2	-1.0
	0.9nm,0.7s,baz=158,slow=9.3,SNR=2.9						
CMAR	Chiang Mai Arr	52.74	298	pP	pP	18 31 52.6	+5.1
	0.7nm,0.5s,baz=123,slow=5.7,SNR=2.5						
VNDA	Vanda	72.05	177	P	P	18 33 29.9	-1.0
	2.2nm,0.6s,baz=335,slow=7.4,SNR=16						
MKAR	Makanchi Array	77.08	321	P	P	18 33 59.2	-1.4
	0.1nm,0.5s,baz=95,slow=9.5,SNR=1.6						
MKAR				pP	pP	18 34 30.9	+4.3
	0.4nm,0.6s,baz=98,slow=7.5,SNR=3.4						
ZALV	Zalesovo Beam	78.64	328	P	P	18 34 07.2	-1.8
	0.9nm,0.6s,baz=111,slow=6.3,SNR=1.8						
ILAR	Eielson Array	85.59	23	P	P	18 34 42.5	-2.7
	0.5nm,0.5s,baz=254,slow=5.0,SNR=9.9						
ILAR				pP	pwP	18 35 12.6	+1.6
	0.5nm,0.7s,baz=246,slow=4.9,SNR=2.2						
PLCA	Paso Flores	122.50	147	PKP	PKPdf	18 41 02.0	-0.4
	1.5nm,0.7s,baz=299,slow=2.3,SNR=4.1						
TORD	Torodi Ar. Bea	144.56	284	PKP	PKPab	18 41 41.5	-1.3
	1.6nm,0.6s,baz=51,slow=3.8,SNR=11						
TORD				pPKP	pPKPdf	18 42 14.0	+1.5
	0.8nm,0.6s,baz=82,slow=3.6,SNR=2.6						
KIC	Kosan Boka	151.38	272	*e*PKIKP	PKPbc	18 42 00.2	-1.3
	4.6nm,0.8s						
DBIC	Dimbokro	151.49	273	PKPbc	PKPbc	18 42 00.1	-1.6
	1.4nm,0.5s,baz=125,slow=2.4,SNR=4.0						
TIC	Toumodi	151.66	273	*e*PKIKP	PKPbc	18 42 00.0	-2.1
LIC	Lamto	151.66	272	*e*PKIKP	PKPdf	18 41 59.7	+4.0
	25nm,1.4s						
BDFB	Brasilia	154.24	146	PKPbc	PKPbc	18 42 05.7	-2.2
	3.0nm,0.4s,baz=70,slow=4.0,SNR=6.4						

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*PAS **27** 18:31:17.8±2.0, 35°.22N±0°.04×117°.28W±0°.05, h1^{km}±7^{km}, Mwr4.3/6, ML4.3/90(NEIC), Error ellipse: s-maj=6.9km s-min=4.8km az=140.0*

*ANF **27** 18:31:17.2±0.1, 35°.21N×117°.28W, h10^{km}±1^{km}, ML4.7/43, Error ellipse: s-maj=1.2km s-min=1.0km az=48.0*

*NEIC **27** 18:31:17.8, 35°.22N×117°.28W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.94; $M_{\theta\theta}$-2.22; $M_{\phi\phi}$1.28; $M_{r\theta}$0.71; $M_{\theta\phi}$1.88; $M_{\phi r}$0.99; Fault plane solution: $M_0$2.95000×10^{15} NP1:ϕ_s334.00000°, δ65.00000°, λ159.00000°. NP2:ϕ_s73.00000°, δ71.00000°, λ27.00000°. Principal axes: T 2.8536, Plg32.0000°, Azm295.0000°; N 0.2020, Plg58.0000°, Azm106.0000°; P -3.0556, Plg4.0000°, Azm203.0000°;*

*NEIC **27** 18:31:17.7±2.0, 35°.20N±0°.03×117°.29W±0°.05, h4^{km}±7^{km} Error ellipse: s-maj=6.2km s-min=3.0km az=117.0*

*IDC **27** 18:31:17.5±0.7, 35°.16N×117°.15W, h0^{km}, mb3.9/7, mb1 4.1/11, mb1mx3.7/48, mbtmp3.9/11, ML3.5/5, MS3.5/12, Ms1 3.5/12, ms1mx3.2/45, Error ellipse: s-maj=15.7km s-min=6.0km az=72.0*

ISC 27 18:31:17.8±1.1**, 35°.20N**±0°.02×**117°.29W**±0°.02**, h7^{km}**±8^{km}**, n127, σ0^{s}.96**/143**, mb4.3**/8**, MS3.5**/9**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RRX	Edison Barstow	0.41	143	P	Pg	18 31 26.1	+0.4
	baz=326,SNR=328						
RRX				S	Sg	18 31 31.6	+0.6
	baz=326						
GSC	Goldstone, Bar	0.41	76		Pg	18 31 25.8	0.0
GSC				Sg	Sg	18 31 31.3	+0.2
GSC				IAML		18 31 31.7	
	comp=N,38μm,0.8s						
GSC				IAML		18 31 34.6	
	comp=E,36μm,0.6s						
GSC	Goldstone, Bar	0.41	76	P	Pg	18 31 25.8	0.0
	baz=257,SNR=1000						
GSC				S	Sg	18 31 31.0	-0.2
	baz=257						
LRMC	Laurel Mtn Rad	0.42	311	P	Pg	18 31 26.3	+0.2
	baz=129,SNR=1000						
LRMC				S	Sg	18 31 31.9	+0.3
	baz=129						
EDW2	Edwards Air Fo	0.66	241	P	Pg	18 31 30.4	-0.1
	baz=60,SNR=1000						
EDW2				S	Sg	18 31 39.2	+0.1
	baz=60						
QSM	Queen of Sheba	0.83	24	Pg	Pg	18 31 33.3	-0.5
QSM				Sg	Sg	18 31 44.3	-0.3
QSM				IAML		18 31 48.0	
	comp=N,15μm,0.5s						
QSM				IAML		18 31 48.2	
	comp=E,9μm,0.5s						
MPMC	Manual Prospec	0.87	349	P	Pg	18 31 33.8	-0.7
	baz=169,SNR=1000						
MPMC				S	Sg	18 31 45.3	-0.5
	baz=169						
HEC	Hector,Ludlow	0.87	115	P	Pg	18 31 34.0	-0.5
	baz=297,SNR=952						
HEC				S	Sb	18 31 46.8	-0.4
	baz=297						
BBRC	Big Bear Solar	0.99	162	P	Pg	18 31 36.6	-0.2
	baz=343,SNR=1000						
BBRC				S	Sg	18 31 49.7	+0.1
	baz=343						
BFSC	Mount Baldy Ra	1.01	198	P	Pg	18 31 36.8	-0.4
	baz=18,SNR=1000						
BFSC				S	Sg	18 31 50.8	+0.5
	baz=18						
ISA	Isabella, Lake	1.07	296		Pg	18 31 37.7	-0.6
ISA				IAML		18 31 54.5	
	comp=N,5μm,0.7s						
ISA	Isabella, Lake	1.07	296	P	Pg	18 31 37.9	-0.4
	baz=114,SNR=1000						
ISA				S	Sg	18 31 51.5	-0.6
	baz=114						
SHOC	Shoshone, Teco	1.08	50	P	Pg	18 31 37.9	-0.7
	baz=230,SNR=1000						
SHOC				S	Sg	18 31 52.4	-0.2
	baz=230						
GWY	Greenwater Val	1.10	27	Pg	Pg	18 31 38.1	-0.8
GWY				IAML		18 31 59.1	
	comp=E,10μm,0.7s						
TUQ	Turquoise Moun	1.14	78	P	Pg	18 31 38.9	-0.8
	baz=259,SNR=1000						
TUQ				S	Sg	18 31 54.1	-0.4
	baz=259						
MWC	Mount Wilson	1.16	213		Pg	18 31 39.6	-0.6
RSBC	Riverside Bore	1.23	181		Pg	18 31 40.9	-0.4
ARVC	Arvin	1.26	267	P	Pg	18 31 41.1	-0.9
	baz=86,SNR=649						
ARVC				S	Sg	18 31 58.2	-0.2
	baz=86						
PASC	Pasadena Art C	1.27	216		Pg	18 31 41.3	-0.8
PASC				IAML		18 32 04.8	
	comp=N,5μm,0.6s						
DECC	Green Verdugo	1.28	222	P	Pg	18 31 41.7	-0.6
	baz=42,SNR=557						
DECC				S	Sb	18 31 59.6	+0.7
	baz=42						
FURC	Furnace Creek,	1.31	15	P	Pn	18 31 41.3	-1.2
	baz=195,SNR=1000						
FURC				S	Sg	18 31 59.4	-0.5
	baz=195						
OSI	Osito Audit: C	1.31	244		Pn	18 31 41.9	-0.8
OSI	Osito Audit: C	1.31	244	P	Pn	18 31 41.9	-0.8
	baz=63,SNR=291						
OSI				S	Sg	18 32 00.3	+0.2
	baz=63						
GR2C	Griffith Obs.	1.36	218		Pn	18 31 43.2	-0.1
CWC	Cottonwood Cre	1.39	333	P	Pn	18 31 43.0	-0.8
	baz=152						
CWC				S	Sg	18 32 01.9	-0.6
	baz=152						
GMRC	Granite Mounta	1.40	107	P	Pn	18 31 42.1	-1.9
	baz=288,SNR=1000						
GMRC				S	Sg	18 32 02.3	-0.7
	baz=288						
VES	Vestal, Richgr	1.59	294	P	Pn	18 31 46.0	-0.4
	baz=113,SNR=1000						
VES				Sb	Sb	18 32 08.5	+0.5
	baz=113						
MURC	Murrieta	1.60	177	P	Pn	18 31 46.3	-0.3
	baz=358,SNR=1000						
MURC				S	Sn	18 32 07.9	+0.3
	baz=358						
BELC	Belle Mtn. Jos	1.61	138	P	Pn	18 31 45.7	-1.0
	baz=319,SNR=1000						
BELC				Sb	Sg	18 32 09.4	-0.1
	baz=319						
FMP	Fort Macarthur	1.70	209	P	Pn	18 31 47.5	-0.5
	baz=29,SNR=56						
PFO	Pinyon Flats O	1.73	156	Pg	Pn	18 31 47.7	-0.7
	comp=N,140nm,0.3s,baz=341,slow=14,SNR=435						
PFO				LR	LR	18 32 09.5	
	comp=N,94nm,19.0s,baz=308,slow=32						
PFO				Lg	Lg	18 32 11.7	
	comp=N,845nm,0.3s,baz=84,slow=15,SNR=20						
PFO	Pinyon Flats O	1.73	156	Pn	Pn	18 31 47.7	-0.7
PFO				IAML		18 32 13.2	
	comp=N,4μm,0.5s						
PFO				IAML		18 32 16.3	
	comp=N,2μm,0.5s						
PFO	Pinyon Flats O	1.73	156	P	Pn	18 31 47.7	-0.7
	baz=337,SNR=392						
PFO				S	Sb	18 32 12.6	+0.6
	baz=337						
TPFO	Pinon Flats	1.74	156	P	Pn	18 31 47.8	-0.7
	baz=337,SNR=372						
GRAC	Grapevine Rang	1.79	358	P	Pn	18 31 48.8	-0.4
	baz=178,SNR=552						
TPNV	Topopah Spring	1.94	26		Pn	18 31 50.9	-0.4
TPNV	Topopah Spring	1.94	26	P	Pn	18 31 50.9	-0.4
	baz=206,SNR=1000						
TIN	Tinemaha, Big	2.00	338	P	Pn	18 31 51.8	-0.4
	baz=157,SNR=210						
CIS	Catalina Islan	2.02	208	P	Pn	18 31 51.5	-0.9
	baz=27,SNR=324						
VOG	Valley Oaks Go	2.03	304	P	Pn	18 31 52.6	+0.1
	baz=122,SNR=300						
LCH	Last Change Ra	2.04	352		Pn	18 31 52.6	-0.2
IRM	Iron Mountain	2.05	120	P	Pn	18 31 51.2	-1.7
	baz=302,SNR=205						
PKM	Mcpherson Peak	2.09	262	P	Pn	18 31 52.4	-1.1
	baz=80,SNR=163						
SHPR	Sheep Range	2.16	53	Pn	Pn	18 31 53.8	-0.7
SHPR				IAML		18 32 28.8	
	comp=E,1μm,0.8s						
BC3	Big Chuckawall	2.17	135	P	Pn	18 31 53.2	-1.2
	baz=316,SNR=316						
NEE2	Needles Airpor	2.24	100	P	Pn	18 31 53.7	-1.6
	baz=282,SNR=49						
109C	Camp Elliot, M	2.31	176		Pn	18 31 55.6	-0.8
109C				IAML		18 32 32.7	
	comp=N,1μm,0.3s						
109C				IAML		18 32 38.9	
	comp=E,2μm,0.8s						
109C	Camp Elliot, M	2.31	176	P	Pn	18 31 56.2	-0.2
	baz=356,SNR=204						
MONP2	Monument Peak	2.42	162	P	Pn	18 31 57.5	-0.5
	baz=343,SNR=409						
SCI2	San Clemente I	2.45	205	P	Pn	18 31 57.8	-0.4
	baz=25,SNR=88						
PAGB	Antelope Grade	2.47	283	Pn	Pn	18 31 57.6	-1.0
PAGB				IAML		18 32 43.9	
	comp=N,2μm,1.2s						
PAGB				IAML		18 32 59.3	
	comp=E,2μm,0.8s						
BAR	Barrett	2.57	168		Pn	18 31 59.6	-0.4
BAR				IAML		18 32 39.9	
	comp=N,852nm,0.2s						
BAR				IAML		18 32 40.2	
	comp=E,1μm,0.8s						
SWSC	Sam W. Stewart	2.57	151	P	Pn	18 31 58.3	-1.6
	baz=332						
SNCC	San Nicolas Is	2.69	224		Pn	18 32 00.9	-0.6
SNCC				IAML		18 32 45.5	
	comp=E,2μm,0.5s						
SNCC				IAML		18 32 48.4	
	comp=N,1μm,0.6s						
SNCC	San Nicolas Is	2.69	224	P	Pn	18 32 00.8	-0.8
	baz=43						
TJX	Tijuana	2.69	176		Pn	18 32 02.7	+1.1
IKP	In-Ko-Pah, Jac	2.73	159	P	Pn	18 32 01.3	-0.9
	baz=340,SNR=69						
PDMCI	Parker Dam,Lak	2.75	108	P	Pn	18 32 00.8	-1.5
	baz=290,SNR=48						
PRN	Pahroc Range	2.85	39	Pn	Pn	18 32 03.4	-0.4
PRN				IAML		18 32 23.4	
	comp=N,1μm,0.6s						
PRN				IAML		18 33 12.6	
	comp=E,2μm,0.9s						
TPH	Tonopah	2.87	1		Pn	18 32 04.3	+0.1
GLA	Glamis	2.96	136		Pn	18 32 04.0	-1.4
GLA				IAML		18 32 54.5	
	comp=N,1μm,0.9s						
GLA	Glamis	2.96	136	P	Pn	18 32 03.9	-1.4
	baz=318,SNR=27						
PMPB	Monarch Peak	3.03	290		Pn	18 32 05.0	-1.3
LHV	Little Huntoon	3.19	343		Pn	18 32 08.7	+0.3
LHV				IAML		18 33 08.7	
	comp=E,788nm,1.7s						
LHV				IAML		18 33 12.8	
	comp=N,794nm,0.8s						
NV11	Mina Array Sit	3.29	348		Pn	18 32 10.4	+0.4
NV11				IAML		18 33 12.4	
	comp=E,446nm,1.4s						
NVAR	Mina Array Bea	3.32	346	Pn	Pn	18 32 11.0	+0.6
	comp=E,15nm,0.3s,baz=170,slow=16,SNR=73						
NVAR				Pg	Pg	18 32 20.4	-1.0
	comp=E,91nm,0.3s,baz=169,slow=19,SNR=61						
NVAR				Lg	Lg	18 33 06.7	
	comp=E,23nm,0.3s,baz=164,slow=32,SNR=5.8						
NVAR	Mina Array Bea	3.32	346		Pn	18 32 10.2	-0.2
R11A	Troy Canyon, C	3.42	23		Pn	18 32 11.3	-0.5
R11A	Troy Canyon, C	3.42	23	P	Pn	18 32 11.0	-0.8
	baz=204,SNR=23						
RYN	Ryan	3.56	344		Pn	18 32 13.5	-0.1
SAO	San Andreas Ge	3.71	296	Pn	Pn	18 32 15.5	-0.1
LCMT	Little Creek M	3.74	60		Pn	18 32 16.2	+0.1
LCMT				IAML		18 33 23.6	
	comp=N,347nm,1.9s						
CMB	Columbia Colle	3.77	320		Pn	18 32 17.3	+0.9
CMB				IAML		18 33 16.9	
	comp=E,574nm,1.4s						
CMB				IAML		18 33 16.9	
	comp=N,663nm,1.1s						
KVN	Kaiserville	3.89	351		Pn	18 32 19.0	+0.7
CCUT	Cedar City	3.94	52		Pn	18 32 19.7	+0.8
KNB	Kanab	4.05	62		Pn	18 32 20.8	+0.4
KNB				IAML		18 33 39.7	
	comp=N,453nm,2.1s						
KNB				IAML		18 34 00.7	
	comp=E,301nm,1.5s						
YERR	Yerington	4.08	338		Pn	18 32 21.8	+0.9
YERR				IAML		18 33 46.2	
	comp=E,343nm,0.8s						
SZCU	Shurtz Canyon	4.15	54		Pn	18 32 21.9	+0.1
U15A	North Rim	4.24	72		Pn	18 32 23.4	+0.2
PNTR	Pine Nut	4.29	335		Pn	18 32 24.9	+1.1
PNTR				IAML		18 33 53.0	
	comp=N,443nm,1.2s						
PNTR				IAML		18 33 53.1	
	comp=E,454nm,1.6s						
PSUT	Pine Spring	4.32	39		Pn	18 32 24.8	+0.7
PSUT				IAML		18 33 43.0	
	comp=E,450nm,1.4s						
PSUT				IAML		18 33 59.1	
	comp=N,275nm,1.1s						
PKCU	Pink Cliffs	4.60	59		Pn	18 32 29.1	+1.0
PKCU				IAML		18 34 03.9	
	comp=N,406nm,2.6s						
PAHR	Pah Rah Range	4.79	340		Pn	18 32 32.1	+1.5
WUAZ	Wupatki	4.85	85		Pn	18 32 31.8	+0.4
WUAZ	Wupatki	4.85	85	P	Pn	18 32 31.2	-0.2
	baz=268						
X16A	Lo Mia Camp, P	4.88	98		Pn	18 32 31.7	-0.1
214A	Organ Pipe Nat	4.95	130		Pn	18 32 30.8	-1.8
214A				IAML		18 34 04.6	
	comp=N,249nm,1.1s						
214A				IAML		18 34 05.0	
	comp=E,169nm,1.3s						
214A	Organ Pipe Nat	4.95	130	P	Pn	18 32 31.1	-1.6
	baz=312						
MTPU	Mount Pierson	4.99	54		Pn	18 32 34.9	+1.4
MTPU				IAML		18 33 57.7	
	comp=N,159nm,1.6s						
MTPU				IAML		18 34 07.6	
	comp=E,130nm,1.2s						
TCRU	Three Creeks R	5.16	47		Pn	18 32 37.2	+1.5
TCRU				IAML		18 34 14.9	
	comp=E,224nm,2.1s						
TCRU				IAML		18 34 24.7	
	comp=N,172nm,1.6s						
BMN	Battle Mountai	5.22	1		Pn	18 32 37.2	+0.8
BMN				IAML		18 34 10.4	
	comp=N,114nm,1.3s						
MVU	Marysvale	5.24	50		Pn	18 32 38.1	+1.3
MSU	Marysvale	5.26	50		Pn	18 32 38.0	+0.9
MCCM	Marconi Confer	5.37	305		Pn	18 32 37.0	-1.3
MCCM				IAML		18 34 08.5	
	comp=N,102nm,1.1s						
MCCM				IAML		18 34 21.3	
	comp=E,125nm,1.4s						
ORV	Oroville	5.48	324		Pn	18 32 41.2	+1.3
GDXM	Geysers	5.69	311	Pn	Pn	18 32 43.6	+0.8
ELK	Elko	5.76	16	Pn	Pn	18 32 44.4	+0.4
	comp=E,1.4nm,0.3s,baz=210,slow=10,SNR=33						
ELK				Lg	Lg	18 34 20.2	
	comp=E,7.7nm,0.3s,baz=317,slow=14,SNR=5.1						
ELK				LR	LR	18 35 05.0	
	comp=E,378nm,19.6s,baz=184,slow=39						
ELK	Elko	5.76	16		Pn	18 32 44.7	+0.7
HOPS	Hopland Field	5.97	311	Pn	Pn	18 32 46.8	+0.2
X18A	Snowflake	6.07	94		Pn	18 32 49.1	+0.9
TUC	Tucson	6.14	116		Pn	18 32 47.9	-1.1
TUC	Tucson	6.14	116	P	Pn	18 32 47.9	-1.1
	baz=300						
SPUT	South Promonto	7.19	31		Pn	18 33 05.2	+1.7
MVCO	Mesa Verde	7.38	72		Pn	18 33 07.3	+1.0
319A	Douglas	7.72	117		Pn	18 33 10.7	0.0
YBH	Yreka Blue Hor	7.78	329	Pn	Pn	18 33 15.0	+3.5
	comp=E,0.2nm,0.3s,baz=145,slow=7.6,SNR=11						
YBH				Lg	Lg	18 35 23.0	
	comp=E,0.1nm,0.3s,baz=57,slow=4.3,SNR=4.2						
ANMO	Albuquerque	8.89	89	Pn	Pn	18 33 27.9	+1.0
	comp=E,0.1nm,0.3s,baz=273,slow=9.8,SNR=2.3						
ANMO				Lg	Lg	18 35 53.2	
	comp=E,0.2nm,0.3s,baz=160,slow=10,SNR=6.2						
SMCO	Snowmass	9.14	61	Pn	Pn	18 33 29.8	-0.6
PDAR	Pinedale Array	9.65	36	Pn	Pn	18 33 40.4	+3.0
	comp=E,0.1nm,0.3s,baz=234,slow=13,SNR=14						
PDAR				LR	LR	18 37 18.7	
	comp=E,101nm,18.9s,baz=222,slow=38						
MNTX	Cornudas Mount	10.54	106		Pn	18 33 50.3	+0.8
LPIG	La Paz	12.62	149	LR	LR	18 38 53.1	
	comp=E,98nm,20.7s,baz=24,slow=36						
F36A	Milaca	20.89	52	P	P	18 36 00.5	-0.1
ULM	Lac du Bonnet	21.65	39	P	P	18 36 08.8	0.0
	comp=E,12nm,0.9s,baz=230,slow=10,SNR=7.8						
ULM				LR	LR	18 46 16.1	
	comp=E,102nm,18.1s,baz=286,slow=42						
DLBC	Dease Lake	24.73	344	P	P	18 36 40.8	+1.1
	comp=E,2.0nm,0.7s,baz=180,slow=15,SNR=3.8						
DLBC				LR	LR	18 47 33.0	
	comp=E,283nm,19.7s,baz=111,slow=39						
CMIG	Matias Romero	26.91	126	LR	LR	18 47 43.8	
	comp=E,69nm,21.6s,baz=246,slow=37						
TKL	Tuckaleechee C	27.24	79	LR	LR	18 48 28.5	
	comp=E,126nm,20.6s,baz=299,slow=38						
YKA	Yellowknife Ar	27.36	3	P	P	18 37 04.2	+0.8
	comp=E,0.3nm,0.6s,baz=180,slow=8.7,SNR=5.7						
YKA				LR	LR	18 47 37.2	
	comp=E,78nm,19.9s,baz=0.0,slow=36						
INK	Inuvik	34.40	349	LR	LR	18 52 46.2	
	comp=E,144nm,19.7s,baz=72,slow=37						
ILAR	Eielson Array	34.54	338	P	P	18 38 08.8	+2.1
	comp=E,0.5nm,0.8s,baz=156,slow=8.6,SNR=6.5						
SCHQ	Schefferville	39.67	44	LR	LR	18 55 55.8	
	comp=E,132nm,18.3s,baz=79,slow=37						
SEY	Seymchan	59.46	328	P	P	18 41 22.1	+1.1
	comp=E,1.7nm,0.7s,baz=80,slow=11,SNR=6.0						
TIXI	Tiksi	63.93	341	P	P	18 41 51.3	+0.3
	comp=E,0.5nm,0.2s,baz=17,slow=3.6,SNR=4.6						
NOA	NORSAR Array B	75.33	23	LR	LR	19 14 25.0	
	comp=E,29nm,21.8s,baz=80,slow=34						
PLCA	Paso Flores	86.94	146	P	P	18 44 02.8	-0.7
	comp=E,2.5nm,0.9s,baz=333,slow=8.0,SNR=3.0						
ZALV	Zalesovo Beam	89.17	347	LR	LR	19 29 40.1	
	comp=E,14nm,18.9s,baz=84,slow=39						
HHC	Hu-ho-hao-te	92.00	325	*e*P	P	18 44 24.0	-3.6
HHC				pmax	pmax		
	comp=Z,120nm,7.8s						
HHC				pmax	pmax		
	comp=Z,13nm,1.5s						
WMQ	Urumqi	98.12	342	*e*P	Pdif	18 44 57.3	+1.8

TAP 27 18:35:05.1, 24°.23N×121°.67E, h14^{km}, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	Fush Village	0.08	209	P	Pg	18 35 08.6	+0.6
	baz=209						
ETL				S	Sg	18 35 10.8	+0.8
	baz=209						
NACB	Ninganchiao	0.09	230	P	Pg	18 35 08.6	+0.5
	baz=229						

NACB				S	Sg	18 35 11.0	+0.9
	baz=229						
TWD	Chiawan	0.16	203	P	Pg	18 35 09.4	+0.4
	baz=200						
ETLH	Xiulin Townshi	0.17	263	P	Pb	18 35 10.0	-0.2
	baz=262						
ETLH				S	Sb	18 35 13.1	-0.4
	baz=262						
ENA	Nanau	0.21	19	P	Pb	18 35 10.6	-0.2
	baz=21						
EWUT	Wuta	0.24	25	P	Pb	18 35 11.0	-0.3
	baz=25						
ETM	Tongmen	0.31	211	*e*P	Pg	18 35 11.7	+0.2
	baz=211						
NNSB	Datong	0.33	308	*e*P	Pb	18 35 12.8	0.0
	baz=307						
NNSB				*e*S	Sb	18 35 17.9	-0.1
	baz=307						
LATG	Datong	0.33	337	*e*P	Pb	18 35 12.9	0.0
	baz=337						
LATG				*e*S	Sb	18 35 17.9	-0.2
	baz=337						
NNS	Nan Shan	0.34	308	*e*P	Pb	18 35 13.3	+0.2
	baz=308						
NNS				S	Sb	18 35 18.4	0.0
	baz=308						
WHF	Hehuan Shan	0.38	257	P	Pb	18 35 13.5	-0.3
	baz=256						
WHF				*e*S	Sb	18 35 19.2	-0.5
	baz=256						
FUSS	Fushou	0.39	273	*e*P	Pb	18 35 13.9	0.0
	baz=272						
FUSS				S	Sb	18 35 19.9	+0.1
	baz=272						
NDS	Dongshan	0.41	6	*e*P	Pb	18 35 14.0	-0.2
	baz=6.0						
NDS				*e*S	Sb	18 35 19.9	-0.3
	baz=6.0						
ENTT	Nioudou	0.42	347	*e*P	Pb	18 35 14.3	0.0
	baz=348						
ENTT				*e*S	Sb	18 35 20.9	+0.2
	baz=348						
ESL	Shilin	0.47	207	*e*P	Pg	18 35 14.6	+0.3
	baz=206						
CHGB	Renai	0.48	250	*e*P	Pb	18 35 15.5	0.0
	baz=249						
TWE	Neicheng	0.49	0	*e*P	Pb	18 35 15.2	-0.3
	baz=1.0						
YHNB	Yeheng	0.51	329	*e*P	Pb	18 35 16.1	+0.1
	baz=328						
YHNB				*e*S	Sb	18 35 23.7	+0.4
	baz=328						
NSK	Sanguang	0.53	328	*e*P	Pb	18 35 16.1	-0.1
	baz=328						
NSK				*e*S	Sb	18 35 24.1	+0.3
	baz=328						
FUSB	Fushanzhiwuyua	0.53	352	*e*P	Pb	18 35 16.5	+0.1
	baz=352						
FUSB				*e*S	Sb	18 35 24.5	+0.6
	baz=352						
WUSB	Renai	0.55	245	*e*P	Pb	18 35 16.7	0.0
	baz=244						
WUSB				*e*S	Sb	18 35 24.9	+0.3
	baz=244						
NWLT	Wulai	0.57	345	*e*P	Pb	18 35 17.1	+0.2
	baz=344						

MAN 27 18:36:33.1, 17°.02N×121°.55E, h20^{km}, mb4.5, ML3.4, MS3.2, Luzon

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BJI ***27*** *18:39:01.4±0.0, 48°.43N×84°.32E, h8^{km}, mB4.6/13, mb4.2/21, ML4.7/9, Ms4.1/10, Ms7 3.9/4*

MOS ***27*** *18:39:04.1±1.1, 48°.31N×84°.26E, h28^{km}, mb4.6/5, Error ellipse: s-maj=5.7km s-min=5.1km az=76.1*

NNC ***27*** *18:39:05.0±0.9, 48°.37N×84°.11E, h0^{km}, mb5.3, mpv5.0, Error ellipse: s-maj=8.3km s-min=4.6km az=91.0*

IDC ***27*** *18:39:05.5±0.6, 48°.22N×84°.28E, h30^{km}±4^{km}, mb3.9/21, mb1 4.1/27, mb1mx3.9/47, mbtmp4.2/27, ML3.7/7, MS3.4/20, Ms1 3.4/20, ms1mx3.3/48, Error ellipse: s-maj=8.8km s-min=7.5km az=135.0*

NEIC ***27*** *18:39:05.2±2.1, 48°.47N±0°.07×84°.0E±0°.2, h16^{km}±5^{km}, mb4.5/27, Error ellipse: s-maj=15.7km s-min=8.9km az=109.0*

SOME ***27*** *18:39:07.9, 48°.20N×83°.87E, h10^{km}, MS4.1*

ISC 27 18:39:05.1±0.4, **48°.27N**±0°.02×**83°.98E**±0°.02, **h14**^{km}±2^{km}, **h14**^{km}**:pP-P, n307,** σ1^{s}**86**/342, **mb4.3**/51, **MS3.3**/18, **51C-32D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZSN	Zaisan	1.01	143	⇓*e*P	Pg	18 39 23.4	-1.3
	1μm,0.1s						
ZSN				*e*S	Sg	18 39 35.6	-2.2
	10μm,0.4s						
MK31	Makanchi Array	1.87	218	PN	Pg	18 39 40.6	-0.2
MK31				SN	Sg	18 40 07.5	+2.5
MK31	Makanchi Array	1.87	218	⇑Pn	Pg	18 39 40.6	-0.2
	198nm,0.3s,baz=42,slow=16						
MK31				⇑Sn	Sg	18 40 07.5	+2.5
	1μm,0.3s,baz=39,slow=24,SNR=45						
MK31	Makanchi Array	1.87	218	Pn	Pg	18 39 40.9	0.0
MKAR	Makanchi Array	1.87	218	Pg	Pg	18 39 40.8	-0.1
	218nm,0.3s,baz=43,slow=18,SNR=7197						
MKAR				Lg	Lg	18 40 07.5	
	3μm,0.3s,baz=42,slow=33,SNR=24						
MKAR	Makanchi Array	1.87	218	Pg	Pg	18 39 41.8	+0.9
MKAR				Sg	Sg	18 40 07.6	+2.6
MAKZ	Makanchi	1.99	224	Pg	Pg	18 39 42.8	-0.5
MAKZ				Sg	Sg	18 40 11.0	+1.9
MAKZ	Makanchi	1.99	224	PN	Pg	18 39 42.5	-0.8
MAKZ				SN	Sg	18 40 09.9	+0.8
MAKZ	Makanchi	1.99	224	⇓Pn	Pg	18 39 42.5	-0.8
	192nm,0.3s						
MAKZ				⇓Sn	Sg	18 40 09.9	+0.8
	6μm,0.6s						
MAKZ	Makanchi	1.99	224		Pg	18 39 41.8	-1.4
DGZ	Jazzator, Alta	2.69	57	Pg	Pg	18 39 56.6	0.0
DGZ				Sg	Sb	18 40 29.2	+3.2
UKR	Ust'-Kan	2.72	11	Pg	Pn	18 39 50.8	+2.3
UKR				Sg	Sn	18 40 23.3	+2.2
CHBI	Chibit, Altay	3.08	47	Pg	Pb	18 40 01.8	+2.1
CHBI				Sg	Sb	18 40 42.7	+5.4
AKAR	Aktash	3.15	48	Pg	Pg	18 40 04.8	-0.5
AKAR				Sg	Sb	18 40 40.8	+1.8
SEM	Semipalatinsk	3.24	313	*e*P	Pg	18 40 07.1	-0.1
	147nm,0.4s						
SEM				*e*S	Sg	18 40 50.4	+1.2
	3μm,0.5s						
SEM	Semipalatinsk	3.24	313	*e*Pn	Pn	18 39 56.2	+0.4
	baz=312						
SEM				*i* P	Pb	18 39 56.5	-6.0
	baz=312						
SEM				*e*Pb	Pg	18 40 02.7	-4.5
	baz=312						
SEM	Semipalatinsk	3.24	313	*e*PN	Pn	18 39 56.1	+0.4
SEM				*e*		18 40 02.7	
CUR	Chagan-Uzun	3.41	56	Pg	Pb	18 40 05.2	-0.1
CUR				Sg	Sb	18 40 45.4	-1.1
ULGR	Ulagan, Altay	3.51	46	Pg	Pb	18 40 08.4	+1.4
ULGR				Sg	Sb	18 40 54.4	+5.0
KURBB	Kurchatov Arra	4.26	306	Pn	Pn	18 40 11.1	+1.6
	6.0nm,0.3s,baz=112,slow=14,SNR=481						
KURBB				Sn	Sn	18 41 02.1	+3.1
	15nm,0.3s,baz=114,slow=20,SNR=7.9						
KURBB	Kurchatov Arra	4.26	306	PN	Pn	18 40 11.2	+1.7
KURBB	Kurchatov Arra	4.26	306	⇑Pn	Pn	18 40 11.0	+1.6
	97nm,0.5s						
KURBB				⇓Lg	Lg	18 41 22.8	
	4μm,0.6s						
KURK	Kurchatov	4.26	307	PN	Pn	18 40 11.1	+1.6
KURK						18 41 02.1	
KURK	Kurchatov	4.26	307	⇓Pn	Pn	18 40 10.7	+1.2
	29nm,0.3s						
KURK				⇑Lg	Lg	18 41 23.6	
	2μm,0.6s						
KURK	Kurchatov	4.26	307	Pn	Pn	18 40 10.8	+1.3
KAPS	Kapalarasan	4.36	228	*e*P	Pg	18 40 26.1	-2.4
	73nm,0.4s						
KAPS				*e*S	Sg	18 41 22.9	-1.9
	692nm,0.3s						
KAPS	Kapalarasan	4.36	228	Pg	Pg	18 40 26.1	-2.4
	73nm,0.4s						
KAPS				Lg	Lg	18 41 22.9	
	692nm,0.3s						
DJR	Jarkent	4.89	218	*e*P	Pg	18 40 36.1	-2.6
	68nm,0.4s						
DJR				*e*S	Sg	18 41 40.7	-1.3
	509nm,0.5s						
DJR	Jarkent	4.89	218	Pg	Pg	18 40 36.1	-2.6
	68nm,0.4s						
DJR				Lg	Lg	18 41 40.7	
	509nm,0.5s						
TDK	Taldyqorghan	5.04	232	*e*P	Pg	18 40 38.8	-2.7
	378nm,0.5s						
TDK				*e*S	Sg	18 41 44.4	-2.3
	959nm,0.6s						
TDK	Taldyqorghan	5.04	232	Pg	Pg	18 40 38.8	-2.7
	378nm,0.5s						
TDK				Lg	Lg	18 41 44.4	
	959nm,0.6s						
WMQ	Urumqi	5.15	148	*e*Pn	Pn	18 40 22.0	+0.3
WMQ				Sn	Sn	18 41 28.0	+7.1
WMQ				smax	smax		
	comp=N,830nm,0.9s						
WMQ				smax	smax		
	comp=E,950nm,0.9s						
WMQ				LR	LR		
	comp=N,900nm,6.7s						
WMQ				LR	LR		
	comp=E,550nm,7.3s						
KTMS	Ketmen	5.45	209	*e*P	Pg	18 40 47.3	-2.0
	105nm,0.7s						
KTMS				*e*S	Sg	18 41 60.0	+0.2
	370nm,0.4s						
KTMS	Ketmen	5.45	209	Pg	Pg	18 40 47.3	-2.0
	105nm,0.7s						
KTMS				Lg	Lg	18 41 60.0	
	370nm,0.4s						
BLB	Baldybastay	5.65	224	Pg	Pg	18 40 51.9	-1.3
	210nm,0.7s						
BLB				Lg	Lg	18 42 07.2	
	683nm,0.4s						
ZAA0	Zalesovo Array	5.71	5	Pn	Pn	18 40 29.2	-0.2
ZALV	Zalesovo Beam	5.71	5	Pn	Pn	18 40 29.2	-0.2
	5.1nm,0.3s,baz=188,slow=14,SNR=45						
ZALV				Sn	Sn	18 41 33.4	-1.3
	31nm,0.3s,baz=199,slow=27,SNR=6.3						
ZALV				Lg	Lg	18 42 05.3	
	37nm,0.3s,baz=187,slow=24,SNR=6.3						
ZALV				LR	LR	18 42 50.6	
	comp=Z,209nm,18.4s,baz=170,slow=39						
ARXS	Arharly	5.88	229	*e*P	Pg	18 40 56.1	-1.6
	53nm,0.5s						
ARXS				*e*S	Sg	18 42 14.3	+0.5
	818nm,0.7s						
ARXS	Arharly	5.88	229	*e*PN	Pn	18 40 34.5	+2.6
ARXS	Arharly	5.88	229	Pg	Pg	18 40 56.1	-1.6
	53nm,0.5s						
ARXS				Lg	Lg	18 42 14.3	
	818nm,0.7s						
SHLS	Shalkode	6.01	213	*e*P	Pg	18 40 55.2	-4.8
	91nm,0.5s						
SHLS				*e*S	Sg	18 42 12.3	-5.6
	265nm,0.4s						
SHLS	Shalkode	6.01	213	*e*Pn	Pn	18 40 33.9	+0.3
	2.9nm,0.6s,baz=210						
SHLS				*e*Lg	Lg	18 42 13.9	
	baz=210						
SHLS	Shalkode	6.01	213	*e*PN	Pn	18 40 33.8	+0.2
SHLS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SHLS	Shalkode	6.01	213	Pg	Pg	18 40 55.2	-4.8
	comp=Z,91nm,0.5s						
SHLS				Lg	Lg	18 42 12.3	
	comp=Z,265nm,0.4s						
UZB	Uzynbulak	6.18	216	*e*Pn	Pn	18 40 38.2	+2.1
	baz=216						
UZB	Uzynbulak	6.18	216	*e*PN	Pn	18 40 38.2	+2.1
ZHN	Zhinishke	6.41	219	*e*P	Pg	18 41 05.1	-2.5
	comp=Z,78nm,0.2s						
ZHN				*e*S	Sg	18 42 30.0	-0.6
	comp=Z,233nm,0.7s						
ZHN	Zhinishke	6.41	219	*e*Pn	Pn	18 40 41.7	+2.6
	baz=219						
ZHN	Zhinishke	6.41	219	*e*PN	Pn	18 40 41.6	+2.6
ZHN	Zhinishke	6.41	219	Pg	Pg	18 41 05.1	-2.5
	comp=Z,78nm,0.2s						
ZHN				Lg	Lg	18 42 30.0	
	comp=Z,233nm,0.7s						
SATY	Saty	6.51	219	*e*P	Pg	18 41 07.0	-2.6
	comp=Z,112nm,0.3s						
SATY				*e*S	Sg	18 42 33.1	-0.7
	comp=Z,279nm,0.4s						
SATY	Saty	6.51	219	*e*Pn	Pn	18 40 43.0	+2.5
	comp=Z,3.5nm,0.5s,baz=218						
SATY	Saty	6.51	219	*e*PN	Pn	18 40 43.0	+2.5
SATY				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SATY	Saty	6.51	219	Pg	Pg	18 41 07.0	-2.6
	comp=Z,112nm,0.3s						
SATY				Lg	Lg	18 42 33.1	
	comp=Z,279nm,0.4s						
CHKK	Chushkaly	6.57	230	*e*P	Pg	18 41 08.9	-1.8
	comp=Z,50nm,0.4s						
CHKK				*e*S	Sg	18 42 36.3	+0.7
	comp=Z,536nm,0.6s						
CHKK	Chushkaly	6.57	230	*e*Pn	Pn	18 40 43.4	+2.3
	baz=230						
CHKK	Chushkaly	6.57	230	Pg	Pg	18 41 08.9	-1.8
	comp=Z,50nm,0.4s						
CHKK				Lg	Lg	18 42 36.3	
	comp=Z,536nm,0.6s						
KTBS	Karatobe	6.82	231	*e*P	Pg	18 41 13.0	-2.6
	comp=Z,51nm,0.6s						
KTBS				*e*S	Sg	18 42 43.8	-0.1
	comp=Z,870nm,0.5s						
KTBS	Karatobe	6.82	231	Pg	Pg	18 41 13.0	-2.6
	comp=Z,51nm,0.6s						
KTBS				Lg	Lg	18 42 43.8	
	comp=Z,870nm,0.5s						
KUU	Kurty	6.88	233	*e*P	Pg	18 41 13.7	-3.0
	comp=Z,35nm,0.3s						
KUU				*e*S	Sg	18 42 44.8	-0.9
	comp=Z,483nm,0.6s						
KUU	Kurty	6.88	233	*e*Pn	Pn	18 40 47.3	+1.8
	baz=233						
KUU	Kurty	6.88	233	*e*PN	Pn	18 40 47.2	+1.8
KUU	Kurty	6.88	233	Pg	Pg	18 41 13.7	-3.0
	comp=Z,35nm,0.3s						
KUU				Lg	Lg	18 42 44.8	
	comp=Z,483nm,0.6s						
KOTS	Kotyrbulak	6.96	226	*e*P	Pg	18 41 14.9	-3.2
	comp=Z,45nm,0.4s						
KOTS				*e*S	Sg	18 42 47.4	-0.8
	comp=Z,350nm,0.8s						
KOTS	Kotyrbulak	6.96	226	Pg	Pg	18 41 14.9	-3.2
	comp=Z,45nm,0.4s						
KOTS				Lg	Lg	18 42 47.4	
	comp=Z,350nm,0.8s						
KNDC	Almaty	7.04	227	P	Pn	18 40 49.9	+2.2
KNDC	Almaty	7.04	227	⇑Pn	Pn	18 40 50.0	+2.2
	comp=Z,37nm,0.5s						
KNDC				⇑Lg	Lg	18 42 51.1	
	comp=Z,577nm,0.8s						
MDOK	Medeo	7.04	226	*e*P	Pg	18 41 16.8	-2.9
	comp=Z,46nm,0.4s						
MDOK				*e*S	Sg	18 42 50.1	-0.8
	comp=Z,245nm,0.8s						
MDOK	Medeo	7.04	226	*e*P	Pn	18 40 50.1	+2.2
	baz=226						
MDOK	Medeo	7.04	226	*e*P	Pn	18 40 50.0	+2.2
MDOK	Medeo	7.04	226	⇑Pn	Pn	18 40 50.0	+2.2
	comp=Z,28nm,0.5s						
MDOK				⇑Lg	Lg	18 42 52.1	
	comp=Z,318nm,0.7s						
MDOK	Medeo	7.04	226	Pg	Pg	18 41 16.8	-2.9
	comp=Z,46nm,0.4s						
MDOK				Lg	Lg	18 42 50.1	
	comp=Z,245nm,0.8s						
AAA	Alma-Ata	7.07	227	*e*P	Pg	18 41 17.7	-2.6
	comp=Z,60nm,0.3s						
AAA				*e*S	Sg	18 42 52.0	+0.1
	comp=Z,14nm,0.4s						
AAA	Alma-Ata	7.07	227	Pg	Pg	18 41 17.7	-2.6
	comp=Z,60nm,0.3s						
AAA				Lg	Lg	18 42 52.0	
	comp=Z,14nm,0.4s						
TNSS	Tian-Shan	7.18	226	*e*P	Pg	18 41 20.2	-2.3
	comp=Z,29nm,0.3s						
TNSS				*e*S	Sg	18 42 55.6	+0.1
	comp=Z,138nm,0.9s						
TNSS	Tian-Shan	7.18	226	*e*Pn	Pn	18 40 52.1	+2.1
	baz=226						
TNSS	Tian-Shan	7.18	226	Pg	Pg	18 41 20.2	-2.3
	comp=Z,29nm,0.3s						
TNSS				Lg	Lg	18 42 55.6	
	comp=Z,138nm,0.9s						
MTBS	Maitube	7.37	229	*e*P	Pg	18 41 23.0	-3.0
	comp=Z,28nm,0.3s						
MTBS				*e*S	Sg	18 43 01.0	-0.4
	comp=Z,342nm,0.4s						
MTBS	Maitube	7.37	229	Pg	Pg	18 41 23.0	-3.0
	comp=Z,28nm,0.3s						
MTBS				Lg	Lg	18 43 01.0	
	comp=Z,342nm,0.4s						
KRBS	Karabastau	7.37	235	*e*P	Pg	18 41 23.0	-3.1
	comp=Z,46nm,0.4s						
KRBS				*e*S	Sg	18 42 59.4	-2.1
	comp=Z,204nm,0.5s						
KRBS	Karabastau	7.37	235	Pg	Pg	18 41 23.0	-3.1
	comp=Z,46nm,0.4s						
KRBS				Lg	Lg	18 42 59.4	
	comp=Z,204nm,0.5s						
BTLS	Baital	7.56	248	*e*P	Pg	18 41 26.5	-3.1
	comp=Z,53nm,0.3s						
BTLS				*e*S	Sg	18 43 06.0	-1.4
	comp=Z,34nm,0.6s						
BTLS	Baital	7.56	248	*e*P	Pn	18 40 56.5	+1.8
	baz=248						
BTLS	Baital	7.56	248	*e*P	Pn	18 40 56.5	+1.8
BTLS	Baital	7.56	248	Pg	Pg	18 41 26.5	-3.1
	comp=Z,53nm,0.3s						
BTLS				Lg	Lg	18 43 06.0	
	comp=Z,34nm,0.6s						
DGS	Degeres	7.63	232	*e*P	Pg	18 41 28.8	-2.2
	comp=Z,65nm,0.4s						
DGS				*e*S	Sg	18 43 10.5	+0.9
	comp=Z,230nm,0.6s						
DGS	Degeres	7.63	232	Pg	Pg	18 41 28.8	-2.2
	comp=Z,65nm,0.4s						
DGS				Lg	Lg	18 43 10.5	
	comp=Z,230nm,0.6s						
KST	Kastek	7.67	230	*e*P	Pg	18 41 28.6	-3.2
	comp=Z,86nm,0.4s						
KST				*e*S	Sg	18 43 10.6	-0.3
	comp=Z,165nm,0.6s						
KST	Kastek	7.67	230	Pg	Pg	18 41 28.6	-3.2
	comp=Z,86nm,0.4s						
KST				Lg	Lg	18 43 10.6	
	comp=Z,165nm,0.6s						
OTUK	Ortayu	7.77	274	P	Pn	18 40 59.5	+1.8
OTUK	Ortayu	7.77	274	⇑Pn	Pn	18 40 59.6	+1.8
	comp=Z,44nm,0.4s						
OTUK				⇑Lg	Lg	18 43 14.9	
	comp=Z,466nm,0.9s						
TKM2	Tokmak 2	7.94	231	P	Pn	18 41 02.8	+2.5
	SNR=8.3						
TKM2	Tokmak 2	7.94	231	P	Pn	18 41 02.5	+2.3
TKM2	Tokmak 2	7.94	231	⇓Pn	Pn	18 41 02.5	+2.3
	comp=Z,17nm,0.5s						
TKM2				⇓Lg	Lg	18 43 22.2	
	comp=Z,255nm,0.8s						
BOOM	Boomskoye usch	8.08	227	P	Pn	18 41 05.4	+3.3
BOOM	Boomskoye usch	8.08	227	Pn	Pn	18 41 05.4	+3.3
ULHL	Ulahol	8.12	225	P	Pn	18 41 07.2	+4.5
	SNR=5.4						
USP	Ospenovka	8.30	236	P	Pn	18 41 06.9	+2.0
	SNR=22						
CHMS	Chumysh	8.34	234	P	Pn	18 41 07.5	+2.1
	SNR=6.9						
KBK	Karagaybulak	8.47	232	P	Pn	18 41 11.3	+3.9
	SNR=25						
AAK	Ala-Archa	8.72	233	Pn	Pn	18 41 12.3	+1.5
	comp=Z,1.9nm,0.3s,baz=84,slow=9.1,SNR=18						
AAK				Lg	Lg	18 43 47.2	
	comp=Z,7.5nm,0.3s,baz=167,slow=22,SNR=9.5						
AAK				LR	LR	18 44 58.8	
	comp=Z,115nm,20.8s,baz=48,slow=40						
AAK	Ala-Archa	8.72	233	P	Pn	18 41 12.9	+2.1
	SNR=11						
AAK	Ala-Archa	8.72	233	P	Pn	18 41 13.0	+2.1
AAK	Ala-Archa	8.72	233	⇑Pn	Pn	18 41 12.8	+2.1
	comp=Z,16nm,0.5s						
AAK				⇓Lg	Lg	18 43 47.9	
	comp=Z,201nm,0.8s						
AAK	Ala-Archa	8.72	233	Pn	Pn	18 41 13.0	+2.1
UCH	Uchtor	9.00	231	P	Pn	18 41 18.9	+4.0
	SNR=7.1						
EKS2	Erkin-Say	9.10	236	P	Pn	18 41 18.4	+2.5
	SNR=15						
AML	Almayashu	9.50	234	P	Pn	18 41 25.4	+3.7
	SNR=6.6						
BVAR	Borovoye Array	9.85	304	Pn	Pn	18 41 26.5	+0.3
	comp=Z,3.1nm,0.3s,baz=127,slow=12,SNR=68						
BVAR				Sn	Sn	18 43 14.0	-2.5
	comp=Z,17nm,0.3s,baz=124,slow=26,SNR=9.2						
BVAR				Lg	Lg	18 44 26.6	
	comp=Z,9.5nm,0.3s,baz=130,slow=25,SNR=4.1						
BRVK	Borovoye	9.92	304	P	Pn	18 41 27.6	+0.4
BRVK				SN	Sn	18 43 19.8	+1.6
BRVK	Borovoye	9.92	304	⇓Pn	Pn	18 41 27.6	+0.4
	comp=Z,9.0nm,0.6s						
BRVK				⇑Sn	Sn	18 43 19.8	+1.6
	comp=Z,75nm,0.7s						
BRVK				⇑Lg	Lg	18 44 20.8	
	comp=Z,104nm,0.7s						
BRVK	Borovoye	9.92	304	Pn	Pn	18 41 27.5	+0.4
DZA	Taraz	10.36	243	*e*Pn	Pn	18 41 34.5	+1.2
	baz=243						
DZA	Taraz	10.36	243	*e*P	Pn	18 41 34.4	+1.2
KSH	Kashi	10.48	216	P	Pn	18 41 47.0	+12
KSH				sP		18 41 53.0	
KSH				S	Sn	18 43 52.3	+20
KSH				sS		18 43 55.3	
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSH				LR	LR		
	comp=Z,960nm,5.5s						
KSH				LR	LR		
	comp=Z,590nm,8.2s						
KKAR	Karatay Array	10.74	246	P	Pn	18 41 38.5	+0.1
KKAR	Karatay Array	10.74	246	Pn	Pn	18 41 38.5	+0.1
KK08	Karatay Array	10.75	246	⇓Pn	Pn	18 41 39.9	+1.4
	comp=Z,24nm,0.6s						
KK08				⇑Lg	Lg	18 44 51.9	
	comp=Z,91nm,0.7s						
IUG	Iuzhnay	11.58	243	*e*Pn	Pn	18 41 51.5	+1.6
	baz=243						
IUG	Iuzhnay	11.58	243	*e*P	Pn	18 41 51.5	+1.6
BTK	Batken	12.50	234	P	Pn	18 42 04.6	+2.1
BTK	Batken	12.50	234		Pn	18 42 04.6	+2.1
ZAK	Zakamensk	12.77	73	*e*P	Pn	18 42 07.3	+1.2
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CHGR	Chuyangaron	14.40	234	P	Pn	18 42 28.9	+0.4
CHGR	Chuyangaron	14.40	234	Pn	Pn	18 42 28.9	+0.4
GTA	Gaotai	14.44	122	*e*P	Pn	18 42 31.3	+2.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,48nm,4.6s						
GTA				LR	LR		
	comp=Z,410nm,8.7s						
GTA				LR	LR		
	comp=Z,480nm,6.9s						
SONM	Songino Array	14.99	83	Pn	Pn	18 42 32.8	-3.7
	comp=Z,0.1nm,0.3s,baz=280,slow=12,SNR=1.5						
SONM				Lg	Lg	18 46 56.8	
	comp=Z,0.3nm,0.3s,baz=276,slow=30,SNR=12						
SONM				LR	LR	18 48 30.9	
	comp=Z,137nm,21.7s,baz=274,slow=38						
ABKAR	Akbulak array	15.87	283		Pn	18 42 46.2	-1.6
ABKAR	Akbulak array	15.87	283		Pn	18 42 46.0	-1.8
SVE	Sverdlovsk	16.51	310	*e*P	Pn	18 42 55.0	-1.0
SVE				*e*S	Sn	18 45 58.1	-0.7
SVE				pmax	pmax		
	comp=Z,25nm,0.9s						
AKTO	Aktyubinsk	17.03	287	P	Pn	18 43 02.2	-0.4
	comp=Z,0.8nm,0.3s,baz=78,slow=12,SNR=16						
AKTO				Lg	Lg	18 48 07.8	
	comp=Z,0.3nm,0.3s,baz=22,slow=2.4,SNR=3.9						
AKTO				LR	LR	18 49 43.6	
	comp=Z,122nm,18.8s,baz=92,slow=37						
ARU	Arti	17.46	307	P	Pn	18 43 08.0	+0.1
	comp=Z,0.0nm,0.3s,baz=110,slow=5.3,SNR=30						
ARU				Sn	Sn	18 46 15.9	-6.0
	comp=Z,0.0nm,0.3s,baz=82,slow=21,SNR=5.8						

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ARU                                   LR     LR     18 50 21.4
      comp=Z,118nm,19.6s,baz=102,slow=38
ARU   Arti                17.46 307d iP     P      18 43 10.8 +1.7
ARU                                   S      S      18 46 30.5 +0.4
ARU                                   pmax   pmax
      comp=Z,32nm,0.7s
ARU   Arti                17.46 307   P      Pn     18 43 07.0 -1.0
ARU                                   IAmb   IAmb   18 43 12.1
      comp=Z,35nm,0.8s
KBL   Kabul               17.66 225   P      Pn     18 43 10.7 -0.1
KBL                                   pmax   pmax
      comp=Z,9.0nm,0.8s
LZH   Lanzhou             19.04 122  eP      Pn     18 43 32.8 +5.3
LZH                                   pP     sP     18 43 38.5 +5.8
LZH                                   sP     pP     18 43 41.5  +11
LZH                                   pmax   pmax
      comp=Z,12nm,1.4s
DANN  Dangsing            19.89 181  eP      P      18 43 35.9 -0.3
      comp=Z,34nm,0.7s
PYUN  Piuthan             20.15 183  eP      P      18 43 38.4 -0.6
GKN   Gorkha              20.24 178  eP      P      18 43 39.9  0.0
      comp=Z,37nm,0.6s
BOD   Bodaibo             20.27  51  eP      P      18 43 37.5 -2.3
BOD                                   pmax   pmax
      comp=Z,10.0nm,1.1s
GUN   Gumba               20.38 175  eP      P      18 43 41.0 -0.6
      comp=Z,18nm,0.4s
KOLN  Koldanda            20.47 181  eP      P      18 43 42.5  0.0
KKN   Kakani              20.47 177  eP      P      18 43 41.9 -0.6
      comp=Z,18nm,0.6s
DMN   Daman               20.64 177  eP      P      18 43 43.9 -0.5
      comp=Z,10nm,0.7s
PKIN  Phulchoki           20.69 176  eP      P      18 43 44.1 -0.8
      comp=Z,20nm,0.6s
PKI   Pulchoki            20.69 176  eP      P      18 43 44.4 -0.6
      comp=Z,16nm,0.7s
HHC   Hu-ho-hao-te        20.93 100  eP      P      18 43 48.3 +1.0
HHC                                   pmax   pmax
      comp=Z,8.0nm,0.9s
HHC                                   pmax   pmax
      comp=Z,250nm,4.9s
NRIK  Noril'sk            21.21   4   P      P      18 43 48.3 -1.6
      comp=Z,7.2nm,0.4s,baz=170,slow=5.4,SNR=16
NRIK  Noril'sk            21.21   4ceP      P      18 43 49.3 -0.6
GEYT  Alibeck             21.43 251   P      P      18 43 53.1 +0.5
      comp=Z,7.2nm,0.6s,baz=52,slow=2.4,SNR=8.2
GEYT                                  LR     LR     18 53 11.3
      comp=Z,96nm,18.0s,baz=35,slow=39
KIRV  Kirov               22.78 310   LR     LR     18 53 38.7
      comp=Z,100nm,19.3s,baz=102,slow=38
KIRV  Kirov               22.78 310⇓eP      P      18 44 06.6 -0.2
BELG  Belogornoye         23.41 294   P      P      18 44 14.0 +0.8
      comp=Z,33nm,0.8s,baz=325,slow=1.5,SNR=19
BELG                                  LR     LR     18 52 57.9
      comp=Z,58nm,18.6s,baz=136,slow=35
BELG  Belogornoye         23.41 294d iP     P      18 44 13.8 +0.6
BELG                                  pmax   pmax
      comp=Z,6.0nm,0.8s
XAN   Xi'an               23.42 118   P      P      18 44 24.0  +10
XAN                                   pmax   pmax
      comp=Z,10.0nm,1.4s
SHL   Shillong            23.50 162   P      P      18 44 12.3 -2.3
SHL                                   pmax   pmax
      comp=Z,9.0nm,1.0s
MAK   Makhachkala         25.89 272  eP      P      18 44 31.5 -4.7
MAK                                  eS      S      18 49 02.1 -3.5
MAK                                   MLR    MLR
      comp=Z,132nm,16.0s
KBZ   Khabaz              28.64 276   LR     LR     18 58 01.2
      comp=Z,57nm,18.1s,baz=16,slow=39
LPSR  Galich'ya Gora      28.65 296  eP      P      18 45 00.9 -0.1
LPSR                                  pmax   pmax
      comp=Z,20nm,0.8s
KIV   Kislovodsk          28.69 277  eP      P      18 45 02.7 +1.1
KIV                                   pmax   pmax
      comp=Z,8.0nm,1.1s
VSR   Storozhevoye        28.77 293  eP      P      18 45 02.0  0.0
VSR                                   pmax   pmax
      comp=Z,10.0nm,1.1s
GNI   Garni               29.01 269   LR     LR     18 58 39.6
      comp=Z,39nm,21.4s,baz=24,slow=40
OBN   Obninsk             29.68 301   LR     LR     18 57 34.1
      comp=Z,32nm,21.4s,baz=328,slow=37
OBN   Obninsk             29.68 301⇑eP      P      18 45 11.2 +1.1
OBN                                   pmax   pmax
      comp=Z,6.0nm,0.8s
SOC   Sochi               30.81 278  eP      P      18 45 18.6 -1.6
SOC                                  e             18 46 19.5
SOC                                  eS      S      18 50 25.0 +1.9
SOC                                  eSS     ScP    18 52 02.2 +3.1
SOC                                  eSSS    SSS    18 52 27.8
SOC                                   MLR    MLR
      comp=Z,29nm,11.0s
NJ2   Nanjing             30.86 109  eP      P      18 45 22.0 +1.3
NJ2                                   pmax   pmax
      comp=Z,6.0nm,0.5s
TIXI  Tiksi               31.17  26   P      P      18 45 19.4 -3.6
      comp=Z,0.2nm,0.3s,baz=297,slow=6.3,SNR=1.5
TIXI                                  pP     sP     18 45 29.1 -0.1
      comp=Z,1.2nm,0.4s,baz=232,slow=5.4,SNR=3.9
TIXI  Tiksi               31.17  26   P      P      18 45 22.8 -0.2
TIXI                                  pmax   pmax
      comp=Z,7.0nm,1.4s
TIXI  Tiksi               31.17  26   P      P      18 45 22.8 -0.2
TIXI                                  IAmb   IAmb   18 45 49.1
      comp=Z,7.0nm,1.4s
APA   Apatity             31.80 326⇓iP      P      18 45 31.2 +2.6
APA                                   pmax   pmax
      comp=Z,9.0nm,1.2s
APA                                   MLR    MLR
      comp=Z,1μm,16.0s
CMAR  Chiang Mai Arr      32.13 153   P      P      18 45 29.6 -2.5
      comp=Z,0.8nm,0.7s,baz=336,slow=9.3,SNR=8.2
CMAR                                  LR     LR     19 00 16.6
      comp=Z,53nm,20.4s,baz=200,slow=40
FIA1  FINESS Array S      34.60 314   P      P      18 45 51.2 -1.9
FINES FINESS Array B      34.60 314   P      P      18 45 52.7 -0.4
      comp=Z,1.5nm,0.5s,baz=86,slow=7.9,SNR=15
FINES                                 LR     LR     19 00 58.3
      comp=Z,96nm,20.6s,baz=76,slow=38
FINES FINESS Array B      34.60 314   P      P      18 45 51.7 -1.4
AKASG Malin Array Be      34.97 295   P      P      18 45 56.2 -0.2
      comp=Z,0.9nm,0.3s,baz=64,slow=8.5,SNR=18
AKASG                                 pP     sP     18 46 07.0 +4.3
      comp=Z,1.5nm,0.5s,baz=90,slow=12,SNR=4.4
AKBB  Malin Array Si      34.97 295deP      P      18 45 56.7 +0.2
ARCES ARCESS Array B      34.98 328   P      P      18 45 55.1 -1.2
      comp=Z,2.6nm,0.9s,baz=82,slow=8.7,SNR=3.9
ARCES                                 LR     LR     19 01 58.8
      comp=Z,100nm,20.1s,baz=120,slow=39
SORM  Soroca              36.38 291 ⇑P      P      18 46 08.6 +0.1
MILM  Milestii Mici       36.55 289 ⇓P      P      18 46 10.5 +0.5
MILM  Milestii Mici       36.55 289 ⇓P      P      18 46 10.5 +0.5
BR131 Keskin Array S      36.63 276   P      P      18 46 10.4 -0.6
BR131                                 pmax   pmax
      comp=Z,6.0nm,0.6s
BR131 Keskin Array S      36.63 276   P      P      18 46 10.4 -0.6
BR131                                 IAmb   IAmb   18 46 13.4
      comp=Z,6.1nm,0.6s
BRTR  Keskin Array B      36.63 276   P      P      18 46 12.1 +1.1
      comp=Z,3.4nm,0.7s,baz=81,slow=7.3,SNR=26
BRTR                                  LR     LR     19 04 33.4
      comp=Z,22nm,18.1s,baz=72,slow=42
BRTR  Keskin Array B      36.63 276   P      P      18 46 09.8 -1.2
TLCR                      37.25 286 ⇑P      P      18 46 16.6 +0.6
TLCR                      37.25 286 ⇑P      P      18 46 16.6 +0.6
JURR  Jurilovca           37.39 286 ⇑P      P      18 46 17.7 +0.5
VLDR  Vladesti            37.45 288 ⇑P      P      18 46 19.3 +1.7
TPGR  Topolog             37.65 286 ⇑P      P      18 46 20.1 +0.7
CFR   Carcaliu            37.69 287 ⇑P      P      18 46 20.6 +0.9
CFR   Carcaliu            37.69 287 ⇑P      P      18 46 20.6 +0.9
TIRR  Tirgusor            37.82 286 ⇓P      P      18 46 21.1 +0.3
TIRR  Tirgusor            37.82 286 ⇓P      P      18 46 21.1 +0.3
PRAR  RASCA               38.00 291 ⇑P      P      18 46 22.8 +0.4
HARR  Harsova             38.03 286 ⇑P      P      18 46 24.1 +1.5
HARR  Harsova             38.03 286 ⇑P      P      18 46 24.1 +1.5
TESR  Tescani             38.08 289 ⇑P      P      18 46 23.9 +0.9
ODBI  Odobesti            38.13 288 ⇑P      P      18 46 25.1 +1.7
VRI   Vrincioaia          38.30 289 ⇑P      P      18 46 26.2 +1.3
VRI   Vrincioaia          38.30 289 ⇑P      P      18 46 26.2 +1.3
PLOR  Plostina            38.35 289 ⇓P      P      18 46 26.2 +0.8
PLOR  Plostina            38.35 289 ⇓P      P      18 46 26.2 +0.8
ICOR  Ion Corvin          38.37 285 ⇑P      P      18 46 27.0 +1.5
BUR08 Bucovina Ar. S      38.52 292   P      P      18 46 25.1 -1.8
BUR08                                 IAmb   IAmb   18 46 28.6
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      comp=Z,8.4nm,0.8s
BURAR Bucovina Array      38.52 292 ⇓P      P      18 46 27.5 +0.6
BURAR Bucovina Array      38.52 292 ⇓P      P      18 46 27.5 +0.6
BURAR Bucovina Array      38.52 292   P      P      18 46 26.1 -0.8
BURAR                                 IAmb   IAmb   18 46 28.9
      comp=Z,12nm,0.8s
COVR  Voineasa-Covas      38.63 289 ⇑P      P      18 46 29.5 +1.7
BORA  Eskisehir           38.66 278   P      P      18 46 27.7 -0.4
ISR   Istrita             38.73 288 ⇑P      P      18 46 30.1 +1.5
ISR   Istrita             38.73 288 ⇑P      P      18 46 30.1 +1.5
NEHR  Nehoiu              38.76 288 ⇑P      P      18 46 30.8 +2.0
MLR   Muntele Rosu        38.95 288 ⇑P      P      18 46 31.9 +1.4
MLR   Muntele Rosu        38.95 288   P      P      18 46 30.9 +0.4
MLR                                   pmax   pmax
      comp=Z,6.0nm,0.6s
MLR   Muntele Rosu        38.95 288   P      P      18 46 30.9 +0.4
MLR                                   IAmb   IAmb   18 46 34.5
      comp=Z,5.7nm,0.6s
DOPR  Dopca               39.10 289 ⇑P      P      18 46 33.4 +1.8
RAYN  Ar Rayn             39.16 245   P      P      18 46 32.5 +0.2
RAYN                                  pmax   pmax
      comp=Z,10.0nm,0.7s
RAYN  Ar Rayn             39.16 245   P      P      18 46 32.5 +0.2
RAYN                                  IAmb   IAmb   18 46 33.4
      comp=Z,9.8nm,0.7s
ARCR  ARCALIA             39.28 291 ⇑P      P      18 46 34.6 +1.5
VOIR                      39.54 289 ⇑P      P      18 46 36.8 +1.4
VOIR                      39.54 289 ⇑P      P      18 46 36.8 +1.4
MTUR  Matau               39.63 288 ⇓P      P      18 46 37.3 +1.1
MTUR  Matau               39.63 288   P      P      18 46 39.2 +3.1
KOLS  Kolonicke sedl      39.81 295  eP      P      18 46 38.9 +1.4
KOLS  Kolonicke sedl      39.81 295  eP      P      18 46 38.9 +1.4
ARR   Arges               39.84 289 ⇑P      P      18 46 38.9 +1.1
TRPA  Tarpa               39.97 294 ⇓P      P      18 46 40.1 +1.4
TRPA  Tarpa               39.97 294  eP      P      18 46 39.5 +0.8
HUMR  Humele              39.99 287 ⇑P      P      18 46 39.2 +0.2
LOT   Lotru               40.35 289 ⇑P      P      18 46 43.4 +1.2
DRGR                      40.42 292 ⇓P      P      18 46 44.0 +1.3
DRGR                      40.42 292 ⇓P      P      18 46 44.0 +1.3
ELL   Elmali              40.70 274   P      P      18 46 45.1  0.0
ELL                                   pmax   pmax
      comp=Z,16nm,0.9s
ELL   Elmali              40.70 274   P      P      18 46 45.1  0.0
ELL                                   IAmb   IAmb   18 46 48.2
      comp=Z,16nm,0.9s
OJC   Ojcow               40.78 298   P      P      18 46 44.3 -1.2
OJC                                   pmax   pmax
      comp=Z,9.0nm,1.0s
OJC   Ojcow               40.78 298   P      P      18 46 44.3 -1.2
OJC                                   IAmb   IAmb   18 46 58.8
      comp=Z,8.6nm,1.0s
MJAR  Matsushiro Arr      40.92  86   LR     LR     19 04 33.9
      comp=Z,40nm,18.6s,baz=190,slow=38
GZR   Gura Zlata          40.99 290 ⇑P      P      18 46 48.6 +1.1
SIRR  Siria               41.30 291 ⇑P      P      18 46 51.6 +1.7
HERR  Herculane           41.46 289 ⇓P      P      18 46 51.6 +0.5
NC405 NORSAR Array S      41.47 316   P      P      18 46 49.6 -1.5
BZS   Buzias              41.62 291 ⇓P      P      18 46 53.1 +0.6
BZS   Buzias              41.62 291 ⇓P      P      18 46 53.1 +0.6
NC602 NORSAR Array S      41.66 315   P      P      18 46 51.7 -0.9
NB2   NORSAR Subarra      41.73 316   P      P      18 46 52.0 -1.2
      comp=Z,6.0nm,0.8s,baz=73,slow=8.6
NOA   NORSAR Array B      41.73 316   P      P      18 46 52.1 -1.0
      comp=Z,1.5nm,0.6s,baz=84,slow=6.3,SNR=7.7
NOA                                   LR     LR     19 05 18.0
      comp=Z,73nm,18.1s,baz=305,slow=38
VTS   Vitosha             42.01 286 ⇑P      P      18 46 56.7 +0.8
VTS   Vitosha             42.01 286 ⇑P      P      18 46 56.7 +0.8
BOVS  Bovan               42.49 288 ⇑P      P      18 46 59.8 +0.2
DPC   Dobruska-Polom      42.77 299  eP      P      18 47 02.5 +0.6
DPC   Dobruska-Polom      42.77 299  eP      P      18 47 02.5 +0.6
UPC   Upice               42.89 300  eP      P      18 47 03.4 +0.6
UPC   Upice               42.89 300  eP      P      18 47 03.4 +0.6
FRGS  Fruska Gora         42.96 291 ⇓P      P      18 47 04.4 +1.0
MODS  Modra-Piesok        43.05 296  eP      P      18 47 05.0 +0.9
MODS  Modra-Piesok        43.05 296  eP      P      18 47 05.0 +0.9
MORH  Mrgy, Hungar        43.19 293 ⇓P      P      18 47 05.9 +0.6
MORH  Mrgy, Hungar        43.19 293  eP      P      18 47 05.5 +0.3
MPLH  Magyarpolny         43.43 295  eP      P      18 47 08.3 +1.1
CONA  Conrad Observa      44.10 296  eP      P      18 47 13.9 +1.3
      comp=Z,1.4nm,0.7s
CLL   Collm               44.28 302  eP      P      18 47 14.0 +0.1
CLL                                  e             18 47 18.0
CLL   Collm               44.28 302  eP      P      18 47 14.0 +0.1
CLL                                  epP     sP     18 47 18.0 -2.2
CLL                                  ePP     PcP    18 48 58.0  0.0
CLL                                  ePPPP          18 49 43.0
PDG   Podgorica           44.65 288 ⇑P      P      18 47 17.3 +0.3
PDG   Podgorica           44.65 288   P      P      18 47 17.5 +0.5
KHC   Kasperske Hory      44.91 299  eP      P      18 47 19.8 +0.8
KHC   Kasperske Hory      44.91 299⇑eP      P      18 47 18.7 -0.3
KHC                                   pmax   pmax
      comp=Z,4.0nm,1.0s
GERES GERESS Array B      44.96 298   P      P      18 47 19.6  0.0
      comp=Z,0.6nm,0.7s,baz=61,slow=9.3,SNR=7.4
GERES                                 LR     LR     19 06 52.9
      comp=Z,63nm,19.9s,baz=84,slow=37
MOA   Molln               45.09 297  i P     P      18 47 21.6 +1.1
      comp=Z,0.6nm,0.4s
SOKA  Soboth              45.18 295  i P     P      18 47 21.9 +0.6
      comp=Z,0.6nm,0.3s,SNR=4.3
OBKA  Obir                45.55 295  eP      P      18 47 25.1 +0.8
      comp=Z,2.0nm,0.6s,SNR=6.8
ZOU   Zoufplan            46.48 296   P      P      18 47 31.0 -0.7
WATA  Walderalm           46.93 297  eP      P      18 47 36.9 +1.7
      comp=Z,1.0nm,0.4s
WTTA  Wattenberg          46.93 297  eP      P      18 47 35.9 +0.7
      comp=Z,1.7nm,0.5s
SQTA  Sankt Quirin        47.21 297  i P     P      18 47 37.5 +0.2
      comp=Z,0.4nm,0.2s
MOTA  Moosalm             47.21 298  eP      P      18 47 36.8 -0.5
      comp=Z,0.6nm,0.4s
FETA  Feichten            47.59 297  i P     P      18 47 40.9 +0.6
      comp=Z,1.0nm,0.6s
TIP   Timpagrande         47.99 285   P      P      18 47 42.5 -0.9
NRCA  Norcia              48.31 291   P      P      18 47 46.0 +0.2
MSSA  Maissana            49.72 295   P      P      18 47 56.7 +0.1
MSSA                                  IAmb   IAmb   18 48 20.5
      comp=Z,14nm,1.5s
RAFF  Raffo Rosso         50.66 285   P      P      18 48 03.3 -0.4
BNI   Bardonecchia        51.03 297   P      P      18 48 04.9 -1.7
BNI                                   pmax   pmax
      comp=Z,4.0nm,0.6s
BNI   Bardonecchia        51.03 297   P      P      18 48 04.9 -1.7
BNI                                   IAmb   IAmb   18 48 11.2
      comp=Z,3.8nm,0.6s
EUNU  Eureka              51.82 358   P      P      18 48 11.1 -0.8
TOLK  Toolik Lake Re      56.85  21   P      P      18 48 46.4 -2.2
TOLK                                  IAmb   IAmb   18 49 05.3
      comp=Z,6.2nm,1.4s
COLD  Coldfoot            57.78  22   P      P      18 48 53.4 -1.8
IMAR  Indian Mountai      57.80  24   P      P      18 48 53.7 -1.7
A36M  Sachs Harbour       58.28  10   P      P      18 48 57.1 -1.4
A36M                                  IAmb   IAmb   18 48 58.3
      comp=Z,4.1nm,0.8s
H21K  Melozitna Rive      58.30  24   P      P      18 48 57.4 -1.5
BMAR  Burnt Mountain      58.96  20   P      P      18 49 02.2 -1.2
INK   Inuvik              60.42  15   P      P      18 49 11.1 -2.3
      comp=Z,1.6nm,0.7s,baz=357,slow=11,SNR=5.3
ESDC  Sonseca Array       60.55 298   P      P      18 49 13.8 -1.0
      comp=Z,0.9nm,0.7s,baz=50,slow=5.8,SNR=11
ILAR  Eielson Array       60.56  22   P      P      18 49 12.4 -2.0
      comp=Z,0.6nm,0.7s,baz=320,slow=5.2,SNR=9.8
ILAR                                  pP     sP     18 49 21.5 +0.7
      comp=Z,0.7nm,0.5s,baz=320,slow=5.0,SNR=3.5
ILAR  Eielson Array       60.56  22   P      P      18 49 11.8 -2.6
YKA   Yellowknife Ar      68.60   9   P      P      18 50 05.0 -1.9
      comp=Z,2.9nm,0.5s,baz=342,slow=6.7,SNR=80
YKA   Yellowknife Ar      68.60   9   P      P      18 50 05.0 -1.9
YKA   Yellowknife Ar      68.60   9   P      P      18 50 04.7 -2.2
TORD  Torodi Ar. Bea      75.19 273   P      P      18 50 46.4 -0.8
      comp=Z,1.6nm,0.4s,baz=35,slow=5.2,SNR=54
TORD                                  LR     LR     19 31 07.2
      comp=Z,39nm,19.6s,baz=320,slow=41
WRA   Warramunga Arr      81.45 133   P      P      18 51 18.5 -3.1
      comp=Z,1.0nm,0.9s,baz=338,slow=5.3,SNR=2.9
WRA                                   pP     sP     18 51 27.6 -0.5
      comp=Z,0.6nm,0.5s,baz=325,slow=3.5,SNR=2.7
DBIC  Dimbokro            84.30 274   P      P      18 51 35.1 -1.5
      comp=Z,2.7nm,0.6s,baz=29,slow=5.4,SNR=6.9
DBIC  Dimbokro            84.30 274   P      P      18 51 35.1 -1.5
ASAR  Alice Springs       84.41 135   P      P      18 51 34.0 -2.9
      comp=Z,0.2nm,0.7s,baz=339,slow=5.0,SNR=1.3
ASAR                                  pP     sP     18 51 43.8 +0.4
```

```
      comp=Z,0.5nm,0.6s,baz=329,slow=5.1,SNR=3.2
ASAR                                  LR     LR     19 33 36.6
      comp=Z,63nm,18.2s,baz=135,slow=39
TIC   Toumodi             84.42 274  eP      P      18 51 40.5 +3.2
KIC   Kosan Boka          84.45 273  eP      P      18 51 36.3 -1.1
      comp=Z,4.4nm,0.6s
LIC   Lamto               84.74 273  eP      P      18 51 37.6 -1.3
      comp=Z,46nm,2.5s
PDAR  Pinedale Array      88.56  10   P      P      18 51 55.2 -2.3
      comp=Z,0.4nm,0.6s,baz=8.5,slow=3.0,SNR=3.7
PDAR  Pinedale Array      88.56  10   P      P      18 51 54.5 -3.0
NVAR  Mina Array Bea      91.43  17   P      P      18 52 09.9 -1.0
      comp=Z,0.4nm,0.3s,baz=318,slow=2.0,SNR=4.7
```

KMA ***27*** *18:58:18.0±0.1, 34°.49N×128°.24E, h9km, Error ellipse: s-maj=1.6km s-min=0.6km az=327.0*
JMA ***27*** *18:58:17.9±0.3, 34°.48N×128°.29E, h6km±3km*
ISC 27 18:58:17.7±1.1**, 34°.48N**±0°.04×**128°.27E**±0°.02**, h11**km±11km**,**
n24, σ0ˢ.22/29**, South Korea**

```
Code  Station Name         Δ°   AZ°  Phase ID            Time     Res
                                     Op     ISC        h  m  s    ISC
YKDB  Yokjido              0.14   0   P      Pg     18 58 20.9  0.0
      SNR=460
KSTOY TONGYEONG            0.39  20   P      Pg     18 58 25.6 +0.2
YNDB  Yeoundo              0.39 263   P      Pg     18 58 25.6 +0.2
      SNR=18
YNDB  Yeoundo              0.39 263   P      Pg     18 58 25.6 +0.2
      SNR=18
YNDB                                  S      Sg     18 58 30.8 +0.2
KSNAH Namhae               0.44 320   P      Pg     18 58 26.5 +0.1
      SNR=8.7
KUJA  Jangpyeong           0.49  34   P      Pg     18 58 27.5 +0.3
      SNR=5.5
KUJA  Jangpyeong           0.49  34   P      Pg     18 58 27.5 +0.3
      SNR=5.5
GWYB  Gwangyang            0.67 314   P      Pg     18 58 30.5 -0.1
KOHB  KOHEUNG              0.83 280   P      Pg     18 58 33.6 -0.1
      SNR=17
KOHB  KOHEUNG              0.83 280   P      Pg     18 58 33.6 -0.1
      SNR=17
EURB  Uiryeong-eup         0.84   1   P      Pg     18 58 33.7 -0.2
BOSB  Boseong-gun          0.92 288   P      Pg     18 58 35.2 -0.1
      SNR=25
BOSB  Boseong-gun          0.92 288   P      Pg     18 58 35.2 -0.1
      SNR=25
BOSB                                  S      Sg     18 58 47.0 -0.3
GMDB  Geomundo             0.93 242   P      Pg     18 58 35.3 -0.1
      SNR=7.2
GMDB  Geomundo             0.93 242   P      Pg     18 58 35.3 -0.1
      SNR=7.2
JTSM  Tsushimamitsus       0.93  98   P      Pg     18 58 35.6  0.0
JTSM                                  S      Sg     18 58 47.5 -0.2
JTU   Tsushima             0.93  87   P      Pg     18 58 35.3 -0.3
JTU                                   S      Sg     18 58 47.5 -0.2
KSBUS Busan                1.03  42   P      Pg     18 58 37.0 -0.5
      SNR=8.3
KSKWJ Gwangju              1.25 303   P      Pn     18 58 41.1  0.0
      SNR=23
KSKWJ Gwangju              1.25 303   P      Pn     18 58 41.1  0.0
      SNR=23
KSKWJ Gwangju              1.25 303   P      Pn     18 58 41.1  0.0
      SNR=23
KSDAG Daegu                1.38  22   P      Pn     18 58 43.1 +0.1
      SNR=8.1
JII   Iki                  1.39 119   P      Pn     18 58 43.1 +0.1
JII                                   S      Sb     18 59 01.7 +0.3
KSJEU Jeongeup             1.50 313   P      Pn     18 58 44.7 +0.2
      SNR=16
```

IDC ***27*** *19:05:30.3±1.0, 20°.50S×173°.99W, h0km, mb4.3/11, mb1 4.5/14, mb1mx4.1/33, mbtmp4.3/14, ML4.0/3, MS3.8/5, Ms1 3.8/5, ms1mx3.3/30, Error ellipse: s-maj=38.9km s-min=16.9km az=142.0*
ISC 27 19:05:34.0±0.8**, 20°.7S**±0°.1×**173°.8W**±0°.1**, h27**km**, n41,**
σ1ˢ.08/37**, mb4.3**/11**, 11C-1D, Tonga Islands**

```
Code  Station Name         Δ°   AZ°  Phase ID            Time     Res
                                     Op     ISC        h  m  s    ISC
AFI   Afiamalu             6.98  16   Pn     Pn     19 07 14.3 -0.3
      4.4nm,0.3s,baz=271,slow=18,SNR=1.7
MSVF  Nonsavu              8.25 289   Pn     Pn     19 07 34.4 +2.4
      0.6nm,0.3s,baz=101,slow=14,SNR=11
MSVF                                  LR     LR     19 10 27.4
      comp=Z,954nm,18.4s,baz=136,slow=37
RAO   Raoul Island         9.34 203   LR     LR     19 11 03.8
      comp=Z,310nm,20.9s,baz=137,slow=35
RAR   Rarotonga           13.11  95   Pn     Pn     19 08 32.1 -6.3
      1.7nm,0.3s,baz=260,slow=6.6,SNR=7.8
RAR                                   LR     LR     19 13 15.3
      comp=Z,352nm,18.2s,baz=284,slow=35
DZM   Mont Dzumac         18.47 262   P      P      19 09 47.8 -0.2
      0.2nm,0.3s,baz=75,slow=18,SNR=4.7
URZ   Urewera             19.23 202   P      Pn     19 09 58.5 +1.4
      0.6nm,0.3s,baz=121,slow=24,SNR=5.9
PPT   Papeete             23.07  86   LR     LR     19 18 09.4
      comp=Z,207nm,18.0s,baz=252,slow=33
PMG   Port Moresby        39.24 281   P      P      19 12 58.9 -1.5
      9.9nm,0.9s,baz=48,slow=3.7,SNR=4.6
STKA  Stephens Creek      41.28 245   P      P      19 13 16.0 -1.2
      5.2nm,0.9s,baz=87,slow=8.3,SNR=7.8
ASAR  Alice Springs       48.32 256   P      P      19 14 12.2 -1.2
      4.7nm,0.8s,baz=87,slow=8.5,SNR=34
ASAR                                  PcP    PcP    19 15 41.1 +1.1
      1.2nm,0.8s,baz=92,slow=3.8,SNR=4.8
WRA   Warramunga Arr      48.48 261   P      P      19 14 13.2 -1.5
      3.7nm,0.9s,baz=96,slow=7.3,SNR=12
FITZ  Fitzroy Crossi      56.91 261   LR     LR     19 40 08.3
      comp=Z,59nm,18.5s,baz=86,slow=37
MJAR  Matsushiro Arr      72.74 321   P      P      19 16 59.6 -0.3
      3.3nm,0.9s,baz=153,slow=5.9,SNR=4.9
NVAR  Mina Array Bea      78.48  41   P      P      19 17 34.1 +1.1
      2.9nm,0.8s,baz=224,slow=9.3,SNR=12
PDAR  Pinedale Array      86.42  42   P      P      19 18 15.1 +0.8
      0.8nm,0.8s,baz=232,slow=4.1,SNR=6.3
SEY   Seymchan            87.48 345   P      P      19 18 18.5 -0.1
      4.2nm,1.0s,baz=126,slow=7.9,SNR=4.6
ILAR  Eielson Array       87.65  11   P      P      19 18 19.6 +0.1
      1.6nm,1.0s,baz=210,slow=6.3,SNR=7.8
CMAR  Chiang Mai Arr      93.90 288   P      P      19 18 50.4 +0.6
      0.3nm,0.6s,baz=134,slow=2.6,SNR=2.2
YKA   Yellowknife Ar      95.04  24   P      P      19 18 52.3 -1.6
      0.5nm,0.9s,baz=232,slow=4.3,SNR=6.8
AKASG Malin Array Be     144.97 334   PKP    PKPbc  19 25 08.0 +0.2
      5.7nm,0.8s,baz=39,slow=4.5,SNR=19
SORM  Soroca             147.30 332 ⇑P      PKPbc  19 25 15.1 +0.1
BURAR Bucovina Array     149.02 335 ⇑P      PKiKP  19 25 21.7 +0.7
DPC   Dobruska-Polom     149.31 347  eP      PKiKP  19 25 21.9 +0.5
DPC                                  ex      x      19 25 25.5
KRLC  Kraliky            149.47 347  eP      PKiKP  19 25 22.4 +0.6
CFR   Carcaliu           149.59 329 ⇑P      PKiKP  19 25 21.8 -0.2
TRPA  Tarpa              149.60 338 ⇑P      PKiKP  19 25 22.5 +0.5
VRI   Vrincioaia         149.74 331 ⇑P      PKiKP  19 25 22.7 +0.3
BRTR  Keskin Array B     149.81 315   PKPbc  PKPbc  19 25 19.9 -2.1
      0.9nm,0.8s,baz=142,slow=2.8,SNR=6.7
HARR  Harsova            150.04 328 ⇑P      PKPbc  19 25 20.8 -1.4
DOPR  Dopca              150.26 332 ⇑P      PKiKP  19 25 24.3 +0.9
MLR   Muntele Rosu       150.38 331 ⇑P      PKPbc  19 25 23.2 +0.1
DRGR                     150.67 337 ⇑P      PKiKP  19 25 25.1 +0.7
VOIR                     150.82 332 ⇓P      PKiKP  19 25 25.5 +0.7
KHC   Kasperske Hory     150.99 350  eP      PKPdf  19 25 20.0 +1.4
KHC                                  ex      x      19 25 25.4
ARR   Arges              151.06 333 ⇑P      PKiKP  19 25 26.2 +1.0
CKRC  Cesky Krumlov      151.16 349  eP      PKiKP  19 25 26.9 +1.6
GERES GERESS Array B     151.25 350   PKPbc  PKiKP  19 25 25.7 +0.2
      1.4nm,1.0s,baz=95,slow=1.6,SNR=7.1
CONA  Conrad Observa     151.70 346  eP      PKiKP  19 25 26.9 +0.4
      0.5nm,0.6s
BZS   Buzias             152.07 337 ⇑P      PKiKP  19 25 27.5 +0.3
MOTA  Moosalm            153.09 353  eP      PKiKP  19 25 30.5 +1.0
      0.2nm,0.3s
FETA  Feichten           153.45 353  eP      PKiKP  19 25 31.4 +1.2
      0.2nm,0.3s
```

WEL 27 19:09:55.8±0.3**, 43°S**±2°×**17°1E**±°**, h5**km**, M3.4**/16**,**
ML3.5/17**, MLv3.4**/16**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=170.7, South Island

```
Code  Station Name         Δ°   AZ°  Phase ID            Time     Res
                                     Op     ISC        h  m  s    ISC
INZ   Inchbonnie           0.34  24   P      Pg     19 10 02.8 +0.5
INZ                                   S      Sg     19 10 07.2 +0.4
WVZ   Waitaha Valley       0.39 264   P      Pg     19 10 04.1 +0.7
```

WVZ				S	Sg	19 10 08.9	+0.5
MHCZ	Mount Hutt	0.55	156	P	Pg	19 10 06.6	+0.2
OXZ	Oxford	0.64	118	P	Pg	19 10 08.4	+0.3
OXZ				S	Sg	19 10 17.3	+0.8
RPZ	Rata Peaks	0.70	192	P	Pg	19 10 09.4	+0.2
GCSZ	Gaunt Creek Bo	0.74	247	P	Pg	19 10 10.2	+0.1
LTZ	Lake Taylor	0.78	72	P	Pg	19 10 11.3	+0.5
LTZ				S	Sg	19 10 21.6	+0.6
ARCZ	Arundel	0.92	184	P	Pg	19 10 13.4	0.0
RACZ	Rakaia	0.94	138	P	Pg	19 10 14.3	+0.4
WACZ	Wakanui South	1.00	155	P	Pg	19 10 15.3	+0.2
WACZ				S	Sb	19 10 29.5	+0.3
AMCZ	Amberley	1.03	99	P	Pb	19 10 16.4	+0.3
FOZ	Fox Glacier	1.17	244	P	Pg	19 10 18.0	-0.3
MQZ	McQueen's Vall	1.22	124	P	Pg	19 10 17.7	-1.5
GVZ	Greta Valley S	1.30	88	P	Pn	19 10 20.0	-0.7
DSZ	Denniston Nort	1.35	18	P	Pn	19 10 20.8	-0.5
DSZ				S	Sn	19 10 39.5	-0.2
TMZ	Timaru	1.36	188	P	Pn	19 10 20.7	-0.8
AKCZ	Akaroa Harbour	1.46	126	P	Pn	19 10 21.6	-1.3
OKCZ	Okains Bay	1.48	118	P	Pn	19 10 22.2	-1.0
LBZ	Lake Benmore	1.56	210	P	Pn	19 10 23.7	-0.6
THZ	Tophouse	1.76	44	P	Pn	19 10 26.9	-0.1
KHZ	Kahutara	1.79	71	P	Pn	19 10 27.5	+0.2
ODZ	Otahua Downs	2.06	192	P	Pn	19 10 30.1	-1.0
JCZ	Jackson Bay	2.08	239	P	Pn	19 10 31.5	0.0
BSWZ	Blackbirch Sta	2.34	57	P	Pn	19 10 36.2	+1.2
QRZ	Quartz Range	2.40	24	P	Pn	19 10 35.9	+0.1
NNZ	Nelson	2.40	42	P	Pn	19 10 36.3	+0.5
WKZ	Wanaka	2.42	221	P	Pn	19 10 35.2	-0.8
CMWZ	Cape Campbell	2.54	61	P	Pb	19 10 40.0	-1.8
TUWZ	Tuamarina	2.56	52	P	Pn	19 10 38.3	+0.4
EAZ	Earnscleugh	2.61	212	P	Pn	19 10 36.9	-1.8
TCW	Tory Channel	2.89	52	P	Pb	19 10 45.2	-2.7
DUWZ	D'Urville Isla	2.98	43	P	Pn	19 10 45.0	+1.1
MLZ	Mavora Lakes	3.25	223	P	Pn	19 10 46.5	-1.0
KIW	Kapiti Island	3.48	53	P	Pn	19 10 50.3	-0.4
OGWZ	Otaki Gorge	3.66	54	P	Pn	19 10 52.5	-0.6
WHZ	Wether Hill Ro	3.72	219	P	Pn	19 10 52.8	-1.1
NMEZ	Namu Road	4.12	29	P	Pn	19 11 01.6	+2.2
NBEZ	Newall Road No	4.24	28	P	Pn	19 11 02.8	+1.7
KHEZ	Kahui Hut	4.27	30	P	Pn	19 11 03.0	+1.4
PREZ	Palmer Road	4.29	32	P	Pn	19 11 03.4	+1.6
NEZ	North Egmont	4.32	31	P	Pn	19 11 04.5	+2.2
PKE	Pukeiti	4.35	29	P	Pn	19 11 03.8	+1.2
APZ	The Paps	4.45	210	P	Pn	19 11 01.8	-2.2
VRZ	Vera Road	4.71	35	P	Pn	19 11 09.3	+1.7
WNVZ	Wahianoa	4.94	43	P	Pn	19 11 14.2	+3.3
NGZ	Ngauruhoe	5.06	42	P	Pn	19 11 17.8	+5.3
OTVZ	Oturere	5.10	42	P	Pn	19 11 16.8	+3.8
WTVZ	West Tongariro	5.10	41	P	Pn	19 11 18.5	+5.5
TMVZ	Te Maari	5.16	42	P	Pn	19 11 18.9	+5.1
HIZ	Hauiti	5.27	32	P	Pn	19 11 15.9	+0.6
WTAZ	Waiatarua	6.60	24	P	Pn	19 11 34.9	+1.4
OUZ	Omahuta	8.01	14	P	Pn	19 11 54.1	+1.3

MDD ***27*** *19:10:33.0±1.7, 36°.89N×11°.12W, h0^{km}, mbLg2.6/9, Error ellipse: s-maj=14.3km s-min=11.0km az=54.0, PRXIMO*

INMG ***27*** *19:10:33.7±1.6, 36°.78N×11°.20W, h10^{km}, ML2.1, Error ellipse: s-maj=8.8km s-min=5.3km az=82.0*

CNRM ***27*** *19:10:37.4, 36°.23N×10°.61W, h30^{km}, ml3.3*

ISC 27 19:10:29.0±2.3, **36°.68N**±0°.06×**11°.5W**±0°.1, **h35**^{km}, **n57**, σ**1**^{s}**88**/88, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	2.17	77	*e*Pn	Pn	19 11 04.4	+1.8
PFVI				*e*Sn	Sn	19 11 26.9	-1.3
PFVI				A	A	19 11 38.4	
	12nm,0.8s						
PFVI	Vila Bisbo	2.17	77	P	Pn	19 11 04.3	+1.8
	1.3nm,0.1s,SNR=7.9						
PFVI				S	Sn	19 11 26.8	-1.3
	19nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	2.17	77	P	Pn	19 11 03.7	+1.2
PFVI				S	Sn	19 11 24.9	-3.3
MORF	Marmelete	2.34	74	*e*Sn	Sn	19 11 31.8	-0.8
MORF				A	A	19 11 34.9	
	9.7nm,0.3s						
MORF	Marmelete	2.34	74	S	Sn	19 11 31.8	-0.8
	9.7nm,0.3s						
PTEO	Sao Teotonio	2.36	68	*e*Pn	Pn	19 11 07.6	+2.4
PTEO				*e*Sn	Sn	19 11 32.5	-0.4
PTEO				A	A	19 11 36.5	
	9.0nm,0.5s						
PTEO	Sao Teotonio	2.36	68	P	Pn	19 11 07.6	+2.4
PTEO				S	Sn	19 11 32.5	-0.4
	4.5nm,0.5s						
PNCL	Nicolau / Gran	2.74	58	*e*Pn	Pn	19 11 13.2	+2.7
PNCL				*e*Sn	Sn	19 11 42.0	-0.4
PNCL				A	A	19 11 43.5	
	4.8nm,0.4s						
PNCL	Nicolau / Gran	2.74	58	P	Pn	19 11 13.2	+2.7
PNCL				S	Sn	19 11 42.0	-0.4
	4.8nm,0.4s						
PMAFR	Mafra	2.86	37	*e*Pn	Pn	19 11 14.6	+2.5
PMAFR				*e*Sn	Sn	19 11 45.2	0.0
PMAFR				A	A	19 11 46.9	
	24nm,0.7s						
PMAFR	Mafra	2.86	37	P	Pn	19 11 12.7	+0.6
	2.0nm,0.2s,SNR=4.0						
PMAFR				S	Sn	19 11 44.5	-0.8
	9.8nm,0.2s,SNR=7.9						
PBDV	Barranco-do-Ve	2.89	78	*e*Pn	Pn	19 11 14.8	+2.3
PBDV				*e*Sn	Sn	19 11 45.8	-0.3
PBDV				A	A	19 11 49.0	
	7.1nm,0.7s						
PBDV	Barranco-do-Ve	2.89	78	P	Pn	19 11 14.8	+2.3
PBDV				S	Sn	19 11 45.8	-0.3
	7.1nm,0.7s						
PCVE	Castro Verde	2.90	70	*e*Pn	Pn	19 11 15.1	+2.4
PCVE				*e*Sn	Sn	19 11 45.3	-1.0
PCVE				A	A	19 11 54.8	
	4.8nm,0.7s						
PCVE	Castro Verde	2.90	70	P	Pn	19 11 15.1	+2.4
PCVE				S	Sn	19 11 45.3	-1.0
	4.8nm,0.7s						
PVAQ	Vaqueiros	3.09	75	*e*Pn	Pn	19 11 18.2	+3.0
PVAQ				*e*Sn	Sn	19 11 50.2	-0.7
PVAQ				A	A	19 11 53.9	
	5.4nm,0.6s						
PVAQ	Vaqueiros	3.09	75	P	Pn	19 11 18.2	+3.0
PVAQ				S	Sn	19 11 50.2	-0.7
	5.4nm,0.6s						
PVAQ	Vaqueiros	3.09	75	P	Pn	19 11 16.8	+1.6
PVAQ				S	Sn	19 11 48.8	-2.1
PBEJ	Beja	3.17	64	*e*Sn	Sn	19 11 51.5	-1.5
PBEJ				A	A	19 11 56.0	
	2.5nm,0.4s						
PBEJ	Beja	3.17	64	S	Sn	19 11 51.5	-1.5
	1.2nm,0.4s						
EGRO	El Granado	3.30	74	S	Sn	19 11 53.7	-2.4
	3.0nm,0.1s,SNR=7.9						
PMTG	Montargil	3.50	46	*e*Pn	Pn	19 11 22.5	+1.6
PMTG				*e*Sn	Sn	19 12 00.7	-0.5
PMTG				A	A	19 12 04.5	
	2.7nm,0.6s						
PMTG	Montargil	3.50	46	P	Pn	19 11 22.5	+1.6
PMTG				S	Sn	19 12 00.7	-0.5
	2.7nm,0.6s						
PSBE	So Bento	3.53	36	*e*Pn	Pn	19 11 23.3	+2.0
PSBE				*e*Sn	Sn	19 12 02.2	+0.3
PSBE				A	A	19 12 05.7	
	4.9nm,0.7s						
PESTR	Estremoz	3.77	53	*e*Pn	Pn	19 11 27.8	+3.2
PESTR				*e*Sn	Sn	19 12 06.6	-1.2
PESTR				A	A	19 12 11.1	
	2.0nm,0.6s						
PESTR	Estremoz	3.77	53	P	Pn	19 11 28.7	+4.1
EMIN	Mina Concepcio	3.98	73	P	Pn	19 11 29.8	+2.3
	0.7nm,0.3s,SNR=7.9						
EMIN				S	Sn	19 12 10.8	-2.1
	1.3nm,0.1s,SNR=7.9						
EBAD	Badajoz	4.10	58	P	Pn	19 11 31.4	+2.3
	0.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	19 12 14.4	-1.4
	4.6nm,0.2s,SNR=7.9						
PCAS	Casmilo, Conde	4.10	34	*e*Pn	Pn	19 11 30.4	+1.3
PCAS				*e*Sn	Sn	19 12 14.8	-1.0
PCAS				A	A	19 12 32.1	
	4.3nm,0.7s						
PCAS	Casmilo, Conde	4.10	34	P	Pn	19 11 30.4	+1.3
PCAS				S	Sn	19 12 14.8	-1.0
	4.3nm,0.7s						
PMRV	Marv??o	4.23	48	*e*Pn	Pn	19 11 32.4	+1.5
PMRV				*e*Sn	Sn	19 12 17.2	-1.9
PMRV				A	A	19 12 19.0	
	2.3nm,0.9s						
PMRV	Marv??o	4.23	48	P	Pn	19 11 32.4	+1.5
PMRV				S	Sn	19 12 17.2	-1.9
	2.3nm,0.9s						
PCBR	Castelo Branco	4.45	44	*e*Sn	Sn	19 12 23.5	-1.1
PCBR				A	A	19 12 24.8	
	2.3nm,0.5s						
PCBR	Castelo Branco	4.45	44	S	Sn	19 12 23.5	-1.1
	1.2nm,0.5s						
ESPR	Espera	4.51	86	P	Pn	19 11 36.9	+2.2
	1.7nm,0.1s,SNR=7.9						
ESPR				S	Sn	19 12 23.7	-2.3
	14nm,0.3s,SNR=7.9						
PVIS	Viseu	4.91	34	*e*Pn	Pn	19 11 41.9	+1.6
PVIS				*e*Sn	Sn	19 12 34.6	-1.2
PVIS				A	A	19 12 39.9	
	3.1nm,0.6s						
PVIS	Viseu	4.91	34	P	Pn	19 11 41.9	+1.6
PVIS				S	Sn	19 12 34.6	-1.2
	1.6nm,0.6s						
ECAB	El Cabril	5.02	72	P	Pn	19 11 43.8	+2.0
	0.6nm,0.2s,SNR=7.9						
ECAB				S	Sn	19 12 35.4	-3.1
	1.9nm,0.2s,SNR=7.9						
SRHM	Skhour des Reh	5.13	144	P	Pn	19 11 43.8	+0.4
SRHM				S	Sn	19 12 36.7	-4.7
PVRL	Vila Real	5.44	31	*e*Sn	Sn	19 12 45.4	-3.6
PVRL	Vila Real	5.44	31	S	Sn	19 12 45.4	-3.6
POLO	Lamas de Olo	5.49	30	*e*Sn	Sn	19 12 47.6	-2.7
POLO	Lamas de Olo	5.49	30	S	Sn	19 12 47.6	-2.7
MVO	Moncorvo	5.66	36	*e*Sn	Sn	19 12 52.2	-2.2
MVO	Moncorvo	5.66	36	P	Pn	19 11 49.8	-0.8
	1.7nm,0.3s,SNR=7.9						
MVO				S	Sn	19 12 51.5	-3.0
	1.1nm,0.1s,SNR=7.9						
EADA	Adamuz	5.68	73	P	Pn	19 11 53.3	+2.3
	0.5nm,0.3s,SNR=7.9						
EADA				S	Sn	19 12 52.6	-2.4
	2.1nm,0.2s,SNR=7.9						
PCAB	Cabril	5.69	27	*e*Sn	Sn	19 12 52.8	-2.3
PCAB	Cabril	5.69	27	S	Sn	19 12 52.8	-2.3
ELOB	Lobios	5.82	26	P	Pn	19 11 53.9	+1.1
	0.2nm,0.1s,SNR=7.9						
ELOB				S	Sn	19 12 55.0	-3.2
	0.6nm,0.1s,SNR=7.9						
OUK	Oukaimeden	6.22	150	P	Pn	19 11 59.6	+0.9
OUK				S	Sn	19 12 59.4	-9.4
PBRG	Braganca	6.30	34	*e*Sn	Sn	19 13 09.1	-1.0
PBRG	Braganca	6.30	34	S	Sn	19 13 09.1	-1.0
AKLM	AKL	6.56	107	P	Pn	19 12 04.1	+1.0
AKLM				S	Sn	19 13 04.5	-12
TTIG	Tnine Tigouga,	6.62	157	P	Pn	19 12 00.9	-3.0
MD31	MD31	6.70	123	P	Pn	19 12 04.1	-0.9
MD31				S	Sn	19 13 10.1	-10
MDT	Midelt	6.84	122	P	Pn	19 12 06.7	-0.2
MDT				S	Sn	19 13 11.2	-12
OUZM	OUZ	6.96	144	P	Pn	19 12 09.8	+1.1
OUZM				S	Sn	19 13 17.2	-9.4

IDC ***27*** *19:24:56.4±1.0, 25°.81N×120°.97W, h0^{km}, mb4.4/14, mb1 4.6/20, mb1mx4.5/41, mbtmp4.5/20, ML4.7/7, MS3.9/27, Ms1 3.9/27, ms1mx3.8/33, Error ellipse: s-maj=24.4km s-min=17.4km az=52.0*

NEIC ***27*** *19:24:56.6±2.8, 25°.66N±0°.10×120°.9W±0°.1, h10^{km}±1^{km}, mb4.9/56, Error ellipse: s-maj=18.5km s-min=13.4km az=219.0*

GCMT ***27*** *19:25:00.6±0.3, 26°.11N±0°.02×120°.96W±0°.02, h31^{km}±1^{km}, MW5.1/117, Moment Tensor Solution. s41,c50; s117,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.47±.20; $M_{\theta\theta}$3.58±.16; $M_{\phi\phi}$-3.10±.16; $M_{r\theta}$1.06±.23; $M_{\theta\phi}$3.28±.14; $M_{\phi r}$-1.70±.22; Best double couple: $M_0$5.10100×10^{16} NP1:ϕ_s25.00000°, δ71.00000°, λ-166.00000°. NP2:ϕ_s291.00000°, δ77.00000°, λ-19.00000°. Principal axes: T 4.9440, Plg4.0000°, Azm339.0000°; N 0.3190, Plg67.0000°, Azm78.0000°; P -5.2580, Plg22.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MEX ***27*** *19:25:04.3±0.3, 26°.26N×120°.60W, h5^{km}, MD4.7*

ECX ***27*** *19:26:03.0±0.3, 29°.81N×117°.59W, h10^{km}, MD3.2, ML3.2*

ISC 27 19:24:57.7±0.6, **25°.90N**±0°.07×**120°.83W**±0°.06, **h10**^{km}, **n402**, σ**1**^{s}**57**/386, **mb4.8**/33, **MS3.9**/22, **2D, North Pacific Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIG	San Pedro Mart	6.96	41	*i* P	Pn	19 26 39.7	-0.4
SPIG				*i* S	Sn	19 27 54.6	-5.0
SPIG	San Pedro Mart	6.96	41	*e*P	Pn	19 26 39.9	-0.2
CCX	Cicese	6.97	31		Pn	19 26 38.7	-1.2
CCX	Cicese	6.97	31	*e*P	Pn	19 26 39.5	-0.4
CCX				IAML		19 27 13.5	
	comp=N,74nm,0.6s						
SCI2	San Clemente I	7.33	15	P	Pn	19 26 44.3	-0.4
	baz=196,SNR=20						
SFX	San Felipe	7.34	44	Pn	Pn	19 26 45.3	+0.4
SFX	San Felipe	7.34	44	*e*P	Pn	19 26 45.9	+1.0
TJX	Tijuana	7.36	26		Pn	19 26 45.5	+0.2
SNCC	San Nicolas Is	7.41	9		Pn	19 26 45.4	-0.5
SNCC	San Nicolas Is	7.41	9	P	Pn	19 26 45.5	-0.3
	baz=190						
TJIG	Tijuana	7.45	28	*e*P	Pn	19 26 46.4	-0.1
TJIG				*i* S	Sn	19 28 04.8	-6.3
TJIG	Tijuana	7.45	28	*e*P	Pn	19 26 46.6	+0.1
OLP	Otay Lakes Par	7.50	26	*e*P	Pn	19 26 47.4	+0.3
TKX	Tecate	7.60	28		Pn	19 26 49.0	+0.5
BAR	Barrett	7.67	27		Pn	19 26 49.7	+0.3
BAR	Barrett	7.67	27	*e*P	Pn	19 26 49.7	+0.3
BAR				⇓*e*		19 26 58.2	
BAR				IAML		19 26 58.2	
	comp=N,112nm,0.3s						
BAR				⇓*e*		19 26 59.5	
BAR				IAML		19 26 59.5	
	comp=E,120nm,0.4s						
109C	Camp Elliot, M	7.68	24	Pn	Pn	19 26 50.0	+0.3
109C	Camp Elliot, M	7.68	24	P	Pn	19 26 49.7	+0.1
	baz=206,SNR=40						
CIS	Catalina Islan	7.76	15	P	Pn	19 26 51.1	+0.3
	baz=196,SNR=8.5						
EML	El Monte Cty P	7.78	26	*e*P	Pn	19 26 51.3	+0.3
SRIG	Santa Rosalia	7.81	78		Pn	19 26 50.6	-0.9
SRIG	Santa Rosalia	7.81	78	*i* P	Pn	19 26 53.0	+1.5
SRIG				*i* S	Sn	19 28 17.4	-2.7
RMX	La Rumorosa	7.86	31		Pn	19 26 52.8	+0.6
RMX	La Rumorosa	7.86	31	*e*P	Pn	19 26 53.0	+0.7
IKP	In-Ko-Pah, Jac	7.88	30	P	Pn	19 26 53.4	+0.9
	baz=212,SNR=41						
MONP2	Monument Peak	7.95	28	P	Pn	19 26 54.3	+0.8
	baz=210,SNR=60						
MONP2	Monument Peak	7.95	28	*e*P	Pn	19 26 54.4	+0.8
FMP	Fort Macarthur	8.09	15	P	Pn	19 26 55.9	+0.7
	baz=196						
SWSC	Sam W. Stewart	8.27	31	P	Pn	19 26 58.9	+1.1
	baz=213,SNR=30						
MURC	Murrieta	8.29	22	P	Pn	19 26 59.2	+1.1
	baz=203,SNR=50						
PASC	Pasadena Art C	8.55	15		Pn	19 27 01.9	+0.3
TPFO	Pinon Flats	8.56	25	P	Pn	19 27 03.1	+1.3
	baz=207,SNR=50						
PFO	Pinyon Flats O	8.57	25	Pn	Pn	19 27 03.6	+1.7
	comp=E,13nm,0.3s,baz=206,slow=14,SNR=158						
PFO				Sn	Sn	19 28 34.5	-4.2
	comp=E,19nm,0.3s,baz=280,slow=15,SNR=7.3						
PFO				LR	LR	19 29 14.5	
	comp=E,360nm,19.2s,baz=196,slow=30						
PFO	Pinyon Flats O	8.57	25	P	Pn	19 27 03.2	+1.3
	baz=207,SNR=42						
DECC	Green Verdugo	8.60	14	P	Pn	19 27 03.3	+1.0
	baz=195,SNR=9.9						
MWC	Mount Wilson	8.63	15		Pn	19 27 03.5	+0.6
BFSC	Mount Baldy Ra	8.75	18	P	Pn	19 27 05.4	+1.0
	baz=199,SNR=42						
LAPR	La Primavera	8.79	57	*i* P	Pn	19 27 05.5	+0.6
LAPR				*i* S	Sn	19 28 42.4	-1.7
GLA	Glamis	8.84	35		Pn	19 27 06.3	+0.8
GLA	Glamis	8.84	35	P	Pn	19 27 06.5	+1.0
	baz=217,SNR=8.0						
OSI	Osito Audit: C	8.87	11	Pn	Pn	19 27 07.3	+1.3
OSI	Osito Audit: C	8.87	11	P	Pn	19 27 07.5	+1.5
	baz=193						
BBRC	Big Bear Solar	8.99	21	P	Pn	19 27 09.2	+1.4
	baz=203,SNR=26						
PKM	Mcpherson Peak	9.00	5	P	Pn	19 27 08.9	+1.0
	baz=186,SNR=36						
BC3	Big Chuckawall	9.03	30	P	Pn	19 27 09.9	+1.7
	baz=212,SNR=21						
BELC	Belle Mtn. Jos	9.09	26	P	Pn	19 27 10.7	+1.6
	baz=208,SNR=22						
214A	Organ Pipe Nat	9.26	47	Pn	Pn	19 27 12.5	+1.2
214A	Organ Pipe Nat	9.26	47	P	Pn	19 27 12.5	+1.2
	baz=230,SNR=41						
214A	Organ Pipe Nat	9.26	47	*i* P	Pn	19 27 12.6	+1.4
EDW2	Edwards Air Fo	9.28	15	P	Pn	19 27 13.4	+1.8
	baz=196,SNR=100						
HSIG		9.31	68	*i* P	Pn	19 27 11.9	-0.1
ARVC	Arvin	9.35	10	P	Pn	19 27 14.3	+1.8
	baz=191,SNR=28						
RRX	Edison Barstow	9.53	19	P	Pn	19 27 17.3	+2.2
	baz=201,SNR=14						
IRM	Iron Mountain	9.59	30	P	Pn	19 27 18.1	+2.3
	baz=212,SNR=13						
HEC	Hector,Ludlow	9.71	22	P	Pn	19 27 19.7	+2.2
	baz=205,SNR=18						
LPIG	La Paz	9.71	98	Pn	Pn	19 27 19.3	+1.9
	comp=E,63nm,0.3s,baz=299,slow=4.8,SNR=17						
LPIG				Sn	Sn	19 29 04.5	-2.1
	comp=E,11nm,0.3s,baz=289,slow=16,SNR=8.6						
LPIG				LR	LR	19 30 04.4	
	comp=E,2μm,19.8s,baz=264,slow=31						
PAGB	Antelope Grade	9.81	3	Pn	Pn	19 27 19.9	+1.1
GMRC	Granite Mounta	9.91	26	P	Pn	19 27 22.3	+2.0
	baz=208,SNR=28						
LRMC	Laurel Mtn Rad	9.92	15	P	Pn	19 27 22.6	+2.1
	baz=197,SNR=104						
ISA	Isabella, Lake	9.94	11	Pn	Pn	19 27 21.4	+0.8
ISA	Isabella, Lake	9.94	11	P	Pn	19 27 23.1	+2.5
	baz=192,SNR=91						
GSC	Goldstone, Bar	9.99	19		Pn	19 27 20.7	-0.6
GSC	Goldstone, Bar	9.99	19	P	Pn	19 27 23.8	+2.4
	baz=201,SNR=296						
VES	Vestal, Richgr	10.02	8	P	Pn	19 27 23.9	+2.3
	baz=189,SNR=22						
SLBS	Sierra La Lagu	10.13	100	Pn	Pn	19 27 24.8	+1.5
PDMCI	Parker Dam,Lak	10.18	33	P	Pn	19 27 26.6	+2.7
	baz=216,SNR=20						
PMPB	Monarch Peak	10.28	0		Pn	19 27 25.9	+0.6
NEE2	Needles Airpor	10.33	30	P	Pn	19 27 29.2	+3.2
	baz=212						
TUQ	Turquoise Moun	10.39	23	P	Pn	19 27 28.9	+1.9
	baz=205,SNR=14						
VOG	Valley Oaks Go	10.46	6	P	Pn	19 27 29.0	+1.4
	baz=188,SNR=12						
MPMC	Manual Prospec	10.52	15	P	Pn	19 27 31.0	+2.3
	baz=197,SNR=50						
QSM	Queen of Sheba	10.59	18	Pn	Pn	19 27 30.1	+0.6
CWC	Cottonwood Cre	10.76	12	P	Pn	19 27 34.5	+2.5
	baz=194						
SAO	San Andreas Ge	10.84	357	Pn	Pn	19 27 31.6	-1.3
GWY	Greenwater Val	10.85	18	Pn	Pn	19 27 35.7	+2.4
TUC	Tucson	10.85	52	Pn	Pn	19 27 33.5	+0.3
TUC	Tucson	10.85	52	P	Pn	19 27 34.6	+1.3
	baz=236						
TUC	Tucson	10.85	52	*i* P	Pn	19 27 34.5	+1.3
FURC	Furnace Creek,	11.06	17	P	Pn	19 27 38.6	+2.7
	baz=199,SNR=14						
TIN	Tinemaha, Big	11.34	11	P	Pn	19 27 43.0	+3.2
	baz=192,SNR=11						
GRAC	Grapevine Rang	11.45	14	P	Pn	19 27 43.9	+2.6
	baz=196,SNR=68						
319A	Douglas	11.51	59	Pn	Pn	19 27 44.0	+1.7
LCH	Last Change Ra	11.62	13		Pn	19 27 47.0	+3.3
SHPR	Sheep Range	11.63	23	Pn	Pn	19 27 46.9	+3.1
TPNV	Topopah Spring	11.68	18		Pn	19 27 47.0	+2.4
TPNV	Topopah Spring	11.68	18	P	Pn	19 27 47.3	+2.7
	baz=201,SNR=164						
X16A	Lo Mia Camp, P	11.74	42	Pn	Pn	19 27 47.1	+1.6
MLAC	Mammoth, Mammo	11.81	8	P	Pn	19 27 49.3	+2.8
	baz=189,SNR=52						
CMB	Columbia Colle	12.10	2		Pn	19 27 52.7	+2.4
CGIG		12.18	66	*i* P	Pn	19 27 52.3	+0.9
MCCM	Marconi Confer	12.33	352	Pn	Pn	19 27 54.8	+1.5
LHV	Little Huntoon	12.47	9		Pn	19 27 59.3	+4.2
PRN	Pahroc Range	12.47	22	Pn	Pn	19 27 57.7	+2.2
TPH	Tonopah	12.51	13		Pn	19 28 00.0	+4.0
WUAZ	Wupatki	12.56	38		Pn	19 27 59.8	+3.1
WUAZ	Wupatki	12.56	38	P	Pn	19 27 59.6	+2.9
	baz=222,SNR=31						
NVAR	Mina Array Bea	12.67	9	Pn	Pn	19 28 01.8	+3.6
	comp=E,1.5nm,0.3s,baz=199,slow=13,SNR=130						
NVAR				LR	LR	19 32 00.6	
	comp=E,858nm,19.4s,baz=192,slow=33						
NVAR	Mina Array Bea	12.67	9	Pn	Pn	19 28 01.4	+3.3
NV11	Mina Array Sit	12.70	10		Pn	19 28 02.5	+4.1
X18A	Snowflake	12.73	45		Pn	19 28 02.3	+3.2
LCMT	Little Creek M	12.82	28		Pn	19 28 04.1	+4.0
RYN	Ryan	12.84	8		Pn	19 28 04.0	+3.6
GDXM	Geysers	12.97	353	Pn	Pn	19 28 03.6	+1.4
KNB	Kanab	13.01	30	Pn	Pn	19 28 07.0	+4.2
YERR	Yerington	13.11	5		Pn	19 28 07.5	+3.3
RUBR	Rubicon Trail	13.12	2		Pn	19 28 08.8	+4.4
121A	Cookes Peak, D	13.16	57	Pn	Pn	19 28 07.3	+2.4
121A	Cookes Peak, D	13.16	57	P	Pn	19 28 07.0	+2.1
	baz=242,SNR=89						
121A	Cookes Peak, D	13.16	57	*i* P	Pn	19 28 06.9	+2.1
R11A	Troy Canyon, C	13.18	18		Pn	19 28 08.8	+3.7
R11A	Troy Canyon, C	13.18	18	P	Pn	19 28 08.4	+3.4
	baz=201,SNR=40						
HOPS	Hopland Field	13.19	352		Pn	19 28 07.4	+2.4
PNTR	Pine Nut	13.19	4		Pn	19 28 09.6	+4.3
W18A	Petrified Fore	13.25	43		Pn	19 28 09.4	+3.3
W18A	Petrified Fore	13.25	43	P	Pn	19 28 09.1	+3.1
	baz=228,SNR=146						
KVN	Kaiserville	13.31	9	Pn	Pn	19 28 09.5	+2.6
MPK	Martis Peak	13.37	3	Pn	Pn	19 28 12.2	+4.4
VCNR	Virginia City	13.39	4		Pn	19 28 12.2	+4.2
PKCU	Pink Cliffs	13.59	30		Pn	19 28 15.5	+4.6
ORV	Oroville	13.62	358		Pn	19 28 13.7	+2.7
HPIG		13.63	82		Pn	19 28 14.6	+3.3
PAHR	Pah Rah Range	13.82	5	Pn	Pn	19 28 17.4	+3.6
O02D	Mt. Diablo Mer	14.33	354	P	Pn	19 28 24.0	+3.3
	baz=173,SNR=46						
O03E	Paynes Creek	14.38	357	P	Pn	19 28 23.7	+2.4
	baz=177						
KMRM	Mail Ridge	14.48	351	Pn	Pn	19 28 25.0	+2.2
MVU	Marysvale	14.52	28	P	P	19 28 27.9	-2.3
Y22D	IRIS PASSCAL I	14.53	53	P	Pn	19 28 25.0	+1.4
	baz=239						
MNTX	Cornudas Mount	14.72	63	Pn	Pn	19 28 26.0	0.0
MNTX	Cornudas Mount	14.72	63	P	Pn	19 28 26.6	+0.6
	baz=250,SNR=19						
MNTX	Cornudas Mount	14.72	63	*i* P	Pn	19 28 29.0	+3.0
N02D	Trinity Center	15.11	355	P	Pn	19 28 33.2	+1.9
	baz=174,SNR=11						
ANMO	Albuquerque	15.31	51	Pn	Pn	19 28 35.5	+1.3
	comp=E,0.6nm,0.3s,baz=222,slow=12,SNR=28						
ANMO				LR	LR	19 33 34.9	
	comp=E,394nm,18.3s,baz=238,slow=34						
ANMO	Albuquerque	15.31	51	Pn	Pn	19 28 36.2	+2.1
ANMO	Albuquerque	15.31	51	P	Pn	19 28 35.7	+1.5
	baz=237						
MVCO	Mesa Verde	15.39	40		P	19 28 38.3	-1.6
MVCO				IAmb	IAmb	19 28 56.3	
	comp=Z,49nm,1.0s						
MVCO	Mesa Verde	15.39	40	P	Pn	19 28 37.4	+2.1
	baz=226,SNR=29						
ELK	Elko	15.52	16	Pn	P	19 28 40.6	-0.6
	comp=Z,0.8nm,0.3s,baz=182,slow=12,SNR=15						
ELK				LR	LR	19 33 24.9	
	comp=Z,454nm,18.1s,baz=201,slow=32						
M02C	Callahan	15.54	354	P	Pn	19 28 39.3	+2.3
	baz=174,SNR=28						
DUG	Dugway, Tooele	15.74	23	P	P	19 28 42.1	-1.6
	baz=207,SNR=10.0						
M04C	Macdoel	15.86	357	P	P	19 28 43.8	-1.2
	baz=177,SNR=39						
YBH	Yreka Blue Hor	15.87	355	Pn	P	19 28 44.2	-0.7
	comp=Z,1.4nm,0.3s,baz=176,slow=6.4,SNR=39						
YBH				LR	LR	19 33 39.0	
	comp=Z,573nm,19.9s,baz=182,slow=33						

YBH	**Yreka Blue Hor**	**15.87**	**355**	Pn	**P**	**19 28 44.2**	**-0.7**
YBH				IAmb	IAmb	19 28 48.4	
	comp=Z,79nm,0.9s						
L04D	**Klamath Falls**	**16.32**	**356**	P	**P**	**19 28 49.5**	**-0.5**
	baz=176,SNR=12						
L02E	**Cave Junction**	**16.38**	**353**	P	**P**	**19 28 50.0**	**-0.5**
	baz=172,SNR=5.7						
K04D	**Chiloquin, OR**	**16.70**	**358**	P	**P**	**19 28 53.5**	**-0.7**
	baz=177,SNR=7.1						
S22A	**4UR Ranch, Cre**	**16.74**	**42**	P	**Pn**	**19 28 53.9**	**+1.3**
	baz=229,SNR=50						
HUMO	**Hull Mountain**	**16.75**	**355**		**P**	**19 28 55.2**	**+0.4**
HUMO				IAmb	IAmb	19 28 59.1	
	comp=Z,74nm,1.1s						
K02D	**Willamette Mer**	**16.91**	**353**	P	**P**	**19 28 56.0**	**-0.5**
	baz=172						
J04D	**Umpqua Nationa**	**17.33**	**357**	P	**P**	**19 29 01.5**	**+0.2**
	baz=176						
J05D	**Fort Rock, OR**	**17.34**	**359**	P	**P**	**19 29 01.4**	**0.0**
	baz=179,SNR=23						
J01E	**Myrtle Point**	**17.40**	**352**	P	**P**	**19 29 01.6**	**-0.2**
	baz=171						
SDCO	**Great Sand Dun**	**17.55**	**44**	P	**P**	**19 29 03.7**	**-0.1**
	baz=232,SNR=27						
MSTX	**Muleshoe**	**17.58**	**59**	P	**Pn**	**19 29 03.0**	**+0.1**
	baz=247						
O20A	**White River Ci**	**17.66**	**33**	P	**P**	**19 29 05.1**	**+0.1**
	baz=220,SNR=7.1						
PINE	**Pine Mountain**	**17.85**	**360**	P	**P**	**19 29 07.4**	**+0.4**
PINE				IAmb	IAmb	19 29 18.3	
	comp=Z,105nm,1.2s						
I03D	**Drain, OR**	**17.87**	**354**	P	**P**	**19 29 07.3**	**+0.3**
	baz=173,SNR=7.2						
I04A	**Tendick Farm,**	**17.90**	**356**	P	**P**	**19 29 07.9**	**+0.6**
	baz=176						
T25A	**Trinidad**	**17.90**	**47**	P	**Pn**	**19 29 07.1**	**+0.1**
T25A	**Trinidad**	**17.90**	**47**	P	**Pn**	**19 29 06.9**	**-0.1**
	baz=235,SNR=20						
I02E	**Swisshome, OR**	**18.33**	**353**	P	**P**	**19 29 12.9**	**+0.9**
	baz=172						
HLID	**Hailey**	**18.38**	**15**	P	**Pn**	**19 29 14.5**	**+1.7**
	baz=199,SNR=16						
I05D	**Terrebonne, OR**	**18.40**	**359**	P	**Pn**	**19 29 15.1**	**+2.2**
	baz=179,SNR=8.0						
Q24A	**Divide**	**18.53**	**42**	P	**Pn**	**19 29 15.9**	**+1.0**
	baz=230,SNR=18						
H04D	**Lebanon**	**18.64**	**356**	P	**Pn**	**19 29 16.8**	**+1.0**
	baz=175						
H04A	**Detroit Lake**	**18.77**	**357**	P	**Pn**	**19 29 18.8**	**+1.4**
H04A				IAmb	IAmb	19 29 19.6	
	comp=Z,54nm,0.8s						
ISCO	**Idaho Springs**	**18.81**	**39**	P	**Pn**	**19 29 20.0**	**+1.7**
	baz=227,SNR=18						
JCT	**Junction City**	**19.08**	**71**	P	**P**	**19 29 20.6**	**+0.1**
	baz=261,SNR=35						
BW06	**Boulder Array**	**19.19**	**26**	P	**Pn**	**19 29 23.5**	**+0.8**
BW06	**Boulder Array**	**19.19**	**26**	P	**Pn**	**19 29 23.8**	**+1.0**
	baz=212						
PD31	**Pinedale Array**	**19.19**	**26**	P	**Pn**	**19 29 23.6**	**+0.8**
PDAR	**Pinedale Array**	**19.19**	**26**	P	**Pn**	**19 29 24.1**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=200,slow=8.8,SNR=21						
PDAR	**Pinedale Array**	**19.19**	**26**	P	**Pn**	**19 29 22.9**	**+0.2**
REDW	**Red Top Meadow**	**19.23**	**23**	P	**Pn**	**19 29 23.9**	**+0.7**
833A	**Chaparral WMA,**	**19.23**	**78**	P	**P**	**19 29 21.7**	**-0.4**
	baz=267,SNR=12						
G05D	**Wamic, OR**	**19.30**	**359**	P	**Pn**	**19 29 24.4**	**+0.6**
	baz=179						
G03D	**McMinnville, O**	**19.37**	**355**	P	**P**	**19 29 24.2**	**+0.8**
	baz=174						
N23A	**Red Feather La**	**19.40**	**36**	P	**P**	**19 29 24.0**	**-0.1**
	baz=224,SNR=11						
LOHW	**Long Hollow**	**19.53**	**23**	P	**Pn**	**19 29 27.6**	**+0.8**
PLID	**Pearl Lake**	**19.54**	**10**	P	**Pn**	**19 29 27.2**	**+0.4**
PLID				IAmb	IAmb	19 29 40.4	
	comp=Z,63nm,1.5s						
MOOW	**Moose Ponds**	**19.61**	**22**	P	**Pn**	**19 29 28.0**	**+0.3**
ABTX	**Abilene, Hawle**	**19.64**	**65**	P	**P**	**19 29 26.4**	**-0.2**
	baz=255,SNR=9.7						
F05D	**White Salmon**	**19.95**	**359**	P	**P**	**19 29 30.5**	**+0.7**
	baz=179,SNR=6.2						
F07A	**Phinny Hill Vi**	**19.96**	**2**	P	**Pn**	**19 29 31.5**	**-0.2**
F07A				IAmb	IAmb	19 29 41.5	
	comp=Z,36nm,0.8s						
F04A	**Amboy**	**20.03**	**357**	P	Pn	19 29 32.2	-0.2
F04A				IAmb	IAmb	19 29 53.3	
	comp=Z,107nm,1.3s						
KSCO	**Kaye Shedlock'**	**20.12**	**45**	P	Pn	19 29 33.2	-0.5
	baz=234						
F04D	**Rainier, OR**	**20.21**	**356**	P	Pn	19 29 34.4	-0.2
	baz=175						
H17A	**Grant Village**	**20.23**	**22**	P	Pn	19 29 36.5	+1.3
	baz=208						
F10A	**Beach Ranch, E**	**20.24**	**7**	P	Pn	19 29 35.1	+0.2
F10A				IAmb	IAmb	19 29 36.3	
	comp=Z,48nm,0.9s						
K22A	**Casper**	**20.42**	**32**	P	**P**	**19 29 35.2**	**0.0**
	baz=219,SNR=13						
E07A	**Sunnyside**	**20.63**	**2**	P	Pn	19 29 39.5	0.0
E07A				IAmb	IAmb	19 29 40.4	
	comp=Z,69nm,0.9s						
E04D	**Cinebar**	**20.66**	**357**	P	Pn	19 29 39.0	-0.9
	baz=176						
E09A	**Wood Farm, Sta**	**20.68**	**5**	P	**P**	**19 29 38.4**	**+0.7**
E09A				IAmb	IAmb	19 29 40.1	
	comp=Z,40nm,0.8s						
E03A	**Lebam**	**20.72**	**355**	P	**P**	**19 29 39.1**	**+1.0**
WMOK	**Wichita Mounta**	**20.94**	**60**	P	**P**	**19 29 41.1**	**+0.4**
	baz=251						
LRM	**Limekiln Ridge**	**20.98**	**17**	P	**P**	**19 29 41.6**	**+0.3**
BOZ	**Bozeman (W)**	**20.99**	**18**	P	**P**	**19 29 43.1**	**+1.8**
BOZ	**Bozeman (W)**	**20.99**	**18**	P	**P**	**19 29 42.3**	**+0.9**
	baz=204,SNR=17						
435B	**Jarrell**	**21.01**	**71**	P	**P**	**19 29 40.6**	**-1.0**
	baz=262,SNR=9.3						
D08A	**Wollman Farm,**	**21.17**	**4**	P	**P**	**19 29 44.9**	**+1.9**
D08A				IAmb	IAmb	19 29 49.3	
	comp=Z,51nm,1.1s						
D05A	**Enumclaw**	**21.26**	**358**	P	**P**	**19 29 46.1**	**+2.1**
D04E	**Lakebay**	**21.29**	**356**	P	**P**	**19 29 45.4**	**+1.1**
	baz=176						
WHTX	**Lake Whitney,**	**21.31**	**68**	P	**P**	**19 29 44.9**	**+0.1**
	baz=259						
RLMT	**Red Lodge**	**21.32**	**23**	P	**P**	**19 29 45.5**	**+0.6**
	baz=210						
MSO	**Missoula**	**21.59**	**13**	P	**P**	**19 29 48.4**	**+0.7**
	baz=197,SNR=12						
OGNE	**Ogallala**	**21.64**	**41**	P	**P**	**19 29 48.5**	**+0.2**
	baz=232,SNR=8.0						
D03D	**Eldon**	**21.66**	**356**	P	**P**	**19 29 49.4**	**+1.0**
	baz=175						
CBKS	**Cedar Bluff**	**21.92**	**49**	P	**P**	**19 29 51.6**	**+0.4**
	baz=240						
C06D	**Leavenworth**	**21.98**	**360**	P	**P**	**19 29 52.7**	**+1.0**
	baz=180,SNR=8.0						
B05A	**Bryant**	**22.34**	**358**	P	**P**	**19 29 56.7**	**+1.1**
	baz=177,SNR=9.1						
HKT	**Hockley**	**22.43**	**74**	P	**P**	**19 29 57.1**	**+0.4**
HKT				IAmb	IAmb	19 30 03.9	
	comp=Z,69nm,1.4s						
B08A	**Colville Reser**	**22.45**	**3**	P	**P**	**19 29 57.3**	**+0.5**
B08A				IAmb	IAmb	19 30 06.3	
	comp=Z,32nm,1.0s						
RSSD	**Black Hills**	**22.71**	**33**	P	**P**	**19 30 01.4**	**+1.5**
RSSD	**Black Hills**	**22.71**	**33**	P	**P**	**19 30 01.3**	**+1.4**
	baz=222						
A04D	**Lummi Island**	**22.82**	**357**	P	**P**	**19 30 01.8**	**+1.1**
	baz=176						
X37A	**Clayton**	**23.59**	**62**	P	**P**	**19 30 07.9**	**-0.7**
NATX	**Nacogdoches**	**23.63**	**70**	P	**P**	**19 30 08.9**	**-0.2**
	baz=262						
TUL1	**Leonard**	**23.63**	**59**	P	**P**	**19 30 08.4**	**-0.6**
	baz=252						
EGMT	**Eagleton**	**23.74**	**19**	P	**P**	**19 30 10.2**	**+0.1**
	baz=205						
LAO	**LASA Array**	**23.77**	**26**	P	**P**	**19 30 10.8**	**+0.4**
	baz=214						
KSU1	**Kansas State U**	**24.21**	**51**	P	**P**	**19 30 14.5**	**0.0**
	baz=244						
BGNE	**Belgrade**	**24.30**	**45**	P	**P**	**19 30 14.6**	**-0.8**
	baz=237						
LLLB	**Lillooet**	**24.68**	**358**	P	**P**	**19 30 18.4**	**-0.4**
LLLB				IAmb	IAmb	19 30 27.1	
	comp=Z,31nm,1.1s						
W39A	**Magazine**	**25.00**	**62**	P	**P**	**19 30 21.9**	**+0.2**
	baz=255						
Z41A	**Richland Creek**	**25.40**	**67**	P	**P**	**19 30 23.8**	**-1.6**
	baz=260,SNR=8.5						
X40A	**Basin Creek Fa**	**25.60**	**64**	P	**P**	**19 30 26.8**	**-0.4**
	baz=258,SNR=7.0						
CMIG	**Matias Romero**	**25.64**	**105**	P	**P**	**19 30 29.5**	**+1.8**
	comp=Z,12nm,0.9s,baz=304,slow=8.9,SNR=12						
U40A	**Yellville**	**26.03**	**60**	P	**P**	**19 30 32.2**	**+1.1**
U40A	**Yellville**	**26.03**	**60**	P	**P**	**19 30 30.6**	**-0.5**
	baz=254,SNR=24						
W41B	**Gary Mavity, V**	**26.22**	**63**	P	**P**	**19 30 31.4**	**-1.4**
	baz=257,SNR=11						
ECSD	**EROS Data Cent**	**26.52**	**42**	P	**P**	**19 30 35.6**	**+0.1**
	baz=236						
MGMO	**Mountain Grove**	**26.70**	**58**	P	**P**	**19 30 37.9**	**+0.7**
MGMO				IAmb	IAmb	19 30 46.6	
	comp=Z,19nm,0.9s						
BBB	**Bella Bella**	**26.82**	**350**	LR	LR	19 37 58.6	
	comp=Z,104nm,21.4s,baz=192,slow=29						
MDND	**Maddock**	**27.55**	**32**	P	**P**	**19 30 44.3**	**-0.3**
	baz=225						
CCM	**Cathedral Cave**	**27.75**	**57**	P	**P**	**19 30 46.1**	**-0.4**
	baz=252						
S44A	**Carbondale**	**29.16**	**58**	P	**P**	**19 30 58.0**	**-1.1**
S44A				IAmb	IAmb	19 31 09.5	
	comp=Z,22nm,0.8s						
SPMN	**Marine on St.**	**29.62**	**42**	P	**P**	**19 31 02.6**	**-0.5**
	baz=239						
AGMN	**Agassiz Nation**	**29.70**	**35**	P	**P**	**19 31 04.4**	**+0.6**
	baz=230						
WVT	**Waverly**	**29.93**	**62**	P	**P**	**19 31 05.5**	**-0.5**
WVT	**Waverly**	**29.93**	**62**	P	**P**	**19 31 06.5**	**+0.6**
	baz=259						
JFWS	**Jewell Farm**	**30.18**	**48**	P	**P**	**19 31 07.8**	**-0.3**
	baz=245						
X48A	**Hartselle**	**30.31**	**66**	P	**P**	**19 31 09.5**	**+0.1**
ULM	**Lac du Bonnet**	**30.98**	**32**	P	**P**	**19 31 18.0**	**+3.0**
	comp=Z,4.1nm,0.6s,baz=243,slow=8.3,SNR=4.3						
ULM				LR	LR	19 43 25.5	
	comp=Z,152nm,21.2s,baz=252,slow=36						
SWET	**Sewanee**	**31.32**	**64**	P	**P**	**19 31 17.9**	**-0.3**
SFIN	**Lafayette**	**31.51**	**54**	P	**P**	**19 31 19.7**	**-0.1**
	baz=253						
WCI	**Wyandotte Cave**	**31.56**	**59**	P	**P**	**19 31 19.4**	**-0.9**
WCI	**Wyandotte Cave**	**31.56**	**59**	P	**P**	**19 31 20.0**	**-0.3**
	baz=257						
WRAK	**Wrangell Islan**	**31.61**	**348**	P	**P**	**19 31 20.4**	**-0.1**
	baz=160						
EYMN	**Ely**	**31.84**	**39**	P	**P**	**19 31 22.3**	**-0.4**
	baz=236						
P49A	**Miami Univ. Ec**	**33.05**	**57**	P	**P**	**19 31 32.2**	**-1.2**
	baz=256,SNR=6.2						
TKL	**Tuckaleechee C**	**33.12**	**64**	P	**P**	**19 31 34.6**	**+0.5**
	comp=Z,7.1nm,0.7s,baz=209,slow=7.9,SNR=9.1						
GOGA	**Godfrey**	**33.19**	**68**	P	**P**	**19 31 34.6**	**0.0**
GOGA	**Godfrey**	**33.19**	**68**	P	**P**	**19 31 33.8**	**-0.8**
	baz=267						
TZTN	**Tazewell**	**33.41**	**62**	P	**P**	**19 31 36.7**	**+0.1**
TZTN	**Tazewell**	**33.41**	**62**	P	**P**	**19 31 36.2**	**-0.4**
	baz=262						
HODGE	**Hodges**	**34.23**	**67**	P	**P**	**19 31 43.1**	**-0.7**
ACSO	**Alum Creek Sta**	**34.51**	**56**	P	**P**	**19 31 45.5**	**-0.6**
	baz=257						
AAM	**Ann Arbor**	**34.54**	**52**	P	**P**	**19 31 45.6**	**-0.6**
	baz=253						
GLMI	**Grayling**	**34.67**	**48**	P	**P**	**19 31 45.9**	**-1.5**
	baz=249						
P52A	**Corning**	**35.03**	**57**	P	**P**	**19 31 50.6**	**+0.1**
	baz=258						
SKAG	**Skagway**	**35.03**	**347**	P	**P**	**19 31 50.4**	**+0.1**
	baz=157						
KMSC	**Kings Mountain**	**35.06**	**65**	P	**P**	**19 31 50.9**	**+0.1**
KMSC	**Kings Mountain**	**35.06**	**65**	P	**P**	**19 31 50.1**	**-0.8**
	baz=265,SNR=22						
P33M	**Teslin, Yukon**	**35.28**	**350**	P	**P**	**19 31 53.0**	**+0.5**
	baz=161						
P53A	**Whipple**	**35.56**	**58**	P	**P**	**19 31 54.2**	**-1.0**
O53A	**New Philadelph**	**35.84**	**56**	P	**P**	**19 31 57.6**	**+0.1**
	baz=258						
NHSC	**New Hope**	**35.93**	**69**	P	**P**	**19 31 58.1**	**-0.3**
	baz=269						
BLA	**Blacksburg**	**35.98**	**62**	P	**P**	**19 31 59.0**	**+0.1**
	baz=263						
WHY	**Whitehorse**	**36.06**	**348**	P	**P**	**19 31 60.0**	**+0.7**
	baz=158						
PNL	**Peninsula**	**36.13**	**344**	P	**P**	**19 32 00.6**	**+0.8**
	baz=151						
M53A	**WI Miller and**	**36.48**	**55**	P	**P**	**19 32 03.4**	**+0.4**
	baz=257						
MCWV	**Mont Chateau**	**36.77**	**58**	P	**P**	**19 32 05.0**	**-0.5**
	baz=260						
YKA	**Yellowknife Ar**	**36.82**	**5**	P	**P**	**19 32 05.7**	**+0.1**
	comp=Z,3.6nm,0.7s,baz=184,slow=8.8,SNR=66						
YKA				PcP	**PcP**	**19 34 26.6**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=175,slow=2.4,SNR=2.6						
YKA				LR	LR	19 47 14.9	
	comp=Z,115nm,18.2s,baz=0.0,slow=36						
YKA	**Yellowknife Ar**	**36.82**	**5**	P	**P**	**19 32 05.3**	**-0.3**
N54A	**Moraine State**	**36.89**	**56**	P	**P**	**19 32 05.2**	**-1.4**
N54A	**Moraine State**	**36.89**	**56**	P	**P**	**19 32 05.3**	**-1.3**
	baz=259						
N31M	**Braeburn, Yuko**	**36.99**	**348**	P	**P**	**19 32 07.0**	**-0.1**
	baz=158						
ERPA	**Erie**	**37.13**	**54**	P	**P**	**19 32 06.9**	**-1.6**
	baz=257						
MESA	**MESA**	**37.23**	**343**	P	**P**	**19 32 09.8**	**+0.4**
	baz=148						
M54A	**Oil Creek Stat**	**37.24**	**55**	P	**P**	**19 32 09.1**	**-0.3**
	baz=258						
M31M	**Drury Creek, Y**	**37.42**	**350**	P	**P**	**19 32 11.5**	**+0.8**
	baz=160						
BGLC	**Bering Glacier**	**37.55**	**342**	P	**P**	**19 32 12.8**	**+1.1**
	baz=146						
CTG	**Chitna Glacier**	**37.74**	**344**	P	**P**	**19 32 14.6**	**+1.0**
	baz=149						
O56A	**Blue Knob Stat**	**37.84**	**57**	P	**P**	**19 32 13.9**	**-0.7**
	baz=261,SNR=6.2						
CRQE	**Cirque**	**38.02**	**342**	P	**P**	**19 32 17.1**	**+1.1**
	baz=147						
YUK3	**Moose Creek**	**38.23**	**345**	P	**P**	**19 32 18.0**	**+0.2**
	baz=151						
SSPA	**Standing Stone**	**38.41**	**57**	P	**P**	**19 32 20.0**	**+0.6**
	baz=261						
EYAK	**Cordova Ski Ar**	**38.61**	**341**	P	**P**	**19 32 20.9**	**+0.2**
	baz=143						
BMRM	**Bremner River**	**38.62**	**342**	P	**P**	**19 32 20.5**	**-0.4**
	baz=145						
BVCY	**Beaver Creek**	**38.88**	**345**	P	**P**	**19 32 24.0**	**+0.9**
	baz=151						
OHAK	**Old Harbor**	**38.93**	**332**	P	**P**	**19 32 23.7**	**+0.2**
	baz=130						
M27K	**Edge Creek, AK**	**39.07**	**345**	P	**P**	**19 32 25.7**	**+0.9**
	baz=149						
N25K	**Chitina, Valde**	**39.14**	**342**	P	**P**	**19 32 25.8**	**+0.5**
	baz=145						
GLI	**Glacier Island**	**39.28**	**340**	P	**P**	**19 32 27.0**	**+0.6**
	baz=141						
TAOE	**Nuku Hiva Isla**	**39.33**	**211**	*e*T	T	20 13 48.8	
	comp=Z,34nm,0.2s						
M26K	**Nabesna, AK**	**39.38**	**344**	P	**P**	**19 32 28.1**	**+0.8**
	baz=148						
KLU	**Klutina**	**39.42**	**341**	P	**P**	**19 32 28.7**	**+1.1**
	baz=143						
PWL	**Port Wells**	**39.66**	**339**	P	**P**	**19 32 31.3**	**+1.7**
	baz=140						
BCAR	**Beaver Creek A**	**39.66**	**345**	P	**P**	**19 32 30.6**	**+1.0**
L27K	**Beaver Creek,**	**39.67**	**345**	P	**P**	**19 32 31.3**	**+1.6**
	baz=150						
HARP	**HAARP**	**39.94**	**343**	P	**P**	**19 32 32.9**	**+1.0**
	baz=145						
M24K	**Tolsona, Glenn**	**39.98**	**342**	P	**P**	**19 32 33.5**	**+1.2**
	baz=143						
L26K	**Log Cabin Wild**	**40.00**	**344**	P	**P**	**19 32 33.5**	**+1.1**
	baz=148						
DAWY	**Dawson**	**40.03**	**347**	P	**P**	**19 32 33.6**	**+0.9**
DAWY	**Dawson**	**40.03**	**347**	P	**P**	**19 32 33.2**	**+0.5**
	baz=154						
N59A	**State Game Lan**	**40.04**	**56**	P	**P**	**19 32 33.5**	**+0.5**
	baz=262						
BINY	**Binghamton**	**40.07**	**54**	P	**P**	**19 32 34.0**	**+0.7**
	baz=260						
SCM	**Sheep Creek Mo**	**40.10**	**341**	P	**P**	**19 32 32.5**	**-0.8**
	baz=142						
KNK	**Knik Glacier**	**40.12**	**340**	P	**P**	**19 32 33.0**	**-0.4**
	baz=140						
RC01	**Rabbit Creek A**	**40.28**	**339**	P	**P**	**19 32 34.1**	**-0.6**
	baz=138						
SML	**Sawmill**	**40.38**	**340**	P	**P**	**19 32 34.9**	**-0.7**
	baz=140						
PMR	**Palmer**	**40.47**	**340**	P	**P**	**19 32 36.8**	**+0.6**
	baz=139						
PAX	**Paxson**	**40.49**	**343**	P	**P**	**19 32 37.4**	**+0.8**
	baz=145						
O20K	**Slope Mountain**	**40.56**	**336**	P	**P**	**19 32 37.9**	**+0.7**
	baz=133						
WAT6	**Susitna Watana**	**40.81**	**341**	P	**P**	**19 32 39.8**	**+0.5**
	baz=142						
SCRK	**Sand Creek**	**40.96**	**345**	P	**P**	**19 32 40.2**	**-0.2**
SCRK	**Sand Creek**	**40.96**	**345**	P	**P**	**19 32 40.8**	**+0.4**
	baz=148						
I29M	**Ogilvie Camp,**	**41.01**	**349**	P	**P**	**19 32 40.7**	**0.0**
	baz=156						
EGAK	**Eagle**	**41.02**	**347**	P	**P**	**19 32 41.6**	**+0.8**
	baz=152						
DHY	**Denali Highway**	**41.09**	**342**	P	**P**	**19 32 41.2**	**-0.4**
	baz=142						
SDPT	**Sand Point**	**41.17**	**326**	P	**P**	**19 32 42.1**	**0.0**
	baz=120						
SPCR	**Spurr Chakacha**	**41.19**	**337**	P	**P**	**19 32 42.6**	**+0.2**
	baz=135						
WAT1	**Susitna Watana**	**41.24**	**341**	P	**P**	**19 32 42.8**	**+0.1**
	baz=141						
J26L	**Joseph Creek**	**41.30**	**345**	P	**P**	**19 32 43.3**	**+0.1**
	baz=148						
CUT	**Chulitna**	**41.43**	**340**	P	**P**	**19 32 44.4**	**+0.3**
	baz=138						
PAL	**Palisades**	**41.45**	**57**	P	**P**	**19 32 44.2**	**-0.4**
	baz=263						
LONY	**Lake Ozonia**	**41.50**	**51**	P	**P**	**19 32 44.8**	**-0.2**
	baz=259						
EPYK	**Eagle Plains**	**41.69**	**350**	P	**P**	**19 32 46.5**	**+0.3**
	baz=158						
J25K	**Salcha River,**	**41.82**	**344**	P	**P**	**19 32 47.9**	**+0.5**
	baz=146						
MCK	**McKinley**	**42.05**	**342**	P	**P**	**19 32 49.2**	**0.0**
	baz=141,SNR=10						
HDA	**Harding Lake**	**42.05**	**343**	P	**P**	**19 32 49.0**	**-0.2**
	baz=144						
TRF	**Thorofare Moun**	**42.22**	**341**	P	**P**	**19 32 51.0**	**+0.2**
	baz=139						
IL31		**42.33**	**344**	P	**P**	**19 32 51.1**	**-0.3**
ILAR	**Eielson Array**	**42.33**	**344**	P	**P**	**19 32 51.9**	**+0.4**
	comp=Z,4.6nm,0.7s,baz=161,slow=8.5,SNR=49						
PPLA	**Purkeypile**	**42.40**	**339**	P	**P**	**19 32 51.3**	**-0.9**
PPLA				IAmb	IAmb	19 33 03.4	
	comp=Z,43nm,1.0s						
PPLA	**Purkeypile**	**42.40**	**339**	P	**P**	**19 32 53.1**	**+0.8**
	baz=136						
PRP	**Porcupine Dome**	**42.61**	**345**	P	**P**	**19 32 54.7**	**+0.7**
	baz=146						
L20K	**Farewell, AK**	**42.66**	**338**	P	**P**	**19 32 54.6**	**+0.4**
	baz=134						
TCOL	**CIGO, UAF Yank**	**42.66**	**343**	P	**P**	**19 32 54.8**	**+0.6**
	baz=143						
CAST	**Castle Rocks**	**42.74**	**340**	P	**P**	**19 32 54.9**	**0.0**
CAST				IAmb	IAmb	19 33 05.8	
	comp=Z,25nm,0.9s						
CAST	**Castle Rocks**	**42.74**	**340**	P	**P**	**19 32 54.3**	**-0.6**
	baz=137,SNR=14						
POKR	**Poker Plat Res**	**42.74**	**344**	P	**P**	**19 32 54.9**	**+0.1**
	baz=144						
NEA2	**Nenana**	**42.75**	**342**	P	**P**	**19 32 54.7**	**-0.2**
	baz=141,SNR=8.7						
BPAW	**Bear Paw Mtn.**	**42.92**	**341**	P	**P**	**19 32 55.5**	**-0.8**
BPAW				IAmb	IAmb	19 33 06.5	
	comp=Z,17nm,1.0s						
BPAW	**Bear Paw Mtn.**	**42.92**	**341**	P	**P**	**19 32 55.9**	**-0.4**
	baz=139						
INK	**Inuvik**	**43.11**	**353**	P	**P**	**19 32 56.8**	**-1.0**
INK	**Inuvik**	**43.11**	**353**	P	**P**	**19 32 58.1**	**+0.4**
	baz=163						
CHUM	**Lake Minchumin**	**43.15**	**340**	P	**P**	**19 32 58.4**	**+0.2**
	baz=137						
I23K	**Minto, Yukon-K**	**43.27**	**343**	P	**P**	**19 32 59.4**	**+0.4**
I23K				IAmb	IAmb	19 33 07.2	
	comp=Z,44nm,1.1s						
I23K	**Minto, Yukon-K**	**43.27**	**343**	P	**P**	**19 32 59.0**	**-0.1**
	baz=141,SNR=16						
K20K	**Telida**	**43.33**	**339**	P	**P**	**19 32 59.6**	**0.0**
	baz=134						
H24K	**Noodor Dome**	**43.44**	**344**	P	**P**	**19 33 00.4**	**-0.1**
	baz=144						
MLY	**Manley**	**43.55**	**342**	P	**P**	**19 33 01.5**	**+0.1**
	baz=140						
TTA	**Tatalina**	**43.69**	**338**	P	**P**	**19 33 02.5**	**-0.1**
TTA				IAmb	IAmb	19 33 10.5	
	comp=Z,21nm,1.2s						
TTA	**Tatalina**	**43.69**	**338**	P	**P**	**19 33 01.8**	**-0.8**
	baz=132,SNR=8.9						
J20K	**Nowinta River**	**43.93**	**340**	P	**P**	**19 33 04.3**	**-0.1**
	baz=135						
I21K	**Tanana**	**44.01**	**342**	P	**P**	**19 33 04.9**	**-0.1**
	baz=138						
BMAR	**Burnt Mountain**	**44.02**	**347**	P	**P**	**19 33 05.2**	**0.0**
H21K	**Melozitna Rive**	**44.60**	**342**	P	**P**	**19 33 08.6**	**-1.1**
	baz=138,SNR=12						
IMAR	**Indian Mountai**	**45.10**	**342**	P	**P**	**19 33 13.7**	**0.0**
COLD	**Coldfoot**	**45.11**	**344**	P	**P**	**19 33 14.3**	**+0.4**
COLD	**Coldfoot**	**45.11**	**344**	P	**P**	**19 33 14.2**	**+0.4**
	baz=142						
TOLK	**Toolik Lake Re**	**46.09**	**346**	P	**P**	**19 33 21.0**	**-0.6**
	baz=143,SNR=8.9						
A36M	**Sachs Harbour**	**46.19**	**358**	P	**P**	**19 33 22.5**	**+0.2**
A36M				IAmb	IAmb	19 33 38.8	
	comp=Z,16nm,0.8s						
A36M	**Sachs Harbour**	**46.19**	**358**	P	**P**	**19 33 22.3**	**+0.1**
	baz=175,SNR=9.7						
ANM	**Nome**	**48.00**	**336**	P	**P**	**19 33 35.8**	**-0.7**
ANM				IAmb	IAmb	19 33 53.0	
	comp=Z,25nm,1.3s						
ANM	**Nome**	**48.00**	**336**	P	**P**	**19 33 36.2**	**-0.4**
	baz=122						
PMOR	**Pomariorio Ree**	**48.45**	**216**	*e*T	T	20 25 11.2	
	comp=Z,14nm,0.4s						
VAH	**Vaihoa**	**48.50**	**216**	*e*T	T	20 25 16.9	
	comp=Z,15nm,0.5s						
SCHQ	**Schefferville**	**48.65**	**39**	P	**P**	**19 33 42.1**	**+0.5**
	comp=Z,6.4nm,1.0s,baz=254,slow=9.0,SNR=7.3						
SCHQ				LR	LR	19 52 58.4	
	comp=Z,128nm,18.7s,baz=292,slow=34						
TNA	**Tin City**	**49.44**	**336**	P	**P**	**19 33 47.5**	**-0.1**
	baz=120						
A21K	**Barrow**	**49.71**	**346**	P	**P**	**19 33 49.0**	**-0.5**
	baz=136,SNR=12						
PPT	**Papeete**	**51.47**	**216**	LR	LR	19 49 17.5	
	comp=Z,66nm,21.8s,baz=86,slow=28						
PPT2	**Papeete2**	**51.49**	**216**	*e*S	**S**	**19 41 19.6**	**-4.5**
	comp=Z,78nm,24.8s						
PPT2				*e*LR	LR	19 48 32.7	
	comp=Z,161nm,29.0s						
EUNU	**Eureka**	**56.15**	**7**	P	**P**	**19 34 37.7**	**+0.7**
EUNU				IAmb	IAmb	19 35 00.2	
	comp=Z,12nm,1.4s						
SUMG	**Summit**	**63.24**	**20**	*i* P	**P**	**19 35 26.0**	**-0.4**
ETMB	**Extrema**	**63.87**	**116**	P	**P**	**19 35 28.4**	**-2.5**
ETMB				IAmb	IAmb	19 35 30.1	
	comp=Z,15nm,1.2s						
PETK	**Petropavlovsk-**	**64.71**	**319**	P	**P**	**19 35 35.4**	**-0.5**
	comp=Z,4.4nm,0.9s,baz=88,slow=11,SNR=2.0						
PETK				LR	LR	20 03 17.2	
	comp=Z,21nm,18.0s,baz=97,slow=36						
PETK	**Petropavlovsk-**	**64.71**	**319**	P	**P**	**19 35 34.2**	**-1.8**
LPAZ	**La Paz**	**66.23**	**123**	P	**P**	**19 35 44.1**	**-2.8**
LPAZ				IAmb	IAmb	19 35 47.4	
	comp=Z,8.5nm,0.9s						
TIXI	**Tiksi**	**71.75**	**342**	P	**P**	**19 36 19.8**	**+0.1**
TIXI				IAmb	IAmb	19 36 25.2	
	comp=Z,14nm,1.1s						
CPUP	**Villa Florida**	**80.27**	**125**	P	**P**	**19 37 09.9**	**+1.0**
	comp=Z,3.2nm,1.0s,baz=297,slow=9.2,SNR=4.3						
CPUP				LR	LR	20 09 38.5	
	comp=Z,60nm,20.9s,baz=318,slow=33						
PLCA	**Paso Flores**	**81.08**	**144**	LR	LR	20 04 44.9	
	comp=Z,52nm,21.6s,baz=329,slow=30						
ARCES	**ARCESS Array B**	**81.77**	**11**	P	**P**	**19 37 17.9**	**+1.6**
	comp=Z,2.5nm,0.7s,baz=2.8,slow=5.0,SNR=4.1						
ARCES				LR	LR	20 14 07.6	
	comp=Z,82nm,18.8s,baz=310,slow=36						
BDFB	**Brasilia**	**81.95**	**112**	P	**P**	**19 37 18.8**	**+0.5**
	comp=Z,6.3nm,0.9s,baz=282,slow=4.7,SNR=5.6						
NRIK	**Noril'sk**	**82.82**	**350**	LR	LR	20 13 28.2	
	comp=Z,30nm,20.2s,baz=344,slow=35						
MJAR	**Matsushiro Arr**	**83.13**	**307**	LR	LR	20 08 50.0	
	comp=Z,56nm,19.9s,baz=100,slow=32						
USRK	**Ussuriysk Ar.**	**83.66**	**316**	P	**P**	**19 37 27.9**	**+1.3**
	comp=Z,5.5nm,1.0s,baz=66,slow=6.5,SNR=5.2						
HNR	**Honiara**	**84.53**	**257**	LR	LR	20 07 45.2	
	comp=Z,124nm,18.7s,baz=71,slow=30						

NOA	NORSAR Array B	85.07	21	P	P	19 37 34.5	+1.0
	comp=Z,1.1nm,0.9s,baz=1.2,slow=8.5,SNR=1.7						
DZM	Mont Dzumac	85.08	243	LR	LR	20 07 06.8	
	comp=Z,80nm,20.5s,baz=330,slow=30						
GUMO	Guam	87.95	284	LR	LR	20 08 52.1	
	comp=Z,59nm,20.6s,baz=97,slow=30						
FINES	FINESS Array B	88.94	15	P	P	19 37 52.8	+0.5
	comp=Z,2.3nm,0.9s,baz=348,slow=13,SNR=3.4						
FINES				LR	LR	20 17 24.9	
	comp=Z,61nm,18.0s,baz=355,slow=35						
FINES	FINESS Array B	88.94	15	P	P	19 37 51.2	-1.0
KSRS	Korea Array	89.81	312	LR	LR	20 11 43.8	
	comp=Z,40nm,21.7s,baz=93,slow=31						
ESDC	Sonseca Array	92.17	44	LR	LR	20 18 59.0	
	comp=Z,66nm,18.4s,baz=275,slow=35						
CLL	Collm	93.06	27	eP	P	19 38 14.0	+2.4
SONM	Songino Array	95.22	330	P	P	19 38 23.3	+1.4
	comp=Z,0.6nm,0.6s,baz=61,slow=2.8,SNR=4.4						
SONM				LR	LR	20 20 00.4	
	comp=Z,64nm,19.2s,baz=316,slow=35						
GERES	GERESS Array B	95.23	28	LR	LR	20 22 26.0	
	comp=Z,88nm,18.3s,baz=312,slow=36						
ZALV	Zalesovo Beam	97.44	345	LR	LR	20 21 58.0	
	comp=Z,50nm,21.3s,baz=38,slow=35						
HHC	Hu-ho-hao-te	97.69	323	eP	P	19 38 30.5	-2.6
HHC				pmax	pmax		
	comp=Z,200nm,6.9s						
HHC				pmax	pmax		
	comp=Z,13nm,1.4s						
NJ2	Nanjing	99.01	312	eP	Pdif	19 38 37.0	-2.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
AKASG	Malin Array Be	99.26	19	LR	LR	20 25 08.1	
	comp=Z,31nm,18.4s,baz=15,slow=36						

NNC 27 19:42:54.5±2.0, 38°.75N×73°.25E, h0km, mb4.1, mpv3.7, 2C-5D, Error ellipse: s-maj=14.9km s-min=9.3km az=173.0, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	Merke	3.99	360	Pg	Pb	19 44 07.5	+1.9
MRKS				Lg	Lg	19 45 04.0	
AAK	Ala-Archa	3.99	13	⇓Pn	Pn	19 43 58.2	+1.1
	8.1nm,0.6s						
AAK				⇓Lg	Lg	19 44 57.0	
	11nm,0.7s						
TKM2	Tokmak 2	4.53	22	⇑Pg	Pb	19 44 17.2	+2.3
	10nm,0.7s						
TKM2				⇓Lg	Lg	19 45 19.8	
	7.9nm,0.9s						
KST	Kastek	4.75	25	Pg	Pb	19 44 21.3	+2.6
	7.3nm,0.5s						
KST				Lg	Lg	19 45 27.5	
	11nm,0.7s						
KK09	Karatay Array	4.84	335	⇓Pn	Pn	19 44 07.5	-1.1
	2.6nm,0.4s,baz=155,slow=13						
KK09				⇓Sn	Sn	19 45 05.9	+0.6
	12nm,0.7s,baz=151,slow=26						
KK09				⇑Lg	Lg	19 45 29.0	
	8.6nm,0.7s						
BRLS	Borolday	5.00	330	Pg	Pb	19 44 23.0	+0.2
	3.6nm,0.4s						
BRLS				Lg	Lg	19 45 30.2	
	9.9nm,0.9s						
TNSS	Tian-Shan	5.11	32	Pg	Pb	19 44 28.7	+3.7
	7.4nm,0.7s						
TNSS				Lg	Lg	19 45 40.5	
	6.1nm,1.3s						
MDOK	Medeo	5.26	32	Pg	Pb	19 44 29.2	+1.8
	8.7nm,0.7s						
MDOK				Lg	Lg	19 45 40.9	
	14nm,1.6s						
KRBS	Karabastau	5.26	20	Pg	Pb	19 44 30.1	+2.7
	5.0nm,0.6s						
KRBS				Lg	Lg	19 45 43.0	
	5.0nm,0.5s						
KOTS	Kotyrbulak	5.34	32	Pg	Pb	19 44 30.1	+1.3
	6.9nm,0.6s						
KOTS				Lg	Lg	19 45 43.0	
	14nm,1.0s						
KTBS	Karatobe	5.59	26	Pg	Pb	19 44 36.8	+3.9
	3.1nm,0.5s						
KTBS				Lg	Lg	19 45 54.2	
	9.7nm,0.9s						
ARXS	Arharly	6.45	31	Pg	Pb	19 44 51.0	+3.5
	4.2nm,0.6s						
ARXS				Lg	Lg	19 46 18.8	
	8.1nm,1.2s						

PRE 27 19:58:28.2±1.3, 26°.40S×27°.46E, h2km, ML2.4
BUL 27 19:58:48.3±0.3, 25°.70S×28°.35E, h1km±10km, MD4.9
EAF 27 19:58:48.3±0.3, 25°.70S×28°.35E, h1km±10km, MD4.5

ISC 27 19:58:26.8±1.4, 26°.31S±0°.04×27°.34E±0°.04, h5km±13km, n15, σ1s.21/26, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRAO	HartRAO	0.52	37	eP	Pb	19 58 39.4	+0.9
HRAO				eS	Sb	19 58 46.6	+0.2
HRAO				IAML		19 58 48.9	
	comp=Z,175nm,0.3s						
KSR	Koster	0.61	319	eP	Pn	19 58 42.7	+0.5
KSR				eS	Sn	19 58 52.4	-0.1
KSR				IAML		19 58 54.9	
	comp=Z,411nm,0.3s						
PRYS	Parys	0.61	178	eP	Pg	19 58 39.1	+0.5
PRYS				eS	Sg	19 58 46.1	-0.5
PRYS				IAML		19 58 52.1	
	comp=Z,54nm,0.2s						
SLR	Silverton	1.02	56	eP	Pn	19 58 48.2	+0.2
SLR				eS	Sb	19 59 01.6	+0.7
SLR				IAML		19 59 08.8	
	comp=Z,53nm,0.1s						
SNKL	Senekal, Frees	2.00	169	eP	Pn	19 59 01.5	+0.1
SNKL				eS	Sn	19 59 26.9	+0.1
SNKL				IAML		19 59 30.1	
	comp=Z,61nm,0.6s						
SWZ	Schweizer	2.00	244	eP	Pg	19 59 05.3	+0.3
SWZ				eS	Sg	19 59 31.0	+0.1
SWZ				IAML		19 59 34.9	
	comp=Z,108nm,0.3s						
NWCL	Newcastle	2.68	123	eP	Pn	19 59 11.4	+0.7
NWCL				eS	Sn	19 59 42.0	-1.7
NWCL				IAML		19 59 49.6	
	comp=Z,34nm,0.5s						
POGA	Pongola	4.04	106	eP	Pn	19 59 31.1	+1.8
POGA				eS	Sn	20 00 15.3	-1.6
POGA				IAML		20 00 33.4	
	comp=Z,17nm,0.5s						
CNG	Changalane	4.35	91	i P	Pb	19 59 43.4	-0.4
CNG				i Sg	Sb	20 00 37.0	+0.5
CNG	Changalane	4.35	91	i P	Pb	19 59 43.4	-0.4
CNG				i Sg	Sb	20 00 37.0	+0.5
MOPA	Mopani	4.62	54	eP	Pn	19 59 38.6	+1.4
MOPA				eS	Sn	20 00 30.7	-0.6
MOPA				IAML		20 01 00.4	
	comp=Z,7.7nm,1.2s						
MSNA	Messina	4.64	32	i P	Pb	19 59 45.8	-3.0
MSNA	Messina	4.64	32	i P	Pb	19 59 45.8	-3.0
MATP	Matopo	5.95	11	i S	Sn	20 01 05.0	+0.6
MATP	Matopo	5.95	11	i S	Sn	20 01 05.0	+0.6

AEIC 27 20:06:13.1±0.8, 51°.55N±0°.05×175°.49W±0°.05, h50km±9km, ML3.5/23, Error ellipse: s-maj=7.1km s-min=4.7km az=166.0
NEIC 27 20:06:15.2±2.2, 51°.8N±0°.2×175°.56W±0°.09, h48km±22km, Error ellipse: s-maj=33.1km s-min=4.4km az=168.0
IDC 27 20:07:45.1±6.1, 54°.69N×165°.08W, h414km±56km, mb2.6/4, mb1 2.9/6, mb1mx2.4/41, mbtmp3.5/6, Error ellipse: s-maj=71.7km s-min=25.4km az=25.0

ISC 27 20:06:14.0±1.2, 51°.5N±0°.1×175°.52W±0°.05, h47km, n29, σ1s.15/31, mb3.1/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSIG	Igitkin Island	0.51	331		Pn	20 06 25.3	0.0
GSMY	Great Sitkin M	0.60	327		Pn	20 06 26.7	+0.3
GSCK	Great Sitkin C	0.62	320		Pn	20 06 26.8	+0.2
GSTD	Great Sitkin T	0.65	324		Pn	20 06 27.4	+0.4
GSTD					Sn	20 06 37.7	+1.3
ADK	Adak	0.80	296	Pn	Pn	20 06 28.3	-0.6
ADK	Adak	0.80	296	Sn	Sn	20 06 38.6	-1.2
ATKA	Atka Island	1.06	50		Pn	20 06 31.4	-1.0
ATKA	Atka Island	1.06	50		Sn	20 06 45.4	-0.6
KIWB	Kanaga Island	1.06	288		Pn	20 06 32.1	-0.3
KIKV	Kanaga Island	1.08	289		Pn	20 06 32.0	-0.7
KIMD	Kanaga Island	1.09	283		Pn	20 06 32.2	-0.6
KOKL	Mount Kliuchef	1.14	46		Pn	20 06 33.3	-0.2
KOFP	Korovin Flat P	1.15	50		Pn	20 06 33.5	-0.2
TAPA	Tanaga Point A	1.45	282		Pn	20 06 37.9	0.0
TAPA					Sn	20 06 56.0	+0.2
TAFL	Tanaga Flats	1.50	279		Pn	20 06 38.5	+0.1
TAFP	Tanaga Falls P	1.57	284		Pn	20 06 39.7	+0.3
TAFP					Sn	20 06 59.3	+0.7
TASE	Tanaga Southea	1.59	282		Pn	20 06 39.9	+0.2
GALAA	Gareloi Lava P	2.04	278		Pn	20 06 46.0	+0.3
MAPS	Pakushin South	5.69	63		Pn	20 07 37.4	+1.5
MSW	Makushin Switc	5.82	62		Pn	20 07 39.6	+2.0
UNV	Unalaska Valle	5.95	64		Pn	20 07 37.9	-1.5
AKUT	Akutan	6.46	62	Pn	Pn	20 07 42.7	-3.6
SMY	Shemya	6.50	285	Pn	Pn	20 07 46.9	0.0
SDPT	Sand Point	9.75	61	Pn	Pn	20 08 31.8	+0.4
KDAK	Kodiak Island	14.63	56	P	Pn	20 09 35.6	-2.1
	0.2nm,0.3s,baz=189,slow=12,SNR=2.1						
ILAR	Eielson Array	19.86	37	P	Pn	20 10 41.1	-1.4
	0.2nm,0.3s,baz=223,slow=9.5,SNR=17						
YKA	Yellowknife Ar	33.63	47	P	P	20 12 49.9	+0.4
	0.1nm,0.5s,baz=283,slow=7.6,SNR=3.9						
NVAR	Mina Array Bea	41.49	85	P	P	20 14 04.3	+7.8
	0.2nm,0.6s,baz=290,slow=8.5,SNR=2.1						
PDAR	Pinedale Array	44.30	74	P	P	20 14 20.6	+1.5
	0.6nm,0.5s,baz=311,slow=3.5,SNR=7.3						

IDC 27 20:32:19.0±1.2, 26°.06N×90°.34E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.6/35, mbtmp3.7/8, ML3.3/1, MS2.7/1, Ms1 2.9/1, ms1mx2.4/44, Error ellipse: s-maj=55.7km s-min=17.7km az=60.0

ISC 27 20:32:22.6±1.3, 26°.1N±0°.2×90°.5E±0°.2, h24km, n9, σ0s.84/10, mb4.0/7, Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	1.32	113	ePG	Pn	20 32 45.0	-0.8
SHL				i SG	Sn	20 33 03.0	+0.2
CMAR	Chiang Mai Arr	10.88	133	Pn	Pn	20 34 56.5	-0.4
	0.1nm,0.3s,baz=302,slow=12,SNR=2.9						
CMAR				LR	LR	20 39 23.0	
	comp=Z,41nm,19.5s,baz=185,slow=39						
MKAR	Makanchi Array	21.67	345	P	P	20 37 11.0	-0.5
	1.6nm,0.6s,baz=155,slow=11,SNR=17						
SONM	Songino Array	25.03	26	P	P	20 37 46.1	+1.1
	0.7nm,0.7s,baz=208,slow=11,SNR=7.7						
KURBB	Kurchatov Arra	26.17	343	P	P	20 37 54.4	-0.6
	0.6nm,0.5s,baz=167,slow=8.5,SNR=5.6						
FINES	FINESS Array B	55.25	328	P	P	20 41 53.2	-0.3
	1.2nm,0.8s,baz=82,slow=14,SNR=4.3						
NOA	NORSAR Array B	62.40	327	P	P	20 42 43.1	-0.2
	2.2nm,1.2s,baz=95,slow=5.3,SNR=2.0						
WRA	Warramunga Arr	62.47	133	P	P	20 42 45.2	+1.0
	1.1nm,0.6s,baz=322,slow=7.3,SNR=8.3						
ASAR	Alice Springs	64.87	136	P	P	20 43 01.1	+1.0
	0.8nm,0.7s,baz=322,slow=7.2,SNR=8.4						

IDC 27 20:53:15.2±2.0, 38°.63N×73°.26E, h0km, mb3.7/5, mb1 3.7/11, mb1mx3.4/47, mbtmp3.6/11, ML3.1/6, MS2.8/3, Ms1 2.8/3, ms1mx2.5/47, Error ellipse: s-maj=27.4km s-min=20.8km az=178.0
SOME 27 20:53:19.9, 38°.92N×73°.38E, h5km
NNC 27 20:53:21.8±1.8, 38°.94N×73°.31E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=13.4km s-min=8.1km az=174.0

ISC 27 20:53:18.8±1.2, 38°.88N±0°.07×73°.39E±0°.04, h10km, n42, σ2s.70/56, mb3.8/5, 7C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	3.26	4	P	Pn	20 54 13.6	+3.2
	SNR=33						
UCH	Uchtor	3.46	14	P	Pb	20 54 17.6	-2.8
	SNR=16						
EKS2	Erkin-Say	3.79	4	P	Pb	20 54 24.3	-1.7
	SNR=8.4						
AAK	Ala-Archa	3.85	12	Pn	Pn	20 54 22.6	+4.3
	6.3nm,0.3s,baz=177,slow=6.5,SNR=47						
AAK				Sn	Sb	20 55 14.7	+1.1
	6.1nm,0.3s,baz=346,slow=18,SNR=6.0						
AAK				LR	LR	20 56 07.5	
	comp=Z,44nm,20.5s,baz=201,slow=42						
AAK	Ala-Archa	3.85	12	P	Pb	20 54 24.6	-2.3
	SNR=5.2						
AAK	Ala-Archa	3.85	12	⇓Pn	Pn	20 54 22.3	+4.1
	33nm,0.8s						
AAK				⇑Lg	Lg	20 55 23.0	
	53nm,0.7s						
MRKS	Merke	3.87	358	eP	Pb	20 54 30.1	+2.9
	24nm,0.5s						
MRKS				eS	Sg	20 55 20.7	-2.3
	62nm,0.7s						
MRKS	Merke	3.87	358	Pg	Pb	20 54 30.1	+2.9
	24nm,0.5s						
MRKS				Lg	Lg	20 55 20.7	
	62nm,0.7s						
KBK	Karagaybulak	3.96	17	P	Pb	20 54 29.2	+0.5
	SNR=12						
CHMS	Chumysh	4.25	14	P	Pn	20 54 27.5	+3.9
	SNR=9.3						
DZA	Taraz	4.30	339	eP	Pb	20 54 36.8	+2.2
	92nm,0.3s						
DZA				eS	Sg	20 55 32.2	-4.8
	119nm,0.8s						
TKM2	Tokmak 2	4.37	22	P	Pb	20 54 36.0	+0.1
	SNR=5.4						
TKM2	Tokmak 2	4.37	22	⇑Pg	Pg	20 54 42.9	+0.4
	18nm,0.7s						
TKM2				⇑Lg	Lg	20 55 39.7	
	39nm,0.9s						
CHM	Chimkent	4.49	321	eP	Pg	20 54 42.0	-2.7
	2.9nm,0.2s						
CHM				eS	Sg	20 55 41.6	-1.2
	472nm,0.9s						
DGS	Degeres	4.72	22	eP	Pg	20 54 47.9	-1.3
	26nm,0.7s						
DGS				eS	Sg	20 55 51.7	+1.4
	55nm,0.6s						
DGS	Degeres	4.72	22	Pg	Pg	20 54 47.9	-1.3
	26nm,0.7s						
DGS				Lg	Lg	20 55 51.7	
	55nm,0.6s						
KK09	Karatay Array	4.77	334	⇓Pn	Pn	20 54 32.6	+1.8
	17nm,0.6s,baz=156,slow=13						
KK09				⇓Sn	Sn	20 55 31.6	+5.4
	71nm,0.8s,baz=150,slow=25						
KK09				⇑Lg	Lg	20 55 49.4	
	38nm,0.7s						
BRLS	Borolday	4.94	328	eP	Pb	20 54 48.6	+3.1
	15nm,0.7s						
BRLS				eS	Sg	20 55 52.8	-4.8
	43nm,0.8s						
TNSS	Tian-Shan	4.95	32	eP	Pg	20 54 52.2	-1.5
	18nm,0.4s						
TNSS				eS	Sg	20 55 58.9	+1.1
	20nm,0.8s						
TNSS	Tian-Shan	4.95	32	Pg	Pg	20 54 52.2	-1.5
	18nm,0.4s						
TNSS				Lg	Lg	20 55 58.9	
	20nm,0.8s						
MDOK	Medeo	5.10	32	Pg	Pg	20 54 55.1	-1.3
	20nm,0.7s						
MDOK				Lg	Lg	20 56 02.9	
	66nm,1.3s						
CHKK	Chushkaly	5.66	27	eP	Pg	20 55 04.5	-2.7
	5.0nm,0.3s						
CHKK				eS	Sg	20 56 20.3	-0.2
	19nm,0.7s						
CHKK	Chushkaly	5.66	27	Pg	Pg	20 55 04.5	-2.7
	5.0nm,0.3s						
CHKK				Lg	Lg	20 56 20.3	
	19nm,0.7s						
ZHN	Zhinishke	5.74	40	eP	Pg	20 55 04.8	-3.9
	4.9nm,0.3s						
ZHN				eS	Sg	20 56 20.4	-2.6
	23nm,1.0s						
ZHN	Zhinishke	5.74	40	Pg	Pg	20 55 04.8	-3.9
	4.9nm,0.3s						
ZHN				Lg	Lg	20 56 20.4	
	23nm,1.0s						
UZB	Uzynbulak	6.03	43	eP	Pg	20 55 11.6	-2.6
	6.1nm,0.3s						
UZB				eS	Sg	20 56 32.4	+0.1
	19nm,1.0s						
UZB	Uzynbulak	6.03	43	Pg	Pg	20 55 11.6	-2.6
	6.1nm,0.3s						
UZB				Lg	Lg	20 56 32.4	
	19nm,1.0s						
BTLS	Baital	6.18	4	eP	Pg	20 55 14.0	-3.1
	7.9nm,0.5s						
BTLS				eS	Sg	20 56 36.3	-0.8
	14nm,0.8s						
BTLS	Baital	6.18	4	Pg	Pg	20 55 14.0	-3.1
	7.9nm,0.5s						
BTLS				Lg	Lg	20 56 36.3	
	14nm,0.8s						
MKAR	Makanchi Array	10.26	37	Pn	Pn	20 55 48.2	+2.2
	0.1nm,0.3s,baz=214,slow=12,SNR=9.3						
KURBB	Kurchatov Arra	12.29	16	Pn	Pn	20 56 15.3	+1.4
	0.0nm,0.3s,baz=204,slow=12,SNR=2.1						
AB31	Akbulak array	14.16	321	⇓Pn	Pn	20 56 40.7	+1.4
	1.3nm,0.5s,baz=135,slow=13,SNR=31						
AB31				⇑Sn	Sn	20 59 18.0	+1.7
	5.9nm,0.9s,baz=138,slow=21,SNR=11						
BVAR	Borovoye Array	14.30	353	Pn	Pn	20 56 40.6	-0.7
	0.1nm,0.3s,baz=141,slow=14,SNR=4.2						
AKTO	Aktyubinsk	15.87	322	Pn	Pn	20 57 01.0	-1.2
	0.1nm,0.3s,baz=115,slow=18,SNR=2.1						
AKTO				Sn	Sn	20 59 50.5	-7.6
	0.1nm,0.3s,baz=347,slow=8.1,SNR=7.1						
AKTO	Aktyubinsk	15.87	322	⇑Pn	P	20 57 06.8	+0.8
	4.1nm,0.7s						
AKTO				⇑Sn	Sn	20 59 59.9	+1.7
	2.7nm,0.8s						
ZALV	Zalesovo Beam	16.98	24	P	Pn	20 57 16.4	+0.2
	0.2nm,0.3s,baz=237,slow=10,SNR=2.3						
SONM	Songino Array	25.45	59	P	P	20 58 47.5	+0.6
	1.0nm,0.7s,baz=267,slow=9.4,SNR=8.6						
FINES	FINESS Array B	36.63	324	P	P	21 00 22.4	-2.6
	1.5nm,0.7s,baz=120,slow=7.5,SNR=5.1						
ARCES	ARCESS Array B	39.71	336	P	P	21 00 49.5	-1.4
	2.3nm,0.9s,baz=112,slow=9.8,SNR=1.2						
KSRS	Korea Array	42.36	74	LR	LR	21 21 01.7	
	comp=Z,22nm,18.1s,baz=210,slow=39						
NOA	NORSAR Array B	43.66	321	P	P	21 01 22.7	-0.7
	2.2nm,1.2s,baz=93,slow=19,SNR=2.3						
NOA				LR	LR	21 22 07.1	
	comp=Z,14nm,20.4s,baz=350,slow=40						
YKA	Yellowknife Ar	78.77	4	P	P	21 05 21.0	-0.2
	0.2nm,0.5s,baz=348,slow=5.5,SNR=6.7						

IDC 27 21:25:18.9±2.8, 30°.70S×59°.92E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.3/46, mbtmp3.7/3, MS3.2/4, Ms1 3.2/4, ms1mx2.8/38, Error ellipse: s-maj=88.9km s-min=50.0km az=47.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	30.79	272	LR	LR	21 40 52.4	
	comp=Z,32nm,20.2s,baz=133,slow=30						
LSZ	Lusaka	32.85	291	LR	LR	21 43 45.0	
	comp=Z,32nm,18.7s,baz=104,slow=34						
SUR	Sutherland	33.25	257	LR	LR	21 42 40.0	
	comp=Z,30nm,18.1s,baz=160,slow=31						
MBAR	Mbarara	40.77	312	LR	LR	21 47 29.2	
	comp=Z,42nm,19.5s,baz=125,slow=33						
CMAR	Chiang Mai Arr	61.62	43	P	P	21 35 38.9	+0.3
	0.5nm,0.3s,baz=227,slow=7.3,SNR=5.2						
ASAR	Alice Springs	65.12	104	P	P	21 36 01.9	0.0
	0.8nm,0.8s,baz=236,slow=6.7,SNR=5.3						
MKAR	Makanchi Array	79.74	15	P	P	21 37 27.7	-0.8
	0.3nm,0.9s,baz=197,slow=4.4,SNR=2.1						
YKA	Yellowknife Ar	148.00	355	PKPbc	PKPbc	21 45 05.2	-0.3
	0.9nm,0.7s,baz=356,slow=2.9,SNR=15						

IDC 27 21:30:27.0±4.0, 5°.96S×148°.82E, h165km±40km, mb3.1/2, mb1 3.5/4, mb1mx2.9/30, mbtmp3.8/4, Error ellipse: s-maj=110.9km s-min=31.7km az=128.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.80	206	P	Pn	21 31 25.9	+0.8
	7.6nm,0.3s,baz=18,slow=10,SNR=13						
PMG				S	Sn	21 32 10.5	0.0
	15nm,0.3s,baz=86,slow=22,SNR=4.7						
WRA	Warramunga Arr	19.78	224	P	P	21 34 44.3	-0.3
	0.6nm,0.3s,baz=50,slow=10,SNR=17						
ASAR	Alice Springs	22.71	218	P	P	21 35 15.4	+0.5
	1.1nm,0.5s,baz=52,slow=9.0,SNR=18						
ILAR	Eielson Array	84.74	23	P	P	21 42 41.8	-0.4
	0.2nm,0.6s,baz=254,slow=5.8,SNR=4.2						

IDC 27 21:35:54.7±0.6, 30°.50S×60°.00E, h0km, mb4.2/15, mb1 4.3/15, mb1mx4.1/45, mbtmp4.2/15, MS3.6/17, Ms1 3.6/17, ms1mx3.4/42, Error ellipse: s-maj=20.7km s-min=17.4km az=12.0
NEIC 27 21:35:57.1±0.9, 30°.5S±0°.1×60°.0E±0°.1, h10km±1km, mb4.6/15, Error ellipse: s-maj=24.3km s-min=21.3km az=202.0

ISC 27 21:35:56.4±0.5, 30°.5S±0°.1×59°.99E±0°.10, h11km, n66, σ0s.73/51, mb4.6/30, MS3.7/17, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VOI	Vohitsoka	14.60	303	Pn	Pn	21 39 22.3	-0.9
ABPO	Ambohimpanom	16.26	312	Pn	Pn	21 39 45.2	+0.2
BOSA	Boshof	30.21	265	P	P	21 42 08.8	+1.6
	2.5nm,1.0s,baz=61,slow=13,SNR=3.0						
BOSA				LR	LR	21 53 21.0	
	comp=Z,43nm,18.4s,baz=179,slow=35						
BOSA	Boshof	30.21	265	P	P	21 42 07.5	+0.3
LSZ	Lusaka	32.84	290	P	P	21 42 30.4	-0.1
	1.8nm,0.7s,baz=130,slow=9.9,SNR=6.3						
LSZ	Lusaka	32.84	290	P	P	21 42 30.5	0.0
LSZ				IAmb	IAmb	21 42 38.1	
	comp=Z,3.2nm,0.8s						
MAW	Mawson	37.19	178	LR	LR	21 54 33.5	
	comp=Z,165nm,20.7s,baz=40,slow=30						
H01W2	Cape Leeuwin H	45.32	110	T	T	22 32 43.9	
	baz=259,slow=75,SNR=7.3						
H01W3	Cape Leeuwin H	45.32	110	T	T	22 32 42.5	
	baz=259,slow=75,SNR=6.0						
H01W1	Cape Leeuwin H	45.34	110	T	T	22 32 38.2	
	baz=259,slow=75,SNR=6.2						
SNAA	Sanae	52.87	201	P	P	21 45 11.6	-0.3
	comp=Z,3.0nm,1.0s,baz=35,slow=10,SNR=3.2						
QSPA	South Pole Qui	59.67	180	P	P	21 45 59.9	-0.7
	comp=Z,4.1nm,0.9s,baz=274,slow=1.3,SNR=9.6						
QSPA	South Pole Qui	59.67	180	P	P	21 46 00.6	0.0
QSPA				IAmb	IAmb	21 46 02.4	
	comp=Z,6.6nm,1.1s						
CMAR	Chiang Mai Arr	61.42	43	P	P	21 46 14.2	+1.3
	comp=Z,5.3nm,0.7s,baz=230,slow=7.0,SNR=42						
CMAR	Chiang Mai Arr	61.42	43	P	P	21 46 12.7	-0.3
KOLN	Koldanda	62.17	24	eP	P	21 46 18.3	+0.2
PYUN	Piuthan	62.26	23	eP	P	21 46 18.5	-0.2
	comp=Z,35nm,0.8s						
DMN	Daman	62.56	25	eP	P	21 46 20.6	-0.1
GKN	Gorkha	62.74	25	eP	P	21 46 21.7	-0.2
	comp=Z,24nm,0.7s						
DANN	Dangsing	62.75	24	eP	P	21 46 22.0	-0.1
	comp=Z,27nm,0.7s						
VNDA	Vanda	62.99	166	LR	LR	22 11 07.9	
	comp=Z,58nm,20.1s,baz=254,slow=34						
ASAR	Alice Springs	65.11	104	P	P	21 46 37.6	0.0
	comp=Z,3.9nm,0.8s,baz=243,slow=6.0,SNR=41						
ASAR	Alice Springs	65.11	104	P	P	21 46 37.9	+0.2
AS31	Alice Springs	65.11	104	P	P	21 46 37.9	+0.2
AS31				IAmb	IAmb	21 46 38.4	
	comp=Z,1.3nm,0.7s						
SLVN	Son La	66.60	45	P	P	21 46 47.3	+0.2
LSA	Lhasa	66.81	29	P	P	21 46 49.0	+0.2
WRA	Warramunga Arr	67.03	100	P	P	21 46 50.2	+0.3
	comp=Z,5.7nm,0.6s,baz=242,slow=5.9,SNR=43						
WRA	Warramunga Arr	67.03	100	P	P	21 46 49.6	-0.3
GEYT	Alibeck	68.09	358	LR	LR	22 14 23.5	
	comp=Z,39nm,20.5s,baz=100,slow=34						
TORD	Torodi Ar. Bea	70.87	299	P	P	21 47 14.9	+1.2
	comp=Z,0.9nm,0.8s,baz=125,slow=5.1,SNR=5.0						
TORD				LR	LR	22 17 54.7	

	comp=Z,76nm,19.7s,baz=55,slow=36						
DBIC	Dimbokro	72.17	289	LR	LR	22 16 50.2	
	comp=Z,50nm,21.0s,baz=146,slow=34						
SIJI	Sorong	73.46	81	P	P	21 47 29.6	+0.2
	comp=Z,3.9nm,0.4s,baz=306,slow=3.8,SNR=4.2						
AAK	Ala-Archa	73.98	11	LR	LR	22 18 15.2	
	comp=Z,38nm,18.3s,baz=182,slow=34						
BRTR	Keskin Array B	74.03	339	P	P	21 47 31.9	-0.4
	comp=Z,0.4nm,0.4s,baz=172,slow=11,SNR=5.5						
BRTR				LR	LR	22 17 51.5	
	comp=Z,29nm,19.6s,baz=151,slow=34						
ENH	Enshi	76.60	43	P	P	21 47 47.8	+0.7
ENH				IAmb	IAmb	21 47 48.7	
	comp=Z,8.5nm,0.8s						
ABKAR	Akbulak array	79.39	360	P	P	21 48 02.7	+0.6
ABKAR				IAmb	IAmb	21 48 15.9	
	comp=Z,19nm,1.9s						
MK31	Makanchi Array	79.52	15	P	P	21 48 03.7	+0.8
MKAR	Makanchi Array	79.52	15	P	P	21 48 03.7	+0.7
	comp=Z,1.5nm,0.8s,baz=194,slow=4.5,SNR=14						
KURK	Kurchatov	82.51	12	P	P	21 48 19.3	+0.6
KURK				IAmb	IAmb	21 48 20.6	
	comp=Z,4.3nm,0.8s						
AKASG	Malin Array Be	85.29	341	P	P	21 48 31.4	-1.6
	comp=Z,0.3nm,0.5s,baz=167,slow=4.0,SNR=2.5						
JOW	Kunigami	86.63	56	LR	LR	22 22 36.7	
	comp=Z,55nm,18.4s,baz=323,slow=32						
ZAA0	Zalesovo Array	86.80	14	P	P	21 48 39.7	-0.6
ZAA0				IAmb	IAmb	21 48 41.1	
	comp=Z,3.3nm,0.8s						
ZALV	Zalesovo Beam	86.80	14	P	P	21 48 39.5	-0.8
	comp=Z,3.7nm,0.8s,baz=202,slow=4.6,SNR=16						
ZALV				LR	LR	22 26 03.4	
	comp=Z,22nm,18.1s,baz=34,slow=35						
ZALV	Zalesovo Beam	86.80	14	P	P	21 48 40.5	+0.1
ABTA	Abfaltersbach	88.02	330	eP	P	21 48 48.0	+1.5
	comp=Z,2.4nm,0.9s						
SONM	Songino Array	88.40	29	P	P	21 48 46.9	-1.5
	comp=Z,0.4nm,0.6s,baz=175,slow=2.7,SNR=4.0						
SONM				LR	LR	22 26 22.4	
	comp=Z,60nm,19.4s,baz=329,slow=34						
SONM	Songino Array	88.40	29	P	P	21 48 47.0	-1.3
SONM				IAmb	IAmb	21 48 59.9	
	comp=Z,5.1nm,1.8s						
WTTA	Wattenberg	88.80	329	eP	P	21 48 50.7	+0.4
	comp=Z,3.8nm,1.1s						
SQTA	Sankt Quirin	88.95	329	eP	P	21 48 51.2	+0.3
	comp=Z,2.7nm,1.0s						
FETA	Feichten	89.01	329	eP	P	21 48 51.7	+0.3
	comp=Z,3.6nm,1.1s						
MOTA	Moosalm	89.09	329	eP	P	21 48 51.7	0.0
	comp=Z,4.4nm,0.9s						
GERES	GERESS Array B	89.14	331	P	P	21 48 51.2	-0.6
	comp=Z,0.1nm,0.3s,baz=140,slow=14,SNR=1.9						
RETA	Reutte	89.35	329	eP	P	21 48 53.0	+0.3
	comp=Z,2.5nm,1.0s						
DAVA	Damuels	89.59	329	eP	P	21 48 54.8	+0.8
	comp=Z,5.4nm,1.1s						
URZ	Urewera	89.91	136	LR	LR	22 21 00.6	
	comp=Z,79nm,20.2s,baz=211,slow=30						
ESDC	Sonseca Array	91.63	316	LR	LR	22 31 02.8	
	comp=Z,36nm,18.6s,baz=355,slow=36						
JNU	Nakatsue	92.14	53	LR	LR	22 31 34.9	
	comp=Z,19nm,18.2s,baz=246,slow=36						
KSRS	Korea Array	92.73	48	LR	LR	22 32 28.9	
	comp=Z,11nm,18.3s,baz=210,slow=37						
FINES	FINESS Array B	95.66	344	LR	LR	22 32 06.2	
	comp=Z,21nm,20.4s,baz=308,slow=35						
NOA	NORSAR Array B	99.45	338	LR	LR	22 34 47.6	
	comp=Z,18nm,19.6s,baz=280,slow=36						
ILAR	Eielson Array	141.82	18	PKP	PKPdf	21 55 27.4	-0.1
	comp=Z,0.8nm,0.9s,baz=268,slow=1.2,SNR=5.2						
YKA	Yellowknife Ar	147.79	355	PKPbc	PKPbc	21 55 40.5	-0.1
	comp=Z,5.5nm,0.8s,baz=354,slow=2.8,SNR=72						
YKA	Yellowknife Ar	147.79	355		PKPdf	21 55 39.1	+1.3
ULM	Lac du Bonnet	153.23	324	PKPbc	PKPbc	21 55 52.5	-1.6
	comp=Z,3.1nm,0.6s,baz=45,slow=4.2,SNR=4.1						
PDAR	Pinedale Array	165.17	329	PKP	PKPdf	21 56 01.6	+0.6
	comp=Z,0.9nm,0.9s,baz=90,slow=1.5,SNR=4.9						
PDAR	Pinedale Array	165.17	329		PKPdf	21 56 00.5	-0.5

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*VAO **27** 21:59:11.3±1.1, 20°.81S×69°.78W, h157^{km}, mb4.1*
*NEIC **27** 21:59:12.2±1.3, 20°.71S±0°.03×69°.29W±0°.06, h105^{km}±4^{km}, mb4.3/7, ML4.1(GUC), Error ellipse: s-maj=7.7km s-min=3.9km az=99.0*
*IDC **27** 21:59:12.8±1.6, 20°.66S×69°.07W, h106^{km}±10^{km}, mb3.6/4, mb1 3.7/5, mb1mx3.4/31, mbtmp4.0/5, Error ellipse: s-maj=28.2km s-min=4.5km az=116.0*
*GUC **27** 21:59:13.2±0.7, 20°.71S×69°.26W, h103^{km}±3^{km}, ML4.1*
ISC 27 21:59:12.0±0.6**, 20°.70S**±0°.03×**69°.32W**±0°.06**, h108**^{km}±5^{km}**, n72, σ0ˢ.86**/93**, mb4.0**/7**, 11C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.38	205	⇑iP	Pn	21 59 28.3	+0.2
PB01				iS	Sn	21 59 39.7	-0.4
PB01				IAML		21 59 40.6	
	comp=N,38µm,0.3s						
PB01	IPOC Station P	0.38	205		Pn	21 59 27.5	-0.6
PB01				Sn	Sn	21 59 39.8	-0.3
PB08	IPOC Station P	0.57	16	⇓iP	Pn	21 59 30.1	+0.5
PB08				iS	Sn	21 59 43.0	+0.1
PB08				IAML		21 59 44.2	
	comp=E,7µm,0.3s						
PB08	IPOC Station P	0.57	16		Pn	21 59 29.1	-0.5
PB08				Sn	Sn	21 59 42.6	-0.2
TA01	Diego Aracena	0.82	279	⇑iP	Pn	21 59 31.7	+0.5
TA01				iS	Sn	21 59 46.0	+0.3
TA01				IAML		21 59 46.9	
	comp=E,6µm,0.3s						
TA01	Diego Aracena	0.82	279		Pn	21 59 31.4	+0.2
TA01				Sn	Sn	21 59 45.9	+0.2
PB02	IPOC Station P	0.82	221	⇑iP	Pn	21 59 32.3	+0.9
PB02				iS	Sn	21 59 46.4	+0.3
PB02				IAML		21 59 48.3	
	comp=E,18µm,0.3s						
TA02	Huaiquique	0.87	299	⇑iP	Pn	21 59 32.2	+0.5
TA02				iS	Sn	21 59 47.1	+0.5
TA02				IAML		21 59 48.4	
	comp=E,7µm,0.1s						
TA02	Huaiquique	0.87	299		Pn	21 59 32.2	+0.5
TA02				Sn	Sn	21 59 47.2	+0.5
PB11	IPOC Station P	0.98	341	⇑iP	Pn	21 59 33.5	+0.5
PB11				iS	Sn	21 59 49.3	+0.4
PB11				IAML		21 59 50.1	
	comp=N,20µm,0.5s						
PB11	IPOC Station P	0.98	341		Pn	21 59 32.5	-0.5
PB09	IPOC Station P	1.10	176	⇑iP	Pn	21 59 35.0	+0.7
PB09				iS	Sn	21 59 52.1	+1.1
PB09				IAML		21 59 54.1	
	comp=N,2µm,0.2s						
PB09	IPOC Station P	1.10	176		Pn	21 59 34.4	+0.1
PB07	IPOC Station P	1.15	207	⇑iP	Pn	21 59 35.5	+0.6
PB07				iS	Sn	21 59 52.4	+0.2
PB07				IAML		21 59 53.0	
	comp=E,3µm,0.2s						
PB07	IPOC Station P	1.15	207		Pn	21 59 34.9	0.0
PB03	IPOC Station P	1.41	197	⇑iP	Pn	21 59 38.3	+0.6
PB03				iS	Sn	21 59 57.2	0.0
PB03				IAML		21 59 58.4	
	comp=E,2µm,0.3s						
PB04	IPOC Station P	1.80	205	eP	Pn	21 59 43.1	+0.5
PB04				iS	Sn	22 00 05.1	-0.8
PB04				IAML		22 00 06.7	
	comp=N,2µm,0.1s						
PB04	IPOC Station P	1.80	205		Pn	21 59 42.9	+0.3
LVC	Limon Verde	1.94	169	P	Pn	21 59 45.9	+1.5
	comp=N,12nm,0.3s,baz=358,slow=8.0,SNR=1.2						
LVC				S	Sn	22 00 10.1	+0.9
	comp=N,168nm,0.3s,baz=134,slow=20,SNR=6.4						
LVC	Limon Verde	1.94	169	eP	Pn	21 59 45.5	+1.0
LVC				iS	Sn	22 00 10.2	+0.9
LVC	Limon Verde	1.94	169	eP	Pn	21 59 46.0	+1.5
LVC	Limon Verde	1.94	169		Pn	21 59 45.5	+1.0
PB06	IPOC Station P	2.01	187	⇑iP	Pn	21 59 45.9	+0.7
PB06				iS	Sn	22 00 11.1	+0.5
PB06				IAML		22 00 14.3	
	comp=E,1µm,0.3s						
PB06	IPOC Station P	2.01	187		Pn	21 59 45.2	-0.1
PB12	IPOC Station P	2.28	335	⇑iP	Pn	21 59 48.5	-0.2
PB12				iS	Sn	22 00 15.4	-1.3
PB12				IAML		22 00 21.6	
	comp=E,1µm,0.3s						
PB12	IPOC Station P	2.28	335		Pn	21 59 48.3	-0.4
PB05	IPOC Station P	2.30	201	⇓iP	Pn	21 59 49.0	+0.2
PB05				iS	Sn	22 00 15.5	-1.6
PB05				IAML		22 00 18.3	
	comp=E,748nm,0.3s						
PB16	IPOC Station P	2.36	356	⇑iP	Pn	21 59 51.6	+1.5
PB16				iS	Sn	22 00 20.9	+1.7
PB16				IAML		22 00 25.7	
	comp=E,452nm,0.4s						
PB16	IPOC Station P	2.36	356		Pn	21 59 51.4	+1.3
PB15	IPOC Station P	2.50	183	eP	Pn	21 59 52.4	+0.8
PB15				iS	Sn	22 00 22.6	+0.6
PB15	IPOC Station P	2.50	183		Pn	21 59 51.6	0.0
AP01	Chacalluta	2.51	337	eP	Pn	21 59 52.9	+1.5
AP01				IAML		22 00 30.7	
	comp=N,2µm,0.2s						
PB10	IPOC Station P	3.03	202	IAML		22 00 36.2	
	comp=N,315nm,0.3s						
PB10	IPOC Station P	3.03	202		Pn	21 59 57.5	-0.8
PB14	IPOC Station P	4.04	194	Pn	Pn	22 00 10.5	-1.6
LPAZ	La Paz	4.53	15	eP	Pn	22 00 22.0	+2.9
LPAZ	La Paz	4.53	15	Pn	Pn	22 00 18.2	-0.8
GO03	Copiap	6.92	187	Pn	Pn	22 00 49.4	-1.4
SIV	San Ignacio	9.12	60	P	Pn	22 01 18.6	-2.2
	comp=N,1.6nm,0.3s,baz=249,slow=9.3,SNR=33						
AQDB	Aquidauana	12.76	91		Pn	22 02 09.1	-0.4
MT01	Popeta	13.23	187	Pn	Pn	22 02 16.1	+0.5
SALV	Santo Antonio	13.79	72	eP	P	22 02 27.3	-0.4
PDRB	Porto dos Gac	15.08	55	eP	P	22 02 42.7	+0.5
CLDB	Colider	16.26	55	eP	Pn	22 02 54.5	+0.4
PCMB	Pacaembu	16.87	96	eP	Pn	22 03 01.1	-0.6
ITAB	Concordia	16.99	116	eP	P	22 03 03.8	+0.5
ITAB	Concordia	16.99	116		Pn	22 03 02.4	-0.7
ITAB				IAmb	IAmb	22 03 04.4	
	comp=Z,20nm,0.7s						
CPSB	Cacapava Do Su	17.27	127	eP	P	22 03 05.9	-0.3
ARAG	Araguaiana, MT	17.35	76	eP	P	22 03 07.4	+0.1
ITRB	Iturama	17.82	90	eP	P	22 03 12.8	+0.3
PLTB	Pedras Altas	17.87	131	eP	P	22 03 11.5	-1.4
PLTB	Pedras Altas	17.87	131	P	P	22 03 11.8	-1.1
FRTB	Fartura	18.50	102	eP	P	22 03 19.2	-0.7
NPGB	Novo Progresso	19.16	47	eP	P	22 03 27.5	+0.4
SNDB	Serra Nova Dou	19.33	66	eP	P	22 03 28.5	-0.4
BB19B	Bebedouro	19.43	95	eP	P	22 03 29.9	-0.2
TER01	Tubaro-SC	19.93	117	eP	P	22 03 34.3	-1.0
IPMB	Ipameri, GO	20.10	86	eP	P	22 03 36.9	-0.4
RCLB	Rio Claro- Sao	20.34	99	eP	P	22 03 39.5	-0.3
ITTB	Itaituba	20.93	41	eP	P	22 03 44.9	-1.2
PTGA	Pitinga	21.85	26	P	P	22 03 55.1	-0.9
	comp=Z,2.0nm,0.3s,baz=322,slow=20,SNR=1.8						
PEXB	Peixe	21.88	70	eP	P	22 03 56.5	+0.2
DIAM	Diamantina, MG	24.29	89	eP	P	22 04 19.1	-0.5
JANB	Januaria	24.43	81	eP	P	22 04 20.7	-0.2
BOAV	Boa Vista	24.52	22	P	P	22 04 22.2	+0.7
BOAV				IAmb	IAmb	22 04 31.8	
	comp=Z,6.7nm,1.3s						
SJCC	San Jacinto, C	30.94	349	P	P	22 05 18.2	-0.7
SNAA	Sanae	63.16	161	P	P	22 09 27.6	-0.5
SNAA				IAmb	IAmb	22 09 27.9	
	comp=Z,4.7nm,1.4s						
DBIC	Dimbokro	68.88	74	P	P	22 10 06.0	+0.5
	comp=Z,1.2nm,0.6s,baz=263,slow=6.0,SNR=3.8						
DBIC	Dimbokro	68.88	74	P	P	22 10 04.9	-0.7
DBIC				IAmb	IAmb	22 10 18.1	
	comp=Z,16nm,1.5s						
QSPA	South Pole Qui	69.49	180	P	P	22 10 10.1	+1.5
QSPA				IAmb	IAmb	22 10 24.3	
	comp=Z,7.3nm,1.4s						
TORD	Torodi Ar. Bea	77.45	71	P	P	22 10 55.6	-0.3
	comp=Z,0.8nm,0.6s,baz=252,slow=5.7,SNR=9.3						
YKA	Yellowknife Ar	90.31	341	P	P	22 12 01.6	+1.3
	comp=Z,0.2nm,0.8s,baz=133,slow=4.4,SNR=2.0						
YKA				pP	pP	22 12 28.2	-0.6
	comp=Z,0.5nm,0.8s,baz=135,slow=4.6,SNR=5.6						

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*IDC **27** 22:04:53.0±0.1, 57°.87S×25°.60W, h0^{km}, mb4.1/3, mb1 4.2/4, mb1mx3.8/30, mbtmp4.1/4, ML4.0/1, MS2.9/1, Ms1 2.9/1, ms1mx2.6/15, Error ellipse: s-maj=8.1km s-min=2.4km az=69.0*
*NEIC **27** 22:04:59.1±0.8, 57°.7S±0°.2×24°.4W±0°.3, h56^{km}±9^{km}, mb4.3/8, Error ellipse: s-maj=30.5km s-min=11.8km az=47.0*
ISC 27 22:04:59.1±0.7**, 57°.9S**±0°.1×**24°.8W**±0°.1**, h50**^{km}**, n24, σ1ˢ.14**/23**, mb4.2**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.47	294	Pn	Pn	22 06 47.3	+1.9
VNA1	Neumayer--Stat	14.60	158	P	Pn	22 08 22.5	+0.2
VNA3	Neumayer Olymp	14.82	161	P	Pn	22 08 24.2	-1.0
VNA3				S	Sn	22 10 55.1	-13
VNA2	Neumayer--Watz	14.99	158	P	Pn	22 08 27.0	-0.5
	baz=328,slow=14						
SNAA	Sanae	16.52	155	P	P	22 08 48.5	-0.5
SNAA	Sanae	16.52	155	Pn	P	22 08 48.2	-0.8
	0.6nm,0.3s,baz=323,slow=16,SNR=19						
SNAA	Sanae	16.52	155	Pn	P	22 08 47.5	-1.5
PMSA	Palmer Station	19.77	233	P	Pn	22 09 26.9	+0.4
QSPA	South Pole Qui	32.36	180	P	P	22 11 24.0	+0.6
	1.5nm,0.5s,baz=268,slow=3.8,SNR=4.6						
QSPA	South Pole Qui	32.36	180	P	P	22 11 23.6	+0.1
QSPA				IAmb	IAmb	22 11 24.4	
	comp=Z,2.1nm,0.6s						
PLTB	Pedras Altas	32.70	311	P	P	22 11 25.0	-1.5
PLTB				IAmb	IAmb	22 11 36.6	
	comp=Z,9.9nm,1.4s						
PLCA	Paso Flores	33.63	280	LR	LR	22 23 25.6	
	comp=Z,23nm,21.0s,baz=156,slow=34						
VNDA	Vanda	44.79	182	P	P	22 13 08.7	+1.6
	comp=Z,1.3nm,0.5s,baz=182,slow=6.9,SNR=13						
VNDA	Vanda	44.79	182	P	P	22 13 08.1	+1.1
PB14	IPOC Station P	46.34	296	P	P	22 13 19.3	-1.1
PTLB	Pontes e Lacer	49.53	314	P	P	22 13 43.7	-0.9
PTLB				IAmb	IAmb	22 13 45.1	
	comp=Z,1.5nm,0.6s						
BOAV	Boa Vista	66.54	320	P	P	22 15 43.1	-0.5
BOAV				IAmb	IAmb	22 15 44.0	
	comp=Z,6.5nm,1.1s						
TORD	Torodi Ar. Bea	74.06	27	P	P	22 16 32.0	+2.6
	comp=Z,1.1nm,0.6s,baz=200,slow=6.4,SNR=16						
FINES	FINESS Array B	125.41	27	PKP	PKiKP	22 23 53.0	-0.2
	comp=Z,0.5nm,0.6s,baz=253,slow=4.2,SNR=4.1						
YKA	Yellowknife Ar	138.41	316	PKP	PKiKP	22 24 17.9	-1.5
	comp=Z,0.5nm,0.5s,baz=134,slow=2.0,SNR=14						
YKA	Yellowknife Ar	138.41	316		PKPdf	22 24 17.3	0.0
INK	Inuvik	148.06	318	PKPbc	PKPbc	22 24 37.0	-0.2
	comp=Z,1.4nm,0.6s,baz=63,slow=3.7,SNR=6.3						
SONM	Songino Array	149.50	88	PKPbc	PKiKP	22 24 43.0	+0.2
	comp=Z,0.7nm,0.4s,baz=217,slow=3.4,SNR=10						
ILAR	Eielson Array	152.31	309	PKPbc	PKiKP	22 24 47.9	-0.1
	comp=Z,0.9nm,0.4s,baz=133,slow=1.8,SNR=32						

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*IDC **27** 22:07:33.4±2.5, 27°.61N×86°.03E, h0^{km}, mb3.6/4, mb1 3.7/6, mb1mx3.2/56, mbtmp3.5/6, ML3.5/1, MS3.0/2, Ms1 3.1/2, ms1mx2.6/36, Error ellipse: s-maj=71.6km s-min=26.4km az=63.0*
ISC 27 22:07:36.1±1.8**, 27°.6N**±0°.2×**86°.1E**±0°.2**, h19**^{km}**, n8, σ0ˢ.81**/8**, mb3.3**/4**, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	5.54	110	eP	Pn	22 08 58.0	+0.2
SHL				iS	Sn	22 10 01.0	-0.2
CMAR	Chiang Mai Arr	14.89	125	Pn	Pn	22 11 04.8	-0.9
	baz=307,slow=12,SNR=1.1						
CMAR				LR	LR	22 17 49.1	
	comp=Z,15nm,21.1s,baz=185,slow=41						
MKAR	Makanchi Array	19.41	352	P	P	22 12 00.4	-0.6
	0.1nm,0.3s,baz=172,slow=10,SNR=7.0						
SONM	Songino Array	25.66	33	P	P	22 13 05.6	+0.7
	0.2nm,0.3s,baz=222,slow=10,SNR=7.2						
ZALV	Zalesovo Beam	26.35	358	P	P	22 13 11.0	+0.2
	0.3nm,0.3s,baz=191,slow=8.5,SNR=2.0						
BVAR	Borovoye Array	27.97	340	P	P	22 13 24.8	-0.6
	0.2nm,0.4s,baz=163,slow=16,SNR=1.8						
JHJ	Hachijo jima 2	46.23	69	LR	LR	22 35 04.0	
	comp=Z,66nm,18.2s,baz=299,slow=36						
WRA	Warramunga Arr	66.42	130	P	P	22 18 25.3	+1.0
	1.7nm,1.1s,baz=326,slow=6.2,SNR=3.0						

IDC 27 22:12:35.5±2.3**, 18°.04S**×**177°.71W, h647**^{km}±23^{km}**, mb2.7**/4**, mb1 3.0**/5**, mb1mx2.5**/43**, mbtmp3.8**/5**, Error ellipse: s-maj=35.1km s-min=31.2km az=128.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.05	274	P	P	22 14 05.0	+0.1
	6.2nm,0.3s,baz=137,slow=5.2,SNR=27						
WRA	Warramunga Arr	45.26	260	P	P	22 19 58.5	+0.3
	0.6nm,0.7s,baz=95,slow=7.4,SNR=7.1						
ASAR	Alice Springs	45.40	254	P	P	22 19 58.8	-0.3
	0.9nm,0.5s,baz=89,slow=7.7,SNR=16						
ASAR				PcP	PcP	22 21 24.8	+0.6
	0.4nm,0.6s,baz=112,slow=3.5,SNR=4.2						
VNDA	Vanda	60.37	185	P	P	22 21 43.9	+0.1
	0.7nm,0.6s,baz=15,slow=6.6,SNR=5.2						
ILAR	Eielson Array	85.86	13	P	P	22 24 08.1	-0.2
	0.2nm,0.4s,baz=212,slow=5.2,SNR=5.7						

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*IDC **27** 22:17:03.3±1.4, 4°.52N×125°.92E, h124^{km}±13^{km}, mb3.8/16, mb1 4.0/20, mb1mx3.7/48, mbtmp4.3/20, Error ellipse: s-maj=24.1km s-min=9.7km az=71.0*
*NEIC **27** 22:17:04.0±1.6, 4°.50N±0°.05×126°.13E±0°.08, h116^{km}±6^{km}, mb4.5/27, Error ellipse: s-maj=12.2km s-min=7.0km az=68.0*
*DJA **27** 22:17:05.2±0.4, 4°N±4°×12°6E±°, h100^{km}±5^{km}, M4.6/19, mB5.0/9, mb4.7/19, MLv4.8/16, Mw(mB)4.3/9*
*MAN **27** 22:17:06.5, 4°.75N×125°.85E, h125^{km}, mb5.6, ML4.6, MS4.8*
ISC 27 22:17:01.8±0.4**, 4°.49N**±0°.04×**126°.12E**±0°.06**, h100**^{km}**, n98, σ2ˢ.09**/106**, mb4.3**/31**, 2C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.00	216	P	Pn	22 17 25.4	+3.2
DAV	Davao City (W)	2.62	348	P	Pn	22 17 43.8	+1.3
	114nm,0.3s,baz=170,slow=1.7,SNR=7.5						
DAV				S	Sn	22 18 20.1	+6.4
	125nm,0.3s,baz=14,slow=23,SNR=6.9						
DAV	Davao City (W)	2.62	348		Pn	22 17 44.8	+2.3
DAV				Sn	Sn	22 18 15.9	+2.2
DAV	Davao City (W)	2.62	348	P	Pn	22 17 47.6	+5.1
KCP	Kidapawan	2.70	338	⇓iP	Pn	22 17 46.1	+2.4
KCP				iS	Sn	22 18 20.4	+4.5
BIPH	Bislig	3.67	4	eP	Pn	22 17 58.9	+2.3
BIPH				eS	Sn	22 18 41.4	+2.4
TNTI	Ternate	3.90	161	P	Pn	22 18 01.9	+2.2
TNTI	Ternate	3.90	161	Pn	Pn	22 18 01.6	+1.9
TNTI				Sn	Sn	22 18 44.9	+0.3
TNTI	Ternate	3.90	161	P	Pn	22 18 02.2	+2.5
PAGZ	Pagadian	4.30	321	⇑eP	Pn	22 18 18.1	+13
PAGZ				eS	Sn	22 18 55.7	+1.4
KMSI	Cibinong	4.44	209	P	Pn	22 18 09.3	+2.3
ZCP	Zamboanga City	4.70	301	⇑eP	Pn	22 18 12.0	+1.6
ZCP				eS	Sn	22 19 01.5	-2.4
GTOI	Gorontalo	4.93	219	P	Pn	22 18 15.8	+2.1
LBMI	Labuha	5.28	165	P	Pn	22 18 21.0	+2.6
	1.3nm2µm75nm,0.7s						
MSLP	Maasin	5.74	347	⇓eP	Pn	22 18 27.3	+2.7
MRSI	Marisa	5.78	226	P	Pn	22 18 28.3	+3.2
	1.2nm3µm272nm,0.6s						
TOLI2	Tolitoli	6.30	238	Pn	Pn	22 18 33.9	+1.6
TOLI2	Tolitoli	6.30	238	P	Pn	22 18 33.8	+1.6
LUWI	Luwuk	6.44	211	Pn	Pn	22 18 36.9	+2.8
LUWI				Sn	Sn	22 19 47.7	+1.5
SANI	Sanana	6.50	181	P	Pn	22 18 33.7	-1.3
	0.8nm4µm69nm,0.7s						
SANI	Sanana	6.50	181	P	Pn	22 18 34.7	-0.3
APSI	Ampana	6.99	220	P	Pn	22 18 47.2	+5.7
	0.4nm1µm99nm,1.3s						
SWI	Sorong	7.39	136	P	Pn	22 18 49.6	+2.5
	0.2nm1µm41nm,0.4s						
SIJI	Sorong	7.40	136	P	Pn	22 18 49.6	+2.4
	10nm,0.3s,baz=334,slow=19,SNR=25						
SIJI				S	Sn	22 20 09.8	0.0
	1.9nm,0.3s,baz=236,slow=22,SNR=1.8						
MPSI	Mapaga	7.46	237	P	Pn	22 18 50.7	+2.7
	0.1nm461nm29nm,0.8s						
MYLDM	Lahad Datu	7.62	275	Pn	Pn	22 18 54.3	+4.1
AAI	Ambon	8.39	166	P	Pn	22 19 02.7	+2.1
	1µm65nm,0.5s						
FAKI	Fak Fak	9.58	140	Pn	Pn	22 19 19.2	+2.4
FAKI	Fak Fak	9.58	140	P	Pn	22 19 19.7	+2.9
KKM	Kota Kinabalu	9.98	279	Pn	Pn	22 19 24.8	+2.3
SPSI	Sidrap Palu	10.53	217	P	Pn	22 19 32.0	+2.2
	49nm,0.8s						
BNSI	Bone	10.69	214	P	Pn	22 19 33.8	+1.9
	18nm,0.7s						
KAPI	Kappang	11.39	214	P	Pn	22 19 41.9	+0.5
	0.5nm,0.3s,baz=32,slow=9.4,SNR=15						
KAPI	Kappang	11.39	214		Pn	22 19 42.9	+1.5
BAKI	Biak	11.46	119	P	Pn	22 19 46.4	+4.0
	80nm,0.9s						
BBKI	Banjar Baru	13.77	235	P	Pn	22 20 16.3	+3.5
	2µm33nm,0.9s						
SBUM	Sibu	14.02	262	P	P	22 20 22.4	+1.5
BATI	Baumata	14.81	190	P	Pn	22 20 27.9	+1.6
	6.8nm,0.3s,baz=324,slow=1.8,SNR=4.4						
WBSI	Waikabubak, Su	15.56	206	P	Pn	22 20 38.5	+2.7
	39nm,0.7s						
TWSI	Taliwang, Sumb	16.05	215	P	Pn	22 20 44.5	+2.7
	54nm,0.8s						
KSM	Kuching	16.07	260		Pn	22 20 43.6	+1.5
KSM				IAmb	IAmb	22 20 46.1	
	comp=Z,21nm,0.6s						
KSM	Kuching	16.07	260	P	P	22 20 45.6	+2.0
PBKI	Pangkalan Bun	16.11	244	P	P	22 20 46.4	+2.4
	comp=Z,151nm,0.8s						
JAGI	Jajag, Banyuwa	17.56	223	P	P	22 21 02.1	+2.1
	comp=Z,29nm,1.3s						
JAGI	Jajag, Banyuwa	17.56	223	P	P	22 21 00.6	+0.6
JAGI	Jajag, Banyuwa	17.56	223	P	Pn	22 21 02.7	+2.3
MTN	Manton Dam	17.93	164	P	P	22 21 04.0	0.0
MTN				IAmb	IAmb	22 21 09.9	
	comp=Z,23nm,0.9s						
YULB	Yu-li	19.36	347	P	P	22 21 19.8	+0.2
YULB				IAmb	IAmb	22 21 23.2	
	comp=Z,40nm,1.3s						
KNRA	Kununurra	20.21	173	P	P	22 21 29.7	+0.8
KNRA				IAmb	IAmb	22 21 39.9	
	comp=Z,38nm,1.2s						
FITZ	Fitzroy Crossi	22.45	181	P	P	22 21 52.7	-0.1
	comp=Z,6.2nm,0.4s,baz=353,slow=5.2,SNR=41						
UBPT	Khong Chiam	22.97	299	P	P	22 21 56.9	-1.1
UBPT				IAmb	IAmb	22 21 57.5	
	comp=Z,8.7nm,0.7s						
COEN	Coen	24.95	138	P	P	22 22 15.9	-0.1
COEN				IAmb	IAmb	22 22 16.9	
	comp=Z,20nm,1.3s						
PMG	Port Moresby	25.11	123	P	P	22 22 18.5	+1.0
	comp=Z,7.4nm,0.4s,baz=332,slow=7.7,SNR=4.7						
WB0	Warramunga Arr	25.45	162	P	P	22 22 21.9	+1.3
WB0				IAmb	IAmb	22 22 28.9	
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	25.59	162	P	P	22 22 22.6	+0.7
	comp=Z,3.0nm,0.3s,baz=342,slow=10,SNR=33						
WRA	Warramunga Arr	25.59	162	P	P	22 22 21.9	+0.1
WB2	Warramunga Arr	25.60	162	P	P	22 22 22.5	+0.6
WB2				IAmb	IAmb	22 22 39.2	
	comp=Z,16nm,1.2s						
WR0	Warramunga Arr	25.67	161	P	P	22 22 22.9	+0.4
WR0				IAmb	IAmb	22 22 35.9	
	comp=Z,5.5nm,0.6s						
PSA00	Pilbara Seismi	26.62	193	P	P	22 22 30.4	-0.8
PSA00				IAmb	IAmb	22 22 31.3	
	comp=Z,14nm,0.7s						
AS31	Alice Springs	29.00	165	P	P	22 22 52.7	+0.4
ASAR	Alice Springs	29.00	165	P	P	22 22 52.0	-0.4
	comp=Z,0.9nm,0.6s,baz=341,slow=7.2,SNR=19						
ASAR				ScP	ScP	22 29 27.6	-3.8
	comp=Z,0.6nm,0.5s,baz=342,slow=3.1,SNR=6.3						
ASAR	Alice Springs	29.00	165	P	P	22 22 52.1	-0.2
ASAR				ScP	ScP	22 29 27.7	-3.7
GIRL	Giralia	29.37	203	P	P	22 22 55.8	+0.2
CMAR	Chiang Mai Arr	29.97	300	P	P	22 22 59.4	-1.6
	comp=Z,0.6nm,0.3s,baz=114,slow=6.1,SNR=7.0						
CMAR	Chiang Mai Arr	29.97	300	P	P	22 23 00.0	-1.0
CHTO	Chiang Mai	30.11	300	P	P	22 23 02.0	-0.3
CTAO	Charters Tower	31.44	142	P	P	22 23 14.2	+0.3
CTAO				IAmb	IAmb	22 23 29.5	
	comp=Z,16nm,1.4s						
XAN	Xi'an	33.47	334	P	P	22 23 30.5	-1.0

XAN				pP	pP	22 23 40.5	-13
MORW	Morawa	34.75	196	P	P	22 23 41.7	-0.9
MORW				IAmb	IAmb	22 23 45.4	
	comp=Z,18nm,1.2s						
FORT	Forrest	35.12	177	P	P	22 23 45.6	-0.1
JSD	Sado	35.18	17	P	P	22 23 45.0	-1.1
BBOO	Buckleboo	38.28	166	P	P	22 24 12.3	-0.2
EIDS	Eidsvold	38.32	142	P	P	22 24 12.9	-0.1
SHL	Shillong	38.94	306	P	P	22 24 16.6	-1.9
SHL				IAmb	IAmb	22 24 17.5	
	comp=Z,9.8nm,0.5s						
STKA	Stephens Creek	39.05	159	P	P	22 24 17.9	-1.2
	comp=Z,1.4nm,0.3s,baz=335,slow=5.7,SNR=4.3						
STKA	Stephens Creek	39.05	159	P	P	22 24 18.4	-0.6
GUN	Gumba	44.79	306	eP	P	22 25 03.6	-2.7
	comp=Z,7.1nm,0.3s						
KLR	Kul'dur	44.83	5	P	P	22 25 06.1	+0.3
	comp=Z,0.6nm,0.3s,baz=191,slow=7.9,SNR=5.9						
SONM	Songino Array	46.39	342	P	P	22 25 17.2	-1.0
	comp=Z,0.4nm,0.6s,baz=169,slow=7.9,SNR=4.0						
SONM				pP	pwP	22 25 45.1	+0.7
	comp=Z,0.2nm,0.4s,baz=161,slow=8.4,SNR=4.5						
SONM				PcP	PcP	22 26 50.7	-1.0
	comp=Z,0.4nm,0.4s,baz=165,slow=3.8,SNR=5.3						
SONM	Songino Array	46.39	342	P	P	22 25 16.8	-1.5
KOLN	Koldanda	46.59	304	eP	P	22 25 18.0	-2.3
	comp=Z,9.2nm,0.3s						
DANN	Dangsing	46.68	305	eP	P	22 25 18.5	-2.6
	comp=Z,11nm,0.3s						
PYUN	Piuthan	47.22	305	eP	P	22 25 22.6	-2.6
	comp=Z,5.6nm,0.4s						
MK31	Makanchi Array	56.59	325	P	P	22 26 32.2	-2.0
MKAR	Makanchi Array	56.59	325	P	P	22 26 32.0	-2.2
	comp=Z,1.2nm,0.4s,baz=120,slow=7.3,SNR=24						
MKAR				pP	pwP	22 27 02.5	+1.8
	comp=Z,1.6nm,0.6s,baz=122,slow=8.0,SNR=7.0						
MKAR				PcP	PcP	22 27 27.8	-1.8
	comp=Z,1.1nm,0.5s,baz=121,slow=5.3,SNR=11						
MKAR				ScP	ScP	22 31 14.9	-5.2
	comp=Z,0.6nm,0.8s,baz=107,slow=5.7,SNR=4.4						
MKAR	Makanchi Array	56.59	325	P	P	22 26 32.2	-2.0
MAKZ	Makanchi	56.77	325	P	P	22 26 33.5	-2.0
MAKZ				IAmb	IAmb	22 26 42.9	
	comp=Z,3.3nm,1.4s						
MAKZ				PcP	PcP	22 27 28.1	-2.2
ZALV	Zalesovo Beam	59.64	333	P	P	22 26 52.4	-2.9
	comp=Z,1.1nm,0.4s,baz=122,slow=6.6,SNR=5.6						
QRZ	Quartz Range	61.90	141	P	P	22 27 11.1	+0.2
QRZ				IAmb	IAmb	22 27 14.6	
	comp=Z,16nm,1.2s						
TIXI	Tiksi	67.09	1	P	P	22 27 43.5	-0.6
	comp=Z,1.5nm,0.3s,baz=188,slow=3.3,SNR=12						
VNDA	Vanda	84.26	173	P	P	22 29 21.4	-0.4
	comp=Z,0.4nm,0.6s,baz=339,slow=8.6,SNR=1.4						
BRTR	Keskin Array B	89.07	310	P	P	22 29 43.0	-3.3
	comp=Z,0.4nm,0.3s,baz=105,slow=5.6,SNR=6.4						
ARCES	ARCESS Array B	89.53	340	P	P	22 29 44.8	-2.8
	comp=Z,4.7nm,1.0s,baz=83,slow=6.4,SNR=8.8						
FINES	FINESS Array B	90.88	332	P	P	22 29 51.3	-2.7
	comp=Z,0.9nm,0.5s,baz=71,slow=4.5,SNR=11						
NOA	NORSAR Array B	97.84	334	P	P	22 30 22.7	-3.2
	comp=Z,0.3nm,0.5s,baz=66,slow=4.4,SNR=1.5						
TORD	Torodi Ar. Bea	122.10	288	PKP	PKPdf	22 35 43.7	-2.1
	comp=Z,0.6nm,0.5s,baz=77,slow=1.7,SNR=13						
TORD	Torodi Ar. Bea	122.10	288		PKPdf	22 35 44.2	-1.6
DBIC	Dimbokro	129.82	282	PKP	PKPdf	22 35 59.2	-1.4
	comp=Z,1.0nm,0.6s,baz=93,slow=2.8,SNR=4.0						

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*IDC **27** 22:30:03.3±3.3, 6°.51S×127°.88E, h366^{km}±35^{km}, mb3.0/2, mb1 3.2/5, mb1mx2.8/27, mbtmp3.9/5, Error ellipse: s-maj=49.5km s-min=11.9km az=66.0*

ISC 27 22:30:02.2±1.2**, 6°.47S**±0°.10×**128°.0E**±0°.1**, h353**^{km}**, n6, σ0^{s}.85**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.67	229	P	Pn	22 31 29.6	+0.1
	29nm,0.3s,baz=104,slow=1.2,SNR=34						
BATI				S	S	22 32 39.8	-0.3
	9.8nm,0.3s,baz=36,slow=17,SNR=5.6						
FITZ	Fitzroy Crossi	11.78	191	P	Pn	22 32 41.6	+0.2
	baz=41,slow=12						
WRA	Warramunga Arr	14.74	156	P	P	22 33 14.5	+0.5
	0.9nm,0.3s,baz=334,slow=12,SNR=35						
WRA				S	S	22 35 51.5	-1.5
	0.3nm,0.3s,baz=341,slow=22,SNR=9.2						
ASAR	Alice Springs	18.02	162	P	P	22 33 50.5	+1.1
	0.5nm,0.3s,baz=346,slow=12,SNR=27						
ASAR				S	S	22 36 57.8	+0.2
	0.2nm,0.3s,baz=346,slow=21,SNR=8.3						
SONM	Songino Array	57.33	343	P	P	22 39 14.6	+0.1
	0.6nm,0.7s,baz=166,slow=7.2,SNR=4.6						
MKAR	Makanchi Array	66.70	328	P	P	22 40 15.8	-0.4
	0.4nm,0.4s,baz=120,slow=8.2,SNR=16						

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*IDC **27** 22:48:37.3±0.8, 8°.72N×39°.90W, h0^{km}, mb4.2/11, mb1 4.3/12, mb1mx4.0/43, mbtmp4.2/12, ML3.7/1, MS3.7/23, Ms1 3.7/23, ms1mx3.6/42, Error ellipse: s-maj=26.7km s-min=17.0km az=149.0*

*NEIC **27** 22:48:40.0±0.9, 8°.8N±0°.1×39°.90W±0°.09, h10^{km}±1^{km}, mb4.6/15, Error ellipse: s-maj=22.9km s-min=15.1km az=343.0*

*GCMT **27** 22:48:42.0±0.4, 8°.71N±0°.03×39°.81W±0°.02, h25^{km}±1^{km}, MW4.8/76, Moment Tensor Solution. s11,c13; s76,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.56±.12; $M_{\theta\theta}$0.44±.10; $M_{\phi\phi}$0.12±.09; $M_{r\theta}$-0.36±.19; $M_{\theta\phi}$-1.87±.09; $M_{\phi r}$1.09±.20; Best double couple: $M_0$2.19000×10^{16} NP1:ϕ_s267.00000°,δ57.00000°,λ-173.00000°. NP2: ϕ_s174.00000°,δ84.00000°,λ-33.00000°. Principal axes: T 2.4940, Plg19.0000°, Azm225.0000°; N -0.6080, Plg56.0000°, Azm345.0000°; P -1.8870, Plg27.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 22:48:39.1±0.5**, 8°.85N**±0°.08×**39°.86W**±0°.08**, h10**^{km}**, n98, σ1^{s}.07**/78**, mb4.4**/23**, MS3.8**/22**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSB	Rosrio	12.41	200	eP	Pn	22 51 34.3	-1.7
MDP	Montagnes des	13.22	254	Pn	Pn	22 51 46.4	-0.5
	0.4nm,0.3s,baz=70,slow=11,SNR=8.6						
MDP				LR	LR	22 56 05.2	
	comp=Z,251nm,19.7s,baz=68,slow=34						
TMAB	Tom-Au,PA,Br	13.84	217	eP	Pn	22 51 54.3	-1.1
RCBR	Riachuelo	15.10	165	eP	Pn	22 52 13.8	+1.1
RCBR	Riachuelo	15.10	165	Pn	Pn	22 52 11.9	-0.9
RCBR				IAmb	IAmb	22 52 26.1	
	comp=Z,25nm,1.1s						
MCPB	Macapa, AP	15.21	234	eP	Pn	22 52 13.3	-0.8
SACV	Santiago Islan	17.02	68	P	Pn	22 52 33.0	-4.5
MALB	Monte Alegre	17.86	234	eP	Pn	22 52 47.7	-0.1
PRPB	Parauapebas	17.92	214	eP	Pn	22 52 47.7	-0.8
SMTB	Santa Maria do	19.20	204	eP	P	22 53 03.5	+0.2
ITTB	Itaituba	20.56	231	eP	P	22 53 18.0	-0.1
BOAV	Boa Vista	21.52	254	eP	P	22 53 28.8	+0.2
BOAV	Boa Vista	21.52	254	P	P	22 53 28.2	-0.4
BOAV				IAmb	IAmb	22 53 32.5	
	comp=Z,23nm,0.9s						
SDBA	SAO DESIDERIO	21.70	193	eP	P	22 53 30.1	-0.4
H05N1	Guadeloupe/Mar	21.96	292	T	T	23 16 18.8	
	SNR=27						
NPGB	Novo Progresso	22.08	225	eP	P	22 53 33.8	-0.8
PTGA	Pitinga	22.17	246	P	P	22 53 34.5	-1.0
	comp=Z,8.5nm,0.8s,baz=67,slow=13,SNR=12						
PTGA				LR	LR	23 02 04.1	
	comp=Z,238nm,20.3s,baz=61,slow=36						
GDU01	Guandu, BA	22.42	179	eP	P	22 53 40.1	+1.9
PEXB	Peixe	22.44	202	eP	P	22 53 38.0	-0.4
SNDB	Serra Nova Dou	23.60	209	eP	P	22 53 50.4	0.0
MACA	Manacapuru-AM	23.94	241	eP	P	22 53 53.8	+0.1
CMC01	Camacan, BA	24.05	179	eP	P	22 53 56.9	+2.3
JANB	Januaria	24.16	191	eP	P	22 53 54.3	-1.4
CLDB	Colider	25.20	219	eP	P	22 54 05.6	+0.5
GUA01	Guaratinga, BA	25.27	180	eP	P	22 54 06.7	+1.0
BDFB	Brasilia	25.64	198	P	P	22 54 07.2	-1.9
	comp=Z,10nm,1.2s,baz=31,slow=10,SNR=6.2						
BDFB				LR	LR	23 03 11.0	
	comp=Z,155nm,20.6s,baz=347,slow=34						
BDFB	Brasilia	25.64	198	P	P	22 54 06.8	-2.4
BDFB				IAmb	IAmb	22 54 11.8	
	comp=Z,19nm,1.3s						
MC01	Montes Claros	25.71	189	eP	P	22 54 10.4	+0.6
PDRB	Porto dos Gac	26.35	220	eP	P	22 54 15.9	+0.3
ARAG	Araguaiana, MT	27.11	206	eP	P	22 54 23.5	+1.1
DIAM	Diamantina, MG	27.23	188	eP	P	22 54 24.3	+0.7
SJMB	Sao Joao De Ma	27.41	183	eP	P	22 54 26.1	+1.1
BSFB	Barra de Sao F	27.52	182	eP	P	22 54 27.2	+1.2
IPMB	Ipameri, GO	27.90	197	eP	P	22 54 30.4	+0.8
RIB01	Linhares ES	27.99	181	eP	P	22 54 31.1	+0.9
SALV	Santo Antonio	29.16	213	eP	P	22 54 40.9	+0.2
ALF01	Guarapari-ES	29.29	182	eP	P	22 54 43.0	+1.2
VILB	Vilhena	29.62	223	eP	P	22 54 45.1	+0.3
H10N3	ASCENSION HYDR	30.22	123	T	T	23 26 24.0	
	baz=302,slow=75,SNR=200						
H10N2	ASCENSION HYDR	30.23	122	T	T	23 26 24.4	
	baz=302,slow=75,SNR=224						
H10N1	ASCENSION HYDR	30.25	123	T	T	23 26 25.6	
	baz=302,slow=75,SNR=215						
H10S3	ASCENSION HYDR	30.70	125	T	T	23 26 59.6	
	baz=299,slow=74,SNR=104						
H10S2	ASCENSION HYDR	30.72	125	T	T	23 27 00.9	
	baz=281,slow=74,SNR=62						
PTLB	Pontes e Lacer	30.78	218	eP	P	22 54 55.4	+0.3
PTLB	Pontes e Lacer	30.78	218	P	P	22 54 55.3	+0.3
PTLB				IAmb	IAmb	22 54 57.3	
	comp=Z,9.1nm,1.4s						
ETMB	Extrema	32.12	235	eP	P	22 55 07.5	+0.5
ETMB	Extrema	32.12	235	P	P	22 55 06.5	-0.5
ETMB				IAmb	IAmb	22 55 08.2	
	comp=Z,12nm,1.3s						
PCMB	Pacaembu	32.27	200	eP	P	22 55 08.5	+0.4
ROSC	El Rosal	34.43	266	LR	LR	23 10 50.4	
	comp=Z,169nm,18.3s,baz=52,slow=39						
DBIC	Dimbokro	34.75	91	P	P	22 55 28.5	-1.4
	comp=Z,3.8nm,0.8s,baz=290,slow=9.2,SNR=9.1						
DBIC				LR	LR	23 07 05.8	
	comp=Z,84nm,19.0s,baz=265,slow=32						
DBIC	Dimbokro	34.75	91	P	P	22 55 29.3	-0.6
DBIC				IAmb	IAmb	22 55 38.0	
	comp=Z,7.6nm,0.8s						
CZSB	Cruzeiro do Su	36.63	244	eP	P	22 55 46.2	+0.1
CZSB	Cruzeiro do Su	36.63	244	P	P	22 55 45.3	-0.7
ITAB	Concordia	37.79	198	eP	P	22 55 55.9	+0.3
CPUP	Villa Florida	38.87	205	LR	LR	23 12 09.2	
	comp=Z,226nm,18.4s,baz=26,slow=36						
CPUP	Villa Florida	38.87	205	eP	P	22 56 04.0	-0.7
TORD	Torodi Ar. Bea	40.98	80	P	P	22 56 22.1	-0.5
	comp=Z,1.8nm,0.9s,baz=274,slow=8.7,SNR=9.3						
TORD				LR	LR	23 11 32.5	
	comp=Z,151nm,19.6s,baz=265,slow=34						
TORD	Torodi Ar. Bea	40.98	80	P	P	22 56 22.7	+0.1
CPSB	Cacapava Do Su	41.15	198	eP	P	22 56 23.8	+0.1
ITQB	Itaqui	41.56	202	eP	P	22 56 27.2	+0.2
LVC	Limon Verde	42.27	222	eP	P	22 56 32.7	-0.7
PLTB	Pedras Altas	42.47	197	eP	P	22 56 34.6	+0.1
ESDC	Sonseca Array	44.36	40	LR	LR	23 12 06.0	
	comp=Z,119nm,20.1s,baz=240,slow=32						
SCHQ	Schefferville	50.64	340	LR	LR	23 15 33.3	
	comp=Z,83nm,22.0s,baz=111,slow=32						
KEST	Kesra	52.11	51	P	P	22 57 50.7	+0.9
	comp=Z,6.3nm,1.0s,baz=206,slow=3.7,SNR=7.0						
KEST				LR	LR	23 19 44.7	
	comp=Z,69nm,19.4s,baz=257,slow=36						
KEST	Kesra	52.11	51	P	P	22 57 50.6	+0.9
KEST				IAmb	IAmb	22 57 53.0	
	comp=Z,8.7nm,1.1s						
H09N1	TRISTAN DA CUN	52.47	152	T	T	23 54 12.8	
	SNR=6.9						
H09W1	TRISTAN DA CUN	52.49	152	T	T	23 54 12.3	
	SNR=7.5						
OSSC	Osservatorio P	56.21	43	P	P	22 58 20.8	+1.3
PLCA	Paso Flores	56.87	208	P	P	22 58 23.7	-0.5
	comp=Z,3.0nm,0.9s,baz=54,slow=8.5,SNR=2.9						
PLCA				LR	LR	23 23 45.1	
	comp=Z,137nm,18.7s,baz=44,slow=37						
PLCA	Paso Flores	56.87	208	eP	P	22 58 24.3	+0.1
PLCA	Paso Flores	56.87	208	P	P	22 58 24.1	-0.1
PLCA				IAmb	IAmb	22 58 34.1	
	comp=Z,8.2nm,1.1s						
FETA	Feichten	57.27	39	eP	P	22 58 27.6	+0.5
	comp=Z,2.9nm,1.3s						
BORG	Borgarnes	57.32	9	LR	LR	23 17 34.1	
	comp=Z,87nm,19.2s,baz=200,slow=30						
MOTA	Moosalm	57.64	39	i P	P	22 58 30.1	+0.4
	comp=Z,4.9nm,1.2s						
SQTA	Sankt Quirin	57.65	39	eP	P	22 58 30.2	+0.5
	comp=Z,2.5nm,0.6s						
WTTA	Wattenberg	57.94	39	eP	P	22 58 32.2	+0.3
	comp=Z,2.0nm,0.7s						
ABTA	Abfaltersbach	58.28	40	i P	P	22 58 34.9	+0.7
	comp=Z,3.7nm,1.0s						
MYKA	Terra Mystica	58.95	40	eP	P	22 58 40.3	+1.5
	comp=Z,4.3nm,0.9s						
OBKA	Obir	59.49	41	eP	P	22 58 44.1	+1.6
	comp=Z,2.6nm,0.8s						
ARSA	Arzberg	60.38	40	eP	P	22 58 48.6	0.0
	comp=Z,0.3nm,0.3s						
VRAC	Vranov	61.78	38	LR	LR	23 22 58.6	
	comp=Z,52nm,19.8s,baz=250,slow=33						
ULM	Lac du Bonnet	61.85	323	LR	LR	23 21 51.8	
	comp=Z,70nm,19.8s,baz=300,slow=32						
SUMG	Summit	63.68	0	i P	P	22 59 11.0	+0.2
NOA	NORSAR Array B	64.17	25	LR	LR	23 23 04.1	
	comp=Z,52nm,20.1s,baz=230,slow=32						
HFS	Hagfors	64.78	26	LR	LR	23 21 25.1	
	comp=Z,66nm,20.6s,baz=248,slow=30						
PDAR	Pinedale Array	69.15	312	LR	LR	23 26 30.5	
	comp=Z,53nm,21.8s,baz=116,slow=33						
FINES	FINESS Array B	70.88	28	P	P	22 59 58.1	+2.0
	comp=Z,3.0nm,1.0s,baz=219,slow=12,SNR=1.8						
FINES				LR	LR	23 28 42.5	
	comp=Z,70nm,18.4s,baz=334,slow=34						
FINES	FINESS Array B	70.88	28	P	P	22 59 57.7	+1.6
BGU	Big Grassy Mou	71.54	310	P	P	23 00 00.7	0.0
BGU				IAmb	IAmb	23 00 11.4	
	comp=Z,5.0nm,1.0s						
LSZ	Lusaka	71.55	109	P	P	23 00 01.8	+0.7
	comp=Z,2.8nm,0.9s,baz=277,slow=3.4,SNR=6.4						
LSZ	Lusaka	71.55	109	P	P	23 00 01.2	+0.1
BR131	Keskin Array S	71.72	51	P	P	23 00 02.4	+0.5
BRTR	Keskin Array B	71.72	51	P	P	23 00 03.3	+1.5
	comp=Z,1.4nm,0.8s,baz=250,slow=4.4,SNR=8.7						
BRTR				LR	LR	23 30 31.5	
	comp=Z,29nm,22.0s,baz=248,slow=35						
BOSA	Boshof	72.98	123	P	P	23 00 08.7	-0.7
	comp=Z,3.6nm,0.9s,baz=166,slow=2.6,SNR=4.9						
BOSA				LR	LR	23 25 50.0	
	comp=Z,52nm,21.3s,baz=328,slow=31						
YKA	Yellowknife Ar	75.16	332	P	P	23 00 20.1	-1.3
	comp=Z,0.3nm,0.7s,baz=103,slow=5.7,SNR=5.4						
YKA				LR	LR	23 31 10.4	
	comp=Z,54nm,19.3s,baz=0.0,slow=34						
NVAR	Mina Array Bea	75.52	307	LR	LR	23 32 20.4	
	comp=Z,48nm,18.9s,baz=70,slow=35						
AKTO	Aktyubinsk	88.23	39	LR	LR	23 39 40.5	
	comp=Z,37nm,20.5s,baz=318,slow=35						

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*GRAL **27** 22:51:45.8±0.3, 34°.96N×36°.34E, h3^{km}±2^{km}, MD3.2*

*ISK **27** 22:51:45.3, 34°.92N×36°.23E, h7^{km}, ML2.5/15*

*DDA **27** 22:51:46.3, 34°.78N×36°.36E, h29^{km}±4^{km}, ML2.7*

ISC 27 22:51:45.3±1.3**, 34°.90N**±0°.03×**36°.36E**±0°.05**, h8**^{km}±11^{km}**, n33, σ0^{s}.81**/46**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWQ	Hawqa	0.70	209	eP	Pg	22 51 59.2	+0.3
HWQ				eS	Sg	22 52 09.2	+1.1
BHL	Bhannes	1.15	211	eP	Pg	22 52 07.1	-0.3
BHL				eS	Sg	22 52 22.7	+0.4
YAYL	Yayladag	1.15	350	eP	Pn	22 52 08.9	+1.0
YAYL				i S	Sb	22 52 22.8	+0.1
YAYL	Yayladag	1.15	350	PN	Pg	22 52 06.9	-0.6
YAYL				SN	Sb	22 52 22.8	+0.1
DQRL	Deir Qamar	1.36	209	eP	Pn	22 52 10.4	-0.2
RCY	Rachaya	1.46	197	eP	Pn	22 52 12.3	+0.2
RCY				eS	Sn	22 52 32.0	+0.4
ASUZ	Hatay-Arsuz	1.47	342	i P	Pg	22 52 13.2	-0.3
ASUZ				i S	Sn	22 52 32.5	+1.1
TAHT	Tahtakopru-Hat	1.48	355	PN	Pn	22 52 12.7	+0.4
TAHT				SN	Sn	22 52 32.5	+0.7
SHBL	Chebaa	1.63	198	eP	Pn	22 52 14.7	+0.3
KRTS	Karatas	1.85	335	PN	Pn	22 52 17.3	-0.1
KUZU	Kuzuini	1.96	17	i P	Pn	22 52 18.1	-0.8
KUZU				i S	Sb	22 52 44.9	-1.0
KUZU				IAML		22 52 48.0	
	comp=N,120nm,0.2s						
YURE	YUREGIR	2.01	343	i P	Pb	22 52 21.8	-0.4
CEYT	Ceyhan	2.17	347	PN	Pn	22 52 22.1	+0.4
LFK	Lefkose	2.35	280	PN	Pn	22 52 23.7	-0.5
GAZ	Gaziantep	2.37	17	PN	Pn	22 52 25.6	+1.0
KIZK	Mersin	2.40	312	i P	Pn	22 52 25.5	+0.6
KIZK				i S	Sn	22 52 53.9	-0.4
KIZK	Mersin	2.40	312	PN	Pn	22 52 24.6	-0.2
MERS	Mersin	2.47	323	PN	Pn	22 52 26.1	+0.2
CSS	Mathiatis	2.49	272	PN	Pn	22 52 25.6	-0.5
IKL	Isikli	2.56	302	PN	Pn	22 52 26.8	-0.2
AKKU	Akkuyu-Mersin	2.61	300	PN	Pn	22 52 27.6	-0.2
KOZT	Kozan	2.61	351	PN	Pn	22 52 28.5	+0.7
GULN	MERSIN_Gulnar	2.63	300	i P	Pn	22 52 27.6	-0.4
GULN				i S	Sn	22 52 58.8	-1.3
GZT	Gaziantep	2.64	21	i P	Pn	22 52 28.1	-0.2
GZT				IAML		22 53 10.0	
	comp=E,36nm,0.4s						
KEBE	Keben-Mersin	2.65	306	PN	Pn	22 52 28.5	+0.1
ANDN	Andirin	2.68	360	i P	Pn	22 52 29.2	+0.4
ANDN				i S	Sn	22 53 01.3	-0.2
TEVE	Tevekalti-Mers	2.83	304	PN	Pn	22 52 30.8	0.0
TEKE	Tekeli-Mersin	2.92	296	PN	Pn	22 52 31.8	-0.3
SAIM	ADANA	3.08	356	i P	Pn	22 52 35.7	+1.4
KERG	Konya-Eregli	3.09	325	i P	Pn	22 52 36.4	+1.8
KERG				i S	Sn	22 53 14.6	+2.8
KERG				IAML		22 53 16.0	
	comp=N,16nm,1.1s						
SANL	SANLIURFA_Merk	3.11	42	i P	Pb	22 52 40.3	-0.6
SANL				i S	Sb	22 53 17.8	-1.2
ERMK	Ermenek	3.30	303	i P	Pn	22 52 37.1	-0.3
AKCD	Akcadag	3.62	20	i P	Pn	22 52 42.4	+0.6
AKCD				IAML		22 53 43.0	
	comp=N,22nm,0.4s						
AKCD				IAML		22 53 44.0	
	comp=E,14nm,0.5s						

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*IDC **27** 23:04:22.3±7.5, 35°.35N×70°.12E, h0^{km}, mb3.8/2, mb1 3.6/7, mb1mx3.3/48, mbtmp3.6/7, ML3.2/5, Error ellipse: s-maj=116.2km s-min=38.8km az=160.0*

ISC 27 23:04:40.7±6.0**, 36°.4N**±0°.6×**70°.1E**±0°.2**, h100**^{km}**, n7, σ0^{s}.69**/7**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	7.11	27	Pn	Pn	23 06 21.9	-0.1
	0.6nm,0.3s,baz=202,slow=7.7,SNR=9.2						
MKAR	Makanchi Array	13.81	37	Pn	Pn	23 07 51.9	-0.2
	0.0nm,0.3s,baz=223,slow=16,SNR=2.3						
KURBB	Kurchatov Arra	15.47	20	Pn	Pn	23 08 12.7	-0.5
	0.0nm,0.3s,baz=210,slow=9.9,SNR=6.3						
AKTO	Aktyubinsk	16.54	332	P	P	23 08 26.7	-0.5
	0.3nm,0.3s,baz=143,slow=11,SNR=7.2						
BVAR	Borovoye Array	16.64	1	P	P	23 08 29.5	+1.1
	0.2nm,0.3s,baz=195,slow=14,SNR=5.1						
ZALV	Zalesovo Beam	20.32	26	P	P	23 09 08.3	-0.2
	2.3nm,0.5s,baz=226,slow=10,SNR=9.1						
NOA	NORSAR Array B	44.05	323	P	P	23 12 38.4	+0.2
	1.3nm,1.1s,baz=99,slow=7.9,SNR=1.5						

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*SSNC **27** 23:04:45.7±1.3, 19°.64N×75°.61W, h16^{km}±5^{km}, MD3.0, ML3.1, MW3.0*

*JSN **27** 23:05:36.9±6.4, 18°.14N×76°.57W, h15^{km}, MD2.4*

ISC 27 23:04:43.7±1.2**, 19°.59N**±0°.05×**75°.59W**±0°.04**, h25**^{km}±13^{km}**, n11, σ1^{s}.14**/19**, 2D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCC	Rio Carpintero	0.42	346	eP	Pb	23 04 52.3	-0.3
RCC				eS	Sb	23 04 57.1	-1.6
RCC				IAML		23 04 57.3	
	comp=E,1µm,0.4s						
RCC				IAML		23 04 57.4	
	comp=N,2µm,0.2s						
GTBY	Guantanamo Bay	0.56	53⇓	iP	Pn	23 04 55.6	-0.6
GTBY				eS	Sb	23 05 03.1	+0.4
GTMO	Guantanamo	0.65	41⇓	iP	Pb	23 04 56.8	+0.3
GTMO				eS	Sb	23 05 05.6	+0.5
GTMO				IAML		23 05 07.2	
	comp=E,15µm,0.2s						
GTMO				IAML		23 05 08.2	
	comp=N,15µm,0.2s						
HLGC	Holguin	1.37	341	eP	Pb	23 05 09.7	+1.0
HLGC				eS	Sb	23 05 28.7	+2.8
HLGC				IAML		23 05 30.8	
	comp=N,209nm,0.3s						
HLGC				IAML		23 05 31.1	
	comp=E,277nm,0.5s						
MASC	Masc	1.41	65	eP	Pn	23 05 07.7	0.0
MASC				eS	Sn	23 05 25.0	-0.5
MASC				IAML		23 05 30.0	
	comp=N,100nm,0.1s						
MASC				IAML		23 05 30.4	
	comp=E,150nm,0.2s						
LMGC	Las Mercedes	1.42	290	eP	Pn	23 05 08.5	+0.6
LMGC				eS	Sn	23 05 25.0	-0.7
LMGC				IAML		23 05 25.9	
	comp=E,359nm,0.1s						
LMGC				IAML		23 05 27.3	
	comp=N,397nm,0.1s						
STH	Stony Hill	1.90	218	i P	Sn	23 05 37.2	-0.5
HOJ	Hope	1.92	215	i P	Sb	23 05 42.4	+0.8
MTDJ	Mount Denham	2.29	234	eP	Pn	23 05 21.0	+1.0
MTDJ				eS	Sn	23 05 46.4	-1.0
MCJ	Malvern	2.58	231	i P	Sb	23 05 59.7	-1.1
CCCC	Cccc	2.60	309	eP	Pn	23 05 23.5	-0.7
CCCC				eS	Sn	23 05 53.7	-1.2
CCCC				IAML		23 05 56.2	
	comp=N,18nm,0.3s						
CCCC				IAML		23 05 59.0	
	comp=E,20nm,0.4s						

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*SOME **27** 23:05:13.6, 37°.72N×72°.40E, h20^{km}, MS4.0*

*BJI **27** 23:05:31.4±0.0, 38°.05N×72°.73E, h6^{km}, mB4.6/11, mb4.4/21, ML4.4/4, Ms4.1/10, Ms7 3.7/8*

*NEIC **27** 23:05:31.7±2.9, 38°.03N±0°.05×72°.68E±0°.03, h10^{km}±1^{km}, mb4.4/35, Error ellipse: s-maj=8.5km s-min=4.1km az=358.0*

*MOS **27** 23:05:34.1±1.1, 38°.14N×72°.81E, h46^{km}, mb4.6/17, Error ellipse: s-maj=5.8km s-min=3.7km az=88.5*

*NNC **27** 23:05:35.1±2.1, 38°.32N×72°.73E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=18.3km s-min=11.8km az=14.0*

*IDC **27** 23:05:35.1±2.7, 38°.03N×72°.81E, h48^{km}±24^{km}, mb4.0/26, mb1 4.1/29, mb1mx4.0/50, mbtmp4.2/29, ML3.8/3, MS3.4/3, Ms1 3.4/3, ms1mx3.0/36, Error ellipse: s-maj=18.3km s-min=11.2km az=7.0*

ISC 27 23:05:30.7±0.3**, 38°.07N**±0°.03×**72°.74E**±0°.03**, h10**^{km}**, n274, σ2^{s}.09**/300**, mb4.3**/60**, MS3.5**/4**, 24C-20D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.59	333	Pn	Pn	23 05 57.7	-1.5
BTK	Batken	2.49	324	PN	Pn	23 06 13.7	+2.4
BTK	Batken	2.49	324	Pn	Pn	23 06 13.7	+2.4
CHGR	Chuyangaron	2.87	283	Pn	Pn	23 06 18.8	+2.1
KSH	Kashi	2.92	59	Pn	Pn	23 06 16.0	-1.2
KSH				Sn	Sn	23 06 47.5	-4.9
KSH				smax	smax		
	comp=N,3µm,0.9s						
KSH				smax	smax		
	comp=E,3µm,1.0s						
AML	Almayashu	4.13	10	P	Pn	23 06 37.3	+3.1
	SNR=16						
TAS	Tashkent	4.20	322	PN	Pn	23 06 37.4	+2.6
TAS	Tashkent	4.20	322	Pn	Pn	23 06 37.4	+2.6
UCH	Uchtor	4.37	18	P	Pn	23 06 41.0	+3.4
	SNR=31						
IUG	Iuzhnay	4.57	334	ePn	Pn	23 06 41.1	+1.1
	baz=332						
IUG				eP	Pn	23 06 41.9	+1.9
	baz=332						
IUG	Iuzhnay	4.57	334	ePN	Pn	23 06 41.1	+1.1
KBL	Kabul	4.61	221	PN	Pn	23 06 46.0	+5.4
KBL	Kabul	4.61	221	Pn	Pn	23 06 46.0	+5.3
EKS2	Erkin-Say	4.66	10	P	Pn	23 06 44.9	+3.7
	SNR=15						
MRKS	Merke	4.69	4	eP	Pb	23 06 50.0	-3.1

	28nm,0.6s						
MRKS				*e*S	Sg	23 07 58.5	-2.7
	257nm,1.0s						
AAK	Ala-Archa	4.76	16	P	Pn	23 06 45.9	+3.3
	5.9nm,0.3s,baz=168,slow=10,SNR=45						
AAK				S	Sn	23 07 38.6	+0.7
	3.2nm,0.3s,baz=214,slow=17,SNR=1.6						
AAK	Ala-Archa	4.76	16	P	Pn	23 06 46.4	+3.8
	SNR=23						
AAK	Ala-Archa	4.76	16	⇑Pn	Pn	23 06 45.9	+3.3
	96nm,0.7s						
AAK				⇓Lg	Lg	23 07 59.3	
	217nm,1.3s						
AAK	Ala-Archa	4.76	16		Pn	23 06 45.4	+2.8
KBK	Karagaybulak	4.89	20	P	Pn	23 06 48.4	+4.0
	SNR=14						
DZA	Taraz	4.94	348	*e*P	Pn	23 06 50.4	+5.5
	92nm,0.5s						
DZA				*e*S	Sb	23 07 59.4	+2.7
	372nm,0.8s						
DZA	Taraz	4.94	348	*e*Pn	Pn	23 06 46.4	+1.5
	baz=347						
DZA	Taraz	4.94	348	*e*PN	Pn	23 06 46.4	+1.5
FRU1	Bishkek	4.95	16	PN	Pn	23 06 48.2	+3.0
FRU1	Bishkek	4.95	16		Pn	23 06 48.2	+3.0
ULHL	Ulahol	4.96	32	P	Pn	23 06 49.2	+3.8
	SNR=7.0						
BOOM	Boomskoye usch	5.05	28	PN	Pn	23 06 49.3	+2.7
BOOM	Boomskoye usch	5.05	28	Pn	Pn	23 06 49.3	+2.7
CHMS	Chumysh	5.16	17	P	Pn	23 06 51.3	+3.3
	SNR=22						
KK07	Karatay Array	5.30	342	⇓Pn	Pn	23 06 52.1	+2.3
	23nm,0.5s,baz=159,slow=13						
KK07				⇑Sn	Sn	23 07 52.9	+1.9
	94nm,0.8s,baz=154,slow=22						
KK07				⇓Lg	Lg	23 08 15.3	
	109nm,0.8s						
KDJ	Kajisay	5.30	39	PN	Pn	23 06 53.9	+3.9
KDJ	Kajisay	5.30	39		Pn	23 06 53.9	+3.9
KKAR	Karatay Array	5.31	342	PN	Pn	23 06 52.4	+2.4
KKAR	Karatay Array	5.31	342	Pn	Pn	23 06 52.4	+2.4
TKM2	Tokmak 2	5.32	23	P	Pn	23 06 54.0	+3.7
	SNR=9.3						
TKM2	Tokmak 2	5.32	23	*i* PN	Pn	23 06 53.4	+3.1
TKM2				pmax	pmax		
	comp=Z,14nm,0.7s						
TKM2	Tokmak 2	5.32	23	⇑Pn	Pn	23 06 53.5	+3.1
	comp=Z,15nm,0.7s						
TKM2				⇑Pg	Pb	23 07 08.6	+4.7
	comp=Z,68nm,1.2s						
TKM2				⇑Lg	Lg	23 08 19.2	
	comp=Z,98nm,0.8s						
TARG	Taragay, Kyrgy	5.34	45		Pn	23 06 54.4	+3.5
BRLS	Borolday	5.43	337	*e*P	Pn	23 06 56.5	+4.8
	comp=Z,13nm,0.7s						
BRLS				*e*S	Sb	23 08 09.8	-1.0
	comp=Z,128nm,0.7s						
BRLS	Borolday	5.43	337	*e*Pn	Pn	23 06 51.9	+0.2
	baz=333						
BRLS	Borolday	5.43	337	*e*PN	Pn	23 06 51.8	+0.2
KST	Kastek	5.54	25	*e*P	Pb	23 07 06.2	-1.4
	comp=Z,22nm,0.8s						
KST				*e*S	Sg	23 08 26.6	-2.1
	comp=Z,99nm,1.1s						
SGDS	Sogindy	5.57	14	*e*Pn	Pn	23 06 55.4	+1.7
	baz=14						
DGS	Degeres	5.66	23	*e*P	Pb	23 07 08.2	-1.4
	comp=Z,54nm,0.7s						
DGS				*e*S	Sg	23 08 30.4	-2.0
MTBS	Maitube	5.79	28	*e*P	Pb	23 07 10.5	-1.2
	comp=Z,7.3nm,0.6s						
MTBS				*e*S	Sg	23 08 34.3	-2.1
	comp=Z,52nm,0.9s						
TNSS	Tian-Shan	5.91	32	*e*P	Pb	23 07 13.1	-1.0
	comp=Z,12nm,0.6s						
TNSS				*e*S	Sg	23 08 38.8	-1.6
	comp=Z,34nm,1.2s						
TNSS	Tian-Shan	5.91	32	*e*Pn	Pn	23 07 00.7	+2.0
	baz=32						
AAA	Alma-Ata	6.04	30	*e*P	Pb	23 07 16.1	+0.1
	comp=Z,16nm,0.4s						
AAA				*e*S	Sg	23 08 43.9	-0.6
	comp=Z,140nm,1.3s						
KRBS	Karabastau	6.05	21	*e*P	Pb	23 07 14.7	-1.5
	comp=Z,9.8nm,0.8s						
KRBS				*e*S	Sg	23 08 41.5	-3.3
	comp=Z,42nm,0.9s						
MDOK	Medeo	6.06	31	*e*P	Pb	23 07 15.5	-0.9
	comp=Z,23nm,0.9s						
MDOK				*e*S	Sg	23 08 43.0	-2.1
	comp=Z,113nm,2.0s						
MDOK	Medeo	6.06	31	*e*Pn	Pn	23 07 02.1	+1.6
	baz=32						
MDOK	Medeo	6.06	31	*e*PN	Pn	23 07 02.0	+1.6
MDOK	Medeo	6.06	31	⇑Pn	Pn	23 07 03.8	+3.3
	comp=Z,17nm,0.8s						
MDOK				⇑Pg	Pb	23 07 20.3	+3.9
	comp=Z,60nm,0.7s						
MDOK				⇑Lg	Lg	23 08 41.8	
	comp=Z,268nm,1.5s						
KNDC	Almaty	6.07	31	PN	Pn	23 07 04.4	+3.9
KNDC	Almaty	6.07	31	⇓Pn	Pn	23 07 04.4	+3.9
	comp=Z,42nm,0.6s						
KNDC				⇓Pg	Pb	23 07 20.2	+3.7
	comp=Z,123nm,0.7s						
KNDC				⇑Lg	Lg	23 08 40.8	
	comp=Z,447nm,1.1s						
KOTS	Kotyrbulak	6.14	31	*e*P	Pb	23 07 17.2	-0.6
	comp=Z,23nm,0.9s						
KOTS				*e*S	Sg	23 08 45.6	-2.2
	comp=Z,170nm,1.0s						
KTBS	Karatobe	6.38	27	*e*P	Pb	23 07 21.2	-0.7
	comp=Z,15nm,1.9s						
KTBS				*e*S	Sg	23 08 52.5	-3.0
	comp=Z,97nm,1.0s						
KUU	Kurty	6.43	24	*e*P	Pb	23 07 21.1	-1.5
	comp=Z,8.1nm,0.5s						
KUU				*e*S	Sg	23 08 52.7	-4.3
	comp=Z,75nm,1.2s						
KUU	Kurty	6.43	24	*e*Pn	Pn	23 07 06.1	+0.7
	comp=Z,11nm,1.0s,baz=24						
KUU	Kurty	6.43	24	*e*PN	Pn	23 07 06.1	+0.7
KUU				pmax	pmax		
	comp=Z,11nm,1.0s						
DHRM	DHARAMSHALA	6.50	152	*e*P	Pn	23 07 07.7	+1.1
DHRM				*e*S	Sn	23 08 20.6	-0.2
DHRM				IAML		23 08 30.7	
	comp=N,260nm,0.5s						
DHRM				IAML		23 08 33.2	
	comp=E,202nm,0.6s						
SATY	Saty	6.59	39	*e*Pn	Pn	23 07 09.6	+1.8
	baz=40						
SATY	Saty	6.59	39	*e*PN	Pn	23 07 09.6	+1.8
CHKK	Chushkaly	6.62	28	*e*P	Pb	23 07 25.5	-0.3
	comp=E,4.1nm,0.3s						
CHKK				*e*S	Sg	23 09 00.3	-2.7
	comp=E,70nm,0.2s						
CHKK	Chushkaly	6.62	28	*e*Pn	Pn	23 07 09.7	+1.7
	baz=28						
ZHN	Zhinishke	6.69	39	*e*Pn	Pn	23 07 09.8	+0.7
	baz=39						
ZHN	Zhinishke	6.69	39	*e*PN	Pn	23 07 09.8	+0.7
UZB	Uzynbulak	6.97	41	*e*Pn	Pn	23 07 15.0	+2.0
	comp=E,5.9nm,0.8s,baz=42						
UZB	Uzynbulak	6.97	41	*e*PN	Pn	23 07 15.0	+2.0
UZB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BTLS	Baital	7.04	8	*e*P	Pb	23 07 33.2	+0.2
	comp=Z,5.0nm,1.0s						
BTLS				*e*S	Sg	23 09 13.1	-3.4
	comp=Z,32nm,0.8s						
BTLS	Baital	7.04	8	*e*Pn	Pn	23 07 15.5	+1.8
	baz=7.4						
BTLS	Baital	7.04	8	*e*PN	Pn	23 07 15.5	+1.8
SHLS	Shalkode	7.21	43	*i* Pn	Pn	23 07 21.7	+5.4
	comp=Z,7.8nm,0.8s,baz=45						
SHLS	Shalkode	7.21	43	*i* P	Pn	23 07 21.6	+5.4
SHLS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BHK	Bhakra	7.29	154	*e*P	Pn	23 07 19.0	+1.7
SMLA	Simla	7.83	151	*e*P	Pn	23 07 27.4	+2.9
SMLA				*e*S	Sn	23 08 51.3	-1.9
SMLA				IAML		23 08 57.5	
	comp=E,255nm,0.7s						
SMLA				IAML		23 08 59.3	
	comp=N,223nm,0.7s						
TDK	Taldyqorghan	8.13	30	*e*Pn	Pn	23 07 29.9	+1.1
	baz=30						
TDK	Taldyqorghan	8.13	30	*e*P	Pn	23 07 29.8	+1.1
HRA	Herat	9.24	250	Pn	Pn	23 07 44.4	+0.2
KUDL	Kundal	10.38	161	*e*P	Pn	23 08 00.6	+0.9
KUDL				*e*S	Sn	23 09 50.9	-5.1
MAKZ	Makanchi	11.08	35	P	Pn	23 08 11.7	+2.5
MAKZ	Makanchi	11.08	35	⇑Pn	Pn	23 08 11.9	+2.7
	comp=N,11nm,0.9s						
MAKZ	Makanchi	11.08	35	Pn	Pn	23 08 11.7	+2.5
MK31	Makanchi Array	11.21	36	*d i*P	Pn	23 08 13.5	+2.5
MK31	Makanchi Array	11.21	36	⇓Pn	Pn	23 08 13.4	+2.4
	comp=N,2.5nm,0.7s,baz=215,slow=12,SNR=17						
MK31	Makanchi Array	11.21	36	Pn	Pn	23 08 13.4	+2.4
MKAR	Makanchi Array	11.21	36	P	Pn	23 08 13.6	+2.6
	comp=N,0.3nm,0.3s,baz=220,slow=14,SNR=24						
MKAR				LR	LR	23 13 05.4	
	comp=N,150nm,19.7s,baz=218,slow=40						
MKAR	Makanchi Array	11.21	36	P	Pn	23 08 13.0	+2.0
MKAR	Makanchi Array	11.21	36	Pn	Pn	23 08 13.0	+2.0
GEYT	Alibeck	11.54	274	P	Pn	23 08 14.2	-1.2
	comp=N,1.6nm,0.3s,baz=103,slow=12,SNR=7.0						
GEYT				S	Sn	23 10 18.7	-5.7
	comp=N,0.5nm,0.3s,baz=94,slow=15,SNR=3.1						
GEYT				LR	LR	23 13 52.7	
	comp=N,201nm,19.7s,baz=220,slow=43						
GEYT	Alibeck	11.54	274		Pn	23 08 14.4	-1.1
GYA0B	ALIBECK ARRAY	11.54	274	Pn	Pn	23 08 15.0	-0.5
WMQ	Urumqi	12.68	58	*e*P	Pn	23 08 32.0	+0.9
WMQ				sP		23 08 39.5	
WMQ				S	Sn	23 10 53.0	+0.6
WMQ				SS	SnSn	23 11 08.5	+4.1
WMQ				pmax	pmax		
	comp=N,18nm,0.9s						
WMQ				pmax	pmax		
	comp=N,120nm,4.5s						
WMQ				LR	LR		
	comp=N,580nm,8.1s						
WMQ				LR	LR		
	comp=N,350nm,6.9s						
ZSN	Zaisan	12.92	40	*e*Pn	Pn	23 08 36.4	+2.0
	baz=40						
ZSN	Zaisan	12.92	40	*e*P	Pn	23 08 36.3	+2.0
PYUN	Piuthan	13.13	136	*e*P	Pn	23 08 33.5	-4.0
	comp=N,43nm,0.5s						
KURBB	Kurchatov Arra	13.21	16	P	Pn	23 08 37.3	-1.0
	comp=N,0.1nm,0.3s,baz=206,slow=11,SNR=32						
KURBB	Kurchatov Arra	13.21	16	P	Pn	23 08 39.2	+1.0
KURBB	Kurchatov Arra	13.21	16	⇓Pn	Pn	23 08 39.2	+1.0
	comp=N,12nm,0.8s						
KURK	Kurchatov	13.32	16	*c i*P	Pn	23 08 39.2	-0.5
KURK				pmax	pmax		
	comp=Z,16nm,1.0s						
KURK	Kurchatov	13.32	16	⇓Pn	Pn	23 08 40.0	+0.3
	comp=Z,14nm,0.9s						
KURK	Kurchatov	13.32	16		Pn	23 08 39.6	-0.2
DANN	Dangsing	13.37	133	*e*P	Pn	23 08 36.1	-4.7
	comp=Z,10.0nm,0.4s						
SEM	Semipalatinsk	13.45	21	*e*P	Pn	23 08 40.2	-1.5
	comp=Z,5.4nm,0.8s,baz=21						
SEM	Semipalatinsk	13.45	21	*e*P	Pn	23 08 40.2	-1.5
SEM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
JHNI	Jhansi	13.49	157	*e*P	Pn	23 08 40.8	-1.4
JHNI				*e*S	Sn	23 11 07.9	-4.3
KOLN	Koldanda	13.72	135	*e*P	Pn	23 08 40.8	-4.7
	comp=Z,5.0nm,0.4s						
GKN	Gorkha	14.14	132	*e*P	Pn	23 08 46.7	-4.5
	comp=Z,9.0nm,0.5s						
AB31	Akbulak array	14.49	325	P	Pn	23 08 55.7	-0.1
AB31				SN	Sn	23 11 37.1	+0.7
AB31	Akbulak array	14.49	325	⇓Pn	Pn	23 08 55.7	-0.1
	comp=Z,10nm,0.8s,baz=137,slow=13,SNR=48						
AB31				Sn	Sn	23 11 37.1	+0.7
	comp=Z,8.8nm,0.7s,baz=146,slow=23,SNR=6.8						
ABKAR	Akbulak array	14.49	325	Pn	Pn	23 08 53.5	-2.2
ABKAR	Akbulak array	14.49	325	Pn	Pn	23 08 53.8	-2.0
KKN	Kakani	14.68	131	*e*P	Pn	23 08 53.2	-5.4
	comp=Z,14nm,0.5s						
PKIN	Phulchoki	14.91	131	*e*P	Pn	23 08 56.6	-5.2
	comp=Z,34nm,0.5s						
PKI	Pulchoki	14.92	131	*e*P	Pn	23 08 57.1	-4.9
	comp=Z,29nm,0.5s						
GUN	Gumba	14.96	129	*e*P	Pn	23 08 57.5	-5.0
	comp=Z,17nm,0.4s						
BHUJ	Bhuj	15.00	191	*e*P	Pn	23 09 05.6	+2.9
BHUJ				IAmb	IAmb	23 09 09.2	
	comp=Z,81nm,1.3s						
BHUJ				*e*S	Sn	23 11 46.4	-2.5
BVAR	Borovoye Array	15.05	355	P	Pn	23 09 02.4	-0.9
	comp=Z,0.8nm,0.3s,baz=174,slow=15,SNR=26						
BRVK	Borovoye	15.09	354	*ce*P	Pn	23 09 03.0	-0.8
BRVK				pmax	pmax		
	comp=Z,20nm,1.3s						
BRVK	Borovoye	15.09	354	Pn	Pn	23 09 03.1	-0.7
BRVK				IAmb	IAmb	23 09 05.4	
	comp=Z,12nm,0.8s						
BHPL	Bhopal	15.31	163	*e*P	Pn	23 09 06.7	-0.3
BHPL				IAmb	IAmb	23 09 14.4	
	comp=Z,10nm,0.6s						
BHPL				*e*S	Sn	23 11 53.8	-3.0
DGZ	Jazzator, Alta	15.70	38	⇓*e*P	Pn	23 09 11.9	-0.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKTO	Aktyubinsk	16.21	324	P	Pn	23 09 17.9	-0.5
	comp=Z,1.4nm,0.3s,baz=118,slow=14,SNR=18						
AKTO				S	Sn	23 12 11.1	-7.1
	comp=Z,0.1nm,0.3s,baz=29,slow=14,SNR=4.0						
AKTO	Aktyubinsk	16.21	324	P	Pn	23 09 20.2	+1.8
AKTO				SN	Sn	23 12 19.9	+1.7
AKTO	Aktyubinsk	16.21	324	⇓Pn	Pn	23 09 20.2	+1.8
	comp=Z,40nm,1.1s						
AKTO				⇑Sn	Sn	23 12 20.0	+1.7
	comp=Z,27nm,1.4s						
LSA	Lhasa	17.40	113	P	Pn	23 09 34.2	+0.2
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LSA	Lhasa	17.40	113		Pn	23 09 34.2	+0.2
ZALV	Zalesovo Beam	17.92	24	P	Pn	23 09 39.1	-0.7
	comp=Z,2.7nm,0.3s,baz=221,slow=10,SNR=51						
ZALV	Zalesovo Beam	17.92	24	Pn	Pn	23 09 39.5	-0.3
BOK	Bokaro	18.13	138	*e*P	Pn	23 09 42.7	+0.1
BOK				IAmb	IAmb	23 09 48.1	
	comp=Z,20nm,0.7s						
MAK	Makhachkala	19.77	292	*e*P	Pn	23 10 02.6	+0.4
MAK				*e*S	S	23 13 43.0	-0.4
MAK				pmax	pmax		
	comp=Z,226nm,1.8s						
MAK				MLR	MLR		
	comp=Z,218nm,18.0s						
SVE	Sverdlovsk	20.42	341	*e*P	P	23 10 07.8	+0.1
SVE				*e*S	S	23 13 56.7	+0.5
SVE				pmax	pmax		
	comp=Z,12nm,0.9s						
SHL	Shillong	20.45	122	P	P	23 10 08.7	+0.2
SHL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SHL	Shillong	20.45	122	P	P	23 10 08.7	+0.2
SHL				IAmb	IAmb	23 10 17.0	
	comp=Z,9.2nm,0.8s						
ARU	Arti	20.66	337	P	P	23 10 10.2	-0.2
	comp=Z,4.7nm,0.6s,baz=142,slow=7.8,SNR=19						
ARU	Arti	20.66	337	*c i*P	P	23 10 10.8	+0.4
ARU						23 10 29.2	
ARU				S	S	23 14 01.0	0.0
ARU				SS	SnSn	23 14 25.4	+5.1
ARU				pmax	pmax		
	comp=Z,38nm,1.3s						
ARU	Arti	20.66	337	P	P	23 10 10.3	-0.1
ARU				IAmb	IAmb	23 10 15.1	
	comp=Z,21nm,0.8s						
GROC	Groznyy	21.04	293	*e*P	P	23 10 16.4	+1.9
GROC				*e*S	S	23 14 07.6	-1.1
GROC				pmax	pmax		
	comp=Z,25nm,0.7s						
GTA	Gaotai	21.14	78	*e*P	P	23 10 16.5	+0.6
GTA				pP	pP	23 10 20.0	-0.1
GTA				sP	sP	23 10 23.8	+1.7
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,74nm,4.0s						
GTA				LR	LR		
	comp=Z,190nm,14.9s						
GTA				LR	LR		
	comp=Z,180nm,13.8s						
GTA				LR	LR		
	comp=Z,240nm,15.3s						
HYB	Hyderabad	21.20	164	*i* P	P	23 10 20.0	+3.5
GNI	Garni	21.79	284	P	P	23 10 24.3	+1.5
	comp=Z,12nm,0.9s,baz=111,slow=5.8,SNR=7.4						
GNI	Garni	21.79	284	P	P	23 10 23.3	+0.4
GNI				pmax	pmax		
	comp=Z,19nm,0.8s						
GNI	Garni	21.79	284	P	P	23 10 23.3	+0.4
GNI				IAmb	IAmb	23 10 42.8	
	comp=Z,19nm,0.8s						
MIB	Mutribah	22.58	256	*e*P	P	23 10 33.3	+2.1
BELG	Belogornoye	22.60	317	P	P	23 10 30.8	-0.5
	comp=Z,18nm,0.8s,baz=357,slow=2.2,SNR=14						
BELG	Belogornoye	22.60	317	*de*P	P	23 10 30.5	-0.8
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NCK	Nalchik	22.66	293	⇓*e*P	P	23 10 33.2	+1.2
NCK				pmax	pmax		
	comp=Z,36nm,0.6s						
ONI	Oni	22.72	291	P	P	23 10 34.3	+1.6
ONI				pmax	pmax		
	comp=Z,18nm,0.9s						
ONI	Oni	22.72	291	P	P	23 10 34.3	+1.6
ONI				IAmb	IAmb	23 10 39.6	
	comp=Z,18nm,0.9s						
RDF	Al-Radifah	22.84	254	*e*P	P	23 10 35.5	+1.5
KBZ	Khabaz	23.18	294	P	P	23 10 38.3	+1.0
	comp=Z,2.3nm,0.7s,baz=112,slow=10,SNR=6.7						
KBZ	Khabaz	23.18	294	⇑*e*P	P	23 10 38.2	+0.8
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GOF	Gofitskoye	23.20	297	⇑*e*P	P	23 10 43.4	+5.8
KIV	Kislovodsk	23.35	294	*e*P	P	23 10 39.4	+0.2
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV				MLR	MLR		
	comp=Z,57nm,14.0s						
KIV	Kislovodsk	23.35	294	P	P	23 10 39.8	+0.6
KIV				IAmb	IAmb	23 10 59.1	
	comp=Z,15nm,0.9s						
MOY	Mondy	24.02	46	*e*P	P	23 10 46.8	+1.1
MOY				pmax	pmax		
	comp=Z,22nm,2.2s						
LZH	Lanzhou	24.84	85	*e*P	P	23 10 54.0	+0.6
LZH				pP	pP	23 10 58.3	+0.4
LZH				sP	sP	23 11 02.0	+2.2
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				LR	LR		
	comp=Z,290nm,13.0s						
LZH				LR	LR		
	comp=Z,290nm,13.6s						
LZH				LR	LR		
	comp=Z,180nm,13.6s						
ZAK	Zakamensk	24.92	51	*e*P	P	23 10 54.2	+0.3
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MARD	Mardin	25.24	278		PcP	23 14 29.1	-1.1
VRH	Novokhopyorsk	25.46	311	*e*P	P	23 10 58.9	+0.2
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KIRV	Kirov	25.49	331	P	P	23 10 58.8	0.0
	comp=Z,7.4nm,0.5s,baz=150,slow=8.1,SNR=3.5						
SONM	Songino Array	26.32	57	P	P	23 11 07.4	+0.8
	comp=Z,6.4nm,0.9s,baz=256,slow=10.0,SNR=14						
SONM	Songino Array	26.32	57	P	P	23 11 07.2	+0.6
SONM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	Songino Array	26.32	57	P	P	23 11 07.2	+0.6
SONM				IAmb	IAmb	23 11 11.9	
	comp=Z,5.9nm,1.0s						
ULN	Ulaanbaatar	26.76	57	⇑*e*P	P	23 11 11.3	+0.7
ULN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ULN	Ulaanbaatar	26.76	57	P	P	23 11 10.8	+0.1
ULN				IAmb	IAmb	23 11 20.0	
	comp=Z,5.5nm,1.0s						
VORD	Divnogorie	26.86	310	*e*P	P	23 11 11.8	+0.5
VORD				pmax	pmax		
	comp=Z,9.0nm,0.7s						
VSR	Storozhevoye	27.00	310	*e*P	P	23 11 12.5	-0.1
VSR				pmax	pmax		
	comp=Z,20nm,1.8s						
RAYN	Ar Rayn	27.39	246	P	P	23 11 16.3	-0.2
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RAYN	Ar Rayn	27.39	246	P	P	23 11 16.2	-0.2
LPSR	Galich'ya Gora	27.55	313	*e*P	P	23 11 18.5	+1.0
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
XAN	Xi'an	29.41	87	P	P	23 11 34.5	+0.2
XAN				pP	sP	23 11 43.8	+3.1
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OBN	Obninsk	29.70	317	⇑*e*P	P	23 11 38.3	+1.8
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR	Chiang Mai Arr	30.07	123	P	P	23 11 39.6	-0.6
	comp=Z,1.8nm,0.3s,baz=309,slow=12,SNR=2.1						
BRTR	Keskin Array B	30.31	286	P	P	23 11 43.5	+1.2
	comp=Z,0.6nm,0.5s,baz=101,slow=7.7,SNR=5.6						
BRTR	Keskin Array B	30.31	286	P	P	23 11 42.4	0.0
NRIK	Noril'sk	32.34	10	P	P	23 12 00.0	+0.3
	comp=Z,3.5nm,0.8s,baz=192,slow=7.6,SNR=7.8						
NRIK				LR	LR	23 26 54.7	
	comp=Z,55nm,19.3s,baz=272,slow=40						
NRIK	Noril'sk	32.34	10	IAmb	IAmb	23 12 01.0	
	comp=Z,4.6nm,0.9s						
BORA	Eskisehir	32.70	287	P	P	23 12 02.0	-1.3
BORA				IAmb	IAmb	23 12 11.0	
	comp=Z,3.9nm,1.0s						
AKASG	Malin Array Be	33.08	307	P	P	23 12 07.2	+0.8
	comp=Z,2.0nm,0.6s,baz=79,slow=7.5,SNR=9.1						
AKASG	Malin Array Be	33.08	307	*ce*P	P	23 12 09.6	+3.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	33.08	307	P	P	23 12 07.2	+0.8
AKBB	Malin Array Si	33.08	307	P	P	23 12 06.9	+0.5
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKBB	Malin Array Si	33.08	307	P	P	23 12 06.9	+0.5
AKBB				IAmb	IAmb	23 12 14.9	
	comp=Z,3.1nm,0.7s						
SORM	Soroca	33.51	302	P	P	23 12 10.6	+0.4
SORM	Soroca	33.51	302	P	P	23 12 10.6	+0.4
TPGR	Topolog	33.56	296	P	P	23 12 15.2	+4.5
ELL	Elmali	33.83	281	P	P	23 12 14.8	+1.6
ELL				pmax	pmax		
	comp=Z,18nm,0.8s						
ELL	Elmali	33.83	281	P	P	23 12 14.8	+1.6
VARL	Varlezi	33.90	298	P	P	23 12 16.2	+2.6
AKAS	Kas	34.20	280	P	P	23 12 17.0	+0.5
VRI	Vrincioaia	34.68	298	⇓P	P	23 12 23.9	+3.5
VRI	Vrincioaia	34.68	298	⇓P	P	23 12 23.9	+3.5
TESR	Tescani	34.70	299	⇑P	P	23 12 22.2	+1.6
PLOR	Plostina	34.74	298	⇓P	P	23 12 23.9	+3.0
PLOR	Plostina	34.74	298	⇓P	P	23 12 23.9	+3.0
COVR	Voineasa-Covas	35.05	298	P	P	23 12 26.5	+2.9
MLR	Muntele Rosu	35.26	297	⇑P	P	23 12 29.0	+3.5
MLR	Muntele Rosu	35.26	297	P	P	23 12 28.0	+2.5
MLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MLR	Muntele Rosu	35.26	297	P	P	23 12 28.0	+2.5
MLR				IAmb	IAmb	23 12 36.2	
	comp=Z,4.8nm,0.9s						
BURAR	Bucovina Array	35.63	301	⇑P	P	23 12 30.0	+1.3
BURAR	Bucovina Array	35.63	301	⇑P	P	23 12 30.0	+1.3
BURAR	Bucovina Array	35.63	301	P	P	23 12 30.2	+1.6
ARCR	ARCALIA	36.24	300	⇓P	P	23 12 36.2	+2.4
FIA1	FINESS Array S	36.98	324	P	P	23 12 39.9	0.0
FINES	FINESS Array B	36.99	324	P	P	23 12 40.2	+0.3
	comp=Z,2.5nm,0.4s,baz=112,slow=9.3,SNR=20						
TRPA	Tarpa	37.41	302	P	P	23 12 45.6	+1.9
KOLS	Kolonicke sedl	37.54	303	*e*P	P	23 12 47.0	+2.2
KOLS	Kolonicke sedl	37.54	303	*e*P	P	23 12 47.0	+2.2
FNA	Florina	39.30	291	P	P	23 13 00.4	+0.5
FNA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FNA	Florina	39.30	291	P	P	23 13 00.3	+0.5
ZEA	Zeya	39.99	49	*e*P	P	23 13 06.4	+1.1
ARCES	ARCESS Array B	40.24	336	P	P	23 13 07.3	+0.1
	comp=Z,2.7nm,0.6s,baz=106,slow=8.2,SNR=14						
ARCES	ARCESS Array B	40.24	336	P	P	23 13 07.5	+0.3
ARCES	ARCESS Array B	40.24	336	P	P	23 13 07.5	+0.3

VRAC	Vranov	41.23	304	P	P	23 13 19.1	+3.5
VRAC	Vranov	41.23	304	P	P	23 13 19.1	+3.5
DPC	Dobruska-Polom	41.31	306	eP	P	23 13 20.1	+3.8
DPC				ex	x	23 13 30.4	
DPC	Dobruska-Polom	41.31	306	eP	P	23 13 20.1	+3.8
DPC				e		23 13 30.4	
KULM	Kulim	41.34	135	P	P	23 13 16.2	-0.6
KULM				IAmb	IAmb	23 13 34.0	
	comp=Z,8.1nm,1.0s						
UPC	Upice	41.49	306	eP	P	23 13 22.0	+4.3
UPC	Upice	41.49	306	eP	P	23 13 22.0	+4.3
CONA	Conrad Observa	41.88	302	eP	P	23 13 22.2	+1.2
	comp=Z,0.3nm,0.3s						
PRU	Pruhonice	42.48	306	eP	P	23 13 30.0	+4.2
PRU	Pruhonice	42.48	306	eP	P	23 13 30.0	+4.2
SOKA	Soboth	42.64	301	eP	P	23 13 28.3	+1.0
	comp=Z,1.0nm,0.6s						
CKRC	Cesky Krumlov	42.78	304	eP	P	23 13 34.8	+6.5
KSRS	Korea Array	43.08	73	P	P	23 13 28.8	-2.0
	comp=Z,0.5nm,0.3s,baz=271,slow=5.7,SNR=4.2						
GSI	Gunungsitoli	43.12	142	P	P	23 13 32.1	+0.8
GERES	GERESS Array B	43.18	304	P	P	23 13 32.0	+0.4
	comp=Z,0.4nm,0.6s,baz=66,slow=7.5,SNR=5.6						
GERES				PP	PcP	23 15 17.9	-3.0
	comp=Z,0.4nm,0.8s,baz=88,slow=9.9,SNR=4.3						
SGRT	San Giovanni R	43.19	294	P	P	23 13 32.5	+0.7
KHC	Kasperske Hory	43.22	305	eP	P	23 13 33.9	+2.1
KHC	Kasperske Hory	43.22	305	P	P	23 13 33.5	+1.7
KHC				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KHC	Kasperske Hory	43.22	305	P	P	23 13 33.5	+1.7
CLL	Collm	43.31	308	eP	P	23 13 33.0	+0.5
CLL	Collm	43.31	308	eP	P	23 13 33.0	+0.5
NC405	NORSAR Array S	43.74	322	P	P	23 13 35.0	-0.9
TIXI	Tiksi	43.80	22	⇓eP	P	23 13 35.3	-0.9
TIXI				pmax	pmax		
	comp=Z,27nm,2.9s						
TIXI	Tiksi	43.80	22	P	P	23 13 35.6	-0.6
TIXI				IAmb	IAmb	23 13 36.6	
	comp=Z,4.6nm,0.7s						
NC602	NORSAR Array S	43.81	322	P	P	23 13 36.4	0.0
NC303	NORSAR Array S	43.92	322	P	P	23 13 38.2	+0.9
NB201	NORSAR Array S	43.94	322	P	P	23 13 38.3	+0.7
NB2	NORSAR Subarra	43.98	322	P	P	23 13 36.7	-1.2
	comp=Z,15nm,1.2s,baz=92,slow=8.6						
NOA	NORSAR Array B	43.98	322	P	P	23 13 37.6	-0.2
	comp=Z,2.8nm,0.9s,baz=92,slow=7.7,SNR=9.2						
ZOU	Zoufplan	44.05	301	P	P	23 13 38.6	-0.2
NBO00	NORSAR Array S	44.19	322	P	P	23 13 38.7	-0.9
NC204	NORSAR Array S	44.21	322	P	P	23 13 39.3	-0.4
ABTA	Abfaltersbach	44.33	301	eP	P	23 13 41.7	+0.8
	comp=Z,1.0nm,0.5s						
NRCA	Norcia	44.80	296	P	P	23 13 45.4	+0.7
NRCA				IAmb	IAmb	23 14 02.3	
	comp=Z,3.7nm,1.0s						
CTI	Castel Tesino	45.06	301	P	P	23 13 47.6	+0.8
CTI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CTI	Castel Tesino	45.06	301	P	P	23 13 47.6	+0.8
DAVA	Damuels	45.98	303	eP	P	23 13 53.9	-0.2
	comp=Z,1.9nm,0.6s						
MSSA	Maissana	46.94	299	P	P	23 14 03.2	+1.6
MSSA				IAmb	IAmb	23 14 06.5	
	comp=Z,5.4nm,0.9s						
SENIN	Lac Senin/Sane	47.92	302	P	P	23 14 10.2	+0.9
SENIN				IAmb	IAmb	23 14 22.4	
	comp=Z,2.2nm,0.9s						
JMN	Monobe	48.94	75	P	P	23 14 18.9	+1.8
JWT	Wachi	49.49	73	P	P	23 14 22.0	+0.7
KEST	Kesra	49.86	288	P	P	23 14 25.3	+1.1
	comp=Z,2.2nm,0.7s,baz=302,slow=6.1,SNR=4.0						
MJAR	Matsushiro Arr	51.11	70	P	P	23 14 32.5	-1.1
	comp=Z,1.2nm,0.4s,baz=286,slow=11,SNR=4.2						
BILL	Bilibino	56.59	27	iP	P	23 15 12.8	-0.4
BILL				i		23 16 11.1	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ESDC	Sonseca Array	57.95	298	P	P	23 15 22.9	-0.4
	comp=Z,2.9nm,0.9s,baz=61,slow=7.2,SNR=8.8						
SUMG	Summit	60.03	341	iP	P	23 15 39.0	+1.4
TORD	Torodi Ar. Bea	67.13	269	P	P	23 16 23.5	-1.4
	comp=Z,2.2nm,0.5s,baz=51,slow=5.9,SNR=26						
KOWA	Kowa	70.86	274	P	P	23 16 48.0	0.0
KOWA				IAmb	IAmb	23 16 51.7	
	comp=Z,5.1nm,1.0s						
INK	Inuvik	72.13	10	P	P	23 16 54.7	-0.2
	comp=Z,2.9nm,0.7s,baz=352,slow=5.6,SNR=9.9						
COLA	College	72.58	17	ceP	P	23 16 57.7	+0.1
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ILAR	Eielson Array	72.89	17	P	P	23 16 58.6	-0.9
	comp=Z,2.1nm,0.8s,baz=317,slow=4.8,SNR=25						
DBIC	Dimbokro	76.15	268	P	P	23 17 18.1	-1.1
	comp=Z,1.6nm,0.7s,baz=18,slow=6.4,SNR=1.7						
YKA	Yellowknife Ar	79.61	3	P	P	23 17 37.2	-0.5
	comp=Z,2.1nm,0.6s,baz=349,slow=5.4,SNR=42						
SCHQ	Schefferville	81.19	338	P	P	23 17 45.7	-0.7
	comp=Z,5.7nm,1.0s,baz=54,slow=7.5,SNR=4.2						
WRA	Warramunga Arr	81.67	123	P	P	23 17 47.5	-1.8
	comp=Z,2.0nm,0.7s,baz=325,slow=5.0,SNR=12						
ASAR	Alice Springs	84.04	126	P	P	23 18 00.1	-1.5
	comp=Z,1.0nm,0.7s,baz=315,slow=5.3,SNR=11						
ASAR	Alice Springs	84.04	126	P	P	23 18 00.7	-0.9
ASAR	Alice Springs	84.04	126	P	P	23 18 00.7	-0.9
PLCA	Paso Flores	151.63	253	PKPbc	PKPbc	23 25 24.0	-1.1
	comp=Z,3.0nm,0.9s,baz=18,slow=2.0,SNR=5.4						

*INET **27** 23:06:57.3, 10°.85N×86°.81W, h15^{km}, MW3.6*

UCR 27 23:06:58.9±1.1, **10°.70N×86°.59W, h0**^{km}±19^{km}, **MW3.9, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	Horizontes, Gu	0.97	89	eP	Pb	23 07 18.5	-0.2
SAJU	San Juanillo,	1.06	126	eP	Pg	23 07 19.3	0.0
LAPC	Finca la Perla	1.13	86	iP	Pg	23 07 20.3	-0.4
LAPC				iS	Sb	23 07 37.5	+0.7
BUEV	Buena Vista	1.16	85	iP	Pg	23 07 21.0	-0.2
BUEV				iS	Sn	23 07 38.5	-0.7
GB1A	Borinquen Arri	1.17	84	iP	Pg	23 07 21.2	-0.2
GPS2	Hotel Rincn d	1.21	87	iP	Pg	23 07 21.8	-0.4
BUAI	Buenos Aires	1.24	82	iP	Pg	23 07 22.8	0.0
INDI	Punta indio, G	1.35	128	eP	Pg	23 07 23.7	-1.1
COLC	Colonia	1.36	91	iP	Pg	23 07 23.9	-1.1
CUI	Cuipilapa	1.40	91	iP	Pg	23 07 24.2	-1.5
JTS	Las Juntas de	1.66	104	eP	Pn	23 07 28.5	-0.8
RIMA	Rio Macho	2.83	109	eP	Pn	23 07 46.4	+0.8

*IDC **27** 23:14:20.5±2.4, 37°.93N×72°.77E, h0^{km}, mb3.6/4, mb1 3.7/7, mb1mx3.4/57, mbtmp3.6/7, ML3.1/3, Error ellipse: s-maj=62.2km s-min=23.5km az=156.0*

ISC 27 23:14:21.8±1.4, **37°.9N**±0°.1×**72°.8E**±0°.1, **h10**^{km}, **n9**, σ1^{s}.**63**/10, **mb3.5**/4, **3C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.87	15	⇓Pg	Pb	23 15 44.6	-2.7
	8.5nm,0.8s						
AAK				⇑Lg	Lg	23 16 42.6	
	17nm,1.2s						
KK09	Karatay Array	5.48	342	⇑Pn	Pn	23 15 44.9	+1.3
	5.1nm,0.7s,baz=153,slow=13						
KK09				⇑Sn	Sn	23 16 47.8	+1.1
	7.9nm,0.6s,baz=148,slow=23						
MKAR	Makanchi Array	11.28	35	Pn	Pn	23 17 03.6	+0.6
	0.0nm,0.3s,baz=220,slow=16,SNR=2.2						
GEYT	Alibeck	11.63	275	Pn	Pn	23 17 07.0	-0.8
	0.5nm,0.3s,baz=122,slow=11,SNR=2.1						
ZALV	Zalesovo Beam	18.02	23	P	P	23 18 31.6	-0.9
	0.2nm,0.3s,baz=221,slow=11,SNR=4.3						
SONM	Songino Array	26.32	57	P	P	23 19 59.8	+2.0
	0.9nm,0.9s,baz=248,slow=11,SNR=5.5						
FINES	FINESS Array B	37.14	325	P	P	23 21 33.8	+1.4
	3.9nm,1.1s,baz=116,slow=8.7,SNR=3.6						
TORD	Torodi Ar. Bea	67.21	269	P	P	23 25 15.8	-0.7
	0.2nm,0.6s,baz=45,slow=5.8,SNR=1.9						
YKA	Yellowknife Ar	79.74	4	P	P	23 26 29.1	-0.4
	0.1nm,0.4s,baz=352,slow=5.5,SNR=2.1						

NOU 27 23:16:38.1, 16°.84S×167°.07E, h13^{km}, **MLv4.3**/15, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.38	130	P	Pn	23 17 02.9	-0.2
RTV	Rentapao	1.60	126	P	Pn	23 17 06.1	-0.1
LIFNC	LIFOU	3.92	178	P	Pn	23 17 36.5	-1.5
KOUNC	Koumac, New Ca	4.54	215	P	Pn	23 17 47.1	+0.6
MARNC	Mare, Loyalty	4.71	169	P	Pn	23 17 49.3	+0.5
YATNC	Mamie plateau,	5.20	182	P	Pn	23 17 54.1	-1.5
DZM	Mont Dzumac	5.24	186	P	Pn	23 17 56.2	0.0
ONTNC	Ouen Toro	5.47	186	P	Pn	23 18 00.0	+0.7
OUENC	Ouen Island, N	5.55	182	P	Pn	23 18 00.6	+0.1

*IDC **27** 23:19:46.6±2.0, 6°.54S×129°.96E, h149^{km}±22^{km}, mb3.5/3, mb1 3.6/9, mb1mx3.2/44, mbtmp4.0/9, Error ellipse: s-maj=23.3km s-min=18.4km az=104.0*

ISC 27 23:19:44.7±0.8, **6°.64S**±0°.06×**130°.12E**±0°.09, **h146**^{km}, **n9**, σ**3**^{s}.**71**/14, **mb3.6**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.85	11	P	Pn	23 21 10.8	+1.3
	1.9nm,0.3s,baz=205,slow=19,SNR=7.2						
SIJI				S	Sn	23 22 08.5	-7.1
	3.5nm,0.3s,baz=244,slow=22,SNR=8.5						
BATI	Baumata	7.31	241	P	Pn	23 21 29.1	+0.1
	3.2nm,0.3s,baz=72,slow=6.4,SNR=1.7						
BATI				S	Sn	23 22 51.3	+0.6
	4.9nm,0.3s,baz=330,slow=4.8,SNR=2.5						
FITZ	Fitzroy Crossi	12.20	201	P	Pn	23 22 35.8	+2.0
	baz=8.7,slow=13						
FITZ				S	Sn	23 24 43.5	-5.1
	1.1nm,0.3s,baz=150,slow=15,SNR=7.0						
WRA	Warramunga Arr	13.84	163	P	Pn	23 22 58.0	+3.1
	0.7nm,0.3s,baz=351,slow=12,SNR=17						
WRA				S	Sn	23 25 23.8	-4.5
	1.6nm,0.3s,baz=340,slow=20,SNR=8.0						
PMG	Port Moresby	17.09	100	P	Pn	23 23 38.3	+3.3
	1.5nm,0.3s,baz=305,slow=12,SNR=1.8						
ASAR	Alice Springs	17.31	168	P	Pn	23 23 40.8	+3.1
	0.3nm,0.3s,baz=355,slow=12,SNR=12						
ASAR				S	S	23 26 45.8	-4.2
	0.3nm,0.3s,baz=353,slow=27,SNR=5.2						
SONM	Songino Array	58.14	341	P	P	23 29 23.8	+0.6
	0.3nm,0.4s,baz=165,slow=6.3,SNR=8.9						
MKAR	Makanchi Array	67.99	327	P	P	23 30 28.9	+0.7
	1.4nm,0.3s,baz=115,slow=8.2,SNR=50						
KURBB	Kurchatov Arra	72.27	328	P	P	23 30 54.1	0.0
	0.5nm,0.5s,baz=122,slow=5.2,SNR=5.3						

*IDC **27** 23:34:21.1±3.9, 8°.28S×119°.07E, h169^{km}±38^{km}, mb3.2/3, mb1 3.6/6, mb1mx2.9/36, mbtmp4.0/6, Error ellipse: s-maj=72.9km s-min=15.8km az=58.0*

ISC 27 23:34:19.2±1.0, **8°.6S**±0°.1×**118°.82E**±0°.09, **h156**^{km}, **n16**, σ1^{s}.**84**/18, **mb3.8**/4, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	3.65	15	P	Pn	23 35 14.4	-0.7
	0.4nm,0.3s,baz=154,slow=6.3,SNR=1.6						
JAGI	Jajag, Banyuwa	4.61	271	P	Pn	23 35 27.3	-0.4
BATI	Baumata	5.05	109	P	Pn	23 35 34.0	+0.5
	22nm,0.3s,baz=294,slow=10.0,SNR=10.0						
BATI				S	Sn	23 36 30.2	-1.3
	15nm,0.3s,baz=299,slow=20,SNR=3.2						
SOEI	Soe	5.51	103	P	Pn	23 35 41.1	+1.5
FITZ	Fitzroy Crossi	11.57	146	P	Pn	23 37 01.2	+1.4
	baz=333,slow=16						
FITZ				S	Sn	23 39 03.0	-4.8
	0.7nm,0.3s,baz=175,slow=20,SNR=9.2						
KNRA	Kununurra	12.02	127	P	Pn	23 37 05.4	-0.2
	36nm,1.6s						
DRS	Darwin Rock St	12.49	109	P	Pn	23 37 12.0	+0.3
	15nm,1.1s						
MTN	Manton Dam	12.83	110	P	Pn	23 37 15.3	-0.8
	48nm,1.6s						
WRKA	Warakurna	18.71	152	P	Pn	23 38 28.7	+0.6
	16nm,0.6s						
WRA	Warramunga Arr	18.80	129	P	P	23 38 28.1	+1.1
	0.4nm,0.3s,baz=302,slow=12,SNR=14						
WRAB	Tennant Creek	18.80	129	P	Pn	23 38 28.2	-1.1
ASAR	Alice Springs	20.84	138	P	P	23 38 50.8	+2.0
	0.9nm,0.3s,baz=316,slow=8.9,SNR=28						
QIS	Mount Isa	23.35	123	P	P	23 39 15.5	+1.7
	4.9nm,1.9s						
OOD	Oodnadatta	24.90	142	P	P	23 39 30.0	+2.3
	12nm,0.6s						
STKA	Stephens Creek	31.40	141	P	P	23 40 27.5	+1.9
	1.0nm,0.4s,baz=327,slow=10,SNR=5.9						
MKAR	Makanchi Array	63.99	333	P	P	23 44 34.6	-1.3
	0.1nm,0.4s,baz=145,slow=7.1,SNR=4.6						

*IDC **27** 23:47:04.5±0.9, 31°.80S×71°.58W, h0^{km}, mb4.5/5, mb1 4.4/10, mb1mx4.2/27, mbtmp4.3/10, ML4.1/5, MS3.5/5, Ms1 3.5/5, ms1mx3.3/19, Error ellipse: s-maj=28.2km s-min=24.0km az=113.0*

*SJA **27** 23:47:06.6±0.7, 31°.75S×72°.10W, h52^{km}±8^{km}, ML4.8, MW4.5*

*VAO **27** 23:47:07.9±1.2, 31°.91S×71°.82W, h37^{km}, mb4.5*

*GUC **27** 23:47:09.4±0.6, 31°.78S×71°.66W, h48^{km}±3^{km}, ML4.8*

*NEIC **27** 23:47:09.9, 31°.76S×71°.74W, h40^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.11; $M_{\theta\theta}$0.04; $M_{\phi\phi}$-3.15; $M_{r\theta}$0.55; $M_{\theta\phi}$0.60; $M_{\phi r}$-2.82; Fault plane solution: $M_0$4.29000×10^{15} NP1:ϕ_s169.25000°, δ66.04000°, λ89.64000°. NP2:ϕ_s350.13000°, δ23.96000°, λ90.80000°. Principal axes: T 4.2114, Plg69.0000°, Azm79.0000°; N 0.1534, Plg0.0000°, Azm169.0000°; P -4.3648, Plg21.0000°, Azm260.0000°;*

*NEIC **27** 23:47:10.4±1.5, 31°.77S±0°.03×71°.71W±0°.09, h38^{km}±6^{km}, mb4.5/12, Mwr4.4/39, ML4.8(GUC) Error ellipse: s-maj=10.8km s-min=4.6km az=94.0*

ISC 27 23:47:07.3±0.9, **31°.80S**±0°.01×**71°.73W**±0°.03, **h19**^{km}±3^{km}, **n169**, σ1^{s}.**64**/215, **mb4.6**/12, **MS4.1**/3, **4C-8D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.85	154	⇓iP	Pn	23 47 25.3	+1.2
VA06				iS	Sn	23 47 36.5	+0.5
VA06				IAML		23 47 39.7	
	comp=E,77µm,0.4s						
CO06	Fray Jorge	1.12	4	⇓iP	Pg	23 47 28.8	-0.2
CO06				eS	Sb	23 47 42.1	-0.2
CO06	Fray Jorge	1.12	4		Pg	23 47 28.8	-0.2
CO06				Sn	Sg	23 47 43.9	+0.1
VA01	Torpederas	1.22	177	eP	Pg	23 47 31.2	+0.2
VA01				eS	Sg	23 47 46.6	-0.4
VA01	Torpederas	1.22	177	Pn	Pg	23 47 31.2	+0.2
VA01				Sn	Sg	23 47 47.0	0.0
VA01	Torpederas	1.22	177	eP	Pn	23 47 29.6	+0.3
VA01				eS	Sg	23 47 47.7	+0.7
CO03	El Pedregal	1.31	43	⇓iP	Pb	23 47 31.4	+0.1
CO03				eS	Sb	23 47 47.0	-0.7
CO03	El Pedregal	1.31	43	Pn	Pb	23 47 31.0	-0.3
CO03				Sn	Sb	23 47 47.8	+0.1
ROCH	El Roble	1.32	153	⇓iP	Pg	23 47 32.4	-0.4
ROCH				⇓iP	Pb	23 47 32.0	+0.4
ROCH				eS	Sg	23 47 49.8	-0.4
ROCH				eS	Sg	23 47 50.1	-0.1
ROCH				IAML		23 47 53.5	
	comp=N,19µm,0.4s						
ROCH				IAML		23 47 54.0	
	comp=N,24µm,0.4s						
VA03	San Esteban	1.39	134	⇓iP	Pg	23 47 33.3	-0.9
VA03				eS	Sg	23 47 50.8	-1.5
VA03				IAML		23 47 54.7	
	comp=N,30µm,0.3s						
VA03	San Esteban	1.39	134		Pb	23 47 32.9	+0.3
VA03	San Esteban	1.39	134	eP	Pn	23 47 29.6	-2.1
VA03				eP	Pg	23 47 33.6	-0.6
VA03				eS	Sg	23 47 52.4	+0.1
VA03				IAML		23 47 57.0	
	comp=Z,12µm,0.6s						
MT02	Curacav	1.54	161	eP	Pb	23 47 35.6	+0.4
MT02				iS	Sb	23 47 55.0	+0.6
MT02	Curacav	1.54	161		Pb	23 47 35.6	+0.4
PEL	Peldehue	1.61	147	eP	Pb	23 47 36.7	+0.3
PEL				eS	Sb	23 47 56.4	+0.1
PEL				IAML		23 47 59.5	
	comp=E,9µm,0.3s						
PEL	Peldehue	1.61	147	eP	Pb	23 47 37.0	+0.6
PEL				eS	Sg	23 47 58.4	-0.8
PEL				eS	Sg	23 47 58.5	-0.8
MT05	Renca	1.80	152	eP	Pb	23 47 39.7	+0.1
MT05				eS	Sb	23 48 01.5	-0.2
MT05				IAML		23 48 11.7	
	comp=E,19µm,0.3s						
MT05	Renca	1.80	152		Pb	23 47 39.8	+0.1
MT05	Renca	1.80	152	eP	Pb	23 47 39.9	+0.3
MT05				eS	Sg	23 48 04.6	-0.7
MT05				IAML		23 48 11.5	
	comp=Z,4µm,0.3s						
GO04	Tololo Observa	1.81	27	⇑iP	Pb	23 47 38.9	-0.9
GO04				eS	Sb	23 48 01.0	-1.2
GO04	Tololo Observa	1.81	27		Pb	23 47 39.0	-0.9
GO04	Tololo Observa	1.81	27	eP	Pb	23 47 39.0	-0.9
GO04				eS	Sb	23 48 01.9	-0.4
VA05	Santo Domingo	1.86	177	⇓eP	Pb	23 47 39.8	-0.7
VA05				iS	Sn	23 48 02.2	+1.2
VA05				IAML		23 48 14.7	
	comp=E,13µm,0.4s						
VA05	Santo Domingo	1.86	177		Pb	23 47 40.0	-0.5
CO05	La Serena	1.92	13	eP	Pb	23 47 40.6	-1.1
CO05				eS	Sn	23 48 03.0	+0.5
CO05	La Serena	1.92	13		Pb	23 47 40.5	-1.2
FCH	Farellones	1.95	142	⇓eP	Pb	23 47 42.0	-0.4
FCH				iS	Sb	23 48 06.6	+0.1
MT09	Talagante	2.07	163	⇑eP	Pb	23 47 44.1	-0.2
MT09				eS	Sb	23 48 08.7	-1.0
MT09				IAML		23 48 22.1	
	comp=N,7µm,0.5s						
MT09	Talagante	2.07	163		Pb	23 47 44.2	-0.2
MT01	Popeta	2.10	169	⇑eP	Pb	23 47 43.7	-1.0
MT01				eS	Sb	23 48 09.2	-1.3
MT01	Popeta	2.10	169		Pb	23 47 43.9	-0.9
MT01	Popeta	2.10	169	eP	Pn	23 47 43.0	+1.6
MT01				eS	Sg	23 48 15.4	+0.5
BO04	La Punta	2.38	157	⇑eP	Pb	23 47 48.1	-1.5
BO04				eS	Sn	23 48 16.0	+2.0
BO04				IAML		23 48 26.0	
	comp=E,6µm,0.3s						
LMEL	Las Melosas	2.42	148	eP	Pb	23 47 49.1	-1.1
LMEL				eS	Sb	23 48 18.1	-1.6
LMEL				IAML		23 48 28.0	
	comp=N,7µm,0.4s						
ASAL	Salagasta	2.58	109	eP	Pb	23 47 52.5	-0.5
ASAL				eS	Sg	23 48 31.6	+1.3
ARCO	CERRO ARCO	2.59	114	eP	Pb	23 47 54.0	+0.8
ARCO				eS	Sg	23 48 32.5	+1.9
ARCO				IAML		23 48 34.6	
	comp=Z,2µm,0.4s						
ZON	Zonda	2.62	85		Pb	23 47 52.2	-1.4
ZON	Zonda	2.62	85	eP	Pb	23 47 53.0	-0.6
ZON				eS	Sg	23 48 33.1	+1.7
BO01	Tunca	2.64	168	eP	Pn	23 47 51.1	+2.2
BO01				eS	Sn	23 48 21.9	+1.5
BO01	Tunca	2.64	168		Pn	23 47 50.5	+1.7
BO01	Tunca	2.64	168	eP	Pn	23 47 50.9	+2.0
BO01				eP	Pn	23 47 51.0	+2.2
BO01				eS	Sb	23 48 26.4	+0.3
ACDV	Cuesta del Vie	2.77	55	eP	Pb	23 47 56.0	-0.2
ACDV				eS	Sg	23 48 33.0	-3.4
AAGR	Agrelo	2.77	118	eP	Pb	23 47 56.0	-0.2
AAGR				eS	Sg	23 48 37.6	+1.2
LCO	Las Campanas	2.92	18	eP	Pn	23 47 54.2	+1.3
LCO				eS	Sn	23 48 28.3	+0.7
LCO	Las Campanas	2.92	18		Pn	23 47 54.5	+1.6
LCO	Las Campanas	2.92	18	eP	Pn	23 47 54.0	+1.1
BO02	Sierra Bellavi	3.09	165	eP	Pn	23 47 57.2	+2.1
BO02				eS	Sn	23 48 33.9	+2.4
BO02				IAML		23 48 48.4	
	comp=E,4µm,0.3s						
BO02	Sierra Bellavi	3.09	165		Pn	23 47 57.8	+2.7
BO02	Sierra Bellavi	3.09	165	eP	Pn	23 47 57.0	+1.9
BO02				eS	Sb	23 48 37.6	-1.4
BO02				IAML		23 48 46.7	
	comp=Z,2µm,0.5s						
GO05	Huala	3.21	183	eP	Pn	23 47 57.7	+1.0
GO05				eS	Sn	23 48 33.1	-1.3
GO05	Huala	3.21	183		Pn	23 47 57.9	+1.2
GO05	Huala	3.21	183	eP	Pn	23 47 57.8	+1.2
GO05				eS	Sg	23 48 47.1	-3.2
AC04	Llanos de Chal	3.63	9	eP	Pn	23 48 03.0	+0.6
AC04				eS	Sn	23 48 44.6	-0.1
AC04	Llanos de Chal	3.63	9		Pn	23 48 03.6	+1.2
AC04	Llanos de Chal	3.63	9	eP	Pn	23 48 03.1	+0.7
AC04				eS	Sn	23 48 46.1	+1.5
AVFE	Valle Fertil	3.84	74	eP	Pn	23 48 08.7	+3.4
AVFE				eS	Sb	23 48 55.6	-4.8
AVFE				IAML		23 49 03.1	
	comp=Z,1µm,0.5s						
ML02	Panimavida	3.96	176	eP	Pn	23 48 09.3	+2.3
ML02				eS	Sn	23 48 53.4	+0.4
ML02	Panimavida	3.96	176		Pn	23 48 08.4	+1.4
RFA	San Rafael	4.03	138	eP	Pn	23 48 12.1	+4.1
RFA				eS	Sg	23 49 11.6	-5.2
RFA				eS	Sg	23 49 12.1	-4.7
VCA	Vinchina	4.32	46	eP	Pn	23 48 11.6	-0.4
VCA				eP	Pn	23 48 15.2	+3.2
VCA				eS	Sb	23 49 11.6	-2.7
VCA				eS	Sb	23 49 12.1	-2.2
VCA				eS	Sb	23 49 17.5	+3.2
VCA				IAML		23 49 18.4	
	comp=Z,1µm,0.6s						
ACHE	Chepes	4.38	83	eP	Pn	23 48 16.1	+3.3
ACHE				eS	Sb	23 49 12.7	-3.4
GO03	Copiap	4.39	18		Pn	23 48 14.2	+1.3
GO03	Copiap	4.39	18	eP	Pn	23 48 14.3	+1.4
GO03				eS	Sn	23 49 07.1	+3.6
APLL	PUNTA DE LOS L	4.68	74	eP	Pn	23 48 19.8	+2.9
APLL				eS	Sg	23 49 36.7	-0.8
ACLC	CERRO LA CRUZ	4.75	61	eP	Pn	23 48 20.9	+2.9
ACLC				eS	Sn	23 49 18.6	+5.9
ACLC				IAML		23 49 24.3	
	comp=Z,1µm,0.5s						
MRA	San Martin	5.14	98	eP	Pn	23 48 25.9	+2.6
MRA				eS	Sb	23 49 30.6	-7.5
MRA				IAML		23 49 33.8	
	comp=Z,396nm,0.6s						
AC02	Maricunga	5.44	25		Pn	23 48 29.0	+1.2
AC02	Maricunga	5.44	25	eP	Pn	23 48 29.4	+1.6
AC02				eS	Sn	23 49 37.1	+7.0
AC02				IAML		23 50 03.2	
	comp=Z,428nm,0.9s						
H03N1	Juan Fernandez	6.27	253	T	T	23 55 19.8	
	baz=81,slow=73						
H03N3	Juan Fernandez	6.29	253	T	T	23 55 17.0	
	baz=81,slow=73						
H03N2	Juan Fernandez	6.29	253	T	T	23 55 21.9	
	baz=81,slow=73						
H03S3	Juan Fernandez	6.37	250	T	T	23 55 25.9	
	baz=92						
H03S1	Juan Fernandez	6.37	249	T	T	23 55 31.6	
	baz=92						
H03S2	Juan Fernandez	6.39	250	T	T	23 55 25.8	
	baz=92						
LC01	Cunco	7.08	181	Pn	Pn	23 48 50.9	+1.0
LC01	Cunco	7.08	181	eP	Pn	23 48 51.0	+1.1
PB14	IPOC Station P	7.24	10	Pn	Pn	23 48 52.4	0.0
AHML	Horco Molle	7.49	50	eP	Pn	23 48 56.0	+0.4
AHML				eP	Pn	23 48 58.4	+2.8
AHML				eS	Sn	23 50 31.8	+12
FSA	Cafayete	7.58	43	eP	Pn	23 49 00.0	+3.1
FSA				eS	Sb	23 50 35.0	-13
PB15	IPOC Station P	8.79	14		Pn	23 49 11.8	-1.7
PLCA	Paso Flores	8.97	174	Pn	Pn	23 49 17.4	+1.6
	comp=Z,0.6nm,0.3s,baz=341,slow=12,SNR=9.7						
PLCA				LR	LR	23 53 22.5	
	comp=Z,137nm,19.3s,baz=337,slow=42						
PLCA	Paso Flores	8.97	174	Pn	Pn	23 49 18.2	+2.4
PLCA	Paso Flores	8.97	174	eP	Pn	23 49 18.0	+2.2
LL04	Puerto Octay	9.11	183	Pn	Pn	23 49 18.9	+1.2
LVC	Limon Verde	9.49	16	Pn	Pn	23 49 22.7	-0.6
	comp=Z,1.1nm,0.3s,baz=180,slow=6.6,SNR=6.5						
LVC				LR	LR	23 52 59.3	
	comp=Z,142nm,20.6s,baz=216,slow=38						
LVC	Limon Verde	9.49	16	eP	Pn	23 49 23.0	-0.3
LVC	Limon Verde	9.49	16		Pn	23 49 22.8	-0.5
PB04	IPOC Station P	9.53	9	Pn	Pn	23 49 24.1	+0.4
ITQB	Itaqui	13.17	85	eP	Pn	23 50 13.7	+0.4
ITQB	Itaqui	13.17	85		Pn	23 50 13.8	+0.5
CPUP	Villa Florida	13.72	70	Pn	Pn	23 50 19.6	-1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.3nm,0.3s,baz=240,slow=12,SNR=8.8						
CPUP				Sn	Sn	23 52 52.9	+0.2
	comp=Z,0.5nm,0.3s,baz=208,slow=12,SNR=3.4						
CPUP				LR	LR	23 56 03.6	
	comp=Z,246nm,19.2s,baz=246,slow=40						
CPUP	Villa Florida	13.72	70	*e*P	Pn	23 50 22.1	+1.3
CPUP	Villa Florida	13.72	70	Pn	Pn	23 50 20.2	-0.6
PLTB	Pedras Altas	15.42	95	*e*P	Pn	23 50 43.0	-0.8
PLTB	Pedras Altas	15.42	95	P	Pn	23 50 42.2	-1.6
LPAZ	La Paz	15.79	13	Pn	Pn	23 50 49.3	+0.1
	comp=Z,0.3nm,0.3s,baz=190,slow=10,SNR=9.4						
LPAZ	La Paz	15.79	13	*e*P	Pn	23 50 50.3	+1.1
ITAB	Concordia	17.65	80	*e*P	P	23 51 13.1	+0.2
ITAB	Concordia	17.65	80		Pn	23 51 12.1	-0.1
AQDB	Aquidauana	18.26	56	*e*P	Pn	23 51 19.1	-0.6
SIV	San Ignacio	18.49	34	P	P	23 51 21.8	-0.5
	comp=Z,0.9nm,0.3s,baz=207,slow=10,SNR=15						
TER01	Tubaro-SC	19.81	86	*e*P	P	23 51 36.6	-0.1
PTLB	Pontes e Lacer	19.92	38	*e*P	P	23 51 37.3	-0.6
PTLB	Pontes e Lacer	19.92	38	P	P	23 51 38.2	+0.3
PTLB				IAmb	IAmb	23 51 52.4	
	comp=Z,17nm,1.0s						
PCMB	Pacaembu	20.88	66	*e*P	P	23 51 48.1	-0.3
FRTB	Fartura	21.35	72	*e*P	P	23 51 54.1	+0.7
VILB	Vilhena	21.55	32	*e*P	P	23 51 55.2	-0.4
VILB	Vilhena	21.55	32	P	P	23 51 55.1	-0.4
EFI	East Falkland	22.26	157	P	P	23 52 03.9	+1.0
EFI				IAmb	IAmb	23 52 22.4	
	comp=Z,14nm,1.0s						
ETMB	Extrema	22.46	14	*e*P	P	23 52 05.8	+0.4
ETMB	Extrema	22.46	14	P	P	23 52 05.4	0.0
ITRB	Iturama	22.66	63	*e*P	P	23 52 08.1	+0.6
PET01	Itanhaem-SP	22.81	77	*e*P	P	23 52 08.1	-1.0
SPB	Sao Paulo	22.98	75	*e*P	P	23 52 10.7	-0.1
BB19B	Bebedouro	23.32	68	*e*P	P	23 52 13.3	-1.0
VAO	Valinhos	23.63	74	*e*P	P	23 52 16.7	-0.7
ARAG	Araguaiana, MT	24.20	53	*e*P	P	23 52 22.3	-0.4
PDRB	Porto dos Gac	24.39	38	*e*P	P	23 52 24.0	-0.5
IPMB	Ipameri, GO	25.31	63	*e*P	P	23 52 31.3	-1.6
CLDB	Colider	25.51	39	*e*P	P	23 52 35.0	+0.4
BSCB	Bom Sucesso	26.37	73	*e*P	P	23 52 41.0	-1.5
BDFB	Brasilia	26.93	59	P	P	23 52 46.1	-1.5
	comp=Z,18nm,1.0s,baz=224,slow=8.0,SNR=14						
BDFB	Brasilia	26.93	59	P	P	23 52 46.7	-0.9
SNDB	Serra Nova Dou	27.27	48	*e*P	P	23 52 49.6	-0.9
DIAM	Diamantina, MG	28.66	69	*e*P	P	23 53 01.8	-1.3
PEXB	Peixe	29.15	53	*e*P	P	23 53 06.2	-1.1
MC01	Montes Claros	29.34	66	*e*P	P	23 53 07.4	-1.7
JANB	Januaria	30.05	63	*e*P	P	23 53 14.2	-1.2
MACA	Manacapuru-AM	30.32	22	*e*P	P	23 53 16.9	-0.8
MACA	Manacapuru-AM	30.32	22	P	P	23 53 16.8	-0.9
MACA				IAmb	IAmb	23 53 17.6	
	comp=Z,7.3nm,0.6s						
SJMB	Sao Joao De Ma	30.44	72	*e*P	P	23 53 17.8	-0.9
BSFB	Barra de Sao F	30.64	73	*e*P	P	23 53 19.5	-1.0
ITTB	Itaituba	31.15	32	*e*P	P	23 53 23.6	-1.4
SDBA	SAO DESIDERIO	31.32	58	*e*P	P	23 53 25.4	-1.2
SMTB	Santa Maria do	32.00	50	*e*P	P	23 53 32.2	-0.3
PRPB	Parauapebas	32.71	43	*e*P	P	23 53 38.3	-0.4
CMC01	Camacan, BA	33.59	68	*e*P	P	23 53 45.6	-0.7
BOAV	Boa Vista	35.63	19	*e*P	P	23 54 04.2	+0.1
BOAV	Boa Vista	35.63	19	P	P	23 54 03.4	-0.6
BOAV				IAmb	IAmb	23 54 04.6	
	comp=Z,8.0nm,1.0s						
MCPB	Macapa, AP	36.39	35	*e*P	P	23 54 10.3	-0.2
VNA3	Neumayer Olymp	51.30	159	P	P	23 56 10.5	+0.8
VNA2	Neumayer--Watz	51.94	158	P	P	23 56 14.1	-0.4
	baz=293,slow=5.8						
SNAA	Sanae	53.53	158	P	P	23 56 27.2	+1.0
SNAA	Sanae	53.53	158	P	P	23 56 27.1	+0.8
SNAA				IAmb	IAmb	23 56 43.0	
	comp=Z,4.1nm,0.9s						
TBI	Tubuai	68.10	255	*e*T	T	01 12 02.9	
	comp=Z,9.6nm,0.3s						
MEH	Mehetia	69.42	261	*e*T	T	01 13 40.7	
	comp=Z,22nm,0.3s						
LIC	Lamto	73.84	72	*e*P	P	23 58 40.4	-0.6
	comp=Z,9.5nm,0.5s						
TIC	Toumodi	74.09	72	*e*P	P	23 58 41.8	-0.7
KIC	Kosan Boka	74.15	72	*e*P	P	23 58 42.4	-0.5
	comp=Z,16nm,0.8s						
DBIC	Dimbokro	74.24	72	P	P	23 58 43.0	-0.4
	comp=Z,8.0nm,0.7s,baz=232,slow=5.8,SNR=15						
DBIC	Dimbokro	74.24	72	P	P	23 58 43.2	-0.1
BOSA	Boshof	80.87	118	P	P	23 59 20.4	0.0
	comp=Z,3.9nm,0.9s,baz=256,slow=6.6,SNR=5.5						
BOSA				LR	LR	00 33 33.2	
	comp=Z,44nm,18.5s,baz=190,slow=34						
PDAR	Pinedale Array	81.92	333	P	P	23 59 26.0	+0.4
	comp=Z,0.1nm,0.4s,baz=126,slow=4.6,SNR=2.1						
NVAR	Mina Array Bea	82.23	325	P	P	23 59 28.7	+1.4
	comp=Z,0.3nm,0.6s,baz=133,slow=6.6,SNR=2.2						
TORD	Torodi Ar. Bea	83.22	70	P	P	23 59 32.2	-0.5
	comp=Z,4.1nm,0.8s,baz=261,slow=5.0,SNR=24						
TORD	Torodi Ar. Bea	83.22	70	P	P	23 59 32.3	-0.4
TORD				IAmb	IAmb	23 59 33.3	
	comp=Z,3.7nm,0.8s						
AFI	Afiamalu	91.09	253	LR	LR	00 30 33.3	
	comp=Z,78nm,21.1s,baz=334,slow=29						
DZM	Mont Dzumac	102.74	234	*e*LR	LR	00 34 44.3	
	comp=Z,110nm,26.1s						
BRTR	Keskin Array B	120.52	60	PKP	PKPdf	00 05 57.2	-0.4
	comp=Z,0.5nm,0.7s,baz=111,slow=1.6,SNR=4.2						
WRA	Warramunga Arr	122.80	209	PKP	PKPdf	00 06 02.3	-0.3
	comp=Z,1.0nm,0.9s,baz=158,slow=1.9,SNR=1.9						
H11S2	WAKE ISLAND Hy	126.03	271	T	T	02 25 08.0	
	baz=117,slow=74,SNR=134						
H11S1	WAKE ISLAND Hy	126.05	271	T	T	02 25 05.6	
	baz=117,slow=74,SNR=66						
H11S3	WAKE ISLAND Hy	126.05	271	T	T	02 25 05.5	
	baz=117,slow=74,SNR=57						
H11N3	WAKE ISLAND Hy	126.39	272	T	T	02 25 28.1	
	baz=116,slow=75,SNR=63						
H11N1	WAKE ISLAND Hy	126.41	272	T	T	02 25 29.9	
	baz=116,slow=75,SNR=20						
H11N2	WAKE ISLAND Hy	126.41	272	T	T	02 25 33.0	
	baz=116,slow=75,SNR=128						
ZALV	Zalesovo Beam	152.22	30	PKPbc	PKPbc	00 07 01.2	+0.2
	comp=Z,7.9nm,0.7s,baz=292,slow=3.3,SNR=36						
ZALV				PKPab	PKPab	00 07 12.3	+1.4
	comp=Z,3.8nm,0.6s,baz=326,slow=1.9,SNR=8.5						
ZALV	Zalesovo Beam	152.22	30		PKPbc	00 07 01.1	0.0
MKAR	Makanchi Array	155.09	46	PKPbc	PKPdf	00 07 07.3	+8.6
	comp=Z,1.0nm,0.8s,baz=318,slow=1.6,SNR=7.3						
MKAR				PKPab	PKPab	00 07 23.3	0.0
	comp=Z,1.4nm,0.8s,baz=296,slow=3.9,SNR=10						

JMA ***28*** *00:01:46.5±0.1, 23°.17N×121°.58E, h11^{km}±2^{km}*
TAP ***28*** *00:01:49.0, 23°.21N×121°.38E, h19^{km}, ML3.5, B*
ISC 28 00:01:47.1±1.0**, 23°.18N**±0°.02×**121°.50E**±0°.02**, h13**^{km}±8^{km}**,**
n119, σ**0^{s}.74**/167**, 8C-8D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.14	238	⇑*i*P	Pb	00 01 53.3	+1.7
	baz=184						
CHKT				*i* S	Sb	00 01 56.5	+1.9
	baz=184						
ECBN	Changbin	0.15	343	⇑*i*P	Pb	00 01 53.4	+1.7
	baz=31						
ECBN				*i* S	Sb	00 01 56.8	+2.0
	baz=31						
FULB	Fuli	0.19	277	*i* P	Pb	00 01 53.1	+0.6
	baz=263						
FULB				S	Sb	00 01 56.5	+0.5
	baz=263						
EYUL	Yuli	0.24	316	P	Pb	00 01 54.2	+0.9
	baz=331						
EYUL				S	Sb	00 01 58.1	+0.7
	baz=331						
TWF1	Yuli	0.26	314	⇓*i*P	Pb	00 01 54.1	+0.6
	baz=327						
TWF1				*i* S	Sb	00 01 58.2	+0.3
	baz=327						
ECS	Chishang	0.27	253	P	Pb	00 01 55.0	+1.2
	baz=244						
ECS				S	Sb	00 01 59.9	+1.6
	baz=244						
EDH	Donghe	0.27	222	P	Pb	00 01 55.0	+1.2
	baz=197						
EDH				S	Sb	00 01 59.4	+1.2
	baz=197						
YULB	Yu-li	0.28	319	⇓*i*P	Pb	00 01 54.4	+0.4
	baz=327						
YULB				*i* S	Sb	00 01 58.5	-0.3
	baz=327						
HGSD	Ruisui	0.32	348	⇑P	Pb	00 01 55.2	+0.5
	baz=16						
HGSD				*e*S	Sb	00 02 01.7	+1.9
	baz=16						
EHY	Hungye	0.37	334	P	Pb	00 01 55.5	0.0
	baz=336						
EHY				S	Sb	00 02 01.2	+0.1
	baz=336						
LONT	Longtian	0.43	232	⇑*i*P	Pb	00 01 57.2	+0.6
	baz=229						
LONT				S	Sb	00 02 03.3	+0.3
	baz=229						
ELDTW	Lidau	0.44	272	⇓*i*P	Pg	00 01 56.2	+0.3
	baz=267						
ELDTW				*i* S	Sg	00 02 01.1	-0.9
	baz=267						
LDUT	Ludao	0.50	183	*e*P	Pn	00 01 59.6	-0.3
	baz=171						
LDUT				*e*S	Sb	00 02 06.7	+1.8
	baz=171						
TWGBT	Beinan	0.53	227	⇑*i*P	Pb	00 01 58.2	0.0
	baz=225						
TWGBT				S	Sg	00 02 05.1	+0.7
	baz=225						
TTN	Taitung	0.53	218	*e*P	Pn	00 01 59.6	-0.7
	baz=209						
TEGC	Jichi Village	0.53	4	*e*P	Pn	00 01 59.8	-0.6
	baz=21						
YUS	Yu-Shan	0.59	302	⇓P	Pg	00 01 59.1	+0.3
	baz=299						
YUS				*i* S	Sg	00 02 06.0	-0.8
	baz=299						
ESL	Shilin	0.64	355	*e*P	Pn	00 02 01.1	-0.7
	baz=352						
VWDT	VWDT	0.66	330	⇓P	Pg	00 02 00.3	+0.2
	baz=337						
VWDT				S	Sg	00 02 07.9	-0.9
	baz=337						
STYH	Taoyuan	0.67	270	*e*P	Pg	00 02 00.2	+0.1
	baz=261						
STYH				*e*S	Sg	00 02 08.0	-0.9
	baz=261						
STYT	Tauyuan	0.68	269	⇓*i*P	Pg	00 02 00.5	+0.1
	baz=265						
STYT				S	Sg	00 02 08.4	-1.0
	baz=265						
TEYL	Yanliau Villag	0.70	8	*e*P	Pn	00 02 03.1	+0.5
	baz=2.0						
TEYL				*e*S	Sn	00 02 14.1	+0.9
	baz=2.0						
ALS	Alishan	0.72	298	⇓*i*P	Pb	00 02 01.5	-0.2
	baz=292						
ALS				*i* S	Sg	00 02 10.5	-0.2
	baz=292						
ECL	Taimali	0.76	221	*e*P	Pg	00 02 01.4	-0.5
	baz=215						
ETM	Tongmen	0.79	360	*e*P	Pb	00 02 02.8	+0.2
	baz=356						
SSLB	Suanglung	0.79	321	*e*P	Pg	00 02 02.1	-0.3
	baz=333						
SSLB				*e*S	Sg	00 02 11.4	-1.4
	baz=333						
HWA	Hwalien	0.80	7	*e*P	Pn	00 02 04.5	+0.4
	baz=359						
SLGT	Liugui	0.81	257	*e*P	Pb	00 02 03.2	+0.3
	baz=250						
TPUB	Ta-pu	0.81	279	⇓*i*P	Pb	00 02 03.1	+0.1
	baz=278						
TPUB				S	Sg	00 02 13.6	+0.2
	baz=278						
WTP	Ta-pu	0.82	275	⇑P	Pb	00 02 03.3	+0.2
	baz=273						
WTP				S	Sg	00 02 13.4	-0.2
	baz=273						
OWD	Renai	0.83	339	*e*P	Pg	00 02 02.8	-0.4
	baz=344						
SGST	Jiashian	0.85	264	*e*P	Pg	00 02 03.4	-0.2
	baz=258						
SGST				S	Sg	00 02 13.7	-1.0
	baz=258						
CHN4	Tsaushan	0.85	282	⇑*i*P	Pb	00 02 04.1	+0.4
	baz=281						
CHN4				S	Sb	00 02 15.1	+0.1
	baz=281						
CHN5	Tsauling	0.86	299	P	Pb	00 02 04.3	+0.3
	baz=301						
CHN1	Nanshi	0.89	271	⇑P	Pg	00 02 04.9	+0.5
	baz=269						
CHN1				S	Sb	00 02 16.5	+0.2
	baz=269						
SMLT	Sun Moon Lake	0.89	322	*e*P	Pg	00 02 04.5	+0.1
	baz=332						
SMLT				*e*S	Sg	00 02 15.4	-0.7
	baz=332						
TWD	Chiawan	0.91	6	*e*P	Pn	00 02 05.7	+0.2
	baz=359						
TWD				S	Sn	00 02 18.3	-0.1
	baz=359						
SSD	Sandimen	0.91	242	*e*P	Pb	00 02 04.3	-0.4
	baz=233						
TSMG	Majia	0.92	239	*e*P	Pn	00 02 06.1	+0.5
	baz=236						
SNST	Tainan City	0.92	273	P	Pg	00 02 05.4	+0.4
	baz=272						
CHGB	Renai	0.93	341	*e*P	Pb	00 02 04.7	-0.6
	baz=346						
CHGB				S	Sg	00 02 16.7	-0.7
	baz=346						
TWK	Hsinying	0.93	276	P	Pg	00 02 05.3	+0.1
	baz=274						
TWK				S	Sb	00 02 16.6	-0.8
	baz=274						
TYC	Yuchr	0.94	321	*e*P	Pg	00 02 05.3	+0.1
	baz=330						
WJS	Zhushan	0.96	312	*e*P	Pg	00 02 05.7	+0.1
	baz=325						
WJS				*e*S	Sg	00 02 18.7	+0.6
	baz=325						
WPL	Puli Township	0.97	329	*e*P	Pb	00 02 05.7	0.0
	baz=341						
WPL				*e*S	Sg	00 02 18.9	+0.4
	baz=341						
MASBT	Mashibuluo	0.98	235	*e*P	Pb	00 02 05.2	-0.6
	baz=224						
ETL	Fush Village	0.99	7	*e*P	Pn	00 02 07.9	+1.2
	baz=358						
WHF	Hehuan Shan	0.99	348	*e*P	Pb	00 02 05.9	-0.4
	baz=3.0						
WHF				*e*S	Sg	00 02 18.8	-0.5
	baz=3.0						
EAST	Anshuo	0.99	217	*e*P	Pb	00 02 05.5	-0.6
	baz=214						
NACB	Ninganchiao	1.00	5	*e*P	Pb	00 02 05.2	-1.1
	baz=9.0						
NACB				*e*S	Sg	00 02 20.0	+0.6
	baz=9.0						
WGK	Gukeng	1.00	301	*e*P	Pn	00 02 07.6	+0.8
	baz=302						
WGK				*e*S	Sg	00 02 19.8	+0.3
	baz=302						
DPDB	Guoxing	1.00	329	*e*P	Pb	00 02 06.5	+0.1
	baz=340						
DPDB				*e*S	Sb	00 02 19.3	-0.2
	baz=340						
CHN2	Minshiung	1.01	291	*e*P	Pn	00 02 06.9	0.0
	baz=291						
WDLH	Douliu	1.02	300	*e*P	Pn	00 02 07.7	+0.7
	baz=301						
WNT	Mingjian	1.02	313	P	Pn	00 02 07.6	+0.5
	baz=315						
WNT				*e*S	Sg	00 02 20.2	0.0
	baz=315						
ETLH	Xiulin Townshi	1.03	359	*e*P	Pb	00 02 05.6	-1.2
	baz=2.0						
WCS	Beigang Elemen	1.03	329	*e*P	Pb	00 02 06.2	-0.6
	baz=338						
CHY	Chiayi	1.04	288	*e*P	Pn	00 02 07.4	+0.1
	baz=289						
WNT1	Nantou City	1.05	314	*e*P	Pn	00 02 07.5	+0.1
	baz=316						
WNT1				S	Sn	00 02 21.5	-0.4
	baz=316						
CHN3	Shinhua	1.05	265	*e*P	Pn	00 02 08.4	+1.0
	baz=263						
TWM1	Shoushan	1.05	251	*e*P	Pn	00 02 08.0	+0.5
	baz=249						
FUSS	Fushou	1.09	348	*e*P	Pb	00 02 07.4	-0.6
	baz=360						
SSPT	Xinbi	1.10	231	*e*P	Pn	00 02 08.4	+0.2
	baz=224						
TWT	Tachien	1.11	345	*e*P	Pb	00 02 08.2	-0.1
	baz=347						
SSHA	Shanhua	1.11	268	*e*P	Pg	00 02 10.0	+1.4
	baz=275						
TDCB	Techi	1.12	344	*e*P	Pb	00 02 07.9	-0.4
	baz=346						
LAY	Lan-yu	1.13	178	*e*P	Pb	00 02 07.8	-0.7
	baz=162						
WWF	Wufeng	1.13	320	P	Pg	00 02 09.5	+0.5
	baz=321						
WWF				S	Sn	00 02 24.0	0.0
	baz=321						
ICHU	Yijhu	1.14	280	*e*P	Pg	00 02 09.0	0.0
	baz=280						
SCZT	Fangliau	1.14	226	*e*P	Pb	00 02 08.0	-0.6
	baz=218						
WTK	Tuku	1.14	297	*e*P	Pg	00 02 09.0	-0.1
	baz=297						
SLIU	Shizi	1.15	214	*e*P	Pn	00 02 07.5	-1.4
	baz=203						
LYUB	Lan-yu	1.17	176	*e*P	Pn	00 02 07.2	-1.9
	baz=162						
WHP	Taichung City	1.21	335	*e*P	Pg	00 02 11.0	+0.6
	baz=348						
TCU	Taichung	1.23	322	*e*P	Pg	00 02 10.7	-0.1
	baz=323						
WCHH	Zhanghua	1.25	316	*e*P	Pg	00 02 10.9	-0.2
	baz=317						
NNSB	Datong	1.25	355	*e*P	Pn	00 02 09.7	-0.7
	baz=9.0						
NNSB				*e*S	Sb	00 02 25.0	-1.7
	baz=9.0						
WRL	Guolierlin Hig	1.26	305	*e*P	Pb	00 02 10.8	+0.1
	baz=306						
WSF	Szhu	1.26	292	*e*P	Pb	00 02 10.8	+0.2
	baz=292						
WSF				*e*S	Sb	00 02 26.7	-0.1
	baz=292						
NNS	Nan Shan	1.27	355	*e*P	Pb	00 02 10.9	+0.1
	baz=8.0						
ENA	Nanau	1.27	10	*e*P	Pn	00 02 10.6	+0.2
EWUT	Wuta	1.29	11	*e*P	Pg	00 02 12.5	+0.6
	baz=360						
WLCH	Liuqiu	1.32	232	*e*P	Pg	00 02 13.8	+1.4
	baz=214						
TWQ1	Liyutan	1.34	330	*e*P	Pg	00 02 12.7	-0.3
	baz=332						
TWQ1				*e*S	Sg	00 02 30.8	+0.4
	baz=332						
TWK1	Hengchun	1.38	208	*e*P	Pb	00 02 13.1	+0.3
	baz=198						
TWKBT	Hengchun	1.38	207	*e*P	Pb	00 02 13.2	+0.4
	baz=198						
TWKBT				*e*S	Sb	00 02 30.4	+0.1
	baz=198						
NSY	Sanyi	1.41	331	*e*P	Pb	00 02 13.3	+0.1
	baz=335						
WDJ	Dajia District	1.41	326	*e*P	Pb	00 02 13.7	+0.5
	baz=327						
NDT	Datong Townshi	1.42	1	*e*P	Pg	00 02 14.3	-0.2
	baz=14						
ENTT	Nioudou	1.46	2	*e*P	Pb	00 02 14.5	+0.4
	baz=3.0						
TWC	Suao	1.46	13	*e*P	Pb	00 02 14.4	+0.3
	baz=360						
NDS	Dongshan	1.47	8	*e*P	Pg	00 02 15.2	-0.1
	baz=7.0						
YHNB	Yeheng	1.49	356	*e*P	Pn	00 02 13.9	+0.3
	baz=8.0						
NSK	Sanguang	1.50	355	*e*P	Pn	00 02 13.4	-0.4
	baz=9.0						
NMLH	Miaoli	1.50	335	*e*P	Pb	00 02 14.9	+0.1
	baz=334						
NSTT	Nanjuang	1.52	343	*e*P	Pb	00 02 15.2	+0.1
	baz=343						
LIOB	Emei	1.53	343	*e*P	Pb	00 02 15.1	-0.2
	baz=343						
TWE	Neicheng	1.55	6	*e*P	Pb	00 02 16.1	+0.5
	baz=6.0						
NWLT	Wulai	1.59	0	*e*P	Pb	00 02 16.8	+0.3
	baz=15						
TATO	Taipei	1.79	360	*e*P	Pg	00 02 21.9	+0.3
	baz=15						
PHUB	P'eng-hu	1.80	281	P	Pn	00 02 17.6	-0.2
	baz=280						
PHUB				S	Sn	00 02 39.3	-1.2
	baz=280						
TIPB	Shuangxi	1.81	9	*e*P	Pb	00 02 19.7	-0.5
	baz=8.0						
PNG	Penghu	1.83	283	*e*P	Pn	00 02 18.3	+0.1
	baz=283						
VCHM	Qimei	1.90	271	*e*P	Pn	00 02 19.6	+0.3
	baz=271						
NWF	Wu-fen Shan	1.91	8	*e*P	Pn	00 02 19.5	+0.2
	baz=6.0						
WFSB	Wu-fen Shan	1.91	8	*e*P	Pn	00 02 20.0	+0.8
	baz=6.0						
YM01	YM01	1.96	2	*e*P	Pb	00 02 22.9	+0.2
HATJ	Hateruma jima	2.29	67	*e*S	Sn	00 02 51.7	-0.9
IRIF	Iriomote-Funau	2.35	60	P	Pn	00 02 26.8	+1.5
IRIF				*e*S	Sn	00 02 54.2	+0.2
JIJ	Ishigaki jima	2.70	63	P	Pn	00 02 31.0	+0.9
JIJ				*e*S	Sn	00 03 01.6	-1.0
PTMZ	Houxiangcun	2.86	311	*e*P	Pn	00 02 32.2	-0.2
	baz=310						
PTMZ				*e*S	Sn	00 03 04.4	-2.2
	baz=310						
JISG	Ishigakijimahi	2.93	61	P	Pn	00 02 34.3	+0.9
JISG				S	Sn	00 03 07.1	-1.3
KNM	Kinmen	3.07	294	*e*P	Pn	00 02 36.4	+1.2
	baz=293						
KNMB	Chin-men Tao	3.12	295	*e*P	Pn	00 02 35.4	-0.6
	baz=295						
JTJ	Tarama	3.27	63	S	Sn	00 03 16.2	-0.7
MATB	Ma-tsu	3.28	335	*e*P	Pn	00 02 38.5	+0.4
	baz=333						
ZPLA	Ao Xicun	3.52	283	*e*P	Pn	00 02 40.6	-0.9
	baz=283						
AXDP	Jialang	3.66	299	*e*P	Pn	00 02 43.0	-0.3
	baz=299						
LYJJ	Jianjiangzhen	3.71	335	*e*P	Pn	00 02 44.8	+0.7
	baz=334						

IDC ***28*** *00:26:09.2±2.4, 16°.06S×173°.91W, h108^{km}±22^{km}, mb4.0/10, mb1 4.2/13, mb1mx4.0/26, mbtmp4.3/13, MS3.0/3, Ms1 3.0/3, ms1mx2.7/28, Error ellipse: s-maj=26.4km s-min=13.2km az=138.0*
NEIC ***28*** *00:26:10.5±2.8, 16°.16S±0°.09×173°.68W±0°.08, h115^{km}±5^{km}, mb4.5/45, Error ellipse: s-maj=12.4km s-min=11.0km az=187.0*
ISC 28 00:26:09.8±0.5**, 16°.13S**±0°.06×**173°.75W**±0°.06**, h115**^{km}**,**
n70, σ**1^{s}.24**/65**, mb4.5**/30**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.92	41	P	Pn	00 26 55.3	+0.4
	41nm,0.3s,baz=161,slow=1.9,SNR=18						
AFI				S	Sn	00 27 26.6	-3.1
	112nm,0.3s,baz=288,slow=11,SNR=18						
NIUE	Niue	4.68	129		Pn	00 27 18.5	+0.2
NIUE				Sn	Sn	00 28 08.9	-2.7
MSVF	Nonsavu	8.01	257	LR	LR	00 29 52.0	
	comp=Z,94nm,21.4s,baz=8.9,slow=28						
MSVF	Nonsavu	8.01	257	Pn	Pn	00 28 06.3	+2.8
RAR	Rarotonga	14.17	113	P	Pn	00 29 27.7	+2.3
	0.7nm,0.3s,baz=256,slow=11,SNR=7.3						
RAR				LR	LR	00 32 57.9	
	comp=Z,72nm,20.4s,baz=270,slow=28						
RAR	Rarotonga	14.17	113	P	Pn	00 29 28.1	+2.6
MARNC	Mare, Loyalty	18.05	250	P	Pn	00 30 13.3	0.0
PINNC	Pines Island,	18.87	247	P	Pn	00 30 22.9	-0.1
OUENC	Ouen Island, N	19.35	248	P	Pn	00 30 29.6	+0.9
OUENC				IAmb	IAmb	00 30 33.8	
	comp=Z,28nm,1.1s						
DZM	Mont Dzumac	19.62	249	P	P	00 30 28.9	-0.5
	comp=Z,0.2nm,0.3s,baz=86,slow=19,SNR=2.3						
DZM	Mont Dzumac	19.62	249	P	P	00 30 29.6	+0.2
DZM				IAmb	IAmb	00 30 36.5	
	comp=Z,26nm,1.0s						
OUZ	Omahuta	22.13	208	P	P	00 30 57.6	+1.6
PPT	Papeete	23.18	97	LR	LR	00 38 15.4	

	comp=Z,38nm,19.6s,baz=186,slow=31						
PPTF	Pamatai, Papee	23.19	97	P	P	00 31 06.5	-0.3
PPTF				IAmb	IAmb	00 31 08.2	
	comp=Z,23nm,0.8s						
URZ	Urewera	23.47	198	P	P	00 31 08.8	-0.2
	comp=Z,6.6nm,0.4s,baz=120,slow=24,SNR=10						
URZ				S	S	00 35 10.5	-3.3
	comp=Z,3.4nm,0.7s,baz=121,slow=23,SNR=1.5						
URZ	Urewera	23.47	198	P	P	00 31 09.3	+0.3
URZ				IAmb	IAmb	00 31 17.7	
	comp=Z,12nm,0.8s						
HIZ	Hauiti	24.44	202	P	P	00 31 19.4	+1.5
BKZ	Black Stump Fm	24.49	199	P	P	00 31 19.3	+1.0
BFZ	Birch Farm	25.96	198	P	P	00 31 33.6	+2.0
BFZ				IAmb	IAmb	00 31 37.5	
	comp=Z,12nm,1.0s						
QRZ	Quartz Range	27.33	203	P	P	00 31 44.1	+0.2
QRZ				IAmb	IAmb	00 31 44.6	
	comp=Z,6.4nm,0.7s						
THZ	Tophouse	28.01	202	P	P	00 31 49.4	-0.6
THZ				IAmb	IAmb	00 31 50.4	
	comp=Z,11nm,1.0s						
KHZ	Kahutara	28.38	200	P	P	00 31 52.4	-0.7
KHZ				IAmb	IAmb	00 31 59.5	
	comp=Z,14nm,1.0s						
LTZ	Lake Taylor	29.13	201	P	P	00 32 00.3	+0.4
LTZ				IAmb	IAmb	00 32 02.6	
	comp=Z,13nm,0.9s						
RPZ	Rata Peaks	30.38	202	P	P	00 32 11.1	+0.2
RPZ				IAmb	IAmb	00 32 18.7	
	comp=Z,15nm,1.1s						
FOZ	Fox Glacier	30.69	204	P	P	00 32 12.2	-1.4
FOZ				IAmb	IAmb	00 32 27.8	
	comp=Z,16nm,1.0s						
MLZ	Mavora Lakes	32.89	204	P	P	00 32 32.4	-0.5
MLZ				IAmb	IAmb	00 32 33.2	
	comp=Z,7.5nm,0.8s						
DCZ	Deep Cove	33.35	205	P	P	00 32 36.3	-0.6
DCZ				IAmb	IAmb	00 32 55.0	
	comp=Z,11nm,1.0s						
WHZ	Wether Hill Ro	33.39	203	P	P	00 32 38.7	+1.4
ARMA	Armidale	34.68	240	P	P	00 32 48.1	-0.7
ARMA				IAmb	IAmb	00 33 03.1	
	comp=Z,10nm,1.1s						
CTAO	Charters Tower	38.16	258	P	P	00 33 18.6	+0.3
CTAO				IAmb	IAmb	00 33 24.1	
	comp=Z,7.4nm,1.1s						
H11S2	WAKE ISLAND Hy	39.42	330	T	T	01 14 52.2	
	baz=146,slow=76,SNR=6.9						
H11S3	WAKE ISLAND Hy	39.43	330	T	T	01 14 49.0	
	baz=146,slow=76,SNR=5.8						
H11S1	WAKE ISLAND Hy	39.44	330	T	T	01 14 50.7	
	baz=146,slow=76,SNR=5.5						
COEN	Coen	41.60	267	P	P	00 33 47.0	+0.1
COEN				IAmb	IAmb	00 33 47.8	
	comp=Z,9.5nm,0.8s						
TOO	Toolangi	41.75	231	P	P	00 33 47.5	-0.3
TOO				IAmb	IAmb	00 34 05.0	
	comp=Z,7.2nm,1.1s						
STKA	Stephens Creek	43.38	241	P	P	00 34 00.2	-0.9
	comp=Z,3.0nm,0.5s,baz=91,slow=11,SNR=13						
STKA	Stephens Creek	43.38	241	P	P	00 34 00.3	-0.7
BBOO	Buckleboo	48.16	240	P	P	00 34 37.2	-1.4
BBOO				IAmb	IAmb	00 34 44.4	
	comp=Z,9.2nm,1.0s						
WB0	Warramunga Arr	49.32	258	P	P	00 34 46.7	-0.9
WB2	Warramunga Arr	49.34	257	P	P	00 34 46.7	-1.2
WRAB	Tennant Creek	49.34	257	P	P	00 34 47.7	-0.1
WRA	Warramunga Arr	49.35	257	P	P	00 34 46.2	-1.7
	comp=Z,5.7nm,0.7s,baz=90,slow=6.8,SNR=32						
WRA	Warramunga Arr	49.35	257	P	P	00 34 46.5	-1.5
AS31	Alice Springs	49.57	252	P	P	00 34 48.0	-1.5
AS31				IAmb	IAmb	00 34 50.0	
	comp=Z,4.3nm,0.8s						
ASAR	Alice Springs	49.57	252	P	P	00 34 48.1	-1.5
	comp=Z,18nm,0.8s,baz=87,slow=8.1,SNR=149						
ASAR	Alice Springs	49.57	252	P	P	00 34 47.9	-1.7
MTN	Manton Dam	53.34	266	P	P	00 35 16.6	-1.1
FORT	Forrest	54.79	244	P	P	00 35 26.6	-1.4
KNRA	Kununurra	55.13	262	P	P	00 35 30.0	-0.7
VNDA	Vanda	62.62	186	P	P	00 36 22.2	+0.8
	comp=Z,1.1nm,0.7s,baz=357,slow=7.2,SNR=6.9						
VNDA	Vanda	62.62	186	P	P	00 36 22.5	+1.0
PSA00	Pilbara Seismi	62.67	254	P	P	00 36 21.8	-1.0
PSA00	Pilbara Seismi	62.67	254	P	P	00 36 21.9	-0.9
PSA00				IAmb	IAmb	00 36 22.6	
	comp=Z,11nm,0.8s						
NVAR	Mina Array Bea	75.09	42	P	P	00 37 39.9	+0.3
	comp=Z,1.9nm,0.8s,baz=228,slow=10.0,SNR=12						
HLID	Hailey	80.40	39	P	P	00 38 09.5	+0.7
MNTX	Cornudas Mount	80.93	53	P	P	00 38 12.3	+0.6
MNTX				IAmb	IAmb	00 38 13.1	
	comp=Z,4.8nm,1.0s						
ANMO	Albuquerque	81.53	50	P	P	00 38 15.5	+0.5
PDAR	Pinedale Array	83.03	42	P	P	00 38 22.5	-0.3
	comp=Z,2.3nm,0.8s,baz=218,slow=3.2,SNR=21						
YHL	Hebgen Lake	83.06	39	P	P	00 38 24.1	+1.2
YHL				IAmb	IAmb	00 38 24.7	
	comp=Z,6.6nm,0.8s						
SMCO	Snowmass	83.06	46	IAmb	IAmb	00 38 24.5	
	comp=Z,5.6nm,1.1s						
H17A	Grant Village	83.20	40	IAmb	IAmb	00 38 25.8	
	comp=Z,3.0nm,0.6s						
ILAR	Eielson Array	83.22	11	P	P	00 38 22.0	-0.9
	comp=Z,0.7nm,0.9s,baz=232,slow=6.6,SNR=6.6						
YKA	Yellowknife Ar	90.90	23	P	P	00 39 00.5	+0.4
	comp=Z,0.3nm,0.8s,baz=234,slow=5.0,SNR=3.0						
CMAR	Chiang Mai Arr	92.52	288	P	P	00 39 09.2	+0.5
	comp=Z,0.5nm,0.3s,baz=108,slow=2.2,SNR=7.1						
ARCES	ARCESS Array B	125.28	352	PKP	PKiKP	00 44 57.3	+0.5
	comp=Z,2.2nm,0.9s,baz=22,slow=2.9,SNR=4.0						
KMBO	Kilima Mbogo	144.91	244	PKP	PKPbc	00 45 34.7	+0.5
	comp=Z,3.3nm,0.8s,baz=23,slow=4.1,SNR=7.8						
BRTR	Keskin Array B	146.50	320	PKPbc	PKPbc	00 45 38.0	-0.2
	comp=Z,2.1nm,0.8s,baz=112,slow=2.0,SNR=14						
BRTR	Keskin Array B	146.50	320		PKPbc	00 45 38.9	+0.7
GERES	GERESS Array B	146.81	351	PKPbc	PKPbc	00 45 38.3	-0.4
	comp=Z,0.8nm,0.7s,baz=28,slow=6.0,SNR=6.8						
GERES	GERESS Array B	146.81	351		PKPbc	00 45 38.8	+0.1

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*TEH **28** 00:29:32.2, 31°.23N×50°.21E, h8km, ML3.3*

*THR **28** 00:29:33.2±0.5, 31°.11N×50°.24E, h14km±8km, ML3.1*

*KISR **28** 00:29:33.9±0.4, 31°.15N×49°.94E, h166km±22km, ML3.9*

*DSN **28** 00:29:38.6±2.4, 30°.62N×50°.24E, h15km, ML3.6/7, Error ellipse: s-maj=31.3km s-min=10.8km az=6.0*

*OMAN **28** 00:29:39.7±0.2, 30°.54N×50°.20E, h12km±4km, mb5.7/5, ms2.6/1, Error ellipse: s-maj=11.2km s-min=2.3km az=349.0*

ISC 28 00:29:34.5±0.9**, 31°.13N**±0°.05×**50°.20E**±0°.04**, h30**km**, n101, σ1.91**/121**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABEH	Behbahan	0.53	175	*e*Pg	Pb	00 29 44.7	-0.8
ABEH				*e*Sg	Sn	00 29 54.7	+0.7
AMIS	Naft Sefid	0.94	305	*e*Pg	Pn	00 29 49.6	-2.2
IBRJ	Brojen	1.19	49	*e*Pg	Pn	00 29 53.7	-1.7
IBRJ				*e*Sg	Sn	00 30 11.5	+0.8
IBRJ				*e*		00 30 18.6	
	comp=Z,5µm,0.5s						
KLNJ	Kolanjah	1.20	95	*e*Pg	Pn	00 29 54.2	-1.4
KLNJ				*e*Sg	Sb	00 30 13.8	+1.6
KLNJ				*e*		00 30 19.0	
	comp=Z,14µm,0.6s						
SHK1	Shahrekord	1.33	26	*e*Pg	Pn	00 29 55.7	-1.6
AHWZ	Ahwaz	1.35	279	*e*Pg	Pn	00 29 58.4	+1.1
IPIR	Pirpir	1.66	21	*e*		00 30 05.3	
	comp=Z,4µm,0.3s						
IPIR				*e*Pg	Pn	00 30 02.5	+0.7
KAZ1	Kazerun	1.95	140	*e*Pn	Pn	00 30 08.8	+3.2
IRAM	Ramesheh	1.98	69	*e*		00 30 47.3	
	comp=Z,2µm,0.6s						
IRAM				*e*Pg	Pn	00 30 08.9	+2.7
IGAR	Gharneh	2.02	51	*e*Pn	Pn	00 30 08.1	+1.4
AHBU	AHRAM	2.45	157	*e*Pn	Pn	00 30 14.5	+2.1
IKLH	Kolahrood	2.48	28	*e*Pn	Pn	00 30 15.0	+2.0
IKLH				*e*		00 30 58.9	
	comp=Z,983nm,0.4s						
SHI	Shiraz	2.49	126	*e*Pn	Pn	00 30 16.6	+3.4
SHI				*e*		00 30 56.5	
	comp=Z,1µm,0.6s						
IZEF	Zefreh	2.52	45	*e*Pn	Pn	00 30 15.7	+2.0
IZEF				*e*		00 30 20.1	
	comp=Z,879nm,0.4s						
KHMZ	Khomeyn	2.61	356	*e*Pn	Pn	00 30 17.3	+2.4
KHMZ				IAML		00 31 06.9	
	comp=N,56nm,0.5s						
KHMZ	Khomeyn	2.61	356	*e*Pn	Pn	00 30 17.3	+2.4
UMR	Umm Al-Rimmam	2.66	234	*e*P	Pn	00 30 18.0	+2.6
UMR				*e*S	Sb	00 30 51.5	-2.2
UMR				IAML		00 30 56.1	
	comp=Z,391nm,0.3s						
NASN	Na'in	2.77	52	*e*Pn	Pn	00 30 19.2	+2.0
NASN	Na'in	2.77	52	*e*Pn	Pn	00 30 19.2	+2.0
QAMS	Qamsar	2.79	21	*e*Pn	Pn	00 30 19.3	+2.0
QAMS				*e*		00 31 05.3	
	comp=Z,2µm,0.4s						
MIB	Mutribah	2.80	243	*e*P	Pn	00 30 19.7	+2.4
DHL1	Dehloran	2.92	303	*e*Pn	Pn	00 30 20.2	+1.2
ISAD	Sadrabad	3.08	74	*e*Pn	Pn	00 30 23.5	+2.2
ISAD				*e*		00 30 30.9	
	comp=Z,642nm,0.3s						
IKFM	Kafar-mosalman	3.11	321	*e*Pn	Pn	00 30 22.9	+1.4
IDOB	Doab	3.15	328	*e*Pn	Pn	00 30 23.3	+1.0
RDF	Al-Radifah	3.18	227	*e*P	Pn	00 30 25.1	+2.6
RDF				*e*S	Sn	00 31 03.5	+4.1
RST	Umm Al-Ruwaisa	3.21	240	*e*P	Pn	00 30 25.3	+2.4
RST				*e*S	Sn	00 31 03.2	+3.1
RST				IAML		00 31 13.2	
	comp=Z,231nm,0.4s						
KRSH	Karshahi	3.27	29	*e*Pn	Pn	00 30 26.5	+2.6
ASAO	Ashtian	3.41	358	*e*Pn	Pn	00 30 28.4	+2.5
ASAO				IAML		00 31 29.5	
	comp=N,37nm,0.7s						
ASAO				IAML		00 31 30.9	
	comp=E,29nm,0.7s						
ASAO	Ashtian	3.41	358	*e*Pn	Pn	00 30 28.4	+2.5
GHVR	GHOM	3.46	15	*e*Pn	Pn	00 30 29.3	+2.8
GHVR				IAML		00 31 38.4	
	comp=E,23nm,0.6s						
GHVR	GHOM	3.46	15	*e*Pn	Pn	00 30 29.3	+2.8
ANAR	Anarak	3.63	55	*e*Pn	Pn	00 30 30.7	+1.9
ISFB	Sefidab	3.64	28	*e*Pn	Pn	00 30 30.3	+1.4
ISFB				*e*		00 30 40.5	
	comp=Z,237nm,0.6s						
GHIR	Ghir-Karzin	3.73	139	*e*Pn	Pn	00 30 32.0	+1.8
GHIR				IAML		00 31 48.2	
	comp=E,29nm,0.5s						
GHIR				IAML		00 31 52.3	
	comp=N,30nm,0.5s						
GHIR	Ghir-Karzin	3.73	139	*e*Pn	Pn	00 30 32.0	+1.8
ICHK	Chekchek	3.75	72	*e*Pn	Pn	00 30 32.4	+1.8
ICHK				*e*		00 31 21.9	
	comp=Z,390nm,0.5s						
IQOM	Qom	3.77	11	*e*Pn	Pn	00 30 32.1	+1.2
HAGD	Aghdareh	3.79	347	*e*Pn	Pn	00 30 32.5	+1.4
IMEH	Mehriz	3.79	85	*e*Pn	Pn	00 30 33.2	+2.1
IMEH				*e*		00 30 45.5	
	comp=Z,243nm,0.3s						
IBZA	Bozab	3.87	330	*e*Pn	Pn	00 30 33.8	+1.6
IBZA				*e*		00 31 41.8	
	comp=Z,464nm,0.3s						
YZKH	Yazd	3.95	70	*e*Pn	Pn	00 30 35.1	+2.0
YZKH	Yazd	3.95	70	*e*Pn	Pn	00 30 35.1	+2.0
IVRN	Varamin	4.06	18	*e*Pn	Pn	00 30 36.0	+1.3
IALM	Almabolaq	4.09	336	*e*Pn	Pn	00 30 35.8	+0.5
KER	Kermanshah	4.15	322	*e*Pn	Pn	00 30 37.7	+1.8
IRAZ	Razeghan	4.27	357	*e*Pn	Pn	00 30 38.5	+0.8
IGHG	Ghaleghazi	4.42	317	*e*Pn	Pn	00 30 41.2	+1.4
IGHG				*e*		00 32 10.9	
	comp=Z,529nm,0.8s						
QABG	Abgarm-Qazvin	4.59	354	*e*Pn	Pn	00 30 43.7	+1.5
ILIN	Lien	4.65	325	*e*Pn	Pn	00 30 43.5	+0.5
ILIN				*e*		00 32 08.4	
	comp=Z,453nm,0.7s						
IDHR	Dehrash	4.79	319	*e*Pn	Pn	00 30 45.7	+0.9
CHTH	Charan	4.83	9	*e*Pn	Pn	00 30 47.8	+2.4
CHTH	Charan	4.83	9	*e*Pn	Pn	00 30 47.8	+2.4
ILAS	Lasjerd	4.83	28	*e*Pn	Pn	00 30 46.6	+1.2
IFIR	Firoozkooh	4.98	25	*e*Pn	Pn	00 30 49.2	+1.7
QALM	Alamut, Qazvin	5.30	4	*e*Pn	Pn	00 30 53.2	+1.3
IANJ	Anjilo	5.33	35	*e*Pn	Pn	00 30 53.4	+1.2
ISHM	Shahmirzad	5.33	28	*e*Pn	Pn	00 30 53.8	+1.5
IPRN	Peran	5.40	19	*e*Pn	Pn	00 30 54.7	+1.6
KRBR	Kerman	5.77	100	*e*Pn	Pn	00 31 00.4	+2.0
KRBR	Kerman	5.77	100	*e*Pn	Pn	00 31 00.4	+2.0
TVBK	TV Kerman	5.77	100	*e*Pn	Pn	00 31 01.2	+2.7
TPRV	Parvadeh(Tabas	5.82	69	*e*Pn	Pn	00 31 01.8	+2.9
NGRK	Negar Kerman	5.83	103	*e*Pn	Pn	00 31 02.2	+2.9
TNSJ	Nastanj	6.10	61	*e*Pn	Pn	00 31 05.6	+2.8
TKDS	Koohdasht(Taba	6.36	65	*e*Pn	Pn	00 31 08.2	+1.9
TABS	Tabas	6.37	65	*e*Pn	Pn	00 31 08.6	+2.2
TABS	Tabas	6.37	65	*e*Pn	Pn	00 31 08.6	+2.2
TRNA	Turayna	6.43	172	P	Pn	00 31 09.1	+1.9
TRNA				S	Sn	00 32 20.2	+0.6
SLWR	Sila	7.16	169	P	Pn	00 31 18.7	+1.6
SLWR				S	Sn	00 32 37.7	+0.3
SHME	Shamm	7.27	133	P	Pn	00 31 19.6	+0.9
SHME				S	Sn	00 32 38.4	-1.9
SHME	Shamm	7.27	133	P	Pn	00 31 20.8	+2.1
SHME				S	Sn	00 32 39.9	-0.4
KBAM	BAM	7.42	103	*e*Pn	Pn	00 31 22.9	+2.1
BANOM	Banah	7.46	133	P	Pn	00 31 20.7	-0.6
BANOM				S	Sn	00 32 43.4	-1.6
BANOM	Banah	7.46	133	P	Pn	00 31 21.4	0.0
MASF	Masafi	7.78	136	P	Pn	00 31 27.2	+1.5
MASF				S	Sn	00 32 51.1	-1.8
MSFE	Esma-Masafi	7.79	136	P	Pn	00 31 27.0	+1.1
ASUD	Al Ashush, Dub	7.91	144	P	Pn	00 31 29.2	+1.7
ASUD	Al Ashush, Dub	7.91	144	P	Pn	00 31 30.0	+2.5
	SNR=9.7						
MZWR	Madinat Zayed	8.04	155	P	Pn	00 31 30.2	+1.0
MZWR				S	Sn	00 32 57.7	-1.4
UOSS	Minazif	8.13	138	P	Pn	00 31 30.8	+0.3
UOSS	Minazif	8.13	138	P	Pn	00 31 31.8	+1.3
UOSS				S	Sn	00 32 59.3	-2.1
HATD	Hatta, Dubai	8.18	139	P	Pn	00 31 33.2	+2.0
HATD	Hatta, Dubai	8.18	139	P	Pn	00 31 34.0	+2.8
HATD				S	Sn	00 33 01.2	-1.5
ASHO	Ashiyiah	8.25	140	P	Pn	00 31 30.5	-1.8
MZR	Muzera	8.61	159	P	Pn	00 31 36.9	-0.2
MZR	Muzera	8.61	159	P	Pn	00 31 38.3	+1.2
MZR				S	Sn	00 33 10.6	-2.6
RAYN	Ar Rayn	8.65	210	P	Pn	00 31 36.5	-1.2
RAYN	Ar Rayn	8.65	210	P	Pn	00 31 37.5	-0.2
RAYN				S	Sn	00 33 12.0	-2.3
UMZA	Um Al Zommool	9.48	151	P	Pn	00 31 49.4	+0.4
UMZA				S	Sn	00 33 32.0	-2.5
HOQ	Hoqain	9.82	138	S	Sn	00 33 42.2	-0.7
BSY	Bisya	10.43	142	P	Pn	00 32 03.5	+1.4
BSY				S	Sn	00 33 55.4	-2.5
SMDO	Samad	10.65	137	P	Pn	00 32 06.7	+1.5
SMDO				S	Sn	00 34 00.9	-2.6
WSAR	Wadi Sarin	10.86	134	P	Pn	00 32 09.9	+1.9
JMDO	Jabal Madar	11.22	139	P	Pn	00 32 15.0	+2.1
	SNR=5.4						
WBK	Wadi Bani Khal	11.54	135	P	Pn	00 32 19.6	+2.3
JLN	Jalan Bani Buh	12.15	135	P	Pn	00 32 27.2	+1.6
DOK	Doka	12.96	163	P	Pn	00 32 36.7	+0.1
WHFO	Wadi Hawf	13.55	165	P	Pn	00 32 44.0	-0.7
SHAO	Shalim	13.95	158	P	Pn	00 32 49.6	-0.6
ABTO	Aybut	14.00	168	P	Pn	00 32 50.2	-0.8
	SNR=6.2						

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*ANF **28** 00:36:29.8±0.3, 35°.61N×97°.40W, h6km, ML3.6/12, Error ellipse: s-maj=4.4km s-min=2.7km az=124.0*

*TUL **28** 00:36:30±0.9, 35°.59N±0°.02×97°.37W±0°.05, h6km±5km, ML3.4, mb_Lg3.2/63(NEIC), Error ellipse: s-maj=5.5km s-min=2.7km az=94.0*

*NEIC **28** 00:36:30.1±0.9, 35°.60N±0°.03×97°.39W±0°.03, h5km±5km, Error ellipse: s-maj=5.5km s-min=2.1km az=208.0*

ISC 28 00:36:29.9±0.9**, 35°.60N**±0°.02×**97°.39W**±0°.02**, h10**km±6km**, n81, σ0.84**/63**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	Oakdale Elemen	0.03	239		Pg	00 36 31.3	-0.5
OK025	Westminster Rd	0.04	114	Pg	Pg	00 36 31.4	-0.5
OK001	Jones High Sch	0.09	115	Pg	Pg	00 36 32.1	-0.3
OK005	Luther M Schoo	0.17	71	Pg	Pg	00 36 33.8	+0.1
BCOK	Bluff Creek, N	0.19	288	Pg	Pg	00 36 34.2	+0.2
OKCFA	Oklahoma City	0.19	196		Pg	00 36 33.9	-0.1
OKCFA	Oklahoma City	0.19	196	P	Pg	00 36 34.0	-0.1
	baz=20,SNR=119						
OKCFA				S	Sg	00 36 37.0	+0.3
	baz=20						
OKCSW	OKLAHOMA CITY	0.20	192	Pg	Pg	00 36 34.0	-0.1
FNO	Franklin	0.34	182	Pg	Pg	00 36 36.7	-0.1
OK031	S. Brethren Rd	0.57	51	Pg	Pg	00 36 40.9	-0.1
OK011	Prague	0.58	101	Pg	Pg	00 36 41.3	0.0
W35A	Tecumseh	0.61	137	Pg	Pg	00 36 41.4	-0.4
QUOK	Quay	0.79	44	Pg	Pg	00 36 44.9	-0.4
CROK	Carrier	1.02	332		Pg	00 36 49.6	-0.1
X34A	Smith Ranch, M	1.06	200	Pg	Pg	00 36 50.1	-0.2
BLOK	Blackwell	1.17	7		Pg	00 36 51.9	-0.5
GC02	Grant County #	1.31	343	Pn	Pn	00 36 54.4	+0.1
TUL1	Leonard	1.33	76		Pn	00 36 53.8	-0.9
TUL1	Leonard	1.33	76	S	Sb	00 37 12.1	-0.2
	baz=256						
KAN13	South Haven SW	1.41	357	Pn	Pn	00 36 56.4	+0.6
WMOK	Wichita Mounta	1.43	233		Pn	00 36 56.0	0.0
WMOK	Wichita Mounta	1.43	233	S	Sb	00 37 14.8	-0.1
	baz=53						
KAN14	Manchester OK	1.43	341		Pn	00 36 54.7	-1.3
T35A	Sooner Cattle	1.49	28		Pn	00 36 57.1	+0.2
T35B	Sooner Cattle	1.49	28	P	Pn	00 36 57.1	+0.3
	baz=208						
T35B				S	Sb	00 37 17.6	+0.8
	baz=208						
U32A	Winter Ranch,	1.52	301		Pn	00 36 57.8	+0.5
U32A	Winter Ranch,	1.52	301	P	Pn	00 36 57.9	+0.6
	baz=121,SNR=48						
OK035	E0210 Rd and N	1.54	316	Pn	Pn	00 36 58.0	+0.5
KAN05	Bluff City Nor	1.56	346	Pn	Pb	00 36 58.8	-0.1
KAN01	Argonia South	1.58	349	Pn	Pn	00 36 58.9	+0.8
KAN01				IAmb_Lg		00 37 23.6	
	comp=Z,143nm,0.9s						
LOOK	Love County	1.61	174	Pn	Pn	00 36 59.1	+0.6
KAN06	Argonia West S	1.69	347		Pb	00 37 00.8	-0.3
KAN08	Anthony NE Sta	1.69	344	Pn	Pn	00 37 00.5	+0.9
KAN16	Harper SW Stat	1.71	342	Pn	Pn	00 37 00.3	+0.4
KAN12	Harper NE Stat	1.77	344	Pn	Pn	00 37 00.9	+0.3
X37A	Clayton	1.94	121		Pn	00 37 04.0	+1.1
X37A				IAmb_Lg		00 37 33.9	
	comp=Z,96nm,0.8s						
X37A	Clayton	1.94	121	P	Pn	00 37 03.8	+0.9
	baz=302,SNR=112						
X37A				S	Sb	00 37 29.7	+0.2
	baz=302						
Z35A	Perchaven, San	2.27	177		Pn	00 37 08.4	+0.9
Z35A	Perchaven, San	2.27	177	P	Pn	00 37 08.5	+1.1
	baz=358,SNR=30						
U38A	Gravette	2.57	70		Pn	00 37 11.9	+0.2
U38A	Gravette	2.57	70	P	Pn	00 37 12.8	+1.0
	baz=251						
HHAR	Hobbs	2.88	75		Pn	00 37 16.9	+1.0
W39A	Magazine	2.97	97		Pn	00 37 17.9	+0.7
W39A				IAmb_Lg		00 38 10.2	
	comp=Z,44nm,0.9s						
W39A	Magazine	2.97	97	P	Pn	00 37 17.8	+0.7
	baz=279,SNR=8.8						
R32A	Long Quarter,	3.01	340		Pg	00 37 26.4	-1.3
Z38A	Mt. Pleasant	3.06	139	Pg	Pg	00 37 26.9	-1.7
Z38A				IAmb_Lg		00 38 13.1	
	comp=Z,71nm,1.0s						
ABTX	Abilene, Hawle	3.51	213	Pg	Pg	00 37 35.0	-2.2
KSU1	Kansas State U	3.55	10	Pn	Pn	00 37 25.8	+0.7
WHTX	Lake Whitney,	3.60	181		Pn	00 37 26.8	+1.0
CBKS	Cedar Bluff	3.72	330	Pn	Pn	00 37 29.1	+1.7
CBKS				IAmb_Lg		00 38 32.4	
	comp=Z,67nm,0.7s						
U40A	Yellville	3.75	77		Pn	00 37 28.6	+0.7
U40A				IAmb_Lg		00 38 35.9	
	comp=Z,39nm,0.7s						
U40A	Yellville	3.75	77	P	Pn	00 37 28.3	+0.4
	baz=259,SNR=15						
U40A				P	Pn	00 37 28.3	+0.4
	baz=259,SNR=15						
237A	Washetta, Mont	3.82	159	IAmb_Lg		00 38 28.7	
	comp=Z,67nm,1.0s						
237A	Washetta, Mont	3.82	159	S	Sn	00 38 14.3	+0.4
	baz=340						
S39A	Bolivar	3.88	56		Pn	00 37 29.9	+0.2
S39A				IAmb_Lg		00 38 34.8	
	comp=Z,49nm,0.7s						
S39A	Bolivar	3.88	56	P	Pn	00 37 30.0	+0.4
	baz=238						
X40A	Basin Creek Fa	3.90	105		Pn	00 37 31.3	+1.4
X40A				IAmb_Lg		00 38 36.7	
	comp=Z,48nm,0.8s						
WLAR	White Oak Lake	4.01	117	Pn	Pn	00 37 32.2	+0.8
WLAR				IAmb_Lg		00 38 46.4	
	comp=Z,32nm,0.9s						
WHAR	Wooly Hollow	4.17	93	Pn	Pn	00 37 30.9	-2.8
WHAR				IAmb_Lg		00 38 52.2	
	comp=Z,39nm,1.1s						
W41B	Gary Mavity, V	4.22	94	P	Pn	00 37 34.9	+0.6
	baz=277,SNR=15						
FCAR	Ozark Folk Cen	4.29	85	IAmb_Lg		00 38 48.4	
	comp=Z,31nm,0.8s						
MGMO	Mountain Grove	4.41	68	IAmb_Lg		00 38 55.9	
	comp=Z,51nm,0.7s						
R40A	Maddies Statio	4.90	55	IAmb_Lg		00 39 06.4	
	comp=Z,35nm,0.8s						
P38A	Dawn	5.05	36	IAmb_Lg		00 39 20.8	
	comp=Z,24nm,0.8s						
KSCO	Kaye Shedlock'	5.39	311	IAmb_Lg		00 39 28.2	
	comp=Z,28nm,0.7s						
CCM	Cathedral Cave	5.50	62	IAmb_Lg		00 39 33.9	
	comp=Z,35nm,0.7s						
PBMO	Poplar Bluff	5.75	76	IAmb_Lg		00 39 35.3	
	comp=Z,56nm,0.8s						
BGNE	Belgrade	5.83	354	IAmb_Lg		00 39 45.3	
	comp=Z,54nm,0.8s						
T25A	Trinidad	5.87	287	IAmb_Lg		00 39 42.7	
	comp=Z,34nm,1.0s						
FVM	French Village	6.07	65	IAmb_Lg		00 39 44.7	
	comp=Z,21nm,0.7s						
L34A	Svendsen Farm,	6.41	7	IAmb_Lg		00 40 00.5	
	comp=Z,47nm,0.8s						
OGNE	Ogallala	6.47	327	IAmb_Lg		00 40 09.9	
	comp=Z,34nm,0.7s						
SLM	Saint Louis	6.47	60	IAmb_Lg		00 39 57.9	
	comp=Z,36nm,0.7s						
W45A	Hickory Valley	6.71	91	IAmb_Lg		00 40 06.7	
	comp=Z,28nm,0.7s						
SCIA	State Center	7.09	26	IAmb_Lg		00 40 19.3	
	comp=Z,22nm,0.8s						
K31A	O'Neill	7.09	352	IAmb_Lg		00 40 29.4	
	comp=Z,34nm,0.7s						
P43A	Skaggs, Pawnee	7.43	55	IAmb_Lg		00 40 30.6	
	comp=Z,44nm,0.8s						
Q44A	Meyer Farm, Va	7.45	61	IAmb_Lg		00 40 41.7	
	comp=Z,35nm,0.7s						
L40A	Anamosa	8.05	35	IAmb_Lg		00 41 00.8	
	comp=Z,19nm,0.8s						
L42A	Oliver, Polo	8.78	41	IAmb_Lg		00 41 15.4	
	comp=Z,34nm,0.9s						
JFWS	Jewell Farm	9.16	35	IAmb_Lg		00 41 30.2	
	comp=Z,17nm,0.7s						

IDC 28 00:43:48.6±5.6**, 4°.91S**×**153°.71E, h0**km**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/24**, mbtmp3.6**/3**, MS3.0**/2**, Ms1 3.0**/2**, ms1mx2.6**/26**, Error ellipse: s-maj=172.0km s-min=39.6km az=108.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	7.89	235	LR	LR	00 48 02.8	
	comp=Z,49nm,21.1s,baz=154,slow=32						
DZM	Mont Dzumac	21.05	145	LR	LR	00 55 41.2	
	comp=Z,75nm,18.2s,baz=32,slow=34						
WRA	Warramunga Arr	24.06	230	P	P	00 49 06.4	+0.5
	1.4nm,0.7s,baz=56,slow=9.6,SNR=5.7						
ASAR	Alice Springs	26.69	224	P	P	00 49 29.4	-0.3
	0.7nm,0.7s,baz=56,slow=9.2,SNR=8.0						
MKAR	Makanchi Array	81.00	319	P	P	00 56 05.4	-0.1
	0.5nm,0.8s,baz=97,slow=3.8,SNR=4.1						

INET 28 01:29:53.9, 12°.22N×**87°.40W, h34**km**, MW3.8, Near coast of Nicaragua**

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*IDC **28** 01:31:17.8±1.8, 6°.19N×126°.56E, h42km±15km, mb4.1/20, mb1 4.3/23, mb1mx4.1/52, mbtmp4.4/23, ML4.4/3, MS3.6/17,*

Ms1 3.6/17, ms1mx3.4/34, Error ellipse: s-maj=25.8km s-min=8.6km az=63.0
*NEIC **28** 01:31:17.4±1.8, 6°.15N±0°.06×126°.23E±0°.09, h31^{km}±4^{km}, mb4.6/41, Error ellipse: s-maj=14.4km s-min=7.6km az=64.0*
*MAN **28** 01:31:18.3, 6°.22N×126°.12E, h13^{km}, mb5.4, ML4.4, MS4.6*
*DJA **28** 01:31:19.7±0.5, 6°N±4°×12°6E±°, h42^{km}±5^{km}, M4.9/24, mb4.8/24, mB5.4/9, MLv5.0/11, Mw(mB)4.8/9, MwMwp4.8/1, Mwp5.1/1*
ISC 28 01:31:19.8±0.9, **6°.08N**±0°.04×**126°.26E**±0°.07, **h57**^{km}±8^{km}, **n139**, σ**1^{s}.46**/140, **mb4.5**/47, **MS3.8**/23, **7C-7D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.54**	**273**	⇑*e*P	**Pn**	**01 31 28.2**	**-3.8**
MATI	**Mati**	**0.86**	**0**	⇓*i*P	**Pn**	**01 31 31.6**	**-4.4**
DAV	**Davao City (W)**	**1.19**	**326**	P	**Pn**	**01 31 38.3**	**-2.0**
	380nm,0.3s,baz=124,slow=1.7,SNR=68						
DAV				S	**Sn**	**01 31 56.0**	**+0.4**
	364nm,0.3s,baz=221,slow=19,SNR=4.7						
DAV				LR	LR	01 32 04.4	
	comp=Z,2µm,18.9s,baz=220,slow=36						
DAV	**Davao City (W)**	**1.19**	**326**	Pn	**Pn**	**01 31 38.1**	**-2.2**
DAV	**Davao City (W)**	**1.19**	**326**	P	**Pn**	**01 31 39.0**	**-1.3**
BIPH	**Bislig**	**2.09**	**3**	⇑*e*P	**Pn**	**01 31 50.5**	**-2.1**
BIPH				*e*S	**Sn**	**01 32 17.3**	**-0.2**
SGSI	**Sangihe**	**2.48**	**197**	P	**Pn**	**01 31 56.6**	**-1.3**
BUTP	**Butuan**	**2.94**	**348**	⇑*e*P	**Pn**	**01 32 04.5**	**+0.4**
PAGZ	**Pagadian**	**3.35**	**302**	⇓*e*P	**Pn**	**01 32 08.4**	**-1.3**
PAGZ				*e*S	Sn	01 32 56.3	+8.0
MSLP	**Maasin**	**4.26**	**341**	⇓*i*P	**Pn**	**01 32 23.3**	**+1.1**
MSLP				*i* S	Sn	01 33 18.4	+7.8
TBP	**Tagbilaran**	**4.30**	**327**	⇓*e*P	**Pn**	**01 32 19.6**	**-3.2**
TBP				*e*S	**Sn**	**01 33 09.8**	**-1.9**
LLP	**Lapu-Lapu**	**4.78**	**332**	⇓*e*P	**Pn**	**01 32 29.5**	**+0.2**
LLP				*e*S	**Sn**	**01 33 29.2**	**+5.7**
TNTI	**Ternate**	**5.39**	**168**	P	**Pn**	**01 32 38.4**	**+0.7**
	1.1nm3µm334nm,0.8s						
TNTI	**Ternate**	**5.39**	**168**	Pn	**Pn**	**01 32 37.9**	**+0.2**
TNTI	**Ternate**	**5.39**	**168**	P	**Pn**	**01 32 39.5**	**+1.8**
GTOI	**Gorontalo**	**6.30**	**211**	P	**Pn**	**01 32 47.8**	**-2.4**
	0.2nm4µm762nm53nm,0.6s						
RCP	**Roxas**	**6.46**	**328**	⇑*e*P	**Pn**	**01 32 52.8**	**+0.4**
LBMI	**Labuha**	**6.79**	**169**	P	**Pn**	**01 32 56.7**	**-0.2**
	0.8nm2µm128nm,0.7s						
MRSI	**Marisa**	**7.04**	**218**	P	**Pn**	**01 32 59.4**	**-0.9**
	0.6nm2µm188nm,0.7s						
TOLI2	**Tolitoli**	**7.36**	**228**	Pn	**Pn**	**01 33 00.6**	**-4.2**
TOLI2	**Tolitoli**	**7.36**	**228**	P	**Pn**	**01 33 00.7**	**-4.0**
LUWI	**Luwuk**	**7.88**	**206**	P	**Pn**	**01 33 14.0**	**+2.1**
	1.2nm4µm142nm,0.7s						
LUWI	**Luwuk**	**7.88**	**206**	Pn	**Pn**	**01 33 12.9**	**+1.0**
SANI	**Sanana**	**8.08**	**182**	P	**Pn**	**01 33 12.8**	**-1.8**
	1µm68nm,0.7s						
SANI	**Sanana**	**8.08**	**182**	P	**Pn**	**01 33 12.5**	**-2.1**
SWI	**Sorong**	**8.52**	**144**	P	**Pn**	**01 33 21.9**	**+1.4**
	4µm41nm,0.5s						
SIJI	**Sorong**	**8.52**	**144**	P	**Pn**	**01 33 19.1**	**-1.6**
	6.9nm,0.3s,baz=352,slow=14,SNR=7.9						
SIJI				S	**Sn**	**01 34 57.2**	**+1.7**
	1.6nm,0.3s,baz=180,slow=20,SNR=1.5						
SIJI				LR	LR	01 35 44.6	
	comp=Z,94nm,19.7s,baz=128,slow=32						
MSAI	**Masohi**	**9.73**	**164**	P	**Pn**	**01 33 37.5**	**+0.3**
	2µm8.0nm,0.5s						
FAKI	**Fak Fak**	**10.76**	**146**	Pn	**Pn**	**01 33 51.3**	**0.0**
FAKI	**Fak Fak**	**10.76**	**146**	P	**Pn**	**01 33 51.7**	**+0.5**
TTSI	**Tana Toraja**	**11.11**	**216**	P	**Pn**	**01 33 55.2**	**-0.9**
	2µm42nm,1.1s						
APYP	**Conner**	**12.69**	**338**	⇑*e*P	P	01 34 30.5	+3.3
KAPI	**Kappang**	**12.79**	**211**	P	**Pn**	**01 34 19.8**	**+0.8**
	0.6nm,0.3s,baz=71,slow=7.8,SNR=5.1						
KAPI	**Kappang**	**12.79**	**211**		**Pn**	**01 34 20.2**	**+1.2**
EDFI	**Ende, Flores**	**15.42**	**197**	P	**Pn**	**01 34 52.9**	**-1.1**
	9.6nm,0.8s						
BATI	**Baumata**	**16.38**	**189**	P	**P**	**01 35 08.8**	**+0.6**
	3.8nm,0.3s,baz=262,slow=5.2,SNR=3.8						
DRS	**Darwin Rock St**	**18.96**	**166**	P	**P**	**01 35 35.9**	**-0.7**
	57nm,0.8s						
MTN	**Manton Dam**	**19.41**	**166**	P	**P**	**01 35 41.0**	**-0.5**
MTN				IAmb	IAmb	01 35 50.5	
	comp=Z,50nm,1.1s						
MTN	**Manton Dam**	**19.41**	**166**	P	**P**	**01 35 41.0**	**-0.5**
	comp=Z,39nm,0.7s						
KDU	**Kakadu**	**19.64**	**162**	P	**Pn**	**01 35 45.0**	**-0.8**
	comp=Z,34nm,1.2s						
GUMO	**Guam**	**19.79**	**66**	LR	LR	01 41 59.0	
	comp=Z,118nm,20.9s,baz=120,slow=33						
QIZ	**Qiongzhong**	**20.52**	**310**	P	Pn	01 35 56.8	+0.5
QIZ				S	Sn	01 39 47.5	+0.4
QIZ				LR	LR		
	comp=N,170nm,7.5s						
QIZ				LR	LR		
	comp=E,310nm,14.5s						
QIZ				LR	LR		
	comp=Z,220nm,14.7s						
JOW	**Kunigami**	**20.73**	**5**	LR	LR	01 43 23.5	
	comp=Z,88nm,20.7s,baz=342,slow=35						
KNRA	**Kununurra**	**21.76**	**173**	P	**P**	**01 36 06.6**	**-0.2**
KNRA	**Kununurra**	**21.76**	**173**	P	**P**	**01 36 05.9**	**-0.9**
	comp=Z,64nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.03**	**181**	P	**P**	**01 36 30.0**	**+0.3**
	comp=Z,5.7nm,0.5s,baz=14,slow=9.2,SNR=30						
MDSI	**Maura Dua**	**24.42**	**245**	P	**P**	**01 36 31.1**	**-2.2**
	comp=Z,7.9nm,1.0s						
COEN	**Coen**	**26.04**	**140**	P	**P**	**01 36 48.0**	**-0.1**
COEN				IAmb	IAmb	01 37 06.0	
	comp=Z,11nm,0.8s						
NJ2	**Nanjing**	**26.75**	**346**	*e*P	**P**	**01 36 55.3**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WB0	**Warramunga Arr**	**26.90**	**163**	P	**P**	**01 36 54.9**	**-0.9**
WRA	**Warramunga Arr**	**27.05**	**163**	P	**P**	**01 36 56.1**	**-1.0**
	comp=Z,2.1nm,0.5s,baz=346,slow=10,SNR=34						
WRA				LR	LR	01 50 35.2	
	comp=Z,101nm,18.1s,baz=25,slow=43						
WRA	**Warramunga Arr**	**27.05**	**163**	P	**P**	**01 36 56.9**	**-0.2**
WB2	**Warramunga Arr**	**27.06**	**163**	P	**P**	**01 36 56.2**	**-1.0**
WB2				IAmb	IAmb	01 37 19.8	
	comp=Z,15nm,0.9s						
PSA00	**Pilbara Seismi**	**28.19**	**193**	P	**P**	**01 37 06.2**	**-1.1**
PSA00				IAmb	IAmb	01 37 21.6	
	comp=Z,12nm,0.8s						
CMAR	**Chiang Mai Arr**	**29.33**	**297**	P	**P**	**01 37 19.2**	**+1.8**
	comp=Z,3.6nm,0.6s,baz=121,slow=7.7,SNR=28						
CMAR				ScP	**ScP**	**01 44 03.0**	**+2.8**
	comp=Z,0.7nm,0.3s,baz=53,slow=1.3,SNR=5.2						
CMAR				LR	LR	01 48 42.1	
	comp=Z,113nm,21.8s,baz=176,slow=35						
CMAR	**Chiang Mai Arr**	**29.33**	**297**	P	**P**	**01 37 18.3**	**+0.8**
KMI	**Kunming**	**29.42**	**313**	⇑P	**P**	**01 37 21.0**	**+2.5**
KMI				pP	pP	01 37 28.0	-4.0
KMI				pmax	pmax		
	comp=Z,13nm,0.8s						
KMI				LR	LR		
	comp=Z,330nm,20.3s						
CHTO	**Chiang Mai**	**29.46**	**298**	P	**P**	**01 37 18.9**	**+0.2**
CHTO				IAmb	IAmb	01 37 21.2	
	comp=Z,9.7nm,0.9s						
AS31	**Alice Springs**	**30.49**	**166**	P	**P**	**01 37 27.3**	**-0.4**
ASAR	**Alice Springs**	**30.49**	**166**	P	**P**	**01 37 26.8**	**-0.9**
	comp=Z,2.8nm,0.5s,baz=344,slow=7.1,SNR=26						
ASAR				PcP	**PcP**	**01 40 26.1**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=0.4,slow=1.3,SNR=6.0						
ASAR	**Alice Springs**	**30.49**	**166**	P	**P**	**01 37 27.2**	**-0.5**
ASAR					**PcP**	**01 40 25.7**	**-0.2**
KSRS	**Korea Array**	**31.27**	**3**	LR	LR	01 51 25.2	
	comp=Z,77nm,19.1s,baz=196,slow=39						
XAN	**Xi'an**	**32.12**	**332**	⇑P	**P**	**01 37 43.5**	**+1.5**
XAN				pP	sP	01 37 58.3	-4.4
XAN				sP	pP	01 38 05.5	+9.4
XAN				PcP	**PcP**	**01 40 32.0**	**+1.8**
XAN				pmax	pmax		
	comp=Z,40nm,1.0s						
XAN				LR	LR		
	comp=E,260nm,12.4s						
XAN				LR	LR		
	comp=Z,320nm,16.5s						
CTAO	**Charters Tower**	**32.60**	**143**	P	**P**	**01 37 47.6**	**+1.4**
CTAO				IAmb	IAmb	01 37 48.2	
	comp=Z,7.2nm,0.8s						
LZH	**Lanzhou**	**36.26**	**329**	⇓P	**P**	**01 38 21.0**	**+3.1**
LZH				pP	pP	01 38 29.8	-2.5
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				LR	LR		
	comp=N,200nm,16.8s						
LZH				LR	LR		
	comp=E,250nm,16.3s						
LZH				LR	LR		
	comp=Z,230nm,15.7s						
MORW	**Morawa**	**36.30**	**195**	P	**P**	**01 38 18.1**	**0.0**
MORW				IAmb	IAmb	01 38 21.3	
	comp=Z,13nm,1.2s						
FORT	**Forrest**	**36.69**	**177**	P	**P**	**01 38 21.3**	**-0.1**
HHC	**Hu-ho-hao-te**	**37.03**	**341**	*e*P	**P**	**01 38 25.8**	**+1.4**
HHC				pmax	pmax		
	comp=Z,230nm,5.1s						
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
SHL	**Shillong**	**38.14**	**304**	P	**P**	**01 38 35.0**	**+1.0**
BBOO	**Buckleboo**	**39.78**	**167**	P	**P**	**01 38 47.3**	**-0.1**
STKA	**Stephens Creek**	**40.48**	**160**	P	**P**	**01 38 53.3**	**+0.1**
	comp=Z,3.1nm,0.5s,baz=335,slow=7.4,SNR=12						
STKA				PcP	**PcP**	**01 40 55.0**	**0.0**
	comp=Z,2.3nm,0.5s,baz=60,slow=5.7,SNR=3.1						
STKA				LR	LR	01 57 41.9	
	comp=Z,63nm,19.1s,baz=348,slow=39						
STKA	**Stephens Creek**	**40.48**	**160**	P	**P**	**01 38 53.1**	**-0.1**
STKA					**PcP**	**01 40 54.9**	**-0.2**
GTA	**Gaotai**	**40.86**	**328**	⇓P	**P**	**01 38 59.0**	**+2.6**
GTA				pP	sP	01 39 08.5	-9.0
GTA				sP	pP	01 39 12.8	+1.8
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,140nm,6.3s						
GTA				LR	LR		
	comp=N,120nm,15.3s						
GTA				LR	LR		
	comp=E,130nm,16.4s						
GTA				LR	LR		
	comp=Z,200nm,16.4s						
KLR	**Kul'dur**	**43.25**	**5**	P	**P**	**01 39 13.8**	**-1.8**
	comp=Z,2.3nm,0.9s,baz=186,slow=2.7,SNR=4.3						
ARMA	**Armidale**	**43.68**	**148**	P	**P**	**01 39 19.5**	**+0.1**
ARMA				IAmb	IAmb	01 39 28.4	
	comp=Z,15nm,0.9s						
ULN	**Ulaanbaatar**	**44.75**	**342**	P	**P**	**01 39 27.2**	**-0.6**
SONM	**Songino Array**	**44.94**	**341**	P	**P**	**01 39 30.0**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=152,slow=8.6,SNR=12						
SONM				PcP	**PcP**	**01 41 10.0**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=157,slow=4.5,SNR=2.9						
SONM				LR	LR	02 00 44.1	
	comp=Z,55nm,19.8s,baz=98,slow=39						
SONM	**Songino Array**	**44.94**	**341**	P	**P**	**01 39 29.6**	**+0.4**
TOO	**Toolangi**	**46.99**	**159**	P	**P**	**01 39 45.5**	**+0.1**
DZM	**Mont Dzumac**	**48.29**	**127**	*e*LR	LR	01 53 41.8	
	comp=Z,192nm,26.9s						
WMQ	**Urumqi**	**50.55**	**324**	*e*P	**P**	**01 40 14.0**	**+1.3**
MK31	**Makanchi Array**	**55.37**	**325**	P	**P**	**01 40 46.9**	**-1.3**
MK31				IAmb	IAmb	01 40 50.8	
	comp=Z,4.0nm,0.7s						
MKAR	**Makanchi Array**	**55.37**	**325**	P	**P**	**01 40 47.4**	**-0.9**
	comp=Z,5.2nm,0.7s,baz=120,slow=7.1,SNR=46						
MKAR				LR	LR	02 05 45.7	
	comp=Z,57nm,21.8s,baz=68,slow=37						
MKAR	**Makanchi Array**	**55.37**	**325**	P	**P**	**01 40 46.9**	**-1.3**
MAKZ	**Makanchi**	**55.56**	**324**	P	**P**	**01 40 49.4**	**-0.2**
MAKZ				IAmb	IAmb	01 40 52.2	
	comp=Z,4.4nm,0.8s						
KSH	**Kashi**	**56.07**	**314**	P	**P**	**01 40 52.0**	**-1.4**
KSH				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ZAA0	**Zalesovo Array**	**58.30**	**333**	P	**P**	**01 41 08.1**	**-0.6**
ZAA0				IAmb	IAmb	01 41 21.0	
	comp=Z,6.1nm,1.3s						
ZALV	**Zalesovo Beam**	**58.30**	**333**	P	**P**	**01 41 09.0**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=121,slow=7.2,SNR=8.5						
ZALV				LR	LR	02 07 23.4	
	comp=Z,84nm,19.1s,baz=90,slow=37						
ZALV	**Zalesovo Beam**	**58.30**	**333**	P	**P**	**01 41 07.7**	**-1.0**
KURK	**Kurchatov**	**59.52**	**327**	P	**P**	**01 41 17.1**	**-0.1**
KKAR	**Karatay Array**	**61.21**	**316**	P	**P**	**01 41 27.9**	**-1.1**
BKZ	**Black Stump Fm**	**64.64**	**139**	P	**P**	**01 41 54.0**	**+2.1**
BRVK	**Borovoye**	**65.18**	**327**	P	**P**	**01 41 55.6**	**+0.6**
TIXI	**Tiksi**	**65.52**	**1**	P	**P**	**01 41 56.4**	**-0.5**
TIXI				IAmb	IAmb	01 42 00.5	
	comp=Z,5.0nm,0.7s						
NRIK	**Noril'sk**	**68.05**	**346**	P	**P**	**01 42 13.2**	**+0.1**
	comp=Z,3.6nm,0.7s,baz=119,slow=5.1,SNR=6.9						
NRIK	**Noril'sk**	**68.05**	**346**	P	**P**	**01 42 12.7**	**-0.4**
NRIK				IAmb	IAmb	01 42 14.2	
	comp=Z,4.8nm,0.8s						
GEYT	**Alibeck**	**69.07**	**308**	LR	LR	02 16 38.9	
	comp=Z,28nm,18.2s,baz=150,slow=39						
ABKAR	**Akbulak array**	**70.05**	**320**	P	**P**	**01 42 25.4**	**-0.5**
AKTO	**Aktyubinsk**	**71.54**	**321**	P	**P**	**01 42 34.4**	**-0.5**
	comp=Z,3.6nm,0.7s,baz=94,slow=11,SNR=16						
ARU	**Arti**	**72.71**	**327**	P	**P**	**01 42 42.1**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=137,slow=0.7,SNR=9.5						
ARU	**Arti**	**72.71**	**327**	P	**P**	**01 42 41.7**	**-0.1**
ARU				IAmb	IAmb	01 42 43.3	
	comp=Z,5.0nm,0.8s						
BELG	**Belogornoye**	**78.27**	**322**	P	**P**	**01 43 13.9**	**+0.2**
	comp=Z,11nm,0.8s,baz=247,slow=3.6,SNR=5.2						
RAYN	**Ar Rayn**	**79.14**	**293**	P	**P**	**01 43 17.8**	**-1.3**
RAYN				IAmb	IAmb	01 43 20.5	
	comp=Z,9.6nm,0.9s						
IMAR	**Indian Mountai**	**80.40**	**24**	P	**P**	**01 43 24.1**	**-0.9**
CAST	**Castle Rocks**	**80.86**	**27**	P	**P**	**01 43 28.3**	**+0.7**
CAST				IAmb	IAmb	01 43 48.1	
	comp=Z,5.5nm,1.0s						
KBZ	**Khabaz**	**81.03**	**313**	LR	LR	02 24 30.1	
	comp=Z,42nm,19.2s,baz=70,slow=39						
KTH	**Kantishna Hill**	**81.39**	**27**	P	**P**	**01 43 31.0**	**+0.6**
KTH				IAmb	IAmb	01 43 55.4	
	comp=Z,12nm,1.2s						
BPAW	**Bear Paw Mtn.**	**81.40**	**26**	P	**P**	**01 43 31.2**	**+0.8**
BPAW				IAmb	IAmb	01 43 44.8	
	comp=Z,4.7nm,0.9s						
GURO	**Guroymak-BITLI**	**81.73**	**308**	P	**P**	**01 43 33.5**	**+0.7**
COLD	**Coldfoot**	**81.93**	**23**	P	**P**	**01 43 33.2**	**+0.1**
COLD				IAmb	IAmb	01 43 35.9	
	comp=Z,4.8nm,1.0s						
TOLK	**Toolik Lake Re**	**82.25**	**22**	P	**P**	**01 43 34.4**	**-0.4**
MCK	**McKinley**	**82.28**	**27**	P	**P**	**01 43 35.6**	**+0.5**
MCK				IAmb	IAmb	01 43 41.5	
	comp=Z,13nm,1.2s						
MDM	**Murphy Dome**	**82.63**	**25**	P	**P**	**01 43 36.5**	**-0.3**
H24K	**Noodor Dome**	**82.80**	**24**	P	**P**	**01 43 38.9**	**+1.1**
KLMR	**Klimovskoe**	**83.14**	**331**	*e*P	**P**	**01 43 37.8**	**-1.7**
KLMR				AMP		01 43 41.5	
	comp=Z,14nm,1.2s						
ILAR	**Eielson Array**	**83.20**	**26**	P	**P**	**01 43 37.4**	**-2.4**
	comp=Z,1.9nm,1.0s,baz=243,slow=4.7,SNR=10						
BMAR	**Burnt Mountain**	**84.11**	**23**	P	**P**	**01 43 44.7**	**+0.3**
VNDA	**Vanda**	**85.80**	**173**	P	**P**	**01 43 53.0**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=312,slow=6.4,SNR=3.5						
VNDA				LR	LR	02 21 48.6	
	comp=Z,39nm,21.5s,baz=344,slow=35						
VNDA	**Vanda**	**85.80**	**173**	P	**P**	**01 43 51.7**	**-0.9**
VNDA				IAmb	IAmb	01 44 19.2	
	comp=Z,4.1nm,1.1s						
PPT2	**Papeete2**	**86.28**	**108**	*e*LR	LR	02 11 12.0	
	comp=Z,77nm,24.8s						
ARCES	**ARCESS Array B**	**88.09**	**340**	P	**P**	**01 44 03.8**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=69,slow=6.6,SNR=8.4						
ARCES				LR	LR	02 29 29.9	
	comp=Z,21nm,20.6s,baz=255,slow=40						
ARCES	**ARCESS Array B**	**88.09**	**340**	P	**P**	**01 44 03.2**	**-0.7**
BRTR	**Keskin Array B**	**88.17**	**310**	P	**P**	**01 44 03.0**	**-2.1**
	comp=Z,0.5nm,0.8s,baz=112,slow=6.4,SNR=2.2						
BRTR	**Keskin Array B**	**88.17**	**310**	P	**P**	**01 44 03.9**	**-1.3**
FINES	**FINESS Array B**	**89.55**	**332**	P	**P**	**01 44 09.7**	**-1.3**
	comp=Z,1.6nm,0.8s,baz=57,slow=7.0,SNR=4.8						
FINES				LR	LR	02 27 28.8	
	comp=Z,68nm,18.6s,baz=58,slow=38						
FINES	**FINESS Array B**	**89.55**	**332**	P	**P**	**01 44 09.3**	**-1.6**
AKASG	**Malin Array Be**	**89.78**	**321**	P	**P**	**01 44 11.3**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=70,slow=4.7,SNR=4.4						
AKASG				LR	LR	02 28 19.3	
	comp=Z,26nm,18.9s,baz=20,slow=38						
AKASG	**Malin Array Be**	**89.78**	**321**	P	**P**	**01 44 10.9**	**-1.4**
TAOE	**Nuku Hiva Isla**	**94.46**	**98**	*e*LR	LR	02 15 01.9	
	comp=Z,118nm,25.1s						
NOA	**NORSAR Array B**	**96.49**	**334**	P	**P**	**01 44 41.8**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=64,slow=4.5,SNR=4.1						
NOA				LR	LR	02 31 36.0	
	comp=Z,73nm,20.5s,baz=65,slow=38						
YKA	**Yellowknife Ar**	**97.56**	**24**	P	**P**	**01 44 46.4**	**-1.3**
	comp=Z,0.7nm,0.9s,baz=305,slow=4.9,SNR=8.6						
YKA	**Yellowknife Ar**	**97.56**	**24**	P	**P**	**01 44 46.3**	**-1.5**
TORD	**Torodi Ar. Bea**	**121.72**	**289**	PKP	**PKPdf**	**01 50 07.2**	**-1.2**
	comp=Z,2.0nm,0.7s,baz=44,slow=2.1,SNR=15						
TORD	**Torodi Ar. Bea**	**121.72**	**289**	PKPdf	**PKPdf**	**01 50 07.6**	**-0.9**
LC01	**Cunco**	**143.44**	**156**	PKPdf	PKPbc	01 50 46.6	+0.8
BO02	**Sierra Bellavi**	**147.38**	**153**	PKPbc	**PKPbc**	**01 50 58.7**	**+0.7**
MT01	**Popeta**	**147.94**	**152**	PKPbc	**PKPbc**	**01 50 59.5**	**+0.1**
MT02	**Curacav**	**148.49**	**151**	PKPbc	**PKPbc**	**01 51 01.3**	**+0.4**
BCIP	**Isla Barro Col**	**149.90**	**60**	PKPbc	**PKPbc**	**01 51 05.3**	**+0.5**

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*IDC **28** 01:58:43.5±12.0, 47°.35N×143°.58E, h349^{km}±160^{km}, mb3.1/2, mb1 3.1/3, mb1mx2.6/29, mbtmp3.8/3, Error ellipse: s-maj=465.1km s-min=85.7km az=151.0*
*JMA **28** 01:58:44.2±0.4, 46°.34N×144°.03E, h404^{km}, M3.6*
ISC 28 01:58:42.8±1.3, **46°.5N**±0°.1×**143°.9E**±0°.1, **h387**^{km}, **n12**, σ**1^{s}.84**/16, **Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWK2	**Keihoku**	**1.79**	**230**	P	**Pn**	**01 59 39.4**	**+3.1**
JTKR	**Abashiri--Toko**	**2.50**	**179**	P	**Pn**	**01 59 43.8**	**+2.7**
JAR	**Ashorobuto**	**3.18**	**181**	P	**Pn**	**01 59 49.0**	**+2.4**
NEM2	**Nemuro 2**	**3.39**	**156**	P	**Pn**	**01 59 49.2**	**+0.8**
NEM2				*e*S	**S**	**02 00 39.8**	**-1.6**
JAK	**Akkeshi**	**3.53**	**170**	*e*S	**S**	**02 00 43.9**	**+0.1**
JCH	**Churui**	**3.88**	**185**	P	**Pn**	**01 59 54.2**	**+1.2**
JCH				*e*S	**S**	**02 00 48.2**	**-1.5**
JNBK	**Urakawa-nobuka**	**4.27**	**191**	P	**Pn**	**01 59 58.3**	**+1.5**
JKB	**Kayabe**	**5.01**	**205**	P	**Pn**	**02 00 06.3**	**+1.9**
JKB				*e*S	**S**	**02 01 10.0**	**-0.6**
JOT	**Ohata**	**5.48**	**203**	P	**Pn**	**02 00 10.9**	**+1.6**
JOT				*e*S	**S**	**02 01 18.1**	**-1.5**
USRK	**Ussuriysk Ar.**	**8.66**	**259**	P	**Pn**	**02 00 45.9**	**+0.7**
	baz=64,slow=12,SNR=7.4						
MKAR	**Makanchi Array**	**41.30**	**294**	P	**P**	**02 05 51.6**	**-0.5**
	0.2nm,0.7s,baz=72,slow=7.8,SNR=4.8						
FINES	**FINESS Array B**	**61.37**	**331**	P	**P**	**02 08 17.2**	**-1.5**
	1.3nm,0.5s,baz=51,slow=7.3,SNR=12						

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*SJA **28** 02:08:18.9±0.6, 29°.79S×72°.63W, h8^{km}, ML4.1, MW3.8*
*NEIC **28** 02:08:24.6±2.5, 29°.85S±0°.05×72°.13W±0°.05, h10^{km}±2^{km}, mb4.3/2, ML4.1(GUC), Error ellipse: s-maj=10.5km s-min=3.1km az=40.0*
*GUC **28** 02:08:27.0±0.7, 29°.94S×72°.01W, h36^{km}±3^{km}, ML4.1*
ISC 28 02:08:23.6±1.5, **29°.88S**±0°.02×**72°.14W**±0°.05, **h3**^{km}±10^{km}, **n67**, σ**1^{s}.74**/99, **3C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.78**	**93**	⇓*i*P	**Pb**	**02 08 40.0**	**+0.1**
CO05				*i* S	**Sg**	**02 08 49.1**	**+0.4**
CO05				IAML		02 08 50.1	
	comp=N,11µm,0.3s						
CO05	**La Serena**	**0.78**	**93**		**Pb**	**02 08 40.0**	**+0.1**
CO05				Sg	**Sg**	**02 08 49.1**	**+0.4**
CO06	**Fray Jorge**	**0.91**	**151**	⇑*i*P	**Pg**	**02 08 42.0**	**+1.0**
CO06				*i* S	**Sg**	**02 08 52.8**	**+0.1**
CO06	**Fray Jorge**	**0.91**	**151**		**Pg**	**02 08 42.0**	**+1.0**
CO06				Sg	**Sg**	**02 08 53.1**	**+0.3**
GO04	**Tololo Observa**	**1.20**	**105**	⇓*i*P	**Pb**	**02 08 46.7**	**-0.4**
GO04				*i* S	**Sb**	**02 09 01.1**	**-2.0**
GO04	**Tololo Observa**	**1.20**	**105**		**Pb**	**02 08 46.6**	**-0.5**
GO04	**Tololo Observa**	**1.20**	**105**	*e*P	**Pn**	**02 08 48.5**	**+1.0**
GO04				*e*S	**Sb**	**02 09 02.0**	**-1.1**
LCO	**Las Campanas**	**1.52**	**56**	⇑*i*P	**Pb**	**02 08 52.6**	**0.0**
LCO				*i* S	**Sb**	**02 09 12.1**	**-0.3**
LCO	**Las Campanas**	**1.52**	**56**	Pn	**Pg**	**02 08 53.0**	**+0.3**
LCO	**Las Campanas**	**1.52**	**56**	*e*P	**Pg**	**02 08 53.0**	**+0.3**
CO03	**El Pedregal**	**1.58**	**128**	⇓*i*P	**Pn**	**02 08 52.4**	**-0.2**
CO03				*i* S	**Sn**	**02 09 11.1**	**-2.5**
CO03				IAML		02 09 16.1	
	comp=E,3µm,0.3s						
CO03	**El Pedregal**	**1.58**	**128**	Pn	**Pn**	**02 08 52.7**	**+0.2**
CO03	**El Pedregal**	**1.58**	**128**	*e*P	**Pn**	**02 08 48.5**	**-4.1**
CO03				*e*P	**Pn**	**02 08 52.8**	**+0.2**
CO03				IAML		02 09 22.7	
	comp=Z,1µm,1.1s						
AC04	**Llanos de Chal**	**1.91**	**29**	⇑*i*P	**Pn**	**02 08 57.8**	**+0.8**
AC04	**Llanos de Chal**	**1.91**	**29**	Pn	**Pn**	**02 08 57.9**	**+0.8**
AC04	**Llanos de Chal**	**1.91**	**29**	*e*P	**Pn**	**02 08 57.7**	**+0.8**
AC04				*e*S	**Sg**	**02 09 24.5**	**-0.4**
AC04				IAML		02 09 34.9	
	comp=Z,874nm,0.5s						
AROD	**Rodeo**	**2.33**	**98**	*e*P	**Pb**	**02 09 06.2**	**-0.2**
AROD				*e*S	**Sn**	**02 09 31.5**	**-1.0**
ACDV	**Cuesta del Vie**	**2.63**	**97**	*e*P	**Pb**	**02 09 10.6**	**-0.9**
ACDV				*e*P	**Pn**	**02 09 11.0**	**+3.8**
ACDV				*e*S	**Sg**	**02 09 49.8**	**+1.6**
ACCO	**Cerro Coronel**	**2.75**	**106**	*e*P	**Pb**	**02 09 13.0**	**-0.6**
ACCO				*e*S	**Sn**	**02 09 44.0**	**+1.1**
VA06	**Catapilco**	**2.77**	**165**	*e*P	**Pn**	**02 09 09.2**	**+0.3**
VA06				IAML		02 09 57.2	
	comp=N,742nm,0.6s						
GO03	**Copiap**	**2.82**	**37**	*e*P	**Pn**	**02 09 11.1**	**+1.4**
GO03				*e*S	**Sn**	**02 09 45.5**	**+1.3**
GO03				IAML		02 09 57.9	
	comp=E,790nm,0.7s						
GO03	**Copiap**	**2.82**	**37**	Pn	**Pn**	**02 09 11.1**	**+1.4**
GO03	**Copiap**	**2.82**	**37**	*e*P	**Pn**	**02 09 11.0**	**+1.4**
GO03				*e*S	**Sb**	**02 09 49.5**	**-0.2**
RTLS	**Leoncito**	**3.11**	**129**	*e*P	**Pb**	**02 09 18.0**	**-1.7**
RTLS				*e*S	**Sb**	**02 09 55.5**	**-2.6**
RTLS				IAML		02 10 03.9	
	comp=Z,482nm,1.0s						
VA03	**San Esteban**	**3.18**	**155**	*e*P	**Pn**	**02 09 15.4**	**+0.7**
VA03				*e*S	**Sn**	**02 09 52.2**	**-1.0**
VA03				IAML		02 10 10.3	
	comp=N,680nm,0.6s						
VA03	**San Esteban**	**3.18**	**155**		**Pn**	**02 09 16.1**	**+1.5**
VA03	**San Esteban**	**3.18**	**155**	*e*P	**Pn**	**02 09 17.0**	**+2.3**
VA03				*e*S	**Sb**	**02 09 59.5**	**-0.6**
VA03				IAML		02 10 14.2	
	comp=Z,540nm,0.7s						
ROCH	**El Roble**	**3.23**	**163**	*e*P	Pb	02 09 16.0	-5.8
ROCH				*e*P	**Pn**	**02 09 15.6**	**+0.2**
ROCH				*e*S	**Sn**	**02 09 52.1**	**-2.6**
ROCH				*e*S	Sb	02 09 53.3	-8.4
ROCH				IAML		02 10 22.9	
	comp=E,451nm,0.6s						
ROCH				IAML		02 10 23.3	
	comp=E,592nm,0.5s						
ROC1	**El Roble**	**3.24**	**163**	*e*P	**Pn**	**02 09 16.0**	**+0.5**
ROC1				*e*S	**Sb**	**02 09 59.0**	**-2.8**
MT02	**Curacav**	**3.48**	**166**	Pn	**Pn**	**02 09 19.3**	**+0.6**
MT02	**Curacav**	**3.48**	**166**	*e*P	**Pn**	**02 09 19.2**	**+0.6**
MT02				*e*S	**Sb**	**02 10 09.0**	**+0.4**
PEL	**Peldehue**	**3.49**	**160**	Pn	**Pn**	**02 09 19.5**	**+0.7**
PEL	**Peldehue**	**3.49**	**160**	*e*P	**Pn**	**02 09 20.1**	**+1.3**
PEL				*e*S	**Sg**	**02 10 16.1**	**+0.5**
VCA	**Vinchina**	**3.62**	**73**	*e*P	**Pb**	**02 09 26.0**	**-2.3**
VCA				*e*S	**Sg**	**02 10 17.0**	**-2.8**
VCA				*e*S	**Sb**	**02 10 17.5**	**+4.8**
VCA				IAML		02 10 27.0	
	comp=Z,505nm,0.6s						
RTCV	**Cerro Valdivia**	**3.67**	**124**	*e*P	**Pb**	**02 09 26.0**	**-3.2**
MT05	**Renca**	**3.70**	**162**	*e*P	**Pn**	**02 09 22.6**	**+0.8**
MT05				IAML		02 10 28.6	
	comp=E,432nm,0.5s						
MT05	**Renca**	**3.70**	**162**	Pn	**Pn**	**02 09 22.8**	**+1.0**
MT05	**Renca**	**3.70**	**162**	*e*P	**Pn**	**02 09 23.0**	**+1.2**
MT05				*e*S	**Sb**	**02 10 17.5**	**+2.4**
MT05				IAML		02 10 35.2	
	comp=Z,249nm,0.9s						
VA05	**Santo Domingo**	**3.80**	**173**	Pn	**Pn**	**02 09 24.5**	**+1.5**
ASAL	**Salagasta**	**3.92**	**135**	*e*P	**Pn**	**02 09 24.0**	**-0.7**
ASAL				*e*P	Pb	02 09 29.0	-4.3
ASAL				*e*S	**Sb**	**02 10 24.0**	**+2.8**
MT09	**Talagante**	**4.01**	**166**		**Pn**	**02 09 27.3**	**+1.2**
AC02	**Maricunga**	**4.03**	**42**	Pn	**Pn**	**02 09 28.7**	**+2.1**
AC02	**Maricunga**	**4.03**	**42**	*e*P	**Pn**	**02 09 28.9**	**+2.3**
AC02				*e*P	Pb	02 09 29.0	-6.4
AC02				*e*S	**Sn**	**02 10 18.5**	**+3.9**
AC02				IAML		02 10 35.7	
	comp=Z,281nm,0.8s						
MT01	**Popeta**	**4.05**	**169**	Pn	**Pn**	**02 09 26.9**	**+0.4**
MT01	**Popeta**	**4.05**	**169**	*e*P	**Pn**	**02 09 27.0**	**+0.5**
MT01				*e*S	**Sb**	**02 10 28.5**	**+3.6**

ACLC	CERRO LA CRUZ	4.54	86	*e*P	Pn	02 09 36.2	+2.9
ACLC				*e*S	Sb	02 10 37.0	-2.2
BO01	Tunca	4.59	169	Pn	Pn	02 09 34.2	+0.3
BO01	Tunca	4.59	169	*e*P	Pn	02 09 35.0	+1.1
BO01				*e*S	Sb	02 10 46.5	+6.0
APLL	PUNTA DE LOS L	4.89	97	*e*P	Pn	02 09 41.0	+2.9
BO02	Sierra Bellavi	5.04	167	Pn	Pn	02 09 41.0	+0.9
BO02	Sierra Bellavi	5.04	167	*e*P	Pn	02 09 41.0	+0.9
BO02				*e*P	Pn	02 09 41.2	+1.1
GO05	Huala	5.12	178	Pn	Pn	02 09 40.4	-0.8
GO05	Huala	5.12	178	*e*P	Pn	02 09 41.0	-0.3
PB14	IPOC Station P	5.45	17	Pn	Pn	02 09 45.2	-0.9
ML02	Panimavida	5.90	174	Pn	Pn	02 09 51.8	-0.1
MRA	San Martin	6.06	116	*e*P	Pn	02 09 55.9	+1.7
PB10	IPOC Station P	6.49	13	Pn	Pn	02 09 58.7	-1.3
PB15	IPOC Station P	7.06	20	Pn	Pn	02 10 07.4	-0.6
PB06	IPOC Station P	7.50	18	Pn	Pn	02 10 12.4	-1.6
PB04	IPOC Station P	7.72	14	Pn	Pn	02 10 15.5	-1.6
LVC	Limon Verde	7.79	23	Pn	Pn	02 10 17.6	-0.7
PB07	IPOC Station P	8.36	15	Pn	Pn	02 10 24.2	-1.7
LC01	Cunco	9.00	179	Pn	Pn	02 10 33.7	-0.8
PB01	IPOC Station P	9.11	16	Pn	Pn	02 10 34.8	-1.4
LPAZ	La Paz	14.02	16	Pn	Pn	02 11 42.3	-1.5
BDFB	Brasilia	26.30	63	P	P	02 14 01.1	+0.4
BDFB				IAmb	IAmb	02 14 16.6	
	comp=Z,12nm,1.4s						
SNAA	Sanae	55.44	159	P	P	02 18 00.1	+1.0
SNAA				IAmb	IAmb	02 18 02.5	
	comp=Z,3.6nm,1.2s						

NEIC ***28*** *02:18:27.5±0.9, 63°.38N±0°.03×149°.58W±0°.07, h103^{km}±3^{km}, Error ellipse: s-maj=5.8km s-min=3.3km az=221.0*

AEIC ***28*** *02:18:27±0.9, 63°.37N±0°.04×149°.60W±0°.07, h101^{km}±4^{km}, ML3.1, ML3.3/133(NEIC), Error ellipse: s-maj=5.8km s-min=4.5km az=211.0*

IDC ***28*** *02:18:27.3±1.7, 63°.42N×149°.64W, h108^{km}±15^{km}, mb3.2/4, mb1 3.3/7, mb1mx2.9/36, mbtmp3.6/7, Error ellipse: s-maj=17.8km s-min=15.7km az=78.0*

ISC 28 02:18:27.0±0.7**, 63°.38N**±0°.03×**149°.64W**±0°.03**, h107**^{km}±5^{km}**, n196, σ0^{s}.69**/234**, mb3.5**/4**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRF	Thorofare Moun	0.30	284		Pn	02 18 42.9	+0.3
TRF					Sn	02 18 54.4	0.0
TRF	Thorofare Moun	0.30	284	P	Pn	02 18 42.9	+0.3
	baz=105,SNR=212						
TRF				S	Sn	02 18 54.3	0.0
	baz=105						
RND	Reindeer	0.35	85		Pn	02 18 42.8	+0.1
RND				Sn	Sn	02 18 54.1	-0.5
MCK	McKinley	0.47	41	Pn	Pn	02 18 43.4	0.0
MCK				Sn	Sn	02 18 54.9	-0.8
MCK	McKinley	0.47	41	P	Pn	02 18 43.7	+0.3
	baz=219,SNR=60						
MCK				S	Sn	02 18 55.3	-0.4
	baz=219						
KTH	Kantishna Hill	0.60	287	Pn	Pn	02 18 44.4	0.0
KTH				Sn	Sn	02 18 57.0	-0.4
KTH				IAML		02 18 58.8	
	comp=N,812nm,1.1s						
WAT7	Susitna Watana	0.66	146		Pn	02 18 44.7	-0.2
WAT1	Susitna Watana	0.74	138		Pn	02 18 45.5	0.0
WAT1					Sn	02 18 59.0	-0.3
WAT1	Susitna Watana	0.74	138	P	Pn	02 18 45.4	0.0
	baz=319						
WAT1				S	Sn	02 18 58.6	-0.7
	baz=319						
BWN	Browne	0.80	5	Pn	Pn	02 18 46.4	+0.4
CUT	Chulitna	1.02	197		Pn	02 18 48.2	+0.1
CUT				Sn	Sn	02 19 03.7	-0.3
CUT				IAML		02 19 09.5	
	comp=E,2µm,0.2s						
CUT				IAML		02 19 16.0	
	comp=N,954nm,0.5s						
CUT	Chulitna	1.02	197	P	Pn	02 18 48.4	+0.2
	baz=17,SNR=48						
CUT				S	Sn	02 19 04.2	+0.2
	baz=17						
DHY	Denali Highway	1.07	106		Pn	02 18 49.0	+0.1
DHY				IAML		02 19 06.4	
	comp=E,641nm,0.8s						
DHY				IAML		02 19 07.4	
	comp=N,507nm,0.7s						
DHY	Denali Highway	1.07	106	P	Pn	02 18 49.0	+0.1
	baz=287,SNR=83						
DHY				S	Sn	02 19 05.0	-0.3
	baz=287						
CAST	Castle Rocks	1.10	273	Pn	Pn	02 18 49.1	+0.1
CAST				Sn	Sn	02 19 04.8	-0.9
CAST				IAML		02 19 05.9	
	comp=N,330nm,0.7s						
CAST	Castle Rocks	1.10	273	P	Pn	02 18 49.2	+0.1
	baz=92,SNR=62						
CAST				S	Sn	02 19 05.2	-0.5
	baz=92						
WAT6	Susitna Watana	1.18	132		Pn	02 18 50.1	+0.1
WAT6	Susitna Watana	1.18	132	P	Pn	02 18 50.1	+0.1
	baz=314,SNR=117						
WAT6				S	Sn	02 19 06.8	-0.7
	baz=314						
NEA2	Nenana	1.24	11	Pn	Pn	02 18 50.5	-0.1
NEA2	Nenana	1.24	11	P	Pn	02 18 50.6	0.0
	baz=191						
NEA2				S	Sn	02 19 07.4	-1.0
	baz=191						
PPLA	Purkeypile	1.26	248		Sn	02 19 09.2	+0.2
PPLA	Purkeypile	1.26	248	Pn	Pn	02 18 51.5	+0.6
PPLA	Purkeypile	1.26	248	P	Pn	02 18 51.5	+0.6
	baz=67,SNR=54						
PPLA				S	Sn	02 19 09.0	0.0
	baz=67						
WRH	Wood River Hil	1.29	31	Pn	Pn	02 18 51.1	0.0
CHUM	Lake Minchumin	1.30	294		Pn	02 18 51.8	+0.6
CHUM	Lake Minchumin	1.30	294	P	Pn	02 18 51.8	+0.6
	baz=112,SNR=19						
CHUM				S	Sn	02 19 09.4	-0.2
	baz=112						
CCB	Clear Creek Bu	1.51	32	Pn	Pn	02 18 53.3	-0.3
HDA	Harding Lake	1.58	48	Pn	Pn	02 18 54.4	-0.2
HDA				IAML		02 19 17.6	
	comp=E,628nm,0.4s						
HDA				IAML		02 19 17.9	
	comp=N,637nm,0.5s						
HDA	Harding Lake	1.58	48	P	Pn	02 18 54.5	0.0
	baz=230						
HDA				S	Sn	02 19 16.2	+0.7
	baz=230						
HDA				S	Sn	02 19 16.2	+0.7
	baz=230						
GHO	Glory Hole Cre	1.65	168	Pn	Pn	02 18 56.0	+0.5
GHO				IAML		02 19 23.5	
	comp=E,663nm,0.6s						
M22K	Willow	1.65	188		Pn	02 18 56.7	+1.3
M22K	Willow	1.65	188	P	Pn	02 18 55.7	+0.3
	baz=8.2,SNR=12						
M22K				S	Sn	02 19 18.2	+1.3
	baz=8.2						
SML	Sawmill	1.69	158	Pn	Pn	02 18 56.2	+0.2
SML				IAML		02 19 23.2	
	comp=E,571nm,0.6s						
SML				IAML		02 19 23.5	
	comp=N,677nm,0.5s						
SML	Sawmill	1.69	158	P	Pn	02 18 56.4	+0.4
	baz=340,SNR=55						
SML				S	Sn	02 19 18.4	+0.4
	baz=340						
TCOL	CIGO, UAF Yank	1.69	27	Pn	Pn	02 18 54.5	-1.4
TCOL				IAML		02 19 23.9	
	comp=N,204nm,0.6s						
TCOL				IAML		02 19 32.4	
	comp=E,165nm,0.5s						
TCOL	CIGO, UAF Yank	1.69	27	P	Pn	02 18 55.9	0.0
	baz=208,SNR=7.4						
TCOL				S	Sn	02 19 17.7	-0.2
	baz=208						
COLA	College	1.69	27	Pn	Pn	02 18 56.0	+0.1
COLA	College	1.69	27	IAML		02 19 23.9	
	comp=E,231nm,0.6s						
COLA				IAML		02 19 42.1	
	comp=E,178nm,0.5s						
COLA	College	1.69	27	S	Sn	02 19 17.5	-0.5
	baz=208						
MDM	Murphy Dome	1.70	21	Pn	Pn	02 18 56.3	+0.2
MLY	Manley	1.73	344	Pn	Pn	02 18 56.6	+0.2
MLY	Manley	1.73	344	P	Pn	02 18 56.8	+0.3
	baz=163						
MLY				S	Sn	02 19 18.0	-0.8
	baz=163						
I23K	Minto, Yukon-K	1.78	4	Pn	Pn	02 18 57.2	+0.2
I23K	Minto, Yukon-K	1.78	4	P	Pn	02 18 57.1	+0.1
	baz=184,SNR=5.5						
I23K				S	Sn	02 19 19.2	-0.7
	baz=184						
PMR	Palmer	1.81	172	Pn	Pn	02 18 57.7	+0.3
PMR				IAML		02 19 25.4	
	comp=E,576nm,0.6s						
PMR				IAML		02 19 27.9	
	comp=N,248nm,0.5s						
PMR	Palmer	1.81	172	P	Pn	02 18 57.9	+0.5
	baz=353,SNR=19						
PMR				S	Sn	02 19 20.9	+0.4
	baz=353						
IL31		1.85	40		Pn	02 18 57.9	0.0
ILAR	Eielson Array	1.85	40	P	Pn	02 18 57.9	0.0
	comp=N,6.3nm,0.3s,baz=222,slow=12,SNR=342						
ILAR				S	Sn	02 19 21.3	-0.1
	comp=N,7.9nm,0.3s,baz=349,slow=15,SNR=20						
ILAR	Eielson Array	1.85	40	Pn	Pn	02 18 57.7	-0.2
SCM	Sheep Creek Mo	1.88	144	Pn	Pn	02 18 58.4	0.0
SCM				IAML		02 19 30.2	
	comp=E,477nm,0.6s						
SCM				IAML		02 19 30.3	
	comp=N,675nm,0.9s						
SCM	Sheep Creek Mo	1.88	144	P	Pn	02 18 58.7	+0.2
	baz=327,SNR=16						
SCM				S	Sn	02 19 23.1	+0.7
	baz=327						
PAX	Paxson	1.93	100	Pn	Pn	02 18 59.5	+0.4
PAX	Paxson	1.93	100	P	Pn	02 18 59.7	+0.6
	baz=284,SNR=99						
POKR	Poker Plat Res	1.99	28	Pn	Pn	02 18 60.0	+0.2
POKR	Poker Plat Res	1.99	28	P	Pn	02 19 00.2	+0.5
	baz=209,SNR=8.4						
K20K	Telida	2.00	271	Pn	Pn	02 19 00.2	+0.4
K20K				IAML		02 19 25.8	
	comp=E,227nm,0.7s						
K20K				IAML		02 19 25.8	
	comp=N,162nm,0.5s						
K20K	Telida	2.00	271	P	Pn	02 19 00.4	+0.6
	baz=88						
K20K				S	Sn	02 19 24.4	-0.5
	baz=88						
M24K	Tolsona, Glenn	2.04	127	Pn	Pn	02 19 00.8	+0.4
M24K	Tolsona, Glenn	2.04	127	P	Pn	02 19 01.1	+0.7
	baz=310,SNR=114						
KNK	Knik Glacier	2.05	164	Pn	Pn	02 19 00.8	+0.3
KNK	Knik Glacier	2.05	164	P	Pn	02 19 00.8	+0.3
	baz=345,SNR=35						
I21K	Tanana	2.08	332	Pn	Pn	02 19 01.1	+0.4
I21K	Tanana	2.08	332	P	Pn	02 19 01.4	+0.6
	baz=149						
I21K				S	Sn	02 19 26.5	-0.1
	baz=149						
L20K	Farewell, AK	2.14	247		Pn	02 19 02.0	+0.3
L20K	Farewell, AK	2.14	247	P	Pn	02 19 01.8	+0.1
	baz=64						
L20K				S	Sn	02 19 27.7	-0.5
	baz=64						
STLK	Strandline Lak	2.15	209		Pn	02 19 02.1	+0.3
J20K	Nowinta River	2.16	294	Pn	Pn	02 19 02.1	+0.4
J20K				IAML		02 19 29.6	
	comp=N,95nm,1.0s						
J20K				IAML		02 19 29.9	
	comp=E,100nm,1.2s						
J20K	Nowinta River	2.16	294	P	Pn	02 19 02.2	+0.4
	baz=110						
J20K				S	Sn	02 19 27.9	-0.5
	baz=110						
RIDG	Independent Ri	2.17	78	Pn	Pn	02 19 02.8	+0.7
RIDG				IAML		02 19 30.8	
	comp=E,153nm,0.9s						
RIDG				IAML		02 19 32.7	
	comp=N,132nm,0.8s						
RIDG	Independent Ri	2.17	78	P	Pn	02 19 02.5	+0.4
	baz=262,SNR=6.0						
RIDG				S	Sn	02 19 28.7	-0.3
	baz=262						
J25K	Salcha River,	2.25	55		Pn	02 19 03.4	+0.3
J25K	Salcha River,	2.25	55	P	Pn	02 19 03.4	+0.3
	baz=238,SNR=40						
J25K				S	Sn	02 19 30.4	-0.3
	baz=238						
HARP	HAARP	2.28	114		Pn	02 19 04.0	+0.6
HARP	HAARP	2.28	114	P	Pn	02 19 03.6	+0.2
	baz=298,SNR=22						
RC01	Rabbit Creek A	2.30	181	Pn	Pn	02 19 05.8	+2.1
RC01	Rabbit Creek A	2.30	181	P	Pn	02 19 04.3	+0.7
	baz=1.5,SNR=21						
PS11	TAPS Pump St11	2.32	122		Pn	02 19 04.8	+0.8
SPCG	Spurr Capps Gl	2.37	209		Pn	02 19 05.2	+0.4
SPCN	Chakachatna No	2.47	210		Pn	02 19 06.6	+0.7
SPU	Mount Spurr	2.48	208	Pn	Pn	02 19 06.2	+0.2
SPCR	Spurr Chakacha	2.50	210	P	Pn	02 19 06.8	+0.5
	baz=28,SNR=7.1						
DOT	Dot Lake	2.51	81	Pn	Pn	02 19 06.5	+0.1
KLU	Klutina	2.56	136	Pn	Pn	02 19 06.7	-0.5
KLU				IAML		02 19 46.5	
	comp=E,234nm,0.6s						
KLU				IAML		02 19 46.8	
	comp=N,256nm,0.8s						
KLU	Klutina	2.56	136	P	Pn	02 19 06.9	-0.3
	baz=319,SNR=17						
H24K	Noodor Dome	2.58	16	Pn	Pn	02 19 08.0	+0.6
H24K	Noodor Dome	2.58	16	P	Pn	02 19 07.8	+0.4
	baz=197						
H24K				S	Sn	02 19 38.6	+0.2
	baz=197						
SCRK	Sand Creek	2.59	74	Pn	Pn	02 19 07.3	-0.3
SCRK				IAML		02 19 40.1	
	comp=N,102nm,1.1s						
SCRK				IAML		02 19 42.7	
	comp=E,72nm,0.8s						
SCRK	Sand Creek	2.59	74	P	Pn	02 19 07.6	0.0
	baz=259,SNR=27						
SCRK				S	Sn	02 19 37.6	-1.1
	baz=259						
PWL	Port Wells	2.60	166	Pn	Pn	02 19 08.0	+0.3
PWL	Port Wells	2.60	166	P	Pn	02 19 08.1	+0.4
	baz=347						
H21K	Melozitna Rive	2.67	330	Pn	Pn	02 19 08.4	0.0
H21K	Melozitna Rive	2.67	330	P	Pn	02 19 08.8	+0.3
	baz=148						
H21K				S	Sn	02 19 39.2	-1.1
	baz=148						
GLI	Glacier Island	2.78	153	Pn	Pn	02 19 09.5	-0.4
GLI	Glacier Island	2.78	153	P	Pn	02 19 09.4	-0.6
	baz=336						
GLI				S	Sn	02 19 42.4	-0.6
	baz=336						
PRP	Porcupine Dome	2.79	38	Pn	Pn	02 19 10.9	+0.7
PRP	Porcupine Dome	2.79	38	P	Pn	02 19 10.5	+0.3
	baz=221,SNR=14						
L26K	Log Cabin Wild	2.87	94	Pn	Pn	02 19 11.6	+0.4
L26K				IAML		02 19 53.6	
	comp=E,235nm,0.5s						
L26K	Log Cabin Wild	2.87	94	P	Pn	02 19 11.4	+0.2
	baz=280,SNR=21						
DIV	Divide	2.89	140		Pn	02 19 10.7	-0.9
SLKM	Skilak Lake	2.90	186		Pn	02 19 12.7	+1.2
J26L	Joseph Creek	2.91	65	P	Pn	02 19 12.2	+0.5
	baz=250,SNR=58						
TTA	Tatalina	2.93	264	Pn	Pn	02 19 12.0	0.0
TTA				IAML		02 19 46.5	
	comp=E,52nm,1.2s						
TTA	Tatalina	2.93	264	P	Pn	02 19 12.0	0.0
	baz=79,SNR=5.7						
TT01	Tatalina	2.94	264		Pn	02 19 12.5	+0.5
N25K	Chitina, Valde	2.94	125	Pn	Pn	02 19 12.5	+0.3
N25K				IAML		02 19 58.1	
	comp=E,105nm,0.8s						
N25K				IAML		02 20 00.0	
	comp=N,89nm,0.5s						
N25K	Chitina, Valde	2.94	125	P	Pn	02 19 12.2	+0.1
	baz=310,SNR=12						
FID	Port Fidalgo	3.03	149	Pn	Pn	02 19 13.1	-0.2
DFR	Drift River	3.15	209		Pn	02 19 16.8	+1.9
IM03		3.16	328		Pn	02 19 15.6	+0.7
IMAR	Indian Mountai	3.16	328	Pn	Pn	02 19 15.5	+0.6
M26K	Nabesna, AK	3.19	105		Pn	02 19 15.7	+0.2
M26K				IAML		02 20 05.2	
	comp=N,101nm,0.6s						
M26K				IAML		02 20 08.1	
	comp=E,95nm,0.4s						
M26K	Nabesna, AK	3.19	105	P	Pn	02 19 15.6	+0.1
	baz=291						
RDWB	Redoubt West	3.27	209		Pn	02 19 18.4	+1.8
RSO	Redoubt South	3.28	208	Pn	Pn	02 19 18.2	+1.5
SEW	Seward	3.29	178	Pn	Pn	02 19 17.2	+0.5
SEW	Seward	3.29	178	P	Pn	02 19 17.2	+0.5
	baz=359						
GLB	Gilahina Butte	3.34	123		Pn	02 19 17.7	+0.3
GLB				IAML		02 20 12.2	
	comp=E,45nm,0.5s						
GLB				IAML		02 20 14.5	
	comp=N,60nm,0.5s						
BMRM	Bremner River	3.38	133	Pn	Pn	02 19 17.3	-0.6
BMRM	Bremner River	3.38	133	P	Pn	02 19 17.4	-0.6
	baz=318,SNR=12						
EYAK	Cordova Ski Ar	3.38	145	Pn	Pn	02 19 17.7	-0.2
EYAK	Cordova Ski Ar	3.38	145	P	Pn	02 19 17.7	-0.2
	baz=329,SNR=7.7						
N19K	Bonanza Creek	3.44	224	Pn	Pn	02 19 19.2	+0.4
N19K				IAML		02 19 54.6	
	comp=E,38nm,2.9s						
N19K				IAML		02 20 33.1	
	comp=N,34nm,2.5s						
N19K	Bonanza Creek	3.44	224	P	Pn	02 19 19.0	+0.2
	baz=40						
GCSA	Galena City Sc	3.47	297	P	Pn	02 19 19.2	+0.2
	baz=110						
L27K	Beaver Creek,	3.55	92		Pn	02 19 19.9	-0.3
L27K				IAML		02 20 03.7	
	comp=E,38nm,0.6s						
L27K	Beaver Creek,	3.55	92	P	Pn	02 19 20.0	-0.3
	baz=278						
BC03		3.57	92		Pn	02 19 20.2	-0.1
BCAR	Beaver Creek A	3.57	92	Pn	Pn	02 19 20.4	-0.1
SVW2	Sparrevohn	3.60	233	Pn	Pn	02 19 22.4	+1.4
SVW2				IAML		02 20 20.8	
	comp=E,32nm,1.7s						
SVW2				IAML		02 20 23.2	
	comp=N,32nm,1.8s						
VRDI	Verde Repeater	3.60	124		Pn	02 19 21.3	+0.1
VRDI				IAML		02 20 18.3	
	comp=N,51nm,0.4s						
VRDI				IAML		02 20 21.1	
	comp=E,36nm,1.2s						
BRLK	Bradley Lake	3.68	190	Pn	Pn	02 19 22.2	+0.3
BRLK				IAML		02 20 06.2	
	comp=N,93nm,0.4s						
BRLK				IAML		02 20 19.8	
	comp=E,91nm,0.7s						
BRSE	Bradley Lake S	3.69	189	P	Pn	02 19 22.5	+0.4
	baz=8.0						
M27K	Edge Creek, AK	3.70	103		Pn	02 19 23.3	+0.9
M27K				IAML		02 20 26.4	
	comp=N,49nm,1.1s						
M27K				IAML		02 20 27.6	
	comp=E,40nm,1.4s						
M27K	Edge Creek, AK	3.70	103	P	Pn	02 19 22.8	+0.5
	baz=289						
FYU	Fort Yukon	3.71	28		Pn	02 19 22.9	+0.7
FYU				IAML		02 20 52.4	
	comp=E,57nm,4.6s						
FYU				IAML		02 21 17.1	
	comp=N,54nm,3.9s						
HOM	Homer	3.86	195	Pn	Pn	02 19 25.8	+1.5
COLD	Coldfoot	3.87	357	Pn	Pn	02 19 24.3	-0.2
COLD	Coldfoot	3.87	357	P	Pn	02 19 25.0	+0.5
	baz=176,SNR=11						
CNPM	China Poot	3.94	192	Pn	Pn	02 19 25.6	+0.2
EGAK	Eagle	3.98	66	Pn	Pn	02 19 26.3	+0.4
EGAK				IAML		02 20 13.9	
	comp=N,53nm,0.7s						
EGAK				IAML		02 20 14.2	
	comp=N,86nm,0.7s						
EGAK	Eagle	3.98	66	P	Pn	02 19 26.7	+0.8
	baz=253,SNR=11						
CRQM	Cirque	4.03	128	Pn	Pn	02 19 26.3	-0.6
CRQE	Cirque	4.05	128	P	Pn	02 19 26.6	-0.5
	baz=313						
P19K	Oil Pt	4.12	206	Pn	Pn	02 19 28.7	+0.9
P19K	Oil Pt	4.12	206	P	Pn	02 19 28.5	+0.7
	baz=23						
BVCY	Beaver Creek	4.13	100		Pn	02 19 28.0	0.0
BVCY	Beaver Creek	4.13	100	P	Pn	02 19 27.7	-0.3
	baz=287,SNR=6.4						
BALM	Baldy	4.14	121		Pn	02 19 28.1	-0.2
TGL	Tana Glacier	4.14	126	Pn	Pn	02 19 27.8	-0.5
TGL				IAML		02 20 35.2	
	comp=N,91nm,0.6s						
TGL				IAML		02 20 35.2	
	comp=E,93nm,0.6s						
KIAG	Kiagna River	4.21	123		Pn	02 19 28.5	-0.7
KHIT	Khitrov Hills	4.22	131		Pn	02 19 29.4	+0.1
WAX	Waxell Ridge	4.35	129		Pn	02 19 31.7	+0.7
YUK2	White River	4.37	107		Pn	02 19 31.9	+0.6
BARN	Barnard Glacie	4.40	118		Pn	02 19 32.1	+0.3
BARN				IAML		02 20 53.9	
	comp=E,28nm,1.3s						
BARN				IAML		02 21 47.4	
	comp=N,27nm,4.3s						
O18K	Koktuh Hills	4.42	219	Pn	Pn	02 19 33.0	+1.0
O18K				IAML		02 20 35.6	
	comp=N,45nm,3.3s						
O18K				IAML		02 22 10.3	
	comp=E,48nm,3.0s						
YUK3	Moose Creek	4.54	107		Pn	02 19 34.5	+0.8
YUK3	Moose Creek	4.54	107	P	Pn	02 19 34.1	+0.5
	baz=295,SNR=7.8						
SNH	Sunshine Point	4.55	132	Pn	Pn	02 19 33.9	+0.2
BM03	Burnt Mountain	4.57	25		Pn	02 19 34.5	+0.6
CTG	Chitna Glacier	4.58	118	P	Pn	02 19 34.2	0.0
	baz=306						
BMAR	Burnt Mountain	4.58	25	Pn	Pn	02 19 34.3	+0.3
CTGM	Chitina Glacie	4.58	118	Pn	Pn	02 19 32.9	-1.4
CTGM				IAML		02 21 04.2	
	comp=N,33nm,3.7s						
CTGM				IAML		02 21 28.5	
	comp=E,25nm,3.3s						
DAWY	Dawson	4.61	77	Pn	Pn	02 19 34.4	0.0
DAWY				IAML		02 20 45.2	
	comp=E,26nm,0.8s						
DAWY				IAML		02 20 46.1	
	comp=N,21nm,0.6s						
DAWY	Dawson	4.61	77	P	Pn	02 19 34.6	+0.2
	baz=266,SNR=12						
BM01	Burnt Mountain	4.61	25		Pn	02 19 35.3	+0.9
LOGN	Logan Glacier	4.80	118	Pn	Pn	02 19 35.8	-1.3
LOGN				IAML		02 20 32.1	
	comp=E,29nm,3.2s						
LOGN				IAML		02 20 49.6	
	comp=N,29nm,3.5s						
YAH	Yahtse	4.81	125	Pn	Pn	02 19 37.0	-0.3
MESA	MESA	4.86	128	Pn	Pn	02 19 37.3	-0.7
MESA	MESA	4.86	128	P	Pn	02 19 38.2	+0.2
	baz=315						
TABL	Table Mountain	4.98	122	Pn	Pn	02 19 38.7	-0.9
TABL				IAML		02 22 13.2	
	comp=E,46nm,3.1s						
TOLK	Toolik Lake Re	5.29	0	Pn	Pn	02 19 45.3	+1.8
TOLK				IAML		02 20 37.1	
	comp=N,13nm,4.8s						
TOLK				IAML		02 21 25.6	
	comp=E,15nm,5.0s						
TOLK	Toolik Lake Re	5.29	0	P	Pn	02 19 44.8	+1.2
	baz=180						
PCA	Pinnacle	5.54	122	Pn	Pn	02 19 47.3	+0.2
PINM	Pinnacle	5.54	122	P	Pn	02 19 47.2	+0.2
	baz=310						
KDAK	Kodiak Island	5.80	196	P	Pn	02 19 51.0	+0.5
	comp=E,0.8nm,0.3s,baz=56,slow=7.7,SNR=22						
KDAK				S	Sn	02 20 51.2	-4.4
	comp=E,2.3nm,0.3s,baz=300,slow=22,SNR=14						
KDAK	Kodiak Island	5.80	196	Pn	Pn	02 19 50.4	-0.1
KDAK	Kodiak Island	5.80	196	P	Pn	02 19 50.8	+0.3
	baz=13						
BCPM	Bancas Point	5.87	121	Pn	Pn	02 19 50.4	-1.1
EPYK	Eagle Plains	6.26	56	Pn	Pn	02 19 56.9	+0.1
EPYK	Eagle Plains	6.26	56	P	Pn	02 19 57.4	+0.6
	baz=247,SNR=20						
ANM	Nome	7.03	287	Pn	Pn	02 20 08.2	+1.2
WHY	Whitehorse	7.46	105	Pn	Pn	02 20 14.1	+1.1

SKAG	Skagway	7.90	113	Pn	Pn	02 20 18.7	-0.3
INK	Inuvik	8.23	46	P	Pn	02 20 24.0	+0.6
	comp=E,0.2nm,0.3s,baz=232,slow=16,SNR=17						
INK				S	Sn	02 21 54.7	+0.2
	baz=190,slow=9.5,SNR=5.1						
INK	Inuvik	8.23	46	Pn	Pn	02 20 24.1	+0.7
INK	Inuvik	8.23	46	P	Pn	02 20 23.6	+0.2
	baz=241						
A21K	Barrow	8.41	344	Pn	Pn	02 20 25.6	-0.2
A21K	Barrow	8.41	344	P	Pn	02 20 25.4	-0.4
	baz=158						
JIS	Juneau Island	9.02	118	Pn	Pn	02 20 33.5	-0.6
A36M	Sachs Harbour	12.55	36	Pn	Pn	02 21 22.6	+1.2
YKA	Yellowknife Ar	15.85	77	P	Pn	02 22 03.6	-0.1
	comp=E,0.1nm,0.3s,baz=285,slow=12,SNR=9.1						
YKA	Yellowknife Ar	15.85	77	Pn	Pn	02 22 02.8	-0.9
RES	Resolute Bay	21.60	36	P	P	02 23 09.4	+1.8
	comp=E,0.7nm,0.5s,baz=261,slow=13,SNR=5.0						
ARCES	ARCESS Array B	47.32	2	P	P	02 26 47.2	-1.9
	comp=E,3.5nm,0.9s,baz=355,slow=9.4,SNR=3.5						
SONM	Songino Array	54.09	306	P	P	02 27 41.6	+1.2
	comp=E,0.2nm,0.5s,baz=23,slow=7.8,SNR=1.9						
MKAR	Makanchi Array	62.75	323	P	P	02 28 39.7	-0.7
	comp=E,0.3nm,0.4s,baz=36,slow=7.7,SNR=4.7						

GUC 28 02:23:52.4±0.7, 30°.68S×72°.33W, h15^{km}, ML3.0, 5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.60	90	⇓iP	Pn	02 24 06.3	0.0
CO06				eS	Sn	02 24 17.4	+1.6
CO06				IAML		02 24 18.7	
	comp=N,1µm,0.2s						
CO05	La Serena	1.21	52	eP	Pb	02 24 15.0	0.0
CO05				eS	Sg	02 24 32.7	+1.3
CO05				IAML		02 24 33.7	
	comp=E,422nm,0.3s						
GO04	Tololo Observa	1.41	70	eP	Pb	02 24 18.9	+0.3
GO04				eS	Sg	02 24 39.1	+1.1
GO04				IAML		02 24 45.2	
	comp=E,750nm,0.4s						
CO03	El Pedregal	1.42	97	eP	Pb	02 24 18.8	+0.2
CO03				eS	Sg	02 24 39.4	+1.1
CO03				IAML		02 24 40.9	
	comp=E,601nm,0.3s						
VA06	Catapilco	2.08	155	⇓iP	Pn	02 24 24.6	-2.1
VA06				i S	Sn	02 24 47.2	-5.1
VA06				IAML		02 24 51.3	
	comp=N,183nm,0.6s						
LCO	Las Campanas	2.18	41	eP	Pn	02 24 28.7	+0.3
LCO				eS	Sb	02 24 57.4	-1.3
VA01	Torpederas	2.41	166	eS	Sn	02 24 53.4	-7.2
ROCH	El Roble	2.55	154	eP	Pn	02 24 31.5	-1.9
ROCH				i S	Sn	02 25 01.4	-3.0
VA03	San Esteban	2.57	144	⇓iP	Pn	02 24 33.3	-0.4
VA03				i S	Sn	02 25 04.1	-0.7
VA03				IAML		02 25 06.8	
	comp=E,200nm,0.4s						
MT02	Curacav	2.77	159	⇓iP	Pn	02 24 34.0	-2.2
MT02				eS	Sn	02 25 05.3	-4.1
MT02				IAML		02 25 07.7	
	comp=N,48nm,0.1s						
MT05	Renca	3.03	154	eP	Pn	02 24 38.7	-1.2
MT05				eS	Sn	02 25 12.4	-3.5
MT05				IAML		02 25 18.8	
	comp=E,130nm,0.3s						
VA05	Santo Domingo	3.03	169	eP	Pn	02 24 36.4	-3.5
VA05				IAML		02 25 11.6	
	comp=E,143nm,0.2s						
FCH	Farellones	3.16	147	eP	Pn	02 24 41.3	-0.6
FCH				eS	Sn	02 25 18.7	-0.8
MT09	Talagante	3.29	160	eP	Pn	02 24 42.0	-1.6
MT09				eS	Sn	02 25 17.9	-4.6
MT09				IAML		02 25 21.6	
	comp=N,86nm,0.2s						
MT01	Popeta	3.31	164	⇓iP	Pn	02 24 40.7	-2.9
MT01				IAML		02 25 21.1	
	comp=E,55nm,0.2s						
LMEL	Las Melosas	3.64	151	eP	Pn	02 24 47.9	-0.5
BO02	Sierra Bellavi	4.31	163	eP	Pn	02 24 55.6	-1.8
BO02				eS	Sn	02 25 42.3	-5.2
GO05	Huala	4.33	176	eP	Pn	02 24 53.6	-4.2
GO05				eS	Sn	02 25 39.0	-9.1

IDC 28 02:41:36.6±7.2, 28°.27S×178°.11W, h0^{km}, mb3.4/2, mb1 3.7/2, mb1mx3.5/21, mbtmp3.4/2, Error ellipse: s-maj=380.6km s-min=103.4km az=164.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.17	265	P	P	02 49 38.4	-1.0
	0.2nm,0.5s,baz=96,slow=8.5,SNR=1.2						
WRA	Warramunga Arr	43.97	270	P	P	02 49 46.4	+0.5
	0.5nm,0.4s,baz=110,slow=7.7,SNR=5.4						
FINES	FINESS Array B	143.12	341	PKP	PKPdf	03 01 11.5	-0.4
	1.5nm,0.9s,baz=23,slow=4.5,SNR=1.4						

IDC 28 02:42:20.7±6.8, 30°.51S×178°.82W, h0^{km}, mb3.6/2, mb1 3.9/2, mb1mx3.6/20, mbtmp3.6/2, Error ellipse: s-maj=272.7km s-min=62.2km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.39	267	P	P	02 50 16.9	-0.3
	0.5nm,0.7s,baz=105,slow=7.3,SNR=6.4						
WRA	Warramunga Arr	43.39	273	P	P	02 50 25.4	+0.1
	0.4nm,0.4s,baz=112,slow=7.9,SNR=6.8						
FINES	FINESS Array B	145.00	339	PKPbc	PKPbc	03 01 57.3	-1.2
	1.6nm,0.9s,baz=108,slow=3.2,SNR=3.5						

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*IDC **28** 03:09:12.8±2.1, 12°.70N×59°.67W, h47^{km}±27^{km}, mb3.5/3, mb1 4.1/7, mb1mx3.5/32, mbtmp4.2/7, ML3.8/4, Error ellipse: s-maj=34.0km s-min=21.7km az=51.0*

*TRN **28** 03:09:16.3, 12°.74N×60°.27W, h45^{km}, MD4.0*

ISC 28 03:09:16.4±0.9, 12°.73N±0°.03×60°.23W±0°.04, h63^{km}±10^{km}, n44, σ1^{s}.13/65, mb3.7/3, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCHC	Barbados, Cave	0.71	55	eP	Pn	03 09 32.0	+1.0
BBGH	Gun Hill	0.77	58	eP	Pn	03 09 32.2	+0.4
BBGH				eS	Sn	03 09 44.8	+1.7
BBSP	Saint Philip	0.84	64	eP	Pn	03 09 33.5	+0.9
BBSP				eS	Sn	03 09 45.8	+1.3
SVOC	Richmond Hill,	1.05	294	eP	Pn	03 09 35.2	0.0
SVOC				eS	Sn	03 09 49.8	+0.5
SVV	Soufriere Volc	1.12	301	eP	Pn	03 09 37.3	+1.0
SVV				eS	Sn	03 09 51.4	+0.4
GCMP	Grenada, Carri	1.19	258	eP	Pn	03 09 37.3	+0.2
GCMP				eS	Sn	03 09 52.8	+0.3
TOSP	Speyside	1.45	192	eP	Pn	03 09 40.8	+0.2
SLCP	Castries, St.	1.47	330	eP	Pn	03 09 40.6	-0.2
SLCP				eS	Sn	03 09 59.2	0.0
SLBI	Saint Lucia, B	1.48	331	eP	Pn	03 09 40.9	0.0
SLBI				eS	Sn	03 09 59.0	-0.3
GRGR	Grenville	1.51	247	eP	Pn	03 09 41.5	+0.2
GRGR				eS	Sn	03 10 01.4	+1.3
GRFF	Grenada Fort F	1.62	246	eP	Pn	03 09 43.0	+0.2
GRFF				eS	Sn	03 10 03.6	+0.8
MPOM	Morne Pois Mar	1.81	340	eP	Pn	03 09 45.4	0.0
MPOM				eS	Sn	03 10 07.3	-0.1
MVM	Montagne Vaucl	1.93	340	eP	Pn	03 09 47.4	+0.4
BIM	Bigot	1.96	335	eP	Pn	03 09 48.0	+0.6
BIM				eS	Sn	03 10 11.8	+0.9
TRMF	Trois Ilets	1.96	336	eP	Pn	03 09 48.0	+0.5
LPMF	Morne Lapointe	1.97	339	eP	Pn	03 09 48.0	+0.4
ZAM	Aeronautique	1.99	337	eP	Pn	03 09 48.4	+0.6
ILAM	Ilet Lapin Mar	2.13	343	eP	Pn	03 09 50.3	+0.6
ILAM				eS	Sn	03 10 14.7	-0.4
FDF	Fort de France	2.18	336	eP	Pn	03 09 51.5	+1.0
FDF				eS	Sn	03 10 17.6	+1.0
PML	Morne Lenard	2.24	336	eP	Pn	03 09 52.6	+1.3
GBMF	Grand Be	2.25	336	eP	Pn	03 09 52.7	+1.3
BAMF	Morne Balai	2.26	337	eP	Pn	03 09 52.8	+1.2
PCM	Pelee Case Pet	2.28	335	eP	Pn	03 09 53.0	+1.2
SVN	Savane Anatole	2.29	337	eP	Pn	03 09 53.2	+1.2
TRN	Trinidad (W)	2.37	209	eP	Pn	03 09 53.8	+0.9
TRN				eS	Sn	03 10 20.7	-0.2
TBH	Brigand Hill	2.38	200	eP	Pn	03 09 55.3	+2.2
MDN	Morne-Daniel	2.81	336	eP	Pn	03 10 00.6	+1.6
MDN				eS	Sn	03 10 32.6	+0.9
DSLB	Salisbury	2.93	337	eP	Pn	03 10 02.2	+1.5
DSLB				eS	Sn	03 10 34.5	-0.2
MDVC	Dominica, Viel	3.09	338	eS	Sn	03 10 39.0	+0.5
MDCT	Cottage Hill,	3.11	338	eP	Pn	03 10 04.8	+1.7
MDCT				eS	Sn	03 10 39.5	+0.4
MAGL	Barre de l’ile	3.36	342	eP	Pn	03 10 07.4	+0.9
MAGL				eS	Sn	03 10 45.2	0.0
TDBA	Terre de Bas,	3.39	336	eP	Pn	03 10 09.0	+2.1
TDBA				eS	Sn	03 10 46.9	+1.0
TBG	Guadaloupe-3	3.39	336	eP	Pn	03 10 08.5	+1.6
CBE	Ff, Capester	3.58	338	eP	Pn	03 10 10.8	+1.2
CBE				eS	Sn	03 10 50.6	0.0
H05N1	Guadeloupe/Mar	3.66	347	P	Pn	03 10 09.5	-1.1
H05N1				S	Sn	03 10 50.1	-2.3
ANBD	Bethesda, Anti	4.54	341	eP	Pn	03 10 23.4	+0.7
ANBD	Bethesda, Anti	4.54	341	eS	Sn	03 11 14.5	+0.3
PCRV	Puerto La Cruz	5.01	240	P	Pn	03 10 31.0	+1.9
	8.0nm,0.3s,baz=38,slow=6.7,SNR=45						
PCRV				S	Sn	03 11 26.8	+1.0
	1.5nm,0.3s,baz=245,slow=17,SNR=1.6						
MDP	Montagnes des	10.66	135	P	Pn	03 11 38.8	-7.6
	0.5nm,0.3s,baz=334,slow=16,SNR=14						
MDP				S	Sn	03 13 30.0	-14
	5.2nm,0.3s,baz=243,slow=20,SNR=18						
PTGA	Pitinga	13.38	179	P	Pn	03 12 19.6	-3.9
	1.5nm,0.3s,baz=355,slow=15,SNR=12						
PTGA				S	Sn	03 14 34.2	-16
	0.7nm,0.3s,baz=322,slow=20,SNR=1.8						
ROSC	El Rosal	15.97	242	P	P	03 13 01.2	+1.1
	2.9nm,0.3s,baz=348,slow=20,SNR=3.8						
ULM	Lac du Bonnet	47.40	329	P	P	03 17 43.9	-0.4
	1.5nm,0.5s,baz=143,slow=5.1,SNR=1.7						
PDAR	Pinedale Array	51.95	315	P	P	03 18 19.9	+0.6
	0.4nm,0.6s,baz=113,slow=9.8,SNR=5.4						
YKA	Yellowknife Ar	62.76	335	P	P	03 19 35.4	+0.6
	0.5nm,0.7s,baz=108,slow=7.4,SNR=6.5						

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*AEIC **28** 03:21:54±1.0, 53°.57N±0°.07×164°.80W±0°.08, h46^{km}±9^{km}, ML3.4, mb3.6/4(NEIC), ML3.5/8(NEIC), Error ellipse: s-maj=10.1km s-min=6.7km az=158.0*

*NEIC **28** 03:21:55.4±0.9, 53°.58N±0°.08×164°.81W±0°.10, h47^{km}±25^{km}, Error ellipse: s-maj=13.3km s-min=6.8km az=152.0*

*IDC **28** 03:22:05.9±12.0, 54°.60N×165°.04W, h74^{km}±73^{km}, mb3.4/5, mb1 3.6/7, mb1mx3.0/64, mbtmp3.7/7, ML2.9/2, Error ellipse: s-maj=131.7km s-min=55.3km az=15.0*

ISC 28 03:21:54.0±1.0, 53°.56N±0°.08×164°.78W±0°.04, h27^{km}, n53, σ1^{s}.39/48, mb3.9/4, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKSA	Akutan Strait	0.80	317		Pn	03 22 09.5	+0.1
AKUT	Akutan	0.83	315		Pn	03 22 09.9	0.0
AKUT				Sn	Sn	03 22 21.0	-0.1
AKUT				IAML		03 22 22.6	
	comp=E,2µm,0.5s						
AKBBA	Akutan Broad B	0.87	309		Pn	03 22 10.8	+0.3
AKMO	Akutan Morgan	0.91	307		Pb	03 22 11.3	+0.3
HSB	Akutan Spr’s B	0.92	314		Pb	03 22 11.6	+0.2
AKLV	Akutan Long Va	0.93	312		Pb	03 22 11.5	+0.1
WESP	Westdahl Peak	0.94	2		Pb	03 22 11.8	+0.1
AKRB	Akutan Reef Bi	0.96	308		Pb	03 22 12.1	+0.2
AKGG	Akutan Green G	0.96	312		Pb	03 22 12.2	+0.2
WECS	Westdahl Cape	0.98	0		Pb	03 22 12.5	+0.2
WEBT	Westdahl Beart	1.04	1		Pb	03 22 13.5	+0.1
UNV	Unalaska Valle	1.06	287	Pn	Pb	03 22 12.7	-1.0
UNV				Sn	Sb	03 22 26.0	-1.3
MNAT	Makushin Natee	1.18	287		Pb	03 22 14.9	-0.8
MSW	Makushin Switc	1.24	288		Pb	03 22 15.9	-0.9
SSLS	Shishaldin Sou	1.25	21		Pb	03 22 15.8	-1.1
MAPS	Pakushin South	1.31	282		Pb	03 22 16.8	-1.1
ISLZ	Isanotski Laza	1.33	28		Pn	03 22 16.8	-0.1
SSLN	Shishaldin Nor	1.34	20		Pb	03 22 17.6	-0.8
ISNN	Isanotski Nort	1.41	24		Pb	03 22 18.6	-1.0
FALS	False Pass	1.53	31	Pn	Pn	03 22 19.0	-0.5
NIKH	Nikolski High	2.52	258	Pn	Pn	03 22 34.4	+1.4
SDPT	Sand Point	3.09	53	Pn	Pn	03 22 42.1	+1.2
SDPT				IAML		03 23 25.7	
	comp=N,144nm,2.4s						
SDPT				IAML		03 23 41.7	
	comp=E,191nm,3.6s						
CNBA	Chernabura Isl	3.30	65	Pn	Pn	03 22 44.7	+0.9
CNBA				IAML		03 23 27.2	
	comp=N,96nm,4.4s						
CHGN	Chignik	4.59	51	Pn	Pn	03 23 02.8	+1.3
KDAK	Kodiak Island	8.09	54	P	Pn	03 23 54.1	+4.6
	comp=N,0.3nm,0.3s,baz=266,slow=13,SNR=1.8						
K20K	Telida	11.30	25	Pn	Pn	03 24 36.2	+2.8
J20K	Nowinta River	11.97	23	Pn	Pn	03 24 45.9	+3.4
SCM	Sheep Creek Mo	12.45	41	Pn	Pn	03 24 49.3	0.0
M24K	Tolsona, Glenn	13.05	42	Pn	Pn	03 24 57.7	+0.2
N25K	Chitina, Valde	13.45	45	Pn	Pn	03 25 04.3	+1.4
GLB	Gilahina Butte	13.71	47	P	P	03 25 10.5	-4.3
VRDI	Verde Repeater	13.78	48	P	Pn	03 25 09.8	+2.4
ILAR	Eielson Array	14.44	32	P	Pn	03 25 17.2	+0.9
	comp=N,0.0nm,0.3s,baz=226,slow=13,SNR=2.0						
M26K	Nabesna, AK	14.49	44	Pn	Pn	03 25 18.2	+1.2
H24K	Noodor Dome	14.90	28	P	P	03 25 25.0	-3.1
SCRK	Sand Creek	14.93	37	P	P	03 25 28.9	+0.5
M27K	Edge Creek, AK	14.94	45	P	P	03 25 27.1	-1.5
L27K	Beaver Creek,	15.28	42	P	P	03 25 31.5	-0.7
BCAR	Beaver Creek A	15.29	42	P	P	03 25 31.1	-1.3
DAWY	Dawson	16.71	41	P	P	03 25 48.5	+0.4
DAWY				IAmb	IAmb	03 25 54.0	
	comp=Z,6.0nm,1.2s						
EPYK	Eagle Plains	18.80	36	P	Pn	03 26 11.2	-0.5
INK	Inuvik	20.83	33	P	P	03 26 32.2	-0.9
	comp=Z,0.8nm,0.7s,baz=245,slow=11,SNR=2.4						
INK	Inuvik	20.83	33	P	P	03 26 32.4	-0.7
INK				IAmb	IAmb	03 26 57.4	
	comp=Z,3.3nm,1.2s						
YKA	Yellowknife Ar	27.35	51	P	P	03 27 38.8	+2.5
	comp=Z,0.3nm,0.5s,baz=275,slow=9.8,SNR=11						
H11N2	WAKE ISLAND Hy	40.17	224	T	T	04 12 23.3	
	baz=26,slow=76,SNR=9.1						
H11N3	WAKE ISLAND Hy	40.18	224	T	T	04 12 26.8	
	baz=26,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	40.19	224	T	T	04 12 18.4	
	baz=26,slow=76,SNR=9.6						
H11S1	WAKE ISLAND Hy	41.35	223	T	T	04 13 51.4	
	baz=25,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	41.37	223	T	T	04 13 48.9	
	baz=25,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	41.37	223	T	T	04 13 50.7	
	baz=25,slow=76,SNR=9.7						
ARCES	ARCESS Array B	56.99	356	P	P	03 31 35.5	-1.0
	comp=Z,5.6nm,0.9s,baz=6.9,slow=8.3,SNR=2.3						
FINES	FINESS Array B	65.02	354	P	P	03 32 29.9	-1.2
	comp=Z,2.1nm,0.9s,baz=5.7,slow=4.2,SNR=3.6						
AKASG	Malin Array Be	75.45	351	P	P	03 33 35.9	+0.9
	comp=Z,0.2nm,0.4s,baz=12,slow=6.3,SNR=2.0						

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*MDD **28** 03:24:06.2±1.7, 36°.87N×11°.12W, h0^{km}, mbLg2.6/7, Error ellipse: s-maj=14.2km s-min=11.7km az=61.0, PRXIMO*

*INMG **28** 03:24:07.3±1.2, 36°.79N×11°.18W, h10^{km}, ML2.1, Error ellipse: s-maj=6.3km s-min=4.4km az=80.0*

*CNRM **28** 03:24:14.2, 36°.21N×10°.42W, h30^{km}*

ISC 28 03:24:00.2±2.3, 36°.68N±0°.06×11°.4W±0°.1, h10^{km}, n53, σ2^{s}.44/89, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	2.08	77	ePn	Pn	03 24 37.7	+2.5
PFVI				eSn	Sn	03 25 00.2	-0.9
PFVI				A	A	03 25 04.6	
	20nm,0.8s						
PFVI	Vila Bisbo	2.08	77	P	Pn	03 24 37.6	+2.4
	2.2nm,0.1s,SNR=7.9						
PFVI				S	Sn	03 25 00.1	-1.1
	18nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	2.08	77	P	Pn	03 24 38.6	+3.4
PFVI				S	Sn	03 25 00.8	-0.3
MORF	Marmelete	2.26	73	ePn	Pn	03 24 39.2	+1.5
MORF				eSn	Sn	03 25 05.3	-0.3
MORF				A	A	03 25 09.7	
	6.9nm,0.2s						
MORF	Marmelete	2.26	73	P	Pn	03 24 39.2	+1.5
MORF				S	Sn	03 25 05.3	-0.3
	6.9nm,0.2s						
PTEO	Sao Teotonio	2.28	67	ePn	Pn	03 24 40.9	+3.0
PTEO				eSn	Sn	03 25 05.8	-0.2
PTEO				A	A	03 25 19.6	
	9.0nm,0.6s						
PTEO	Sao Teotonio	2.28	67	P	Pn	03 24 40.9	+3.0
PTEO				S	Sn	03 25 05.8	-0.2
	4.5nm,0.6s						
PNCL	Nicolau / Gran	2.67	57	ePn	Pn	03 24 46.4	+3.2
PNCL				eSn	Sn	03 25 15.6	0.0
PNCL				A	A	03 25 17.5	
	5.0nm,0.3s						
PNCL	Nicolau / Gran	2.67	57	P	Pn	03 24 46.4	+3.2
PNCL				S	Sn	03 25 15.6	0.0
	5.0nm,0.3s						
PMAFR	Mafra	2.80	35	eSn	Sn	03 25 18.4	-0.6
PMAFR				A	A	03 25 23.8	
	23nm,0.6s						
PMAFR	Mafra	2.80	35	S	Sn	03 25 18.1	-0.9
	12nm,0.1s,SNR=7.9						
PCVE	Castro Verde	2.82	69	ePn	Pn	03 24 48.5	+3.2
PCVE				eSn	Sn	03 25 18.6	-0.7
PCVE				A	A	03 25 27.7	
	3.9nm,0.6s						
PCVE	Castro Verde	2.82	69	P	Pn	03 24 48.5	+3.2
PCVE				S	Sn	03 25 18.6	-0.7
	3.9nm,0.6s						
PVAQ	Vaqueiros	3.00	75	ePn	Pn	03 24 51.2	+3.3
PVAQ				eSn	Sn	03 25 22.7	-1.2
PVAQ				A	A	03 25 25.6	
	5.6nm,0.9s						
PVAQ	Vaqueiros	3.00	75	P	Pn	03 24 51.2	+3.3
PVAQ				S	Sn	03 25 22.7	-1.2
	5.6nm,0.9s						
PVAQ	Vaqueiros	3.00	75	P	Pn	03 24 51.0	+3.2
PVAQ				S	Sn	03 25 22.4	-1.5
PBEJ	Beja	3.09	63	eSn	Sn	03 25 24.6	-1.5
PBEJ				A	A	03 25 32.3	
	2.2nm,0.2s						
PBEJ	Beja	3.09	63	S	Sn	03 25 24.6	-1.5
	1.1nm,0.2s						
EGRO	El Granado	3.21	74	S	Sn	03 25 28.0	-1.1
	3.0nm,0.1s,SNR=7.9						
PMTG	Montargil	3.44	45	ePn	Pn	03 24 56.6	+2.8
PMTG				eSn	Sn	03 25 33.7	-0.9
PMTG				A	A	03 25 39.5	
	3.2nm,0.5s						
PMTG	Montargil	3.44	45	P	Pn	03 24 56.6	+2.8
PMTG				S	Sn	03 25 33.7	-0.9
	3.2nm,0.5s						
PSBE	So Bento	3.48	35	ePn	Pn	03 24 56.6	+2.2
PSBE				eSn	Sn	03 25 35.5	-0.1
PSBE				A	A	03 25 37.6	
	5.8nm,0.8s						
PESTR	Estremoz	3.70	53	ePn	Pn	03 25 00.4	+3.0
PESTR				eSn	Sn	03 25 39.8	-1.3
PESTR				A	A	03 25 44.5	
	2.6nm,0.8s						
EMIN	Mina Concepcio	3.90	72	P	Pn	03 25 02.6	+2.5
	0.3nm,0.2s,SNR=7.9						
EMIN				S	Sn	03 25 43.8	-2.1
	1.0nm,0.1s,SNR=7.9						
EBAD	Badajoz	4.02	58	P	Pn	03 25 04.3	+2.5
	0.2nm,0.1s,SNR=7.9						
EBAD				S	Sn	03 25 47.4	-1.6
	1.7nm,0.1s,SNR=6.0						
PCAS	Casmilo, Conde	4.05	33	ePn	Pn	03 25 03.6	+1.4
PCAS				eSn	Sn	03 25 47.9	-1.8
PCAS				A	A	03 25 50.1	
	4.1nm,0.6s						
PCAS	Casmilo, Conde	4.05	33	P	Pn	03 25 03.6	+1.4
PCAS				S	Sn	03 25 47.9	-1.8
	4.1nm,0.6s						
PMRV	Marv??o	4.16	48	ePn	Pn	03 25 05.6	+1.8
PMRV				eSn	Sn	03 25 50.5	-2.0
PMRV				A	A	03 25 52.7	
	3.2nm,0.6s						
PMRV	Marv??o	4.16	48	P	Pn	03 25 05.6	+1.8
PMRV				S	Sn	03 25 50.5	-2.0
	3.2nm,0.6s						
PCBR	Castelo Branco	4.39	43	ePn	Pn	03 25 09.5	+2.6
PCBR				eSn	Sn	03 25 56.1	-2.0
PCBR	Castelo Branco	4.39	43	P	Pn	03 25 09.5	+2.6
PCBR				S	Sn	03 25 56.1	-2.0
ESPR	Espera	4.42	86	P	Pn	03 25 10.1	+2.8
	1.9nm,0.1s,SNR=4.6						
ESPR				S	Sn	03 25 57.1	-1.8
	16nm,0.3s,SNR=7.9						
MTE	Manteigas	4.76	38	eSn	Sn	03 26 05.0	-2.5
MTE	Manteigas	4.76	38	S	Sn	03 26 05.0	-2.5
PVIS	Viseu	4.85	33	eSn	Sn	03 26 07.4	-2.2
PVIS	Viseu	4.85	33	S	Sn	03 26 07.4	-2.2
ECAB	El Cabril	4.93	72	P	Pn	03 25 16.6	+2.2
	0.1nm,0.2s,SNR=9.1						
ECAB				S	Sn	03 26 08.6	-3.0
	0.9nm,0.1s,SNR=5.5						
PVRL	Vila Real	5.39	31	eSn	Sn	03 26 20.0	-2.9
PVRL	Vila Real	5.39	31	S	Sn	03 26 20.0	-2.9
EADA	Adamuz	5.60	73	P	Pn	03 25 26.6	+3.0
	0.3nm,0.2s,SNR=7.9						
EADA				S	Sn	03 26 25.4	-2.6
	0.9nm,0.1s,SNR=7.9						
MVO	Moncorvo	5.60	36	ePn	Pn	03 25 25.6	+1.9
MVO				eSn	Sn	03 26 25.1	-3.1
MVO				A	A	03 26 28.8	
	3.2nm,0.6s						
MVO	Moncorvo	5.60	36	P	Pn	03 25 23.9	+0.2
	0.5nm,0.2s,SNR=7.9						
MVO				S	Sn	03 26 23.9	-4.3
	1.4nm,0.2s,SNR=7.9						
ELOB	Lobios	5.77	25	S	Sn	03 26 27.8	-4.5
	0.6nm,0.2s,SNR=7.9						
LCRM	LCR	6.11	117	P	Pn	03 25 31.4	+0.7
LCRM				S	Sn	03 26 30.0	-11
OUK	Oukaimeden	6.19	151	P	Pn	03 25 33.6	+1.7
OUK				S	Sn	03 26 35.8	-7.2
PAB	San Pablo	6.22	61	P	Pn	03 25 35.1	+2.9
	0.1nm,0.2s,SNR=7.9						
PAB				S	Sn	03 26 39.0	-4.4
	0.3nm,0.2s,SNR=7.9						
PBRG	Braganca	6.24	34	ePn	Pn	03 25 33.9	+1.4
PBRG				eSn	Sn	03 26 39.8	-4.1
PBRG	Braganca	6.24	34	P	Pn	03 25 33.9	+1.4
PBRG				S	Sn	03 26 39.8	-4.1
ESDC	Sonseca Array	6.55	61	P	Pn	03 25 38.3	+1.7
	0.2nm,0.2s,baz=251,slow=13,SNR=7.9						
ESDC				S	Sn	03 26 47.6	-3.7
	0.4nm,0.2s,baz=246,slow=22,SNR=3.9						
MD31	MD31	6.63	123	P	Pn	03 25 39.7	+1.9
MD31				S	Sn	03 26 43.7	-10
EQES	Quesada	6.71	78	S	Sn	03 26 52.6	-2.7
	0.3nm,0.2s,SNR=7.9						
MDT	Midelt	6.77	123	P	Pn	03 25 40.5	+0.8
MDT				S	Sn	03 26 46.5	-10
TZRR	Tazzarine	7.61	139	P	Pn	03 25 51.6	+0.3
TZRR				S	Sn	03 27 07.0	-11

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*IDC **28** 03:31:15.0±3.4, 36°.31N×70°.30E, h170^{km}±30^{km}, mb3.5/13, mb1 3.6/18, mb1mx3.3/56, mbtmp4.1/18, MS3.2/2, Ms1 3.2/2, ms1mx2.6/36, Error ellipse: s-maj=22.8km s-min=14.1km az=26.0*

*SOME **28** 03:31:16.7, 37°.77N×71°.40E, h10^{km}*

*NEIC **28** 03:31:18.5±2.0, 36°.53N±0°.06×70°.17E±0°.07, h191^{km}±7^{km}, mb4.0/8, Error ellipse: s-maj=9.9km s-min=6.6km az=218.0*

*NNC **28** 03:31:23.4±1.6, 37°.02N×70°.36E, h204^{km}±14^{km}, mb3.6, mpv4.6, Error ellipse: s-maj=14.7km s-min=11.1km az=15.0*

ISC 28 03:31:18.8±0.5, 36°.53N±0°.05×70°.43E±0°.06, h204^{km}, n117, σ1^{s}.91/126, mb3.8/15, 5C-7D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.29	210	Pn	Pn	03 31 58.9	-2.0
CHGR	Chuyangaron	2.35	335	Pn	Pn	03 32 00.2	-1.1
CEP	Cherat	2.96	155	P	Pn	03 32 08.0	-0.4
CEP				S	S	03 32 45.0	-1.5
DRK	Karamyk	3.14	20	Pn	Pn	03 32 10.8	+0.3
BTK	Batken	3.53	5	Pn	Pn	03 32 15.7	+0.7

CHCP	Chirah Chowk	3.69	140	P	Pn	03 32 17.2	+0.2
THW	Thamme Wali	3.88	163	P	Pn	03 32 18.6	-0.7
TAS	Tashkent	4.87	350	Pn	Pn	03 32 30.5	-1.0
SARP	Sargodha	4.96	157	P	Pn	03 32 31.5	-1.3
KSH	Kashi	5.30	54	P	Pn	03 32 33.0	-4.1
KSH				S	S	03 33 25.8	-13
KSH	comp=Z,73nm,0.6s			pmax	pmax		
KSH	comp=N,220nm,0.5s			smax	smax		
KSH	comp=E,150nm,0.3s			smax	smax		
CHM	Chimkent comp=E,7.4nm,0.4s	5.81	354	*e*P	Pn	03 32 46.9	+3.2
CHM	comp=E,937nm,0.2s			*e*S	S	03 33 47.2	-3.4
AML	Almayashu SNR=293	6.14	23	P	Pn	03 32 47.9	-0.2
DZA	Taraz comp=E,22nm,0.2s	6.39	6	*e*P	Pn	03 32 54.9	+3.8
DZA	comp=E,663nm,0.4s			*e*S	S	03 34 01.1	-3.0
DZA	Taraz baz=4.3	6.39	6	*e*P	Pn	03 32 50.4	-0.6
DZA	Taraz comp=E,284nm,0.2s	6.39	6	Pg	Pn	03 32 50.0	-1.0
DZA	comp=E,663nm,0.4s			Lg	Lg	03 34 01.0	
DHRM	DHARAMSHALA	6.47	130	*e*P	Pn	03 32 51.6	-0.7
DHRM				*e*S	S	03 34 02.4	-3.9
DHRM	comp=N,433nm,0.2s			IAML		03 34 03.7	
BRLS	Borolday comp=N,17nm,0.2s	6.51	356	*e*P	Pn	03 32 52.1	-0.4
BRLS	comp=N,57nm,0.4s			*e*S	S	03 33 55.5	-11
BRLS	Borolday baz=353	6.51	356	*e*P	Pn	03 32 48.0	-4.6
BRLS	baz=353			*e*sP		03 33 01.3	
BRLS	baz=353			*e*S	S	03 33 56.1	-11
BRLS	Borolday comp=N,17nm,0.2s	6.51	356	Pg	Pn	03 32 48.3	-4.3
BRLS	comp=N,57nm,0.4s			Lg	Lg	03 33 57.3	
UCH	Uchtor SNR=83	6.51	28	P	Pn	03 32 52.9	-0.1
KK02	Karatay Array comp=N,11nm,0.4s	6.56	1	⇑P	Pn	03 32 52.4	-0.9
KK02	comp=N,14nm,0.3s			⇑S	S	03 34 00.5	-7.7
KKAR	Karatay Array	6.56	1	Pn	Pn	03 32 52.9	-0.4
MRKS	Merke	6.57	18	*e*P	Pn	03 32 57.2	+3.7
MRKS				*e*S	S	03 34 05.1	-3.3
EKS2	Erkin-Say SNR=63	6.64	22	P	Pn	03 32 54.5	+0.1
AAK	Ala-Archa comp=N,21nm,0.3s,baz=173,slow=6.2,SNR=128	6.86	26	P	Pn	03 32 57.3	+0.1
AAK	comp=N,9.0nm,0.3s,baz=332,slow=21,SNR=23			S	S	03 34 13.4	-1.9
AAK	comp=N,28nm,19.6s,baz=190,slow=42			LR	LR	03 36 13.1	
AAK	Ala-Archa SNR=42	6.86	26	P	Pn	03 32 57.4	+0.1
AAK	Ala-Archa comp=N,17nm,0.3s	6.86	26	⇑P	Pn	03 32 57.1	-0.1
AAK	comp=N,99nm,0.6s			⇓S	S	03 34 11.5	-3.8
KBK	Karagaybulak SNR=29	7.04	28	P	Pn	03 33 00.0	+0.4
FRU1	Bishkek	7.06	26	Pn	Pn	03 33 00.1	+0.3
CHMS	Chumysh SNR=33	7.26	26	P	Pn	03 33 02.5	+0.1
BOOM	Boomskoye usch	7.32	34	Pn	Pn	03 33 02.5	-0.7
USP	Ospenovka SNR=26	7.42	24	P	Pn	03 33 04.0	-0.4
TKM2	Tokmak 2 SNR=99	7.52	30	P	Pn	03 33 05.8	-0.1
TKM2	Tokmak 2 comp=N,70nm,0.5s	7.52	30	⇓P	Pn	03 33 05.8	-0.1
TKM2	comp=N,31nm,0.8s			⇑S	S	03 34 27.2	-3.8
SGDS	Sogindy baz=23	7.63	24	*e*P	Pn	03 33 05.4	-1.7
SGDS	baz=23			*e*sP		03 33 19.4	
SGDS	Sogindy comp=N,12nm,0.5s	7.63	24	Pg	Pn	03 33 05.6	-1.5
SGDS	comp=N,22nm,0.5s			Lg	Lg	03 34 28.5	
TARG	Taragay, Kyrgy	7.73	46	Pn	Pn	03 33 08.5	-0.4
KST	Kastek comp=N,23nm,0.5s	7.77	32	*e*P	Pn	03 33 14.1	+5.0
KST	comp=N,48nm,0.6s			*e*S	S	03 34 34.1	-2.8
KST	Kastek comp=N,61nm,0.7s	7.77	32	Pg	Pn	03 33 08.8	-0.3
KST	comp=N,48nm,0.6s			Lg	Lg	03 34 34.1	
SMLA	Simla	7.78	132	*e*P	Pn	03 33 08.0	-1.1
SMLA				*e*S	S	03 34 31.9	-5.0
SMLA	comp=N,107nm,0.2s			IAML		03 34 34.3	
SMLA	comp=E,124nm,0.3s			IAML		03 34 34.5	
DGS	Degeres comp=E,8.3nm,0.6s	7.86	30	*e*P	Pn	03 33 17.9	+7.7
DGS	comp=E,18nm,0.5s			*e*S	S	03 34 40.2	+1.2
DGS	Degeres comp=E,14nm,0.5s	7.86	30	Pg	Pn	03 33 09.7	-0.4
DGS	comp=E,18nm,0.5s			Lg	Lg	03 34 35.7	
MTBS	Maitube comp=E,42nm,0.5s	8.04	33	P	Pn	03 33 12.5	0.0
IZV	Izvestkoviy comp=E,22nm,0.5s	8.05	34	P	Pn	03 33 12.9	+0.2
KRBS	Karabastau comp=E,4.3nm,0.5s	8.21	28	Pg	Pn	03 33 13.7	-0.9
KRBS	comp=E,17nm,0.3s			Lg	Lg	03 34 42.3	
TNSS	Tian-Shan baz=36	8.21	36	*e*P	Pn	03 33 14.2	-0.8
TNSS	Tian-Shan comp=E,26nm,0.5s	8.21	36	P	Pn	03 33 14.9	-0.1
MDOK	Medeo baz=36	8.35	36	*e*P	Pn	03 33 16.2	-0.4
MDOK	Medeo comp=E,18nm,0.6s	8.35	36	⇓P	Pn	03 33 16.7	+0.1
MDOK	Medeo comp=E,8.7nm,1.5s	8.35	36	Pg	Pn	03 33 15.4	-1.2
KOTS	Kotyrbulak comp=E,50nm,0.8s	8.44	35	P	Pn	03 33 17.3	-0.4
KTBS	Karatobe comp=E,5.4nm,0.5s	8.62	32	Pg	Pn	03 33 19.0	-1.0
KTBS	comp=E,7.0nm,0.5s			Lg	Lg	03 34 52.2	
KUU	Kurty baz=30	8.63	30	*e*P	Pn	03 33 17.8	-2.3
KUU	Kurty comp=E,5.5nm,0.4s	8.63	30	Pg	Pn	03 33 18.5	-1.6
KUU	comp=E,14nm,0.3s			Lg	Lg	03 34 51.7	
BTLS	Baital baz=16	8.93	17	*e*P	Pn	03 33 22.2	-1.8
SATY	Saty comp=E,3.9nm,0.8s,baz=41	8.95	41	*e*P	Pn	03 33 22.7	-1.7
SATY	Saty comp=E,8.0nm,0.7s	8.95	41	P	Pn	03 33 24.0	-0.4
ZHN	Zhinishke baz=41	9.04	40	*e*P	Pn	03 33 24.4	-1.1
UZB	Uzynbulak comp=E,2.3nm,0.6s,baz=43	9.34	42	*e*P	Pn	03 33 28.5	-1.0
UZB	Uzynbulak comp=E,10nm,0.4s	9.34	42	P	Pn	03 33 29.1	-0.3
BLB	Baldybastay comp=E,14nm,0.5s	9.74	37	P	Pn	03 33 33.4	-1.1
KUDL	Kundal	9.81	147	*e*P	Pn	03 33 32.4	-3.1
KUDL				*e*S	S	03 35 15.6	-10
JHNI	Jhansi	13.03	146	*e*P	Pn	03 34 16.1	-0.6
JHNI				*e*S	S	03 36 29.1	-13
MAKZ	Makanchi comp=E,13nm,0.8s	13.40	36	⇓P	Pn	03 34 20.4	-0.5
MAKZ	Makanchi	13.40	36	Pn	Pn	03 34 20.4	-0.5
PYUN	Piuthan comp=E,4.7nm,0.3s	13.54	125	*e*P	Pn	03 34 23.1	0.0
MK31	Makanchi Array comp=E,12nm,0.8s,baz=226,slow=13,SNR=65	13.54	37	P	Pn	03 34 22.5	-0.2
MK31	Makanchi Array	13.54	37		Pn	03 34 23.1	+0.3
MKAR	Makanchi Array comp=E,0.8nm,0.3s,baz=212,slow=11,SNR=30	13.54	37	P	Pn	03 34 23.1	+0.4
MKAR	Makanchi Array	13.54	37	Pn	Pn	03 34 22.4	-0.3
DANN	Dangsing comp=E,12nm,0.2s	13.89	122	*e*P	P	03 34 31.2	+1.7
KOLN	Koldanda comp=E,3.3nm,0.2s	14.16	124	*e*P	Pn	03 34 30.2	-0.6
GKN	Gorkha comp=E,20nm,0.3s	14.71	121	*e*P	P	03 34 40.5	+2.1
AB31	Akbulak array comp=E,2.8nm,0.5s,baz=144,slow=12,SNR=66	14.84	332	P	Pn	03 34 37.2	-1.4
ABKAR	Akbulak array	14.84	332	P	Pn	03 34 36.9	-1.8
ABKAR	Akbulak array	14.84	332		Pn	03 34 37.5	-1.2
WMQ	Urumqi	15.06	56	*e*P	Pn	03 34 35.5	-6.0
KURBB	Kurchatov Arra comp=E,0.2nm,0.3s,baz=207,slow=11,SNR=12	15.24	20	P	Pn	03 34 42.4	-1.2
KURBB	Kurchatov Arra comp=E,5.6nm,0.8s	15.24	20	⇑P	Pn	03 34 42.6	-0.9
KKN	Kakani	15.29	121	*e*P	P	03 34 47.1	+2.2
KURK	Kurchatov	15.35	20	P	Pn	03 34 44.2	-0.6
PKIN	Phulchoki comp=E,16nm,0.3s	15.50	121	*e*P	P	03 34 49.3	+2.0
PKI	Pulchoki comp=E,7.2nm,0.3s	15.52	121	*e*P	P	03 34 49.5	+2.0
GUN	Gumba comp=E,10nm,0.3s	15.63	119	*e*P	Pn	03 34 51.8	+2.9
BVAR	Borovoye Array comp=E,1.1nm,0.3s,baz=207,slow=13,SNR=18	16.49	360	P	Pn	03 34 58.7	+0.2
BRVK	Borovoye comp=E,5.4nm,0.6s	16.52	360	⇓P	P	03 34 57.1	-0.8
BRVK	Borovoye	16.52	360	P	P	03 34 58.0	+0.1
BRVK	comp=Z,7.0nm,0.7s			IAmb	IAmb	03 35 01.7	
AKTO	Aktyubinsk comp=Z,0.7nm,0.3s,baz=143,slow=12,SNR=33	16.53	331	P	Pn	03 34 59.1	+0.1
AKTO	Aktyubinsk comp=Z,12nm,0.8s	16.53	331	⇓P	P	03 34 57.7	-0.3
ZAA0	Zalesovo Array comp=Z,1.3nm,0.8s	20.08	25	⇓P	P	03 35 37.2	+0.8
ZAA0	Zalesovo Array	20.08	25	P	P	03 35 37.3	+0.8
ZALV	Zalesovo Beam comp=Z,7.1nm,0.5s,baz=219,slow=11,SNR=29	20.08	25	P	P	03 35 37.5	+1.0
ZALV	Zalesovo Beam	20.08	25	P	P	03 35 37.1	+0.6
ARU	Arti comp=Z,0.6nm,0.3s,baz=152,slow=9.5,SNR=5.4	21.45	342	P	P	03 35 52.9	+2.0
SONM	Songino Array comp=Z,0.8nm,0.8s,baz=262,slow=9.0,SNR=7.2	28.70	55	P	P	03 36 59.6	+2.8
CMAR	Chiang Mai Arr comp=Z,0.7nm,0.3s,baz=316,slow=7.6,SNR=4.3	30.88	118	P	P	03 37 16.8	+0.6
AKASG	Malin Array Be comp=Z,0.6nm,0.5s,baz=82,slow=8.2,SNR=4.5	32.57	309	P	P	03 37 31.2	+0.6
FINES	FINESS Array B comp=Z,0.7nm,0.4s,baz=116,slow=11,SNR=8.6	37.20	326	P	P	03 38 10.9	+0.9
FINES	FINESS Array B	37.20	326	P	P	03 38 09.3	-0.7
ARCES	ARCESS Array B comp=Z,5.0nm,1.0s,baz=106,slow=6.7,SNR=4.9	40.94	338	P	P	03 38 42.2	+1.3
PSI	Prapat comp=Z,160nm,18.4s,baz=232,slow=41	42.63	135	LR	LR	04 00 06.0	
NB2	NORSAR Subarra comp=Z,0.5nm,0.5s,baz=98,slow=7.9	44.08	323	P	P	03 39 06.5	+0.2
NOA	NORSAR Array B comp=Z,0.8nm,0.5s,baz=97,slow=7.8,SNR=4.5	44.08	323	P	P	03 39 06.3	0.0
NC204	NORSAR Array S	44.32	323	P	P	03 39 08.7	+0.5
YHNB	Yeheng	44.95	90	P	P	03 39 15.6	+1.8
TORD	Torodi Ar. Bea comp=Z,0.7nm,0.5s,baz=47,slow=5.6,SNR=14	65.26	268	P	P	03 41 37.2	-1.7
KOWA	Kowa	69.11	273	P	P	03 42 01.9	-1.2
BMAR	Burnt Mountain	73.02	13	P	P	03 42 29.1	+3.3
INK	Inuvik	73.95	9	P	P	03 42 32.3	+1.2
INK	comp=Z,2.4nm,1.0s			IAmb	IAmb	03 42 38.6	
LBTB	Lobatse	74.39	222	P	P	03 42 35.0	+0.6
LBTB	comp=Z,3.3nm,0.9s			IAmb	IAmb	03 42 55.6	
CAST	Castle Rocks	74.80	18	P	P	03 42 38.1	+1.9
CAST	comp=Z,4.1nm,1.2s			IAmb	IAmb	03 42 49.6	
ILAR	Eielson Array comp=Z,0.9nm,0.9s,baz=280,slow=2.6,SNR=6.5	74.87	16	P	P	03 42 37.2	+0.6
SCRK	Sand Creek	76.18	15	P	P	03 42 45.8	+1.6
BCAR	Beaver Creek A	77.45	14	P	P	03 42 52.9	+1.8
YKA	Yellowknife Ar comp=Z,0.7nm,0.7s,baz=347,slow=5.1,SNR=12	81.23	2	P	P	03 43 12.4	+0.9
WRA	Warramunga Arr comp=Z,1.6nm,0.8s,baz=323,slow=4.7,SNR=2.9	82.40	122	P	P	03 43 17.3	-0.9
ASAR	Alice Springs comp=Z,1.1nm,0.6s,baz=304,slow=4.8,SNR=8.8	84.65	125	P	P	03 43 28.9	-0.8

NNC 28 03:42:32.4±8.0,**38°.32N**×**72°.24E**,**h0^{km},mb3.6,mpv3.2,**
2C-2D,Error ellipse: s-maj=64.8km s-min=53.1km
az=168.0,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AAK	Ala-Archa 1.8nm,0.4s	4.64	21	⇓P	Pn	03 43 44.4	+0.4
AAK	8.7nm,0.9s			⇓S	Sn	03 44 39.2	+0.5
KK02	Karatay Array 1.2nm,0.3s	4.96	345	⇑P	Pn	03 43 49.1	+1.0
KK02	7.2nm,0.6s			⇑S	Sn	03 44 47.7	+1.5
AB31	Akbulak array 0.5nm,0.7s,baz=130,slow=14,SNR=8.2	14.06	325	P	Pn	03 45 48.5	-4.3

NEIC ***28*** *03:59:30.8±1.9,35°.66N±0°.04×97°.45W±0°.06,h9^{km}±6^{km},*
Error ellipse: s-maj=6.6km s-min=5.7km az=69.0
TUL ***28*** *03:59:30.6±1.6,35°.67N±0°.04×97°.41W±0°.05,h5^{km}±7^{km},*
ML3.7,mb_Lg3.5/89(NEIC),Error ellipse: s-maj=6.3km
s-min=5.1km az=64.0
ANF ***28*** *03:59:30.8±0.6,35°.69N×97°.42W,h8^{km}±4^{km},ML4.0/10,*
Error ellipse: s-maj=3.6km s-min=3.1km az=146.0
ISC 28 03:59:30.5±0.8,**35°.69N**±0°.03×**97°.42W**±0°.03,**h9^{km}**±6^{km},
n116,σ**1^{s}05**/113,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OK009	Oakdale Elemen	0.10	180		Pg	03 59 32.9	-0.2
OK009				Sg	Sg	03 59 34.7	-0.2
OK025	Westminster Rd	0.12	146		Pg	03 59 33.3	-0.1
OK025				Sg	Sg	03 59 35.1	-0.3
BCOK	Bluff Creek, N	0.15	260	Pg	Pg	03 59 33.8	-0.1
BCOK				Sg	Sg	03 59 37.1	+0.9
OK001	Jones High Sch	0.16	139	Pg	Pg	03 59 33.9	-0.1
OK001				Sg	Sg	03 59 36.5	0.0
OK005	Luther M Schoo	0.19	99		Pg	03 59 34.5	0.0
OK005				Sg	Sg	03 59 37.6	+0.4
OKCFA	Oklahoma City	0.27	185		Pg	03 59 35.4	-0.5
OKCFA				Sg	Sg	03 59 39.9	+0.3
OKCFA	Oklahoma City baz=8.5,SNR=104	0.27	185	P	Pg	03 59 36.0	+0.1
OKCFA	baz=8.5			S	Sg	03 59 40.0	+0.4
OKCSW	OKLAHOMA CITY	0.28	183	Pg	Pg	03 59 35.6	-0.5
OKCSW				Sg	Sg	03 59 40.2	+0.3
FNO	Franklin	0.43	178	Pg	Pg	03 59 38.3	-0.5
OK031	S. Brethren Rd	0.55	60	Pg	Pg	03 59 40.7	-0.4
OK011	Prague	0.63	108	Pg	Pg	03 59 42.8	+0.1
QUOK	Quay	0.76	50	Pg	Pg	03 59 44.6	-0.5
CROK	Carrier	0.94	331	Pg	Pg	03 59 48.3	-0.2
BLOK	Blackwell	1.09	9		Pg	03 59 51.1	-0.3
X34A	Smith Ranch, M	1.13	197		Pg	03 59 51.9	-0.3
GC02	Grant County #	1.22	343		Pb	03 59 53.6	-0.1
KAN13	South Haven SW	1.33	358		Pn	03 59 55.6	+0.4
KAN14	Manchester OK	1.34	341	Pn	Pn	03 59 55.8	+0.4
TUL1	Leonard	1.34	80	Pn	Pn	03 59 54.5	-0.9
TUL1	comp=Z,188nm,1.0s			IAmb_Lg		04 00 15.5	
TUL1	Leonard baz=260	1.34	80	P	Pn	03 59 54.5	-0.9
T35A	Sooner Cattle	1.43	31		Pn	03 59 56.9	+0.3
T35B	Sooner Cattle baz=210,SNR=29	1.43	31	P	Pn	03 59 56.9	+0.2
T35B	baz=210			S	Sn	04 00 16.4	+0.9
U32A	Winter Ranch,	1.46	299		Pn	03 59 57.6	+0.6
U32A	Winter Ranch, baz=118,SNR=37	1.46	299	P	Pn	03 59 57.5	+0.6
U32A	baz=118			S	Sg	04 00 17.7	+0.3
OK035	E0210 Rd and N	1.46	315		Pn	03 59 57.6	+0.6
WMOK	Wichita Mounta	1.46	230	Pn	Pn	03 59 57.1	+0.1
WMOK	Wichita Mounta baz=50,SNR=12	1.46	230	P	Pn	03 59 57.1	+0.1
WMOK	baz=50			S	Sb	04 00 16.8	+0.3
KAN05	Bluff City Nor	1.47	346		Pn	03 59 58.1	+1.0
KAN01	Argonia South	1.49	350	Pn	Pn	03 59 58.5	+1.0
KAN10	Anthony SW Sta	1.54	340	Pn	Pn	03 59 58.8	+0.8
KAN06	Argonia West S	1.60	347		Pn	04 00 00.2	+1.2
KAN08	Anthony NE Sta	1.60	344	Pn	Pn	03 59 59.9	+1.0
KAN16	Harper SW Stat	1.62	342		Pn	04 00 00.4	+1.1
KAN12	Harper NE Stat	1.68	344	Pn	Pn	04 00 01.2	+1.2
LOOK	Love County	1.70	173	Pn	Pn	04 00 01.0	+0.7
LOOK	comp=Z,166nm,0.9s			IAmb_Lg		04 00 27.2	
X37A	Clayton	2.00	122	Pn	Pn	04 00 05.7	+1.2
X37A	comp=Z,201nm,0.9s			IAmb_Lg		04 00 35.5	
X37A	Clayton baz=304,SNR=54	2.00	122	P	Pn	04 00 05.4	+0.9
X37A	baz=304			S	Sb	04 00 31.8	-0.4
Z35A	Perchaven, San	2.35	177	Pn	Pn	04 00 10.2	+0.9
Z35A	Perchaven, San baz=357,SNR=10.0	2.35	177	P	Pn	04 00 11.1	+1.8
U38A	Gravette	2.57	72	Pn	Pn	04 00 14.0	+1.7
U38A	comp=Z,112nm,0.8s			IAmb_Lg		04 00 51.5	
HHAR	Hobbs	2.89	77	Pn	Pn	04 00 19.0	+2.4
R32A	Long Quarter,	2.92	340	Pn	Pn	04 00 17.6	+0.5
W39A	Magazine	3.01	98		Pn	04 00 18.9	+0.6
W39A	comp=Z,130nm,0.9s			IAmb_Lg		04 01 09.7	
W39A	Magazine baz=280,SNR=34	3.01	98	P	Pn	04 00 18.7	+0.4
Z38A	Mt. Pleasant comp=Z,111nm,1.1s	3.15	140	IAmb_Lg		04 01 18.3	
KSU1	Kansas State U	3.47	11	Pn	Pn	04 00 25.5	+0.9
KSU1	comp=Z,120nm,0.7s			IAmb_Lg		04 01 29.1	
KSU1	Kansas State U baz=191,SNR=7.2	3.47	11	P	Pn	04 00 25.5	+0.9
ABTX	Abilene, Hawle comp=Z,105nm,0.7s	3.56	212	IAmb_Lg		04 01 28.0	
CBKS	Cedar Bluff	3.63	330	Pn	Pn	04 00 28.2	+1.4
CBKS	comp=Z,80nm,0.8s			IAmb_Lg		04 01 29.2	
CBKS	Cedar Bluff baz=149,SNR=6.5	3.63	330	P	Pn	04 00 28.2	+1.4
WHTX	Lake Whitney,	3.68	180	Pn	Pn	04 00 28.6	+1.0
U40A	Yellville	3.76	78		Pn	04 00 30.5	+1.8
U40A	comp=Z,111nm,0.8s			IAmb_Lg		04 01 30.8	
U40A	Yellville baz=261,SNR=9.0	3.76	78	P	Pn	04 00 29.0	+0.3
U40A	baz=261,SNR=9.0			P	Pn	04 00 29.0	+0.3
S39A	Bolivar	3.86	58	Pn	Pn	04 00 30.6	+0.6
237A	Washetta, Mont	3.91	159	Pn	Pn	04 00 30.7	0.0
X40A	Basin Creek Fa	3.95	106		Pn	04 00 31.8	+0.6
WLAR	White Oak Lake	4.07	118	Pn	Pn	04 00 34.7	+1.8
WLAR	comp=Z,78nm,0.9s			IAmb_Lg		04 01 51.1	
WHAR	Wooly Hollow	4.21	94	Pn	Pn	04 00 35.1	+0.3
WHAR	comp=Z,88nm,1.0s			IAmb_Lg		04 01 45.8	
FCAR	Ozark Folk Cen	4.31	86	Pn	Pn	04 00 34.9	-1.3
FCAR	comp=Z,94nm,0.9s			IAmb_Lg		04 01 45.1	
MGMO	Mountain Grove	4.41	69		Pn	04 00 39.8	+2.2
MGMO	comp=Z,99nm,1.1s			IAmb_Lg		04 01 53.6	
MSTX	Muleshoe	4.72	250	Pn	Pn	04 00 42.9	+1.0
R40A	Maddies Statio	4.88	56	Pn	Pn	04 00 45.9	+2.0
R40A	comp=Z,66nm,0.9s			IAmb_Lg		04 02 05.5	
435B	Jarrell	4.89	182	Pn	Pn	04 00 45.6	+1.5
435B	comp=Z,92nm,0.8s			IAmb_Lg		04 02 14.2	
P38A	Dawn	5.00	37	Pn	Pn	04 00 46.7	+1.0
P38A	comp=Z,61nm,0.7s			IAmb_Lg		04 02 19.5	
N33A	J Bar K, Exete comp=Z,85nm,1.0s	5.05	360	IAmb_Lg		04 02 23.6	
KSCO	Kaye Shedlock'	5.31	310	Pn	Pn	04 00 51.2	+1.1
KSCO	comp=Z,96nm,0.8s			IAmb_Lg		04 02 27.3	
N35A	Tabor	5.35	15	Pn	Pn	04 00 49.9	-0.7
CCM	Cathedral Cave	5.49	63	Pn	Pn	04 00 53.8	+1.5
CCM	comp=Z,56nm,0.8s			IAmb_Lg		04 02 24.2	
JCT	Junction City	5.56	202	Pn	Pn	04 00 55.1	+1.6
JCT	comp=Z,105nm,0.7s			IAmb_Lg		04 02 37.5	
P40A	Paris	5.74	46	Pn	Pn	04 00 56.4	+0.6
BGNE	Belgrade	5.74	355	Pn	Pn	04 00 56.2	+0.4
BGNE	comp=Z,112nm,0.7s			IAmb_Lg		04 02 49.3	
PBMO	Poplar Bluff comp=Z,95nm,0.8s	5.76	77	IAmb_Lg		04 02 34.7	
LPAR	Lepanto	5.80	89	Pn	Pn	04 00 57.2	+0.5
143A	Socs Landing, comp=Z,56nm,0.8s	5.81	119	IAmb_Lg		04 02 51.1	
T25A	Trinidad	5.82	286	Pn	Pn	04 00 58.0	+0.9
T25A	comp=Z,85nm,0.7s			IAmb_Lg		04 02 44.9	
FVM	French Village	6.06	66	Pn	Pn	04 01 01.8	+1.5
FVM	comp=Z,68nm,0.8s			IAmb_Lg		04 02 43.3	
N38A	Joes South For	6.07	32	Pn	Pn	04 00 59.8	-0.6
OGNE	Ogallala	6.38	327	Pn	Pn	04 01 05.6	+0.9
OGNE	comp=Z,66nm,0.8s			IAmb_Lg		04 03 01.0	
HALT	Halls comp=Z,72nm,0.9s	6.57	86	IAmb_Lg		04 03 08.6	
Y45A	Yeager Farm, C comp=Z,40nm,0.8s	6.73	103	IAmb_Lg		04 03 17.1	
W45A	Hickory Valley comp=Z,59nm,0.8s	6.75	92	IAmb_Lg		04 03 21.8	
SDCO	Great Sand Dun	6.81	290		Pn	04 01 12.4	+1.7
S44A	Carbondale comp=Z,78nm,0.8s	6.86	71	IAmb_Lg		04 03 09.5	
K31A	O'Neill comp=Z,63nm,0.7s	7.00	352	IAmb_Lg		04 03 28.0	
SCIA	State Center	7.03	27	Pn	Pn	04 01 15.0	+1.5
SCIA	comp=Z,62nm,0.7s			IAmb_Lg		04 03 15.6	
N41A	Harden Midland	7.20	44	Pn	Pn	04 01 16.8	+0.9
T45A	Paducah comp=Z,79nm,0.7s	7.21	77	IAmb_Lg		04 03 17.4	
Q44A	Meyer Farm, Va	7.43	62	Pn	Pn	04 01 19.8	+0.8
Q44A	comp=Z,60nm,0.8s			IAmb_Lg		04 03 40.7	
ISCO	Idaho Springs	7.68	305	Pn	Pn	04 01 23.7	+1.0
BNM	Barren Site	7.71	261	Pn	Pn	04 01 23.9	+0.8
MNTX	Cornudas Mount	7.73	241	Pn	Pn	04 01 23.8	+0.6
MNTX	comp=Z,40nm,1.1s			IAmb_Lg		04 03 43.5	
Y22D	IRIS PASSCAL I comp=Z,42nm,0.8s	7.97	261	IAmb_Lg		04 03 53.3	
L40A	Anamosa comp=Z,60nm,1.0s	7.99	35	IAmb_Lg		04 03 46.7	
OLIL	Olney comp=Z,64nm,1.0s	8.04	65	IAmb_Lg		04 03 57.0	
ECSD	EROS Data Cent	8.06	4	Pn	Pn	04 01 26.7	-1.0
PHWY	Pilot Hill comp=Z,34nm,0.9s	8.43	314	IAmb_Lg		04 04 04.9	
L42A	Oliver, Polo	8.74	41	Pn	Pn	04 01 37.2	+0.3
SUSD	Miller comp=Z,29nm,0.7s	8.83	353	IAmb_Lg		04 04 25.9	
JFWS	Jewell Farm	9.11	35	Pn	Pn	04 01 41.7	-0.3
JFWS	comp=Z,43nm,0.8s			IAmb_Lg		04 04 31.5	
BLO	Bloomington	9.34	65	Pn	Pn	04 01 45.6	+0.3
I40A	Norwalk	9.72	30	Pn	Pn	04 01 48.9	-1.6
I40A	comp=Z,47nm,1.1s			IAmb_Lg		04 04 41.4	
RSSD	Black Hills	9.84	331	Pn	Pn	04 01 52.2	0.0
K22A	Casper	9.91	317	Pn	Pn	04 01 53.9	+0.7
K22A	comp=Z,22nm,0.8s			IAmb_Lg		04 05 03.4	
K43A	Burlington	9.94	42	Pn	Pn	04 01 53.2	-0.2
SPMN	Marine on St.	10.16	19	Pn	Pn	04 01 56.3	-0.1
F33A	5 Mile Ranch,	10.18	4	Pn	Pn	04 01 54.7	-2.0

I42A	Draeger Farm,	10.48	36	Pn	Pn	04 01 58.3	-2.5
F36A	Milaca	10.59	15	Pn	Pn	04 01 59.8	-2.5
G40A	Rib Lake	11.03	28	Pn	Pn	04 02 07.1	-1.3
S51A	Beattyville	11.28	76	Pn	Pn	04 02 10.8	-1.0
BW06	Boulder Array	11.76	311	Pn	Pn	04 02 18.0	-0.6
PD31	Pinedale Array	11.76	311	Pn	Pn	04 02 18.0	-0.6
PDAR	Pinedale Array	11.76	311	Pn	Pn	04 02 17.7	-0.9
B35A	Bob, Littlefor	12.96	11	Pn	Pn	04 02 32.5	-2.1
RLMT	Red Lodge	13.04	320	Pn	Pn	04 02 35.0	-1.0
S54A	Dingess, Beckl	13.10	76	Pn	Pn	04 02 39.6	+3.0

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*IDC **28** 04:11:49.2±2.8, 25°.02S×179°.34E, h492^{km}±32^{km}, mb3.5/8, mb1 3.8/10, mb1mx3.5/30, mbtmp4.5/10, Error ellipse: s-maj=21.8km s-min=17.7km az=158.0*

*NEIC **28** 04:11:50.6±2.6, 25°.2S±0°.1×179°.4E±0°.1, h498^{km}±10^{km}, mb4.4/22, Error ellipse: s-maj=19.6km s-min=16.8km az=137.0*

*NOU **28** 04:12:09.4, 26°.84S×176°.87E, h471^{km}, mb4.2/15, South of Fiji Islands*

ISC 28 04:11:50.2±0.6**, 25°.27S**±0°.06×**179°.35E**±0°.08**, h507**^{km}**, n100, σ2^{s}05**/106**, mb4.3**/21**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.60	351	P	P	04 13 42.1	-0.8
	1.9nm,0.3s,baz=222,slow=23,SNR=8.5						
MSVF	Nonsavu	7.60	351	P	P	04 13 42.4	-0.5
MARNC	Mare, Loyalty	11.05	288	P	P	04 14 19.6	+0.7
PINNC	Pines Island,	11.20	281	P	P	04 14 22.0	+1.6
NIUE	Niue	11.69	60	P	P	04 14 26.5	+0.9
OUENC	Ouen Island, N	11.79	281	P	P	04 14 28.4	+1.8
YATNC	Mamie plateau,	11.85	283	P	P	04 14 29.4	+2.1
LIFNC	LIFOU	12.01	289	P	P	04 14 29.4	+0.5
ETAZ	East Tamaki Re	12.24	197	P	P	04 14 35.7	+4.6
DZM	Mont Dzumac	12.24	282	P	P	04 14 33.1	+1.5
	1.5nm,0.3s,baz=80,slow=17,SNR=17						
DZM	Mont Dzumac	12.24	282	*e*P	P	04 14 33.0	+1.5
	70nm,1.1s						
DZM	Mont Dzumac	12.24	282	P	P	04 14 33.3	+1.8
MXZ	Matakaoa Point	12.29	184	P	P	04 14 34.5	+2.9
MXZ	Matakaoa Point	12.29	184	P	P	04 14 34.5	+2.9
PUZ	Puketiti	12.80	184	P	P	04 14 41.9	+4.9
PUZ				S	S	04 16 54.7	+0.2
TOZ	Tahuroa Road	12.85	194	P	P	04 14 40.6	+3.1
URZ	Urewera	13.09	188	P	P	04 14 40.3	+0.2
	11nm,0.3s,baz=285,slow=22,SNR=12						
URZ				S	S	04 16 54.0	-6.1
	0.4nm,0.3s,baz=307,slow=20,SNR=1.5						
URZ	Urewera	13.09	188	P	P	04 14 40.0	0.0
URZ				S	S	04 16 54.5	-5.6
URZ	Urewera	13.09	188	P	P	04 14 41.7	+1.7
URZ	Urewera	13.09	188	P	P	04 14 41.8	+1.8
MWZ	Matawai	13.12	186	S	S	04 16 58.5	-2.2
MWZ	Matawai	13.12	186	P	P	04 14 43.2	+2.8
CNGZ	Carnagh Statio	13.21	184	P	P	04 14 43.3	+2.0
RAGZ	Rawiri	13.29	187	P	P	04 14 45.2	+2.9
GRRZ	Galatos Road	13.33	191	P	P	04 14 46.6	+4.0
HRRZ	Handcock Road	13.34	190	P	P	04 14 46.3	+3.6
KUTZ	Kaahu Road	13.51	192	P	P	04 14 48.8	+4.3
SNGZ	Shannon Statio	13.58	187	P	P	04 14 46.4	+1.1
SNGZ				S	S	04 17 02.5	-7.1
PRGZ	Paritu Road	13.67	185	P	P	04 14 48.3	+2.1
RAHZ	Arahi	13.74	187	P	P	04 14 47.0	+0.1
RAHZ				S	S	04 17 11.1	-1.5
HIZ	Hauiti	13.74	195	P	P	04 14 52.6	+5.6
HIZ	Hauiti	13.74	195	P	P	04 14 45.0	-1.9
KNZ	Kokohu	13.78	185	P	P	04 14 48.4	+1.0
RATZ	Rangitukua	13.89	192	P	P	04 14 50.8	+2.3
NMHZ	Naumai	13.95	188	P	P	04 14 49.3	+0.1
RITZ	Rihia Road	13.98	191	P	P	04 14 52.1	+2.7
AFI	Afiamalu	14.05	38	P	P	04 14 46.9	-3.7
	8.6nm,0.3s,baz=67,slow=0.5,SNR=9.3						
BKZ	Black Stump Fm	14.06	189	P	P	04 14 51.8	+1.4
BKZ				S	S	04 17 15.9	-3.0
BKZ	Black Stump Fm	14.06	189	P	P	04 14 50.9	+0.5
TMVZ	Te Maari	14.14	192	P	P	04 14 53.6	+2.4
OTVZ	Oturere	14.20	192	P	P	04 14 53.5	+1.7
SNVZ	South Ngauruho	14.22	192	P	P	04 14 53.9	+1.7
KWHZ	Kaweka Forest	14.33	189	P	P	04 14 53.7	+0.5
KWHZ				S	S	04 17 20.8	-3.2
VRZ	Vera Road	14.35	195	P	P	04 14 57.1	+3.9
WNVZ	Wahianoa	14.37	192	P	P	04 14 54.9	+1.2
MOVZ	Moawhango	14.42	191	P	P	04 14 54.5	+0.4
BHHZ	Black Hill Sta	14.45	190	P	P	04 14 53.9	-0.4
KAHZ	Kahuranaki	14.63	188	P	P	04 14 55.8	-0.5
BFZ	Birch Farm	15.59	189	P	P	04 15 06.1	-0.1
BFZ	Birch Farm	15.59	189	P	P	04 15 07.1	+0.9
SNZO	South Karori	16.46	192	P	P	04 15 15.0	-0.2
QRZ	Quartz Range	16.52	198	P	P	04 15 18.5	+2.5
QRZ	Quartz Range	16.52	198	P	P	04 15 17.6	+1.7
TUWZ	Tuamarina	16.73	194	P	P	04 15 19.2	+1.2
THZ	Tophouse	17.29	196	P	P	04 15 25.2	+1.6
KHZ	Kahutara	17.76	194	P	P	04 15 28.1	+0.3
LTZ	Lake Taylor	18.41	197	P	P	04 15 35.3	+1.4
RPZ	Rata Peaks	19.61	198	P	P	04 15 46.3	+1.6
FOZ	Fox Glacier	19.82	201	P	P	04 15 47.6	+1.0
ODZ	Otahua Downs	20.95	197	P	P	04 15 58.4	+1.6
MLZ	Mavora Lakes	22.00	201	P	P	04 16 08.8	+2.4
MLZ				IAmb	IAmb	04 16 09.5	
	comp=Z,14nm,0.8s						
EIDS	Eidsvold	25.53	264	P	P	04 16 38.5	+0.4
EIDS				IAmb	IAmb	04 16 39.5	
	comp=Z,5.3nm,0.8s						
CTA	Charters Tower	30.92	273	P	P	04 17 25.9	+0.7
	comp=Z,10nm,0.6s,baz=93,slow=12,SNR=12						
CTAO	Charters Tower	30.92	273	P	P	04 17 25.8	+0.5
CTAO				IAmb	IAmb	04 17 26.5	
	comp=Z,13nm,0.8s						
TOO	Toolangi	31.22	239	P	P	04 17 29.1	+1.5
TOO				IAmb	IAmb	04 17 29.6	
	comp=Z,4.7nm,0.8s						
QLP	Quilpie	31.55	260	P	P	04 17 30.9	+0.3
	comp=Z,9.6nm,0.9s						
STKA	Stephens Creek	33.68	250	P	P	04 17 49.7	+1.0
	comp=Z,0.9nm,0.3s,baz=49,slow=9.2,SNR=3.5						
STKA	Stephens Creek	33.68	250	P	P	04 17 49.6	+1.0
INKA	Innaminka	34.54	257	P	P	04 17 56.4	+0.5
	comp=Z,21nm,1.6s						
COEN	Coen	35.77	281	P	P	04 18 06.8	+0.4
LCRK	Leigh Creek	36.58	252	P	P	04 18 13.0	+0.1
BBOO	Buckleboo	38.37	248	P	P	04 18 27.5	-0.1
BBOO				IAmb	IAmb	04 18 48.9	
	comp=Z,5.4nm,1.1s						
BBOO	Buckleboo	38.37	248	P	P	04 18 26.9	-0.6
	comp=Z,14nm,2.3s						
OOD	Oodnadatta	38.99	256	P	P	04 18 33.2	+0.6
	comp=Z,12nm,1.1s						
AS31	Alice Springs	41.24	262	P	P	04 18 50.7	-0.1
AS31				IAmb	IAmb	04 18 52.0	
	comp=Z,2.5nm,0.4s						
ASAR	Alice Springs	41.24	262	P	P	04 18 50.8	0.0
	comp=Z,5.7nm,0.7s,baz=88,slow=6.4,SNR=52						
ASAR				S	S	04 24 25.9	-1.9
	comp=Z,1.4nm,0.9s,baz=104,slow=15,SNR=9.3						
ASAR	Alice Springs	41.24	262	P	P	04 18 50.5	-0.3
WR0	Warramunga Arr	41.55	268	P	P	04 18 52.7	-0.5
WR0				IAmb	IAmb	04 18 53.4	
	comp=Z,9.7nm,0.6s						
WB2	Warramunga Arr	41.73	268	P	P	04 18 54.0	-0.6
WB2				IAmb	IAmb	04 18 54.5	
	comp=Z,17nm,0.6s						
WRAB	Tennant Creek	41.73	268	P	P	04 18 54.0	-0.7
WRAB				IAmb	IAmb	04 18 54.4	
	comp=Z,14nm,0.6s						
WB0	Warramunga Arr	41.74	268	P	P	04 18 54.0	-0.7
WRA	Warramunga Arr	41.74	268	P	P	04 18 54.4	-0.4
	comp=Z,14nm,0.5s,baz=104,slow=7.8,SNR=144						
WRA				S	S	04 24 30.9	-4.2
	comp=Z,2.0nm,0.9s,baz=42,slow=30,SNR=4.6						
WRA	Warramunga Arr	41.74	268	P	P	04 18 54.2	-0.6
FORT	Forrest	45.29	251	P	P	04 19 21.6	-0.6
FORT				IAmb	IAmb	04 19 37.8	
	comp=Z,17nm,0.9s						
KNRA	Kununurra	48.10	271	P	P	04 19 43.6	-0.1
KNRA				IAmb	IAmb	04 19 44.5	
	comp=Z,35nm,0.9s						
MORW	Morawa	55.86	251	P	P	04 20 39.2	-0.3
QSPA	South Pole Qui	64.82	180	P	P	04 21 40.6	+2.1
	comp=Z,2.6nm,0.9s,baz=316,slow=0.5,SNR=9.1						
QSPA	South Pole Qui	64.82	180	P	P	04 21 40.5	+2.1
QSPA				IAmb	IAmb	04 21 42.5	
	comp=Z,4.5nm,1.1s						
VNA3	Neumayer Olymp	83.54	177	P	P	04 23 24.9	+0.8
VNA2	Neumayer--Watz	83.95	178	P	P	04 23 27.3	+1.1
NVAR	Mina Array Bea	86.15	44	P	P	04 23 38.5	+0.9
	comp=Z,0.9nm,0.7s,baz=225,slow=7.9,SNR=7.5						
NVAR	Mina Array Bea	86.15	44	P	P	04 23 38.8	+1.3
ELK	Elko	89.42	44	P	P	04 23 53.2	+0.3
	comp=Z,0.4nm,0.3s,baz=313,slow=4.0,SNR=4.0						
ELK	Elko	89.42	44	P	P	04 23 54.4	+1.5
ILAR	Eielson Array	93.50	14	P	P	04 24 08.8	-2.0
	comp=Z,0.6nm,0.9s,baz=200,slow=6.0,SNR=4.2						
NOA	NORSAR Array B	143.33	350	PKP	PKPab	04 30 23.5	-0.6
	comp=Z,0.2nm,0.5s,baz=59,slow=1.5,SNR=3.8						
AKASG	Malin Array Be	145.78	326	PKPbc	PKPdf	04 30 30.4	0.0
	comp=Z,0.2nm,0.3s,baz=43,slow=3.6,SNR=1.9						
AKASG	Malin Array Be	145.78	326		PKPbc	04 30 32.0	0.0
BRTR	Keskin Array B	147.90	305	PKPbc	PKPbc	04 30 38.0	-0.4
	comp=Z,1.1nm,0.7s,baz=100,slow=4.1,SNR=4.9						
TORD	Torodi Ar. Bea	167.74	191	PKPab	PKPab	04 32 09.4	+0.8
	comp=Z,0.7nm,0.7s,baz=171,slow=4.0,SNR=3.9						

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*IDC **28** 04:12:22.1±1.1, 31°.48S×178°.99W, h0^{km}, mb4.5/4, mb1 4.6/6, mb1mx4.1/32, mbtmp4.5/6, ML4.2/2, MS3.6/10, Ms1 3.5/10, ms1mx3.4/23, Error ellipse: s-maj=30.0km s-min=25.0km az=101.0*

*NEIC **28** 04:12:28.6±1.4, 31°.60S±0°.07×179°.1W±0°.2, h37^{km}±10^{km}, mb4.5/9, Error ellipse: s-maj=21.0km s-min=5.6km az=113.0*

ISC 28 04:12:27.2±0.8**, 31°.58S**±0°.07×**179°.0W**±0°.1**, h35**^{km}**, n68, σ1^{s}45**/53**, mb4.5**/8**, MS3.6**/10**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.49	23	P	Pn	04 13 04.0	-1.2
RAO	Raoul Island	2.50	23	Pn	Pn	04 13 04.9	-0.5
	99nm,0.3s,baz=252,slow=20,SNR=2.1						
RAO				LR	LR	04 13 54.8	
	comp=Z,499nm,21.5s,baz=229,slow=38						
RAO	Raoul Island	2.50	23		Pn	04 13 07.1	+1.7
RIZ	Raoul Island	2.50	22	P	Pn	04 13 05.3	-0.2
MXZ	Matakaoa Point	6.37	200	P	Pn	04 13 56.6	-1.8
MXZ	Matakaoa Point	6.37	200	Pn	Pn	04 13 59.0	+0.5
WMGZ	Waiomatatini S	6.58	198	P	Pn	04 13 54.5	-6.9
WMGZ				S	Sn	04 15 14.8	-0.3
PUZ	Puketiti	6.86	198	P	Pn	04 14 04.8	-0.5
RUGZ	Raukumara Rang	6.93	202	P	Pn	04 14 06.5	+0.1
TWGZ	Tauwhareparae	7.03	200	P	Pn	04 14 09.0	+1.3
WIAZ	Waiheke Island	7.11	221	P	Pn	04 14 10.7	+2.0
OUZ	Omahuta	7.17	238	P	Pn	04 14 08.4	-1.1
OUZ	Omahuta	7.17	238	Pn	Pn	04 14 08.5	-1.0
CNGZ	Carnagh Statio	7.26	198	P	Pn	04 14 09.5	-1.2
CNGZ				S	Sn	04 15 31.0	-0.9
MWZ	Matawai	7.32	202	P	Pn	04 14 11.5	0.0
MWZ				S	Sn	04 15 32.2	-1.1
URZ	Urewera	7.39	204	Pn	Pn	04 14 12.2	-0.3
	2.5nm,0.3s,baz=302,slow=22,SNR=10						
URZ	Urewera	7.39	204	P	Pn	04 14 10.7	-1.8
URZ				S	Sn	04 15 35.5	+0.5
URZ	Urewera	7.39	204	Pn	Pn	04 14 12.0	-0.5
SNGZ	Shannon Statio	7.78	202	P	Pn	04 14 17.3	-0.7
RAHZ	Arahi	7.99	202	P	Pn	04 14 19.0	-1.8
RAHZ				S	Sn	04 15 54.2	+4.3
BKZ	Black Stump Fm	8.41	205	P	Pn	04 14 25.6	-1.1
BKZ				S	Sn	04 16 02.8	+2.5
BKZ	Black Stump Fm	8.41	205	Pn	Pn	04 14 27.3	+0.6
HIZ	Hauiti	8.55	214	Pn	Pn	04 14 28.6	+0.1
KWHZ	Kaweka Forest	8.67	204	P	Pn	04 14 27.6	-2.5
KWHZ				S	Sn	04 16 05.7	-1.0
BFZ	Birch Farm	9.86	202	Pn	Pn	04 14 42.2	-4.2
MSWZ	Moikau Station	10.85	204	Pn	Pn	04 14 56.9	-3.0
SNZO	South Karori	10.95	206	Pn	Pn	04 14 56.7	-4.6
BHW	Baring Head	10.97	205	Pn	Pn	04 14 59.5	-2.2
THZ	Tophouse	12.05	210	S	Sn	04 17 25.3	-4.3
DZM	Mont Dzumac	16.05	303	LR	LR	04 21 09.2	
	comp=Z,566nm,18.1s,baz=201,slow=33						
DZM	Mont Dzumac	16.05	303	*e*LR	LR	04 19 57.3	
	comp=Z,865nm,25.1s						
RAR	Rarotonga	20.06	64	LR	LR	04 22 09.1	
	comp=Z,94nm,20.5s,baz=272,slow=29						
TBI	Tubuai	27.41	80	*e*T	T	04 46 07.0	
	23nm,0.4s						
PAE	Paea	30.02	69	*e*T	T	04 49 10.5	
	5.4nm,0.2s						
PPT2	Papeete2	30.06	69	*e*LR	LR	04 25 52.2	
	comp=Z,170nm,27.0s						
PPT2	Papeete2	30.06	69	*e*T	T	04 49 14.3	
	6.2nm,0.3s						
PPT	Papeete	30.07	69	LR	LR	04 29 25.6	
	comp=Z,37nm,19.1s,baz=278,slow=34						
VAH	Vaihoa	32.92	68	*e*T	T	04 52 46.2	
	21nm,0.2s						
STKA	Stephens Creek	33.38	259	P	P	04 19 03.7	+1.4
	6.3nm,0.9s,baz=90,slow=10,SNR=8.4						
STKA				LR	LR	04 30 51.1	
	comp=Z,108nm,19.2s,baz=38,slow=33						
STKA	Stephens Creek	33.38	259	P	P	04 19 03.0	+0.8
STKA				IAmb	IAmb	04 19 04.7	
	comp=Z,2.6nm,1.1s						
BBOO	Buckleboo	37.82	256	P	P	04 19 40.6	+0.2
BBOO				IAmb	IAmb	04 20 02.0	
	comp=Z,23nm,1.4s						
AS31	Alice Springs	42.19	269	P	P	04 20 16.7	-0.1
ASAR	Alice Springs	42.19	269	P	P	04 20 17.0	+0.2
	comp=Z,3.5nm,0.8s,baz=110,slow=8.3,SNR=12						
ASAR				LR	LR	04 37 14.9	
	comp=Z,92nm,18.1s,baz=186,slow=35						
ASAR	Alice Springs	42.19	269	P	P	04 20 16.0	-0.8
TAOE	Nuku Hiva Isla	42.57	66	*e*LR	LR	04 31 39.3	
	comp=Z,98nm,25.8s						
WB2	Warramunga Arr	43.28	274	P	P	04 20 25.6	0.0
WB2				IAmb	IAmb	04 20 51.2	
	comp=Z,11nm,1.1s						
WRAB	Tennant Creek	43.28	274	P	P	04 20 25.2	-0.5
WRAB				IAmb	IAmb	04 20 29.9	
	comp=Z,12nm,0.7s						
WRA	Warramunga Arr	43.29	274	P	P	04 20 25.5	-0.2
	comp=Z,8.4nm,1.3s,baz=116,slow=7.4,SNR=6.2						
WRA				LR	LR	04 37 31.1	
	comp=Z,138nm,20.3s,baz=110,slow=35						
WRA	Warramunga Arr	43.29	274	P	P	04 20 25.1	-0.7
FORT	Forrest	44.91	257	P	P	04 20 38.9	+0.3
QSPA	South Pole Qui	58.54	180	P	P	04 22 21.8	+1.9
	comp=Z,6.8nm,0.8s,baz=4.5,slow=0.9,SNR=24						
QSPA	South Pole Qui	58.54	180	P	P	04 22 21.6	+1.7
SNAA	Sanae	77.01	179	P	P	04 24 16.3	+0.3
SNAA				IAmb	IAmb	04 24 18.3	
	comp=Z,5.4nm,1.1s						
VNA3	Neumayer Olymp	77.19	176	P	P	04 24 17.3	+0.3
VNA2	Neumayer--Watz	77.61	177	P	P	04 24 20.0	+0.7
	baz=179,slow=4.9						
MJAR	Matsushiro Arr	78.72	326	LR	LR	04 54 51.0	
	comp=Z,16nm,21.0s,baz=155,slow=32						
H03S2	Juan Fernandez	80.54	124	T	T	05 53 16.9	
	baz=236,SNR=58						
H03S1	Juan Fernandez	80.55	124	T	T	05 53 18.3	
	baz=236,SNR=59						
H03S3	Juan Fernandez	80.56	124	T	T	05 53 19.9	
	baz=236,SNR=85						
H03N3	Juan Fernandez	80.74	123	T	T	05 53 31.6	
	baz=241,slow=72,SNR=238						
H03N2	Juan Fernandez	80.74	123	T	T	05 53 30.8	
	baz=241,slow=72,SNR=79						
H03N1	Juan Fernandez	80.76	123	T	T	05 53 31.4	
	baz=241,slow=72,SNR=564						
KSRS	Korea Array	84.68	320	LR	LR	04 58 46.6	
	comp=Z,34nm,19.0s,baz=202,slow=33						
CPUP	Villa Florida	99.93	129	LR	LR	05 02 48.1	
	comp=Z,34nm,21.4s,baz=230,slow=30						
FINES	FINESS Array B	145.93	339	PKPbc	PKPdf	04 32 00.8	-0.8
	comp=Z,2.9nm,0.9s,baz=117,slow=2.1,SNR=11						
FINES	FINESS Array B	145.93	339		PKPdf	04 32 01.0	-0.5
BRTR	Keskin Array B	152.36	296	PKPbc	PKPbc	04 32 19.2	-0.3
	comp=Z,0.3nm,0.6s,baz=122,slow=4.5,SNR=3.9						
TORD	Torodi Ar. Bea	161.65	182	PKPab	PKPab	04 33 09.3	-0.6
	comp=Z,2.3nm,0.8s,baz=188,slow=3.3,SNR=11						

WEL 28 04:13:05.1, 41°S±4°×**17°4E**±°**, h30**^{km}±9^{km}**, M2.2**/16**, ML2.4**/18**, MLv2.2**/16**, Error ellipse: s-maj=0.0km s-min=0.0km az=121.7, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCW	Tory Channel	0.35	197	P	Pn	04 13 14.1	-0.1
KIW	Kapiti Island	0.38	88	P	Pb	04 13 13.6	-0.1
DUWZ	D’Urville Isla	0.38	281	P	Pb	04 13 14.1	+0.4
WEL	Wellington	0.49	147	P	Pn	04 13 16.2	+0.1
CAW	Cannon Point	0.55	115	P	Pn	04 13 16.8	-0.1
OGWZ	Otaki Gorge	0.58	85	P	Pb	04 13 16.5	-0.3
BHW	Baring Head	0.64	147	P	Pn	04 13 18.2	+0.1
TUWZ	Tuamarina	0.66	212	P	Pn	04 13 18.5	+0.1
MSWZ	Moikau Station	0.83	131	P	Pb	04 13 21.5	+0.4
HOWZ	Holdsworth Sta	0.84	92	P	Pb	04 13 21.2	0.0
NNZ	Nelson	0.85	246	P	Pn	04 13 21.1	0.0
MTW	Mount Morrison	0.87	109	P	Pb	04 13 21.8	0.0
MRZ	Mangatainoka R	0.91	77	P	Pn	04 13 21.8	-0.2
PAWZ	Paruwai Farm	0.92	124	P	Pb	04 13 22.5	0.0
BSWZ	Blackbirch Sta	0.93	206	P	Pb	04 13 23.4	+0.7
PLWZ	Palliser	0.94	138	P	Pb	04 13 22.7	-0.3
TIWZ	Tintock	1.12	85	P	Pn	04 13 24.9	+0.1
TMWZ	Te Maipa	1.14	102	P	Pn	04 13 25.3	+0.2
PRWZ	Pori Road	1.23	75	P	Pn	04 13 26.4	+0.2
QRZ	Quartz Range	1.43	271	P	Pn	04 13 28.1	-0.9
THZ	Tophouse	1.44	231	P	Pb	04 13 30.6	-0.7
WNVZ	Wahianoa	1.79	31	P	Pn	04 13 35.8	+1.6
MQZ	McQueen’s Vall	3.12	204	P	Pn	04 13 53.1	+0.9
KMRZ	Kaimai	3.25	22	P	Pn	04 13 57.3	+3.2

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*IDC **28** 04:53:51.6±3.5, 35°.84N×71°.06E, h82^{km}±30^{km}, mb3.2/9, mb1 3.4/14, mb1mx3.2/58, mbtmp3.6/14, Error ellipse: s-maj=25.5km s-min=16.7km az=168.0*

*NEIC **28** 04:53:54.0±1.1, 35°.96N±0°.07×71°.0E±0°.1, h101^{km}±9^{km}, mb4.1/4, Error ellipse: s-maj=13.9km s-min=8.9km az=111.0*

*NNC **28** 04:53:57.9±5.3, 36°.33N×70°.77E, h77^{km}±105^{km}, mb3.6, mpv3.7, Error ellipse: s-maj=44.1km s-min=38.1km az=61.0*

ISC 28 04:53:52.0±0.6**, 35°.79N**±0°.06×**71°.18E**±0°.06**, h102**^{km}**, n44, σ2^{s}12**/50**, mb3.3**/9**, 4C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.15	235	Pn	Pn	04 54 28.4	+1.5
CHGR	Chuyangaron	3.28	331	Pn	Pn	04 54 40.3	-1.3
BTK	Batken	4.27	356	Pn	Pn	04 54 55.4	+0.5
DHRM	DHARAMSHALA	5.53	128	*e*P	Pn	04 55 13.0	+0.8
DHRM				*e*S	Sn	04 56 14.6	0.0
DHRM				IAML		04 56 16.3	
	comp=N,149nm,0.4s						
DHRM				IAML		04 56 17.0	
	comp=E,175nm,0.2s						
SMLA	Simla	6.83	131	*e*P	Pn	04 55 30.4	+0.8
SMLA				*e*S	Sn	04 56 44.2	-1.7
SMLA				IAML		04 56 47.0	
	comp=N,51nm,0.2s						
SMLA				IAML		04 56 48.2	
	comp=E,51nm,0.2s						
AAK	Ala-Archa	7.30	20	P	Pn	04 55 36.6	+0.4
	comp=E,1.2nm,0.3s,baz=192,slow=8.1,SNR=13						
AAK				S	Sn	04 56 55.9	-1.6
	baz=156,slow=20,SNR=1.4						
AAK	Ala-Archa	7.30	20	⇑P	Pn	04 55 36.5	+0.4
	comp=E,2.3nm,0.6s						
AAK				⇑S	Sn	04 56 54.2	-3.3
	comp=E,3.6nm,0.5s						
AAK	Ala-Archa	7.30	20	Pn	Pn	04 55 36.8	+0.7
KK02	Karatay Array	7.32	356	⇓P	Pn	04 55 35.6	-0.6
	comp=E,4.2nm,0.3s						
KK02				⇑S	Sn	04 56 51.9	-5.8
	comp=E,11nm,0.5s						
KKAR	Karatay Array	7.32	356	Pn	Pn	04 55 35.7	-0.6
BOOM	Boomskoye usch	7.64	28	Pn	Pn	04 55 40.9	+0.2
TARG	Taragay, Kyrgy	7.87	39	Pn	Pn	04 55 45.2	+1.2
TKM2	Tokmak 2	7.90	24	⇑P	Pn	04 55 44.1	-0.2
	comp=E,2.0nm,0.6s						
KUDL	Kundal	8.86	148	*e*P	Pn	04 55 57.0	-0.2
KUDL				*e*S	Sn	04 57 28.2	-7.0
GEYT	Alibeck	10.68	285	P	Pn	04 56 20.6	-1.3
	comp=E,0.7nm,0.3s,baz=83,slow=15,SNR=2.6						
PYUN	Piuthan	12.62	124	*e*P	Pn	04 56 46.2	-1.9
	comp=E,5.0nm,0.2s						
DANN	Dangsing	12.99	121	*e*P	Pn	04 56 50.0	-3.0
	comp=E,13nm,0.3s						
KOLN	Koldanda	13.24	124	*e*P	Pn	04 56 54.1	-2.2
	comp=E,6.8nm,0.4s						
MK31	Makanchi Array	13.79	34	P	P	04 57 08.4	+0.4
	baz=208,slow=12,SNR=8.3						
MK31	Makanchi Array	13.79	34	P	P	04 57 08.6	+0.5
MKAR	Makanchi Array	13.79	34	P	Pn	04 57 02.4	-0.7
	comp=E,0.0nm,0.3s,baz=218,slow=13,SNR=2.2						
MKAR	Makanchi Array	13.79	34	P	P	04 57 08.9	+0.8
GKN	Gorkha	13.81	120	*e*P	Pn	04 57 00.7	-2.9
	comp=E,11nm,0.4s						
PKIN	Phulchoki	14.61	120	*e*P	Pn	04 57 11.3	-2.6
	comp=E,12nm,0.4s						
PKI	Pulchoki	14.62	120	*e*P	Pn	04 57 11.7	-2.4
	comp=E,7.1nm,0.3s						
GUN	Gumba	14.75	118	*e*P	Pn	04 57 12.0	-3.8
	comp=E,3.7nm,0.3s						
KURBB	Kurchatov Arra	15.75	17	P	Pn	04 57 28.1	+0.3
	comp=E,0.0nm,0.3s,baz=208,slow=12,SNR=2.4						
AB31	Akbulak array	15.77	332	P	Pn	04 57 26.1	-2.1
	comp=E,1.1nm,0.4s,baz=156,slow=12,SNR=63						
AB31				S	Sn	05 00 11.2	-11
	comp=E,0.5nm,0.5s,baz=160,slow=22,SNR=4.0						
ABKAR	Akbulak array	15.77	332	P	Pn	04 57 26.4	-1.8
AKTO	Aktyubinsk	17.46	331	P	P	04 57 47.9	-0.8
	comp=E,0.3nm,0.3s,baz=143,slow=15,SNR=11						
AKTO	Aktyubinsk	17.46	331	⇓P	P	04 57 49.4	+0.7
	comp=E,3.8nm,0.8s						
ZAA0	Zalesovo Array	20.50	23	P	P	04 58 22.5	+0.8
ZAA0				IAmb	IAmb	04 58 23.0	
	comp=Z,4.5nm,1.1s						
ZALV	Zalesovo Beam	20.50	23	P	P	04 58 22.2	+0.5
	comp=Z,2.6nm,0.6s,baz=218,slow=11,SNR=11						
SONM	Songino Array	28.63	54	P	P	04 59 41.7	+2.8
	comp=Z,0.3nm,0.5s,baz=251,slow=8.7,SNR=3.3						
BRTR	Keskin Array B	29.79	289	P	P	04 59 50.1	+0.9
	comp=Z,0.3nm,0.5s,baz=78,slow=9.6,SNR=2.5						
NC303	NORSAR Array S	44.98	324	P	P	05 01 58.0	+1.2
NC303				IAmb	IAmb	05 01 59.4	
	comp=Z,7.8nm,1.1s						
NOA	NORSAR Array B	45.03	323	P	P	05 01 58.7	+1.5
	comp=Z,0.3nm,0.5s,baz=97,slow=8.0,SNR=3.1						
TORD	Torodi Ar. Bea	65.84	269	P	P	05 04 27.4	+0.5
	comp=Z,0.5nm,0.6s,baz=42,slow=5.3,SNR=7.6						
INK	Inuvik	74.58	9	P	P	05 05 20.8	+1.5
	comp=Z,0.4nm,0.4s,baz=314,slow=5.6,SNR=4.1						
INK	Inuvik	74.58	9	P	P	05 05 21.5	+2.2
WRA	Warramunga Arr	81.50	122	P	P	05 06 00.5	+2.2
	comp=Z,0.3nm,0.5s,baz=323,slow=4.6,SNR=5.9						
WB2	Warramunga Arr	81.51	122	P	P	05 06 00.3	+2.0
YKA	Yellowknife Ar	81.94	3	P	P	05 06 01.7	+1.7
	comp=Z,0.1nm,0.4s,baz=349,slow=5.3,SNR=5.1						
ASAR	Alice Springs	83.73	125	P	P	05 06 12.2	+2.3
	comp=Z,0.1nm,0.4s,baz=315,slow=5.5,SNR=3.3						

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*IDC **28** 05:00:32.9±28.0, 29°.85N×138°.56E, h416^{km}±144^{km}, mb2.8/5, mb1 2.9/7, mb1mx2.6/49, mbtmp3.6/7, Error ellipse: s-maj=408.9km s-min=36.1km az=173.0*

*JMA **28** 05:00:36.4±0.1, 30°.35N×139°.14E, h431^{km}, M3.4*

ISC 28 05:00:35.8±0.9**, 30°.32N**±0°.10×**139°.0E**±0°.1**, h450**^{km}**, n12, σ2^{s}29**/14**, mb3.2**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	4.24	138	P	P	05 01 52.6	-0.5
CBIJ				*e*S	S	05 02 53.1	-2.8
JRY	Ryogami san	5.69	359	P	P	05 02 07.9	+1.1
JAG	Ashikaga	6.10	3	P	P	05 02 11.3	+0.3
JAG				*e*S	S	05 03 25.0	-3.9
MJAR	Matsushiro Arr	6.25	354	P	P	05 02 13.1	+0.6
	0.1nm,0.3s,baz=173,slow=11,SNR=4.7						
JHO	Hitachi	6.41	11	*e*S	S	05 03 32.7	-2.0
JFK	Kawauchi	7.20	12	*e*S	S	05 03 47.9	-2.1
KSRS	Korea Array	11.65	311	P	P	05 03 08.3	-2.5
	0.3nm,0.3s,baz=126,slow=10,SNR=2.9						
MKAR	Makanchi Array	46.31	307	P	P	05 08 19.4	-0.2
	0.4nm,0.7s,baz=86,slow=8.6,SNR=4.2						
KURBB	Kurchatov Arra	48.83	313	P	P	05 08 38.4	0.0
	0.5nm,0.5s,baz=90,slow=7.7,SNR=7.2						
BVAR	Borovoye Array	53.81	316	P	P	05 09 14.9	+0.1
	0.6nm,0.4s,baz=108,slow=4.7,SNR=3.5						
YKA	Yellowknife Ar	70.63	28	P	P	05 11 08.5	+4.2
	0.3nm,1.0s,baz=297,slow=4.1,SNR=1.8						

FINES	**FINESS Array B**	73.84	333	P	P	05 11 23.9	+0.9
	1.4nm,0.9s,baz=72,slow=4.5,SNR=4.8						

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*SOME **28** 05:09:19.8, 41°.77N×84°.07E, h10^{km}*

*IDC **28** 05:09:23.1±2.5, 41°.73N×84°.00E, h0^{km}, mb3.6/2, mb1 3.4/7, mb1mx3.2/61, mbtmp3.4/7, ML2.9/5, MS2.4/2, Ms1 2.4/2, ms1mx2.2/38, Error ellipse: s-maj=34.4km s-min=20.8km az=106.0*

*NNC **28** 05:09:31.5±2.1, 42°.08N×83°.76E, h11^{km}±8^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=13.5km s-min=5.9km az=156.0*

ISC 28 05:09:29.6±1.7**, 42°.05N**±0°.08×**83°.75E**±0°.06**, h10**^{km}**, n53, σ2^{s}02**/73**, 9C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	2.86	300	*e*P	Pn	05 10 19.7	+4.2
	18nm,0.2s						
KTMS				*e*S	Sg	05 11 03.2	+1.6
	151nm,0.3s						
KTMS	**Ketmen**	2.86	300	Pg	Pn	05 10 16.6	+1.1
	18nm,0.2s						
KTMS				Lg	Lg	05 11 03.2	
	151nm,0.3s						
SHLS	**Shalkode**	3.35	291	*e*P	Pn	05 10 23.0	+0.8
	8.9nm,0.2s						
SHLS				*e*S	Sb	05 11 09.5	-0.5
	106nm,0.4s						
SHLS	**Shalkode**	3.35	291	Pg	Pn	05 10 20.4	-1.8
	24nm,0.2s						
SHLS				Lg	Lg	05 11 09.5	
	146nm,0.5s						
UZB	**Uzynbulak**	3.66	289	*e*P	Pb	05 10 33.3	-1.1
	9.1nm,0.3s						
UZB				*e*S	Sg	05 11 25.9	-1.2
	69nm,0.6s						
UZB	**Uzynbulak**	3.66	289	Pg	Pn	05 10 30.0	+3.6
	19nm,0.3s						
UZB				Lg	Lg	05 11 25.9	
	69nm,0.6s						
DJR	**Jarkent**	3.68	310	*e*P	Pb	05 10 33.6	-1.2
	2.4nm,0.5s						
DJR				*e*S	Sg	05 11 26.1	-1.8
	32nm,0.4s						
DJR	**Jarkent**	3.68	310	Pg	Pn	05 10 30.0	+3.4
	14nm,0.5s						
DJR				Lg	Lg	05 11 26.1	
	32nm,0.4s						
SATY	**Saty**	4.07	286	*e*P	Pb	05 10 41.8	+0.3
	15nm,0.5s						
SATY				*e*S	Sg	05 11 40.7	+0.3
	45nm,0.2s						
SATY	**Saty**	4.07	286	Pg	Pb	05 10 39.0	-2.5
	15nm,0.5s						
SATY				Lg	Lg	05 11 41.7	
	45nm,0.2s						
BLB	**Baldybastay**	4.37	300	Pg	Pn	05 10 43.0	+6.8
	9.2nm,0.1s						
BLB				Lg	Lg	05 11 48.5	
	42nm,0.3s						
KAPS	**Kapalarasan**	4.54	317	*e*P	Pb	05 10 48.6	-0.7
	3.2nm,0.3s						
KAPS				*e*S	Sg	05 11 52.7	-2.6
	40nm,0.2s						
KAPS	**Kapalarasan**	4.54	317	Pg	Pn	05 10 45.4	+7.0
	10nm,0.4s						
KAPS				Lg	Lg	05 11 52.7	
	40nm,0.2s						
ARXS	**Arharly**	4.84	298	*e*P	Pb	05 10 58.0	+3.5
	10nm,0.3s						
ARXS				*e*S	Sg	05 12 09.2	+4.1
	35nm,0.8s						
ARXS	**Arharly**	4.84	298	Pg	Pb	05 10 53.5	-1.1
	10nm,0.3s						
ARXS				Lg	Lg	05 12 06.7	
	35nm,0.8s						
MK31	**Makanchi Array**	4.85	348	Pn	Pn	05 10 43.5	+0.9
	0.2nm,0.2s,baz=159,slow=15,SNR=34						
MK31				⇓Pg	Pb	05 10 59.0	+4.3
	5.2nm,0.6s,baz=161,slow=15,SNR=18						
MK31				⇑Lg	Lg	05 12 06.3	
	4.7nm,0.3s,baz=168,slow=29,SNR=4.4						
MKAR	**Makanchi Array**	4.85	348	Pn	Pn	05 10 43.7	+1.0
	0.4nm,0.3s,baz=163,slow=13,SNR=13						
MKAR				Pg	Pb	05 10 56.3	+1.6
	1.3nm,0.3s,baz=163,slow=14,SNR=20						
MKAR				Lg	Lg	05 12 07.2	
	3.8nm,0.3s,baz=163,slow=30,SNR=7.1						
MKAR				LR	LR	05 12 54.3	
	comp=Z,43nm,20.3s,baz=110,slow=40						
TDK	**Taldyqorghan**	4.88	309	*e*P	Pb	05 10 55.8	+0.7
	46nm,0.3s						
TDK				*e*S	Sg	05 12 04.9	-1.2
	74nm,0.4s						
TDK	**Taldyqorghan**	4.88	309	Pg	Pb	05 10 52.6	-2.5
	58nm,0.3s						
TDK				Lg	Lg	05 12 04.9	
	74nm,0.4s						
MAKZ	**Makanchi**	4.92	346	⇓Pn	Pn	05 10 45.1	+1.5
	1.7nm,0.7s						
MAKZ				⇑Pg	Pg	05 11 01.9	-1.9
	4.2nm,0.5s						
MAKZ				⇓Lg	Lg	05 12 11.4	
	21nm,1.0s						
KOTS	**Kotyrbulak**	5.04	286	*e*P	Pb	05 10 58.9	+0.9
	7.1nm,0.3s						
KOTS				*e*S	Sg	05 12 11.1	-0.2
	52nm,0.6s						
KOTS	**Kotyrbulak**	5.04	286	Pg	Pb	05 10 56.4	-1.6
	7.1nm,0.3s						
KOTS				Lg	Lg	05 12 11.1	
	52nm,0.6s						
MDOK	**Medeo**	5.07	285	*e*P	Pb	05 10 59.5	+1.1
	5.6nm,0.4s						
MDOK				*e*S	Sg	05 12 12.4	+0.1
	21nm,0.8s						
MDOK	**Medeo**	5.07	285	⇑Pn	Pn	05 10 46.7	+0.9
	6.1nm,0.6s						
MDOK				Pg	Pg	05 11 06.5	-0.1
	6.0nm,0.6s						
MDOK				⇑Lg	Lg	05 12 14.5	
	38nm,1.0s						
MDOK	**Medeo**	5.07	285	Pg	Pb	05 10 58.5	0.0
	5.6nm,0.4s						
MDOK				Lg	Lg	05 12 15.0	
	21nm,0.8s						
TNSS	**Tian-Shan**	5.12	283	*e*P	Pb	05 11 00.7	+1.2
	4.6nm,0.3s						
TNSS				*e*S	Sg	05 12 13.6	-0.4
	12nm,0.3s						
TNSS	**Tian-Shan**	5.12	283	Pg	Pb	05 10 57.6	-1.9
	4.6nm,0.3s						
TNSS				Lg	Lg	05 12 13.6	
	12nm,0.3s						
IZV	**Izvestkoviy**	5.36	283	*e*P	Pb	05 11 05.1	+1.6
	3.7nm,0.5s						
IZV				*e*S	Sg	05 12 20.4	-1.4
	36nm,0.4s						
IZV	**Izvestkoviy**	5.36	283	Pg	Pb	05 11 01.8	-1.7
	4.8nm,0.3s						
IZV				Lg	Lg	05 12 20.3	
	36nm,0.4s						
KTBS	**Karatobe**	5.45	290	*e*P	Pb	05 11 07.2	+2.3
	1.7nm,0.3s						
KTBS				*e*S	Sg	05 12 24.4	-0.2
	19nm,0.7s						
KTBS	**Karatobe**	5.45	290	Pg	Pb	05 11 04.0	-0.9
	4.9nm,0.5s						
KTBS				Lg	Lg	05 12 24.4	
	19nm,0.7s						
ZSN	**Zaisan**	5.46	8	*e*P	Pb	05 11 04.8	-0.1
	3.1nm,0.4s						
ZSN				*e*S	Sg	05 12 21.2	-3.4
	21nm,0.4s						
ZSN	**Zaisan**	5.46	8	Pg	Pn	05 10 54.7	+3.7
	4.5nm,0.3s						
ZSN				Lg	Lg	05 12 08.5	
	21nm,0.4s						
MTBS	**Maitube**	5.51	284	*e*P	Pb	05 11 07.7	+1.7
	3.3nm,0.3s						
MTBS				*e*S	Sg	05 12 25.6	-0.9
	21nm,0.4s						
MTBS	**Maitube**	5.51	284	Pg	Pb	05 11 04.6	-1.4
	3.3nm,0.3s						
MTBS				Lg	Lg	05 12 25.6	
	21nm,0.4s						
KUU	**Kurty**	5.74	291	*e*P	Pb	05 11 10.4	+0.6
	1.8nm,0.5s						
KUU				*e*S	Sg	05 12 30.6	-3.2
	25nm,0.4s						
KUU	**Kurty**	5.74	291	Pg	Pb	05 11 10.4	+0.6
	1.8nm,0.5s						
KUU				Lg	Lg	05 12 35.6	
	25nm,0.4s						
KST	**Kastek**	5.84	282	*e*P	Pb	05 11 13.6	+2.1
	6.7nm,0.3s						
KST				*e*S	Sg	05 12 35.6	-1.4
	14nm,0.5s						
KST	**Kastek**	5.84	282	Pg	Pb	05 11 10.4	-1.1
	6.7nm,0.3s						
KST				Lg	Lg	05 12 35.6	
	14nm,0.5s						
DGS	**Degeres**	6.00	284	*e*P	Pb	05 11 14.9	+0.6
	2.5nm,0.4s						
DGS				*e*S	Sg	05 12 37.8	-4.5
	12nm,0.5s						
DGS	**Degeres**	6.00	284	Pg	Pb	05 11 14.1	-0.2
	2.5nm,0.4s						
DGS				Lg	Lg	05 12 42.1	
	12nm,0.5s						
TKM2	**Tokmak 2**	6.09	281	⇓Pn	Pn	05 11 01.4	+1.6
	2.8nm,0.3s						
TKM2				⇑Sn	Sn	05 12 13.9	+4.2
	7.5nm,0.7s						
TKM2				⇑Lg	Lg	05 12 47.7	
	8.4nm,0.5s						
KRBS	**Karabastau**	6.16	288	*e*P	Pb	05 11 18.5	+1.5
	2.4nm,0.3s						
KRBS				*e*S	Sg	05 12 43.2	-3.9
	12nm,0.5s						
KRBS	**Karabastau**	6.16	288	Pg	Pb	05 11 17.4	+0.5
	2.4nm,0.3s						
KRBS				Lg	Lg	05 12 47.0	
	12nm,0.5s						
SGDS	**Sogindy**	6.86	285	Pg	Pb	05 11 29.9	+1.1
	4.0nm,0.6s						
SGDS				Lg	Lg	05 13 09.2	
	7.9nm,0.8s						
AAK	**Ala-Archa**	6.88	278	Pn	Pn	05 11 10.7	0.0
	0.4nm,0.3s,baz=137,slow=19,SNR=2.7						
AAK				Lg	Lg	05 13 07.5	
	0.3nm,0.3s,baz=233,slow=20,SNR=1.2						
AAK				LR	LR	05 14 02.3	
	comp=Z,30nm,21.1s,baz=108,slow=39						
AAK	**Ala-Archa**	6.88	278	⇑Pn	Pn	05 11 12.4	+1.7
	1.8nm,0.7s						
AAK				⇑Lg	Lg	05 13 12.1	
	11nm,0.8s						
KURBB	**Kurchatov Arra**	9.30	339	Pn	Pn	05 11 45.7	+2.1
	0.1nm,0.3s,baz=167,slow=13,SNR=2.6						
KURBB				Lg	Lg	05 14 34.4	
	0.1nm,0.3s,baz=169,slow=31,SNR=7.8						
KURBB	**Kurchatov Arra**	9.30	339	⇑Lg	Lg	05 14 27.6	
	20nm,1.1s						
ZALV	**Zalesovo Beam**	11.92	3	Pn	Pn	05 12 18.3	-1.2
	0.2nm,0.3s,baz=179,slow=11,SNR=5.7						
BVAR	**Borovoye Array**	14.18	325	Pn	Pn	05 12 50.5	+0.1
	0.1nm,0.3s,baz=147,slow=14,SNR=2.6						
BRTR	**Keskin Array B**	37.52	284	P	P	05 16 41.8	-2.0
	0.5nm,0.7s,baz=97,slow=12,SNR=3.7						
TORD	**Torodi Ar. Bea**	75.46	275	P	P	05 21 10.3	-3.8
	0.6nm,0.9s,baz=44,slow=4.5,SNR=3.2						

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*IDC **28** 05:19:00.2±1.0, 21°.30S×68°.51W, h104^{km}±11^{km}, mb4.0/13, mb1 4.1/16, mb1mx4.0/33, mbtmp4.3/16, MS2.8/2, Ms1 2.8/2, ms1mx2.6/17, Error ellipse: s-maj=16.3km s-min=14.0km az=140.0*

*NEIC **28** 05:19:01.0±2.6, 21°.37S±0°.04×68°.67W±0°.06, h112^{km}±4^{km}, Error ellipse: s-maj=8.4km s-min=5.5km az=92.0*

*VAO **28** 05:19:01.3±0.4, 21°.32S×68°.54W, h116^{km}, mb4.5*

*GUC **28** 05:19:01.1±0.7, 21°.39S×68°.74W, h117^{km}±4^{km}, ML4.6*

ISC 28 05:19:00.4±0.4**, 21°.37S**±0°.03×**68°.67W**±0°.05**, h113**^{km}±3^{km}**, h113**^{km}**:pP-P, n206, σ1^{s}27**/236**, mb4.3**/38**, 5C-7D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	0.69	231	⇓*i*P	Pn	05 19 19.8	+0.6
PB09				*i* S	Sn	05 19 33.8	+0.6
PB09				IAML		05 19 36.2	
	comp=E,13µm,0.4s						
PB09	**IPOC Station P**	0.69	231		Pn	05 19 19.6	+0.4
PB09				Sn	Sn	05 19 33.5	+0.2
PB01	**IPOC Station P**	0.83	293	⇓*i*P	Pn	05 19 20.4	+0.1
PB01				*i* S	Sn	05 19 35.0	-0.2
PB01				IAML		05 19 36.6	
	comp=E,34µm,0.2s						
PB01	**IPOC Station P**	0.83	293	Pn	Pn	05 19 20.0	-0.3
PB01				Sn	Sn	05 19 34.9	-0.3
PB02	**IPOC Station P**	1.15	272	⇓*i*P	Pn	05 19 23.5	0.0
PB02				*i* S	Sn	05 19 40.3	-0.6
PB02				IAML		05 19 42.0	
	comp=E,38µm,0.6s						
PB07	**IPOC Station P**	1.19	252	⇓*i*P	Pn	05 19 24.0	0.0
PB07				*i* S	Sn	05 19 41.1	-0.8
PB07				IAML		05 19 41.9	
	comp=N,22µm,0.4s						
PB07	**IPOC Station P**	1.19	252		Pn	05 19 23.4	-0.6
PB07				Sn	Sn	05 19 41.0	-0.9
PB03	**IPOC Station P**	1.22	236	⇑*i*P	Pn	05 19 24.3	0.0
PB03				*i* S	Sn	05 19 41.8	-0.7
PB03				IAML		05 19 42.2	
	comp=N,15µm,0.3s						
LVC	**Limon Verde**	1.26	190	P	Pn	05 19 25.7	+0.7
	comp=N,155nm,0.3s,baz=12,slow=9.4,SNR=1600						
LVC				LR	LR	05 19 40.7	
	comp=N,88nm,18.6s,baz=260,slow=30						
LVC				S	Sn	05 19 44.0	+0.4
	comp=N,720nm,0.3s,baz=90,slow=20,SNR=23						
LVC	**Limon Verde**	1.26	190	*e*P	Pn	05 19 25.1	+0.1
LVC				*i* S	Sn	05 19 44.0	+0.4
LVC	**Limon Verde**	1.26	190	*e*P	Pn	05 19 25.8	+0.7
LVC	**Limon Verde**	1.26	190	Pn	Pn	05 19 25.7	+0.7
LVC				Sn	Sn	05 19 44.4	+0.7
PB08	**IPOC Station P**	1.30	339	⇓*i*P	Pn	05 19 26.5	+1.0
PB08				*i* S	Sn	05 19 45.7	+1.3
PB08				IAML		05 19 46.9	
	comp=E,4µm,0.3s						
PB08	**IPOC Station P**	1.30	339	Pn	Pn	05 19 26.4	+0.8
PB08				Sn	Sn	05 19 45.0	+0.6
PB06	**IPOC Station P**	1.57	212	⇑*i*P	Pn	05 19 28.7	+0.2
PB06				*i* S	Sn	05 19 49.9	+0.1
PB06				IAML		05 19 51.0	
	comp=E,12µm,0.3s						
PB06	**IPOC Station P**	1.57	212		Pn	05 19 28.4	0.0
PB06				Sn	Sn	05 19 49.4	-0.4
TA01	**Diego Aracena**	1.62	299	⇓*i*P	Pn	05 19 28.5	-0.4
TA01				*i* S	Sn	05 19 49.5	-1.0
TA01				IAML		05 19 51.1	
	comp=E,10µm,0.3s						
TA01	**Diego Aracena**	1.62	299	Pn	Pn	05 19 28.5	-0.4
PB04	**IPOC Station P**	1.68	235	⇑*i*P	Pn	05 19 29.2	-0.5
PB04				*i* S	Sn	05 19 50.8	-1.3
PB04				IAML		05 19 55.4	
	comp=N,6µm,0.2s						
PB04	**IPOC Station P**	1.68	235	Pn	Pn	05 19 29.4	-0.4
TA02	**Huaiquique**	1.75	308	*e*P	Pn	05 19 29.8	-0.6
TA02				*i* S	Sn	05 19 52.1	-1.2
TA02				IAML		05 19 56.2	
	comp=N,7µm,0.2s						
TA02	**Huaiquique**	1.75	308		Pn	05 19 29.8	-0.6
PB11	**IPOC Station P**	1.84	330	⇓*i*P	Pn	05 19 31.9	+0.1
PB11				*i* S	Sn	05 19 55.4	-0.3
PB11				IAML		05 19 57.7	
	comp=N,8µm,0.6s						
PB11	**IPOC Station P**	1.84	330		Pn	05 19 31.7	-0.1
PB15	**IPOC Station P**	1.98	202		Pn	05 19 33.6	+0.1
PB05	**IPOC Station P**	2.05	224	⇑*i*P	Pn	05 19 33.7	-0.7
PB05				*e*S	Sn	05 19 58.2	-2.1
PB05				IAML		05 20 06.7	
	comp=E,2µm,0.3s						
PB10	**IPOC Station P**	2.76	219	IAML		05 20 39.0	
	comp=E,863nm,0.6s						
PB10	**IPOC Station P**	2.76	219	Pn	Pn	05 19 42.2	-1.2
PB16	**IPOC Station P**	3.12	345	⇑*i*P	Pn	05 19 49.2	+0.6
PB16	**IPOC Station P**	3.12	345	Pn	Pn	05 19 49.3	+0.7
PB12	**IPOC Station P**	3.15	330	IAML		05 20 30.0	
	comp=E,910nm,0.2s						
PB12	**IPOC Station P**	3.15	330	Pn	Pn	05 19 47.4	-1.2
PB14	**IPOC Station P**	3.62	206	Pn	Pn	05 19 54.2	-0.9
LPAZ	**La Paz**	5.08	6	*e*P	Pn	05 20 16.5	+1.6
LPAZ	**La Paz**	5.08	6	Pn	Pn	05 20 16.9	+2.0
AC02	**Maricunga**	5.46	184	Pn	Pn	05 20 19.4	-0.6
GO03	**Copiap**	6.36	193	Pn	Pn	05 20 28.7	-3.1
SIV	**San Ignacio**	8.96	55	P	Pn	05 21 04.6	-2.4
	comp=E,22nm,0.3s,baz=256,slow=9.0,SNR=359						
SIV				LR	LR	05 25 23.6	
	comp=E,79nm,19.2s,baz=268,slow=44						
PTLB	**Pontes e Lacer**	10.79	59	*e*P	Pn	05 21 29.2	-2.5
PTLB	**Pontes e Lacer**	10.79	59	Pn	Pn	05 21 29.2	-2.5
VA03	**San Esteban**	11.48	188	Pn	Pn	05 21 36.4	-4.6
CPUP	**Villa Florida**	11.49	118	P	Pn	05 21 39.1	-2.0
	comp=E,0.3nm,0.3s,baz=307,slow=11,SNR=5.7						
CPUP				LR	LR	05 27 06.2	
	comp=E,38nm,19.1s,baz=283,slow=43						
CPUP	**Villa Florida**	11.49	118	*e*P	Pn	05 21 39.8	-1.3
VILB	**Vilhena**	11.63	45	*e*P	Pn	05 21 41.9	-1.2
VILB	**Vilhena**	11.63	45	Pn	Pn	05 21 41.5	-1.6
ETMB	**Extrema**	11.72	12	Pn	Pn	05 21 41.4	-2.8
MT02	**Curacav**	12.05	190	Pn	Pn	05 21 47.5	-0.9
AQDB	**Aquidauana**	12.15	88	*e*P	Pn	05 21 48.6	-1.3
AQDB	**Aquidauana**	12.15	88	Pn	Pn	05 21 47.6	-2.3
MT09	**Talagante**	12.53	189	Pn	Pn	05 21 52.5	-2.4
MT01	**Popeta**	12.66	190	Pn	Pn	05 21 54.5	-1.9
BO01	**Tunca**	13.15	189	Pn	Pn	05 22 00.7	-2.2
SALV	**Santo Antonio**	13.44	68	*e*P	Pn	05 22 04.0	-2.8
BO02	**Sierra Bellavi**	13.51	187	Pn	Pn	05 22 06.5	-1.0
PP1B	**Ponte de Pedra**	13.53	76	*e*P	Pn	05 22 07.2	-0.7
ITQB	**Itaqui**	13.65	130	*e*P	Pn	05 22 10.2	+0.8
ITQB	**Itaqui**	13.65	130	Pn	Pn	05 22 08.7	-0.7
GO05	**Huala**	13.89	191	Pn	Pn	05 22 09.3	-3.2
CZSB	**Cruzeiro do Su**	14.11	343	*e*P	Pn	05 22 15.2	-0.1
CZSB	**Cruzeiro do Su**	14.11	343	Pn	Pn	05 22 14.7	-0.6
ML02	**Panimavida**	14.55	189	Pn	Pn	05 22 19.2	-1.6
PDRB	**Porto dos Gac**	14.99	52	*e*P	Pn	05 22 25.9	-0.7
ITAB	**Concordia**	16.16	114	*e*P	P	05 22 41.3	-0.9
ITAB	**Concordia**	16.16	114		P	05 22 41.8	-0.3
ITAB				IAmb	IAmb	05 22 43.0	
	comp=Z,19nm,0.7s						
CLDB	**Colider**	16.17	52	*e*P	Pn	05 22 40.5	-0.7
PCMB	**Pacaembu**	16.21	94	*e*P	P	05 22 41.5	-1.1
CPSB	**Cacapava Do Su**	16.38	126	*e*P	Pn	05 22 42.6	-1.1
ARAG	**Araguaiana, MT**	16.94	73	*e*P	Pn	05 22 49.8	-0.9
PLTB	**Pedras Altas**	16.98	131	P	Pn	05 22 50.2	-0.9
TBTG	**Tabatinga, AM**	17.12	356	*e*P	P	05 22 53.7	+0.9
TBTG	**Tabatinga, AM**	17.12	356	P	Pn	05 22 52.1	-0.7
ITRB	**Iturama**	17.23	88	*e*P	P	05 22 53.8	-0.2
FRTB	**Fartura**	17.78	100	*e*P	Pn	05 23 00.4	-0.5
BB19B	**Bebedouro**	18.78	93	*e*P	P	05 23 11.0	0.0
SNDB	**Serra Nova Dou**	19.07	63	*e*P	P	05 23 13.2	-0.9
TER01	**Tubaro-SC**	19.09	116	*e*P	Pn	05 23 14.8	-1.5
NPGB	**Novo Progresso**	19.19	44	*e*P	P	05 23 13.5	-2.0
PLCA	**Paso Flores**	19.37	184	P	Pn	05 23 18.5	-1.1
	comp=Z,0.3nm,0.3s,baz=0.2,slow=11,SNR=6.9						
PLCA	**Paso Flores**	19.37	184	*e*P	P	05 23 18.3	+0.9
PLCA	**Paso Flores**	19.37	184		P	05 23 17.8	+0.5
IPMB	**Ipameri, GO**	19.55	84	*e*P	P	05 23 18.9	-0.6
RCLB	**Rio Claro- Sao**	19.64	97	*e*P	P	05 23 19.4	-1.0
MACA	**Manacapuru-AM**	19.69	24	*e*P	P	05 23 19.3	-1.6
MACA	**Manacapuru-AM**	19.69	24	P	P	05 23 19.0	-1.9
LL04	**Puerto Octay**	19.74	188	P	P	05 23 21.6	+0.4
LL04				IAmb	IAmb	05 23 22.4	
	comp=Z,17nm,0.8s						
SPB	**Sao Paulo**	19.75	100	*e*P	P	05 23 20.8	-0.7
SPB	**Sao Paulo**	19.75	100	P	P	05 23 18.9	-2.6
SPB				IAmb	IAmb	05 23 27.2	
	comp=Z,11nm,1.1s						
PET01	**Itanhaem-SP**	19.93	102	*e*P	P	05 23 23.5	0.0
LL03	**Petrohue**	19.96	188	P	P	05 23 21.6	-2.1
VAO	**Valinhos**	20.16	99	*e*P	P	05 23 24.7	-1.4
LL05	**Los Muermos**	20.39	190	P	P	05 23 28.7	+0.5
LL05				IAmb	IAmb	05 23 51.0	
	comp=Z,18nm,0.8s						
BDFB	**Brasilia**	20.39	77	P	P	05 23 28.7	+0.1
	comp=Z,14nm,0.4s,baz=246,slow=9.1,SNR=66						
BDFB	**Brasilia**	20.39	77	P	P	05 23 27.7	-0.9
ITTB	**Itaituba**	21.05	38	*e*P	P	05 23 34.4	-1.2
PARB	**Paraibuna**	21.40	100	*e*P	P	05 23 39.6	+0.2
PEXB	**Peixe**	21.55	68	*e*P	P	05 23 40.2	-0.7
PTGA	**Pitinga**	22.20	24	P	P	05 23 45.8	-1.9
	comp=Z,4.7nm,0.4s,baz=205,slow=15,SNR=17						
BSCB	**Bom Sucesso**	22.28	93	*e*P	P	05 23 48.5	-0.1
PRPB	**Parauapebas**	23.69	53	*e*P	P	05 24 01.3	-0.8
DIAM	**Diamantina, MG**	23.70	87	*e*P	P	05 24 01.0	-1.4
SMTB	**Santa Maria do**	23.81	62	*e*P	P	05 24 03.4	+0.3
MC01	**Montes Claros**	23.82	83	*e*P	P	05 24 02.5	-0.7
MALB	**Monte Alegre**	23.94	38	*e*P	P	05 24 04.0	-0.2
JANB	**Januaria**	23.96	79	*e*P	P	05 24 02.9	-1.6
SDBA	**SAO DESIDERIO**	24.39	72	*e*P	P	05 24 08.0	-0.5
BOAV	**Boa Vista**	24.92	20	*e*P	P	05 24 13.5	+0.3
BOAV	**Boa Vista**	24.92	20	P	P	05 24 13.2	0.0
BOAV				IAmb	IAmb	05 24 14.1	
	comp=Z,8.1nm,0.7s						
POPC	**Popayan, Colom**	25.02	341	*e*P	P	05 24 16.4	+2.0
ORTC	**Ortega, Tolima**	25.93	345	*e*P	P	05 24 23.1	+0.7
SJMB	**Sao Joao De Ma**	25.94	89	*e*P	P	05 24 22.1	-0.4
CHIC	**Chingaza**	26.31	349	*e*P	P	05 24 24.7	-1.5
MCPB	**Macapa, AP**	26.43	40	*e*P	P	05 24 27.8	+1.0
RIB01	**Linhares ES**	26.58	91	*e*P	P	05 24 27.8	-0.4
NAN01	**Guarapari, ES**	27.10	88	*e*P	P	05 24 32.5	-0.3
PLMC	**San Jos del P**	27.15	343	*e*P	P	05 24 37.6	+4.3
GUY2C	**Guyana, Caldas**	27.23	345	*e*P	P	05 24 43.4	+8.9
SPBC	**San Pablo de B**	27.37	348	*e*P	P	05 24 39.3	+4.0
RUSC	**La Rusia**	27.43	350	*e*P	P	05 24 36.5	+0.2
GUA01	**Guaratinga, BA**	27.68	85	*e*P	P	05 24 37.5	-0.6
CBOC	**Ciudad Bolivar**	28.00	344	*e*P	P	05 24 41.1	+0.1
HELC	**Santa Helena**	28.20	345	*e*P	P	05 24 42.2	-0.8
GDU01	**Guandu, BA**	28.73	79	*e*P	P	05 24 46.2	-1.2
SMLC	**San Martn de**	30.44	349	*e*P	P	05 24 58.3	-4.2
SJCC	**San Jacinto, C**	31.72	348	P	P	05 25 14.9	+1.2
SJCC				IAmb	IAmb	05 25 43.0	
	comp=Z,10nm,1.1s						
OBIP	**Obispado Ponce**	39.22	3	P	P	05 26 14.9	-2.8
CELP	**Cerrillos**	39.25	3	P	P	05 26 16.5	-1.6
HOPE	**Hope Point**	40.89	152	P	P	05 26 33.0	+1.8
VNA3	**Neumayer Olymp**	60.13	161	P	P	05 28 56.5	+0.8
T47A	**Sharon Grove**	60.59	343	P	P	05 28 57.3	-1.8
VNA2	**Neumayer--Watz**	60.70	161	P	P	05 29 00.4	+0.9
	baz=285,slow=8.1						
SNAA	**Sanae**	62.33	161	P	P	05 29 11.2	+0.7
SNAA	**Sanae**	62.33	161	P	P	05 29 10.5	-0.1
FVM	**French Village**	62.48	341	P	P	05 29 11.8	0.0
CCM	**Cathedral Cave**	62.80	340	P	P	05 29 13.7	-0.2
CCM				IAmb	IAmb	05 29 14.3	
	comp=Z,4.2nm,0.8s						
M57A	**Sunshine Farm,**	62.87	353	P	P	05 29 14.2	-0.2
M57A				IAmb	IAmb	05 29 32.3	
	comp=Z,4.6nm,1.1s						
N53A	**Lisbon**	62.88	350	P	P	05 29 13.5	-0.9
S39A	**Bolivar**	63.16	338	P	P	05 29 16.3	0.0
S39A				IAmb	IAmb	05 29 16.9	
	comp=Z,3.8nm,0.7s						
S39A				pP	pP	05 29 46.0	+0.7
S39A				sP	sP	05 29 56.7	-1.4
M55A	**Ridgway**	63.21	352	P	P	05 29 17.1	+0.5
R40A	**Maddies Statio**	63.34	339	P	P	05 29 17.3	-0.2
R40A				IAmb	IAmb	05 29 17.7	
	comp=Z,3.2nm,0.6s						
R40A				pP	pP	05 29 46.1	-0.4
M54A	**Oil Creek Stat**	63.38	351	P	P	05 29 17.8	+0.1
M54A				pP	pP	05 29 47.4	+0.7
MNTX	**Cornudas Mount**	63.41	325	P	P	05 29 18.4	+0.2
J59A	**Piesco**	64.73	355	P	P	05 29 27.6	+1.0
ANMO	**Albuquerque**	66.51	327	P	P	05 29 39.3	+1.0
	comp=Z,0.8nm,0.7s,baz=140,slow=10,SNR=5.6						
ANMO	**Albuquerque**	66.51	327	IAmb	IAmb	05 29 40.4	
	comp=Z,0.8nm,0.7s						
F64A	**Sherman**	66.91	0	P	P	05 29 40.9	+0.5
T25A	**Trinidad**	67.24	330	P	P	05 29 40.7	-2.3
T25A				IAmb	IAmb	05 29 47.2	
	comp=Z,3.8nm,1.1s						
D62A	**Allapoint, All**	68.13	360	P	P	05 29 48.4	+0.4
SDCO	**Great Sand Dun**	68.25	329	P	P	05 29 50.7	+1.3
SDCO				IAmb	IAmb	05 29 51.4	
	comp=Z,3.6nm,0.9s						
DBIC	**Dimbokro**	68.48	73	P	P	05 29 50.8	-0.2
	comp=Z,9.1nm,0.9s,baz=247,slow=5.7,SNR=10						
DBIC	**Dimbokro**	68.48	73	P	P	05 29 50.9	-0.2
DBIC				IAmb	IAmb	05 29 51.4	
	comp=Z,7.7nm,0.8s						
QSPA	**South Pole Qui**	68.83	180	P	P	05 29 54.1	+1.6

QSPA				IAmb	IAmb	05 29 54.4	
	comp=Z,6.1nm,0.7s						
QSPA				pP	sP	05 30 24.5	-10
QSPA				sP	pP	05 30 35.4	+14
WUAZ	**Wupatki**	69.56	324	P	P	05 29 58.5	+1.2
WUAZ				IAmb	IAmb	05 30 00.8	
	comp=Z,4.8nm,0.9s						
VLDQ	**Val d'Or**	69.60	354	P	P	05 29 57.5	+0.4
VLDQ				IAmb	IAmb	05 29 58.3	
	comp=Z,4.8nm,0.8s						
ECSD	**EROS Data Cent**	69.67	339	P	P	05 29 57.7	-0.1
BAR	**Barrett**	70.65	318	P	P	05 30 05.2	+1.2
BAR				IAmb	IAmb	05 30 06.6	
	comp=Z,3.6nm,0.8s						
W13A	**Hualapai Mount**	70.67	322	P	P	05 30 05.1	+0.9
U15A	**North Rim**	70.73	324	P	P	05 30 06.2	+1.5
PFO	**Pinyon Flats O**	71.15	319	P	P	05 30 07.6	+0.5
	comp=Z,1.3nm,0.7s,baz=8.9,slow=1.8,SNR=2.6						
KNB	**Kanab**	71.45	324	P	P	05 30 11.4	+2.5
KNB				IAmb	IAmb	05 30 12.2	
	comp=Z,6.1nm,0.9s						
LCMT	**Little Creek M**	71.68	324	P	P	05 30 10.6	+0.4
SRU	**San Rafael Swe**	71.78	327	P	P	05 30 12.2	+1.3
SRU				IAmb	IAmb	05 30 12.9	
	comp=Z,5.2nm,0.7s						
P18A	**Preston Nutter**	72.04	327	P	P	05 30 14.2	+1.8
P18A				IAmb	IAmb	05 30 14.9	
	comp=Z,5.1nm,0.7s						
CCUT	**Cedar City**	72.13	324	P	P	05 30 15.8	+2.7
CCUT				IAmb	IAmb	05 30 16.4	
	comp=Z,5.7nm,0.8s						
P17A	**Butcher Ranch,**	72.17	327	P	P	05 30 14.7	+1.6
P17A				IAmb	IAmb	05 30 15.4	
	comp=Z,5.4nm,0.8s						
MSU	**Marysvale**	72.20	325	P	P	05 30 15.3	+1.9
MSU				pP	pP	05 30 42.1	-0.7
MVU	**Marysvale**	72.21	325	P	P	05 30 15.5	+2.0
SHPR	**Sheep Range**	72.39	322	P	P	05 30 16.3	+1.8
SHPR				pP	pP	05 30 45.1	+1.2
RDMU	**Red Mountain**	72.42	328	P	P	05 30 15.0	+0.3
RDMU				IAmb	IAmb	05 30 16.5	
	comp=Z,4.1nm,0.8s						
KOWA	**Kowa**	72.76	66	P	P	05 30 16.4	-0.5
KOWA				IAmb	IAmb	05 30 17.3	
	comp=Z,4.1nm,0.8s						
QSM	**Queen of Sheba**	73.01	321	P	P	05 30 19.7	+1.7
GWY	**Greenwater Val**	73.04	321	P	P	05 30 20.2	+1.9
SPR3	**Spring Creek 3**	73.70	325	P	P	05 30 24.1	+1.8
ISA	**Isabella, Lake**	73.76	320	P	P	05 30 24.0	+1.5
ISA				IAmb	IAmb	05 30 25.1	
	comp=Z,2.6nm,0.7s						
PD31	**Pinedale Array**	74.11	330	P	P	05 30 24.1	-0.4
PDAR	**Pinedale Array**	74.11	330	P	P	05 30 25.1	+0.6
	comp=Z,0.5nm,0.5s,baz=128,slow=7.2,SNR=8.7						
PDAR	**Pinedale Array**	74.11	330	P	P	05 30 24.8	+0.3
SPUT	**South Promonto**	74.41	327	P	P	05 30 26.9	+0.7
SPUT				IAmb	IAmb	05 30 28.2	
	comp=Z,3.8nm,0.8s						
AHID	**Auburn Hatcher**	74.83	329	P	P	05 30 29.7	+1.0
AHID				IAmb	IAmb	05 30 30.6	
	comp=Z,5.5nm,0.6s						
AHID				pP	pP	05 30 58.9	+0.3
REDW	**Red Top Meadow**	75.17	330	P	P	05 30 31.6	+0.9
MOOW	**Moose Ponds**	75.42	330	P	P	05 30 33.2	+1.2
ELK	**Elko**	75.44	325	P	P	05 30 33.8	+1.5
	comp=Z,1.0nm,0.9s,baz=67,slow=1.6,SNR=4.2						
ELK	**Elko**	75.44	325	P	P	05 30 32.6	+0.3
NVAR	**Mina Array Bea**	75.53	322	P	P	05 30 34.5	+1.8
	comp=Z,0.9nm,0.7s,baz=162,slow=7.2,SNR=11						
VNDA	**Vanda**	77.02	190	P	P	05 30 41.7	+1.3
	comp=Z,1.7nm,1.0s,baz=94,slow=4.3,SNR=3.5						
VNDA	**Vanda**	77.02	190	P	P	05 30 41.3	+0.8
TORD	**Torodi Ar. Bea**	77.10	70	P	P	05 30 41.3	-0.6
	comp=Z,6.5nm,0.7s,baz=255,slow=5.4,SNR=39						
TORD				pP	pP	05 31 12.9	+1.1
	comp=Z,4.5nm,0.8s,baz=256,slow=5.5,SNR=7.4						
TORD	**Torodi Ar. Bea**	77.10	70	P	P	05 30 41.1	-0.8
TORD				IAmb	IAmb	05 30 42.6	
	comp=Z,4.5nm,0.7s						
TORD				pP	pP	05 31 12.2	+0.5
PLID	**Pearl Lake**	78.94	328	P	P	05 30 52.7	+1.0
PLID				IAmb	IAmb	05 30 53.8	
	comp=Z,4.0nm,0.8s						
PLID				pP	pP	05 31 22.7	+0.9
TSUM	**Tsumeb**	79.86	107	P	P	05 30 57.9	+0.6
TSUM				IAmb	IAmb	05 30 58.9	
	comp=Z,4.1nm,0.8s						
K05A	**Summer Lake**	79.87	324	P	P	05 30 58.4	+1.6
K05A				IAmb	IAmb	05 30 59.5	
	comp=Z,5.9nm,0.8s						
YBH	**Yreka Blue Hor**	80.24	322	P	P	05 30 58.8	+0.1
	comp=Z,2.3nm,0.8s,baz=153,slow=9.0,SNR=2.3						
C09A	**Chrisman Ranch**	81.97	329	P	P	05 31 08.6	+1.0
BOSA	**Boshof**	83.31	118	P	P	05 31 14.9	-0.4
	comp=Z,3.3nm,0.8s,baz=270,slow=4.3,SNR=5.8						
BOSA	**Boshof**	83.31	118	P	P	05 31 15.2	-0.1
BOSA				IAmb	IAmb	05 31 31.9	
	comp=Z,3.4nm,1.1s						
LBTB	**Lobatse**	84.87	115	P	P	05 31 23.8	+0.6
LBTB				IAmb	IAmb	05 31 24.4	
	comp=Z,4.6nm,0.8s						
YKA	**Yellowknife Ar**	91.14	341	P	P	05 31 52.2	+0.2
	comp=Z,2.7nm,0.6s,baz=134,slow=4.5,SNR=76						
YKA	**Yellowknife Ar**	91.14	341	P	P	05 31 52.3	+0.4
YKA				pP	pP	05 32 23.7	+0.9
ASAR	**Alice Springs**	130.13	207	PKP	PKPdf	05 37 58.0	+0.1
	comp=Z,1.0nm,0.9s,baz=152,slow=2.6,SNR=6.0						
WRA	**Warramunga Arr**	133.18	210	PKP	PKPdf	05 38 03.8	+0.1
	comp=Z,0.6nm,0.6s,baz=152,slow=1.6,SNR=6.9						
ZALV	**Zalesovo Beam**	141.74	25	PKhKP	PKPpre	05 38 15.6	
	comp=Z,2.1nm,0.5s,baz=317,slow=8.1,SNR=3.9						
ZALV				PKP	PKPdf	05 38 19.5	+1.2
	comp=Z,2.1nm,0.4s,baz=302,slow=2.6,SNR=9.6						
ZALV	**Zalesovo Beam**	141.74	25		PKPdf	05 38 14.8	-3.5
ZALV				pPKPdf	pPKPdf	05 38 52.3	+2.0
KSH	**Kashi**	144.84	51	PKP	PKPbc	05 38 24.8	+1.0
KSH				sPKP		05 38 58.5	
MKAR	**Makanchi Array**	145.39	36	PKPbc	PKPbc	05 38 26.1	+0.9
	comp=Z,6.1nm,0.8s,baz=328,slow=4.3,SNR=43						
MKAR				pPKPbc	pPKPdf	05 38 58.3	+1.2
	comp=Z,6.8nm,0.8s,baz=308,slow=2.8,SNR=17						
MKAR	**Makanchi Array**	145.39	36	PKPbc	PKPdf	05 38 25.9	+0.8
SONM	**Songino Array**	153.29	7	PKP	PKPdf	05 38 38.8	+1.1
	comp=Z,0.4nm,0.6s,baz=297,slow=1.8,SNR=3.7						
SONM				PKPbc	PKPbc	05 38 46.1	+0.7
	comp=Z,0.7nm,0.5s,baz=321,slow=1.6,SNR=6.1						
SONM	**Songino Array**	153.29	7		PKPdf	05 38 38.3	+0.6
SONM				PKPbc	PKPbc	05 38 46.0	+0.7
SONM				PKPab	PKPab	05 38 56.8	-0.7

IDC 28 05:30:09.8±7.5, 10°.89S×161°.23E, h136^{km}±46^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.2/21, mbtmp3.7/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/19, Error ellipse: s-maj=89.7km s-min=42.7km az=110.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	1.92	319	P	Pn	05 30 43.3	0.0
	23nm,0.3s,baz=217,slow=5.1,SNR=1.5						
HNR				S	Sn	05 31 09.1	+0.3
	48nm,0.3s,baz=70,slow=21,SNR=9.6						
WRA	**Warramunga Arr**	27.41	248	P	P	05 35 42.9	+0.1
	2.1nm,0.8s,baz=70,slow=7.6,SNR=6.5						
ASAR	**Alice Springs**	28.95	240	P	P	05 35 56.5	-0.1
	0.4nm,0.8s,baz=72,slow=8.9,SNR=3.3						
DAV	**Davao City (W)**	39.72	295	LR	LR	05 52 45.7	
	comp=Z,32nm,19.7s,baz=346,slow=34						
MKAR	**Makanchi Array**	90.39	318	P	P	05 42 55.8	0.0
	0.2nm,0.6s,baz=90,slow=5.8,SNR=1.9						

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*IDC **28** 05:49:39.0±2.0, 1°.99N×125°.24E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.5/36, mbtmp3.8/3, MS3.1/1, Ms1 3.1/1, ms1mx2.4/35, Error ellipse: s-maj=178.3km s-min=27.4km az=64.0*

*DJA **28** 05:50:02.3±0.6, 1°N±6°×12°5E±°, h200^{km}±6^{km}, M3.7/6, MLv3.7/6*

ISC 28 05:50:00.6±1.6, 1°.6N±0°.2×125°.1E±0°.2, h200^{km}, n7, σ0^{s}.95/6, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	2.28	244	P	Pn	05 50 42.3	+0.2
MRSI	**Marisa**	3.33	250	P	Pn	05 50 53.5	-0.7
SANI	**Sanana**	3.78	166	P	Pn	05 50 58.9	-0.8
WRA	**Warramunga Arr**	23.30	157	P	P	05 54 51.6	+0.8
	3.3nm,0.6s,baz=336,slow=10,SNR=24						
ASAR	**Alice Springs**	26.58	162	P	P	05 55 21.4	+0.9
	0.4nm,0.4s,baz=346,slow=7.3,SNR=13						
KSRS	**Korea Array**	35.74	4	LR	LR	06 11 31.6	
	comp=Z,27nm,19.9s,baz=220,slow=37						
MKAR	**Makanchi Array**	58.35	327	P	P	05 59 34.6	-0.3
	0.2nm,0.3s,baz=111,slow=7.9,SNR=2.6						

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*NNC **28** 06:11:35.4±2.6, 38°.01N×72°.01E, h148^{km}±70^{km}, mb3.0, mpv4.1, Error ellipse: s-maj=30.5km s-min=15.6km az=11.0*

ISC 28 06:11:33.0±3.6, 37°.8N±0°.2×72°.0E±0°.1, h113^{km}, n16, σ0^{s}.82/19, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	4.49	16	P	Pn	06 12 39.8	+0.5
	SNR=14						
IUG	**Iuzhnay**	4.57	341	Pg	Pn	06 12 41.8	+1.7
	197nm,0.1s						
IUG				Lg	Lg	06 13 32.8	
	34nm,0.3s						
UCH	**Uchtor**	4.79	23	P	Pn	06 12 43.8	+0.2
	SNR=12						
MRKS	**Merke**	5.00	10	Pg	Pn	06 12 46.9	+1.0
	12nm,0.3s						
MRKS				Lg	Lg	06 13 41.9	
	17nm,0.2s						
EKS2	**Erkin-Say**	5.01	15	P	Pn	06 12 47.0	+0.9
	SNR=44						
AAK	**Ala-Archa**	5.17	21	P	Pn	06 12 48.7	+0.6
	SNR=16						
AAK	**Ala-Archa**	5.17	21	⇑P	Pn	06 12 48.8	+0.6
	5.8nm,0.5s						
AAK				⇓S	Sn	06 13 46.6	-0.2
	7.7nm,0.5s						
KK02	**Karatay Array**	5.39	348	⇑P	Pn	06 12 52.4	+1.4
	16nm,0.2s						
KK02				⇓S	Sn	06 13 51.1	-0.8
	11nm,0.5s						
BRLS	**Borolday**	5.45	343	Pg	Pn	06 12 50.7	-1.2
	34nm,0.1s						
BRLS				Lg	Lg	06 13 48.5	
	9.3nm,0.2s						
CHMS	**Chumysh**	5.57	21	P	Pn	06 12 54.1	+0.5
	SNR=7.4						
USP	**Ospenovka**	5.75	19	P	Pn	06 12 56.1	0.0
	SNR=7.1						
TKM2	**Tokmak 2**	5.78	27	⇑P	Pn	06 12 56.8	+0.2
	2.6nm,0.7s						
TKM2				⇑S	Sn	06 14 02.0	+0.4
	2.1nm,0.6s						
SGDS	**Sogindy**	5.96	19	P	Pn	06 12 58.7	-0.2
	4.2nm,0.3s						
DGS	**Degeres**	6.12	27	P	Pn	06 13 01.5	+0.4
	2.2nm,0.5s						
KRBS	**Karabastau**	6.49	24	P	Pn	06 13 05.5	-0.5
	2.3nm,0.8s						
AB31	**Akbulak array**	14.36	327	P	Pn	06 14 50.3	-0.5
	0.7nm,0.2s,baz=129,slow=15,SNR=27						

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*IDC **28** 06:28:59.3±2.7, 22°.17N×105°.62E, h0^{km}, mb3.5/2, mb1 3.7/3, mb1mx2.8/51, mbtmp3.6/3, ML3.9/1, Error ellipse: s-maj=64.9km s-min=33.0km az=149.0*

*PLV **28** 06:29:03.4±0.3, 21°.81N×103°.56E, h8^{km}±999^{km}, ML3.6*

ISC 28 06:29:04.8±1.3, 21°.75N±0°.05×103°.52E±0°.06, h10^{km}, n6, σ1^{s}.94/8, Vietnam

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGV	**Tuan Giao**	0.19	210	*i* Pg	Pg	06 29 08.9	+0.2
TGV				*e*Sg	Sg	06 29 12.6	+1.1
TGV				IAML		06 29 17.2	
	comp=N,8μm,1.3s						
TGV				IAML		06 29 19.2	
	comp=E,9μm,1.1s						
MLAV	**Muong La stati**	0.44	310	*e*Pg	Pg	06 29 12.3	-1.1
MLAV				*e*Sg	Sg	06 29 18.6	-0.8
MLAV				IAML		06 29 19.3	
	comp=N,6μm,0.7s						
MLAV				IAML		06 29 21.4	
	comp=E,3μm,0.7s						
HBVN	**Hoa-Binh**	1.94	118	*e*Pg	Pg	06 29 40.2	-1.8
HBVN				IAML		06 30 08.5	
	comp=N,992nm,0.4s						
HBVN				IAML		06 30 10.2	
	comp=E,511nm,0.3s						
CMAR	**Chiang Mai Arr**	5.41	233	Pn	Pg	06 30 46.1	-2.3
	comp=E,0.6nm,0.3s,baz=49,slow=16,SNR=19						
CMAR				Sn	Sg	06 31 57.3	-1.2
	comp=E,0.1nm,0.3s,baz=58,slow=31,SNR=7.8						
KSRS	**Korea Array**	26.25	48	P	P	06 34 19.9	-20
	comp=E,1.1nm,0.4s,baz=235,slow=7.9,SNR=4.6						
MKAR	**Makanchi Array**	30.33	330	P	P	06 35 19.0	+2.5
	comp=E,0.3nm,0.8s,baz=116,slow=8.2,SNR=2.6						

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*IDC **28** 06:28:50.8±2.1, 6°.42S×129°.51E, h0^{km}, mb3.7/1, mb1 3.9/4, mb1mx3.2/47, mbtmp3.7/4, ML3.4/3, Error ellipse: s-maj=91.8km s-min=27.2km az=76.0*

ISC 28 06:29:07.1±1.4, 7°.1S±0°.1×129°.5E±0°.1, h139^{km}, n13, σ2^{s}.69/16, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRS	**Darwin Rock St**	5.44	166	P	Pn	06 30 29.1	+2.8
MTN	**Manton Dam**	5.90	164	P	Pn	06 30 34.7	+2.3
KDU	**Kakadu**	6.25	152	P	Pn	06 30 38.6	+1.6
KNRA	**Kununurra**	8.53	185	P	Pn	06 31 09.0	+1.4
	14nm,1.7s						
FITZ	**Fitzroy Crossi**	11.54	199	Pn	Pn	06 31 48.2	+0.5
	0.2nm,0.3s,baz=26,slow=9.7,SNR=12						
FITZ				Sn	Sn	06 33 51.9	-3.1
	baz=78,slow=20,SNR=0.6						
WRAB	**Tennant Creek**	13.57	160	P	Pn	06 32 14.0	0.0
WRA	**Warramunga Arr**	13.57	160	Pn	Pn	06 32 12.1	-2.0
	0.1nm,0.3s,baz=340,slow=13,SNR=2.3						
WRA				Sn	Sn	06 34 39.6	-4.7
	0.7nm,0.3s,baz=334,slow=19,SNR=8.0						
QIS	**Mount Isa**	16.55	145	P	P	06 32 51.7	+0.4
	8.6nm,2.1s						
ASAR	**Alice Springs**	16.98	166	P	Pn	06 32 57.8	+1.4
	0.3nm,0.3s,baz=343,slow=10,SNR=29						
ASAR				S	S	06 36 01.9	-4.0
	0.1nm,0.3s,baz=352,slow=27,SNR=2.3						
WRKA	**Warakurna**	17.85	184	P	P	06 33 07.2	+1.7
	6.0nm,2.4s						
MULG	**Mulgathing**	23.43	170	P	P	06 34 05.0	+1.2
	11nm,2.3s						
LCRK	**Leigh Creek**	24.59	162	P	P	06 34 17.3	+2.9
MKAR	**Makanchi Array**	68.07	327	P	P	06 39 48.6	-3.1
	0.3nm,0.3s,baz=116,slow=8.2,SNR=10						

IDC 28 06:29:52.0±11.0, 0°.86S×135°.72E, h0^{km}, mb3.9/2, mb1 4.0/3, mb1mx3.1/46, mbtmp3.8/3, ML3.5/1, Error ellipse: s-maj=190.6km s-min=126.2km az=140.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	19.02	184	P	P	06 34 14.1	-1.5
	0.2nm,0.3s,baz=3.7,slow=11,SNR=4.4						
ASAR	**Alice Springs**	22.74	184	P	P	06 34 56.2	+0.3
	1.8nm,0.4s,baz=10,slow=12,SNR=24						
STKA	**Stephens Creek**	31.35	170	P	P	06 36 14.9	+0.6
	1.5nm,0.7s,baz=352,slow=7.1,SNR=3.5						

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*UPA **28** 06:55:17.5±2.9, 15°.08N×61°.46W, h10^{km}±157^{km}, MW5.1, Hypocentre not reviewed by the ISC*

*IDC **28** 06:55:28.7±0.6, 14°.60N×61°.40W, h151^{km}±5^{km}, mb5.1/33, mb1 5.2/36, mb1mx5.2/39, mbtmp5.5/36, MS4.5/17, Ms1 4.5/17, ms1mx4.3/38, Error ellipse: s-maj=8.5km s-min=6.2km az=105.0*

*TRN **28** 06:55:28.2, 14°.63N×61°.24W, h158^{km}, MD5.5*

TRN Felt in Martinique MMI IV, II; Saint Lucia MMI IV; St. Vincent MMI IV, III.

*MOS **28** 06:55:28.3±0.9, 14°.61N×61°.42W, h161^{km}, mb5.7/86, Error ellipse: s-maj=5.4km s-min=4.5km az=74.4*

*BGR **28** 06:55:29.5±0.0, 14°.57N×61°.31W, h173^{km}±3^{km}, mb5.6*

*NEIC **28** 06:55:29.7, 14°.60N×61°.38W, h145^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.84; M$_{\theta\theta}$2.10; M$_{\phi\phi}$-0.26; M$_{r\theta}$-2.73; M$_{\theta\phi}$-0.42; M$_{\phi r}$-0.42; Fault plane solution: M$_{0}$3.43000×10^{17} NP1:φ$_{s}$84.36000°, δ72.63000°, λ-101.17000°. NP2:φ$_{s}$297.85000°, δ20.56000°, λ-58.22000°. Principal axes: T 3.5059, Plg27.0000°, Azm183.0000°; N -0.1678, Plg11.0000°, Azm88.0000°; P -3.3380, Plg61.0000°, Azm338.0000°;*

*BJI **28** 06:55:29.4±0.0, 14°.55N×61°.45W, h150^{km}, mB5.4/24*

*NEIC **28** 06:55:29.9±1.6, 14°.66N±0°.05×61°.35W±0°.07, h150^{km}±1^{km}, mb5.8/778, Mwb5.6/44, Mww5.6, Error ellipse: s-maj=10.8km s-min=8.8km az=74.0*

*GCMT **28** 06:55:29.9±0.1, 14°.66N±0°.01×61°.30W±0°.01, h151^{km}, MW5.7/145, Moment Tensor Solution. s136,c235; s145,c298; Duration: 1^{s}.7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-2.12±.03; M$_{\theta\theta}$3.21±.04; M$_{\phi\phi}$-1.09±.04; M$_{r\theta}$-2.17±.03; M$_{\theta\phi}$-1.47±.04; M$_{\phi r}$-0.88±.03; Best double couple: M$_{0}$3.92200×10^{17} NP1:φ$_{s}$320.00000°, δ40.00000°, λ-34.00000°. NP2:φ$_{s}$78.00000°, δ69.00000°, λ-124.00000°. Principal axes: T 4.2160, Plg17.0000°, Azm193.0000°; N -0.5870, Plg32.0000°, Azm92.0000°; P -3.6290, Plg53.0000°, Azm306.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **28** 06:55:31, 14°.59N×61°.37W, h160^{km}, Moment Tensor Solution. Duration: 2^{s}.0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.97; M$_{\theta\theta}$2.64; M$_{\phi\phi}$-0.67; M$_{r\theta}$-2.37; M$_{\theta\phi}$-1.24; M$_{\phi r}$-0.93; Fault plane solution: M$_{0}$3.69000×10^{17} NP1: φ$_{s}$319.00000°, δ35.00000°, λ-35.00000°. NP2:φ$_{s}$80.00000°, δ71.00000°, λ-119.00000°. Principal axes: T 3.7828, Plg20.0000°, Azm191.0000°; N -0.1850, Plg27.0000°, Azm90.0000°; P -3.5978, Plg55.0000°, Azm313.0000°;*

ISC 28 06:55:29.2±0.3, 14°.59N±0°.02×61°.39W±0°.03, h157^{km}±2^{km}, h157^{km}:pP-P, n1883, σ1^{s}.05/1973, mb5.8/547, 181C-674D, Fault plane solution: NP1:φ$_{s}$306.16879°**,**δ23.37944°**,** λ-49.96459°. **NP2:**φ$_{s}$83.70086°**,**δ72.31264°**,** λ-105.54071°. **Principal axes:** T Plg25.7354°**,** Azm185.8414°**;** N Plg14.7889°**,** Azm88.5303°**;** P Plg59.7558°**,** Azm331.6069°**; Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDF	**Fort de France**	0.27	58	P	Pn	06 55 50.0	-0.5
FDF	**Fort de France**	0.27	58	*e*P	Pn	06 55 50.2	-0.3
FDF				*e*S	Sn	06 56 06.8	0.0
FDF	**Fort de France**	0.27	58		Pn	06 55 50.0	-0.5
PML	**Morne Lenard**	0.27	46	*e*P	Pn	06 55 50.1	-0.5
PCM	**Pelee Case Pet**	0.28	37	*e*P	Pn	06 55 50.0	-0.6
PCM	**Pelee Case Pet**	0.28	37	*e*P	Pn	06 55 50.2	-0.4
GBMF	**Grand Be**	0.29	46	*e*P	Pn	06 55 50.2	-0.4
BIM	**Bigot**	0.31	104	*e*P	Pn	06 55 50.2	-0.5
BIM				*e*S	Sn	06 56 07.0	+0.1
BIM	**Bigot**	0.31	104		Pn	06 55 50.2	-0.5
BAMF	**Morne Balai**	0.32	46	*e*P	Pn	06 55 50.5	-0.2
SVN	**Savane Anatole**	0.33	40	*e*P	Pn	06 55 50.5	-0.2
SVN	**Savane Anatole**	0.33	40		Pn	06 55 50.5	-0.2
TRMF	**Trois Ilets**	0.33	100	*e*P	Pn	06 55 50.1	-0.6
ZAM	**Aeronautique**	0.34	93	*e*P	Pn	06 55 50.4	-0.3
LPMF	**Morne Lapointe**	0.41	92	*e*P	Pn	06 55 50.4	-0.6
MVM	**Montagne Vaucl**	0.47	94	*e*P	Pn	06 55 50.5	-0.8
ILAM	**Ilet Lapin Mar**	0.53	70	*e*P	Pn	06 55 50.8	-0.7
ILAM				*e*S	Sn	06 56 07.4	-1.0
ILAM	**Ilet Lapin Mar**	0.53	70		Pn	06 55 50.5	-1.0
MPOM	**Morne Pois Mar**	0.53	106	*e*P	Pn	06 55 50.5	-0.9
MPOM				*e*S	Sn	06 56 07.5	-0.9
MPOM	**Morne Pois Mar**	0.53	106	Pn	Pn	06 55 50.4	-1.0
SLBI	**Saint Lucia, B**	0.69	145	*e*P	Pn	06 55 51.8	-0.7
SLBI				*e*S	Sn	06 56 09.2	-0.9
SLCP	**Castries, St.**	0.69	146	*e*P	Pn	06 55 51.9	-0.6
SLCP				*e*S	Sn	06 56 10.2	0.0
MDN	**Morne-Daniel**	0.72	359	*e*P	Pn	06 55 52.6	0.0
MDN				*e*S	Sn	06 56 11.0	+0.4
DLPL	**La Plaine**	0.75	10	*e*P	Pn	06 55 52.4	-0.4
DSLB	**Salisbury**	0.84	358	*e*P	Pn	06 55 53.4	0.0
MCLT	**Moule a Chique**	0.98	154	*e*P	Pn	06 55 52.9	-1.6
MDVC	**Dominica, Viel**	1.02	359	*e*P	Pn	06 55 55.0	+0.2
MDVC				*e*S	Sn	06 56 14.3	-0.1
MDCT	**Cottage Hill,**	1.02	356	*e*P	Pn	06 55 55.8	+1.0
TDBA	**Terre de Bas,**	1.27	349	*e*P	Pn	06 55 57.2	+0.2
TDBA				*e*S	Sn	06 56 18.4	-0.1
SVV	**Soufriere Volc**	1.28	173	*e*P	Pn	06 55 58.3	+1.1
TBG	**Guadaloupe-3**	1.28	349	*e*P	Pn	06 55 57.1	0.0
SVB	**Belmont**	1.32	174	*e*P	Pn	06 55 57.7	+0.1
MAGL	**Barre de l’ile**	1.35	4	*e*P	Pn	06 55 57.2	-0.7
MAGL				*e*S	Sn	06 56 18.9	-1.1
SVOC	**Richmond Hill,**	1.44	174	*e*P	Pn	06 55 58.5	-0.2
SVOC				*e*S	Sn	06 56 21.2	-0.2
CBE	**Ff, Capester**	1.48	352	*e*P	Pn	06 55 59.3	+0.1
CBE				*e*S	Sn	06 56 22.8	+0.5
H05N1	**Guadeloupe/Mar**	1.74	10	P	Pn	06 56 01.3	-0.6
H05N1				S	Sn	06 56 24.9	-2.3
GCMP	**Grenada, Carri**	2.09	181	*e*P	Pn	06 56 06.1	+0.2
GCMP				*e*S	Sn	06 56 33.5	-0.6
BCHC	**Barbados, Cave**	2.24	130	*e*P	Pn	06 56 08.2	+0.6
BCHC				*e*S	Sn	06 56 35.2	-1.9
BBGH	**Gun Hill**	2.29	129	*e*P	Pn	06 56 08.1	0.0
BBGH				*e*S	Sn	06 56 36.4	-1.7
BBGH	**Gun Hill**	2.29	129		Pn	06 56 08.0	-0.2
GRGR	**Grenville**	2.46	186	*e*P	Pn	06 56 10.9	+0.6
GRGR				*e*S	Sn	06 56 42.3	+0.3
GRGR	**Grenville**	2.46	186	Pn	Pn	06 56 10.8	+0.6
ANBD	**Bethesda, Anti**	2.47	352	*e*P	Pn	06 56 09.6	-0.7
ANBD				*e*S	Sn	06 56 40.3	-1.8
ANDO	**Antigua, Disas**	2.54	350	*e*P	Pn	06 56 10.6	-0.6
ANDO				*e*S	Sn	06 56 41.9	-1.8
GRFF	**Grenada Fort F**	2.55	188	*e*P	Pn	06 56 11.7	+0.3
GRFF				*e*S	Sn	06 56 44.1	+0.1
NVBH	**Bath Hotel, Ne**	2.78	335	*e*P	Pn	06 56 14.0	-0.1
NVDO	**Nevis, Disaste**	2.78	335	*e*P	Pn	06 56 15.5	+1.4
NVDO				*e*S	Sn	06 56 48.3	-0.6
SKOC	**St. Kitts, UWI**	2.98	334	*e*P	Pn	06 56 17.1	+0.5
SKOC				*e*S	Sn	06 56 52.3	-1.1
ANWB	**Willy Bob**	3.08	353	*e*P	Pn	06 56 16.7	-1.2
ANWB				*e*S	Sn	06 56 53.4	-2.4
ANWB	**Willy Bob**	3.08	353	Pn	Pn	06 56 16.3	-1.6
SEUS	**St. Eustatius**	3.27	332	*e*P	Pn	06 56 20.8	+0.5
SEUS				*e*S	Sn	06 57 00.0	+0.2
SEUS	**St. Eustatius**	3.27	332		Pn	06 56 20.6	+0.4
TOSP	**Speyside**	3.38	166	*e*P	Pn	06 56 21.4	-0.2
TPR	**Prospect**	3.44	170	*e*P	Pn	06 56 21.4	-1.1
BOT	**Bacolet**	3.47	169	*e*P	Pn	06 56 22.9	+0.1
SABA	**Saba**	3.50	330	*e*P	Pn	06 56 23.8	+0.6
SABA				*e*S	Sn	06 57 03.7	-1.6
SABA	**Saba**	3.50	330		Pn	06 56 23.8	+0.6
SMRT	**St. Maarten**	3.80	335	*e*P	Pn	06 56 26.4	-0.7
SMRT				*e*S	Sn	06 57 10.8	-1.4
SMRT	**St. Maarten**	3.80	335		Pn	06 56 26.3	-0.8
TRN	**Trinidad (W)**	3.92	180	*e*P	Pn	06 56 29.2	+0.5
TRN				*e*S	Sn	06 57 13.5	-1.5
TBH	**Brigand Hill**	4.09	176	*e*P	Pn	06 56 31.4	+0.5
TPP	**Pointe-a-Pierr**	4.25	181	*e*P	Pn	06 56 33.5	+0.5
CDVI	**St. Croix**	4.52	314	*e*P	Pn	06 56 37.3	+0.8
CDVI	**St. Croix**	4.52	314	*e*S	Sn	06 57 28.1	-0.7
CDVI	**St. Croix**	4.52	314	Pn	Pn	06 56 37.2	+0.8
STVI	**Saint Thomas**	5.07	318	Pn	Pn	06 56 44.2	+0.6
CUPR	**Culebra, Puert**	5.26	315	Pn	Pn	06 56 47.2	+1.1
MTP	**Monte Pirata**	5.31	312	Pn	Pn	06 56 47.9	+1.0
PCRV	**Puerto La Cruz**	5.42	216	P	Pn	06 56 48.8	+0.4
	53nm,0.3s,baz=2.6,slow=5.1,SNR=180						
HUMP	**Col San Antoni**	5.55	310		Pn	06 56 50.4	+0.4
PDPR	**Patillas Dam,**	5.61	308	Pn	Pn	06 56 51.3	+0.5
CBYP	**Canovanas**	5.64	311		Pn	06 56 51.9	+0.7
SJG	**San Juan**	5.76	308	P	Pn	06 56 53.3	+0.5
SJG	**San Juan**	5.76	308	*e*P	Pn	06 56 53.5	+0.7
SJG	**San Juan**	5.76	308	*e*S	Sn	06 57 56.4	-1.8
SJG	**San Juan**	5.76	308		Pn	06 56 53.3	+0.5
GCPR	**Guaynabo City**	5.83	310		Pn	06 56 54.7	+0.9
CELP	**Cerrillos**	6.07	305		Pn	06 56 57.7	+0.7
OBIP	**Obispado Ponce**	6.07	305		Pn	06 56 56.9	-0.1
EMPR	**Esperanza - Ma**	6.27	309		Pn	06 57 01.3	+1.8
AOPR	**Arecibo Observ**	6.36	307	*e*P	Pn	06 57 02.1	+1.3
AOPR	**Arecibo Observ**	6.36	307	*e*S	Sn	06 58 10.2	-2.5
AOPR	**Arecibo Observ**	6.36	307		Pn	06 57 01.9	+1.1

MLPR	**Magueyes Islan**	**6.39**	**302**	Pn	**Pn**	**06 57 01.8**	**+0.6**
CRPR	**Cabo Rojo, PR**	**6.46**	**302**		**Pn**	**06 57 02.7**	**+0.6**
PRSN	**Puerto Rico Se**	**6.60**	**304**		**Pn**	**06 57 04.8**	**+0.9**
AGPR	**Aguadilla, PR**	**6.71**	**306**		**Pn**	**06 57 06.8**	**+1.4**
PCDR	**Punta Cana, DR**	**7.76**	**301**		**Pn**	**06 57 20.5**	**+1.1**
BAUV	**El Baul**	**8.60**	**230**	*e*P	**Pn**	**06 57 30.6**	**0.0**
BAUV	**El Baul**	**8.60**	**230**	Pn	**Pn**	**06 57 30.7**	**0.0**
SDD	**Santo Domingo**	**9.04**	**296**		**Pn**	**06 57 38.9**	**+2.5**
SC01	**Santiago de lo**	**10.15**	**300**		**Pn**	**06 57 51.2**	**+0.1**
SDDR	**Presa de Saban**	**10.44**	**296**	*i* P	**Pn**	**06 57 55.6**	**+0.6**
SDDR	**Presa de Saban**	**10.44**	**296**	*e*S	**Sn**	**06 59 42.4**	**-8.4**
SDDR	**Presa de Saban**	**10.44**	**296**		**Pn**	**06 57 55.7**	**+0.6**
SDV	**Santo Domingo**	**10.68**	**239**	*e*P	**P**	**06 58 09.3**	**+2.2**
SDV	**Santo Domingo**	**10.68**	**239**	*e*P	Pn	06 57 50.0	-8.5
SDV	**Santo Domingo**	**10.68**	**239**		**Pn**	**06 57 58.3**	**-0.1**
URIC	**Uribia, Colomb**	**10.72**	**256**	*e*P	**P**	**06 58 08.7**	**+1.4**
URIC	**Uribia, Colomb**	**10.72**	**256**		**Pn**	**06 57 57.7**	**-1.0**
JAKH	**Jacmel**	**11.28**	**290**		**Pn**	**06 58 06.1**	**+0.1**
LGNH	**Logne**	**11.44**	**291**		**Pn**	**06 58 08.9**	**+0.8**
GRTK	**Grand Turk**	**11.54**	**308**	Pn	**Pn**	**06 58 07.0**	**-2.3**
BOAV	**Boa Vista**	**12.15**	**176**	Pn	**Pn**	**06 58 13.5**	**-3.9**
LL6C	**La Loma 6 Bece**	**12.58**	**249**	*e*P	**P**	**06 58 28.8**	**+0.6**
MDP	**Montagnes des**	**12.77**	**137**	P	**Pn**	**06 58 22.1**	**-3.2**
	38nm,0.3s,baz=329,slow=15,SNR=236						
MDP				S	Sn	07 00 34.9	-12
	291nm,0.3s,baz=67,slow=12,SNR=30						
LL1C	**La Loma 1 Cana**	**12.91**	**248**	*e*P	**P**	**06 58 32.8**	**+0.8**
SMRC	**Santa Marta, M**	**12.97**	**256**	*e*P	**P**	**06 58 32.2**	**-0.4**
LL5C	**La Loma 5 El P**	**12.98**	**250**	*e*P	**P**	**06 58 32.8**	**+0.1**
TAMC	**Tame, Arauca**	**13.05**	**233**	*e*P	**P**	**06 58 35.5**	**+2.1**
TAMC	**Tame, Arauca**	**13.05**	**233**	*e*P	**P**	**06 58 35.9**	**+2.4**
PAMC	**Pamplona, Colo**	**13.24**	**238**	*e*P	**Pn**	**06 58 33.7**	**+2.0**
OCAC	**Ocana**	**13.29**	**243**	*e*P	**P**	**06 58 34.9**	**-1.3**
OCAC	**Ocana**	**13.29**	**243**		**Pn**	**06 58 31.8**	**-0.4**
ARGC	**Ariguani, Magd**	**13.42**	**251**	*e*P	**P**	**06 58 36.7**	**-0.9**
SMLC	**San Martn de**	**13.69**	**247**	*e*P	**Pn**	**06 58 37.1**	**0.0**
BARC	**Barichara**	**14.05**	**237**	*e*P	**P**	**06 58 43.5**	**-1.3**
GTBY	**Guantanamo Bay**	**14.14**	**294**	*e*P	**Pn**	**06 58 42.6**	**0.0**
GTBY	**Guantanamo Bay**	**14.14**	**294**	Pn	**Pn**	**06 58 42.0**	**-0.7**
BRRC	**Barranca, Sant**	**14.20**	**240**	*e*P	**P**	**06 58 46.0**	**-0.2**
SJCC	**San Jacinto, C**	**14.26**	**252**	*e*P	**Pn**	**06 58 45.6**	**+1.3**
SJCC	**San Jacinto, C**	**14.26**	**252**		**Pn**	**06 58 44.0**	**-0.3**
SJCC	**San Jacinto, C**	**14.26**	**252**	*e*P		06 58 44.7	
SJCC				*e*S		07 01 21.1	
RUSC	**La Rusia**	**14.39**	**234**	*e*P	**P**	**06 58 49.0**	**+0.2**
PTGC	**Puerto Gaitan,**	**14.79**	**227**	*e*P	**Pn**	**06 58 50.8**	**-0.1**
CMJ	**Castle Mountai**	**14.81**	**286**	*i* P	**P**	**06 58 52.8**	**-0.1**
ZARC	**Zaragoza, Cauc**	**14.98**	**243**	*e*P	**Pn**	**06 58 53.0**	**-0.3**
ZARC	**Zaragoza, Cauc**	**14.98**	**243**	Pn	**Pn**	**06 58 52.6**	**-0.7**
MOTC	**Monteria, Cord**	**15.13**	**249**	*e*P	**P**	**06 58 57.9**	**+1.4**
MOTC	**Monteria, Cord**	**15.13**	**249**		**Pn**	**06 58 54.7**	**-0.3**
PTBC	**PUERTO BERRIO,**	**15.13**	**239**	*e*P	**Pn**	**06 58 53.9**	**-1.3**
HOJ	**Hope**	**15.13**	**285**	*i* P	**P**	**06 58 55.9**	**-0.6**
STH	**Stony Hill**	**15.20**	**285**	*i* P	**P**	**06 58 58.0**	**+0.7**
PTGA	**Pitinga**	**15.29**	**175**	P	**Pn**	**06 58 55.8**	**-1.3**
	34nm,0.3s,baz=333,slow=22,SNR=262						
PTGA				S	Sn	07 01 34.7	-13
	40nm,0.3s,baz=105,slow=23,SNR=6.8						
PTGA				LR	LR	07 06 24.0	
	comp=Z,1µm,18.5s,baz=330,slow=43						
SPBC	**San Pablo de B**	**15.32**	**236**	*e*P	**P**	**06 58 58.1**	**-0.6**
UREC	**San Jos de Ur**	**15.45**	**245**	*e*P	**Pn**	**06 58 56.9**	**-2.1**
CHIC	**Chingaza**	**15.68**	**232**	*e*P	**P**	**06 59 03.8**	**+0.7**
LCBC	**Los crdobas,**	**15.73**	**250**	*e*P	**P**	**06 59 06.0**	**+2.8**
CVJ	**Coleyville**	**15.91**	**285**	*i* P	**Pn**	**06 59 04.7**	**-0.1**
MTDJ	**Mount Denham**	**15.91**	**285**	*e*P	**Pn**	**06 59 04.8**	**+0.1**
MTDJ	**Mount Denham**	**15.91**	**285**	Pn	**Pn**	**06 59 02.9**	**-1.8**
VILC	**Villavicencio,**	**15.99**	**231**	*e*P	**P**	**06 59 07.9**	**+1.8**
CROSA	**EL ROSAL, CUND**	**16.00**	**234**	*e*P	**P**	**06 59 09.1**	**+2.5**
MCJ	**Malvern**	**16.00**	**284**	*i* P	**P**	**06 59 06.7**	**+0.5**
ROSC	**El Rosal**	**16.00**	**234**	P	**P**	**06 59 07.7**	**+1.1**
	72nm,0.3s,baz=60,slow=7.6,SNR=193						
ROSC	**El Rosal**	**16.00**	**234**		**P**	**06 59 08.7**	**+2.1**
NORC	**Norcasia**	**16.01**	**237**	*e*P	**Pn**	**06 59 05.8**	**-0.2**
CNOCA	**NORCASIA, CALD**	**16.01**	**237**	*e*P	**Pn**	**06 59 05.7**	**-0.3**
HELC	**Santa Helena**	**16.21**	**240**	*e*P	**Pn**	**06 59 08.4**	**-0.4**
HELC	**Santa Helena**	**16.21**	**240**	*e*P		06 59 08.0	
HELC				*e*S		07 02 02.8	
GUVC	**San Jose del G**	**16.32**	**224**	*e*P	**P**	**06 59 09.7**	**0.0**
GUY2C	**Guyana, Caldas**	**16.61**	**237**	*e*P	**P**	**06 59 12.9**	**-0.5**
CAPC	**Capurgana**	**16.72**	**251**	*e*P	**Pn**	**06 59 15.3**	**+0.9**
CBOC	**Ciudad Bolivar**	**16.80**	**240**	*e*P	**Pn**	**06 59 15.7**	**+0.1**
CMAN1	**Manizales, Cal**	**16.83**	**237**	*e*P	**Pn**	**06 59 22.2**	**+6.1**
CIBA1	**Ibague, SGC**	**16.96**	**235**	*e*P	**Pn**	**06 59 18.1**	**+0.5**
ANIL	**Santa Ana**	**17.07**	**235**	*e*P	**Pn**	**06 59 18.8**	**-0.3**
PRAC	**Prado**	**17.15**	**232**	*e*P	**P**	**06 59 19.0**	**+0.2**
ORTC	**Ortega, Tolima**	**17.30**	**233**	*e*P	**Pn**	**06 59 21.4**	**-0.1**
MACC	**Macarena, Meta**	**17.45**	**226**	*e*P	**P**	**06 59 22.5**	**+0.3**
MACC	**Macarena, Meta**	**17.45**	**226**	*e*P	**P**	**06 59 22.4**	**+0.3**
MCPB	**Macapa, AP**	**17.49**	**147**	*e*P	**P**	**06 59 20.1**	**-2.5**
PLMC	**San Jos del P**	**17.54**	**238**	*e*P	**P**	**06 59 22.6**	**-0.6**
MACA	**Manacapuru-AM**	**17.65**	**178**		**Pn**	**06 59 25.4**	**-0.3**
PTAC	**Punta Ardita,**	**17.73**	**247**	*e*P	**Pn**	**06 59 27.0**	**+0.4**
BBSR	**BB Station**	**17.95**	**351**	P	**P**	**06 59 28.2**	**+0.8**
BBSR				IAmb	IAmb	06 59 34.2	
	comp=Z,518nm,1.3s						
YOTC	**Yotoco, Valle**	**18.12**	**236**	*e*P	**P**	**06 59 28.7**	**-1.0**
CHPO	**Chepo, Panama**	**18.16**	**255**	*e*P		06 59 30.6	
LCCY	**Blossom Villag**	**18.56**	**288**	P	**P**	**06 59 34.6**	**+0.4**
GARC	**Garzon, Huila**	**18.60**	**230**	*e*P	**Pn**	**06 59 36.4**	**-0.7**
BCIP	**Isla Barro Col**	**18.84**	**255**	P	**P**	**06 59 37.4**	**+0.1**
BCIP				pmax	pmax		
	comp=Z,514nm,1.1s						
BCIP	**Isla Barro Col**	**18.84**	**255**	*e*P	**Pn**	**06 59 38.7**	**-0.9**
BCIP	**Isla Barro Col**	**18.84**	**255**		**P**	**06 59 37.4**	**+0.1**
BCIP				IAmb	IAmb	06 59 40.3	
	comp=Z,514nm,1.1s						
BCIP	**Isla Barro Col**	**18.84**	**255**	*e*P		06 59 37.8	
CHOR3	**La Chorrera**	**18.86**	**255**	*e*P		06 59 40.4	
FLOC	**Florencia**	**19.12**	**229**	*e*P	**P**	**06 59 41.0**	**+0.5**
CFLOR	**Florencia**	**19.13**	**229**	*e*P	**P**	**06 59 41.2**	**+0.7**
PCON	**Cinco Dias**	**19.19**	**232**	*e*P	**P**	**06 59 43.0**	**+1.3**
POPC	**Popayan, Colom**	**19.27**	**233**	*e*P	**P**	**06 59 41.5**	**-0.7**
VTON	**El Valle, Cocl**	**19.28**	**254**	*e*P		06 59 43.5	
PRVC	**Isla de Provid**	**19.43**	**269**	*e*P	**Pn**	**06 59 45.9**	**-0.6**
SOTA	**Rioblanco**	**19.47**	**232**	*e*P	**P**	**06 59 45.8**	**+1.1**
ITTB	**Itaituba**	**19.65**	**163**	*e*P	**P**	**06 59 46.7**	**+0.6**
AZU	**Azuero**	**19.71**	**252**	*e*P		06 59 49.0	
TOSI3	**Tonosi**	**20.01**	**251**	*e*P		06 59 56.2	
CACAO	**El Cacao, Vera**	**20.42**	**251**	*e*P		06 59 54.7	
TBTG	**Tabatinga, AM**	**20.48**	**205**	*e*P	**P**	**06 59 54.0**	**-0.9**
TBTG	**Tabatinga, AM**	**20.48**	**205**	*e*P	**P**	**06 59 54.1**	**-0.9**
TBTG	**Tabatinga, AM**	**20.48**	**205**	P	**P**	**06 59 54.2**	**-0.8**
GMAL	**Guarumal, Vera**	**20.61**	**253**	*e*P		06 59 56.7	
GCUF	**Volcan Galeras**	**20.62**	**231⇑**	*e*P	**P**	**06 59 57.0**	**0.0**
CMBC	**Cumbal**	**21.17**	**232**	*e*P	**P**	**07 00 03.5**	**+0.7**
TULM	**Tulcn-Chalpat**	**21.29**	**231**	*e*P	**P**	**07 00 03.5**	**-0.6**
CTUM2	**Tumaco**	**21.32**	**235**	*e*P	**P**	**07 00 04.5**	**+0.6**
TUMC	**Tumaco**	**21.32**	**235**	*e*P	**P**	**07 00 04.4**	**+0.4**
TUMC	**Tumaco**	**21.32**	**235**	P	**P**	**07 00 04.4**	**+0.4**
061Z	**Ochoppi**	**21.45**	**305**	P	**P**	**07 00 05.5**	**+0.2**
BCO2	**Palmira**	**21.51**	**257**	*e*P		07 00 07.4	
060A	**Indiantown**	**21.59**	**308**	P	**P**	**07 00 07.3**	**+0.5**
BRU2	**Volcan**	**21.64**	**257**	*e*P	**P**	**07 00 08.3**	**+0.8**
BRU2	**Volcan**	**21.64**	**257**	P	**P**	**07 00 08.0**	**+0.5**
BRU2	**Volcan**	**21.64**	**257**	*e*P		07 00 09.7	
CDITO	**Canoas**	**21.87**	**256**	P	**P**	**07 00 11.4**	**+1.6**
CDITO				IAmb	IAmb	07 00 45.3	
	comp=Z,299nm,1.1s						
CUSE	**Cuicocha Este**	**22.01**	**231**	*e*P	**P**	**07 00 10.9**	**-0.9**
SOR	**Soroa**	**22.03**	**295**	P	**P**	**07 00 09.8**	**-1.5**
SOR				pmax	pmax		
	comp=Z,920nm,1.2s						
SOR	**Soroa**	**22.03**	**295**	P	**P**	**07 00 09.8**	**-1.5**
OTAV	**Otavalo**	**22.10**	**231**	P	**P**	**07 00 12.1**	**-0.5**
OTAV				pmax	pmax		
	comp=Z,684nm,1.4s						
OTAV	**Otavalo**	**22.10**	**231**	*e*P	**P**	**07 00 10.5**	**-2.1**
OTAV	**Otavalo**	**22.10**	**231**	*e*P	**P**	**07 00 11.8**	**-0.8**
OTAV	**Otavalo**	**22.10**	**231**	P	**P**	**07 00 12.1**	**-0.5**
OTAV				IAmb	IAmb	07 00 14.9	
	comp=Z,684nm,1.4s						
SRBA	**San Rafael, Bu**	**22.14**	**259**	P	**P**	**07 00 13.4**	**+0.7**
NPGB	**Novo Progresso**	**22.31**	**164**	*e*P	**P**	**07 00 14.1**	**0.0**
CVTR	**Volcan Turrial**	**22.32**	**261**	P	**P**	**07 00 15.2**	**+0.5**
PAC1	**Pacto, Paraso**	**22.34**	**232**	*e*P	**P**	**07 00 14.0**	**-0.5**
PIRO	**Carate, Puerto**	**22.36**	**256**	*e*P	**P**	**07 00 15.8**	**+1.2**
PEZE	**Perez Zeledon,**	**22.41**	**259**	*e*P	**P**	**07 00 14.2**	**-1.0**
PEZE	**Perez Zeledon,**	**22.41**	**259**	P	**P**	**07 00 15.6**	**+0.4**
ESPN	**Las Esperanzas**	**22.42**	**267**	P	**P**	**07 00 16.3**	**+1.1**
RIOS	**Rincon, Osa**	**22.44**	**257**	P	**P**	**07 00 17.4**	**+2.0**
RIOS				IAmb	IAmb	07 01 01.0	
	comp=Z,479nm,1.3s						
RIMA	**Rio Macho**	**22.48**	**260⇓**	*e*P	**P**	**07 00 17.5**	**+1.5**
RIMA	**Rio Macho**	**22.48**	**260**	P	**P**	**07 00 17.5**	**+1.5**
RIMA				IAmb	IAmb	07 01 02.7	
	comp=Z,860nm,1.8s						
LCR2	**La Lucha 2**	**22.62**	**260**	*e*P	**P**	**07 00 17.6**	**+0.2**
HDC	**Heredia**	**22.66**	**261**	P	**P**	**07 00 19.0**	**+1.4**
HDC				IAmb	IAmb	07 00 22.4	
	comp=Z,485nm,1.3s						
COVE	**Coope Vega, Sa**	**22.78**	**263**	P	**P**	**07 00 20.1**	**+1.5**
COVE				IAmb	IAmb	07 00 21.3	
	comp=Z,350nm,1.0s						
DWPF	**Disney Wildern**	**22.96**	**309**	P	**P**	**07 00 20.4**	**+0.3**
DWPF				IAmb	IAmb	07 00 22.9	
	comp=Z,202nm,0.7s						
DWPF	**Disney Wildern**	**22.96**	**309**	P	**P**	**07 00 20.2**	**+0.2**
	baz=122						
ARE1	**Arenal 1**	**23.14**	**262**	*e*P	**P**	**07 00 22.8**	**+0.9**
ACON	**Acoyapa**	**23.30**	**266**	P	**P**	**07 00 23.3**	**0.0**
JTS	**Las Juntas de**	**23.40**	**262**	P	**P**	**07 00 23.6**	**-0.7**
	comp=Z,18nm,0.5s						
JTS	**Las Juntas de**	**23.40**	**262**	*e*P	**P**	**07 00 24.1**	**-0.1**
JTS	**Las Juntas de**	**23.40**	**262**	P	**P**	**07 00 24.7**	**+0.4**
JTS				pmax	pmax		
	comp=Z,122nm,1.4s						
JTS	**Las Juntas de**	**23.40**	**262**	P	**P**	**07 00 24.6**	**+0.4**
LAFE	**Finca La Fe, P**	**23.47**	**261**	*e*P	**P**	**07 00 25.8**	**+0.9**
PRPB	**Parauapebas**	**23.61**	**150**	*e*P	**P**	**07 00 26.5**	**+0.4**
CAO2	**Cobano, Puntar**	**23.69**	**261**	P	**P**	**07 00 27.0**	**+0.1**
BOAB	**BOACO BROADBAN**	**23.70**	**268**	P	**P**	**07 00 27.2**	**+0.2**
ORTG	**Ortega, Santa**	**23.87**	**263**	P	**P**	**07 00 28.1**	**-0.5**
MATN	**Matagalpa**	**23.89**	**269**	P	**P**	**07 00 28.7**	**-0.1**
MATN				IAmb	IAmb	07 00 32.7	
	comp=Z,312nm,1.1s						
HZTE	**Horizontes, Gu**	**23.93**	**264**	P	**P**	**07 00 29.6**	**+0.6**
HZTE				IAmb	IAmb	07 01 06.9	
	comp=Z,477nm,1.4s						
DUNO	**Dulce Nombre,**	**23.97**	**262**	P	**P**	**07 00 28.7**	**-0.7**
656A	**Willston**	**24.45**	**310**	P	**P**	**07 00 34.0**	**+0.4**
656A				IAmb	IAmb	07 00 36.9	
	comp=Z,631nm,1.6s						
Y60A	**Bolivia**	**24.61**	**325**	P	**P**	**07 00 34.4**	**-0.6**
Y60A				IAmb	IAmb	07 00 37.9	
	comp=Z,239nm,0.8s						
ETMB	**Extrema**	**24.72**	**191**	*e*P	**P**	**07 00 34.8**	**-1.4**
ETMB	**Extrema**	**24.72**	**191**	P	**P**	**07 00 35.3**	**-0.8**
ETMB				IAmb	IAmb	07 00 37.5	
	comp=Z,324nm,1.4s						
456A	**Hilliard**	**24.84**	**314**	P	**P**	**07 00 37.2**	**+0.1**
CZSB	**Cruzeiro do Su**	**24.86**	**208**	*e*P	**P**	**07 00 36.0**	**-1.5**
CZSB	**Cruzeiro do Su**	**24.86**	**208**	P	**P**	**07 00 35.9**	**-1.5**
257A	**Skidaway Islan**	**24.92**	**317**	P	**P**	**07 00 38.5**	**+0.6**
Y59A	**Loris**	**24.97**	**324**	P	**P**	**07 00 38.7**	**+0.5**
CRIN	**San Cristobal**	**25.01**	**269**	P	**P**	**07 00 40.1**	**+1.2**
TGUH	**Tegucigalpa,Un**	**25.09**	**272**	*e*P	**P**	**07 00 41.3**	**+1.6**
TGUH	**Tegucigalpa,Un**	**25.09**	**272**	P	**P**	**07 00 41.3**	**+1.6**
TGUH				IAmb	IAmb	07 00 42.9	
	comp=Z,460nm,1.1s						
TGUH				PcP	**PcP**	**07 04 11.2**	**+1.0**
NHSC	**New Hope**	**25.13**	**320**	P	**P**	**07 00 39.9**	**+0.3**
NHSC				IAmb	IAmb	07 00 43.8	
	comp=Z,335nm,0.9s						
NHSC					**PcP**	**07 04 10.0**	**+0.3**
NHSC	**New Hope**	**25.13**	**320**	P	**P**	**07 00 40.0**	**+0.3**
	baz=133,SNR=28						
V61A	**Roper**	**25.13**	**330**	P	**P**	**07 00 39.6**	**-0.1**
CNNC	**Cliffs of the**	**25.36**	**327**	P	**P**	**07 00 42.2**	**+0.4**
CNNC	**Cliffs of the**	**25.36**	**327**	P	**P**	**07 00 41.7**	**-0.1**
	baz=140,SNR=11						
Y58A	**Scranton**	**25.37**	**322**	P	**P**	**07 00 41.8**	**-0.1**
X58A	**Rowland**	**25.64**	**324**	P	**P**	**07 00 44.1**	**-0.2**
X58A				IAmb	IAmb	07 00 45.4	
	comp=Z,118nm,0.6s						
X58A				PcP	**PcP**	**07 04 10.3**	**-0.6**
255A	**Hazlehurst**	**25.86**	**315**	P	**P**	**07 00 47.0**	**+0.6**
255A				IAmb	IAmb	07 00 48.1	
	comp=Z,218nm,0.9s						
Y57A	**Sumter**	**25.88**	**322**	P	**P**	**07 00 46.7**	**+0.2**
Y57A					**PcP**	**07 04 12.2**	**+0.8**
CLDB	**Colider**	**25.90**	**167**	*e*P	**P**	**07 00 47.2**	**+0.3**
U59A	**Littleton**	**26.17**	**329**	P	**P**	**07 00 48.9**	**-0.2**
U59A					**PcP**	**07 04 12.1**	**+0.1**
553A	**Crawfordville**	**26.28**	**310**	IAmb	IAmb	07 00 56.0	
	comp=Z,364nm,1.2s						
T60A	**Surry**	**26.29**	**331**	P	**P**	**07 00 50.4**	**+0.3**
TIGA	**Tifton**	**26.35**	**313**	P	**P**	**07 00 51.0**	**+0.2**
TIGA	**Tifton**	**26.35**	**313**	P	**P**	**07 00 51.2**	**+0.4**
	baz=125,SNR=28						
BIRD	**Birdtown, Kers**	**26.36**	**323**	IAmb	IAmb	07 00 52.3	
	comp=Z,213nm,0.9s						
V58A	**Windy Hill, Pi**	**26.43**	**326**	P	**P**	**07 00 51.5**	**+0.1**
V58A				IAmb	IAmb	07 00 52.9	
	comp=Z,253nm,1.1s						
PDRB	**Porto dos Gac**	**26.44**	**170**	*e*P	**P**	**07 00 52.8**	**+1.1**
JSC	**Jenkinsville**	**26.58**	**321**	P	**P**	**07 00 52.1**	**-0.7**
JSC						07 04 14.1	
JSC				pmax	pmax		
	comp=Z,114nm,1.1s						
JSC	**Jenkinsville**	**26.58**	**321**	P	**P**	**07 00 52.1**	**-0.7**
JSC				PcP	**PcP**	**07 04 14.1**	**+1.0**
154A	**Montrose**	**26.70**	**316**	P	**P**	**07 00 53.9**	**0.0**
154A				IAmb	IAmb	07 00 55.9	
	comp=Z,206nm,1.1s						
SNET	**Serv Nac Est T**	**27.01**	**272**	P	**P**	**07 00 57.7**	**+0.7**
SNET				IAmb	IAmb	07 01 03.2	
	comp=Z,283nm,1.0s						
SMTB	**Santa Maria do**	**27.02**	**149**	*e*P	**P**	**07 00 57.8**	**+0.9**
ESQI	**Esquipulas**	**27.05**	**273**	P	**P**	**07 00 59.3**	**+2.0**
MTO3	**Montecristo**	**27.08**	**273**	P	**P**	**07 00 59.1**	**+1.4**
Q61A	**Milford**	**27.14**	**336**	P	**P**	**07 00 58.5**	**+0.8**
	baz=149						
HODGE	**Hodges**	**27.17**	**320**	P	**P**	**07 00 58.2**	**+0.2**
HODGE				IAmb	IAmb	07 00 59.7	
	comp=Z,253nm,1.5s						
KMSC	**Kings Mountain**	**27.21**	**322**	P	**P**	**07 00 58.6**	**+0.1**
KMSC	**Kings Mountain**	**27.21**	**322**	P	**P**	**07 00 58.4**	**-0.1**
	baz=134,SNR=36						
JSRW	**J. Sargeant Re**	**27.27**	**331**	P	**P**	**07 00 59.1**	**+0.2**
PAULI	**Pauline**	**27.29**	**321**	P	**P**	**07 00 59.6**	**+0.5**
VILB	**Vilhena**	**27.39**	**177**	*e*P	**P**	**07 01 01.4**	**+1.1**
VILB	**Vilhena**	**27.39**	**177**	P	**P**	**07 01 01.9**	**+1.7**
ATAH	**Atahualpa**	**27.40**	**219**	P	**P**	**07 01 00.2**	**-0.5**
	comp=Z,33nm,0.6s,baz=33,slow=8.5,SNR=38						
ATAH				ScP	**ScP**	**07 07 43.4**	**+1.6**
	comp=Z,13nm,0.7s,baz=6.1,slow=1.4,SNR=5.4						
T57A	**Hurt**	**27.41**	**328**	IAmb	IAmb	07 01 01.9	
	comp=Z,453nm,1.4s						
GOGA	**Godfrey**	**27.43**	**317**	P	**P**	**07 01 00.5**	**+0.2**
GOGA				pmax	pmax		
	comp=Z,134nm,1.1s						
GOGA	**Godfrey**	**27.43**	**317**	P	**P**	**07 01 00.5**	**+0.2**
GOGA	**Godfrey**	**27.43**	**317**	P	**P**	**07 01 00.6**	**+0.2**
	baz=128,SNR=34						
CBN	**Corbin Frederi**	**27.45**	**332**	P	**P**	**07 01 00.8**	**+0.3**
CBN				IAmb	IAmb	07 01 47.4	
	comp=Z,136nm,0.5s						
CBN				PcP	**PcP**	**07 04 15.6**	**+0.6**
CBN	**Corbin Frederi**	**27.45**	**332**	P	**P**	**07 01 00.4**	**-0.1**
	baz=145,SNR=9.7						
R58B	**Mineral**	**27.49**	**331**	P	**P**	**07 01 00.7**	**-0.1**
R58B				IAmb	IAmb	07 01 02.6	
	comp=Z,477nm,1.9s						
PETF	**Flores**	**27.50**	**279**	P	**P**	**07 01 02.0**	**+0.8**
U56A	**King**	**27.53**	**325**	P	**P**	**07 01 00.2**	**-1.0**
U56A				IAmb	IAmb	07 01 03.0	
	comp=Z,145nm,0.7s						
U56A				PcP	**PcP**	**07 04 15.9**	**+0.6**
P61A	**Hammonton**	**27.62**	**337**	P	**P**	**07 01 01.8**	**-0.2**
P61A				IAmb	IAmb	07 01 09.8	
	comp=Z,412nm,1.2s						
V55A	**Taylorsville**	**27.64**	**324**	P	**P**	**07 01 02.7**	**+0.4**
V55A				IAmb	IAmb	07 01 04.4	
	comp=Z,318nm,1.4s						
152A	**Waverly Hall**	**27.84**	**314**	P	**P**	**07 01 04.8**	**+0.7**
S57A	**Dark Hollow, R**	**27.85**	**329**	P	**P**	**07 01 04.8**	**+0.8**
S57A				IAmb	IAmb	07 01 05.8	
	comp=Z,224nm,1.3s						
M65A	**Busby, Falmout**	**28.05**	**345**	P	**P**	**07 01 06.2**	**+0.4**
	baz=161						
P60A	**Greenville**	**28.06**	**336**	P	**P**	**07 01 05.6**	**-0.3**
P60A					**PcP**	**07 04 17.0**	**+0.4**
P60A	**Greenville**	**28.06**	**336**	P	**P**	**07 01 05.8**	**-0.1**
	baz=150,SNR=8.6						
BG3	**Lake Jocassee**	**28.08**	**320**	P	**P**	**07 01 07.0**	**+0.8**
BG3				IAmb	IAmb	07 01 08.7	
	comp=Z,194nm,1.2s						
BG3				PcP	**PcP**	**07 04 17.3**	**+0.5**
Y52A	**Lilburn**	**28.09**	**317**	P	**P**	**07 01 06.6**	**+0.3**
Y52A				IAmb	IAmb	07 01 08.3	
	comp=Z,161nm,0.7s						
WUPA	**West Chester U**	**28.15**	**336**	P	**P**	**07 01 07.5**	**+0.8**
WUPA				PcP	**PcP**	**07 04 16.7**	**0.0**
BLA	**Blacksburg**	**28.18**	**327**	P	**P**	**07 01 07.8**	**+0.7**
BLA				pmax	pmax		
	comp=Z,172nm,1.0s						
BLA	**Blacksburg**	**28.18**	**327**	P	**P**	**07 01 07.8**	**+0.7**
BLA				IAmb	IAmb	07 01 47.3	
	comp=Z,172nm,0.9s						
BLA	**Blacksburg**	**28.18**	**327**	P	**P**	**07 01 07.8**	**+0.7**
	baz=138,SNR=40						
SDMD	**Soldier's Deli**	**28.21**	**334**	P	**P**	**07 01 08.1**	**+0.8**
SDMD				PcP	**PcP**	**07 04 17.5**	**+0.5**
SNDB	**Serra Nova Dou**	**28.23**	**159**	*e*P	**P**	**07 01 07.0**	**-0.6**
M63A	**Gales Ferry**	**28.27**	**343**	P	**P**	**07 01 08.8**	**+1.1**
BRNJ	**Basking Ridge**	**28.43**	**339**	P	**P**	**07 01 09.2**	**+0.1**
BRNJ				IAmb	IAmb	07 01 11.4	
	comp=Z,475nm,1.6s						
WSPT	**Westport, CT**	**28.45**	**341**	P	**P**	**07 01 08.5**	**-0.8**
WSPT				IAmb	IAmb	07 01 11.1	
	comp=Z,379nm,1.5s						
L64A	**Middleborough**	**28.45**	**345**	P	**P**	**07 01 09.3**	**0.0**
L64A				IAmb	IAmb	07 01 11.8	
	comp=Z,275nm,1.5s						
YLE	**Yale**	**28.46**	**342**	P	**P**	**07 01 10.8**	**+1.4**
YLE				IAmb	IAmb	07 01 11.5	
	comp=Z,297nm,1.3s						
YLE				PcP	**PcP**	**07 04 18.0**	**+0.5**
V53A	**Saluda**	**28.46**	**321**	P	**P**	**07 01 10.1**	**+0.6**
V53A				IAmb	IAmb	07 01 11.6	
	comp=Z,324nm,1.6s						
V53A				PcP	**PcP**	**07 04 18.2**	**+0.5**
U54A	**Nelsons Funny**	**28.46**	**324**	P	**P**	**07 01 09.5**	**-0.1**
U54A				IAmb	IAmb	07 01 11.5	
	comp=Z,195nm,1.2s						
PAL	**Palisades**	**28.49**	**340**	P	**P**	**07 01 09.7**	**0.0**
PAL				pmax	pmax		
	comp=Z,148nm,1.3s						
PAL	**Palisades**	**28.49**	**340**	P	**P**	**07 01 09.7**	**0.0**
PAL	**Palisades**	**28.49**	**340**	P	**P**	**07 01 09.8**	**+0.2**
	baz=154						
MVL	**Millersville**	**28.50**	**335**	P	**P**	**07 01 10.7**	**+0.9**
MVL				PcP	**PcP**	**07 04 18.1**	**+0.4**
250A	**Grady**	**28.56**	**312**	P	**P**	**07 01 10.8**	**+0.3**
250A				IAmb	IAmb	07 01 12.2	
	comp=Z,279nm,0.9s						
250A					**PcP**	**07 04 18.4**	**+0.4**
LUPA	**Lehigh Univers**	**28.64**	**337**	P	**P**	**07 01 11.1**	**0.0**
LUPA				IAmb	IAmb	07 01 13.4	
	comp=Z,359nm,1.3s						
UCCT	**U. Connecticut**	**28.69**	**343**	P	**P**	**07 01 11.1**	**-0.3**
TRNY	**Table Rock, Ra**	**28.72**	**340**	P	**P**	**07 01 12.1**	**+0.3**
TRNY				IAmb	IAmb	07 01 13.6	
	comp=Z,211nm,1.2s						
BRAL	**Brewton**	**28.73**	**309**	P	**P**	**07 01 12.9**	**+1.0**
BRAL	**Brewton**	**28.73**	**309**	P	**P**	**07 01 13.0**	**+1.0**
	baz=119,SNR=13						
W52A	**Murphy**	**28.77**	**319**	P	**P**	**07 01 12.9**	**+0.6**
W52A				PcP	**PcP**	**07 04 19.7**	**+1.2**
P57A	**Homestead Farm**	**28.78**	**333**	P	**P**	**07 01 12.7**	**+0.4**
P57A				PcP	**PcP**	**07 04 18.8**	**+0.4**
ODNJ	**Ogdensburg**	**28.79**	**339**	P	**P**	**07 01 12.6**	**+0.2**
ODNJ				IAmb	IAmb	07 01 14.3	
	comp=Z,345nm,1.7s						
ODNJ				PcP	**PcP**	**07 04 18.6**	**+0.2**
R55A	**Marlinton**	**28.84**	**328**	P	**P**	**07 01 13.3**	**+0.4**
BCX	**Boston College**	**28.91**	**345**	P	**P**	**07 01 14.5**	**+1.1**
BCX				IAmb	IAmb	07 01 15.2	
	comp=Z,288nm,1.4s						
Q56A	**Snyder Ridge,**	**28.96**	**331**	P	**P**	**07 01 15.0**	**+1.0**
Q56A				IAmb	IAmb	07 01 16.6	
	comp=Z,234nm,1.1s						
WES	**Weston**	**28.99**	**345**	P	**P**	**07 01 15.1**	**+1.0**
WES				pmax	pmax		
	comp=Z,566nm,1.7s						
WES	**Weston**	**28.99**	**345**	P	**P**	**07 01 15.1**	**+1.0**
WES				IAmb	IAmb	07 01 16.1	
	comp=Z,566nm,1.7s						
KSCT	**Kent School, K**	**29.00**	**341**	P	**P**	**07 01 15.3**	**+1.1**
KSCT				IAmb	IAmb	07 01 16.2	
	comp=Z,203nm,1.4s						
TKL	**Tuckaleechee C**	**29.04**	**320**	P	**P**	**07 01 15.2**	**+0.5**
	comp=Z,20nm,0.5s,baz=139,slow=9.5,SNR=82						
TKL				PP	**sP**	**07 02 08.5**	**+3.8**
	comp=Z,30nm,0.7s,baz=137,slow=13,SNR=5.2						
TKL	**Tuckaleechee C**	**29.04**	**320**	P	**P**	**07 01 15.0**	**+0.3**
TKL				pmax	pmax		
	comp=Z,190nm,1.4s						
TKL	**Tuckaleechee C**	**29.04**	**320**	P	**P**	**07 01 14.9**	**+0.3**
TKL				IAmb	IAmb	07 01 16.4	
	comp=Z,190nm,1.4s						
X51A	**Calhoun**	**29.04**	**317**	P	**P**	**07 01 15.2**	**+0.5**
X51A				IAmb	IAmb	07 01 16.4	
	comp=Z,95nm,0.5s						
V52A	**Sevierville**	**29.05**	**321**	P	**P**	**07 01 15.0**	**+0.3**
V52A				IAmb	IAmb	07 01 16.4	
	comp=Z,355nm,1.6s						
N59A	**State Game Lan**	**29.07**	**337**	P	**P**	**07 01 15.9**	**+1.0**
N59A				IAmb	IAmb	07 01 16.8	
	comp=Z,324nm,1.7s						
N59A	**State Game Lan**	**29.07**	**337**	P	**P**	**07 01 15.3**	**+0.5**
	baz=150,SNR=11						
S54A	**Dingess, Beckl**	**29.10**	**326**	P	**P**	**07 01 15.0**	**-0.2**
S54A				IAmb	IAmb	07 01 17.1	
	comp=Z,406nm,1.6s						
HUEH	**Huehuetenango**	**29.10**	**275**	P	**P**	**07 01 16.2**	**+0.6**
HUEH				IAmb	IAmb	07 01 29.9	
	comp=Z,186nm,0.8s						
HRV	**Adam Dziewonsk**	**29.17**	**344**	P	**P**	**07 01 16.3**	**+0.6**
HRV				pmax	pmax		
	comp=Z,143nm,1.3s						
HRV	**Adam Dziewonsk**	**29.17**	**344**	P	**P**	**07 01 16.2**	**+0.6**
HRV	**Adam Dziewonsk**	**29.17**	**344**	P	**P**	**07 01 16.3**	**+0.6**
	baz=160						
QUA2	**Belchertown**	**29.17**	**343**	P	**P**	**07 01 16.8**	**+1.1**
RTAL	**Retalhuleu**	**29.33**	**274**	P	**P**	**07 01 18.6**	**+1.1**
RTAL				IAmb	IAmb	07 01 19.9	
	comp=Z,134nm,0.9s						
N58A	**Sunbury**	**29.37**	**336**	P	**P**	**07 01 18.3**	**+0.9**
CPCT	**Cooper Cave**	**29.37**	**319**	IAmb	IAmb	07 01 19.5	
	comp=Z,101nm,0.7s						
L61B	**Northampton**	**29.42**	**343**	P	**P**	**07 01 18.3**	**+0.4**
	baz=157						
TZTN	**Tazewell**	**29.49**	**322**	P	**P**	**07 01 19.1**	**+0.4**
TZTN	**Tazewell**	**29.49**	**322**	P	**P**	**07 01 18.9**	**+0.3**
	baz=132,SNR=23						
V51A	**Loudon**	**29.49**	**320**	P	**P**	**07 01 19.2**	**+0.6**
V51A				IAmb	IAmb	07 01 20.6	
	comp=Z,296nm,1.4s						
K62A	**Royalston**	**29.50**	**344**	IAmb	IAmb	07 02 15.2	
	comp=Z,210nm,1.4s						
PEXB	**Peixe**	**29.52**	**153**	*e*P	**P**	**07 01 20.2**	**+1.1**
FPAL	**Fort Paine**	**29.53**	**317**	P	**P**	**07 01 19.4**	**+0.4**
FPAL				IAmb	IAmb	07 01 20.9	
	comp=Z,193nm,1.1s						
KSPA	**Keystone Colle**	**29.62**	**338**	P	**P**	**07 01 20.9**	**+1.1**
KSPA				IAmb	IAmb	07 01 21.8	
	comp=Z,270nm,1.4s						
O56A	**Blue Knob Stat**	**29.67**	**333**	P	**P**	**07 01 20.9**	**+0.7**
O56A				IAmb	IAmb	07 01 22.8	
	comp=Z,274nm,1.1s						
O56A				PcP	**PcP**	**07 04 20.2**	**-0.5**
O56A	**Blue Knob Stat**	**29.67**	**333**	P	**P**	**07 01 21.2**	**+1.0**
	baz=145,SNR=29						
SSPA	**Standing Stone**	**29.68**	**334**	P	**P**	**07 01 20.7**	**+0.5**
SSPA				IAmb	IAmb	07 01 22.6	
	comp=Z,404nm,1.6s						
SSPA	**Standing Stone**	**29.68**	**334**	P	**P**	**07 01 21.1**	**+0.9**
	baz=146						
Y49A	**Blount Mountai**	**29.68**	**315**	IAmb	IAmb	07 01 22.2	
	comp=Z,209nm,1.3s						
CCIG	**Comitan**	**29.68**	**277**	P	**P**	**07 01 21.0**	**+0.3**
Q54A	**Coxs Mills**	**29.73**	**328**	P	**P**	**07 01 22.1**	**+1.4**
Q54A				PcP	**PcP**	**07 04 21.8**	**+1.0**
MCWV	**Mont Chateau**	**29.77**	**331**	IAmb	IAmb	07 01 23.7	
	comp=Z,160nm,1.1s						
MCWV	**Mont Chateau**	**29.77**	**331**	P	**P**	**07 01 21.9**	**+0.9**
	baz=142,SNR=26						
R53A	**Hurricane**	**29.83**	**326**	P	**P**	**07 01 22.6**	**+1.0**

R53A				IAmb	IAmb	07 01 23.7	
	comp=Z,210nm,0.7s						
R53A				PcP	**PcP**	**07 04 21.2**	**+0.1**
L59A	**Walton**	**29.93**	**339**	IAmb	IAmb	07 01 24.6	
	comp=Z,263nm,1.8s						
PTLB	**Pontes e Lacer**	**29.93**	**176**	*e*P	**P**	**07 01 23.2**	**+0.6**
PTLB	**Pontes e Lacer**	**29.93**	**176**	P	**P**	**07 01 23.4**	**+0.8**
PTLB				IAmb	IAmb	07 01 24.8	
	comp=Z,192nm,1.3s						
M57A	**Sunshine Farm,**	**29.95**	**336**	P	**P**	**07 01 24.2**	**+1.6**
M57A				IAmb	IAmb	07 01 25.1	
	comp=Z,189nm,0.9s						
M57A				PcP	**PcP**	**07 04 22.0**	**+0.6**
TRY	**Troy**	**29.97**	**342**	P	**P**	**07 01 24.0**	**+1.2**
FFD	**Franklin Falls**	**30.09**	**345**	P	**P**	**07 01 25.2**	**+1.4**
FFD				IAmb	IAmb	07 01 26.2	
	comp=Z,440nm,1.6s						
FFD				PcP	**PcP**	**07 04 22.3**	**+0.6**
SWET	**Sewanee**	**30.14**	**317**	P	**P**	**07 01 24.9**	**+0.5**
SWET				IAmb	IAmb	07 01 26.5	
	comp=Z,231nm,1.3s						
SWET				PcP	**PcP**	**07 04 23.0**	**+1.0**
J61A	**Chester**	**30.21**	**344**	P	**P**	**07 01 26.1**	**+1.2**
J61A				IAmb	IAmb	07 01 27.4	
	comp=Z,489nm,1.9s						
S51A	**Beattyville**	**30.25**	**323**	P	**P**	**07 01 25.5**	**+0.1**
S51A				IAmb	IAmb	07 01 27.3	
	comp=Z,164nm,0.9s						
BINY	**Binghamton**	**30.27**	**338**	P	**P**	**07 01 26.3**	**+0.9**
BINY				IAmb	IAmb	07 01 27.8	
	comp=Z,275nm,1.2s						
BINY	**Binghamton**	**30.27**	**338**	P	**P**	**07 01 26.3**	**+0.9**
	baz=151,SNR=18						
SIV	**San Ignacio**	**30.39**	**179**	P	**P**	**07 01 27.4**	**+0.7**
	comp=Z,166nm,0.6s,baz=12,slow=7.3,SNR=127						
SIV				LR	LR	07 13 59.3	
	comp=Z,3µm,18.3s,baz=63,slow=36						
I63A	**Otisfield**	**30.39**	**347**	IAmb	IAmb	07 01 29.2	
	comp=Z,352nm,1.4s						
P53A	**Whipple**	**30.39**	**328**	P	**P**	**07 01 27.6**	**+1.0**
P53A				IAmb	IAmb	07 01 28.8	
	comp=Z,248nm,1.3s						
I62A	**Tamworth**	**30.40**	**346**	IAmb	IAmb	07 01 29.0	
	comp=Z,254nm,1.6s						
O54A	**Avella**	**30.43**	**331**	IAmb	IAmb	07 01 29.3	
	comp=Z,291nm,1.2s						
X48A	**Hartselle**	**30.44**	**315**	P	**P**	**07 01 27.4**	**+0.4**
Q52A	**Bidwell**	**30.46**	**327**	IAmb	IAmb	07 01 29.1	
	comp=Z,393nm,1.4s						
HNH	**Hanover**	**30.48**	**344**	P	**P**	**07 01 28.3**	**+1.0**
HNH				IAmb	IAmb	07 01 29.5	
	comp=Z,381nm,1.5s						
NNA	**Nana**	**30.53**	**211**	P	**P**	**07 01 26.6**	**-1.5**
	comp=Z,43nm,0.5s,baz=13,slow=7.8,SNR=34						
NNA				ScP	**ScP**	**07 07 52.5**	**+1.2**
	comp=Z,11nm,0.8s,baz=61,slow=2.4,SNR=4.7						
NNA	**Nana**	**30.53**	**211**	*ce*P	**P**	**07 01 26.5**	**-1.5**
NNA				pmax	pmax		
	comp=Z,86nm,0.7s						
NNA	**Nana**	**30.53**	**211**	P	**P**	**07 01 26.1**	**-1.9**
ACCN	**Adirondack Com**	**30.57**	**342**	P	**P**	**07 01 28.4**	**+0.3**
ACCN				IAmb	IAmb	07 01 30.3	
	comp=Z,187nm,1.2s						
T50A	**Nancy**	**30.58**	**321**	P	**P**	**07 01 29.1**	**+0.9**
T50A				IAmb	IAmb	07 01 30.4	
	comp=Z,266nm,1.1s						
346A	**Big Creek Wild**	**30.65**	**308**	IAmb	IAmb	07 01 31.4	
	comp=Z,291nm,1.4s						
WVL	**Waterville**	**30.69**	**348**	IAmb	IAmb	07 01 31.6	
	comp=Z,256nm,1.2s						
GBN	**Guysborough**	**30.72**	**360**	P	**P**	**07 01 30.1**	**+0.8**
GBN				IAmb	IAmb	07 01 31.4	
	comp=Z,174nm,1.3s						
M55A	**Ridgway**	**30.74**	**334**	P	**P**	**07 01 30.6**	**+1.0**
M55A				IAmb	IAmb	07 01 31.9	
	comp=Z,276nm,1.0s						
M55A				PcP	**PcP**	**07 04 23.6**	**+0.1**
GGN	**Saint George**	**30.78**	**352**	IAmb	IAmb	07 01 32.4	
	comp=Z,432nm,1.4s						
L56A	**Greenwood**	**30.80**	**336**	P	**P**	**07 01 31.4**	**+1.2**
L56A				IAmb	IAmb	07 01 32.3	
	comp=Z,132nm,0.8s						
L56A				PcP	**PcP**	**07 04 24.0**	**+0.4**
SALV	**Santo Antonio**	**30.82**	**169**	*e*P	**P**	**07 01 31.2**	**+0.7**
U49A	**Red Boiling Sp**	**30.83**	**320**	P	**P**	**07 01 31.0**	**+0.6**
U49A				IAmb	IAmb	07 01 32.4	
	comp=Z,108nm,0.7s						
U49A				PcP	**PcP**	**07 04 24.4**	**+0.7**
N54A	**Moraine State**	**30.86**	**332**	IAmb	IAmb	07 01 33.2	
	comp=Z,304nm,1.1s						
N54A	**Moraine State**	**30.86**	**332**	P	**P**	**07 01 31.7**	**+1.0**
	baz=143,SNR=37						
P52A	**Corning**	**30.88**	**328**	P	**P**	**07 01 31.4**	**+0.5**
	baz=138,SNR=45						
O53A	**New Philadelph**	**30.89**	**330**	P	**P**	**07 01 31.6**	**+0.6**
O53A				IAmb	IAmb	07 01 33.1	
	comp=Z,342nm,1.3s						
O53A				PcP	**PcP**	**07 04 24.6**	**+0.8**
O53A	**New Philadelph**	**30.89**	**330**	P	**P**	**07 01 31.5**	**+0.6**
	baz=140,SNR=30						
LBNH	**Lisbon**	**30.89**	**345**	P	**P**	**07 01 31.7**	**+0.9**
LBNH				IAmb	IAmb	07 01 33.3	
	comp=Z,226nm,1.2s						
LBNH				PcP	**PcP**	**07 04 24.4**	**+0.7**
LBNH	**Lisbon**	**30.89**	**345**	P	**P**	**07 01 31.8**	**+0.9**
	baz=160,SNR=14						
J59A	**Piesco**	**30.89**	**341**	IAmb	IAmb	07 01 33.3	
	comp=Z,310nm,1.6s						
K57A	**Scipio Center**	**30.92**	**338**	P	**P**	**07 01 31.7**	**+0.5**
K57A				IAmb	IAmb	07 01 33.1	
	comp=Z,346nm,1.4s						
K57A				PcP	**PcP**	**07 04 24.1**	**+0.2**
CLTN	**Cedars of Leba**	**30.93**	**318**	IAmb	IAmb	07 01 33.4	
	comp=Z,552nm,1.8s						
146A	**Union**	**30.93**	**310**	P	**P**	**07 01 32.3**	**+1.0**
146A				PcP	**PcP**	**07 04 24.4**	**+0.4**
H62A	**Milan**	**31.02**	**346**	P	**P**	**07 01 33.8**	**+1.8**
H62A				IAmb	IAmb	07 01 34.9	
	comp=Z,458nm,1.4s						
H62A				PcP	**PcP**	**07 04 24.8**	**+0.7**
V48A	**Smith Brothers**	**31.04**	**317**	IAmb	IAmb	07 01 34.4	
	comp=Z,282nm,1.2s						
J58A	**Remsen**	**31.05**	**340**	P	**P**	**07 01 33.2**	**+0.9**
J58A					**PcP**	**07 04 24.7**	**+0.5**
Q51A	**Peebles**	**31.09**	**326**	P	**P**	**07 01 33.6**	**+0.9**
Q51A				IAmb	IAmb	07 01 34.9	
	comp=Z,132nm,0.9s						
Q51A				PcP	**PcP**	**07 04 24.3**	**-0.1**
O52A	**Adamsville**	**31.09**	**329**	P	**P**	**07 01 33.1**	**+0.4**
O52A				IAmb	IAmb	07 01 34.9	
	comp=Z,427nm,1.5s						
O52A				PcP	**PcP**	**07 04 24.9**	**+0.6**
R50A	**Paris**	**31.12**	**324**	P	**P**	**07 01 34.2**	**+1.2**
R50A				IAmb	IAmb	07 01 35.6	
	comp=Z,371nm,1.4s						
N53A	**Lisbon**	**31.14**	**331**	P	**P**	**07 01 34.0**	**+1.0**
N53A				IAmb	IAmb	07 01 35.5	
	comp=Z,362nm,1.2s						
N53A					**PcP**	**07 04 25.6**	**+1.1**
M54A	**Oil Creek Stat**	**31.16**	**333**	P	**P**	**07 01 34.5**	**+1.3**
M54A				IAmb	IAmb	07 01 35.4	
	comp=Z,155nm,1.1s						
M54A	**Oil Creek Stat**	**31.16**	**333**	P	**P**	**07 01 34.1**	**+0.8**
	baz=144,SNR=18						
VT1	**Waterbury**	**31.18**	**344**	P	**P**	**07 01 34.8**	**+1.4**
VT1				IAmb	IAmb	07 01 35.8	
	comp=Z,214nm,1.4s						
P51A	**Williamsport**	**31.26**	**327**	P	**P**	**07 01 34.9**	**+0.7**
P51A				IAmb	IAmb	07 01 36.0	
	comp=Z,252nm,0.8s						
NCB	**Newcomb**	**31.27**	**342**	P	**P**	**07 01 35.0**	**+0.8**
NCB				IAmb	IAmb	07 01 36.5	
	comp=Z,184nm,1.1s						
LMN	**Caledonia Moun**	**31.29**	**355**	P	**P**	**07 01 35.1**	**+0.7**
LMN				IAmb	IAmb	07 01 36.7	
	comp=Z,351nm,1.2s						
LMN					**PcP**	**07 04 23.7**	**-1.1**
PKME	**Peaks-Kenny Pk**	**31.30**	**349**	IAmb	IAmb	07 01 36.7	
	comp=Z,282nm,1.6s						
PKME	**Peaks-Kenny Pk**	**31.30**	**349**	P	**P**	**07 01 35.1**	**+0.7**
	baz=165,SNR=10						
J57A	**Williamstown**	**31.33**	**339**	P	**P**	**07 01 35.6**	**+0.9**
J57A				IAmb	IAmb	07 01 36.9	
	comp=Z,344nm,1.4s						
J57A					**PcP**	**07 04 25.4**	**+0.5**
LPAZ	**La Paz**	**31.40**	**193**	*e*P	**P**	**07 01 36.2**	**-0.1**
LPAZ	**La Paz**	**31.40**	**193**	IAmb	IAmb	07 02 15.0	
	comp=Z,182nm,1.0s						
SDBA	**SAO DESIDERIO**	**31.40**	**148**	*e*P	**P**	**07 01 35.0**	**-0.7**
MMNY	**Mt. Morris Dam**	**31.44**	**336**	P	**P**	**07 01 36.4**	**+0.7**
MMNY				IAmb	IAmb	07 01 37.7	
	comp=Z,445nm,1.5s						
MMNY				PcP	**PcP**	**07 04 25.7**	**+0.5**
PLAL	**Pickwick Lake**	**31.44**	**315**	P	**P**	**07 01 36.8**	**+0.9**
PLAL					**PcP**	**07 04 25.6**	**+0.2**
WVNY	**West Valley, N**	**31.45**	**335**	P	**P**	**07 01 36.5**	**+0.7**
WVNY					**PcP**	**07 04 25.8**	**+0.4**
ALLY	**Alegheny Colle**	**31.48**	**333**	IAmb	IAmb	07 01 38.1	
	comp=Z,211nm,0.8s						
G62A	**West of Eustis**	**31.50**	**348**	P	**P**	**07 01 38.0**	**+1.8**
G62A				IAmb	IAmb	07 01 39.0	
	comp=Z,331nm,1.3s						
G62A					**PcP**	**07 04 25.9**	**+0.5**
J56A	**Wolcott**	**31.52**	**338**	IAmb	IAmb	07 01 38.0	
	comp=Z,268nm,1.4s						
ARAG	**Araguaiana, MT**	**31.56**	**162**	*e*P	**P**	**07 01 37.7**	**+0.7**
M53A	**WI Miller and**	**31.56**	**332**	P	**P**	**07 01 37.8**	**+1.0**
M53A				IAmb	IAmb	07 01 38.8	
	comp=Z,205nm,1.1s						
M53A	**WI Miller and**	**31.56**	**332**	P	**P**	**07 01 37.2**	**+0.4**
	baz=142,SNR=14						
R49A	**Shelbyville**	**31.61**	**323**	P	**P**	**07 01 37.9**	**+0.6**
R49A				IAmb	IAmb	07 01 39.6	
	comp=Z,280nm,1.4s						
R49A				PcP	**PcP**	**07 04 25.9**	**+0.1**
344A	**Westbrook Farm**	**31.66**	**307**	IAmb	IAmb	07 01 40.0	
	comp=Z,292nm,1.3s						
F63A	**Nahmakanta, Br**	**31.69**	**350**	IAmb	IAmb	07 01 39.9	
	comp=Z,201nm,1.4s						
F64A	**Sherman**	**31.72**	**351**	IAmb	IAmb	07 01 40.5	
	comp=Z,453nm,1.6s						
ACSO	**Alum Creek Sta**	**31.76**	**328**	P	**P**	**07 01 38.8**	**+0.2**
ACSO				PcP	**PcP**	**07 04 25.2**	**-0.9**
ACSO	**Alum Creek Sta**	**31.76**	**328**	P	**P**	**07 01 39.5**	**+0.9**
	baz=138,SNR=45						
ERPA	**Erie**	**31.79**	**333**	IAmb	IAmb	07 01 40.8	
	comp=Z,97nm,0.8s						
ERPA	**Erie**	**31.79**	**333**	P	**P**	**07 01 39.4**	**+0.6**
	baz=144						
VBMS	**Vicksburg**	**31.83**	**309**	P	**P**	**07 01 40.9**	**+1.7**
VBMS				PcP	**PcP**	**07 04 27.6**	**+1.1**
VBMS	**Vicksburg**	**31.83**	**309**	P	**P**	**07 01 40.4**	**+1.2**
	baz=117,SNR=12						
J55A	**Hilton**	**31.86**	**337**	IAmb	IAmb	07 01 41.2	
	comp=Z,229nm,1.1s						
FRNY	**Flat Rock**	**31.88**	**343**	P	**P**	**07 01 39.3**	**-0.2**
Y45A	**Yeager Farm, C**	**31.89**	**312**	P	**P**	**07 01 40.9**	**+1.2**
Y45A				PcP	**PcP**	**07 04 27.7**	**+1.0**
WVT	**Waverly**	**31.93**	**317**	P	**P**	**07 01 39.7**	**-0.3**
WVT						07 04 27.1	
WVT				pmax	pmax		
	comp=Z,167nm,0.7s						
WVT	**Waverly**	**31.93**	**317**	P	**P**	**07 01 39.7**	**-0.3**
WVT				IAmb	IAmb	07 01 41.6	
	comp=Z,167nm,0.7s						
WVT				PcP	**PcP**	**07 04 27.1**	**+0.4**
WVT	**Waverly**	**31.93**	**317**	P	**P**	**07 01 40.3**	**+0.2**
	baz=126						
M52A	**Chesterland**	**31.95**	**331**	P	**P**	**07 01 41.0**	**+0.8**
M52A				IAmb	IAmb	07 01 42.2	
	comp=Z,248nm,1.3s						
LONY	**Lake Ozonia**	**31.96**	**342**	P	**P**	**07 01 41.2**	**+0.9**
LONY	**Lake Ozonia**	**31.96**	**342**	P	**P**	**07 01 40.9**	**+0.6**
	baz=155,SNR=10						
T47A	**Sharon Grove**	**31.96**	**319**	P	**P**	**07 01 40.7**	**+0.3**
N51A	**Ashland**	**31.97**	**329**	P	**P**	**07 01 40.9**	**+0.5**
N51A				IAmb	IAmb	07 01 42.2	
	comp=Z,198nm,0.9s						
N51A				PcP	**PcP**	**07 04 26.4**	**-0.4**
MOQ	**Mont Orford**	**31.97**	**345**	P	**P**	**07 01 40.7**	**+0.3**
MOQ					**PcP**	**07 04 26.9**	**+0.2**
MEDO	**Medina**	**32.02**	**336**	P	**P**	**07 01 40.7**	**-0.1**
MEDO				PcP	**PcP**	**07 04 26.3**	**-0.5**
J54A	**Appleton**	**32.19**	**336**	P	**P**	**07 01 42.6**	**+0.4**
J54A				PcP	**PcP**	**07 04 27.5**	**+0.3**
P49A	**Miami Univ. Ec**	**32.20**	**325**	P	**P**	**07 01 43.1**	**+0.7**
	baz=134,SNR=99						
WCI	**Wyandotte Cave**	**32.24**	**322**	P	**P**	**07 01 43.8**	**+1.0**
WCI				IAmb	IAmb	07 01 45.0	
	comp=Z,284nm,1.1s						
WCI				PcP	**PcP**	**07 04 28.2**	**+0.6**
WCI	**Wyandotte Cave**	**32.24**	**322**	P	**P**	**07 01 43.6**	**+0.8**
	baz=130						
CMIG	**Matias Romero**	**32.30**	**279**	ScP	**ScP**	**07 07 57.1**	**-0.2**
	comp=Z,23nm,0.9s,baz=62,slow=3.7,SNR=22						
W45A	**Hickory Valley**	**32.30**	**314**	P	**P**	**07 01 43.6**	**+0.2**
W45A					**PcP**	**07 04 27.7**	**-0.1**
RCBR	**Riachuelo**	**32.41**	**127**	P	**P**	**07 01 45.2**	**+0.7**
RCBR				pmax	pmax		
	comp=Z,101nm,1.3s						
RCBR	**Riachuelo**	**32.41**	**127**	*e*P	**P**	**07 01 44.8**	**+0.2**
RCBR	**Riachuelo**	**32.41**	**127**	P	**P**	**07 01 45.2**	**+0.7**
O49A	**Covington**	**32.45**	**326**	P	**P**	**07 01 45.1**	**+0.5**
O49A				PcP	**PcP**	**07 04 27.8**	**-0.3**
PQI	**Presque Isle**	**32.46**	**351**	P	**P**	**07 01 45.2**	**+0.7**
PQI				IAmb	IAmb	07 01 46.2	
	comp=Z,162nm,1.4s						
PQI				PcP	**PcP**	**07 04 28.4**	**+0.5**
MNTQ	**Montreal, Queb**	**32.50**	**344**	P	**P**	**07 01 45.6**	**+0.7**
MNTQ				IAmb	IAmb	07 01 49.4	
	comp=Z,208nm,1.5s						
MNTQ					**PcP**	**07 04 28.1**	**+0.1**
P48A	**Milroy**	**32.55**	**324**	P	**P**	**07 01 44.8**	**-0.6**
P48A				PcP	**PcP**	**07 04 27.8**	**-0.5**
PP1B	**Ponte de Pedra**	**32.63**	**168**	*e*P	**P**	**07 01 47.1**	**+0.8**
E62A	**Clayton Lake**	**32.65**	**350**	P	**P**	**07 01 47.3**	**+1.1**
E62A					**PcP**	**07 04 28.8**	**+0.3**
M50A	**Fremont**	**32.66**	**329**	P	**P**	**07 01 47.3**	**+0.9**
143A	**Socs Landing,**	**32.71**	**309**	P	**P**	**07 01 48.2**	**+1.2**
MET	**Memphis--Engin**	**32.80**	**314**	P	**P**	**07 01 48.5**	**+0.8**
HALT	**Halls**	**32.81**	**315**	P	**P**	**07 01 47.8**	**0.0**
BATG	**Bathurst New B**	**32.82**	**354**	P	**P**	**07 01 48.5**	**+0.8**
BATG				IAmb	IAmb	07 01 49.7	
	comp=Z,218nm,1.4s						
BDFB	**Brasilia**	**32.82**	**156**	P	**P**	**07 01 49.2**	**+1.1**
	comp=Z,77nm,0.7s,baz=332,slow=9.2,SNR=138						
BDFB				LR	LR	07 15 45.3	
	comp=Z,1µm,18.9s,baz=336,slow=37						
BDFB	**Brasilia**	**32.82**	**156**	P	**P**	**07 01 49.1**	**+1.0**
BDFB				pmax	pmax		
	comp=Z,152nm,0.9s						
BDFB	**Brasilia**	**32.82**	**156**	P	**P**	**07 01 49.1**	**+1.0**
BDFB				IAmb	IAmb	07 01 50.5	
	comp=Z,152nm,0.9s						
N49A	**Columbus Grove**	**32.89**	**327**	P	**P**	**07 01 48.1**	**-0.3**
N49A				PcP	**PcP**	**07 04 29.1**	**-0.1**
T45A	**Paducah**	**32.98**	**318**	P	**P**	**07 01 49.7**	**+0.5**
GLAT	**Glass**	**32.98**	**316**	P	**P**	**07 01 50.1**	**+0.9**
BLO	**Bloomington**	**32.99**	**323**	P	**P**	**07 01 50.1**	**+0.8**
BLO				PcP	**PcP**	**07 04 29.5**	**-0.1**
D62A	**Allapoint, All**	**33.02**	**350**	P	**P**	**07 01 50.3**	**+0.9**
D62A				IAmb	IAmb	07 01 51.6	
	comp=Z,469nm,1.6s						
D62A					**PcP**	**07 04 28.9**	**-0.6**
LNXT	**Lenox**	**33.02**	**316**	P	**P**	**07 01 50.1**	**+0.5**
HICK	**Hickman**	**33.09**	**316**	P	**P**	**07 01 50.8**	**+0.6**
PLVO	**Plevna**	**33.13**	**339**	P	**P**	**07 01 50.9**	**+0.4**
PLVO					**PcP**	**07 04 28.9**	**-1.0**
GNAR	**Gosnell**	**33.31**	**315**	P	**P**	**07 01 53.1**	**+1.0**
441A	**DeRidder**	**33.31**	**304**	P	**P**	**07 01 53.3**	**+1.1**
LPAR	**Lepanto**	**33.31**	**314**	P	**P**	**07 01 52.5**	**+0.4**
K50A	**Casco**	**33.51**	**331**	P	**P**	**07 01 53.7**	**0.0**
HBAR	**Harrisburg**	**33.53**	**314**	P	**P**	**07 01 54.5**	**+0.5**
HBAR					**PcP**	**07 04 32.2**	**+1.1**
AAM	**Ann Arbor**	**33.64**	**330**	P	**P**	**07 01 55.1**	**+0.2**
AAM					**PcP**	**07 04 31.6**	**+0.3**
AAM	**Ann Arbor**	**33.64**	**330**	P	**P**	**07 01 55.7**	**+0.8**
	baz=139,SNR=37						
SADO	**Sadowa**	**33.65**	**337**	P	**P**	**07 01 54.8**	**-0.1**
	comp=Z,69nm,0.5s,baz=152,slow=3.2,SNR=101						
SADO				PcP	**PcP**	**07 04 31.6**	**+0.3**
	comp=Z,25nm,0.5s,baz=206,slow=1.1,SNR=12						
SADO				ScP	**ScP**	**07 08 00.4**	**-1.0**
	comp=Z,17nm,0.8s,baz=92,slow=2.6,SNR=6.4						
SADO	**Sadowa**	**33.65**	**337**	P	**P**	**07 01 53.8**	**-1.1**
SADO				IAmb	IAmb	07 01 56.0	
	comp=Z,280nm,1.3s						
SADO					**PcP**	**07 04 32.1**	**+0.8**
OLIL	**Olney**	**33.66**	**321**	P	**P**	**07 01 55.5**	**+0.4**
OLIL				PcP	**PcP**	**07 04 32.0**	**+0.6**
N47A	**Urbana**	**33.67**	**326**	P	**P**	**07 01 55.4**	**+0.2**
N47A				PcP	**PcP**	**07 04 31.1**	**-0.4**
P46A	**Rosedale**	**33.68**	**323**	P	**P**	**07 01 56.1**	**+0.8**
PB16	**IPOC Station P**	**33.69**	**194**	P	**P**	**07 01 54.1**	**-2.0**
LMQ	**La Malbaie**	**33.69**	**349**	P	**P**	**07 01 56.1**	**+0.8**
S44A	**Carbondale**	**33.76**	**318**	P	**P**	**07 01 56.6**	**+0.7**
S44A				PcP	**PcP**	**07 04 32.1**	**+0.3**
L48A	**N Adams**	**33.76**	**328**	P	**P**	**07 01 56.6**	**+0.6**
L48A				PcP	**PcP**	**07 04 31.5**	**-0.3**
JANB	**Januaria**	**33.95**	**149**	*e*P	**P**	**07 01 58.0**	**+0.1**
Z41A	**Richland Creek**	**34.01**	**309**	P	**P**	**07 01 58.7**	**+0.5**
	baz=116,SNR=20						
SFIN	**Lafayette**	**34.11**	**324**	P	**P**	**07 01 59.5**	**+0.5**
SFIN				IAmb	IAmb	07 02 00.8	
	comp=Z,158nm,0.6s						
SFIN	**Lafayette**	**34.11**	**324**	P	**P**	**07 01 59.6**	**+0.5**
	baz=132,SNR=33						
Q44A	**Meyer Farm, Va**	**34.33**	**320**	P	**P**	**07 02 01.2**	**+0.4**
WLAR	**White Oak Lake**	**34.43**	**309**	P	**P**	**07 02 02.9**	**+1.1**
W41B	**Gary Mavity, V**	**34.47**	**312**	P	**P**	**07 02 02.6**	**+0.5**
	baz=119,SNR=90						
I49A	**Point Hope**	**34.50**	**332**	P	**P**	**07 02 02.9**	**+0.6**
I49A				IAmb	IAmb	07 02 03.8	
	comp=Z,152nm,0.6s						
WHAR	**Wooly Hollow**	**34.56**	**312**	P	**P**	**07 02 02.9**	**0.0**
WHAR				IAmb	IAmb	07 02 04.5	
	comp=Z,259nm,1.0s						
X40A	**Basin Creek Fa**	**34.58**	**311**	IAmb	IAmb	07 02 05.0	
	comp=Z,225nm,1.0s						
X40A	**Basin Creek Fa**	**34.58**	**311**	P	**P**	**07 02 03.3**	**+0.2**
	baz=117,SNR=53						
FVM	**French Village**	**34.69**	**318**	P	**P**	**07 02 04.1**	**+0.1**
FVM						07 04 35.1	
FVM				pmax	pmax		
	comp=Z,162nm,0.6s						
FVM	**French Village**	**34.69**	**318**	P	**P**	**07 02 04.1**	**+0.1**
FVM				IAmb	IAmb	07 02 05.4	
	comp=Z,162nm,0.6s						
FVM				PcP	**PcP**	**07 04 35.1**	**+0.6**
FCAR	**Ozark Folk Cen**	**34.73**	**313**	P	**P**	**07 02 04.2**	**-0.2**
FCAR				IAmb	IAmb	07 02 05.8	
	comp=Z,150nm,0.8s						
O44A	**Mansfield**	**34.77**	**322**	P	**P**	**07 02 05.2**	**+0.5**
O44A					**PcP**	**07 04 35.2**	**+0.5**
L46A	**Eue Claire**	**34.78**	**327**	P	**P**	**07 02 05.4**	**+0.7**
L46A				IAmb	IAmb	07 02 06.5	
	comp=Z,100nm,0.7s						
NATX	**Nacogdoches**	**34.85**	**305**	P	**P**	**07 02 06.6**	**+1.2**
NATX	**Nacogdoches**	**34.85**	**305**	P	**P**	**07 02 06.2**	**+0.7**
	baz=112,SNR=49						
IPMB	**Ipameri, GO**	**34.88**	**158**	*e*P	**P**	**07 02 06.3**	**+0.4**
J47A	**Sunmer**	**34.91**	**329**	P	**P**	**07 02 06.5**	**+0.6**
SLM	**Saint Louis**	**34.94**	**319**	P	**P**	**07 02 05.8**	**-0.3**
SLM				pmax	pmax		
	comp=Z,147nm,1.1s						
SLM	**Saint Louis**	**34.94**	**319**	P	**P**	**07 02 05.8**	**-0.3**
SLM				IAmb	IAmb	07 02 07.3	
	comp=Z,147nm,1.1s						
MIAR	**Mount Ida**	**35.15**	**310**	P	**P**	**07 02 08.2**	**+0.2**
MIAR				pmax	pmax		
	comp=Z,155nm,1.1s						
MIAR	**Mount Ida**	**35.15**	**310**	P	**P**	**07 02 08.2**	**+0.2**
MIAR				IAmb	IAmb	07 02 09.5	
	comp=Z,155nm,1.1s						
HKT	**Hockley**	**35.19**	**302**	P	**P**	**07 02 08.1**	**-0.2**
HKT						07 04 37.7	
HKT				pmax	pmax		
	comp=Z,278nm,1.4s						
HKT	**Hockley**	**35.19**	**302**	P	**P**	**07 02 08.1**	**-0.2**
HKT				IAmb	IAmb	07 02 10.2	
	comp=Z,278nm,1.4s						
HKT				PcP	**PcP**	**07 04 37.7**	**+1.7**
CCM	**Cathedral Cave**	**35.26**	**317**	P	**P**	**07 02 08.9**	**0.0**
CCM						07 04 36.9	
CCM				pmax	pmax		
	comp=Z,287nm,1.0s						
CCM	**Cathedral Cave**	**35.26**	**317**	P	**P**	**07 02 08.9**	**0.0**
CCM				IAmb	IAmb	07 02 10.2	
	comp=Z,287nm,0.9s						
CCM				PcP	**PcP**	**07 04 36.9**	**+0.7**
CCM	**Cathedral Cave**	**35.26**	**317**	P	**P**	**07 02 08.8**	**-0.2**
	baz=124						
AQDB	**Aquidauana**	**35.29**	**171**	*e*P	**P**	**07 02 10.1**	**+0.8**
AQDB	**Aquidauana**	**35.29**	**171**	P	**P**	**07 02 10.8**	**+1.5**
AQDB				IAmb	IAmb	07 02 12.0	
	comp=Z,203nm,0.9s						
M44A	**Midewin, Midew**	**35.32**	**324**	P	**P**	**07 02 10.1**	**+0.8**
M44A				IAmb	IAmb	07 02 10.9	
	comp=Z,329nm,1.1s						
PB08	**IPOC Station P**	**35.35**	**193**	P	**P**	**07 02 08.0**	**-2.3**
GDU01	**Guandu, BA**	**35.46**	**142**	*e*P	**P**	**07 02 11.0**	**+0.2**
MGMO	**Mountain Grove**	**35.47**	**315**	P	**P**	**07 02 10.6**	**-0.1**
MGMO				PcP	**PcP**	**07 04 37.7**	**+0.9**
U40A	**Yellville**	**35.48**	**313**	P	**P**	**07 02 10.5**	**-0.3**
U40A				IAmb	IAmb	07 02 12.1	
	comp=Z,208nm,1.1s						
U40A				PcP	**PcP**	**07 04 37.6**	**+0.7**
U40A	**Yellville**	**35.48**	**313**	P	**P**	**07 02 10.7**	**-0.1**
	baz=120,SNR=52						
HDIL	**Hopedale**	**35.51**	**322**	P	**P**	**07 02 10.5**	**-0.4**
HDIL				IAmb	IAmb	07 02 12.5	
	comp=Z,165nm,0.7s						
MC01	**Montes Claros**	**35.55**	**150**	*e*P	**P**	**07 02 11.9**	**+0.3**
W39A	**Magazine**	**35.60**	**311**	P	**P**	**07 02 12.6**	**+0.8**
W39A	**Magazine**	**35.60**	**311**	P	**P**	**07 02 12.7**	**+0.9**
	baz=117,SNR=113						
Z38A	**Mt. Pleasant**	**35.68**	**307**	P	**P**	**07 02 13.2**	**+0.7**
ITRB	**Iturama**	**35.77**	**162**	*e*P	**P**	**07 02 14.6**	**+1.2**
L44A	**Lake County Fo**	**35.77**	**325**	P	**P**	**07 02 13.8**	**+0.6**
L44A	**Lake County Fo**	**35.77**	**325**	P	**P**	**07 02 13.6**	**+0.4**
	baz=132,SNR=15						
TLIG	**Tlapa**	**35.81**	**280**	IAmb	IAmb	07 02 16.2	
	comp=Z,224nm,1.3s						
237A	**Washetta, Mont**	**35.85**	**305**	P	**P**	**07 02 14.8**	**+0.8**
GLMI	**Grayling**	**36.00**	**331**	P	**P**	**07 02 15.7**	**+0.5**
GLMI	**Grayling**	**36.00**	**331**	P	**P**	**07 02 16.0**	**+0.9**
	baz=140,SNR=34						
R40A	**Maddies Statio**	**36.07**	**317**	P	**P**	**07 02 15.2**	**-0.6**
R40A				IAmb	IAmb	07 02 16.3	
	comp=Z,252nm,1.2s						
R40A				PcP	**PcP**	**07 04 39.0**	**+0.5**
HHAR	**Hobbs**	**36.21**	**313**	P	**P**	**07 02 17.6**	**+0.6**
HHAR				IAmb	IAmb	07 02 18.4	
	comp=Z,162nm,0.8s						
HHAR				PcP	**PcP**	**07 04 39.8**	**+0.7**
KVTX	**Kingsville**	**36.28**	**297**	IAmb	IAmb	07 02 20.0	
	comp=Z,345nm,1.2s						
K43A	**Burlington**	**36.36**	**326**	P	**P**	**07 02 18.1**	**0.0**
UNM	**Universidad Na**	**36.41**	**283**	P	**P**	**07 02 21.8**	**+2.6**
UNM				pmax	pmax		
	comp=Z,222nm,1.4s						
UNM	**Universidad Na**	**36.41**	**283**	P	**P**	**07 02 21.8**	**+2.6**
UNM				IAmb	IAmb	07 02 22.4	
	comp=Z,222nm,1.4s						
S39A	**Bolivar**	**36.47**	**315**	P	**P**	**07 02 19.0**	**-0.2**
S39A				IAmb	IAmb	07 02 20.3	
	comp=Z,170nm,0.8s						
X37A	**Clayton**	**36.51**	**309**		**P**	**07 02 20.4**	**+0.8**
X37A				IAmb	IAmb	07 02 20.4	
	comp=Z,165nm,1.2s						
735A	**Kenedy**	**36.53**	**299**	P	**P**	**07 02 20.7**	**+0.9**
735A				IAmb	IAmb	07 02 21.5	
	comp=Z,252nm,1.0s						
U38A	**Gravette**	**36.60**	**313**		**P**	**07 02 20.3**	**0.0**
U38A				IAmb	IAmb	07 02 21.4	
	comp=Z,323nm,1.6s						
P40A	**Paris**	**36.60**	**319**	P	**P**	**07 02 20.2**	**-0.1**
L42A	**Oliver, Polo**	**36.64**	**324**	P	**P**	**07 02 21.1**	**+0.5**
G45A	**Suttons Bay**	**36.65**	**331**	P	**P**	**07 02 21.9**	**+1.2**
G45A				IAmb	IAmb	07 02 22.6	
	comp=Z,354nm,1.2s						
CMC01	**Camacan, BA**	**36.78**	**143**	*e*P	**P**	**07 02 23.1**	**+1.1**
435B	**Jarrell**	**36.88**	**302**	P	**P**	**07 02 23.4**	**+0.5**
435B				IAmb	IAmb	07 02 24.1	
	comp=Z,346nm,1.2s						
435B					**PcP**	**07 04 42.7**	**+1.5**
435B	**Jarrell**	**36.88**	**302**	P	**P**	**07 02 22.6**	**-0.2**
	baz=108,SNR=39						
PB09	**IPOC Station P**	**36.98**	**192**	IAmb	IAmb	07 03 02.4	
	comp=Z,264nm,1.3s						
E46A	**Sault Ste Mari**	**37.05**	**333**	P	**P**	**07 02 24.7**	**+0.8**
E46A				IAmb	IAmb	07 02 26.0	
	comp=Z,415nm,1.2s						

E46A				PcP	PcP	07 04 41.2	-0.2
DIAM	Diamantina, MG	37.05	151	*e*P	P	07 02 25.2	+0.7
WHTX	Lake Whitney,	37.16	304	P	P	07 02 25.3	+0.2
WHTX				IAmb	IAmb	07 02 26.4	
	comp=Z,289nm,0.9s						
WHTX	Lake Whitney,	37.16	304	P	P	07 02 25.0	-0.1
	baz=109,SNR=27						
H43A	Windswept, Lux	37.27	328	P	P	07 02 26.6	+0.7
H43A					PcP	07 04 42.8	+0.7
PCMB	Pacaembu	37.32	164	*e*P	P	07 02 27.5	+1.0
TUL1	Leonard	37.38	311	P	P	07 02 26.9	0.0
	baz=116,SNR=83						
I42A	Draeger Farm,	37.47	327	P	P	07 02 28.1	+0.5
JFWS	Jewell Farm	37.56	324	P	P	07 02 28.5	+0.2
JFWS				PcP	PcP	07 04 43.6	+0.6
JFWS	Jewell Farm	37.56	324	P	P	07 02 28.1	-0.2
	baz=130,SNR=41						
L40A	Anamosa	37.58	323	P	P	07 02 28.2	-0.3
L40A				IAmb	IAmb	07 02 29.5	
	comp=Z,243nm,1.1s						
GUA01	Guaratinga, BA	37.60	145	*e*P	P	07 02 29.3	+0.4
P38A	Dawn	37.62	318	P	P	07 02 28.6	-0.2
P38A				IAmb	IAmb	07 02 29.9	
	comp=Z,191nm,0.8s						
P38A				PcP	PcP	07 04 44.1	+0.9
BB19B	Bebedouro	37.62	160	*e*P	P	07 02 29.9	+0.8
LOOK	Love County	37.65	307		P	07 02 29.5	+0.3
LOOK				IAmb	IAmb	07 02 31.6	
	comp=Z,96nm,0.7s						
LOOK				PcP	PcP	07 04 45.0	+1.6
LVC	Limon Verde	37.70	191	P	P	07 02 28.0	-2.1
	comp=Z,46nm,0.4s,baz=15,slow=5.4,SNR=70						
LVC				ScP	ScP	07 08 15.3	-1.7
	comp=Z,13nm,0.9s,baz=349,slow=4.2,SNR=6.4						
LVC	Limon Verde	37.70	191	*e*P	P	07 02 28.1	-2.0
LVC	Limon Verde	37.70	191	P	P	07 02 28.0	-2.1
LVC				IAmb	IAmb	07 03 08.4	
	comp=Z,152nm,1.1s						
833A	Chaparral WMA,	37.75	298	P	P	07 02 29.3	-0.9
	baz=103,SNR=21						
W35A	Tecumseh	37.87	309	P	P	07 02 30.6	-0.4
W35A				IAmb	IAmb	07 02 31.8	
	comp=Z,218nm,0.9s						
W35A				PcP	PcP	07 04 44.9	+0.8
N38A	Joes South For	38.06	319	P	P	07 02 33.1	+0.5
OK031	S. Brethren Rd	38.17	310		P	07 02 34.1	+0.6
E43A	Lone Tree Farm	38.27	331	IAmb	IAmb	07 02 36.2	
	comp=Z,324nm,1.4s						
FNO	Franklin	38.30	309		P	07 02 34.7	0.0
FNO				IAmb	IAmb	07 02 35.7	
	comp=Z,468nm,1.5s						
FNO				PcP	PcP	07 04 46.6	+1.1
T35A	Sooner Cattle	38.34	312	IAmb	IAmb	07 02 36.1	
	comp=Z,343nm,1.1s						
F42A	Maple Grove Fa	38.37	329	P	P	07 02 36.2	+1.1
F42A				IAmb	IAmb	07 02 36.8	
	comp=Z,168nm,0.7s						
OK025	Westminster Rd	38.38	310		P	07 02 35.1	-0.3
OK025				IAmb	IAmb	07 02 36.3	
	comp=Z,324nm,1.1s						
OK025					PcP	07 04 46.3	+0.6
OKCSW	OKLAHOMA CITY	38.39	309		P	07 02 35.4	0.0
OKCSW					PcP	07 04 46.8	+1.1
OKCFA	Oklahoma City	38.40	309	P	P	07 02 35.3	-0.2
OKCFA				IAmb	IAmb	07 02 36.4	
	comp=Z,413nm,1.5s						
OKCFA					PcP	07 04 46.4	+0.6
NAN01	Guarapari, ES	38.45	146	*e*P	P	07 02 36.4	+0.4
SJMB	Sao Joao De Ma	38.61	148	*e*P	P	07 02 38.2	+0.8
JCT	Junction City	38.63	301	P	P	07 02 37.4	-0.1
JCT				pmax	pmax		
	comp=Z,483nm,1.3s						
JCT	Junction City	38.63	301	P	P	07 02 37.4	-0.1
JCT	Junction City	38.63	301	P	P	07 02 37.0	-0.5
	baz=106,SNR=117						
SCIA	State Center	38.69	321	P	P	07 02 38.0	+0.2
SCIA				IAmb	IAmb	07 02 39.2	
	comp=Z,292nm,0.9s						
SCIA	State Center	38.69	321	P	P	07 02 37.6	-0.1
	baz=125,SNR=19						
K38A	Parkersburg	38.85	322	P	P	07 02 39.2	+0.1
BSFB	Barra de Sao F	38.89	148	*e*P	P	07 02 40.5	+0.9
BSCB	Bom Sucesso	38.95	155	*e*P	P	07 02 40.2	0.0
G40A	Rib Lake	39.08	327	P	P	07 02 41.5	+0.5
G40A				IAmb	IAmb	07 02 42.9	
	comp=Z,269nm,1.1s						
ABTX	Abilene, Hawle	39.12	304	P	P	07 02 41.5	-0.1
ABTX	Abilene, Hawle	39.12	304	P	P	07 02 41.1	-0.5
	baz=108,SNR=98						
WMOK	Wichita Mounta	39.15	308	P	P	07 02 41.1	-0.7
	baz=112,SNR=18						
RCLB	Rio Claro- Sao	39.21	159	*e*P	P	07 02 43.8	+1.4
CROK	Carrier	39.24	311	P	P	07 02 42.3	-0.1
KAN14	Manchester OK	39.41	311	P	P	07 02 43.9	+0.1
KSU1	Kansas State U	39.41	315	P	P	07 02 42.9	-0.9
KSU1	Kansas State U	39.41	315	P	P	07 02 42.7	-1.1
	baz=118,SNR=94						
FRTB	Fartura	39.44	163	*e*P	P	07 02 45.2	+1.0
KAN06	Argonia West S	39.45	312	P	P	07 02 44.1	-0.1
KAN06				IAmb	IAmb	07 02 45.7	
	comp=Z,281nm,1.1s						
D41A	Chassel	39.51	331	P	P	07 02 45.2	+0.7
RIB01	Linhares ES	39.52	148	*e*P	P	07 02 45.2	+0.3
KAN12	Harper NE Stat	39.58	312		P	07 02 45.6	+0.4
KAN16	Harper SW Stat	39.59	312		P	07 02 45.4	0.0
ZAIG	Zacatecas	39.75	288	P	P	07 02 48.0	+0.8
ZAIG				IAmb	IAmb	07 02 50.0	
	comp=Z,394nm,1.7s						
U32A	Winter Ranch,	39.94	310		P	07 02 48.4	+0.1
VAO	Valinhos	39.94	159	*e*P	P	07 02 50.0	+1.5
PTGB	Pitanga	40.11	167	*e*P	P	07 02 51.1	+1.3
SPB	Sao Paulo	40.33	160	*e*P	P	07 02 52.6	+1.1
SPB	Sao Paulo	40.33	160	P	P	07 02 52.4	+0.9
SCHQ	Schefferville	40.38	355	P	P	07 02 52.3	+0.7
	comp=Z,74nm,0.5s,baz=178,slow=7.2,SNR=245						
SCHQ				PcP	PcP	07 04 51.7	+0.1
	comp=Z,7.9nm,0.5s,baz=256,slow=4.2,SNR=2.1						
SCHQ				ScP	ScP	07 08 24.4	-2.0
	comp=Z,7.0nm,0.9s,baz=66,slow=4.9,SNR=3.7						
SCHQ	Schefferville	40.38	355	P	P	07 02 52.2	+0.6
SCHQ				IAmb	IAmb	07 02 53.7	
	comp=Z,378nm,1.2s						
SPMN	Marine on St.	40.45	325	P	P	07 02 51.8	-0.5
SPMN				IAmb	IAmb	07 02 53.3	
	comp=Z,281nm,1.2s						
SPMN				PcP	PcP	07 04 52.3	+0.2
SPMN	Marine on St.	40.45	325	P	P	07 02 51.6	-0.6
	baz=129,SNR=54						
ALF01	Guarapari-ES	40.45	149	*e*P	P	07 02 53.2	+0.7
VAS01	Vassouras-RJ	40.65	154	*e*P	P	07 02 54.7	+0.5
E38A	The Farm, Brul	40.67	328	P	P	07 02 53.6	-0.6
L34A	Svendsen Farm,	40.69	319	IAmb	IAmb	07 02 55.2	
	comp=Z,327nm,1.1s						
PARB	Paraibuna	40.73	158	*e*P	P	07 02 55.6	+0.7
N33A	J Bar K, Exete	40.76	317	IAmb	IAmb	07 02 57.8	
	comp=Z,186nm,0.5s						
CPUP	Villa Florida	40.87	174	P	P	07 02 55.0	-0.8
	comp=Z,64nm,0.5s,baz=356,slow=7.2,SNR=224						
CPUP				ScP	ScP	07 08 28.7	0.0
	comp=Z,4.9nm,0.9s,baz=303,slow=4.2,SNR=2.9						
CPUP				LR	LR	07 20 17.8	
	comp=Z,994nm,19.9s,baz=354,slow=36						
CPUP	Villa Florida	40.87	174	IAmb	IAmb	07 02 56.3	
	comp=Z,339nm,1.6s						
DUB01	Friburgo-RJ	40.94	153	*e*P	P	07 02 57.4	+0.8
MAN01	Angra dos Reis	40.95	155	*e*P	P	07 02 57.6	+1.0
PET01	Itanhaem-SP	41.03	160	*e*P	P	07 02 57.1	-0.2
CAM01	Campos-RJ	41.04	151	*e*P	P	07 02 57.9	+0.6
F36A	Milaca	41.24	326	P	P	07 02 57.9	-0.9
F36A				PcP	PcP	07 04 54.9	+0.3
CBKS	Cedar Bluff	41.46	313	IAmb	IAmb	07 03 01.7	
	comp=Z,356nm,1.1s						
CBKS	Cedar Bluff	41.46	313	P	P	07 03 00.4	-0.4
	baz=115,SNR=36						
TIJ01	Guaruva-PR	41.47	163	*e*P	P	07 03 02.4	+1.4
EYMN	Ely	41.55	329	P	P	07 03 01.4	+0.2
EYMN				IAmb	IAmb	07 03 03.7	
	comp=Z,462nm,1.7s						
EYMN	Ely	41.55	329	P	P	07 03 00.8	-0.5
	baz=133,SNR=21						
BGNE	Belgrade	41.55	317	P	P	07 03 01.1	-0.4
BGNE				PcP	PcP	07 04 56.5	+0.7
BGNE	Belgrade	41.55	317	P	P	07 03 00.8	-0.6
	baz=119,SNR=37						
ECSD	EROS Data Cent	41.78	321	P	P	07 03 02.4	-0.8
ECSD				PcP	PcP	07 04 56.5	0.0
ECSD	EROS Data Cent	41.78	321	P	P	07 03 02.9	-0.3
	baz=123,SNR=96						
AC02	Maricunga	41.86	190	IAmb	IAmb	07 03 43.4	
	comp=Z,207nm,1.1s						
MSTX	Muleshoe	42.02	305	P	P	07 03 05.1	-0.4
MSTX	Muleshoe	42.02	305	P	P	07 03 05.0	-0.4
	baz=107,SNR=61						
ITAB	Concordia	42.54	168	*e*P	P	07 03 10.0	+0.6
K31A	O'Neill	42.54	318	P	P	07 03 09.2	-0.2
F33A	5 Mile Ranch,	42.77	324	P	P	07 03 10.7	-0.5
F33A				IAmb	IAmb	07 03 12.0	
	comp=Z,341nm,1.6s						
B35A	Bob, Littlefor	42.94	328	P	P	07 03 12.1	-0.4
B35A				IAmb	IAmb	07 03 13.5	
	comp=Z,552nm,1.4s						
B35A				PcP	PcP	07 04 60.0	-0.3
HPIG		42.98	294	IAmb	IAmb	07 03 15.0	
	comp=Z,347nm,1.1s						
MNTX	Cornudas Mount	43.57	301	P	P	07 03 17.9	0.0
MNTX				IAmb	IAmb	07 03 19.4	
	comp=Z,247nm,1.1s						
MNTX	Cornudas Mount	43.57	301	P	P	07 03 17.8	0.0
	baz=103,SNR=228						
SUSD	Miller	43.59	321	P	P	07 03 17.4	-0.4
SUSD	Miller	43.59	321	P	P	07 03 17.3	-0.5
	baz=121,SNR=40						
KSCO	Kaye Shedlock'	43.60	312	IAmb	IAmb	07 03 19.2	
	comp=Z,411nm,1.2s						
KSCO	Kaye Shedlock'	43.60	312	P	P	07 03 17.8	-0.4
	baz=112,SNR=48						
OGNE	Ogallala	43.96	315	IAmb	IAmb	07 03 21.9	
	comp=Z,376nm,1.2s						
OGNE	Ogallala	43.96	315	P	P	07 03 20.4	-0.4
	baz=115,SNR=15						
PMOZ	Porto Moniz, M	43.98	58	*e*P	P	07 03 22.5	+1.3
	comp=Z,416nm,1.5s						
PMOZ	Porto Moniz, M	43.98	58	P	P	07 03 21.5	+0.3
PMAR	Madeira	44.19	58	*e*P	P	07 03 23.5	+0.6
	comp=Z,274nm,2.2s						
ITQB	Itaqui	44.24	174	*e*P	P	07 03 22.4	-0.6
ITQB	Itaqui	44.24	174	P	P	07 03 22.2	-0.9
ITQB				IAmb	IAmb	07 03 23.5	
	comp=Z,411nm,1.6s						
ITQB				PP	PP	07 05 08.3	-1.3
T25A	Trinidad	44.27	309	P	P	07 03 23.6	0.0
T25A				IAmb	IAmb	07 03 24.9	
	comp=Z,267nm,1.1s						
T25A	Trinidad	44.27	309	P	P	07 03 23.6	0.0
	baz=109,SNR=131						
LCO	Las Campanas	44.27	192	P	P	07 03 21.5	-2.2
LCO				pmax	pmax		
	comp=Z,186nm,1.5s						
LCO	Las Campanas	44.27	192	P	P	07 03 21.5	-2.2
PMPS	Porto Santo	44.74	58	*e*P	P	07 03 25.2	-1.9
	comp=Z,416nm,1.8s						
ANMO	Albuquerque	45.22	305	P	P	07 03 31.4	+0.3
ANMO				pmax	pmax		
	comp=Z,240nm,1.3s						
ANMO	Albuquerque	45.22	305	P	P	07 03 31.4	+0.3
ANMO				IAmb	IAmb	07 03 33.0	
	comp=Z,240nm,1.2s						
ANMO	Albuquerque	45.22	305	P	P	07 03 31.5	+0.4
	baz=105						
ULM	Lac du Bonnet	45.23	329	P	P	07 03 30.2	-0.5
	comp=Z,254nm,0.4s,baz=131,slow=8.0,SNR=326						
ULM				PcP	PcP	07 05 07.9	-0.1
	comp=Z,29nm,0.6s,baz=96,slow=1.8,SNR=4.5						
ULM				ScP	ScP	07 08 45.1	-1.0
	comp=Z,12nm,0.9s,baz=124,slow=4.4,SNR=5.3						
ULM				S	S	07 09 55.9	-2.9
	baz=338,slow=19						
ULM				LR	LR	07 22 51.5	
	comp=Z,481nm,19.6s,baz=137,slow=36						
ULM	Lac du Bonnet	45.23	329	P	P	07 03 29.8	-0.9
ULM				pmax	pmax		
	comp=Z,708nm,1.3s						
ULM	Lac du Bonnet	45.23	329	P	P	07 03 29.8	-0.9
SDCO	Great Sand Dun	45.28	309	IAmb	IAmb	07 03 32.9	
	comp=Z,211nm,1.1s						
SDCO	Great Sand Dun	45.28	309	P	P	07 03 31.5	-0.2
	baz=108,SNR=151						
GO04	Tololo Observa	45.42	191	P	P	07 03 31.2	-1.5
Q24A	Divide	45.42	311	P	P	07 03 32.2	-0.6
	baz=110,SNR=51						
E28A	Huff	45.73	322	P	P	07 03 34.4	-0.4
E28A				IAmb	IAmb	07 03 35.9	
	comp=Z,517nm,1.6s						
121A	Cookes Peak, D	45.73	301	IAmb	IAmb	07 03 37.8	
	comp=Z,277nm,1.1s						
121A	Cookes Peak, D	45.73	301	P	P	07 03 36.3	+1.1
	baz=102,SNR=125						
MDND	Maddock	45.78	324	IAmb	IAmb	07 03 36.1	
	comp=Z,457nm,1.2s						
MDND	Maddock	45.78	324	P	P	07 03 34.8	-0.3
	baz=123,SNR=26						
ISCO	Idaho Springs	46.05	312	P	P	07 03 37.8	+0.1
ISCO				pmax	pmax		
	comp=Z,160nm,1.1s						
ISCO	Idaho Springs	46.05	312	P	P	07 03 37.8	+0.1
ISCO	Idaho Springs	46.05	312	P	P	07 03 37.9	+0.1
	baz=110,SNR=130						
CO03	El Pedregal	46.05	191	P	P	07 03 35.5	-2.0
CO03				IAmb	IAmb	07 03 38.8	
	comp=Z,89nm,0.5s						
S22A	4UR Ranch, Cre	46.28	309	P	P	07 03 39.5	0.0
	baz=107,SNR=94						
ZON	Zonda	46.41	189	P	P	07 03 38.9	-1.3
ZON				pmax	pmax		
	comp=Z,593nm,1.7s						
ZON	Zonda	46.41	189	P	P	07 03 38.9	-1.3
ZON				IAmb	IAmb	07 04 19.7	
	comp=Z,593nm,1.7s						
SLBS	Sierra La Lagu	46.57	289	P	P	07 03 43.2	+1.5
SLBS				IAmb	IAmb	07 03 44.3	
	comp=Z,317nm,1.2s						
RSSD	Black Hills	46.64	318	P	P	07 03 42.1	-0.1
RSSD				pmax	pmax		
	comp=Z,39nm,0.7s						
RSSD	Black Hills	46.64	318	P	P	07 03 42.0	-0.1
RSSD	Black Hills	46.64	318	P	P	07 03 41.8	-0.4
	baz=116						
N23A	Red Feather La	46.67	313	P	P	07 03 42.3	-0.1
	baz=111,SNR=48						
PLTB	Pedras Altas	46.69	171	P	P	07 03 40.7	-1.6
319A	Douglas	46.77	299	IAmb	IAmb	07 03 45.6	
	comp=Z,337nm,0.9s						
MVCO	Mesa Verde	47.41	307	P	P	07 03 48.1	-0.1
MVCO	Mesa Verde	47.41	307	P	P	07 03 48.0	-0.1
	baz=106,SNR=36						
K22A	Casper	47.71	315	IAmb	IAmb	07 03 52.0	
	comp=Z,442nm,1.4s						
K22A	Casper	47.71	315	P	P	07 03 50.5	+0.1
	baz=112,SNR=72						
RWWY	Rawlins	47.84	314	P	P	07 03 50.8	-0.7
RWWY				IAmb	IAmb	07 03 52.3	
	comp=Z,443nm,1.4s						
W18A	Petrified Fore	47.87	304	P	P	07 03 52.4	+0.7
W18A				IAmb	IAmb	07 03 53.6	
	comp=Z,381nm,1.3s						
W18A	Petrified Fore	47.87	304	P	P	07 03 52.2	+0.5
	baz=103,SNR=20						
VA03	San Esteban	47.90	190	IAmb	IAmb	07 04 31.0	
	comp=Z,330nm,1.4s						
NRS	Narsarsuaq	47.91	10	P	P	07 03 52.5	+1.1
NRS				pmax	pmax		
	comp=Z,674nm,1.5s						
NRS	Narsarsuaq	47.91	10	*i* P	P	07 03 52.4	+1.1
NRS				IAmb	IAmb	07 03 53.4	
	comp=Z,693nm,1.5s						
NRS	Narsarsuaq	47.91	10	P	P	07 03 52.5	+1.1
X18A	Snowflake	47.92	303	P	P	07 03 53.0	+0.9
X18A				IAmb	IAmb	07 03 54.5	
	comp=E,163nm,1.1s						
O20A	White River Ci	48.06	311	P	P	07 03 53.2	0.0
O20A	White River Ci	48.06	311	P	P	07 03 53.4	+0.2
	baz=108,SNR=35						
TUC	Tucson	48.19	300	P	P	07 03 54.7	+0.6
TUC				pmax	pmax		
	comp=Z,172nm,1.1s						
TUC	Tucson	48.19	300	P	P	07 03 54.7	+0.6
TUC				IAmb	IAmb	07 03 56.2	
	comp=Z,172nm,1.1s						
TUC	Tucson	48.19	300	P	P	07 03 54.7	+0.6
	baz=100						
PEL	Peldehue	48.29	190	P	P	07 03 54.4	-0.3
PEL				pmax	pmax		
	comp=Z,349nm,1.8s						
PEL	Peldehue	48.29	190	P	P	07 03 54.4	-0.3
PEL				IAmb	IAmb	07 04 34.5	
	comp=Z,349nm,1.8s						
MT02	Curacav	48.48	191	P	P	07 03 54.9	-1.2
MT05	Renca	48.54	190	P	P	07 03 55.7	-0.9
MT05				IAmb	IAmb	07 04 36.5	
	comp=Z,430nm,1.6s						
DGMT	Dagmar	48.74	323	P	P	07 03 58.4	+0.4
DGMT				IAmb	IAmb	07 03 59.2	
	comp=Z,430nm,1.4s						
DGMT	Dagmar	48.74	323	P	P	07 03 58.3	+0.4
	baz=119,SNR=42						
SRIG	Santa Rosalia	48.85	294	P	P	07 04 00.4	+1.3
X16A	Lo Mia Camp, P	49.10	303	P	P	07 04 02.3	+1.1
X16A				IAmb	IAmb	07 04 03.6	
	comp=Z,162nm,1.2s						
LAO	LASA Array	49.14	320	IAmb	IAmb	07 04 02.3	
	comp=Z,226nm,1.3s						
LAO	LASA Array	49.14	320	P	P	07 04 01.5	+0.4
	baz=116,SNR=34						
RDMU	Red Mountain	49.16	311	P	P	07 04 01.3	-0.3
RDMU				IAmb	IAmb	07 04 03.7	
	comp=Z,388nm,1.4s						
WUAZ	Wupatki	49.26	304	P	P	07 04 03.3	+0.9
	baz=102,SNR=278						
P18A	Preston Nutter	49.39	310	IAmb	IAmb	07 04 05.2	
	comp=Z,468nm,1.4s						
SRU	San Rafael Swe	49.45	309	P	P	07 04 04.3	+0.5
SRU				pmax	pmax		
	comp=Z,391nm,1.4s						
SRU	San Rafael Swe	49.45	309	P	P	07 04 04.3	+0.5
SRU				IAmb	IAmb	07 04 05.4	
	comp=Z,391nm,1.4s						
214A	Organ Pipe Nat	49.83	300	P	P	07 04 07.4	+0.8
214A				IAmb	IAmb	07 04 08.9	
	comp=Z,211nm,1.5s						
214A	Organ Pipe Nat	49.83	300	P	P	07 04 07.2	+0.6
	baz=98,SNR=29						
BW06	Boulder Array	49.85	314	P	P	07 04 06.7	-0.1
	baz=109,SNR=264						
PD31	Pinedale Array	49.85	314	P	P	07 04 06.5	-0.2
PD31				IAmb	IAmb	07 04 08.0	
	comp=Z,378nm,1.2s						
PDAR	Pinedale Array	49.85	314	P	P	07 04 06.8	+0.1
	comp=Z,76nm,0.5s,baz=118,slow=9.7,SNR=805						
PDAR				PcP	PcP	07 05 25.4	+0.4
	comp=Z,15nm,0.6s,baz=108,slow=5.3,SNR=4.5						
PDAR				ScP	ScP	07 09 04.8	-1.2
	comp=Z,6.5nm,0.8s,baz=111,slow=6.3,SNR=9.3						
PDAR				PKiKP	PKiKP	07 12 09.6	-1.3
	comp=Z,0.6nm,0.5s,baz=115,slow=4.6,SNR=8.1						
PDAR				LR	LR	07 27 24.6	
	comp=Z,472nm,19.9s,baz=114,slow=38						
Q16A	Castle Valley	49.89	309	P	P	07 04 06.4	-0.7
TMUT	Trail Mountain	50.02	309	P	P	07 04 08.7	+0.5
U15A	North Rim	50.18	305	IAmb	IAmb	07 04 11.8	
	comp=Z,586nm,1.9s						
FCC	Fort Churchill	50.34	339	P	P	07 04 09.3	-0.5
FCC				pmax	pmax		
	comp=Z,234nm,0.6s						
FCC	Fort Churchill	50.34	339	P	P	07 04 09.3	-0.5
PKCU	Pink Cliffs	50.41	307	P	P	07 04 11.8	+0.7
PKCU				IAmb	IAmb	07 04 13.2	
	comp=Z,257nm,1.4s						
MTPU	Mount Pierson	50.45	307	IAmb	IAmb	07 04 13.8	
	comp=Z,346nm,1.5s						
RLMT	Red Lodge	50.47	317	P	P	07 04 11.5	+0.1
RLMT				IAmb	IAmb	07 04 13.0	
	comp=Z,343nm,1.2s						
RLMT	Red Lodge	50.47	317	P	P	07 04 11.6	+0.2
	baz=111,SNR=161						
MPU	Maple Canyon	50.52	310	IAmb	IAmb	07 04 13.5	
	comp=Z,144nm,1.1s						
MSU	Marysvale	50.55	308	P	P	07 04 12.8	+0.7
MSU	Marysvale	50.55	308	P	P	07 04 12.8	+0.7
KNB	Kanab	50.72	306	P	P	07 04 14.0	+0.7
KNB				pmax	pmax		
	comp=Z,116nm,1.1s						
KNB	Kanab	50.72	306	P	P	07 04 14.0	+0.7
TCRU	Three Creeks R	50.78	308	P	P	07 04 14.6	+0.8
TCRU				IAmb	IAmb	07 04 16.2	
	comp=Z,264nm,1.6s						
CTU	Camp Tracy	50.79	311	IAmb	IAmb	07 04 15.5	
	comp=Z,226nm,0.8s						
NLU	North Lily Min	50.83	310	P	P	07 04 14.5	+0.3
NLU				IAmb	IAmb	07 04 16.0	
	comp=Z,246nm,1.4s						
LOHW	Long Hollow	50.85	315	IAmb	IAmb	07 04 15.6	
	comp=Z,278nm,1.5s						
AHID	Auburn Hatcher	50.92	314	IAmb	IAmb	07 04 16.0	
	comp=Z,352nm,1.1s						
TTIG	Tnine Tigouga,	50.96	62	P	P	07 04 17.0	+1.8
GCMT	Greycliff	50.98	318	P	P	07 04 15.2	+0.2
LKWY	Lake	51.03	316	P	P	07 04 16.9	+1.3
LKWY				pmax	pmax		
	comp=Z,48nm,1.1s						
LKWY	Lake	51.03	316	P	P	07 04 16.9	+1.3
SZCU	Shurtz Canyon	51.05	307	IAmb	IAmb	07 04 17.4	
	comp=Z,504nm,1.9s						
FLWY	Flagg Ranch	51.07	315	P	P	07 04 16.2	+0.4
H17A	Grant Village	51.09	316	P	P	07 04 16.5	+0.5
H17A	Grant Village	51.09	316	P	P	07 04 16.2	+0.1
	baz=110,SNR=22						
YUF	Upper Falls	51.15	316	P	P	07 04 17.6	+1.1
ECR	Eagle Creek	51.20	314	P	P	07 04 17.2	+0.3
YPP	Pitchstone Pla	51.20	316	P	P	07 04 17.4	+0.5
CCUT	Cedar City	51.25	307	P	P	07 04 17.9	+0.5
YNR	Norris Junctio	51.27	316	P	P	07 04 17.7	+0.3
PDMCI	Parker Dam,Lak	51.28	302	P	P	07 04 17.7	+0.4
	baz=99,SNR=24						
DUG	Dugway, Tooele	51.44	310	IAmb	IAmb	07 04 20.4	
	comp=Z,382nm,1.2s						
DUG	Dugway, Tooele	51.44	310	P	P	07 04 18.9	+0.3
	baz=105,SNR=220						
YMR	Madison River	51.44	316	P	P	07 04 18.1	-0.5
SFX	San Felipe	51.45	298	P	P	07 04 19.3	+0.7
SFX				IAmb	IAmb	07 04 20.8	
	comp=Z,254nm,1.3s						
SPUT	South Promonto	51.46	311	P	P	07 04 18.6	-0.2
SPUT				IAmb	IAmb	07 04 20.1	
	comp=Z,190nm,1.1s						
OUK	Oukaimeden	51.52	62	P	P	07 04 22.0	+2.4
H10N3	ASCENSION HYDR	51.56	113	T	T	07 59 55.9	
	baz=297,slow=75,SNR=504						
H10N2	ASCENSION HYDR	51.57	113	T	T	07 59 54.2	
	baz=297,slow=75,SNR=522						
H10N1	ASCENSION HYDR	51.58	113	T	T	07 59 57.0	
	baz=297,slow=75,SNR=606						
PFVI	Vila Bisbo	51.62	54	*e*P	P	07 04 21.0	+1.2
	comp=Z,206nm,1.4s						
GLA	Glamis	51.67	301	P	P	07 04 20.9	+0.6
GLA				pmax	pmax		
	comp=Z,230nm,1.4s						
GLA	Glamis	51.67	301	P	P	07 04 20.9	+0.6
GLA				IAmb	IAmb	07 04 22.5	
	comp=Z,230nm,1.4s						
GLA	Glamis	51.67	301	P	P	07 04 20.8	+0.6
	baz=98,SNR=43						
NEE2	Needles Airpor	51.74	303	P	P	07 04 21.4	+0.6
	baz=99,SNR=35						
BGU	Big Grassy Mou	51.79	311	P	P	07 04 21.5	+0.3
MORF	Marmelete	51.79	54	*e*P	P	07 04 21.8	+0.6
MORF				IAmb	IAmb	07 04 24.1	
	comp=Z,79nm,0.9s						
MORF	Marmelete	51.79	54	*e*P	P	07 04 22.4	+1.3
	comp=Z,216nm,1.2s						
MORF	Marmelete	51.79	54	*e*P	P	07 04 21.8	+0.6
QLMT	Earthquake Lak	51.81	316	P	P	07 04 22.6	+1.2
HVU	Hansel Valley	51.83	312	IAmb	IAmb	07 04 22.6	
	comp=Z,164nm,0.8s						
PSUT	Pine Spring	51.84	308	IAmb	IAmb	07 04 24.1	
	comp=Z,215nm,0.9s						
EGMT	Eagleton	51.88	320	P	P	07 04 22.0	+0.4
EGMT				IAmb	IAmb	07 04 23.5	
	comp=Z,304nm,1.1s						
EGMT	Eagleton	51.88	320	P	P	07 04 22.1	+0.4
	baz=113,SNR=106						
H10S3	ASCENSION HYDR	51.90	114	T	T	08 00 36.1	
	baz=285,slow=74,SNR=355						
H10S2	ASCENSION HYDR	51.92	114	T	T	08 00 19.6	
	baz=295,slow=74,SNR=62						
PNCL	Nicolau / Gran	52.05	53	*e*P	P	07 04 24.1	+1.2
	comp=Z,150nm,1.1s						

IRM	Iron Mountain	52.08	302	P	P	07 04 24.4	+1.0
	baz=98,SNR=222						
AVE	Averroes	52.14	59	P	P	07 04 25.2	+1.5
PSBE	So Bento	52.15	51	*e*P	P	07 04 24.6	+0.9
	comp=Z,185nm,1.7s						
BOZ	Bozeman (W)	52.20	317	IAmb	IAmb	07 04 25.8	
	comp=Z,154nm,1.2s						
BOZ	Bozeman (W)	52.20	317	P	P	07 04 24.2	+0.1
	baz=110,SNR=90						
BC3	Big Chuckawall	52.27	301	P	P	07 04 25.3	+0.5
	baz=98,SNR=82						
SPR3	Spring Creek 3	52.30	308	IAmb	IAmb	07 04 27.4	
	comp=Z,416nm,1.5s						
PCVE	Castro Verde	52.33	54	*e*P	P	07 04 26.1	+1.0
	comp=Z,101nm,1.4s						
OUZM	OUZ	52.43	62	P	P	07 04 28.0	+1.9
SHPR	Sheep Range	52.46	305	P	P	07 04 27.0	+0.8
SHPR				IAmb	IAmb	07 04 28.5	
	comp=Z,246nm,2.0s						
SWSC	Sam W. Stewart	52.47	300	P	P	07 04 26.7	+0.5
	baz=97,SNR=40						
PMTG	Montargil	52.48	52	*e*P	P	07 04 26.9	+0.8
	comp=Z,202nm,1.8s						
PCAS	Casmilo, Conde	52.49	50	*e*P	P	07 04 26.4	+0.2
	comp=Z,181nm,1.4s						
PRN	Pahroc Range	52.54	306	P	P	07 04 27.9	+1.1
PVAQ	Vaqueiros	52.54	54	*e*P	P	07 04 27.7	+1.1
	comp=Z,186nm,1.7s						
PBEJ	Beja	52.54	53	*e*P	P	07 04 26.7	+0.1
	comp=Z,84nm,1.6s						
COI	Coimbra	52.59	50	*e*P	P	07 04 27.9	+1.0
	comp=Z,325nm,1.3s						
COI	Coimbra	52.59	50	P	P	07 04 28.2	+1.3
COI				pmax	pmax		
	comp=Z,215nm,1.1s						
COI	Coimbra	52.59	50	P	P	07 04 28.2	+1.3
COI				IAmb	IAmb	07 04 29.9	
	comp=Z,215nm,1.1s						
GMRC	Granite Mounta	52.59	303	P	P	07 04 27.7	+0.5
	baz=98,SNR=76						
RMX	La Rumorosa	52.66	300	P	P	07 04 28.6	+0.9
IKP	In-Ko-Pah, Jac	52.69	300	P	P	07 04 28.6	+0.7
	baz=96,SNR=20						
DLMT	Dillon	52.76	316	P	P	07 04 28.5	+0.2
DLMT				IAmb	IAmb	07 04 30.2	
	comp=Z,380nm,1.7s						
BELC	Belle Mtn. Jos	52.76	302	P	P	07 04 29.1	+0.6
	baz=98,SNR=57						
ZHG	ZHG	52.80	59	P	P	07 04 30.0	+1.4
DY2G	Dye2	52.81	8	*i* P	P	07 04 28.8	+0.4
DY2G				IAmb	IAmb	07 04 29.9	
	comp=Z,2µm,1.5s						
SFJD	Kangerlussuaq	52.84	5	P	P	07 04 28.6	+0.3
SFJD	Kangerlussuaq	52.84	5	*i* P	P	07 04 28.4	+0.2
SFJD				IAmb	IAmb	07 04 29.7	
	comp=Z,167nm,1.5s						
SFJD	Kangerlussuaq	52.84	5	P	P	07 04 28.6	+0.3
SFJD				IAmb	IAmb	07 04 30.0	
	comp=Z,240nm,1.4s						
TUQ	Turquoise Moun	52.90	303	P	P	07 04 30.0	+0.5
	baz=99,SNR=145						
PESTR	Estremoz	52.92	52	*e*P	P	07 04 30.3	+0.9
	comp=Z,202nm,1.5s						
PESTR	Estremoz	52.92	52	P	P	07 04 30.5	+1.1
PESTR	Estremoz	52.92	52	P	P	07 04 30.6	+1.2
MONP2	Monument Peak	52.98	300	P	P	07 04 31.0	+0.8
	baz=96,SNR=72						
CCX	Cicese	53.08	299	P	P	07 04 32.1	+1.5
CCX				IAmb	IAmb	07 04 33.0	
	comp=Z,152nm,1.3s						
TPFO	Pinon Flats	53.09	301	P	P	07 04 31.4	+0.5
	baz=97,SNR=22						
PVIS	Viseu	53.09	50	*e*P	P	07 04 31.0	+0.3
	comp=Z,92nm,1.6s						
PFO	Pinyon Flats O	53.09	301	P	P	07 04 31.1	+0.2
PFO				pmax	pmax		
	comp=Z,40nm,0.8s						
PFO	Pinyon Flats O	53.09	301	P	P	07 04 31.1	+0.2
PFO				PcP	PcP	07 05 38.8	+1.6
PFO	Pinyon Flats O	53.09	301	P	P	07 04 31.4	+0.5
	baz=97,SNR=22						
TKX	Tecate	53.10	300	IAmb	IAmb	07 04 32.7	
	comp=Z,289nm,1.9s						
ISOG	Isortoq, Green	53.12	11	*i* P	P	07 04 30.9	+0.6
ISOG				IAmb	IAmb	07 04 31.7	
	comp=Z,207nm,1.2s						
PGAV	Gavieira, Arco	53.12	48	*e*P	P	07 04 31.6	+0.7
	comp=Z,118nm,1.3s						
R11A	Troy Canyon, C	53.13	307	IAmb	IAmb	07 04 33.4	
	comp=Z,176nm,1.4s						
R11A	Troy Canyon, C	53.13	307	P	P	07 04 31.7	+0.5
	baz=101,SNR=101						
HEC	Hector,Ludlow	53.15	303	P	P	07 04 32.0	+0.8
	baz=98,SNR=101						
BAR	Barrett	53.17	300	P	P	07 04 31.9	+0.6
BAR				IAmb	IAmb	07 04 33.3	
	comp=Z,228nm,1.6s						
BAR				PcP	PcP	07 05 38.7	+1.3
PMRV	Marv??o	53.19	51	*e*P	P	07 04 31.8	+0.4
	comp=Z,126nm,1.5s						
PCBR	Castelo Branco	53.21	51	*e*P	P	07 04 32.0	+0.5
	comp=Z,82nm,1.5s						
PCAB	Cabril	53.23	49	*e*P	P	07 04 30.2	-1.4
	comp=Z,90nm,1.7s						
SHOC	Shoshone, Teco	53.26	304	P	P	07 04 32.7	+0.8
	baz=99,SNR=40						
MTE	Manteigas	53.28	50	*e*P	P	07 04 32.7	+0.6
	comp=Z,101nm,1.3s						
POLO	Lamas de Olo	53.32	49	*e*P	P	07 04 32.9	+0.5
	comp=Z,72nm,1.4s						
ZGR	Zagora	53.35	63	P	P	07 04 35.0	+2.2
PVRL	Vila Real	53.35	49	*e*P	P	07 04 33.3	+0.7
	comp=Z,131nm,1.5s						
ELK	Elko	53.37	310	P	P	07 04 33.2	+0.3
ELK				pmax	pmax		
	comp=Z,496nm,1.8s						
ELK	Elko	53.37	310	P	P	07 04 33.2	+0.3
TPNV	Topopah Spring	53.40	305	P	P	07 04 34.3	+1.1
TPNV				pmax	pmax		
	comp=Z,50nm,0.8s						
TPNV	Topopah Spring	53.40	305	P	P	07 04 34.2	+1.1
TPNV	Topopah Spring	53.40	305	P	P	07 04 34.2	+1.0
	baz=100,SNR=110						
ANGG	Ammassalik, Gr	53.44	12	*i* P	P	07 04 32.7	0.0
ANGG	Ammassalik, Gr	53.44	12	IAmb	IAmb	07 04 34.9	
	comp=Z,343nm,1.6s						
TZRR	Tazzarine	53.44	62	P	P	07 04 36.0	+2.5
HLID	Hailey	53.47	314	IAmb	IAmb	07 04 35.4	
	comp=Z,285nm,1.4s						
HLID	Hailey	53.47	314	P	P	07 04 33.9	+0.3
	baz=106,SNR=138						
109C	Camp Elliot, M	53.55	300	P	P	07 04 34.9	+0.8
109C				IAmb	IAmb	07 04 36.0	
	comp=Z,167nm,1.2s						
109C	Camp Elliot, M	53.55	300	P	P	07 04 34.6	+0.6
	baz=96,SNR=20						
BBRC	Big Bear Solar	53.55	302	P	P	07 04 35.5	+1.1
	baz=97,SNR=26						
GSC	Goldstone, Bar	53.60	303	P	P	07 04 35.2	+0.7
GSC				pmax	pmax		
	comp=Z,384nm,1.8s						
GSC	Goldstone, Bar	53.60	303	P	P	07 04 35.2	+0.7
GSC				IAmb	IAmb	07 04 36.6	
	comp=Z,384nm,1.8s						
GSC	Goldstone, Bar	53.60	303	P	P	07 04 35.1	+0.6
	baz=98,SNR=67						
GWY	Greenwater Val	53.61	304	P	P	07 04 34.9	+0.2
GWY				IAmb	IAmb	07 04 36.2	
	comp=Z,145nm,1.3s						
RRX	Edison Barstow	53.70	303	P	P	07 04 36.3	+1.2
	baz=98,SNR=22						
MURC	Murrieta	53.70	301	P	P	07 04 36.0	+0.7
	baz=96,SNR=46						
QSM	Queen of Sheba	53.74	304	P	P	07 04 36.1	+0.7
QSM				IAmb	IAmb	07 04 37.5	
	comp=Z,273nm,1.4s						
FURC	Furnace Creek,	53.81	305	P	P	07 04 36.8	+0.9
	baz=99,SNR=59						
MVO	Moncorvo	53.83	49	*e*P	P	07 04 36.8	+0.7
	comp=Z,120nm,1.6s						
SICH	Sidi Chahed	53.97	58	P	P	07 04 40.0	+2.8
GOLM	Goulmima	54.04	61	P	P	07 04 41.0	+3.2
CHEFC	Chefchaouen	54.08	57	P	P	07 04 41.3	+3.3
LC01	Cunco	54.11	190	P	P	07 04 36.3	-1.6
MSO	Missoula	54.11	318	P	P	07 04 37.9	-0.2
	baz=108,SNR=32						
BFSC	Mount Baldy Ra	54.16	302	P	P	07 04 39.0	+0.3
	baz=97,SNR=41						
PBRG	Braganca	54.19	49	*e*P	P	07 04 39.4	+0.8
	comp=Z,69nm,1.6s						
MPMC	Manual Prospec	54.25	304	P	P	07 04 39.9	+0.5
	baz=98,SNR=67						
GRAC	Grapevine Rang	54.29	305	P	P	07 04 40.1	+0.6
	baz=99,SNR=62						
LCRM	LCR	54.31	59	P	P	07 04 42.0	+2.2
LRMC	Laurel Mtn Rad	54.33	303	P	P	07 04 40.4	+0.6
	baz=98,SNR=94						
MDT	Midelt	54.43	60	P	P	07 04 41.7	+1.1
	comp=Z,38nm,1.0s,baz=289,slow=6.4,SNR=38						
MDT	Midelt	54.43	60	P	P	07 04 42.8	+2.2
MFID	Camas Ranch	54.43	313	P	P	07 04 39.0	-1.4
MFID				IAmb	IAmb	07 04 42.1	
	comp=Z,252nm,1.6s						
MWC	Mount Wilson	54.49	302	IAmb	IAmb	07 04 43.0	
	comp=Z,256nm,1.4s						
EDW2	Edwards Air Fo	54.51	303	P	P	07 04 41.7	+0.6
	baz=97,SNR=102						
PASC	Pasadena Art C	54.59	302	P	P	07 04 42.0	+0.5
PASC				IAmb	IAmb	07 04 43.3	
	comp=Z,134nm,1.1s						
FMP	Fort Macarthur	54.63	301	P	P	07 04 42.5	+0.7
	baz=96						
CIS	Catalina Islan	54.70	301	P	P	07 04 43.1	+0.7
	baz=96,SNR=13						
DECC	Green Verdugo	54.72	302	P	P	07 04 43.1	+0.5
	baz=96,SNR=17						
SCI2	San Clemente I	54.77	300	P	P	07 04 43.6	+0.8
	baz=95,SNR=5.7						
CWC	Cottonwood Cre	54.78	304	P	P	07 04 43.8	+0.7
	baz=98						
WALA	Waterton Lakes	54.83	320	P	P	07 04 42.5	-0.7
WALA				IAmb	IAmb	07 04 44.4	
	comp=Z,184nm,1.6s						
LR03	Panguipulli	54.90	190	IAmb	IAmb	07 06 12.2	
	comp=Z,51nm,0.3s						
ILULI	Ilulissat	54.97	4	P	P	07 04 44.5	+0.8
ILULI				pmax	pmax		
	comp=Z,161nm,0.8s						
ILULI	Ilulissat	54.97	4	*i* P	P	07 04 43.1	-0.6
ILULI				IAmb	IAmb	07 04 45.0	
	comp=Z,596nm,1.6s						
ILULI	Ilulissat	54.97	4	P	P	07 04 44.5	+0.8
ILULI				IAmb	IAmb	07 04 45.3	
	comp=Z,161nm,0.8s						
PLID	Pearl Lake	54.98	315	P	P	07 04 43.9	-0.6
PLID				IAmb	IAmb	07 04 45.4	
	comp=Z,155nm,1.1s						
TIN	Tinemaha, Big	54.98	305	P	P	07 04 45.2	+0.6
	baz=98,SNR=20						
ISA	Isabella, Lake	54.99	303	P	P	07 04 45.5	+0.9
	baz=97,SNR=34						
OSI	Osito Audit: C	55.08	302	P	P	07 04 45.2	+0.1
OSI	Osito Audit: C	55.08	302	P	P	07 04 45.0	-0.1
	baz=96,SNR=7.9						
NV11	Mina Array Sit	55.13	307	P	P	07 04 45.5	-0.2
NV11				IAmb	IAmb	07 04 47.4	
	comp=Z,279nm,1.3s						
AKLM	AKL	55.21	58	P	P	07 04 47.3	+1.2
ARVC	Arvin	55.22	303	P	P	07 04 47.2	+1.0
	baz=96,SNR=37						
NVAR	Mina Array Bea	55.25	307	P	P	07 04 46.8	+0.3
	comp=Z,54nm,0.8s,baz=103,slow=6.2,SNR=287						
NVAR				PcP	PcP	07 05 46.8	+1.3
	comp=Z,16nm,0.7s,baz=125,slow=3.6,SNR=6.9						
NVAR				ScP	ScP	07 09 29.7	+0.1
	comp=Z,4.2nm,0.9s,baz=124,slow=4.8,SNR=5.6						
NVAR				LR	LR	07 31 34.2	
	comp=Z,434nm,20.2s,baz=97,slow=39						
NVAR	Mina Array Bea	55.25	307	P	P	07 04 46.7	+0.1
LHV	Little Huntoon	55.38	307	IAmb	IAmb	07 04 49.6	
	comp=Z,70nm,0.6s						
KOWA	Kowa	55.39	82	P	P	07 04 47.9	+0.3
	comp=Z,46nm,0.9s,baz=286,slow=7.3,SNR=74						
KOWA				ScP	ScP	07 09 29.1	-1.2
	comp=Z,6.3nm,0.9s,baz=222,slow=7.1,SNR=4.1						
KOWA	Kowa	55.39	82	P	P	07 04 48.0	+0.3
RYN	Ryan	55.45	307	IAmb	IAmb	07 04 49.6	
	comp=Z,144nm,1.2s						
VES	Vestal, Richgr	55.51	304	P	P	07 04 48.8	+0.7
	baz=97,SNR=78						
PAB	San Pablo	55.52	52	P	P	07 04 48.9	+0.6
PAB				pmax	pmax		
	comp=Z,95nm,1.4s						
PAB	San Pablo	55.52	52	P	P	07 04 48.9	+0.6
PAB	San Pablo	55.52	52	P	P	07 04 49.2	+0.9
MLAC	Mammoth, Mammo	55.54	306	P	P	07 04 49.6	+0.9
	baz=98,SNR=33						
SNCC	San Nicolas Is	55.61	300	P	P	07 04 50.0	+1.1
SNCC	San Nicolas Is	55.61	300	P	P	07 04 49.4	+0.5
	baz=95						
PLCA	Paso Flores	55.70	188	P	P	07 04 48.6	-0.7
	comp=Z,27nm,0.5s,baz=6.6,slow=7.8,SNR=70						
PLCA				ScP	ScP	07 09 31.7	+0.6
	comp=Z,5.0nm,0.8s,baz=351,slow=6.5,SNR=3.5						
PLCA				LR	LR	07 30 05.1	
	comp=Z,468nm,19.4s,baz=360,slow=37						
VOG	Valley Oaks Go	55.80	304	P	P	07 04 50.0	-0.3
	baz=97						
BMO	Blue Mountains	55.82	315	IAmb	IAmb	07 04 51.1	
	comp=Z,179nm,1.5s						
ESDC	Sonseca Array	55.84	52	P	P	07 04 51.5	+0.9
	comp=Z,21nm,0.5s,baz=269,slow=7.0,SNR=173						
ESDC				LR	LR	07 23 33.9	
	comp=Z,180nm,20.7s,baz=265,slow=30						
ESDC	Sonseca Array	55.84	52	P	P	07 04 51.4	+0.9
ESBB	Sonseca Array	55.84	52	IAmb	IAmb	07 04 53.2	
	comp=Z,163nm,1.4s						
TIC	Toumodi	55.84	92	*e*P	P	07 04 50.3	-0.6
LIC	Lamto	55.93	92	*e*P	P	07 04 50.6	-0.9
	comp=Z,97nm,0.8s						
DBIC	Dimbokro	55.99	92	P	P	07 04 51.8	-0.1
	comp=Z,17nm,0.5s,baz=299,slow=6.2,SNR=82						
DBIC				LR	LR	07 25 16.5	
	comp=Z,288nm,20.4s,baz=290,slow=32						
DBIC	Dimbokro	55.99	92	P	P	07 04 51.8	-0.1
PKM	Mcpherson Peak	56.00	302	P	P	07 04 52.4	+0.5
	baz=96,SNR=49						
YERR	Yerington	56.06	307	P	P	07 04 51.8	-0.4
YERR				PcP	PcP	07 05 50.8	+2.2
LL04	Puerto Octay	56.16	190	IAmb	IAmb	07 04 52.1	
	comp=Z,138nm,1.6s						
KIC	Kosan Boka	56.17	92	*e*P	P	07 04 52.9	-0.3
	comp=Z,35nm,0.5s						
ICESG	Greenland Ices	56.18	9	*i* P	P	07 04 52.4	-0.4
ICESG				IAmb	IAmb	07 04 53.7	
	comp=Z,880nm,1.6s						
WVOR	Wild Horse Val	56.22	311	P	P	07 04 52.9	-0.4
WVOR				pmax	pmax		
	comp=Z,138nm,1.4s						
WVOR	Wild Horse Val	56.22	311	P	P	07 04 52.9	-0.4
WVOR				IAmb	IAmb	07 04 54.5	
	comp=Z,138nm,1.4s						
JBK	JBK	56.26	58	P	P	07 04 55.0	+1.2
PAHR	Pah Rah Range	56.28	308	P	P	07 04 52.7	-1.1
J08A	Circle Bar Ran	56.29	313	P	P	07 04 53.4	-0.3
J08A				IAmb	IAmb	07 04 54.9	
	comp=Z,223nm,1.3s						
LL03	Petrohue	56.38	190	P	P	07 04 53.5	-0.6
LL03				IAmb	IAmb	07 04 55.9	
	comp=Z,60nm,0.7s						
PAGB	Antelope Grade	56.44	303	P	P	07 04 55.2	+0.4
MPK	Martis Peak	56.71	308	IAmb	IAmb	07 04 58.7	
	comp=Z,211nm,1.4s						
RUBR	Rubicon Trail	56.77	307	P	P	07 04 58.7	+1.3
RUBR				IAmb	IAmb	07 04 59.5	
	comp=Z,163nm,1.1s						
CMB	Columbia Colle	56.82	306	P	P	07 04 57.4	-0.1
CMB				pmax	pmax		
	comp=Z,145nm,1.7s						
CMB	Columbia Colle	56.82	306	P	P	07 04 57.4	-0.1
CMB				IAmb	IAmb	07 04 59.2	
	comp=Z,144nm,1.6s						
PMPB	Monarch Peak	56.93	304	P	P	07 04 58.7	+0.3
PMPB				IAmb	IAmb	07 04 59.7	
	comp=Z,126nm,1.3s						
SOEG	Soedalen	56.95	13	*i* P	P	07 04 59.9	+2.1
SOEG				*e*P	P	07 05 00.2	+2.4
SOEG				IAmb	IAmb	07 05 01.3	
	comp=Z,24nm,0.6s						
NUUG	Nuugaatsiaq	57.14	3	*e*P	P	07 04 58.2	-0.8
NUUG				*i* P	P	07 04 59.4	+0.4
NUUG				IAmb	IAmb	07 05 00.5	
	comp=Z,300nm,1.6s						
C09A	Chrisman Ranch	57.22	318	P	P	07 05 00.1	+0.1
D08A	Wollman Farm,	57.45	317	P	P	07 05 01.4	-0.3
D08A				IAmb	IAmb	07 05 03.0	
	comp=Z,159nm,1.7s						
SAO	San Andreas Ge	57.51	304	IAmb	IAmb	07 05 04.1	
	comp=Z,109nm,1.3s						
HAWA	Hanford	57.70	316	P	P	07 05 03.2	-0.3
ORV	Oroville	57.88	308	P	P	07 05 05.1	+0.3
ORV				pmax	pmax		
	comp=Z,350nm,1.5s						
ORV	Oroville	57.88	308	P	P	07 05 05.1	+0.3
E07A	Sunnyside	57.96	316	P	P	07 05 05.1	-0.2
E07A				IAmb	IAmb	07 05 06.6	
	comp=Z,170nm,1.5s						
B08A	Colville Reser	58.05	318	P	P	07 05 05.0	-0.9
B08A				IAmb	IAmb	07 05 06.6	
	comp=Z,116nm,1.4s						
PINE	Pine Mountain	58.14	313	P	P	07 05 07.5	+0.7
O03E	Paynes Creek	58.21	309	P	P	07 05 06.5	-0.7
	baz=98,SNR=32						
J05D	Fort Rock, OR	58.26	312	P	P	07 05 07.5	0.0
	baz=100,SNR=40						
RSBS	Rosebush, Pemb	58.26	37	*e*P	P	07 05 07.3	+0.2
M04C	Macdoel	58.45	310	P	P	07 05 09.1	+0.1
	baz=99,SNR=67						
GO07	Milladeo Hill,	58.52	191	IAmb	IAmb	07 05 09.5	
	comp=Z,99nm,0.6s						
K04D	Chiloquin, OR	58.52	311	P	P	07 05 09.7	+0.3
	baz=99,SNR=48						
I05D	Terrebonne, OR	58.52	313	P	P	07 05 10.0	+0.8
	baz=101,SNR=16						
LTY	Liberty	58.66	317	P	P	07 05 09.8	-0.4
LTY				IAmb	IAmb	07 05 11.3	
	comp=Z,86nm,0.9s						
G05D	Wamic, OR	58.68	314	P	P	07 05 10.7	+0.4
	baz=101,SNR=5.1						
MCCM	Marconi Confer	58.78	306	P	P	07 05 11.9	+0.9
MCCM				IAmb	IAmb	07 05 13.2	
	comp=Z,194nm,1.1s						
WDC	Whiskeytown Da	58.80	309	P	P	07 05 09.6	-1.6
WDC				pmax	pmax		
	comp=Z,155nm,1.5s						
WDC	Whiskeytown Da	58.80	309	P	P	07 05 09.6	-1.6
WDC				IAmb	IAmb	07 05 10.8	
	comp=Z,155nm,1.5s						
L04D	Klamath Falls	58.86	311	P	P	07 05 11.6	-0.2
	baz=99,SNR=30						
J04D	Umpqua Nationa	58.88	312	P	P	07 05 12.2	+0.2
	baz=100,SNR=36						
F05D	White Salmon	58.90	315	P	P	07 05 12.4	+0.6
	baz=102,SNR=33						
HOOD	Mount Hood Mea	58.92	314	IAmb	IAmb	07 05 13.9	
	comp=Z,230nm,1.1s						
O02D	Mt. Diablo Mer	58.94	308	P	P	07 05 10.9	-1.3
	baz=97,SNR=6.5						
C06D	Leavenworth	58.96	317	P	P	07 05 11.2	-1.0
	baz=103,SNR=6.9						
YLL	Llanberis	58.96	36	*e*P	P	07 05 11.6	-0.4
N02D	Trinity Center	58.98	309	P	P	07 05 11.0	-1.5
	baz=98,SNR=16						
HOPS	Hopland Field	59.02	307	IAmb	IAmb	07 05 15.3	
	comp=Z,172nm,1.2s						
YBH	Yreka Blue Hor	59.09	310	P	P	07 05 12.4	-0.9
YBH				pmax	pmax		
	comp=Z,196nm,1.5s						
YBH	Yreka Blue Hor	59.09	310	P	P	07 05 12.4	-0.9
YBH				IAmb	IAmb	07 05 13.3	
	comp=Z,196nm,1.4s						
M02C	Callahan	59.15	310	P	P	07 05 12.6	-1.0
	baz=98,SNR=22						
H04A	Detroit Lake	59.18	314	P	P	07 05 13.8	0.0
H04A				IAmb	IAmb	07 05 14.9	
	comp=Z,114nm,1.0s						
I04A	Tendick Farm,	59.19	312	P	P	07 05 13.3	-0.5
	baz=100						
GAL1	Galloway	59.22	34	*e*P	P	07 05 13.4	-0.3
MCH1	Michaelchurch	59.30	38	*e*P	P	07 05 14.4	0.0
MCH1				IAmb	IAmb	07 05 15.8	
	comp=Z,331nm,1.6s						
HUMO	Hull Mountain	59.39	311	P	P	07 05 14.6	-0.6
KCPM	Cahto Peak	59.49	308	IAmb	IAmb	07 05 18.4	
	comp=Z,199nm,1.2s						
SUMG	Summit	59.51	8	P	P	07 05 16.7	+0.7
SUMG				pmax	pmax		
	comp=Z,621nm,1.3s						
SUMG	Summit	59.51	8	*i* P	P	07 05 16.7	+0.7
SUMG				IAmb	IAmb	07 05 17.8	
	comp=Z,588nm,1.3s						
SUMG	Summit	59.51	8	P	P	07 05 16.7	+0.7
HLM1	Long Mynd	59.52	37	*e*P	P	07 05 16.1	+0.2
HLM1				IAmb	IAmb	07 05 17.5	
	comp=Z,396nm,1.4s						
H04D	Lebanon	59.54	313	P	P	07 05 15.5	-0.7
	baz=100						
NEWG	New Galloway	59.56	34	*e*P	P	07 05 16.2	+0.1
NEWG				IAmb	IAmb	07 05 17.7	
	comp=Z,152nm,1.2s						
KPL	Plockton	59.61	31	*e*P	P	07 05 15.9	-0.5
KMRM	Mail Ridge	59.65	308	P	P	07 05 18.0	+0.9
BUCK	Buck Mountain	59.66	313	IAmb	IAmb	07 05 18.0	
	comp=Z,148nm,1.1s						
PGBU	Glenifferbraes	59.66	33	*e*P	P	07 05 16.9	+0.1
PGBU				IAmb	IAmb	07 05 18.9	
	comp=Z,290nm,1.3s						
KHMM	Horse Mountain	59.74	309	P	P	07 05 18.9	+1.0
E04D	Cinebar	59.79	316	P	P	07 05 16.8	-1.0
	baz=101,SNR=5.3						
L02E	Cave Junction	59.80	310	P	P	07 05 17.4	-0.7
	baz=98						
B05A	Bryant	59.82	318	P	P	07 05 16.0	-2.0
	baz=102,SNR=8.8						
I03D	Drain, OR	59.84	312	P	P	07 05 17.4	-0.8
	baz=99						
KAC	Achnashellach	59.84	31	*e*P	P	07 05 17.7	-0.3
K02D	Willamette Mer	59.92	311	P	P	07 05 18.8	-0.2
	baz=98,SNR=7.8						
JCC	Jacoby Creek,	59.96	309	P	P	07 05 20.4	+1.4
F04D	Rainier, OR	60.00	315	P	P	07 05 18.7	-0.6
	baz=100						
KESW	Keswick, Cumbr	60.01	35	*e*P	P	07 05 19.3	+0.1
KESW				IAmb	IAmb	07 05 20.8	
	comp=Z,254nm,1.5s						
G03D	McMinnville, O	60.02	314	P	P	07 05 19.5	0.0
	baz=100,SNR=9.2						
D04E	Lakebay	60.04	316	P	P	07 05 19.1	-0.4
	baz=101						
INVG	Invergeldie, C	60.10	33	*e*P	P	07 05 19.7	-0.1
INVG				IAmb	IAmb	07 05 21.0	
	comp=Z,196nm,1.5s						
J01E	Myrtle Point	60.18	312	P	P	07 05 20.3	-0.3
	baz=98						
ESK	Eskdalemuir	60.18	34	P	P	07 05 21.2	+0.8
ESK				pmax	pmax		
	comp=Z,147nm,1.5s						
ESK	Eskdalemuir	60.18	34	P	P	07 05 21.2	+0.8
ESK				IAmb	IAmb	07 05 21.9	
	comp=Z,147nm,1.5s						
EKA	Eskdalemuir Ar	60.21	34	P	P	07 05 20.5	-0.1
I02E	Swisshome, OR	60.26	313	P	P	07 05 21.4	+0.3
	baz=99						
KBO	Bosley Butte	60.27	310	P	P	07 05 22.8	+1.4
MDO	Dochfour	60.29	31	*e*P	P	07 05 21.1	0.0
A04D	Lummi Island	60.31	318	P	P	07 05 20.1	-1.3
	baz=102						
D03D	Eldon	60.32	317	P	P	07 05 20.5	-1.0
	baz=101						
EDI	Edinburgh	60.39	33	*e*P	P	07 05 21.4	-0.3
EBL	Broad Law	60.42	34	*e*P	P	07 05 21.7	-0.3
LBWR	Ladybower, Pea	60.44	36	⇑*e*P	P	07 05 22.2	+0.1
LBWR				IAmb	IAmb	07 05 23.8	
	comp=Z,388nm,1.6s						
E03A	Lebam	60.46	315	P	P	07 05 22.7	+0.3
CWF	Charnwood Fore	60.50	37	*e*P	P	07 05 21.8	-0.8
CWF				IAmb	IAmb	07 05 24.0	
	comp=Z,191nm,1.5s						
YKA	Yellowknife Ar	60.60	335	P	P	07 05 22.6	-0.5
	comp=Z,101nm,0.5s,baz=107,slow=7.4,SNR=1567						
YKA				S	S	07 13 25.6	-1.0
	comp=Z,1.5nm,0.9s,baz=111,slow=14,SNR=4.2						
YKA				PKP2bc		07 34 49.3	
	comp=Z,0.4nm,0.8s,baz=305,slow=3.3,SNR=6.1						
HPK	Haverah Park	60.65	36	*e*P	P	07 05 23.6	0.0
HPK				IAmb	IAmb	07 05 25.0	
	comp=Z,373nm,1.6s						
EDU	Dundee	60.68	33	*e*P	P	07 05 23.9	+0.2

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ESY   Stoneypath       60.69  34 eP      P      07 05 23.6 -0.2
B04A  Port Angeles     60.70 317  P      P      07 05 24.0  0.0
B04A                              IAmb   IAmb   07 05 24.7
      comp=Z,189nm,1.2s
WISH  Wishkah          60.70 316  IAmb   IAmb   07 05 26.0
      comp=Z,188nm,1.1s
EDMD  Edmundbyers      60.72  35 eP      P      07 05 23.9 -0.1
EDMD                              IAmb   IAmb   07 05 25.2
      comp=Z,199nm,1.4s
PGC   Sidney           60.78 318  P      P      07 05 24.1 -0.4
PGC                               IAmb   IAmb   07 05 25.2
      comp=Z,115nm,0.9s
SCO   Scoresbysund     60.85  14 i P     P      07 05 25.5 +0.9
SCO                               IAmb   IAmb   07 05 25.7
      comp=Z,222nm,1.7s
SCO   Scoresbysund     60.85  14  IAmb   IAmb   07 05 26.0
      comp=Z,211nm,1.7s
BIGH  Upper Bighouse   60.89  30 eP      P      07 05 24.6 -0.5
TORD  Torodi Ar. Bea   61.08  83  P      P      07 05 26.7 -0.5
      comp=Z,27nm,0.9s,baz=288,slow=6.9,SNR=93
TORD                              ScP    ScP    07 09 52.9 -2.6
      comp=Z,1.2nm,1.0s,baz=321,slow=5.4,SNR=3.6
TORD                              LR     LR     07 28 36.8
      comp=Z,414nm,21.3s,baz=260,slow=32
TORD                              PKPPKP P'P'df 07 34 40.3 -3.6
      comp=Z,1.4nm,0.9s,baz=27,slow=2.2,SNR=4.2
TORD                              PKP2bc        07 34 50.6
      comp=Z,7.5nm,1.1s,baz=67,slow=1.6,SNR=14
TORD  Torodi Ar. Bea   61.08  83  P      P      07 05 26.6 -0.5
MLA1  Latheron         61.10  31 eP      P      07 05 26.3 -0.2
CLRS  Cowichan Lake    61.26 318  P      P      07 05 28.1 +0.4
ELMS  Elmsett, Ipswi   61.71  38 eP      P      07 05 30.3 -0.3
ELMS                              IAmb   IAmb   07 05 31.4
      comp=Z,89nm,0.5s
TULEG Thule            62.08 358 i P     P      07 05 32.7  0.0
TULEG                             IAmb   IAmb   07 05 33.9
      comp=Z,369nm,1.5s
TULEG Thule            62.08 358  P      P      07 05 32.8  0.0
CBB   Campbell River   62.27 319  P      P      07 05 34.3 -0.2
SSB   Saint Sauveur    62.86  46  P      P      07 05 39.1 +0.5
SSB                               pmax   pmax
      comp=Z,118nm,1.5s
SSB   Saint Sauveur    62.86  46  P      P      07 05 39.1 +0.5
NEEM  North Greenlan   63.09   3 i P     P      07 05 40.0 +0.1
NEEM                              IAmb   IAmb   07 05 40.7
      comp=Z,406nm,1.3s
SNF   Seneffe          63.42  41 κP      P      07 05 42.2 +0.1
      comp=Z,49nm,0.5s
UCC   Uccle            63.52  40 dP      P      07 05 42.8 +0.1
      comp=Z,22nm,0.6s
UCC   Uccle            63.52  40  P      P      07 05 43.0 +0.3
UCC                               pmax   pmax
      comp=Z,22nm,0.5s
UCC   Uccle            63.52  40  P      P      07 05 43.0 +0.3
DOU   Dourbes          63.55  41 dP      P      07 05 43.1 +0.1
BMRD  Maredsous        63.70  41 dP      P      07 05 44.0 +0.1
BGES  Gesves           63.91  41 dP      P      07 05 45.4 +0.1
DBG   Daneborg         63.94  12 i P     P      07 05 46.0 +0.9
DBG                               IAmb   IAmb   07 05 47.2
      comp=Z,398nm,1.6s
RCHB  Rochefort        63.97  41 dP      P      07 05 45.7  0.0
BCLA  Clavier          64.05  41 dP      P      07 05 46.4 +0.1
BSTI  Sart Tilman      64.25  41 dP      P      07 05 47.9 +0.4
BNI   Bardonecchia     64.34  47  P      P      07 05 49.7 +1.2
BNI                               pmax   pmax
      comp=Z,73nm,1.3s
BNI   Bardonecchia     64.34  47  P      P      07 05 49.7 +1.2
BEBN  Eben Emael       64.35  40 dP      P      07 05 48.5 +0.3
BBB   Bella Bella      64.36 321  LR     LR     07 34 02.5
      comp=Z,343nm,20.6s,baz=92,slow=36
BHOU  Houvegnez        64.49  41 dP      P      07 05 49.7 +0.6
WLF   Walferdange      64.49  42 dP      P      07 05 49.3 +0.2
WLF   Walferdange      64.49  42  P      P      07 05 49.3 +0.2
WLF                               pmax   pmax
      comp=Z,147nm,1.4s
WLF   Walferdange      64.49  42 eP      P      07 05 49.5 +0.4
      comp=Z,78nm,1.3s,baz=266,slow=6.3
WLF   Walferdange      64.49  42  P      P      07 05 49.3 +0.2
WLF                               IAmb   IAmb   07 05 51.1
      comp=Z,147nm,1.4s
MEM   Membach          64.53  41 dP      P      07 05 49.5 +0.2
BTNL  Ternell          64.60  41 dP      P      07 05 50.0 +0.2
ECH   Echery           64.98  43  IAmb   IAmb   07 05 54.0
      comp=Z,185nm,1.6s
AHRW  Bad Neuenahr-A   65.19  41 eP      P      07 05 54.1 +0.5
      comp=Z,122nm,1.3s,baz=266,slow=6.3
BUG   Bochum--Univer   65.43  40 eP      P      07 05 55.3 +0.2
      comp=Z,88nm,1.5s,baz=266,slow=6.3
KMY   Karmoy           65.66  31 eP      P      07 05 56.3 -0.1
GRNB  Grenville Isla   65.72 323  P      P      07 05 58.3 +1.3
BFO   Black Forest     65.77  43  P      P      07 05 57.1 -0.3
BFO                               pmax   pmax
      comp=Z,64nm,1.5s
BFO   Black Forest     65.77  43 eP      P      07 05 57.2 -0.3
      comp=Z,8.0nm,0.7s,baz=266,slow=6.3
BFO   Black Forest     65.77  43  P      P      07 05 57.1 -0.3
IBBN  Ibbenburen       65.84  39 eP      P      07 05 57.9 +0.1
      baz=266,slow=6.3
SUE   Sulen            65.85  29 eP      P      07 06 06.4 +8.8
ASK   Askoy            65.92  30 eP      P      07 05 58.1 +0.1
DAG   Danmarks Havn    65.96  10 i P     P      07 05 58.0  0.0
DAG                               IAmb   IAmb   07 05 59.3
      comp=Z,225nm,1.5s
BER   Bergen           65.96  30 eP      P      07 05 58.2 -0.2
TNS   Taunus Mts       66.03  41 eP      P      07 05 59.4 +0.3
      comp=Z,40nm,1.0s,baz=266,slow=6.3
TNS                              epP     pP     07 06 40.5 +4.2
EFI   East Falkland    66.05 178  P      P      07 05 59.9 +1.0
EFI                               pmax   pmax
      comp=Z,304nm,1.7s
EFI   East Falkland    66.05 178  P      P      07 05 59.9 +1.0
EFI                               IAmb   IAmb   07 06 00.8
      comp=Z,304nm,1.7s
KEST  Kesra            66.08  57  P      P      07 06 00.7 +1.0
      comp=Z,31nm,0.5s,baz=170,slow=3.1,SNR=74
KEST  Kesra            66.08  57  P      P      07 06 00.8 +1.0
KEST                              IAmb   IAmb   07 06 02.5
      comp=Z,154nm,1.4s
FOO   Floro            66.11  29 eP      P      07 05 59.7 +0.5
HLG   Helgoland        66.17  37 eP      P      07 06 00.1 +0.3
      comp=Z,304nm,1.2s,baz=266,slow=6.3
HG4B  Hotspring        66.25 321  IAmb   IAmb   07 06 02.1
      comp=Z,274nm,1.4s
GO09  Cerro Castillo   66.28 187  P      P      07 06 01.1 +0.7
GO09                              IAmb   IAmb   07 06 43.4
      comp=Z,235nm,2.0s
BLS5  Blasjo           66.31  31 eP      P      07 06 01.1 +0.5
STU   Stuttgart        66.38  43 eP      P      07 06 01.1 -0.2
      comp=Z,67nm,0.9s,baz=266,slow=6.3
SNART Snartemo         66.48  32 eP      P      07 06 02.0 +0.3
EUNU  Eureka           66.48 355  P      P      07 06 01.7 +0.3
EUNU                              IAmb   IAmb   07 06 03.4
      comp=Z,214nm,1.3s
ODD1  Odda             66.49  31 eP      P      07 06 02.6 +0.8
HYA   Hoyanger         66.55  29 eP      P      07 06 02.7 +0.6
MG05  Puerto Natales   66.70 188  P      P      07 06 03.9 +0.9
DAVA  Damuels          66.73  45 i P     P      07 06 04.4 +0.6
      comp=Z,115nm,1.3s,SNR=20
UBR   Ueberruh         66.91  44 eP      P      07 06 04.2 -0.6
      comp=Z,21nm,1.2s,baz=266,slow=6.3
UBR                              epP     pP     07 06 45.9 +3.9
VLC   Villacollemand   66.93  48  P      P      07 06 04.8 -0.1
UBBA  Unterbreizbach   67.07  41 eP      P      07 06 05.9 +0.4
      comp=Z,59nm,1.4s,baz=266,slow=6.3
GTTG  Gottingen        67.11  40 eP      P      07 06 06.1 +0.2
      comp=Z,128nm,1.4s,baz=266,slow=6.3
HOMB  Homborsund       67.14  33 eP      P      07 06 06.5 +0.7
AKN   Aaknes           67.14  28 eP      P      07 06 06.8 +0.9
MUD   Monsted U'grnd   67.22  35 eP      P      07 06 06.0 -0.4
MUD                              i P     P      07 06 07.0 +0.6
MUD                               IAmb   IAmb   07 06 08.1
      comp=Z,350nm,1.6s
CASP  Castiglione de   67.25  49  P      P      07 06 07.2 +0.3
FETA  Feichten         67.29  45 i P     P      07 06 07.8 +0.5
      comp=Z,56nm,0.7s,SNR=40
NRDL  Niedersach Rie   67.29  39 eP      P      07 06 07.3 +0.4
      comp=Z,181nm,1.4s,baz=266,slow=6.3
RETA  Reutte           67.34  44 i P     P      07 06 07.8 +0.3
      comp=Z,66nm,1.3s,SNR=18
CLZ   Clausthal        67.39  40 eP      P      07 06 08.1 +0.4
      comp=Z,27nm,1.0s,baz=266,slow=6.3
CLZ                              epP     pP     07 06 49.1 +4.1
WRAK  Wrangell Islan   67.44 325  P      P      07 06 08.9 +1.1
WRAK  Wrangell Islan   67.44 325  P      P      07 06 08.2 +0.4
      baz=98,SNR=6.4
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SKAR  Skarslia         67.46  30 eP      P      07 06 08.7 +0.8
MOL   Molde            67.48  28 eP      P      07 06 09.3 +1.4
MOTA  Moosalm          67.56  45 i P     P      07 06 09.1 +0.1
      comp=Z,65nm,1.2s,SNR=20
BSEG  Bad Segeberg     67.56  37 eP      P      07 06 08.8 +0.1
      comp=Z,33nm,0.9s,baz=266,slow=6.3
ASSE  Asse, Remlinge   67.61  39 eP      P      07 06 09.4 +0.5
      comp=Z,85nm,1.3s,baz=266,slow=6.3
ASSE                             epP     pP     07 06 50.6 +4.4
SQTA  Sankt Quirin     67.63  45 i P     P      07 06 09.6 +0.3
      comp=Z,35nm,0.5s,SNR=39
FUR   Furstenfeldbru   67.72  44 eP      P      07 06 10.3 +0.5
      baz=266,slow=6.3
CRAG  Craig            67.76 324  P      P      07 06 10.0 +0.2
      baz=97
GRFO  Grafenberg       67.77  42  P      P      07 06 10.5 +0.5
GRFO                              pmax   pmax
      comp=Z,110nm,1.4s
GRFO  Grafenberg       67.77  42  P      P      07 06 10.5 +0.5
GRA1  Grafenberg Arr   67.77  42  P      P      07 06 10.6 +0.5
GRF   Grafenberg Arr   67.77  42  P      P      07 06 10.6 +0.5
GRF                               pmax   pmax
      comp=Z,126nm,1.5s
GRF   Grafenberg Arr   67.77  42 eP      P      07 06 10.2 +0.1
      comp=Z,62nm,1.3s,baz=266,slow=6.3
TEOL  Teolo            67.88  47  P      P      07 06 10.3 -0.5
WATA  Walderalm        67.88  45 i P     P      07 06 10.7 -0.3
      comp=Z,51nm,1.5s,SNR=19
KONO  Kongsberg        67.92  31  P      P      07 06 10.3 -0.4
KONO                              pmax   pmax
      comp=Z,200nm,1.8s
KONO  Kongsberg        67.92  31 eP      P      07 06 10.6 -0.1
KONO  Kongsberg        67.92  31  P      P      07 06 10.3 -0.4
KONO                              IAmb   IAmb   07 06 14.2
      comp=Z,200nm,1.8s
WTTA  Wattenberg       67.92  45 i P     P      07 06 11.3 +0.1
      comp=Z,46nm,1.4s,SNR=17
FLTG  Flechtingen      67.97  39 eP      P      07 06 11.2  0.0
      baz=266,slow=6.3
GO10  Punta Arenas     67.98 186  P      P      07 06 13.0 +1.9
DOMB  Dombas           68.07  29 eP      P      07 06 12.4 +0.7
MOX   Moxa             68.08  41 eP      P      07 06 11.8 -0.2
      comp=Z,4.3nm,0.7s,baz=266,slow=6.3
NEUB  Neuenburg        68.22  40 eP      P      07 06 13.0 +0.2
      comp=Z,25nm,1.0s,baz=266,slow=6.3
P33M  Teslin, Yukon    68.23 329  P      P      07 06 13.2 +0.4
      baz=99,SNR=66
A36M  Sachs Harbour    68.25 342  P      P      07 06 11.9 -0.6
A36M                              IAmb   IAmb   07 06 13.2
      comp=Z,134nm,0.8s
A36M  Sachs Harbour    68.25 342  P      P      07 06 12.0 -0.5
      baz=111,SNR=109
MANZ  Manzenberg       68.36  42 eP      P      07 06 14.1 +0.4
      comp=Z,12nm,1.1s,baz=266,slow=6.3
ROTZ  Rotzenmuhle      68.41  42 eP      P      07 06 14.2 +0.1
      comp=Z,3.3nm,1.0s,baz=266,slow=6.3
MURB  Monte Urbino     68.47  49  P      P      07 06 13.6 -1.0
ABTA  Abfaltersbach    68.50  45 i P     P      07 06 14.6 -0.2
      comp=Z,73nm,1.4s,SNR=18
WERD  Werda            68.51  41 eP      P      07 06 14.8 +0.2
      comp=Z,62nm,1.4s,baz=266,slow=6.3
GUNZ  Gunzen           68.52  41 eP      P      07 06 15.2 +0.5
      baz=266,slow=6.3
OSL   Oslo             68.53  31 eP      P      07 06 16.1 +1.6
WERN  Wernitzgruen     68.55  41 eP      P      07 06 15.2 +0.3
      comp=Z,20nm,1.1s,baz=266,slow=6.3
NKC   Novy Kostel      68.59  41 eP      P      07 06 15.5 +0.3
NKC                               AMS    AMS    07 31 00.0
NKC   Novy Kostel      68.59  41 eP      P      07 06 15.5 +0.3
TANN  Tannenbergstha   68.61  41 eP      P      07 06 15.3  0.0
      comp=Z,118nm,1.5s,baz=266,slow=6.3
NBO00 NORSAR Array S   68.71  30  P      P      07 06 15.1 -0.6
NBO00                             IAmb   IAmb   07 06 16.4
      comp=Z,384nm,1.5s
RJOB  Jochberg         68.72  44 eP      P      07 06 16.1  0.0
      baz=266,slow=6.3
NAO01 NORSAR Array S   68.74  30  IAmb   IAmb   07 06 18.3
      comp=Z,385nm,1.6s
NC204 NORSAR Array S   68.74  30  IAmb   IAmb   07 06 18.3
      comp=Z,378nm,1.6s
JIS   Juneau Island    68.77 327  P      P      07 06 16.9 +0.9
JIS                               IAmb   IAmb   07 06 17.9
      comp=Z,274nm,1.9s
ZOU   Zoufplan         68.82  45  P      P      07 06 16.5 -0.3
WET   Wettzell         68.82  43 eP      P      07 06 16.6 -0.1
      comp=Z,50nm,1.3s,baz=266,slow=6.3
TBLU  Trondheim        68.83  27 eP      P      07 06 17.8 +1.5
NB2   NORSAR Subarra   68.92  30  P      P      07 06 16.9 -0.1
      comp=Z,184nm,1.4s,baz=261,slow=6.5
NB2   NORSAR Subarra   68.92  30  P      P      07 06 16.9 -0.1
      baz=261,slow=6.5
NOA   NORSAR Array B   68.92  30  P      P      07 06 17.2 +0.2
      comp=Z,10nm,0.6s,baz=262,slow=6.3,SNR=72
NOA                               LR     LR     07 31 55.0
      comp=Z,344nm,20.8s,baz=260,slow=32
NB201 NORSAR Array S   68.96  30  IAmb   IAmb   07 06 19.9
      comp=Z,200nm,1.2s
CLL   Collm            69.00  40⇓iP      P      07 06 17.8 +0.2
CLL                              e              07 06 41.0
CLL                              e*PP    pP     07 06 55.0  0.0
CLL                              e*SP    sP     07 07 10.0 -1.8
CLL                              eS      S      07 15 10.0 +0.3
CLL                               pmax   pmax
      comp=Z,78nm,1.2s
CLL   Collm            69.00  40⇓iP      P      07 06 17.8 +0.2
      comp=Z,78nm,1.2s
CLL                              ePcP    PcP    07 06 41.0 +0.3
CLL                              epP     pP     07 06 55.0  0.0
CLL                              esP     sP     07 07 10.0 -1.8
CLL                              ePP     PP     07 08 48.0 -3.9
CLL                              esPP           07 09 40.0
CLL                              eS      S      07 15 10.0 +0.3
CLL                              ePS     PnS    07 15 58.0 -0.1
CLL                              esS     sS     07 16 11.0 -1.2
CLL                              esPPS          07 16 45.0
CLL                              eSS     SS     07 19 36.0 -2.2
CLL                              esSS           07 20 36.0
CLL                              e              07 21 52.0
CLL                              eSSS    SSS    07 22 52.0
CLL                              esSSS          07 23 52.0
CLL                              eSSSS          07 24 30.0
CLL                              esSSSS         07 25 31.0
CLL                               Lm     MLR    07 57 00.0
      comp=N,100nm,18.5s
CLL                               Lm     MLR    07 57 00.0
      comp=E,200nm,18.6s
CLL                               Lm     MLR    07 57 00.0
      comp=Z,200nm,19.0s
CLL   Collm            69.00  40 eP      P      07 06 17.7 +0.1
      comp=Z,35nm,1.1s,baz=266,slow=6.3
CLL                              epP     pP     07 06 58.6 +3.5
NC303 NORSAR Array S   69.02  30  P      P      07 06 18.4 +0.8
NC303                             IAmb   IAmb   07 06 19.9
      comp=Z,248nm,1.6s
NC602 NORSAR Array S   69.04  30 eP      P      07 06 18.8 +1.1
BESE  Bessie Mountai   69.05 327  P      P      07 06 18.2 +0.3
BESE                              IAmb   IAmb   07 06 19.9
      comp=Z,296nm,1.8s
KBA   Koelnbreinsper   69.08  45 i P     P      07 06 18.4  0.0
      comp=Z,120nm,1.4s,SNR=21
CLTB  Caltabellotta    69.13  55  P      P      07 06 18.6 -0.2
SIT   Sitka            69.14 326  IAmb   IAmb   07 06 20.4
      comp=Z,104nm,1.0s
SIT   Sitka            69.14 326  P      P      07 06 18.9 +0.6
      baz=95,SNR=7.4
NC405 NORSAR Array S   69.17  30  P      P      07 06 18.2 -0.4
FBE   Freiberg         69.20  41 eP      P      07 06 19.3 +0.4
      comp=Z,79nm,1.3s,baz=266,slow=6.3
FBE                              epP     pP     07 06 60.0 +3.6
M31M  Drury Creek, Y   69.28 331  P      P      07 06 20.1 +0.9
      baz=98,SNR=113
MYKA  Terra Mystica    69.28  45 i P     P      07 06 19.4 -0.2
      comp=Z,119nm,1.6s,SNR=24
KHC   Kasperske Hory   69.28  43 eP      P      07 06 19.4 -0.1
KHC                               AMS    AMS    07 32 20.0
      comp=Z,1µm,6.2s
KHC   Kasperske Hory   69.28  43 i P     P      07 06 19.3 -0.2
KHC                               pmax   pmax
      comp=Z,146nm,1.6s
KHC   Kasperske Hory   69.28  43  P      P      07 06 17.6 -1.9
WHY   Whitehorse       69.31 330  P      P      07 06 20.0 +0.5
WHY   Whitehorse       69.31 330  P      P      07 06 19.4 -0.1
      baz=97,SNR=22
CADS  Cadrg            69.34  46 i P     P      07 06 19.7 -0.3
      comp=Z,445nm,1.9s
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GEC2  GERESS Array S   69.36  43 eP      P      07 06 19.8 -0.2
      comp=Z,26nm,1.1s,baz=266,slow=6.3
GEC2  GERESS Array S   69.36  43  P      P      07 06 19.9 -0.2
GERES GERESS Array B   69.36  43  P      P      07 06 19.8 -0.2
      comp=Z,5.2nm,0.4s,baz=270,slow=4.3,SNR=95
SKAG  Skagway          69.39 328  P      P      07 06 20.4 +0.6
SKAG                              IAmb   IAmb   07 06 22.1
      comp=Z,232nm,1.8s
SKAG  Skagway          69.39 328  P      P      07 06 20.1 +0.3
      baz=96,SNR=15
RUE   Ruedersdorf      69.53  39 eP      P      07 06 21.2 +0.4
RUE   Ruedersdorf      69.53  39 eP      P      07 06 21.0 +0.2
      baz=266,slow=6.3
BRG   Berggiesshubel   69.57  41 eP      P      07 06 21.2  0.0
      comp=Z,19nm,1.0s,baz=266,slow=6.3
BRG                              epP     pP     07 07 02.2 +3.5
NOR   Nord             69.58   6 i P     P      07 06 20.6 -0.2
NOR                               IAmb   IAmb   07 06 21.7
      comp=Z,452nm,1.7s
MOA   Molln            69.72  44 i P     P      07 06 21.9 -0.3
      comp=Z,73nm,1.4s,SNR=21
CKRC  Cesky Krumlov    69.76  43 eP      P      07 06 23.0 +0.6
NSS   Namsos           69.78  26 eP      P      07 06 22.8 +0.6
CEY   Cerknica         69.82  46 i P     P      07 06 22.4 -0.5
      comp=Z,291nm,1.9s
N31M  Braeburn, Yuko   69.84 331  P      P      07 06 23.2 +0.5
      baz=97,SNR=75
OBKA  Obir             69.91  46 i P     P      07 06 23.4  0.0
      comp=Z,94nm,1.4s,SNR=36
PRU   Pruhonice        69.93  42 eP      P      07 06 24.0 +0.6
PRU                               AMS    AMS    07 30 50.0
      comp=Z,700nm,20.1s
PRU   Pruhonice        69.93  42 eP      P      07 06 24.0 +0.6
PRU                               MLR    MLR
      comp=Z,700nm,20.1s
INK   Inuvik           69.95 338  P      P      07 06 22.4 -0.7
      baz=101,SNR=205
RAFF  Raffo Rosso      70.06  55  P      P      07 06 25.7 +1.2
SOKA  Soboth           70.24  45 i P     P      07 06 24.9 -0.6
      comp=Z,51nm,1.6s,SNR=22
STOK  Stokkvaagen      70.48  24 eP      P      07 06 27.6 +1.3
NBB40 Tonnes           70.50  24 eP      P      07 06 27.6 +1.1
TREC  Trest            70.54  43 eP      P      07 06 27.3 +0.2
TREC  Trest            70.54  43 eP      P      07 06 27.3 +0.2
KONS  Konsvik          70.54  24 eP      P      07 06 28.1 +1.3
ARSA  Arzberg          70.57  45 i P     P      07 06 27.1 -0.2
      comp=Z,77nm,1.4s,SNR=27
CONA  Conrad Observa   70.79  44 i P     P      07 06 28.8  0.0
      comp=Z,81nm,1.6s,SNR=33
NBB30 Finnes           70.85  24 eP      P      07 06 29.8 +1.2
EPYK  Eagle Plains     70.86 336  P      P      07 06 28.6 -0.1
EPYK                              IAmb   IAmb   07 06 29.8
      comp=Z,330nm,1.6s
EPYK  Eagle Plains     70.86 336  P      P      07 06 28.2 -0.5
      baz=98,SNR=43
UPC   Upice            70.88  41 eP      P      07 06 29.5 +0.4
UPC                               AMS    AMS    07 32 10.0
UPC   Upice            70.88  41 eP      P      07 06 29.5 +0.4
CHVC  Chvalec          70.91  41 eP      P      07 06 29.6 +0.3
CHVC                              AMS    AMS    07 34 40.0
      comp=Z,600nm,18.5s
NBB17 Glomfjord B¥r    70.92  24 eP      P      07 06 30.1 +1.1
LOF   Lofoten          70.95  23 eP      P      07 06 29.9 +0.7
OSTC  Ostas            71.01  41 eP      P      07 06 30.4 +0.4
KSP   Ksiaz            71.06  41 ePKP    P      07 06 30.7 +0.5
DPC   Dobruska-Polom   71.08  41 eP      P      07 06 30.7 +0.3
DPC                               AMS    AMS    07 34 50.0
      comp=Z,600nm,19.0s
DPC   Dobruska-Polom   71.08  41 eP      P      07 06 30.7 +0.3
DPC                               MLR    MLR
      comp=Z,600nm,19.0s
KOGS  Kog              71.08  46 i P     P      07 06 30.4 -0.1
KRUC  Moravsky         71.13  43⇓iP      P      07 06 30.7  0.0
VRAC  Vranov           71.26  43 ⇓P      P      07 06 32.0 +0.5
VRAC  Vranov           71.26  43⇓iP      P      07 06 31.6 +0.1
VRAC  Vranov           71.26  43 ⇓P      P      07 06 32.0 +0.5
J29M  Klondike Camp    71.26 334  P      P      07 06 32.1 +0.8
      baz=96,SNR=16
SOP   Sopron           71.26  44 eP      P      07 06 33.8 +2.3
KRLC  Kraliky          71.37  42 eP      P      07 06 32.8 +0.6
KRLC                              AMS    AMS    07 33 10.0
      comp=Z,600nm,17.5s
KRLC  Kraliky          71.37  42 eP      P      07 06 32.8 +0.6
KRLC                              MLR    MLR
      comp=Z,600nm,17.5s
I29M  Ogilvie Camp,    71.39 334  P      P      07 06 31.7 -0.3
      baz=96,SNR=97
FAUS  Fauske           71.51  23 eP      P      07 06 33.3 +0.7
STEI  Steigen          71.55  23 eP      P      07 06 34.0 +1.2
BCPM  Bancas Point     71.61 329  P      P      07 06 34.4 +1.1
BCPM                              IAmb   IAmb   07 06 35.4
      comp=Z,229nm,1.2s
ZST   Bratislava       71.62  44 eP      P      07 06 33.7 +0.1
ZST                               pmax   pmax
      comp=Z,373nm,1.5s
ZST   Bratislava       71.62  44 eP      P      07 06 33.7 +0.1
GKP   Gorka Klasztor   71.65  38 ePKP    P      07 06 35.0 +1.4
MODS  Modra-Piesok     71.73  44 eP      P      07 06 33.9 -0.4
MODS                              pmax   pmax
      comp=Z,202nm,1.5s
MODS  Modra-Piesok     71.73  44 eP      P      07 06 33.9 -0.4
DAWY  Dawson           71.74 333  P      P      07 06 34.5 +0.4
      baz=94,SNR=214
EGYH  Egyhazaskeszo    71.80  45 eP      P      07 06 35.7 +1.0
TIP   Timpagrande      71.81  53 ⇓P      P      07 06 33.7 -1.3
TIP   Timpagrande      71.81  53  P      P      07 06 34.2 -0.9
MORC  Moravsky Berou   71.87  42 ⇓P      P      07 06 35.5 +0.3
MORC  Moravsky Berou   71.87  42⇓iP      P      07 06 35.5 +0.3
MORC  Moravsky Berou   71.87  42 ⇓P      P      07 06 35.5 +0.3
PINM  Pinnacle         71.92 329  P      P      07 06 36.0 +0.7
      baz=92,SNR=7.5
PCA   Pinnacle         71.92 329  IAmb   IAmb   07 06 37.4
      comp=Z,180nm,1.1s
MPLH  Magyarpolny      71.94  45 eP      P      07 06 35.8 +0.2
JAVC  Velka Javorina   71.98  43⇓iP      P      07 06 37.0 +1.2
YUK3  Moose Creek      72.09 331  P      P      07 06 36.6 +0.2
      baz=92,SNR=35
TIH   Tihany           72.20  45 eP      P      07 06 37.9 +0.8
OKC   Ostrava-Krasne   72.26  42  AMS    AMS    07 32 20.0
BVCY  Beaver Creek     72.31 331  P      P      07 06 37.9 +0.4
      baz=92,SNR=8.8
LOGN  Logan Glacier    72.32 330  P      P      07 06 38.6 +0.9
LOGN                              IAmb   IAmb   07 06 39.8
      comp=Z,158nm,0.7s
TABL  Table Mountain   72.38 329  P      P      07 06 39.0 +0.8
TABL                              IAmb   IAmb   07 06 40.0
      comp=Z,268nm,1.7s
KOVH  Kovagotottos     72.38  46 eP      P      07 06 38.4 +0.3
CSKK  Cskako           72.43  45 eP      P      07 06 40.9 +2.4
SRO   Srobarova        72.44  44 eP      P      07 06 38.7 +0.2
SRO                               pmax   pmax
      comp=Z,125nm,1.5s
SRO   Srobarova        72.44  44 eP      P      07 06 38.7 +0.2
KOLL  Kolacno          72.47  43 eP      P      07 06 38.9 +0.2
CTGM  Chitina Glacie   72.48 330  IAmb   IAmb   07 06 41.0
      comp=Z,178nm,0.6s
CTG   Chitna Glacier   72.49 330  P      P      07 06 39.6 +0.8
      baz=92,SNR=45
EGAK  Eagle            72.55 334  P      P      07 06 39.1 +0.3
EGAK                              IAmb   IAmb   07 06 40.4
      comp=Z,263nm,0.8s
EGAK  Eagle            72.55 334  P      P      07 06 39.0 +0.1
      baz=93,SNR=137
KBS   Kingsbay         72.58  11  P      P      07 06 40.6 +1.8
KBS                               pmax   pmax
      comp=Z,185nm,1.5s
KBS   Kingsbay         72.58  11 eP      P      07 06 40.3 +1.5
KBS   Kingsbay         72.58  11  P      P      07 06 40.6 +1.8
BARN  Barnard Glacie   72.64 330  P      P      07 06 40.6 +0.9
BARN                              IAmb   IAmb   07 06 43.0
      comp=Z,108nm,0.6s
YAH   Yahtse           72.67 329  IAmb   IAmb   07 06 42.3
      comp=Z,319nm,1.6s
MORH  Mrgy, Hungar     72.75  46 eP      P      07 06 40.5 +0.2
VYHS  Vyhne            72.76  43 eP      P      07 06 40.8 +0.4
VYHS                              pmax   pmax
      comp=Z,144nm,1.7s
VYHS  Vyhne            72.76  43 eP      P      07 06 40.8 +0.4
MESA  MESA             72.77 329  IAmb   IAmb   07 06 45.1
      comp=Z,223nm,1.4s
MESA  MESA             72.77 329  P      P      07 06 41.4 +1.0
      baz=91,SNR=5.2
L27K  Beaver Creek,    72.78 332  P      P      07 06 41.0 +0.7
L27K  Beaver Creek,    72.78 332  P      P      07 06 40.8 +0.5
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      baz=92,SNR=209
M27K  Edge Creek, AK    72.78 331  IAmb    IAmb   07 06 42.4
      comp=Z,145nm,0.7s
M27K  Edge Creek, AK    72.78 331  P       P      07 06 41.0 +0.5
      baz=92
HSPB  Hornsund (broa    72.94  13 ePKP     P      07 06 43.3 +2.4
BUD   Budapest          72.94  44 eP       P      07 06 43.0 +1.6
ISLE  Juniper Island    72.97 329  IAmb    IAmb   07 06 43.4
      comp=Z,228nm,1.4s
TRO   Tromso            73.05  21 eP       P      07 06 42.4 +0.7
LANS  Liptovska Anna    73.15  43 eP       P      07 06 43.8 +1.1
LANS                               pmax    pmax
      comp=Z,45nm,1.6s
LANS  Liptovska Anna    73.15  43 eP       P      07 06 43.8 +1.1
TGL   Tana Glacier      73.21 330  P       P      07 06 43.6 +0.7
TGL                                IAmb    IAmb   07 06 44.8
      comp=Z,277nm,1.4s
SNH   Sunshine Point    73.22 329  IAmb    IAmb   07 06 45.6
      comp=Z,267nm,1.1s
WAX   Waxell Ridge      73.22 329  P       P      07 06 44.6 +1.6
WAX                                IAmb    IAmb   07 06 44.7
      comp=Z,175nm,1.3s
M26K  Nabesna, AK       73.30 331  P       P      07 06 43.9 +0.5
M26K  Nabesna, AK       73.30 331  P       P      07 06 43.7 +0.3
      baz=90
SPA0  Spitsbergen Ar    73.30  12 eP       P      07 06 43.9 +0.8
SPITS Spitsbergen Ar    73.30  12  P       P      07 06 43.6 +0.5
SPITS                              pmax    pmax
      comp=Z,236nm,1.5s
SPB2  Spitsbergen Ar    73.31  12  IAmb    IAmb   07 06 45.2
      comp=Z,255nm,1.6s
OJC   Ojcow             73.31  42 ePKP     P      07 06 44.4 +0.7
IZAB  Izabela           73.34  43 eP       P      07 06 44.8 +1.0
CRQE  Cirque            73.34 330  P       P      07 06 44.3 +0.5
      baz=90
CRQM  Cirque            73.36 330  IAmb    IAmb   07 06 45.9
      comp=Z,252nm,1.6s
BGLC  Bering Glacier    73.44 329  P       P      07 06 44.0 -0.1
      baz=90
BBLS  Lazi&#263;i       73.44  48 eP       P      07 06 45.4 +0.8
PDG   Podgorica         73.45  50 ⇑P       P      07 06 45.3 +0.7
L26K  Log Cabin Wild    73.47 332  P       P      07 06 45.1 +0.8
L26K  Log Cabin Wild    73.47 332  P       P      07 06 44.7 +0.4
      baz=90,SNR=132
TEKS  Tekeris           73.48  47 eP       P      07 06 43.6 -1.1
PSZ   Piszkesteto       73.50  44 ⇑P       P      07 06 44.9  0.0
PSZ   Piszkesteto       73.50  44 eP       P      07 06 45.9 +1.1
PSZ   Piszkesteto       73.50  44  P       P      07 06 45.3 +0.4
PSZ                                pmax    pmax
      comp=Z,145nm,1.8s
PSZ   Piszkesteto       73.50  44  P       P      07 06 45.3 +0.4
VRDI  Verde Repeater    73.52 330  P       P      07 06 45.5 +0.6
JETT  Jettan, Norway    73.56  21 eP       P      07 06 46.9 +2.1
J26L  Joseph Creek      73.58 333  P       P      07 06 44.6 -0.4
      baz=91,SNR=68
FRGS  Fruska Gora       73.63  47 ⇓P       P      07 06 46.0 +0.3
FRGS  Fruska Gora       73.63  47 eP       P      07 06 45.7 +0.1
NIE   Niedzica          73.68  42 ePKP     P      07 06 48.0 +2.2
SCRK  Sand Creek        73.76 333  P       P      07 06 46.0  0.0
SCRK  Sand Creek        73.76 333  P       P      07 06 46.1  0.0
      baz=90,SNR=76
DOT   Dot Lake          73.79 333  IAmb    IAmb   07 06 48.0
      comp=Z,334nm,1.4s
DIVS  Divibare          73.85  48 eP       P      07 06 47.6 +0.6
BEL   Belsk             73.85  40 ePKP     P      07 06 48.3 +1.6
KECS  Kecovo            73.86  43 eP       P      07 06 47.5 +0.7
KECS                               pmax    pmax
      comp=Z,33nm,1.5s
KECS  Kecovo            73.86  43 eP       P      07 06 47.5 +0.7
SJES  Sjenica           73.91  49 eP       P      07 06 48.1 +0.7
TIR   Tirane            74.00  51  P       P      07 06 49.5 +1.7
TIR                                pmax    pmax
      comp=Z,165nm,1.5s
TIR   Tirane            74.00  51  P       P      07 06 49.5 +1.7
BMAR  Burnt Mountain    74.02 337  P       P      07 06 46.9 -0.6
N25K  Chitina, Valde    74.06 330  P       P      07 06 48.3 +0.4
      baz=89,SNR=30
BMRM  Bremner River     74.08 330  P       P      07 06 48.5 +0.5
      baz=89,SNR=52
TRUS  Trudelj           74.13  48 eP       P      07 06 49.5 +1.0
RIDG  Independent Ri    74.14 333  P       P      07 06 47.9 -0.3
RIDG                               IAmb    IAmb   07 06 49.8
      comp=Z,209nm,1.2s
RIDG  Independent Ri    74.14 333  P       P      07 06 48.3  0.0
      baz=89,SNR=18
AMBH  Ambrzfalva        74.18  45 eP       P      07 06 51.4 +2.7
FYU   Fort Yukon        74.28 336  IAmb    IAmb   07 06 50.3
      comp=Z,498nm,1.6s
HARP  HAARP             74.31 331  P       P      07 06 49.2  0.0
      baz=89,SNR=22
GRUS  Gruza             74.39  48 eP       P      07 06 50.9 +0.9
PRP   Porcupine Dome    74.41 335  P       P      07 06 49.8 -0.1
      baz=89,SNR=76
PAX   Paxson            74.44 332  P       P      07 06 49.9 -0.2
PAX                                pmax    pmax
      comp=Z,107nm,0.9s
PAX   Paxson            74.44 332  P       P      07 06 49.9 -0.2
PAX   Paxson            74.44 332  P       P      07 06 49.8 -0.2
      baz=88,SNR=56
IGT   Igoumenitsa       74.54  53  P       P      07 06 51.4 +0.4
KTK1  Kautokeino        74.56  22 eP       P      07 06 51.3 +0.8
EYAK  Cordova Ski Ar    74.66 329  IAmb    IAmb   07 06 53.2
      comp=Z,184nm,1.3s
EYAK  Cordova Ski Ar    74.66 329  P       P      07 06 51.7 +0.6
      baz=88,SNR=7.7
KLU   Klutina           74.70 330  P       P      07 06 51.9 +0.3
KLU                                IAmb    IAmb   07 06 53.0
      comp=Z,112nm,0.6s
KLU   Klutina           74.70 330  P       P      07 06 51.8 +0.3
      baz=88,SNR=43
HAMF  Hammerfest        74.71  20 eP       P      07 06 52.0 +0.7
SVIS  Svilajnac         74.71  48 eP       P      07 06 53.4 +1.6
OHR   Ohrid             74.72  51 i P      P      07 06 53.4 +1.3
SELS  Selova            74.74  49 eP       P      07 06 52.4 +0.3
KBN   Korca             74.77  51  P       P      07 06 54.0 +1.6
KBN                                pmax    pmax
      comp=Z,248nm,1.6s
KBN   Korca             74.77  51  P       P      07 06 54.0 +1.6
KBN                                IAmb    IAmb   07 06 55.5
      comp=Z,248nm,1.6s
M24K  Tolsona, Glenn    74.79 331  IAmb    IAmb   07 06 53.7
      comp=Z,333nm,1.4s
M24K  Tolsona, Glenn    74.79 331  P       P      07 06 52.3 +0.3
      baz=88,SNR=12
SIRR  Siria             74.83  46 ⇓P       P      07 06 52.9 +0.4
BZS   Buzias            74.86  46 ⇓P       P      07 06 53.6 +0.9
BZS   Buzias            74.86  46 ⇓P       P      07 06 53.6 +0.9
LTVH  Ltavrtes, Hu      74.89  44 eP       P      07 06 56.2 +3.4
NEST  Nestorio          74.99  52  P       P      07 06 54.8 +1.1
IL31                    75.00 334  P       P      07 06 52.8 -0.3
IL31                               IAmb    IAmb   07 06 54.3
      comp=Z,118nm,0.6s
ILAR  Eielson Array     75.00 334  P       P      07 06 52.9 -0.2
      comp=Z,66nm,0.5s,baz=91,slow=4.7,SNR=1232
ILAR                               PP      PP     07 09 44.6 +1.8
      comp=Z,7.3nm,1.1s,baz=92,slow=5.1,SNR=5.8
ILAR                               LR      LR     07 40 55.2
      comp=Z,387nm,20.9s,baz=122,slow=36
KOLS  Kolonicke sedl    75.00  43 eP       P      07 06 54.8 +1.3
KOLS                               pmax    pmax
      comp=Z,44nm,1.4s
KOLS  Kolonicke sedl    75.00  43 eP       P      07 06 54.8 +1.3
Q23K  Middleton Isla    75.01 328  P       P      07 06 53.3 +0.1
      baz=87
KUBS  Kucevo            75.02  47 eP       P      07 06 53.3 -0.4
UZH   Uzhgorod          75.05  43 i P      P      07 06 54.2 +0.5
UZH                               e               07 07 00.9
HDA   Harding Lake      75.05 333  P       P      07 06 52.8 -0.6
HDA   Harding Lake      75.05 333  P       P      07 06 52.8 -0.6
      baz=88
HOPEN Hopen             75.07  14 eP       P      07 06 55.9 +2.6
BOVS  Bovan             75.12  48 ⇓P       P      07 06 54.1 -0.1
BOVS  Bovan             75.12  48 eP       P      07 06 54.2 -0.1
SUW   Suwalki           75.15  37 ePKP     P      07 06 54.5 +0.4
SUW   Suwalki           75.15  37 eP       P      07 06 54.3 +0.2
SUW   Suwalki           75.15  37  IAmb    IAmb   07 06 55.8
      comp=Z,207nm,1.4s
MTSE  Matsula           75.18  33 eP       P      07 06 54.9 +0.7
FNA   Florina           75.19  51 eP       P      07 06 55.5 +0.7
FNA   Florina           75.19  51  P       P      07 06 55.2 +0.4
FNA   Florina           75.19  51  P       P      07 06 55.1 +0.4
FNA                                pmax    pmax
      comp=Z,234nm,1.8s
FNA   Florina           75.19  51  P       P      07 06 55.1 +0.4
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POKR  Poker Plat Res    75.22 334  P       P      07 06 54.4  0.0
POKR                               IAmb    IAmb   07 06 55.6
      comp=Z,335nm,1.1s
POKR  Poker Plat Res    75.22 334  P       P      07 06 54.1 -0.3
      baz=87,SNR=32
KWP   Kalwaria Pacla    75.23  42 ePKP     P      07 06 56.2 +1.4
TRPA  Tarpa             75.25  44 ⇓P       P      07 06 54.9 +0.1
TRPA  Tarpa             75.25  44 eP       P      07 06 55.1 +0.3
KPRO  Kipourio          75.28  52  P       P      07 06 54.5 -0.8
BARS  Barje             75.29  49 eP       P      07 06 53.8 -1.4
BARS  Barje             75.29  49 eP       P      07 06 55.8 +0.6
GLI   Glacier Island    75.30 330  P       P      07 06 55.2 +0.3
GLI                                IAmb    IAmb   07 06 55.9
      comp=Z,143nm,0.7s
GLI   Glacier Island    75.30 330  P       P      07 06 54.7 -0.1
      baz=86,SNR=6.7
DHY   Denali Highway    75.30 332  P       P      07 06 54.6 -0.5
DHY                                IAmb    IAmb   07 06 56.2
      comp=Z,248nm,1.7s
DHY   Denali Highway    75.30 332  P       P      07 06 54.5 -0.6
      baz=87,SNR=14
SCM   Sheep Creek Mo    75.35 331  P       P      07 06 55.2 -0.1
SCM                                pmax    pmax
      comp=Z,285nm,1.1s
SCM   Sheep Creek Mo    75.35 331  P       P      07 06 55.2 -0.1
SCM                                IAmb    IAmb   07 06 56.7
      comp=Z,285nm,1.1s
SCM   Sheep Creek Mo    75.35 331  P       P      07 06 55.2 -0.1
      baz=86,SNR=23
ARA0  ARCESS Array S    75.36  21 eP       P      07 06 55.4 +0.3
ARCES ARCESS Array B    75.36  21  P       P      07 06 55.3 +0.3
      comp=Z,29nm,0.5s,baz=279,slow=6.0,SNR=146
ARCES ARCESS Array B    75.36  21  P       P      07 06 56.6 +1.5
ARCES                              pmax    pmax
      comp=Z,320nm,1.8s
ARCES ARCESS Array B    75.36  21  P       P      07 06 56.6 +1.5
ARCES                              IAmb    IAmb   07 06 56.7
      comp=Z,320nm,1.8s
H24K  Noodor Dome       75.37 335  P       P      07 06 55.5 +0.1
H24K                               IAmb    IAmb   07 06 56.8
      comp=Z,343nm,1.3s
H24K  Noodor Dome       75.37 335  P       P      07 06 55.4 +0.1
      baz=87
CCB   Clear Creek Bu    75.41 334  P       P      07 06 54.6 -0.7
CCB                                IAmb    IAmb   07 06 56.1
      comp=Z,330nm,1.6s
COLA  College           75.41 334d iP      P      07 06 54.7 -0.7
COLA                               pmax    pmax
      comp=Z,376nm,1.6s
COLA  College           75.41 334  P       P      07 06 55.1 -0.3
      baz=87
TCOL  CIGO, UAF Yank    75.42 334  P       P      07 06 55.0 -0.4
      baz=87,SNR=36
ZAGS  Zajecar           75.48  48 eP       P      07 06 56.4 +0.1
PABE  Paberze           75.49  36 eP       P      07 06 56.7 +0.7
PABE  Paberze           75.49  36  P       P      07 06 56.5 +0.4
WAT6  Susitna Watana    75.50 331  P       P      07 06 55.7 -0.5
      baz=86,SNR=49
HERR  Herculane         75.50  47 ⇓P       P      07 06 56.5 +0.2
DRGR                    75.50  45 ⇓P       P      07 06 57.0 +0.6
DRGR                    75.50  45 ⇓P       P      07 06 57.0 +0.6
WRH   Wood River Hil    75.54 333  IAmb    IAmb   07 06 57.1
      comp=Z,104nm,0.7s
KZN   Kozani            75.55  52  P       P      07 06 57.2 +0.4
DJES  Djerdap           75.60  47 eP       P      07 06 57.7 +0.8
STIP  Stip              75.69  50 i P      P      07 06 58.8 +1.3
GZR   Gura Zlata        75.70  46 ⇓P       P      07 06 58.3 +0.7
GZR   Gura Zlata        75.70  46 ⇓P       P      07 06 58.3 +0.7
DEV   Deva              75.73  46 ⇓P       P      07 06 58.4 +0.8
DEV   Deva              75.73  46 ⇓P       P      07 06 58.4 +0.8
EVR   Evrytania         75.75  53  P       P      07 06 59.5 +1.5
BOSS  Bosilegrad        75.82  49 eP       P      07 06 59.0 +0.8
THL   Klokotos Trika    75.83  52  P       P      07 06 58.1 -0.2
SML   Sawmill           75.83 331  P       P      07 06 57.7 -0.3
      baz=86,SNR=15
ZAPS  Zavoj             75.84  49 eP       P      07 06 59.1 +0.7
WAT1  Susitna Watana    75.85 332  P       P      07 06 58.0 -0.1
      baz=86
TOLK  Toolik Lake Re    75.87 338  P       P      07 06 57.9 -0.2
      baz=86,SNR=61
KEV   Kevo              75.87  21  P       P      07 06 58.2 +0.3
KEV                                pmax    pmax
      comp=Z,324nm,1.7s
KEV   Kevo              75.87  21  P       P      07 06 58.2 +0.3
KEV                                IAmb    IAmb   07 06 59.8
      comp=Z,324nm,1.7s
ANX   Ano Chora         75.88  53  P       P      07 06 59.7 +0.9
PWL   Port Wells        75.91 330  IAmb    IAmb   07 06 59.7
      comp=Z,232nm,1.2s
PWL   Port Wells        75.91 330  P       P      07 06 58.2 -0.1
      baz=85,SNR=7.9
KNK   Knik Glacier      75.92 330  P       P      07 06 58.7 +0.3
      baz=85,SNR=14
BMR   Baia Mare         75.94  44 ⇓P       P      07 06 59.4 +0.6
BMR   Baia Mare         75.94  44 ⇓P       P      07 06 59.4 +0.6
GRG   Griva             75.94  51 eP       P      07 06 59.9 +0.9
GRG   Griva             75.94  51  P       P      07 06 59.8 +0.8
RND   Reindeer          75.95 332  P       P      07 06 58.7 +0.1
RND                                pmax    pmax
      comp=Z,806nm,1.7s
RND   Reindeer          75.95 332  P       P      07 06 58.7 +0.1
NEA2  Nenana            75.95 334  P       P      07 06 58.2 -0.3
      baz=86,SNR=173
MCK   McKinley          75.96 333  P       P      07 06 58.2 -0.4
MCK                                pmax    pmax
      comp=Z,136nm,1.0s
MCK   McKinley          75.96 333  P       P      07 06 58.2 -0.4
MCK                                IAmb    IAmb   07 06 59.6
      comp=Z,136nm,1.0s
MCK   McKinley          75.96 333  P       P      07 06 58.3 -0.4
      baz=86,SNR=51
VAY   Valandovo         76.03  51 i P      P      07 07 00.1 +0.7
I23K  Minto, Yukon-K    76.03 334  P       P      07 06 58.9  0.0
      baz=86,SNR=99
LVV   L'vov             76.06  42 eP       P      07 06 59.5 +0.1
ITM   Ithomi            76.07  55 eP       P      07 07 00.7 +0.9
ITM   Ithomi            76.07  55  P       P      07 07 00.5 +0.7
ITM   Ithomi            76.07  55  P       P      07 07 00.3 +0.5
ITM                                IAmb    IAmb   07 07 02.2
      comp=Z,292nm,1.7s
SRE   Strehaia          76.08  47 ⇑P       P      07 06 59.9 +0.2
SRE   Strehaia          76.08  47 ⇑P       P      07 06 59.9 +0.2
FINES FINESS Array B    76.10  30  P       P      07 06 59.6 +0.2
      comp=Z,30nm,0.5s,baz=258,slow=3.4,SNR=302
FINES                              LR      LR     07 36 44.6
      comp=Z,286nm,19.7s,baz=304,slow=32
FIA1  FINESS Array S    76.11  30  P       P      07 06 59.6 +0.2
GHO   Glory Hole Cre    76.11 331  IAmb    IAmb   07 07 01.0
      comp=Z,284nm,1.1s
CJR   Cluj-Napoca       76.12  45 ⇓P       P      07 07 00.8 +0.9
CJR   Cluj-Napoca       76.12  45 ⇓P       P      07 07 00.8 +0.9
KLV   Kalavryta, Ach    76.13  54  P       P      07 07 01.0 +0.8
COLD  Coldfoot          76.21 336  P       P      07 07 00.3 +0.3
COLD                               IAmb    IAmb   07 07 01.8
      comp=Z,242nm,1.5s
COLD  Coldfoot          76.21 336  P       P      07 07 00.1 +0.1
      baz=85,SNR=64
PMR   Palmer            76.23 331  P       P      07 06 59.9 -0.2
      baz=85,SNR=17
VTS   Vitosha           76.36  49 ⇓P       P      07 07 02.4 +1.0
VTS   Vitosha           76.36  49 ⇓P       P      07 07 02.4 +1.0
VTS   Vitosha           76.36  49  P       P      07 07 02.4 +1.0
HORT  Hortiatis         76.52  51 eP       P      07 07 02.9 +0.6
HORT  Hortiatis         76.52  51  P       P      07 07 02.8 +0.5
SEW   Seward            76.52 329  IAmb    IAmb   07 07 03.1
      comp=Z,158nm,1.2s
SEW   Seward            76.52 329  P       P      07 07 01.9 +0.1
      baz=84,SNR=7.3
RC01  Rabbit Creek A    76.56 330  P       P      07 07 02.2 +0.1
      baz=84,SNR=6.3
TRF   Thorofare Moun    76.59 332  P       P      07 07 02.4  0.0
      baz=84,SNR=77
ARCR  ARCALIA           76.59  44 ⇓P       P      07 07 03.0 +0.5
MLY   Manley            76.62 334  P       P      07 07 01.9 -0.5
MLY                                IAmb    IAmb   07 07 03.3
      comp=Z,143nm,0.9s
MLY   Manley            76.62 334  P       P      07 07 01.9 -0.5
      baz=84
SOH   Sokhos            76.68  51  P       P      07 07 04.2 +1.0
M22K  Willow            76.68 331  P       P      07 07 02.5 -0.1
      baz=84,SNR=17
CUT   Chulitna          76.68 331  P       P      07 07 02.4 -0.3
      baz=84,SNR=18
ISAL  Salakas           76.71  36 eP       P      07 07 03.8 +0.9
VSU   Vasula            76.72  33 eP       P      07 07 03.5 +0.5
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VSU   Vasula            76.72  33d iP      P      07 07 02.2 -0.7
IIGN  Ignalina          76.79  36 eP       P      07 07 04.6 +1.2
NEO   Neokhori          76.79  53  P       P      07 07 03.7 -0.1
BPAW  Bear Paw Mtn.     76.83 333  IAmb    IAmb   07 07 04.4
      comp=Z,249nm,1.0s
BPAW  Bear Paw Mtn.     76.83 333  P       P      07 07 03.0 -0.5
      baz=84,SNR=86
KTH   Kantishna Hill    76.86 333  P       P      07 07 03.7  0.0
VLI   Veliai            76.94  55  P       P      07 07 05.6 +1.0
NVR   Nevrokopi         76.99  50  P       P      07 07 05.5 +0.6
ARR   Arges             77.00  46 ⇑P       P      07 07 05.7 +0.8
KRND  KRANIDI           77.01  54  P       P      07 07 05.4 +0.4
IDID  Didziasalis       77.08  36 eP       P      07 07 05.8 +0.8
BUR08 Bucovina Ar. S    77.09  44  P       P      07 07 06.6 +1.2
BUR08                              IAmb    IAmb   07 07 08.0
      comp=Z,214nm,1.6s
BURAR Bucovina Array    77.10  44 ⇑P       P      07 07 06.0 +0.5
BURAR Bucovina Array    77.10  44 ⇑P       P      07 07 06.0 +0.5
I21K  Tanana            77.13 334  P       P      07 07 04.7 -0.4
I21K                               IAmb    IAmb   07 07 06.0
      comp=Z,254nm,1.4s
I21K  Tanana            77.13 334  P       P      07 07 04.8 -0.4
      baz=83
NACGM Naroch            77.16  36 i P      P      07 07 06.2 +0.7
BRSE  Bradley Lake S    77.21 329  P       P      07 07 05.7  0.0
      baz=83
BRLK  Bradley Lake      77.28 329  P       P      07 07 06.2 +0.1
BRLK                               IAmb    IAmb   07 07 45.3
      comp=Z,442nm,1.9s
VOIR                    77.28  46 ⇑P       P      07 07 07.1 +0.6
VOIR                    77.28  46 ⇑P       P      07 07 07.1 +0.6
ATH   Athens Observa    77.36  54  P       P      07 07 07.7 +0.7
CAST  Castle Rocks      77.39 333  P       P      07 07 06.2 -0.4
CAST                               IAmb    IAmb   07 07 07.3
      comp=Z,317nm,1.5s
CAST  Castle Rocks      77.39 333  P       P      07 07 06.0 -0.6
      baz=83,SNR=64
H21K  Melozitna Rive    77.42 335  IAmb    IAmb   07 07 08.0
      comp=Z,162nm,1.1s
H21K  Melozitna Rive    77.42 335  P       P      07 07 06.7 -0.1
      baz=83
CHUM  Lake Minchumin    77.44 333  P       P      07 07 06.4 -0.4
      baz=83,SNR=68
DOPR  Dopca             77.44  46 ⇑P       P      07 07 08.0 +0.7
VLY   Voula,Athens      77.44  54  P       P      07 07 07.8 +0.4
PTL   Penteli           77.47  54  P       P      07 07 08.1 +0.5
CNPM  China Poot        77.49 329  IAmb    IAmb   07 07 09.2
      comp=Z,200nm,1.3s
PLD   Plovdiv           77.50  50 eP       P      07 07 08.3 +0.6
PPLA  Purkeypile        77.51 332  P       P      07 07 07.1 -0.4
PPLA                               IAmb    IAmb   07 07 08.5
      comp=Z,523nm,1.7s
PPLA  Purkeypile        77.51 332  P       P      07 07 07.1 -0.4
      baz=82,SNR=14
DION  Dionisos Attik    77.52  54  P       P      07 07 08.4 +0.5
HOM   Homer             77.67 329  P       P      07 07 08.7 +0.5
      baz=82
OZUR                    77.70  45 ⇑P       P      07 07 09.1 +0.4
THAS  Thassos island    77.74  51  P       P      07 07 09.5 +0.5
SPCR  Spurr Chakacha    77.74 330  P       P      07 07 08.4 -0.4
      baz=82,SNR=18
KNDR  Palaiochora Ch    77.77  57 eP       P      07 07 10.2 +0.9
MNK   Minsk             77.84  37 i P      P      07 07 09.9 +0.6
MNK                               i *PP    pP     07 07 48.8 +1.1
MNK                               i               07 10 06.4
MNK                               i PPP    PPP    07 11 55.8
MNK                               i S      S      07 16 51.2 +2.1
MNK                               i *SS    sS     07 17 51.1 -2.7
MNK                               i SS     SS     07 22 01.5 +8.9
MNK                               i SSS    SSS    07 25 17.5
MNK                                pmax    pmax
      comp=Z,111nm,1.3s
MNK                                pmax    pmax
      comp=E,17nm,1.3s
MNK                                pmax    pmax
      comp=N,71nm,1.4s
MNK                                MLR     MLR
      comp=N,828nm,24.0s
MNK                                MLR     MLR
      comp=E,139nm,23.0s
MNK                                MLR     MLR
      comp=Z,144nm,22.0s
MNK   Minsk             77.84  37 i P      P      07 07 10.0 +0.7
      comp=E,17nm,1.3s
MNK                               i P      P      07 07 10.0 +0.7
      comp=N,71nm,1.4s
MNK                               i P      P      07 07 10.0 +0.7
      comp=Z,111nm,1.3s,baz=98
MNK                               i pP     pP     07 07 48.8 +1.2
MNK                               i PP     PP     07 10 06.5 -0.4
MNK                               i PPP    PPP    07 11 55.9
MNK                               i S      S      07 16 51.2 +2.1
MNK                               i sS     sS     07 17 51.2 -2.6
MNK                               i SS     SS     07 22 01.6 +9.0
MNK                               i SSS    SSS    07 25 17.5
MNK                               i LQ     LQ     07 36 08.2
MNK                               i LR     LR     07 40 23.4
MNK                               i LRM    MLR    07 43 24.5
      comp=N,828nm,23.5s
MNK                               i LRM    MLR    07 43 28.4
      comp=E,139nm,23.2s
MNK                               i LRM    MLR    07 43 46.4
      comp=Z,144nm,21.6s
MLR   Muntele Rosu      77.90  46 ⇑P       P      07 07 11.2 +1.2
MLR   Muntele Rosu      77.90  46  P       P      07 07 10.5 +0.5
MLR                                pmax    pmax
      comp=Z,251nm,1.4s
MLR   Muntele Rosu      77.90  46  P       P      07 07 10.5 +0.5
MLR                                IAmb    IAmb   07 07 13.1
      comp=Z,251nm,1.4s
A21K  Barrow            77.96 341  P       P      07 07 10.3 +0.7
A21K                               IAmb    IAmb   07 07 12.0
      comp=Z,270nm,1.1s
A21K  Barrow            77.96 341  P       P      07 07 10.2 +0.6
      baz=80,SNR=112
IMMV  Iera Moni Meta    77.97  56 eP       P      07 07 11.3 +0.9
IMMV  Iera Moni Meta    77.97  56  P       P      07 07 11.2 +0.9
COVR  Voineasa-Covas    78.02  46 ⇓P       P      07 07 11.6 +1.0
O20K  Slope Mountain    78.10 329  P       P      07 07 10.5 -0.2
      baz=82
MHLO  Agia Marina, M    78.11  55  P       P      07 07 10.9 -0.2
NEHR  Nehoiu            78.15  46 ⇑P       P      07 07 11.1 -0.1
GVD   Gavdhos           78.16  57 eP       P      07 07 11.9 +0.5
GVD   Gavdhos           78.16  57  P       P      07 07 11.9 +0.5
GVDS  Gavdos            78.16  57 eP       P      07 07 11.9 +0.5
J20K  Nowinta River     78.19 333  IAmb    IAmb   07 07 11.8
      comp=Z,116nm,0.5s
TESR  Tescani           78.23  45 ⇓P       P      07 07 12.0 +0.4
RDO   Rodhopi           78.27  50 eP       P      07 07 12.5 +0.6
RDO   Rodhopi           78.27  50  P       P      07 07 12.3 +0.4
K20K  Telida            78.29 333  IAmb    IAmb   07 07 12.5
      comp=Z,152nm,1.1s
K20K  Telida            78.29 333  P       P      07 07 11.2 -0.4
      baz=81
PLOR  Plostina          78.33  46 ⇑P       P      07 07 11.9 -0.3
PLOR  Plostina          78.33  46 ⇑P       P      07 07 11.9 -0.3
L20K  Farewell, AK      78.34 332  P       P      07 07 11.4 -0.6
      baz=81,SNR=17
SMTH  Samothraki Isl    78.37  51  P       P      07 07 12.2 -0.3
VRI   Vrincioaia        78.38  45 ⇓P       P      07 07 12.3 -0.2
VRI   Vrincioaia        78.38  45 eP       P      07 07 11.6 -0.9
VRI   Vrincioaia        78.38  45 ⇓P       P      07 07 12.3 -0.2
PUL   Pulkovo           78.38  31 i P      P      07 07 12.0 -0.1
PUL                                pmax    pmax
      comp=Z,55nm,0.7s
KDAK  Kodiak Island     78.43 327  P       P      07 07 13.2 +0.8
      comp=Z,83nm,0.5s,baz=119,slow=4.0,SNR=7.3
KDAK  Kodiak Island     78.43 327  P       P      07 07 13.5 +1.1
KDAK                               pmax    pmax
      comp=Z,314nm,1.4s
KDAK  Kodiak Island     78.43 327  P       P      07 07 13.5 +1.1
KDAK                               IAmb    IAmb   07 07 14.4
      comp=Z,314nm,1.4s
KDAK  Kodiak Island     78.43 327  P       P      07 07 13.2 +0.8
      baz=81
APA   Apatity           78.45  23⇓iP       P      07 07 11.7 -0.7
P19K  Oil Pt            78.47 329  IAmb    IAmb   07 07 15.2
      comp=Z,134nm,0.7s
P19K  Oil Pt            78.47 329  P       P      07 07 12.7  0.0
      baz=81,SNR=5.6
RAZG  Razgrad           78.59  48 ⇓P       P      07 07 14.1 +0.4
ALN   Alexandroupoli    78.69  51 eP       P      07 07 14.5 +0.2
ALN   Alexandroupoli    78.69  51  P       P      07 07 14.4 +0.2
ALN   Alexandroupoli    78.69  51  P       P      07 07 15.1 +0.9
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GADA	Gvkgeada	78.69	51	eP	P	07 07 14.8	+0.5
IDI	Anoyia	78.73	56	P	P	07 07 15.3	+0.6
ENEZ	Enez	78.79	51	eP	P	07 07 15.4	+0.6
Q19K	Cape Douglas,	78.80	328	P	P	07 07 13.9	-0.6
	baz=80						
SIGR	SIGRI	78.82	52	eP	P	07 07 15.7	+0.7
SIGR	SIGRI	78.82	52	P	P	07 07 15.6	+0.6
LVZ	Lovozero	78.86	23	i P	P	07 07 13.3	-1.4
LVZ				pmax	pmax		
	comp=Z,214nm,2.2s						
BOZC	Bozcaada	78.87	52	eP	P	07 07 15.5	+0.3
OHAK	Old Harbor	78.90	326	P	P	07 07 16.1	+1.1
OHAK				IAmb	IAmb	07 07 17.0	
	comp=Z,348nm,1.3s						
OHAK	Old Harbor	78.90	326	P	P	07 07 15.3	+0.4
	baz=80,SNR=10.0						
N19K	Bonanza Creek	78.90	330	P	P	07 07 14.9	-0.2
	baz=80						
THR9	Santorini-Faro	78.92	55	P	P	07 07 15.3	-0.3
O19K	Port Alsworth	78.92	329	IAmb	IAmb	07 07 16.2	
	comp=Z,120nm,0.6s						
O19K	Port Alsworth	78.92	329	P	P	07 07 14.9	-0.2
	baz=80,SNR=12						
APE	Apeiranthos	78.93	54	⇓P	P	07 07 15.5	-0.2
APE	Apeiranthos	78.93	54	eP	P	07 07 15.6	-0.1
APE	Apeiranthos	78.93	54	P	P	07 07 15.3	-0.4
APE	Apeiranthos	78.93	54	⇓P	P	07 07 15.5	-0.2
THR3	Thira Island,	78.94	55	P	P	07 07 15.7	0.0
SANT	Santorini	79.00	55	⇓P	P	07 07 15.8	-0.3
SANT	Santorini	79.00	55	eP	P	07 07 15.8	-0.3
EDRB	Edirne	79.05	50	eP	P	07 07 16.6	+0.4
ERIK	Erikli-Kesan	79.07	51	eP	P	07 07 16.8	+0.5
EZN	Ezine	79.08	52	eP	P	07 07 16.8	+0.5
UKOP	Uzunkopru-Edir	79.08	50	eP	P	07 07 17.1	+0.7
GELI	Tayfur-Gelibol	79.09	51	eP	P	07 07 16.9	+0.5
SORM	Soroca	79.11	43	⇓P	P	07 07 16.0	-0.4
SORM	Soroca	79.11	43	⇓P	P	07 07 16.0	-0.4
PMSA	Palmer Station	79.15	181	eP	P	07 07 18.0	+2.0
PMSA	Palmer Station	79.15	181	P	P	07 07 17.6	+1.6
TTA	Tatalina	79.23	332	P	P	07 07 15.8	-1.0
TTA				pmax	pmax		
	comp=Z,33nm,1.1s						
TTA	Tatalina	79.23	332	P	P	07 07 15.8	-1.0
TTA	Tatalina	79.23	332	P	P	07 07 16.2	-0.6
	baz=79,SNR=14						
AKASG	Malin Array Be	79.24	40	P	P	07 07 17.1	+0.1
	comp=Z,23nm,0.5s,baz=284,slow=3.8,SNR=282						
AKASG				S	S	07 17 02.9	-1.2
	comp=Z,0.1nm,0.3s,baz=270,slow=9.8,SNR=6.5						
AKASG				PKKPbc	PKKPbc	07 26 06.7	-1.3
	comp=Z,0.7nm,0.7s,baz=88,slow=2.8,SNR=6.7						
AKASG	Malin Array Be	79.24	40	P	P	07 07 16.6	-0.4
AKBB	Malin Array Si	79.24	40	ceP	P	07 07 16.7	-0.3
GCSA	Galena City Sc	79.26	334	P	P	07 07 16.9	+0.1
	baz=79,SNR=7.3						
LPK	Lapseki	79.31	51	eP	P	07 07 18.3	+0.7
NPS	Neapolis	79.32	56	P	P	07 07 18.4	+0.6
VLDR	Vladesti	79.32	45	⇑P	P	07 07 17.2	-0.4
SVW2	Sparrevohn	79.37	330	P	P	07 07 17.4	-0.2
SVW2				IAmb	IAmb	07 07 18.6	
	comp=Z,101nm,0.7s						
ICOR	Ion Corvin	79.42	47	⇑P	P	07 07 18.8	+0.6
CFR	Carcaliu	79.47	46	⇓P	P	07 07 18.1	-0.3
CFR	Carcaliu	79.47	46	⇓P	P	07 07 18.1	-0.3
P18K	Big Mountain,	79.52	329	IAmb	IAmb	07 07 19.6	
	comp=Z,332nm,1.3s						
P18K	Big Mountain,	79.52	329	P	P	07 07 18.2	-0.2
	baz=79,SNR=5.3						
URLA	Izmir	79.54	53	eP	P	07 07 19.5	+0.5
MILM	Milestii Mici	79.63	44	⇓P	P	07 07 18.9	-0.3
MILM	Milestii Mici	79.63	44	d iP	P	07 07 18.0	-1.2
MILM				e		07 07 24.0	
MILM				e		07 08 15.0	
MILM				pmax	pmax		
	comp=Z,280nm,1.5s						
MAR6	Marsite Statio	79.63	51	eP	P	07 07 19.8	+0.4
MAR3	Marsite Statio	79.65	51	eP	P	07 07 19.7	+0.3
DKL	Dikili	79.65	52	eP	P	07 07 20.1	+0.6
KRBG	Karabiga-Canak	79.71	51	eP	P	07 07 19.9	+0.1
TPGR	Topolog	79.73	46	⇑P	P	07 07 20.7	+0.9
TIRR	Tirgusor	79.79	47	⇓P	P	07 07 20.1	0.0
TIRR	Tirgusor	79.79	47	P	P	07 07 19.9	-0.2
TIRR				pmax	pmax		
	comp=Z,105nm,1.4s						
TIRR	Tirgusor	79.79	47	P	P	07 07 19.9	-0.2
ZKR	Zakros	79.83	56	eP	P	07 07 20.9	+0.3
ZKR	Zakros	79.83	56	P	P	07 07 20.8	+0.2
BLCB	Balcova	79.88	53	eP	P	07 07 21.2	+0.5
BLCB	Balcova	79.88	53	P	P	07 07 21.0	+0.3
MRMT	Marmara Adasi	79.90	51	eP	P	07 07 20.4	-0.5
GCAM	G?zelcaml?	80.16	54	eP	P	07 07 22.3	+0.1
SLVT	Silivri	80.24	50	eP	P	07 07 22.9	+0.3
CTYL	Yalikoy Yolu	80.25	50	eP	P	07 07 22.6	-0.1
BODT	Bodrum	80.34	54	eP	P	07 07 22.3	-1.0
PURM	Purcari	80.42	44	⇑P	P	07 07 23.9	+0.5
CTKS	Kestanelik-??a	80.46	50	eP	P	07 07 23.9	+0.1
KCTX	Karacabey (Bur	80.53	51	eP	P	07 07 24.1	-0.1
DAT	Datca	80.61	55	eP	P	07 07 23.9	-0.9
DAT	Datca	80.61	55	P	P	07 07 23.7	-1.1
AYDB	Zeytinkoy-Aydi	80.62	53	eP	P	07 07 24.8	-0.1
RDOG	Red Dog Mine	80.83	338	P	P	07 07 34.9	+10
	baz=74,SNR=67						
KLYT	Kilyos	80.85	50	eP	P	07 07 25.9	+0.1
ISK	Istanbul-Kandi	80.90	50	eP	P	07 07 25.9	-0.2
KAVV	Kandilli-Istan	80.90	50	eP	P	07 07 25.9	-0.2
MDNY	Mudanya-Bursa	80.91	51	eP	P	07 07 25.8	-0.4
YER	Yerkesik	81.08	54	eP	P	07 07 26.6	-0.7
YER	Yerkesik	81.08	54	P	P	07 07 26.3	-1.0
KULA	Kula-Manisa	81.10	53	eP	P	07 07 27.3	-0.1
TURN	Turunc	81.13	54	eP	P	07 07 27.2	-0.2
ARG	Arkhangelos	81.14	55	eP	P	07 07 27.2	-0.3
YLV	Yalova	81.23	50	eP	P	07 07 27.9	-0.1
SIMA	Simav-Kutahya	81.24	52	eP	P	07 07 28.4	+0.3
SILT	Sile	81.31	50	eP	P	07 07 28.2	-0.1
HRT	Hereke	81.40	50	eP	P	07 07 28.7	-0.2
TVSB	Tavsanli	81.53	52	eP	P	07 07 29.8	+0.2
ADVT	Abdulvahap	81.53	50	eP	P	07 07 29.5	0.0
CAVI	Cavuskoy	81.66	51	eP	P	07 07 30.3	+0.1
FETY	Fethiye	81.81	54	eP	P	07 07 30.3	-0.8
FETY	Fethiye	81.81	54	P	P	07 07 29.8	-1.3
CHGN	Chignik	81.85	326	IAmb	IAmb	07 07 32.4	
	comp=Z,285nm,1.0s						
CHGN	Chignik	81.85	326	P	P	07 07 31.0	+0.3
	baz=76,SNR=11						
GULT	Gulveren	82.11	50	eP	P	07 07 32.8	+0.2
BORA	Eskisehir	82.18	51	P	P	07 07 33.3	+0.2
AKAS	Kas	82.31	55	eP	P	07 07 33.9	+0.1
ELL	Elmali	82.44	54	eP	P	07 07 35.5	+1.0
SMAI	San Martin Ant	82.60	182	P	P	07 07 36.0	+1.7
SMAI				IAmb	IAmb	07 08 19.2	
	comp=Z,142nm,1.1s						
KLMR	Klimovskoe	82.61	29	eP	P	07 07 33.0	-1.6
KLMR				e*SP	sP	07 08 26.2	-3.3
KLMR				e		07 10 44.0	
KLMR				eS	S	07 17 35.2	-3.4
KLMR				eSS	SS	07 22 58.6	-4.6
KLMR				pmax	pmax		
	comp=Z,132nm,1.4s						
KLMR	Klimovskoe	82.61	29	eP	P	07 07 33.1	-1.6
KLMR				AMP		07 07 35.4	
	comp=Z,132nm,1.4s						
KLMR				esP	sP	07 08 26.3	-3.3
KLMR				ePP	PP	07 10 44.1	-1.9
KLMR				eS	S	07 17 35.2	-3.4
KLMR				eS	S	07 17 35.2	-3.4
KLMR				eSS	SS	07 22 58.7	-4.5
KLMR				eSS	SS	07 22 58.7	-4.5
MDUB	Mudurnu	82.61	50	eP	P	07 07 35.5	+0.2
OBN	Obninsk	82.65	35	⇓P	P	07 07 35.8	+0.9
OBN	Obninsk	82.65	35	d iP	P	07 07 35.4	+0.5
OBN				*PP	pP	07 08 16.0	+2.3
OBN				e*SP	sP	07 08 34.2	+4.0
OBN				eS	S	07 17 44.7	+5.5
OBN				e*SS	pS	07 18 30.1	+3.8
OBN				ePS	PnS	07 18 46.7	-3.6
OBN				eSSS	SSS	07 26 38.0	
OBN				pmax	pmax		
	comp=Z,576nm,1.7s						
OBN				MLR	MLR		
	comp=Z,232nm,17.0s						
OBN	Obninsk	82.65	35	P	P	07 07 35.6	+0.7
OBN				IAmb	IAmb	07 07 36.8	
	comp=Z,177nm,0.6s						
ISP	Isparta	82.68	53	eP	P	07 07 35.8	+0.1
KORT	Korkueli	82.73	54	eP	P	07 07 35.9	-0.1
CIFT	Cifteler, Eski	82.76	51	eP	P	07 07 36.3	+0.3
ANM	Nome	82.83	335	IAmb	IAmb	07 07 38.0	
	comp=Z,105nm,1.0s						
ANM	Nome	82.83	335	P	P	07 07 36.5	+0.7
	baz=71,SNR=47						
CHNA	Chernabura Isl	82.86	325	P	P	07 07 36.2	+0.2
	baz=75						
YUVA	Yuva-Kibriscik	82.99	50	eP	P	07 07 37.3	0.0
MOS	Moscow	83.07	34	eP	P	07 07 35.3	-1.8
MOS				pmax	pmax		
	comp=Z,700nm,2.0s						
MOS				pmax	pmax		
	comp=Z,295nm,1.6s						
SVRH	Sivrihisar-ESK	83.08	51	eP	P	07 07 37.9	+0.2
SDPT	Sand Point	83.22	325	IAmb	IAmb	07 07 39.5	
	comp=Z,148nm,0.8s						
SDPT	Sand Point	83.22	325	P	P	07 07 38.6	+0.7
	baz=74,SNR=5.4						
TNA	Tin City	83.51	336	P	P	07 07 39.4	+0.2
TNA				IAmb	IAmb	07 07 41.9	
	comp=Z,170nm,0.8s						
TNA	Tin City	83.51	336	P	P	07 07 40.3	+1.1
	baz=69,SNR=57						
SIM	Simferopol'	83.66	45	d iP	P	07 07 39.9	-0.5
SIM				pmax	pmax		
	comp=Z,57nm,1.6s						
LOD	Lodumlu	83.91	51	eP	P	07 07 42.3	+0.4
BR231	Keskin MP Arra	83.93	51	P	P	07 07 42.0	-0.1
ANTO	Ankara	83.94	51	eP	P	07 07 42.6	+0.6
ANTO	Ankara	83.94	51	P	P	07 07 41.4	-0.6
ANTO	Ankara	83.94	51	P	P	07 07 41.4	-0.6
LADK	Ladik-KONYA	84.01	52	eP	P	07 07 42.7	+0.2
KONT	Konya--Tatoy	84.07	52	eP	P	07 07 43.1	+0.4
KULU	Kulu	84.30	51	eP	P	07 07 44.4	+0.5
BZK	Bozkurt	84.32	48	eP	P	07 07 43.9	+0.1
CHBY	Cihanbeyli	84.32	52	eP	P	07 07 44.4	+0.4
ILGA	Ilgaz	84.34	49	P	P	07 07 44.7	+0.4
CANT	Cankiri	84.38	50	eP	P	07 07 44.8	+0.6
HDMB	Hadim	84.40	53	eP	P	07 07 44.4	-0.2
GAZI	Gazipasa	84.44	54	eP	P	07 07 43.4	-1.2
BR131	Keskin Array S	84.61	51	IAmb	IAmb	07 07 46.9	
	comp=Z,200nm,1.9s						
BRTR	Keskin Array B	84.61	51	P	P	07 07 45.6	+0.1
	comp=Z,12nm,0.9s,baz=262,slow=4.8,SNR=49						
TSUM	Tsumeb	84.65	111	P	P	07 07 47.0	+1.0
LPSR	Galich'ya Gora	84.68	37	eP	P	07 07 45.2	-0.2
LPSR				pmax	pmax		
	comp=Z,100nm,0.7s						
SERE	Sereflikochisa	84.74	51	eP	P	07 07 45.9	-0.3
KAMT	Kaman	84.75	51	eP	P	07 07 46.2	0.0
SULT	Sultanhani-AKS	84.89	52	eP	P	07 07 47.2	+0.3
FALS	False Pass	84.98	325	P	P	07 07 47.2	+0.4
	baz=72						
TEKE	Tekeli-Mersin	85.09	54	eP	P	07 07 47.5	-0.3
BERE	Bereket-Mersin	85.13	54	eP	P	07 07 48.4	+0.2
PRGR	Permogore	85.14	27	eP	P	07 07 45.1	-2.4
PRGR				e*PP	pP	07 08 26.3	-0.1
PRGR				pmax	pmax		
	comp=Z,74nm,0.8s						
LEF	Lefka	85.17	55	eP	P	07 07 48.0	-0.2
YESY	Yesilyurt	85.17	52	eP	P	07 07 48.5	+0.2
SNOP	Sinop	85.17	48	eP	P	07 07 48.2	+0.1
CORM	Corum	85.23	50	eP	P	07 07 48.4	-0.2
VSR	Storozhevoye	85.23	38	eP	P	07 07 47.7	-0.4
VSR				pmax	pmax		
	comp=Z,110nm,1.4s						
TEVE	Tevekalti-Mers	85.28	54	eP	P	07 07 49.1	+0.3
AKKU	Akkuyu-Mersin	85.43	54	eP	P	07 07 49.5	0.0
KEBE	Keben-Mersin	85.48	54	eP	P	07 07 50.2	+0.4
IKL	Isikli	85.52	54	eP	P	07 07 49.9	0.0
CSS	Mathiatis	85.56	55	eP	P	07 07 50.1	-0.1
GAMB	Gambell	85.70	335	P	P	07 07 49.9	-0.2
GAMB	Gambell	85.70	335	P	P	07 07 51.1	+0.9
	baz=66,SNR=11						
KIZK	Mersin	85.81	54	eP	P	07 07 51.4	0.0
YOZ	Yozgat	85.88	50	eP	P	07 07 51.9	+0.1
MERS	Mersin	86.01	53	eP	P	07 07 52.8	+0.4
KVT	Kavak	86.03	49	eP	P	07 07 52.5	+0.1
CMRD	Camardi-Nigde	86.16	52	eP	P	07 07 52.9	-0.3
BNN	Bunyan	86.49	51	eP	P	07 07 55.1	+0.3
TOKT	Tokat	86.60	49	eP	P	07 07 55.3	+0.1
KOZT	Kozan	86.85	52	eP	P	07 07 56.3	-0.1
CEYT	Ceyhan	86.91	53	eP	P	07 07 56.9	+0.2
UNV	Unalaska Valle	87.02	325	IAmb	IAmb	07 07 58.6	
	comp=Z,198nm,1.0s						
UNV	Unalaska Valle	87.02	325	P	P	07 07 57.3	+0.4
	baz=69,SNR=9.3						
SARI	SarD1z-Kayseri	87.04	51	eP	P	07 07 58.2	+0.6
SVSK	Karacayir	87.05	50	eP	P	07 07 57.4	+0.1
RSDY	Resadiye-TOKAT	87.16	49	eP	P	07 07 57.9	0.0
TAHT	Tahtakopru-Hat	87.43	53	eP	P	07 07 59.9	+0.7
YAYL	Yayladag	87.46	54	eP	P	07 08 00.2	+0.7
DARE	Darende-Malaty	87.80	51	eP	P	07 08 01.8	+0.7
SOC	Sochi	87.91	46	eP	P	07 08 01.5	+0.2
SOC				e		07 11 29.0	
SOC				ePPP	PPP	07 13 23.6	
SOC				eS	SKSac	07 18 15.5	+0.4
SOC				eSS	SS	07 24 23.7	+1.9
SOC				eSSS	SSS	07 27 58.5	
SOC				pmax	pmax		
	comp=Z,199nm,1.4s						
GAZ	Gaziantep	87.99	52	eP	P	07 08 02.0	0.0
GAZ	Gaziantep	87.99	52	P	P	07 08 02.4	+0.4
GAZ				IAmb	IAmb	07 08 03.5	
	comp=Z,123nm,1.8s						
KIRV	Kirov	88.10	29	ceP	P	07 08 01.3	-0.5
ARPR	Arapgir-MALATY	88.28	50	eP	P	07 08 04.7	+1.3
ILIC	ilic-Erzincan	88.34	50	eP	P	07 08 04.6	+0.9
MALT	Malatya	88.58	51	eP	P	07 08 05.4	+0.6
MALT	Malatya	88.58	51	P	P	07 08 05.7	+0.9
NIKH	Nikolski High	88.65	325	P	P	07 08 04.8	+0.2
	baz=67						
HPAH	Hawaii Prepara	89.04	290	P	P	07 08 07.5	+0.3
HPAH				IAmb	IAmb	07 08 08.5	
	comp=Z,110nm,0.8s						
SVRC	Sivrice-ELAZID	89.22	51	eP	P	07 08 09.1	+1.2
CHOM	Cayeli-Rize	89.43	48	eP	P	07 08 08.9	+0.3
GOF	Gofitskoye	89.68	43	⇑eP	P	07 08 10.9	+1.3
GOF				pmax	pmax		
	comp=Z,130nm,1.3s						
BELG	Belogornoye	89.74	35	i P	P	07 08 08.8	-0.9
BELG				pmax	pmax		
	comp=Z,25nm,1.7s						
YEDI	Yedisu-Bingol	89.80	49	eP	P	07 08 11.7	+1.2
KIV	Kislovodsk	89.82	44	eP	P	07 08 11.4	+1.0
KIV	Kislovodsk	89.82	44	eP	P	07 08 11.2	+0.8
KIV				e*PP	pP	07 08 49.7	-0.1
KIV				pmax	pmax		
	comp=Z,39nm,1.1s						
KIV				pmax	pmax		
	comp=Z,38nm,3.2s						
KIV	Kislovodsk	89.82	44	P	P	07 08 11.0	+0.6
SHA1	Shidzhatmaz	89.87	45	d iP	P	07 08 11.7	+0.8
DYBB	Diyarbakir	89.97	51	eP	P	07 08 12.3	+1.0
KBZ	Khabaz	90.04	45	P	P	07 08 12.3	+1.1
	comp=Z,6.4nm,0.9s,baz=280,slow=5.4,SNR=12						
KBZ				SKKPbc	SKKPbc	07 29 06.4	+1.5
	comp=Z,3.0nm,0.2s,baz=70,slow=6.8,SNR=5.0						
KBZ	Khabaz	90.04	45	ceP	P	07 08 13.0	+1.7
KBZ				pmax	pmax		
	comp=Z,44nm,1.5s						
BNGB	Bingl	90.05	50	eP	P	07 08 12.7	+1.1
EJDE	Erzurum, Palan	90.23	49	eP	P	07 08 13.4	+0.6
ERZM	Erzurum	90.25	49	eP	P	07 08 14.1	+1.3
MAZI	Mazidag	90.36	51	eP	P	07 08 13.7	+0.6
KOPR	Koprukoy-ERZUR	90.58	48	eP	P	07 08 15.9	+1.8
NCK	Nalchik	90.60	45	i P	P	07 08 14.2	+0.2
NCK				pmax	pmax		
	comp=Z,25nm,1.1s						
SENK	Senkaya-Erzuru	90.74	48	eP	P	07 08 16.2	+1.2
BILL	Bilibino	90.76	344	c iP	P	07 08 14.2	0.0
BILL				e		07 08 58.5	
BILL				eS	SKSac	07 18 23.3	-7.6
BILL				SSS	SSS	07 28 47.0	
BILL				pmax	pmax		
	comp=Z,200nm,1.5s						
BILL	Bilibino	90.76	344	P	P	07 08 13.7	-0.5
ONI	Oni	90.82	46	P	P	07 08 15.8	+0.7
ONI				pmax	pmax		
	comp=Z,75nm,1.6s						
ONI	Oni	90.82	46	P	P	07 08 15.8	+0.7
GURO	Guroymak-BITLI	91.19	50	eP	P	07 08 18.3	+1.3
GURO	Guroymak-BITLI	91.19	50	P	P	07 08 17.8	+0.8
GURO				IAmb	IAmb	07 08 19.7	
	comp=Z,83nm,1.5s						
AGRB	Hanur-Agry	91.54	48	eP	P	07 08 19.8	+1.1
SIRT	Sirnak	91.85	51	eP	P	07 08 20.9	+0.9
MBAR	Mbarara	92.20	90	i P	P	07 08 23.7	+1.5
CLDR	Caldiran	92.37	49	eP	P	07 08 23.9	+1.4
VNA3	Neumayer Olymp	92.46	165	P	P	07 08 22.9	+1.1
VNA3	Neumayer Olymp	92.46	165	pP	pP	07 09 04.7	+4.2
GNI	Garni	92.60	47	eP	P	07 08 24.6	+1.1
VNA2	Neumayer--Watz	92.83	165	P	P	07 08 24.6	+1.1
VNA2	Neumayer--Watz	92.83	165	pP	pP	07 09 07.2	+5.0
	baz=322,slow=3.2						
LSZ	Lusaka	93.36	105	P	P	07 08 28.3	+1.0
LSZ				pmax	pmax		
	comp=Z,41nm,1.8s						
LSZ	Lusaka	93.36	105	P	P	07 08 28.3	+1.0
LBTB	Lobatse	93.38	115	PKKPbc	PKKPbc	07 25 33.6	-0.3
	comp=Z,2.2nm,0.5s,baz=149,slow=6.0,SNR=4.6						
MAK	Makhachkala	93.44	44	eP	P	07 08 25.0	-2.1
MAK				e*PP	pP	07 09 01.3	-5.2
MAK				e*SP	sP	07 09 19.4	-3.5
MAK				e		07 12 11.6	
MAK				ePPP	PPP	07 14 12.3	
MAK				e		07 18 44.9	
MAK				eSS	SS	07 25 38.7	-2.7
MAK				eSSS	SSS	07 29 25.8	
MAK				pmax	pmax		
	comp=Z,245nm,1.3s						
NRIK	Noril'sk	93.46	11	P	P	07 08 26.6	0.0
	comp=Z,9.3nm,0.5s,baz=2.9,slow=1.9,SNR=19						
NRIK				PKKP	PKKPdf	07 25 23.4	-8.4
	comp=Z,1.8nm,0.5s,baz=0.0,slow=0.0,SNR=3.6						
NRIK	Noril'sk	93.46	11	ceP	P	07 08 26.2	-0.4
NRIK				pmax	pmax		
	comp=Z,60nm,1.5s						
NRIK	Noril'sk	93.46	11	P	P	07 08 26.6	0.0
NRIK				IAmb	IAmb	07 08 27.9	
	comp=Z,86nm,1.6s						
ARU	Arti	93.46	29	c iP	P	07 08 26.1	-0.7
ARU						07 12 12.4	
ARU				S	SKSac	07 18 45.7	-0.7
ARU				SS	SS	07 25 44.8	+4.0
ARU				pmax	pmax		
	comp=Z,60nm,1.9s						
ARU	Arti	93.46	29	P	P	07 08 26.5	-0.4
ARU				IAmb	IAmb	07 08 28.8	
	comp=Z,142nm,2.0s						
TIXI	Tiksi	93.69	357	PP	PP	07 12 10.8	-3.2
	comp=Z,3.0nm,0.8s,baz=1.7,slow=5.3,SNR=4.7						
TIXI	Tiksi	93.69	357	ceP	P	07 08 27.0	-0.6
TIXI				pmax	pmax		
	comp=Z,49nm,1.3s						
TIXI	Tiksi	93.69	357	P	P	07 08 27.0	-0.6
BOSA	Boshof	93.98	118	P	P	07 08 30.0	+0.1
	comp=Z,1.2nm,0.5s,baz=277,slow=3.3,SNR=7.1						
BOSA				PKKPbc	PKKPdf	07 25 32.0	+0.4
	comp=Z,1.3nm,0.5s,baz=132,slow=3.9,SNR=7.2						
BOSA				LR	LR	07 44 29.2	
	comp=Z,181nm,21.4s,baz=308,slow=31						
BOSA	Boshof	93.98	118	P	P	07 08 30.0	+0.1
SVE	Sverdlovsk	94.19	28	eP	P	07 08 30.4	+0.2
SVE				pmax	pmax		
	comp=Z,28nm,1.5s						
SNAA	Sanae	94.45	164	P	P	07 08 32.0	+0.9
SNAA	Sanae	94.45	164	pP	pP	07 09 15.4	+5.5
ABKAR	Akbulak array	98.09	34	P	Pdif	07 08 48.2	+0.1
ABKAR	Akbulak array	98.09	34	P	Pdif	07 08 48.3	+0.3
ABKAR				IAmb	IAmb	07 08 48.9	
	comp=Z,12nm,1.4s						
SEY	Seymchan	98.37	345	P	Pdif	07 08 49.6	+0.6
	comp=Z,32nm,1.1s,baz=53,slow=1.1,SNR=18						
SEY				LR	LR	07 57 39.5	
	comp=Z,314nm,19.1s,baz=10.0,slow=38						
SEY	Seymchan	98.37	345	i P	P	07 08 48.6	-0.4
BRVK	Borovoye	100.89	27	i P	Pdif	07 08 57.1	-3.3
BRVK				pmax	pmax		
	comp=Z,11nm,2.7s						
PETK	Petropavlovsk-	104.67	337	Pdiff	Pdif	07 09 19.8	+2.5
	comp=Z,1.1nm,0.7s,baz=71,slow=7.7,SNR=5.1						
ZALV	Zalesovo Beam	105.88	20	PKiKP	PKiKP	07 13 32.4	-1.8
	comp=Z,2.8nm,0.8s,baz=291,slow=3.4,SNR=8.7						
SYO	Syowa Base	107.46	158	⇑eX	Pdif	07 09 33.4	+4.3
MKAR	Makanchi Array	110.73	26	PKiKP	PKiKP	07 13 42.3	-1.4
	comp=Z,0.5nm,0.5s,baz=298,slow=2.4,SNR=8.9						
MKAR				PKKPbc	PKKPbc	07 24 41.6	-2.3
	comp=Z,1.8nm,0.7s,baz=121,slow=5.9,SNR=12						
KSH	Kashi	113.09	35	PKP	PKiKP	07 13 44.8	-3.7
VNDA	Vanda	113.44	189	PKKPbc	PKKPbc	07 24 30.4	-5.3
	comp=Z,1.2nm,1.0s,baz=315,slow=5.7,SNR=2.7						
WMQ	Urumqi	115.37	24	ePKP	PKPdf	07 13 53.5	+0.9
WMQ				LR	LR		
	comp=Z,900nm,16.3s						
WMQ				LR	LR		
	comp=Z,610nm,17.7s						
WMQ				LR	LR		
	comp=Z,800nm,21.1s						
KLR	Kul'dur	115.40	351	i PKIKP	PKiKP	07 13 49.8	-2.6
MAW	Mawson	116.11	159	PKP	PKiKP	07 13 53.3	+0.2
	comp=Z,5.8nm,0.7s,baz=300,slow=2.9,SNR=4.5						
SONM	Songino Array	116.90	9	PKP	PKPdf	07 13 55.3	-0.3
	comp=Z,2.7nm,0.5s,baz=305,slow=1.2,SNR=24						
SONM				PP	PP	07 15 05.0	-0.3
	comp=Z,4.0nm,1.1s,baz=329,slow=4.0,SNR=3.4						
SONM	Songino Array	116.90	9		PKPdf	07 13 54.9	-0.7
USRK	Ussuriysk Ar.	120.23	349	PKP	PKPdf	07 14 01.3	-0.6
	comp=Z,7.2nm,0.7s,baz=278,slow=1.9,SNR=13						
USRK				PP	PP	07 15 18.9	-9.3
	comp=Z,4.6nm,0.8s,baz=33,slow=8.1,SNR=4.4						
USRK	Ussuriysk Ar.	120.23	349	PKPdf	PKPdf	07 14 01.0	-0.9
MDJ	Mudanjiang	120.23	351	PKP	PKPdf	07 14 01.8	-0.1
MDJ				AMB	AMB		
	comp=Z,200nm,5.2s						
MSVF	Nonsavu	123.03	258	PKP	PKPdf	07 14 08.1	+0.1
	comp=Z,23nm,0.9s,baz=144,slow=9.1,SNR=8.6						
GTA	Gaotai	123.48	17	ePKP	PKPdf	07 14 07.8	-0.7
GTA				LR	LR		
	comp=Z,200nm,19.6s						
GTA				LR	LR		
	comp=Z,230nm,18.5s						
GTA				LR	LR		
	comp=Z,190nm,19.3s						
URZ	Urewera	123.55	234	PKP	PKiKP	07 14 08.6	0.0
	comp=Z,11nm,0.6s,baz=120,slow=23,SNR=8.3						
URZ	Urewera	123.55	234		PKiKP	07 14 08.8	+0.2
HHC	Hu-ho-hao-te	124.45	6	ePKP	PKPdf	07 14 10.3	0.0
HHC				PP	PP	07 16 03.3	+6.5
HHC				AMB	AMB		
	comp=Z,150nm,8.3s						
PYUN	Piuthan	125.30	39	eP	PKPdf	07 14 11.9	-0.5
	comp=Z,64nm,0.6s						
TUWZ	Tuamarina	125.39	229		PKiKP	07 14 12.8	+0.7
DANN	Dangsing	125.59	38	eP	PKPdf	07 14 12.5	-0.5
	comp=Z,71nm,0.6s						
BJT	Baijiatuau	125.62	2	PKIKP	PKPdf	07 14 12.2	-0.2
BJT	Baijiatuau	125.62	2		PKPdf	07 14 12.2	-0.2
MJB9	Matsu-Tunnel	125.88	341		PKPdf	07 14 12.6	-0.4
MAJO	Matsushiro	125.88	341	PKIKP	PKPdf	07 14 12.4	-0.6
MAJO	Matsushiro	125.88	341	PKPdf	PKPdf	07 14 12.4	-0.6
MAT	Matsushiro	125.88	341	PKP	PKPdf	07 14 11.8	-1.2
MJAR	Matsushiro Arr	125.88	341	PKP	PKPdf	07 14 12.3	-0.6
	comp=Z,24nm,0.5s,baz=46,slow=0.7,SNR=52						
MJAR				PP	PP	07 16 02.6	-3.8
	comp=Z,2.2nm,0.4s,baz=4.1,slow=7.4,SNR=5.3						
MJAR	Matsushiro Arr	125.88	341	PKIKP	PKPdf	07 14 12.6	-0.4
MJAR	Matsushiro Arr	125.88	341		PKPdf	07 14 12.6	-0.4
KOLN	Koldanda	125.91	39	eP	PKPdf	07 14 12.7	-0.8
GKN	Gorkha	126.37	38	eP	PKPdf	07 14 13.8	-0.5
KKN	Kakani	126.91	38	eP	PKPdf	07 14 14.9	-0.5
	comp=Z,34nm,0.5s						
PKIN	Phulchoki	127.13	38	eP	PKPdf	07 14 14.9	-1.0
PKI	Pulchoki	127.14	38	eP	PKPdf	07 14 15.1	-0.9
GUN	Gumba	127.17	37	eP	PKPdf	07 14 15.7	-0.4
	comp=Z,28nm,0.5s						
INU	Inuyama	127.36	341	PKPdf	PKPdf	07 14 14.8	-1.0
KSRS	Korea Array	127.50	351	PKP	PKPdf	07 14 15.7	-0.3
	comp=Z,17nm,0.9s,baz=46,slow=1.7,SNR=33						
KSAR	Wonju Array Be	127.51	351	PKIKP	PKPdf	07 14 14.7	-1.3
KSAR	Wonju Array Be	127.51	351	PKPdf	PKPdf	07 14 14.7	-1.3
TIY	Taiyuan	127.65	6	PKP	PKPdf	07 14 16.5	+0.1
LZH	Lanzhou	127.70	15	⇑PKP	PKiKP	07 14 17.5	+0.3
LZH				sPKP		07 15 08.5	

LSA	Lhasa	128.61	31	PKIKP	PKiKP	07 14 19.6	0.0
LSA	Lhasa	128.61	31		PKiKP	07 14 19.6	0.0
XAN	Xi'an	130.77	11	PKP	PKPdf	07 14 22.5	+0.1
SHL	Shillong	132.34	33	PKIKP	PKPdf	07 14 25.4	-0.4
SHL	Shillong	132.34	33	PKPdf	PKPdf	07 14 25.4	-0.4
CD2	Chengdu	132.56	17	PKP	PKPdf	07 14 25.5	-0.4
NJ2	Nanjing	133.62	360	*e*PKP	PKPdf	07 14 25.8	-1.9
DZM	Mont Dzumac	134.14	253	PKP	PKPdf	07 14 29.3	+0.2
	comp=Z,14nm,0.7s,baz=167,slow=7.1,SNR=12						
WHN	Wuhan	134.94	5	PKP	PKPdf	07 14 30.3	0.0
GYA	Guiyang	137.57	16	⇑PKP	PKPdf	07 14 35.8	+0.4
GYA				AMB	AMB		
	comp=Z,190nm,5.3s						
KMI	Kunming	137.60	22	⇓PKP	PKPdf	07 14 35.0	-0.7
KMI				sPKP		07 15 30.5	
KMI				PP	PP	07 17 27.5	+5.5
KMI				AMB	AMB		
	comp=Z,200nm,4.2s						
KMI				LR	LR		
	comp=Z,240nm,10.9s						
KMI				LR	LR		
	comp=Z,240nm,14.1s						
KMI				LR	LR		
	comp=Z,170nm,12.4s						
SSLB	Suanglung	141.79	357	PKPdf	PKPdf	07 14 41.5	-1.5
CMAR	Chiang Mai Arr	141.86	31	PKhKP	PKPpre	07 14 38.6	
	comp=Z,5.1nm,0.5s,baz=312,slow=3.2,SNR=17						
RABL	Rabaul	145.38	284	PKPbc	PKPdf	07 14 49.6	+0.1
TOO	Toolangi	146.95	221	PKP2	PKPbc	07 14 54.0	+0.2
TOO	Toolangi	146.95	221	PKPbc	PKPbc	07 14 54.0	+0.2
EIDS	Eidsvold	147.74	245		PKPbc	07 14 56.2	0.0
MANU	Manus Island	149.00	291	PKPbc	PKiKP	07 15 01.2	+0.2
PMG	Port Moresby	151.62	277	PKP	PKPdf	07 15 00.9	+1.3
	comp=Z,5.4nm,0.4s,baz=51,slow=7.7						
PMG				PKPbc	PKiKP	07 15 06.7	+0.3
	comp=Z,74nm,1.0s,baz=70,slow=3.9,SNR=4.3						
STKA	Stephens Creek	152.86	227	PKP	PKPdf	07 15 01.5	+0.6
	comp=Z,9.9nm,0.8s,baz=110,slow=2.5,SNR=24						
STKA				PKPbc	PKiKP	07 15 09.3	+0.8
	comp=Z,30nm,0.7s,baz=101,slow=2.1,SNR=40						
STKA	Stephens Creek	152.86	227	PKPbc	PKiKP	07 15 08.6	+0.1
STKA				PKPab	PKPab	07 15 20.5	+0.6
CTA	Charters Tower	153.08	254	PKP	PKPdf	07 15 02.2	+0.6
	comp=Z,7.1nm,0.8s,baz=22,slow=9.5,SNR=3.3						
CTA				PKPbc	PKPbc	07 15 09.1	-0.1
	comp=Z,20nm,0.5s,baz=115,slow=3.0,SNR=18						
CTA				PKPab	PKPab	07 15 21.7	+0.5
	comp=Z,39nm,0.9s,baz=95,slow=7.2,SNR=10						
CTAO	Charters Tower	153.08	254	PKIKP	PKPdf	07 15 01.5	-0.1
CTAO	Charters Tower	153.08	254	PKPdf	PKPdf	07 15 01.5	-0.1
CTAO					PKPbc	07 15 08.9	-0.2
CTAO				PKPab	PKPab	07 15 22.0	+0.8
IPM	Ipoh	154.25	44	PKPdf	PKPdf	07 15 01.4	-2.1
IPM					PKPbc	07 15 11.6	-0.2
IPM				PKPab	PKPab	07 15 26.1	-0.1
KKM	Kota Kinabalu	159.36	7	PKPdf	PKPdf	07 15 10.3	+0.2
KKM				PKPab	PKPab	07 15 48.2	+0.1
SPMM	Sapulut	160.71	6	P	PKPdf	07 15 11.0	-0.6
FORT	Forrest	161.70	207	PKPdf	PKPdf	07 15 11.3	-0.8
SBUM	Sibu	161.92	21	P	PKPdf	07 15 14.0	+1.2
SBUM	Sibu	161.92	21	PKPdf	PKPdf	07 15 11.5	-1.3
SBUM				PKPab	PKPab	07 15 59.2	0.0
AS31	Alice Springs	162.98	236		PKPdf	07 15 13.3	-0.3
ASAR	Alice Springs	162.98	236	PKP	PKPdf	07 15 12.9	-0.7
	comp=Z,12nm,0.9s,baz=120,slow=1.2,SNR=68						
ASAR				PKPab	PKPab	07 16 02.9	-1.1
	comp=Z,2.2nm,0.5s,baz=111,slow=3.9,SNR=14						
ASAR	Alice Springs	162.98	236		PKPdf	07 15 12.0	-1.6
WR0	Warramunga Arr	163.89	248	PKPdf	PKPdf	07 15 14.3	-0.2
WR0					PKPab	07 16 07.6	-0.5
WB2	Warramunga Arr	164.06	248		PKPdf	07 15 13.3	-1.4
WB2				PKPab	PKPab	07 16 08.3	-0.5
WRA	Warramunga Arr	164.07	248	PKP	PKPdf	07 15 14.0	-0.7
	comp=Z,15nm,1.0s,baz=75,slow=0.8,SNR=40						
WRA				PKPab	PKPab	07 16 08.8	0.0
	comp=Z,36nm,0.8s,baz=108,slow=4.5,SNR=19						
WRA	Warramunga Arr	164.07	248		PKPdf	07 15 13.8	-0.9
WRA				PKPab	PKPab	07 16 08.6	-0.3
WB0	Warramunga Arr	164.07	249		PKPdf	07 15 14.3	-0.4
WB0					PKPab	07 16 08.9	0.0
FITZ	Fitzroy Crossi	172.41	242	PKPab	PKPab	07 16 45.2	-0.5
	comp=Z,0.2nm,0.3s,baz=157,slow=6.2,SNR=2.3						
PSA00	Pilbara Seismi	172.96	189		PKPdf	07 15 19.2	-1.2
PSA00				PKPab	PKPab	07 16 48.3	+0.6

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*IDC **28** 07:08:24.3±0.5, 51°.18N×179°.47E, h0^{km}, mb4.6/33, mb1 4.7/34, mb1mx4.7/49, mbtmp4.6/34, ML5.3/1, MS4.3/23, Ms1 4.3/23, ms1mx4.2/44 Error ellipse: s-maj=16.3km s-min=10.6km az=158.0*

*AEIC **28** 07:08:28.5±2.2, 51°.0N±0°.1×179°.39E±0°.08, h28^{km}±2^{km}, ML4.8/23, mb4.9/324(NEIC), Error ellipse: s-maj=15.5km s-min=7.2km az=171.0*

*BJI **28** 07:08:28.9±0.0, 51°.32N×179°.43E, h50^{km}, mB5.2/33, mb4.9/56, Ms4.9/33, Ms7 4.6/33*

*MOS **28** 07:08:29.7±1.0, 51°.19N×179°.39E, h49^{km}, mb5.1/76, Error ellipse: s-maj=6.4km s-min=5.2km az=100.4*

*GCMT **28** 07:08:29.5±0.3, 51°.07N±0°.02×179°.53E±0°.04, h22^{km}±1^{km}, MW5.2/94, Moment Tensor Solution. s52,c62; s94,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.16±.28; M$_{\theta\theta}$-4.59±.19; M$_{\phi\phi}$-0.57±.16; M$_{r\theta}$3.87±.30; M$_{\theta\phi}$-1.55±.11; M$_{\phi r}$1.61±.27; Best double couple: M$_0$6.63200×10^{16} NP1:ϕ_s253.00000°, δ25.00000°, λ94.00000°. NP2: ϕ_s69.00000°, δ65.00000°, λ88.00000°. Principal axes: T 6.6570, Plg70.0000°, Azm335.0000°; N -0.0520, Plg2.0000°, Azm70.0000°; P -6.6070, Plg20.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **28** 07:08:31.7±1.6, 51°.2N±0°.1×179°.41E±0°.09, h49^{km}±6^{km} Error ellipse: s-maj=16.3km s-min=7.6km az=172.0*

ISC 28 07:08:30.7±0.6**, 51°.19N**±0°.07×**179°.42E**±0°.03**, h45**^{km}±4^{km}**, h44**^{km}**:pP-P, n858,** σ1^{s}**33**/861**, mb4.9**/249**, MS4.5**/39**, 33C-10D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAKI	Gareloi-Kavalg	1.17	71		Pn	07 08 49.9	-0.7
GASW	Gareloi Southw	1.23	61		Pn	07 08 51.4	-0.1
GALAA	Gareloi Lava P	1.27	62		Pn	07 08 52.3	+0.3
GAEA	Gareloi East	1.29	62		Pn	07 08 52.6	+0.3
TASE	Tanaga Southea	1.72	67		Pn	07 08 58.6	+0.5
TAFP	Tanaga Falls P	1.77	65		Pn	07 08 59.4	+0.5
TAFP					Sn	07 09 23.4	+3.2
KIMD	Kanaga Island	2.17	73		Pn	07 09 05.0	+0.7
KICM	Kanaga Island	2.24	70		Pn	07 09 06.2	+0.9
KIKV	Kanaga Island	2.24	71		Pn	07 09 06.0	+0.8
KIWB	Kanaga Island	2.25	71		Pn	07 09 06.0	+0.7
ADK	Adak	2.53	72		Pn	07 09 09.7	+0.4
ADK	Adak	2.53	72	Sn	Sn	07 09 41.1	+2.3
GSTD	Great Sitkin T	2.90	71		Pn	07 09 14.6	+0.2
GSTD					Sn	07 09 50.9	+2.9
GSMY	Great Sitkin M	2.95	71		Pn	07 09 15.2	+0.2
GSTR	Great Sitkin T	2.96	70		Pn	07 09 15.7	+0.5
SHEM	Shemya Is, Ala	3.63	297	LR	LR	07 10 49.6	
	comp=Z,6μm,19.4s,baz=133,slow=40						
SMY	Shemya	3.63	297	P	Pn	07 09 25.1	+0.8
SMY	Shemya	3.63	297		Pn	07 09 25.1	+0.8
ATKA	Atka Island	4.10	73	Pn	Pn	07 09 31.2	+0.4
KOKL	Mount Kliuchef	4.13	71		Pn	07 09 31.6	+0.4
KOFP	Korovin Flat P	4.18	72		Pn	07 09 32.4	+0.6
NIKH	Nikolski High	7.45	72		Pn	07 10 18.3	+1.7
NIKH	Nikolski High	7.45	72	P	Pn	07 10 17.1	+0.4
	baz=259						
MAPS	Pakushin South	8.73	67		Pn	07 10 35.4	+1.2
UNV	Unalaska Valle	8.99	67	Pn	Pn	07 10 37.9	+0.1
UNV	Unalaska Valle	8.99	67	P	Pn	07 10 37.9	+0.1
	baz=257						
AKUT	Akutan	9.47	66	Pn	Pn	07 10 46.6	+2.2
FALS	False Pass	10.97	64	P	Pn	07 11 04.7	-0.1
	baz=256						
SDPT	Sand Point	12.72	63		Pn	07 11 28.1	-0.7
SDPT	Sand Point	12.72	63	P	Pn	07 11 27.4	-1.3
	baz=258						
PET	Petropavlovsk	12.89	286	*e*P	P	07 11 36.7	-4.0
PET				pmax	pmax		
	comp=Z,200nm,7.6s						
PET				MLR	MLR		
	comp=Z,1μm,19.0s						
PET	Petropavlovsk	12.89	286	Pn	Pn	07 11 30.6	-0.4
CNBA	Chernabura Isl	13.14	66	Pn	Pn	07 11 33.0	-1.5
CHNA	Chernabura Isl	13.15	66	P	Pn	07 11 33.8	-0.7
	baz=262						
PEA0B	Petropavlovsk-	13.47	287	*ce*P	Pn	07 11 42.5	+3.6
PETK	Petropavlovsk-	13.47	287	Pn	Pn	07 11 40.8	+1.9
	comp=Z,0.6nm,0.3s,baz=104,slow=12,SNR=12						
PETK				LR	LR	07 16 44.6	
	comp=Z,842nm,21.5s,baz=91,slow=37						
PETK	Petropavlovsk-	13.47	287	P	Pn	07 11 37.6	-1.3
PETK	Petropavlovsk-	13.47	287	Pn	Pn	07 11 37.6	-1.3
GAMB	Gambell	13.48	17	Pn	Pn	07 11 39.4	+0.4
GAMB	Gambell	13.48	17	P	Pn	07 11 39.8	+0.8
	baz=204						
CHGN	Chignik	14.05	60	Pn	Pn	07 11 46.8	-0.1
CHGN	Chignik	14.05	60	P	Pn	07 11 46.9	+0.1
	baz=257						
ANM	Nome	15.60	25	P	P	07 12 12.4	+1.7
ANM				pmax	pmax		
	comp=Z,21nm,0.9s						
ANM	Nome	15.60	25	P	P	07 12 12.4	+1.7
ANM	Nome	15.60	25	P	Pn	07 12 07.0	-0.2
	baz=218,SNR=9.6						
TNA	Tin City	15.82	20	P	Pn	07 12 11.3	+1.4
TNA	Tin City	15.82	20	P	Pn	07 12 08.3	-1.6
	baz=210						
P18K	Big Mountain,	16.53	50	P	Pn	07 12 19.7	+0.7
SVW2	Sparrevohn	16.99	45	P	P	07 12 27.5	+1.3
OHAK	Old Harbor	17.00	59		Pn	07 12 21.3	-3.6
OHAK				IAmb	IAmb	07 12 29.6	
	comp=Z,60nm,0.6s						
OHAK	Old Harbor	17.00	59	P	Pn	07 12 23.5	-1.3
	baz=260						
Q19K	Cape Douglas,	17.17	53	P	Pn	07 12 26.3	-0.8
	baz=254						
O19K	Port Alsworth	17.23	48	P	Pn	07 12 26.9	-0.8
O19K				IAmb	IAmb	07 12 36.0	
	comp=Z,177nm,1.5s						
O19K	Port Alsworth	17.23	48	P	Pn	07 12 26.5	-1.2
	baz=250						
N19K	Bonanza Creek	17.37	46	P	P	07 12 30.1	-0.4
N19K	Bonanza Creek	17.37	46	P	Pn	07 12 27.9	-1.7
	baz=248						
KDAK	Kodiak Island	17.47	57	P	Pn	07 12 27.3	-3.4
	comp=Z,9.4nm,0.3s,baz=274,slow=6.7,SNR=37						
KDAK				S	Sn	07 15 35.3	-8.7
	comp=Z,0.5nm,0.3s,baz=25,slow=19,SNR=1.4						
KDAK	Kodiak Island	17.47	57	P	P	07 12 31.7	+0.3
KDAK				pmax	pmax		
	comp=Z,39nm,0.7s						
KDAK	Kodiak Island	17.47	57		P	07 12 31.7	+0.3
KDAK	Kodiak Island	17.47	57	P	Pn	07 12 28.0	-2.7
	baz=259						
TTA	Tatalina	17.66	39	P	P	07 12 35.0	+1.4
TTA				pmax	pmax		
	comp=Z,44nm,1.0s						
TTA	Tatalina	17.66	39		P	07 12 35.0	+1.4
TTA	Tatalina	17.66	39	P	Pn	07 12 31.3	-1.9
	baz=239,SNR=18						
O20K	Slope Mountain	18.00	50	P	Pn	07 12 34.2	-3.0
	baz=252						
RSO	Redoubt South	18.05	48	P	P	07 12 39.5	+1.5
BILL	Bilibino	18.09	344	*de*P	Pn	07 12 40.7	+2.4
BILL				pmax	pmax		
	comp=Z,29nm,0.7s						
BILL				MLR	MLR		
	comp=Z,811nm,16.0s						
BILL	Bilibino	18.09	344	P	Pn	07 12 39.2	+0.9
L20K	Farewell, AK	18.31	42	P	P	07 12 38.5	-2.2
	baz=244						
GCSA	Galena City Sc	18.34	33	P	P	07 12 40.2	-0.8
	baz=233,SNR=18						
CNPM	China Poot	18.52	52	P	P	07 12 43.1	+0.1
CNPM				IAmb	IAmb	07 13 00.4	
	comp=Z,53nm,0.7s						
SPCR	Spurr Chakacha	18.55	46	P	P	07 12 41.9	-1.5
	baz=250,SNR=14						
SPU	Mount Spurr	18.61	46	P	Pn	07 12 46.4	+1.7
K20K	Telida	18.64	39	P	P	07 12 44.2	-0.1
K20K	Telida	18.64	39	P	Pn	07 12 44.8	-0.2
	baz=241						
SEY	Seymchan	18.65	319	P	Pn	07 12 47.4	+2.3
	comp=Z,0.4nm,0.3s,baz=113,slow=9.8,SNR=10						
SEY				LR	LR	07 19 24.6	
	comp=Z,1μm,20.6s,baz=112,slow=35						
BRLK	Bradley Lake	18.75	51	P	Pn	07 12 46.1	-0.2
BRLK				IAmb	IAmb	07 12 49.5	
	comp=Z,105nm,1.4s						
RDOG	Red Dog Mine	19.00	21	P	Pn	07 13 00.2	+11
	baz=216,SNR=14						
J20K	Nowinta River	19.02	37	P	Pn	07 12 49.2	-0.3
J20K				IAmb	IAmb	07 12 54.3	
	comp=Z,48nm,0.8s						
J20K	Nowinta River	19.02	37	P	P	07 12 46.9	-1.5
	baz=239						
PPLA	Purkeypile	19.20	41	P	Pn	07 12 52.6	+0.8
PPLA				IAmb	IAmb	07 13 03.1	
	comp=Z,72nm,0.7s						
PPLA	Purkeypile	19.20	41	P	P	07 12 50.3	-0.2
	baz=245						
CAST	Castle Rocks	19.46	40	P	Pn	07 12 54.6	-0.3
CAST				IAmb	IAmb	07 12 58.9	
	comp=Z,50nm,0.8s						
CAST	Castle Rocks	19.46	40	P	P	07 12 51.7	-1.6
	baz=244,SNR=21						
SEW	Seward	19.53	51	P	P	07 12 54.8	+0.8
SEW				IAmb	IAmb	07 12 58.0	
	comp=Z,104nm,1.5s						
SEW	Seward	19.53	51	P	P	07 12 52.9	-1.1
	baz=256						
CHUM	Lake Minchumin	19.58	39	P	P	07 12 54.8	+0.3
	baz=242,SNR=15						
RC01	Rabbit Creek A	19.65	48	P	P	07 12 56.0	+0.7
RC01	Rabbit Creek A	19.65	48	P	P	07 12 54.2	-1.1
	baz=253						
M22K	Willow	19.68	46	P	P	07 12 55.5	-0.1
	baz=251						
CUT	Chulitna	19.83	44	P	P	07 12 57.6	+0.4
CUT				IAmb	IAmb	07 13 06.0	
	comp=Z,88nm,0.8s						
CUT	Chulitna	19.83	44	P	P	07 12 57.9	+0.7
	baz=249						
KTH	Kantishna Hill	19.99	40	P	P	07 12 59.7	+0.5
PMR	Palmer	20.08	47	P	P	07 13 00.0	+0.1
PMR				pmax	pmax		
	comp=Z,52nm,1.5s						
PMR	Palmer	20.08	47	P	P	07 13 00.0	+0.1
PMR	Palmer	20.08	47	P	P	07 13 00.3	+0.4
	baz=253						
IMAR	Indian Mountai	20.13	32	P	P	07 13 01.6	+1.0
BPAW	Bear Paw Mtn.	20.20	39	P	Pn	07 13 02.7	-0.9
BPAW				IAmb	IAmb	07 13 08.6	
	comp=Z,44nm,0.8s						
BPAW	Bear Paw Mtn.	20.20	39	P	P	07 13 01.8	+0.4
	baz=244,SNR=24						
TRF	Thorofare Moun	20.21	41	P	Pn	07 13 03.0	-0.8
TRF				IAmb	IAmb	07 13 15.4	
	comp=Z,59nm,1.0s						
TRF	Thorofare Moun	20.21	41	P	P	07 13 00.1	-1.5
	baz=246						
GHO	Glory Hole Cre	20.22	46	P	P	07 13 01.4	-0.3
PWL	Port Wells	20.25	49	P	P	07 13 00.1	-1.9
PWL				IAmb	IAmb	07 13 15.9	
	comp=Z,50nm,0.9s						
PWL	Port Wells	20.25	49	P	P	07 13 00.1	-1.9
	baz=256						
H21K	Melozitna Rive	20.28	34	P	Pn	07 13 03.4	-1.1
H21K				IAmb	IAmb	07 13 05.8	
	comp=Z,55nm,0.9s						
H21K	Melozitna Rive	20.28	34	P	P	07 13 01.8	-0.3
	baz=237						
I21K	Tanana	20.33	36	P	P	07 13 03.8	+1.1
I21K				IAmb	IAmb	07 13 12.2	
	comp=Z,145nm,1.4s						
I21K	Tanana	20.33	36	P	P	07 13 02.0	-0.6
	baz=240						
KNK	Knik Glacier	20.34	47	P	P	07 13 01.9	-0.9
KNK				IAmb	IAmb	07 13 23.8	
	comp=Z,73nm,1.3s						
KNK	Knik Glacier	20.34	47	P	P	07 13 02.4	-0.4
	baz=254						
SML	Sawmill	20.50	46	P	P	07 13 04.0	-0.6
SML				IAmb	IAmb	07 13 08.9	
	comp=Z,32nm,0.8s						
SML	Sawmill	20.50	46	P	P	07 13 04.2	-0.5
	baz=253						
MLY	Manley	20.72	37	P	P	07 13 05.9	-1.1
MLY				IAmb	IAmb	07 13 10.4	
	comp=Z,37nm,1.0s						
MLY	Manley	20.72	37	P	P	07 13 05.9	-1.1
	baz=242						
WAT1	Susitna Watana	20.72	43	P	P	07 13 06.4	-0.6
	baz=250						
RND	Reindeer	20.79	42	P	P	07 13 08.2	+0.4
RND				pmax	pmax		
	comp=Z,24nm,0.8s						
RND	Reindeer	20.79	42	P	P	07 13 08.2	+0.4
BWN	Browne	20.84	40	P	Pn	07 13 09.7	-1.3
GLI	Glacier Island	20.84	49	P	P	07 13 09.5	+1.2
GLI				IAmb	IAmb	07 13 21.1	
	comp=Z,90nm,1.2s						
MCK	McKinley	20.88	41	P	P	07 13 08.7	0.0
MCK				pmax	pmax		
	comp=Z,38nm,1.0s						
MCK	McKinley	20.88	41	P	P	07 13 08.7	0.0
MCK				IAmb	IAmb	07 13 13.4	
	comp=Z,38nm,1.0s						
MCK	McKinley	20.88	41	P	P	07 13 09.0	+0.3
	baz=248,SNR=10						
SCM	Sheep Creek Mo	20.97	47	P	P	07 13 09.1	-0.6
SCM				pmax	pmax		
	comp=Z,69nm,0.9s						
SCM	Sheep Creek Mo	20.97	47	P	P	07 13 09.1	-0.6
SCM				IAmb	IAmb	07 13 16.8	
	comp=Z,69nm,0.9s						
SCM	Sheep Creek Mo	20.97	47	P	P	07 13 09.0	-0.7
	baz=254,SNR=7.2						
WAT6	Susitna Watana	21.00	44	P	P	07 13 09.3	-0.8
	baz=252,SNR=24						
FID	Port Fidalgo	21.11	50	P	P	07 13 10.7	-0.6
FID				IAmb	IAmb	07 13 20.9	
	comp=Z,38nm,0.6s						
NEA2	Nenana	21.16	39	P	P	07 13 12.4	+0.6
NEA2	Nenana	21.16	39	P	P	07 13 11.0	-0.7
	baz=245,SNR=44						
I23K	Minto, Yukon-K	21.29	37	P	P	07 13 13.5	+0.5
I23K	Minto, Yukon-K	21.29	37	P	P	07 13 13.4	+0.4
	baz=244,SNR=18						
DHY	Denali Highway	21.31	43	P	P	07 13 13.8	+0.3
DHY				IAmb	IAmb	07 13 18.3	
	comp=Z,47nm,0.7s						
DHY	Denali Highway	21.31	43	P	P	07 13 13.2	-0.3
	baz=251,SNR=14						
EYAK	Cordova Ski Ar	21.43	51	P	P	07 13 14.1	-0.4
EYAK				IAmb	IAmb	07 13 20.3	
	comp=Z,50nm,1.2s						
EYAK	Cordova Ski Ar	21.43	51	P	P	07 13 12.9	-1.6
	baz=259						
WRH	Wood River Hil	21.50	39	P	P	07 13 15.0	-0.3
DIV	Divide	21.53	49	P	P	07 13 16.0	+0.3
DIV				IAmb	IAmb	07 13 21.2	
	comp=Z,28nm,0.6s						
KLU	Klutina	21.54	48	P	P	07 13 17.1	+1.3
KLU	Klutina	21.54	48	P	P	07 13 15.7	-0.1
	baz=257						
M24K	Tolsona, Glenn	21.57	46	P	P	07 13 16.2	+0.1
M24K				IAmb	IAmb	07 13 32.6	
	comp=Z,75nm,1.0s						
M24K	Tolsona, Glenn	21.57	46	P	P	07 13 15.3	-0.7
	baz=255						
MDM	Murphy Dome	21.64	38	P	P	07 13 17.1	+0.2
MDM				IAmb	IAmb	07 13 20.5	
	comp=Z,42nm,1.0s						
CCB	Clear Creek Bu	21.69	39	P	P	07 13 16.3	-1.0
TCOL	CIGO, UAF Yank	21.75	39	P	P	07 13 19.2	+1.2
TCOL	CIGO, UAF Yank	21.75	39	P	P	07 13 17.0	-1.0
	baz=246,SNR=7.9						
COLA	College	21.76	39	*i* P	P	07 13 19.1	+1.1
COLA				pmax	pmax		
	comp=Z,25nm,0.9s						
COLA	College	21.76	39	P	P	07 13 19.5	+1.5
COLA	College	21.76	39	P	P	07 13 17.2	-0.8
	baz=246						
HDA	Harding Lake	21.94	40	P	P	07 13 19.8	-0.2
HDA	Harding Lake	21.94	40	P	P	07 13 18.9	-1.1
	baz=248						
COLD	Coldfoot	22.00	32	P	P	07 13 21.3	+0.7
COLD	Coldfoot	22.00	32	P	P	07 13 20.2	-0.4
	baz=238,SNR=12						
POKR	Poker Plat Res	22.02	38	P	P	07 13 20.8	0.0
POKR				IAmb	IAmb	07 13 24.0	
	comp=Z,24nm,0.7s						
POKR	Poker Plat Res	22.02	38	P	P	07 13 20.4	-0.4
	baz=246,SNR=10						
BMRM	Bremner River	22.06	50	P	P	07 13 21.2	-0.1
BMRM				IAmb	IAmb	07 13 44.0	
	comp=Z,33nm,0.9s						
BMRM	Bremner River	22.06	50	P	P	07 13 17.9	-3.5
	baz=260						
HARP	HAARP	22.10	46	P	P	07 13 18.7	-3.1
	baz=255,SNR=10						
IL31		22.10	39	P	P	07 13 22.2	+0.5
ILAR	Eielson Array	22.10	39	P	P	07 13 20.8	-0.9
	comp=Z,4.8nm,0.6s,baz=254,slow=11,SNR=27						
ILAR				PcP	PcP	07 17 16.9	-0.6
	comp=Z,1.8nm,0.8s,baz=261,slow=2.8,SNR=5.0						
ILAR				ScP	ScP	07 20 54.5	+3.7
	comp=Z,0.7nm,0.7s,baz=293,slow=3.7,SNR=5.2						
ILAR	Eielson Array	22.10	39	P	P	07 13 22.4	+0.6
PAX	Paxson	22.11	44	P	P	07 13 21.8	-0.2
PAX				pmax	pmax		
	comp=Z,22nm,0.7s						
PAX	Paxson	22.11	44	P	P	07 13 21.8	-0.2
PAX	Paxson	22.11	44	P	P	07 13 20.5	-1.4
	baz=254,SNR=12						
H24K	Noodor Dome	22.15	36	P	P	07 13 22.7	+0.4
H24K				IAmb	IAmb	07 13 28.1	
	comp=Z,46nm,0.8s						
H24K	Noodor Dome	22.15	36	P	P	07 13 21.5	-0.8
	baz=244						
N25K	Chitina, Valde	22.18	48	P	P	07 13 23.0	+0.3
N25K				IAmb	IAmb	07 13 31.6	
	comp=Z,25nm,0.7s						
N25K	Chitina, Valde	22.18	48	P	P	07 13 21.7	-1.1
	baz=258						
GLB	Gilahina Butte	22.52	49	P	P	07 13 25.8	-0.5
GLB				IAmb	IAmb	07 13 47.3	
	comp=Z,46nm,1.2s						
RIDG	Independent Ri	22.60	43	P	P	07 13 27.5	+0.3
RIDG				IAmb	IAmb	07 13 45.3	
	comp=Z,25nm,0.8s						
RIDG	Independent Ri	22.60	43	P	P	07 13 26.1	-1.0
	baz=253						
VRDI	Verde Repeater	22.65	49	P	P	07 13 28.4	+0.5
VRDI				IAmb	IAmb	07 13 33.4	
	comp=Z,37nm,1.2s						
CRQM	Cirque	22.73	51	P	P	07 13 30.2	+1.5
CRQM				IAmb	IAmb	07 13 34.0	
	comp=Z,39nm,1.0s						
CRQE	Cirque	22.75	51	P	P	07 13 27.4	-1.5
	baz=262						
WAX	Waxell Ridge	22.83	51	P	P	07 13 30.9	+1.3
WAX				IAmb	IAmb	07 13 39.1	
	comp=Z,41nm,1.1s						
MENT	Mentasta	22.87	45	P	P	07 13 31.5	+1.5
MENT				IAmb	IAmb	07 13 46.4	
	comp=Z,21nm,0.6s						
TGL	Tana Glacier	22.88	51	P	P	07 13 30.1	-0.1
TGL				IAmb	IAmb	07 13 35.4	
	comp=Z,31nm,1.0s						
DOT	Dot Lake	22.91	43	P	P	07 13 31.1	+0.7
DOT				IAmb	IAmb	07 13 31.6	
	comp=Z,34nm,1.2s						
PRP	Porcupine Dome	22.91	38	P	P	07 13 30.1	-0.3
PRP	Porcupine Dome	22.91	38	P	P	07 13 29.2	-1.3
	baz=248						
A21K	Barrow	22.93	20	P	P	07 13 30.1	-0.4
A21K	Barrow	22.93	20	P	P	07 13 29.7	-0.7
	baz=221,SNR=50						
TOLK	Toolik Lake Re	22.97	29	P	P	07 13 31.4	+0.4
TOLK				IAmb	IAmb	07 13 34.1	
	comp=Z,36nm,0.8s						
TOLK	Toolik Lake Re	22.97	29	P	P	07 13 29.0	-2.0
	baz=236,SNR=21						
SCRK	Sand Creek	23.03	42	P	P	07 13 30.6	-1.0
SCRK				IAmb	IAmb	07 13 36.6	
	comp=Z,22nm,0.8s						
SCRK	Sand Creek	23.03	42	P	P	07 13 30.0	-1.7
	baz=253,SNR=21						
L26K	Log Cabin Wild	23.06	45	P	P	07 13 32.1	+0.2
L26K				IAmb	IAmb	07 13 46.9	
	comp=Z,21nm,0.7s						
L26K	Log Cabin Wild	23.06	45	P	P	07 13 30.3	-1.6

	baz=256,SNR=9.7						
M26K	**Nabesna, AK**	23.08	46	P	P	07 13 31.4	-0.7
M26K				IAmb	IAmb	07 13 56.2	
	comp=Z,48nm,1.5s						
M26K	**Nabesna, AK**	23.08	46	P	P	07 13 29.0	-3.1
	baz=258						
J26L	**Joseph Creek**	23.36	41	P	P	07 13 33.1	-1.8
	baz=252,SNR=38						
GRNC	**Granite Creek**	23.40	51	P	P	07 13 35.7	+0.2
FYU	**Fort Yukon**	23.43	36	P	P	07 13 36.1	+0.8
FYU				IAmb	IAmb	07 13 37.9	
	comp=Z,88nm,1.1s						
BARN	**Barnard Glacie**	23.49	50	P	P	07 13 36.2	-0.1
YUK	**Yuzh-Kuril'sk**	23.57	266	*e*P	P	07 13 35.3	-1.6
YUK				*e*		07 14 04.4	
YUK				*e*S	S	07 17 46.8	-0.9
YUK				*e*SS	SnSn	07 18 28.6	+1.4
YUK				pmax	pmax		
	comp=Z,283nm,0.9s						
YUK				pmax	pmax		
	comp=N,162nm,1.1s						
YUK				pmax	pmax		
	comp=E,398nm,1.2s						
YUK				pmax	pmax		
	comp=Z,603nm,2.3s						
YUK				MLR	MLR		
	comp=Z,303nm,16.0s						
YUK				MLR	MLR		
	comp=E,945nm,15.0s						
YUK				MLR	MLR		
	comp=N,465nm,13.0s						
M27K	**Edge Creek, AK**	23.58	47	P	P	07 13 36.5	-0.5
M27K	**Edge Creek, AK**	23.58	47	P	P	07 13 35.8	-1.3
	baz=259						
CTG	**Chitna Glacier**	23.63	50	P	P	07 13 35.2	-2.3
	baz=263						
CTGM	**Chitina Glacie**	23.63	50	P	P	07 13 38.0	+0.5
CTGM				IAmb	IAmb	07 13 42.0	
	comp=Z,22nm,0.7s						
TABL	**Table Mountain**	23.67	52	P	P	07 13 38.4	+0.4
TABL				IAmb	IAmb	07 14 06.6	
	comp=Z,53nm,1.4s						
L27K	**Beaver Creek,**	23.74	45	P	P	07 13 38.3	-0.2
L27K	**Beaver Creek,**	23.74	45	P	P	07 13 37.4	-1.0
	baz=258,SNR=12						
BCAR	**Beaver Creek A**	23.76	45	P	P	07 13 38.3	-0.4
BMAR	**Burnt Mountain**	24.02	34	P	P	07 13 41.3	+0.3
BVCY	**Beaver Creek**	24.06	47	P	P	07 13 40.1	-1.3
	baz=260						
PCA	**Pinnacle**	24.09	53	P	P	07 13 42.1	+0.5
PCA				IAmb	IAmb	07 13 48.3	
	comp=Z,89nm,1.3s						
PINM	**Pinnacle**	24.09	53	P	P	07 13 40.1	-1.6
	baz=266						
YUK3	**Moose Creek**	24.15	48	P	P	07 13 40.9	-1.6
	baz=262,SNR=19						
YSS	**Yuzh-Sakhalins**	24.22	274	pmax	pmax		
	comp=Z,40nm,1.1s						
YSS	**Yuzh-Sakhalins**	24.22	274	⇓*e*P	P	07 13 44.8	+1.9
YSS				pmax	pmax		
	comp=Z,41nm,1.2s						
YSS				MLR	MLR		
	comp=Z,900nm,16.0s						
YSS	**Yuzh-Sakhalins**	24.22	274	*e*		07 14 51.4	
YSS	**Yuzh-Sakhalins**	24.22	274	*e*PKIKP	P	07 13 45.3	+2.4
EGAK	**Eagle**	24.43	41	P	P	07 13 45.4	+0.7
EGAK	**Eagle**	24.43	41	P	P	07 13 43.2	-1.5
	baz=255,SNR=19						
DAWY	**Dawson**	25.02	43	P	P	07 13 49.9	-0.2
DAWY				IAmb	IAmb	07 13 57.5	
	comp=Z,20nm,0.8s						
DAWY	**Dawson**	25.02	43	P	P	07 13 49.5	-0.5
	baz=258						
JKA	**Kamikawa-asahi**	25.58	268		P	07 13 56.3	+1.0
JKA				IAmb	IAmb	07 13 59.7	
	comp=Z,42nm,0.8s						
ASAJ	**Asahikawa**	25.58	268	P	P	07 13 55.7	+0.4
	comp=Z,38nm,0.7s,baz=91,slow=9.1,SNR=13						
ASAJ				LR	LR	07 23 46.1	
	comp=Z,364nm,20.4s,baz=90,slow=36						
ASAJ	**Asahikawa**	25.58	268	PKIKP	P	07 13 55.7	+0.4
ASAJ	**Asahikawa**	25.58	268	P	P	07 13 56.3	+1.0
ASAJ				pmax	pmax		
	comp=Z,42nm,0.8s						
I29M	**Ogilvie Camp,**	25.74	40	P	P	07 13 56.3	-0.4
	baz=257,SNR=10						
EPYK	**Eagle Plains**	26.61	39	P	P	07 14 04.3	-0.2
EPYK	**Eagle Plains**	26.61	39	P	P	07 14 03.2	-1.2
	baz=256						
INK	**Inuvik**	28.26	35	P	P	07 14 19.0	-0.1
	comp=Z,2.9nm,0.6s,baz=236,slow=7.2,SNR=9.5						
INK				PcP	PcP	07 17 32.1	+0.9
	comp=Z,2.3nm,0.6s,baz=308,slow=3.3,SNR=6.3						
INK	**Inuvik**	28.26	35	P	P	07 14 19.6	+0.5
INK				pmax	pmax		
	comp=Z,18nm,1.1s						
INK	**Inuvik**	28.26	35	P	P	07 14 19.6	+0.5
INK	**Inuvik**	28.26	35	P	P	07 14 19.1	0.0
	baz=256						
YAK	**Yakutsk**	28.70	311	P	P	07 14 22.6	-0.6
	comp=Z,9.3nm,0.4s,baz=167,slow=8.3,SNR=4.1						
YAK	**Yakutsk**	28.70	311	*e*P	P	07 14 22.5	-0.6
YAK				pmax	pmax		
	comp=Z,22nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
DLBC	**Dease Lake**	29.40	56	P	P	07 14 32.7	+3.2
	comp=N,1.9nm,0.7s,baz=322,slow=9.3,SNR=2.3						
KLR	**Kul'dur**	30.15	285	*ce*P	P	07 14 36.1	0.0
KLR				pmax	pmax		
	comp=Z,40nm,0.8s						
TIXI	**Tiksi**	30.26	331	P	P	07 14 37.6	+0.8
	comp=Z,1.5nm,0.3s,baz=122,slow=13,SNR=6.8						
TIXI				PcP	PcP	07 17 36.6	+0.5
	comp=Z,2.7nm,0.6s,baz=113,slow=3.8,SNR=5.0						
TIXI	**Tiksi**	30.26	331	*ce*P	P	07 14 37.5	+0.8
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TIXI	**Tiksi**	30.26	331	P	P	07 14 37.9	+1.2
ZEA	**Zeya**	31.30	295	*e*P	P	07 14 46.3	+0.1
ZEA				pmax	pmax		
	comp=E,30nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.6s						
ZEA				MLR	MLR		
	comp=E,400nm,15.0s						
A36M	**Sachs Harbour**	31.80	29	P	P	07 14 51.0	+0.7
A36M	**Sachs Harbour**	31.80	29	P	P	07 14 50.3	0.0
	baz=259,SNR=33						
USRK	**Ussuriysk Ar.**	32.21	276	P	P	07 14 54.9	+0.7
	comp=E,4.3nm,0.9s,baz=90,slow=5.8,SNR=3.3						
USRK				LR	LR	07 27 53.1	
	comp=E,260nm,20.7s,baz=73,slow=36						
MJAR	**Matsushiro Arr**	32.65	260	P	P	07 14 59.0	+0.8
	comp=E,3.9nm,0.7s,baz=54,slow=8.6,SNR=2.5						
MJAR				LR	LR	07 26 21.8	
	comp=E,321nm,21.4s,baz=75,slow=33						
MJAR	**Matsushiro Arr**	32.65	260	P	P	07 14 59.0	+0.8
MAJO	**Matsushiro**	32.65	260	*i* P	P	07 14 57.4	-0.8
MAJO				pmax	pmax		
	comp=Z,11nm,1.0s						
H11N2	**WAKE ISLAND Hy**	32.91	202	T	T	07 50 08.0	
	baz=18,slow=74,SNR=48						
H11N3	**WAKE ISLAND Hy**	32.91	202	T	T	07 50 06.4	
	baz=18,slow=74,SNR=42						
H11N1	**WAKE ISLAND Hy**	32.92	202	T	T	07 50 07.1	
	baz=18,SNR=38						
MDJ	**Mudanjiang**	33.50	279	P	P	07 15 05.8	+0.3
MDJ				pmax	pmax		
	comp=Z,12nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,180nm,4.2s						
H11S1	**WAKE ISLAND Hy**	34.13	202	T	T	07 51 40.0	
	baz=19,slow=76,SNR=32						
H11S2	**WAKE ISLAND Hy**	34.15	202	T	T	07 51 35.6	
	baz=19,slow=76,SNR=17						
H11S3	**WAKE ISLAND Hy**	34.15	202	T	T	07 51 35.1	
	baz=19,slow=76,SNR=20						
LLLB	**Lillooet**	36.17	67	P	P	07 15 30.2	+1.6
YKA	**Yellowknife Ar**	36.17	46	P	P	07 15 27.8	-0.6
	comp=Z,7.5nm,0.5s,baz=281,slow=7.8,SNR=62						
YKA				PcP	PcP	07 17 54.4	+1.5
	comp=Z,1.8nm,0.6s,baz=290,slow=3.1,SNR=7.2						
YKA				ScP	ScP	07 21 38.8	+3.4
	comp=Z,1.1nm,0.7s,baz=290,slow=3.1,SNR=12						
YKA	**Yellowknife Ar**	36.17	46	P	P	07 15 27.4	-1.0
NLWA	**Neilton Lookou**	36.40	73	P	P	07 15 31.9	+1.3
CN2	**Changchun**	36.48	280	*e*P	P	07 15 31.5	+0.3
CN2				*e*S	S	07 21 04.0	-5.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,500nm,19.0s						
CN2				LR	LR		
	comp=Z,600nm,19.0s						
CN2				LR	LR		
	comp=Z,600nm,20.0s						
A04D	**Lummi Island**	36.50	71	P	P	07 15 30.5	-0.7
	baz=296						
D03D	**Eldon**	36.80	73	P	P	07 15 30.7	-3.2
	baz=297,SNR=10						
E03A	**Lebam**	36.99	74	P	P	07 15 37.8	+2.3
B05A	**Bryant**	37.06	71	P	P	07 15 33.5	-2.6
	baz=297,SNR=5.5						
D04E	**Lakebay**	37.16	73	P	P	07 15 35.6	-1.3
	baz=298						
BOD	**Bodaibo**	37.19	306	*e*P	P	07 15 35.5	-1.6
BOD				pmax	pmax		
	comp=Z,34nm,1.1s						
HIA	**Hailar**	37.31	291	P	P	07 15 37.7	-0.6
HIA				pmax	pmax		
	comp=Z,18nm,0.6s						
HIA	**Hailar**	37.31	291	P	P	07 15 37.7	-0.6
HIA				IAmb	IAmb	07 15 52.5	
	comp=Z,18nm,0.6s						
F04D	**Rainier, OR**	37.55	75	P	P	07 15 38.5	-1.7
	baz=299						
E04D	**Cinebar**	37.58	74	P	P	07 15 39.3	-1.2
	baz=299						
COR	**Corvallis**	38.12	77	P	P	07 15 46.9	+1.8
COR				pmax	pmax		
	comp=Z,164nm,1.5s						
COR	**Corvallis**	38.12	77	P	P	07 15 46.9	+1.8
LTY	**Liberty**	38.38	72	P	P	07 15 48.1	+0.8
LTY				IAmb	IAmb	07 15 50.0	
	comp=Z,11nm,0.6s						
H04D	**Lebanon**	38.50	77	P	P	07 15 46.9	-1.4
	baz=301						
BUCK	**Buck Mountain**	38.51	77	P	P	07 15 51.7	+3.2
KSRS	**Korea Array**	38.52	270	P	P	07 15 49.9	+1.4
	comp=Z,4.8nm,0.9s,baz=50,slow=8.6,SNR=7.7						
KSRS				LR	LR	07 31 59.3	
	comp=Z,199nm,19.2s,baz=80,slow=37						
KSAR	**Wonju Array Be**	38.55	270	P	P	07 15 48.2	-0.6
KSAR	**Wonju Array Be**	38.55	270	P	P	07 15 48.2	-0.6
B08A	**Colville Reser**	38.66	69	P	P	07 15 50.9	+1.3
B08A				IAmb	IAmb	07 15 51.8	
	comp=Z,23nm,1.4s						
HOOD	**Mount Hood Mea**	38.75	75	P	P	07 15 52.3	+1.7
HOOD				IAmb	IAmb	07 16 20.0	
	comp=Z,26nm,1.1s						
H04A	**Detroit Lake**	38.75	76	P	P	07 15 51.6	+1.2
H04A				IAmb	IAmb	07 16 13.0	
	comp=Z,28nm,1.0s						
K02D	**Willamette Mer**	38.89	80	P	P	07 15 48.4	-3.4
	baz=303						
G05D	**Wamic, OR**	38.99	75	P	P	07 15 51.3	-1.2
	baz=300						
I04A	**Tendick Farm,**	39.08	77	P	P	07 15 50.8	-2.4
	baz=302						
E07A	**Sunnyside**	39.21	72	P	P	07 15 55.0	+0.7
E07A				IAmb	IAmb	07 15 56.6	
	comp=Z,49nm,1.4s						
HUMO	**Hull Mountain**	39.38	79	P	P	07 15 58.7	+3.0
HUMO				IAmb	IAmb	07 16 25.3	
	comp=Z,22nm,1.3s						
JNU	**Nakatsue**	39.44	262	P	P	07 15 56.8	+0.5
	comp=Z,8.3nm,0.8s,baz=8.1,slow=7.1,SNR=2.6						
I05D	**Terrebonne, OR**	39.45	76	P	P	07 15 54.2	-2.1
	baz=301						
HAWA	**Hanford**	39.49	72	P	P	07 15 57.1	+0.5
HAWA				IAmb	IAmb	07 15 58.8	
	comp=Z,24nm,0.8s						
F07A	**Phinny Hill Vi**	39.50	73	P	P	07 15 56.0	-0.6
F07A				IAmb	IAmb	07 15 59.1	
	comp=Z,19nm,0.8s						
D08A	**Wollman Farm,**	39.52	71	P	P	07 15 57.2	+0.3
D08A				IAmb	IAmb	07 15 58.5	
	comp=Z,16nm,0.9s						
C09A	**Chrisman Ranch**	39.55	70	P	P	07 15 57.2	+0.2
C09A				IAmb	IAmb	07 15 58.8	
	comp=Z,11nm,0.6s						
J04D	**Umpqua Nationa**	39.56	78	P	P	07 15 55.1	-2.3
	baz=302						
E08A	**Dider Farm, El**	39.72	72	P	P	07 15 58.8	+0.4
E08A				IAmb	IAmb	07 16 00.5	
	comp=Z,24nm,1.0s						
KHMM	**Horse Mountain**	39.87	82	P	P	07 15 58.4	-1.5
KHMM				IAmb	IAmb	07 15 58.8	
	comp=Z,55nm,1.4s						
L04D	**Klamath Falls**	40.00	79	P	P	07 15 59.7	-1.3
	baz=303						
NEW	**Newport**	40.00	68	P	P	07 16 01.0	+0.2
NEW				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NEW	**Newport**	40.00	68	P	P	07 16 01.0	+0.2
NEW				IAmb	IAmb	07 16 02.2	
	comp=Z,10.0nm,0.6s						
YBH	**Yreka Blue Hor**	40.02	80	P	P	07 16 03.1	+2.0
	comp=Z,3.9nm,0.8s,baz=278,slow=6.6,SNR=11						
YBH	**Yreka Blue Hor**	40.02	80	P	P	07 16 01.4	+0.3
YBH				pmax	pmax		
	comp=Z,16nm,1.1s						
YBH	**Yreka Blue Hor**	40.02	80	P	P	07 16 01.4	+0.3
J05D	**Fort Rock, OR**	40.07	77	P	P	07 16 01.8	+0.1
	baz=302						
K04D	**Chiloquin, OR**	40.12	79	P	P	07 16 01.2	-0.8
	baz=303						
KMRM	**Mail Ridge**	40.25	83	P	P	07 16 05.3	+2.2
KMRM				IAmb	IAmb	07 16 31.2	
	comp=Z,62nm,1.3s						
E09A	**Wood Farm, Sta**	40.26	71	P	P	07 16 04.1	+1.2
RES	**Resolute Bay**	40.38	24	P	P	07 16 04.2	+0.6
	comp=Z,7.2nm,0.8s,baz=232,slow=6.0,SNR=14						
RES				PcP	PcP	07 18 06.4	+0.6
	comp=Z,2.0nm,0.6s,baz=280,slow=1.7,SNR=3.6						
RES	**Resolute Bay**	40.38	24	P	P	07 16 04.6	+1.0
RES						07 18 06.4	
RES				pmax	pmax		
	comp=Z,11nm,1.0s						
RES	**Resolute Bay**	40.38	24	P	P	07 16 04.6	+1.0
G08A	**Pilot Rock**	40.40	73	P	P	07 16 04.5	+0.2
N02D	**Trinity Center**	40.45	81	P	P	07 16 05.4	+0.7
	baz=304						
M04C	**Macdoel**	40.53	80	P	P	07 16 05.5	+0.2
	baz=304						
K05A	**Summer Lake**	40.59	78	P	P	07 16 07.7	+1.8
EUNU	**Eureka**	40.77	15	P	P	07 16 08.1	+1.3
F10A	**Beach Ranch, E**	41.08	72	P	P	07 16 10.5	+0.7
F10A				IAmb	IAmb	07 16 20.0	
	comp=Z,16nm,0.9s						
O03E	**Paynes Creek**	41.40	82	P	P	07 16 11.3	-1.2
	baz=305						
MOD	**Modoc Plateau**	41.41	79	P	P	07 16 14.2	+1.6
WALA	**Waterton Lakes**	41.47	66	P	P	07 16 14.7	+1.6
BMO	**Blue Mountains**	41.62	73	P	P	07 16 14.9	+0.6
BMO				pmax	pmax		
	comp=Z,14nm,1.2s						
BMO	**Blue Mountains**	41.62	73	P	P	07 16 14.9	+0.6
J08A	**Circle Bar Ran**	41.72	76	P	P	07 16 15.9	+0.7
JTMT	**Jette**	41.91	68	P	P	07 16 17.4	+0.7
ORV	**Oroville**	42.02	82	P	P	07 16 17.6	+0.1
ORV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ORV	**Oroville**	42.02	82	P	P	07 16 17.6	+0.1
WVOR	**Wild Horse Val**	42.14	77	P	P	07 16 19.8	+1.2
WVOR				pmax	pmax		
	comp=Z,12nm,1.0s						
WVOR	**Wild Horse Val**	42.14	77	P	P	07 16 19.8	+1.2
PLID	**Pearl Lake**	42.28	72	P	P	07 16 20.6	+0.8
MSO	**Missoula**	42.58	69	P	P	07 16 22.5	+0.4
MSO	**Missoula**	42.58	69	P	P	07 16 20.2	-1.9
	baz=301,SNR=9.1						
PAHR	**Pah Rah Range**	43.25	81	P	P	07 16 28.1	+0.4
PAHR				IAmb	IAmb	07 16 56.5	
	comp=Z,19nm,1.1s						
MFID	**Camas Ranch**	43.30	74	P	P	07 16 28.0	+0.1
VCNR	**Virginia City**	43.33	81	P	P	07 16 28.3	0.0
PNTR	**Pine Nut**	43.48	81	P	P	07 16 30.5	+0.9
PNTR				IAmb	IAmb	07 16 45.7	
	comp=Z,28nm,0.7s						
CMB	**Columbia Colle**	43.63	83	P	P	07 16 32.2	+1.6
CMB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMB	**Columbia Colle**	43.63	83	P	P	07 16 32.1	+1.6
SAO	**San Andreas Ge**	43.75	85	P	P	07 16 33.6	+2.1
SAO				pmax	pmax		
	comp=Z,11nm,1.1s						
SAO	**San Andreas Ge**	43.75	85	P	P	07 16 33.6	+2.1
YERR	**Yerington**	43.77	81	P	P	07 16 32.7	+0.8
HRY	**Holter Researc**	43.88	68	P	P	07 16 31.9	-0.7
LRM	**Limekiln Ridge**	43.99	69	P	P	07 16 33.1	-0.6
NRIK	**Noril'sk**	44.01	329	P	P	07 16 33.4	+0.2
	comp=Z,12nm,0.9s,baz=75,slow=10,SNR=14						
NRIK	**Noril'sk**	44.01	329	*ce*P	P	07 16 33.1	0.0
NRIK				pmax	pmax		
	comp=Z,17nm,1.0s						
NRIK	**Noril'sk**	44.01	329	P	P	07 16 33.6	+0.5
NRIK				IAmb	IAmb	07 16 35.7	
	comp=Z,14nm,0.9s						
HLID	**Hailey**	44.07	73	P	P	07 16 34.8	+0.5
HLID				IAmb	IAmb	07 16 36.9	
	comp=Z,18nm,1.1s						
HLID	**Hailey**	44.07	73	P	P	07 16 33.4	-0.8
	baz=304,SNR=18						
DLMT	**Dillon**	44.16	70	P	P	07 16 36.0	+1.2
DLMT				IAmb	IAmb	07 16 40.0	
	comp=Z,20nm,1.4s						
BMN	**Battle Mountai**	44.16	78	P	P	07 16 35.7	+0.8
BMN				pmax	pmax		
	comp=Z,11nm,1.1s						
BMN	**Battle Mountai**	44.16	78	P	P	07 16 35.7	+0.8
MCMT	**McKenzie Canyo**	44.30	71	P	P	07 16 36.2	+0.1
BJI	**Beijing**	44.31	281	P	P	07 16 37.8	+1.9
BJI				S	S	07 23 06.8	+0.1
BJI				pmax	pmax		
	comp=Z,14nm,0.8s						
BJI				pmax	pmax		
	comp=Z,190nm,5.1s						
BJI				LR	LR		
	comp=Z,420nm,22.4s						
BJI				LR	LR		
	comp=Z,450nm,20.4s						
BJI				LR	LR		
	comp=Z,640nm,20.8s						
EGMT	**Eagleton**	44.38	65	P	P	07 16 36.4	-0.2
EGMT				IAmb	IAmb	07 16 38.6	
	comp=Z,19nm,0.8s						
EGMT	**Eagleton**	44.38	65	P	P	07 16 33.4	-3.2
	baz=302,SNR=9.1						
RYN	**Ryan**	44.43	81	P	P	07 16 37.7	+0.6
KVN	**Kaiserville**	44.44	81	P	P	07 16 36.6	-0.6
KVN				pmax	pmax		
	comp=Z,15nm,1.3s						
KVN	**Kaiserville**	44.44	81	P	P	07 16 36.5	-0.6
BOZ	**Bozeman (W)**	44.60	69	P	P	07 16 37.4	-1.0
BOZ				pmax	pmax		
	comp=Z,23nm,0.8s						
BOZ	**Bozeman (W)**	44.60	69	P	P	07 16 37.4	-1.0
BOZ				IAmb	IAmb	07 16 40.3	
	comp=Z,23nm,0.8s						
BOZ	**Bozeman (W)**	44.60	69	P	P	07 16 36.7	-1.7
	baz=303,SNR=22						
NVAR	**Mina Array Bea**	44.69	81	P	P	07 16 39.6	+0.3
	comp=Z,2.3nm,0.6s,baz=291,slow=7.7,SNR=16						
NVAR				ScP	ScP	07 22 12.2	+2.8
	comp=Z,0.7nm,0.8s,baz=254,slow=6.0,SNR=4.6						
NVAR	**Mina Array Bea**	44.69	81	P	P	07 16 39.4	+0.1
NV11	**Mina Array Sit**	44.78	81	P	P	07 16 40.3	+0.4
QLMT	**Earthquake Lak**	45.14	70	P	P	07 16 42.8	0.0
ELK	**Elko**	45.19	77	P	P	07 16 43.8	+0.5
ELK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ELK	**Elko**	45.19	77	P	P	07 16 43.8	+0.5
TLY	**Talaya**	45.22	302	LR	LR	07 37 09.5	
	comp=Z,1µm,18.6s,baz=94,slow=38						
YHL	**Hebgen Lake**	45.27	70	P	P	07 16 44.0	+0.1
ULN	**Ulaanbaatar**	45.34	296	*ce*P	P	07 16 44.6	+0.4
ULN				pmax	pmax		
	comp=Z,15nm,1.0s						
ULN	**Ulaanbaatar**	45.34	296	P	P	07 16 44.4	+0.2
ULN				IAmb	IAmb	07 16 46.5	
	comp=Z,12nm,0.9s						
YHH	**Holmes Hill**	45.51	69	P	P	07 16 45.4	-0.4
YMR	**Madison River**	45.51	70	P	P	07 16 45.8	+0.2
TULEG	**Thule**	45.51	18	*e*P	P	07 16 43.6	-1.3
TULEG	**Thule**	45.51	18	P	P	07 16 44.7	-0.3
TULEG				IAmb	IAmb	07 16 46.2	
	comp=Z,16nm,1.0s						
TPH	**Tonopah**	45.58	81	P	P	07 16 46.6	+0.3
TPH				pmax	pmax		
	comp=Z,62nm,1.0s						
TPH	**Tonopah**	45.58	81	P	P	07 16 46.5	+0.3
GCMT	**Greycliff**	45.64	68	P	P	07 16 48.1	+1.5
YNR	**Norris Junctio**	45.65	69	P	P	07 16 48.2	+1.3
SONM	**Songino Array**	45.73	296	P	P	07 16 48.3	+1.1
	comp=Z,7.3nm,0.8s,baz=56,slow=9.0,SNR=14						
SONM				PcP	PcP	07 18 24.7	+0.3
	comp=Z,1.1nm,0.6s,baz=52,slow=2.4,SNR=1.9						
SONM				LR	LR	07 37 45.5	
	comp=Z,987nm,18.1s,baz=60,slow=38						
SONM	**Songino Array**	45.73	296	P	P	07 16 48.2	+0.9
SONM				pmax	pmax		
	comp=Z,14nm,1.2s						
SONM	**Songino Array**	45.73	296	P	P	07 16 48.2	+0.9
SONM				IAmb	IAmb	07 16 49.7	
	comp=Z,14nm,1.2s						
VES	**Vestal, Richgr**	45.81	85	P	P	07 16 47.3	-0.6
	baz=309						
YPP	**Pitchstone Pla**	45.82	70	P	P	07 16 49.3	+1.0
LCH	**Last Change Ra**	45.84	82	P	P	07 16 49.3	+1.0
H17A	**Grant Village**	45.89	70	P	P	07 16 49.9	+1.2
H17A	**Grant Village**	45.89	70	P	P	07 16 49.1	+0.4
	baz=304,SNR=25						
LKWY	**Lake**	45.90	69	P	P	07 16 49.3	+0.5
LKWY				pmax	pmax		
	comp=Z,24nm,0.9s						
LKWY	**Lake**	45.90	69	P	P	07 16 49.3	+0.5
LKWY				IAmb	IAmb	07 16 52.2	
	comp=Z,24nm,0.9s						
YMP	**Mirror Lake Pl**	45.94	69	P	P	07 16 49.7	+0.4
YMP				IAmb	IAmb	07 16 58.8	
	comp=Z,12nm,0.7s						
PKM	**Mcpherson Peak**	45.96	86	P	P	07 16 47.1	-2.3
	baz=310						
FLWY	**Flagg Ranch**	45.99	70	P	P	07 16 50.2	+0.7
FLWY				IAmb	IAmb	07 16 52.4	
	comp=Z,26nm,0.9s						
CWC	**Cottonwood Cre**	46.06	83	P	P	07 16 47.8	-2.3
	baz=309						
HVU	**Hansel Valley**	46.08	74	P	P	07 16 51.7	+1.5
HVU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HVU	**Hansel Valley**	46.08	74	P	P	07 16 51.7	+1.5
HVU				IAmb	IAmb	07 17 07.6	
	comp=Z,9.3nm,0.8s						
ZAK	**Zakamensk**	46.09	300	*e*P	P	07 16 44.1	-6.0
ZAK				pmax	pmax		
	comp=Z,14nm,1.1s						
MOOW	**Moose Ponds**	46.16	71	P	P	07 16 51.1	+0.3
GRAC	**Grapevine Rang**	46.16	82	P	P	07 16 48.2	-2.4
	baz=309						
RLMT	**Red Lodge**	46.25	68	P	P	07 16 52.6	+1.1
RLMT	**Red Lodge**	46.25	68	P	P	07 16 46.6	-4.9
	baz=304,SNR=22						
ISA	**Isabella, Lake**	46.31	85	P	P	07 16 52.0	+0.1
ISA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ISA	**Isabella, Lake**	46.31	85	P	P	07 16 52.0	+0.1
ISA	**Isabella, Lake**	46.31	85	P	P	07 16 47.9	-4.0
	baz=310						
REDW	**Red Top Meadow**	46.32	71	P	P	07 16 53.5	+1.5
LOHW	**Long Hollow**	46.32	71	P	P	07 16 52.6	+0.5
R11A	**Troy Canyon, C**	46.42	80	P	P	07 16 53.1	+0.2
R11A				IAmb	IAmb	07 17 00.2	
	comp=Z,8.4nm,0.8s						
R11A	**Troy Canyon, C**	46.42	80	P	P	07 16 50.9	-2.0
	baz=308,SNR=20						
ARVC	**Arvin**	46.43	85	P	P	07 16 52.0	-0.8
	baz=310						
BGU	**Big Grassy Mou**	46.43	75	P	P	07 16 54.9	+1.9
AHID	**Auburn Hatcher**	46.51	72	P	P	07 16 54.1	+0.5
AHID				IAmb	IAmb	07 16 56.2	
	comp=Z,14nm,0.9s						
MOY	**Mondy**	46.63	303	*e*P	P	07 16 55.5	+1.2
MOY				pmax	pmax		

	comp=Z,22nm,2.2s						
HHC	Hu-ho-hao-te	46.66	285	eP	P	07 16 55.8	+1.1
HHC				PP	PP	07 18 47.0	+2.4
HHC				S	S	07 23 43.3	+2.6
HHC				SS	SS	07 26 57.5	-9.4
HHC				pmax	pmax		
	comp=Z,25nm,1.0s						
HHC				pmax	pmax		
	comp=Z,290nm,4.6s						
HHC				LR	LR		
	comp=Z,490nm,15.8s						
HHC				LR	LR		
	comp=Z,370nm,14.6s						
HHC				LR	LR		
	comp=Z,490nm,16.1s						
MPMC	Manual Prospec	46.67	83	P	P	07 16 55.1	+0.2
	baz=309,SNR=5.9						
GUMO	Guam	46.73	229	LR	LR	07 34 26.2	
	comp=Z,207nm,19.4s,baz=90,slow=33						
SPR3	Spring Creek 3	46.80	78	P	P	07 16 56.0	-0.1
FURC	Furnace Creek,	46.80	83	P	P	07 16 56.0	+0.4
	baz=309						
OSI	Osito Audit: C	46.82	86	P	P	07 16 56.7	+0.8
OSI	Osito Audit: C	46.82	86	P	P	07 16 56.2	+0.3
	baz=310						
TPNV	Topopah Spring	46.88	82	P	P	07 16 56.6	+0.1
TPNV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TPNV	Topopah Spring	46.88	82	P	P	07 16 56.6	+0.1
TPNV				IAmb	IAmb	07 17 19.0	
	comp=Z,9.5nm,0.8s						
TPNV	Topopah Spring	46.88	82	P	P	07 16 56.4	-0.1
	baz=309,SNR=18						
FCC	Fort Churchill	46.90	45	P	P	07 16 56.0	-0.1
FCC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
FCC	Fort Churchill	46.90	45	P	P	07 16 56.0	-0.1
FCC				IAmb	IAmb	07 16 59.8	
	comp=Z,7.5nm,0.7s						
LRMC	Laurel Mtn Rad	46.92	84	P	P	07 16 56.2	-0.5
	baz=310						
DUG	Dugway, Tooele	47.00	76	P	P	07 16 57.1	-0.3
DUG				pmax	pmax		
	comp=Z,18nm,1.2s						
DUG	Dugway, Tooele	47.00	76	P	P	07 16 57.1	-0.3
DUG				IAmb	IAmb	07 17 26.5	
	comp=Z,18nm,1.1s						
DUG	Dugway, Tooele	47.00	76	P	P	07 16 57.2	-0.2
	baz=307,SNR=13						
GWY	Greenwater Val	47.10	83	P	P	07 16 58.4	+0.1
GWY				IAmb	IAmb	07 17 21.0	
	comp=Z,8.3nm,0.7s						
EDW2	Edwards Air Fo	47.11	85	P	P	07 16 57.7	-0.4
	baz=310						
QSM	Queen of Sheba	47.12	83	P	P	07 16 59.0	+0.9
QSM				IAmb	IAmb	07 17 27.6	
	comp=Z,10nm,1.1s						
LAO	LASA Array	47.12	65	P	P	07 16 59.5	+1.4
LAO				IAmb	IAmb	07 17 27.7	
	comp=Z,23nm,1.2s						
LAO	LASA Array	47.12	65	P	P	07 16 57.1	-1.0
	baz=304						
NOR	Nord	47.18	3	eP	P	07 16 58.3	+0.3
PRN	Pahroc Range	47.34	80	P	P	07 17 00.9	+0.9
PRN				IAmb	IAmb	07 17 10.5	
	comp=Z,15nm,0.8s						
CTU	Camp Tracy	47.35	75	P	P	07 17 01.9	+1.7
CTU				IAmb	IAmb	07 17 22.1	
	comp=Z,7.7nm,0.8s						
BW06	Boulder Array	47.43	71	P	P	07 17 00.8	-0.1
BW06	Boulder Array	47.43	71	P	P	07 17 00.3	-0.5
	baz=306,SNR=39						
PD31	Pinedale Array	47.43	71	P	P	07 17 00.6	-0.2
PDAR	Pinedale Array	47.43	71	P	P	07 17 01.2	+0.4
	comp=Z,24nm,0.6s,baz=305,slow=3.3,SNR=200						
PDAR	Pinedale Array	47.43	71	P	P	07 17 00.6	-0.2
MWC	Mount Wilson	47.49	86	P	P	07 17 01.4	+0.1
MWC				pmax	pmax		
	comp=Z,24nm,1.2s						
MWC	Mount Wilson	47.49	86	P	P	07 17 01.4	+0.1
MWC				IAmb	IAmb	07 17 21.4	
	comp=Z,24nm,1.2s						
SHOC	Shoshone, Teco	47.53	83	P	P	07 17 01.2	-0.2
	baz=310,SNR=7.5						
GSC	Goldstone, Bar	47.58	84	P	P	07 17 02.5	+0.6
GSC	Goldstone, Bar	47.58	84	P	P	07 17 02.5	+0.6
GSC				IAmb	IAmb	07 17 27.2	
	comp=Z,27nm,1.4s						
GSC	Goldstone, Bar	47.58	84	P	P	07 17 01.4	-0.5
	baz=310						
JLU	Jordanelle	47.59	75	P	P	07 17 02.8	+0.7
JLU				IAmb	IAmb	07 17 04.3	
	comp=Z,14nm,1.2s						
NLU	North Lily Min	47.60	76	P	P	07 17 03.0	+0.9
NJ2	Nanjing	47.70	271	eP	P	07 17 02.5	-0.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BFSC	Mount Baldy Ra	47.74	85	P	P	07 17 02.9	-0.3
	baz=311						
BTO	Baotou	47.74	286	eP	P	07 17 04.0	+0.9
BTO				LR	LR		
	comp=Z,1µm,14.8s						
BTO				LR	LR		
	comp=Z,2µm,17.8s						
MPU	Maple Canyon	47.83	75	P	P	07 17 04.8	+0.9
SHPR	Sheep Range	47.84	81	P	P	07 17 04.4	+0.4
NEEM	North Greenlan	47.88	13	i P	P	07 17 03.9	0.0
NEEM				IAmb	IAmb	07 17 05.7	
	comp=Z,74nm,0.9s						
TIY	Taiyuan	48.05	281	eP	P	07 17 07.8	+2.4
TIY				pmax	pmax		
	comp=Z,19nm,0.6s						
TUQ	Turquoise Moun	48.05	83	P	P	07 17 02.7	-2.8
	baz=310						
HEC	Hector,Ludlow	48.18	84	P	P	07 17 03.8	-2.8
	baz=310						
BBRC	Big Bear Solar	48.18	85	P	P	07 17 06.8	+0.1
	baz=311						
TCRU	Three Creeks R	48.20	77	P	P	07 17 06.8	0.0
TCRU				IAmb	IAmb	07 17 14.9	
	comp=Z,11nm,0.8s						
CCUT	Cedar City	48.30	79	P	P	07 17 08.1	+0.5
MVU	Marysvale	48.41	77	P	P	07 17 09.6	+1.2
MSU	Marysvale	48.42	77	P	P	07 17 09.9	+1.4
MSU	Marysvale	48.42	77	P	P	07 17 09.9	+1.4
SZCU	Shurtz Canyon	48.44	79	P	P	07 17 10.2	+1.6
MURC	Murrieta	48.45	86	P	P	07 17 05.5	-3.0
	baz=311						
TMUT	Trail Mountain	48.53	76	P	P	07 17 10.7	+1.3
TMUT				IAmb	IAmb	07 17 36.3	
	comp=Z,14nm,0.8s						
GMRC	Granite Mounta	48.63	83	P	P	07 17 09.4	-0.6
	baz=310,SNR=9.3						
P17A	Butcher Ranch,	48.71	75	P	P	07 17 11.9	+1.3
P17A				IAmb	IAmb	07 17 27.1	
	comp=Z,8.7nm,0.8s						
LCMT	Little Creek M	48.71	79	P	P	07 17 11.4	+0.7
LCMT				IAmb	IAmb	07 17 39.5	
	comp=Z,14nm,1.1s						
MTPU	Mount Pierson	48.71	78	P	P	07 17 12.7	+1.7
MTPU				IAmb	IAmb	07 17 32.8	
	comp=Z,9.2nm,1.0s						
RDMU	Red Mountain	48.74	73	P	P	07 17 12.2	+1.3
Q16A	Castle Valley	48.79	76	P	P	07 17 12.0	+0.7
Q16A				IAmb	IAmb	07 17 13.5	
	comp=Z,8.1nm,0.7s						
PFO	Pinyon Flats O	48.90	85	P	P	07 17 13.2	+1.1
PFO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PFO	Pinyon Flats O	48.90	85	P	P	07 17 13.2	+1.1
PFO	Pinyon Flats O	48.90	85	P	P	07 17 10.5	-1.6
	baz=311						
TPFO	Pinon Flats	48.91	85	P	P	07 17 12.1	0.0
	baz=311						
P18A	Preston Nutter	48.91	75	P	P	07 17 12.6	+0.2
P18A				IAmb	IAmb	07 17 37.7	
	comp=Z,26nm,1.4s						
BELC	Belle Mtn. Jos	48.93	84	P	P	07 17 10.2	-2.2
	baz=311						
KNB	Kanab	48.97	79	P	P	07 17 14.3	+1.7
KNB				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KNB	Kanab	48.97	79	P	P	07 17 14.3	+1.7
KNB				IAmb	IAmb	07 17 22.1	
	comp=Z,7.7nm,0.7s						
109C	Camp Elliot, M	48.97	86	P	P	07 17 13.2	+0.7
109C				IAmb	IAmb	07 17 15.8	
	comp=Z,12nm,0.7s						
109C	Camp Elliot, M	48.97	86	P	P	07 17 11.7	-0.8
	baz=312						
PKCU	Pink Cliffs	49.01	78	P	P	07 17 14.8	+1.6
PKCU				IAmb	IAmb	07 17 22.3	
	comp=Z,9.4nm,0.8s						
SRU	San Rafael Swe	49.06	75	P	P	07 17 14.3	+0.9
SRU				pmax	pmax		
	comp=Z,12nm,0.8s						
SRU	San Rafael Swe	49.06	75	P	P	07 17 14.3	+0.9
SRU				IAmb	IAmb	07 17 37.3	
	comp=Z,12nm,0.8s						
NEE2	Needles Airpor	49.30	83	P	P	07 17 14.3	-0.6
	baz=310						
K22A	Casper	49.30	69	P	P	07 17 15.3	+0.2
K22A				IAmb	IAmb	07 17 16.3	
	comp=Z,15nm,0.8s						
K22A	Casper	49.30	69	P	P	07 17 12.1	-3.0
	baz=307						
IRM	Iron Mountain	49.36	84	P	P	07 17 13.8	-1.8
	baz=311,SNR=7.5						
BAR	Barrett	49.38	86	P	P	07 17 15.8	+0.1
BAR				IAmb	IAmb	07 17 31.1	
	comp=Z,12nm,1.1s						
MONP2	Monument Peak	49.40	86	P	P	07 17 14.4	-1.7
	baz=312						
RWWY	Rawlins	49.48	71	P	P	07 17 15.4	-1.2
BC3	Big Chuckawall	49.50	84	P	P	07 17 15.7	-1.0
	baz=311						
W13A	Hualapai Mount	49.54	82	P	P	07 17 17.4	+0.3
U15A	North Rim	49.67	79	P	P	07 17 18.4	+0.3
U15A				IAmb	IAmb	07 17 23.6	
	comp=Z,13nm,0.8s						
SWSC	Sam W. Stewart	49.75	85	P	P	07 17 17.4	-1.0
	baz=312						
IKP	In-Ko-Pah, Jac	49.76	86	P	P	07 17 17.9	-0.7
	baz=312						
O20A	White River Ci	49.81	73	P	P	07 17 19.3	+0.2
O20A				IAmb	IAmb	07 17 36.4	
	comp=Z,20nm,0.8s						
O20A	White River Ci	49.81	73	P	P	07 17 18.4	-0.7
	baz=308,SNR=11						
RSSD	Black Hills	49.87	66	P	P	07 17 19.4	-0.1
	baz=307						
PDMCI	Parker Dam,Lak	49.90	83	P	P	07 17 19.4	-0.1
	baz=311						
MDND	Maddock	50.15	60	P	P	07 17 21.0	-0.3
	baz=306						
GLA	Glamis	50.29	85	P	P	07 17 23.1	+0.5
GLA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GLA	Glamis	50.29	85	P	P	07 17 23.1	+0.5
GLA				IAmb	IAmb	07 17 48.4	
	comp=Z,10nm,0.9s						
GLA	Glamis	50.29	85	P	P	07 17 22.6	-0.1
	baz=312,SNR=7.7						
SPITS	Spitsbergen Ar	50.48	356	P	P	07 17 23.3	-0.1
	comp=Z,35nm,0.6s,baz=39,slow=6.8,SNR=84						
SPB2	Spitsbergen Ar	50.49	356	P	P	07 17 23.5	+0.1
UPNV	Upernavik	50.52	19	eP	P	07 17 23.1	-0.6
N23A	Red Feather La	50.72	71	P	P	07 17 26.6	+0.6
	baz=308						
ULM	Lac du Bonnet	50.72	56	P	P	07 17 25.4	-0.1
	comp=Z,3.2nm,0.6s,baz=315,slow=8.5,SNR=3.1						
ULM				LR	LR	07 38 52.2	
	comp=Z,562nm,21.0s,baz=316,slow=36						
PHWY	Pilot Hill	50.75	70	P	P	07 17 27.0	+0.7
PHWY				IAmb	IAmb	07 17 27.6	
	comp=Z,18nm,1.4s						
WUAZ	Wupatki	50.83	80	P	P	07 17 27.4	+0.6
WUAZ				IAmb	IAmb	07 17 34.5	
	comp=Z,9.0nm,0.7s						
WUAZ	Wupatki	50.83	80	P	P	07 17 26.5	-0.3
	baz=310,SNR=14						
SMCO	Snowmass	51.17	73	P	P	07 17 30.1	+0.5
MVCO	Mesa Verde	51.50	76	P	P	07 17 30.1	-1.8
	baz=310						
ISCO	Idaho Springs	51.60	72	P	P	07 17 33.5	+0.8
ISCO				pmax	pmax		
	comp=Z,11nm,1.1s						
ISCO	Idaho Springs	51.60	72	P	P	07 17 33.5	+0.8
ISCO				IAmb	IAmb	07 17 35.4	
	comp=Z,11nm,1.1s						
ISCO	Idaho Springs	51.60	72	P	P	07 17 30.4	-2.2
	baz=309						
DAG	Danmarks Havn	51.80	5	i P	P	07 17 32.8	-0.5
DAG				IAmb	IAmb	07 17 34.1	
	comp=Z,10nm,0.8s						
W18A	Petrified Fore	52.10	79	P	P	07 17 37.5	+1.2
W18A				IAmb	IAmb	07 18 06.6	
	comp=Z,10.0nm,0.8s						
W18A	Petrified Fore	52.10	79	P	P	07 17 36.8	+0.5
	baz=311						
S22A	4UR Ranch, Cre	52.17	74	P	P	07 17 36.6	-0.4
	baz=310						
214A	Organ Pipe Nat	52.29	84	P	P	07 17 36.7	-0.9
	baz=312						
Q24A	Divide	52.41	72	P	P	07 17 37.4	-1.3
	baz=310						
SUSD	Miller	52.56	63	P	P	07 17 39.8	+0.4
	baz=308						
XAN	Xi'an	52.59	280	⇑P	P	07 17 40.8	+1.0
XAN				pP	pP	07 17 53.3	+1.3
XAN				pmax	pmax		
	comp=Z,14nm,1.5s						
XAN				LR	LR		
	comp=Z,350nm,21.3s						
XAN				LR	LR		
	comp=Z,470nm,19.2s						
SDCO	Great Sand Dun	52.98	74	P	P	07 17 44.4	+1.5
SDCO	Great Sand Dun	52.98	74	P	P	07 17 43.0	+0.1
	baz=310						
OGNE	Ogallala	52.99	68	P	P	07 17 41.9	-0.9
	baz=309						
TUC	Tucson	53.32	82	P	P	07 17 45.0	-0.2
TUC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TUC	Tucson	53.32	82	P	P	07 17 45.0	-0.2
TUC	Tucson	53.32	82	P	P	07 17 45.0	-0.2
	baz=312						
ZAA0	Zalesovo Array	53.34	313	P	P	07 17 43.9	-1.1
ZALV	Zalesovo Beam	53.34	313	P	P	07 17 44.8	-0.2
	comp=Z,4.0nm,0.6s,baz=51,slow=6.8,SNR=11						
ZALV				PcP	PcP	07 18 52.8	+0.9
	comp=Z,5.2nm,0.8s,baz=24,slow=5.2,SNR=5.2						
ZALV				LR	LR	07 42 02.7	
	comp=Z,444nm,18.3s,baz=50,slow=38						
ZALV	Zalesovo Beam	53.34	313	i P	P	07 17 45.0	0.0
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZALV	Zalesovo Beam	53.34	313	P	P	07 17 44.3	-0.7
SUMG	Summit	53.75	13	P	P	07 17 48.1	-0.1
SUMG				pmax	pmax		
	comp=Z,31nm,1.1s						
SUMG	Summit	53.75	13	i P	P	07 17 48.2	-0.1
SUMG				IAmb	IAmb	07 17 51.8	
	comp=Z,36nm,1.2s						
SUMG	Summit	53.75	13	P	P	07 17 48.1	-0.1
K31A	O'Neill	53.82	65	P	P	07 17 49.5	+0.8
K31A				IAmb	IAmb	07 17 51.2	
	comp=Z,18nm,0.9s						
KSCO	Kaye Shedlock'	53.88	71	P	P	07 17 50.4	+1.1
KSCO	Kaye Shedlock'	53.88	71	P	P	07 17 48.5	-0.8
	baz=310,SNR=5.3						
T25A	Trinidad	54.03	73	P	P	07 17 52.9	+2.3
T25A				IAmb	IAmb	07 17 53.4	
	comp=Z,28nm,1.2s						
T25A	Trinidad	54.03	73	P	P	07 17 49.6	-1.0
	baz=311,SNR=6.0						
DBG	Daneborg	54.09	6	i P	P	07 17 49.6	-0.6
DBG				IAmb	IAmb	07 17 51.6	
	comp=Z,18nm,0.9s						
ANMO	Albuquerque	54.23	77	P	P	07 17 52.1	+0.1
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ANMO	Albuquerque	54.23	77	P	P	07 17 52.1	+0.1
ANMO	Albuquerque	54.23	77	P	P	07 17 51.6	-0.4
	baz=312						
ECSD	EROS Data Cent	54.32	63	P	P	07 17 51.8	-0.5
ECSD	EROS Data Cent	54.32	63	P	P	07 17 50.6	-1.7
	baz=309						
ILULI	Ilulissat	54.34	20	P	P	07 17 52.1	+0.1
ILULI				pmax	pmax		
	comp=Z,22nm,1.1s						
ILULI	Ilulissat	54.34	20	P	P	07 17 52.0	+0.1
ILULI				IAmb	IAmb	07 18 16.2	
	comp=Z,22nm,1.1s						
LZH	Lanzhou	54.36	285	eP	P	07 17 54.5	+1.6
LZH				pP	pP	07 18 02.8	-2.3
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZH				LR	LR		
	comp=Z,490nm,16.8s						
LZH				LR	LR		
	comp=Z,610nm,17.9s						
LZH				LR	LR		
	comp=Z,400nm,17.5s						
EYMN	Ely	54.41	56	P	P	07 17 53.1	+0.2
EYMN				IAmb	IAmb	07 17 58.5	
	comp=Z,14nm,1.2s						
EYMN	Ely	54.41	56	P	P	07 17 52.1	-0.8
	baz=309						
LENM	Lemitar	54.43	78	P	P	07 17 52.2	-1.2
GTA	Gaotai	54.59	291	eP	P	07 17 55.0	+0.5
GTA				pP	pP	07 18 05.8	-1.2
GTA				sP	sP	07 18 10.5	-1.7
GTA				pmax	pmax		
	comp=Z,15nm,1.2s						
GTA				pmax	pmax		
	comp=Z,120nm,4.3s						
GTA				LR	LR		
	comp=Z,400nm,16.0s						
GTA				LR	LR		
	comp=Z,410nm,17.4s						
GTA				LR	LR		
	comp=Z,480nm,19.6s						
BNM	Barren Site	54.66	78	P	P	07 17 55.1	-0.1
DGZ	Jazzator, Alta	54.77	307	i P	P	07 17 55.3	-0.4
DGZ				pmax	pmax		
	comp=Z,12nm,0.9s						
121A	Cookes Peak, D	55.03	80	P	P	07 17 58.6	+0.8
121A	Cookes Peak, D	55.03	80	P	P	07 17 57.1	-0.7
	baz=313						
CBKS	Cedar Bluff	55.71	69	P	P	07 18 02.5	0.0
CBKS				pmax	pmax		
	comp=Z,108nm,1.5s						
CBKS	Cedar Bluff	55.71	69	P	P	07 18 02.5	0.0
CBKS	Cedar Bluff	55.71	69	P	P	07 18 02.2	-0.3
	baz=311,SNR=5.7						
R32A	Long Quarter,	56.58	69	P	P	07 18 08.1	-0.5
R32A				IAmb	IAmb	07 18 13.5	
	comp=Z,24nm,1.1s						
ICESG	Greenland Ices	56.64	16	eP	P	07 18 08.4	-0.6
ICESG				IAmb	IAmb	07 18 10.1	
	comp=Z,42nm,1.1s						
N35A	Tabor	56.73	65	P	P	07 18 10.1	+0.4
MNTX	Cornudas Mount	57.09	79	P	P	07 18 12.1	-0.2
	baz=313						
MSTX	Muleshoe	57.14	75	P	P	07 18 12.7	-0.1
	baz=313						
KSU1	Kansas State U	57.35	67	P	P	07 18 12.8	-1.3
	baz=312						
ZSN	Zaisan	57.53	307	eP	P	07 18 15.6	+0.4
	baz=307						
ZSN				i S	S	07 26 10.7	+1.3
	baz=307						
ZSN	Zaisan	57.53	307	eP	P	07 18 15.6	+0.4
U32A	Winter Ranch,	57.77	71	P	P	07 18 17.4	+0.3
SEM	Semipalatinsk	57.79	312	eP	P	07 18 16.5	-0.8
	baz=312						
SEM	Semipalatinsk	57.79	312	eP	P	07 18 16.4	-0.8
KAN08	Anthony NE Sta	57.81	69	P	P	07 18 17.5	+0.2
ARCES	ARCESS Array B	58.09	350	P	P	07 18 17.7	-1.1
	comp=Z,6.6nm,0.8s,baz=30,slow=6.1,SNR=10.0						
ARCES	ARCESS Array B	58.09	350	IAmb	IAmb	07 18 22.9	
	comp=Z,29nm,1.4s						
N38A	Joes South For	58.14	63	P	P	07 18 18.5	-1.1
KURK	Kurchatov	58.34	313	P	P	07 18 20.9	+0.2
KURK				pmax	pmax		
	comp=Z,19nm,0.8s						
KURK	Kurchatov	58.34	313	P	P	07 18 20.9	+0.2
JFWS	Jewell Farm	58.36	60	P	P	07 18 21.3	+0.2
JFWS				pmax	pmax		
	comp=Z,52nm,1.5s						
JFWS	Jewell Farm	58.36	60	P	P	07 18 21.3	+0.2
JFWS	Jewell Farm	58.36	60	P	P	07 18 20.1	-1.0
	baz=312						
L40A	Anamosa	58.41	61	P	P	07 18 21.6	+0.2
KURBB	Kurchatov Arra	58.44	313	P	P	07 18 21.3	-0.2
WMQ	Urumqi	58.50	302	eP	P	07 18 23.0	+0.9
WMQ				sP	sP	07 18 44.5	+4.6
WMQ				pmax	pmax		
	comp=Z,22nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.3s						
WMQ				LR	LR		
	comp=Z,930nm,15.3s						
WMQ				LR	LR		
	comp=Z,640nm,14.7s						
WMQ				LR	LR		
	comp=Z,730nm,18.5s						
P38A	Dawn	58.76	64	P	P	07 18 23.8	-0.1
P38A				IAmb	IAmb	07 18 25.1	
	comp=Z,16nm,0.8s						
WMOK	Wichita Mounta	59.02	72	P	P	07 18 24.4	-1.4
	baz=313,SNR=7.1						
MK31	Makanchi Array	59.27	308	P	P	07 18 26.8	-0.5
MK31				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MK31	Makanchi Array	59.27	308	P	P	07 18 26.8	-0.5
MK31				IAmb	IAmb	07 18 28.5	
	comp=Z,8.3nm,1.0s						
MKAR	Makanchi Array	59.27	308	P	P	07 18 26.8	-0.5
	comp=Z,7.4nm,0.6s,baz=52,slow=7.0,SNR=42						
MKAR	Makanchi Array	59.27	308	i P	P	07 18 26.7	-0.7
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MAKZ	Makanchi	59.42	308	P	P	07 18 27.8	-0.5
MAKZ				pmax	pmax		
	comp=Z,11nm,0.7s						
MAKZ	Makanchi	59.42	308	P	P	07 18 27.8	-0.5
MAKZ				IAmb	IAmb	07 18 29.5	
	comp=Z,11nm,0.7s						
FNO	Franklin	59.49	71	P	P	07 18 29.5	+0.5
N41A	Harden Midland	59.53	62	P	P	07 18 29.5	+0.3
N41A				IAmb	IAmb	07 18 34.6	
	comp=Z,15nm,0.8s						
P40A	Paris	59.66	64	P	P	07 18 29.7	-0.4
TX31	Lajitas Ar. Si	59.79	80	P	P	07 18 31.3	0.0
TX32	Lajitas Array	59.79	80	P	P	07 18 31.0	-0.2
TX32				IAmb	IAmb	07 18 59.7	
	comp=Z,7.4nm,0.9s						
W35A	Tecumseh	59.87	70		P	07 18 32.3	+0.6
ABTX	Abilene, Hawle	59.96	74	P	P	07 18 29.9	-2.4
	baz=314						
TUL1	Leonard	59.99	69	P	P	07 18 32.1	-0.4
TUL1	Leonard	59.99	69	P	P	07 18 30.9	-1.5
	baz=314						
BRVK	Borovoye	60.33	319	P	P	07 18 34.9	+0.5
BRVK				pmax	pmax		
	comp=Z,35nm,0.8s						
BRVK	Borovoye	60.33	319	P	P	07 18 34.9	+0.5
R40A	Maddies Statio	60.39	65	P	P	07 18 34.6	-0.5
R40A				IAmb	IAmb	07 18 35.1	
	comp=Z,8.0nm,0.6s						
SCHQ	Schefferville	60.84	37	P	P	07 18 37.7	-0.3
	comp=Z,7.1nm,0.8s,baz=297,slow=9.9,SNR=7.7						
P43A	Skaggs, Pawnee	61.00	62	P	P	07 18 39.0	-0.2
CCM	Cathedral Cave	61.13	64	P	P	07 18 38.7	-1.5
	baz=314						
SVE	Sverdlovsk	61.15	327	eP	P	07 18 41.8	+1.8
SVE				pmax	pmax		
	comp=Z,23nm,1.0s						
X37A	Clayton	61.15	70	P	P	07 18 41.5	+1.1
X37A				IAmb	IAmb	07 18 42.7	
	comp=Z,20nm,1.1s						
MGMO	Mountain Grove	61.18	66	P	P	07 18 40.5	0.0
MGMO				IAmb	IAmb	07 18 41.5	
	comp=Z,8.6nm,1.0s						
JCT	Junction City	61.36	76	P	P	07 18 42.2	+0.3
JCT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JCT	Junction City	61.36	76	P	P	07 18 42.1	+0.3
JCT				IAmb	IAmb	07 18 50.7	
	comp=Z,6.1nm,0.8s						
JCT	Junction City	61.36	76	P	P	07 18 40.8	-1.1
	baz=315						
U40A	Yellville	61.39	67	P	P	07 18 41.9	-0.1
U40A				IAmb	IAmb	07 18 43.1	
	comp=Z,12nm,0.7s						

U40A	Yellville	61.39	67	P	P	07 18 41.1	-0.9
	baz=314,SNR=7.1						
FVM	French Village	61.65	64	P	P	07 18 43.4	-0.3
FVM				pmax	pmax		
	comp=Z,15nm,1.2s						
FVM	French Village	61.65	64	P	P	07 18 43.4	-0.3
FVM				IAmb	IAmb	07 19 11.9	
	comp=Z,15nm,1.2s						
PRGR	Permogore	61.65	337	eP	P	07 18 42.2	-1.1
PRGR				pmax	pmax		
	comp=Z,20nm,0.5s						
W39A	Magazine	61.66	68	P	P	07 18 43.6	-0.2
W39A	Magazine	61.66	68	P	P	07 18 43.4	-0.4
	baz=314						
SFIN	Lafayette	61.82	60	P	P	07 18 45.8	+1.0
SFIN	Lafayette	61.82	60	P	P	07 18 43.5	-1.2
	baz=314						
FCAR	Ozark Folk Cen	62.14	67	P	P	07 18 46.2	-0.8
ARU	Arti	62.17	327	c iP	P	07 18 48.0	+1.1
ARU						07 19 24.8	
ARU						07 21 01.6	
ARU				S	S	07 27 11.8	+3.2
ARU				SS	SS	07 31 11.2	0.0
ARU				pmax	pmax		
	comp=Z,14nm,0.7s						
ARU	Arti	62.17	327	P	P	07 18 47.6	+0.7
MIAR	Mount Ida	62.24	69	P	P	07 18 48.1	+0.4
MIAR				pmax	pmax		
	comp=Z,22nm,1.0s						
MIAR	Mount Ida	62.24	69	P	P	07 18 48.1	+0.4
P46A	Rosedale	62.30	61	P	P	07 18 47.9	-0.1
P46A				IAmb	IAmb	07 18 49.3	
	comp=Z,13nm,0.7s						
AAM	Ann Arbor	62.30	56	P	P	07 18 46.1	-1.9
	baz=315						
OLIL	Olney	62.42	62	P	P	07 18 48.7	-0.1
TDK	Taldyqorghan	62.46	308	eP	P	07 18 50.0	+0.9
	comp=Z,18nm,0.8s,baz=308						
TDK	Taldyqorghan	62.46	308	eP	P	07 18 49.9	+0.9
TDK				pmax	pmax		
	comp=Z,18nm,0.8s						
PBMO	Poplar Bluff	62.49	65	P	P	07 18 49.4	+0.1
W41B	Gary Mavity, V	62.57	67	P	P	07 18 48.4	-1.5
	baz=315						
KMI	Kunming	62.64	277	⇑P	P	07 18 50.5	-0.2
KMI				pP	pP	07 19 05.8	+2.5
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
KMI				LR	LR		
	comp=Z,260nm,14.6s						
HNR	Honiara	62.68	202	LR	LR	07 43 46.9	
	comp=Z,276nm,18.5s,baz=352,slow=34						
X40A	Basin Creek Fa	62.72	68	P	P	07 18 51.3	+0.5
X40A				IAmb	IAmb	07 18 52.1	
	comp=Z,14nm,1.1s						
X40A	Basin Creek Fa	62.72	68	P	P	07 18 50.9	+0.1
	baz=315						
OTUK	Ortayu	62.97	314	P	P	07 18 52.5	+0.1
WLAR	White Oak Lake	63.12	69	P	P	07 18 54.0	+0.5
SHLS	Shalkode	63.25	306	eP	P	07 18 53.9	-0.6
	comp=Z,8.1nm,0.8s,baz=306						
SHLS	Shalkode	63.25	306	eP	P	07 18 53.8	-0.6
SHLS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
T45A	Paducah	63.33	64	P	P	07 18 55.6	+0.7
P48A	Milroy	63.38	60	P	P	07 18 54.5	-0.6
UZB	Uzynbulak	63.48	306	eP	P	07 18 56.5	+0.5
	baz=306						
UZB	Uzynbulak	63.48	306	eP	P	07 18 56.5	+0.5
Z41A	Richland Creek	63.60	69	P	P	07 18 56.4	-0.4
	baz=315						
UTMT	University of	63.69	64	P	P	07 18 58.0	+0.8
P49A	Miami Univ. Ec	63.71	59	P	P	07 18 57.1	-0.3
	baz=316						
ZHN	Zhinishke	63.77	307	eP	P	07 18 58.6	+0.8
	baz=307						
ZHN	Zhinishke	63.77	307	eP	P	07 18 58.6	+0.8
KLMR	Klimovskoe	63.77	339	eP	P	07 18 54.5	-2.9
KLMR				pmax	pmax		
	comp=Z,14nm,1.0s						
KLMR	Klimovskoe	63.77	339	eP	P	07 18 54.5	-2.9
KLMR				AMP		07 18 58.8	
	comp=Z,14nm,1.0s						
KLMR				LQ	LQ	07 41 52.2	
KLMR				LQ	LQ	07 41 52.2	
KLMR				LR	LR	07 47 49.1	
WCI	Wyandotte Cave	63.78	61	P	P	07 18 57.6	-0.3
WCI				pmax	pmax		
	comp=Z,11nm,0.7s						
WCI	Wyandotte Cave	63.78	61	P	P	07 18 57.6	-0.3
WCI				IAmb	IAmb	07 18 59.5	
	comp=Z,11nm,0.7s						
WCI	Wyandotte Cave	63.78	61	P	P	07 18 57.8	0.0
	baz=316						
SATY	Saty	63.86	307	eP	P	07 18 58.6	+0.1
	baz=307						
SATY	Saty	63.86	307	eP	P	07 18 58.6	+0.1
T47A	Sharon Grove	64.22	63	P	P	07 19 01.1	+0.4
KUU	Kurty	64.28	309	eP	P	07 19 00.4	-0.8
	comp=Z,8.0nm,0.9s,baz=309						
KUU	Kurty	64.28	309	eP	P	07 19 00.3	-0.8
KUU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
W45A	Hickory Valley	64.35	65	P	P	07 19 03.1	+1.4
WVT	Waverly	64.42	64	P	P	07 19 01.9	-0.2
WVT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WVT	Waverly	64.42	64	P	P	07 19 01.9	-0.2
WVT				IAmb	IAmb	07 19 28.3	
	comp=Z,6.6nm,0.8s						
WVT	Waverly	64.42	64	P	P	07 19 02.4	+0.3
	baz=316						
MDOK	Medeo	64.47	308	eP	P	07 19 02.3	-0.2
	baz=308						
MDOK	Medeo	64.47	308	P	P	07 19 02.8	+0.3
BTLS	Baital	64.55	311	eP	P	07 19 02.9	+0.1
	comp=Z,8.8nm,1.1s,baz=311						
BTLS	Baital	64.55	311	eP	P	07 19 02.8	0.0
BTLS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TNSS	Tian-Shan	64.61	308	eP	P	07 19 04.3	+0.6
	baz=308						
Q51A	Peebles	64.81	59	P	P	07 19 04.9	+0.3
Q51A				IAmb	IAmb	07 19 05.8	
	comp=Z,27nm,1.4s						
O52A	Adamsville	64.83	57	P	P	07 19 04.3	-0.4
O53A	New Philadelph	65.06	56	P	P	07 19 04.5	-1.7
	baz=317						
TARG	Taragay, Kyrgy	65.13	306	P	P	07 19 08.7	+1.5
TARG				IAmb	IAmb	07 19 22.3	
	comp=Z,7.7nm,1.1s						
N54A	Moraine State	65.17	55	P	P	07 19 05.0	-1.9
	baz=317						
AFI	Afiamalu	65.27	171	LR	LR	07 43 20.3	
	comp=Z,348nm,19.5s,baz=42,slow=32						
U49A	Red Boiling Sp	65.30	62	P	P	07 19 08.0	+0.2
U49A				IAmb	IAmb	07 19 29.9	
	comp=Z,12nm,1.0s						
TKM2	Tokmak 2	65.36	308	P	P	07 19 07.5	-0.9
	SNR=9.7						
TKM2	Tokmak 2	65.36	308	i P	P	07 19 08.3	-0.1
TKM2				pmax	pmax		
	comp=Z,17nm,1.2s						
SGDS	Sogindy	65.44	309	eP	P	07 19 09.4	+0.7
	comp=Z,8.7nm,1.1s,baz=309						
T50A	Nancy	65.45	61	P	P	07 19 09.0	+0.2
T50A				IAmb	IAmb	07 19 10.9	
	comp=Z,9.0nm,0.7s						
BOOM	Boomskoye usch	65.51	308	P	P	07 19 10.4	+1.1
BOOM				pmax	pmax		
	comp=Z,22nm,1.3s						
BOOM	Boomskoye usch	65.51	308	P	P	07 19 10.4	+1.1
BOOM				IAmb	IAmb	07 19 13.4	
	comp=Z,22nm,1.3s						
USP	Ospenovka	65.64	309	P	P	07 19 11.0	+1.0
	SNR=26						
VBMS	Vicksburg	65.69	68	P	P	07 19 11.6	+1.3
VBMS	Vicksburg	65.69	68	P	P	07 19 08.0	-2.3
	baz=316						
FINES	FINESS Array B	65.72	346	P	P	07 19 08.5	-1.5
	comp=Z,3.4nm,0.7s,baz=20,slow=6.1,SNR=7.9						
FINES	FINESS Array B	65.72	346	i P	P	07 19 09.0	-1.0
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	FINESS Array B	65.72	346	P	P	07 19 09.0	-1.0
CHMS	Chumysh	65.72	309	P	P	07 19 11.7	+1.2
	SNR=6.8						
J58A	Remsen	65.76	50	P	P	07 19 09.7	-1.0
NCB	Newcomb	65.82	49	P	P	07 19 10.7	-0.3
NCB				IAmb	IAmb	07 19 25.6	
	comp=Z,8.8nm,1.1s						
D62A	Allapoint, All	65.83	44	P	P	07 19 11.1	+0.1
D62A				IAmb	IAmb	07 19 32.4	
	comp=Z,14nm,1.1s						
KBK	Karagaybulak	65.88	308	P	P	07 19 12.4	+0.7
	SNR=9.8						
E62A	Clayton Lake	65.97	45	P	P	07 19 11.5	-0.5
J59A	Piesco	66.06	50	P	P	07 19 11.1	-1.6
J59A				IAmb	IAmb	07 19 32.4	
	comp=Z,17nm,1.2s						
R53A	Hurricane	66.07	58	P	P	07 19 13.1	+0.4
X48A	Hartselle	66.08	64	P	P	07 19 13.0	+0.2
X48A				IAmb	IAmb	07 19 13.6	
	comp=Z,7.2nm,0.7s						
AAK	Ala-Archa	66.12	309	P	P	07 19 13.9	+0.8
	SNR=12						
AAK	Ala-Archa	66.12	309	P	P	07 19 14.0	+0.8
AAK				pmax	pmax		
	comp=Z,12nm,0.8s						
AAK	Ala-Archa	66.12	309	P	P	07 19 14.0	+0.8
AAK				IAmb	IAmb	07 19 16.6	
	comp=Z,12nm,0.8s						
SWET	Sewanee	66.15	63	P	P	07 19 13.7	+0.3
SWET				IAmb	IAmb	07 19 14.8	
	comp=Z,17nm,1.3s						
146A	Union	66.24	67	P	P	07 19 14.6	+0.7
BINY	Binghamton	66.28	52	P	P	07 19 11.5	-2.5
	baz=318						
M57A	Sunshine Farm,	66.36	53	P	P	07 19 14.8	+0.3
M57A				IAmb	IAmb	07 19 16.9	
	comp=Z,9.1nm,0.8s						
Z47A	Carrollton	66.40	66	P	P	07 19 15.0	+0.1
UCH	Uchtor	66.41	308	P	P	07 19 16.9	+1.4
	SNR=9.7						
LSA	Lhasa	66.44	288	P	P	07 19 14.7	-1.1
LSA				pmax	pmax		
	comp=Z,14nm,0.7s						
LSA	Lhasa	66.44	288	P	P	07 19 14.7	-1.1
EKS2	Erkin-Say	66.45	309	P	P	07 19 15.6	+0.3
	SNR=21						
SSPA	Standing Stone	66.49	54	P	P	07 19 12.6	-2.8
	baz=318						
TZTN	Tazewell	66.51	61	P	P	07 19 15.6	0.0
TZTN				IAmb	IAmb	07 19 32.2	
	comp=Z,18nm,1.2s						
TZTN	Tazewell	66.51	61	P	P	07 19 13.1	-2.5
	baz=317						
V51A	Loudon	66.61	62	P	P	07 19 15.3	-0.9
V51A				IAmb	IAmb	07 19 43.4	
	comp=Z,9.5nm,0.8s						
FPAL	Fort Paine	66.82	63	P	P	07 19 17.7	0.0
FPAL				IAmb	IAmb	07 19 43.9	
	comp=Z,13nm,0.8s						
AML	Almayashu	66.89	309	P	P	07 19 19.6	+1.2
	SNR=22						
AKTO	Aktyubinsk	67.19	324	P	P	07 19 20.2	+0.5
N59A	State Game Lan	67.35	53	P	P	07 19 18.7	-2.2
	baz=319						
AB31	Akbulak array	67.41	322	i P	P	07 19 21.0	-0.1
ABKAR	Akbulak array	67.41	322	P	P	07 19 21.8	+0.7
DZA	Taraz	67.45	311	eP	P	07 19 22.6	+1.1
	baz=311						
DZA	Taraz	67.45	311	eP	P	07 19 22.6	+1.1
U54A	Nelsons Funny	67.47	60	P	P	07 19 23.1	+1.4
U54A				IAmb	IAmb	07 19 44.2	
	comp=Z,10nm,0.8s						
NC204	NORSAR Array S	67.52	354	P	P	07 19 21.7	0.0
NC405	NORSAR Array S	67.62	354	P	P	07 19 21.8	-0.4
KKAR	Karatay Array	67.68	311	P	P	07 19 22.7	-0.3
KKAR	Karatay Array	67.68	311	P	P	07 19 22.7	-0.3
KSH	Kashi	67.71	306	P	P	07 19 28.0	+4.7
KSH				pP	sP	07 19 42.3	+1.1
KSH				PcP	PcP	07 19 53.5	+3.6
KSH				SS	SS	07 32 46.5	+8.2
KSH				pmax	pmax		
	comp=Z,24nm,1.2s						
KSH				LR	LR		
	comp=Z,360nm,15.6s						
KSH				LR	LR		
	comp=Z,530nm,15.3s						
KSH				LR	LR		
	comp=Z,550nm,13.1s						
BLA	Blacksburg	67.71	58	P	P	07 19 19.8	-3.4
	baz=318						
NB201	NORSAR Array S	67.71	354	P	P	07 19 23.2	+0.4
NB2	NORSAR Subarra	67.73	354	P	P	07 19 22.4	-0.6
	comp=Z,38nm,1.2s,baz=7.6,slow=6.5						
NB2	NORSAR Subarra	67.73	354	P	P	07 19 22.4	-0.6
	baz=7.6,slow=6.5						
NOA	NORSAR Array B	67.73	354	P	P	07 19 22.4	-0.6
	comp=Z,12nm,0.9s,baz=8.1,slow=6.3,SNR=33						
NOA				LR	LR	07 50 41.7	
	comp=Z,137nm,18.9s,baz=255,slow=38						
NC602	NORSAR Array S	68.01	354	P	P	07 19 24.9	+0.3
BRLS	Borolday	68.06	312	eP	P	07 19 27.7	+2.4
	baz=312						
BRLS	Borolday	68.06	312	eP	P	07 19 27.7	+2.4
HRV	Adam Dziewonsk	68.20	49	P	P	07 19 23.3	-2.8
	baz=320						
PAL	Palisades	68.21	51	P	P	07 19 24.1	-2.2
	baz=319						
BRAL	Brewton	68.47	67	P	P	07 19 26.6	-1.4
	baz=317						
T57A	Hurt	68.49	58	P	P	07 19 28.8	+0.7
T57A				IAmb	IAmb	07 19 32.6	
	comp=Z,18nm,1.3s						
R58B	Mineral	68.49	56	P	P	07 19 29.7	+1.7
IUG	Iuzhnay	68.64	311	eP	P	07 19 29.9	+0.7
	baz=311						
IUG	Iuzhnay	68.64	311	eP	P	07 19 29.8	+0.7
KMSC	Kings Mountain	68.75	60	P	P	07 19 29.9	+0.1
KMSC	Kings Mountain	68.75	60	P	P	07 19 27.0	-2.7
	baz=318						
GOGA	Godfrey	68.86	63	P	P	07 19 27.4	-3.0
	baz=318						
HODGE	Hodges	68.92	61	P	P	07 19 30.9	+0.1
HODGE				IAmb	IAmb	07 19 47.2	
	comp=Z,8.0nm,0.7s						
SHL	Shillong	69.02	285	P	P	07 19 31.7	-0.1
SHL				pmax	pmax		
	comp=Z,33nm,0.9s						
SHL	Shillong	69.02	285	P	P	07 19 31.7	-0.1
BELG	Belogornoye	69.08	331	i P	P	07 19 31.8	+0.4
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KONO	Kongsberg	69.21	354	P	P	07 19 33.1	+0.9
KONO				pmax	pmax		
	comp=Z,25nm,0.9s						
KONO	Kongsberg	69.21	354	P	P	07 19 33.1	+0.9
TAOE	Nuku Hiva Isla	69.23	137	eLR	LR	07 40 23.5	
	comp=Z,738nm,22.2s,baz=331						
TAOE	Nuku Hiva Isla	69.23	137	eT	T	08 34 32.0	
	comp=Z,21nm,0.3s						
JSC	Jenkinsville	69.43	61	P	P	07 19 33.7	-0.3
JSC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
JSC	Jenkinsville	69.43	61	P	P	07 19 33.6	-0.3
JSC				IAmb	IAmb	07 19 50.5	
	comp=Z,9.4nm,0.7s						
OBN	Obninsk	69.64	338	⇓eP	P	07 19 33.5	-1.4
OBN				*PP	pP	07 19 49.0	+1.3
OBN						07 22 10.0	
OBN				S	S	07 28 39.0	-0.6
OBN				pmax	pmax		
	comp=Z,18nm,1.0s						
OBN				MLR	MLR		
	comp=Z,794nm,18.0s						
DRK	Karamyk	69.84	308	P	P	07 19 38.2	+1.4
BTK	Batken	69.87	309	P	P	07 19 37.5	+0.8
BTK				pmax	pmax		
	comp=Z,36nm,0.9s						
BTK	Batken	69.87	309	P	P	07 19 37.5	+0.8
CMAR	Chiang Mai Arr	69.91	275	P	P	07 19 36.8	-0.3
	comp=Z,3.5nm,0.7s,baz=27,slow=7.1,SNR=12						
CMAR	Chiang Mai Arr	69.91	275	i P	P	07 19 37.2	+0.1
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NHSC	New Hope	70.91	61	P	P	07 19 40.6	-2.4
	baz=319						
GKN	Gorkha	71.54	292	eP	P	07 19 47.2	+0.1
	comp=Z,57nm,0.8s						
CHGR	Chuyangaron	71.77	309	P	P	07 19 48.6	+0.3
DANN	Dangsing	71.79	293	eP	P	07 19 49.1	+0.3
	comp=Z,100nm,0.8s						
PMOR	Pomariorio Ree	71.82	147	eT	T	08 37 49.1	
	comp=Z,8.1nm,0.2s						
MNK	Minsk	72.03	343	i P	P	07 19 46.5	-2.9
MNK				i *PP	pP	07 20 00.7	-1.5
MNK				i S	S	07 29 02.0	-5.3
MNK				i SS	SS	07 33 47.7	+4.2
MNK				pmax	pmax		
	comp=Z,20nm,0.9s						
MNK	Minsk	72.03	343	i P	P	07 19 46.5	-2.9
MNK				i P	P	07 19 46.5	-2.9
MNK				i P	P	07 19 46.5	-2.9
	comp=Z,20nm,0.9s,baz=197						
MNK				i pP	pP	07 20 00.7	-1.5
MNK				i PP	PP	07 22 22.9	-6.1
MNK				i PPP	PPP	07 24 06.4	
MNK				i S	S	07 29 02.1	-5.2
MNK				i SS	SS	07 33 47.7	+4.3
MNK				i SSS	SSS	07 37 08.3	
MNK				i LQ	LQ	07 47 23.6	
MNK				i LR	LR	07 51 58.6	
KOLN	Koldanda	72.32	292	eP	P	07 19 51.7	-0.2
PYUN	Piuthan	72.43	293	eP	P	07 19 52.9	+0.4
	comp=Z,63nm,0.9s						
NIL	Nilore	73.59	303	P	P	07 19 59.2	+0.1
NIL				pmax	pmax		
	comp=Z,32nm,1.2s						
NIL	Nilore	73.59	303	P	P	07 19 59.2	+0.1
PPT2	Papeete2	73.67	149	eLR	LR	07 42 16.1	
	comp=Z,648nm,23.2s,baz=343						
PPT2	Papeete2	73.67	149	eT	T	08 40 08.6	
	comp=Z,5.1nm,0.2s						
DZM	Mont Dzumac	73.83	193	eLQ	LQ	07 39 03.3	
	comp=Z,2µm,32.8s						
DZM				eLR	LR	07 42 12.0	
	comp=Z,712nm,23.2s						
KBL	Kabul	75.06	307	P	P	07 20 07.4	-0.4
KBL				pmax	pmax		
	comp=Z,30nm,0.9s						
KBL	Kabul	75.06	307	P	P	07 20 07.4	-0.4
AKASG	Malin Array Be	75.38	341	P	P	07 20 08.3	-0.7
	comp=Z,1.2nm,0.3s,baz=25,slow=6.2,SNR=14						
AKASG				LR	LR	07 56 49.5	
	comp=Z,322nm,21.2s,baz=290,slow=38						
GOF	Gofitskoye	76.98	330	⇑eP	P	07 20 19.9	+1.6
CLL	Collm	77.23	351	eP	P	07 20 15.0	-4.6
MAK	Makhachkala	77.34	326	eP	P	07 20 19.5	-0.8
MAK				e*PP	pP	07 20 34.0	+0.6
MAK				e*SP	sP	07 20 38.8	+0.4
MAK				e		07 23 13.1	
MAK				ePPP	PPP	07 25 02.9	
MAK				eS	S	07 30 07.3	+0.3
MAK				e*SS	SKKSac	07 30 31.7	+1.5
MAK				eSSS	SSS	07 38 24.9	
MAK				MLR	MLR		
	comp=Z,882nm,19.0s						
GEYT	Alibeck	77.46	316	P	P	07 20 21.4	+0.2
	comp=Z,11nm,0.9s,baz=245,slow=23,SNR=8.8						
GEYT				LR	LR	07 59 37.8	
	comp=Z,430nm,18.1s,baz=40,slow=40						
GEYT	Alibeck	77.46	316	P	P	07 20 21.3	+0.1
GEYT				IAmb	IAmb	07 20 24.4	
	comp=Z,12nm,0.9s						
GYA0B	ALIBECK ARRAY	77.46	316	P	P	07 20 21.9	+0.7
GYA0B				IAmb	IAmb	07 20 24.4	
	comp=Z,18nm,1.0s						
SORM	Soroca	77.99	341	⇑P	P	07 20 24.1	+0.2
SORM	Soroca	77.99	341	⇑P	P	07 20 24.1	+0.2
KIV	Kislovodsk	78.08	330	eP	P	07 20 24.8	+0.2
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KBZ	Khabaz	78.22	329	P	P	07 20 26.4	+1.3
	comp=Z,5.5nm,0.8s,baz=4.3,slow=3.9,SNR=7.3						
SHA1	Shidzhatmaz	78.28	330	i P	P	07 20 25.2	-0.7
KOLS	Kolonicke sedl	78.36	345	eP	P	07 20 28.2	+2.3
KOLS	Kolonicke sedl	78.36	345	eP	P	07 20 28.2	+2.3
BCLA	Clavier	78.65	356	dP	P	07 20 27.2	-0.3
LGD	Lagodekhi	78.78	326	P	P	07 20 31.1	+2.7
BUR08	Bucovina Ar. S	79.09	343	P	P	07 20 30.1	0.0
BUR08				IAmb	IAmb	07 20 32.9	
	comp=Z,8.6nm,0.8s						
TRPA	Tarpa	79.09	344	⇓P	P	07 20 30.9	+1.0
TBI	Tubuai	79.11	151	eLR	LR	07 44 59.9	
	comp=Z,751nm,22.5s,baz=340						
BURAR	Bucovina Array	79.11	343	⇑P	P	07 20 30.3	+0.1
BURAR	Bucovina Array	79.11	343	⇑P	P	07 20 30.3	+0.1
BURAR	Bucovina Array	79.11	343	P	P	07 20 30.4	+0.1
BURAR				IAmb	IAmb	07 20 33.3	
	comp=Z,12nm,0.9s						
DDFL	Dedoflistskaro	79.17	326	P	P	07 20 36.4	+5.8
KHC	Kasperske Hory	79.33	351	eP	P	07 20 31.5	+0.2
KHC	Kasperske Hory	79.33	351	eP	P	07 20 27.5	-3.8
GERES	GERESS Array B	79.60	350	P	P	07 20 32.9	0.0
	comp=Z,1.2nm,0.7s,baz=22,slow=4.9,SNR=9.0						
GERES				LR	LR	08 01 11.8	
	comp=Z,168nm,18.1s,baz=22,slow=40						
ARCR	ARCALIA	79.78	343	⇑P	P	07 20 33.8	0.0
TESR	Tescani	79.89	341	⇑P	P	07 20 34.9	+0.5
AKH	Akhalkalaki	80.10	328	⇑P	P	07 20 37.1	+1.3
AKH	Akhalkalaki	80.10	328	P	P	07 20 41.4	+5.6
CONA	Conrad Observa	80.26	349	eP	P	07 20 36.9	+0.5
	comp=Z,5.7nm,1.2s						
DRGR		80.36	344	P	P	07 20 36.8	-0.2
VRI	Vrincioaia	80.49	341	⇑P	P	07 20 39.0	+1.4
VRI	Vrincioaia	80.49	341	⇑P	P	07 20 39.0	+1.4
PLOR	Plostina	80.52	341	⇑P	P	07 20 39.4	+1.6
PLOR	Plostina	80.52	341	⇑P	P	07 20 39.4	+1.6
COVR	Voineasa-Covas	80.62	341	⇑P	P	07 20 39.7	+1.4
DOPR	Dopca	80.66	342	⇑P	P	07 20 39.0	+0.5
CFR	Carcaliu	80.85	340	⇑P	P	07 20 39.7	+0.2
CFR	Carcaliu	80.85	340	⇑P	P	07 20 39.7	+0.2
ARSA	Arzberg	80.97	349	eP	P	07 20 40.7	+0.6
	comp=Z,6.7nm,1.4s						
MLR	Muntele Rosu	81.01	341	⇑P	P	07 20 41.9	+1.4
MLR	Muntele Rosu	81.01	341	P	P	07 20 40.6	+0.1
MLR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MLR	Muntele Rosu	81.01	341	P	P	07 20 40.6	+0.1
MLR				IAmb	IAmb	07 20 44.2	
	comp=Z,7.0nm,0.6s						
TPGR	Topolog	81.10	340	⇑P	P	07 20 42.0	+1.2
WRA	Warramunga Arr	81.11	222	P	P	07 20 40.1	-0.9
	comp=Z,2.1nm,0.9s,baz=30,slow=6.1,SNR=4.8						
VOIR		81.24	342	⇓P	P	07 20 41.9	+0.2
VOIR		81.24	342	⇓P	P	07 20 41.9	+0.2
WATA	Walderalm	81.30	352	eP	P	07 20 42.3	+0.3
	comp=Z,5.7nm,0.6s						
MOTA	Moosalm	81.34	352	eP	P	07 20 43.9	+1.6
	comp=Z,11nm,1.1s						
WTTA	Wattenberg	81.37	352	eP	P	07 20 42.3	-0.1
	comp=Z,4.4nm,0.6s						
ARR	Arges	81.39	342	⇑P	P	07 20 43.7	+1.3
KBA	Koelnbreinsper	81.39	350	eP	P	07 20 43.1	+0.5
	comp=Z,7.1nm,0.6s						
SQTA	Sankt Quirin	81.45	352	eP	P	07 20 41.8	-1.0
	comp=Z,4.3nm,1.0s						
TIRR	Tirgusor	81.48	339	⇑P	P	07 20 44.2	+1.4
TIRR	Tirgusor	81.48	339	⇑P	P	07 20 44.2	+1.4
DAVA	Damuels	81.50	353	eP	P	07 20 44.9	+1.8
	comp=Z,4.4nm,0.8s						
SOKA	Soboth	81.59	349	eP	P	07 20 43.5	0.0
	comp=Z,14nm,1.3s						
BZS	Buzias	81.69	344	⇓P	P	07 20 43.7	-0.2
BZS	Buzias	81.69	344	⇓P	P	07 20 43.7	-0.2
FETA	Feichten	81.69	352	eP	P	07 20 44.0	-0.2
	comp=Z,7.3nm,1.0s						
GZR	Gura Zlata	81.70	344	⇑P	P	07 20 43.7	-0.4
GZR	Gura Zlata	81.70	344	⇑P	P	07 20 43.7	-0.4
MYKA	Terra Mystica	81.80	350	eP	P	07 20 43.4	-1.1
	comp=Z,3.1nm,0.8s						
ABTA	Abfaltersbach	81.80	351	eP	P	07 20 46.2	+1.6
	comp=Z,10nm,1.3s						
OBKA	Obir	81.81	350	eP	P	07 20 45.6	+0.9
	comp=Z,5.1nm,0.7s						
HERR	Herculane	82.26	344	⇓P	P	07 20 46.7	-0.3
FRGS	Fruska Gora	82.43	346	⇑P	P	07 20 48.4	+0.5
FITZ	Fitzroy Crossi	83.47	231	P	P	07 20 53.3	0.0
	comp=Z,4.7nm,0.8s,baz=9.1,slow=6.7						
BOVS	Bovan	83.59	344	⇑P	P	07 20 53.6	-0.3
ASAR	Alice Springs	84.59	221	P	P	07 20 58.5	-0.5
	comp=Z,4.8nm,1.1s,baz=23,slow=5.2,SNR=7.5						

ASAR				LR	LR	07 55 58.3	
	comp=Z,139nm,19.3s,baz=76,slow=34						
BRTR	**Keskin Array B**	**84.64**	**334**	P	**P**	**07 21 00.3**	**+0.9**
	comp=Z,5.4nm,0.7s,baz=47,slow=2.0,SNR=22						
BRTR				LR	LR	08 05 17.1	
	comp=Z,191nm,18.8s,baz=15,slow=40						
BRTR	**Keskin Array B**	**84.64**	**334**	P	**P**	**07 20 59.3**	**-0.2**
NRCA	**Norcia**	**85.61**	**350**	P	**P**	**07 21 04.3**	**+0.2**
STKA	**Stephens Creek**	**89.17**	**211**	P	**P**	**07 21 21.4**	**+0.3**
	comp=Z,2.9nm,1.0s,baz=4.1,slow=10,SNR=2.9						
ESDC	**Sonseca Array**	**89.47**	**3**	LR	LR	08 02 53.2	
	comp=Z,142nm,19.5s,baz=355,slow=36						
KEST	**Kesra**	**93.01**	**352**	LR	LR	08 05 40.2	
	comp=Z,58nm,19.2s,baz=236,slow=37						
ROSC	**El Rosal**	**96.34**	**74**	LR	LR	08 10 00.4	
	comp=Z,50nm,18.3s,baz=50,slow=38						
TORD	**Torodi Ar. Bea**	**115.91**	**358**	PKP	**PKiKP**	**07 27 07.5**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=338,slow=1.9,SNR=2.8						
H03N2	**Juan Fernandez**	**122.17**	**105**	T	T	09 41 39.1	
	baz=317,slow=77,SNR=9.5						
H03N1	**Juan Fernandez**	**122.19**	**105**	T	T	09 41 35.7	
	baz=317,slow=77,SNR=8.4						
H03N3	**Juan Fernandez**	**122.19**	**105**	T	T	09 41 31.8	
	baz=317,slow=77,SNR=7.5						
DBIC	**Dimbokro**	**122.26**	**5**	PKP	**PKPdf**	**07 27 19.9**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=34,slow=1.3,SNR=4.9						
DBIC	**Dimbokro**	**122.26**	**5**	PKIKP	**PKPdf**	**07 27 20.0**	**-0.8**
QSPA	**South Pole Qui**	**140.94**	**180**	PKP	**PKPdf**	**07 27 52.8**	**-1.5**
	baz=166,slow=0.7						
PMSA	**Palmer Station**	**145.35**	**138**	PKPbc	**PKPab**	**07 28 02.4**	**+0.2**
	comp=Z,19nm,1.2s,baz=343,slow=5.1,SNR=2.0						
LBTB	**Lobatse**	**147.06**	**313**	PKPbc	**PKPbc**	**07 28 08.5**	**0.0**
	comp=Z,14nm,0.8s,baz=11,slow=2.3,SNR=14						
LBTB	**Lobatse**	**147.06**	**313**	PKP2	**PKPbc**	**07 28 09.1**	**+0.6**
LBTB	**Lobatse**	**147.06**	**313**	PKPbc	**PKPbc**	**07 28 09.1**	**+0.6**
BOSA	**Boshof**	**150.26**	**309**	PKPbc	**PKPbc**	**07 28 17.0**	**+0.3**
	comp=Z,6.0nm,0.6s,baz=48,slow=1.6,SNR=16						

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*IDC **28** 07:20:04.8±3.2, 51°.00N×179°.30E, h0^{km}, mb3.8/5, mb1 4.0/5, mb1mx3.6/48, mbtmp3.8/5, Error ellipse: s-maj=80.0km s-min=30.5km az=4.0*

*NEIC **28** 07:20:08.6±1.4, 50°.9N±0°.2×179°.3E±0°.1, h27^{km}±10^{km}, mb4.1/24, Error ellipse: s-maj=35.1km s-min=9.2km az=183.0*

ISC 28 07:20:10.8±1.7, **51°.0N**±0°.3×**179°.38E**±0°.07, **h48**^{km}, **n37**, σ1^{s}**11**/35, **mb4.0**/12, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIWB	**Kanaga Island**	**2.34**	**67**	Pn	**Pn**	**07 20 45.8**	**-0.9**
ADK	**Adak**	**2.62**	**69**	Pn	**Pn**	**07 20 49.9**	**-0.6**
GSTR	**Great Sitkin T**	**3.06**	**67**	Pn	**Pn**	**07 20 56.1**	**-0.4**
SMY	**Shemya**	**3.71**	**300**	Pn	**Pn**	**07 21 03.4**	**-2.0**
ATKA	**Atka Island**	**4.19**	**71**	Pn	**Pn**	**07 21 09.6**	**-2.4**
KDAK	**Kodiak Island**	**17.59**	**56**	Pn	**Pn**	**07 24 10.5**	**-1.6**
J20K	**Nowinta River**	**19.18**	**36**	P	**P**	**07 24 30.5**	**+0.4**
KTH	**Kantishna Hill**	**20.16**	**40**	P	**P**	**07 24 41.6**	**+0.8**
KTH				IAmb	IAmb	07 24 49.4	
	comp=Z,16nm,1.4s						
IMAR	**Indian Mountai**	**20.31**	**32**	P	Pn	07 24 43.6	-1.1
BPAW	**Bear Paw Mtn.**	**20.36**	**39**	P	**P**	**07 24 43.1**	**+0.1**
H21K	**Melozitna Rive**	**20.45**	**34**	P	**P**	**07 24 43.7**	**-0.2**
H21K				IAmb	IAmb	07 25 10.5	
	comp=Z,13nm,1.5s						
SML	**Sawmill**	**20.65**	**46**	P	**P**	**07 24 45.2**	**-0.9**
RND	**Reindeer**	**20.95**	**42**	P	**P**	**07 24 49.3**	**-0.1**
RND				IAmb	IAmb	07 25 06.1	
	comp=Z,15nm,1.4s						
SCM	**Sheep Creek Mo**	**21.12**	**46**	P	**P**	**07 24 50.8**	**-0.3**
MDM	**Murphy Dome**	**21.81**	**38**	P	**P**	**07 24 59.0**	**+0.5**
H24K	**Noodor Dome**	**22.32**	**36**	P	**P**	**07 25 04.1**	**+0.2**
A21K	**Barrow**	**23.12**	**19**	P	**P**	**07 25 12.7**	**+0.5**
A21K				IAmb	IAmb	07 25 21.9	
	comp=Z,6.3nm,1.2s						
TOLK	**Toolik Lake Re**	**23.15**	**29**	P	**P**	**07 25 13.3**	**+0.7**
SCRK	**Sand Creek**	**23.19**	**42**	P	**P**	**07 25 13.1**	**0.0**
BCAR	**Beaver Creek A**	**23.91**	**45**	P	**P**	**07 25 20.9**	**+1.0**
BMAR	**Burnt Mountain**	**24.19**	**34**	P	**P**	**07 25 23.1**	**+0.7**
INK	**Inuvik**	**28.43**	**35**	P	**P**	**07 26 01.2**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=220,slow=7.9,SNR=2.0						
INK	**Inuvik**	**28.43**	**35**	IAmb	IAmb	07 26 16.8	
	comp=Z,3.9nm,1.4s						
YKA	**Yellowknife Ar**	**36.33**	**46**	P	**P**	**07 27 09.5**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=281,slow=7.9,SNR=7.1						
NEW	**Newport**	**40.09**	**68**	P	**P**	**07 27 42.9**	**+1.6**
NEW				IAmb	IAmb	07 28 08.4	
	comp=Z,4.3nm,1.4s						
YHH	**Holmes Hill**	**45.59**	**69**	P	**P**	**07 28 28.2**	**+2.0**
YHH				IAmb	IAmb	07 28 28.7	
	comp=Z,1.9nm,1.1s						
PASC	**Pasadena Art C**	**47.49**	**86**	P	**P**	**07 28 39.8**	**-1.0**
BW06	**Boulder Array**	**47.52**	**71**	P	**P**	**07 28 39.6**	**-1.7**
BW06				IAmb	IAmb	07 28 48.2	
	comp=Z,3.9nm,1.4s						
PD31	**Pinedale Array**	**47.52**	**71**	P	**P**	**07 28 39.8**	**-1.5**
PD31				IAmb	IAmb	07 28 48.2	
	comp=Z,2.7nm,1.3s						
PDAR	**Pinedale Array**	**47.52**	**71**	P	**P**	**07 28 42.4**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=320,slow=2.3,SNR=12						
MWC	**Mount Wilson**	**47.53**	**85**	P	**P**	**07 28 41.8**	**+0.3**
JLU	**Jordanelle**	**47.66**	**74**	P	**P**	**07 28 42.3**	**-0.1**
JLU				IAmb	IAmb	07 28 54.7	
	comp=Z,4.6nm,1.4s						
SPITS	**Spitsbergen Ar**	**50.67**	**356**	P	**P**	**07 29 04.9**	**+0.3**
	comp=Z,18nm,1.1s,baz=17,slow=6.0,SNR=8.6						
MK31	**Makanchi Array**	**59.37**	**308**	P	**P**	**07 30 06.7**	**-1.1**
MK31				IAmb	IAmb	07 30 24.5	
	comp=Z,2.6nm,1.4s						
MKAR	**Makanchi Array**	**59.37**	**308**	P	**P**	**07 30 08.2**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=42,slow=6.8,SNR=6.1						
MKAR	**Makanchi Array**	**59.37**	**308**	P	**P**	**07 30 08.7**	**+0.9**
ABKAR	**Akbulak array**	**67.54**	**322**	P	**P**	**07 31 03.7**	**+2.0**
ABKAR				IAmb	IAmb	07 31 04.5	
	comp=Z,3.0nm,1.2s						

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*IDC **28** 07:20:44.1±1.2, 9°.19S×158°.16E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.4/43, mbtmp3.9/5, MS3.6/1, Ms1 3.6/1, ms1mx2.9/38, Error ellipse: s-maj=43.5km s-min=22.1km az=3.0*

ISC 28 07:20:49.1±1.2, **9°.3S**±0°.3×**158°.2E**±0°.1, **h35**^{km}, **n7**, σ1^{s}**46**/7, **mb3.9**/5, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.78**	**94**	Pn	**Pn**	**07 21 15.6**	**-1.8**
	41nm,0.3s,baz=218,slow=6.3,SNR=5.7						
HNR				Sn	**Sn**	**07 21 40.7**	**+1.9**
	65nm,0.3s,baz=208,slow=9.1,SNR=4.4						
WRA	**Warramunga Arr**	**25.31**	**243**	P	**P**	**07 26 13.4**	**+0.7**
	1.6nm,0.8s,baz=65,slow=9.4,SNR=4.9						
URZ	**Urewera**	**33.50**	**152**	LR	LR	07 39 02.6	
	comp=Z,93nm,19.8s,baz=31,slow=33						
SONM	**Songino Array**	**72.97**	**326**	P	**P**	**07 32 15.3**	**+0.1**
	0.9nm,0.8s,baz=131,slow=4.4,SNR=3.9						
ILAR	**Eielson Array**	**84.39**	**21**	P	**P**	**07 33 18.2**	**+0.7**
	1.0nm,1.0s,baz=213,slow=6.5,SNR=4.6						
MKAR	**Makanchi Array**	**87.19**	**318**	P	**P**	**07 33 31.2**	**-0.6**
	0.4nm,0.6s,baz=96,slow=6.5,SNR=4.2						
YKA	**Yellowknife Ar**	**96.91**	**28**	P	**P**	**07 34 16.6**	**+0.1**
	0.4nm,0.9s,baz=261,slow=6.1,SNR=4.0						

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*GUC **28** 07:25:36.2±0.6, 31°.63S×70°.64W, h117^{km}±3^{km}, ML4.2*

*NEIC **28** 07:25:36.6±1.4, 31°.62S±0°.03×70°.62W±0°.06, h107^{km}±4^{km}, Error ellipse: s-maj=7.5km s-min=5.0km az=89.0*

ISC 28 07:25:36.8±0.7, **31°.63S**±0°.03×**70°.66W**±0°.05, **h107**^{km}±7^{km}, **n61**, σ1^{s}**17**/88, **mb4.8**/3, **6C-6D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO03	**El Pedregal**	**0.79**	**358**	⇑*i*P	**Pn**	**07 25 55.7**	**0.0**
CO03				*i* S	**Sn**	**07 26 09.9**	**-0.1**
CO03				IAML		07 26 10.9	
	comp=E,12µm,0.3s						
CO03	**El Pedregal**	**0.79**	**358**		**Pn**	**07 25 55.7**	**0.0**
CO03				Sn	**Sn**	**07 26 09.8**	**-0.1**
VA06	**Catapilco**	**1.08**	**210**	⇓*i*P	**Pn**	**07 25 58.5**	**0.0**
VA06				*i* S	**Sn**	**07 26 15.0**	**+0.1**
VA06				IAML		07 26 16.5	
	comp=N,3µm,0.2s						
VA03	**San Esteban**	**1.14**	**175**	⇓*i*P	**Pn**	**07 25 59.4**	**+0.1**
VA03				*i* S	**Sn**	**07 26 16.7**	**+0.4**
VA03	**San Esteban**	**1.14**	**175**		**Pn**	**07 25 59.3**	**+0.1**
VA03				Sn	**Sn**	**07 26 16.2**	**0.0**
CO06	**Fray Jorge**	**1.27**	**318**	⇑*i*P	**Pn**	**07 26 01.1**	**+0.4**
CO06				*i* S	**Sn**	**07 26 19.3**	**+0.6**
CO06				IAML		07 26 24.1	
	comp=E,3µm,0.5s						
CO06	**Fray Jorge**	**1.27**	**318**	Pn	**Pn**	**07 26 01.1**	**+0.4**
CO06				Sn	**Sn**	**07 26 19.6**	**+1.0**
ROCH	**El Roble**	**1.37**	**192**	⇓*i*P	**Pn**	**07 26 01.7**	**-0.4**
ROCH				⇓*i*P	**Pn**	**07 26 01.2**	**-0.9**
ROCH				*i* S	**Sn**	**07 26 20.6**	**-0.7**
ROCH				*e*S	**Sn**	**07 26 20.8**	**-0.5**
ROCH				IAML		07 26 23.6	
	comp=N,5µm,0.3s						
ROCH				IAML		07 26 24.0	
	comp=N,5µm,0.3s						
GO04	**Tololo Observa**	**1.46**	**355**	⇑*i*P	**Pn**	**07 26 02.8**	**-0.3**
GO04				*i* S	**Sn**	**07 26 22.9**	**-0.1**
GO04				IAML		07 26 27.3	
	comp=N,6µm,0.6s						
GO04	**Tololo Observa**	**1.46**	**355**	Pn	**Pn**	**07 26 02.9**	**-0.3**
PEL	**Peldehue**	**1.51**	**181**		**Pn**	**07 26 03.6**	**0.0**
PEL				Sn	**Sn**	**07 26 24.0**	**+0.1**
VA01	**Torpederas**	**1.62**	**211**	*e*P	**Pn**	**07 26 04.5**	**-0.3**
VA01	**Torpederas**	**1.62**	**211**	Pn	**Pn**	**07 26 04.6**	**-0.3**
VA01				Sn	**Sn**	**07 26 26.2**	**0.0**
MT02	**Curacav**	**1.68**	**194**	⇓*i*P	**Pn**	**07 26 05.2**	**-0.4**
MT02				*e*S	**Sn**	**07 26 26.7**	**-0.8**
MT02				IAML		07 26 28.0	
	comp=N,3µm,0.2s						
MT02	**Curacav**	**1.68**	**194**		**Pn**	**07 26 05.0**	**-0.5**
MT02				Sn	**Sn**	**07 26 27.1**	**-0.3**
ZON	**Zonda**	**1.69**	**88**	Pn	**Pn**	**07 26 04.8**	**-1.0**
ZON				Sn	**Sn**	**07 26 26.7**	**-1.1**
FCH	**Farellones**	**1.72**	**170**	⇑*i*P	**Pn**	**07 26 07.0**	**+0.5**
FCH				*i* S	**Sn**	**07 26 29.8**	**+0.8**
FCH				IAML		07 26 31.7	
	comp=N,2µm,0.2s						
MT05	**Renca**	**1.76**	**182**	*e*P	**Pn**	**07 26 06.5**	**-0.2**
MT05				*e*S	**Sn**	**07 26 29.3**	**-0.1**
MT05				IAML		07 26 31.4	
	comp=N,4µm,0.3s						
MT05	**Renca**	**1.76**	**182**		**Pn**	**07 26 06.8**	**+0.1**
CO05	**La Serena**	**1.77**	**344**	⇑*i*P	**Pn**	**07 26 06.5**	**-0.2**
CO05				*i* S	**Sn**	**07 26 29.2**	**-0.4**
CO05				IAML		07 26 37.1	
	comp=N,1µm,0.3s						
CO05	**La Serena**	**1.77**	**344**	Pn	**Pn**	**07 26 06.6**	**-0.2**
MT09	**Talagante**	**2.16**	**187**	*i* P	**Pn**	**07 26 11.2**	**-0.6**
MT09				*e*S	**Sn**	**07 26 37.9**	**-0.7**
MT09				IAML		07 26 40.0	
	comp=N,2µm,0.1s						
MT09	**Talagante**	**2.16**	**187**	Pn	**Pn**	**07 26 11.2**	**-0.6**
VA05	**Santo Domingo**	**2.18**	**201**	*e*P	**Pn**	**07 26 11.2**	**-0.7**
VA05				*e*S	**Sn**	**07 26 36.5**	**-2.2**
VA05				IAML		07 26 48.5	
	comp=E,2µm,0.3s						
VA05	**Santo Domingo**	**2.18**	**201**	Pn	**Pn**	**07 26 11.2**	**-0.7**
LMEL	**Las Melosas**	**2.25**	**170**	*e*P	**Pn**	**07 26 13.7**	**+0.7**
LMEL				*e*S	**Sn**	**07 26 41.1**	**+0.5**
LMEL				IAML		07 26 46.1	
	comp=N,2µm,0.2s						
MT01	**Popeta**	**2.29**	**192**	⇓*i*P	**Pn**	**07 26 12.9**	**-0.4**
MT01				*e*S	**Sn**	**07 26 39.5**	**-1.7**
MT01				IAML		07 26 42.0	
	comp=E,2µm,0.3s						
MT01	**Popeta**	**2.29**	**192**	Pn	**Pn**	**07 26 12.9**	**-0.4**
BO04	**La Punta**	**2.35**	**179**	*e*P	**Pn**	**07 26 13.9**	**-0.3**
BO04				*e*S	**Sn**	**07 26 42.5**	**-0.5**
BO04				IAML		07 26 45.5	
	comp=N,1µm,0.3s						
LCO	**Las Campanas**	**2.61**	**359**	⇑*e*P	**Pn**	**07 26 17.2**	**-0.5**
LCO				*e*S	**Sn**	**07 26 47.6**	**-1.6**
LCO	**Las Campanas**	**2.61**	**359**	Pn	**Pn**	**07 26 17.3**	**-0.5**
BO01	**Tunca**	**2.78**	**187**	*i* P	**Pn**	**07 26 19.1**	**-0.6**
BO01				*e*S	**Sn**	**07 26 51.0**	**-1.8**
BO01				IAML		07 26 53.6	
	comp=N,554nm,0.5s						
BO01	**Tunca**	**2.78**	**187**	Pn	**Pn**	**07 26 19.2**	**-0.6**
BO02	**Sierra Bellavi**	**3.16**	**182**	*e*P	**Pn**	**07 26 24.4**	**-0.5**
BO02				*e*S	**Sn**	**07 27 00.8**	**-1.1**
BO02				IAML		07 27 05.6	
	comp=N,1µm,0.1s						
BO02	**Sierra Bellavi**	**3.16**	**182**	Pn	**Pn**	**07 26 24.7**	**-0.2**
AC04	**Llanos de Chal**	**3.43**	**354**	*e*P	**Pn**	**07 26 28.0**	**-0.5**
AC04				*e*S	**Sn**	**07 27 07.0**	**-1.4**
AC04				IAML		07 27 17.7	
	comp=E,290nm,0.5s						
AC04	**Llanos de Chal**	**3.43**	**354**	Pn	**Pn**	**07 26 28.5**	**0.0**
GO05	**Huala**	**3.54**	**197**	*e*P	**Pn**	**07 26 27.9**	**-1.9**
GO05				*e*S	**Sn**	**07 27 08.5**	**-2.4**
GO05				IAML		07 27 13.6	
	comp=N,273nm,0.1s						
GO05	**Huala**	**3.54**	**197**	Pn	**Pn**	**07 26 28.0**	**-1.8**
GO03	**Copiap**	**4.04**	**5**	Pn	**Pn**	**07 26 36.0**	**-0.7**
ML02	**Panimavida**	**4.17**	**189**	Pn	**Pn**	**07 26 37.0**	**-1.3**
AC02	**Maricunga**	**4.96**	**16**	Pn	**Pn**	**07 26 49.0**	**-0.5**
LC01	**Cunco**	**7.32**	**187**	Pn	**Pn**	**07 27 20.2**	**-0.8**
LR03	**Panguipulli**	**8.10**	**189**	Pn	**Pn**	**07 27 30.5**	**-1.1**
PB15	**IPOC Station P**	**8.45**	**7**	Pn	**Pn**	**07 27 33.0**	**-3.6**
PB06	**IPOC Station P**	**8.94**	**6**	Pn	**Pn**	**07 27 39.4**	**-3.8**
LL04	**Puerto Octay**	**9.37**	**188**	Pn	**Pn**	**07 27 46.6**	**-2.1**
PB09	**IPOC Station P**	**9.87**	**8**	Pn	**Pn**	**07 27 52.1**	**-3.8**
PB07	**IPOC Station P**	**9.89**	**4**	Pn	**Pn**	**07 27 54.5**	**-1.5**
AP01	**Chacalluta**	**13.20**	**1**	Pn	**Pn**	**07 28 39.4**	**-0.7**
PB16	**IPOC Station P**	**13.28**	**5**		**Pn**	**07 28 43.1**	**+1.4**
ITAB	**Concordia**	**16.72**	**80**	Pn	**P**	**07 29 25.5**	**+0.4**
ITAB				IAmb	IAmb	07 29 25.6	
	comp=Z,6.8nm,0.8s						
AQDB	**Aquidauana**	**17.41**	**54**	P	**P**	**07 29 32.6**	**-0.2**
AQDB				IAmb	IAmb	07 29 49.8	
	comp=Z,5.1nm,1.2s						
PTLB	**Pontes e Lacer**	**19.24**	**36**	P	**P**	**07 29 53.5**	**+0.8**
EFI	**East Falkland**	**22.07**	**159**	P	**P**	**07 30 23.2**	**+0.4**
EFI				IAmb	IAmb	07 30 43.4	
	comp=Z,46nm,1.1s						
BDFB	**Brasilia**	**26.06**	**58**	P	**P**	**07 30 59.9**	**-0.6**
BDFB				IAmb	IAmb	07 31 07.8	
	comp=Z,11nm,1.5s						
PMSA	**Palmer Station**	**33.42**	**175**	P	**P**	**07 32 06.3**	**+1.4**
PMSA				IAmb	IAmb	07 32 23.0	
	comp=Z,26nm,1.2s						
ORCD	**Orcadas**	**33.75**	**157**	P	**P**	**07 32 07.8**	**0.0**
VNA3	**Neumayer Olymp**	**51.13**	**159**	P	P	07 34 40.5	+12
VNA2	**Neumayer--Watz**	**51.76**	**158**	P	**P**	**07 34 36.4**	**+3.5**
	baz=293,slow=6.6						
SNAA	**Sanae**	**53.35**	**159**	P	P	07 34 57.9	+13

WEL 28 07:25:59.8, 39°S±2°×**17°6E**±°, **h77**^{km}±4^{km}, **M3.3**/79, **ML3.5**/79, **MLv3.3**/79, **Error ellipse: s-maj=0.0km s-min=0.0km az=98.6, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATZ	**Hinemaiaia**	**0.06**	**346**	P	Pn	07 26 11.1	+0.2
HATZ				S	Sn	07 26 19.8	+0.7
RITZ	**Rihia Road**	**0.20**	**263**	P	Pn	07 26 11.9	+0.6
RITZ				S	Sn	07 26 21.2	+1.4
MRHZ	**Matea Rd**	**0.27**	**63**	P	Pn	07 26 11.8	+0.2
MRHZ				S	Sn	07 26 21.1	+0.7
RATZ	**Rangitukua**	**0.28**	**288**	P	Pn	07 26 11.8	0.0
RATZ				S	Sn	07 26 21.3	+0.8
WHTZ	**Whakaora**	**0.31**	**337**	P	Pn	07 26 12.6	+0.6
KATZ	**Kakaramea**	**0.33**	**266**	P	Pn	07 26 12.3	+0.2
TMVZ	**Te Maari**	**0.36**	**243**	P	Pn	07 26 12.6	+0.3
TMVZ				S	Sn	07 26 22.2	+0.6
ETVZ	**East Tongariro**	**0.36**	**240**	P	Pn	07 26 12.7	+0.3
ETVZ				S	Sn	07 26 22.6	+1.0
BKZ	**Black Stump Fm**	**0.36**	**126**	P	Pn	07 26 12.8	+0.5
BKZ				S	Sn	07 26 22.7	+1.2
NTVZ	**North Tongarir**	**0.37**	**247**	P	Pn	07 26 12.8	+0.3
NTVZ				S	Sn	07 26 22.5	+0.8
KRVZ	**Karewarewa**	**0.39**	**249**	P	Pn	07 26 12.9	+0.3
OTVZ	**Oturere**	**0.41**	**239**	P	Pn	07 26 13.0	+0.3
OTVZ				S	Sn	07 26 23.3	+1.0
NNVZ	**North Ngauruho**	**0.43**	**245**	P	Pn	07 26 13.0	+0.1
NNVZ				S	Sn	07 26 24.3	+1.8
ALRZ	**Allen Road**	**0.43**	**25**	P	Pn	07 26 12.9	+0.1
ALRZ				S	Sn	07 26 23.4	+1.1
SNVZ	**South Ngauruho**	**0.43**	**238**	P	Pn	07 26 13.3	+0.4
SNVZ				S	Sn	07 26 23.1	+0.4
WPRZ	**Whakapapatarin**	**0.43**	**5**	P	Pn	07 26 12.8	0.0
WTVZ	**West Tongariro**	**0.44**	**248**	P	Pn	07 26 12.9	0.0
WTVZ				S	Sn	07 26 22.9	+0.3
NGZ	**Ngauruhoe**	**0.46**	**241**	P	Pn	07 26 13.2	+0.1
TUVZ	**Tukino**	**0.47**	**228**	P	Pn	07 26 13.5	+0.3
PRRZ	**Plateau Road**	**0.50**	**26**	P	Pn	07 26 13.4	0.0
KUTZ	**Kaahu Road**	**0.52**	**334**	P	Pn	07 26 14.1	+0.6
WHVZ	**Whangaehu Hut**	**0.52**	**231**	P	Pn	07 26 13.9	+0.1
WHVZ				S	Sn	07 26 23.8	-0.3
KWHZ	**Kaweka Forest**	**0.53**	**153**	P	Pn	07 26 14.2	+0.5
KWHZ				S	Sn	07 26 25.5	+1.7
FWVZ	**Far West T-bar**	**0.53**	**235**	P	Pn	07 26 13.8	0.0
FWVZ				S	Sn	07 26 24.2	0.0
MOVZ	**Moawhango**	**0.53**	**212**	P	Pn	07 26 13.6	-0.1
DRZ	**Dome Shelter**	**0.54**	**233**	P	Pn	07 26 14.1	+0.1
BHHZ	**Black Hill Sta**	**0.54**	**184**	P	Pn	07 26 13.9	+0.2
TWVZ	**Taurewa**	**0.54**	**257**	P	Pn	07 26 13.6	-0.1
WNVZ	**Wahianoa**	**0.55**	**227**	P	Pn	07 26 14.0	+0.1
NMHZ	**Naumai**	**0.56**	**105**	P	Pn	07 26 15.0	+1.1
TRVZ	**Turoa**	**0.56**	**232**	P	Pn	07 26 14.2	+0.1
MTHZ	**Maungataniwha**	**0.58**	**80**	P	Pn	07 26 14.4	+0.4
HRRZ	**Handcock Road**	**0.58**	**13**	P	Pn	07 26 14.4	+0.3
GRRZ	**Galatos Road**	**0.60**	**360**	P	Pn	07 26 14.6	+0.3
HSRZ	**Hossack Road**	**0.65**	**9**	P	Pn	07 26 15.0	+0.2
MTVZ	**Mangateitei**	**0.66**	**229**	P	Pn	07 26 15.0	+0.1
MCHZ	**McNeill Hill**	**0.67**	**137**	P	Pn	07 26 16.2	+1.2
PKVZ	**Pokaka**	**0.68**	**240**	P	Pn	07 26 15.2	0.0
RRRZ	**Republican Roa**	**0.69**	**27**	P	Pn	07 26 15.3	+0.1
MUGZ	**Murupara**	**0.70**	**47**	P	Pn	07 26 15.2	-0.1
KRHZ	**Kereru**	**0.72**	**164**	P	Pn	07 26 16.0	+0.5
HLRZ	**Highlands Stat**	**0.72**	**15**	P	Pn	07 26 16.4	+0.8
ARHZ	**Aropaoanui**	**0.75**	**115**	P	Pn	07 26 16.6	+0.8
RTZ	**Ruatahuna**	**0.76**	**64**	P	Pn	07 26 16.1	+0.1
RAHZ	**Arahi**	**0.76**	**88**	P	Pn	07 26 16.7	+0.7
TLZ	**Tolley Road**	**0.77**	**324**	P	Pn	07 26 16.0	0.0
TARZ	**Mount Tarawera**	**0.78**	**23**	P	Pn	07 26 16.5	+0.3
MKRZ	**Makatiti**	**0.86**	**19**	P	Pn	07 26 17.6	+0.5
OMRZ	**Omania**	**0.87**	**14**	P	Pn	07 26 17.2	0.0
KARZ	**Kaharoa**	**0.94**	**6**	P	Pn	07 26 18.4	+0.4
PNHZ	**Pukenui**	**0.96**	**176**	P	Pn	07 26 18.1	-0.2
SNGZ	**Shannon Statio**	**0.97**	**80**	P	Pn	07 26 18.8	+0.4
EDRZ	**Edgecumbe**	**0.98**	**30**	P	Pn	07 26 18.3	-0.2
CKHZ	**Cape Kidnapper**	**1.03**	**134**	P	Pn	07 26 19.8	+0.8
KAHZ	**Kahuranaki**	**1.03**	**145**	P	Pn	07 26 19.6	+0.5
URZ	**Urewera**	**1.04**	**49**	P	Pn	07 26 18.9	-0.3
MARZ	**Manawahe**	**1.06**	**25**	P	Pn	07 26 19.4	-0.1
VRZ	**Vera Road**	**1.07**	**260**	P	Pn	07 26 19.3	-0.2
HIZ	**Hauiti**	**1.08**	**294**	P	Pn	07 26 19.4	-0.2
TSZ	**Takapari Road**	**1.11**	**186**	P	Pn	07 26 19.7	-0.4
KMRZ	**Kaimai**	**1.11**	**353**	P	Pn	07 26 20.1	0.0
RAGZ	**Rawiri**	**1.12**	**66**	P	Pn	07 26 20.6	+0.4
WPHZ	**Waipukurau**	**1.14**	**167**	P	Pn	07 26 20.2	-0.2
OPRZ	**Ohinepanea**	**1.16**	**18**	P	Pn	07 26 20.5	-0.2
WAZ	**Wanganui**	**1.19**	**227**	P	Pn	07 26 21.1	+0.1
KNZ	**Kokohu**	**1.22**	**94**	P	Pn	07 26 21.6	+0.2
PXZ	**Pawanui**	**1.22**	**152**	P	Pn	07 26 21.4	-0.1
TGRZ	**Tauranga**	**1.23**	**5**	P	Pn	07 26 21.5	0.0
MWZ	**Matawai**	**1.27**	**61**	P	Pn	07 26 21.8	-0.3
WHRZ	**Whale Island**	**1.29**	**32**	P	Pn	07 26 22.7	+0.4
TOZ	**Tahuroa Road**	**1.31**	**338**	P	Pn	07 26 22.4	-0.1
RIGZ	**Rimuhau**	**1.31**	**80**	P	Pn	07 26 22.6	0.0
DVHZ	**Dannevirke**	**1.34**	**178**	P	Pn	07 26 22.1	-0.9
PRHZ	**Porangahau**	**1.37**	**163**	P	Pn	07 26 23.0	-0.4
PRGZ	**Paritu Road**	**1.38**	**89**	P	Pn	07 26 23.2	-0.3
OHWZ	**Ohakea**	**1.39**	**206**	P	Pn	07 26 23.5	-0.1
MHEZ	**Mangahewa**	**1.40**	**264**	P	Pn	07 26 24.0	+0.3
MHGZ	**Mahia Peninsul**	**1.41**	**99**	P	Pn	07 26 24.0	+0.1
LREZ	**Lake Rotokare**	**1.42**	**249**	P	Pn	07 26 24.0	0.0
TKGZ	**Te Karaka**	**1.45**	**70**	P	Pn	07 26 24.5	+0.1
POWZ	**Post Office Ro**	**1.46**	**190**	P	Pn	07 26 23.5	-1.1
DREZ	**Durham Road**	**1.51**	**260**	P	Pn	07 26 25.3	+0.2
ANWZ	**Angora Road**	**1.53**	**170**	P	Pn	07 26 24.7	-0.7
PREZ	**Palmer Road**	**1.57**	**255**	P	Pn	07 26 26.5	+0.6
RUGZ	**Raukumara Rang**	**1.58**	**52**	P	Pn	07 26 25.4	-0.8
NEZ	**North Egmont**	**1.60**	**258**	P	Pn	07 26 26.6	+0.2
PRWZ	**Pori Road**	**1.60**	**184**	P	Pn	07 26 25.4	-1.0
TWGZ	**Tauwhareparae**	**1.66**	**63**	P	Pn	07 26 27.4	+0.2
KHEZ	**Kahui Hut**	**1.67**	**258**	P	Pn	07 26 27.4	+0.1
PKE	**Pukeiti**	**1.67**	**261**	P	Pn	07 26 27.1	-0.2
MYRZ	**Mayor Island**	**1.67**	**4**	P	Pn	07 26 27.5	+0.1
CNGZ	**Carnagh Statio**	**1.70**	**75**	P	Pn	07 26 27.6	-0.1
BFZ	**Birch Farm**	**1.73**	**177**	P	Pn	07 26 26.6	-1.4
MRZ	**Mangatainoka R**	**1.75**	**193**	P	Pn	07 26 26.6	-1.7
HAZ	**Te Kaha**	**1.77**	**48**	P	Pn	07 26 27.5	-1.1
NBEZ	**Newall Road No**	**1.77**	**259**	P	Pn	07 26 28.5	-0.1
NMEZ	**Namu Road**	**1.80**	**254**	P	Pn	07 26 28.7	-0.2
TIWZ	**Tintock**	**1.83**	**185**	P	Pn	07 26 27.8	-1.6
PKGZ	**Pakihiroa**	**1.87**	**56**	P	Pn	07 26 29.8	-0.2
PUZ	**Puketiti**	**1.90**	**63**	P	Pn	07 26 29.6	-0.7
CPWZ	**Castlepoint**	**1.96**	**178**	P	Pn	07 26 30.0	-1.0
HOWZ	**Holdsworth Sta**	**2.00**	**193**	P	Pn	07 26 29.4	-2.2
OGWZ	**Otaki Gorge**	**2.00**	**201**	P	Pn	07 26 29.7	-1.9
KIW	**Kapiti Island**	**2.12**	**206**	P	Pn	07 26 31.0	-2.2
WMGZ	**Waiomatatini S**	**2.13**	**59**	P	Pn	07 26 32.8	-0.6
TMWZ	**Te Maipa**	**2.16**	**184**	P	Pn	07 26 31.6	-2.2
ETAZ	**East Tamaki Re**	**2.21**	**335**	P	Pn	07 26 33.9	-0.4
AWAZ	**Awhitu Peninsu**	**2.21**	**328**	P	Pn	07 26 34.2	-0.3
MXZ	**Matakaoa Point**	**2.22**	**52**	P	Pn	07 26 34.0	-0.5
KUZ	**Kuaotunu**	**2.23**	**352**	P	Pn	07 26 34.2	-0.5
MTW	**Mount Morrison**	**2.25**	**192**	P	Pn	07 26 32.4	-2.7
WIAZ	**Waiheke Island**	**2.29**	**340**	P	Pn	07 26 35.1	-0.4
CAW	**Cannon Point**	**2.30**	**200**	P	Pn	07 26 33.0	-2.6
EPAZ	**Eden Park BICE**	**2.34**	**332**	P	Pn	07 26 35.8	-0.4
WTAZ	**Waiatarua**	**2.36**	**328**	P	Pn	07 26 36.3	-0.1
HBAZ	**Herne Bay Bore**	**2.37**	**332**	P	Pn	07 26 36.4	-0.1
MBAZ	**Motutapu North**	**2.38**	**336**	P	Pn	07 26 36.3	-0.5
TRWZ	**Traveller**	**2.46**	**187**	P	Pn	07 26 35.2	-2.7
PAWZ	**Paruwai Farm**	**2.48**	**192**	P	Pn	07 26 35.1	-3.0
RVAZ	**Riverhead Bore**	**2.49**	**330**	P	Pn	07 26 37.9	-0.3
DUWZ	**D'Urville Isla**	**2.50**	**222**	P	Pn	07 26 35.8	-2.6
WEL	**Wellington**	**2.55**	**203**	P	Pn	07 26 36.0	-3.0
MSWZ	**Moikau Station**	**2.55**	**195**	P	Pn	07 26 35.8	-3.2
BHW	**Baring Head**	**2.63**	**201**	P	Pn	07 26 36.8	-3.3
TCW	**Tory Channel**	**2.66**	**211**	P	Pn	07 26 37.4	-3.0
PLWZ	**Palliser**	**2.69**	**194**	P	Pn	07 26 37.6	-3.4
GRZ	**Great Barrier**	**2.75**	**349**	P	Pn	07 26 41.2	-0.5
TUWZ	**Tuamarina**	**2.98**	**213**	P	Pn	07 26 41.5	-3.3
NNZ	**Nelson**	**3.08**	**222**	P	Pn	07 26 42.7	-3.5
BSWZ	**Blackbirch Sta**	**3.25**	**211**	P	Pn	07 26 44.8	-3.6
QRZ	**Quartz Range**	**3.33**	**235**	P	Pn	07 26 46.5	-3.1
THZ	**Tophouse**	**3.73**	**220**	P	Pn	07 26 51.5	-3.5
KHZ	**Kahutara**	**3.97**	**209**	P	Pn	07 26 54.1	-4.2
DSZ	**Denniston Nort**	**4.31**	**228**	P	Pn	07 26 59.4	-3.6
INZ	**Inchbonnie**	**5.17**	**222**	P	Pn	07 27 11.5	-3.1
CTZ	**Chatham Island**	**7.26**	**133**	P	Pn	07 27 43.2	+0.1
JCZ	**Jackson Bay**	**7.51**	**225**	P	Pn	07 27 42.8	-3.8

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*KRSC **28** 07:34:34.9±2.1, 48°.96N×156°.86E, h7^{km}±33^{km}, ML4.0*

*IDC **28** 07:34:41.0±4.2, 49°.20N×155°.56E, h59^{km}±33^{km}, mb3.0/3, mb1 3.4/5, mb1mx3.1/42, mbtmp3.5/5, ML4.0/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/14, Error ellipse: s-maj=75.1km s-min=26.6km az=149.0*

ISC 28 07:34:36.8±1.5, **48°.8N**±0°.1×**156°.1E**±0°.1, **h34**^{km}, **n21**, σ1^{s}**46**/25, **mb3.5**/3, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.87**	**1**	*e*P	**Pn**	**07 35 05.7**	**-0.7**
SKR				*e*S	**Sn**	**07 35 27.9**	**-0.9**
PAU	**Pauzhetka**	**2.70**	**10**	*e*P	**Pn**	**07 35 18.0**	**+0.3**
PAU				*e*S	**Sn**	**07 35 49.6**	**+0.4**
KDTR	**Khodutka, Kamc**	**3.26**	**22**	*e*P	**Pn**	**07 35 25.4**	**0.0**
KDTR				*e*S	**Sn**	**07 36 02.7**	**-0.3**
ASAK	**Asacha**	**3.76**	**17**	*e*P	**Pn**	**07 35 33.3**	**+0.9**
RUS	**Russkaya**	**3.94**	**22**	*e*P	**Pn**	**07 35 34.7**	**-0.1**
RUS				*e*S	**Sn**	**07 36 18.8**	**-1.0**
GRL	**Gorelyy**	**3.95**	**18**	*e*P	**Pn**	**07 35 36.2**	**+1.1**
APC	**Apacha**	**4.17**	**9**	*e*P	**Pn**	**07 35 41.7**	**+3.7**
KRMR	**Karymshinskiy**	**4.23**	**17**	*e*P	**Pn**	**07 35 39.9**	**+1.2**
KRMR				*e*S	**Sn**	**07 36 27.8**	**+1.0**
PETK	**Petropavlovsk-**	**4.42**	**13**	P	**Pn**	**07 35 41.6**	**+0.2**
	0.5nm,0.3s,baz=174,slow=13,SNR=4.3						
DALK	**Dalny**	**4.55**	**21**	*e*P	**Pn**	**07 35 43.1**	**0.0**
UGLR	**Uglovaya**	**4.73**	**20**	*e*P	**Pn**	**07 35 46.8**	**+1.1**
AVH	**Avacha**	**4.76**	**20**	*e*P	**Pn**	**07 35 47.8**	**+1.7**
KOK	**Koryaka**	**4.76**	**19**	*e*P	**Pn**	**07 35 48.1**	**+1.9**
SMAR	**Somma**	**4.77**	**20**	*e*P	**Pn**	**07 35 47.6**	**+1.2**

SPN	Mys Shipunski	4.96	29	*e*P	Pn	07 35 48.4	-0.4
GNL	Ganaly	5.03	13	*e*P	Pn	07 35 51.5	+1.7
ASAJ	Asahikawa	10.42	248	P	Pn	07 37 05.2	+1.5
	1.3nm,0.3s,baz=77,slow=12,SNR=7.3						
KLR	Kul'dur	15.96	281	LR	LR	07 44 34.4	
	comp=Z,184nm,22.0s,baz=29,slow=38						
MKAR	Makanchi Array	47.79	297	P	P	07 43 08.5	-2.0
	0.3nm,0.6s,baz=70,slow=9.0,SNR=2.7						
KURBB	Kurchatov Arra	48.00	303	P	P	07 43 09.3	-2.8
	0.4nm,0.6s,baz=62,slow=8.5,SNR=4.4						
YKA	Yellowknife Ar	48.06	39	P	P	07 43 13.1	+0.7
	0.3nm,0.8s,baz=298,slow=8.1,SNR=3.7						

*IDC **28** 07:51:49.8±3.0, 34°.32S×57°.73E, h0^{km}, mb3.9/4, mb1 4.1/4, mb1mx3.5/45, mbtmp3.9/4, Error ellipse: s-maj=139.3km s-min=33.4km az=41.0*

*NEIC **28** 07:51:52.6±0.6, 34°.1S±0°.1×57°.8E±0°.1, h10^{km}±1^{km}, mb4.6/5, Error ellipse: s-maj=20.3km s-min=13.8km az=210.0*

ISC 28 07:51:51.9±0.7, **34°.13S**±0°.10×**57°.7E**±0°.2, **h10**^{km}, **n19**, σ**0^{s}.80**/19, **mb4.3**/7, **South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RER	Riviere de l'E	13.04	352	Pn	Pn	07 54 56.8	-0.5
CRZF	Crozet Islands	13.07	198	Pn	Pn	07 54 56.6	-1.0
QSPA	South Pole Qui	56.05	180	P	P	08 01 31.6	+0.9
QSPA				IAmb	IAmb	08 01 36.6	
	comp=Z,3.3nm,1.1s						
VNDA	Vanda	59.93	166	P	P	08 01 58.6	+1.0
VNDA				IAmb	IAmb	08 01 59.9	
	comp=Z,6.6nm,1.4s						
ASAR	Alice Springs	66.14	103	P	P	08 02 39.0	-0.8
	comp=Z,1.0nm,0.7s,baz=236,slow=6.0,SNR=17						
ASAR	Alice Springs	66.14	103	P	P	08 02 39.4	-0.5
AS31	Alice Springs	66.14	103	P	P	08 02 39.2	-0.6
WRA	Warramunga Arr	68.29	100	P	P	08 02 52.9	-0.6
	comp=Z,2.3nm,0.9s,baz=237,slow=5.5,SNR=13						
WB2	Warramunga Arr	68.30	100	P	P	08 02 52.6	-0.9
WB0	Warramunga Arr	68.42	100	P	P	08 02 53.4	-0.9
WB0				IAmb	IAmb	08 02 55.2	
	comp=Z,16nm,1.5s						
ABKAR	Akbulak array	83.04	1	P	P	08 04 17.9	+0.8
MKAR	Makanchi Array	83.54	17	P	P	08 04 20.3	+0.5
	comp=Z,0.2nm,0.6s,baz=218,slow=6.8,SNR=1.8						
BVAR	Borovoye Array	87.49	8	P	P	08 04 40.1	+0.8
	comp=Z,0.6nm,0.5s,baz=189,slow=8.6,SNR=2.7						
INK	Inuvik	145.18	7	PKPbc	PKPbc	08 11 26.8	-1.5
	comp=Z,2.3nm,1.0s,baz=3.0,slow=4.8,SNR=5.7						
INK	Inuvik	145.18	7		PKPbc	08 11 28.0	-0.3
ILAR	Eielson Array	145.87	19	PKPbc	PKPdf	08 11 29.9	-0.1
	comp=Z,0.4nm,0.5s,baz=302,slow=4.0,SNR=5.8						
ILAR	Eielson Array	145.87	19		PKPdf	08 11 29.7	-0.3
YKA	Yellowknife Ar	151.20	353	PKPbc	PKPbc	08 11 44.7	+0.1
	comp=Z,0.5nm,0.7s,baz=5.1,slow=2.1,SNR=10.0						
YKA	Yellowknife Ar	151.20	353		PKPbc	08 11 45.0	+0.3

*IDC **28** 07:53:56.9±1.9, 51°.99N×169°.37W, h0^{km}, mb3.4/3, mb1 3.6/5, mb1mx3.0/45, mbtmp3.4/5, ML3.1/2, MS3.3/1, Ms1 3.3/1, ms1mx2.7/35, Error ellipse: s-maj=66.7km s-min=27.1km az=146.0*

*NEIC **28** 07:54:06.2±1.9, 52°.6N±0°.2×169°.8W±0°.2, h51^{km}±17^{km}, mb4.0/9, Error ellipse: s-maj=36.9km s-min=7.9km az=156.0*

ISC 28 07:54:03.6±1.4, **52°.3N**±0°.3×**169°.7W**±0°.1, **h40**^{km}, **n25**, σ**1^{s}.06**/23, **mb3.6**/3, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	0.83	37	Pn	Pn	07 54 20.2	+1.3
UNV	Unalaska Valle	2.46	50	Pn	Pn	07 54 43.0	+1.9
ATKA	Atka Island	2.78	270	Pn	Pn	07 54 46.0	+0.5
AKUT	Akutan	2.98	50	Pn	Pn	07 54 49.9	+1.6
ADK	Adak	4.34	267	Pn	Pn	07 55 08.1	+1.1
KIWB	Kanaga Island	4.63	267	Pn	Pn	07 55 12.7	+1.7
CNBA	Chernabura Isl	6.52	63	Pn	Pn	07 55 37.6	+0.8
CHGN	Chignik	7.71	54	Pn	Pn	07 55 52.5	-0.6
SCM	Sheep Creek Mo	15.37	43		Pn	07 57 38.0	+0.7
KLU	Klutina	15.81	45		Pn	07 57 43.2	+0.1
KLU				IAmb	IAmb	07 57 50.2	
	comp=Z,17nm,1.4s						
ILAR	Eielson Array	17.11	34	P	P	07 58 01.0	+0.3
	comp=Z,0.1nm,0.3s,baz=229,slow=12,SNR=1.2						
BARN	Barnard Glacie	17.58	49	P	P	07 58 06.3	+0.2
BARN				IAmb	IAmb	07 58 32.8	
	comp=Z,16nm,1.2s						
SCRK	Sand Creek	17.74	39	Pn	Pn	07 58 05.4	-1.9
LOGN	Logan Glacier	17.82	50		Pn	07 58 08.2	-0.2
LOGN				IAmb	IAmb	07 58 15.7	
	comp=Z,28nm,1.4s						
BCAR	Beaver Creek A	18.23	43		Pn	07 58 14.2	+1.0
EGAK	Eagle	19.21	38	P	Pn	07 58 24.4	-0.5
BMAR	Burnt Mountain	19.48	29	P	P	07 58 26.9	+0.1
PEA0B	Petropavlovsk-	19.70	285	P	Pn	07 58 30.0	-0.8
PETK	Petropavlovsk-	19.70	285	P	Pn	07 58 30.4	-0.4
	comp=Z,0.3nm,0.3s,baz=80,slow=14,SNR=2.5						
SKAG	Skagway	20.36	56	P	Pn	07 58 38.3	-0.3
SKAG				IAmb	IAmb	07 58 57.2	
	comp=Z,9.9nm,1.1s						
INK	Inuvik	23.50	33	P	P	07 59 08.3	-1.1
	comp=Z,1.1nm,0.9s,baz=208,slow=3.7,SNR=2.0						
INK	Inuvik	23.50	33	P	P	07 59 08.6	-0.8
INK				IAmb	IAmb	07 59 13.2	
	comp=Z,6.0nm,1.5s						
YKA	Yellowknife Ar	30.43	49	P	P	08 00 11.4	-0.3
	comp=Z,0.1nm,0.6s,baz=272,slow=8.4,SNR=3.6						
PDAR	Pinedale Array	40.60	79	LR	LR	08 15 51.5	
	comp=Z,42nm,19.9s,baz=338,slow=32						
ASAR	Alice Springs	90.21	230	P	P	08 06 58.8	-0.9
	comp=Z,0.4nm,0.6s,baz=26,slow=4.6,SNR=4.9						

*SLM **28** 08:03:43.1±1.1, 35°.368N±0°.008×90°.075W±0°.008, h5^{km}±6^{km}, Md2.5/11, mb_Lg2.1/3(NEIC), Error ellipse: s-maj=1.3km s-min=0.9km az=154.0*

NEIC 28 08:03:43.2±0.9, **35°.368N**±0°.004×**90°.06W**±0°.01, **h10**^{km}±5^{km}, **Error ellipse: s-maj=1.5km s-min=0.6km az=91.0, Arkansas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFTN	Shelby Forest	0.04	106		Pg	08 03 46.1	+1.0
GILT	SW Tenn Gill C	0.15	154		Pg	08 03 46.6	0.0
HDBT	Hernando Brdge	0.21	179		Pg	08 03 47.7	0.0
HDBT				Sg	Sg	08 03 51.5	+0.9
MET	Memphis--Engin	0.27	157	Pg	Pg	08 03 48.6	0.0
MET				Sg	Sg	08 03 53.0	+0.7
LPAR	Lepanto	0.30	320	Pg	Pg	08 03 49.1	-0.3
LPAR				Sg	Sg	08 03 53.3	-0.1
NAIT	NWS Agricenter	0.32	138		Pg	08 03 49.6	0.0
CUET	Cent US Eq Con	0.37	169		Pg	08 03 50.5	0.0
TWAR	Twist	0.41	269		Pg	08 03 50.9	-0.3
TWAR					Sg	08 03 57.3	+0.7
DLAR	Dell	0.44	6		Pg	08 03 51.8	-0.1
DLAR					Sg	08 03 58.5	+0.7
ARPT	Arp	0.50	39		Pg	08 03 52.9	-0.1
HBAR	Harrisburg	0.52	291	Pg	Pg	08 03 53.0	-0.4
HBAR				Sg	Sg	08 04 00.9	+0.7
GNAR	Gosnell	0.60	4	Pg	Pg	08 03 54.7	-0.2
EDIT	Edith	0.65	40		Pg	08 03 55.8	0.0
CHNM	Channel	0.68	9		Pg	08 03 56.3	-0.1
W45A	Hickory Valley	0.75	106	Pg	Pg	08 03 57.0	-0.7
W45A				Sg	Sg	08 04 07.4	-0.1
PEBM	Pemiscott Bayo	0.76	12	Pg	Pg	08 03 57.7	-0.2
FPST	Four Points	0.79	39		Pg	08 03 58.3	-0.1
HALT	Halls	0.80	47	Pg	Pg	08 03 58.1	-0.6
HALT				Sg	Sg	08 04 09.4	+0.3
BRGM	Braggadocio	0.85	11		Pg	08 03 59.9	+0.2
LNXT	Lenox	0.87	32	Pg	Pg	08 03 59.8	-0.1
PVMO	Portageville	1.08	16	Pg	Pg	08 04 03.5	-0.6
GLAT	Glass	1.10	35	Pg	Pb	08 04 03.7	-0.7
PENMO	Penman	1.14	18	Pg	Pb	08 04 04.4	-0.6
FLPT	Flippin	1.20	30		Pb	08 04 05.9	-0.2
PARMO	Parma	1.32	11	Pn	Pn	08 04 07.2	-0.5
HICK	Hickman	1.35	30	Pn	Pn	08 04 08.2	+0.1
UTMT	University of	1.38	45	Pn	Pn	08 04 08.3	-0.2
HENM	Henderson Moun	1.43	19	Pn	Pn	08 04 09.3	+0.1
PBMO	Poplar Bluff	1.44	348	Pn	Pn	08 04 07.8	-1.6
PLAL	Pickwick Lake	1.67	103	Pn	Pn	08 04 13.0	+0.4
PLAL				IAmb_Lg		08 04 35.2	
	comp=Z,2.4nm,0.7s						
FCAR	Ozark Folk Cen	1.76	288	Pn	Pn	08 04 13.9	+0.1
WVT	Waverly	1.97	67	Pn	Pn	08 04 16.9	+0.3
T45A	Paducah	2.01	34	IAmb_Lg		08 04 52.4	
	comp=Z,16nm,0.7s						
X40A	Basin Creek Fa	2.44	250	Pn	Pn	08 04 22.4	-0.8
X40A				IAmb_Lg		08 05 06.4	
	comp=Z,8.2nm,1.2s						
FVM	French Village	2.63	354	Pn	Pn	08 04 25.8	0.0
X48A	Hartselle	2.64	109	Pn	Pn	08 04 26.2	+0.3
CLTN	Cedars of Leba	3.12	76	Pn	Pn	08 04 32.8	+0.3
Y49A	Blount Mountai	3.37	116	Pn	Pn	08 04 36.3	+0.4

IDC 28 08:29:41.2±2.5, **3°.99S**×**152°.33E**, **h0**^{km}, **mb3.8**/3, **mb1 4.0**/3, **mb1mx3.5**/26, **mbtmp3.8**/3, **MS3.3**/1, **Ms1 3.3**/1, **ms1mx2.6**/36, **Error ellipse: s-maj=51.8km s-min=37.2km az=13.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	18.97	337	LR	LR	08 39 12.9	
	comp=Z,94nm,21.8s,baz=90,slow=30						
DZM	Mont Dzumac	22.59	144	P	P	08 34 43.8	+0.2
	4.8nm,0.5s,baz=299,slow=9.5,SNR=9.8						
WRA	Warramunga Arr	23.64	226	P	P	08 34 54.6	+0.3
	1.0nm,0.4s,baz=53,slow=9.7,SNR=8.1						
ASAR	Alice Springs	26.44	221	P	P	08 35 19.6	-0.5
	0.3nm,0.4s,baz=53,slow=9.0,SNR=5.7						
TORD	Torodi Ar. Bea	149.60	289	PKPbc	PKPbc	08 49 33.4	-0.5
	0.7nm,0.8s,baz=49,slow=1.2,SNR=3.6						

IDC 28 09:00:22.6±2.8, **52°.42N**×**35°.60E**, **h0**^{km}, **mb3.0**/1, **mb1 3.7**/3, **mb1mx2.9**/49, **mbtmp3.5**/3, **ML2.7**/3, **Error ellipse: s-maj=34.9km s-min=13.6km az=120.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OBN	Obninsk	2.76	12	Lg	Lg	09 01 51.6	
	2.8nm,0.3s,baz=353,slow=22,SNR=8.5						
AKASG	Malin Array Be	4.34	249	Pn	Pn	09 01 27.8	-2.0
	0.6nm,0.3s,baz=56,slow=12,SNR=4.7						
AKASG				Pg	Pb	09 01 37.9	-1.8
	1.9nm,0.3s,baz=58,slow=14,SNR=9.8						
AKASG				Sn	Sn	09 02 19.1	-1.9
	1.4nm,0.3s,baz=62,slow=19,SNR=2.3						
AKASG				Lg	Lg	09 02 36.4	
	2.2nm,0.3s,baz=65,slow=30,SNR=4.6						
I43RU	DUBNA INFRASON	4.41	12	*i*		09 30 00.7	
	baz=183,slow=336,SNR=5.5						
FINES	FINESS Array B	10.42	334	Pn	Pn	09 02 49.2	-4.0
	0.1nm,0.3s,baz=159,slow=16,SNR=1.8						
FINES				Sn	Sn	09 04 40.2	-10
	0.1nm,0.3s,baz=160,slow=22,SNR=1.2						
I31KZ	AKTYUBINSK INF	14.13	89	*i*		10 24 00.4	
	baz=284,slow=291,SNR=0.7						
ARCES	ARCESS Array B	17.81	348	P	Pn	09 04 31.5	-0.1
	baz=161,slow=11,SNR=5.4						
YKA	Yellowknife Ar	63.04	345	P	P	09 10 51.1	+0.1
	0.1nm,0.4s,baz=12,slow=6.8,SNR=2.4						

NNC 28 09:15:56.6±4.7, **53°.46N**×**87°.79E**, **h0**^{km}±43^{km}, **mb3.5, mpv3.2, 5C-3D, Error ellipse: s-maj=47.9km s-min=26.5km az=74.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	1.84	287	⇓P	Pn	09 16 28.6	-0.8
	1.1nm,0.3s						
ZAA0				⇑S	Sb	09 16 54.3	-0.3
	14nm,0.8s						
KURK	Kurchatov	6.29	248	⇑Pn	Pn	09 17 32.6	+2.1
	3.0nm,1.1s						
KURK				⇓Sn	Sn	09 18 44.0	+1.0
	2.9nm,0.9s						
KURK				⇑Lg	Lg	09 19 16.3	
	11nm,0.9s						
KURBB	Kurchatov Arra	6.38	247	⇑Pn	Pn	09 17 33.2	+1.4
	2.6nm,0.3s						
KURBB				⇓Sn	Sn	09 18 44.9	-0.4
	11nm,0.7s						
KURBB				⇑Lg	Lg	09 19 19.4	
	3.2nm,0.7s						

IDC 28 09:21:03.5±6.0, **30°.80N**×**141°.53E**, **h0**^{km}, **mb3.6**/2, **mb1 3.8**/3, **mb1mx3.1**/40, **mbtmp3.5**/3, **ML2.6**/1, **Error ellipse: s-maj=300.0km s-min=34.6km az=77.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	6.36	335	Pn	Pn	09 22 38.1	-0.4
	0.1nm,0.3s,baz=154,slow=9.4,SNR=4.0						
WRA	Warramunga Arr	50.92	189	P	P	09 30 06.0	-0.6
	0.4nm,0.2s,baz=6.8,slow=7.8,SNR=14						
ASAR	Alice Springs	54.65	189	P	P	09 30 34.6	+0.4
	0.2nm,0.4s,baz=9.4,slow=5.7,SNR=10						

*IDC **28** 09:22:08.7±0.9, 3°.64S×151°.21E, h0^{km}, mb3.9/10, mb1 4.1/10, mb1mx3.8/35, mbtmp3.9/10, MS3.5/15, Ms1 3.4/15, ms1mx3.3/40, Error ellipse: s-maj=31.9km s-min=20.1km az=97.0*

ISC 28 09:22:13.9±0.8, **3°.7S**±0°.1×**151°.2E**±0°.2, **h35**^{km}, **n22**, σ**1^{s}.25**/11, **mb3.8**/10, **MS3.5**/13, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.97	215	Pn	Pn	09 23 60.0	+6.4
	0.6nm,0.3s,baz=268,slow=4.0,SNR=3.7						
PMG				LR	LR	09 26 44.6	
	comp=Z,204nm,21.1s,baz=16,slow=39						
GUMO	Guam	18.27	340	LR	LR	09 32 22.2	
	comp=Z,84nm,18.3s,baz=98,slow=34						
WRA	Warramunga Arr	23.07	224	P	P	09 27 16.6	0.0
	2.4nm,1.0s,baz=51,slow=10,SNR=6.4						
WRA				LR	LR	09 37 22.1	
	comp=Z,105nm,19.3s,baz=20,slow=40						
DZM	Mont Dzumac	23.52	142	P	P	09 27 21.9	+0.9
	7.0nm,0.9s,baz=338,slow=12,SNR=3.1						
ASAR	Alice Springs	25.97	219	P	P	09 27 43.1	-0.3
	1.3nm,0.8s,baz=54,slow=8.5,SNR=11						
ASAR				LR	LR	09 39 19.7	
	comp=Z,103nm,18.3s,baz=30,slow=40						
STKA	Stephens Creek	29.47	197	P	P	09 28 14.7	0.0
	2.3nm,0.8s,baz=13,slow=11,SNR=4.9						
STKA				LR	LR	09 39 21.6	
	comp=Z,72nm,20.6s,baz=23,slow=35						
MJAR	Matsushiro Arr	41.81	344	LR	LR	09 44 27.0	
	comp=Z,31nm,20.7s,baz=140,slow=32						
LEM	Lembang	43.51	264	LR	LR	09 51 37.0	
	comp=Z,103nm,18.6s,baz=246,slow=41						
KSRS	Korea Array	46.29	334	LR	LR	09 47 10.0	
	comp=Z,47nm,20.1s,baz=191,slow=32						
CMAR	Chiang Mai Arr	55.96	295	P	P	09 31 48.0	-1.2
	1.3nm,0.3s,baz=90,slow=5.3,SNR=4.5						
PETK	Petropavlovsk-	56.84	5	LR	LR	09 53 58.8	
	comp=Z,22nm,19.5s,baz=195,slow=34						
SONM	Songino Array	64.53	328	P	P	09 32 49.3	+1.8
	0.5nm,0.6s,baz=147,slow=6.2,SNR=4.2						
SONM				LR	LR	10 01 29.9	
	comp=Z,29nm,20.3s,baz=220,slow=37						
MKAR	Makanchi Array	78.44	319	P	P	09 34 13.2	+2.0
	1.1nm,1.0s,baz=95,slow=7.2,SNR=3.3						
ZALV	Zalesovo Beam	79.34	327	LR	LR	10 08 45.6	
	comp=Z,24nm,20.4s,baz=89,slow=35						
ILAR	Eielson Array	81.73	22	P	P	09 34 28.2	-0.3
	0.8nm,0.9s,baz=241,slow=5.5,SNR=4.0						
NRIK	Noril'sk	84.39	341	P	P	09 34 41.2	-1.1
	0.8nm,0.4s,baz=58,slow=3.0,SNR=1.6						
ARU	Arti	94.50	326	LR	LR	10 18 13.6	
	comp=Z,33nm,20.2s,baz=102,slow=36						
GEYT	Alibeck	94.67	308	LR	LR	10 21 26.5	
	comp=Z,25nm,19.1s,baz=335,slow=38						
AKTO	Aktyubinsk	94.84	320	LR	LR	10 18 57.3	
	comp=Z,30nm,20.1s,baz=99,slow=36						
ELK	Elko	95.07	50	LR	LR	10 13 29.8	
	comp=Z,27nm,18.5s,baz=5.0,slow=32						
YKA	Yellowknife Ar	95.18	28	P	P	09 35 32.6	-0.9
	0.1nm,0.3s,baz=286,slow=4.4,SNR=2.8						
TORD	Torodi Ar. Bea	148.44	289	PKPbc	PKPbc	09 41 56.9	-1.1
	0.7nm,0.8s,baz=60,slow=1.1,SNR=4.0						

*JMA **28** 09:31:20.3±0.1, 35°.39N×141°.23E, h30^{km}±1^{km}, M3.1*

*IDC **28** 09:31:30.0±4.0, 36°.49N×140°.20E, h188^{km}±64^{km}, mb3.0/2, mb1 3.3/3, mb1mx2.5/41, mbtmp3.6/3, Error ellipse: s-maj=148.2km s-min=27.6km az=118.0*

ISC 28 09:31:20.1±1.5, **35°.44N**±0°.07×**141°.3E**±0°.1, **h35**^{km}, **n20**, σ**1^{s}.53**/17, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.44	306	P	Pn	09 31 29.6	-0.4
CHOJ				S	Sn	09 31 35.9	-0.9
JSMT	Sammumatsuo	0.72	286	P	Pn	09 31 33.9	+0.1
JIHU	Itakohorinouch	0.82	310	P	Pn	09 31 35.9	+0.7
BSO1	Boso 1	0.83	199	P	Pn	09 31 34.3	-0.5
KTR	Katsuura	0.86	250	P	Pn	09 31 35.0	-0.7
KTR				*e*S	Sn	09 31 45.1	-1.9
BSO4	Boso 4	0.91	240	P	Pn	09 31 35.8	-0.5
BSO3	Boso 3	0.91	226	P	Pn	09 31 35.6	-0.6
JYT	Yasato	1.19	311	P	Pn	09 31 41.2	+0.9
JHO	Hitachi	1.31	333	P	Pn	09 31 43.2	+1.3
MJAR	Matsushiro Arr	2.73	295	P	Pn	09 32 03.5	+1.9
	0.5nm,0.3s,baz=110,slow=8.2,SNR=17						
MAT	Matsushiro	2.74	295	P	Pn	09 32 04.0	+2.4
MAT				*e*S	Sn	09 32 34.9	+1.4
ASAJ	Asahikawa	8.72	6	P	Pn	09 33 20.5	-3.2
	0.1nm,0.3s,baz=342,slow=20,SNR=2.0						
H11N2	WAKE ISLAND Hy	27.45	118	T	T	10 06 05.2	
	baz=310,slow=75,SNR=8.1						
H11N1	WAKE ISLAND Hy	27.46	118	T	T	10 06 03.7	
	baz=310,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	27.47	118	T	T	10 06 06.6	
	baz=310,slow=75,SNR=9.4						
H11S1	WAKE ISLAND Hy	28.11	120	T	T	10 06 46.4	
	baz=312,slow=75,SNR=4.1						
H11S3	WAKE ISLAND Hy	28.11	120	T	T	10 06 44.4	
	baz=312,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	28.12	120	T	T	10 06 43.0	
	baz=312,slow=75,SNR=14						
WRA	Warramunga Arr	55.47	188	P	P	09 40 50.5	-0.9
	0.6nm,0.5s,baz=4.0,slow=7.4,SNR=2.2						
ASAR	Alice Springs	59.20	188	P	P	09 41 18.9	+1.2
	0.3nm,0.8s,baz=358,slow=4.9,SNR=1.7						

IDC 28 09:35:56.8±7.5, **12°.17N**×**96°.03E**, **h0**^{km}, **mb3.7**/3, **mb1 3.8**/4, **mb1mx3.4**/41, **mbtmp3.6**/4, **ML3.5**/1, **Error ellipse: s-maj=198.6km s-min=40.7km az=90.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	6.86	24	Pn	Pn	09 37 38.5	-0.2
	0.2nm,0.3s,baz=215,slow=16,SNR=1.6						
WRA	Warramunga Arr	49.39	130	P	P	09 44 49.0	+0.4
	0.5nm,0.9s,baz=295,slow=7.5,SNR=1.4						
ASAR	Alice Springs	51.38	134	P	P	09 45 03.5	-0.2
	0.4nm,0.6s,baz=309,slow=7.2,SNR=7.5						
STKA	Stephens Creek	61.81	136	P	P	09 46 17.5	-0.3
	0.7nm,0.6s,baz=309,slow=13,SNR=2.8						

*IDC **28** 09:41:10.7±2.9, 34°.60N×25°.83E, h0^{km}, mb3.5/3, mb1 3.6/4, mb1mx3.4/32, mbtmp3.4/4, ML4.0/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/26, Error ellipse: s-maj=74.0km s-min=30.7km az=175.0*

*DDA **28** 09:41:12.5, 35°.17N×25°.82E, h4^{km}±1^{km}, MW3.8*

*ATH **28** 09:41:16.7, 35°.12N×25°.87E, h32^{km}±2^{km}, ML3.5/8, Error ellipse: s-maj=3.0km s-min=1.1km az=160.0*

*THE **28** 09:41:18.7, 35°.14N×25°.88E, h17^{km}±1^{km}, ML3.4/4, Error ellipse: s-maj=3.0km s-min=0.9km az=9.0*

ISC 28 09:41:16.2±0.9, **35°.10N**±0°.04×**25°.85E**±0°.02, **h17**^{km}±2^{km}, **n44**, σ**1^{s}.24**/62, **mb3.6**/3, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STIA	Sitia Lasithi	0.23	63	P	Pb	09 41 23.1	+1.2
STIA				S	Sb	09 41 28.4	+2.8
NPS	Neapolis	0.25	310	P	Pb	09 41 23.6	+1.3
NPS				S	Sb	09 41 28.8	+2.4
	10µm,0.3s						
NPS	Neapolis	0.25	310	P	Pb	09 41 23.5	+1.1
NPS				S	Sb	09 41 28.6	+2.1
NPS				AML	AML	09 41 29.0	
	comp=E,20317µm,0.7s						
NPS				AML	AML	09 41 29.4	
	comp=N,19192µm,0.4s						
ZKR	Zakros	0.30	87	P	Pb	09 41 23.8	+0.6
ZKR				S	Sb	09 41 29.8	+1.9
	comp=N,9µm,0.6s						
ZKR	Zakros	0.30	87	P	Pb	09 41 23.9	+0.6
ZKR				S	Sb	09 41 29.5	+1.6
ZKR				AML	AML	09 41 30.4	
	comp=N,12306µm,0.4s						
ZKR				AML	AML	09 41 30.4	
	comp=E,21798µm,0.7s						
IACM	Heraklion	0.67	288	P	Pb	09 41 30.1	+0.7
IACM				S	Sb	09 41 39.8	+1.5
IDI	Anoyia	0.81	284	P	Pb	09 41 32.0	+0.2
IDI				S	Sg	09 41 43.5	+0.8
IDI	Anoyia	0.81	284	P	Pb	09 41 31.9	+0.1
IDI				S	Sb	09 41 43.0	+0.6
IDI				AML	AML	09 41 44.2	
	comp=N,8090µm,0.4s						
IDI				AML	AML	09 41 46.6	
	comp=E,5575µm,0.8s						
SIVA	Sivas	0.85	265	P	Pb	09 41 32.4	-0.2
SIVA				S	Sg	09 41 45.4	+1.2
THR6	Thira Island,	1.31	344	P	Pb	09 41 40.6	+0.3
THR6	Thira Island,	1.31	344	P	Pg	09 41 40.9	-0.6
SANT	Santorini	1.31	346	P	Pn	09 41 40.0	+0.2
SANT				AML	AML	09 42 03.6	
	comp=N,603µm,0.4s						
SANT				AML	AML	09 42 04.8	
	comp=E,2440µm,0.6s						
SANT	Santorini	1.31	346	*i* P	Pn	09 41 40.0	+0.2
SANT				*i* S	Sg	09 42 01.5	+2.9
THR9	Santorini-Faro	1.32	343	P	Pb	09 41 40.2	-0.3
THR9	Santorini-Faro	1.32	343	P	Pb	09 41 40.4	-0.1
THR8	Santorini-Mono	1.34	347	P	Pb	09 41 40.7	-0.2
THR8	Santorini-Mono	1.34	347	P	Pn	09 41 39.8	-0.3
THR3	Thira Island,	1.36	345	P	Pb	09 41 41.0	-0.2
THR3	Thira Island,	1.36	345	P	Pb	09 41 41.3	+0.1
THR5	Thira Island,	1.38	343	P	Pn	09 41 40.6	0.0
THR5	Thira Island,	1.38	343	P	Pn	09 41 40.8	+0.2
THT2	Imerovigli	1.38	346	P	Pn	09 41 40.1	-0.5
VAM	Vamos	1.38	283	P	Pb	09 41 41.9	+0.3
VAM				S	Sb	09 42 00.6	+1.7
	comp=E,1µm,0.4s						
VAM	Vamos	1.38	283	P	Pb	09 41 41.8	+0.2
VAM				S	Sb	09 41 59.9	+0.9
VAM				AML	AML	09 42 04.6	
	comp=N,3129µm,0.4s						
VAM				AML	AML	09 42 07.4	
	comp=E,2335µm,0.4s						
GVD	Gavdhos	1.47	260	P	Pb	09 41 43.7	+0.6
GVD	Gavdhos	1.47	260	P	Pb	09 41 43.6	+0.6
GVD				AML	AML	09 42 21.4	
	comp=E,1148µm,0.4s						
GVD				AML	AML	09 42 22.3	
	comp=N,1573µm,0.4s						
IMMV	Iera Moni Meta	1.57	284	P	Pb	09 41 45.7	+1.0
IMMV				S	Sb	09 42 05.3	+1.0
	comp=N,1µm,0.7s						
IMMV	Iera Moni Meta	1.57	284	P	Pb	09 41 45.8	+1.0
IMMV				S	Sb	09 42 05.6	+1.3
IMMV				AML	AML	09 42 11.0	
	comp=N,2576µm,0.4s						
IMMV				AML	AML	09 42 14.2	
	comp=E,2617µm,0.8s						
RODP	Rodopos	1.77	286	P	Pb	09 41 48.9	+0.7
NISR	Nisiros	1.83	34	P	Pb	09 41 49.6	+0.3
MHLO	Agia Marina, M	1.97	324	P	Pn	09 41 49.8	+0.9
MHLO				AML	AML	09 42 22.1	
	comp=N,1985µm,0.5s						
MHLO				AML	AML	09 42 22.7	
	comp=E,2095µm,0.5s						
APE	Apeiranthos	1.98	353	P	Pn	09 41 49.3	+0.3
APE	Apeiranthos	1.98	353	P	Pn	09 41 49.7	+0.6
APE	Apeiranthos	1.98	353	*i* P	Pn	09 41 48.8	-0.2
APE				*i* S	Sb	09 42 15.3	-1.0
ARG	Arkhangelos	2.17	58	P	Pn	09 41 53.0	+1.5
ZEYE	Izmir, Urla-Ze	3.18	9	*e*P	Pn	09 42 06.9	+1.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEYE				*e*S	Sn	09 42 45.3	+2.4
ZEYE				IAML		09 43 10.0	
	comp=E,18nm,0.6s						
AKAS	Kas	3.26	69	*i* P	Pn	09 42 07.3	+0.6
AKAS				*i* S	Sn	09 42 48.6	+3.5
AKAS				IAML		09 43 09.0	
	comp=E,30nm,0.5s						
URLA	Izmir	3.31	10	*i* P	Pn	09 42 07.3	+0.1
URLA				*i* S	Sn	09 42 48.0	+1.8
GOLH	Golhisar	3.69	54	*e*P	Pn	09 42 12.6	+0.1
GOLH				*e*S	Sb	09 43 03.9	-1.4
GOLH				IAML		09 43 28.0	
	comp=N,26nm,0.6s						
AKASG	Malin Array Be	15.79	8	Pn	P	09 44 59.6	-1.7
	comp=N,0.6nm,0.3s,baz=197,slow=11,SNR=4.7						
GERES	GERESS Array B	16.41	331	LR	LR	09 53 23.4	
	comp=N,53nm,18.8s,baz=200,slow=44						
ESDC	Sonseca Array	24.06	290	P	P	09 46 29.2	-1.4
	comp=N,0.6nm,0.5s,baz=85,slow=9.3,SNR=7.3						
MKAR	Makanchi Array	43.34	57	P	P	09 49 16.5	-0.8
	comp=N,0.6nm,0.6s,baz=285,slow=9.7,SNR=7.1						
SONM	Songino Array	59.09	51	P	P	09 51 15.3	-0.3
	comp=N,0.2nm,0.4s,baz=303,slow=6.7,SNR=1.7						

IDC 28 09:43:02.3±5.0, 17.°03S×175.°17W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.6/32, mbtmp3.9/3, Error ellipse: s-maj=178.8km s-min=100.7km az=155.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.76	241	P	P	09 50 54.3	+0.8
	1.0nm,0.4s,baz=80,slow=12,SNR=4.8						
WRA	Warramunga Arr	47.83	258	P	P	09 51 41.8	-0.4
	0.7nm,0.7s,baz=97,slow=7.3,SNR=7.9						
ASAR	Alice Springs	48.00	253	P	P	09 51 42.9	-0.6
	2.1nm,0.7s,baz=89,slow=8.6,SNR=33						
ASAR				PcP	PcP	09 53 11.4	-0.3
	0.4nm,0.6s,baz=109,slow=4.3,SNR=4.9						

IDC 28 09:49:31.7±2.6, 4.°17S×129.°13E, h0^{km}, mb3.4/1, mb1 3.4/3, mb1mx3.2/40, mbtmp3.2/3, ML2.9/2, MS3.4/1, Ms1 3.4/1, ms1mx2.4/21, Error ellipse: s-maj=176.6km s-min=32.5km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.48	162	Pn	Pn	09 53 25.2	+0.8
	0.0nm,0.3s,baz=342,slow=8.9,SNR=1.7						
ASAR	Alice Springs	19.92	167	P	P	09 54 04.8	-0.4
	0.1nm,0.3s,baz=343,slow=10,SNR=3.2						
URZ	Urewera	55.24	135	LR	LR	10 24 00.9	
	comp=Z,35nm,18.2s,baz=211,slow=38						
MKAR	Makanchi Array	65.41	327	P	P	10 00 16.3	0.0
	0.2nm,0.4s,baz=120,slow=7.6,SNR=1.9						

TEH 28 10:03:03.5, 37.°71N×47.°42E, h9^{km}, ML3.5, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISRB	Sarab	0.23	58	*e*Sg	Sg	10 03 12.2	+0.8
ISRB				*e*Pg	Pg	10 03 08.4	+0.2
IBST	Bostanabad	0.42	269	*e*Pg	Pg	10 03 12.0	+0.2
IBST				*e*Sg	Sg	10 03 18.1	+0.7
IHRS	Heris	0.68	334	*e*Pg	Pg	10 03 16.4	-0.3
ITBZ	Tabriz	1.14	298	*e*Pg	Pg	10 03 24.6	-0.8
ITBZ				*e*Sg	Sn	10 03 41.1	-0.5
IAZR	Azarshahr	1.15	269	*e*Pg	Pb	10 03 25.6	0.0
IAZR				*e*Sg	Sn	10 03 41.6	-0.3
IAZR				*e*		10 03 44.9	
	comp=Z,32µm,0.2s						
GRMI	Germi	1.16	18	*e*Pg	Pg	10 03 25.0	-0.8
CSN1	Caspian	1.33	96	*e*Pg	Pg	10 03 29.5	+0.4
CSN1				*e*Sg	Sn	10 03 46.2	+0.1
ZNJK	Zanjan	1.44	135	*e*Pn	Pn	10 03 30.1	+0.1
ISHB	Shabestar	1.54	293	*e*Pg	Pb	10 03 32.0	-0.4
ISHB				*e*		10 03 32.9	
	comp=Z,11µm,0.4s						
MAHB	Mahabad	1.66	236	*e*Pg	Pb	10 03 34.1	-0.2
MAHB				*e*		10 04 03.6	
	comp=Z,6µm,0.4s						
IMRD	Marand	1.69	307	*e*Pn	Pb	10 03 35.1	+0.2
JIR1	Jirandeh	2.14	117	*e*Pn	Pb	10 03 41.7	-0.9
LHJ2	Lahijan - Gila	2.17	104	*e*Pn	Pb	10 03 42.1	-0.8
IGZV	Ghazvin	2.59	120	*e*Pn	Pb	10 03 48.2	-2.1
IGZV				*e*		10 04 31.8	
	comp=Z,2µm,0.4s						
SNGE	Sanandaj	2.61	181	*e*Pn	Pn	10 03 47.7	+1.7
QABG	Abgarm-Qazvin	2.64	138	*e*Pn	Pn	10 03 47.0	+0.5
QABG				*e*		10 03 53.0	
	comp=Z,2µm,0.3s						
MAKU	Maku	2.71	308	*e*Pn	Pn	10 03 44.3	-3.1
ILIN	Lien	2.81	188	*e*Pn	Pn	10 03 50.4	+1.6
QALM	Alamut, Qazvin	2.87	115	*e*Pn	Pn	10 03 51.9	+2.2
QALM				*e*		10 04 37.7	
	comp=Z,2µm,0.4s						
IRAZ	Razeghan	3.06	138	*e*Pn	Pn	10 03 54.0	+1.8
IRAZ				*e*		10 04 00.2	
	comp=Z,2µm,0.3s						
IDHR	Dehrash	3.11	196	*e*Pn	Pn	10 03 55.4	+2.4
HAGD	Aghdareh	3.19	154	*e*Pn	Pn	10 03 55.7	+1.6
IMHD	Mahdasht	3.29	127	*e*Pn	Pn	10 03 56.9	+1.5
IMHD				*e*		10 04 48.2	
	comp=Z,916nm,0.3s						
THKV	Tehran--Karaj	3.30	122	*e*Pn	Pn	10 03 57.5	+2.0
CHTH	Charan	3.47	120	*e*Pn	Pn	10 04 00.0	+2.1
ASAO	Ashtian	3.79	145	*e*Pn	Pn	10 04 03.8	+1.5
IQOM	Qom	4.10	133	*e*Pn	Pn	10 04 07.8	+1.2
BMDN	Meydan	4.18	164	*e*Pn	Pn	10 04 09.5	+1.8
IVRN	Varamin	4.40	127	*e*Pn	Pn	10 04 12.9	+2.3
KHMZ	Khomeyn	4.46	152	*e*Pn	Pn	10 04 14.3	+2.8
GHVR	GHOM	4.49	135	*e*Pn	Pn	10 04 13.1	+1.3
ISFB	Sefidab	5.14	129	*e*Pn	Pn	10 04 22.3	+1.6
KRSH	Karshahi	5.34	133	*e*Pn	Pn	10 04 25.4	+1.8
IKLH	Kolahrood	5.53	141	*e*Pn	Pn	10 04 28.0	+1.7

SSNC 28 10:04:43.7±1.7, 19.°62N×75.°58W, h2^{km}±10^{km}, MD3.0, ML3.1, MW3.0

JSN 28 10:04:44.4±1.3, 19.°63N×75.°59W, h15^{km}±999^{km}, MD3.8

ISC 28 10:04:39.2±1.2, 19.°48N±0.°04×75.°57W±0.°04, h11^{km}±11^{km}, n12, σ2.^{s}14/21, 1C-2D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCC	Rio Carpintero	0.53	347	⇓*i*P	Pb	10 04 51.0	+0.5
RCC				*e*S	Sg	10 04 55.8	-0.7
RCC				IAML		10 04 56.0	
	comp=E,2µm,0.2s						
RCC				IAML		10 04 56.1	
	comp=N,3µm,0.2s						
GTBY	Guantanamo Bay	0.62	44	⇓*i*P	Pn	10 04 54.3	+0.3
GTBY				*e*S	Sb	10 05 02.0	+1.2
MASC	Masc	1.44	61	*e*P	Pg	10 05 06.3	-0.5
MASC				*e*S	Sg	10 05 24.1	-1.3
MASC				IAML		10 05 28.7	
	comp=N,179nm,0.3s						
MASC				IAML		10 05 29.1	
	comp=E,224nm,0.2s						
LMGC	Las Mercedes	1.47	293	*e*P	Pb	10 05 07.1	+0.5
LMGC				*e*S	Sn	10 05 23.6	-1.4
LMGC				IAML		10 05 24.9	
	comp=N,694nm,0.1s						
LMGC				IAML		10 05 25.7	
	comp=E,354nm,0.1s						
HLGC	Holguin	1.48	342	*e*P	Pg	10 05 08.1	+0.5
HLGC				*e*S	Sg	10 05 27.8	+1.1
HLGC				IAML		10 05 29.4	
	comp=N,289nm,0.6s						
HLGC				IAML		10 05 29.8	
	comp=E,446nm,0.5s						
STH	Stony Hill	1.82	220	⇑*i*P	Pg	10 05 15.1	+0.9
HOJ	Hope	1.85	218	*i* P	Pg	10 05 16.0	+1.4
CVJ	Coleyville	2.24	236	*i* P	Pg	10 05 20.4	-1.8
MTDJ	Mount Denham	2.24	236	*e*P	Pb	10 05 19.6	-0.1
MTDJ				*e*S	Sn	10 05 44.8	+0.7
MCJ	Malvern	2.54	233	*i* P	Pg	10 05 26.1	-1.7
MCJ				*i* S	Sb	10 05 56.0	-0.1
CCCC	Cccc	2.68	310	*e*P	Pn	10 05 21.3	-1.0
CCCC				*e*S	Sn	10 05 48.2	-6.6
CCCC				IAML		10 05 56.8	
	comp=N,38nm,0.5s						
CCCC				IAML		10 05 57.6	
	comp=E,32nm,0.2s						
MGV	Manicaragua	4.89	303	*e*P	Pn	10 05 55.5	+2.8
MGV				*e*S	Sn	10 06 52.0	+2.8
MGV				IAML		10 06 55.3	
	comp=N,2.1nm,0.3s						

NNC 28 10:07:01.1±5.8, 37.°03N×70.°58E, h0^{km}, mb3.6, mpv3.4, 3C-1D, Error ellipse: s-maj=54.8km s-min=44.9km az=137.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	Karatay Array	6.06	360	⇓P	Pn	10 08 32.9	+0.9
	1.9nm,0.5s						
KK02				⇑S	Sn	10 09 43.0	+0.9
	0.9nm,0.3s						
AAK	Ala-Archa	6.36	27	⇑P	Pn	10 08 35.5	-0.7
	1.2nm,0.4s						
AAK				⇑S	Sn	10 09 50.9	+1.4
	2.7nm,0.7s						
AB31	Akbulak array	14.45	331	P	Pn	10 10 26.3	-0.5
	0.2nm,0.5s,baz=169,slow=9.6,SNR=5.6						

IDC 28 10:39:54.3±10.0, 38.°49N×20.°55E, h0^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.3/52, mbtmp3.5/6, ML3.5/1, MS3.3/2, Ms1 3.4/2, ms1mx2.4/46, Error ellipse: s-maj=195.9km s-min=30.9km az=34.0

ATH 28 10:40:01.7, 39.°00N×20.°62E, h17^{km}±1^{km}, ML3.3/14, Error ellipse: s-maj=1.5km s-min=0.7km az=256.0

TIR 28 10:40:01.1, 39.°02N×20.°68E, h0^{km}±1^{km}, Md3.2, Ml3.8

THE 28 10:40:02.7, 39.°01N×20.°66E, h0^{km}±5^{km}, ML3.3/7, Error ellipse: s-maj=5.4km s-min=1.2km az=243.0

BEO 28 10:40:02.8±0.9, 39.°09N×20.°55E, h0^{km}, ML3.2/8

ISC 28 10:40:01.4±0.8, 39.°00N±0.°01×20.°64E±0.°02, h18^{km}±3^{km}, n116, σ1.^{s}80/156, mb3.6/5, 5C-5D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSLK	Tsoukalades, L	0.18	175	P	Pg	10 40 05.9	-0.2
TSLK				S	Sg	10 40 09.3	+0.1
TSLK				AML	AML	10 40 11.5	
	comp=E,55744µm,0.3s						
TSLK				AML	AML	10 40 14.7	
	comp=N,39605µm,0.3s						
LKD2	Lefkada island	0.22	176	P	Pg	10 40 06.5	-0.2
LKD2				S	Sb	10 40 10.8	+1.0
	comp=N,15µm,0.4s						
LKD2	Lefkada island	0.22	176	P	Pg	10 40 06.4	-0.2
LKD2				S	Sg	10 40 10.5	+0.3
LKD2				AML	AML	10 40 11.5	
	comp=E,30924µm,0.4s						
LKD2				AML	AML	10 40 14.3	
	comp=N,35286µm,0.5s						
LKD2	Lefkada island	0.22	176	P	Pg	10 40 06.4	-0.2
	baz=184						
LKD2				S	Sg	10 40 10.3	+0.1
	baz=184						
NYDR	Nydri-Lefkada	0.29	171	P	Pg	10 40 07.6	-0.3
NYDR				S	Sg	10 40 12.8	+0.5
DRAG	Dragano-Lefkad	0.32	189	P	Pg	10 40 08.2	-0.2
DRAG				S	Sg	10 40 13.6	+0.5
EVGI	Lefkada island	0.38	178	P	Pg	10 40 09.0	-0.4
EVGI				S	Sg	10 40 15.2	+0.4
FSK	Fiskardo	0.55	186	P	Pg	10 40 12.0	-0.4
FSK				AML	AML	10 40 27.6	
	comp=N,4326µm,0.2s						
FSK				AML	AML	10 40 28.0	
	comp=E,6782µm,0.2s						
IGT	Igoumenitsa	0.58	336	P	Pg	10 40 12.6	-0.4
IGT				S	Sb	10 40 22.4	+1.6
	comp=E,2µm,0.3s						
IGT	Igoumenitsa	0.58	336	P	Pg	10 40 12.5	-0.5
IGT				S	Sg	10 40 21.0	+0.2
IGT				AML	AML	10 40 25.7	
	comp=N,3698µm,0.3s						
IGT				AML	AML	10 40 30.2	
	comp=E,4920µm,0.4s						
IGT	Igoumenitsa	0.58	336	P	Pg	10 40 13.2	+0.2
	baz=333						
IGT				S	Sb	10 40 22.4	+1.6
	baz=333						
JAN	Janina	0.67	14	P	Pb	10 40 15.2	+0.6
JAN				S	Sn	10 40 26.1	0.0
	comp=E,6µm,0.5s						
JAN	Janina	0.67	14	P	Pb	10 40 15.2	+0.6
KEF4	Livadi, Kephal	0.76	193	P	Pb	10 40 16.3	+0.2
KEF4	Livadi, Kephal	0.76	193	P	Pb	10 40 15.8	-0.3
DMLN	Damoulianata-K	0.79	195	P	Pn	10 40 19.3	+1.6
LXRA	Lixouri, Kepha	0.82	191	P	Pb	10 40 16.9	-0.1
VLS	Valsamata	0.83	183	P	Pb	10 40 16.6	-0.6
VLS				S	Sn	10 40 32.1	+2.2
	comp=E,4µm,0.4s						
VLS	Valsamata	0.83	183	P	Pb	10 40 16.6	-0.6
VLS				S	Sb	10 40 28.4	+0.4
VLS				AML	AML	10 40 32.5	
	comp=E,9066µm,0.5s						
VLS				AML	AML	10 40 35.2	
	comp=N,7097µm,0.3s						
KEF3	Kipouria, Keph	0.83	196	P	Pb	10 40 17.3	0.0
ARGA	Argostoli. Kep	0.83	189	P	Pb	10 40 17.8	+0.4
ARGA				S	Sb	10 40 28.1	-0.1
PSDA	Pessada-Kefalo	0.89	183	P	Pb	10 40 17.7	-0.6
EVR	Evrytania	0.92	95	P	Pg	10 40 18.8	-0.5
EVR				S	Sn	10 40 33.7	+1.4
	comp=N,2µm,0.9s						
EVR	Evrytania	0.92	95	P	Pn	10 40 19.1	-0.4
EVR				S	Sn	10 40 31.7	-0.6
EVR				AML	AML	10 40 36.3	
	comp=N,4379µm,0.5s						
EVR				AML	AML	10 40 36.5	
	comp=E,3365µm,0.7s						
KASA	Kassiopi	0.92	324	P	Pb	10 40 18.8	0.0
KEK	Kerkira	0.96	318	P	Pb	10 40 19.2	-0.3
KEK				S	Sn	10 40 37.0	+3.8
	comp=E,1µm,0.4s						
KEK	Kerkira	0.96	318	P	Pb	10 40 19.4	-0.1
SRN	Sarande	1.00	331	P	Pg	10 40 21.6	+0.7
	baz=330						
SRN				S	Sn	10 40 37.3	+3.1
	baz=330						
SRN				AMP			
	comp=N,2.3nm,0.3s,baz=330						
ANX	Ano Chora	1.08	112	P	Pb	10 40 21.2	-0.4
ANX				AML	AML	10 40 39.3	
	comp=N,6591µm,0.6s						
ANX				AML	AML	10 40 41.9	
	comp=E,5383µm,0.6s						
KPRO	Kipourio	1.10	30	P	Pg	10 40 22.6	-0.2
LSK	Leskovik	1.15	359	P	Pg	10 40 23.4	-0.3
	baz=358						
LSK				S	Sg	10 40 41.6	+3.0
	baz=358						
LSK				AMP			
	comp=N,7.8nm,0.3s,baz=358						
RLS	Riolos of Patr	1.15	145	P	Pn	10 40 22.4	-0.1
RLS	Riolos of Patr	1.15	145	P	Pn	10 40 22.3	-0.3
RLS				AML	AML	10 40 46.8	
	comp=E,2029µm,0.5s						
RLS				AML	AML	10 40 47.1	
	comp=N,1962µm,0.6s						
EFP	Efpalio	1.15	120	P	Pb	10 40 22.2	-0.5
EFP				AML	AML	10 40 46.3	
	comp=N,4068µm,0.4s						
EFP				AML	AML	10 40 47.0	
	comp=E,5663µm,0.3s						
VTN	Vitineika	1.17	158	P	Pb	10 40 23.5	+0.4
THL	Klokotos Trika	1.21	62	P	Pg	10 40 24.6	-0.2
THL				S	Sg	10 40 42.1	+1.5
	comp=E,662nm,0.5s						
THL	Klokotos Trika	1.21	62	P	Pb	10 40 23.7	0.0
THL				S	Sg	10 40 40.0	-0.5
THL				AML	AML	10 40 47.5	
	comp=N,1294µm,0.5s						
THL				AML	AML	10 40 47.7	
	comp=E,1348µm,0.5s						
SERG	Sergoula	1.26	118	P	Pn	10 40 24.2	+0.1
SERG				AML	AML	10 40 48.6	
	comp=N,3752µm,0.4s						
SERG				AML	AML	10 40 49.0	
	comp=E,3817µm,0.3s						
LTHK	Lithakia	1.30	173	P	Pn	10 40 24.6	-0.1
DRO	Drossia	1.35	141	P	Pn	10 40 25.5	+0.2
DRO				AML	AML	10 40 50.4	
	comp=N,3359µm,0.3s						
DRO				AML	AML	10 40 54.8	
	comp=E,5991µm,0.4s						
NEST	Nestorio	1.44	13	P	Pg	10 40 30.1	+0.8
KLV	Kalavryta, Ach	1.53	128	P	Pn	10 40 28.5	+0.7
KLV				AML	AML	10 40 58.4	
	comp=N,822µm,0.8s						
KLV				AML	AML	10 41 02.0	
	comp=E,586µm,0.3s						
KZN	Kozani	1.57	34	P	Pg	10 40 30.6	-1.0
KZN	Kozani	1.57	34	P	Pg	10 40 30.4	-1.2
KZN				AML	AML	10 40 56.6	
	comp=N,697µm,0.7s						
KZN				AML	AML	10 41 01.5	
	comp=E,1272µm,0.5s						
KBN	Korca	1.62	4	P	Pg	10 40 32.8	+0.1
	baz=3.0						
KBN				S	Sg	10 40 57.1	+3.3
	baz=3.0						
KBN				AMP			
	comp=N,3.3nm,1.0s,baz=3.0						
FNA	Florina	1.87	18	P	Pg	10 40 36.0	-1.3
FNA	Florina	1.87	18	P	Pg	10 40 36.8	-0.5
	baz=16						
FNA				S	Sg	10 41 03.7	+2.1
	baz=16						
LKR	Lokris	1.88	100	P	Pb	10 40 35.1	-0.1
ITM	Ithomi	2.09	150	P	Pb	10 40 38.6	-0.1
OHR	Ohrid	2.11	3	*e*Pn	Pg	10 40 41.2	-0.7
TIR	Tirane	2.41	346	*e*Pn	Pb	10 40 43.0	-1.3
PHP	Peshkopia	2.68	357	P	Pb	10 40 49.7	+0.8
	baz=357						
PHP				S	Sg	10 41 25.5	-2.1
	baz=357						
VAY	Valandovo	2.75	32	*i* Pn	Pb	10 40 47.7	-2.3
VAY	Valandovo	2.75	32	*e*Pn	Pb	10 40 47.4	-2.6
TIP	Timpagrande	3.02	275	⇑P	Pn	10 40 50.3	+1.8
DRME	Dracevica, Mon	3.37	341	*e*Pn	Pn	10 40 54.0	+0.9
MATE	Matera	3.44	300	⇓P	Pb	10 41 04.9	+3.0
PDG	Podgorica	3.58	343	⇑P	Pn	10 40 59.9	+4.0
PDG	Podgorica	3.58	343	*e*Pn	Pn	10 40 59.0	+3.0
BOSS	Bosilegrad	3.76	21	*e*Pn	Pn	10 41 01.5	+3.0
HCY	Herceg Novi	3.81	335	*e*Pn	Pn	10 41 00.1	+1.0
BARS	Barje	3.91	13	*e*Pn	Pn	10 41 02.8	+2.2
BARS				*e*Sn	Sn	10 41 46.8	+0.8
TREB	Trebinje	4.09	336	*e*Pn	Pn	10 41 03.4	+0.3
VTS	Vitosha	4.11	28	⇓P	Pn	10 41 06.8	+3.4
VTS	Vitosha	4.11	28	*e*Pn	Pn	10 41 06.6	+3.1
VTS				*e*Sn	Sn	10 41 52.7	+1.5
BRY	Bratogost	4.21	338	*e*Pn	Pn	10 41 06.2	+1.5
SELS	Selova	4.23	5	*e*Pn	Pn	10 41 06.1	+1.2
SJES	Sjenica	4.28	353	*e*Pn	Pn	10 41 08.1	+2.3
UPM	Unac-Piva	4.39	343	*e*Pn	Pn	10 41 10.2	+2.8
STON	Ston	4.46	331	*e*Pn	Pn	10 41 08.1	+0.1
STON	Ston	4.46	331	*e*Pn	Pn	10 41 08.6	+0.6
STON				Sn	Sn	10 41 57.5	-1.9
ZAPS	Zavoj	4.52	19	*e*Pn	Pn	10 41 11.9	+2.9
BOVS	Bovan	4.70	10	⇑P	Pb	10 41 19.1	-4.0
BOVS	Bovan	4.70	10	*e*Pn	Pn	10 41 12.4	+1.1
LSTV	Lastovo	4.71	324	*e*Pn	Pn	10 41 11.4	-0.2
LSTV				Sn	Sn	10 42 01.4	-4.3
GRUS	Gruza	4.88	1	*e*Pn	Pn	10 41 15.5	+1.6
GRUS				*e*Sn	Sn	10 42 12.4	+2.5
BBLS	Lazići	4.95	350	*e*Pn	Pn	10 41 15.0	+0.2
BBLS	Lazići	4.95	350	*e*Pn	Pn	10 41 16.4	+1.6
ZAGS	Zajecar	4.95	14	*e*Pn	Pn	10 41 16.9	+2.1
MAKA	Makarska	5.08	329	*e*Pn	Pn	10 41 17.0	+0.5
MAKA				Sn	Sn	10 42 11.7	-2.9
DIVS	Divibare	5.11	355	*e*Pn	Pn	10 41 18.0	+0.9
DIVS	Divibare	5.11	355	*e*Pn	Pn	10 41 18.2	+1.1
DIVS				*e*Sn	Sn	10 42 15.4	-0.3
RICI	Ricice	5.21	331	*e*Pn	Pn	10 41 18.8	+0.5
RICI				Sn	Sn	10 42 16.2	-1.7
HVAR	Hvar	5.23	324	*e*Pn	Pn	10 41 18.8	+0.1
HVAR				Sn	Sn	10 42 14.3	-4.2
KIJV	Kijevo	5.92	329	*e*Pn	Pn	10 41 29.0	+0.8
KIJV				Sn	Sn	10 42 32.9	-2.6
ZIRJ	Zirje	5.97	323	*i* Pn	Pn	10 41 28.5	-0.3
ZIRJ				Sn	Sn	10 42 32.7	-4.1
MORI	Morici	6.11	324	*e*Pn	Pn	10 41 31.3	+0.6
MORI				Sn	Sn	10 42 36.9	-3.1
FRGS	Fruska Gora	6.18	355	*e*Pn	Pn	10 41 30.6	-1.1
DUGI	Dugi Otok	6.51	322	*e*Pn	Pn	10 41 36.7	+0.5
DUGI				Sn	Sn	10 42 45.0	-4.9
GZR	Gura Zlata	6.58	13	⇑P	Pn	10 41 40.8	+3.6
UDBI	Udbina	6.61	328	*e*Pn	Pn	10 41 38.7	+1.0
UDBI				Sn	Sn	10 42 50.6	-2.0
MRAK	Mrakovica	6.62	336	*e*Pn	Pn	10 41 37.8	0.0
NVLJ	Novalja	7.03	324	*e*Pn	Pn	10 41 43.4	+0.1
NVLJ				Sn	Sn	10 42 58.6	-4.1
MOSL	Moslavina	7.20	338	*e*Pn	Pn	10 41 46.7	+0.9
MOSL				Sn	Sn	10 43 04.8	-2.3
VOIR		7.21	26	⇓P	Pn	10 41 46.5	+0.6
MLR	Muntele Rosu	7.58	30	⇓P	Pn	10 41 49.5	-1.6
SMRN	Sveta Marina	7.72	323	*e*Pn	Pn	10 41 53.0	+0.2
SMRN				Sn	Sn	10 43 16.1	-3.5
BRJN	Brijuni	7.81	321	*e*Pn	Pn	10 41 54.1	0.0
BRJN				Sn	Sn	10 43 16.7	-5.3
CRES	Cresnjev	7.82	332	*e*Pn	Pn	10 41 54.9	+0.7
CEY	Cerknica	8.15	328	*e*Pn	Pn	10 41 59.5	+0.8
PLOR	Plostina	8.16	31	⇑P	Pn	10 41 55.9	-2.9
VRI	Vrincioaia	8.20	31	⇓P	Pn	10 41 56.4	-3.1
SOKA	Soboth	8.70	334	*e*Pn	Pn	10 42 08.5	+2.1
	comp=N,1.0nm,0.2s						
OBKA	Obir	8.73	331	*e*Pn	Pn	10 42 08.8	+2.0
	comp=N,0.7nm,0.2s						
ABTA	Abfaltersbach	9.76	325	*e*Pn	Pn	10 42 22.7	+1.7
	comp=N,0.6nm,0.3s						
WTTA	Wattenberg	10.55	324	*e*Pn	Pn	10 42 33.7	+1.9
	comp=N,0.9nm,0.3s						
SQTA	Sankt Quirin	10.71	323	*e*Pn	Pn	10 42 36.1	+2.1
	comp=N,1.1nm,0.3s						
MOTA	Moosalm	10.85	323	*i* Pn	Pn	10 42 38.5	+2.6
	comp=N,1.0nm,0.4s						
GERES	GERESS Array B	11.03	335	Pn	Pn	10 42 40.0	+1.7
	comp=N,0.1nm,0.3s,baz=161,slow=13,SNR=3.9						
MDT	Midelt	21.32	261	LR	LR	10 55 01.6	
	comp=N,30nm,18.5s,baz=46,slow=43						
HFS	Hagfors	21.60	351	P	P	10 44 50.7	+0.6
	comp=N,5.1nm,1.0s,baz=179,slow=12,SNR=4.2						
FINES	FINESS Array B	22.72	7	P	P	10 45 04.2	+2.2
	comp=N,1.7nm,0.8s,baz=188,slow=7.7,SNR=2.1						
NOA	NORSAR Array B	22.83	348	P	P	10 45 04.3	+1.1
	comp=N,0.2nm,0.5s,baz=163,slow=11,SNR=1.4						
MKAR	Makanchi Array	44.80	59	P	P	10 48 12.3	-1.6
	comp=N,0.3nm,0.5s,baz=273,slow=9.2,SNR=2.6						
ZALV	Zalesovo Beam	45.08	49	P	P	10 48 14.0	-2.1
	comp=N,0.9nm,0.6s,baz=280,slow=8.6,SNR=4.0						
ILAR	Eielson Array	76.10	355	LR	LR	11 29 14.6	
	comp=N,46nm,18.6s,baz=182,slow=39						

IDC 28 10:44:04.5±1.6, 26.°65N×141.°59E, h0^{km}, mb3.8/2, mb1 4.1/3, mb1mx3.5/56, mbtmp3.8/3, MS2.7/2, Ms1 2.7/2, ms1mx2.3/43, Error ellipse: s-maj=69.5km s-min=35.6km az=98.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	10.28	345	LR	LR	10 50 01.2	
	comp=Z,23nm,18.2s,baz=160,slow=35						
KSRS	Korea Array	15.81	316	Pn	Pn	10 47 48.6	+0.3
	baz=131,slow=10,SNR=6.2						
USRK	Ussuriysk Ar.	19.16	339	LR	LR	10 56 05.8	
	comp=Z,35nm,18.5s,baz=150,slow=38						
WRA	Warramunga Arr	46.84	189	P	P	10 52 36.2	-0.2
	1.6nm,1.0s,baz=11,slow=7.7,SNR=1.1						
YKA	Yellowknife Ar	72.79	28	P	P	10 55 34.5	+0.1
	0.5nm,0.6s,baz=294,slow=6.3,SNR=7.2						

KMA 28 11:07:46.0±0.7, 33.°59N×130.°43E, h0^{km}, Error ellipse: s-maj=6.2km s-min=5.6km az=144.0

NIED 28 11:07:49.1, 33.°65N×130.°28E, h12^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.23; $M_{\theta\theta}$3.30; $M_{\phi\phi}$-3.07; $M_{r\theta}$-0.48; $M_{\theta\phi}$1.06; $M_{\phi r}$1.01; Fault plane solution: $M_0$3.54000×10^{14} NP1:

φs125.00000°,δ81.00000°,λ-16.00000°. NP2: φs217.00000°,δ74.00000°,λ-171.00000°.

*JMA **28** 11:07:49.1,33°.64N×130°.28E,h12^{km},M3.9 Broadband fault plane solution: P waves. NP1:φs222.00000°, δ79.00000°,λ-171.00000°. NP2:φs130.00000°, δ81.00000°,λ-11.00000°. Principal axes: T Plg1.0000°, Azm176.0000°; N Plg76.0000°, Azm270.0000°; P Plg14.0000°, Azm86.0000°;*

JMA Felt III J1.

ISC 28 11:07:49.0±0.9,33°.63N±0°.05×130°.29E±0°.04,h15^{km}±10^{km}, n25,σ0^s.50/32,3C-2D,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFI	**Itaya**	0.22	158	⇑P	Pg	11 07 54.0	0.0
JFI				S	Sg	11 07 57.5	+0.2
JFA	**Akaike**	0.43	79	⇓P	Pg	11 07 57.5	-0.1
JFA				*e*S	Sg	11 08 03.5	+0.1
JII	**Iki**	0.49	289	⇓P	Pg	11 07 58.7	0.0
JII				*e*S	Sg	11 08 05.4	+0.1
JTA	**Tamana**	0.70	163	⇑P	Pg	11 08 02.5	-0.1
JTA				*e*S	Sg	11 08 11.9	+0.1
JTSM	**Tsushimamitsus**	1.03	313	⇑P	Pb	11 08 07.9	-0.6
JTSM				S	Sb	11 08 21.1	-0.8
KSBUS	**Busan**	1.88	329	P	Pn	11 08 21.0	+0.3
	SNR=9.5						
KSBUS				S	Sb	11 08 47.0	+0.6
YKDB	**Yokjido**	1.94	301	P	Pn	11 08 21.5	0.0
	SNR=46						
YNDB	**Yeoundo**	2.21	292	P	Pn	11 08 25.1	-0.1
	SNR=19						
YNDB				S	Sb	11 08 56.4	+0.4
KSDAG	**Daegu**	2.42	332	P	Pn	11 08 28.2	+0.2
	SNR=14						
KOHB	**KOHEUNG**	2.69	292	P	Pn	11 08 31.7	0.0
	SNR=19						
KOHB	**KOHEUNG**	2.69	292	P	Pn	11 08 31.7	0.0
	SNR=19						
BOSB	**Boseong-gun**	2.79	295	P	Pn	11 08 33.1	0.0
	SNR=15						
BOSB	**Boseong-gun**	2.79	295	P	Pn	11 08 33.1	0.0
	SNR=15						
KSKWJ	**Gwangju**	3.12	300	P	Pn	11 08 39.0	+1.3
	SNR=5.5						
KSKWJ	**Gwangju**	3.12	300	P	Pn	11 08 39.0	+1.3
	SNR=5.5						
KSULJ	**Uljin**	3.15	347	P	Pn	11 08 38.2	+0.2
	SNR=7.2						
KSULJ	**Uljin**	3.15	347	P	Pn	11 08 38.2	+0.2
	SNR=7.2						
KSJEU	**Jeongeup**	3.33	305	P	Pn	11 08 41.0	+0.4
	SNR=10						
KSJEU	**Jeongeup**	3.33	305	P	Pn	11 08 41.0	+0.4
	SNR=10						
KSJEO	**Jeonju**	3.37	314	P	Pn	11 08 42.0	+0.9
	SNR=6.6						
KSJEO	**Jeonju**	3.37	314	P	Pn	11 08 42.0	+0.9
	SNR=6.6						
MNYD	**Munyeodo**	3.85	305	P	Pn	11 08 48.0	+0.3
	SNR=10						
MNYD	**Munyeodo**	3.85	305	P	Pn	11 08 48.0	+0.3
	SNR=10						
OYDB	**Oeyeondo**	4.32	308	P	Pn	11 08 54.3	+0.1
	SNR=12						
OYDB	**Oeyeondo**	4.32	308	P	Pn	11 08 54.3	+0.1
	SNR=12						

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*IDC **28** 11:17:22.5±1.7,5°.30S×152°.36E,h0^{km},mb3.5/5, mb1 3.8/5,mb1mx3.3/31,mbtmp3.5/5,MS3.8/1,Ms1 3.8/1, ms1mx2.7/22,Error ellipse: s-maj=85.1km s-min=24.6km az=125.0*

ISC 28 11:17:29.0±1.7,5°.3S±0°.4×152°.2E±0°.5,h45^{km},n7,σ1^s.72/6, mb3.4/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.68	229	P	P	11 22 25.1	-1.7
	0.5nm,0.7s,baz=53,slow=9.8,SNR=3.5						
ASAR	**Alice Springs**	25.39	222	P	P	11 22 53.4	+1.1
	0.6nm,0.7s,baz=59,slow=8.6,SNR=8.6						
FITZ	**Fitzroy Crossi**	28.92	242	LR	LR	11 34 41.0	
	comp=Z,168nm,20.0s,baz=112,slow=36						
MKAR	**Makanchi Array**	80.36	319	P	P	11 29 36.1	+0.4
	0.3nm,0.7s,baz=105,slow=6.1,SNR=2.7						
ILAR	**Eielson Array**	82.86	22	P	P	11 29 47.0	-1.5
	0.6nm,0.7s,baz=243,slow=5.5,SNR=10						
YKA	**Yellowknife Ar**	96.15	28	P	P	11 30 52.3	+0.5
	0.2nm,0.6s,baz=269,slow=5.0,SNR=4.5						
TORD	**Torodi Ar. Bea**	149.94	287	PKPbc	PKiKP	11 37 17.9	+1.5
	2.4nm,1.3s,baz=78,slow=3.7,SNR=3.7						

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*THE **28** 11:24:00.5,37°.52N×24°.16E,h13^{km}±1^{km},ML2.5/8,Error ellipse: s-maj=1.9km s-min=0.8km az=284.0*

*ATH **28** 11:24:00.7,37°.53N×24°.16E,h16^{km}±2^{km},ML2.6/11,Error ellipse: s-maj=2.7km s-min=0.8km az=359.0*

ISC 28 11:24:00.4±1.0,37°.51N±0°.02×24°.15E±0°.03,h17^{km}±12^{km}, n25,σ0^s.92/42,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLY	**Voula,Athens**	0.44	320	P	Pg	11 24 09.4	+0.1
VLY				S	Sg	11 24 15.3	-0.1
	2µm,0.3s						
VLY	**Voula,Athens**	0.44	320	P	Pg	11 24 09.4	+0.1
VLY				S	Sg	11 24 15.4	0.0
VLY				AML	AML	11 24 15.5	
	comp=N,3076µm,0.3s						
VLY				AML	AML	11 24 15.5	
	comp=E,3513µm,0.3s						
ATH	**Athens Observa**	0.57	323	P	Pg	11 24 11.9	+0.2
ATH				S	Sg	11 24 19.5	+0.1
	comp=E,725nm,0.3s						
ATH	**Athens Observa**	0.57	323	P	Pg	11 24 12.0	+0.2
ATH				S	Sg	11 24 19.4	+0.1
ATH				AML	AML	11 24 20.5	
	comp=N,1324µm,0.3s						
ATH				AML	AML	11 24 21.6	
	comp=E,1564µm,0.3s						
PTL	**Penteli**	0.58	337	P	Pg	11 24 12.0	+0.1
PTL				S	Sg	11 24 19.5	-0.2
	comp=E,285nm,0.2s						
PTL	**Penteli**	0.58	337	P	Pg	11 24 12.1	+0.2
PTL				S	Sg	11 24 19.4	-0.2
PTL				AML	AML	11 24 21.1	
	comp=E,618µm,0.3s						
PTL				AML	AML	11 24 22.9	
	comp=N,510µm,0.3s						
DION	**Dionisos Attik**	0.59	343	P	Pg	11 24 12.2	+0.1
DION				S	Sg	11 24 20.1	+0.1
DION	**Dionisos Attik**	0.59	343	P	Pg	11 24 12.2	+0.1
DION				S	Sg	11 24 19.4	-0.5
DION				AML	AML	11 24 20.6	
	comp=E,1732µm,0.3s						
DION				AML	AML	11 24 20.6	
	comp=N,1105µm,0.3s						
KRND	**KRANIDI**	0.81	261	P	Pg	11 24 15.7	-0.4
KRND				S	Sg	11 24 27.9	+1.2
	comp=N,458nm,0.4s						
KRND	**KRANIDI**	0.81	261	P	Pg	11 24 15.9	-0.2
KRND				S	Sg	11 24 27.3	+0.5
KRND				AML	AML	11 24 28.9	
	comp=N,838µm,0.4s						
KRND				AML	AML	11 24 30.4	
	comp=E,985µm,0.4s						
TNSA	**Tinos**	0.81	88	P	Pg	11 24 15.6	-0.5
TNSA				S	Sg	11 24 26.9	+0.1
TNSA				AML	AML	11 24 28.6	
	comp=E,1461µm,0.2s						
TNSA				AML	AML	11 24 29.0	
	comp=N,2474µm,0.1s						
MHLO	**Agia Marina, M**	0.85	166	P	Pg	11 24 17.4	+0.5
MHLO				S	Sg	11 24 28.2	+0.1
	comp=N,502nm,0.3s						
MHLO	**Agia Marina, M**	0.85	166	P	Pg	11 24 16.7	-0.2
MHLO				S	Sg	11 24 28.2	+0.1
MHLO				AML	AML	11 24 30.9	
	comp=E,1174µm,0.3s						
MHLO				AML	AML	11 24 32.2	
	comp=N,832µm,0.2s						
LTK	**Loutraki**	1.06	299	P	Pg	11 24 20.0	-1.0
LTK				S	Sg	11 24 34.4	-0.6
LTK				AML	AML	11 24 34.8	
	comp=N,275µm,0.5s						
LTK				AML	AML	11 24 36.7	
	comp=E,487µm,0.5s						
KYMI	**Kymi, Euboea I**	1.12	358	P	Pg	11 24 21.0	-1.0
KYMI				S	Sg	11 24 36.0	-0.7
	comp=E,120nm,0.3s						
KYMI	**Kymi, Euboea I**	1.12	358	P	Pg	11 24 21.0	-1.0
KYMI				AML	AML	11 24 38.6	
	comp=N,276µm,0.5s						
KYMI				AML	AML	11 24 40.5	
	comp=E,212µm,0.2s						
APE	**Apeiranthos**	1.19	112	P	Pg	11 24 22.7	-0.7
APE				S	Sg	11 24 37.4	-1.5
	comp=E,288nm,0.2s						
APE	**Apeiranthos**	1.19	112	P	Pg	11 24 21.7	-1.7
APE				AML	AML	11 24 39.3	
	comp=N,651µm,0.2s						
APE				AML	AML	11 24 39.4	
	comp=E,547µm,0.2s						
VLI	**Veliai**	1.25	231	P	Pg	11 24 22.1	-2.5
VLI				S	Sg	11 24 40.6	-0.3
	comp=E,155nm,0.5s						
SKY	**Skiros Island**	1.40	13	P	Pn	11 24 25.0	-0.1
LKR	**Lokris**	1.45	322	P	Pn	11 24 26.5	+0.7
LKR	**Lokris**	1.45	322	P	Pn	11 24 26.8	+0.9
LKR				AML	AML	11 24 51.1	
	comp=E,298µm,0.2s						
LKR				AML	AML	11 24 52.8	
	comp=N,331µm,0.2s						
THR9	**Santorini-Faro**	1.51	140	P	Pn	11 24 29.9	+3.4
KTHA	**Kythira Island**	1.53	215	P	Pn	11 24 26.2	-0.7
KLV	**Kalavryta, Ach**	1.67	289	P	Pn	11 24 29.1	+0.2

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*IDC **28** 11:47:05.5±1.9,7°.64S×31°.72E,h0^{km},mb3.6/2,mb1 3.9/3, mb1mx3.5/35,mbtmp3.9/3,ML4.0/1,Error ellipse: s-maj=45.4km s-min=24.9km az=122.0*

*LSZ **28** 11:47:06.1±0.3,7°.55S×32°.36E,h10^{km},MD3.4,ML4.4*

ISC 28 11:47:04.6±1.0,7°.25S±0°.06×31°.16E±0°.09,h10^{km},n9, σ1^s.32/13,Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSMZ	**Kasama**	2.91	179	*i* P	Pn	11 47 52.0	+0.9
KSMZ				*i*		11 47 52.0	
	baz=23,slow=16						
KSMZ				AMP		11 47 53.0	
	comp=Z,3µm,0.1s						
KSMZ				*i* S	Sn	11 48 25.5	-0.7
KSMZ	**Kasama**	2.91	179	*i* P	Pn	11 47 52.0	+0.9
KSMZ				*i*		11 47 52.0	
	baz=23,slow=16						
KSMZ				AMP		11 47 53.0	
	comp=Z,3µm,0.1s						
KSMZ				*i* S	Sn	11 48 25.5	-0.7
DODT	**Dodoma, Tanzan**	4.68	77	P	Pn	11 48 16.7	+1.3
DODT				S	Sn	11 49 09.5	-0.4
MBAR	**Mbarara**	6.62	356	*e*P	Pn	11 48 43.9	+1.8
MBAR				*e*S	Sn	11 49 55.9	-1.8
LSZ	**Lusaka**	8.49	200	P	Pn	11 49 08.0	+0.1
LSZ				S	Sn	11 50 36.0	-8.0
KMBO	**Kilima Mbogo**	8.59	45	Pn	Pn	11 49 10.6	+1.2
	comp=Z,1.8nm,0.3s,baz=218,slow=19,SNR=16						
KMBO				Sn	Sn	11 50 44.4	-2.2
	comp=Z,2.6nm,0.3s,baz=232,slow=19,SNR=3.1						
KMBO				Lg	Lg	11 51 35.0	
	comp=Z,6.3nm,0.3s,baz=146,slow=24,SNR=9.3						
ZOMB	**Zomba**	9.07	153	P	Pn	11 49 15.4	-0.3
ZOMB				S	Sn	11 50 50.3	-7.7
BOSA	**Boshof**	21.97	194	P	P	11 51 58.6	-0.3
	comp=Z,1.3nm,0.5s,baz=17,slow=11,SNR=6.2						
BOSA				Lg	Lg	11 58 30.3	
	comp=Z,5.6nm,1.0s,baz=292,slow=19,SNR=3.3						
TORD	**Torodi Ar. Bea**	35.60	305	P	P	11 54 10.9	+8.1
	comp=Z,0.7nm,0.6s,baz=112,slow=8.3,SNR=4.0						

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*BUL **28** 11:48:30.0±0.7,16°.39S×34°.12E,h0^{km}±813^{km},MD4.5*

*EAF **28** 11:48:31.2±2.1,16°.17S×33°.72E,h0^{km}±688^{km},MD4.1*

ISC 28 11:48:31.9±1.8,16°.21S±0°.10×33°.7E±0°.2,h10^{km},n9, σ1^s.44/10,Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TETE	**Tete**	0.11	309	*i* P	Pg	11 48 33.7	-0.9
TETE	**Tete**	0.11	309	*i* P	Pg	11 48 33.7	-0.9
MATP	**Matopo**	6.45	229	*i* P	Pn	11 50 08.6	+1.5
MATP	**Matopo**	6.45	229	*i* P	Pn	11 50 08.6	+1.5
MSNA	**Messina**	7.00	209	*i* P	Pn	11 50 12.9	-1.7
MSNA	**Messina**	7.00	209	*i* P	Pn	11 50 12.9	-1.7
MOPA	**Mopani**	7.57	196	*i* P	Pn	11 50 23.3	+0.9
MOPA	**Mopani**	7.57	196	*i* P	Pn	11 50 23.3	+0.9
KIL	**Kilembe**	16.70	347	*e*P	Pn	11 52 26.1	-0.2
KIL				*e*S	P	11 52 29.9	+1.2

IDC 28 12:19:28.2±10.0,14°.95S×167°.50E,h102^{km}±115^{km}, mb3.6/3,mb1 3.7/4,mb1mx3.4/22,mbtmp3.8/4,ML2.9/1, Error ellipse: s-maj=244.6km s-min=66.2km az=87.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	7.15	188	P	Pn	12 21 11.5	+1.2
	0.2nm,0.3s,baz=291,slow=18,SNR=1.6						
DZM				S	Sn	12 22 29.2	-0.8
	0.2nm,0.3s,baz=144,slow=19,SNR=1.4						
STKA	**Stephens Creek**	29.02	230	P	P	12 25 16.7	-2.0
	0.5nm,0.4s,baz=72,slow=12,SNR=4.3						
WRA	**Warramunga Arr**	31.99	256	P	P	12 25 46.2	+1.2
	0.7nm,0.8s,baz=72,slow=8.6,SNR=5.5						
ASAR	**Alice Springs**	32.81	249	P	P	12 25 52.5	+0.3
	1.8nm,0.4s,baz=76,slow=9.3,SNR=60						

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*LDG **28** 12:31:07.5±0.2,51°.70N×16°.38E,h1^{km},Ml3.7/16,Error ellipse: s-maj=6.3km s-min=3.3km az=16.0,Suspected Mining induced.*

*DNK **28** 12:31:08.4±1.9,51°.56N×16°.24E,h0^{km}±165^{km},Mc3.1*

*IPEC **28** 12:31:09.7±0.3,51°.56N×16°.21E,h1^{km},ML3.4/3,Error ellipse: s-maj=3.2km s-min=1.7km az=66.0*

*IDC **28** 12:31:10.6±0.5,51°.52N×16°.00E,h0^{km},mb3.7/7, mb1 3.7/15,mb1mx3.6/44,mbtmp3.6/15,ML3.3/8,Error ellipse: s-maj=11.6km s-min=6.1km az=112.0*

*PRU **28** 12:31:11.2±0.0,51°.49N×16°.09E,h0^{km}*

*BGR **28** 12:31:11.4±0.4,51°.50N×16°.12E,h1^{km},ML3.7/13,Error ellipse: s-maj=4.4km s-min=2.2km az=14.0*

*VIE **28** 12:31:12.8±0.5,51°.37N×15°.96E,h0^{km},mb3.3/20, ml3.4/16,ms4.0/3,Error ellipse: s-maj=4.5km s-min=2.9km az=49.0 79 km WNW of Wroclaw Suspected Mining induced.*

ISC 28 12:31:08.7±0.5,51°.55N±0°.02×16°.10E±0°.02,h0^{km},n128, σ1^s.74/216,mb3.7/7,10C-6D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.72	170	*i* Pg	Pg	12 31 24.0	+1.5
KSP				*i* Sg	Sg	12 31 33.0	+1.3
KSP	**Ksiaz**	0.72	170	*e*Pg	Pg	12 31 23.9	+1.5
KSP				*e*Sg	Sg	12 31 33.0	+1.3
CHVC	**Chvalec**	0.96	182	*e*PG	Pg	12 31 28.8	+1.6
CHVC				*e*SG	Sg	12 31 41.3	+1.6
	comp=Z,648nm,0.4s						
UPC	**Upice**	1.05	183	*e*PG	Pg	12 31 30.1	+1.4
UPC				*e*SG	Sg	12 31 43.5	+1.2
	comp=Z,783nm,0.4s						
DPC	**Dobruska-Polom**	1.21	173	*e*PG	Pg	12 31 32.9	+1.0
DPC				*e*SG	Sg	12 31 47.9	+0.4
	comp=Z,362nm,0.7s						
DPC	**Dobruska-Polom**	1.21	173	*e*Pg	Pg	12 31 32.7	+0.8
DPC				*e*Sg	Sg	12 31 48.6	+1.0
PVCC	**Panska Ves**	1.41	224	*e*PG	Pg	12 31 36.8	+1.1
PVCC				*e*SG	Sg	12 31 55.3	+1.3
	comp=Z,980nm,0.5s						
BRG	**Berggiesshubel**	1.52	244	*e*Pn	Pn	12 31 37.8	+0.7
BRG				*e*Pg	Pg	12 31 39.5	+1.7
BRG				*e*Sg	Sg	12 31 59.4	+1.9
KRLC	**Kraliky**	1.54	164	*e*PG	Pn	12 31 38.3	+0.8
KRLC				*e*SG	Sn	12 31 57.2	-1.0
	comp=Z,357nm,0.4s						
PRA	**Prague**	1.82	216	*e*PG	Pn	12 31 42.4	+1.1
PRA				*e*SG	Sb	12 32 07.2	+1.0
	comp=Z,202nm,0.6s						
FBE	**Freiberg**	1.84	251	*e*Pn	Pn	12 31 42.5	+0.9
FBE				*e*Sg	Sg	12 32 09.4	+1.6
PRU	**Pruhonice**	1.85	213	*e*PN	Pn	12 31 42.6	+0.9
PRU				*e*PG	Pb	12 31 44.4	+1.0
PRU				*e*SG	Sb	12 32 08.4	+1.3
	comp=Z,359nm,0.3s						
GKP	**Gorka Klasztor**	1.86	21	*e*Pg	Pg	12 31 47.3	+3.0
GKP				*e*Sg	Sg	12 32 12.8	+4.5
CLL	**Collm**	1.96	264	*i* Pn	Pn	12 31 43.8	+0.7
CLL				*e*Pg	Pb	12 31 46.0	+0.8
CLL				*i*		12 31 50.0	
CLL				*i*		12 31 51.1	
CLL				*i* Sg	Sg	12 32 13.4	+1.9
	comp=Z,281nm,0.7s						
CLL	**Collm**	1.96	264	*e*Pn	Pn	12 31 43.6	+0.5
CLL				*e*Sg	Sg	12 32 13.2	+1.7
RAC	**Raciborz**	1.98	137	*e*PG	Pg	12 31 47.1	+0.5
RAC				*e*SG	Sg	12 32 13.5	+1.3
MORC	**Moravsky Berou**	2.00	152	⇓P	Pn	12 31 44.3	+0.5
MORC				⇓S	Sn	12 32 10.3	+0.8
MORC	**Moravsky Berou**	2.00	152	*e*Pn	Pn	12 31 44.3	+0.5
	baz=335						
MORC				*e*Sg	Sb	12 32 11.7	+0.3
	comp=Z,199nm,0.5s,baz=335						
MORC	**Moravsky Berou**	2.00	152	*e*Pn	Pn	12 31 44.5	+0.7
OKC	**Ostrava-Krasne**	2.15	142	*e*PG	Pg	12 31 50.5	+0.6
OKC				*e*SG	Sb	12 32 16.8	+1.1
	comp=Z,466nm,0.8s						
OKC	**Ostrava-Krasne**	2.15	142	*e*Pn	Pn	12 31 46.6	+0.8
OKC				*e*Pg	Pg	12 31 51.3	+1.4
VRAC	**Vranov**	2.27	172	⇑P	Pn	12 31 48.9	+1.5
VRAC				⇑S	Sb	12 32 19.7	+0.6
VRAC	**Vranov**	2.27	172	Pn	Pn	12 31 48.9	+1.5
	comp=Z,6.2nm,0.3s,baz=335,slow=13,SNR=18						
VRAC				Lg	Lg	12 32 21.7	
	comp=Z,39nm,0.3s,baz=94,slow=22,SNR=12						
VRAC	**Vranov**	2.27	172	*e*Pn	Pn	12 31 48.3	+0.9
	baz=354						
VRAC				*e*Sg	Sb	12 32 20.6	+1.5
	comp=Z,219nm,0.6s,baz=354						
TREC	**Trest**	2.29	190	*e*SG	Sb	12 32 22.2	+2.4
	comp=Z,168nm,0.6s						
KRUC	**Moravsky**	2.50	176	*e*Pn	Pn	12 31 51.6	+1.0
	baz=357						
KRUC				*e*Sg	Sb	12 32 28.3	+2.6
	comp=Z,191nm,1.0s,baz=357						
TANN	**Tannenbergstha**	2.57	245	*e*Pn	Pn	12 31 53.1	+1.4
TANN				*e*Pg	Pg	12 31 59.8	+1.9
TANN				*e*Sg	Sg	12 32 32.3	+1.2
WERD	**Werda**	2.64	247	*e*Pn	Pn	12 31 54.0	+1.4
WERD				*e*Pg	Pg	12 32 01.5	+2.2
WERD				*e*Sg	Sg	12 32 35.1	+1.6
NKC	**Novy Kostel**	2.67	242	*e*PN	Pn	12 31 54.2	+1.3
NKC				*e*PG	Pg	12 32 01.3	+1.5
NKC				*e*SG	Sg	12 32 34.6	+0.3
	comp=Z,280nm,0.6s						
OJC	**Ojcow**	2.69	118	*e*Pg	Pg	12 32 00.2	-0.1
OJC				*e*Sg	Sg	12 32 36.3	+1.1
OJC	**Ojcow**	2.69	118	*e*Pg	Pg	12 32 01.2	+0.9
OJC				*e*Sg	Sg	12 32 36.3	+1.1
JAVC	**Velka Javorina**	2.88	159	*e*PN	Pn	12 31 56.8	+0.9
KHC	**Kasperske Hory**	2.91	215	*e*PN	Pn	12 31 57.0	+0.7
KHC				*e*PG	Pb	12 32 03.6	+2.1
KHC				*e*SN	Sn	12 32 31.9	-0.2
KHC				*e*SG	Sb	12 32 41.0	+3.3
	comp=Z,103nm,0.5s						
CKRC	**Cesky Krumlov**	2.97	204	*e*PN	Pn	12 31 59.6	+2.5
CKRC				*e*PG	Pg	12 32 05.8	+0.2
CKRC				*e*SG	Sb	12 32 43.1	+3.9
	comp=Z,118nm,0.6s						
MOX	**Moxa**	2.97	254	*e*Pn	Pn	12 31 58.2	+1.1
MOX				*e*Sg	Sg	12 32 46.7	+2.6
GEC2	**GERESS Array S**	3.12	211	*e*Pn	Pn	12 32 00.3	+1.1
GEC2				*e*Sg	Sg	12 32 47.9	-0.9
GERES	**GERESS Array B**	3.12	211	Pn	Pn	12 32 00.1	+0.9
	comp=Z,7.0nm,0.3s,baz=32,slow=12,SNR=192						
GERES				Pg	Pb	12 32 06.5	+1.5
	comp=Z,9.3nm,0.3s,baz=30,slow=16,SNR=38						
GERES				Lg	Lg	12 32 47.4	
	comp=Z,20nm,0.3s,baz=25,slow=26,SNR=6.0						
WET	**Wettzell**	3.17	222	*e*Pn	Pn	12 32 01.1	+1.1
LANS	**Liptovska Anna**	3.23	137	*e*PN	Pn	12 32 02.1	+1.4
LANS				*e*PG	Pg	12 32 11.0	+0.5
LANS				*e*SG	Sg	12 32 52.0	-0.3
MODS	**Modra-Piesok**	3.27	166	*e*PN	Pn	12 32 02.1	+0.9
MODS				*e*PG	Pg	12 32 10.9	-0.4
MODS				*e*SG	Sg	12 32 53.1	-0.6
KOLL	**Kolacno**	3.32	153	*e*PN	Pn	12 32 03.0	+1.1
KOLL				*e*SG	Sg	12 32 55.4	0.0
ZST	**Bratislava**	3.42	169	*e*PG	Pg	12 32 13.9	-0.3
ZST				*e*SG	Sg	12 32 58.0	-0.5
NIE	**Niedzica**	3.43	127	*e*P	Pg	12 32 15.5	+1.1
NIE				*e*S	Sg	12 33 01.2	+2.5
VYHS	**Vyhne**	3.53	149	*e*PN	Pn	12 32 05.3	+0.5
VYHS				*e*PG	Pg	12 32 16.2	-0.1
VYHS				*e*SG	Sg	12 33 02.1	0.0
CLZ	**Clausthal**	3.58	277	*e*Pn	Pn	12 32 07.6	+2.1
GRF	**Grafenberg Arr**	3.62	241	*e*Pn	Pn	12 32 07.7	+1.6
CONA	**Conrad Observa**	3.63	183	*i* Pn	Pn	12 32 08.0	+1.7
	comp=Z,4.2nm,0.3s,SNR=6.8						
CONA				*e*Sg	Sg	12 33 07.3	+2.1
	comp=Z,40nm,0.4s						
BSD	**Bornholm Skovb**	3.64	349	*i* P	Pn	12 32 06.0	-0.3
BSD				*e*S	Sn	12 32 49.4	-0.5
SOP	**Sopron**	3.88	175	*e*P	Pb	12 32 16.5	-1.5
MOA	**Molln**	3.89	199	*i* Pn	Pn	12 32 11.0	+1.2
	comp=Z,12nm,0.4s,SNR=11						
MOA				*e*Sg	Sg	12 33 15.6	+1.9
	comp=Z,39nm,0.3s						
STHS	**Stebnicka Huta**	3.92	121	*e*PG	Pg	12 32 23.6	-0.1
KECS	**Kecovo**	4.17	136	*e*PG	Pg	12 32 31.2	+2.6
ARSA	**Arzberg**	4.32	185	*e*Pn	Pn	12 32 18.1	+2.4
	comp=Z,2.6nm,0.3s						
ARSA				*e*Sg	Sg	12 33 29.6	+2.2
	comp=Z,74nm,0.8s						
LUNU	**Lund**	4.38	340	*i* P	Pn	12 32 16.0	-0.5
LUNU				*e*S	Sn	12 33 07.0	-1.3
PSZ	**Piszkesteto**	4.39	144	⇓P	Pn	12 32 18.1	+1.5
PSZ				⇑S	Sn	12 33 09.0	+0.5
PSZ	**Piszkesteto**	4.39	144	*e*P	Pn	12 32 18.6	+2.0
MPLH	**Magyarpolny**	4.48	167	*e*P	Pn	12 32 20.0	+2.2
KOLS	**Kolonicke sedl**	4.75	121	*e*PN	Pn	12 32 22.8	+1.3
KOLS				*e*PG	Pg	12 32 39.4	-0.2
KOLS				*e*SG	Sg	12 33 41.4	+0.3
BLEU	**Blekinge**	4.77	358	*i* P	Pn	12 32 22.8	+1.1
BLEU				*e*S	Sn	12 33 14.5	-3.1
KBA	**Koelnbreinsper**	4.83	203	*i* Pn	Pn	12 32 24.4	+1.6
	comp=Z,16nm,0.4s,SNR=12						
KBA				*e*Sg	Sg	12 33 43.6	0.0
	comp=Z,29nm,0.6s						
SOKA	**Soboth**	4.93	189	*e*Pn	Pn	12 32 26.1	+2.0
	comp=Z,1.2nm,0.4s						
SOKA				*e*Sg	Sg	12 33 46.0	-0.9
	comp=Z,8.2nm,0.5s						
DEL	**Delary**	5.10	346	*i* P	Pn	12 32 26.0	-0.3
OBKA	**Obir**	5.15	192	*e*Pn	Pn	12 32 28.7	+1.6
	comp=Z,1.5nm,0.4s						
OBKA				*e*Sg	Sg	12 33 55.4	+1.4
	comp=Z,28nm,0.5s						
WATA	**Walderalm**	5.15	217	*i* Pn	Pn	12 32 29.3	+2.2
	comp=Z,22nm,0.7s,SNR=9.5						
WATA				*e*Sg	Sg	12 33 53.6	-0.5
	comp=Z,26nm,0.7s						
MYKA	**Terra Mystica**	5.18	199	*e*Pn	Pn	12 32 30.0	+2.4
	comp=Z,0.7nm,0.2s						
MYKA				*e*Sg	Sg	12 33 56.4	+1.3
	comp=Z,21nm,0.6s						
WTTA	**Wattenberg**	5.19	216	*i* Pn	Pn	12 32 29.7	+2.0
	comp=Z,8.6nm,0.5s,SNR=7.5						
WTTA				*e*Sg	Sg	12 33 55.9	+0.7
	comp=Z,28nm,0.5s						
MOTA	**Moosalm**	5.32	220	*e*Pn	Pn	12 32 30.6	+1.1
	comp=Z,4.7nm,0.5s						
MOTA				*e*Sg	Sg	12 34 00.7	+1.0
	comp=Z,21nm,0.5s						
RETA	**Reutte**	5.35	223	*e*Pn	Pn	12 32 30.8	+0.9
	comp=Z,1.8nm,0.3s						
RETA				*e*Sg	Sg	12 34 03.5	+3.0
	comp=Z,25nm,0.5s						
ABTA	**Abfaltersbach**	5.35	208	*i* Pn	Pn	12 32 31.9	+2.0
	comp=Z,8.4nm,0.7s,SNR=6.8						
ABTA				*e*Sg	Sg	12 33 59.6	-1.0
	comp=Z,7.7nm,0.4s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SQTA	Sankt Quirin	5.38	218	*e*Pn	Pn	12 32 32.3	+1.9
	comp=Z,5.9nm,0.4s						
SQTA				*e*Sg	Sg	12 34 02.8	+1.2
	comp=Z,14nm,0.4s						
TRPA	Tarpa	5.39	127	⇓P	Pn	12 32 30.5	+0.2
MORH	Mrgy, Hungar	5.60	162	⇓P	Pn	12 32 35.3	+2.1
MORH				⇑S	Sn	12 33 40.0	+1.9
MORH	Mrgy, Hungar	5.60	162	*e*P	Pn	12 32 35.3	+2.1
KOVH	Kovagotottos	5.62	166	*e*P	Pn	12 32 34.0	+0.5
FETA	Feichten	5.74	220	*e*Pn	Pn	12 32 37.0	+1.8
	comp=Z,2.6nm,0.5s						
FETA				*e*Sg	Sg	12 34 15.3	+2.4
	comp=Z,7.3nm,0.5s						
DAVA	Damuels	5.89	226	*e*Pn	Pn	12 32 38.2	+0.9
	comp=Z,3.2nm,0.3s						
DAVA				*e*Sg	Sg	12 34 17.0	-0.8
	comp=Z,8.7nm,0.3s						
DAVOX	Davos/Dischmat	6.28	223	Pn	Pn	12 32 42.4	-0.3
	comp=Z,1.6nm,0.3s,baz=23,slow=12,SNR=14						
DAVOX				Sn	Sn	12 33 52.5	-2.7
	comp=Z,0.8nm,0.3s,baz=108,slow=20,SNR=1.3						
DAVOX				Lg	Lg	12 34 29.1	
	comp=Z,2.0nm,0.3s,baz=216,slow=19,SNR=3.9						
BORU	Boraas	6.40	344	*e*P	Pn	12 32 44.6	+0.5
SIRR	Siria	6.43	143	⇑P	Pn	12 32 45.4	+0.8
DRGR		6.44	135	⇑P	Pn	12 32 45.1	+0.3
DRGR				⇓S	Sn	12 33 57.3	-1.6
CDF	Champ du Feu	6.50	245	*e*Pn	Pn	12 32 46.9	+1.2
CDF	Champ du Feu	6.50	245	*e*Pg	Pg	12 33 14.0	+0.8
CDF				*e*Sn	Sn	12 33 57.4	-3.1
CDF				*e*Sg	Sg	12 34 38.6	+1.2
	comp=Z,112nm,1.1s						
BZS	Buzias	6.97	146	⇑P	Pn	12 32 53.3	+1.2
HINF	Hinteralfeld	7.07	242	*e*Pn	Pn	12 32 53.4	0.0
HINF	Hinteralfeld	7.07	242	*e*Pg	Pg	12 33 23.0	-1.1
HINF				*e*Sn	Sn	12 34 11.6	-2.8
HINF				*e*Sg	Sg	12 34 55.9	+0.3
	comp=Z,37nm,0.7s						
BURAR	Bucovina Array	7.11	120	⇑P	Pn	12 32 54.0	0.0
NACGM	Naroch	7.24	58	*i* P	Pn	12 32 55.1	-0.5
HAU	Haudompre	7.24	244	*e*Pn	Pn	12 32 54.9	-0.9
HAU	Haudompre	7.24	244	*e*Pg	Pg	12 33 26.5	-0.9
HAU				*e*Sg	Sg	12 35 01.2	0.0
	comp=Z,32nm,0.6s						
GIVF	Givet	7.29	263	*e*Pn	Pn	12 32 56.5	+0.1
GIVF				*e*Sg	Sg	12 35 02.2	-0.6
	comp=Z,114nm,1.3s						
PAGF	Fort de Pagny	7.32	250	*e*Pn	Pn	12 32 57.6	+0.7
GZR	Gura Zlata	7.59	142	⇑P	Pn	12 33 02.3	+1.7
BAIF	Baives	7.69	263	*e*Pn	Pn	12 33 01.5	-0.3
BAIF	Baives	7.69	263	*e*Pg	Pg	12 33 33.6	-2.3
BAIF				*e*Sn	Sn	12 34 26.2	-3.3
BAIF				*e*Sg	Sg	12 35 14.3	-1.1
MEZF	Maizieres J’vi	7.74	251	*e*Pg	Pg	12 33 34.3	-2.7
SFTF	Sexfontaines	7.89	249	*e*Sg	Sg	12 35 22.2	+0.2
	comp=Z,211nm,1.6s						
CABF	La Chapelle	8.22	237	*e*Pg	Pg	12 33 45.2	-1.0
CABF				*e*Sg	Sg	12 35 32.1	-0.5
	comp=Z,61nm,1.0s						
AKASG	Malin Array Be	8.30	91	Pn	Pn	12 33 09.9	-0.3
	comp=Z,2.1nm,0.3s,baz=281,slow=12,SNR=13						
AKASG				Lg	Lg	12 35 35.3	
	comp=Z,0.3nm,0.3s,baz=280,slow=28,SNR=2.4						
VOIR		8.52	132	⇑P	Pn	12 33 14.0	+0.6
LPL	La Plagne	8.66	229	*e*Pn	Pn	12 33 15.4	0.0
HFS	Hagfors	8.71	352	Pn	Pn	12 33 16.2	+0.4
	comp=Z,0.3nm,0.3s,baz=174,slow=16,SNR=7.2						
HFS				Sn	Sn	12 34 46.8	-7.8
	comp=Z,0.1nm,0.3s,baz=166,slow=25,SNR=1.5						
LOR	Lormes	9.06	247	*e*Pn	Pn	12 33 19.5	-1.2
	baz=59						
LOR	Lormes	9.06	247	*e*Pg	Pn	12 34 01.6	+41
	baz=58						
LOR				*e*Sn	Sn	12 34 59.0	-4.3
LOR				*e*Sg		12 35 58.3	
	comp=Z,0.8nm,0.3s,baz=58						
MBDF	Montbardon	9.24	226	*e*Pn	Pn	12 33 23.4	+0.1
MBDF				*e*Sn	Sn	12 35 03.3	-4.8
	comp=Z,2.0nm,0.5s						
SSF	Saint Saulge	9.37	246	*e*Pn	Pn	12 33 24.8	-0.2
SSF	Saint Saulge	9.37	246	*e*Pg	Pn	12 34 05.4	+40
SSF				*e*Sg	Sn	12 36 08.2	+57
	comp=Z,14nm,0.9s						
SMF	Signal de Mont	9.42	243	*e*Pn	Pn	12 33 25.5	-0.1
SMF	Signal de Mont	9.42	243	*e*Pg	Pn	12 34 06.3	+41
SMF				*e*Sn	Sn	12 35 07.7	-4.5
SMF				*e*Sg		12 36 10.1	
	comp=Z,28nm,0.8s						
ORIF	Oris-en-Rattie	9.51	230	*e*Pn	Pn	12 33 27.2	+0.3
AVF	Avril sur Loir	9.61	245	*e*Pn	Pn	12 33 28.3	+0.1
AVF				*e*Sg	Sn	12 36 15.0	+58
	comp=Z,3.5nm,0.6s						
SBF	Sospel	9.65	221	*e*Pn	Pn	12 33 28.8	-0.1
SBF				*e*Sn	Sn	12 35 13.4	-4.6
	comp=Z,2.0nm,0.3s						
NOA	NORSAR Array B	9.89	346	Pn	Pn	12 33 29.9	-2.1
	comp=Z,0.0nm,0.3s,baz=166,slow=12,SNR=2.7						
BGF	Bois d'Agland	10.03	245	*e*Pn	Pn	12 33 33.9	-0.1
BGF				*e*Sg		12 36 28.9	
	comp=Z,6.2nm,0.4s						
VIVF	Saint-Julien-l	10.15	233	*e*Pn	Pn	12 33 35.5	-0.1
VIVF				*e*Sn	Sn	12 35 25.1	-4.9
	comp=Z,0.4nm,0.2s						
PGF	Pioggiola	10.22	211	*e*Pn	Pn	12 33 36.6	-0.1
FRF	La Foret Royal	10.23	222	*e*Pn	Pn	12 33 38.2	+1.5
LMR	La Mourre	10.47	222	*e*Pn	Pn	12 33 41.7	+1.7
LASF	Ste Croix	11.11	232	*e*Pn	Pn	12 33 48.6	-0.2
FINES	FINESS Array B	11.33	25	Pn	Pn	12 33 50.1	-1.5
	comp=Z,0.4nm,0.3s,baz=208,slow=11,SNR=12						
FINES				Sn	Sn	12 35 52.9	-5.9
	comp=Z,0.3nm,0.3s,baz=208,slow=23,SNR=1.8						
EKA	Eskdalemuir Ar	12.09	296	Pn	Pn	12 33 59.5	-2.5
	baz=108,slow=15,SNR=5.8						
ARCES	ARCESS Array B	18.58	10	Pn	P	12 35 25.1	-1.9
	baz=191,slow=13,SNR=14						
ARU	Arti	25.12	62	P	P	12 36 35.8	+0.9
	comp=Z,1.0nm,0.5s,baz=286,slow=13,SNR=5.3						
AKTO	Aktyubinsk	26.15	76	P	P	12 36 45.8	+1.4
	comp=Z,0.7nm,0.4s,baz=288,slow=13,SNR=2.3						
BVAR	Borovoye Array	32.58	66	P	P	12 37 43.8	+2.4
	comp=Z,0.6nm,0.5s,baz=260,slow=8.9,SNR=4.9						
TORD	Torodi Ar. Bea	40.04	202	P	P	12 38 46.9	+1.4
	comp=Z,0.6nm,0.7s,baz=5.9,slow=8.7,SNR=4.2						
MKAR	Makanchi Array	42.20	69	P	P	12 39 04.4	+1.4
	comp=Z,0.5nm,0.8s,baz=302,slow=11,SNR=2.6						
SONM	Songino Array	54.90	55	P	P	12 40 43.1	+2.2
	comp=Z,0.5nm,0.8s,baz=274,slow=8.7,SNR=4.7						
YKA	Yellowknife Ar	59.82	336	P	P	12 41 17.2	+2.0
	comp=Z,0.7nm,0.6s,baz=28,slow=6.7,SNR=13						

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*IDC **28** 12:44:57.3±2.0, 20°.25S×68°.99W, h0^{km}, mb4.0/2, mb1 4.1/2, mb1mx3.7/16, mbtmp4.1/2, Error ellipse: s-maj=214.1km s-min=49.3km az=164.0*

*GUC **28** 12:45:15.6±0.8, 21°.09S×68°.48W, h142^{km}±5^{km}, ML3.8*

ISC 28 12:45:14.9±0.9**, 21°.08S**±0°.04×**68°.6W**±0°.1**, h150**^{km}±8^{km}**, n19,** σ**0.^{s}89**/33**, 12C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.85	272	⇑*i*P	Pn	12 45 38.5	-0.1
PB01				*i* S	Sn	12 45 55.7	-0.9
PB01				IAML		12 45 59.0	
	comp=E,1µm,0.3s						
PB09	IPOC Station P	0.94	221	⇑*i*P	Pn	12 45 39.6	+0.3
PB09				*i* S	Sn	12 45 58.5	+0.4
PB09				IAML		12 46 01.7	
	comp=E,1µm,0.2s						
PB08	IPOC Station P	1.08	330	⇑*i*P	Pn	12 45 41.2	+0.4
PB08				*i* S	Sn	12 46 00.3	-0.2
PB08				IAML		12 46 01.6	
	comp=N,1µm,0.3s						
PB07	IPOC Station P	1.38	242	⇑*i*P	Pn	12 45 43.9	+0.5
PB07				*i* S	Sn	12 46 05.3	+0.1
PB07				IAML		12 46 07.4	
	comp=E,2µm,0.3s						
PB03	IPOC Station P	1.46	229	⇑*i*P	Pn	12 45 44.6	+0.4
PB03				*i* S	Sn	12 46 06.3	-0.3
PB03				IAML		12 46 07.6	
	comp=E,920nm,0.3s						
LVC	Limon Verde	1.55	192	⇑*i*P	Pn	12 45 45.3	-0.1
LVC				*i* S	Sn	12 46 08.2	-0.6
TA01	Diego Aracena	1.59	289	⇑*i*P	Pn	12 45 45.8	+0.5
TA01				*i* S	Sn	12 46 08.7	0.0
TA01				IAML		12 46 10.8	
	comp=E,945nm,0.3s						
PB11	IPOC Station P	1.66	322	⇑*i*P	Pn	12 45 46.6	+0.3
PB11				*i* S	Sn	12 46 09.9	-0.6
PB11				IAML		12 46 11.4	
	comp=E,1µm,0.2s						
TA02	Huaiquique	1.67	299	*e*P	Pn	12 45 46.9	+0.6
TA02				IAML		12 46 13.6	
	comp=N,2µm,0.2s						
PB06	IPOC Station P	1.86	210	⇑*i*P	Pn	12 45 48.7	+0.1
PB06				*i* S	Sn	12 46 14.4	0.0
PB06				IAML		12 46 15.4	
	comp=E,778nm,0.5s						
PB04	IPOC Station P	1.92	229	⇑*i*P	Pn	12 45 49.8	+0.5
PB04				*i* S	Sn	12 46 15.2	-0.5
PB04				IAML		12 46 24.5	
	comp=N,682nm,0.2s						
PB15	IPOC Station P	2.27	201	⇑*e*P	Pn	12 45 53.6	+0.2
PB15				*i* S	Sn	12 46 23.2	+0.1
PB05	IPOC Station P	2.32	220	*e*P	Pn	12 45 54.2	+0.2
PB05				*i* S	Sn	12 46 23.7	-0.3
PB12	IPOC Station P	2.96	326	*e*P	Pn	12 46 01.3	-0.5
PB12				*i* S	Sn	12 46 37.1	-1.0
PB12				IAML		12 46 43.8	
PB10	IPOC Station P	3.04	217	⇑*i*P	Pn	12 46 02.9	+0.2
PB10				*i* S	Sn	12 46 36.4	-3.3
PB10				IAML		12 46 54.1	
	comp=E,98nm,0.2s						
BDFB	Brasilia	20.24	78	P	P	12 49 37.9	-0.9
	comp=E,3.0nm,0.4s,baz=264,slow=9.0,SNR=6.2						
TORD	Torodi Ar. Bea	76.92	70	P	P	12 56 52.0	+0.7
	comp=E,0.7nm,0.5s,baz=255,slow=5.8,SNR=8.2						
ASAR	Alice Springs	130.43	207	PKP	PKiKP	13 04 11.2	+2.0
	comp=E,0.5nm,1.1s,baz=136,slow=1.8,SNR=4.5						
MKAR	Makanchi Array	145.11	36	PKP	PKiKP	13 04 37.1	-1.3
	comp=E,0.9nm,0.7s,baz=325,slow=2.3,SNR=7.9						

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*IDC **28** 13:05:53.1±2.0, 5°.74S×130°.73E, h0^{km}, mb3.7/2, mb1 4.1/4, mb1mx3.6/27, mbtmp4.0/4, ML4.3/2, Error ellipse: s-maj=140.3km s-min=26.4km az=68.0*

*DJA **28** 13:06:03.6±0.5, 6°S±3°×13°0E±°, h199^{km}±10^{km}, M4.5/8, mb4.4/4, mB4.9/2, MLv4.5/8, Mw(mB)4.1/2*

*NEIC **28** 13:06:05.4±0.8, 5°.73S±0°.09×130°.2E±0°.1, h152^{km}±12^{km}, mb4.3/7, Error ellipse: s-maj=16.1km s-min=13.2km az=100.0*

ISC 28 13:06:04.7±0.9**, 5°.76S**±0°.07×**130°.19E**±0°.08**, h146**^{km}**, n35,** σ**1.^{s}72**/35**, mb4.1**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.27	347	P	Pn	13 06 33.7	+2.1
SAUI	Saumlaki	2.46	154	P	Pn	13 06 47.3	+2.1
SAUI				S	Sn	13 07 19.7	+3.3
SAUI	Saumlaki	2.46	154		Pn	13 06 46.8	+1.6
SAUI	Saumlaki	2.46	154	P	Pn	13 06 47.3	+2.1
MSAI	Masohi	2.71	332	P	Pn	13 06 50.0	+1.7
FAKI	Fak Fak	3.49	36	P	Pn	13 06 58.7	+0.5
FAKI	Fak Fak	3.49	36	Pn	Pn	13 06 58.4	+0.2
FAKI	Fak Fak	3.49	36	P	Pn	13 06 58.5	+0.2
SWI	Sorong	4.98	12	P	Pn	13 07 17.6	-0.2
SANI	Sanana	5.59	311	P	Pn	13 07 27.3	+1.4
	0.1nm13nm,0.6s						
SANI	Sanana	5.59	311	P	Pn	13 07 27.7	+1.8
LBMI	Labuha	5.76	332	P	Pn	13 07 29.4	+1.2
	0.3nm1µm59nm,0.6s						
DRS	Darwin Rock St	6.66	174	P	Pn	13 07 38.5	-1.7
	35nm,0.4s						
TNTI	Ternate	7.08	336	Pn	Pn	13 07 46.1	+0.3
SOEI	Soe	7.08	236	Pn	Pn	13 07 46.7	+0.7
SOEI	Soe	7.08	236	P	Pn	13 07 47.1	+1.1
MTN	Manton Dam	7.10	173		Pn	13 07 44.5	-1.5
MTN	Manton Dam	7.10	173	P	Pn	13 07 44.2	-1.8
KDU	Kakadu	7.24	162	P	Pn	13 07 46.2	-1.7
BATI	Baumata	7.83	235	P	Pn	13 07 55.6	-0.3
	0.1nm26nm,0.5s						
KNRA	Kununurra	9.95	188		Pn	13 08 21.3	-2.9
KNRA	Kununurra	9.95	188	P	Pn	13 08 20.9	-3.2
	51nm,0.7s						
WB0	Warramunga Arr	14.51	164		Pn	13 09 21.1	-2.2
WRA	Warramunga Arr	14.66	164	Pn	Pn	13 09 22.2	-2.9
	1.2nm,0.3s,baz=348,slow=13,SNR=33						
WB2	Warramunga Arr	14.66	164	Pn	Pn	13 09 22.1	-3.0
COEN	Coen	15.15	123	Pn	Pn	13 09 31.1	-0.2
COEN				IAmb	IAmb	13 09 36.3	
	comp=Z,20nm,0.8s						
AS31	Alice Springs	18.15	169	P	P	13 10 06.1	+0.1
AS31				IAmb	IAmb	13 10 10.4	
	comp=Z,3.7nm,0.5s						
ASAR	Alice Springs	18.16	169	P	Pn	13 10 07.6	0.0
	comp=Z,1.5nm,0.3s,baz=349,slow=12,SNR=104						
ASAR	Alice Springs	18.16	169	P	P	13 10 06.0	-0.1
PSA00	Pilbara Seismi	18.64	212	P	P	13 10 10.0	-1.3
PSA00				IAmb	IAmb	13 10 11.8	
	comp=Z,4.8nm,0.6s						
FORT	Forrest	24.96	184	P	P	13 11 15.1	+0.4
FORT				IAmb	IAmb	13 11 26.1	
	comp=Z,15nm,0.8s						
MORW	Morawa	26.77	208	P	P	13 11 30.7	-0.3
BBOO	Buckleboo	27.46	169	P	P	13 11 37.5	+0.4
BBOO				IAmb	IAmb	13 12 02.0	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	28.09	159	P	P	13 11 43.8	+1.1
	comp=Z,0.4nm,0.2s,baz=333,slow=16,SNR=5.2						
MKAR	Makanchi Array	67.31	326	P	P	13 16 51.8	+8.0
	comp=Z,0.2nm,0.4s,baz=116,slow=8.5,SNR=5.2						

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*IDC **28** 13:32:47.9±1.1, 5°.09S×152°.69E, h0^{km}, mb4.0/9, mb1 4.2/10, mb1mx4.0/29, mbtmp4.0/10, ML1.8/1, MS3.2/6, Ms1 3.2/6, ms1mx2.9/39, Error ellipse: s-maj=44.5km s-min=18.0km az=129.0*

ISC 28 13:32:55.4±1.1**, 5°.2S**±0°.2×**152°.6E**±0°.2**, h55**^{km}**, n17,** σ**0.^{s}72**/13**, mb4.0**/9**, MS3.3**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.85	232	Pn	Pn	13 34 32.5	-0.9
	1.1nm,0.3s,baz=52,slow=8.7,SNR=8.3						
PMG				Sn	Sn	13 35 50.6	+0.6
	2.7nm,0.3s,baz=333,slow=21,SNR=5.8						
HNR	Honiara	8.42	121	LR	LR	13 38 12.1	
	comp=Z,135nm,20.1s,baz=5.0,slow=39						
GUMO	Guam	20.16	338	LR	LR	13 44 52.8	
	comp=Z,34nm,18.6s,baz=110,slow=36						
DZM	Mont Dzumac	21.49	143	LR	LR	13 45 19.2	
	comp=Z,40nm,19.7s,baz=17,slow=35						
WRA	Warramunga Arr	23.06	229	P	P	13 37 56.4	-0.1
	1.4nm,0.8s,baz=51,slow=10.0,SNR=6.7						
ASAR	Alice Springs	25.75	223	P	P	13 38 21.2	0.0
	0.8nm,0.7s,baz=61,slow=9.2,SNR=14						
ASAR				LR	LR	13 48 01.3	
	comp=Z,80nm,19.1s,baz=356,slow=35						
MSVF	Nonsavu	27.84	119	LR	LR	13 49 05.5	
	comp=Z,74nm,19.0s,baz=99,slow=35						
STKA	Stephens Creek	28.50	200	LR	LR	13 50 53.3	
	comp=Z,86nm,18.8s,baz=24,slow=38						
CMAR	Chiang Mai Arr	57.86	295	P	P	13 42 43.0	+1.0
	2.1nm,0.9s,baz=112,slow=5.1,SNR=13						
PETK	Petropavlovsk-	58.22	4	P	P	13 42 43.4	-0.5
	1.9nm,0.6s,baz=177,slow=7.6,SNR=9.6						
MKAR	Makanchi Array	80.47	319	P	P	13 45 01.8	+0.2
	0.9nm,0.9s,baz=104,slow=7.7,SNR=4.5						
ZALV	Zalesovo Beam	81.35	326	P	P	13 45 05.3	-0.7
	1.4nm,0.5s,baz=121,slow=6.0,SNR=6.1						
ILAR	Eielson Array	82.57	22	P	P	13 45 11.2	-1.0
	2.9nm,0.8s,baz=255,slow=5.3,SNR=20						
NVAR	Mina Array Bea	92.46	52	P	P	13 46 02.0	+0.9
	0.4nm,0.8s,baz=227,slow=4.7,SNR=2.6						
YKA	Yellowknife Ar	95.84	28	P	P	13 46 16.2	+0.6
	0.5nm,0.8s,baz=268,slow=4.7,SNR=6.9						
GERES	GERESS Array B	124.26	328	PKP	PKiKP	13 51 48.7	0.0
	0.1nm,0.4s,baz=132,slow=2.0,SNR=6.1						
TORD	Torodi Ar. Bea	150.23	287	PKPbc	PKPbc	13 52 41.4	-0.1
	1.2nm,0.8s,baz=75,slow=2.2,SNR=5.0						

IDC 28 13:39:35.7±2.0**, 5°.13S**×**152°.85E, h0**^{km}**, mb3.5**/4**, mb1 3.8**/4**, mb1mx3.5**/34**, mbtmp3.5**/4**, Error ellipse: s-maj=70.4km s-min=29.9km az=123.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.27	229	P	P	13 44 45.1	0.0
	0.8nm,0.9s,baz=53,slow=9.6,SNR=1.6						
ASAR	Alice Springs	25.94	223	P	P	13 45 09.8	-0.3
	0.5nm,0.7s,baz=53,slow=9.4,SNR=8.9						
CMAR	Chiang Mai Arr	58.06	295	P	P	13 49 31.4	+0.2
	0.3nm,0.3s,baz=104,slow=5.0,SNR=4.1						
ILAR	Eielson Array	82.44	22	P	P	13 51 59.8	+0.1
	0.5nm,0.7s,baz=254,slow=5.4,SNR=4.7						

SSNC 28 13:40:18.9±1.3**, 19°.51N**×**75°.55W, h2**^{km}±6^{km}**, MD2.7, ML2.3, MW2.7, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTBY	Guantanamo Bay	0.59	45	*i* P	Pg	13 40 30.5	+0.3
GTBY				*e*S	Sg	13 40 38.2	+0.3
GTMO	Guantanamo	0.69	34	*e*S	Sg	13 40 40.7	-0.4
GTMO				IAML		13 40 40.9	
	comp=E,3µm,0.2s						
GTMO				IAML		13 40 40.9	
	comp=N,2µm,0.2s						
GTMO	Guantanamo	0.69	34	*i* S	Sg	13 40 40.5	-0.6
MASC	Masc	1.41	62	*e*P	Pn	13 40 42.5	-3.1
MASC				*e*S	Sg	13 40 59.6	-4.7
MASC				IAML		13 41 03.5	
	comp=N,18nm,0.1s						
MASC				IAML		13 41 05.2	
	comp=E,32nm,0.2s						
HLGC	Holguin	1.46	341	*e*P	Pn	13 40 44.8	-1.5
HLGC				*e*S	Sb	13 41 03.9	-1.8
HLGC				IAML		13 41 05.4	
	comp=N,22nm,0.3s						
HLGC				IAML		13 41 05.6	
	comp=E,77nm,0.6s						
LMGC	Las Mercedes	1.48	292	*e*P	Pn	13 40 43.3	-3.2
LMGC				*e*S	Sb	13 41 00.3	-5.9
LMGC				IAML		13 41 00.9	
	comp=N,76nm,0.1s						
LMGC				IAML		13 41 01.7	
	comp=E,84nm,0.1s						
MTDJ	Mount Denham	2.27	236	*e*P	Pn	13 40 54.6	-2.8
MTDJ				*e*S	Sn	13 41 22.1	-4.0
CCCC	Cccc	2.67	309	*e*P	Pn	13 40 58.7	-4.3
CCCC				*e*S	Sn	13 41 28.7	-7.2

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*ATH **28** 13:44:06.4, 40°.22N×19°.13E, h15^{km}±4^{km}, ML2.4/4, Error ellipse: s-maj=4.8km s-min=1.4km az=184.0*

*THE **28** 13:44:07.0, 40°.28N×19°.28E, h0^{km}±5^{km}, ML2.5/3, Error ellipse: s-maj=7.0km s-min=1.3km az=265.0*

*TIR **28** 13:44:07.6, 40°.35N×19°.46E, h13^{km}, Md2.8, Ml2.7*

ISC 28 13:44:04.6±1.4**, 40°.30N**±0°.03×**19°.17E**±0°.04**, h7**^{km}±10^{km}**, n44,** σ**1.^{s}13**/67**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	Vlora	0.30	56	P	Pg	13 44 10.3	-0.1
VLO	Vlora	0.30	56	P	Pg	13 44 10.5	0.0
	baz=14						
VLO				S	Sg	13 44 13.5	-0.9
	baz=14						
VLO				AMP			
	comp=N,113nm,0.1s,baz=14						
KEK	Kerkira	0.76	140	P	Pg	13 44 20.1	+0.9
KEK				S	Sb	13 44 30.3	-0.4
	comp=N,285nm,0.2s						
KEK	Kerkira	0.76	140	P	Pg	13 44 20.1	+0.9
KEK				S	Sb	13 44 30.3	-0.4
KEK				AML	AML	13 44 36.4	
	comp=N,577µm,0.3s						
KEK				AML	AML	13 44 37.1	
	comp=E,652µm,0.2s						
SRN	Sarande	0.76	123	P	Pg	13 44 19.1	-0.1
SRN	Sarande	0.76	123	P	Pb	13 44 20.3	+0.1
	baz=138						
SRN				S	Sb	13 44 30.5	-0.3
	baz=138						
SRN				AMP			
	comp=N,1.2nm,0.5s,baz=138						
KASA	Kassiopi	0.81	133	P	Pb	13 44 21.4	+0.4
KASA				AML	AML	13 44 35.5	
	comp=E,864µm,0.3s						
KASA				AML	AML	13 44 36.1	
	comp=N,749µm,0.2s						
LSK	Leskovik	1.10	97	P	Pg	13 44 25.3	-0.5
LSK	Leskovik	1.10	97	P	Pg	13 44 25.6	-0.1
	baz=102						
LSK				S	Sg	13 44 38.6	-1.5
	baz=102						
TIR	Tirane	1.17	27	P	Pn	13 44 29.3	+1.9
TIR	Tirane	1.17	27	P	Pn	13 44 29.3	+1.9
TIR	Tirane	1.17	27	P	Pg	13 44 28.0	+1.0
	baz=17						
TIR				S	Sb	13 44 43.1	+0.6
	baz=17						
IGT	Igoumenitsa	1.18	130	P	Pg	13 44 27.5	+0.3
IGT				S	Sn	13 44 44.6	+0.8
	comp=N,202nm,0.5s						
IGT	Igoumenitsa	1.18	130	P	Pg	13 44 27.5	+0.3
IGT				AML	AML	13 44 46.6	
	comp=N,376µm,0.4s						
IGT				AML	AML	13 44 48.8	
	comp=E,448µm,0.6s						
IGT	Igoumenitsa	1.18	130	P	Pn	13 44 28.4	+0.9
	baz=140						
IGT				S	Sn	13 44 43.7	-0.1
	baz=140						
KBN	Korca	1.27	75	P	Pg	13 44 28.3	-0.8
	baz=74						
KBN				S	Sg	13 44 43.7	-1.9
	baz=74						
KBN				AMP			
	comp=N,0.7nm,0.8s,baz=74						
NEST	Nestorio	1.44	85	P	Pb	13 44 32.0	+0.2
NEST	Nestorio	1.44	85	P	Pg	13 44 33.0	+0.8
NEST				AML	AML	13 44 55.5	
	comp=E,163µm,0.6s						
NEST				AML	AML	13 44 55.6	
	comp=N,220µm,0.6s						
JAN	Janina	1.44	116	P	Pb	13 44 32.1	+0.3
JAN	Janina	1.44	116	P	Pb	13 44 32.1	+0.3
OHR	Ohrid	1.48	56	*e*Pn	Pg	13 44 34.3	+1.4
PENT	Pentalofos	1.51	93	P	Pg	13 44 34.0	+0.5
PENT	Pentalofos	1.51	93	P	Pg	13 44 33.8	+0.3
NOCI	Noci	1.68	288	P	Pn	13 44 36.2	+1.8
PHP	Peshkopia	1.68	34	P	Pb	13 44 36.8	+0.9
	baz=28						
PHP				S	Sb	13 44 58.4	+1.1
	baz=28						
KPRO	Kipourio	1.72	101	P	Pb	13 44 36.8	+0.3
KPRO	Kipourio	1.72	101	P	Pg	13 44 37.3	-0.1
FNA	Florina	1.75	73	P	Pn	13 44 36.4	+1.0
FNA	Florina	1.75	73	P	Pg	13 44 38.4	+0.3
FNA	Florina	1.75	73	P	Pn	13 44 36.1	+0.7
	baz=73						
FNA				S	Sb	13 44 58.5	-0.7
	baz=73						
TSLK	Tsoukalades, L	1.87	142	P	Pn	13 44 38.4	+1.4
TSLK	Tsoukalades, L	1.87	142	P	Pb	13 44 38.7	-0.3
STON	Ston	2.79	337	*e*Pn	Pn	13 44 50.2	+0.6
STON				Sn	Sn	13 45 23.1	-0.5
LSTV	Lastovo	3.00	326	*e*Pn	Pn	13 44 53.4	+0.9
LSTV				Sn	Sn	13 45 26.7	-2.0
MAKA	Makarska	3.39	332	*e*Pn	Pn	13 44 58.5	+0.6
MAKA				Sn	Sn	13 45 36.9	-1.4
HVAR	Hvar	3.52	326	*e*Pn	Pn	13 45 00.3	+0.6
HVAR				Sn	Sn	13 45 39.3	-2.3
RICI	Ricice	3.53	335	*e*Pn	Pn	13 45 01.4	+1.5
RICI				Sn	Sn	13 45 40.6	-1.3
KIJV	Kijevo	4.23	332	*e*Pn	Pn	13 45 11.0	+1.5
KIJV				Sn	Sn	13 45 58.5	-0.6
ZIRJ	Zirje	4.26	323	*e*Pn	Pn	13 45 11.1	+1.3
ZIRJ				Sn	Sn	13 45 58.5	-1.2
MORI	Morici	4.39	325	*e*Pn	Pn	13 45 13.6	+1.9
MORI				Sn	Sn	13 46 02.4	-0.7
DUGI	Dugi Otok	4.79	322	*e*Pn	Pn	13 45 18.4	+1.3
DUGI				Sn	Sn	13 46 11.4	-1.5
NVLJ	Novalja	5.31	325	*e*Pn	Pn	13 45 24.9	+0.6
NVLJ				Sn	Sn	13 46 23.9	-1.8
SMRN	Sveta Marina	6.00	324	*e*Pn	Pn	13 45 34.4	+0.7
SMRN				Sn	Sn	13 46 40.1	-2.6
BRJN	Brijuni	6.09	321	*e*Pn	Pn	13 45 36.4	+1.4
BRJN				Sn	Sn	13 46 42.9	-2.1

CRAAG ***28*** *13:48:08.0, 36°.44N×1°.70E, Ml3.6*
LDG ***28*** *13:48:10.9±0.2, 36°.48N×1°.56E, h10^{km}, Ml2.9/8, Error ellipse: s-maj=5.0km s-min=2.7km az=152.0*
MDD ***28*** *13:48:10.3±0.6, 36°.45N×1°.59E, h19^{km}±8^{km}, mb4.2/28, Error ellipse: s-maj=8.2km s-min=5.0km az=163.0, PRXIMO*
CNRM ***28*** *13:48:14.6, 36°.35N×1°.33E, h91^{km}, ml3.1*
ISC 28 13:48:09.1±1.1**, 36°.47N**±0°.05×**1°.63E**±0°.04**, h23**^{km}±12^{km}**, n73, σ1^{s}.74**/113**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EBNR	Beni Rached	0.20	203	P	Pb	13 48 13.5	-1.1
ECHA	Ech Chlef	0.38	213	P	Pb	13 48 17.0	-0.3
ECHF	Ech Chlef	0.39	216	P	Pb	13 48 17.0	-0.4
EANR	'Ain N'Sour	0.67	219	P	Pb	13 48 22.0	-0.2
EANR	'Ain N'Sour	0.67	219	P	Pb	13 48 22.0	-0.2
OKGL	Djebel Kef Gue	0.90	242	P	Pb	13 48 27.1	+1.0
OKGL	Djebel Kef Gue	0.90	242	P	Pn	13 48 25.8	-0.6
	282nm,0.1s,SNR=7.9						
OKGL				S	Sb	13 48 39.6	+1.8
	3µm,0.2s,SNR=7.9						
ABA	Alger-Bouzarea	1.18	73	P	Pb	13 48 31.9	+1.1
ABA	Alger-Bouzarea	1.18	73	P	Pb	13 48 31.9	+1.1
OJGS	Djebel Guires	1.20	217	P	Pn	13 48 29.2	-1.3
OJGS	Djebel Guires	1.20	217	P	Pn	13 48 29.2	-1.3
OJBR	Djebel Berber	1.36	230	P	Pn	13 48 26.0	-6.8
ADJB	Djebel Djouab	1.50	102	P	Pb	13 48 36.8	+0.5
ADJB	Djebel Djouab	1.50	102	P	Pb	13 48 36.8	+0.5
ODJA	Bouhanifia	1.84	232	P	Pn	13 48 37.0	-2.3
CART	Cartagena	2.38	299	*e*P	Pn	13 48 46.0	-0.6
CART				*e*S	Sn	13 49 11.6	-3.4
CART	Cartagena	2.38	299	P	Pn	13 48 46.0	-0.6
ETRV	Los Montesinos	2.45	310	S	Sn	13 49 15.5	-1.4
	37nm,0.2s,SNR=7.9						
EIBI	Ibiza	2.56	355	P	Pn	13 48 49.9	+0.8
	15nm,0.1s,SNR=58						
EIBI				S	Sn	13 49 18.2	-1.4
	93nm,0.3s,SNR=7.4						
EBEN2	Beniarda presa	2.63	327	P	Pn	13 48 51.0	+0.9
	23nm,0.1s,SNR=7.9						
EBEN2				S	Sn	13 49 20.0	-1.4
	21nm,0.1s,SNR=7.9						
EMUR	La Murta	2.67	302	P	Pn	13 48 50.4	-0.2
	7.4nm,0.3s,SNR=12						
EMUR				S	Sn	13 49 21.1	-1.1
	10.0nm,0.3s						
AFON	Font Roja	2.78	322	P	Pn	13 48 52.9	+0.6
	8.0nm,0.2s,SNR=7.9						
AFON				S	Sn	13 49 24.8	-0.4
	14nm,0.2s,SNR=7.9						
EZAR	Zarzadilla de	3.00	299	P	Pn	13 48 55.4	+0.1
	19nm,0.2s,SNR=7.9						
EZAR				S	Sn	13 49 29.4	-1.1
	14nm,0.3s,SNR=7.9						
ENIJ	Nijar	3.12	280	P	Pn	13 48 56.1	-0.7
	7.1nm,0.3s,SNR=7.9						
ENIJ				S	Sn	13 49 31.0	-2.3
	12nm,0.3s,SNR=7.9						
ETOB	Tobarra	3.33	312	P	Pn	13 49 01.1	+1.3
	5.3nm,0.2s,SNR=14						
ETOB				S	Sn	13 49 38.4	-0.1
	12nm,0.4s						
ETOS	Mallorca	3.42	16	P	Pn	13 49 00.6	-0.4
	9.0nm,0.4s,SNR=13						
ETOS				S	Sn	13 49 39.2	-1.7
	5.6nm,0.2s,SNR=5.3						
EBER	Berja	3.65	278	P	Pn	13 49 04.4	0.0
	8.3nm,0.1s,SNR=27						
EBER				S	Sn	13 49 45.1	-1.7
	15nm,0.3s,SNR=5.2						
TAF	Taforalt	3.68	244	P	Pn	13 49 05.6	+1.0
TAF				S	Sn	13 49 47.1	-0.3
SESP	Santiago Espad	3.71	298	P	Pn	13 49 06.9	+1.8
	18nm,0.3s,SNR=7.9						
SESP				S	Sn	13 49 48.1	-0.1
	36nm,0.2s,SNR=7.9						
ECHE	Chera	3.73	327	P	Pn	13 49 06.3	+1.1
	4.3nm,0.2s,SNR=7.9						
ECHE				S	Sn	13 49 47.6	-0.8
	3.7nm,0.2s,SNR=7.9						
GOG	Mont Gurugu	3.96	253	P	Pn	13 49 10.0	+1.6
GOG				S	Sn	13 49 53.5	-0.6
EQES	Quesada	3.98	291	P	Pn	13 49 10.6	+1.8
	4.2nm,0.2s,SNR=7.9						
EQES				S	Sn	13 49 55.9	+1.1
	10nm,0.3s,SNR=7.9						
MAHO	Mahon	4.00	31	*e*S	Sn	13 49 53.7	-1.4
MAHO	Mahon	4.00	31	S	Sn	13 49 53.7	-1.4
JBK	JBK	4.03	239	P	Pn	13 49 10.5	+0.9
JBK				S	Sn	13 49 55.8	-0.4
EMOS	Mosqueruela	4.22	338	P	Pn	13 49 13.6	+1.5
	6.9nm,0.1s,SNR=48						
EMOS				S	Sn	13 49 58.8	-2.0
	6.3nm,0.2s,SNR=9.2						
ELGU	Los Guajares,	4.24	277	P	Pn	13 49 12.7	+0.4
	5.2nm,0.1s,SNR=7.9						
ELGU				S	Sn	13 49 60.0	-1.2
	9.6nm,0.3s,SNR=7.9						
ERTA	Horta de San J	4.59	348	P	Pn	13 49 17.4	+0.3
	3.6nm,0.3s,SNR=7.9						
ERTA				S	Sn	13 50 07.9	-1.8
	4.4nm,0.3s,SNR=7.9						
EGOR	Sierra Gorda,	4.65	280	P	Pn	13 49 20.1	+2.1
	3.2nm,0.3s,SNR=7.9						
EGOR				S	Sn	13 50 10.2	-1.0
	1.4nm,0.2s,SNR=7.9						
EPOB	Poblet	4.89	355	P	Pn	13 49 22.3	+1.1
	2.9nm,0.3s,SNR=10						
EPOB				S	Sn	13 50 13.9	-3.3
	2.1nm,0.2s,SNR=7.9						
EMIJ	Mijas	5.15	273	P	Pn	13 49 23.5	-1.4
	1.7nm,0.2s,SNR=7.9						
EMIJ				S	Sn	13 50 18.8	-4.8
	1.8nm,0.2s,SNR=7.9						
EADA	Adamuz	5.22	291	P	Pn	13 49 25.9	+0.1
	0.8nm,0.2s,SNR=7.9						
EADA				S	Sn	13 50 23.2	-2.1
	2.3nm,0.2s,SNR=7.9						
CFON	Fontmartina	5.32	7	P	Pn	13 49 27.9	+0.8
	8.9nm,0.3s,SNR=7.9						
CFON				S	Sn	13 50 24.7	-3.0
	4.4nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	5.45	308	P	Pn	13 49 28.8	-0.1
	1.3nm,0.2s,baz=122,slow=14,SNR=4.0						
ESDC				S	Sn	13 50 28.4	-2.4
	1.5nm,0.2s,baz=122,slow=24,SNR=3.8						
PAB	San Pablo	5.63	305	P	Pn	13 49 31.7	+0.3
	2.8nm,0.3s,SNR=7.9						
PAB				S	Sn	13 50 32.8	-2.5
	0.8nm,0.2s,SNR=7.9						
ECAB	El Cabril	5.84	288	P	Pn	13 49 34.0	-0.2
	1.3nm,0.2s,SNR=7.9						
ECAB				S	Sn	13 50 37.9	-2.6
	1.9nm,0.3s,SNR=7.9						
CSOR	Sort	5.91	356	P	Pn	13 49 36.8	+1.5
	4.3nm,0.3s,SNR=7.9						
CSOR				S	Sn	13 50 40.1	-2.1
	2.0nm,0.2s,SNR=7.9						
CLLI	Llivia	6.00	2	P	Pn	13 49 38.0	+1.4
	1.6nm,0.3s,SNR=7.9						
CLLI				S	Sn	13 50 42.0	-2.7
	1.1nm,0.3s,SNR=7.9						
EJON	La Jonquera	6.05	9	P	Pn	13 49 38.0	+0.9
	1.2nm,0.3s,SNR=7.9						
EJON				S	Sn	13 50 42.2	-3.4
	2.7nm,0.4s,SNR=7.9						
ECHI	Chisagues Biel	6.28	350	P	Pn	13 49 42.7	+2.3
	0.7nm,0.2s,SNR=7.9						
ECHI				S	Sn	13 50 48.4	-3.1
	1.0nm,0.3s,SNR=7.9						
MDT	Midelt	6.30	236	P	Pn	13 49 43.7	+3.1
EPF	Esparros	6.62	352	*e*Pn	Pn	13 49 46.3	+1.3
EPF				*e*Sn	Sn	13 50 57.7	-2.1
	0.6nm,0.2s						
ETSF	Etsaut	6.63	346	*e*Pn	Pn	13 49 46.3	+1.1
ETSF				*e*Sn	Sn	13 50 57.3	-2.8
	0.8nm,0.3s						
EMIN	Mina Concepcio	6.75	284	P	Pn	13 49 46.9	+0.1
	1.2nm,0.3s,SNR=7.9						
EMIN				S	Sn	13 50 59.2	-3.8
	2.5nm,0.4s,SNR=7.9						
MTLF	Montolieu	6.88	4	*e*Pn	Pn	13 49 49.4	+1.0
SJPF	Ste Jean	6.99	343	*e*Pn	Pn	13 49 51.7	+1.7
SJPF				*e*Sn	Sn	13 51 05.5	-3.1
	0.5nm,0.3s						
PVAQ	Vaqueiros	7.54	280	*e*P	Pn	13 49 57.5	-0.1
PVAQ				*e*S	Sn	13 51 17.7	-4.6
PVAQ	Vaqueiros	7.54	280	P	Pn	13 49 57.5	-0.1
PVAQ				S	Sn	13 51 20.4	-1.9
PESTR	Estremoz	7.69	291	P	Pn	13 50 02.0	+2.3
PESTR				S	Sn	13 51 25.7	-0.3
LASF	Ste Croix	7.78	12	*e*Pn	Pn	13 50 02.2	+1.3
ELAN	Lanestosa	7.79	332	P	Pn	13 50 03.7	+2.6
	4.4nm,0.2s,SNR=7.9						
LMR	La Mourre	7.81	27	*e*Pn	Pn	13 50 02.5	+1.2
LMR				*e*Sn	Sn	13 51 26.3	-2.6
	1.6nm,0.3s						
FRF	La Foret Royal	8.06	27	*e*Pn	Pn	13 50 06.1	+1.4
FRF				*e*Sn	Sn	13 51 32.0	-3.0
	3.8nm,0.4s						
SMRF	Simiane la Rot	8.08	21	*e*Pn	Pn	13 50 06.6	+1.6
MVO	Moncorvo	8.22	307	*e*S	Sn	13 51 38.4	-0.7
PMTG	Montargil	8.22	291	*e*S	Sn	13 51 37.7	-1.3
PNCL	Nicolau / Gran	8.26	284	*e*P	Pn	13 50 07.0	-0.4
PGF	Pioggiola	8.32	41	*e*Pn	Pn	13 50 10.6	+2.2
PGF				*e*Sn	Sn	13 51 39.0	-2.7
	0.8nm,0.3s						
CAF	Calviac	8.45	2	*e*Pn	Pn	13 50 11.0	+0.9
CAF				*e*Sn	Sn	13 51 41.0	-3.7
	0.4nm,0.2s						
ECAL	Calabor	8.48	313	P	Pn	13 50 12.9	+2.3
	3.0nm,0.2s,SNR=7.9						
EARI	Arriondas	8.61	325	P	Pn	13 50 14.1	+1.9
	2.2nm,0.3s,SNR=7.9						
SBF	Sospel	8.62	29	*e*Pn	Pn	13 50 13.8	+1.4
MBDF	Montbardon	9.12	24	*e*Pn	Pn	13 50 20.6	+1.2

IDC ***28*** *13:50:44.9±3.8, 38°.63N×20°.69E, h0^{km}, mb3.8/4, mb1 3.7/6, mb1mx3.4/49, mbtmp3.7/6, ML3.1/2, Error ellipse: s-maj=81.3km s-min=21.6km az=50.0*
ATH ***28*** *13:50:45.4, 38°.45N×20°.52E, h7^{km}±1^{km}, ML2.9/8, Error ellipse: s-maj=2.0km s-min=0.6km az=110.0*
THE ***28*** *13:50:45.5, 38°.44N×20°.53E, h0^{km}±2^{km}, ML3.2/5, Error ellipse: s-maj=2.6km s-min=0.5km az=83.0*
ISC 28 13:50:44.7±0.8**, 38°.46N**±0°.02×**20°.47E**±0°.03**, h12**^{km}±5^{km}**, n58, σ1^{s}.47**/88**, mb3.8**/4**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.07	90	P	Pg	13 50 46.7	-0.5
FSK				S	Sg	13 50 47.3	-1.8
FSK				AML	AML	13 50 47.8	
FSK				AML	AML	13 50 48.0	
KEF4	Livadi, Kephal	0.20	190	P	Pg	13 50 49.4	+0.3
KEF4				S	Sg	13 50 52.8	+0.7
KEF4	Livadi, Kephal	0.20	190	P	Pg	13 50 49.4	+0.3
KEF4				S	Sg	13 50 52.6	+0.5
EVGI	Lefkada island	0.22	42	P	Pg	13 50 49.6	+0.2
EVGI				S	Sg	13 50 52.9	+0.3
EVGI	Lefkada island	0.22	42	P	Pg	13 50 49.6	+0.2
EVGI				S	Sg	13 50 52.6	0.0
DMLN	Damoulianata-K	0.23	199	P	Pg	13 50 50.0	+0.4
DMLN				S	Sg	13 50 53.8	+0.9
DMLN	Damoulianata-K	0.23	199	P	Pg	13 50 50.0	+0.4
DMLN				S	Sg	13 50 53.6	+0.6
DRAG	Dragano-Lefkad	0.24	20	P	Pg	13 50 50.0	+0.3
DRAG				S	Sg	13 50 53.9	+0.7
	13µm,0.4s						
DRAG	Dragano-Lefkad	0.24	20	P	Pg	13 50 50.1	+0.3
LXRA	Lixouri, Kepha	0.26	185	P	Pg	13 50 50.6	+0.5
LXRA				S	Sg	13 50 54.4	+0.7
KEF3	Kipouria, Keph	0.27	200	P	Pg	13 50 50.2	-0.1
KEF3				S	Sg	13 50 54.7	+0.6
KEF3	Kipouria, Keph	0.27	200	P	Pg	13 50 50.6	+0.3
KEF3				S	Sg	13 50 54.7	+0.6
VLS	Valsamata	0.30	161	P	Pg	13 50 50.6	-0.2
VLS				S	Sg	13 50 55.1	+0.3
	11µm,0.4s						
VLS	Valsamata	0.30	161	P	Pg	13 50 50.6	-0.2
VLS				S	Sg	13 50 55.1	+0.3
VLS				AML	AML	13 50 55.7	
	comp=E,20645µm,0.5s						
VLS				AML	AML	13 50 55.8	
	comp=N,21598µm,0.3s						
NYDR	Nydri-Lefkada	0.31	35	P	Pg	13 50 51.2	+0.2
NYDR	Nydri-Lefkada	0.31	35	P	Pg	13 50 51.3	+0.2
PSDA	Pessada-Kefalo	0.36	165	P	Pg	13 50 51.8	0.0
PSDA				S	Sg	13 50 57.2	+0.6
PSDA	Pessada-Kefalo	0.36	165	P	Pg	13 50 51.8	0.0
PSDA				S	Sg	13 50 57.2	+0.6
LKD2	Lefkada island	0.36	24	P	Pg	13 50 52.1	+0.2
LKD2				S	Sg	13 50 57.4	+0.6
	comp=N,2µm,0.7s						
LKD2	Lefkada island	0.36	24	P	Pg	13 50 52.1	+0.2
LKD2				S	Sg	13 50 57.4	+0.6
LKD2				AML	AML	13 51 06.2	
	comp=N,3528µm,0.6s						
LKD2				AML	AML	13 51 07.6	
	comp=E,4936µm,0.7s						
TSLK	Tsoukalades, L	0.39	22	P	Pg	13 50 53.0	+0.4
TSLK				S	Sg	13 50 59.7	+1.9
	comp=E,3µm,0.5s						
TSLK	Tsoukalades, L	0.39	22	P	Pg	13 50 53.0	+0.4
VTN	Vitineika	0.78	134	P	Pb	13 50 59.7	-0.5
VTN	Vitineika	0.78	134	P	Pb	13 50 59.7	-0.5
LTHK	Lithakia	0.80	159	P	Pb	13 50 59.3	-1.2
LTHK				S	Sg	13 51 12.0	+1.3
	comp=E,3µm,0.4s						
RLS	Riolos of Patr	0.88	117	P	Pb	13 51 01.1	-0.8
RLS	Riolos of Patr	0.88	117	P	Pb	13 51 01.3	-0.6
RLS				AML	AML	13 51 18.5	
	comp=N,1128µm,0.4s						
RLS				AML	AML	13 51 20.3	
	comp=E,1265µm,0.4s						
IGT	Igoumenitsa	1.08	354	P	Pb	13 51 05.5	+0.3
IGT	Igoumenitsa	1.08	354	P	Pb	13 51 05.5	+0.3
IGT				AML	AML	13 51 25.7	
	comp=N,901µm,0.4s						
IGT				AML	AML	13 51 28.5	
	comp=E,1328µm,0.5s						
EVR	Evrytania	1.14	66	P	Pn	13 51 05.8	-0.8
EVR	Evrytania	1.14	66	P	Pn	13 51 05.8	-0.8
EVR				AML	AML	13 51 29.7	
	comp=N,842µm,0.5s						
EVR				AML	AML	13 51 33.5	
	comp=E,699µm,0.6s						
ANX	Ano Chora	1.15	83	P	Pn	13 51 05.6	-1.0
JAN	Janina	1.23	14	P	Pg	13 51 09.7	+1.3
JAN	Janina	1.23	14	P	Pn	13 51 07.8	+0.1
JAN				AML	AML	13 51 30.4	
	comp=N,823µm,0.6s						
JAN				AML	AML	13 51 31.4	
	comp=E,1793µm,0.6s						
KEK	Kerkira	1.36	338	P	Pg	13 51 12.2	+1.5
KLV	Kalavryta, Ach	1.39	107	P	Pn	13 51 09.1	-0.8
MAKR	Makrakomi, Fth	1.41	66	P	Pn	13 51 10.5	+0.3
MAKR	Makrakomi, Fth	1.41	66	P	Pn	13 51 10.5	+0.3
MAKR				AML	AML	13 51 38.0	
	comp=N,591µm,0.5s						
MAKR				AML	AML	13 51 39.1	
	comp=E,848µm,0.6s						
KPRO	Kipourio	1.65	25	P	Pg	13 51 17.0	+0.7
ITM	Ithomi	1.72	137	P	Pb	13 51 17.7	+1.5
IDI	Anoyia	4.75	130	Pn	Pn	13 51 58.7	+2.5
	comp=E,0.3nm,0.3s,baz=326,slow=18,SNR=2.3						
IDI				Sn	Sn	13 52 52.5	+1.3
	comp=E,0.6nm,0.3s,baz=278,slow=19,SNR=2.1						
STON	Ston	4.88	335	*e*Pn	Pn	13 51 58.0	+0.1
STON				Sn	Sn	13 52 51.5	-2.8
LSTV	Lastovo	5.09	329	*e*Pn	Pn	13 52 00.5	-0.3
LSTV				Sn	Sn	13 52 55.5	-3.9
MAKA	Makarska	5.49	333	*e*Pn	Pn	13 52 07.0	+0.8
MAKA				Sn	Sn	13 53 05.5	-3.6
HVAR	Hvar	5.61	328	*e*Pn	Pn	13 52 07.8	-0.1
HVAR				Sn	Sn	13 53 07.9	-4.3
RICI	Ricice	5.63	334	*e*Pn	Pn	13 52 07.7	-0.4
RICI				Sn	Sn	13 53 10.3	-2.3
KIJV	Kijevo	6.33	332	*e*Pn	Pn	13 52 18.3	+0.5
KIJV				Sn	Sn	13 53 26.0	-4.0
ZIRJ	Zirje	6.34	326	*e*Pn	Pn	13 52 16.9	-1.0
ZIRJ				Sn	Sn	13 53 26.2	-4.0
MORI	Morici	6.49	328	*e*Pn	Pn	13 52 20.2	+0.3
MORI				Sn	Sn	13 53 29.8	-4.0
DUGI	Dugi Otok	6.87	325	*e*Pn	Pn	13 52 25.4	+0.2
DUGI				Sn	Sn	13 53 37.8	-5.4
UDBI	Udbina	7.01	331	*e*Pn	Pn	13 52 27.9	+0.7
UDBI				Sn	Sn	13 53 44.1	-2.8
NVLJ	Novalja	7.40	327	*e*Pn	Pn	13 52 32.3	-0.2
NVLJ				Sn	Sn	13 53 51.8	-4.5
BRJN	Brijuni	8.17	324	*e*Pn	Pn	13 52 42.0	-0.9
BRJN				Sn	Sn	13 54 09.2	-5.9
GERES	GERESS Array B	11.47	337	Pn	Pn	13 53 29.5	+1.1
	comp=E,0.1nm,0.3s,baz=161,slow=15,SNR=2.3						
HFS	Hagfors	22.12	351	P	P	13 55 40.9	+1.2
	comp=E,3.3nm,0.9s,baz=179,slow=14,SNR=2.3						
FINES	FINESS Array B	23.27	7	P	P	13 55 52.5	+0.7
	comp=E,2.3nm,0.8s,baz=169,slow=9.9,SNR=6.0						
MKAR	Makanchi Array	45.19	59	P	P	13 59 01.2	-0.1
	comp=E,1.1nm,0.9s,baz=279,slow=7.0,SNR=9.6						
ZALV	Zalesovo Beam	45.53	48	P	P	13 59 03.9	0.0
	comp=E,1.1nm,0.4s,baz=283,slow=8.0,SNR=4.8						

IDC 28 14:05:10.1±1.6**, 1°.15N×125°.73E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.6**/37**, mbtmp3.7**/4**, ML3.3**/1**, Error ellipse: s-maj=113.6km s-min=23.6km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.13	180	P	Pn	14 09 36.7	+1.0
	0.1nm,0.3s,baz=3.8,slow=14,SNR=3.8						
WRA	Warramunga Arr	22.60	158	P	P	14 10 11.9	-0.7
	1.8nm,0.4s,baz=334,slow=11,SNR=27						
ASAR	Alice Springs	25.92	163	P	P	14 10 44.0	-0.2
	0.6nm,0.4s,baz=345,slow=10,SNR=22						
ASAR				PcP	PcP	14 14 12.8	-0.6
	0.3nm,0.5s,baz=337,slow=2.0,SNR=6.1						
MKAR	Makanchi Array	59.11	327	P	P	14 15 12.6	+0.1
	0.3nm,0.4s,baz=115,slow=8.1,SNR=6.2						

BJI ***28*** *14:08:57.8±0.0, 17°.85S×172°.25W, h10^{km}, mB5.4/3, mb5.0/17, Ms4.9/2, Ms7 4.7/2*
IDC ***28*** *14:08:58.5±0.9, 18°.05S×172°.53W, h0^{km}, mb4.5/14, mb1 4.7/15, mb1mx4.5/32, mbtmp4.5/15, ML3.9/1, MS3.9/6, Ms1 3.9/6, ms1mx3.5/40, Error ellipse: s-maj=39.4km s-min=16.6km az=152.0*
NOU ***28*** *14:09:00.9, 17°.50S×172°.14W, h0^{km}, mb5.0/12, Tonga Islands Region*
NEIC ***28*** *14:09:01.4±1.2, 17°.6S±0°.1×172°.9W±0°.1, h10^{km}±1^{km}, mb4.8/52, Error ellipse: s-maj=18.1km s-min=16.0km az=135.0*
ISC 28 14:09:01.6±0.5**, 17°.5S**±0°.1×**172°.9W**±0°.1**, h10**^{km}**, n161, σ1^{s}.47**/148**, mb4.7**/43**, MS3.8**/7**, 20C-10D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	3.22	119		Pn	14 09 42.9	-9.3
NIUE	Niue	3.22	119	P	Pn	14 09 42.9	-9.3
MSVF	Nonsavu	8.64	267	Pn	Pn	14 11 15.2	+8.4
	0.6nm,0.3s,baz=130,slow=13,SNR=10						
MSVF				LR	LR	14 14 06.8	
	comp=Z,711nm,21.3s,baz=101,slow=34						
MSVF	Nonsavu	8.64	267	Pn	Pn	14 11 07.5	+0.7
MSVF	Nonsavu	8.64	267	P	Pn	14 11 15.1	+8.3
RAR	Rarotonga	12.92	109	Pn	Pn	14 11 55.1	-10
	6.6nm,0.3s,baz=265,slow=8.3,SNR=13						
RAR				LR	LR	14 15 10.7	
	comp=Z,339nm,19.2s,baz=280,slow=30						
RAR	Rarotonga	12.92	109		Pn	14 11 52.2	-13
RAR	Rarotonga	12.92	109	P	Pn	14 11 56.2	-9.1
LIFNC	LIFOU	19.05	257	P	P	14 13 22.5	-1.6
LIFNC				IAmb	IAmb	14 13 40.6	
	comp=Z,135nm,1.2s						
PINNC	Pines Island,	19.15	251		P	14 13 24.3	-0.8
PINNC				IAmb	IAmb	14 13 48.5	
	comp=Z,90nm,1.4s						
PINNC	Pines Island,	19.15	251	P	Pn	14 13 33.1	+7.1
DZM	Mont Dzumac	19.96	254	P	Pn	14 13 38.1	+2.2
	comp=Z,4.9nm,0.8s,baz=97,slow=17,SNR=6.4						
DZM				LR	LR	14 20 31.1	
	comp=Z,251nm,18.5s,baz=54,slow=34						
DZM	Mont Dzumac	19.96	254	*e*LR	LR	14 18 29.8	
	comp=Z,372nm,24.2s						
HAZ	Te Kaha	21.77	200	P	P	14 13 55.0	+1.6
RUGZ	Raukumara Rang	21.99	200	P	P	14 13 58.6	+2.6
TWGZ	Tauwhareparae	22.09	199	P	P	14 13 58.9	+1.9
PPT2	Papeete2	22.23	94	*e*LR	LR	14 18 41.4	
	comp=Z,419nm,27.5s						
PPT	Papeete	22.23	94	LR	LR	14 21 01.5	
	comp=Z,367nm,18.1s,baz=296,slow=33						
MWZ	Matawai	22.38	200	P	P	14 14 01.6	+1.5
URZ	Urewera	22.45	201	P	P	14 14 00.8	+0.1
	comp=Z,47nm,0.8s,baz=304,slow=23,SNR=17						
RAGZ	Rawiri	22.56	200	P	P	14 14 04.4	+2.4
TOZ	Tahuroa Road	22.58	205	P	P	14 14 04.3	+2.2
TBI	Tubuai	22.70	109	*e*LR	LR	14 19 00.9	
	comp=Z,380nm,32.2s						
SNGZ	Shannon Statio	22.84	200	P	P	14 14 06.4	+1.5
RAHZ	Arahi	23.05	200	P	P	14 14 07.7	+0.6
MTHZ	Maungataniwha	23.07	201	P	P	14 14 07.5	+0.1
BKZ	Black Stump Fm	23.47	201	P	P	14 14 10.7	-0.7
BKZ	Black Stump Fm	23.47	201	P	P	14 14 10.4	-1.0
BKZ				IAmb	IAmb	14 14 23.9	
	comp=Z,26nm,0.8s						
BKZ	Black Stump Fm	23.47	201	P	P	14 14 16.1	+4.7
HIZ	Hauiti	23.51	205	P	P	14 14 14.6	+2.9
HIZ	Hauiti	23.51	205	P	P	14 14 16.3	+4.6
KRVZ	Karewarewa	23.71	203	P	P	14 14 14.4	+0.5
ETVZ	East Tongariro	23.72	202	P	P	14 14 14.5	+0.5
SNVZ	South Ngauruho	23.79	203	P	P	14 14 15.8	+1.1
BHHZ	Black Hill Sta	23.91	201	P	P	14 14 17.6	+1.8
BFZ	Birch Farm	24.92	200	P	P	14 14 28.6	+3.7
TUWZ	Tuamarina	26.38	203	P	P	14 14 37.0	-1.1
QRZ	Quartz Range	26.41	205	P	P	14 14 41.7	+3.3
THZ	Tophouse	27.06	204	P	P	14 14 42.6	-1.7
THZ				IAmb	IAmb	14 15 05.8	
	comp=Z,14nm,0.9s						
HNR	Honiara	27.58	283	LR	LR	14 25 50.4	
	comp=Z,300nm,18.2s,baz=108,slow=36						
TAOE	Nuku Hiva Isla	32.98	79	*e*LR	LR	14 23 53.7	
	comp=Z,165nm,20.4s						
EIDS	Eidsvold	34.35	251	P	P	14 15 48.2	-0.6
EIDS				IAmb	IAmb	14 15 51.0	
	comp=Z,21nm,1.2s						
CAN	Canberra	38.17	235	P	P	14 16 19.8	-1.7
CAN				IAmb	IAmb	14 16 23.0	
	comp=Z,33nm,1.5s						
CTA	Charters Tower	38.69	260	P	P	14 16 26.0	0.0
	comp=Z,5.4nm,0.8s,baz=90,slow=8.2,SNR=1.7						
CTAO	Charters Tower	38.69	260	P	P	14 16 23.9	-2.0
CTAO				IAmb	IAmb	14 16 46.1	
	comp=Z,30nm,1.5s						
KKO	Keanakako`i	40.56	26	P	P	14 16 41.0	-0.6
TOO	Toolangi	41.55	233	P	P	14 16 48.4	-1.0
TOO				IAmb	IAmb	14 17 02.3	
	comp=Z,17nm,1.4s						
COEN	Coen	42.37	268	P	P	14 16 55.4	-1.0
COEN				IAmb	IAmb	14 17 19.3	
	comp=Z,24nm,1.3s						
STKA	Stephens Creek	43.44	242	P	P	14 17 03.6	-1.4
	comp=Z,5.0nm,0.8s,baz=76,slow=6.1,SNR=8.3						
STKA	Stephens Creek	43.44	242	P	P	14 17 04.1	-0.9
BBOO	Buckleboo	48.21	241	P	P	14 17 40.9	-1.7
WB0	Warramunga Arr	49.84	259	P	P	14 17 53.5	-1.8
WB0				IAmb	IAmb	14 18 12.3	
	comp=Z,10nm,1.0s						
WB2	Warramunga Arr	49.86	258	P	P	14 17 53.1	-2.3
WB2				IAmb	IAmb	14 18 09.8	
	comp=Z,17nm,1.2s						
WRA	Warramunga Arr	49.87	258	P	P	14 17 54.0	-1.5
	comp=Z,3.6nm,0.5s,baz=97,slow=7.5,SNR=46						
WRA	Warramunga Arr	49.87	258	P	P	14 17 53.8	-1.7
AS31	Alice Springs	49.95	254	P	P	14 17 55.0	-1.2
AS31				IAmb	IAmb	14 17 58.8	
	comp=Z,6.4nm,0.7s						
ASAR	Alice Springs	49.95	254	P	P	14 17 55.2	-0.9
	comp=Z,22nm,0.7s,baz=89,slow=8.8,SNR=345						
ASAR				S	S	14 25 02.1	-4.8
	comp=Z,0.6nm,0.8s,baz=94,slow=15,SNR=2.9						
ASAR	Alice Springs	49.95	254	P	P	14 17 55.1	-1.1
FITZ	Fitzroy Crossi	58.27	259	P	P	14 18 57.0	+0.2
	comp=Z,2.6nm,0.9s,baz=63,slow=6.8,SNR=2.0						
PSA00	Pilbara Seismi	63.09	254	P	P	14 19 27.9	-1.9
PSA00				IAmb	IAmb	14 19 33.1	
	comp=Z,20nm,1.2s						

SHEM	Shemya Is, Ala	70.85	352	LR	LR	14 47 59.3	
	comp=Z,187nm,20.1s,baz=142,slow=33						
MJAR	Matsushiro Arr	70.86	320	P	P	14 20 19.6	+0.8
	comp=Z,3.4nm,1.0s,baz=159,slow=3.7,SNR=3.5						
JAGI	Jajag, Banyuwa	71.31	267	P	P	14 20 21.4	-0.7
QSPA	South Pole Qui	72.54	180	P	P	14 20 28.1	-0.6
QSPA				IAmb	IAmb	14 20 30.9	
	comp=Z,5.8nm,0.9s						
PEA0B	Petropavlovsk-	74.78	342	P	P	14 20 42.3	+0.6
PETK	Petropavlovsk-	74.78	342	P	P	14 20 42.9	+1.2
	comp=Z,3.9nm,0.8s,baz=140,slow=7.5,SNR=3.2						
PETK	Petropavlovsk-	74.78	342	P	P	14 20 42.4	+0.7
UGM	Wanagama	74.92	266	P	P	14 20 42.9	-0.5
LCH	Last Change Ra	75.29	43	P	P	14 20 45.0	-0.2
YERR	Yerington	75.32	40	P	P	14 20 45.4	0.0
NVAR	Mina Array Bea	75.57	41	P	P	14 20 46.8	-0.1
	comp=Z,1.8nm,0.8s,baz=228,slow=8.8,SNR=12						
NVAR	Mina Array Bea	75.57	41	P	P	14 20 46.5	-0.4
NV11	Mina Array Sit	75.67	41	P	P	14 20 46.2	-1.2
TPH	Tonopah	76.05	42	P	P	14 20 49.2	-0.4
KVN	Kaiserville	76.07	41	P	P	14 20 49.1	-0.6
YHNB	Yeheng	76.55	301	P	P	14 20 51.6	-1.0
TPUB	Ta-pu	76.56	300	P	P	14 20 52.7	+0.1
K05A	Summer Lake	76.66	37	P	P	14 20 53.3	+0.3
K05A				IAmb	IAmb	14 21 02.6	
	comp=Z,9.3nm,1.2s						
PINE	Pine Mountain	77.31	36	P	P	14 20 57.0	+0.4
PINE				IAmb	IAmb	14 21 12.6	
	comp=Z,8.6nm,1.1s						
TUC	Tucson	77.35	50	P	P	14 20 56.7	-0.3
TUC				IAmb	IAmb	14 21 21.2	
	comp=Z,5.9nm,1.1s						
LEM	Lembang	77.99	267	P	P	14 21 02.8	+1.7
	comp=Z,15nm,0.4s,baz=72,slow=6.2,SNR=6.3						
WISH	Wishkah	77.99	32	P	P	14 21 00.3	+0.3
KSRS	Korea Array	78.00	316	P	P	14 21 03.0	+2.7
	comp=Z,2.8nm,1.0s,baz=128,slow=6.1,SNR=8.0						
KNB	Kanab	78.36	45	P	P	14 21 02.9	+0.4
KNB				IAmb	IAmb	14 21 08.3	
	comp=Z,8.9nm,1.5s						
SPR3	Spring Creek 3	78.44	43	P	P	14 21 02.9	-0.3
ELK	Elko	78.84	41	P	P	14 21 04.6	-0.6
G08A	Pilot Rock	79.36	35	P	P	14 21 07.2	-0.6
MSU	Marysvale	79.59	44	P	P	14 21 09.1	-0.3
121A	Cookes Peak, D	79.68	51	P	P	14 21 09.8	-0.1
121A				IAmb	IAmb	14 21 15.4	
	comp=Z,7.6nm,1.1s						
F10A	Beach Ranch, E	80.73	36	P	P	14 21 14.2	-1.0
F10A				IAmb	IAmb	14 21 32.4	
	comp=Z,6.5nm,1.1s						
HLID	Hailey	80.95	39	P	P	14 21 16.3	-0.3
ANMO	Albuquerque	81.79	50	P	P	14 21 20.6	-0.6
NJ2	Nanjing	81.82	307	*e*P	P	14 21 22.3	+1.2
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
MCMT	McKenzie Canyo	82.59	38	P	P	14 21 24.6	-0.6
MCK	McKinley	83.10	10	P	P	14 21 27.1	-0.1
BW06	Boulder Array	83.51	41	P	P	14 21 29.0	-1.0
PD31	Pinedale Array	83.51	41	P	P	14 21 29.1	-0.9
PDAR	Pinedale Array	83.51	41	P	P	14 21 29.2	-0.8
	comp=Z,2.0nm,0.8s,baz=215,slow=2.9,SNR=13						
BOZ	Bozeman (W)	83.73	38	P	P	14 21 30.8	-0.2
BOZ				IAmb	IAmb	14 21 47.2	
	comp=Z,7.9nm,1.4s						
WRH	Wood River Hil	83.93	11	P	P	14 21 30.6	-0.7
CCB	Clear Creek Bu	84.14	11	P	P	14 21 32.1	-0.3
CCB				IAmb	IAmb	14 21 34.4	
	comp=Z,7.8nm,1.0s						
HRY	Holter Researc	84.22	37	P	P	14 21 32.8	-0.6
TCOL	CIGO, UAF Yank	84.33	10	P	P	14 21 32.9	-0.5
COLA	College	84.34	10	P	P	14 21 33.0	-0.4
IL31		84.41	11	P	P	14 21 33.4	-0.4
IL31				IAmb	IAmb	14 21 49.7	
	comp=Z,5.0nm,0.9s						
ILAR	Eielson Array	84.41	11	P	P	14 21 33.4	-0.4
	comp=Z,1.7nm,0.8s,baz=226,slow=5.5,SNR=16						
POKR	Poker Plat Res	84.63	11	P	P	14 21 34.8	-0.2
POKR				IAmb	IAmb	14 21 37.0	
	comp=Z,11nm,0.9s						
DAWY	Dawson	85.34	14	P	P	14 21 38.6	0.0
DAWY				IAmb	IAmb	14 21 41.4	
	comp=Z,9.7nm,1.1s						
BILL	Bilibino	86.66	352	P	P	14 21 45.1	+0.2
BILL				IAmb	IAmb	14 22 05.2	
	comp=Z,15nm,1.2s						
BMAR	Burnt Mountain	87.23	11	P	P	14 21 48.0	+0.2
GYA	Guiyang	89.46	298	⇓P	P	14 22 02.3	+2.9
GYA				pmax	pmax		
	comp=Z,13nm,1.6s						
XAN	Xi'an	90.25	306	P	P	14 22 04.5	+1.6
XAN				sP	pwP	14 22 15.5	+4.8
XAN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
HHC	Hu-ho-hao-te	90.81	313	*e*P	P	14 22 03.0	-2.4
HHC				pmax	pmax		
	comp=Z,19nm,1.4s						
HHC				LR	LR		
	comp=Z,160nm,18.1s						
HHC				LR	LR		
	comp=Z,250nm,19.8s						
HHC				LR	LR		
	comp=Z,290nm,21.1s						
YKA	Yellowknife Ar	91.83	23	P	P	14 22 09.3	-0.1
	comp=Z,1.0nm,0.9s,baz=237,slow=4.3,SNR=9.9						
KMI	Kunming	92.37	295	⇑P	P	14 22 13.5	+0.4
KMI				pP	sP	14 22 17.3	+1.7
KMI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CMAR	Chiang Mai Arr	93.73	288	P	P	14 22 21.7	+2.4
	comp=Z,1.1nm,0.7s,baz=99,slow=2.5,SNR=9.8						
MKAR	Makanchi Array	112.64	314	PKiKP	PKiKP	14 27 37.8	-0.7
	comp=Z,1.0nm,0.9s,baz=105,slow=2.3,SNR=3.2						
AKASG	Malin Array Be	142.46	337	PKhKP	PKPpre	14 28 27.9	
	comp=Z,0.6nm,0.6s,baz=32,slow=4.2,SNR=2.0						
SORM	Soroca	144.87	335	⇑P	PKPdf	14 28 38.7	-0.2
KMBO	Kilima Mbogo	145.00	241	PKPbc	PKPdf	14 28 41.0	+0.4
	comp=Z,5.1nm,0.9s,baz=97,slow=5.3,SNR=8.0						
KWP	Kalwaria Pacla	145.57	342	*e*PKP	PKPab	14 28 41.5	+1.0
OJC	Ojcow	145.81	345	*e*PKP	PKPab	14 28 42.1	+0.8
KSP	Ksiaz	145.95	350	*e*PKP	PKPab	14 28 42.4	+0.5
CHVC	Chvalec	146.23	350	*e*PKP	PKPab	14 28 43.9	+0.9
OSTC	Ostas	146.24	350	⇑*e*PKP	PKPab	14 28 43.7	+0.7
UPC	Upice	146.32	350	⇑*e*PKP	PKPab	14 28 44.1	+0.8
DPC	Dobruska-Polom	146.41	349	⇑*e*PKP	PKPab	14 28 44.3	+0.6
NIE	Niedzica	146.43	344	*e*PKP	PKiKP	14 28 45.4	-0.6
BUR01	Bucovina Ar. S	146.50	338	⇑P	PKiKP	14 28 48.7	+2.5
KRLC	Kraliky	146.59	349	⇑*e*PKP	PKPab	14 28 44.6	+0.2
MORC	Moravsky Berou	146.73	348	⇓P	PKPab	14 28 45.1	+0.2
MORC	Moravsky Berou	146.73	348	*e*PKP	PKPab	14 28 45.0	+0.1
LANS	Liptovska Anna	146.89	345	*e*PKP	PKiKP	14 28 46.4	-0.5
PRU	Pruhonice	147.05	351	⇑*i*PKP	PKPab	14 28 46.0	-0.1
CFR	Carcaliu	147.29	332	⇑P	PKPbc	14 28 45.6	+0.2
VRI	Vrincioaia	147.35	334	⇓P	PKPab	14 28 46.6	-0.8
VRAC	Vranov	147.37	348	*e*PKP	PKPab	14 28 46.9	-0.5
TPGR	Topolog	147.41	331	⇓P	PKPab	14 28 47.4	-0.3
JAVC	Velka Javorina	147.57	347	*e*PKP	PKiKP	14 28 47.5	-0.8
KRUC	Moravsky	147.64	349	*e*PKP	PKPbc	14 28 46.9	+0.6
VYHS	Vyhne	147.65	345	*e*PKP	PKPbc	14 28 47.1	+0.7
GRF	Grafenberg Arr	147.73	355	*e*PKPbc	PKiKP	14 28 48.1	-0.5
	baz=350,slow=2.2						
HARR	Harsova	147.76	332	⇓P	PKiKP	14 28 48.2	-0.5
DOPR	Dopca	147.81	336	⇓P	PKiKP	14 28 48.3	-0.6
PSZ	Piszkesteto	147.91	344	⇑P	PKPab	14 28 50.4	+0.7
MLR	Muntele Rosu	147.98	335	⇑P	PKPbc	14 28 47.7	+0.2
MLR				⇑P	PKiKP	14 28 48.5	-0.9
KHC	Kasperske Hory	148.03	352	⇑*i*PKP	PKiKP	14 28 48.9	-0.3
DRGR		148.08	340	⇑P	PKPbc	14 28 48.5	+0.8
BRTR	Keskin Array B	148.08	319	PKPbc	PKiKP	14 28 49.4	-0.4
	comp=Z,4.8nm,0.9s,baz=106,slow=3.2,SNR=10.0						
MODS	Modra-Piesok	148.12	347	*e*PKP	PKPbc	14 28 48.0	+0.4
CKRC	Cesky Krumlov	148.23	351	⇑*i*PKP	PKPab	14 28 50.3	-0.5
GERES	GERESS Array B	148.29	352	PKPbc	PKPbc	14 28 49.0	+0.8
	comp=Z,2.7nm,0.8s,baz=29,slow=3.0,SNR=23						
VOIR		148.38	336	⇑P	PKiKP	14 28 50.4	+0.3
ARR	Arges	148.60	336	⇑P	PKiKP	14 28 50.9	+0.3
SIRR	Siria	148.88	340	⇓P	PKPbc	14 28 49.2	-0.5
GZR	Gura Zlata	149.27	338	⇓P	PKiKP	14 28 53.2	+1.2
BZS	Buzias	149.47	340	⇑P	PKPbc	14 28 51.7	+0.5
MORH	Mrgy, Hungar	149.82	344	⇓P	PKPbc	14 28 50.5	-1.4
HERR	Herculane	149.84	338	⇑P	PKiKP	14 28 52.6	-0.5
FRGS	Fruska Gora	150.46	342	⇑P	PKPbc	14 28 53.6	0.0
VTS	Vitosha	151.45	335	⇓P	PKPbc	14 28 53.6	-2.5

IDC ***28*** *14:15:10.0±4.3, 31°.95S×178°.45W, h0km, mb4.5/3, mb1 4.6/3, mb1mx4.0/35, mbtmp4.5/3, Error ellipse: s-maj=208.6km s-min=40.4km az=164.0*

NEIC ***28*** *14:16:07.8±2.5, 30°.9S±0°.1×179°.5E±0°.2, h449km±10km, mb4.1/11, Error ellipse: s-maj=26.3km s-min=21.2km az=94.0*

WEL ***28*** *14:16:15.5±0.7, 32°S±10°×18°0E±2°6, h461km±14km, M4.0/18, mB4.3/8, ML4.6/6, MLv4.7/18, Mw(mB)3.5/8, Error ellipse: s-maj=0.0km s-min=0.0km az=108.5*

ISC 28 14:16:07.6±0.9**, 30°.85S**±0°.08×**179°.4E**±0°.1**, h450km, n73, σ2ˢ.12**/75**, mb4.2**/10**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.80	56	P	P	14 17 20.0	+6.7
GLKZ				S	S	14 18 16.4	+10
RAO	Raoul Island	2.81	56	P	P	14 17 11.9	-1.4
OUZ	Omahuta	6.54	227	P	P	14 17 54.2	+6.8
KUZ	Kuaotunu	6.63	207	P	P	14 17 54.3	+6.0
MXZ	Matakaoa Point	6.76	187	P	P	14 17 54.5	+4.9
MYRZ	Mayor Island	6.93	201	P	P	14 17 57.6	+6.1
WMGZ	Waiomatatini S	7.00	186	P	P	14 17 55.6	+3.4
WMGZ				S	S	14 19 18.3	+0.4
HAZ	Te Kaha	7.02	191	P	P	14 17 56.4	+4.1
HAZ				S	S	14 19 15.8	-2.4
PKGZ	Pakihiroa	7.11	189	P	P	14 17 58.0	+4.6
RUGZ	Raukumara Rang	7.24	191	P	P	14 17 57.5	+2.6
RUGZ				S	S	14 19 21.6	-1.2
PUZ	Puketiti	7.27	187	P	P	14 17 59.9	+4.9
PUZ				S	S	14 19 23.3	+0.1
OPRZ	Ohinepanea	7.37	198	P	P	14 18 00.3	+4.2
TWGZ	Tauwhareparae	7.41	189	P	P	14 17 57.9	+1.3
TWGZ				S	S	14 19 26.3	+0.4
KMRZ	Kaimai	7.55	201	P	P	14 18 03.2	+5.2
TOZ	Tahuroa Road	7.59	204	P	P	14 18 04.6	+6.1
MWZ	Matawai	7.63	191	P	P	14 18 01.1	+2.2
URZ	Urewera	7.63	194	P	P	14 18 01.0	+2.1
URZ				S	S	14 19 27.7	-2.5
URZ	Urewera	7.63	194	P	P	14 18 00.8	+1.9
URZ	Urewera	7.63	194	P	P	14 18 01.2	+2.3
CNGZ	Carnagh Statio	7.68	187	P	P	14 18 04.1	+4.6
TKGZ	Te Karaka	7.68	189	P	P	14 18 02.0	+2.6
TKGZ				S	S	14 19 27.4	-3.7
RAGZ	Rawiri	7.80	192	P	P	14 18 03.2	+2.4
RAGZ				S	S	14 19 12.6	-21
RIGZ	Rimuhau	7.96	189	P	P	14 18 03.9	+1.5
RTZ	Ruatahuna	8.00	194	P	P	14 18 05.4	+2.4
SNGZ	Shannon Statio	8.10	192	P	P	14 18 06.2	+2.3
SNGZ				S	S	14 19 38.7	-0.8
MTHZ	Maungataniwha	8.26	194	P	P	14 18 08.4	+2.7
MTHZ				S	S	14 19 41.5	-1.2
RAHZ	Arahi	8.27	193	P	P	14 18 07.7	+1.9
RAHZ				S	S	14 19 41.4	-1.5
KNZ	Kokohu	8.28	189	P	P	14 18 08.2	+2.4
NMHZ	Naumai	8.50	194	P	P	14 18 10.6	+2.2
HIZ	Hauiti	8.52	205	P	P	14 18 14.4	+6.0
BKZ	Black Stump Fm	8.64	195	P	P	14 18 10.4	+0.7
BKZ	Black Stump Fm	8.64	195	P	P	14 18 11.9	+2.1
OTVZ	Oturere	8.85	199	P	P	14 18 15.1	+2.9
SNVZ	South Ngauruho	8.87	199	P	P	14 18 15.0	+2.5
KWHZ	Kaweka Forest	8.90	195	P	P	14 18 13.5	+0.9
KWHZ				S	S	14 19 52.3	-3.1
TRVZ	Turoa	9.00	199	P	P	14 18 13.6	-0.4
WNVZ	Wahianoa	9.02	199	P	P	14 18 16.5	+2.5
BHHZ	Black Hill Sta	9.04	197	P	P	14 18 15.9	+1.6
MOVZ	Moawhango	9.05	198	P	P	14 18 16.7	+2.5
PKVZ	Pokaka	9.05	200	P	P	14 18 17.4	+3.1
KRHZ	Kereru	9.12	195	P	P	14 18 15.2	+0.2
KAHZ	Kahuranaki	9.16	192	P	P	14 18 18.4	+2.9
PXZ	Pawanui	9.39	192	P	P	14 18 19.3	+1.4
WPHZ	Waipukurau	9.51	194	P	P	14 18 17.1	-2.1
NBEZ	Newall Road No	9.55	207	P	P	14 18 23.6	+4.0
BFZ	Birch Farm	10.14	194	P	P	14 18 29.2	+3.1
QRZ	Quartz Range	11.41	207	P	P	14 18 43.1	+3.2
NNZ	Nelson	11.44	204	P	P	14 18 40.1	0.0
BSWZ	Blackbirch Sta	11.72	201	P	P	14 18 44.2	+0.9
THZ	Tophouse	12.08	204	P	P	14 18 47.7	+0.5
KHZ	Kahutara	12.47	201	P	P	14 18 52.0	+0.7
KHZ	Kahutara	12.47	201	P	P	14 18 54.1	+2.8
LTZ	Lake Taylor	13.20	204	P	P	14 18 59.8	+0.5
OXZ	Oxford	13.77	203	P	P	14 19 04.2	-1.1
CTA	Charters Tower	31.68	282	P	P	14 21 54.3	+1.5
	2.4nm,0.2s,baz=108,slow=9.6,SNR=1.4						
CTAO	Charters Tower	31.68	282	P	P	14 21 53.9	+1.1
BBOO	Buckleboo	36.70	255	P	P	14 22 34.8	-0.2
BBOO				IAmb	IAmb	14 23 03.6	
	comp=Z,14nm,1.4s						
COEN	Coen	37.27	289	P	P	14 22 40.8	+0.9
COEN				IAmb	IAmb	14 23 03.2	
	comp=Z,20nm,1.2s						
AS31	Alice Springs	40.86	269	P	P	14 23 08.1	-0.9
ASAR	Alice Springs	40.86	269	P	P	14 23 08.6	-0.4
	comp=Z,1.1nm,0.4s,baz=106,slow=7.3,SNR=39						
ASAR	Alice Springs	40.86	269	P	P	14 23 08.1	-1.0
WB2	Warramunga Arr	41.88	274	P	P	14 23 16.7	-0.5
WB2				IAmb	IAmb	14 23 17.6	
	comp=Z,10nm,1.2s						
WRA	Warramunga Arr	41.89	274	P	P	14 23 16.7	-0.6
	comp=Z,3.4nm,0.3s,baz=114,slow=7.6,SNR=52						
WRA	Warramunga Arr	41.89	274	P	P	14 23 16.5	-0.8
WB0	Warramunga Arr	41.92	274	P	P	14 23 17.0	-0.5
WB0				IAmb	IAmb	14 23 38.6	
	comp=Z,15nm,1.4s						
FORT	Forrest	43.77	256	P	P	14 23 31.1	-0.8
FORT				IAmb	IAmb	14 23 31.6	
	comp=Z,11nm,0.8s						
VNDA	Vanda	47.44	185	P	P	14 23 58.5	-0.9
VNDA				IAmb	IAmb	14 24 27.6	
	comp=Z,5.6nm,1.4s						
KNRA	Kununurra	48.52	276	P	P	14 24 08.4	0.0
QSPA	South Pole Qui	59.26	180	P	P	14 25 25.4	+1.1
QSPA				IAmb	IAmb	14 25 27.8	
	comp=Z,4.5nm,1.2s						
FINES	FINESS Array B	144.76	338	PKPbc	PKPdf	14 34 51.5	+0.1
	comp=Z,1.9nm,0.4s,baz=53,slow=4.2,SNR=19						
FINES	FINESS Array B	144.76	338		PKPdf	14 34 51.0	-0.4
HFS	Hagfors	149.19	346	PKPbc	PKPbc	14 35 03.0	-0.7
	comp=Z,6.2nm,1.1s,baz=84,slow=4.5,SNR=4.6						
HFS	Hagfors	149.19	346		PKPbc	14 35 03.0	-0.7

IDC ***28*** *14:20:30.0±4.4, 17°.96S×168°.69E, h114km±41km, mb4.1/11, mb1 4.2/12, mb1mx3.7/43, mbtmp4.4/12, Error ellipse: s-maj=39.5km s-min=23.6km az=165.0*

NEIC ***28*** *14:20:30.2±1.4, 17°.96S±0°.07×168°.58E±0°.06, h107km±5km, mb4.6/31, Error ellipse: s-maj=10.1km s-min=8.2km az=161.0*

NOU ***28*** *14:20:32.1, 18°.01S×168°.37E, h109km, MLv4.5/32, Vanuatu Islands*

ISC 28 14:20:29.1±0.6**, 17°.97S**±0°.05×**168°.62E**±0°.09**, h100km, n90, σ1ˢ.46**/89**, mb4.6**/41**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.25	314	P	Pn	14 20 48.6	+5.1
DVP	Devils Point	0.47	300	P	Pn	14 20 49.2	+4.5
SANVU	Saraoutou	2.85	331	Pn	Pn	14 21 13.6	+0.7
LIFNC	LIFOU	3.08	205	Pn	Pn	14 21 16.3	+0.4
LIFNC	LIFOU	3.08	205	P	Pn	14 21 16.7	+0.7
MARNC	Mare, Loyalty	3.54	189	Pn	Pn	14 21 22.0	-0.2
MARNC	Mare, Loyalty	3.54	189	P	Pn	14 21 22.5	+0.4
YATNC	Mamie plateau,	4.38	201	P	Pn	14 21 33.8	+0.3
DZM	Mont Dzumac	4.56	206	P	Pn	14 21 37.5	+1.5
	12nm,0.3s,baz=133,slow=21,SNR=208						
DZM				S	Sn	14 22 27.1	-1.0
	11nm,0.3s,baz=132,slow=23,SNR=16						
DZM	Mont Dzumac	4.56	206	Pn	Pn	14 21 36.8	+0.7
DZM	Mont Dzumac	4.56	206	P	Pn	14 21 37.4	+1.3
NOUC	Port Laguerre	4.65	207	P	Pn	14 21 39.3	+2.2
OUENC	Ouen Island, N	4.73	200	Pn	Pn	14 21 39.2	+1.0
OUENC	Ouen Island, N	4.73	200	P	Pn	14 21 40.3	+2.1
PINNC	Pines Island,	4.75	193		Pn	14 21 39.3	+0.8
PINNC	Pines Island,	4.75	193	P	Pn	14 21 40.1	+1.6
ONTNC	Ouen Toro	4.77	205	Pn	Pn	14 21 40.2	+1.5
ONTNC	Ouen Toro	4.77	205	P	Pn	14 21 41.0	+2.2
KOUNC	Koumac, New Ca	4.83	237	P	Pn	14 21 41.5	+1.9
OUZ	Omahuta	17.75	167	P	P	14 24 30.7	+1.5
OUZ	Omahuta	17.75	167	P	Pn	14 24 33.4	+3.7
	15nm,1.7s						
CTA	Charters Tower	21.24	261	P	P	14 25 09.9	+2.6
	4.4nm,0.6s,baz=86,slow=0.4,SNR=2.1						
CTAO	Charters Tower	21.24	261	P	P	14 25 07.5	+0.1
CTAO	Charters Tower	21.24	261	P	P	14 25 09.9	+2.6
URZ	Urewera	21.54	162	P	P	14 25 12.2	+1.9
URZ				IAmb	IAmb	14 25 39.9	
	comp=Z,46nm,1.4s						
BKZ	Black Stump Fm	22.21	164	P	P	14 25 18.4	+1.0
BKZ	Black Stump Fm	22.21	164	P	P	14 25 22.0	+4.6
PMG	Port Moresby	22.50	289	P	P	14 25 21.8	+1.2
	comp=Z,13nm,1.0s,baz=134,slow=5.4,SNR=5.6						
PMG	Port Moresby	22.50	289	P	P	14 25 21.1	+0.5
BFZ	Birch Farm	23.57	165	P	P	14 25 30.7	0.0
BFZ				IAmb	IAmb	14 25 32.9	
	comp=Z,55nm,1.3s						
BFZ	Birch Farm	23.57	165	P	P	14 25 33.6	+2.9
	comp=Z,58nm,1.7s						
BHW	Baring Head	23.97	168	P	P	14 25 34.0	-0.2
THZ	Tophouse	24.00	172	P	P	14 25 34.7	+0.2
THZ				IAmb	IAmb	14 25 37.6	
	comp=Z,22nm,0.7s						
MSWZ	Moikau Station	24.05	168	P	P	14 25 34.6	-0.4
PLWZ	Palliser	24.20	168	P	P	14 25 35.5	-0.8
KHZ	Kahutara	24.73	171	P	P	14 25 41.5	+0.4
KHZ				IAmb	IAmb	14 25 55.2	
	comp=Z,35nm,1.3s						
KHZ	Kahutara	24.73	171	P	P	14 25 41.7	+0.6
	comp=Z,27nm,1.2s						
CMSA	Cobar Meteorol	24.75	233	P	P	14 25 41.7	+0.2
	comp=Z,13nm,2.7s						
COEN	Coen	24.77	276	P	P	14 25 40.7	-1.1
COEN				IAmb	IAmb	14 25 44.2	
	comp=Z,16nm,1.0s						
LTZ	Lake Taylor	24.93	174	P	P	14 25 43.5	+0.5
LTZ				IAmb	IAmb	14 25 44.5	
	comp=Z,18nm,0.7s						
RPZ	Rata Peaks	25.75	176	P	P	14 25 51.0	+0.6
RPZ				IAmb	IAmb	14 26 03.4	
	comp=Z,36nm,1.3s						
STKA	Stephens Creek	28.05	235	P	P	14 26 11.9	+0.7
	comp=Z,6.2nm,0.7s,baz=65,slow=7.1,SNR=16						
STKA	Stephens Creek	28.05	235	P	P	14 26 11.4	+0.3
HTT	Hallett	30.73	234	P	P	14 26 35.6	+0.7
	comp=Z,6.6nm,1.1s						
OOD	Oodnadatta	31.79	246	P	P	14 26 44.3	+0.1
	comp=Z,17nm,0.9s						
WB0	Warramunga Arr	32.40	261	P	P	14 26 48.8	-0.9
WB0				IAmb	IAmb	14 26 49.3	
	comp=Z,9.0nm,0.6s						
WB2	Warramunga Arr	32.44	261	P	P	14 26 48.6	-1.4
WB2				IAmb	IAmb	14 26 49.6	
	comp=Z,9.6nm,0.9s						
WRAB	Tennant Creek	32.44	261	P	P	14 26 48.7	-1.3
WRAB				IAmb	IAmb	14 27 15.9	
	comp=Z,16nm,1.1s						
WRAB	Tennant Creek	32.44	261	P	P	14 26 49.4	-0.6
WRA	Warramunga Arr	32.45	261	P	P	14 26 49.0	-1.1
	comp=Z,5.3nm,0.7s,baz=92,slow=9.1,SNR=29						
WRA	Warramunga Arr	32.45	261	P	P	14 26 48.5	-1.6
BBOO	Buckleboo	32.76	237	P	P	14 26 52.2	-0.4
BBOO				IAmb	IAmb	14 26 53.3	
	comp=Z,9.8nm,0.8s						
AS31	Alice Springs	32.88	254	P	P	14 26 52.9	-1.1
AS31				IAmb	IAmb	14 26 53.8	
	comp=Z,5.5nm,0.6s						
ASAR	Alice Springs	32.88	254	P	P	14 26 53.2	-0.7
	comp=Z,13nm,0.6s,baz=80,slow=8.9,SNR=203						
ASAR	Alice Springs	32.88	254	P	P	14 26 52.5	-1.5
MULG	Mulgathing	33.70	242	P	P	14 26 59.9	-1.0
	comp=Z,13nm,0.9s						
WRKA	Warakurna	38.06	252	P	P	14 27 37.1	-1.2
	comp=Z,10nm,1.2s						
KNRA	Kununurra	38.17	267	P	P	14 27 38.1	-1.0
KNRA	Kununurra	38.17	267	P	P	14 27 37.9	-1.3
	comp=Z,17nm,1.0s						
FORT	Forrest	38.88	243	P	P	14 27 44.0	-0.9
FORT				IAmb	IAmb	14 28 11.3	
	comp=Z,15nm,0.9s						
FORT	Forrest	38.88	243	P	P	14 27 44.2	-0.7
	comp=Z,16nm,0.9s						
SIJI	Sorong	40.43	291	P	P	14 27 57.4	-0.7
	comp=Z,8.4nm,0.7s,baz=76,slow=9.5,SNR=5.3						
FITZ	Fitzroy Crossi	40.80	263	P	P	14 28 00.8	-0.2
	comp=Z,19nm,0.8s,baz=102,slow=5.2,SNR=22						
PSA00	Pilbara Seismi	45.89	257	P	P	14 28 41.8	-0.2
PSA00				IAmb	IAmb	14 28 42.1	
	comp=Z,9.8nm,1.1s						
MBWA	Marble Bar	46.03	258	P	P	14 28 42.7	-0.4
	comp=Z,32nm,1.0s						
MEEK	Meekatharra	46.82	250	P	P	14 28 48.2	-1.0
	comp=Z,30nm,0.8s						
NWAO	Narrogin (SRO)	48.28	242	P	P	14 28 59.3	-1.1
MORW	Morawa	49.11	247	P	P	14 29 06.0	-0.8
TOLI2	Tolitoli	50.73	287	P	P	14 29 18.0	-1.2
KSM	Kuching	60.52	282	P	P	14 30 28.5	-0.8
JNU	Nakatsue	62.29	325	P	P	14 30 40.2	-0.7
NJ2	Nanjing	68.89	316	*e*P	P	14 31 25.5	+2.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
IPM	Ipoh	70.25	282	P	P	14 31 31.6	-0.5
KULM	Kulim	70.88	282	P	P	14 31 35.2	-0.7
QSPA	South Pole Qui	72.08	180	P	P	14 31 41.2	-1.2
QSPA				IAmb	IAmb	14 31 42.2	
	comp=Z,10nm,1.4s						
CN2	Changchun	73.07	329	*e*P	P	14 31 46.8	-1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN	Xi'an	76.82	313	P	P	14 32 10.5	+0.3
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CM31	Chiang Mai Arr	77.45	294	P	P	14 32 13.7	-0.3
CM31				IAmb	IAmb	14 32 15.5	
	comp=Z,5.7nm,0.8s						
CMAR	Chiang Mai Arr	77.45	294	P	P	14 32 14.6	+0.5
	comp=Z,2.4nm,0.8s,baz=134,slow=4.5,SNR=17						
CMAR	Chiang Mai Arr	77.45	294	P	P	14 32 13.9	-0.1
HHC	Hu-ho-hao-te	78.88	320	*e*P	P	14 32 25.5	+3.9
HHC				pmax	pmax		
	comp=Z,260nm,5.7s						
HHC				pmax	pmax		
	comp=Z,11nm,1.2s						
HHC				LR	LR		
	comp=N,200nm,17.6s						
HHC				LR	LR		
	comp=E,250nm,17.7s						
HHC				LR	LR		
	comp=Z,300nm,19.4s						
GTA	Gaotai	85.83	314	*e*P	P	14 32 58.0	+0.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
SONM	Songino Array	85.85	323	P	P	14 32 57.0	-0.7
	comp=Z,1.7nm,0.9s,baz=149,slow=6.5,SNR=8.2						
SONM	Songino Array	85.85	323	IAmb	IAmb	14 32 58.1	
	comp=Z,1.9nm,0.9s						
NVAR	Mina Array Bea	88.41	49	P	P	14 33 09.8	-0.6
	comp=Z,1.0nm,0.8s,baz=231,slow=8.8,SNR=6.6						
ILAR	Eielson Array	89.20	17	P	P	14 33 10.8	-2.5
	comp=Z,0.2nm,0.6s,baz=238,slow=5.0,SNR=1.5						
G08A	Pilot Rock	90.82	42	P	P	14 33 22.1	+0.7
G08A				IAmb	IAmb	14 33 22.4	
	comp=Z,4.4nm,1.0s						
WMQ	Urumqi	95.90	314	*e*P	P	14 33 45.5	+0.7
MKAR	Makanchi Array	100.42	316	P	Pdif	14 34 03.0	-1.9
	comp=Z,0.3nm,0.6s,baz=91,slow=6.9,SNR=2.8						
DAVOX	Davos/Dischmat	146.34	333	PKPbc	PKPdf	14 39 58.0	+0.8
	comp=Z,3.7nm,0.6s,baz=67,slow=1.3,SNR=11						

IDC ***28*** *14:26:26.1±2.9, 51°.18N×179°.49E, h0km, mb3.9/7, mb1 4.1/9, mb1mx3.7/70, mbtmp3.9/9, ML3.2/2, Error ellipse: s-maj=77.8km s-min=20.6km az=178.0*

AEIC ***28*** *14:26:30±1.9, 51°.0N±0°.2×179°.4E±0°.1, h32km±7km, ML3.4, mb4.5/25(NEIC), Error ellipse: s-maj=28.7km s-min=9.1km az=181.0*

NEIC ***28*** *14:26:33.9±2.4, 51°.2N±0°.2×179°.52E±0°.09, h62km±7km, Error ellipse: s-maj=25.0km s-min=6.7km az=189.0*

ISC 28 14:26:32.1±1.6**, 51°.1N**±0°.3×**179°.44E**±0°.06**, h48km, n51, σ0ˢ.92**/49**, mb4.3**/16**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TASE	Tanaga Southea	1.72	65		Pn	14 27 00.1	+0.4
TAFP	Tanaga Falls P	1.78	64		Pn	14 27 00.8	+0.3
KIMD	Kanaga Island	2.17	72		Pn	14 27 05.9	+0.1

KIKV	Kanaga Island	2.24	69		Pn	14 27 07.4	+0.6
KIWB	Kanaga Island	2.25	70		Pn	14 27 06.7	-0.1
ADK	Adak	2.53	71		Pn	14 27 10.7	0.0
GSTD	Great Sitkin T	2.90	70		Pn	14 27 16.0	+0.2
GSMY	Great Sitkin M	2.95	70		Pn	14 27 16.5	+0.1
GSTR	Great Sitkin T	2.96	69	Pn	Pn	14 27 16.4	-0.2
SMY	Shemya	3.67	298		Pn	14 27 27.1	+0.9
ATKA	Atka Island	4.10	72	Pn	Pn	14 27 32.7	+0.6
UNV	Unalaska Valle	8.99	67	Pn	Pn	14 28 39.5	+0.4
PETK	Petropavlovsk-	13.50	287	Pn	Pn	14 29 40.9	+0.1
	0.1nm,0.3s,baz=112,slow=16,SNR=1.3						
CHGN	Chignik	14.06	60	Pn	Pn	14 29 46.9	-1.4
KDAK	Kodiak Island	17.48	57	P	Pn	14 30 28.9	-3.1
	0.6nm,0.3s,baz=294,slow=10.0,SNR=1.1						
KDAK	Kodiak Island	17.48	57	Pn	Pn	14 30 29.4	-2.6
J20K	Nowinta River	19.04	37	P	Pn	14 30 51.3	+0.3
J20K				IAmb	IAmb	14 30 54.2	
	comp=Z,47nm,2.0s						
PPLA	Purkeypile	19.22	41	P	Pn	14 30 53.7	+0.4
PPLA				IAmb	IAmb	14 31 30.0	
	comp=Z,64nm,1.7s						
CAST	Castle Rocks	19.49	40	P	Pn	14 30 56.0	-0.3
KTH	Kantishna Hill	20.02	40	P	P	14 31 01.2	+0.6
KTH				IAmb	IAmb	14 31 20.1	
	comp=Z,37nm,1.6s						
IMAR	Indian Mountai	20.16	32	P	P	14 31 02.2	+0.1
BPAW	Bear Paw Mtn.	20.22	39	P	Pn	14 31 03.8	-1.2
H21K	Melozitna Rive	20.31	34	P	Pn	14 31 04.7	-1.3
SCM	Sheep Creek Mo	20.99	47	P	P	14 31 10.4	-0.7
MDM	Murphy Dome	21.67	38	P	P	14 31 18.7	+0.4
ILAR	Eielson Array	22.12	39	P	P	14 31 22.8	-0.4
	comp=Z,0.5nm,0.6s,baz=249,slow=9.4,SNR=6.5						
H24K	Noodor Dome	22.17	36	P	P	14 31 25.3	+1.6
H24K				IAmb	IAmb	14 31 57.0	
	comp=Z,26nm,1.8s						
N25K	Chitina, Valde	22.20	48	P	P	14 31 24.8	+0.7
N25K				IAmb	IAmb	14 32 12.7	
	comp=Z,63nm,1.8s						
A21K	Barrow	22.97	20	P	P	14 31 31.7	-0.3
A21K				IAmb	IAmb	14 32 29.2	
	comp=Z,26nm,1.9s						
TOLK	Toolik Lake Re	23.00	29	P	P	14 31 32.2	-0.2
TOLK				IAmb	IAmb	14 32 00.5	
	comp=Z,22nm,1.9s						
SCRK	Sand Creek	23.05	42	P	P	14 31 31.6	-1.5
SCRK				IAmb	IAmb	14 32 29.2	
	comp=Z,35nm,1.9s						
M27K	Edge Creek, AK	23.60	47	P	P	14 31 40.6	+2.1
M27K				IAmb	IAmb	14 32 23.7	
	comp=Z,62nm,2.0s						
BCAR	Beaver Creek A	23.78	45	P	P	14 31 40.3	+0.3
YKA	Yellowknife Ar	36.19	46	P	P	14 33 29.2	-0.4
	comp=Z,0.4nm,0.5s,baz=281,slow=8.4,SNR=8.6						
BW06	Boulder Array	47.43	71	P	P	14 35 01.8	-0.2
BW06				IAmb	IAmb	14 36 20.9	
	comp=Z,11nm,1.7s						
PD31	Pinedale Array	47.43	71	P	P	14 35 01.3	-0.6
PD31				IAmb	IAmb	14 36 20.9	
	comp=Z,9.1nm,1.6s						
PDAR	Pinedale Array	47.43	71	P	P	14 35 02.4	+0.5
	comp=Z,1.5nm,0.6s,baz=306,slow=3.4,SNR=17						
PDAR	Pinedale Array	47.43	71	P	P	14 35 02.0	+0.1
SPB2	Spitsbergen Ar	50.53	356	P	P	14 35 24.4	-0.5
ARCES	ARCESS Array B	58.13	350	P	P	14 36 20.9	+0.7
	comp=Z,3.9nm,1.0s,baz=34,slow=8.7,SNR=1.1						
KURK	Kurchatov	58.38	313	P	P	14 36 22.4	+0.2
MK31	Makanchi Array	59.31	308	P	P	14 36 28.2	-0.6
MK31				IAmb	IAmb	14 37 44.2	
	comp=Z,7.1nm,1.6s						
MKAR	Makanchi Array	59.31	308	P	P	14 36 28.4	-0.3
	comp=Z,0.7nm,0.6s,baz=50,slow=6.2,SNR=12						
MKAR	Makanchi Array	59.31	308	P	P	14 36 27.9	-0.8
MAKZ	Makanchi	59.46	308	P	P	14 36 28.8	-0.9
I45A	Fountain	59.75	56	P	P	14 36 32.2	+0.4
BVAR	Borovoye Array	60.35	319	P	P	14 36 36.4	+0.6
	comp=Z,1.3nm,0.5s,baz=64,slow=3.4,SNR=13						
BRVK	Borovoye	60.37	319	P	P	14 36 36.6	+0.7
BRVK				IAmb	IAmb	14 36 37.3	
	comp=Z,2.0nm,0.8s						
AKTO	Aktyubinsk	67.23	324	P	P	14 37 22.3	+1.2
	comp=Z,0.5nm,0.5s,baz=70,slow=9.1,SNR=5.5						
ABKAR	Akbulak array	67.45	322	P	P	14 37 23.1	+0.7
NB201	NORSAR Array S	67.76	354	P	P	14 37 23.8	-0.4

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*ISK **28** 14:33:36.9, 39.°69N×38.°96E, h5^{km}, ML3.5/24*

*DDA **28** 14:33:37.0, 39.°70N×38.°94E, h10^{km}±8^{km}, MW3.6*

ISC 28 14:33:38.7±1.1**, 39.°69N**±0.°03×**38.°95E**±0.°02**, h5**^{km}±11^{km}**, n45, σ1^{s}.00**/59**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
REFA	Refahiye_ERZN	0.26	327	*i* P	Pg	14 33 43.5	-0.3
REFA				*i* S	Sg	14 33 47.6	+0.3
ILIC	ilic-Erzincan	0.38	231	PG	Pg	14 33 45.6	-0.5
ILIC				SG	Sg	14 33 52.1	+1.1
EUZM	Uzumlu	0.58	88	*i* P	Pg	14 33 49.5	-0.3
EUZM				*i* S	Sb	14 33 59.4	-0.6
ERZN	Erzincan	0.61	99	PG	Pg	14 33 49.7	-0.7
ERZN				SG	Sg	14 33 58.4	+0.1
ARPR	Arapgir-MALATY	0.76	219	PG	Pg	14 33 52.7	-0.6
ARPR				SG	Sb	14 34 04.9	-0.4
BAYT	Aydıntepe-Bayb	1.15	52	PN	Pg	14 33 59.6	-1.3
BAYB	BAYBURT	1.16	60	*i* P	Pg	14 33 58.8	-2.1
KOVA	Elazig, Kovanc	1.19	145	*i* P	Pg	14 34 00.1	-1.4
KOVA				*i* S	Sg	14 34 17.0	0.0
CUKAN	kangal_SIVAS	1.21	252	*i* P	Pg	14 34 01.3	-0.5
CUKAN				*i* S	Sn	14 34 20.4	+1.1
CUKAN				IAML		14 34 28.0	
	comp=E,507nm,0.7s						
KOPT	Kop Dagi	1.24	74	*i* P	Pn	14 34 03.1	+0.1
YEDI	Yedisu-Bingol	1.26	101	PN	Pg	14 34 01.6	-1.3
SVRC	Sivrice-ELAZID	1.34	168	PN	Pn	14 34 02.9	-1.4
RSDY	Resadiye-TOKAT	1.43	300	PN	Pn	14 34 04.4	-1.0
MALT	Malatya	1.43	197	PN	Pn	14 34 04.0	-1.5
KTUT	Trabzon	1.44	25	PN	Pn	14 34 04.8	-0.7
BNGB	Bingl	1.51	117	PN	Pn	14 34 06.2	-0.4
SVSK	Karacayir	1.52	279	PN	Pn	14 34 06.5	-0.1
DARE	Darende-Malaty	1.59	226	PN	Pn	14 34 07.5	-0.3
CUGUR	Gurin_SVAS	1.62	234	*i* P	Pb	14 34 09.0	-0.3
CUGUR				*i* S	Sg	14 34 32.8	+2.0
CUGUR				IAML		14 34 34.0	
	comp=E,1μm,0.6s						
KRIK	Erzurum-spir	1.65	66	*i* P	Pb	14 34 09.5	-0.3
KRIK				*i* S	Sg	14 34 32.8	+1.0
KARO	Karliova-Bingo	1.67	102	PN	Pn	14 34 08.4	-0.5
HANI	Diyarbakir_Han	1.70	138	*i* P	Pb	14 34 10.2	-0.4
HANI				*i* S	Sg	14 34 35.7	+2.3
HANI				IAML		14 34 40.0	
	comp=E,110nm,1.1s						
SLHN	Bingol, Solhan	1.77	114	*i* P	Pg	14 34 12.3	-0.3
SLHN				*i* S	Sg	14 34 37.8	+2.3
EJDE	Erzurum, Palan	1.82	85	*i* P	Pn	14 34 11.8	+0.6
EJDE				*i* S	Sg	14 34 41.0	+3.7
EJDE	Erzurum, Palan	1.82	85	PN	Pn	14 34 10.6	-0.5
ERZM	Erzurum	1.88	83	PN	Pn	14 34 11.3	-0.5
TOKT	Tokat	1.95	290	PN	Pn	14 34 12.7	+0.1
ELBS	KAHRAMANMARAS_	1.96	227	*i* P	Pb	14 34 14.5	-0.6
ELBS				*i* S	Sg	14 34 42.3	+0.5
ELBS				IAML		14 34 45.0	
	comp=N,956nm,0.6s						
DYBB	Diyarbakir	1.97	151	PN	Pn	14 34 12.7	-0.1
CHOM	Cayeli-Rize	1.97	44	PN	Pn	14 34 12.7	-0.2
VRTB	Varto-Mus	2.01	104	PN	Pn	14 34 13.4	-0.1
CUSAR	Sarkisla-SIVAS	2.11	263	*i* P	Pn	14 34 15.9	+1.0
CUSAR				*i* S	Sg	14 34 46.8	+0.3
KOPR	Koprukoy-ERZUR	2.26	81	PN	Pn	14 34 16.8	-0.1
SVAN	Silvan-Diyarba	2.33	130	PN	Pn	14 34 17.8	0.0
SARI	SarD1z-Kayseri	2.35	238	PN	Pn	14 34 18.3	+0.1
MAZI	Mazidag	2.52	152	PN	Pn	14 34 20.5	+0.1
BNN	Bunyan	2.55	252	PN	Pn	14 34 21.2	+0.3
HOPA	Hopa-Artvin	2.55	47	PN	Pn	14 34 21.0	+0.3
GURO	Guroymak-BITLI	2.65	114	PN	Pn	14 34 22.6	+0.2
BCA	Borcka	2.69	48	PN	Pn	14 34 22.9	+0.2
SENK	Senkaya-Erzuru	2.75	70	PN	Pn	14 34 23.9	+0.2
BATM	Batumi	2.83	47	PN	Pn	14 34 25.9	+1.2
MLAZ	Malazgirt-MUS	2.84	100	PN	Pn	14 34 25.2	+0.2
GAZ	Gaziantep	2.86	209	PN	Pn	14 34 25.6	+0.5
AGRB	Hanur-Agry	3.12	91	PN	Pn	14 34 29.1	+0.2

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*IDC **28** 14:36:44.9±1.3, 29.°38S×71.°76W, h0^{km}, mb4.5/3, mb1 4.2/6, mb1mx3.9/29, mbtmp4.2/6, ML4.0/3, MS3.1/4, Ms1 3.0/4, ms1mx2.9/21, Error ellipse: s-maj=58.5km s-min=24.2km az=101.0*

*NEIC **28** 14:36:45.6±1.7, 29.°32S±0.°04×71.°91W±0.°07, h10^{km}±1^{km}, mb4.5/9, ML4.4(GUC), Error ellipse: s-maj=9.9km s-min=7.1km az=269.0*

*GUC **28** 14:36:47.5±0.6, 29.°33S×71.°88W, h35^{km}, ML4.4*

*SJA **28** 14:36:47.9±0.7, 29.°21S×71.°79W, h26^{km}±2^{km}, ML4.1, MW4.2*

ISC 28 14:36:43.5±1.4**, 29.°30S**±0.°02×**72.°01W**±0.°05**, h3**^{km}±9^{km}**, n105, σ1^{s}.80**/137**, mb4.5**/6**, 7C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.92	133	⇑*e*P	Pn	14 37 02.8	-0.4
CO05				*i* S	Sg	14 37 13.3	+0.4
CO05				IAML		14 37 14.2	
	comp=E,13μm,0.3s						
CO05	La Serena	0.92	133		Pn	14 37 03.0	-0.2
CO05				Sg	Sg	14 37 12.1	-0.8
LCO	Las Campanas	1.18	76	*e*P	Pn	14 37 07.4	+0.2
LCO				*i* S	Sb	14 37 21.4	-1.1
LCO	Las Campanas	1.18	76		Pn	14 37 07.6	+0.5
LCO				Sg	Sb	14 37 20.6	-1.9
LCO	Las Campanas	1.18	76	*e*P	Pn	14 37 07.0	-0.1
AC04	Llanos de Chal	1.36	37	⇓*e*P	Pg	14 37 10.7	+1.0
AC04				*i* S	Sb	14 37 26.3	-1.2
AC04				IAML		14 37 27.4	
	comp=E,4μm,0.1s						
AC04	Llanos de Chal	1.36	37	Pn	Pg	14 37 10.6	+1.0
AC04	Llanos de Chal	1.36	37	*e*P	Pg	14 37 10.7	+1.0
AC04				*e*S	Sg	14 37 27.1	-0.3
AC04				IAML		14 37 27.5	
	comp=Z,2μm,0.6s						
GO04	Tololo Observa	1.37	130	⇑*e*P	Pg	14 37 10.0	+0.3
GO04				*i* S	Sb	14 37 26.4	-1.4
GO04				IAML		14 37 29.3	
	comp=N,42μm,0.4s						
GO04	Tololo Observa	1.37	130		Pg	14 37 10.2	+0.5
CO06	Fray Jorge	1.41	167	⇑*i*P	Pg	14 37 10.7	+0.2
CO06				*i* S	Sn	14 37 25.2	-3.9
CO06	Fray Jorge	1.41	167		Pg	14 37 10.7	+0.2
CO03	El Pedregal	1.92	144	⇑*i*P	Pb	14 37 18.0	-1.1
CO03				*i* S	Sn	14 37 39.2	-2.6
CO03				IAML		14 37 43.7	
	comp=E,4μm,0.3s						
CO03	El Pedregal	1.92	144	Pn	Pb	14 37 18.0	-1.1
GO03	Copiap	2.31	43	*e*P	Pb	14 37 24.0	-1.8
GO03				IAML		14 38 02.6	
	comp=E,1μm,0.6s						
GO03	Copiap	2.31	43	Pn	Pb	14 37 23.8	-2.0
GO03	Copiap	2.31	43	*e*P	Pb	14 37 24.1	-1.6
GO03				*e*S	Sn	14 37 51.5	+0.1
AROD	Rodeo	2.37	112	*e*P	Pb	14 37 26.5	-0.5
AROD				*e*S	Sb	14 37 55.1	-1.7
ACDV	Cuesta del Vie	2.66	110	*e*P	Pb	14 37 30.5	-1.4
ACDV				*e*S	Sb	14 38 03.7	-1.3
ACDV				IAML		14 38 08.0	
	comp=Z,741nm,0.4s						
ACCO	Cerro Coronel	2.86	117	*e*P	Pb	14 37 34.0	-1.4
ACCO				*e*S	Sb	14 38 09.4	-1.5
VCA	Vinchina	3.38	81	*e*P	Pb	14 37 42.0	-2.1
VCA				*e*P	Pg	14 37 42.7	-5.5
VCA				*e*S	Sg	14 38 32.2	+0.1
VCA				IAML		14 38 37.5	
	comp=Z,410nm,0.6s						
RTLS	Leoncito	3.42	137	*e*P	Pb	14 37 42.0	-2.9
RTLS				*e*S	Sb	14 38 22.2	-4.8
RTLS				IAML		14 38 33.6	
	comp=Z,609nm,0.6s						
AC02	Maricunga	3.54	47	*e*P	Pn	14 37 42.2	+2.5
AC02				*i* S	Sn	14 38 23.1	+0.8
AC02				IAML		14 38 41.4	
	comp=N,689nm,0.3s						
AC02	Maricunga	3.54	47	Pn	Pn	14 37 42.1	+2.3
AC02	Maricunga	3.54	47	*e*P	Pn	14 37 42.0	+2.3
AC02				*e*S	Sn	14 38 21.7	-0.6
AC02				IAML		14 38 39.7	
	comp=Z,532nm,0.8s						
ZON	Zonda	3.65	129	Pn	Pn	14 37 41.7	+0.8
ZON	Zonda	3.65	129	*e*P	Pb	14 37 45.0	-3.6
ZON				*e*S	Sb	14 38 30.2	-3.1
ZON				IAML		14 38 41.0	
	comp=Z,217nm,0.6s						
VA03	San Esteban	3.68	160		Pn	14 37 42.3	+1.0
VA03	San Esteban	3.68	160	*e*P	Pn	14 37 43.8	+2.5
VA03				*e*S	Sn	14 38 24.2	-1.0
VA03				IAML		14 38 55.0	
	comp=Z,470nm,0.7s						
VA01	Torpederas	3.73	175		Pn	14 37 42.7	+0.8
ROCH	El Roble	3.76	167	⇑*i*P	Pn	14 37 44.1	+1.5
ROCH				IAML		14 38 50.1	
	comp=N,642nm,0.5s						
RTCV	Cerro Valdivia	3.94	131	*e*P	Pn	14 37 48.0	+3.2
RTCV				*e*S	Sb	14 38 42.7	+1.1
PEL	Peldehue	4.00	164		Pn	14 37 46.3	+0.6
MT02	Curacav	4.02	169		Pn	14 37 46.5	+0.5
AVFE	Valle Fertil	4.18	110	*e*P	Pn	14 37 51.0	+2.8
AVFE				*e*S	Sn	14 38 38.4	+0.8
AVFE				IAML		14 38 58.6	
	comp=Z,405nm,0.6s						
MT05	Renca	4.22	165	Pn	Pn	14 37 49.7	+0.9
MT05	Renca	4.22	165	*e*P	Pn	14 37 50.9	+2.2
MT05				*e*P	Pn	14 37 51.0	+2.2
MT05				*e*S	Sn	14 38 39.3	+0.6
MT05				IAML		14 39 01.8	
	comp=Z,174nm,0.7s						
ASAL	Salagasta	4.27	141	*e*P	Pn	14 37 53.0	+3.6
ASAL				*e*S	Sb	14 38 55.2	+4.0
VA05	Santo Domingo	4.36	176		Pn	14 37 51.2	+0.6
ARCO	CERRO ARCO	4.41	144	*e*P	Pn	14 37 55.7	+4.3
ARCO				*e*P	Pb	14 37 56.7	-5.0
ARCO				*e*S	Sb	14 38 58.2	+2.9
ARCO				IAML		14 39 09.8	
	comp=Z,413nm,0.7s						
MT09	Talagante	4.55	169		Pn	14 37 54.6	+1.3
MT01	Popeta	4.60	172	⇑*i*P	Pn	14 37 55.0	+1.1
MT01				IAML		14 38 58.4	
	comp=E,146nm,0.2s						
MT01	Popeta	4.60	172		Pn	14 37 54.8	+0.9
MT01	Popeta	4.60	172	*e*P	Pn	14 37 55.1	+1.2
MT01				*e*S	Sb	14 39 03.7	+3.1
MT01				IAML		14 39 14.9	
	comp=Z,132nm,0.6s						
AAGR	Agrelo	4.66	145	*e*P	Pb	14 38 00.0	-5.9
LMEL	Las Melosas	4.79	162	*e*P	Pn	14 37 59.1	+2.4
LMEL				*i* S	Sn	14 38 51.6	-1.2
LMEL				IAML		14 38 59.5	
	comp=N,167nm,0.4s						
BO04	La Punta	4.83	166	⇑*i*P	Pn	14 37 58.7	+1.6
BO04				IAML		14 39 28.4	
	comp=N,179nm,0.6s						
PB14	IPOC Station P	4.87	18	Pn	Pn	14 37 57.8	-0.1
ACHE	Chepes	4.99	113	*e*P	Pn	14 38 02.0	+2.6
ACHE				*e*S	Sn	14 38 56.7	-0.9
BO01	Tunca	5.14	171	Pn	Pn	14 38 01.9	+0.5
BO01	Tunca	5.14	171	*e*P	Pn	14 38 03.0	+1.7
BO01				*e*S	Sn	14 39 00.3	-0.8
BO01				IAML		14 39 45.1	
	comp=Z,56nm,0.7s						
BO02	Sierra Bellavi	5.58	170		Pn	14 38 08.2	+0.8
BO02	Sierra Bellavi	5.58	170	*e*P	Pn	14 38 09.0	+1.6
BO02				*e*S	Sb	14 39 24.7	-4.1
GO05	Huala	5.70	179		Pn	14 38 09.1	+0.1
GO05	Huala	5.70	179	*e*P	Pn	14 38 09.0	0.0
GO05				*e*P	Pn	14 38 09.6	+0.6
GO05				*e*S	Sn	14 38 59.8	-15
PB10	IPOC Station P	5.91	13	Pn	Pn	14 38 12.6	+0.8
PB10	IPOC Station P	5.91	13	*e*P	Pn	14 38 12.5	+0.6
PB10				*e*S	Sn	14 39 16.2	-3.9
RFA	San Rafael	6.23	152	*e*P	Pn	14 38 18.3	+1.9
ML02	Panimavida	6.47	176	Pn	Pn	14 38 20.1	+0.5
PB15	IPOC Station P	6.48	21		Pn	14 38 20.5	+0.6
PB15	IPOC Station P	6.48	21	*e*P	Pn	14 38 21.0	+1.1
PB15				*e*P	Pn	14 38 21.7	+1.8
PB15				*e*S	Sn	14 39 32.4	-2.1
PB15				*e*S	Sn	14 39 33.6	-0.9
PB05	IPOC Station P	6.62	15	*e*P	Pn	14 38 21.0	-0.8
PB05				*e*P	Pn	14 38 21.7	-0.1
PB05				*e*S	Sn	14 39 32.4	-5.4
PB05				*e*S	Sn	14 39 33.6	-4.2
PB06	IPOC Station P	6.92	19	Pn	Pn	14 38 25.5	-0.4
PB06	IPOC Station P	6.92	19	*e*P	Pn	14 38 26.5	+0.5
PB06				*e*S	Sn	14 39 41.4	-4.0
PB04	IPOC Station P	7.13	14	Pn	Pn	14 38 28.0	-0.9
H03N1	Juan Fernandez	7.20	233	T	T	14 46 32.3	
	baz=61,slow=71,SNR=1315						
H03N2	Juan Fernandez	7.21	233	T	T	14 46 25.6	
	baz=61,slow=71,SNR=1150						
H03N3	Juan Fernandez	7.22	233	T	T	14 46 20.5	
	baz=61,slow=71,SNR=1034						
LVC	Limon Verde	7.22	23	Pn	Pn	14 38 30.9	+0.6
	comp=Z,1.0nm,0.3s,baz=173,slow=9.1,SNR=9.9						
LVC				Sn	Sn	14 39 49.8	-3.2
	comp=Z,3.4nm,0.3s,baz=302,slow=14,SNR=3.7						
LVC				LR	LR	14 41 24.8	
	comp=Z,186nm,19.8s,baz=230,slow=39						
LVC	Limon Verde	7.22	23	Pn	Pn	14 38 30.3	+0.1
LVC	Limon Verde	7.22	23	*e*S	Sn	14 39 51.4	-1.6
PB07	IPOC Station P	7.78	15	Pn	Pn	14 38 37.4	-0.4
PB09	IPOC Station P	7.88	19	Pn	Pn	14 38 39.0	-0.1
PB09	IPOC Station P	7.88	19	*e*P	Pn	14 38 39.9	+0.8
PB01	IPOC Station P	8.53	16	Pn	Pn	14 38 47.2	-0.7
PB08	IPOC Station P	9.48	17	Pn	Pn	14 39 01.9	+0.6
LC01	Cunco	9.58	179	Pn	Pn	14 39 01.9	-0.3
PB11	IPOC Station P	9.73	13	Pn	Pn	14 39 04.6	0.0
PB16	IPOC Station P	11.15	12	Pn	Pn	14 39 25.3	+0.9
PLCA	Paso Flores	11.47	174	Pn	Pn	14 39 29.3	+1.1
	comp=Z,0.5nm,0.3s,baz=343,slow=10,SNR=8.7						
PLCA				LR	LR	14 43 14.4	
	comp=Z,54nm,19.9s,baz=0.5,slow=34						
PLCA	Paso Flores	11.47	174	Pn	Pn	14 39 28.9	+0.7
LL04	Puerto Octay	11.59	181	Pn	Pn	14 39 29.5	-0.2
CPUP	Villa Florida	13.33	81	LR	LR	14 45 12.8	
	comp=Z,89nm,21.9s,baz=240,slow=39						
PLTB	Pedras Altas	16.05	103	P	P	14 40 32.8	-0.9
SIV	San Ignacio	16.64	40	Pn	P	14 40 39.9	-0.4
	comp=Z,0.3nm,0.3s,baz=216,slow=13,SNR=5.6						
NNA	Nana	17.80	344	LR	LR	14 46 22.9	
	comp=Z,59nm,20.6s,baz=196,slow=32						
DSPA	Despedida	24.79	175	P	P	14 42 09.3	+2.9
BOAV	Boa Vista	33.38	21	P	P	14 43 23.5	+0.3
BOAV				IAmb	IAmb	14 43 51.7	
	comp=Z,10nm,1.5s						
VNA2	Neumayer--Watz	54.35	159	P	P	14 46 12.0	+1.0
	baz=289,slow=8.4						
SNAA	Sanae	55.94	159	P	P	14 46 23.3	+0.8
SNAA	Sanae	55.94	159	P	P	14 46 23.3	+0.8
	comp=Z,4.7nm,0.5s,baz=281,slow=8.9,SNR=12						
SNAA	Sanae	55.94	159	P	P	14 46 23.2	+0.7
SNAA				IAmb	IAmb	14 46 24.1	
	comp=Z,5.6nm,0.8s						
QSPA	South Pole Qui	60.92	180	P	P	14 46 58.4	+0.9
VNDA	Vanda	68.71	191	P	P	14 47 49.5	+1.6
VNDA				IAmb	IAmb	14 48 15.7	
	comp=Z,3.7nm,1.2s						
DBIC	Dimbokro	73.70	73	P	P	14 48 19.4	+0.3
	comp=Z,2.3nm,0.7s,baz=226,slow=10,SNR=4.2						
DBIC	Dimbokro	73.70	73	IAmb	IAmb	14 48 20.6	
	comp=Z,3.8nm,0.9s						
KOWA	Kowa	78.70	66	P	P	14 48 48.3	+0.8
KOWA				IAmb	IAmb	14 48 49.3	
	comp=Z,3.7nm,0.8s						
TORD	Torodi Ar. Bea	82.61	71	P	P	14 49 09.3	+0.9
	comp=Z,2.3nm,0.8s,baz=270,slow=4.3,SNR=11						
WRA	Warramunga Arr	124.84	211	PKP	PKiKP	14 55 46.2	+0.4
	comp=Z,0.2nm,0.4s,baz=153,slow=1.7,SNR=5.2						
KURK	Kurchatov	149.29	38		PKPab	14 56 35.2	-2.7
KURBB	Kurchatov Arra	149.29	38	PKPbc	PKPab	14 56 35.2	-2.7
	comp=Z,1.4nm,0.4s,baz=302,slow=3.1,SNR=14						
AAK	Ala-Archa	150.01	55	PKPbc	PKPab	14 56 37.7	-3.6
	comp=Z,2.4nm,0.5s,baz=88,slow=4.0,SNR=4.8						
ZALV	Zalesovo Beam	150.15	28	PKPbc	PKiKP	14 56 37.2	+1.0
	comp=Z,6.6nm,0.7s,baz=297,slow=3.2,SNR=18						
ZALV	Zalesovo Beam	150.15	28		PKiKP	14 56 36.8	+0.7
MKAR	Makanchi Array	153.45	42	PKPbc	PKiKP	14 56 44.4	+1.1
	comp=Z,0.8nm,0.7s,baz=318,slow=1.6,SNR=4.8						

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*MOS **28** 14:39:29.1±1.0, 5.°15S×152.°73E, h32^{km}, mb5.2/30, Error ellipse: s-maj=12.0km s-min=7.9km az=84.2*

*BJI **28** 14:39:29.3±0.0, 5.°20S×152.°82E, h40^{km}, mB5.1/24, mb4.8/45, Ms4.8/22, Ms7 4.5/24*

*NEIC **28** 14:39:31.6±1.6, 5.°20S±0.°05×152.°80E±0.°08, h35^{km}±1^{km}, mb5.1/102, Error ellipse: s-maj=13.5km s-min=8.7km az=81.0*

*IDC **28** 14:39:32.2±2.6, 5.°12S×152.°65E, h40^{km}±22^{km}, mb4.3/23, mb1 4.4/24, mb1mx4.2/43, mbtmp4.5/24, ML2.7/1, MS4.2/32, Ms1 4.2/32, ms1mx4.1/39, Error ellipse: s-maj=15.8km s-min=10.9km az=108.0*

*GCMT **28** 14:39:33.6±0.2, 5.°42S±0.°02×152.°65E±0.°02, h33^{km}, MW5.0/77, Moment Tensor Solution. s49,c61; s77,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.56±.19; M$_{\theta\theta}$-3.17±.11; M$_{\phi\phi}$-0.38±.11; M$_{r\theta}$2.08±.11; M$_{\theta\phi}$-0.65±.08; M$_{\phi r}$0.10±.12; Best double couple: M$_{0}$4.01700×10^{16} NP1:ϕ_{s}253.00000°, δ30.00000°, λ82.00000°. NP2: ϕ_{s}82.00000°, δ61.00000°, λ95.00000°. Principal axes: T 4.1530, Plg74.0000°, Azm4.0000°; N -0.2680, Plg4.0000°, Azm260.0000°; P -3.8820, Plg15.0000°, Azm169.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **28** 14:39:37.7±1.3, 5°S±8°×15°2E±2°4, h64^{km}±5^{km}, M5.0/7, mB5.3/4, mb5.0/7, MLv5.1/2, Mw(mB)4.7/4*

ISC 28 14:39:31.8±0.3**, 5.°19S**±0.°04×**152.°83E**±0.°06**, h43**^{km}**, n337, σ1^{s}.17**/327**, mb5.0**/105**, MS4.2**/41**, 9C-1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.19	326	Pn	Pn	14 39 51.6	-0.4
RABL				Sn	Sn	14 40 07.6	+0.6
RABL	Rabaul	1.19	326	P	Pn	14 39 51.8	-0.2
MANU	Manus Island	6.28	300	Pn	Pn	14 41 00.4	-1.6
PMG	Port Moresby	7.01	233	Pn	Pn	14 41 12.9	+0.9
	8.0nm,0.3s,baz=38,slow=8.5,SNR=50						
PMG				Sn	Sn	14 42 28.2	-2.3
	5.8nm,0.3s,baz=132,slow=21,SNR=3.0						
PMG	Port Moresby	7.01	233	P	Pn	14 41 11.8	-0.2
PMG						14 42 28.2	
PMG	Port Moresby	7.01	233	Pn	Pn	14 41 11.8	-0.2
PMG	Port Moresby	7.01	233	P	Pn	14 41 13.6	+1.6
PMG	Port Moresby	7.01	233	P	Pn	14 41 13.6	+1.6
HNR	Honiara	8.22	121	LR	LR	14 45 14.0	
	comp=Z,1μm,19.4s,baz=301,slow=41						
COEN	Coen	12.90	227	Pn	Pn	14 42 32.2	-0.5
PATS	Pohnpei	13.14	25	Pn	Pn	14 42 33.9	-2.1
CTAO	Charters Tower	16.14	203	P	Pn	14 43 13.0	-2.7
CTAO				pmax	pmax		
	comp=Z,49nm,1.5s						
CTAO	Charters Tower	16.14	203	Pn	Pn	14 43 12.9	-2.7
SANVU	Saraoutou	17.42	127		P	14 43 33.2	+0.6
QIS	Mount Isa	19.96	219	P	P	14 44 01.2	+0.6
	comp=Z,62nm,1.3s						
EIDS	Eidsvold	20.14	185	P	P	14 44 00.0	-2.4
GUMO	Guam	20.26	337	LR	LR	14 52 34.9	
	comp=Z,342nm,18.2s,baz=158,slow=39						
FAKI	Fak Fak	20.65	275	P	P	14 44 08.6	+0.5
DZM	Mont Dzumac	21.34	143	P	P	14 44 18.1	+2.6
	comp=Z,12nm,0.6s,baz=4.5,slow=20,SNR=18						
DZM				LR	LR	14 51 37.7	
	comp=Z,704nm,21.3s,baz=320,slow=34						
DZM	Mont Dzumac	21.34	143	*e*P	P	14 44 19.4	+3.8
	comp=Z,98nm,1.4s						
DZM				*e*S	S	14 48 09.8	-0.6
	comp=Z,603nm,23.3s						
DZM				*e*LR	LR	14 49 28.9	
	comp=Z,1μm,26.2s						
DZM	Mont Dzumac	21.34	143	P	P	14 44 17.5	+2.0
DZM	Mont Dzumac	21.34	143	P	P	14 44 19.4	+3.8
KDU	Kakadu	21.43	248	P	P	14 44 15.3	-1.2
	comp=Z,75nm,1.2s						
OUENC	Ouen Island, N	21.84	143	P	P	14 44 25.0	+4.2
SIJI	Sorong	21.95	281	P	P	14 44 21.6	-0.5
	comp=Z,9.1nm,0.5s,baz=176,slow=9.5,SNR=8.9						
MTN	Manton Dam	22.72	249	P	P	14 44 29.9	-0.4
MTN				IAmb	IAmb	14 44 58.2	
	comp=Z,53nm,1.1s						
MTN	Manton Dam	22.72	249	P	P	14 44 30.9	+0.6
	comp=Z,47nm,0.8s						
QLP	Quilpie	22.81	200	P	P	14 44 32.4	+1.3

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      comp=Z,64nm,1.5s
DRS   Darwin Rock St   22.82 250   P      P      14 44 31.9 +0.6
      comp=Z,27nm,1.0s
WB0   Warramunga Arr   23.07 229   P      P      14 44 33.7 -0.2
WRAB  Tennant Creek    23.20 229   P      P      14 44 34.4 -0.7
WRAB                               pmax   pmax
      comp=Z,30nm,1.0s
WRAB  Tennant Creek    23.20 229   P      P      14 44 34.4 -0.7
WB2   Warramunga Arr   23.20 229   P      P      14 44 34.3 -0.9
WRA   Warramunga Arr   23.21 229   P      P      14 44 34.5 -0.8
      comp=Z,5.6nm,0.8s,baz=54,slow=10,SNR=28
WRA                                S      S      14 48 44.7 +0.4
      comp=Z,7.0nm,1.1s,baz=53,slow=18,SNR=5.6
WRA                                LR     LR     14 54 33.0
      comp=Z,572nm,19.2s,baz=50,slow=39
WRA   Warramunga Arr   23.21 229   P      P      14 44 34.9 -0.4
WRA   Warramunga Arr   23.21 229   P      P      14 44 34.9 -0.4
INKA  Innaminka        25.21 206   P      P      14 44 55.4 +1.8
      comp=Z,88nm,1.1s
LBMI  Labuha           25.69 279   P      P      14 45 01.4 +3.2
KNRA  Kununurra        25.83 244   P      P      14 44 58.6 -0.7
KNRA                               IAmb   IAmb   14 45 24.1
      comp=Z,43nm,0.7s
KNRA  Kununurra        25.83 244   P      P      14 44 58.7 -0.7
      comp=Z,64nm,0.9s
AS31  Alice Springs    25.89 223   P      P      14 44 59.6 -0.2
ASAR  Alice Springs    25.89 223   P      P      14 44 59.5 -0.4
      comp=Z,4.6nm,0.7s,baz=57,slow=8.5,SNR=41
ASAR                               S      S      14 49 33.3 +6.1
      comp=Z,2.1nm,1.0s,baz=29,slow=23,SNR=4.5
ASAR                               LR     LR     14 54 40.2
      comp=Z,543nm,21.6s,baz=40,slow=35
ASAR  Alice Springs    25.89 223   P      P      14 45 00.2 +0.3
ASAR  Alice Springs    25.89 223   P      P      14 45 00.2 +0.3
CMSA  Cobar Meteorol   27.06 193   P      P      14 45 12.2 +1.9
      comp=Z,9.8nm,0.9s
MSVF  Nonsavu          27.64 119   LR     LR     14 55 44.0
      comp=Z,715nm,19.7s,baz=297,slow=35
MSVF  Nonsavu          27.64 119 i P      P      14 45 12.7 -3.1
MSVF                               pmax   pmax
      comp=Z,17nm,1.1s
STKA  Stephens Creek   28.56 200   P      P      14 45 23.8  0.0
      comp=Z,2.3nm,0.7s,baz=22,slow=13,SNR=8.9
STKA                               LR     LR     14 57 22.4
      comp=Z,721nm,18.6s,baz=17,slow=38
STKA  Stephens Creek   28.56 200   P      P      14 45 22.6 -1.2
STKA                               pmax   pmax
      comp=Z,4.0nm,1.5s
STKA  Stephens Creek   28.56 200   P      P      14 45 22.6 -1.2
BATI  Baumata          29.32 258   LR     LR     14 59 36.9
      comp=Z,823nm,20.6s,baz=78,slow=41
FITZ  Fitzroy Crossi   29.50 242   P      P      14 45 30.8 -1.4
      comp=Z,6.5nm,0.5s,baz=65,slow=7.6,SNR=28
DAV   Davao City (W)   29.79 294   LR     LR     14 56 47.0
      comp=Z,479nm,19.5s,baz=98,slow=35
BBOO  Buckleboo        31.63 208   P      P      14 45 50.5 -0.4
BBOO                               IAmb   IAmb   14 45 59.3
      comp=Z,31nm,1.4s
KAPI  Kappang          32.94 269   LR     LR     15 04 02.5
      comp=Z,98nm,18.4s,baz=118,slow=45
FORT  Forrest          34.51 220   P      P      14 46 15.7 -0.4
FORT                               IAmb   IAmb   14 46 34.6
      comp=Z,31nm,1.0s
PSA00 Pilbara Seismi   35.86 240   P      P      14 46 26.2 -1.6
PSA00                              IAmb   IAmb   14 46 47.1
      comp=Z,44nm,1.2s
URZ   Urewera          39.64 150   P      P      14 47 01.8 +2.3
      comp=Z,4.0nm,0.7s,baz=307,slow=20,SNR=1.6
URZ   Urewera          39.64 150   P      P      14 47 00.5 +1.0
URZ                                IAmb   IAmb   14 47 21.3
      comp=Z,49nm,1.3s
JOW   Kunigami         39.72 324   LR     LR     15 00 27.2
      comp=Z,232nm,19.4s,baz=160,slow=32
YULB  Yu-li            41.88 314   P      P      14 47 17.1 -1.1
YULB                               IAmb   IAmb   14 47 27.8
      comp=Z,40nm,1.2s
MORW  Morawa           42.13 231   P      P      14 47 18.6 -1.6
JSU   Suzuyama         42.27 331   P      P      14 47 20.7 -0.5
JSU                                IAmb   IAmb   14 47 47.6
      comp=Z,79nm,1.3s
TPUB  Ta-pu            42.31 313   P      P      14 47 20.7 -1.0
TPUB                               IAmb   IAmb   14 47 48.8
      comp=Z,47nm,1.2s
JNU   Nakatsue         43.41 333   P      P      14 47 30.1 -0.4
      comp=Z,18nm,1.1s,baz=152,slow=3.6,SNR=5.2
JNU   Nakatsue         43.41 333   P      P      14 47 30.0 -0.5
JNU                                IAmb   IAmb   14 47 38.4
      comp=Z,49nm,1.4s
MJAR  Matsushiro Arr   43.71 343   LR     LR     15 03 46.1
      comp=Z,239nm,21.2s,baz=210,slow=33
JHS   Saijyo           44.07 337   P      P      14 47 35.2 -0.6
JHS                                IAmb   IAmb   14 47 40.0
      comp=Z,49nm,1.4s
LEM   Lembang          44.98 266   LR     LR     15 09 09.1
      comp=Z,161nm,19.7s,baz=65,slow=40
JTM   Tenmabayashi     47.00 348   P      P      14 47 58.0 -0.8
DLV   T  Lat           47.26 291   P      P      14 48 00.4 -1.2
ERM   Erimo            47.80 350   P      P      14 48 04.9  0.0
ERM                                pmax   pmax
      comp=Z,77nm,1.2s
ERM   Erimo            47.80 350   P      P      14 48 04.9  0.0
KSRS  Korea Array      48.35 333   P      P      14 48 07.7 -1.6
      comp=Z,1.6nm,0.7s,baz=147,slow=7.5,SNR=4.6
KSRS                               LR     LR     15 07 31.9
      comp=Z,126nm,18.7s,baz=164,slow=35
RAR   Rarotonga        48.60 114   LR     LR     15 05 31.0
      comp=Z,271nm,21.1s,baz=285,slow=32
QIZ   Qiongzhong       48.69 301   P      P      14 48 12.5 +0.2
QIZ                                S      S      14 55 15.8 +3.8
QIZ                                LR     LR
      comp=Z,310nm,17.1s
NJ2   Nanjing          49.16 321 e P      P      14 48 17.3 +1.7
NJ2                                pmax   pmax
      comp=Z,6.0nm,0.5s
JKA   Kamikawa-asahi   49.93 350   P      P      14 48 21.4 +0.1
ASAJ  Asahikawa        49.93 350   P      P      14 48 20.4 -0.9
      comp=Z,8.9nm,0.7s,baz=220,slow=33,SNR=7.1
ASAJ                               LR     LR     15 06 23.3
      comp=Z,136nm,21.7s,baz=182,slow=32
ASAJ  Asahikawa        49.93 350   P      P      14 48 21.4 +0.1
ASAJ                               pmax   pmax
      comp=Z,67nm,1.5s
YSS   Yuzh-Sakhalins   52.67 351   P      P      14 48 40.5 -1.3
YSS                                IAmb   IAmb   14 48 58.2
      comp=Z,38nm,1.2s
MDJ   Mudanjiang       53.79 340   P      P      14 48 49.5 -0.6
MDJ                                pmax   pmax
      comp=Z,9.0nm,1.0s
MDJ                                pmax   pmax
      comp=Z,400nm,5.2s
ENH   Enshi            54.44 313   P      P      14 48 54.2 -0.9
ENH                                IAmb   IAmb   14 48 55.9
      comp=Z,26nm,1.1s
WRMHI West Rim         56.58  63   P      P      14 49 09.4 -1.4
XAN   Xi'an            56.92 317 ⇑ P      P      14 49 13.0 +0.1
XAN                                pP     pP     14 49 24.8 +0.2
XAN                                sP     sP     14 49 30.5 +1.1
XAN                                pmax   pmax
      comp=Z,14nm,0.7s
XAN                                LR     LR
      comp=Z,460nm,21.3s
KMI   Kunming          57.22 304 ⇑ P      P      14 49 17.5 +2.1
KMI                                pmax   pmax
      comp=Z,11nm,0.5s
PPT   Papeete          57.58 107   LR     LR     15 11 13.8
      comp=Z,76nm,19.4s,baz=306,slow=33
PPT2  Papeete2         57.59 107 e LR     LR     15 06 16.2
      comp=Z,55nm,21.2s
CM31  Chiang Mai Arr   58.06 295   P      P      14 49 20.9 -0.2
CM31                               IAmb   IAmb   14 49 22.6
      comp=Z,16nm,1.1s
CMAR  Chiang Mai Arr   58.06 295   P      P      14 49 21.7 +0.5
      comp=Z,8.3nm,0.9s,baz=110,slow=5.3,SNR=44
CMAR                               LR     LR     15 14 20.2
      comp=Z,72nm,19.4s,baz=100,slow=36
CMAR  Chiang Mai Arr   58.06 295   P      P      14 49 20.6 -0.5
CHTO  Chiang Mai       58.18 296   P      P      14 49 20.9 -1.0
CHTO                               pmax   pmax
      comp=Z,21nm,1.4s
CHTO  Chiang Mai       58.18 296   P      P      14 49 20.9 -1.0
CHTO                               IAmb   IAmb   14 49 23.0
      comp=Z,21nm,1.4s
PEA0B Petropavlovsk-   58.22   3   P      P      14 49 22.1 +0.5
PEA0B                              pmax   pmax
      comp=Z,68nm,1.5s
PEA0B Petropavlovsk-   58.22   3   P      P      14 49 22.1 +0.5
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PETK  Petropavlovsk-   58.22   3   P      P      14 49 21.9 +0.3
      comp=Z,7.2nm,0.6s,baz=164,slow=6.5,SNR=50
PETK                               LR     LR     15 09 59.3
      comp=Z,205nm,20.8s,baz=193,slow=31
PETK  Petropavlovsk-   58.22   3   P      P      14 49 21.5 -0.1
PETK  Petropavlovsk-   58.22   3   P      P      14 49 21.5 -0.1
TBI   Tubuai           58.38 114 e LR     LR     15 06 26.7
      comp=Z,381nm,27.8s
CD2   Chengdu          59.01 311   P      P      14 49 27.8 +0.2
CD2                                S      S      14 57 35.8 +4.4
CD2                                pmax   pmax
      comp=Z,20nm,0.6s
CD2                                LR     LR
      comp=Z,310nm,15.7s
CD2                                LR     LR
      comp=Z,320nm,17.6s
HHC   Hu-ho-hao-te     59.37 324 e P      P      14 49 30.5 +0.5
HHC                                pmax   pmax
      comp=Z,17nm,1.1s
HHC                                pmax   pmax
      comp=Z,140nm,5.8s
HHC                                LR     LR
      comp=Z,160nm,16.9s
HHC                                LR     LR
      comp=Z,250nm,19.3s
HHC                                LR     LR
      comp=Z,300nm,17.7s
SMY   Shemya           60.45  15   P      P      14 49 37.1 +0.1
SMY                                pmax   pmax
      comp=Z,84nm,0.8s
SMY   Shemya           60.45  15   P      P      14 49 37.1 +0.1
LZH   Lanzhou          61.52 316 e P      P      14 49 45.5 +0.6
LZH                                pmax   pmax
      comp=Z,14nm,1.4s
LZH                                LR     LR
      comp=Z,180nm,15.6s
LZH                                LR     LR
      comp=Z,260nm,15.6s
LZH                                LR     LR
      comp=Z,200nm,16.3s
MA2   Magadan          64.58 359   P      P      14 50 04.3 -0.1
MA2                                pmax   pmax
      comp=Z,10.0nm,0.8s
MA2   Magadan          64.58 359   P      P      14 50 04.3 -0.1
MA2                                IAmb   IAmb   14 50 07.0
      comp=Z,10nm,0.8s
GTA   Gaotai           65.96 317 ⇑ P      P      14 50 14.3 +0.3
GTA                                pP     pP     14 50 26.0 +0.1
GTA                                sP     sP     14 50 31.8 +1.2
GTA                                pmax   pmax
      comp=Z,6.0nm,1.2s
GTA                                pmax   pmax
      comp=Z,110nm,4.8s
GTA                                LR     LR
      comp=Z,120nm,21.1s
GTA                                LR     LR
      comp=Z,130nm,18.9s
GTA                                LR     LR
      comp=Z,200nm,18.2s
ULN   Ulaanbaatar      66.33 328ce P      P      14 50 16.2  0.0
ULN                                pmax   pmax
      comp=Z,3.0nm,1.3s
NIKH  Nikolski High    66.35  24   P      P      14 50 17.0 +1.0
      baz=222
TAOE  Nuku Hiva Isla   66.55  97 e LR     LR     15 10 21.6
      comp=Z,191nm,22.4s
SONM  Songino Array    66.66 328   P      P      14 50 18.6 +0.3
      comp=Z,1.7nm,0.5s,baz=149,slow=5.8,SNR=14
SONM                               LR     LR     15 17 52.1
      comp=Z,175nm,20.9s,baz=118,slow=35
SONM  Songino Array    66.66 328   P      P      14 50 17.7 -0.6
SONM                               pmax   pmax
      comp=Z,10.0nm,1.4s
SONM  Songino Array    66.66 328   P      P      14 50 17.7 -0.6
YAK   Yakutsk          69.36 349ce P      P      14 50 35.0 +0.3
YAK                                pmax   pmax
      comp=Z,21nm,1.7s
ZAK   Zakamensk        69.83 329 e P      P      14 50 36.1 -2.0
ZAK                                pmax   pmax
      comp=Z,8.0nm,1.3s
GUN   Gumba            72.34 301 e P      P      14 50 53.7 -0.4
      comp=Z,28nm,0.6s
VNDA  Vanda            72.45 178   P      P      14 50 54.5 +1.3
      comp=Z,1.7nm,0.9s,baz=353,slow=6.4,SNR=6.5
VNDA                               LR     LR     15 22 10.3
      comp=Z,89nm,18.1s,baz=325,slow=35
VNDA  Vanda            72.45 178   P      P      14 50 54.6 +1.3
VNDA                               pmax   pmax
      comp=Z,7.0nm,1.3s
VNDA  Vanda            72.45 178   P      P      14 50 54.6 +1.3
PKI   Pulchoki         72.65 301 e P      P      14 50 55.5 -0.4
PKIN  Phulchoki        72.67 301 e P      P      14 50 55.0 -0.9
KKN   Kakani           72.82 301 e P      P      14 50 56.3 -0.5
      comp=Z,17nm,0.6s
CHGN  Chignik          73.06  26   P      P      14 50 57.5 +0.3
CHGN  Chignik          73.06  26   P      P      14 50 58.3 +1.1
      baz=232
GKN   Gorkha           73.43 301 e P      P      14 50 59.7 -0.6
BILL  Bilibino         73.67   5d i P     P      14 51 01.2 +0.6
BILL                             e*PP     pP     14 51 09.8 -3.2
BILL                              *SP     PcP    14 51 15.0 -1.2
BILL                                             14 53 46.0
BILL                               PPP    PPP    14 55 32.0
BILL                               SS     SS     15 05 18.0 +6.0
BILL                               pmax   pmax
      comp=Z,20nm,1.0s
BILL                               MLR    MLR
      comp=Z,139nm,19.0s
BILL  Bilibino         73.67   5   P      P      14 51 00.9 +0.3
BILL                               IAmb   IAmb   14 51 03.0
      comp=Z,21nm,1.1s
GAMB  Gambell          73.74  16   P      P      14 51 03.1 +2.1
      baz=217
KOLN  Koldanda         74.25 301 e P      P      14 51 04.6 -0.6
DANN  Dangsing         74.26 301 e P      P      14 51 04.5 -0.8
      comp=Z,20nm,0.6s
PYUN  Piuthan          74.86 301 e P      P      14 51 07.6 -1.1
      comp=Z,54nm,1.1s
OHAK  Old Harbor       75.88  27   P      P      14 51 14.8 +1.2
OHAK                               IAmb   IAmb   14 51 38.9
      comp=Z,38nm,1.0s
OHAK  Old Harbor       75.88  27   P      P      14 51 14.7 +1.2
      baz=236
WMQ   Urumqi           76.04 317 e P      P      14 51 16.0 +1.0
WMQ                                pP     pP     14 51 21.5 -5.5
WMQ                                sP     PcP    14 51 26.3 -0.8
WMQ                                pmax   pmax
      comp=Z,18nm,1.3s
ANM   Nome             76.13  17   P      P      14 51 16.5 +1.5
ANM                                pmax   pmax
      comp=Z,39nm,1.2s
ANM   Nome             76.13  17   P      P      14 51 16.5 +1.5
ANM                                IAmb   IAmb   14 51 18.6
      comp=Z,39nm,1.2s
ANM   Nome             76.13  17   P      P      14 51 16.4 +1.5
      baz=223
TNA   Tin City         76.16  16   P      P      14 51 16.0 +1.0
TNA   Tin City         76.16  16   P      P      14 51 16.2 +1.2
      baz=220
KDAK  Kodiak Island    76.51  27   LR     LR     15 18 09.6
      comp=Z,370nm,21.4s,baz=263,slow=30
KDAK  Kodiak Island    76.51  27   P      P      14 51 17.1 -0.1
KDAK                               pmax   pmax
      comp=Z,40nm,1.4s
KDAK  Kodiak Island    76.51  27   P      P      14 51 17.1 -0.1
KDAK                               IAmb   IAmb   14 51 36.4
      comp=Z,40nm,1.4s
O18K  Koktuh Hills     76.57  24   P      P      14 51 18.2 +0.7
Q19K  Cape Douglas,    76.69  25   P      P      14 51 18.9 +0.7
Q19K  Cape Douglas,    76.69  25   P      P      14 51 18.9 +0.7
      baz=235
SVW2  Sparrevohn       77.17  23   P      P      14 51 22.1 +1.2
SVW2                               IAmb   IAmb   14 51 42.3
      comp=Z,15nm,1.0s
P19K  Oil Pt           77.27  25   P      P      14 51 22.2 +0.7
P19K  Oil Pt           77.27  25   P      P      14 51 22.0 +0.5
      baz=236
N19K  Bonanza Creek    77.43  24   P      P      14 51 23.6 +1.1
N19K  Bonanza Creek    77.43  24   P      P      14 51 23.5 +1.1
      baz=234
O20K  Slope Mountain   77.77  25   P      P      14 51 24.8 +0.5
      baz=236
HOM   Homer            77.95  25   P      P      14 51 26.6 +1.4
CNPM  China Poot       78.05  26   P      P      14 51 26.9 +1.1
TTA   Tatalina         78.12  21   P      P      14 51 27.5 +1.3
TTA                                pmax   pmax
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      comp=Z,11nm,0.7s
TTA   Tatalina         78.12  21   P      P      14 51 27.5 +1.3
TTA                                IAmb   IAmb   14 51 29.2
      comp=Z,11nm,0.7s
TTA   Tatalina         78.12  21   P      P      14 51 27.5 +1.3
      baz=232
TIXI  Tiksi            78.28 352ce P      P      14 51 27.1 +0.3
TIXI                               pmax   pmax
      comp=Z,23nm,3.9s
TIXI  Tiksi            78.28 352   P      P      14 51 28.1 +1.3
BRLK  Bradley Lake     78.33  25   P      P      14 51 28.4 +1.1
BRLK                               IAmb   IAmb   14 51 30.4
      comp=Z,27nm,0.9s
DGZ   Jazzator, Alta   78.41 323 i P      P      14 51 27.3 -0.9
DGZ                                pmax   pmax
      comp=Z,6.0nm,0.8s
L20K  Farewell, AK     78.64  22   P      P      14 51 30.1 +1.0
      baz=234
CAPN  Captain Cook N   78.75  25   P      P      14 51 30.8 +1.2
      baz=237
GCSA  Galena City Sc   78.94  20   P      P      14 51 31.8 +1.3
      baz=231
SEW   Seward           79.12  26   P      P      14 51 32.8 +1.2
RDOG  Red Dog Mine     79.34  15   P      P      14 51 43.6  +11
      baz=225
RC01  Rabbit Creek A   79.51  25   P      P      14 51 34.7 +0.9
RC01                               IAmb   IAmb   14 51 37.5
      comp=Z,43nm,1.2s
RC01  Rabbit Creek A   79.51  25   P      P      14 51 34.7 +0.9
      baz=239
PPLA  Purkeypile       79.52  22   P      P      14 51 35.4 +1.4
PPLA                               IAmb   IAmb   14 52 01.7
      comp=Z,40nm,1.4s
PPLA  Purkeypile       79.52  22   P      P      14 51 34.6 +0.6
      baz=236
J20K  Nowinta River    79.53  21   P      P      14 51 35.4 +1.5
J20K                               IAmb   IAmb   14 51 37.8
      comp=Z,26nm,0.8s
M22K  Willow           79.70  24   P      P      14 51 35.1 +0.4
      baz=238
CAST  Castle Rocks     79.85  22   P      P      14 51 36.2 +0.6
CAST                               IAmb   IAmb   14 51 39.1
      comp=Z,12nm,0.8s
CAST  Castle Rocks     79.85  22   P      P      14 51 36.1 +0.4
      baz=236,SNR=8.2
PWL   Port Wells       79.98  25   P      P      14 51 37.5 +1.1
PWL   Port Wells       79.98  25   P      P      14 51 37.3 +0.9
      baz=240
CUT   Chulitna         79.99  23   P      P      14 51 36.7 +0.4
      baz=238
PMR   Palmer           80.02  24   P      P      14 51 36.9 +0.4
      baz=239
CHUM  Lake Minchumin   80.02  22   P      P      14 51 37.7 +1.2
      baz=236,SNR=10.0
KTH   Kantishna Hill   80.36  22   P      P      14 51 38.7 +0.3
KTH                                IAmb   IAmb   14 51 39.2
      comp=Z,12nm,0.8s
SML   Sawmill          80.46  24   P      P      14 51 40.2 +1.2
SML                                IAmb   IAmb   14 51 42.0
      comp=Z,47nm,1.2s
SML   Sawmill          80.46  24   P      P      14 51 39.5 +0.6
      baz=240,SNR=6.0
GLI   Glacier Island   80.52  25   P      P      14 51 39.7 +0.5
      baz=241
TRF   Thorofare Moun   80.54  22   P      P      14 51 39.7 +0.1
      baz=238
BPAW  Bear Paw Mtn.    80.63  22   P      P      14 51 40.5 +0.7
      baz=237
MK31  Makanchi Array   80.63 319   P      P      14 51 40.3 +0.1
MK31                               pmax   pmax
      comp=Z,4.0nm,1.2s
MK31  Makanchi Array   80.63 319   P      P      14 51 40.3 +0.1
MKAR  Makanchi Array   80.63 319   P      P      14 51 40.4 +0.2
      comp=Z,0.9nm,0.4s,baz=96,slow=7.9,SNR=26
MKAR                               LR     LR     15 26 54.9
      comp=Z,138nm,19.7s,baz=92,slow=35
MKAR  Makanchi Array   80.63 319 i P      P      14 51 40.7 +0.5
MKAR                               pmax   pmax
      comp=Z,1.0nm,0.4s
MKAR  Makanchi Array   80.63 319   P      P      14 51 39.9 -0.3
IMAR  Indian Mountai   80.73  19   P      P      14 51 41.6 +1.3
MAKZ  Makanchi         80.84 319   P      P      14 51 41.0 -0.3
MAKZ                               pmax   pmax
      comp=Z,9.0nm,1.1s
MAKZ  Makanchi         80.84 319   P      P      14 51 41.0 -0.3
H21K  Melozitna Rive   80.86  20   P      P      14 51 42.2 +1.2
H21K  Melozitna Rive   80.86  20   P      P      14 51 41.8 +0.8
      baz=235,SNR=8.9
I21K  Tanana           80.88  21   P      P      14 51 42.4 +1.4
I21K                               IAmb   IAmb   14 51 46.2
      comp=Z,22nm,0.9s
I21K  Tanana           80.88  21   P      P      14 51 42.0 +1.0
      baz=236
SCM   Sheep Creek Mo   80.89  25   P      P      14 51 42.0 +0.7
      baz=241
WAT1  Susitna Watana   80.89  23   P      P      14 51 42.3 +1.0
      baz=239
RND   Reindeer         81.07  23   P      P      14 51 42.4 +0.2
RND                                pmax   pmax
      comp=Z,16nm,0.9s
RND   Reindeer         81.07  23   P      P      14 51 42.4 +0.2
RND                                IAmb   IAmb   14 51 44.6
      comp=Z,16nm,0.9s
WAT6  Susitna Watana   81.09  24   P      P      14 51 42.8 +0.3
      baz=240
DIV   Divide           81.21  26   P      P      14 51 43.9 +0.9
DIV                                IAmb   IAmb   14 51 45.8
      comp=Z,21nm,0.9s
MCK   McKinley         81.21  23   P      P      14 51 43.1 +0.2
MCK                                pmax   pmax
      comp=Z,73nm,1.4s
MCK   McKinley         81.21  23   P      P      14 51 43.0 +0.2
MCK   McKinley         81.21  23   P      P      14 51 42.7 -0.2
      baz=239,SNR=10.0
MLY   Manley           81.23  21   P      P      14 51 43.6 +0.5
MLY   Manley           81.23  21   P      P      14 51 44.2 +1.2
      baz=237
KLU   Klutina          81.31  25   P      P      14 51 44.4 +0.8
KLU                                IAmb   IAmb   14 52 01.7
      comp=Z,41nm,1.2s
KLU   Klutina          81.31  25   P      P      14 51 44.5 +0.9
      baz=242
ZAA0  Zalesovo Array   81.49 326   P      P      14 51 43.5 -1.0
ZALV  Zalesovo Beam    81.49 326   P      P      14 51 43.5 -1.0
      comp=Z,5.4nm,0.5s,baz=113,slow=5.8,SNR=21
ZALV                               LR     LR     15 27 55.6
      comp=Z,86nm,20.5s,baz=76,slow=36
ZALV  Zalesovo Beam    81.49 326 i P      P      14 51 44.0 -0.5
ZALV                               pmax   pmax
      comp=Z,5.0nm,0.5s
M24K  Tolsona, Glenn   81.50  25   P      P      14 51 45.6 +1.1
      baz=242
NEA2  Nenana           81.60  22   P      P      14 51 44.9 -0.1
NEA2  Nenana           81.60  22   P      P      14 51 44.8 -0.1
      baz=239,SNR=6.6
BMRM  Bremner River    81.64  26   P      P      14 51 45.7 +0.5
      baz=243
I23K  Minto, Yukon-K   81.79  21   P      P      14 51 46.2 +0.4
I23K                               IAmb   IAmb   14 51 48.6
      comp=Z,11nm,0.6s
I23K  Minto, Yukon-K   81.79  21   P      P      14 51 46.0 +0.1
      baz=238,SNR=8.6
WRH   Wood River Hil   81.90  22   P      P      14 51 46.4 -0.1
WRH                                IAmb   IAmb   14 51 48.7
      comp=Z,24nm,1.2s
N25K  Chitina, Valde   81.93  25   P      P      14 51 47.6 +0.8
      baz=243
CCB   Clear Creek Bu   82.10  22   P      P      14 51 47.2 -0.3
CCB                                IAmb   IAmb   14 51 49.5
      comp=Z,10nm,0.8s
MDM   Murphy Dome      82.10  22   P      P      14 51 47.6  0.0
MDM                                IAmb   IAmb   14 51 49.0
      comp=Z,21nm,1.4s
PAX   Paxson           82.19  24   P      P      14 51 49.0 +0.8
      baz=242
TCOL  CIGO, UAF Yank   82.19  22   P      P      14 51 48.0  0.0
TCOL                               IAmb   IAmb   14 51 49.3
      comp=Z,20nm,0.7s
TCOL  CIGO, UAF Yank   82.19  22   P      P      14 51 47.8 -0.2
      baz=240,SNR=6.6
COLA  College          82.20  22   P      P      14 51 48.1 +0.1
COLA                               pmax   pmax
      comp=Z,20nm,0.7s
COLA  College          82.20  22   P      P      14 51 48.1 +0.1
COLA                               IAmb   IAmb   14 51 49.3
      comp=Z,20nm,0.7s
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COLA	College	82.20	22	P	P	14 51 48.5	+0.5
	baz=240						
HDA	Harding Lake	82.30	22	P	P	14 51 48.7	+0.1
HDA	Harding Lake	82.30	22	P	P	14 51 49.2	+0.6
	baz=241						
POKR	Poker Plat Res	82.47	22	P	P	14 51 49.9	+0.4
	baz=240						
IL31		82.50	22	P	P	14 51 49.1	-0.5
IL31				IAmb	IAmb	14 51 51.5	
	comp=Z,10nm,0.7s						
ILAR	Eielson Array	82.50	22	P	P	14 51 49.5	-0.2
	comp=Z,9.5nm,0.8s,baz=244,slow=5.3,SNR=87						
ILAR				LR	LR	15 25 41.1	
	comp=Z,126nm,19.5s,baz=250,slow=34						
ILAR	Eielson Array	82.50	22	P	P	14 51 49.0	-0.7
ILAR	Eielson Array	82.50	22	P	P	14 51 49.0	-0.7
MCARA	McCarthy VSAT	82.51	26	P	P	14 51 50.9	+1.1
	baz=245						
COLD	Coldfoot	82.61	19	P	P	14 51 51.3	+1.1
COLD				IAmb	IAmb	14 51 53.5	
	comp=Z,15nm,1.0s						
COLD	Coldfoot	82.61	19	P	P	14 51 51.2	+1.1
	baz=237,SNR=9.4						
H24K	Noodor Dome	82.67	21	P	P	14 51 51.6	+1.0
H24K				IAmb	IAmb	14 51 53.9	
	comp=Z,9.8nm,0.7s						
H24K	Noodor Dome	82.67	21	P	P	14 51 52.1	+1.5
	baz=240						
KDJ	Kajisay	82.90	313	P	P	14 51 52.9	+0.4
KDJ				pmax	pmax		
	comp=Z,22nm,1.5s						
KDJ	Kajisay	82.90	313	P	P	14 51 52.9	+0.4
KDJ				IAmb	IAmb	14 51 54.4	
	comp=Z,22nm,1.4s						
M26K	Nabesna, AK	82.96	25	P	P	14 51 53.1	+0.9
	baz=245						
CTG	Chitna Glacier	83.08	27	P	P	14 51 54.1	+1.2
	baz=246						
CTGM	Chitina Glacie	83.08	27	P	P	14 51 54.2	+1.3
L26K	Log Cabin Wild	83.08	24	P	P	14 51 53.7	+1.0
	baz=244						
A21K	Barrow	83.17	15	P	P	14 51 53.8	+0.9
A21K	Barrow	83.17	15	P	P	14 51 54.1	+1.2
	baz=231,SNR=16						
KSH	Kashi	83.20	311	P	P	14 51 57.0	+3.0
KSH				pP	pP	14 52 02.5	-3.7
KSH				pmax	pmax		
	comp=Z,12nm,1.2s						
SCRK	Sand Creek	83.25	23	P	P	14 51 54.0	+0.3
SCRK	Sand Creek	83.25	23	P	P	14 51 54.9	+1.2
	baz=244						
M27K	Edge Creek, AK	83.41	25	P	P	14 51 55.7	+1.1
M27K	Edge Creek, AK	83.41	25	P	P	14 51 56.0	+1.4
	baz=246						
TOLK	Toolik Lake Re	83.57	18	P	P	14 51 56.3	+1.1
TOLK				IAmb	IAmb	14 51 57.4	
	comp=Z,9.9nm,0.8s						
TOLK	Toolik Lake Re	83.57	18	P	P	14 51 56.4	+1.2
	baz=238,SNR=9.9						
J26L	Joseph Creek	83.64	23	P	P	14 51 56.8	+1.1
	baz=244						
L27K	Beaver Creek,	83.72	25	P	P	14 51 57.2	+1.2
L27K				IAmb	IAmb	14 51 59.1	
	comp=Z,14nm,1.1s						
L27K	Beaver Creek,	83.72	25	P	P	14 51 57.8	+1.7
	baz=246						
BCAR	Beaver Creek A	83.74	25	P	P	14 51 57.4	+1.2
YUK3	Moose Creek	83.79	26	P	P	14 51 57.9	+1.2
	baz=247						
BOOM	Boomskoye usch	83.88	314	P	P	14 51 57.7	+0.2
BOOM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BOOM	Boomskoye usch	83.88	314	P	P	14 51 57.7	+0.2
FYU	Fort Yukon	83.97	21	P	P	14 51 58.4	+1.2
FYU				IAmb	IAmb	14 52 00.7	
	comp=Z,12nm,0.6s						
KURK	Kurchatov	84.09	322	*ce*P	P	14 51 57.2	-0.9
KURK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KURK	Kurchatov	84.09	322	P	P	14 51 57.2	-0.9
KURBB	Kurchatov Arra	84.12	322	P	P	14 51 58.2	-0.1
	comp=Z,1.6nm,0.6s,baz=105,slow=4.3,SNR=14						
NIL	Nilore	84.22	304	P	P	14 51 58.8	-0.4
NIL				pmax	pmax		
	comp=Z,23nm,0.7s						
NIL	Nilore	84.22	304	P	P	14 51 58.8	-0.4
BMAR	Burnt Mountain	84.60	20	P	P	14 52 02.2	+1.7
KBK	Karagaybulak	84.63	314	P	P	14 52 02.6	+1.3
	SNR=9.7						
EGAK	Eagle	84.70	23	P	P	14 52 01.6	+0.6
EGAK	Eagle	84.70	23	P	P	14 52 02.4	+1.5
	baz=246						
CHMS	Chumysh	84.84	314	P	P	14 52 03.3	+1.1
	SNR=13						
UCH	Uchtor	84.85	313	P	P	14 52 04.6	+1.8
	SNR=23						
AAK	Ala-Archa	84.95	313	P	P	14 52 03.7	+0.9
	comp=Z,5.7nm,0.7s,baz=122,slow=5.1,SNR=12						
AAK	Ala-Archa	84.95	313	P	P	14 52 04.3	+1.4
	SNR=9.5						
AAK	Ala-Archa	84.95	313	*ce*P	P	14 52 03.4	+0.5
AAK				pmax	pmax		
	comp=Z,59nm,1.7s						
AAK	Ala-Archa	84.95	313	P	P	14 52 03.0	+0.1
AAK				IAmb	IAmb	14 52 04.9	
	comp=Z,21nm,1.2s						
USP	Ospenovka	85.07	314	P	P	14 52 04.6	+1.2
	SNR=22						
DAWY	Dawson	85.12	24	P	P	14 52 04.3	+1.1
DAWY				IAmb	IAmb	14 52 06.4	
	comp=Z,20nm,1.4s						
DAWY	Dawson	85.12	24	P	P	14 52 04.7	+1.6
	baz=248						
MAW	Mawson	85.23	203	LR	LR	15 26 30.1	
	comp=Z,185nm,22.0s,baz=64,slow=33						
AML	Almayashu	85.43	313	P	P	14 52 06.7	+1.1
	SNR=35						
EKS2	Erkin-Say	85.47	313	P	P	14 52 06.1	+0.6
	SNR=18						
N31M	Braeburn, Yuko	85.77	27	P	P	14 52 07.7	+1.3
	baz=251						
WHY	Whitehorse	85.92	28	P	P	14 52 08.4	+1.1
	baz=252						
I29M	Ogilvie Camp,	86.04	23	P	P	14 52 09.4	+1.7
	baz=249						
NRIK	Noril'sk	86.33	341	P	P	14 52 08.7	-0.3
	comp=Z,4.8nm,0.5s,baz=85,slow=3.3,SNR=13						
NRIK				LR	LR	15 33 33.2	
	comp=Z,55nm,18.3s,baz=99,slow=38						
NRIK	Noril'sk	86.33	341	*ce*P	P	14 52 08.4	-0.5
NRIK				pmax	pmax		
	comp=Z,19nm,1.6s						
NRIK	Noril'sk	86.33	341	P	P	14 52 08.6	-0.3
NRIK				IAmb	IAmb	14 52 10.1	
	comp=Z,6.7nm,0.7s						
M31M	Drury Creek, Y	86.62	27	P	P	14 52 12.2	+1.6
	baz=252						
P33M	Teslin, Yukon	86.77	29	P	P	14 52 13.0	+1.6
	baz=254						
BTK	Batken	87.21	310	P	P	14 52 13.8	-0.2
BTK				pmax	pmax		
	comp=Z,23nm,1.4s						
BTK	Batken	87.21	310	P	P	14 52 13.8	-0.2
BTK				IAmb	IAmb	14 52 16.4	
	comp=Z,23nm,1.4s						
DLBC	Dease Lake	87.70	31	LR	LR	15 24 38.5	
	comp=Z,386nm,20.4s,baz=268,slow=31						
KKAR	Karatay Array	87.91	313	P	P	14 52 17.1	-0.1
KKAR	Karatay Array	87.91	313	P	P	14 52 17.1	-0.1
CHGR	Chuyangaron	88.27	309	P	P	14 52 18.8	-0.4
INK	Inuvik	88.80	21	P	P	14 52 21.3	+0.5
INK				pmax	pmax		
	comp=Z,25nm,1.4s						
INK	Inuvik	88.80	21	P	P	14 52 21.3	+0.5
INK				IAmb	IAmb	14 52 23.0	
	comp=Z,25nm,1.4s						
INK	Inuvik	88.80	21	P	P	14 52 21.6	+0.9
	baz=253						
BVAR	Borovoye Array	89.56	323	P	P	14 52 24.1	-0.7
	comp=Z,3.1nm,0.5s,baz=132,slow=4.4,SNR=31						
BRVK	Borovoye	89.63	323	P	P	14 52 24.3	-0.7
BRVK				pmax	pmax		
	comp=Z,12nm,1.5s						
BRVK	Borovoye	89.63	323	P	P	14 52 24.3	-0.7
BRVK				IAmb	IAmb	14 52 25.6	
	comp=Z,12nm,1.5s						
G05D	Wamic, OR	90.73	45	P	P	14 52 30.9	+0.5
	baz=263						
PKM	Mcpherson Peak	90.77	55	P	P	14 52 30.8	-0.2
	baz=264						
CIS	Catalina Islan	91.78	57	P	P	14 52 34.7	-0.9
	baz=265						
NVAR	Mina Array Bea	92.30	52	P	P	14 52 39.8	+1.7
	comp=Z,0.6nm,0.7s,baz=258,slow=6.9,SNR=3.8						
NVAR				LR	LR	15 28 06.7	
	comp=Z,324nm,19.8s,baz=280,slow=32						
A36M	Sachs Harbour	92.39	18	P	P	14 52 38.0	+0.6
A36M	Sachs Harbour	92.39	18	P	P	14 52 38.6	+1.1
	baz=261						
LRMC	Laurel Mtn Rad	92.56	55	P	P	14 52 38.8	-0.4
	baz=266						
MONP2	Monument Peak	93.41	57	P	P	14 52 43.0	-0.4
	baz=266						
TPNV	Topopah Spring	93.82	53	P	P	14 52 44.6	-0.4
	baz=266						
YKA	Yellowknife Ar	95.75	28	P	P	14 52 54.5	+1.4
	comp=Z,1.3nm,0.6s,baz=270,slow=4.8,SNR=29						
YKA				LR	LR	15 30 20.4	
	comp=Z,240nm,21.8s,baz=0.0,slow=32						
GEYT	Alibeck	96.87	307	LR	LR	15 37 41.0	
	comp=Z,66nm,20.1s,baz=240,slow=36						
PDAR	Pinedale Array	99.09	48	LR	LR	15 34 23.2	
	comp=Z,280nm,18.7s,baz=267,slow=33						
SNAA	Sanae	101.65	188	*i* P	Pdif	14 53 18.6	-0.9
SNAA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
FINES	FINESS Array B	111.41	336	PKiKP	PKiKP	14 58 01.4	+0.4
	comp=Z,3.3nm,1.1s,baz=27,slow=2.1,SNR=3.7						
NOA	NORSAR Array B	117.28	340	PKP	PKiKP	14 58 12.9	+0.6
	comp=Z,0.6nm,0.8s,baz=42,slow=1.8,SNR=1.7						
CLL	Collm	123.20	331	*e*PKIKP	PKiKP	14 58 25.0	+0.8
CLL				*i*		14 58 36.6	
CLL	Collm	123.20	331	*e*PKPdf	PKiKP	14 58 25.0	+0.8
CLL				*i* pPKPdf	pPKPdf	14 58 36.6	-0.3
CLL				LmV		15 57 00.0	
	comp=Z,100nm,19.2s						
CONA	Conrad Observa	123.78	326	*e*P	PKiKP	14 58 25.8	+0.2
	comp=Z,2.9nm,1.1s						
GERES	GERESS Array B	124.39	328	PKP	PKiKP	14 58 27.5	+0.7
	comp=Z,1.6nm,0.5s,baz=78,slow=2.1,SNR=22						
ABTA	Abfaltersbach	126.32	327	*e*P	PKPdf	14 58 29.3	-0.9
	comp=Z,7.5nm,1.6s						
WTTA	Wattenberg	126.46	328	*e*P	PKiKP	14 58 30.9	-0.1
	comp=Z,6.1nm,1.0s						
STAL	STALIGIAL	126.51	326	PKPdf	PKiKP	14 58 31.1	+0.1
MOTA	Moosalm	126.69	328	*e*P	PKiKP	14 58 32.1	+0.6
	comp=Z,5.6nm,1.1s						
FETA	Feichten	127.10	328	*e*P	PKiKP	14 58 32.2	-0.1
	comp=Z,8.2nm,1.2s						
TORD	Torodi Ar. Bea	150.45	288	PKPbc	PKPbc	14 59 19.7	-0.1
	comp=Z,4.8nm,0.8s,baz=57,slow=2.1,SNR=14						
TORD	Torodi Ar. Bea	150.45	288		PKPbc	14 59 19.2	-0.7
BDFB	Brasilia	150.78	135	PKPbc	PKiKP	14 59 21.9	+0.5
	comp=Z,3.5nm,0.5s,baz=274,slow=2.6,SNR=5.5						
KOWA	Kowa	155.41	294		PKPab	14 59 46.5	-0.8
KIC	Kosan Boka	157.65	274	*e*PKP2	PKPab	14 59 56.8	-0.3
	comp=Z,12nm,0.6s						
DBIC	Dimbokro	157.75	275	PKPab	PKPab	14 59 56.4	-1.1
	comp=Z,4.8nm,0.7s,baz=91,slow=2.7,SNR=7.8						
DBIC	Dimbokro	157.75	275	PKP2	PKPab	14 59 56.3	-1.2
TIC	Toumodi	157.92	275	*e*PKP2	PKPab	14 59 57.9	-0.3
LIC	Lamto	157.94	274	*e*PKP2	PKPab	14 59 58.0	-0.3
	comp=Z,17nm,0.6s						

IDC ***28*** *14:52:58.1±4.9, 5°.06S×152°.57E, h66^{km}±46^{km}, mb3.6/11, mb1 3.7/12, mb1mx3.5/48, mbtmp3.9/12, ML1.5/1, Error ellipse: s-maj=29.7km s-min=23.6km az=138.0*

ISC 28 14:52:57.0±0.8**, 5°.0S**±0°.1×**152°.5E**±0°.1**, h55^{km}, n14, σ1^s.18**/15**, mb3.8**/11**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.88	231	P	Pn	14 54 37.8	+2.5
	0.6nm,0.3s,baz=7.1,slow=13,SNR=1.9						
PMG				S	Sn	14 55 50.2	-2.1
	0.8nm,0.3s,baz=319,slow=20,SNR=1.6						
DZM	Mont Dzumac	21.63	143	P	P	14 57 42.6	-0.3
	2.5nm,0.6s,baz=326,slow=11,SNR=1.8						
WRA	Warramunga Arr	23.09	229	P	P	14 57 57.3	-1.1
	0.9nm,0.5s,baz=53,slow=9.9,SNR=10						
ASAR	Alice Springs	25.80	222	P	P	14 58 24.4	+1.2
	1.0nm,0.8s,baz=56,slow=8.6,SNR=12						
FITZ	Fitzroy Crossi	29.32	242	P	P	14 58 53.6	-1.0
	2.8nm,0.9s,baz=58,slow=7.6,SNR=7.0						
CMAR	Chiang Mai Arr	57.74	295	P	P	15 02 43.5	+0.6
	0.9nm,0.8s,baz=101,slow=5.3,SNR=5.7						
PETK	Petropavlovsk-	58.09	4	P	P	15 02 44.3	-0.3
	5.3nm,1.1s,baz=168,slow=7.6,SNR=6.2						
MKAR	Makanchi Array	80.33	319	P	P	15 05 02.6	+0.1
	0.2nm,0.5s,baz=95,slow=6.9,SNR=1.3						
ZALV	Zalesovo Beam	81.21	326	P	P	15 05 06.9	0.0
	0.6nm,0.5s,baz=108,slow=4.7,SNR=2.0						
ILAR	Eielson Array	82.48	22	P	P	15 05 12.8	-0.5
	1.1nm,0.7s,baz=249,slow=6.4,SNR=10						
BVAR	Borovoye Array	89.28	323	P	P	15 05 47.0	-0.2
	0.3nm,0.4s,baz=106,slow=4.8,SNR=3.6						
YKA	Yellowknife Ar	95.76	28	P	P	15 06 17.5	+0.6
	0.2nm,0.7s,baz=271,slow=4.6,SNR=4.4						
GERES	GERESS Array B	124.12	328	PKP	PKPdf	15 11 48.6	-1.1
	0.3nm,0.5s,baz=45,slow=2.1,SNR=4.0						
TORD	Torodi Ar. Bea	150.13	288	PKPbc	PKPbc	15 12 43.1	+0.3
	0.8nm,0.8s,baz=112,slow=2.9,SNR=2.7						

IDC 28 15:00:14.0±4.0**, 4°.07S**×**152°.00E, h0^{km}, mb3.8**/2**, mb1 4.1**/2**, mb1mx3.3**/45**, mbtmp3.8**/2**, Error ellipse: s-maj=163.2km s-min=52.1km az=117.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.35	226	P	P	15 05 23.4	-0.9
	2.9nm,1.1s,baz=51,slow=9.6,SNR=4.8						
ASAR	Alice Springs	26.17	220	P	P	15 05 51.1	+0.8
	1.2nm,0.6s,baz=55,slow=8.9,SNR=19						
TORD	Torodi Ar. Bea	149.32	289	PKPbc	PKPbc	15 20 05.1	-0.8
	0.5nm,0.7s,baz=61,slow=4.8,SNR=2.8						

NEIC ***28*** *15:10:30.5±1.7, 41°.48N±0°.03×118°.98W±0°.05, h8^{km}±5^{km}, Error ellipse: s-maj=6.0km s-min=4.5km az=74.0*

IDC ***28*** *15:10:30.5±0.6, 41°.48N×119°.07W, h0^{km}, mb3.5/3, mb1 3.7/7, mb1mx3.6/35, mbtmp3.5/7, ML3.3/4, MS2.8/3, Ms1 2.8/3, ms1mx2.6/26, Error ellipse: s-maj=8.5km s-min=6.4km az=22.0*

NEIC ***28*** *15:10:31, 41°.48N×119°.02W, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.40; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$1.42; $M_{r\theta}$0.05; $M_{\theta\phi}$0.26; $M_{\phi r}$0.42; Fault plane solution: $M_0$1.49000×10^{15} NP1:ϕ_s189.03000°, δ53.25000°, λ-90.99000°. NP2:ϕ_s10.68000°, δ36.77000°, λ-88.67000°. Principal axes: T 1.5217, Plg8.0000°, Azm280.0000°; N -0.0571, Plg1.0000°, Azm190.0000°; P -1.4646, Plg82.0000°, Azm94.0000°;*

REN ***28*** *15:10:31.5±1.9, 41°.45N±0°.04×119°.03W±0°.06, h18^{km}±5^{km}, ML4.2, mb4.1/1(NEIC), ML3.8/70(NEIC), Mwr4.1/82(NEIC) Error ellipse: s-maj=6.4km s-min=5.8km az=75.0*

ANF ***28*** *15:10:32.2±1.7, 41°.47N×119°.01W, h15^{km}, ML4.1/14, Error ellipse: s-maj=16.7km s-min=9.6km az=110.0*

ISC 28 15:10:30.1±0.6**, 41°.40N**±0°.03×**118°.98W**±0°.03**, h10^{km}, n72, σ1^s.16**/78**, mb3.6**/4**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WVOR	Wild Horse Val	1.07	14	Pn	Pb	15 10 49.4	-1.4
WVOR				Sn	Sn	15 11 04.1	-2.1
WVOR				IAML		15 11 05.7	
	4µm,0.9s						
WVOR				IAML		15 11 05.8	
	3µm,1.1s						
MOD	Modoc Plateau	1.11	297		Pn	15 10 51.9	-0.1
WVA	Winnemucca Val	1.59	204		Pb	15 11 00.2	+0.5
BMN	Battle Mountai	1.64	125		Pb	15 11 00.6	0.0
PAHR	Pah Rah Range	1.72	191		Pb	15 11 01.8	0.0
PEAR	Peavine Mounta	1.94	203		Pb	15 11 05.4	-0.3
K05A	Summer Lake	1.95	314		Pb	15 11 04.2	-1.7
K05A				IAML		15 11 44.4	
	comp=E,1µm,1.3s						
LOY	Loyalton	1.98	209		Pb	15 11 06.2	-0.3
BABR	Babbit Peak	1.99	206		Pb	15 11 06.4	-0.2
J08A	Circle Bar Ran	1.99	11	Pn	Pn	15 11 03.4	-0.6
J08A				IAML		15 11 33.5	
	comp=E,1µm,0.7s						
J08A				IAML		15 11 40.1	
	comp=N,1µm,0.6s						
KBF	Kyburz Flat	2.11	207		Pb	15 11 08.0	-0.6
M04C	Macdoel	2.18	281	P	Pn	15 11 07.4	+0.8
	baz=98,SNR=144						
M04C				S	Sn	15 11 34.3	+0.5
	baz=98						
IND	Independence	2.20	208		Pb	15 11 09.4	-0.8
MPK	Martis Peak	2.25	201	Pn	Pn	15 11 09.1	+1.5
MPK				IAML		15 11 55.2	
	comp=N,493nm,0.5s						
MPK				IAML		15 12 02.2	
	comp=E,635nm,0.9s						
DONR	Donner Summit	2.29	207		Pb	15 11 10.4	-1.3
K04D	Chiloquin, OR	2.41	302	P	Pn	15 11 10.1	+0.5
	baz=118,SNR=43						
K04D				S	Sn	15 11 39.9	+0.7
	baz=118						
O03E	Paynes Creek	2.41	244	P	Pb	15 11 11.6	-2.1
	baz=61,SNR=364						
O03E				Sb	Sg	15 11 47.5	0.0
	baz=61						
YERR	Yerington	2.42	185		Pn	15 11 11.5	+1.6
YERR				IAML		15 12 03.6	
	comp=E,484nm,0.7s						
KVN	Kaiserville	2.44	164		Pn	15 11 11.8	+1.7
KVN				IAML		15 11 55.4	
	comp=E,350nm,1.3s						
KVN				IAML		15 11 56.6	
	comp=N,374nm,0.7s						
J05D	Fort Rock, OR	2.52	319	P	Pn	15 11 11.1	-0.2
	baz=136,SNR=178						
L04D	Klamath Falls	2.62	289	P	Pn	15 11 13.3	+0.6
	baz=106,SNR=90						
RYN	Ryan	2.79	173		Pn	15 11 16.4	+1.5
RYN				IAML		15 12 12.0	
	comp=E,327nm,1.1s						
RYN				IAML		15 12 12.2	
	comp=N,346nm,0.8s						
WDC	Whiskeytown Da	2.82	254		Pn	15 11 15.7	+0.5
WDC				IAML		15 12 06.6	
	comp=N,301nm,1.2s						
YBH	Yreka Blue Hor	2.82	278	Pn	Pn	15 11 16.2	+0.8
	comp=N,2.7nm,0.3s,baz=78,slow=10.0,SNR=76						
YBH				Pg	Pb	15 11 20.7	+0.1
	comp=N,8.8nm,0.3s,baz=8.7,slow=13,SNR=37						
YBH				Lg	Lg	15 12 01.0	
	comp=N,3.2nm,0.3s,baz=336,slow=18,SNR=2.3						
YBH	Yreka Blue Hor	2.82	278		Pn	15 11 15.5	+0.1
N02D	Trinity Center	2.85	263	P	Pn	15 11 16.5	+0.8
	baz=79,SNR=66						
ELK	Elko	2.90	102	Pn	Pb	15 11 20.9	-1.2
	comp=N,13nm,0.3s,baz=289,slow=16,SNR=269						
ELK				Pg	Pg	15 11 24.6	-1.2
	comp=N,36nm,0.3s,baz=300,slow=17,SNR=40						
ELK				Sn	Sb	15 11 58.5	+0.8
	comp=N,55nm,0.3s,baz=219,slow=22,SNR=9.2						
ELK				LR	LR	15 12 55.2	
	comp=N,190nm,20.4s,baz=184,slow=48						
ELK	Elko	2.90	102	Pn	Pn	15 11 17.5	+0.9
M02C	Callahan	2.92	271	P	Pn	15 11 17.9	+1.2
	baz=88,SNR=9.1						
J04D	Umpqua Nationa	2.96	309	P	Pn	15 11 18.7	+1.3
	baz=126,SNR=51						
NVAR	Mina Array Bea	3.01	170	Pn	Pb	15 11 21.2	-2.7
	comp=N,1.7nm,0.3s,baz=351,slow=13,SNR=28						
NVAR				Pg	Pg	15 11 24.8	-3.0
	comp=N,2.8nm,0.3s,baz=349,slow=13,SNR=43						
NVAR				Lg	Lg	15 12 09.8	
	comp=N,21nm,0.3s,baz=2.0,slow=14,SNR=5.6						
NV11	Mina Array Sit	3.03	168	Pn	Pn	15 11 19.3	+1.0
NV11				IAML		15 12 26.9	
	comp=E,198nm,1.2s						
MFID	Camas Ranch	3.08	48	Pn	Pn	15 11 19.1	+0.1
O02D	Mt. Diablo Mer	3.14	248	P	Pn	15 11 21.0	+1.3
	baz=65,SNR=68						
O02D				Sb	Sg	15 12 09.5	-1.5
	baz=65						
LHV	Little Huntoon	3.16	173		Pn	15 11 20.3	+0.3
LHV				IAML		15 12 34.4	
	comp=E,395nm,1.4s						
LHV				IAML		15 12 34.8	
	comp=N,340nm,1.3s						
LUL	Lundy Lake	3.34	183		Pb	15 11 26.5	-3.2
I05D	Terrebonne, OR	3.41	330	Pb	Pb	15 11 30.6	-0.1
	baz=147,SNR=36						
I04A	Tendick Farm,	3.49	315	Pb	Pb	15 11 33.0	+1.1
	baz=131,SNR=31						
CMB	Columbia Colle	3.53	198	Pn	Pn	15 11 25.9	+0.9
L02E	Cave Junction	3.54	284	P	Pn	15 11 27.8	+2.6
	baz=100,SNR=11						
BMO	Blue Mountains	3.66	19		Pn	15 11 26.4	-0.6
BMO				IAML		15 12 29.7	
	comp=N,129nm,0.7s						
BMO				IAML		15 12 40.4	
	comp=N,128nm,1.4s						
K02D	Willamette Mer	3.73	292	P	Pn	15 11 29.8	+2.1
	baz=108,SNR=37						
JCC	Jacoby Creek,	3.86	263	Pn	Pn	15 11 29.4	-0.1
JCC				IAML		15 12 45.7	
	comp=E,124nm,1.4s						
KCPM	Cahto Peak	3.90	246	Pn	Pn	15 11 30.4	+0.1
KCPM				IAML		15 12 56.8	
	comp=N,122nm,1.4s						
KCPM				IAML		15 12 58.3	
	comp=E,138nm,1.9s						
HLID	Hailey	4.01	56	Pn	Pn	15 11 31.7	-0.1
HLID				IAML		15 12 38.5	
	comp=E,221nm,0.6s						
R11A	Troy Canyon, C	4.01	138		Pn	15 11 32.3	+0.5
R11A				IAML		15 12 45.0	
	comp=N,108nm,0.6s						
R11A				IAML		15 12 45.5	
	comp=E,94nm,1.2s						
H04A	Detroit Lake	4.04	325	Pn	Pn	15 11 30.2	-1.8
DSP	Deep Springs	4.10	169		Pb	15 11 37.7	-4.6
H04D	Lebanon	4.17	320	Pb	Pb	15 11 43.3	-0.3
	baz=136,SNR=8.5						
PLID	Pearl Lake	4.28	30	Pn	Pn	15 11 34.9	-0.7
PLID				IAML		15 12 54.8	
	comp=E,88nm,1.9s						
PLID				IAML		15 12 58.7	
	comp=E,120nm,0.9s						
MCCM	Marconi Confer	4.43	224	Pn	Pn	15 11 38.2	+0.9
MCCM				IAML		15 14 32.9	
	comp=E,84nm,2.2s						
COR	Corvallis	4.50	317	Pn	Pn	15 11 37.3	-1.0
COR				IAML		15 13 11.1	
	comp=E,111nm,1.3s						
COR				IAML		15 13 22.1	
	comp=E,117nm,2.0s						
BGU	Big Grassy Mou	4.51	94		Pn	15 11 39.4	+0.7
BGU				IAML		15 12 58.1	
	comp=N,134nm,1.4s						
HVU	Hansel Valley	4.67	83	Pn	Pn	15 11 41.6	+0.8
PSUT	Pine Spring	4.86	124	Pn	Pn	15 11 44.0	+0.5
SPUT	South Promonto	4.91	89	Pn	Pn	15 11 45.0	+0.8
SPUT				IAML		15 13 04.8	
	comp=E,93nm,0.7s						
NLU	North Lily Min	5.44	103	Pn	Pn	15 11 51.4	-0.1
GWY	Greenwater Val	5.51	160	Pn	Pn	15 11 52.6	+0.3
MCMT	McKenzie Canyo	5.64	51		Pn	15 11 54.3	0.0
QSM	Queen of Sheba	5.67	162	Pn	Pn	15 11 55.4	+0.9
MTPU	Mount Pierson	6.22	120	Pn	Pn	15 12 02.6	+0.3
MSO	Missoula	6.53	32	Pn	Pn	15 12 06.7	+0.5
BOZ	Bozeman (W)	6.79	49		Pn	15 12 09.5	-0.5
PDAR	Pinedale Array	7.14	76	Pn	Pn	15 12 21.0	+6.2
	comp=E,0.1nm,0.3s,baz=272,slow=12,SNR=4.4						
PDAR				Pg	Pb	15 12 36.2	+1.9
	comp=E,0.9nm,0.3s,baz=248,slow=14,SNR=17						
PDAR				Lg	Lg	15 14 12.7	
	comp=E,0.3nm,0.3s,baz=263,slow=27,SNR=3.5						
PDAR				LR	LR	15 15 40.4	
	comp=E,48nm,19.1s,baz=252,slow=43						
HRY	Holter Researc	7.39	42		Pn	15 12 17.4	-0.8
ANMO	Albuquerque	11.77	119	LR	LR	15 17 13.8	
	comp=E,52nm,21.6s,baz=298,slow=34						
YKA	Yellowknife Ar	21.29	6	P	P	15 15 17.3	+0.8
	comp=E,0.8nm,0.8s,baz=188,slow=10,SNR=13						
ILAR	Eielson Array	28.34	335	P	P	15 16 25.9	+2.0
	comp=E,0.5nm,0.9s,baz=144,slow=7.8,SNR=2.6						
AKASG	Malin Array Be	84.16	20	P	P	15 23 02.0	+0.8
	comp=E,0.4nm,0.5s,baz=330,slow=3.8,SNR=4.7						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKASG	Malin Array Be	84.16	20	IAmb	IAmb	15 23 21.7	
	comp=Z,1.4nm,1.2s						
HHC	Hu-ho-hao-te	86.19	324	*e*P	P	15 23 12.3	+0.5
HHC				pmax	pmax		
	comp=Z,180nm,6.2s						
HHC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WMQ	Urumqi	91.84	341	*e*P	P	15 23 38.3	-0.1

IDC 28 15:29:27.0±2.2, 5°33S×153°17E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/29, mbtmp3.8/5, ML1.9/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/34, Error ellipse: s-maj=118.4km s-min=22.5km az=125.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.21	235	Pn	Pn	15 31 14.4	+0.8
	1.2nm,0.3s,baz=23,slow=10,SNR=6.3						
PMG				Sn	Sn	15 32 31.8	-4.5
	0.6nm,0.3s,baz=336,slow=20,SNR=1.8						
WRA	Warramunga Arr	23.38	230	P	P	15 34 38.1	+0.5
	0.8nm,0.7s,baz=52,slow=9.5,SNR=2.5						
ASAR	Alice Springs	26.02	224	P	P	15 35 01.4	-0.6
	0.8nm,0.8s,baz=61,slow=8.9,SNR=10						
ASAJ	Asahikawa	50.13	350	LR	LR	15 59 30.3	
	comp=Z,24nm,18.2s,baz=124,slow=36						
PETK	Petropavlovsk-	58.34	3	P	P	15 39 23.6	-0.2
	1.2nm,0.8s,baz=159,slow=8.6,SNR=4.5						
ILAR	Eielson Array	82.51	22	P	P	15 41 51.5	+0.2
	1.0nm,0.8s,baz=249,slow=5.7,SNR=6.1						

IDC 28 15:38:10.9±3.0, 29°15N×140°42E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/27, mbtmp3.7/4, Error ellipse: s-maj=137.4km s-min=26.2km az=74.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	47.97	308	P	P	15 46 52.5	+1.1
	0.3nm,0.5s,baz=90,slow=8.6,SNR=5.4						
WRA	Warramunga Arr	49.16	188	P	P	15 47 00.9	+0.2
	0.5nm,0.4s,baz=2.0,slow=7.8,SNR=10						
ASAR	Alice Springs	52.89	187	P	P	15 47 28.4	-0.4
	0.3nm,0.3s,baz=359,slow=6.5,SNR=18						
FINES	FINESS Array B	75.42	333	P	P	15 49 55.1	-1.1
	2.3nm,0.9s,baz=69,slow=7.7,SNR=2.2						

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*NEIC **28** 15:46:32.2±0.9, 3°9S±0°2×80°8W±0°2, h10km±11km, Error ellipse: s-maj=37.4km s-min=14.7km az=61.0*

*IGQ **28** 15:46:35±0.9, 4°S±2°×8°1W±°, h8km*

*ARE **28** 15:46:36±0.8, 3°8S±0°2×80°6W±0°2, h29km±7km, ML4.2, mb4.6/6(NEIC), Error ellipse: s-maj=33.7km s-min=13.5km az=49.0*

ISC 28 15:46:37.9±1.0, 3°79S±0°06×80°59W±0°09, h57km, n55, $\sigma 1^{s}58$/58, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNL	Arenillas	0.57	65	P	Pn	15 46 48.0	-2.5
ARNL				S	Sn	15 46 55.0	-4.5
ACH1	Ecuador-Univer	0.84	54	P	Pn	15 46 51.0	-2.7
ACH1				S	Sn	15 47 02.0	-3.4
MCRA	Macar, Loja	0.86	133	P	Pn	15 46 53.0	-1.1
MCRA				S	Sn	15 47 04.0	-1.9
ISPG	Isla Puna-Puer	0.91	27	P	Pn	15 46 54.0	-0.8
ISPG				S	Sn	15 47 08.0	+0.8
ACH2	Ecuador-Machal	0.93	56	P	Pn	15 46 53.0	-2.0
GONZ	Gonzanam	1.27	111	P	Pn	15 46 59.0	-0.8
ACUE	Ecuador-Cuenca	1.84	62	P	Pn	15 47 09.0	+1.5
COHC	Cochancay	1.87	45	P	Pn	15 47 06.0	-1.6
AMIL	Milagro (Trans	1.92	31	P	Pn	15 47 07.0	-1.2
BOSC	San Juan Bosco	2.18	73	P	Pn	15 47 13.0	+1.0
LOJ1	Universidad t	2.23	95	P	Pn	15 47 01.0	-12
ISPT	Isla de la Pla	2.55	349	P	Pn	15 47 15.0	-2.0
SANGA	Volcan Sangay	2.80	52	P	Pn	15 47 20.0	-0.8
CHSH	Refugio Sur-Vo	2.85	37	P	Pn	15 47 21.0	-0.5
TAMH	Tambohuasha Ch	2.87	39	P	Pn	15 47 21.0	-0.7
PORT	Chimborazo Vol	2.93	38	P	Pn	15 47 22.0	-0.7
BMAS	Trigal station	3.09	43	P	Pn	15 47 23.0	-1.7
ARRY	Arrayan	3.11	43	P	Pn	15 47 23.0	-1.9
BPAT	Tungurahua Vol	3.12	44	P	Pn	15 47 24.0	-1.2
BBIL	Ulba Tungurahu	3.13	42	P	Pn	15 47 25.0	-0.1
CAB1	Cabo Pasado-Ma	3.38	3	P	Pn	15 47 28.0	-0.3
CABP	Cabo Pasado	3.38	3	P	Pn	15 47 28.0	-0.3
SLOR	San Lorenzo -	3.69	35	P	Pn	15 47 33.0	+0.1
CAMI	Rancho Maria	3.72	34	P	Pn	15 47 34.0	+0.6
BNAS	Cotopaxi Volca	3.74	34	P	Pn	15 47 35.0	+1.3
SUCR	Mariscal Sucre	3.76	34	P	Pn	15 47 35.0	+1.1
BREF	Cotopaxi Volca	3.77	35	P	Pn	15 47 35.0	+0.9
BTAM	Cotopaxi Volca	3.79	35	P	Pn	15 47 35.0	+0.7
TAMB	Tambo	3.79	36	P	Pn	15 47 35.0	+0.7
BVC2	Cotopaxi Volca	3.79	35	P	Pn	15 47 35.0	+0.6
HPAL	Hacienda Las P	4.04	29	P	Pn	15 47 37.0	-0.6
GGPT	Toaza - Volcan	4.05	29	P	Pn	15 47 37.0	-0.8
JUA2	San Juan 2	4.06	29	P	Pn	15 47 38.0	-0.1
TERV	Terraza Guagua	4.10	29	P	Pn	15 47 39.0	+0.4
PINO	Pino	4.11	29	P	Pn	15 47 38.0	-0.8
PAC1	Pacto, Paraso	4.41	24	P	Pn	15 47 41.0	-1.5
OTAV	Otavalo	4.53	28	Pn	Pn	15 47 44.1	-0.4
CUSE	Cuicocha Este	4.62	28	P	Pn	15 47 46.0	+0.4
CUIC	Cuicocha-Domo	4.63	29	P	Pn	15 47 45.0	-0.8
URCU	Urcuqui	4.80	29	P	Pn	15 47 49.0	+0.9
YAHU	Yahuarcocha	4.83	31	P	Pn	15 47 49.0	+0.5
RVRD	Rio Verde	4.97	14	P	Pn	15 47 49.0	-1.0
LNGL	El Angel-Carch	5.18	30	P	Pn	15 47 57.0	+3.5
CHL1	Volc¡n Chiles	5.26	30	P	Pn	15 47 57.0	+2.5
CHMA	Chilma	5.26	29	P	Pn	15 47 56.0	+1.7
ECEN	Cerro Negro	5.27	30	P	Pn	15 47 57.0	+2.3
CHL2	Volc¡n Chiles	5.28	30	P	Pn	15 47 58.0	+3.2
CZSB	Cruzeiro do Su	8.77	117	Pn	Pn	15 48 41.0	-1.1
ETMB	Extrema	15.47	114	Pn	Pn	15 50 11.5	-1.2
ESPN	Las Esperanzas	16.30	347	Pn	Pn	15 50 23.1	-0.2
ESPN				IAmb	IAmb	15 50 24.8	
	comp=Z,11nm,0.6s						
ACON	Acoyapa	16.30	344	P	P	15 50 24.2	-1.2
ACON				IAmb	IAmb	15 50 30.0	
	comp=Z,28nm,0.6s						
RCBR	Riachuelo	44.57	94	P	P	15 54 46.3	+1.5
B35A	Bob, Littlefor	53.19	349	P	P	15 55 50.0	-0.2
B35A				IAmb	IAmb	15 56 07.4	
	comp=Z,11nm,1.1s						
FCC	Fort Churchill	63.28	352	P	P	15 57 02.1	+1.7
FCC				IAmb	IAmb	15 57 14.4	
	comp=Z,9.7nm,1.5s						
PMOZ	Porto Moniz, M	70.06	53	P	P	15 57 45.9	+1.5

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*IDC **28** 15:52:01.4±1.6, 2°48S×139°21E, h0km, mb3.6/3, mb1 4.0/4, mb1mx3.4/38, mbtmp3.8/4, ML4.2/1, Error ellipse: s-maj=72.9km s-min=25.7km az=96.0*

*NEIC **28** 15:52:03.2±1.2, 2°5S±0°1×139°3E±0°1, h10km±2km, mb4.1/10, Error ellipse: s-maj=27.3km s-min=21.4km az=134.0*

ISC 28 15:52:05.6±0.9, 2°5S±0°1×139°32E±0°08, h27km, n23, $\sigma 1^{s}14$/22, mb3.8/4, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.84	94	P	Sn	15 52 33.4	+0.1
FAKI	Fak Fak	7.08	267	Pn	Pn	15 53 48.1	+0.6
FAKI	Fak Fak	7.08	267	P	Pn	15 53 48.6	+1.1
KDU	Kakadu	12.16	214	P	Pn	15 54 55.8	-1.4
	24nm,1.1s						
DRS	Darwin Rock St	12.90	220	P	Pn	15 55 07.6	+0.3
	10nm,0.7s						
MTN	Manton Dam	13.06	218	Pn	Pn	15 55 08.6	-1.0
MTN	Manton Dam	13.06	218	P	Pn	15 55 09.0	-0.6
	19nm,1.2s						
LUWI	Luwuk	16.61	275		Pn	15 55 57.1	+0.3
LUWI				IAmb	IAmb	15 56 20.7	
	comp=Z,30nm,1.1s						
KNRA	Kununurra	16.70	218	Pn	Pn	15 55 56.3	-1.6
KNRA				IAmb	IAmb	15 56 21.2	
	comp=Z,37nm,1.4s						
KNRA	Kununurra	16.70	218	P	Pn	15 55 57.2	-0.7
	comp=Z,24nm,1.8s						
WB0	Warramunga Arr	17.80	195		Pn	15 56 10.6	-1.0
WB0				IAmb	IAmb	15 56 36.6	
	comp=Z,16nm,1.4s						
QIS	Mount Isa	17.92	179	P	P	15 56 16.8	+3.3
	comp=Z,9.6nm,2.2s						
WRAB	Tennant Creek	17.96	195		Pn	15 56 12.6	-1.0
WRAB				IAmb	IAmb	15 56 32.8	
	comp=Z,8.6nm,1.2s						
WB2	Warramunga Arr	17.97	195		Pn	15 56 12.7	-1.0
WB2				IAmb	IAmb	15 56 28.2	
	comp=Z,22nm,1.4s						
WRA	Warramunga Arr	17.98	195	P	Pn	15 56 12.9	-0.8
	comp=Z,0.8nm,0.3s,baz=15,slow=12,SNR=27						
WRA	Warramunga Arr	17.98	195	IAmb	IAmb	15 56 17.8	
	comp=Z,0.4nm,1.4s						
AS31	Alice Springs	21.65	194	P	P	15 56 53.5	-0.7
ASAR	Alice Springs	21.66	194	P	P	15 56 54.0	-0.3
	comp=Z,1.0nm,0.4s,baz=22,slow=10,SNR=37						
MK31	Makanchi Array	70.02	322	P	P	16 03 14.8	-0.4
MKAR	Makanchi Array	70.02	322	P	P	16 03 14.7	-0.5
	comp=Z,0.5nm,0.6s,baz=110,slow=6.3,SNR=7.3						
MAKZ	Makanchi	70.22	322	P	P	16 03 16.1	-0.3
BOOM	Boomskoye usch	72.45	316	P	P	16 03 28.9	-1.2
BOOM				IAmb	IAmb	16 03 42.0	
	comp=Z,2.8nm,1.1s						
ILAR	Eielson Array	85.42	24	P	P	16 04 40.5	+0.1
	comp=Z,0.4nm,0.7s,baz=269,slow=4.2,SNR=5.6						

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*NEIC **28** 15:52:56.2±0.6, 36°26N±0°01×97°38W±0°03, h6km±7km, Error ellipse: s-maj=3.3km s-min=1.3km az=77.0*

*TUL **28** 15:52:56.6±0.6, 36°26N±0°02×97°35W±0°04, h8km±7km, ML3.4, mb_Lg3.5/91(NEIC), Error ellipse: s-maj=4.8km s-min=1.8km az=65.0*

*ANF **28** 15:52:57.2±0.4, 36°26N×97°32W, h8km, ML4.0/14, Error ellipse: s-maj=4.7km s-min=2.9km az=118.0*

ISC 28 15:52:56.2±1.1, 36°27N±0°02×97°37W±0°03, h6km±10km, n103, $\sigma 0^{s}64$/87, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLOK	Blackwell	0.51	14	Pg	Pg	15 53 06.5	+0.4
BLOK				Sg	Sg	15 53 12.7	+0.1
OK031	S. Brethren Rd	0.53	126	Pg	Pg	15 53 06.7	+0.2
OK031				Sg	Sg	15 53 13.2	-0.1
QUOK	Quay	0.54	100	Pg	Pg	15 53 06.9	+0.3
QUOK				Sg	Sg	15 53 13.7	0.0
CROK	Carrier	0.55	296	Pg	Pg	15 53 07.4	+0.5
OK030	Cody Creek RV	0.58	125		Pg	15 53 07.5	+0.1
OK030				Sg	Sg	15 53 15.2	+0.2
BCOK	Bluff Creek, N	0.64	198	Pg	Pg	15 53 08.7	+0.2
OK025	Westminster Rd	0.69	178	Pg	Pg	15 53 09.6	+0.2
OK025				Sg	Sg	15 53 18.0	-0.3
OK025				IAmb_Lg		15 53 18.2	
	comp=Z,806nm,1.1s						
OK009	Oakdale Elemen	0.69	184		Pg	15 53 09.6	+0.2
GC02	Grant County #	0.71	326		Pg	15 53 10.1	+0.3
OK001	Jones High Sch	0.71	175		Pg	15 53 09.8	0.0
KAN13	South Haven SW	0.75	353		Pg	15 53 10.9	+0.2
KAN13				Sg	Sg	15 53 20.2	-0.2
KAN14	Manchester OK	0.84	325		Pg	15 53 12.5	+0.2
KAN14				Sg	Sg	15 53 23.4	+0.1
OKCFA	Oklahoma City	0.85	185		Pg	15 53 12.5	0.0
OKCFA				IAmb_Lg		15 53 24.4	
	comp=Z,348nm,0.8s						
OKCFA	Oklahoma City	0.85	185	P	Pg	15 53 12.6	0.0
	baz=5.3,SNR=36						
OKCFA				S	Sg	15 53 24.4	+0.7
	baz=5.3						
OKCSW	OKLAHOMA CITY	0.86	184	Pg	Pg	15 53 12.6	-0.1
KAN05	Bluff City Nor	0.93	334	Pg	Pg	15 53 14.2	+0.1
KAN05				Sg	Sg	15 53 26.2	-0.1
KAN01	Argonia South	0.94	340		Pg	15 53 14.3	0.0
T35A	Sooner Cattle	0.94	46		Pg	15 53 14.3	0.0
T35B	Sooner Cattle	0.94	46	P	Pg	15 53 14.3	0.0
	baz=226,SNR=154						
T35B				S	Sg	15 53 26.7	+0.1
	baz=226						
FNO	Franklin	1.01	182		Pg	15 53 15.2	-0.3
FNO				IAmb_Lg		15 53 28.4	
	comp=Z,238nm,0.9s						
KAN10	Anthony SW Sta	1.04	326	Pg	Pg	15 53 16.1	0.0
KAN06	Argonia West S	1.06	338		Pg	15 53 16.5	0.0
KAN08	Anthony NE Sta	1.07	333		Pg	15 53 16.8	0.0
KAN16	Harper SW Stat	1.11	330	Pg	Pg	15 53 17.3	-0.2
KAN12	Harper NE Stat	1.15	334	Pg	Pg	15 53 18.0	-0.2
OK035	E0210 Rd and N	1.17	293		Pg	15 53 18.3	-0.4
W35A	Tecumseh	1.18	160		Pg	15 53 17.9	-1.0
TUL1	Leonard	1.32	105	Pn	Pn	15 53 20.4	-0.9
TUL1	Leonard	1.32	105	P	Pn	15 53 20.4	-0.9
	baz=286,SNR=219						
TUL1				S	Sb	15 53 38.5	-0.2
	baz=286						
U32A	Winter Ranch,	1.32	275		Pn	15 53 20.9	-0.3
WMOK	Wichita Mounta	1.91	218	P	Pn	15 53 30.6	+1.2
	baz=37,SNR=42						
WMOK				S	Sb	15 53 56.1	+0.4
	baz=37						
X37A	Clayton	2.34	135		Pn	15 53 35.2	+0.1
X37A	Clayton	2.34	135	P	Pn	15 53 36.2	+1.1
	baz=317,SNR=47						
R32A	Long Quarter,	2.40	334		Pn	15 53 35.9	-0.2
R32A	Long Quarter,	2.40	334	S	Sn	15 54 07.5	+1.6
	baz=153						
U38A	Gravette	2.41	85	P	Pn	15 53 37.6	+1.3
	baz=267,SNR=130						
HHAR	Hobbs	2.77	89	Pn	Pn	15 53 40.9	-0.3
KSU1	Kansas State U	2.89	12	Pn	Pn	15 53 42.5	-0.3
KSU1	Kansas State U	2.89	12	P	Pn	15 53 43.6	+0.7
	baz=192						
W39A	Magazine	3.10	109	IAmb_Lg		15 54 41.7	
	comp=Z,83nm,0.8s						
W39A	Magazine	3.10	109	P	Pn	15 53 46.3	+0.6
	baz=291,SNR=21						
CBKS	Cedar Bluff	3.16	324	Pn	Pn	15 53 46.5	-0.1
CBKS				IAmb_Lg		15 54 41.1	
	comp=Z,143nm,0.7s						
S39A	Bolivar	3.54	65	IAmb_Lg		15 54 58.1	
	comp=Z,80nm,0.8s						
S39A	Bolivar	3.54	65	P	Pn	15 53 52.7	+1.1
	baz=247						
MIAR	Mount Ida	3.54	118	IAmb_Lg		15 54 51.6	
	comp=Z,80nm,0.7s						
MIAR	Mount Ida	3.54	118	P	Pn	15 53 52.7	+1.0
	baz=300						
Z38A	Mt. Pleasant	3.58	146	Pn	Pn	15 53 52.3	0.0
Z38A				IAmb_Lg		15 54 56.4	
	comp=Z,169nm,0.7s						
U40A	Yellville	3.65	87		Pn	15 53 53.1	-0.1
U40A				IAmb_Lg		15 54 59.0	
	comp=Z,107nm,0.9s						
ABTX	Abilene, Hawle	4.09	208	Pn	Pn	15 53 59.2	-0.1
X40A	Basin Creek Fa	4.11	114	IAmb_Lg		15 55 10.5	
	comp=Z,91nm,0.8s						
X40A	Basin Creek Fa	4.11	114	P	Pn	15 54 00.8	+1.3
	baz=297,SNR=9.4						
X40A				P	Pn	15 54 00.8	+1.3
	baz=297,SNR=9.4						
MGMO	Mountain Grove	4.19	76		Pn	15 54 00.4	-0.2
MGMO				IAmb_Lg		15 55 09.6	
	comp=Z,121nm,0.8s						
WHAR	Wooly Hollow	4.24	102	Pn	Pn	15 54 01.1	-0.3
WHAR				IAmb_Lg		15 55 17.6	
	comp=Z,112nm,0.9s						
FCAR	Ozark Folk Cen	4.26	94	Pn	Pn	15 54 01.4	-0.2
FCAR				IAmb_Lg		15 55 15.4	
	comp=Z,78nm,0.7s						
W41B	Gary Mavity, V	4.30	103	P	Pn	15 54 02.8	+0.6
	baz=286,SNR=14						
WLAR	White Oak Lake	4.34	125	IAmb_Lg		15 55 20.3	
	comp=Z,92nm,0.8s						
237A	Washetta, Mont	4.45	163	Pn	Pn	15 54 04.0	-0.2
237A	Washetta, Mont	4.45	163	P	Pn	15 54 04.7	+0.5
	baz=344,SNR=5.2						
N33A	J Bar K, Exete	4.46	359	Pn	Pn	15 54 04.1	-0.3
P38A	Dawn	4.52	41	Pn	Pn	15 54 04.5	-0.6
P38A				IAmb_Lg		15 55 19.6	
	comp=Z,108nm,0.8s						
R40A	Maddies Statio	4.54	62		Pn	15 54 04.9	-0.6
R40A	Maddies Statio	4.54	62	P	Pn	15 54 06.4	+0.9
	baz=245,SNR=13						
MSTX	Muleshoe	4.99	244	Pn	Pn	15 54 11.8	+0.1
KSCO	Kaye Shedlock'	4.99	305	Pn	Pn	15 54 11.8	0.0
KSCO				IAmb_Lg		15 55 43.6	
	comp=Z,75nm,0.8s						
T42A	Van Buren	5.10	80	IAmb_Lg		15 55 46.9	
	comp=Z,70nm,0.9s						
BGNE	Belgrade	5.17	353		Pn	15 54 13.5	-0.6
BGNE				IAmb_Lg		15 55 54.3	
	comp=Z,122nm,0.9s						
CCM	Cathedral Cave	5.21	68	IAmb_Lg		15 55 41.6	
	comp=Z,119nm,0.8s						
P40A	Paris	5.32	51	Pn	Pn	15 54 15.7	-0.5
P40A				IAmb_Lg		15 55 46.1	
	comp=Z,130nm,0.7s						
435B	Jarrell	5.47	182	IAmb_Lg		15 56 05.4	
	comp=Z,44nm,0.9s						
HBAR	Harrisburg	5.49	95	Pn	Pn	15 54 17.4	-1.1
PBMO	Poplar Bluff	5.61	83	IAmb_Lg		15 56 03.1	
	comp=Z,67nm,0.7s						
T25A	Trinidad	5.73	281	IAmb_Lg		15 56 08.8	
	comp=Z,72nm,1.1s						
L34A	Svendsen Farm,	5.74	7	IAmb_Lg		15 56 03.9	
	comp=Z,112nm,0.8s						
FVM	French Village	5.80	71	IAmb_Lg		15 56 02.1	
	comp=Z,130nm,0.7s						
OGNE	Ogallala	5.93	323	IAmb_Lg		15 56 13.4	
	comp=Z,104nm,0.8s						
PEBM	Pemiscott Bayo	6.07	89	IAmb_Lg		15 56 22.1	
	comp=Z,126nm,0.7s						
143A	Socs Landing,	6.07	124	IAmb_Lg		15 56 17.8	
	comp=Z,83nm,0.8s						
JCT	Junction City	6.12	200	Pn	Pn	15 54 26.7	-0.5
JCT				IAmb_Lg		15 56 18.1	
	comp=Z,69nm,0.7s						
K31A	O'Neill	6.44	351	IAmb_Lg		15 56 28.8	
	comp=Z,124nm,0.8s						
SCIA	State Center	6.49	29	IAmb_Lg		15 56 27.6	
	comp=Z,98nm,0.8s						
W45A	Hickory Valley	6.75	97	IAmb_Lg		15 56 34.7	
	comp=Z,92nm,0.8s						
T45A	Paducah	7.05	81	IAmb_Lg		15 56 38.9	
	comp=Z,107nm,0.7s						
P43A	Skaggs, Pawnee	7.05	59	Pn	Pn	15 54 40.0	+0.1
K38A	Parkersburg	7.29	28	IAmb_Lg		15 57 03.0	
	comp=Z,102nm,1.1s						
ISCO	Idaho Springs	7.40	301	IAmb_Lg		15 56 58.1	
	comp=Z,29nm,0.9s						
ECSD	EROS Data Cent	7.48	4	Pn	Pn	15 54 44.7	-1.1
L40A	Anamosa	7.50	38	Pn	Pn	15 54 45.7	-0.4
L40A				IAmb_Lg		15 57 01.1	
	comp=Z,58nm,0.7s						
PLAL	Pickwick Lake	7.67	97	IAmb_Lg		15 57 16.5	
	comp=Z,49nm,1.2s						
BNM	Barren Site	7.87	257	Pn	Pn	15 54 51.0	-0.4
MNTX	Cornudas Mount	8.06	238	Pn	Pn	15 54 54.0	+0.1
MNTX				IAmb_Lg		15 57 22.9	
	comp=Z,27nm,1.0s						
PHWY	Pilot Hill	8.07	311	IAmb_Lg		15 57 25.3	
	comp=Z,38nm,0.8s						
Y22D	IRIS PASSCAL I	8.12	257	IAmb_Lg		15 57 33.3	
	comp=Z,62nm,0.8s						
LENM	Lemitar	8.14	258	Pn	Pn	15 54 54.6	-0.4
SUSD	Miller	8.26	352	IAmb_Lg		15 57 32.4	
	comp=Z,42nm,1.0s						
L42A	Oliver, Polo	8.28	44	Pn	Pn	15 54 56.1	-0.7
L42A				IAmb_Lg		15 57 19.5	
	comp=Z,83nm,0.9s						
I37A	Lemond, Waseca	8.31	20	IAmb_Lg		15 57 39.2	
	comp=Z,42nm,0.9s						
JFWS	Jewell Farm	8.61	37	IAmb_Lg		15 57 33.7	
	comp=Z,75nm,0.8s						
I40A	Norwalk	9.20	32	Pn	Pn	15 55 08.0	-1.4
I40A				IAmb_Lg		15 57 54.0	
	comp=Z,38nm,1.0s						
RWWY	Rawlins	9.38	308	IAmb_Lg		15 58 13.8	
	comp=Z,27nm,0.9s						
K22A	Casper	9.52	315	IAmb_Lg		15 58 08.6	
	comp=Z,34nm,0.9s						
I42A	Draeger Farm,	9.99	38	Pn	Pn	15 55 19.4	-0.8
F36A	Milaca	10.01	16		Pn	15 55 18.3	-2.3
G40A	Rib Lake	10.50	29	Pn	Pn	15 55 26.7	-0.6

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*NEIC **28** 15:56:37.5±1.7, 5°37S±0°05×152°00E±0°09, h32km±6km, mb4.4/7, Error ellipse: s-maj=12.4km s-min=7.0km az=85.0*

*IDC **28** 15:56:42.4±8.2, 5°14S×151°43E, h85km±57km, mb3.8/3, mb1 4.0/4, mb1mx3.2/42, mbtmp4.2/4, ML2.1/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/34, Error ellipse: s-maj=106.0km s-min=54.1km az=124.0*

ISC 28 15:56:37.3±0.8, 5°39S±0°06×152°01E±0°09, h45km, n23, $\sigma 1^{s}18$/24, mb4.2/9, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.20	8	Pn	Pn	15 56 57.9	+0.1
RABL				Sn	Sn	15 57 14.7	+1.8
RABL	Rabaul	1.20	8	P	Pn	15 56 57.8	+0.1
MANU	Manus Island	5.70	306	Pn	Pn	15 57 59.2	-0.3
PMG	Port Moresby	6.25	230	P	Pn	15 58 08.2	+1.2
	3.4nm,0.3s,baz=52,slow=7.3,SNR=18						
PMG				S	Sn	15 59 17.7	+0.6
	4.0nm,0.3s,baz=155,slow=19,SNR=2.5						
PMG	Port Moresby	6.25	230		Pn	15 58 07.7	+0.7
PMG	Port Moresby	6.25	230	P	Pn	15 58 08.8	+1.8
PMG	Port Moresby	6.25	230	P	Pn	15 58 08.8	+1.8
HNR	Honiara	8.84	117	Pn	Pn	15 58 43.3	+0.7
QIS	Mount Isa	19.30	218	P	Pn	16 00 59.2	-0.8
	8.9nm,0.8s						
MTN	Manton Dam	21.89	249	P	P	16 01 26.9	+0.2
MTN				IAmb	IAmb	16 01 41.6	
	comp=Z,20nm,1.1s						
WB0	Warramunga Arr	22.32	229	P	P	16 01 29.7	-1.6
WB0				IAmb	IAmb	16 01 58.5	
	comp=Z,13nm,1.2s						
WRAB	Tennant Creek	22.45	228	P	P	16 01 31.6	-1.1
WB2	Warramunga Arr	22.45	228	P	P	16 01 31.4	-1.4
WB2				IAmb	IAmb	16 01 57.8	
	comp=Z,21nm,1.5s						
WRA	Warramunga Arr	22.46	228	P	P	16 01 31.7	-1.2
	comp=Z,3.0nm,0.7s,baz=51,slow=10,SNR=11						
KNRA	Kununurra	25.00	244	P	P	16 01 56.3	-0.9
KNRA				IAmb	IAmb	16 02 10.9	
	comp=Z,39nm,1.4s						
KNRA	Kununurra	25.00	244	P	P	16 01 57.3	+0.1
	comp=Z,18nm,1.7s						
AS31	Alice Springs	25.18	222	P	P	16 01 57.8	-1.0
AS31				IAmb	IAmb	16 02 00.6	
	comp=Z,2.1nm,0.6s						
ASAR	Alice Springs	25.18	222	P	P	16 01 58.0	-0.8
	comp=Z,6.0nm,0.8s,baz=54,slow=9.4,SNR=40						
SYDH	Sydney Hard Ro	28.25	182	P	P	16 02 25.2	-1.1
	comp=Z,16nm,1.2s						
FITZ	Fitzroy Crossi	28.68	242	P	P	16 02 28.9	-1.4
	comp=Z,2.6nm,0.8s,baz=61,slow=9.9,SNR=0.5						
JOW	Kunigami	39.42	326	P	P	16 04 04.2	+1.1
RAR	Rarotonga	49.27	113	LR	LR	16 21 52.1	
	comp=Z,32nm,20.7s,baz=230,slow=30						
TORD	Torodi Ar. Bea	149.73	287	PKPbc	PKPbc	16 16 21.9	-1.4
	comp=Z,1.0nm,0.6s,baz=51,slow=3.4,SNR=4.8						

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*NEIC **28** 15:57:16.7±1.6, 11°87N±0°10×141°91E±0°09, h84km±8km, mb4.5/39, Error ellipse: s-maj=15.0km s-min=12.3km az=149.0*

*IDC **28** 15:57:17.0±2.9, 11°80N×141°92E, h94km±26km, mb3.7/12, mb1 3.9/13, mb1mx3.5/48, mbtmp4.0/13, MS2.5/3, Ms1 2.5/3, ms1mx2.4/43, Error ellipse: s-maj=26.4km s-min=17.6km az=106.0*

ISC 28 15:57:12.9±0.6, 11°82N±0°09×141°79E±0°07, h50km, n61, $\sigma 1^{s}28$/60, mb4.5/32, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.48	59	P	Pn	15 58 07.1	+2.5
	42nm,0.3s,baz=199,slow=2.5,SNR=19						
GUMO				S	Sn	15 58 47.6	+3.0
	19nm,0.3s,baz=17,slow=19,SNR=1.2						
GUMO				LR	LR	15 59 02.2	
	comp=Z,24nm,21.4s,baz=241,slow=31						
GUMO	Guam	3.48	59	Sn	Sn	15 58 44.4	-0.3
DAV	Davao City (W)	16.66	255	P	P	16 01 07.9	+3.1
PATS	Pohnpei	17.04	105	P	P	16 01 09.3	+0.4
JOW	Kunigami	19.61	322	Pn	Pn	16 01 40.7	+1.8
JSU	Suzuyama	22.21	334	P	P	16 02 06.5	+1.3
LUWI	Luwuk	22.80	237	P	P	16 02 12.4	+0.7
LUWI				IAmb	IAmb	16 02 13.2	
	comp=Z,21nm,0.8s						
JWT	Wachi	24.07	347	P	P	16 02 22.2	-1.4
JWT				IAmb	IAmb	16 02 26.6	

	comp=Z,18nm,0.9s						
JHS	Saijyo	24.38	343	P	P	16 02 27.1	+0.5
JHS				IAmb	IAmb	16 02 35.6	
	comp=Z,66nm,1.5s						
MJAR	Matsushiro Arr	24.83	353	LR	LR	16 10 13.7	
	comp=Z,28nm,21.2s,baz=165,slow=31						
MJAR	Matsushiro Arr	24.83	353	P	P	16 02 29.2	-1.3
MAJO	Matsushiro	24.83	353	P	P	16 02 29.3	-1.2
MAJO				IAmb	IAmb	16 02 56.8	
	comp=Z,22nm,1.4s						
MJB9	Matsu-Tunnel	24.83	353	P	P	16 02 29.0	-1.6
MJB9				IAmb	IAmb	16 02 56.7	
	comp=Z,22nm,1.4s						
JTU	Tsushima	25.26	335	P	P	16 02 35.1	+0.7
JMM	Marumori	25.95	358	P	P	16 02 39.9	-0.8
JMM				IAmb	IAmb	16 03 04.0	
	comp=Z,21nm,1.2s						
MTN	Manton Dam	26.69	204	P	P	16 02 48.3	+0.9
MTN				IAmb	IAmb	16 02 57.1	
	comp=Z,52nm,1.5s						
KSRS	Korea Array	28.39	336	LR	LR	16 13 37.0	
	comp=Z,10nm,19.4s,baz=235,slow=34						
WB2	Warramunga Arr	32.40	193	P	P	16 03 37.6	-0.6
WB2				IAmb	IAmb	16 04 01.3	
	comp=Z,12nm,1.2s						
WRA	Warramunga Arr	32.40	193	P	P	16 03 37.9	-0.3
	comp=Z,0.5nm,0.5s,baz=16,slow=9.5,SNR=2.2						
USA0B	Ussuriysk Arra	33.35	347	P	P	16 03 46.7	+0.5
USA0B				IAmb	IAmb	16 03 47.7	
	comp=Z,8.2nm,0.8s						
USRK	Ussuriysk Ar.	33.35	347	P	P	16 03 47.2	+1.0
	comp=Z,6.5nm,0.6s,baz=162,slow=8.3,SNR=12						
USRK	Ussuriysk Ar.	33.35	347	P	P	16 03 46.5	+0.3
ASAR	Alice Springs	36.10	192	P	P	16 04 10.4	+0.3
	comp=Z,0.2nm,0.5s,baz=22,slow=12,SNR=1.7						
KULM	Kulim	41.16	265	P	P	16 04 52.5	-0.2
KULM				IAmb	IAmb	16 05 14.2	
	comp=Z,20nm,1.2s						
GSI	Gunungsitoli	45.07	260	P	P	16 05 23.6	-0.8
GSI				IAmb	IAmb	16 05 38.5	
	comp=Z,26nm,1.5s						
ULN	Ulaanbaatar	46.19	328	P	P	16 05 33.2	+0.2
SONM	Songino Array	46.52	327	P	P	16 05 36.1	+0.6
	comp=Z,0.4nm,0.4s,baz=132,slow=6.9,SNR=7.6						
SONM	Songino Array	46.52	327	P	P	16 05 36.5	+1.0
MORW	Morawa	47.65	211	P	P	16 05 45.0	+0.7
MORW				IAmb	IAmb	16 06 10.4	
	comp=Z,11nm,1.2s						
MA2	Magadan	48.14	6	P	P	16 05 47.2	-0.5
YAK	Yakutsk	50.89	353	P	P	16 06 08.2	-0.4
	comp=Z,9.7nm,0.7s,baz=179,slow=1.4,SNR=11						
YAK	Yakutsk	50.89	353	P	P	16 06 07.5	-1.2
SEY	Seymchan	51.59	6	P	P	16 06 13.7	-0.2
	comp=Z,6.7nm,0.3s,baz=289,slow=0.2,SNR=39						
BILL	Bilibino	58.42	11	P	P	16 07 03.2	+0.1
BILL				IAmb	IAmb	16 07 03.5	
	comp=Z,2.1nm,0.7s						
WMR	Waimanalo Ridg	58.49	72	P	P	16 07 02.3	-2.1
MKAR	Makanchi Array	60.70	317	P	P	16 07 19.4	+0.2
	comp=Z,0.4nm,0.7s,baz=100,slow=8.0,SNR=4.4						
CAST	Castle Rocks	68.90	26	P	P	16 08 09.6	-2.7
CAST				IAmb	IAmb	16 08 28.9	
	comp=Z,6.2nm,1.4s						
IMAR	Indian Mountai	69.00	23	P	P	16 08 11.1	-1.8
H21K	Melozitna Rive	69.26	24	P	P	16 08 14.4	-0.1
BRVK	Borovoye	69.53	322	P	P	16 08 16.2	-0.2
A21K	Barrow	69.96	18	P	P	16 08 18.2	-0.4
A21K				IAmb	IAmb	16 08 18.7	
	comp=Z,3.3nm,0.8s						
PWL	Port Wells	69.98	29	P	P	16 08 18.0	-1.0
BWN	Browne	70.22	26	P	P	16 08 20.1	-0.3
I23K	Minto, Yukon-K	70.51	25	P	P	16 08 21.9	-0.2
COLD	Coldfoot	70.72	22	P	P	16 08 22.6	-0.8
H24K	Noodor Dome	71.27	24	P	P	16 08 26.4	-0.5
H24K				IAmb	IAmb	16 08 36.9	
	comp=Z,4.8nm,1.4s						
TOLK	Toolik Lake Re	71.34	21	P	P	16 08 27.0	-0.2
TOLK				IAmb	IAmb	16 08 28.8	
	comp=Z,4.7nm,1.1s						
IL31		71.44	25	P	P	16 08 25.6	-2.1
ILAR	Eielson Array	71.44	25	P	P	16 08 25.9	-2.0
	comp=Z,1.2nm,0.5s,baz=246,slow=6.1,SNR=24						
ILAR	Eielson Array	71.44	25	P	P	16 08 25.7	-2.1
PAX	Paxson	71.72	27	P	P	16 08 28.5	-1.1
PAX				IAmb	IAmb	16 08 34.1	
	comp=Z,9.7nm,1.4s						
SCRK	Sand Creek	72.54	26	P	P	16 08 33.8	-0.7
SCRK				IAmb	IAmb	16 08 35.2	
	comp=Z,6.8nm,1.5s						
BMAR	Burnt Mountain	72.89	23	P	P	16 08 36.7	+0.2
DAWY	Dawson	74.56	27	P	P	16 08 45.4	-0.9
ABKAR	Akbulak array	75.83	318	P	P	16 08 52.9	-1.0
INK	Inuvik	77.14	22	P	P	16 08 59.0	-1.8
	comp=Z,0.7nm,0.6s,baz=244,slow=2.8,SNR=2.0						
INK	Inuvik	77.14	22	P	P	16 08 59.6	-1.2
INK				IAmb	IAmb	16 09 18.1	
	comp=Z,7.2nm,1.5s						
A36M	Sachs Harbour	79.77	18	P	P	16 09 14.1	-1.2
A36M				IAmb	IAmb	16 09 15.2	
	comp=Z,2.6nm,0.6s						
YKA	Yellowknife Ar	85.80	27	P	P	16 09 46.0	-0.8
	comp=Z,0.5nm,0.4s,baz=289,slow=5.1,SNR=8.8						
NVAR	Mina Array Bea	90.37	51	P	P	16 10 09.9	+0.5
	comp=Z,0.7nm,0.6s,baz=270,slow=5.6,SNR=6.9						
FINES	FINESS Array B	91.47	334	P	P	16 10 11.0	-2.7
	comp=Z,0.9nm,0.4s,baz=66,slow=4.9,SNR=9.7						

IDC 28 16:19:39.2±803.0, 29°.69N×104°.61E, h0km, Error ellipse: s-maj=375.1km s-min=216.9km az=71.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I34MN	SONGINO INFRAS	18.14	4	*i*		18 11 20.0	
	baz=183,slow=339,SNR=0.5						
I45RU	USSURIYSK INFR	26.09	49	*i*		18 58 20.0	
	baz=241,slow=332,SNR=2.1						
I39PW	PALAU INFRASON	35.73	122	*i*		20 00 00.0	
	baz=305,slow=314,SNR=2.7						

ANF ***28*** *16:21:32.7±0.3, 36°.28N×97°.12W, h4km, ML3.8/11, Error ellipse: s-maj=2.8km s-min=2.3km az=142.0*
NEIC ***28*** *16:21:32.3±0.9, 36°.29N±0°.01×97°.15W±0°.02, h7km±6km, Error ellipse: s-maj=2.3km s-min=1.6km az=47.0*
TUL ***28*** *16:21:32.5±1.0, 36°.29N±0°.01×97°.12W±0°.02, h4km±7km, ML3.2, mb_Lg3.4/81(NEIC), Error ellipse: s-maj=2.3km s-min=1.7km az=58.0*
ISC 28 16:21:32.3±1.2, **36°.29N**±0°.02×**97°.15W**±0°.02, **h3**km±12km, **n87**, σ**0^{s}61**/67, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	Quay	0.37	108	Pg	Pg	16 21 39.9	+0.4
OK031	S. Brethren Rd	0.42	143	Pg	Pg	16 21 40.7	+0.4
OK031				Sg	Sg	16 21 45.8	+0.1
OK034	N. Norfolk Rd.	0.45	128	Pg	Pg	16 21 41.3	+0.5
OK034				Sg	Sg	16 21 46.8	+0.2
OK030	Cody Creek RV	0.46	140		Pg	16 21 41.7	+0.5
OK030				Sg	Sg	16 21 47.4	+0.3
BLOK	Blackwell	0.48	353	Pg	Pg	16 21 42.0	+0.5
CROK	Carrier	0.71	288	Pg	Pg	16 21 46.4	+0.5
OK025	Westminster Rd	0.72	192	Pg	Pg	16 21 46.5	+0.4
BCOK	Bluff Creek, N	0.73	211	Pg	Pg	16 21 46.5	+0.2
KAN13	South Haven SW	0.77	340	Pg	Pg	16 21 47.1	0.0
KAN13				Sg	Sg	16 21 57.2	0.0
GC02	Grant County #	0.81	315		Pg	16 21 47.5	-0.2
T35A	Sooner Cattle	0.81	39	Pg	Pg	16 21 47.9	+0.1
T35A				Sg	Sg	16 21 58.4	0.0
T35B	Sooner Cattle	0.81	39	P	Pg	16 21 48.0	+0.1
	baz=218,SNR=103						
T35B				S	Sg	16 21 58.5	+0.2
	baz=218						
OKCFA	Oklahoma City	0.90	196		Pg	16 21 49.7	+0.1
OKCFA	Oklahoma City	0.90	196	P	Pg	16 21 49.9	+0.3
	baz=17,SNR=17						
OKCFA				S	Sg	16 22 02.4	+1.1
	baz=17						
OKCSW	OKLAHOMA CITY	0.91	195		Pg	16 21 49.8	0.0
KAN14	Manchester OK	0.94	316	Pg	Pg	16 21 49.9	-0.4
KAN14				Sg	Sg	16 22 02.2	-0.2
KAN01	Argonia South	0.99	331		Pg	16 21 51.1	-0.3
OK032	Salt Plains WL	1.00	301	Pg	Pg	16 21 51.2	-0.3
FNO	Franklin	1.05	191	Pg	Pg	16 21 52.2	-0.2
KAN06	Argonia West S	1.12	329		Pg	16 21 53.7	0.0
KAN10	Anthony SW Sta	1.13	318		Pg	16 21 53.8	-0.1
KAN08	Anthony NE Sta	1.15	325		Pg	16 21 54.0	-0.3
W35A	Tecumseh	1.15	169	Pg	Pg	16 21 53.5	-0.9
TUL1	Leonard	1.16	108	Pg	Pg	16 21 53.8	-0.7
TUL1	Leonard	1.16	108	P	Pg	16 21 53.8	-0.7
	baz=290,SNR=41						
TUL1				S	Sg	16 22 09.1	-0.4
	baz=290						
KAN16	Harper SW Stat	1.19	322	Pg	Pg	16 21 54.9	-0.3
KAN12	Harper NE Stat	1.22	326	Pg	Pg	16 21 55.5	-0.2
OK035	E0210 Rd and N	1.33	289		Pn	16 21 57.2	-0.5
U32A	Winter Ranch,	1.50	274		Pn	16 22 00.0	-0.2
U32A	Winter Ranch,	1.50	274	P	Pn	16 22 00.2	+0.1
	baz=93,SNR=37						
U32A				S	Sb	16 22 20.9	+0.6
	baz=93						
WMOK	Wichita Mounta	2.04	221		Pn	16 22 07.4	-0.2
WMOK	Wichita Mounta	2.04	221	P	Pn	16 22 08.7	+1.1
	baz=40,SNR=9.1						
WMOK				S	Sb	16 22 35.3	-0.5
	baz=40						
X37A	Clayton	2.23	139	IAmb_Lg		16 22 47.2	
	comp=Z,124nm,1.0s						
X37A	Clayton	2.23	139	P	Pn	16 22 10.9	+0.8
	baz=320,SNR=46						
X37A				Sb	Sg	16 22 42.6	-1.3
	baz=320						
U38A	Gravette	2.23	85	P	Pn	16 22 11.2	+0.9
	baz=267,SNR=74						
R32A	Long Quarter,	2.47	330	P	Pn	16 22 14.1	+0.6
	baz=149						
R32A				S	Sn	16 22 45.3	+1.1
	baz=149						
HHAR	Hobbs	2.59	89		Pn	16 22 14.3	-0.9
W39A	Magazine	2.94	111	Pn	Pn	16 22 19.4	-0.6
W39A				IAmb_Lg		16 23 09.8	
	comp=Z,140nm,0.7s						
CBKS	Cedar Bluff	3.26	322	Pn	Pn	16 22 23.9	-0.5
S39A	Bolivar	3.37	64	IAmb_Lg		16 23 25.6	
	comp=Z,90nm,0.8s						
S39A	Bolivar	3.37	64	P	Pn	16 22 26.7	+0.9
	baz=246,SNR=16						
U40A	Yellville	3.47	88	IAmb_Lg		16 23 23.9	
	comp=Z,78nm,0.7s						
U40A	Yellville	3.47	88	P	Pn	16 22 27.9	+0.7
	baz=270,SNR=18						
U40A				P	Pn	16 22 27.9	+0.7
	baz=270,SNR=18						
X40A	Basin Creek Fa	3.95	116	IAmb_Lg		16 23 37.9	
	comp=Z,63nm,0.7s						
MGMO	Mountain Grove	4.01	76		Pn	16 22 34.5	-0.3
WHAR	Wooly Hollow	4.07	103	IAmb_Lg		16 23 47.5	
	comp=Z,112nm,0.8s						
FCAR	Ozark Folk Cen	4.09	94	IAmb_Lg		16 23 45.7	
	comp=Z,76nm,0.8s						
ABTX	Abilene, Hawle	4.20	210	IAmb_Lg		16 23 50.3	
	comp=Z,88nm,0.9s						
WLAR	White Oak Lake	4.21	127	IAmb_Lg		16 23 50.8	
	comp=Z,68nm,0.7s						
R40A	Maddies Statio	4.37	61		Pn	16 22 39.6	-0.1
R40A				IAmb_Lg		16 23 50.2	
	comp=Z,58nm,0.9s						
R40A	Maddies Statio	4.37	61	P	Pn	16 22 39.9	+0.2
	baz=244,SNR=12						
N33A	J Bar K, Exete	4.45	357	IAmb_Lg		16 24 02.3	
	comp=Z,62nm,0.9s						
T42A	Van Buren	4.92	80	Pn	Pn	16 22 46.4	-0.8
T42A	Van Buren	4.92	80	P	Pn	16 22 47.7	+0.5
	baz=263						
CCM	Cathedral Cave	5.03	68	Pn	Pn	16 22 47.5	-1.2
KSCO	Kaye Shedlock'	5.13	304	Pn	Pn	16 22 48.5	-1.6
KSCO				IAmb_Lg		16 24 29.1	
	comp=Z,79nm,0.9s						
MSTX	Muleshoe	5.16	245	Pn	Pn	16 22 49.7	-0.9
BGNE	Belgrade	5.17	352	IAmb_Lg		16 24 21.3	
	comp=Z,41nm,0.7s						
PBMO	Poplar Bluff	5.43	83	Pn	Pn	16 22 54.1	-0.1
PBMO				IAmb_Lg		16 24 27.1	
	comp=Z,48nm,0.7s						
435B	Jarrell	5.50	184	IAmb_Lg		16 24 32.3	
	comp=Z,51nm,0.9s						
FVM	French Village	5.63	70	Pn	Pn	16 22 56.5	-0.5
FVM				IAmb_Lg		16 24 33.4	
	comp=Z,36nm,0.8s						
T25A	Trinidad	5.90	280	IAmb_Lg		16 24 42.1	
	comp=Z,40nm,0.8s						
PARMO	Parma	5.97	84	IAmb_Lg		16 24 40.9	
	comp=Z,75nm,0.8s						
SLM	Saint Louis	5.98	65	IAmb_Lg		16 24 38.7	
	comp=Z,42nm,0.8s						
OGNE	Ogallala	6.02	322	IAmb_Lg		16 24 59.4	
	comp=Z,40nm,0.7s						
HENM	Henderson Moun	6.20	84	IAmb_Lg		16 24 54.6	
	comp=Z,58nm,0.8s						
JCT	Junction City	6.20	202	Pn	Pn	16 23 03.8	-1.0
JCT				IAmb_Lg		16 24 59.7	
	comp=Z,54nm,0.8s						
SCIA	State Center	6.39	27	IAmb_Lg		16 24 56.9	
	comp=Z,59nm,0.9s						
K31A	O'Neill	6.45	349	IAmb_Lg		16 25 08.0	
	comp=Z,64nm,0.9s						
S44A	Carbondale	6.47	75	IAmb_Lg		16 24 57.5	
	comp=Z,54nm,0.8s						
W45A	Hickory Valley	6.57	98	IAmb_Lg		16 25 12.0	
	comp=Z,65nm,0.8s						
Y45A	Yeager Farm, C	6.69	109	IAmb_Lg		16 25 13.8	
	comp=Z,43nm,0.8s						
SDCO	Great Sand Dun	6.84	285	IAmb_Lg		16 25 17.7	
	comp=Z,28nm,1.0s						
P43A	Skaggs, Pawnee	6.89	59	IAmb_Lg		16 25 29.0	
	comp=Z,58nm,0.8s						
Q44A	Meyer Farm, Va	6.96	66	IAmb_Lg		16 25 20.5	
	comp=Z,58nm,0.9s						
L40A	Anamosa	7.38	37	IAmb_Lg		16 25 27.1	
	comp=Z,40nm,0.8s						
ECSD	EROS Data Cent	7.45	3	Pn	Pn	16 23 21.3	-0.6
WVT	Waverly	7.53	88	IAmb_Lg		16 25 41.6	
	comp=Z,30nm,1.2s						
OLIL	Olney	7.59	69	IAmb_Lg		16 25 36.3	
	comp=Z,35nm,0.9s						
O44A	Mansfield	7.85	58	IAmb_Lg		16 25 42.0	
	comp=Z,52nm,0.9s						
MNTX	Cornudas Mount	8.23	239	Pn	Pn	16 23 32.3	-0.3
I37A	Lemond, Waseca	8.23	19	IAmb_Lg		16 26 00.7	
	comp=Z,43nm,0.8s						
SUSD	Miller	8.26	351	IAmb_Lg		16 26 10.3	
	comp=Z,29nm,0.8s						
Y22D	IRIS PASSCAL I	8.30	257	IAmb_Lg		16 26 18.7	
	comp=Z,39nm,1.0s						
P46A	Rosedale	8.53	64	IAmb_Lg		16 26 10.4	
	comp=Z,42nm,0.8s						
SPMN	Marine on St.	9.52	19	IAmb_Lg		16 26 46.3	
	comp=Z,18nm,0.7s						
K22A	Casper	9.64	314	IAmb_Lg		16 27 03.1	
	comp=Z,25nm,1.0s						

IDC ***28*** *16:25:57.9±0.4, 3°.84S×128°.22E, h0km, mb4.9/31, mb1 5.0/35, mb1mx4.8/52, mbtmp4.9/35, ML4.7/3, MS4.5/27, Ms1 4.5/27, ms1mx4.4/33, Error ellipse: s-maj=15.7km s-min=10.0km az=59.0*
MOS ***28*** *16:26:00.6±1.1, 3°.79S×128°.33E, h33km, mb5.4/27, Error ellipse: s-maj=9.6km s-min=4.8km az=117.8*
GCMT ***28*** *16:26:01.9±0.1, 3°.85S±0°.01×128°.28E±0°.01, h17km, MW5.4/131, Moment Tensor Solution. s106,c178; s131,c238; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.47±.02; M$_{\theta\theta}$-1.28±.02; M$_{\phi\phi}$0.80±.02; M$_{r\theta}$0.58±.05; M$_{\theta\phi}$0.74±.02; M$_{\phi r}$-0.50±.06; Best double couple: M$_0$1.47700×10^{17} NP1:φ$_s$242.00000°, δ56.00000°, λ8.00000°. NP2:φ$_s$148.00000°, δ83.00000°, λ146.00000°. Principal axes: T 1.2090, Plg28.0000°, Azm100.0000°; N 0.5310, Plg56.0000°, Azm318.0000°; P -1.7450, Plg18.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BJI ***28*** *16:26:04.0±0.0, 3°.80S×128°.40E, h52km, mB5.3/51, mb4.9/74, Ms4.8/66, Ms7 4.6/66*
NEIC ***28*** *16:26:04.9±1.9, 3°.75S±0°.06×128°.36E±0°.06, h51km±5km, mb5.2/103, Error ellipse: s-maj=9.0km s-min=8.2km az=54.0*
DJA ***28*** *16:26:05.7±0.3, 4°S±2°×12°8E±°, h36km±3km, M5.1/74, mB5.6/53, mb5.3/74, MLv5.5/19, Mw(mB)5.1/53, MwMwp5.0/22, Mwp5.3/22*
KLM ***28*** *16:26:08, 3°.94S×128°.60E, h93km, mb5.3*
ISC 28 16:26:04.1±0.4, **3°.88S**±0°.03×**128°.34E**±0°.04, **h44**km±3km, **h45**km**:pP-P**, **n520**, σ**1^{s}78**/536, **mb5.2**/158, **MS4.6**/48, **9C-17D**, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	0.24	323	P	Pn	16 26 04.7	-7.4
MSAI	Masohi	0.79	48	P	Pn	16 26 15.5	-3.4
BNDI	Bandanaira	1.69	112	P	Pn	16 26 30.1	-1.0
SANI	Sanana	2.97	308	P	Pn	16 26 46.7	-2.0
SANI	Sanana	2.97	308	P	Pn	16 26 47.5	-1.2
LBMI	Labuha	3.33	345	P	Pn	16 26 53.8	+0.2
FAKI	Fak Fak	4.02	76	P	Pn	16 27 03.4	+0.3
FAKI	Fak Fak	4.02	76		Pn	16 27 03.0	-0.1
FAKI	Fak Fak	4.02	76	P	Pn	16 27 03.5	+0.3
SIJI	Sorong	4.18	44	Pn	Pn	16 27 04.3	-1.1
	197nm,0.3s,baz=232,slow=10,SNR=273						
SIJI				Sn	Sn	16 27 52.6	-0.5
	127nm,0.3s,baz=50,slow=24,SNR=16						
SWI	Sorong	4.18	44	P	Pn	16 27 05.6	+0.2
TNTI	Ternate	4.72	348	P	Pn	16 27 12.4	-0.4
TNTI	Ternate	4.72	348		Pn	16 27 12.0	-0.7
TNTI	Ternate	4.72	348	P	Pn	16 27 12.7	-0.1
SAUI	Saumlaki	5.03	144	P	Pn	16 27 19.7	+2.6
SAUI	Saumlaki	5.03	144		Pn	16 27 18.3	+1.2
SAUI	Saumlaki	5.03	144	P	Pn	16 27 18.5	+1.4
BBSI	Bau Bau	5.96	254	P	Pn	16 27 31.9	+2.0
	0.2nm501nm72nm,0.9s						
KMSI	Cibinong	6.21	315	P	Pn	16 27 33.1	-0.1
	5.3nm8μm1μm,1.0s						
LUWI	Luwuk	6.23	297	P	Pn	16 27 33.6	+0.1
	5.9nm8μm15μm2μm,1.1s						
LUWI	Luwuk	6.23	297		Pn	16 27 32.7	-0.8
LUWI	Luwuk	6.23	297	P	Pn	16 27 33.6	+0.1
SOEI	Soe	7.10	214	P	Pn	16 27 49.2	+3.6
	2.9nm18μm8μm935nm,0.8s						
SOEI	Soe	7.10	214		Pn	16 27 48.1	+2.5
SOEI	Soe	7.10	214	P	Pn	16 27 49.2	+3.6
APSI	Ampana	7.30	294	P	Pn	16 27 49.9	+1.7
	2.5nm4μm7μm914nm,1.0s						
MMRI	Maumere	7.69	232	P	Pn	16 28 06.8	+13
MMRI	Maumere	7.69	232	Pn	Pn	16 27 55.3	+1.8
MMRI	Maumere	7.69	232	P	Pn	16 27 54.3	+0.8
MRSI	Marisa	7.72	304	P	Pn	16 27 54.8	+0.9
	2.3nm5μm5μm779nm,0.6s						
BATI	Baumata	7.81	216	Pn	Pn	16 27 58.5	+3.2
	57nm,0.3s,baz=123,slow=0.9,SNR=68						
BATI	Baumata	7.81	216	P	Pn	16 27 57.8	+2.5
	1.3nm6μm3μm420nm,0.8s						
SGSI	Sangihe	8.02	339	P	Pn	16 28 07.3	+9.2
BSSI	Bau Bau, Buton	8.13	254	P	Pn	16 28 03.4	+3.7
	2μm204nm,0.9s						
SRPI	Serui, Papua	8.14	76	P	Pn	16 27 59.9	+0.1
	1.5nm5μm3μm280nm,0.6s						
BAKI	Biak	8.21	71	P	Pn	16 28 01.3	+0.6
	522nm,0.8s						
BNSI	Bone	8.22	266	P	Pn	16 28 03.2	+2.3
	2μm131nm,0.8s						
BKSI	Bulukumba	8.31	260	P	Pn	16 28 04.9	+2.8
	4μm3μm321nm,0.7s						
TTSI	Tana Toraja	8.54	275	P	Pn	16 28 10.5	+5.2
	0.5nm4μm2μm126nm,1.0s						
SPSI	Sidrap Palu	8.55	269	P	Pn	16 28 09.5	+4.2
	0.6nm4μm2μm117nm,0.9s						
KAPI	Kappang	8.63	262	Pn	Pn	16 28 09.6	+3.1
	14nm,0.3s,baz=128,slow=7.4,SNR=51						
KAPI				LR	LR	16 31 24.5	
	comp=Z,4μm,18.6s,baz=112,slow=38						
KAPI	Kappang	8.63	262	P	Pn	16 28 08.7	+2.2
KAPI	Kappang	8.63	262		Pn	16 28 08.7	+2.2
DRS	Darwin Rock St	8.87	164	P	Pn	16 28 10.6	+0.9
	185nm,0.7s						
TOLI2	Tolitoli	9.03	303	Pn	Pn	16 28 11.4	-0.6
TOLI2	Tolitoli	9.03	303	P	Pn	16 28 13.8	+1.8
MTN	Manton Dam	9.33	163	P	Pn	16 28 17.2	+1.2
	baz=9.4,SNR=18						
MTN	Manton Dam	9.33	163	Pn	Pn	16 28 17.0	+0.9
MTN	Manton Dam	9.33	163	P	Pn	16 28 17.2	+1.2
	156nm,0.6s						
MPSI	Mapaga	9.41	296	P	Pn	16 28 21.6	+4.4
	5μm3μm271nm,1.2s						
KDU	Kakadu	9.66	155	P	Pn	16 28 19.7	-0.8
	baz=9.7,SNR=50						
KDU	Kakadu	9.66	155	P	Pn	16 28 19.6	-1.0
	320nm,0.9s						
DAV	Davao City (W)	11.22	346	LR	LR	16 33 22.6	
	comp=Z,4μm,20.8s,baz=104,slow=40						
KCP	Kidapawan	11.29	343	⇓*i*P	Pn	16 28 42.2	-0.7
SMKI	Samarinda	11.63	287	P	Pn	16 29 02.3	+15
KNRA	Kununurra	11.73	178	P	Pn	16 28 48.0	-0.9
	baz=12,SNR=66						
KNRA	Kununurra	11.73	178	Pn	Pn	16 28 47.8	-1.1
KNRA	Kununurra	11.73	178	P	Pn	16 28 47.8	-1.1
	257nm,0.7s						
GENI	Genyem	11.88	84	P	Pn	16 28 52.2	+1.2
	3μm4μm156nm,1.0s						
KBKI	Kotabaru	12.16	272	P	P	16 29 06.7	+0.3
TWSI	Taliwang, Sumb	12.36	246	P	P	16 29 05.9	-2.8
	1μm51nm,1.1s						
PAGZ	Pagadian	12.65	337	⇓*e*P	Pn	16 28 59.8	-1.7
MYLDM	Lahad Datu	13.32	312	Pn	Pn	16 29 07.7	-3.0
BBKI	Banjar Baru	13.47	271	P	P	16 29 18.0	-3.0
	3μm84nm,1.2s						
SRBI	Singaraja	13.70	252	P	P	16 29 21.5	-2.1
	3μm125nm,1.1s						
MTKI	Muara Teweh, K	13.74	282	P	P	16 29 22.7	-1.3
	1μm48nm,2.4s						
TBP	Tagbilaran	14.20	342	⇓*e*P	Pn	16 29 24.6	+2.0
FITZ	Fitzroy Crossi	14.38	190	Pn	Pn	16 29 21.6	-3.4
	2.2nm,0.3s,baz=28,slow=10.0,SNR=48						
FITZ				LR	LR	16 35 52.9	
	comp=Z,3μm,18.4s,baz=16,slow=41						
FITZ	Fitzroy Crossi	14.38	190	P	Pn	16 29 22.7	-2.3
	baz=14,SNR=34						
ABJI	Asem Bagus	14.56	254	P	P	16 29 34.8	+1.7
	6μm275nm,1.4s						
SPMM	Sapulut	14.61	306	P	P	16 29 32.0	-1.7
LLP	Lapu-Lapu	14.76	343	⇓*e*P	Pn	16 29 27.9	-2.2
LLP				*e*S	Sn	16 32 10.9	-1.6
JAGI	Jajag, Banyuwa	14.82	251	P	P	16 29 34.5	-1.5
	5μm6μm203nm,1.8s						
JAGI	Jajag, Banyuwa	14.82	251	Pn	Pn	16 29 31.9	+1.0
JAGI	Jajag, Banyuwa	14.82	251	P	Pn	16 29 31.9	+1.0
BLJI	Banyuglugur	15.16	255	P	P	16 29 42.7	+2.9
	2μm146nm,1.1s						
GMJI	Gumukmas	15.44	253	P	P	16 29 46.2	+3.3
	5μm146nm,1.3s						
RCP	Roxas	16.31	340	⇓*e*P	P	16 29 53.9	+1.3
PBKI	Pangkalan Bun	16.68	273	P	P	16 29 59.3	+2.6
	3μm195nm,0.9s						
WB0	Warramunga Arr	16.86	160	Pn	Pn	16 29 53.8	-3.3
WB0				IAmb	IAmb	16 30 10.0	
	comp=Z,147nm,0.9s						
WRAB	Tennant Creek	17.00	160	*d i*P	Pn	16 29 57.1	-1.7
WRAB	Tennant Creek	17.00	160	Pn	Pn	16 29 55.4	-3.5
WRAB				IAmb	IAmb	16 30 13.6	
	comp=Z,186nm,1.0s						
WRA	Warramunga Arr	17.01	160	P	Pn	16 29 56.5	-2.4
	comp=Z,1.9nm,0.3s,baz=338,slow=13,SNR=49						
WRA				S	Sn	16 32 54.5	-13
	comp=Z,0.2nm,0.3s,baz=331,slow=14,SNR=3.8						
WRA				LR	LR	16 36 51.0	
	comp=Z,4μm,18.2s,baz=340,slow=38						
WRA	Warramunga Arr	17.01	160	Pn	Pn	16 29 54.9	-4.0
WB2	Warramunga Arr	17.01	160	Pn	Pn	16 29 55.9	-3.0
WB2				IAmb	IAmb	16 30 12.2	
	comp=Z,125nm,0.8s						
WR0	Warramunga Arr	17.09	160	P	Pn	16 29 56.3	-3.6
SBUM	Sibu	17.29	291	P	P	16 30 06.0	+2.6
SBUM	Sibu	17.29	291	P	Pn	16 30 02.9	+0.5
STKI	Sintang	17.30	283	P	P	16 30 06.1	+2.6
	comp=Z,43nm,1.4s						
UWJI	Ujung Watu	17.50	261	P	P	16 30 16.2	+10
PCJI	Pacitan	17.59	255	P	P	16 30 10.2	+3.4
	comp=Z,3μmcomp=Z,213nm,0.9s						
COEN	Coen	17.74	125	P	Pn	16 30 07.4	-0.5
COEN				IAmb	IAmb	16 30 11.6	
	comp=Z,147nm,0.7s						
WOJI	Wonogiri, Jawa	17.76	256	P	P	16 30 10.2	+1.6
	comp=Z,187nm,1.2s						
SMRI	Semarang	18.09	259	P	Pn	16 30 14.9	+2.6
	comp=Z,8μmcomp=Z,686nm,1.0s						

SMRI	Semarang	18.09	259	P	Pn	16 30 12.8	+0.5
UGM	Wanagama	18.16	256	P	Pn	16 30 17.1	+3.9
	comp=Z,347nm,1.3s						
UGM	Wanagama	18.16	256	P	Pn	16 30 13.7	+0.4
UGM	Wanagama	18.16	256	P	Pn	16 30 16.3	+3.1
YOGI	Yogyakarta	18.37	257	P	Pn	16 30 20.9	+5.2
	comp=Z,5µmcomp=Z,229nm,0.9s						
PGP	Puerto Galera	18.76	337	⇓*e*P	Pn	16 30 21.7	+1.3
KSM	Kuching	18.79	286	P	Pn	16 30 24.0	+3.3
KSM	Kuching	18.79	286	P	P	16 30 19.9	0.0
KSM	Kuching	18.79	286	P	Pn	16 30 21.2	+0.5
MBWA	Marble Bar	19.11	205	P	Pn	16 30 24.8	+0.3
LUBP	Lubang	19.25	335	⇓*e*P	P	16 30 24.9	-0.1
PSA00	Pilbara Seismi	19.43	204	P	Pn	16 30 28.0	-0.3
PSA00	Pilbara Seismi	19.43	204	P	Pn	16 30 28.3	0.0
	comp=Z,93nm,0.8s						
PMG	Port Moresby	19.48	107	P	Pn	16 30 29.7	+0.7
	comp=Z,2.5nm,0.3s,baz=287,slow=6.9,SNR=22						
PMG	Port Moresby	19.48	107	P	P	16 30 27.4	-0.1
PMG				pmax	pmax		
	comp=Z,94nm,0.8s						
PMG	Port Moresby	19.48	107	P	P	16 30 27.4	-0.1
PMG				IAmb	IAmb	16 30 44.7	
	comp=Z,94nm,0.8s						
PMG	Port Moresby	19.48	107	P	Pn	16 30 29.6	+0.6
PMG	Port Moresby	19.48	107	P	Pn	16 30 29.9	+0.9
QIS	Mount Isa	19.88	147	P	Pn	16 30 32.8	-1.0
	baz=20,SNR=150						
QIS	Mount Isa	19.88	147	P	P	16 30 32.3	+0.4
	comp=Z,249nm,0.9s						
CMJI	Cimerak	20.16	258	P	Pn	16 30 36.5	-0.6
	comp=Z,2µmcomp=Z,140nm,0.8s						
AS31	Alice Springs	20.39	165	P	P	16 30 38.5	+1.1
AS31				IAmb	IAmb	16 30 42.8	
	comp=Z,78nm,0.7s						
ASAR	Alice Springs	20.39	165	P	Pn	16 30 38.9	-1.0
	comp=Z,314nm,1.0s,baz=347,slow=11,SNR=1021						
ASAR				S	S	16 34 20.4	-3.3
	comp=Z,8.9nm,0.9s,baz=333,slow=14,SNR=3.7						
ASAR				PcP	PcP	16 34 48.8	-0.2
	comp=Z,8.9nm,0.5s,baz=359,slow=1.3,SNR=8.1						
ASAR				ScP	ScP	16 38 24.1	+1.9
	comp=Z,3.0nm,0.9s,baz=345,slow=1.9,SNR=4.9						
ASAR				LR	LR	16 38 45.9	
	comp=Z,2µm,18.9s,baz=352,slow=38						
ASAR				PKiKP	PKiKP	16 42 35.4	-2.3
	comp=Z,0.7nm,1.0s,baz=15,slow=1.1,SNR=4.3						
LEM	Lembang	20.83	261	P	P	16 30 43.5	+1.1
	comp=Z,30nm,0.6s,baz=112,slow=10,SNR=8.6						
LEM				LR	LR	16 39 20.1	
	comp=Z,5µm,19.1s,baz=86,slow=39						
WRKA	Warakurna	21.04	180	P	P	16 30 46.4	+2.1
	baz=21,SNR=168						
WRKA	Warakurna	21.04	180	P	P	16 30 45.8	+1.4
	comp=Z,235nm,1.0s						
MTSU	Mount Surprise	21.11	133	P	P	16 30 45.7	+0.6
	baz=21,SNR=47						
MTSU	Mount Surprise	21.11	133	P	P	16 30 45.6	+0.4
	comp=Z,73nm,0.8s						
CNJI	Cibinong	21.38	260	P	P	16 30 51.1	+3.0
	comp=Z,2µmcomp=Z,3µmcomp=Z,277nm,0.9s						
CBJI	Citeko	21.55	262	P	P	16 30 52.4	+2.5
	comp=Z,3µmcomp=Z,95nm,0.5s						
DBJI	Dramaga	21.66	262	P	P	16 31 01.3	+10
SKJI	Sukabumi	21.90	261	P	P	16 31 10.6	+17
PPBI	Pangkal Pinang	22.23	274	P	P	16 31 01.1	+3.8
	comp=Z,3µmcomp=Z,38nm,1.0s						
CGJI	Cibinong	22.71	262	P	P	16 31 09.8	+7.4
	comp=Z,2µmcomp=Z,66nm,1.2s						
GIRL	Giralia	23.12	215	P	P	16 31 08.1	+1.7
	baz=23,SNR=7.3						
GIRL	Giralia	23.12	215	P	P	16 31 07.9	+1.4
	comp=Z,210nm,1.1s						
KLSI		23.55	267	P	P	16 31 11.8	+1.0
	comp=Z,25nm,1.0s						
CTA	Charters Tower	23.76	134	P	P	16 31 12.7	0.0
	comp=Z,23nm,0.7s,baz=310,slow=14,SNR=18						
CTAO	Charters Tower	23.76	134	P	P	16 31 13.1	+0.4
CTAO				pmax	pmax		
	comp=Z,96nm,1.2s						
CTAO	Charters Tower	23.76	134	P	P	16 31 13.1	+0.4
CTAO				IAmb	IAmb	16 31 26.0	
	comp=Z,96nm,1.1s						
CTAO	Charters Tower	23.76	134	P	P	16 31 14.5	+1.8
RABL	Rabaul	23.77	92	P	P	16 31 13.1	+0.2
RABL	Rabaul	23.77	92	P	P	16 31 15.1	+2.2
KASI	Kota Agung	23.82	265	P	P	16 31 17.2	+4.0
	comp=Z,56nm,0.9s						
GUMO	Guam	23.88	43	LR	LR	16 38 47.7	
	comp=Z,1µm,21.7s,baz=230,slow=32						
DSRI	Dabo	23.98	278	P	P	16 31 19.9	+5.1
	comp=Z,1µmcomp=Z,45nm,1.1s						
MDSI	Maura Dua	24.10	268	P	P	16 31 17.9	+2.0
	comp=Z,749nmcomp=Z,18nm,1.1s						
LWLI	Liwa	24.23	266	P	P	16 31 24.5	+7.3
	comp=Z,53nm,1.1s						
MEEK	Meekatharra	24.47	201	P	P	16 31 19.1	-0.1
	baz=25,SNR=38						
MEEK	Meekatharra	24.47	201	P	P	16 31 19.1	-0.1
	comp=Z,160nm,0.9s						
LHSI	Lahat	24.76	269	P	P	16 31 26.3	+4.4
	comp=Z,3µmcomp=Z,44nm,0.9s						
JMBI	JAMBI	24.77	274	P	P	16 31 30.3	+8.3
	comp=Z,96nm,0.7s						
OOD	Oodnadatta	24.80	164	P	P	16 31 22.6	+0.6
	comp=Z,132nm,0.7s						
MYKOM	Kota Tinggi	25.11	283	P	P	16 31 28.0	+2.9
MYKOM	Kota Tinggi	25.11	283	P	P	16 31 25.2	+0.1
MYKOM				IAmb	IAmb	16 31 46.4	
	comp=Z,110nm,1.5s						
MASI	Maura Aman, Be	26.06	271	P	P	16 31 44.6	+11
INKA	Innaminka	26.52	155	P	P	16 31 38.9	+1.2
	comp=Z,221nm,1.5s						
FORT	Forrest	26.76	181	P	P	16 31 41.6	+1.8
	baz=27,SNR=22						
FORT	Forrest	26.76	181	P	P	16 31 40.5	+0.7
FORT	Forrest	26.76	181	P	P	16 31 41.1	+1.3
	comp=Z,178nm,0.9s						
MULG	Mulgathing	26.81	169	P	P	16 31 40.5	+0.2
	comp=Z,63nm,0.7s						
JRMM	Jerantut	26.97	286	P	P	16 31 43.0	+1.1
QLP	Quilpie	27.23	148	P	P	16 31 45.0	+1.0
	baz=27,SNR=6.2						
MORW	Morawa	27.64	204	P	P	16 31 48.3	+0.5
	baz=28,SNR=12						
MORW	Morawa	27.64	204	P	P	16 31 47.5	-0.2
MORW				IAmb	IAmb	16 31 49.1	
	comp=Z,82nm,1.5s						
MORW	Morawa	27.64	204	P	P	16 31 47.9	+0.1
	comp=Z,28nm,1.1s						
LCRK	Leigh Creek	28.03	162	P	P	16 31 52.8	+1.6
	comp=Z,116nm,0.9s						
TPUB	Ta-pu	28.04	345	P	P	16 31 53.3	+1.9
IPM	Ipoh	28.52	287	P	P	16 31 57.0	+1.2
IPM	Ipoh	28.52	287	P	P	16 31 56.2	+0.3
IPM				IAmb	IAmb	16 31 59.2	
	comp=Z,44nm,0.8s						
IPM	Ipoh	28.52	287	P	P	16 31 56.7	+0.9
BLDU	Ballidu	28.77	201	P	P	16 31 58.7	+0.9
	baz=29,SNR=18						
BLDU	Ballidu	28.77	201	P	P	16 31 58.3	+0.5
	comp=Z,58nm,2.1s						
RK1H	Rockhampton Ha	28.89	134	P	P	16 31 59.3	+0.4
	comp=Z,26nm,1.0s						
MNSI	Mandailing Nat	29.11	279	P	P	16 32 02.1	+1.1
	comp=Z,53nm,0.8s						
KULM	Kulim	29.12	288	P	P	16 32 02.0	+0.9
KULM	Kulim	29.12	288	P	P	16 32 00.1	-1.0
QIZ	Qiongzhong	29.15	322	P	P	16 32 02.5	+1.2
QIZ				S	S	16 36 51.0	+0.4
QIZ				LR	LR		
	comp=Z,780nm,13.7s						
QIZ				LR	LR		
	comp=Z,830nm,15.5s						
QIZ				LR	LR		
	comp=Z,840nm,13.7s						
KLBR	Kellerberrin	29.31	199	P	P	16 32 03.2	+0.6
	baz=30,SNR=15						
KLBR	Kellerberrin	29.31	199	P	P	16 32 03.4	+0.8
	comp=Z,127nm,1.0s						
SISI	Saibi	29.32	274	P	P	16 32 18.4	+15
BBOO	Buckleboo	29.68	167	P	P	16 32 06.7	+0.9
	baz=30,SNR=11						
BBOO	Buckleboo	29.68	167	P	P	16 32 05.8	0.0
BBOO				IAmb	IAmb	16 32 17.1	
	comp=Z,40nm,1.0s						
BBOO	Buckleboo	29.68	167	P	P	16 32 06.1	+0.3
	comp=Z,36nm,1.3s						
RMQ	Roma	29.80	141	P	P	16 32 07.9	+0.9
	baz=30,SNR=11						
RPSI	Rantau Prapat	30.11	282	P	P	16 32 09.7	-0.2
PSI	Prapat	30.13	282	P	P	16 32 09.7	-0.6
	comp=Z,23nm,0.8s,baz=94,slow=7.2,SNR=19						
MUN	Mundaring	30.19	201	P	P	16 32 11.5	+1.1
	baz=30,SNR=8.0						
MUN	Mundaring	30.19	201	P	P	16 32 11.4	+1.1
	comp=Z,49nm,1.2s						
STKA	Stephens Creek	30.51	157	P	P	16 32 14.2	+0.9
	comp=Z,34nm,0.9s,baz=331,slow=8.3,SNR=27						
STKA				LR	LR	16 44 29.8	
	comp=Z,2µm,20.0s,baz=326,slow=36						
STKA	Stephens Creek	30.51	157	P	P	16 32 14.1	+0.8
	baz=31,SNR=14						
STKA	Stephens Creek	30.51	157	P	P	16 32 13.8	+0.6
STKA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
STKA	Stephens Creek	30.51	157	P	P	16 32 13.8	+0.6
NWAO	Narrogin (SRO)	30.71	198	P	P	16 32 16.6	+1.6
HTT	Hallett	31.02	163	P	P	16 32 19.6	+1.9
	baz=31,SNR=8.0						
HTT	Hallett	31.02	163	P	P	16 32 20.1	+2.4
	comp=Z,53nm,2.0s						
GSI	Gunungsitoli	31.17	279	P	P	16 32 19.8	+0.5
	comp=Z,70nm,0.8s						
GSI	Gunungsitoli	31.17	279	P	P	16 32 17.3	-1.9
GSI				IAmb	IAmb	16 32 33.5	
	comp=Z,67nm,1.0s						
GSI	Gunungsitoli	31.17	279	P	P	16 32 19.5	+0.2
SRIT	Nakonsritamara	31.22	293	P	P	16 32 19.1	-0.6
SRIT				IAmb	IAmb	16 32 30.6	
	comp=Z,42nm,1.1s						
TPTI		31.93	282	P	P	16 32 35.4	+9.4
CMSA	Cobar Meteorol	31.99	151	P	P	16 32 27.3	+1.1
	baz=32,SNR=22						
CMSA	Cobar Meteorol	31.99	151	P	P	16 32 27.1	+0.8
	comp=Z,60nm,1.2s						
LHMI	Lhok Sumawe	32.63	286	P	P	16 32 40.6	+8.5
	comp=Z,149nm,1.2s						
ARMA	Armidale	34.36	143	P	P	16 32 48.9	+1.8
	baz=34,SNR=13						
ARMA	Armidale	34.36	143	P	P	16 32 47.3	+0.2
ARMA				IAmb	IAmb	16 32 50.4	
	comp=Z,30nm,0.8s						
ARMA	Armidale	34.36	143	P	P	16 32 48.6	+1.5
	comp=Z,63nm,1.4s						
SLVN	Son La	34.65	317	P	P	16 32 47.8	-1.8
ARPS	Mount Arapiles	35.01	161	P	P	16 32 54.0	+1.5
	baz=35,SNR=18						
ARPS	Mount Arapiles	35.01	161	P	P	16 32 54.0	+1.5
	comp=Z,100nm,1.0s						
JSU	Suzuyama	35.24	3	P	P	16 32 54.2	-0.3
SSE	Sheshan	35.44	349	P	P	16 32 59.3	+3.1
SSE				S	S	16 38 32.8	+4.6
SSE				pmax	pmax		
	comp=Z,17nm,0.6s						
SSE				LR	LR		
	comp=Z,250nm,15.8s						
MGCD	Mangrove Creek	36.11	147	P	P	16 33 03.9	+1.9
	baz=36,SNR=5.6						
MGCD	Mangrove Creek	36.11	147	P	P	16 33 03.8	+1.8
	comp=Z,43nm,1.0s						
CM31	Chiang Mai Arr	36.49	308	P	P	16 33 03.4	-2.0
CMAR	Chiang Mai Arr	36.49	308	P	P	16 33 05.8	+0.4
	comp=Z,6.7nm,0.7s,baz=134,slow=6.8,SNR=45						
CMAR				PcP	PcP	16 35 29.9	+1.2
	comp=Z,2.8nm,0.7s,baz=158,slow=2.5,SNR=6.3						
CMAR				LR	LR	16 52 03.3	
	comp=Z,270nm,18.1s,baz=178,slow=43						
CMAR	Chiang Mai Arr	36.49	308	P	P	16 33 03.9	-1.5
CAN	Canberra	36.67	151	P	P	16 33 07.3	+0.5
CAN				pmax	pmax		
	comp=Z,81nm,1.0s						
CAN	Canberra	36.67	151	P	P	16 33 07.3	+0.5
CAN	Canberra	36.67	151	P	P	16 33 08.5	+1.7
CHTO	Chiang Mai	36.69	309	P	P	16 33 05.7	-1.4
CHTO				pmax	pmax		
	comp=Z,36nm,0.9s						
CHTO	Chiang Mai	36.69	309	P	P	16 33 05.7	-1.4
CHTO				IAmb	IAmb	16 33 16.3	
	comp=Z,36nm,0.9s						
CHTO	Chiang Mai	36.69	309	P	P	16 33 08.5	+1.4
GYA	Guiyang	36.73	326	⇓*i*P	P	16 33 08.5	+1.0
GYA				pP	sP	16 33 22.8	-1.6
GYA				S	S	16 38 45.0	-3.5
GYA				pmax	pmax		
	comp=Z,24nm,1.4s						
GYA				pmax	pmax		
	comp=Z,350nm,4.7s						
WHN	Wuhan	36.75	340	⇓P	P	16 33 08.8	+1.4
WHN				LR	LR		
	comp=Z,1µm,17.1s						
NJ2	Nanjing	36.85	347	*e*P	P	16 33 06.0	-2.2
NJ2				pP	pP	16 33 21.0	+0.8
NJ2				sP	sP	16 33 25.3	-0.1
NJ2				S	S	16 38 47.3	-2.5
NJ2				pmax	pmax		
	comp=Z,26nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,280nm,3.8s						
NJ2				LR	LR		
	comp=Z,380nm,11.8s						
NJ2				LR	LR		
	comp=Z,660nm,18.0s						
NJ2				LR	LR		
	comp=Z,380nm,19.9s						
JNU	Nakatsue	36.88	4	P	P	16 33 08.7	+0.2
	comp=Z,18nm,0.9s,baz=298,slow=2.0,SNR=4.7						
JNU	Nakatsue	36.88	4	P	P	16 33 07.8	-0.7
JNU	Nakatsue	36.88	4	P	P	16 33 09.8	+1.3
TOO	Toolangi	37.03	157	P	P	16 33 12.0	+2.1
	baz=37,SNR=12						
TOO	Toolangi	37.03	157	P	P	16 33 11.0	+1.2
TOO				pmax	pmax		
	comp=Z,63nm,1.2s						
TOO	Toolangi	37.03	157	P	P	16 33 10.9	+1.2
TOO				IAmb	IAmb	16 33 24.1	
	comp=Z,62nm,1.1s						
TOO	Toolangi	37.03	157	P	P	16 33 11.9	+2.1
	comp=Z,53nm,1.4s						
JMN	Monobe	37.77	8	P	P	16 33 14.8	-1.2
KMI	Kunming	38.06	321	⇓P	P	16 33 20.5	+1.6
KMI				sP	sP	16 33 38.5	+2.6
KMI				S	S	16 39 12.5	+3.6
KMI				pmax	pmax		
	comp=Z,28nm,1.7s						
KMI				pmax	pmax		
	comp=Z,360nm,4.9s						
KMI				LR	LR		
	comp=Z,810nm,17.0s						
KMI				LR	LR		
	comp=Z,510nm,17.7s						
KMI				LR	LR		
	comp=Z,670nm,23.8s						
ENH	Enshi	38.45	333	P	P	16 33 21.2	-0.6
ENH				IAmb	IAmb	16 33 35.0	
	comp=Z,34nm,1.0s						
KOUNC	Koumac, New Ca	38.70	118	P	P	16 33 25.6	+1.5
JHS	Saijyo	38.93	6	P	P	16 33 25.5	-0.3
JWT	Wachi	39.51	9	P	P	16 33 30.7	+0.1
INU	Inuyama	39.86	11	P	P	16 33 33.9	+0.4
INU				IAmb	IAmb	16 33 49.6	
	comp=Z,44nm,1.0s						
INU	Inuyama	39.86	11	P	P	16 33 35.0	+1.5
SANVU	Saraoutou	39.92	109	P	P	16 33 33.3	-1.0
SANVU	Saraoutou	39.92	109	P	P	16 33 35.1	+0.8
KSAR	Wonju Array Be	41.11	359	P	P	16 33 44.0	+0.2
KSAR	Wonju Array Be	41.11	359	P	P	16 33 44.0	+0.2
DZM	Mont Dzumac	41.12	119	P	P	16 33 44.9	+0.7
	comp=Z,19nm,0.7s,baz=299,slow=10						
DZM				LR	LR	16 49 39.2	
	comp=Z,316nm,19.1s,baz=300,slow=34						
DZM	Mont Dzumac	41.12	119	*e*P	P	16 33 45.0	+0.7
	comp=Z,55nm,1.1s						
DZM				*e*S	S	16 39 54.6	-0.1
	comp=Z,778nm,30.1s						
DZM				*e*LQ	LQ	16 43 17.7	
	comp=Z,1µm,28.4s						
DZM				*e*LR	LR	16 45 04.7	
	comp=Z,1µm,27.9s						
KSRS	Korea Array	41.12	359	P	P	16 33 43.9	0.0
	comp=Z,4.9nm,0.5s,baz=177,slow=9.8,SNR=25						
KSRS				LR	LR	16 49 41.6	
	comp=Z,401nm,20.8s,baz=176,slow=35						
KS19	Wonju Array Si	41.17	359	P	P	16 33 42.9	-1.4
ONTNC	Ouen Toro	41.21	120	P	P	16 33 44.5	-0.4
ONTNC				IAmb	IAmb	16 33 55.5	
	comp=Z,52nm,1.1s						
TIA	Tai'an	41.24	346	⇓P	P	16 33 45.8	+0.9
TIA				S	S	16 40 00.3	+4.5
TIA				pmax	pmax		
	comp=Z,12nm,0.9s						
TIA				LR	LR		
	comp=Z,350nm,15.1s						
TIA				LR	LR		
	comp=Z,750nm,16.7s						
TIA				LR	LR		
	comp=Z,630nm,14.7s						
MJAR	Matsushiro Arr	41.25	12	P	P	16 33 44.5	-0.6
	comp=Z,10.0nm,0.8s,baz=185,slow=9.6,SNR=18						
MJAR				LR	LR	16 49 55.6	
	comp=Z,616nm,21.2s,baz=155,slow=35						
MJAR	Matsushiro Arr	41.25	12	P	P	16 33 43.2	-1.8
MJAR				pmax	pmax		
	comp=Z,20nm,1.2s						
MJAR	Matsushiro Arr	41.25	12	P	P	16 33 43.2	-1.8
MAJO	Matsushiro	41.26	12	P	P	16 33 42.2	-2.9
MAJO				pmax	pmax		
	comp=Z,37nm,1.1s						
MAJO	Matsushiro	41.26	12	P	P	16 33 42.2	-2.9
MAJO	Matsushiro	41.26	12	P	P	16 33 47.1	+2.1
MAT	Matsushiro	41.26	12	P	P	16 33 44.1	-0.9
MAT				*e*S	S	16 39 56.8	+0.8
MJB9	Matsu-Tunnel	41.26	12	P	P	16 33 42.1	-3.0
JYT	Yasato	41.41	15	P	P	16 33 45.1	-1.1
JYT				IAmb	IAmb	16 33 58.7	
	comp=Z,45nm,0.9s						
YATNC	Mamie plateau,	41.51	119	P	P	16 33 49.7	+2.4
OUENC	Ouen Island, N	41.59	120	P	P	16 33 47.8	-0.2
OUENC	Ouen Island, N	41.59	120	P	P	16 33 48.7	+0.7
	comp=Z,29nm,1.1s						
CD2	Chengdu	41.80	328	P	P	16 33 49.5	-0.1
CD2				PcP	PcP	16 35 43.8	-1.5
CD2				S	S	16 40 05.3	+1.0
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,620nm,13.0s						
CD2				LR	LR		
	comp=Z,940nm,14.0s						
XAN	Xi'an	41.93	336	P	P	16 33 50.8	+0.1
XAN				pP	pP	16 34 02.5	-0.2
XAN				sP	sP	16 34 08.5	+0.7
XAN				PcP	PcP	16 35 48.3	+2.7
XAN				S	S	16 40 11.8	+5.6
XAN				sS	sS	16 40 27.5	+3.1
XAN				SS	SS	16 43 10.3	-3.9
XAN				ScS	ScS	16 43 48.0	-2.0
XAN				pmax	pmax		
	comp=Z,26nm,0.9s						
XAN				LR	LR		
	comp=Z,530nm,13.1s						
XAN				LR	LR		
	comp=Z,640nm,18.6s						
XAN				LR	LR		
	comp=Z,850nm,17.9s						
DL2	Dalian	43.02	352	P	P	16 34 04.0	+4.7
DL2				pmax	pmax		
	comp=Z,22nm,0.8s						
DL2				pmax	pmax		
	comp=Z,220nm,4.3s						
DL2				LR	LR		
	comp=Z,400nm,12.2s						
DL2				LR	LR		
	comp=Z,620nm,15.7s						
DL2				LR	LR		
	comp=Z,750nm,16.7s						
JMM	Marumori	43.11	14	P	P	16 34 00.0	-0.1
JMM				IAmb	IAmb	16 34 14.9	
	comp=Z,63nm,0.8s						
WAKE	Wake Island	44.16	57	P	P	16 34 09.2	+0.3
BJT	Baijiatuau	45.09	347	P	P	16 34 14.4	-1.5
BJT				pmax	pmax		
	comp=Z,22nm,0.9s						
BJT	Baijiatuau	45.09	347	P	P	16 34 14.4	-1.5
BJI	Beijing	45.11	347	P	P	16 34 15.8	-0.3
BJI				S	S	16 40 54.5	+2.2
BJI				SS	ScS	16 44 08.0	-1.5
BJI				pmax	pmax		
	comp=Z,24nm,1.1s						
BJI				pmax	pmax		
	comp=Z,200nm,6.5s						
BJI				LR	LR		
	comp=Z,440nm,18.8s						
BJI				LR	LR		
	comp=Z,410nm,16.5s						
BJI				LR	LR		
	comp=Z,510nm,20.4s						
SNY	Shenyang	45.70	355	⇓P	P	16 34 14.0	-6.7
SNY				S	S	16 41 11.0	+10
SNY				pmax	pmax		
	comp=Z,17nm,2.5s						
SNY				pmax	pmax		
	comp=Z,360nm,4.7s						
SNY				LR	LR		
	comp=N,690nm,20.6s						
SNY				LR	LR		
	comp=E,350nm,21.6s						
SNY				LR	LR		
	comp=Z,1µm,20.6s						
LZH	Lanzhou	45.89	332	*e*P	P	16 34 22.8	+0.2
LZH				pP	pP	16 34 34.3	-0.4
LZH				sP	sP	16 34 38.5	-1.3
LZH				S	S	16 41 00.8	-3.3
LZH				sS	sS	16 41 30.0	+7.5
LZH				pmax	pmax		
	comp=Z,38nm,1.3s						
LZH				pmax	pmax		
	comp=Z,310nm,6.0s						
LZH				LR	LR		
	comp=Z,400nm,18.4s						
LZH				LR	LR		
	comp=Z,500nm,19.0s						
LZH				LR	LR		
	comp=Z,390nm,18.4s						
SHL	Shillong	45.89	312	P	P	16 34 19.8	-3.0
SHL				pmax	pmax		
	comp=Z,83nm,1.1s						
SHL	Shillong	45.89	312	P	P	16 34 19.8	-3.0
HHC	Hu-ho-hao-te	47.09	343	*e*P	P	16 34 31.5	-0.3
HHC				pP	pP	16 34 41.0	-2.4
HHC				PP	PP	16 36 27.8	+4.8
HHC				S	S	16 41 28.0	+7.0
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,280nm,5.1s						
HHC				LR	LR		
	comp=Z,340nm,15.4s						
HHC				LR	LR		
	comp=Z,690nm,15.1s						
HHC				LR	LR		
	comp=Z,730nm,14.8s						
CN2	Changchun	47.53	357	*e*P	P	16 34 41.0	+5.9
CN2				pP	sP	16 34 51.0	-0.9
CN2				sP	pP	16 34 54.8	+7.9
CN2				PcP	PcP	16 36 09.5	+4.9
CN2				S	S	16 41 34.5	+7.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
CN2				LR	LR		
	comp=Z,500nm,17.0s						
CN2				LR	LR		
	comp=Z,600nm,19.0s						
USA0B	Ussuriysk Arra	47.97	4	P	P	16 34 38.3	-0.1
USA0B				pmax	pmax		
	comp=Z,21nm,0.9s						
USA0B	Ussuriysk Arra	47.97	4	P	P	16 34 38.3	-0.1
USA0B				IAmb	IAmb	16 34 59.2	
	comp=Z,21nm,0.9s						
USRK	Ussuriysk Ar.	47.97	4	P	P	16 34 38.2	-0.2
	comp=Z,5.1nm,0.6s,baz=183,slow=6.8,SNR=23						
USRK				LR	LR	16 55 08.3	
	comp=Z,602nm,19.5s,baz=170,slow=36						
USRK	Ussuriysk Ar.	47.97	4	P	P	16 34 37.7	-0.7
MDJ	Mudanjiang	48.29	1	P	P	16 34 42.3	+1.4

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MDJ                            sP     sP      16 35 01.5 +4.5
MDJ                            PP     PP      16 36 36.0 +2.2
MDJ                            S      S       16 41 43.3 +5.6
MDJ                            pmax   pmax
      comp=Z,18nm,1.8s
MDJ                            pmax   pmax
      comp=Z,200nm,3.5s
MDJ                            LR     LR
      comp=Z,700nm,14.5s
MDJ                            LR     LR
      comp=Z,570nm,20.6s
MDJ                            LR     LR
      comp=Z,1μm,25.0s
PALK  Pallekele         48.81 283  P      P       16 34 46.3 +0.8
      comp=Z,6.1nm,0.7s,baz=190,slow=11,SNR=1.7
LSA   Lhasa             48.82 316  P      P       16 34 46.5 +0.7
LSA                            pmax   pmax
      comp=Z,77nm,1.3s
LSA   Lhasa             48.82 316  P      P       16 34 45.3 -0.5
LSA                            pmax   pmax
      comp=Z,27nm,0.7s
LSA   Lhasa             48.82 316  P      P       16 34 45.3 -0.5
LSA                            IAmb   IAmb    16 34 59.1
      comp=Z,27nm,0.7s
YUK   Yuzh-Kuril'sk     50.23  16 eP      P       16 34 53.3 -2.4
YUK                           e               16 36 11.6
YUK                           e               16 36 49.5
YUK                           ePPP    PPP     16 37 46.3
YUK                           eS      S       16 42 03.1 -1.8
YUK                           e               16 44 39.7
YUK                           eSS     SS      16 45 38.9 -0.1
YUK                           eSSS    SSS     16 47 09.0
YUK                            pmax   pmax
      comp=Z,525nm,2.1s
YUK                            pmax   pmax
      comp=E,196nm,1.2s
YUK                            pmax   pmax
      comp=Z,304nm,1.2s
YUK                            pmax   pmax
      comp=N,81nm,0.6s
YUK                            MLR    MLR
      comp=Z,194nm,19.0s
GTA   Gaotai            50.46 331 eP      P       16 34 57.3 -0.4
GTA                            pP     sP      16 35 16.0 +0.9
GTA                            S      S       16 42 11.5 +3.0
GTA                            sS     sS      16 42 31.8 +4.8
GTA                            pmax   pmax
      comp=Z,11nm,1.2s
GTA                            pmax   pmax
      comp=Z,150nm,5.5s
GTA                            LR     LR
      comp=Z,400nm,15.6s
GTA                            LR     LR
      comp=Z,250nm,17.1s
GTA                            LR     LR
      comp=Z,510nm,18.2s
MSVF  Nonsavu           50.56 110  P      P       16 35 01.3 +2.4
      comp=Z,16nm,0.9s,baz=270,slow=20
MSVF  Nonsavu           50.56 110  P      P       16 34 58.5 -0.4
MSVF                           pmax   pmax
      comp=Z,75nm,1.3s
MSVF  Nonsavu           50.56 110  P      P       16 34 58.5 -0.4
GUN   Gumba             51.67 310 eP      P       16 35 06.7 -0.6
      comp=Z,63nm,0.7s
PKI   Pulchoki          51.86 310 eP      P       16 35 07.4 -1.3
      comp=Z,58nm,1.0s
PKIN  Phulchoki         51.87 310 eP      P       16 35 07.5 -1.2
KKN   Kakani            52.07 310 eP      P       16 35 09.2 -0.9
      comp=Z,83nm,1.0s
YSS   Yuzh-Sakhalins    52.19  12 eP      P       16 35 12.0 +1.6
YSS                            pmax   pmax
      comp=Z,40nm,1.4s
GKN   Gorkha            52.67 310 eP      P       16 35 13.4 -1.1
      comp=Z,43nm,0.7s
KOLN  Koldanda          53.35 309 eP      P       16 35 19.0 -0.6
      comp=Z,205nm,1.0s
HYB   Hyderabad         53.48 295 i P     P       16 35 20.0 -0.5
DCZ   Deep Cove         53.50 147  P      P       16 35 20.7 +0.6
DCZ                            IAmb   IAmb    16 35 30.5
      comp=Z,28nm,1.0s
DANN  Dangsing          53.51 310 eP      P       16 35 20.0 -0.9
      comp=Z,210nm,0.8s
PYZ   Puysegur Point    53.69 148  P      P       16 35 22.0 +0.5
FOZ   Fox Glacier       53.86 143  P      P       16 35 23.1 +0.3
FOZ                            IAmb   IAmb    16 35 39.1
      comp=Z,42nm,1.3s
PYUN  Piuthan           53.98 309 eP      P       16 35 23.7 -0.5
      comp=Z,194nm,1.0s
WKZ   Wanaka            54.15 145  P      P       16 35 25.5 +0.5
WKZ                            IAmb   IAmb    16 35 37.5
      comp=Z,62nm,1.4s
WHZ   Wether Hill Ro    54.20 147  P      P       16 35 25.5 +0.2
WHZ                            IAmb   IAmb    16 35 28.1
      comp=Z,20nm,0.8s
RPZ   Rata Peaks        54.70 143  P      P       16 35 29.7 +0.7
ULN   Ulaanbaatar       54.81 343c iP     P       16 35 29.1 -0.7
ULN                            pmax   pmax
      comp=Z,20nm,0.8s
ULN   Ulaanbaatar       54.81 343  P      P       16 35 29.4 -0.4
ULN                            IAmb   IAmb    16 35 33.9
      comp=Z,18nm,0.8s
GRNR  Gornyy            54.88   6⇑iP      P       16 35 28.9 -1.1
GRNR                           pmax   pmax
      comp=Z,6.0nm,1.2s
SONM  Songino Array     54.98 342  P      P       16 35 30.4 -0.6
      comp=Z,10.0nm,0.9s,baz=152,slow=7.5,SNR=26
SONM                           LR     LR      17 01 29.9
      comp=Z,252nm,19.1s,baz=148,slow=39
SONM  Songino Array     54.98 342  P      P       16 35 30.1 -0.9
SONM                           pmax   pmax
      comp=Z,19nm,1.1s
SONM  Songino Array     54.98 342  P      P       16 35 30.1 -0.9
TUWZ  Tuamarina         55.31 139  P      P       16 35 32.6 -0.7
KHZ   Kahutara          55.55 140  P      P       16 35 34.6 -0.4
KHZ                            IAmb   IAmb    16 35 54.1
      comp=Z,23nm,1.0s
MQZ   McQueen’s Vall    55.67 142  P      P       16 35 35.9  0.0
MQZ                            IAmb   IAmb    16 36 02.9
      comp=Z,65nm,1.5s
BKZ   Black Stump Fm    55.97 136  P      P       16 35 38.1 -0.1
BKZ                            IAmb   IAmb    16 35 54.8
      comp=Z,34nm,0.8s
MCQ   Macquarie Isla    56.26 159  P      P       16 35 40.9 +1.0
MCQ                            pmax   pmax
      comp=Z,92nm,1.2s
MCQ   Macquarie Isla    56.26 159  P      P       16 35 40.9 +1.0
CIT   Chita             57.09 349 eP      P       16 35 46.2 +0.3
CIT                           e               16 35 55.4
CIT                           e               16 35 59.6
CIT                           e               16 36 46.8
CIT                            pmax   pmax
      comp=Z,58nm,1.9s
ZEA   Zeya              57.41 359 i P     P       16 35 49.6 +1.5
ZAK   Zakamensk         58.19 341 eP      P       16 35 50.0 -3.8
ZAK                            pmax   pmax
      comp=Z,8.0nm,1.3s
NDI   New Delhi         58.79 307 eP      P       16 35 56.0 -2.2
IRK   Irkutsk           59.52 343 eP      P       16 36 02.5 -0.3
IRK                            pmax   pmax
      comp=Z,54nm,4.0s
WMQ   Urumqi            59.89 327 ⇓P      P       16 36 05.5 -0.1
WMQ                            pP     pP      16 36 17.0 -1.2
WMQ                            sP     sP      16 36 30.0 +6.8
WMQ                            pmax   pmax
      comp=Z,47nm,1.1s
WMQ                            pmax   pmax
      comp=Z,300nm,4.3s
WMQ                            LR     LR
      comp=Z,840nm,17.9s
WMQ                            LR     LR
      comp=Z,760nm,20.7s
WMQ                            LR     LR
      comp=Z,570nm,26.7s
MOY   Mondy             60.04 341 eP      P       16 36 06.0 -0.5
MOY                            pmax   pmax
      comp=Z,56nm,1.8s
PEA0B Petropavlovsk-    61.92  20  P      P       16 36 17.1 -2.0
PEA0B                          pmax   pmax
      comp=Z,105nm,1.4s
PEA0B Petropavlovsk-    61.92  20  P      P       16 36 17.1 -2.0
PETK  Petropavlovsk-    61.92  20  P      P       16 36 19.6 +0.4
      comp=Z,10.0nm,0.8s,baz=200,slow=7.9,SNR=14
PETK                           LR     LR      17 00 54.0
      comp=Z,242nm,22.0s,baz=203,slow=34
PETK  Petropavlovsk-    61.92  20  P      P       16 36 16.7 -2.5
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PET   Petropavlovsk     62.18  20ceP      P       16 36 22.5 +1.7
PET                            pmax   pmax
      comp=Z,60nm,1.3s
PET   Petropavlovsk     62.18  20  P      P       16 36 19.7 -1.1
BOD   Bodaibo           62.58 351 eP      P       16 36 23.3 -0.1
BOD                            pmax   pmax
      comp=Z,45nm,1.4s
CASY  Casey             63.53 188  P      P       16 36 29.1 -0.5
ZSN   Zaisan            63.76 329 eP      P       16 36 29.9 -1.7
      baz=329
ZSN   Zaisan            63.76 329 eP      P       16 36 29.8 -1.7
NIL   Nilore            63.94 310  P      P       16 36 31.1 -1.9
NIL                            pmax   pmax
      comp=Z,15nm,0.8s
NIL   Nilore            63.94 310  P      P       16 36 31.1 -1.9
NIL                            IAmb   IAmb    16 36 42.5
      comp=Z,15nm,0.8s
DGZ   Jazzator, Alta    63.99 332⇓iP      P       16 36 33.3 +0.2
DGZ                            pmax   pmax
      comp=Z,28nm,1.2s
UZB   Uzynbulak         64.52 322 eP      P       16 36 35.1 -1.7
      baz=322
UZB   Uzynbulak         64.52 322 eP      P       16 36 35.0 -1.7
TARG  Taragay, Kyrgy    64.52 320  P      P       16 36 33.4 -3.8
KSH   Kashi             64.61 317  P      P       16 36 38.5 +1.1
KSH                            pP     pP      16 36 49.5 +0.2
KSH                            PcP    PcP     16 37 07.3 -3.8
KSH                            SS     SS      16 49 24.0 -1.8
KSH                            pmax   pmax
      comp=Z,15nm,0.8s
KSH                            LR     LR
      comp=Z,490nm,12.0s
KSH                            LR     LR
      comp=Z,390nm,10.6s
KSH                            LR     LR
      comp=Z,380nm,12.4s
MK31  Makanchi Array    64.72 327  P      P       16 36 36.4 -1.5
MK31                           pmax   pmax
      comp=Z,24nm,1.0s
MK31  Makanchi Array    64.72 327  P      P       16 36 36.4 -1.5
MK31                           IAmb   IAmb    16 36 47.3
      comp=Z,24nm,0.9s
MKAR  Makanchi Array    64.72 327  P      P       16 36 37.0 -0.9
      comp=Z,16nm,0.7s,baz=115,slow=7.7,SNR=79
MKAR                           LR     LR      17 07 23.3
      comp=Z,259nm,19.4s,baz=116,slow=38
MKAR  Makanchi Array    64.72 327  P      P       16 36 36.4 -1.4
SATY  Saty              64.85 322 eP      P       16 36 37.7 -1.2
      comp=Z,8.6nm,0.8s,baz=322
SATY  Saty              64.85 322 eP      P       16 36 37.7 -1.2
SATY                           pmax   pmax
      comp=Z,9.0nm,0.8s
ZHN   Zhinishke         64.89 322 eP      P       16 36 38.4 -0.8
      baz=322
ZHN   Zhinishke         64.89 322 eP      P       16 36 38.3 -0.8
MAKZ  Makanchi          64.90 327  P      P       16 36 37.6 -1.4
MAKZ                           pmax   pmax
      comp=Z,24nm,1.0s
MAKZ  Makanchi          64.90 327  P      P       16 36 37.6 -1.4
MAKZ                           IAmb   IAmb    16 36 48.4
      comp=Z,24nm,0.9s
KDJ   Kajisay           65.13 320  P      P       16 36 40.1 -0.7
KDJ                            pmax   pmax
      comp=Z,18nm,0.9s
KDJ   Kajisay           65.13 320  P      P       16 36 40.1 -0.7
KDJ                            IAmb   IAmb    16 36 50.2
      comp=Z,18nm,0.8s
MA2   Magadan           65.70  12 i P     P       16 36 44.6 +0.7
YAK   Yakutsk           65.73   1 eP      P       16 36 45.0 +1.0
YAK                           e*PP    sP      16 37 00.9 +0.1
YAK                           e               16 37 20.4
YAK                           eS      S       16 45 28.5 +1.7
YAK                           e*SS    sS      16 46 02.7  +15
YAK                           e               16 46 34.2
YAK                           eSSS    SSS     16 52 38.2
YAK                            pmax   pmax
      comp=Z,66nm,0.8s
YAK                            pmax   pmax
      comp=N,13nm,1.0s
YAK                            pmax   pmax
      comp=E,14nm,1.1s
YAK                            smax   smax
      comp=N,263nm,3.3s
YAK                            smax   smax
      comp=E,160nm,3.8s
YAK   Yakutsk           65.73   1  P      P       16 36 43.5 -0.5
TNSS  Tian-Shan         65.74 321 eP      P       16 36 43.7 -1.3
      baz=321
MDOK  Medeo             65.75 321 eP      P       16 36 43.5 -1.2
      baz=321
MDOK  Medeo             65.75 321 eP      P       16 36 43.5 -1.2
TDK   Taldyqorghan      65.90 324 eP      P       16 36 44.9 -0.7
      comp=E,18nm,1.1s,baz=324
TDK   Taldyqorghan      65.90 324 eP      P       16 36 44.8 -0.7
TDK                            pmax   pmax
      comp=Z,18nm,1.1s
BOOM  Boomskoye usch    66.10 320  P      P       16 36 44.9 -2.2
BOOM                           pmax   pmax
      comp=Z,13nm,0.9s
BOOM  Boomskoye usch    66.10 320  P      P       16 36 44.9 -2.2
CHKK  Chushkaly         66.14 322 eP      P       16 36 46.3 -0.8
      baz=322
TKM2  Tokmak 2          66.54 320  P      P       16 36 49.3 -0.6
      SNR=11
KUU   Kurty             66.56 322 eP      P       16 36 48.3 -1.6
      comp=Z,24nm,1.0s,baz=322
KUU   Kurty             66.56 322 eP      P       16 36 48.2 -1.6
KUU                            pmax   pmax
      comp=Z,24nm,1.0s
KBK   Karagaybulak      66.82 320  P      P       16 36 51.1 -0.5
      SNR=10
UCH   Uchtor            66.89 319  P      P       16 36 53.0 +0.5
      SNR=14
AAK   Ala-Archa         67.10 320  P      P       16 36 53.0 -0.4
      comp=Z,6.5nm,0.8s,baz=149,slow=4.1,SNR=16
AAK   Ala-Archa         67.10 320  P      P       16 36 53.6 +0.2
      SNR=9.1
AAK   Ala-Archa         67.10 320  P      P       16 36 52.2 -1.2
AAK                            pmax   pmax
      comp=Z,28nm,1.3s
AAK   Ala-Archa         67.10 320  P      P       16 36 52.2 -1.2
AAK                            IAmb   IAmb    16 37 09.5
      comp=Z,28nm,1.3s
AML   Almayashu         67.38 319  P      P       16 36 55.1 -0.4
      SNR=18
AML   Almayashu         67.38 319  P      P       16 36 56.2 +0.7
AML                            pmax   pmax
      comp=Z,29nm,0.9s
USP   Ospenovka         67.41 320  P      P       16 36 55.2  0.0
      SNR=22
SGDS  Sogindy           67.42 321 eP      P       16 36 53.1 -2.2
      baz=321
DRK   Karamyk           67.47 316  P      P       16 36 53.9 -2.1
DRK                            IAmb   IAmb    16 37 11.2
      comp=Z,31nm,1.3s
KBL   Kabul             67.50 310  P      P       16 36 54.0 -2.2
KBL                            pmax   pmax
      comp=Z,10.0nm,1.0s
KBL   Kabul             67.50 310  P      P       16 36 54.0 -2.2
EKS2  Erkin-Say         67.58 319  P      P       16 36 56.1 -0.3
      SNR=14
SEM   Semipalatinsk     67.99 329 eP      P       16 36 57.1 -1.9
      baz=329
SEM   Semipalatinsk     67.99 329 eP      P       16 36 57.0 -1.9
ZAA0  Zalesovo Array    68.07 334  P      P       16 36 57.3 -1.7
ZAA0                           IAmb   IAmb    16 37 07.2
      comp=Z,45nm,1.1s
ZALV  Zalesovo Beam     68.07 334  P      P       16 36 58.3 -0.7
      comp=Z,15nm,0.9s,baz=110,slow=4.4,SNR=24
ZALV                           LR     LR      17 09 22.7
      comp=Z,206nm,19.4s,baz=134,slow=38
ZALV  Zalesovo Beam     68.07 334 i P     P       16 36 58.2 -0.8
ZALV                           pmax   pmax
      comp=Z,16nm,0.9s
ZALV  Zalesovo Beam     68.07 334  P      P       16 36 57.0 -2.0
BTLS  Baital            68.56 322 eP      P       16 37 01.1 -1.3
      baz=322
BTLS  Baital            68.56 322 eP      P       16 37 01.1 -1.3
CHGR  Chuyangaron       69.00 314  P      P       16 37 03.4 -2.0
CHGR                           IAmb   IAmb    16 37 11.1
      comp=Z,33nm,0.9s
KURBB Kurchatov Arra    69.00 329  P      P       16 37 03.8 -1.2
      comp=Z,18nm,0.7s,baz=128,slow=5.5,SNR=3.4
KURK  Kurchatov         69.01 329ceP      P       16 37 03.9 -1.1
KURK                           pmax   pmax
      comp=Z,32nm,0.8s
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KURK  Kurchatov         69.01 329  P      P       16 37 03.5 -1.5
SEY   Seymchan          69.08  12 i P     P       16 37 04.9 -0.3
DZA   Taraz             69.28 319 eP      P       16 37 06.0 -0.9
      baz=319
DZA   Taraz             69.28 319 eP      P       16 37 06.0 -0.9
IUG   Iuzhnay           69.82 318 eP      P       16 37 09.1 -1.3
      baz=318
IUG   Iuzhnay           69.82 318 eP      P       16 37 09.1 -1.3
KKAR  Karatay Array     69.92 319  P      P       16 37 08.3 -2.5
KKAR  Karatay Array     69.92 319  P      P       16 37 08.3 -2.5
BRLS  Borolday          70.33 318 eP      P       16 37 12.3 -1.1
      baz=318
BRLS  Borolday          70.33 318 eP      P       16 37 12.2 -1.1
HRA   Herat             72.75 308  P      P       16 37 26.2 -2.1
WSAR  Wadi Sarin        73.03 296  P      P       16 37 28.6 -1.3
      comp=Z,8.8nm,1.1s,baz=154,slow=3.8,SNR=5.2
BVAR  Borovoye Array    74.56 328  P      P       16 37 37.2 -1.0
      comp=Z,6.5nm,0.7s,baz=146,slow=8.6,SNR=25
BRVK  Borovoye          74.63 328ceP      P       16 37 36.7 -2.0
BRVK                           pmax   pmax
      comp=Z,22nm,1.0s
BRVK  Borovoye          74.63 328  P      P       16 37 36.7 -2.0
TIXI  Tiksi             75.39   0ceP      P       16 37 41.5 -1.2
TIXI                           pmax   pmax
      comp=Z,20nm,0.7s
TIXI  Tiksi             75.39   0  P      P       16 37 41.1 -1.6
TIXI                           IAmb   IAmb    16 37 50.3
      comp=Z,21nm,0.8s
SOCY  Socotra           75.58 284  P      P       16 37 41.3 -3.7
VNDA  Vanda             75.73 173  P      P       16 37 44.2 -0.4
      comp=Z,1.9nm,0.5s,baz=310,slow=7.0,SNR=12
VNDA                           LR     LR      17 08 17.5
      comp=Z,715nm,21.6s,baz=339,slow=34
VNDA  Vanda             75.73 173  P      P       16 37 42.9 -1.7
VNDA                           pmax   pmax
      comp=Z,6.0nm,0.8s
VNDA  Vanda             75.73 173  P      P       16 37 42.9 -1.7
BILL  Bilibino          76.48  14⇓eP      P       16 37 50.2 +1.2
BILL                          e               16 38 00.2
BILL                          i *PP   pP      16 38 04.0 +2.5
BILL                          e*SS    sS      16 48 13.7  +21
BILL                          eSS     SS      16 52 31.6 +4.9
BILL                           pmax   pmax
      comp=Z,5.0nm,1.1s
BILL                           MLR    MLR
      comp=Z,169nm,18.0s
BILL  Bilibino          76.48  14  P      P       16 37 48.5 -0.5
SBA   Scott Base        76.63 172  P      P       16 37 50.4 +0.7
SBA                            pmax   pmax
      comp=Z,23nm,1.1s
SBA   Scott Base        76.63 172  P      P       16 37 50.4 +0.7
SBA                            IAmb   IAmb    16 38 16.1
      comp=Z,23nm,1.1s
GEYT  Alibeck           76.94 310  P      P       16 37 52.1 -0.3
      comp=Z,3.7nm,0.7s,baz=178,slow=7.2,SNR=2.2
GEYT                           LR     LR      17 18 08.7
      comp=Z,160nm,19.9s,baz=215,slow=41
MAW   Mawson            77.24 201  LR     LR      17 08 17.1
      comp=Z,230nm,21.9s,baz=59,slow=33
NRIK  Noril'sk          78.15 346  P      P       16 37 57.8 -0.5
      comp=Z,14nm,0.9s,baz=143,slow=6.2,SNR=18
NRIK                           LR     LR      17 13 40.5
      comp=Z,396nm,21.7s,baz=144,slow=37
NRIK  Noril'sk          78.15 346ceP      P       16 37 57.2 -1.1
NRIK                           pmax   pmax
      comp=Z,37nm,1.1s
NRIK  Noril'sk          78.15 346  P      P       16 37 57.1 -1.3
NRIK                           IAmb   IAmb    16 38 09.9
      comp=Z,32nm,1.1s
ABKAR Akbulak array     79.05 322  P      P       16 38 02.0 -1.7
ABKAR Akbulak array     79.05 322  P      P       16 38 01.7 -2.0
ABKAR                          IAmb   IAmb    16 38 19.7
      comp=Z,15nm,0.8s
AKTO  Aktyubinsk        80.61 322  P      P       16 38 11.5 -0.6
      comp=Z,5.1nm,0.5s,baz=118,slow=9.3,SNR=13
SVE   Sverdlovsk        81.26 329 eP      P       16 38 15.4  0.0
SVE                            pmax   pmax
      comp=Z,42nm,1.5s
PPT2  Papeete2          81.30 107 eLR     LR      17 03 47.9
      comp=Z,346nm,22.5s
PPT   Papeete           81.31 107  LR     LR      17 12 47.0
      comp=Z,187nm,20.6s,baz=294,slow=34
TBI   Tubuai            81.32 113 eLR     LR      17 03 47.7
      comp=Z,498nm,29.8s
ARU   Arti              82.20 328  P      P       16 38 19.3 -1.1
      comp=Z,1.5nm,0.5s,baz=98,slow=3.2,SNR=13
ARU   Arti              82.20 328c iP     P       16 38 19.6 -0.8
ARU                            S      S       16 48 32.6 +0.4
ARU                            SS     SS      16 53 54.8 +2.0
ARU                            pmax   pmax
      comp=Z,40nm,1.6s
ARU   Arti              82.20 328  P      P       16 38 19.2 -1.1
ARU                            IAmb   IAmb    16 38 29.0
      comp=Z,26nm,1.0s
TNA   Tin City          82.96  22  P      P       16 38 23.9 -0.2
      baz=244
ANM   Nome              83.53  23  P      P       16 38 27.9 +0.7
      baz=247
UMR   Umm Al-Rimmam     83.76 300 eP      P       16 38 28.1 -0.9
RDF   Al-Radifah        83.82 299 eP      P       16 38 28.3 -1.1
MIB   Mutribah          84.12 300 eP      P       16 38 29.7 -1.2
RST   Umm Al-Ruwaisa    84.37 300 eP      P       16 38 30.9 -1.3
RAYN  Ar Rayn           84.97 294  P      P       16 38 33.9 -1.5
RAYN                           pmax   pmax
      comp=Z,80nm,1.5s
RAYN  Ar Rayn           84.97 294  P      P       16 38 33.9 -1.5
RDOG  Red Dog Mine      85.78  21  P      P       16 38 36.8 -1.6
      baz=249
QSPA  South Pole Qui    86.08 180  P      P       16 38 39.0 -1.1
QSPA                           IAmb   IAmb    16 38 54.5
      comp=Z,25nm,1.2s
TTA   Tatalina          86.94  26  P      P       16 38 44.0 -0.3
      baz=256
OHAK  Old Harbor        86.96  32  P      P       16 38 45.2 +0.8
      baz=258
GCSA  Galena City Sc    87.04  24  P      P       16 38 45.7 +1.1
      baz=255
N19K  Bonanza Creek     87.14  29  P      P       16 38 46.3 +1.0
      baz=257
BELG  Belogornoye       87.39 323  P      P       16 38 46.5 -0.1
      comp=Z,75nm,0.9s,baz=97,slow=1.5,SNR=12
P19K  Oil Pt            87.49  30  P      P       16 38 50.4 +3.4
      baz=258
KIRV  Kirov             87.52 329  P      P       16 38 47.9 +0.9
      comp=Z,15nm,0.7s,baz=84,slow=4.8,SNR=9.5
KIRV  Kirov             87.52 329ceP      P       16 38 46.7 -0.4
GNI   Garni             87.58 310  P      P       16 38 49.0 +1.0
      comp=Z,4.2nm,0.6s,baz=341,slow=2.0,SNR=5.3
GNI   Garni             87.58 310  P      P       16 38 45.8 -2.3
GNI                            pmax   pmax
      comp=Z,16nm,1.1s
GNI   Garni             87.58 310  P      P       16 38 45.8 -2.3
GNI                            IAmb   IAmb    16 39 11.8
      comp=Z,16nm,1.1s
L20K  Farewell, AK      87.79  27  P      P       16 38 48.6 +0.3
      baz=257
K20K  Telida            87.90  26  P      P       16 38 49.0 +0.1
      baz=257
J20K  Nowinta River     88.05  25  P      P       16 38 49.5  0.0
      baz=257
GEVA  Gevas             88.67 308  P      P       16 38 52.5 -0.8
CHUM  Lake Minchumin    88.77  26  P      P       16 38 53.7 +0.7
      baz=259
CAST  Castle Rocks      88.79  26  P      P       16 38 53.5 +0.5
      baz=259
NCK   Nalchik           88.83 314 i P     P       16 38 54.4 +0.7
NCK                            pmax   pmax
      comp=Z,18nm,1.1s
SIRT  Sirnak            89.08 307  P      P       16 38 54.3 -0.8
I21K  Tanana            89.17  25  P      P       16 38 54.9 +0.2
      baz=259
KBZ   Khabaz            89.36 314  P      P       16 38 56.5 +0.4
      comp=Z,4.3nm,0.9s,baz=69,slow=7.2,SNR=4.3
KBZ                            LR     LR      17 27 02.5
      comp=Z,75nm,18.7s,baz=78,slow=41
KBZ   Khabaz            89.36 314 i P     P       16 38 55.2 -0.9
KBZ                            pmax   pmax
      comp=Z,10.0nm,1.1s
RC01  Rabbit Creek A    89.46  29  P      P       16 38 56.5 +0.2
      baz=261
GURO  Guroymak-BITLI    89.50 309  P      P       16 38 56.7 -0.4
GURO                           IAmb   IAmb    16 39 10.4
      comp=Z,23nm,1.0s
KIV   Kislovodsk        89.53 314 eP      P       16 38 54.8 -2.3
KIV                            pmax   pmax
      comp=Z,9.0nm,1.0s
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KIV				MLR	MLR		
	comp=Z,88nm,20.0s						
MLY	Manley	89.66	25	P	P	16 38 58.0	+0.8
	baz=260						
COLD	Coldfoot	90.24	23	P	P	16 38 58.8	-0.9
COLD				IAmb	IAmb	16 39 24.8	
	comp=Z,11nm,1.2s						
COLD	Coldfoot	90.24	23	P	P	16 38 59.5	-0.3
	baz=261						
I23K	Minto, Yukon-K	90.25	25	P	P	16 38 59.2	-0.7
	baz=261						
WAT6	Susitna Watana	90.61	27	P	P	16 39 01.2	-0.6
	baz=263						
TOLK	Toolik Lake Re	90.70	21	P	P	16 39 01.6	-0.3
	baz=261						
CCB	Clear Creek Bu	90.84	25	P	P	16 39 00.7	-1.8
CCB				IAmb	IAmb	16 39 25.5	
	comp=Z,23nm,1.4s						
VRH	Novokhopyorsk	90.87	321	eP	P	16 39 02.7	-0.3
VRH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TAOE	Nuku Hiva Isla	90.91	99	eLR	LR	17 08 17.4	
	comp=Z,375nm,25.4s						
H24K	Noodor Dome	90.96	24	P	P	16 39 02.5	-0.7
H24K				IAmb	IAmb	16 39 18.6	
	comp=Z,12nm,1.1s						
H24K	Noodor Dome	90.96	24	P	P	16 39 02.6	-0.6
	baz=263						
HDA	Harding Lake	91.18	26	P	P	16 39 02.6	-1.5
	baz=264						
IL31		91.25	25	P	P	16 39 02.1	-2.3
ILAR	Eielson Array	91.25	25	P	P	16 39 03.5	-0.9
	comp=Z,1.4nm,0.5s,baz=244,slow=4.8,SNR=23						
ILAR				LR	LR	17 14 16.8	
	comp=Z,207nm,21.1s,baz=268,slow=32						
BMAR	Burnt Mountain	92.43	23	P	P	16 39 10.3	+0.3
VSR	Storozhevoye	92.47	321	eP	P	16 39 07.8	-2.6
VSR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
J26L	Joseph Creek	92.65	26	P	P	16 39 10.4	-0.7
	baz=267						
LPSR	Galich'ya Gora	92.69	322	eP	P	16 39 12.1	+0.7
LPSR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KLMR	Klimovskoe	92.78	331	eP	P	16 39 12.4	+0.8
KLMR				e		16 42 54.3	
KLMR				pmax	pmax		
	comp=Z,15nm,1.2s						
KLMR	Klimovskoe	92.78	331	eP	P	16 39 12.5	+0.8
KLMR				AMP		16 39 14.1	
	comp=Z,15nm,1.2s						
KLMR				ePP	PP	16 42 54.4	+0.3
KLMR				LQ	LQ	17 10 59.0	
KLMR				LQ	LQ	17 10 59.0	
KLMR				LR	LR	17 18 50.9	
CTG	Chitna Glacier	93.52	29	P	P	16 39 16.6	+1.3
	baz=268						
OBN	Obninsk	94.17	325⇓	eP	P	16 39 16.3	-1.8
OBN				i		16 39 26.2	
OBN				e*PP	pwP	16 39 32.9	-1.6
OBN				eSS	SS	16 56 50.6	+3.5
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,225nm,22.0s						
DAWY	Dawson	94.46	26	P	P	16 39 18.6	-0.8
DAWY				IAmb	IAmb	16 39 37.5	
	comp=Z,15nm,1.2s						
DAWY	Dawson	94.46	26	P	P	16 39 19.4	0.0
	baz=270						
I29M	Ogilvie Camp,	94.90	25	P	P	16 39 21.4	+0.1
	baz=272						
BRTR	Keskin Array B	96.07	309	LR	LR	17 29 45.1	
	comp=Z,132nm,20.1s,baz=121,slow=40						
INK	Inuvik	96.60	22	P	P	16 39 26.4	-2.5
INK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
INK	Inuvik	96.60	22	P	P	16 39 26.4	-2.5
INK				IAmb	IAmb	16 39 36.4	
	comp=Z,9.4nm,1.2s						
INK	Inuvik	96.60	22	P	P	16 39 29.2	+0.3
	baz=276						
ARCES	ARCESS Array B	98.09	340	P	P	16 39 34.5	-1.2
	comp=Z,4.6nm,0.8s,baz=90,slow=3.8,SNR=5.7						
ARCES				LR	LR	17 28 14.7	
	comp=Z,153nm,21.8s,baz=90,slow=38						
AKASG	Malin Array Be	98.76	321	PP	PP	16 43 38.1	-2.5
	comp=Z,0.2nm,0.4s,baz=58,slow=9.2,SNR=1.3						
BOSA	Boshof	99.59	240	LR	LR	17 20 10.4	
	comp=Z,197nm,19.4s,baz=108,slow=33						
YKA	Yellowknife Ar	105.68	25	PKiKP	PKiKP	16 44 22.5	+0.1
	comp=Z,0.5nm,0.9s,baz=336,slow=2.2,SNR=3.0						
CLL	Collm	108.68	323	eSKSac	SKSac	16 50 54.0	-5.6
CLL				eSdif	Sdif	16 52 27.0	-1.4
CLL				e		16 53 13.0	
CLL				eSSS	SSS	17 04 07.0	
CLL				eSSSS		17 07 24.0	
CLL				e		17 10 24.0	
GERES	GERESS Array B	108.98	321	PKiKP	PKiKP	16 44 28.7	-0.4
	comp=Z,0.4nm,0.5s,baz=59,slow=1.8,SNR=7.8						
PDAR	Pinedale Array	115.84	44	PKP	PKPdf	16 44 43.6	+1.1
	comp=Z,0.7nm,0.8s,baz=230,slow=7.0,SNR=3.4						
ESDC	Sonseca Array	124.12	316	PKP	PKPdf	16 44 57.8	-0.6
	comp=Z,0.4nm,0.3s,baz=43,slow=2.5,SNR=3.0						
TORD	Torodi Ar. Bea	126.53	283	PKP	PKPdf	16 45 03.4	-0.1
	comp=Z,4.4nm,0.7s,baz=57,slow=1.8,SNR=22						
PLCA	Paso Flores	132.35	161	PKP	PKiKP	16 45 15.3	+0.2
	comp=Z,3.0nm,0.9s,baz=267,slow=3.7,SNR=3.6						
PLCA				SKP		16 48 52.0	
	comp=Z,7.0nm,1.1s,baz=182,slow=1.4,SNR=4.3						
PLCA	Paso Flores	132.35	161		PKPdf	16 45 13.8	-0.2
KIC	Kosan Boka	133.21	275	ePKIKP	PKiKP	16 45 17.3	-0.2
	comp=Z,7.2nm,0.7s						
KIC	Kosan Boka	133.21	275	ePKP1	SKPdf	16 48 49.7	+1.5
	comp=Z,8.6nm,0.9s						
DBIC	Dimbokro	133.32	275	PKP	PKPdf	16 45 16.6	+0.2
	comp=Z,1.9nm,0.5s,baz=155,slow=4.0,SNR=4.6						
DBIC				SKPbc	SKPab	16 48 42.8	-0.6
	comp=Z,2.4nm,0.7s,baz=153,slow=6.8,SNR=3.6						
TIC	Toumodi	133.49	275	ePKIKP	PKiKP	16 45 17.8	-0.3
TIC	Toumodi	133.49	275	ePKP1	SKPdf	16 48 50.5	+1.8
LIC	Lamto	133.50	275	ePKIKP	PKPdf	16 45 17.4	+0.6
	comp=Z,26nm,1.1s						
LIC	Lamto	133.50	275	ePKP1	SKPdf	16 48 49.3	+0.6
	comp=Z,30nm,1.2s						
BO02	Sierra Bellavi	137.54	156		PKPdf	16 45 20.8	-3.1
GO03	Copiap	143.95	151	PKPdf	PKPbc	16 45 33.6	+0.1
PLTB	Pedras Altas	144.51	177	PKPdf	PKPab	16 45 34.7	-0.1
PB04	IPOC Station P	148.29	146	PKPbc	PKPdf	16 45 44.9	+1.6
PB06	IPOC Station P	148.31	147	PKPbc	PKPdf	16 45 44.9	+1.6
ITAB	Concordia	149.07	179	PKPbc	PKPbc	16 45 47.3	-1.0
CPUP	Villa Florida	149.47	170	PKPbc	PKPbc	16 45 49.2	-0.1
	comp=Z,11nm,0.8s,baz=196,slow=2.1,SNR=17						
CPUP	Villa Florida	149.47	170	PKHKP	PKPpre	16 45 47.3	
CPUP	Villa Florida	149.47	170		PKPbc	16 45 47.3	-2.0
PB11	IPOC Station P	150.59	144		PKPdf	16 45 48.7	+1.7

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*IDC **28** 16:34:54.2±5.9, 5°.26S×152°.32E, h42^{km}±53^{km}, mb3.5/8, mb1 3.8/9, mb1mx3.5/41, mbtmp3.8/9, ML1.3/1, Error ellipse: s-maj=54.8km s-min=30.8km az=128.0*

ISC 28 16:34:55.2±1.5**, 5°.3S**±0°.2×**152°.3E**±0°.3**, h50**^{km}**, n10, σ1^{s}.04**/11**, mb3.8**/8**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.54	231	P	Pn	16 36 29.6	+0.7
	0.4nm,0.3s,baz=41,slow=8.7,SNR=4.0						
PMG				S	Sn	16 37 40.7	-1.5
	1.0nm,0.3s,baz=155,slow=19,SNR=4.9						
WRA	Warramunga Arr	22.76	229	P	P	16 39 54.0	+0.5
	2.5nm,0.8s,baz=56,slow=10,SNR=5.3						
ASAR	Alice Springs	25.46	222	P	P	16 40 18.8	0.0
	0.8nm,0.8s,baz=57,slow=9.8,SNR=4.7						
FITZ	Fitzroy Crossi	28.99	242	P	P	16 40 51.4	+1.0
	1.6nm,0.6s,baz=80,slow=12,SNR=1.3						
CMAR	Chiang Mai Arr	57.61	296	P	P	16 44 40.5	-0.1
	0.3nm,0.7s,baz=108,slow=6.0,SNR=2.9						
SONM	Songino Array	66.44	328	P	P	16 45 40.2	+0.7
	0.3nm,0.6s,baz=135,slow=5.3,SNR=2.5						
ILAR	Eielson Array	82.78	22	P	P	16 47 12.3	-1.3
	0.9nm,0.6s,baz=243,slow=5.5,SNR=14						
BVAR	Borovoye Array	89.30	323	P	P	16 47 45.5	-0.5
	0.5nm,0.6s,baz=232,slow=7.3,SNR=4.0						
YKA	Yellowknife Ar	96.07	28	P	P	16 48 18.0	+0.9
	0.2nm,0.6s,baz=272,slow=4.6,SNR=4.2						
TORD	Torodi Ar. Bea	149.96	287	PKPbc	PKPbc	16 54 40.1	-1.0
	0.3nm,0.4s,baz=46,slow=3.6,SNR=2.6						

WEL 28 16:56:43.5±0.2**, 40°S**±1°×**17°6E**±°**, h21**^{km}±2^{km}**, M3.2**/42**, ML3.5**/42**, MLv3.2**/42**, Error ellipse: s-maj=0.0km s-min=0.0km az=91.6, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNHZ	Pukenui	0.10	299	P	Pb	16 56 48.8	+1.2
PNHZ				S	Sb	16 56 53.3	+2.8
WPHZ	Waipukurau	0.14	136	P	Pb	16 56 49.6	0.0
WPHZ				S	Sb	16 56 54.4	+0.4
TSZ	Takapari Road	0.29	250	P	Pb	16 56 50.8	+0.8
TSZ				S	Sb	16 56 56.4	+1.7
KRHZ	Kereru	0.32	8	P	Pb	16 56 51.1	+0.6
KRHZ				S	Sb	16 56 57.1	+1.8
DVHZ	Dannevirke	0.35	198	P	Pb	16 56 51.9	+0.9
DVHZ				S	Sn	16 56 58.1	-1.7
PRHZ	Porangahau	0.39	141	P	Pn	16 56 53.0	-0.9
PRHZ				S	Sn	16 57 00.6	-0.1
PXZ	Pawanui	0.43	99	P	Pn	16 56 53.3	-1.0
PXZ				S	Sn	16 57 01.8	+0.2
KAHZ	Kahuranaki	0.47	69	P	Pn	16 56 54.0	-0.9
KAHZ				S	Sn	16 57 02.9	+0.3
BHHZ	Black Hill Sta	0.51	338	P	Pb	16 56 54.0	+0.2
BHHZ				S	Sb	16 57 01.4	+0.7
ANWZ	Angora Road	0.51	166	P	Pn	16 56 54.8	-0.7
ANWZ				S	Sn	16 57 04.1	+0.4
KWHZ	Kaweka Forest	0.54	9	P	Pb	16 56 54.6	+0.1
KWHZ				S	Sb	16 57 03.0	+1.2
MCHZ	McNeill Hill	0.60	30	P	Pn	16 56 56.2	-0.5
MCHZ				S	Sn	16 57 05.6	-0.1
POWZ	Post Office Ro	0.60	224	P	Pn	16 56 56.1	-0.6
PRWZ	Pori Road	0.65	204	P	Pn	16 56 56.9	-0.5
PRWZ				S	Sn	16 57 07.1	+0.1
CKHZ	Cape Kidnapper	0.66	63	P	Pb	16 56 56.9	+0.5
CKHZ				S	Sn	16 57 06.8	-0.6
MOVZ	Moawhango	0.70	322	P	Pb	16 56 57.2	+0.1
MOVZ				S	Sb	16 57 06.7	+0.3
BFZ	Birch Farm	0.72	184	P	Pb	16 56 57.5	+0.1
BFZ				S	Sn	16 57 08.4	-0.4
OHWZ	Ohakea	0.80	252	P	Pn	16 56 60.0	+0.4
OHWZ				S	Sn	16 57 11.7	+0.9
BKZ	Black Stump Fm	0.81	10	P	Pb	16 56 58.7	-0.1
BKZ				S	Sb	16 57 10.0	+0.7
WNVZ	Wahianoa	0.84	319	P	Pn	16 56 60.0	-0.2
TUVZ	Tukino	0.86	324	P	Pn	16 57 00.4	-0.1
TUVZ				S	Sn	16 57 12.7	+0.2
MTVZ	Mangateitei	0.87	311	P	Pn	16 57 00.6	+0.1
MTVZ				S	Sn	16 57 12.8	+0.3
ARHZ	Aropaoanui	0.88	37	P	Pb	16 56 59.8	-0.1
TIWZ	Tintock	0.88	202	P	Pb	16 56 60.0	0.0
WHVZ	Whangaehu Hut	0.88	320	P	Pn	16 57 00.7	-0.1
WHVZ				S	Sn	16 57 12.4	-0.6
TRVZ	Turoa	0.89	318	P	Pn	16 57 00.8	-0.1
TRVZ				S	Sn	16 57 12.8	-0.4
MRZ	Mangatainoka R	0.90	219	P	Pb	16 56 59.9	-0.4
MRZ				S	Sn	16 57 12.6	-0.6
DRZ	Dome Shelter	0.90	320	P	Pn	16 57 01.1	0.0
DRZ				S	Sn	16 57 13.2	-0.4
FWVZ	Far West T-bar	0.92	320	P	Pn	16 57 01.2	-0.1
FWVZ				S	Sb	16 57 13.1	+0.5
SNVZ	South Ngauruho	0.93	326	P	Pn	16 57 01.5	0.0
SNVZ				S	Sn	16 57 14.0	-0.2
OTVZ	Oturere	0.94	328	P	Pn	16 57 01.6	0.0
OTVZ				S	Sn	16 57 14.3	-0.2
NMHZ	Naumai	0.94	24	P	Pb	16 57 01.2	0.0
ETVZ	East Tongariro	0.95	330	P	Pn	16 57 01.7	0.0
ETVZ				S	Sn	16 57 14.4	-0.2
CPWZ	Castlepoint	0.95	185	P	Pb	16 57 01.0	-0.2
NGZ	Ngauruhoe	0.96	325	P	Pn	16 57 01.9	+0.1
TMVZ	Te Maari	0.97	331	P	Pn	16 57 01.9	0.0
TMVZ				S	Sn	16 57 14.7	-0.4
NNVZ	North Ngauruho	0.99	327	P	Pn	16 57 02.4	+0.2
NNVZ				S	Sn	16 57 15.6	-0.1
NTVZ	North Tongarir	0.99	330	P	Pn	16 57 02.3	0.0
NTVZ				S	Sn	16 57 15.5	-0.2
PKVZ	Pokaka	1.00	312	P	Pn	16 57 02.5	+0.1
KRVZ	Karewarewa	1.01	329	P	Pn	16 57 02.6	+0.1
WTVZ	West Tongariro	1.01	326	P	Pn	16 57 02.6	+0.1
WAZ	Wanganui	1.04	281	P	Pn	16 57 03.7	+0.9
WAZ				S	Sn	16 57 17.9	+1.1
RITZ	Rihia Road	1.04	340	P	Pn	16 57 03.0	+0.1
HATZ	Hinemaiaia	1.08	351	P	Pb	16 57 03.5	0.0
HATZ				S	Sb	16 57 17.0	-0.2
KATZ	Kakaramea	1.09	334	P	Pb	16 57 03.8	0.0
HOWZ	Holdsworth Sta	1.11	213	P	Pn	16 57 02.6	-1.2
HOWZ				S	Sb	16 57 16.7	-1.4
TWVZ	Taurewa	1.12	322	P	Pn	16 57 03.9	0.0
TWVZ				S	Sn	16 57 19.2	+0.5
MRHZ	Matea Rd	1.13	4	P	Pn	16 57 03.9	-0.2
MRHZ				S	Sn	16 57 19.7	+0.7
WHHZ	Waihua	1.14	39	P	Pn	16 57 03.8	-0.3
RATZ	Rangitukua	1.17	339	P	Pn	16 57 04.7	0.0
MTHZ	Maungataniwha	1.18	20	P	Pn	16 57 03.8	-1.0
MTHZ				S	Sn	16 57 20.4	+0.1
TMWZ	Te Maipa	1.19	196	P	Pn	16 57 03.5	-1.4
RAHZ	Arahi	1.20	30	P	Pn	16 57 04.0	-1.1
RAHZ				S	Sb	16 57 20.6	-0.1
OGWZ	Otaki Gorge	1.22	225	P	Pn	16 57 04.3	-1.0
WHTZ	Whakaora	1.32	348	P	Pb	16 57 08.4	+0.8
MTW	Mount Morrison	1.34	207	P	Pn	16 57 05.2	-1.8
KIW	Kapiti Island	1.40	230	P	Pn	16 57 06.8	-0.9
ALRZ	Allen Road	1.40	1	P	Pn	16 57 07.3	-0.4
SNGZ	Shannon Statio	1.42	34	P	Pn	16 57 06.8	-1.3
VRZ	Vera Road	1.46	304	P	Pn	16 57 08.8	+0.2
CAW	Cannon Point	1.49	219	P	Pn	16 57 07.3	-1.6
TRWZ	Traveller	1.51	198	P	Pn	16 57 07.5	-1.8
KUTZ	Kaahu Road	1.52	345	P	Pn	16 57 09.0	-0.4
MUGZ	Murupara	1.52	14	P	Pn	16 57 08.5	-1.0
LREZ	Lake Rotokare	1.56	288	P	Pb	16 57 11.3	-0.2
PAWZ	Paruwai Farm	1.57	205	P	Pn	16 57 08.1	-2.1
MSWZ	Moikau Station	1.66	209	P	Pn	16 57 09.0	-2.4
RIGZ	Rimuhau	1.69	42	P	Pn	16 57 09.9	-1.8
RAGZ	Rawiri	1.70	31	P	Pn	16 57 10.4	-1.6
TARZ	Mount Tarawera	1.73	5	P	Pn	16 57 12.0	-0.4
TLZ	Tolley Road	1.74	340	P	Pn	16 57 11.9	-0.5
WEL	Wellington	1.77	221	P	Pn	16 57 10.8	-2.0
PREZ	Palmer Road	1.77	290	P	Pb	16 57 14.6	-0.7
MHEZ	Mangahewa	1.77	299	P	Pn	16 57 14.1	+1.2
PLWZ	Palliser	1.79	206	P	Pn	16 57 10.7	-2.5
DREZ	Durham Road	1.81	295	P	Pb	16 57 15.0	-0.8
URZ	Urewera	1.81	20	P	Pn	16 57 11.5	-1.8
HIZ	Hauiti	1.84	322	P	Pn	16 57 13.4	-0.3
NEZ	North Egmont	1.85	291	P	Pb	16 57 15.7	-0.9
MWZ	Matawai	1.88	31	P	Pn	16 57 12.5	-1.9
KHEZ	Kahui Hut	1.90	290	P	Pb	16 57 16.5	-0.9
TKGZ	Te Karaka	1.93	39	P	Pn	16 57 13.1	-1.9
PKE	Pukeiti	1.95	292	P	Pb	16 57 17.2	-1.1
NMEZ	Namu Road	1.96	285	P	Pb	16 57 17.2	-1.2
TCW	Tory Channel	1.99	231	P	Pn	16 57 14.1	-1.8
DUWZ	D’Urville Isla	2.01	245	P	Pn	16 57 16.2	0.0
NBEZ	Newall Road No	2.01	289	P	Pb	16 57 18.3	-1.0
TWGZ	Tauwhareparae	2.21	37	P	Pn	16 57 16.8	-2.1
RUGZ	Raukumara Rang	2.26	29	P	Pn	16 57 17.6	-2.1
TUWZ	Tuamarina	2.32	230	P	Pn	16 57 18.1	-2.3
HAZ	Te Kaha	2.48	28	P	Pn	16 57 19.9	-2.7
NNZ	Nelson	2.56	240	P	Pn	16 57 22.7	-1.0
QRZ	Quartz Range	3.02	252	P	Pn	16 57 28.3	-1.6
THZ	Tophouse	3.15	234	P	Pn	16 57 29.4	-2.4
DSZ	Denniston Nort	3.85	241	P	Pn	16 57 39.9	-1.6
GVZ	Greta Valley S	3.88	218	P	Pn	16 57 39.8	-2.1
CTZ	Chatham Island	6.49	128	P	Pn	16 58 16.5	-1.2

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*IDC **28** 17:10:49.6±7.1, 30°.66S×178°.81W, h0^{km}, mb3.6/2, mb1 3.9/2, mb1mx3.6/23, mbtmp3.6/2, MS3.4/2, Ms1 3.3/2, ms1mx2.8/29, Error ellipse: s-maj=292.1km s-min=58.7km az=155.0*

ISC 28 17:10:53.2±1.3**, 31°.8S**±0°.1×**178°.6W**±0°.3**, h35**^{km}**, n20, σ1^{s}.33**/30**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.58	13	P	Pn	17 11 33.3	+0.9
GLKZ				S	Sn	17 12 01.2	-1.4
RIZ	Raoul Island	2.60	12	S	Sn	17 12 03.5	+0.5
MXZ	Matakaoa Point	6.31	203	P	Pn	17 12 24.6	+0.9
MXZ				S	Sn	17 13 33.1	-1.4
WMGZ	Waiomatatini S	6.51	202	P	Pn	17 12 28.1	+1.7
HAZ	Te Kaha	6.67	206	P	Pn	17 12 28.0	-0.6
HAZ				S	Sn	17 13 44.6	+1.3
PUZ	Puketiti	6.79	202	P	Pn	17 12 31.3	+1.0
PUZ				S	Sn	17 13 44.3	-2.0
RUGZ	Raukumara Rang	6.89	206	P	Pn	17 12 31.6	-0.2
RUGZ				S	Sn	17 13 49.5	+0.5
TWGZ	Tauwhareparae	6.97	203	P	Pn	17 12 34.2	+1.4
TWGZ				S	Sn	17 13 49.3	-1.7
OPRZ	Ohinepanea	7.25	212	P	Pn	17 12 38.9	+2.3
TKGZ	Te Karaka	7.25	203	P	Pn	17 12 37.6	+0.9
TKGZ				S	Sn	17 13 56.1	-1.7
MWZ	Matawai	7.27	205	P	Pn	17 12 38.1	+1.1
MWZ				S	Sn	17 13 57.0	-1.3
URZ	Urewera	7.36	208	P	Pn	17 12 38.9	+0.7
URZ				S	Sn	17 14 00.4	0.0
MUGZ	Murupara	7.69	208	P	Pn	17 12 43.9	+1.3
MUGZ				S	Sn	17 14 07.5	-0.9
RTZ	Ruatahuna	7.72	207	P	Pn	17 12 43.3	+0.1
RTZ				S	Sn	17 14 06.3	-3.1
SNGZ	Shannon Statio	7.74	204	P	Pn	17 12 44.1	+0.8
SNGZ				S	Sn	17 14 09.6	-0.1
MSVF	Nonsavu	14.33	347	LR	LR	17 17 57.7	
	comp=Z,153nm,18.4s,baz=297,slow=32						
STKA	Stephens Creek	33.72	259	LR	LR	17 31 08.6	
	comp=Z,51nm,18.0s,baz=183,slow=36						
ASAR	Alice Springs	42.57	269	P	P	17 18 45.5	-0.5
	0.4nm,0.6s,baz=107,slow=7.2,SNR=13						
WRA	Warramunga Arr	43.69	274	P	P	17 18 54.9	0.0
	0.4nm,0.3s,baz=112,slow=7.9,SNR=2.4						
FINES	FINESS Array B	146.27	339	PKPbc	PKPdf	17 30 27.0	-1.1
	4.3nm,1.0s,baz=76,slow=5.9,SNR=5.8						

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*TUL **28** 17:12:29.7±1.3, 36°.53N±0°.03×99°.00W±0°.04, h8^{km}±6^{km}, ML2.7, mb_Lg2.8/6(NEIC), Error ellipse: s-maj=5.4km s-min=3.3km az=51.0*

NEIC 28 17:12:30.8±1.6**, 36°.54N**±0°.03×**98°.95W**±0°.04**, h16**^{km}±3^{km}**, Error ellipse: s-maj=5.5km s-min=4.1km az=121.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.17	195	Pg	Pg	17 12 33.2	-1.9
OK035	E0210 Rd and N	0.25	49	Pg	Pg	17 12 35.7	-0.7
OK035				Sg	Sg	17 12 40.3	0.0
OK032	Salt Plains WL	0.65	66	Pg	Pg	17 12 42.0	-1.5
OK032				Sg	Sg	17 12 52.2	+0.1
CROK	Carrier	0.78	92	Pg	Pg	17 12 45.1	-0.9
KAN14	Manchester OK	0.89	62	Sg	Sg	17 12 59.8	-0.1
KAN10	Anthony SW Sta	0.90	49	Sg	Sb	17 12 59.6	-0.1
KAN10				IAmb_Lg		17 12 59.7	
	comp=Z,50nm,0.8s						
GC02	Grant County #	0.93	70	Pg	Pb	17 12 47.8	-0.7
KAN05	Bluff City Nor	1.03	56	IAmb_Lg		17 13 06.0	
	comp=Z,439nm,1.0s						
KAN13	South Haven SW	1.27	68	Pn	Pn	17 12 53.6	-0.3
BCOK	Bluff Creek, N	1.40	129	Pn	Pn	17 12 56.0	+0.3
BCOK					Sb	17 13 14.9	+0.8
BLOK	Blackwell	1.41	81		Pn	17 12 55.7	-0.2
OK025	Westminster Rd	1.62	126	Pn	Pn	17 12 58.8	+0.1
FNO	Franklin	1.79	135		Pn	17 13 02.1	+1.0
WMOK	Wichita Mounta	1.81	176	Pn	Pn	17 13 01.5	+0.2
QUOK	Quay	1.84	101	Pn	Pn	17 13 02.3	+0.4
OK034	N. Norfolk Rd.	1.88	106	Pn	Pb	17 13 03.7	-1.1
R32A	Long Quarter,	1.89	6		Pb	17 13 04.2	-0.7
T35A	Sooner Cattle	1.99	78	Pn	Pn	17 13 03.8	-0.1
W35A	Tecumseh	2.18	129	Pn	Pn	17 13 06.0	-0.5
CBKS	Cedar Bluff	2.35	345	Pn	Pn	17 13 08.3	-0.6
X37A	Clayton	3.51	123	Pn	Pn	17 13 24.7	+0.1
KSCO	Kaye Shedlock’	3.82	311	IAmb_Lg		17 14 34.7	
	comp=Z,7.6nm,0.7s						
PBMO	Poplar Bluff	6.85	85	IAmb_Lg		17 16 03.6	
	comp=Z,14nm,0.8s						

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*TAP **28** 17:23:09.9, 24°.60N×122°.43E, h14^{km}, ML2.6, D*

*JMA **28** 17:23:09.9±0.1, 24°.58N×122°.42E, h12^{km}, M2.3*

ISC 28 17:23:09.9±1.0**, 24°.59N**±0°.03×**122°.44E**±0°.02**, h14**^{km}±8^{km}**, n59, σ0^{s}.64**/106**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.48	107	P	Pg	17 23 19.3	-0.2
JYNG				S	Sb	17 23 27.4	+0.3
TWC	Suao	0.54	272	P	Pg	17 23 19.7	-0.8
	baz=272						
TWC				S	Sb	17 23 28.2	-0.5
	baz=272						
YOJ	Yonaguni jima	0.54	104	P	Pg	17 23 21.0	+0.5
	baz=104						
YOJ				S	Sb	17 23 28.8	+0.1
	baz=104						
YOJ	Yonaguni jima	0.54	104	P	Pg	17 23 20.7	+0.2
YOJ				S	Sb	17 23 29.0	+0.3
TWB1	Santiao Chiao	0.58	316	i P	Pb	17 23 22.0	+0.2
	baz=316						
TWB1				i S	Sg	17 23 29.2	+0.1
	baz=316						
NTC	Toucheng	0.61	296	i P	Pg	17 23 21.7	-0.2
	baz=295						
NTC				S	Sb	17 23 31.3	+0.4
	baz=295						
EWUT	Wuta	0.62	257	P	Pg	17 23 21.8	-0.2
	baz=265						
EWUT				S	Sb	17 23 31.0	0.0
	baz=265						
ILA	Ilan	0.65	286	P	Pb	17 23 22.8	-0.3
	baz=276						
ILA				eS	Sb	17 23 32.3	+0.3
	baz=276						
ENA	Nanau	0.66	256	i P	Pg	17 23 22.4	-0.4
	baz=264						
ENA				i S	Sb	17 23 31.6	-0.4
	baz=264						
NDS	Dongshan	0.66	274	P	Pg	17 23 22.3	-0.5
	baz=273						
NDS				S	Sb	17 23 32.0	-0.1
	baz=273						
TIPB	Shuangxi	0.67	304	i P	Pb	17 23 23.2	-0.2
	baz=298						
TWE	Neicheng	0.71	281	i P	Pg	17 23 23.3	-0.5
	baz=273						
TWE				i S	Sb	17 23 34.1	+0.4
	baz=273						
NWF	Wu-fen Shan	0.76	309	i P	Pn	17 23 25.8	-0.6
	baz=325						
NWF				i S	Sn	17 23 36.8	-0.9
	baz=325						
ENTT	Nioudou	0.80	274	i P	Pb	17 23 25.4	-0.1
	baz=273						
ENTT				i S	Sb	17 23 36.1	0.0
	baz=273						
NDT	Datong Townshi	0.84	271	i P	Pb	17 23 26.3	0.0
	baz=271						
NDT				i S	Sb	17 23 37.9	+0.4
	baz=271						
ETL	Fush Village	0.86	240	eP	Pn	17 23 27.4	-0.2
	baz=248						
ETL				eS	Sn	17 23 39.0	-0.9
	baz=248						
TWA	Mucha	0.87	297	P	Pg	17 23 26.5	-0.2
	baz=297						
TWA				eS	Sb	17 23 38.9	+0.7
	baz=297						
NWLT	Wulai	0.87	282	i P	Pg	17 23 26.4	-0.4
	baz=283						
NWLT				i S	Sb	17 23 38.6	+0.3
	baz=283						
NACB	Ninganchiao	0.87	242	P	Pg	17 23 26.2	-0.7
	baz=248						
NACB				S	Sb	17 23 38.2	-0.2
	baz=248						
NHDH	Xindian Distri	0.91	294	i P	Pn	17 23 28.1	-0.2
	baz=295						
NHDH				i S	Sb	17 23 40.1	+0.7
	baz=295						
TWD	Chiawan	0.92	237	P	Pb	17 23 27.8	+0.1
	baz=236						
TWD				eS	Sb	17 23 40.4	+0.7
	baz=236						
ETLH	Xiulin Townshi	0.95	246	P	Pg	17 23 27.6	-0.7
	baz=226						
ETLH				S	Sn	17 23 41.7	-0.6

	baz=226						
YM01	**YM01**	**0.96**	**305**	P	**Pn**	**17 23 28.9**	**-0.1**
	baz=305						
YM01				S	**Sn**	**17 23 41.7**	**-0.8**
	baz=305						
YHNB	**Yeheng**	**0.97**	**275**	P	**Pg**	**17 23 28.6**	**-0.1**
	baz=275						
YHNB				S	**Sn**	**17 23 42.1**	**-0.7**
	baz=275						
NNSB	**Datong**	**0.97**	**261**	P	**Pb**	**17 23 28.2**	**-0.4**
	baz=261						
NNSB				S	**Sn**	**17 23 42.2**	**-0.7**
	baz=261						
NNS	**Nan Shan**	**0.98**	**261**	*i* P	**Pg**	**17 23 28.8**	**-0.1**
	baz=261						
NNS				S	**Sg**	**17 23 40.9**	**-0.8**
	baz=261						
NSK	**Sanguang**	**0.99**	**275**	*i* P	**Pg**	**17 23 29.0**	**0.0**
	baz=276						
NSK				*i* S	**Sb**	**17 23 42.2**	**+0.5**
	baz=276						
TWY	**Chenhua**	**1.02**	**312**	*e*P	**Pg**	**17 23 29.6**	**-0.1**
	baz=312						
TWY				*e*S	**Sn**	**17 23 44.4**	**+0.5**
	baz=312						
TWS1	**Kuangyinshan**	**1.06**	**299**	*i* P	**Pn**	**17 23 31.2**	**+0.9**
	baz=300						
FUSS	**Fushou**	**1.14**	**253**	*i* P	**Pg**	**17 23 31.9**	**-0.1**
	baz=253						
FUSS				S	**Sg**	**17 23 46.7**	**-0.2**
	baz=253						
WHF	**Hehuan Shan**	**1.16**	**248**	*i* P	**Pb**	**17 23 31.8**	**-0.1**
	baz=248						
WHF				S	**Sn**	**17 23 47.7**	**-0.1**
	baz=248						
ESL	**Shilin**	**1.20**	**230**	*i* P	**Pn**	**17 23 31.9**	**-0.4**
	baz=229						
ESL				*e*S	**Sg**	**17 23 49.4**	**+0.7**
	baz=229						
IRIF	**Iriomote-Funau**	**1.21**	**102**	P	**Pn**	**17 23 32.7**	**+0.4**
IRIF				*e*S	**Sn**	**17 23 48.7**	**+0.3**
TDCB	**Techi**	**1.21**	**254**	P	**Pg**	**17 23 34.1**	**+0.8**
	baz=238						
TDCB				S	**Sn**	**17 23 51.2**	**+2.4**
	baz=238						
CHGB	**Renai**	**1.27**	**246**	P	**Pg**	**17 23 34.1**	**-0.3**
	baz=227						
CHGB				S	**Sg**	**17 23 51.5**	**+0.6**
	baz=227						
LIOB	**Emei**	**1.29**	**273**	P	**Pg**	**17 23 35.0**	**+0.1**
	baz=274						
LIOB				S	**Sg**	**17 23 52.1**	**+0.4**
	baz=274						
NSTT	**Nanjuang**	**1.31**	**272**	*i* P	**Pg**	**17 23 35.7**	**+0.6**
	baz=273						
NSTT				S	**Sg**	**17 23 53.2**	**+1.0**
	baz=273						
OWD	**Renai**	**1.31**	**241**	P	**Pb**	**17 23 34.5**	**+0.1**
	baz=224						
HATJ	**Hateruma jima**	**1.36**	**113**	P	**Pn**	**17 23 34.8**	**+0.4**
HATJ				*e*S	**Sb**	**17 23 52.8**	**+0.5**
WHP	**Taichung City**	**1.40**	**257**	*i* P	**Pg**	**17 23 36.3**	**-0.4**
	baz=266						
WHP				S	**Sg**	**17 23 56.0**	**+1.1**
	baz=266						
HGSD	**Ruisui**	**1.43**	**220**	P	**Pn**	**17 23 35.1**	**-0.4**
	baz=205						
VWDT	**VWDT**	**1.45**	**235**	P	**Pb**	**17 23 36.3**	**-0.4**
	baz=235						
VWDT				S	**Sb**	**17 23 55.4**	**+0.5**
	baz=235						
JKRS	**Kuro-shima**	**1.48**	**103**	P	**Pn**	**17 23 35.5**	**-0.5**
JKRS				S	**Sn**	**17 23 54.7**	**-0.4**
EHY	**Hungye**	**1.48**	**224**	P	**Pn**	**17 23 35.6**	**-0.6**
	baz=222						
WCS	**Beigang Elemen**	**1.49**	**249**	P	**Pb**	**17 23 37.7**	**+0.4**
	baz=236						
JIJ	**Ishigaki jima**	**1.57**	**98**	P	**Pn**	**17 23 36.7**	**-0.6**
JIJ				*e*S	**Sn**	**17 23 55.4**	**-2.1**
SMLT	**Sun Moon Lake**	**1.57**	**244**	*i* P	**Pb**	**17 23 38.6**	**-0.2**
	baz=227						
SMLT				S	**Sg**	**17 23 59.4**	**-1.2**
	baz=227						
SSLB	**Suanglung**	**1.57**	**240**	P	**Pb**	**17 23 38.4**	**-0.4**
	baz=224						
SSLB				S	**Sb**	**17 23 58.7**	**+0.2**
	baz=224						
YULB	**Yu-li**	**1.58**	**221**	P	**Pn**	**17 23 37.0**	**-0.5**
	baz=220						
YULB				S	**Sn**	**17 23 57.2**	**-0.6**
	baz=220						
EYUL	**Yuli**	**1.61**	**220**	*i* P	**Pn**	**17 23 38.0**	**+0.1**
	baz=237						
JISG	**Ishigakijimahi**	**1.71**	**90**	P	**Pn**	**17 23 38.6**	**-0.6**
JISG				S	**Sn**	**17 24 00.9**	**+0.1**
FULB	**Fuli**	**1.74**	**217**	P	**Pn**	**17 23 39.3**	**-0.4**
	baz=200						
FULB				S	**Sn**	**17 24 02.4**	**+0.8**
	baz=200						
ALS	**Alishan**	**1.84**	**235**	P	**Pb**	**17 23 43.1**	**-0.4**
	baz=218						
ALS				*e*S	**Sb**	**17 24 07.2**	**+0.7**
	baz=218						
ELDTW	**Lidau**	**1.91**	**223**	P	**Pn**	**17 23 41.8**	**-0.3**
	baz=221						
STYH	**Taoyuan**	**2.08**	**227**	P	**Pn**	**17 23 45.8**	**+1.5**
	baz=213						
CHN4	**Tsaushan**	**2.09**	**234**	P	**Pb**	**17 23 46.7**	**-0.9**
	baz=216						
CHN4				*e*S	**Sb**	**17 24 12.6**	**-0.8**
	baz=216						
TPUB	**Ta-pu**	**2.09**	**233**	P	**Pn**	**17 23 46.1**	**+1.5**
	baz=216						
WTP	**Ta-pu**	**2.14**	**232**	P	**Pb**	**17 23 48.6**	**+0.1**
	baz=216						
MASBT	**Mashibuluo**	**2.57**	**220**	*e*P	**Pn**	**17 23 52.6**	**+1.4**
	baz=207						

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*NEIC **28** 17:31:15.8±2.1, 1.°82N±0.°08×127.°27E±0.°05, h126^{km}±6^{km}, mb4.6/36, Error ellipse: s-maj=11.3km s-min=6.6km az=167.0*

*IDC **28** 17:31:15.5±2.2, 1.°78N×127.°42E, h128^{km}±20^{km}, mb4.1/9, mb1 4.2/11, mb1mx3.7/50, mbtmp4.5/11, MS3.6/1, Ms1 3.6/1, ms1mx2.6/28, Error ellipse: s-maj=26.7km s-min=9.2km az=85.0*

*DJA **28** 17:31:15.5±1.7, 2°N±8°×12°7E±1°2, h116^{km}±15^{km}, M5.0/7, MLv5.0/7*

ISC 28 17:31:14.2±0.4**, 1.°81N**±0.°05×**127.°37E**±0.°07**, h112**^{km}**, n100,** σ**1.^{s}41**/107**, mb4.5**/38**, 2C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.03**	**180**	P	**Pn**	**17 31 39.5**	**+3.5**
TNTI	**Ternate**	**1.03**	**180**		**Pn**	**17 31 38.9**	**+2.9**
TNTI	**Ternate**	**1.03**	**180**	P	**Pn**	**17 31 39.4**	**+3.5**
LBMI	**Labuha**	**2.44**	**177**	P	**Pn**	**17 31 56.4**	**+3.4**
SGSI	**Sangihe**	**2.62**	**315**	P	**Pn**	**17 31 56.1**	**+0.8**
SGSI				S	**Sn**	**17 32 27.3**	**+0.4**
KMSI	**Cibinong**	**3.61**	**250**	P	**Pn**	**17 32 10.8**	**+2.4**
SANI	**Sanana**	**4.08**	**200**	P	**Pn**	**17 32 15.5**	**+0.7**
SANI	**Sanana**	**4.08**	**200**	P	**Pn**	**17 32 15.4**	**+0.7**
GTOI	**Gorontalo**	**4.51**	**255**	P	**Pn**	**17 32 23.3**	**+2.7**
LUWI	**Luwuk**	**5.40**	**238**	Pn	**Pn**	**17 32 32.9**	**+0.4**
LUWI	**Luwuk**	**5.40**	**238**	P	**Pn**	**17 32 34.4**	**+1.8**
KCP	**Kidapawan**	**5.64**	**336**	⇑*e*P	**Pn**	**17 32 37.1**	**+1.2**
KCP				*i* S	**Sn**	**17 33 42.0**	**+2.5**
TOLI2	**Tolitoli**	**6.62**	**264**	Pn	**Pn**	**17 32 49.7**	**+0.6**
TOLI2	**Tolitoli**	**6.62**	**264**	P	**Pn**	**17 32 50.0**	**+0.9**
FAKI	**Fak Fak**	**6.77**	**134**	P	**Pn**	**17 32 55.0**	**+3.9**
MYLDM	**Lahad Datu**	**9.47**	**291**	Pn	**Pn**	**17 33 31.3**	**+3.6**
KAPI	**Kappang**	**10.20**	**228**	P	**Pn**	**17 33 40.0**	**+2.5**
	11nm,0.3s,baz=47,slow=11,SNR=63						
KAPI				S	**Sn**	**17 35 28.5**	**-1.5**
	8.7nm,0.3s,baz=85,slow=22,SNR=15						
KAPI	**Kappang**	**10.20**	**228**		**Pn**	**17 33 38.4**	**+0.8**
SAUI	**Saumlaki**	**10.49**	**158**	Pn	**Pn**	**17 33 43.8**	**+2.3**
KKM	**Kota Kinabalu**	**11.90**	**291**	Pn	**Pn**	**17 33 58.0**	**-2.5**
KKM	**Kota Kinabalu**	**11.90**	**291**	P	**Pn**	**17 34 03.6**	**+3.1**
SOEI	**Soe**	**11.90**	**195**	P	**Pn**	**17 34 01.4**	**+0.9**
DRS	**Darwin Rock St**	**14.58**	**166**	P	**Pn**	**17 34 36.2**	**+1.0**
	25nm,0.8s						
MTN	**Manton Dam**	**15.03**	**166**		**Pn**	**17 34 41.1**	**+0.2**
MTN				IAmb	IAmb	17 34 49.9	
	comp=Z,54nm,1.4s						
MTN	**Manton Dam**	**15.03**	**166**	P	**Pn**	**17 34 41.2**	**+0.3**
	comp=Z,26nm,1.1s						
KDU	**Kakadu**	**15.27**	**161**	P	**P**	**17 34 46.4**	**+0.2**
	comp=Z,48nm,0.8s						
KNRA	**Kununurra**	**17.43**	**176**		**P**	**17 35 10.1**	**0.0**
KNRA				IAmb	IAmb	17 35 38.9	
	comp=Z,33nm,1.2s						
KNRA	**Kununurra**	**17.43**	**176**	P	**Pn**	**17 35 10.2**	**-0.3**
	comp=Z,35nm,1.6s						
FITZ	**Fitzroy Crossi**	**19.86**	**185**	P	**P**	**17 35 37.0**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=6.3,slow=13,SNR=8.6						
COEN	**Coen**	**22.16**	**135**	P	**P**	**17 36 01.1**	**-0.1**
COEN				IAmb	IAmb	17 36 04.2	
	comp=Z,38nm,1.2s						
YULB	**Yu-li**	**22.25**	**345**	P	**P**	**17 36 00.2**	**-1.8**
YULB				IAmb	IAmb	17 36 04.4	
	comp=Z,18nm,0.8s						
TPUB	**Ta-pu**	**22.34**	**344**	P	**P**	**17 36 01.4**	**-1.6**
TPUB				IAmb	IAmb	17 36 14.0	
	comp=Z,41nm,1.0s						
TPUB	**Ta-pu**	**22.34**	**344**	P	**P**	**17 36 01.9**	**-1.1**
WB0	**Warramunga Arr**	**22.53**	**163**	P	**P**	**17 36 04.2**	**-0.8**
WB0				IAmb	IAmb	17 36 05.1	
	comp=Z,30nm,0.8s						
WRAB	**Tennant Creek**	**22.67**	**163**	P	**P**	**17 36 05.9**	**-0.4**
WRAB	**Tennant Creek**	**22.67**	**163**	P	**P**	**17 36 05.9**	**-0.5**
WRA	**Warramunga Arr**	**22.68**	**163**	P	**P**	**17 36 05.7**	**-0.8**
	comp=Z,34nm,0.6s,baz=344,slow=11,SNR=207						
WRA				S	**S**	**17 40 04.8**	**-1.7**
	comp=Z,3.1nm,1.0s,baz=341,slow=18,SNR=4.8						
WRA	**Warramunga Arr**	**22.68**	**163**	P	**P**	**17 36 04.2**	**-2.2**
WB2	**Warramunga Arr**	**22.68**	**163**	P	**P**	**17 36 06.0**	**-0.4**
SSLB	**Suanglung**	**22.71**	**345**	P	**P**	**17 36 05.4**	**-1.4**
SSLB				IAmb	IAmb	17 36 09.6	
	comp=Z,24nm,0.8s						
SSLB	**Suanglung**	**22.71**	**345**	P	**P**	**17 36 07.0**	**+0.2**
WR0	**Warramunga Arr**	**22.75**	**162**	P	**P**	**17 36 06.4**	**-0.8**
WR0				IAmb	IAmb	17 36 07.3	
	comp=Z,28nm,0.7s						
YHNB	**Yeheng**	**23.45**	**346**	P	**P**	**17 36 14.2**	**+0.4**
YHNB	**Yeheng**	**23.45**	**346**	P	**P**	**17 36 14.4**	**+0.6**
QIS	**Mount Isa**	**25.26**	**152**	P	**P**	**17 36 30.0**	**-0.2**
	comp=Z,14nm,0.8s						
MTSU	**Mount Surprise**	**25.91**	**141**	P	**P**	**17 36 38.1**	**+2.0**
	comp=Z,14nm,0.8s						
AS31	**Alice Springs**	**26.11**	**166**	P	**P**	**17 36 37.2**	**-0.7**
ASAR	**Alice Springs**	**26.11**	**166**	P	**P**	**17 36 37.1**	**-0.8**
	comp=Z,2.6nm,0.5s,baz=342,slow=7.4,SNR=108						
ASAR				PcP	**PcP**	**17 40 02.0**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=356,slow=1.6,SNR=5.1						
ASAR				S	**S**	**17 41 00.3**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=348,slow=20,SNR=2.3						
ASAR				ScP	**ScP**	**17 43 29.0**	**-3.4**
	comp=Z,0.3nm,0.7s,baz=341,slow=2.7,SNR=2.7						
BKNI	**Bangkinang**	**26.37**	**267**	P	**P**	**17 36 39.6**	**-0.7**
BKNI	**Bangkinang**	**26.37**	**267**	P	**P**	**17 36 40.1**	**-0.2**
WRKA	**Warakurna**	**26.70**	**178**	P	**P**	**17 36 42.4**	**-0.8**
	comp=Z,7.7nm,1.3s						
CTAO	**Charters Tower**	**28.58**	**141**	P	**P**	**17 37 00.7**	**+0.7**
CTAO				IAmb	IAmb	17 37 10.8	
	comp=Z,15nm,1.2s						
CTAO	**Charters Tower**	**28.58**	**141**	P	**P**	**17 36 58.8**	**-1.1**
MEEK	**Meekatharra**	**29.52**	**196**	P	**P**	**17 37 08.0**	**-0.2**
	comp=Z,14nm,2.8s						
OOD	**Oodnadatta**	**30.50**	**165**	P	**P**	**17 37 15.9**	**-0.9**
	comp=Z,11nm,1.1s						
INKA	**Innaminka**	**32.08**	**157**	P	**P**	**17 37 30.6**	**-0.1**
	comp=Z,33nm,0.6s						
FORT	**Forrest**	**32.42**	**179**	P	**P**	**17 37 33.0**	**-0.7**
FORT				IAmb	IAmb	17 37 33.9	
	comp=Z,13nm,0.8s						
FORT	**Forrest**	**32.42**	**179**	P	**P**	**17 37 32.9**	**-0.7**
	comp=Z,22nm,0.8s						
MULG	**Mulgathing**	**32.55**	**169**	P	**P**	**17 37 34.2**	**-0.6**
	comp=Z,8.6nm,1.3s						
QLP	**Quilpie**	**32.59**	**151**	P	**P**	**17 37 33.4**	**-1.8**
	comp=Z,14nm,2.9s						
LCRK	**Leigh Creek**	**33.71**	**163**	P	**P**	**17 37 44.3**	**-0.5**
	comp=Z,28nm,1.0s						
BLDU	**Ballidu**	**33.81**	**197**	P	**P**	**17 37 46.1**	**+0.3**
	comp=Z,9.0nm,1.8s						
INU	**Inuyama**	**34.55**	**14**	P	**P**	**17 37 52.0**	**-0.1**
BBOO	**Buckleboo**	**35.40**	**167**	P	**P**	**17 37 58.8**	**-0.6**
BBOO				IAmb	IAmb	17 37 59.5	
	comp=Z,17nm,1.1s						
BBOO	**Buckleboo**	**35.40**	**167**	P	**P**	**17 37 58.2**	**-1.2**
	comp=Z,16nm,1.9s						
KSRS	**Korea Array**	**35.47**	**1**	P	**P**	**17 38 00.2**	**+0.3**
	comp=Z,2.8nm,0.6s,baz=176,slow=9.3,SNR=13						
NWAO	**Narrogin (SRO)**	**35.86**	**195**	P	**P**	**17 38 02.8**	**-0.5**
MAJO	**Matsushiro**	**35.98**	**15**	P	**P**	**17 38 02.8**	**-1.6**
MAJO				IAmb	IAmb	17 38 06.7	
	comp=Z,19nm,1.4s						
MJAR	**Matsushiro Arr**	**35.98**	**15**	P	**P**	**17 38 02.7**	**-1.7**
	comp=Z,3.5nm,0.6s,baz=193,slow=8.8,SNR=10						
MJAR	**Matsushiro Arr**	**35.98**	**15**	P	**P**	**17 38 03.0**	**-1.4**
MJB9	**Matsu-Tunnel**	**35.98**	**15**	P	**P**	**17 38 02.6**	**-1.8**
MJB9				IAmb	IAmb	17 38 07.2	
	comp=Z,18nm,1.4s						
STKA	**Stephens Creek**	**36.12**	**159**	P	**P**	**17 38 05.0**	**-0.5**
	comp=Z,14nm,0.5s,baz=332,slow=8.3,SNR=52						
STKA	**Stephens Creek**	**36.12**	**159**	P	**P**	**17 38 05.4**	**-0.2**
STKA				IAmb	IAmb	17 38 06.2	
	comp=Z,5.1nm,0.9s						
STKA	**Stephens Creek**	**36.12**	**159**	P	**P**	**17 38 04.8**	**-0.8**
	comp=Z,6.0nm,0.8s						
XAN	**Xi'an**	**36.41**	**334**	⇑P	**P**	**17 38 08.8**	**+0.7**
XAN				pmax	pmax		
	comp=Z,16nm,0.9s						
HTT	**Hallett**	**36.71**	**164**	P	**P**	**17 38 10.9**	**+0.3**
CMSA	**Cobar Meteorol**	**37.45**	**154**	P	**P**	**17 38 17.3**	**+0.4**
	comp=Z,8.8nm,2.7s						
JMM	**Marumori**	**37.94**	**17**	P	**P**	**17 38 21.9**	**+1.0**
ARMA	**Armidale**	**39.52**	**146**	P	**P**	**17 38 35.5**	**+1.2**
LZH	**Lanzhou**	**40.47**	**330**	*e*P	**P**	**17 38 43.8**	**+1.6**
LZH				pP	pP	17 38 47.8	-19
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
CAN	**Canberra**	**42.12**	**153**	P	**P**	**17 38 56.8**	**+1.3**
CAN				IAmb	IAmb	17 38 57.3	
	comp=Z,14nm,1.1s						
TOO	**Toolangi**	**42.63**	**159**	P	**P**	**17 39 00.8**	**+1.1**
GTA	**Gaotai**	**45.06**	**330**	*e*P	**P**	**17 39 19.5**	**+0.3**
GTA				pP	pP	17 39 30.8	-14
GTA				sP	pwP	17 39 36.5	-11
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ULN	**Ulaanbaatar**	**49.13**	**342**	P	**P**	**17 39 50.6**	**-0.1**
SONM	**Songino Array**	**49.31**	**341**	P	**P**	**17 39 51.8**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=156,slow=8.4,SNR=11						
SONM	**Songino Array**	**49.31**	**341**	P	**P**	**17 39 51.9**	**-0.1**
PEA0B	**Petropavlovsk-**	**56.96**	**21**	P	**P**	**17 40 47.1**	**-0.7**
PETK	**Petropavlovsk-**	**56.96**	**21**	P	**P**	**17 40 48.1**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=211,slow=2.6,SNR=6.6						
PETK	**Petropavlovsk-**	**56.96**	**21**	P	**P**	**17 40 47.4**	**-0.5**
MK31	**Makanchi Array**	**59.49**	**326**	P	**P**	**17 41 05.8**	**+0.2**
MK31				IAmb	IAmb	17 41 06.6	
	comp=Z,3.4nm,0.8s						
MKAR	**Makanchi Array**	**59.49**	**326**	P	**P**	**17 41 05.8**	**+0.2**
	comp=Z,3.1nm,0.4s,baz=117,slow=7.9,SNR=78						
MKAR				LR	LR	18 07 49.9	
	comp=Z,45nm,18.4s,baz=354,slow=37						
MKAR	**Makanchi Array**	**59.49**	**326**	P	**P**	**17 41 05.6**	**0.0**
MAKZ	**Makanchi**	**59.67**	**325**	P	**P**	**17 41 07.0**	**+0.2**
MAKZ				IAmb	IAmb	17 41 10.8	
	comp=Z,14nm,1.5s						
THZ	**Tophouse**	**59.80**	**142**	P	**P**	**17 41 07.4**	**-0.5**
KURK	**Kurchatov**	**63.69**	**328**	P	**P**	**17 41 33.4**	**-0.3**
KURK				IAmb	IAmb	17 41 34.2	
	comp=Z,5.1nm,0.9s						
BRVK	**Borovoye**	**69.34**	**327**	P	**P**	**17 42 09.3**	**-0.3**
TIXI	**Tiksi**	**69.74**	**1**	P	**P**	**17 42 10.7**	**-1.0**
ABKAR	**Akbulak array**	**74.03**	**321**	P	**P**	**17 42 36.9**	**-0.9**
VNDA	**Vanda**	**81.46**	**173**	P	**P**	**17 43 17.4**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=325,slow=6.2,SNR=10						
VNDA	**Vanda**	**81.46**	**173**	P	**P**	**17 43 17.6**	**-0.9**

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*THE **28** 17:34:21.6, 38.°53N×20.°54E, h13^{km}, ML2.6/6, Error ellipse: s-maj=1.0km s-min=0.3km az=289.0*

*ATH **28** 17:34:21.6, 38.°53N×20.°56E, h14^{km}±1^{km}, ML2.2/7, Error ellipse: s-maj=2.0km s-min=0.6km az=284.0*

ISC 28 17:34:20.1±0.9**, 38.°54N**±0.°02×**20.°50E**±0.°04**, h19**^{km}±2^{km}**, n39,** σ**1.^{s}32**/68**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.09**	**150**	P	**Pg**	**17 34 24.4**	**+0.6**
FSK				S	**Sg**	**17 34 26.1**	**-0.1**
FSK				AML	AML	17 34 26.5	
	comp=N,3552µm,0.2s						
FSK				AML	AML	17 34 26.7	
	comp=E,10821µm,0.2s						
EVGI	**Lefkada island**	**0.14**	**56**	P	**Pg**	**17 34 24.8**	**+0.5**
EVGI				S	**Sg**	**17 34 27.3**	**+0.1**
EVGI	**Lefkada island**	**0.14**	**56**	P	**Pg**	**17 34 24.8**	**+0.5**
EVGI				S	**Sg**	**17 34 27.3**	**+0.1**
DRAG	**Dragano-Lefkad**	**0.15**	**21**	P	**Pg**	**17 34 25.1**	**+0.6**
DRAG				S	**Sg**	**17 34 28.4**	**+1.0**
	comp=E,17µm,0.3s						
DRAG	**Dragano-Lefkad**	**0.15**	**21**	P	**Pg**	**17 34 25.3**	**+0.8**
DRAG				S	**Sg**	**17 34 28.4**	**+1.0**
NYDR	**Nydri-Lefkada**	**0.23**	**41**	P	**Pg**	**17 34 26.1**	**+0.6**
NYDR				S	**Sg**	**17 34 29.6**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.23**	**41**	P	**Pg**	**17 34 26.2**	**+0.6**
NYDR				S	**Sg**	**17 34 29.6**	**+0.3**
LKD2	**Lefkada island**	**0.28**	**26**	P	**Pg**	**17 34 27.1**	**+0.8**
LKD2				S	**Sg**	**17 34 31.0**	**+0.5**
	comp=E,872nm,0.3s						
LKD2	**Lefkada island**	**0.28**	**26**	P	**Pg**	**17 34 27.2**	**+0.9**
LKD2				S	**Sg**	**17 34 30.9**	**+0.3**
LKD2				AML	AML	17 34 32.3	
	comp=E,1797µm,0.2s						
LKD2				AML	AML	17 34 32.6	
	comp=N,1691µm,0.3s						
KEF4	**Livadi, Kephal**	**0.29**	**192**	P	**Pb**	**17 34 27.4**	**+0.8**
KEF4	**Livadi, Kephal**	**0.29**	**192**	P	**Pb**	**17 34 27.4**	**+0.8**
TSLK	**Tsoukalades, L**	**0.31**	**23**	P	**Pb**	**17 34 27.9**	**+0.9**
TSLK				S	**Sb**	**17 34 32.7**	**+1.0**
	comp=N,868nm,0.5s						
TSLK	**Tsoukalades, L**	**0.31**	**23**	P	**Pb**	**17 34 27.9**	**+0.9**
TSLK				S	**Sb**	**17 34 32.2**	**+0.6**
DMLN	**Damoulianata-K**	**0.32**	**199**	P	**Pb**	**17 34 28.0**	**+0.8**
DMLN				S	**Sb**	**17 34 33.4**	**+1.4**
	comp=N,2µm,0.2s						
DMLN	**Damoulianata-K**	**0.32**	**199**	P	**Pb**	**17 34 28.1**	**+0.8**
DMLN				S	**Sb**	**17 34 33.4**	**+1.4**
LXRA	**Lixouri, Kepha**	**0.34**	**189**	P	**Pb**	**17 34 28.4**	**+0.8**
LXRA				S	**Sb**	**17 34 33.6**	**+0.8**
KEF3	**Kipouria, Keph**	**0.36**	**200**	P	**Pb**	**17 34 28.1**	**+0.2**
KEF3				S	**Sb**	**17 34 33.8**	**+0.6**
	comp=N,3µm,0.2s						
KEF3	**Kipouria, Keph**	**0.36**	**200**	P	**Pb**	**17 34 28.2**	**+0.2**
KEF3				S	**Sb**	**17 34 33.8**	**+0.6**
VLS	**Valsamata**	**0.37**	**169**	P	**Pb**	**17 34 28.5**	**+0.4**
VLS				S	**Sb**	**17 34 34.2**	**+0.6**
	comp=N,2µm,0.1s						
VLS	**Valsamata**	**0.37**	**169**	P	**Pb**	**17 34 28.5**	**+0.4**
VLS				S	**Sb**	**17 34 34.2**	**+0.6**
VLS				AML	AML	17 34 34.5	
	comp=N,2856µm,0.1s						
VLS				AML	AML	17 34 34.7	
	comp=E,3248µm,0.2s						
PSDA	**Pessada-Kefalo**	**0.43**	**172**	P	**Pb**	**17 34 29.6**	**+0.5**
PSDA				S	**Sb**	**17 34 36.2**	**+0.9**
PSDA	**Pessada-Kefalo**	**0.43**	**172**	P	**Pb**	**17 34 29.6**	**+0.5**
PSDA				S	**Sb**	**17 34 36.2**	**+0.9**
RLS	**Riolos of Patr**	**0.90**	**122**	P	**Pn**	**17 34 37.9**	**+0.2**
RLS	**Riolos of Patr**	**0.90**	**122**	P	**Pn**	**17 34 37.9**	**+0.2**
RLS				AML	AML	17 34 53.4	
	comp=E,176µm,0.2s						
RLS				AML	AML	17 34 53.6	
	comp=N,280µm,0.3s						
IGT	**Igoumenitsa**	**1.00**	**352**	P	**Pg**	**17 34 40.6**	**+1.1**
IGT	**Igoumenitsa**	**1.00**	**352**	P	**Pg**	**17 34 40.6**	**+1.1**
IGT				AML	AML	17 35 00.6	
	comp=N,99µm,0.2s						
IGT				AML	AML	17 35 01.7	
	comp=E,126µm,0.4s						
EVR	**Evrytania**	**1.09**	**69**	P	**Pg**	**17 34 41.2**	**0.0**
EVR	**Evrytania**	**1.09**	**69**	P	**Pg**	**17 34 41.2**	**0.0**
EVR				AML	AML	17 35 04.2	
	comp=E,120µm,0.4s						
EVR				AML	AML	17 35 04.3	
	comp=N,92µm,0.7s						
DRO	**Drossia**	**1.12**	**121**	P	**Pg**	**17 34 41.8**	**+0.1**
JAN	**Janina**	**1.15**	**14**	P	**Pg**	**17 34 42.8**	**+0.5**
JAN				AML	AML	17 35 03.4	
	comp=E,271µm,0.6s						
JAN				AML	AML	17 35 04.0	
	comp=N,232µm,0.3s						
STON	**Ston**	**4.82**	**335**	*e*Pn	**Pn**	**17 35 31.8**	**+0.2**
STON				Sn	**Sn**	**17 36 24.2**	**-2.8**
LSTV	**Lastovo**	**5.04**	**328**	*e*Pn	**Pn**	**17 35 34.9**	**+0.3**
LSTV				Sn	**Sn**	**17 36 29.0**	**-3.3**
MAKA	**Makarska**	**5.43**	**332**	*e*Pn	**Pn**	**17 35 40.6**	**+0.6**
MAKA				Sn	**Sn**	**17 36 38.2**	**-3.6**
HVAR	**Hvar**	**5.56**	**328**	*e*Pn	**Pn**	**17 35 42.1**	**+0.4**
HVAR				Sn	**Sn**	**17 36 42.0**	**-3.1**
RICI	**Ricice**	**5.57**	**334**	*e*Pn	**Pn**	**17 35 42.7**	**+0.8**
RICI				Sn	**Sn**	**17 36 42.5**	**-2.8**
KIJV	**Kijevo**	**6.27**	**332**	*e*Pn	**Pn**	**17 35 52.4**	**+0.8**
KIJV				Sn	**Sn**	**17 36 60.0**	**-2.7**
ZIRJ	**Zirje**	**6.29**	**326**	*e*Pn	**Pn**	**17 35 51.9**	**+0.1**
ZIRJ				Sn	**Sn**	**17 36 59.6**	**-3.5**
MORI	**Morici**	**6.43**	**327**	*e*Pn	**Pn**	**17 35 55.0**	**+1.3**
MORI				Sn	**Sn**	**17 37 04.0**	**-2.7**
DUGI	**Dugi Otok**	**6.82**	**325**	*e*Pn	**Pn**	**17 35 60.0**	**+0.9**
DUGI				Sn	**Sn**	**17 37 13.4**	**-2.7**

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*KISR **28** 17:39:39.6±0.6, 32.°65N×49.°72E, h195^{km}±55^{km}, ML3.9*

*TEH **28** 17:39:40.0, 32.°68N×49.°88E, h5^{km}, ML3.2*

ISC 28 17:39:42.1±0.9**, 32.°70N**±0.°03×**49.°83E**±0.°03**, h11**^{km}**, n43,** σ**1.^{s}60**/46**, 1D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPIR	**Pirpir**	**0.90**	**91**	*e*Pg	**Pg**	**17 39 57.1**	**-2.3**
IPIR				*e*		17 40 13.8	
	comp=Z,12µm,0.4s						
SHK1	**Shahrekord**	**0.97**	**112**	*e*Pg	**Pg**	**17 39 58.2**	**-2.5**
KHMZ	**Khomeyn**	**1.04**	**6**	*e*Pn	**Pg**	**17 39 59.6**	**-2.6**
AMIS	**Naft Sefid**	**1.13**	**204**	*e*Pg	**Pb**	**17 40 02.7**	**-0.9**
AMIS				*e*Sg	**Sn**	**17 40 21.7**	**+2.4**
BMDN	**Meydan**	**1.28**	**319**	*e*		17 40 33.7	
	comp=Z,3µm,0.4s						
BMDN				*e*Pn	**Pn**	**17 40 05.6**	**-0.5**
IBRJ	**Brojen**	**1.45**	**123**	*e*		17 40 48.9	
	comp=Z,3µm,0.7s						
IBRJ				*e*Pg	**Pb**	**17 40 08.8**	**-0.4**
IKLH	**Kolahrood**	**1.60**	**67**	*e*Pn	**Pn**	**17 40 10.0**	**-0.5**
IKLH				*e*		17 40 34.4	
	comp=Z,3µm,0.6s						
QAMS	**Qamsar**	**1.68**	**51**	*e*	**Sg**	**17 40 37.3**	**+1.3**
	comp=Z,6µm,0.5s						
IDOB	**Doab**	**1.76**	**309**	*e*Pn	**Pn**	**17 40 13.3**	**+0.6**
ASAO	**Ashtian**	**1.85**	**5**	*e*Pn	**Pb**	**17 40 15.3**	**-0.8**
IKFM	**Kafar-mosalman**	**1.85**	**297**	*e*Pn	**Pb**	**17 40 15.1**	**-0.9**
IKFM				*e*		17 40 53.8	
	comp=Z,5µm,0.6s						
IGAR	**Gharneh**	**1.89**	**98**	*e*Pn	**Pn**	**17 40 14.9**	**+0.3**
IZEF	**Zefreh**	**2.12**	**84**	*e*Pn	**Pn**	**17 40 18.7**	**+1.0**
IZEF				*e*		17 40 56.5	
	comp=Z,991nm,0.4s						
DHL1	**Dehloran**	**2.15**	**270**	*e*Pn	**Pn**	**17 40 19.0**	**+1.2**
HAGD	**Aghdareh**	**2.19**	**345**	*e*Pn	**Pn**	**17 40 20.3**	**+1.6**
HAGD				*e*		17 40 59.1	
	comp=Z,1µm,0.6s						
KLNJ	**Kolanjah**	**2.26**	**138**	*e*Pn	**Pn**	**17 40 20.7**	**+1.0**
KLNJ				*e*		17 41 05.8	
	comp=Z,1µm,0.7s						
KRSH	**Karshahi**	**2.31**	**56**	*e*Pn	**Pb**	**17 40 22.8**	**-1.1**
KRSH				*e*		17 41 01.2	
	comp=Z,2µm,1.1s						
IRAM	**Ramesheh**	**2.34**	**112**	*e*Pn	**Pn**	**17 40 21.4**	**+0.7**
IQOM	**Qom**	**2.38**	**26**	*e*Pn	**Pn**	**17 40 22.4**	**+1.2**
IQOM				*e*		17 40 27.2	
	comp=Z,1µm,0.4s						
IBZA	**Bozab**	**2.41**	**318**	*e*Pn	**Pn**	**17 40 23.5**	**+1.8**
IBZA				*e*		17 40 26.8	
	comp=Z,755nm,0.5s						
NASN	**Na'in**	**2.52**	**87**	*e*Pn	**Pn**	**17 40 25.2**	**+2.0**
IALM	**Almabolaq**	**2.56**	**328**	*e*Pn	**Pn**	**17 40 25.3**	**+1.5**
ISFB	**Sefidab**	**2.60**	**50**	*e*Pn	**Pn**	**17 40 26.0**	**+1.8**
ISFB				*e*		17 41 05.2	
	comp=Z,645nm,0.6s						
IRAZ	**Razeghan**	**2.70**	**2**	*e*Pn	**Pb**	**17 40 28.5**	**-2.1**

IRAZ				*e*		17 41 26.5	
	comp=Z,1μm,0.8s						
QABG	**Abgarm-Qazvin**	**3.01**	**356**	*e*Pn	**Pn**	**17 40 32.0**	**+2.1**
IMHD	**Mahdasht**	**3.06**	**13**	*e*Pn	**Pn**	**17 40 32.5**	**+2.0**
SNGE	**Sanandaj**	**3.16**	**320**	*e*Pn	**Pn**	**17 40 32.4**	**+0.5**
IGHG	**Ghaleghazi**	**3.17**	**302**	*e*Pn	**Pn**	**17 40 33.7**	**+1.6**
IGHG				*e*		17 41 47.1	
	comp=Z,1μm,0.8s						
ILIN	**Lien**	**3.25**	**314**	*e*Pn	**Pn**	**17 40 35.2**	**+1.9**
ILIN				*e*		17 41 51.5	
	comp=Z,504nm,0.9s						
ANAR	**Anarak**	**3.32**	**80**	*e*Pn	**Pn**	**17 40 35.3**	**+1.2**
ISAD	**Sadrabad**	**3.36**	**102**	*e*Pn	**Pn**	**17 40 36.1**	**+1.3**
IDHR	**Dehrash**	**3.49**	**306**	*e*Pn	**Pn**	**17 40 37.9**	**+1.4**
IDHR				*e*		17 40 54.4	
	comp=Z,563nm,0.7s						
MIB	**Mutribah**	**3.59**	**217**	*e*P	**Pn**	**17 40 38.4**	**+0.8**
UMR	**Umm Al-Rimmam**	**3.62**	**211**	*e*P	**Pn**	**17 40 38.6**	**+0.5**
UMR				*e*S	**Sn**	**17 41 23.1**	**+2.3**
UMR				IAML		17 41 27.8	
	comp=Z,119nm,0.5s						
ILAS	**Lasjerd**	**3.73**	**43**	*e*Pn	**Pn**	**17 40 42.5**	**+2.6**
QALM	**Alamut, Qazvin**	**3.79**	**10**	*e*Pn	**Pn**	**17 40 42.8**	**+2.2**
IFIR	**Firoozkooh**	**3.81**	**39**	*e*Pn	**Pn**	**17 40 43.1**	**+2.2**
RST	**Umm Al-Ruwaisa**	**4.01**	**218**	*e*P	**Pn**	**17 40 43.5**	**+0.1**
YZKH	**Yazd**	**4.04**	**93**	*e*Pn	**Pn**	**17 40 45.5**	**+1.6**
ISHM	**Shahmirzad**	**4.23**	**42**	*e*Pn	**Pn**	**17 40 48.4**	**+1.7**
ISHM				*e*		17 41 03.2	
	comp=Z,593nm,0.4s						
RDF	**Al-Radifah**	**4.24**	**208**⇓	*e*P	**Pn**	**17 40 47.5**	**+0.9**
RDF				*e*S	**Sn**	**17 41 37.7**	**+1.7**
RDF				IAML		17 41 42.8	
	comp=Z,135nm,0.4s						
QRN	**Al-Qurain**	**4.27**	**203**	*e*P	**Pn**	**17 40 47.2**	**+0.2**
IANJ	**Anjilo**	**4.38**	**50**	*e*Pn	**Pn**	**17 40 50.3**	**+1.6**

IDC 28 17:50:12.7±1.4**, 2°.27N×125°.08E, h0^{km}, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/40**, mbtmp3.6**/4**, Error ellipse: s-maj=73.7km s-min=23.7km az=58.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.87**	**158**	P	P	17 55 28.1	-0.1
	0.3nm,0.3s,baz=336,slow=10,SNR=8.7						
PMG	**Port Moresby**	**24.87**	**118**	P	P	17 55 37.1	-0.3
	2.5nm,0.3s,baz=315,slow=8.6,SNR=2.3						
ASAR	**Alice Springs**	**27.17**	**162**	P	P	17 55 58.7	+0.5
	0.5nm,1.0s,baz=343,slow=11,SNR=2.6						
MKAR	**Makanchi Array**	**57.83**	**327**	P	P	18 00 06.0	-0.1
	0.2nm,0.4s,baz=119,slow=7.2,SNR=10.0						

*IDC **28** 17:57:09.8±1.9, 43°.65N×105°.44W, h0^{km}, mb4.0/4, mb1 3.8/8, mb1mx3.6/39, mbtmp3.6/8, ML3.3/4, Error ellipse: s-maj=53.3km s-min=8.5km az=150.0*

*NEIC **28** 17:57:11.5±0.8, 43°.72N±0°.05×105°.29W±0°.05, h0^{km}±2^{km}, ML3.3/44, Error ellipse: s-maj=9.0km s-min=5.2km az=159.0*

ISC 28 17:57:10.4±0.8**, 43°.74N**±0°.06×**105°.29W**±0°.07**, h0^{km}, n47, σ0^{s}92**/46**, mb3.9**/4**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.98**	**67**	Pg	**Pb**	**17 57 30.6**	**+0.2**
K22A	**Casper**	**1.42**	**220**		**Pn**	**17 57 36.1**	**-1.5**
K22A				IAML		17 57 58.8	
	comp=E,370nm,0.7s						
K22A				IAML		17 58 00.9	
	comp=N,446nm,0.3s						
PHWY	**Pilot Hill**	**2.44**	**183**	Pn	**Pn**	**17 57 52.3**	**+0.5**
PHWY				IAML		17 58 27.5	
	comp=N,92nm,0.4s						
RWWY	**Rawlins**	**2.49**	**215**		**Pn**	**17 57 52.9**	**+0.4**
RWWY				IAML		17 58 30.5	
	comp=N,187nm,0.5s						
LAO	**LASA Array**	**3.02**	**348**		**Pn**	**17 58 00.2**	**+0.6**
LAO				IAML		17 58 52.8	
	comp=N,124nm,0.7s						
RLMT	**Red Lodge**	**3.17**	**297**	Pn	**Pn**	**17 58 02.8**	**+1.0**
RLMT				IAML		17 58 57.6	
	comp=N,57nm,0.6s						
RLMT				IAML		17 58 57.8	
	comp=N,50nm,0.4s						
PD31	**Pinedale Array**	**3.27**	**254**		**Pn**	**17 58 03.9**	**+0.7**
PDAR	**Pinedale Array**	**3.27**	**254**	Pn	**Pn**	**17 58 04.0**	**+0.9**
	comp=N,4.3nm,0.3s,baz=72,slow=15,SNR=71						
PDAR				Lg	Lg	17 58 47.2	
	comp=N,9.2nm,0.3s,baz=73,slow=34,SNR=6.0						
PDAR	**Pinedale Array**	**3.27**	**254**		**Pn**	**17 58 03.8**	**+0.7**
BW06	**Boulder Array**	**3.27**	**254**		**Pn**	**17 58 03.8**	**+0.7**
BW06				IAML		17 58 51.5	
	comp=N,61nm,0.7s						
YMP	**Mirror Lake Pl**	**3.64**	**288**		**Pn**	**17 58 09.2**	**+0.9**
YMP				IAML		17 59 14.4	
	comp=E,75nm,0.5s						
YMP				IAML		17 59 19.2	
	comp=N,71nm,0.6s						
OGNE	**Ogallala**	**3.69**	**138**	Pn	**Pn**	**17 58 10.0**	**+1.2**
GCMT	**Greycliff**	**3.73**	**305**		**Pn**	**17 58 11.1**	**+1.6**
LKWY	**Lake**	**3.77**	**284**		**Pn**	**17 58 11.7**	**+1.6**
LKWY				IAML		17 59 18.9	
	comp=N,36nm,0.9s						
LOHW	**Long Hollow**	**3.86**	**270**		**Pn**	**17 58 12.4**	**+1.2**
H17A	**Grant Village**	**3.87**	**282**		**Pn**	**17 58 12.7**	**+1.3**
H17A				IAML		17 59 15.0	
	comp=N,30nm,0.6s						
FLWY	**Flagg Ranch**	**3.93**	**277**		**Pn**	**17 58 12.9**	**+0.8**
FLWY				IAML		17 59 23.5	
	comp=N,29nm,2.1s						
FLWY				IAML		17 59 30.0	
	comp=N,34nm,1.4s						
ISCO	**Idaho Springs**	**3.94**	**184**	Pn	**Pn**	**17 58 13.2**	**+0.7**
MOOW	**Moose Ponds**	**3.96**	**272**	Pn	**Pn**	**17 58 14.2**	**+1.6**
MOOW				IAML		18 00 23.0	
	comp=N,36nm,0.1s						
YPP	**Pitchstone Pla**	**4.02**	**279**		**Pn**	**17 58 14.4**	**+1.0**
REDW	**Red Top Meadow**	**4.06**	**267**		**Pn**	**17 58 15.2**	**+1.1**
REDW				IAML		17 59 25.3	
	comp=N,52nm,0.7s						
REDW				IAML		17 59 32.2	
	comp=N,42nm,1.1s						
O20A	**White River Ci**	**4.22**	**212**	Pn	**Pn**	**17 58 17.0**	**+0.8**
O20A				IAML		17 59 26.4	
	comp=N,37nm,0.8s						
O20A				IAML		17 59 28.0	
	comp=E,36nm,0.6s						
E28A	**Huff**	**4.31**	**47**		**Pn**	**17 58 18.6**	**+1.4**
E28A				IAML		17 59 42.4	
	comp=E,55nm,0.8s						
YHL	**Hebgen Lake**	**4.38**	**287**		**Pn**	**17 58 19.0**	**+0.6**
YHL				IAML		17 59 41.0	
	comp=E,31nm,1.3s						
YHL				IAML		17 59 52.8	
	comp=N,34nm,1.4s						
QLMT	**Earthquake Lak**	**4.54**	**286**		**Pn**	**17 58 20.2**	**-0.4**
DGMT	**Dagmar**	**4.79**	**9**		**Pn**	**17 58 25.2**	**+1.3**
BOZ	**Bozeman (W)**	**4.89**	**294**		**Pn**	**17 58 25.3**	**-0.1**
KSCO	**Kaye Shedlock'**	**5.13**	**156**		**Pn**	**17 58 27.9**	**-0.7**
HRY	**Holter Researc**	**5.50**	**305**		**Pn**	**17 58 34.5**	**+0.9**
P18A	**Preston Nutter**	**5.54**	**224**		**Pn**	**17 58 34.9**	**+0.5**
SPUT	**South Promonto**	**5.82**	**248**	Pn	**Pn**	**17 58 38.7**	**+0.5**
HVU	**Hansel Valley**	**5.85**	**253**		**Pn**	**17 58 39.2**	**+0.7**
SRU	**San Rafael Swe**	**6.07**	**222**		**Pn**	**17 58 42.1**	**+0.5**
TMUT	**Trail Mountain**	**6.28**	**227**		**Pn**	**17 58 45.4**	**+0.8**
ECSD	**EROS Data Cent**	**6.28**	**87**	Pn	**Pn**	**17 58 45.4**	**+1.0**
NLU	**North Lily Min**	**6.32**	**236**	Pn	**Pn**	**17 58 44.9**	**-0.2**
DUG	**Dugway, Tooele**	**6.63**	**240**	Pn	**Pn**	**17 58 50.0**	**+0.7**
MSU	**Marysvale**	**7.37**	**227**	Pn	**Pn**	**17 59 00.3**	**+0.8**
I10CA	**LAC DU BONNET**	**9.04**	**41**	*i*		18 51 10.0	
	baz=225,slow=339,SNR=17						
ULM	**Lac du Bonnet**	**9.15**	**41**	Pn	**Pn**	**17 59 23.1**	**-0.5**
	comp=N,1.9nm,0.3s,baz=236,slow=11,SNR=9.2						
ULM				Lg	Lg	18 01 56.9	
	comp=N,0.3nm,0.3s,baz=129,slow=22,SNR=2.1						
ULM	**Lac du Bonnet**	**9.15**	**41**	Pn	**Pn**	**17 59 23.4**	**-0.1**
NVAR	**Mina Array Bea**	**11.16**	**246**	Pn	**Pn**	**17 59 52.4**	**+1.0**
	comp=N,0.1nm,0.3s,baz=46,slow=10,SNR=1.5						
YKA	**Yellowknife Ar**	**19.56**	**347**	P	**Pn**	**18 01 40.4**	**-0.3**
	comp=N,0.0nm,0.3s,baz=161,slow=12,SNR=2.4						
ARCES	**ARCESS Array B**	**61.42**	**18**	P	**P**	**18 07 26.4**	**-1.5**
	comp=N,3.5nm,0.9s,baz=338,slow=6.1,SNR=7.5						
ZALV	**Zalesovo Beam**	**82.30**	**354**	P	**P**	**18 09 32.9**	**-0.6**
	comp=N,0.3nm,0.3s,baz=353,slow=6.0,SNR=2.2						
SONM	**Songino Array**	**84.63**	**339**	P	**P**	**18 09 46.0**	**+0.2**
	comp=N,0.3nm,0.4s,baz=5.4,slow=6.1,SNR=2.5						
MKAR	**Makanchi Array**	**89.60**	**355**	P	**P**	**18 10 10.3**	**+0.5**
	comp=N,0.8nm,1.0s,baz=354,slow=4.8,SNR=1.2						

*BJI **28** 18:35:25.0±0.0, 23°.86N×122°.54E, h10^{km}, mB4.6/17, mb4.3/34, ML4.4/2, Ms4.3/30, Ms7 4.0/27*

*JMA **28** 18:35:26.7±0.2, 23°.79N×122°.48E, h27^{km}±5^{km}, M4.5*

*NIED **28** 18:35:26.8, 23°.79N×122°.48E, h27^{km}, MW4.5, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}1.56; $M_{\theta\theta}$-3.83; $M_{\phi\phi}$2.26; $M_{r\theta}$4.55; $M_{\theta\phi}$0.91; $M_{\phi r}$2.54; Fault plane solution: $M_0$6.24000×10^{15} NP1:ϕ_s63.00000°, δ81.00000°, λ61.00000°. NP2:ϕ_s318.00000°, δ30.00000°, λ162.00000°.*

*TAP **28** 18:35:26.9, 23°.79N×122°.53E, h54^{km}±1^{km}, ML4.7, D*

*NEIC **28** 18:35:27.9±1.9, 23°.81N±0°.05×122°.52E±0°.07, h29^{km}±4^{km}, mb4.7/57, Error ellipse: s-maj=10.2km s-min=6.9km az=120.0*

*IDC **28** 18:35:29.0±0.5, 23°.99N×122°.64E, h37^{km}±3^{km}, mb4.1/18, mb1 4.3/19, mb1mx4.1/33, mbtmp4.3/19, ML4.0/1, MS3.8/12, Ms1 3.9/12, ms1mx3.5/38, Error ellipse: s-maj=17.1km s-min=11.0km az=63.0*

ISC 28 18:35:28.2±0.5**, 23°.78N**±0°.03×**122°.51E**±0°.02**, h34**^{km}±1^{km}**, n252, σ1^{s}20**/302**, mb4.5**/46**, MS4.0**/14**, 1C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.78**	**31**	P	**Pn**	**18 35 41.4**	**-1.4**
JYNG				S	**Sn**	**18 35 50.8**	**-2.4**
YOJ	**Yonaguni jima**	**0.82**	**34**	P	**Pn**	**18 35 42.2**	**-1.1**
	baz=32						
YOJ				*e*S	**Sn**	**18 35 53.3**	**-0.9**
	baz=32						
YOJ	**Yonaguni jima**	**0.82**	**34**	P	**Pn**	**18 35 42.1**	**-1.3**
YOJ				S	**Sn**	**18 35 51.9**	**-2.3**
YOJ	**Yonaguni jima**	**0.82**	**34**		**Pn**	**18 35 42.0**	**-1.3**
TEYL	**Yanliau Villag**	**0.84**	**276**	P	**Pn**	**18 35 42.6**	**-0.9**
	baz=272						
TEYL				S	**Sn**	**18 35 54.0**	**-0.7**
	baz=272						
HWA	**Hwalien**	**0.85**	**283**	*e*P	**Pn**	**18 35 42.6**	**-1.1**
	baz=276						
HWA				*e*S	**Sn**	**18 35 54.5**	**-0.5**
	baz=276						
TWD	**Chiawan**	**0.89**	**290**	P	**Pn**	**18 35 42.6**	**-1.6**
	baz=289						
TWD				S	**Sn**	**18 35 54.0**	**-1.9**
	baz=289						
TEGC	**Jichi Village**	**0.89**	**266**	P	**Pn**	**18 35 43.3**	**-1.0**
	baz=265						
TEGC				*e*S	**Sn**	**18 35 55.1**	**-0.8**
	baz=265						
ETL	**Fush Village**	**0.89**	**295**	P	**Pn**	**18 35 42.9**	**-1.5**
	baz=294						
ETL				*e*S	**Sn**	**18 35 55.4**	**-0.7**
	baz=294						
NACB	**Ninganchiao**	**0.92**	**295**	*e*P	**Pn**	**18 35 43.1**	**-1.6**
	baz=295						
NACB				*e*S	**Sn**	**18 35 56.0**	**-0.9**
	baz=295						
NACB	**Ninganchiao**	**0.92**	**295**		**Pn**	**18 35 43.2**	**-1.5**
EWUT	**Wuta**	**0.94**	**315**	P	**Pn**	**18 35 44.2**	**-0.8**
	baz=321						
ETM	**Tongmen**	**0.95**	**281**	*e*P	**Pn**	**18 35 43.5**	**-1.6**
	baz=278						
ETM				*e*S	**Sn**	**18 35 56.2**	**-1.2**
	baz=278						
ENA	**Nanau**	**0.95**	**313**	P	**Pn**	**18 35 44.3**	**-0.9**
	baz=320						
ESL	**Shilin**	**0.98**	**272**	*e*P	**Pn**	**18 35 43.8**	**-1.8**
	baz=265						
ESL				*e*S	**Sn**	**18 35 56.1**	**-2.3**
	baz=265						
TWC	**Suao**	**1.02**	**324**	*e*P	**Pn**	**18 35 45.2**	**-0.9**
	baz=323						
TWC				*e*S	**Sn**	**18 35 59.3**	**+0.1**
	baz=323						
ETLH	**Xiulin Townshi**	**1.03**	**295**	*e*P	**Pn**	**18 35 45.0**	**-1.4**
	baz=294						
ETLH				*e*S	**Sn**	**18 35 58.3**	**-1.4**
	baz=294						
HGSD	**Ruisui**	**1.03**	**254**	P	**Pn**	**18 35 45.0**	**-1.3**
	baz=254						
HGSD				*e*S	**Sn**	**18 35 58.4**	**-1.2**
	baz=254						
ECBN	**Changbin**	**1.07**	**245**	*e*P	**Pn**	**18 35 45.9**	**-1.0**
	baz=236						
NDS	**Dongshan**	**1.12**	**320**	*e*P	**Pn**	**18 35 47.2**	**-0.2**
	baz=319						
NDS				*e*S	**Sn**	**18 36 02.4**	**+0.8**
	baz=319						
EHY	**Hungye**	**1.12**	**256**	P	**Pn**	**18 35 46.4**	**-1.1**
	baz=256						
EHY				*e*S	**Sn**	**18 36 01.3**	**-0.5**
	baz=256						
EYUL	**Yuli**	**1.17**	**249**	*e*P	**Pn**	**18 35 47.4**	**-0.9**
	baz=249						
EYUL				*e*S	**Sn**	**18 36 02.4**	**-0.7**
	baz=249						
YULB	**Yu-li**	**1.18**	**251**	*e*P	**Pn**	**18 35 47.4**	**-0.9**
	baz=251						
YULB				*e*S	**Sn**	**18 36 02.3**	**-0.8**
	baz=251						
YULB	**Yu-li**	**1.18**	**251**		**Pn**	**18 35 47.1**	**-1.2**
EGS		**1.18**	**334**	*e*P	**Pn**	**18 35 48.5**	**+0.1**
	baz=333						
WHF	**Hehuan Shan**	**1.19**	**288**	P	**Pn**	**18 35 47.7**	**-1.2**
	baz=288						
WHF				*e*S	**Sn**	**18 36 03.1**	**-1.0**
	baz=288						
ILA	**Ilan**	**1.20**	**325**	*e*P	**Pn**	**18 35 49.2**	**+0.6**
	baz=324						
TWE	**Neicheng**	**1.21**	**321**	*e*P	**Pn**	**18 35 48.7**	**0.0**
	baz=320						
ENTT	**Nioudou**	**1.21**	**315**	*e*P	**Pn**	**18 35 48.8**	**0.0**
	baz=314						
NNSB	**Datong**	**1.21**	**302**	P	**Pn**	**18 35 48.3**	**-0.6**
	baz=302						
NNSB				*e*S	**Sn**	**18 36 03.7**	**-0.5**
	baz=302						
HATJ	**Hateruma jima**	**1.22**	**77**	P	**Pn**	**18 35 48.8**	**0.0**
HATJ				S	**Sn**	**18 36 04.3**	**+0.2**
NDT	**Datong Townshi**	**1.22**	**312**	*e*P	**Pn**	**18 35 48.7**	**-0.2**
	baz=311						
NNS	**Nan Shan**	**1.23**	**303**	P	**Pn**	**18 35 48.4**	**-0.7**
	baz=302						
OWD	**Renai**	**1.23**	**278**	*e*P	**Pn**	**18 35 48.2**	**-0.9**
	baz=278						
OWD				*e*S	**Sn**	**18 36 03.4**	**-1.3**
	baz=278						
NTC	**Toucheng**	**1.23**	**330**	*e*P	**Pn**	**18 35 49.3**	**+0.2**
	baz=338						
NTC				*e*S	**Sn**	**18 36 05.5**	**+0.9**
	baz=338						
FUSS	**Fushou**	**1.25**	**292**	P	**Pn**	**18 35 48.7**	**-0.7**
	baz=291						
IRIF	**Iriomote-Funau**	**1.25**	**63**	P	**Pn**	**18 35 49.3**	**+0.1**
IRIF				S	**Sn**	**18 36 05.2**	**+0.4**
CHKT	**Chengkung**	**1.25**	**237**	*e*P	**Pn**	**18 35 47.8**	**-1.5**
	baz=230						
CHKT				*e*S	**Sn**	**18 36 02.8**	**-2.1**
	baz=230						
CHGB	**Renai**	**1.25**	**283**	P	**Pn**	**18 35 48.6**	**-0.9**
	baz=283						
CHGB				*e*S	**Sn**	**18 36 05.0**	**-0.3**
	baz=283						
VWDT	**VWDT**	**1.25**	**269**	*e*P	**Pn**	**18 35 48.7**	**-0.6**
	baz=269						
VWDT				*e*S	**Sn**	**18 36 04.3**	**-0.7**
	baz=269						
FULB	**Fuli**	**1.26**	**243**	*e*P	**Pn**	**18 35 48.1**	**-1.3**
	baz=235						
FULB				*e*S	**Sn**	**18 36 03.2**	**-1.9**
	baz=235						
TWT	**Tachien**	**1.31**	**291**	*e*P	**Pn**	**18 35 49.7**	**-0.5**
	baz=291						
TWT				*e*S	**Sn**	**18 36 06.3**	**-0.3**
	baz=291						
TWB1	**Santiao Chiao**	**1.31**	**339**	*e*P	**Pn**	**18 35 49.6**	**-0.5**
	baz=338						
TDCB	**Techi**	**1.32**	**291**	*e*P	**Pn**	**18 35 49.9**	**-0.5**
	baz=291						
TDCB				*e*S	**Sn**	**18 36 05.8**	**-1.0**
	baz=291						
TIPB	**Shuangxi**	**1.34**	**332**	*e*P	**Pn**	**18 35 50.4**	**-0.2**
	baz=342						
NWLT	**Wulai**	**1.35**	**317**	*e*P	**Pn**	**18 35 50.6**	**-0.1**
	baz=317						
YHNB	**Yeheng**	**1.36**	**311**	*e*P	**Pn**	**18 35 50.5**	**-0.3**
	baz=310						
YHNB	**Yeheng**	**1.36**	**311**		**Pn**	**18 35 50.6**	**-0.3**
EDH	**Donghe**	**1.37**	**234**	*e*P	**Pn**	**18 35 49.3**	**-1.6**
	baz=229						
EDH				*e*S	**Sn**	**18 36 05.6**	**-2.2**
	baz=229						
NSK	**Sanguang**	**1.38**	**311**	*e*P	**Pn**	**18 35 50.7**	**-0.4**
	baz=310						
SSLB	**Suanglung**	**1.42**	**271**	*e*P	**Pn**	**18 35 50.7**	**-1.0**
	baz=270						
SSLB	**Suanglung**	**1.42**	**271**		**Pn**	**18 35 51.0**	**-0.8**
JKRS	**Kuro-shima**	**1.45**	**71**	P	**Pn**	**18 35 52.2**	**+0.2**
JKRS				S	**Sn**	**18 36 10.3**	**+0.6**
NWF	**Wu-fen Shan**	**1.45**	**333**	*e*P	**Pn**	**18 35 51.7**	**-0.4**
	baz=343						
LDUT	**Ludao**	**1.46**	**221**	*e*P	**Pn**	**18 35 50.4**	**-1.7**
	baz=221						
LDUT				*e*S	**Sn**	**18 36 07.5**	**-2.6**
	baz=221						
TWA	**Mucha**	**1.46**	**325**	*e*P	**Pn**	**18 35 52.8**	**+0.5**
	baz=337						
SMLT	**Sun Moon Lake**	**1.48**	**274**	*e*P	**Pn**	**18 35 52.4**	**-0.1**
	baz=274						
SMLT				*e*S	**Sn**	**18 36 10.7**	**0.0**
	baz=274						
NHDH	**Xindian Distri**	**1.48**	**323**	*e*P	**Pn**	**18 35 53.2**	**+0.8**
	baz=333						
WCS	**Beigang Elemen**	**1.49**	**281**	*e*P	**Pn**	**18 35 51.3**	**-1.2**
	baz=274						
WCS				*e*S	**Sn**	**18 36 11.0**	**+0.3**
	baz=274						
TATO	**Taipei**	**1.51**	**322**		**Pn**	**18 35 53.2**	**+0.3**
WHP	**Taichung City**	**1.51**	**289**	*e*P	**Pn**	**18 35 53.3**	**+0.3**
	baz=283						
TYC	**Yuchr**	**1.52**	**275**	*e*P	**Pn**	**18 35 52.5**	**-0.5**
	baz=275						
LONT	**Longtian**	**1.54**	**236**	*e*P	**Pn**	**18 35 52.3**	**-1.0**
	baz=231						
LONT				*e*S	**Sn**	**18 36 11.1**	**-0.9**
	baz=231						
TAP	**Taipei**	**1.55**	**324**	*e*P	**Pn**	**18 35 53.9**	**+0.5**
	baz=312						
ALS	**Alishan**	**1.58**	**261**	*e*P	**Pn**	**18 35 54.2**	**0.0**
	baz=254						
JIJ	**Ishigaki jima**	**1.60**	**68**	P	**Pn**	**18 35 53.8**	**-0.3**
JIJ				S	**Sn**	**18 36 12.9**	**-0.7**
YM01	**YM01**	**1.61**	**328**	*e*P	**Pn**	**18 35 54.8**	**+0.6**
	baz=339						
LIOB	**Emei**	**1.61**	**303**	*e*P	**Pn**	**18 35 55.3**	**+1.0**
	baz=313						
NSTT	**Nanjuang**	**1.62**	**302**	*e*P	**Pn**	**18 35 55.3**	**+0.9**
	baz=312						
TTN	**Taitung**	**1.62**	**231**	*e*P	**Pn**	**18 35 54.3**	**0.0**
	baz=225						
TTN				*e*S	**Sn**	**18 36 13.5**	**-0.5**
	baz=225						
TWGBT	**Beinan**	**1.63**	**234**	*e*P	**Pn**	**18 35 53.4**	**-1.0**
	baz=229						
TWGBT				*e*S	**Sn**	**18 36 13.2**	**-1.0**
	baz=229						
TWG	**Pinlang**	**1.63**	**234**		**Pn**	**18 35 53.4**	**-1.1**
WJS	**Zhushan**	**1.63**	**272**	*e*P	**Pn**	**18 35 55.9**	**+1.4**
	baz=270						
TWS1	**Kuangyinshan**	**1.65**	**323**	*e*P	**Pn**	**18 35 55.3**	**+0.6**
	baz=312						
ANP	**Anpu**	**1.66**	**327**	*e*P	**Pn**	**18 35 55.3**	**+0.3**
	baz=338						
WNT	**Mingjian**	**1.67**	**274**	*e*P	**Pn**	**18 35 55.7**	**+0.6**
	baz=273						
NTST	**Danshui**	**1.68**	**325**	*e*P	**Pn**	**18 35 55.4**	**+0.2**
	baz=337						
TWQ1	**Liyutan**	**1.68**	**290**	*e*P	**Pn**	**18 35 56.0**	**+0.7**
	baz=290						
CHN5	**Tsauling**	**1.69**	**264**	*e*P	**Pn**	**18 35 55.8**	**+0.4**
	baz=264						
NCU	**National Centr**	**1.69**	**315**	*e*P	**Pn**	**18 35 55.2**	**-0.1**
	baz=315						
NCUH	**Zhongli**	**1.69**	**315**	*e*P	**Pn**	**18 35 55.5**	**+0.2**
	baz=315						
STYH	**Taoyuan**	**1.70**	**249**	*e*P	**Pn**	**18 35 55.2**	**-0.3**
	baz=242						
TWY	**Chenhua**	**1.70**	**331**	*e*P	**Pn**	**18 35 55.7**	**+0.2**
	baz=341						
TCU	**Taichung**	**1.71**	**283**	*e*P	**Pn**	**18 35 56.9**	**+1.2**
	baz=297						
SBCB	**Hsinchu**	**1.72**	**306**	*e*P	**Pn**	**18 35 56.7**	**+1.0**
	baz=306						
NSY	**Sanyi**	**1.72**	**292**	*e*P	**Pn**	**18 35 56.7**	**+1.0**
	baz=292						
HSN	**Hsinchu**	**1.73**	**306**	*e*P	**Pn**	**18 35 56.9**	**+1.0**
	baz=308						
NMLH	**Miaoli**	**1.74**	**296**	*e*P	**Pn**	**18 35 57.2**	**+1.2**
	baz=296						
TPUB	**Ta-pu**	**1.79**	**255**	*e*P	**Pn**	**18 35 57.6**	**+0.9**
	baz=247						
TPUB	**Ta-pu**	**1.79**	**255**	Pn	**Pn**	**18 35 57.7**	**+0.9**
WDJ	**Dajia District**	**1.80**	**289**	*e*P	**Pn**	**18 35 57.0**	**+0.2**
	baz=289						
WDLH	**Douliu**	**1.81**	**267**	*e*P	**Pn**	**18 35 57.6**	**+0.7**
	baz=267						
CHN4	**Tsaushan**	**1.81**	**257**	*e*P	**Pn**	**18 35 58.2**	**+1.3**
	baz=256						
WCHH	**Zhanghua**	**1.81**	**280**	*e*P	**Pn**	**18 35 57.6**	**+0.7**
	baz=280						
WTP	**Ta-pu**	**1.82**	**253**	*e*P	**Pn**	**18 35 58.8**	**+1.7**
	baz=253						
JISG	**Ishigakijimahi**	**1.83**	**64**	P	**Pn**	**18 35 56.8**	**-0.5**
JISG				S	**Sn**	**18 36 19.6**	**+0.3**
ECL	**Taimali**	**1.85**	**231**	*e*P	**Pn**	**18 35 56.0**	**-1.6**
	baz=240						
CHN2	**Minshiung**	**1.88**	**263**	*e*P	**Pn**	**18 35 58.7**	**+0.7**
	baz=263						
SLGT	**Liugui**	**1.88**	**246**	*e*P	**Pn**	**18 35 58.8**	**+0.8**
	baz=240						
SGST	**Jiashian**	**1.90**	**249**	*e*P	**Pn**	**18 35 57.6**	**-0.6**
	baz=249						
CHN1	**Nanshi**	**1.91**	**252**	*e*P	**Pn**	**18 35 59.7**	**+1.3**
	baz=252						
TWK	**Hsinying**	**1.92**	**255**	*e*P	**Pn**	**18 35 59.6**	**+1.0**
	baz=254						
SNST	**Tainan City**	**1.93**	**254**	*e*P	**Pn**	**18 35 59.3**	**+0.7**
	baz=253						
CHY	**Chiayi**	**1.93**	**262**	*e*P	**Pn**	**18 35 59.1**	**+0.5**
	baz=262						
LAY	**Lan-yu**	**1.94**	**207**	*e*P	**Pn**	**18 35 56.6**	**-2.3**
	baz=214						
WTK	**Tuku**	**1.94**	**268**	*e*P	**Pn**	**18 35 59.7**	**+0.9**
	baz=267						
WRL	**Guolierlin Hig**	**1.96**	**274**	*e*P	**Pn**	**18 35 59.6**	**+0.6**
	baz=266						
LYUB	**Lan-yu**	**1.96**	**206**	*e*P	**Pn**	**18 35 57.0**	**-2.1**
	baz=213						
SSD	**Sandimen**	**2.01**	**240**	*e*P	**Pn**	**18 35 59.6**	**-0.1**
	baz=235						
TSMG	**Majia**	**2.02**	**238**	*e*P	**Pn**	**18 35 59.3**	**-0.6**
	baz=233						
TAW	**Tawu**	**2.05**	**227**	*e*P	**Pn**	**18 35 59.3**	**-1.0**
	baz=233						
EAST	**Anshuo**	**2.07**	**228**	*e*P	**Pn**	**18 35 59.6**	**-1.0**
	baz=235						
MASBT	**Mashibuluo**	**2.08**	**236**	*e*P	**Pn**	**18 35 59.7**	**-1.0**
	baz=231						
ICHU	**Yijhu**	**2.09**	**259**	*e*P	**Pn**	**18 36 01.5**	**+0.8**
	baz=259						
WSF	**Szhu**	**2.10**	**267**	*e*P	**Pn**	**18 36 00.9**	**0.0**
	baz=256						
SGLT	**Jiouru**	**2.13**	**241**	*e*P	**Pn**	**18 36 03.6**	**+2.2**
	baz=239						
SSHA	**Shanhua**	**2.14**	**253**	*e*P	**Pn**	**18 36 02.6**	**+1.1**
	baz=253						
TWM1	**Shoushan**	**2.14**	**244**	*e*P	**Pn**	**18 36 03.0**	**+1.5**
	baz=243						
CHN8	**Yiju**	**2.15**	**259**	*e*P	**Pn**	**18 36 02.6**	**+0.9**
	baz=259						
JTJ	**Tarama**	**2.18**	**66**	P	**Pn**	**18 36 02.3**	**+0.3**
JTJ				*e*S	**Sn**	**18 36 28.5**	**+0.7**
SSPT	**Xinbi**	**2.20**	**235**	*e*P	**Pn**	**18 36 02.8**	**+0.4**
	baz=232						
SCLT	**Jiali**	**2.21**	**255**	*e*P	**Pn**	**18 36 01.4**	**-1.1**
	baz=265						
SLIU	**Shizi**	**2.21**	**226**	*e*P	**Pn**	**18 36 02.0**	**-0.5**
	baz=225						

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SCZT  Fangliau          2.23 231 eP     Pn     18 36 02.1 -0.7
      baz=227
SNJT  Kaohsiung City    2.25 243 eP     Pn     18 36 05.2 +2.2
      baz=243
TWKBT Hengchun          2.41 221 eP     Pn     18 36 05.3 +0.1
      baz=220
TWK1  Hengchun          2.41 221 eP     Pn     18 36 05.0 -0.2
      baz=220
WLCH  Liuqiu            2.42 234 eP     Pn     18 36 07.4 +2.0
      baz=233
WDGT  Dungji            2.67 259 eP     Pn     18 36 09.1 +0.3
      baz=259
PHUB  P'eng-hu          2.71 265 eP     Pn     18 36 10.0 +0.7
      baz=278
PNG   Penghu            2.72 266 eP     Pn     18 36 09.5 +0.1
      baz=266
VCHM  Qimei             2.88 259 eP     Pn     18 36 12.1 +0.3
      baz=259
MATB  Ma-tsu            3.31 316 eP     Pn     18 36 16.1 -1.5
      baz=317
PTMZ  Houxiangcun       3.33 293 eP     Pn     18 36 17.2 -0.7
      baz=294
LYJJ  Jianjiangzhen     3.71 318 eP     Pn     18 36 21.4 -1.8
      baz=311
QZH   Quanzhou          3.75 289⇑iPn    Pn     18 36 23.3 -0.4
QZH                              Sn     Sn     18 37 04.5 -2.2
XPSS  Dashiqiu          3.77 327 eP     Pn     18 36 22.8 -1.2
      baz=336
KNM   Kinmen            3.78 280 eP     Pn     18 36 25.5 +1.5
      baz=280
KNMB  Chin-men Tao      3.83 281 eP     Pn     18 36 24.0 -0.7
      baz=282
KNMB  Chin-men Tao      3.83 281 Pn     Pn     18 36 24.2 -0.4
AXDP  Jialang           4.29 286 eP     Pn     18 36 30.8 -0.3
      baz=287
ZPLA  Ao Xicun          4.36 273 eP     Pn     18 36 32.0  0.0
      baz=282
JOW   Kunigami          6.04  59 Pn     Pn     18 36 53.4 -1.7
      8.9nm,0.3s,baz=160,slow=15,SNR=14
JOW                              Sn     Sn     18 37 58.8 -4.3
      baz=140,slow=25,SNR=1.2
SSE   Sheshan           7.38 351 Pn     Pn     18 37 16.3 +2.8
SSE                              Sn     Sn     18 38 38.8 +2.7
SSE                              LR     LR
      comp=N,530nm,13.9s
SSE                              LR     LR
      comp=E,220nm,13.4s
JNU   Nakatsue         11.86  36 LR     LR     18 42 57.8
      comp=Z,303nm,19.3s,baz=220,slow=39
KSRS  Korea Array      14.40  18 Pn     Pn     18 38 50.9 +1.3
      0.8nm,0.3s,baz=197,slow=12,SNR=31
KSRS                             LR     LR     18 45 21.9
      comp=Z,431nm,18.3s,baz=195,slow=42
KS19  Wonju Array Si   14.43  17 P      P      18 38 54.3 -2.1
XAN   Xi'an            15.67 314 P      P      18 39 08.8 -1.4
XAN                              pP     pP     18 39 17.8 -0.5
XAN                              pmax   pmax
      comp=Z,13nm,1.0s
XAN                              pmax   pmax
      comp=Z,260nm,5.1s
XAN                              LR     LR
      comp=N,370nm,12.4s
XAN                              LR     LR
      comp=E,510nm,17.2s
XAN                              LR     LR
      comp=Z,810nm,16.5s
BTO   Baotou           19.79 331 eP     P      18 39 56.3 +0.6
BTO                              LR     LR
      comp=N,2µm,14.1s
BTO                              LR     LR
      comp=E,1µm,13.0s
CN2   Changchun        20.12   6 eP     P      18 39 58.5 -0.6
CN2                              S      S      18 43 38.0 -5.2
CN2                              pmax   pmax
      comp=Z,10.0nm,0.5s
CN2                              LR     LR
      comp=N,600nm,13.0s
CN2                              LR     LR
      comp=E,300nm,13.0s
CN2                              LR     LR
      comp=Z,700nm,13.0s
LZH   Lanzhou          20.26 312 ⇓P     Pn     18 40 03.5 +0.5
LZH                              pP     pP     18 40 06.5 -2.5
LZH                              pmax   pmax
      comp=Z,19nm,1.3s
LZH                              LR     LR
      comp=N,530nm,16.8s
LZH                              LR     LR
      comp=E,530nm,17.9s
LZH                              LR     LR
      comp=Z,630nm,17.9s
CMAR  Chiang Mai Arr   22.60 261 P      P      18 40 28.6 +2.5
      0.9nm,0.9s,baz=64,slow=9.0,SNR=7.1
CMAR                             pP     pwP    18 40 39.0 +1.1
      1.8nm,0.8s,baz=62,slow=8.7,SNR=5.4
CMAR                             LR     LR     18 49 36.6
      comp=Z,125nm,20.4s,baz=153,slow=37
CMAR  Chiang Mai Arr   22.60 261 P      P      18 40 26.3 +0.3
TNTI  Ternate          23.35 168 P      P      18 40 35.4 +1.7
TNTI                             IAmb   IAmb   18 40 38.6
      comp=Z,27nm,1.0s
SBUM  Sibu             23.43 207 P      P      18 40 34.7 +0.3
GTA   Gaotai           24.73 314 eP     P      18 40 46.8 +0.2
GTA                              pmax   pmax
      comp=Z,12nm,1.1s
GTA                              pmax   pmax
      comp=Z,75nm,6.2s
GTA                              LR     LR
      comp=Z,190nm,14.9s
GTA                              LR     LR
      comp=Z,330nm,16.7s
GTA                              LR     LR
      comp=Z,370nm,15.3s
LBMI  Labuha           24.75 168 P      P      18 40 55.4 +8.6
MTKI  Muara Teweh, K   25.66 198 P      P      18 40 57.9 +2.9
      comp=Z,832nmcomp=Z,17nm,0.8s
ULN   Ulaanbaatar      27.00 337 P      P      18 41 06.4 -0.6
SONM  Songino Array    27.22 336 P      P      18 41 08.6 -0.4
      comp=Z,7.4nm,0.9s,baz=150,slow=9.6,SNR=31
SONM                             pP     pP     18 41 19.1 +1.4
      comp=Z,11nm,1.0s,baz=151,slow=9.4,SNR=16
SONM                             LR     LR     18 53 08.1
      comp=Z,271nm,20.1s,baz=94,slow=39
SONM  Songino Array    27.22 336 IAmb   IAmb   18 41 20.5
      comp=Z,15nm,1.0s
LSA   Lhasa            28.56 289 P      P      18 41 19.6 -2.0
WMQ   Urumqi           34.81 314 eP     P      18 42 17.5 +1.7
WMQ                              pP     pP     18 42 22.5 -2.2
WMQ                              pmax   pmax
      comp=Z,15nm,0.7s
MK31  Makanchi Array   39.47 316 P      P      18 42 55.2 -0.1
MK31                             IAmb   IAmb   18 42 57.2
      comp=Z,9.7nm,0.9s
MKAR  Makanchi Array   39.47 316 P      P      18 42 55.5 +0.2
      comp=Z,12nm,0.8s,baz=109,slow=9.5,SNR=54
MKAR                             pP     pP     18 43 05.9 +1.6
      comp=Z,6.6nm,0.8s,baz=102,slow=11,SNR=9.3
MKAR                             PP     PnPn   18 44 28.2 -1.0
      comp=Z,2.0nm,0.7s,baz=98,slow=9.7,SNR=4.4
MKAR                             LR     LR     19 00 54.8
      comp=Z,164nm,18.4s,baz=8.5,slow=39
MKAR  Makanchi Array   39.47 316 P      P      18 42 55.2 -0.1
PETK  Petropavlovsk-   39.53  33 LR     LR     18 58 19.0
      comp=Z,84nm,21.2s,baz=131,slow=35
MAKZ  Makanchi         39.67 316 P      P      18 42 56.9 -0.1
MAKZ                             IAmb   IAmb   18 42 59.0
      comp=Z,16nm,0.9s
PRZ   Przheval'sk      40.85 308 P      P      18 43 09.1 +2.1
PRZ                              IAmb   IAmb   18 43 10.3
      comp=Z,15nm,1.0s
TARG  Taragay, Kyrgy   41.13 307 P      P      18 43 09.3 -0.3
ZAA0  Zalesovo Array   41.24 327 P      P      18 43 08.3 -1.4
ZAA0                             IAmb   IAmb   18 43 20.6
      comp=Z,8.6nm,0.8s
ZALV  Zalesovo Beam    41.24 327 P      P      18 43 08.8 -1.0
      comp=Z,6.1nm,0.8s,baz=111,slow=7.9,SNR=22
ZALV                             pP     pP     18 43 19.3 +0.6
      comp=Z,7.5nm,0.8s,baz=114,slow=8.1,SNR=12
ZALV                             LR     LR     19 01 35.0
      comp=Z,194nm,18.1s,baz=10,slow=38
ZALV  Zalesovo Beam    41.24 327 P      P      18 43 08.5 -1.3
KDJ   Kajisay          41.66 307 P      P      18 43 15.1 +1.4
KDJ                              IAmb   IAmb   18 43 16.3
      comp=Z,10nm,0.8s
KSH   Kashi            42.13 303 P      P      18 43 22.3 +4.8
KSH                              ScS    ScS    18 53 16.8 -0.6
KSH                              pmax   pmax
      comp=Z,8.0nm,0.9s
KSH                              LR     LR
      comp=Z,200nm,7.7s
KSH                              LR     LR
      comp=Z,310nm,7.6s
KSH                              LR     LR
      comp=Z,290nm,11.0s
TKM2  Tokmak 2         42.97 308 P      P      18 43 26.1 +1.8
      SNR=16
KURK  Kurchatov        43.18 320 P      P      18 43 24.7 -0.9
KBK   Karagaybulak     43.39 308 P      P      18 43 29.6 +1.9
      SNR=12
CHMS  Chumysh          43.59 308 P      P      18 43 30.0 +0.8
      SNR=8.5
UCH   Uchtor           43.63 307 P      P      18 43 32.6 +2.6
      SNR=19
FRU1  Bishkek          43.64 308 P      P      18 43 30.4 +0.8
FRU1                             IAmb   IAmb   18 43 32.0
      comp=Z,12nm,0.8s
AAK   Ala-Archa        43.71 307 P      P      18 43 31.8 +1.6
      SNR=6.4
AAK   Ala-Archa        43.71 307 P      P      18 43 31.4 +1.1
AAK                              IAmb   IAmb   18 43 32.6
      comp=Z,6.4nm,0.8s
USP   Ospenovka        43.82 308 P      P      18 43 32.2 +1.2
      SNR=6.6
NIL   Nilore           43.95 294 P      P      18 43 32.7 +0.5
NIL                              IAmb   IAmb   18 43 34.1
      comp=Z,6.8nm,0.9s
AML   Almayashu        44.22 307 P      P      18 43 36.6 +2.0
      SNR=14
EKS2  Erkin-Say        44.24 307 P      P      18 43 36.0 +1.6
      SNR=9.1
WRA   Warramunga Arr   44.96 164 P      P      18 43 40.7 +0.5
      comp=Z,4.0nm,0.8s,baz=345,slow=8.6,SNR=14
WRA                              pP     sP     18 43 52.7 -0.2
      comp=Z,1.9nm,0.8s,baz=344,slow=8.4,SNR=4.5
DRK   Karamyk          45.34 303 P      P      18 43 43.4 -0.1
DRK                              IAmb   IAmb   18 43 46.3
      comp=Z,6.8nm,0.9s
BTK   Batken           46.14 303 P      P      18 43 50.0 +0.4
BTK                              IAmb   IAmb   18 43 59.1
      comp=Z,7.1nm,1.2s
KKAR  Karatay Array    46.68 308 P      P      18 43 53.3 -0.4
CHGR  Chuyangaron      47.34 301 P      P      18 43 59.0  0.0
CHGR                             IAmb   IAmb   18 44 17.3
      comp=Z,11nm,1.0s
KBL   Kabul            47.43 296 P      P      18 44 00.4 +0.5
TIXI  Tiksi            48.03   3 P      P      18 44 00.7 -2.9
TIXI                             IAmb   IAmb   18 44 21.9
      comp=Z,5.1nm,1.1s
SMY   Shemya           48.36  40 P      P      18 44 04.5 -2.0
AS31  Alice Springs    48.44 166 P      P      18 44 08.9 +1.5
ASAR  Alice Springs    48.45 166 P      P      18 44 08.8 +1.4
      comp=Z,3.3nm,0.8s,baz=346,slow=7.4,SNR=23
ASAR                             pP     pwP    18 44 21.9 +0.7
      comp=Z,1.0nm,0.5s,baz=351,slow=13,SNR=5.0
ASAR  Alice Springs    48.45 166 P      P      18 44 08.5 +1.0
BRVK  Borovoye         48.82 321 P      P      18 44 09.6 -0.4
BRVK                             IAmb   IAmb   18 44 21.6
      comp=Z,3.9nm,0.8s
FORT  Forrest          54.51 174 P      P      18 44 52.2 -0.5
ABKAR Akbulak array    54.59 314 P      P      18 44 53.5 +0.3
ABKAR                            IAmb   IAmb   18 45 07.0
      comp=Z,9.5nm,0.9s
ABKAR Akbulak array    54.59 314 P      P      18 44 53.2 +0.1
GEYT  Alibeck          56.04 301 P      P      18 45 05.0 +1.1
      comp=Z,3.5nm,0.8s,baz=76,slow=15,SNR=4.3
GEYT  Alibeck          56.04 301 P      P      18 45 02.7 -1.2
GYA0B ALIBECK ARRAY    56.04 301 P      P      18 45 03.4 -0.6
GYA0B                            IAmb   IAmb   18 45 14.1
      comp=Z,7.6nm,0.9s
STKA  Stephens Creek   58.28 161 P      P      18 45 20.8 +1.2
      comp=Z,7.7nm,0.8s,baz=344,slow=7.2,SNR=15
STKA  Stephens Creek   58.28 161 P      P      18 45 20.5 +0.9
ONI   Oni              66.50 308 P      P      18 46 15.5 +0.9
ONI                              IAmb   IAmb   18 46 32.7
      comp=Z,9.2nm,1.1s
KBZ   Khabaz           66.67 309 P      P      18 46 16.1 +0.5
      comp=Z,3.8nm,0.8s,baz=76,slow=4.2,SNR=9.0
KBZ                              pP     sP     18 46 28.0 -0.9
      comp=Z,5.9nm,1.0s,baz=134,slow=8.5,SNR=5.9
KIV   Kislovodsk       66.78 309 P      P      18 46 16.2 -0.2
KIV                              IAmb   IAmb   18 46 18.5
      comp=Z,12nm,1.0s
CAST  Castle Rocks     66.98  29 P      P      18 46 17.9 +0.6
CAST                             IAmb   IAmb   18 46 46.5
      comp=Z,5.1nm,1.2s
SIRT  Sirnak           68.36 303 P      P      18 46 26.9 +0.3
GURO  Guroymak-BITLI   68.42 304 P      P      18 46 26.3 -0.7
GURO                             IAmb   IAmb   18 46 29.6
      comp=Z,3.8nm,1.0s
ILAR  Eielson Array    69.01  27 P      P      18 46 29.1 -0.9
      comp=Z,0.5nm,0.5s,baz=273,slow=6.3,SNR=9.0
HDA   Harding Lake     69.06  28 P      P      18 46 31.0 +0.7
BMAR  Burnt Mountain   69.39  24 P      P      18 46 30.7 -1.6
RAYN  Ar Rayn          69.62 287 P      P      18 46 33.5 -1.1
MARD  Mardin           69.69 303 P      P      18 46 35.4 +0.6
ARCES ARCESS Array B   70.36 338 P      P      18 46 37.1 -1.1
      comp=Z,4.7nm,0.9s,baz=55,slow=11,SNR=4.7
ARCES                            LR     LR     19 20 59.2
      comp=Z,47nm,19.5s,baz=250,slow=39
M26K  Nabesna, AK      71.25  29 P      P      18 46 44.4 +0.5
L27K  Beaver Creek,    71.59  29 P      P      18 46 46.0 +0.1
L27K                             IAmb   IAmb   18 46 59.1
      comp=Z,8.9nm,1.3s
BCAR  Beaver Creek A   71.61  29 P      P      18 46 46.2 +0.2
FINES FINESS Array B   72.40 330 P      P      18 46 50.2 -0.4
      comp=Z,3.2nm,0.8s,baz=64,slow=4.4,SNR=8.2
FINES                            pP     pP     18 47 00.8 +0.6
      comp=Z,4.4nm,1.0s,baz=46,slow=8.2,SNR=3.1
FINES                            LR     LR     19 22 15.8
      comp=Z,149nm,18.9s,baz=26,slow=39
FINES FINESS Array B   72.40 330 P      P      18 46 50.8 +0.2
CTGM  Chitina Glacie   72.42  31 P      P      18 46 51.1 +0.1
BNN   Bunyan           73.01 305 P      P      18 46 55.2 +0.3
INK   Inuvik           73.14  22 P      P      18 46 54.7 -0.2
ILGA  Ilgaz            73.92 308 P      P      18 47 00.1 -0.3
ILGA                             IAmb   IAmb   18 47 12.5
      comp=Z,16nm,1.2s
AKASG Malin Array Be   73.97 319 P      P      18 46 59.1 -1.0
      comp=Z,0.5nm,0.6s,baz=60,slow=6.0,SNR=6.5
AKASG                            pP     pP     18 47 10.3 +0.7
      comp=Z,2.9nm,0.7s,baz=59,slow=6.2,SNR=7.3
AKASG Malin Array Be   73.97 319 P      P      18 46 59.5 -0.7
BR131 Keskin Array S   74.38 307 P      P      18 47 02.5 -0.5
BR131                            IAmb   IAmb   18 47 17.5
      comp=Z,8.2nm,0.8s
BRTR  Keskin Array B   74.38 307 P      P      18 47 03.4 +0.4
      comp=Z,5.0nm,0.9s,baz=112,slow=6.2,SNR=15
BRTR                             pP     sP     18 47 14.5 -1.8
      comp=Z,3.9nm,0.8s,baz=101,slow=6.4,SNR=7.5
ANTO  Ankara           74.96 307 P      P      18 47 05.5 -0.7
MDUB  Mudurnu          75.92 308 P      P      18 47 10.5 -1.3
CSS   Mathiatis        76.14 302 P      P      18 47 12.2 -0.8
CSS                              IAmb   IAmb   18 47 27.0
      comp=Z,10nm,0.8s
BORA  Eskisehir        76.66 308 P      P      18 47 16.4 +0.5
BORA                             IAmb   IAmb   18 47 28.2
      comp=Z,5.7nm,0.8s
JIS   Juneau Island    76.67  32 P      P      18 47 15.6 +0.2
BUR08 Bucovina Ar. S   77.49 317 P      P      18 47 20.1 -0.3
BURAR Bucovina Array   77.49 317 P      P      18 47 19.9 -0.6
ELL   Elmali           78.14 305 P      P      18 47 23.6 -0.8
NB2   NORSAR Subarra   79.14 333 P      P      18 47 28.8 -0.5
      comp=Z,0.7nm,0.6s,baz=59,slow=5.6
NOA   NORSAR Array B   79.14 333 P      P      18 47 28.4 -0.8
      comp=Z,1.1nm,0.6s,baz=56,slow=5.5,SNR=4.9
NOA                              pP     pP     18 47 39.7 +0.9
      comp=Z,1.6nm,0.8s,baz=57,slow=5.8,SNR=4.5
NOA                              LR     LR     19 26 29.3
      comp=Z,119nm,18.2s,baz=70,slow=39
YKA   Yellowknife Ar   82.87  23 P      P      18 47 48.5 -0.5
      comp=Z,3.6nm,0.8s,baz=311,slow=5.0,SNR=43
YKA                              pP     pP     18 48 00.0 +1.4
      comp=Z,2.3nm,0.8s,baz=313,slow=5.1,SNR=8.5
CLL   Collm            83.10 323 ePP    PP     18 50 57.0 -4.2
GEC2  GERESS Array S   83.92 321 P      P      18 47 55.6 +0.7
GEC2                             IAmb   IAmb   18 48 07.5
      comp=Z,4.7nm,0.9s
GERES GERESS Array B   83.92 321 P      P      18 47 55.0 +0.2
      comp=Z,2.4nm,0.9s,baz=57,slow=4.9,SNR=14
GERES                            pP     sP     18 48 06.6 -1.6
      comp=Z,2.0nm,0.8s,baz=68,slow=4.6,SNR=8.1
BORG  Borgarnes        87.42 345 LR     LR     19 32 06.2
      comp=Z,70nm,21.5s,baz=6.1,slow=39
BCLA  Clavier          87.69 325 dPcP   PcP    18 48 14.9 -0.3
DOU   Dourbes          88.25 325 dPcP   P      18 48 16.9 +0.9
KOND  Kondoa           88.96 264 iS     S      18 59 12.5 +6.0
SFJD  Kangerlussuaq    89.36 357 LR     LR     19 28 37.0
      comp=Z,22nm,19.8s,baz=356,slow=36
NVAR  Mina Array Bea   95.89  44 P      P      18 48 52.6 +0.7
      comp=Z,0.2nm,0.4s,baz=282,slow=4.4,SNR=2.2
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JMA ***28*** *18:36:59.5±0.2,23°.86N×122°.46E,h19^{km}±4^{km},M3.4*
TAP ***28*** *18:36:60.0,23°.80N×122°.55E,h46^{km}±1^{km},ML4.0,D*
ISC 28 18:36:59.3±1.0**,23°.78N**±0°.03×**122°.52E**±0°.02**,h31**^{km}±11^{km}**,**
n87,σ**0°.91**/162**,Taiwan region**

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Code  Station Name       Δ°  AZ°  Phase ID       Time       Res
                                 Op     ISC    h  m  s    ISC
JYNG  Yonagunijimaku    0.77  30 P      Pn     18 37 13.3 -0.8
JYNG                             S      Sb     18 37 23.1 -1.3
YOJ   Yonaguni jima     0.81  33 P      Pb     18 37 15.0 +0.1
      baz=32
YOJ                              S      Sb     18 37 25.2 -0.4
      baz=32
YOJ   Yonaguni jima     0.81  33 P      Pn     18 37 14.6  0.0
YOJ                              eS     Sn     18 37 24.3 -1.3
TEYL  Yanliau Villag    0.85 276 eP     Pn     18 37 13.9 -1.3
      baz=269
TEYL                             S      Sb     18 37 26.9 +0.2
      baz=269
HWA   Hwalien           0.86 283 iP     Pb     18 37 16.3 +0.5
      baz=274
HWA                              iS     Sb     18 37 27.7 +0.7
      baz=274
TWD   Chiawan           0.90 289 eP     Pn     18 37 15.2 -0.7
      baz=288
TWD                              eS     Sn     18 37 26.4 -1.3
      baz=288
TEGC  Jichi Village     0.90 266 P      Pn     18 37 15.8 -0.1
      baz=264
TEGC                             eS     Sn     18 37 27.6 -0.3
      baz=264
ETL   Fush Village      0.91 295 P      Pb     18 37 17.1 +0.6
      baz=293
ETL                              S      Sb     18 37 28.1 -0.2
      baz=293
NACB  Ninganchiao       0.93 295 eP     Pb     18 37 17.2 +0.3
      baz=293
NACB                             S      Sb     18 37 29.2 +0.1
      baz=293
EWUT  Wuta              0.95 314 P      Pb     18 37 16.6 -0.6
      baz=321
EWUT                             S      Sb     18 37 29.8 +0.4
      baz=321
ETM   Tongmen           0.96 281 eP     Pn     18 37 15.9 -0.8
      baz=275
ETM                              S      Sn     18 37 28.4 -0.9
      baz=275
ENA   Nanau             0.96 312 P      Pn     18 37 16.8 +0.1
      baz=319
ENA                              S      Sb     18 37 30.5 +0.6
      baz=319
ESL   Shilin            1.00 272 P      Pn     18 37 16.3 -0.9
      baz=264
ESL                              S      Sn     18 37 30.4 +0.1
      baz=264
TWC   Suao              1.03 323 iP     Pb     18 37 17.9 -0.7
      baz=322
TWC                              eS     Sb     18 37 32.6 +0.9
      baz=322
ETLH  Xiulin Townshi    1.04 294 eP     Pn     18 37 17.6 -0.3
      baz=293
ETLH                             S      Sb     18 37 32.7 +0.5
      baz=293
HGSD  Ruisui            1.05 254 P      Pn     18 37 18.7 +0.8
      baz=254
HGSD                             eS     Sn     18 37 29.7 -1.8
      baz=254
ECBN  Changbin          1.09 245 eP     Pn     18 37 16.6 -1.8
      baz=236
ECBN                             S      Sn     18 37 31.4 -1.0
      baz=236
NDS   Dongshan          1.12 319 P      Pb     18 37 19.7 -0.5
      baz=318
NDS                              eS     Sb     18 37 35.1 +0.7
      baz=318
EHY   Hungye            1.14 256 iP     Pn     18 37 19.7 +0.6
      baz=255
EHY                              S      Sn     18 37 34.2 +0.6
      baz=255
EYUL  Yuli              1.19 249 P      Pn     18 37 20.5 +0.7
      baz=241
EYUL                             S      Sn     18 37 34.8 -0.1
      baz=241
EGS                     1.19 333 eP     Pb     18 37 20.8 -0.5
      baz=332
YULB  Yu-li             1.19 251 P      Pn     18 37 20.6 +0.8
      baz=251
YULB                             S      Sn     18 37 34.8 -0.2
      baz=251
TWF1  Yuli              1.20 249 iP     Pn     18 37 20.9 +0.8
      baz=249
TWF1                             iS     Sn     18 37 35.9 +0.5
      baz=249
HATJ  Hateruma jima     1.21  77 eS     Sb     18 37 36.7 -0.1
WHF   Hehuan Shan       1.21 288 iP     Pn     18 37 20.3 -0.1
      baz=287
WHF                              S      Sn     18 37 36.1 +0.1
      baz=287
TWE   Neicheng          1.22 320 iP     Pb     18 37 21.1 -0.6
      baz=319
ENTT  Nioudou           1.22 315 P      Pb     18 37 21.3 -0.6
      baz=303
NNSB  Datong            1.22 302 P      Pn     18 37 20.9 +0.4
      baz=301
NNSB                             S      Sb     18 37 36.4 -1.1
      baz=301
NDT   Datong Townshi    1.23 312 iP     Pb     18 37 21.4 -0.6
      baz=310
NDT                              S      Sb     18 37 37.1 -0.5
      baz=310
IRIF  Iriomote-Funau    1.23  63 P      Pb     18 37 22.1 +0.1
IRIF                             eS     Sb     18 37 38.2 +0.6
NNS   Nan Shan          1.24 302 iP     Pb     18 37 21.3 -0.9
      baz=301
NNS                              S      Sb     18 37 36.9 -0.9
      baz=301
NTC   Toucheng          1.24 330 P      Pb     18 37 22.0 -0.2
      baz=328
NTC                              eS     Sb     18 37 39.9 +2.1
      baz=328
OWD   Renai             1.25 278 iP     Pn     18 37 21.1 +0.4
      baz=277
OWD                              S      Sn     18 37 36.8 +0.2
      baz=277
FUSS  Fushou            1.26 292 iP     Pn     18 37 21.2 +0.2
      baz=291
FUSS                             S      Sb     18 37 37.5 -1.1
      baz=291
CHKT  Chengkung         1.26 238 P      Pn     18 37 20.8 -0.1
      baz=229
CHKT                             S      Sn     18 37 35.0 -1.7
      baz=229
CHGB  Renai             1.27 283 P      Pn     18 37 21.1  0.0
      baz=282
CHGB                             S      Sb     18 37 37.7 -1.0
      baz=282
VWDT  VWDT              1.27 269 P      Pn     18 37 21.3 +0.5
      baz=268
VWDT                             S      Sn     18 37 36.9  0.0
      baz=268
FULB  Fuli              1.27 243 P      Pn     18 37 21.2 +0.2
      baz=234
FULB                             eS     Sn     18 37 35.9 -1.1
      baz=234
TWB1  Santiao Chiao     1.31 338 P      Pb     18 37 22.3 -1.1
      baz=337
TWT   Tachien           1.32 291 iP     Pn     18 37 22.5 +0.8
      baz=290
TWT                              S      Sb     18 37 39.3 -0.9
      baz=290
TDCB  Techi             1.33 291 P      Pb     18 37 22.8 -1.0
      baz=290
TDCB                             S      Sb     18 37 39.4 -1.2
      baz=290
TIPB  Shuangxi          1.34 332 eP     Pb     18 37 24.6 +0.7
      baz=330
ECS   Chishang          1.38 241 P      Pn     18 37 23.2 +0.7
      baz=233
ECS                              S      Sn     18 37 40.8 +1.1
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	baz=233						
EDH	Donghe	1.38	235	eP	Pn	18 37 21.0	-1.4
	baz=229						
EDH				S	Sn	18 37 38.0	-1.6
	baz=229						
JKRS	Kuro-shima	1.43	71	P	Pb	18 37 26.4	+1.0
JKRS				eS	Sb	18 37 44.5	+1.2
NWF	Wu-fen Shan	1.45	332	iP	Pb	18 37 24.7	-1.1
	baz=331						
NWF				iS	Sb	18 37 43.2	-0.7
	baz=331						
WFSB	Wu-fen Shan	1.45	332	P	Pb	18 37 24.6	-1.1
	baz=331						
WFSB				eS	Sb	18 37 43.9	+0.1
	baz=331						
LDUT	Ludao	1.47	221	eP	Pn	18 37 21.4	-2.2
	baz=221						
LDUT				eS	Sn	18 37 40.0	-1.9
	baz=221						
TWA	Mucha	1.47	325	P	Pb	18 37 26.0	-0.1
	baz=337						
TWA				S	Sb	18 37 43.6	-0.7
	baz=337						
NHDH	Xindian Distri	1.49	322	P	Pb	18 37 25.9	-0.4
	baz=321						
NHDH				S	Sb	18 37 44.0	-0.8
	baz=321						
SMLT	Sun Moon Lake	1.49	274	P	Pn	18 37 24.7	+0.6
	baz=273						
SMLT				S	Sb	18 37 44.0	-1.0
	baz=273						
ELDTW	Lidau	1.50	247	iP	Pn	18 37 24.4	+0.1
	baz=247						
ELDTW				S	Sn	18 37 42.9	+0.1
	baz=247						
TATO	Taipei	1.52	322	P	Pb	18 37 26.1	-0.7
	baz=321						
TATO				S	Sb	18 37 44.5	-1.2
	baz=321						
WHP	Taichung City	1.52	289	iP	Pb	18 37 26.9	-0.1
	baz=288						
WHP				eS	Sb	18 37 47.2	+1.3
	baz=288						
LONT	Longtian	1.55	236	eP	Pn	18 37 26.6	+1.8
	baz=230						
LONT				S	Sn	18 37 43.7	-0.1
	baz=230						
JIJ	Ishigaki jima	1.59	68	P	Pb	18 37 27.9	-0.2
JIJ				eS	Sb	18 37 48.2	+0.4
ALS	Alishan	1.60	261	P	Pn	18 37 27.2	+1.5
	baz=269						
ALS				S	Sn	18 37 46.0	+0.5
	baz=269						
NJD	Zhudong	1.62	306	P	Pb	18 37 28.2	-0.3
	baz=306						
NJD				eS	Sn	18 37 46.3	+0.7
	baz=306						
LIOB	Emei	1.62	302	P	Pb	18 37 28.2	-0.4
	baz=313						
NSTT	Nanjuang	1.63	302	P	Pb	18 37 28.3	-0.3
	baz=293						
NSTT				S	Sb	18 37 48.2	-0.6
	baz=293						
TTN	Taitung	1.63	231	iP	Pn	18 37 26.8	+0.9
	baz=231						
TTN				S	Sn	18 37 46.4	+0.7
	baz=231						
TWGBT	Beinan	1.64	234	P	Pn	18 37 26.3	+0.3
	baz=228						
TWGBT				S	Sn	18 37 46.3	+0.2
	baz=228						
WNT	Mingjian	1.69	274	iP	Pb	18 37 29.0	-0.7
	baz=273						
WNT				S	Sb	18 37 50.0	-0.6
	baz=273						
WWF	Wufeng	1.69	279	P	Pb	18 37 29.5	-0.2
	baz=271						
WNT1	Nantou City	1.69	275	P	Pb	18 37 29.0	-0.8
	baz=274						
WNT1				S	Sb	18 37 50.8	+0.1
	baz=274						
TWQ1	Liyutan	1.70	290	P	Pb	18 37 29.1	-0.8
	baz=290						
TWQ1				eS	Sb	18 37 51.5	+0.7
	baz=290						
CHN5	Tsauling	1.70	264	P	Pn	18 37 28.7	+1.7
	baz=264						
CHN5				S	Sb	18 37 49.8	-1.2
	baz=264						
STYH	Taoyuan	1.72	250	P	Pn	18 37 28.1	+1.0
	baz=243						
STYH				S	Sn	18 37 48.4	+0.4
	baz=243						
TCU	Taichung	1.73	283	eP	Pb	18 37 29.7	-0.7
	baz=282						
TCU				eS	Sb	18 37 52.5	+0.8
	baz=282						
STYT	Tauyuan	1.73	250	P	Pn	18 37 27.7	+0.3
	baz=243						
STYT				S	Sn	18 37 48.5	0.0
	baz=243						
WYL	Yuanlin Townsh	1.79	276	P	Pn	18 37 29.4	+1.3
	baz=266						
WYL				S	Sb	18 37 53.4	0.0
	baz=266						
TPUB	Ta-pu	1.80	255	eP	Pb	18 37 31.0	-0.7
	baz=249						
TPUB				S	Sb	18 37 52.7	-1.2
	baz=249						
JISG	Ishigakijimahi	1.82	63	P	Pb	18 37 31.4	-0.5
WCHH	Zhanghua	1.82	280	P	Pn	18 37 30.0	+1.5
	baz=279						
WCHH				S	Sb	18 37 54.4	-0.1
	baz=279						
ECL	Taimali	1.86	231	eP	Pn	18 37 28.2	-0.9
	baz=241						
ECL				eS	Sn	18 37 50.2	-1.5
	baz=241						
PCYT	Pengchaiyu	1.89	348	eP	Pn	18 37 30.6	+1.2
	baz=346						
SLGT	Liugui	1.89	246	eP	Pb	18 37 32.4	-0.8
	baz=239						
SLGT				S	Sn	18 37 54.2	+1.8
	baz=239						
LYUB	Lan-yu	1.97	206	P	Pn	18 37 30.5	-0.1
	baz=206						
LYUB				eS	Sn	18 37 54.4	+0.1
	baz=206						
SSD	Sandimen	2.02	240	P	Pn	18 37 32.9	+1.6
	baz=236						
SSD				S	Sn	18 37 56.6	+1.1
	baz=236						
EAST	Anshuo	2.08	228	eP	Pn	18 37 34.0	+1.9
	baz=235						
EAST				S	Sn	18 37 57.1	+0.1
	baz=235						
MASBT	Mashibuluo	2.09	237	eP	Pb	18 37 36.5	-0.2
	baz=233						
MASBT				eS	Sn	18 37 57.4	+0.1
	baz=233						
HEN	Hengchun	2.42	223	P	Pn	18 37 38.4	+1.7
	baz=223						
HEN				S	Sn	18 38 06.3	+1.1
	baz=223						
PHUB	P'eng-hu	2.72	265	P	Pn	18 37 42.9	+2.0
	baz=279						
PHUB				S	Sn	18 38 13.4	+0.7
	baz=279						
JMJ	Miyako jima 2	2.73	67	eP	Pn	18 37 40.5	-0.5
	baz=68						
PNG	Penghu	2.73	266	iP	Pn	18 37 42.9	+1.9
	baz=280						
PNG				S	Sn	18 38 14.8	+1.9
	baz=280						
PTMZ	Houxiangcun	3.34	293	P	Pn	18 37 50.4	+0.9
	baz=283						
PTMZ				S	Sn	18 38 27.8	-0.4
	baz=283						
KNMB	Chin-men Tao	3.84	281	P	Pn	18 37 57.2	+1.0
	baz=282						

BGR ***28*** *19:24:06.0±0.0, 2°.61S×19°.12W, h10^{km}, mb4.7, Ms4.3*

MOS ***28*** *19:24:12.9±0.9, 0°.50S×20°.03W, h10^{km}, mb5.3/26, MS5.3/5, Error ellipse: s-maj=9.8km s-min=4.3km az=54.8*

IDC ***28*** *19:24:14.0±0.5, 0°.47S×19°.99W, h0^{km}, mb4.6/30, mb1 4.7/31, mb1mx4.6/46, mbtmp4.6/31, ML4.9/1, MS4.4/32, Ms1 4.4/32, ms1mx4.3/43, Error ellipse: s-maj=18.4km s-min=11.8km az=146.0*

NEIC ***28*** *19:24:15.5±1.4, 0°.51S±0°.04×19°.96W±0°.08, h10^{km}±1^{km}, mb5.1/194, Error ellipse: s-maj=14.2km s-min=4.6km az=290.0*

GCMT ***28*** *19:24:20.5±0.2, 0°.31S±0°.01×20°.05W±0°.01, h25^{km}, MW5.1/120, Moment Tensor Solution. s41,c53; s120,c172; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.34±.15; M$_{\theta\theta}$0.27±.12; M$_{\phi\phi}$-1.61±.13; M$_{r\theta}$3.33±.31; M$_{\theta\phi}$-4.19±.10; M$_{\phi r}$0.60±.24; Best double couple: M$_0$5.55100×10^{16} NP1:φ$_s$176.00000°, δ50.00000°, λ11.00000°. NP2:φ$_s$78.00000°, δ81.00000°, λ139.00000°. Principal axes: T 5.1710, Plg34.0000°, Azm29.0000°; N 0.7570, Plg48.0000°, Azm249.0000°; P -5.9300, Plg21.0000°, Azm134.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 19:24:16.7±0.3, **0°.48S**±0°.06×**19°.90W**±0°.05, **h19^{km}, n573, σ1^{s}.46**/552, **mb5.0**/204, **MS4.4**/39, **77C-74D, Fault plane solution: NP1:**φ$_s$199.80302°, δ59.34806°, λ28.88170°. **NP2:**φ$_s$94.09575°, δ65.44807°, λ145.90968°. **Principal axes:** T Plg40.8676°, Azm54.8434°; N Plg48.8751°, Azm242.5483°; P Plg3.8235°, Azm148.1584°; **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	ASCENSION HYDR	9.08	144	T	T	19 36 17.1	
	baz=322						
H10N3	ASCENSION HYDR	9.09	144	T	T	19 35 33.7	
	baz=322,slow=74						
H10N1	ASCENSION HYDR	9.10	144	T	T	19 35 33.9	
	baz=322,slow=74						
ASCN	Ascension	9.24	143	Pn	Pn	19 26 28.5	-0.6
MBO	M'Bour	15.06	11	Pn	Pn	19 27 48.4	-0.2
SACV	Santiago Islan	15.78	347	Pn	Pn	19 27 54.8	-3.3
LIC	Lamto	16.27	66	eP	Pn	19 28 06.8	+2.4
	327nm,1.7s						
TIC	Toumodi	16.45	64	eP	Pn	19 28 07.2	+0.5
KIC	Kosan Boka	16.59	66	eP	Pn	19 28 09.3	+0.8
	33nm,0.6s						
DBIC	Dimbokro	16.61	64	Pn	Pn	19 28 08.6	-0.1
	4.2nm,0.3s,baz=255,slow=13,SNR=34						
DBIC				Sn	Sn	19 31 03.0	-10
	5.2nm,0.3s,baz=199,slow=23,SNR=8.9						
DBIC				LR	LR	19 33 31.6	
	comp=Z,990nm,18.1s,baz=258,slow=33						
DBIC	Dimbokro	16.61	64	Pn	Pn	19 28 08.0	-0.7
RCBR	Riachuelo	16.83	251	P	Pn	19 28 06.7	-4.9
RCBR				pmax	pmax		
	comp=Z,18nm,0.8s						
RCBR	Riachuelo	16.83	251	eP	P	19 28 16.4	+2.8
RCBR	Riachuelo	16.83	251	Pn	Pn	19 28 06.7	-4.9
KOWA	Kowa	21.64	46	P	P	19 29 06.5	+0.3
	comp=Z,156nm,1.1s,baz=229,slow=7.9,SNR=117						
KOWA				S	S	19 32 57.2	-8.2
	comp=Z,16nm,0.8s,baz=179,slow=21,SNR=2.3						
KOWA				LR	LR	19 37 10.3	
	comp=Z,1μm,18.0s,baz=216,slow=36						
KOWA	Kowa	21.64	46	P	P	19 29 06.7	+0.5
GDU01	Guandu, BA	23.50	235	eP	P	19 29 29.1	+3.3
ROSB	Rosrio	24.33	264	eP	P	19 29 37.6	+4.0
CMC01	Camacan, BA	24.37	232	eP	P	19 29 38.2	+4.3
GUA01	Guaratinga, BA	25.32	230	eP	P	19 29 46.9	+4.4
TORD	Torodi Ar. Bea	25.33	57	P	P	19 29 43.1	+0.4
	comp=Z,50nm,0.7s,baz=231,slow=9.7,SNR=89						
TORD				S	S	19 34 23.8	+16
	comp=Z,2.7nm,0.6s,baz=245,slow=22,SNR=3.1						
TORD				LR	LR	19 38 48.2	
	comp=Z,403nm,18.3s,baz=245,slow=34						
RIB01	Linhares ES	27.46	226	eP	P	19 30 05.1	+3.3
BSFB	Barra de Sao F	27.48	227	eP	P	19 30 05.6	+3.5
SDBA	SAO DESIDERIO	27.48	243	eP	P	19 30 05.8	+3.6
SJMB	Sao Joao De Ma	27.65	228	eP	P	19 30 08.1	+4.5
BDFB	Brasilia	31.57	240	LR	LR	19 41 42.2	
	comp=Z,871nm,21.0s,baz=103,slow=33						
TTIG	Tnine Tigouga,	32.72	18	P	P	19 30 52.1	+3.6
ZGR	Zagora	33.33	23	P	P	19 30 55.0	+1.3
OUK	Oukaimeden	33.52	19	P	P	19 30 60.0	+4.3
OUZM	OUZ	33.62	21	P	P	19 30 58.1	+1.9
TZRR	Tazzarine	33.94	22	P	P	19 31 01.0	+1.9
ARAG	Araguaiana, MT	34.94	243	eP	P	19 31 12.6	+4.9
NPGB	Novo Progresso	35.95	259	eP	P	19 31 19.9	+3.2
ITTB	Itaituba	36.00	263	eP	P	19 31 21.4	+4.5
MDT	Midelt	36.12	22	P	P	19 31 19.9	+2.1
	comp=Z,16nm,0.9s,baz=235,slow=5.9,SNR=20						
MDT	Midelt	36.12	22	P	P	19 31 21.2	+3.4
FRTB	Fartura	36.69	230	eP	P	19 31 27.2	+4.4
LCRM	LCR	36.81	21	P	P	19 31 27.0	+3.2
PCMB	Pacaembu	37.09	233	eP	P	19 31 29.7	+3.5
CLDB	Colider	37.13	253	eP	P	19 31 29.1	+2.4
TIJ01	Guaruva-PR	37.42	226	eP	P	19 31 32.0	+3.0
PDRB	Porto dos Gac	38.20	252	eP	P	19 31 38.6	+3.0
JBK	JBK	38.25	23	P	P	19 31 39.0	+2.9
SALV	Santo Antonio	38.49	245	eP	P	19 31 42.2	+4.1
PVAQ	Vaqueiros	39.34	15	eLR	LR	19 43 32.5	
	comp=Z,575nm,18.0s						
PTGB	Pitanga	39.35	230	eP	P	19 31 48.4	+3.1
PCVE	Castro Verde	39.47	15	eP	P	19 31 48.4	+2.4
	comp=Z,55nm,1.1s						
TER01	Tubaro-SC	39.49	222	eP	P	19 31 49.8	+3.6
PNCL	Nicolau / Gran	39.80	14	eP	P	19 31 49.5	+0.8
	comp=Z,69nm,1.6s						
PTGA	Pitinga	40.06	269	LR	LR	19 46 59.7	
	comp=Z,296nm,18.3s,baz=90,slow=34						
AQDB	Aquidauana	40.24	238	P	P	19 31 51.2	-1.4
EVO	Evora	40.33	14	eP	P	19 31 55.8	+2.7
	comp=Z,70nm,1.6s						
BOAV	Boa Vista	40.71	274	eP	P	19 32 00.0	+3.4
BOAV	Boa Vista	40.71	274	P	P	19 31 56.4	-0.2
PESTR	Estremoz	40.75	15	eP	P	19 31 59.0	+2.4
	comp=Z,84nm,2.0s						
PMTG	Montargil	40.79	14	eP	P	19 31 58.0	+1.1
	comp=Z,61nm,1.5s						
ITAB	Concordia	40.81	227	eP	P	19 32 00.7	+3.5
TSUM	Tsumeb	41.19	119	P	P	19 32 00.6	-0.1
PMRV	Marv??o	41.33	15	eP	P	19 32 03.9	+2.5
	comp=Z,54nm,1.4s						
PMRV	Marv??o	41.33	15	eLR	LR	19 44 31.0	
	comp=Z,718nm,18.0s						
PTLB	Pontes e Lacer	41.49	247	eP	P	19 32 05.3	+2.3
PTLB	Pontes e Lacer	41.49	247	P	P	19 32 03.0	0.0
PCAS	Casmilo, Conde	41.66	13	eP	P	19 32 05.7	+1.7
	comp=Z,106nm,1.8s						
CART	Cartagena	41.71	23	P	P	19 32 04.2	-0.3
CART				IAmb	IAmb	19 32 06.9	
	comp=Z,34nm,1.1s						
VILB	Vilhena	41.81	251	eP	P	19 32 08.5	+2.8
PAB	San Pablo	42.30	18	P	P	19 32 09.6	+0.2
PAB				pmax	pmax		
	comp=Z,30nm,1.4s						
PAB	San Pablo	42.30	18	P	P	19 32 09.6	+0.2
ESDC	Sonseca Array	42.54	18	P	P	19 32 12.8	+1.5
	comp=Z,10nm,1.0s,baz=208,slow=8.5,SNR=22						
ESDC				PP	PP	19 33 48.5	-1.6
	comp=Z,3.5nm,0.9s,baz=209,slow=10,SNR=5.3						
ESDC				LR	LR	19 50 06.3	
	comp=Z,547nm,19.7s,baz=225,slow=36						
ESDC	Sonseca Array	42.54	18	P	P	19 32 11.5	+0.2
ESBB	Sonseca Array	42.54	18	P	P	19 32 11.3	0.0
ESBB				IAmb	IAmb	19 32 14.6	
	comp=Z,52nm,1.5s						
MVO	Moncorvo	43.06	14	eP	P	19 32 17.6	+2.1
	comp=Z,75nm,1.3s						
MVO	Moncorvo	43.06	14	eLR	LR	19 44 45.1	
	comp=Z,635nm,18.0s						
SIV	San Ignacio	43.43	247	P	P	19 32 19.0	+0.2
	comp=Z,5.2nm,1.1s,baz=79,slow=9.7,SNR=7.5						
PGAV	Gavieira, Arco	43.53	13	eLR	LR	19 47 45.0	
	comp=Z,495nm,18.0s						
CPSB	Cacapava Do Su	43.59	224	eP	P	19 32 22.7	+2.8
CPUP	Villa Florida	44.25	231	P	P	19 32 26.2	+1.0
	comp=Z,4.7nm,1.1s,baz=56,slow=9.9,SNR=3.8						
CPUP				LR	LR	19 49 41.7	
	comp=Z,380nm,19.4s,baz=62,slow=35						
CPUP	Villa Florida	44.25	231	P	P	19 32 23.9	-1.4
CPUP				pmax	pmax		
	comp=Z,13nm,1.4s						
CPUP	Villa Florida	44.25	231	eP	P	19 32 28.2	+2.9
CPUP	Villa Florida	44.25	231	P	P	19 32 23.9	-1.4
PLTB	Pedras Altas	44.52	222	eP	P	19 32 30.5	+3.1
PLTB	Pedras Altas	44.52	222	P	P	19 32 25.2	-2.2
KEST	Kesra	45.16	34	P	P	19 32 33.9	+1.3
	comp=Z,10nm,0.9s,baz=230,slow=3.1,SNR=13						
KEST				LR	LR	19 53 06.6	
	comp=Z,3μm,18.1s,baz=176,slow=38						
KEST	Kesra	45.16	34	P	P	19 32 32.0	-0.5
KEST				IAmb	IAmb	19 32 36.7	
	comp=Z,17nm,1.1s						
ITQB	Itaqui	45.44	227	eP	P	19 32 37.5	+2.8
ITQB	Itaqui	45.44	227	P	P	19 32 33.0	-1.8
ITQB				IAmb	IAmb	19 32 38.5	
	comp=Z,43nm,1.5s						
ETMB	Extrema	46.99	257	eP	P	19 32 49.8	+2.7
ETMB	Extrema	46.99	257	P	P	19 32 46.0	-1.2
VSL	Villasalto	47.96	31	P	P	19 32 53.9	-0.4
VSL				IAmb	IAmb	19 32 56.8	
	comp=Z,17nm,1.0s						
CLTB	Caltabellotta	48.67	35	P	P	19 32 59.7	-0.3
CLTB				IAmb	IAmb	19 33 05.3	
	comp=Z,16nm,0.7s						
LFF	La Frestale	48.79	19	eP	P	19 33 02.4	+1.8
LFF				pmax	pmax		
	comp=Z,37nm,1.4s						
BAUV	El Baul	48.85	282	P	P	19 33 00.2	-1.4
BAUV				IAmb	IAmb	19 33 16.0	
	comp=Z,32nm,1.1s						
CORL	Corleone	48.94	35	P	P	19 33 00.3	-1.6
CORL				IAmb	IAmb	19 33 15.2	
	comp=Z,25nm,1.0s						
CAF	Calviac	49.23	21	eP	P	19 33 05.0	+1.0
CAF				pmax	pmax		
	comp=Z,26nm,1.3s						
MFF	Saint Martin d	49.99	18	eP	P	19 33 11.8	+2.1
MFF				pmax	pmax		
	comp=Z,390nm,2.5s						
LPAZ	La Paz	50.05	249	P	P	19 33 10.8	-0.7
	comp=Z,6.3nm,0.8s,baz=67,slow=3.9,SNR=18						
LPAZ				LR	LR	19 54 02.4	
	comp=Z,438nm,18.1s,baz=84,slow=36						
LPAZ	La Paz	50.05	249	P	P	19 33 09.4	-2.1
LPAZ				pmax	pmax		
	comp=Z,13nm,0.9s						
LPAZ	La Paz	50.05	249	eP	P	19 33 14.0	+2.5
LPAZ	La Paz	50.05	249	P	P	19 33 09.4	-2.1
LBTB	Lobatse	50.26	123	P	P	19 33 11.0	-1.3
LBTB				pmax	pmax		
	comp=Z,12nm,0.8s						
LBTB	Lobatse	50.26	123	P	P	19 33 11.0	-1.3
LBTB				IAmb	IAmb	19 33 13.6	
	comp=Z,12nm,0.8s						
MBAR	Mbarara	50.64	90	P	P	19 33 16.6	+1.2
MBAR				pmax	pmax		
	comp=Z,11nm,1.1s						
MBAR	Mbarara	50.64	90	P	P	19 33 16.6	+1.2
BNI	Bardonecchia	51.09	24	P	P	19 33 18.7	+0.4
BNI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BNI	Bardonecchia	51.09	24	P	P	19 33 18.7	+0.4
CASP	Castiglione de	51.18	29	P	P	19 33 17.6	-1.2
SDV	Santo Domingo	51.38	282	eP	P	19 33 24.2	+3.2
BOSA	Boshof	51.40	127	P	P	19 33 21.0	+0.1
	comp=Z,15nm,0.7s,baz=303,slow=7.9,SNR=31						
BOSA				LR	LR	19 51 04.2	
	comp=Z,279nm,20.8s,baz=254,slow=31						
BOSA	Boshof	51.40	127	P	P	19 33 20.2	-0.7
BOSA				pmax	pmax		
	comp=Z,15nm,0.8s						
BOSA	Boshof	51.40	127	P	P	19 33 20.2	-0.7
BOSA				IAmb	IAmb	19 33 22.2	
	comp=Z,15nm,0.8s						
LPL	La Plagne	51.49	24	eP	P	19 33 23.1	+1.7
LPL				pmax	pmax		
	comp=Z,68nm,2.0s						
MSSA	Maissana	51.72	27	P	P	19 33 21.5	-1.4
MSSA				IAmb	IAmb	19 33 27.0	
	comp=Z,32nm,1.3s						
PAOL	Paolisi	51.81	33	P	P	19 33 23.3	-0.3
TIP	Timpagrande	51.81	36	P	P	19 33 24.0	+0.3
TIP				IAmb	IAmb	19 33 25.6	
	comp=Z,17nm,0.9s						
OSSC	Osservatorio P	51.91	29	P	P	19 33 23.6	-0.7
PB08	IPOC Station P	51.97	245	P	P	19 33 23.7	-1.8
VLC	Villacollemand	51.99	27	P	P	19 33 25.2	+0.3
CLF	Chambon-Foret	52.01	19	P	P	19 33 25.9	+1.0
CLF				IAmb	IAmb	19 33 35.1	
	comp=Z,18nm,1.0s						
AQU	L'Aquila	52.12	31	P	P	19 33 25.5	-0.4
AQU				pmax	pmax		
	comp=Z,26nm,1.1s						
AQU	L'Aquila	52.12	31	P	P	19 33 25.5	-0.4
AQU				IAmb	IAmb	19 33 28.8	
	comp=Z,26nm,1.1s						
PB11	IPOC Station P	52.32	245	P	P	19 33 27.6	-0.4
PB11				IAmb	IAmb	19 33 40.8	
	comp=Z,22nm,1.2s						
NRCA	Norcia	52.32	30	P	P	19 33 27.7	+0.2
MURB	Monte Urbino	52.34	30	P	P	19 33 26.9	-0.6
MURB				IAmb	IAmb	19 33 35.9	
	comp=Z,28nm,1.3s						
ZCCA	Zocca	52.41	28	P	P	19 33 28.4	+0.3
ZCCA				IAmb	IAmb	19 33 31.1	
	comp=Z,17nm,0.8s						
SENIN	Lac Senin/Sane	52.41	24	P	P	19 33 27.2	-1.0
PRMA	PARMA	52.43	27	P	P	19 33 28.0	0.0
LVC	Limon Verde	52.46	242	P	P	19 33 28.4	-0.8
	comp=Z,3.5nm,0.7s,baz=39,slow=6.5,SNR=1.9						
LVC	Limon Verde	52.46	242	eP	P	19 33 31.1	+2.0
PB07	IPOC Station P	53.06	243		P	19 33 30.5	-2.9
PB07				IAmb	IAmb	19 33 45.5	
	comp=Z,20nm,0.8s						
CZSB	Cruzeiro do Su	53.11	261	eP	P	19 33 37.5	+3.8
SALO	Salr	53.18	26	P	P	19 33 33.8	+0.1
SALO				IAmb	IAmb	19 33 35.1	
	comp=Z,34nm,1.5s						
TEOL	Teolo	53.50	27	P	P	19 33 35.6	-0.4
TEOL				IAmb	IAmb	19 33 37.1	
	comp=Z,16nm,1.0s						
ITM	Ithomi	53.83	41	P	P	19 33 38.4	-0.2
ITM				IAmb	IAmb	19 33 45.5	
	comp=Z,22nm,0.9s						
CTI	Castel Tesino	54.02	27	P	P	19 33 39.4	-0.5
CTI				pmax	pmax		
	comp=Z,11nm,0.9s						
CTI	Castel Tesino	54.02	27	P	P	19 33 39.4	-0.5
DAVA	Damuels	54.21	25	iP	P	19 33 41.8	+0.4
	comp=Z,29nm,0.7s,SNR=7.4						
FETA	Feichten	54.36	25	eP	P	19 33 42.7	+0.3
	comp=Z,15nm,0.8s,SNR=5.9						
BFO	Black Forest	54.42	23	P	P	19 33 43.0	+0.3
BFO				pmax	pmax		
	comp=Z,11nm,0.9s						
BFO	Black Forest	54.42	23	eP	P	19 33 43.5	+0.7
	comp=Z,6.9nm,0.9s,baz=216,slow=7.0						
BFO	Black Forest	54.42	23	P	P	19 33 43.0	+0.3
DOU	Dourbes	54.57	19	dP	P	19 33 44.5	+0.8
	comp=Z,7.4nm,0.9s						
ROSC	El Rosal	54.61	276	LR	LR	19 54 09.7	
	comp=Z,275nm,21.7s,baz=54,slow=33						
UBR	Ueberruh	54.62	24	eP	P	19 33 45.3	+1.1
	comp=Z,12nm,0.7s,baz=216,slow=7.0						
STAL	STALIGIAL	54.66	27	P	P	19 33 44.2	-0.3
STAL				IAmb	IAmb	19 33 46.6	
	comp=Z,12nm,0.9s						
SQTA	Sankt Quirin	54.72	26	eP	P	19 33 45.3	+0.3
	comp=Z,23nm,0.9s,SNR=7.7						
RETA	Reutte	54.74	25	iP	P	19 33 45.2	+0.2
	comp=Z,14nm,1.0s						
SKDS	Skadanscina	54.74	29	iP	P	19 33 45.6	+0.6
MOTA	Moosalm	54.77	25	eP	P	19 33 45.4	0.0
	comp=Z,16nm,1.1s,SNR=5.7						
ABTA	Abfaltersbach	54.94	27	eP	P	19 33 47.7	+1.2
	comp=Z,17nm,0.9s,SNR=8.3						
WTTA	Wattenberg	54.94	26	iP	P	19 33 47.1	+0.4
	comp=Z,14nm,1.0s,SNR=5.6						
WATA	Walderalm	54.97	26	iP	P	19 33 47.0	+0.1
	comp=Z,18nm,1.4s						
ZOU	Zoufplan	55.00	27	P	P	19 33 47.7	+0.5
ZOU				IAmb	IAmb	19 33 49.4	
	comp=Z,43nm,1.4s						
ROBS	Robic	55.02	28	iP	P	19 33 48.0	+1.0
BCLA	Clavier	55.08	19	dP	P	19 33 47.5	+0.1
CADS	Cadrg	55.11	28	iP	P	19 33 48.8	+1.0
STU	Stuttgart	55.12	23	P	P	19 33 47.4	-0.3
STU				pmax	pmax		
	comp=Z,12nm,0.9s						
STU	Stuttgart	55.12	23	eP	P	19 33 48.7	+1.0

	comp=Z,19nm,0.8s,baz=216,slow=7.0						
STU	Stuttgart	55.12	23	P	P	19 33 47.4	-0.3
STU				IAmb	IAmb	19 33 48.8	
	comp=Z,12nm,0.9s						
KBN	Korca	55.13	37	P	P	19 33 49.7	+1.7
KBN				pmax	pmax		
	comp=Z,20nm,1.2s						
KBN	Korca	55.13	37	P	P	19 33 49.7	+1.7
KBN				IAmb	IAmb	19 34 03.0	
	comp=Z,20nm,1.2s						
PDG	Podgorica	55.35	35	⇓P	P	19 33 49.0	-0.5
PDG	Podgorica	55.35	35	P	P	19 33 49.9	+0.4
PDG				IAmb	IAmb	19 33 52.5	
	comp=Z,32nm,1.3s						
MYKA	Terra Mystica	55.36	28	*i* P	P	19 33 50.8	+1.2
	comp=Z,14nm,1.2s						
ZARC	Zaragoza, Cauc	55.37	279	P	P	19 33 48.2	-1.9
LODK	Lodwar	55.37	86	P	P	19 33 49.2	-1.0
ZON	Zonda	55.46	231	P	P	19 33 49.6	-1.0
ZON				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZON	Zonda	55.46	231	P	P	19 33 49.6	-1.0
FUR	Furstenfeldbru	55.48	25	*e*P	P	19 33 50.9	+0.5
	comp=Z,14nm,0.8s,baz=216,slow=7.0						
BTNL	Ternell	55.50	20	*d*P	P	19 33 51.8	+1.4
KBA	Koelnbreinsper	55.56	27	*i* P	P	19 33 51.6	+0.5
	comp=Z,5.7nm,0.6s						
FNA	Florina	55.58	37	P	P	19 33 51.4	+0.2
FNA				pmax	pmax		
	comp=Z,27nm,1.0s						
FNA	Florina	55.58	37	P	P	19 33 51.4	+0.2
FNA				IAmb	IAmb	19 33 53.7	
	comp=Z,27nm,1.0s						
OBKA	Obir	55.70	28	*i* P	P	19 33 53.2	+1.1
	comp=Z,5.7nm,0.9s						
RJOB	Jochberg	55.81	26	*e*P	P	19 33 52.7	-0.1
	comp=Z,17nm,0.7s,baz=216,slow=7.0						
TNS	Taunus Mts	56.02	22	*e*P	P	19 33 55.5	+1.3
	comp=Z,7.5nm,0.8s,baz=216,slow=7.0						
SOKA	Soboth	56.05	28	*e*P	P	19 33 55.7	+1.1
	comp=Z,14nm,0.9s,SNR=8.7						
APE	Apeiranthos	56.20	43	⇑P	P	19 33 56.1	+0.3
APE	Apeiranthos	56.20	43	⇑P	P	19 33 56.1	+0.3
SJES	Sjenica	56.29	34	*e*P	P	19 33 57.7	+1.3
SKO	Skopje	56.34	36	*i* P	P	19 33 58.2	+1.6
BBLS	Lazići	56.36	33	*e*P	P	19 33 57.5	+0.7
MOA	Molln	56.55	27	*i* P	P	19 33 57.9	-0.2
	comp=Z,8.2nm,0.9s						
IVAS	Ivanjica	56.59	34	*e*P	P	19 33 58.8	+0.3
GO04	Tololo Observa	56.61	234	P	P	19 33 57.6	-1.4
GO04				IAmb	IAmb	19 34 04.2	
	comp=Z,20nm,0.8s						
STIP	Stip	56.61	37	*i* P	P	19 34 00.9	+2.4
GRFO	Grafenberg	56.66	24	P	P	19 33 57.6	-1.1
GRFO				pmax	pmax		
	comp=Z,16nm,0.9s						
GRFO	Grafenberg	56.66	24	P	P	19 33 57.6	-1.1
GRFO				IAmb	IAmb	19 33 59.8	
	comp=Z,16nm,0.9s						
GRA1	Grafenberg Arr	56.66	24	P	P	19 33 57.6	-1.2
GRA1				IAmb	IAmb	19 33 59.9	
	comp=Z,15nm,0.9s						
GRF	Grafenberg Arr	56.66	24	P	P	19 33 57.6	-1.2
GRF				pmax	pmax		
	comp=Z,15nm,0.9s						
GRF	Grafenberg Arr	56.66	24	*e*P	P	19 33 59.1	+0.3
	comp=Z,9.4nm,0.8s,baz=216,slow=7.0						
GRF				*e*L	L	19 59 13.8	
	comp=Z,141nm,18.7s						
ARSA	Arzberg	56.70	28	*e*P	P	19 33 59.5	+0.4
	comp=Z,9.4nm,1.0s						
CO03	El Pedregal	56.77	233	P	P	19 33 58.5	-1.6
CO03				IAmb	IAmb	19 34 15.5	
	comp=Z,25nm,1.3s						
DIVS	Divibare	56.84	34	P	P	19 34 00.1	-0.1
DIVS				IAmb	IAmb	19 34 02.8	
	comp=Z,24nm,1.3s						
DIVS	Divibare	56.84	34	*e*P	P	19 34 01.5	+1.3
WET	Wettzell	56.92	25	*e*P	P	19 34 00.6	0.0
	comp=Z,11nm,0.8s,baz=216,slow=7.0						
GEC2	GERESS Array S	57.04	26	*e*P	P	19 34 01.6	+0.1
	comp=Z,6.0nm,0.8s,baz=216,slow=7.0						
GEC2	GERESS Array S	57.04	26	P	P	19 34 02.0	+0.4
GERES	GERESS Array B	57.04	26	P	P	19 34 01.8	+0.2
	comp=Z,4.9nm,0.8s,baz=207,slow=6.2,SNR=45						
GERES				PP	PP	19 36 05.1	-3.4
	comp=Z,3.4nm,0.9s,baz=201,slow=7.9,SNR=4.9						
GERES				LR	LR	19 59 27.1	
	comp=Z,191nm,18.7s,baz=254,slow=37						
GERES	GERESS Array B	57.04	26	P	P	19 34 01.7	+0.1
BARS	Barje	57.07	36	*e*P	P	19 34 03.1	+1.3
GRUS	Gruza	57.10	34	*e*P	P	19 34 03.4	+1.4
ROTZ	Rotzenmuhle	57.12	24	*e*P	P	19 34 02.2	+0.2
	comp=Z,0.8nm,0.8s,baz=216,slow=7.0						
TRUS	Trudelj	57.15	34	*e*P	P	19 34 03.9	+1.6
KMBO	Kilima Mbogo	57.15	91	P	P	19 34 05.1	+1.9
	comp=Z,2.1nm,0.8s,baz=249,slow=9.5,SNR=4.1						
KMBO	Kilima Mbogo	57.15	91	*i* P	P	19 34 06.1	+2.9
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KHC	Kasperske Hory	57.21	26	*e*P	P	19 34 03.1	+0.4
KHC				*e*x	x	19 35 10.0	
KHC				*e*PP	PP	19 36 09.2	-0.7
KHC				AMS	AMS	20 01 30.0	
	comp=Z,600nm,18.6s						
KHC	Kasperske Hory	57.21	26	P	P	19 34 02.9	+0.2
KHC				pmax	pmax		
	comp=Z,22nm,1.5s						
KHC	Kasperske Hory	57.21	26	P	P	19 34 02.9	+0.2
KHC				IAmb	IAmb	19 34 03.8	
	comp=Z,22nm,1.5s						
MANZ	Manzenberg	57.25	24	*e*P	P	19 34 03.1	+0.1
	comp=Z,1.7nm,0.8s,baz=216,slow=7.0						
BOSS	Bosilegrad	57.27	36	*e*P	P	19 34 04.7	+1.5
CKRC	Cesky Krumlov	57.29	26	*e*P	P	19 34 05.0	+1.7
CKRC				*e*PP	PP	19 36 10.2	-0.4
CONA	Conrad Observa	57.34	28	*i* P	P	19 34 04.2	+0.4
	comp=Z,7.1nm,0.9s						
VA03	San Esteban	57.41	231	P	P	19 34 03.2	-1.3
VA03				IAmb	IAmb	19 34 17.3	
	comp=Z,13nm,0.8s						
FRGS	Fruska Gora	57.42	32	⇓P	P	19 34 04.4	+0.1
FRGS	Fruska Gora	57.42	32	*e*P	P	19 34 04.9	+0.6
SOP	Sopron	57.50	28	*e*P	P	19 34 05.7	+1.0
BOVS	Bovan	57.51	35	⇓P	P	19 34 05.5	+0.6
BOVS	Bovan	57.51	35	*e*P	P	19 34 05.5	+0.6
MORH	Mrgy, Hungar	57.51	31	⇑P	P	19 34 05.1	+0.2
MORH	Mrgy, Hungar	57.51	31	*e*P	P	19 34 05.7	+0.8
MOX	Moxa	57.56	23	*e*P	P	19 34 06.1	+0.9
	comp=Z,7.6nm,0.8s,baz=216,slow=7.0						
MOX				*e*L	L	19 59 40.6	
	comp=Z,327nm,19.3s						
NKC	Novy Kostel	57.58	24	*e*P	P	19 34 06.8	+1.6
NKC	Novy Kostel	57.58	24	*e*P	P	19 34 06.8	+1.6
WERN	Wernitzgruen	57.59	24	*e*P	P	19 34 05.9	+0.6
	comp=Z,4.1nm,0.9s,baz=216,slow=7.0						
MPLH	Magyarpolny	57.61	29	*e*P	P	19 34 05.7	+0.1
GUNZ	Gunzen	57.63	24	*e*P	P	19 34 06.2	+0.6
	comp=Z,5.3nm,0.8s,baz=216,slow=7.0						
PEL	Peldehue	57.66	230	P	P	19 34 04.7	-1.5
PEL				pmax	pmax		
	comp=Z,26nm,1.1s						
PEL	Peldehue	57.66	230	P	P	19 34 04.7	-1.5
PEL				IAmb	IAmb	19 34 10.6	
	comp=Z,26nm,1.1s						
EGYH	Egyhazaskeszo	57.68	29	*e*P	P	19 34 08.1	+2.1
WERD	Werda	57.68	24	*e*P	P	19 34 06.7	+0.7
	comp=Z,5.7nm,1.0s,baz=216,slow=7.0						
TANN	Tannenbergstha	57.72	24	*e*P	P	19 34 06.7	+0.4
	comp=Z,6.8nm,0.7s,baz=216,slow=7.0						
VTS	Vitosha	57.79	37	⇑P	P	19 34 07.9	+0.8
VTS	Vitosha	57.79	37	P	P	19 34 07.8	+0.8
VTS				pmax	pmax		
	comp=Z,31nm,1.5s						
VTS	Vitosha	57.79	37	P	P	19 34 07.8	+0.8
VTS				IAmb	IAmb	19 34 09.8	
	comp=Z,31nm,1.5s						
ZAPS	Zavoj	57.82	36	*e*P	P	19 34 08.8	+1.7
ZAGS	Zajecar	57.92	35	*e*P	P	19 34 08.6	+0.9
NEUB	Neuenburg	58.07	23	*e*P	P	19 34 09.6	+1.0
	comp=Z,15nm,0.8s,baz=216,slow=7.0						
ZST	Bratislava	58.12	28	*e*P	P	19 34 10.1	+1.0
ZST	Bratislava	58.12	28	*e*P	P	19 34 10.1	+1.0
MT09	Talagante	58.15	230	P	P	19 34 08.8	-0.9
MT09				IAmb	IAmb	19 34 23.2	
	comp=Z,18nm,1.0s						
PRU	Pruhonice	58.27	25	*e*P	P	19 34 11.3	+1.3
PRU				AMS	AMS	19 58 30.0	
	comp=Z,700nm,6.6s						
PRU	Pruhonice	58.27	25	*e*P	P	19 34 11.3	+1.3
PRU				MLR	MLR		
	comp=Z,700nm,6.6s						
MODS	Modra-Piesok	58.33	28	*e*P	P	19 34 10.4	-0.1
MODS				pmax	pmax		
	comp=Z,21nm,1.1s						
MODS	Modra-Piesok	58.33	28	*e*P	P	19 34 10.4	-0.1
BO02	Sierra Bellavi	58.40	229	P	P	19 34 10.0	-1.5
KRUC	Moravsky	58.41	27	*e*P	P	19 34 11.0	-0.1
SRO	Srobarova	58.44	29	*e*P	P	19 34 12.7	+1.4
SRO				pmax	pmax		
	comp=Z,12nm,0.8s						
SRO	Srobarova	58.44	29	*e*P	P	19 34 12.7	+1.4
BO01	Tunca	58.47	229	P	P	19 34 10.1	-1.6
BO01				IAmb	IAmb	19 34 27.7	
	comp=Z,9.3nm,0.7s						
FBE	Freiberg	58.47	24	*e*P	P	19 34 12.4	+1.0
	comp=Z,3.6nm,0.9s,baz=216,slow=7.0						
ALN	Alexandroupoli	58.55	40	P	P	19 34 12.8	+0.6
ALN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ALN	Alexandroupoli	58.55	40	P	P	19 34 12.8	+0.6
CLL	Collm	58.63	24	*i* P	P	19 34 12.5	-0.1
CLL				pmax	pmax		
	comp=Z,18nm,1.5s						
CLL	Collm	58.63	24	*i* P	P	19 34 12.5	-0.1
	comp=Z,18nm,1.5s						
CLL				*e*PP	PP	19 36 20.0	-2.4
CLL				*e*S	S	19 42 24.0	+8.1
CLL				*e*SSSS		19 49 18.0	
CLL	Collm	58.63	24	P	P	19 34 12.2	-0.4
AKAS	Kas	58.66	46	P	P	19 34 13.2	0.0
VRAC	Vranov	58.67	27	⇓P	P	19 34 12.0	-0.9
VRAC	Vranov	58.67	27	*e*P	P	19 34 13.1	+0.2
VRAC	Vranov	58.67	27	⇓P	P	19 34 12.0	-0.9
HERR	Herculane	58.68	34	⇑P	P	19 34 13.8	+0.8
BRG	Berggiesshubel	58.68	24	*e*P	P	19 34 13.6	+0.7
	comp=Z,3.1nm,0.8s,baz=216,slow=7.0						
PVCC	Panska Ves	58.68	25	*e*P	P	19 34 13.9	+1.0
PVCC				AMS	AMS	20 01 10.0	
	comp=Z,800nm,6.7s						
PVCC	Panska Ves	58.68	25	*e*P	P	19 34 13.9	+1.0
PVCC				MLR	MLR		
	comp=Z,800nm,6.7s						
BZS	Buzias	58.69	33	⇓P	P	19 34 14.3	+1.2
BZS	Buzias	58.69	33	⇓P	P	19 34 14.3	+1.2
JAVC	Velka Javorina	58.85	28	*e*P	P	19 34 15.3	+1.0
BALB	Balikesir	59.10	42	P	P	19 34 14.8	-1.2
BALB				IAmb	IAmb	19 34 17.5	
	comp=Z,15nm,0.8s						
ELL	Elmali	59.11	46	P	P	19 34 17.4	+1.0
ELL				pmax	pmax		
	comp=Z,72nm,1.0s						
ELL	Elmali	59.11	46	P	P	19 34 17.4	+1.0
SIRR	Siria	59.13	32	⇑P	P	19 34 16.9	+0.7
VYHS	Vyhne	59.16	29	*e*P	P	19 34 17.1	+0.8
VYHS				pmax	pmax		
	comp=Z,23nm,1.0s						
VYHS	Vyhne	59.16	29	*e*P	P	19 34 17.1	+0.8
GZR	Gura Zlata	59.19	34	⇓P	P	19 34 17.2	+0.5
GZR	Gura Zlata	59.19	34	⇓P	P	19 34 17.2	+0.5
UPC	Upice	59.28	26	*e*P	P	19 34 17.8	+0.6
UPC				AMS	AMS	20 00 00.0	
	comp=Z,1µm,6.2s						
UPC	Upice	59.28	26	*e*P	P	19 34 17.8	+0.6
UPC				MLR	MLR		
	comp=Z,1µm,6.2s						
VLAD	Vladila	59.29	36	⇑P	P	19 34 19.2	+2.0
PSZ	Piszkesteto	59.29	30	⇓P	P	19 34 18.2	+0.9
PSZ	Piszkesteto	59.29	30	P	P	19 34 17.9	+0.6
PSZ				pmax	pmax		
	comp=Z,41nm,1.4s						
PSZ	Piszkesteto	59.29	30	P	P	19 34 17.9	+0.6
DPC	Dobruska-Polom	59.31	26	*e*P	P	19 34 18.0	+0.6
DPC				*e*PP	PP	19 36 28.6	+0.1
DPC				AMS	AMS	19 59 40.0	
	comp=Z,900nm,5.9s						
DPC	Dobruska-Polom	59.31	26	*e*P	P	19 34 18.0	+0.6
DPC				*e*		19 36 28.6	
DPC				MLR	MLR		
	comp=Z,900nm,5.9s						
KRLC	Kraliky	59.31	27	*e*P	P	19 34 18.4	+1.0
KRLC				*e*PP	PP	19 36 28.3	-0.3
KRLC	Kraliky	59.31	27	*e*P	P	19 34 18.4	+1.0
KRLC				*e*		19 36 28.3	
CHVC	Chvalec	59.36	26	*e*P	P	19 34 18.5	+0.8
CHVC				AMS	AMS	19 59 40.0	
OSTC	Ostas	59.41	26	*e*P	P	19 34 19.0	+1.0
OSTC				AMS	AMS	19 59 10.0	
MORC	Moravsky Berou	59.44	27	⇓P	P	19 34 18.7	+0.4
MORC	Moravsky Berou	59.44	27	*e*P	P	19 34 18.9	+0.6
MORC	Moravsky Berou	59.44	27	P	P	19 34 18.9	+0.6
MORC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MORC	Moravsky Berou	59.44	27	P	P	19 34 18.9	+0.6
MORC				IAmb	IAmb	19 34 19.6	
	comp=Z,9.9nm,0.9s						
BSEG	Bad Segeberg	59.72	20	*e*P	P	19 34 21.0	+1.0
	comp=Z,19nm,0.7s,baz=216,slow=7.0						
OKC	Ostrava-Krasne	59.76	28	*e*P	P	19 34 21.7	+1.3
OKC	Ostrava-Krasne	59.76	28	*e*P	P	19 34 21.7	+1.3
COPA	Copaceanca	59.84	36	⇓P	P	19 34 21.6	+0.5
LANS	Liptovska Anna	59.91	29	*e*P	P	19 34 22.8	+1.3
LANS	Liptovska Anna	59.91	29	*e*P	P	19 34 22.8	+1.3
HUMR	Humele	59.93	36	⇓P	P	19 34 21.9	+0.1
DRGR		60.02	32	⇑P	P	19 34 23.3	+0.9
DRGR		60.02	32	⇑P	P	19 34 23.3	+0.9
ARR	Arges	60.22	35	⇓P	P	19 34 25.0	+1.2
EFI	East Falkland	60.26	206	*i* P	P	19 34 22.7	-1.1
EFI				pmax	pmax		
	comp=Z,22nm,1.1s						
RAZG	Razgrad	60.30	37	⇓P	P	19 34 24.6	+0.3
CJR	Cluj-Napoca	60.45	33	⇓P	P	19 34 26.9	+1.5
CJR	Cluj-Napoca	60.45	33	⇓P	P	19 34 26.9	+1.5
VOIR		60.50	35	⇑P	P	19 34 26.5	+0.8
VOIR		60.50	35	⇑P	P	19 34 26.5	+0.8
TRPA	Tarpa	60.77	31	⇑P	P	19 34 27.9	+0.5
OJC	Ojcow	60.80	28	P	P	19 34 27.8	+0.3
OJC				pmax	pmax		
	comp=Z,12nm,0.9s						
OJC	Ojcow	60.80	28	P	P	19 34 27.8	+0.3
OJC				IAmb	IAmb	19 34 28.8	
	comp=Z,12nm,0.9s						
PLCA	Paso Flores	60.84	222	LR	LR	19 58 08.7	
	comp=Z,196nm,20.8s,baz=75,slow=34						
BORA	Eskisehir	60.94	43	P	P	19 34 28.3	-0.6
BORA				IAmb	IAmb	19 34 30.6	
	comp=Z,26nm,1.3s						
UZH	Uzhgorod	60.97	31	⇓*i*P	P	19 34 29.0	+0.3
UZH				*i*		19 34 33.7	
BMR	Baia Mare	60.99	32	⇓P	P	19 34 29.6	+0.7
BMR	Baia Mare	60.99	32	⇓P	P	19 34 29.6	+0.7
DOPR	Dopca	61.00	35	⇑P	P	19 34 26.2	-2.9
MLR	Muntele Rosu	61.05	35	⇑P	P	19 34 29.7	+0.2
MLR	Muntele Rosu	61.05	35	P	P	19 34 29.1	-0.4
MLR				pmax	pmax		
	comp=Z,54nm,1.3s						
MLR	Muntele Rosu	61.05	35	P	P	19 34 29.1	-0.4
ARCR	ARCALIA	61.09	33	⇓P	P	19 34 29.2	-0.4
OZUR		61.30	35	⇑P	P	19 34 31.9	+0.8
COVR	Voineasa-Covas	61.40	35	⇓P	P	19 34 31.8	0.0
BISRR	Bisoca	61.52	36	⇑P	P	19 34 31.2	-1.4
PLOR	Plostina	61.66	35	⇓P	P	19 34 32.3	-1.2
PLOR	Plostina	61.66	35	⇓P	P	19 34 32.3	-1.2
VRI	Vrincioaia	61.71	35	⇓P	P	19 34 33.1	-0.7
VRI	Vrincioaia	61.71	35	⇓P	P	19 34 33.1	-0.7
MMAI	Mount Meron Ar	61.72	52	LR	LR	20 02 59.3	
	comp=Z,153nm,20.9s,baz=290,slow=38						
MDUB	Mudurnu	61.73	42	P	P	19 34 34.5	+0.4
TLBR	Topalu	61.76	37	⇑P	P	19 34 33.8	-0.4
HARR	Harsova	61.77	37	⇑P	P	19 34 34.5	+0.3
HARR	Harsova	61.77	37	⇑P	P	19 34 34.5	+0.3
ODBI	Odobesti	61.84	35	⇑P	P	19 34 35.8	+1.1
BURAR	Bucovina Array	61.88	33	⇑P	P	19 34 36.0	+0.9
BURAR	Bucovina Array	61.88	33	⇑P	P	19 34 36.0	+0.9
BURAR	Bucovina Array	61.88	33	P	P	19 34 36.0	+0.9
BUR08	Bucovina Ar. S	61.89	33	P	P	19 34 36.0	+0.9
TIRR	Tirgusor	61.94	37	⇑P	P	19 34 34.8	-0.5
TIRR	Tirgusor	61.94	37	⇑P	P	19 34 34.8	-0.5
TIRR	Tirgusor	61.94	37	P	P	19 34 34.8	-0.5
TESR	Tescani	62.03	35	⇑P	P	19 34 36.2	+0.2
TPGR	Topolog	62.15	37	⇓P	P	19 34 37.0	+0.2
CFR	Carcaliu	62.16	36	⇓P	P	19 34 36.5	-0.3
CFR	Carcaliu	62.16	36	⇓P	P	19 34 36.5	-0.3
GHRR		62.21	35	⇓P	P	19 34 37.5	+0.3
BR231	Keskin MP Arra	62.52	44	P	P	19 34 39.7	+0.2
ANTO	Ankara	62.54	44	P	P	19 34 39.9	+0.3
ANTO				pmax	pmax		
	comp=Z,51nm,1.4s						
ANTO	Ankara	62.54	44	P	P	19 34 39.9	+0.3
TLCR		62.57	37	⇑P	P	19 34 40.2	+0.7
TLCR		62.57	37	⇑P	P	19 34 40.2	+0.7
LVV	L'vov	62.60	30	*e*P	P	19 34 39.8	+0.1
BR131	Keskin Array S	63.06	44	P	P	19 34 43.4	+0.2
BR131				pmax	pmax		
	comp=Z,36nm,1.3s						
BR131	Keskin Array S	63.06	44	P	P	19 34 43.4	+0.2
BRTR	Keskin Array B	63.06	44	P	P	19 34 44.0	+0.8
	comp=Z,12nm,1.0s,baz=236,slow=6.2,SNR=29						
BRTR				LR	LR	20 02 25.2	
	comp=Z,102nm,21.1s,baz=227,slow=36						
BRTR	Keskin Array B	63.06	44	P	P	19 34 44.0	+0.8
BRTR	Keskin Array B	63.06	44	P	P	19 34 43.4	+0.2
TSSL	Sulina	63.10	37	⇓P	P	19 34 30.9	-12
ILGA	Ilgaz	63.69	43	P	P	19 34 47.5	+0.1
SORM	Soroca	63.90	34	⇓P	P	19 34 47.0	-1.4
SORM	Soroca	63.90	34	⇓P	P	19 34 47.0	-1.4
BNN	Bunyan	64.26	46	P	P	19 34 51.0	-0.1
GAZ	Gaziantep	64.61	48	P	P	19 34 53.5	+0.2
MOQ	Mont Orford	64.84	322	P	P	19 34 53.9	-0.7
SUW	Suwalki	64.89	26	*e*P	P	19 34 55.5	+0.9
SUW	Suwalki	64.89	26	P	P	19 34 54.8	+0.1
SUW				pmax	pmax		
	comp=Z,38nm,0.9s						
SUW	Suwalki	64.89	26	P	P	19 34 54.8	+0.1
SNOP	Sinop	65.12	42	P	P	19 34 55.9	-0.6
N59A	State Game Lan	65.17	316	P	P	19 34 57.3	+0.5
TOKA	Tokat	65.29	44	P	P	19 34 57.0	-0.7
TOKA				IAmb	IAmb	19 34 59.5	
	comp=Z,27nm,1.4s						
SDMD	Soldier's Deli	65.33	314	P	P	19 34 57.5	-0.4
SDMD				IAmb	IAmb	19 34 59.0	
	comp=Z,9.6nm,1.0s						
JSRW	J. Sargeant Re	65.44	312	P	P	19 34 58.5	-0.1
R58B	Mineral	65.54	313	P	P	19 34 58.9	-0.4
R58B				IAmb	IAmb	19 35 00.2	
	comp=Z,9.3nm,0.8s						
JTS	Las Juntas de	65.56	281	*i* P	P	19 34 54.6	-5.3
JTS				pmax	pmax		
	comp=Z,9.0nm,1.3s						
AKASG	Malin Array Be	65.81	32	P	P	19 35 00.4	-0.3
	comp=Z,12nm,0.9s,baz=235,slow=7.4,SNR=42						
AKASG				LR	LR	20 05 34.2	
	comp=Z,218nm,19.0s,baz=240,slow=38						
AKASG	Malin Array Be	65.81	32	P	P	19 35 00.1	-0.6
AKASG				pmax	pmax		
	comp=Z,15nm,1.2s						
AKASG	Malin Array Be	65.81	32	P	P	19 35 00.1	-0.6
AKASG				IAmb	IAmb	19 35 01.3	
	comp=Z,15nm,1.1s						
AKBB	Malin Array Si	65.81	32	*ce*P	P	19 34 59.8	-0.9
AKBB	Malin Array Si	65.81	32	P	P	19 34 59.8	-0.9
NB2	NORSAR Subarra	65.83	16	P	P	19 35 01.0	+0.3
	comp=Z,89nm,2.0s,baz=212,slow=6.5						
NB2	NORSAR Subarra	65.83	16	P	P	19 35 01.0	+0.3
	baz=212,slow=6.5						
NOA	NORSAR Array B	65.83	16	P	P	19 35 01.0	+0.3
	comp=Z,1.8nm,0.7s,baz=212,slow=6.6,SNR=10						
NOA				LR	LR	20 05 28.7	
	comp=Z,396nm,19.3s,baz=205,slow=38						
MALT	Malatya	65.93	47	P	P	19 35 03.0	+1.1
NC405	NORSAR Array S	66.03	16	P	P	19 35 02.1	+0.1
P57A	Homestead Farm	66.19	314	P	P	19 35 03.2	-0.2
P57A				IAmb	IAmb	19 35 06.6	
	comp=Z,19nm,1.1s						
TRQ	Mont Tremblant	66.69	322	P	P	19 35 06.3	-0.3
NACGM	Naroch	67.08	27	*i* P	P	19 35 07.5	-1.2
IIGN	Ignalina	67.10	27	*e*P	P	19 35 10.0	+1.1
SCHQ	Schefferville	67.15	333	P	P	19 35 09.6	+0.3
	comp=Z,7.0nm,0.9s,baz=145,slow=12,SNR=3.2						
SCHQ				LR	LR	19 59 44.1	
	comp=Z,171nm,18.8s,baz=117,slow=32						
IDID	Didziasalis	67.31	27	*e*P	P	19 35 11.1	+0.8
MARD	Mardin	67.33	49	P	P	19 35 10.9	0.0
V55A	Taylorsville	67.34	309	P	P	19 35 11.5	+0.6
WVNY	West Valley, N	67.71	317	P	P	19 35 14.1	+1.0
RAYN	Ar Rayn	67.75	64	P	P	19 35 14.7	+1.0
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RAYN	Ar Rayn	67.75	64	P	P	19 35 14.7	+1.0
RAYN				IAmb	IAmb	19 35 16.2	
	comp=Z,8.4nm,0.9s						
KOPT	Kop Dagi	68.04	46	P	P	19 35 16.6	+1.1
Q54A	Coxs Mills	68.07	313	P	P	19 35 15.2	-0.1
SIRT	Sirnak	68.64	49	P	P	19 35 19.0	-0.1
GURO	Guroymak-BITLI	68.67	48	P	P	19 35 20.0	+0.7
R53A	Hurricane	68.68	312	P	P	19 35 19.9	+0.7
R53A				IAmb	IAmb	19 35 26.1	
	comp=Z,14nm,0.9s						
SOC	Sochi	68.79	42	*e*P	P	19 35 17.8	-2.0
SOC				*e*		19 37 49.2	
SOC				*e*PPP	PPP	19 39 32.6	
SOC				*e*S	S	19 44 23.5	+0.9
SOC				*e*SS	SS	19 48 51.5	+3.7
TKL	Tuckaleechee C	69.28	309	P	P	19 35 22.2	-0.8
	comp=Z,4.3nm,0.8s,baz=140,slow=7.8,SNR=3.4						
VLDQ	Val d'Or	69.30	323	P	P	19 35 23.2	+0.4
VLDQ				IAmb	IAmb	19 35 25.1	
	comp=Z,16nm,1.1s						
GEVA	Gevas	69.36	48	P	P	19 35 23.9	+0.2
GEVA				IAmb	IAmb	19 35 26.0	
	comp=Z,20nm,0.9s						
DY2G	Dye2	69.38	349	*i* P	P	19 35 26.7	+3.4
S51A	Beattyville	69.70	311	P	P	19 35 25.3	-0.3
S51A				IAmb	IAmb	19 35 27.2	
	comp=Z,14nm,0.9s						
V51A	Loudon	69.77	309	P	P	19 35 25.8	-0.2
V51A				IAmb	IAmb	19 35 27.5	
	comp=Z,14nm,0.8s						
ACSO	Alum Creek Sta	70.04	313	P	P	19 35 27.1	-0.5
W50A	Signal Mountai	70.36	308	P	P	19 35 29.2	-0.5
W50A				IAmb	IAmb	19 35 34.9	
	comp=Z,26nm,1.1s						
R50A	Paris	70.45	311	P	P	19 35 30.3	+0.1
R50A				IAmb	IAmb	19 35 31.1	
	comp=Z,21nm,1.2s						
T50A	Nancy	70.48	310	P	P	19 35 30.9	+0.5
T50A				IAmb	IAmb	19 35 31.8	
	comp=Z,12nm,0.9s						
AKH	Akhalkalaki	70.65	45	⇓P	P	19 35 32.3	+0.8
AKH	Akhalkalaki	70.65	45	P	P	19 35 32.6	+1.1
NEY	Neytrino	70.71	43	*i* P	P	19 35 32.2	+0.3
NEY				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SFJD	Kangerlussuaq	70.71	348	P	P	19 35 31.6	+0.5
	comp=Z,11nm,0.8s,baz=165,slow=10,SNR=4.2						
SFJD	Kangerlussuaq	70.71	348	IAmb	IAmb	19 35 32.8	
	comp=Z,23nm,1.1s						
VNA2	Neumayer--Watz	70.81	176	P	P	19 35 32.3	+0.6
SHA1	Shidzhatmaz	70.83	43	*i* P	P	19 35 32.5	-0.2
KIV	Kislovodsk	70.93	43	*e*P	P	19 35 33.5	+0.4
KIV				pmax	pmax		
	comp=Z,31nm,1.1s						
KIV				MLR	MLR		
	comp=Z,46nm,18.0s						
KIV	Kislovodsk	70.93	43	P	P	19 35 33.4	+0.3
FINES	FINESS Array B	70.93	21	P	P	19 35 33.1	+0.5
	comp=Z,4.1nm,0.7s,baz=251,slow=4.3,SNR=16						
FINES				LR	LR	20 09 09.8	
	comp=Z,391nm,18.1s,baz=214,slow=38						
KBZ	Khabaz	70.99	43	P	P	19 35 34.2	+0.9
	comp=Z,25nm,0.9s,baz=237,slow=4.4,SNR=41						
KBZ				LR	LR	20 08 28.4	
	comp=Z,74nm,21.0s,baz=270,slow=37						
KBZ	Khabaz	70.99	43	*ce*P	P	19 35 33.9	+0.6
KBZ				pmax	pmax		
	comp=Z,35nm,0.9s						
ONI	Oni	71.00	44	P	P	19 35 33.5	0.0
ONI				pmax	pmax		
	comp=Z,34nm,1.0s						
ONI	Oni	71.00	44	P	P	19 35 33.5	0.0
U49A	Red Boiling Sp	71.07	309	P	P	19 35 34.1	+0.1
U49A				IAmb	IAmb	19 35 39.6	

	comp=Z,27nm,1.2s						
R49A	Shelbyville	71.09	311	P	P	19 35 33.5	-0.6
GNI	Garni	71.16	47	P	P	19 35 35.2	+0.5
GNI				pmax	pmax		
	comp=Z,38nm,1.1s						
GNI	Garni	71.16	47	P	P	19 35 35.2	+0.5
PYA1	Pyatigorsk	71.24	43	*i* P	P	19 35 35.7	+0.8
PYA1				pmax	pmax		
	comp=Z,3.0nm,1.3s						
CLTN	Cedars of Leba	71.39	308	P	P	19 35 35.5	-0.5
CLTN				IAmb	IAmb	19 35 50.0	
	comp=Z,24nm,1.4s						
NCK	Nalchik	71.39	43	*i* P	P	19 35 36.6	+0.8
NCK				pmax	pmax		
	comp=Z,23nm,1.1s						
VORD	Divnogorie	71.49	35	*e*P	P	19 35 35.4	-0.8
VORD				pmax	pmax		
	comp=Z,20nm,0.7s						
VSR	Storozhevoye	71.53	35	*e*P	P	19 35 35.5	-0.9
VSR				pmax	pmax		
	comp=Z,40nm,1.4s						
GOF	Gofitskoye	71.55	42⇑	*e*P	P	19 35 37.0	+0.3
GOF				pmax	pmax		
	comp=Z,36nm,0.9s						
X48A	Hartselle	71.56	307	P	P	19 35 36.6	-0.4
X48A				IAmb	IAmb	19 35 41.5	
	comp=Z,9.2nm,0.8s						
V48A	Smith Brothers	71.69	308	P	P	19 35 36.8	-1.0
V48A				IAmb	IAmb	19 35 42.4	
	comp=Z,18nm,1.1s						
OBN	Obninsk	71.91	30	*ce*P	P	19 35 38.2	-0.3
OBN				*PP	pP	19 35 41.0	-1.9
OBN				*SP	sP	19 35 43.0	-1.6
OBN				pmax	pmax		
	comp=Z,21nm,1.3s						
OBN				MLR	MLR		
	comp=Z,177nm,17.0s						
OBN	Obninsk	71.91	30	P	P	19 35 37.7	-0.8
OBN				IAmb	IAmb	19 35 38.9	
	comp=Z,15nm,1.0s						
SNAA	Sanae	71.93	174	P	P	19 35 39.1	+0.6
SNAA	Sanae	71.93	174	*ce*P	P	19 35 38.9	+0.4
SNAA				pmax	pmax		
	comp=Z,14nm,1.7s						
SNAA	Sanae	71.93	174	P	P	19 35 38.4	-0.1
LPSR	Galich'ya Gora	71.99	33	*e*P	P	19 35 37.2	-2.0
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
Z47A	Carrollton	72.10	305	P	P	19 35 39.7	-0.5
T47A	Sharon Grove	72.22	309	P	P	19 35 40.0	-0.9
DDFL	Dedoflistskaro	72.54	46	P	P	19 35 46.3	+3.5
WVT	Waverly	72.58	308	P	P	19 35 41.6	-1.4
WVT				pmax	pmax		
	comp=Z,13nm,1.1s						
WVT	Waverly	72.58	308	P	P	19 35 41.6	-1.4
WVT				IAmb	IAmb	19 35 42.8	
	comp=Z,13nm,1.1s						
MOS	Moscow	72.73	30	*e*P	P	19 35 42.2	-1.3
MOS				*e*		19 36 08.2	
MOS				pmax	pmax		
	comp=Z,46nm,0.9s						
LGD	Lagodekhi	72.74	46	P	P	19 35 44.6	+0.7
GROC	Groznyy	72.83	44	*e*P	P	19 35 44.5	+0.2
GROC				*e*		19 36 00.8	
GROC				*e*		19 38 28.7	
GROC				*e*PPP	PPP	19 40 10.7	
GROC				pmax	pmax		
	comp=Z,23nm,1.1s						
P46A	Rosedale	72.97	312	P	P	19 35 44.7	-0.6
VRH	Novokhopyorsk	72.99	35	*e*P	P	19 35 42.3	-2.8
VRH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
FRB	Frobisher Bay	73.35	340	LR	LR	20 01 59.6	
	comp=Z,2μm,21.9s,baz=293,slow=31						
OLIL	Olney	73.42	311	P	P	19 35 46.6	-1.3
SIUC	Southern Illin	74.03	309	P	P	19 35 49.9	-1.7
SIUC				IAmb	IAmb	19 35 51.0	
	comp=Z,21nm,1.1s						
O44A	Mansfield	74.05	312	P	P	19 35 48.4	-3.2
FVM	French Village	75.02	310	P	P	19 35 55.7	-1.7
FVM				pmax	pmax		
	comp=Z,11nm,0.8s						
FVM	French Village	75.02	310	P	P	19 35 55.7	-1.7
FVM				IAmb	IAmb	19 35 57.1	
	comp=Z,11nm,0.8s						
CCM	Cathedral Cave	75.67	309	P	P	19 35 59.6	-1.5
CCM				pmax	pmax		
	comp=Z,13nm,0.8s						
CCM	Cathedral Cave	75.67	309	P	P	19 35 59.5	-1.5
CCM				IAmb	IAmb	19 36 01.0	
	comp=Z,13nm,0.8s						
KLMR	Klimovskoe	76.00	26	*e*P	P	19 36 00.8	-1.6
KLMR				pmax	pmax		
	comp=Z,54nm,1.4s						
KLMR	Klimovskoe	76.00	26	*e*P	P	19 36 00.8	-1.6
KLMR				AMP		19 36 03.8	
	comp=Z,54nm,1.4s						
JFWS	Jewell Farm	76.02	315	P	P	19 36 02.5	-0.5
JFWS				pmax	pmax		
	comp=Z,36nm,1.3s						
JFWS	Jewell Farm	76.02	315	P	P	19 36 02.5	-0.5
ARCES	ARCESS Array B	76.16	15	P	P	19 36 03.6	+0.4
	comp=Z,1.2nm,0.5s,baz=224,slow=3.8,SNR=7.7						
ARCES				LR	LR	20 12 39.1	
	comp=Z,180nm,18.2s,baz=200,slow=38						
ARCES	ARCESS Array B	76.16	15	IAmb	IAmb	19 36 32.1	
	comp=Z,23nm,1.4s						
MGMO	Mountain Grove	76.28	308	P	P	19 36 03.5	-1.2
MGMO				IAmb	IAmb	19 36 05.0	
	comp=Z,32nm,1.3s						
R40A	Maddies Statio	76.51	310	P	P	19 36 04.7	-1.1
R40A				IAmb	IAmb	19 36 05.8	
	comp=Z,8.5nm,0.7s						
U40A	Yellville	76.59	307	P	P	19 36 04.5	-1.9
U40A				IAmb	IAmb	19 36 06.3	
	comp=Z,13nm,0.9s						
BELG	Belogornoye	76.84	36	*i* P	P	19 36 07.0	-0.3
BELG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
W39A	Magazine	77.13	306	P	P	19 36 07.3	-2.1
W39A				IAmb	IAmb	19 36 14.8	
	comp=Z,17nm,1.1s						
DAG	Danmarks Havn	77.16	0	*i* P	P	19 36 09.0	+0.3
APA	Apatity	77.19	18⇓	*i*P	P	19 36 02.3	-6.7
APA				pmax	pmax		
	comp=Z,11nm,1.1s						
APA				MLR	MLR		
	comp=Z,900nm,15.0s						
S39A	Bolivar	77.21	309	P	P	19 36 08.1	-1.7
S39A				IAmb	IAmb	19 36 13.8	
	comp=Z,12nm,1.0s						
UOSS	Minazif	77.61	64	P	P	19 36 12.1	-0.3
P38A	Dawn	77.73	311	P	P	19 36 11.2	-1.5
P38A				IAmb	IAmb	19 36 16.7	
	comp=Z,24nm,0.9s						
I37A	Lemond, Waseca	78.51	315	P	P	19 36 15.7	-1.2
I37A				IAmb	IAmb	19 36 18.1	
	comp=Z,36nm,1.2s						
TUL1	Leonard	78.86	307	P	P	19 36 16.9	-2.1
TUL1				IAmb	IAmb	19 36 19.0	
	comp=Z,11nm,0.8s						
SYO	Syowa Base	79.01	162⇑	*i*P	P	19 36 15.9	-3.2
SYO	Syowa Base	79.01	162⇓	*e*sP	sP	19 36 24.0	-1.0
PRGR	Permogore	79.02	26	*e*P	P	19 36 18.3	-1.0
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
N35A	Tabor	79.54	312	P	P	19 36 21.6	-1.1
T35A	Sooner Cattle	79.59	308	P	P	19 36 22.1	-0.9
T35A				IAmb	IAmb	19 36 23.2	
	comp=Z,19nm,0.8s						
W35A	Tecumseh	79.63	306	P	P	19 36 22.2	-1.1
W35A				IAmb	IAmb	19 36 27.6	
	comp=Z,26nm,1.2s						
B35A	Bob, Littlefor	79.65	319	P	P	19 36 21.9	-1.1
B35A				IAmb	IAmb	19 36 23.2	
	comp=Z,17nm,0.9s						
NEEM	North Greenlan	79.68	353	*e*P	P	19 36 21.5	-1.5
Z35A	Perchaven, San	79.70	304	P	P	19 36 22.0	-1.6
Z35A				IAmb	IAmb	19 36 28.6	
	comp=Z,30nm,1.0s						
KIRV	Kirov	79.75	30	*ce*P	P	19 36 22.3	-1.0
ECSD	EROS Data Cent	80.74	314	P	P	19 36 27.8	-1.3
ECSD				IAmb	IAmb	19 36 29.1	
	comp=Z,14nm,0.9s						
GEYT	Alibeck	80.85	52	P	P	19 36 30.4	+0.6
	comp=Z,5.0nm,0.7s,baz=254,slow=10,SNR=8.6						
GEYT				LR	LR	20 15 44.8	
	comp=Z,123nm,18.4s,baz=30,slow=38						
GEYT	Alibeck	80.85	52	P	P	19 36 29.5	-0.3
GYA0B	ALIBECK ARRAY	80.85	52	P	P	19 36 29.5	-0.3
AGMN	Agassiz Nation	81.03	319	P	P	19 36 29.6	-0.9
WMOK	Wichita Mounta	81.13	305	P	P	19 36 29.9	-1.5
WMOK				pmax	pmax		
	comp=Z,12nm,1.2s						
WMOK	Wichita Mounta	81.13	305	P	P	19 36 29.9	-1.5
ULM	Lac du Bonnet	81.41	321	P	P	19 36 31.8	-0.7
	comp=Z,6.2nm,0.8s,baz=98,slow=4.1,SNR=4.7						
ULM	Lac du Bonnet	81.41	321	P	P	19 36 30.7	-1.8
ULM				pmax	pmax		
	comp=Z,15nm,1.4s						
ULM	Lac du Bonnet	81.41	321	P	P	19 36 30.7	-1.8
JCT	Junction City	81.53	301	P	P	19 36 32.7	-0.9
JCT	Junction City	81.53	301	P	P	19 36 32.7	-0.9
JCT				IAmb	IAmb	19 36 34.2	
	comp=Z,14nm,0.8s						
TULEG	Thule	81.61	350	*e*P	P	19 36 32.5	-0.5
NOR	Nord	82.03	0	*i* P	P	19 36 35.5	+0.3
FCC	Fort Churchill	82.24	330	P	P	19 36 35.4	-1.2
FCC				pmax	pmax		
	comp=Z,15nm,1.0s						
FCC	Fort Churchill	82.24	330	P	P	19 36 35.4	-1.2
FCC				IAmb	IAmb	19 36 37.5	
	comp=Z,15nm,1.0s						
AKTO	Aktyubinsk	82.67	39	LR	LR	20 16 46.0	
	comp=Z,131nm,20.5s,baz=293,slow=38						
MDND	Maddock	83.43	318	P	P	19 36 41.5	-1.6
ABKAR	Akbulak array	83.73	40	P	P	19 36 44.5	-0.1
ABKAR	Akbulak array	83.73	40	P	P	19 36 44.7	+0.2
HRA	Herat	83.78	55	P	P	19 36 43.0	-2.5
HRA				IAmb	IAmb	19 36 46.4	
	comp=Z,9.0nm,0.8s						
ARU	Arti	84.02	33*d*	*i*P	P	19 36 45.8	-0.1
ARU				S	S	19 47 09.0	-0.1
ARU				SS	SS	19 52 35.8	-1.8
ARU				pmax	pmax		
	comp=Z,29nm,1.0s						
ARU	Arti	84.02	33	P	P	19 36 44.6	-1.3
MSTX	Muleshoe	84.34	304	P	P	19 36 46.1	-2.1
MSTX				IAmb	IAmb	19 36 49.4	
	comp=Z,18nm,1.0s						
OGNE	Ogallala	84.36	311	P	P	19 36 46.4	-1.7
KSCO	Kaye Shedlock'	84.63	309	P	P	19 36 47.8	-1.8
SVE	Sverdlovsk	85.21	33	*e*P	P	19 36 53.0	+1.1
SVE				pmax	pmax		
	comp=Z,29nm,1.1s						
RSSD	Black Hills	86.11	314	P	P	19 36 55.7	-1.3
RSSD				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RSSD	Black Hills	86.11	314	P	P	19 36 55.7	-1.3
EUNU	Eureka	86.49	351	P	P	19 36 58.2	+0.2
EUNU				IAmb	IAmb	19 37 04.4	
	comp=Z,17nm,1.1s						
RES	Resolute Bay	86.51	345	P	P	19 36 58.3	+0.3
	comp=Z,2.2nm,0.8s,baz=73,slow=4.3,SNR=7.2						
RES				LR	LR	20 11 42.4	
	comp=Z,161nm,18.5s,baz=102,slow=33						
RES	Resolute Bay	86.51	345	P	P	19 36 58.5	+0.5
RES				pmax	pmax		
	comp=Z,8.0nm,1.2s						
RES	Resolute Bay	86.51	345	P	P	19 36 58.5	+0.5
SDCO	Great Sand Dun	86.80	308	P	P	19 37 00.4	-0.2
MAW	Mawson	86.80	158	LR	LR	20 08 19.3	
	comp=Z,263nm,18.6s,baz=247,slow=30						
ISCO	Idaho Springs	87.00	310	P	P	19 37 00.5	-1.1
ISCO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ISCO	Idaho Springs	87.00	310	P	P	19 37 00.5	-1.1
ANMO	Albuquerque	87.44	305	P	P	19 37 03.8	+0.1
	comp=Z,4.2nm,0.8s,baz=110,slow=6.2,SNR=13						
ANMO	Albuquerque	87.44	305	P	P	19 37 01.2	-2.4
ANMO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ANMO	Albuquerque	87.44	305	P	P	19 37 01.2	-2.4
BNM	Barren Site	87.55	304	P	P	19 37 03.4	-0.9
LAO	LASA Array	87.81	317	P	P	19 37 03.3	-1.7
LAO				IAmb	IAmb	19 37 06.1	
	comp=Z,14nm,0.8s						
K22A	Casper	87.83	313	P	P	19 37 04.3	-1.0
LENM	Lemitar	87.83	304	P	P	19 37 06.8	+1.3
SMCO	Snowmass	88.02	309	P	P	19 37 06.5	0.0
SMCO				IAmb	IAmb	19 37 07.7	
	comp=Z,6.0nm,0.9s						
MVCO	Mesa Verde	89.16	307	P	P	19 37 12.4	+0.6
MVCO				IAmb	IAmb	19 37 13.5	
	comp=Z,14nm,1.3s						
RPN	Rapa Nui	89.28	243	P	P	19 37 13.3	+1.0
	comp=Z,32nm,0.3s,baz=84,slow=5.5,SNR=2.0						
KBL	Kabul	89.40	56	P	P	19 37 12.5	-0.4
KBL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KBL	Kabul	89.40	56	P	P	19 37 12.5	-0.4
KBL				IAmb	IAmb	19 37 15.2	
	comp=Z,7.8nm,0.8s						
CHGR	Chuyangaron	89.56	52	P	P	19 37 14.2	+0.7
QSPA	South Pole Qui	89.60	180	P	P	19 37 13.2	+0.2
QSPA				IAmb	IAmb	19 37 14.5	
	comp=Z,13nm,0.8s						
RLMT	Red Lodge	89.88	315	P	P	19 37 14.2	-0.8
PDAR	Pinedale Array	90.06	313	P	P	19 37 15.0	-0.9
	comp=Z,1.0nm,0.9s,baz=101,slow=6.3,SNR=6.4						
PDAR				LR	LR	20 15 28.7	
	comp=Z,157nm,18.1s,baz=84,slow=34						
BRVK	Borovoye	90.49	37	P	P	19 37 17.3	0.0
BRVK				pmax	pmax		
	comp=Z,13nm,1.1s						
BRVK	Borovoye	90.49	37	P	P	19 37 17.3	0.0
BRVK				IAmb	IAmb	19 37 19.6	
	comp=Z,13nm,1.1s						
P18A	Preston Nutter	90.56	309	P	P	19 37 16.2	-2.2
KKAR	Karatay Array	90.62	47	P	P	19 37 17.5	-0.7
KKAR	Karatay Array	90.62	47	P	P	19 37 17.5	-0.7
BTK	Batken	90.86	50	P	P	19 37 19.7	+0.2
BTK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BTK	Batken	90.86	50	P	P	19 37 19.7	+0.2
BTK				IAmb	IAmb	19 37 21.1	
	comp=Z,8.1nm,0.9s						
REDW	Red Top Meadow	91.01	313	P	P	19 37 19.0	-1.3
REDW				IAmb	IAmb	19 37 20.9	
	comp=Z,6.9nm,1.0s						
MTPU	Mount Pierson	92.09	308	P	P	19 37 23.1	-2.5
YKA	Yellowknife Ar	92.60	332	P	P	19 37 26.7	-0.2
	comp=Z,3.5nm,0.8s,baz=90,slow=5.0,SNR=50						
YKA				LR	LR	20 15 18.9	
	comp=Z,254nm,19.8s,baz=0.0,slow=33						
AAK	Ala-Archa	93.56	47	*ce*P	P	19 37 32.8	+0.8
AAK				pmax	pmax		
	comp=Z,25nm,1.1s						
AAK	Ala-Archa	93.56	47	P	P	19 37 32.5	+0.4
AAK				IAmb	IAmb	19 37 34.2	
	comp=Z,7.9nm,0.8s						
ELK	Elko	94.36	311	P	P	19 37 35.6	-0.2
	comp=Z,0.5nm,0.4s,baz=95,slow=3.0,SNR=5.0						
KSH	Kashi	94.84	51	P	P	19 37 38.3	+0.4
KSH				pP	sP	19 37 43.5	-0.4
KSH				sP	pP	19 37 45.0	+2.6
KSH				PP	PP	19 41 30.0	+3.2
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
TARG	Taragay, Kyrgy	96.08	48	P	P	19 37 44.0	+0.1
TARG				IAmb	IAmb	19 37 45.9	
	comp=Z,11nm,1.2s						
NRIK	Noril'sk	96.56	20	LR	LR	20 26 18.7	
	comp=Z,279nm,18.1s,baz=291,slow=39						
NVAR	Mina Array Bea	96.88	308	P	P	19 37 46.7	-0.7
	comp=Z,0.4nm,0.7s,baz=64,slow=6.1,SNR=2.6						
NVAR				LR	LR	20 18 43.4	
	comp=Z,79nm,21.4s,baz=92,slow=34						
MKAR	Makanchi Array	98.69	43	P	P	19 37 54.9	-0.2
	comp=Z,0.8nm,0.8s,baz=285,slow=3.0,SNR=5.0						
MKAR				LR	LR	20 27 51.3	
	comp=Z,88nm,20.0s,baz=288,slow=39						
ZALV	Zalesovo Beam	99.03	35	LR	LR	20 25 16.1	
	comp=Z,73nm,20.4s,baz=21,slow=37						
WMQ	Urumqi	102.97	45	*e*P	Pdif	19 38 16.3	+2.0
CD2	Chengdu	118.72	55	PKP	PKPdf	19 43 03.3	-1.2
TAOE	Nuku Hiva Isla	119.77	260	*e*LR	LR	20 19 37.2	
	comp=Z,119nm,22.6s						
HHC	Hu-ho-hao-te	120.51	41	*e*P	PKPdf	19 43 02.5	-5.2
HHC				LR	LR		
	comp=N,160nm,20.6s						
HHC				LR	LR		
	comp=E,190nm,21.5s						
HHC				LR	LR		
	comp=Z,200nm,21.3s						
PPT2	Papeete2	127.33	247	*e*LR	LR	20 23 18.0	
	comp=Z,150nm,24.0s						
NJ2	Nanjing	130.00	47	*e*P	PKiKP	19 43 26.3	-0.4
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
STKA	Stephens Creek	143.37	153	PKhKP	PKPpre	19 43 47.2	
	comp=Z,4.9nm,0.7s,baz=216,slow=3.1,SNR=12						
ASAR	Alice Springs	145.03	135	PKPbc	PKPdf	19 43 53.2	-0.6
	comp=Z,65nm,0.7s,baz=227,slow=2.7,SNR=607						
ASAR	Alice Springs	145.03	135		PKPab	19 43 52.8	-0.3
TNTI	Ternate	147.27	89	PKP	PKPab	19 44 01.5	-0.4
LBMI	Labuha	147.39	92	PKP	PKiKP	19 44 08.2	+5.5
WRA	Warramunga Arr	147.62	130	PKPbc	PKPbc	19 44 00.7	-0.2
	comp=Z,9.0nm,0.8s,baz=237,slow=2.8,SNR=22						
WRAB	Tennant Creek	147.63	130	*i* PKIKP	PKPdf	19 43 57.5	-0.8
WB0	Warramunga Arr	147.76	130		PKPbc	19 44 00.6	-0.7
DZM	Mont Dzumac	156.75	195	*e*LR	LR	20 36 54.3	
	comp=Z,183nm,31.1s						

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*GUC **28** 19:34:13.9±0.5, 24°.31S×68°.12W, h177^{km}±5^{km}, ML3.8*
*IDC **28** 19:34:14.0±4.8, 24°.18S×67°.58W, h143^{km}±31^{km}, mb3.5/3, mb1 3.6/5, mb1mx3.3/38, mbtmp3.9/5, Error ellipse: s-maj=69.4km s-min=25.5km az=4.0*
ISC 28 19:34:11.5±0.9**, 24°.45S**±0°.05×**67°.9W**±0°.1**, h147**^{km}±11^{km}**, n21,** σ**1**^{s}**21**/35**, 5C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	1.92	310⇑	*e*P	Pn	19 34 46.9	+1.2
PB15				*e*S	Sn	19 35 12.2	+0.2
LVC	Limon Verde	2.06	332	P	Pn	19 34 49.2	+1.6
	9.3nm,0.3s,baz=154,slow=5.9,SNR=33						
LVC				S	Sn	19 35 15.7	+0.4
	74nm,0.3s,baz=82,slow=22,SNR=26						
LVC	Limon Verde	2.06	332	*e*P	Pn	19 34 49.2	+1.6
LVC				*e*S	Sn	19 35 16.2	+0.9
PB06	IPOC Station P	2.33	318⇑	*e*P	Pn	19 34 51.8	+1.2
PB06				*e*S	Sn	19 35 20.3	-0.5
PB06				IAML		19 35 22.4	
	comp=E,851nm,0.3s						
PB10	IPOC Station P	2.63	290⇑	*e*P	Pn	19 34 54.8	+0.8
PB10				*e*S	Sn	19 35 26.0	-0.9
PB10				IAML		19 35 32.8	
	comp=E,200nm,0.3s						
AC02	Maricunga	2.64	205⇑	*i*P	Pn	19 34 55.8	+1.1
AC02				*e*S	Sn	19 35 29.5	+1.6
PB05	IPOC Station P	2.67	306	*e*P	Pn	19 34 55.4	+0.7
PB05				*i* S	Sn	19 35 26.9	-1.0
PB05				IAML		19 35 30.0	
	comp=N,250nm,0.4s						
PB09	IPOC Station P	2.93	334	*e*P	Pn	19 34 59.1	+1.1
PB09				*i* S	Sn	19 35 34.0	+0.1
PB09				IAML		19 35 38.1	
	comp=E,104nm,0.6s						
PB03	IPOC Station P	2.95	324⇑	*e*P	Pn	19 34 59.1	+0.7
PB03				*e*S	Sn	19 35 33.5	-1.0
PB03				IAML		19 35 34.8	
	comp=E,361nm,0.6s						
PB04	IPOC Station P	2.97	315	*e*P	Pn	19 34 59.1	+0.5
PB04				*i* S	Sn	19 35 33.4	-1.5
PB04				IAML		19 35 34.2	
	comp=N,378nm,0.1s						
PB07	IPOC Station P	3.28	325	*e*P	Pn	19 35 03.0	+0.4
PB07				*e*S	Sn	19 35 40.6	-1.5
PB07				IAML		19 35 43.5	
	comp=E,157nm,0.4s						
PB02	IPOC Station P	3.63	329	*e*P	Pn	19 35 07.5	+0.5
PB02				*i* S	Sn	19 35 48.3	-1.7
PB01	IPOC Station P	3.70	336	*e*P	Pn	19 35 09.3	+1.4
PB01				*i* S	Sn	19 35 50.4	-1.3
GO03	Copiap	3.79	214	*e*P	Pn	19 35 08.3	-0.7
GO03				*e*S	Sn	19 35 51.6	-2.0
LPAZ	La Paz	8.12	358	P	Pn	19 36 07.2	0.0
	comp=E,0.2nm,0.3s,baz=168,slow=8.4,SNR=2.1						
SIV	San Ignacio	10.55	38	P	Pn	19 36 36.4	-2.6
	comp=E,2.8nm,0.3s,baz=240,slow=9.9,SNR=26						
BDFB	Brasilia	20.59	69	P	P	19 38 38.8	-0.4
	comp=E,4.0nm,0.6s,baz=222,slow=11,SNR=5.6						
TORD	Torodi Ar. Bea	77.47	69	P	P	19 45 51.2	+0.1
	comp=E,0.6nm,0.5s,baz=250,slow=7.6,SNR=4.8						
YKA	Yellowknife Ar	94.27	340	P	P	19 47 15.3	+1.9
	comp=E,0.2nm,0.5s,baz=136,slow=4.4,SNR=6.2						
ZALV	Zalesovo Beam	144.16	28	PKP	PKPdf	19 53 29.9	+0.6
	comp=E,0.9nm,0.3s,baz=291,slow=3.3,SNR=6.0						
MKAR	Makanchi Array	147.37	39	PKPbc	PKiKP	19 53 40.0	+0.2
	comp=E,1.0nm,0.6s,baz=304,slow=3.1,SNR=14						

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*IDC **28** 19:46:04.6±3.3, 23°.94S×179°.66W, h573^{km}±49^{km}, mb3.0/4, mb1 3.1/6, mb1mx2.9/29, mbtmp4.0/6, Error ellipse: s-maj=97.2km s-min=32.7km az=72.0*
*NEIC **28** 19:46:05.7±0.8, 24°.0S±0°.2×179°.8W±0°.1, h567^{km}±20^{km}, mb4.1/10, Error ellipse: s-maj=27.6km s-min=13.9km az=187.0*
ISC 28 19:46:04.9±1.4**, 24°.0S**±0°.2×**179°.9W**±0°.2**, h550**^{km}**, n17,** σ**1**^{s}**27**/16**, mb4.0**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.51	161	P	P	19 47 40.0	+1.0
	106nm,0.3s,baz=6.3,slow=18,SNR=4.7						
MSVF	Nonsavu	6.53	343	P	P	19 47 49.4	+0.6
	2.7nm,0.3s,baz=93,slow=17,SNR=11						
DZM	Mont Dzumac	12.70	276	P	P	19 48 52.4	+1.6
	0.3nm,0.3s,baz=96,slow=19,SNR=1.8						
CTA	Charters Tower	31.55	270	P	P	19 51 43.9	+1.0
	7.7nm,0.8s,baz=93,slow=7.4,SNR=2.3						
CTAO	Charters Tower	31.55	270	P	P	19 51 44.0	+1.2
CTAO				IAmb	IAmb	19 51 49.0	
	comp=Z,22nm,1.4s						
STKA	Stephens Creek	34.74	248	P	P	19 52 09.2	-0.5
	comp=Z,0.8nm,0.5s,baz=93,slow=10,SNR=4.9						
STKA	Stephens Creek	34.74	248	IAmb	IAmb	19 52 09.8	
	comp=Z,1.9nm,1.5s						
BBOO	Buckleboo	39.46	247	P	P	19 52 46.9	-1.3
BBOO				IAmb	IAmb	19 53 02.6	
	comp=Z,19nm,1.2s						
AS31	Alice Springs	42.08	261	P	P	19 53 09.2	-0.1
ASAR	Alice Springs	42.08	261	P	P	19 53 09.2	-0.1
	comp=Z,0.4nm,0.4s,baz=92,slow=6.5,SNR=15						
WB2	Warramunga Arr	42.46	266	P	P	19 53 11.9	-0.3
WB2				IAmb	IAmb	19 53 12.9	
	comp=Z,4.3nm,0.8s						
WB0	Warramunga Arr	42.46	267		P	19 53 12.0	-0.2
WB0				IAmb	IAmb	19 53 15.8	
	comp=Z,8.3nm,1.1s						
WRA	Warramunga Arr	42.47	266	P	P	19 53 12.4	+0.1
	comp=Z,1.6nm,0.5s,baz=101,slow=8.3,SNR=19						
WRA	Warramunga Arr	42.47	266	P	P	19 53 12.5	+0.1
KNRA	Kununurra	48.76	270	P	P	19 54 01.5	+1.3
VNDA	Vanda	54.27	185	P	P	19 54 38.7	-0.3
VNDA				IAmb	IAmb	19 55 04.7	
	comp=Z,7.3nm,1.5s						
KKM	Kota Kinabalu	69.00	287	P	P	19 56 13.0	-3.2

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*IDC **28** 20:00:49.2±0.9, 28°.29S×176°.29W, h0^{km}, mb4.3/9, mb1 4.4/11, mb1mx4.3/28, mbtmp4.2/11, ML3.8/2, MS3.9/4, Ms1 3.8/4, ms1mx3.3/30, Error ellipse: s-maj=31.6km s-min=18.0km az=144.0*
*NEIC **28** 20:00:51.1±1.8, 28°.4S±0°.1×176°.5W±0°.1, h10^{km}±1^{km}, mb4.5/12, Error ellipse: s-maj=24.0km s-min=11.6km az=128.0*
ISC 28 20:00:53.5±0.6**, 28°.47S**±0°.08×**176°.38W**±0°.09**, h29**^{km}**, n47,** σ**1**^{s}**69**/42**, mb4.3**/10**, MS3.7**/6**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.56	239	Pn	Pb	20 01 22.3	+0.6
	176nm,0.3s,baz=75,slow=20,SNR=2.8						
RAO				Sn	Sb	20 01 45.6	+4.6
	692nm,0.3s,baz=90,slow=20,SNR=14						
RAO	Raoul Island	1.56	239		Pn	20 01 17.4	-1.9
OUZ	Omahuta	10.86	229	Pn	Pn	20 03 23.8	-3.1
URZ	Urewera	11.18	207	Pn	Pn	20 03 32.6	+1.3
	1.1nm,0.3s,baz=121,slow=23,SNR=6.6						
URZ				Sn	Sn	20 05 33.2	-2.0
	4.0nm,0.3s,baz=128,slow=20,SNR=7.5						

URZ	Urewera	11.18	207		Sn	20 05 34.7	-0.6
BKZ	Black Stump Fm	12.20	207	Pn	Pn	20 03 42.1	-3.3
MSWZ	Moikau Station	14.62	206	Pn	Pn	20 04 17.0	-1.3
PLWZ	Palliser	14.75	205	P	P	20 04 25.5	-0.4
BHW	Baring Head	14.76	207	Pn	Pn	20 04 19.2	-1.0
TUWZ	Tuamarina	15.16	209	Pn	Pn	20 04 22.1	-3.4
THZ	Tophouse	15.88	211		Pn	20 04 34.8	-0.2
THZ				IAmb	IAmb	20 04 50.5	
	comp=Z,40nm,1.5s						
KHZ	Kahutara	16.14	208	Pn	Pn	20 04 34.6	-3.6
KHZ				IAmb	IAmb	20 04 57.5	
	comp=Z,28nm,1.0s						
DZM	Mont Dzumac	16.78	288	Pn	P	20 04 47.6	-1.0
	comp=Z,0.2nm,0.3s,baz=120,slow=14,SNR=4.1						
DZM	Mont Dzumac	16.78	288	*e*Pn	P	20 04 50.0	+1.4
	comp=Z,64nm,1.4s						
DZM				*e*LR	LR	20 08 44.9	
	comp=Z,316nm,26.4s						
DZM	Mont Dzumac	16.78	288	P	Pn	20 04 45.2	-1.4
DZM				IAmb	IAmb	20 05 01.0	
	comp=Z,35nm,1.3s						
OXZ	Oxford	17.52	209	P	Pn	20 04 52.9	-2.7
OXZ				IAmb	IAmb	20 04 57.9	
	comp=Z,18nm,0.5s						
PPT2	Papeete2	26.88	72	*e*LR	LR	20 12 54.5	
	comp=Z,118nm,21.2s						
PPT	Papeete	26.89	72	LR	LR	20 15 13.4	
	comp=Z,129nm,19.8s,baz=210,slow=32						
STKA	Stephens Creek	36.33	254	P	P	20 07 56.0	+1.2
	comp=Z,3.1nm,0.7s,baz=101,slow=12,SNR=9.2						
STKA				LR	LR	20 22 55.2	
	comp=Z,142nm,18.0s,baz=188,slow=36						
PMG	Port Moresby	39.13	292	P	P	20 08 18.8	+0.1
	comp=Z,2.3nm,0.3s,baz=112,slow=19,SNR=1.7						
TAOE	Nuku Hiva Isla	39.26	67	*e*LR	LR	20 18 51.9	
	comp=Z,119nm,22.6s						
AS31	Alice Springs	44.66	264	P	P	20 09 03.5	-0.4
ASAR	Alice Springs	44.66	264	P	P	20 09 03.9	-0.1
	comp=Z,2.0nm,0.6s,baz=100,slow=7.0,SNR=36						
ASAR	Alice Springs	44.66	264	P	P	20 09 03.5	-0.4
WRA	Warramunga Arr	45.48	269	P	P	20 09 09.4	-1.0
	comp=Z,2.9nm,0.7s,baz=107,slow=7.7,SNR=13						
WRA	Warramunga Arr	45.48	269	P	P	20 09 08.9	-1.6
WB0	Warramunga Arr	45.50	270	P	P	20 09 09.8	-0.8
WB0				IAmb	IAmb	20 09 23.6	
	comp=Z,17nm,1.4s						
FORT	Forrest	47.93	253	P	P	20 09 29.5	0.0
BATI	Baumata	58.84	275	LR	LR	20 37 55.1	
	comp=Z,186nm,18.2s,baz=228,slow=38						
QSPA	South Pole Qui	61.64	180	P	P	20 11 09.3	+0.8
SMAI	San Martin Ant	70.69	158	P	P	20 12 07.8	+1.6
MJAR	Matsushiro Arr	77.48	324	P	P	20 12 45.9	-0.3
	comp=Z,3.1nm,0.7s,baz=162,slow=5.6,SNR=4.4						
MJAR	Matsushiro Arr	77.48	324	IAmb	IAmb	20 12 46.6	
	comp=Z,3.9nm,1.0s						
PLCA	Paso Flores	82.78	133	LR	LR	20 42 38.6	
	comp=Z,57nm,19.2s,baz=172,slow=30						
KSRS	Korea Array	83.81	319	P	P	20 13 21.4	+1.3
	comp=Z,1.6nm,0.8s,baz=139,slow=5.1,SNR=4.5						
NVAR	Mina Array Bea	85.86	42	P	P	20 13 30.9	+0.2
	comp=Z,2.4nm,0.9s,baz=225,slow=8.7,SNR=11						
CMAR	Chiang Mai Arr	94.11	289	P	P	20 14 11.6	+1.9
	comp=Z,0.9nm,0.9s,baz=138,slow=3.0,SNR=5.7						
ILAR	Eielson Array	95.74	12	P	P	20 14 15.6	-0.5
	comp=Z,0.7nm,0.9s,baz=202,slow=6.8,SNR=4.4						
MKAR	Makanchi Array	117.60	311	PKP	PKPdf	20 19 34.9	-1.6
	comp=Z,1.0nm,1.0s,baz=90,slow=0.1,SNR=3.7						
FINES	FINESS Array B	143.78	342	PKP	PKPab	20 20 22.6	+0.5
	comp=Z,2.8nm,0.9s,baz=48,slow=2.1,SNR=4.8						
KBZ	Khabaz	145.15	307	PKPbc	PKPdf	20 20 28.2	+0.1
	comp=Z,2.4nm,0.9s,baz=95,slow=1.7,SNR=4.4						
NB2	NORSAR Subarra	147.03	353	PKP	PKPbc	20 20 32.2	-0.7
	comp=Z,1.4nm,0.7s,baz=10.0,slow=2.9						
NOA	NORSAR Array B	147.03	353	PKPbc	PKPdf	20 20 31.9	+1.0
	comp=Z,2.2nm,0.7s,baz=12,slow=4.5,SNR=6.5						
AKASG	Malin Array Be	150.55	326	PKPbc	PKPbc	20 20 41.6	-0.6
	comp=Z,3.5nm,0.7s,baz=63,slow=1.7,SNR=12						
AKASG	Malin Array Be	150.55	326		PKPbc	20 20 41.8	-0.4
CLL	Collm	156.11	345	*e*PKPab	PKPab	20 21 12.0	-0.3
TORD	Torodi Ar. Bea	164.65	173	PKPab	PKPab	20 21 51.2	+0.9
	comp=Z,5.6nm,0.9s,baz=186,slow=3.1,SNR=20						

IDC 28 20:14:00.1±55.0**, 24°18S×179°12W, h516**km±296km**,**
mb2.7/3**, mb1 2.9**/3**, mb1mx2.8**/22**, mbtmp3.7**/3**, Error ellipse: s-maj=1036.0km s-min=66.6km az=91.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	24.78	303	P	P	20 18 41.0	+0.1
	231nm,0.8s,baz=127,slow=10,SNR=2.1						
STKA	Stephens Creek	35.37	249	P	P	20 20 11.6	-0.5
	0.8nm,0.5s,baz=91,slow=15,SNR=4.7						
ASAR	Alice Springs	42.78	261	P	P	20 21 12.3	+0.1
	0.5nm,0.5s,baz=100,slow=7.5,SNR=7.6						
WRA	Warramunga Arr	43.19	266	P	P	20 21 15.2	-0.2
	0.5nm,0.9s,baz=100,slow=8.0,SNR=4.9						

IDC 28 20:36:44.2±61.0**, 17°88S×177°50W, h507**km±39km**,**
mb2.9/3**, mb1 3.1**/4**, mb1mx2.9**/40**, mbtmp3.8**/4**, Error ellipse: s-maj=1047.0km s-min=136.4km az=79.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.24	271	P	P	20 38 05.1	0.0
	1.5nm,0.3s,baz=112,slow=5.4,SNR=9.0						
STKA	Stephens Creek	39.40	241	P	P	20 43 29.8	-0.1
	0.4nm,0.3s,baz=82,slow=16,SNR=3.9						
WRA	Warramunga Arr	45.49	259	P	P	20 44 17.5	-0.5
	0.3nm,0.5s,baz=96,slow=6.0,SNR=6.2						
ASAR	Alice Springs	45.63	254	P	P	20 44 19.1	+0.1
	1.7nm,0.4s,baz=89,slow=8.9,SNR=49						

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*IDC **28** 21:21:34.6±8.8, 38°07N×72°54E, h63km±62km, mb3.1/4, mb1 3.3/6, mb1mx2.9/55, mbtmp3.4/6, ML2.9/2, MS3.3/1, Ms1 3.5/1, ms1mx2.5/20, Error ellipse: s-maj=61.6km s-min=41.0km az=4.0*
*NNC **28** 21:21:35.4±3.4, 38°42N×72°44E, h1km±16km, mb3.6, mpv3.1, Error ellipse: s-maj=23.3km s-min=21.4km az=26.0*
ISC 28 21:21:27.7±1.6**, 37°9N**±0°1×**72°39E**±0°10**, h10**km**, n12, σ1ˢ97**/16**, mb3.2**/4**, 5C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.03	18	P	Pn	21 22 44.3	+1.0
	0.6nm,0.3s,baz=187,slow=6.9,SNR=9.9						
AAK				S	Sn	21 23 39.9	-1.6
	0.1nm,0.3s,baz=340,slow=21,SNR=1.8						
AAK	Ala-Archa	5.03	18	⇑Pn	Pn	21 22 44.8	+1.5
	1.1nm,0.4s						
AAK				⇓Pg	Pb	21 22 58.2	+2.4
	4.1nm,0.7s						
AAK				⇓Lg	Lg	21 23 57.8	
	10nm,0.9s						
KK02	Karatay Array	5.42	345	⇓Pn	Pn	21 22 50.3	+1.7
	1.1nm,0.3s						
KK02				⇓Sn	Sn	21 23 49.9	-1.2
	6.5nm,0.8s						
TKM2	Tokmak 2	5.61	25	⇓Pn	Pn	21 22 52.7	+1.4
	2.9nm,1.1s						
TKM2				⇑Pg	Pb	21 23 07.5	+1.8
	1.4nm,0.6s						
TKM2				⇑Lg	Lg	21 24 16.6	
	17nm,1.5s						
AB31	Akbulak array	14.50	326	⇑Pn	Pn	21 24 55.0	+2.1
	0.3nm,0.5s,baz=143,slow=13,SNR=8.1						
AB31				Sn	Sn	21 27 30.1	-3.5
	0.6nm,0.7s,baz=136,slow=26,SNR=4.2						
AKTO	Aktyubinsk	16.22	325	⇑Pn	P	21 25 20.2	+1.6
	3.4nm,0.8s						
ZALV	Zalesovo Beam	18.21	24	P	Pn	21 25 38.3	-2.1
	0.2nm,0.3s,baz=215,slow=12,SNR=3.7						
SONM	Songino Array	26.65	57	P	P	21 27 06.2	-0.4
	0.4nm,0.8s,baz=262,slow=6.4,SNR=4.1						
CMAR	Chiang Mai Arr	30.19	122	LR	LR	21 41 46.9	
	comp=Z,59nm,19.4s,baz=264,slow=40						
NOA	NORSAR Array B	43.97	322	P	P	21 29 34.6	-0.2
	0.2nm,0.6s,baz=107,slow=6.5,SNR=2.4						
TIXI	Tiksi	44.09	22	P	P	21 29 33.4	-2.1
	0.8nm,0.6s,baz=280,slow=5.7,SNR=2.8						
YKA	Yellowknife Ar	79.82	3	P	P	21 33 34.8	-1.0
	0.2nm,0.6s,baz=347,slow=5.7,SNR=2.6						

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*ANF **28** 22:33:55.3±0.1, 36°54N×112°27W, h0km, ML3.9/28, Error ellipse: s-maj=1.7km s-min=1.2km az=102.0*
*NEIC **28** 22:33:56.8±1.3, 36°59N±0°03×112°35W±0°04, h9km±6km, ML3.6/94, ML3.6/7(REN), Error ellipse: s-maj=5.0km s-min=3.3km az=52.0*
*REN **28** 22:33:59.8±3.4, 36°72N±0°04×112°48W±0°05, h8km±6km, Error ellipse: s-maj=6.3km s-min=4.7km az=54.0*
ISC 28 22:33:56.3±1.0**, 36°60N**±0°02×**112°31W**±0°03**, h10**km±9km**, n91, σ1ˢ29**/108**, Western Arizona**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U15A	North Rim	0.17	175	Pg	Pg	22 34 00.4	+0.2
U15A				Sg	Sg	22 34 03.6	+0.8
U15A				IAML		22 34 03.8	
	comp=N,25µm,0.3s						
U15A				IAML		22 34 03.9	
	comp=E,35µm,0.3s						
KNB	Kanab	0.59	316	Pg	Pg	22 34 07.9	+0.1
KNB				Sg	Sg	22 34 15.6	0.0
KNB				IAML		22 34 16.5	
	comp=E,4µm,0.2s						
KNB				IAML		22 34 16.7	
	comp=N,3µm,0.3s						
PKCU	Pink Cliffs	0.85	360	Pg	Pg	22 34 12.4	-0.3
PKCU				Sg	Sg	22 34 24.3	+0.5
PKCU				IAML		22 34 29.0	
	comp=N,2µm,0.3s						
PKCU				IAML		22 34 29.0	
	comp=E,3µm,0.4s						
LCMT	Little Creek M	0.86	299		Pg	22 34 12.4	-0.5
LCMT				Sg	Sg	22 34 23.6	-0.4
SZCU	Shurtz Canyon	1.18	328		Pg	22 34 18.1	-0.8
SZCU				Sg	Sg	22 34 33.2	-1.1
CCUT	Cedar City	1.27	319		Pn	22 34 20.0	-0.4
CCUT				Sg	Sg	22 34 36.0	-1.3
CCUT				IAML		22 34 36.8	
	comp=E,1µm,0.4s						
CCUT				IAML		22 34 36.9	
	comp=N,641nm,0.4s						
WUAZ	Wupatki	1.32	145		Pn	22 34 20.1	-0.8
WUAZ				Sg	Sb	22 34 36.6	-1.7
WUAZ	Wupatki	1.32	145	P	Pn	22 34 20.1	-0.8
	baz=324,SNR=477						
WUAZ				S	Sb	22 34 36.8	-1.5
	baz=324						
ICU	Indian Springs	1.41	294		Pn	22 34 22.3	+0.2
ICU					Sb	22 34 40.0	-0.8
MTPU	Mount Pierson	1.45	4		Pn	22 34 22.4	-0.5
MTPU				IAML		22 34 43.2	
	comp=E,1µm,0.4s						
MTPU				IAML		22 34 43.9	
	comp=N,826nm,0.4s						
MVU	Marysvale	1.91	2	Pn	Pn	22 34 29.3	+0.2
MSU	Marysvale	1.92	3		Pn	22 34 29.9	+0.7
TCRU	Three Creeks R	2.01	357	Pn	Pn	22 34 31.1	+0.5
TCRU				IAML		22 35 02.9	
	comp=E,398nm,0.3s						
TCRU				IAML		22 35 03.0	
	comp=N,419nm,0.6s						
X16A	Lo Mia Camp, P	2.29	162		Pn	22 34 34.2	-0.1
PSUT	Pine Spring	2.29	328	Pn	Pn	22 34 34.7	+0.3
PSUT				IAML		22 35 11.4	
	comp=N,245nm,0.5s						
PSUT				IAML		22 35 13.7	
	comp=E,292nm,0.5s						
SHPR	Sheep Range	2.30	269	Pn	Pn	22 34 34.4	0.0
SHPR				IAML		22 35 09.9	
	comp=E,233nm,0.5s						
PRN	Pahroc Range	2.34	291	Pn	Pn	22 34 35.2	+0.2
PRN				IAML		22 35 08.8	
	comp=E,572nm,0.7s						
PRN				IAML		22 35 15.0	
	comp=N,754nm,0.5s						
Q16A	Castle Valley	2.49	21	Pn	Pn	22 34 38.8	+1.7
Q16A				IAML		22 35 15.4	
	comp=N,610nm,0.7s						
Q16A				IAML		22 35 19.1	
	comp=E,500nm,0.5s						
W18A	Petrified Fore	2.56	124		Pn	22 34 38.4	+0.4
W18A	Petrified Fore	2.56	124	P	Pn	22 34 37.9	-0.1
	baz=306						
W18A				Sb	Sb	22 35 14.2	+0.2
	baz=306						
NEE2	Needles Airpor	2.62	227	P	Pn	22 34 37.9	-0.8
	baz=45,SNR=31						
NEE2				Sb	Sg	22 35 18.0	-2.4
	baz=45						
PDMCI	Parker Dam,Lak	2.73	214	P	Pn	22 34 39.7	-0.5
	baz=32						
PDMCI				Sb	Sb	22 35 20.9	+2.0
	baz=32						
X18A	Snowflake	2.82	136	Pn	Pn	22 34 42.6	+1.0
TMUT	Trail Mountain	2.83	18	Pn	Pn	22 34 42.6	+0.7
SRU	San Rafael Swe	2.88	29	Pn	Pn	22 34 44.8	+2.3
SRU				IAML		22 35 25.3	
	comp=N,343nm,0.5s						
SPR3	Spring Creek 3	2.88	327	Pn	Pn	22 34 41.9	-0.7
SPR3				IAML		22 35 29.1	
	comp=E,122nm,0.8s						
SPR3				IAML		22 35 32.6	
	comp=N,128nm,0.8s						
MVCO	Mesa Verde	3.12	78	Pn	Pn	22 34 47.0	+1.2
MVCO	Mesa Verde	3.12	78	P	Pn	22 34 45.9	+0.2
	baz=260,SNR=67						
P17A	Butcher Ranch,	3.13	23	Pn	Pn	22 34 47.0	+1.2
P17A				IAML		22 35 33.8	
	comp=N,275nm,0.8s						
P17A				IAML		22 35 37.6	
	comp=E,284nm,0.6s						
R11A	Troy Canyon, C	3.14	305	Pn	Pn	22 34 45.9	-0.1
R11A				IAML		22 35 35.5	
	comp=E,109nm,0.3s						
R11A				IAML		22 35 37.4	
	comp=N,104nm,0.4s						
R11A	Troy Canyon, C	3.14	305	P	Pn	22 34 46.3	+0.3
	baz=123						
TUQ	Turquoise Moun	3.15	249	P	Pn	22 34 46.2	+0.1
	baz=67						
TPNV	Topopah Spring	3.18	278	Pn	Pn	22 34 47.0	+0.4
TPNV				IAML		22 35 38.9	
	comp=N,114nm,0.6s						
TPNV	Topopah Spring	3.18	278	P	Pn	22 34 47.2	+0.6
	baz=95,SNR=54						
GMRC	Granite Mounta	3.27	237	P	Pn	22 34 47.4	-0.4
	baz=55						
GMRC				Sb	Sb	22 35 37.2	+2.8
	baz=55						
SHOC	Shoshone, Teco	3.28	259	Sb	Sg	22 35 39.0	-2.6
	baz=76						
NLU	North Lily Min	3.36	3	Pn	Pn	22 34 49.1	+0.1
IRM	Iron Mountain	3.36	224	P	Pn	22 34 48.1	-0.8
	baz=42						
IRM				Sb	Sb	22 35 40.2	+3.3
	baz=42						
P18A	Preston Nutter	3.44	28		Pn	22 34 50.8	+0.6
P18A				IAML		22 35 50.6	
	comp=N,256nm,0.8s						
GWY	Greenwater Val	3.54	265	Pn	Pn	22 34 53.7	+2.2
GWY				IAML		22 35 55.5	
	comp=E,127nm,0.8s						
GWY				IAML		22 36 00.2	
	comp=N,88nm,1.1s						
DUG	Dugway, Tooele	3.61	354	Pn	Pn	22 34 53.1	+0.7
DUG	Dugway, Tooele	3.61	354	P	Pn	22 34 53.3	+0.8
	baz=174						
DUG				Sb	Sg	22 35 49.8	-2.6
	baz=174						
FURC	Furnace Creek,	3.67	269	Sb	Sg	22 35 50.2	-3.9
	baz=87						
HEC	Hector,Ludlow	3.72	243	P	Pn	22 34 53.9	+0.1
	baz=60,SNR=9.7						
QSM	Queen of Sheba	3.74	262	Pn	Pn	22 34 55.4	+1.4
QSM				IAML		22 35 57.9	
	comp=N,73nm,0.8s						
QSM				IAML		22 36 04.8	
	comp=E,61nm,1.5s						
GSC	Goldstone, Bar	3.87	252	Pn	Pn	22 34 57.3	+1.4
GSC				IAML		22 36 01.0	
	comp=E,106nm,0.6s						
GSC				IAML		22 36 09.0	
	comp=N,92nm,1.1s						
GSC	Goldstone, Bar	3.87	252	Sb	Sg	22 35 57.2	-3.4
	baz=69						
BC3	Big Chuckawall	3.91	222	P	Pn	22 34 56.4	-0.1
	baz=40						
BC3				Sb	Sb	22 35 56.7	+4.1
	baz=40						
BELC	Belle Mtn. Jos	3.98	230	P	Pn	22 34 57.4	-0.1
	baz=48						
BELC				Sb	Sb	22 35 59.0	+4.3
	baz=48						
GLA	Glamis	4.10	211		Pn	22 34 59.0	0.0
GLA				IAML		22 36 07.7	
	comp=N,142nm,0.6s						
GLA	Glamis	4.10	211	P	Pn	22 34 58.8	-0.2
	baz=29						
RRX	Edison Barstow	4.18	247	P	Pn	22 35 00.5	+0.4
	baz=64						
TPH	Tonopah	4.18	292	Pn	Pn	22 35 00.9	+0.5
LCH	Last Change Ra	4.32	280		Pn	22 35 02.6	+0.4
LCH				IAML		22 36 14.2	
	comp=N,38nm,0.7s						
LCH				IAML		22 36 17.5	
	comp=E,44nm,0.7s						
TUC	Tucson	4.46	163	Pn	Pn	22 35 04.2	+0.2
TUC	Tucson	4.46	163	P	Pn	22 35 03.6	-0.4
	baz=344						
RDMU	Red Mountain	4.51	28	Pn	Pn	22 35 03.8	-1.1
RDMU				IAML		22 36 17.9	
	comp=N,75nm,0.8s						
RDMU				IAML		22 36 25.7	
	comp=E,104nm,1.2s						
PFO	Pinyon Flats O	4.52	230	Pn	Pn	22 35 04.4	-0.5
PFO	Pinyon Flats O	4.52	230	P	Pn	22 35 05.2	+0.3
	baz=47						
TPFO	Pinon Flats	4.52	230	P	Pn	22 35 04.9	0.0
	baz=47						
S22A	4UR Ranch, Cre	4.53	74	P	Pn	22 35 06.2	+1.0
	baz=257,SNR=10.0						
SWSC	Sam W. Stewart	4.64	219	P	Pn	22 35 06.8	+0.3
	baz=37						
214A	Organ Pipe Nat	4.65	185	Pn	Pn	22 35 07.2	+0.6
214A				IAML		22 36 33.3	
	comp=E,32nm,0.8s						
SPUT	South Promonto	4.71	359	Pn	Pn	22 35 08.3	+0.8
ELK	Elko	4.73	332	Pn	Pn	22 35 07.8	-0.2
O20A	White River Ci	4.76	41	Pn	Pn	22 35 09.2	+0.8
O20A	White River Ci	4.76	41	P	Pn	22 35 09.2	+0.8
	baz=224						
SMCO	Snowmass	4.95	57		Pn	22 35 12.6	+1.6
LENM	Lemitar	4.99	118	Pn	Pn	22 35 12.2	+0.8
NV11	Mina Array Sit	5.00	293	Pn	Pn	22 35 09.9	-1.6
MURC	Murrieta	5.00	235	P	Pn	22 35 11.9	+0.5
	baz=52						
MONP2	Monument Peak	5.01	224	P	Pn	22 35 11.9	+0.1
	baz=41						
IKP	In-Ko-Pah, Jac	5.03	220	P	Pn	22 35 12.1	+0.2
	baz=37						
ANMO	Albuquerque	5.04	107	Pn	Pn	22 35 12.3	+0.2
ANMO				IAML		22 36 35.1	
	comp=E,35nm,0.7s						
ANMO				IAML		22 36 38.0	
	comp=E,33nm,0.8s						
ANMO	Albuquerque	5.04	107	P	Pn	22 35 11.8	-0.3
	baz=291						
ISA	Isabella, Lake	5.08	261	Pn	Pn	22 35 11.7	-0.8
NVAR	Mina Array Bea	5.10	293	Pn	Pn	22 35 14.9	+1.9
HVU	Hansel Valley	5.19	356	Pn	Pn	22 35 14.4	+0.3
HVU				IAML		22 36 44.7	
	comp=N,27nm,0.8s						
KVN	Kaiserville	5.20	300	Pn	Pn	22 35 15.2	+0.9
KVN				IAML		22 36 43.3	
	comp=N,23nm,1.0s						
KVN				IAML		22 36 45.0	
	comp=E,34nm,0.9s						
BNM	Barren Site	5.25	116	Pn	Pn	22 35 15.5	+0.5
BAR	Barrett	5.31	224	Pn	Pn	22 35 15.7	+0.1
RYN	Ryan	5.33	294	Pn	Pn	22 35 16.2	+0.1
RYN				IAML		22 36 49.0	
	comp=E,43nm,1.2s						
RYN				IAML		22 36 50.2	
	comp=N,40nm,0.6s						
BMN	Battle Mountai	5.43	316	Pn	Pn	22 35 18.1	+0.6
SDCO	Great Sand Dun	5.56	76		Pn	22 35 20.4	+1.0
SDCO	Great Sand Dun	5.56	76	P	Pn	22 35 20.1	+0.8
	baz=260						
ISCO	Idaho Springs	6.17	57	Pn	Pn	22 35 28.4	+0.7
T25A	Trinidad	6.36	83	Pn	Pn	22 35 30.6	+0.4
RWWY	Rawlins	6.45	36	Pn	Pn	22 35 29.6	-2.0
REDW	Red Top Meadow	6.85	9	Pn	Pn	22 35 38.5	+1.5
MNTX	Cornudas Mount	7.54	128	Pn	Pn	22 35 48.3	+2.0
WVOR	Wild Horse Val	7.61	322	Pn	Pn	22 35 46.2	-1.1

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*ISK **28** 23:24:31.2, 39°04N×25°37E, h11km, ML2.5/21*
*THE **28** 23:24:33.3, 39°01N×25°44E, h10km±5km, ML2.4/3, Error ellipse: s-maj=5.3km s-min=1.1km az=101.0*
*ATH **28** 23:24:33.4, 38°97N×25°46E, h17km±3km, ML2.5/7, Error ellipse: s-maj=3.9km s-min=1.2km az=121.0*
ISC 28 23:24:31.9±1.2**, 39°02N**±0°03×**25°48E**±0°02**, h4**km±12km**, n37, σ0ˢ80**/52**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.35	56	P	Pb	23 24 39.9	-0.8
SIGR				S	Sb	23 24 46.2	-0.4
	1µm,0.2s						
SIGR	SIGRI	0.35	56	P	Pb	23 24 40.4	-0.3
SIGR				S	Sb	23 24 46.2	-0.4
SIGR				AML	AML	23 24 47.0	
	comp=E,3060µm,0.3s						
SIGR				AML	AML	23 24 47.7	
	comp=N,2053µm,0.2s						
SIGR	SIGRI	0.35	56	PG	Pb	23 24 39.6	-1.1
SIGR				SG	Sb	23 24 46.9	+0.4
PSRA	Psara	0.48	172	P	Pb	23 24 42.3	-0.5
PSRA				S	Sg	23 24 48.6	+1.3
PSRA				AML	AML	23 24 49.3	
	comp=E,5656µm,0.1s						
PSRA				AML	AML	23 24 49.8	
	comp=N,4364µm,0.1s						
EFSA	Agios Efstrati	0.65	324	P	Pb	23 24 46.7	+1.0
EFSA				S	Sb	23 24 56.5	+1.4
EFSA				AML	AML	23 24 58.6	
	comp=N,790µm,0.3s						
EFSA				AML	AML	23 24 58.6	
	comp=E,1315µm,0.8s						
PRK	Paraskevi	0.66	69	P	Pn	23 24 47.5	-0.4
PRK				S	Sb	23 24 56.3	+1.0
	comp=E,408nm,0.5s						
PRK	Paraskevi	0.66	69	P	Pn	23 24 47.4	-0.6
PRK				S	Sb	23 24 56.3	+1.0
PRK				AML	AML	23 24 58.5	
	comp=E,794µm,0.5s						
PRK				AML	AML	23 24 59.9	
	comp=N,845µm,0.4s						
SKY	Skiros Island	0.74	259	P	Pb	23 24 47.6	+0.3
SKY				S	Sg	23 24 56.5	+0.8
SKY	Skiros Island	0.74	259	P	Pb	23 24 47.6	+0.3
SKY				S	Sg	23 24 56.5	+0.8
SKY				AML	AML	23 24 57.2	
	comp=N,1298µm,0.2s						
SKY				AML	AML	23 24 58.8	
	comp=E,1168µm,0.2s						
LIA	Limnos Island	0.91	345	P	Pb	23 24 50.6	+0.4
LIA				S	Sb	23 25 03.7	+1.0
	comp=E,228nm,0.4s						
LIA	Limnos Island	0.91	345	P	Pn	23 24 51.2	-0.2
LIA				S	Sb	23 25 03.7	+1.0
LIA				AML	AML	23 25 04.2	
	comp=E,424µm,0.5s						
LIA				AML	AML	23 25 05.8	
	comp=N,440µm,0.3s						
BOZC	Bozcaada	0.94	28	PG	Pg	23 24 50.1	+0.2
BOZC				SG	Sb	23 25 03.9	+0.5
EZN	Ezine	1.04	39	P	Pn	23 24 52.8	-0.4
EZN	Ezine	1.04	39	PG	Pb	23 24 52.3	-0.1
EZN				SG	Sn	23 25 07.6	-0.5
DKL	Dikili	1.11	87	PN	Pn	23 24 53.9	-0.3
DKL				SN	Sn	23 25 10.9	+1.0
KYMI	Kymi, Euboea I	1.15	251	P	Pg	23 24 53.1	-0.8
KYMI				AML	AML	23 25 11.1	
	comp=E,247µm,0.4s						
KYMI				AML	AML	23 25 11.3	
	comp=N,224µm,0.4s						

GADA	Gvkgeada	1.22	15	PN	Pg	23 24 54.7	-0.5
KARY	Karystos	1.28	220	P	Pn	23 24 56.3	-0.3
KARY				S	Sg	23 25 11.9	-1.2
BLCB	Balcova	1.38	117	PN	Pg	23 24 58.1	-0.2
DION	Dionisos Attik	1.53	233	P	Pn	23 24 58.8	-1.2
DION	Dionisos Attik	1.53	233	P	Pn	23 24 58.8	-1.2
GELI	Tayfur-Gelibol	1.58	29	PN	Pn	23 24 59.8	-0.8
LPK	Lapseki	1.68	36	PN	Pn	23 25 01.6	-0.4
OUR	Ouranopolis	1.75	319	PN	Pn	23 25 00.9	-2.1
ENEZ	Enez	1.79	17	PN	Pn	23 25 02.7	-0.9
ERIK	Erikli-Kesan	1.83	25	PN	Pn	23 25 03.3	-0.8
GCAM	G?zelcaml?	1.90	133	PN	Pn	23 25 05.3	+0.2
ALN	Alexandroupoli	1.93	13	PN	Pn	23 25 04.6	-0.8
APE	Apeiranthos	1.94	179	PN	Pn	23 25 05.6	-0.1
KRBG	Karabiga-Canak	1.96	45	PN	Pn	23 25 05.6	-0.3
RDO	Rodhopi	2.13	1	PN	Pn	23 25 07.1	-1.1
AYDB	Zeytinkoy-Aydi	2.17	119	PN	Pn	23 25 09.1	+0.2
MAR6	Marsite Statio	2.17	39	PN	Pn	23 25 08.6	-0.2
MAR3	Marsite Statio	2.22	38	PN	Pn	23 25 08.4	-1.0
EDC	Edincik	2.27	53	PN	Pn	23 25 10.1	0.0
MRMT	Marmara Adasi	2.27	45	PN	Pn	23 25 10.1	-0.1
UKOP	Uzunkopru-Edir	2.29	22	PN	Pn	23 25 09.9	-0.5

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*IDC **28** 23:45:37.9±2.0, 13°.10N×143°.66E, h122^{km}±28^{km}, mb3.4/5, mb1 3.6/5, mb1mx2.9/47, mbtmp3.8/5, MS3.2/1, Ms1 3.2/1, ms1mx2.5/30, Error ellipse: s-maj=43.9km s-min=20.0km az=73.0*

ISC 28 23:45:39.7±0.9**, 13°.2N**±0°.1×**144°.0E**±0°.2**, h150**^{km}**, n7,** σ**1^{s}.06**/7**, mb3.8**/5**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.94	66	P	Pn	23 46 03.7	-0.3
	18nm,0.3s,baz=308,slow=12,SNR=11						
GUMO				S	Sn	23 46 21.7	-0.7
	83nm,0.3s,baz=120,slow=21,SNR=6.9						
JOW	Kunigami	20.00	315	LR	LR	23 56 22.6	
	comp=Z,74nm,20.7s,baz=288,slow=32						
WRA	Warramunga Arr	34.29	196	P	P	23 52 10.7	-1.1
	4.0nm,0.7s,baz=15,slow=9.3,SNR=22						
ASAR	Alice Springs	37.95	195	P	P	23 52 42.2	-0.7
	1.2nm,0.7s,baz=17,slow=12,SNR=12						
DZM	Mont Dzumac	41.41	148	P	P	23 53 13.1	+1.4
	2.7nm,0.7s,baz=180,slow=14,SNR=8.6						
SONM	Songino Array	46.55	326	P	P	23 53 52.8	+0.4
	0.3nm,0.6s,baz=135,slow=7.1,SNR=2.5						
MKAR	Makanchi Array	61.16	316	P	P	23 55 38.5	0.0
	0.3nm,0.7s,baz=97,slow=7.5,SNR=1.9						

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*UPP **28** 23:54:33.7±0.5, 67°.82N×20°.22E, h0^{km}±6^{km}, ML2.2, Explosion*

*HEL **28** 23:54:34.2±0.1, 67°.82N×20°.21E, h0^{km}, ML1.6, ML2.2(UPP), Explosion*

ISC 28 23:54:34.3±0.9**, 67°.83N**±0°.02×**20°.22E**±0°.03**, h0**^{km}**, n25,** σ**1^{s}.03**/35**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	21	P	Pg	23 54 36.5	-0.2
KUA				S	Sg	23 54 38.5	+0.1
KUA	Kurravaara	0.13	21	iP	Pg	23 54 36.5	-0.2
KUA				iS	Sg	23 54 38.5	+0.1
RATU	Laukkuluspa	0.24	268	P	Pg	23 54 38.3	-0.5
RATU	Laukkuluspa	0.24	268	iP	Pg	23 54 38.3	-0.5
KOVU	Salmi	0.39	357	P	Pg	23 54 41.4	-0.4
KOVU	Salmi	0.39	357	iP	Pg	23 54 41.4	-0.4
LANU	Lannavaara	0.70	71	eP	Pg	23 54 47.0	-0.8
LANU				eS	Sb	23 54 58.8	-0.8
DUNU	Dundret	0.73	169	P	Pg	23 54 47.0	-1.2
DUNU	Dundret	0.73	169	iP	Pg	23 54 47.0	-1.2
MASU	Masugnsbyn	0.78	118	P	Pg	23 54 48.3	-0.9
MASU	Masugnsbyn	0.78	118	iP	Pg	23 54 48.3	-0.9
SALU	Saltoluokta	0.80	236	P	Pg	23 54 48.7	-0.8
SALU	Saltoluokta	0.80	236	iP	Pg	23 54 48.7	-0.8
KIF	Kilpisjarvi	1.20	10	eP	Pg	23 54 56.8	-0.4
KIF	Kilpisjarvi	1.20	10	ePB	Pg	23 54 56.9	-0.3
KIF				MSG		23 55 13.1	
	comp=Z,6.4nm,0.2s						
KIF				eSN	Sn	23 55 15.1	0.0
HEF	Hetta	1.41	64	eP	Pn	23 54 59.9	-1.4
HEF	Hetta	1.41	64	eP	Pn	23 54 59.7	-1.6
	baz=249						
HEF				MSG		23 55 17.5	
	comp=Z,3.8nm,0.2s						
HEF				eSN	Sn	23 55 22.4	+1.9
ERTU	Ertsjaerv	1.50	148	P	Pn	23 55 01.3	-1.1
ERTU	Ertsjaerv	1.50	148	ePG	Pn	23 55 01.1	-1.3
ERTU				eSN	Sn	23 55 24.1	+1.5
KALU	Kalix	2.34	146	ePB	Pn	23 55 14.3	+0.4
	baz=329						
KALU				e		23 55 50.5	
TOF	Tornio	2.39	136	ePB	Pn	23 55 15.3	+0.7
	baz=317						
TOF				MSG		23 55 45.0	
	comp=Z,2.8nm,0.2s						
TOF				eSG	Sb	23 55 48.2	+0.1
RNF	Rovaniemi	2.57	116	ePB	Pn	23 55 18.3	+1.2
RNF				eSG	Sb	23 55 52.9	-0.4
ARA0	ARCESS Array S	2.58	46	eP	Pn	23 55 18.0	+0.7
	baz=232						
ARA0				eSG	Sb	23 55 53.5	-0.1
KEV	Kevo	3.13	49	ePB	Pb	23 55 29.0	-1.8
KEV				MSG		23 56 07.2	
	comp=Z,1.6nm,0.2s						
KEV				eSG	Sb	23 56 11.2	+1.7
OBF0	Syolatti, Pyha	3.73	152	ePG	Pb	23 55 42.7	+1.9

UPP 28 23:54:36.2±0.1**, 67°.82N**×**20°.19E, h0**^{km}**, ML2.2, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	23	P	Pg	23 54 39.3	+0.3
KUA				S	Sg	23 54 40.9	+0.1
RATU	Laukkuluspa	0.23	271	P	Pg	23 54 40.7	+0.2
KOVU	Salmi	0.40	359	P	Pg	23 54 43.9	0.0
MASU	Masugnsbyn	0.78	117	P	Pg	23 54 50.9	-0.3

IDC 28 23:54:52.9±18.0**, 21°.17S**×**173°.92W, h0**^{km}**, mb4.5**/5**, mb1 4.6**/5**, mb1mx4.1**/29**, mbtmp4.5**/5**, Error ellipse: s-maj=337.6km s-min=141.7km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	37.22	264	P	P	00 02 07.4	+1.0
	7.0nm,0.3s,baz=95,slow=9.8,SNR=12						
STKA	Stephens Creek	40.95	245	P	P	00 02 36.4	-1.2
	2.0nm,0.4s,baz=93,slow=9.6,SNR=8.6						
ASAR	Alice Springs	48.08	257	P	P	00 03 34.0	-0.7
	2.6nm,0.5s,baz=100,slow=6.7,SNR=28						
WRA	Warramunga Arr	48.28	262	P	P	00 03 35.8	-0.5
	2.2nm,0.3s,baz=91,slow=8.4,SNR=44						
FITZ	Fitzroy Crossi	56.71	262	P	P	00 04 40.0	+1.2
	2.5nm,0.7s,baz=86,slow=7.1,SNR=2.2						

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*IDC **29** 00:06:36.4±1.2, 27°.65N×92°.72E, h0^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.6/60, mbtmp3.7/6, ML4.3/1, Error ellipse: s-maj=48.6km s-min=22.4km az=66.0*

*NDI **29** 00:06:46.8±5.0, 27°.20N×92°.91E, h10^{km}±22^{km}, ML3.7*

ISC 29 00:06:39.7±0.8**, 27°.67N**±0°.06×**92°.67E**±0°.06**, h18**^{km}**, n13,** σ**1^{s}.18**/17**, mb4.0**/5**, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITAN	ITANAGAR	1.07	119	eP	Pg	00 07 03.6	+3.1
ITAN				eS	Sb	00 07 11.3	-2.1
ITAN				IAML		00 07 17.1	
	comp=N,2μm,0.3s						
ITAN				IAML		00 07 17.9	
	comp=E,2μm,0.4s						
JORH	JORHAT	1.69	123	eP	Pn	00 07 08.5	+0.2
JORH				eS	Sn	00 07 29.4	-0.1
JORH				IAML		00 07 33.2	
	comp=Z,2μm,0.4s						
SHL	Shillong	2.21	199	eP	Pb	00 07 19.3	0.0
SHL				eS	Sb	00 07 45.8	-0.7
SHL				IAML		00 07 49.1	
	comp=N,704nm,0.4s						
KOHI	KOHIMA	2.33	146	eP	Pn	00 07 17.4	0.0
KOHI				eS	Sn	00 07 45.0	-0.6
KOHI				IAML		00 07 55.4	
	comp=N,374nm,0.4s						
LKP	Lekhapani	2.84	96	eS	Sb	00 08 03.4	-1.0
LKP				IAML		00 08 04.6	
	comp=N,843nm,0.6s						
LKP				IAML		00 08 07.7	
	comp=E,536nm,0.4s						
BRDH	Bariadhala	5.06	191	Sn	Sn	00 08 53.2	+0.4
	comp=E,0.2nm,0.3s,baz=136,slow=24,SNR=8.1						
CMAR	Chiang Mai Arr	10.84	147	Pn	Pn	00 09 13.6	-0.4
	comp=E,0.6nm,0.3s,baz=321,slow=13,SNR=2.9						
WMQ	Urumqi	16.60	347	eP	P	00 10 35.0	+1.0
SONM	Songino Array	22.80	24	P	P	00 11 40.9	-0.6
	comp=E,0.5nm,0.5s,baz=208,slow=11,SNR=6.1						
WRA	Warramunga Arr	62.19	135	P	P	00 16 59.2	-1.1
	comp=E,1.1nm,0.8s,baz=315,slow=8.2,SNR=5.9						
GERES	GERESS Array B	62.68	313	P	P	00 17 03.3	-0.1
	comp=E,0.6nm,0.5s,baz=77,slow=5.9,SNR=5.3						
ASAR	Alice Springs	64.72	138	P	P	00 17 16.2	-0.8
	comp=E,0.8nm,0.5s,baz=322,slow=6.5,SNR=14						
ILAR	Eielson Array	77.01	22	P	P	00 18 30.8	-0.3
	comp=E,0.5nm,0.8s,baz=299,slow=3.7,SNR=4.3						

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*IDC **29** 00:06:57.1±0.5, 34°.98N×73°.07E, h0^{km}, mb4.2/32, mb1 4.3/39, mb1mx4.2/59, mbtmp4.2/39, ML4.1/7, MS3.7/26, Ms1 3.7/26, ms1mx3.6/43, Error ellipse: s-maj=12.3km s-min=10.2km az=24.0*

*BJI **29** 00:07:01.2±0.0, 35°.07N×73°.08E, h42^{km}, mB4.7/23, mb4.6/42, ML4.4/4, Ms4.2/22, Ms7 3.9/22*

*MOS **29** 00:07:02.7±1.2, 35°.08N×73°.06E, h54^{km}, mb4.6/19, Error ellipse: s-maj=6.6km s-min=3.8km az=92.4*

*NEIC **29** 00:07:04.0±1.8, 34°.98N±0°.05×73°.05E±0°.08, h49^{km}±7^{km}, mb4.7/49, Error ellipse: s-maj=9.4km s-min=7.5km az=70.0*

*NNC **29** 00:07:08.9±5.6, 35°.42N×72°.52E, h60^{km}±69^{km}, mb4.5, mpv4.5, Error ellipse: s-maj=43.1km s-min=39.5km az=106.0*

ISC 29 00:07:03.3±0.3**, 35°.03N**±0°.03×**73°.10E**±0°.03**, h50**^{km}**, n274,** σ**2^{s}.14**/300**, mb4.4**/71**, MS3.8**/31**, 10C-6D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.37	174	P	Pn	00 07 25.9	-0.2
NIL	Nilore	1.38	175	P	Pn	00 07 25.8	-0.4
NIL	Nilore	1.38	175		Pn	00 07 25.8	-0.4
CEP	Cherat	1.55	220	P	Pn	00 07 27.6	-1.0
CEP				S	Sn	00 07 49.0	+1.3
THW	Thamme Wali	2.49	207	P	Pn	00 07 42.1	+0.7
JMU	Jammu	2.75	146	eP	Pn	00 07 42.5	-2.3
JMU				eS	Sn	00 08 21.0	+4.2
SARP	Sargodha	3.12	187	P	Pn	00 07 50.7	+0.8
KBL	Kabul	3.37	263	PN	Pn	00 07 54.5	+0.9
KBL	Kabul	3.37	263	Pn	Pn	00 07 54.5	+0.9
THN	Thein Dam	3.38	139	eP	Pn	00 07 56.0	+2.5
THN				eS	Sn	00 08 37.5	+5.1
DHRM	DHARAMSHALA	3.85	135	eP	Pn	00 08 02.2	+2.0
DHRM				eS	Sn	00 08 47.7	+3.5
DHRM				IAML		00 08 49.9	
	comp=E,4μm,0.2s						
DHRM				IAML		00 08 50.1	
	comp=N,3μm,0.3s						
DRK	Karamyk	4.57	347	Pn	Pn	00 08 13.4	+3.3
CHGR	Chuyangaron	4.81	320	PN	Pn	00 08 13.3	+0.1
CHGR	Chuyangaron	4.81	320	Pn	Pn	00 08 13.3	+0.1
KSH	Kashi	5.04	26	P	Pn	00 08 14.3	-2.0
KSH				sP		00 08 27.0	
KSH				S	Sn	00 09 08.3	-5.0
KSH				smax	smax		
	comp=N,490nm,1.3s						
KSH				smax	smax		
	comp=N,770nm,1.2s						
KSH				LR	LR		
	comp=N,3μm,4.0s						
KSH				LR	LR		
	comp=N,2μm,3.8s						
KSH				LR	LR		
	comp=N,3μm,9.5s						
SMLA	Simla	5.17	138	eP	Pn	00 08 19.5	+1.4
SMLA				eS	Sn	00 09 18.3	+1.8
SMLA				IAML		00 09 22.0	
	comp=E,1μm,0.2s						
SMLA				IAML		00 09 22.4	
	comp=N,1μm,0.3s						
BTK	Batken	5.34	341	PN	Pn	00 08 22.1	+1.6
BTK	Batken	5.34	341	Pn	Pn	00 08 22.1	+1.6
AML	Almayashu	7.11	4	P	Pn	00 08 47.8	+2.7
	SNR=37						
AML	Almayashu	7.11	4	PN	Pn	00 08 47.4	+2.4
NDI	New Delhi	7.23	150	eP	Pn	00 08 46.3	0.0
NDI				eP	Pn	00 08 47.0	+0.7
NDI				eS	Sn	00 10 04.7	-2.3
UCH	Uchtor	7.28	8	P	Pn	00 08 49.3	+1.9
	SNR=94						
UCH	Uchtor	7.28	8	P	Pn	00 08 49.2	+1.9
KUDL	Kundal	7.44	156	eP	Pn	00 08 47.9	-1.4
KUDL				eS	Sn	00 10 09.2	-3.1
IUG	Iuzhnay	7.50	342	eP	Pn	00 08 49.8	-0.4
	baz=342						
IUG	Iuzhnay	7.50	342	eP	Pn	00 08 49.8	-0.4
SONA	Sohna	7.56	152	eP	Pn	00 08 50.4	-0.5
SONA				eS	Sn	00 10 13.8	-1.4
ULHL	Ulahol	7.62	18	P	Pn	00 08 55.8	+3.9
	SNR=14						
ULHL	Ulahol	7.62	18	P	Pn	00 08 55.7	+3.9
EKS2	Erkin-Say	7.64	4	P	Pn	00 08 55.5	+3.4
	SNR=27						
TARG	Taragay, Kyrgy	7.64	27		Pn	00 08 53.6	+1.2
AAK	Ala-Archa	7.68	8	Pn	Pn	00 08 54.9	+2.2
	comp=N,3.6nm,0.3s,baz=181,slow=8.0,SNR=48						
AAK				Sn	Sn	00 10 22.0	+3.8
	comp=N,3.7nm,0.3s,baz=11,slow=13,SNR=6.8						
AAK				LR	LR	00 12 14.3	
	comp=N,999nm,21.9s,baz=200,slow=41						
AAK	Ala-Archa	7.68	8	P	Pn	00 08 54.9	+2.2
	SNR=32						
AAK	Ala-Archa	7.68	8	⇓P	Pn	00 08 54.8	+2.2
	comp=N,27nm,0.8s						
AAK				⇑S	Sn	00 10 18.5	+0.3
	comp=N,50nm,0.9s						
AAK	Ala-Archa	7.68	8	Pn	Pn	00 08 53.9	+1.3
KBK	Karagaybulak	7.75	10	P	Pn	00 08 56.1	+2.5
	SNR=19						
KBK	Karagaybulak	7.75	10	P	Pn	00 08 56.6	+2.9
BOOM	Boomskoye usch	7.78	16	P	Pn	00 08 55.7	+1.7
BOOM	Boomskoye usch	7.78	16	Pn	Pn	00 08 55.7	+1.7
CHMS	Chumysh	8.06	9	P	Pn	00 08 59.6	+1.8
	SNR=12						
TKM2	Tokmak 2	8.12	13	P	Pn	00 09 00.4	+1.7
	SNR=26						
TKM2	Tokmak 2	8.12	13	P	Pn	00 09 00.4	+1.7
TKM2				S	Sn	00 10 26.9	-2.3
TKM2	Tokmak 2	8.12	13	⇑P	Pn	00 09 00.4	+1.7
	comp=N,8.7nm,0.6s						
TKM2				⇑S	Sn	00 10 26.9	-2.3
	comp=N,27nm,0.6s						
USP	Ospenovka	8.30	7	P	Pn	00 09 03.4	+2.3
	SNR=9.7						
KKAR	Karatay Array	8.31	347	P	Pn	00 09 01.7	+0.5
KKAR	Karatay Array	8.31	347	Pn	Pn	00 09 01.7	+0.5
KK08	Karatay Array	8.32	347	⇓P	Pn	00 09 01.6	+0.4
	comp=N,25nm,0.5s,baz=172,slow=13						
KK08				⇑S	Sn	00 10 28.9	-4.9
	comp=N,37nm,0.5s,baz=173,slow=23						
SGDS	Sogindy	8.50	8	eP	Pn	00 09 04.0	+0.3
	baz=7.7						
PRZ	Przheval'sk	8.52	27	P	Pn	00 09 05.6	+1.5
PRZ	Przheval'sk	8.52	27	Pn	Pn	00 09 05.6	+1.5
AJM	Ajmer	8.62	171	eP	Pn	00 09 04.9	-0.6
MDOK	Medeo	8.69	19	eP	Pn	00 09 06.8	+0.4
	baz=20						
MDOK	Medeo	8.69	19	eP	Pn	00 09 06.8	+0.4
HRA	Herat	8.96	269	Pn	Pn	00 09 09.9	-0.3
SATY	Saty	9.02	26	eP	Pn	00 09 11.0	0.0
	comp=N,3.2nm,0.6s,baz=26						
SATY	Saty	9.02	26	eP	Pn	00 09 10.9	0.0
SATY				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KUU	Kurty	9.20	15	eP	Pn	00 09 12.4	-0.9
	baz=15						
KUU	Kurty	9.20	15	eP	Pn	00 09 12.4	-0.9
CHKK	Chushkaly	9.31	18	eP	Pn	00 09 15.0	+0.1
	baz=18						
UZB	Uzynbulak	9.32	28	eP	Pn	00 09 15.1	-0.1
	comp=Z,4.3nm,0.9s,baz=28						
UZB	Uzynbulak	9.32	28	eP	Pn	00 09 15.0	-0.1
UZB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BTLS	Baital	10.03	4	eP	Pn	00 09 24.3	-0.4
	comp=Z,3.0nm,0.8s,baz=3.9						
BTLS	Baital	10.03	4	eP	Pn	00 09 24.2	-0.4
BTLS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
JHNI	Jhansi	10.62	152	eP	Pn	00 09 30.7	-2.1
JHNI				eS	Sn	00 11 25.3	-5.0
TDK	Taldyqorghan	10.76	21	eP	Pn	00 09 34.3	-0.3
	baz=21						
TDK	Taldyqorghan	10.76	21	eP	Pn	00 09 34.3	-0.3
PYUN	Piuthan	10.90	127	ePn	Pn	00 09 35.0	-1.8
PYUN				eSn	Sn	00 11 34.1	-3.2
	comp=Z,264nm,0.5s						
DANN	Dangsing	11.25	123	ePn	Pn	00 09 40.2	-1.5
DANN				eSn	Sn	00 11 41.0	-5.2
	comp=Z,185nm,0.4s						
KOLN	Koldanda	11.52	126	ePn	Pn	00 09 43.7	-1.5
KOLN				eSn	Sn	00 11 48.5	-4.0
	comp=Z,166nm,0.5s						
GKN	Gorkha	12.07	122	ePn	Pn	00 09 50.7	-2.1
GKN				eSn	Sn	00 12 00.1	-5.9
	comp=Z,266nm,0.3s						
BHUJ	Bhuj	12.11	195	eP	Pn	00 09 50.7	-2.4
BHUJ				eS	Sn	00 11 58.8	-7.8
BHUJ				IAML		00 12 02.8	
	comp=E,70nm,1.2s						
ALBI	Allahabad	12.26	140	eP	Pn	00 09 51.7	-3.5
ALBI				eS	Sn	00 12 03.9	-6.5
BHPL	Bhopal	12.33	161	eP	Pn	00 09 53.9	-2.3
BHPL				eS	Sn	00 12 05.7	-6.6
BHPL				IAML		00 12 10.4	
	comp=E,50nm,0.6s						
GEYT	Alibeck	12.40	288	Pn	Pn	00 09 55.0	-2.1
	comp=E,1.1nm,0.3s,baz=80,slow=26,SNR=9.4						
GEYT				Sn	Sn	00 12 14.6	+0.8
	comp=E,2.9nm,0.3s,baz=120,slow=22,SNR=3.7						
GEYT				LR	LR	00 16 13.9	
	comp=E,141nm,18.6s,baz=205,slow=45						
GEYT	Alibeck	12.40	288	Pn	Pn	00 09 54.2	-2.9
GYA0	ALIBECK ARRAY	12.40	288	P	Pn	00 09 54.0	-3.1
GYA0B	ALIBECK ARRAY	12.40	288	Pn	Pn	00 09 54.0	-3.1
KKN	Kakani	12.65	121	ePn	Pn	00 09 58.4	-2.3
KKN				eSn	Sn	00 12 13.4	-6.9
	comp=E,107nm,0.4s						
PKIN	Phulchoki	12.87	122	ePn	Pn	00 10 01.0	-2.7
PKIN				eSn	Sn	00 12 18.8	-6.7
	comp=E,118nm,0.4s						
PKI	Pulchoki	12.88	122	ePn	Pn	00 10 01.3	-2.6
PKI				eSn	Sn	00 12 19.2	-6.7
	comp=E,85nm,0.4s						
GUN	Gumba	13.00	120	ePn	Pn	00 10 02.4	-3.3
GUN				eSn	Sn	00 12 21.1	-7.9
	comp=E,76nm,0.4s						
JBP	Jabalpur	13.25	151	eP	Pn	00 10 05.2	-3.5
MAKZ	Makanchi	13.54	27	P	Pn	00 10 12.1	-0.5
MAKZ	Makanchi	13.54	27	Pn	Pn	00 10 12.1	-0.5
MK31	Makanchi Array	13.64	28	iP	Pn	00 10 13.7	-0.3
MK31	Makanchi Array	13.64	28	P	Pn	00 10 14.3	+0.3
	comp=E,3.8nm,0.6s,baz=208,slow=14,SNR=50						
MK31	Makanchi Array	13.64	28	Pn	Pn	00 10 14.2	+0.2
MKAR	Makanchi Array	13.64	28	Pn	Pn	00 10 14.0	0.0
	comp=E,0.6nm,0.3s,baz=207,slow=15,SNR=31						
MKAR	Makanchi Array	13.64	28	P	Pn	00 10 13.2	-0.8
MKAR	Makanchi Array	13.64	28	Pn	Pn	00 10 13.2	-0.8
WMQ	Urumqi	14.28	48	eP	Pn	00 10 21.5	-1.1
WMQ				pP	P	00 10 30.3	+1.7
WMQ				sP		00 10 37.3	
WMQ				S	Sn	00 12 57.5	-2.1
WMQ				pmax	pmax		
	comp=E,50nm,0.7s						
WMQ				pmax	pmax		
	comp=E,210nm,4.9s						
WMQ				LR	LR		
	comp=E,470nm,13.1s						
WMQ				LR	LR		
	comp=E,530nm,12.1s						
WMQ				LR	LR		
	comp=E,540nm,19.7s						
AKL	Akola	14.68	165	eP	Pn	00 10 24.5	-3.5
BLSP	Bilaspur	15.09	146	eP	Pn	00 10 33.4	+0.1
BOK	Bokaro	15.77	132	eS	Sn	00 13 22.2	-14
KURBB	Kurchatov Arra	16.08	13	Pn	Pn	00 10 43.2	-2.6
	comp=E,0.1nm,0.3s,baz=202,slow=11,SNR=15						
LSA	Lhasa	16.14	104	P	P	00 10 49.8	0.0
LSA				pmax	pmax		
	comp=E,140nm,0.7s						
LSA	Lhasa	16.14	104	P	P	00 10 50.5	+0.7
LSA				pmax	pmax		
	comp=Z,26nm,0.7s						
LSA	Lhasa	16.14	104	P	P	00 10 50.5	+0.7
LSA				IAmb	IAmb	00 10 51.7	
	comp=Z,26nm,0.7s						
KURK	Kurchatov	16.19	13	P	Pn	00 10 44.4	-2.8
KURK				pmax	pmax		
	comp=Z,11nm,1.0s						
KURK	Kurchatov	16.19	13	Pn	Pn	00 10 44.4	-2.8
POO	Poona	16.44	177	eP	Pn	00 10 51.0	+0.3
POO				iS	Sn	00 13 39.0	-13
AB31	Akbulak array	17.21	330	P	Pn	00 10 57.8	-2.1
AB31				S	Sn	00 13 59.3	-11
AB31	Akbulak array	17.21	330	⇑P	Pn	00 10 57.8	-2.1
	comp=Z,10nm,0.7s,baz=141,slow=12,SNR=124						
AB31				S	Sn	00 13 59.3	-11
	comp=Z,7.5nm,0.7s,baz=149,slow=25,SNR=5.2						
ABKAR	Akbulak array	17.21	330	Pn	Pn	00 10 57.1	-2.9
WSAR	Wadi Sarin	17.23	231	P	Pn	00 11 00.0	-0.4
	comp=Z,0.8nm,0.3s,baz=72,slow=8.8,SNR=9.1						
WSAR				S	Sn	00 13 57.9	-13
	comp=Z,0.2nm,0.3s,baz=262,slow=17,SNR=2.0						
KAD	Karad	17.67	177	eP	Pn	00 11 06.1	+0.1
DGZ	Jazzator, Alta	18.04	31	iP	P	00 11 09.9	-0.4
BVAR	Borovoye Array	18.10	355	P	P	00 11 10.5	-0.2
	comp=Z,1.8nm,0.3s,baz=170,slow=14,SNR=53						
BRVK	Borovoye	18.14	355	P	P	00 11 10.9	-0.3
BRVK				pmax	pmax		
	comp=Z,17nm,0.8s						
BRVK	Borovoye	18.14	355	⇑P	P	00 11 10.9	-0.3
	comp=Z,19nm,0.8s						
BRVK	Borovoye	18.14	355		P	00 11 10.9	-0.3
HYB	Hyderabad	18.20	163	iP	P	00 11 10.0	-2.1
HYB				eS	Sn	00 14 23.0	-12
AKTO	Aktyubinsk	18.91	329	P	P	00 11 19.9	+0.2
	comp=Z,2.4nm,0.3s,baz=134,slow=10,SNR=64						
AKTO				S	Sn	00 14 45.0	-6.5
	comp=Z,0.4nm,0.3s,baz=323,slow=20,SNR=1.8						
AKTO				LR	LR	00 19 37.4	
	comp=Z,107nm,18.0s,baz=142,slow=40						
AKTO	Aktyubinsk	18.91	329	⇓P	P	00 11 19.6	-0.1
	comp=Z,18nm,0.6s						
ZAA0	Zalesovo Array	20.63	20	P	P	00 11 38.2	-0.2
ZAA0				IAmb	IAmb	00 11 43.1	
	comp=Z,42nm,0.8s						
ZALV	Zalesovo Beam	20.63	20	P	P	00 11 38.3	0.0
	comp=Z,30nm,0.5s,baz=220,slow=10,SNR=61						
ZALV				S	S	00 15 23.5	-2.5
	comp=Z,1.1nm,0.5s,baz=197,slow=19,SNR=2.4						
ZALV				LR	LR	00 20 36.9	
	comp=Z,178nm,20.3s,baz=262,slow=40						
ZALV	Zalesovo Beam	20.63	20	iP	P	00 11 38.2	-0.1
ZALV				pmax	pmax		
	comp=Z,30nm,0.5s						
ZALV	Zalesovo Beam	20.63	20	P	P	00 11 37.8	-0.6
MAK	Makhachkala	21.36	299	eP	P	00 11 44.2	-2.0
MAK				eS	S	00 15 39.1	-1.4
MAK				MLR	MLR		
	comp=Z,143nm,12.0s						
GTA	Gaotai	21.69	70	⇑P	P	00 11 51.0	+1.0
GTA				pP	pP	00 12 00.3	-2.5
GTA				sP	sP	00 12 04.5	-5.1
GTA				sS	Sn	00 15 59.5	+0.9
GTA				pmax	pmax		
	comp=Z,16nm,1.1s						
GTA				pmax	pmax		
	comp=Z,120nm,6.2s						
GTA				LR	LR		
	comp=Z,130nm,12.4s						
GTA				LR	LR		

	comp=Z,180nm,12.0s						
GTA				LR	LR		
	comp=Z,300nm,13.8s						
LGD	**Lagodekhi**	**22.06**	**296**	P	**P**	**00 11 55.6**	**+1.8**
DDFL	**Dedoflistskaro**	**22.09**	**295**	P	**P**	**00 11 57.4**	**+3.2**
UMR	**Umm Al-Rimmam**	**22.11**	**263**	*e*P	**P**	**00 11 53.8**	**-0.7**
QRN	**Al-Qurain**	**22.25**	**261**	*e*P	**P**	**00 11 55.2**	**-0.7**
MIB	**Mutribah**	**22.33**	**264**	*e*P	**P**	**00 11 56.4**	**-0.4**
RDF	**Al-Radifah**	**22.48**	**261**	*e*P	**P**	**00 11 58.1**	**-0.3**
RST	**Umm Al-Ruwaisa**	**22.72**	**263**	*e*P	**P**	**00 12 00.2**	**-0.8**
GNI	**Garni**	**23.00**	**291**	P	**P**	**00 12 05.3**	**+1.4**
	comp=Z,19nm,0.8s,baz=96,slow=1.9,SNR=12						
GNI				LR	LR	00 23 13.7	
	comp=Z,62nm,18.7s,baz=66,slow=42						
GNI	**Garni**	**23.00**	**291**	P	**P**	**00 12 04.7**	**+0.8**
GNI				pmax	pmax		
	comp=Z,107nm,1.4s						
GNI	**Garni**	**23.00**	**291**	P	**P**	**00 12 04.7**	**+0.8**
SVE	**Sverdlovsk**	**23.39**	**343**	*e*P	**P**	**00 12 08.6**	**+1.2**
SVE				MLR	MLR		
	comp=Z,535nm,13.0s						
ARU	**Arti**	**23.59**	**340**	P	**P**	**00 12 10.4**	**+1.1**
	comp=Z,1.2nm,0.5s,baz=166,slow=4.9,SNR=8.2						
ARU				LR	LR	00 22 18.8	
	comp=Z,409nm,19.6s,baz=146,slow=39						
ARU	**Arti**	**23.59**	**340**	*c* *i*P	**P**	**00 12 10.4**	**+1.1**
ARU						00 12 36.0	
ARU				S	**S**	**00 16 24.6**	**+4.8**
ARU				SS	**SnSn**	**00 17 02.0**	**+1.5**
ARU				pmax	pmax		
	comp=Z,23nm,2.1s						
ARU				MLR	MLR		
	comp=Z,380nm,16.0s						
ARU	**Arti**	**23.59**	**340**	P	**P**	**00 12 09.0**	**-0.3**
BGD	**Bogdanovka**	**23.95**	**294**	P	**P**	**00 12 16.6**	**+3.6**
AKH	**Akhalkalaki**	**24.05**	**294**	P	**P**	**00 12 16.3**	**+2.4**
ONI	**Oni**	**24.22**	**297**	P	**P**	**00 12 16.9**	**+1.6**
ONI				pmax	pmax		
	comp=Z,13nm,1.0s						
ONI	**Oni**	**24.22**	**297**	P	**P**	**00 12 16.9**	**+1.6**
ONI				IAmb	IAmb	00 12 31.7	
	comp=Z,13nm,1.0s						
NCK	**Nalchik**	**24.26**	**299**	*i* P	**P**	**00 12 15.1**	**-0.5**
NCK				pmax	pmax		
	comp=Z,30nm,1.0s						
KARS	**Kars**	**24.30**	**292**	P	**P**	**00 12 17.4**	**+1.3**
KARS				pmax	pmax		
	comp=Z,73nm,1.2s						
KARS	**Kars**	**24.30**	**292**	P	**P**	**00 12 17.4**	**+1.3**
SIRT	**Sirnak**	**24.79**	**285**	P	**P**	**00 12 20.6**	**0.0**
KBZ	**Khabaz**	**24.80**	**300**	P	**P**	**00 12 20.7**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=111,slow=9.9,SNR=5.3						
KBZ	**Khabaz**	**24.80**	**300**	*i* P	**P**	**00 12 20.2**	**-0.3**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NEY	**Neytrino**	**24.85**	**298**	*i* P	**P**	**00 12 19.7**	**-1.4**
NEY				pmax	pmax		
	comp=Z,5.0nm,1.4s						
SHA1	**Shidzhatmaz**	**24.98**	**300**	*i* P	**P**	**00 12 23.1**	**+0.7**
KVAR	**Kislovodsk Arr**	**24.99**	**300**	P	**P**	**00 12 26.7**	**+4.4**
	comp=Z,2.7nm,0.8s,baz=172,slow=16,SNR=2.7						
LZH	**Lanzhou**	**24.99**	**79**	*e*P	P	00 12 36.3	+14
LZH				sP	sP	00 12 53.5	+11
LZH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
LZH				LR	LR		
	comp=N,230nm,14.1s						
LZH				LR	LR		
	comp=E,250nm,13.6s						
LZH				LR	LR		
	comp=Z,160nm,14.2s						
KIV	**Kislovodsk**	**24.99**	**300**	*e*P	**P**	**00 12 20.6**	**-1.8**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,34nm,15.0s						
KIV	**Kislovodsk**	**24.99**	**300**	P	**P**	**00 12 23.3**	**+0.9**
KIV				IAmb	IAmb	00 12 47.6	
	comp=Z,14nm,1.0s						
GURO	**Guroymak-BITLI**	**25.07**	**287**	P	**P**	**00 12 23.6**	**+0.5**
BELG	**Belogornoye**	**25.10**	**322**	P	**P**	**00 12 23.8**	**+0.7**
	comp=Z,32nm,0.8s,baz=310,slow=2.6,SNR=18						
BELG				LR	LR	00 23 42.9	
	comp=Z,112nm,18.6s,baz=184,slow=40						
BELG	**Belogornoye**	**25.10**	**322**	*i* P	**P**	**00 12 23.6**	**+0.5**
BELG				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MOY	**Mondy**	**26.00**	**42**	*e*P	**P**	**00 12 33.4**	**+1.9**
MARD	**Mardin**	**26.12**	**285**	P	**P**	**00 12 33.1**	**+0.3**
MARD				IAmb	IAmb	00 12 44.7	
	comp=Z,16nm,1.3s						
KOPT	**Kop Dagi**	**26.25**	**291**	P	**P**	**00 12 35.0**	**+1.0**
KOPT				IAmb	IAmb	00 12 46.9	
	comp=Z,19nm,1.3s						
RAYN	**Ar Rayn**	**26.57**	**252**	P	**P**	**00 12 36.4**	**-0.4**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RAYN	**Ar Rayn**	**26.57**	**252**	P	**P**	**00 12 36.4**	**-0.4**
ZAK	**Zakamensk**	**26.73**	**46**	*e*P	**P**	**00 12 33.2**	**-4.8**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KMI	**Kunming**	**27.40**	**103**	⇓P	**P**	**00 12 47.0**	**+2.6**
KMI				pP	pP	00 12 54.0	-4.4
KMI				sP	sP	00 12 56.5	-8.3
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
KMI				LR	LR		
	comp=Z,240nm,10.5s						
KMI				LR	LR		
	comp=Z,190nm,10.3s						
KMI				LR	LR		
	comp=Z,230nm,12.4s						
TLY	**Talaya**	**27.48**	**43**	LR	LR	00 25 10.9	
	comp=Z,260nm,21.9s,baz=274,slow=40						
SONM	**Songino Array**	**27.82**	**52**	P	**P**	**00 12 49.5**	**+1.6**
	comp=Z,3.7nm,0.7s,baz=247,slow=8.3,SNR=15						
SONM				LR	LR	00 25 40.2	
	comp=Z,435nm,19.6s,baz=256,slow=40						
SONM	**Songino Array**	**27.82**	**52**	P	**P**	**00 12 49.3**	**+1.4**
SONM				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	**Songino Array**	**27.82**	**52**	P	**P**	**00 12 49.3**	**+1.4**
CHTO	**Chiang Mai**	**28.02**	**118**	P	**P**	**00 12 50.4**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CHTO	**Chiang Mai**	**28.02**	**118**	P	**P**	**00 12 50.4**	**+0.7**
CM31	**Chiang Mai Arr**	**28.25**	**119**	P	**P**	**00 12 52.5**	**+0.7**
CM31				IAmb	IAmb	00 13 13.6	
	comp=Z,14nm,1.1s						
CMAR	**Chiang Mai Arr**	**28.25**	**119**	P	**P**	**00 12 52.5**	**+0.7**
	comp=Z,2.7nm,0.8s,baz=299,slow=9.5,SNR=20						
CMAR				LR	LR	00 26 34.9	
	comp=Z,133nm,19.3s,baz=346,slow=42						
CMAR	**Chiang Mai Arr**	**28.25**	**119**	*ce*P	**P**	**00 12 53.0**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	**Ulaanbaatar**	**28.26**	**53**	P	**P**	**00 12 53.0**	**+1.2**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ULN	**Ulaanbaatar**	**28.26**	**53**	P	**P**	**00 12 53.0**	**+1.2**
KIRV	**Kirov**	**28.31**	**334**	LR	LR	00 26 09.9	
	comp=Z,94nm,18.2s,baz=136,slow=41						
XAN	**Xi'an**	**29.43**	**82**	P	**P**	**00 13 03.8**	**+1.6**
XAN				pP	pP	00 13 14.0	-2.3
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
HHC	**Hu-ho-hao-te**	**30.71**	**68**	*e*P	**P**	**00 13 15.0**	**+1.5**
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,6.0s						
ENH	**Enshi**	**30.89**	**88**	P	**P**	**00 13 16.0**	**+0.9**
ENH				IAmb	IAmb	00 13 23.1	
	comp=Z,11nm,0.7s						
MMAI	**Mount Meron Ar**	**31.19**	**277**	P	**P**	**00 13 19.2**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=12,slow=21,SNR=1.6						
ILGA	**Ilgaz**	**31.40**	**293**	P	**P**	**00 13 19.7**	**0.0**
ILGA				IAmb	IAmb	00 13 34.0	
	comp=Z,23nm,1.1s						
BRTR	**Keskin Array B**	**31.53**	**290**	P	**P**	**00 13 21.5**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=104,slow=6.1,SNR=2.4						
BRTR				LR	LR	00 28 47.2	
	comp=Z,55nm,19.4s,baz=96,slow=42						
BRTR	**Keskin Array B**	**31.53**	**290**	P	**P**	**00 13 21.4**	**+0.6**
OBN	**Obninsk**	**32.16**	**320**	LR	LR	00 30 21.7	
	comp=Z,19nm,18.9s,baz=164,slow=44						
OBN	**Obninsk**	**32.16**	**320**	*i* P	**P**	**00 13 26.0**	**+0.1**
OBN				pmax	pmax		
	comp=Z,18nm,1.3s						
KLMR	**Klimovskoe**	**33.60**	**331**	*e*P	**P**	**00 13 37.8**	**-0.6**
KLMR				pmax	pmax		
	comp=Z,17nm,1.3s						
KLMR	**Klimovskoe**	**33.60**	**331**	*e*P	**P**	**00 13 37.9**	**-0.5**
KLMR				AMP		00 13 50.7	
	comp=Z,17nm,1.3s						
ELL	**Elmali**	**34.82**	**286**	P	**P**	**00 13 49.0**	**-0.5**
ELL				pmax	pmax		
	comp=Z,28nm,0.6s						
ELL	**Elmali**	**34.82**	**286**	P	**P**	**00 13 49.0**	**-0.5**
AKASG	**Malin Array Be**	**35.20**	**310**	P	**P**	**00 13 51.7**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=82,slow=6.8,SNR=5.1						
NRIK	**Noril'sk**	**35.29**	**9**	P	**P**	**00 13 53.8**	**+0.7**
	comp=Z,6.7nm,0.9s,baz=199,slow=8.4,SNR=10						
NRIK				LR	LR	00 30 21.9	
	comp=Z,292nm,18.1s,baz=184,slow=40						
NRIK	**Noril'sk**	**35.29**	**9**	P	**P**	**00 13 53.7**	**+0.7**
NRIK				pmax	pmax		
	comp=Z,15nm,1.1s						
NRIK	**Noril'sk**	**35.29**	**9**	P	**P**	**00 13 53.7**	**+0.7**
NRIK				IAmb	IAmb	00 13 56.7	
	comp=Z,15nm,1.1s						
HIA	**Hailar**	**36.79**	**53**	*i* P	**P**	**00 14 08.3**	**+2.2**
HIA				pmax	pmax		
	comp=Z,13nm,2.3s						
MLR	**Muntele Rosu**	**36.99**	**301**	P	**P**	**00 14 09.5**	**+1.5**
	comp=Z,2.7nm,0.8s,baz=151,slow=9.6,SNR=5.2						
MLR				LR	LR	00 32 30.4	
	comp=Z,87nm,18.4s,baz=130,slow=41						
NJ2	**Nanjing**	**38.00**	**81**	*e*P	**P**	**00 14 18.3**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
IDI	**Anoyia**	**39.10**	**285**	P	**P**	**00 14 26.8**	**+1.0**
	comp=Z,4.0nm,0.8s,baz=50,slow=14,SNR=1.8						
KOLS	**Kolonicke sedl**	**39.52**	**307**	*e*P	**P**	**00 14 29.2**	**+0.2**
KOLS	**Kolonicke sedl**	**39.52**	**307**	*e*P	**P**	**00 14 29.2**	**+0.2**
FINES	**FINESS Array B**	**39.65**	**327**	P	**P**	**00 14 30.4**	**+0.5**
	comp=Z,1.9nm,0.5s,baz=126,slow=11,SNR=19						
FINES				LR	LR	00 32 37.2	
	comp=Z,81nm,18.8s,baz=110,slow=39						
FINES	**FINESS Array B**	**39.65**	**327**	*i* P	**P**	**00 14 30.3**	**+0.4**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
PSI	**Prapat**	**40.04**	**137**	P	**P**	**00 14 34.0**	**+0.3**
	comp=Z,4.3nm,0.8s,baz=254,slow=5.3,SNR=4.0						
RPSI	**Rantau Prapat**	**40.13**	**138**	P	**P**	**00 14 34.0**	**-0.3**
ZEA	**Zeya**	**41.83**	**46**	*e*P	**P**	**00 14 50.8**	**+2.8**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ZEA				MLR	MLR		
	comp=Z,200nm,16.0s						
MNSI	**Mandailing Nat**	**42.06**	**138**	P	**P**	**00 14 51.4**	**+1.1**
ARA0	**ARCESS Array S**	**43.16**	**338**	*e*P	**P**	**00 14 59.9**	**+1.3**
ARCES	**ARCESS Array B**	**43.16**	**338**	P	**P**	**00 14 59.4**	**+0.9**
	comp=Z,3.0nm,0.6s,baz=93,slow=7.3,SNR=16						
ARCES				LR	LR	00 33 56.9	
	comp=Z,316nm,19.3s,baz=105,slow=38						
ARCES	**ARCESS Array B**	**43.16**	**338**	IAmb	IAmb	00 15 00.8	
	comp=Z,23nm,1.2s						
KTK1	**Kautokeino**	**43.65**	**336**	*e*P	**P**	**00 15 02.9**	**+0.4**
KSAR	**Wonju Array Be**	**43.73**	**70**	P	**P**	**00 15 04.7**	**+1.1**
KSAR	**Wonju Array Be**	**43.73**	**70**	P	**P**	**00 15 04.7**	**+1.1**
KSRS	**Korea Array**	**43.76**	**70**	P	**P**	**00 15 04.8**	**+1.0**
	comp=Z,5.9nm,0.8s,baz=274,slow=6.9,SNR=12						
KSRS				LR	LR	00 36 04.0	
	comp=Z,92nm,18.2s,baz=275,slow=40						
HAMF	**Hammerfest**	**44.22**	**339**	*e*P	**P**	**00 15 09.1**	**+2.1**
JETT	**Jettan, Norway**	**44.79**	**337**	*e*P	**P**	**00 15 14.9**	**+3.2**
GERES	**GERESS Array B**	**45.18**	**307**	P	**P**	**00 15 15.3**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=61,slow=8.0,SNR=1.9						
GERES				LR	LR	00 38 10.9	
	comp=Z,63nm,19.1s,baz=93,slow=42						
HFS	**Hagfors**	**45.27**	**323**	P	**P**	**00 15 15.8**	**+0.2**
	comp=Z,2.8nm,0.5s,baz=95,slow=11,SNR=15						
TRO	**Tromso**	**45.30**	**336**	*e*P	**P**	**00 15 18.5**	**+2.9**
USRK	**Ussuriysk Ar.**	**45.42**	**60**	LR	LR	00 36 27.3	
	comp=Z,235nm,18.2s,baz=247,slow=39						
FAUS	**Fauske**	**45.89**	**333**	*e*P	**P**	**00 15 20.5**	**+0.2**
NC602	**NORSAR Array S**	**46.40**	**323**	*e*P	**P**	**00 15 24.1**	**-0.3**
TIXI	**Tiksi**	**46.52**	**21**	*ce*P	**P**	**00 15 25.0**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TIXI	**Tiksi**	**46.52**	**21**	P	**P**	**00 15 25.4**	**+0.2**
TIXI				IAmb	IAmb	00 15 26.6	
	comp=Z,4.6nm,0.5s						
NB201	**NORSAR Array S**	**46.54**	**324**	P	**P**	**00 15 25.6**	**0.0**
NB2	**NORSAR Subarra**	**46.58**	**324**	P	**P**	**00 15 25.5**	**-0.4**
	comp=Z,3.5nm,0.7s,baz=96,slow=7.9						
NB2	**NORSAR Subarra**	**46.58**	**324**	P	**P**	**00 15 25.5**	**-0.4**
	baz=96,slow=7.9						
NOA	**NORSAR Array B**	**46.58**	**324**	P	**P**	**00 15 25.8**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=103,slow=7.2,SNR=9.6						
NOA				LR	LR	00 36 36.6	
	comp=Z,51nm,18.2s,baz=90,slow=38						
MASI	**Maura Aman, Be**	**46.79**	**138**	P	**P**	**00 15 32.7**	**+4.6**
NBO00	**NORSAR Array S**	**46.79**	**324**	P	**P**	**00 15 25.8**	**-1.7**
NC204	**NORSAR Array S**	**46.82**	**324**	P	**P**	**00 15 27.8**	**0.0**
NC204				IAmb	IAmb	00 15 40.9	
	comp=Z,4.1nm,0.6s						
CTI	**Castel Tesino**	**46.91**	**303**	P	**P**	**00 15 27.9**	**-0.9**
CTI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CTI	**Castel Tesino**	**46.91**	**303**	P	**P**	**00 15 27.9**	**-0.9**
KONO	**Kongsberg**	**47.30**	**322**	*e*P	**P**	**00 15 31.5**	**0.0**
DAVOX	**Davos/Dischmat**	**48.00**	**304**	P	**P**	**00 15 36.1**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=72,slow=3.2,SNR=5.0						
PMBI	**Palembang**	**48.04**	**135**	P	**P**	**00 15 42.0**	**+4.3**
KMBO	**Kilima Mbogo**	**49.16**	**231**	P	**P**	**00 15 47.9**	**+1.2**
	comp=Z,5.9nm,1.1s,baz=31,slow=11,SNR=5.2						
KMBO				LR	LR	00 39 38.5	
	comp=Z,74nm,18.4s,baz=88,slow=40						
SPB2	**Spitsbergen Ar**	**49.31**	**347**	P	**P**	**00 15 49.0**	**+2.3**
SPA0	**Spitsbergen Ar**	**49.31**	**347**	*e*P	**P**	**00 15 48.3**	**+1.5**
SPITS	**Spitsbergen Ar**	**49.31**	**347**	P	**P**	**00 15 48.2**	**+1.4**
	comp=Z,12nm,0.9s,baz=120,slow=12,SNR=6.1						
SPITS	**Spitsbergen Ar**	**49.31**	**347**	P	**P**	**00 15 48.0**	**+1.2**
SPITS				pmax	pmax		
	comp=Z,76nm,1.5s						
BER	**Bergen**	**49.45**	**323**	*e*P	**P**	**00 15 50.2**	**+2.2**
SENIN	**Lac Senin/Sane**	**49.82**	**304**	P	**P**	**00 15 51.1**	**-0.3**
SENIN				IAmb	IAmb	00 16 09.9	
	comp=Z,6.7nm,1.1s						
JWT	**Wachi**	**50.16**	**71**	P	**P**	**00 15 55.5**	**+1.7**
BGES	**Gesves**	**50.53**	**310**	*d*P	**P**	**00 15 56.6**	**+0.2**
BGES				*d*pP	**pP**	**00 16 07.9**	**-3.2**
KEST	**Kesra**	**51.13**	**290**	P	**P**	**00 16 02.0**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=75,slow=3.1,SNR=2.2						
MJAR	**Matsushiro Arr**	**51.91**	**68**	P	**P**	**00 16 08.1**	**+1.1**
	comp=Z,3.3nm,0.7s,baz=291,slow=9.2,SNR=5.9						
EKA	**Eskdalemuir Ar**	**54.53**	**317**	P	**P**	**00 16 27.2**	**+1.3**
	comp=Z,1.4nm,0.6s,baz=84,slow=8.9,SNR=2.0						
MPSI	**Mapaga**	**55.59**	**118**	P	**P**	**00 16 38.5**	**+4.5**
DAG	**Danmarks Havn**	**56.62**	**344**	*i* P	**P**	**00 16 41.0**	**+0.5**
MRSI	**Marisa**	**56.99**	**116**	P	**P**	**00 16 46.3**	**+2.3**
BILL	**Bilibino**	**59.18**	**26**	*i* P	**P**	**00 16 57.4**	**-1.2**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s						
ESDC	**Sonseca Array**	**59.66**	**299**	P	**P**	**00 17 02.2**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=53,slow=7.6,SNR=1.8						
PETK	**Petropavlovsk-**	**59.84**	**44**	LR	LR	00 44 17.0	
	comp=Z,100nm,18.6s,baz=280,slow=37						
EUNU	**Eureka**	**64.60**	**356**	P	**P**	**00 17 33.5**	**-1.4**
TORD	**Torodi Ar. Bea**	**67.41**	**270**	P	**P**	**00 17 53.3**	**-0.6**
	comp=Z,2.6nm,0.6s,baz=42,slow=5.7,SNR=30						
TORD				LR	LR	00 50 45.0	
	comp=Z,94nm,18.4s,baz=100,slow=39						
A21K	**Barrow**	**68.29**	**15**	P	**P**	**00 18 00.1**	**+1.6**
A21K				IAmb	IAmb	00 18 00.9	
	comp=Z,5.4nm,0.7s						
KOWA	**Kowa**	**71.38**	**275**	P	**P**	**00 18 18.4**	**0.0**
KOWA				IAmb	IAmb	00 18 29.6	
	comp=Z,8.3nm,0.7s						
TOLK	**Toolik Lake Re**	**71.91**	**15**	P	**P**	**00 18 21.7**	**+0.9**
TOLK				IAmb	IAmb	00 18 24.9	
	comp=Z,4.9nm,0.8s						
A36M	**Sachs Harbour**	**72.50**	**6**	P	**P**	**00 18 25.3**	**+1.1**
A36M				IAmb	IAmb	00 18 27.7	
	comp=Z,10nm,0.9s						
IMAR	**Indian Mountai**	**73.05**	**18**	P	**P**	**00 18 27.6**	**0.0**
MDM	**Murphy Dome**	**75.24**	**17**	P	**P**	**00 18 42.0**	**+1.6**
MDM				IAmb	IAmb	00 18 58.0	
	comp=Z,5.0nm,1.0s						
BPAW	**Bear Paw Mtn.**	**75.26**	**18**	P	**P**	**00 18 40.9**	**+0.4**
BPAW				IAmb	IAmb	00 19 01.2	
	comp=Z,7.9nm,1.2s						
CAST	**Castle Rocks**	**75.52**	**19**	P	**P**	**00 18 43.3**	**+1.3**
CAST				IAmb	IAmb	00 18 45.6	
	comp=Z,7.9nm,0.9s						
IL31		**75.72**	**17**	P	**P**	**00 18 43.6**	**+0.6**
IL31				IAmb	IAmb	00 19 02.4	
	comp=Z,7.2nm,1.4s						
ILAR	**Eielson Array**	**75.72**	**17**	P	**P**	**00 18 43.3**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=307,slow=4.8,SNR=12						
ILAR	**Eielson Array**	**75.72**	**17**	P	**P**	**00 18 42.8**	**-0.3**
KTH	**Kantishna Hill**	**75.72**	**19**	P	**P**	**00 18 44.6**	**+1.4**
DBIC	**Dimbokro**	**76.35**	**269**	LR	LR	00 55 28.7	
	comp=Z,155nm,18.0s,baz=80,slow=38						
RND	**Reindeer**	**76.38**	**18**	P	**P**	**00 18 47.3**	**+0.3**
RND				pmax	pmax		
	comp=Z,22nm,1.4s						
RND	**Reindeer**	**76.38**	**18**	P	**P**	**00 18 47.2**	**+0.3**
RND				IAmb	IAmb	00 18 48.2	
	comp=Z,22nm,1.4s						
BOSA	**Boshof**	**77.75**	**222**	P	**P**	**00 18 55.8**	**+0.6**
	comp=Z,2.4nm,1.0s,baz=51,slow=6.6,SNR=7.0						
BOSA				LR	LR	00 53 08.6	
	comp=Z,62nm,20.0s,baz=22,slow=36						
BOSA	**Boshof**	**77.75**	**222**	P	**P**	**00 18 55.6**	**+0.5**
BOSA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BOSA	**Boshof**	**77.75**	**222**	P	**P**	**00 18 55.6**	**+0.5**
WB0	**Warramunga Arr**	**79.68**	**123**	P	**P**	**00 19 06.4**	**+0.7**
WB0				IAmb	IAmb	00 19 33.2	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**79.76**	**123**	P	**P**	**00 19 07.1**	**+0.9**
	comp=Z,2.5nm,0.6s,baz=324,slow=5.0,SNR=22						
WRA	**Warramunga Arr**	**79.76**	**123**	*i* P	**P**	**00 19 07.3**	**+1.1**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WB2	**Warramunga Arr**	**79.77**	**123**	P	**P**	**00 19 06.6**	**+0.4**
ASAR	**Alice Springs**	**82.01**	**126**	P	**P**	**00 19 19.1**	**+0.9**
	comp=Z,3.1nm,0.8s,baz=316,slow=5.4,SNR=22						
ASAR	**Alice Springs**	**82.01**	**126**	P	**P**	**00 19 19.2**	**+1.0**

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*VIE **29** 00:08:02.8±0.5, 49°.77N×18°.66E, h0^{km}, mb2.4/3, ml2.2/3, Error ellipse: s-maj=7.1km s-min=2.9km az=160.0 31 km ESE of Ostrava Suspected Mining induced.*

*IPEC **29** 00:08:03.7±0.2, 49°.99N×18°.57E, h1^{km}, ML2.5/3, Error ellipse: s-maj=2.0km s-min=1.1km az=164.0*

*PRU **29** 00:08:04.6±0.0, 49°.95N×18°.48E, h0^{km}*

ISC 29 00:08:04.0±0.8, **49°.96N**±0°.03×**18°.52E**±0°.02, **h0^{km}, n44,** σ**1ˢ10**/80, **10C-4D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.24**	**301**	*e*PG	**Pb**	**00 08 10.2**	**+1.5**
RAC				*e*SG	**Sb**	**00 08 14.8**	**+3.0**
OKC	**Ostrava-Krasne**	**0.27**	**243**	*e*PG	**Pg**	**00 08 10.0**	**+0.9**
OKC				*e*SG	**Sg**	**00 08 13.6**	**+1.0**
	comp=Z,197nm,0.6s						
MORC	**Moravsky Berou**	**0.66**	**254**	⇑P	**Pg**	**00 08 16.8**	**+0.2**
MORC				⇓S	**Sg**	**00 08 26.8**	**+1.7**
MORC	**Moravsky Berou**	**0.66**	**254**	*e*Pg	**Pg**	**00 08 16.8**	**+0.2**
	baz=72						
MORC				*e*Sg	**Sg**	**00 08 25.5**	**+0.4**
	96nm,0.6s,baz=72						
OJC	**Ojcow**	**0.86**	**72**	*e*Pg	**Pg**	**00 08 19.8**	**-0.8**
OJC				*e*Sg	**Sb**	**00 08 32.8**	**-1.2**
LANS	**Liptovska Anna**	**1.02**	**142**	*e*PG	**Pb**	**00 08 23.8**	**-0.7**
LANS				*e*SG	**Sb**	**00 08 38.0**	**-0.5**
LANS				*e*LG	Lg	00 08 42.5	
KRLC	**Kraliky**	**1.13**	**277**	*e*PG	**Pg**	**00 08 24.7**	**-0.9**
KRLC				*e*SG	**Sg**	**00 08 41.0**	**+0.8**
	comp=Z,46nm,0.4s						
JAVC	**Velka Javorina**	**1.23**	**207**	*e*PG	**Pb**	**00 08 28.3**	**+0.1**
JAVC	**Velka Javorina**	**1.23**	**207**	*e*Pg	**Pb**	**00 08 28.2**	**+0.1**
	baz=27						
NIE	**Niedzica**	**1.28**	**114**	*e*Pg	**Pn**	**00 08 28.9**	**-0.2**
NIE				*e*Sg	**Sn**	**00 08 48.0**	**+1.0**
VRAC	**Vranov**	**1.41**	**243**	⇑P	**Pn**	**00 08 30.3**	**-0.7**
VRAC				⇑S	**Sb**	**00 08 50.4**	**+0.7**
VRAC	**Vranov**	**1.41**	**243**	*e*PG	**Pn**	**00 08 30.4**	**-0.6**
VRAC				*e*SG	**Sg**	**00 08 49.6**	**+0.3**
VRAC	**Vranov**	**1.41**	**243**	*e*Pg	**Pn**	**00 08 30.3**	**-0.7**
	baz=61						
VRAC				*e*Sg	**Sg**	**00 08 49.5**	**+0.3**
	53nm,0.9s,baz=61						
DPC	**Dobruska-Polom**	**1.47**	**286**	*e*PG	**Pn**	**00 08 31.2**	**-0.6**
DPC				*e*SG	**Sb**	**00 08 51.4**	**0.0**
	comp=Z,42nm,0.9s						
VYHS	**Vyhne**	**1.48**	**172**	*e*PG	**Pn**	**00 08 31.7**	**-0.2**
VYHS				*e*SG	**Sn**	**00 08 52.4**	**+0.4**
OSTC	**Ostas**	**1.59**	**293**	*e*PG	**Pn**	**00 08 33.0**	**-0.5**
OSTC				*e*SG	**Sg**	**00 08 55.5**	**+0.3**
	comp=Z,31nm,0.7s						
KRUC	**Moravsky**	**1.65**	**238**	*e*PN	**Pn**	**00 08 34.4**	**+0.2**
KRUC				*e*SG	**Sb**	**00 08 57.2**	**+0.6**
KRUC	**Moravsky**	**1.65**	**238**	*e*Pn	**Pn**	**00 08 34.3**	**+0.1**
	baz=56						
KRUC				*e*Sg	**Sb**	**00 08 57.1**	**+0.5**
	39nm,0.8s,baz=56						
KSP	**Ksiaz**	**1.68**	**303**	*e*Pg	**Pn**	**00 08 33.8**	**-0.8**
KSP				*e*Sg	**Sg**	**00 08 58.2**	**+0.3**
UPC	**Upice**	**1.70**	**290**	*e*PG	**Pn**	**00 08 34.8**	**-0.1**
UPC				*e*SG	**Sg**	**00 08 58.6**	**0.0**
	comp=Z,9.8nm,0.5s						
CHVC	**Chvalec**	**1.70**	**293**	*e*PG	**Pn**	**00 08 34.8**	**-0.2**
CHVC				*e*SG	**Sg**	**00 08 58.8**	**+0.1**
	comp=Z,22nm,0.5s						
MODS	**Modra-Piesok**	**1.78**	**208**	*e*PG	**Pn**	**00 08 34.8**	**-1.3**
MODS				*e*SG	**Sn**	**00 08 59.2**	**-0.2**
STHS	**Stebnicka Huta**	**1.85**	**106**	*e*PG	**Pb**	**00 08 38.1**	**-0.6**
KECS	**Kecovo**	**1.96**	**138**	*e*PG	**Pg**	**00 08 43.1**	**+1.5**
ZST	**Bratislava**	**1.99**	**208**	*e*SG	**Sn**	**00 09 04.4**	**-0.2**
TREC	**Trest**	**2.08**	**253**	*e*PN	**Pn**	**00 08 39.6**	**-0.6**
TREC				*e*PG	**Pb**	**00 08 41.4**	**-1.2**
TREC				*e*SG	**Sb**	**00 09 10.3**	**+1.3**
	comp=Z,13nm,0.4s						
SRO	**Srobarova**	**2.15**	**184**	*e*PG	**Pg**	**00 08 46.0**	**+0.8**
PSZ	**Piszkesteto**	**2.23**	**156**	⇑P	**Pn**	**00 08 42.6**	**+0.3**
PSZ				⇑S	**Sg**	**00 09 14.7**	**-1.0**
PRU	**Pruhonice**	**2.57**	**272**	*e*PG	**Pb**	**00 08 50.0**	**-0.9**
PRU				*e*SG	**Sg**	**00 09 25.4**	**-1.1**
	comp=Z,11nm,0.7s						
PVCC	**Panska Ves**	**2.60**	**284**	*e*PG	**Pb**	**00 08 51.3**	**-0.1**
PVCC				*e*SG	**Sg**	**00 09 27.7**	**+0.2**
	comp=Z,16nm,0.6s						
PRA	**Prague**	**2.64**	**274**	*e*PG	**Pb**	**00 08 51.7**	**-0.4**
PRA				*e*SG	**Sg**	**00 09 27.4**	**-1.3**
	comp=Z,5.7nm,0.5s						
KOLS	**Kolonicke sedl**	**2.66**	**111**	*e*PG	**Pg**	**00 08 54.7**	**-0.2**
CONA	**Conrad Observa**	**2.68**	**222**	*e*Pn	**Pn**	**00 08 46.6**	**-1.9**
	0.4nm,0.2s						
CONA				Sn	**Sn**	**00 09 17.6**	**-4.1**
	2.5nm,0.3s						
CKRC	**Cesky Krumlov**	**2.98**	**249**	*e*PN	**Pn**	**00 08 52.9**	**+0.4**
CKRC				*e*PG	**Pb**	**00 08 58.5**	**+0.6**
CKRC				*e*SG	**Sg**	**00 09 37.9**	**-1.7**
TRPA	**Tarpa**	**3.22**	**123**	⇑P	**Pn**	**00 08 55.4**	**-0.3**
TRPA				⇑S	**Sn**	**00 09 36.7**	**+2.0**
KHC	**Kasperske Hory**	**3.32**	**257**	*e*PN	**Pn**	**00 08 57.0**	**-0.3**
KHC				*e*PG	**Pb**	**00 09 04.0**	**+0.2**
KHC				*e*SG	**Sg**	**00 09 49.1**	**-1.6**
	comp=Z,7.7nm,0.7s						
ARSA	**Arzberg**	**3.36**	**217**	*i* Pn	**Pn**	**00 08 54.7**	**-3.1**
	0.5nm,0.3s						
MOA	**Molln**	**3.51**	**235**	*i* Pn	**Pn**	**00 08 59.4**	**-0.4**
	0.4nm,0.2s						
MOA				Sg	**Sg**	**00 09 56.0**	**-0.7**
	9.3nm,0.7s						
CLL	**Collm**	**3.76**	**293**	*e*Pg	**Pg**	**00 09 16.0**	**-0.1**
CLL				*e*Sg	**Sg**	**00 10 03.0**	**-1.8**
	comp=Z,10.0nm,1.0s						
NKC	**Novy Kostel**	**3.92**	**276**	*e*SG	**Sg**	**00 10 08.3**	**-1.5**
	comp=Z,4.7nm,0.3s						
DRGR		**4.22**	**137**	⇑P	**Pn**	**00 09 09.4**	**-0.3**
DRGR				⇓S	**Sn**	**00 10 00.7**	**+0.9**
BZS	**Buzias**	**4.82**	**153**	⇓P	**Pn**	**00 09 18.6**	**+0.8**
BURAR	**Bucovina Array**	**5.01**	**115**	⇑P	**Pn**	**00 09 20.5**	**0.0**

GZR	Gura Zlata	5.40	146	⇓P	Pn	00 09 26.5	+0.7
GZR				⇑S	Sn	00 10 30.9	+2.3

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*UPP **29** 00:17:48.7±0.1, 67°.18N×20°.62E, h0^{km}, ML2.8, Explosion*
*HEL **29** 00:17:49.6±0.1, 67°.20N×20°.67E, h1^{km}, ML2.4, ML2.8(UPP), Confirmed Induced event*
*IDC **29** 00:17:49.6±0.8, 67°.19N×20°.89E, h0^{km}, mb1 3.5/5, mb1mx3.1/50, mbtmp3.5/5, ML2.7/5, Error ellipse: s-maj=13.7km s-min=7.1km az=112.0*
*NAO **29** 00:17:49.6±0.7, 67°.15N×20°.98E, ML2.7*
*BER **29** 00:17:51.3±3.1, 67°.18N×20°.56E, h0^{km}, ML2.3, ML2.7(NAO), Suspected explosion*
ISC 29 00:17:47.8±0.6, **67°.16N**±0°.02×**20°.61E**±0°.02, **h0**^{km}, **n52**, σ**1**^{s}.**25**/88, **1C-1D, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASU	Masugnsbyn	0.62	60	P	Pg	00 18 00.2	+0.6
MASU				S	Sg	00 18 08.4	+0.9
MASU	Masugnsbyn	0.62	60	*i* P	Pg	00 18 00.2	+0.6
MASU				*i* S	Sg	00 18 08.4	+0.9
RATU	Laukkuluspa	0.78	330	P	Pg	00 18 03.1	+0.5
RATU				S	Sg	00 18 13.0	+0.4
RATU	Laukkuluspa	0.78	330	*i* P	Pg	00 18 03.1	+0.5
RATU				*i* S	Sg	00 18 13.0	+0.4
KUA	Kurravaara	0.81	353	P	Pg	00 18 03.3	0.0
KUA				S	Sg	00 18 14.2	+0.6
KUA	Kurravaara	0.81	353	*i* P	Pg	00 18 03.3	0.0
KUA				*i* S	Sg	00 18 14.2	+0.6
SALU	Saltoluokta	0.85	286	⇓*i*P	Pb	00 18 05.0	-0.4
ERTU	Ertsjaerv	0.87	133	P	Pg	00 18 05.1	+0.6
ERTU	Ertsjaerv	0.87	133	*e*P	Pg	00 18 05.0	+0.6
ERTU				*e*S	Sg	00 18 16.7	+1.0
NIKU	Nikkaluokta	0.94	320	P	Pg	00 18 06.1	+0.4
NIKU	Nikkaluokta	0.94	320	*e*P	Pg	00 18 06.1	+0.4
LANU	Lannavaara	1.04	30	P	Pg	00 18 07.4	-0.3
LANU	Lannavaara	1.04	30	*e*P	Pg	00 18 07.2	-0.5
LANU				*e*S	Sg	00 18 19.8	-1.4
KOVU	Salmi	1.08	351	P	Pg	00 18 08.4	-0.2
KOVU	Salmi	1.08	351	*e*P	Pg	00 18 08.4	-0.2
SJUU	Sjulsmark	1.71	166	P	Pb	00 18 20.2	+0.2
SJUU	Sjulsmark	1.71	166	*e*P	Pb	00 18 20.2	+0.2
KALU	Kalix	1.71	139	P	Pn	00 18 19.9	+1.1
KALU	Kalix	1.71	139	*e*P	Pn	00 18 19.9	+1.1
KALU				*e*S	Sb	00 18 42.9	+0.9
HEF	Hetta	1.71	41	Pn	Pn	00 18 19.1	+0.2
HEF				Sn	Sn	00 18 40.9	-0.4
HEF	Hetta	1.71	41	*e*P	Pn	00 18 19.1	+0.2
HEF	Hetta	1.71	41	*e*P	Pn	00 18 18.9	0.0
HEF				*e*S	Sn	00 18 39.4	-2.0
TOF	Tornio	1.84	124	*e*P	Pb	00 18 22.1	-0.1
TOF				*e*S	Sb	00 18 46.0	+0.3
TOF				MSG		00 18 48.5	
	comp=Z,40nm,0.3s						
KIF	Kilpisjarvi	1.86	2	Pn	Pb	00 18 22.4	-0.2
KIF				Sn	Sg	00 18 48.3	+1.0
KIF	Kilpisjarvi	1.86	2	*e*P	Pb	00 18 22.4	-0.2
KIF	Kilpisjarvi	1.86	2	*e*P	Pb	00 18 22.2	-0.3
KIF				MSG		00 18 50.2	
	comp=Z,40nm,0.3s						
FAUS	Fauske	2.08	279	*e*P	Pb	00 18 26.5	+0.2
FAUS				*e*Sg	Sg	00 18 55.7	+1.2
FAUS				IAML		00 18 56.8	
	comp=Z,35nm,0.5s						
KTK1	Kautokeino	2.11	27	Pn	Pb	00 18 25.9	-0.8
KTK1				Sn	Sb	00 18 53.1	-0.4
KTK1	Kautokeino	2.11	27	*e*P	Pb	00 18 26.0	-0.8
KTK1				*e*S	Sb	00 18 52.9	-0.6
KTK1				IAML		00 18 55.4	
	comp=Z,50nm,0.5s						
STEI	Steigen	2.20	293	*e*	Pn	00 18 26.6	+1.1
STEI				*e*P	Pb	00 18 28.3	-0.1
STEI				*e*Sg	Sg	00 18 58.1	-0.3
RNF	Rovaniemi	2.20	102	MSG		00 19 00.8	
	comp=Z,18nm,0.3s						
JETT	Jettan, Norway	2.41	358	*e*P	Pb	00 18 31.7	-0.3
JETT				*e*Sg	Sg	00 19 03.6	-1.5
JETT				⇑*e*		00 20 37.6	
BURU	Burvik	2.60	173	*e*P	Pn	00 18 33.3	+2.3
ARA0	ARCESS Array S	3.00	35	Pn	Pn	00 18 37.4	+0.8
	baz=209,slow=14						
ARA0				Sn	Sn	00 19 14.3	+1.2
	baz=208,slow=28						
ARA0	ARCESS Array S	3.00	35	Pn	Pn	00 18 37.4	+0.8
	baz=209,slow=14						
ARA0				Sn	Sn	00 19 14.3	+1.2
	baz=208,slow=28						
ARCES	ARCESS Array B	3.00	35	Pn	Pn	00 18 37.4	+0.8
	baz=216,slow=13,SNR=116						
ARCES				Sn	Sn	00 19 13.4	+0.3
	baz=216,slow=21,SNR=3.5						
APA0	Apatity Array	4.80	79	Pn	Pn	00 19 01.8	+0.5
	baz=262,slow=11						
APA0				Sn	Sn	00 19 56.3	-1.2
	baz=276,slow=28						
APA0				Lg	Lg	00 20 16.3	
	baz=281,slow=28						
APA0	Apatity Array	4.80	79	Pn	Pn	00 19 01.8	+0.5
	baz=262,slow=11						
APA0				Sn	Sn	00 19 56.3	-1.2
	baz=276,slow=28						
FIA0	FINESS Array S	6.21	155	Pn	Pn	00 19 22.5	+1.9
	baz=346,slow=16						
FIA0				Sn	Sn	00 20 31.7	-0.4
	baz=348,slow=28						
FIA0				Lg	Lg	00 21 03.7	
	baz=348,slow=37						
FIA0	FINESS Array S	6.21	155	Pn	Pn	00 19 22.5	+1.9
	baz=346,slow=16						
FIA0				Sn	Sn	00 20 31.7	-0.4
	baz=348,slow=28						
FIA0				Sg	Sg	00 21 03.7	-3.3
	baz=348,slow=37						
FINES	FINESS Array B	6.21	155	Pn	Pn	00 19 22.6	+2.1
	comp=Z,0.7nm,0.3s,baz=345,slow=11,SNR=23						
FINES				Sn	Sn	00 20 32.6	+0.4
	comp=Z,0.5nm,0.3s,baz=346,slow=24,SNR=4.0						
FINES				Lg	Lg	00 21 04.3	
	comp=Z,0.8nm,0.3s,baz=342,slow=30,SNR=6.7						
NB2	NORSAR Subarra	7.38	218	Pn	Pn	00 19 38.4	+1.6
	baz=25,slow=14						
NB2				Sn	Sn	00 20 58.3	-2.8
NB2				Lg	Lg	00 21 42.2	
NB2	NORSAR Subarra	7.38	218	Pn	Pn	00 19 38.4	+1.6
	baz=25,slow=14						
NB2				Sn	Sn	00 20 58.3	-2.8
NB2				Sg	Sg	00 21 42.2	-2.4
NOA	NORSAR Array B	7.38	218	Pn	Pn	00 19 38.5	+1.8
	comp=Z,0.0nm,0.3s,baz=28,slow=11,SNR=5.8						
NOA				Sn	Sn	00 21 00.8	-0.3
	comp=Z,0.0nm,0.3s,baz=246,slow=14,SNR=5.0						
NOA				Lg	Lg	00 21 44.3	
	comp=Z,0.1nm,0.3s,baz=50,slow=10,SNR=3.6						
NRA0	NORESS Array S	7.57	216	Pn	Pn	00 19 41.2	+1.9
	baz=27,slow=14						
NRA0				Sn	Sn	00 21 01.9	-3.8
	baz=23,slow=28						
NRA0	NORESS Array S	7.57	216	Pn	Pn	00 19 41.2	+1.9
	baz=27,slow=14						
NRA0				Sn	Sn	00 21 01.9	-3.8
	baz=23,slow=28						
HFS	Hagfors	7.69	207	Pn	Pn	00 19 41.5	+0.6
	comp=Z,0.5nm,0.3s,baz=25,slow=13,SNR=15						
HFS				Sn	Sn	00 21 07.6	-0.9
	comp=Z,0.5nm,0.3s,baz=24,slow=23,SNR=6.5						
HFS	Hagfors	7.69	207	Pn	Pn	00 19 41.4	+0.6
	baz=19,slow=14						
HFS				Sn	Sn	00 21 07.0	-1.5
	baz=22,slow=22						
HFS	Hagfors	7.69	207	Pn	Pn	00 19 41.4	+0.6
	baz=19,slow=14						
HFS				Sn	Sn	00 21 07.0	-1.5
	baz=22,slow=22						
SPA0	Spitsbergen Ar	11.14	355	Pn	Pn	00 20 28.2	+0.1
	baz=160,slow=14						
SPA0	Spitsbergen Ar	11.14	355	Pn	Pn	00 20 28.2	+0.1
	baz=160,slow=14						
SPITS	Spitsbergen Ar	11.14	355	Pn	Pn	00 20 27.5	-0.7
	baz=158,slow=15,SNR=1.6						

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*IDC **29** 00:20:46.7±3.1, 43°.84N×148°.44E, h0^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.4/49, mbtmp3.7/6, ML3.0/2, MS3.2/2, Ms1 3.2/2, ms1mx2.6/38, Error ellipse: s-maj=82.0km s-min=28.0km az=168.0*
*MOS **29** 00:20:47.1±2.5, 43°.70N×148°.03E, h40^{km}, mb4.0/1, Error ellipse: s-maj=16.4km s-min=14.4km az=170.4*
*NIED **29** 00:20:48.8, 43°.59N×147°.72E, h25^{km}, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.45; $M_{\theta\theta}$5.33; $M_{\phi\phi}$-1.88; $M_{r\theta}$-1.05; $M_{\theta\phi}$1.91; $M_{\phi r}$2.37; Fault plane solution: $M_0$5.68000×10^{14} NP1: ϕ_s108.00000°, δ59.00000°, λ-43.00000°. NP2: ϕ_s224.00000°, δ54.00000°, λ-141.00000°.*
*JMA **29** 00:20:48.8±0.3, 43°.59N×147°.72E, h25^{km}, M3.5*
*SKHL **29** 00:20:49.7±0.2, 43°.70N×147°.80E, h57^{km}±7^{km}, mb4.4/4*
ISC 29 00:20:45.8±3.1, **43°.72N**±0°.08×**147°.87E**±0°.06, **h14**^{km}±21^{km}, **n29**, σ**1**^{s}.**32**/38, **mb3.7**/4, **1C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	Shikotan	0.77	281	⇑*i*PN	Pn	00 21 02.4	+0.2
SHO				*e*S	Sb	00 21 12.2	+1.0
SHO				pmax	pmax		
	comp=Z,109nm,0.3s						
SHO				pmax	pmax		
	comp=N,95nm,0.2s						
SHO				pmax	pmax		
	comp=E,92nm,0.2s						
SHO				smax	smax		
	comp=N,2μm,0.3s						
SHO				smax	smax		
	comp=E,1μm,0.4s						
SHO	Shikotan	0.77	281	*i* P	Pn	00 21 02.5	+0.2
SHO				AMB	AMB	00 21 04.8	
	comp=E,110nm,0.3s						
SHO				*e*S	Sb	00 21 12.2	+1.0
SHO				A	A	00 21 13.5	
	comp=E,2μm,0.3s						
SHO				A	A	00 21 13.5	
	comp=E,1μm,0.3s						
YUK	Yuzh-Kuril'sk	1.48	283	*e*PN	Pn	00 21 12.8	+0.7
YUK				*e*S	Sn	00 21 30.4	-0.9
YUK				pmax	pmax		
	comp=N,87nm,0.2s						
YUK				pmax	pmax		
	comp=E,88nm,0.2s						
YUK				pmax	pmax		
	comp=Z,172nm,0.2s						
YUK				smax	smax		
	comp=N,496nm,0.3s						
YUK				smax	smax		
	comp=E,537nm,0.2s						
YUK	Yuzh-Kuril'sk	1.48	283	*e*P	Pn	00 21 12.8	+0.7
YUK				AMB	AMB	00 21 16.4	
	comp=E,170nm,0.2s						
YUK				*e*S	Sn	00 21 29.5	-1.8
YUK				A	A	00 21 30.9	
	comp=E,500nm,0.3s						
YUK				A	A	00 21 30.9	
	comp=E,540nm,0.3s						
KUR	Kuril'sk	1.51	360	*e*PN	Pn	00 21 13.6	+1.1
KUR				*e*S	Sn	00 21 30.4	-1.5
KUR				pmax	pmax		
	comp=N,79nm,0.4s						
KUR				pmax	pmax		
	comp=Z,133nm,0.4s						
KUR				smax	smax		
	comp=N,264nm,0.4s						
KUR				smax	smax		
	comp=E,355nm,0.4s						
KUR	Kuril'sk	1.51	360	*e*P	Pn	00 21 13.6	+1.1
KUR				AMB	AMB	00 21 15.4	
	comp=E,130nm,0.4s						
KUR				*e*S	Sn	00 21 30.5	-1.5
KUR				A	A	00 21 33.4	
	comp=E,460nm,0.4s						
KUR				A	A	00 21 33.4	
	comp=E,400nm,0.4s						
NEM2	Nemuro 2	1.59	258	P	Pb	00 21 14.2	-0.7
NEM2				*e*S	Sn	00 21 32.4	-1.4
NMR	Nemuro--Hokkai	1.60	258	*e*PN	Pb	00 21 14.1	-1.0
NMR				*e*S	Sb	00 21 34.6	-0.5
NMR	Nemuro--Hokkai	1.60	258	*e*P	Pb	00 21 14.1	-1.0
NMR				*e*S	Sn	00 21 32.2	-1.8
GLVR	Golovnino	1.70	271	*e*PN	Pn	00 21 15.4	+0.4
GLVR				*e*S	Sn	00 21 36.4	-0.3
GLVR				pmax	pmax		
	comp=Z,84nm,0.2s						
GLVR				smax	smax		
	comp=N,541nm,0.3s						
GLVR				smax	smax		
	comp=E,627nm,0.3s						
GLVR	Golovnino	1.70	271	*e*P	Pn	00 21 15.5	+0.4
GLVR				AMB	AMB	00 21 17.0	
	comp=E,80nm,0.2s						
GLVR				*e*S	Sn	00 21 35.0	-1.7
GLVR				A	A	00 21 39.8	
	comp=E,541nm,0.3s						
GLVR				A	A	00 21 39.8	
	comp=E,627nm,0.3s						
RUSJ	Misakicho	1.93	282	*e*PN	Pn	00 21 17.9	-0.4
RUSJ				*e*S	Sn	00 21 40.9	-1.4
JNSB	Nemuroshibetsu	2.08	272	P	Pb	00 21 21.9	-1.4
JNSB				*e*S	Sn	00 21 46.1	+0.2
JNK	Nakash	2.29	268	P	Pn	00 21 24.5	+1.3
JNK				*e*S	Sn	00 21 50.6	-0.6
AKK	Akkeshi	2.32	253	*e*P	Pn	00 21 24.5	+1.0
AKK				*e*S	Sn	00 21 50.3	-1.5
JAR	Ashorobuto	3.01	263	P	Pn	00 21 35.5	+2.4
ASAJ	Asahikawa	3.83	278	Pn	Pb	00 21 52.4	-0.7
	comp=E,1.0nm,0.3s,baz=48,slow=27,SNR=1.2						
ASAJ				Sn	Sb	00 22 43.5	+4.1
	comp=E,0.8nm,0.3s,baz=41,slow=20,SNR=1.8						
ASAJ				LR	LR	00 23 29.4	
	comp=E,94nm,18.7s,baz=0.5,slow=38						
PETK	Petropavlovsk-	11.43	31	Pn	Pn	00 23 27.5	-1.0
	comp=E,0.3nm,0.3s,baz=221,slow=13,SNR=5.2						
H11N2	WAKE ISLAND Hy	28.74	140	T	T	00 57 20.2	
	baz=331,slow=76,SNR=8.1						
H11N1	WAKE ISLAND Hy	28.76	140	T	T	00 57 32.0	
	baz=331,slow=76,SNR=8.8						
H11N3	WAKE ISLAND Hy	28.76	140	T	T	00 57 26.6	
	baz=331,slow=76,SNR=8.7						
H11S1	WAKE ISLAND Hy	29.72	142	T	T	00 58 36.1	
	baz=332,slow=76,SNR=8.9						
H11S3	WAKE ISLAND Hy	29.73	142	T	T	00 58 34.9	
	baz=332,slow=76,SNR=7.7						
H11S2	WAKE ISLAND Hy	29.74	142	T	T	00 58 37.6	
	baz=332,slow=76,SNR=7.0						
ILAR	Eielson Array	41.20	36	P	P	00 28 29.7	0.0
	comp=E,0.6nm,0.6s,baz=266,slow=9.4,SNR=8.0						
INK	Inuvik	46.16	30	P	P	00 29 10.1	+0.6
	comp=E,1.4nm,0.8s,baz=307,slow=3.7						
HNR	Honiara	54.03	165	LR	LR	00 49 27.5	
	comp=E,77nm,20.8s,baz=338,slow=32						
YKA	Yellowknife Ar	55.53	34	P	P	00 30 20.1	0.0
	comp=E,0.3nm,0.6s,baz=301,slow=7.3,SNR=3.6						
NVAR	Mina Array Bea	67.15	58	P	P	00 31 40.1	+0.6
	comp=E,0.6nm,0.6s,baz=292,slow=6.3,SNR=5.1						

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*NOU **29** 00:32:16.1, 35°.11S×177°.77W, h0^{km}, mb4.6/8, East of North Island, N.Z.*
*IDC **29** 00:32:29.1±0.8, 35°.45S×179°.16W, h0^{km}, mb4.4/6, mb1 4.5/8, mb1mx4.1/28, mbtmp4.4/8, ML3.9/2, MS3.7/6, Ms1 3.8/6, ms1mx3.5/17, Error ellipse: s-maj=30.7km s-min=23.0km az=159.0*
*WEL **29** 00:32:31.0±1.1, 36°S±8°×17°9W±°, h33^{km}, M4.6/25, mB5.2/3, ML4.9/24, MLv4.7/25, Mw(mB)4.5/3, Error ellipse: s-maj=0.0km s-min=0.0km az=3.6*
*NEIC **29** 00:32:38.9±1.3, 35°.7S±0°.1×179°.6W±0°.2, h57^{km}±11^{km}, mb4.4/7, Error ellipse: s-maj=20.5km s-min=18.0km az=76.0*
ISC 29 00:32:34.6±0.7, **35°.59S**±0°.07×**178°.91W**±0°.08, **h47**^{km}, **n88**, σ**1**^{s}.**50**/84, **mb4.3**/9, **MS3.8**/8, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.99	228	P	Pn	00 33 18.2	-1.2
MXZ				S	Sn	00 33 53.3	-0.6
MXZ	Matakaoa Point	2.99	228	Pn	Pn	00 33 17.9	-1.5
PKGZ	Pakihiroa	3.34	226	P	Pn	00 33 24.2	-0.1
PKGZ				S	Sn	00 34 05.1	+2.3
PUZ	Puketiti	3.37	222	P	Pn	00 33 23.8	-0.9
PUZ				S	Sn	00 34 05.6	+2.3
HAZ	Te Kaha	3.43	230	P	Pn	00 33 24.3	-1.1
HAZ				S	Sn	00 34 09.3	+4.4
TWGZ	Tauwhareparae	3.59	223	P	Pn	00 33 27.0	-0.7
RUGZ	Raukumara Rang	3.63	228	P	Pn	00 33 28.1	-0.2
CNGZ	Carnagh Statio	3.70	218	P	Pn	00 33 29.0	-0.2
TKGZ	Te Karaka	3.85	221	P	Pn	00 33 31.0	-0.2
MWZ	Matawai	3.96	225	P	Pn	00 33 32.0	-0.8
RIGZ	Rimuhau	4.09	220	P	Pn	00 33 33.8	-0.8
RAGZ	Rawiri	4.13	224	P	Pn	00 33 34.6	-0.6
URZ	Urewera	4.16	229	Pn	Pn	00 33 34.2	-1.3
	8.1nm,0.3s,baz=120,slow=24,SNR=54						
URZ				Sn	Sn	00 34 23.0	+0.2
	12nm,0.3s,baz=161,slow=19,SNR=3.2						
URZ	Urewera	4.16	229	P	Pn	00 33 34.2	-1.3
URZ	Urewera	4.16	229	P	Pn	00 33 33.8	-1.7
PRGZ	Paritu Road	4.20	217	P	Pn	00 33 36.1	0.0
OPRZ	Ohinepanea	4.29	237	P	Pn	00 33 35.6	-1.6
EDRZ	Edgecumbe	4.30	233	P	Pn	00 33 36.0	-1.6
MHGZ	Mahia Peninsul	4.37	215	P	Pn	00 33 38.3	-0.1
SNGZ	Shannon Statio	4.38	222	P	Pn	00 33 37.8	-0.7
KNZ	Kokohu	4.38	217	P	Pn	00 33 36.7	-1.8
TGRZ	Tauranga	4.43	240	P	Pn	00 33 38.7	-0.6
RTZ	Ruatahuna	4.47	226	P	Pn	00 33 38.9	-0.9
MUGZ	Murupara	4.50	229	P	Pn	00 33 39.6	-0.6
OMRZ	Omania	4.54	235	P	Pn	00 33 39.6	-1.2
KARZ	Kaharoa	4.59	237	P	Pn	00 33 39.9	-1.5
RAHZ	Arahi	4.61	223	P	Pn	00 33 41.8	+0.1
RAHZ				S	Sn	00 34 35.8	+1.8
MTHZ	Maungataniwha	4.71	225	P	Pn	00 33 42.9	-0.1
NMHZ	Naumai	4.89	223	P	Pn	00 33 45.3	-0.3
MRHZ	Matea Rd	4.94	228	P	Pn	00 33 45.5	-0.8
BKZ	Black Stump Fm	5.12	224	P	Pn	00 33 47.5	-1.2
BKZ	Black Stump Fm	5.12	224		Pn	00 33 47.9	-0.8
BKZ	Black Stump Fm	5.12	224	P	Pn	00 33 47.6	-1.1
MCHZ	McNeill Hill	5.20	221	P	Pn	00 33 47.8	-2.0
KWHZ	Kaweka Forest	5.33	223	P	Pn	00 33 51.0	-0.7
TMVZ	Te Maari	5.55	229	P	Pn	00 33 53.3	-1.4
HIZ	Hauiti	5.78	238	Pn	Pn	00 33 55.8	-2.0
HIZ	Hauiti	5.78	238	P	Pn	00 33 57.5	-0.2
OUZ	Omahuta	6.13	271		Pn	00 34 00.1	-2.5
OUZ	Omahuta	6.13	271	P	Pn	00 34 00.7	-1.9
BFZ	Birch Farm	6.36	215	Pn	Pn	00 34 02.9	-2.8
BFZ	Birch Farm	6.36	215	P	Pn	00 34 03.3	-2.4
MSWZ	Moikau Station	7.41	216	Pn	Pn	00 34 16.8	-3.2
PLWZ	Palliser	7.52	216	Pn	Pn	00 34 18.5	-3.2
CTZ	Chatham Island	8.33	168	P	Pn	00 34 30.9	-1.7
CTZ				S	Sn	00 36 02.7	-2.6
QRZ	Quartz Range	8.53	230	P	Pn	00 34 35.3	-0.1
KHZ	Kahutara	9.00	218	P	Pn	00 34 40.8	-1.0
ODZ	Otahua Downs	12.35	217	P	Pn	00 35 26.2	-1.4
OUENC	Ouen Island, N	18.07	313	P	Pn	00 36 41.9	-0.3
OUENC				IAmb	IAmb	00 36 53.1	
	comp=Z,27nm,1.1s						
DZM	Mont Dzumac	18.57	313	P	P	00 36 46.8	-1.0
	comp=Z,0.4nm,0.3s,baz=148,slow=8.9,SNR=7.5						
DZM				LR	LR	00 42 19.4	
	comp=Z,440nm,18.1s,baz=144,slow=32						
DZM	Mont Dzumac	18.57	313	*e*Pn	P	00 36 46.4	-1.4
	comp=Z,78nm,1.2s						
DZM				*e*LR	LR	00 40 42.3	
	comp=Z,704nm,27.1s						
DZM	Mont Dzumac	18.57	313	P	P	00 36 47.4	-0.3
DZM				IAmb	IAmb	00 37 00.8	
	comp=Z,28nm,1.0s						
TBI	Tubuai	28.28	72	*e*LR	LR	00 45 29.2	
	comp=Z,379nm,28.8s,baz=238						
PPT2	Papeete2	31.59	63	*e*LR	LR	00 47 09.3	
	comp=Z,286nm,25.2s,baz=230						
PPT	Papeete	31.61	63	LR	LR	00 48 24.3	
	comp=Z,90nm,20.1s,baz=236,slow=30						
STKA	Stephens Creek	32.91	265	P	P	00 39 04.0	-0.3
	comp=Z,1.9nm,0.9s,baz=328,slow=2.9,SNR=3.0						
CTAO	Charters Tower	34.25	287	P	P	00 39 14.9	-1.2
AS31	Alice Springs	42.34	273	P	P	00 40 22.8	-1.4
AS31				IAmb	IAmb	00 40 32.8	
	comp=Z,2.8nm,0.6s						
ASAR	Alice Springs	42.34	273	P	P	00 40 23.2	-1.0
	comp=Z,4.8nm,0.7s,baz=118,slow=7.6,SNR=43						
ASAR	Alice Springs	42.34	273	P	P	00 40 22.2	-2.0
WB2	Warramunga Arr	43.79	278	P	P	00 40 34.0	-1.9
WB2				IAmb	IAmb	00 40 36.4	
	comp=Z,10nm,0.9s						
WRA	Warramunga Arr	43.80	278	P	P	00 40 34.2	-1.8
	comp=Z,5.4nm,0.9s,baz=120,slow=7.5,SNR=15						
WRA	Warramunga Arr	43.80	278	P	P	00 40 34.0	-2.0
WB0	Warramunga Arr	43.84	278	P	P	00 40 34.4	-1.9
WB0				IAmb	IAmb	00 40 39.1	
	comp=Z,17nm,1.1s						
TAOE	Nuku Hiva Isla	44.22	63	*e*LR	LR	00 52 45.4	
	comp=Z,172nm,28.1s						
FITZ	Fitzroy Crossi	51.79	274	P	P	00 41 36.5	-1.3
	comp=Z,12nm,1.0s,baz=129,slow=6.6,SNR=7.3						
H03N3	Juan Fernandez	78.48	123	T	T	02 11 06.4	
	baz=242,slow=74,SNR=4.5						
H03N2	Juan Fernandez	78.48	123	T	T	02 11 05.8	
	baz=242						
H03N1	Juan Fernandez	78.49	123	T	T	02 11 05.8	
	baz=242,slow=74,SNR=4.7						
PLCA	Paso Flores	79.54	133	LR	LR	01 15 38.9	
	comp=Z,35nm,18.1s,baz=187,slow=32						
MJAR	Matsushiro Arr	82.10	326	LR	LR	01 18 33.5	
	comp=Z,13nm,19.8s,baz=245,slow=34						
PETK	Petropavlovsk-	90.64	346	P	P	00 45 32.4	+1.0
	comp=Z,16nm,1.1s,baz=111,slow=8.1,SNR=7.7						
NVAR	Mina Array Bea	92.54	43	P	P	00 45 43.1	+2.2
	comp=Z,0.1nm,0.3s,baz=207,slow=5.8,SNR=4.6						
CMAR	Chiang Mai Arr	94.40	289	LR	LR	01 33 13.3	
	comp=Z,54nm,18.1s,baz=230,slow=39						
CPUP	Villa Florida	97.32	130	LR	LR	01 22 03.6	
	comp=Z,58nm,21.7s,baz=214,slow=30						
KURBB	Kurchatov Arra	124.03	311	PKP	PKiKP	00 51 27.3	0.0
	comp=Z,0.8nm,0.7s,baz=121,slow=1.9,SNR=4.4						
KBZ	Khabaz	147.09	297	PKPbc	PKPbc	00 52 12.1	+0.1
	comp=Z,5.1nm,0.9s,baz=247,slow=1.6,SNR=6.3						
OBN	Obninsk	148.82	320	PKPbc	PKiKP	00 52 16.9	-0.6
	comp=Z,1.8nm,0.3s,baz=192,slow=7.0,SNR=5.1						
FINES	FINESS Array B	149.67	336	PKPbc	PKiKP	00 52 18.8	-0.3
	comp=Z,10nm,0.9s,baz=113,slow=4.4,SNR=8.2						
LIC	Lamto	150.24	168	*e*PKP1	PKiKP	00 52 23.6	+1.8
	comp=Z,49nm,1.3s						
KIC	Kosan Boka	150.42	168	*e*PKP1	PKiKP	00 52 23.9	+1.7
	comp=Z,19nm,0.8s						
TIC	Toumodi	150.65	168	*e*PKP1	PKiKP	00 52 24.7	+2.0
DBIC	Dimbokro	150.71	168	PKPbc	PKiKP	00 52 24.3	+1.5
	comp=Z,5.8nm,0.7s,baz=168,slow=3.3,SNR=9.7						
EIL	Elat	150.97	268	PKPbc	PKiKP	00 52 23.0	+0.1
	comp=Z,3.3nm,0.9s,baz=182,slow=3.2,SNR=5.0						
MMAI	Mount Meron Ar	151.62	275	PKPbc	PKiKP	00 52 25.3	+1.1
	comp=Z,4.1nm,0.8s,baz=113,slow=3.3,SNR=4.0						
BRTR	Keskin Array B	153.99	289	PKPbc	PKiKP	00 52 29.3	+0.3
	comp=Z,1.4nm,0.8s,baz=169,slow=2.9,SNR=3.0						
AKASG	Malin Array Be	154.72	315	PKPbc	PKiKP	00 52 30.7	+0.8
	comp=Z,0.4nm,0.4s,baz=77,slow=1.8,SNR=5.0						
TORD	Torodi Ar. Bea	157.65	182	PKPab	PKPab	00 53 00.0	+1.7
	comp=Z,1.2nm,0.6s,baz=175,slow=3.6,SNR=7.5						

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*IDC **29** 00:44:38.8±1.0, 35°.92N×68°.45E, h0^{km}, mb3.8/12, mb1 4.0/17, mb1mx3.8/51, mbtmp3.9/17, ML3.7/5, MS3.2/12, Ms1 3.2/12, ms1mx2.9/46, Error ellipse: s-maj=20.3km s-min=14.6km az=153.0*
*NNC **29** 00:44:39.5±3.9, 36°.16N×68°.09E, h0^{km}, mb4.5, mpv4.5, Error ellipse: s-maj=37.7km s-min=25.6km az=158.0*
*NEIC **29** 00:44:41.8±2.2, 35°.84N±0°.04×68°.28E±0°.08, h47^{km}±19^{km}, mb4.0/5, Error ellipse: s-maj=10.1km s-min=3.6km az=59.0*
ISC 29 00:44:42.2±0.6, **35°.99N**±0°.05×**68°.31E**±0°.05, **h30**^{km}, **n66**, σ**2**^{s}.**05**/70, **mb4.0**/11, **MS3.2**/7, **6C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	1.56	157	Pn	Pn	00 45 05.0	-3.2
KBL					Sn	00 45 23.8	-3.8
CHGR	Chuyangaron	2.75	14		Pn	00 45 24.9	+0.5
CEP	Cherat	3.67	125	P	Pn	00 45 38.7	+1.7
CEP				S	Sb	00 46 32.0	+1.6
THW	Thamme Wali	4.27	137	P	Pn	00 45 46.4	+1.2
DRK	Karamyk	4.45	37	Pn	Pn	00 45 49.7	+1.7
BTK	Batken	4.52	25	Pn	Pn	00 45 50.8	+2.1
NIL	Nilore	4.69	118	Pn	Pn	00 45 51.7	+0.7
CHCP	Chirah Chowk	4.70	118	P	Pn	00 45 51.7	+0.6
HRA	Herat	5.21	254	Pn	Pn	00 45 58.2	-0.1
KK08	Karatay Array	7.30	13	⇑P	Pn	00 46 27.3	+0.4

	19nm,0.9s,baz=198,slow=14						
KK08				⇑S	Sn	00 47 48.6	-0.1
	12nm,0.6s,baz=196,slow=28						
KKAR	Karatay Array	7.31	13	Pn	Pn	00 46 27.2	+0.3
AML	Almayashu	7.43	33	P	Pn	00 46 29.5	+0.6
	SNR=63						
DHRM	DHARAMSHALA	7.61	117	eP	Pn	00 46 30.8	-0.5
DHRM				eS	Sn	00 47 55.8	-0.7
DHRM				IAML		00 48 02.3	
	comp=E,116nm,0.6s						
DHRM				IAML		00 48 03.5	
	comp=N,81nm,0.5s						
UCH	Uchtor	7.88	36	P	Pn	00 46 35.8	+0.7
	SNR=75						
EKS2	Erkin-Say	7.90	31	P	Pn	00 46 36.1	+1.0
	SNR=7.5						
AAK	Ala-Archa	8.19	34	Pn	Pn	00 46 40.0	+0.8
	comp=N,4.8nm,0.3s,baz=214,slow=7.4,SNR=144						
AAK				Sn	Sn	00 48 13.4	+2.7
	comp=N,1.9nm,0.3s,baz=138,slow=23,SNR=15						
AAK				LR	LR	00 50 27.4	
	comp=N,147nm,20.4s,baz=220,slow=43						
AAK	Ala-Archa	8.19	34	P	Pn	00 46 39.9	+0.8
	SNR=62						
AAK	Ala-Archa	8.19	34	⇑P	Pn	00 46 39.9	+0.8
	comp=N,35nm,0.6s						
AAK				⇑S	Sn	00 48 15.1	+4.4
	comp=N,53nm,0.8s						
AAK	Ala-Archa	8.19	34	Pn	Pn	00 46 39.3	+0.2
GEYT	Alibeck	8.38	286	Pn	Pn	00 46 41.9	+0.2
	comp=N,1.8nm,0.3s,baz=202,slow=14,SNR=13						
GEYT				Sn	Sn	00 48 14.7	-0.7
	comp=N,0.8nm,0.3s,baz=86,slow=34,SNR=2.5						
GEYT				LR	LR	00 50 42.2	
	comp=N,73nm,18.4s,baz=60,slow=43						
GEYT	Alibeck	8.38	286	Pn	Pn	00 46 41.1	-0.6
GYA0B	ALIBECK ARRAY	8.38	286	Pn	Pn	00 46 41.2	-0.5
FRU1	Bishkek	8.39	34	Pn	Pn	00 46 42.8	+1.1
KBK	Karagaybulak	8.41	36	P	Pn	00 46 43.5	+1.3
	SNR=26						
CHMS	Chumysh	8.59	33	P	Pn	00 46 44.9	+0.4
	SNR=34						
USP	Ospenovka	8.70	31	P	Pn	00 46 45.8	-0.2
	SNR=9.8						
ULHL	Ulahol	8.78	42	P	Pn	00 46 47.0	-0.2
	SNR=14						
BOOM	Boomskoye usch	8.79	40	Pn	Pn	00 46 47.1	-0.2
SMLA	Simla	8.84	121	eP	Pn	00 46 48.1	+0.2
SMLA				eS	Sn	00 48 23.9	-2.6
SMLA				IAML		00 48 28.8	
	comp=E,40nm,0.4s						
TKM2	Tokmak 2	8.93	37	P	Pn	00 46 49.4	+0.1
	SNR=5.6						
TKM2	Tokmak 2	8.93	37	⇑P	Pn	00 46 48.8	-0.5
	comp=E,7.8nm,0.6s						
TKM2				⇑S	Sn	00 48 30.2	+1.4
	comp=E,14nm,0.8s						
TARG	Taragay, Kyrgy	9.37	49	Pn	Pn	00 46 55.4	-0.1
KUDL	Kundal	10.45	136	eP	Pn	00 47 08.8	-1.2
KUDL				eS	Sn	00 48 54.6	-11
AB31	Akbulak array	14.60	338	P	Pn	00 48 03.9	-2.8
	comp=E,1.4nm,0.4s,baz=156,slow=12,SNR=116						
ABKAR	Akbulak array	14.60	338		Pn	00 48 03.6	-3.1
ABKAR	Akbulak array	14.60	338	Pn	Pn	00 48 04.2	-2.5
MK31	Makanchi Array	15.03	40	P	Pn	00 48 09.5	-2.9
	comp=E,6.5nm,0.8s,baz=227,slow=11,SNR=21						
MK31	Makanchi Array	15.03	40		Pn	00 48 10.4	-2.0
MK31				IAmb	IAmb	00 48 11.4	
	comp=Z,5.5nm,0.9s						
MKAR	Makanchi Array	15.03	40	Pn	Pn	00 48 10.2	-2.3
	comp=Z,0.2nm,0.3s,baz=230,slow=13,SNR=24						
MKAR				LR	LR	00 54 21.4	
	comp=Z,74nm,20.4s,baz=207,slow=39						
MKAR	Makanchi Array	15.03	40		Pn	00 48 10.0	-2.5
WSAR	Wadi Sarin	15.22	216	LR	LR	00 54 23.2	
	comp=Z,68nm,20.1s,baz=324,slow=38						
AKTO	Aktyubinsk	16.25	336	Pn	Pn	00 48 27.1	-1.0
	comp=Z,0.3nm,0.3s,baz=142,slow=13,SNR=9.6						
AKTO	Aktyubinsk	16.25	336	⇓P	Pn	00 48 26.4	-1.7
	comp=Z,3.2nm,0.7s						
KURBB	Kurchatov Arra	16.39	24	Pn	Pn	00 48 26.6	-3.3
	comp=Z,0.1nm,0.3s,baz=212,slow=11,SNR=6.3						
BVAR	Borovoye Array	17.10	4	P	Pn	00 48 36.6	-2.2
	comp=Z,0.6nm,0.3s,baz=185,slow=10,SNR=15						
BVAR				S	Sn	00 51 38.2	-10
	comp=Z,0.2nm,0.3s,baz=196,slow=21,SNR=3.5						
BRVK	Borovoye	17.12	4	Pn	Pn	00 48 37.2	-1.9
GNI	Garni	19.00	290	LR	LR	00 58 29.0	
	comp=Z,28nm,18.5s,baz=52,slow=43						
KBZ	Khabaz	20.93	299	P	Pn	00 49 24.7	-0.2
	comp=Z,0.9nm,0.8s,baz=120,slow=8.1,SNR=1.4						
ZAA0	Zalesovo Array	21.33	28	P	P	00 49 25.8	-0.8
ZALV	Zalesovo Beam	21.33	28	P	P	00 49 26.5	-0.1
	comp=Z,4.8nm,0.5s,baz=217,slow=9.3,SNR=18						
ZALV				LR	LR	00 58 47.6	
	comp=Z,58nm,18.8s,baz=350,slow=40						
ZALV	Zalesovo Beam	21.33	28	P	P	00 49 25.6	-0.9
ARU	Arti	21.49	345	P	P	00 49 29.4	+1.2
	comp=Z,1.6nm,0.6s,baz=154,slow=3.4,SNR=7.2						
ARU				LR	LR	00 58 33.3	
	comp=Z,43nm,18.2s,baz=184,slow=39						
ARU	Arti	21.49	345	P	P	00 49 28.6	+0.4
ARU				IAmb	IAmb	00 49 32.4	
	comp=Z,5.3nm,0.7s						
BELG	Belogornoye	21.98	325	P	P	00 49 36.5	+2.9
	comp=Z,11nm,0.7s,baz=140,slow=1.5,SNR=14						
EIL	Elat	28.63	267	P	P	00 50 38.6	+2.5
	comp=Z,2.7nm,0.8s,baz=94,slow=7.5,SNR=3.8						
SONM	Songino Array	30.42	55	P	P	00 50 52.4	+0.5
	comp=Z,0.7nm,0.8s,baz=264,slow=7.4,SNR=5.9						
SONM				LR	LR	01 04 42.8	
	comp=Z,63nm,18.1s,baz=151,slow=40						
SONM	Songino Array	30.42	55	P	P	00 50 52.1	+0.2
SONM				IAmb	IAmb	00 51 20.9	
	comp=Z,8.8nm,1.9s						
NRIK	Noril'sk	35.05	12	LR	LR	01 08 14.4	
	comp=Z,31nm,20.5s,baz=112,slow=40						
FINES	FINESS Array B	36.71	327	P	P	00 51 48.3	+2.0
	comp=Z,2.4nm,0.9s,baz=143,slow=12,SNR=3.6						
ARCES	ARCESS Array B	40.80	339	LR	LR	01 09 25.2	
	comp=Z,40nm,21.2s,baz=295,slow=36						
NOA	NORSAR Array B	43.49	324	P	P	00 52 43.5	+1.0
	comp=Z,4.9nm,1.1s,baz=22,slow=2.8,SNR=3.6						
NOA				LR	LR	01 14 15.6	
	comp=Z,35nm,19.1s,baz=305,slow=41						
TORD	Torodi Ar. Bea	63.52	267	P	P	00 55 11.5	+1.4
	comp=Z,0.6nm,0.6s,baz=45,slow=5.8,SNR=6.0						
BOSA	Boshof	75.97	218	LR	LR	01 33 47.7	
	comp=Z,53nm,18.8s,baz=188,slow=39						
YKA	Yellowknife Ar	81.83	1	P	P	00 57 00.2	+2.2
	comp=Z,0.2nm,0.6s,baz=351,slow=5.4,SNR=2.9						
WRA	Warramunga Arr	83.59	120	P	P	00 57 08.8	+1.0
	comp=Z,0.5nm,0.7s,baz=326,slow=5.3,SNR=1.8						
ASAR	Alice Springs	85.78	123	P	P	00 57 19.6	+0.8
	comp=Z,0.9nm,1.0s,baz=289,slow=3.8,SNR=4.5						

WEL 29 00:46:40.0±0.8,45˚S±4˚×16˚7E±˚,h54km±7km,M3.4/9, ML3.6/9,MLv3.4/9,Error ellipse: s-maj=0.0km s-min=0.0km az=115.2,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	Deep Cove	0.05	119	P	Pn	00 46 48.7	+0.6
DCZ				S	Sn	00 46 55.6	+1.5
MLZ	Mavora Lakes	0.73	85	P	Pn	00 46 54.8	+0.5
MLZ				S	Sn	00 47 06.6	+1.9
WHZ	Wether Hill Ro	0.75	127	P	Pn	00 46 55.4	+0.8
WHZ				S	Sn	00 47 07.1	+1.9
PYZ	Puysegur Point	0.78	201	P	Pn	00 46 55.2	+0.2
PYZ				S	Sn	00 47 06.7	+0.8
MSZ	Milford Sound	0.97	38	P	Pn	00 46 57.5	+0.2
MSZ				S	Sn	00 47 11.2	+1.1
WKZ	Wanaka	1.50	66	P	Pn	00 47 05.1	+0.6
WKZ				S	Sn	00 47 23.5	+0.6
APZ	The Paps	1.52	156	P	Pn	00 47 05.2	+0.3
APZ				S	Sn	00 47 24.5	+0.8
EAZ	Earnscleugh	1.58	83	P	Pn	00 47 06.2	+0.6
EAZ				S	Sn	00 47 24.1	-0.8
SYZ	Scrubby Hill	1.80	128	P	Pn	00 47 09.0	+0.5
SYZ				S	Sn	00 47 31.0	+0.7
JCZ	Jackson Bay	1.82	42	P	Pn	00 47 08.4	-0.6
TUZ	Tuapeka	1.85	107	P	Pn	00 47 10.3	+1.0
TUZ				S	Sn	00 47 31.0	-0.6
LBZ	Lake Benmore	2.44	65	P	Pn	00 47 16.3	-1.1
LBZ				S	Sn	00 47 43.6	-2.3
HHSZ	Highcliff Hill	2.50	101	P	Pn	00 47 18.3	+0.2
HHSZ				S	Sn	00 47 45.3	-2.1
ODZ	Otahua Downs	2.54	82	P	Pn	00 47 18.0	-0.7
ODZ				S	Sn	00 47 45.4	-3.1
FOZ	Fox Glacier	2.73	47	P	Pn	00 47 19.9	-1.4
TMZ	Timaru	2.98	71	P	Pn	00 47 23.1	-1.6
GCSZ	Gaunt Creek Bo	3.15	49	P	Pn	00 47 25.1	-1.9
ARCZ	Arundel	3.27	64	P	Pn	00 47 26.6	-2.1
RPZ	Rata Peaks	3.32	60	P	Pn	00 47 27.3	-2.0
RPZ				S	Sn	00 48 04.1	-3.4
WACZ	Wakanui South	3.70	68	P	Pn	00 47 32.6	-1.9
MHCZ	Mount Hutt	3.73	61	P	Pn	00 47 32.6	-2.5
OXZ	Oxford	4.13	61	P	Pn	00 47 37.6	-2.8
MQZ	McQueen's Vall	4.34	68	P	Pn	00 47 40.8	-2.4
AKCZ	Akaroa Harbour	4.44	71	P	Pn	00 47 42.6	-2.1
OKCZ	Okains Bay	4.60	70	P	Pn	00 47 45.1	-1.8
DSZ	Denniston Nort	5.04	44	P	Pn	00 47 50.2	-2.7
THZ	Tophouse	5.60	51	P	Pn	00 47 56.8	-3.9
QRZ	Quartz Range	6.09	43	P	Pn	00 48 05.7	-1.6

*PRE **29** 00:55:02.0±1.1,26˚97S×26˚78E,h2km,ML2.7*
*EAF **29** 00:55:05.6±1.4,27˚02S×26˚79E,h10km,MD4.0*
ISC 29 00:55:03.7±1.7,26˚96S±0˚03×26˚81E±0˚04,h16km±12km, n25,σ1ˢ79/42,South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	Parys	0.49	86	eP	Pb	00 55 12.4	-1.7
PRYS				eS	Sg	00 55 19.3	-1.1
PRYS				IAML		00 55 24.2	
	comp=Z,302nm,0.9s						
KSR	Koster	1.10	4	eP	Pn	00 55 23.9	-0.7
KSR				eS	Sb	00 55 39.0	+0.3
KSR				IAML		00 55 44.1	
	comp=Z,546nm,0.1s						
HRAO	HartRAO	1.32	37	eP	Pn	00 55 28.1	+0.4
HRAO				eS	Sg	00 55 46.8	+0.3
HRAO				IAML		00 55 49.4	
	comp=Z,106nm,0.3s						
SWZ	Schweizer	1.33	260	eP	Pn	00 55 27.6	-0.2
SWZ				eS	Sn	00 55 45.4	+0.1
SWZ				IAML		00 55 49.8	
	comp=Z,127nm,0.2s						
SNKL	Senekal, Frees	1.57	147	eP	Pb	00 55 32.4	0.0
SNKL				eS	Sb	00 55 53.2	+1.1
SNKL				IAML		00 55 56.3	
	comp=Z,97nm,0.3s						
SLR	Silverton	1.80	48	eP	Pn	00 55 35.7	+1.6
SLR				eS	Sb	00 55 58.8	+0.1
SLR				IAML		00 56 02.1	
	comp=Z,140nm,0.4s						
BOSA	Boshof	2.15	219	eP	Pn	00 55 40.2	+1.2
BOSA				eS	Sn	00 56 06.0	+0.7
BOSA				IAML		00 56 12.1	
	comp=Z,24nm,1.2s						
BOSA	Boshof	2.15	219	i P	Pn	00 55 40.0	+1.1
BOSA	Boshof	2.15	219	i P	Pn	00 55 40.0	+1.1
LBTB	Lobatse	2.22	330	eP	Pn	00 55 41.4	+1.4
LBTB				eS	Sn	00 56 08.5	+1.4
LBTB				IAML		00 56 15.2	
	comp=Z,46nm,0.2s						
POGA	Pongola	4.38	96	eP	Pn	00 56 10.1	+0.5
POGA				eS	Sn	00 57 00.5	+0.1
POGA				IAML		00 57 21.6	
	comp=Z,18nm,0.5s						
PKA	Prieska	4.48	232	eP	Pn	00 56 11.0	0.0
PKA				eS	Sn	00 57 01.8	-1.0
PKA				IAML		00 57 04.5	
	comp=Z,2.5nm,0.1s						
CNG	Changalane	4.86	83	i P	Pn	00 56 19.0	+2.8
CNG	Changalane	4.86	83	i P	Pn	00 56 19.0	+2.8
MOPA	Mopani	5.38	52	eP	Pn	00 56 24.0	+0.6
MOPA				eS	Sn	00 57 24.2	-0.9
MOPA				IAML		00 57 27.3	
	comp=Z,7.3nm,1.0s						
MOPA	Mopani	5.38	52	i P	Pn	00 56 26.8	+3.4
MOPA				i S	Sn	00 57 23.1	-2.0
MOPA	Mopani	5.38	52	i P	Pn	00 56 26.8	+3.4
MOPA				i S	Sn	00 57 23.1	-2.0
MSNA	Messina	5.44	33	i P	Pn	00 56 27.4	+3.1
MSNA				i S	Sn	00 57 27.1	+0.5
MSNA	Messina	5.44	33	i P	Pn	00 56 27.4	+3.1
MSNA				i S	Sn	00 57 27.1	+0.5
SOE	Somerset East	5.84	190	eP	Pn	00 56 30.2	+0.6
SOE				eS	Sn	00 57 35.2	-1.0
SOE				IAML		00 57 40.0	
	comp=Z,46nm,3.2s						
MATP	Matopo	6.68	14	i S	Sn	00 57 55.1	-2.1
MATP	Matopo	6.68	14	i S	Sn	00 57 55.1	-2.1
BLWY	Bulawayo	6.98	14	i P	Pn	00 56 48.2	+2.7
BLWY	Bulawayo	6.98	14	i P	Pn	00 56 48.2	+2.7
CVNA	Calvinia	7.63	232	eP	Pn	00 56 54.6	+0.3
CVNA				eS	Sn	00 58 17.3	-3.2
CVNA				IAML		00 58 25.3	
	comp=Z,36nm,3.2s						

*MOS **29** 01:00:34.3±1.4,42˚01N×141˚23E,h130km,mb4.3/2,Error ellipse: s-maj=13.3km s-min=10.3km az=146.0*
*IDC **29** 01:00:34.9±2.6,41˚97N×141˚15E,h116km±20km, mb3.6/10,mb1 3.7/12,mb1mx3.5/33,mbtmp3.9/12,Error ellipse: s-maj=28.6km s-min=15.5km az=171.0*
*NEIC **29** 01:00:35.5±0.8,42˚05N±0˚05×141˚17E±0˚07, h114km±5km,mb4.4/11,Error ellipse: s-maj=7.7km s-min=6.8km az=138.0*
*JMA **29** 01:00:35.6±0.1,42˚11N×141˚18E,h110km±1km,M3.2*
*SKHL **29** 01:00:35.5±0.5,42˚10N×141˚30E,h132km±6km,mb5.0/4, msha5.6/5*
ISC 29 01:00:35.1±0.7,42˚05N±0˚04×141˚22E±0˚03,h117km±5km, n77,σ1ˢ31/100,mb4.0/16,1D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKB	Kayabe	0.21	220	P	Pn	01 00 51.1	-0.3
JKB				eS	Sn	01 01 02.8	-0.9
JNB	Noboribetsu	0.44	342	P	Pn	01 00 51.4	-1.0
JNB				eS	Sn	01 01 04.1	-1.3
JYM2	Yakumo 2	0.63	276	P	Pn	01 00 53.2	-0.5
JOT	Ohata	0.68	191	P	Pn	01 00 54.2	+0.1
JOT				eS	Sn	01 01 08.3	0.0
JIAM	Iburiatsuma	0.77	42	P	Pn	01 00 55.0	+0.2
JIAM				eS	Sn	01 01 09.7	+0.1
JSR	Shiriuchi	0.79	229	P	Pn	01 00 55.0	0.0
JSR				eS	Sn	01 01 09.5	-0.4
JEW	Eniwo	0.81	12	P	Pn	01 00 54.8	-0.3
JEW	Eniwo	0.81	12		Pn	01 00 54.9	-0.1
JEW				Sn	Sn	01 01 10.1	-0.1
JOMM	Oshimamatsumae	1.05	240	P	Pn	01 00 57.6	+0.2
JSH	Shimam	1.05	305	P	Pn	01 00 57.0	-0.4
JSH				eS	Sn	01 01 13.0	-1.2
JHST	Hiyamasetana	1.06	291	P	Pn	01 00 57.0	-0.5
JHST				eS	Sn	01 01 12.7	-1.7
JBT2	Biratori 2	1.12	49	P	Pn	01 00 58.0	-0.1
JBT2				eS	Sn	01 01 15.7	+0.2
JNBK	Urakawa-nobuka	1.17	78	P	Pn	01 00 58.8	+0.2
JNBK				eS	Sn	01 01 17.0	+0.6
JISS	Ishikarishitsu	1.23	7	P	Pn	01 00 59.4	+0.1
JISS				eS	Sn	01 01 17.8	+0.1
JTM	Tenmabayashi	1.27	185		Pn	01 01 00.3	+0.5
JOSM	Okushiri--Mats	1.30	272	P	Pn	01 00 59.3	-0.7
JOSM				eS	Sn	01 01 17.7	-1.2
JSK	Shakotan	1.41	337	P	Pn	01 01 01.0	-0.3
JSK				eS	Sn	01 01 20.8	-0.4
ERM	Erimo	1.45	91	PN	Pn	01 01 02.8	+1.1
ERM						01 01 22.7	
ERM	Erimo	1.45	91		Pn	01 01 02.8	+1.1
ERM				Sn	Sn	01 01 22.7	+0.8
JFR	Furan	1.50	42	P	Pn	01 01 01.6	-0.8
JFR				eS	Sn	01 01 21.5	-1.7
JCH	Churui	1.69	70	P	Pn	01 01 04.8	+0.2
JCH				eS	Sn	01 01 26.7	-0.3
JANG	Nango	1.69	172	P	Pn	01 01 04.7	0.0
JANG				eS	Sn	01 01 26.8	-0.4
JHR	Hokuryu	1.73	12	P	Pn	01 01 05.9	+0.8
ASAJ	Asahikawa	2.30	26	P	Pn	01 01 12.3	+0.2
	7.0nm,0.3s,baz=214,slow=15,SNR=40						
JKA	Kamikawa-asahi	2.30	26	eP	Pn	01 01 12.4	+0.2
JKA	Kamikawa-asahi	2.30	26	Pn	Pn	01 01 12.2	+0.1
AKK	Akkeshi	2.85	69	eP	Pn	01 01 18.9	-0.4
AKK				AMB	AMB	01 01 20.3	
	40nm,0.3s						
AKK				eS	Sn	01 01 50.7	-2.6
AKK				A	A	01 01 52.1	
	440nm,0.3s						
AKK				A	A	01 01 52.1	
	180nm,0.3s						
NMR	Nemuro--Hokkai	3.58	67	ePN	Pn	01 01 27.7	-1.2
NMR				eS	Sn	01 02 05.9	-4.5
NMR	Nemuro--Hokkai	3.58	67	eP	Pn	01 01 27.0	-1.9
NMR				eS	Sn	01 02 06.0	-4.5
GLVR	Golovnino	3.58	61	ePN	Pn	01 01 29.8	+0.8
GLVR				eS	Sn	01 02 09.6	-1.0
GLVR				pmax	pmax		
	comp=Z,81nm,0.1s						
GLVR				smax	smax		
	comp=N,647nm,0.3s						
GLVR				smax	smax		
	comp=E,327nm,0.3s						
GLVR	Golovnino	3.58	61	eP	Pn	01 01 29.8	+0.8
GLVR				AMB	AMB	01 01 31.3	
RUSJ	Misakicho	3.59	54	ePN	Pn	01 01 32.1	+3.0
RUSJ				eS	Sn	01 02 14.3	+3.4
YUK	Yuzh-Kuril'sk	3.94	58	ePN	Pn	01 01 35.1	+1.4
YUK				eS	Sn	01 02 19.0	-0.1
YUK				pmax	pmax		
	comp=Z,116nm,0.3s						
YUK				smax	smax		
	comp=N,519nm,0.4s						
YUK				smax	smax		
	comp=E,236nm,0.4s						
YUK	Yuzh-Kuril'sk	3.94	58	eP	Pn	01 01 34.4	+0.7
YUK				AMB	AMB	01 01 39.7	
	comp=E,120nm,0.3s						
YUK				eS	Sn	01 02 17.2	-1.9
YUK				A	A	01 02 22.9	
	comp=E,520nm,0.4s						
YUK				A	A	01 02 22.9	
	comp=E,240nm,0.4s						
JMM	Marumori	4.19	185	Pn	Pn	01 01 36.5	-0.7
SHO	Shikotan	4.50	64	⇓iPN	Pn	01 01 40.2	-1.1
SHO				eS	Sn	01 02 28.1	-4.5
SHO				pmax	pmax		
	comp=Z,33nm,0.2s						
SHO				smax	smax		
	comp=N,186nm,0.3s						
SHO				smax	smax		
	comp=E,247nm,0.3s						
SHO	Shikotan	4.50	64	eP	Pn	01 01 40.4	-0.9
SHO				AMB	AMB	01 01 40.9	
	comp=E,30nm,0.2s						
SHO				eS	Sn	01 02 28.2	-4.4
SHO				A	A	01 02 29.2	
	comp=E,170nm,0.4s						
SHO				A	A	01 02 29.2	
	comp=E,240nm,0.4s						
USA0B	Ussuriysk Arra	7.08	291	PN	Pn	01 02 16.2	+0.1
USA0B	Ussuriysk Arra	7.08	291	Pn	Pn	01 02 16.2	+0.1
USRK	Ussuriysk Ar.	7.08	291	P	Pn	01 02 17.4	+1.3
	baz=98,slow=15,SNR=11						
USRK	Ussuriysk Ar.	7.08	291		Pn	01 02 16.2	+0.1
BJT	Baijiatuau	18.99	272	P	P	01 04 47.6	+0.2
BJT				pmax	pmax		
	comp=Z,19nm,0.6s						
BJT	Baijiatuau	18.99	272	P	P	01 04 47.6	+0.2
BJT				IAmb	IAmb	01 04 53.4	
	comp=Z,19nm,0.6s						
SONM	Songino Array	25.17	295	P	P	01 05 48.4	-1.1
	comp=Z,1.0nm,0.6s,baz=79,slow=8.7,SNR=8.1						
SONM	Songino Array	25.17	295	P	P	01 05 49.3	-0.2
SONM	Songino Array	25.17	295	P	P	01 05 49.3	-0.2
H11N2	WAKE ISLAND Hy	31.11	128	T	T	01 38 49.1	
	baz=312,slow=76,SNR=6.9						
H11N1	WAKE ISLAND Hy	31.11	128	T	T	01 38 53.2	
	baz=312,slow=76,SNR=9.6						
H11N3	WAKE ISLAND Hy	31.12	128	T	T	01 39 12.1	
	baz=312,slow=76,SNR=7.0						
ZAA0	Zalesovo Array	38.56	308	P	P	01 07 47.0	+0.9
ZAA0				IAmb	IAmb	01 07 47.7	
	comp=Z,6.2nm,0.5s						
ZALV	Zalesovo Beam	38.56	308	P	P	01 07 47.0	+0.9
	comp=Z,6.3nm,0.4s,baz=83,slow=8.3,SNR=27						
ZALV	Zalesovo Beam	38.56	308	P	P	01 07 46.5	+0.4
MKAR	Makanchi Array	41.50	297	P	P	01 08 10.1	-0.4
	comp=Z,1.3nm,0.5s,baz=83,slow=11,SNR=18						
MKAR	Makanchi Array	41.50	297	P	P	01 08 10.3	-0.2
MKAR	Makanchi Array	41.50	297	eP	P	01 08 10.3	-0.2
MKAR	Makanchi Array	41.50	297	P	P	01 08 10.3	-0.2
KURK	Kurchatov	42.86	304	P	P	01 08 22.4	+1.0
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURK	Kurchatov	42.86	304	eP	P	01 08 22.4	+1.0
KURK	Kurchatov	42.86	304	P	P	01 08 22.4	+1.0
KURK				IAmb	IAmb	01 08 23.4	
	comp=Z,4.4nm,1.0s						
PPLA	Purkeypile	43.22	38	P	P	01 08 26.1	+1.7
PPLA				IAmb	IAmb	01 08 41.9	
	comp=Z,25nm,1.4s						
CAST	Castle Rocks	43.24	37	P	P	01 08 25.6	+1.2
TOLK	Toolik Lake Re	44.13	29	P	P	01 08 32.3	+0.8
TOLK				IAmb	IAmb	01 08 49.6	
	comp=Z,6.0nm,1.4s						
RND	Reindeer	44.69	37	P	P	01 08 36.5	+0.5
RND				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RND	Reindeer	44.69	37	P	P	01 08 36.5	+0.5
RND				IAmb	IAmb	01 08 54.4	
	comp=Z,3.8nm,1.0s						
GHO	Glory Hole Cre	44.85	39	P	P	01 08 38.2	+0.9
ILAR	Eielson Array	45.40	35	P	P	01 08 41.9	+0.4
	comp=Z,0.8nm,0.7s,baz=262,slow=6.0,SNR=9.2						
ABKAR	Akbulak array	54.68	307	P	P	01 09 52.0	+0.3
ABKAR				IAmb	IAmb	01 09 58.8	
	comp=Z,5.4nm,1.5s						
YKA	Yellowknife Ar	59.58	31	P	P	01 10 26.3	+0.4
	comp=Z,0.4nm,0.5s,baz=302,slow=6.5,SNR=14						
YKA	Yellowknife Ar	59.58	31	P	P	01 10 26.1	+0.1
WRA	Warramunga Arr	62.01	187	P	P	01 10 41.7	-1.2
	comp=Z,0.2nm,0.3s,baz=5.4,slow=6.9,SNR=1.5						
FINES	FINESS Array B	64.33	331	P	P	01 10 57.4	-0.3
	comp=Z,1.2nm,0.6s,baz=24,slow=9.9,SNR=6.6						
NOA	NORSAR Array B	69.52	337	P	P	01 11 30.3	-0.3
	comp=Z,0.6nm,0.7s,baz=14,slow=3.8,SNR=3.3						
NVAR	Mina Array Bea	72.14	54	P	P	01 11 48.7	+1.6
	comp=Z,1.2nm,0.7s,baz=287,slow=6.8,SNR=6.4						
NVAR	Mina Array Bea	72.14	54	P	P	01 11 46.0	-1.1
PDAR	Pinedale Array	74.28	46	P	P	01 12 00.4	+0.7
	comp=Z,0.7nm,0.6s,baz=269,slow=2.6,SNR=5.9						
NWAO	Narrogin (SRO)	77.80	200	P	P	01 12 19.4	+0.2
NWAO	Narrogin (SRO)	77.80	200	P	P	01 12 19.4	+0.2

*INET **29** 01:08:18.1,13˚23N×89˚87W,h18km,MW3.1*
*SNET **29** 01:08:19.6±1.1,13˚34N×89˚75W,h55km±6km,ML3.7*
*UCR **29** 01:08:19.6±1.1,13˚34N×89˚75W,h55km±5km,ML3.8*
*GCG **29** 01:08:20.9±0.4,13˚26N×89˚93W,h65km±43km,MD3.7*
ISC 29 01:08:21.0±1.6,13˚32N±0˚07×89˚72W±0˚04,h45km±11km, n54,σ0ˢ83/89,2D,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.42	67	i P	Pn	01 08 30.2	-0.8
LALI				eS	Sn	01 08 38.0	-0.1
LALI	Alcalda de L	0.42	67	i P	Pn	01 08 30.2	-0.8
LALI				eS	Sn	01 08 38.0	-0.1
JAYA	Jayaque - finc	0.42	38	i P	Pn	01 08 30.4	-0.8
JAYA				eS	Sn	01 08 39.5	+1.0
JAYA				IAML		01 08 39.8	
	comp=Z,6µm,0.2s						
JAYA	Jayaque - finc	0.42	38	i P	Pn	01 08 30.4	-0.8
JAYA				eS	Sn	01 08 39.5	+1.0
JAYA				IAML		01 08 39.8	
	comp=Z,6µm,0.2s						
CEVE	Cerro Verde	0.51	11	i P	Pn	01 08 31.6	-0.8
CEVE				eS	Sn	01 08 42.7	+2.2
CEVE				IAML		01 08 44.7	
	comp=Z,6µm,0.3s						
CEVE	Cerro Verde	0.51	11	i P	Pn	01 08 31.6	-0.8
CEVE				eS	Sn	01 08 42.7	+2.2
CEVE				IAML		01 08 44.7	
	comp=Z,6µm,0.3s						
MAGS	Ministerio de	0.56	49	eP	Pn	01 08 31.9	-0.9
CEDA	San Andres	0.57	33	eP	Pn	01 08 32.4	-0.5
CEDA				eS	Sn	01 08 42.5	+1.0

CEDA				IAML		01 08 48.4	
	comp=Z,2μm,0.2s						
CEDA	San Andres	0.57	33	*e*P	Pn	01 08 32.4	-0.5
CEDA				*e*S	Sn	01 08 42.5	+1.0
CEDA				IAML		01 08 48.4	
	comp=Z,2μm,0.2s						
NUBE	Las Nubes	0.58	354	⇓*i*P	Pn	01 08 32.1	-1.1
NUBE				*e*S	Sn	01 08 41.5	-0.4
NUBE	Las Nubes	0.58	354	⇓*i*P	Pn	01 08 32.1	-1.1
NUBE				*e*S	Sn	01 08 41.5	-0.4
BOQS	Boqueron	0.59	46	*e*P	Pn	01 08 32.9	-0.6
BOQS				*e*S	Sn	01 08 43.1	+0.8
BOQS	Boqueron	0.59	46	*e*P	Pn	01 08 32.9	-0.6
BOQS				*e*S	Sn	01 08 43.1	+0.8
SNET	Serv Nac Est T	0.60	52	*i* P	Pn	01 08 32.5	-0.9
SNET	Serv Nac Est T	0.60	52	*i* P	Pn	01 08 32.5	-0.9
UEES	Universidad Ev	0.61	50	*e*P	Pn	01 08 32.8	-0.7
UEES				IAML		01 08 46.6	
	comp=Z,2μm,0.1s						
UEES	Universidad Ev	0.61	50	*e*P	Pn	01 08 32.8	-0.7
UEES				IAML		01 08 46.6	
	comp=Z,2μm,0.1s						
OPAM	Oficina de Pla	0.64	52	*e*P	Pn	01 08 33.1	-0.7
OPAM	Oficina de Pla	0.64	52	*e*P	Pn	01 08 33.1	-0.7
IGN	Direccin Gen	0.66	54	*e*P	Pn	01 08 33.4	-0.7
IGN				*e*S	Sn	01 08 44.4	+0.8
IGN	Direccin Gen	0.66	54	*e*P	Pn	01 08 33.4	-0.7
IGN				*e*S	Sn	01 08 44.4	+0.8
UDBS	Universidad Do	0.68	54	*e*P	Pn	01 08 33.6	-0.8
UDBS	Universidad Do	0.68	54	*e*P	Pn	01 08 33.6	-0.8
LOAL	Lomas de Alarc	0.68	355	*e*S	Sn	01 08 44.6	+0.7
UNIC	Universidad Ca	0.68	14	*e*P	Pn	01 08 33.7	-0.7
UNIC	Universidad Ca	0.68	14	*e*P	Pn	01 08 33.7	-0.7
AEIL	Aeropuerto Ilo	0.70	57	*i* P	Pn	01 08 34.2	-0.4
AEIL				*e*S	Sn	01 08 45.7	+1.3
AEIL				IAML		01 08 50.1	
	comp=Z,3μm,0.6s						
AEIL	Aeropuerto Ilo	0.70	57	*i* P	Pn	01 08 34.2	-0.4
AEIL				*e*S	Sn	01 08 45.7	+1.3
AEIL				IAML		01 08 50.1	
	comp=Z,3μm,0.6s						
SLOZ	Alcaldia de Sa	0.70	355	*e*P	Pn	01 08 34.0	-0.7
SLOZ				*e*S	Sn	01 08 44.6	0.0
LFRS	El Faro	0.71	65	*i* P	Pn	01 08 33.9	-0.9
LFRS	El Faro	0.71	65	*i* P	Pn	01 08 33.9	-0.9
LFU	La Fuente	0.73	54	*i* P	Pn	01 08 34.5	-0.5
LFU				*e*S	Sn	01 08 46.2	+1.1
LFU	La Fuente	0.73	54	*i* P	Pn	01 08 34.5	-0.5
LFU				*e*S	Sn	01 08 46.2	+1.1
TACO	Tacachico	0.74	29	*e*P	Pn	01 08 34.4	-0.7
TACO				*e*S	Sn	01 08 45.0	-0.3
TACO	Tacachico	0.74	29	*e*P	Pn	01 08 34.4	-0.7
TACO				*e*S	Sn	01 08 45.0	-0.3
PAVA	Las Pavas	0.86	63	*e*P	Pn	01 08 36.5	-0.2
PAVA				*e*S	Sn	01 08 48.8	+0.5
PAVA	Las Pavas	0.86	63	*e*P	Pn	01 08 36.5	-0.2
PAVA				*e*S	Sn	01 08 48.8	+0.5
SNVI	San Vicente	0.91	71	*e*P	Pn	01 08 37.3	-0.2
SNVI	San Vicente	0.91	71	*e*P	Pn	01 08 37.3	-0.2
TECO	Alcaldia de Te	0.94	77	*e*P	Pn	01 08 36.9	-1.0
SCLA	Alcaldia de Sa	1.04	68	*e*P	Pn	01 08 39.2	+0.1
SCLA				*e*S	Sn	01 08 53.6	+1.1
SCLA	Alcaldia de Sa	1.04	68	*e*P	Pn	01 08 39.2	+0.1
SCLA				*e*S	Sn	01 08 53.6	+1.1
ALJI	Alcalda de J	1.12	90	*e*P	Pn	01 08 39.8	-0.5
ALJI				*e*S	Sn	01 08 54.9	+0.4
ALJI	Alcalda de J	1.12	90	*e*P	Pn	01 08 39.8	-0.5
ALJI				*e*S	Sn	01 08 54.9	+0.4
LLGN	La Laguna	1.13	42	*e*P	Pn	01 08 40.0	-0.4
LLGN				*e*S	Sn	01 08 54.7	-0.2
LLGN	La Laguna	1.13	42	*e*P	Pn	01 08 40.0	-0.4
LLGN				*e*S	Sn	01 08 54.7	-0.2
MTO3	Montecristo	1.13	18	*i* P	Pn	01 08 39.9	-0.7
MTO3				*e*S	Sn	01 08 54.9	-0.1
MTO3	Montecristo	1.13	18	*i* P	Pn	01 08 39.9	-0.7
MTO3				*e*S	Sn	01 08 54.9	-0.1
COEB	Comit de Eme	1.17	81	*e*P	Pn	01 08 40.1	-1.0
COEB	Comit de Eme	1.17	81	*e*P	Pn	01 08 40.1	-1.0
ESQI	Esquipulas	1.29	17	*e*P	Pn	01 08 41.6	-1.0
ESQI				*e*S	Sn	01 08 58.9	+0.1
NBG	Las Nubes	1.40	334	*e*P	Pn	01 08 45.0	+0.7
NBG				*e*S	Sn	01 09 04.0	+2.3
FUG	Fuego 3	1.56	316	*e*P	Pn	01 08 46.1	-0.4
FUG				*e*S	Sn	01 09 05.5	-0.1
STG3	Santiaguito 3,	2.27	308	*e*P	Pn	01 08 56.5	+0.4
STG3				*e*S	Sn	01 09 22.1	-0.9

TAP ***29*** *01:18:12.8, 24°.14N×122°.54E, h47^{km}±1^{km}, ML2.6, D*

JMA ***29*** *01:18:12.5±0.1, 24°.04N×122°.53E, h32^{km}±3^{km}, M2.0*

ISC 29 01:18:13.0±1.0**, 24°.11N**±0°.04×**122°.52E**±0°.02**, h29**^{km}±11^{km}**, n43,** σ**0^{s}.85**/80**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.51	49	P	Pb	01 18 23.6	+0.1
JYNG				S	Sb	01 18 31.2	+0.5
YOJ	Yonaguni jima	0.56	52	*i* P	Pb	01 18 24.4	0.0
	baz=53						
YOJ				S	Sb	01 18 33.0	+0.7
	baz=53						
YOJ	Yonaguni jima	0.56	52	P	Pb	01 18 24.3	-0.1
YOJ				S	Sb	01 18 32.9	+0.7
EWUT	Wuta	0.75	296	P	Pb	01 18 27.3	-0.3
	baz=293						
EWUT				*e*S	Sb	01 18 38.1	+0.6
	baz=293						
TWC	Suao	0.79	309	*i* P	Pb	01 18 27.6	-0.5
	baz=307						
TWC				S	Sb	01 18 37.5	-1.0
	baz=307						
TWD	Chiawan	0.85	268	*e*P	Pb	01 18 29.6	+0.5
	baz=266						
NACB	Ninganchiao	0.85	274	*i* P	Pb	01 18 28.6	-0.5
	baz=272						
NACB				*e*S	Sb	01 18 40.4	+0.2
	baz=272						
NDS	Dongshan	0.90	305	*e*P	Pb	01 18 29.9	-0.1
	baz=303						
NDS				*e*S	Sb	01 18 41.7	0.0
	baz=303						
ETLH	Xiulin Townshi	0.95	276	*i* P	Pb	01 18 30.2	-0.8
	baz=274						
ETLH				*e*S	Sb	01 18 42.2	-1.0
	baz=274						
NTC	Toucheng	0.97	320	*e*P	Pb	01 18 31.0	-0.2
	baz=318						
NTC				*e*S	Sb	01 18 44.5	+0.8
	baz=318						
TWE	Neicheng	0.99	308	*e*P	Pb	01 18 31.8	+0.4
	baz=306						
TWE				*e*S	Sb	01 18 44.1	0.0
	baz=306						
LATG	Datong	1.00	295	*i* P	Pb	01 18 31.2	-0.5
	baz=293						
LATG				*e*S	Sb	01 18 44.3	-0.3
	baz=293						
TWB1	Santiao Chiao	1.01	332	*e*P	Pb	01 18 30.8	-1.2
	baz=330						
TWB1				*e*S	Sb	01 18 44.0	-0.9
	baz=330						
NDT	Datong Townshi	1.04	298	*e*P	Pn	01 18 32.2	+0.6
	baz=296						
NDT				*e*S	Sb	01 18 45.8	+0.1
	baz=296						
TIPB	Shuangxi	1.06	324	*e*P	Pn	01 18 31.8	-0.1
	baz=322						
TIPB				*e*S	Sb	01 18 47.0	+0.7
	baz=322						
FUSB	Fushanzhiwuyua	1.07	307	*i* P	Pn	01 18 32.7	+0.7
	baz=305						
FUSB				*e*S	Sb	01 18 46.8	+0.3
	baz=305						
NNSB	Datong	1.08	287	*e*P	Pn	01 18 32.5	+0.1
	baz=285						
IRIF	Iriomote-Funau	1.12	78	P	Pn	01 18 32.8	+0.1
IRIF				*e*S	Sb	01 18 47.6	-0.5
NWLT	Wulai	1.14	306	*e*P	Pn	01 18 34.0	+1.0
	baz=304						
NWLT				*e*S	Sb	01 18 48.4	-0.1
	baz=304						
SXI1	Grass Mountain	1.14	329	P	Pn	01 18 32.6	-0.4
	baz=327						
SXI1				*e*S	Sb	01 18 47.2	-1.3
	baz=327						
WHF	Hehuan Shan	1.15	272	*e*P	Pn	01 18 33.2	-0.3
	baz=270						
WHF				*e*S	Sb	01 18 48.2	-1.0
	baz=270						
NWF	Wu-fen Shan	1.17	325	*e*P	Pn	01 18 33.2	-0.2
	baz=323						
NWF				*e*S	Sb	01 18 48.1	-1.3
	baz=323						
WFSB	Wu-fen Shan	1.17	325	P	Pn	01 18 33.2	-0.1
	baz=323						
WFSB				*e*S	Sb	01 18 48.2	-1.1
	baz=323						
FUSS	Fushou	1.17	277	*e*P	Pn	01 18 33.8	+0.1
	baz=275						
FUSS				*e*S	Sb	01 18 48.8	-0.9
	baz=275						
HGSD	Ruisui	1.18	239	*e*P	Pn	01 18 33.1	-0.5
	baz=238						
HGSD				*e*S	Sb	01 18 48.1	-1.5
	baz=238						
YHNB	Yeheng	1.18	298	P	Pn	01 18 33.7	+0.1
	baz=296						
YHNB				*e*S	Sb	01 18 48.8	-1.0
	baz=296						
TWA	Mucha	1.21	315	*e*P	Pn	01 18 33.9	-0.1
	baz=314						
CHGB	Renai	1.23	268	*e*P	Pn	01 18 35.0	+0.6
	baz=266						
CHGB				*e*S	Sn	01 18 49.3	-1.0
	baz=266						
EHY	Hungye	1.25	241	*e*P	Pn	01 18 34.6	+0.1
	baz=240						
EHY				*e*S	Sn	01 18 49.5	-1.0
	baz=240						
WUSB	Renai	1.29	265	*e*P	Pn	01 18 35.7	+0.5
	baz=263						
WUSB				*e*S	Sn	01 18 52.7	+1.2
	baz=263						
VWDT	VWDT	1.31	254	*e*P	Pn	01 18 35.8	+0.5
	baz=253						
VWDT				*e*S	Sn	01 18 51.9	0.0
	baz=253						
YULB	Yu-li	1.33	238	P	Pn	01 18 35.5	-0.1
	baz=237						
YULB				*e*S	Sn	01 18 51.9	-0.5
	baz=237						
EYUL	Yuli	1.34	236	*e*P	Pn	01 18 36.1	+0.3
	baz=235						
EYUL				*e*S	Sn	01 18 54.1	+1.6
	baz=235						
TWF1	Yuli	1.35	236	*e*P	Pn	01 18 35.9	0.0
	baz=235						
TWF1				*e*S	Sn	01 18 53.4	+0.4
	baz=235						
JKRS	Kuro-shima	1.36	85	*e*S	Sn	01 18 53.6	+0.4
FULB	Fuli	1.45	231	*e*P	Pn	01 18 37.8	+0.6
	baz=231						
FULB				*e*S	Sn	01 18 55.1	-0.2
	baz=231						
WHP	Taichung City	1.45	277	*e*P	Pn	01 18 39.7	+2.4
	baz=275						
WHP				*e*S	Sn	01 18 56.0	+0.7
	baz=275						
SSLB	Suanglung	1.47	258	*e*P	Pn	01 18 39.0	+1.5
	baz=256						
LIOB	Emei	1.47	291	*e*P	Pn	01 18 39.1	+1.5
	baz=290						
JIJ	Ishigaki jima	1.50	80	P	Pn	01 18 38.0	+0.1
JIJ				S	Sn	01 18 56.2	-0.3
TYC	Yuchr	1.54	263	*e*P	Pn	01 18 40.4	+2.0
	baz=261						
TYC				*e*S	Sn	01 19 00.1	+2.7
	baz=261						
EDH	Donghe	1.59	225	*e*P	Pn	01 18 40.2	+1.0
	baz=224						
EDH				*e*S	Sn	01 18 57.6	-1.2
	baz=224						
JISG	Ishigakijimahi	1.70	74	P	Pn	01 18 40.7	+0.1
JISG				*e*S	Sn	01 19 00.8	-0.6

IDC 29 01:30:10.0±2.4**, 6°.28S**×**151°.82E, h0**^{km}**, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/25**, mbtmp3.6**/3**, Error ellipse: s-maj=170.9km s-min=30.3km az=127.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.74	230	P	P	01 35 03.2	-0.1
	0.5nm,0.7s,baz=55,slow=9.1,SNR=1.5						
ASAR	Alice Springs	24.41	223	P	P	01 35 30.8	+0.4
	1.0nm,0.7s,baz=58,slow=9.1,SNR=9.8						
ILAR	Eielson Array	83.89	22	P	P	01 42 41.6	+0.2
	0.7nm,0.8s,baz=250,slow=5.7,SNR=5.3						
TORD	Torodi Ar. Bea	149.79	285	PKPbc	PKPbc	01 50 02.1	-1.1
	0.7nm,0.7s,baz=64,slow=3.5,SNR=4.3						

SNET ***29*** *01:38:48.6±0.5, 13°.38N×90°.25W, h29^{km}±2^{km}, ML3.2*

GCG ***29*** *01:38:50.1±0.6, 13°.48N×90°.57W, h21^{km}±7^{km}, MD3.2*

ISC 29 01:38:47.2±3.0**, 13°.3N**±0°.2×**90°.31W**±0°.06**, h31**^{km}±14^{km}**, n9,** σ**0^{s}.70**/16**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.77	42	*e*P	Pb	01 39 02.0	-0.2
NUBE				*e*S	Sb	01 39 12.0	-0.5
CEVE	Cerro Verde	0.83	53	*e*P	Pn	01 39 03.5	+0.4
CEVE				*e*S	Sn	01 39 15.2	+0.8
CEVE				IAML		01 39 16.3	
	comp=Z,1μm,0.2s						
SLOZ	Alcaldia de Sa	0.86	36	*e*P	Pn	01 39 03.1	-0.2
SLOZ				*e*S	Sn	01 39 15.0	+0.1
JAYA	Jayaque - finc	0.90	68	*e*P	Pn	01 39 03.9	+0.1
JAYA				*e*S	Sn	01 39 15.7	-0.2
JAYA				IAML		01 39 17.2	
	comp=Z,1μm,0.2s						
UEES	Universidad Ev	1.11	69	IAML		01 39 24.5	
	comp=Z,411nm,0.2s						
TACO	Tacachico	1.13	55	*e*P	Pn	01 39 07.3	+0.4
TACO				*e*S	Sb	01 39 22.0	-0.6
FUG	Fuego 3	1.23	335	*e*P	Pn	01 39 08.6	+0.1
FUG				*e*S	Sn	01 39 23.1	-1.1
NBG	Las Nubes	1.26	358	*e*P	Pb	01 39 10.7	+0.2
NBG				*e*S	Sb	01 39 27.4	+1.0
STG3	Santiaguito 3,	1.84	319	*e*P	Pn	01 39 17.7	+0.8
STG3				*e*S	Sn	01 39 38.1	-1.2

KRSC 29 01:49:08.5±2.2**, 53°.66N**×**167°.89E, h39**^{km}±25^{km}**, ML4.3, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	1.91	325	P	Pn	01 49 38.2	-0.2
BKI				S	Sn	01 50 04.2	+3.0
KBTR	Krutoberegovo	3.88	313	S	Sn	01 50 56.4	+6.6
TUMD	Tumrok D	4.64	292	S	Sn	01 51 15.3	+6.8
SPN	Mys Shipunski	4.74	266	P	Pn	01 50 22.2	+4.8
SPN				S	Sn	01 51 14.5	+3.4
TUMR	Tumrok	4.80	293	P	Pn	01 50 22.8	+4.5
KMNR	Kamenistaya	4.91	298	P	Pn	01 50 23.9	+4.2
NLC	Nalytchevo	5.13	268	*e*P	Pn	01 50 27.7	+5.0
NLC				*e*S	Sn	01 51 23.9	+3.2
UGLR	Uglovaya	5.44	269	P	Pn	01 50 32.1	+5.0
SMAR	Somma	5.44	269	P	Pn	01 50 32.7	+5.5
AVH	Avacha	5.48	269	P	Pn	01 50 32.0	+4.4
AVH				S	Sn	01 51 34.2	+4.8
KOK	Koryaka	5.54	270	P	Pn	01 50 32.4	+4.0
RUS	Russkaya	5.79	261	P	Pn	01 50 36.1	+4.4
RUS				S	Sn	01 51 41.2	+4.4
GNL	Ganaly	5.91	274	*e*P	Pn	01 50 38.9	+5.3
KRMR	Karymshinskiy	5.92	266	*e*P	Pn	01 50 39.4	+5.9
KRMR				*e*S	Sn	01 51 44.3	+4.3
GRL	Gorelyy	6.02	263	P	Pn	01 50 41.1	+6.1
ASAK	Asacha	6.16	262	*e*P	Pn	01 50 42.2	+5.2
ASAK				*e*S	Sn	01 51 51.7	+5.6
KDTR	Khodutka, Kamc	6.24	257	*e*P	Pn	01 50 42.5	+4.5
KDTR				*e*S	Sn	01 51 51.1	+3.2

BJI ***29*** *01:51:39.4±0.0, 6°.11S×155°.21E, h50^{km}, mB5.6/58, mb5.3/78, Ms5.3/84, Ms7 5.1/79*

MOS ***29*** *01:51:40.1±1.0, 6°.16S×154°.67E, h34^{km}, mb5.6/49, MS5.1/18, Error ellipse: s-maj=7.8km s-min=5.5km az=101.9*

NEIC ***29*** *01:51:41.7, 6°.29S×154°.76E, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.08; M$_{\theta\theta}$-0.85; M$_{\phi\phi}$-3.23; M$_{r\theta}$-2.43; M$_{\theta\phi}$2.95; M$_{\phi r}$0.82; Fault plane solution: M$_0$5.40000×10^{17} NP1:φ$_s$167.41000°, δ37.15000°, λ124.58000°. NP2:φ$_s$306.56000°, δ60.19000°, λ66.73000°. Principal axes: T 5.0892, Plg66.0000°, Azm173.0000°; N 0.5733, Plg20.0000°, Azm319.0000°; P -5.6625, Plg12.0000°, Azm53.0000°;*

NEIC ***29*** *01:51:41.5±1.8, 6°.25S±0°.07×154°.76E±0°.07, h30^{km}±1^{km}, mb5.5/298, Ms_20 5.8/330, Mwb5.8/47, Mww5.8 Error ellipse: s-maj=12.4km s-min=10.5km az=56.0*

IDC ***29*** *01:51:42.4±1.3, 6°.21S×154°.68E, h42^{km}±11^{km}, mb5.1/39, mb1 5.2/42, mb1mx5.0/51, mbtmp5.4/42, ML4.6/3, MS5.2/28, Ms1 5.2/28, ms1mx5.1/32, Error ellipse: s-maj=9.9km s-min=8.6km az=105.0*

GCMT ***29*** *01:51:44.5±0.1, 6°.41S±0°.01×154°.57E±0°.01, h41^{km}, MW5.8/151, Moment Tensor Solution. s151,c296; s143,c374; Duration: 1^{s}.9 Moment tensor: Scale 10^{17} Nm; M$_{rr}$4.93±.05; M$_{\theta\theta}$-1.66±.04; M$_{\phi\phi}$-3.27±.04; M$_{r\theta}$-2.43±.04; M$_{\theta\phi}$2.77±.03; M$_{\phi r}$1.16±.04; Best double couple: M$_0$5.81200×10^{17} NP1:φ$_s$156.00000°, δ34.00000°, λ112.00000°. NP2:φ$_s$310.00000°, δ59.00000°, λ76.00000°. Principal axes: T 5.7360, Plg72.0000°, Azm186.0000°; N 0.1520, Plg12.0000°, Azm318.0000°; P -5.8880, Plg13.0000°, Azm51.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

DJA ***29*** *01:51:45.4±0.5, 6°S±3°×15°5E±°, h73^{km}±5^{km}, M5.7/56, mb5.8/56, mB6.1/51, MLv6.9/1, Mw(mB)5.7/51, MwMwp5.6/36, Mwp5.7/36*

NEIC ***29*** *01:51:45, 6°.22S×154°.54E, h46^{km}, Moment Tensor Solution. Duration: 2^{s}.0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$5.04; M$_{\theta\theta}$-2.17; M$_{\phi\phi}$-2.87; M$_{r\theta}$-2.34; M$_{\theta\phi}$3.10; M$_{\phi r}$0.73; Fault plane solution: M$_0$5.90000×10^{17} NP1: φ$_s$152.00000°, δ36.00000°, λ112.00000°. NP2: φ$_s$305.00000°, δ57.00000°, λ75.00000°. Principal axes: T 5.7399, Plg73.0000°, Azm175.0000°; N 0.3112, Plg13.0000°, Azm314.0000°; P -6.0511, Plg11.0000°, Azm46.0000°;*

ISC 29 01:51:42.8±0.4**, 6°.29S**±0°.03×**154°.71E**±0°.04**, h47**^{km}±3^{km}**, h49**^{km}**:pP-P, n1105,** σ**1^{s}.43**/954**, mb5.5**/286**, MS5.7**/230**, 92C-37D, Fault plane solution: NP1:**φ$_s$320.59238°**,** δ66.49251°**,** λ52.23274°. **NP2:**φ$_s$203.35181°**,** δ43.53952°**,** λ144.61751°. **Principal axes:** T Plg52.6198°**,** Azm185.0848°**;** N Plg34.1684°**,** Azm337.7651°**;** P Plg13.3288°**,** Azm77.0196°**; Fault plane solution: NP1:**φ$_s$308.63312°**,** δ69.43034°**,** λ91.50618°. **NP2:** φ$_s$124.35323°**,** δ20.62235°**,** λ85.99342°. **Principal axes:** T Plg65.5380°**,** Azm221.2057°**;** N Plg1.4101°**,** Azm128.1038°**;** P Plg24.4159°**,** Azm37.4635°**;**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.28	309		Pn	01 52 32.4	+0.6
RABL				Sn	Sn	01 53 09.5	-0.1
RABL	Rabaul	3.28	309	P	Pn	01 52 35.1	+3.4
PMG	Port Moresby	8.10	247	P	Pn	01 53 39.0	+1.2
	77nm,0.3s,baz=58,slow=9.3,SNR=81						
PMG				S	Sn	01 55 09.3	+1.1
	116nm,0.3s,baz=51,slow=23,SNR=22						
PMG				LR	LR	01 56 42.6	
	comp=Z,52μm,20.2s,baz=34,slow=37						
PMG	Port Moresby	8.10	247	Pn	Pn	01 53 38.8	+0.9
PMG				Sn	Sn	01 55 07.1	-1.0
PMG	Port Moresby	8.10	247	P	Pn	01 53 40.5	+2.6
PMG	Port Moresby	8.10	247	P	Pn	01 53 40.5	+2.6
MANU	Manus Island	8.45	300	Pn	Pn	01 53 43.5	+0.8
PATS	Pohnpei	13.52	15	P	Pn	01 54 53.9	+1.8
	baz=14,SNR=4.1						
PATS	Pohnpei	13.52	15	Pn	Pn	01 54 50.3	-1.8
COEN	Coen	13.68	235	Pn	Pn	01 54 54.0	-0.2
COEN	Coen	13.68	235	P	P	01 54 59.2	-2.5
	240nm,0.8s						
GENI	Genyem	14.96	284	P	Pn	01 55 12.8	+1.5
	10μm7μm259nm,1.6s						
GENI	Genyem	14.96	284	P	Pn	01 55 13.2	+1.9
SANVU	Saraoutou	15.27	128	P	P	01 55 17.5	-1.9
SANVU				IAmb	IAmb	01 55 24.5	
	comp=Z,285nm,0.8s						
SANVU	Saraoutou	15.27	128	P	P	01 55 19.0	-0.4
MTSU	Mount Surprise	15.54	220	P	P	01 55 21.5	-1.1
	baz=16,SNR=22						
MTSU	Mount Surprise	15.54	220	P	P	01 55 21.6	-0.9
	comp=Z,70nm,1.4s						
CTA	Charters Tower	15.99	210	P	P	01 55 26.2	-1.2
	comp=Z,2.5nm,0.3s,baz=29,slow=16,SNR=34						
CTA	Charters Tower	15.99	210	P	P	01 55 28.7	+1.2
	comp=Z,100nm,1.6s						
CTAO	Charters Tower	15.99	210	P	P	01 55 26.1	-1.4
CTAO				pmax	pmax		
	comp=Z,250nm,1.4s						
CTAO	Charters Tower	15.99	210		P	01 55 26.1	-1.4
CTAO	Charters Tower	15.99	210	P	P	01 55 26.8	-0.7
KOUNC	Koumac, New Ca	16.95	148	P	P	01 55 39.6	+1.5
DVP	Devils Point	17.39	132	P	P	01 55 49.3	+6.4
	comp=Z,199μm,0.8s						
RK1H	Rockhampton Ha	17.48	193	P	P	01 55 46.7	+2.8
	comp=Z,71nm,0.9s						
LIFNC	LIFOU	18.84	141	Pn	Pn	01 56 00.9	+1.1
LIFNC	LIFOU	18.84	141	P	Pn	01 56 02.0	+2.2
SRPI	Serui, Papua	18.94	283	P	Pn	01 56 15.9	+15
EIDS	Eidsvold	19.29	190	P	Pn	01 56 05.7	+0.5
	baz=19,SNR=35						
EIDS	Eidsvold	19.29	190	P	P	01 56 03.4	-0.5
EIDS				IAmb	IAmb	01 56 09.7	
	comp=Z,284nm,1.2s						
EIDS	Eidsvold	19.29	190	P	Pn	01 56 05.9	+0.7
	comp=Z,245nm,1.5s						
NOUC	Port Laguerre	19.30	146	P	Pn	01 56 06.2	+0.9
DZM	Mont Dzumac	19.36	145	P	Pn	01 56 06.5	+0.4
	comp=Z,8.8nm,0.3s,baz=352,slow=12,SNR=106						
DZM	Mont Dzumac	19.36	145	*e*P	Pn	01 56 06.2	+0.1
	comp=Z,718nm,1.2s						
DZM				*e*S	S	01 59 36.5	-4.9
	comp=Z,8μm,25.6s						
DZM				*e*LR	LR	02 00 36.0	
	comp=Z,27μm,25.4s,baz=311						
DZM	Mont Dzumac	19.36	145	P	Pn	01 56 05.8	-0.3
DZM				IAmb	IAmb	01 56 08.3	
	comp=Z,376nm,1.2s						
DZM	Mont Dzumac	19.36	145	P	Pn	01 56 07.1	+1.0
ONTNC	Ouen Toro	19.55	146	P	Pn	01 56 08.0	-0.3
ONTNC				IAmb	IAmb	01 56 27.1	
	comp=Z,296nm,0.9s						
ONTNC	Ouen Toro	19.55	146	P	Pn	01 56 08.4	+0.1
YATNC	Mamie plateau,	19.61	144	P	Pn	01 56 09.5	+0.5
MARNC	Mare, Loyalty	19.86	141	P	Pn	01 56 11.4	-0.5
MARNC	Mare, Loyalty	19.86	141	P	Pn	01 56 12.7	+0.8
OUENC	Ouen Island, N	19.86	145	P	Pn	01 56 11.3	-0.6
OUENC				IAmb	IAmb	01 56 13.5	
	comp=Z,235nm,1.0s						
OUENC	Ouen Island, N	19.86	145	P	Pn	01 56 12.2	+0.3
PINNC	Pines Island,	20.36	144	P	P	01 56 14.9	-0.5
PINNC				IAmb	IAmb	01 56 29.4	
	comp=Z,149nm,0.9s						
PINNC	Pines Island,	20.36	144	P	Pn	01 56 18.4	+0.6
QIS	Mount Isa	20.40	224	P	P	01 56 17.0	+1.1
	baz=20,SNR=41						
QIS	Mount Isa	20.40	224	P	P	01 56 17.0	+1.1
	comp=Z,196nm,0.8s						
RMQ	Roma	20.88	195	P	Pn	01 56 22.9	-1.1
	baz=21,SNR=64						
RMQ	Roma	20.88	195	P	Pn	01 56 22.8	-1.2
	comp=Z,315nm,1.0s						
GUMO	Guam	22.03	334	P	P	01 56 33.8	+0.3
	comp=Z,365nm,0.8s,baz=188,slow=8.9,SNR=11						
GUMO				LR	LR	02 04 45.8	
	comp=Z,2μm,20.5s,baz=154,slow=36						
GUMO	Guam	22.03	334	P	P	01 56 32.7	-0.8
GUMO				pmax	pmax		
	comp=Z,425nm,0.8s						
GUMO				MLR	MLR		
	comp=Z,3μm,21.0s						
GUMO	Guam	22.03	334	P	P	01 56 32.7	-0.8
GUMO	Guam	22.03	334	P	P	01 56 34.8	+1.3

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QLP   Quilpie           22.52 205  P        P        01 56 39.3 +0.6
            baz=23,SNR=33
QLP   Quilpie           22.52 205  P        P        01 56 39.1 +0.4
            comp=Z,252nm,0.9s
FAKI  Fak Fak           22.64 277  P        P        01 56 40.5 +0.4
            comp=Z,15µmcomp=Z,9µmcomp=Z,586nm,0.8s
FAKI  Fak Fak           22.64 277  P        P        01 56 39.8 -0.2
FAKI  Fak Fak           22.64 277  P        P        01 56 40.7 +0.6
KDU   Kakadu            22.83 252  P        P        01 56 41.6 -0.4
            baz=23,SNR=30
KDU   Kakadu            22.83 252  P        P        01 56 42.7 +0.7
            comp=Z,186nm,0.6s
SAUI  Saumlaki          23.29 264  P        P        01 56 47.6 +0.9
WB0   Warramunga Arr    23.86 234  P        P        01 56 51.5 -0.5
WRAB  Tennant Creek     23.99 234  P        P        01 56 53.7 +0.5
WRAB                               pmax     pmax
            comp=Z,217nm,0.9s
WRAB                               MLR      MLR
            comp=Z,18µm,21.0s
WRAB  Tennant Creek     23.99 234  P        P        01 56 53.6 +0.5
WRAB  Tennant Creek     23.99 234  P        P        01 56 54.4 +1.2
WB2   Warramunga Arr    23.99 234  P        P        01 56 53.1 -0.1
WRA   Warramunga Arr    24.00 234  P        P        01 56 53.7 +0.4
            comp=Z,140nm,0.8s,baz=56,slow=9.8,SNR=174
WRA                                S        S        02 01 08.4 +1.1
            comp=Z,6.7nm,1.0s,baz=59,slow=17,SNR=1.9
WRA                                ScP      ScP      02 04 09.6 +0.3
            comp=Z,8.5nm,0.9s,baz=61,slow=2.8,SNR=5.8
WRA                                LR       LR       02 06 08.7
            comp=Z,18µm,20.0s,baz=60,slow=36
WRA   Warramunga Arr    24.00 234  P        P        01 56 53.6 +0.3
WRA                                         ScP      02 04 09.1 -0.3
SIJI  Sorong            24.00 282  P        P        01 56 52.6 -0.8
            comp=Z,63nm,0.7s,baz=106,slow=8.9,SNR=28
SIJI                               LR       LR       02 06 14.2
            comp=Z,5µm,20.4s,baz=132,slow=36
SWI   Sorong            24.01 282  P        P        01 56 53.6 +0.2
            comp=Z,11µmcomp=Z,4µmcomp=Z,209nm,0.8s
MTN   Manton Dam        24.14 253  P        P        01 56 55.1 +0.5
            baz=24,SNR=12
MTN   Manton Dam        24.14 253  P        P        01 56 54.3 -0.3
MTN   Manton Dam        24.14 253  P        P        01 56 55.6 +1.0
            comp=Z,119nm,1.3s
ARMA  Armidale          24.18 187  P        P        01 56 56.3 +1.3
            baz=24,SNR=30
ARMA  Armidale          24.18 187  P        P        01 56 54.6 -0.4
ARMA                               IAmb     IAmb     01 56 57.2
            comp=Z,314nm,1.4s
ARMA  Armidale          24.18 187  P        P        01 56 56.5 +1.5
            comp=Z,246nm,2.1s
DRS   Darwin Rock St    24.27 254  P        P        01 56 57.0 +1.2
            comp=Z,116nm,0.9s
INKA  Innaminka         25.12 210  P        P        01 57 03.4  0.0
            comp=Z,384nm,0.8s
MSVF  Nonsavu           25.47 119  P        P        01 57 07.8 +1.1
            comp=Z,16nm,0.6s,baz=278,slow=14,SNR=11
MSVF                               LR       LR       02 06 27.0
            comp=Z,11µm,19.6s,baz=303,slow=35
MSVF  Nonsavu           25.47 119  P        P        01 57 06.5 -0.3
MSVF                               pmax     pmax
            comp=Z,71nm,1.4s
MSVF                               MLR      MLR
            comp=Z,10µm,20.0s
MSVF  Nonsavu           25.47 119  P        P        01 57 06.5 -0.3
MSVF  Nonsavu           25.47 119  P        P        01 57 09.5 +2.8
MSAI  Masohi            25.86 275  P        P        01 57 10.8 +0.6
            comp=Z,1µmcomp=Z,42nm,0.7s
NFK   Norfolk Island    25.86 153  P        P        01 57 12.5 +2.4
AS31  Alice Springs     26.44 227  P        P        01 57 15.8 +0.3
ASAR  Alice Springs     26.44 227  P        P        01 57 15.6 +0.1
            comp=Z,31nm,0.4s,baz=58,slow=9.1,SNR=364
ASAR                               PcP      PcP      02 00 40.7 +0.7
            comp=Z,13nm,0.6s,baz=52,slow=2.3,SNR=5.9
ASAR                               ScP      ScP      02 04 17.8 +1.5
            comp=Z,8.2nm,0.9s,baz=52,slow=3.0,SNR=6.8
ASAR                               LR       LR       02 07 22.0
            comp=Z,16µm,20.4s,baz=74,slow=36
ASAR                               P3KPbc            02 30 00.8
            comp=Z,1.3nm,0.8s,baz=190,slow=3.8,SNR=7.9
ASAR  Alice Springs     26.44 227  P        P        01 57 15.7 +0.2
ASAR                                        PcP      02 00 39.6 -0.4
ASAR                                        ScP      02 04 16.9 +0.6
CMSA  Cobar Meteorol    26.50 197  P        P        01 57 16.2 +0.3
            baz=27,SNR=101
CMSA  Cobar Meteorol    26.50 197  P        P        01 57 16.2 +0.3
            comp=Z,85nm,0.8s
AAI   Ambon             26.54 274  P        P        01 57 16.3 -0.1
            comp=Z,9µmcomp=Z,3µmcomp=Z,262nm,0.7s
MGCD  Mangrove Creek    27.00 187  P        P        01 57 21.9 +1.6
            baz=27,SNR=27
MGCD  Mangrove Creek    27.00 187  P        P        01 57 23.1 +2.8
            comp=Z,105nm,0.8s
KNRA  Kununurra         27.10 248  P        P        01 57 21.5 +0.2
            baz=27,SNR=19
KNRA  Kununurra         27.10 248  P        P        01 57 21.6 +0.2
KNRA                               IAmb     IAmb     01 57 27.6
            comp=Z,88nm,0.7s
KNRA  Kununurra         27.10 248  P        P        01 57 22.1 +0.7
            comp=Z,162nm,0.7s
H11S3 WAKE ISLAND Hy    27.31  25  T        T        02 25 26.6
            baz=206,slow=74,SNR=87
H11S2 WAKE ISLAND Hy    27.31  25  T        T        02 25 26.4
            baz=206
H11S1 WAKE ISLAND Hy    27.33  25  T        T        02 25 27.9
            baz=206,slow=74,SNR=46
SYDH  Sydney Hard Ro    27.59 187  P        P        01 57 30.1 +4.5
            comp=Z,37nm,0.7s
RIV   Riverview         27.61 186  P        P        01 57 28.1 +2.4
            baz=28,SNR=3.8
LBMI  Labuha            27.73 281  P        P        01 57 28.8 +1.7
            comp=Z,5µmcomp=Z,6µmcomp=Z,294nm,1.0s
OOD   Oodnadatta        28.00 218  P        P        01 57 29.1 -0.2
            comp=Z,108nm,1.5s
WAKE  Wake Island       28.00  25  IAMs_20  IAMs_20  02 07 27.1
            comp=Z,17µm,20.0s
TNTI  Ternate           28.18 283  P        P        01 57 40.3 +9.1
STKA  Stephens Creek    28.26 204  P        P        01 57 31.5 -0.1
            comp=Z,21nm,0.7s,baz=11,slow=9.6,SNR=31
STKA                               PcP      PcP      02 00 44.2  0.0
            comp=Z,17nm,0.8s,baz=7.9,slow=7.4,SNR=3.9
STKA                               ScP      ScP      02 04 22.8 +1.2
            comp=Z,8.4nm,1.0s,baz=134,slow=14,SNR=3.8
STKA                               LR       LR       02 08 41.3
            comp=Z,14µm,20.3s,baz=22,slow=36
STKA  Stephens Creek    28.26 204  P        P        01 57 31.5 -0.1
            baz=28,SNR=24
STKA  Stephens Creek    28.26 204  P        P        01 57 31.3 -0.3
STKA                               ScP      ScP      02 04 22.7 +1.2
STKA  Stephens Creek    28.26 204  P        P        01 57 31.5 -0.1
            comp=Z,11nm,0.6s
H11N1 WAKE ISLAND Hy    28.48  25  T        T        02 27 29.2
            baz=190,slow=76
H11N3 WAKE ISLAND Hy    28.49  25  T        T        02 27 18.4
            baz=190
H11N2 WAKE ISLAND Hy    28.50  25  T        T        02 27 45.0
            baz=190,slow=76
LCRK  Leigh Creek       28.60 211  P        P        01 57 34.6 -0.1
            comp=Z,103nm,0.9s
SANI  Sanana            28.95 277  P        P        01 57 38.2 +0.2
            comp=Z,4µmcomp=Z,377nm,0.8s
SANI  Sanana            28.95 277  P        P        01 57 39.0 +1.0
CNB   Canberra Magne    29.31 189  P        P        01 57 42.3 +1.4
            baz=29,SNR=8.0
CNB   Canberra Magne    29.31 189  P        P        01 57 42.9 +1.9
            comp=Z,49nm,1.9s
CAN   Canberra          29.37 190  P        P        01 57 42.4 +0.9
CAN                                pmax     pmax
            comp=Z,82nm,1.3s
CAN                                MLR      MLR
            comp=Z,14µm,20.0s
CAN   Canberra          29.37 190  P        P        01 57 42.4 +0.9
CAN                                IAmb     IAmb     01 57 43.6
            comp=Z,82nm,1.3s
CAN                                IAMs_20  IAMs_20  02 08 25.3
            comp=Z,14µm,20.0s
CAN   Canberra          29.37 190  P        P        01 57 43.3 +1.8
SOEI  Soe               30.34 261  P        P        01 57 51.6 +1.2
            comp=Z,10µmcomp=Z,4µmcomp=Z,157nm,0.9s
SOEI  Soe               30.34 261  P        P        01 57 50.8 +0.4
SOEI  Soe               30.34 261  P        P        01 57 49.9 -0.5
FITZ  Fitzroy Crossi    30.69 245  P        P        01 57 53.0 -0.3
            comp=Z,84nm,0.6s,baz=78,slow=7.7,SNR=165
HTT   Hallett           30.73 206  P        P        01 57 53.7 +0.1
            baz=31,SNR=17
HTT   Hallett           30.73 206  P        P        01 57 53.8 +0.2
            comp=Z,52nm,1.5s
MULG  Mulgathing        30.77 217  P        P        01 57 53.5 -0.5
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BATI  Baumata           30.97 261  P        P        01 57 56.1 +0.2
            comp=Z,82nm,0.8s,baz=160,slow=4.8,SNR=8.8
BATI  Baumata           30.97 261  P        P        01 57 57.3 +1.4
            comp=Z,5µmcomp=Z,2µmcomp=Z,92nm,0.9s
WHYH  Whyalla           31.02 209  P        P        01 57 56.1  0.0
            comp=Z,78nm,0.7s
MILA  Mila              31.05 189  P        P        01 57 57.7 +1.4
            baz=31,SNR=9.1
WRKA  Warakurna         31.42 231  P        P        01 57 59.5 -0.4
            baz=32,SNR=92
WRKA  Warakurna         31.42 231  P        P        01 57 59.4 -0.4
            comp=Z,132nm,0.7s
KMSI  Cibinong          31.42 281  P        P        01 58 00.9 +1.0
            comp=Z,699nm,0.7s
BBOO  Buckleboo         31.59 211  P        P        01 58 00.7 -0.4
            baz=32,SNR=56
BBOO  Buckleboo         31.59 211  P        P        01 58 00.7 -0.4
BBOO                               IAmb     IAmb     01 58 13.0
            comp=Z,28nm,0.6s
BBOO  Buckleboo         31.59 211  P        P        01 58 01.1  0.0
            comp=Z,40nm,0.6s
DAV   Davao City (W)    31.95 294  LR       LR       02 11 05.9
            comp=Z,3µm,18.8s,baz=110,slow=36
BBSI  Bau Bau           31.98 270  P        P        01 58 21.1  +16
TOO   Toolangi          32.26 194  P        P        01 58 07.9 +1.0
            baz=32,SNR=14
TOO   Toolangi          32.26 194  P        P        01 58 07.0 +0.1
TOO                                pmax     pmax
            comp=Z,52nm,1.2s
TOO   Toolangi          32.26 194  P        P        01 58 07.0 +0.1
TOO                                IAmb     IAmb     01 58 08.7
            comp=Z,52nm,1.2s
TOO   Toolangi          32.26 194  P        P        01 58 08.0 +1.0
            comp=Z,49nm,2.5s
MMRI  Maumere           32.28 264  P        P        01 58 07.0 -0.4
            comp=Z,6µmcomp=Z,534nm,0.7s
MMRI  Maumere           32.28 264  P        P        01 58 07.1 -0.4
MMRI  Maumere           32.28 264  P        P        01 58 08.1 +0.7
LUWI  Luwuk             32.29 278  P        P        01 58 08.3 +0.8
            comp=Z,7µmcomp=Z,11µmcomp=Z,1000nm,0.8s
LUWI  Luwuk             32.29 278  P        P        01 58 08.2 +0.7
LUWI  Luwuk             32.29 278  P        P        01 58 09.4 +1.9
GTOI  Gorontalo         32.38 281  P        P        01 58 10.1 +1.8
            comp=Z,2µmcomp=Z,275nm,0.7s
ARPS  Mount Arapiles    32.55 199  P        P        01 58 10.2 +0.7
            baz=33,SNR=39
ARPS  Mount Arapiles    32.55 199  P        P        01 58 10.0 +0.6
            comp=Z,154nm,0.8s
BRAT  Ballarat          32.63 196  P        P        01 58 11.7 +1.5
            comp=Z,28nm,1.0s
GEXS  Deakin Univers    33.15 195  P        P        01 58 17.2 +2.5
            comp=Z,89nm,0.8s
MRSI  Marisa            33.39 280  P        P        01 58 16.7 -0.4
            comp=Z,4µmcomp=Z,2µmcomp=Z,231nm,0.8s
APSI  Ampana            33.42 278  P        P        01 58 18.2 +0.9
            comp=Z,3µmcomp=Z,5µmcomp=Z,481nm,1.1s
OUZ   Omahuta           33.64 151  P        P        01 58 21.8 +2.8
OUZ   Omahuta           33.64 151  P        P        01 58 19.5 +0.5
OUZ                                IAmb     IAmb     01 58 22.7
            comp=Z,48nm,1.0s
AFI   Afiamalu          33.82 106  P        P        01 58 20.7 -0.1
            comp=Z,52nm,0.8s,baz=298,slow=3.5,SNR=4.6
BSSI  Bau Bau, Buton    34.02 268  P        P        01 58 23.4 +0.8
            comp=Z,4µmcomp=Z,3µmcomp=Z,222nm,0.9s
BKSI  Bulukumba         34.42 270  P        P        01 58 26.2 +0.1
            comp=Z,6µmcomp=Z,1µmcomp=Z,55nm,0.9s
BNSI  Bone              34.50 271  P        P        01 58 27.7 +0.9
            comp=Z,2µmcomp=Z,125nm,0.9s
TOLI2 Tolitoli          34.66 281  P        P        01 58 27.8 -0.3
TOLI2 Tolitoli          34.66 281  P        P        01 58 27.9 -0.3
KAPI  Kappang           34.81 270  P        P        01 58 29.5 +0.1
            comp=Z,39nm,0.7s,baz=175,slow=4.3,SNR=20
KAPI  Kappang           34.81 270  P        P        01 58 29.5 +0.1
KAPI                               IAmb     IAmb     01 58 31.5
            comp=Z,70nm,0.9s
SPSI  Sidrap Palu       34.88 272  P        P        01 58 29.7 -0.3
            comp=Z,5µmcomp=Z,1µmcomp=Z,76nm,0.9s
FORT  Forrest           34.91 222  P        P        01 58 30.0 -0.1
            baz=35,SNR=41
FORT  Forrest           34.91 222  P        P        01 58 30.3 +0.1
FORT  Forrest           34.91 222  P        P        01 58 30.2 +0.1
            comp=Z,155nm,0.8s
TTSI  Tana Toraja       34.92 274  P        P        01 58 33.6 +3.2
GLAD  Gladstone         35.07 189  P        P        01 58 33.7 +2.4
            comp=Z,62nm,0.7s
JCJ   Chichijima        35.33 340  P        P        01 58 31.9 -1.7
JCJ   Chichijima        35.33 340  P        P        01 58 35.1 +1.4
MPSI  Mapaga            35.37 279  P        P        01 58 33.7 -0.5
            comp=Z,4µmcomp=Z,5µmcomp=Z,651nm,0.8s
CORO  Coronation Par    35.66 190  P        P        01 58 39.1 +2.7
            comp=Z,69nm,1.2s
KUZ   Kuaotunu          35.89 151  P        P        01 58 40.6 +2.3
TOZ   Tahuroa Road      36.57 152  P        P        01 58 46.2 +2.0
MOO   Moorlands         36.62 189  P        P        01 58 47.1 +2.6
            baz=37,SNR=4.0
MOO   Moorlands         36.62 189  P        P        01 58 48.6 +4.0
            comp=Z,58nm,1.4s
HIZ   Hauiti            36.91 153  P        P        01 58 47.3 +0.2
HIZ                                IAmb     IAmb     01 58 50.2
            comp=Z,143nm,1.3s
MBWA  Marble Bar        36.94 243  IAMs_20  IAMs_20  02 14 10.1
            comp=Z,15µm,20.0s
MBWA  Marble Bar        36.94 243  P        P        01 58 47.4 -0.2
PSA00 Pilbara Seismi    36.97 242  P        P        01 58 47.4 -0.5
PSA00 Pilbara Seismi    36.97 242  P        P        01 58 47.9  0.0
PSA00                              IAmb     IAmb     01 58 49.4
            comp=Z,64nm,0.8s
PSA00 Pilbara Seismi    36.97 242  P        P        01 58 47.9  0.0
            comp=Z,100nm,1.7s
TAU   Tasmania Unive    37.06 189  P        P        01 58 49.3 +1.1
TAU                                pmax     pmax
            comp=Z,274nm,1.5s
TAU                                MLR      MLR
            comp=Z,4µm,19.0s
TAU   Tasmania Unive    37.06 189  P        P        01 58 49.3 +1.1
TAU   Tasmania Unive    37.06 189  P        P        01 58 49.9 +1.7
OMRZ  Omania            37.28 151  P        P        01 58 54.6 +4.3
SGKI  Sangatta, Kali    37.47 277  P        P        01 58 53.2 +1.0
            comp=Z,6µmcomp=Z,5µmcomp=Z,358nm,0.9s
TWSI  Taliwang, Sumb    37.58 264  P        P        01 58 51.6 -1.5
            comp=Z,3µmcomp=Z,1µmcomp=Z,107nm,0.6s
HAZ   Te Kaha           37.70 149  P        P        01 58 56.1 +2.3
URZ   Urewera           37.76 151  P        P        01 58 55.3 +1.1
            comp=Z,22nm,0.5s,baz=122,slow=23,SNR=19
URZ   Urewera           37.76 151  P        P        01 58 55.8 +1.5
URZ   Urewera           37.76 151  P        P        01 58 55.1 +0.9
URZ                                IAmb     IAmb     01 59 06.2
            comp=Z,80nm,0.8s
URZ   Urewera           37.76 151  P        P        01 58 56.4 +2.1
OTVZ  Oturere           37.80 153  P        P        01 58 58.5 +3.7
RUGZ  Raukumara Rang    37.81 150  P        P        01 58 56.6 +1.7
SNVZ  South Ngauruho    37.81 153  P        P        01 58 58.2 +3.2
MXZ   Matakaoa Point    37.82 149  P        P        01 58 58.6 +3.8
TRVZ  Turoa             37.86 153  P        P        01 58 57.9 +2.5
MYLDM Lahad Datu        37.90 287  P        P        01 58 57.2 +1.4
QRZ   Quartz Range      37.91 158  P        P        01 58 56.4 +0.9
QRZ                                IAmb     IAmb     01 58 58.7
            comp=Z,118nm,1.2s
QRZ   Quartz Range      37.91 158  P        P        01 58 57.5 +2.0
WNVZ  Wahianoa          37.91 153  P        P        01 58 58.5 +2.8
PKGZ  Pakihiroa         37.95 149  P        P        01 58 58.8 +2.8
WMGZ  Waiomatatini S    38.07 149  P        P        01 58 59.1 +2.2
MTHZ  Maungataniwha     38.10 152  P        P        01 58 58.9 +1.7
TWGZ  Tauwhareparae     38.12 150  P        P        01 59 00.2 +2.8
BKZ   Black Stump Fm    38.18 152  P        P        01 58 58.6 +0.7
BKZ                                IAmb     IAmb     01 59 14.8
            comp=Z,51nm,0.7s
BKZ   Black Stump Fm    38.18 152  P        P        01 59 01.2 +3.3
PUZ   Puketiti          38.18 149  P        P        01 58 59.3 +1.4
NMHZ  Naumai            38.28 152  P        P        01 59 01.6 +2.9
KWHZ  Kaweka Forest     38.36 153  P        P        01 59 01.9 +2.5
KRHZ  Kereru            38.51 153  P        P        01 59 02.0 +1.4
KBKI  Kotabaru          38.52 273  P        P        01 59 02.7 +1.7
THZ   Tophouse          38.86 158  P        P        01 59 04.5 +0.9
THZ                                IAmb     IAmb     01 59 05.5
            comp=Z,89nm,1.0s
TUWZ  Tuamarina         38.97 157  P        P        01 59 05.2 +0.9
PXZ   Pawanui           39.05 153  P        P        01 59 06.7 +1.6
BSWZ  Blackbirch Sta    39.19 157  P        P        01 59 07.1 +0.9
SRBI  Singaraja         39.22 265  P        P        01 59 06.2 -0.7
            comp=Z,5µmcomp=Z,2µmcomp=Z,88nm,0.6s
DNP   Denpasar          39.23 264  P        P        01 59 06.4 -0.5
            comp=Z,34µmcomp=Z,497nm,0.8s
IGBI  Denpasar          39.29 264  P        P        01 59 06.8 -0.7
            comp=Z,4µmcomp=Z,307nm,0.5s
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BFZ   Birch Farm        39.30 154  P        P        01 59 07.6 +0.4
BFZ                                IAmb     IAmb     01 59 17.7
            comp=Z,59nm,0.7s
BFZ   Birch Farm        39.30 154  P        P        01 59 09.6 +2.4
BHW   Baring Head       39.32 156  P        P        01 59 07.7 +0.4
FOZ   Fox Glacier       39.41 163  P        P        01 59 07.7 -0.3
FOZ                                IAmb     IAmb     01 59 10.2
            comp=Z,70nm,1.1s
FOZ                                IAMs_20  IAMs_20  02 13 33.6
            comp=Z,8µm,20.0s
MSWZ  Moikau Station    39.48 155  P        P        01 59 08.9 +0.2
LTZ   Lake Taylor       39.52 160  P        P        01 59 10.0 +0.9
LTZ                                IAmb     IAmb     01 59 12.3
            comp=Z,188nm,1.4s
LTZ                                IAMs_20  IAMs_20  02 15 02.6
            comp=Z,8µm,18.0s
PLWZ  Palliser          39.61 156  P        P        01 59 10.2 +0.3
KHZ   Kahutara          39.66 158  P        P        01 59 10.8 +0.6
KHZ                                IAmb     IAmb     01 59 11.5
            comp=Z,108nm,1.1s
KHZ                                IAMs_20  IAMs_20  02 13 17.2
            comp=Z,9µm,22.0s
KHZ   Kahutara          39.66 158  P        P        01 59 14.4 +4.3
SPMM  Sapulut           39.72 285  P        P        01 59 12.0 +0.9
BBKI  Banjar Baru       39.82 272  P        P        01 59 13.1 +1.2
MEEK  Meekatharra       39.88 235  P        P        01 59 12.4 +0.1
            baz=40,SNR=80
MEEK  Meekatharra       39.88 235  P        P        01 59 12.2 -0.1
            comp=Z,227nm,1.0s
OXZ   Oxford            39.93 160  P        P        01 59 12.8 +0.4
RPZ   Rata Peaks        39.95 161  P        P        01 59 13.2 +0.6
RPZ                                IAmb     IAmb     01 59 14.8
            comp=Z,86nm,0.8s
MTKI  Muara Teweh, K    40.08 276  P        P        01 59 25.5  +11
ABJI  Asem Bagus        40.19 265  P        P        01 59 14.0 -1.0
            comp=Z,98nm,0.7s
JAGI  Jajag, Banyuwa    40.27 264  P        P        01 59 13.8 -1.9
            comp=Z,5µmcomp=Z,431nm,0.7s
JAGI  Jajag, Banyuwa    40.27 264  P        P        01 59 14.3 -1.3
JAGI  Jajag, Banyuwa    40.27 264  P        P        01 59 15.3 -0.4
LBZ   Lake Benmore      40.30 163  P        P        01 59 16.1 +0.7
LBZ                                IAMs_20  IAMs_20  02 14 00.0
            comp=Z,15µm,20.0s
KKM   Kota Kinabalu     40.33 287  P        P        01 59 16.9 +0.7
KKM                                IAmb     IAmb     01 59 19.0
            comp=Z,126nm,1.1s
KKM   Kota Kinabalu     40.33 287  P        P        01 59 19.0 +2.8
WKZ   Wanaka            40.37 164  P        P        01 59 16.2 +0.2
WKZ                                IAmb     IAmb     01 59 18.1
            comp=Z,116nm,1.4s
WKZ                                IAMs_20  IAMs_20  02 13 03.1
            comp=Z,16µm,22.0s
MQZ   McQueen’s Vall    40.47 160  P        P        01 59 17.3 +0.5
MQZ                                IAmb     IAmb     01 59 33.2
            comp=Z,122nm,1.3s
DCZ   Deep Cove         40.50 167  P        P        01 59 17.2 +0.1
MLZ   Mavora Lakes      40.64 165  P        P        01 59 18.7 +0.4
MLZ                                IAMs_20  IAMs_20  02 12 55.2
            comp=Z,10µm,22.0s
BLJI  Banyuglugur       40.83 265  P        P        01 59 19.6 -0.6
            comp=Z,3µmcomp=Z,115nm,0.7s
GMJI  Gumukmas          40.97 265  P        P        01 59 20.5 -0.9
            comp=Z,5µmcomp=Z,2µmcomp=Z,82nm,0.8s
ODZ   Otahua Downs      41.03 163  P        P        01 59 21.6 +0.1
ODZ                                IAMs_20  IAMs_20  02 14 32.5
            comp=Z,11µm,20.0s
WHZ   Wether Hill Ro    41.09 166  P        P        01 59 22.4 +0.5
JOW   Kunigami          41.71 323  P        P        01 59 28.3 +1.0
            comp=Z,128nm,0.7s,baz=152,slow=8.6,SNR=19
JOW   Kunigami          41.71 323  P        P        01 59 28.2 +0.9
JOW   Kunigami          41.71 323  P        P        01 59 29.9 +2.6
GIRL  Giralia           42.26 243  P        P        01 59 32.9 +1.1
            baz=42,SNR=11
GIRL  Giralia           42.26 243  P        P        01 59 32.6 +0.8
KLBR  Kellerberrin      42.73 229  P        P        01 59 35.2 -0.4
            baz=43,SNR=91
KLBR  Kellerberrin      42.73 229  P        P        01 59 35.1 -0.5
            comp=Z,439nm,0.7s
MORW  Morawa            42.95 233  P        P        01 59 37.2 -0.2
            baz=43,SNR=29
MORW  Morawa            42.95 233  P        P        01 59 37.6 +0.2
MORW                               IAmb     IAmb     01 59 38.0
            comp=Z,85nm,0.9s
MORW  Morawa            42.95 233  P        P        01 59 37.2 -0.2
            comp=Z,122nm,1.1s
PBKI  Pangkalan Bun     43.05 273  P        P        01 59 43.4 +5.0
BLDU  Ballidu           43.08 231  P        P        01 59 38.1 -0.4
            baz=43,SNR=54
BLDU  Ballidu           43.08 231  P        P        01 59 38.3 -0.1
            comp=Z,100nm,1.2s
SBUM  Sibu              43.31 280  P        P        01 59 42.0 +1.5
SBUM  Sibu              43.31 280  P        P        01 59 41.3 +0.8
SBUM                               IAmb     IAmb     01 59 43.8
            comp=Z,102nm,1.4s
WOJI  Wonogiri, Jawa    43.47 265  P        P        01 59 41.7 -0.1
            comp=Z,4µmcomp=Z,231nm,1.7s
STKI  Sintang           43.61 277  P        P        01 59 45.9 +3.0
MIDW  Midway            43.61  37  IAMs_20  IAMs_20  02 15 24.6
            comp=Z,12µm,20.0s
NWAO  Narrogin (SRO)    43.76 228  IAMs_20  IAMs_20  02 17 40.6
            comp=Z,12µm,21.0s
NWAO  Narrogin (SRO)    43.76 228  P        P        01 59 43.8  0.0
TWG   Pinlang           43.81 312  P        P        01 59 43.7 -0.7
TWG                                IAmb     IAmb     01 59 54.4
            comp=Z,68nm,0.9s
UGM   Wanagama          43.87 265  P        P        01 59 45.2 +0.2
            comp=Z,217nm,1.3s
UGM   Wanagama          43.87 265  P        P        01 59 45.5 +0.5
UGM   Wanagama          43.87 265  P        P        01 59 46.2 +1.2
SMRI  Semarang          43.97 266  P        P        01 59 44.8 -1.0
            comp=Z,186nm,1.0s
SMRI  Semarang          43.97 266  P        P        01 59 46.6 +0.8
SMRI  Semarang          43.97 266  P        P        01 59 48.1 +2.3
YULB  Yu-li             43.99 313  P        P        01 59 45.5 -0.3
YULB                               IAmb     IAmb     01 59 48.5
            comp=Z,90nm,0.8s
MUN   Mundaring         44.08 230  P        P        01 59 46.4  0.0
            baz=44,SNR=20
MUN   Mundaring         44.08 230  P        P        01 59 46.5 +0.1
            comp=Z,138nm,0.9s
YOGI  Yogyakarta        44.09 265  P        P        01 59 47.1 +0.3
JSU   Suzuyama          44.15 330  P        P        01 59 48.0 +1.1
JSU                                IAmb     IAmb     01 59 50.7
            comp=Z,62nm,0.8s
NACB  Ninganchiao       44.26 314  P        P        01 59 48.0  0.0
JMN   Monobe            44.42 335  P        P        01 59 49.2  0.0
JMN                                IAmb     IAmb     01 59 53.4
            comp=Z,60nm,0.8s
TPUB  Ta-pu             44.42 313  P        P        01 59 48.7 -0.6
TPUB  Ta-pu             44.42 313  P        P        01 59 51.6 +2.3
JYT   Yasato            44.43 343  P        P        01 59 49.6 +0.6
JYT                                IAmb     IAmb     01 59 54.6
            comp=Z,41nm,0.8s
SSLB  Suanglung         44.48 313  P        P        01 59 49.4 -0.4
SSLB                               IAmb     IAmb     02 00 00.9
            comp=Z,79nm,0.7s
SSLB  Suanglung         44.48 313  P        P        01 59 50.8 +1.0
INU   Inuyama           44.64 339  P        P        01 59 52.5 +1.7
YHNB  Yeheng            44.73 315  P        P        01 59 51.3 -0.5
YHNB                               IAmb     IAmb     02 00 12.3
            comp=Z,81nm,0.9s
YHNB  Yeheng            44.73 315  P        P        01 59 54.7 +2.9
JGF   Kuroka            44.75 340  P        P        01 59 51.2 -0.5
KSM   Kuching           45.00 278  P        P        01 59 55.0 +1.0
KSM   Kuching           45.00 278  P        P        01 59 55.1 +1.0
KSM   Kuching           45.00 278  P        P        01 59 55.0 +1.0
JWT   Wachi             45.17 338  P        P        01 59 53.9 -1.1
JWT                                IAmb     IAmb     01 59 58.6
            comp=Z,93nm,1.4s
JNU   Nakatsue          45.26 331  P        P        01 59 55.2 -0.6
            comp=Z,194nm,0.7s,baz=126,slow=3.0,SNR=23
JNU   Nakatsue          45.26 331  P        P        01 59 55.3 -0.5
JNU   Nakatsue          45.26 331  P        P        01 59 58.3 +2.5
MJAR  Matsushiro Arr    45.32 341  P        P        01 59 55.0 -1.2
            comp=Z,16nm,0.8s,baz=172,slow=8.6,SNR=20
MJAR                               PcP      PcP      02 01 34.7 -0.6
            comp=Z,14nm,0.8s,baz=163,slow=3.9,SNR=5.1
MJAR                               LR       LR       02 19 57.8
            comp=Z,1µm,18.6s,baz=110,slow=38
MJAR  Matsushiro Arr    45.32 341  P        P        01 59 55.4 -0.8
MJAR                               pmax     pmax
            comp=Z,11nm,0.7s
MJAR  Matsushiro Arr    45.32 341  P        P        01 59 55.4 -0.8
MAJO  Matsushiro        45.33 341  P        P        01 59 55.5 -0.7
MAJO                               pmax     pmax
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	comp=Z,34nm,1.1s						
MAJO				MLR	MLR		
	comp=Z,2µm,19.0s						
MAJO	**Matsushiro**	**45.33**	**341**	P	**P**	**01 59 55.5**	**-0.7**
MAJO	**Matsushiro**	**45.33**	**341**	P	**P**	**01 59 57.2**	**+1.0**
MAT	**Matsushiro**	**45.33**	**341**	P	**P**	**01 59 55.0**	**-1.2**
MAT				S	S	02 06 23.4	-10
MJB9	**Matsu-Tunnel**	**45.33**	**341**	P	**P**	**01 59 55.3**	**-1.0**
JHS	**Saijyo**	**45.84**	**335**	P	**P**	**01 59 59.8**	**-0.5**
JHS				IAmb	IAmb	02 00 11.2	
	comp=Z,120nm,1.4s						
LEM	**Lembang**	**46.78**	**267**	P	**P**	**02 00 07.8**	**-0.4**
	comp=Z,120nm,0.5s,baz=98,slow=1.3,SNR=15						
QZH	**Quanzhou**	**46.90**	**313**	⇑*i*P	**P**	**02 00 09.5**	**+0.7**
QZH				S	**S**	**02 06 57.0**	**+0.5**
QZH				pmax	pmax		
	comp=Z,110nm,0.7s						
QZH				LR	LR		
	comp=Z,1µm,15.6s						
QZH				LR	LR		
	comp=Z,1µm,20.4s						
QZH				LR	LR		
	comp=Z,2µm,20.8s						
KSNAH	**Namhae**	**48.06**	**330**	P	**P**	**02 00 14.9**	**-2.8**
	SNR=8.2						
CJD	**Chujado**	**48.23**	**328**	P	**P**	**02 00 22.0**	**+3.0**
	SNR=8.4						
XMAS	**Kiritimati**	**48.48**	**82**	IAMs_20	IAMs_20	02 17 55.9	
	comp=Z,9µm,20.0s						
JTM	**Tenmabayashi**	**48.49**	**346**	P	**P**	**02 00 20.8**	**0.0**
HANB	**Haenam**	**48.54**	**329**	P	**P**	**02 00 24.0**	**+2.6**
	SNR=7.9						
KSJDO	**Jindo**	**48.61**	**328**	P	**P**	**02 00 25.3**	**+3.4**
	SNR=7.2						
XMI	**Christmas Isla**	**48.64**	**262**	P	**P**	**02 00 24.0**	**+1.5**
	comp=Z,209nm,1.2s						
XMIS	**Christmas Isla**	**48.68**	**262**	P	**P**	**02 00 23.2**	**+0.4**
XMIS	**Christmas Isla**	**48.68**	**262**	P	**P**	**02 00 24.2**	**+1.4**
	comp=Z,168nm,1.3s						
KSKCH	**Geochang**	**48.70**	**331**	P	**P**	**02 00 22.9**	**+0.2**
	SNR=14						
KSKWJ	**Gwangju**	**48.80**	**330**	P	**P**	**02 00 25.5**	**+2.2**
	SNR=6.9						
KSKWJ	**Gwangju**	**48.80**	**330**	P	**P**	**02 00 26.0**	**+2.6**
	SNR=7.0						
KSKWJ	**Gwangju**	**48.80**	**330**	P	**P**	**02 00 26.0**	**+2.6**
	SNR=7.0						
KSULJ	**Uljin**	**48.89**	**333**	P	**P**	**02 00 24.0**	**0.0**
	SNR=22						
SSE	**Sheshan**	**49.08**	**321**	P	**P**	**02 00 26.0**	**+0.4**
SSE				pP	**pP**	**02 00 35.5**	**-2.6**
SSE				S	**S**	**02 07 26.0**	**-1.3**
SSE				pmax	pmax		
	comp=Z,12nm,1.0s						
SSE				pmax	pmax		
	comp=Z,260nm,8.3s						
SSE				LR	LR		
	comp=Z,380nm,17.2s						
KSJEU	**Jeongeup**	**49.09**	**330**	P	**P**	**02 00 28.1**	**+2.5**
	SNR=15						
UJN	**ULJIN**	**49.12**	**333**	P	**P**	**02 00 28.7**	**+2.9**
	SNR=6.9						
KSSAJ	**Sangju**	**49.23**	**332**	P	**P**	**02 00 29.5**	**+2.9**
	SNR=6.9						
CHYB	**Chungyang**	**49.31**	**333**	P	**P**	**02 00 31.0**	**+3.7**
	SNR=7.6						
OKCB	**Cheongsan-myeo**	**49.35**	**331**	P	**P**	**02 00 31.0**	**+3.4**
	SNR=7.7						
DLV	**T Lat**	**49.41**	**291**	P	**P**	**02 00 29.3**	**+0.7**
DLV	**T Lat**	**49.41**	**291**	P	**P**	**02 00 30.0**	**+1.4**
KSTBA	**Taebaek**	**49.44**	**333**	P	**P**	**02 00 32.1**	**+3.8**
	SNR=9.4						
TJN	**Taejon**	**49.58**	**331**	*i* P	**P**	**02 00 28.5**	**-0.8**
TJN	**Taejon**	**49.58**	**331**	P	**P**	**02 00 29.9**	**+0.6**
KSRS	**Korea Array**	**50.18**	**332**	P	**P**	**02 00 33.2**	**-0.6**
	comp=Z,41nm,0.7s,baz=147,slow=8.2,SNR=43						
KSRS				LR	LR	02 21 38.5	
	comp=Z,648nm,18.6s,baz=144,slow=36						
KSAR	**Wonju Array Be**	**50.19**	**332**	P	**P**	**02 00 33.7**	**-0.2**
KSAR	**Wonju Array Be**	**50.19**	**332**	P	**P**	**02 00 33.7**	**-0.2**
KS19	**Wonju Array Si**	**50.25**	**332**	P	**P**	**02 00 33.6**	**-0.7**
KS19				IAmb	IAmb	02 00 38.2	
	comp=Z,49nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**50.72**	**352**	*e*P	**P**	**02 00 39.0**	**+1.3**
YUK				*e*		02 01 54.9	
YUK				*e*		02 02 35.1	
YUK				*e*PPP	PPP	02 03 33.6	
YUK				*e*S	**S**	**02 07 51.7**	**+2.0**
YUK				*e*		02 10 26.0	
YUK				pmax	pmax		
	comp=E,523nm,1.2s						
YUK				pmax	pmax		
	comp=Z,449nm,1.2s						
YUK				pmax	pmax		
	comp=N,271nm,1.1s						
INCN	**Inchon**	**50.82**	**331**	P	**P**	**02 00 38.7**	**0.0**
INCN				pmax	pmax		
	comp=Z,199nm,0.8s						
INCN	**Inchon**	**50.82**	**331**	P	**P**	**02 00 38.7**	**0.0**
INCN	**Inchon**	**50.82**	**331**	P	**P**	**02 00 39.4**	**+0.7**
QIZ	**Qiongzhong**	**50.86**	**301**	P	**P**	**02 00 39.5**	**+0.2**
QIZ				S	**S**	**02 07 52.5**	**0.0**
QIZ				sS	**sS**	**02 08 11.0**	**-2.9**
QIZ				pmax	pmax		
	comp=Z,50nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,650nm,3.0s						
QIZ				LR	LR		
	comp=Z,1µm,20.2s						
QIZ				LR	LR		
	comp=Z,2µm,20.0s						
QIZ				LR	LR		
	comp=Z,3µm,21.2s						
NJ2	**Nanjing**	**51.19**	**320**	⇑P	**P**	**02 00 39.3**	**-2.2**
NJ2				S	**S**	**02 07 56.3**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,850nm,4.7s						
NJ2				LR	LR		
	comp=Z,1µm,22.6s						
NJ2				LR	LR		
	comp=Z,1µm,21.6s						
NJ2				LR	LR		
	comp=Z,2µm,23.0s						
JKA	**Kamikawa-asahi**	**51.35**	**349**	P	**P**	**02 00 43.1**	**+0.6**
ASAJ	**Asahikawa**	**51.35**	**349**	P	**P**	**02 00 43.2**	**+0.7**
	comp=Z,17nm,0.9s,baz=228,slow=25,SNR=3.2						
ASAJ	**Asahikawa**	**51.35**	**349**	P	**P**	**02 00 43.1**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,30nm,0.9s						
MYKOM	**Kota Tinggi**	**51.41**	**277**	P	**P**	**02 00 44.0**	**+0.5**
KUR	**Kuril'sk**	**51.65**	**354**	P	P	02 00 34.6	-10
KUR				*e*SSS	SSS	02 13 16.3	
WHN	**Wuhan**	**53.24**	**316**	⇓P	**P**	**02 00 58.5**	**+1.7**
WHN				pP	**pP**	**02 01 11.5**	**+1.9**
WHN				S	**S**	**02 08 25.3**	**+0.5**
WHN				sS	**sS**	**02 08 46.0**	**+0.7**
WHN				pmax	pmax		
	comp=Z,110nm,1.0s						
WHN				LR	LR		
	comp=Z,2µm,15.8s						
WHN				LR	LR		
	comp=Z,1µm,13.9s						
WHN				LR	LR		
	comp=Z,4µm,24.0s						
BKNI	**Bangkinang**	**53.97**	**275**	P	**P**	**02 01 02.6**	**+0.1**
BKNI	**Bangkinang**	**53.97**	**275**	P	**P**	**02 01 03.7**	**+1.2**
YSS	**Yuzh-Sakhalins**	**54.06**	**350**	*e*P	**P**	**02 01 02.9**	**+0.5**
YSS				*e**PP	**pP**	**02 01 16.7**	**+1.1**
YSS				*e*		02 03 06.0	
YSS				*e*S	**S**	**02 08 34.4**	**-0.9**
YSS				*e*SS	**SKiKP**	**02 12 11.0**	**0.0**
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
USA0B	**Ussuriysk Arra**	**54.27**	**340**	P	**P**	**02 01 05.0**	**+0.9**
USA0B				pmax	pmax		
	comp=Z,26nm,0.9s						
USA0B	**Ussuriysk Arra**	**54.27**	**340**	P	**P**	**02 01 05.0**	**+0.9**
USRK	**Ussuriysk Ar.**	**54.27**	**340**	P	**P**	**02 01 03.6**	**-0.4**
	comp=Z,18nm,0.7s,baz=170,slow=7.3,SNR=27						
USRK				LR	LR	02 22 37.0	
	comp=Z,740nm,21.4s,baz=140,slow=34						
USRK	**Ussuriysk Ar.**	**54.27**	**340**	P	**P**	**02 01 03.5**	**-0.6**
DL2	**Dalian**	**54.42**	**328**	P	**P**	**02 01 05.5**	**+0.2**
DL2				S	**S**	**02 08 40.0**	**-0.5**
DL2				pmax	pmax		
	comp=Z,120nm,0.8s						
DL2				pmax	pmax		
	comp=Z,300nm,4.2s						
DL2				LR	LR		
	comp=Z,1µm,22.6s						
DL2				LR	LR		
	comp=Z,1µm,22.4s						
DL2				LR	LR		
	comp=Z,2µm,26.7s						
IPM	**Ipoh**	**54.66**	**280**	P	**P**	**02 01 06.9**	**-0.6**
IPM				IAmb	IAmb	02 01 09.1	
	comp=Z,69nm,0.9s						
IPM	**Ipoh**	**54.66**	**280**	P	**P**	**02 01 09.2**	**+1.7**
TIA	**Tai'an**	**55.03**	**323**	⇓*i*P	**P**	**02 01 09.3**	**-0.5**
KULM	**Kulim**	**55.18**	**281**	P	**P**	**02 01 10.8**	**-0.4**
PPT	**Papeete**	**55.47**	**107**	LR	LR	02 20 20.8	
	comp=Z,746nm,21.6s,baz=272,slow=31						
PPT2	**Papeete2**	**55.47**	**107**	*e*S	**S**	**02 08 52.4**	**-3.1**
	comp=Z,3µm,27.0s						
PPT2				*e*LQ	LQ	02 14 58.3	
	comp=Z,3µm,26.2s						
PPT2				*e*LR	LR	02 17 21.1	
	comp=Z,3µm,25.8s						
MDJ	**Mudanjiang**	**55.48**	**338**	P	**P**	**02 01 12.3**	**-0.5**
MDJ				S	**S**	**02 08 59.3**	**+4.8**
MDJ				sS	sS	02 09 14.0	-1.7
MDJ				pmax	pmax		
	comp=Z,13nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,390nm,7.4s						
MDJ				LR	LR		
	comp=Z,650nm,19.5s						
MDJ				LR	LR		
	comp=Z,630nm,14.9s						
MDJ				LR	LR		
	comp=Z,2µm,22.7s						
MDJ	**Mudanjiang**	**55.48**	**338**	P	**P**	**02 01 13.3**	**+0.5**
MDJ				IAmb	IAmb	02 01 16.7	
	comp=Z,24nm,0.7s						
MDJ	**Mudanjiang**	**55.48**	**338**	P	**P**	**02 01 15.6**	**+2.8**
SNY	**Shenyang**	**55.69**	**332**	⇑P	**P**	**02 01 13.0**	**-1.4**
SNY				S	**S**	**02 08 50.8**	**-6.6**
SNY				pmax	pmax		
	comp=Z,12nm,0.7s						
SNY				pmax	pmax		
	comp=Z,430nm,6.5s						
SNY				LR	LR		
	comp=Z,1µm,19.4s						
SNY				LR	LR		
	comp=Z,1µm,18.8s						
SNY				LR	LR		
	comp=Z,2µm,20.2s						
TBI	**Tubuai**	**56.22**	**114**	*e*LR	LR	02 17 36.3	
	comp=Z,9µm,28.8s						
PSI	**Prapat**	**56.43**	**278**	P	**P**	**02 01 18.6**	**-1.8**
	comp=Z,22nm,0.7s,baz=97,slow=6.6,SNR=19						
CN2	**Changchun**	**56.43**	**335**	*e*P	**P**	**02 01 19.0**	**-0.7**
CN2				S	**S**	**02 09 04.3**	**-2.9**
CN2				pmax	pmax		
	comp=Z,40nm,0.8s						
CN2				pmax	pmax		
	comp=Z,600nm,10.0s						
CN2				LR	LR		
	comp=Z,700nm,19.0s						
CN2				LR	LR		
	comp=Z,900nm,19.0s						
CN2				LR	LR		
	comp=Z,1µm,21.0s						
ENH	**Enshi**	**56.55**	**313**	P	**P**	**02 01 20.4**	**-0.5**
SKR	**Severo-Kuril's**	**56.75**	**1**	*e*P	P	02 01 27.0	+5.3
SKR				*e*S	**S**	**02 09 12.3**	**+1.2**
SKR				MLR	MLR		
	comp=Z,1µm,18.0s						
SKR				MLR	MLR		
	comp=Z,2µm,17.0s						
GYA	**Guiyang**	**56.80**	**307**	⇓P	**P**	**02 01 23.8**	**+1.0**
GYA				pP	pP	02 01 34.5	-1.3
GYA				sP	sP	02 01 43.5	+2.4
GYA				S	**S**	**02 09 11.0**	**-2.0**
GYA				pmax	pmax		
	comp=Z,51nm,1.0s						
GYA				pmax	pmax		
	comp=Z,770nm,4.8s						
GYA				LR	LR		
	comp=Z,1µm,19.8s						
GYA				LR	LR		
	comp=Z,1µm,22.3s						
GYA				LR	LR		
	comp=Z,2µm,21.2s						
SLVN	**Son La**	**56.89**	**300**	P	**P**	**02 01 23.4**	**0.0**
SLVN				IAmb	IAmb	02 01 26.4	
	comp=Z,51nm,1.1s						
GSI	**Gunungsitoli**	**57.53**	**276**	P	**P**	**02 01 27.0**	**-1.0**
GSI	**Gunungsitoli**	**57.53**	**276**	P	**P**	**02 01 28.9**	**+0.9**
TYV	**Tymovskoe**	**57.86**	**351**	*e*P	**P**	**02 01 30.6**	**+1.0**
TYV				*e*		02 09 25.1	
TYV				pmax	pmax		
	comp=Z,500nm,4.7s						
TYV				pmax	pmax		
	comp=Z,19nm,1.0s						
BJT	**Baijiatuau**	**58.17**	**326**	P	**P**	**02 01 31.0**	**-1.0**
BJT				pmax	pmax		
	comp=Z,41nm,0.7s						
BJT				MLR	MLR		
	comp=Z,1µm,20.0s						
BJT	**Baijiatuau**	**58.17**	**326**	P	**P**	**02 01 31.0**	**-1.0**
BJT				IAmb	IAmb	02 01 36.8	
	comp=Z,41nm,0.7s						
BJI	**Beijing**	**58.18**	**326**	P	**P**	**02 01 31.3**	**-0.7**
BJI				pP	**pP**	**02 01 41.5**	**-3.7**
BJI				PcP	**PcP**	**02 02 23.0**	**-0.1**
BJI				S	**S**	**02 09 36.3**	**+6.0**
BJI				sS	**sS**	**02 09 51.0**	**-0.9**
BJI				pmax	pmax		
	comp=Z,17nm,0.8s						
BJI				LR	LR		
	comp=Z,930nm,19.0s						
BJI				LR	LR		
	comp=Z,1µm,22.6s						
BJI				LR	LR		
	comp=Z,2µm,22.7s						
LHMI	**Lhok Sumawe**	**58.79**	**280**	P	**P**	**02 01 35.7**	**-1.1**
GRNR	**Gornyy**	**58.98**	**347**	*e*P	**P**	**02 01 38.5**	**+1.1**
XAN	**Xi'an**	**59.00**	**316**	⇑P	**P**	**02 01 38.0**	**0.0**
XAN				pP	pP	02 01 52.0	+1.1
XAN				sP	sP	02 01 59.5	+3.3
XAN				PcP	**PcP**	**02 02 27.0**	**+0.4**
XAN				PP	**PP**	**02 03 48.8**	**-0.1**
XAN				S	**S**	**02 09 38.5**	**-2.9**
XAN				SS	**SS**	**02 13 34.5**	**-1.6**
XAN				pmax	pmax		
	comp=Z,110nm,0.8s						
XAN				pmax	pmax		
	comp=Z,730nm,6.8s						
XAN				LR	LR		
	comp=Z,760nm,21.3s						
XAN				LR	LR		
	comp=Z,2µm,22.0s						
XAN				LR	LR		
	comp=Z,2µm,21.3s						
PET	**Petropavlovsk**	**59.18**	**3**	*e*P	**P**	**02 01 40.6**	**+1.9**
PET				*e*S	**S**	**02 09 45.8**	**+3.1**
PET				*e*SS	**SS**	**02 13 41.1**	**+3.1**
PET				pmax	pmax		
	comp=Z,122nm,0.7s						
PET	**Petropavlovsk**	**59.18**	**3**	P	**P**	**02 01 39.9**	**+1.2**
PET	**Petropavlovsk**	**59.18**	**3**	P	**P**	**02 01 41.7**	**+3.0**
	comp=Z,379nm,0.8s						
PEA0B	**Petropavlovsk-**	**59.22**	**2**	P	**P**	**02 01 40.3**	**+1.3**
PEA0B				pmax	pmax		
	comp=Z,100nm,0.9s						
PEA0B	**Petropavlovsk-**	**59.22**	**2**	P	**P**	**02 01 40.3**	**+1.3**
PETK	**Petropavlovsk-**	**59.22**	**2**	P	**P**	**02 01 39.7**	**+0.7**
	comp=Z,77nm,0.9s,baz=188,slow=9.0,SNR=50						
PETK				LR	LR	02 23 23.0	
	comp=Z,3µm,21.9s,baz=182,slow=32						
PETK	**Petropavlovsk-**	**59.22**	**2**	P	**P**	**02 01 39.2**	**+0.1**
KMI	**Kunming**	**59.39**	**304**	⇑P	**P**	**02 01 42.3**	**+1.3**
KMI				pP	pP	02 01 52.3	-1.3
KMI				sP	pwP	02 01 56.5	0.0
KMI				PcP	**PcP**	**02 02 30.3**	**+1.7**
KMI				S	**S**	**02 09 45.8**	**-1.3**
KMI				pmax	pmax		
	comp=Z,86nm,0.7s						
KMI				pmax	pmax		
	comp=Z,840nm,4.2s						
KMI				LR	LR		
	comp=Z,1µm,21.7s						
KMI				LR	LR		
	comp=Z,2µm,24.0s						
KMI				LR	LR		
	comp=Z,2µm,26.4s						
CM31	**Chiang Mai Arr**	**60.23**	**295**	P	**P**	**02 01 47.2**	**+0.6**
CMAR	**Chiang Mai Arr**	**60.23**	**295**	P	**P**	**02 01 47.5**	**+0.8**
	comp=Z,22nm,0.7s,baz=119,slow=5.3,SNR=108						
CMAR				LR	LR	02 26 14.2	
	comp=Z,1µm,21.3s,baz=155,slow=34						
CMAR				PKP2bc		02 31 20.8	
	comp=Z,1.5nm,0.7s,baz=281,slow=4.1,SNR=6.0						
CMAR	**Chiang Mai Arr**	**60.23**	**295**	*i* P	**P**	**02 01 47.7**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,23nm,0.7s						
CHTO	**Chiang Mai**	**60.34**	**296**	P	**P**	**02 01 47.9**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,115nm,1.5s						
CHTO	**Chiang Mai**	**60.34**	**296**	P	**P**	**02 01 47.9**	**+0.5**
CHTO	**Chiang Mai**	**60.34**	**296**	P	**P**	**02 01 48.5**	**+1.1**
SHEM	**Shemya Is, Ala**	**61.06**	**13**	LR	LR	02 24 15.2	
	comp=Z,7µm,21.3s,baz=188,slow=32						
CD2	**Chengdu**	**61.14**	**310**	P	**P**	**02 01 53.0**	**+0.3**
CD2				S	**S**	**02 10 08.5**	**-0.5**
CD2				sS	pS	02 10 27.0	+2.6
CD2				SS	**SS**	**02 14 10.5**	**+0.7**
CD2				pmax	pmax		
	comp=Z,80nm,0.6s						
CD2				pmax	pmax		
	comp=Z,680nm,5.6s						
CD2				LR	LR		
	comp=Z,2µm,24.0s						
CD2				LR	LR		
	comp=Z,2µm,24.5s						
HHC	**Hu-ho-hao-te**	**61.36**	**324**	*e*P	**P**	**02 01 57.0**	**+2.9**
HHC				pP	pP	02 02 02.5	-4.8
HHC				S	**S**	**02 10 08.8**	**-2.7**
HHC				SS	**SS**	**02 14 15.8**	**+2.8**
HHC				pmax	pmax		
	comp=Z,40nm,0.7s						
HHC				pmax	pmax		
	comp=Z,340nm,6.6s						
HHC				LR	LR		
	comp=Z,1µm,19.2s						
HHC				LR	LR		
	comp=Z,1µm,19.8s						
HHC				LR	LR		
	comp=Z,2µm,21.0s						
BTO	**Baotou**	**62.13**	**323**	*e*P	**P**	**02 02 01.3**	**+2.1**
BTO				S	**S**	**02 10 23.0**	**+1.8**
BTO				LR	LR		
	comp=Z,3µm,17.6s						
BTO				LR	LR		
	comp=Z,5µm,19.8s						
KIWB	**Kanaga Island**	**62.72**	**19**	P	**P**	**02 02 03.0**	**+0.2**
ADK	**Adak**	**62.90**	**19**	P	**P**	**02 02 04.6**	**+0.7**
ADK				pmax	pmax		
	comp=Z,239nm,1.2s						
ADK	**Adak**	**62.90**	**19**	P	**P**	**02 02 04.6**	**+0.7**
ADK	**Adak**	**62.90**	**19**	P	**P**	**02 02 07.0**	**+3.1**
	comp=Z,172nm,1.1s						
HIA	**Hailar**	**63.16**	**335**	P	**P**	**02 02 05.5**	**-0.4**
HIA				pmax	pmax		
	comp=Z,60nm,0.8s						
HIA				MLR	MLR		
	comp=Z,1µm,20.0s						
HIA	**Hailar**	**63.16**	**335**	P	**P**	**02 02 05.5**	**-0.4**
LZH	**Lanzhou**	**63.62**	**315**	⇓P	**P**	**02 02 10.5**	**+1.2**
LZH				pP	pP	02 02 22.8	+0.1
LZH				S	**S**	**02 10 39.0**	**-1.2**
LZH				SS	**SS**	**02 14 49.8**	**+1.2**
LZH				pmax	pmax		
	comp=Z,38nm,1.4s						
LZH				LR	LR		
	comp=Z,1µm,15.6s						
LZH				LR	LR		
	comp=Z,1µm,16.1s						
LZH				LR	LR		
	comp=Z,2µm,17.4s						
ZEA	**Zeya**	**64.12**	**342**	*e*P	**P**	**02 02 12.5**	**+0.5**
ZEA				*e*		02 02 51.1	
ZEA				*e*		02 04 30.8	
ZEA				*e*S	**S**	**02 10 45.5**	**+0.1**
ZEA				*e*		02 11 58.9	
ZEA				pmax	pmax		
	comp=N,40nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,70nm,1.0s						
ZEA				pmax	pmax		
	comp=E,100nm,3.2s						
ZEA				pmax	pmax		
	comp=Z,200nm,5.3s						
ZEA				pmax	pmax		
	comp=Z,200nm,7.1s						
ZEA				smax	smax		
	comp=E,300nm,15.0s						
TAOE	**Nuku Hiva Isla**	**64.55**	**97**	*e*S	**S**	**02 10 49.2**	**-3.2**
	comp=E,254nm,24.4s						
TAOE	**Nuku Hiva Isla**	**64.55**	**97**	*e*LR	LR	02 21 30.8	
	comp=E,2µm,23.5s						
MA2	**Magadan**	**65.72**	**358**	*ce*P	**P**	**02 02 21.2**	**-1.1**
MA2				pmax	pmax		
	comp=Z,43nm,0.8s						
MA2	**Magadan**	**65.72**	**358**	P	**P**	**02 02 21.5**	**-0.9**
MA2				IAmb	IAmb	02 02 25.8	
	comp=Z,47nm,0.8s						
MA2	**Magadan**	**65.72**	**358**	P	**P**	**02 02 24.8**	**+2.5**
NIKH	**Nikolski High**	**66.60**	**23**	P	**P**	**02 02 28.2**	**+0.2**
	baz=220						
MOKO	**MOKOCHONG**	**66.70**	**302**	*e*P	**P**	**02 02 29.1**	**-0.4**
MOKO				IAmb	IAmb	02 02 42.7	
	comp=Z,87nm,1.0s						
KOHI	**KOHIMA**	**66.85**	**301**	*e*P	**P**	**02 02 29.5**	**-1.0**
CASY	**Casey**	**67.18**	**198**	IAMs_20	IAMs_20	02 27 38.5	
	comp=Z,6µm,22.0s						
ITAN	**ITANAGAR**	**67.65**	**303**	*e*P	**P**	**02 02 36.5**	**+1.2**
CIT	**Chita**	**67.85**	**334**	*e*P	**P**	**02 02 37.6**	**+1.5**
CIT				*e*		02 02 56.6	
CIT				pmax	pmax		
	comp=Z,90nm,2.3s						
GTA	**Gaotai**	**68.03**	**317**	⇑P	**P**	**02 02 38.0**	**+0.4**
GTA				pP	pP	02 02 47.3	-3.8
GTA				S	**S**	**02 11 34.8**	**+0.9**
GTA				sS	pS	02 11 51.8	+2.1
GTA				pmax	pmax		
	comp=Z,19nm,1.2s						
GTA				pmax	pmax		
	comp=Z,550nm,7.3s						
GTA				LR	LR		
	comp=Z,390nm,22.2s						
GTA				LR	LR		
	comp=Z,710nm,21.8s						
GTA				LR	LR		
	comp=Z,1µm,24.3s						
UNV	**Unalaska Valle**	**68.19**	**24**	P	**P**	**02 02 38.2**	**+0.2**
	baz=222						
ULN	**Ulaanbaatar**	**68.26**	**328**	P	**P**	**02 02 39.1**	**+0.2**
ULN				pmax	pmax		
	comp=Z,39nm,1.0s						
ULN				MLR	MLR		
	comp=Z,2µm,20.0s						
ULN	**Ulaanbaatar**	**68.26**	**328**	P	**P**	**02 02 39.1**	**+0.2**
ULN				IAmb	IAmb	02 02 43.0	
	comp=Z,39nm,1.0s						
SONM	**Songino Array**	**68.59**	**327**	P	**P**	**02 02 40.9**	**-0.1**
	comp=Z,26nm,0.9s,baz=139,slow=4.7,SNR=40						
SONM				PKPPKP	**P'P'df**	**02 30 55.0**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=303,slow=2.9,SNR=3.1						
SONM				LR	LR	02 34 19.1	
	comp=Z,1µm,18.6s,baz=125,slow=37						
SONM	**Songino Array**	**68.59**	**327**	P	**P**	**02 02 40.6**	**-0.3**
SONM				pmax	pmax		
	comp=Z,34nm,1.0s						
SONM	**Songino Array**	**68.59**	**327**	P	**P**	**02 02 40.6**	**-0.3**
SONM				IAmb	IAmb	02 02 44.8	
	comp=Z,34nm,1.0s						
SHL	**Shillong**	**68.70**	**300**	*e*P	**P**	**02 02 42.3**	**+0.1**
SHL				*e*P	**P**	**02 02 43.0**	**+0.9**
SHL				*e*S	**S**	**02 11 43.0**	**+0.7**
SEY	**Seymchan**	**69.04**	**359**	P	**P**	**02 02 43.2**	**0.0**
	comp=Z,17nm,0.9s,baz=171,slow=4.6,SNR=19						
SEY				LR	LR	02 27 44.2	

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       comp=Z,497nm,21.3s,baz=167,slow=31
SEY   Seymchan         69.04 359 i P      P        02 02 43.4 +0.2
LSA   Lhasa            70.64 304   P      P        02 02 54.5 +0.1
LSA                                pmax   pmax
       comp=Z,42nm,0.8s
LSA   Lhasa            70.64 304   P      P        02 02 54.0 -0.4
LSA                                pmax   pmax
       comp=Z,43nm,0.8s
LSA   Lhasa            70.64 304   P      P        02 02 54.0 -0.4
LSA                                IAmb   IAmb     02 03 06.9
       comp=Z,43nm,0.8s
YAK   Yakutsk          70.81 348   P      P        02 02 53.7 -0.4
       comp=Z,50nm,0.8s,baz=100,slow=0.4,SNR=15
YAK   Yakutsk          70.81 348  eP      P        02 02 53.7 -0.4
YAK                               e*PP    pP       02 03 07.8 +0.2
YAK                               e                02 03 12.4
YAK                               eS      S        02 12 05.2 -0.1
YAK                               e*SS    SKiKP    02 12 35.2 +2.4
YAK                               e                02 12 57.6
YAK                               eSS     SS       02 16 42.6 +4.0
YAK                                pmax   pmax
       comp=Z,91nm,0.9s
YAK                                pmax   pmax
       comp=E,4.0nm,0.8s
YAK                                pmax   pmax
       comp=N,11nm,1.1s
YAK                                smax   smax
       comp=E,451nm,4.1s
YAK                                smax   smax
       comp=N,78nm,2.9s
YAK                                MLR    MLR
       comp=Z,1µm,23.0s
YAK                                MLR    MLR
       comp=N,841nm,24.0s
YAK                                MLR    MLR
       comp=E,412nm,24.0s
YAK   Yakutsk          70.81 348   P      P        02 02 53.2 -0.9
VNDA  Vanda            71.29 178   P      P        02 02 57.8 +0.9
       comp=E,5.2nm,0.8s,baz=329,slow=7.1,SNR=17
VNDA                               LR     LR       02 29 49.3
       comp=E,798nm,19.5s,baz=3.0,slow=32
VNDA  Vanda            71.29 178   P      P        02 02 58.0 +1.1
VNDA                               pmax   pmax
       comp=Z,34nm,1.4s
VNDA  Vanda            71.29 178   P      P        02 02 58.0 +1.1
ZAK   Zakamensk        71.75 328  eP      P        02 02 59.2 -1.0
ZAK                                pmax   pmax
       comp=Z,47nm,0.9s
BOD   Bodaibo          71.86 338  eP      P        02 02 59.1 -1.4
BOD                                pmax   pmax
       comp=Z,25nm,1.7s
CHGN  Chignik          73.23  25   P      P        02 03 10.3 +1.7
       baz=229
BOK   Bokaro           73.43 297  eP      P        02 03 11.4 +0.7
BOK                                IAmb   IAmb     02 03 12.9
       comp=Z,190nm,1.1s
MOY   Mondy            73.67 328  eP      P        02 03 12.0 +0.4
MOY                                pmax   pmax
       comp=Z,37nm,2.1s
GAMB  Gambell          74.31  15   P      P        02 03 14.1 -0.8
GAMB                               IAmb   IAmb     02 03 19.3
       comp=Z,62nm,0.9s
GAMB                               IAMs_20 IAMs_20 02 31 10.7
       comp=Z,5µm,20.0s
GAMB  Gambell          74.31  15   P      P        02 03 16.5 +1.7
       baz=215
GUN   Gumba            74.51 301  eP      P        02 03 17.4 +0.1
       comp=Z,355nm,0.8s
BILL  Bilibino         74.60   4d iP      P        02 03 16.5  0.0
BILL                              i                02 03 26.4
BILL                              i                02 06 06.6
BILL                              i S     S        02 12 45.1 -3.3
BILL                               pmax   pmax
       comp=Z,111nm,0.8s
BILL                               MLR    MLR
       comp=Z,756nm,19.0s
BILL  Bilibino         74.60   4   P      P        02 03 16.8 +0.3
PKI   Pulchoki         74.82 301  eP      P        02 03 18.8 -0.3
PKIN  Phulchoki        74.84 301  eP      P        02 03 18.8 -0.3
KKN   Kakani           74.99 301  eP      P        02 03 19.7 -0.2
PALK  Pallekele        75.05 279   P      P        02 03 20.8 +0.5
PALK                               pmax   pmax
       comp=Z,42nm,0.7s
PALK  Pallekele        75.05 279   P      P        02 03 20.8 +0.5
PALK                               IAmb   IAmb     02 03 22.0
       comp=Z,42nm,0.7s
GKN   Gorkha           75.60 301  eP      P        02 03 23.1 -0.2
OHAK  Old Harbor       76.02  26   P      P        02 03 24.6 -0.3
OHAK  Old Harbor       76.02  26   P      P        02 03 25.8 +1.0
       baz=234
VLK   Valmikinagar     76.08 300⇑eP      P        02 03 25.3 -0.6
BLSP  Bilaspur         76.40 294  eP      P        02 03 27.5 -0.4
KOLN  Koldanda         76.42 300  eP      P        02 03 27.7 -0.4
DANN  Dangsing         76.44 301  eP      P        02 03 27.7 -0.6
       comp=Z,110nm,0.8s
P18K  Big Mountain,    76.52  24   IAMs_20 IAMs_20 02 36 16.3
       comp=Z,4µm,20.0s
P18K  Big Mountain,    76.52  24   P      P        02 03 28.1 +0.4
       baz=232
ANM   Nome             76.63  17   P      P        02 03 28.8 +0.6
ANM                                pmax   pmax
       comp=Z,75nm,0.9s
ANM   Nome             76.63  17   P      P        02 03 28.8 +0.6
ANM                                IAmb   IAmb     02 03 32.4
       comp=Z,75nm,0.9s
ANM   Nome             76.63  17   P      P        02 03 29.4 +1.2
       baz=221
KDAK  Kodiak Island    76.65  26   P      P        02 03 28.1 -0.3
       comp=Z,31nm,0.9s,baz=261,slow=3.3,SNR=6.3
KDAK  Kodiak Island    76.65  26   P      P        02 03 29.0 +0.5
       baz=234
TNA   Tin City         76.71  15   P      P        02 03 28.8 +0.2
TNA                                IAmb   IAmb     02 03 32.3
       comp=Z,57nm,1.0s
TNA   Tin City         76.71  15   P      P        02 03 29.4 +0.8
       baz=218
Q19K  Cape Douglas,    76.88  25   P      P        02 03 29.8  0.0
Q19K                               IAmb   IAmb     02 03 32.8
       comp=Z,64nm,0.8s
Q19K                               IAMs_20 IAMs_20 02 32 42.9
       comp=Z,6µm,22.0s
Q19K  Cape Douglas,    76.88  25   P      P        02 03 29.7  0.0
       baz=233
PYUN  Piuthan          77.03 301  eP      P        02 03 30.8 -0.7
       comp=Z,96nm,0.7s
O19K  Port Alsworth    77.38  23   P      P        02 03 32.0 -0.5
O19K                               IAmb   IAmb     02 03 36.7
       comp=Z,46nm,1.1s
O19K                               IAMs_20 IAMs_20 02 32 30.0
       comp=Z,5µm,22.0s
O19K  Port Alsworth    77.38  23   P      P        02 03 32.6 +0.2
       baz=232
SVW2  Sparrevohn       77.45  22   P      P        02 03 33.0 +0.1
SVW2                               IAmb   IAmb     02 03 36.9
       comp=Z,62nm,1.0s
P19K  Oil Pt           77.48  24   P      P        02 03 31.9 -1.2
P19K  Oil Pt           77.48  24   P      P        02 03 32.8 -0.3
       baz=233
N19K  Bonanza Creek    77.69  23   P      P        02 03 35.0 +0.6
N19K  Bonanza Creek    77.69  23   P      P        02 03 34.0 -0.3
       baz=232
WMQ   Urumqi           78.12 317  eP      P        02 03 38.3 +1.2
WMQ                                pP     pP       02 03 49.8 -0.7
WMQ                                S      S        02 13 29.0 +1.0
WMQ                                sS     pS       02 13 45.8 +1.2
WMQ                                pmax   pmax
       comp=Z,35nm,1.1s
WMQ                                pmax   pmax
       comp=Z,590nm,5.1s
WMQ                                LR     LR
       comp=Z,870nm,18.7s
WMQ                                LR     LR
       comp=Z,710nm,21.1s
WMQ                                LR     LR
       comp=Z,1µm,25.3s
HOM   Homer            78.14  25   P      P        02 03 37.4 +0.6
       baz=235
RSO   Redoubt South    78.16  24   P      P        02 03 37.2 +0.1
CNPM  China Poot       78.24  25   P      P        02 03 37.7 +0.4
TTA   Tatalina         78.46  21   P      P        02 03 38.4 -0.2
TTA                                pmax   pmax
       comp=Z,54nm,1.0s
TTA   Tatalina         78.46  21   P      P        02 03 38.4 -0.2
TTA                                IAmb   IAmb     02 03 42.4
       comp=Z,54nm,1.0s
TTA   Tatalina         78.46  21   P      P        02 03 39.4 +0.9
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       baz=230,SNR=21
BRLK  Bradley Lake     78.52  25   P      P        02 03 38.9  0.0
BRLK                               IAmb   IAmb     02 03 56.0
       comp=Z,78nm,1.1s
BRSE  Bradley Lake S   78.56  25   P      P        02 03 39.5 +0.4
       baz=236
HYB   Hyderabad        78.78 289 i P      P        02 03 40.0 -1.2
       comp=Z,123nm,0.8s
HYB   Hyderabad        78.78 289  eP      P        02 03 40.5 -0.7
HYB                                IAmb   IAmb     02 03 42.1
       comp=Z,99nm,0.8s
SPCR  Spurr Chakacha   78.81  23   P      P        02 03 41.4 +0.9
       baz=234
TRD   Trivandrum       78.90 280  eP      P        02 03 42.6 +0.8
TRD                                IAmb   IAmb     02 03 44.8
       comp=Z,59nm,0.6s
L20K  Farewell, AK     78.94  22   P      P        02 03 41.8 +0.6
       baz=232
SEW   Seward           79.31  25   P      P        02 03 44.0 +0.9
       baz=237
GCSA  Galena City Sc   79.35  19   P      P        02 03 43.8 +0.6
       baz=229,SNR=18
K20K  Telida           79.42  21   P      P        02 03 43.9 +0.2
K20K                               IAmb   IAmb     02 03 47.9
       comp=Z,41nm,1.0s
K20K  Telida           79.42  21   P      P        02 03 44.6 +0.9
       baz=232
TIXI  Tiksi            79.62 352   P      P        02 03 43.9 -0.7
       comp=Z,5.2nm,0.7s,baz=108,slow=4.2,SNR=10
TIXI  Tiksi            79.62 352ceP      P        02 03 42.3 -2.3
TIXI                               pmax   pmax
       comp=Z,12nm,0.8s
TIXI  Tiksi            79.62 352   P      P        02 03 44.4 -0.2
RC01  Rabbit Creek A   79.73  24   P      P        02 03 44.8 -0.6
RC01                               IAmb   IAmb     02 03 48.8
       comp=Z,74nm,1.1s
RC01                               IAMs_20 IAMs_20 02 33 23.3
       comp=Z,5µm,22.0s
RC01  Rabbit Creek A   79.73  24   P      P        02 03 45.6 +0.1
       baz=236
PPLA  Purkeypile       79.82  22   P      P        02 03 47.1 +1.0
PPLA  Purkeypile       79.82  22   P      P        02 03 46.0 -0.1
       baz=234
J20K  Nowinta River    79.90  20   P      P        02 03 46.7 +0.4
J20K                               IAmb   IAmb     02 03 50.5
       comp=Z,50nm,1.0s
J20K                               IAMs_20 IAMs_20 02 35 49.6
       comp=Z,6µm,21.0s
J20K  Nowinta River    79.90  20   P      P        02 03 46.8 +0.4
       baz=232
RDOG  Red Dog Mine     79.91  15   IAMs_20 IAMs_20 02 37 00.7
       comp=Z,4µm,20.0s
RDOG  Red Dog Mine     79.91  15   P      P        02 03 56.2  +10
       baz=223
M22K  Willow           79.95  23   P      P        02 03 46.8 +0.2
       baz=236,SNR=6.8
CAST  Castle Rocks     80.17  21   P      P        02 03 47.5 -0.3
CAST                               IAmb   IAmb     02 03 51.9
       comp=Z,34nm,0.9s
CAST  Castle Rocks     80.17  21   P      P        02 03 47.6 -0.2
       baz=234
PWL   Port Wells       80.18  25   P      P        02 03 48.1 +0.2
PWL   Port Wells       80.18  25   P      P        02 03 48.2 +0.3
       baz=238,SNR=8.8
PMR   Palmer           80.25  24   P      P        02 03 47.7 -0.5
PMR                                pmax   pmax
       comp=Z,53nm,1.0s
PMR   Palmer           80.25  24   P      P        02 03 47.7 -0.5
PMR                                IAmb   IAmb     02 03 51.4
       comp=Z,53nm,1.0s
PMR   Palmer           80.25  24   P      P        02 03 48.2  0.0
       baz=237,SNR=6.6
CUT   Chulitna         80.26  23   P      P        02 03 47.4 -0.8
CUT                                IAmb   IAmb     02 03 51.3
       comp=Z,73nm,1.0s
CUT   Chulitna         80.26  23   P      P        02 03 48.5 +0.2
       baz=236
JHNI  Jhansi           80.31 297  eP      P        02 03 47.5 -1.9
CHUM  Lake Minchumin   80.36  21   P      P        02 03 48.9 +0.1
       baz=234,SNR=23
DGZ   Jazzator, Alta   80.41 323c iP      P        02 03 48.6 -1.0
DGZ                                pmax   pmax
       comp=Z,24nm,0.8s
KNK   Knik Glacier     80.43  24   P      P        02 03 48.6 -0.6
KNK                                IAmb   IAmb     02 03 52.3
       comp=Z,81nm,1.2s
KNK                                IAMs_20 IAMs_20 02 34 05.7
       comp=Z,6µm,22.0s
KNK   Knik Glacier     80.43  24   P      P        02 03 50.1 +0.9
       baz=238,SNR=5.9
GHO   Glory Hole Cre   80.44  24   P      P        02 03 48.4 -1.0
GHO                                IAmb   IAmb     02 04 04.6
       comp=Z,42nm,0.9s
GHO                                IAMs_20 IAMs_20 02 34 30.8
       comp=Z,4µm,21.0s
KTH   Kantishna Hill   80.67  22   P      P        02 03 49.5 -1.0
KTH                                IAmb   IAmb     02 04 04.4
       comp=Z,39nm,1.0s
SML   Sawmill          80.69  24   P      P        02 03 48.8 -1.9
SML                                IAMs_20 IAMs_20 02 34 27.5
       comp=Z,6µm,21.0s
SML   Sawmill          80.69  24   P      P        02 03 50.9 +0.2
       baz=238,SNR=13
GLI   Glacier Island   80.71  25   IAMs_20 IAMs_20 02 35 34.1
       comp=Z,4µm,20.0s
GLI   Glacier Island   80.71  25   P      P        02 03 50.6 -0.1
       baz=239
AKL   Akola            80.79 292  eP      P        02 03 51.1 -1.0
TRF   Thorofare Moun   80.84  22   P      P        02 03 50.2 -1.4
TRF   Thorofare Moun   80.84  22   P      P        02 03 51.3 -0.3
       baz=236
BHPL  Bhopal           80.88 295  eP      P        02 03 52.0 -0.6
BHPL                               IAmb   IAmb     02 03 53.2
       comp=Z,100nm,0.6s
FID   Port Fidalgo     80.90  25   IAMs_20 IAMs_20 02 35 57.6
       comp=Z,4µm,21.0s
BPAW  Bear Paw Mtn.    80.96  21   P      P        02 03 51.4 -0.7
BPAW  Bear Paw Mtn.    80.96  21   P      P        02 03 51.7 -0.3
       baz=235
EYAK  Cordova Ski Ar   81.11  26   P      P        02 03 53.3 +0.5
       baz=240
SCM   Sheep Creek Mo   81.11  24   P      P        02 03 52.5 -0.4
SCM                                pmax   pmax
       comp=Z,78nm,1.0s
SCM   Sheep Creek Mo   81.11  24   P      P        02 03 52.5 -0.4
SCM                                IAmb   IAmb     02 04 10.5
       comp=Z,78nm,1.0s
SCM                                IAMs_20 IAMs_20 02 34 14.7
       comp=Z,6µm,22.0s
SCM   Sheep Creek Mo   81.11  24   P      P        02 03 53.2 +0.2
       baz=238,SNR=5.9
IMAR  Indian Mountai   81.15  19   P      P        02 03 53.0 +0.1
ZSN   Zaisan           81.22 320  eP      P        02 03 53.8  0.0
       baz=320
ZSN   Zaisan           81.22 320  eP      P        02 03 53.8  0.0
I21K  Tanana           81.25  20   P      P        02 03 54.1 +0.6
I21K                               IAmb   IAmb     02 03 59.2
       comp=Z,36nm,0.8s
I21K                               IAMs_20 IAMs_20 02 36 42.3
       comp=Z,6µm,21.0s
I21K  Tanana           81.25  20   P      P        02 03 53.9 +0.5
       baz=234
H21K  Melozitna Rive   81.26  19   IAMs_20 IAMs_20 02 40 50.4
       comp=Z,2µm,19.0s
H21K  Melozitna Rive   81.26  19   P      P        02 03 54.0 +0.4
       baz=233
WAT6  Susitna Watana   81.34  23   P      P        02 03 53.6 -0.7
       baz=238,SNR=6.5
RND   Reindeer         81.36  22   IAmb   IAmb     02 03 56.8
       comp=Z,41nm,0.9s
DIV   Divide           81.39  25   IAmb   IAmb     02 04 11.9
       comp=Z,45nm,0.9s
MCK   McKinley         81.51  22   P      P        02 03 54.3 -0.7
       baz=237,SNR=22
KLU   Klutina          81.51  25   IAmb   IAmb     02 03 59.5
       comp=Z,77nm,1.0s
KLU                                IAMs_20 IAMs_20 02 36 40.3
       comp=Z,4µm,20.0s
KLU   Klutina          81.51  25   P      P        02 03 55.1  0.0
       baz=240,SNR=10
BWN   Browne           81.55  21   IAMs_20 IAMs_20 02 36 09.0
       comp=Z,6µm,20.0s
MLY   Manley           81.59  20   P      P        02 03 55.6 +0.2
       baz=235
M24K  Tolsona, Glenn   81.72  24   P      P        02 03 56.4 +0.2
       baz=240
MERT  Meerut           81.73 300⇓eP      P        02 03 55.9 -1.0
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DHY   Denali Highway   81.74  23   IAmb   IAmb     02 03 59.8
       comp=Z,42nm,1.0s
DHY                                IAMs_20 IAMs_20 02 35 00.4
       comp=Z,4µm,22.0s
DHY   Denali Highway   81.74  23   P      P        02 03 56.0 -0.4
       baz=238,SNR=9.9
BMRM  Bremner River    81.81  25   IAmb   IAmb     02 03 59.7
       comp=Z,77nm,1.3s
BMRM  Bremner River    81.81  25   P      P        02 03 56.4 -0.2
       baz=241
KAAM  Kaadhehdhoo      81.82 271   P      P        02 03 57.6  0.0
BERG  Berg Lake        81.92  26   IAMs_20 IAMs_20 02 35 59.1
       comp=Z,5µm,20.0s
NEA2  Nenana           81.93  21   IAmb   IAmb     02 03 59.6
       comp=Z,40nm,1.1s
NEA2                               IAMs_20 IAMs_20 02 35 14.3
       comp=Z,5µm,22.0s
NEA2  Nenana           81.93  21   P      P        02 03 56.4 -0.8
       baz=236,SNR=22
NDI   New Delhi        82.12 300⇑eP      P        02 03 55.9 -3.0
NDI                               eP      PcP      02 03 58.0 -6.2
N25K  Chitina, Valde   82.12  25   IAmb   IAmb     02 04 01.7
       comp=Z,61nm,1.2s
N25K  Chitina, Valde   82.12  25   P      P        02 03 57.3 -1.0
       baz=241,SNR=5.6
I23K  Minto, Yukon-K   82.14  21   P      P        02 03 58.2 +0.1
       baz=236
WRH   Wood River Hil   82.22  22   IAmb   IAmb     02 04 01.1
       comp=Z,39nm,1.2s
WRH                                IAMs_20 IAMs_20 02 35 13.0
       comp=Z,6µm,22.0s
HARP  HAARP            82.28  24   P      P        02 03 58.7 -0.3
       baz=240
WAX   Waxell Ridge     82.32  26   IAMs_20 IAMs_20 02 36 53.8
       comp=Z,4µm,18.0s
CRQM  Cirque           82.34  26   IAMs_20 IAMs_20 02 40 07.6
       comp=Z,3µm,20.0s
CRQE  Cirque           82.36  26   P      P        02 03 58.9 -0.7
       baz=242
CCB   Clear Creek Bu   82.42  21   IAMs_20 IAMs_20 02 35 07.2
       comp=Z,6µm,22.0s
MDM   Murphy Dome      82.43  21   IAmb   IAmb     02 04 02.1
       comp=Z,40nm,1.3s
MDM                                IAMs_20 IAMs_20 02 36 32.6
       comp=Z,5µm,21.0s
PAX   Paxson           82.44  23   P      P        02 03 59.5 -0.4
       baz=240
TGL   Tana Glacier     82.47  26   IAMs_20 IAMs_20 02 35 58.8
       comp=Z,3µm,22.0s
TCOL  CIGO, UAF Yank   82.52  21   IAmb   IAmb     02 04 03.8
       comp=Z,37nm,0.8s
TCOL                               IAMs_20 IAMs_20 02 35 20.9
       comp=Z,5µm,22.0s
TCOL  CIGO, UAF Yank   82.52  21   P      P        02 03 59.2 -1.0
       baz=238,SNR=10
COLA  College          82.52  21   P      P        02 04 00.5 +0.3
COLA                               pmax   pmax
       comp=Z,38nm,0.8s
COLA  College          82.52  21   P      P        02 04 00.5 +0.3
COLA                               IAmb   IAmb     02 04 03.8
       comp=Z,38nm,0.8s
COLA  College          82.52  21   IAMs_20 IAMs_20 02 35 20.9
       comp=Z,5µm,22.0s
COLA  College          82.52  21   P      P        02 03 59.5 -0.6
       baz=238
HDA   Harding Lake     82.61  22   IAmb   IAmb     02 04 02.7
       comp=Z,41nm,1.3s
HDA   Harding Lake     82.61  22   P      P        02 03 59.9 -0.8
       baz=238
ISLE  Juniper Island   82.62  26   IAMs_20 IAMs_20 02 36 40.6
       comp=Z,3µm,20.0s
SMLA  Simla            82.65 302  eP      P        02 04 00.8 -0.8
MCARA McCarthy VSAT    82.68  25   IAmb   IAmb     02 04 05.5
       comp=Z,65nm,1.1s
MCARA                              IAMs_20 IAMs_20 02 36 06.2
       comp=Z,6µm,20.0s
MCARA McCarthy VSAT    82.68  25   P      P        02 04 00.8 -0.3
       baz=242
MK31  Makanchi Array   82.69 319c iP      P        02 04 00.8 -0.7
MK31  Makanchi Array   82.69 319   IAmb   IAmb     02 04 06.7
       comp=Z,22nm,0.8s
MKAR  Makanchi Array   82.69 319   P      P        02 04 00.8 -0.7
       comp=Z,29nm,0.8s,baz=105,slow=5.3,SNR=55
MKAR                               LR     LR       02 42 12.9
       comp=Z,824nm,19.9s,baz=109,slow=37
YAH   Yahtse           82.78  27   IAMs_20 IAMs_20 02 36 45.6
       comp=Z,4µm,21.0s
POKR  Poker Plat Res   82.80  21   IAMs_20 IAMs_20 02 35 29.4
       comp=Z,5µm,22.0s
POKR  Poker Plat Res   82.80  21   P      P        02 04 01.1 -0.6
       baz=238
ILAR  Eielson Array    82.82  22   P      P        02 04 00.4 -1.4
       comp=Z,14nm,0.9s,baz=252,slow=5.2,SNR=67
ILAR                               PKKPbc PKKPbc   02 22 26.9 -1.6
       comp=Z,0.5nm,0.9s,baz=352,slow=1.8,SNR=4.9
ILAR                               LR     LR       02 36 15.5
       comp=Z,6µm,21.8s,baz=250,slow=32
KAD   Karad            82.87 288  eP      P        02 04 01.9 -1.2
MAKZ  Makanchi         82.90 319   P      P        02 04 02.4 -0.2
MAKZ                               pmax   pmax
       comp=Z,32nm,0.9s
MAKZ                               MLR    MLR
       comp=Z,1µm,20.0s
MAKZ  Makanchi         82.90 319   P      P        02 04 02.4 -0.2
MAKZ                               IAmb   IAmb     02 04 06.5
       comp=Z,32nm,0.8s
GOA   Goa              82.94 286  eP      P        02 04 03.2 -0.2
COLD  Coldfoot         83.03  19   P      P        02 04 02.5 -0.3
       baz=235
H24K  Noodor Dome      83.03  20   P      P        02 04 02.2 -0.7
       baz=238
RIDG  Independent Ri   83.06  23   P      P        02 04 02.9 -0.2
       baz=240
TABL  Table Mountain   83.08  27   IAMs_20 IAMs_20 02 35 50.7
       comp=Z,4µm,22.0s
BARN  Barnard Glacie   83.12  26   IAMs_20 IAMs_20 02 35 34.7
       comp=Z,3µm,22.0s
M26K  Nabesna, AK      83.16  25   IAmb   IAmb     02 04 18.8
       comp=Z,39nm,1.4s
M26K                               IAMs_20 IAMs_20 02 38 24.0
       comp=Z,4µm,20.0s
M26K  Nabesna, AK      83.16  25   P      P        02 04 03.4 -0.3
       baz=242
CTG   Chitna Glacier   83.22  26   P      P        02 04 03.8 -0.3
       baz=244
CTGM  Chitina Glacie   83.22  26   IAmb   IAmb     02 04 07.6
       comp=Z,45nm,1.0s
CTGM                               IAMs_20 IAMs_20 02 34 26.5
       comp=Z,3µm,22.0s
LOGN  Logan Glacier    83.31  26   IAMs_20 IAMs_20 02 37 11.8
       comp=Z,3µm,20.0s
L26K  Log Cabin Wild   83.31  24   IAMs_20 IAMs_20 02 35 46.9
       comp=Z,6µm,22.0s
L26K  Log Cabin Wild   83.31  24   P      P        02 04 04.5 +0.1
       baz=242,SNR=6.1
DOT   Dot Lake         83.33  23   IAmb   IAmb     02 04 07.2
       comp=Z,53nm,1.0s
PINM  Pinnacle         83.33  27   P      P        02 04 04.7 +0.1
       baz=245
POO   Poona            83.37 289  eP      P        02 04 01.5 -4.2
POO                               eP      PcP      02 04 04.7 -5.3
POO                                IAmb   IAmb     02 04 06.3
       comp=Z,123nm,1.0s
ZALV  Zalesovo Beam    83.44 326   P      P        02 04 03.5 -1.7
       comp=Z,16nm,0.8s,baz=110,slow=5.5,SNR=28
ZALV                               LR     LR       02 40 58.3
       comp=Z,606nm,20.9s,baz=108,slow=36
SCRK  Sand Creek       83.51  23   IAmb   IAmb     02 04 08.3
       comp=Z,31nm,1.1s
SCRK  Sand Creek       83.51  23   P      P        02 04 05.6 +0.1
       baz=241,SNR=11
PNL   Peninsula        83.55  28   P      P        02 04 06.0 +0.3
       baz=246
DHRM  DHARAMSHALA      83.60 303  eP      P        02 04 05.7 -1.2
DHRM                               IAmb   IAmb     02 04 09.6
       comp=Z,78nm,0.9s
M27K  Edge Creek, AK   83.61  25   IAMs_20 IAMs_20 02 38 19.7
       comp=Z,3µm,20.0s
M27K  Edge Creek, AK   83.61  25   P      P        02 04 06.2 +0.2
       baz=243
QSPA  South Pole Qui   83.69 180   P      P        02 04 06.9 +0.5
       comp=Z,34nm,0.5s,baz=3.8,slow=2.1,SNR=31
PRP   Porcupine Dome   83.70  21   IAMs_20 IAMs_20 02 37 14.0
       comp=Z,5µm,21.0s
A21K  Barrow           83.77  14   IAmb   IAmb     02 04 10.3
       comp=Z,49nm,0.8s
A21K                               IAMs_20 IAMs_20 02 37 53.8
       comp=Z,5µm,21.0s
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A21K	**Barrow**	**83.77**	**14**	P	**P**	**02 04 06.9**	**+0.4**
	baz=229						
J26L	**Joseph Creek**	**83.93**	**23**	P	**P**	**02 04 08.1**	**+0.5**
	baz=242						
UZB	**Uzynbulak**	**83.93**	**315**	*e*P	**P**	**02 04 08.1**	**-0.1**
	baz=314						
UZB	**Uzynbulak**	**83.93**	**315**	*e*P	**P**	**02 04 08.0**	**-0.1**
L27K	**Beaver Creek,**	**83.94**	**24**	IAmb	IAmb	02 04 11.5	
	comp=Z,24nm,1.0s						
L27K	**Beaver Creek,**	**83.94**	**24**	P	**P**	**02 04 08.1**	**+0.4**
	baz=243						
YUK3	**Moose Creek**	**83.95**	**26**	P	**P**	**02 04 07.9**	**-0.1**
	baz=245						
TOLK	**Toolik Lake Re**	**84.03**	**18**	IAmb	IAmb	02 04 12.6	
	comp=Z,35nm,0.8s						
TOLK				IAMs_20	IAMs_20	02 40 18.8	
	comp=Z,2µm,20.0s						
TOLK	**Toolik Lake Re**	**84.03**	**18**	P	**P**	**02 04 08.2**	**+0.2**
	baz=236,SNR=30						
PRZ	**Przheval'sk**	**84.21**	**314**	IAmb	IAmb	02 04 15.4	
	comp=Z,34nm,0.9s						
SATY	**Saty**	**84.35**	**314**	*e*P	**P**	**02 04 08.9**	**-1.4**
	baz=314						
SATY	**Saty**	**84.35**	**314**	*e*P	**P**	**02 04 08.8**	**-1.4**
ZHN	**Zhinishke**	**84.35**	**314**	*e*P	**P**	**02 04 08.8**	**-1.5**
	baz=314						
ZHN	**Zhinishke**	**84.35**	**314**	*e*P	**P**	**02 04 08.7**	**-1.5**
TDK	**Taldyqorghan**	**84.82**	**316**	*e*P	**P**	**02 04 11.2**	**-1.2**
	comp=Z,17nm,1.0s,baz=316						
TDK	**Taldyqorghan**	**84.82**	**316**	*e*P	**P**	**02 04 11.2**	**-1.2**
TDK				pmax	pmax		
	comp=Z,17nm,1.0s						
MAW	**Mawson**	**84.94**	**203**	P	**P**	**02 04 13.1**	**+0.6**
	comp=Z,38nm,0.5s,baz=98,slow=4.6,SNR=86						
MAW				LR	LR	02 38 18.3	
	comp=Z,2µm,21.9s,baz=87,slow=33						
MAW	**Mawson**	**84.94**	**203**	P	**P**	**02 04 13.2**	**+0.6**
	baz=85,SNR=66						
MAW	**Mawson**	**84.94**	**203**	P	**P**	**02 04 13.5**	**+0.9**
MAW				pmax	pmax		
	comp=Z,13nm,1.1s						
MAW	**Mawson**	**84.94**	**203**	P	**P**	**02 04 13.5**	**+0.9**
EGAK	**Eagle**	**84.97**	**23**	IAmb	IAmb	02 04 15.2	
	comp=Z,46nm,1.1s						
EGAK	**Eagle**	**84.97**	**23**	P	**P**	**02 04 13.2**	**+0.5**
	baz=244,SNR=15						
SEM	**Semipalatinsk**	**85.02**	**322**	*e*P	**P**	**02 04 12.5**	**-1.1**
	baz=322						
SEM	**Semipalatinsk**	**85.02**	**322**	*e*P	**P**	**02 04 12.4**	**-1.1**
MDOK	**Medeo**	**85.34**	**314**	*e*P	**P**	**02 04 15.2**	**-0.1**
	baz=314						
MDOK	**Medeo**	**85.34**	**314**	*e*P	**P**	**02 04 15.2**	**-0.1**
KSH	**Kashi**	**85.34**	**310**	P	**P**	**02 04 17.0**	**+1.7**
KSH				pP	pP	02 04 30.0	+1.0
KSH				PP	**PP**	**02 07 40.8**	**+6.9**
KSH				SKS	**SKSac**	**02 14 33.3**	**-3.6**
KSH				S	**S**	**02 14 41.8**	**-1.1**
KSH				sS	sS	02 15 03.5	-2.1
KSH				SS	**SS**	**02 20 20.0**	**+1.4**
KSH				pmax	pmax		
	comp=Z,37nm,0.8s						
KSH				pmax	pmax		
	comp=Z,1µm,6.5s						
KSH				LR	LR		
	comp=Z,740nm,19.9s						
KSH				LR	LR		
	comp=Z,790nm,19.9s						
KSH				LR	LR		
	comp=Z,1µm,22.0s						
DAWY	**Dawson**	**85.36**	**24**	P	**P**	**02 04 15.5**	**+0.7**
	baz=246,SNR=8.4						
TNSS	**Tian-Shan**	**85.38**	**314**	*e*P	**P**	**02 04 15.9**	**+0.1**
	baz=314						
SKAG	**Skagway**	**85.38**	**29**	P	**P**	**02 04 15.1**	**+0.2**
	baz=250						
JIS	**Juneau Island**	**85.44**	**30**	IAMs_20	IAMs_20	02 35 37.3	
	comp=Z,3µm,22.0s						
CHKK	**Chushkaly**	**85.54**	**315**	*i* P	**P**	**02 04 14.9**	**-1.2**
	baz=315						
ULHL	**Ulahol**	**85.72**	**313**	P	**P**	**02 04 18.9**	**+1.6**
	SNR=9.0						
ULHL	**Ulahol**	**85.72**	**313**	P	**P**	**02 04 20.1**	**+2.8**
ULHL				pmax	pmax		
	comp=Z,25nm,0.9s						
WRAK	**Wrangell Islan**	**85.89**	**32**	IAMs_20	IAMs_20	02 38 44.3	
	comp=Z,3µm,20.0s						
N31M	**Braeburn, Yuko**	**85.89**	**27**	P	**P**	**02 04 18.2**	**+0.8**
	baz=249						
BOOM	**Boomskoye usch**	**85.99**	**313**	IAmb	IAmb	02 04 22.2	
	comp=Z,27nm,0.7s						
J29M	**Klondike Camp**	**85.99**	**24**	P	**P**	**02 04 18.7**	**+0.8**
	baz=246,SNR=5.7						
KUU	**Kurty**	**86.00**	**315**	*e*P	**P**	**02 04 17.4**	**-1.0**
	baz=315						
KUU	**Kurty**	**86.00**	**315**	*e*P	**P**	**02 04 17.3**	**-1.1**
WHY	**Whitehorse**	**86.01**	**28**	P	**P**	**02 04 18.7**	**+0.5**
	baz=250						
KURK	**Kurchatov**	**86.10**	**322**	P	**P**	**02 04 18.1**	**-0.6**
KURK				pmax	pmax		
	comp=Z,24nm,1.2s						
KURK				MLR	MLR		
	comp=Z,800nm,19.0s						
KURK	**Kurchatov**	**86.10**	**322**	P	**P**	**02 04 18.1**	**-0.6**
I29M	**Ogilvie Camp,**	**86.32**	**23**	P	**P**	**02 04 19.9**	**+0.4**
	baz=246,SNR=17						
TKM2	**Tokmak 2**	**86.33**	**314**	P	**P**	**02 04 23.1**	**+2.8**
	SNR=15						
NIL	**Nilore**	**86.38**	**304**	P	**P**	**02 04 20.2**	**-0.3**
NIL				pmax	pmax		
	comp=Z,31nm,0.7s						
NIL	**Nilore**	**86.38**	**304**	P	**P**	**02 04 20.1**	**-0.3**
NIL				IAmb	IAmb	02 04 23.5	
	comp=Z,31nm,0.7s						
M31M	**Drury Creek, Y**	**86.76**	**26**	P	**P**	**02 04 21.8**	**+0.1**
	baz=250,SNR=7.6						
P33M	**Teslin, Yukon**	**86.83**	**28**	P	**P**	**02 04 22.8**	**+0.6**
	baz=252						
CHMS	**Chumysh**	**86.95**	**314**	P	**P**	**02 04 22.2**	**-0.9**
	SNR=11						
UCH	**Uchtor**	**86.97**	**313**	P	**P**	**02 04 24.5**	**+0.8**
	SNR=23						
UCH	**Uchtor**	**86.97**	**313**	P	**P**	**02 04 25.5**	**+1.8**
UCH				pmax	pmax		
	comp=Z,23nm,0.8s						
AAK	**Ala-Archa**	**87.06**	**313**	P	**P**	**02 04 23.6**	**-0.2**
	SNR=15						
AAK	**Ala-Archa**	**87.06**	**313**	P	**P**	**02 04 23.6**	**-0.2**
AAK				pmax	pmax		
	comp=Z,14nm,0.7s						
AAK	**Ala-Archa**	**87.06**	**313**	P	**P**	**02 04 23.6**	**-0.2**
SGDS	**Sogindy**	**87.13**	**314**	*e*P	**P**	**02 04 22.5**	**-1.4**
	baz=314						
USP	**Ospenovka**	**87.18**	**314**	P	**P**	**02 04 23.3**	**-0.9**
	SNR=18						
AML	**Almayashu**	**87.55**	**313**	P	**P**	**02 04 25.9**	**-0.5**
	SNR=44						
AML	**Almayashu**	**87.55**	**313**	P	**P**	**02 04 27.7**	**+1.3**
AML				pmax	pmax		
	comp=Z,54nm,0.8s						
EKS2	**Erkin-Say**	**87.59**	**313**	P	**P**	**02 04 26.8**	**+0.5**
	SNR=17						
BTLS	**Baital**	**87.84**	**316**	*e*P	**P**	**02 04 26.8**	**-0.5**
	baz=316						
BTLS	**Baital**	**87.84**	**316**	*e*P	**P**	**02 04 26.7**	**-0.5**
HOPS	**Hopland Field**	**87.89**	**51**	IAMs_20	IAMs_20	02 43 00.9	
	comp=Z,4µm,19.0s						
MCCM	**Marconi Confer**	**87.90**	**51**	IAMs_20	IAMs_20	02 38 08.1	
	comp=Z,3µm,20.0s						
NRIK	**Noril'sk**	**87.98**	**341**	P	**P**	**02 04 25.6**	**-1.7**
	comp=Z,27nm,0.8s,baz=111,slow=4.5,SNR=44						
NRIK				LR	LR	02 43 14.3	
	comp=Z,1µm,21.7s,baz=98,slow=35						
NRIK	**Noril'sk**	**87.98**	**341**	*ce*P	**P**	**02 04 24.9**	**-2.4**
NRIK				pmax	pmax		
	comp=Z,30nm,0.9s						
J01E	**Myrtle Point**	**87.98**	**46**	P	**P**	**02 04 28.3**	**+0.4**
	baz=260						
GDXM	**Geysers**	**88.07**	**51**	IAmb	IAmb	02 04 33.0	
	comp=Z,25nm,0.9s						
K02D	**Willamette Mer**	**88.09**	**47**	P	**P**	**02 04 28.3**	**-0.3**
	baz=260						
O02D	**Mt. Diablo Mer**	**88.31**	**49**	P	**P**	**02 04 29.9**	**+0.2**
	baz=260						
M02C	**Callahan**	**88.46**	**48**	P	**P**	**02 04 30.3**	**-0.1**
	baz=260						
N02D	**Trinity Center**	**88.50**	**49**	P	**P**	**02 04 30.9**	**+0.3**
	baz=260						
WDC	**Whiskeytown Da**	**88.56**	**49**	IAMs_20	IAMs_20	02 42 59.8	
	comp=Z,3µm,18.0s						
HUMO	**Hull Mountain**	**88.59**	**47**	IAmb	IAmb	02 04 34.9	
	comp=Z,19nm,1.0s						
YBH	**Yreka Blue Hor**	**88.62**	**48**	P	**P**	**02 04 29.9**	**-1.2**
	comp=Z,6.0nm,0.9s,baz=250,slow=1.6,SNR=3.5						
SAO	**San Andreas Ge**	**88.80**	**53**	IAMs_20	IAMs_20	02 36 57.2	
	comp=Z,3µm,19.0s						
G03D	**McMinnville, O**	**88.82**	**44**	P	**P**	**02 04 32.2**	**+0.3**
	baz=260						
L04D	**Klamath Falls**	**89.00**	**48**	P	**P**	**02 04 33.2**	**+0.2**
	baz=261						
O03E	**Paynes Creek**	**89.07**	**49**	P	**P**	**02 04 33.5**	**+0.2**
	baz=261,SNR=14						
INK	**Inuvik**	**89.16**	**21**	P	**P**	**02 04 31.9**	**-1.0**
	comp=Z,8.4nm,0.8s,baz=266,slow=6.2,SNR=28						
INK	**Inuvik**	**89.16**	**21**	P	**P**	**02 04 33.2**	**+0.3**
	baz=251						
M04C	**Macdoel**	**89.28**	**48**	P	**P**	**02 04 34.1**	**-0.1**
	baz=261						
J04D	**Umpqua Nationa**	**89.31**	**47**	P	**P**	**02 04 34.5**	**+0.1**
	baz=261						
D03D	**Eldon**	**89.34**	**42**	P	**P**	**02 04 34.4**	**+0.1**
	baz=260						
BTK	**Batken**	**89.34**	**310**	IAmb	IAmb	02 04 46.6	
	comp=Z,15nm,0.8s						
DZA	**Taraz**	**89.40**	**313**	*e*P	**P**	**02 04 34.5**	**-0.2**
	baz=313						
DZA	**Taraz**	**89.40**	**313**	*e*P	**P**	**02 04 34.5**	**-0.2**
E04D	**Cinebar**	**89.53**	**43**	P	**P**	**02 04 35.4**	**+0.2**
	baz=260						
PAGB	**Antelope Grade**	**89.61**	**54**	IAmb	IAmb	02 04 41.7	
	comp=Z,35nm,0.9s						
A04D	**Lummi Island**	**89.80**	**41**	P	**P**	**02 04 37.0**	**+0.7**
	baz=260						
CMB	**Columbia Colle**	**89.83**	**52**	IAMs_20	IAMs_20	02 41 23.2	
	comp=Z,3µm,19.0s						
J05D	**Fort Rock, OR**	**89.95**	**47**	P	**P**	**02 04 38.3**	**+0.9**
	baz=261,SNR=16						
HOOD	**Mount Hood Mea**	**89.96**	**45**	IAmb	IAmb	02 04 42.9	
	comp=Z,25nm,1.0s						
KBL	**Kabul**	**89.97**	**305**	P	**P**	**02 04 36.2**	**-1.6**
KBL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KBL	**Kabul**	**89.97**	**305**	P	**P**	**02 04 36.2**	**-1.6**
I05D	**Terrebonne, OR**	**90.03**	**46**	P	**P**	**02 04 37.9**	**+0.3**
	baz=261						
K05A	**Summer Lake**	**90.11**	**47**	IAmb	IAmb	02 04 47.1	
	comp=Z,26nm,1.1s						
F05D	**White Salmon**	**90.18**	**44**	P	**P**	**02 04 38.5**	**+0.2**
	baz=261						
G05D	**Wamic, OR**	**90.18**	**45**	P	**P**	**02 04 38.7**	**+0.4**
	baz=261						
PINE	**Pine Mountain**	**90.23**	**46**	P	**P**	**02 04 38.6**	**-0.2**
VES	**Vestal, Richgr**	**90.57**	**54**	P	**P**	**02 04 41.1**	**+0.9**
	baz=263						
VCNR	**Virginia City**	**90.57**	**51**	IAmb	IAmb	02 04 44.3	
	comp=Z,23nm,0.9s						
PNTR	**Pine Nut**	**90.58**	**51**	IAmb	IAmb	02 04 44.5	
	comp=Z,35nm,0.9s						
ARVC	**Arvin**	**90.68**	**55**	P	**P**	**02 04 41.8**	**+0.9**
	baz=263						
CIS	**Catalina Islan**	**90.81**	**57**	P	**P**	**02 04 42.3**	**+0.7**
	baz=263						
PAHR	**Pah Rah Range**	**90.83**	**50**	IAmb	IAmb	02 04 45.1	
	comp=Z,26nm,1.0s						
YERR	**Yerington**	**90.84**	**51**	IAmb	IAmb	02 04 45.4	
	comp=Z,21nm,1.0s						
LTY	**Liberty**	**90.92**	**43**	IAmb	IAmb	02 04 44.2	
	comp=Z,21nm,1.1s						
DECC	**Green Verdugo**	**90.98**	**56**	P	**P**	**02 04 43.2**	**+0.9**
	baz=263						
MLAC	**Mammoth, Mammo**	**90.99**	**52**	P	**P**	**02 04 43.5**	**+1.0**
	baz=263						
ISA	**Isabella, Lake**	**91.04**	**54**	P	**P**	**02 04 43.6**	**+1.1**
	baz=263						
PASC	**Pasadena Art C**	**91.09**	**56**	IAMs_20	IAMs_20	02 38 20.0	
	comp=Z,3µm,20.0s						
F07A	**Phinny Hill Vi**	**91.24**	**44**	IAmb	IAmb	02 04 46.0	
	comp=Z,18nm,0.9s						
EDW2	**Edwards Air Fo**	**91.33**	**55**	P	**P**	**02 04 44.9**	**+1.0**
	baz=263,SNR=15						
E07A	**Sunnyside**	**91.38**	**43**	IAmb	IAmb	02 04 46.6	
	comp=Z,25nm,0.9s						
CWC	**Cottonwood Cre**	**91.45**	**54**	P	**P**	**02 04 45.9**	**+1.3**
	baz=263						
NVAR	**Mina Array Bea**	**91.50**	**52**	P	**P**	**02 04 45.7**	**+0.9**
	comp=Z,36nm,0.9s,baz=253,slow=5.6,SNR=85						
NVAR				PKKPbc	**PKKPbc**	**02 22 06.8**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=130,slow=2.6,SNR=5.4						
NVAR				LR	LR	02 41 36.9	
	comp=Z,2µm,19.1s,baz=274,slow=33						
BFSC	**Mount Baldy Ra**	**91.54**	**56**	P	**P**	**02 04 46.1**	**+1.1**
	baz=263						
HAWA	**Hanford**	**91.58**	**44**	IAmb	IAmb	02 04 47.1	
	comp=Z,24nm,0.9s						
BRVK	**Borovoye**	**91.63**	**323**	P	**P**	**02 04 43.0**	**-1.8**
BRVK				pmax	pmax		
	comp=Z,14nm,0.9s						
BRVK				MLR	MLR		
	comp=Z,1µm,22.0s						
BRVK	**Borovoye**	**91.63**	**323**	P	**P**	**02 04 43.0**	**-1.8**
BRVK				IAmb	IAmb	02 04 47.3	
	comp=Z,14nm,0.9s						
LRMC	**Laurel Mtn Rad**	**91.66**	**55**	P	**P**	**02 04 46.8**	**+1.3**
	baz=264,SNR=18						
WVOR	**Wild Horse Val**	**91.72**	**48**	IAmb	IAmb	02 04 48.2	
	comp=Z,13nm,0.9s						
WVOR				IAMs_20	IAMs_20	02 40 49.5	
	comp=Z,5µm,20.0s						
G08A	**Pilot Rock**	**91.84**	**45**	IAmb	IAmb	02 04 48.9	
	comp=Z,25nm,1.1s						
109C	**Camp Elliot, M**	**91.85**	**57**	IAMs_20	IAMs_20	02 42 34.0	
	comp=Z,3µm,19.0s						
109C	**Camp Elliot, M**	**91.85**	**57**	P	**P**	**02 04 47.5**	**+1.2**
	baz=264						
MURC	**Murrieta**	**91.85**	**57**	P	**P**	**02 04 47.5**	**+1.2**
	baz=264,SNR=6.2						
MPMC	**Manual Prospec**	**91.88**	**54**	P	**P**	**02 04 47.6**	**+1.0**
	baz=264,SNR=21						
J08A	**Circle Bar Ran**	**91.95**	**47**	IAmb	IAmb	02 04 49.5	
	comp=Z,21nm,1.1s						
B08A	**Colville Reser**	**91.96**	**42**	IAmb	IAmb	02 04 48.8	
	comp=Z,17nm,1.1s						
D08A	**Wollman Farm,**	**92.08**	**43**	IAmb	IAmb	02 04 49.8	
	comp=Z,18nm,1.0s						
GRAC	**Grapevine Rang**	**92.08**	**53**	P	**P**	**02 04 48.7**	**+1.4**
	baz=264						
RRX	**Edison Barstow**	**92.15**	**55**	P	**P**	**02 04 48.4**	**+0.8**
	baz=264						
GSC	**Goldstone, Bar**	**92.35**	**55**	IAmb	IAmb	02 04 52.6	
	comp=Z,16nm,0.9s						
GSC	**Goldstone, Bar**	**92.35**	**55**	P	**P**	**02 04 49.9**	**+1.2**
	baz=264,SNR=11						
QSM	**Queen of Sheba**	**92.37**	**54**	IAmb	IAmb	02 04 55.0	
	comp=Z,29nm,1.0s						
MONP2	**Monument Peak**	**92.42**	**57**	P	**P**	**02 04 50.2**	**+1.0**
	baz=264,SNR=13						
FURC	**Furnace Creek,**	**92.42**	**54**	P	**P**	**02 04 50.3**	**+1.4**
	baz=264,SNR=18						
PFO	**Pinyon Flats O**	**92.46**	**57**	P	**P**	**02 04 50.4**	**+1.1**
	comp=Z,18nm,0.8s,baz=263,slow=4.0,SNR=22						
PFO	**Pinyon Flats O**	**92.46**	**57**	P	**P**	**02 04 49.2**	**-0.1**
PFO				pmax	pmax		
	comp=Z,28nm,1.2s						
PFO	**Pinyon Flats O**	**92.46**	**57**	P	**P**	**02 04 49.2**	**-0.1**
PFO				IAmb	IAmb	02 05 05.0	
	comp=Z,28nm,1.1s						
PFO	**Pinyon Flats O**	**92.46**	**57**	IAMs_20	IAMs_20	02 41 57.3	
	comp=Z,3µm,18.0s						
PFO	**Pinyon Flats O**	**92.46**	**57**	P	**P**	**02 04 50.8**	**+1.5**
	baz=264,SNR=15						
TPFO	**Pinon Flats**	**92.46**	**57**	P	**P**	**02 04 50.9**	**+1.6**
	baz=264,SNR=9.7						
GWY	**Greenwater Val**	**92.55**	**54**	IAmb	IAmb	02 05 06.0	
	comp=Z,33nm,1.3s						
BMN	**Battle Mountai**	**92.56**	**50**	IAmb	IAmb	02 04 53.1	
	comp=Z,25nm,1.0s						
C09A	**Chrisman Ranch**	**92.60**	**42**	IAmb	IAmb	02 04 51.8	
	comp=Z,27nm,1.2s						
IKP	**In-Ko-Pah, Jac**	**92.66**	**58**	P	**P**	**02 04 51.3**	**+1.2**
	baz=264						
HEC	**Hector,Ludlow**	**92.69**	**55**	P	**P**	**02 04 50.8**	**+0.6**
	baz=264,SNR=25						
SHOC	**Shoshone, Teco**	**92.84**	**54**	P	**P**	**02 04 51.7**	**+0.9**
	baz=264						
A36M	**Sachs Harbour**	**92.86**	**18**	IAMs_20	IAMs_20	02 45 44.0	
	comp=Z,4µm,20.0s						
A36M	**Sachs Harbour**	**92.86**	**18**	P	**P**	**02 04 50.1**	**0.0**
	baz=259						
BELC	**Belle Mtn. Jos**	**92.88**	**56**	P	**P**	**02 04 52.1**	**+0.9**
	baz=264,SNR=34						
SYO	**Syowa Base**	**92.90**	**199**	⇓*i*P	**P**	**02 04 51.6**	**+1.2**
SYO	**Syowa Base**	**92.90**	**199**	⇓*i*pP	pP	02 05 02.4	-1.7
SWSC	**Sam W. Stewart**	**92.94**	**57**	P	**P**	**02 04 51.8**	**+0.5**
	baz=264						
BMO	**Blue Mountains**	**92.95**	**45**	IAmb	IAmb	02 04 53.9	
	comp=Z,13nm,1.0s						
TPNV	**Topopah Spring**	**92.96**	**53**	IAmb	IAmb	02 04 55.5	
	comp=Z,15nm,1.1s						
TPNV	**Topopah Spring**	**92.96**	**53**	P	**P**	**02 04 52.2**	**+0.6**
	baz=264,SNR=19						
TUQ	**Turquoise Moun**	**93.08**	**55**	P	**P**	**02 04 52.5**	**+0.4**
	baz=264,SNR=17						
F10A	**Beach Ranch, E**	**93.12**	**44**	IAmb	IAmb	02 04 54.4	
	comp=Z,24nm,1.1s						
GMRC	**Granite Mounta**	**93.23**	**56**	P	**P**	**02 04 53.6**	**+0.8**
	baz=265,SNR=34						
BC3	**Big Chuckawall**	**93.30**	**57**	P	**P**	**02 04 54.5**	**+1.4**
	baz=265,SNR=18						
NEW	**Newport**	**93.42**	**42**	IAmb	IAmb	02 04 55.6	
	comp=Z,24nm,1.1s						
NEW	**Newport**	**93.42**	**42**	P	**P**	**02 04 53.5**	**+0.3**
	baz=264,SNR=23						
IRM	**Iron Mountain**	**93.60**	**56**	P	**P**	**02 04 55.8**	**+1.4**
	baz=265,SNR=53						
R11A	**Troy Canyon, C**	**93.62**	**52**	IAmb	IAmb	02 04 58.9	
	comp=Z,22nm,1.0s						
R11A	**Troy Canyon, C**	**93.62**	**52**	P	**P**	**02 04 55.0**	**+0.4**
	baz=265,SNR=37						
GLA	**Glamis**	**93.77**	**57**	P	**P**	**02 04 56.2**	**+1.0**
	baz=265,SNR=11						
SHPR	**Sheep Range**	**93.79**	**54**	IAmb	IAmb	02 04 59.7	
	comp=Z,25nm,1.0s						
PLID	**Pearl Lake**	**93.90**	**45**	IAMs_20	IAMs_20	02 40 18.8	
	comp=Z,4µm,21.0s						
PRN	**Pahroc Range**	**93.96**	**53**	IAmb	IAmb	02 05 02.2	
	comp=Z,26nm,1.0s						
NEE2	**Needles Airpor**	**94.09**	**56**	P	**P**	**02 04 57.8**	**+1.2**
	baz=265,SNR=7.0						
ELK	**Elko**	**94.09**	**50**	IAmb	IAmb	02 05 00.1	
	comp=Z,14nm,1.1s						
ELK				IAMs_20	IAMs_20	02 41 51.9	
	comp=Z,3µm,19.0s						
PDMCI	**Parker Dam,Lak**	**94.44**	**56**	P	**P**	**02 04 59.4**	**+1.2**
	baz=265,SNR=15						
HLID	**Hailey**	**94.92**	**47**	P	**P**	**02 05 00.8**	**+0.4**
	baz=266						
CCUT	**Cedar City**	**95.31**	**53**	IAmb	IAmb	02 05 08.7	
	comp=Z,20nm,1.3s						
214A	**Organ Pipe Nat**	**95.38**	**59**	P	**P**	**02 05 02.9**	**+0.3**
	baz=266						
MSO	**Missoula**	**95.46**	**44**	IAMs_20	IAMs_20	02 45 13.7	
	comp=Z,4µm,19.0s						
MSO	**Missoula**	**95.46**	**44**	P	**P**	**02 05 03.4**	**+0.6**
	baz=267						
SZCU	**Shurtz Canyon**	**95.53**	**53**	IAmb	IAmb	02 05 07.5	
	comp=Z,15nm,1.1s						
YKA	**Yellowknife Ar**	**95.84**	**28**	P	**P**	**02 05 03.7**	**-0.2**
	comp=Z,11nm,0.9s,baz=268,slow=4.8,SNR=59						
YKA				PKKP	**PKKPbc**	**02 21 52.0**	**-3.6**
	comp=Z,1.2nm,0.5s,baz=85,slow=2.6,SNR=32						
YKA				LR	LR	02 47 43.6	
	comp=Z,962nm,18.3s,baz=0.0,slow=35						
DUG	**Dugway, Tooele**	**95.90**	**50**	IAMs_20	IAMs_20	02 41 59.8	
	comp=Z,3µm,21.0s						
DUG	**Dugway, Tooele**	**95.90**	**50**	P	**P**	**02 05 05.3**	**+0.4**
	baz=267						
HVU	**Hansel Valley**	**96.01**	**49**	IAmb	IAmb	02 05 07.9	
	comp=Z,14nm,0.9s						
PKCU	**Pink Cliffs**	**96.14**	**53**	IAmb	IAmb	02 05 11.2	
	comp=Z,24nm,1.0s						
MTPU	**Mount Pierson**	**96.27**	**52**	IAmb	IAmb	02 05 11.6	
	comp=Z,24nm,1.0s						
DLMT	**Dillon**	**96.32**	**45**	IAMs_20	IAMs_20	02 42 57.8	
	comp=Z,2µm,20.0s						
WUAZ	**Wupatki**	**96.79**	**55**	IAmb	IAmb	02 05 14.4	
	comp=Z,10nm,0.9s						
WUAZ				IAMs_20	IAMs_20	02 42 40.7	
	comp=Z,3µm,20.0s						
WUAZ	**Wupatki**	**96.79**	**55**	P	**P**	**02 05 09.6**	**+0.5**
	baz=267,SNR=12						
BOZ	**Bozeman (W)**	**97.00**	**45**	IAMs_20	IAMs_20	02 45 21.0	
	comp=Z,3µm,19.0s						
BOZ	**Bozeman (W)**	**97.00**	**45**	P	Pdif	02 05 10.0	0.0
	baz=268,SNR=15						
TMUT	**Trail Mountain**	**97.09**	**51**	IAmb	IAmb	02 05 14.2	
	comp=Z,19nm,0.9s						
Q16A	**Castle Valley**	**97.10**	**52**	IAmb	IAmb	02 05 27.2	
	comp=Z,14nm,1.2s						
TUC	**Tucson**	**97.12**	**58**	P	Pdif	02 05 11.2	+0.5
TUC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TUC	**Tucson**	**97.12**	**58**	P	Pdif	02 05 11.2	+0.6
TUC	**Tucson**	**97.12**	**58**	IAMs_20	IAMs_20	02 41 14.6	
	comp=Z,3µm,21.0s						
TUC	**Tucson**	**97.12**	**58**	P	Pdif	02 05 11.4	+0.8
	baz=267						
AHID	**Auburn Hatcher**	**97.30**	**48**	IAMs_20	IAMs_20	02 45 14.9	
	comp=Z,4µm,20.0s						
SLBS	**Sierra La Lagu**	**97.37**	**67**	IAMs_20	IAMs_20	02 45 36.8	
	comp=Z,3µm,20.0s						
YMR	**Madison River**	**97.45**	**46**	IAmb	IAmb	02 05 15.7	
	comp=Z,12nm,0.9s						
P17A	**Butcher Ranch,**	**97.46**	**51**	IAmb	IAmb	02 05 15.0	
	comp=Z,13nm,1.0s						
REDW	**Red Top Meadow**	**97.50**	**47**	IAmb	IAmb	02 05 16.2	
	comp=Z,17nm,1.4s						
H17A	**Grant Village**	**97.72**	**46**	IAmb	IAmb	02 05 17.6	
	comp=Z,11nm,1.1s						
H17A	**Grant Village**	**97.72**	**46**	P	Pdif	02 05 14.2	+0.9
	baz=269,SNR=10.0						
P18A	**Preston Nutter**	**97.85**	**51**	IAmb	IAmb	02 05 26.1	
	comp=Z,9.9nm,0.9s						
YMP	**Mirror Lake Pl**	**98.03**	**46**	IAmb	IAmb	02 05 34.6	
	comp=Z,19nm,1.5s						
W18A	**Petrified Fore**	**98.11**	**56**	IAmb	IAmb	02 05 31.2	
	comp=Z,8.5nm,0.8s						
EGMT	**Eagleton**	**98.33**	**42**	IAmb	IAmb	02 05 17.3	
	comp=Z,11nm,1.0s						
EGMT	**Eagleton**	**98.33**	**42**	P	Pdif	02 05 15.8	+0.1
	baz=270						
BW06	**Boulder Array**	**98.43**	**48**	IAMs_20	IAMs_20	02 46 21.0	
	comp=Z,3µm,19.0s						
BW06	**Boulder Array**	**98.43**	**48**	P	**P**	**02 05 16.1**	**-0.4**
	baz=269,SNR=11						
PDAR	**Pinedale Array**	**98.43**	**48**	P	**P**	**02 05 16.2**	**-0.2**
	comp=Z,5.2nm,0.8s,baz=242,slow=2.2,SNR=36						
PDAR				PKKPbc	**PKKPbc**	**02 21 46.2**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=121,slow=4.6,SNR=5.5						
PDAR				LR	LR	02 46 51.0	
	comp=Z,3µm,18.7s,baz=287,slow=34						
ARU	**Arti**	**98.60**	**326**	*c i*P	**P**	**02 05 13.7**	**-2.8**
ARU						02 09 14.1	
ARU				S	**SKSac**	**02 15 47.1**	**-3.5**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARU				MLR	MLR		
	comp=Z,829nm,21.0s						
RLMT	**Red Lodge**	**98.66**	**45**	IAMs_20	IAMs_20	02 46 07.9	
	comp=Z,3µm,20.0s						
RLMT	**Red Lodge**	**98.66**	**45**	P	Pdif	02 05 18.0	+0.6
	baz=270,SNR=5.3						
GEYT	**Alibeck**	**99.03**	**307**	LR	LR	02 51 56.0	
	comp=Z,508nm,20.9s,baz=30,slow=36						
AKTO	**Aktyubinsk**	**99.08**	**320**	LR	LR	02 50 31.9	
	comp=Z,337nm,21.3s,baz=66,slow=36						
MVCO	**Mesa Verde**	**99.17**	**53**	IAMs_20	IAMs_20	02 46 40.5	
	comp=Z,3µm,19.0s						
MVCO	**Mesa Verde**	**99.17**	**53**	P	**Pdif**	**02 05 19.8**	**-0.1**
	baz=269						
O20A	**White River Ci**	**99.40**	**50**	IAmb	IAmb	02 05 25.9	
	comp=Z,9.8nm,0.8s						
O20A	**White River Ci**	**99.40**	**50**	P	**Pdif**	**02 05 20.8**	**0.0**
	baz=270,SNR=6.1						
SMCO	**Snowmass**	**100.38**	**51**	IAMs_20	IAMs_20	02 48 22.5	
	comp=Z,2µm,18.0s						
Y22D	**IRIS PASSCAL I**	**100.41**	**57**	IAMs_20	IAMs_20	02 48 29.7	
	comp=Z,3µm,19.0s						
S22A	**4UR Ranch, Cre**	**100.50**	**53**	P	**Pdif**	**02 05 26.0**	**+0.2**
	baz=270						
K22A	**Casper**	**100.67**	**48**	P	**Pdif**	**02 05 26.4**	**+0.1**
	baz=271						
LAO	**LASA Array**	**100.76**	**44**	IAMs_20	IAMs_20	02 49 00.2	
	comp=Z,2µm,18.0s						
LAO	**LASA Array**	**100.76**	**44**	P	**Pdif**	**02 05 27.1**	**+0.6**

	baz=272,SNR=9.2						
ANMO	Albuquerque	100.80	56	IAMs_20	IAMs_20	02 47 02.9	
	comp=Z,2µm,21.0s						
ANMO	Albuquerque	100.80	56	P	Pdif	02 05 27.7	+0.6
	baz=270						
SNAA	Sanae	100.81	187	Pdiff	Pdif	02 05 26.0	-0.2
N23A	Red Feather La	101.14	50	P	Pdif	02 05 29.0	+0.4
	baz=271						
ISCO	Idaho Springs	101.42	51	IAMs_20	IAMs_20	02 46 31.0	
	comp=Z,2µm,20.0s						
ISCO	Idaho Springs	101.42	51	P	Pdif	02 05 30.4	+0.5
	baz=271						
PHWY	Pilot Hill	101.50	49	IAMs_20	IAMs_20	02 49 42.0	
	comp=Z,3µm,19.0s						
SDCO	Great Sand Dun	101.55	53	IAMs_20	IAMs_20	02 47 04.6	
	comp=Z,3µm,20.0s						
SDCO	Great Sand Dun	101.55	53	P	Pdif	02 05 31.2	+0.7
	baz=271						
MNTX	Cornudas Mount	101.69	59	IAMs_20	IAMs_20	02 44 00.7	
	comp=Z,4µm,21.0s						
VNA2	Neumayer--Watz	102.02	186	Pdiff	Pdif	02 05 32.1	+0.6
DGMT	Dagmar	102.03	42	P	Pdif	02 05 32.7	+0.6
	baz=274						
RSSD	Black Hills	102.42	46	P	Pdif	02 05 34.1	-0.1
	baz=273						
T25A	Trinidad	102.43	53	IAMs_20	IAMs_20	02 47 46.0	
	comp=Z,2µm,20.0s						
OGNE	Ogallala	104.10	49	IAMs_20	IAMs_20	02 51 06.1	
	comp=Z,3µm,19.0s						
VOI	Vohitsoka	104.11	246	IAMs_20	IAMs_20	02 49 08.5	
	comp=Z,2µm,20.0s						
AMTX	Amarillo	104.72	56	IAMs_20	IAMs_20	02 47 36.8	
	comp=Z,3µm,21.0s						
TULEG	Thule	105.94	10	IAMs_20	IAMs_20	02 49 16.3	
	comp=Z,2µm,21.0s						
CBKS	Cedar Bluff	106.03	52	IAMs_20	IAMs_20	02 47 49.0	
	comp=Z,4µm,22.0s						
LVZ	Lovozero	106.80	340	IAMs_20	IAMs_20	02 52 44.8	
	comp=Z,2µm,18.0s						
U32A	Winter Ranch,	106.81	54	IAMs_20	IAMs_20	02 49 24.9	
	comp=Z,3µm,20.0s						
MAK	Makhachkala	106.84	313	*i* P	Pdif	02 05 57.2	+3.7
MAK				*e*		02 10 16.6	
MAK				*e*		02 16 31.4	
MAK				*e*		02 17 15.0	
MAK				*e*PS	PS	02 19 41.6	+1.0
MAK				*e*SS	SS	02 25 20.0	-2.3
MAK				MLR	MLR		
	comp=Z,952nm,19.0s						
OK035	E0210 Rd and N	107.02	54	IAMs_20	IAMs_20	02 50 20.4	
	comp=Z,4µm,20.0s						
UNM	Universidad Na	107.23	72	IAMs_20	IAMs_20	02 57 17.3	
	comp=Z,2µm,18.0s						
APA	Apatity	107.38	340	⇓*i*P	Pdif	02 06 02.1	+6.8
APA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KLMR	Klimovskoe	107.58	332	*e*P	Pdif	02 05 53.3	-3.0
KLMR				pmax	pmax		
	comp=Z,17nm,1.4s						
ECSD	EROS Data Cent	107.80	46	IAMs_20	IAMs_20	02 53 45.6	
	comp=Z,3µm,19.0s						
OK025	Westminster Rd	108.22	55	IAMs_20	IAMs_20	02 49 59.4	
	comp=Z,3µm,21.0s						
KVTX	Kingsville	108.29	63	IAMs_20	IAMs_20	02 53 56.9	
	comp=Z,3µm,19.0s						
KSU1	Kansas State U	108.42	51	IAMs_20	IAMs_20	02 50 25.3	
	comp=Z,3µm,20.0s						
OK031	S. Brethren Rd	108.59	54	IAMs_20	IAMs_20	02 55 33.1	
	comp=Z,3µm,19.0s						
ARCES	ARCESS Array B	108.83	343	PKiKP	PKiKP	02 10 07.1	+0.7
	comp=Z,1.7nm,0.7s,baz=306,slow=0.8,SNR=1.6						
ARCES				PKKPbc	PKKPbc	02 21 15.2	-2.3
	comp=Z,1.7nm,0.7s,baz=0.0,slow=2.9,SNR=4.1						
TUL1	Leonard	109.44	54	IAMs_20	IAMs_20	02 54 23.6	
	comp=Z,3µm,19.0s						
X37A	Clayton	109.93	56	IAMs_20	IAMs_20	02 53 31.6	
	comp=Z,3µm,19.0s						
KIV	Kislovodsk	110.15	315	*i* PKIKP	PKiKP	02 10 06.9	-2.8
KIV				*e*		02 10 41.5	
KIV				*e*PS	PS	02 20 10.9	-3.3
KIV				*e*SS	SS	02 26 03.8	-3.2
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NATX	Nacogdoches	110.81	59	IAMs_20	IAMs_20	02 54 00.2	
	comp=Z,2µm,20.0s						
W39A	Magazine	111.15	55	IAMs_20	IAMs_20	02 55 07.9	
	comp=Z,3µm,20.0s						
MIAR	Mount Ida	111.40	55	IAMs_20	IAMs_20	02 53 43.6	
	comp=Z,3µm,20.0s						
U40A	Yellville	111.74	53	IAMs_20	IAMs_20	02 58 35.4	
	comp=Z,3µm,19.0s						
X40A	Basin Creek Fa	112.02	55	IAMs_20	IAMs_20	02 54 29.9	
	comp=Z,3µm,20.0s						
SOC	Sochi	112.33	315	*i* PKIKP	PKiKP	02 10 11.1	-2.6
SOC				*e*		02 10 55.7	
SOC				*e*PPP	PPP	02 13 16.2	
SOC				*e*PS	PS	02 20 28.8	-5.2
SOC				*e*SSS	SSS	02 30 39.7	
SOC				MLR	MLR		
	comp=Z,378nm,18.0s						
JFWS	Jewell Farm	112.51	46	IAMs_20	IAMs_20	02 50 38.4	
	comp=Z,3µm,22.0s						
CCM	Cathedral Cave	112.73	51	IAMs_20	IAMs_20	02 56 21.5	
	comp=Z,3µm,20.0s						
FINES	FINESS Array B	113.18	336	PKiKP	PKiKP	02 10 15.1	+0.3
	comp=Z,3.1nm,0.9s,baz=90,slow=4.2,SNR=2.6						
FINES				PKKPbc	PKKPbc	02 21 00.6	-2.5
	comp=Z,0.5nm,0.3s,baz=242,slow=3.3,SNR=7.8						
VBMS	Vicksburg	114.25	58	IAMs_20	IAMs_20	02 51 51.2	
	comp=Z,2µm,20.0s						
L44A	Lake County Fo	114.36	46	IAMs_20	IAMs_20	02 59 43.6	
	comp=Z,3µm,19.0s						
HQIL	Hanson Quary C	114.50	47	IAMs_20	IAMs_20	02 57 52.8	
	comp=Z,3µm,21.0s						
WVT	Waverly	115.78	53	IAMs_20	IAMs_20	02 55 02.5	
	comp=Z,2µm,20.0s						
PLAL	Pickwick Lake	115.81	54	IAMs_20	IAMs_20	02 53 23.1	
	comp=Z,2µm,20.0s						
EFI	East Falkland	115.81	158	*i* PKIKP	PKPdf	02 10 20.8	+0.6
MNK	Minsk	115.84	329	*i* P	Pdif	02 06 35.8	+2.5
MNK				*i*		02 10 20.2	
MNK				*i*		02 11 23.4	
MNK				*i* PPP	PPP	02 13 50.0	
MNK				*i*		02 17 27.9	
MNK				*i* PS	PKKPab	02 21 04.8	+7.9
MNK				*i* SS	SS	02 27 20.9	-0.3
MNK				*i* SSS	SSS	02 31 35.5	
MNK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.3s						
MNK				pmax	pmax		
	comp=N,20nm,1.2s						
MNK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MNK				pmax	pmax		
	comp=N,17nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.2s						
MNK				MLR	MLR		
	comp=N,582nm,20.0s						
MNK				MLR	MLR		
	comp=Z,859nm,22.0s						
MNK				MLR	MLR		
	comp=E,94nm,22.0s						
MNK	Minsk	115.84	329	*i* P	Pdif	02 06 35.8	+2.5
	comp=E,2.0nm,1.3s						
MNK				*i* P	Pdif	02 06 35.8	+2.5
	comp=N,20nm,1.2s						
MNK				*i* P	Pdif	02 06 35.8	+2.5
	comp=Z,6.0nm,1.1s,baz=61						
MNK				*i* PKP	PKPdf	02 10 20.3	+0.2
	comp=E,2.0nm,1.2s						
MNK				*i* PKP	PKPdf	02 10 20.3	+0.2
	comp=N,17nm,1.0s						
MNK				*i* PKP	PKPdf	02 10 20.3	+0.2
	comp=Z,3.0nm,0.6s						
MNK				*i* PP	PP	02 11 23.4	-0.4
MNK				*i* PPP	PPP	02 13 50.1	
MNK				*i* SKS	SKSdf	02 17 28.0	-0.4
MNK				*i* SKKS	SKKSac	02 18 54.7	+33
MNK				*i* PS	PS	02 21 04.8	-0.8
MNK				*i* SS	SS	02 27 20.9	-0.2
MNK				*i* SSS	SSS	02 31 35.5	
MNK				*i* LQ	LQ	02 49 33.5	
MNK				*i* LR	LR	02 56 53.4	
MNK				*i* LRM	MLR	03 00 18.0	
	comp=N,582nm,20.3s						
MNK				*i* LRM	MLR	03 00 23.5	
	comp=Z,859nm,21.6s						
MNK				*i* LRM	MLR	03 00 40.9	
	comp=E,94nm,22.2s						
T47A	Sharon Grove	116.17	52		PKiKP	02 10 21.4	+0.1
NACGM	Naroch	116.21	329	*i* PKP	PKiKP	02 10 28.3	+7.5
SNET	Serv Nac Est T	116.74	78	IAMs_20	IAMs_20	02 51 08.3	
	comp=Z,3µm,20.0s						
AKASG	Malin Array Be	116.80	325	PKP	PKPdf	02 10 20.7	-1.4
	comp=Z,1.8nm,0.7s,baz=55,slow=2.5,SNR=5.2						
AKASG				PP	PP	02 11 30.9	+0.3
	comp=Z,2.4nm,0.7s,baz=55,slow=6.4,SNR=6.1						
AKASG				PKKPbc	PKKPbc	02 20 48.5	-1.8
	comp=Z,0.2nm,0.3s,baz=262,slow=3.4,SNR=2.7						
CLTN	Cedars of Leba	116.97	53		PKPdf	02 10 21.2	-1.7
BRAL	Brewton	117.33	58	IAMs_20	IAMs_20	02 57 22.9	
	comp=Z,2µm,21.0s						
AAM	Ann Arbor	117.36	45	IAMs_20	IAMs_20	02 54 07.8	
	comp=Z,3µm,22.0s						
P49A	Miami Univ. Ec	117.38	49	IAMs_20	IAMs_20	02 59 40.6	
	comp=Z,3µm,19.0s						
BRTR	Keskin Array B	117.71	312	PKP	PKPdf	02 10 24.0	-0.4
	comp=Z,1.3nm,0.8s,baz=45,slow=14,SNR=4.3						
BRTR				PP	PP	02 11 35.9	-1.7
	comp=Z,1.4nm,0.8s,baz=69,slow=8.0,SNR=2.2						
BRTR	Keskin Array B	117.71	312	PKPdf	PKPdf	02 10 23.4	-1.0
BRTR					PP	02 11 36.1	-1.6
ACSO	Alum Creek Sta	118.47	47	IAMs_20	IAMs_20	02 54 01.6	
	comp=Z,3µm,22.0s						
TGUH	Tegucigalpa,Un	118.64	77	IAMs_20	IAMs_20	02 50 24.7	
	comp=Z,2µm,22.0s						
HFS	Hagfors	118.74	339	PKP	PKPdf	02 10 24.7	-0.9
	comp=Z,1.0nm,0.7s,baz=12,slow=7.6,SNR=6.6						
HOPE	Hope Point	118.93	173	IAMs_20	IAMs_20	02 52 22.0	
	comp=Z,2µm,21.0s						
NB2	NORSAR Subarra	118.94	341	PKPdf	PKPdf	02 10 24.7	-1.3
	comp=Z,1.3nm,1.0s,baz=41,slow=1.7						
NOA	NORSAR Array B	118.94	341	PKP	PKPdf	02 10 24.7	-1.3
	comp=Z,1.5nm,1.0s,baz=44,slow=1.8,SNR=3.9						
P52A	Corning	119.27	48	IAMs_20	IAMs_20	03 00 43.4	
	comp=Z,2µm,20.0s						
M53A	WI Miller and	119.75	45	IAMs_20	IAMs_20	02 59 33.1	
	comp=Z,3µm,21.0s						
O53A	New Philadelph	119.75	47	IAMs_20	IAMs_20	03 01 07.8	
	comp=Z,3µm,21.0s						
TIRR	Tirgusor	119.82	318	IAMs_20	IAMs_20	03 11 15.7	
	comp=Z,2µm,20.0s						
GOGA	Godfrey	119.87	55	IAMs_20	IAMs_20	03 00 44.3	
	comp=Z,3µm,19.0s						
ERPA	Erie	120.00	45	IAMs_20	IAMs_20	02 55 14.9	
	comp=Z,3µm,22.0s						
BOAB	BOACO BROADBAN	120.21	79	IAMs_20	IAMs_20	03 00 15.0	
	comp=Z,2µm,19.0s						
KALB	Balgarevo	120.22	317	⇑P	PKiKP	02 10 39.6	+11
BOSA	Boshof	120.24	232	PKP	PKPdf	02 10 29.4	-0.2
	comp=Z,4.7nm,0.6s,baz=152,slow=1.7,SNR=14						
BOSA				PKKPbc	PKKPbc	02 20 36.5	-0.9
	comp=Z,3.0nm,0.8s,baz=354,slow=4.1,SNR=3.7						
N54A	Moraine State	120.40	46	IAMs_20	IAMs_20	02 59 52.8	
	comp=Z,3µm,20.0s						
HODGE	Hodges	120.65	54		PKiKP	02 10 30.4	+0.3
JTS	Las Juntas de	120.89	82	IAMs_20	IAMs_20	03 01 00.8	
	comp=Z,2µm,18.0s						
KMSC	Kings Mountain	121.15	53	P	PKPdf	02 10 30.9	0.0
	baz=286						
BLA	Blacksburg	121.28	50	P	PKPdf	02 10 30.9	-0.3
	baz=287						
VOIR		121.60	320	⇓P	PKiKP	02 10 33.3	+1.6
VOIR		121.60	320	⇓PKIKP	PKiKP	02 10 33.3	+1.6
KOLS	Kolonicke sedl	121.61	325	*e*PKIKP	PKPdf	02 10 30.1	-1.3
KOLS	Kolonicke sedl	121.61	325	*e*PKP	PKPdf	02 10 30.1	-1.3
O56A	Blue Knob Stat	121.65	46	IAMs_20	IAMs_20	03 02 26.1	
	comp=Z,3µm,21.0s						
O56A	Blue Knob Stat	121.65	46	P	PKiKP	02 10 32.2	+0.2
	baz=291						
HDC	Heredia	121.71	82	IAMs_20	IAMs_20	02 59 26.0	
	comp=Z,2µm,19.0s						
PEL	Peldehue	121.77	135	IAMs_20	IAMs_20	02 52 05.9	
	comp=Z,2µm,22.0s						
ARR	Arges	121.89	321	⇓P	PKiKP	02 10 32.4	+0.1
SSPA	Standing Stone	122.01	45	P	PKiKP	02 10 32.7	+0.1
	baz=291						
SRBA	San Rafael, Bu	122.43	83		PKPdf	02 10 33.6	-0.5
NHSC	New Hope	122.61	55	IAMs_20	IAMs_20	03 01 38.7	
	comp=Z,2µm,20.0s						
DWPF	Disney Wildern	122.69	61	IAMs_20	IAMs_20	02 59 01.0	
	comp=Z,1µm,21.0s						
BINY	Binghamton	122.73	43	IAMs_20	IAMs_20	03 03 33.6	
	comp=Z,3µm,20.0s						
LSZ	Lusaka	122.86	247	IAMs_20	IAMs_20	02 57 37.5	
	comp=Z,2µm,22.0s						
LANS	Liptovska Anna	123.06	327	*e*PKIKP	PKiKP	02 10 35.4	+0.9
LANS	Liptovska Anna	123.06	327	*e*PKP	PKiKP	02 10 35.4	+0.9
N59A	State Game Lan	123.39	44	IAMs_20	IAMs_20	02 59 35.8	
	comp=Z,2µm,20.0s						
BZS	Buzias	123.65	322	⇑P	PKPdf	02 10 33.8	-1.6
BZS	Buzias	123.65	322	⇑PKIKP	PKPdf	02 10 33.8	-1.6
MORC	Moravsky Berou	123.74	328	⇑P	PKiKP	02 10 35.8	0.0
MORC	Moravsky Berou	123.74	328	⇑PKIKP	PKiKP	02 10 35.8	0.0
P60A	Greenville	123.91	46	P	PKiKP	02 10 36.4	0.0
	baz=293						
KRLC	Kraliky	123.96	329	*e*PKPDF	PKPdf	02 10 35.7	-0.3
KRLC	Kraliky	123.96	329	*e*PKIKP	PKPdf	02 10 35.7	-0.3
VTS	Vitosha	124.01	318	⇑P	PKPdf	02 10 35.5	-0.9
VTS	Vitosha	124.01	318	PKIKP	PKPdf	02 10 35.8	-0.6
VTS	Vitosha	124.01	318	PKPdf	PKPdf	02 10 35.8	-0.6
VRAC	Vranov	124.52	328	⇓P	PKiKP	02 10 41.1	+3.8
VRAC	Vranov	124.52	328	⇓PKIKP	PKiKP	02 10 41.1	+3.8
BOVS	Bovan	124.55	320	⇓P	PKPdf	02 10 35.8	-1.4
MODS	Modra-Piesok	124.70	327	*e*PKIKP	PKPdf	02 10 36.6	-0.8
MODS	Modra-Piesok	124.70	327	*e*PKP	PKPdf	02 10 36.6	-0.8
CLL	Collm	125.06	332	*e*PKIKP	PKPdf	02 10 38.0	+0.1
CLL				*e*		02 10 52.0	
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CLL	Collm	125.06	332	*e*PKPdf	PKPdf	02 10 38.0	+0.1
	comp=Z,4.0nm,0.8s						
CLL				*e*		02 10 42.0	
	comp=Z,7.0nm,0.8s						
CLL				*e*sPKPdf	pPKPdf	02 10 52.0	-0.3
CLL				*e*		02 11 02.0	
CLL				*e*PP	PP	02 12 30.0	+3.3
CLL				*e*		02 14 00.0	
CLL				*e*PPP	PPP	02 15 18.0	
CLL				*e*PS	PS	02 22 24.0	-4.0
CLL				*e*		02 23 29.0	
CLL				*e*PPS	PPS	02 23 54.0	
CLL				*e*(SS)		02 29 00.0	
CLL				*e*		02 32 18.0	
CLL				*e*SSS	SSS	02 33 54.0	
CLL	Collm	125.06	332		PKiKP	02 10 38.1	-0.1
PRU	Pruhonice	125.16	330	*e*PKPDF	PKiKP	02 10 41.0	+2.5
PRU	Pruhonice	125.16	330	*e*PKIKP	PKiKP	02 10 41.0	+2.5
NNA	Nana	125.61	109	IAMs_20	IAMs_20	03 06 33.2	
	comp=Z,1µm,19.0s						
BCIP	Isla Barro Col	125.91	83	*e*P	PKPdf	02 10 39.4	-1.2
BCIP	Isla Barro Col	125.91	83	IAMs_20	IAMs_20	02 55 40.0	
	comp=Z,2µm,19.0s						
CKRC	Cesky Krumlov	126.01	329	*e*PKPDF	PKPdf	02 10 39.5	-0.4
NKC	Novy Kostel	126.03	331	*e*PKPDF	PKiKP	02 10 40.4	+0.1
NKC	Novy Kostel	126.03	331	*e*PKIKP	PKiKP	02 10 40.4	+0.1
FNA	Florina	126.07	317	PKIKP	PKPdf	02 10 38.7	-1.6
FNA	Florina	126.07	317	PKPdf	PKPdf	02 10 38.7	-1.6
KHC	Kasperske Hory	126.19	329	*e*PKP	PKPdf	02 10 39.6	-0.6
KHC	Kasperske Hory	126.19	329	*e*PKIKP	PKPdf	02 10 39.6	-0.6
PAC1	Pacto, Paraso	126.28	94	*e*P	PKiKP	02 10 44.8	+2.8
GEC2	GERESS Array S	126.30	329	PKPdf	PKPdf	02 10 40.0	-0.6
GERES	GERESS Array B	126.30	329	PKP	PKPdf	02 10 40.0	-0.6
	comp=Z,3.0nm,0.9s,baz=78,slow=1.9,SNR=20						
GERES	GERESS Array B	126.30	329	PKIKP	PKPdf	02 10 40.0	-0.6
OTAV	Otavalo	126.61	94	*e*P	PKiKP	02 10 46.5	+3.4
PDG	Podgorica	126.70	320	⇑P	PKiKP	02 10 42.5	+0.7
KBA	Koelnbreinsper	127.60	327	*e*P	PKPdf	02 10 42.1	-1.1
	comp=Z,7.7nm,1.4s						
MTDJ	Mount Denham	127.75	72	IAMs_20	IAMs_20	03 02 38.7	
	comp=Z,1µm,19.0s						
EKA	Eskdalemuir Ar	127.98	344	PKP	PKiKP	02 10 43.8	-0.2
	comp=Z,2.8nm,0.7s,baz=14,slow=3.2,SNR=4.3						
ABTA	Abfaltersbach	128.25	328	*i* P	PKPdf	02 10 43.1	-1.2
	comp=Z,8.9nm,1.4s						
WTTA	Wattenberg	128.38	329	*e*P	PKPdf	02 10 43.1	-1.6
	comp=Z,5.9nm,0.8s						
STAL	STALIGIAL	128.45	327	PKPdf	PKPdf	02 10 43.6	-1.0
LVC	Limon Verde	128.56	125	PKP	PKPdf	02 10 46.1	+0.1
	comp=Z,4.8nm,0.8s,baz=283,slow=3.2,SNR=4.4						
MOTA	Moosalm	128.60	329	*i* P	PKPdf	02 10 44.3	-0.8
	comp=Z,5.4nm,0.9s						
SQTA	Sankt Quirin	128.63	329	*i* P	PKPdf	02 10 44.5	-0.6
	comp=Z,4.8nm,0.9s						
POPC	Popayan, Colom	128.65	92	*e*P	PKPdf	02 10 45.6	-0.6
PB09	IPOC Station P	128.68	124	IAMs_20	IAMs_20	02 55 10.8	
	comp=Z,1µm,21.0s						
RETA	Reutte	128.68	329	*i* P	PKPdf	02 10 44.9	-0.2
	comp=Z,7.2nm,1.3s						
PB01	IPOC Station P	128.82	123		PKPdf	02 10 45.3	-0.8
PCON	Cinco Dias	128.90	92	*e*P	PKiKP	02 10 47.8	0.0
FETA	Feichten	129.01	329	*i* P	PKPdf	02 10 44.9	-0.9
	comp=Z,5.5nm,1.1s						
YOTC	Yotoco, Valle	129.11	90	*e*P	PKPdf	02 10 46.6	-0.3
PLMC	San Jos del P	129.24	89	*e*P	PKPdf	02 10 47.5	+0.3
DAVA	Damuels	129.26	330	*e*P	PKPdf	02 10 46.0	-0.4
	comp=Z,4.7nm,1.0s						
DBBC	Dabeiba	129.43	86	*e*P	PKiKP	02 10 49.5	+1.2
FLOC	Florencia	129.56	93	*e*P	PKiKP	02 10 48.1	-0.3
CBOC	Ciudad Bolivar	129.57	88	*e*P	PKPdf	02 10 47.2	-0.6
GTBY	Guantanamo Bay	129.81	69	IAMs_20	IAMs_20	03 03 10.0	
	comp=Z,2µm,18.0s						
PB16	IPOC Station P	129.99	120	IAMs_20	IAMs_20	03 10 39.0	
	comp=Z,1µm,21.0s						
HELC	Santa Helena	130.07	87	*e*P	PKiKP	02 10 49.5	-0.4
UREC	San Jos de Ur	130.13	85	*e*P	PKPdf	02 10 48.6	-0.1
GUY2C	Guyana, Caldas	130.18	88	*e*P	PKPdf	02 10 49.5	+0.1
ORTC	Ortega, Tolima	130.20	90	*e*P	PKPdf	02 10 48.1	-0.8
AQU	L'Aquila	130.40	323	IAMs_20	IAMs_20	03 11 16.5	
	comp=Z,1µm,22.0s						
SJCC	San Jacinto, C	130.51	82	*e*P	PKiKP	02 10 50.4	0.0
PRAC	Prado	130.54	90	*e*P	PKPdf	02 10 49.6	+0.1
NORC	Norcasia	130.69	88	*e*P	PKPdf	02 10 49.3	-0.6
TSUM	Tsumeb	130.76	238	PKPdf	PKPdf	02 10 49.1	-0.9
TSUM	Tsumeb	130.76	238	IAMs_20	IAMs_20	03 03 13.5	
	comp=Z,2µm,21.0s						
ZARC	Zaragoza, Cauc	130.79	86	*e*P	PKPdf	02 10 49.1	-0.8
VLC	Villacollemand	131.05	326	IAMs_20	IAMs_20	03 11 50.1	
	comp=Z,1µm,21.0s						
PTBC	PUERTO BERRIO,	131.15	87	*e*P	PKPdf	02 10 46.0	-4.7
ROSC	El Rosal	131.19	89	PKP	PKiKP	02 10 51.9	-0.3
	comp=Z,18nm,0.6s,baz=164,slow=19,SNR=4.8						
ROSC				SKPbc	SKPab	02 14 13.3	+0.6
	comp=Z,26nm,0.8s,baz=23,slow=0.8,SNR=7.9						
MACC	Macarena, Meta	131.41	93	*e*P	PKPdf	02 10 50.6	-0.6
SPBC	San Pablo de B	131.49	88	*e*P	PKPdf	02 10 51.1	-0.3
SMLC	San Martn de	131.60	84	*e*P	PKPdf	02 10 50.6	-0.8
CHIC	Chingaza	131.76	89	*e*P	PKPdf	02 10 51.1	-1.2
LPAZ	La Paz	132.04	118	*e*P	PKPdf	02 10 52.6	-0.4
OCAC	Ocana	132.33	85	*e*P	PKPdf	02 10 53.6	+0.5
BNI	Bardonecchia	132.41	329	IAMs_20	IAMs_20	03 15 05.8	
	comp=Z,2µm,20.0s						
RUSC	La Rusia	132.48	88	*e*P	PKPdf	02 10 52.6	-1.2
CRJC	Cerrejon, Guaj	132.75	81	*e*P	PKiKP	02 10 54.5	-0.4
GRTK	Grand Turk	133.19	66	IAMs_20	IAMs_20	03 04 43.7	
	comp=Z,3µm,20.0s						
SDDR	Presa de Saban	133.52	70	IAMs_20	IAMs_20	03 02 08.7	
	comp=Z,3µm,22.0s						
SOCV	Socops	134.77	85	*e*P	PKPdf	02 10 48.1	-9.4
SDV	Santo Domingo	135.00	84	*e*P	PKPdf	02 10 56.8	-1.3
BBSR	BB Station	135.06	50	IAMs_20	IAMs_20	03 08 57.5	
	comp=Z,2µm,20.0s						
CPUP	Villa Florida	135.09	138	PKP	PKPdf	02 10 57.5	-0.2
	comp=Z,3.0nm,0.8s,baz=229,slow=6.0,SNR=3.7						
ETMB	Extrema	136.20	111	PKPdf	PKPdf	02 10 59.7	-0.4
KEST	Kesra	136.78	318	SKPbc	SKPbc	02 14 29.6	-0.1
	comp=Z,12nm,0.9s,baz=311,slow=1.7,SNR=6.7						
BAUV	El Baul	137.56	84	PKPdf	PKPdf	02 11 02.0	-0.7
SIV	San Ignacio	138.23	122	PKP	PKPdf	02 11 03.9	0.0
	comp=Z,5.4nm,0.8s,baz=244,slow=5.2,SNR=17						
SIV				SKPbc	SKPbc	02 14 35.0	+0.5
	comp=Z,3.8nm,0.8s,baz=226,slow=1.5,SNR=6.5						
SJG	San Juan	138.47	70	IAMs_20	IAMs_20	03 03 58.1	
	comp=Z,1µm,20.0s						
SABA	Saba	141.28	70	IAMs_20	IAMs_20	03 03 39.5	
	comp=Z,2µm,19.0s						
SMRT	St. Maarten	141.34	69	IAMs_20	IAMs_20	03 09 38.1	
	comp=Z,2µm,20.0s						
PGAV	Gavieira, Arco	141.38	340	*e*LR	LR	03 00 54.3	
	comp=Z,1µm,22.0s						
SEUS	St. Eustatius	141.55	70	IAMs_20	IAMs_20	03 06 06.7	
	comp=Z,2µm,22.0s						
ESDC	Sonseca Array	141.61	333	PKhKP	PKPpre	02 11 03.8	
	comp=Z,0.7nm,0.7s,baz=12,slow=4.0,SNR=4.5						
MVO	Moncorvo	141.63	338	*e*LR	LR	03 01 39.2	
	comp=Z,677nm,20.0s						
ANWB	Willy Bob	142.62	69	IAMs_20	IAMs_20	03 05 40.1	
	comp=Z,1µm,21.0s						
CBE	Ff, Capester	143.12	72	*e*	PKPbc	02 11 09.1	-0.6
SPB	Sao Paulo	143.26	145	IAMs_20	IAMs_20	03 18 32.1	
	comp=Z,1µm,21.0s						
PMRV	Marv??o	143.27	337	*e*PKP	PKPbc	02 11 09.2	-0.2
PMRV	Marv??o	143.27	337	*e*LR	LR	03 01 46.4	
	comp=Z,703nm,20.0s						
DSLB	Salisbury	143.42	73	*e*	PKPab	02 11 08.7	-0.6
MACA	Manacapuru-AM	143.43	104	PKPdf	PKPdf	02 11 13.5	+0.2
GRGR	Grenville	143.66	78	IAMs_20	IAMs_20	03 04 13.1	
	comp=Z,1µm,20.0s						
PSBE	So Bento	143.73	338	*e*PKP	PKPbc	02 11 10.6	-0.1
SVN	Savane Anatole	143.76	74	IAMs_20	IAMs_20	03 21 16.6	
	comp=Z,1µm,18.0s						
FDF	Fort de France	143.80	74	IAMs_20	IAMs_20	03 05 35.6	
	comp=Z,2µm,22.0s						
PESTR	Estremoz	143.83	336	*e*PKP	PKPab	02 11 10.0	-0.3
PMTG	Montargil	143.91	337	*e*PKP	PKPab	02 11 10.2	-0.4
MPOM	Morne Pois Mar	144.12	74	*e*	PKPdf	02 11 13.9	-0.5
EVO	Evora	144.29	336	*e*PKP	PKPab	02 11 12.1	+0.1
BOAV	Boa Vista	144.66	95	PKPdf	PKPbc	02 11 14.4	0.0
PBEJ	Beja	144.66	336	*e*PKP	PKPbc	02 11 13.7	+0.1
PTGA	Pitinga	144.69	100	PKP	PKPab	02 11 14.0	-0.2
	comp=Z,20nm,0.7s,baz=326,slow=22,SNR=26						
TOSP	Speyside	144.83	79	PKPdf	PKPbc	02 11 15.1	+0.3
PNCL	Nicolau / Gran	144.85	337	*e*PKP	PKPab	02 11 14.0	-0.1
JBK	JBK	145.07	326	P	PKPdf	02 11 16.0	+0.1
PCVE	Castro Verde	145.07	336	*e*PKP	PKPab	02 11 15.0	+0.1
PVAQ	Vaqueiros	145.13	335	*e*PKP	PKPdf	02 11 15.6	0.0
PVAQ	Vaqueiros	145.13	335	*e*LR	LR	03 03 59.0	
	comp=Z,693nm,20.0s						
PALE	Palemas	145.14	329	P	PKPbc	02 11 14.0	-1.3
PTEO	Sao Teotonio	145.42	336	*e*PKP	PKPab	02 11 16.3	+0.1
MORF	Marmelete	145.60	336	*e*PKP	PKPdf	02 11 16.5	0.0
MORF	Marmelete	145.60	336	*e*PKP	PKPab	02 11 16.9	-0.1
PFVI	Vila Bisbo	145.82	336	*e*PKP	PKPab	02 11 18.0	+0.3
CHEFC	Chefchaouen	145.93	330	P	PKiKP	02 11 22.0	+0.7
LCRM	LCR	146.80	328	P	PKPbc	02 11 21.0	+0.5
MDT	Midelt	147.33	327	P	PKiKP	02 11 27.4	+3.1
BDFB	Brasilia	148.67	134	PKPbc	PKPbc	02 11 24.9	-1.1
	comp=Z,11nm,0.7s,baz=157,slow=3.7,SNR=11						
BDFB	Brasilia	148.67	134	PKIKP	PKPdf	02 11 22.9	+0.7
BDFB	Brasilia	148.67	134		PKPdf	02 11 22.9	+0.7
TORD	Torodi Ar. Bea	152.56	286	PKP	PKPdf	02 11 27.5	-0.7
	comp=Z,2.1nm,0.8s,baz=23,slow=2.0,SNR=11						
TORD				PKPbc	PKPbc	02 11 34.2	-1.0
	comp=Z,38nm,0.7s,baz=43,slow=2.0,SNR=103						
MDP	Montagnes des	152.75	91	PKPbc	PKiKP	02 11 36.4	+0.6
	comp=Z,17nm,0.5s,baz=271,slow=5.8,SNR=12						
KOWA	Kowa	157.56	293	PKPab	PKPab	02 12 06.4	-0.6
	comp=Z,10nm,0.5s,baz=53,slow=4.2,SNR=15						
KOWA				PP	PP	02 15 44.5	-1.8
	comp=Z,6.9nm,0.9s,baz=36,slow=5.8,SNR=5.1						
KOWA	Kowa	157.56	293	IAMs_20	IAMs_20	03 31 48.8	
	comp=Z,1µm,20.0s						
KIC	Kosan Boka	159.58	271	*e*PKP1	PKPab	02 12 15.4	-0.5
	comp=Z,88nm,0.7s						
DBIC	Dimbokro	159.70	272	PKPab	PKPab	02 12 16.3	-0.1
	comp=Z,40nm,0.8s,baz=104,slow=4.8,SNR=25						
DBIC				PP	PP	02 16 00.1	+1.8
	comp=Z,4.6nm,0.8s,baz=129,slow=7.3,SNR=3.1						
DBIC	Dimbokro	159.70	272		PKPab	02 12 16.1	-0.2
TIC	Toumodi	159.86	272	*e*PKP1	PKPab	02 12 16.5	-0.6
LIC	Lamto	159.86	271	*e*PKP1	PKPab	02 12 16.4	-0.7
	comp=Z,102nm,0.8s						

ROM 29 02:08:51.5±0.1,43.°053N±0.°004×12.°803E±0.°005, h10^{km},Md1.1/3,1C-1D Error ellipse: s-maj=0.4km s-min=0.4km az=232.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ASSB	Assisi San Ben	0.11	265	⇑P	Pg	02 08 54.8	+0.5
ASSB				S	Sg	02 08 56.8	+0.5
ASSB				AML	AML		

	comp=E,172µm,0.2s						
ASSB				AML	AML		
	comp=N,242µm,0.3s						
ASSB				END			
ATCC	AVT- Casa Cast	0.18	318	⇓P	Pg	02 08 56.1	+0.7
ATCC				S	Sg	02 08 59.3	+1.3
ATCC				END			
FDMO	Fiordimonte	0.21	94	P	Pg	02 08 56.7	+0.8
FDMO				S	Sg	02 09 00.1	+1.2
FDMO				END			
SNTG	Esanatoglia	0.23	26	P	Pg	02 08 56.8	+0.6
SNTG				S	Sg	02 09 00.7	+1.3
FOSV	Fossato di Vic	0.24	353	P	Pg	02 08 57.1	+0.6
FOSV				S	Sg	02 09 01.0	+1.1
CSP1	Cessapalombo	0.30	82	P	Pg	02 08 58.0	+0.5
CSP1				S	Sb	02 09 03.3	-0.8
NRCA	Norcia	0.32	134	P	Pg	02 08 58.5	+0.6
NRCA				S	Sb	02 09 03.5	-1.1
EL6	Elcito	0.35	38	P	Pg	02 08 59.1	+0.6
EL6				S	Sb	02 09 04.8	-0.9
CING	Cingoli	0.43	41	P	Pg	02 09 00.5	+0.5
CING				S	Sb	02 09 07.6	-0.3
SSP9	Sansepolcro	0.71	317	S	Sg	02 09 15.0	+0.3

*IDC **29** 02:17:04.9±1.8, 52°.40N×169°.81W, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.4/42, mbtmp3.7/7, ML3.4/2, Error ellipse: s-maj=51.8km s-min=21.4km az=171.0*

*NEIC **29** 02:17:10.6±1.4, 52°.4N±0°.1×169°.65W±0°.09, h36^{km}±62^{km}, Error ellipse: s-maj=15.4km s-min=7.5km az=165.0*

*AEIC **29** 02:17:10±2.0, 52°.31N±0°.09×169°.5W±0°.1, h24^{km}±8^{km}, ML3.4, Error ellipse: s-maj=14.0km s-min=7.7km az=148.0*

ISC 29 02:17:11.6±1.4**, 52°.6N**±0°.3×**169°.8W**±0°.1**, h44**^{km}**, n29, σ0^{s}92**/20**, mb3.6**/5**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	0.67	59		Pn	02 17 24.1	-0.6
OKSP	Okmok Steeple	1.11	55		Pn	02 17 30.5	-0.2
OKSO	Okmok South	1.23	53		Pn	02 17 32.4	+0.1
OKFG	Magazine Ridge	1.38	55		Pn	02 17 34.8	+0.4
MAPS	Pakushin South	2.08	55		Pn	02 17 44.3	+0.3
MSW	Makushin Switc	2.22	54		Pn	02 17 46.9	+1.0
MTBL	Makushin Table	2.30	53		Pn	02 17 48.2	+1.1
UNV	Unalaska Valle	2.33	57		Pn	02 17 47.8	+0.5
KOFP	Korovin Flat P	2.65	264		Pn	02 17 52.9	+1.0
AKMO	Akutan Morgan	2.70	56		Pn	02 17 54.4	+1.9
KOKL	Mount Kliuchef	2.71	265		Pn	02 17 52.6	+0.1
ATKA	Atka Island	2.72	263		Pn	02 17 52.3	-0.5
KDAK	Kodiak Island	11.10	56	Pn	Pn	02 19 45.2	-2.2
	0.3nm,0.3s,baz=233,slow=3.6,SNR=1.9						
ILAR	Eielson Array	16.89	35	Pn	Pn	02 21 03.8	-0.5
	0.1nm,0.3s,baz=231,slow=10,SNR=6.8						
PETK	Petropavlovsk-	19.54	284	P	Pn	02 21 36.0	-0.6
	1.0nm,0.3s,baz=92,slow=13,SNR=18						
YKA	Yellowknife Ar	30.27	49	P	P	02 23 18.5	+0.6
	0.3nm,0.3s,baz=275,slow=7.6,SNR=6.2						
H11N2	WAKE ISLAND Hy	37.50	218	T	T	03 04 09.2	
	baz=21,slow=76						
H11N3	WAKE ISLAND Hy	37.50	218	T	T	03 04 00.6	
	baz=21,slow=76						
H11N1	WAKE ISLAND Hy	37.52	218	T	T	03 04 12.6	
	baz=21,slow=76						
H11S1	WAKE ISLAND Hy	38.69	217	T	T	03 05 30.1	
	baz=23,slow=76,SNR=44						
H11S2	WAKE ISLAND Hy	38.70	217	T	T	03 05 35.7	
	baz=23,slow=76,SNR=36						
H11S3	WAKE ISLAND Hy	38.71	217	T	T	03 05 35.9	
	baz=23,slow=76,SNR=27						
PDAR	Pinedale Array	40.62	79	P	P	02 24 46.8	-0.4
	0.7nm,0.5s,baz=295,slow=2.6,SNR=11						
MKAR	Makanchi Array	63.43	313	P	P	02 27 36.1	-0.3
	0.2nm,0.7s,baz=49,slow=6.1,SNR=1.6						
FINES	FINESS Array B	65.57	352	P	P	02 27 50.2	+0.1
	3.1nm,0.9s,baz=12,slow=9.8,SNR=5.2						
CMAR	Chiang Mai Arr	76.30	282	P	P	02 28 56.4	+0.6
	0.6nm,0.3s,baz=31,slow=7.8,SNR=4.6						
H03N2	Juan Fernandez	116.27	111	T	T	04 42 50.0	
	baz=323,slow=78,SNR=4.9						
H03N1	Juan Fernandez	116.28	111	T	T	04 42 44.3	
	baz=323,slow=78,SNR=13						
H03N3	Juan Fernandez	116.29	111	T	T	04 42 44.5	
	baz=323,slow=78,SNR=7.6						

*IDC **29** 02:44:20.5±2.2, 35°.04N×25°.85E, h27^{km}±14^{km}, mb3.7/11, mb1 3.9/15, mb1mx3.6/56, mbtmp3.9/15, ML3.7/4, Error ellipse: s-maj=23.6km s-min=15.5km az=8.0*

*THE **29** 02:44:21.7, 35°.06N×25°.85E, h21^{km}, ML3.6/7, Error ellipse: s-maj=0.9km s-min=0.3km az=178.0*

*ATH **29** 02:44:21.4, 35°.06N×25°.86E, h30^{km}±8^{km}, ML3.9/6, Error ellipse: s-maj=12.4km s-min=1.3km az=17.0*

*NIC **29** 02:44:21.7±0.0, 34°.65N×26°.28E, h10^{km}±15^{km}, Ml4.1/4*

*ISK **29** 02:44:21.6, 35°.22N×25°.86E, h14^{km}, ML3.7/25*

*HLW **29** 02:44:21.4, 35°.01N×26°.03E, h29^{km}±17^{km}, Md4.2, Ml4.0*

ISC 29 02:44:20.7±0.7**, 35°.00N**±0°.04×**25°.86E**±0°.02**, h28**^{km}±5^{km}**, n109, σ1^{s}65**/130**, mb3.9**/11**, 3C-3D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRMA	Ierapetra Chan	0.10	278	P	Pb	02 44 25.1	-0.6
FRMA				S	Sb	02 44 28.5	-0.6
STIA	Sitia Lasithi	0.28	44	P	Pb	02 44 27.6	-0.1
STIA				S	Sb	02 44 32.2	-0.2
ZKR	Zakros	0.32	69	P	Pb	02 44 28.4	+0.2
ZKR				S	Sb	02 44 34.3	+0.9
	22µm,0.7s						
ZKR	Zakros	0.32	69	P	Pb	02 44 28.3	+0.2
ZKR				S	Sb	02 44 34.5	+1.2
ZKR				AML	AML	02 44 35.2	
	comp=N,29606µm,0.6s						
ZKR				AML	AML	02 44 35.4	
	comp=E,56554µm,0.8s						
ZKR	Zakros	0.32	69	PG	Pb	02 44 28.4	+0.2
ZKR				SG	Sb	02 44 34.2	+0.9
ZKR	Zakros	0.32	69	P	Pb	02 44 27.9	-0.3
ZKR				AML	AML	02 44 33.8	
	comp=E,27nm,0.6s						
ZKR				AML	AML	02 44 33.8	
	comp=E,27nm,0.6s						
ZKR				AML	AML	02 44 33.9	
	comp=E,55nm,0.8s						
ZKR				AML	AML	02 44 33.9	
	comp=E,55nm,0.8s						
ZKR				S	Sb	02 44 34.5	+1.2
NPS	Neapolis	0.33	323	P	Pb	02 44 27.9	-0.5
NPS				S	Sb	02 44 33.2	-0.4
	comp=E,14µm,0.3s						
NPS	Neapolis	0.33	323	P	Pb	02 44 28.0	-0.5
NPS				S	Sb	02 44 33.4	-0.3
NPS				AML	AML	02 44 33.9	
	comp=N,28629µm,0.7s						
NPS				AML	AML	02 44 34.2	
	comp=E,47621µm,0.8s						
HRKL	Herakleio	0.69	297	P	Pb	02 44 33.9	-0.3
HRKL				S	Sb	02 44 43.9	+0.5
	comp=E,14µm,0.6s						
HRKL	Herakleio	0.69	297	PG	Pb	02 44 34.3	+0.1
HRKL				SG	Sb	02 44 43.7	+0.3
KSTL	Kastelli Herak	0.71	295	P	Pb	02 44 30.4	-4.1
KSTL				S	Sb	02 44 38.0	-5.9
	comp=E,4µm,0.4s						
IACM	Heraklion	0.71	296	P	Pb	02 44 34.4	-0.1
IACM	Heraklion	0.71	296	P	Pb	02 44 34.5	0.0
IACM				S	Sb	02 44 44.5	+0.6
IACM				AML	AML	02 44 53.0	
	comp=Z,57486µm,0.6s						
IACM				AML	AML	02 44 55.4	
	comp=N,69678µm,0.7s						
IDI	Anoyia	0.84	290	Pg	Pb	02 44 35.9	-0.9
	comp=N,48nm,0.3s,baz=163,slow=12,SNR=642						
IDI				Lg	Lg	02 44 47.6	
	comp=N,446nm,0.3s,baz=358,slow=18,SNR=48						
IDI				LR	LR	02 45 16.2	
	comp=N,527nm,21.7s,baz=124,slow=68						
IDI	Anoyia	0.84	290	P	Pb	02 44 36.7	-0.1
IDI				S	Sb	02 44 48.0	+0.3
	comp=N,6µm,0.7s						
IDI	Anoyia	0.84	290	P	Pb	02 44 36.5	-0.3
IDI				S	Sb	02 44 48.1	+0.3
SIVA	Sivas	0.86	271	P	Pb	02 44 36.8	-0.2
SIVA				S	Sn	02 44 49.0	+0.5
	comp=N,8µm,0.6s						
SIVA	Sivas	0.86	271	P	Pb	02 44 36.9	-0.2
SIVA				AML	AML	02 44 57.3	
	comp=N,21772µm,0.5s						
SIVA				AML	AML	02 45 02.0	
	comp=E,32568µm,0.7s						
TMBK	Timbaki Herakl	0.90	275	P	Pb	02 44 37.6	0.0
TMBK				S	Sn	02 44 50.2	+0.7
	comp=E,3µm,0.5s						
SANT	Santorini	1.41	347	PN	Pn	02 44 43.9	-0.6
SANT				SN	Sn	02 45 01.3	-0.8
VAM	Vamos	1.42	287	P	Pb	02 44 46.4	0.0
THR8	Santorini-Mono	1.44	348	P	Pn	02 44 44.8	-0.1
GVDS	Gavdos	1.46	264	PN	Pb	02 44 48.8	+1.6
GVD	Gavdhos	1.46	264	P	Pb	02 44 48.0	+0.8
GVD				AML	AML	02 45 18.4	
	comp=E,3320µm,0.4s						
GVD				AML	AML	02 45 26.9	
	comp=N,3567µm,0.5s						
GVD	Gavdhos	1.46	264	PN	Pb	02 44 48.1	+0.8
GVD				SN	Sb	02 45 08.9	+3.5
THR5	Thira Island,	1.47	344	P	Pn	02 44 45.2	-0.2
IMMV	Iera Moni Meta	1.60	287	P	Pb	02 44 50.1	+0.5
IMMV				AML	AML	02 45 15.5	
	comp=N,5276µm,0.5s						
IMMV				AML	AML	02 45 18.7	
	comp=E,6461µm,0.7s						
IMMV	Iera Moni Meta	1.60	287	PN	Pb	02 44 49.6	0.0
IMMV				SN	Sb	02 45 10.2	+0.8
KNDR	Palaiochora Ch	1.79	278	PN	Pb	02 44 53.7	+0.8
RODP	Rodopos	1.81	289	PN	Pb	02 44 52.5	-0.6
KOSK	Kos Island	1.97	27	PN	Pn	02 44 52.9	+0.7
APE	Apeiranthos	2.08	353	PN	Pn	02 44 54.3	+0.5
ARG	Arkhangelos	2.21	56	PN	Pn	02 44 57.6	+2.1
ARG	Arkhangelos	2.21	56	P	Pn	02 44 57.9	+2.4
ARG				S	Sn	02 45 26.4	+4.4
DAT	Datca	2.22	39	PN	Pn	02 44 57.0	+1.2
BODT	Bodrum	2.37	29	PN	Pn	02 44 58.6	+0.9
TURN	Turunc	2.63	47	PN	Pn	02 45 03.1	+1.9
YER	Yerkesik	2.90	42	PN	Pn	02 45 07.4	+2.4
GCAM	G?zelcaml?	2.92	22	PN	Pn	02 45 06.4	+1.2
FETY	Fethiye	3.09	57	PN	Pn	02 45 09.4	+1.8
KSL	Kastellorizon	3.25	68	P	Pn	02 45 10.8	+1.1
KSL				S	Sn	02 45 48.3	+0.8
AKAS	Kas	3.29	67	PN	Pn	02 45 12.4	+1.9
AYDB	Zeytinkoy-Aydi	3.37	29	PN	Pn	02 45 12.9	+1.4
CAME	Cameli-Denizli	3.40	54	PN	Pn	02 45 14.2	+2.2
URLA	Izmir	3.41	10	PN	Pn	02 45 12.9	+0.9
BLCB	Balcova	3.51	15	PN	Pn	02 45 14.6	+1.2
SLUM	Salum	3.54	189	P	Pn	02 45 14.8	+1.0
	baz=192						
SLUM				AMP		02 45 00.0	
	baz=192						
SLUM				S	Sn	02 45 53.8	-1.0
	baz=192						
ELL	Elmali	3.72	61	PN	Pn	02 45 18.7	+2.2
ELL	Elmali	3.72	61	P	Pn	02 45 18.2	+1.8
ITM	Ithomi	3.85	305	PN	Pn	02 45 20.8	+2.7
KORT	Korkueli	4.16	60	PN	Pn	02 45 23.9	+1.5
KULA	Kula-Manisa	4.17	32	PN	Pn	02 45 24.4	+1.9
SIGR	SIGRI	4.20	360	PN	Pn	02 45 23.7	+0.8
BASM	Basmaki-Afyon	4.46	48	PN	Pn	02 45 28.9	+2.4
BCK	Bucak	4.55	56	PN	Pn	02 45 30.2	+2.5
ISP	Isparta	4.70	52	PN	Pn	02 45 32.6	+2.8
SIMA	Simav-Kutahya	4.78	31	PN	Pn	02 45 32.9	+2.0
EZN	Ezine	4.83	4	PN	Pn	02 45 32.3	+0.8
GEDZ	Gediz	4.94	34	PN	Pn	02 45 35.2	+2.1
AKMS	Akamas	5.32	88	P	Pn	02 45 37.5	-0.7
AKMS				S	Sn	02 46 36.7	-1.9
AKMS				AML	AML	02 46 37.5	
	comp=E,0.4nm,0.4s						
AKMS				AML	AML	02 46 37.5	
	comp=E,0.4nm,0.4s						
AKMS				AML	AML	02 46 39.7	
	comp=E,0.4nm,0.9s						
AKMS				AML	AML	02 46 39.7	
	comp=E,0.4nm,0.9s						
NATA	Nata	5.52	90	P	Pn	02 45 40.1	-1.0
NATA				S	Sn	02 46 41.3	-2.4
NATA				AML	AML	02 46 44.1	
	comp=E,0.6nm,0.5s						
NATA				AML	AML	02 46 44.1	
	comp=E,0.6nm,0.5s						
NATA				AML	AML	02 46 45.0	
	comp=E,0.6nm,0.5s						
NATA				AML	AML	02 46 45.0	
	comp=E,0.6nm,0.5s						
ALFC	Alefka	5.53	86	P	Pn	02 45 40.7	-0.5
SWA2		5.75	183	P	Pn	02 45 45.0	+0.9
	baz=186						
SWA2				AMP		02 46 00.0	
	baz=186						
SWA2				S	Sn	02 46 46.1	-3.2
	baz=186						
ASGA	Asgata	6.08	90	P	Pn	02 45 47.3	-1.4
ASGA				AML	AML	02 46 55.2	
	comp=E,0.3nm,0.6s						
ASGA				AML	AML	02 46 56.8	
	comp=E,0.2nm,0.8s						
CSS	Mathiatis	6.14	88	P	Pn	02 45 49.5	0.0
MVOU	Mavrovouni	6.38	88	P	Pn	02 45 52.2	-0.7
RYAN	Fayoum	6.99	146	P	Pn	02 46 01.4	+0.2
	baz=147						
RYAN				AMP		02 47 00.0	
	baz=147						
HSAF	As Saff	7.21	136	P	Pn	02 46 04.6	+0.3
	baz=137						
GLL	Jalalah	7.33	136	P	Pn	02 46 05.6	-0.4
	baz=136						
VTS	Vitosha	7.88	346	⇓P	Pn	02 46 16.6	+3.1
BOSS	Bosilegrad	7.93	342	*e*P	Pn	02 46 19.3	+5.1
ZAF	Zafarana	8.04	133	P	Pn	02 46 15.6	0.0
	baz=134						
HFRF	Wahat Farafira	8.11	164	P	Pn	02 46 16.8	+0.3
	baz=165						
MMAI	Mount Meron Ar	8.17	101	Pn	Pn	02 46 16.4	-1.0
	comp=E,2.9nm,0.3s,baz=288,slow=11,SNR=12						
MMAI				Sn	Sn	02 47 46.5	-2.4
	comp=E,2.5nm,0.3s,baz=314,slow=26,SNR=5.6						
BARS	Barje	8.41	339	*e*P	Pn	02 46 23.5	+2.8
TAMRE	El Minia	8.48	148	P	Pn	02 46 21.5	-0.2
	baz=148						
ZAPS	Zavoj	8.63	344	*e*P	Pn	02 46 27.9	+4.2
SELS	Selova	8.99	337	*e*P	Pn	02 46 37.6	+8.9
BOVS	Bovan	9.20	341	⇑P	Pn	02 46 31.6	+0.1
BOVS	Bovan	9.20	341	*e*P	Pn	02 46 32.6	+1.1
ZAGS	Zajecar	9.23	343	*e*P	Pn	02 46 30.8	-1.1
EIL	Elat	9.35	122	Pn	Pn	02 46 32.5	-1.1
	comp=E,1.2nm,0.3s,baz=289,slow=3.0,SNR=19						
EIL				Sn	Sn	02 48 13.6	-4.2
	comp=E,1.1nm,0.3s,baz=85,slow=14,SNR=2.7						
SJES	Sjenica	9.43	333	*e*P	Pn	02 46 39.7	+5.0
VAE	Valguarnera	9.57	288	Pn	Pn	02 46 38.8	+2.1
	comp=E,1.0nm,0.3s,baz=18,slow=6.7,SNR=7.1						
IVAS	Ivanjica	9.63	334	*e*P	Pn	02 46 41.5	+4.0
GRUS	Gruza	9.72	337	*e*P	Pn	02 46 45.2	+6.6
BBLS	Lazići	10.16	333	*e*P	Pn	02 46 58.4	+14
HERR	Herculane	10.21	346	⇓P	Pn	02 46 48.1	+2.8
GZR	Gura Zlata	10.64	348	⇓P	Pn	02 46 54.6	+3.3
DOPR	Dopca	10.96	358	⇑P	Pn	02 47 04.6	+9.0
BZS	Buzias	11.08	344	⇑P	Pn	02 46 58.4	+1.1
AKASG	Malin Array Be	15.88	8	Pn	Pn	02 48 04.2	+2.1
	comp=E,1.4nm,0.3s,baz=196,slow=11,SNR=4.4						
KRLC	Kraliky	16.46	339	*e*P	Pn	02 48 11.2	+1.6
GERES	GERESS Array B	16.50	331	Pn	Pn	02 48 11.2	+1.1
	comp=E,0.1nm,0.3s,baz=137,slow=13,SNR=8.2						
KHC	Kasperske Hory	16.77	331	*e*P	Pn	02 48 15.6	+2.1
DPC	Dobruska-Polom	16.84	339	*e*P	Pn	02 48 14.4	0.0
UPC	Upice	17.07	338	*e*P	Pn	02 48 17.9	+0.6
CHVC	Chvalec	17.13	338	*e*P	Pn	02 48 18.2	+0.2
ESDC	Sonseca Array	24.11	290	P	P	02 49 33.5	-0.5
	comp=E,1.9nm,0.5s,baz=83,slow=9.6,SNR=40						
FINES	FINESS Array B	26.46	0	P	P	02 49 56.0	+0.9
	comp=E,1.0nm,0.7s,baz=157,slow=12,SNR=1.1						
TORD	Torodi Ar. Bea	30.83	231	P	P	02 50 35.0	+0.6
	comp=E,1.3nm,0.6s,baz=33,slow=8.6,SNR=10.0						
ARCES	ARCESS Array B	34.59	360	P	P	02 51 04.5	-2.3
	comp=E,3.0nm,0.8s,baz=171,slow=6.4,SNR=3.6						
MKAR	Makanchi Array	43.39	56	P	P	02 52 21.4	+0.8
	comp=E,1.3nm,0.6s,baz=278,slow=7.5,SNR=17						
ZALV	Zalesovo Beam	44.70	46	P	P	02 52 30.7	-0.3
	comp=E,0.6nm,0.3s,baz=248,slow=7.6,SNR=2.8						
SONM	Songino Array	59.15	51	P	P	02 54 19.7	+0.7
	comp=E,0.3nm,0.5s,baz=273,slow=7.7,SNR=0.9						
SCHQ	Schefferville	63.68	320	P	P	02 54 48.8	-0.4
	comp=E,3.9nm,0.6s,baz=52,slow=4.0,SNR=8.1						
INK	Inuvik	75.85	352	P	P	02 56 02.5	-1.4
	comp=E,0.6nm,0.5s,baz=5.2,slow=7.0,SNR=4.6						
YKA	Yellowknife Ar	77.77	342	P	P	02 56 13.9	-0.9
	comp=E,0.3nm,0.8s,baz=30,slow=5.4,SNR=4.3						
ILAR	Eielson Array	80.39	357	P	P	02 56 28.3	-0.9
	comp=E,0.5nm,1.0s,baz=356,slow=6.3,SNR=2.7						

*IDC **29** 02:54:03.4±0.6, 6°.75N×76°.68W, h0^{km}, mb4.5/18, mb1 4.7/21, mb1mx4.7/27, mbtmp4.6/21, ML4.8/2, MS4.5/14, Ms1 4.5/14, ms1mx4.3/30, Error ellipse: s-maj=20.0km s-min=10.5km az=41.0*

*MOS **29** 02:54:05.5±0.9, 6°.84N×76°.80W, h20^{km}, mb5.1/25, Error ellipse: s-maj=10.5km s-min=6.3km az=110.6*

*VAO **29** 02:54:06.2±0.3, 6°.74N×76°.59W, h10^{km}, mb5.3*

*NEIC **29** 02:54:06.1±1.8, 6°.90N±0°.04×76°.70W±0°.05, h10^{km}±1^{km}, Error ellipse: s-maj=9.1km s-min=5.4km az=231.0*

*RSNC **29** 02:54:06.4±0.9, 6°.86N×76°.70W, h6^{km}±2^{km}, ML4.8, Mw5.0, Fault plane solution: NP1:ϕ_s74.00000°, δ78.00000°, λ-162.00000°.*

*GCMT **29** 02:54:11.0±0.2, 7°.02N±0°.01×76°.59W±0°.02, h30^{km}±1^{km}, MW5.1/97, Moment Tensor Solution. s23,c26; s97,c135; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.46±.30; $M_{\theta\theta}$-0.31±.18; $M_{\phi\phi}$-1.14±.22; $M_{r\theta}$-2.80±.26; $M_{\theta\phi}$-4.26±.12; $M_{\phi r}$1.72±.27; Best double couple: $M_0$5.49500×10^{16} NP1:ϕ_s4.00000°, δ60.00000°, λ23.00000°. NP2: ϕ_s262.00000°, δ70.00000°, λ148.00000°. Principal axes: T 5.9130, Plg36.0000°, Azm220.0000°; N -0.8300, Plg53.0000°, Azm53.0000°; P -5.0760, Plg7.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **29** 02:54:11.6±0.0, 6°.95N×76°.62W, h20^{km}±1^{km}, mb4.6*

ISC 29 02:54:06.2±0.4**, 6°.82N**±0°.02×**76°.69W**±0°.02**, h15**^{km}±2^{km}**, h15**^{km}**:pP-P, n653, σ1^{s}40**/663**, mb4.9**/177**, MS4.5**/11**, 24C-52D, Fault plane solution: NP1:**ϕ_s333.57468°, δ76.97483°, λ15.60938°. **NP2:**ϕ_s239.97170°, δ74.80206°, λ166.49400°. **Principal axes:** T Plg20.1658°, Azm197.0641°; N Plg69.7744°, Azm12.4680°; P Plg1.4901°, Azm106.5167°; **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBBC	Dabeiba	0.51	68	⇑*i*P	Pg	02 54 15.7	-0.6
DBBC				*e*S	Sg	02 54 22.9	-0.3
SOLC	Bahia Solano	0.93	231	⇑*i*P	Pn	02 54 25.0	+0.2
SOLC				*e*S	Sg	02 54 36.9	+0.5
SOLC				*i*		02 54 44.6	
	comp=Z,26µm,0.4s						
PTAC	Punta Ardita,	1.16	286	*e*P	Pn	02 54 27.4	-0.5
PTAC				*e*S	Sb	02 54 42.0	-0.9
PTAC				*i*		02 54 45.6	
	comp=Z,24µm,0.3s						
CBOC	Ciudad Bolivar	1.16	145	*e*P	Pn	02 54 28.0	-0.2
CBOC				*e*S	Sb	02 54 43.3	+0.2
CBOC				*i*		02 54 49.8	
	comp=Z,23µm,0.5s						
HELC	Santa Helena	1.31	119	⇓*i*P	Pn	02 54 29.6	-0.8
HELC				*e*S	Sg	02 54 48.4	-0.2
HELC				*i*		02 54 52.1	
	comp=Z,12µm,0.5s						
UREC	San Jos de Ur	1.47	51	⇑*e*P	Pn	02 54 31.9	-0.4
UREC				*e*S	Sn	02 54 51.2	-0.1
UREC				*i*		02 54 53.7	
	comp=Z,10µm,0.4s						
CAPC	Capurgana	1.92	340	⇓*e*P	Pn	02 54 36.7	-1.7
CAPC				*e*Pg	Pb	02 54 39.3	-1.6
CAPC				*e*S	Sb	02 55 04.4	-0.3
CAPC				*i*		02 55 12.6	
	comp=Z,4µm,0.7s						
ZARC	Zaragoza, Cauc	1.93	70	*e*P	Pn	02 54 39.1	+0.6
ZARC				*e*S	Sn	02 55 03.0	+0.4
ZARC				*i*		02 55 08.2	
	comp=Z,8µm,0.5s						
ZARC	Zaragoza, Cauc	1.93	70		Pn	02 54 38.9	+0.4
PLMC	San Jos del P	1.95	168	⇑*e*P	Pn	02 54 37.3	-1.5
PLMC				*e*S	Sn	02 54 59.5	-3.6
PLMC				*i*		02 55 01.6	
	comp=Z,17µm,0.4s						
PIZC	Pizarro, Choco	1.96	200	*e*P	Pb	02 54 40.9	-0.8
PIZC				*e*S	Sg	02 55 08.1	-1.3
PIZC				*i*		02 55 21.4	
	comp=Z,5µm,0.6s						
LCBC	Los crdobas,	2.05	9	⇑*e*P	Pn	02 54 41.2	+1.1
LCBC				*e*S	Sb	02 55 08.1	-0.3
LCBC				*i*		02 55 19.5	
	comp=Z,4µm,0.8s						
GUY2C	Guyana, Caldas	2.06	140	⇓*i*Pg	Pb	02 54 42.6	-1.0
GUY2C				*e*Pg	Pg	02 54 45.2	-0.6
GUY2C				*e*S	Sb	02 55 09.0	-0.3
GUY2C				*i*		02 55 13.6	
	comp=Z,10µm,0.6s						
CMAN1	Manizales, Cal	2.09	146	*e*P	Pb	02 54 44.0	+0.1
CMAN1				*e*S	Sg	02 55 12.5	-0.9
MOTC	Monteria, Cord	2.19	27	*e*P	Pn	02 54 41.9	-0.2
MOTC				*e*S	Sn	02 55 09.0	-0.1
MOTC	Monteria, Cord	2.19	27		Pn	02 54 41.7	-0.5
MOTC				Sn	Sn	02 55 08.9	-0.1
NORC	Norcasia	2.20	125	⇓*i*P	Pb	02 54 44.2	-1.5
NORC				*e*S	Sb	02 55 12.8	0.0
NORC				*i*		02 55 15.7	
	comp=Z,6µm,0.5s						
PTBC	PUERTO BERRIO,	2.23	97	⇓*e*P	Pn	02 54 43.9	+1.1
PTBC				*e*S	Sn	02 55 11.6	+1.5
PTBC				*i*		02 55 15.8	
	comp=Z,13µm,0.6s						
ANIL	Santa Ana	2.65	151	*e*P	Pn	02 54 51.1	+2.4
ANIL				*e*S	Sb	02 55 26.3	+0.4
ANIL				*i*		02 55 29.6	
	comp=Z,9µm,0.4s						
YOTC	Yotoco, Valle	2.84	173	⇑*i*P	Pn	02 54 50.1	-1.1
YOTC				*e*S	Sn	02 55 21.5	-3.7
YOTC				*i*		02 55 25.2	
	comp=Z,3µm,0.4s						
SPBC	San Pablo de B	2.85	114	⇓*i*P	Pb	02 54 54.2	-2.6
SPBC				*e*S	Sb	02 55 30.3	-1.3
SPBC				*i*		02 55 50.5	
	comp=Z,2µm,0.6s						
BRRC	Barranca, Sant	2.97	84	*e*P	Pn	02 54 54.5	+1.7
BRRC				*e*S	Sn	02 55 30.2	+2.0
BRRC				*i*		02 55 49.0	
	comp=Z,2µm,0.6s						
ROSC	El Rosal	3.07	130	Pg	Pb	02 54 58.6	-2.1
	comp=Z,191nm,0.3s,baz=358,slow=3.6,SNR=158						
ROSC				LR	LR	02 55 39.2	
	comp=Z,3µm,21.1s,baz=326,slow=32						
ROSC				Lg	Lg	02 55 40.1	
	comp=Z,331nm,0.3s,baz=3.3,slow=21,SNR=4.7						
ROSC	El Rosal	3.07	130	P	Pn	02 54 56.8	+2.2
ROSC	El Rosal	3.07	130	*e*P	Pb	02 54 58.7	-2.1
ROSC				*e*S	Sb	02 55 36.0	-2.2
ROSC				*i*		02 55 50.1	
	comp=Z,3µm,0.6s						
ROSC	El Rosal	3.07	130	Pn	Pn	02 54 56.8	+2.2
ORTC	Ortega, Tolima	3.23	154	⇑*i*P	Pn	02 54 59.6	+3.1
ORTC				*e*S	Sn	02 55 36.4	+1.6
ORTC				*i*		02 55 44.5	
	comp=Z,2µm,0.4s						
SMLC	San Martn de	3.25	53	*e*P	Pn	02 54 56.7	-0.1
SMLC				*e*S	Sn	02 55 35.6	+0.3
SMLC				*i*		02 56 00.4	
	comp=Z,1µm,0.6s						
SJCC	San Jacinto, C	3.40	26	*e*P	Pn	02 54 57.8	-1.0
SJCC				*e*S	Sn	02 55 36.0	-2.9
SJCC				*i*		02 55 49.1	
	comp=Z,876nm,0.5s						
SJCC	San Jacinto, C	3.40	26	Pn	Pn	02 54 57.5	-1.3
RAC02	Cali,SGC	3.43	177	*e*P	Pn	02 54 59.4	+0.1
RAC02				*e*S	Sn	02 55 36.9	-3.0
BARC	Barichara	3.49	94	*e*P	Pn	02 55 02.3	+2.2
BARC				*e*S	Sn	02 55 42.0	+0.6
BARC				*i*		02 56 05.2	
	comp=Z,2µm,0.5s						
PRAC	Prado	3.57	150	⇑*e*P	Pn	02 55 04.6	+3.5
PRAC				*e*Pg	Pg	02 55 13.6	-1.1
PRAC				*e*S	Sb	02 55 48.5	-3.8
PRAC				*i*		02 55 58.3	
	comp=Z,3µm,0.8s						
OCAC	Ocana	3.62	67	*e*P	Pn	02 55 03.2	+1.2

OCAC				*e*S	Sn	02 55 47.1	+2.5
OCAC				*i*		02 56 03.8	
	comp=Z,5µm,0.6s						
OCAC	Ocana	3.62	67		Pn	02 55 02.1	+0.1
CHIC	Chingaza	3.66	126	*e*P	Pn	02 55 05.7	+3.0
CHIC				*e*S	Sb	02 55 52.5	-2.7
CHIC				*i*		02 56 14.5	
	comp=Z,929nm,0.6s						
RUSC	La Rusia	3.70	104	*e*P	Pn	02 55 05.5	+2.2
RUSC				*e*S	Sn	02 55 49.5	+2.5
RUSC				*i*		02 56 10.7	
	comp=Z,3µm,0.7s						
ARGC	Ariguani, Magd	3.86	39	*e*P	Pn	02 55 08.8	+3.7
ARGC				*e*S	Sn	02 55 50.8	+0.5
BCIP	Isla Barro Col	3.89	307	P	Pn	02 55 04.5	-1.1
BCIP	Isla Barro Col	3.89	307⇓	*e*P	Pn	02 55 04.4	-1.2
BCIP				*e*Pg	Pb	02 55 08.9	-5.7
BCIP				*e*S	Sn	02 55 47.7	-3.3
BCIP				*i*		02 55 51.7	
	comp=Z,1µm,0.5s						
BCIP	Isla Barro Col	3.89	307	Pn	Pn	02 55 04.5	-1.1
PAMC	Pamplona, Colo	3.99	82	*e*P	Pn	02 55 09.2	+1.8
PAMC				*e*S	Sn	02 55 54.8	+0.7
PAMC				*i*		02 55 58.7	
	comp=Z,2µm,0.5s						
VILC	Villavicencio,	4.02	132	*e*P	Pn	02 55 11.8	+4.4
VILC				*e*S	Sn	02 55 56.8	+2.5
MARP	Paez Belalcaza	4.02	170	*e*P	Pn	02 55 10.0	+2.5
MARP				*e*S	Sn	02 55 55.8	+1.2
MARP				*i*		02 56 01.7	
	comp=Z,496nm,0.6s						
LL1C	La Loma 1 Cana	4.11	49	*e*P	Pn	02 55 12.8	+4.2
LL1C				*e*Pg	Pg	02 55 23.8	-1.2
LL1C				*e*S	Sn	02 56 01.0	+4.5
LL1C				*i*		02 56 37.6	
	comp=Z,3µm,0.6s						
LL5C	La Loma 5 El P	4.13	45	*e*S	Sn	02 55 57.6	+0.6
POPC	Popayan, Colom	4.25	180⇑	*e*P	Pn	02 55 11.4	+0.6
POPC				*e*S	Sn	02 55 59.6	-0.7
POPC				*i*		02 56 05.0	
	comp=Z,798nm,0.5s						
BETC	Betania	4.30	163	*e*P	Pn	02 55 14.0	+2.8
BETC				*e*S	Sn	02 56 04.2	+3.1
BETC				*i*		02 56 08.5	
	comp=Z,2µm,0.4s						
LL6C	La Loma 6 Bece	4.45	49	*e*P	Pn	02 55 14.0	+0.8
LL6C				*e*S	Sn	02 56 03.8	-1.0
LL6C				*i*		02 56 44.6	
	comp=Z,538nm,0.7s						
PCON	Cinco Dias	4.47	176	*e*P	Pn	02 55 16.5	+2.5
PCON				*e*S	Sn	02 56 07.6	+1.4
PCON				*i*		02 56 33.9	
	comp=Z,1µm,0.6s						
SOTA	Rioblanco	4.66	179	*e*P	Pn	02 55 19.1	+2.5
SOTA				*e*S	Sn	02 56 11.7	+1.1
SOTA				*i*		02 56 22.1	
	comp=Z,1µm,0.6s						
GARC	Garzon, Huila	4.76	165	*e*P	Pn	02 55 19.8	+2.1
GARC				*e*S	Sn	02 56 12.3	-0.4
GARC				*i*		02 56 26.6	
	comp=Z,803nm,0.3s						
BBAC	Balboa, Cauca	4.80	187	*e*S	Sn	02 56 16.9	+3.1
TAMC	Tame, Arauca	4.88	94	*e*P	Pn	02 55 21.6	+2.5
TAMC				*e*S	Sn	02 56 20.6	+5.2
TAMC				*i*		02 56 42.9	
	comp=Z,666nm,0.6s						
SMRC	Santa Marta, M	4.95	29	*e*P	Pn	02 55 22.1	+2.0
SMRC				*e*S	Sn	02 56 13.3	-3.9
SMRC				*i*		02 56 23.8	
	comp=Z,238nm,0.4s						
CVALL	Valledupar, Ce	4.99	43	*e*P	Pn	02 55 21.6	+0.9
CVALL				*e*S	Sn	02 56 14.1	-4.1
CVALL				*i*		02 56 21.0	
	comp=Z,564nm,0.5s						
PTGC	Puerto Gaitan,	5.23	120	*e*P	Pn	02 55 26.1	+2.1
PTGC				*e*S	Sn	02 56 25.2	+1.2
PTGC				*i*		02 57 02.5	
	comp=Z,441nm,0.5s						
FLOC	Florencia	5.31	169⇑	*e*P	Pn	02 55 26.7	+1.6
FLOC				*e*S	Sn	02 56 27.5	+1.5
FLOC				*i*		02 56 48.7	
	comp=Z,645nm,0.8s						
MACC	Macarena, Meta	5.44	149	*e*P	Pn	02 55 29.2	+2.3
MACC				*e*S	Sn	02 56 35.8	+6.5
MACC				*i*		02 57 16.9	
	comp=Z,632nm,0.7s						
CRJC	Cerrejon, Guaj	5.61	42	*e*P	Pn	02 55 28.0	-1.3
CRJC				*e*Pg	Pn	02 55 30.4	+1.1
CRJC				*e*S	Sn	02 56 30.2	-3.5
CRJC				*i*		02 56 34.0	
	comp=Z,767nm,0.4s						
GUVC	San Jose del G	5.87	136	*e*P	Pn	02 55 35.5	+2.8
GUVC				*e*S	Sn	02 56 40.1	+0.3
GUVC				*i*		02 56 55.4	
	comp=Z,261nm,0.7s						
CMBC	Cumbal	5.95	191	*e*P	Pn	02 55 36.7	+2.4
SOCV	Socops	5.96	76	*e*P	Pn	02 55 35.1	+1.1
SOCV				*e*S	Sn	02 56 41.3	-0.8
TULM	Tulcn-Chalpat	6.17	190	*e*P	Pn	02 55 42.1	+4.9
BRU2	Volcan	6.26	289		Pn	02 55 39.1	+0.8
SDV	Santo Domingo	6.34	71	*e*P	Pn	02 55 40.7	+1.3
SDV				*e*S	Sn	02 56 52.3	+0.7
SDV				*i*		02 57 15.1	
	comp=Z,342nm,0.5s						
SDV	Santo Domingo	6.34	71	*e*P	Pn	02 55 40.6	+1.2
SDV	Santo Domingo	6.34	71	Pn	Pn	02 55 40.1	+0.7
CDITO	Canoas	6.37	286		Pn	02 55 39.0	-0.7
CUSE	Cuicocha Este	6.70	195	*e*P	Pn	02 55 47.7	+3.2
CUSE				*e*S	Sn	02 57 01.3	+0.5
URIC	Uribia, Colomb	6.71	43	*e*P	Pn	02 55 44.1	-0.1
URIC				*e*S	Sn	02 57 00.1	-0.3
URIC				*i*		02 57 15.8	
	comp=Z,119nm,0.6s						
URIC	Uribia, Colomb	6.71	43		Pn	02 55 44.3	+0.1
OTAV	Otavalo	6.77	195	P	Pn	02 55 46.4	+0.8
OTAV	Otavalo	6.77	195	*e*P	Pn	02 55 46.3	+0.8
OTAV				*e*S	Sn	02 57 03.1	+0.3
OTAV				*i*		02 57 12.8	
	comp=Z,108nm,0.7s						
OTAV	Otavalo	6.77	195	*e*P	Pn	02 55 46.0	+0.4
OTAV	Otavalo	6.77	195		Pn	02 55 46.4	+0.8
PAC1	Pacto, Paraso	6.84	198	*e*P	Pn	02 55 47.0	+0.8
PAC1				*e*S	Sn	02 57 02.8	-1.3
PAC1				*i*		02 57 10.4	
	comp=Z,352nm,0.3s						
SRBA	San Rafael, Bu	7.03	290		Pn	02 55 49.5	+0.8
ELOV	Elorza	7.15	88	*e*P	Pn	02 55 51.2	+0.8
ELOV				*e*S	Sn	02 57 11.2	-0.3
DABV	Dabajuro	7.23	55	*e*P	Pn	02 55 51.5	0.0
DABV				*e*S	Sn	02 57 09.5	-4.0
PEZE	Perez Zeledon,	7.37	291		Pn	02 55 54.1	+0.6
RIMA	Rio Macho	7.68	293	Pn	Pn	02 55 58.1	+0.2
CVTR	Volcan Turrial	7.68	295		Pn	02 55 58.3	+0.3
BAUV	El Baul	8.82	76	*e*P	Pn	02 56 10.9	-2.3
BAUV	El Baul	8.82	76	Pn	Pn	02 56 11.6	-1.6
JTS	Las Juntas de	8.87	293	Pn	Pn	02 56 15.3	+1.3
JTS				LR	LR	03 00 33.7	
	comp=Z,1µm,18.2s,slow=44						
JTS	Las Juntas de	8.87	293		Pn	02 56 14.9	+0.9
ESPN	Las Esperanzas	9.21	306		Pn	02 56 17.4	-1.2
BOAB	BOACO BROADBAN	10.47	303	Pn	Pn	02 56 36.0	+0.1
BIRV	Birongo	10.92	70	Pn	Pn	02 56 40.0	-2.0
MATN	Matagalpa	10.94	304		Pn	02 56 41.3	-1.1
MCJ	Malvern	11.08	355	*i* P	Pn	02 56 45.6	+1.3
MCJ				*i* P	Pn	02 56 48.3	+4.0
HOJ	Hope	11.12	360	*i* P	Pn	02 56 48.3	+3.6
STH	Stony Hill	11.19	359	*i* P	Pn	02 56 48.1	+2.3
CMJ	Castle Mountai	11.25	2	*i* P	Pn	02 56 49.0	+2.4
CVJ	Coleyville	11.37	356	*i* P	Pn	02 56 49.7	+1.5
MTDJ	Mount Denham	11.37	356		Pn	02 56 48.2	0.0
PCRV	Puerto La Cruz	12.37	74	Pn	Pn	02 57 01.9	-0.1
	comp=Z,8.0nm,0.3s,baz=233,slow=6.3,SNR=22						
PCRV				LR	LR	03 02 59.8	
	comp=Z,3µm,19.6s,slow=43						
TGUH	Tegucigalpa,Un	12.65	305		Pn	02 57 05.9	+0.1
TBTG	Tabatinga, AM	12.86	148	*e*P	Pn	02 57 08.4	-0.2
TBTG	Tabatinga, AM	12.86	148	Pn	Pn	02 57 10.0	+1.4
GTBY	Guantanamo Bay	13.12	7		Pn	02 57 11.2	-0.9
SDDR	Presa de Saban	13.18	23		Pn	02 57 12.1	-0.9
SC01	Santiago de lo	13.80	24		Pn	02 57 21.2	-0.3
ATAH	Atahualpa	13.97	187	Pn	Pn	02 57 26.2	+2.0
	comp=Z,1.0nm,0.3s,baz=0.6,slow=8.2,SNR=14						
ATAH				LR	LR	03 04 08.8	
	comp=Z,2µm,20.4s,baz=3.1,slow=44						
OBIP	Obispado Ponce	14.87	40		Pn	02 57 32.6	-3.4
CZSB	Cruzeiro do Su	14.99	165	Pn	Pn	02 57 38.1	+0.4
HUMP	Col San Antoni	15.43	42	IAmb	IAmb	02 57 42.0	
	comp=Z,88nm,0.8s						
TRN	Trinidad (W)	15.57	75	*e*	P	02 57 48.0	-1.7
MTP	Monte Pirata	15.60	43	IAmb	IAmb	02 57 44.0	
	comp=Z,75nm,0.7s						
GRGR	Grenville	15.73	69	*e*	Pn	02 57 45.5	-2.0
GRGR	Grenville	15.73	69	*e*	Pn	02 57 46.8	-0.7
GRGR	Grenville	15.73	69	Pn	Pn	02 57 45.0	-2.5
GCMP	Grenada, Carri	16.06	68	*e*	Pn	02 57 51.8	+0.1
SVB	Belmont	16.49	66	*e*	Pn	02 57 49.9	-7.3
SVB	Belmont	16.49	66	Pn	Pn	02 57 55.5	-1.7
SVB				IAmb	IAmb	02 58 04.3	
	comp=Z,132nm,0.7s						
TOSP	Speyside	16.55	73	*e*	P	02 57 59.3	-1.3
BOAV	Boa Vista	16.70	105	*e*P	Pn	02 57 57.2	-2.7
SLBI	Saint Lucia, B	17.02	64	*e*	P	02 58 04.8	-0.9
BIM	Bigot	17.14	62	*e*	P	02 58 13.4	+6.4
FDF	Fort de France	17.16	61	*e*	Pn	02 58 03.0	-2.7
DSLB	Salisbury	17.24	59	*e*	Pn	02 58 05.4	-1.3
DLPL	La Plaine	17.34	60	*e*	P	02 58 15.6	+6.4
CBE	Ff, Capester	17.39	57	*e*	P	02 58 13.1	+3.3
MAGL	Barre de l’ile	17.60	58	*e*	P	02 58 16.3	+4.2
CCIG	Comitan	17.80	303		Pn	02 58 13.6	-0.3
PTGA	Pitinga	18.29	114	P	Pn	02 58 16.7	-3.0
	comp=Z,2.3nm,0.3s,baz=303,slow=14,SNR=26						
PTGA				LR	LR	03 05 52.1	
	comp=Z,2µm,19.0s,baz=292,slow=39						
NNA	Nana	18.69	180	LR	LR	03 06 46.8	
	comp=Z,1µm,20.6s,baz=349,slow=41						
NNA	Nana	18.69	180	P	Pn	02 58 26.2	+1.7
NNA				pmax	pmax		
	comp=Z,32nm,0.9s						
NNA	Nana	18.69	180	P	Pn	02 58 26.2	+1.7
MACA	Manacapuru-AM	18.80	121	*e*P	P	02 58 24.4	-1.0
MACA	Manacapuru-AM	18.80	121	P	P	02 58 23.8	-1.6
ETMB	Extrema	19.55	148	*e*P	P	02 58 33.0	-0.5
ETMB	Extrema	19.55	148	P	P	02 58 32.8	-0.8
CMIG	Matias Romero	20.50	301	P	P	02 58 44.1	+0.1
	comp=Z,5.3nm,0.8s,baz=99,slow=8.2,SNR=6.1						
CMIG				LR	LR	03 08 13.0	
	comp=Z,1µm,19.4s,baz=115,slow=41						
ITTB	Itaituba	23.68	117	*e*P	P	02 59 16.7	-0.9
TLIG	Tlapa	23.87	299	P	P	02 59 19.3	-0.2
TLIG				IAmb	IAmb	02 59 29.2	
	comp=Z,41nm,1.3s						
MDP	Montagnes des	23.97	93	P	P	02 59 20.6	+0.2
	comp=Z,29nm,0.8s,baz=291,slow=9.2,SNR=20						
MDP				LR	LR	03 09 09.6	
	comp=Z,2µm,19.1s,baz=287,slow=38						
MALB	Monte Alegre	23.98	110	*e*P	P	02 59 19.6	-0.8
LPAZ	La Paz	24.47	160	P	P	02 59 25.1	-0.5
LPAZ				pmax	pmax		
	comp=Z,27nm,0.8s						
LPAZ	La Paz	24.47	160	*e*P	P	02 59 24.6	-1.0
LPAZ	La Paz	24.47	160	P	P	02 59 25.1	-0.5
LPAZ				IAmb	IAmb	02 59 38.3	
	comp=Z,27nm,0.8s						
TIGA	Tifton	25.33	346	P	P	02 59 33.3	+0.8
	baz=164						
NPGB	Novo Progresso	25.35	123	*e*P	P	02 59 31.0	-1.9
VILB	Vilhena	25.58	140	*e*P	P	02 59 33.7	-1.3
VILB	Vilhena	25.58	140	P	P	02 59 35.1	+0.1
MCPB	Macapa, AP	25.59	105	*e*P	P	02 59 34.9	-0.3
PB16	IPOC Station P	25.98	164	P	P	02 59 39.0	-0.3
PB16				IAmb	IAmb	02 59 57.2	
	comp=Z,24nm,0.9s						
PB12	IPOC Station P	26.04	166	P	P	02 59 38.6	-0.6
PB12				IAmb	IAmb	02 59 50.5	
	comp=Z,32nm,0.8s						
NHSC	New Hope	26.35	353	P	P	02 59 43.9	+2.1
	baz=172						
PDRB	Porto dos Gac	27.01	133	*e*P	P	02 59 46.2	-1.7
CLDB	Colider	27.23	130	*e*P	P	02 59 47.0	-2.9
PB11	IPOC Station P	27.31	165	P	P	02 59 50.5	-0.2
SIV	San Ignacio	27.44	146	P	P	02 59 49.8	-2.0
	comp=Z,8.2nm,0.9s,baz=325,slow=9.4,SNR=34						
SIV				LR	LR	03 11 11.4	
	comp=Z,2µm,20.1s,baz=319,slow=38						
PB08	IPOC Station P	27.80	165	P	P	02 59 54.7	-0.7
PB08				IAmb	IAmb	03 00 07.0	
	comp=Z,21nm,0.8s						
344A	Westbrook Farm	27.80	334	P	P	02 59 53.5	-1.4
344A				IAmb	IAmb	03 00 08.5	
	comp=Z,37nm,0.9s						
TA01	Diego Aracena	27.96	167	P	P	02 59 57.9	+1.5
TA01				IAmb	IAmb	03 00 08.1	
	comp=Z,27nm,0.8s						
PTLB	Pontes e Lacer	28.14	142	*e*P	P	02 59 55.9	-2.2
PTLB	Pontes e Lacer	28.14	142	P	P	02 59 58.0	-0.1
Z47A	Carrollton	28.29	340	P	P	02 59 58.7	-0.6
PB01	IPOC Station P	28.58	166	P	P	03 00 02.6	+0.6
PB07	IPOC Station P	29.14	167	P	P	03 00 07.1	0.0
PB07				IAmb	IAmb	03 00 20.1	
	comp=Z,15nm,1.0s						
HKT	Hockley	29.22	324	*i* P	P	03 00 08.9	+1.5
HKT				pmax	pmax		
	comp=Z,15nm,1.7s						
W50A	Signal Mountai	29.34	345	P	P	03 00 06.4	-2.2
W50A				IAmb	IAmb	03 00 16.4	
	comp=Z,15nm,0.8s						
PB09	IPOC Station P	29.36	166	P	P	03 00 07.8	-1.3
PB09				IAmb	IAmb	03 00 20.5	
	comp=Z,24nm,0.9s						
Y45A	Yeager Farm, C	29.43	338	P	P	03 00 08.6	-0.7
TKL	Tuckaleechee C	29.43	348	LR	LR	03 10 57.9	
	comp=Z,1µm,19.4s,baz=294,slow=34						
V52A	Sevierville	29.57	349	P	P	03 00 09.8	-0.8
V52A				IAmb	IAmb	03 00 21.1	
	comp=Z,19nm,0.9s						
PRPB	Parauapebas	29.76	115	*e*P	P	03 00 11.4	-1.2
TMAB	Tom-Au,PA,Br	29.96	107	*e*P	P	03 00 13.9	-0.4
LVC	Limon Verde	30.23	166	P	P	03 00 17.5	+0.6
LVC				pmax	pmax		
	comp=Z,26nm,0.9s						
LVC	Limon Verde	30.23	166	P	P	03 00 17.5	+0.6
LVC				IAmb	IAmb	03 00 27.7	
	comp=Z,26nm,0.8s						
TZTN	Tazewell	30.24	349	P	P	03 00 18.7	+2.2
	baz=166						
V48A	Smith Brothers	30.25	343	IAmb	IAmb	03 00 24.5	
	comp=Z,28nm,0.8s						
833A	Chaparral WMA,	30.31	318	P	P	03 00 17.2	-0.1
	baz=130						
BLA	Blacksburg	30.44	354	P	P	03 00 18.2	-0.1
	baz=173,SNR=5.7						
W45A	Hickory Valley	30.45	340	P	P	03 00 18.3	-0.1
SALV	Santo Antonio	30.69	138	*e*P	P	03 00 17.9	-2.8
WLAR	White Oak Lake	30.76	333	P	P	03 00 20.0	-1.1
WLAR				IAmb	IAmb	03 00 31.2	
	comp=Z,35nm,1.2s						
WVT	Waverly	30.90	342	P	P	03 00 21.8	-0.6
WVT				pmax	pmax		
	comp=Z,14nm,0.9s						
WVT	Waverly	30.90	342	P	P	03 00 21.8	-0.6
WVT				IAmb	IAmb	03 00 29.5	
	comp=Z,14nm,0.9s						
WVT	Waverly	30.90	342	P	P	03 00 23.0	+0.6
	baz=158						
X40A	Basin Creek Fa	31.31	334	P	P	03 00 24.0	-1.9
X40A				IAmb	IAmb	03 00 34.6	
	comp=Z,18nm,0.9s						
X40A	Basin Creek Fa	31.31	334	P	P	03 00 26.1	+0.1
	baz=148						
SNDB	Serra Nova Dou	31.41	126	*e*P	P	03 00 25.3	-1.7
T47A	Sharon Grove	31.50	344	P	P	03 00 26.8	-0.7
WHTX	Lake Whitney,	31.66	325	P	P	03 00 29.1	0.0
	baz=138						
FCAR	Ozark Folk Cen	32.21	336	P	P	03 00 32.5	-1.4
FCAR				IAmb	IAmb	03 00 42.0	
	comp=Z,12nm,0.8s						
Q54A	Coxs Mills	32.24	354	IAmb	IAmb	03 00 42.9	
	comp=Z,22nm,0.9s						
W39A	Magazine	32.32	333	P	P	03 00 35.2	+0.3
	baz=147						
PBMO	Poplar Bluff	32.35	339	P	P	03 00 34.2	-0.8
PP1B	Ponte de Pedra	32.45	139	*e*P	P	03 00 35.2	-1.0
S44A	Carbondale	32.78	341	P	P	03 00 38.2	-0.7
U40A	Yellville	32.91	336	P	P	03 00 40.3	+0.3
	baz=149,SNR=5.6						
SMTB	Santa Maria do	32.92	118	*e*P	P	03 00 39.2	-1.2
P52A	Corning	33.03	352	P	P	03 00 41.8	+0.7
	baz=170,SNR=5.7						
ARAG	Araguaiana, MT	33.29	132	*e*P	P	03 00 41.4	-2.1
O56A	Blue Knob Stat	33.34	357	P	P	03 00 44.1	+0.3
	baz=176						
P49A	Miami Univ. Ec	33.36	349	P	P	03 00 44.7	+0.8
	baz=165						
ABTX	Abilene, Hawle	33.39	323	P	P	03 00 43.1	-1.2
ABTX				IAmb	IAmb	03 01 01.5	
	comp=Z,11nm,0.8s						
ABTX	Abilene, Hawle	33.39	323	P	P	03 00 43.6	-0.8
	baz=135,SNR=6.4						
BLO	Bloomington	33.41	346	P	P	03 00 43.3	-1.0
BLO				pmax	pmax		
	comp=Z,128nm,1.5s						
BLO	Bloomington	33.41	346	P	P	03 00 43.3	-1.0
FVM	French Village	33.43	340	P	P	03 00 42.9	-1.6
FVM				pmax	pmax		
	comp=Z,56nm,0.7s						
FVM	French Village	33.43	340	P	P	03 00 42.9	-1.6
P48A	Milroy	33.43	348	P	P	03 00 44.2	-0.3
O53A	New Philadelph	33.53	354	P	P	03 00 45.7	+0.3
O53A	New Philadelph	33.53	354	P	P	03 00 44.6	-0.7
	baz=172,SNR=5.8						
SSPA	Standing Stone	33.69	358	P	P	03 00 47.2	+0.5
	baz=178						
ACSO	Alum Creek Sta	33.74	351	P	P	03 00 47.3	+0.1
	baz=169,SNR=5.6						
W35A	Tecumseh	33.76	329		P	03 00 46.5	-0.9
W35A				IAmb	IAmb	03 00 53.9	
	comp=Z,22nm,1.4s						
CCM	Cathedral Cave	33.78	339	P	P	03 00 47.2	-0.4
CCM				pmax	pmax		
	comp=Z,45nm,0.7s						
CCM	Cathedral Cave	33.78	339	P	P	03 00 47.2	-0.4
CCM	Cathedral Cave	33.78	339	P	P	03 00 47.2	-0.4
	baz=153						
TUL1	Leonard	33.84	331		P	03 00 46.4	-1.7
TUL1				IAmb	IAmb	03 01 04.2	
	comp=Z,14nm,0.8s						
TUL1	Leonard	33.84	331	P	P	03 00 47.7	-0.4
	baz=144						
ROSB	Rosrio	33.91	106	*e*P	P	03 00 48.7	-0.3
PEXB	Peixe	33.92	124	*e*P	P	03 00 47.9	-1.2
P46A	Rosedale	34.00	345	P	P	03 00 47.9	-1.5
AQDB	Aquidauana	34.08	143	*e*P	P	03 00 48.3	-2.1
AQDB	Aquidauana	34.08	143	P	P	03 00 50.4	+0.1
AQDB				IAmb	IAmb	03 01 06.3	
	comp=Z,11nm,0.8s						
FNO	Franklin	34.11	329		P	03 00 49.0	-1.5
N54A	Moraine State	34.12	356	P	P	03 00 50.2	-0.3
	baz=174						
S39A	Bolivar	34.25	336	P	P	03 00 49.9	-1.8
S39A				IAmb	IAmb	03 00 59.3	
	comp=Z,19nm,0.9s						
AC02	Maricunga	34.25	168	P	P	03 00 53.2	+0.9
R40A	Maddies Statio	34.36	338	P	P	03 00 51.4	-1.2
R40A				IAmb	IAmb	03 00 59.5	
	comp=Z,23nm,0.7s						
OK031	S. Brethren Rd	34.38	330	IAmb	IAmb	03 01 00.4	
	comp=Z,13nm,0.8s						
QUOK	Quay	34.49	331		P	03 00 53.5	-0.2
QUOK				IAmb	IAmb	03 01 01.5	
	comp=Z,18nm,0.8s						
BCOK	Bluff Creek, N	34.53	329		P	03 00 52.9	-1.2
BCOK				IAmb	IAmb	03 01 01.3	
	comp=Z,21nm,0.7s						
M54A	Oil Creek Stat	34.64	356	P	P	03 00 57.6	+2.6
	baz=175						
GO03	Copiap	34.78	170	P	P	03 00 56.0	-0.4
GO03				IAmb	IAmb	03 01 11.6	
	comp=Z,20nm,0.7s						
T35A	Sooner Cattle	34.99	332		P	03 00 56.6	-1.5
T35A				IAmb	IAmb	03 01 05.7	
	comp=Z,18nm,0.8s						
BLOK	Blackwell	35.20	331		P	03 00 57.8	-2.1
BLOK				IAmb	IAmb	03 01 09.3	
	comp=Z,38nm,1.3s						
P40A	Paris	35.38	339	P	P	03 00 59.8	-1.6
P40A				IAmb	IAmb	03 01 11.9	
	comp=Z,24nm,0.9s						
CROK	Carrier	35.38	330		P	03 01 00.8	-0.7
KAN14	Manchester OK	35.72	330	P	P	03 01 03.1	-1.3
KAN14				IAmb	IAmb	03 01 12.1	
	comp=Z,13nm,0.9s						
OK032	Salt Plains WL	35.73	330		P	03 01 04.0	-0.5
OK032				IAmb	IAmb	03 01 15.1	
	comp=Z,18nm,0.9s						
U32A	Winter Ranch,	35.80	328	P	P	03 01 03.8	-1.3
U32A				IAmb	IAmb	03 01 13.0	
	comp=Z,23nm,0.8s						
LCO	Las Campanas	36.09	171	P	P	03 01 09.1	+1.2
LCO				pmax	pmax		
	comp=Z,30nm,0.9s						
LCO	Las Campanas	36.09	171	P	P	03 01 09.1	+1.2
LCO				IAmb	IAmb	03 01 20.2	
	comp=Z,30nm,0.9s						
BDFB	Brasilia	36.12	128	P	P	03 01 06.9	-1.3
	comp=Z,9.8nm,0.7s,baz=308,slow=14,SNR=9.5						
BDFB	Brasilia	36.12	128	P	P	03 01 07.3	-0.9
BDFB				pmax	pmax		
	comp=Z,11nm,0.7s						
BDFB	Brasilia	36.12	128	P	P	03 01 07.3	-0.9
BDFB				IAmb	IAmb	03 01 12.6	
	comp=Z,11nm,0.7s						
AMTX	Amarillo	36.19	324	P	P	03 01 08.6	+0.1
	baz=135						
MSTX	Muleshoe	36.21	322	IAmb	IAmb	03 01 24.1	
	comp=Z,16nm,0.9s						
MSTX	Muleshoe	36.21	322	P	P	03 01 08.0	-0.8
	baz=132,SNR=6.4						
MNTX	Cornudas Mount	36.47	316	P	P	03 01 09.6	-1.3
MNTX	Cornudas Mount	36.47	316	P	P	03 01 10.5	-0.4
	baz=127,SNR=7.3						
L44A	Lake County Fo	36.59	346	P	P	03 01 12.0	+0.3
	baz=161						
KSU1	Kansas State U	36.82	334	IAmb	IAmb	03 01 21.5	
	comp=Z,22nm,0.9s						
KSU1	Kansas State U	36.82	334	P	P	03 01 14.5	+0.8
	baz=146						
SDBA	SAO DESIDERIO	36.92	121	*e*P	P	03 01 13.4	-1.6
ITRB	Iturama	36.97	136	*e*P	P	03 01 12.8	-2.4
GO04	Tololo Observa	37.22	172	P	P	03 01 18.0	+0.5
R32A	Long Quarter,	37.24	331	P	P	03 01 16.5	-0.9
R32A				IAmb	IAmb	03 01 33.0	
	comp=Z,18nm,1.1s						
IPMB	Ipameri, GO	37.39	132	*e*P	P	03 01 16.7	-2.1
CO06	Fray Jorge	37.60	173	P	P	03 01 21.4	+1.0
PCMB	Pacaembu	37.69	139	*e*P	P	03 01 19.9	-1.4
LONY	Lake Ozonia	37.70	2	P	P	03 01 22.9	+1.8
	baz=183						
CO03	El Pedregal	37.88	172	P	P	03 01 24.1	+1.1
CPUP	Villa Florida	37.93	151	LR	LR	03 18 34.0	
	comp=Z,1µm,18.8s,baz=187,slow=39						
CPUP	Villa Florida	37.93	151	*e*P	P	03 01 22.4	-0.9
CBKS	Cedar Bluff	38.05	330	P	P	03 01 23.6	-0.6
CBKS				pmax	pmax		
	comp=Z,17nm,0.8s						
CBKS	Cedar Bluff	38.05	330	P	P	03 01 23.6	-0.6
CBKS				IAmb	IAmb	03 01 32.1	
	comp=Z,17nm,0.8s						
CBKS	Cedar Bluff	38.05	330	P	P	03 01 24.4	+0.1
	baz=141						
121A	Cookes Peak, D	38.61	316	P	P	03 01 29.1	-0.1
121A	Cookes Peak, D	38.61	316	P	P	03 01 29.7	+0.5
	baz=125,SNR=7.9						
JANB	Januaria	38.76	124	*e*P	P	03 01 29.3	-1.2
ZON	Zonda	38.91	169	P	P	03 01 31.4	-0.1
ZON				pmax	pmax		
	comp=Z,60nm,0.9s						
ZON	Zonda	38.91	169	P	P	03 01 31.4	-0.1
319A	Douglas	39.04	313	P	P	03 01 30.9	-1.9
BB19B	Bebedouro	39.15	136	*e*P	P	03 01 32.1	-1.6
ANMO	Albuquerque	39.16	320	P	P	03 01 34.5	+0.7
ANMO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ANMO	Albuquerque	39.16	320	P	P	03 01 34.5	+0.7
ANMO	Albuquerque	39.16	320	P	P	03 01 34.7	+0.9
	baz=129						
T25A	Trinidad	39.34	324	P	P	03 01 34.2	-1.1
T25A	Trinidad	39.34	324	P	P	03 01 36.4	+1.0
	baz=133						
KSCO	Kaye Shedlock’	39.67	328	P	P	03 01 35.6	-2.4
KSCO				IAmb	IAmb	03 01 48.3	
	comp=Z,20nm,0.9s						

KSCO	Kaye Shedlock'	39.67	328	P	P	03 01 38.6	+0.6
	baz=137						
VA03	San Esteban	39.80	172	P	P	03 01 39.1	+0.1
VA01	Torpederas	39.91	173	P	P	03 01 38.6	-1.2
MC01	Montes Claros	39.94	126	*e*P	P	03 01 39.3	-1.1
FRTB	Fartura	40.02	139	*e*P	P	03 01 40.3	-0.6
PEL	Peldehue	40.15	172	P	P	03 01 41.4	-0.5
PEL				pmax	pmax		
	comp=Z,23nm,0.7s						
PEL	Peldehue	40.15	172	P	P	03 01 41.4	-0.5
PEL				IAmb	IAmb	03 01 53.6	
	comp=Z,23nm,0.7s						
MT02	Curacav	40.21	173	P	P	03 01 42.2	0.0
MT02				IAmb	IAmb	03 01 54.5	
	comp=Z,26nm,0.8s						
MT05	Renca	40.39	172	P	P	03 01 45.6	+1.7
SDCO	Great Sand Dun	40.39	324	P	P	03 01 44.7	+0.5
SDCO	Great Sand Dun	40.39	324	P	P	03 01 44.6	+0.5
	baz=132,SNR=15						
TUC	Tucson	40.62	313	P	P	03 01 45.8	-0.1
TUC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TUC	Tucson	40.62	313	P	P	03 01 45.8	-0.1
TUC	Tucson	40.62	313	P	P	03 01 46.5	+0.7
	baz=121						
ECSD	EROS Data Cent	40.71	338	P	P	03 01 47.2	+0.8
ECSD	EROS Data Cent	40.71	338	P	P	03 01 47.1	+0.8
	baz=149						
MT09	Talagante	40.74	173	P	P	03 01 47.1	+0.3
RCLB	Rio Claro- Sao	40.74	136	*e*P	P	03 01 44.8	-2.1
MT01	Popeta	40.79	173	P	P	03 01 47.9	+0.8
MT01				IAmb	IAmb	03 02 05.3	
	comp=Z,25nm,0.8s						
DIAM	Diamantina, MG	41.04	128	*e*P	P	03 01 48.2	-1.4
S22A	4UR Ranch, Cre	41.18	323	P	P	03 01 50.7	+0.1
	baz=131,SNR=6.9						
X18A	Snowflake	41.23	317	P	P	03 01 50.3	-0.7
BO01	Tunca	41.33	173	P	P	03 01 52.2	+0.7
ITAB	Concordia	41.37	146	*e*P	P	03 01 51.3	-0.6
W18A	Petrified Fore	41.42	317	P	P	03 01 51.7	-0.8
W18A	Petrified Fore	41.42	317	P	P	03 01 53.0	+0.5
	baz=125,SNR=8.1						
F36A	Milaca	41.53	342	P	P	03 01 51.8	-1.3
F36A				IAmb	IAmb	03 01 59.6	
	comp=Z,26nm,0.8s						
BO02	Sierra Bellavi	41.76	173	P	P	03 01 56.4	+1.3
BSCB	Bom Sucesso	41.79	132	*e*P	P	03 01 53.9	-1.8
GO05	Huala	41.85	174	P	P	03 01 56.4	+0.7
GO05				IAmb	IAmb	03 02 07.7	
	comp=Z,36nm,0.8s						
ISCO	Idaho Springs	41.86	326	P	P	03 01 56.7	+0.5
ISCO				pmax	pmax		
	comp=Z,11nm,1.1s						
ISCO	Idaho Springs	41.86	326	P	P	03 01 56.7	+0.5
ISCO	Idaho Springs	41.86	326	P	P	03 01 56.7	+0.5
	baz=134						
MVCO	Mesa Verde	41.86	321	P	P	03 01 56.4	+0.2
	baz=128						
214A	Organ Pipe Nat	41.93	311	P	P	03 01 55.0	-1.6
214A	Organ Pipe Nat	41.93	311	P	P	03 01 56.8	+0.2
	baz=119,SNR=6.8						
GDU01	Guandu, BA	42.12	119	*e*P	P	03 01 56.4	-1.9
ML02	Panimavida	42.65	174	P	P	03 02 03.1	+0.9
ML02				IAmb	IAmb	03 02 15.0	
	comp=Z,26nm,0.8s						
WUAZ	Wupatki	42.75	317	P	P	03 02 02.5	-0.9
WUAZ	Wupatki	42.75	317	P	P	03 02 04.1	+0.7
	baz=124,SNR=8.2						
N23A	Red Feather La	42.80	327	P	P	03 02 04.4	+0.5
	baz=134						
CMC01	Camacan, BA	42.92	121	*e*P	P	03 02 03.3	-1.5
SJMB	Sao Joao De Ma	43.23	127	*e*P	P	03 02 05.6	-1.6
GUA01	Guaratinga, BA	43.27	123	*e*P	P	03 02 06.2	-1.3
VAS01	Vassouras-RJ	43.55	133	*e*P	P	03 02 08.4	-1.4
BSFB	Barra de Sao F	43.57	126	*e*P	P	03 02 09.2	-0.8
O20A	White River Ci	43.57	324	P	P	03 02 10.6	+0.6
	baz=131						
NAN01	Guarapari, ES	43.63	125	*e*P	P	03 02 09.2	-1.4
B35A	Bob, Littlefor	43.85	344	P	P	03 02 10.8	-1.0
B35A				IAmb	IAmb	03 02 18.6	
	comp=Z,33nm,0.8s						
U15A	North Rim	43.87	317	P	P	03 02 10.1	-2.5
GLA	Glamis	43.95	312	P	P	03 02 10.9	-2.1
GLA				pmax	pmax		
	comp=Z,11nm,0.9s						
GLA	Glamis	43.95	312	P	P	03 02 10.9	-2.1
GLA	Glamis	43.95	312	P	P	03 02 13.8	+0.9
	baz=118						
RWWY	Rawlins	44.04	327	IAmb	IAmb	03 02 21.4	
	comp=Z,26nm,1.4s						
PDMCI	Parker Dam,Lak	44.05	314	P	P	03 02 14.4	+0.8
	baz=120						
RIB01	Linhares ES	44.19	127	*e*P	P	03 02 13.1	-1.9
RSSD	Black Hills	44.19	332	P	P	03 02 14.4	-0.5
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
RSSD	Black Hills	44.19	332	P	P	03 02 14.3	-0.5
RSSD	Black Hills	44.19	332	P	P	03 02 15.5	+0.6
	baz=139						
W13A	Hualapai Mount	44.27	315	P	P	03 02 14.9	-0.7
SRU	San Rafael Swe	44.29	322	P	P	03 02 14.9	-0.9
SRU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SRU	San Rafael Swe	44.29	322	P	P	03 02 14.8	-0.9
K22A	Casper	44.34	328	P	P	03 02 16.9	+0.8
	baz=135						
AGMN	Agassiz Nation	44.43	342	IAmb	IAmb	03 02 23.9	
	comp=Z,17nm,0.8s						
AGMN	Agassiz Nation	44.43	342	P	P	03 02 16.7	+0.2
	baz=152,SNR=5.5						
PKCU	Pink Cliffs	44.45	319	IAmb	IAmb	03 02 25.7	
	comp=Z,23nm,1.4s						
SWSC	Sam W. Stewart	44.62	311	P	P	03 02 19.0	+0.7
	baz=117						
ALF01	Guarapari-ES	44.63	128	*e*P	P	03 02 17.4	-1.1
P17A	Butcher Ranch,	44.64	322	IAmb	IAmb	03 02 28.6	
	comp=Z,16nm,1.3s						
BC3	Big Chuckawall	44.69	312	P	P	03 02 19.7	+0.7
	baz=118						
IRM	Iron Mountain	44.70	313	P	P	03 02 19.5	+0.6
	baz=119						
MVU	Marysvale	44.99	320	IAmb	IAmb	03 02 35.9	
	comp=Z,30nm,1.0s						
MONP2	Monument Peak	45.07	311	P	P	03 02 22.8	+0.6
	baz=116						
BELC	Belle Mtn. Jos	45.25	312	P	P	03 02 24.0	+0.5
	baz=118						
GMRC	Granite Mounta	45.38	313	P	P	03 02 24.9	+0.4
	baz=119						
TPFO	Pinon Flats	45.41	311	P	P	03 02 25.1	+0.4
	baz=117						
PFO	Pinyon Flats O	45.42	311	P	P	03 02 25.3	+0.5
	baz=117						
MPU	Maple Canyon	45.52	322	IAmb	IAmb	03 02 34.1	
	comp=Z,18nm,1.4s						
109C	Camp Elliot, M	45.58	310	P	P	03 02 26.6	+0.7
	baz=116						
TUQ	Turquoise Moun	45.88	314	P	P	03 02 28.7	+0.3
	baz=119						
HEC	Hector,Ludlow	45.89	313	P	P	03 02 29.3	+0.8
	baz=118						
MURC	Murrieta	45.96	311	P	P	03 02 29.6	+0.6
	baz=116						
CTU	Camp Tracy	46.00	323	IAmb	IAmb	03 02 37.7	
	comp=Z,10nm,1.1s						
BW06	Boulder Array	46.05	326	IAmb	IAmb	03 02 37.7	
	comp=Z,10nm,1.1s						
BW06	Boulder Array	46.05	326	P	P	03 02 29.6	-0.2
	baz=132,SNR=6.8						
PD31	Pinedale Array	46.05	326	IAmb	IAmb	03 02 37.7	
	comp=Z,9.1nm,1.1s						
PDAR	Pinedale Array	46.05	326	P	P	03 02 29.4	-0.4
	comp=Z,2.7nm,0.9s,baz=128,slow=6.6,SNR=16						
ULM	Lac du Bonnet	46.17	343	P	P	03 02 30.5	+0.3
	comp=Z,7.6nm,0.8s,baz=164,slow=9.7,SNR=5.5						
ULM				LR	LR	03 22 40.9	
	comp=Z,334nm,19.4s,baz=152,slow=37						
DUG	Dugway, Tooele	46.35	321	IAmb	IAmb	03 02 40.8	
	comp=Z,11nm,0.9s						
DUG	Dugway, Tooele	46.35	321	P	P	03 02 32.3	+0.2
	baz=126,SNR=11						
GSC	Goldstone, Bar	46.45	313	P	P	03 02 33.0	+0.1
	baz=118						
SPUT	South Promonto	46.79	323	IAmb	IAmb	03 02 43.1	
	comp=Z,17nm,1.3s						
TPNV	Topopah Spring	46.85	316	P	P	03 02 36.7	+0.7
	baz=120						
AHID	Auburn Hatcher	46.91	325	IAmb	IAmb	03 02 49.5	
	comp=Z,6.6nm,0.9s						
BGU	Big Grassy Mou	46.91	322	IAmb	IAmb	03 02 44.2	
	comp=Z,16nm,1.3s						
FURC	Furnace Creek,	47.04	315	P	P	03 02 38.5	+1.1
	baz=119						
R11A	Troy Canyon, C	47.11	318	IAmb	IAmb	03 02 46.4	
	comp=Z,8.4nm,1.2s						
R11A	Troy Canyon, C	47.11	318	P	P	03 02 38.6	+0.4
	baz=122,SNR=7.7						
EDW2	Edwards Air Fo	47.12	312	P	P	03 02 37.3	-0.8
	baz=116						
LAO	LASA Array	47.13	332	P	P	03 02 38.2	+0.3
	baz=138						
REDW	Red Top Meadow	47.16	326	IAmb	IAmb	03 02 46.6	
	comp=Z,21nm,1.1s						
LRMC	Laurel Mtn Rad	47.16	313	P	P	03 02 38.8	+0.3
	baz=117						
SNOW	Snow King Moun	47.17	326	IAmb	IAmb	03 02 46.2	
	comp=Z,26nm,1.3s						
LOHW	Long Hollow	47.18	326	IAmb	IAmb	03 02 57.5	
	comp=Z,20nm,1.3s						
HVU	Hansel Valley	47.27	323	IAmb	IAmb	03 02 49.6	
	comp=Z,5.7nm,0.8s						
MPMC	Manual Prospec	47.29	314	P	P	03 02 39.5	-0.1
	baz=118						
MOOW	Moose Ponds	47.35	327	IAmb	IAmb	03 02 51.8	
	comp=Z,5.6nm,0.8s						
RLMT	Red Lodge	47.49	329	P	P	03 02 41.3	+0.4
	baz=134						
DGMT	Dagmar	47.61	335	P	P	03 02 41.8	+0.2
	baz=142						
GRAC	Grapevine Rang	47.65	315	P	P	03 02 42.6	+0.4
	baz=119						
PLCA	Paso Flores	47.66	174	P	P	03 02 42.7	+0.6
	comp=Z,15nm,1.0s,baz=351,slow=8.8,SNR=18						
PLCA	Paso Flores	47.66	174	*e*P	P	03 02 42.7	+0.6
ISA	Isabella, Lake	47.82	313	P	P	03 02 43.9	+0.4
	baz=117						
CWC	Cottonwood Cre	47.90	314	P	P	03 02 44.5	+0.3
	baz=118						
YHL	Hebgen Lake	48.31	327	IAmb	IAmb	03 02 56.5	
	comp=Z,12nm,1.0s						
SCHQ	Schefferville	48.52	8	LR	LR	03 25 08.3	
	comp=Z,516nm,18.3s,baz=245,slow=38						
NV11	Mina Array Sit	48.90	316	IAmb	IAmb	03 03 00.0	
	comp=Z,11nm,1.1s						
NVAR	Mina Array Bea	49.00	316	P	P	03 02 53.3	+0.6
	comp=Z,4.4nm,0.9s,baz=130,slow=6.1,SNR=21						
BOZ	Bozeman (W)	49.04	328	P	P	03 02 53.4	+0.5
	baz=131						
LL01	San Ignacio de	49.12	176	IAmb	IAmb	03 02 53.8	
	comp=Z,15nm,0.8s						
KVN	Kaiserville	49.16	317	IAmb	IAmb	03 03 02.2	
	comp=Z,15nm,1.4s						
RYN	Ryan	49.24	316	IAmb	IAmb	03 03 01.5	
	comp=Z,10nm,1.1s						
BMN	Battle Mountai	49.28	319	IAmb	IAmb	03 03 03.7	
	comp=Z,8.2nm,0.9s						
HLID	Hailey	49.31	324	P	P	03 02 55.3	+0.3
	baz=127,SNR=8.9						
EGMT	Eagleton	49.75	331	P	P	03 02 58.5	+0.3
	baz=135						
YERR	Yerington	49.91	316	IAmb	IAmb	03 03 08.4	
	comp=Z,9.2nm,0.9s						
LL02	Futaleuf	49.97	175	IAmb	IAmb	03 03 01.3	
	comp=Z,15nm,0.9s						
MFID	Camas Ranch	50.06	323	IAmb	IAmb	03 03 08.1	
	comp=Z,10nm,0.9s						
PNTR	Pine Nut	50.20	316	IAmb	IAmb	03 03 18.0	
	comp=Z,12nm,0.8s						
VCNR	Virginia City	50.33	317	IAmb	IAmb	03 03 11.6	
	comp=Z,24nm,1.5s						
MSO	Missoula	51.06	328	P	P	03 03 08.7	+0.6
	baz=129						
WVOR	Wild Horse Val	51.24	321	IAmb	IAmb	03 03 17.2	
	comp=Z,21nm,1.1s						
O03E	Paynes Creek	52.27	317	P	P	03 03 16.5	-0.7
	baz=117						
COYC	Coyhaique	52.32	176	IAmb	IAmb	03 03 18.5	
	comp=Z,29nm,1.1s						
O02D	Mt. Diablo Mer	52.89	316	P	P	03 03 21.5	-0.3
	baz=116						
G08A	Pilot Rock	52.97	324	IAmb	IAmb	03 03 30.5	
	comp=Z,23nm,1.5s						
M04C	Macdoel	52.98	318	P	P	03 03 22.6	0.0
	baz=118						
E09A	Wood Farm, Sta	53.18	325	IAmb	IAmb	03 03 31.6	
	comp=Z,10nm,1.0s						
PINE	Pine Mountain	53.38	321	IAmb	IAmb	03 03 33.2	
	comp=Z,14nm,1.1s						
L04D	Klamath Falls	53.49	319	P	P	03 03 25.9	-0.4
	baz=118						
NEW	Newport	53.64	327	P	P	03 03 27.4	+0.2
	baz=127						
J04D	Umpqua Nationa	53.85	320	P	P	03 03 29.1	+0.1
	baz=119						
G05D	Wamic, OR	54.35	322	P	P	03 03 33.1	+0.7
	baz=121						
B08A	Colville Reser	54.90	326	IAmb	IAmb	03 03 43.9	
	comp=Z,10nm,0.8s						
YKA	Yellowknife Ar	62.08	341	P	P	03 04 25.1	-1.0
	comp=Z,1.7nm,0.5s,baz=133,slow=6.7,SNR=36						
TAOE	Nuku Hiva Isla	65.14	257	*e*LR	LR	03 24 56.1	
	comp=Z,350nm,22.2s						
ICESG	Greenland Ices	66.75	14	*i* P	P	03 05 02.5	+5.4
PNCL	Nicolau / Gran	68.66	52	*e*pP	pP	03 05 15.6	+1.5
PCAS	Casmilo, Conde	68.97	50	*e*P	P	03 05 10.6	-0.6
	comp=Z,116nm,1.6s						
PCAS				*e*pP	sP	03 05 17.7	-0.2
PCVE	Castro Verde	68.97	52	*e*P	P	03 05 11.3	+0.1
	comp=Z,54nm,1.5s						
EVO	Evora	69.12	51	*e*P	P	03 05 12.4	+0.3
	comp=Z,25nm,2.0s						
EVO				*e*pP	sP	03 05 19.1	+0.3
PESTR	Estremoz	69.49	51	*e*P	P	03 05 14.9	+0.5
	comp=Z,57nm,1.5s						
PESTR				*e*pP	sP	03 05 21.1	-0.1
PESTR	Estremoz	69.49	51	P	P	03 05 14.6	+0.1
PESTR				IAmb	IAmb	03 05 21.7	
	comp=Z,16nm,1.0s						
PVIS	Viseu	69.53	49	*e*P	P	03 05 14.7	0.0
	comp=Z,50nm,2.0s						
PVIS				*e*pP	sP	03 05 21.0	-0.4
POLO	Lamas de Olo	69.70	48	*e*P	P	03 05 16.4	+0.6
	comp=Z,37nm,1.5s						
POLO				*e*pP	sP	03 05 22.4	-0.1
PMRV	Marv??o	69.72	51	*e*pP	pP	03 05 22.4	+1.6
PVRL	Vila Real	69.75	49	*e*pP	pP	03 05 22.7	+1.8
TULEG	Thule	69.81	2	*i* P	P	03 05 21.7	+6.1
TULEG				IAmb	IAmb	03 05 22.2	
	comp=Z,22nm,0.9s						
MVO	Moncorvo	70.24	49	*e*P	P	03 05 19.5	+0.4
	comp=Z,37nm,1.3s						
MVO				*e*pP	sP	03 05 26.1	+0.3
PBRG	Braganca	70.55	48	*e*P	P	03 05 21.2	+0.3
	comp=Z,47nm,1.8s						
TIC	Toumodi	71.10	85	*e*P	P	03 05 24.6	-0.2
LIC	Lamto	71.13	86	*e*P	P	03 05 24.3	-0.6
	comp=Z,74nm,1.2s						
DBIC	Dimbokro	71.26	85	P	P	03 05 24.7	-1.0
	comp=Z,11nm,0.9s,baz=310,slow=5.9,SNR=15						
DBIC	Dimbokro	71.26	85	P	P	03 05 25.6	-0.1
DBIC				pmax	pmax		
	comp=Z,13nm,0.8s						
DBIC	Dimbokro	71.26	85	P	P	03 05 25.6	-0.1
DBIC				IAmb	IAmb	03 05 31.9	
	comp=Z,13nm,0.8s						
KIC	Kosan Boka	71.41	86	*e*P	P	03 05 26.1	-0.5
	comp=Z,31nm,0.8s						
A36M	Sachs Harbour	71.54	346	P	P	03 05 25.0	-1.3
A36M	Sachs Harbour	71.54	346	P	P	03 05 25.7	-0.5
	baz=128,SNR=14						
KOWA	Kowa	71.59	77	P	P	03 05 27.9	+0.3
YUK3	Moose Creek	71.79	333	P	P	03 05 28.2	-0.1
	baz=110						
INK	Inuvik	71.85	341	P	P	03 05 28.2	0.0
	baz=119,SNR=7.2						
NEEM	North Greenlan	71.88	6	*i* P	P	03 05 33.5	+4.9
PMSA	Palmer Station	72.03	174	*e*P	P	03 05 29.4	+0.2
DAWY	Dawson	72.17	336	P	P	03 05 30.8	+0.5
	baz=112						
BVCY	Beaver Creek	72.19	334	P	P	03 05 32.1	+1.7
	baz=110						
I29M	Ogilvie Camp,	72.24	337	P	P	03 05 31.5	+0.9
	baz=113						
ESDC	Sonseca Array	72.38	51	P	P	03 05 32.4	+0.4
	comp=Z,6.5nm,0.9s,baz=271,slow=6.2,SNR=20						
ESDC	Sonseca Array	72.38	51	P	P	03 05 32.3	+0.2
ESDC				IAmb	IAmb	03 05 39.5	
	comp=Z,14nm,1.1s						
ESBB	Sonseca Array	72.38	51	IAmb	IAmb	03 05 39.9	
	comp=Z,16nm,0.9s						
M27K	Edge Creek, AK	72.62	334	P	P	03 05 34.2	+1.0
	baz=109						
BCAR	Beaver Creek A	72.81	334	P	P	03 05 35.1	+1.0
L27K	Beaver Creek,	72.83	334	P	P	03 05 35.1	+0.8
	baz=109						
EGAK	Eagle	73.14	336	P	P	03 05 36.9	+0.9
	baz=110						
L26K	Log Cabin Wild	73.48	334	P	P	03 05 38.9	+0.8
	baz=108						
J26L	Joseph Creek	74.03	336	P	P	03 05 41.9	+0.5
	baz=108						
SCRK	Sand Creek	74.04	335	P	P	03 05 41.3	-0.1
SCRK				IAmb	IAmb	03 05 50.5	
	comp=Z,18nm,1.4s						
SCRK	Sand Creek	74.04	335	P	P	03 05 41.8	+0.4
	baz=108						
RIDG	Independent Ri	74.33	335	P	P	03 05 43.8	+0.7
	baz=107						
SMAI	San Martin Ant	75.08	176	P	P	03 05 47.7	+0.6
PRP	Porcupine Dome	75.13	336	P	P	03 05 49.3	+1.6
	baz=107						
WAT6	Susitna Watana	75.29	333	P	P	03 05 50.3	+1.5
	baz=104						
BMAR	Burnt Mountain	75.34	338	P	P	03 05 48.6	-0.2
HDA	Harding Lake	75.41	335	P	P	03 05 51.8	+2.6
	baz=105						
ILAR	Eielson Array	75.48	335	P	P	03 05 49.0	-0.6
	comp=Z,2.0nm,0.9s,baz=120,slow=4.3,SNR=12						
MFF	Saint Martin d	75.83	44	*e*P	P	03 05 52.4	+0.4
MFF				pmax	pmax		
	comp=Z,41nm,0.9s						
COLA	College	75.90	335	*i* P	P	03 05 54.7	+2.7
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PPT	Papeete	75.92	250	LR	LR	03 31 19.7	
	comp=Z,132nm,22.0s,baz=80,slow=30						
PPT2	Papeete2	75.92	250	*e*LR	LR	03 29 53.8	
	comp=Z,514nm,25.5s,baz=78						
MDM	Murphy Dome	76.08	335	P	P	03 05 53.5	+0.4
MDM				IAmb	IAmb	03 06 00.6	
	comp=Z,10nm,0.9s						
MCK	McKinley	76.09	334	P	P	03 05 54.4	+1.2
	baz=103						
H24K	Noodor Dome	76.15	336	P	P	03 05 54.4	+0.9
	baz=104						
NEA2	Nenana	76.34	335	P	P	03 05 54.9	+0.4
	baz=103						
DAG	Danmarks Havn	76.35	12	*i* P	P	03 05 59.0	+4.6
I23K	Minto, Yukon-K	76.59	335	P	P	03 05 56.5	+0.7
	baz=103						
TRF	Thorofare Moun	76.62	334	P	P	03 05 56.9	+0.6
	baz=102						
BPAW	Bear Paw Mtn.	77.05	334	P	P	03 05 58.0	-0.6
BPAW	Bear Paw Mtn.	77.05	334	P	P	03 05 57.8	-0.8
	baz=101,SNR=6.2						
TBI	Tubuai	77.07	244	*e*LR	LR	03 30 24.0	
	comp=Z,214nm,27.5s						
MLY	Manley	77.14	335	IAmb	IAmb	03 06 07.4	
	comp=Z,14nm,1.0s						
MLY	Manley	77.14	335	P	P	03 05 59.4	+0.3
	baz=102						
TORD	Torodi Ar. Bea	77.20	78	P	P	03 05 60.0	-0.4
	comp=Z,2.3nm,0.7s,baz=284,slow=4.7,SNR=15						
CAF	Calviac	77.25	46	*e*P	P	03 06 00.4	+0.3
CAF				pmax	pmax		
	comp=Z,16nm,0.9s						
COLD	Coldfoot	77.39	338	P	P	03 06 00.4	+0.1
	baz=103,SNR=7.2						
CAST	Castle Rocks	77.41	334	P	P	03 06 01.3	+0.7
	baz=100						
TOLK	Toolik Lake Re	77.48	339	P	P	03 06 01.4	+0.5
	baz=104						
CHUM	Lake Minchumin	77.59	334	P	P	03 06 01.8	+0.3
	baz=100						
I21K	Tanana	77.68	335	P	P	03 06 03.3	+1.2
	baz=100						
SSF	Saint Saulge	78.36	43	*e*P	P	03 06 06.0	-0.2
SSF				pmax	pmax		
	comp=Z,24nm,1.1s						
J20K	Nowinta River	78.43	334	IAmb	IAmb	03 06 14.0	
	comp=Z,16nm,0.7s						
J20K	Nowinta River	78.43	334	P	P	03 06 06.1	-0.1
	baz=98						
SNF	Seneffe	79.03	40	*d*x	pP	03 06 16.4	+1.6
NOR	Nord	79.06	7	*i* P	P	03 06 15.6	+6.2
DOU	Dourbes	79.21	40	*d*x	pP	03 06 16.5	+0.7
BGES	Gesves	79.54	40	*d*P	P	03 06 12.3	-0.3
BGES				*d*x	pP	03 06 18.8	+1.3
RCHB	Rochefort	79.62	40	*d*P	P	03 06 13.0	0.0
RCHB				*d*x	pP	03 06 19.0	+1.1
BCLA	Clavier	79.67	40	*d*P	P	03 06 13.4	+0.1
BCLA				*d*x	pP	03 06 19.3	+1.0
GCSA	Galena City Sc	79.68	335	P	P	03 06 14.2	+1.2
	baz=96						
BSTI	Sart Tilman	79.85	40	*d*x	pP	03 06 20.8	+1.6
BEBN	Eben Emael	79.92	40	*d*x	P	03 06 20.9	+6.2
BHOU	Houvegnez	80.12	40	*d*P	P	03 06 15.9	+0.2
	comp=Z,11nm,1.2s						
BHOU				*d*x	pP	03 06 21.9	+1.1
MEM	Membach	80.13	40	*d*x	pP	03 06 22.2	+1.5
WLF	Walferdange	80.20	41	*d*P	P	03 06 17.0	+0.9
	comp=Z,36nm,0.8s						
WLF				*d*x	pP	03 06 22.5	+1.3
WLF	Walferdange	80.20	41	*e*P	P	03 06 17.1	+0.9
	comp=Z,12nm,0.8s,baz=272,slow=5.2						
WLF				*e*pP	sP	03 06 23.0	+0.3
BTNL	Ternell	80.21	40	*d*x	pP	03 06 22.6	+1.4
A21K	Barrow	80.35	341	P	P	03 06 16.1	-0.4
	baz=97,SNR=7.2						
LPL	La Plagne	80.56	45	*e*P	P	03 06 19.3	+0.8
LPL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AHRW	Bad Neuenahr-A	80.81	40	*e*P	P	03 06 20.4	+1.0
	comp=Z,5.2nm,0.8s,baz=272,slow=5.2						
AHRW				*e*pP	sP	03 06 26.2	+0.2
ECH	Echery	80.85	42	IAmb	IAmb	03 06 26.9	
	comp=Z,23nm,0.9s						
BUG	Bochum--Univer	80.94	39	*e*P	P	03 06 21.0	+1.0
	comp=Z,4.5nm,0.8s,baz=272,slow=5.2						
BUG				*e*pP	PcP	03 06 26.4	-0.1
IBBN	Ibbenburen	81.25	38	*e*P	P	03 06 22.6	+0.9
	comp=Z,9.1nm,1.0s,baz=272,slow=5.2						
IBBN				*e*pP	sP	03 06 28.2	-0.1
BFO	Black Forest	81.64	42	*e*P	P	03 06 24.4	+0.5
	comp=Z,3.1nm,0.9s,baz=272,slow=5.2						
BFO				*e*pP	PcP	03 06 30.0	+0.3
TNS	Taunus Mts	81.69	40	*e*P	P	03 06 25.1	+0.9
	baz=272,slow=5.2						
TNS				*e*pP	sP	03 06 30.5	-0.2
STU	Stuttgart	82.20	42	*e*P	P	03 06 27.4	+0.5
	comp=Z,14nm,0.8s,baz=272,slow=5.2						
STU				*e*pP	sP	03 06 33.2	-0.2
STU	Stuttgart	82.20	42	IAmb	IAmb	03 06 34.0	
	comp=Z,18nm,0.9s						
GTTG	Gottingen	82.62	39	*e*P	P	03 06 29.8	+0.8
	comp=Z,4.1nm,0.8s,baz=272,slow=5.2						
DAVA	Damuels	82.71	43	*e*P	P	03 06 29.9	+0.2
	comp=Z,26nm,0.9s,SNR=5.4						
BSEG	Bad Segeberg	82.77	37	*e*P	P	03 06 30.9	+1.3
	baz=272,slow=5.2						
BSEG				*e*pP	sP	03 06 36.3	0.0
KEST	Kesra	82.85	55	P	P	03 06 31.0	+0.4
	comp=Z,2.9nm,0.7s,baz=288,slow=7.3,SNR=6.6						
KEST	Kesra	82.85	55	IAmb	IAmb	03 06 43.5	
	comp=Z,6.7nm,1.1s						
UBR	Ueberruh	82.85	43	*e*P	P	03 06 30.8	+0.5
	comp=Z,4.3nm,1.0s,baz=272,slow=5.2						
UBR				*e*pP	sP	03 06 36.8	-0.1
NB2	NORSAR Subarra	83.06	29	P	P	03 06 31.5	+0.4
	comp=Z,27nm,1.1s,baz=273,slow=5.1						
NB2	NORSAR Subarra	83.06	29	P	P	03 06 31.5	+0.4
	baz=273,slow=5.1						
NOA	NORSAR Array B	83.06	29	P	P	03 06 31.3	+0.2
	comp=Z,3.2nm,0.9s,baz=273,slow=5.3,SNR=7.2						
FETA	Feichten	83.30	43	*e*P	P	03 06 33.1	+0.3
	comp=Z,15nm,1.0s						
RETA	Reutte	83.30	43	*e*P	P	03 06 33.5	+0.8
	comp=Z,7.2nm,1.1s						
ANM	Nome	83.32	334	P	P	03 06 31.9	-0.5

	baz=88						
FLTG	Flechtingen	83.38	38	*e*P	P	03 06 33.9	+1.0
	comp=Z,6.3nm,0.9s,baz=272,slow=5.2						
FLTG				*e*pP	sP	03 06 39.5	0.0
GRF	Grafenberg Arr	83.50	41	*e*P	P	03 06 34.2	+0.7
	comp=Z,4.5nm,0.8s,baz=272,slow=5.2						
MOTA	Moosalm	83.54	43	*e*P	P	03 06 33.9	-0.1
	comp=Z,9.4nm,1.5s						
SQTA	Sankt Quirin	83.61	43	*e*P	P	03 06 35.3	+0.9
	comp=Z,12nm,1.1s						
MOX	Moxa	83.70	40	*e*P	P	03 06 35.2	+0.6
	comp=Z,1.9nm,0.9s,baz=272,slow=5.2						
NEUB	Neuenburg	83.77	39	*e*P	P	03 06 35.8	+0.9
	comp=Z,4.5nm,0.8s,baz=272,slow=5.2						
NEUB				*e*pP	sP	03 06 41.4	-0.1
WATA	Walderalm	83.86	43	*e*P	P	03 06 35.2	-0.4
	comp=Z,8.1nm,1.1s						
WTTA	Wattenberg	83.90	43	*i* P	P	03 06 36.6	+0.6
	comp=Z,1.8nm,0.8s						
CTI	Castel Tesino	83.99	44	IAmb	IAmb	03 06 43.2	
	comp=Z,8.5nm,0.9s						
MANZ	Manzenberg	84.05	40	*e*P	P	03 06 37.1	+0.7
	comp=Z,0.7nm,0.9s,baz=272,slow=5.2						
WERD	Werda	84.15	40	*e*P	P	03 06 37.8	+0.8
	comp=Z,3.2nm,0.9s,baz=272,slow=5.2						
GUNZ	Gunzen	84.17	40	*e*P	P	03 06 37.6	+0.6
	comp=Z,2.0nm,0.8s,baz=272,slow=5.2						
WERN	Wernitzgruen	84.21	40	*e*P	P	03 06 37.8	+0.6
	baz=272,slow=5.2						
TANN	Tannenbergstha	84.25	40	*e*P	P	03 06 38.3	+0.8
	comp=Z,3.3nm,0.9s,baz=272,slow=5.2						
TANN				*e*pP	sP	03 06 44.4	+0.3
NKC	Novy Kostel	84.25	40	*e*P	P	03 06 38.5	+1.0
NKC				*e*pP	sP	03 06 43.7	-0.4
NKC	Novy Kostel	84.25	40	*e*P	P	03 06 38.5	+1.0
NKC				*e*		03 06 43.7	
CLL	Collm	84.53	39	P	P	03 06 38.8	0.0
CLL				pmax	pmax		
	comp=Z,11nm,0.9s						
CLL	Collm	84.53	39	*i* P	P	03 06 39.3	+0.5
CLL				*i*		03 06 45.3	
	comp=Z,11nm,0.9s						
CLL				*e*PP	PP	03 09 58.0	+3.9
CLL	Collm	84.53	39	*e*P	P	03 06 39.7	+0.9
	comp=Z,3.7nm,0.9s,baz=272,slow=5.2						
CLL				*e*pP	sP	03 06 45.5	+0.1
CLL	Collm	84.53	39	P	P	03 06 38.8	0.0
CLL				IAmb	IAmb	03 06 46.3	
	comp=Z,11nm,0.9s						
ABTA	Abfaltersbach	84.53	44	*e*P	P	03 06 38.8	-0.2
	comp=Z,8.9nm,0.9s,SNR=8.9						
WET	Wettzell	84.61	41	*e*P	P	03 06 40.2	+0.9
	comp=Z,4.6nm,0.9s,baz=272,slow=5.2						
RJOB	Jochberg	84.66	43	*e*P	P	03 06 40.2	+0.6
	comp=Z,2.2nm,0.9s,baz=272,slow=5.2						
STAL	STALIGIAL	84.71	44	IAmb	IAmb	03 06 51.8	
	comp=Z,6.8nm,0.8s						
FBE	Freiberg	84.78	39	*e*P	P	03 06 41.1	+1.0
	comp=Z,4.5nm,0.9s,baz=272,slow=5.2						
FBE				*e*pP	sP	03 06 47.0	+0.4
KHC	Kasperske Hory	85.07	41	*e*P	P	03 06 41.8	+0.2
KHC				*e*x	x	03 06 48.2	
KHC	Kasperske Hory	85.07	41	*i* P	P	03 06 41.4	-0.2
KHC				pmax	pmax		
	comp=Z,14nm,1.0s						
KHC	Kasperske Hory	85.07	41	IAmb	IAmb	03 06 49.3	
	comp=Z,10nm,0.9s						
KBA	Koelnbreinsper	85.08	43	*e*P	P	03 06 41.8	-0.1
	comp=Z,12nm,1.3s,SNR=5.2						
BRG	Berggiesshubel	85.16	39	*e*P	P	03 06 42.9	+0.9
	comp=Z,3.5nm,0.9s,baz=272,slow=5.2						
BRG				*e*pP	sP	03 06 48.8	+0.3
GEC2	GERESS Array S	85.17	42	*e*P	P	03 06 42.9	+0.7
	comp=Z,4.4nm,0.9s,baz=272,slow=5.2						
GEC2				*e*pP	sP	03 06 48.6	-0.2
GEC2	GERESS Array S	85.17	42	IAmb	IAmb	03 06 49.5	
	comp=Z,12nm,0.9s						
GERES	GERESS Array B	85.17	42	P	P	03 06 42.5	+0.3
	comp=Z,3.8nm,0.9s,baz=255,slow=2.6,SNR=24						
MYKA	Terra Mystica	85.32	44	*e*P	P	03 06 43.8	+0.8
	comp=Z,9.2nm,0.8s						
CKRC	Cesky Krumlov	85.58	42	*e*P	P	03 06 45.0	+0.9
CKRC				*e*x	x	03 06 50.4	
PRU	Pruhonice	85.62	40	*e*P	P	03 06 44.6	+0.3
PRU				*e*pP	sP	03 06 50.8	-0.1
PRU	Pruhonice	85.62	40	*e*P	P	03 06 44.6	+0.3
PRU				*e*		03 06 50.8	
MOA	Molln	85.64	42	*e*P	P	03 06 44.3	-0.1
	comp=Z,6.3nm,0.7s,SNR=5.4						
GBAS	Gorenja Brezov	85.94	44	*i* P	P	03 06 46.7	+0.7
GBAS				*i*		03 06 52.8	
OBKA	Obir	85.95	44	*e*P	P	03 06 45.9	-0.3
	comp=Z,7.1nm,1.2s						
GBRS	Gornja Briga	86.23	45	*i* P	P	03 06 48.3	+0.8
GBRS				*i*		03 06 54.4	
TREC	Trest	86.30	41	*e*P	P	03 06 54.5	+6.8
TREC	Trest	86.30	41	*e*P	P	03 06 54.5	+6.8
UPC	Upice	86.50	40	*e*P	P	03 06 49.2	+0.5
UPC				*e*pP	sP	03 06 55.0	-0.3
UPC	Upice	86.50	40	*e*P	P	03 06 49.2	+0.5
UPC				*e*		03 06 55.0	
CHVC	Chvalec	86.52	40	*e*P	P	03 06 49.3	+0.5
CHVC				*e*x	x	03 06 55.9	
ARSA	Arzberg	86.54	43	*e*P	P	03 06 48.7	-0.3
	comp=Z,7.2nm,0.9s						
OSTC	Ostas	86.63	40	*e*P	P	03 06 49.5	+0.2
OSTC				*e*x	x	03 06 55.6	
CONA	Conrad Observa	86.69	42	*e*P	P	03 06 50.1	+0.3
	comp=Z,10nm,0.9s,SNR=5.3						
DPC	Dobruska-Polom	86.72	40	*e*P	P	03 06 50.4	+0.6
DPC				*e*x	x	03 06 56.8	
DPC	Dobruska-Polom	86.72	40	*e*P	P	03 06 50.4	+0.6
DPC				*e*		03 06 56.8	
KRUC	Moravsky	86.92	41	*e*P	P	03 06 51.1	+0.4
KRUC				*e*		03 06 57.1	
VRAC	Vranov	87.02	41	⇓P	P	03 06 52.5	+1.3
VRAC	Vranov	87.02	41	*e*P	P	03 06 51.0	-0.2
VRAC				*e*		03 06 57.9	
VRAC	Vranov	87.02	41	⇓P	P	03 06 52.5	+1.3
KRLC	Kraliky	87.05	40	*e*P	P	03 06 52.2	+0.8
KRLC				*e*x	x	03 06 58.4	
KRLC	Kraliky	87.05	40	*e*P	P	03 06 52.2	+0.8
KRLC				*e*		03 06 58.4	
MORC	Moravsky Berou	87.57	40	*e*P	P	03 06 54.7	+0.8
MORC				*e*		03 07 00.8	
MODS	Modra-Piesok	87.58	42	*e*P	P	03 06 54.3	+0.3
MODS				*e*		03 07 00.0	
MODS	Modra-Piesok	87.58	42	*e*P	P	03 06 54.3	+0.3
MODS				*e*		03 07 00.0	
JAVC	Velka Javorina	87.78	41	*e*P	P	03 06 56.9	+1.9
JAVC				*e*		03 07 02.7	
ARCES	ARCESS Array B	87.90	20	P	P	03 06 54.5	-0.6
	comp=Z,6.1nm,0.8s,baz=280,slow=7.0,SNR=5.1						
VYHS	Vyhne	88.59	41	*e*P	P	03 07 05.7	+6.9
VYHS	Vyhne	88.59	41	*e*	P	03 07 05.7	+6.9
LANS	Liptovska Anna	88.91	41	*e*P	P	03 07 08.5	+8.2
LANS	Liptovska Anna	88.91	41	*e*	P	03 07 08.5	+8.2
OJC	Ojcow	88.95	40	P	P	03 07 00.9	+0.5
OJC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OJC	Ojcow	88.95	40	P	P	03 07 00.9	+0.5
OJC				IAmb	IAmb	03 07 08.6	
	comp=Z,9.9nm,1.0s						
BBLS	Lazići	89.70	46	*e*P	P	03 07 10.7	+6.6
VNA2	Neumayer--Watz	89.77	162	P	P	03 07 02.8	-1.0
	baz=314,slow=5.9						
DIVS	Divibare	90.08	46	IAmb	IAmb	03 07 14.0	
	comp=Z,7.6nm,1.0s						
FINES	FINESS Array B	90.11	28	P	P	03 07 05.7	+0.2
	comp=Z,3.8nm,0.9s,baz=339,slow=10,SNR=4.9						
IVAS	Ivanjica	90.28	46	*e*P	P	03 07 07.0	+0.1
TRUS	Trudelj	90.35	46	*e*P	P	03 07 08.6	+1.5
GRUS	Gruza	90.63	46	*e*P	P	03 07 09.4	+1.0
BZS	Buzias	90.95	44	⇓P	P	03 07 11.0	+1.2
BZS	Buzias	90.95	44	⇓P	P	03 07 11.0	+1.2
KBN	Korca	91.25	49	IAmb	IAmb	03 07 13.9	
	comp=Z,8.6nm,0.9s						
BOVS	Bovan	91.38	46	⇑P	P	03 07 12.3	+0.4
BOVS	Bovan	91.38	46	*e*P	P	03 07 12.0	+0.1
SNAA	Sanae	91.41	162	P	P	03 07 10.7	-0.7
SNAA	Sanae	91.41	162	*i* P	P	03 07 10.2	-1.2
SNAA				pmax	pmax		
	comp=Z,24nm,1.7s						
SNAA	Sanae	91.41	162	P	P	03 07 11.0	-0.4
SNAA				IAmb	IAmb	03 07 20.7	
	comp=Z,5.4nm,0.8s						
DRGR		91.47	43	⇓P	P	03 07 11.7	-0.6
DRGR		91.47	43	⇓P	P	03 07 11.7	-0.6
BARS	Barje	91.61	47	*e*P	P	03 07 13.2	+0.2
ZAGS	Zajecar	91.72	46	*e*P	P	03 07 13.6	+0.2
GZR	Gura Zlata	91.79	44	⇓P	P	03 07 14.9	+1.0
GZR	Gura Zlata	91.79	44	⇓P	P	03 07 14.9	+1.0
ZAPS	Zavoj	92.11	46	*e*P	P	03 07 16.7	+1.4
NACGM	Naroch	92.13	34	*i* P	P	03 07 20.6	+5.6
BOSS	Bosilegrad	92.15	47	*e*P	P	03 07 11.2	-4.3
VTS	Vitosha	92.67	47	⇓P	P	03 07 19.1	+1.0
VTS	Vitosha	92.67	47	⇓P	P	03 07 19.1	+1.0
VTS	Vitosha	92.67	47	IAmb	IAmb	03 07 25.5	
	comp=Z,5.2nm,1.1s						
ARR	Arges	93.08	44	⇑P	P	03 07 21.4	+1.6
VOIR		93.35	44	⇓P	P	03 07 24.2	+3.1
VOIR		93.35	44	⇓P	P	03 07 24.2	+3.1
BILL	Bilibino	93.47	340	*i* P	P	03 07 24.1	+3.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MLR	Muntele Rosu	93.95	43	⇓P	P	03 07 24.7	+0.8
MLR	Muntele Rosu	93.95	43	⇓P	P	03 07 24.7	+0.8
QSPA	South Pole Qui	96.83	180	P	P	03 07 36.1	-0.4
QSPA				IAmb	IAmb	03 07 46.2	
	comp=Z,5.8nm,0.8s						
AAK	Ala-Archa	124.22	25	*i* PKIKP	PKiKP	03 13 08.1	+2.8
WMQ	Urumqi	127.65	14	*e*P	PKiKP	03 13 12.0	0.0
WMQ				pmax	pmax		
	comp=Z,200nm,6.1s						
HHC	Hu-ho-hao-te	131.96	352	*e*P	PKPdf	03 13 16.5	-3.3
STKA	Stephens Creek	136.48	230	PKP	PKPdf	03 13 27.4	-0.9
	comp=Z,3.0nm,0.9s,baz=59,slow=4.1,SNR=7.3						
STKA	Stephens Creek	136.48	230	PKIKP	PKPdf	03 13 27.8	-0.5
STKA	Stephens Creek	136.48	230		PKPdf	03 13 27.8	-0.5
NJ2	Nanjing	138.60	340	*e*P	PKPdf	03 13 32.3	+0.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CD2	Chengdu	142.48	359	PKP	PKPdf	03 13 38.5	-0.9
HYB	Hyderabad	145.67	45	*i* PKP	PKPdf	03 13 45.0	-0.2
ASAR	Alice Springs	146.19	237	PKPbc	PKPdf	03 13 45.3	-0.7
	comp=Z,16nm,0.8s,baz=120,slow=3.9,SNR=80						
ASAR	Alice Springs	146.19	237	PKP2	PKPdf	03 13 45.4	-0.6
WRA	Warramunga Arr	147.20	244	PKPbc	PKPdf	03 13 47.0	-0.7
	comp=Z,6.7nm,1.0s,baz=108,slow=4.7,SNR=16						
WRA	Warramunga Arr	147.20	244	PKIKP	PKPdf	03 13 47.3	-0.4
WRA	Warramunga Arr	147.20	244		PKPdf	03 13 47.3	-0.4
KMI	Kunming	148.24	1	⇑P	PKPdf	03 13 48.5	-1.1
KMI				pP	PKPbc	03 13 52.0	-0.9
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	Chiang Mai Arr	154.51	10	PKP	PKPdf	03 13 59.0	0.0
	comp=Z,1.0nm,0.3s,baz=312,slow=1.0,SNR=5.0						
CMAR				PKPbc	PKiKP	03 14 07.6	+0.2
	comp=Z,0.7nm,0.4s,baz=358,slow=2.9,SNR=1.6						
CMAR	Chiang Mai Arr	154.51	10		PKPdf	03 13 58.2	-0.8

*IDC **29** 02:59:43.5±2.9, 34°.81N×73°.08E, h0^{km}, mb3.8/3, mb1 3.8/7, mb1mx3.3/52, mbtmp3.7/7, ML3.8/3 Error ellipse: s-maj=68.4km s-min=28.9km az=132.0*

ISC 29 02:59:48.4±1.1**, 35°.0N**±0°.1×**72°.9E**±0°.1**, h24**^{km}**, n8,** σ**2^{s}13**/9**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.53	137	*e*P	Pb	03 00 47.5	-2.7
THN				*e*S	Sb	03 01 36.0	+3.5
MKAR	Makanchi Array	13.73	28	Pn	Pn	03 03 02.0	+0.4
	0.1nm,0.3s,baz=220,slow=15,SNR=2.0						
KURBB	Kurchatov Arra	16.12	13	Pn	Pn	03 03 31.1	-2.1
	0.0nm,0.3s,baz=203,slow=11,SNR=4.0						
BVAR	Borovoye Array	18.07	355	P	P	03 03 59.1	+1.2
	0.5nm,0.3s,baz=173,slow=13,SNR=12						
AKTO	Aktyubinsk	18.80	329	P	Pn	03 04 07.7	+1.1
	0.9nm,0.3s,baz=129,slow=11,SNR=22						
ZALV	Zalesovo Beam	20.70	20	P	P	03 04 25.8	-0.8
	4.4nm,0.7s,baz=212,slow=11,SNR=18						
TORD	Torodi Ar. Bea	67.21	270	P	P	03 10 40.9	-0.1
	0.2nm,0.4s,baz=52,slow=6.0,SNR=5.0						
INK	Inuvik	75.10	10	P	P	03 11 28.4	+0.5
	0.9nm,1.0s,baz=349,slow=5.2,SNR=4.0						

*IDC **29** 03:05:58.8±4.8, 42°.09N×139°.76E, h188^{km}±20^{km}, mb3.2/9, mb1 3.3/11, mb1mx3.1/45, mbtmp3.7/11, Error ellipse: s-maj=82.1km s-min=12.4km az=170.0*

*JMA **29** 03:05:58.8±0.1, 41°.99N×139°.85E, h187^{km}±1^{km}, M2.9*

ISC 29 03:05:58.2±0.8**, 41°.97N**±0°.06×**139°.83E**±0°.05**, h191**^{km}±6^{km}**, n28,** σ**0^{s}59**/41**, mb3.4**/9**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSM	Okushiri--Mats	0.29	294	P	Pn	03 06 23.4	-0.2
JOSM				*e*S	Sn	03 06 42.3	-0.8
JYM2	Yakumo 2	0.43	69	P	Pn	03 06 24.4	+0.5
JYM2				*e*S	Sn	03 06 44.0	+0.2
JHST	Hiyamasetana	0.46	4	P	Pn	03 06 24.2	+0.2
JHST				*e*S	Sn	03 06 43.5	-0.7
JSR	Shiriuchi	0.62	135	P	Pn	03 06 25.0	+0.2
JSR				*e*S	Sn	03 06 45.1	-0.1
JSH	Shimam	0.69	13	P	Pn	03 06 25.3	+0.2
JSH				*e*S	Sn	03 06 45.9	-0.1
JKB	Kayabe	0.90	95	P	Pn	03 06 26.5	+0.2
JKB				*e*S	Sn	03 06 47.6	-0.3
JNB	Noboribetsu	1.03	60	P	Pn	03 06 27.0	-0.1
JOT	Ohata	1.08	122	P	Pn	03 06 27.8	+0.2
JOT				*e*S	Sn	03 06 50.5	+0.2
JIW	Iwasaki	1.38	175	P	Pn	03 06 30.8	+0.7
JSK	Shakotan	1.46	19	P	Pn	03 06 30.9	+0.2
JEW	Eniwo	1.48	53	*e*S	Sn	03 06 57.1	+0.8
JTM	Tenmabayashi	1.50	141	P	Pn	03 06 31.5	+0.4
JTM				*e*S	Sn	03 06 56.6	0.0
JIAM	Iburiatsuma	1.68	66	P	Pn	03 06 33.3	+0.6
JIAM				*e*S	Sn	03 07 00.0	+0.4
JANG	Nango	2.04	141	P	Pn	03 06 36.0	-0.5
JANG				*e*S	Sn	03 07 05.1	-1.0
JNBK	Urakawa-nobuka	2.19	81	P	Pn	03 06 38.2	+0.1
JNBK				*e*S	Sn	03 07 08.2	-0.9
JFR	Furan	2.36	59	*e*S	Sn	03 07 11.5	-1.0
JCH	Churui	2.70	75	P	Pn	03 06 43.8	+0.1
JCH				*e*S	Sn	03 07 17.6	-1.7
ASAJ	Asahikawa	2.95	42	P	Pn	03 06 47.1	+0.4
	1.1nm,0.3s,baz=178,slow=11,SNR=10						
ASAJ				S	Sn	03 07 23.9	-0.8
	1.0nm,0.3s,baz=49,slow=29,SNR=7.2						
USRK	Ussuriysk Ar.	6.16	294	P	Pn	03 07 27.5	+0.1
	baz=94,slow=13,SNR=25						
SONM	Songino Array	24.27	295	P	P	03 10 56.7	-1.1
	0.4nm,0.4s,baz=90,slow=8.5,SNR=5.6						
ZALV	Zalesovo Beam	37.80	308	P	P	03 12 55.8	-0.1
	1.3nm,0.5s,baz=85,slow=8.5,SNR=6.7						
MKAR	Makanchi Array	40.62	297	P	P	03 13 19.0	-0.3
	1.4nm,0.6s,baz=82,slow=10,SNR=18						
KURBB	Kurchatov Arra	42.13	304	P	P	03 13 31.3	-0.1
	2.1nm,0.5s,baz=78,slow=9.0,SNR=13						
ILAR	Eielson Array	46.06	35	P	P	03 14 03.1	+0.6
	0.7nm,0.9s,baz=283,slow=5.5,SNR=5.6						
BVAR	Borovoye Array	46.44	309	P	P	03 14 05.4	-0.2
	0.8nm,0.4s,baz=77,slow=6.9,SNR=8.9						
INK	Inuvik	50.60	29	P	P	03 14 37.6	+0.6
	0.3nm,0.3s,baz=273,slow=6.8,SNR=6.8						
YKA	Yellowknife Ar	60.19	31	P	P	03 15 45.7	+0.3
	0.1nm,0.4s,baz=302,slow=7.2,SNR=5.0						
PDAR	Pinedale Array	75.08	46	P	P	03 17 19.6	+0.3
	0.4nm,0.6s,baz=343,slow=0.9,SNR=6.0						

IDC 29 03:12:19.0±10.0**, 26°.95N**×**139°.22E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.4**/28**, mbtmp3.5**/3**, Error ellipse: s-maj=405.9km s-min=34.6km az=68.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	46.85	186	P	P	03 20 51.0	0.0
	1.1nm,0.3s,baz=7.6,slow=8.5,SNR=8.9						
MKAR	Makanchi Array	48.53	310	P	P	03 21 03.7	-0.2
	0.2nm,0.7s,baz=106,slow=8.6,SNR=1.7						
ASAR	Alice Springs	50.58	186	P	P	03 21 19.4	-0.3
	0.3nm,0.6s,baz=10.0,slow=9.8,SNR=4.4						

*TAP **29** 03:13:21.6, 21°.58N×122°.09E, h43^{km}, ML4.0, D*

*JMA **29** 03:13:24.2±0.3, 21°.75N×121°.88E, h57^{km}, M4.4*

ISC 29 03:13:24.0±1.5**, 21°.73N**±0°.05×**121°.98E**±0°.03**, h19**^{km}±3^{km}**, n91,** σ**1^{s}18**/156**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LYUB	Lan-yu	0.46	306	P	Pb	03 13 33.9	+0.4
	baz=312						
LYUB				S	Sn	03 13 43.6	+0.5
	baz=312						
LAY	Lan-yu	0.50	308	*i* P	Pg	03 13 33.7	-0.5
	baz=313						
LAY				S	Sn	03 13 43.2	-1.1
	baz=313						
TSEB	Hengchuen, Pin	1.02	280	*e*P	Pb	03 13 43.0	0.0
	baz=285						
TSEB				S	Sg	03 13 59.0	+1.7
	baz=285						
LDUT	Ludao	1.05	333	P	Pb	03 13 42.7	-0.9
	baz=332						
TWKBT	Hengchun	1.11	281	P	Pn	03 13 43.4	-1.0
	baz=297						
TWKBT				S	Sn	03 13 59.7	+0.5
	baz=297						
TWK1	Hengchun	1.11	281	*i* P	Pn	03 13 43.8	-0.7
	baz=297						
TWK1				S	Sg	03 14 00.8	+0.5
	baz=297						
TAW	Tawu	1.19	302	P	Pn	03 13 44.8	-0.7
	baz=305						
TAW				*i* S	Sb	03 14 00.8	0.0
	baz=305						
HEN	Hengchun	1.19	284	*e*P	Pn	03 13 44.3	-1.2
	baz=297						
HEN				S	Sb	03 14 00.7	-0.1
	baz=297						
SLIU	Shizi	1.20	294	*i* P	Pn	03 13 42.9	-2.8
	baz=298						
SLIU				S	Sb	03 14 00.2	-1.0
	baz=298						
EAST	Anshuo	1.24	302	*i* P	Pn	03 13 45.8	-0.4
	baz=314						
EAST				*i* S	Sn	03 14 02.6	+0.2
	baz=314						
TTN	Taitung	1.28	323	S	Sg	03 14 06.0	+0.5
	baz=330						
ECL	Taimali	1.28	312	*i* P	Pn	03 13 45.3	-1.6
	baz=305						
ECL				S	Sn	03 14 02.4	-1.2
	baz=305						
TWGBT	Beinan	1.37	323	P	Pn	03 13 47.4	-0.7
	baz=311						
TWGBT				S	Sg	03 14 07.7	-0.6
	baz=311						
EDH	Donghe	1.39	333	*i* P	Pn	03 13 46.5	-1.8
	baz=340						
EDH				*i* S	Sn	03 14 04.8	-1.3
	baz=340						
LONT	Longtian	1.41	326	*i* P	Pn	03 13 47.9	-0.7
	baz=313						
LONT				S	Sg	03 14 09.3	-0.5
	baz=313						
SCZT	Fangliau	1.42	297	*i* P	Pn	03 13 48.7	0.0
	baz=309						
CHKT	Chengkung	1.48	337	*i* P	Pn	03 13 47.9	-1.6
	baz=344						
CHKT				*i* S	Sn	03 14 06.6	-1.7
	baz=344						
SSPT	Xinbi	1.51	300	P	Pn	03 13 49.2	-0.8
	baz=312						
SSPT				S	Sn	03 14 09.2	0.0
	baz=312						
MASBT	Mashibuluo	1.53	305	P	Pn	03 13 50.1	-0.1
	baz=307						
TSMG	Majia	1.57	308	*i* P	Pb	03 13 52.0	-0.5
	baz=310						
TSMG				S	Sn	03 14 11.0	+0.3
	baz=310						
FULB	Fuli	1.59	337	*i* P	Pn	03 13 48.9	-2.3
	baz=345						
FULB				*i* S	Sn	03 14 10.3	-1.0
	baz=345						
SSD	Sandimen	1.61	309	*i* P	Pn	03 13 51.4	0.0
	baz=311						
WLCH	Liuqiu	1.61	293	*e*P	Pn	03 13 52.2	+0.8
	baz=296						
WLCH				*e*S	Sb	03 14 14.4	+1.4
	baz=296						
ELDTW	Lidau	1.70	329	*i* P	Pn	03 13 51.8	-1.0
	baz=318						
EYUL	Yuli	1.72	339	*i* P	Pn	03 13 52.6	-0.4
	baz=346						
EYUL				S	Sb	03 14 16.7	+0.4
	baz=346						
SLGT	Liugui	1.76	316	*i* P	Pn	03 13 54.6	+1.1
	baz=321						
SLGT				S	Sb	03 14 17.7	+0.3
	baz=321						
YULB	Yu-li	1.77	339	P	Pn	03 13 52.2	-1.4
	baz=324						
YULB				S	Sb	03 14 17.3	-0.4
	baz=324						
STYH	Taoyuan	1.82	322	P	Pn	03 13 55.2	+1.0
	baz=323						
STYH				S	Sb	03 14 18.6	-0.4
	baz=323						
HGSD	Ruisui	1.83	344	P	Pn	03 13 53.0	-1.3
	baz=348						
HGSD				S	Sn	03 14 17.5	+0.5
	baz=348						
SGST	Jiashian	1.87	316	*i* P	Pn	03 13 55.5	+0.6
	baz=319						
SGST				*i* S	Sb	03 14 21.0	+0.6
	baz=319						
EHY	Hungye	1.87	341	*i* P	Pn	03 13 54.4	-0.6
	baz=326						
EHY				S	Sn	03 14 19.1	+1.1
	baz=326						
WTP	Ta-pu	1.97	320	*i* P	Pn	03 13 57.9	+1.6
	baz=321						
WTP				*i* S	Sb	03 14 24.3	+0.8
	baz=321						
CHN1	Nanshi	1.98	317	*i* P	Pb	03 13 58.8	-0.5
	baz=318						
CHN1				*i* S	Sb	03 14 25.3	+1.7
	baz=318						
TPUB	Ta-pu	2.00	322	P	Pn	03 13 58.2	+1.4
	baz=322						
TPUB				S	Sb	03 14 25.5	+1.1
	baz=322						
SNST	Tainan City	2.02	317	S	Sb	03 14 24.4	-0.5
	baz=318						
TWK	Hsinying	2.06	318	*i* P	Pn	03 13 58.7	+1.1
	baz=319						
TWK				*i* S	Sb	03 14 27.4	+1.4
	baz=319						
CHN4	Tsaushan	2.06	322	*i* P	Pn	03 13 59.3	+1.7
	baz=322						
CHN4				S	Sb	03 14 26.8	+0.8
	baz=322						
ALS	Alishan	2.08	329	*i* P	Pn	03 13 59.0	+0.9
	baz=318						
ALS				*e*S	Sb	03 14 27.1	+0.3
	baz=318						
ESL	Shilin	2.13	346	*e*S	Sn	03 14 25.9	+1.3
	baz=352						
VWDT	VWDT	2.16	339	P	Pn	03 13 59.4	+0.5
	baz=338						
VWDT				*e*S	Sn	03 14 26.1	+1.0
	baz=338						
CHN5	Tsauling	2.21	327	*i* P	Pb	03 14 02.1	-1.4
	baz=314						
CHN5				S	Sb	03 14 30.8	+0.3
	baz=314						
SSLB	Suanglung	2.26	335	P	Pn	03 14 01.6	+1.3
	baz=347						
SSLB				S	Sb	03 14 31.4	-0.3
	baz=347						
CHY	Chiayi	2.27	321	*e*S	Sn	03 14 30.2	+2.3
	baz=308						
WDLH	Douliu	2.36	326	*e*S	Sb	03 14 34.0	-0.7
	baz=326						
SMLT	Sun Moon Lake	2.36	335	*i* P	Pn	03 14 04.0	+2.1
	baz=335						
SMLT				S	Sb	03 14 34.5	-0.4
	baz=335						
TWD	Chiawan	2.37	351	S	Sn	03 14 30.6	+0.4
	baz=350						

WJS	Zhushan	2.38	331	eP	Pn	03 14 03.3	+1.3
	baz=319						
WJS				eS	Sb	03 14 35.0	-0.3
	baz=319						
TYC	Yuchr	2.40	335	iP	Pb	03 14 04.7	-1.9
	baz=334						
TYC				S	Sb	03 14 35.8	0.0
	baz=334						
CHGB	Renai	2.44	342	P	Pn	03 14 03.9	+1.0
	baz=350						
CHGB				S	Sb	03 14 35.0	-2.0
	baz=350						
WNT	Mingjian	2.45	331	P	Pb	03 14 06.0	-1.4
	baz=317						
WNT				iS	Sb	03 14 37.2	0.0
	baz=317						
NACB	Ninganchiao	2.46	352	P	Pn	03 14 02.0	-1.0
	baz=357						
NACB				S	Sn	03 14 32.2	-0.4
	baz=357						
WHF	Hehuan Shan	2.49	345	iP	Pn	03 14 04.3	+0.3
	baz=344						
WHF				S	Sn	03 14 36.5	+2.5
	baz=344						
ETLH	Xiulin Townshi	2.51	350	P	Pn	03 14 03.6	-0.2
	baz=348						
ETLH				S	Sn	03 14 35.3	+1.4
	baz=348						
WCS	Beigang Elemen	2.52	337	P	Pn	03 14 05.7	+1.9
	baz=323						
WCS				S	Sb	03 14 39.0	-0.2
	baz=323						
FUSS	Fushou	2.60	345	iP	Pn	03 14 06.4	+1.2
	baz=352						
TWT	Tachien	2.62	344	iP	Pn	03 14 06.3	+0.9
	baz=350						
TWT				S	Sn	03 14 39.2	+2.5
	baz=350						
TDCB	Techi	2.62	343	eS	Sn	03 14 38.3	+1.5
	baz=349						
WDGT	Dungji	2.63	306	eP	Pn	03 14 04.9	-0.5
	baz=307						
WDGT				S	Sn	03 14 36.6	-0.2
	baz=307						
ENA	Nanau	2.69	355	iP	Pn	03 14 06.0	-0.3
	baz=354						
ENA				iS	Sn	03 14 39.7	+1.3
	baz=354						
EWUT	Wuta	2.71	356	eS	Sn	03 14 38.6	-0.1
	baz=354						
WHP	Taichung City	2.71	340	iP	Pn	03 14 09.2	+2.7
	baz=339						
WHP				iS	Sb	03 14 44.3	-0.5
	baz=339						
NNSB	Datong	2.74	349	eP	Pn	03 14 06.9	-0.2
	baz=347						
NNSB				eS	Sn	03 14 41.0	+1.3
	baz=347						
NNS	Nan Shan	2.75	348	eP	Pn	03 14 08.1	+0.8
	baz=347						
NNS				S	Sn	03 14 40.8	+0.7
	baz=347						
VCHM	Qimei	2.78	302	eP	Pn	03 14 07.5	+0.1
	baz=304						
TWQ1	Liyutan	2.83	337	eP	Pn	03 14 09.2	+1.0
	baz=325						
TWQ1				S	Sb	03 14 47.0	-1.3
	baz=325						
PHUB	P'eng-hu	2.85	309	S	Sn	03 14 41.0	-1.1
	baz=310						
JYNG	Yonagunijimaku	2.85	18	P	Pn	03 14 09.0	+0.6
HATJ	Hateruma jima	2.86	36	P	Pn	03 14 09.6	+1.0
HATJ				eS	Sn	03 14 43.0	+0.5
TWC	Suao	2.87	358	eP	Pn	03 14 09.0	+0.3
	baz=356						
TWC				eS	Sn	03 14 44.1	+1.4
	baz=356						
YOJ	Yonaguni jima	2.88	19	eP	Pn	03 14 08.5	-0.3
	baz=16						
YOJ	Yonaguni jima	2.88	19	P	Pn	03 14 09.7	+0.9
WDJ	Dajia District	2.88	335	eS	Sb	03 14 47.1	-2.6
	baz=321						
NDS	Dongshan	2.90	355	P	Pn	03 14 09.9	+0.8
	baz=354						
NSY	Sanyi	2.90	337	eS	Sb	03 14 48.9	-1.3
	baz=323						
ENTT	Nioudou	2.92	353	P	Pn	03 14 09.9	+0.5
ENTT				eS	Sn	03 14 46.2	+2.1
YHNB	Yeheng	2.98	349	P	Pn	03 14 10.6	+0.3
	baz=357						
YHNB				S	Sn	03 14 47.5	+2.0
	baz=357						
NSK	Sanguang	2.99	349	iP	Pn	03 14 10.7	+0.3
	baz=357						
NSK				iS	Sn	03 14 47.5	+1.8
	baz=357						
NSTT	Nanjuang	3.02	343	eS	Sn	03 14 49.3	+2.8
	baz=326						
LIOB	Emei	3.04	343	eP	Pn	03 14 13.6	+2.5
	baz=326						
LIOB				eS	Sb	03 14 52.2	-1.8
	baz=326						
IRIF	Iriomote-Funau	3.05	32	P	Pn	03 14 12.1	+0.9
IRIF				eS	Sn	03 14 47.9	+0.7
NWLT	Wulai	3.06	352	iP	Pn	03 14 12.4	+0.9
	baz=351						
NWLT				S	Sn	03 14 48.7	+1.2
	baz=351						
JKRS	Kuro-shima	3.12	36	P	Pn	03 14 13.2	+1.1
JKRS				eS	Sn	03 14 49.4	+0.6
JIJ	Ishigaki jima	3.29	37	P	Pn	03 14 15.0	+0.5
JIJ				S	Sn	03 14 52.5	-0.6
NWF	Wu-fen Shan	3.33	357	P	Pn	03 14 17.3	+2.2
	baz=5.0						
NWF				S	Sn	03 14 57.5	+3.3
	baz=5.0						
JISG	Ishigakijimahi	3.56	37	P	Pn	03 14 18.8	+0.6
JISG				S	Sn	03 14 59.6	-0.1
JTJ	Tarama	3.83	40	P	Pn	03 14 23.1	+1.2
JTJ				eS	Sn	03 15 06.9	+0.6
JIRB	Irabujima	4.26	43	P	Pn	03 14 27.9	+0.1
JIRB				eS	Sn	03 15 16.7	-0.2
JMJ2	Miyako jima3	4.29	45	P	Pn	03 14 28.6	+0.3
JMJ2				eS	Sn	03 15 17.9	0.0
JOGS	Gusukube	4.36	46	P	Pn	03 14 28.7	-0.5
JIKM	Ikemajima	4.37	43	eS	Sn	03 15 20.5	+0.7
AXDP	Jialang	4.85	311	eP	Pn	03 14 37.8	+1.9
	baz=311						

SKHL ***29*** *03:18:57.9±0.2, 44.°30N×148.°00E, h47^{km}±4^{km}, mb4.7/4*
JMA ***29*** *03:18:57.1±0.3, 43.°95N×147.°82E, h0^{km}, M3.9*
ISC 29 03:18:54.7±3.6**, 44.°24N**±0.°09×**147.°9E**±0.°1**, h7**^{km}±25^{km}**, n19,** σ1^{s}**41**/29**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	Shikotan	0.89	246	iP	Pn	03 19 14.3	+0.7
SHO				AMB	AMB	03 19 15.4	
	100nm,0.2s						
SHO				eS	Sn	03 19 26.7	0.0
SHO				A	A	03 19 27.0	
	690nm,0.2s						
SHO				A	A	03 19 27.0	
	2µm,0.2s						
KUR	Kuril'sk	0.99	357	iP	Pb	03 19 13.9	-0.3
KUR				AMB	AMB	03 19 14.1	
	310nm,0.3s						
KUR				iS	Sb	03 19 26.0	-1.5
KUR				A	A	03 19 28.1	
	970nm,0.3s						
KUR				A	A	03 19 28.1	
	960nm,0.3s						
YUK	Yuzh-Kuril'sk	1.51	263	eP	Pb	03 19 23.2	+0.1
YUK				AMB	AMB	03 19 25.2	
	220nm,0.2s						
YUK				eS	Sb	03 19 42.0	-0.5
YUK				A	A	03 19 44.6	
	570nm,0.2s						
YUK				A	A	03 19 44.6	
	330nm,0.2s						
NEM2	Nemuro 2	1.82	242	P	Pn	03 19 26.9	+0.5
NEM2				eS	Sn	03 19 48.5	-1.2
GLVR	Golovnino	1.82	255	eP	Pn	03 19 26.8	+0.4
GLVR				AMB	AMB	03 19 28.1	
	370nm,0.2s						
GLVR				eS	Sn	03 19 49.8	+0.1
GLVR				A	A	03 19 53.5	
	1µm,0.3s						
GLVR				A	A	03 19 53.5	
	670nm,0.3s						
NMR	Nemuro--Hokkai	1.83	242	eP	Pn	03 19 27.3	+0.8
NMR				eS	Sn	03 19 50.1	+0.2
JRA	Rausu	2.06	262	P	Pb	03 19 32.0	-0.4
JRA				eS	Sb	03 19 57.5	-0.6
JNSB	Nemuroshibetsu	2.17	259	P	Pb	03 19 33.2	-1.1
JKHN	Kushirohamanak	2.33	241	P	Pn	03 19 34.3	+0.9
JNK	Nakash	2.42	255	P	Pn	03 19 36.5	+1.8
JNK				eS	Sn	03 20 05.3	+0.7
AKK	Akkeshi	2.56	243	eP	Pn	03 19 37.7	+1.0
AKK				eS	Sn	03 20 06.7	-1.4
JAK	Akkeshi	2.67	243	P	Pn	03 19 39.1	+1.0
JAK				eS	Sn	03 20 09.1	-1.5
JTKR	Abashiri--Toko	2.92	266	P	Pb	03 19 45.5	-1.6
JAR	Ashorobuto	3.17	254	P	Pn	03 19 47.8	+2.8
JOB	Onbets	3.27	247	P	Pn	03 19 48.6	+2.2
JMP	Maruseppu	3.31	268	P	Pn	03 19 49.7	+2.7
JCH	Churui	3.71	246	P	Pn	03 19 53.7	+1.2
JNBK	Urakawa-nobuka	4.27	244	P	Pn	03 20 02.5	+2.4
YSS	Yuzh-Sakhalins	4.54	308	eP	Pn	03 20 04.9	+1.1
YSS				AMB	AMB	03 20 05.7	
	10.0nm,0.3s						

IDC ***29*** *03:35:28.7±0.8, 41.°06N×124.°93W, h0^{km}, mb4.3/12, mb1 4.5/18, mb1mx4.2/43, mbtmp4.4/18, ML3.9/5, MS4.1/20, Ms1 4.1/20, ms1mx3.9/39, Error ellipse: s-maj=14.6km s-min=9.3km az=33.0*
NEIC ***29*** *03:35:28.4±2.5, 41.°08N±0.°05×125.°15W±0.°05, h10^{km}±1^{km}, Error ellipse: s-maj=8.3km s-min=6.1km az=208.0*
NCEDC ***29*** *03:35:28.4±2.9, 41.°07N±0.°05×125.°29W±0.°07, h17^{km}±5^{km}, Mwr4.9/6, mb4.9/88(NEIC), ML4.2/72(NEIC), Mww4.9(NEIC), Error ellipse: s-maj=8.6km s-min=6.3km az=59.0*
NEIC ***29*** *03:35:29.4, 41.°06N×125.°35W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.44; $M_{\theta\theta}$-2.12; $M_{\phi\phi}$2.56; $M_{r\theta}$0.44; $M_{\theta\phi}$0.28; $M_{\phi r}$-0.79; Fault plane solution: $M_0$2.51000×10^{16} NP1:ϕ_s229.00000°, δ69.00000°, λ-2.00000°. NP2:ϕ_s319.00000°, δ88.00000°, λ-159.00000°. Principal axes: T 2.7567, Plg14.0000°, Azm92.0000°; N -0.4830, Plg69.0000°, Azm323.0000°; P -2.2737, Plg16.0000°, Azm186.0000°;*
ANF ***29*** *03:35:29.1±0.5, 41.°14N×125.°14W, h15^{km}, ML4.5/20 Error ellipse: s-maj=6.5km s-min=1.8km az=88.0*
NEIC ***29*** *03:35:31, 41.°06N×125.°35W, h12^{km}, Moment Tensor Solution. Duration: 10^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.60; $M_{\theta\theta}$-2.50; $M_{\phi\phi}$3.09; $M_{r\theta}$-0.39; $M_{\theta\phi}$0.53; $M_{\phi r}$-0.46; Fault plane solution: $M_0$2.95000×10^{16} NP1: ϕ_s140.00000°, δ78.00000°, λ-178.00000°. NP2: ϕ_s50.00000°, δ88.00000°, λ-12.00000°. Principal axes: T 3.2082, Plg7.0000°, Azm96.0000°; N -0.6019, Plg78.0000°, Azm222.0000°; P -2.6063, Plg10.0000°, Azm5.0000°;*
GCMT ***29*** *03:35:31.4±0.3, 41.°10N±0.°01×125.°26W±0.°02, h18^{km}±1^{km}, MW5.0/103, Moment Tensor Solution. s26, c31; s103, c157; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.57±.13; $M_{\theta\theta}$-3.26±.10; $M_{\phi\phi}$3.83±.12; $M_{r\theta}$0.74±.26; $M_{\theta\phi}$0.83±.08; $M_{\phi r}$0.03±.22; Best double couple: $M_0$3.73300×10^{16} NP1:ϕ_s322.00000°, δ79.00000°, λ-171.00000°. NP2:ϕ_s231.00000°, δ81.00000°, λ-11.00000°. Principal axes: T 3.9290, Plg1.0000°, Azm277.0000°; N -0.3910, Plg76.0000°, Azm13.0000°; P -3.5380, Plg14.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 29 03:35:28.9±1.8**, 41.°12N**±0.°05×**125.°02W**±0.°06**, h8**^{km}±11^{km}**, n430,** σ1^{s}**47**/417**, mb4.8**/56**, MS4.2**/17**, 2D, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCC	Jacoby Creek,	0.81	112		Pg	03 35 44.9	+0.5
JCC				Sg	Sb	03 35 57.1	+0.8
JCC				IAML		03 35 58.5	
	comp=N,9µm,0.6s						
JCC				IAML		03 36 05.6	
	comp=E,8µm,1.5s						
KHMM	Horse Mountain	1.01	104		Pg	03 35 48.6	+0.3
KHMM				Sg	Sn	03 36 03.7	-0.3
KHMM				IAML		03 36 06.7	
	comp=E,5µm,0.7s						
KCRM	Chalk Rock	1.15	127		Pb	03 35 50.0	-1.1
KOMM	Orleans Mounta	1.19	82		Pb	03 35 51.7	-0.2
KBO	Bosley Butte	1.24	28		Pn	03 35 50.9	-1.8
KBO				IAML		03 36 08.0	
	comp=E,5µm,0.3s						
KBO				IAML		03 36 08.4	
	comp=N,4µm,0.3s						
KMRM	Mail Ridge	1.34	132		Pn	03 35 52.9	-1.2
L02E	Cave Junction	1.48	45	P	Pn	03 35 55.2	-0.7
	baz=230,SNR=555						
L02E				S	Sn	03 36 14.2	-1.4
	baz=230						
KBSM	Bell Springs	1.62	137		Pn	03 35 56.4	-1.5
M02C	Callahan	1.66	80	P	Pn	03 35 58.1	-0.3
	baz=261,SNR=1000						
M02C				S	Sn	03 36 19.1	-0.7
	baz=261						
N02D	Trinity Center	1.76	94	P	Pn	03 35 59.2	-0.6
	baz=274,SNR=1000						
KCPM	Cahto Peak	1.81	142		Pn	03 35 58.5	-2.0
KEBM	Edson Butte	1.82	16		Pn	03 35 58.7	-2.0
KEBM				IAML		03 36 45.8	
	comp=N,1µm,0.7s						
KEBM				IAML		03 36 59.3	
	comp=E,2µm,1.4s						
YBH	Yreka Blue Hor	1.84	70	Pn	Pn	03 36 01.1	+0.2
	comp=E,260nm,0.3s,baz=263,slow=12,SNR=2945						
YBH				Sn	Sn	03 36 24.9	+0.4
	comp=E,221nm,0.3s,baz=147,slow=16,SNR=21						
YBH				LR	LR	03 36 28.5	
	comp=E,1µm,19.6s,baz=248,slow=33						
YBH	Yreka Blue Hor	1.84	70		Pn	03 36 01.2	+0.2
YBH	Yreka Blue Hor	1.84	70	IAML		03 36 27.8	
	comp=N,2µm,0.5s						
K02D	Willamette Mer	1.87	32	P	Pn	03 36 00.4	-0.9
	baz=217,SNR=1000						
K02D				S	Sn	03 36 22.5	-2.6
	baz=217						
O02D	Mt. Diablo Mer	1.94	118	P	Pn	03 36 01.4	-0.9
	baz=296,SNR=274						
WDC	Whiskeytown Da	1.96	105		Pn	03 36 02.0	-0.4
WDC	Whiskeytown Da	1.96	105	IAML		03 36 29.4	
	comp=N,1µm,0.7s						
HUMO	Hull Mountain	2.14	45	Pn	Pn	03 36 04.5	-0.5
LHEM	Herd Peak	2.17	76		Pn	03 36 06.3	+0.8
J01E	Myrtle Point	2.19	21	P	Pn	03 36 04.2	-1.5
	baz=206,SNR=66						
J01E				S	Sn	03 36 30.5	-2.6
	baz=206						
GNAM	Navarro Ridge	2.20	151		Pn	03 36 03.2	-2.5
GASB	Alder Springs	2.29	129		Pn	03 36 06.2	-0.9
L04D	Klamath Falls	2.31	61	P	Pn	03 36 08.7	+1.3
	baz=244,SNR=1000						
LTCM	Tuscan Springs	2.38	112		Pn	03 36 08.0	-0.3
DBO	Dodson Butte	2.40	33	Pn	Pn	03 36 08.0	-0.6
M04C	Macdoel	2.48	73	P	Pn	03 36 10.9	+1.2
	baz=256,SNR=224						
O03E	Paynes Creek	2.58	108	P	Pn	03 36 10.4	-0.7
	baz=288,SNR=1000						
HOPS	Hopland Field	2.60	144	Pn	Pn	03 36 09.1	-2.1
HOPS				IAML		03 36 48.6	
	comp=E,680nm,1.4s						
HOPS				IAML		03 36 50.9	
	comp=N,639nm,1.6s						
HATC	Hat Creek Radi	2.71	95		Pn	03 36 13.3	+0.4
I03D	Drain, OR	2.86	25	P	Pn	03 36 14.0	-0.8
	baz=209,SNR=1000						
I03D				S	Sn	03 36 47.5	-1.9
	baz=209						
K04D	Chiloquin, OR	2.87	57	P	Pn	03 36 15.9	+0.9
	baz=241,SNR=84						
GDXM	Geysers	2.87	143		Pn	03 36 13.2	-1.9
FTR	Fort Ross	2.96	151		Pn	03 36 14.1	-2.2
J04D	Umpqua Nationa	3.03	45	P	Pn	03 36 18.3	+1.0
	baz=228,SNR=164						
I02E	Swisshome, OR	3.11	16	P	Pn	03 36 16.9	-1.3
	baz=200,SNR=8.8						
I02E				S	Sn	03 36 52.8	-2.7
	baz=200						
ORV	Oroville	3.11	119		Pn	03 36 17.2	-1.1
ORV				IAML		03 36 59.1	
	comp=E,435nm,0.6s						
SUTB	Sutter Butte	3.12	126		Pn	03 36 16.4	-1.9
I04A	Tendick Farm,	3.30	35	P	Pn	03 36 21.4	+0.5
	baz=219,SNR=153						
MCCM	Marconi Confer	3.40	150	Pn	Pn	03 36 20.0	-2.3
MCCM				IAML		03 36 58.8	
	comp=E,626nm,0.8s						
MCCM				IAML		03 36 59.7	
	comp=N,527nm,0.8s						
CVS	Carmenet Viney	3.40	144		Pn	03 36 20.5	-1.8
BUCK	Buck Mountain	3.42	25		Pn	03 36 22.5	-0.1
BUCK				IAML		03 37 03.7	
	comp=N,586nm,0.9s						
BUCK				IAML		03 37 43.9	
	comp=E,570nm,1.9s						
K05A	Summer Lake	3.47	61		Pn	03 36 24.3	+0.8
K05A				IAML		03 38 00.5	
	comp=E,519nm,4.1s						
J05D	Fort Rock, OR	3.55	51	P	Pn	03 36 25.4	+1.0
	baz=235,SNR=1000						
MOD	Modoc Plateau	3.63	76		Pn	03 36 25.7	+0.2
MOD				IAML		03 37 44.1	
	comp=E,270nm,1.7s						
COR	Corvallis	3.69	19		Pn	03 36 25.5	-0.7
COR				IAML		03 37 14.6	
	comp=E,333nm,0.7s						
COR				IAML		03 37 18.0	
	comp=E,483nm,0.6s						
H04D	Lebanon	3.79	26	P	Pn	03 36 27.6	-0.1
	baz=209,SNR=194						
BKS	Berkeley--Byer	3.89	145		Pn	03 36 27.4	-1.6
PINE	Pine Mountain	4.03	47	Pn	Pn	03 36 32.0	+0.9
PINE				IAML		03 37 43.5	
	comp=N,194nm,1.5s						
PINE				IAML		03 38 25.9	
	comp=E,256nm,3.8s						
H04A	Detroit Lake	4.12	29	Pn	Pn	03 36 32.5	+0.3
I05D	Terrebonne, OR	4.21	39	P	Pn	03 36 33.9	+0.5
	baz=223,SNR=65						
MPK	Martis Peak	4.23	114		Pn	03 36 34.7	+0.7
RUBR	Rubicon Trail	4.27	117		Pn	03 36 34.5	+0.1
G03D	McMinnville, O	4.29	17	P	Pn	03 36 33.5	-1.0
	baz=200,SNR=65						
G03D				S	Sn	03 37 22.5	-2.1
	baz=200						
JRSC	Jasper Ridge	4.29	149		Pn	03 36 32.0	-2.5
VCNR	Virginia City	4.50	112		Pn	03 36 37.9	+0.4
VCNR				IAML		03 37 09.5	
	comp=E,220nm,0.7s						
VCNR				IAML		03 37 28.5	
	comp=N,188nm,0.8s						
PAHR	Pah Rah Range	4.53	106		Pn	03 36 38.0	+0.1
PNTR	Pine Nut	4.62	114	Pn	Pn	03 36 39.8	+0.5
CMB	Columbia Colle	4.72	129	Pn	Pn	03 36 40.4	-0.1
HOOD	Mount Hood Mea	4.87	29	Pn	Pn	03 36 43.0	+0.5
HOOD				IAML		03 38 51.1	
	comp=N,146nm,3.0s						
GHS	Gilroy Hot Spr	4.89	144		Pn	03 36 41.0	-1.8
YERR	Yerington	4.92	114		Pn	03 36 43.8	+0.4
YERR				IAML		03 37 24.2	
	comp=N,142nm,0.7s						
G05D	Wamic, OR	4.93	32	P	Pn	03 36 44.1	+0.8
	baz=216,SNR=354						
WVOR	Wild Horse Val	4.95	73		Pn	03 36 43.3	-0.4
WVOR				IAML		03 37 43.7	
	comp=N,107nm,0.5s						
WVOR				IAML		03 39 06.3	
	comp=N,178nm,3.8s						
I07A	Izee	5.03	52		Pn	03 36 46.3	+1.4
I07A				IAML		03 38 43.1	
	comp=N,104nm,3.4s						
I07A				IAML		03 39 05.3	
	comp=E,108nm,4.9s						
F04D	Rainier, OR	5.17	16	P	Pn	03 36 46.7	+0.2
	baz=199,SNR=8.3						
J08A	Circle Bar Ran	5.35	63		Pn	03 36 49.8	+0.6
BJCM	Johnson Can.	5.37	147		Pn	03 36 46.5	-2.9
F05D	White Salmon	5.42	27	P	Pn	03 36 50.3	+0.2
	baz=211,SNR=42						
RYN	Ryan	5.58	114		Pn	03 36 52.5	+0.1
KVN	Kaiserville	5.70	109	Pn	Pn	03 36 54.1	+0.1
E04D	Cinebar	5.72	17	P	Pn	03 36 54.1	+0.1
	baz=201,SNR=13						
LHV	Little Huntoon	5.79	118		Pn	03 36 56.0	+1.0
NVAR	Mina Array Bea	5.83	115	Pn	Pn	03 36 56.1	+0.2
	comp=E,19nm,0.3s,baz=294,slow=14,SNR=358						
NVAR				LR	LR	03 39 39.5	
	comp=E,3µm,19.0s,baz=315,slow=43						
NVAR	Mina Array Bea	5.83	115		Pn	03 36 56.2	+0.4
PMPB	Monarch Peak	5.91	145		Pn	03 36 55.3	-1.5
NV11	Mina Array Sit	5.93	115		Pn	03 36 57.3	+0.1
BMN	Battle Mountai	5.96	94		Pn	03 36 57.4	-0.2
F07A	Phinny Hill Vi	6.04	36	Pn	Pn	03 36 59.7	+1.2
G08A	Pilot Rock	6.08	45		Pn	03 37 00.5	+1.3
D04E	Lakebay	6.27	14	P	Pn	03 37 02.4	+0.8
	baz=197,SNR=16						
VOG	Valley Oaks Go	6.51	136	P	Pn	03 37 05.2	+0.2
	baz=318						
PAGB	Antelope Grade	6.55	144		Pn	03 37 03.7	-1.9
D03D	Eldon	6.56	12	P	Pn	03 37 04.8	-0.9
	baz=194,SNR=128						
E07A	Sunnyside	6.59	33	Pn	Pn	03 37 07.0	+0.8
HAWA	Hanford	6.60	35		Pn	03 37 07.4	+1.2
TPH	Tonopah	6.75	114		Pn	03 37 08.5	0.0
BMO	Blue Mountains	6.77	54		Pn	03 37 10.3	+1.6
E08A	Dider Farm, El	6.88	37		Pn	03 37 11.1	+1.0
LTY	Liberty	6.88	26		Pn	03 37 10.8	+0.6
LCH	Last Change Ra	6.92	122		Pn	03 37 12.0	+1.2
VES	Vestal, Richgr	7.03	137	P	Pn	03 37 12.1	-0.1
	baz=319						
MFID	Camas Ranch	7.19	68	Pn	Pn	03 37 14.7	+0.2
E09A	Wood Farm, Sta	7.33	40		Pn	03 37 16.6	+0.3
D08A	Wollman Farm,	7.38	34	Pn	Pn	03 37 17.5	+0.5
ELK	Elko	7.42	90	Pn	Pn	03 37 20.8	+3.1
	comp=E,1.3nm,0.3s,baz=283,slow=15,SNR=116						
ELK				LR	LR	03 40 37.7	
	comp=E,2µm,20.2s,baz=285,slow=42						
ELK	Elko	7.42	90		Pn	03 37 18.6	+0.9
B05A	Bryant	7.44	15	P	Pn	03 37 17.8	+0.1
	baz=199,SNR=32						
F10A	Beach Ranch, E	7.45	47		Pn	03 37 19.9	+1.9
ISA	Isabella, Lake	7.49	135	Pn	Pn	03 37 18.9	+0.4
ISA	Isabella, Lake	7.49	135	P	Pn	03 37 19.3	+0.8
	baz=317						
PLID	Pearl Lake	7.70	56		Pn	03 37 23.7	+2.2
ARVC	Arvin	7.72	139	P	Pn	03 37 21.7	+0.1
	baz=321						
MPMC	Manual Prospec	7.76	128	P	Pn	03 37 22.6	+0.1
	baz=312						
A04D	Lummi Island	7.77	11	P	Pn	03 37 22.5	+0.2
	baz=194						
R11A	Troy Canyon, C	7.78	108		Pn	03 37 23.3	+0.7
R11A	Troy Canyon, C	7.78	108	P	Pn	03 37 23.3	+0.7
	baz=293						
TPNV	Topopah Spring	8.00	119		Pn	03 37 26.4	+0.9
TPNV	Topopah Spring	8.00	119	P	Pn	03 37 26.4	+0.9
	baz=303						
GWY	Greenwater Val	8.18	124		Pn	03 37 28.7	+0.6
OSI	Osito Audit: C	8.18	141		Pn	03 37 28.7	+0.7
OSI	Osito Audit: C	8.18	141	P	Pn	03 37 28.6	+0.6
	baz=323						
QSM	Queen of Sheba	8.20	126		Pn	03 37 29.1	+0.9
HLID	Hailey	8.23	69	Pn	Pn	03 37 29.7	+1.0
HLID	Hailey	8.23	69	P	Pn	03 37 29.8	+1.1
	baz=256						
C09A	Chrisman Ranch	8.24	34		Pn	03 37 28.7	0.0
B08A	Colville Reser	8.29	27	Pn	Pn	03 37 29.5	+0.1
EDW2	Edwards Air Fo	8.34	136	P	Pn	03 37 30.8	+0.6
	baz=319						
SPR3	Spring Creek 3	8.47	101	Pn	Pn	03 37 33.3	+1.1
PRN	Pahroc Range	8.57	112		Pn	03 37 33.8	+0.4
DECC	Green Verdugo	8.66	140	P	Pn	03 37 35.1	+0.5
	baz=323						
GSC	Goldstone, Bar	8.69	129	Pn	Pn	03 37 36.2	+1.2
PASC	Pasadena Art C	8.80	140		Pn	03 37 36.4	0.0
MWC	Mount Wilson	8.82	139		Pn	03 37 37.2	+0.3
RRX	Edison Barstow	8.88	132	P	Pn	03 37 38.3	+0.7
	baz=316						

SHPR	Sheep Range	8.97	118	Pn	Pn	03 37 39.3	+0.4
PSUT	Pine Spring	8.97	103	Pn	Pn	03 37 40.5	+1.5
BFSC	Mount Baldy Ra	9.01	137	P	Pn	03 37 39.5	+0.1
	baz=321						
BGU	Big Grassy Mou	9.07	87		Pn	03 37 40.9	+0.7
NEW	Newport	9.09	36	Pn	Pn	03 37 40.6	+0.3
NEW	Newport	9.09	36	P	Pn	03 37 40.1	-0.2
	baz=222						
HVU	Hansel Valley	9.22	82	Pn	Pn	03 37 42.2	-0.2
DUG	Dugway, Tooele	9.32	92	Pn	Pn	03 37 44.3	+0.6
DUG	Dugway, Tooele	9.32	92	P	Pn	03 37 46.2	+2.5
	baz=279						
BBRC	Big Bear Solar	9.38	134	P	Pn	03 37 44.4	-0.2
	baz=318						
SPUT	South Promonto	9.48	85		Pn	03 37 47.0	+1.1
MCMT	McKenzie Canyo	9.66	63	Pn	Pn	03 37 50.5	+2.1
CCUT	Cedar City	9.71	108		Pn	03 37 49.4	+0.3
GMRC	Granite Mounta	9.72	128	P	Pn	03 37 49.9	+0.7
	baz=312						
MURC	Murrieta	9.75	138	P	Pn	03 37 49.3	-0.2
	baz=322						
MSO	Missoula	9.81	51	Pn	Pn	03 37 51.2	+0.8
MSO	Missoula	9.81	51	P	Pn	03 37 52.8	+2.4
	baz=239						
SZCU	Shurtz Canyon	9.89	107		Pn	03 37 51.5	-0.1
NLU	North Lily Min	9.93	93	Pn	Pn	03 37 54.4	+2.3
TCRU	Three Creeks R	9.99	100		Pn	03 37 55.9	+3.0
DLMT	Dillon	10.01	61		Pn	03 37 54.4	+1.3
LCMT	Little Creek M	10.03	110		Pn	03 37 53.5	0.0
CTU	Camp Tracy	10.06	88	Pn	Pn	03 37 56.5	+2.7
BELC	Belle Mtn. Jos	10.09	132	P	Pn	03 37 54.2	0.0
	baz=317						
PFO	Pinyon Flats O	10.12	135	Pn	Pn	03 37 55.2	+0.5
	comp=E,6.3nm,0.3s,baz=322,slow=11,SNR=89						
PFO				LR	LR	03 40 56.1	
	comp=E,264nm,20.8s,baz=307,slow=33						
PFO	Pinyon Flats O	10.12	135	P	Pn	03 37 54.8	+0.1
	baz=319						
TPFO	Pinon Flats	10.13	135	P	Pn	03 37 54.7	-0.1
	baz=319						
MVU	Marysvale	10.20	101		Pn	03 37 57.9	+2.2
MSU	Marysvale	10.22	101		Pn	03 37 57.1	+1.0
MPU	Maple Canyon	10.25	92	Pn	Pn	03 37 58.0	+1.5
LRM	Limekiln Ridge	10.27	59		Pn	03 37 58.8	+2.0
JLU	Jordanelle	10.29	88		Pn	03 37 59.5	+2.4
ECR	Eagle Creek	10.33	75		Pn	03 37 59.4	+1.8
MTPU	Mount Pierson	10.37	103		Pn	03 38 00.9	+2.6
IRM	Iron Mountain	10.46	128	P	Pn	03 37 59.2	0.0
	baz=314						
AHID	Auburn Hatcher	10.50	76		Pn	03 38 02.6	+2.7
PKCU	Pink Cliffs	10.51	106	Pn	Pn	03 38 03.4	+3.2
QLMT	Earthquake Lak	10.62	65		Pn	03 38 03.6	+2.0
W13A	Hualapai Mount	10.63	121		Pn	03 38 04.0	+2.3
BC3	Big Chuckawall	10.64	131	P	Pn	03 38 01.9	+0.1
	baz=316						
MONP2	Monument Peak	10.70	137	P	Pn	03 38 03.2	+0.5
	baz=322						
TMUT	Trail Mountain	10.72	95		Pn	03 38 05.1	+2.1
BOZ	Bozeman (W)	10.72	61		Pn	03 38 03.9	+0.9
BOZ	Bozeman (W)	10.72	61	P	Pn	03 38 03.1	+0.2
	baz=250						
REDW	Red Top Meadow	10.74	73		Pn	03 38 03.7	+0.5
BAR	Barrett	10.75	139		Pn	03 38 03.7	+0.6
YHL	Hebgen Lake	10.80	65		Pn	03 38 04.2	+0.1
SNOW	Snow King Moun	10.83	73		Pn	03 38 05.3	+0.9
Q16A	Castle Valley	10.85	97	Pn	Pn	03 38 05.5	+0.9
MOOW	Moose Ponds	10.87	71	Pn	Pn	03 38 06.0	+0.9
YMR	Madison River	10.90	66		Pn	03 38 06.8	+1.3
YPP	Pitchstone Pla	10.93	69		Pn	03 38 09.0	+3.2
LOHW	Long Hollow	10.96	72	Pn	Pn	03 38 10.0	+3.9
FLWY	Flagg Ranch	10.96	70		Pn	03 38 09.7	+3.4
U15A	North Rim	10.98	111		Pn	03 38 08.6	+2.0
HRY	Holter Researc	11.03	55		Pn	03 38 07.9	+0.9
P17A	Butcher Ranch,	11.03	94		Pn	03 38 10.8	+3.7
IKP	In-Ko-Pah, Jac	11.06	137	P	Pn	03 38 06.2	-1.2
	baz=322						
H17A	Grant Village	11.11	68		Pn	03 38 11.3	+3.0
H17A	Grant Village	11.11	68	P	Pn	03 38 09.6	+1.3
	baz=258						
YNR	Norris Junctio	11.11	66		Pn	03 38 11.7	+3.4
BBB	Bella Bella	11.27	350	Pn	Pn	03 38 13.0	+2.9
	comp=E,0.3nm,0.3s,baz=186,slow=6.3,SNR=5.8						
BBB				LR	LR	03 41 33.7	
	comp=E,601nm,21.3s,baz=167,slow=32						
BBB	Bella Bella	11.27	350		Pn	03 38 12.6	+2.5
SRU	San Rafael Swe	11.28	96		Pn	03 38 13.8	+3.2
P18A	Preston Nutter	11.37	93		Pn	03 38 15.1	+3.1
GLA	Glamis	11.44	131		Pn	03 38 12.2	-0.5
GLA	Glamis	11.44	131	P	Pn	03 38 13.1	+0.4
	baz=317						
BW06	Boulder Array	11.63	77		Pn	03 38 16.2	+0.7
BW06	Boulder Array	11.63	77	P	Pn	03 38 16.7	+1.2
	baz=267						
PD31	Pinedale Array	11.63	77		Pn	03 38 16.2	+0.8
PDAR	Pinedale Array	11.63	77	Pn	Pn	03 38 18.0	+2.5
	comp=E,0.2nm,0.3s,baz=265,slow=12,SNR=31						
PDAR				LR	LR	03 43 17.2	
	comp=E,2µm,18.8s,baz=263,slow=40						
PDAR	Pinedale Array	11.63	77		Pn	03 38 17.3	+1.9
RDMU	Red Mountain	11.72	88		Pn	03 38 17.5	+0.9
Y14A	Wickenburg	11.93	123		Pn	03 38 20.2	+0.9
WUAZ	Wupatki	12.09	113	Pn	Pn	03 38 22.7	+1.1
WUAZ	Wupatki	12.09	113	P	Pn	03 38 23.0	+1.4
	baz=301						
GCMT	Greycliff	12.09	62		Pn	03 38 21.5	-0.1
RLMT	Red Lodge	12.18	66	Pn	Pn	03 38 26.2	+3.3
RLMT	Red Lodge	12.18	66	P	Pn	03 38 23.3	+0.4
	baz=256						
X16A	Lo Mia Camp, P	12.65	118		Pn	03 38 27.8	-1.5
O20A	White River Ci	12.79	89	Pn	Pn	03 38 30.9	-0.3
O20A	White River Ci	12.79	89	P	Pn	03 38 31.8	+0.6
	baz=280						
EGMT	Eagleton	12.88	52	Pn	Pn	03 38 32.7	+0.4
EGMT	Eagleton	12.88	52	P	Pn	03 38 32.2	0.0
	baz=244						
RWWY	Rawlins	13.39	82		Pn	03 38 38.8	-0.6
MVCO	Mesa Verde	13.40	102	Pn	Pn	03 38 42.0	+2.4
MVCO	Mesa Verde	13.40	102	P	Pn	03 38 40.4	+0.8
	baz=292						
W18A	Petrified Fore	13.44	112		Pn	03 38 41.5	+1.5
W18A	Petrified Fore	13.44	112	P	Pn	03 38 41.7	+1.6
	baz=301						
X18A	Snowflake	13.60	114		Pn	03 38 41.9	-0.4
K22A	Casper	13.87	78		Pn	03 38 45.8	-0.1
K22A	Casper	13.87	78	P	Pn	03 38 46.0	+0.1
	baz=270						
SMCO	Snowmass	13.94	92		Pn	03 38 48.5	+1.3
TUC	Tucson	14.40	123	Pn	Pn	03 38 53.0	-0.1
TUC	Tucson	14.40	123	P	Pn	03 38 54.8	+1.7
	baz=311						
N23A	Red Feather La	14.41	85	P	Pn	03 38 53.6	+0.1
	baz=277						
S22A	4UR Ranch, Cre	14.46	98	P	Pn	03 38 55.5	+1.4
	baz=289						
LAO	LASA Array	14.64	61		Pn	03 38 56.4	+0.1
ISCO	Idaho Springs	14.84	89	Pn	Pn	03 38 59.7	+0.5
ISCO	Idaho Springs	14.84	89	P	Pn	03 39 00.0	+0.8
	baz=281						
Q24A	Divide	15.37	92	P	Pn	03 39 06.7	+0.3
	baz=284						
SDCO	Great Sand Dun	15.45	96	P	Pn	03 39 07.8	+0.3
SDCO	Great Sand Dun	15.45	96	P	Pn	03 39 08.8	+1.3
	baz=288						
RSSD	Black Hills	15.73	72		Pn	03 39 09.9	-1.1
RSSD	Black Hills	15.73	72	P	Pn	03 39 09.7	-1.3
	baz=266						
ANMO	Albuquerque	15.86	107	Pn	Pn	03 39 14.8	+2.1
	comp=E,0.2nm,0.3s,baz=305,slow=12,SNR=28						
ANMO				LR	LR	03 45 15.6	
	comp=E,799nm,20.5s,baz=312,slow=37						
ANMO	Albuquerque	15.86	107		Pn	03 39 11.3	-1.4
ANMO	Albuquerque	15.86	107	P	Pn	03 39 14.1	+1.4
	baz=298						
319A	Douglas	15.97	123	Pn	Pn	03 39 14.3	+0.2
319A				IAmb	IAmb	03 39 22.2	
	comp=Z,64nm,1.0s						
BNM	Barren Site	16.13	110	Pn	Pn	03 39 14.9	-1.3
121A	Cookes Peak, D	16.23	116	P	Pn	03 39 17.5	+0.1
121A	Cookes Peak, D	16.23	116	P	Pn	03 39 18.4	+1.0
	baz=306						
T25A	Trinidad	16.47	97		Pn	03 39 20.0	-0.5
T25A	Trinidad	16.47	97	P	Pn	03 39 20.8	+0.3
	baz=290						
DGMT	Dagmar	16.48	57	Pn	Pn	03 39 18.8	-1.5
DGMT	Dagmar	16.48	57	P	Pn	03 39 17.8	-2.6
	baz=252						
KSCO	Kaye Shedlock’	17.27	90		Pn	03 39 30.2	-0.3
KSCO	Kaye Shedlock’	17.27	90	P	Pn	03 39 30.4	-0.1
	baz=284						
OGNE	Ogallala	17.34	83		Pn	03 39 27.4	-4.0
OGNE				IAmb	IAmb	03 39 39.0	
	comp=Z,59nm,0.9s						
OGNE	Ogallala	17.34	83	P	Pn	03 39 29.7	-1.7
	baz=278						
DLBC	Dease Lake	17.62	351	P	P	03 39 38.0	+2.3
	comp=Z,0.1nm,0.3s,baz=165,slow=12,SNR=4.6						
DLBC	Dease Lake	17.62	351	Pn	P	03 39 36.2	+0.5
E28A	Huff	18.34	65	P	Pn	03 39 42.5	-1.1
E28A				IAmb	IAmb	03 39 46.2	
	comp=Z,69nm,0.7s						
MNTX	Cornudas Mount	18.36	115		P	03 39 44.4	+0.5
MNTX	Cornudas Mount	18.36	115	P	P	03 39 45.2	+1.3
	baz=306						
MSTX	Muleshoe	19.00	105	P	P	03 39 50.3	-0.8
MSTX	Muleshoe	19.00	105	P	P	03 39 51.2	0.0
	baz=298						
MDND	Maddock	19.29	61	P	P	03 39 52.0	-2.1
MDND	Maddock	19.29	61	P	P	03 39 53.9	-0.1
	baz=259						
AMTX	Amarillo	19.39	101		P	03 39 54.3	-1.0
AMTX	Amarillo	19.39	101	P	P	03 39 53.0	-2.4
	baz=296						
CBKS	Cedar Bluff	19.50	88	P	P	03 39 55.4	-1.0
CBKS				IAmb	IAmb	03 39 58.8	
	comp=Z,59nm,0.7s						
CBKS	Cedar Bluff	19.50	88	P	P	03 39 57.1	+0.7
	baz=285						
K31A	O'Neill	19.60	77	P	P	03 39 57.4	-0.1
K31A				IAmb	IAmb	03 40 01.3	
	comp=Z,50nm,0.7s						
BGNE	Belgrade	20.18	80	P	P	03 40 03.2	-0.6
BGNE				IAmb	IAmb	03 40 20.5	
	comp=Z,28nm,0.6s						
R32A	Long Quarter,	20.38	89	P	P	03 40 05.4	-0.6
U32A	Winter Ranch,	20.80	95	P	P	03 40 08.7	-2.0
N33A	J Bar K, Exete	20.81	82	P	P	03 40 08.8	-1.9
N33A				IAmb	IAmb	03 40 13.3	
	comp=Z,33nm,0.6s						
LPIG	La Paz	20.96	140	LR	LR	03 48 18.4	
	comp=Z,283nm,19.8s,baz=324,slow=37						
ECSD	EROS Data Cent	21.09	73	P	P	03 40 12.7	-1.0
ECSD	EROS Data Cent	21.09	73	P	P	03 40 12.4	-1.2
	baz=273						
KAN16	Harper SW Stat	21.22	92	P	P	03 40 12.9	-2.2
KAN12	Harper NE Stat	21.25	92	P	P	03 40 15.1	-0.4
KAN12				IAmb	IAmb	03 40 20.5	
	comp=Z,47nm,0.9s						
OK032	Salt Plains WL	21.25	93		P	03 40 14.4	-1.1
KAN08	Anthony NE Sta	21.29	92		P	03 40 12.4	-3.5
F33A	5 Mile Ranch,	21.31	68	P	P	03 40 14.2	-1.9
F33A				IAmb	IAmb	03 40 22.5	
	comp=Z,28nm,0.6s						
KAN14	Manchester OK	21.39	92	P	P	03 40 15.5	-1.5
KAN05	Bluff City Nor	21.41	92	P	P	03 40 16.8	-0.4
L34A	Svendsen Farm,	21.42	78	P	P	03 40 15.6	-1.6
KAN01	Argonia South	21.48	92	P	P	03 40 15.2	-2.7
KAN01				IAmb	IAmb	03 40 29.3	
	comp=Z,73nm,1.1s						
GC02	Grant County #	21.50	93		P	03 40 17.9	-0.2
CROK	Carrier	21.53	94		P	03 40 17.4	-1.1
CROK				IAmb	IAmb	03 40 25.2	
	comp=Z,34nm,0.7s						
KAN13	South Haven SW	21.74	92		P	03 40 18.7	-2.0
KSU1	Kansas State U	21.79	86	P	P	03 40 20.5	-0.7
KSU1	Kansas State U	21.79	86	P	P	03 40 20.9	-0.3
	baz=284						
AGMN	Agassiz Nation	21.84	61	P	P	03 40 20.6	-1.0
AGMN	Agassiz Nation	21.84	61	P	P	03 40 21.2	-0.5
	baz=262						
M31M	Drury Creek, Y	21.85	348	P	P	03 40 19.1	-2.6
	baz=161						
ABTX	Abilene, Hawle	21.95	105	P	P	03 40 18.9	-4.1
ABTX	Abilene, Hawle	21.95	105	P	P	03 40 22.1	-0.9
	baz=300						
BCOK	Bluff Creek, N	22.12	95		P	03 40 23.5	-1.3
BCOK				IAmb	IAmb	03 40 31.7	
	comp=Z,33nm,0.8s						
N35A	Tabor	22.14	81	P	P	03 40 22.9	-2.0
ULM	Lac du Bonnet	22.19	56	P	P	03 40 25.1	-0.3
	comp=Z,5.3nm,0.3s,baz=260,slow=11						
ULM				LR	LR	03 49 59.4	
	comp=Z,477nm,18.2s,baz=85,slow=39						
ULM	Lac du Bonnet	22.19	56	P	P	03 40 23.2	-2.2
ULM				IAmb	IAmb	03 40 36.0	
	comp=Z,36nm,1.1s						
YKA	Yellowknife Ar	22.30	13	P	P	03 40 26.0	-0.4
	comp=Z,16nm,0.8s,baz=198,slow=11,SNR=54						
YKA				LR	LR	03 49 00.6	
	comp=Z,548nm,20.9s,baz=0.0,slow=36						
YKA	Yellowknife Ar	22.30	13	P	P	03 40 25.7	-0.7
OK025	Westminster Rd	22.35	95	P	P	03 40 25.0	-2.3
OK025				IAmb	IAmb	03 40 41.1	
	comp=Z,22nm,0.7s						
T35A	Sooner Cattle	22.50	91	P	P	03 40 27.0	-1.9
T35A				IAmb	IAmb	03 40 41.1	
	comp=Z,31nm,0.8s						
QUOK	Quay	22.61	93		P	03 40 29.6	-0.4
QUOK				IAmb	IAmb	03 40 36.1	
	comp=Z,21nm,0.6s						
W35A	Tecumseh	22.87	96		P	03 40 31.6	-1.2
W35A				IAmb	IAmb	03 40 36.0	
	comp=Z,28nm,1.1s						
JCT	Junction City	22.97	110	P	P	03 40 32.6	-1.3
JCT				IAmb	IAmb	03 40 38.1	
	comp=Z,38nm,1.1s						
JCT	Junction City	22.97	110	P	P	03 40 32.8	-1.1
	baz=304						
F36A	Milaca	23.25	68	P	P	03 40 35.7	-0.9
Z35A	Perchaven, San	23.37	100	P	P	03 40 38.1	+0.2
Z35A				IAmb	IAmb	03 40 41.0	
	comp=Z,22nm,0.8s						
I37A	Lemond, Waseca	23.39	72	P	P	03 40 37.6	-0.5
I37A				IAmb	IAmb	03 40 50.0	
	comp=Z,26nm,0.8s						
TUL1	Leonard	23.39	93	P	P	03 40 40.3	+2.1
	baz=292						
SPMN	Marine on St.	23.76	69	P	P	03 40 42.5	+0.9
SPMN				IAmb	IAmb	03 40 53.0	
	comp=Z,14nm,0.6s						
SPMN	Marine on St.	23.76	69	P	P	03 40 39.2	-2.5
	baz=272						
N38A	Joes South For	23.94	80	P	P	03 40 41.3	-2.2
N38A				IAmb	IAmb	03 40 47.5	
	comp=Z,24nm,0.7s						
P38A	Dawn	23.97	83	P	P	03 40 42.6	-1.1
K38A	Parkersburg	23.98	76	P	P	03 40 44.4	+0.6
BCAR	Beaver Creek A	24.12	341	P	P	03 40 45.7	+0.7
L27K	Beaver Creek,	24.13	341	P	P	03 40 47.0	+1.9
L27K	Beaver Creek,	24.13	341	P	P	03 40 45.1	0.0
	baz=148						
KDAK	Kodiak Island	24.22	323	LR	LR	03 47 41.3	
	comp=Z,325nm,20.5s,baz=160,slow=30						
X37A	Clayton	24.23	96		P	03 40 45.7	-0.5
U38A	Gravette	24.27	91	P	P	03 40 46.9	+0.3
U38A				IAmb	IAmb	03 40 56.7	
	comp=Z,18nm,0.7s						
435B	Jarrell	24.40	106	P	P	03 40 44.5	-3.2
435B				IAmb	IAmb	03 41 01.6	
	comp=Z,40nm,0.9s						
435B	Jarrell	24.40	106	P	P	03 40 48.1	+0.4
	baz=302						
DAWY	Dawson	24.46	345	P	P	03 40 46.1	-2.0
	baz=154						
833A	Chaparral WMA,	24.53	113	P	P	03 40 49.1	+0.2
	baz=308						
J29M	Klondike Camp	24.59	346	P	P	03 40 48.5	-0.8
	baz=156						
S39A	Bolivar	24.66	88	P	P	03 40 48.8	-1.3
S39A				IAmb	IAmb	03 40 59.5	
	comp=Z,12nm,0.6s						
P40A	Paris	25.11	83	P	P	03 40 53.3	-0.8
P40A				IAmb	IAmb	03 40 57.1	
	comp=Z,24nm,0.8s						
W39A	Magazine	25.18	93	P	P	03 40 54.6	-0.2
W39A				IAmb	IAmb	03 40 57.7	
	comp=Z,21nm,0.8s						
W39A	Magazine	25.18	93	P	P	03 40 54.4	-0.4
	baz=293						
R40A	Maddies Statio	25.27	86	P	P	03 40 55.8	+0.2
R40A				IAmb	IAmb	03 40 57.1	
	comp=Z,28nm,1.3s						
I40A	Norwalk	25.41	72	P	P	03 40 57.3	+0.5
I40A				IAmb	IAmb	03 41 08.3	
	comp=Z,24nm,0.9s						
SCRK	Sand Creek	25.43	340	P	P	03 40 52.5	-4.4
	baz=146						
I29M	Ogilvie Camp,	25.44	347	P	P	03 40 53.9	-3.0
	baz=157						
U40A	Yellville	25.45	90	P	P	03 40 56.8	-0.5
	baz=291						
MIAR	Mount Ida	25.60	95	P	P	03 40 58.9	+0.4
MIAR				IAmb	IAmb	03 41 02.9	
	comp=Z,19nm,0.8s						
MIAR	Mount Ida	25.60	95	P	P	03 40 57.7	-0.8
	baz=294						
J26L	Joseph Creek	25.76	342	P	P	03 40 59.3	-0.6
	baz=147						
CCM	Cathedral Cave	26.11	86	P	P	03 41 02.7	-0.5
	baz=287						
FCAR	Ozark Folk Cen	26.17	91	P	P	03 41 03.8	0.0
FCAR				IAmb	IAmb	03 41 17.9	
	comp=Z,14nm,0.6s						
WHAR	Wooly Hollow	26.27	92	P	P	03 41 05.5	+0.8
WHAR				IAmb	IAmb	03 41 07.6	
	comp=Z,21nm,0.8s						
WLAR	White Oak Lake	26.31	96	P	P	03 41 04.0	-1.0
WLAR				IAmb	IAmb	03 41 07.7	
	comp=Z,38nm,1.0s						
W41B	Gary Mavity, V	26.35	92	P	P	03 41 06.2	+0.8
	baz=293						
L42A	Oliver, Polo	26.36	76	P	P	03 41 05.0	-0.5
SLM	Saint Louis	26.70	84	P	P	03 41 06.7	-1.9
FVM	French Village	26.75	85	P	P	03 41 07.8	-1.3
FVM				IAmb	IAmb	03 41 20.2	
	comp=Z,30nm,1.5s						
ILAR	Eielson Array	26.82	339	P	P	03 41 10.1	+0.7
	comp=Z,1.8nm,0.7s,baz=151,slow=8.0,SNR=17						
ILAR	Eielson Array	26.82	339	P	P	03 41 09.9	+0.6
BPAW	Bear Paw Mtn.	27.52	335	P	P	03 41 15.4	-0.2
	baz=135						
INK	Inuvik	27.63	353	P	P	03 41 16.9	+0.3
	comp=Z,12nm,1.2s,baz=143,slow=10,SNR=9.1						
INK				LR	LR	03 52 55.9	
	comp=Z,603nm,19.2s,baz=160,slow=38						
INK	Inuvik	27.63	353	P	P	03 41 17.0	+0.5
INK				IAmb	IAmb	03 41 25.1	
	comp=Z,33nm,1.5s						
INK	Inuvik	27.63	353	P	P	03 41 17.0	+0.5
	baz=166						
I23K	Minto, Yukon-K	27.79	338	P	P	03 41 19.2	+1.1
	baz=139						
H21K	Melozitna Rive	29.16	337	P	P	03 41 29.8	-0.5
	baz=134						
WVT	Waverly	29.33	88	P	P	03 41 31.8	-0.2
	baz=291						
BLO	Bloomington	29.34	81	P	P	03 41 31.6	-0.5
BLO				IAmb	IAmb	03 41 41.9	
	comp=Z,21nm,0.7s						
WCI	Wyandotte Cave	29.78	83	P	P	03 41 35.4	-0.7
	baz=288						
TOLK	Toolik Lake Re	30.53	343	P	P	03 41 42.7	+0.3
TOLK				IAmb	IAmb	03 41 54.7	
	comp=Z,17nm,1.2s						
TOLK	Toolik Lake Re	30.53	343	P	P	03 41 43.6	+1.2
	baz=142						
A36M	Sachs Harbour	30.94	360	P	P	03 41 46.4	+0.5
A36M				IAmb	IAmb	03 41 54.7	
	comp=Z,14nm,1.0s						
A36M	Sachs Harbour	30.94	360	P	P	03 41 45.3	-0.6
	baz=180						
ACSO	Alum Creek Sta	31.67	78	P	P	03 41 52.8	0.0
	baz=286						
CPCT	Cooper Cave	32.08	87	P	P	03 41 56.4	+0.1
CPCT				IAmb	IAmb	03 41 58.5	
	comp=Z,27nm,1.2s						
GOGA	Godfrey	33.70	90	P	P	03 42 10.7	+0.2
GOGA				IAmb	IAmb	03 42 12.9	
	comp=Z,9.4nm,0.8s						
GOGA	Godfrey	33.70	90	P	P	03 42 11.2	+0.7
	baz=295						
M54A	Oil Creek Stat	33.77	74	P	P	03 42 12.0	+0.9
	baz=285						
A21K	Barrow	34.15	343	P	P	03 42 15.6	+1.6
A21K	Barrow	34.15	343	P	P	03 42 16.2	+2.2
	baz=136						
WVNY	West Valley, N	34.31	72	P	P	03 42 15.8	0.0
PAULI	Pauline	34.36	86	P	P	03 42 16.0	-0.2
KMSC	Kings Mountain	34.60	85	P	P	03 42 18.2	-0.1
KMSC	Kings Mountain	34.60	85	P	P	03 42 18.3	-0.1
	baz=293						
L56A	Greenwood	35.13	72	P	P	03 42 23.2	+0.3
SSPA	Standing Stone	35.30	75	P	P	03 42 24.1	-0.2
	baz=287						
BINY	Binghamton	36.25	72	P	P	03 42 31.4	-1.0
BINY	Binghamton	36.25	72	P	P	03 42 31.5	-1.0
	baz=285						
SCHQ	Schefferville	40.11	50	P	P	03 43 04.7	-0.2
	comp=Z,14nm,0.9s,baz=292,slow=7.3,SNR=7.0						
TAOE	Nuku Hiva Isla	51.64	199	*e*LR	LR	03 59 09.6	
	comp=Z,409nm,28.0s						
TAOE	Nuku Hiva Isla	51.64	199	*e*T	T	04 38 43.1	
	comp=Z,43nm,0.2s						
PTBC	PUERTO BERRIO,	56.57	113	*e*P	P	03 45 14.5	+2.2
GUY2C	Guyana, Caldas	56.88	115	*e*P	P	03 45 16.6	+1.5
BARC	Barichara	57.42	112	*e*P	P	03 45 21.8	+3.2
SPBC	San Pablo de B	57.47	114	*e*P	P	03 45 22.6	+3.9
SOCV	Socops	57.89	109	*e*P	P	03 45 21.2	-0.4
ORTC	Ortega, Tolima	57.92	116	*e*P	P	03 45 22.6	+0.8
POPC	Popayan, Colom	57.96	118	*e*P	P	03 45 24.0	+1.6
RUSC	La Rusia	57.98	113	*e*P	P	03 45 26.1	+3.3
CHIC	Chingaza	58.43	114	*e*P	P	03 45 29.6	+3.8
OTAV	Otavalo	58.53	122	*e*P	P	03 45 25.7	-0.9
PMOR	Pomariorio Ree	59.73	206	*e*T	T	04 48 38.4	
	comp=Z,14nm,0.4s						
VAH	Vaihoa	59.86	205	*e*T	T	04 48 49.2	
	comp=Z,8.4nm,0.4s						
MACC	Macarena, Meta	60.15	116	*e*P	P	03 45 37.5	+0.2
H11N3	WAKE ISLAND Hy	60.95	272	T	T	04 51 42.8	
	baz=53,slow=75,SNR=20						
H11N2	WAKE ISLAND Hy	60.95	272	T	T	04 51 47.7	
	baz=53,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	60.97	272	T	T	04 51 40.3	
	baz=53,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	61.83	271	T	T	04 53 15.6	
	baz=52,slow=74,SNR=4.2						
H11S2	WAKE ISLAND Hy	61.84	271	T	T	04 53 12.4	
	baz=52,slow=74,SNR=5.4						
H11S3	WAKE ISLAND Hy	61.85	271	T	T	04 53 16.4	
	baz=52,slow=74,SNR=5.3						
PPT	Papeete	62.68	207	LR	LR	04 08 16.4	
	comp=Z,42nm,19.3s,baz=34,slow=31						
PPT2	Papeete2	62.70	206	*e*LR	LR	04 04 15.8	
	comp=Z,206nm,22.5s						
PPT2	Papeete2	62.70	206	*e*T	T	04 52 19.9	
	comp=Z,3.1nm,0.4s						
TBI	Tubuai	68.04	204	*e*LR	LR	04 06 36.9	
	comp=Z,263nm,30.8s						
NOA	NORSAR Array B	72.14	21	LR	LR	04 18 46.6	
	comp=Z,166nm,18.7s,baz=320,slow=36						
FINES	FINESS Array B	75.12	14	P	P	03 47 13.6	+2.5
	comp=Z,3.9nm,0.9s,baz=268,slow=5.7,SNR=4.9						
KLMR	Klimovskoe	77.60	8	*e*P	P	03 47 25.3	+0.2
KLMR				AMP		03 47 27.5	
	comp=Z,38nm,1.4s						
BMRD	Maredsous	78.89	30	*d*P	P	03 47 30.6	-1.9
BTNL	Ternell	79.17	29	*d*P	P	03 47 30.2	-3.9
SONM	Songino Array	80.41	328	P	P	03 47 43.2	+2.2
	comp=Z,0.4nm,0.4s,baz=68,slow=2.0,SNR=4.9						
SONM	Songino Array	80.41	328	P	P	03 47 39.9	-1.1
CLL	Collm	80.94	25	*e*P	P	03 47 46.0	+2.4
	comp=Z,6.0nm,0.8s						
ZAA0	Zalesovo Array	81.89	343	P	P	03 47 47.1	-1.5
ZALV	Zalesovo Beam	81.89	343	P	P	03 47 49.5	+0.9
	comp=Z,1.2nm,0.6s,baz=22,slow=4.8,SNR=9.0						
ZALV	Zalesovo Beam	81.89	343	P	P	03 47 48.0	-0.6
DAVA	Damuels	83.29	29	*i* P	P	03 47 57.4	+1.2
	comp=Z,13nm,1.9s						
GERES	GERESS Array B	83.30	26	P	P	03 47 58.5	+2.3
	comp=Z,0.5nm,0.7s,baz=350,slow=5.0,SNR=4.0						
GERES				LR	LR	04 27 54.0	
	comp=Z,109nm,18.3s,baz=284,slow=38						
ESDC	Sonseca Array	83.35	42	P	P	03 47 58.4	+1.8
	comp=Z,2.0nm,1.1s,baz=305,slow=5.2,SNR=4.0						
ESDC				LR	LR	04 21 59.8	
	comp=Z,101nm,19.1s,baz=280,slow=34						

HHC	Hu-ho-hao-te	83.61	320	*e*P	P	03 47 55.0	-3.0
HHC				pmax	pmax		
	comp=Z,97nm,5.7s						
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
WATA	Walderalm	83.86	28	*e*P	P	03 48 02.4	+3.2
	comp=Z,5.9nm,1.0s						
WTTA	Wattenberg	83.94	28	*e*P	P	03 48 03.0	+3.4
	comp=Z,5.0nm,1.0s						
MOA	Molln	84.35	26	*e*P	P	03 48 04.6	+3.1
	comp=Z,7.0nm,1.5s						
ABTA	Abfaltersbach	84.70	28	*e*P	P	03 48 06.0	+2.6
	comp=Z,5.7nm,1.4s						
KBA	Koelnbreinsper	84.70	27	*e*P	P	03 48 05.1	+1.6
	comp=Z,7.2nm,1.4s						
MODS	Modra-Piesok	84.85	24	*e*P	P	03 48 06.3	+2.3
BRVK	Borovoye	85.27	351	P	P	03 48 05.5	-0.4
BRVK				IAmb	IAmb	03 48 09.6	
	comp=Z,5.7nm,0.8s						
OBKA	Obir	85.61	27	*e*P	P	03 48 09.0	+1.1
	comp=Z,11nm,1.5s						
AKASG	Malin Array Be	85.82	16	P	P	03 48 09.8	+1.1
	comp=Z,3.4nm,0.8s,baz=344,slow=4.0,SNR=11						
AKASG				LR	LR	04 25 53.1	
	comp=Z,134nm,18.5s,baz=295,slow=35						
AKASG	Malin Array Be	85.82	16	P	P	03 48 08.2	-0.5
KURK	Kurchatov	86.23	345	P	P	03 48 10.3	-0.5
KURK				IAmb	IAmb	03 48 18.6	
	comp=Z,6.4nm,1.0s						
NJ2	Nanjing	86.36	310	*e*P	P	03 48 08.3	-3.4
NJ2				pmax	pmax		
	comp=Z,33nm,0.6s						
AKTO	Aktyubinsk	88.78	358	LR	LR	04 31 34.9	
	comp=Z,64nm,19.4s,baz=343,slow=38						
MKAR	Makanchi Array	89.15	342	P	P	03 48 26.7	+1.8
	comp=Z,2.7nm,1.1s,baz=341,slow=3.0,SNR=5.2						
MKAR				LR	LR	04 30 05.3	
	comp=Z,148nm,19.5s,baz=324,slow=37						
ABKAR	Akbulak array	89.90	357	P	P	03 48 27.1	-1.2
ABKAR	Akbulak array	89.90	357	P	P	03 48 27.7	-0.6
ABKAR				IAmb	IAmb	03 48 32.0	
	comp=Z,9.3nm,1.1s						
WMQ	Urumqi	90.46	337	*e*P	P	03 48 30.3	-0.9
KBZ	Khabaz	94.84	9	LR	LR	04 34 14.0	
	comp=Z,93nm,19.1s,baz=338,slow=37						
BRTR	Keskin Array B	97.22	16	LR	LR	04 33 20.2	
	comp=Z,102nm,21.6s,baz=345,slow=36						
QSPA	South Pole Qui	130.93	180	PKP	PKiKP	03 54 41.2	+0.4
	comp=Z,0.7nm,0.2s,baz=266,slow=3.1,SNR=3.7						
BOSA	Boshof	152.75	72	PKPbc	PKiKP	03 55 28.1	+1.3
	comp=Z,2.5nm,0.9s,baz=266,slow=6.9,SNR=3.8						

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*NEIC **29** 03:37:15.9±2.5, 5°.8S±0°.2×156°.7E±0°.1, h14^{km}±7^{km}, mb4.4/4, Error ellipse: s-maj=28.3km s-min=12.3km az=157.0*

*IDC **29** 03:37:28.9±3.7, 6°.51S×154°.88E, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.2/36, mbtmp3.9/3, Error ellipse: s-maj=132.0km s-min=36.4km az=116.0*

ISC 29 03:37:17.6±1.1, **5°.9S**±0°.2×**156°.7E**±0°.1, **h35^{km}, n11, σ1^{s}43**/10, **mb3.9**/4, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	4.81	290	Pn	Pn	03 38 29.0	+1.4
COEN	Coen	15.54	238	Pn	P	03 40 56.7	-1.5
COEN				IAmb	IAmb	03 41 12.0	
	comp=Z,32nm,1.4s						
MSVF	Nonsavu	23.96	121	P	P	03 42 30.5	+1.4
WB0	Warramunga Arr	25.70	235	P	P	03 42 44.8	+0.1
WB0				IAmb	IAmb	03 42 46.3	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	25.83	235	P	P	03 42 45.2	-0.7
	comp=Z,4.5nm,0.9s,baz=56,slow=9.2,SNR=10.0						
AS31	Alice Springs	28.16	229	P	P	03 43 08.1	+1.1
ASAR	Alice Springs	28.17	229	P	P	03 43 07.8	+0.8
	comp=Z,1.0nm,0.5s,baz=56,slow=9.3,SNR=16						
ASAR	Alice Springs	28.17	229	P	P	03 43 07.3	+0.4
WMR	Waimanalo Ridg	52.28	57	P	P	03 46 25.5	-0.4
MKAR	Makanchi Array	83.69	318	P	P	03 49 57.5	+15
	comp=Z,0.4nm,0.6s,baz=89,slow=6.4,SNR=5.6						
TORD	Torodi Ar. Bea	154.32	288	PKPbc	PKPab	03 57 27.1	-2.3
	comp=Z,0.4nm,0.6s,baz=65,slow=2.8,SNR=3.7						

NOU 29 04:19:12.2, 16°.41S×167°.62E, h20^{km}, MLv4.2/11, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	1.04	337	P	Pb	04 19 31.3	-0.2
DVP	Devils Point	1.42	158	P	Pn	04 19 37.0	+0.2
YATNC	Mamie plateau,	5.66	187	P	Pn	04 20 35.3	0.0
DZM	Mont Dzumac	5.74	191	P	Pn	04 20 35.8	-0.6
OUENC	Ouen Island, N	6.02	187	P	Pn	04 20 40.4	+0.2

SKHL 29 04:21:23.2±0.1, **42°.00N×144°.30E, h57^{km}**±2^{km}, **mb4.6**/5, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NMR	Nemuro--Hokkai	1.73	37	*i* P	Pn	04 21 49.8	-1.1
NMR				*i* S	Sn	04 22 09.7	-2.1
GLVR	Golovnino	1.96	27	*e*P	Pn	04 21 53.7	-0.3
GLVR				*e*S	Sn	04 22 15.0	-2.4
GLVR				A	A	04 22 18.0	
	220nm,0.2s						
GLVR				A	A	04 22 18.0	
	280nm,0.2s						
GRPR	Tuman	2.27	28	*e*P	Pn	04 21 57.1	-1.1
GRPR				AMB	AMB	04 22 04.0	
	270nm,0.5s						
GRPR				*e*S	Sn	04 22 22.0	-3.0
GRPR				A	A	04 22 25.0	
	400nm,0.5s						
GRPR				A	A	04 22 25.0	
	960nm,0.5s						
YUK	Yuzh-Kuril'sk	2.33	29	*e*P	Pn	04 21 57.4	-1.7
YUK				AMB	AMB	04 22 03.0	
	180nm,0.4s						
YUK				*e*S	Sn	04 22 23.1	-3.5
YUK				A	A	04 22 28.0	
	760nm,0.7s						
YUK				A	A	04 22 28.0	
	1μm,0.7s						
JKA	Kamikawa-asahi	2.46	330	*e*P	Pn	04 22 01.1	+0.3
KUR	Kuril'sk	4.14	37	*e*P	Pn	04 22 24.1	+0.3
KUR				AMB	AMB	04 22 33.0	
	40nm,0.5s						
KUR				*e*S	Sn	04 23 10.6	-0.3
KUR				A	A	04 23 28.5	
	130nm,0.5s						
KUR				A	A	04 23 28.5	
	140nm,0.5s						
YSS	Yuzh-Sakhalins	5.08	348	*e*P	Pn	04 22 37.4	+0.8
YSS				AMB	AMB	04 22 41.0	
	10.0nm,0.4s						
YSS				*e*S	Sn	04 23 31.5	-2.4
YSS				A	A	04 23 33.8	
	30nm,0.3s						
KLR	Kul'dur	11.37	314	*e*P	Pn	04 24 04.5	+1.8
MKAR	Makanchi Array	43.55	298	*e*P	P	04 29 23.2	+2.0
KURK	Kurchatov	44.79	305	*e*P	P	04 29 32.4	+1.4

IDC 29 04:50:54.1±2.8, **1°.64N×127°.41E, h0^{km}, mb3.6**/3, **mb1 3.8**/3, **mb1mx3.5**/40, **mbtmp3.6**/3, **Error ellipse: s-maj=265.9km s-min=24.4km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.50	163	P	P	04 55 54.3	-1.1
	1.1nm,0.5s,baz=342,slow=12,SNR=3.4						
ASAR	Alice Springs	25.94	166	P	P	04 56 29.1	+0.8
	0.4nm,0.4s,baz=344,slow=11,SNR=8.7						
MKAR	Makanchi Array	59.65	326	P	P	05 01 00.1	-0.1
	0.4nm,0.3s,baz=121,slow=7.4,SNR=15						

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*IDC **29** 04:59:35.9±5.0, 13°.37S×76°.10W, h58^{km}±32^{km}, mb3.5/4, mb1 3.7/6, mb1mx3.5/29, mbtmp3.7/6, ML3.2/2, MS2.8/2, Ms1 2.8/2, ms1mx2.6/19, Error ellipse: s-maj=78.3km s-min=22.7km az=40.0*

ISC 29 04:59:34.0±1.5, **13°.6S**±0°.2×**76°.3W**±0°.2, **h50^{km}, n16, σ1^{s}09**/11, **mb3.6**/4, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	1.66	340	P	Pn	05 00 00.3	-0.5
	12nm,0.3s,baz=160,slow=8.9,SNR=58						
NNA				S	Sn	05 00 20.4	-0.6
	132nm,0.3s,baz=233,slow=12,SNR=10						
NNA				LR	LR	05 00 46.4	
	comp=Z,126nm,20.2s,baz=126,slow=46						
ATAH	Atahualpa	6.72	342	P	Pn	05 01 12.2	+1.7
	0.7nm,0.3s,baz=148,slow=4.5,SNR=13						
LVC	Limon Verde	11.39	143	LR	LR	05 06 21.8	
	comp=Z,32nm,21.9s,baz=314,slow=35						
SIV	San Ignacio	14.90	101	P	Pn	05 03 02.0	+0.4
	0.1nm,0.3s,baz=282,slow=15,SNR=4.7						
H03N1	Juan Fernandez	19.93	186	T	T	05 23 59.0	
	baz=7.7,slow=74,SNR=146						
H03N2	Juan Fernandez	19.93	187	T	T	05 23 58.1	
	baz=7.7,slow=74,SNR=94						
H03N3	Juan Fernandez	19.95	187	T	T	05 23 59.0	
	baz=7.7,slow=74,SNR=137						
PTGA	Pitinga	20.57	53	LR	LR	05 12 06.0	
	comp=Z,44nm,19.2s,baz=289,slow=37						
PDAR	Pinedale Array	63.84	333	P	P	05 10 01.3	-0.2
	0.4nm,0.8s,baz=116,slow=6.1,SNR=3.5						
NVAR	Mina Array Bea	64.97	325	P	P	05 10 10.6	+1.6
	0.6nm,0.8s,baz=132,slow=5.4,SNR=2.3						
YKA	Yellowknife Ar	81.50	343	P	P	05 11 45.2	-0.4
	0.5nm,0.7s,baz=139,slow=6.4,SNR=8.7						
YKA				pP	pP	05 11 58.8	-1.4
	0.5nm,0.7s,baz=143,slow=5.7,SNR=5.3						
TORD	Torodi Ar. Bea	81.67	74	P	P	05 11 47.2	-0.4
	1.7nm,0.7s,baz=266,slow=5.1,SNR=8.7						
H11N3	WAKE ISLAND Hy	119.44	285	T	T	07 28 37.0	
	baz=96,slow=74,SNR=31						
H11N2	WAKE ISLAND Hy	119.45	285	T	T	07 28 42.1	
	baz=96,slow=74,SNR=30						
H11N1	WAKE ISLAND Hy	119.45	285	T	T	07 28 34.9	
	baz=96,slow=74,SNR=17						
SONM	Songino Array	145.76	357	PKPbc	PKPbc	05 19 07.9	+0.2
	1.5nm,0.8s,baz=345,slow=3.4,SNR=7.7						
SONM				pPKPbc	pPKPdf	05 19 21.5	-0.9
	1.8nm,1.0s,baz=338,slow=4.4,SNR=4.4						

NNC 29 05:01:53.9±17.0, **38°.53N×71°.67E, h0^{km}, mb3.6, mpv3.2, 1C-5D, Error ellipse: s-maj=136.2km s-min=99.2km az=175.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	4.63	27	⇓P	Pn	05 02 59.7	-5.6
	4.0nm,0.6s						
AAK				⇓S	Sn	05 03 56.3	-3.6
	8.5nm,0.8s						
KK08	Karatay Array	4.66	349	⇓P	Pn	05 03 05.8	+0.3
	2.0nm,0.6s,baz=145,slow=11						
KK08				⇑S	Sn	05 04 02.1	+1.8
	5.8nm,0.7s,baz=141,slow=22						
TKM2	Tokmak 2	5.31	33	⇓P	Pn	05 03 18.9	+4.4
	1.6nm,0.5s						
TKM2				⇓S	Sn	05 04 23.5	+7.0
	1.8nm,0.6s						
AB31	Akbulak array	13.64	326	P	Pn	05 05 11.5	+3.0
	0.2nm,0.5s,baz=131,slow=14,SNR=6.5						

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*IDC **29** 05:25:05.2±1.9, 30°.57N×50°.07E, h0^{km}, mb3.7/11, mb1 3.8/11, mb1mx3.6/51, mbtmp3.7/11, Error ellipse: s-maj=41.5km s-min=21.7km az=166.0*

*TEH **29** 05:25:07.0, 30°.46N×50°.28E, h16^{km}, ML3.6*

*THR **29** 05:25:08.5±0.4, 30°.42N×50°.39E, h28^{km}±7^{km}, ML3.2*

*KISR **29** 05:25:09.5±0.8, 30°.30N×49°.85E, h0^{km}±56^{km}, ML4.0*

ISC 29 05:25:06.9±1.0, **30°.43N**±0°.03×**50°.26E**±0°.03, **h14^{km}**±7^{km}, **n82, σ1^{s}48**/89, **mb3.8**/12, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABEH	Behbahan	0.17	357	*e*Pg	Pg	05 25 11.0	-0.1
KLNJ	Kolanjah	1.28	63	*e*Pg	Pn	05 25 29.9	-1.0
KLNJ				*e*Sg	Sg	05 25 49.2	+0.7
KLNJ				*e*		05 25 52.8	
	comp=Z,21μm,0.4s						
KAZ1	Kazerun	1.44	123	*e*Pg	Pg	05 25 34.3	-0.3
KAZ1				*e*Sg	Sg	05 25 54.9	+1.7
KAZ1				*e*		05 26 07.0	
	comp=Z,11μm,0.4s						
AMIS	Naft Sefid	1.49	326	*e*Pg	Pg	05 25 34.8	-0.9
AMIS				*e*Sg	Sg	05 25 56.2	+1.1
AHWZ	Ahwaz	1.66	303	*e*Pg	Pb	05 25 37.5	+0.2
IBRJ	Brojen	1.71	30	*e*Pg	Pb	05 25 37.8	-0.5
IBRJ				*e*Sg	Sg	05 26 02.4	+0.4
IBRJ				*e*		05 26 03.5	
	comp=Z,10μm,0.8s						
AHBU	AHRAM	1.80	150	*e*Pg	Pb	05 25 39.7	0.0
SHK1	Shahrekord	1.97	15	*e*Pn	Pb	05 25 41.6	-1.2
SHK1				*e*		05 25 49.4	
	comp=Z,4μm,1.0s						
SHI	Shiraz	2.10	111	*e*Pn	Pb	05 25 43.4	-1.6
SHI				*e*		05 26 24.9	
	comp=Z,3μm,0.6s						
IRAM	Ramesheh	2.28	52	*e*Pn	Pb	05 25 46.2	-1.9
IRAM				*e*		05 26 20.3	
	comp=Z,3μm,0.5s						
IPIR	Pirpir	2.32	13	*e*Pn	Pb	05 25 46.6	-2.1
IPIR				*e*		05 26 22.8	
	comp=Z,4μm,0.6s						
UMR	Umm Al-Rimmam	2.38	249	*e*P	Pb	05 25 48.0	-1.5
IGAR	Gharneh	2.49	37	*e*Pn	Pn	05 25 48.8	+1.4
MIB	Mutribah	2.61	257	*e*P	Pb	05 25 51.8	-1.7
MIB				*e*S	Sn	05 26 22.5	+2.3
MIB				IAML		05 26 31.7	
	comp=Z,433nm,0.5s						
QRN	Al-Qurain	2.64	231	*e*P	Pb	05 25 52.0	-2.1
QRN				*e*S	Sb	05 26 24.5	-1.9
QRN				IAML		05 26 28.1	
	comp=Z,1μm,0.3s						
RDF	Al-Radifah	2.79	238	*e*P	Pn	05 25 53.7	+2.4
RDF				*e*S	Sn	05 26 27.2	+2.3
RDF				IAML		05 26 31.9	
	comp=Z,1μm,0.4s						
RST	Umm Al-Ruwaisa	2.98	253	*e*P	Pn	05 25 56.4	+2.5
IZEF	Zefreh	3.03	35	*e*Pn	Pn	05 25 56.3	+1.5
IZEF				*e*		05 26 05.3	
	comp=Z,1μm,0.4s						
IKLH	Kolahrood	3.10	21	*e*Pn	Pn	05 25 57.6	+1.9
IKLH				*e*		05 26 44.0	
	comp=Z,1μm,0.5s						
GHIR	Ghir-Karzin	3.19	131	*e*Pn	Pn	05 25 57.9	+1.0
GHIR				IAML		05 26 55.1	
	comp=N,48nm,0.4s						
GHIR				IAML		05 27 10.3	
	comp=E,47nm,0.5s						
GHIR	Ghir-Karzin	3.19	131	*e*Pn	Pn	05 25 57.9	+1.0
NASN	Na'in	3.21	42	*e*Pn	Pn	05 25 58.4	+1.0
NASN	Na'in	3.21	42	*e*Pn	Pn	05 25 58.4	+1.0
ISAD	Sadrabad	3.29	62	*e*Pn	Pn	05 25 59.9	+1.5
KHMZ	Khomeyn	3.31	356	*e*Pn	Pn	05 26 01.0	+2.3
KHMZ				IAML		05 27 06.3	
	comp=N,31nm,0.5s						
KHMZ	Khomeyn	3.31	356	*e*Pn	Pn	05 26 01.0	+2.3
QAMS	Qamsar	3.44	16	*e*Pn	Pn	05 26 02.9	+2.5
QAMS				*e*		05 26 59.6	
	comp=Z,1μm,0.5s						
BMDN	Meydan	3.46	340	*e*Pn	Pn	05 26 01.0	+0.4
IDOB	Doab	3.79	333	*e*Pn	Pn	05 26 06.7	+1.5
IMEH	Mehriz	3.86	74	*e*		05 26 10.2	
	comp=Z,503nm,0.2s						
IMEH				*e*Pn	Pn	05 26 07.9	+1.7
KRSH	Karshahi	3.87	24	*e*		05 26 55.8	
	comp=Z,1μm,0.4s						
KRSH				*e*Pn	Pn	05 26 07.8	+1.5
ICHK	Chekchek	3.98	62	*e*Pn	Pn	05 26 09.3	+1.4
ANAR	Anarak	4.04	46	*e*Pn	Pn	05 26 10.5	+2.0
ASAO	Ashtian	4.12	357	*e*Pn	Pn	05 26 12.1	+2.4
ASAO				IAML		05 27 03.5	
	comp=N,35nm,0.4s						
ASAO				IAML		05 27 16.8	
	comp=E,38nm,0.8s						
ASAO	Ashtian	4.12	357	*e*Pn	Pn	05 26 12.1	+2.4
GHVR	GHOM	4.14	12	*e*Pn	Pn	05 26 11.8	+2.0
GHVR				IAML		05 27 05.5	
	comp=N,16nm,0.4s						
GHVR				IAML		05 27 27.9	
	comp=E,27nm,0.6s						
GHVR	GHOM	4.14	12	*e*Pn	Pn	05 26 11.8	+2.0
YZKH	Yazd	4.19	61	*e*Pn	Pn	05 26 11.9	+1.3
YZKH				IAML		05 27 08.2	
	comp=N,28nm,0.7s						
YZKH				IAML		05 27 09.6	
	comp=E,23nm,0.5s						
YZKH	Yazd	4.19	61	*e*Pn	Pn	05 26 11.9	+1.3
ISFB	Sefidab	4.26	23	*e*Pn	Pn	05 26 12.7	+1.2
IQOM	Qom	4.46	9	*e*Pn	Pn	05 26 15.3	+0.9
IQOM				*e*		05 26 23.5	
	comp=Z,656nm,0.4s						
HAGD	Aghdareh	4.49	348	*e*Pn	Pn	05 26 15.3	+0.5
IVRN	Varamin	4.72	15	*e*Pn	Pn	05 26 19.3	+1.4
IALM	Almabolaq	4.76	339	*e*Pn	Pn	05 26 19.3	+0.7
IRAZ	Razeghan	4.97	357	*e*Pn	Pn	05 26 23.5	+2.0
IGHG	Ghaleghazi	4.99	322	*e*Pn	Pn	05 26 22.2	+0.5
IMHD	Mahdasht	5.26	4	*e*Pn	Pn	05 26 26.6	+1.3
ILIN	Lien	5.27	329	*e*Pn	Pn	05 26 26.7	+1.1
QABG	Abgarm-Qazvin	5.30	354	*e*Pn	Pn	05 26 27.0	+1.0
IDMV	Damavand	5.35	16	*e*Pn	Pn	05 26 27.6	+0.9
KHGB	Koh Gabri	5.37	89	*e*Pn	Pn	05 26 28.0	+1.1
IDHR	Dehrash	5.37	324	*e*Pn	Pn	05 26 27.1	+0.1
DAMV	Damavand	5.38	15	*e*Pn	Pn	05 26 28.7	+1.5
DAMV	Damavand	5.38	15	*e*Pn	Pn	05 26 28.7	+1.5
CHTH	Charan	5.52	7	*e*Pn	Pn	05 26 31.3	+2.3
CHTH	Charan	5.52	7	*e*Pn	Pn	05 26 31.3	+2.3
IFIR	Firoozkooh	5.61	21	*e*Pn	Pn	05 26 31.1	+0.9
NGRK	Negar Kerman	5.66	96	*e*Pn	Pn	05 26 32.8	+1.7
IANJ	Anjilo	5.89	30	*e*Pn	Pn	05 26 34.7	+0.6
ISHM	Shahmirzad	5.94	25	*e*Pn	Pn	05 26 34.9	+0.1
GENO	Geno	5.99	119	*e*Pn	Pn	05 26 36.6	+1.1
TPRV	Parvadeh(Tabas	6.06	63	*e*Pn	Pn	05 26 37.2	+1.0
TNSJ	Nastanj	6.43	55	*e*Pn	Pn	05 26 42.6	+1.2
TKDS	Koohdasht(Taba	6.63	60	*e*Pn	Pn	05 26 44.9	+0.7
TABS	Tabas	6.65	59	*e*Pn	Pn	05 26 45.6	+1.2
TABS	Tabas	6.65	59	*e*Pn	Pn	05 26 45.6	+1.2
IGLO	Ghaloghah	6.75	25	*e*Pn	Pn	05 26 47.1	+1.2
KHNJ	Kahnooj	6.96	109	*e*Pn	Pn	05 26 49.9	+1.3
KBAM	BAM	7.23	98	*e*Pn	Pn	05 26 53.5	+1.1
AKTO	Aktyubinsk	20.82	14	P	P	05 29 47.9	-0.1
	comp=Z,1.4nm,0.7s,baz=198,slow=9.4,SNR=4.6						
IDI	Anoyia	21.84	290	P	P	05 30 00.5	+1.4
	comp=Z,5.6nm,0.6s,baz=94,slow=15,SNR=3.1						
MLR	Muntele Rosu	24.24	315	P	P	05 30 25.5	+1.9
	comp=Z,3.2nm,0.6s,baz=95,slow=11,SNR=7.3						
AKASG	Malin Array Be	25.64	328	P	P	05 30 34.6	-1.4
	comp=Z,0.3nm,0.4s,baz=135,slow=8.3,SNR=5.8						
KURBB	Kurchatov Arra	29.19	38	P	P	05 31 08.2	+0.4
	comp=Z,0.8nm,0.6s,baz=241,slow=9.7,SNR=5.8						
MKAR	Makanchi Array	29.63	47	P	P	05 31 12.2	+0.4
	comp=Z,0.8nm,0.8s,baz=249,slow=8.2,SNR=6.9						
ZALV	Zalesovo Beam	34.22	37	P	P	05 31 51.9	-0.1
	comp=Z,1.2nm,0.4s,baz=248,slow=9.4,SNR=5.8						
FINES	FINESS Array B	34.86	340	P	P	05 31 56.1	-1.4
	comp=Z,0.7nm,0.4s,baz=154,slow=9.0,SNR=8.8						
HFS	Hagfors	38.42	331	P	P	05 32 26.6	-1.3
	comp=Z,1.4nm,0.4s,baz=120,slow=8.8,SNR=16						
NOA	NORSAR Array B	39.95	331	P	P	05 32 38.4	-2.3
	comp=Z,0.2nm,0.4s,baz=133,slow=8.6,SNR=1.5						
SONM	Songino Array	45.84	51	P	P	05 33 29.7	+1.0
	comp=Z,0.3nm,0.7s,baz=270,slow=10,SNR=4.0						
TORD	Torodi Ar. Bea	47.88	260	P	P	05 33 44.4	-0.6
	comp=Z,0.6nm,0.5s,baz=55,slow=8.4,SNR=7.4						
YKA	Yellowknife Ar	86.61	353	P	P	05 37 48.7	-1.0
	comp=Z,0.1nm,0.5s,baz=2.7,slow=5.5,SNR=4.3						

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*NEIC **29** 05:39:00.3±2.4, 39°.62S±0°.04×72°.80W±0°.10, h55^{km}±6^{km}, Error ellipse: s-maj=11.2km s-min=5.9km az=107.0*

*IDC **29** 05:39:01.7±2.0, 39°.49S×72°.56W, h63^{km}±20^{km}, mb3.9/5, mb1 3.9/5, mb1mx3.6/20, mbtmp4.2/5, MS3.2/3, Ms1 3.2/3, ms1mx2.9/21, Error ellipse: s-maj=32.6km s-min=19.5km az=60.0*

*GUC **29** 05:39:01.1±0.7, 39°.66S×72°.74W, h62^{km}±3^{km}, ML4.3*

*NEIC **29** 05:39:01, 39°.66S×72°.74W, h59^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.05; $M_{\theta\theta}$0.93; $M_{\phi\phi}$-1.98; $M_{r\theta}$-1.15; $M_{\theta\phi}$-0.19; $M_{\phi r}$-1.82; Fault plane solution: $M_0$2.76000×10^{15} NP1:ϕ_s328.05000°, δ28.87000°, λ30.04000°. NP2:ϕ_s211.19000°, δ76.01000°, λ115.52000°. Principal axes: T 2.5158, Plg52.0000°, Azm151.0000°; N 0.4375, Plg25.0000°, Azm25.0000°; P -2.9533, Plg27.0000°, Azm281.0000°;*

ISC 29 05:39:00.6±0.8, **39°.58S**±0°.04×**72°.72W**±0°.04, **h56^{km}**±8^{km}, **n62, σ1^{s}71**/74, **mb4.2**/9, **6C-3D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LR03	Panguipulli	0.30	100	⇓*i*P	Pn	05 39 11.5	+1.3
LR03				*i* S	Sn	05 39 18.8	+1.7
LR03				IAML		05 39 21.4	
	comp=E,110μm,0.6s						
LR03	Panguipulli	0.30	100		Pn	05 39 11.4	+1.3
LR03				Sn	Sn	05 39 18.5	+1.3
LR02	Universidad Au	0.47	241	*e*P	Pn	05 39 12.1	+0.3
LR02				*i* S	Sn	05 39 20.3	+0.4
LR02				IAML		05 39 25.3	
	comp=E,56μm,0.3s						
LR04	Corral	0.62	241	⇑*i*P	Pn	05 39 13.8	+0.2
LR04				*e*S	Sn	05 39 23.1	+0.1
LR04				IAML		05 39 25.2	
	comp=E,21μm,0.3s						
LC01	Cunco	0.95	44	⇑*i*P	Pn	05 39 19.0	+1.3
LC01				*i* S	Sn	05 39 32.8	+2.3
LC01				IAML		05 39 33.5	
	comp=E,24μm,0.3s						
LC01	Cunco	0.95	44	Pn	Pn	05 39 19.0	+1.3
LC01					Sn	05 39 32.5	+2.1
LL04	Puerto Octay	1.35	170	⇓*i*P	Pn	05 39 22.6	-0.6
LL04				*i* S	Sn	05 39 38.7	-1.3
LL04				IAML		05 39 41.3	
	comp=N,4μm,0.2s						
LL04	Puerto Octay	1.35	170	Pn	Pn	05 39 22.7	-0.4
LL03	Petrohue	1.58	171	⇑*i*P	Pn	05 39 26.1	0.0
LL03				*e*S	Sn	05 39 42.9	-2.6
LL03				IAML		05 39 54.5	
	comp=N,4μm,0.5s						
LL03	Petrohue	1.58	171	Pn	Pn	05 39 26.2	0.0
LL05	Los Muermos	1.91	197	⇑*i*P	Pn	05 39 30.1	-0.7
LL05				*i* S	Sn	05 39 51.9	-1.8
LL05				IAML		05 40 06.8	
	comp=E,1μm,0.4s						
LL05	Los Muermos	1.91	197	Pn	Pn	05 39 29.9	-0.9
PLCA	Paso Flores	2.02	125	P	Pn	05 39 33.0	+0.6
	comp=E,10.0nm,0.3s,baz=305,slow=12,SNR=120						
PLCA				S	Sn	05 39 49.3	-7.3
	comp=E,56nm,0.3s,baz=309,slow=14,SNR=29						
PLCA				LR	LR	05 40 32.0	
	comp=E,534nm,21.9s,baz=264,slow=46						
PLCA	Paso Flores	2.02	125	⇓*i*P	Pn	05 39 33.0	+0.6
PLCA	Paso Flores	2.02	125	Pn	Pn	05 39 32.5	+0.1
LL01	San Ignacio de	2.81	175	*e*P	Pn	05 39 43.8	+0.9
LL01				*e*S	Sn	05 40 14.3	-1.2
LL01				IAML		05 40 24.3	
	comp=N,451nm,0.4s						
LL01	San Ignacio de	2.81	175	Pn	Pn	05 39 43.1	+0.1
LL07	Hotel Espejo d	3.30	190	⇑*e*P	Pn	05 39 48.6	-1.1
LL07				*e*S	Sn	05 40 23.7	-3.9
LL07				IAML		05 40 36.1	
	comp=E,1μm,0.5s						
LL07	Hotel Espejo d	3.30	190	Pn	Pn	05 39 48.5	-1.1
GO07	Milladeo Hill,	3.60	191	⇑*i*P	Pn	05 39 52.6	-1.3
GO07				IAML		05 40 54.8	
	comp=E,2μm,0.5s						
GO07	Milladeo Hill,	3.60	191		Pn	05 39 52.5	-1.3
LL02	Futaleuf	3.67	170	Pn	Pn	05 39 55.7	+0.9
ML02	Panimavida	3.95	16	Pn	Pn	05 39 59.6	+1.0
GO05	Huala	4.61	8	*e*P	Pn	05 40 08.0	+0.3
GO05				*e*S	Sn	05 41 00.2	+0.3
GO05	Huala	4.61	8	Pn	Pn	05 40 08.0	+0.3
BO02	Sierra Bellavi	5.02	19	Pn	Pn	05 40 14.6	+1.2
BO01	Tunca	5.34	15		Pn	05 40 17.8	+0.1
MT01	Popeta	5.83	12	Pn	Pn	05 40 23.7	-0.7
MT09	Talagante	5.96	14	Pn	Pn	05 40 25.8	-0.5
MT05	Renca	6.38	15		Pn	05 40 31.5	-0.5
MT02	Curacav	6.44	12	Pn	Pn	05 40 31.4	-1.3
VA03	San Esteban	7.03	15	Pn	Pn	05 40 39.9	-1.0
H03S1	Juan Fernandez	7.58	317	P	Pn	05 40 49.0	+0.9
	SNR=12						
H03S1				T	T	05 48 01.0	
	baz=140						
H03S2	Juan Fernandez	7.59	317	P	Pn	05 40 49.2	+0.9
	SNR=12						

H03S2				T	T	05 47 58.4	
	baz=140						
H03S3	Juan Fernandez	7.59	317	P	Pn	05 40 49.0	+0.7
	SNR=16						
H03S3				T	T	05 48 08.8	
	baz=140						
H03N3	Juan Fernandez	7.89	319	P	Pn	05 40 53.9	+1.4
	baz=287,slow=72,SNR=35						
H03N3				S	Sn	05 42 16.4	-3.8
	baz=247,slow=72,SNR=4.3						
H03N1	Juan Fernandez	7.89	319	P	Pn	05 40 53.8	+1.4
	baz=287,slow=72,SNR=52						
H03N1				S	Sn	05 42 16.2	-4.0
	baz=247,slow=72,SNR=5.1						
H03N2	Juan Fernandez	7.91	319	P	Pn	05 40 54.3	+1.7
	baz=287,slow=72,SNR=20						
H03N2				S	Sn	05 42 16.5	-3.9
	baz=247,slow=72,SNR=3.7						
CO03	El Pedregal	8.88	11		Pn	05 41 04.8	-1.5
CO06	Fray Jorge	8.93	6	Pn	Pn	05 41 05.6	-1.3
GO04	Tololo Observa	9.52	10	Pn	Pn	05 41 13.3	-1.9
AC04	Llanos de Chal	11.43	7	Pn	Pn	05 41 39.8	-1.3
DSPA	Despedida	14.69	170	Pn	Pn	05 42 25.3	+0.3
EFI	East Falkland	15.82	145		P	05 42 41.0	-1.4
EFI				IAmb	IAmb	05 42 42.8	
	comp=Z,62nm,1.5s						
LVC	Limon Verde	17.23	12	LR	LR	05 49 49.4	
	comp=Z,83nm,19.9s,baz=190,slow=38						
PLTB	Pedras Altas	17.36	69		Pn	05 42 58.3	-0.7
ITAB	Concordia	21.09	61	P	P	05 43 42.8	+2.5
ITAB				IAmb	IAmb	05 43 47.2	
	comp=Z,14nm,1.2s						
LPAZ	La Paz	23.55	11	P	P	05 44 08.8	+2.1
LPAZ				IAmb	IAmb	05 44 29.9	
	comp=Z,5.6nm,1.1s						
AQDB	Aquidauana	24.00	42	P	P	05 44 08.9	-1.2
AQDB				IAmb	IAmb	05 44 13.3	
	comp=Z,6.7nm,1.3s						
SIV	San Ignacio	25.61	27	P	P	05 44 24.2	-0.6
	comp=Z,1.1nm,0.7s,baz=215,slow=11,SNR=4.4						
PMSA	Palmer Station	25.74	171	LR	LR	05 55 29.2	
	comp=Z,61nm,18.8s,baz=38,slow=38						
PTLB	Pontes e Lacer	26.82	30	P	P	05 44 35.4	-0.3
NNA	Nana	27.72	351	LR	LR	05 53 08.3	
	comp=Z,40nm,19.8s,baz=178,slow=31						
VNA2	Neumayer--Watz	45.14	155	P	P	05 47 10.9	-0.2
	baz=291,slow=7.9						
SNAA	Sanae	46.68	156	P	P	05 47 23.3	+0.1
SNAA	Sanae	46.68	156	P	P	05 47 23.3	+0.1
SNAA				IAmb	IAmb	05 47 24.4	
	comp=Z,6.3nm,1.0s						
QSPA	South Pole Qui	50.67	180	P	P	05 47 55.3	+1.2
	comp=Z,2.5nm,0.7s,baz=139,slow=3.1,SNR=6.5						
ACON	Acoyapa	52.58	345	P	P	05 48 10.3	+1.7
DBIC	Dimbokro	77.53	70	P	P	05 50 50.5	-0.1
	comp=Z,2.2nm,0.4s,baz=227,slow=5.2,SNR=6.7						
DBIC	Dimbokro	77.53	70	IAmb	IAmb	05 50 50.8	
	comp=Z,4.5nm,0.7s						
BOSA	Boshof	77.99	117	P	P	05 50 53.1	-0.2
	comp=Z,2.1nm,0.8s,baz=222,slow=5.0,SNR=5.5						
TORD	Torodi Ar. Bea	86.63	70	P	P	05 51 37.1	-1.2
	comp=Z,0.4nm,0.5s,baz=226,slow=5.2,SNR=4.2						

*IDC **29** 05:50:04.0±3.1, 5°.64S×130°.99E, h54^{km}±32^{km}, mb3.8/5, mb1 4.1/7, mb1mx3.8/24, mbtmp4.2/7, ML4.9/3, Error ellipse: s-maj=53.4km s-min=18.6km az=77.0*
*DJA **29** 05:50:05.6±0.3, 6°S±3°×13°1E±°, h137^{km}±12^{km}, M4.8/7, mB5.3/4, mb4.7/6, MLv4.8/7, Mw(mB)4.8/4*
ISC 29 05:50:07.1±0.7, **5°.46S**±0°.06×**131°.30E**±0°.09, **h100**^{km}, **n29**, σ**1^{s}.72**/28, **mb4.0**/9, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.67	304	P	Pn	05 50 34.6	-0.9
SAUI	Saumlaki	2.51	180	P	Pn	05 50 46.0	-0.3
FAKI	Fak Fak	2.70	21	P	Pn	05 50 49.2	+0.4
FAKI	Fak Fak	2.70	21	P	Pn	05 50 49.1	+0.3
AAI	Ambon	3.56	300	P	Pn	05 50 59.0	-1.3
SIJI	Sorong	4.56	360	P	Pn	05 51 13.1	-0.8
	117nm,0.3s,baz=207,slow=12,SNR=106						
SIJI				S	Sn	05 52 01.3	-4.5
	26nm,0.3s,baz=194,slow=22,SNR=6.6						
SWI	Sorong	4.57	360	P	Pn	05 51 12.8	-1.2
SANI	Sanana	6.29	302	P	Pn	05 51 36.9	-0.4
	0.3nm1µm46nm,0.4s						
SANI	Sanana	6.29	302	P	Pn	05 51 37.1	-0.2
DRS	Darwin Rock St	6.94	183	P	Pn	05 51 43.5	-2.7
KDU	Kakadu	7.28	171	P	Pn	05 51 47.9	-2.9
MTN	Manton Dam	7.34	181	P	Pn	05 51 49.3	-2.3
	182nm,0.4s						
SOEI	Soe	8.17	238	P	Pn	05 52 00.6	-2.5
	39nm,0.7s						
SOEI	Soe	8.17	238	P	Pn	05 52 02.3	-0.8
FITZ	Fitzroy Crossi	13.72	203	P	Pn	05 53 11.2	-6.2
	3.5nm,0.3s,baz=24,slow=9.2,SNR=80						
FITZ				S	Sn	05 55 32.8	-16
	3.7nm,0.3s,baz=136,slow=17,SNR=7.8						
COEN	Coen	14.43	127	P	Pn	05 53 26.0	-0.7
	29nm,1.4s						
WRA	Warramunga Arr	14.70	169	P	Pn	05 53 24.5	-5.6
	2.4nm,0.3s,baz=356,slow=15,SNR=38						
WRA				S	Sn	05 56 00.4	-12
	2.4nm,0.3s,baz=351,slow=23,SNR=9.4						
QIS	Mount Isa	17.04	152	P	Pn	05 53 58.7	-0.6
	9.6nm,1.5s						
ASAR	Alice Springs	18.28	172	P	P	05 54 12.2	-0.9
	2.4nm,0.3s,baz=359,slow=9.7,SNR=92						
ASAR				S	S	05 57 24.0	-13
	0.6nm,0.3s,baz=359,slow=25,SNR=5.4						
WRKA	Warakurna	19.68	188	P	P	05 54 28.5	+0.1
	17nm,1.5s						
OOD	Oodnadatta	22.60	170	P	P	05 54 59.8	+0.3
	30nm,0.8s						
MULG	Mulgathing	24.83	174	P	P	05 55 22.0	+1.9
	15nm,0.5s						
FORT	Forrest	25.37	187	P	P	05 55 25.5	+0.5
	13nm,2.1s						
LCRK	Leigh Creek	25.70	166	P	P	05 55 29.7	+1.7
	17nm,0.7s						
STKA	Stephens Creek	28.00	161	P	P	05 55 49.5	+0.9
	0.9nm,0.3s,baz=331,slow=12,SNR=5.0						
CMAR	Chiang Mai Arr	39.78	307	P	P	05 57 31.3	+0.7
	0.8nm,0.3s,baz=138,slow=7.5,SNR=6.4						
SONM	Songino Array	57.42	340	P	P	05 59 48.0	+2.6
	0.6nm,0.7s,baz=166,slow=6.6,SNR=4.1						
MKAR	Makanchi Array	67.67	326	P	P	06 00 55.5	+1.9
	1.6nm,0.4s,baz=113,slow=8.2,SNR=32						
ZALV	Zalesovo Beam	70.79	333	P	P	06 01 13.5	+0.9
	0.6nm,0.5s,baz=125,slow=4.2,SNR=2.1						

*IDC **29** 06:49:47.5±12.0, 6°.47S×154°.59E, h96^{km}±113^{km}, mb3.7/9, mb1 4.0/10, mb1mx3.6/40, mbtmp4.0/10, ML4.0/1, MS3.4/6, Ms1 3.4/6, ms1mx3.0/31, Error ellipse: s-maj=40.2km s-min=25.0km az=173.0*
ISC 29 06:49:42.2±0.8, **6°.4S**±0°.1×**154°.6E**±0°.2, **h48**^{km}, **n16**, σ**1^{s}.04**/11, **mb3.9**/9, **MS3.3**/4, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.97	248	LR	LR	06 54 41.9	
	comp=Z,212nm,20.4s,baz=42,slow=37						
DZM	Mont Dzumac	19.30	145	P	Pn	06 54 05.0	+0.1
	0.5nm,0.3s,baz=336,slow=13,SNR=5.1						
DZM				LR	LR	06 59 54.9	
	comp=Z,59nm,21.0s,baz=213,slow=32						
WRA	Warramunga Arr	23.86	234	P	P	06 54 52.3	+0.9
	12nm,0.9s,baz=57,slow=9.4,SNR=25						
ASAR	Alice Springs	26.29	227	P	P	06 55 13.6	+0.1
	2.0nm,0.6s,baz=58,slow=9.1,SNR=30						
ASAR				LR	LR	07 05 20.7	
	comp=Z,97nm,18.9s,baz=44,slow=36						
H11S3	WAKE ISLAND Hy	27.46	25	T	T	07 24 05.7	
	baz=204,slow=74						
H11S2	WAKE ISLAND Hy	27.46	26	T	T	07 24 01.6	
	baz=204,slow=74						
H11S1	WAKE ISLAND Hy	27.48	25	T	T	07 23 51.5	
	baz=204						
STKA	Stephens Creek	28.11	204	P	P	06 55 29.4	-0.3
	1.5nm,0.7s,baz=15,slow=7.8,SNR=4.6						
STKA				LR	LR	07 06 07.9	
	comp=Z,84nm,20.9s,baz=26,slow=35						
PETK	Petropavlovsk-	59.35	2	LR	LR	07 23 20.1	
	comp=Z,17nm,20.2s,baz=84,slow=34						
CMAR	Chiang Mai Arr	60.20	295	P	P	06 59 45.3	-0.6
	0.5nm,0.3s,baz=112,slow=6.9,SNR=4.8						
SONM	Songino Array	68.65	327	P	P	07 00 41.7	+1.0
	0.8nm,0.9s,baz=116,slow=6.6,SNR=3.8						
MKAR	Makanchi Array	82.73	319	P	P	07 02 01.4	+0.4
	0.8nm,0.6s,baz=96,slow=5.6,SNR=8.3						
ILAR	Eielson Array	82.97	22	P	P	07 02 00.1	-1.8
	1.0nm,1.0s,baz=231,slow=3.7,SNR=4.9						
ILAR				LR	LR	07 33 15.5	
	comp=Z,40nm,20.3s,baz=199,slow=31						
NVAR	Mina Array Bea	91.65	52	P	P	07 02 46.0	+1.1
	0.7nm,0.7s,baz=251,slow=5.4,SNR=4.8						
YKA	Yellowknife Ar	96.00	28	P	P	07 03 04.4	+0.4
	0.2nm,0.6s,baz=266,slow=4.5,SNR=6.7						
TORD	Torodi Ar. Bea	152.52	286	PKPbc	PKPbc	07 09 33.1	-1.3
	0.4nm,0.6s,baz=102,slow=1.8,SNR=2.5						

*IDC **29** 06:49:43.4±4.5, 0°.77S×78°.88W, h89^{km}±44^{km}, mb3.4/6, mb1 3.7/8, mb1mx3.5/37, mbtmp3.9/8, Error ellipse: s-maj=49.5km s-min=20.9km az=58.0*
*IGQ **29** 06:49:44±0.3, 1°S±2°×7°9W±°, h101^{km}*
*VAO **29** 06:49:49.7±0.7, 0°.74S×78°.38W, h103^{km}±6^{km}, mb4.0*
ISC 29 06:49:44.0±0.7, **0°.92S**±0°.03×**79°.22W**±0°.04, **h103**^{km}±6^{km}, **n112**, σ**1^{s}.18**/126, **mb3.6**/6, **2C**, **Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAST	Pastocalle	0.62	69	P	Pn	06 50 02.0	+0.5
SRAM	San Ramn-Vol	0.67	75	P	Pn	06 50 02.0	+0.1
SRAM				S	Sn	06 50 16.0	+0.7
SLOR	San Lorenzo -	0.74	75	P	Pn	06 50 03.0	+0.4
CAMI	Rancho Maria	0.75	71	P	Pn	06 50 03.0	+0.3
SUCR	Mariscal Sucre	0.78	69	P	Pn	06 50 04.0	+1.1
SUCR				S	Sn	06 50 19.0	+1.9
BNAS	Cotopaxi Volca	0.78	71	P	Pn	06 50 04.0	+1.0
BMOR	Cotopaxi Volca	0.78	76	P	Pn	06 50 04.0	+0.9
NAS2	Nasa	0.80	70	P	Pn	06 50 04.0	+0.8
IGUA	Igualata	0.81	134	P	Pn	06 50 04.0	+0.6
BREF	Cotopaxi Volca	0.82	72	P	Pn	06 50 04.0	+0.5
VCES	Cotopaxi	0.83	82	P	Pn	06 50 04.0	+0.5
VCES				S	Sn	06 50 19.0	+0.9
FLF1	Flavio Alfaro-	0.84	312	P	Pn	06 50 03.0	0.0
FLF1				S	Sn	06 50 19.0	+1.7
PIS1	Pisayambo	0.84	99	P	Pn	06 50 04.0	+0.4
PIS1				S	Sn	06 50 19.0	+0.7
BVC2	Cotopaxi Volca	0.85	72	P	Pn	06 50 04.0	+0.3
BTAM	Cotopaxi Volca	0.86	73	P	Pn	06 50 04.0	+0.2
VC1	Cotopaxi 1	0.86	71	P	Pn	06 50 04.0	+0.2
TAMB	Tambo	0.88	75	P	Pn	06 50 04.0	0.0
TOMA	Boca Toma-Volc	0.89	62	P	Pn	06 50 04.0	+0.1
TOMA				S	Sn	06 50 20.0	+1.1
BIL2	Estacion Bilba	0.89	127	P	Pn	06 50 04.0	+0.2
HPAL	Hacienda Las P	0.90	39	P	Pn	06 50 04.0	0.0
BBIL	Ulba Tungurahu	0.90	126	P	Pn	06 50 04.0	0.0
JUI6	Juive	0.90	124	P	Pn	06 50 04.0	+0.1
POND	Pondoa	0.91	123	P	Pn	06 50 04.0	-0.1
GGPT	Toaza - Volcan	0.91	41	P	Pn	06 50 05.0	+0.8
JUA2	San Juan 2	0.93	41	P	Pn	06 50 05.0	+0.5
RETU	Refugio	0.93	124	P	Pn	06 50 05.0	+0.5
BMAS	Trigal station	0.94	128	P	Pn	06 50 04.0	-0.4
BRUN	Tungurahua Vol	0.95	122	P	Pn	06 50 04.0	-0.5
ARRY	Arrayan	0.96	127	P	Pn	06 50 04.0	-0.6
PIAT	Ana Tenorio	0.96	95	P	Pn	06 50 05.0	+0.4
TERV	Terraza Guagua	0.96	40	P	Pn	06 50 05.0	+0.2
GGPC	Guagua Pichinc	0.96	40	P	Pn	06 50 05.0	+0.1
PINO	Pino	0.97	39	P	Pn	06 50 05.0	0.0
BPAT	Tungurahua Vol	0.97	126	P	Pn	06 50 05.0	+0.1
MAG1	Magdalena	1.01	327	P	Pn	06 50 05.0	+0.2
APR2	Miler	1.02	14	P	Pn	06 50 05.0	0.0
YANA	Yana	1.03	39	P	Pn	06 50 06.0	+0.5
ANTG	Antisana-Guama	1.05	67	P	Pn	06 50 06.0	+0.3
ANTM	Antisana-La Mi	1.06	69	P	Pn	06 50 06.0	+0.1
BV15	Puerto Quito-O	1.07	360	P	Pn	06 50 05.0	-0.5
ANTS	Antisana-Sarah	1.13	68	P	Pn	06 50 07.0	+0.3
ANTI	Antisana	1.16	66	P	Pn	06 50 07.0	0.0
PULU	Pululahua	1.18	37	P	Pn	06 50 07.0	0.0
JAMA	Jama	1.19	304	P	Pn	06 50 06.0	-0.8
PAC1	Pacto, Paraso	1.25	20	*e*P	Pn	06 50 07.8	+0.2
PAC1				*e*S	Sn	06 50 26.4	+0.9
PAC1				*i*		06 50 28.0	
	comp=Z,5µm,0.3s						
PAC1	Pacto, Paraso	1.25	20	P	Pn	06 50 07.0	-0.7
AMIL	Milagro (Trans	1.26	197	P	Pn	06 50 07.0	-0.6
CAB1	Cabo Pasado-Ma	1.32	294	P	Pn	06 50 09.0	+0.7
CABP	Cabo Pasado	1.32	294	P	Pn	06 50 09.0	+0.7
PUYO	Puyo, Santa Ro	1.32	115	P	Pn	06 50 09.0	+0.6
OTAV	Otavalo	1.38	34⇑	*e*P	Pn	06 50 10.0	+0.5
OTAV				*e*S	Sn	06 50 29.6	+0.9
OTAV				*i*		06 50 34.7	
	comp=Z,400nm,0.6s						
OTAV	Otavalo	1.38	34	*e*P	Pn	06 50 10.2	+0.8
SANGA	Volcan Sangay	1.41	143	P	Pn	06 50 10.0	+0.2
CUSE	Cuicocha Este	1.47	34⇑	*e*P	Pn	06 50 11.3	+0.8
CUSE				*e*S	Sn	06 50 31.8	+1.4
CUSE				*i*		06 50 36.6	
	comp=Z,4µm,0.4s						
CUSE	Cuicocha Este	1.47	34	P	Pn	06 50 11.0	+0.5
CUSW	Cuicocha Oeste	1.48	36	P	Pn	06 50 11.0	+0.4
CUIC	Cuicocha-Domo	1.49	35	P	Pn	06 50 11.0	+0.3
COTA	Cotacachi	1.53	35	P	Pn	06 50 12.0	+0.7
CAYR	Refugio Cayamb	1.53	52	P	Pn	06 50 13.0	+1.6
COHC	Cochancay	1.54	181	P	Pn	06 50 10.0	-0.9
IMBA	Imbabura, San	1.56	41	P	Pn	06 50 13.0	+1.3
URCU	Urcuqui	1.66	35	P	Pn	06 50 14.0	+1.2
AIB2	Ibarra (Univer	1.68	42	P	Pn	06 50 13.0	+0.1
YAHU	Yahuarcocha	1.72	42	P	Pn	06 50 14.0	+0.5
LAV4	Lava4-Reventad	1.79	63	P	Pn	06 50 15.0	+0.7
REVN	San Rafael	1.80	62	P	Pn	06 50 15.0	+0.6
ISPT	Isla de la Pla	1.89	260	P	Pn	06 50 15.0	-0.3
ACUE	Ecuador-Cuenca	1.99	173	P	Pn	06 50 19.0	+2.0
LNGL	El Angel-Carch	2.05	36	P	Pn	06 50 18.0	+0.2
CHMA	Chilma	2.11	33	P	Pn	06 50 19.0	+0.5
CHL1	Volc¡n Chiles	2.12	37	P	Pn	06 50 19.0	+0.2
ECEN	Cerro Negro	2.13	36	P	Pn	06 50 19.0	0.0
CHL2	Volc¡n Chiles	2.15	37	P	Pn	06 50 20.0	+0.9
CASC	Dorado de Casc	2.15	61	P	Pn	06 50 19.0	+0.2
TULM	Tulcn-Chalpat	2.17	41	*e*P	Pn	06 50 20.8	+1.5
BONI	La Bonita	2.17	51	P	Pn	06 50 20.0	+0.8
ISPG	Isla Puna-Puer	2.25	205	P	Pn	06 50 21.0	+1.0
CMBC	Cumbal	2.31	37	*e*P	Pn	06 50 25.1	+3.9
CMBC				*e*S	Sn	06 50 49.7	+0.1
BOSC	San Juan Bosco	2.33	162	P	Pn	06 50 23.0	+1.8
ARNL	Arenillas	2.74	198	P	Pn	06 50 25.0	-1.5
MCRA	Macar, Loja	3.50	192	P	Pn	06 50 35.0	-1.7
BBAC	Balboa, Cauca	3.52	34	*e*P	Pn	06 50 38.5	+1.4
BBAC				*e*S	Sn	06 51 20.3	+2.3
BBAC				*i*		06 51 24.9	
	comp=N,363nm,0.4s						
POPC	Popayan, Colom	4.28	36	*e*P	Pn	06 50 47.3	+0.1
POPC				*e*S	Sn	06 51 35.5	-0.6
POPC				*i*		06 51 43.3	
	comp=Z,13nm,0.4s						
PCON	Cinco Dias	4.29	41	*e*P	Pn	06 50 49.9	+2.2
FLOC	Florencia	4.35	55	*e*P	Pn	06 50 47.3	-0.7
MACC	Macarena, Meta	6.17	60	*e*P	Pn	06 51 12.4	-0.4
ATAH	Atahualpa	6.23	172	P	Pn	06 51 15.2	+1.4
	comp=Z,5.4nm,0.3s,baz=11,slow=8.4,SNR=65						
ATAH				S	Sn	06 52 25.2	+1.3
	comp=Z,6.5nm,0.3s,baz=202,slow=23,SNR=28						
PLMC	San Jos del P	6.49	27	*e*P	Pn	06 51 13.8	-3.2
TBTG	Tabatinga, AM	9.85	109	*e*P	Pn	06 51 58.8	-3.9
NNA	Nana	11.24	168	P	Pn	06 52 23.1	+1.4
	comp=Z,2.3nm,0.3s,baz=322,slow=11,SNR=4.9						
MACA	Manacapuru-AM	18.65	97	*e*P	P	06 53 50.8	-3.3
LPAZ	La Paz	18.78	145	*e*P	Pn	06 53 57.3	-0.3
BOAV	Boa Vista	18.98	80	*e*P	P	06 53 53.3	-4.3
SIV	San Ignacio	23.33	131	P	P	06 54 42.9	-0.5
	comp=Z,1.2nm,0.5s,baz=292,slow=8.4,SNR=14						
ITTB	Itaituba	23.70	99	*e*P	P	06 54 45.8	-0.9
LVC	Limon Verde	23.78	156	P	P	06 54 49.4	+1.7
	comp=Z,2.7nm,0.6s,baz=342,slow=6.4,SNR=2.7						
PTLB	Pontes e Lacer	24.52	127	*e*P	P	06 54 54.0	-0.1
NPGB	Novo Progresso	24.56	105	*e*P	P	06 54 52.7	-1.8
PDRB	Porto dos Gac	24.72	116	*e*P	P	06 54 55.4	-0.5
MALB	Monte Alegre	24.96	92	*e*P	P	06 54 56.6	-1.6
CLDB	Colider	25.28	114	*e*P	P	06 54 59.9	-1.2
SALV	Santo Antonio	27.57	124	*e*P	P	06 55 22.8	+1.2
PP1B	Ponte de Pedra	29.11	126	*e*P	P	06 55 36.2	+0.9
PRPB	Parauapebas	29.80	101	*e*P	P	06 55 40.7	-0.8
SNDB	Serra Nova Dou	29.80	113	*e*P	P	06 55 40.7	-0.8
AQDB	Aquidauana	30.10	132	*e*P	P	06 55 46.0	+1.9
IPMB	Ipameri, GO	34.86	121	*e*P	P	06 56 24.6	-1.1
PLCA	Paso Flores	40.40	170	P	P	06 57 13.3	+1.2
	comp=Z,1.8nm,0.7s,baz=350,slow=11,SNR=5.2						
GDU01	Guandu, BA	41.23	110	*e*P	P	06 57 19.2	0.0
NVAR	Mina Array Bea	53.15	322	P	P	06 58 53.9	+2.1
	comp=Z,0.5nm,0.7s,baz=141,slow=4.4,SNR=4.6						
YKA	Yellowknife Ar	68.63	343	P	P	07 00 35.7	-0.1
	comp=Z,0.1nm,0.5s,baz=139,slow=5.6,SNR=5.8						
YKA				pP	pP	07 01 00.9	-0.8
	comp=Z,0.2nm,0.7s,baz=140,slow=5.2,SNR=3.4						
TORD	Torodi Ar. Bea	81.36	77	P	P	07 01 48.8	-1.2
	comp=Z,0.4nm,0.6s,baz=280,slow=6.2,SNR=4.8						

*TAP **29** 07:05:60.0, 24°.87N×122°.50E, h116^{km}, ML3.1, C*
*JMA **29** 07:05:59.9±0.1, 24°.79N×122°.47E, h120^{km}±2^{km}, M2.3*
ISC 29 07:06:01.0±1.7, **24°.83N**±0°.06×**122°.50E**±0°.03, **h111**^{km}±11^{km}, **n49**, σ**0^{s}.55**/86, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.49	292	*e*P	Pn	07 06 17.7	-0.2
	baz=287						
JYNG	Yonagunijimaku	0.55	132	P	Pn	07 06 18.3	0.0
JYNG				S	Sn	07 06 32.0	+0.7
YOJ	Yonaguni jima	0.59	128	P	Pn	07 06 18.6	0.0
YOJ				*e*S	Sn	07 06 32.7	+0.9
TIPB	Shuangxi	0.63	284	P	Pn	07 06 18.7	-0.2
	baz=277						
TIPB				S	Sn	07 06 32.6	+0.2
	baz=277						
TWC	Suao	0.63	250	P	Pn	07 06 18.6	-0.2
	baz=240						
TWC				S	Sn	07 06 31.7	-0.5
	baz=240						
NWF	Wu-fen Shan	0.69	291	*e*P	Pn	07 06 19.2	-0.3
	baz=287						
NDS	Dongshan	0.73	255	*e*P	Pn	07 06 19.5	-0.2
	baz=248						
NDS				*e*S	Sn	07 06 33.5	-0.4
	baz=248						
EWUT	Wuta	0.76	240	P	Pn	07 06 19.9	0.0
	baz=235						
EWUT				*e*S	Sn	07 06 34.6	+0.5
	baz=235						
TWE	Neicheng	0.76	262	*e*P	Pn	07 06 19.8	-0.1
	baz=259						
TWE				*e*S	Sn	07 06 33.9	-0.3
	baz=259						
ENA	Nanau	0.79	240	*e*P	Pn	07 06 20.4	+0.2
	baz=234						
ENA				*e*S	Sn	07 06 35.1	+0.4
	baz=234						
ENTT	Nioudou	0.87	258	*e*P	Pn	07 06 21.5	+0.5
	baz=255						
ENTT				*e*S	Sn	07 06 35.5	-0.5
	baz=255						
YM01	YM01	0.90	291	P	Pn	07 06 21.2	-0.1
	baz=288						
YM01				*e*S	Sn	07 06 36.8	+0.2
	baz=288						
NWLT	Wulai	0.90	267	P	Pn	07 06 20.9	-0.4
	baz=271						
NWLT				*e*S	Sn	07 06 36.5	-0.2
	baz=271						
NDT	Datong Townshi	0.92	256	P	Pn	07 06 21.9	+0.4
	baz=257						
NDT				*e*S	Sn	07 06 37.9	+0.9
	baz=257						
TWY	Chenhua	0.93	299	*e*S	Sn	07 06 37.0	0.0
	baz=296						
YHNB	Yeheng	1.03	262	*e*P	Pn	07 06 22.7	+0.1
	baz=264						
YHNB				*e*S	Sn	07 06 39.1	+0.1
	baz=264						
ETL	Fush Village	1.04	230	*e*P	Pn	07 06 22.6	-0.1
	baz=223						
ETL				*e*S	Sn	07 06 39.3	+0.2
	baz=223						
NSK	Sanguang	1.05	262	P	Pn	07 06 22.7	-0.1
	baz=264						
NSK				*e*S	Sn	07 06 38.8	-0.5
	baz=264						
NACB	Ninganchiao	1.05	232	*e*P	Pn	07 06 22.3	-0.5
	baz=225						
NACB				*e*S	Sn	07 06 38.7	-0.4
	baz=225						
NNSB	Datong	1.09	249	P	Pn	07 06 23.4	+0.1
	baz=241						
NNSB				*e*S	Sn	07 06 40.0	-0.2
	baz=241						
NNS	Nan Shan	1.09	250	P	Pn	07 06 23.6	+0.3
	baz=241						
NNS				*e*S	Sn	07 06 40.6	+0.4
	baz=241						
TWD	Chiawan	1.11	228	*e*P	Pn	07 06 23.3	-0.1
	baz=222						
TWD				*e*S	Sn	07 06 40.5	+0.2
	baz=222						
ETLH	Xiulin Townshi	1.11	236	*e*P	Pn	07 06 23.2	-0.4
	baz=235						
ETLH				*e*S	Sn	07 06 40.2	-0.4
	baz=235						
IRIF	Iriomote-Funau	1.23	113	P	Pn	07 06 24.7	0.0
IRIF				S	Sn	07 06 43.1	+0.5
FUSS	Fushou	1.28	243	*e*P	Pn	07 06 25.5	0.0
	baz=238						
FUSS				*e*S	Sn	07 06 43.4	-0.7
	baz=238						
WHF	Hehuan Shan	1.31	239	*e*P	Pn	07 06 25.9	-0.2
	baz=232						
WHF				*e*S	Sn	07 06 45.2	+0.1
	baz=232						
TWT	Tachien	1.33	245	*e*S	Sn	07 06 45.3	+0.2
	baz=238						
TDCB	Techi	1.34	245	*e*P	Pn	07 06 26.6	+0.4
	baz=238						
TDCB				*e*S	Sn	07 06 45.4	+0.1
	baz=238						
LIOB	Emei	1.36	263	*e*P	Pn	07 06 26.0	-0.2
	baz=261						
LIOB				*e*S	Sn	07 06 45.1	-0.2
	baz=261						
NSTT	Nanjuang	1.37	262	*e*P	Pn	07 06 26.0	-0.4
	baz=260						
NSTT				*e*S	Sn	07 06 45.2	-0.4
	baz=260						
ESL	Shilin	1.40	224	*e*P	Pn	07 06 26.3	-0.4
	baz=231						
CHGB	Renai	1.43	238	*e*P	Pn	07 06 27.6	+0.3
	baz=230						
CHGB				*e*S	Sn	07 06 47.2	+0.1
	baz=230						
JKRS	Kuro-shima	1.50	113	P	Pn	07 06 28.1	+0.3
JKRS				S	Sn	07 06 48.6	+0.4
EGFH	Guangfu	1.51	220	*e*S	Sn	07 06 47.2	-1.2
	baz=228						
WHP	Taichung City	1.51	249	*e*P	Pn	07 06 28.5	+0.4
	baz=255						
WHP				*e*S	Sn	07 06 48.8	+0.1
	baz=255						
JIJ	Ishigaki jima	1.57	107	P	Pn	07 06 28.5	-0.2
JIJ				S	Sn	07 06 49.0	-0.7
VWDT	VWDT	1.63	229	*e*P	Pn	07 06 29.6	+0.1
	baz=223						
VWDT				*e*S	Sn	07 06 51.0	-0.1
	baz=223						
WCS	Beigang Elemen	1.64	242	*e*P	Pn	07 06 30.6	+1.1
	baz=249						
HGSD	Ruisui	1.65	217	*e*P	Pn	07 06 30.3	+0.6
	baz=210						
HGSD				*e*S	Sn	07 06 51.4	-0.1
	baz=210						
JISG	Ishigakijimahi	1.67	98	P	Pn	07 06 29.7	-0.2
JISG				S	Sn	07 06 51.8	0.0
EHY	Hungye	1.70	219	*e*P	Pn	07 06 28.9	-1.3
	baz=226						
SMLT	Sun Moon Lake	1.73	238	*e*P	Pn	07 06 31.8	+1.0
	baz=236						
SSLB	Suanglung	1.75	234	*e*P	Pn	07 06 31.6	+0.7
	baz=229						
SSLB				*e*S	Sn	07 06 54.2	+0.6
	baz=229						
TYC	Yuchr	1.75	239	*e*P	Pn	07 06 31.9	+0.9
	baz=234						
TYC				*e*S	Sn	07 06 55.5	+1.8

	baz=234						
YULB	Yu-li	1.80	218	eP	Pn	07 06 30.4	-1.2
	baz=217						
YULB				eS	Sn	07 06 52.9	-1.9
	baz=217						
JTJ	Tarama	2.01	95	P	Pn	07 06 34.3	+0.1
JTJ				S	Sn	07 06 58.8	-0.8
TPUB	Ta-pu	2.28	229	eP	Pn	07 06 37.5	-0.2
	baz=238						
WTP	Ta-pu	2.33	228	eP	Pn	07 06 38.6	+0.3
	baz=238						
TWGBT	Beinan	2.38	213	eP	Pn	07 06 39.7	+0.7
	baz=212						

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*IDC **29** 07:14:58.2±2.7,36°.24N×70°.75E,h185km±23km,mb4.1/22, mb1 4.2/27,mb1mx3.9/48,mbtmp4.6/27,Error ellipse: s-maj=15.1km s-min=11.2km az=4.0*
*MOS **29** 07:15:00.4±0.8,36°.44N×70°.76E,h212km,mb4.5/21,Error ellipse: s-maj=9.0km s-min=4.3km az=82.9*
*BJI **29** 07:15:00.2±0.0,36°.53N×70°.66E,h202km,mB4.7/13, mb4.4/23*
*NEIC **29** 07:15:01.4±1.7,36°.42N±0°.05×70°.68E±0°.09,h206km±3km, mb4.5/45,Error ellipse: s-maj=10.1km s-min=7.7km az=84.0*
*NNC **29** 07:15:06.8±4.3,36°.92N×70°.79E,h226km±54km,mb3.8, mpv4.9,Error ellipse: s-maj=42.0km s-min=25.0km az=10.0*
ISC 29 07:14:59.6±0.3,**36°.27N**±0°.04×**70°.79E**±0°.05,**h200**km,**n231**, σ**1s.75**/246,**mb4.4**/57,**15C-11D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.24	220	PN	Pn	07 15 43.8	+2.9
KBL	Kabul	2.24	220	Pn	Pn	07 15 43.8	+2.9
CEP	Cherat	2.61	159	P	Pn	07 15 49.0	+4.1
CEP				S	Sn	07 16 24.0	+3.8
CHGR	Chuyangaron	2.71	332	PN	Pn	07 15 45.0	-1.0
CHGR	Chuyangaron	2.71	332		Pn	07 15 46.0	0.0
CHCP	Chirah Chowk	3.30	141	P	Pn	07 15 57.2	+4.3
NIL	Nilore	3.30	142	PN	Pn	07 15 57.3	+4.4
NIL	Nilore	3.30	142		Pn	07 15 57.3	+4.4
DRK	Karamyk	3.30	14		Pn	07 15 53.9	+0.8
THW	Thamme Wali	3.55	167	P	Pn	07 15 59.7	+3.7
BTK	Batken	3.78	0	PN	Pn	07 15 59.6	+0.9
BTK	Batken	3.78	0	Pn	Pn	07 15 59.6	+0.9
SARP	Sargodha	4.61	160	P	Pn	07 16 12.3	+3.2
TAS	Tashkent	5.18	347	PN	Pn	07 16 16.3	0.0
TAS	Tashkent	5.18	347	Pn	Pn	07 16 16.3	0.0
KSH	Kashi	5.22	50	P	Pn	07 16 13.5	-3.4
KSH				S	Sn	07 17 06.3	-12
KSH				smax	smax		
	comp=N,420nm,0.8s						
KSH				smax	smax		
	comp=E,480nm,0.6s						
IUG	Iuzhnay	5.90	354	⇓iP	Pn	07 16 25.5	-0.1
	baz=354						
IUG	Iuzhnay	5.90	354	d iPN	Pn	07 16 25.4	-0.1
DHRM	DHARAMSHALA	6.07	130	eP	Pn	07 16 31.0	+3.0
DHRM				eS	Sn	07 17 38.5	+0.6
DHRM				IAML		07 17 41.6	
	comp=N,2µm,0.4s						
DHRM				IAML		07 17 42.0	
	comp=E,2µm,0.6s						
AML	Almayashu	6.27	20	P	Pn	07 16 30.4	-0.2
	SNR=444						
UCH	Uchtor	6.61	25	P	Pn	07 16 35.2	0.0
	SNR=346						
DZA	Taraz	6.63	3	eP	Pn	07 16 34.7	-0.2
	baz=2.6						
DZA	Taraz	6.63	3	ePN	Pn	07 16 34.7	-0.2
BHK	Bhakra	6.73	134	eP	Pn	07 16 39.1	+2.8
EKS2	Erkin-Say	6.79	19	P	Pn	07 16 37.0	-0.1
	SNR=105						
KKAR	Karatay Array	6.83	358	PN	Pn	07 16 36.6	-0.9
KKAR	Karatay Array	6.83	358		Pn	07 16 36.6	-0.9
KK08	Karatay Array	6.83	358	⇑P	Pn	07 16 36.6	-0.9
	comp=E,26nm,0.5s						
KK08				⇓S	Sn	07 17 48.7	-6.7
	comp=E,26nm,0.6s						
AAK	Ala-Archa	6.97	23	P	Pn	07 16 39.6	+0.1
	comp=E,14nm,0.3s,baz=206,slow=8.5,SNR=304						
AAK				S	Sn	07 17 55.3	-3.7
	comp=E,6.4nm,0.3s,baz=5.4,slow=20,SNR=8.3						
AAK	Ala-Archa	6.97	23	P	Pn	07 16 39.6	+0.1
	SNR=44						
AAK	Ala-Archa	6.97	23	⇑P	Pn	07 16 39.5	-0.1
	comp=E,54nm,0.5s						
AAK				⇓S	Sn	07 17 55.5	-3.4
	comp=E,77nm,0.7s						
AAK	Ala-Archa	6.97	23	Pn	Pn	07 16 39.5	-0.1
KBK	Karagaybulak	7.14	25	P	Pn	07 16 42.1	+0.3
	SNR=20						
FRU1	Bishkek	7.17	23	PN	Pn	07 16 42.6	+0.5
FRU1	Bishkek	7.17	23		Pn	07 16 42.6	+0.5
HRA	Herat	7.24	257	Pn	Pn	07 16 42.2	-0.9
ULHL	Ulahol	7.31	34	P	Pn	07 16 44.1	+0.1
	SNR=27						
SMLA	Simla	7.38	132	eP	Pn	07 16 46.9	+2.1
SMLA				eS	Sn	07 18 06.4	-1.9
SMLA				IAML		07 18 12.2	
	comp=N,597nm,0.5s						
SMLA				IAML		07 18 12.8	
	comp=E,533nm,0.5s						
CHMS	Chumysh	7.38	23	P	Pn	07 16 45.0	+0.3
	SNR=10						
USP	Ospenovka	7.55	21	P	Pn	07 16 46.5	-0.4
	SNR=40						
TKM2	Tokmak 2	7.61	28	P	Pn	07 16 47.9	+0.1
	SNR=337						
TKM2	Tokmak 2	7.61	28	PN	Pn	07 16 47.7	-0.1
TKM2	Tokmak 2	7.61	28	⇑P	Pn	07 16 47.7	-0.1
	comp=E,139nm,0.7s						
TKM2				⇑S	Sn	07 18 07.2	-6.7
	comp=E,60nm,1.3s						
TARG	Taragay, Kyrgy	7.71	43	Pn	Pn	07 16 49.1	-0.3
SGDS	Sogindy	7.76	21	i P	Pn	07 16 48.5	-1.1
	comp=E,11nm,0.5s,baz=20						
TNSS	Tian-Shan	8.26	33	eP	Pn	07 16 55.7	-0.8
	baz=33						
MDOK	Medeo	8.40	33	eP	Pn	07 16 57.7	-0.4
	baz=32						
MDOK	Medeo	8.40	33	ePN	Pn	07 16 57.7	-0.4
PRZ	Przheval'sk	8.55	41	PN	Pn	07 16 59.5	-0.7
PRZ	Przheval'sk	8.55	41		Pn	07 16 59.5	-0.7
KUU	Kurty	8.72	27	⇓iP	Pn	07 17 00.8	-1.4
	comp=E,9.9nm,0.6s,baz=27						
KUU	Kurty	8.72	27	d iPN	Pn	07 17 00.7	-1.4
KUU				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SATY	Saty	8.96	39	eP	Pn	07 17 04.7	-0.8
	comp=Z,7.8nm,0.8s,baz=38						
SATY	Saty	8.96	39	ePN	Pn	07 17 04.6	-0.8
SATY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZHN	Zhinishke	9.06	38	eP	Pn	07 17 05.5	-1.1
	baz=38						
ZHN	Zhinishke	9.06	38	ePN	Pn	07 17 05.5	-1.1
BTLS	Baital	9.10	15	eP	Pn	07 17 05.6	-1.5
	baz=14						
BTLS	Baital	9.10	15	ePN	Pn	07 17 05.5	-1.5
NDI	New Delhi	9.31	143	eP	Pn	07 17 11.8	+1.9
NDI				eP	Pn	07 17 12.0	+2.1
NDI				eS	Sn	07 18 49.3	-4.9
UZB	Uzynbulak	9.34	40	eP	Pn	07 17 10.1	-0.3
	baz=40						
UZB	Uzynbulak	9.34	40	eP	Pn	07 17 10.1	-0.3
KUDL	Kundal	9.43	148	eP	Pn	07 17 12.4	+0.9
KUDL				eS	Sn	07 18 51.2	-5.8
SONA	Sohna	9.60	145	eP	Pn	07 17 15.3	+1.5
SONA				eS	Sn	07 18 57.1	-4.1
GEYT	Alibeck	10.26	283	Pn	Pn	07 17 20.3	-1.9
AJM	Ajmer	10.30	160	eP	Pn	07 17 24.4	+1.6
AJM				eS	Sn	07 19 13.5	-4.3
TDK	Taldyqorghan	10.46	31	eP	Pn	07 17 24.3	-0.4
	comp=Z,12nm,0.9s,baz=31						
TDK	Taldyqorghan	10.46	31	eP	Pn	07 17 24.3	-0.4
TDK				pmax	pmax		
	comp=Z,12nm,0.9s						
JHNI	Jhansi	12.65	146	eP	P	07 18 00.1	+3.6
JHNI				eS	Sn	07 20 06.5	-7.5
BHUJ	Bhuj	13.01	185	eP	P	07 18 00.1	-0.3
BHUJ				⇑eS	S	07 20 16.3	-6.1
PYUN	Piuthan	13.14	125	eP	Pn	07 17 59.7	+0.5
	comp=Z,35nm,0.3s						
MAKZ	Makanchi	13.44	35	P	Pn	07 18 01.8	-0.7
MAKZ	Makanchi	13.44	35		Pn	07 18 01.8	-0.7
DANN	Dangsing	13.50	122	eP	P	07 18 05.1	-1.2
	comp=Z,47nm,0.3s						
MK31	Makanchi Array	13.57	36	d iP	Pn	07 18 04.3	+0.2
MK31	Makanchi Array	13.57	36	P	Pn	07 18 04.3	+0.2
	comp=Z,13nm,0.7s,baz=220,slow=12,SNR=42						
MK31	Makanchi Array	13.57	36	Pn	Pn	07 18 04.4	+0.2
MKAR	Makanchi Array	13.57	36	P	Pn	07 18 04.3	+0.2
	comp=Z,1.2nm,0.3s,baz=214,slow=9.2,SNR=26						
MKAR	Makanchi Array	13.57	36	P	Pn	07 18 03.8	-0.4
MKAR	Makanchi Array	13.57	36		Pn	07 18 03.8	-0.4
KOLN	Koldanda	13.77	124	eP	P	07 18 08.2	-0.9
	comp=Z,20nm,0.4s						
BHPL	Bhopal	14.20	154	eP	P	07 18 17.8	+4.1
BHPL				eS	S	07 20 45.3	-4.8
BHPL				IAML		07 20 50.8	
	comp=N,30nm,0.4s						
GKN	Gorkha	14.32	121	eP	P	07 18 15.4	+0.2
	comp=N,82nm,0.5s						
DMN	Daman	14.89	121	eP	P	07 18 22.8	+1.2
	comp=N,46nm,0.5s						
KKN	Kakani	14.90	120	eP	P	07 18 22.9	+1.2
WMQ	Urumqi	14.97	55	eP	P	07 18 24.3	+2.2
WMQ				pmax	pmax		
	comp=N,21nm,0.7s						
WMQ				pmax	pmax		
	comp=N,110nm,4.1s						
PKIN	Phulchoki	15.11	121	eP	P	07 18 25.2	+1.1
	comp=N,62nm,0.5s						
PKI	Pulchoki	15.13	121	eP	P	07 18 25.5	+1.2
AB31	Akbulak array	15.21	332	P	Pn	07 18 22.9	-1.2
AB31	Akbulak array	15.21	332	⇑P	Pn	07 18 22.9	-1.2
	comp=N,7.2nm,0.5s,baz=144,slow=13,SNR=231						
ABKAR	Akbulak array	15.21	332	P	Pn	07 18 23.1	-1.0
ABKAR	Akbulak array	15.21	332	P	Pn	07 18 22.5	-1.7
ABKAR				IAmb	IAmb	07 18 26.0	
	comp=Z,18nm,0.7s						
GUN	Gumba	15.25	119	eP	P	07 18 26.7	+1.0
	comp=Z,52nm,0.5s						
JBP	Jabalpur	15.29	146	⇓eS	S	07 21 12.2	-3.1
KURBB	Kurchatov Arra	15.39	19	P	Pn	07 18 24.9	-1.5
	comp=Z,0.7nm,0.3s,baz=208,slow=10,SNR=28						
KURK	Kurchatov	15.50	19	P	Pn	07 18 24.9	-2.8
KURK	Kurchatov	15.50	19	P	Pn	07 18 26.8	-0.9
BVAR	Borovoye Array	16.76	359	P	P	07 18 41.9	+0.3
	comp=Z,1.9nm,0.3s,baz=174,slow=15,SNR=25						
BRVK	Borovoye	16.79	359	c iP	Pn	07 18 42.5	-0.7
BRVK				pmax	pmax		
	comp=Z,15nm,1.6s						
BRVK	Borovoye	16.79	359	P	P	07 18 41.5	-0.5
BRVK				IAmb	IAmb	07 18 49.6	
	comp=Z,11nm,0.8s						
AKTO	Aktyubinsk	16.90	331	P	Pn	07 18 43.8	-0.7
	comp=Z,6.5nm,0.3s,baz=141,slow=10,SNR=152						
AKTO	Aktyubinsk	16.90	331	⇓P	P	07 18 43.2	0.0
	comp=Z,27nm,0.6s						
DGZ	Jazzator, Alta	18.07	37	ceP	Pn	07 18 57.4	-1.0
DGZ				pmax	pmax		
	comp=Z,17nm,0.6s						
HYB	Hyderabad	20.00	158	i P	Pn	07 19 21.0	-0.5
HYB				eS	S	07 23 05.0	+14
ZAA0	Zalesovo Array	20.19	25	P	P	07 19 17.8	-1.0
ZALV	Zalesovo Beam	20.19	25	P	P	07 19 18.5	-0.3
	comp=Z,15nm,0.4s,baz=218,slow=12,SNR=52						
ZALV	Zalesovo Beam	20.19	25	i P	P	07 19 18.7	-0.1
ZALV				pmax	pmax		
	comp=Z,15nm,0.4s						
ZALV	Zalesovo Beam	20.19	25	P	P	07 19 18.0	-0.8
SHL	Shillong	20.96	115	P	P	07 19 30.3	+2.9
SHL				pmax	pmax		
	comp=Z,13nm,0.8s						
SHL	Shillong	20.96	115	P	P	07 19 30.3	+2.9
SHL				IAmb	IAmb	07 19 36.5	
	comp=Z,13nm,0.8s						
ARU	Arti	21.80	342	P	P	07 19 35.9	+0.4
	comp=Z,10.0nm,0.5s,baz=150,slow=4.7,SNR=38						
ARU	Arti	21.80	342	c iP	P	07 19 35.8	+0.3
ARU						07 20 13.0	
ARU				S	S	07 23 24.0	+1.8
ARU				pmax	pmax		
	comp=Z,26nm,0.6s						
ARU	Arti	21.80	342	P	P	07 19 35.6	0.0
NEY	Neytrino	22.61	297	⇓eP	P	07 19 45.9	+2.4
NEY				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KIV	Kislovodsk	22.75	298	eP	P	07 19 44.8	+0.1
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BELG	Belogornoye	22.97	322	P	P	07 19 47.0	+0.7
	comp=Z,28nm,0.6s,baz=330,slow=0.7,SNR=20						
BELG	Belogornoye	22.97	322	ceP	P	07 19 46.8	+0.5
BELG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA	Gaotai	23.09	73	eP	P	07 19 50.5	+2.7
GTA				pP	pP	07 20 33.5	+8.2
GTA				sP	sP	07 20 54.8	+3.9
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KIRV	Kirov	26.38	335	P	P	07 20 17.7	+0.6
	comp=Z,24nm,0.5s,baz=267,slow=1.8,SNR=5.7						
KIRV	Kirov	26.38	335	ceP	P	07 20 17.4	+0.3
SONM	Songino Array	28.60	55	P	P	07 20 38.9	+1.6
	comp=Z,0.8nm,0.4s,baz=262,slow=8.8,SNR=9.5						
SONM	Songino Array	28.60	55	P	P	07 20 38.7	+1.5
SONM				pmax	pmax		
	comp=Z,3.0nm,1.4s						
SONM	Songino Array	28.60	55	P	P	07 20 38.7	+1.5
ULN	Ulaanbaatar	29.05	55	⇓eP	P	07 20 40.4	-0.8
ULN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
PRGR	Permogore	29.91	336	eP	P	07 20 48.1	-0.3
PRGR				pmax	pmax		
	comp=Z,21nm,0.6s						
OBN	Obninsk	30.00	320	eP	P	07 20 50.1	+0.8
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
XAN	Xi'an	31.12	83	P	P	07 21 01.8	+2.3
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KLMR	Klimovskoe	31.60	331	eP	P	07 21 02.2	-1.0
KLMR				pmax	pmax		
	comp=Z,23nm,1.1s						
KLMR	Klimovskoe	31.60	331	eP	P	07 21 02.2	-1.0
KLMR				AMP		07 21 04.0	
	comp=Z,23nm,1.1s						
HHC	Hu-ho-hao-te	32.00	69	eP	P	07 21 10.0	+2.8
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,57nm,6.6s						
ELL	Elmali	32.69	283	P	P	07 21 14.0	+0.8
ELL				pmax	pmax		
	comp=Z,53nm,0.5s						
ELL	Elmali	32.69	283	P	P	07 21 14.0	+0.8
ENH	Enshi	32.74	89	P	P	07 21 16.1	+2.5
AKASG	Malin Array Be	32.96	309	P	P	07 21 15.0	-0.1
	comp=Z,2.1nm,0.5s,baz=82,slow=6.9,SNR=22						
AKASG	Malin Array Be	32.96	309	i P	P	07 21 15.1	-0.1
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKASG	Malin Array Be	32.96	309	P	P	07 21 14.3	-0.9
AKBB	Malin Array Si	32.96	309	⇑eP	P	07 21 14.6	-0.6
AKBB				pmax	pmax		
	comp=Z,9.0nm,1.5s						
AKBB	Malin Array Si	32.96	309	P	P	07 21 15.2	0.0
AKBB				IAmb	IAmb	07 21 15.6	
	comp=Z,4.9nm,0.5s						
NRIK	Noril'sk	34.38	10	P	P	07 21 28.6	+1.3
	comp=Z,18nm,0.4s,baz=200,slow=5.8,SNR=35						
NRIK	Noril'sk	34.38	10	c iP	P	07 21 28.4	+1.2
NRIK				pmax	pmax		
	comp=Z,19nm,0.6s						
NRIK	Noril'sk	34.38	10	P	P	07 21 27.4	+0.2
MLR	Muntele Rosu	34.75	300	P	P	07 21 32.2	+1.3
MLR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MLR	Muntele Rosu	34.75	300	P	P	07 21 32.2	+1.3
MLR				IAmb	IAmb	07 21 33.7	
	comp=Z,8.6nm,0.9s						
BURAR	Bucovina Array	35.27	303	P	P	07 21 35.3	+0.1
BUR08	Bucovina Ar. S	35.28	303	P	P	07 21 35.6	+0.3
FIA1	FINESS Array S	37.58	326	P	P	07 21 54.8	+0.4
FIA1				IAmb	IAmb	07 21 56.1	
	comp=Z,7.4nm,0.6s						
FINES	FINESS Array B	37.58	326	P	P	07 21 54.6	+0.1
	comp=Z,4.3nm,0.4s,baz=120,slow=9.8,SNR=61						
FINES	FINESS Array B	37.58	326	P	P	07 21 54.4	-0.1
KEV	Kevo	40.95	338	P	P	07 22 22.2	0.0
KEV				pmax	pmax		
	comp=Z,16nm,0.8s						
KEV	Kevo	40.95	338	P	P	07 22 22.2	0.0
KEV				IAmb	IAmb	07 22 23.4	
	comp=Z,16nm,0.8s						
ARA0	ARCESS Array S	41.29	338	eP	P	07 22 25.7	+0.7
ARCES	ARCESS Array B	41.29	338	P	P	07 22 25.5	+0.4
	comp=Z,8.4nm,0.6s,baz=115,slow=7.8,SNR=43						
ARCES	ARCESS Array B	41.29	338	P	P	07 22 25.4	+0.4
ARCES				pmax	pmax		
	comp=Z,14nm,0.9s						
ARCES	ARCESS Array B	41.29	338	P	P	07 22 25.4	+0.4
ARCES				IAmb	IAmb	07 22 26.7	
	comp=Z,14nm,0.9s						
KTK1	Kautokeino	41.76	336	eP	P	07 22 28.9	+0.1
HAMF	Hammerfest	42.38	339	eP	P	07 22 34.1	+0.3
SGRT	San Giovanni R	42.51	295	P	P	07 22 34.2	-1.1
JETT	Jettan, Norway	42.90	337	eP	P	07 22 38.8	+0.7
GERES	GERESS Array B	42.93	305	P	P	07 22 38.7	+0.1
	comp=Z,0.5nm,0.5s,baz=69,slow=7.3,SNR=7.0						
GERES	GERESS Array B	42.93	305	P	P	07 22 39.2	+0.6
GERES	GERESS Array B	42.93	305	P	P	07 22 39.2	+0.6
TRO	Tromso	43.41	336	eP	P	07 22 43.7	+1.7
FAUS	Fauske	43.93	333	eP	P	07 22 46.4	+0.2
STEI	Steigen	44.10	333	eP	P	07 22 48.9	+1.3
NC405	NORSAR Array S	44.23	323	P	P	07 22 47.6	-1.1
NC405				IAmb	IAmb	07 23 01.1	
	comp=Z,17nm,1.1s						
NC602	NORSAR Array S	44.27	323	eP	P	07 22 48.6	-0.5
NB2	NORSAR Subarra	44.46	323	P	P	07 22 49.6	-1.0
	comp=Z,3.0nm,0.4s,baz=99,slow=7.9						
NB2	NORSAR Subarra	44.46	323	P	P	07 22 49.6	-1.0
	baz=99,slow=7.9						
NOA	NORSAR Array B	44.46	323	P	P	07 22 49.3	-1.3
	comp=Z,0.3nm,0.3s,baz=101,slow=7.9,SNR=22						
WTTA	Wattenberg	44.48	303	i P	P	07 22 49.7	-1.4
	comp=Z,1.8nm,0.6s						
WATA	Walderalm	44.51	304	i P	P	07 22 50.0	-1.3
	comp=Z,1.7nm,0.5s						
KONS	Konsvik	44.53	331	eP	P	07 22 51.3	+0.4
NSS	Namsos	44.60	328	eP	P	07 22 51.5	0.0
LOF	Lofoten	44.77	333	eP	P	07 22 52.5	-0.3
SQTA	Sankt Quirin	44.78	303	i P	P	07 22 52.2	-1.2
	comp=Z,2.1nm,0.4s						
MOTA	Moosalm	44.83	304	i P	P	07 22 52.8	-1.0
	comp=Z,3.7nm,0.9s						
FETA	Feichten	45.13	303	i P	P	07 22 55.4	-0.9
	comp=Z,1.0nm,0.4s						
KONO	Kongsberg	45.16	321	eP	P	07 22 56.0	-0.1
DAVA	Damuels	45.66	304	i P	P	07 23 00.0	-0.4
	comp=Z,5.7nm,0.5s						
SKAR	Skarslia	45.86	323	eP	P	07 23 02.2	+0.7
TIXI	Tiksi	46.05	22	P	P	07 23 03.1	+0.3
	comp=Z,14nm,0.3s,baz=272,slow=3.4,SNR=32						
TIXI	Tiksi	46.05	22	P	P	07 23 03.4	+0.6
TIXI				pmax	pmax		
	comp=Z,13nm,0.8s						
TIXI	Tiksi	46.05	22	P	P	07 23 03.4	+0.6
TIXI				IAmb	IAmb	07 23 04.0	
	comp=Z,13nm,0.8s						
MSSA	Maissana	46.46	300	P	P	07 23 06.3	-0.2
MSSA				IAmb	IAmb	07 23 20.2	
	comp=Z,40nm,1.4s						
SENIN	Lac Senin/Sane	47.57	303	P	P	07 23 14.4	-0.8
SPB2	Spitsbergen Ar	47.67	347	P	P	07 23 16.0	+0.7
SPB2				IAmb	IAmb	07 23 16.9	
	comp=Z,37nm,1.1s						
SPA0	Spitsbergen Ar	47.68	347	eP	P	07 23 16.4	+1.0
SPITS	Spitsbergen Ar	47.68	347	P	P	07 23 16.2	+0.8
	comp=Z,8.5nm,0.8s,baz=116,slow=9.4,SNR=16						
SPITS	Spitsbergen Ar	47.68	347	P	P	07 23 15.6	+0.2
SPITS				pmax	pmax		
	comp=Z,53nm,1.4s						
KEST	Kesra	48.95	289	P	P	07 23 26.8	+1.0
	comp=Z,4.6nm,0.5s,baz=283,slow=1.6,SNR=7.6						
KEST	Kesra	48.95	289	P	P	07 23 24.9	-0.9
YSS	Yuzh-Sakhalins	53.09	55	⇑eP	P	07 23 53.6	-2.7
YSS				pmax	pmax		
	comp=Z,104nm,2.1s						
DAG	Danmarks Havn	54.90	344	i P	P	07 24 07.0	-1.9
ESDC	Sonseca Array	57.42	298	P	P	07 24 26.9	-0.5
	comp=Z,1.9nm,0.7s,baz=54,slow=7.8,SNR=12						
BILL	Bilibino	58.89	26	⇑iP	P	07 24 38.1	+1.1
BILL				i		07 26 49.3	
BILL				pmax	pmax		
	comp=Z,18nm,2.5s						
TORD	Torodi Ar. Bea	65.55	269	P	P	07 25 20.7	-1.3
	comp=Z,6.1nm,0.5s,baz=47,slow=5.8,SNR=72						
A21K	Barrow	67.58	15	P	P	07 25 34.4	+0.4
A21K				IAmb	IAmb	07 25 36.2	
	comp=Z,5.4nm,0.7s						
KOWA	Kowa	69.41	273	P	P	07 25 45.3	-1.0
KOWA				IAmb	IAmb	07 25 46.7	
	comp=Z,5.0nm,0.8s						
ANM	Nome	70.31	22	P	P	07 25 51.8	+0.9
ANM				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ANM	Nome	70.31	22	P	P	07 25 51.8	+0.9
TOLK	Toolik Lake Re	71.19	15	P	P	07 25 57.5	+1.2
TOLK				IAmb	IAmb	07 25 57.6	
	comp=Z,8.5nm,0.9s						
A36M	Sachs Harbour	71.45	5	P	P	07 25 58.1	+0.5
A36M				IAmb	IAmb	07 25 59.1	
	comp=Z,9.5nm,0.8s						
COLD	Coldfoot	72.24	16	P	P	07 26 02.5	+0.1
COLD				IAmb	IAmb	07 26 04.9	
	comp=Z,8.3nm,1.2s						
IMAR	Indian Mountai	72.44	18	P	P	07 26 03.5	-0.2
BMAR	Burnt Mountain	73.20	13	P	P	07 26 09.2	+1.0
INK	Inuvik	74.16	9	P	P	07 26 14.2	+0.7
	comp=Z,5.4nm,0.7s,baz=348,slow=6.4,SNR=35						
INK	Inuvik	74.16	9	P	P	07 26 14.3	+0.7
INK				IAmb	IAmb	07 26 16.5	
	comp=Z,20nm,1.5s						
LBTB	Lobatse	74.40	222	P	P	07 26 17.1	+1.4
LBTB				pmax	pmax		
	comp=Z,10.0nm,1.4s						
LBTB	Lobatse	74.40	222	P	P	07 26 17.1	+1.4
LBTB				IAmb	IAmb	07 26 35.1	
	comp=Z,10nm,1.4s						
CAST	Castle Rocks	74.95	18	P	P	07 26 18.6	+0.3
IL31		75.05	16	P	P	07 26 18.8	+0.1
ILAR	Eielson Array	75.05	16	P	P	07 26 18.6	-0.2
	comp=Z,2.4nm,0.9s,baz=320,slow=4.9,SNR=22						
KNRA	Kununurra	75.24	122	P	P	07 26 22.1	+1.5
DAWY	Dawson	77.18	13	P	P	07 26 31.1	+0.2
SML	Sawmill	77.26	18	P	P	07 26 30.7	-0.7
BOSA	Boshof	77.46	220	P	P	07 26 34.3	+1.3
	comp=Z,3.9nm,0.7s,baz=14,slow=5.7,SNR=8.8						
BOSA	Boshof	77.46	220	P	P	07 26 34.1	+1.1
BOSA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BOSA	Boshof	77.46	220	P	P	07 26 34.1	+1.1
BOSA				IAmb	IAmb	07 27 02.2	
	comp=Z,10nm,1.4s						
BCAR	Beaver Creek A	77.63	15	P	P	07 26 34.5	+1.0
KDAK	Kodiak Island	79.47	22	P	P	07 26 43.8	+0.3
KDAK				pmax	pmax		
	comp=Z,93nm,1.5s						
KDAK	Kodiak Island	79.47	22	P	P	07 26 43.8	+0.3
WHY	Whitehorse	81.15	12	P	P	07 26 52.4	-0.1
WHY				IAmb	IAmb	07 26 52.9	
	comp=Z,5.1nm,0.7s						
YKA	Yellowknife Ar	81.48	3	P	P	07 26 54.1	0.0
	comp=Z,4.1nm,0.5s,baz=349,slow=5.4,SNR=140						
YKA	Yellowknife Ar	81.48	3	P	P	07 26 53.6	-0.5
WRA	Warramunga Arr	82.01	122	P	P	07 26 57.3	-0.2
	comp=Z,1.3nm,0.4s,baz=326,slow=4.8,SNR=12						
WRA	Warramunga Arr	82.01	122	i P	P	07 26 57.7	+0.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WB2	Warramunga Arr	82.02	122	P	P	07 26 57.6	+0.1
WB2				IAmb	IAmb	07 27 04.4	
	comp=Z,18nm,1.5s						
DLBC	Dease Lake	84.05	11	P	P	07 27 08.4	+0.9
DLBC				IAmb	IAmb	07 27 37.0	
	comp=Z,11nm,1.3s						
ASAR	Alice Springs	84.26	125	P	P	07 27 09.2	+0.2
	comp=Z,1.2nm,0.5s,baz=314,slow=4.6,SNR=26						

ASAR	**Alice Springs**	**84.26**	**125**	P	**P**	**07 27 09.5**	**+0.5**
ASAR	**Alice Springs**	**84.26**	**125**	P	**P**	**07 27 09.5**	**+0.5**
PLCA	**Paso Flores**	**149.59**	**250**	PKPbc	**PKPbc**	**07 34 25.4**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=214,slow=4.4,SNR=5.8						

IDC 29 07:21:04.3±9.0**, 19°.93S**×**178°.64W, h640**^{km}±55^{km}**, mb3.0**/2**, mb1 3.2**/3**, mb1mx2.8**/23**, mbtmp4.0**/3**, Error ellipse: s-maj=278.5km s-min=46.7km az=148.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.82**	**304**	P	P	07 22 31.6	-0.2
	1.3nm,0.3s,baz=242,slow=22,SNR=5.9						
ASAR	**Alice Springs**	**44.07**	**256**	P	P	07 28 18.2	0.0
	1.8nm,0.5s,baz=94,slow=7.6,SNR=32						
WRA	**Warramunga Arr**	**44.09**	**262**	P	P	07 28 18.6	+0.2
	0.6nm,0.3s,baz=98,slow=7.7,SNR=9.2						
AKASG	**Malin Array Be**	**142.23**	**331**	PKP	PKPdf	07 39 24.6	-0.6
	0.9nm,0.4s,baz=43,slow=4.3,SNR=10						

IDC ***29*** *07:32:15.0±1.9, 2°.28N×96°.09E, h0^{km}, mb4.0/6, mb1 4.1/8, mb1mx3.7/45, mbtmp4.0/8, ML3.9/2, MS3.6/3, Ms1 3.6/3, ms1mx2.9/39, Error ellipse: s-maj=55.7km s-min=20.6km az=54.0*

NEIC ***29*** *07:32:21.4±1.2, 2°.40N±0°.04×96°.3E±0°.1, h33^{km}±7^{km}, mb4.4/13, Error ellipse: s-maj=21.1km s-min=4.6km az=77.0*

ISC 29 07:32:20.9±0.7**, 2°.42N**±0°.08×**96°.3E**±0°.1**, h30**^{km}**, n38,** σ**1^{s}.21**/30**, mb4.3**/15**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**1.69**	**131**	Pn	**Pn**	**07 32 47.8**	**-0.5**
PSI	**Prapat**	**2.64**	**82**	Pn	**Pn**	**07 33 02.1**	**+0.5**
	3.4nm,0.3s,baz=281,slow=7.2,SNR=12						
IPM	**Ipoh**	**5.13**	**66**	Pn	**Pn**	**07 33 35.5**	**-0.3**
KULM	**Kulim**	**5.18**	**57**	Pn	**Pn**	**07 33 36.5**	**0.0**
CMAR	**Chiang Mai Arr**	**16.14**	**9**	Pn	**Pn**	**07 36 05.9**	**+0.1**
	0.5nm,0.3s,baz=196,slow=11,SNR=9.1						
CMAR				LR	LR	07 42 09.2	
	comp=Z,84nm,18.8s,baz=232,slow=36						
CMAR	**Chiang Mai Arr**	**16.14**	**9**	P	**Pn**	**07 36 05.8**	**0.0**
SHL	**Shillong**	**23.40**	**350**	P	**P**	**07 37 26.2**	**-1.4**
SHL				IAmb	IAmb	07 37 27.9	
	comp=Z,9.4nm,0.8s						
TOLI2	**Tolitoli**	**24.50**	**93**	P	**P**	**07 37 36.8**	**-1.1**
TOLI2				IAmb	IAmb	07 37 38.8	
	comp=Z,12nm,1.2s						
H08S2	**Diego Garcia H**	**25.78**	**247**	T	T	08 04 18.6	
	baz=69,slow=76,SNR=126						
H08S3	**Diego Garcia H**	**25.78**	**247**	T	T	08 04 23.5	
	baz=69,slow=76,SNR=116						
H08S1	**Diego Carcia H**	**25.80**	**247**	T	T	08 04 19.3	
	baz=69,slow=76,SNR=42						
BATI	**Baumata**	**29.99**	**115**	LR	LR	07 51 48.4	
	comp=Z,231nm,19.9s,baz=278,slow=39						
LZH	**Lanzhou**	**34.22**	**11**	*e*P	**P**	**07 39 08.5**	**+4.3**
LZH				pP	pP	07 39 11.8	-1.2
LZH				pmax	pmax		
	comp=Z,24nm,1.5s						
GTA	**Gaotai**	**36.95**	**5**	*e*P	**P**	**07 39 27.0**	**-0.6**
GTA				pP	pP	07 39 30.8	-5.7
GTA				sP	sP	07 39 33.0	-7.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
H01W3	**Cape Leeuwin H**	**40.71**	**157**	T	T	08 23 08.0	
	baz=333,slow=76,SNR=91						
H01W2	**Cape Leeuwin H**	**40.72**	**157**	T	T	08 23 09.0	
	baz=333,slow=76,SNR=100						
H01W1	**Cape Leeuwin H**	**40.72**	**157**	T	T	08 23 07.7	
	baz=333,slow=76,SNR=65						
TARG	**Taragay, Kyrgy**	**42.52**	**339**	P	**P**	**07 40 14.2**	**0.0**
DRK	**Karamyk**	**43.10**	**332**	P	**P**	**07 40 19.5**	**+0.7**
WRA	**Warramunga Arr**	**43.44**	**123**	P	**P**	**07 40 20.7**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=301,slow=8.8,SNR=3.6						
CHGR	**Chuyangaron**	**43.77**	**329**	P	**P**	**07 40 22.9**	**-1.1**
CHGR				IAmb	IAmb	07 40 24.3	
	comp=Z,11nm,1.0s						
ASAR	**Alice Springs**	**44.84**	**128**	P	**P**	**07 40 32.0**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=316,slow=8.8,SNR=6.0						
KSRS	**Korea Array**	**45.37**	**36**	LR	LR	08 01 12.8	
	comp=Z,55nm,18.5s,baz=212,slow=38						
MK31	**Makanchi Array**	**45.85**	**347**	P	**P**	**07 40 40.0**	**-0.4**
MK31				IAmb	IAmb	07 40 50.7	
	comp=Z,3.3nm,1.0s						
MKAR	**Makanchi Array**	**45.85**	**347**	P	**P**	**07 40 39.9**	**-0.5**
	comp=Z,3.8nm,0.8s,baz=152,slow=7.9,SNR=24						
MKAR	**Makanchi Array**	**45.85**	**347**	P	**P**	**07 40 39.6**	**-0.8**
MAKZ	**Makanchi**	**45.94**	**346**	P	**P**	**07 40 41.2**	**+0.1**
MAKZ				IAmb	IAmb	07 40 41.3	
	comp=Z,2.9nm,0.8s						
SONM	**Songino Array**	**46.07**	**9**	P	**P**	**07 40 42.0**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=187,slow=8.8,SNR=13						
SONM	**Songino Array**	**46.07**	**9**	P	**P**	**07 40 42.2**	**0.0**
KKAR	**Karatay Array**	**46.57**	**334**	P	**P**	**07 40 44.8**	**-1.4**
ZAA0	**Zalesovo Array**	**52.22**	**351**	P	**P**	**07 41 28.6**	**-0.4**
ZAA0				IAmb	IAmb	07 41 29.8	
	comp=Z,4.3nm,0.8s						
ZALV	**Zalesovo Beam**	**52.22**	**351**	P	**P**	**07 41 28.5**	**-0.5**
	comp=Z,1.5nm,0.4s,baz=176,slow=4.5,SNR=12						
ZALV	**Zalesovo Beam**	**52.22**	**351**	P	**P**	**07 41 28.0**	**-1.0**
ABKAR	**Akbulak array**	**56.02**	**332**	P	**P**	**07 41 56.4**	**-0.5**
ABKAR				IAmb	IAmb	07 41 57.9	
	comp=Z,4.8nm,1.2s						
NRIK	**Noril'sk**	**67.06**	**357**	P	**P**	**07 43 10.0**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=140,slow=7.9,SNR=1.7						
CASY	**Casey**	**69.30**	**174**	P	**P**	**07 43 24.7**	**-0.3**
CLL	**Collm**	**83.93**	**321**	*e*P	**P**	**07 44 49.0**	**+0.9**
QSPA	**South Pole Qui**	**92.36**	**180**	P	**P**	**07 45 31.1**	**+2.7**

IDC ***29*** *08:09:51.4±4.7, 53°.60N×90°.93E, h0^{km}, mb1 3.3/3, mb1mx3.1/45, mbtmp3.3/3, ML2.8/3, Error ellipse: s-maj=48.9km s-min=27.4km az=50.0*

NNC ***29*** *08:09:53.1±4.5, 53°.57N×90°.69E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=31.9km s-min=25.5km az=63.0, Suspected Mining explosion.*

ISC 29 08:09:51.6±4.4**, 53°.9N**±0°.2×**90°.5E**±0°.2**, h0**^{km}**, n9,** σ**1^{s}.31**/10**, 9C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.38**	**273**	⇑Pg	**Pg**	**08 10 57.4**	**+1.2**
	1.9nm,0.6s						
ZAA0				⇑Lg	Lg	08 11 47.2	
	8.5nm,0.8s						
ZALV	**Zalesovo Beam**	**3.38**	**273**	Pn	**Pb**	**08 10 50.3**	**-2.0**
	1.3nm,0.3s,baz=96,slow=15,SNR=13						
ZALV				Lg	Lg	08 11 46.9	
	1.8nm,0.3s,baz=90,slow=26,SNR=9.2						
KURK	**Kurchatov**	**7.98**	**251**	⇓Pn	**Pn**	**08 11 49.2**	**+0.5**
	2.4nm,0.8s						
KURK				⇑Sn	**Sn**	**08 13 20.2**	**+0.6**
	8.5nm,0.8s						
KURK				⇑Lg	Lg	08 14 10.9	
	11nm,0.8s						
KURBB	**Kurchatov Arra**	**8.07**	**251**	Pn	**Pn**	**08 11 50.8**	**+0.9**
	0.2nm,0.3s,baz=65,slow=15,SNR=9.7						
KURBB	**Kurchatov Arra**	**8.07**	**251**	⇑Pn	**Pn**	**08 11 50.5**	**+0.5**
	4.1nm,0.7s						
KURBB				⇑Sn	**Sn**	**08 13 21.8**	**-0.1**
	30nm,0.8s						
KURBB				⇑Lg	Lg	08 14 10.6	
	23nm,0.9s						
MK31	**Makanchi Array**	**8.88**	**220**	⇓Pn	**Pn**	**08 12 03.0**	**+1.9**
	1.9nm,0.8s,baz=37,slow=13,SNR=3.2						
MK31				⇑Sn	**Sn**	**08 13 40.8**	**-0.9**
	1.8nm,0.7s						
MK31				⇑Lg	Lg	08 14 25.2	
	6.4nm,0.8s,baz=44,slow=25,SNR=4.2						
MKAR	**Makanchi Array**	**8.88**	**220**	Pn	**Pn**	**08 12 00.4**	**-0.6**
	0.3nm,0.3s,baz=37,slow=14,SNR=13						
MKAR				Lg	Lg	08 14 29.5	
	0.0nm,0.3s,baz=42,slow=26,SNR=4.3						
SONM	**Songino Array**	**11.72**	**115**	Lg	Lg	08 15 48.9	
	0.1nm,0.3s,baz=302,slow=27,SNR=9.2						
I34MN	**SONGINO INFRAS**	**11.75**	**115**	*i*		09 17 00.0	
	baz=310,slow=326,SNR=1.2						

NEIC ***29*** *08:20:46.9±0.4, 5°.86S±0°.08×151°.9E±0°.1, h38^{km}±11^{km}, mb4.2/9, Error ellipse: s-maj=23.5km s-min=4.9km az=117.0*

IDC ***29*** *08:20:47.4±5.9, 5°.70S×151°.56E, h56^{km}±51^{km}, mb3.8/5, mb1 4.1/6, mb1mx3.5/32, mbtmp4.1/6, ML2.1/1, Error ellipse: s-maj=70.4km s-min=30.1km az=125.0*

ISC 29 08:20:46.0±0.7**, 5°.8S**±0°.1×**151°.8E**±0°.1**, h36**^{km}**, n19,** σ**1^{s}.08**/20**, mb4.1**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.66**	**13**	Pn	**Pn**	**08 21 13.6**	**+1.1**
PMG	**Port Moresby**	**5.82**	**232**	P	**Pn**	**08 22 11.0**	**+1.2**
	3.6nm,0.3s,baz=27,slow=12,SNR=7.0						
PMG				S	**Sn**	**08 23 14.1**	**-1.2**
	6.2nm,0.3s,baz=137,slow=24,SNR=7.4						
PMG	**Port Moresby**	**5.82**	**232**	Pn	**Pn**	**08 22 11.2**	**+1.5**
DZM	**Mont Dzumac**	**21.48**	**140**	P	**P**	**08 25 32.5**	**+0.8**
DZM				IAmb	IAmb	08 25 35.3	
	comp=Z,5.1nm,0.9s						
WB0	**Warramunga Arr**	**21.88**	**229**	P	**P**	**08 25 36.0**	**0.0**
WB0				IAmb	IAmb	08 25 56.6	
	comp=Z,19nm,1.4s						
WB2	**Warramunga Arr**	**22.02**	**229**	P	**P**	**08 25 37.8**	**+0.4**
WB2				IAmb	IAmb	08 26 06.1	
	comp=Z,10.0nm,1.1s						
WRA	**Warramunga Arr**	**22.03**	**229**	P	**P**	**08 25 35.9**	**-1.6**
	comp=Z,5.7nm,0.8s,baz=52,slow=9.9,SNR=14						
KNRA	**Kununurra**	**24.63**	**245**	P	**P**	**08 26 04.8**	**+1.4**
AS31	**Alice Springs**	**24.73**	**222**	P	**P**	**08 26 04.5**	**+0.2**
ASAR	**Alice Springs**	**24.73**	**222**	P	**P**	**08 26 04.0**	**-0.2**
	comp=Z,4.9nm,0.8s,baz=58,slow=8.6,SNR=40						
ASAR	**Alice Springs**	**24.73**	**222**	P	**P**	**08 26 04.5**	**+0.3**
STKA	**Stephens Creek**	**27.63**	**199**	P	**P**	**08 26 29.4**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=23,slow=16,SNR=3.8						
STKA	**Stephens Creek**	**27.63**	**199**	P	**P**	**08 26 29.9**	**-0.3**
SONM	**Songino Array**	**66.66**	**328**	P	**P**	**08 31 34.1**	**+1.0**
SONM				IAmb	IAmb	08 31 56.7	
	comp=Z,3.1nm,1.5s						
VNDA	**Vanda**	**71.86**	**178**	P	**P**	**08 32 04.6**	**-0.2**
VNDA				IAmb	IAmb	08 32 16.6	
	comp=Z,6.2nm,1.4s						
ILAR	**Eielson Array**	**83.47**	**22**	P	**P**	**08 33 07.8**	**-1.8**
	comp=Z,0.6nm,0.7s,baz=258,slow=5.3,SNR=5.9						
QSPA	**South Pole Qui**	**84.15**	**180**	P	**P**	**08 33 13.7**	**+0.4**
NVAR	**Mina Array Bea**	**93.49**	**52**	P	**P**	**08 33 59.0**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=246,slow=9.1,SNR=4.1						
TORD	**Torodi Ar. Bea**	**149.65**	**286**	PKPbc	**PKPbc**	**08 40 31.1**	**-1.8**
	comp=Z,1.8nm,0.7s,baz=64,slow=3.0,SNR=10						

IDC 29 08:44:17.6±2.4**, 1°.90N**×**127°.01E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.2**/27**, mbtmp3.4**/3**, Error ellipse: s-maj=199.2km s-min=27.8km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.87**	**162**	P	P	08 49 23.7	+0.8
	0.6nm,0.4s,baz=341,slow=11,SNR=2.8						
ASAR	**Alice Springs**	**26.29**	**166**	P	P	08 49 54.2	-0.8
	0.2nm,0.7s,baz=344,slow=7.3,SNR=1.7						
MKAR	**Makanchi Array**	**59.21**	**326**	P	P	08 54 20.7	0.0
	0.8nm,0.8s,baz=122,slow=7.7,SNR=5.0						

MOS ***29*** *09:00:02.2±0.0, 43°.23N×44°.84E, h11^{km}, MPVA3.9*

NORS ***29*** *09:00:02.9±0.0, 43°.25N×44°.89E, h15^{km}, MPVA3.9*

DRS ***29*** *09:00:05.0±0.0, 43°.30N×44°.56E, h23^{km}*

TIF ***29*** *09:00:16.1, 43°.49N×44°.82E, h24^{km}±2^{km}*

ISC 29 09:00:05.0±0.8**, 43°.27N**±0°.02×**44°.84E**±0°.01**, h7**^{km}±5^{km}**, n80,** σ**1^{s}.17**/159**, 2C-2D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMGR	**Komgaron**	**0.22**	**175**	*e*PG	**Pg**	**09 00 07.9**	**-1.5**
KMGR	**Komgaron**	**0.22**	**175**	*e*Pg	**Pg**	**09 00 07.9**	**-1.5**
KMGR				*e*Sg	**Sg**	**09 00 11.4**	**-0.9**
BTKR	**Batakoyurt**	**0.24**	**294**	*e*PG	**Pg**	**09 00 08.7**	**-1.1**
BTKR				*e*S	**Sg**	**09 00 14.2**	**+1.2**
BTKR	**Batakoyurt**	**0.24**	**294**	*e*Pg	**Pg**	**09 00 08.6**	**-1.1**
BTKR				*e*Sg	**Sg**	**09 00 14.0**	**+1.1**
VLKR	**Vladikavkaz**	**0.26**	**208**	⇑*i*PG	**Pg**	**09 00 09.4**	**-0.7**
VLKR				*e*S	**Sb**	**09 00 15.3**	**-1.3**
VLKR	**Vladikavkaz**	**0.26**	**208**	*e*Pg	**Pg**	**09 00 08.9**	**-1.2**
VLKR				*e*Sg	**Sg**	**09 00 12.7**	**-0.8**
ARNR	**Ardon**	**0.42**	**257**	⇑*i*PG	**Pg**	**09 00 12.9**	**-0.2**
ARNR				*e*S	**Sb**	**09 00 21.7**	**+0.5**
ARNR	**Ardon**	**0.42**	**257**	*i* Pg	**Pg**	**09 00 12.7**	**-0.4**
ARNR				*e*Sg	**Sg**	**09 00 18.7**	**+0.1**
TRKR	**Terskaya**	**0.46**	**350**	*e*PG	**Pb**	**09 00 14.4**	**-1.0**
TRKR				*e*S	**Sb**	**09 00 22.9**	**+0.5**
TRKR	**Terskaya**	**0.46**	**350**	*e*Pg	**Pg**	**09 00 14.3**	**+0.4**
TRKR				*e*Sg	**Sb**	**09 00 22.6**	**+0.3**
STDR	**Stavd-Durt**	**0.57**	**280**	*e*PG	**Pg**	**09 00 15.2**	**-0.9**
STDR				*e*S	**Sg**	**09 00 23.7**	**+0.1**
STDR	**Stavd-Durt**	**0.57**	**280**	*e*Pg	**Pg**	**09 00 15.2**	**-0.9**
STDR				*e*Sg	**Sg**	**09 00 23.7**	**+0.1**
KORR	**Kora**	**0.59**	**252**	*e*PG	**Pg**	**09 00 15.7**	**-0.8**
KORR				*e*S	**Sb**	**09 00 27.1**	**+0.7**
LACR	**Lac**	**0.60**	**222**	*e*PG	**Pg**	**09 00 15.5**	**-1.1**
LACR				*e*S	**Sb**	**09 00 26.0**	**-0.5**
LACR	**Lac**	**0.60**	**222**	*e*Pg	**Pg**	**09 00 15.1**	**-1.4**
LACR				*e*Sg	**Sg**	**09 00 23.2**	**-1.2**
PRTR	**Priterechnaya**	**0.63**	**320**	*e*PG	**Pg**	**09 00 16.9**	**-0.2**
PRTR				*e*S	**Sn**	**09 00 29.1**	**-1.5**
PRTR	**Priterechnaya**	**0.63**	**320**	*e*Pg	**Pg**	**09 00 16.9**	**-0.2**
PRTR				*e*Sg	**Sn**	**09 00 29.1**	**-1.5**
MTEO	**Meteo**	**0.64**	**201**	P	**Pg**	**09 00 16.1**	**-1.2**
PNSH	**Pansheti**	**0.66**	**195**	P	**Pg**	**09 00 16.1**	**-1.5**
PNSH	**Pansheti**	**0.66**	**195**	PG	**Pg**	**09 00 16.2**	**-1.5**
GROC	**Groznyy**	**0.70**	**95**	*e*PG	**Pg**	**09 00 18.5**	**0.0**
GROC				*e*S	**Sn**	**09 00 31.5**	**-0.9**
GROC	**Groznyy**	**0.70**	**95**	*e*Pg	**Pg**	**09 00 18.1**	**-0.4**
GROC				*e*Sg	**Sb**	**09 00 29.3**	**-0.1**
LSNR	**Lesken**	**0.74**	**271**	*e*PG	**Pg**	**09 00 18.8**	**-0.5**
LSNR				*e*S	**Sn**	**09 00 32.6**	**-0.8**
LSNR	**Lesken**	**0.74**	**271**	*e*Pg	**Pg**	**09 00 18.8**	**-0.5**
LSNR				*e*Sg	**Sn**	**09 00 32.6**	**-0.8**
ZEI	**Tsey**	**0.84**	**235**	*e*PG	**Pg**	**09 00 20.1**	**-1.2**
ZEI				*e*S	**Sb**	**09 00 34.8**	**+1.1**
ZEI	**Tsey**	**0.84**	**235**	*e*Pg	**Pg**	**09 00 20.0**	**-1.2**
ZEI				*e*Sg	**Sb**	**09 00 33.8**	**+0.1**
GUDG	**Gudauri**	**0.85**	**198**	P	**Pb**	**09 00 22.6**	**+0.4**
GUDG				S	**Sn**	**09 00 37.0**	**+0.5**
GUDG	**Gudauri**	**0.85**	**198**	PG	**Pb**	**09 00 22.6**	**+0.4**
GUDG				S	**Sn**	**09 00 36.9**	**+0.5**
NCK	**Nalchik**	**0.93**	**284**	⇓*e*PG	**Pg**	**09 00 22.0**	**-1.0**
NCK				*e*S	**Sb**	**09 00 36.1**	**0.0**
NCK				pmax	pmax		
	comp=Z,156nm,0.1s						
NCK				smax	smax		
	comp=Z,126nm,0.2s						
NCK	**Nalchik**	**0.93**	**284**	*e*Pg	**Pg**	**09 00 21.9**	**-1.0**
NCK				*e*Sg	**Sb**	**09 00 36.5**	**+0.4**
DVE	**Vedeno**	**0.99**	**108**	*e*PG	**Pg**	**09 00 22.1**	**-2.0**
DVE				*e*S	**Sb**	**09 00 38.2**	**+0.3**
DVE	**Vedeno**	**0.99**	**108**	*e*Pg	**Pg**	**09 00 21.6**	**-2.5**
DVE				*e*Sg	**Sg**	**09 00 37.5**	**+0.5**
DIGR	**Digorskoe uzhe**	**1.00**	**248**	*e*PG	**Pg**	**09 00 23.0**	**-1.1**
DIGR				*e*S	**Sb**	**09 00 38.4**	**+0.3**
KBTC	**Kuba-Taba**	**1.17**	**298**	*e*PG	**Pg**	**09 00 25.7**	**-1.8**
KBTC				*e*S	**Sn**	**09 00 44.1**	**0.0**
KBTC	**Kuba-Taba**	**1.17**	**298**	*e*Pg	**Pg**	**09 00 25.7**	**-1.8**
KBTC				*e*Sg	**Sn**	**09 00 44.1**	**0.0**
BTLR	**Botlikh**	**1.18**	**121**	*e*PG	**Pg**	**09 00 25.7**	**-2.0**
BTLR				*e*S	**Sn**	**09 00 44.6**	**+0.2**
BTLR	**Botlikh**	**1.18**	**121**	*e*Pg	**Pg**	**09 00 25.6**	**-2.0**
BTLR				*e*Sg	**Sg**	**09 00 43.0**	**-0.1**
ONI	**Oni**	**1.23**	**237**	P	**Pg**	**09 00 27.2**	**-1.3**
ONI				S	**Sn**	**09 00 45.7**	**+0.2**
ONI	**Oni**	**1.23**	**237**	PG	**Pg**	**09 00 27.2**	**-1.3**
ONI				S	**Sn**	**09 00 45.7**	**+0.2**
DLMR	**Dylym**	**1.32**	**98**	*e*PG	**Pn**	**09 00 28.4**	**-1.5**
DLMR				*e*S	**Sn**	**09 00 48.0**	**+0.2**
DLMR	**Dylym**	**1.32**	**98**	*e*Pg	**Pn**	**09 00 28.4**	**-1.5**
DLMR				*e*Sg	**Sn**	**09 00 48.0**	**+0.2**
DBC	**Dubki**	**1.48**	**99**	*e*PG	**Pn**	**09 00 30.6**	**-1.5**
DBC				*i* S	**Sb**	**09 00 52.1**	**+0.3**
DBC				pmax	pmax		
	comp=Z,81nm,0.3s						
DBC				smax	smax		
	comp=N,82nm,0.4s						
DBC	**Dubki**	**1.48**	**99**	*e*Pg	**Pn**	**09 00 30.7**	**-1.5**
DBC				*e*Sg	**Sn**	**09 00 51.5**	**-0.2**
KBZ	**Khabaz**	**1.48**	**288**	*e*PG	**Pn**	**09 00 29.8**	**-2.3**
KBZ				*e*S	**Sn**	**09 00 51.5**	**-0.2**
KBZ	**Khabaz**	**1.48**	**288**	*e*Pg	**Pn**	**09 00 29.8**	**-2.3**
KBZ				*e*Sg	**Sn**	**09 00 51.5**	**-0.2**
PYA1	**Pyatigorsk**	**1.49**	**303**	⇓*i*PG	**Pn**	**09 00 30.4**	**-1.8**
PYA1				*e*S	**Sn**	**09 00 51.6**	**-0.4**
PYA1				pmax	pmax		
	comp=Z,3.0nm,0.2s						
PYA1				smax	smax		
	comp=Z,3.0nm,0.3s						
PYA1	**Pyatigorsk**	**1.49**	**303**	*e*Pg	**Pn**	**09 00 30.6**	**-1.7**
PYA1				*e*Sg	**Sn**	**09 00 51.6**	**-0.4**
UNCR	**Uncukul**	**1.54**	**111**	*e*PG	**Pn**	**09 00 31.3**	**-1.5**
UNCR				*i* S	**Sn**	**09 00 53.5**	**+0.4**
UNCR				pmax	pmax		
	comp=Z,52nm,0.3s						
UNCR				smax	smax		
	comp=E,156nm,0.6s						
UNCR	**Uncukul**	**1.54**	**111**	*i* Pg	**Pn**	**09 00 31.4**	**-1.5**
UNCR				*e*Sg	**Sn**	**09 00 53.0**	**-0.1**
NEY	**Neytrino**	**1.55**	**270**	*e*PG	**Pn**	**09 00 31.6**	**-1.6**
NEY				*e*S	**Sn**	**09 00 53.7**	**+0.1**
NEY	**Neytrino**	**1.55**	**270**	*e*Pg	**Pn**	**09 00 31.6**	**-1.6**
NEY				*e*Sg	**Sn**	**09 00 53.7**	**+0.1**
XNZR	**Khunzakh**	**1.55**	**117**	*e*PG	**Pn**	**09 00 32.2**	**-1.0**
XNZR				*i* S	**Sg**	**09 00 55.0**	**+0.1**
XNZR				pmax	pmax		
	comp=Z,41nm,0.3s						
XNZR				smax	smax		
	comp=E,88nm,0.2s						
XNZR	**Khunzakh**	**1.55**	**117**	*e*Pg	**Pn**	**09 00 32.3**	**-1.0**
XNZR				*e*Sg	**Sg**	**09 00 54.7**	**-0.2**
KRNR	**Karanay**	**1.58**	**106**	*e*PG	**Pn**	**09 00 31.9**	**-1.6**
KRNR				*e*S	**Sn**	**09 00 54.2**	**0.0**
KRNR	**Karanay**	**1.58**	**106**	*e*Pg	**Pn**	**09 00 31.9**	**-1.6**
KRNR				*e*Sg	**Sn**	**09 00 54.2**	**0.0**
BEYR	**Belyy Ugol+**	**1.64**	**297**	*e*PN	**Pn**	**09 00 32.8**	**-1.5**
BEYR				*e*S	**Sn**	**09 00 55.8**	**+0.1**
BEYR	**Belyy Ugol+**	**1.64**	**297**	*e*Pg	**Pn**	**09 00 32.8**	**-1.5**
BEYR				*e*Sg	**Sn**	**09 00 55.8**	**+0.1**
SHA1	**Shidzhatmaz**	**1.66**	**287**	*e*PN	**Pn**	**09 00 33.2**	**-1.5**
SHA1				*e*S	**Sg**	**09 00 57.7**	**-0.5**
SHA1	**Shidzhatmaz**	**1.66**	**287**	*e*Pg	**Pn**	**09 00 33.2**	**-1.5**
SHA1				*e*Sg	**Sg**	**09 00 57.7**	**-0.5**
KIV0	**Kislovodsk Arr**	**1.70**	**294**	*e*Pg	**Pn**	**09 00 33.9**	**-1.3**
KIV0				*e*Sg	**Sn**	**09 00 57.5**	**+0.3**
KIV	**Kislovodsk**	**1.71**	**294**	*e*PN	**Pn**	**09 00 33.9**	**-1.3**
KIV				*e*S	**Sn**	**09 00 57.5**	**+0.1**
KIV	**Kislovodsk**	**1.71**	**294**	*e*Pg	**Pn**	**09 00 34.0**	**-1.3**
KIV				*e*Sg	**Sb**	**09 00 58.3**	**-0.2**
ARKR	**Arakani**	**1.72**	**112**	*e*PN	**Pn**	**09 00 34.0**	**-1.3**
ARKR				*e*S	**Sn**	**09 00 58.0**	**+0.4**
ARKR	**Arakani**	**1.72**	**112**	*e*Pg	**Pn**	**09 00 34.0**	**-1.3**
ARKR				*e*Sg	**Sn**	**09 00 58.0**	**+0.4**
BUJR	**Buynaksk**	**1.72**	**104**	*e*PN	**Pn**	**09 00 34.2**	**-1.1**
BUJR				*i* S	**Sb**	**09 00 58.9**	**+0.1**
BUJR				pmax	pmax		
	comp=Z,126nm,0.3s						
BUJR				smax	smax		
	comp=N,124nm,0.6s						
BUJR	**Buynaksk**	**1.72**	**104**	*e*Pg	**Pn**	**09 00 34.3**	**-1.1**
BUJR				*e*Sg	**Sb**	**09 00 58.7**	**-0.1**
LGD	**Lagodekhi**	**1.77**	**144**	P	**Pn**	**09 00 36.8**	**+0.8**
LGD				S	**Sg**	**09 01 02.3**	**+0.3**
LGD	**Lagodekhi**	**1.77**	**144**	PN	**Pn**	**09 00 36.8**	**+0.8**
LGD				S	**Sg**	**09 01 02.3**	**+0.3**
TRLG	**Trialeti**	**1.82**	**198**	P	**Pn**	**09 00 36.6**	**-0.2**
TRLG				S	**Sg**	**09 01 03.0**	**-0.5**
TRLG	**Trialeti**	**1.82**	**198**	PN	**Pn**	**09 00 36.6**	**-0.2**
TRLG				S	**Sg**	**09 01 02.9**	**-0.5**
KMKR	**Kumukh**	**2.02**	**124**	*e*PN	**Pn**	**09 00 38.9**	**-0.7**
KMKR				*i* S	**Sb**	**09 01 07.3**	**-0.2**
KMKR				pmax	pmax		
	comp=Z,21nm,0.2s						
KMKR				smax	smax		
	comp=N,78nm,0.3s						
KMKR	**Kumukh**	**2.02**	**124**	*e*Pg	**Pn**	**09 00 39.0**	**-0.7**
KMKR				*e*Sg	**Sn**	**09 01 03.8**	**-1.4**
ALER	**Alexandrovskoy**	**2.04**	**318**	*e*PN	**Pn**	**09 00 36.3**	**-3.4**
ALER	**Alexandrovskoy**	**2.04**	**318**	*e*Pg	**Pn**	**09 00 36.3**	**-3.4**
ALER				*e*Sg	**Sn**	**09 01 04.3**	**-1.1**
GOF	**Gofitskoye**	**2.20**	**325**	*e*PN	**Pn**	**09 00 40.2**	**-1.8**
GOF				*e*S	**Sb**	**09 01 11.3**	**-1.3**
GOF	**Gofitskoye**	**2.20**	**325**	*e*Pg	**Pn**	**09 00 40.2**	**-1.8**
GOF				*e*Sg	**Sb**	**09 01 11.3**	**-1.3**
URKR	**Urkarakh**	**2.34**	**117**	*e*PN	**Pn**	**09 00 44.2**	**+0.3**
URKR				*e*S	**Sn**	**09 01 13.3**	**+0.4**
URKR	**Urkarakh**	**2.34**	**117**	*e*Pn	**Pn**	**09 00 44.2**	**+0.3**
URKR				*e*Sn	**Sn**	**09 01 13.3**	**+0.4**
MNK	**Minsk**	**15.78**	**321**	*i* P	**Pn**	**09 03 47.9**	**+0.4**
MNK				*i* S	**Sn**	**09 06 45.9**	**+3.4**
MNK				pmax	pmax		
	comp=Z,19nm,0.7s						
MNK				pmax	pmax		
	comp=N,24nm,0.8s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,530nm,23.0s						
MNK				MLR	MLR		
	comp=E,76nm,26.0s						
MNK				MLR	MLR		
	comp=Z,103nm,17.0s						
MNK	**Minsk**	**15.78**	**321**	*i* P	**Pn**	**09 03 47.9**	**+0.4**
	comp=E,4.0nm,0.8s						
MNK				*i* P	**Pn**	**09 03 47.9**	**+0.4**
	comp=N,24nm,0.8s						
MNK				*i* P	**Pn**	**09 03 47.9**	**+0.4**
	comp=Z,19nm,0.7s,baz=309						
MNK				*i* PP	**sP**	**09 03 56.5**	**+1.8**
MNK				*i* PPP	PPP	09 04 04.1	
MNK				*i* S	**Sn**	**09 06 45.9**	**+3.4**
MNK				*i* SS	**S**	**09 06 60.0**	**+2.6**
MNK				*i* SSS	SSS	09 07 12.6	
MNK				*i* LR	LR	09 09 41.5	
MNK				*i* LRM	MLR	09 10 21.6	
	comp=N,530nm,23.1s						
MNK				*i* LRM	MLR	09 10 22.5	
	comp=E,76nm,25.8s						
MNK				*i* LRM	MLR	09 10 44.3	
	comp=Z,103nm,16.8s						

TEH ***29*** *09:03:17.0, 33°.72N×48°.90E, h8^{km}, ML3.3*

KISR ***29*** *09:03:18.0±0.6, 33°.55N×48°.85E, h24^{km}±999^{km}, ML4.0*

ISC 29 09:03:16.3±1.1**, 33°.70N**±0°.03×**49°.02E**±0°.02**, h6**^{km}±10^{km}**, n44,** σ**1^{s}.87**/48**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BMDN	**Meydan**	**0.16**	**260**	*e*Pg	**Pg**	**09 03 19.4**	**-0.3**
BMDN				*e*Sg	**Sg**	**09 03 21.5**	**-0.4**
IDOB	**Doab**	**0.70**	**277**	*e*Pg	**Pg**	**09 03 29.4**	**-0.5**
KHMZ	**Khomeyn**	**0.79**	**87**	*e*Pg	**Pg**	**09 03 31.4**	**-0.1**
HAGD	**Aghdareh**	**1.12**	**5**	*e*Pg	**Pn**	**09 03 38.2**	**-0.7**
HAGD				*e*Sg	**Sn**	**09 03 55.4**	**+0.6**
HAGD				*e*		09 03 59.1	
	comp=Z,17µm,0.5s						
ASAO	**Ashtian**	**1.19**	**44**	*e*Pg	**Pn**	**09 03 40.0**	**+0.2**
IBZA	**Bozab**	**1.23**	**309**	*e*Pg	**Pg**	**09 03 39.1**	**-0.8**
IBZA				*e*		09 04 07.4	
	comp=Z,5µm,0.6s						
IALM	**Almabolaq**	**1.35**	**329**	*e*Pg	**Pb**	**09 03 41.8**	**-0.5**
KER	**Kermanshah**	**1.71**	**294**	*e*Pn	**Pb**	**09 03 47.6**	**-0.6**
KCHF	**Cheshme Sefid,**	**1.74**	**290**	*e*Pn	**Pn**	**09 03 45.9**	**-1.4**
DHL1	**Dehloran**	**1.78**	**236**	*e*Pn	**Pb**	**09 03 48.8**	**-0.5**
IRAZ	**Razeghan**	**1.86**	**24**	*e*Pn	**Pg**	**09 03 51.4**	**-0.6**
IRAZ				*e*		09 03 55.2	
	comp=Z,7µm,0.7s						
IPIR	**Pirpir**	**1.87**	**122**	*e*Pn	**Pb**	**09 03 51.4**	**+0.3**
IPIR				*e*		09 04 29.6	
	comp=Z,1µm,0.5s						
SNGE	**Sanandaj**	**1.96**	**316**	*e*Pn	**Pb**	**09 03 52.4**	**-0.1**
QAMS	**Qamsar**	**1.98**	**88**	*e*Pn	**Pg**	**09 03 54.7**	**+0.3**
AMIS	**Naft Sefid**	**2.04**	**174**	*e*Pn	**Pb**	**09 03 53.0**	**-0.9**
GHVR	**GHOM**	**2.04**	**67**	*e*Pn	**Pg**	**09 03 55.2**	**-0.3**
IQOM	**Qom**	**2.05**	**56**	*e*Pn	**Pg**	**09 03 54.9**	**-0.7**
IQOM				*e*		09 03 58.3	
	comp=Z,1µm,0.7s						
QABG	**Abgarm-Qazvin**	**2.06**	**13**	*e*Pn	**Pb**	**09 03 53.6**	**-0.6**
QABG				*e*		09 04 31.5	
	comp=Z,2µm,0.8s						

SHK1	**Shahrekord**	**2.08**	**131**	*e*Pn	**Pg**	**09 03 55.5**	**-0.8**
SHK1				*e*		09 04 37.1	
	comp=Z,934nm,0.8s						
ILIN	**Lien**	**2.09**	**306**	*e*	**Sg**	**09 04 29.6**	**+6.1**
	comp=Z,4µm,0.6s						
IGHG	**Ghaleghazi**	**2.13**	**288**	*e*Pn	**Pn**	**09 03 53.1**	**+0.4**
IGHG				*e*		09 04 37.3	
	comp=Z,4µm,1.2s						
IKLH	**Kolahrood**	**2.17**	**99**	*e*Pn	**Pg**	**09 03 57.3**	**-0.7**
IKLH				*e*		09 04 52.0	
	comp=Z,988nm,0.7s						
IDHR	**Dehrash**	**2.40**	**295**	*e*Pn	**Pb**	**09 03 58.1**	**-1.9**
IDHR				*e*		09 04 03.0	
	comp=Z,3µm,0.4s						
IMHD	**Mahdasht**	**2.40**	**34**	*e*	**Pg**	**09 04 01.8**	**-0.5**
	comp=Z,1µm,0.7s						
IHSB	**Hasanabad**	**2.54**	**46**	*e*Pn	**Pb**	**09 04 01.7**	**-0.8**
IHSB				*e*		09 04 52.6	
	comp=Z,847nm,0.8s						
IVRN	**Varamin**	**2.59**	**59**	*e*Pn	**Pb**	**09 04 02.6**	**-0.6**
IVRN				*e*		09 05 00.2	
	comp=Z,940nm,0.7s						
KRSH	**Karshahi**	**2.61**	**83**	*e*Pn	**Pb**	**09 04 03.1**	**-0.5**
THKV	**Tehran--Karaj**	**2.69**	**34**	*e*Pn	**Pb**	**09 04 03.2**	**-1.8**
ISFB	**Sefidab**	**2.75**	**75**	*e*Pn	**Pb**	**09 04 05.1**	**-1.0**
ISFB				*e*		09 04 50.2	
	comp=Z,592nm,1.1s						
CHTH	**Charan**	**2.80**	**38**	*e*Pn	**Pb**	**09 04 06.7**	**-0.3**
IGZV	**Ghazvin**	**2.85**	**20**	*e*Pn	**Pb**	**09 04 06.0**	**-1.9**
IZEF	**Zefreh**	**2.89**	**105**	*e*		09 04 58.4	
	comp=Z,680nm,1.0s						
IZEF				*e*Pn	**Pb**	**09 04 07.4**	**-1.0**
ZNJK	**Zanjan**	**2.97**	**355**	*e*Pn	**Pb**	**09 04 08.7**	**-1.2**
QALM	**Alamut, Qazvin**	**3.04**	**26**	*e*Pn	**Pb**	**09 04 08.1**	**-2.8**
JIR1	**Jirandeh**	**3.07**	**12**	*e*Pn	**Pb**	**09 04 08.1**	**-3.4**
IDMV	**Damavand**	**3.11**	**52**	*e*Pn	**Pb**	**09 04 09.4**	**-2.9**
KLNJ	**Kolanjah**	**3.46**	**140**	*e*Pn	**Pb**	**09 04 15.6**	**-2.6**
IFIR	**Firoozkooh**	**3.64**	**57**	*e*Pn	**Pb**	**09 04 17.1**	**-4.1**
ILAS	**Lasjerd**	**3.66**	**62**	*e*Pn	**Pb**	**09 04 17.4**	**-4.2**
ISHM	**Shahmirzad**	**4.10**	**58**	*e*Pn	**Pn**	**09 04 22.8**	**+3.0**
ISHM				*e*		09 04 36.8	
	comp=Z,421nm,0.4s						
MIB	**Mutribah**	**4.14**	**201**	*e*P	**Pn**	**09 04 21.1**	**+1.0**
IANJ	**Anjilo**	**4.41**	**65**	*e*Pn	**Pn**	**09 04 27.4**	**+3.4**
RST	**Umm Al-Ruwaisa**	**4.53**	**203**	*e*P	**Pn**	**09 04 26.2**	**+0.7**
RST				*e*S	**Sn**	**09 05 17.4**	**-1.1**
RDF	**Al-Radifah**	**4.92**	**195**	*e*P	**Pn**	**09 04 31.7**	**+0.8**
RDF				*e*S	**Sn**	**09 05 27.6**	**-0.6**
RDF				IAML		09 05 29.7	
	comp=Z,113nm,0.8s						

IDC 29 09:22:20.6±2.1**, 1°.82N**×**126°.65E, h0^{km}, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.1**/41**, mbtmp3.6**/3**, Error ellipse: s-maj=174.2km s-min=25.6km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.90**	**161**	P	P	09 27 26.2	-0.1
	1.6nm,0.6s,baz=340,slow=11,SNR=9.0						
ASAR	**Alice Springs**	**26.29**	**165**	P	P	09 27 58.3	+0.1
	0.2nm,0.4s,baz=340,slow=7.5,SNR=2.1						
MKAR	**Makanchi Array**	**59.08**	**326**	P	P	09 32 22.7	-0.1
	0.4nm,0.5s,baz=117,slow=7.4,SNR=7.5						

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*IDC **29** 09:26:44.3±2.6, 57°.82S×9°.12W, h0^{km}, mb4.0/3, mb1 4.3/4, mb1mx3.9/27, mbtmp4.3/4, ML4.8/1, MS3.6/7, Ms1 3.5/7, ms1mx3.3/23, Error ellipse: s-maj=147.3km s-min=51.0km az=87.0*

ISC 29 09:26:46.1±1.9**, 57°.9S**±0°.2×**9°.0W**±0°.7**, h10^{km}, n13, σ1^{s}21**/8**, mb4.1**/3**, MS3.5**/6**, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.81**	**179**	P	**Pn**	**09 29 48.2**	**+0.3**
VNA1				S	Sn	09 31 56.4	-14
VNA2	**Neumayer--Watz**	**13.10**	**178**	P	**Pn**	**09 29 50.6**	**-1.3**
	baz=351,slow=16						
VNA2				S	Sn	09 32 01.2	-16
	baz=351,slow=23						
SNAA	**Sanae**	**14.06**	**172**	P	**Pn**	**09 30 04.2**	**-0.8**
SNAA	**Sanae**	**14.06**	**172**	Pn	**Pn**	**09 30 04.0**	**-1.1**
	4.5nm,0.3s,baz=346,slow=14,SNR=52						
SNAA				LR	LR	09 34 00.8	
	comp=Z,184nm,19.8s,baz=118,slow=31						
PMSA	**Palmer Station**	**26.50**	**232**	LR	LR	09 39 38.6	
	comp=Z,77nm,20.2s,baz=102,slow=29						
QSPA	**South Pole Qui**	**32.34**	**180**	P	**P**	**09 33 15.5**	**+0.4**
	3.5nm,0.8s,baz=224,slow=4.1,SNR=12						
MAW	**Mawson**	**32.36**	**137**	LR	LR	09 45 10.3	
	comp=Z,162nm,18.2s,baz=254,slow=34						
BOSA	**Boshof**	**37.72**	**54**	LR	LR	09 46 53.6	
	comp=Z,88nm,18.2s,baz=190,slow=32						
PLCA	**Paso Flores**	**42.03**	**266**	LR	LR	09 50 25.7	
	comp=Z,48nm,19.8s,baz=136,slow=34						
VNDA	**Vanda**	**44.72**	**177**	P	**P**	**09 34 59.8**	**+1.1**
	1.2nm,1.0s,baz=188,slow=5.7,SNR=5.2						
CPUP	**Villa Florida**	**46.25**	**292**	LR	LR	09 50 34.6	
	comp=Z,48nm,21.9s,baz=208,slow=31						
ASAR	**Alice Springs**	**93.03**	**146**	P	**P**	**09 40 00.3**	**+0.5**
	0.7nm,0.8s,baz=200,slow=4.4,SNR=4.9						
ASAR				LR	LR	10 19 47.6	
	comp=Z,51nm,18.2s,baz=171,slow=34						
YKA	**Yellowknife Ar**	**144.65**	**309**	PKP	**PKPdf**	**09 46 19.9**	**-1.4**
	2.2nm,1.1s,baz=112,slow=3.7,SNR=5.0						

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*IDC **29** 09:28:06.6±0.8, 7°.44S×74°.48W, h159^{km}±8^{km}, mb3.9/9, mb1 4.1/13, mb1mx3.8/31, mbtmp4.4/13, MS2.7/1, Ms1 2.7/1, ms1mx2.6/29, Error ellipse: s-maj=14.1km s-min=10.6km az=26.0*

*NEIC **29** 09:28:07.8±2.0, 7°.33S±0°.08×74°.47W±0°.08, h153^{km}±6^{km}, mb4.4/40, Error ellipse: s-maj=12.0km s-min=10.9km az=98.0*

*VAO **29** 09:28:10.0±0.5, 7°.23S×74°.20W, h159^{km}±4^{km}, mbR4.3*

ISC 29 09:28:07.0±0.4**, 7°.33S**±0°.05×**74°.49W**±0°.06**, h154^{km}, n127, σ1^{s}11**/132**, mb4.3**/29**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**1.81**	**103**	*e*P	**Pn**	**09 28 42.4**	**+2.1**
CZSB	**Cruzeiro do Su**	**1.81**	**103**		**Pn**	**09 28 42.2**	**+2.0**
ATAH	**Atahualpa**	**3.88**	**273**	P	**Pn**	**09 29 05.5**	**-0.6**
	60nm,0.3s,baz=21,slow=3.5,SNR=1182						
ATAH				S	**Sn**	**09 29 51.9**	**-0.1**
	71nm,0.3s,baz=217,slow=22,SNR=8.9						
ATAH				LR	LR	09 30 32.9	
	comp=Z,103nm,20.0s,baz=289,slow=38						
NNA	**Nana**	**5.18**	**206**	P	**Pn**	**09 29 23.2**	**+0.3**
	3.2nm,0.3s,baz=32,slow=7.3,SNR=13						
NNA				S	**Sn**	**09 30 18.9**	**-3.3**
	28nm,0.3s,baz=216,slow=8.0,SNR=5.9						
NNA	**Nana**	**5.18**	**206**	Pn	**Pn**	**09 29 23.7**	**+0.8**
TBTG	**Tabatinga, AM**	**5.53**	**56**	*e*P	**Pn**	**09 29 27.7**	**+0.2**
TBTG	**Tabatinga, AM**	**5.53**	**56**	Pn	**Pn**	**09 29 27.8**	**+0.3**
OTAV	**Otavalo**	**8.49**	**332**	*e*P	**Pn**	**09 30 10.0**	**+2.5**
OTAV	**Otavalo**	**8.49**	**332**		**Pn**	**09 30 08.3**	**+0.9**
ETMB	**Extrema**	**8.55**	**107**	*e*P	**Pn**	**09 30 05.5**	**-2.3**
ETMB	**Extrema**	**8.55**	**107**	Pn	**Pn**	**09 30 05.5**	**-2.3**
LPAZ	**La Paz**	**10.86**	**146**	*e*P	**Pn**	**09 30 37.5**	**-1.5**
LPAZ	**La Paz**	**10.86**	**146**	Pn	**Pn**	**09 30 36.7**	**-2.3**
PB16	**IPOC Station P**	**11.97**	**157**	Pn	**Pn**	**09 30 53.1**	**-0.3**
MACA	**Manacapuru-AM**	**14.36**	**74**	*e*P	**Pn**	**09 31 21.4**	**-2.0**
MACA	**Manacapuru-AM**	**14.36**	**74**	Pn	**Pn**	**09 31 22.4**	**-1.0**
ZARC	**Zaragoza, Cauc**	**14.73**	**359**	P	**Pn**	**09 31 28.9**	**+0.9**
VILB	**Vilhena**	**15.13**	**113**	*e*P	**Pn**	**09 31 32.7**	**-0.4**
VILB	**Vilhena**	**15.13**	**113**		**Pn**	**09 31 32.7**	**-0.4**
OCAC	**Ocana**	**15.51**	**4**	P	**Pn**	**09 31 37.5**	**-0.3**
SIV	**San Ignacio**	**15.70**	**124**	P	**Pn**	**09 31 39.4**	**-0.6**
	1.5nm,0.3s,baz=302,slow=10,SNR=58						
PTGA	**Pitinga**	**15.90**	**66**	P	**Pn**	**09 31 41.3**	**-1.2**
	3.2nm,0.3s,baz=255,slow=13,SNR=44						
LVC	**Limon Verde**	**16.11**	**161**	*e*P	**P**	**09 31 50.0**	**+4.3**
LVC	**Limon Verde**	**16.11**	**161**	P	**P**	**09 31 47.0**	**+1.3**
SDV	**Santo Domingo**	**16.56**	**13**	*e*P	**Pn**	**09 31 51.0**	**+0.3**
BOAV	**Boa Vista**	**16.96**	**56**	*e*P	**P**	**09 31 54.5**	**-0.2**
BOAV	**Boa Vista**	**16.96**	**56**	P	**P**	**09 31 54.9**	**+0.2**
PTLB	**Pontes e Lacer**	**17.07**	**120**	*e*P	**Pn**	**09 31 57.0**	**+0.4**
PTLB	**Pontes e Lacer**	**17.07**	**120**		**Pn**	**09 31 56.9**	**+0.4**
PTLB				IAmb	IAmb	09 32 14.6	
	comp=Z,6.8nm,0.5s						
SJCC	**San Jacinto, C**	**17.13**	**358**	P	**Pn**	**09 31 57.9**	**+0.6**
BAUV	**El Baul**	**17.40**	**22**	P	**P**	**09 31 59.0**	**-0.5**
BAUV				IAmb	IAmb	09 32 08.1	
	comp=Z,14nm,0.9s						
PDRB	**Porto dos Gac**	**18.03**	**105**	*e*P	**P**	**09 32 07.0**	**+0.6**
CLDB	**Colider**	**18.79**	**102**	*e*P	**P**	**09 32 15.3**	**+0.5**
ITTB	**Itaituba**	**18.89**	**82**	*e*P	**P**	**09 32 15.3**	**-0.5**
NPGB	**Novo Progresso**	**18.99**	**90**	*e*P	**P**	**09 32 15.8**	**-1.1**
BIRV	**Birongo**	**19.49**	**25**	P	**Pn**	**09 32 24.6**	**-0.6**
AC02	**Maricunga**	**20.06**	**166**	P	**P**	**09 32 30.6**	**+1.7**
SALV	**Santo Antonio**	**20.27**	**117**	*e*P	**P**	**09 32 31.4**	**+0.7**
PP1B	**Ponte de Pedra**	**21.68**	**120**	*e*P	**P**	**09 32 47.2**	**+1.4**
AQDB	**Aquidauana**	**22.40**	**128**	*e*P	**P**	**09 32 53.7**	**+0.7**
AQDB	**Aquidauana**	**22.40**	**128**	P	**P**	**09 32 53.3**	**+0.3**
AQDB				IAmb	IAmb	09 32 55.6	
	comp=Z,18nm,0.8s						
SNDB	**Serra Nova Dou**	**23.32**	**103**	*e*P	**P**	**09 33 01.8**	**+0.2**
MCPB	**Macapa, AP**	**23.42**	**74**	*e*P	**P**	**09 33 02.3**	**-0.2**
ARAG	**Araguaiana, MT**	**23.71**	**113**	*e*P	**P**	**09 33 05.3**	**+0.2**
PRPB	**Parauapebas**	**24.53**	**89**	*e*P	**P**	**09 33 13.1**	**+0.5**
CPUP	**Villa Florida**	**24.98**	**141**	P	**P**	**09 33 14.0**	**-2.5**
	comp=Z,2.1nm,0.6s,baz=344,slow=9.6,SNR=7.4						
CPUP	**Villa Florida**	**24.98**	**141**	*e*P	**P**	**09 33 18.6**	**+2.1**
CPUP	**Villa Florida**	**24.98**	**141**	P	**P**	**09 33 15.5**	**-0.9**
PEXB	**Peixe**	**26.24**	**102**	*e*P	**P**	**09 33 28.9**	**+0.8**
ITRB	**Iturama**	**26.45**	**120**	*e*P	**P**	**09 33 30.1**	**+0.3**
PCMB	**Pacaembu**	**26.54**	**125**	*e*P	**P**	**09 33 31.9**	**+1.2**
SMTB	**Santa Maria do**	**26.68**	**95**	*e*P	**P**	**09 33 33.1**	**+1.2**
BDFB	**Brasilia**	**27.20**	**110**	P	**P**	**09 33 37.4**	**+0.6**
	comp=Z,1.9nm,0.3s,baz=243,slow=9.6,SNR=5.0						
BDFB	**Brasilia**	**27.20**	**110**	P	**P**	**09 33 37.4**	**+0.6**
IPMB	**Ipameri, GO**	**27.70**	**115**	*e*P	**P**	**09 33 41.3**	**+0.2**
ITQB	**Itaqui**	**27.86**	**145**	*e*P	**P**	**09 33 44.2**	**+1.9**
BB19B	**Bebedouro**	**28.57**	**121**	*e*P	**P**	**09 33 48.8**	**0.0**
FRTB	**Fartura**	**28.75**	**126**	*e*P	**P**	**09 33 51.6**	**+1.2**
ITAB	**Concordia**	**29.02**	**136**	*e*P	**P**	**09 33 54.7**	**+2.1**
ITAB	**Concordia**	**29.02**	**136**	P	**P**	**09 33 52.7**	**+0.1**
ITAB				IAmb	IAmb	09 34 06.1	
	comp=Z,16nm,1.3s						
SDBA	**SAO DESIDERIO**	**29.57**	**102**	*e*P	**P**	**09 33 58.4**	**+0.6**
RCLB	**Rio Claro- Sao**	**29.98**	**123**	*e*P	**P**	**09 34 01.5**	**+0.2**
CPSB	**Cacapava Do Su**	**30.28**	**142**	*e*P	**P**	**09 34 05.3**	**+1.6**
ROSB	**Rosrio**	**30.56**	**83**	*e*P	**P**	**09 34 06.6**	**+0.3**
JANB	**Januaria**	**30.56**	**107**	*e*P	**P**	**09 34 06.5**	**+0.1**
SPB	**Sao Paulo**	**30.59**	**125**	*e*P	**P**	**09 34 07.1**	**+0.6**
MC01	**Montes Claros**	**31.26**	**110**	*e*P	**P**	**09 34 12.9**	**+0.4**
LC01	**Cunco**	**31.52**	**176**	P	**P**	**09 34 14.9**	**+0.4**
LC01				IAmb	IAmb	09 34 15.5	
	comp=Z,5.6nm,0.9s						
BSCB	**Bom Sucesso**	**31.78**	**118**	*e*P	**P**	**09 34 17.1**	**0.0**
TER01	**Tubaro-SC**	**31.91**	**135**	*e*P	**P**	**09 34 19.6**	**+1.5**
DIAM	**Diamantina, MG**	**31.91**	**113**	*e*P	**P**	**09 34 18.7**	**+0.3**
PARB	**Paraibuna**	**31.97**	**123**	*e*P	**P**	**09 34 18.9**	**+0.2**
DUB01	**Friburgo-RJ**	**34.25**	**119**	*e*P	**P**	**09 34 39.1**	**+0.6**
SJMB	**Sao Joao De Ma**	**34.29**	**113**	*e*P	**P**	**09 34 39.5**	**+0.6**
BSFB	**Barra de Sao F**	**34.64**	**113**	*e*P	**P**	**09 34 42.2**	**+0.3**
CAM01	**Campos-RJ**	**34.79**	**118**	*e*P	**P**	**09 34 42.8**	**-0.3**
GDU01	**Guandu, BA**	**34.88**	**103**	*e*P	**P**	**09 34 44.5**	**+0.5**
GUA01	**Guaratinga, BA**	**35.10**	**108**	*e*P	**P**	**09 34 46.0**	**+0.2**
CMC01	**Camacan, BA**	**35.16**	**106**	*e*P	**P**	**09 34 46.8**	**+0.4**
RIB01	**Linhares ES**	**35.17**	**113**	*e*P	**P**	**09 34 46.8**	**+0.4**
GOGA	**Godfrey**	**41.40**	**349**	P	**P**	**09 35 37.9**	**-0.3**
GOGA				IAmb	IAmb	09 35 39.2	
	comp=Z,7.9nm,0.9s						
HODGE	**Hodges**	**41.98**	**350**	P	**P**	**09 35 43.1**	**+0.1**
HODGE				IAmb	IAmb	09 35 43.9	
	comp=Z,5.2nm,0.8s						
W57A	**Gilead**	**42.57**	**353**	P	**P**	**09 35 48.0**	**+0.3**
CPCT	**Cooper Cave**	**43.59**	**348**	P	**P**	**09 35 54.9**	**-1.0**
CPCT				IAmb	IAmb	09 35 56.5	
	comp=Z,6.3nm,0.9s						
V48A	**Smith Brothers**	**44.38**	**346**	P	**P**	**09 36 01.8**	**-0.5**
V48A				IAmb	IAmb	09 36 01.9	
	comp=Z,9.0nm,0.6s						
TZTN	**Tazewell**	**44.46**	**350**	P	**P**	**09 36 02.7**	**-0.1**
WVT	**Waverly**	**45.01**	**345**	P	**P**	**09 36 05.6**	**-1.6**
WVT				IAmb	IAmb	09 36 07.5	
	comp=Z,14nm,1.4s						
ABTX	**Abilene, Hawle**	**46.39**	**330**	P	**P**	**09 36 18.8**	**+0.6**
ABTX				IAmb	IAmb	09 36 19.9	
	comp=Z,9.2nm,0.8s						
Q54A	**Coxs Mills**	**46.45**	**353**	P	**P**	**09 36 18.6**	**+0.2**
MGMO	**Mountain Grove**	**47.28**	**341**	P	**P**	**09 36 23.3**	**-1.6**
MGMO				IAmb	IAmb	09 36 24.8	
	comp=Z,18nm,1.4s						
SADO	**Sadowa**	**52.03**	**356**	P	**P**	**09 36 59.8**	**-0.8**
SDCO	**Great Sand Dun**	**53.37**	**329**	P	**P**	**09 37 11.6**	**+0.6**
SDCO				IAmb	IAmb	09 37 12.7	
	comp=Z,5.3nm,1.0s						
X18A	**Snowflake**	**53.45**	**323**	P	**P**	**09 37 11.6**	**0.0**
X18A				IAmb	IAmb	09 37 13.4	
	comp=Z,3.0nm,0.8s						
MTPU	**Mount Pierson**	**57.18**	**325**	P	**P**	**09 37 38.2**	**-0.2**
GWY	**Greenwater Val**	**58.66**	**321**	P	**P**	**09 37 49.0**	**+0.5**
GWY				IAmb	IAmb	09 37 49.8	
	comp=Z,2.6nm,0.7s						
DUG	**Dugway, Tooele**	**59.03**	**326**	P	**P**	**09 37 51.7**	**+0.8**
DUG				IAmb	IAmb	09 37 52.7	
	comp=Z,5.2nm,0.8s						
PDAR	**Pinedale Array**	**59.20**	**330**	P	**P**	**09 37 51.7**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=127,slow=9.0,SNR=9.2						
PDAR				PcP	**PcP**	**09 38 38.4**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=127,slow=6.9,SNR=6.1						
PDAR	**Pinedale Array**	**59.20**	**330**	P	**P**	**09 37 52.2**	**+0.1**
ULM	**Lac du Bonnet**	**60.28**	**344**	P	**P**	**09 37 58.1**	**-1.0**
	comp=Z,2.9nm,0.4s,baz=165,slow=10,SNR=3.0						
RLMT	**Red Lodge**	**60.84**	**332**	P	**P**	**09 38 03.4**	**+0.1**
NVAR	**Mina Array Bea**	**61.07**	**322**	P	**P**	**09 38 05.8**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=114,slow=7.6,SNR=7.6						
NVAR				PcP	**PcP**	**09 38 46.7**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=134,slow=5.2,SNR=4.3						
KVN	**Kaiserville**	**61.33**	**322**	P	**P**	**09 38 07.1**	**+0.4**
KVN				IAmb	IAmb	09 38 28.5	
	comp=Z,4.8nm,1.4s						
YHL	**Hebgen Lake**	**61.53**	**331**	P	**P**	**09 38 09.8**	**+1.8**
BOZ	**Bozeman (W)**	**62.29**	**331**	P	**P**	**09 38 13.5**	**+0.5**
MFID	**Camas Ranch**	**62.88**	**327**		**P**	**09 38 17.4**	**+0.5**
I07A	**Izee**	**65.32**	**326**	P	**P**	**09 38 34.0**	**+1.2**
I07A				IAmb	IAmb	09 38 34.1	
	comp=Z,4.8nm,0.7s						
LIC	**Lamto**	**70.59**	**81**	*e*P	**P**	**09 39 08.1**	**+1.9**
	comp=Z,14nm,0.5s						
TIC	**Toumodi**	**70.67**	**80**	*e*P	**P**	**09 39 04.8**	**-1.9**
DBIC	**Dimbokro**	**70.84**	**80**	P	**P**	**09 39 05.9**	**-1.8**
	comp=Z,6.0nm,0.4s,baz=258,slow=3.5,SNR=19						
DBIC	**Dimbokro**	**70.84**	**80**	P	**P**	**09 39 06.4**	**-1.2**
KIC	**Kosan Boka**	**70.90**	**81**	*e*P	**P**	**09 39 06.2**	**-1.8**
	comp=Z,12nm,0.5s						
YKA	**Yellowknife Ar**	**76.12**	**342**	P	**P**	**09 39 37.0**	**-0.5**
	comp=Z,1.9nm,0.4s,baz=140,slow=6.1,SNR=114						
YKA				pP	**pP**	**09 40 15.7**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=139,slow=6.5,SNR=2.9						
YKA	**Yellowknife Ar**	**76.12**	**342**	P	**P**	**09 39 37.1**	**-0.4**
SNAA	**Sanae**	**77.35**	**162**	P	**P**	**09 39 44.2**	**-0.2**
TORD	**Torodi Ar. Bea**	**78.34**	**75**	P	**P**	**09 39 49.2**	**-1.7**
	comp=Z,2.2nm,0.6s,baz=261,slow=4.6,SNR=16						
DLBC	**Dease Lake**	**79.19**	**334**	P	**P**	**09 39 55.2**	**+0.5**
DLBC				IAmb	IAmb	09 40 19.1	
	comp=Z,11nm,1.4s						
QSPA	**South Pole Qui**	**82.78**	**180**	P	**P**	**09 40 14.9**	**+1.2**
QSPA				IAmb	IAmb	09 40 15.3	
	comp=Z,4.5nm,0.8s						
ILAR	**Eielson Array**	**89.19**	**336**	P	**P**	**09 40 44.6**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=150,slow=2.5,SNR=7.0						
STKA	**Stephens Creek**	**127.98**	**219**	PKP	**PKPdf**	**09 46 55.4**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=98,slow=4.1,SNR=5.0						
STKA	**Stephens Creek**	**127.98**	**219**		**PKPdf**	**09 46 55.0**	**-0.3**
ZALV	**Zalesovo Beam**	**130.60**	**16**	PKP	**PKPdf**	**09 46 59.6**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=299,slow=1.5,SNR=2.9						
ZALV				pPKP	**pPKPdf**	**09 47 41.9**	**+1.5**
	comp=Z,0.9nm,0.6s,baz=336,slow=3.2,SNR=1.8						
ZALV	**Zalesovo Beam**	**130.60**	**16**		**PKPdf**	**09 46 60.0**	**+0.5**
MKAR	**Makanchi Array**	**135.92**	**23**	PKP	**PKPdf**	**09 47 09.7**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=295,slow=2.4,SNR=4.7						
MKAR	**Makanchi Array**	**135.92**	**23**		**PKPdf**	**09 47 10.4**	**+0.6**
ASAR	**Alice Springs**	**138.54**	**221**	PKhKP	PKPpre	09 47 06.3	
	comp=Z,0.6nm,0.5s,baz=138,slow=2.4,SNR=14						
ASAR				PKP	**PKPdf**	**09 47 14.0**	**-1.4**
	comp=Z,1.0nm,0.7s,baz=121,slow=2.0,SNR=9.6						
ASAR				pPKP	pPKPdf	09 47 56.8	+0.6
	comp=Z,0.6nm,0.6s,baz=117,slow=2.3,SNR=3.1						
WRA	**Warramunga Arr**	**140.76**	**226**	PKP	**PKPdf**	**09 47 19.2**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=119,slow=2.4,SNR=10						
KSRS	**Korea Array**	**143.75**	**329**	PKP	PKPab	09 47 20.8	-0.6
	comp=Z,1.2nm,0.5s,baz=39,slow=3.3,SNR=6.4						

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*IDC **29** 09:44:02.3±0.8, 12°.01N×140°.74E, h32^{km}±4^{km}, mb3.9/12, mb1 4.1/12, mb1mx3.8/53, mbtmp4.1/12, MS3.1/6, Ms1 3.1/6, ms1mx2.9/36, Error ellipse: s-maj=23.6km s-min=17.8km az=106.0*

*NEIC **29** 09:44:03.5±1.9, 12°.1N±0°.1×140°.5E±0°.1, h35^{km}±8^{km}, mb4.6/16, Error ellipse: s-maj=25.1km s-min=10.3km az=53.0*

ISC 29 09:44:02.5±0.6**, 12°.00N**±0°.10×**140°.6E**±0°.2**, h30^{km}, n40, σ0^{s}92**/43**, mb4.3**/19**, MS3.0**/5**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.46**	**69**	LR	LR	09 46 48.4	
	comp=Z,238nm,18.7s,baz=203,slow=38						
JHJ	**Hachijo jima 2**	**21.03**	**358**	LR	LR	09 55 24.3	
	comp=Z,69nm,20.8s,baz=131,slow=32						
PMG	**Port Moresby**	**22.25**	**163**	LR	LR	09 56 26.1	
	comp=Z,67nm,20.6s,baz=356,slow=34						
KSRS	**Korea Array**	**27.77**	**338**	LR	LR	09 59 16.3	
	comp=Z,24nm,20.4s,baz=172,slow=33						
WRA	**Warramunga Arr**	**32.34**	**191**	P	**P**	**09 50 28.3**	**-0.9**
	2.1nm,1.0s,baz=9.8,slow=9.7,SNR=7.5						
AS31	**Alice Springs**	**36.05**	**190**	P	**P**	**09 51 01.8**	**+0.3**
ASAR	**Alice Springs**	**36.05**	**190**	P	**P**	**09 51 01.8**	**+0.4**
	0.6nm,0.6s,baz=18,slow=12,SNR=16						
ASAR	**Alice Springs**	**36.05**	**190**	P	**P**	**09 50 59.0**	**-2.4**
CMAR	**Chiang Mai Arr**	**40.63**	**284**	P	**P**	**09 51 40.9**	**+0.8**
	0.9nm,0.4s,baz=97,slow=7.5,SNR=7.2						
CMAR				pP	**sP**	**09 51 50.7**	**-0.2**
	1.4nm,0.4s,baz=85,slow=5.9,SNR=3.1						
CMAR				LR	LR	10 07 24.7	
	comp=Z,19nm,21.0s,baz=115,slow=34						
DZM	**Mont Dzumac**	**42.30**	**143**	P	**P**	**09 51 55.8**	**+1.9**
DZM				IAmb	IAmb	09 52 16.4	
	comp=Z,20nm,1.4s						
STKA	**Stephens Creek**	**43.64**	**179**	P	**P**	**09 52 03.8**	**-0.6**
FORT	**Forrest**	**44.21**	**196**	P	**P**	**09 52 09.0**	**0.0**
BBOO	**Buckleboo**	**44.77**	**185**	P	**P**	**09 52 13.7**	**+0.3**
BBOO				IAmb	IAmb	09 52 39.5	
	comp=Z,15nm,1.4s						
SONM	**Songino Array**	**45.74**	**328**	P	**P**	**09 52 22.5**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=151,slow=9.3,SNR=2.4						
SONM				PcP	**PcP**	**09 53 58.1**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=141,slow=2.2,SNR=4.2						
SONM				LR	LR	10 14 35.4	
	comp=Z,30nm,18.1s,baz=22,slow=40						
SONM	**Songino Array**	**45.74**	**328**	P	**P**	**09 52 21.4**	**+0.2**
TOO	**Toolangi**	**49.52**	**175**	P	**P**	**09 52 50.0**	**-0.5**
MKAR	**Makanchi Array**	**59.78**	**317**	P	**P**	**09 54 05.4**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=96,slow=7.9,SNR=6.0						
MKAR	**Makanchi Array**	**59.78**	**317**	P	**P**	**09 54 05.0**	**+0.1**
ZALV	**Zalesovo Beam**	**60.53**	**326**	P	**P**	**09 54 10.3**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=167,slow=7.2,SNR=1.7						
ANM	**Nome**	**64.24**	**23**	P	**P**	**09 54 34.4**	**-0.1**
ANM				IAmb	IAmb	09 54 35.9	
	comp=Z,3.7nm,0.8s						
IMAR	**Indian Mountai**	**69.29**	**23**	P	**P**	**09 55 06.8**	**+0.1**
H21K	**Melozitna Rive**	**69.57**	**24**	P	**P**	**09 55 08.7**	**+0.3**
H21K				IAmb	IAmb	09 55 09.9	
	comp=Z,7.1nm,0.9s						
TOLK	**Toolik Lake Re**	**71.59**	**21**	P	**P**	**09 55 21.4**	**+0.8**
IL31		**71.78**	**25**	P	**P**	**09 55 20.9**	**-0.8**
IL31				IAmb	IAmb	09 55 21.3	
	comp=Z,2.5nm,0.7s						
ILAR	**Eielson Array**	**71.78**	**25**	P	**P**	**09 55 20.5**	**-1.3**
	comp=Z,1.9nm,0.7s,baz=249,slow=6.1,SNR=24						
ILAR				pP	**pP**	**09 55 30.7**	**+0.7**
	comp=Z,2.3nm,0.7s,baz=246,slow=6.1,SNR=9.8						
ILAR	**Eielson Array**	**71.78**	**25**	P	**P**	**09 55 21.1**	**-0.7**
BMAR	**Burnt Mountain**	**73.17**	**23**	P	**P**	**09 55 31.1**	**+1.0**
ABKAR	**Akbulak array**	**74.92**	**318**	P	**P**	**09 55 40.0**	**-0.6**
ABKAR	**Akbulak array**	**74.92**	**318**	P	**P**	**09 55 40.8**	**+0.2**
DAWY	**Dawson**	**74.92**	**27**	P	**P**	**09 55 40.4**	**0.0**
DAWY				IAmb	IAmb	09 55 41.9	
	comp=Z,8.2nm,1.1s						
AKTO	**Aktyubinsk**	**76.13**	**319**	P	**P**	**09 55 47.3**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=72,slow=6.3,SNR=4.9						
AKTO				pP	**pP**	**09 55 57.1**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=58,slow=8.0,SNR=3.2						
INK	**Inuvik**	**77.41**	**22**	P	**P**	**09 55 54.1**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=303,slow=5.3,SNR=6.5						
INK				pP	**PcP**	**09 56 04.4**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=257,slow=8.2,SNR=2.7						
INK	**Inuvik**	**77.41**	**22**	P	**P**	**09 55 53.8**	**-0.6**
INK				IAmb	IAmb	09 56 11.0	
	comp=Z,6.1nm,1.4s						
A36M	**Sachs Harbour**	**79.96**	**18**	P	**P**	**09 56 08.2**	**-0.1**
A36M				IAmb	IAmb	09 56 09.5	
	comp=Z,5.2nm,0.8s						
YKA	**Yellowknife Ar**	**86.16**	**27**	P	**P**	**09 56 40.4**	**-0.2**
	comp=Z,2.3nm,0.9s,baz=287,slow=5.1,SNR=22						
YKA				pP	**sP**	**09 56 51.0**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=288,slow=5.1,SNR=7.5						
YKA	**Yellowknife Ar**	**86.16**	**27**	P	**P**	**09 56 40.1**	**-0.5**
ARCES	**ARCESS Array B**	**87.28**	**341**	P	**P**	**09 56 45.0**	**-1.0**
	comp=Z,3.1nm,1.0s,baz=54,slow=6.2,SNR=5.5						
FIA1	**FINESS Array S**	**90.80**	**334**	P	**P**	**09 57 00.6**	**-2.0**
FINES	**FINESS Array B**	**90.80**	**334**	P	**P**	**09 57 00.8**	**-1.9**
	comp=Z,3.5nm,0.6s,baz=67,slow=4.8,SNR=17						
FINES				pP	**pP**	**09 57 11.1**	**+0.1**
	comp=Z,2.9nm,0.6s,baz=82,slow=4.7,SNR=4.8						
FINES	**FINESS Array B**	**90.80**	**334**	P	**P**	**09 57 01.4**	**-1.2**

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*SOME **29** 09:59:06.7, 40°.78N×69°.80E, h0^{km}*

*NNC **29** 09:59:07.1±3.3, 40°.78N×69°.62E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=21.9km s-min=13.5km az=33.0*

*ISU **29** 09:59:09, 41°.00N×69°.60E, h5^{km}*

*KRNET **29** 09:59:10.3±0.1, 41°.10N×69°.80E, h13^{km}, mb2.8*

ISC 29 09:59:11.6±1.0**, 41°.02N**±0°.04×**69°.79E**±0°.03**, h10^{km}, n26, σ2^{s}24**/44**, 17C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGS	**TashGRES**	**0.45**	**333**	*e*P	**Pg**	**09 59 19.0**	**-1.3**
TGS				*e*S	**Sg**	**09 59 26.0**	**-0.3**
TAS	**Tashkent**	**0.48**	**309**	⇑*i*P	**Pg**	**09 59 18.6**	**-2.3**
	baz=2.0						
TAS				⇑*i*S	**Sg**	**09 59 25.1**	**-2.2**
	baz=2.0						
CHMG	**Chimgan**	**0.55**	**17**	*e*P	**Pg**	**09 59 21.0**	**-1.3**
TRKS	**Terek-Say**	**1.14**	**63**	⇑*e*P	**Pg**	**09 59 31.2**	**-2.2**
	baz=70						
TRKS				⇑*i*S	**Sg**	**09 59 46.3**	**-1.9**
	baz=70						
IUG	**Iuzhnay**	**1.14**	**9**	*e*P	**Pn**	**09 59 33.6**	**-0.1**
	152nm,0.2s						
IUG				*e*S	**Sn**	**09 59 53.0**	**+3.6**
	53nm,0.5s						
IUG	**Iuzhnay**	**1.14**	**9**	P	**Pn**	**09 59 33.6**	**-0.1**
	413nm,0.5s						
IUG				S	**Sn**	**09 59 53.0**	**+3.6**
	81nm,0.6s						
BTK	**Batken**	**1.24**	**141**	*i* P	**Pn**	**09 59 35.0**	**-0.1**
BTK				*i* S	**Sn**	**09 59 55.0**	**+3.1**
BTK	**Batken**	**1.24**	**141**	⇑*e*P	**Pn**	**09 59 34.9**	**-0.1**
	baz=43						
BTK				⇑*e*S	**Sn**	**09 59 52.6**	**+0.7**
	baz=43						
ARK	**Arkit**	**1.81**	**64**	⇓*e*P	**Pn**	**09 59 43.2**	**+0.3**
	baz=66						
ARK				⇓*e*S	**Sb**	**10 00 07.2**	**-0.4**
	baz=66						
BRLS	**Borolday**	**2.00**	**1**	*e*P	**Pn**	**09 59 46.3**	**+0.8**
	8.4nm,0.4s						
BRLS				*e*S	**Sg**	**10 00 15.6**	**-0.4**
	17nm,0.5s						
KK07	**Karatay Array**	**2.13**	**14**	⇓Pn	**Pb**	**09 59 49.2**	**-1.1**
	5.1nm,0.5s,baz=200,slow=17						
KK07				⇑Sn	**Sg**	**10 00 18.8**	**-1.2**
	10.0nm,0.6s,baz=201,slow=25						
MNAS	**Manas**	**2.50**	**53**	⇑*e*P	**Pn**	**09 59 53.0**	**+0.6**
	baz=55						
MNAS				⇑*i*S	**Sb**	**10 00 24.7**	**-2.9**
	baz=55						
MRKS	**Merke**	**3.09**	**55**	*e*P	**Pb**	**10 00 07.4**	**+0.8**
	4.4nm,0.7s						
MRKS				*e*S	**Sg**	**10 00 50.6**	**-0.2**
	8.2nm,0.6s						
MRKS	**Merke**	**3.09**	**55**	Pg	**Pb**	**10 00 07.4**	**+0.8**
	4.4nm,0.7s						
MRKS				Lg	Lg	10 00 50.6	

	8.2nm,0.6s						
AML	Almayashu	3.13	68	⇑iP	Pn	10 00 02.3	+1.0
	baz=69						
AML				⇑iS	Sn	10 00 40.2	+1.3
	baz=69						
ARLS	Aral	3.51	75	⇑iP	Pn	10 00 07.6	+1.3
	baz=76						
ARLS				⇑iS	Sn	10 00 49.4	+1.5
	baz=76						
AAK	Ala-Archa	3.87	64	⇑Pg	Pb	10 00 21.9	+2.0
	1.8nm,0.6s						
AAK				⇑Lg	Lg	10 01 21.6	
	3.3nm,0.8s						
TKM2	Tokmak 2	4.72	64	⇑Pg	Pb	10 00 36.0	+1.4
	1.8nm,0.7s						
TKM2				⇑Lg	Lg	10 01 39.2	
	3.4nm,0.6s						
DGS	Degeres	4.97	62	eP	Pb	10 00 40.1	+1.4
	1.9nm,0.6s						
DGS				eS	Sg	10 01 47.0	-4.1
	3.1nm,0.6s						
DGS	Degeres	4.97	62	Pg	Pb	10 00 40.1	+1.4
	1.9nm,0.6s						
DGS				Lg	Lg	10 01 47.0	
	3.1nm,0.6s						
KRBS	Karabastau	5.11	57	eP	Pb	10 00 44.3	+3.2
	1.7nm,0.6s						
KRBS				eS	Sg	10 01 53.4	-2.3
	2.2nm,0.5s						
KRBS	Karabastau	5.11	57	Pg	Pb	10 00 44.3	+3.2
	1.7nm,0.6s						
KRBS				Lg	Lg	10 01 53.4	
	2.2nm,0.5s						
KUU	Kurty	5.63	57	eP	Pb	10 00 53.9	+4.0
	2.4nm,1.0s						
KUU				eS	Sg	10 02 09.7	-2.5
	4.3nm,0.7s						
KUU	Kurty	5.63	57	Pg	Pb	10 00 53.9	+4.0
	2.4nm,1.0s						
KUU				Lg	Lg	10 02 09.7	
	4.3nm,0.7s						
KTBS	Karatobe	5.77	60	eP	Pb	10 00 55.8	+3.5
	1.4nm,0.6s						
KTBS				eS	Sg	10 02 13.1	-3.6
	3.3nm,0.5s						
KTBS	Karatobe	5.77	60	Pg	Pb	10 00 55.7	+3.5
	1.4nm,0.6s						
KTBS				Lg	Lg	10 02 13.1	
	3.3nm,0.5s						

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*GCG **29** 10:09:44.3±0.3, 13°.40N×91°.10W, h36^{km}±999^{km}, MD3.6*
*SNET **29** 10:09:44.6±1.4, 13°.47N×90°.88W, h16^{km}±6^{km}, ML3.5*
ISC 29 10:09:44.2±3.2**, 13°.4N**±0°.1×**91°.0W**±0°.1**, h31**^{km}±19^{km}**, n14, σ0s.63**/21**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	1.05	8	eP	Pn	10 10 03.4	+0.4
SLOZ	Alcaldia de Sa	1.33	62	eP	Pn	10 10 06.4	-0.3
SLOZ				eS	Sn	10 10 23.2	-0.2
NBG	Las Nubes	1.33	28	eP	Pb	10 10 08.2	-0.6
NBG				eS	Sb	10 10 26.8	+1.1
CEVE	Cerro Verde	1.40	72	eP	Pn	10 10 06.8	-1.1
CEVE				eS	Sn	10 10 25.0	-0.4
CEVE				IAML		10 10 30.9	
	comp=Z,1μm,0.4s						
STG3	Santiaguito 3,	1.41	337	eP	Pn	10 10 07.8	-0.2
JAYA	Jayaque - finc	1.53	80	eP	Pn	10 10 08.5	-1.0
JAYA				eS	Sn	10 10 28.7	+0.3
JAYA				IAML		10 10 31.5	
	comp=Z,934nm,0.2s						
CEDA	San Andres	1.61	76	eP	Pn	10 10 10.6	+0.1
CEDA				eS	Sn	10 10 30.0	-0.3
CEDA				IAML		10 10 38.1	
	comp=Z,767nm,0.2s						
LALI	Alcalda de L	1.63	87	eP	Pn	10 10 11.4	+0.5
TACO	Tacachico	1.69	70	eP	Pn	10 10 11.4	-0.3
TACO				eS	Sn	10 10 32.1	-0.2
OPAM	Oficina de Pla	1.78	80	eP	Pn	10 10 12.5	-0.4
PAVA	Las Pavas	2.03	81	eP	Pn	10 10 16.6	+0.2
PAVA				IAML		10 10 46.3	
	comp=Z,214nm,0.5s						
SCLA	Alcaldia de Sa	2.23	82	eP	Pn	10 10 19.2	+0.2
ALJI	Alcalda de J	2.36	92	eS	Sn	10 10 49.5	+0.6
COEB	Comit de Eme	2.40	88	eP	Pn	10 10 21.8	+0.2
COEB				eS	Sn	10 10 51.0	+1.0
COEB				IAML		10 10 56.2	
	comp=Z,186nm,0.3s						

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*IDC **29** 10:15:54.0±1.5, 34°.71N×23°.81E, h0^{km}, mb3.8/5, mb1 3.7/7, mb1mx3.5/45, mbtmp3.7/7, ML3.4/2, MS3.1/1, Ms1 3.2/1, ms1mx2.3/48, Error ellipse: s-maj=38.6km s-min=12.3km az=154.0*
*ISK **29** 10:15:54.0, 34°.65N×23°.70E, h10^{km}, ML3.5/16*
*ATH **29** 10:15:54.3, 34°.56N×23°.83E, h26^{km}±8^{km}, ML3.8/4, Error ellipse: s-maj=8.8km s-min=3.1km az=87.0*
*THE **29** 10:15:54.3, 34°.65N×23°.72E, h0^{km}±7^{km}, ML3.7/4, Error ellipse: s-maj=10.8km s-min=1.5km az=206.0*
ISC 29 10:15:56.6±1.2**, 34°.75N**±0°.06×**23°.80E**±0°.04**, h17**^{km}±5^{km}**, n43, σ1s.54**/56**, mb3.9**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.25	70	P	Pg	10 16 02.0	-0.3
GVD				S	Sb	10 16 07.5	+0.8
	32μm,0.4s						
GVD	Gavdhos	0.25	70	P	Pg	10 16 01.9	-0.3
GVD				S	Sb	10 16 07.7	+1.1
GVD				AML	AML	10 16 08.3	
	comp=E,55483μm,0.4s						
GVD				AML	AML	10 16 08.5	
	comp=N,70788μm,0.4s						
GVD	Gavdhos	0.25	70	PG	Pg	10 16 01.9	-0.3
GVD				SG	Sb	10 16 07.4	+0.8
GVDS	Gavdos	0.25	69	PG	Pg	10 16 01.6	-0.7
GVDS				SG	Sb	10 16 07.0	+0.3
KNDR	Palaiochora Ch	0.49	349	PG	Pg	10 16 06.1	-0.3
KNDR				SG	Sb	10 16 14.9	+1.4
IMMV	Iera Moni Meta	0.72	12	P	Pg	10 16 10.3	-0.4
IMMV				S	Sn	10 16 22.9	+0.4
	comp=N,7μm,0.2s						
IMMV	Iera Moni Meta	0.72	12	P	Pg	10 16 10.2	-0.4
IMMV				S	Sn	10 16 23.0	+0.4
IMMV				AML	AML	10 16 23.3	
	comp=E,18723μm,0.3s						
IMMV				AML	AML	10 16 24.5	
	comp=N,8831μm,0.4s						
IMMV	Iera Moni Meta	0.72	12	PG	Pg	10 16 10.3	-0.4
IMMV				SG	Sn	10 16 22.9	+0.4
VAM	Vamos	0.73	26	P	Pg	10 16 10.4	-0.4
VAM				S	Sn	10 16 23.6	+0.9
	comp=N,9μm,0.4s						
VAM	Vamos	0.73	26	P	Pg	10 16 10.5	-0.4
VAM				S	Sn	10 16 23.4	+0.7
VAM				AML	AML	10 16 23.7	
	comp=E,25444μm,0.4s						
VAM				AML	AML	10 16 25.8	
	comp=N,15126μm,0.5s						
RODP	Rodopos	0.81	357	P	Pb	10 16 11.6	-0.5
RODP				S	Sn	10 16 25.5	+0.8
	comp=N,315nm,0.4s						
RODP	Rodopos	0.81	357	PG	Pb	10 16 11.6	-0.5
IDI	Anoyia	1.04	59	Pg	Pb	10 16 14.9	-1.2
	comp=N,8.1nm,0.3s,baz=244,slow=13,SNR=40						
IDI				Lg	Lg	10 16 28.8	
	comp=N,30nm,0.3s,baz=200,slow=18,SNR=8.6						
IDI				LR	LR	10 16 42.1	
	comp=N,54nm,19.4s,baz=210,slow=46						
IDI	Anoyia	1.04	59	P	Pb	10 16 15.1	-1.0
IDI	Anoyia	1.04	59	P	Pb	10 16 15.1	-1.0
IDI				AML	AML	10 16 47.4	
	comp=N,1228μm,1.0s						
IDI				AML	AML	10 16 48.9	
	comp=E,1048μm,0.6s						
ANKY	Antikythira Is	1.18	340	P	Pn	10 16 18.6	+0.3
ANKY	Antikythira Is	1.18	340	P	Pn	10 16 18.6	+0.3
KTHA	Kythira Island	1.62	338	P	Pb	10 16 26.5	+0.6
ZKR	Zakros	2.02	79	PN	Pb	10 16 31.4	-1.3
VLI	Veliai	2.08	340	P	Pb	10 16 34.7	+0.8
SANT	Santorini	2.10	39	PN	Pb	10 16 33.6	-0.6
APE	Apeiranthos	2.70	31	PN	Pn	10 16 40.5	+1.3
ITM	Ithomi	2.86	328	PN	Pn	10 16 42.2	+0.8
DAT	Datca	3.65	56	PN	Pn	10 16 53.6	+1.3
BODT	Bodrum	3.66	50	PN	Pn	10 16 54.6	+2.2
ARG	Arkhangelos	3.82	66	PN	Pn	10 16 56.4	+1.9
GCAM	G?zelcaml?	4.04	42	PN	Pn	10 16 59.8	+2.2
CHOS	Chios island	4.05	26	PN	Pn	10 17 00.0	+2.2
URLA	Izmir	4.24	31	PN	Pn	10 17 01.7	+1.3
YER	Yerkesik	4.34	56	PN	Pn	10 17 04.2	+2.4
BRTR	Keskin Array B	9.28	55	Pn	Pn	10 18 12.0	+2.3
	comp=E,0.2nm,0.3s,baz=228,slow=15,SNR=4.0						
STON	Ston	9.40	331	ePn	Pn	10 18 10.5	-0.6
STON				Sn	Sn	10 19 48.0	-8.3
RICI	Ricice	10.15	331	ePn	Pn	10 18 18.2	-3.1
RICI				Sn	Sn	10 20 00.9	-14
HVAR	Hvar	10.17	328	ePn	Pn	10 18 24.0	+2.3
HVAR				Sn	Sn	10 20 12.0	-3.3
KIJV	Kijevo	10.86	330	ePn	Pn	10 18 27.9	-3.3
KIJV				Sn	Sn	10 20 17.3	-15
ZIRJ	Zirje	10.90	327	ePn	Pn	10 18 33.3	+1.6
ZIRJ				Sn	Sn	10 20 28.2	-5.0
GERES	GERESS Array B	15.95	335	Pn	P	10 19 45.1	+1.5
	comp=E,0.1nm,0.3s,baz=153,slow=13,SNR=6.2						
AKASG	Malin Array Be	16.42	12	Pn	Pn	10 19 46.8	+0.8
	comp=E,0.2nm,0.3s,baz=208,slow=10,SNR=1.5						
ESDC	Sonseca Array	22.61	291	P	P	10 20 58.0	+1.6
	comp=E,0.5nm,0.6s,baz=89,slow=9.6,SNR=4.0						
ESDC				LR	LR	10 29 46.9	
	comp=E,46nm,18.6s,baz=15,slow=37						
HFS	Hagfors	26.23	349	P	P	10 21 29.2	-1.1
	comp=E,1.6nm,0.6s,baz=149,slow=12,SNR=5.9						
TORD	Torodi Ar. Bea	29.38	228	P	P	10 21 58.8	-0.2
	comp=E,0.3nm,0.5s,baz=42,slow=8.6,SNR=2.2						
MKAR	Makanchi Array	44.92	56	P	P	10 24 10.5	+0.2
	comp=E,2.1nm,0.4s,baz=268,slow=7.6,SNR=37						
ZALV	Zalesovo Beam	46.09	46	P	P	10 24 18.8	-0.6
	comp=E,0.8nm,0.4s,baz=270,slow=8.0,SNR=3.6						

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*KRNET **29** 11:06:58.2±0.1, 39°.00N×73°.06E, h12^{km}, mb3.2*
*NNC **29** 11:07:00.1±10.0, 39°.04N×73°.88E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=73.3km s-min=42.1km az=160.0*
ISC 29 11:06:59.6±2.3**, 39°.1N**±0°.1×**73°.01E**±0°.06**, h10**^{km}**, n13, σ1s.75**/19**, 13C-7D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.01	22	⇓eP	Pg	11 07 18.3	-0.8
	baz=19						
SFK				⇓eS	Sg	11 07 32.6	+0.3
	baz=19						
DRK	Karamyk	1.02	294	⇑eP	Pg	11 07 17.9	-1.4
	baz=97						
DRK				⇑iS	Sg	11 07 32.8	+0.3
	baz=97						
OHH	Osh	1.45	353	⇑iP	Pb	11 07 26.4	-0.5
	baz=52						
OHH				⇑iS	Sg	11 07 47.2	+0.8
	baz=52						
BTK	Batken	1.95	301	⇑iP	Pb	11 07 34.5	-0.9
	baz=2.0						
BTK				⇑iS	Sb	11 08 00.9	+1.1
	baz=2.0						
TRKS	Terek-Say	2.83	330	⇓eP	Pn	11 07 45.7	+0.6
	baz=30						
TRKS				⇓iS	Sn	11 08 20.5	+1.1
	baz=30						
ARLS	Aral	2.96	19	⇓iP	Pn	11 07 47.9	+1.1
	baz=18						
ARLS				⇓iS	Sn	11 08 24.1	+1.7
	baz=18						
MNAS	Manas	3.43	354	⇑iP	Pn	11 07 54.7	+1.4
	baz=53						
MNAS				⇑iS	Sn	11 08 35.4	+1.4
	baz=53						
AAK	Ala-Archa	3.73	17	⇑Pg	Pb	11 08 02.3	-3.4
	7.9nm,0.8s						
AAK				⇓Lg	Lg	11 08 52.8	
	9.7nm,0.7s						
TKM2	Tokmak 2	4.31	26	⇑Pg	Pn	11 08 09.1	+3.7
	3.6nm,0.7s						
TKM2				⇑Lg	Lg	11 09 10.0	
	5.3nm,0.7s						
KK08	Karatay Array	4.45	336	⇑Pn	Pb	11 08 13.0	-4.8
	3.1nm,0.5s,baz=148,slow=13						
KK08				⇑Sn	Sb	11 09 09.6	-2.0
	5.0nm,0.6s,baz=143,slow=22						
SGDS	Sogindy	4.54	15	Pg	Pg	11 08 26.5	-0.1
	1.7nm,0.7s						
SGDS				Lg	Lg	11 09 26.3	
	6.0nm,1.1s						
BRLS	Borolday	4.62	330	Pg	Pg	11 08 33.3	+5.2
	2.4nm,0.3s						
BRLS				Lg	Lg	11 09 37.5	
	3.4nm,0.8s						
KUU	Kurty	5.42	26	Pg	Pg	11 08 41.4	-2.1
	2.7nm,1.1s						
KUU				Lg	Lg	11 09 51.2	
	5.8nm,1.0s						

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*IDC **29** 11:21:34.7±1.9, 33°.83N×38°.23W, h0^{km}, mb3.8/9, mb1 4.0/9, mb1mx3.8/38, mbtmp3.8/9, MS3.6/11, Ms1 3.6/11, ms1mx3.3/39, Error ellipse: s-maj=56.4km s-min=22.5km az=14.0*
ISC 29 11:21:36.3±1.7**, 33°.8N**±0°.3×**38°.2W**±0°.2**, h10**^{km}**, n21, σ0s.61**/9**, mb3.8**/9**, MS3.6**/11**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array	27.94	68	LR	LR	11 35 41.8	
	comp=Z,47nm,19.7s,baz=230,slow=30						
MDT	Midelt	28.03	83	LR	LR	11 36 07.4	
	comp=Z,196nm,20.1s,baz=317,slow=31						
SCHQ	Schefferville	28.98	325	LR	LR	11 38 29.2	
	comp=Z,135nm,18.3s,baz=105,slow=35						
DAVOX	Davos/Dischmat	38.31	56	P	P	11 28 58.2	+1.0
	0.8nm,0.4s,baz=233,slow=10,SNR=2.5						
GERES	GERESS Array B	40.95	52	P	P	11 29 19.2	+0.1
	0.9nm,0.9s,baz=277,slow=11,SNR=4.8						
GERES				LR	LR	11 44 17.8	
	comp=Z,35nm,18.7s,baz=284,slow=33						
DBIC	Dimbokro	41.02	124	LR	LR	11 44 32.7	
	comp=Z,82nm,19.3s,baz=331,slow=34						
TORD	Torodi Ar. Bea	41.65	110	P	P	11 29 25.1	+0.1
	1.1nm,1.0s,baz=307,slow=7.0,SNR=3.8						
TORD				LR	LR	11 45 20.2	
	comp=Z,153nm,18.9s,baz=325,slow=34						
ROSC	El Rosal	44.23	237	LR	LR	11 46 27.3	
	comp=Z,93nm,18.9s,baz=41,slow=34						
H10N2	ASCENSION HYDR	47.16	147	T	T	12 20 14.1	
	baz=332,slow=75,SNR=125						
H10N3	ASCENSION HYDR	47.16	147	T	T	12 20 04.4	
	baz=332,slow=75,SNR=153						
H10N1	ASCENSION HYDR	47.18	147	T	T	12 20 15.5	
	baz=332,slow=75,SNR=198						
H10S3	ASCENSION HYDR	48.08	148	T	T	12 21 17.0	
	baz=332,slow=74,SNR=193						
H10S2	ASCENSION HYDR	48.09	148	T	T	12 21 18.1	
	baz=248,slow=74,SNR=72						
RES	Resolute Bay	49.02	343	LR	LR	11 47 56.6	
	comp=Z,53nm,20.1s,baz=108,slow=32						
AKASG	Malin Array Be	50.89	49	P	P	11 30 36.7	-0.6
	1.5nm,0.8s,baz=277,slow=6.9,SNR=4.6						
AKASG				LR	LR	11 50 25.5	
	comp=Z,52nm,19.1s,baz=275,slow=34						
YKA	Yellowknife Ar	54.42	326	P	P	11 31 02.8	-0.5
	0.6nm,0.8s,baz=86,slow=7.5,SNR=7.0						
PDAR	Pinedale Array	55.18	302	P	P	11 31 09.3	0.0
	0.7nm,0.8s,baz=64,slow=6.8,SNR=4.8						
BRTR	Keskin Array B	56.45	62	P	P	11 31 18.0	-0.4
	1.4nm,0.9s,baz=287,slow=5.9,SNR=2.3						
BRTR				LR	LR	11 55 41.2	
	comp=Z,28nm,18.1s,baz=292,slow=36						
INK	Inuvik	60.93	335	P	P	11 31 49.6	+0.7
	3.5nm,1.1s,baz=82,slow=5.7,SNR=5.9						
MKAR	Makanchi Array	83.55	37	P	P	11 34 04.5	0.0
	2.0nm,1.0s,baz=318,slow=1.6,SNR=4.3						
BOSA	Boshof	86.40	128	LR	LR	12 11 17.1	
	comp=Z,40nm,18.1s,baz=186,slow=34						

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*EAF **29** 11:27:20.4±2.2, 18°.12S×27°.03E, h38^{km}±21^{km}, MD3.9*
BUL 29 11:27:17.4±1.4**, 17°.74S×27°.95E, h9**^{km}±18^{km}**, MD4.1, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLWY	Bulawayo	2.47	166	i P	Pn	11 27 58.5	+0.5
BLWY				i Sg	Sg	11 28 34.9	-1.9
BLWY	Bulawayo	2.47	166	i P	Pn	11 27 58.5	+0.5
BLWY				i Sg	Sg	11 28 34.9	-1.9
MATP	Matopo	2.72	169	i P	Pn	11 28 00.6	-0.8
MATP				i Sg	Sb	11 28 41.2	+1.3
MATP	Matopo	2.72	169	i P	Pn	11 28 00.6	-0.8
MATP				i Sg	Sb	11 28 41.2	+1.3
MSNA	Messina	4.98	157	i P	Pn	11 28 31.9	-0.5
MSNA				i S	Sn	11 29 26.0	-4.2
MSNA	Messina	4.98	157	i P	Pn	11 28 31.9	-0.5
MSNA				i S	Sn	11 29 26.0	-4.2
MOPA	Mopani	6.59	151	i P	Pn	11 28 58.2	+3.7
MOPA	Mopani	6.59	151	i P	Pn	11 28 58.2	+3.7

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*IDC **29** 11:29:20.2±1.5, 11°.70S×118°.81E, h0^{km}, mb4.2/4, mb1 4.1/9, mb1mx3.8/33, mbtmp4.0/9, ML3.7/5, MS3.1/3, Ms1 3.1/3, ms1mx2.7/32, Error ellipse: s-maj=49.1km s-min=20.0km az=47.0*
*NEIC **29** 11:29:26.0±1.3, 11°.63S±0°.08×118°.90E±0°.08, h32^{km}±6^{km}, mb4.5/16, Error ellipse: s-maj=11.7km s-min=10.5km az=223.0*
ISC 29 11:29:25.5±0.5**, 11°.63S**±0°.06×**119°.00E**±0°.06**, h35**^{km}**, n53, σ1s.55**/55**, mb4.4**/8**, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	4.36	47		Pn	11 30 28.0	-1.3
MMRI	Maumere	4.36	47	P	Pn	11 30 28.2	-1.1
BATI	Baumata	4.79	73	Pn	Pn	11 30 35.7	+0.4
	8.8nm,0.3s,baz=253,slow=18,SNR=3.8						
BATI				Sn	Sn	11 31 28.7	-0.9
	24nm,0.3s,baz=332,slow=20,SNR=8.0						
SOEI	Soe	5.50	71		Pn	11 30 46.0	+0.8
SOEI	Soe	5.50	71	P	Pn	11 30 47.0	+1.9
JAGI	Jajag, Banyuwa	5.71	303		Pn	11 30 46.2	-1.8
JAGI	Jajag, Banyuwa	5.71	303	P	Pn	11 30 46.3	-1.7
KAPI	Kappang	6.62	6	Pn	Pn	11 31 01.7	+1.4
	3.9nm,0.3s,baz=260,slow=1.6,SNR=9.5						
KAPI				Sn	Sn	11 32 08.8	-5.8
	5.8nm,0.3s,baz=138,slow=21,SNR=7.7						
KAPI				LR	LR	11 33 48.8	
	comp=Z,41nm,18.6s,baz=223,slow=40						
KAPI	Kappang	6.62	6		Pn	11 31 01.4	+1.1
FITZ	Fitzroy Crossi	9.08	136	Pn	Pn	11 31 33.8	-0.4
	0.6nm,0.3s,baz=314,slow=7.5,SNR=22						
FITZ				Sn	Sn	11 33 09.4	-5.9
	4.6nm,0.3s,baz=177,slow=18,SNR=17						
FITZ				LR	LR	11 35 13.2	
	comp=Z,94nm,18.9s,baz=272,slow=38						
UGM	Wanagama	9.13	293		Pn	11 31 33.9	-1.1
UGM	Wanagama	9.13	293	P	Pn	11 31 34.6	-0.4
MBWA	Marble Bar	9.50	176	P	Pn	11 31 39.7	-0.3
PSA00	Pilbara Seismi	9.92	175		Pn	11 31 45.4	-0.3
PSA00	Pilbara Seismi	9.92	175		Pn	11 31 44.7	-1.0
PSA00	Pilbara Seismi	9.92	175	P	Pn	11 31 44.4	-1.3
	42nm,0.7s						
KNRA	Kununurra	10.30	114	Pn	Pn	11 31 52.9	+1.9
KNRA	Kununurra	10.30	114	P	Pn	11 31 51.2	+0.2
	48nm,1.7s						
GIRL	Giralia	11.86	202	Pn	Pn	11 32 12.7	+0.4
GIRL	Giralia	11.86	202	P	Pn	11 32 11.7	-0.5
	132nm,0.8s						
MTN	Manton Dam	11.92	97	Pn	Pn	11 32 14.8	+1.7
KDU	Kakadu	13.21	96	P	Pn	11 32 30.9	+0.1
	16nm,1.0s						
MEEK	Meekatharra	14.94	181	P	Pn	11 32 51.5	-2.7
FAKI	Fak Fak	15.72	58	Pn	Pn	11 33 05.8	+1.3
FAKI				IAmb	IAmb	11 33 06.3	
	comp=Z,30nm,0.7s						
FAKI	Fak Fak	15.72	58	P	Pn	11 33 06.0	+1.4
WRKA	Warakurna	15.98	148	P	Pn	11 33 06.1	-1.7
	comp=Z,15nm,0.9s						
WB0	Warramunga Arr	16.87	121	P	P	11 33 21.2	+0.3
WRA	Warramunga Arr	16.91	121	P	Pn	11 33 19.1	-0.5
	comp=Z,0.1nm,0.3s,baz=283,slow=12,SNR=2.6						
WRA				S	Sn	11 36 13.5	-13
	comp=Z,0.3nm,0.3s,baz=288,slow=22,SNR=4.6						
WRAB	Tennant Creek	16.91	121	P	P	11 33 20.8	-0.5
WB2	Warramunga Arr	16.92	121	P	P	11 33 22.0	+0.6
MORW	Morawa	17.57	189	P	Pn	11 33 27.6	-0.1
MORW				IAmb	IAmb	11 33 28.9	
	comp=Z,24nm,0.7s						
MORW	Morawa	17.57	189	P	Pn	11 33 26.3	-1.4
	comp=Z,35nm,0.9s						
AS31	Alice Springs	18.55	132	P	Pn	11 33 40.9	+1.1
ASAR	Alice Springs	18.55	132	P	Pn	11 33 41.1	+1.2
	comp=Z,0.2nm,0.3s,baz=322,slow=14,SNR=18						
ASAR				S	Sn	11 36 55.8	-11
	comp=Z,0.4nm,0.3s,baz=297,slow=21,SNR=10						
BLDU	Ballidu	19.01	186	P	P	11 33 44.6	+0.2
	comp=Z,17nm,0.7s						
FORT	Forrest	20.82	158	P	P	11 34 04.9	+0.8
FORT				IAmb	IAmb	11 34 18.2	
	comp=Z,16nm,0.8s						
COEN	Coen	23.68	98	P	P	11 34 36.4	+2.1
STKA	Stephens Creek	28.98	138	P	P	11 35 22.5	+0.6
CMAR	Chiang Mai Arr	35.85	326	P	P	11 36 22.7	+0.5
	comp=Z,0.3nm,0.4s,baz=159,slow=7.7,SNR=1.2						
SONM	Songino Array	60.25	350	P	P	11 39 30.5	+0.1
	comp=Z,2.3nm,0.8s,baz=167,slow=8.1,SNR=16						
SONM	Songino Array	60.25	350	P	P	11 39 30.6	+0.1
SONM				IAmb	IAmb	11 39 31.4	
	comp=Z,1.9nm,0.8s						
BOOM	Boomskoye usch	66.75	327	P	P	11 40 13.2	-0.4
BOOM				IAmb	IAmb	11 40 21.6	
	comp=Z,3.2nm,0.9s						
MK31	Makanchi Array	66.79	333	P	P	11 40 13.9	+0.3
MKAR	Makanchi Array	66.79	333	P	P	11 40 13.7	+0.1
	comp=Z,4.9nm,0.7s,baz=156,slow=7.3,SNR=45						
MAKZ	Makanchi	66.94	333	P	P	11 40 14.8	+0.3
KKAR	Karatay Array	70.17	324	P	P	11 40 34.7	0.0
ZAA0	Zalesovo Array	71.49	339	IAmb	IAmb	11 40 42.1	
	comp=Z,3.4nm,0.7s						
ZAA0				P	P	11 40 42.8	+0.4
ZALV	Zalesovo Beam	71.49	339	P	P	11 40 41.4	-1.0
	comp=Z,2.6nm,0.5s,baz=152,slow=5.9,SNR=8.9						
ZALV	Zalesovo Beam	71.49	339	P	P	11 40 42.0	-0.5
QSPA	South Pole Qui	78.38	180	P	P	11 41 23.5	+1.1
QSPA				IAmb	IAmb	11 41 43.1	
	comp=Z,4.2nm,1.4s						
ABKAR	Akbulak array	79.70	325	P	P	11 41 30.2	+0.6
PPT	Papeete	87.89	107	LR	LR	12 20 48.6	
	comp=Z,41nm,18.2s,baz=79,slow=35						
SNAA	Sanae	88.48	196	P	P	11 42 14.2	+0.1
SNAA				IAmb	IAmb	11 42 23.5	
	comp=Z,5.1nm,1.3s						

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*IDC **29** 11:38:27.5±1.0, 4°.53S×152°.90E, h0^{km}, mb4.2/7, mb1 4.4/7, mb1mx4.0/40, mbtmp4.3/7, MS3.0/3, Ms1 3.0/3, ms1mx2.8/22, Error ellipse: s-maj=30.8km s-min=24.5km az=131.0*
*NEIC **29** 11:38:36.8±1.6, 4°.74S±0°.10×153°.04E±0°.08, h58^{km}±6^{km}, mb4.5/16, Error ellipse: s-maj=14.2km s-min=11.0km az=195.0*
ISC 29 11:38:35.7±0.7**, 4°.73S**±0°.08×**153°.04E**±0°.10**, h55**^{km}**, n37, σ1s.20**/34**, mb4.4**/14**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.02	302	Pn	Pn	11 38 55.3	+1.4
PMG	Port Moresby	7.46	231	Pn	Pn	11 40 22.8	+0.9
	3.1nm,0.3s,baz=38,slow=14,SNR=7.9						
PMG				Sn	Sn	11 41 44.7	-0.4
	6.9nm,0.3s,baz=332,slow=19,SNR=9.9						
PMG				LR	LR	11 43 13.8	
	comp=Z,94nm,20.2s,baz=58,slow=38						
PMG	Port Moresby	7.46	231		Pn	11 40 23.2	+1.3
CTAO	Charters Tower	16.63	203	P	P	11 42 26.5	-0.4
DZM	Mont Dzumac	21.58	144	P	P	11 43 21.0	0.0
	16nm,0.7s,baz=319,slow=14,SNR=23						
DZM	Mont Dzumac	21.58	144	P	P	11 43 21.2	+0.2
DZM				IAmb	IAmb	11 43 23.6	
	comp=Z,15nm,0.8s						
OUENC	Ouen Island, N	22.08	144	P	P	11 43 25.3	-1.0
OUENC				IAmb	IAmb	11 43 28.4	
	comp=Z,14nm,0.9s						
MTN	Manton Dam	23.08	248		P	11 43 37.1	+0.2
MTN				IAmb	IAmb	11 43 42.1	
	comp=Z,41nm,1.4s						
WB0	Warramunga Arr	23.52	229	P	P	11 43 40.2	-0.9
WB0				IAmb	IAmb	11 43 42.0	

	comp=Z,8.5nm,0.7s						
WB2	Warramunga Arr	23.66	229	P	P	11 43 41.0	-1.4
WB2				IAmb	IAmb	11 43 42.7	
	comp=Z,9.6nm,0.9s						
WRA	Warramunga Arr	23.66	229	P	P	11 43 41.5	-1.0
	comp=Z,4.8nm,0.5s,baz=53,slow=9.8,SNR=28						
KNRA	Kununurra	26.21	244	P	P	11 44 05.0	-0.6
AS31	Alice Springs	26.36	223	P	P	11 44 06.3	-0.5
ASAR	Alice Springs	26.36	223	P	P	11 44 05.5	-1.4
	comp=Z,2.0nm,0.5s,baz=53,slow=9.0,SNR=30						
ASAR	Alice Springs	26.36	223	P	P	11 44 06.4	-0.6
H11S3	WAKE ISLAND Hy	26.72	30	T	T	12 11 55.5	
	baz=211,slow=76,SNR=6.9						
H11S2	WAKE ISLAND Hy	26.72	30	T	T	12 12 02.6	
	baz=211,slow=76,SNR=5.9						
H11S1	WAKE ISLAND Hy	26.73	30	T	T	12 11 53.8	
	baz=211,slow=76,SNR=4.6						
STKA	Stephens Creek	29.06	200	P	P	11 44 29.8	-1.1
	comp=Z,1.4nm,0.7s,baz=34,slow=12,SNR=3.6						
STKA				LR	LR	11 55 20.6	
	comp=Z,60nm,18.6s,baz=209,slow=35						
STKA	Stephens Creek	29.06	200	P	P	11 44 29.9	-1.1
FITZ	Fitzroy Crossi	29.90	241	P	P	11 44 37.0	-1.5
	comp=Z,9.1nm,0.5s,baz=49,slow=7.0,SNR=37						
FORT	Forrest	34.99	219	P	P	11 45 21.5	-1.4
NNZ	Nelson	40.64	156		P	11 46 12.1	+1.7
GIRL	Giralia	41.51	241	P	P	11 46 18.7	+0.9
RPZ	Rata Peaks	41.95	160	P	P	11 46 21.6	+0.4
RPZ				IAmb	IAmb	11 46 26.8	
	comp=Z,10nm,0.8s						
MJAR	Matsushiro Arr	43.34	343	LR	LR	12 01 56.2	
	comp=Z,14nm,21.3s,baz=80,slow=33						
PEA0B	Petropavlovsk-	57.76	3	P	P	11 48 21.3	+0.4
PEA0B				IAmb	IAmb	11 48 43.6	
	comp=Z,3.8nm,0.8s						
VNDA	Vanda	72.89	178	P	P	11 50 01.0	+2.6
	comp=Z,1.1nm,0.6s,baz=340,slow=6.6,SNR=7.1						
VNDA	Vanda	72.89	178	P	P	11 50 00.7	+2.2
IMAR	Indian Mountai	80.24	19	P	P	11 50 40.3	+0.2
ILAR	Eielson Array	82.01	22	P	P	11 50 47.7	-1.9
	comp=Z,0.4nm,0.8s,baz=247,slow=4.6,SNR=2.5						
QSPA	South Pole Qui	85.23	180	P	P	11 51 07.1	+0.9
QSPA				IAmb	IAmb	11 51 08.8	
	comp=Z,4.1nm,0.7s						
GERES	GERESS Array B	124.12	329	PKP	PKPdf	11 57 28.4	+0.1
	comp=Z,0.4nm,0.6s,baz=35,slow=2.4,SNR=4.2						
GERES	GERESS Array B	124.12	329		PKPdf	11 57 28.0	-0.4
TORD	Torodi Ar. Bea	150.51	288	PKPbc	PKPbc	11 58 21.8	-0.6
	comp=Z,1.6nm,0.7s,baz=44,slow=2.0,SNR=9.6						
BDFB	Brasilia	150.94	135	PKPbc	PKPbc	11 58 23.2	-0.3
	comp=Z,2.9nm,0.7s,baz=124,slow=2.0,SNR=3.9						
BDFB	Brasilia	150.94	135		PKPdf	11 58 15.3	-2.5

IDC ***29*** *11:39:18.5±1.1, 35.°76N×97.°47W, h0^{km}, mb4.1/7, mb1 4.2/12, mb1mx3.9/48, mbtmp4.1/12, ML3.9/5, MS3.7/24, Ms1 3.7/24, ms1mx3.6/46, Error ellipse: s-maj=18.9km s-min=12.1km az=14.0*

ANF ***29*** *11:39:19.1±0.2, 35.°72N×97.°42W, h8^{km}, ML5.4/29, Error ellipse: s-maj=2.3km s-min=2.1km az=90.0*

TUL ***29*** *11:39:19.2±1.6, 35.°67N±0.°03×97.°41W±0.°05, h7^{km}±5^{km}, ML4.5, mb4.3/13(NEIC), mb_Lg4.5/122(NEIC), Mwr4.3/88(NEIC), Error ellipse: s-maj=5.5km s-min=3.7km az=102.0*

NEIC ***29*** *11:39:19.3, 35.°69N×97.°40W, h7^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.67; $M_{\theta\theta}$3.28; $M_{\phi\phi}$-3.94; $M_{r\theta}$-0.40; $M_{\theta\phi}$1.22; $M_{\phi r}$-0.20; Fault plane solution: $M_0$3.88000×10^{15} NP1:ϕ_s215.35000°, δ85.15000°, λ172.83000°. NP2:ϕ_s305.96000°, δ82.86000°, λ4.89000°. Principal axes: T 3.5392, Plg8.0000°, Azm171.0000°; N 0.6085, Plg81.0000°, Azm1.0000°; P -4.1477, Plg2.0000°, Azm261.0000°;*

NEIC ***29*** *11:39:19.1±1.4, 35.°70N±0.°02×97.°40W±0.°05, h4^{km}±4^{km} Error ellipse: s-maj=6.5km s-min=2.6km az=65.0*

ISC 29 11:39:18.8±0.8**, 35.°71N**±0.°02×**97.°41W**±0.°02**, h7**^{km}±6^{km}**, n301,** σ**0.^{s}96**/323**, mb4.1**/12**, MS3.8**/16**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	Oakdale Elemen	0.13	184		Pg	11 39 21.5	-0.2
OK009				Sg	Sg	11 39 23.4	-0.2
OK025	Westminster Rd	0.15	155		Pg	11 39 21.8	-0.1
OK025				Sg	Sg	11 39 23.7	-0.3
BCOK	Bluff Creek, N	0.17	250	Pg	Pg	11 39 22.9	+0.5
BCOK				Sg	Sg	11 39 25.7	+1.0
OK001	Jones High Sch	0.18	147	Pg	Pg	11 39 22.5	0.0
OK001				Sg	Sg	11 39 25.2	+0.1
OK005	Luther M Schoo	0.19	108		Pg	11 39 23.2	+0.5
OKCFA	Oklahoma City	0.30	186		Pg	11 39 24.6	-0.2
OKCFA				Sg	Sg	11 39 28.5	-0.2
OKCSW	OKLAHOMA CITY	0.31	184	Pg	Pg	11 39 24.7	-0.2
OKCSW				Sg	Sg	11 39 28.8	-0.2
FNO	Franklin	0.46	179	Pg	Pg	11 39 27.4	-0.2
OK031	S. Brethren Rd	0.52	63	Pg	Pg	11 39 29.8	+0.8
OK031				Sg	Sb	11 39 37.5	-0.7
OK011	Prague	0.63	111		Pg	11 39 30.9	-0.2
W35A	Tecumseh	0.71	142	Pg	Pg	11 39 32.1	-0.4
W35A				Sg	Sg	11 39 41.5	-0.3
QUOK	Quay	0.73	51	Pg	Pb	11 39 33.7	-0.2
QUOK				Sg	Sb	11 39 44.2	+0.1
CROK	Carrier	0.92	330	Pg	Pb	11 39 37.1	+0.1
BLOK	Blackwell	1.06	9		Pb	11 39 39.8	+0.3
X34A	Smith Ranch, M	1.16	197		Pg	11 39 40.5	-0.7
X34A				IAmb_Lg		11 39 53.8	
	comp=Z,3μm,1.2s						
GC02	Grant County #	1.19	342		Pb	11 39 42.0	+0.2
OK032	Salt Plains WL	1.27	330		Pn	11 39 43.2	+0.3
KAN13	South Haven SW	1.30	358		Pg	11 39 44.2	+0.4
KAN14	Manchester OK	1.32	340		Pb	11 39 44.2	+0.3
TUL1	Leonard	1.33	81	Pn	Pn	11 39 43.1	-0.8
TUL1	Leonard	1.33	81	P	Pn	11 39 43.0	-0.8
	baz=260,SNR=1000						
TUL1				S	Sn	11 40 02.0	+0.2
	baz=260						
TUL1	Leonard	1.33	81	P	Pn	11 39 43.1	-0.8
	baz=260,SNR=1000						
TUL1				S	Sn	11 40 02.3	+0.5
	baz=260						
T35A	Sooner Cattle	1.40	31		Pn	11 39 45.1	+0.3
T35B	Sooner Cattle	1.40	31	P	Pn	11 39 45.4	+0.5
	baz=210,SNR=1000						
T35B				S	Sg	11 40 04.6	+0.6
	baz=210						
KAN05	Bluff City Nor	1.44	345		Pb	11 39 46.5	+0.5
OK035	E0210 Rd and N	1.44	314	Pn	Pn	11 39 46.1	+0.7
U32A	Winter Ranch,	1.45	298	Pn	Pn	11 39 46.2	+0.7
U32A	Winter Ranch,	1.45	298	P	Pn	11 39 46.2	+0.7
	baz=118,SNR=426						
U32A				S	Sb	11 40 05.5	+0.7
	baz=118						
KAN01	Argonia South	1.46	349		Pb	11 39 46.8	+0.4
KAN01				IAmb_Lg		11 40 08.8	
	comp=Z,2μm,0.9s						
KAN10	Anthony SW Sta	1.51	339		Pb	11 39 47.5	+0.2
KAN06	Argonia West S	1.57	347		Pb	11 39 48.7	+0.4
KAN08	Anthony NE Sta	1.58	344		Pb	11 39 48.7	+0.4
KAN08				IAmb_Lg		11 40 12.7	
	comp=Z,3μm,0.9s						
KAN16	Harper SW Stat	1.60	341		Pb	11 39 48.8	+0.1
KAN16				IAmb_Lg		11 40 13.7	
	comp=Z,2μm,0.9s						
KAN12	Harper NE Stat	1.65	344		Pb	11 39 49.6	+0.1
LOOK	Love County	1.73	174	Pn	Pn	11 39 49.6	+0.3
LOOK				IAmb_Lg		11 40 15.5	
	comp=Z,2μm,1.0s						
X37A	Clayton	2.01	123	Pn	Pn	11 39 53.8	+0.6
X37A				IAmb_Lg		11 40 25.2	
	comp=Z,2μm,0.7s						
X37A	Clayton	2.01	123	P	Pn	11 39 53.8	+0.6
	baz=304,SNR=859						
X37A				S	Sb	11 40 20.3	-0.7
	baz=304						
Z35A	Perchaven, San	2.38	177	Pn	Pn	11 39 58.7	+0.4
Z35A	Perchaven, San	2.38	177	P	Pn	11 39 59.0	+0.7
	baz=357,SNR=139						
Z35A				S	Sn	11 40 29.1	+1.4
	baz=357						
U38A	Gravette	2.56	73		Pn	11 40 02.0	+1.4
U38A	Gravette	2.56	73	P	Pn	11 40 01.7	+1.0
	baz=254,SNR=932						
HHAR	Hobbs	2.87	78		Pn	11 40 06.0	+1.0
R32A	Long Quarter,	2.90	339		Pn	11 40 06.3	+0.9
R32A	Long Quarter,	2.90	339	P	Pn	11 40 06.3	+0.9
	baz=159						
W39A	Magazine	3.01	99		Pn	11 40 07.2	+0.3
W39A				IAmb_Lg		11 40 59.3	
	comp=Z,855nm,0.9s						
W39A	Magazine	3.01	99	P	Pn	11 40 07.2	+0.3
	baz=280,SNR=342						
W39A				S	Sn	11 40 44.4	+1.3
	baz=280						
W39A	Magazine	3.01	99	P	Pn	11 40 07.2	+0.3
	baz=280,SNR=34						
W39A				S	Sn	11 40 42.8	-0.3
	baz=280						
Z38A	Mt. Pleasant	3.16	140	Pn	Pn	11 40 09.1	+0.1
Z38A				IAmb_Lg		11 41 06.8	
	comp=Z,798nm,0.9s						
Z38A	Mt. Pleasant	3.16	140	P	Pn	11 40 09.3	+0.3
	baz=321,SNR=33						
Z38A				S	Sn	11 40 47.2	+0.2
	baz=321						
MIAR	Mount Ida	3.35	109		Pn	11 40 12.4	+0.8
MIAR				IAmb_Lg		11 41 14.1	
	comp=Z,2μm,0.9s						
MIAR	Mount Ida	3.35	109	P	Pn	11 40 12.4	+0.8
	baz=291,SNR=410						
MIAR				S	Sn	11 40 52.9	+1.2
	baz=291						
MIAR	Mount Ida	3.35	109	P	Pn	11 40 12.1	+0.5
	baz=291,SNR=49						
MIAR				S	Sn	11 40 52.0	+0.3
	baz=291						
KSU1	Kansas State U	3.44	10	Pn	Pn	11 40 13.8	+0.9
KSU1				IAmb_Lg		11 41 16.6	
	comp=Z,3μm,1.2s						
KSU1	Kansas State U	3.44	10	P	Pn	11 40 13.5	+0.7
	baz=191,SNR=46						
KSU1	Kansas State U	3.44	10	P	Pn	11 40 13.8	+0.9
	baz=191,SNR=90						
AMTX	Amarillo	3.59	258	Pn	Pn	11 40 15.9	+0.9
AMTX				IAmb_Lg		11 41 19.2	
	comp=Z,1μm,0.8s						
AMTX	Amarillo	3.59	258	P	Pn	11 40 15.9	+0.9
	baz=76						
AMTX				S	Sn	11 40 58.5	+0.9
	baz=76						
AMTX	Amarillo	3.59	258	P	Pn	11 40 16.0	+1.1
	baz=76						
ABTX	Abilene, Hawle	3.59	212		Pn	11 40 15.1	0.0
ABTX				IAmb_Lg		11 41 15.0	
	comp=Z,1μm,0.8s						
ABTX	Abilene, Hawle	3.59	212	P	Pn	11 40 15.3	+0.3
	baz=31						
ABTX				S	Sn	11 40 58.6	+0.9
	baz=31						
ABTX	Abilene, Hawle	3.59	212	P	Pn	11 40 15.0	0.0
	baz=31						
ABTX				S	Sn	11 40 58.5	+0.8
	baz=31						
CBKS	Cedar Bluff	3.61	330	Pn	Pn	11 40 16.3	+1.1
CBKS				IAmb_Lg		11 41 18.5	
	comp=Z,1μm,0.7s						
CBKS	Cedar Bluff	3.61	330	P	Pn	11 40 16.6	+1.4
	baz=148,SNR=89						
CBKS	Cedar Bluff	3.61	330	P	Pn	11 40 16.2	+1.0
	baz=148,SNR=45						
WHTX	Lake Whitney,	3.71	181	Pn	Pn	11 40 16.3	-0.2
WHTX	Lake Whitney,	3.71	181	P	Pn	11 40 16.8	+0.2
	baz=0.8,SNR=115						
WHTX	Lake Whitney,	3.71	181	P	Pn	11 40 16.5	-0.1
	baz=0.8						
WHTX				Sb	Sb	11 41 12.0	+2.0
	baz=0.8						
U40A	Yellville	3.75	79		Pn	11 40 17.2	+0.1
U40A				IAmb_Lg		11 41 24.3	
	comp=Z,2μm,0.8s						
U40A	Yellville	3.75	79	P	Pn	11 40 17.2	+0.1
	baz=261,SNR=194						
U40A				P	Pn	11 40 17.2	+0.1
	baz=261,SNR=194						
U40A				S	Sn	11 41 02.9	+1.4
	baz=261						
U40A				S	Sn	11 41 02.9	+1.4
	baz=261						
U40A	Yellville	3.75	79	P	Pn	11 40 17.1	+0.1
	baz=261,SNR=27						
S39A	Bolivar	3.83	58	Pn	Pn	11 40 19.0	+0.7
S39A				IAmb_Lg		11 41 26.1	
	comp=Z,2μm,1.0s						
S39A	Bolivar	3.83	58	P	Pn	11 40 18.9	+0.7
	baz=240,SNR=114						
S39A				S	Sn	11 41 04.6	+1.0
	baz=240						
237A	Washetta, Mont	3.94	160		Pn	11 40 19.4	-0.2
237A				IAmb_Lg		11 41 30.5	
	comp=Z,925nm,0.8s						
237A	Washetta, Mont	3.94	160	P	Pn	11 40 19.3	-0.4
	baz=341,SNR=58						
237A				S	Sn	11 41 05.0	-1.0
	baz=341						
X40A	Basin Creek Fa	3.95	107		Pn	11 40 20.4	+0.7
X40A	Basin Creek Fa	3.95	107	P	Pn	11 40 20.5	+0.7
	baz=289,SNR=105						
X40A				P	Pn	11 40 20.5	+0.7
	baz=289,SNR=105						
X40A	Basin Creek Fa	3.95	107	P	Pn	11 40 19.7	-0.1
	baz=289,SNR=25						
WLAR	White Oak Lake	4.08	118		Pn	11 40 21.9	+0.3
WLAR				IAmb_Lg		11 41 36.6	
	comp=Z,846nm,0.7s						
WHAR	Wooly Hollow	4.20	94	Pn	Pn	11 40 23.5	+0.2
WHAR				IAmb_Lg		11 41 43.1	
	comp=Z,1μm,1.0s						
W41B	Gary Mavity, V	4.25	96	P	Pn	11 40 24.3	+0.3
	baz=278,SNR=340						
W41B				S	Sn	11 41 15.0	+1.2
	baz=278						
W41B	Gary Mavity, V	4.25	96	P	Pn	11 40 24.2	+0.3
	baz=278,SNR=58						
W41B				S	Sn	11 41 13.3	-0.5
	baz=278						
FCAR	Ozark Folk Cen	4.30	86		Pn	11 40 24.2	-0.4
FCAR				IAmb_Lg		11 41 35.6	
	comp=Z,1μm,0.9s						
MGMO	Mountain Grove	4.39	69		Pn	11 40 27.0	+1.1
MGMO				IAmb_Lg		11 41 48.1	
	comp=Z,653nm,0.7s						
Z41A	Richland Creek	4.53	121	P	Pn	11 40 27.9	+0.1
	baz=304,SNR=9.7						
Z41A				P	Pn	11 40 27.9	+0.1
	baz=304,SNR=9.7						
Z41A	Richland Creek	4.53	121	P	Pn	11 40 27.3	-0.4
	baz=304,SNR=9.3						
Z41A				S	Sn	11 41 18.6	-2.1
	baz=304						
NATX	Nacogdoches	4.56	149		Pn	11 40 29.9	+1.6
NATX	Nacogdoches	4.56	149	P	Pn	11 40 28.8	+0.6
	baz=331						
NATX	Nacogdoches	4.56	149	P	Pn	11 40 27.9	-0.4
	baz=331						
MSTX	Muleshoe	4.74	250		Pn	11 40 31.1	+0.3
MSTX	Muleshoe	4.74	250	P	Pn	11 40 31.1	+0.3
	baz=67,SNR=28						
MSTX	Muleshoe	4.74	250	P	Pn	11 40 31.1	+0.3
	baz=67,SNR=22						
MSTX				S	Sn	11 41 26.7	+0.7
	baz=67						
R40A	Maddies Statio	4.85	56		Pn	11 40 32.6	+0.4
R40A				IAmb_Lg		11 41 55.5	
	comp=Z,1μm,0.9s						
R40A	Maddies Statio	4.85	56	P	Pn	11 40 33.0	+0.8
	baz=239,SNR=64						
435B	Jarrell	4.92	182	Pn	Pn	11 40 33.1	-0.1
435B				IAmb_Lg		11 42 04.0	
	comp=Z,963nm,0.7s						
435B	Jarrell	4.92	182	P	Pn	11 40 32.6	-0.6
	baz=1.8,SNR=17						
435B	Jarrell	4.92	182	P	Pn	11 40 33.0	-0.1
	baz=1.8						
435B				Sb	Sb	11 41 48.3	+3.6
	baz=1.8						
P38A	Dawn	4.97	37	Pn	Pn	11 40 35.2	+1.4
P38A				IAmb_Lg		11 42 02.3	
	comp=Z,853nm,0.9s						
P38A	Dawn	4.97	37	P	Pn	11 40 34.3	+0.4
	baz=219,SNR=50						
CCAR	Cane Creek	4.97	109	Pn	Pn	11 40 34.6	+0.7
CCAR				IAmb_Lg		11 42 04.3	
	comp=Z,693nm,0.8s						
N33B	J Bar K, Exete	5.01	360	P	Pn	11 40 34.7	+0.2
	baz=180,SNR=16						
N33A	J Bar K, Exete	5.02	360	Pn	Pn	11 40 34.8	+0.2
KSCO	Kaye Shedlock’	5.30	310	Pn	Pn	11 40 39.5	+1.0
KSCO				IAmb_Lg		11 42 23.9	
	comp=Z,1μm,0.7s						
KSCO	Kaye Shedlock’	5.30	310	P	Pn	11 40 39.2	+0.7
	baz=127,SNR=50						
KSCO	Kaye Shedlock’	5.30	310	P	Pn	11 40 39.3	+0.8
	baz=127,SNR=31						
KSCO				S	Sn	11 41 39.6	-0.3
	baz=127						
N35A	Tabor	5.32	15	Pn	Pn	11 40 39.2	+0.5
N35A	Tabor	5.32	15	P	Pn	11 40 39.0	+0.3
	baz=195,SNR=21						
CCM	Cathedral Cave	5.47	63		Pn	11 40 41.7	+1.0
CCM				IAmb_Lg		11 42 16.9	
	comp=Z,829nm,0.9s						
CCM	Cathedral Cave	5.47	63	P	Pn	11 40 41.4	+0.7
	baz=246,SNR=18						
CCM	Cathedral Cave	5.47	63	P	Pn	11 40 40.4	-0.3
	baz=246						
CCM				S	Sn	11 41 43.5	-0.4
	baz=246						
HBAR	Harrisburg	5.50	90	Pn	Pn	11 40 42.9	+1.7
HBAR				IAmb_Lg		11 42 16.9	
	comp=Z,1μm,0.8s						
JCT	Junction City	5.59	202	Pn	Pn	11 40 42.5	0.0
JCT	Junction City	5.59	202	P	Pn	11 40 42.2	-0.3
	baz=20,SNR=73						
JCT	Junction City	5.59	202	P	Pn	11 40 42.1	-0.3
	baz=20,SNR=26						
JCT				S	Sn	11 41 46.7	-0.3
	baz=20						
P40A	Paris	5.71	47		Pn	11 40 45.1	+1.0
BGNE	Belgrade	5.71	354		Pn	11 40 43.8	-0.4
BGNE				IAmb_Lg		11 42 33.7	
	comp=Z,1μm,0.7s						
BGNE	Belgrade	5.71	354	P	Pn	11 40 43.7	-0.4
	baz=174,SNR=16						
BGNE	Belgrade	5.71	354	P	Pn	11 40 44.1	0.0
	baz=174,SNR=15						
PBMO	Poplar Bluff	5.74	77		Pn	11 40 46.2	+1.7
PBMO				IAmb_Lg		11 42 22.5	
	comp=Z,1μm,0.8s						
LPAR	Lepanto	5.79	89		Pn	11 40 46.4	+1.3
LPAR				IAmb_Lg		11 42 33.5	
	comp=Z,1μm,1.0s						
143A	Socs Landing,	5.81	119		Pn	11 40 47.0	+1.5
143A				IAmb_Lg		11 42 31.4	
	comp=Z,608nm,0.8s						
T25A	Trinidad	5.82	286	Pn	Pn	11 40 46.6	+0.8
T25A				Pg	Pg	11 41 06.8	-3.5
T25A				IAmb_Lg		11 42 31.5	
	comp=Z,1μm,0.9s						
T25A	Trinidad	5.82	286	P	Pn	11 40 46.4	+0.7
	baz=102,SNR=31						
T25A				S	Sn	11 41 53.2	+0.4
	baz=102						
HKT	Hockley	5.90	167	Pn	Pn	11 40 46.9	+0.3
GNAR	Gosnell	6.01	85	IAmb_Lg		11 42 32.3	
	comp=Z,2μm,0.8s						
N38A	Joes South For	6.04	32	Pn	Pn	11 40 48.6	+0.1
N38A	Joes South For	6.04	32	P	Pn	11 40 48.8	+0.2
	baz=214,SNR=47						
FVM	French Village	6.04	66	Pn	Pn	11 40 49.1	+0.5
FVM				IAmb_Lg		11 42 34.0	
	comp=Z,1μm,0.9s						
FVM	French Village	6.04	66	P	Pn	11 40 48.8	+0.2
	baz=250,SNR=23						
441A	DeRidder	6.08	143	Pn	Pn	11 40 49.9	+0.7
MET	Memphis--Engin	6.13	93	Pn	Pn	11 40 49.9	0.0
MET				IAmb_Lg		11 42 40.8	
	comp=Z,765nm,0.9s						
PARMO	Parma	6.27	79	Pn	Pn	11 40 54.3	+2.6
PVMO	Portageville	6.29	81	IAmb_Lg		11 42 56.2	
	comp=Z,958nm,0.9s						
L34A	Svendsen Farm,	6.30	7		Pn	11 40 51.9	-0.2
PENMO	Penman	6.35	81	IAmb_Lg		11 42 57.9	
	comp=Z,828nm,0.7s						
OGNE	Ogallala	6.36	327	Pn	Pn	11 40 54.2	+1.2
OGNE				IAmb_Lg		11 42 49.6	
	comp=Z,1μm,0.7s						
OGNE	Ogallala	6.36	327	P	Pn	11 40 54.0	+0.9
	baz=144,SNR=62						
OGNE				S	Sn	11 42 05.3	-0.7
	baz=144						
SLM	Saint Louis	6.43	61	IAmb_Lg		11 42 56.0	
	comp=Z,744nm,0.8s						
LNXT	Lenox	6.44	84	Pn	Pn	11 40 55.6	+1.5
LNXT				IAmb_Lg		11 42 58.3	
	comp=Z,1μm,0.8s						
HENM	Henderson Moun	6.50	79	Pn	Pn	11 40 56.2	+1.4
HALT	Halls	6.56	86	IAmb_Lg		11 42 54.5	
	comp=Z,968nm,0.8s						
GLAT	Glass	6.61	83	Pn	Pn	11 40 57.9	+1.5
GLAT				IAmb_Lg		11 42 54.3	
	comp=Z,953nm,0.9s						
VBMS	Vicksburg	6.71	119	S	Sn	11 42 12.4	-1.9
	baz=303						
Y45A	Yeager Farm, C	6.73	104	Pn	Pn	11 40 57.6	-0.4
Y45A				IAmb_Lg		11 43 04.9	
	comp=Z,445nm,0.8s						
Y45A	Yeager Farm, C	6.73	104	P	Pn	11 40 58.0	-0.1
	baz=288,SNR=14						
W45A	Hickory Valley	6.74	92		Pn	11 40 58.5	+0.4
W45A				IAmb_Lg		11 43 07.2	
	comp=Z,605nm,0.7s						
W45A	Hickory Valley	6.74	92	P	Pn	11 40 58.3	+0.2
	baz=277,SNR=30						
SDCO	Great Sand Dun	6.80	290		Pn	11 41 01.2	+1.8
SDCO				IAmb_Lg		11 42 60.0	
	comp=Z,587nm,1.1s						
SDCO	Great Sand Dun	6.80	290	P	Pn	11 41 00.9	+1.5
	baz=105,SNR=122						
S44A	Carbondale	6.84	71		Pn	11 40 59.9	+0.3
S44A				IAmb_Lg		11 43 05.1	
	comp=Z,1μm,1.0s						
S44A	Carbondale	6.84	71	P	Pn	11 40 59.9	+0.3
	baz=255,SNR=14						
735A	Kenedy	6.85	183	Pn	Pn	11 41 00.9	+1.2
735A				IAmb_Lg		11 43 12.1	
	comp=Z,609nm,0.9s						
UTMT	University of	6.96	82	Pn	Pn	11 41 02.2	+1.1
UTMT				IAmb_Lg		11 43 01.6	
	comp=Z,1μm,0.8s						
Q24A	Divide	6.96	300	P	Pn	11 41 02.0	+0.4
	baz=116,SNR=14						
Q24A				S	Sn	11 42 20.5	-0.7
	baz=116						
K31A	O'Neill	6.98	352	Pn	Pn	11 41 02.5	+1.1
SCIA	State Center	7.00	27	Pn	Pn	11 41 01.9	+0.2
SCIA				IAmb_Lg		11 43 06.1	
	comp=Z,909nm,0.8s						
SCIA	State Center	7.00	27	P	Pn	11 41 02.3	+0.6
	baz=209,SNR=8.1						
SCIA	State Center	7.00	27	P	Pn	11 41 01.7	0.0
	baz=209,SNR=14						
SCIA				S	Sn	11 42 21.7	+0.2
	baz=209						
344A	Westbrook Farm	7.01	125	Pn	Pn	11 41 02.3	+0.4
N41A	Harden Midland	7.17	44		Pn	11 41 04.5	+0.3
N41A	Harden Midland	7.17	44	P	Pn	11 41 04.9	+0.7
	baz=228,SNR=11						
T45A	Paducah	7.19	77		Pn	11 41 06.3	+2.0
P43A	Skaggs, Pawnee	7.38	56		Pn	11 41 08.9	+1.9
Q44A	Meyer Farm, Va	7.41	62	Pn	Pn	11 41 08.8	+1.4
Q44A	Meyer Farm, Va	7.41	62	P	Pn	11 41 08.2	+0.8
	baz=247,SNR=16						
ANMO	Albuquerque	7.43	267	Pn	Pn	11 41 09.5	+1.6
	comp=Z,0.7nm,0.3s,baz=84,slow=19,SNR=19						
ANMO				Lg	Lg	11 43 12.7	
	comp=Z,20nm,0.3s,baz=338,slow=13,SNR=6.0						
ANMO				LR	LR	11 44 11.9	
	comp=Z,1μm,19.5s,baz=84,slow=40						
ANMO	Albuquerque	7.43	267	Pn	Pn	11 41 09.0	+1.1
ANMO	Albuquerque	7.43	267	P	Pn	11 41 08.4	+0.5
	baz=82						
833A	Chaparral WMA,	7.56	193	P	Pn	11 41 09.9	+0.5
	baz=12,SNR=13						
833A				S	Sn	11 42 34.2	-1.1
	baz=12						
146A	Union	7.57	112	IAmb_Lg		11 43 34.5	
	comp=Z,408nm,1.0s						
PLAL	Pickwick Lake	7.67	93	Pn	Pn	11 41 11.0	+0.2

ISCO	Idaho Springs	7.67	305	Pn	Pn	11 41 11.6	+0.4
ISCO				IAmb_Lg		11 43 28.5	
	comp=Z,268nm,0.7s						
ISCO	Idaho Springs	7.67	305	P	Pn	11 41 12.0	+0.8
	baz=120,SNR=80						
ISCO	Idaho Springs	7.67	305	P	Pn	11 41 11.7	+0.4
	baz=120,SNR=45						
ISCO				S	Sn	11 42 38.3	-0.2
	baz=120						
BNM	Barren Site	7.73	261	Pn	Pn	11 41 12.4	+0.4
MNTX	Cornudas Mount	7.75	241	Pn	Pn	11 41 10.5	-1.6
MNTX				IAmb_Lg		11 43 44.2	
	comp=Z,428nm,1.0s						
MNTX	Cornudas Mount	7.75	241	P	Pn	11 41 12.0	-0.1
	baz=57,SNR=34						
MNTX	Cornudas Mount	7.75	241	P	Pn	11 41 12.0	-0.1
	baz=57,SNR=25						
WVT	Waverly	7.79	84		Pn	11 41 12.8	+0.2
WVT	Waverly	7.79	84	P	Pn	11 41 11.5	-1.0
	baz=270						
K38A	Parkersburg	7.80	26		Pn	11 41 12.6	-0.2
K38A	Parkersburg	7.80	26	P	Pn	11 41 13.1	+0.4
	baz=209,SNR=9.5						
L40A	Anamosa	7.97	35		Pn	11 41 14.6	-0.4
L40A				IAmb_Lg		11 43 38.4	
	comp=Z,669nm,0.8s						
L40A	Anamosa	7.97	35	P	Pn	11 41 14.6	-0.4
	baz=219,SNR=9.3						
Y22D	IRIS PASSCAL I	7.98	261	IAmb_Lg		11 43 53.5	
	comp=Z,611nm,0.9s						
HDIL	Hopedale	8.02	50	Pn	Pn	11 41 16.3	+0.6
ECSD	EROS Data Cent	8.03	4	Pn	Pn	11 41 15.2	-0.7
ECSD	EROS Data Cent	8.03	4	P	Pn	11 41 15.0	-0.9
	baz=184,SNR=123						
ECSD	EROS Data Cent	8.03	4	P	Pn	11 41 14.9	-1.1
	baz=184,SNR=44						
Z47A	Carrollton	8.11	105	Pn	Pn	11 41 16.9	-0.1
Z47A				IAmb_Lg		11 43 56.7	
	comp=Z,298nm,1.0s						
T47A	Sharon Grove	8.41	78	Pn	Pn	11 41 20.8	-0.4
PHWY	Pilot Hill	8.42	314	Pn	Pn	11 41 21.5	0.0
PHWY				IAmb_Lg		11 43 52.7	
	comp=Z,397nm,1.0s						
N23A	Red Feather La	8.47	310	Pn	Pn	11 41 24.1	+2.0
N23A	Red Feather La	8.47	310	P	Pn	11 41 22.7	+0.6
	baz=125,SNR=30						
N23A				S	Sn	11 42 57.8	-0.2
	baz=125						
X48A	Hartselle	8.59	95		Pn	11 41 23.3	-0.3
L42A	Oliver, Polo	8.71	42	Pn	Pn	11 41 24.9	-0.3
L42A	Oliver, Polo	8.71	42	P	Pn	11 41 25.4	+0.2
	baz=226,SNR=19						
SUSD	Miller	8.80	353		Pn	11 41 27.5	+1.1
SUSD				IAmb_Lg		11 44 11.6	
	comp=Z,590nm,1.1s						
SUSD	Miller	8.80	353	P	Pn	11 41 26.6	+0.2
	baz=172						
JFWS	Jewell Farm	9.08	35		Pn	11 41 30.6	+0.3
JFWS				IAmb_Lg		11 44 07.6	
	comp=Z,653nm,0.7s						
JFWS	Jewell Farm	9.08	35	P	Pn	11 41 30.2	-0.1
	baz=220,SNR=34						
JFWS	Jewell Farm	9.08	35	P	Pn	11 41 29.8	-0.5
	baz=220						
WCI	Wyandotte Cave	9.24	71		Pn	11 41 33.8	+1.2
BLO	Bloomington	9.32	65	Pn	Pn	11 41 33.9	+0.3
SWET	Sewanee	9.38	90		Pn	11 41 36.4	+2.0
I40A	Norwalk	9.69	31	Pn	Pn	11 41 37.6	-1.0
I40A				IAmb_Lg		11 44 35.1	
	comp=Z,726nm,1.2s						
I40A	Norwalk	9.69	31	P	Pn	11 41 37.7	-1.0
	baz=215,SNR=30						
RWWY	Rawlins	9.70	311		Pn	11 41 39.9	+0.8
RWWY				IAmb_Lg		11 44 31.2	
	comp=Z,398nm,1.2s						
RSSD	Black Hills	9.81	331		Pn	11 41 40.5	0.0
RSSD				IAmb_Lg		11 44 48.5	
	comp=Z,258nm,0.9s						
RSSD	Black Hills	9.81	331	P	Pn	11 41 40.7	+0.1
	baz=147,SNR=18						
RSSD	Black Hills	9.81	331	P	Pn	11 41 40.6	+0.1
	baz=147						
L44A	Lake County Fo	9.81	46	P	Pn	11 41 40.0	-0.4
	baz=232						
K22A	Casper	9.89	317		Pn	11 41 42.1	+0.5
K22A	Casper	9.89	317	P	Pn	11 41 41.6	0.0
	baz=132,SNR=17						
K43A	Burlington	9.91	43	P	Pn	11 41 41.1	-0.6
	baz=228,SNR=18						
SPMN	Marine on St.	10.13	19	P	Pn	11 41 43.0	-1.6
	baz=202,SNR=10						
SPMN	Marine on St.	10.13	19	P	Pn	11 41 42.5	-2.0
	baz=202,SNR=11						
P48A	Milroy	10.22	65		Pn	11 41 47.5	+1.6
V51A	Loudon	10.62	86		Pn	11 41 52.1	+0.8
V51A	Loudon	10.62	86	P	Pn	11 41 51.6	+0.3
	baz=273,SNR=6.4						
R50A	Paris	10.77	72		Pn	11 41 53.9	+0.4
G40A	Rib Lake	11.01	28	Pn	Pn	11 41 55.7	-0.9
G40A	Rib Lake	11.01	28	P	Pn	11 41 55.6	-1.0
	baz=212,SNR=12						
TKL	Tuckaleechee C	11.09	86	Pn	Pn	11 41 57.8	-0.1
	comp=Z,0.8nm,0.3s,baz=236,slow=9.6,SNR=7.1						
TKL				Lg	Lg	11 45 03.2	
	comp=Z,5.3nm,0.3s,baz=162,slow=16,SNR=6.2						
TKL				LR	LR	11 46 36.6	
	comp=Z,154nm,19.0s,baz=310,slow=39						
S51A	Beattyville	11.26	76		Pn	11 42 00.6	+0.4
H43A	Windswept, Lux	11.44	37	P	Pn	11 42 01.8	-0.7
	baz=223,SNR=7.2						
Q51A	Peebles	11.67	69		Pn	11 42 05.6	-0.1
GOGA	Godfrey	11.72	97	P	Pn	11 42 04.9	-1.6
	baz=285						
BW06	Boulder Array	11.75	310		Pn	11 42 07.1	0.0
BW06	Boulder Array	11.75	310	P	Pn	11 42 06.8	-0.3
	baz=123						
PD31	Pinedale Array	11.75	310		Pn	11 42 07.1	0.0
PDAR	Pinedale Array	11.75	310	Pn	Pn	11 42 06.7	-0.4
	comp=Z,0.7nm,0.3s,baz=118,slow=15,SNR=20						
PDAR				Lg	Lg	11 45 28.5	
	comp=Z,2.8nm,0.3s,baz=122,slow=20,SNR=3.4						
PDAR				LR	LR	11 46 35.2	
	comp=Z,300nm,19.8s,baz=122,slow=37						
PDAR	Pinedale Array	11.75	310		Pn	11 42 07.2	0.0
P51A	Williamsport	11.99	67		Pn	11 42 10.4	+0.3
ACSO	Alum Creek Sta	12.24	64		Pn	11 42 13.2	-0.4
ACSO	Alum Creek Sta	12.24	64	P	Pn	11 42 12.9	-0.7
	baz=253						
Q52A	Bidwell	12.48	70		Pn	11 42 16.9	+0.1
AGMN	Agassiz Nation	12.63	5	P	Pn	11 42 15.1	-3.6
	baz=186,SNR=9.5						
R53A	Hurricane	12.63	73	Pn	Pn	11 42 17.9	-1.0
P52A	Corning	12.72	68		Pn	11 42 19.1	-1.0
P52A	Corning	12.72	68	P	Pn	11 42 18.6	-1.5
	baz=257,SNR=5.5						
LAO	LASA Array	12.80	332		Pn	11 42 19.8	-1.5
LOHW	Long Hollow	12.85	312	Pn	Pn	11 42 22.4	+0.3
B35A	Bob, Littlefor	12.93	11	Pn	Pn	11 42 21.3	-1.6
MOOW	Moose Ponds	13.02	312	Pn	Pn	11 42 24.4	+0.1
RLMT	Red Lodge	13.02	320	Pn	Pn	11 42 24.7	+0.3
RLMT	Red Lodge	13.02	320	P	Pn	11 42 23.6	-0.8
	baz=132						
S54A	Dingess, Beckl	13.08	76	Pn	Pn	11 42 23.8	-1.3
E43A	Lone Tree Farm	13.22	33	Pn	Pn	11 42 25.5	-1.4
P53A	Whipple	13.25	69	Pn	Pn	11 42 25.3	-2.0
O53A	New Philadelph	13.55	66	Pn	Pn	11 42 29.5	-2.0
GCMT	Greycliff	13.68	321		Pn	11 42 33.5	+0.1
DGMT	Dagmar	13.70	341	Pn	Pn	11 42 30.7	-2.8
DGMT	Dagmar	13.70	341	P	Pn	11 42 30.3	-3.2
	baz=156,SNR=11						
BLA	Blacksburg	13.76	79	Pn	Pn	11 42 34.4	0.0
YHL	Hebgen Lake	13.90	315	Pn	Pn	11 42 37.0	+0.5
R55A	Marlinton	14.06	74	Pn	Pn	11 42 36.4	-2.1
O54A	Avella	14.16	67		Pn	11 42 39.0	-0.8
ULM	Lac du Bonnet	14.57	4	Pn	Pn	11 42 40.5	-4.9
	comp=Z,1.7nm,0.3s,baz=188,slow=10,SNR=8.8						
ULM				Sn	Sn	11 45 13.9	-13
	comp=Z,1.1nm,0.3s,baz=92,slow=15,SNR=1.7						
ULM				Lg	Lg	11 46 50.8	
	comp=Z,0.7nm,0.3s,baz=111,slow=18,SNR=2.5						
ULM				LR	LR	11 48 43.1	
	comp=Z,297nm,21.9s,baz=186,slow=39						
T57A	Hurt	14.69	80	Pn	Pn	11 42 45.9	-1.1
S57A	Dark Hollow, R	14.94	77	Pn	Pn	11 42 49.6	-0.9
M54A	Oil Creek Stat	15.02	62	Pn	Pn	11 42 50.6	-1.0
PFO	Pinyon Flats O	15.81	268	LR	LR	11 49 30.0	
	comp=Z,335nm,18.4s,baz=86,slow=39						
LPIG	La Paz	16.07	227	LR	LR	11 49 27.5	
	comp=Z,163nm,18.7s,baz=45,slow=38						
SSPA	Standing Stone	16.11	66	Pn	Pn	11 43 03.3	-2.5
SSPA				IAmb	IAmb	11 43 08.0	
	comp=Z,16nm,1.1s						
SADO	Sadowa	16.60	51	Lg	Lg	11 47 54.0	
	comp=Z,1.8nm,0.3s,baz=257,slow=4.2,SNR=3.4						
SADO				LR	LR	11 49 43.6	
	comp=Z,262nm,18.5s,baz=311,slow=38						
NVAR	Mina Array Bea	16.89	285	LR	LR	11 49 32.6	
	comp=Z,196nm,19.9s,baz=90,slow=37						
JTMT	Jette	17.36	319		P	11 43 24.0	+0.9
CMIG	Matias Romero	18.68	172	P	Pn	11 43 39.4	+1.5
	comp=Z,0.7nm,0.3s,baz=340,slow=8.9,SNR=6.8						
VLDQ	Val d'Or	19.27	44	P	P	11 43 42.1	-1.8
VLDQ				IAmb	IAmb	11 43 43.8	
	comp=Z,24nm,0.9s						
E03A	Lebam	22.37	307	P	P	11 44 16.2	-1.3
G62A	West of Eustis	22.46	57	P	P	11 44 17.3	-1.1
G62A				IAmb	IAmb	11 44 30.2	
	comp=Z,16nm,1.1s						
F63A	Nahmakanta, Br	23.56	56	P	P	11 44 32.4	+2.7
JTS	Las Juntas de	27.73	153	LR	LR	11 57 25.3	
	comp=Z,61nm,20.0s,slow=39						
SCHQ	Schefferville	28.43	38	P	P	11 45 13.7	-0.3
	comp=Z,3.9nm,0.7s,baz=250,slow=9.5,SNR=5.0						
SCHQ				Lg	Lg	11 53 58.4	
	comp=Z,23nm,1.1s,baz=132,slow=15,SNR=2.5						
YKA	Yellowknife Ar	28.88	343	P	P	11 45 17.9	+0.1
	comp=Z,1.2nm,0.8s,baz=146,slow=8.3,SNR=12						
YKA				Lg	Lg	11 54 19.0	
	comp=Z,4.4nm,1.1s,baz=141,slow=28,SNR=1.9						
YKA				LR	LR	11 57 22.2	
	comp=Z,229nm,21.8s,baz=0.0,slow=38						
DLBC	Dease Lake	31.26	327	LR	LR	11 59 05.2	
	comp=Z,274nm,18.5s,baz=104,slow=38						
FRB	Frobisher Bay	33.13	23	P	P	11 45 55.2	-0.1
	comp=Z,0.9nm,0.4s,baz=216,slow=15,SNR=1.9						
ROSC	El Rosal	37.38	140	LR	LR	12 03 45.2	
	comp=Z,43nm,21.8s,baz=48,slow=39						
INK	Inuvik	38.38	339	P	P	11 46 41.0	+0.8
	comp=Z,1.3nm,0.8s,baz=120,slow=9.1,SNR=9.2						
INK	Inuvik	38.38	339	P	P	11 46 40.8	+0.6
BCAR	Beaver Creek A	38.53	329	P	P	11 46 43.4	+1.7
EGAK	Eagle	39.01	332	P	P	11 46 46.2	+0.6
EGAK				IAmb	IAmb	11 47 13.8	
	comp=Z,14nm,1.4s						
A36M	Sachs Harbour	39.09	347	P	P	11 46 46.4	+0.3
A36M				IAmb	IAmb	11 46 49.5	
	comp=Z,3.4nm,0.9s						
ILAR	Eielson Array	41.26	330	P	P	11 47 05.7	+1.4
	comp=Z,1.4nm,0.6s,baz=105,slow=6.6,SNR=14						
ILAR				LR	LR	12 04 59.0	
	comp=Z,131nm,19.6s,baz=118,slow=37						
BMAR	Burnt Mountain	41.44	335	P	P	11 47 07.7	+2.0
CCB	Clear Creek Bu	41.59	330	P	P	11 47 08.2	+1.3
TOLK	Toolik Lake Re	43.64	335	P	P	11 47 24.0	+0.4
TOLK				IAmb	IAmb	11 47 49.3	
	comp=Z,3.5nm,1.1s						
ARCES	ARCESS Array B	67.14	19	P	P	11 50 12.9	+0.1
	comp=Z,2.1nm,0.8s,baz=301,slow=7.2,SNR=1.9						
ARCES				LR	LR	12 18 23.5	
	comp=Z,94nm,20.1s,baz=330,slow=35						
CPUP	Villa Florida	72.40	143	LR	LR	12 28 55.3	
	comp=Z,28nm,18.3s,baz=22,slow=41						
CPUP	Villa Florida	72.40	143	P	P	11 50 46.4	+0.8
CPUP				IAmb	IAmb	11 51 10.9	
	comp=Z,6.1nm,1.4s						
FINES	FINESS Array B	72.91	25	P	P	11 50 48.9	+0.6
	comp=Z,1.4nm,0.7s,baz=45,slow=3.0,SNR=3.5						
FINES	FINESS Array B	72.91	25	P	P	11 50 48.6	+0.3
YAK	Yakutsk	75.44	339	LR	LR	12 28 21.0	
	comp=Z,25nm,18.8s,baz=38,slow=39						
GERES	GERESS Array B	75.96	39	LR	LR	12 23 22.0	
	comp=Z,35nm,18.4s,baz=308,slow=35						
KEST	Kesra	81.55	52	LR	LR	12 24 37.1	
	comp=Z,75nm,21.5s,baz=242,slow=33						
KLR	Kul'dur	84.83	330	LR	LR	12 33 57.0	
	comp=Z,42nm,18.1s,baz=37,slow=39						
AFI	Afiamalu	85.75	250	LR	LR	12 22 20.7	
	comp=Z,227nm,18.7s,baz=24,slow=30						
DBIC	Dimbokro	88.22	83	LR	LR	12 26 05.7	
	comp=Z,46nm,20.2s,baz=304,slow=32						
TORD	Torodi Ar. Bea	89.66	74	LR	LR	12 31 20.4	
	comp=Z,33nm,18.6s,baz=245,slow=35						
KBZ	Khabaz	93.08	28	LR	LR	12 33 32.9	
	comp=Z,40nm,18.1s,baz=330,slow=35						
KSRS	Korea Array	95.93	325	LR	LR	12 40 10.2	
	comp=Z,33nm,18.0s,baz=82,slow=38						

TUL ***29*** *11:49:23.9±1.5, 35.°67N±0.°01×97.°41W±0.°01, h6*^{km}*±5*^{km}*, ML3.5, mb_Lg3.4/67(NEIC), Error ellipse: s-maj=2.0km s-min=1.1km az=164.0*

ANF ***29*** *11:49:23.8±0.2, 35.°70N×97.°41W, h4*^{km}*, ML3.9/15, Error ellipse: s-maj=2.4km s-min=2.2km az=131.0*

NEIC ***29*** *11:49:24.1±1.3, 35.°69N±0.°01×97.°42W±0.°02, h4*^{km}*±6*^{km}*, Error ellipse: s-maj=2.6km s-min=1.8km az=100.0*

ISC 29 11:49:24.1±0.9**, 35.°69N**±0.°02×**97.°42W**±0.°02**, h7**^{km}±7^{km}**, n113, σ0.^{s}73**/134**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK009	Oakdale Elemen	0.11	183	Pg	Pg	11 49 26.1	-0.4
OK009				Sg	Sg	11 49 27.9	-0.2
OK025	Westminster Rd	0.12	149		Pg	11 49 26.6	-0.2
OK025				Sg	Sg	11 49 28.6	0.0
BCOK	Bluff Creek, N	0.16	259	Pg	Pg	11 49 27.4	0.0
BCOK				Sg	Sg	11 49 30.2	+0.5
OK001	Jones High Sch	0.16	141	Pg	Pg	11 49 27.2	-0.2
OK001				Sg	Sg	11 49 29.8	+0.1
OK005	Luther M Schoo	0.19	100		Pg	11 49 27.9	0.0
OK005				Sg	Sg	11 49 30.9	+0.5
OKCFA	Oklahoma City	0.27	186		Pg	11 49 29.3	-0.3
OKCFA				Sg	Sg	11 49 33.2	+0.1
OKCFA	Oklahoma City	0.27	186	P	Pg	11 49 29.2	-0.3
	baz=6.1,SNR=98						
OKCFA				S	Sg	11 49 33.4	+0.2
	baz=6.1						
OKCSW	OKLAHOMA CITY	0.28	184	Pg	Pg	11 49 29.4	-0.3
OKCSW				Sg	Sg	11 49 33.6	+0.2
FNO	Franklin	0.43	178	Pg	Pg	11 49 32.1	-0.3
FNO				Sg	Sg	11 49 38.3	+0.2
OK031	S. Brethren Rd	0.54	60	Pg	Pg	11 49 34.5	0.0
OK031				IAmb_Lg		11 49 41.4	
	comp=Z,332nm,0.8s						
OK031				Sg	Sg	11 49 42.0	+0.5
W35A	Tecumseh	0.69	140	Pg	Pg	11 49 36.9	-0.6
W35A				IAmb_Lg		11 49 45.8	
	comp=Z,250nm,1.0s						
W35A				Sg	Sg	11 49 46.0	-0.4
QUOK	Quay	0.75	50	Pg	Pg	11 49 38.3	-0.3
QUOK				Sg	Sg	11 49 48.8	+0.4
CROK	Carrier	0.94	331	Pg	Pg	11 49 41.9	-0.3
CROK				Sg	Sg	11 49 54.6	+0.3
BLOK	Blackwell	1.08	9	Pg	Pg	11 49 44.5	-0.4
BLOK				Sg	Sb	11 49 59.8	+0.2
X34A	Smith Ranch, M	1.14	198	Pg	Pg	11 49 45.4	-0.6
X34A				Sg	Sb	11 50 01.0	-0.1
GC02	Grant County #	1.22	343	Pg	Pg	11 49 46.7	-0.7
GC02				Sg	Sb	11 50 03.8	+0.4
OK032	Salt Plains WL	1.29	330		Pg	11 49 47.6	-1.2
KAN13	South Haven SW	1.32	358	Pn	Pn	11 49 48.8	-0.3
TUL1	Leonard	1.34	80	Pn	Pn	11 49 47.8	-1.5
TUL1	Leonard	1.34	80	P	Pn	11 49 47.8	-1.5
	baz=261						
TUL1				S	Sn	11 50 07.3	-0.1
	baz=261						
KAN14	Manchester OK	1.34	341		Pn	11 49 48.9	-0.4
T35A	Sooner Cattle	1.43	30		Pn	11 49 50.0	-0.5
T35B	Sooner Cattle	1.43	31	P	Pn	11 49 50.1	-0.4
	baz=211,SNR=173						
T35B				S	Sg	11 50 09.8	-0.2
	baz=211						
U32A	Winter Ranch,	1.46	299		Pn	11 49 50.7	-0.3
U32A	Winter Ranch,	1.46	299	P	Pn	11 49 50.6	-0.4
	baz=118,SNR=67						
U32A				S	Sg	11 50 10.8	-0.2
	baz=118						
OK035	E0210 Rd and N	1.46	315		Pn	11 49 50.6	-0.3
KAN05	Bluff City Nor	1.47	346		Pn	11 49 51.0	0.0
KAN01	Argonia South	1.49	349		Pn	11 49 51.5	+0.1
KAN10	Anthony SW Sta	1.53	339		Pn	11 49 52.0	0.0
KAN06	Argonia West S	1.60	347		Pn	11 49 53.3	+0.4
KAN08	Anthony NE Sta	1.60	344		Pn	11 49 53.3	+0.4
KAN16	Harper SW Stat	1.62	341		Pn	11 49 53.7	+0.5
KAN12	Harper NE Stat	1.67	344		Pn	11 49 54.6	+0.6
LOOK	Love County	1.70	173		Pn	11 49 54.4	+0.1
LOOK				IAmb_Lg		11 50 21.5	
	comp=Z,117nm,0.7s						
X37A	Clayton	2.00	123		Pn	11 49 59.3	+0.9
X37A				IAmb_Lg		11 50 31.0	
	comp=Z,121nm,0.7s						
X37A	Clayton	2.00	123	P	Pn	11 49 58.7	+0.3
	baz=304						
X37A				S	Sb	11 50 25.3	-0.7
	baz=304						
Z35A	Perchaven, San	2.35	177		Pn	11 50 03.8	+0.5
U38A	Gravette	2.57	72		Pn	11 50 07.9	+1.7
U38A	Gravette	2.57	72	P	Pn	11 50 06.4	+0.2
	baz=254						
HHAR	Hobbs	2.88	77	Pn	Pn	11 50 10.7	+0.2
HHAR				IAmb_Lg		11 50 54.0	
	comp=Z,70nm,0.7s						
R32A	Long Quarter,	2.92	340		Pn	11 50 11.4	+0.4
W39A	Magazine	3.00	98		Pn	11 50 11.9	-0.2
W39A				IAmb_Lg		11 51 06.1	
	comp=Z,172nm,0.9s						
W39A	Magazine	3.00	98	P	Pn	11 50 12.1	-0.1
	baz=280,SNR=25						
Z38A	Mt. Pleasant	3.15	140		Pn	11 50 14.2	+0.1
MIAR	Mount Ida	3.35	109		Pn	11 50 17.8	+0.9
MIAR	Mount Ida	3.35	109	P	Pn	11 50 17.7	+0.8
	baz=291,SNR=32						
MIAR				S	Sn	11 50 57.7	+0.8
	baz=291						
KSU1	Kansas State U	3.47	10		Pn	11 50 19.4	+0.8
KSU1				IAmb_Lg		11 51 20.4	
	comp=Z,105nm,0.9s						
ABTX	Abilene, Hawle	3.57	212		Pn	11 50 21.2	+1.2
AMTX	Amarillo	3.58	258	Pn	Pn	11 50 21.8	+1.6
AMTX				IAmb_Lg		11 51 18.8	
	comp=Z,64nm,0.8s						
CBKS	Cedar Bluff	3.63	330		Pn	11 50 21.6	+0.7
CBKS				IAmb_Lg		11 51 28.8	
	comp=Z,64nm,0.8s						
CBKS	Cedar Bluff	3.63	330	P	Pn	11 50 21.5	+0.7
	baz=149,SNR=14						
WHTX	Lake Whitney,	3.69	181		Pn	11 50 22.1	+0.5
WHTX	Lake Whitney,	3.69	181	P	Pn	11 50 21.5	-0.1
	baz=0.5,SNR=6.5						
U40A	Yellville	3.76	78	Pn	Pn	11 50 22.4	-0.2
U40A				IAmb_Lg		11 51 32.4	
	comp=Z,74nm,0.7s						
S39A	Bolivar	3.85	58		Pn	11 50 23.5	-0.3
S39A	Bolivar	3.85	58	P	Pn	11 50 23.9	+0.1
	baz=240,SNR=7.8						
237A	Washetta, Mont	3.91	160	Pn	Pn	11 50 23.7	-0.9
237A	Washetta, Mont	3.91	160	P	Pn	11 50 24.2	-0.4
	baz=340						
X40A	Basin Creek Fa	3.94	106		Pn	11 50 25.6	+0.6
X40A	Basin Creek Fa	3.94	106	P	Pn	11 50 25.3	+0.2
	baz=289,SNR=15						
X40A				P	Pn	11 50 25.3	+0.2
	baz=289,SNR=15						
WLAR	White Oak Lake	4.07	118		Pn	11 50 27.6	+0.8
WHAR	Wooly Hollow	4.20	94		Pn	11 50 28.4	-0.3
WHAR				IAmb_Lg		11 51 39.5	
	comp=Z,96nm,1.1s						
W41B	Gary Mavity, V	4.25	95	P	Pn	11 50 29.2	-0.1
	baz=278,SNR=12						
FCAR	Ozark Folk Cen	4.31	86		Pn	11 50 29.9	-0.2
FCAR				IAmb_Lg		11 51 42.5	
	comp=Z,114nm,1.1s						
MGMO	Mountain Grove	4.40	69	Pn	Pn	11 50 33.6	+2.2
MGMO				IAmb_Lg		11 51 44.8	
	comp=Z,60nm,0.8s						
MSTX	Muleshoe	4.73	250		Pn	11 50 36.5	+0.5
MSTX	Muleshoe	4.73	250	P	Pn	11 50 36.6	+0.6
	baz=67,SNR=7.1						
R40A	Maddies Statio	4.87	56	Pn	Pn	11 50 37.7	-0.2
R40A				IAmb_Lg		11 52 06.4	
	comp=Z,57nm,0.7s						
R40A	Maddies Statio	4.87	56	P	Pn	11 50 37.9	0.0
	baz=239,SNR=6.4						
435B	Jarrell	4.89	182	Pn	Pn	11 50 38.7	+0.5
435B				IAmb_Lg		11 52 06.0	
	comp=Z,95nm,0.9s						
P38A	Dawn	4.99	37		Pn	11 50 39.7	+0.2
P38A				IAmb_Lg		11 52 06.1	
	comp=Z,47nm,0.9s						
N33A	J Bar K, Exete	5.04	360		Pn	11 50 38.5	-1.8
N33A				IAmb_Lg		11 52 15.7	
	comp=Z,69nm,0.8s						
KSCO	Kaye Shedlock'	5.31	310		Pn	11 50 44.5	+0.5
KSCO				IAmb_Lg		11 52 24.7	
	comp=Z,39nm,0.9s						
N35A	Tabor	5.35	15		Pn	11 50 43.6	-0.8
CCM	Cathedral Cave	5.48	63	Pn	Pn	11 50 45.6	-0.6
CCM				IAmb_Lg		11 52 23.4	
	comp=Z,60nm,0.7s						
HBAR	Harrisburg	5.51	89	Pn	Pn	11 50 46.8	+0.3
JCT	Junction City	5.57	202		Pn	11 50 49.3	+1.8
P40A	Paris	5.73	46	Pn	Pn	11 50 50.1	+0.5
P40A				IAmb_Lg		11 52 32.3	
	comp=Z,72nm,0.7s						
BGNE	Belgrade	5.74	354		Pn	11 50 49.5	-0.3
BGNE				IAmb_Lg		11 52 41.0	
	comp=Z,91nm,0.8s						
PBMO	Poplar Bluff	5.75	77	Pn	Pn	11 50 50.4	+0.5
PBMO				IAmb_Lg		11 52 30.9	
	comp=Z,85nm,0.9s						
LPAR	Lepanto	5.79	89	Pn	Pn	11 50 48.6	-1.9
LPAR				IAmb_Lg		11 52 31.2	
	comp=Z,71nm,0.8s						
143A	Socs Landing,	5.80	119	Pn	Pn	11 50 51.4	+0.7
T25A	Trinidad	5.82	286	Pn	Pn	11 50 51.2	0.0
T25A				IAmb_Lg		11 52 37.9	
	comp=Z,88nm,0.9s						
GNAR	Gosnell	6.02	85	Pn	Pn	11 50 53.0	-0.6
FVM	French Village	6.06	66		Pn	11 50 53.5	-0.6
FVM				IAmb_Lg		11 52 36.4	
	comp=Z,29nm,0.8s						
N38A	Joes South For	6.07	32		Pn	11 50 54.1	-0.2
PEBM	Pemiscott Bayo	6.15	84		Pn	11 50 55.9	+0.6
PARMO	Parma	6.28	79		Pn	11 50 57.2	+0.1
PARMO				IAmb_Lg		11 52 44.7	
	comp=Z,93nm,0.8s						
L34A	Svendsen Farm,	6.32	7		Pn	11 50 57.9	+0.1
OGNE	Ogallala	6.38	327		Pn	11 50 59.7	+1.0
OGNE				IAmb_Lg		11 52 52.5	
	comp=Z,40nm,0.8s						
SLM	Saint Louis	6.44	61		Pn	11 50 58.9	-0.6
SLM				IAmb_Lg		11 52 53.8	
	comp=Z,38nm,0.8s						
LNXT	Lenox	6.45	84	Pn	Pn	11 51 00.6	+1.1
W45A	Hickory Valley	6.74	92		Pn	11 51 05.6	+2.1
W45A				IAmb_Lg		11 53 15.2	
	comp=Z,53nm,0.8s						
SDCO	Great Sand Dun	6.81	290		Pn	11 51 04.1	-0.7
SDCO				IAmb_Lg		11 53 06.0	
	comp=Z,27nm,1.0s						
735A	Kenedy	6.82	183	Pn	Pn	11 51 02.7	-1.9
S44A	Carbondale	6.86	71	Pn	Pn	11 51 06.4	+1.3
S44A				IAmb_Lg		11 53 06.2	
	comp=Z,41nm,0.7s						
K31A	O'Neill	7.00	352		Pn	11 51 06.6	-0.5
SCIA	State Center	7.02	27		Pn	11 51 06.8	-0.6
SCIA				IAmb_Lg		11 53 17.4	
	comp=Z,61nm,0.7s						
N41A	Harden Midland	7.20	44	Pn	Pn	11 51 10.0	+0.3
T45A	Paducah	7.20	77	Pn	Pn	11 51 08.6	-1.3
P43A	Skaggs, Pawnee	7.40	55	Pn	Pn	11 51 12.5	-0.1
P43A				IAmb_Lg		11 53 34.3	
	comp=Z,40nm,0.7s						
Q44A	Meyer Farm, Va	7.42	62	Pn	Pn	11 51 13.6	+0.7
Q44A				IAmb_Lg		11 53 39.1	
	comp=Z,33nm,0.7s						
ANMO	Albuquerque	7.43	267		Pn	11 51 13.3	+0.1
BNM	Barren Site	7.72	261	Pn	Pn	11 51 17.5	+0.3
MNTX	Cornudas Mount	7.74	241	Pn	Pn	11 51 19.1	+1.8
WVT	Waverly	7.79	84	Pn	Pn	11 51 17.8	-0.2
K38A	Parkersburg	7.83	26	IAmb_Lg		11 53 38.9	
	comp=Z,70nm,0.9s						
L40A	Anamosa	7.99	35	Pn	Pn	11 51 20.1	-0.5
ECSD	EROS Data Cent	8.06	4	Pn	Pn	11 51 22.2	+0.6

PHWY	Pilot Hill	8.43	314	Pn	Pn	11 51 27.0	0.0
L42A	Oliver, Polo	8.73	41	Pn	Pn	11 51 30.1	-0.7
MVCO	Mesa Verde	9.06	283	Pn	Pn	11 51 34.7	-0.9
JFWS	Jewell Farm	9.10	35	Pn	Pn	11 51 36.9	+1.0

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*ATH **29** 12:00:29.5, 34°.53N×23°.88E, h35^{km}±8^{km}, ML3.6/3, Error ellipse: s-maj=11.9km s-min=3.9km az=96.0*
*THE **29** 12:00:31.4, 34°.66N×23°.76E, h14^{km}±1^{km}, ML3.4/5, Error ellipse: s-maj=2.2km s-min=1.4km az=20.0*
ISC 29 12:00:26.8±3.0, **34°.5N**±0°.1×**23°.74E**±0°.07, **h18**^{km}±7^{km}, **n13**, σ**0^{s}.41**/23, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.46	38	P	Pn	12 00 38.2	-0.3
GVD				S	Sb	12 00 43.2	+0.3
	11µm,0.3s						
GVD	Gavdhos	0.46	38	P	Pn	12 00 38.2	-0.3
GVD				S	Sb	12 00 43.9	+1.1
GVD				AML	AML	12 00 44.7	
	comp=N,24739µm,0.4s						
GVD				AML	AML	12 00 45.6	
	comp=E,19798µm,0.3s						
GVDS	Gavdos	0.46	38	P	Pn	12 00 37.9	-0.7
GVDS				S	Sb	12 00 43.1	+0.1
	comp=E,10µm,0.4s						
KNDR	Palaiochora Ch	0.76	356	P	Pn	12 00 42.3	-0.3
KNDR				S	Sg	12 00 51.5	-0.2
	comp=E,450nm,0.3s						
IMMV	Iera Moni Meta	1.00	11	P	Pg	12 00 46.3	+0.1
IMMV				S	Sb	12 00 58.3	-0.2
	comp=E,3µm,0.3s						
IMMV	Iera Moni Meta	1.00	11	P	Pg	12 00 46.3	+0.1
IMMV				S	Sg	12 00 59.2	-0.2
IMMV				AML	AML	12 00 59.5	
	comp=E,7905µm,0.3s						
IMMV				AML	AML	12 01 00.4	
	comp=N,3325µm,0.3s						
VAM	Vamos	1.00	22	P	Pg	12 00 46.5	+0.3
VAM				S	Sn	12 00 59.5	-0.1
	comp=N,3µm,0.5s						
VAM	Vamos	1.00	22	P	Pg	12 00 46.6	+0.3
VAM				S	Sn	12 00 59.7	+0.1
VAM				AML	AML	12 00 60.0	
	comp=E,9177µm,0.5s						
VAM				AML	AML	12 01 02.0	
	comp=N,4768µm,0.5s						
PRNS	Prines Rethymn	1.08	35	P	Pg	12 00 47.5	-0.3
PRNS				S	Sb	12 01 00.8	0.0
IDI	Anoyia	1.24	49	P	Pg	12 00 51.4	+0.6
IDI				S	Sg	12 01 06.8	-0.2
ANKY	Antikythira Is	1.43	345	P	Pg	12 00 54.7	+0.3
ANKY	Antikythira Is	1.43	345	P	Pg	12 00 54.9	+0.5
KTHA	Kythira Island	1.86	343	P	Pg	12 01 02.8	+0.3

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*OSPL **29** 12:03:55.3±0.3, 18°.15N×67°.47W, h5^{km}±67^{km}, ML3.2*
*RSPR **29** 12:03:55.4, 18°.15N×67°.43W, h7^{km}±2^{km}, MD3.4/17*
*NEIC **29** 12:03:56.4±2.1, 18°.16N±0°.02×67°.32W±0°.04, h23^{km}±10^{km}, Error ellipse: s-maj=5.8km s-min=2.1km az=84.0*
ISC 29 12:03:55.2±0.9, **18°.17N**±0°.04×**67°.42W**±0°.03, **h32**^{km}, **n62**, σ**1^{s}.00**/73, **15C-2D**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.22	347	⇑eP	Pb	12 04 00.8	-1.2
PRSN	Puerto Rico Se	0.27	79		Pb	12 04 01.0	-1.4
PRSN				Sg	Sb	12 04 05.5	-1.8
PRSN				IAML		12 04 08.2	
	comp=N,11µm,0.2s						
PRSN				IAML		12 04 08.9	
	comp=E,10µm,0.3s						
LSP	Las Mesas	0.32	88	⇑eP	Pb	12 04 02.3	-0.8
LSP	Las Mesas	0.32	88	eS	Sb	12 04 07.8	-0.7
CRPR	Cabo Rojo, PR	0.34	118	⇑eP	Pb	12 04 02.4	-0.9
CRPR	Cabo Rojo, PR	0.34	118	eS	Sb	12 04 07.8	-1.1
CRPR	Cabo Rojo, PR	0.34	118		Pb	12 04 02.4	-0.9
CRPR					Sb	12 04 07.8	-1.1
CRPR	Cabo Rojo, PR	0.34	118	i P	Pb	12 04 02.0	-1.3
CRPR				IAML		12 04 08.5	
	comp=Z,3µm,0.1s						
MLPR	Magueyes Islan	0.41	119	⇑eP	Pb	12 04 03.2	-1.1
MLPR	Magueyes Islan	0.41	119	eS	Sb	12 04 09.3	-1.3
MLPR	Magueyes Islan	0.41	119		Pb	12 04 03.2	-1.1
MLPR					Sb	12 04 09.3	-1.3
MLPR	Magueyes Islan	0.41	119	IAML		12 04 09.9	
	comp=N,4µm,0.4s						
MLPR				IAML		12 04 09.9	
	comp=E,4µm,0.4s						
AGPR	Aguadilla, PR	0.42	45	⇓eP	Pb	12 04 03.8	-0.7
AGPR	Aguadilla, PR	0.42	45	eS	Sb	12 04 10.3	-0.6
AGPR	Aguadilla, PR	0.42	45		Pb	12 04 03.8	-0.7
AGPR					Sb	12 04 10.3	-0.6
AGPR	Aguadilla, PR	0.42	45	i P	Pb	12 04 03.7	-0.8
AGPR				eS	Sb	12 04 09.8	-1.0
AGPR				IAML		12 04 11.7	
	comp=Z,6µm,0.2s						
GBPR	Guanica, Bosqu	0.55	110	⇑eP	Pb	12 04 05.5	-1.0
GBPR	Guanica, Bosqu	0.55	110	eS	Sb	12 04 13.6	-0.6
AOPR	Arecibo Observ	0.66	74	⇑eP	Pb	12 04 07.0	-1.3
AOPR	Arecibo Observ	0.66	74	eS	Sb	12 04 15.7	-1.6
AOPR	Arecibo Observ	0.66	74		Pb	12 04 07.0	-1.3
AOPR					Sb	12 04 15.7	-1.6
UUPR	Utuado, UPR, P	0.67	83	⇑eP	Pb	12 04 07.4	-1.1
UUPR	Utuado, UPR, P	0.67	83	eS	Sb	12 04 16.5	-1.1
UUPR	Utuado, UPR, P	0.67	83		Pb	12 04 07.4	-1.1
UUPR					Sb	12 04 16.5	-1.1
OBIP	Obispado Ponce	0.79	99	⇓iP	Pn	12 04 09.4	-0.6
OBIP	Obispado Ponce	0.79	99	eS	Sb	12 04 20.0	-0.7
OBIP	Obispado Ponce	0.79	99		Pn	12 04 09.4	-0.6
OBIP					Sb	12 04 20.0	-0.7
OBIP	Obispado Ponce	0.79	99	IAML		12 04 25.4	
	comp=N,1µm,0.2s						
CELP	Cerrillos	0.81	96	⇑eP	Pn	12 04 09.7	-0.7
CELP	Cerrillos	0.81	96	eS	Sn	12 04 20.9	-0.3
CELP	Cerrillos	0.81	96		Pn	12 04 09.7	-0.7
CELP					Sn	12 04 20.9	-0.3
EMPR	Esperanza - Ma	0.90	70	⇑eP	Pn	12 04 11.5	-0.1
EMPR	Esperanza - Ma	0.90	70	eS	Sb	12 04 23.8	-0.3
EMPR	Esperanza - Ma	0.90	70		Pn	12 04 11.5	-0.1
EMPR					Sb	12 04 23.8	-0.3
EMPR	Esperanza - Ma	0.90	70	IAML		12 04 26.5	
	comp=E,2µm,0.3s						
PCDR	Punta Cana, DR	0.97	291	⇑eP	Pn	12 04 12.1	-0.4
PCDR	Punta Cana, DR	0.97	291		Pn	12 04 12.1	-0.4
PCDR	Punta Cana, DR	0.97	291	i P	Pn	12 04 12.2	-0.4
PCDR				IAML		12 04 31.1	
	comp=Z,278nm,1.2s						
SJG	San Juan	1.21	92		Pn	12 04 16.3	+0.5
SJG				Sg	Sb	12 04 33.9	+1.1
SJG				IAML		12 04 34.8	
	comp=Z,1µm,0.6s						
SJG				IAML		12 04 35.9	
	comp=Z,1µm,0.3s						
GCPR	Guaynabo City	1.28	83	⇑eP	Pn	12 04 17.5	+0.7
GCPR	Guaynabo City	1.28	83	eS	Sb	12 04 34.3	-0.5
GCPR	Guaynabo City	1.28	83		Pn	12 04 17.5	+0.7
GCPR					Sb	12 04 34.3	-0.5
PDPR	Patillas Dam,	1.34	96		Pb	12 04 19.2	-0.4
PDPR				IAML		12 04 38.0	
	comp=E,976nm,0.2s						
CBYP	Canovanas	1.49	86	⇑eP	Pn	12 04 20.8	+1.0
CBYP	Canovanas	1.49	86	eS	Sn	12 04 39.3	+1.1
CBYP	Canovanas	1.49	86		Pn	12 04 20.8	+1.0
CBYP					Sn	12 04 39.3	+1.1
HUMP	Col San Antoni	1.50	91	⇑eP	Pn	12 04 20.8	+1.0
HUMP	Col San Antoni	1.50	91	eS	Sb	12 04 40.2	-0.7
HUMP	Col San Antoni	1.50	91		Pn	12 04 20.8	+1.0
HUMP					Sb	12 04 40.2	-0.7
MTP	Monte Pirata	1.78	92	⇑eP	Pn	12 04 25.2	+1.5
MTP	Monte Pirata	1.78	92	eS	Sn	12 04 46.8	+1.6
MTP	Monte Pirata	1.78	92		Pn	12 04 25.2	+1.5
MTP					Sn	12 04 46.8	+1.6
MTP	Monte Pirata	1.78	92	IAML		12 04 49.8	
	comp=E,313nm,0.2s						
CUPR	Culebra, Puert	2.04	86	⇑eP	Pn	12 04 27.8	+0.5
CUPR	Culebra, Puert	2.04	86	eS	Sn	12 04 51.8	+0.2
CUPR	Culebra, Puert	2.04	86		Pn	12 04 27.8	+0.5
CUPR					Sn	12 04 51.8	+0.2
SDD	Santo Domingo	2.38	277	Pn	Pb	12 04 36.9	-0.6
SDD				IAML		12 05 27.7	
	comp=N,239nm,2.4s						
SDD				IAML		12 06 03.9	
	comp=E,197nm,2.2s						
CDVI	St. Croix	2.56	99	Pn	Pb	12 04 38.7	-1.8
CDVI				IAML		12 05 23.1	
	comp=N,308nm,0.5s						
SDDR	Presa de Saban	3.76	283		Pn	12 04 56.5	+5.6
SDDR				IAML		12 05 51.1	
	comp=N,59nm,1.1s						
SDDR				IAML		12 05 57.6	
	comp=N,58nm,0.6s						
GRTK	Grand Turk	4.82	314	Pn	Pn	12 05 07.1	+1.5
BIRV	Birongo	7.73	172	Pn	Pn	12 05 47.0	+1.4
BAUV	El Baul	9.19	184	Pn	Pn	12 06 06.6	+1.0

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*DJA **29** 12:19:37.7±0.4, 9°S±4°×10°9E±°, h10^{km}, M4.7/19, mB5.7/3, mb4.7/7, MLv4.6/19, Mw(mB)5.2/3*
*BJI **29** 12:19:40.0±0.0, 9°.20S×108°.90E, h35^{km}, mB5.0/14, mb4.7/33, Ms4.5/5, Ms7 4.2/4*
*NEIC **29** 12:19:41.0±2.0, 9°.23S±0°.07×108°.86E±0°.07, h35^{km}±6^{km}, mb4.6/28, Error ellipse: s-maj=12.4km s-min=7.8km az=134.0*
*IDC **29** 12:19:44.4±2.9, 8°.94S×109°.23E, h58^{km}±26^{km}, mb4.0/19, mb1 4.0/21, mb1mx3.7/44, mbtmp4.2/21, ML3.8/2, MS3.7/11, Ms1 3.7/11, ms1mx3.5/34, Error ellipse: s-maj=28.1km s-min=12.1km az=54.0*
ISC 29 12:19:38.7±0.5, **9°.32S**±0°.06×**108°.87E**±0°.05, **h27**^{km}, **n104**, σ**1^{s}.73**/102, **mb4.6**/42, **MS3.8**/12, **1C**, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	1.58	345	P	Pn	12 20 05.1	+0.1
CMJI				S	Sb	12 20 28.6	+1.6
YOGI	Yogyakarta	2.05	43	P	Pn	12 20 11.4	-0.1
UGM	Wanagama	2.15	49	P	Pn	12 20 12.6	-0.2
UGM	Wanagama	2.15	49	Pn	Pn	12 20 12.2	-0.6
UGM				Sn	Sn	12 20 37.7	-1.0
WOJI	Wonogiri, Jawa	2.51	54	P	Pn	12 20 18.5	+0.8
PCJI	Pacitan	2.54	64	P	Pn	12 20 17.4	-0.7
CNJI	Cibinong	2.64	319	P	Pn	12 20 21.3	+1.7
SMRI	Semarang	2.74	35	P	Pn	12 20 22.9	+1.9
SMRI	Semarang	2.74	35		Pn	12 20 22.7	+1.8
LEM	Lembang	2.77	333	P	Pb	12 20 25.2	-2.5
	27nm,0.3s,baz=135,slow=10.0,SNR=29						
LEM				LR	LR	12 21 46.3	
	comp=Z,2µm,20.4s,baz=145,slow=46						
LEM	Lembang	2.77	333	P	Pn	12 20 24.7	+3.1
SKJI	Sukabumi	3.25	315	P	Pn	12 20 29.2	+1.2
XMIS	Christmas Isla	3.38	250	Pn	Pn	12 20 30.3	+0.6
DBJI	Dramaga	3.46	322	P	Pn	12 20 32.9	+2.0
UWJI	Ujung Watu	3.54	36	P	Pn	12 20 33.2	+1.2
CGJI	Cibinong	4.14	310	P	Pn	12 20 42.5	+2.2
GMJI	Gumukmas	4.63	77	P	Pn	12 20 47.4	+0.4
BLJI	Banyuglugur	4.92	72	P	Pn	12 20 51.9	+0.9
BWJI	Bawean	5.09	48	P	Pn	12 20 54.0	+0.7
	1.0nm197nm,0.8s						
JAGI	Jajag, Banyuwa	5.28	81	P	Pn	12 20 57.1	+1.1
	0.6nm79nm,0.4s						
JAGI	Jajag, Banyuwa	5.28	81	Pn	Pn	12 20 56.7	+0.7
ABJI	Asem Bagus	5.51	74	P	Pn	12 20 59.8	+0.7
	0.6nm156nm,0.9s						
IGBI	Denpasar	6.21	86	P	Pn	12 21 09.4	+0.7
	0.7nm2µm70nm,1.1s						
MDSI	Maura Dua	6.69	316	P	Pn	12 21 18.3	+3.0
	0.1nm9.7nm,0.9s						
TWSI	Taliwang, Sumb	7.93	86	P	Pn	12 21 33.0	+0.7
	0.2nm879nm29nm,0.8s						
EDFI	Ende, Flores	12.67	88	P	Pn	12 22 34.1	-3.3
GIRL	Giralia	14.21	159	Pn	Pn	12 22 56.6	-1.7
SOEI	Soe	15.19	93	P	P	12 23 17.2	+0.8
SOEI				IAmb	IAmb	12 23 42.2	
	comp=Z,36nm,0.9s						
TOLI2	Tolitoli	15.75	49	P	P	12 23 23.0	+0.4
FITZ	Fitzroy Crossi	18.46	120	P	Pn	12 23 53.7	+0.9
	comp=Z,0.2nm,0.3s,baz=301,slow=11,SNR=2.3						
KNRA	Kununurra	20.41	110	P	P	12 24 14.7	+0.8
MTN	Manton Dam	22.12	101	P	P	12 24 33.5	+1.1
MTN				IAmb	IAmb	12 24 53.9	
	comp=Z,34nm,1.1s						
FAKI	Fak Fak	24.08	76	P	P	12 24 50.0	-2.3
FAKI				IAmb	IAmb	12 24 51.5	
	comp=Z,22nm,1.0s						
WB0	Warramunga Arr	26.75	116	P	P	12 25 17.5	+1.1
WB0				IAmb	IAmb	12 25 20.4	
	comp=Z,23nm,1.2s						
WRA	Warramunga Arr	26.77	116	P	P	12 25 17.4	+0.8
	comp=Z,2.3nm,0.8s,baz=288,slow=11,SNR=9.3						
WRA	Warramunga Arr	26.77	116	P	P	12 25 18.1	+1.5
WB2	Warramunga Arr	26.78	116	P	P	12 25 17.4	+0.8
WB2				IAmb	IAmb	12 25 34.8	
	comp=Z,30nm,1.4s						
AS31	Alice Springs	27.85	124	P	P	12 25 27.5	+1.2
ASAR	Alice Springs	27.85	124	P	P	12 25 27.6	+1.3
	comp=Z,0.4nm,0.5s,baz=301,slow=10.0,SNR=9.3						
ASAR				PcP	PcP	12 28 44.4	+2.3
	comp=Z,0.6nm,0.5s,baz=310,slow=2.0,SNR=5.8						
ASAR				LR	LR	12 36 57.0	
	comp=Z,109nm,20.2s,baz=308,slow=37						
ASAR	Alice Springs	27.85	124	P	P	12 25 29.0	+2.7
CM31	Chiang Mai Arr	29.29	340	P	P	12 25 38.8	-0.3
CMAR	Chiang Mai Arr	29.29	340	P	P	12 25 38.5	-0.5
	comp=Z,0.8nm,0.5s,baz=177,slow=8.4,SNR=2.5						
CMAR				LR	LR	12 38 48.2	
	comp=Z,142nm,19.1s,baz=215,slow=39						
CMAR	Chiang Mai Arr	29.29	340	P	P	12 25 39.8	+0.8
COEN	Coen	33.89	101	P	P	12 26 19.0	-0.6
BBOO	Buckleboo	34.30	137	P	P	12 26 24.0	+1.0
BBOO				IAmb	IAmb	12 26 32.5	
	comp=Z,6.8nm,1.1s						
KMI	Kunming	34.75	350	⇑P	P	12 26 30.5	+3.3
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KMI				LR	LR		
	comp=Z,320nm,16.0s						
KMI				LR	LR		
	comp=Z,190nm,16.0s						
KMI				LR	LR		
	comp=Z,270nm,15.3s						
H08S2	Diego Garcia H	36.01	270	T	T	13 05 53.9	
	baz=94,slow=74,SNR=4.5						
H08S3	Diego Garcia H	36.02	270	T	T	13 06 05.3	
	baz=94,slow=74,SNR=7.3						
H08S1	Diego Carcia H	36.03	270	T	T	13 05 05.0	
	baz=94,SNR=3.2						
STKA	Stephens Creek	37.72	131	P	P	12 26 54.8	+2.5
	comp=Z,2.2nm,0.5s,baz=315,slow=8.3,SNR=9.4						
STKA	Stephens Creek	37.72	131	P	P	12 26 54.0	+1.7
NJ2	Nanjing	42.23	13	eP	P	12 27 32.5	+2.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN	Xi'an	43.12	0	P	P	12 27 36.8	-0.1
XAN				pP	pwP	12 27 51.8	+4.3
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GUN	Gumba	43.19	330	eP	P	12 27 37.7	-0.2
	comp=Z,18nm,0.7s						
KOLN	Koldanda	44.25	327	eP	P	12 27 46.8	+0.5
	comp=Z,6.6nm,0.4s						
DANN	Dangsing	44.63	328	eP	P	12 27 49.4	-0.1
	comp=Z,25nm,0.6s						
PYUN	Piuthan	44.84	327	eP	P	12 27 51.5	+0.5
	comp=Z,9.3nm,0.5s						
GTA	Gaotai	49.21	351	eP	P	12 28 25.3	+0.5
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BJI	Beijing	49.58	7	P	P	12 28 26.0	-1.4
BJI				pmax	pmax		
	comp=Z,11nm,0.6s						
BTO	Baotou	49.69	1	eP	P	12 28 29.8	+1.4
JHS	Saijyo	49.69	26	P	P	12 28 27.1	-1.4
KSRS	Korea Array	49.84	20	P	P	12 28 28.8	-0.7
	comp=Z,1.5nm,0.8s,baz=197,slow=3.7,SNR=4.8						
KSRS				LR	LR	12 51 52.1	
	comp=Z,33nm,18.2s,baz=55,slow=39						
HHC	Hu-ho-hao-te	49.98	3	eP	P	12 28 34.5	+3.8
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
MAT	Matsushiro	53.31	29	P	P	12 28 52.5	-3.0
MJAR	Matsushiro Arr	53.31	29	P	P	12 28 53.3	-2.2
	comp=Z,4.2nm,0.8s,baz=210,slow=7.2,SNR=7.2						
MJAR				LR	LR	12 50 47.7	
	comp=Z,36nm,20.5s,baz=65,slow=35						
MJAR	Matsushiro Arr	53.31	29	P	P	12 28 54.4	-1.1
MJAR				IAmb	IAmb	12 29 03.0	
	comp=Z,6.5nm,1.3s						
WMQ	Urumqi	56.28	342	eP	P	12 29 19.8	+2.8
SONM	Songino Array	56.95	358	P	P	12 29 21.9	+0.1
	comp=Z,1.8nm,0.5s,baz=177,slow=7.8,SNR=13						
SONM				LR	LR	12 56 29.7	
	comp=Z,82nm,19.4s,baz=190,slow=39						
SONM	Songino Array	56.95	358	P	P	12 29 21.6	-0.2
SONM				IAmb	IAmb	12 29 22.2	
	comp=Z,6.4nm,1.4s						
USRK	Ussuriysk Ar.	57.24	20	P	P	12 29 22.7	-1.0
	comp=Z,1.5nm,0.5s,baz=195,slow=5.9,SNR=5.2						
KSH	Kashi	57.38	330	P	P	12 29 24.5	-0.5
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BOOM	Boomskoye usch	59.71	332	P	P	12 29 40.9	-0.3
BOOM				IAmb	IAmb	12 29 53.7	
	comp=Z,5.5nm,0.9s						
CHGR	Chuyangaron	60.38	325	P	P	12 29 44.7	-1.1
BTK	Batken	60.44	327	P	P	12 29 47.1	+0.9
BTK				IAmb	IAmb	12 29 47.8	
	comp=Z,7.6nm,1.1s						
MK31	Makanchi Array	60.69	339	P	P	12 29 48.0	+0.3
MK31				IAmb	IAmb	12 29 48.6	
	comp=Z,4.9nm,0.8s						
MKAR	Makanchi Array	60.69	339	P	P	12 29 48.1	+0.5
	comp=Z,6.5nm,0.6s,baz=144,slow=7.7,SNR=36						
MKAR	Makanchi Array	60.69	339	P	P	12 29 47.9	+0.2
KLR	Kul'dur	61.67	17	P	P	12 29 52.8	-1.4
	comp=Z,4.7nm,0.6s,baz=189,slow=4.3,SNR=20						
KKAR	Karatay Array	62.79	329	P	P	12 30 02.7	+0.8
KURBB	Kurchatov Arra	65.26	339	P	P	12 30 18.4	+0.5
	comp=Z,2.0nm,0.6s,baz=153,slow=5.6,SNR=16						
KURK	Kurchatov	65.31	339	P	P	12 30 18.8	+0.6
ZAA0	Zalesovo Array	66.24	345	P	P	12 30 23.7	-0.5
ZAA0				IAmb	IAmb	12 30 24.9	
	comp=Z,6.5nm,1.1s						
ZALV	Zalesovo Beam	66.24	345	P	P	12 30 23.8	-0.3
	comp=Z,1.9nm,0.3s,baz=116,slow=3.4,SNR=8.5						
ZALV				LR	LR	13 01 46.2	
	comp=Z,66nm,18.2s,baz=33,slow=38						
ZALV	Zalesovo Beam	66.24	345	P	P	12 30 26.1	+1.9
BVAR	Borovoye Array	70.22	336	P	P	12 30 49.6	+0.4
	comp=Z,2.3nm,0.7s,baz=161,slow=9.4,SNR=8.9						
BRVK	Borovoye	70.29	336	P	P	12 30 49.8	+0.2
ABKAR	Akbulak array	72.35	329	P	P	12 31 02.8	+0.7
VNDA	Vanda	73.36	170	P	P	12 31 11.6	+3.9
	comp=Z,1.2nm,0.9s,baz=296,slow=9.7,SNR=3.6						
VNDA	Vanda	73.36	170	P	P	12 31 10.0	+2.3
AKTO	Aktyubinsk	74.06	329	P	P	12 31 13.1	+0.9
	comp=Z,0.8nm,0.5s,baz=110,slow=16,SNR=4.1						
AKTO				LR	LR	13 10 44.9	
	comp=Z,43nm,18.3s,baz=119,slow=41						
PEA0B	Petropavlovsk-	74.73	28	P	P	12 31 16.4	+0.3
PEA0B				IAmb	IAmb	12 31 29.6	
	comp=Z,6.6nm,0.9s						
PETK	Petropavlovsk-	74.73	28	P	P	12 31 14.9	-1.1
	comp=Z,3.0nm,0.8s,baz=349,slow=1.5,SNR=6.5						
PETK	Petropavlovsk-	74.73	28	P	P	12 31 16.0	-0.1
ARU	Arti	77.51	334	P	P	12 31 32.3	+0.5
	comp=Z,0.7nm,0.4s,baz=108,slow=8.7,SNR=3.5						
SEY	Seymchan	79.38	19	P	P	12 31 41.3	-0.7
	comp=Z,0.9nm,0.4s,baz=259,slow=5.2,SNR=6.7						
BOSA	Boshof	80.03	243	LR	LR	13 02 28.0	
	comp=Z,66nm,19.6s,baz=182,slow=32						
BELG	Belogornoye	80.58	327	LR	LR	13 12 23.3	
	comp=Z,40nm,18.6s,baz=145,slow=39						
TIXI	Tiksi	81.89	6	P	P	12 31 54.6	-0.6
TIXI				IAmb	IAmb	12 31 55.5	
	comp=Z,6.3nm,0.8s						
BR131	Keskin Array S	84.75	312	P	P	12 32 10.8	-0.1
BRTR	Keskin Array B	84.75	312	P	P	12 32 12.4	+1.5
	comp=Z,2.1nm,0.8s,baz=139,slow=6.0,SNR=6.1						
BRTR	Keskin Array B	84.75	312	P	P	12 32 11.6	+0.8
KLMR	Klimovskoe	88.28	333	eP	P	12 32 24.6	-2.8
KLMR				AMP		12 32 28.8	
	comp=Z,14nm,1.3s						
MNK	Minsk	92.33	325	i P	P	12 32 41.8	-4.7
	comp=E,2.0nm,0.9s						
MNK				i P	P	12 32 41.8	-4.7
	comp=N,32nm,1.1s						
MNK				i P	P	12 32 41.8	-4.7
	comp=Z,9.0nm,0.7s,baz=104						
MNK				i PP	PP	12 36 22.5	-4.9
MNK				i PPP	PPP	12 38 17.3	
MNK				i S	SKSac	12 43 10.9	-7.1
MNK				i PS	PS	12 44 44.5	-18
MNK				i SS	SS	12 49 44.5	-15
MNK				i SSS	SSS	12 53 33.8	
MNK				i LRM	MLR	13 14 32.7	
	comp=N,240nm,19.2s						
MNK				i LRM	MLR	13 14 42.2	
	comp=E,61nm,21.7s						
MNK				i LRM	MLR	13 14 42.2	
ARCES	ARCESS Array B	96.35	339	LR	LR	13 25 25.9	
	comp=E,80nm,18.8s,baz=250,slow=41						

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*TUL **29** 12:48:14.1±1.9, 36°.45N±0°.03×98°.80W±0°.04, h5^{km}±7^{km}, ML3.1, mb_Lg2.9/37(NEIC), Error ellipse: s-maj=4.6km s-min=3.6km az=110.0*
*ANF **29** 12:48:14.7±0.2, 36°.42N×98°.77W, h5^{km}, ML3.6/9, Error ellipse: s-maj=3.2km s-min=2.4km az=2.0*
*NEIC **29** 12:48:15.3±1.6, 36°.45N±0°.02×98°.72W±0°.01, h5^{km}±2^{km}, Error ellipse: s-maj=3.4km s-min=3.1km az=188.0*
ISC 29 12:48:14.3±1.2, **36°.44N**±0°.03×**98°.77W**±0°.02, **h2**^{km}±11^{km}, **n83**, σ**0^{s}.75**/100, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.19	252	Pg	Pg	12 48 17.8	-0.3
U32A				Sg	Sg	12 48 21.0	+0.4
U32A	Winter Ranch,	0.19	252	P	Pg	12 48 17.6	-0.5
	baz=75,SNR=146						
U32A				S	Sg	12 48 20.8	+0.1
	baz=75						
OK035	E0210 Rd and N	0.27	11	Pg	Pg	12 48 19.8	+0.2
OK035				Sg	Sg	12 48 24.0	+0.9
OK032	Salt Plains WL	0.58	51		Pg	12 48 25.8	+0.3
CROK	Carrier	0.64	84	Pg	Pg	12 48 26.8	+0.2
CROK				Sg	Sg	12 48 36.0	+1.1
KAN14	Manchester OK	0.83	51		Pg	12 48 30.5	+0.2
KAN14				Sg	Sg	12 48 41.4	+0.3
GC02	Grant County #	0.84	60	Pg	Pg	12 48 30.4	-0.1
GC02				Sg	Sg	12 48 42.2	+0.8
KAN10	Anthony SW Sta	0.87	38	Pg	Pg	12 48 30.8	-0.3
KAN10				Sg	Sg	12 48 42.6	+0.2
KAN16	Harper SW Stat	0.97	36		Pg	12 48 32.5	-0.4
KAN16				Sg	Sg	12 48 45.8	+0.3
KAN05	Bluff City Nor	0.98	47		Pg	12 48 33.0	-0.2
KAN05				Sg	Sg	12 48 46.0	0.0
KAN08	Anthony NE Sta	1.01	39	Pg	Pg	12 48 33.3	-0.5
KAN08				Sg	Sg	12 48 46.9	-0.1
KAN12	Harper NE Stat	1.06	36		Pg	12 48 34.2	-0.5
KAN12				Sg	Sg	12 48 48.6	+0.2
KAN01	Argonia South	1.08	48		Pg	12 48 34.8	-0.2
KAN01				Sg	Sg	12 48 48.5	-0.6
KAN06	Argonia West S	1.09	42	Pg	Pg	12 48 34.6	-0.6
KAN06				Sg	Sg	12 48 48.7	-0.7
KAN13	South Haven SW	1.19	61	Pg	Pg	12 48 36.5	-0.6
KAN13				Sg	Sg	12 48 52.0	-0.4
BCOK	Bluff Creek, N	1.22	129	Pg	Pg	12 48 37.2	-0.6
BCOK				Sg	Sb	12 48 54.2	-0.3
BLOK	Blackwell	1.29	75		Pn	12 48 38.4	-1.1
BLOK				Sg	Sg	12 48 55.5	-0.4
OK025	Westminster Rd	1.44	126		Pn	12 48 41.0	-0.6
OKCFA	Oklahoma City	1.48	133		Pn	12 48 41.6	-0.5
OKCFA	Oklahoma City	1.48	133	P	Pn	12 48 41.6	-0.5
	baz=315,SNR=17						
OKCFA				S	Sn	12 49 01.7	-0.3
	baz=315						
OKCSW	OKLAHOMA CITY	1.50	133	Pn	Pn	12 48 41.9	-0.4
FNO	Franklin	1.62	136	Pn	Pn	12 48 44.0	0.0
OK031	S. Brethren Rd	1.64	107		Pn	12 48 44.3	+0.1
QUOK	Quay	1.69	99		Pn	12 48 45.1	+0.2
T35A	Sooner Cattle	1.88	75		Pn	12 48 47.6	0.0
T35B	Sooner Cattle	1.88	75	P	Pn	12 48 47.4	-0.2
	baz=256,SNR=151						
T35B				Sb	Sb	12 49 13.7	+0.4
	baz=256						
R32A	Long Quarter,	1.98	1		Pn	12 48 49.6	+0.6

R32A	Long Quarter,	1.98	1	P	Pn	12 48 49.2	+0.2
	baz=180,SNR=42						
R32A				S	Sb	12 49 15.4	-0.9
	baz=180						
X34A	Smith Ranch, M	1.99	157		Pn	12 48 50.1	+1.1
W35A	Tecumseh	2.01	129		Pn	12 48 50.0	+0.7
TUL1	Leonard	2.47	101	Pn	Pn	12 48 56.4	+0.8
TUL1	Leonard	2.47	101	P	Pn	12 48 55.8	+0.1
	baz=284,SNR=30						
CBKS	Cedar Bluff	2.49	342		Pn	12 48 57.7	+1.7
CBKS	Cedar Bluff	2.49	342	P	Pn	12 48 56.5	+0.5
	baz=161						
CBKS				S	Sb	12 49 30.1	-0.9
	baz=161						
LOOK	Love County	2.77	151	Pn	Pn	12 49 00.9	+1.1
LOOK				IAmb_Lg		12 49 48.5	
	comp=Z,32nm,0.8s						
AMTX	Amarillo	2.83	238		Pn	12 49 01.7	+1.0
AMTX				IAmb_Lg		12 49 44.6	
	comp=Z,53nm,0.8s						
AMTX	Amarillo	2.83	238	P	Pn	12 49 01.4	+0.6
	baz=56,SNR=23						
KSU1	Kansas State U	3.16	32		Pn	12 49 05.2	+0.1
X37A	Clayton	3.33	123		Pn	12 49 08.3	+0.8
X37A	Clayton	3.33	123	P	Pn	12 49 07.5	0.0
	baz=305,SNR=8.5						
Z35A	Perchaven, San	3.34	158		Pn	12 49 08.1	+0.4
Z35A	Perchaven, San	3.34	158	P	Pn	12 49 08.0	+0.4
	baz=339						
U38A	Gravette	3.54	89		Pn	12 49 09.9	-0.4
ABTX	Abilene, Hawle	3.87	191		Pn	12 49 17.1	+2.0
HHAR	Hobbs	3.90	91		Pn	12 49 15.6	+0.2
KSCO	Kaye Shedlock'	3.99	311		Pn	12 49 18.4	+1.7
MSTX	Muleshoe	4.10	234	Pn	Pn	12 49 19.3	+1.2
MSTX				IAmb_Lg		12 50 27.1	
	comp=Z,32nm,0.9s						
W39A	Magazine	4.24	106		Pn	12 49 21.7	+1.7
W39A				IAmb_Lg		12 50 39.0	
	comp=Z,34nm,0.8s						
N33A	J Bar K, Exete	4.42	13	Pn	Pn	12 49 21.3	-1.2
N33A				IAmb_Lg		12 50 43.6	
	comp=Z,32nm,0.8s						
Z38A	Mt. Pleasant	4.45	134		Pn	12 49 22.9	+0.1
S39A	Bolivar	4.53	72		Pn	12 49 23.8	-0.3
S39A				IAmb_Lg		12 50 41.3	
	comp=Z,22nm,0.8s						
S39A	Bolivar	4.53	72	P	Pn	12 49 24.1	+0.1
	baz=255,SNR=6.7						
T25A	Trinidad	4.58	280	Pn	Pn	12 49 24.3	-0.6
MIAR	Mount Ida	4.64	113	Pn	Pn	12 49 25.5	0.0
U40A	Yellville	4.78	89	Pn	Pn	12 49 28.7	+1.3
U40A				IAmb_Lg		12 50 45.2	
	comp=Z,24nm,0.8s						
BGNE	Belgrade	4.99	5	Pn	Pn	12 49 29.7	-0.5
BGNE				IAmb_Lg		12 51 02.3	
	comp=Z,28nm,0.8s						
N35A	Tabor	5.05	28	Pn	Pn	12 49 31.8	+0.7
OGNE	Ogallala	5.17	331	Pn	Pn	12 49 33.8	+0.9
OGNE				IAmb_Lg		12 51 09.2	
	comp=Z,32nm,0.8s						
P38A	Dawn	5.22	51	Pn	Pn	12 49 32.1	-1.3
P38A				IAmb_Lg		12 51 08.3	
	comp=Z,16nm,0.8s						
X40A	Basin Creek Fa	5.22	110	Pn	Pn	12 49 32.5	-1.0
MGMO	Mountain Grove	5.27	80	Pn	Pn	12 49 34.6	+0.4
WHAR	Wooly Hollow	5.39	100	Pn	Pn	12 49 37.8	+2.0
WHAR				IAmb_Lg		12 51 20.6	
	comp=Z,21nm,0.8s						
WLAR	White Oak Lake	5.39	119	Pn	Pn	12 49 37.0	+1.1
WLAR				IAmb_Lg		12 51 18.7	
	comp=Z,18nm,0.8s						
FCAR	Ozark Folk Cen	5.41	94	Pn	Pn	12 49 34.9	-1.2
R40A	Maddies Statio	5.50	68	Pn	Pn	12 49 37.1	-0.2
SDCO	Great Sand Dun	5.54	286	Pn	Pn	12 49 38.9	+0.9
435B	Jarrell	5.73	170	IAmb_Lg		12 51 22.7	
	comp=Z,24nm,1.0s						
JCT	Junction City	6.01	189	Pn	Pn	12 49 44.3	-0.1
JCT				IAmb_Lg		12 51 29.0	
	comp=Z,16nm,0.8s						
N38A	Joes South For	6.14	43	Pn	Pn	12 49 45.6	-0.5
P40A	Paris	6.14	58	Pn	Pn	12 49 45.5	-0.7
CCM	Cathedral Cave	6.22	73	Pn	Pn	12 49 46.8	-0.4
CCM				IAmb_Lg		12 51 36.6	
	comp=Z,23nm,1.0s						
ISCO	Idaho Springs	6.35	304	Pn	Pn	12 49 47.8	-1.5
ANMO	Albuquerque	6.43	259		Pn	12 49 50.6	+0.3
PBMO	Poplar Bluff	6.72	85	Pn	Pn	12 49 54.5	+0.5
BNM	Barren Site	6.82	253	Pn	Pn	12 49 56.0	+0.3
FVM	French Village	6.84	74	Pn	Pn	12 49 57.0	+1.3
PHWY	Pilot Hill	7.12	315	Pn	Pn	12 49 59.5	-0.4
PHWY				IAmb_Lg		12 51 59.9	
	comp=Z,18nm,0.8s						
N23A	Red Feather La	7.16	311	Pn	Pn	12 50 00.8	+0.5
MNTX	Cornudas Mount	7.24	231	Pn	Pn	12 50 01.0	-0.3
MNTX				IAmb_Lg		12 52 11.7	
	comp=Z,11nm,1.1s						
ECSD	EROS Data Cent	7.47	12	Pn	Pn	12 50 04.8	+0.4
MVCO	Mesa Verde	7.84	279	Pn	Pn	12 50 10.6	+0.9
SUSD	Miller	8.00	359	IAmb_Lg		12 52 33.9	
	comp=Z,10nm,0.7s						
RSSD	Black Hills	8.66	334	IAmb_Lg		12 52 54.9	
	comp=Z,8.6nm,0.7s						

*IDC **29** 12:50:39.9±1.9, 5°.67S×147°.79E, h137^{km}±16^{km}, mb3.6/6, mb1 3.8/8, mb1mx3.5/39, mbtmp4.1/8, Error ellipse: s-maj=33.2km s-min=14.1km az=109.0*

*NEIC **29** 12:50:43.4±1.5, 5°.69S±0°.08×147°.62E±0°.09, h161^{km}±9^{km}, mb4.4/15, Error ellipse: s-maj=12.4km s-min=12.1km az=60.0*

ISC 29 12:50:41.5±0.8**, 5°.65S**±0°.09×**147°.7E**±0°.1**, h150^{km}, n46,** σ**1^{s}.07**/48**, mb4.2**/14**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.76	188	P	Pn	12 51 38.7	0.0
	3.4nm,0.3s,baz=357,slow=15,SNR=6.4						
PMG				S	Sn	12 52 20.6	-2.6
	22nm,0.3s,baz=52,slow=23,SNR=22						
PMG	Port Moresby	3.76	188		Pn	12 51 37.6	-1.1
PMG	Port Moresby	3.76	188	P	Pn	12 51 38.8	0.0
PMG	Port Moresby	3.76	188	P	Pn	12 51 39.1	+0.4
RABL	Rabaul	4.71	72	Pn	Pn	12 51 53.7	+2.6
COEN	Coen	9.37	208	Pn	Pn	12 52 54.0	+0.8
COEN	Coen	9.37	208	P	Pn	12 52 55.4	+2.2
	24nm,2.3s						
KDU	Kakadu	16.55	244	P	P	12 54 24.2	-0.7
	20nm,1.6s						
QIS	Mount Isa	16.76	207	P	P	12 54 28.0	+0.7
	10nm,1.2s						
MTN	Manton Dam	17.81	245	P	P	12 54 39.3	+0.4
MTN	Manton Dam	17.81	245	P	P	12 54 40.0	+1.2
	26nm,1.9s						
DRS	Darwin Rock St	17.87	247	P	P	12 54 40.0	+0.5
	15nm,0.8s						
WB0	Warramunga Arr	19.07	221	P	P	12 54 53.1	+0.5
WB0				IAmb	IAmb	12 54 53.8	
	comp=Z,9.7nm,1.1s						
WRAB	Tennant Creek	19.22	221	P	P	12 54 54.6	+0.4
WB2	Warramunga Arr	19.22	221	P	P	12 54 53.9	-0.4
WB2				IAmb	IAmb	12 54 55.3	
	comp=Z,10nm,0.7s						
WRA	Warramunga Arr	19.23	221	P	P	12 54 54.5	+0.2
	comp=Z,0.9nm,0.3s,baz=48,slow=11,SNR=14						
EIDS	Eidsvold	19.88	171	P	P	12 55 02.2	+1.0
EIDS				IAmb	IAmb	12 55 22.3	
	comp=Z,20nm,1.2s						
RMQ	Roma	20.74	177	P	P	12 55 13.0	+2.5
	comp=Z,35nm,0.7s						
KNRA	Kununurra	21.06	240	P	P	12 55 12.6	-1.4
KNRA				IAmb	IAmb	12 55 17.0	
	comp=Z,27nm,1.1s						
KNRA	Kununurra	21.06	240	P	P	12 55 13.2	-0.8
	comp=Z,40nm,1.7s						
AS31	Alice Springs	22.28	215	P	P	12 55 27.0	+0.3
AS31				IAmb	IAmb	12 55 27.4	
	comp=Z,3.5nm,0.6s						
ASAR	Alice Springs	22.28	215	P	P	12 55 26.9	+0.2
	comp=Z,9.4nm,0.5s,baz=51,slow=8.5,SNR=236						
ASAR				S	S	12 59 23.5	+2.4
	comp=Z,5.4nm,0.9s,baz=32,slow=21,SNR=15						
ASAR	Alice Springs	22.28	215	P	P	12 55 26.4	-0.3
INKA	Innaminka	22.93	196	P	P	12 55 32.9	+0.2
	comp=Z,49nm,0.8s						
OOD	Oodnadatta	24.79	206	P	P	12 55 49.5	-0.1
FITZ	Fitzroy Crossi	24.82	238	P	P	12 55 50.3	+0.4
	comp=Z,3.8nm,0.6s,baz=64,slow=9.9,SNR=14						
ARMA	Armidale	24.92	172	P	P	12 55 52.3	+1.4
ARMA				IAmb	IAmb	12 55 55.1	
	comp=Z,22nm,1.1s						
ARMA	Armidale	24.92	172	P	P	12 55 52.2	+1.4
	comp=Z,24nm,1.4s						
STKA	Stephens Creek	26.70	192	P	P	12 56 06.5	-0.3
	comp=Z,1.2nm,0.5s,baz=14,slow=15,SNR=5.3						
STKA	Stephens Creek	26.70	192	P	P	12 56 05.8	-1.0
WRKA	Warakurna	26.77	222	P	P	12 56 06.7	-0.9
MULG	Mulgathing	27.65	206	P	P	12 56 14.5	-0.8
	comp=Z,8.8nm,2.6s						
CAN	Canberra	29.55	178	P	P	12 56 32.2	0.0
CAN				IAmb	IAmb	12 56 33.5	
	comp=Z,5.8nm,0.7s						
CAN	Canberra	29.55	178	P	P	12 56 32.8	+0.7
CNB	Canberra Magne	29.56	177	P	P	12 56 32.6	+0.4
MORW	Morawa	37.90	228	P	P	12 57 43.9	-0.5
TUWZ	Tuamarina	42.65	151	P	P	12 58 23.4	+0.2
BFZ	Birch Farm	43.27	148	P	P	12 58 28.4	+0.3
SONM	Songino Array	64.43	330	P	P	13 01 02.5	+0.7
	comp=Z,0.5nm,1.0s,baz=145,slow=9.1,SNR=3.8						
SONM	Songino Array	64.43	330	P	P	13 01 02.4	+0.5
VNDA	Vanda	72.22	177	P	P	13 01 49.9	+0.2
	comp=Z,1.5nm,0.6s,baz=328,slow=8.7,SNR=8.1						
VNDA	Vanda	72.22	177	P	P	13 01 49.5	-0.1
QSPA	South Pole Qui	84.31	180	P	P	13 02 55.3	-1.2
QSPA				IAmb	IAmb	13 02 56.5	
	comp=Z,3.1nm,0.8s						
ILAR	Eielson Array	84.90	23	P	P	13 02 58.4	-0.9
	comp=Z,0.4nm,0.6s,baz=248,slow=4.8,SNR=4.6						
M26K	Nabesna, AK	85.58	26	P	P	13 03 02.5	-0.3
M26K				IAmb	IAmb	13 03 20.6	
	comp=Z,8.5nm,1.4s						
TORD	Torodi Ar. Bea	145.65	285	PKPbc	PKPdf	13 10 02.3	-0.8
	comp=Z,0.4nm,0.4s,baz=52,slow=3.4,SNR=4.1						

*VIE **29** 12:59:02.4±0.3, 50°.11N×18°.43E, h0^{km}, mb2.7/4, ml2.7/3, Error ellipse: s-maj=3.3km s-min=2.6km az=162.0 34 km NNE of Ostrava Suspected Mining induced.*

*IPEC **29** 12:59:02.8±0.2, 50°.06N×18°.48E, h2^{km}±2^{km}, ML2.7/3, Error ellipse: s-maj=2.0km s-min=1.1km az=163.0*

*IDC **29** 12:59:03.3±1.8, 49°.94N×18°.47E, h0^{km}, mb1 3.6/4, mb1mx3.2/50, mbtmp3.5/4, ML2.8/4, Error ellipse: s-maj=32.9km s-min=10.8km az=137.0*

*PRU **29** 12:59:03.7±0.0, 50°.04N×18°.38E, h0^{km}*

*BGR **29** 12:59:03.2±0.3, 50°.10N×18°.40E, h1^{km}, ML3.0/9, Error ellipse: s-maj=6.7km s-min=4.4km az=176.0*

ISC 29 12:59:02.6±0.7**, 50°.07N**±0°.03×**18°.45E**±0°.02**, h0^{km}, n59,** σ**1^{s}.20**/100**, 10C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.16	274	*e*PG	Pg	12 59 07.3	+1.6
RAC				*e*SG	Sg	12 59 10.5	+2.7
OKC	Ostrava-Krasne	0.30	220	*e*PG	Pg	12 59 09.2	+0.9
OKC				*e*SG	Sg	12 59 13.1	+0.8
	comp=Z,934nm,1.4s						
OKC	Ostrava-Krasne	0.30	220	*e*Pg	Pg	12 59 09.3	+0.9
OKC				*e*Sg	Sg	12 59 14.2	+1.8
MORC	Moravsky Berou	0.66	243	⇓P	Pg	12 59 15.5	+0.3
MORC				⇑S	Sg	12 59 24.6	+1.0
MORC	Moravsky Berou	0.66	243	*e*Pg	Pg	12 59 15.4	+0.3
	baz=64						
MORC				*e*Sg	Sg	12 59 24.0	+0.4
	204nm,0.8s,baz=64						
MORC	Moravsky Berou	0.66	243	*e*Pg	Pg	12 59 15.4	+0.3
MORC				*e*Sg	Sg	12 59 25.1	+1.5
OJC	Ojcow	0.88	80	*e*Pg	Pg	12 59 19.5	0.0
OJC				*e*Sg	Sg	12 59 32.8	+1.9
OJC	Ojcow	0.88	80	*e*Pg	Pg	12 59 19.7	+0.2
OJC				*e*Sg	Sb	12 59 33.0	0.0
KRLC	Kraliky	1.07	271	*e*PG	Pg	12 59 22.5	-0.6
KRLC				*e*SG	Sg	12 59 37.0	0.0
	comp=Z,161nm,0.4s						
LANS	Liptovska Anna	1.14	144	*e*PG	Pg	12 59 24.7	+0.4
LANS				*e*SG	Sb	12 59 41.2	+0.8
LANS				*e*LG	Lg	12 59 44.9	
JAVC	Velka Javorina	1.32	203	*e*Pg	Pg	12 59 27.9	+0.1
	baz=23						
NIE	Niedzica	1.37	118	*e*Pb	Pg	12 59 29.2	+0.4
NIE				*e*Pg	Pb	12 59 29.8	+0.7
NIE				*e*Sg	Sn	12 59 49.7	+1.9
DPC	Dobruska-Polom	1.39	282	*e*PG	Pg	12 59 28.7	-0.5
DPC				*e*SG	Sg	12 59 47.6	+0.3
	comp=Z,163nm,0.6s						
DPC	Dobruska-Polom	1.39	282	*e*Pg	Pg	12 59 29.0	-0.3
DPC				*e*Sg	Sg	12 59 46.9	-0.4
VRAC	Vranov	1.43	238	⇑P	Pn	12 59 29.4	-0.3
VRAC				⇑S	Sg	12 59 48.6	+0.2
VRAC	Vranov	1.43	238	Pg	Pn	12 59 29.2	-0.5
	8.1nm,0.3s,baz=61,slow=15,SNR=71						
VRAC				Lg	Lg	12 59 48.4	
	17nm,0.3s,baz=137,slow=22,SNR=17						
VRAC	Vranov	1.43	238	*e*Pg	Pn	12 59 29.1	-0.6
	baz=58						
VRAC				*e*Sg	Sg	12 59 48.1	-0.2
	81nm,0.5s,baz=58						
OSTC	Ostas	1.51	290	*e*PG	Pn	12 59 30.2	-0.7
OSTC				*e*SG	Sg	12 59 51.5	+0.4
	comp=Z,67nm,0.6s						
KSP	Ksiaz	1.58	300	*e*Pg	Pn	12 59 31.2	-0.5
KSP				*e*Sg	Sn	12 59 53.0	+0.1
KSP	Ksiaz	1.58	300	*e*Pn	Pn	12 59 31.4	-0.5
KSP				*e*Pg	Pg	12 59 34.4	+1.6
VYHS	Vyhne	1.60	171	*e*PG	Pn	12 59 31.7	-0.4
VYHS				*e*SG	Sn	12 59 53.7	+0.2
CHVC	Chvalec	1.62	290	*e*PG	Pn	12 59 32.2	-0.2
CHVC				*e*SG	Sn	12 59 54.4	+0.5
	comp=Z,60nm,0.8s						
UPC	Upice	1.62	287	*e*PG	Pn	12 59 32.8	+0.4
UPC				*e*SG	Sb	12 59 54.9	+0.6
	comp=Z,51nm,0.6s						
KRUC	Moravsky	1.68	234	*e*Pn	Pn	12 59 33.2	+0.1
	baz=53						
KRUC				*e*Sg	Sn	12 59 55.8	+0.5
	72nm,0.6s,baz=53						
MODS	Modra-Piesok	1.86	205	*e*PN	Pn	12 59 34.4	-1.4
MODS				*e*SN	Sn	12 59 58.9	-1.1
STHS	Stebnicka Huta	1.93	109	*e*PN	Pb	12 59 39.1	+0.5
STHS				*e*SN	Sg	13 00 05.4	+0.9
TREC	Trest	2.07	249	*e*SG	Sb	13 00 07.2	-0.2
	comp=Z,51nm,0.7s						
ZST	Bratislava	2.08	206	*e*PN	Pn	12 59 38.2	-0.4
ZST				*e*SN	Sn	13 00 04.6	-0.6
PSZ	Piszkesteto	2.36	156	⇑P	Pn	12 59 42.8	+0.2
PSZ	Piszkesteto	2.36	156	*e*PN	Pn	12 59 42.4	-0.2
PRU	Pruhonice	2.52	270	*e*SG	Sb	13 00 21.7	+1.5
	comp=Z,20nm,0.6s						
PVCC	Panska Ves	2.53	282	*e*PG	Pb	12 59 48.7	-0.1
PVCC				*e*SG	Sg	13 00 22.9	-0.8
	comp=Z,80nm,0.5s						
CONA	Conrad Observa	2.74	219	*e*Pn	Pn	12 59 47.2	-0.6
	2.5nm,0.3s						
CONA				*e*Sn	Sn	13 00 21.3	-0.4
	9.1nm,0.4s						
KOLS	Kolonicke sedl	2.74	113	*e*PG	Pg	12 59 56.0	+0.9
CKRC	Cesky Krumlov	2.98	247	*e*PG	Pb	12 59 56.9	+0.4
CKRC				*e*SG	Sb	13 00 35.8	+2.4
BRG	Berggiesshubel	2.99	287	*e*Pg	Pb	12 59 57.9	+1.3
BRG				*e*Sg	Sg	13 00 36.6	-1.9
KHC	Kasperske Hory	3.30	255	*e*PN	Pn	12 59 55.3	-0.3
KHC				*e*PG	Pb	13 00 02.9	+0.9
KHC				*e*SG	Sg	13 00 47.1	-1.6
	comp=Z,26nm,0.6s						
TRPA	Tarpa	3.32	124	⇑P	Pn	12 59 56.1	+0.4
TRPA	Tarpa	3.32	124	*e*PG	Pg	13 00 05.8	-0.3
GEC2	GERESS Array S	3.33	250	*e*Pg	Pb	13 00 04.2	+1.6
GEC2				*e*Sg	Sg	13 00 47.5	-2.0
GERES	GERESS Array B	3.33	250	Pn	Pn	12 59 55.7	-0.3
	0.4nm,0.3s,baz=64,slow=15,SNR=11						
GERES				Pg	Pb	13 00 03.9	+1.3
	2.9nm,0.3s,baz=67,slow=17,SNR=23						
GERES				Lg	Lg	13 00 47.2	
	5.3nm,0.3s,baz=66,slow=29,SNR=8.1						
FBE	Freiberg	3.36	287	*e*Pg	Pb	13 00 05.1	+2.2
FBE				*e*Sg	Sg	13 00 49.9	-0.6
ARSA	Arzberg	3.42	216	*i* Pn	Pn	12 59 57.3	+0.1
	2.1nm,0.3s						
MOA	Molln	3.54	233	*i* Sn	Sn	13 00 42.6	+1.3
	12nm,0.5s						
CLL	Collm	3.68	292	*e*Pg	Pb	13 00 11.0	+2.7
CLL				*e*Sg	Sg	13 01 01.0	+0.4
	comp=Z,33nm,1.2s						
CLL	Collm	3.68	292	*e*Pg	Pb	13 00 10.0	+1.6
WET	Wettzell	3.74	258	*e*Pg	Pb	13 00 11.4	+2.0
WET				*e*Sg	Sg	13 01 00.6	-2.0
TANN	Tannenbergstha	3.86	277	*e*Pg	Pb	13 00 13.9	+2.4
TANN				*e*Sg	Sg	13 01 03.8	-2.6
NKC	Novy Kostel	3.86	275	*e*PN	Pn	13 00 03.1	-0.1
NKC				*e*PG	Pb	13 00 12.2	+0.7
NKC				*e*SG	Sg	13 01 04.9	-1.6
	comp=Z,22nm,0.6s						
MORH	Mrgy, Hungar	3.86	178	⇓P	Pn	13 00 02.7	-0.5
MORH				⇑S	Sn	13 00 45.5	-3.7
MORH	Mrgy, Hungar	3.86	178	*e*PN	Pn	13 00 03.0	-0.1
WERD	Werda	3.96	278	*e*Pg	Pb	13 00 15.7	+2.6
DRGR		4.34	138	⇑P	Pn	13 00 10.0	+0.2
SIRR	Siria	4.37	149	⇑P	Pn	13 00 10.2	0.0
BZS	Buzias	4.94	153	⇑P	Pn	13 00 18.1	+0.1
BURAR	Bucovina Array	5.10	116	⇑P	Pn	13 00 21.1	+0.8
DAVOX	Davos/Dischmat	6.58	243	Pn	Pn	13 00 42.0	+1.3
	comp=Z,1.0nm,0.3s,baz=63,slow=7.9,SNR=8.8						
DAVOX				Lg	Lg	13 02 33.4	
	comp=Z,0.7nm,0.3s,baz=228,slow=21,SNR=5.8						
FINES	FINESS Array B	12.17	18	Pn	Pn	13 01 54.1	-2.9
	comp=Z,0.2nm,0.3s,baz=199,slow=12,SNR=5.7						
ARCES	ARCESS Array B	19.82	7	Pn	P	13 03 33.4	-1.0
	baz=190,slow=15,SNR=1.3						

NNC 29 13:01:27.7±8.8**, 37°.13N**×**70°.94E, h0^{km}, mb3.8, mpv3.4, 3C-2D, Error ellipse: s-maj=68.8km s-min=56.2km az=169.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK07	Karatay Array	5.97	357	⇑Sn	Sn	13 04 08.0	+1.6
	3.3nm,0.6s,baz=182,slow=23						
KK09	Karatay Array	6.00	357	⇓Pn	Pn	13 02 59.5	+1.8
	0.7nm,0.3s,baz=174,slow=12						
AAK	Ala-Archa	6.15	25	Pn	Pn	13 02 59.8	-0.1
	1.8nm,0.5s						
AAK				⇓Sn	Sn	13 04 12.9	+1.9
	5.6nm,0.6s						
TKM2	Tokmak 2	6.80	30	⇑Pn	Pn	13 03 07.8	-1.1
	2.4nm,0.5s						
TKM2				⇑Sn	Sn	13 04 26.1	-1.1
	3.8nm,0.9s						

*REN **29** 13:23:33.9±0.8, 41°.87N±0°.02×119°.61W±0°.02, h9^{km}±5^{km}, ML3.5/5, ML3.1/58(NEIC), Error ellipse: s-maj=3.0km s-min=1.5km az=45.0*

*ANF **29** 13:23:33.7±1.0, 41°.87N×119°.63W, h3^{km}±8^{km}, ML3.4/14, Error ellipse: s-maj=4.4km s-min=3.2km az=110.0*

*NEIC **29** 13:23:34.0±0.7, 41°.88N±0°.04×119°.62W±0°.02, h12^{km}±6^{km}, Error ellipse: s-maj=5.2km s-min=2.1km az=168.0*

ISC 29 13:23:33.5±1.3**, 41°.86N**±0°.03×**119°.62W**±0°.03**, h2^{km}**±13^{km}**, n49,** σ**0^{s}.83**/59**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.51	274	Pg	Pg	13 23 44.3	+1.0
MOD				Sg	Sg	13 23 50.9	+0.9
MOD				IAML		13 23 52.2	
	comp=N,2µm,0.6s						
WVOR	Wild Horse Val	0.93	52		Pg	13 23 51.5	+0.3
WVOR					Sg	13 24 03.8	+0.6
WVOR	Wild Horse Val	0.93	52	IAML		13 24 08.0	
	comp=N,851nm,1.0s						
K05A	Summer Lake	1.28	313		Pn	13 23 57.9	-0.7
M04C	Macdoel	1.66	268	P	Pn	13 24 03.6	-0.1
	baz=86,SNR=225						
M04C				S	Sg	13 24 26.5	-0.4
	baz=86						
J08A	Circle Bar Ran	1.71	29		Pn	13 24 03.7	-0.7
J08A				IAML		13 24 31.3	
	comp=E,265nm,0.6s						
J08A				IAML		13 24 31.8	
	comp=N,333nm,0.8s						
K04D	Chiloquin, OR	1.76	296	P	Pn	13 24 04.7	-0.3
	baz=115,SNR=29						
J05D	Fort Rock, OR	1.85	320	P	Pn	13 24 06.3	-0.1
	baz=139,SNR=245						
J05D				Sb	Sg	13 24 33.3	+0.2
	baz=139						
L04D	Klamath Falls	2.03	281	P	Pn	13 24 08.3	-0.5
	baz=99,SNR=413						
L04D				Sb	Sg	13 24 39.0	+0.2
	baz=99						
PAHR	Pah Rah Range	2.16	175	Pn	Pn	13 24 09.7	-1.0
PAHR				IAML		13 24 46.5	
	comp=E,85nm,0.4s						
O03E	Paynes Creek	2.28	227	P	Pn	13 24 12.4	+0.3
	baz=46,SNR=32						
O03E				Sb	Sg	13 24 46.2	-0.4
	baz=46						
J04D	Umpqua Nationa	2.30	308	P	Pn	13 24 12.5	-0.1
	baz=126,SNR=76						
BMN	Battle Mountai	2.31	128	Pn	Pn	13 24 12.0	-0.6
BMN				IAML		13 24 48.3	
	comp=E,140nm,0.6s						
BMN				IAML		13 24 49.3	
	comp=N,165nm,0.6s						
YBH	Yreka Blue Hor	2.32	268		Pb	13 24 15.2	-0.8
YBH	Yreka Blue Hor	2.32	268	Pn	Pn	13 24 11.8	-0.9
YBH	Yreka Blue Hor	2.32	268	IAML		13 24 48.9	
	comp=N,84nm,0.6s						
M02C	Callahan	2.47	260	P	Pn	13 24 14.1	-0.7
	baz=78,SNR=64						
M02C				Sb	Sg	13 24 52.0	-0.8
	baz=78						
N02D	Trinity Center	2.49	250	P	Pn	13 24 14.4	-0.6
	baz=68,SNR=73						
N02D				Sb	Sg	13 24 52.7	-0.7
	baz=68						
WDC	Whiskeytown Da	2.55	241		Pb	13 24 18.6	-1.3
WDC	Whiskeytown Da	2.55	241	Pn	Pn	13 24 15.5	-0.3
VCNR	Virginia City	2.57	181	Pn	Pn	13 24 15.6	-0.6
VCNR				IAML		13 25 00.4	
	comp=E,147nm,0.8s						
VCNR				IAML		13 25 04.3	
	comp=N,136nm,0.9s						
MPK	Martis Peak	2.58	187		Pb	13 24 22.2	+1.5
MPK				IAML		13 25 06.1	
	comp=N,82nm,0.5s						
MPK				IAML		13 25 09.4	
	comp=E,95nm,1.1s						
HUMO	Hull Mountain	2.59	288	Pn	Pn	13 24 15.6	-0.8
HUMO				IAML		13 25 01.6	
	comp=N,57nm,1.1s						
ORV	Oroville	2.71	212		Pb	13 24 20.9	-1.9
ORV	Oroville	2.71	212	Pn	Pn	13 24 17.1	-1.0
I05D	Terrebonne, OR	2.78	334	Pb	Pb	13 24 23.6	-0.2
	baz=152,SNR=11						
I05D				Sb	Sg	13 25 00.6	-2.0
	baz=152						
I04A	Tendick Farm,	2.82	314	Pb	Pb	13 24 24.8	+0.3
	baz=132,SNR=12						
I04A				Sb	Sg	13 25 02.2	-1.8
	baz=132						
YERR	Yerington	2.89	174		Pn	13 24 20.3	-0.4
YERR				IAML		13 25 10.9	
	comp=E,110nm,0.8s						
YERR				IAML		13 25 11.7	
	comp=N,96nm,0.9s						
O02D	Mt. Diablo Mer	2.93	236	Pb	Pb	13 24 26.1	-0.4
	baz=54,SNR=15						
O02D				S	Sn	13 24 57.7	+0.7
	baz=54						
DBO	Dodson Butte	2.96	296	Pn	Pn	13 24 20.7	-0.8
DBO				IAML		13 25 17.3	
	comp=N,52nm,1.9s						
DBO				IAML		13 25 30.6	
	comp=E,49nm,3.4s						
L02E	Cave Junction	2.98	277	P	Pn	13 24 22.3	+0.6
	baz=94,SNR=29						
L02E				Sb	Sb	13 25 05.9	+1.7
	baz=94						
KVN	Kaiserville	3.04	157	Pn	Pn	13 24 22.2	-0.5
KVN				IAML		13 25 15.8	
	comp=E,43nm,0.8s						
KVN				IAML		13 25 16.2	
	comp=N,40nm,0.8s						

K02D	Willamette Mer	3.12	287	P	Pn	13 24 24.0	+0.3
	baz=104,SNR=236						
MFID	Camas Ranch	3.20	60		Pn	13 24 24.1	-0.7
KHMM	Horse Mountain	3.25	254	Pn	Pn	13 24 25.1	-0.5
KHMM				IAML		13 24 54.8	
	comp=N,56nm,4.8s						
KHMM				IAML		13 25 05.4	
	comp=E,50nm,2.5s						
RYN	Ryan	3.34	165	Pn	Pn	13 24 26.8	-0.1
RYN				IAML		13 25 22.9	
	comp=E,53nm,1.1s						
RYN				IAML		13 25 26.4	
	comp=N,39nm,0.8s						
BMO	Blue Mountains	3.43	29	Pn	Pn	13 24 27.1	-0.9
KBO	Bosley Butte	3.45	277	Pn	Pn	13 24 28.0	-0.3
G08A	Pilot Rock	3.46	8	Pn	Pn	13 24 27.9	-0.5
JCC	Jacoby Creek,	3.48	254	Pn	Pn	13 24 27.6	-0.9
JCC				IAML		13 25 36.5	
	comp=N,54nm,2.6s						
JCC				IAML		13 25 42.5	
	comp=E,54nm,4.9s						
ELK	Elko	3.48	107		Pn	13 24 28.1	-0.7
ELK				IAML		13 25 22.5	
	comp=E,35nm,0.4s						
ELK				IAML		13 25 27.0	
	comp=E,31nm,0.6s						
NV11	Mina Array Sit	3.61	161	Pn	Pn	13 24 29.5	-0.9
NV11				IAML		13 25 43.2	
	comp=N,26nm,2.0s						
PLID	Pearl Lake	4.16	38	Pn	Pn	13 24 37.4	-0.8
HLID	Hailey	4.19	64	P	Pn	13 24 39.3	+0.8
	baz=248						
HVU	Hansel Valley	5.11	89	Pn	Pn	13 24 51.4	+0.2
SPUT	South Promonto	5.41	94	Pn	Pn	13 24 55.0	-0.2
NLU	North Lily Min	6.02	106		Pn	13 25 02.7	-1.1
MOOW	Moose Ponds	6.79	71	Pn	Pn	13 25 13.4	-0.8
BOZ	Bozeman (W)	6.88	54	Pn	Pn	13 25 14.8	-0.7

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*NEIC **29** 13:33:48.7±1.5, 18°.6N±0°.3×69°.0W±0°.1, h132^{km}±9^{km}, Error ellipse: s-maj=41.9km s-min=19.5km az=189.0*
*RSPR **29** 13:33:49.7, 18°.53N×68°.94W, h126^{km}±3^{km}, MD3.4/10*
*OSPL **29** 13:33:52.9±0.7, 17°.89N×69°.00W, h61^{km}±37^{km}, ML2.7*
ISC 29 13:33:49.1±1.3, **18°.5N**±0°.2×**68°.91W**±0°.05, **h134**^{km}, **n41**, σ**$0^{s}.85$**/41, **10C**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.50	89	⇑eP	Pn	13 34 08.1	-0.5
PCDR	Punta Cana, DR	0.50	89	eS	Sn	13 34 22.5	-0.9
PCDR	Punta Cana, DR	0.50	89		Pn	13 34 08.1	-0.5
PCDR	Punta Cana, DR	0.50	89		Sn	13 34 22.5	-0.9
PCDR	Punta Cana, DR	0.50	89	IAML		13 34 09.2	
	comp=E,82nm,1.8s						
PCDR				IAML		13 34 10.7	
	comp=N,222nm,1.8s						
PCDR	Punta Cana, DR	0.50	89	i P	Pn	13 34 08.2	-0.4
PCDR				IAML		13 34 24.3	
	comp=Z,188nm,2.2s						
IDE	Isla Desecheo	1.37	95	⇑eP	Pn	13 34 15.6	-0.5
IDE	Isla Desecheo	1.37	95	eS	Sn	13 34 36.7	+0.1
AGPR	Aguadilla, PR	1.71	91	⇑eP	Pn	13 34 20.5	+0.6
AGPR	Aguadilla, PR	1.71	91	eS	Sn	13 34 44.6	+1.3
AGPR	Aguadilla, PR	1.71	91		Pn	13 34 20.5	+0.6
AGPR					Sn	13 34 44.6	+1.3
LSP	Las Mesas	1.76	100	⇑eP	Pn	13 34 21.4	+0.9
LSP	Las Mesas	1.76	100	eS	Sn	13 34 45.5	+1.0
CRPR	Cabo Rojo, PR	1.78	106	⇑eP	Pn	13 34 20.8	+0.1
CRPR	Cabo Rojo, PR	1.78	106	eS	Sn	13 34 46.3	+1.5
CRPR	Cabo Rojo, PR	1.78	106		Pn	13 34 20.8	+0.1
CRPR					Sn	13 34 46.3	+1.5
CRPR	Cabo Rojo, PR	1.78	106	IAML		13 34 58.2	
	comp=E,42nm,3.5s						
CRPR				IAML		13 35 21.1	
	comp=N,41nm,2.1s						
CRPR	Cabo Rojo, PR	1.78	106	i P	Pn	13 34 20.9	+0.1
MLPR	Magueyes Islan	1.85	106	⇑eP	Pn	13 34 22.7	+1.1
MLPR	Magueyes Islan	1.85	106	eS	Sn	13 34 45.8	-0.5
MLPR	Magueyes Islan	1.85	106		Pn	13 34 22.7	+1.1
MLPR					Sn	13 34 45.8	-0.5
MLPR	Magueyes Islan	1.85	106	IAML		13 34 46.8	
	comp=N,34nm,2.5s						
AOPR	Arecibo Observ	2.05	94	⇑eP	Pn	13 34 23.7	-0.3
AOPR	Arecibo Observ	2.05	94	eS	Sn	13 34 49.8	-0.8
AOPR	Arecibo Observ	2.05	94		Pn	13 34 23.7	-0.3
AOPR					Sn	13 34 49.8	-0.8
AOPR	Arecibo Observ	2.05	94	IAML		13 34 58.8	
	comp=N,63nm,0.6s						
LOBA2	Hotel Casa Bon	2.12	259	i P	Pn	13 34 23.4	-1.3
OBIP	Obispado Ponce	2.24	102	Pn	Pn	13 34 26.7	+0.5
OBIP				IAML		13 35 05.9	
	comp=N,34nm,3.1s						
CELP	Cerrillos	2.26	101	⇑eP	Pn	13 34 26.5	+0.1
CELP	Cerrillos	2.26	101	eS	Sn	13 34 55.7	+0.6
CELP	Cerrillos	2.26	101		Pn	13 34 26.5	+0.1
CELP	Cerrillos	2.26	101		Sn	13 34 55.7	+0.6
CELP	Cerrillos	2.26	101	IAML		13 34 47.9	
	comp=E,23nm,3.2s						
CELP	Cerrillos	2.26	101	IAML		13 35 35.0	
	comp=N,30nm,3.0s						
SDDR	Presa de Saban	2.30	282	i P	Pn	13 34 28.8	+1.7
SDDR				eS	Sn	13 34 56.3	+0.1
HUMP	Col San Antoni	2.93	97	Pn	Pn	13 34 35.0	+0.1
MTP	Monte Pirata	3.22	97	⇑eP	Pn	13 34 38.8	+0.1
MTP	Monte Pirata	3.22	97	eS	Sn	13 35 15.7	-1.2
MTP	Monte Pirata	3.22	97		Pn	13 34 38.8	+0.1
MTP					Sn	13 35 15.7	-1.2
CUPR	Culebra, Puert	3.45	93	⇑eP	Pn	13 34 40.9	-0.8
CUPR	Culebra, Puert	3.45	93		Pn	13 34 40.9	-0.8

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*NIED **29** 13:55:37.5, 41°.07N×142°.80E, h17^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.41; $M_{\theta\theta}$-1.92; $M_{\phi\phi}$-0.48; $M_{r\theta}$0.14; $M_{\theta\phi}$-2.11; $M_{\phi r}$2.71; Fault plane solution: $M_0$4.08000×10^{14} NP1:ϕ_s24.00000°, δ68.00000°, λ58.00000°. NP2:ϕ_s263.00000°, δ38.00000°, λ143.00000°.*
*JMA **29** 13:55:37.4±0.2, 41°.07N×142°.80E, h17^{km}±3^{km}, M3.7*
*NEIC **29** 13:55:41.5±2.3, 41°.23N±0°.07×142°.7E±0°.1, h41^{km}±6^{km}, mb4.2/7, Error ellipse: s-maj=16.8km s-min=7.3km az=116.0*
*IDC **29** 13:55:43.0±3.2, 41°.26N×142°.52E, h55^{km}±27^{km}, mb3.5/4, mb1 3.6/6, mb1mx3.2/56, mbtmp3.7/6, ML3.1/2, MS4.2/1, Ms1 4.2/1, ms1mx2.6/39, Error ellipse: s-maj=51.3km s-min=27.1km az=126.0*
ISC 29 13:55:37.5±1.4, **41°.16N**±0°.04×**142°.71E**±0°.05, **h17**^{km}±8^{km}, **n48**, σ**$1^{s}.29$**/58, **mb4.1**/8, **1D**, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	Erimo	0.92	21		Pn	13 55 55.8	+0.1
ERM				Sn	Sn	13 56 07.9	-0.6
JEM	Erimo	0.92	21	P	Pn	13 55 55.7	0.0
JEM				eS	Sn	13 56 08.4	-0.1
JARK	Aomorirokkasho	1.03	262	P	Pg	13 55 57.3	-0.1
JARK				eS	Sn	13 56 11.7	+0.5
JAHD	Aomorihigashid	1.04	276	P	Pg	13 55 58.0	+0.3
JAHD				eS	Sn	13 56 12.6	+1.0
JNBK	Urakawa-nobuka	1.12	2	P	Pg	13 55 59.5	+0.3
JNBK				eS	Sg	13 56 15.5	+1.7
JKEN	Kujiedanarisaw	1.22	219	P	Pn	13 55 59.1	-0.8
JKEN				eS	Sb	13 56 14.3	-1.4
JOT	Ohata	1.27	280	⇓P	Pg	13 56 01.2	-0.9
JOT				eS	Sg	13 56 18.3	-0.4
JTM	Tenmabayashi	1.30	254	P	Pb	13 56 01.7	+0.2
JTM				eS	Sg	13 56 19.5	0.0
JTM	Tenmabayashi	1.30	254	Pn	Pb	13 56 01.7	+0.2
JKB	Kayabe	1.45	300	P	Pb	13 56 03.7	-0.5
JKB				eS	Sg	13 56 23.7	-0.8
JCH	Churui	1.53	18	P	Pb	13 56 05.2	-0.3
JCH				eS	Sg	13 56 25.8	-1.1
JIAM	Iburiatsuma	1.57	338	P	Pg	13 56 07.5	-0.3
JIAM				eS	Sg	13 56 29.6	+1.3
JBT2	Biratori 2	1.64	351	P	Pg	13 56 08.6	-0.4
JBT2				eS	Sg	13 56 31.0	+0.7
JSR	Shiriuchi	1.77	283	P	Pb	13 56 09.3	-0.2
JSR				eS	Sg	13 56 32.5	-1.9
JAH	Hinai	1.85	239	P	Pb	13 56 09.8	-1.2
JAH				eS	Sb	13 56 33.4	-0.5
JEW	Eniwo	1.92	331	P	Pb	13 56 11.9	-0.3
JEW				eS	Sg	13 56 37.6	-1.8
JEW	Eniwo	1.92	331		Pb	13 56 11.3	-0.8
JOM	Ohasama	2.00	213	P	Pn	13 56 11.1	+0.4
JKA	Kamikawa-asahi	2.95	358	Pn	Pn	13 56 25.4	+1.7
ASAJ	Asahikawa	2.95	358	P	Pn	13 56 26.2	+2.4
	3.8nm,0.3s,baz=204,slow=11,SNR=27						
ASAJ				S	Sb	13 57 06.4	+0.8
	7.8nm,0.3s,baz=333,slow=26,SNR=11						
JMM	Marumori	3.61	205	Pn	Pn	13 56 33.2	+0.4
JSD	Sado	4.64	229	Pn	Pn	13 56 50.4	+3.4
MJB9	Matsu-Tunnel	5.80	219	Pn	Pn	13 57 04.1	+1.2
MAJO	Matsushiro	5.80	219	Pn	Pn	13 57 04.5	+1.7
MJAR	Matsushiro Arr	5.80	219	P	Pn	13 57 05.9	+3.1
	0.1nm,0.3s,baz=31,slow=13,SNR=5.2						
MJAR	Matsushiro Arr	5.80	219	Pn	Pn	13 57 03.5	+0.7
INU	Inuyama	7.33	219	Pn	Pn	13 57 28.9	+5.0
JWT	Wachi	8.22	227	Pn	Pn	13 57 40.3	+4.3
KSRS	Korea Array	12.04	257	P	P	13 58 35.4	-5.7
	0.3nm,0.3s,baz=65,slow=14,SNR=5.0						
JNU	Nakatsue	12.38	233	Pn	Pn	13 58 35.7	+2.6
HIA	Hailar	18.05	304		P	13 59 47.6	-0.3
HIA				IAmb	IAmb	13 59 57.7	
	comp=Z,5.2nm,0.5s						
H11N2	WAKE ISLAND Hy	29.67	129	T	T	14 32 35.0	
	baz=318,slow=75,SNR=19						
H11N1	WAKE ISLAND Hy	29.68	129	T	T	14 32 57.3	
	baz=318,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	29.69	129	T	T	14 32 53.4	
	baz=318,slow=75,SNR=12						
SVW2	Sparrevohn	41.67	40	P	P	14 03 25.8	+0.9
SVW2				IAmb	IAmb	14 03 26.6	
	comp=Z,9.9nm,0.7s						
J20K	Nowinta River	42.37	35	P	P	14 03 30.6	+0.1
IMAR	Indian Mountai	42.61	33	P	P	14 03 33.1	+0.6
MK31	Makanchi Array	42.90	299	P	P	14 03 35.1	-0.1
MKAR	Makanchi Array	42.90	299	P	P	14 03 35.2	+0.1
	comp=Z,0.7nm,0.6s,baz=84,slow=9.9,SNR=10						
MDM	Murphy Dome	44.91	34	P	P	14 03 52.0	+1.0
MDM				IAmb	IAmb	14 04 08.9	
	comp=Z,3.4nm,1.1s						
BMAR	Burnt Mountain	46.25	31	P	P	14 04 02.2	+0.6
TGL	Tana Glacier	47.89	40	P	P	14 04 14.3	-0.3
INK	Inuvik	50.27	29	P	P	14 04 32.9	+0.4
	comp=Z,1.0nm,0.8s,baz=286,slow=6.1,SNR=4.8						
BATI	Baumata	54.05	203	LR	LR	14 30 18.2	
	comp=Z,225nm,18.9s,baz=243,slow=38						
DLBC	Dease Lake	54.79	40	P	P	14 05 05.6	-0.7
DLBC				IAmb	IAmb	14 05 06.1	
	comp=Z,4.3nm,1.0s						
ABKAR	Akbulak array	56.11	308	P	P	14 05 14.2	-1.5
ABKAR				IAmb	IAmb	14 05 25.2	
	comp=Z,1.1nm,0.9s						
FINES	FINESS Array B	65.64	332	P	P	14 06 19.9	-0.5
	comp=Z,1.5nm,0.9s,baz=46,slow=6.1,SNR=4.1						
NOA	NORSAR Array B	70.77	337	P	P	14 06 51.6	-1.0
	comp=Z,0.8nm,0.7s,baz=34,slow=6.3,SNR=3.2						

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*NEIC **29** 14:03:30.4±2.1, 15°.54N±0°.08×96°.40W±0°.06, h28^{km}±4^{km}, mb4.5/8, Md4.4/63(MEX), Error ellipse: s-maj=12.0km s-min=7.7km az=179.0*
*IDC **29** 14:03:32.7±3.0, 15°.61N×96°.15W, h41^{km}±9^{km}, mb3.6/5, mb1 3.9/5, mb1mx3.3/58, mbtmp3.8/5, MS3.1/3, Ms1 3.2/3, ms1mx2.9/23, Error ellipse: s-maj=51.4km s-min=10.5km az=149.0*
*MEX **29** 14:03:32.7±0.8, 15°.72N×96°.42W, h30^{km}±12^{km}, MD4.4*
ISC 29 14:03:30.4±0.7, **15°.65N**±0°.05×**96°.41W**±0°.02, **h24**^{km}, **n74**, σ**$2^{s}.53$**/114, **mb4.0**/8, **1C-1D**, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.31	68		Pb	14 03 38.9	+1.4
HUIG					Sb	14 03 43.7	+1.3
HUIG	Huatulco	0.31	68	i P	Pb	14 03 38.9	+1.4
HUIG				i S	Sb	14 03 43.7	+1.3
PEIG	Puerto Escondi	0.79	296	i P	Pb	14 03 45.1	-0.4
PEIG				eS	Sb	14 03 53.9	-1.9
OXLC	Oaxaca	1.44	349	eP	Pn	14 03 54.1	-0.9
OXLC				eS	Sn	14 04 10.3	-3.0
OXBJ	Oaxaca	1.44	348		Pn	14 03 54.3	-0.9
OXBJ					Sn	14 04 10.2	-3.3
OXBJ	Oaxaca	1.44	348	eP	Pn	14 03 54.3	-0.9
OXBJ				eS	Sn	14 04 10.2	-3.3
VHO	Vista Hermosa	1.45	348	eP	Pn	14 03 54.3	-1.0
VHO				eS	Sn	14 04 10.6	-3.0
YOIG	Yosondua	1.62	318	eP	Pn	14 03 57.1	-0.6
YOIG				eS	Sn	14 04 15.2	-2.8
PNIG	Pinotepa	1.81	294		Pn	14 03 59.7	-0.4
PNIG					Sn	14 04 18.6	-3.7
PNIG	Pinotepa	1.81	294	eP	Pn	14 03 59.7	-0.4
PNIG				ePg	Pb	14 04 04.5	+1.6
PNIG				i S	Sn	14 04 19.1	-3.2
CMIG	Matias Romero	2.05	45	P	Pn	14 04 02.0	-1.4
	18nm,0.3s,baz=223,slow=10,SNR=146						
CMIG				S	Sn	14 04 26.0	-2.2
	66nm,0.3s,baz=224,slow=20,SNR=11						
CMIG	Matias Romero	2.05	45		Pn	14 04 01.9	-1.4
CMIG					Sn	14 04 24.2	-4.0
CMIG	Matias Romero	2.05	45	eP	Pn	14 04 01.9	-1.4
CMIG				eS	Sn	14 04 24.2	-4.0
TXIG	Tlaxiaco	2.06	321	ePn	Pn	14 04 03.7	0.0
TXIG				eP	Pn	14 04 03.7	0.0
TXIG				i Pg	Pb	14 04 08.6	+1.3
TXIG				eS	Sn	14 04 25.2	-3.6
NEUV	Arroyo Zacate	2.13	16	eP	Pn	14 04 03.6	-0.9
NEUV				eS	Sn	14 04 27.0	-3.2
TOIG	Toxpalan	2.51	346	eP	Pn	14 04 12.1	+2.3
TOIG				eS	Sn	14 04 36.5	-3.3
HLIG	Huajuapan de L	2.55	329	eP	Pn	14 04 11.2	+0.8
HLIG				eS	Sn	14 04 38.4	-2.4
UXUV	UXUV	2.73	52	eP	Pn	14 04 11.8	-1.0
UXUV				eS	Sn	14 04 42.7	-2.3
FTIG	Fresnillo de T	2.79	324	i Pn	Pn	14 04 14.6	+1.0
FTIG				ePg	Pb	14 04 20.0	+0.4
FTIG				eS	Sn	14 04 43.8	-2.8
TLIG	Tlapa	2.81	313		Pn	14 04 14.2	+0.3
TLIG	Tlapa	2.81	313		Sn	14 04 45.4	-1.8
TLIG	Tlapa	2.81	313	eP	Pn	14 04 15.2	+1.2
TLIG				eS	Sn	14 04 45.4	-1.8
CRIG	Cruz Grande	2.83	293		Pn	14 04 14.2	+0.1
CRIG					Sn	14 04 42.7	-4.8
CRIG	Cruz Grande	2.83	293	eP	Pn	14 04 14.2	+0.1
CRIG				eS	Sn	14 04 42.7	-4.8
PCIG		3.07	89		Pn	14 04 16.8	-0.6
PCIG					Sn	14 04 50.3	-3.2
PCIG		3.07	89	eP	Pn	14 04 16.8	-0.6
PCIG				eS	Sn	14 04 50.3	-3.2
TGIG		3.35	70		Pn	14 04 24.1	+2.8
TGIG					Sn	14 04 53.5	-6.9
TGIG		3.35	70	eP	Pn	14 04 24.1	+2.8
TGIG				eS	Sn	14 04 53.5	-6.9
JAUV	Jalcomulco	3.71	354	eP	Pn	14 04 25.3	-1.0
JAUV				eS	Sn	14 05 02.4	-7.0
MEIG	Mezcala	3.82	307		Pn	14 04 29.6	+1.8
MEIG					Sn	14 05 08.4	-3.6
MEIG	Mezcala	3.82	307	eP	Pn	14 04 29.6	+1.8
MEIG				eS	Sn	14 05 08.4	-3.6
CAIG	El Cayaco	3.96	291		Pn	14 04 30.0	+0.4
CAIG					Sn	14 05 09.2	-6.1
CAIG	El Cayaco	3.96	291	eP	Pn	14 04 30.0	+0.4
CAIG				eS	Sn	14 05 09.2	-6.1
PLIG	Platanillo	4.02	313		Pn	14 04 32.4	+1.7
PLIG					Sn	14 05 14.0	-3.1
PLIG	Platanillo	4.02	313	⇓eP	Pn	14 04 32.4	+1.7
PLIG				eS	Sn	14 05 14.0	-3.1
PATR	El Naranjo	4.06	97	eP	Pn	14 04 32.2	+1.0
PATR				eS	Sn	14 05 14.2	-4.0
PAVE	Pavencul	4.11	96	eP	Pn	14 04 33.3	+1.4
PAVE				eS	Sn	14 05 16.0	-3.3
CCIG	Comitan	4.16	81		Pn	14 04 31.9	-0.6
CCIG	Comitan	4.16	81	eP	Pn	14 04 37.4	+4.9
CHUJ	Union Juarez	4.18	97	eP	Pn	14 04 34.5	+1.5
CHUJ				eS	Sn	14 05 18.0	-3.3
MAVM	Malinalco, Edo	4.42	319		Pn	14 04 37.9	+1.8
MAVM					Sn	14 05 23.5	-3.4
MAVM	Malinalco, Edo	4.42	319	eP	Pn	14 04 37.9	+1.8
MAVM				eS	Sn	14 05 23.5	-3.4
XCVM	Xochimilco	4.42	325	eP	Pn	14 04 28.5	-7.7
ARIG	Puente Sto Nin	4.59	305		Pn	14 04 40.8	+2.5
ARIG					Sn	14 05 26.6	-4.3
ARIG	Puente Sto Nin	4.59	305	eP	Pn	14 04 40.8	+2.5
ARIG				eS	Sn	14 05 26.6	-4.3
TOVM	TOLUCA	4.77	320		Pn	14 04 41.3	+0.1
TOVM					Sn	14 05 34.9	-1.0
TOVM	TOLUCA	4.77	320	⇑eP	Pn	14 04 41.3	+0.1
TOVM				eS	Sn	14 05 34.9	-1.0
ZIIG	Zihuatanejo	5.22	293		Pn	14 04 48.9	+1.9
ZIIG					Sn	14 05 39.7	-6.8
ZIIG	Zihuatanejo	5.22	293	eP	Pn	14 04 48.9	+1.9
ZIIG				eS	Sn	14 05 39.7	-6.8
JTS	Las Juntas de	12.37	114	LR	LR	14 10 09.2	
	comp=Z,54nm,20.0s,slow=33						
RIOS	Rincon, Osa	14.37	117	Pn	Pn	14 06 51.4	-1.1
SOR	Soroa	14.51	59	Pn	Pn	14 06 54.2	-0.1
W35A	Tecumseh	19.43	359	P	P	14 07 54.7	-0.3
OKCSW	OKLAHOMA CITY	19.70	358	P	P	14 07 57.2	-0.8
FCAR	Ozark Folk Cen	20.52	10	P	P	14 08 06.4	-0.5
LENM	Lemitar	20.75	335	Pn	P	14 08 11.5	+1.9
PFO	Pinyon Flats O	25.45	318	LR	LR	14 17 54.6	
	comp=Z,65nm,21.9s,baz=52,slow=34						
PDAR	Pinedale Array	29.28	340	P	P	14 09 31.6	+0.5
	0.4nm,0.7s,baz=133,slow=12,SNR=3.4						
PDAR				pP	sP	14 09 43.3	+2.2
	0.4nm,0.7s,baz=152,slow=5.9,SNR=2.9						
NVAR	Mina Array Bea	29.77	324	P	P	14 09 38.6	+3.2
	1.9nm,0.8s,baz=154,slow=9.0,SNR=5.4						
NVAR				pP	sP	14 09 50.2	+4.7
	0.9nm,0.8s,baz=147,slow=8.8,SNR=4.5						
NVAR				LR	LR	14 22 00.7	
	comp=Z,65nm,21.9s,baz=239,slow=37						
NVAR	Mina Array Bea	29.77	324	P	P	14 09 33.5	-1.9
YKA	Yellowknife Ar	48.52	349	P	P	14 12 10.9	-0.2
	1.0nm,0.8s,baz=154,slow=7.4,SNR=12						
YKA				pP	sP	14 12 22.7	+1.3
	0.7nm,0.8s,baz=155,slow=7.2,SNR=7.4						
H03N2	Juan Fernandez	51.59	161	T	T	15 08 23.3	
	baz=331,slow=77,SNR=10						
H03N1	Juan Fernandez	51.59	161	T	T	15 08 32.1	
	baz=331,slow=77,SNR=8.4						
H03N3	Juan Fernandez	51.60	161	T	T	15 08 21.6	
	baz=331,slow=77,SNR=7.1						
INK	Inuvik	57.69	345	P	P	14 13 19.0	+0.4
	0.7nm,0.6s,baz=126,slow=6.0,SNR=8.9						
INK	Inuvik	57.69	345	IAmb	IAmb	14 13 19.5	
	comp=Z,4.6nm,1.2s						
HDA	Harding Lake	59.51	337	P	P	14 13 31.9	+0.5
ILAR	Eielson Array	59.67	337	P	P	14 13 34.0	+1.5
	comp=Z,0.4nm,0.6s,baz=139,slow=5.3,SNR=6.8						
MDM	Murphy Dome	60.26	337	P	P	14 13 37.5	+1.0
MDM				IAmb	IAmb	14 13 38.8	
	comp=Z,6.0nm,1.4s						
BMAR	Burnt Mountain	60.31	341	P	P	14 13 37.6	+0.8
H24K	Noodor Dome	60.57	338	P	P	14 13 39.6	+1.0
H24K				IAmb	IAmb	14 13 52.5	
	comp=Z,9.3nm,1.5s						
I23K	Minto, Yukon-K	60.77	337	P	P	14 13 41.3	+1.3
I23K				IAmb	IAmb	14 13 41.9	
	comp=Z,4.0nm,0.9s						
J20K	Nowinta River	62.21	335	P	P	14 13 48.4	-1.3
A21K	Barrow	65.92	342	P	P	14 14 11.6	-2.4

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*REN **29** 14:03:42.3±0.9, 41°.88N±0°.04×119°.61W±0°.03, h10^{km}±5^{km}, ML3.5/5, ML3.2/58(NEIC), Error ellipse: s-maj=5.2km s-min=2.7km az=164.0*
*ANF **29** 14:03:42.3±0.6, 41°.88N×119°.57W, h10^{km}, ML3.4/14, Error ellipse: s-maj=6.3km s-min=3.0km az=100.0*
*NEIC **29** 14:03:42.6±1.0, 41°.87N±0°.04×119°.61W±0°.03, h12^{km}±4^{km}, Error ellipse: s-maj=6.2km s-min=2.3km az=157.0*
ISC 29 14:03:41.9±1.3, **41°.87N**±0°.03×**119°.61W**±0°.03, **h7**^{km}±14^{km}, **n44**, σ**$0^{s}.78$**/53, **Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.52	274		Pg	14 03 52.8	+0.8
MOD					Sb	14 04 00.3	-1.1
MOD	Modoc Plateau	0.52	274	IAML		14 04 00.6	
	comp=E,3μm,0.6s						
MOD				IAML		14 04 04.2	
	comp=N,1μm,0.4s						
WVOR	Wild Horse Val	0.92	51		Pg	14 03 59.9	+0.4
WVOR					Sb	14 04 12.2	-0.6
WVOR	Wild Horse Val	0.92	51	IAML		14 04 15.7	
	comp=N,983nm,0.5s						
WVOR				IAML		14 04 16.3	
	comp=N,863nm,1.2s						
K05A	Summer Lake	1.28	312		Pn	14 04 06.4	-0.1
K05A				IAML		14 04 27.4	
	comp=E,598nm,1.2s						
K05A				IAML		14 04 32.0	
	comp=N,548nm,1.4s						
M04C	Macdoel	1.67	268	P	Pn	14 04 12.0	+0.2
	baz=86,SNR=261						
M04C				Sb	Sg	14 04 36.4	+0.8
	baz=86						
J08A	Circle Bar Ran	1.71	29		Pn	14 04 12.1	-0.2
J08A				IAML		14 04 39.2	
	comp=N,304nm,0.6s						
J08A				IAML		14 04 39.6	
	comp=E,312nm,0.5s						
K04D	Chiloquin, OR	1.77	296	P	Pn	14 04 13.2	+0.1
	baz=114,SNR=63						
K04D				S	Sb	14 04 37.2	+0.1
	baz=114						
J05D	Fort Rock, OR	1.86	320	Pb	Pb	14 04 16.3	0.0
	baz=139						
J05D				Sb	Sg	14 04 41.5	-0.1
	baz=139						
L04D	Klamath Falls	2.04	281	P	Pn	14 04 16.9	0.0
	baz=99,SNR=454						
L04D				Sb	Sg	14 04 48.2	+0.7
	baz=99						
PINE	Pine Mountain	2.16	333	Pn	Pn	14 04 17.7	-0.9
PINE				IAML		14 04 52.7	
	comp=E,168nm,0.6s						
PINE				IAML		14 05 04.5	
	comp=N,122nm,0.8s						
PAHR	Pah Rah Range	2.17	175	Pn	Pn	14 04 18.8	+0.2
I07A	Izee	2.21	2	Pn	Pn	14 04 19.0	-0.3
I07A				IAML		14 04 53.5	
	comp=N,156nm,0.6s						
O03E	Paynes Creek	2.29	227	P	Pn	14 04 20.9	+0.7
	baz=46,SNR=306						
O03E				Sb	Sg	14 04 54.2	-1.2
	baz=46						
J04D	Umpqua Nationa	2.30	307	Pb	Pb	14 04 24.0	0.0
	baz=126						
YBH	Yreka Blue Hor	2.33	268		Pb	14 04 23.2	-1.0
YBH	Yreka Blue Hor	2.33	268	Pn	Pn	14 04 20.6	-0.2
M02C	Callahan	2.48	260	P	Pn	14 04 22.5	-0.4
	baz=78,SNR=88						
M02C				Sb	Sg	14 05 00.5	-1.1
	baz=78						
N02D	Trinity Center	2.50	250	P	Pn	14 04 22.7	-0.3
	baz=68,SNR=106						
N02D				Sb	Sg	14 05 01.0	-1.1
	baz=68						
WDC	Whiskeytown Da	2.56	241	Pn	Pn	14 04 23.0	-0.9
WDC				IAML		14 05 02.0	
	comp=N,63nm,0.7s						
HUMO	Hull Mountain	2.60	288	Pn	Pn	14 04 23.8	-0.6
HUMO				IAML		14 05 06.2	
	comp=E,56nm,0.6s						
ORV	Oroville	2.72	213		Pn	14 04 24.4	-1.7
I05D	Terrebonne, OR	2.78	333	Pb	Pb	14 04 32.0	0.0
	baz=152						
I04A	Tendick Farm,	2.82	314	Pb	Pb	14 04 33.2	+0.4
	baz=132						
I04A				Sb	Sg	14 05 10.5	-2.1
	baz=132						
YERR	Yerington	2.89	174	Pn	Pn	14 04 28.6	0.0
YERR				IAML		14 05 17.2	
	comp=N,55nm,0.4s						
YERR				IAML		14 05 21.4	
	comp=E,80nm,0.4s						
O02D	Mt. Diablo Mer	2.94	236	P	Pn	14 04 29.2	0.0
	baz=54,SNR=18						
O02D				Sb	Sb	14 05 13.4	+2.5
	baz=54						
L02E	Cave Junction	2.99	277	P	Pn	14 04 30.4	+0.6
	baz=94						
K02D	Willamette Mer	3.12	287	P	Pn	14 04 32.5	+0.8
	baz=104						
MFID	Camas Ranch	3.19	60	Pn	Pn	14 04 32.7	+0.1
KHMM	Horse Mountain	3.26	254	Pn	Pn	14 04 33.8	+0.2
KHMM				IAML		14 05 45.1	
	comp=N,49nm,4.2s						

KHMM				IAML		14 06 14.0	
	comp=E,47nm,3.9s						
RYN	Ryan	3.34	165	Pn	Pn	14 04 35.2	+0.4
RYN				IAML		14 05 33.7	
	comp=E,39nm,0.8s						
RYN				IAML		14 05 40.0	
	comp=N,34nm,1.0s						
H04A	Detroit Lake	3.39	327	Pn	Pn	14 04 35.1	-0.2
H04A				IAML		14 04 57.4	
	comp=N,28nm,4.3s						
BMO	Blue Mountains	3.42	29	Pn	Pn	14 04 36.1	+0.2
G08A	Pilot Rock	3.45	8	Pn	Pn	14 04 36.6	+0.3
KBO	Bosley Butte	3.46	277	Pn	Pn	14 04 36.8	+0.5
ELK	Elko	3.48	107	Pn	Pn	14 04 36.5	-0.2
ELK				IAML		14 05 35.2	
	comp=N,32nm,0.5s						
ELK				IAML		14 05 35.8	
	comp=N,43nm,0.4s						
JCC	Jacoby Creek,	3.49	254	Pn	Pn	14 04 37.0	+0.3
JCC				IAML		14 05 58.6	
	comp=N,44nm,1.7s						
JCC				IAML		14 06 47.6	
	comp=E,61nm,4.7s						
KMRM	Mail Ridge	3.51	243	Pn	Pn	14 04 37.2	+0.2
KMRM				IAML		14 05 00.7	
	comp=E,55nm,4.3s						
KMRM				IAML		14 05 56.5	
	comp=N,50nm,4.0s						
KEBM	Edson Butte	3.64	288	Pn	Pn	14 04 39.7	+0.9
KCPM	Cahto Peak	3.72	236	Pn	Pn	14 04 40.4	+0.4
HOPS	Hopland Field	3.90	224	Pn	Pn	14 04 41.5	-0.9
HLID	Hailey	4.18	64	P	Pn	14 04 47.6	+1.2
	baz=248						
BGU	Big Grassy Mou	5.04	99		Pn	14 04 57.9	-0.1
BGU				IAML		14 06 30.5	
	comp=N,17nm,1.3s						
BGU				IAML		14 06 33.0	
	comp=E,20nm,1.0s						
DLMT	Dillon	6.17	53	Pn	Pn	14 05 13.6	0.0

THE **29** *14:15:49.8, 37.°30N×19.°81E, h0^{km}±14^{km}, ML4.2/5, Error ellipse: s-maj=17.2km s-min=1.9km az=225.0*

IDC **29** *14:15:52.8±0.7, 37.°61N×20.°12E, h0^{km}, mb4.2/17, mb1 4.1/25, mb1mx4.0/53, mbtmp4.1/25, ML3.6/6, MS3.4/12, Ms1 3.4/12, ms1mx3.1/41, Error ellipse: s-maj=14.5km s-min=12.1km az=153.0*

ATH **29** *14:15:52.6, 37.°42N×19.°95E, h10^{km}±1^{km}, ML3.9/17, Error ellipse: s-maj=5.1km s-min=1.3km az=61.0*

MED_RC **29** *14:15:53.0±0.6, 37.°42N×19.°89E, h10^{km}, MW4.0/11, Moment Tensor Solution.Mantle waves: s11,c11; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.26±.13; $M_{\theta\theta}$0.95±.10; $M_{\phi\phi}$-0.69±.15; $M_{r\theta}$0.01±.27; $M_{\theta\phi}$0.88±.11; $M_{\phi r}$0.84±.47; Best double couple: $M_0$1.48000×10^{15} NP1:ϕ_s107.00000°, δ58.00000°, λ-14.00000°. NP2:ϕ_s205.00000°, δ78.00000°, λ-147.00000°. Principal axes: T 1.4200, Plg13.0000°, Azm332.0000°; N 0.1300, Plg55.0000°, Azm223.0000°; P -1.5500, Plg31.0000°, Azm71.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

NEIC **29** *14:15:53.8±2.1, 37.°59N±0.°07×19.°99E±0.°04, h4^{km}±4^{km}, mb4.5/40 Error ellipse: s-maj=9.9km s-min=4.5km az=195.0*

MOS **29** *14:15:54.1±1.2, 37.°49N×20.°05E, h22^{km}, mb4.4/19, Error ellipse: s-maj=10.1km s-min=4.3km az=72.2*

ISC 29 14:15:54.7±1.1**, 37.°58N**±0.°04×**19.°96E**±0.°03**, h13**^{km}±6^{km}**, n295, σ1^{s}76**/317**, mb4.3**/40**, MS3.4**/7**, 9C-15D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.69	26	P	Pb	14 16 09.0	+0.3
KEF3				S	Sn	14 16 23.6	+2.8
	28μm,0.7s						
KEF3	Kipouria, Keph	0.69	26	P	Pb	14 16 09.1	+0.5
LTHK	Lithakia	0.70	79	P	Pg	14 16 06.9	-1.5
LTHK				S	Sn	14 16 20.8	-0.3
	17μm,0.8s						
LTHK	Lithakia	0.70	79	P	Pg	14 16 07.0	-1.5
LTHK				S	Sb	14 16 18.7	+0.2
LTHK				AML	AML	14 16 21.5	
	comp=E,38620μm,0.8s						
LTHK				AML	AML	14 16 21.6	
	comp=N,33432μm,0.6s						
ARGA	Argostoli. Kep	0.72	34	P	Pb	14 16 09.7	+0.5
LXRA	Lixouri, Kepha	0.72	31	P	Pb	14 16 09.3	+0.1
PSDA	Pessada-Kefalo	0.72	42	P	Pg	14 16 08.2	-0.6
PSDA				S	Sn	14 16 23.3	+1.7
PSDA	Pessada-Kefalo	0.72	42	P	Pg	14 16 08.6	-0.2
PSDA				S	Sb	14 16 20.5	+1.5
DMLN	Damoulianata-K	0.73	26	P	Pg	14 16 08.9	-0.1
DMLN				S	Sn	14 16 25.2	+3.3
	comp=N,15μm,1.0s						
DMLN	Damoulianata-K	0.73	26	P	Pb	14 16 09.4	0.0
VLS	Valsamata	0.78	40	P	Pg	14 16 09.3	-0.5
VLS				S	Sn	14 16 24.6	+1.7
	comp=N,11μm,0.6s						
VLS	Valsamata	0.78	40	P	Pb	14 16 09.6	-0.5
VLS				AML	AML	14 16 25.4	
	comp=N,28402μm,0.7s						
VLS				AML	AML	14 16 27.3	
	comp=E,11203μm,0.8s						
VLS	Valsamata	0.78	40	P	Pg	14 16 09.3	-0.5
VLS				S	Sn	14 16 24.6	+1.7
FSK	Fiskardo	1.00	28	P	Pn	14 16 15.0	+0.6
FSK				S	Sn	14 16 32.2	+3.9
	comp=E,6μm,1.3s						
FSK	Fiskardo	1.00	28	P	Pb	14 16 14.0	+0.2
FSK				AML	AML	14 16 41.2	
	comp=N,11601μm,1.2s						
FSK				AML	AML	14 16 42.8	
	comp=E,8402μm,1.0s						
VTN	Vitineika	1.02	70	P	Pb	14 16 14.3	0.0
EVGI	Lefkada island	1.17	28	P	Pb	14 16 16.9	0.0
DRAG	Dragano-Lefkad	1.20	23	P	Pn	14 16 18.7	+1.4
DRAG	Dragano-Lefkad	1.20	23	P	Pn	14 16 19.0	+1.7
NYDR	Nydri-Lefkada	1.27	27	P	Pb	14 16 19.2	+0.7
RLS	Riolos of Patr	1.28	68	P	Pb	14 16 19.2	+0.5
RLS	Riolos of Patr	1.28	68	P	Pg	14 16 18.4	-1.0
RLS				AML	AML	14 16 46.2	
	comp=E,6308μm,1.0s						
RLS				AML	AML	14 16 46.4	
	comp=N,10145μm,1.3s						
LKD2	Lefkada island	1.32	24	P	Pb	14 16 20.2	+0.7
LKD2	Lefkada island	1.32	24	P	Pb	14 16 20.7	+1.3
LKD2				AML	AML	14 16 54.7	
	comp=E,5285μm,0.7s						
LKD2				AML	AML	14 16 55.7	
	comp=N,5055μm,0.5s						
TSLK	Tsoukalades, L	1.36	23	P	Pb	14 16 21.1	+1.2
TSLK	Tsoukalades, L	1.36	23	P	Pb	14 16 21.2	+1.2
DRO	Drossia	1.43	74	P	Pg	14 16 21.1	-1.1
DRO	Drossia	1.43	74	P	Pg	14 16 21.2	-1.1
DRO				AML	AML	14 16 56.3	
	comp=N,8712μm,0.6s						
DRO				AML	AML	14 16 57.2	
	comp=E,7970μm,0.6s						
PYL	PYLOS	1.57	115	P	Pn	14 16 21.1	-1.3
PYL				AML	AML	14 16 51.6	
	comp=E,2557μm,0.6s						
PYL				AML	AML	14 16 58.3	
	comp=N,1796μm,0.8s						
ITM	Ithomi	1.61	104	P	Pn	14 16 22.2	-0.7
ITM				AML	AML	14 17 03.5	
	comp=E,3154μm,0.6s						
ITM				AML	AML	14 17 06.8	
	comp=N,3561μm,0.9s						
ITM	Ithomi	1.61	104		Pn	14 16 22.2	-0.7
LAKA	Lakka	1.73	67	P	Pb	14 16 26.1	-0.2
LAKA	Lakka	1.73	67	P	Pb	14 16 26.2	-0.1
LAKA				AML	AML	14 17 01.5	
	comp=E,25156μm,1.0s						
LAKA				AML	AML	14 17 05.1	
	comp=N,12245μm,1.1s						
EFP	Efpalio	1.75	61	P	Pb	14 16 26.6	-0.1
EFP	Efpalio	1.75	61	P	Pb	14 16 26.7	-0.1
KLV	Kalavryta, Ach	1.79	74	P	Pb	14 16 26.4	-1.1
KLV	Kalavryta, Ach	1.79	74	P	Pb	14 16 26.5	-0.9
KLV				AML	AML	14 17 07.5	
	comp=N,2508μm,1.7s						
KLV				AML	AML	14 17 10.3	
	comp=E,2133μm,1.4s						
TRIZ	Trizonia	1.84	64	P	Pb	14 16 27.5	-0.7
ANX	Ano Chora	1.85	56	P	Pb	14 16 28.3	-0.1
SERG	Sergoula	1.85	63	P	Pb	14 16 27.8	-0.6
EVR	Evrytania	1.97	47	P	Pb	14 16 30.2	-0.3
EVR	Evrytania	1.97	47	P	Pb	14 16 30.7	+0.1
EVR				AML	AML	14 17 14.1	
	comp=E,2332μm,1.3s						
EVR				AML	AML	14 17 20.0	
	comp=N,3693μm,1.2s						
KEK	Kerkira	2.13	357	P	Pn	14 16 31.5	+1.4
KEK				AML	AML	14 17 21.9	
	comp=E,1732μm,0.6s						
KEK				AML	AML	14 17 25.1	
	comp=N,1798μm,0.8s						
THAL	Thalero	2.19	77	P	Pn	14 16 31.8	+1.1
THAL				AML	AML	14 17 20.6	
	comp=E,9061μm,0.8s						
THAL				AML	AML	14 17 20.8	
	comp=N,8041μm,0.9s						
JAN	Janina	2.19	18	P	Pb	14 16 34.5	+0.3
MAKR	Makrakomi, Fth	2.23	49	P	Pb	14 16 34.1	-0.8
MAKR				AML	AML	14 17 39.9	
	comp=N,3350μm,1.9s						
MAKR				AML	AML	14 17 43.3	
	comp=E,3059μm,2.2s						
AGG	Agios Georgios	2.35	52	P	Pn	14 16 35.2	+2.1
AGG	Agios Georgios	2.35	52	P	Pn	14 16 34.4	+1.3
AGG	Agios Georgios	2.35	52		Pn	14 16 34.4	+1.3
LTK	Loutraki	2.42	79	P	Pn	14 16 34.6	+0.6
VLI	Veliai	2.53	109	P	Pn	14 16 35.8	+0.4
THL	Klokotos Trika	2.55	38	P	Pn	14 16 38.1	+2.3
THL				AML	AML	14 17 32.7	
	comp=N,1558μm,1.2s						
THL				AML	AML	14 17 34.9	
	comp=E,1761μm,1.8s						
KPRO	Kipourio	2.61	24	P	Pb	14 16 39.9	-1.5
LKR	Lokris	2.62	65	P	Pn	14 16 37.6	+0.9
ATAL	Atalanti	2.66	64	P	Pn	14 16 38.2	+0.9
ATAL				AML	AML	14 17 31.0	
	comp=N,1536μm,1.2s						
ATAL				AML	AML	14 17 36.5	
	comp=E,1294μm,1.2s						
VIL2	Platees	2.69	75	P	Pn	14 16 38.1	+0.4
PENT	Pentalofos	2.77	19	P	Pb	14 16 42.1	-2.1
KTHA	Kythira Island	2.81	117	P	Pn	14 16 39.8	+0.4
KTHA	Kythira Island	2.81	117	P	Pn	14 16 39.9	+0.5
KTHA				AML	AML	14 17 43.3	
	comp=N,1095μm,1.2s						
KTHA				AML	AML	14 17 53.4	
	comp=E,1397μm,0.9s						
NEST	Nestorio	2.95	16	P	Pb	14 16 44.9	-2.4
TIP	Timpagrande	2.98	303	⇓P	Pn	14 16 42.8	+1.0
TIP	Timpagrande	2.98	303		Pn	14 16 42.4	+0.7
KZN	Kozani	3.07	27	P	Pn	14 16 45.4	+2.4
KZN	Kozani	3.07	27	P	Pn	14 16 45.6	+2.7
XOR	Xorichti	3.10	54	P	Pn	14 16 44.4	+1.0
KBN	Korca	3.11	12	P	Pn	14 16 44.4	+0.9
KBN	Korca	3.11	12		Pn	14 16 44.4	+0.9
ANKY	Antikythira Is	3.18	122	P	Pn	14 16 45.3	+0.8
CEL	Celeste	3.29	283	Pn	Pn	14 16 46.6	+0.6
FNA	Florina	3.38	18	P	Pn	14 16 49.7	+2.4
FNA	Florina	3.38	18	P	Pn	14 16 46.9	-0.4
FNA	Florina	3.38	18		Pn	14 16 46.9	-0.4
OHR	Ohrid	3.59	10	*i* P	Pn	14 16 52.6	+2.6
TIR	Tirane	3.76	359	*e*P	Pn	14 16 54.1	+1.7
VAM	Vamos	4.04	121	P	Pn	14 16 56.1	-0.2
VAY	Valandovo	4.25	28	*i* P	Pn	14 17 00.3	+1.3
VAE	Valguarnera	4.41	270	Pn	Pn	14 17 03.9	+2.4
	baz=164,slow=6.8,SNR=4.1						
VAE				Sn	Sn	14 17 56.3	+3.6
	comp=E,9.1nm,0.3s,baz=251,slow=17,SNR=3.1						
STIP	Stip	4.45	22	*i* P	Pn	14 17 04.7	+2.8
RAFF	Raffo Rosso	4.47	267		Pn	14 17 01.7	-0.5
SKO	Skopje	4.53	14	*i* P	Pn	14 17 04.6	+1.6
IDI	Anoyia	4.58	118	Pn	Pn	14 17 03.6	-0.2
	comp=E,0.8nm,0.3s,baz=302,slow=19,SNR=2.4						
IDI				Sn	Sn	14 17 56.4	-0.5
	comp=E,6.2nm,0.3s,baz=57,slow=19,SNR=6.2						
IDI				LR	LR	14 18 56.6	
	comp=E,217nm,19.7s,baz=280,slow=41						
DRME	Dracevica, Mon	4.64	353	*e*Pn	Pn	14 17 04.7	+0.2
PDG	Podgorica	4.88	354	*e*Pn	Pn	14 17 07.3	-0.4
PDG	Podgorica	4.88	354		Pn	14 17 07.0	-0.7
BOSS	Bosilegrad	5.28	21	*e*P	Pn	14 17 14.3	+1.1
TREB	Trebinje	5.28	347	*e*Pn	Pn	14 17 11.8	-1.5
CORL	Corleone	5.29	275		Pn	14 17 12.3	-1.1
SGRT	San Giovanni R	5.29	323		Pn	14 17 14.1	+0.6
CLTB	Caltabellotta	5.36	272		Pn	14 17 13.9	-0.6
BARS	Barje	5.42	15	*e*P	Pn	14 17 15.4	+0.2
BARS	Barje	5.42	15	*e*P	Pb	14 17 31.4	+2.2
BRY	Bratogost	5.43	349	*e*Pn	Pn	14 17 15.0	-0.4
STON	Ston	5.56	343	*e*Pn	Pn	14 17 16.0	-1.1
STON	Ston	5.56	343	*e*Pn	Pn	14 17 16.3	-0.8
STON				Sn	Sn	14 18 15.5	-5.4
VTS	Vitosha	5.62	25	⇓P	Pn	14 17 19.9	+1.8
VTS	Vitosha	5.62	25	⇓P	Pn	14 17 19.9	+1.8
VTS	Vitosha	5.62	25		Pn	14 17 18.8	+0.7
SJES	Sjenica	5.67	0	*e*P	Pn	14 17 19.9	+1.1
LSTV	Lastovo	5.69	337	*e*Pn	Pn	14 17 18.4	-0.5
LSTV				Sn	Sn	14 18 18.8	-5.3
SELS	Selova	5.70	9	*e*P	Pn	14 17 19.3	+0.2
ALN	Alexandroupoli	5.77	53	P	Pn	14 17 19.5	-0.4
ALN	Alexandroupoli	5.77	53	Pn	Pn	14 17 19.5	-0.4
IVAS	Ivanjica	5.99	1	*e*P	Pn	14 17 22.5	-0.6
ZAPS	Zavoj	6.04	19	*e*P	Pn	14 17 24.9	+1.1
RUDO	Rudo	6.05	356	*e*Pn	Pn	14 17 25.6	+1.8
MAKA	Makarska	6.13	339	*e*Pn	Pn	14 17 24.3	-0.6
MAKA				Sn	Sn	14 18 29.5	-5.3
BOVS	Bovan	6.19	12	⇑P	Pn	14 17 25.2	-0.6
BOVS	Bovan	6.19	12	*e*P	Pn	14 17 25.5	-0.3
HVAR	Hvar	6.20	335	*e*Pn	Pn	14 17 25.1	-0.8
HVAR				Sn	Sn	14 18 32.2	-4.5
RICI	Ricice	6.29	341	*e*Pn	Pn	14 17 27.1	-0.1
RICI				Sn	Sn	14 18 33.8	-5.0
BBLS	Lazići	6.29	356	*e*Pn	Pn	14 17 28.3	+1.0
BBLS	Lazići	6.29	356	*e*P	Pn	14 17 29.2	+1.9
GRUS	Gruza	6.33	5	*e*P	Pn	14 17 28.0	+0.3
ZAGS	Zajecar	6.46	15	*e*P	Pn	14 17 29.1	-0.4
DIVS	Divibare	6.51	0	*e*Pn	Pn	14 17 29.0	-1.3
DIVS	Divibare	6.51	0	Pn	Pn	14 17 29.6	-0.7
DIVS	Divibare	6.51	0	*e*P	Pn	14 17 29.3	-1.0
TRUS	Trudelj	6.65	3	*e*P	Pn	14 17 31.5	-0.5
ZIRJ	Zirje	6.90	333	*e*Pn	Pn	14 17 35.7	+0.2
ZIRJ				Sn	Sn	14 18 48.2	-5.6
KIJV	Kijevo	6.96	338	*e*Pn	Pn	14 17 35.8	-0.6
KIJV				Sn	Sn	14 18 50.8	-4.7
MORI	Morici	7.06	334	*e*Pn	Pn	14 17 37.1	-0.6
MORI				Sn	Sn	14 18 51.7	-6.1
DUGI	Dugi Otok	7.41	331	*e*Pn	Pn	14 17 42.7	+0.2
DUGI				Sn	Sn	14 19 01.4	-4.9
NRCA	Norcia	7.42	317		Pn	14 17 42.0	-0.7
BLY	Banja Luka	7.46	345	*e*Pn	Pn	14 17 43.2	0.0
HERR	Herculane	7.52	13	⇓P	Pn	14 17 44.0	-0.1
FRGS	Fruska Gora	7.57	359	*e*Pn	Pn	14 17 42.1	-2.7
FRGS	Fruska Gora	7.57	359	*e*P	Pn	14 17 45.1	+0.3
UDBI	Udbina	7.63	337	*e*Pn	Pn	14 17 46.0	+0.4
UDBI				Sn	Sn	14 19 06.8	-5.1
MRAK	Mrakovica	7.78	344	*e*Pn	Pn	14 17 46.5	-1.1
AKAS	Kas	7.84	97	Pn	Pn	14 17 48.6	0.0
HUMR	Humele	7.91	27	⇓P	Pn	14 17 50.1	+0.8
NVLJ	Novalja	7.96	333	*e*Pn	Pn	14 17 49.9	-0.2
NVLJ				Sn	Sn	14 19 14.8	-5.3
GZR	Gura Zlata	8.09	14	⇑P	Pn	14 17 52.4	+0.5
GZR	Gura Zlata	8.09	14	⇑P	Pn	14 17 52.4	+0.5
MTUR	Matau	8.54	25	⇓P	Pn	14 17 56.1	-2.1
MTUR	Matau	8.54	25	⇓P	Pn	14 17 56.1	-2.1
SMRN	Sveta Marina	8.63	331	*i* Pn	Pn	14 17 58.8	-0.5
SMRN				Sn	Sn	14 19 30.5	-6.0
BRJN	Brijuni	8.68	329	*e*Pn	Pn	14 17 59.5	-0.4
BRJN				Sn	Sn	14 19 31.2	-6.5
MORH	Mrgy, Hungar	8.68	354	*e*P	Pn	14 18 00.9	+0.9
VOIR		8.73	24	⇑P	Pn	14 18 02.6	+1.9
VOIR		8.73	24	⇑P	Pn	14 18 02.6	+1.9
KEST	Kesra	8.73	261	Pn	Pn	14 18 02.2	+1.5
	comp=E,0.2nm,0.3s,baz=0.2,slow=1.6,SNR=8.2						
KEST				LR	LR	14 22 09.8	
	comp=E,115nm,18.3s,baz=358,slow=42						
KEST	Kesra	8.73	261	Pn	Pn	14 18 01.2	+0.5
CRES	Cresnjev	8.90	339	*e*Pn	Pn	14 18 02.6	-0.4
MLR	Muntele Rosu	9.09	28	⇑P	Pn	14 18 08.4	+2.8
MLR	Muntele Rosu	9.09	28	Pn	Pn	14 18 08.7	+3.1
	comp=E,1.4nm,0.3s,baz=257,slow=9.0,SNR=10						
MLR	Muntele Rosu	9.09	28	⇑P	Pn	14 18 08.4	+2.8
MLR	Muntele Rosu	9.09	28	Pn	Pn	14 18 07.1	+1.5
CEY	Cerknica	9.14	335	*e*Pn	Pn	14 18 06.8	+0.5
PLOR	Plostina	9.65	29	⇓P	Pn	14 18 15.6	+2.3
PLOR	Plostina	9.65	29	⇓P	Pn	14 18 15.6	+2.3
VRI	Vrincioaia	9.70	29	⇓P	Pn	14 18 15.8	+1.9
VRI	Vrincioaia	9.70	29	⇓P	Pn	14 18 15.8	+1.9
MPLH	Magyarpolny	9.75	350	*e*P	Pn	14 18 17.5	+2.9
OBKA	Obir	9.79	337	*e*Pn	Pn	14 18 16.9	+1.7
	comp=E,1.1nm,0.3s						
SOKA	Soboth	9.80	340	*e*Pn	Pn	14 18 14.8	-0.6
	comp=E,7.9nm,0.5s,SNR=12						
ARSA	Arzberg	10.20	343	*i* Pn	Pn	14 18 20.7	-0.1
	comp=E,1.1nm,0.3s						
PSZ	Piszkesteto	10.33	360	*e*P	Pn	14 18 23.0	+0.3
CTI	Castel Tesino	10.49	326	P	Pn	14 18 24.0	-0.8
CTI	Castel Tesino	10.49	326		Pn	14 18 24.0	-0.8
ABTA	Abfaltersbach	10.69	331	*e*Pn	Pn	14 18 27.9	+0.3
	comp=E,1.2nm,0.5s						
BURAR	Bucovina Array	10.75	19	Pn	Pn	14 18 28.2	-0.1
BRTR	Keskin Array B	10.91	74	LR	LR	14 23 43.3	
	comp=E,196nm,21.3s,baz=266,slow=44						
MOA	Molln	11.08	340	*e*Pn	Pn	14 18 32.8	0.0
	comp=E,1.9nm,0.4s,SNR=4.9						
WATA	Walderalm	11.54	330	*e*Pn	Pn	14 18 42.2	+3.0
	comp=E,1.0nm,0.4s						
FETA	Feichten	11.64	327	*e*Pn	Pn	14 18 43.7	+3.1
	comp=E,1.9nm,0.7s						
MOTA	Moosalm	11.74	329	*e*Pn	Pn	14 18 45.2	+3.3
	comp=E,0.9nm,0.5s						
DAVOX	Davos/Dischmat	11.84	324	Pn	Pn	14 18 45.8	+2.4
	comp=E,0.2nm,0.3s,baz=157,slow=18,SNR=6.4						
DAVOX				Sn	Sn	14 20 55.7	+0.2
	comp=E,0.2nm,0.3s,baz=268,slow=23,SNR=3.2						
DAVOX				LR	LR	14 24 55.2	
	comp=E,139nm,21.5s,baz=93,slow=46						
CKRC	Cesky Krumlov	11.96	342	*e*PN	Pn	14 18 44.9	0.0
GERES	GERESS Array B	12.14	340	Pn	Pn	14 18 47.0	-0.5
	comp=E,0.4nm,0.3s,baz=159,slow=15,SNR=8.2						
GERES				Sn	Sn	14 20 56.4	-6.3
	comp=E,0.1nm,0.3s,baz=155,slow=24,SNR=1.5						
GERES	GERESS Array B	12.14	340	*e*P	Pn	14 18 49.4	+2.0
GERES	GERESS Array B	12.14	340	Pn	Pn	14 18 45.7	-1.7
KHC	Kasperske Hory	12.44	340	*e*PN	Pn	14 18 51.6	+0.2
KHC	Kasperske Hory	12.44	340	*e*P	Pn	14 18 51.6	+0.2
KHC	Kasperske Hory	12.44	340	Pn	Pn	14 18 50.0	-1.4
CLL	Collm	14.59	342	*i* P	P	14 19 29.8	+2.7
CLL	Collm	14.59	342	*i* PP	P	14 19 29.8	+2.7
	comp=Z,16nm,1.3s						
AKASG	Malin Array Be	14.69	24	Pn	Pn	14 19 21.2	-0.9
	comp=Z,0.8nm,0.3s,baz=213,slow=11,SNR=7.7						
AKASG	Malin Array Be	14.69	24	*e*P	Pn	14 19 23.9	+1.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	Malin Array Si	14.69	24	⇑*e*P	P	14 19 25.8	-2.4
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
EIL	Elat	14.76	118	Pn	Pn	14 19 20.8	-2.3
	comp=Z,0.5nm,0.3s,baz=288,slow=13,SNR=3.1						
MNK	Minsk	17.77	15	*i* P	Pn	14 19 59.1	-2.6
MNK				*i* S	Sn	14 23 19.4	-0.1
MNK				pmax	pmax		
	comp=Z,23nm,0.8s						
MNK				pmax	pmax		
	comp=N,35nm,1.1s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.1s						
MNK	Minsk	17.77	15	*i* P	Pn	14 19 59.1	-2.6
	comp=E,3.0nm,1.1s						
MNK				*i* P	Pn	14 19 59.1	-2.6
	comp=N,35nm,1.1s						
MNK				*i* P	Pn	14 19 59.1	-2.6
	comp=Z,23nm,0.8s,baz=201						
MNK				*i* PP	pwP	14 20 09.8	+0.3
MNK				*i* PPP	PPP	14 20 17.5	
MNK				*i* S	Sn	14 23 19.5	0.0
MNK				*i* SS	SnSn	14 23 34.4	+1.4
MNK				*i* SSS	SSS	14 23 47.2	
MNK				*i* LRM	MLR	14 27 29.9	
MNK				*i* LRM	MLR	14 27 58.8	
NACGM	Naroch	17.94	13	*i* P	Pn	14 19 56.6	-7.1
PABE	Paberze	18.14	7	*e*P	Pn	14 20 06.0	-0.1
PABE	Paberze	18.14	7		Pn	14 20 05.5	-0.6
PABE				IAmb	IAmb	14 20 06.2	
	comp=Z,45nm,0.7s						
IIGN	Ignalina	18.28	11	*e*P	Pn	14 20 08.2	+0.4
KIV	Kislovodsk	18.32	63	*e*P	P	14 20 09.3	+0.6
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
IDID	Didziasalis	18.33	12	*e*P	Pn	14 20 08.5	+0.1
KBZ	Khabaz	18.43	63	LR	LR	14 29 08.7	
	comp=Z,64nm,19.4s,baz=240,slow=44						
KBZ	Khabaz	18.43	63	⇓*e*P	Pn	14 20 11.0	+1.3
KBZ				pmax	pmax		
	comp=Z,11nm,1.4s						
ISAL	Salakas	18.48	11	*e*P	P	14 20 08.9	-1.3
ONI	Oni	18.64	67	P	P	14 20 10.8	-1.3
ONI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ONI	Oni	18.64	67	P	P	14 20 10.8	-1.3
ESDC	Sonseca Array	18.80	284	P	Pn	14 20 15.2	+0.8
	baz=75,slow=10,SNR=5.7						
ESDC	Sonseca Array	18.80	284	IAmb	IAmb	14 20 16.2	
	comp=Z,0.9nm,0.9s						
VSR	Storozhevoye	19.26	39	*e*P	P	14 20 18.0	-0.8
VSR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LPSR	Galich'ya Gora	20.03	35	*e*P	P	14 20 27.4	+0.3
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
VRH	Novokhopyorsk	20.57	42	*e*P	P	14 20 32.4	-0.6
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN	Obninsk	20.86	27	*i* P	P	14 20 33.7	-2.4
OBN				*i*		14 20 42.5	
OBN				*i*		14 20 57.0	
OBN				pmax	pmax		
	comp=Z,41nm,1.7s						
MTSE	Matsula	21.30	6	*e*P	P	14 20 41.9	+1.1
VSU	Vasula	21.36	10	*e*P	P	14 20 42.5	+1.1
VSU	Vasula	21.36	10	*d* *i*P	P	14 20 42.5	+1.1
MTE	Manteigas	21.53	286	P	P	14 20 42.1	-1.5
MTE				IAmb	IAmb	14 20 58.4	
	comp=Z,14nm,1.0s						
HFS	Hagfors	22.93	352	P	P	14 20 58.3	+0.1
	comp=Z,6.0nm,0.5s,baz=162,slow=11,SNR=47						
EKA	Eskdalemuir Ar	23.67	326	P	P	14 21 06.0	+0.3
	comp=Z,4.8nm,0.8s,baz=126,slow=12,SNR=5.2						
NC602	NORSAR Array S	23.78	350	P	P	14 21 04.9	-1.8
NC602				IAmb	IAmb	14 21 18.1	
	comp=Z,11nm,1.0s						
NAO01	NORSAR Array S	23.98	349	P	P	14 21 08.1	-0.6
NB201	NORSAR Array S	24.12	350	P	P	14 21 09.8	-0.2
NB2	NORSAR Subarra	24.12	350	P	P	14 21 10.2	+0.2
	comp=Z,4.7nm,0.8s,baz=158,slow=9.3						
NC405	NORSAR Array S	24.12	350	P	P	14 21 09.8	-0.2
NOA	NORSAR Array B	24.12	350	P	P	14 21 10.4	+0.3
	comp=Z,4.3nm,0.8s,baz=160,slow=9.0,SNR=11						
NOA				LR	LR	14 32 04.0	
	comp=Z,45nm,19.6s,baz=285,slow=40						
NBO00	NORSAR Array S	24.18	349	P	P	14 21 10.2	-0.3
FINES	FINESS Array B	24.19	7	P	P	14 21 10.1	-0.5
	comp=Z,4.1nm,0.5s,baz=171,slow=8.9,SNR=44						
FINES				LR	LR	14 31 55.4	
	comp=Z,175nm,18.6s,baz=188,slow=40						
FINES	FINESS Array B	24.19	7	*e*P	P	14 21 09.8	-0.8
FINES				pmax	pmax		
	comp=Z,4.0nm,0.5s						
FINES	FINESS Array B	24.19	7	P	P	14 21 10.5	-0.1
FIA1	FINESS Array S	24.19	7	P	P	14 21 10.3	-0.4
FIA1				IAmb	IAmb	14 21 22.9	
	comp=Z,18nm,1.2s						
NC303	NORSAR Array S	24.28	350	P	P	14 21 12.4	+1.0
BELG	Belogornoye	24.34	44	P	P	14 21 11.4	-0.6
	comp=Z,21nm,0.5s,baz=348,slow=1.8,SNR=18						
BELG	Belogornoye	24.34	44	*c* *i*P	P	14 21 11.1	-0.9
BELG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VALR	Valaam	24.77	13	⇓*e*P	P	14 21 16.6	+0.8
VALR				pmax	pmax		
	comp=Z,38nm,1.1s						
KLMR	Klimovskoe	26.36	22	*e*P	P	14 21 26.3	-3.9
KLMR				pmax	pmax		
	comp=Z,12nm,1.0s						
KLMR	Klimovskoe	26.36	22	*e*P	P	14 21 26.4	-3.8

KLMR				AMP		14 21 32.2	
	comp=Z,12nm,1.0s						
TORD	**Torodi Ar. Bea**	**29.29**	**219**	P	**P**	**14 21 57.4**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=32,slow=8.5,SNR=9.8						
TORD				LR	LR	14 34 36.6	
	comp=Z,43nm,19.4s,baz=0.0,slow=38						
TORD	**Torodi Ar. Bea**	**29.29**	**219**	IAmb	IAmb	14 22 10.5	
	comp=Z,4.8nm,0.8s						
GEYT	**Alibeck**	**30.03**	**77**	LR	LR	14 34 21.9	
	comp=Z,62nm,19.8s,baz=50,slow=37						
ABKAR	**Akbulak array**	**30.95**	**55**	P	**P**	**14 22 09.3**	**-2.0**
KOWA	**Kowa**	**31.33**	**229**	P	**P**	**14 22 16.3**	**+1.3**
	comp=Z,1.3nm,0.5s,baz=48,slow=8.4,SNR=4.6						
KOWA	**Kowa**	**31.33**	**229**	IAmb	IAmb	14 22 25.5	
	comp=Z,5.3nm,1.3s						
ARCES	**ARCESS Array B**	**32.16**	**4**	P	**P**	**14 22 21.5**	**-0.2**
	comp=Z,2.2nm,0.9s,baz=188,slow=3.6,SNR=5.9						
ARCES	**ARCESS Array B**	**32.16**	**4**	*e*P	**P**	**14 22 22.2**	**+0.5**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	**ARCESS Array B**	**32.16**	**4**	P	**P**	**14 22 21.5**	**-0.2**
ARCES				IAmb	IAmb	14 22 41.6	
	comp=Z,14nm,1.3s						
BRVK	**Borovoye**	**37.78**	**49**	⇓*e*P	**P**	**14 23 08.4**	**-1.9**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BRVK	**Borovoye**	**37.78**	**49**	P	**P**	**14 23 10.0**	**-0.4**
BVAR	**Borovoye Array**	**37.84**	**49**	P	**P**	**14 23 09.1**	**-1.8**
	comp=Z,0.8nm,0.5s,baz=238,slow=9.7,SNR=5.5						
DBIC	**Dimbokro**	**38.15**	**222**	P	**P**	**14 23 14.5**	**+0.6**
	comp=Z,4.2nm,0.9s,baz=55,slow=9.6,SNR=4.6						
DBIC				LR	LR	14 39 27.1	
	comp=Z,54nm,18.6s,baz=54,slow=37						
KKAR	**Karatay Array**	**38.44**	**65**	P	**P**	**14 23 15.3**	**-0.8**
KKAR	**Karatay Array**	**38.44**	**65**	P	**P**	**14 23 15.3**	**-0.8**
KURBB	**Kurchatov Arra**	**42.94**	**53**	P	**P**	**14 23 51.6**	**-1.5**
	comp=Z,1.0nm,0.3s,baz=282,slow=8.8,SNR=7.7						
KURK	**Kurchatov**	**42.99**	**53**	P	**P**	**14 23 51.6**	**-1.9**
KURK	**Kurchatov**	**42.99**	**53**	P	**P**	**14 23 51.6**	**-1.9**
MAKZ	**Makanchi**	**45.78**	**58**	P	**P**	**14 24 13.6**	**-2.3**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MAKZ	**Makanchi**	**45.78**	**58**	P	**P**	**14 24 13.6**	**-2.3**
MK31	**Makanchi Array**	**45.99**	**58**	P	**P**	**14 24 15.5**	**-2.1**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK31	**Makanchi Array**	**45.99**	**58**	P	**P**	**14 24 15.4**	**-2.1**
MKAR	**Makanchi Array**	**45.99**	**58**	P	**P**	**14 24 16.0**	**-1.6**
	comp=Z,1.3nm,0.5s,baz=271,slow=7.4,SNR=35						
MKAR	**Makanchi Array**	**45.99**	**58**	*e*P	**P**	**14 24 16.2**	**-1.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**45.99**	**58**	P	**P**	**14 24 15.7**	**-1.9**
ZALV	**Zalesovo Beam**	**46.42**	**48**	P	**P**	**14 24 19.6**	**-1.2**
	comp=Z,5.7nm,0.5s,baz=267,slow=8.3,SNR=9.0						
ZALV	**Zalesovo Beam**	**46.42**	**48**	*e*P	**P**	**14 24 19.3**	**-1.5**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZALV	**Zalesovo Beam**	**46.42**	**48**	P	**P**	**14 24 19.1**	**-1.7**
NRIK	**Noril'sk**	**47.53**	**26**	P	**P**	**14 24 30.7**	**+1.5**
	comp=Z,3.6nm,0.6s,baz=256,slow=6.7,SNR=4.9						
NRIK	**Noril'sk**	**47.53**	**26**	*e*P	**P**	**14 24 30.2**	**+1.0**
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NRIK	**Noril'sk**	**47.53**	**26**	P	**P**	**14 24 29.8**	**+0.5**
NRIK				IAmb	IAmb	14 24 48.6	
	comp=Z,5.0nm,0.9s						
WMQ	**Urumqi**	**50.44**	**60**	*e*P	**P**	**14 24 54.5**	**+2.5**
TULEG	**Thule**	**53.53**	**343**	P	**P**	**14 25 14.7**	**+0.2**
TULEG				IAmb	IAmb	14 25 35.8	
	comp=Z,9.9nm,1.5s						
TIXI	**Tiksi**	**60.36**	**20**	P	**P**	**14 26 03.4**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TIXI	**Tiksi**	**60.36**	**20**	P	**P**	**14 26 03.4**	**+0.5**
TIXI				IAmb	IAmb	14 26 11.2	
	comp=Z,3.2nm,1.1s						
BATG	**Bathurst New B**	**61.17**	**309**	P	**P**	**14 26 09.8**	**+0.9**
SONM	**Songino Array**	**61.18**	**50**	P	**P**	**14 26 08.8**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=280,slow=6.9,SNR=6.7						
SONM	**Songino Array**	**61.18**	**50**	P	**P**	**14 26 08.5**	**-0.6**
SONM				pmax	pmax		
	comp=Z,4.0nm,1.3s						
SONM	**Songino Array**	**61.18**	**50**	P	**P**	**14 26 08.5**	**-0.6**
SONM				IAmb	IAmb	14 26 13.6	
	comp=Z,4.0nm,1.3s						
ULN	**Ulaanbaatar**	**61.57**	**50**	P	**P**	**14 26 11.6**	**-0.1**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ULN	**Ulaanbaatar**	**61.57**	**50**	P	**P**	**14 26 11.6**	**-0.1**
BOSA	**Boshof**	**66.03**	**175**	LR	LR	14 57 44.8	
	comp=Z,70nm,18.3s,baz=250,slow=38						
HHC	**Hu-ho-hao-te**	**67.74**	**55**	*e*P	**P**	**14 26 51.3**	**-0.8**
HHC				pmax	pmax		
	comp=Z,110nm,7.6s						
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
A36M	**Sachs Harbour**	**68.03**	**349**	P	**P**	**14 26 54.3**	**+1.1**
A36M				IAmb	IAmb	14 27 18.0	
	comp=Z,3.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**70.41**	**81**	P	**P**	**14 27 08.8**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=298,slow=7.6,SNR=5.3						
BILL	**Bilibino**	**71.70**	**13**	*i* P	**P**	**14 27 15.2**	**-0.6**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
INK	**Inuvik**	**72.58**	**350**	P	**P**	**14 27 20.4**	**-0.6**
INK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
INK	**Inuvik**	**72.58**	**350**	P	**P**	**14 27 20.4**	**-0.6**
YKA	**Yellowknife Ar**	**73.80**	**340**	P	**P**	**14 27 29.1**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=35,slow=5.4,SNR=15						
YKA	**Yellowknife Ar**	**73.80**	**340**	P	**P**	**14 27 29.2**	**+0.8**
TOLK	**Toolik Lake Re**	**73.81**	**356**	P	**P**	**14 27 30.0**	**+1.6**
TOLK				IAmb	IAmb	14 27 42.3	
	comp=Z,4.8nm,1.3s						
BMAR	**Burnt Mountain**	**74.66**	**354**	P	**P**	**14 27 35.3**	**+1.9**
EPYK	**Eagle Plains**	**74.83**	**350**	P	**P**	**14 27 35.6**	**+1.2**
ULM	**Lac du Bonnet**	**75.92**	**323**	P	**P**	**14 27 42.3**	**+1.4**
	comp=Z,2.3nm,0.6s,baz=38,slow=3.0,SNR=2.9						
ULM	**Lac du Bonnet**	**75.92**	**323**	IAmb	IAmb	14 27 48.0	
	comp=Z,14nm,1.5s						
IMAR	**Indian Mountai**	**76.65**	**357**	P	**P**	**14 27 46.0**	**+1.2**
H21K	**Melozitna Rive**	**76.94**	**357**	P	**P**	**14 27 47.8**	**+1.4**
H21K				IAmb	IAmb	14 28 01.5	
	comp=Z,4.3nm,1.4s						
MDM	**Murphy Dome**	**77.38**	**355**	P	**P**	**14 27 50.3**	**+1.4**
DAWY	**Dawson**	**77.38**	**351**	P	**P**	**14 27 50.2**	**+1.2**
DAWY				IAmb	IAmb	14 28 15.0	
	comp=Z,4.6nm,1.2s						
ILAR	**Eielson Array**	**77.46**	**354**	P	**P**	**14 27 50.8**	**+1.4**
ILAR	**Eielson Array**	**77.46**	**354**	P	**P**	**14 27 50.8**	**+1.4**
MLY	**Manley**	**77.46**	**356**	P	**P**	**14 27 51.3**	**+1.9**
MLY				IAmb	IAmb	14 28 03.5	
	comp=Z,7.3nm,1.4s						
NJ2	**Nanjing**	**77.50**	**59**	*e*P	**P**	**14 27 50.3**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
WRH	**Wood River Hil**	**77.85**	**355**	P	**P**	**14 27 52.8**	**+1.3**
WRH				IAmb	IAmb	14 28 00.9	
	comp=Z,3.2nm,1.0s						
BCAR	**Beaver Creek A**	**78.63**	**352**	P	**P**	**14 27 57.4**	**+1.4**
KTH	**Kantishna Hill**	**78.94**	**356**	P	**P**	**14 27 58.3**	**+0.6**
RND	**Reindeer**	**78.96**	**355**	P	**P**	**14 27 57.9**	**+0.1**
RND				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RND	**Reindeer**	**78.96**	**355**	P	**P**	**14 27 57.9**	**+0.1**
RND				IAmb	IAmb	14 28 07.2	
	comp=Z,3.7nm,1.0s						
DHY	**Denali Highway**	**79.17**	**354**	P	**P**	**14 27 59.9**	**+0.9**
DHY				IAmb	IAmb	14 28 04.5	
	comp=Z,9.5nm,1.2s						
JTMT	**Jette**	**85.75**	**331**	P	**P**	**14 28 33.2**	**-0.5**
CPUP	**Villa Florida**	**96.38**	**242**	LR	LR	15 13 40.6	
	comp=Z,39nm,18.3s,baz=39,slow=36						
ASAR	**Alice Springs**	**122.55**	**96**	PKP	**PKPdf**	**14 34 50.2**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=335,slow=1.8,SNR=5.2						

DJA 29 14:57:54.4±0.3, 9˚S±3˚×11˚8E±˚, h131^{km}±6^{km}, M3.9/16, mb4.1/6, MLv3.8/16, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**1.42**	**134**	P	Pn	14 58 21.5	-0.3
WBSI				S	Sn	14 58 43.3	+0.7
TWSI	**Taliwang, Sumb**	**1.45**	**266**	P	Pn	14 58 22.5	+0.5
TWSI				S	Sn	14 58 43.7	+0.6
BASI	**Baing, Sumba**	**2.69**	**126**	P	Pn	14 58 37.3	+0.2
BASI				S	Sn	14 59 10.4	+0.4
SRBI	**Singaraja**	**3.15**	**280**	P	Pn	14 58 43.5	+0.4
IGBI	**Denpasar**	**3.17**	**267**	P	Pn	14 58 43.9	+0.6
BSSI	**Bau Bau, Buton**	**3.27**	**41**	P	Pn	14 58 44.7	+0.1
EDFI	**Ende, Flores**	**3.30**	**92**	P	Pn	14 58 45.8	+0.7
BKSI	**Bulukumba**	**3.75**	**28**	P	Pn	14 58 51.1	+0.3
MMRI	**Maumere**	**3.84**	**90**	P	Pn	14 58 52.6	+0.5
JAGI	**Jajag, Banyuwa**	**4.16**	**272**	P	Pn	14 58 55.7	-0.6
BNSI	**Bone**	**4.57**	**23**	P	Pn	14 59 01.6	-0.2
SPSI	**Sidrap Palu**	**4.86**	**17**	P	Pn	14 59 05.7	0.0
GMJI	**Gumukmas**	**4.87**	**274**	P	Pn	14 59 05.4	-0.4
BBSI	**Bau Bau**	**5.24**	**53**	P	Pn	14 59 10.0	-0.7
	0.0nm4.5nm,0.9s						
BATI	**Baumata**	**5.47**	**107**	P	Pn	14 59 14.6	+0.8
	0.1nm22nm,1.1s						
SOEI	**Soe**	**5.94**	**101**	P	Pn	14 59 20.6	+0.3
	0.1nm22nm,0.7s						
PCJI	**Pacitan**	**7.11**	**273**	P	Pn	14 59 36.2	+0.3
	0.2nm42nm,1.5s						
UGM	**Wanagama**	**7.78**	**275**	P	Pn	14 59 45.0	0.0
	0.5nm85nm,2.5s						

IDC 29 15:11:19.2±2.4, 4°.11S×127°.77E, h0^{km}, mb3.3/3, mb1 3.7/4, mb1mx3.3/27, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=113.4km s-min=26.3km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.05**	**188**	Pn	Pn	15 14 41.1	+1.3
	0.2nm,0.3s,baz=3.4,slow=8.4,SNR=8.9						
ASAR	**Alice Springs**	**20.32**	**164**	P	P	15 15 56.5	-0.5
	0.4nm,0.6s,baz=345,slow=14,SNR=11						
CMAR	**Chiang Mai Arr**	**36.19**	**309**	P	P	15 18 23.3	-0.7
	0.3nm,0.4s,baz=142,slow=7.4,SNR=4.2						
MKAR	**Makanchi Array**	**64.61**	**327**	P	P	15 21 59.0	+0.4
	0.4nm,0.5s,baz=128,slow=7.8,SNR=7.4						

IDC ***29*** *15:20:53.9±0.9, 8°.95S×109°.08E, h0^{km}, mb4.2/13, mb1 4.3/14, mb1mx4.0/35, mbtmp4.2/14, ML3.7/1, MS3.6/12, Ms1 3.6/12, ms1mx3.4/34, Error ellipse: s-maj=35.5km s-min=14.7km az=56.0*

NEIC ***29*** *15:20:58.2±1.9, 9°.24S±0°.09×108°.84E±0°.03, h36^{km}±6^{km}, mb4.7/34, Error ellipse: s-maj=13.1km s-min=3.5km az=168.0*

DJA ***29*** *15:20:58.2±0.4, 9˚S±3˚×10˚9E±˚, h37^{km}±6^{km}, M4.7/24, mb4.7/24, mB5.3/5, MLv4.7/23, Mw(mB)4.8/5, MwMwp5.9/1, Mwp6.0/1*

ISC 29 15:20:58.1±0.6, 9°.32S±0°.06×108°.92E±0°.05, h37^{km}±1^{km}, n118, σ1^{s}.33/122, mb4.6/39, MS3.7/14, 2C, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJI	**Cimerak**	**1.60**	**343**	P	**Pn**	**15 21 22.5**	**-1.3**
CMJI				S	**Sn**	**15 21 43.7**	**+0.6**
YOGI	**Yogyakarta**	**2.02**	**42**	P	**Pn**	**15 21 28.3**	**-1.2**
YOGI				S	**Sn**	**15 21 54.7**	**+1.2**
UGM	**Wanagama**	**2.11**	**49**	P	**Pn**	**15 21 30.0**	**-0.9**
UGM				S	**Sn**	**15 21 56.8**	**+0.9**
UGM	**Wanagama**	**2.11**	**49**	Pn	**Pn**	**15 21 29.8**	**-1.1**
WOJI	**Wonogiri, Jawa**	**2.46**	**53**	P	**Pn**	**15 21 35.6**	**-0.1**
WOJI				S	**Sn**	**15 22 05.8**	**+1.2**
PCJI	**Pacitan**	**2.49**	**64**	P	**Pn**	**15 21 35.4**	**-0.7**
PCJI				S	**Sn**	**15 22 06.8**	**+1.6**
CNJI	**Cibinong**	**2.67**	**318**	P	**Pn**	**15 21 39.1**	**+0.5**
CNJI				S	**Sn**	**15 22 10.7**	**+1.0**
SMRI	**Semarang**	**2.71**	**34**	P	**Pn**	**15 21 39.9**	**+0.8**
SMRI				S	**Sn**	**15 22 11.2**	**+0.6**
SMRI	**Semarang**	**2.71**	**34**		**Pn**	**15 21 39.9**	**+0.8**
SKJI	**Sukabumi**	**3.28**	**314**	P	**Pn**	**15 21 47.9**	**+0.9**
XMIS	**Christmas Isla**	**3.42**	**250**	Pn	**Pn**	**15 21 47.7**	**-1.2**
DBJI	**Dramaga**	**3.49**	**322**	P	**Pn**	**15 21 50.5**	**+0.7**
UWJI	**Ujung Watu**	**3.51**	**35**	P	**Pn**	**15 21 50.1**	**0.0**
TNG	**Tangerang**	**3.86**	**324**	P	**Pn**	**15 21 54.0**	**-0.9**
CGJI	**Cibinong**	**4.18**	**310**	P	**Pn**	**15 21 59.5**	**+0.2**
SBJI	**Serang**	**4.21**	**319**	P	**Pn**	**15 22 00.8**	**+1.0**
BWJI	**Bawean**	**5.06**	**47**	P	**Pn**	**15 22 11.7**	**+0.3**
	0.9nm159nm,1.1s						
JAGI	**Jajag, Banyuwa**	**5.23**	**81**	P	**Pn**	**15 22 14.2**	**+0.4**
	0.6nm112nm,0.7s						
JAGI	**Jajag, Banyuwa**	**5.23**	**81**	Pn	**Pn**	**15 22 14.0**	**+0.2**
KLI	**Kotabumi**	**5.99**	**317**	P	**Pn**	**15 22 25.0**	**+0.8**
	0.7nm2µm75nm,0.7s						
IGBI	**Denpasar**	**6.17**	**86**	P	**Pn**	**15 22 26.8**	**+0.2**
	0.4nm63nm,0.8s						
KLSI		**6.20**	**318**	P	**Pn**	**15 22 27.1**	**0.0**
	0.1nm14nm,1.2s						
SRBI	**Singaraja**	**6.34**	**79**	P	**Pn**	**15 22 30.3**	**+1.3**
	0.3nm70nm,0.8s						
LWLI	**Liwa**	**6.45**	**311**	P	**Pn**	**15 22 31.4**	**+0.8**
	0.8nm37µm49nm,0.6s						
TPI	**Tanjungpandan**	**6.64**	**349**	P	**Pn**	**15 22 32.5**	**-0.6**
MDSI	**Maura Dua**	**6.73**	**315**	P	**Pn**	**15 22 35.6**	**+1.3**
	0.1nm10nm,0.7s						
PBKI	**Pangkalan Bun**	**7.12**	**23**	P	**Pn**	**15 22 39.4**	**-0.3**
	0.3nm77nm,0.9s						
PPBI	**Pangkal Pinang**	**7.63**	**339**	P	**Pn**	**15 22 46.9**	**+0.1**
	0.7nm49nm,0.4s						
LHSI	**Lahat**	**7.65**	**315**	P	**Pn**	**15 22 47.6**	**+0.6**
	0.3nm27nm,0.6s						
MASI	**Maura Aman, Be**	**9.04**	**312**	P	**Pn**	**15 23 07.1**	**+0.9**
	64nm,0.8s						
KAPI	**Kappang**	**11.56**	**69**	LR	LR	15 29 33.3	
	comp=Z,134nm,19.8s,baz=270,slow=46						
BNSI	**Bone**	**12.13**	**67**	P	**Pn**	**15 23 49.3**	**+0.9**
	20nm,2.3s						
TTSI	**Tana Toraja**	**12.49**	**61**	P	**Pn**	**15 23 53.3**	**-0.1**
	21nm,0.9s						
EDFI	**Ende, Flores**	**12.62**	**88**	P	**Pn**	**15 23 54.7**	**-0.6**
	8.5nm,0.8s						
MNSI	**Mandailing Nat**	**13.70**	**317**	P	**Pn**	**15 24 07.2**	**-2.6**
GIRL	**Giralia**	**14.20**	**160**	Pn	**Pn**	**15 24 12.9**	**-3.7**
MPSI	**Mapaga**	**14.54**	**49**	P	**Pn**	**15 24 21.8**	**+0.5**
	632nm18nm,0.9s						
APSI	**Ampana**	**15.17**	**57**	P	**Pn**	**15 24 28.8**	**-0.9**
	19nm,0.7s						
GSI	**Gunungsitoli**	**15.46**	**312**	Pn	Pn	15 24 26.2	-7.4
TOLI2	**Tolitoli**	**15.71**	**49**	P	**P**	**15 24 41.1**	**+0.7**
TOLI2				IAmb	IAmb	15 24 41.7	
	comp=Z,25nm,0.8s						
PSA00	**Pilbara Seismi**	**16.09**	**140**	Pn	**Pn**	**15 24 39.3**	**-2.3**
MRSI	**Marisa**	**16.21**	**54**	P	**P**	**15 24 46.3**	**+0.4**
KULM	**Kulim**	**16.69**	**330**	P	**P**	**15 24 50.7**	**-0.6**
FITZ	**Fitzroy Crossi**	**18.42**	**120**	P	**Pn**	**15 25 13.1**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=293,slow=9.4,SNR=1.7						
KNRA	**Kununurra**	**20.36**	**110**	P	**P**	**15 25 32.9**	**+1.2**
KNRA				IAmb	IAmb	15 25 34.5	
	comp=Z,56nm,1.4s						
LBMI	**Labuha**	**20.40**	**66**	P	**P**	**15 25 31.9**	**-0.1**
	comp=Z,42nm,0.9s						
DAV	**Davao City (W)**	**23.25**	**46**	LR	LR	15 37 06.9	
	comp=Z,131nm,19.8s,baz=270,slow=42						
FAKI	**Fak Fak**	**24.04**	**76**	P	**P**	**15 26 09.8**	**-0.1**
FAKI				IAmb	IAmb	15 26 10.2	
	comp=Z,51nm,1.3s						
WRA	**Warramunga Arr**	**26.72**	**116**	P	**P**	**15 26 35.2**	**+1.0**
	comp=Z,2.4nm,0.7s,baz=288,slow=11,SNR=6.4						
WRA	**Warramunga Arr**	**26.72**	**116**	IAmb	IAmb	15 26 44.6	
	comp=Z,0.3nm,0.8s						
ASAR	**Alice Springs**	**27.81**	**124**	P	**P**	**15 26 45.8**	**+1.8**
	comp=Z,0.4nm,0.5s,baz=306,slow=9.7,SNR=14						
ASAR				PcP	**PcP**	**15 30 01.8**	**+2.0**
	comp=Z,0.5nm,0.5s,baz=307,slow=2.1,SNR=7.6						
ASAR				LR	LR	15 38 05.3	
	comp=Z,96nm,20.8s,baz=292,slow=37						
ASAR	**Alice Springs**	**27.81**	**124**	P	**P**	**15 26 44.0**	**0.0**
CMAR	**Chiang Mai Arr**	**29.30**	**340**	P	**P**	**15 26 55.4**	**-1.8**
	comp=Z,0.9nm,0.7s,baz=178,slow=8.6,SNR=11						
CMAR				PcP	**PcP**	**15 30 05.4**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=198,slow=4.7,SNR=4.7						
CMAR				LR	LR	15 39 13.5	
	comp=Z,127nm,19.4s,baz=204,slow=38						
KMI	**Kunming**	**34.76**	**350**	⇑P	**P**	**15 27 48.3**	**+3.0**
KMI				pP	sP	15 27 59.5	+0.6
KMI				sP	pwP	15 28 03.0	+3.6
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
H08S2	**Diego Garcia H**	**36.06**	**270**	T	T	16 06 21.3	
	baz=95,slow=75,SNR=7.5						
H08S3	**Diego Garcia H**	**36.07**	**270**	T	T	16 06 22.6	
	baz=95,slow=75,SNR=5.8						
H08S1	**Diego Carcia H**	**36.08**	**270**	T	T	16 06 21.1	
	baz=95,slow=75,SNR=5.9						
STKA	**Stephens Creek**	**37.69**	**131**	P	**P**	**15 28 12.6**	**+2.5**
	comp=Z,3.9nm,0.7s,baz=307,slow=8.6,SNR=15						
STKA				LR	LR	15 45 14.8	
	comp=Z,102nm,19.1s,baz=351,slow=39						
STKA	**Stephens Creek**	**37.69**	**131**	P	**P**	**15 28 12.1**	**+2.0**
NJ2	**Nanjing**	**42.22**	**13**	*e*P	**P**	**15 28 50.3**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN	**Xi'an**	**43.12**	**360**	⇑P	**P**	**15 28 55.0**	**+0.1**
XAN				pP	pP	15 29 05.3	+0.5
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GUN	**Gumba**	**43.21**	**330**	*e*P	**P**	**15 28 55.6**	**-0.5**
	comp=Z,19nm,0.6s						
DMN	**Daman**	**43.36**	**329**	*e*P	**P**	**15 28 56.7**	**-0.5**
GKN	**Gorkha**	**43.92**	**328**	*e*P	**P**	**15 29 01.0**	**-0.6**
KOLN	**Koldanda**	**44.28**	**327**	*e*P	**P**	**15 29 03.7**	**-0.8**
DANN	**Dangsing**	**44.65**	**328**	*e*P	**P**	**15 29 07.0**	**-0.6**
	comp=Z,26nm,0.6s						
PYUN	**Piuthan**	**44.87**	**327**	*e*P	**P**	**15 29 08.9**	**-0.3**
	comp=Z,8.5nm,0.5s						
LZH	**Lanzhou**	**45.41**	**354**	*e*P	**P**	**15 29 14.3**	**+0.9**
LZH				pP	pP	15 29 23.8	+0.4
LZH				pmax	pmax		
	comp=Z,11nm,1.2s						
LZH				LR	LR		
	comp=Z,370nm,14.0s						
LZH				LR	LR		
	comp=Z,280nm,14.4s						
LZH				LR	LR		
	comp=Z,270nm,15.4s						
GTA	**Gaotai**	**49.21**	**351**	*e*P	**P**	**15 29 43.3**	**+0.4**
GTA				pP	pP	15 29 53.0	+0.1
GTA				sP	sP	15 29 57.5	+0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,120nm,5.9s						
GTA				LR	LR		
	comp=Z,170nm,20.0s						
GTA				LR	LR		
	comp=Z,130nm,16.4s						
GTA				LR	LR		
	comp=Z,160nm,17.4s						
JHS	**Saijyo**	**49.66**	**26**	P	**P**	**15 29 44.7**	**-1.5**
KSRS	**Korea Array**	**49.82**	**20**	P	**P**	**15 29 46.4**	**-1.0**
	comp=Z,1.9nm,0.9s,baz=201,slow=9.4,SNR=5.1						
KSRS				LR	LR	15 53 26.2	
	comp=Z,32nm,18.1s,baz=240,slow=40						
HHC	**Hu-ho-hao-te**	**49.98**	**3**	*e*P	**P**	**15 29 52.5**	**+3.9**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,86nm,7.6s						
JWT	**Wachi**	**50.93**	**28**	P	**P**	**15 29 53.9**	**-1.9**
MAJO	**Matsushiro**	**53.28**	**29**	P	**P**	**15 30 10.8**	**-2.5**
MAT	**Matsushiro**	**53.28**	**29**	P	**P**	**15 30 09.9**	**-3.4**
MJAR	**Matsushiro Arr**	**53.28**	**29**	P	**P**	**15 30 10.7**	**-2.6**
	comp=Z,4.9nm,0.8s,baz=223,slow=7.2,SNR=10						
MJAR				LR	LR	15 52 06.8	
	comp=Z,29nm,20.9s,baz=220,slow=35						
MJAR	**Matsushiro Arr**	**53.28**	**29**	P	**P**	**15 30 10.7**	**-2.6**
MJAR				IAmb	IAmb	15 30 10.9	
	comp=Z,6.5nm,1.1s						
MJB9	**Matsu-Tunnel**	**53.28**	**29**	P	**P**	**15 30 10.5**	**-2.8**
NIL	**Nilore**	**54.54**	**323**	P	**P**	**15 30 21.4**	**-1.2**
NIL				IAmb	IAmb	15 30 38.9	
	comp=Z,8.3nm,0.8s						
WMQ	**Urumqi**	**56.29**	**342**	*e*P	**P**	**15 30 36.0**	**+0.9**
WMQ				sP	sP	15 30 50.8	+1.8
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
SONM	**Songino Array**	**56.94**	**358**	P	**P**	**15 30 39.5**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=176,slow=8.2,SNR=18						
SONM				LR	LR	15 57 37.8	
	comp=Z,56nm,19.0s,baz=154,slow=39						
SONM	**Songino Array**	**56.94**	**358**	P	**P**	**15 30 39.4**	**-0.3**
ULN	**Ulaanbaatar**	**56.95**	**358**	P	**P**	**15 30 38.6**	**-1.2**
ULN				IAmb	IAmb	15 30 40.1	
	comp=Z,4.1nm,0.8s						
USRK	**Ussuriysk Ar.**	**57.22**	**20**	P	**P**	**15 30 39.8**	**-1.8**
	comp=Z,2.8nm,0.8s,baz=116,slow=3.2,SNR=5.0						
KSH	**Kashi**	**57.41**	**330**	P	**P**	**15 30 42.0**	**-1.1**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KDJ	**Kajisay**	**58.88**	**333**	P	**P**	**15 30 53.5**	**0.0**
KDJ				IAmb	IAmb	15 30 54.6	
	comp=Z,13nm,1.0s						
DRK	**Karamyk**	**59.52**	**327**	P	**P**	**15 30 57.6**	**-0.5**
DRK				IAmb	IAmb	15 31 09.7	
	comp=Z,7.9nm,0.7s						
BOOM	**Boomskoye usch**	**59.73**	**332**	P	**P**	**15 30 59.7**	**+0.4**
BOOM				IAmb	IAmb	15 31 01.1	
	comp=Z,4.7nm,0.8s						
CHGR	**Chuyangaron**	**60.40**	**325**	P	**P**	**15 31 02.2**	**-1.7**
BTK	**Batken**	**60.47**	**327**	P	**P**	**15 31 03.1**	**-1.2**
BTK				IAmb	IAmb	15 31 05.7	
	comp=Z,5.1nm,0.9s						
AAK	**Ala-Archa**	**60.52**	**331**	P	**P**	**15 31 04.1**	**-0.6**
AAK				IAmb	IAmb	15 31 05.7	
	comp=Z,4.9nm,1.3s						
MK31	**Makanchi Array**	**60.71**	**339**	P	**P**	**15 31 05.1**	**-0.6**
MK31				IAmb	IAmb	15 31 06.4	
	comp=Z,4.4nm,0.8s						
MKAR	**Makanchi Array**	**60.71**	**339**	P	**P**	**15 31 05.5**	**-0.3**
	comp=Z,5.7nm,0.7s,baz=145,slow=7.5,SNR=63						
MKAR				LR	LR	16 02 14.4	
	comp=Z,35nm,18.6s,baz=166,slow=41						
MKAR	**Makanchi Array**	**60.71**	**339**	P	**P**	**15 31 05.1**	**-0.6**
MAKZ	**Makanchi**	**60.83**	**339**	P	**P**	**15 31 06.2**	**-0.4**
MAKZ				IAmb	IAmb	15 31 07.2	
	comp=Z,2.5nm,0.8s						
CRZF	**Crozet Islands**	**60.83**	**222**	P	**P**	**15 31 06.5**	**-0.1**
KKAR	**Karatay Array**	**62.81**	**329**	P	**P**	**15 31 19.4**	**-0.5**
KURK	**Kurchatov**	**65.32**	**339**	P	**P**	**15 31 35.2**	**-1.0**
KURK				IAmb	IAmb	15 31 37.0	
	comp=Z,6.6nm,0.9s						
ZAA0	**Zalesovo Array**	**66.25**	**345**	P	**P**	**15 31 40.4**	**-1.8**
ZAA0				IAmb	IAmb	15 31 42.3	
	comp=Z,9.4nm,1.2s						
ZALV	**Zalesovo Beam**	**66.25**	**345**	P	**P**	**15 31 41.2**	**-0.9**
	comp=Z,1.5nm,0.3s,baz=117,slow=5.2,SNR=7.2						
ZALV	**Zalesovo Beam**	**66.25**	**345**	P	**P**	**15 31 40.4**	**-1.7**
GEYT	**Alibeck**	**66.75**	**318**	LR	LR	16 03 57.1	
	comp=Z,46nm,21.0s,baz=280,slow=39						
BRVK	**Borovoye**	**70.30**	**336**	P	**P**	**15 32 06.9**	**-0.7**
ABKAR	**Akbulak array**	**72.37**	**329**	P	**P**	**15 32 19.9**	**-0.2**
ABKAR				IAmb	IAmb	15 32 22.6	
	comp=Z,10nm,0.8s						
PEA0B	**Petropavlovsk-**	**74.70**	**28**	P	**P**	**15 32 32.1**	**-1.7**
PETK	**Petropavlovsk-**	**74.70**	**28**	P	**P**	**15 32 32.5**	**-1.3**
	comp=Z,6.2nm,1.1s,baz=222,slow=1.9,SNR=4.3						
PETK	**Petropavlovsk-**	**74.70**	**28**	P	**P**	**15 32 31.8**	**-2.0**
NRIK	**Noril'sk**	**79.87**	**352**	P	**P**	**15 33 02.1**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=129,slow=4.4,SNR=3.9						
NRIK	**Noril'sk**	**79.87**	**352**	IAmb	IAmb	15 33 02.8	
	comp=Z,2.9nm,0.9s						
BOSA	**Boshof**	**80.08**	**243**	LR	LR	16 03 52.0	
	comp=Z,70nm,18.7s,baz=172,slow=32						
TIXI	**Tiksi**	**81.88**	**6**	P	**P**	**15 33 11.7**	**-1.3**
TIXI				IAmb	IAmb	15 33 12.8	
	comp=Z,5.9nm,0.7s						
BRTR	**Keskin Array B**	**84.78**	**311**	P	**P**	**15 33 29.8**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=134,slow=5.3,SNR=6.3						
KLMR	**Klimovskoe**	**88.30**	**333**	*e*P	**P**	**15 33 45.2**	**-0.2**
KLMR				AMP		15 33 46.8	
	comp=Z,19nm,1.4s						
MNK	**Minsk**	**92.35**	**325**	*i* P	**P**	**15 34 04.7**	**+0.2**
	comp=E,4.0nm,1.2s						
MNK				*i* P	**P**	**15 34 04.7**	**+0.2**
	comp=N,11nm,0.9s						
MNK				*i* P	**P**	**15 34 04.7**	**+0.2**
	comp=Z,5.0nm,0.7s,baz=103						
MNK				*i* PP	**PP**	**15 37 45.5**	**-0.2**
MNK				*i* PPP	PPP	15 39 44.3	
MNK				*i* S	**SKSac**	**15 44 34.8**	**0.0**
MNK				*i* PS	**PS**	**15 46 20.5**	**-0.1**
MNK				*i* SS	**SS**	**15 51 16.9**	**+0.4**
MNK				*i* SSS	SSS	15 54 56.2	
MNK				*i* LQ	LQ	16 09 48.5	
MNK				*i* LR	LR	16 15 22.9	

MNK				*i* LRM	MLR	16 16 14.2	
	comp=N,76nm,16.6s						
MNK				*i* LRM	MLR	16 16 37.4	
	comp=E,8.0nm,10.1s						
MNK				*i* LRM	MLR	16 16 47.5	
	comp=Z,85nm,15.9s						
ARCES	ARCESS Array B	96.36	339	LR	LR	16 24 50.7	
	comp=Z,79nm,19.2s,baz=250,slow=40						
YKA	Yellowknife Ar	118.34	21	PKP	PKiKP	15 39 41.6	+0.4
	comp=Z,0.6nm,1.1s,baz=311,slow=2.0,SNR=3.6						
LPAZ	La Paz	154.39	187	PKPbc	PKiKP	15 40 58.1	+1.7
	comp=Z,1.9nm,0.4s,baz=263,slow=4.5,SNR=8.0						
LPAZ	La Paz	154.39	187		PKiKP	15 40 57.0	+0.6

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*NOU **29** 15:33:06.5,23°.50S×179°.54W,h558km,ML4.6/25,South of Fiji Islands*

*IDC **29** 15:33:07.2±2.2,23°.56S×179°.98W,h521km±26km,mb3.6/6, mb1 3.7/6,mb1mx3.3/29,mbtmp4.5/6,Error ellipse: s-maj=44.9km s-min=20.9km az=34.0*

*NEIC **29** 15:33:08.1±1.3,23°.6S±0°.1×179°.9W±0°.2,h537km±14km, mb4.5/27,Error ellipse: s-maj=20.9km s-min=20.0km az=63.0*

ISC 29 15:33:07.2±0.7,**23°.66S**±0°.07×**179°.88W**±0°.10,**h532**km, **n112**,σ**1s.85**/129,**mb4.4**/26,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.20	341	P	P	15 34 45.9	-1.3
	0.7nm,0.3s,baz=244,slow=14,SNR=1.8						
MSVF	Nonsavu	6.20	341	P	P	15 34 46.7	-0.4
TAVE	Taveuni	6.91	360	P	P	15 34 53.2	-0.6
DGTI	Dogotuki	7.33	357	P	P	15 34 57.2	-0.7
NIUE	Niue	10.33	66	P	P	15 35 30.1	+1.7
MARNC	Mare, Loyalty	11.38	279	P	P	15 35 39.7	+0.3
PINNC	Pines Island,	11.71	273	P	P	15 35 43.7	+0.9
LIFNC	LIFOU	12.27	281	P	P	15 35 48.7	0.0
OUZ	Omahuta	12.85	205	P	P	15 35 56.1	+1.7
OUZ	Omahuta	12.85	205	P	P	15 35 55.7	+1.3
OUZ	Omahuta	12.85	205	P	P	15 35 56.6	+2.2
PKGZ	Pakihiroa	14.29	187	P	P	15 36 06.9	-2.6
TGRZ	Tauranga	14.41	192	P	P	15 36 14.3	+3.6
RUGZ	Raukumara Rang	14.42	188	P	P	15 36 11.2	+0.3
RUGZ				S	S	15 38 41.7	-0.6
PUZ	Puketiti	14.46	186	P	P	15 36 08.9	-2.3
PUZ				S	S	15 38 41.6	-1.3
TOZ	Tahuroa Road	14.58	195	P	P	15 36 16.1	+3.7
TWGZ	Tauwhareparae	14.59	187	P	P	15 36 13.6	+1.0
SANVU	Saraoutou	14.65	302	P	P	15 36 12.6	-0.9
URZ	Urewera	14.78	189	P	P	15 36 11.4	-3.1
URZ				S	S	15 38 44.1	-4.9
URZ	Urewera	14.78	189	P	P	15 36 13.0	-1.5
URZ	Urewera	14.78	189	P	P	15 36 15.1	+0.6
MWZ	Matawai	14.80	188	P	P	15 36 13.6	-1.2
MWZ				S	S	15 38 46.7	-2.7
TKGZ	Te Karaka	14.86	187	P	P	15 36 16.0	+0.7
TKGZ				S	S	15 38 47.8	-2.7
CNGZ	Carnagh Statio	14.87	186	P	P	15 36 16.6	+1.2
RRRZ	Republican Roa	14.96	191	P	P	15 36 20.3	+3.9
RAGZ	Rawiri	14.97	188	P	P	15 36 17.0	+0.4
MUGZ	Murupara	15.05	190	P	P	15 36 17.4	+0.1
RIGZ	Rimuhau	15.14	187	P	P	15 36 16.2	-2.1
RIGZ				S	S	15 38 53.6	-2.1
TLZ	Tolley Road	15.14	194	P	P	15 36 21.1	+2.7
WPRZ	Whakapapatarin	15.20	192	P	P	15 36 12.7	-6.2
SNGZ	Shannon Statio	15.26	188	P	P	15 36 19.5	-0.1
SNGZ				S	S	15 38 59.4	+1.4
MTHZ	Maungataniwha	15.40	190	P	P	15 36 20.5	-0.6
MTHZ				S	S	15 38 59.5	-1.0
RAHZ	Arahi	15.43	189	P	P	15 36 21.4	+0.1
RAHZ				S	S	15 39 02.1	+1.2
HIZ	Hauiti	15.48	196	P	P	15 36 25.6	+3.9
HIZ	Hauiti	15.48	196	P	P	15 36 24.0	+2.2
HATZ	Hinemaiaia	15.57	192	P	P	15 36 21.8	-1.0
BKZ	Black Stump Fm	15.77	190	P	P	15 36 21.5	-3.3
BKZ				S	S	15 39 03.0	-3.9
BKZ	Black Stump Fm	15.77	190	P	P	15 36 20.8	-4.0
BKZ				IAmb	IAmb	15 36 30.6	
	comp=Z,33nm,1.5s						
BKZ	Black Stump Fm	15.77	190	P	P	15 36 23.0	-1.8
NTVZ	North Tongarir	15.85	193	P	P	15 36 25.6	-0.2
TMVZ	Te Maari	15.86	193	P	P	15 36 25.5	-0.4
TWVZ	Taurewa	15.88	193	P	P	15 36 26.3	+0.3
ETVZ	East Tongariro	15.88	193	P	P	15 36 24.9	-1.1
OTVZ	Oturere	15.92	193	P	P	15 36 24.3	-2.1
SNVZ	South Ngauruho	15.94	193	P	P	15 36 25.7	-1.0
MCHZ	McNeill Hill	16.01	190	P	P	15 36 25.8	-1.4
MCHZ				S	S	15 39 08.6	-2.3
TUVZ	Tukino	16.02	193	P	P	15 36 26.2	-1.2
KWHZ	Kaweka Forest	16.03	190	P	P	15 36 25.3	-2.2
KWHZ				S	S	15 39 10.7	-0.8
VRZ	Vera Road	16.08	195	P	P	15 36 29.3	+1.4
WNVZ	Wahianoa	16.09	193	P	P	15 36 26.6	-1.5
MOVZ	Moawhango	16.14	192	P	P	15 36 27.4	-1.1
BHHZ	Black Hill Sta	16.16	191	P	P	15 36 26.3	-2.4
BHHZ				S	S	15 39 09.6	-4.0
KRHZ	Kereru	16.25	190	P	P	15 36 28.3	-1.3
KAHZ	Kahuranaki	16.32	189	P	P	15 36 29.0	-1.2
KAHZ				S	S	15 39 14.0	-2.4
PKE	Pukeiti	16.34	197	P	P	15 36 33.3	+2.8
PNHZ	Pukenui	16.55	191	P	P	15 36 30.3	-2.2
NMEZ	Namu Road	16.58	197	P	P	15 36 35.7	+3.1
TSZ	Takapari Road	16.73	191	P	P	15 36 31.8	-2.3
TSZ				S	S	15 39 19.8	-3.4
DVHZ	Dannevirke	16.93	190	P	P	15 36 33.1	-2.8
DVHZ				S	S	15 39 25.7	-0.7
ANWZ	Angora Road	17.03	190	P	P	15 36 35.8	-1.2
BFZ	Birch Farm	17.29	190	P	P	15 36 36.9	-2.4
BFZ				S	S	15 39 29.1	-3.2
BFZ	Birch Farm	17.29	190	P	P	15 36 36.6	-2.6
BFZ	Birch Farm	17.29	190	P	P	15 36 38.6	-0.7
SNZO	South Karori	18.18	193	P	P	15 36 47.5	+0.1
BHW	Baring Head	18.24	193	P	P	15 36 46.1	-1.9
QRZ	Quartz Range	18.27	199	P	P	15 36 48.4	+0.1
NNZ	Nelson	18.40	196	P	P	15 36 47.9	-1.5
KHZ	Kahutara	19.49	195	P	P	15 36 59.4	0.0
LTZ	Lake Taylor	20.16	197	P	P	15 37 03.4	-2.0
RPZ	Rata Peaks	21.36	198	P	P	15 37 16.2	-0.1
ODZ	Otahua Downs	22.69	198	P	P	15 37 28.2	0.0
ARMA	Armidale	26.21	249	P	P	15 37 59.5	-0.4
ARMA				IAmb	IAmb	15 38 15.4	
	comp=Z,29nm,1.5s						
ARMA	Armidale	26.21	249	P	P	15 38 01.3	+1.5
	comp=Z,10nm,0.9s						
EIDS	Eidsvold	26.46	260	P	P	15 38 01.8	-0.1
EIDS				IAmb	IAmb	15 38 22.8	
	comp=Z,17nm,1.2s						
EIDS	Eidsvold	26.46	260	P	P	15 38 01.9	0.0
	comp=Z,13nm,1.8s						
CNB	Canberra Magne	29.07	239	P	P	15 38 26.5	+1.8
	comp=Z,12nm,2.8s						
CAN	Canberra	29.36	240	P	P	15 38 28.1	+0.8
CAN				IAmb	IAmb	15 38 28.7	
	comp=Z,6.7nm,0.9s						
CAN	Canberra	29.36	240	P	P	15 38 28.4	+1.2
CMSA	Cobar Meteorol	31.41	248	P	P	15 38 44.6	-0.2
	comp=Z,6.5nm,0.9s						
CTA	Charters Tower	31.59	270	P	P	15 38 46.9	+0.4
	comp=Z,16nm,0.4s,baz=94,slow=11,SNR=31						
CTAO	Charters Tower	31.59	270	P	P	15 38 46.5	0.0
CTAO	Charters Tower	31.59	270	P	P	15 38 47.1	+0.6
QLP	Quilpie	32.56	257	P	P	15 38 54.6	-0.1
	comp=Z,15nm,0.9s						
TOO	Toolangi	32.67	237	P	P	15 38 55.6	0.0
TOO				IAmb	IAmb	15 38 56.2	
	comp=Z,14nm,1.3s						
TOO	Toolangi	32.67	237	P	P	15 38 55.7	+0.1
	comp=Z,9.4nm,1.0s						
TAU	Tasmania Unive	33.18	227	P	P	15 39 00.2	+0.5
MTSU	Mount Surprise	33.84	272	P	P	15 39 05.9	+0.2
	comp=Z,9.2nm,0.9s						
BRAT	Ballarat	33.87	237	P	P	15 39 06.8	+1.2
	comp=Z,6.9nm,0.7s						
PMG	Port Moresby	34.52	289	P	P	15 39 11.1	-0.3
PMG				IAmb	IAmb	15 39 38.3	
	comp=Z,16nm,1.2s						
STKA	Stephens Creek	34.92	248	P	P	15 39 14.9	+0.4
	comp=Z,3.0nm,0.4s,baz=92,slow=10,SNR=16						
STKA	Stephens Creek	34.92	248	IAmb	IAmb	15 39 15.3	
	comp=Z,0.9nm,0.6s						
INKA	Innaminka	35.61	255	P	P	15 39 21.2	+0.9
	comp=Z,12nm,1.0s						
COEN	Coen	36.19	279	P	P	15 39 25.1	-0.1
COEN				IAmb	IAmb	15 39 51.0	
	comp=Z,30nm,1.4s						
BBOO	Buckleboo	39.64	247	P	P	15 39 52.4	-0.8
BBOO				IAmb	IAmb	15 39 53.7	
	comp=Z,11nm,1.1s						
AS31	Alice Springs	42.19	260	P	P	15 40 12.8	-0.7
ASAR	Alice Springs	42.19	260	P	P	15 40 13.2	-0.3
	comp=Z,5.4nm,0.6s,baz=95,slow=7.4,SNR=194						
ASAR				ScP	ScP	15 44 57.8	+2.3
	comp=Z,0.9nm,0.8s,baz=99,slow=4.9,SNR=5.3						
ASAR	Alice Springs	42.19	260	P	P	15 40 12.8	-0.8
WB2	Warramunga Arr	42.52	266	P	P	15 40 15.2	-1.1
WB2				IAmb	IAmb	15 40 16.0	
	comp=Z,13nm,0.8s						
WB0	Warramunga Arr	42.53	266	P	P	15 40 15.2	-1.1
WB0				IAmb	IAmb	15 40 15.9	
	comp=Z,11nm,0.7s						
WRA	Warramunga Arr	42.54	266	P	P	15 40 15.5	-0.8
	comp=Z,7.9nm,0.5s,baz=102,slow=8.6,SNR=30						
WRA	Warramunga Arr	42.54	266	P	P	15 40 15.5	-0.8
FORT	Forrest	46.50	249	P	P	15 40 45.9	-0.8
FORT				IAmb	IAmb	15 40 46.6	
	comp=Z,24nm,0.6s						
MTN	Manton Dam	47.55	274	P	P	15 40 53.5	-1.3
MTN				IAmb	IAmb	15 40 56.3	
	comp=Z,59nm,1.5s						
KNRA	Kununurra	48.80	270	P	P	15 41 03.6	-0.5
KNRA				IAmb	IAmb	15 41 14.8	
	comp=Z,23nm,1.1s						
VNDA	Vanda	54.63	185	P	P	15 41 47.6	+2.4
	comp=Z,0.7nm,0.6s,baz=31,slow=7.1,SNR=2.1						
VNDA	Vanda	54.63	185	P	P	15 41 46.6	+1.4
PSA00	Pilbara Seismi	55.32	259	P	P	15 41 49.6	-1.4
MORW	Morawa	57.06	250	P	P	15 42 02.3	-0.6
MORW				IAmb	IAmb	15 42 24.5	
	comp=Z,22nm,1.2s						
GIRL	Giralia	60.08	257	P	P	15 42 24.0	+0.7
TOLI2	Tolitoli	62.63	284	P	P	15 42 39.5	-0.6
TOLI2				IAmb	IAmb	15 42 43.9	
	comp=Z,6.0nm,0.8s						
QSPA	South Pole Qui	66.43	180	P	P	15 43 04.5	+1.0
	comp=Z,2.0nm,0.8s,baz=19,slow=1.0,SNR=14						
QSPA	South Pole Qui	66.43	180	P	P	15 43 04.1	+0.7

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*RSPR **29** 15:50:01.8,17°.94N×68°.44W,h98km±2km,MD3.3/10*

*NEIC **29** 15:50:02.5±1.3,18°.0N±0°.2×68°.45W±0°.08,h74km±17km, Error ellipse: s-maj=31.8km s-min=8.3km az=192.0*

ISC 29 15:50:01.7±1.7,**18°.1N**±0°.2×**68°.45W**±0°.07,**h95**km,**n43**, σ**0s.54**/44,**7C-3D**,**Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	Punta Cana, DR	0.45	8	Pn	Pn	15 50 15.3	-1.3
PCDR				Sn	Sn	15 50 26.6	-1.1
PCDR				IAML		15 50 29.1	
	comp=N,301nm,0.6s						
IDE	Isla Desecheo	0.98	71	⇑*e*P	Pn	15 50 21.4	-0.1
IDE	Isla Desecheo	0.98	71	*e*S	Sn	15 50 37.0	+0.6
CRPR	Cabo Rojo, PR	1.28	92	⇓*e*P	Pn	15 50 24.6	-0.4
CRPR	Cabo Rojo, PR	1.28	92	*e*S	Sn	15 50 42.3	-0.2
CRPR	Cabo Rojo, PR	1.28	92		Pn	15 50 24.6	-0.4
CRPR	Cabo Rojo, PR	1.28	92		Sn	15 50 42.3	-0.2
LSP	Las Mesas	1.30	85	⇑*e*P	Pn	15 50 25.5	+0.2
AGPR	Aguadilla, PR	1.33	72	⇑*e*P	Pn	15 50 26.0	+0.4
AGPR	Aguadilla, PR	1.33	72	*e*S	Sn	15 50 44.7	+1.0
AGPR	Aguadilla, PR	1.33	72		Pn	15 50 26.0	+0.4
AGPR					Sn	15 50 44.7	+1.0
AGPR	Aguadilla, PR	1.33	72	IAML		15 50 53.0	
	comp=E,98nm,1.4s						
AGPR				IAML		15 51 01.0	
	comp=N,121nm,3.2s						
MLPR	Magueyes Islan	1.34	94	⇓*e*P	Pn	15 50 25.0	-0.7
MLPR	Magueyes Islan	1.34	94	*e*S	Sn	15 50 44.0	+0.1
MLPR	Magueyes Islan	1.34	94		Pn	15 50 25.0	-0.7
MLPR	Magueyes Islan	1.34	94		Sn	15 50 44.0	+0.1
MLPR	Magueyes Islan	1.34	94	IAML		15 50 31.6	
	comp=N,33nm,2.2s						
MLPR	Magueyes Islan	1.34	94	IAML		15 50 51.9	
	comp=E,28nm,0.3s						
AOPR	Arecibo Observ	1.64	80	⇑*e*P	Pn	15 50 29.3	-0.2
AOPR	Arecibo Observ	1.64	80	*e*S	Sn	15 50 51.0	+0.5
AOPR	Arecibo Observ	1.64	80		Pn	15 50 29.3	-0.2
AOPR					Sn	15 50 51.0	+0.5
UUPR	Utuado, UPR, P	1.66	83	⇑*e*P	Pn	15 50 29.5	-0.2
UUPR	Utuado, UPR, P	1.66	83	*e*S	Sn	15 50 51.0	+0.1
UUPR	Utuado, UPR, P	1.66	83		Pn	15 50 29.5	-0.2
UUPR					Sn	15 50 51.0	+0.1
OBIP	Obispado Ponce	1.75	90	Pn	Pn	15 50 29.8	-1.2
CELP	Cerrillos	1.78	89	⇓*e*P	Pn	15 50 30.8	-0.4
CELP	Cerrillos	1.78	89	*e*S	Sn	15 50 53.6	-0.2
CELP	Cerrillos	1.78	89		Pn	15 50 30.8	-0.4
CELP					Sn	15 50 53.6	-0.2
CELP	Cerrillos	1.78	89	IAML		15 50 59.3	
	comp=N,33nm,0.5s						
EMPR	Esperanza - Ma	1.87	77	Pn	Pn	15 50 31.5	-0.9
SJG	San Juan	2.19	88	Pn	Pn	15 50 36.8	+0.2
SJG				IAML		15 51 05.5	
	comp=N,29nm,0.3s						
SJG				IAML		15 51 07.4	
	comp=N,39nm,0.7s						
GCPR	Guaynabo City	2.26	84	Pn	Pn	15 50 37.6	+0.1
GCPR				IAML		15 51 09.0	
	comp=E,20nm,1.0s						
GCPR				IAML		15 51 10.0	
	comp=N,25nm,1.8s						
PDPR	Patillas Dam,	2.31	91	Pn	Pn	15 50 39.0	+0.8
PDPR				IAML		15 51 29.8	
	comp=E,62nm,1.0s						
CBYP	Canovanas	2.47	85	Pn	Pn	15 50 40.2	-0.2
HUMP	Col San Antoni	2.47	88	⇑*e*P	Pn	15 50 40.4	0.0
HUMP	Col San Antoni	2.47	88	*e*S	Sn	15 51 09.8	-0.2
HUMP	Col San Antoni	2.47	88		Pn	15 50 40.4	0.0
HUMP					Sn	15 51 09.8	-0.2
HUMP	Col San Antoni	2.47	88	IAML		15 51 15.9	
	comp=N,29nm,0.3s						
MTP	Monte Pirata	2.76	89	⇑*e*P	Pn	15 50 43.9	-0.1
MTP	Monte Pirata	2.76	89	*e*S	Sn	15 51 17.0	+0.3
MTP	Monte Pirata	2.76	89		Pn	15 50 43.9	-0.1
MTP					Sn	15 51 17.0	+0.3
MTP	Monte Pirata	2.76	89	IAML		15 51 24.5	
	comp=N,32nm,2.9s						
MTP				IAML		15 51 38.7	
	comp=E,26nm,2.9s						
SDDR	Presa de Saban	2.84	289	Pn	Pn	15 50 46.1	+0.8
SDDR				IAML		15 51 41.0	
	comp=E,33nm,3.1s						
SDDR				IAML		15 51 52.8	
	comp=E,27nm,3.0s						

JMA 29 15:52:06.3±0.3,**23°.02N**×**123°.13E**,**h61**km,**M1.9**, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	Hateruma jima	1.20	31	P	Pn	15 52 27.4	+0.3
HATJ				*e*S	Sn	15 52 43.0	+0.5
IRIF	Iriomote-Funau	1.42	23	P	Pn	15 52 30.7	+0.8
IRIF				*e*S	Sn	15 52 48.5	+0.8
JYNG	Yonagunijimaku	1.44	353	P	Pn	15 52 30.9	+0.8
JKRS	Kuro-shima	1.46	33	P	Pn	15 52 31.2	+0.8
JKRS				*e*S	Sn	15 52 49.2	+0.7
JIJ	Ishigaki jima	1.63	35	P	Pn	15 52 33.1	+0.4
JIJ				S	Sn	15 52 53.0	+0.3
JISG	Ishigakijimahi	1.90	34	P	Pn	15 52 36.7	+0.3
JISG				*e*S	Sn	15 52 59.3	+0.1
JTJ	Tarama	2.16	41	P	Pn	15 52 41.0	+1.0
JTJ				*e*S	Sn	15 53 07.1	+1.4

TAP 29 15:52:19.7,**23°.27N**×**121°.16E**,**h11**km±1km,**ML1.2**,**B**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FULB	Fuli	0.14	121	*e*P	Pb	15 52 24.4	-0.1
	baz=120						
FULB				*e*S	Sg	15 52 27.8	+2.4
	baz=120						
ELDTW	Lidau	0.15	237	*e*P	Pg	15 52 22.9	-0.3
	baz=235						
ELDTW				*e*S	Sg	15 52 25.8	0.0
	baz=235						
EYUL	Yuli	0.17	63	*i* P	Pg	15 52 23.6	+0.2
	baz=56						
EYUL				*i* S	Sg	15 52 26.3	+0.4
	baz=56						
YULB	Yu-li	0.17	47	*e*P	Pg	15 52 23.7	+0.1
	baz=40						
YULB				*e*S	Sg	15 52 26.0	-0.2
	baz=40						
EHY	Hungye	0.28	33	*i* P	Pg	15 52 25.6	+0.2
	baz=29						
EHY				*e*S	Sg	15 52 29.5	+0.4
	baz=29						
EDH	Donghe	0.33	156	*e*P	Pb	15 52 27.2	-0.4
	baz=156						
EDH				*e*S	Sb	15 52 32.4	-0.5
	baz=156						
STYH	Taoyuan	0.37	254	*i* P	Pg	15 52 27.2	+0.2
	baz=254						
STYH				*e*S	Sg	15 52 31.6	-0.3
	baz=254						
STYT	Tauyuan	0.39	254	*i* P	Pg	15 52 27.7	+0.3
	baz=253						
STYT				S	Sg	15 52 33.0	+0.5
	baz=253						
ALS	Alishan	0.40	306	*e*P	Pg	15 52 27.7	0.0
	baz=306						
ALS				*e*S	Sg	15 52 33.4	+0.3
	baz=306						
VWDT	VWDT	0.48	358	*e*P	Pg	15 52 29.5	+0.4
	baz=355						
VWDT				*e*S	Sb	15 52 37.2	0.0
	baz=355						

NOU 29 16:10:39.2,**14°.93S**×**166°.64E**,**h14**km,**MLv5.0**/13, **Vanuatu Islands**,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.75	133	P	Pb	16 10 54.1	+0.1
DVP	Devils Point	3.15	152	P	Pn	16 11 28.7	+0.3
RTV	Rentapao	3.32	149	P	Pn	16 11 31.1	+0.3
LIFNC	LIFOU	5.84	174	P	Pn	16 12 04.6	-0.9
KOUNC	Koumac, New Ca	6.02	202	P	Pn	16 12 07.9	0.0
MARNC	Mare, Loyalty	6.65	169	P	Pn	16 12 16.5	0.0
NOUC	Port Laguerre	7.14	183	P	Pn	16 12 23.2	-0.1
OUENC	Ouen Island, N	7.45	179	P	Pn	16 12 28.4	+0.9

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*IDC **29** 17:01:48.4±1.3,2°.83S×129°.68E,h0km,mb3.6/3, mb1 3.7/5,mb1mx3.5/41,mbtmp3.5/5,ML3.5/2,Error ellipse: s-maj=44.9km s-min=24.2km az=82.0*

*DJA **29** 17:01:53.3±1.0,3°S±3°×13°0E±°,h19km±8km,M3.3/7, MLv3.3/7*

ISC 29 17:01:51.7±0.8,**2°.76S**±0°.05×**130°.00E**±0°.04,**h25**km,**n12**, σ**1s.01**/17,**mb3.7**/3,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.22	241	P	Pb	17 02 14.2	+0.1
MSAI				S	Sb	17 02 29.6	+0.1
AAI	Ambon	2.03	243	P	Pn	17 02 24.8	+0.5
AAI				S	Sn	17 02 49.2	+0.4
FAKI	Fak Fak	2.25	94	P	Pb	17 02 31.3	-0.4
FAKI				S	Sb	17 03 00.7	+1.6
SIJI	Sorong	2.26	34	Pn	Pb	17 02 31.0	-0.9
	4.5nm,0.3s,baz=59,slow=3.3,SNR=59						
SIJI				Sn	Sb	17 03 00.0	+0.6
	3.7nm,0.3s,baz=320,slow=12,SNR=4.6						
SWI	Sorong	2.26	34	P	Pb	17 02 31.3	-0.6
LBMI	Labuha	3.27	310	P	Pn	17 02 41.8	+0.5
LBMI				S	Sn	17 03 20.2	+0.8
SANI	Sanana	4.07	280	P	Pn	17 02 51.0	-1.4
TNTI	Ternate	4.38	323	P	Pn	17 02 57.0	+0.3
WRA	Warramunga Arr	17.60	166	P	Pn	17 05 53.4	-1.9
	0.2nm,0.3s,baz=350,slow=11,SNR=1.4						
ASAR	Alice Springs	21.13	170	P	P	17 06 35.4	+0.6
	2.7nm,0.8s,baz=351,slow=11,SNR=20						
MKAR	Makanchi Array	64.72	326	P	P	17 12 29.2	+1.4
	0.3nm,0.7s,baz=110,slow=6.3,SNR=2.1						
KURBB	Kurchatov Arra	68.93	328	P	P	17 12 53.5	-1.0
	0.5nm,0.5s,baz=127,slow=5.9,SNR=6.8						

DJA 29 17:19:58.1±1.2,**6°N**±7°×**9°5E**±°,**h10**km,**M3.8**/4,**mb4.3**/3, **MLv3.6**/4,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	1.56	102	P	Pn	17 20 25.8	-0.2
LHMI				S	Sn	17 20 45.8	-0.5
TPTI		2.89	142	P	Pn	17 20 44.2	0.0
TPTI				S	Sn	17 21 20.4	+1.4
TSI	Tuntungan	3.75	123	P	Pn	17 20 56.0	-0.1
PPSI	Pulau Pagai	9.46	151	P	Pn	17 22 13.5	-1.0

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*NEIC **29** 17:22:59.9±1.5,18°.0S±0°.3×178°.4W±0°.2,h451km±12km, mb4.1/11,Error ellipse: s-maj=42.2km s-min=27.1km az=193.0*

*IDC **29** 17:23:03.3±5.0,17°.53S×178°.79W,h475km±24km,mb3.2/3, mb1 3.3/4,mb1mx3.0/27,mbtmp3.9/4,Error ellipse: s-maj=166.7km s-min=36.1km az=140.0*

ISC 29 17:22:59.1±1.6,**17°.9S**±0°.3×**178°.3W**±0°.2,**h450**km,**n21**, σ**1s.15**/20,**mb4.0**/10,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.48	272	P	P	17 24 12.6	+2.6
	1.0nm,0.3s,baz=123,slow=22,SNR=5.7						
MSVF	Nonsavu	3.48	272	P	P	17 24 10.0	0.0
SANVU	Saraoutou	14.10	278	P	P	17 26 02.2	+1.4
CTAO	Charters Tower	33.54	261	P	P	17 28 58.7	-1.5
TOO	Toolangi	37.24	231	P	P	17 29 32.0	+1.0
TOO				IAmb	IAmb	17 29 32.8	
	comp=Z,7.5nm,1.2s						
STKA	Stephens Creek	38.71	241	P	P	17 29 44.0	+0.9
	comp=Z,1.3nm,0.7s,baz=75,slow=12,SNR=2.9						
STKA	Stephens Creek	38.71	241	P	P	17 29 43.6	+0.5
BBOO	Buckleboo	43.49	241	P	P	17 30 21.3	0.0
BBOO				IAmb	IAmb	17 30 32.1	
	comp=Z,8.0nm,1.1s						
WRA	Warramunga Arr	44.73	260	P	P	17 30 30.0	-1.2
	comp=Z,0.5nm,0.5s,baz=96,slow=7.6,SNR=2.1						
WRA	Warramunga Arr	44.73	260	P	P	17 30 30.0	-1.2
WRA	Warramunga Arr	44.73	260	IAmb	IAmb	17 30 38.5	
	comp=Z,0.4nm,1.3s						
AS31	Alice Springs	44.88	254	P	P	17 30 31.9	-0.5
AS31				IAmb	IAmb	17 30 32.5	
	comp=Z,1.7nm,0.6s						
ASAR	Alice Springs	44.88	254	P	P	17 30 31.9	-0.4
	comp=Z,5.1nm,0.6s,baz=90,slow=8.1,SNR=119						
ASAR	Alice Springs	44.88	254	P	P	17 30 31.3	-1.1
FORT	Forrest	50.09	245	P	P	17 31 10.9	-0.7
FORT				IAmb	IAmb	17 31 34.4	
	comp=Z,16nm,1.0s						
KNRA	Kununurra	50.59	264	P	P	17 31 14.9	-0.5
KNRA				IAmb	IAmb	17 31 48.9	
	comp=Z,36nm,1.3s						
SOEI	Soe	56.17	270	P	P	17 31 53.6	-1.9
SOEI				IAmb	IAmb	17 32 17.8	
	comp=Z,22nm,0.9s						
MORW	Morawa	60.57	246	P	P	17 32 24.7	-0.4
QSPA	South Pole Qui	72.14	180	P	P	17 33 37.1	+0.4
QSPA				IAmb	IAmb	17 33 37.6	
	comp=Z,2.0nm,0.7s						
GERES	GERESS Array B	147.65	345	PKPbc	PKPbc	17 41 51.8	-0.3
	comp=Z,0.5nm,0.5s,baz=31,slow=3.4,SNR=6.5						
GERES	GERESS Array B	147.65	345		PKPdf	17 41 49.4	+0.6

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*ISK **29** 17:30:25.3,34°.40N×33°.92E,h15km,ML2.9/14*

*GII **29** 17:30:27.1±0.0,34°.75N×33°.89E,h20km,Mm2.3/3*

*NIC **29** 17:30:28.2±0.0,34°.55N×33°.97E,h6km±2km,Ml2.5/7*

ISC 29 17:30:28.6±1.3,**34°.63N**±0°.03×**34°.00E**±0°.04,**h15**km±10km, **n41**,σ**0s.76**/57,**1C**,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PARAL	Paralimni	0.36	5	⇑*i*P	Pn	17 30 37.5	-1.7
PARAL				S	Sn	17 30 44.3	-1.8
PARAL				AML	AML	17 30 46.9	
	1.8nm,0.7s						

PARAL				AML	AML	17 30 46.9	
	1.8nm,0.7s						
PARAL				AML	AML	17 30 47.2	
	2.6nm,0.4s						
PARAL				AML	AML	17 30 47.2	
	2.6nm,0.4s						
MVOU	**Mavrovouni**	**0.49**	**322**	P	**Pg**	**17 30 38.2**	**-0.1**
MVOU				AML	AML	17 30 44.5	
	1.2nm,0.5s						
MVOU				AML	AML	17 30 47.6	
	1.2nm,0.3s						
AKIN	**Akıncılar- Kıb**	**0.58**	**311**	PG	**Pg**	**17 30 39.3**	**-0.8**
AKIN				SG	**Sb**	**17 30 49.1**	**+0.6**
ASGA	**Asgata**	**0.64**	**284**	P	**Pg**	**17 30 40.6**	**-0.5**
ASGA				S	**Sb**	**17 30 50.3**	**+0.2**
ASGA				AML	AML	17 30 52.3	
	1.0nm,0.5s						
ASGA				AML	AML	17 30 52.3	
	1.0nm,0.5s						
ASGA				AML	AML	17 30 53.3	
	0.9nm,0.7s						
ASGA				AML	AML	17 30 53.3	
	0.9nm,0.7s						
CSS	**Mathiatis**	**0.64**	**301**	Pg	**Pg**	**17 30 41.0**	**-0.2**
CSS				Sg	**Sb**	**17 30 50.8**	**+0.5**
CSS	**Mathiatis**	**0.64**	**301**	P	**Pg**	**17 30 41.1**	**-0.1**
CSS				S	**Sn**	**17 30 51.9**	**-1.1**
ATHAL	**Athalassa**	**0.71**	**316**	P	**Pn**	**17 30 43.2**	**-0.8**
ATHAL				S	**Sn**	**17 30 54.8**	**+0.1**
ATHAL				AML	AML	17 30 55.4	
	1.4nm,0.4s						
ATHAL				AML	AML	17 30 55.4	
	1.4nm,0.4s						
ATHAL				AML	AML	17 31 03.5	
	1.7nm,0.6s						
ATHAL				AML	AML	17 31 03.5	
	1.7nm,0.6s						
LFK	**Lefkose**	**0.75**	**329**	PG	**Pn**	**17 30 44.0**	**-0.7**
LFK				SG	**Sn**	**17 30 57.3**	**+1.5**
EREN	**Erenkoy**	**0.91**	**9**	PN	**Pn**	**17 30 47.5**	**+0.8**
LEF	**Lefka**	**1.03**	**298**	PN	**Pb**	**17 30 47.3**	**-0.8**
NATA	**Nata**	**1.19**	**277**	P	**Pb**	**17 30 50.8**	**0.0**
NATA				S	**Sg**	**17 31 07.9**	**+0.8**
NATA				AML	AML	17 31 11.9	
	1.1nm,0.7s						
NATA				AML	AML	17 31 11.9	
	1.1nm,0.7s						
NATA				AML	AML	17 31 13.6	
	0.7nm,0.7s						
NATA				AML	AML	17 31 13.6	
	0.7nm,0.7s						
ALFC	**Alefka**	**1.27**	**295**	P	**Pb**	**17 30 51.8**	**-0.3**
ALFC				S	**Sg**	**17 31 10.7**	**+1.2**
ALFC				AML	AML	17 31 11.1	
	0.3nm,0.6s						
ALFC				AML	AML	17 31 11.1	
	0.3nm,0.6s						
ALFC				AML	AML	17 31 13.2	
	0.3nm,0.5s						
ALFC				AML	AML	17 31 13.2	
	0.3nm,0.5s						
AKMS	**Akamas**	**1.42**	**286**	P	**Pb**	**17 30 54.6**	**-0.2**
AKMS				S	**Sg**	**17 31 15.1**	**+0.5**
AKMS				AML	AML	17 31 20.2	
	0.3nm,0.4s						
AKMS				AML	AML	17 31 20.2	
	0.3nm,0.4s						
AKMS				AML	AML	17 31 20.6	
	0.2nm,0.5s						
AKMS				AML	AML	17 31 20.6	
	0.2nm,0.5s						
AKKU	**Akkuyu-Mersin**	**1.57**	**347**	PN	**Pb**	**17 30 56.5**	**-0.7**
IKL	**Isikli**	**1.62**	**351**	PN	**Pb**	**17 30 57.5**	**-0.7**
TEKE	**Tekeli-Mersin**	**1.67**	**335**	PN	**Pn**	**17 30 57.7**	**+0.4**
BERE	**Bereket-Mersin**	**1.82**	**340**	PN	**Pn**	**17 30 59.6**	**+0.1**
KEBE	**Keben-Mersin**	**1.82**	**353**	PN	**Pb**	**17 31 00.2**	**-1.5**
TEVE	**Tevekalti-Mers**	**1.85**	**346**	PN	**Pn**	**17 31 00.5**	**+0.6**
GEM	**Giv'at Ha'Em**	**1.98**	**135**	Pn	**Pn**	**17 31 00.8**	**-0.7**
NATI	**Neve Ativ**	**1.99**	**133**	Pn	**Pn**	**17 31 01.7**	**+0.1**
MMA0B	**Mount Meron ar**	**1.99**	**144**	Pn	**Pn**	**17 31 00.8**	**-0.9**
MMA0B				Sn	**Sn**	**17 31 27.0**	**+0.6**
GAZI	**Gazipasa**	**2.11**	**320**	PN	**Pn**	**17 31 03.1**	**-0.2**
BLGI	**Bet Lehem HaGe**	**2.14**	**152**	Pn	**Pn**	**17 31 03.5**	**-0.2**
BLGI				Sn	**Sn**	**17 31 30.6**	**+0.7**
OFRI	**`Ofer**	**2.17**	**157**	Pn	**Pn**	**17 31 03.5**	**-0.6**
MERS	**Mersin**	**2.27**	**11**	PN	**Pn**	**17 31 06.4**	**+0.8**
TAHT	**Tahtakopru-Hat**	**2.49**	**45**	PN	**Pn**	**17 31 09.5**	**+1.0**
MMLI	**Mount Malkishu**	**2.49**	**151**	Pn	**Pn**	**17 31 08.7**	**+0.1**
SLTI	**Sal'it**	**2.54**	**160**	Pn	**Pn**	**17 31 08.6**	**-0.6**
HDMB	**Hadim**	**2.63**	**333**	PN	**Pn**	**17 31 11.1**	**+0.4**
HMDT	**Nahal Hemdat**	**2.69**	**151**	Pn	**Pn**	**17 31 11.9**	**+0.6**
HMDT				Sn	**Sn**	**17 31 44.1**	**+0.4**
CMRD	**Camardi-Nigde**	**3.13**	**15**	PN	**Pn**	**17 31 19.1**	**+1.7**
AMAZ	**Amatzia**	**3.19**	**166**	Pn	**Pn**	**17 31 18.1**	**0.0**
AMAZ				Sn	**Sn**	**17 31 56.3**	**+0.5**
DSI	**Dead Sea**	**3.27**	**159**	Pn	**Pn**	**17 31 18.6**	**-0.6**
DSI				Sn	**Sn**	**17 31 57.8**	**0.0**
YTIR	**Yattir**	**3.39**	**164**	Pn	**Pn**	**17 31 20.3**	**-0.7**
MDBI	**Mazsada**	**3.50**	**161**	Pn	**Pn**	**17 31 22.0**	**-0.4**
MDBI				Sn	**Sn**	**17 32 03.3**	**-0.2**
GHAJ	**Ghor Haditha**	**3.57**	**158**	Pn	**Pn**	**17 31 22.8**	**-0.6**
KZIT	**Kziot**	**3.73**	**175**	Pn	**Pn**	**17 31 25.3**	**-0.3**
PRNI	**Paran**	**4.35**	**168**	Pn	**Pn**	**17 31 33.7**	**-0.5**
HRFI	**Mount Harif**	**4.67**	**169**	Pn	**Pn**	**17 31 38.8**	**+0.3**
MBRI	**Mt Berech**	**4.89**	**171**	Pn	**Pn**	**17 31 42.0**	**+0.4**

RSNC 29 17:33:08.6±1.2**,6°.07N×73°.71W,h116**^{km}±4^{km}**,ML3.2, Mw3.7,4C-4D,Fault plane solution: NP1:**ϕ_s28.00000°, δ21.00000°,λ138.00000°.**,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.55**	**222**⇑	*i*P	Pn	17 33 26.2	-0.4
SPBC				*e*S	Sn	17 33 40.1	+0.1
SPBC				*i*		17 33 41.8	
	comp=Z,566nm,0.2s						
RUSC	**La Rusia**	**0.64**	**105**⇓	*i*P	Pn	17 33 27.4	-0.2
RUSC				*e*S	Sn	17 33 41.3	-0.6
RUSC				*i*		17 33 43.6	
	comp=Z,356nm,0.3s						
BARC	**Barichara**	**0.74**	**45**⇓	*i*P	Pn	17 33 28.2	0.0
BARC				*e*S	Sn	17 33 42.8	-0.1
BARC				*i* S	Sn	17 33 42.8	-0.1
BARC				*i*		17 33 44.4	
	comp=Z,1µm,0.2s						
PTBC	**PUERTO BERRIO,**	**0.88**	**302**⇑	*i*P	Pn	17 33 27.9	-1.2
PTBC				*e*S	Sn	17 33 43.2	-1.4
PTBC				*i*		17 33 46.2	
	comp=Z,333nm,0.1s						
BRRC	**Barranca, Sant**	**1.03**	**360**	*e*P	Pn	17 33 30.4	-0.2
BRRC				*e*S	Sn	17 33 47.4	+0.1
BRRC				*i*		17 33 50.6	
	comp=Z,223nm,0.2s						
NORC	**Norcasia**	**1.26**	**247**⇑	*e*P	Pn	17 33 31.9	-1.2
NORC				*e*S	Sn	17 33 51.2	-0.5
NORC				*i*		17 33 53.6	
	comp=Z,470nm,0.3s						
ROSC	**El Rosal**	**1.36**	**207**	*e*P	Pn	17 33 35.3	+0.7
ROSC				*e*S	Sn	17 33 54.6	+0.4
ROSC				*i*		17 34 00.1	
	comp=Z,229nm,0.4s						
CHIC	**Chingaza**	**1.43**	**181**⇑	*i*P	Pn	17 33 34.8	-0.6
CHIC				*e*S	Sn	17 33 54.7	-0.9
CHIC				*i*		17 33 58.1	
	comp=Z,224nm,0.4s						
PAMC	**Pamplona, Colo**	**1.61**	**38**	*e*P	Pn	17 33 37.6	0.0
PAMC				*e*S	Sn	17 33 59.2	-0.4
PAMC				*i*		17 34 03.1	
	comp=Z,126nm,0.3s						
HELC	**Santa Helena**	**1.82**	**274**	*e*P	Pn	17 33 39.8	-0.1
HELC				*e*S	Sn	17 34 03.1	-0.7
HELC				*i*		17 34 08.2	
	comp=Z,173nm,0.5s						
ZARC	**Zaragoza, Cauc**	**1.82**	**321**	*e*P	Pn	17 33 39.1	-0.6
ZARC				*e*S	Sn	17 34 03.0	-0.4
ZARC				*i*		17 34 04.7	
	comp=Z,333nm,0.4s						
GUY2C	**Guyana, Caldas**	**1.85**	**243**	*e*P	Pn	17 33 40.2	-0.3
GUY2C				*e*S	Sn	17 34 05.4	+0.7
GUY2C				*i*		17 34 09.6	
	comp=Z,180nm,0.4s						
TAMC	**Tame, Arauca**	**1.94**	**79**⇓	*i*P	Pn	17 33 40.9	-0.3
TAMC				*e*S	Sn	17 34 05.9	0.0
TAMC				*i*		17 34 06.2	
	comp=Z,81nm,0.2s						
VILC	**Villavicencio,**	**1.94**	**180**	*e*P	Pn	17 33 40.8	-0.5
VILC				*e*S	Sn	17 34 06.5	+0.3
OCAC	**Ocana**	**2.19**	**10**	*e*P	Pn	17 33 44.4	-0.1
OCAC				*e*S	Sn	17 34 12.6	+0.7
OCAC				*i*		17 34 20.2	
	comp=Z,290nm,0.4s						
ANIL	**Santa Ana**	**2.30**	**227**	*e*P	Pn	17 33 46.0	0.0
ANIL				*e*S	Sn	17 34 14.7	0.0
ANIL				*i*		17 34 20.5	
	comp=Z,325nm,0.4s						
CBOC	**Ciudad Bolivar**	**2.30**	**265**	*e*P	Pn	17 33 46.1	+0.2
CBOC				*e*S	Sn	17 34 14.3	-0.1
CBOC				*i*		17 34 23.1	
	comp=Z,44nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.43**	**140**	*e*P	Pn	17 33 45.9	-1.4
PTGC				*e*S	Sn	17 34 15.2	-1.9
PTGC				*i*		17 34 20.8	
	comp=Z,62nm,0.3s						
UREC	**San Jos de Ur**	**2.47**	**313**	*e*P	Pn	17 33 46.2	-1.6
UREC				*e*S	Sn	17 34 15.1	-3.0
UREC				*i*		17 34 25.0	
	comp=Z,113nm,0.2s						
PRAC	**Prado**	**2.62**	**207**	*e*P	Pn	17 33 48.6	-1.2
PRAC				*e*S	Sn	17 34 21.8	+0.4
PRAC				*i*		17 34 27.8	
	comp=Z,156nm,0.4s						
ORTC	**Ortega, Tolima**	**2.63**	**216**	*e*P	Pn	17 33 49.5	-0.5
ORTC				*e*S	Sn	17 34 21.8	-0.2
ORTC				*i*		17 34 27.5	
	comp=Z,145nm,0.2s						
DBBC	**Dabeiba**	**2.66**	**291**⇓	*e*P	Pn	17 33 50.0	-0.5
DBBC				*e*S	Sn	17 34 20.1	-2.5
SMLC	**San Martn de**	**2.74**	**352**	*e*P	Pn	17 33 50.6	-0.8
SMLC				*e*S	Sn	17 34 23.9	-0.5
SMLC				*i*		17 34 29.6	
	comp=Z,96nm,0.1s						
PLMC	**San Jos del P**	**2.81**	**246**	*e*P	Pn	17 33 51.8	-0.6
PLMC				*e*S	Sn	17 34 24.2	-1.9
PLMC				*i*		17 34 33.7	
	comp=Z,30nm,0.2s						
YOTC	**Yotoco, Valle**	**3.34**	**232**	*e*P	Pn	17 33 58.5	-1.0
YOTC				*e*S	Sn	17 34 38.9	+0.1
SOCV	**Socops**	**3.58**	**52**	*e*P	Pn	17 34 00.6	-2.0
SOCV				*e*S	Sn	17 34 40.2	-4.1
GUVC	**San Jose del G**	**3.66**	**163**	*e*P	Pn	17 34 02.5	-1.1
GUVC				*e*S	Sn	17 34 43.2	-2.9
GUVC				*i*		17 34 51.0	
	comp=Z,67nm,0.2s						
MACC	**Macarena, Meta**	**3.90**	**182**	*e*P	Pn	17 34 04.5	-2.3
MACC				*e*S	Sn	17 34 47.5	-4.2
MACC				*i*		17 34 49.9	
	comp=Z,36nm,0.3s						
MARP	**Paez Belalcaza**	**3.91**	**215**	*e*P	Pn	17 34 05.7	-1.4
MARP				*e*S	Sn	17 34 51.3	-1.2
SJCC	**San Jacinto, C**	**4.08**	**339**	*e*P	Pn	17 34 06.9	-2.3
SJCC				*e*S	Sn	17 34 52.2	-4.0
SJCC				*i*		17 34 60.0	
	comp=Z,22nm,0.3s						
ELOV	**Elorza**	**4.30**	**77**	*e*P	Pn	17 34 10.7	-1.4
ELOV				*e*S	Sn	17 34 57.9	-3.5
FLOC	**Florencia**	**4.86**	**204**	*e*P	Pn	17 34 18.8	-0.9
FLOC				*e*S	Sn	17 35 06.9	-8.0
FLOC				*i*		17 35 17.7	
	comp=Z,11nm,0.4s						

TUL ***29*** *17:35:15.3±2.1,35°.74N±0°.01×97°.36W±0°.02,h7*^{km}*±5*^{km}*, ML2.7,mb_Lg2.2/5(NEIC),Error ellipse: s-maj=1.9km s-min=1.5km az=129.0*

NEIC 29 17:35:15.2±1.1**,35°.75N**±0°.01×**97°.37W**±0°.02**,h12**^{km}±3^{km}**, Error ellipse: s-maj=2.3km s-min=1.9km az=110.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.08**	**306**		Pg	17 35 17.7	0.0
OK029				Sg	Sg	17 35 19.3	-0.4
OK025	**Westminster Rd**	**0.17**	**170**		Pg	17 35 19.0	0.0
OK025				Sg	Sg	17 35 21.5	-0.1
OK005	**Luther M Schoo**	**0.18**	**122**	Pg	Pg	17 35 18.8	-0.3
OK005				Sg	Sg	17 35 21.6	-0.2
BCOK	**Bluff Creek, N**	**0.21**	**245**	Pg	Pg	17 35 20.0	+0.3
BCOK				Sg	Sg	17 35 23.6	+0.8
OKCFA	**Oklahoma City**	**0.34**	**191**		Pg	17 35 22.1	+0.2
OKCFA				Sg	Sg	17 35 27.2	+0.7
OKCSW	**OKLAHOMA CITY**	**0.35**	**189**	Pg	Pg	17 35 22.4	+0.2
OKCSW				Sg	Sg	17 35 27.6	+0.8
OK031	**S. Brethren Rd**	**0.48**	**65**	Pg	Pg	17 35 24.6	0.0
OK031				Sg	Sg	17 35 31.3	+0.3
FNO	**Franklin**	**0.49**	**183**	Pg	Pg	17 35 24.9	+0.1
FNO				Sg	Sb	17 35 32.1	-0.8
OK030	**Cody Creek RV**	**0.51**	**69**		Pg	17 35 25.2	0.0
OK030				IAmb_Lg		17 35 31.1	
	comp=Z,13nm,0.9s						
OK030				Sg	Sg	17 35 32.1	+0.1
OK034	**N. Norfolk Rd.**	**0.60**	**64**	Pg	Pg	17 35 26.7	-0.1
OK034				Sg	Sg	17 35 34.6	-0.1
QUOK	**Quay**	**0.69**	**52**	Pg	Pg	17 35 28.3	-0.2
QUOK				Sg	Sg	17 35 37.7	+0.2
W35A	**Tecumseh**	**0.72**	**145**	Pg	Pg	17 35 28.6	-0.5
W35A				Sg	Sg	17 35 38.4	-0.2
CROK	**Carrier**	**0.90**	**327**	Pg	Pg	17 35 32.6	0.0
CROK				Sg	Sb	17 35 45.1	+0.3
BLOK	**Blackwell**	**1.02**	**7**	Pg	Pb	17 35 34.5	-0.3
BLOK				Sg	Sb	17 35 48.1	0.0
GC02	**Grant County #**	**1.17**	**341**		Pb	17 35 37.1	-0.2
GC02				Sg	Sn	17 35 53.5	+0.2
X34A	**Smith Ranch, M**	**1.21**	**198**		Pg	17 35 38.2	-0.1
X34A				Sg	Sn	17 35 54.8	+0.6
OK032	**Salt Plains WL**	**1.25**	**328**	Pn	Pn	17 35 38.5	0.0
OK032				Sn	Sg	17 35 55.8	+0.3
KAN13	**South Haven SW**	**1.27**	**356**		Pn	17 35 38.5	-0.3
KAN14	**Manchester OK**	**1.30**	**339**		Pn	17 35 38.8	-0.4
TUL1	**Leonard**	**1.30**	**82**		Pn	17 35 38.3	-0.9
T35A	**Sooner Cattle**	**1.36**	**31**	Pn	Pn	17 35 39.4	-0.7
KAN05	**Bluff City Nor**	**1.42**	**344**	Pn	Pn	17 35 40.1	-0.7
KAN01	**Argonia South**	**1.44**	**348**		Pn	17 35 41.1	0.0
OK035	**E0210 Rd and N**	**1.44**	**312**	Pn	Pn	17 35 40.6	-0.6
U32A	**Winter Ranch,**	**1.46**	**296**	Pn	Pn	17 35 40.9	-0.5
KAN10	**Anthony SW Sta**	**1.49**	**337**	Pn	Pn	17 35 42.1	+0.2
KAN06	**Argonia West S**	**1.55**	**346**		Pn	17 35 42.7	+0.1
KAN08	**Anthony NE Sta**	**1.55**	**342**	Pn	Pb	17 35 44.0	+0.1
LOOK	**Love County**	**1.76**	**175**	Pn	Pb	17 35 46.7	-0.7
X37A	**Clayton**	**2.01**	**125**	Pn	Pn	17 35 49.8	+0.9
Z35A	**Perchaven, San**	**2.41**	**178**	Pn	Pn	17 35 54.1	-0.4
U38A	**Gravette**	**2.52**	**73**	Pn	Pn	17 35 57.8	+1.9
R32A	**Long Quarter,**	**2.88**	**339**	Pn	Pn	17 35 58.9	-2.0
W39A	**Magazine**	**2.98**	**100**	Pn	Pn	17 36 01.2	-1.1
MIAR	**Mount Ida**	**3.33**	**110**	Pn	Pn	17 36 05.4	-1.8
ABTX	**Abilene, Hawle**	**3.64**	**212**	Pn	Pn	17 36 11.0	-0.4
U40A	**Yellville**	**3.71**	**79**	Pn	Pn	17 36 11.9	-0.5
S39A	**Bolivar**	**3.79**	**58**	Pn	Pn	17 36 11.3	-2.1
X40A	**Basin Creek Fa**	**3.93**	**107**	Pn	Pn	17 36 13.9	-1.5
WLAR	**White Oak Lake**	**4.07**	**119**	Pn	Pn	17 36 16.9	-0.3
WLAR				IAmb_Lg		17 37 34.6	
	comp=Z,13nm,0.8s						
WHAR	**Wooly Hollow**	**4.17**	**95**	Pn	Pn	17 36 17.2	-1.5
FCAR	**Ozark Folk Cen**	**4.27**	**87**	Pn	Pn	17 36 20.7	+0.7
MGMO	**Mountain Grove**	**4.35**	**70**	Pn	Pn	17 36 20.0	-1.2
R40A	**Maddies Statio**	**4.81**	**57**	Pn	Pn	17 36 25.1	-2.3
P38A	**Dawn**	**4.92**	**37**	IAmb_Lg		17 38 00.9	
	comp=Z,5.4nm,0.8s						
N33A	**J Bar K, Exete**	**4.98**	**359**	Pn	Pn	17 36 27.8	-2.0
N35A	**Tabor**	**5.28**	**14**	Pn	Pn	17 36 31.4	-2.5
P40A	**Paris**	**5.67**	**47**	Pn	Pn	17 36 39.4	+0.2

IDC ***29*** *17:38:18.7±0.8,9°.72S×114°.20E,h0*^{km}*,mb4.4/19, mb1 4.4/21,mb1mx4.2/45,mbtmp4.4/21,ML4.2/2,MS3.5/8, Ms1 3.5/8,ms1mx3.1/35,Error ellipse: s-maj=28.4km s-min=14.3km az=42.0*

NEIC ***29*** *17:38:22.3±2.2,10°.03S±0°.06×114°.20E±0°.06,h33*^{km}*±5*^{km}*, mb4.7/39,Error ellipse: s-maj=9.1km s-min=7.1km az=222.0*

BJI ***29*** *17:38:22.6±0.0,10°.06S×113°.96E,h49*^{km}*,mB5.0/20, mb4.8/43,Ms4.5/4,Ms7 4.2/4*

DJA ***29*** *17:38:23.2±0.3,10°S±2°×11°4E±°,h49*^{km}*±15*^{km}*,M4.7/30, mB5.2/7,mb4.7/30,MLv4.8/19,Mw(mB)4.6/7*

ISC 29 17:38:21.5±1.3**,10°.07S**±0°.05×**114°.16E**±0°.04**,h30**^{km}±9^{km}**, n159,**σ1^{s}.**82**/166**,mb4.6**/40**,MS3.8**/5**,2C-2D,South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**1.58**	**38**	P	**Pb**	**17 38 49.9**	**-0.1**
IGBI				S	**Sb**	**17 39 09.7**	**+0.2**
JAGI	**Jajag, Banyuwa**	**1.59**	**360**	P	**Pn**	**17 38 48.9**	**+1.2**
JAGI				S	**Sn**	**17 39 07.9**	**+0.7**
JAGI	**Jajag, Banyuwa**	**1.59**	**360**		**Pn**	**17 38 48.9**	**+1.2**
JAGI	**Jajag, Banyuwa**	**1.59**	**360**	P	**Pb**	**17 38 49.3**	**-0.9**
GMJI	**Gumukmas**	**1.92**	**338**	P	**Pn**	**17 38 53.6**	**+1.4**
GMJI				S	**Sn**	**17 39 16.2**	**+0.8**
ABJI	**Asem Bagus**	**2.26**	**2**	P	**Pb**	**17 39 00.3**	**-1.4**
ABJI				S	**Sb**	**17 39 28.7**	**-0.5**
BLJI	**Banyuglugur**	**2.38**	**346**	P	**Pb**	**17 39 01.2**	**-2.4**
BLJI				S	**Sb**	**17 39 30.7**	**-1.9**
PCJI	**Pacitan**	**3.49**	**302**	P	**Pn**	**17 39 15.1**	**+1.3**
PCJI				S	**Sn**	**17 39 52.0**	**-2.1**
WOJI	**Wonogiri, Jawa**	**3.89**	**304**	P	**Pn**	**17 39 20.7**	**+1.3**
WOJI				S	**Sn**	**17 40 03.3**	**-0.8**
UGM	**Wanagama**	**4.19**	**300**	P	**Pn**	**17 39 24.8**	**+1.4**
UGM				S	**Sn**	**17 40 09.8**	**-1.6**
UGM	**Wanagama**	**4.19**	**300**		**Pn**	**17 39 24.9**	**+1.4**
UGM	**Wanagama**	**4.19**	**300**	P	**Pn**	**17 39 25.1**	**+1.7**
YOGI	**Yogyakarta**	**4.43**	**300**	P	**Pn**	**17 39 28.0**	**+1.3**
BWJI	**Bawean**	**4.45**	**340**	P	**Pn**	**17 39 28.7**	**+1.7**
SMRI	**Semarang**	**4.75**	**309**	Pn	**Pn**	**17 39 31.4**	**+0.3**
UWJI	**Ujung Watu**	**4.83**	**318**	P	**Pn**	**17 39 33.8**	**+1.6**
WBSI	**Waikabubak, Su**	**5.17**	**86**	P	**Pn**	**17 39 38.1**	**+1.2**
CMJI	**Cimerak**	**6.09**	**291**	P	**Pn**	**17 39 50.7**	**+1.2**
	0.3nm1µm29nm,1.1s						
BBKI	**Banjar Baru**	**6.60**	**6**	P	**Pn**	**17 39 59.2**	**+2.6**
	0.2nm50nm,0.8s						
KBKI	**Kotabaru**	**7.01**	**17**	P	**Pn**	**17 40 05.1**	**+2.8**
	0.2nm520nm31nm,0.8s						
LEM	**Lembang**	**7.23**	**296**	Sn	**Sn**	**17 41 29.8**	**+3.1**
	1.9nm,0.3s,baz=276,slow=12,SNR=4.1						
BSSI	**Bau Bau, Buton**	**7.38**	**59**	P	**Pn**	**17 40 10.7**	**+3.4**
	0.4nm79nm,0.5s						
CNJI	**Cibinong**	**7.47**	**291**	P	**Pn**	**17 40 10.0**	**+1.4**
	0.5nm2µm56nm,0.7s						
KAPI	**Kappang**	**7.48**	**48**	Sn	**Sn**	**17 41 33.5**	**+1.0**
	4.9nm,0.3s,baz=111,slow=23,SNR=6.9						
KAPI				LR	LR	17 43 37.1	
	comp=Z,156nm,18.6s,baz=232,slow=44						
KAPI	**Kappang**	**7.48**	**48**	Pn	**Pn**	**17 40 07.8**	**-0.8**
EDFI	**Ende, Flores**	**7.54**	**81**	P	**Pn**	**17 40 11.5**	**+1.9**
	439nm32nm,0.7s						
BKSI	**Bulukumba**	**7.56**	**52**	P	**Pn**	**17 40 13.1**	**+3.4**
	0.3nm572nm55nm,0.5s						
PBKI	**Pangkalan Bun**	**7.72**	**341**	P	**Pn**	**17 40 13.4**	**+1.4**
	0.4nm11µm146nm,0.8s						
MMRI	**Maumere**	**8.09**	**81**	P	**Pn**	**17 40 20.6**	**+3.5**
	67nm,1.0s						
MMRI	**Maumere**	**8.09**	**81**	Pn	**Pn**	**17 40 16.6**	**-0.5**
MMRI	**Maumere**	**8.09**	**81**	P	**Pn**	**17 40 20.9**	**+3.8**
BNSI	**Bone**	**8.15**	**47**	P	**Pn**	**17 40 20.8**	**+2.9**
	42nm,0.5s						
SPSI	**Sidrap Palu**	**8.23**	**43**	P	**Pn**	**17 40 21.4**	**+2.5**
	12nm,0.5s						
XMI	**Christmas Isla**	**8.35**	**267**	P	**Pn**	**17 40 21.8**	**+1.2**
	116nm,0.8s						
XMIS	**Christmas Isla**	**8.39**	**266**	Pn	**Pn**	**17 40 20.4**	**-0.7**
XMIS	**Christmas Isla**	**8.39**	**266**	P	**Pn**	**17 40 20.6**	**-0.5**
	67nm,0.9s						
TTSI	**Tana Toraja**	**8.96**	**39**	P	**Pn**	**17 40 30.8**	**+1.9**
	12nm,0.8s						
CGJI	**Cibinong**	**9.06**	**292**	P	**Pn**	**17 40 31.6**	**+1.3**
	2µm63nm,0.5s						
MTKI	**Muara Teweh, K**	**9.10**	**5**	P	**Pn**	**17 40 33.3**	**+2.4**
	19nm,0.5s						
BKB	**Balikpapan**	**9.16**	**17**	P	Pn	17 40 36.8	+5.0
	72nm,0.8s						
BATI	**Baumata**	**9.35**	**92**	Pn	**Pn**	**17 40 37.0**	**+2.6**
	7.8nm,0.3s,baz=79,slow=20,SNR=2.5						
BATI				Sn	**Sn**	**17 42 16.8**	**-2.0**
	8.2nm,0.3s,baz=259,slow=13,SNR=1.9						
BATI	**Baumata**	**9.35**	**92**	P	**Pn**	**17 40 37.4**	**+3.0**
	30nm,1.1s						
SOEI	**Soe**	**9.96**	**89**	P	**Pn**	**17 40 45.5**	**+2.7**
	35nm,0.7s						
SOEI	**Soe**	**9.96**	**89**	Pn	**Pn**	**17 40 47.4**	**+4.5**
SOEI	**Soe**	**9.96**	**89**	P	**Pn**	**17 40 46.7**	**+3.9**
STKI	**Sintang**	**10.42**	**345**	P	**Pn**	**17 40 51.5**	**+2.5**
KASI	**Kota Agung**	**10.59**	**295**	P	**Pn**	**17 40 52.6**	**+1.3**
	21nm,0.4s						
KLSI		**10.77**	**299**	P	**Pn**	**17 40 55.3**	**+1.5**
	5.1nm,0.8s						
LWLI	**Liwa**	**11.20**	**296**	P	**Pn**	**17 41 01.0**	**+1.2**
	35µm39nm,0.7s						
MDSI	**Maura Dua**	**11.35**	**299**	P	**Pn**	**17 41 01.0**	**-0.7**
	3.9nm,0.6s						
APSI	**Ampana**	**11.76**	**40**	P	**Pn**	**17 41 09.7**	**+2.4**
	14nm,0.8s						
MPSI	**Mapaga**	**11.81**	**29**	P	**Pn**	**17 41 09.5**	**+1.5**
	6.9nm,0.7s						
KSM	**Kuching**	**12.09**	**341**	Pn	**Pn**	**17 41 10.5**	**-1.4**
GIRL	**Giralia**	**12.50**	**180**	Pn	**Pn**	**17 41 17.9**	**+0.4**
GIRL	**Giralia**	**12.50**	**180**	P	**Pn**	**17 41 17.5**	**0.0**
	98nm,1.6s						
SBUM	**Sibu**	**12.59**	**351**	Pn	**Pn**	**17 41 17.7**	**-1.0**
PSA00	**Pilbara Seismi**	**12.67**	**155**	Pn	**Pn**	**17 41 18.2**	**-1.7**
PSA00	**Pilbara Seismi**	**12.67**	**155**	Pn	**Pn**	**17 41 17.8**	**-2.1**
PSA00	**Pilbara Seismi**	**12.67**	**155**	P	**Pn**	**17 41 20.6**	**+0.8**
	23nm,1.8s						
TOLI2	**Tolitoli**	**12.91**	**31**	Pn	**Pn**	**17 41 19.8**	**-3.3**
MRSI	**Marisa**	**13.03**	**37**	P	**Pn**	**17 41 27.7**	**+3.0**
	10.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**13.69**	**127**	Pn	**Pn**	**17 41 34.8**	**+1.0**
	0.6nm,0.3s,baz=323,slow=8.6,SNR=11						
FITZ				Sn	**Sn**	**17 43 56.5**	**-8.4**
	0.9nm,0.3s,baz=7.6,slow=21,SNR=7.4						
FITZ				LR	LR	17 47 27.0	
	comp=Z,97nm,19.2s,baz=306,slow=40						
MASI	**Maura Aman, Be**	**13.69**	**299**	P	**Pn**	**17 41 34.1**	**+0.2**
	55nm,0.8s						
SANI	**Sanana**	**14.20**	**57**	P	**Pn**	**17 41 42.5**	**+1.8**
	24nm,0.8s						
KNRA	**Kununurra**	**15.28**	**113**	Pn	**Pn**	**17 41 55.5**	**+0.2**
KNRA	**Kununurra**	**15.28**	**113**	P	**P**	**17 41 59.1**	**-0.7**
	27nm,1.4s						
MTN	**Manton Dam**	**16.86**	**101**	Pn	**Pn**	**17 42 12.1**	**-3.4**
MTN				IAmb	IAmb	17 42 34.6	
	comp=Z,65nm,1.2s						
MEEK	**Meekatharra**	**17.01**	**166**	P	**Pn**	**17 42 18.1**	**+0.8**
	comp=Z,28nm,2.7s						
MORW	**Morawa**	**18.98**	**175**	P	**P**	**17 42 40.4**	**-0.3**
MORW				IAmb	IAmb	17 43 16.2	
	comp=Z,53nm,1.6s						
MORW	**Morawa**	**18.98**	**175**	P	**Pn**	**17 42 44.9**	**+3.4**
	comp=Z,11nm,1.6s						
SIJI	**Sorong**	**19.31**	**63**	P	**P**	**17 42 45.0**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=280,slow=6.0,SNR=12						
SIJI				LR	LR	17 53 24.1	
	comp=Z,39nm,18.4s,baz=215,slow=47						
FAKI	**Fak Fak**	**19.31**	**70**	P	**P**	**17 42 43.2**	**-1.2**
FAKI				IAmb	IAmb	17 42 46.3	
	comp=Z,60nm,1.2s						
IPM	**Ipoh**	**19.50**	**317**	P	**P**	**17 42 47.0**	**+0.5**
IPM				IAmb	IAmb	17 42 53.3	
	comp=Z,21nm,0.6s						
WRKA	**Warakurna**	**20.05**	**140**	P	Pn	17 42 56.6	+2.3
	comp=Z,12nm,2.4s						
KULM	**Kulim**	**20.35**	**318**	P	**P**	**17 42 54.7**	**-1.0**
KULM				IAmb	IAmb	17 43 50.8	
	comp=Z,27nm,1.3s						
WB0	**Warramunga Arr**	**21.77**	**119**	P	**P**	**17 43 10.2**	**-0.8**
WRA	**Warramunga Arr**	**21.80**	**119**	P	**P**	**17 43 15.1**	**+3.8**
	comp=Z,1.8nm,0.7s,baz=294,slow=12,SNR=8.9						
WRA	**Warramunga Arr**	**21.80**	**119**	P	**P**	**17 43 07.4**	**-3.9**
WRAB	**Tennant Creek**	**21.80**	**119**	P	**P**	**17 43 15.0**	**+3.6**
	comp=Z,18nm,2.4s						
WB2	**Warramunga Arr**	**21.81**	**119**	P	**P**	**17 43 10.8**	**-0.6**
WB2				IAmb	IAmb	17 43 23.0	
	comp=Z,34nm,1.6s						
ASAR	**Alice Springs**	**23.19**	**128**	P	**P**	**17 43 28.9**	**+2.9**
	comp=Z,1.3nm,0.5s,baz=301,slow=8.7,SNR=44						
ASAR	**Alice Springs**	**23.19**	**128**	P	**P**	**17 43 27.6**	**+1.6**
AS31	**Alice Springs**	**23.19**	**128**	P	**P**	**17 43 28.2**	**+2.2**
SRIT	**Nakonsritamara**	**23.54**	**321**	P	**P**	**17 43 30.0**	**+0.5**
SRIT				IAmb	IAmb	17 43 31.5	
	comp=Z,18nm,0.6s						
FORT	**Forrest**	**24.33**	**150**	P	**P**	**17 43 37.8**	**+1.0**
CM31	**Chiang Mai Arr**	**32.08**	**332**	P	**P**	**17 44 45.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**32.08**	**332**	P	**P**	**17 44 47.1**	**+1.0**

	comp=Z,18nm,1.0s,baz=165,slow=8.2,SNR=63						
CMAR				LR	LR	18 00 49.0	
	comp=Z,65nm,18.2s,baz=231,slow=42						
CMAR	Chiang Mai Arr	32.08	332	P	P	17 44 46.8	+0.7
CHTO	Chiang Mai	32.39	332	P	P	17 44 49.4	+0.5
CHTO				IAmb	IAmb	17 44 51.2	
	comp=Z,20nm,1.4s						
STKA	Stephens Creek	33.39	135	P	P	17 45 01.2	+3.7
	comp=Z,0.7nm,0.4s,baz=326,slow=9.1,SNR=5.9						
STKA				LR	LR	17 58 36.9	
	comp=Z,99nm,20.4s,baz=228,slow=36						
STKA	Stephens Creek	33.39	135	P	P	17 44 56.8	-0.7
KMI	Kunming	36.71	343	⇓P	P	17 45 28.8	+2.4
KMI				pP	pwP	17 45 38.3	0.0
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ENH	Enshi	40.36	354	P	P	17 45 56.4	-0.3
ENH				IAmb	IAmb	17 45 57.7	
	comp=Z,11nm,1.0s						
SHL	Shillong	41.54	329	P	P	17 46 05.9	-0.8
NJ2	Nanjing	42.12	6	eP	P	17 46 13.8	+2.7
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
XAN	Xi'an	44.15	354	⇑P	P	17 46 27.3	-0.3
XAN				sP	pwP	17 46 47.8	+8.2
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
HYB	Hyderabad	44.54	308	i P	P	17 46 30.0	-1.0
HNR	Honiara	45.10	93	P	P	17 46 35.0	-0.5
LSA	Lhasa	45.33	331	P	P	17 46 38.0	+0.4
LSA				pmax	pmax		
	comp=Z,61nm,0.8s						
LSA	Lhasa	45.33	331	P	P	17 46 37.9	+0.4
LSA				IAmb	IAmb	17 46 39.4	
	comp=Z,16nm,1.0s						
GUN	Gumba	46.64	325	eP	P	17 46 47.7	-0.1
	comp=Z,26nm,0.5s						
PKI	Pulchoki	46.65	324	eP	P	17 46 47.1	-0.8
PKIN	Phulchoki	46.66	324	eP	P	17 46 47.2	-0.7
	comp=Z,13nm,0.5s						
DMN	Daman	46.86	324	eP	P	17 46 48.7	-0.7
KKN	Kakani	46.89	324	eP	P	17 46 48.7	-0.9
LZH	Lanzhou	46.93	349	⇓P	P	17 46 50.8	+1.1
LZH				pP	pwP	17 47 01.8	0.0
LZH				sP	sP	17 47 07.3	+6.5
LZH				pmax	pmax		
	comp=Z,34nm,1.3s						
JMN	Monobe	47.42	22	P	P	17 46 52.5	-0.9
GKN	Gorkha	47.42	324	eP	P	17 46 53.3	-0.4
KOLN	Koldanda	47.86	323	eP	P	17 46 56.7	-0.5
DANN	Dangsing	48.20	323	eP	P	17 46 59.3	-0.6
JHS	Saijyo	48.28	21	P	P	17 46 59.0	-1.1
PYUN	Piuthan	48.47	322	eP	P	17 47 01.2	-0.7
KSRS	Korea Array	49.00	15	P	P	17 47 04.6	-0.9
	comp=Z,1.9nm,0.9s,baz=207,slow=7.1,SNR=4.5						
BTO	Baotou	50.56	356	eP	P	17 47 18.3	+0.8
HHC	Hu-ho-hao-te	50.72	357	eP	P	17 47 22.5	+3.8
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,7.6s						
GTA	Gaotai	51.00	346	⇑P	P	17 47 21.3	+0.4
GTA				pP	pwP	17 47 33.5	+0.5
GTA				sP	sP	17 47 38.8	+6.8
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAT	Matsushiro	51.59	25	P	P	17 47 22.5	-2.7
MJAR	Matsushiro Arr	51.59	25	P	P	17 47 22.8	-2.4
	comp=Z,1.6nm,0.6s,baz=194,slow=8.3,SNR=6.7						
JMM	Marumori	53.80	26	P	P	17 47 40.0	-1.5
MDJ	Mudanjiang	56.19	13	P	P	17 47 57.6	-1.0
MDJ				IAmb	IAmb	17 47 58.6	
	comp=Z,8.6nm,1.0s						
USA0B	Ussuriysk Arra	56.38	15	P	P	17 47 59.0	-1.0
USA0B				IAmb	IAmb	17 47 59.7	
	comp=Z,8.1nm,0.8s						
USRK	Ussuriysk Ar.	56.38	15	P	P	17 47 58.9	-1.1
	comp=Z,6.4nm,0.6s,baz=174,slow=6.6,SNR=13						
USRK	Ussuriysk Ar.	56.38	15	P	P	17 47 58.4	-1.6
ULN	Ulaanbaatar	58.02	354	P	P	17 48 11.0	-0.7
ULN				IAmb	IAmb	17 48 12.3	
	comp=Z,12nm,1.3s						
SONM	Songino Array	58.06	354	P	P	17 48 11.4	-0.5
	comp=Z,1.4nm,0.3s,baz=175,slow=8.0,SNR=23						
SONM				PcP	PcP	17 49 04.4	+0.8
	comp=Z,1.7nm,0.7s,baz=170,slow=4.5,SNR=5.2						
SONM	Songino Array	58.06	354	P	P	17 48 11.2	-0.7
SONM				IAmb	IAmb	17 48 13.1	
	comp=Z,5.8nm,1.0s						
SONM				PcP	PcP	17 49 04.7	+1.2
WMQ	Urumqi	58.78	338	eP	P	17 48 19.5	+2.5
KDJ	Kajisay	62.02	330	P	P	17 48 38.1	-1.3
BOOM	Boomskoye usch	62.91	329	P	P	17 48 44.7	-0.6
BOOM				IAmb	IAmb	17 48 47.3	
	comp=Z,2.9nm,0.7s						
MK31	Makanchi Array	63.36	336	P	P	17 48 46.8	-1.2
MKAR	Makanchi Array	63.36	336	P	P	17 48 47.5	-0.5
	comp=Z,2.7nm,0.6s,baz=147,slow=7.4,SNR=46						
MAKZ	Makanchi	63.50	336	P	P	17 48 48.8	0.0
WSAR	Wadi Sarin	63.61	302	P	P	17 48 50.9	+0.8
	comp=Z,6.0nm,0.7s,baz=140,slow=7.7,SNR=5.9						
AAK	Ala-Archa	63.76	328	P	P	17 48 51.1	+0.2
	comp=Z,2.9nm,0.8s,baz=173,slow=3.7,SNR=13						
AAK	Ala-Archa	63.76	328	P	P	17 48 50.4	-0.5
AAK				IAmb	IAmb	17 48 53.0	
	comp=Z,3.3nm,0.8s						
KKAR	Karatay Array	66.20	326	P	P	17 49 06.0	-0.6
MAW	Mawson	66.64	199	LR	LR	18 14 12.1	
	comp=Z,123nm,20.4s,baz=238,slow=32						
MAW	Mawson	66.64	199	P	P	17 49 10.3	+1.3
MAW				IAmb	IAmb	17 49 44.9	
	comp=Z,11nm,1.4s						
ZALV	Zalesovo Beam	68.45	342	P	P	17 49 19.7	-0.9
	comp=Z,2.1nm,0.4s,baz=172,slow=4.2,SNR=4.2						
ZALV				LR	LR	18 19 53.8	
	comp=Z,82nm,18.9s,baz=28,slow=37						
ZALV	Zalesovo Beam	68.45	342	P	P	17 49 19.0	-1.6
GEYT	Alibeck	70.81	316	P	P	17 49 36.3	+0.8
	comp=Z,4.7nm,0.9s,baz=96,slow=12,SNR=6.6						
GEYT	Alibeck	70.81	316	P	P	17 49 35.8	+0.2
GEYT				IAmb	IAmb	17 49 37.0	
	comp=Z,5.4nm,0.9s						
GYA0B	ALIBECK ARRAY	70.81	316	P	P	17 49 36.3	+0.7
GYA0B				IAmb	IAmb	17 49 36.9	
	comp=Z,7.5nm,0.9s						
VNDA	Vanda	71.72	170	LR	LR	18 22 01.2	
	comp=Z,52nm,18.2s,baz=354,slow=36						
YAK	Yakutsk	72.89	8	P	P	17 49 45.9	-1.5
PETK	Petropavlovsk-	73.03	26	P	P	17 49 48.9	+0.4
	comp=Z,4.3nm,1.0s,baz=270,slow=4.3,SNR=4.5						
BVAR	Borovoye Array	73.08	334	P	P	17 49 48.6	-0.2
	comp=Z,3.0nm,0.7s,baz=158,slow=9.6,SNR=23						
BRVK	Borovoye	73.14	334	P	P	17 49 48.8	-0.4
ABKAR	Akbulak array	75.76	327	P	P	17 50 04.2	-0.1
ABKAR				IAmb	IAmb	17 50 09.6	
	comp=Z,5.1nm,0.5s						
ARU	Arti	80.52	332	P	P	17 50 30.7	0.0
	comp=Z,0.4nm,0.4s,baz=76,slow=8.3,SNR=4.1						
TIXI	Tiksi	82.13	5	P	P	17 50 37.5	-1.3
TIXI				IAmb	IAmb	17 50 39.6	
	comp=Z,4.2nm,0.8s						
GURO	Guroymak-BITLI	82.58	311	P	P	17 50 42.9	+0.8
BELG	Belogornoye	84.09	326	P	P	17 50 50.0	+0.6
	comp=Z,6.4nm,0.6s,baz=96,slow=4.2,SNR=3.9						
BRTR	Keskin Array B	89.17	310	P	P	17 51 15.4	+0.6
	comp=Z,2.4nm,0.9s,baz=111,slow=6.8,SNR=5.1						
BRTR	Keskin Array B	89.17	310	P	P	17 51 14.5	-0.2
KLMR	Klimovskoe	91.36	332	eP	P	17 51 23.3	-0.9
KLMR				AMP		17 51 30.9	
	comp=Z,9.0nm,1.1s						
RDOG	Red Dog Mine	96.63	22	P	P	17 51 48.4	+0.1
FINES	FINESS Array B	97.85	331	P	Pdif	17 51 54.4	+0.4
	comp=Z,2.5nm,0.7s,baz=127,slow=5.7,SNR=8.6						
YKA	Yellowknife Ar	117.08	23	PKP	PKiKP	17 57 04.4	+1.1
	comp=Z,0.5nm,0.7s,baz=303,slow=1.8,SNR=5.6						

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*NEIC **29** 17:46:14.7±1.2, 37°.26N±0°.02×97°.62W±0°.02, h7^{km}±6^{km}, Error ellipse: s-maj=3.0km s-min=2.1km az=174.0*

ISC 29 17:46:14.5±1.1**, 37°.26N**±0°.02×**97°.64W**±0°.02**, h6**^{km}±6^{km}**, mb_Lg2.5**/14**, ML2.6**/22**, Error ellipse: s-maj=3.4km s-min=2.2km az=188.0, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KAN01	Argonia South	0.15	222		Pg	17 46 17.7	+0.2
KAN01				Sg	Sg	17 46 20.0	+0.5
KAN06	Argonia West S	0.18	265		Pg	17 46 18.3	+0.2
KAN06				Sg	Sg	17 46 21.0	+0.5
KAN05	Bluff City Nor	0.24	231	Sg	Sg	17 46 23.1	+0.6
KAN08	Anthony NE Sta	0.27	262	Pg	Pg	17 46 20.1	+0.3
KAN08				Sg	Sg	17 46 24.1	+0.7
KAN13	South Haven SW	0.28	153	Pg	Pg	17 46 20.1	+0.2
KAN13				Sg	Sg	17 46 24.1	+0.5
KAN12	Harper NE Stat	0.29	277	Pg	Pg	17 46 20.4	+0.3
KAN12				Sg	Sg	17 46 24.8	+0.7
KAN16	Harper SW Stat	0.34	264	Pg	Pg	17 46 21.4	+0.2
KAN16				Sg	Sg	17 46 26.1	+0.4
KAN10	Anthony SW Sta	0.39	249	Pg	Pg	17 46 22.3	+0.2
KAN10				Sg	Sg	17 46 27.9	+0.6
KAN14	Manchester OK	0.40	221		Pg	17 46 22.4	+0.1
KAN14				Sg	Sg	17 46 28.1	+0.6
GC02	Grant County #	0.45	204	Pg	Pg	17 46 23.2	+0.1
GC02				Sg	Sg	17 46 29.4	+0.3
BLOK	Blackwell	0.60	146	Pg	Pg	17 46 26.0	-0.1
BLOK				Sg	Sg	17 46 34.4	+0.5
OK032	Salt Plains WL	0.65	225	Pg	Pg	17 46 27.0	0.0
OK032				Sg	Sg	17 46 36.1	+0.6
CROK	Carrier	0.81	200	Pg	Pg	17 46 29.8	-0.1
CROK				Sg	Sg	17 46 40.8	+0.3
T35A	Sooner Cattle	0.96	111	Pg	Pg	17 46 32.6	-0.4
T35A				Sg	Sg	17 46 45.2	-0.2
OK035	E0210 Rd and N	1.02	238	Pg	Pg	17 46 33.6	-0.5
QUOK	Quay	1.32	145	Pn	Pn	17 46 38.9	-0.6
QUOK				Sn	Sb	17 46 56.8	-0.1
U32A	Winter Ranch,	1.41	232	Pn	Pn	17 46 40.2	-0.5
U32A				Sn	Sb	17 46 58.3	-1.1
U32A				IAmb_Lg		17 47 02.4	
	comp=Z,18nm,0.8s						
R32A	Long Quarter,	1.44	324	Pn	Pn	17 46 41.3	+0.1
OK034	N. Norfolk Rd.	1.45	149	Pn	Pn	17 46 41.6	+0.3
OK034				Sn	Sg	17 47 01.0	-0.2
OK031	S. Brethren Rd	1.46	154	Pn	Pn	17 46 41.4	0.0
OK031				Sn	Sb	17 47 00.9	+0.1
OK029	Liberty Lake	1.47	174		Pn	17 46 41.6	0.0
OK029				Sn	Sn	17 47 01.1	-0.1
OK030	Cody Creek RV	1.50	153		Pn	17 46 42.0	0.0
BCOK	Bluff Creek, N	1.60	179		Pn	17 46 43.4	0.0
OK025	Westminster Rd	1.70	172	Pn	Pn	17 46 43.3	-1.4
OKCFA	Oklahoma City	1.85	175	Pn	Pn	17 46 47.5	+0.7
KSU1	Kansas State U	2.00	23		Pb	17 46 50.2	-1.2
TUL1	Leonard	2.01	132	Pn	Pn	17 46 49.3	+0.4
TUL1				IAmb_Lg		17 47 21.1	
	comp=Z,30nm,0.8s						
FNO	Franklin	2.01	175	Pn	Pn	17 46 49.4	+0.4
W35A	Tecumseh	2.19	163	Pn	Pn	17 46 52.1	+0.5
W35A				IAmb_Lg		17 47 26.1	
	comp=Z,17nm,0.7s						
CBKS	Cedar Bluff	2.27	314		Pn	17 46 54.2	+1.6
CBKS				IAmb_Lg		17 47 29.9	
	comp=Z,12nm,0.8s						
X34A	Smith Ranch, M	2.66	184		Pn	17 46 58.4	+0.5
U38A	Gravette	2.73	107	Pn	Pn	17 47 00.1	+1.1
HHAR	Hobbs	3.12	107	Pn	Pn	17 47 05.3	+1.0
X37A	Clayton	3.24	145	Pn	Pn	17 47 06.5	+0.6
LOOK	Love County	3.29	173	Pn	Pn	17 47 07.0	+0.5
S39A	Bolivar	3.46	82	Pn	Pn	17 47 08.2	-0.7
W39A	Magazine	3.73	122		Pn	17 47 13.0	+0.3
N35A	Tabor	3.91	23	Pn	Pn	17 47 15.7	+0.5
Z35A	Perchaven, San	3.94	175	Pn	Pn	17 47 16.0	+0.5
U40A	Yellville	3.94	102	Pn	Pn	17 47 15.7	+0.1
P38A	Dawn	3.99	53	Pn	Pn	17 47 15.5	-0.8
AMTX	Amarillo	4.05	235	Pn	Pn	17 47 16.8	-0.3
AMTX				IAmb_Lg		17 48 30.1	
	comp=Z,16nm,0.9s						
MIAR	Mount Ida	4.27	128	Pn	Pn	17 47 18.3	-1.7
MGMO	Mountain Grove	4.29	90	Pn	Pn	17 47 18.1	-2.2
KSCO	Kaye Shedlock’	4.30	295	Pn	Pn	17 47 19.8	-0.8
R40A	Maddies Statio	4.37	75	Pn	Pn	17 47 20.7	-0.8
FCAR	Ozark Folk Cen	4.64	106	Pn	Pn	17 47 24.2	-0.9
WHAR	Wooly Hollow	4.75	113	Pn	Pn	17 47 26.4	-0.2
X40A	Basin Creek Fa	4.78	124	Pn	Pn	17 47 24.8	-2.3
X40A				IAmb_Lg		17 48 51.3	
	comp=Z,12nm,1.1s						
L34A	Svendsen Farm,	4.80	11	IAmb_Lg		17 48 47.8	
	comp=Z,17nm,0.8s						
N38A	Joes South For	4.92	43	Pn	Pn	17 47 29.5	+0.6
P40A	Paris	4.94	61	Pn	Pn	17 47 28.8	-0.5
OGNE	Ogallala	5.02	318	Pn	Pn	17 47 32.0	+1.5
MSTX	Muleshoe	5.32	233	Pn	Pn	17 47 32.6	-2.0
T25A	Trinidad	5.41	271	Pn	Pn	17 47 35.3	-0.7
T25A				IAmb_Lg		17 49 16.6	
	comp=Z,11nm,1.2s						
FVM	French Village	5.77	81	Pn	Pn	17 47 41.5	+0.9
SDCO	Great Sand Dun	6.27	277	Pn	Pn	17 47 47.0	-0.8
ECSD	EROS Data Cent	6.51	7	Pn	Pn	17 47 50.1	-0.7

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*KRNET **29** 17:53:55.6±0.1, 40°.67N×71°.92E, h12^{km}, mb2.6*
*ISU **29** 17:53:55, 40°.60N×72°.10E, h5^{km}*
*SOME **29** 17:53:58.6, 40°.78N×71°.92E, h5^{km}*
*NNC **29** 17:54:00.4±2.6, 40°.90N×71°.90E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=21.8km s-min=7.9km az=178.0*

ISC 29 17:53:57.4±1.2**, 40°.65N**±0°.02×**71°.77E**±0°.03**, h16**^{km}±9^{km}**, n30,** σ**1^{s}.56**/50**, 22C-8D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
FRG	Fergana	0.28	177	eP	Pg	17 54 04.0	+0.6
FRG				eS	Sb	17 54 09.0	+0.5
OHH	Osh	0.79	99	⇑iP	Pb	17 54 08.1	-4.7
	baz=2.0						
OHH				⇑iS	Sb	17 54 17.6	-5.6
	baz=2.0						
BTK	Batken	0.94	231	i P	Pn	17 54 17.0	+1.0
BTK				i S	Sn	17 54 30.0	+0.9
BTK	Batken	0.94	231	⇑iP	Pb	17 54 15.4	+0.1
	baz=35						
BTK				⇑iS	Sn	17 54 29.7	+0.6
	baz=35						
TRKS	Terek-Say	1.00	332	⇑iP	Pb	17 54 14.3	-2.1
	baz=25						
TRKS				⇑iS	Sb	17 54 27.8	-1.6
	baz=25						
ARK	Arkit	1.16	7	eP	Pn	17 54 17.0	-2.0
ARK				eS	Sb	17 54 31.0	-2.9
ARK	Arkit	1.16	7	⇓iP	Pn	17 54 17.4	-1.6
	baz=2.0						
ARK				⇓iS	Sb	17 54 33.1	-0.8
	baz=2.0						
DRK	Karamyk	1.17	179	⇑iP	Pn	17 54 18.2	-1.2
	baz=84						
DRK				⇑iS	Sb	17 54 34.7	+0.3
	baz=84						
SFK	Sufi-Kurgan	1.47	115	⇑eP	Pn	17 54 21.8	-1.7
	baz=18						
SFK				⇑eS	Sn	17 54 40.6	-2.0
	baz=18						
MNAS	Manas	1.92	17	⇑iP	Pn	17 54 30.3	+0.8
	baz=13						
MNAS				⇑iS	Sb	17 54 55.9	+0.1
	baz=13						
IUG	Iuzhnay	1.98	319	eP	Pb	17 54 33.9	+0.7
	112nm,0.2s						
IUG				eS	Sg	17 55 01.1	-0.1
	79nm,0.3s						
IUG	Iuzhnay	1.98	319	Pg	Pb	17 54 33.9	+0.7
	185nm,0.2s						
IUG				Lg	Lg	17 55 01.1	
	79nm,0.3s						
AML	Almayashu	2.07	44	⇑iP	Pn	17 54 32.4	+0.5
	baz=42						
AML				⇑iS	Sn	17 54 59.0	+1.4
	baz=42						
ARLS	Aral	2.28	57	⇑iP	Pn	17 54 34.8	+0.3
	baz=56						
ARLS				⇑iS	Sn	17 55 03.3	+1.0
	baz=56						
MRKS	Merke	2.36	27	eP	Pb	17 54 39.0	-0.6
	6.0nm,0.3s						
MRKS				eS	Sb	17 55 08.8	+0.2
	18nm,0.4s						
MRKS	Merke	2.36	27	Pg	Pb	17 54 39.0	-0.6
	6.0nm,0.3s						
MRKS				Lg	Lg	17 55 08.8	
	18nm,0.4s						
EKS2	Erkin-Say	2.51	36	⇓eP	Pn	17 54 38.4	+0.7
	baz=34						
EKS2				⇓iS	Sn	17 55 09.8	+1.8
	baz=34						
UCH	Uchtor	2.60	52	⇓iP	Pn	17 54 39.5	+0.3
	baz=50						
UCH				⇓iS	Sn	17 55 11.6	+1.0
	baz=50						
KK08	Karatay Array	2.63	339	⇓Pg	Pb	17 54 45.2	+1.0
	1.8nm,0.5s,baz=148,slow=17						
KK08				⇑Lg	Lg	17 55 17.6	
	5.9nm,0.5s,baz=155,slow=30						
BRLS	Boroldày	2.78	329	eP	Pb	17 54 45.4	-1.3
	1.8nm,0.1s						
BRLS				eS	Sb	17 55 19.9	-0.6
	15nm,0.2s						
BRLS	Boroldày	2.78	329	Pg	Pb	17 54 45.4	-1.3
	1.8nm,0.1s						
BRLS				Lg	Lg	17 55 19.9	
	15nm,0.2s						
AAK	Ala-Archa	2.85	45	⇓Pg	Pg	17 54 51.2	-0.9
	2.1nm,0.5s						
AAK				⇑Lg	Lg	17 55 22.4	
	6.8nm,0.5s						
AAK	Ala-Archa	2.85	45	⇑eP	Pn	17 54 43.0	+0.6
	baz=43						
AAK				⇑iS	Sn	17 55 17.6	+1.2
	baz=43						
TKM2	Tokmak 2	3.65	50	⇑Pg	Pb	17 55 04.6	+2.9
	0.7nm,0.3s						
TKM2				⇑Lg	Lg	17 55 47.0	
	3.3nm,0.6s						
KST	Kastek	3.94	51	eP	Pb	17 55 06.3	-0.3
	1.6nm,0.2s						
KST				eS	Sb	17 55 55.6	+1.5
	6.3nm,0.4s						
KST	Kastek	3.94	51	Pg	Pb	17 55 06.3	-0.3
	1.6nm,0.2s						
KST				Lg	Lg	17 55 55.6	
	6.3nm,0.4s						
DGS	Degeres	3.95	48	eP	Pb	17 55 06.9	+0.1
	0.8nm,0.2s						
DGS				eS	Sb	17 55 56.7	+2.3
	6.9nm,0.6s						
DGS	Degeres	3.95	48	Pg	Pb	17 55 06.9	+0.1
	0.8nm,0.2s						
DGS				Lg	Lg	17 55 56.7	
	6.9nm,0.6s						
KRBS	Karabastau	4.21	42	eP	Pb	17 55 11.0	0.0
	1.3nm,0.4s						
KRBS				eS	Sb	17 56 05.2	+3.5
	3.2nm,0.3s						
KRBS	Karabastau	4.21	42	Pg	Pb	17 55 11.0	0.0
	1.3nm,0.4s						
KRBS				Lg	Lg	17 56 05.2	
	3.2nm,0.3s						

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*IDC **29** 17:55:41.1±4.2, 3°.16S×130°.67E, h0^{km}, mb3.5/2, mb1 3.7/3, mb1mx3.3/40, mbtmp3.5/3, ML3.5/1, Error ellipse: s-maj=319.9km s-min=27.5km az=71.0*
*DJA **29** 17:55:57.8±0.8, 4°S±9°×12°9E±°, h95^{km}±6^{km}, M3.6/7, MLv3.6/7*

ISC 29 17:55:55.6±1.0**, 3°.95S**±0°.10×**129°.20E**±0°.07**, h100**^{km}**, n9,** σ**1^{s}.18**/11**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSAI	Masohi	0.65	336	P	Pn	17 56 13.7	+1.0
MSAI				S	Sn	17 56 25.7	+0.3
AAI	Ambon	1.03	284	P	Pn	17 56 17.7	+1.3
AAI				S	Sn	17 56 33.5	+1.4
FAKI	Fak Fak	3.21	72	P	Pn	17 56 45.6	+1.4
SWI	Sorong	3.69	34	P	Pn	17 56 50.2	-0.5
LBMI	Labuha	3.70	333	P	Pn	17 56 51.7	+0.9
SANI	Sanana	3.72	300	P	Pn	17 56 50.0	-1.0
WRA	Warramunga Arr	16.67	163	P	Pn	17 59 42.1	-1.2
	0.2nm,0.3s,baz=349,slow=11,SNR=1.6						
ASAR	Alice Springs	20.12	167	P	P	18 00 22.0	+0.2
	1.3nm,0.6s,baz=347,slow=11,SNR=29						
MKAR	Makanchi Array	65.25	326	P	P	18 06 25.9	-0.8
	0.3nm,0.4s,baz=112,slow=8.1,SNR=10						

DJA 29 17:56:38.7±0.4**, 1°N**±6°×**12°6E**±°**, h10**^{km}**, M3.0**/7**, MLv3.0**/7**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TNTI	Ternate	1.46	107	P	Pn	17 57 03.9	-1.3
KMSI	Cibinong	2.09	252	P	Pn	17 57 14.1	+0.3
KMSI	Cibinong	2.09	252	P	Pn	17 57 14.2	+0.4
LBMI	Labuha	2.39	140	P	Pn	17 57 18.3	+0.3
SGSI	Sangihe	2.50	350	P	Pn	17 57 19.5	0.0
GTOI	Gorontalo	3.01	259	P	Pn	17 57 28.4	+1.9

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*TUL **29** 18:00:32.3±1.2, 35°.67N±0°.02×97°.41W±0°.02, h7^{km}±4^{km}, ML3.0, mb_Lg2.6/26(NEIC), Error ellipse: s-maj=2.8km s-min=2.1km az=113.0*
*ANF **29** 18:00:32.1±0.2, 35°.70N×97°.40W, h7^{km}, ML3.1/5, Error ellipse: s-maj=2.4km s-min=2.0km az=116.0*
*NEIC **29** 18:00:32.4±1.1, 35°.68N±0°.01×97°.41W±0°.02, h7^{km}±4^{km}, Error ellipse: s-maj=2.4km s-min=2.0km az=76.0*

ISC 29 18:00:32.4±0.8**, 35°.68N**±0°.02×**97°.40W**±0°.02**, h9**^{km}±6^{km}**, n69,** σ**0^{s}.67**/87**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OK009	Oakdale Elemen	0.10	188	Pg	Pg	18 00 34.5	-0.4
OK009				Sg	Sg	18 00 36.3	-0.4
OK025	Westminster Rd	0.12	152		Pg	18 00 34.8	-0.3
OK025				Sg	Sg	18 00 36.9	-0.1
OK029	Liberty Lake	0.12	340	Pg	Pg	18 00 35.4	+0.2
OK029				Sg	Sg	18 00 37.8	+0.6
OK001	Jones High Sch	0.15	143	Pg	Pg	18 00 35.6	-0.1
OK001				Sg	Sg	18 00 38.2	+0.2
BCOK	Bluff Creek, N	0.17	261	Pg	Pg	18 00 35.8	-0.2
BCOK				Sg	Sg	18 00 38.6	+0.2
OK005	Luther M Schoo	0.18	100	Pg	Pg	18 00 36.2	+0.1
OK005				Sg	Sg	18 00 39.2	+0.6
OKCFA	Oklahoma City	0.27	188		Pg	18 00 37.6	-0.2
OKCFA				Sg	Sg	18 00 41.6	+0.1
OKCFA	Oklahoma City	0.27	188	P	Pg	18 00 37.6	-0.2
	baz=7.9						
OKCFA				S	Sg	18 00 41.6	+0.1
	baz=7.9						
OKCSW	OKLAHOMA CITY	0.28	186	Pg	Pg	18 00 37.7	-0.2
OKCSW				Sg	Sg	18 00 41.9	+0.2
FNO	Franklin	0.43	180	Pg	Pg	18 00 40.5	-0.3
FNO				Sg	Sg	18 00 46.6	+0.2
OK031	S. Brethren Rd	0.53	60	Pg	Pg	18 00 42.7	0.0
OK031				Sg	Sg	18 00 50.3	+0.6
OK030	Cody Creek RV	0.56	64		Pg	18 00 43.3	0.0
OK030				IAmb_Lg		18 00 50.3	
	comp=Z,40nm,1.0s						
OK030				Sg	Sg	18 00 51.3	+0.7
OK034	N. Norfolk Rd.	0.65	60	Pg	Pg	18 00 44.9	-0.1
OK034				Sg	Sg	18 00 53.9	+0.5
W35A	Tecumseh	0.69	141	Pg	Pg	18 00 45.1	-0.5
W35A				Sg	Sg	18 00 54.5	-0.1
QUOK	Quay	0.74	49	Pg	Pg	18 00 46.5	-0.2
QUOK				Sg	Sg	18 00 57.1	+0.6
CROK	Carrier	0.94	330		Pg	18 00 50.3	-0.3
CROK				Sg	Sb	18 01 03.7	+0.1
BLOK	Blackwell	1.08	8	Pg	Pg	18 00 52.6	-0.6
X34A	Smith Ranch, M	1.14	198		Pg	18 00 53.6	-0.6
X34A				Sg	Sb	18 01 09.7	+0.6
GC02	Grant County #	1.22	343	Pn	Pb	18 00 55.2	-0.5
OK032	Salt Plains WL	1.29	330		Pn	18 00 56.0	-0.7
OK032				Sg	Sg	18 01 14.2	+0.2
KAN13	South Haven SW	1.33	357		Pn	18 00 57.0	-0.1
TUL1	Leonard	1.33	80	Pn	Pn	18 00 56.0	-1.2
TUL1				IAmb_Lg		18 01 16.5	
	comp=Z,20nm,1.0s						
TUL1	Leonard	1.33	80	P	Pn	18 00 56.2	-1.0
	baz=260						
TUL1				S	Sn	18 01 15.6	+0.6
	baz=260						
KAN14	Manchester OK	1.35	341		Pn	18 00 57.3	-0.1
T35A	Sooner Cattle	1.43	30	Pn	Pn	18 00 58.4	-0.1
T35B	Sooner Cattle	1.43	30	P	Pn	18 00 58.5	-0.1
	baz=210						
T35B				S	Sn	18 01 17.9	+0.5
	baz=210						
OK035	E0210 Rd and N	1.47	314	Pn	Pn	18 00 59.4	+0.2

U32A	Winter Ranch,	1.47	299	Pn	Pn	18 00 59.2	+0.1
U32A	Winter Ranch,	1.47	299	P	Pn	18 00 59.1	+0.1
	baz=118						
U32A				S	Sg	18 01 19.4	-0.3
	baz=118						
KAN05	Bluff City Nor	1.47	345		Pn	18 00 59.6	+0.4
KAN01	Argonia South	1.49	349		Pn	18 00 59.8	+0.4
KAN10	Anthony SW Sta	1.54	339		Pn	18 01 00.6	+0.5
KAN06	Argonia West S	1.60	347		Pn	18 01 01.1	+0.1
KAN08	Anthony NE Sta	1.61	344		Pn	18 01 01.1	+0.1
KAN08				IAmb_Lg		18 01 24.0	
	comp=Z,25nm,1.1s						
KAN16	Harper SW Stat	1.63	341		Pn	18 01 01.4	+0.1
KAN12	Harper NE Stat	1.68	344		Pn	18 01 02.5	+0.5
LOOK	Love County	1.70	174		Pn	18 01 02.7	+0.5
X37A	Clayton	1.99	123		Pn	18 01 06.8	+0.6
X37A				IAmb_Lg		18 01 36.9	
	comp=Z,32nm,0.9s						
X37A	Clayton	1.99	123	P	Pn	18 01 06.9	+0.6
	baz=304						
Z35A	Perchaven, San	2.35	177	Pn	Pn	18 01 12.0	+0.7
Z35A				IAmb_Lg		18 01 52.4	
	comp=Z,20nm,1.2s						
U38A	Gravette	2.56	72	Pn	Pn	18 01 13.7	-0.4
HHAR	Hobbs	2.87	77	Pn	Pn	18 01 18.6	+0.2
R32A	Long Quarter,	2.93	339		Pn	18 01 20.4	+1.2
W39A	Magazine	3.00	98		Pn	18 01 20.3	+0.2
W39A	Magazine	3.00	98	P	Pn	18 01 20.3	+0.2
	baz=280						
Z38A	Mt. Pleasant	3.14	140	Pn	Pn	18 01 22.0	0.0
MIAR	Mount Ida	3.34	109		Pn	18 01 24.8	0.0
KSU1	Kansas State U	3.47	10		Pn	18 01 27.0	+0.4
ABTX	Abilene, Hawle	3.57	212	Pn	Pn	18 01 28.8	+0.7
ABTX				IAmb_Lg		18 02 31.0	
	comp=Z,11nm,0.8s						
AMTX	Amarillo	3.59	258	Pn	Pn	18 01 27.7	-0.6
AMTX				IAmb_Lg		18 02 31.2	
	comp=Z,21nm,1.2s						
CBKS	Cedar Bluff	3.64	330		Pn	18 01 28.4	-0.5
CBKS				IAmb_Lg		18 02 30.7	
	comp=Z,14nm,0.8s						
WHTX	Lake Whitney,	3.68	181	Pn	Pn	18 01 30.3	+0.8
U40A	Yellville	3.75	78		Pn	18 01 29.4	-1.1
U40A				IAmb_Lg		18 02 28.7	
	comp=Z,6.8nm,0.8s						
S39A	Bolivar	3.84	57		Pn	18 01 31.2	-0.5
X40A	Basin Creek Fa	3.93	106		Pn	18 01 31.7	-1.3
X40A				IAmb_Lg		18 02 46.5	
	comp=Z,22nm,0.9s						
WLAR	White Oak Lake	4.06	118	Pn	Pn	18 01 34.9	+0.2
WHAR	Wooly Hollow	4.19	94		Pn	18 01 36.9	+0.4
FCAR	Ozark Folk Cen	4.30	86		Pn	18 01 38.8	+0.8
MGMO	Mountain Grove	4.39	69	IAmb_Lg		18 02 54.8	
	comp=Z,11nm,0.8s						
MSTX	Muleshoe	4.74	250		Pn	18 01 44.9	+0.8
R40A	Maddies Statio	4.87	56	Pn	Pn	18 01 46.5	+0.8
435B	Jarrell	4.89	182	IAmb_Lg		18 03 15.3	
	comp=Z,19nm,0.9s						
P38A	Dawn	4.99	37	Pn	Pn	18 01 47.8	+0.3
KSCO	Kaye Shedlock'	5.32	310	Pn	Pn	18 01 51.1	-1.1
KSCO				IAmb_Lg		18 03 28.8	
	comp=Z,14nm,0.7s						
CCM	Cathedral Cave	5.48	63	Pn	Pn	18 01 52.7	-1.5
JCT	Junction City	5.57	202	IAmb_Lg		18 03 39.0	
	comp=Z,14nm,0.8s						
PBMO	Poplar Bluff	5.74	77	Pn	Pn	18 01 57.0	-0.8
FVM	French Village	6.05	66	Pn	Pn	18 01 59.7	-2.3
N38A	Joes South For	6.06	32	Pn	Pn	18 01 59.4	-2.8

NOU 29 18:05:06.5, 16°.69S×167°.55E, h96^{km}, MLv4.3/14, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	1.20	149	P	Pn	18 05 28.3	-0.6
SANVU	Saraoutou	1.28	345	P	Pn	18 05 29.7	-0.2
RTV	Rentapao	1.38	143	P	Pn	18 05 31.9	+0.8
LIFNC	LIFOU	4.08	184	P	Pn	18 06 06.5	-0.2
MARNC	Mare, Loyalty	4.79	175	P	Pn	18 06 16.1	-0.2
KOUNC	Koumac, New Ca	4.93	218	P	Pn	18 06 19.2	+0.9
YATNC	Mamie plateau,	5.38	187	P	Pn	18 06 23.7	-0.6
DZM	Mont Dzumac	5.45	191	P	Pn	18 06 24.9	-0.6
NOUC	Port Laguerre	5.51	192	P	Pn	18 06 25.8	-0.3
ONTNC	Ouen Toro	5.68	190	P	Pn	18 06 28.2	-0.3
PINNC	Pines Island,	5.89	181	P	Pn	18 06 31.4	+0.1

*UPP **29** 18:06:25.8±0.1, 67°.08N×20°.94E, h6^{km}±4^{km}, ML1.6, Explosion*

*HEL **29** 18:06:26.3±0.1, 67°.10N×21°.02E, h0^{km}, ML2.1, ML1.6(UPP), Explosion*

*IDC **29** 18:06:27.9±1.0, 67°.25N×20°.89E, h0^{km}, mb1 3.0/4, mb1mx2.9/39, mbtmp3.0/4, ML1.9/4, Error ellipse: s-maj=24.4km s-min=8.3km az=121.0*

ISC 29 18:06:25.6±0.8**, 67°.10N**±0°.03×**21°.00E**±0°.03**, h0^{km}, n34,** σ1^{s}59/45**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERTU	Ertsjaerv	0.72	139	P	Pg	18 06 39.2	-0.2
ERTU	Ertsjaerv	0.72	139	*e*P	Pg	18 06 39.0	-0.4
PAJU	Pajala	0.83	94	P	Pg	18 06 41.6	+0.2
PAJU	Pajala	0.83	94	*e*P	Pg	18 06 41.4	0.0
PAJU				*e*S	Sg	18 06 49.0	-3.3
KUA	Kurravaara	0.89	344	P	Pg	18 06 42.6	-0.1
KUA				S	Sg	18 06 54.5	+0.3
KUA	Kurravaara	0.89	344	*e*P	Pg	18 06 42.6	-0.1
KUA				*e*S	Sg	18 06 54.5	+0.3
RATU	Laukkuluspa	0.91	324	P	Pg	18 06 42.5	-0.4
RATU	Laukkuluspa	0.91	324	*e*P	Pg	18 06 42.5	-0.4
SALU	Saltoluokta	1.01	287	P	Pg	18 06 44.2	-0.7
SALU	Saltoluokta	1.01	287	*e*P	Pg	18 06 44.2	-0.7
KALU	Kalix	1.57	142	P	Pn	18 06 54.2	-0.4
KALU	Kalix	1.57	142	*e*PG	Pn	18 06 54.2	-0.4
KALU				*e*SN	Sg	18 07 19.6	+3.8
SJUU	Sjulsmark	1.62	171	P	Pn	18 06 55.1	-0.2
SJUU	Sjulsmark	1.62	171	*e*P	Pn	18 06 55.1	-0.2
HEF	Hetta	1.66	36	*e*P	Pb	18 06 57.0	+0.1
HEF	Hetta	1.66	36	*e*PG	Pn	18 06 56.0	+0.1
HEF				MSG		18 07 15.1	
	comp=Z,6.7nm,0.2s						
TOF	Tornio	1.68	126	*e*PG	Pn	18 06 56.4	+0.3
TOF				MSG		18 07 15.9	
	comp=Z,32nm,0.2s						
TOF				*e*SN	Sg	18 07 19.7	+0.3
KIF	Kilpisjarvi	1.91	358	*e*P	Pg	18 07 01.7	-0.5
KIF	Kilpisjarvi	1.91	358	*e*PB	Pb	18 07 00.9	-0.3
KIF				MSG		18 07 24.7	
	comp=Z,18nm,0.2s						
KIF				*e*SG	Sg	18 07 28.7	+1.8
RNF	Rovaniemi	2.04	102	*e*PG	Pn	18 07 02.5	+1.3
BURU	Burvik	2.53	176	*e*P	Pn	18 07 08.8	+1.0
	baz=358						
OUL	Oulu	2.84	133	*e*PB	Pb	18 07 14.6	-2.5
ARA0	ARCESS Array S	2.96	32	*e*P	Pn	18 07 14.7	+0.9
ARA0				*e*SB	Sb	18 07 55.0	-0.8
ARCES	ARCESS Array B	2.96	32	Pn	Pn	18 07 14.6	+0.8
	baz=212,slow=14,SNR=44						
ARCES				Sn	Sn	18 07 52.0	+2.1
	baz=214,slow=22,SNR=2.0						
OUF	Merijarvi	3.15	149	*e*PB	Pb	18 07 21.1	-1.2
OUF				MSG		18 07 58.6	
	comp=Z,2.8nm,0.2s						
VRF	Varrio	3.38	75	*e*P	Pn	18 07 21.7	+2.2
MSF	Maaselka	3.44	107	*e*PB	Pb	18 07 25.3	-1.9
	baz=295						
KEV	Kevo	3.47	37	*e*P	Pn	18 07 21.5	+0.8
KU6	Riekki	3.71	103	*e*P	Pn	18 07 26.6	+2.5
VAF	Ylistaro	4.14	169	*e*P	Pn	18 07 31.4	+1.5
FINES	FINESS Array B	6.09	156	Pn	Pn	18 08 01.3	+4.6
	comp=Z,0.1nm,0.3s,baz=344,slow=12,SNR=9.9						
FINES				Sn	Sn	18 09 06.5	-0.6
	comp=Z,0.1nm,0.3s,baz=350,slow=24,SNR=1.6						
NOA	NORSAR Array B	7.43	220	Pn	Pn	18 08 16.8	+1.6
	comp=Z,0.0nm,0.3s,baz=48,slow=8.9,SNR=4.0						
NOA				Sn	Sn	18 09 39.2	-1.0
	comp=Z,0.0nm,0.3s,baz=26,slow=9.4,SNR=0.9						
HFS	Hagfors	7.71	208	Pn	Pn	18 08 22.0	+3.1
	comp=Z,0.1nm,0.3s,baz=24,slow=14,SNR=2.6						
HFS				Sn	Sn	18 09 47.4	+0.6
	comp=Z,0.1nm,0.3s,baz=22,slow=31,SNR=1.5						
NOR	Nord	17.10	342	*i* P	Pn	18 10 23.0	-2.5

*TUL **29** 18:18:49.4±1.8, 35°.94N±0°.01×97°.30W±0°.01, h6^{km}±7^{km}, ML2.7, mb_Lg2.3/10(NEIC), Error ellipse: s-maj=1.8km s-min=1.4km az=134.0*

NEIC 29 18:18:49.3±1.4**, 35°.96N**±0°.01×**97°.30W**±0°.02**, h5^{km}**±**2^{km}, Error ellipse: s-maj=3.0km s-min=2.2km az=148.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.20	218	Pg	Pg	18 18 53.5	+0.2
OK029				Sg	Sg	18 18 56.5	+0.5
OK031	S. Brethren Rd	0.38	91	Pg	Pg	18 18 57.0	+0.4
OK031				Sg	Sg	18 19 02.3	+0.8
OK025	Westminster Rd	0.38	185		Pg	18 18 56.9	+0.2
OK025				Sg	Sg	18 19 02.0	+0.5
BCOK	Bluff Creek, N	0.39	220	Pg	Pg	18 18 57.0	+0.1
BCOK				Sg	Sg	18 19 02.5	+0.5
OK030	Cody Creek RV	0.42	94		Pg	18 18 57.9	+0.4
OK030				Sg	Sg	18 19 03.8	+0.8
OK034	N. Norfolk Rd.	0.48	84	Pg	Pg	18 18 59.0	+0.4
OK034				Sg	Sg	18 19 05.7	+0.9
QUOK	Quay	0.53	66	Pg	Pg	18 18 60.0	+0.5
QUOK				Sg	Sg	18 19 07.0	+0.7
OKCFA	Oklahoma City	0.56	193	Pg	Pg	18 19 00.0	0.0
OKCFA				Sg	Sg	18 19 07.7	+0.5
OKCSW	OKLAHOMA CITY	0.56	191	Pg	Pg	18 19 00.1	0.0
OKCSW				Sg	Sg	18 19 08.0	+0.5
FNO	Franklin	0.70	187	Pg	Pg	18 19 02.7	-0.2
FNO				Sg	Sg	18 19 12.1	+0.1
CROK	Carrier	0.78	315	Pg	Pg	18 19 03.8	-0.4
CROK				Sg	Sg	18 19 13.6	-0.7
BLOK	Blackwell	0.80	5		Pg	18 19 04.5	-0.2
BLOK				Sg	Sg	18 19 15.2	-0.1
W35A	Tecumseh	0.88	156	Pg	Pg	18 19 05.0	-1.1
W35A				Sg	Sg	18 19 17.2	-0.3
GC02	Grant County #	1.00	333		Pg	18 19 08.3	-0.2
GC02				Sg	Sg	18 19 21.6	+0.1
KAN13	South Haven SW	1.06	352	Pg	Pb	18 19 10.1	-0.1
KAN13				Sg	Sb	18 19 24.1	-0.3
OK032	Salt Plains WL	1.12	319	Pg	Pg	18 19 10.2	-0.6
OK032				Sg	Sg	18 19 25.2	-0.1
KAN14	Manchester OK	1.13	332		Pg	18 19 10.7	-0.4
KAN14				Sg	Sg	18 19 25.9	+0.2
T35A	Sooner Cattle	1.15	33	Pg	Pg	18 19 10.9	-0.4
T35A				Sg	Sg	18 19 26.3	0.0
TUL1	Leonard	1.23	92	Pg	Pg	18 19 11.5	-1.3
TUL1				Sg	Sg	18 19 27.9	-0.8
KAN05	Bluff City Nor	1.24	338		Pg	18 19 12.8	-0.2
KAN05				Sg	Sb	18 19 29.3	-0.1
KAN01	Argonia South	1.25	343		Pg	18 19 13.0	-0.3
KAN10	Anthony SW Sta	1.33	331	Pn	Pn	18 19 14.2	-0.4
OK035	E0210 Rd and N	1.36	304	Pn	Pn	18 19 13.4	-1.6
KAN06	Argonia West S	1.36	341		Pn	18 19 14.9	-0.1
KAN08	Anthony NE Sta	1.38	337	Pn	Pn	18 19 15.1	-0.1
KAN08				IAmb_Lg		18 19 34.7	
	comp=Z,12nm,0.8s						
KAN16	Harper SW Stat	1.41	334		Pn	18 19 15.7	+0.1
X34A	Smith Ranch, M	1.42	198	Pn	Pn	18 19 15.2	-0.6
U32A	Winter Ranch,	1.44	287	Pn	Pn	18 19 15.9	-0.2
U32A				IAmb_Lg		18 19 34.7	
	comp=Z,7.8nm,0.8s						
KAN12	Harper NE Stat	1.45	337		Pn	18 19 15.8	-0.5
LOOK	Love County	1.96	177	Pn	Pn	18 19 22.7	-0.5
X37A	Clayton	2.09	130	IAmb_Lg		18 19 59.5	
	comp=Z,20nm,0.7s						
U38A	Gravette	2.41	78		Pn	18 19 27.2	-2.2
Z35A	Perchaven, San	2.62	179	Pn	Pn	18 19 30.4	-1.9
R32A	Long Quarter,	2.71	336	Pn	Pn	18 19 32.8	-0.7
HHAR	Hobbs	2.74	82	Pn	Pn	18 19 31.8	-2.2
HHAR				IAmb_Lg		18 20 20.3	
	comp=Z,16nm,1.0s						
W39A	Magazine	2.97	104		Pn	18 19 35.0	-2.0
W39A				IAmb_Lg		18 20 27.0	
	comp=Z,13nm,0.8s						
Z38A	Mt. Pleasant	3.30	144	Pn	Pn	18 19 40.5	-1.1
MIAR	Mount Ida	3.36	114	Pn	Pn	18 19 43.1	+0.7
U40A	Yellville	3.62	82	Pn	Pn	18 19 45.9	-0.2
U40A				IAmb_Lg		18 20 45.6	
	comp=Z,7.7nm,0.8s						
S39A	Bolivar	3.63	60	Pn	Pn	18 19 46.8	+0.6
AMTX	Amarillo	3.73	255	Pn	Pn	18 19 48.8	+1.1
X40A	Basin Creek Fa	3.94	111	Pn	Pn	18 19 50.4	-0.1
WHAR	Wooly Hollow	4.14	98	Pn	Pn	18 19 52.3	-0.8
FCAR	Ozark Folk Cen	4.20	89	Pn	Pn	18 19 52.7	-1.4
R40A	Maddies Statio	4.65	58	Pn	Pn	18 20 00.1	-0.1
P38A	Dawn	4.72	38	Pn	Pn	18 20 01.1	-0.1
P40A	Paris	5.48	48	Pn	Pn	18 20 10.1	-1.5
JCT	Junction City	5.85	202	Pn	Pn	18 20 17.1	+0.4

*IDC **29** 18:43:53.4±1.1, 41°.58N×79°.65E, h0^{km}, mb3.7/7, mb1 3.8/11, mb1mx3.4/58, mbtmp3.8/11, ML3.4/5, MS2.6/1, Ms1 2.6/1, ms1mx2.4/46, Error ellipse: s-maj=19.4km s-min=17.7km az=96.0*

*MOS **29** 18:43:54.2±1.0, 41°.64N×79°.73E, h11^{km}, mb4.1/2, Error ellipse: s-maj=8.1km s-min=4.9km az=123.5*

*SOME **29** 18:43:57.4, 41°.85N×79°.48E, h10^{km}, MS2.9*

*KRNET **29** 18:43:57.5±0.1, 41°.83N×79°.55E, h18^{km}, mb4.2*

*NNC **29** 18:43:58.4±1.3, 41°.91N×79°.52E, h0^{km}, mb4.7, mpv4.5, Error ellipse: s-maj=9.2km s-min=5.7km az=158.0*

ISC 29 18:43:57.2±1.5**, 41°.84N**±0°.04×**79°.59E**±0°.03**, h3^{km}**±**8^{km}, n146,** σ1^{s}65/209**, mb3.7**/7**, 35C-15D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.09	306	*i* PG	Pg	18 44 17.6	-0.6
PRZ	Przheval'sk	1.09	306	⇑*i*P	Pg	18 44 17.8	-0.4
	baz=8.0						
PRZ				⇑*i*S	Sg	18 44 32.3	-0.1
	baz=8.0						
UZB	Uzynbulak	1.37	342	*e*P	Pn	18 44 22.8	-0.6
	416nm,0.2s						
UZB				*e*S	Sb	18 44 41.4	-0.1
	1μm,0.4s						
UZB	Uzynbulak	1.37	342	*i* Pn	Pn	18 44 22.8	-0.6
	baz=344						
UZB	Uzynbulak	1.37	342	*i* PN	Pn	18 44 22.8	-0.6
UZB	Uzynbulak	1.37	342	P	Pn	18 44 22.8	-0.6
	416nm,0.2s						
UZB				S	Sb	18 44 41.4	-0.1
	1μm,0.4s						
UZB	Uzynbulak	1.37	342	*e*P	Pn	18 44 22.8	-0.6
	baz=44						
UZB				*e*S	Sb	18 44 41.4	-0.1
	baz=44						
SATY	Saty	1.50	325	*e*P	Pn	18 44 24.9	-0.3
	251nm,0.2s						
SATY				*e*S	Sn	18 44 44.2	-1.0
	1μm,0.3s						
SATY	Saty	1.50	325	*e*Pn	Pn	18 44 24.6	-0.5
	baz=326						
SATY	Saty	1.50	325	*e*PN	Pn	18 44 24.6	-0.5
SATY	Saty	1.50	325	P	Pn	18 44 24.9	-0.3
	251nm,0.2s						
SATY				S	Sn	18 44 44.2	-1.0
	1μm,0.3s						
SATY	Saty	1.50	325	*e*P	Pn	18 44 24.9	-0.3
	baz=26						
SATY				*e*S	Sn	18 44 44.3	-1.0
	baz=26						
ZHN	Zhinishke	1.58	327	*e*P	Pn	18 44 26.4	+0.2
	427nm,0.2s						
ZHN				*e*S	Sn	18 44 46.9	-0.3
	1μm,0.2s						
ZHN	Zhinishke	1.58	327	*e*Pn	Pn	18 44 26.1	-0.1
	baz=329						
ZHN	Zhinishke	1.58	327	*e*PN	Pn	18 44 26.1	-0.1
ZHN	Zhinishke	1.58	327	P	Pn	18 44 26.4	+0.2
	427nm,0.2s						
ZHN				S	Sn	18 44 46.9	-0.3
	1μm,0.2s						
ZHN	Zhinishke	1.58	327	*e*P	Pn	18 44 26.4	+0.2
	baz=29						
ZHN				*e*S	Sn	18 44 46.9	-0.3
	baz=29						
KTMS	Ketmen	1.70	19	*e*P	Pn	18 44 28.9	+1.0
	444nm,0.3s						
KTMS				*e*S	Sb	18 44 52.0	+1.1
	782nm,0.3s						
KTMS	Ketmen	1.70	19	P	Pn	18 44 28.9	+1.0
	444nm,0.3s						
KTMS				S	Sb	18 44 52.0	+1.1
	782nm,0.3s						
KTMS	Ketmen	1.70	19	*e*P	Pn	18 44 28.9	+1.0
	baz=20						
KTMS				*e*S	Sb	18 44 52.1	+1.1
	baz=20						
ANVS	Anan'yevo	1.71	304	*i* PN	Pn	18 44 26.1	-2.0
ANVS	Anan'yevo	1.71	304	⇑*i*P	Pn	18 44 28.1	0.0
	baz=5.0						
ANVS				⇑*i*S	Sn	18 44 50.5	0.0
	baz=5.0						
KDJ	Kajisay	1.82	280	*i* PN	Pn	18 44 29.9	+0.3
KDJ				*i* S	Sn	18 44 53.3	0.0
KDJ	Kajisay	1.82	280	⇓*i*P	Pn	18 44 29.7	+0.1
	baz=80						
KDJ				⇓*i*S	Sn	18 44 53.4	+0.1
	baz=80						
TNSS	Tian-Shan	2.29	302	*e*P	Pn	18 44 38.3	+2.0
	85nm,0.2s						
TNSS				*e*S	Sb	18 45 07.7	-0.7
	254nm,0.3s						
TNSS	Tian-Shan	2.29	302	*e*Pg	Pn	18 44 38.2	+2.0
	baz=303						
TNSS	Tian-Shan	2.29	302	Pg	Pn	18 44 38.3	+2.0
	85nm,0.2s						
TNSS				Lg	Lg	18 45 07.7	
	254nm,0.3s						
MDOK	Medeo	2.30	306	*e*P	Pn	18 44 37.7	+1.5
	92nm,0.2s						
MDOK				*e*S	Sb	18 45 07.7	-0.6
	890nm,0.3s						
MDOK	Medeo	2.30	306	*e*Pg	Pb	18 44 39.4	0.0
	baz=307						
MDOK	Medeo	2.30	306	PN	Pn	18 44 36.8	+0.7
MDOK				S	Sb	18 45 08.0	-0.3
MDOK	Medeo	2.30	306	⇑Pn	Pn	18 44 36.9	+0.7
	36nm,0.3s						
MDOK				⇓Sn	Sb	18 45 08.0	-0.3
	799nm,0.6s						
MDOK	Medeo	2.30	306	Pg	Pn	18 44 37.7	+1.5
	92nm,0.2s						
MDOK				Lg	Lg	18 45 07.7	
	890nm,0.3s						
KOTS	Kotyrbulak	2.30	308	*e*P	Pn	18 44 38.1	+1.9
	162nm,0.2s						
KOTS				*e*S	Sb	18 45 08.5	+0.2
	1μm,0.4s						
KOTS	Kotyrbulak	2.30	308	Pg	Pn	18 44 38.1	+1.9
	162nm,0.2s						
KOTS				Lg	Lg	18 45 08.5	
	1μm,0.4s						
KNDC	Almaty	2.38	306	PN	Pn	18 44 38.6	+1.5
KNDC				S	Sb	18 45 09.9	-0.6
KNDC	Almaty	2.38	306	⇑Pn	Pn	18 44 38.7	+1.5
	69nm,0.3s						
KNDC				⇓Sn	Sb	18 45 09.9	-0.6
	523nm,0.5s						
BLB	Baldybastay	2.40	340	Pg	Pb	18 44 40.3	-0.7
	683nm,0.2s						
BLB				Lg	Lg	18 45 11.1	
	954nm,0.2s						
AAA	Alma-Ata	2.40	305	*e*P	Pb	18 44 41.8	+0.6
	260nm,0.3s						
AAA				*e*S	Sg	18 45 13.5	-0.9
	858nm,0.4s						
AAA	Alma-Ata	2.40	305	Pg	Pb	18 44 41.8	+0.6
	260nm,0.3s						
AAA				Lg	Lg	18 45 13.5	
	858nm,0.4s						
DJR	Jarkent	2.49	3	*e*P	Pb	18 44 42.6	0.0
	56nm,0.2s						
DJR				*e*S	Sb	18 45 15.8	+2.0
	436nm,0.4s						
DJR	Jarkent	2.49	3	Pg	Pn	18 44 40.3	+1.5
	56nm,0.2s						
DJR				Lg	Lg	18 45 12.5	
	303nm,0.3s						
ULHL	Ulahol	2.53	280	P	Pn	18 44 40.5	+1.2
	SNR=15						
ULHL	Ulahol	2.53	280	*i* PN	Pn	18 44 39.7	+0.3
ULHL				*i* S	Sn	18 45 09.7	-1.1
ULHL	Ulahol	2.53	280	⇓*i*P	Pn	18 44 40.3	+0.9
	baz=81						
ULHL				⇓*i*S	Sn	18 45 11.8	+1.0
	baz=81						
MTBS	Maitube	2.67	300	*e*P	Pb	18 44 45.1	-0.6
	48nm,0.1s						
MTBS				*e*S	Sb	18 45 18.9	0.0
	313nm,0.3s						
MTBS	Maitube	2.67	300	Pg	Pb	18 44 45.3	-0.4
	48nm,0.1s						
MTBS				Lg	Lg	18 45 18.9	
	313nm,0.3s						
ARXS	Arharly	2.70	332	*e*P	Pb	18 44 45.2	-1.0
	132nm,0.3s						
ARXS				*e*S	Sb	18 45 19.8	0.0
	483nm,0.5s						
ARXS	Arharly	2.70	332	*e*PN	Pn	18 44 42.6	+1.0
ARXS	Arharly	2.70	332	Pg	Pb	18 44 45.2	-1.0
	132nm,0.3s						
ARXS				Lg	Lg	18 45 19.8	
	483nm,0.5s						
CHKK	Chushkaly	2.78	317	*e*P	Pb	18 44 47.2	-0.3
	63nm,0.2s						
CHKK				*e*S	Sb	18 45 22.4	+0.5
	741nm,0.3s						
CHKK	Chushkaly	2.78	317	*e*Pg	Pb	18 44 47.4	-0.1
	baz=318						
CHKK	Chushkaly	2.78	317	Pg	Pb	18 44 47.2	-0.3
	63nm,0.2s						
CHKK				Lg	Lg	18 45 22.3	
	741nm,0.3s						
BOOM	Boomskoye usch	2.79	285	*i* PN	Pn	18 44 43.4	+0.5
BOOM				*i* S	Sn	18 45 16.0	-1.2
BOOM	Boomskoye usch	2.79	285	⇑*i*P	Pn	18 44 43.6	+0.7
	baz=85						
BOOM				⇑*i*S	Sn	18 45 17.3	+0.1
	baz=85						
KTBS	Karatobe	2.84	312	*e*P	Pb	18 44 47.2	-1.4
	61nm,0.3s						
KTBS				*e*S	Sb	18 45 22.5	-1.4
	289nm,0.4s						
KTBS	Karatobe	2.84	312	Pg	Pn	18 44 45.9	+2.4
	61nm,0.3s						
KTBS				Lg	Lg	18 45 22.5	
	289nm,0.4s						
KST	Kastek	2.94	295	*e*P	Pb	18 44 49.5	-0.9
	105nm,0.4s						
KST				*e*S	Sb	18 45 27.1	+0.3
	384nm,0.3s						
KST	Kastek	2.94	295	Pg	Pn	18 44 48.2	+3.2
	105nm,0.4s						
KST				Lg	Lg	18 45 27.0	
	384nm,0.3s						
KUU	Kurty	3.15	312	*e*P	Pb	18 44 53.3	-0.6
	19nm,0.3s						
KUU				*e*S	Sb	18 45 33.0	+0.4
	158nm,0.5s						
KUU	Kurty	3.15	312	*e*Pg	Pb	18 44 55.2	+1.4
	baz=312						
KUU	Kurty	3.15	312	*e*PN	Pb	18 44 55.2	+1.4
KUU	Kurty	3.15	312	Pg	Pb	18 44 53.3	-0.6
	19nm,0.3s						
KUU				Lg	Lg	18 45 33.0	
	158nm,0.5s						
DGS	Degeres	3.15	298	*e*P	Pb	18 44 52.5	-1.4
	28nm,0.2s						
DGS				*e*S	Sb	18 45 31.8	-1.0
	207nm,0.5s						
DGS	Degeres	3.15	298	Pg	Pn	18 44 50.3	+2.5
	28nm,0.2s						
DGS				Lg	Lg	18 45 28.8	
	207nm,0.5s						
TKM2	Tokmak 2	3.15	291	P	Pn	18 44 49.0	+1.1
	SNR=28						
TKM2	Tokmak 2	3.15	291	*i* PN	Pn	18 44 46.8	-1.1
TKM2	Tokmak 2	3.15	291	⇑Pn	Pn	18 44 48.7	+0.8
	9.0nm,0.3s						
TKM2				⇑Pg	Pb	18 44 54.9	+0.9
	25nm,0.4s						
TKM2				⇑Lg	Lg	18 45 35.2	
	172nm,0.4s						
TKM2	Tokmak 2	3.15	291	⇑*i*P	Pn	18 44 48.2	+0.3
	baz=92						
TKM2				⇑*i*S	Sn	18 45 26.0	-0.1
	baz=92						
TDK	Taldyqorghan	3.27	345	*e*P	Pb	18 44 57.3	+1.3

	266nm,0.5s						
TDK				eS	Sb	18 45 39.6	+3.5
	292nm,0.4s						
TDK	Taldyqorghan	3.27	345	ePg	Pb	18 44 57.3	+1.3
	baz=346						
TDK	Taldyqorghan	3.27	345	ePN	Pb	18 44 57.2	+1.3
TDK	Taldyqorghan	3.27	345	Pg	Pb	18 44 57.3	+1.3
	266nm,0.5s						
TDK				Lg	Lg	18 45 39.6	
	292nm,0.4s						
KRBS	Karabastau	3.43	304	eP	Pb	18 44 57.9	-0.7
	43nm,0.2s						
KRBS				eS	Sb	18 45 41.7	+1.0
	270nm,0.2s						
KRBS	Karabastau	3.43	304	Pg	Pb	18 44 57.9	-0.7
	43nm,0.2s						
KRBS				Lg	Lg	18 45 41.7	
	270nm,0.2s						
KAPS	Kapalarasan	3.44	357	eP	Pb	18 44 59.6	+0.7
	86nm,0.2s						
KAPS				eS	Sb	18 45 44.2	+3.1
	225nm,0.3s						
KAPS	Kapalarasan	3.44	357	Pg	Pb	18 44 59.6	+0.7
	86nm,0.2s						
KAPS				Lg	Lg	18 45 44.2	
	225nm,0.3s						
KBK	Karagaybulak	3.54	285	P	Pn	18 44 54.6	+1.4
	SNR=18						
KBK	Karagaybulak	3.54	285	i PN	Pn	18 44 53.3	0.0
KBK				i S	Sn	18 45 33.3	-2.4
KBK	Karagaybulak	3.54	285	⇑iP	Pn	18 44 54.0	+0.7
	baz=85						
KBK				⇑iS	Sn	18 45 35.3	-0.4
	baz=85						
CHMS	Chumysh	3.77	289	i PN	Pn	18 44 55.1	-1.1
CHMS	Chumysh	3.77	289	⇑iP	Pn	18 44 57.3	+1.1
	baz=90						
CHMS				⇑iS	Sn	18 45 40.6	-0.4
	baz=90						
UCH	Uchtor	3.80	277	P	Pb	18 45 05.4	+0.2
	SNR=17						
UCH	Uchtor	3.80	277	i PN	Pn	18 44 57.8	+0.7
UCH				i S	Sn	18 45 40.8	-1.8
UCH	Uchtor	3.80	277	⇑iP	Pn	18 44 58.1	+1.0
	baz=78						
UCH				⇑iS	Sn	18 45 42.0	-0.6
	baz=78						
FRU1	Bishkek	3.80	286	i PN	Pn	18 44 56.6	-0.2
FRU1	Bishkek	3.80	286	⇑iP	Pn	18 44 58.1	+1.3
	baz=87						
FRU1				⇑iS	Sn	18 45 42.1	+0.1
	baz=87						
AAK	Ala-Archa	3.87	284	Pn	Pn	18 44 59.3	+1.6
	1.8nm,0.3s,baz=139,slow=4.7,SNR=20						
AAK				Lg	Lg	18 45 56.5	
	16nm,0.3s,baz=268,slow=19,SNR=8.9						
AAK				LR	LR	18 46 46.4	
	comp=Z,82nm,19.1s,baz=112,slow=44						
AAK	Ala-Archa	3.87	284	P	Pn	18 44 59.4	+1.6
	SNR=8.8						
AAK	Ala-Archa	3.87	284	i PN	Pn	18 44 58.0	+0.3
AAK				i S	Sn	18 45 41.4	-2.3
AAK	Ala-Archa	3.87	284	⇑Pg	Pb	18 45 06.8	+0.6
	17nm,0.5s						
AAK				⇓Lg	Lg	18 45 58.6	
	106nm,0.8s						
AAK	Ala-Archa	3.87	284	⇑iP	Pn	18 44 58.7	+1.0
	baz=84						
AAK				⇑iS	Sn	18 45 43.1	-0.6
	baz=84						
ARLS	Aral	3.94	272	⇑iP	Pn	18 45 00.0	+1.3
	baz=72						
ARLS				⇑iS	Sn	18 45 45.0	-0.4
	baz=72						
SGDS	Sogindy	4.00	295	ePN	Pn	18 44 59.8	+0.4
SGDS	Sogindy	4.00	295	Pg	Pb	18 45 07.6	-0.7
	46nm,0.6s						
SGDS				Lg	Lg	18 45 58.4	
	70nm,0.4s						
USP	Ospenovka	4.02	292	P	Pn	18 45 00.8	+1.0
	SNR=11						
USP	Ospenovka	4.02	292	i PN	Pn	18 44 58.9	-0.8
USP	Ospenovka	4.02	292	⇑iP	Pn	18 45 00.9	+1.2
	baz=93						
USP				⇑iS	Sn	18 45 46.4	-1.0
	baz=93						
EKS2	Erkin-Say	4.39	283	P	Pb	18 45 17.0	+1.9
	SNR=15						
EKS2	Erkin-Say	4.39	283	i PN	Pn	18 45 05.2	+0.3
EKS2	Erkin-Say	4.39	283	⇓iP	Pn	18 45 06.0	+1.1
	baz=83						
EKS2				⇓iS	Sn	18 45 55.7	-1.0
	baz=83						
AML	Almayashu	4.41	276	P	Pb	18 45 16.9	+1.4
	SNR=17						
AML	Almayashu	4.41	276	i PN	Pn	18 45 06.1	+0.8
AML				i S	Sn	18 45 55.0	-2.3
AML	Almayashu	4.41	276	⇑iP	Pn	18 45 06.5	+1.2
	baz=76						
AML				⇑iS	Sn	18 45 56.5	-0.8
	baz=76						
BTLS	Baital	5.15	310	eP	Pb	18 45 29.1	+1.2
	7.5nm,0.2s						
BTLS				eS	Sb	18 46 34.7	+4.5
	4.3nm,0.5s						
BTLS	Baital	5.15	310	ePn	Pn	18 45 15.0	-0.2
	baz=311						
BTLS				ePg	Pb	18 45 31.5	+3.6
	1.7nm,0.5s,baz=311						
BTLS	Baital	5.15	310	ePN	Pn	18 45 15.0	-0.2
BTLS				e		18 45 31.4	
BTLS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BTLS	Baital	5.15	310	Pg	Pb	18 45 29.4	+1.5
	comp=Z,7.5nm,0.2s						
BTLS				Lg	Lg	18 46 34.7	
	comp=Z,4.3nm,0.5s						
MAKZ	Makanchi	5.25	18	PN	Pn	18 45 18.5	+1.9
MAKZ				SN	Sn	18 46 18.8	+1.2
MAKZ	Makanchi	5.25	18	⇓Pn	Pn	18 45 18.1	+1.5
	comp=Z,11nm,0.7s						
MAKZ				⇑Sn	Sn	18 46 18.8	+1.2
	comp=Z,27nm,0.5s						
MK31	Makanchi Array	5.31	20	PN	Pn	18 45 18.8	+1.3
MK31				SN	Sn	18 46 19.7	+0.5
MK31	Makanchi Array	5.31	20	⇓Pn	Pn	18 45 18.8	+1.3
	comp=Z,1.6nm,0.2s						
MK31				Sn	Sn	18 46 19.6	+0.5
	comp=Z,40nm,0.6s,baz=191,slow=20,SNR=18						
MKAR	Makanchi Array	5.31	20	Pn	Pn	18 45 18.9	+1.4
	comp=Z,5.6nm,0.3s,baz=209,slow=14,SNR=267						
MKAR				Sn	Sn	18 46 21.5	+2.3
	comp=Z,10nm,0.3s,baz=198,slow=24,SNR=21						
ARK	Arkit	5.70	272	⇓iP	Pn	18 45 24.1	+1.2
	baz=72						
ARK				⇓iS	Sn	18 46 26.6	-2.3
	baz=72						
DZA	Taraz	6.21	282	ePg	Pb	18 45 50.6	+4.7
	baz=283						
WMQ	Urumqi	6.28	69	ePn	Pn	18 45 33.3	+2.6
WMQ				Sn	Sn	18 46 46.0	+3.1
WMQ				smax	smax		
	comp=N,40nm,0.9s						
WMQ				smax	smax		
	comp=E,63nm,0.9s						
ZSN	Zaisan	6.75	32	ePn	Pn	18 45 37.0	-0.2
	comp=E,2.1nm,0.9s,baz=32						
ZSN	Zaisan	6.75	32	ePN	Pn	18 45 36.9	-0.2
ZSN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KK02	Karatay Array	6.83	284	⇑Pg	Pg	18 46 08.4	+0.3
	comp=Z,4.6nm,0.5s,baz=97,slow=16						
KK02				⇑Lg	Lg	18 47 32.6	
	comp=Z,22nm,0.8s,baz=106,slow=27						
KK31	Karatay Array	6.83	284	P*	Pb	18 46 01.5	+4.9
IUG	Iuzhnay	7.13	276	ePg	Pb	18 46 07.0	+5.3
	baz=276						
IUG	Iuzhnay	7.13	276	Pg	Pb	18 46 07.4	+5.7
	comp=Z,106nm,0.5s						
IUG				Lg	Lg	18 47 41.0	
	comp=Z,43nm,0.7s						
BRLS	Borolday	7.32	283	ePg	Pg	18 46 11.8	-5.5
	baz=281						
BRLS	Borolday	7.32	283	Pg	Pg	18 46 12.5	-4.8
	comp=Z,2.1nm,0.3s						
BRLS				Lg	Lg	18 47 48.1	
	comp=Z,7.7nm,0.3s						
SEM	Semipalatinsk	8.58	3	ePg	Pg	18 46 35.1	-6.3
	baz=2.9						
KURBB	Kurchatov Arra	8.81	356	Pn	Pn	18 46 06.9	+1.5
	comp=Z,0.0nm,0.3s,baz=174,slow=16,SNR=4.2						
KURBB				Lg	Lg	18 48 39.7	
	comp=Z,0.4nm,0.3s,baz=182,slow=27,SNR=5.1						
KURK	Kurchatov	8.90	356	P	Pn	18 46 06.9	+0.3
KURK	Kurchatov	8.90	356	⇑Lg	Lg	18 48 39.8	
	comp=Z,30nm,0.8s						
DGZ	Jazzator, Alta	9.57	32	⇓eP	Pn	18 46 17.6	+1.6
ZALV	Zalesovo Beam	12.60	14	Pn	Pn	18 46 58.5	+1.2
	comp=Z,1.6nm,0.3s,baz=222,slow=13,SNR=4.9						
ZALV				Sn	Sn	18 49 11.1	-7.0
	comp=Z,1.1nm,0.3s,baz=204,slow=21,SNR=5.6						
ZALV	Zalesovo Beam	12.60	14	i P	Pn	18 46 58.9	+1.6
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRVK	Borovoye	12.85	334	⇓eP	Pn	18 47 01.1	+0.4
BRVK				pmax	pmax		
	comp=Z,5.0nm,2.3s						
GTA	Gaotai	15.54	92	eP	P	18 47 41.3	-0.6
GTA				pP	sP	18 47 48.5	+3.8
GTA				sP	pP	18 47 51.5	+7.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AB31	Akbulak array	15.61	305	eP	Pn	18 47 37.9	-0.1
AB31	Akbulak array	15.61	305	Pn	Pn	18 47 37.9	-0.1
	comp=Z,0.8nm,0.4s,baz=109,slow=12,SNR=46						
SONM	Songino Array	19.87	63	P	P	18 48 28.9	-0.6
	comp=Z,0.2nm,0.3s,baz=264,slow=10.0,SNR=6.1						
ARU	Arti	19.94	324	P	P	18 48 27.9	-2.1
	comp=Z,0.8nm,0.4s,baz=110,slow=14,SNR=4.5						
ARU	Arti	19.94	324c	iP	P	18 48 30.9	+0.9
ARU						18 48 44.2	
ARU				S	Sn	18 52 16.3	+0.3
ARU				pmax	pmax		
	comp=Z,16nm,2.9s						
BRTR	Keskin Array B	34.54	282	P	P	18 50 45.3	-1.7
	comp=Z,0.9nm,0.7s,baz=97,slow=7.8,SNR=3.0						
MNK	Minsk	35.91	309	i P	P	18 51 02.8	+4.4
MNK				i		18 52 23.6	
MNK				i PPP	PPP	18 52 37.4	
MNK				i		18 53 29.1	
MNK				i S	S	18 56 41.5	+4.5
MNK				i SSS	SSS	18 59 24.0	
MNK				i		19 01 21.0	
MNK				MLR	MLR		
	comp=N,17nm,7.0s						
MNK				MLR	MLR		
	comp=E,4.0nm,8.0s						
MNK				MLR	MLR		
	comp=Z,20nm,6.0s						
MNK	Minsk	35.91	309	i P	P	18 51 02.9	+4.5
	comp=E,2.0nm,0.9s						
MNK				i P	P	18 51 02.9	+4.5
	comp=N,10.0nm,1.0s						
MNK				i P	P	18 51 02.9	+4.5
	comp=Z,9.0nm,0.8s,baz=269						
MNK				i PP	PP	18 52 23.6	+3.9
MNK				i PPP	PPP	18 52 37.4	
MNK				i S	S	18 56 41.5	+4.5
MNK				i SS	SS	18 59 07.7	-5.2
MNK				i SSS	SSS	18 59 24.0	
MNK				i LR	LR	19 05 56.4	
MNK				i LRM	MLR	19 07 13.7	
	comp=N,17nm,7.0s						
MNK				i LRM	MLR	19 07 14.0	
	comp=E,4.0nm,7.7s						
MNK				i LRM	MLR	19 07 15.3	
	comp=Z,20nm,6.4s						
FINES	FINESS Array B	37.22	320	P	P	18 51 06.9	-2.6
	comp=Z,1.0nm,0.6s,baz=107,slow=6.6,SNR=4.4						
FINES	FINESS Array B	37.22	320	i P	P	18 51 08.3	-1.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TIXI	Tiksi	38.30	23	P	P	18 51 16.5	-2.0
	comp=Z,0.8nm,0.6s,baz=233,slow=5.2,SNR=6.9						
YKA	Yellowknife Ar	75.39	7	P	P	18 55 38.3	-3.3
	comp=Z,0.2nm,0.6s,baz=345,slow=5.6,SNR=4.2						
ASAR	Alice Springs	82.28	131	P	P	18 56 16.6	-3.5
	comp=Z,0.3nm,0.7s,baz=322,slow=4.8,SNR=6.3						
STKA	Stephens Creek	92.92	131	P	P	18 57 05.6	-5.9
	comp=Z,0.8nm,0.5s,baz=270,slow=3.0,SNR=2.8						

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*TUL **29** 18:47:08.7±1.4, 35°.66N±0°.02×97°.400W±0°.009, h7^{km}±5^{km}, ML3.3, mb_Lg2.9/47(NEIC), Error ellipse: s-maj=2.3km s-min=1.0km az=173.0*

*ANF **29** 18:47:08.6±0.2, 35°.70N×97°.41W, h7^{km}, ML3.5/6, Error ellipse: s-maj=2.4km s-min=2.2km az=22.0*

*NEIC **29** 18:47:08.9±1.1, 35°.685N±0°.009×97°.41W±0°.02, h6^{km}±5^{km}, Error ellipse: s-maj=2.9km s-min=1.3km az=97.0*

ISC 29 18:47:08.8±0.8, **35°.68N**±0°.02×**97°.40W**±0°.02, **h9**^{km}±6^{km}, **n83**, σ**0^{s}72**/104, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	Oakdale Elemen	0.10	189		Pg	18 47 10.9	-0.4
OK025	Westminster Rd	0.11	152		Pg	18 47 11.2	-0.3
OK025				Sg	Sg	18 47 13.1	-0.2
OK029	Liberty Lake	0.12	340		Pg	18 47 11.9	+0.2
OK029				Sg	Sg	18 47 14.3	+0.7
OK001	Jones High Sch	0.15	142	Pg	Pg	18 47 11.9	-0.2
OK001				Sg	Sg	18 47 14.4	0.0
BCOK	Bluff Creek, N	0.17	262	Pg	Pg	18 47 12.4	0.0
BCOK				Sg	Sg	18 47 15.2	+0.4
OKCFA	Oklahoma City	0.27	188		Pg	18 47 13.9	-0.3
OKCFA				Sg	Sg	18 47 17.9	0.0
OKCFA	Oklahoma City	0.27	188	P	Pg	18 47 14.0	-0.3
	baz=6.5						
OKCFA				S	Sg	18 47 17.9	0.0
	baz=6.5						
OKCSW	OKLAHOMA CITY	0.28	186	Pg	Pg	18 47 14.1	-0.3
OKCSW				Sg	Sg	18 47 18.2	+0.1
FNO	Franklin	0.42	180	Pg	Pg	18 47 16.8	-0.3
FNO				Sg	Sg	18 47 22.9	+0.2
OK031	S. Brethren Rd	0.53	59	Pg	Pg	18 47 19.2	0.0
OK031				Sg	Sg	18 47 26.7	+0.5
OK030	Cody Creek RV	0.56	64		Pg	18 47 19.6	-0.1
OK030				Sg	Sg	18 47 27.6	+0.5
OK034	N. Norfolk Rd.	0.65	60	Pg	Pg	18 47 21.2	-0.2
OK034				Sg	Sg	18 47 30.2	+0.3
W35A	Tecumseh	0.68	141	Pg	Pg	18 47 21.4	-0.6
W35A				Sg	Sg	18 47 30.7	-0.2
QUOK	Quay	0.75	49	Pg	Pg	18 47 22.9	-0.3
QUOK				Sg	Sg	18 47 33.2	+0.3
CROK	Carrier	0.95	330	Pg	Pg	18 47 26.8	-0.3
CROK				Sg	Sb	18 47 39.8	-0.3
BLOK	Blackwell	1.09	8		Pg	18 47 29.3	-0.5
BLOK				Sg	Sg	18 47 42.9	-0.9
X34A	Smith Ranch, M	1.13	198		Pg	18 47 30.0	-0.6
X34A				Sg	Sb	18 47 45.9	+0.4
GC02	Grant County #	1.22	343		Pg	18 47 31.6	-0.8
OK032	Salt Plains WL	1.30	330		Pn	18 47 32.7	-0.5
OK032				Sg	Sb	18 47 50.0	-0.2
KAN13	South Haven SW	1.33	357		Pn	18 47 33.6	0.0
KAN13				Sn	Sn	18 47 52.0	+0.5
TUL1	Leonard	1.33	80	Pn	Pn	18 47 32.4	-1.2
TUL1	Leonard	1.33	80	P	Pn	18 47 32.4	-1.2
	baz=261						
TUL1				S	Sn	18 47 51.9	+0.4
	baz=261						
KAN14	Manchester OK	1.35	341	Pn	Pn	18 47 33.7	-0.2
KAN14				Sn	Sn	18 47 52.5	+0.5
T35A	Sooner Cattle	1.43	30	Pn	Pn	18 47 34.8	-0.2
T35B	Sooner Cattle	1.43	30	P	Pn	18 47 34.8	-0.2
	baz=211						
T35B				S	Sn	18 47 54.3	+0.4
	baz=211						
U32A	Winter Ranch,	1.47	299		Pn	18 47 35.6	0.0
U32A	Winter Ranch,	1.47	299	P	Pn	18 47 35.6	0.0
	baz=118						
U32A				S	Sg	18 47 55.8	-0.3
	baz=118						
OK035	E0210 Rd and N	1.47	314	Pn	Pn	18 47 35.6	0.0
KAN05	Bluff City Nor	1.47	345		Pn	18 47 35.6	0.0
KAN01	Argonia South	1.50	349		Pn	18 47 36.2	+0.2
KAN10	Anthony SW Sta	1.54	339		Pn	18 47 36.9	+0.3
KAN06	Argonia West S	1.60	347		Pb	18 47 38.2	-0.5
KAN08	Anthony NE Sta	1.61	344		Pb	18 47 38.1	-0.6
KAN16	Harper SW Stat	1.63	341		Pn	18 47 38.3	+0.5
KAN12	Harper NE Stat	1.68	344		Pb	18 47 39.3	-0.7
LOOK	Love County	1.70	174		Pn	18 47 38.9	+0.2
LOOK				IAmb_Lg		18 48 05.6	
	comp=Z,65nm,1.0s						
X37A	Clayton	1.99	123		Pn	18 47 43.0	+0.3
X37A				IAmb_Lg		18 48 14.4	
	comp=Z,54nm,0.8s						
X37A	Clayton	1.99	123	P	Pn	18 47 43.1	+0.4
	baz=304						
X37A				S	Sb	18 48 09.7	-0.4
	baz=304						
Z35A	Perchaven, San	2.35	177		Pn	18 47 48.2	+0.5
U38A	Gravette	2.56	72	Pn	Pn	18 47 51.7	+1.1
HHAR	Hobbs	2.87	77		Pn	18 47 55.6	+0.7
R32A	Long Quarter,	2.93	339		Pn	18 47 56.8	+1.1
W39A	Magazine	3.00	98		Pn	18 47 56.6	+0.1
W39A				IAmb_Lg		18 48 49.0	
	comp=Z,43nm,0.8s						
W39A	Magazine	3.00	98	P	Pn	18 47 56.7	+0.2
	baz=280						
W39A				S	Sn	18 48 33.9	+1.3
	baz=280						
Z38A	Mt. Pleasant	3.13	140		Pn	18 47 58.8	+0.4
Z38A				IAmb_Lg		18 48 49.4	
	comp=Z,23nm,0.8s						
MIAR	Mount Ida	3.34	109		Pn	18 48 02.1	+0.9
MIAR				IAmb_Lg		18 49 02.8	
	comp=Z,28nm,0.8s						
MIAR	Mount Ida	3.34	109	P	Pn	18 48 02.2	+1.0
	baz=291						
MIAR				S	Sn	18 48 42.3	+1.3
	baz=291						
KSU1	Kansas State U	3.47	10		Pn	18 48 03.7	+0.6
KSU1				IAmb_Lg		18 49 06.7	
	comp=Z,36nm,0.9s						
ABTX	Abilene, Hawle	3.57	212		Pn	18 48 05.3	+0.8
ABTX				IAmb_Lg		18 49 08.4	
	comp=Z,23nm,1.1s						
AMTX	Amarillo	3.59	258		Pn	18 48 05.8	+1.0
CBKS	Cedar Bluff	3.64	330		Pn	18 48 06.2	+0.8
CBKS				IAmb_Lg		18 49 11.4	
	comp=Z,26nm,0.7s						
WHTX	Lake Whitney,	3.68	181		Pn	18 48 06.9	+0.9
U40A	Yellville	3.75	78		Pn	18 48 07.5	+0.6
U40A				IAmb_Lg		18 49 13.2	
	comp=Z,27nm,0.7s						
S39A	Bolivar	3.84	57		Pn	18 48 09.4	+1.2
237A	Washetta, Mont	3.90	160	Pn	Pn	18 48 08.7	-0.3
X40A	Basin Creek Fa	3.93	106		Pn	18 48 10.0	+0.6
WLAR	White Oak Lake	4.06	118	Pn	Pn	18 48 10.6	-0.6
WHAR	Wooly Hollow	4.19	94		Pn	18 48 12.7	-0.3
WHAR				IAmb_Lg		18 49 24.4	
	comp=Z,40nm,1.2s						
FCAR	Ozark Folk Cen	4.30	86		Pn	18 48 14.6	+0.1
FCAR				IAmb_Lg		18 49 32.3	
	comp=Z,20nm,0.7s						
MGMO	Mountain Grove	4.39	69	Pn	Pn	18 48 16.4	+0.6
MGMO				IAmb_Lg		18 49 32.3	
	comp=Z,20nm,0.8s						
MSTX	Muleshoe	4.74	250		Pn	18 48 20.9	+0.4
R40A	Maddies Statio	4.87	56	Pn	Pn	18 48 23.1	+0.8
R40A				IAmb_Lg		18 49 42.5	
	comp=Z,19nm,0.7s						
435B	Jarrell	4.89	182	IAmb_Lg		18 49 46.4	
	comp=Z,29nm,0.7s						
CCAR	Cane Creek	4.96	109	Pn	Pn	18 48 22.0	-1.5
CCAR				IAmb_Lg		18 49 54.3	
	comp=Z,27nm,0.8s						
P38A	Dawn	4.99	37		Pn	18 48 23.2	-0.8
P38A				IAmb_Lg		18 49 52.8	
	comp=Z,17nm,0.8s						
KSCO	Kaye Shedlock’	5.33	310		Pn	18 48 27.2	-1.5
KSCO				IAmb_Lg		18 50 03.9	
	comp=Z,24nm,0.8s						
N35A	Tabor	5.35	14		Pn	18 48 30.3	+1.4
CCM	Cathedral Cave	5.48	63	Pn	Pn	18 48 30.4	-0.2
CCM				IAmb_Lg		18 50 06.1	
	comp=Z,24nm,0.9s						
HBAR	Harrisburg	5.50	89	Pn	Pn	18 48 28.9	-2.0
JCT	Junction City	5.56	202		Pn	18 48 31.3	-0.6
P40A	Paris	5.73	46	Pn	Pn	18 48 32.8	-1.2
PBMO	Poplar Bluff	5.74	77	Pn	Pn	18 48 33.4	-0.8
PBMO				IAmb_Lg		18 50 08.9	
	comp=Z,29nm,0.9s						
BGNE	Belgrade	5.75	354	Pn	Pn	18 48 32.4	-2.0
BGNE				IAmb_Lg		18 50 28.3	
	comp=Z,29nm,0.9s						
T25A	Trinidad	5.83	286	Pn	Pn	18 48 33.5	-2.3
T25A				IAmb_Lg		18 50 14.6	
	comp=Z,25nm,0.8s						
FVM	French Village	6.05	66	Pn	Pn	18 48 38.5	0.0
FVM				IAmb_Lg		18 50 28.3	
	comp=Z,19nm,0.8s						
OGNE	Ogallala	6.39	327	IAmb_Lg		18 50 33.3	
	comp=Z,22nm,1.0s						
SDCO	Great Sand Dun	6.82	290		Pn	18 48 50.3	+0.9
S44A	Carbondale	6.85	71	IAmb_Lg		18 50 46.2	
	comp=Z,17nm,0.8s						
ISCO	Idaho Springs	7.69	305	Pn	Pn	18 49 01.7	+0.4
BNM	Barren Site	7.73	261	Pn	Pn	18 49 01.9	+0.1
MNTX	Cornudas Mount	7.74	241	Pn	Pn	18 49 02.4	+0.6
L42A	Oliver, Polo	8.73	41	Pn	Pn	18 49 15.5	+0.2
SUSD	Miller	8.83	353	IAmb_Lg		18 52 00.5	
	comp=Z,15nm,0.9s						

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*BGR **29** 18:56:21.2±5.8, 44°.87N×24°.81E, h5^{km}, ML4.5, Error ellipse: s-maj=103.4km s-min=22.2km az=129.0*

*KRSZO **29** 18:56:26.7±0.4, 45°.41N×24°.16E, h8^{km}±2^{km}, ML4.6/38, Error ellipse: s-maj=2.2km s-min=1.8km az=3.0*

*MOS **29** 18:56:26.2±1.2, 45°.37N×24°.12E, h11^{km}, mb4.6/11, Error ellipse: s-maj=4.3km s-min=3.1km az=113.8*

*IDC **29** 18:56:26.5±0.7, 45°.40N×24°.11E, h0^{km}, mb4.0/14, mb1 4.0/21, mb1mx3.9/43, mbtmp3.9/21, ML3.7/7, MS3.4/15, Ms1 3.4/15, ms1mx3.2/52, Error ellipse: s-maj=13.2km s-min=6.6km az=14.0*

*PRU **29** 18:56:26.4±0.0, 45°.18N×24°.11E, h0^{km}, M4.3*

*SIGU **29** 18:56:27.2, 45°.44N×24°.21E, h2^{km}*

*BEO **29** 18:56:27.1±0.5, 45°.38N×24°.21E, h0^{km}, ML4.1/19*

*PDG **29** 18:56:27.9±0.6, 45°.37N×24°.18E, h22^{km}±1^{km}, ML3.8/12, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*

*BUC **29** 18:56:28.1±0.1, 45°.41N×24°.17E, h4^{km}, ml4.3/67, Error ellipse: s-maj=1.4km s-min=1.0km az=13.0*

*NEIC **29** 18:56:29.2±2.2, 45°.37N±0°.05×24°.16E±0°.06, h27^{km}±6^{km}, mb4.3/23, ML4.2(BUC), Error ellipse: s-maj=7.3km s-min=5.7km az=161.0*

*SOF **29** 18:56:29.2, 45°.18N×24°.27E, h14^{km}, MD3.9*

*THE **29** 18:56:30.0, 45°.33N×24°.30E, h31^{km}±17^{km}, ML3.8/4, Error ellipse: s-maj=20.6km s-min=1.6km az=3.0*

*CFUSG **29** 18:56:30.0, 45°.26N×24°.52E, h8^{km}, mb3.8/4, MD3.7/3, Romania Magtype MSH 3.9 from 4 stations*

ISC 29 18:56:27.5±0.8, **45°.41N**±0°.02×**24°.16E**±0°.01, **h13**^{km}±5^{km}, **n546**, σ**1^{s}85**/688, **mb4.2**/30, **MS3.6**/7, **111C-88D**, **Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOT	Lotru	0.28	278	⇑P	Pg	18 56 34.3	+1.0
LOT				⇑S	Sg	18 56 38.1	+0.9
LOT	Lotru	0.28	278	Pg	Pg	18 56 34.3	+1.0
	comp=Z,148nm,SNR=1000						
ARR	Arges	0.34	97	⇓P	Pg	18 56 34.0	-0.4
ARR				⇓S	Sg	18 56 38.5	-0.5
RMVG	GOVORA	0.39	167	⇑P	Pg	18 56 36.2	+1.0
RMVG				⇓S	Sg	18 56 41.1	+0.7
VOIR		0.63	87	⇑P	Pg	18 56 39.4	-0.3
VOIR				⇑S	Sg	18 56 47.6	-0.5
VOIR		0.63	87	⇑P	Pg	18 56 39.4	-0.3
MTUR	Matau	0.67	106	⇑P	Pg	18 56 40.2	-0.3
MTUR	Matau	0.67	106	⇑P	Pg	18 56 40.3	-0.1
MDB	Medias	0.75	12	⇑P	Pb	18 56 43.8	+1.4
MDB				⇓S	Sb	18 56 54.2	+1.8
MDB	Medias	0.75	12	⇓P	Pb	18 56 43.8	+1.4
STFAR	Stefanesti-Arg	0.79	134	⇓P	Pb	18 56 44.1	+1.0
STFAR				⇓S	Sg	18 56 52.8	-0.4
GZR	Gura Zlata	0.97	269	⇓P	Pg	18 56 46.1	-0.1
GZR				⇑S	Sb	18 57 00.4	+1.3
GZR	Gura Zlata	0.97	269	Pg	Pg	18 56 45.8	-0.5
	comp=Z,35nm,SNR=880						
GZR	Gura Zlata	0.97	269	eSg	Sg	18 56 57.3	-1.7
DEV	Deva	1.00	299	⇓P	Pg	18 56 47.2	+0.5
DEV				⇑S	Sb	18 57 01.9	+2.1
DEV	Deva	1.00	299	⇑P	Pg	18 56 47.4	+0.7
DEV	Deva	1.00	299	Pb	Pg	18 56 47.2	+0.5

	comp=Z,30nm,SNR=817						
SRE	Strehaia	1.01	222	⇓P	Pb	18 56 48.6	+1.8
SRE				⇓S	Sn	18 57 03.1	+1.7
SRE	Strehaia	1.01	222	⇓P	Pn	18 56 48.8	+1.4
DOPR	Dopca	1.02	57	⇑P	Pg	18 56 46.8	-0.4
DOPR				⇑S	Sb	18 57 01.5	+1.0
HUMR	Humele	1.06	146	⇓P	Pg	18 56 48.0	+0.1
HUMR				⇑S	Sb	18 57 03.9	+2.4
TGMR	Targu Mures	1.15	13	⇑P	Pg	18 56 49.7	+0.2
TGMR				⇓S	Sn	18 57 07.1	+2.2
MLR	Muntele Rosu	1.26	86	⇓P	Pg	18 56 51.8	+0.1
MLR				⇑S	Sn	18 57 10.1	+2.3
MLR	Muntele Rosu	1.26	86	Pg	Pg	18 56 51.7	+0.1
	comp=Z,118nm,0.3s,baz=265,slow=3.5,SNR=298						
MLR				LR	LR	18 57 06.6	
	comp=Z,70nm,20.7s,baz=227,slow=31						
MLR				Lg	Lg	18 57 10.4	
	comp=Z,401nm,0.3s,baz=44,slow=18,SNR=23						
MLR	Muntele Rosu	1.26	86		Pg	18 56 50.6	-1.2
MLR				Sn	Sn	18 57 09.9	+2.1
OZUR		1.33	58	⇑P	Pn	18 56 52.6	+0.8
OZUR				⇑S	Sb	18 57 11.0	+1.7
HERR	Herculane	1.34	247	⇓P	Pn	18 56 53.6	+1.6
HERR				⇓S	Sg	18 57 11.3	+0.6
CJR	Cluj-Napoca	1.36	344	⇓P	Pn	18 56 53.2	+1.0
CJR				⇑S	Sn	18 57 13.1	+3.0
CJR	Cluj-Napoca	1.36	344	⇓P	Pn	18 56 53.5	+1.3
CJR	Cluj-Napoca	1.36	344	Pn	Pn	18 56 53.3	+1.0
	comp=Z,23nm,SNR=433						
DJES	Djerdap	1.38	238	⇓P	Pg	18 56 54.7	+0.7
DJES				⇑S	Sn	18 57 13.9	+3.3
DJES	Djerdap	1.38	238	ePn	Pn	18 56 54.4	+1.9
DJES				eSg	Sb	18 57 12.5	+1.8
SECR		1.40	105	⇓P	Pg	18 56 54.9	+0.6
PLAR	PLOIESTI	1.41	110	⇑P	Pb	18 56 54.9	+1.2
PLAR				⇑S	Sn	18 57 15.0	+3.6
CBBR	Cluj-Babes-Bol	1.42	343	⇓P	Pn	18 56 54.1	+1.1
VLAD	Vladila	1.42	173	⇓S	Sn	18 57 14.5	+2.8
PUNG	Punghina	1.43	218	⇓P	Pn	18 56 54.2	+1.0
COPA	Copaceanca	1.48	149	⇑S	Sg	18 57 16.7	+1.5
COVR	Voineasa-Covas	1.50	72	⇑P	Pn	18 56 55.1	+0.9
COVR				⇓S	Sg	18 57 17.6	+1.9
NEHR	Nehoiu	1.50	89	⇑P	Pg	18 56 56.8	+0.4
BAIL	Bailesti	1.51	203	⇑P	Pn	18 56 54.8	+0.6
BAIL				⇓S	Sn	18 57 16.0	+2.3
JOSR	Joseni	1.60	36	⇑P	Pn	18 56 56.3	+0.7
JOSR				⇑S	Sg	18 57 20.3	+1.2
SULR		1.66	116	⇑P	Pn	18 56 57.5	+1.2
SULR				⇑S	Sg	18 57 21.4	+0.6
ARCR	ARCALIA	1.68	5	⇑P	Pn	18 56 57.1	+0.5
ARCR	ARCALIA	1.68	5	Pg	Pn	18 56 58.6	+2.0
	comp=Z,9.1nm,SNR=168						
BUC1	Bucharest	1.70	128	⇑P	Pb	18 56 59.4	+0.8
BUC1				⇓S	Sb	18 57 21.5	+1.6
BUC1	Bucharest	1.70	128	⇑P	Pb	18 56 59.4	+0.8
DRGR		1.71	324	⇑P	Pn	18 56 58.1	+1.1
DRGR				⇑S	Sg	18 57 23.2	+0.7
DRGR		1.71	324	⇑P	Pn	18 56 58.3	+1.2
DRGR		1.71	324	Pb	Pn	18 56 58.1	+1.1
	comp=Z,22nm,SNR=523						
DRGR		1.71	324	ePn	Pn	18 56 58.2	+1.1
DRGR				eSg	Sg	18 57 23.3	+0.9
ISR	Istrita	1.71	99	⇓P	Pb	18 56 59.5	+0.7
ISR	Istrita	1.71	99	⇓P	Pb	18 56 59.8	+1.0
INCR	INCERC-Sediu C	1.72	124	⇑S	Sg	18 57 23.8	+1.0
SGRR	Singureni	1.76	132	⇑P	Pn	18 56 58.3	+0.7
SGRR				⇑S	Sg	18 57 23.8	-0.1
BZS	Buzias	1.80	277	⇑P	Pn	18 56 58.7	+0.5
BZS				⇑S	Sn	18 57 23.8	+2.9
BZS	Buzias	1.80	277	⇓P	Pn	18 56 59.2	+1.0
BZS	Buzias	1.80	277	Pn	Pn	18 56 58.6	+0.3
	comp=Z,9.8nm,SNR=279						
BZS	Buzias	1.80	277	ePg	Pn	18 57 00.8	+2.6
BZS				eSg	Sb	18 57 24.1	+1.4
PLOR	Plostina	1.80	75	⇓P	Pn	18 56 59.7	+1.4
PLOR				⇑S	Sb	18 57 24.8	+1.9
PLOR	Plostina	1.80	75	⇓P	Pb	18 57 00.8	+0.4
MDVR	Moldovita	1.84	251	⇓P	Pn	18 57 01.4	+2.5
MDVR				⇓S	Sb	18 57 26.5	+2.4
VRI	Vrincioaia	1.86	75	⇓P	Pn	18 57 00.5	+1.4
VRI	Vrincioaia	1.86	75	⇓P	Pn	18 57 00.5	+1.4
MESR	Meseseni	1.93	335	⇑P	Pn	18 57 01.2	+1.1
MESR				⇑S	Sn	18 57 26.6	+2.4
SIRR	Siria	1.94	297	⇑P	Pn	18 57 01.4	+1.2
SIRR				⇑S	Sn	18 57 27.9	+3.3
SIRR	Siria	1.94	297	Pn	Pn	18 57 01.3	+1.0
	comp=Z,12nm,SNR=323						
ZIMR		1.96	153	⇑P	Pn	18 57 00.9	+0.5
ZIMR		1.96	153	⇑P	Pn	18 57 00.7	+0.3
GRER		1.98	90	⇑S	Sn	18 57 27.9	+2.4
KUBS	Kucevo	2.03	241	ePn	Pn	18 57 02.4	+1.0
KUBS				eSg	Sb	18 57 32.2	+2.8
TESR	Tescani	2.06	57	⇓P	Pn	18 57 02.8	+1.0
PGOR	Pogoanele	2.06	103	⇑P	Pn	18 57 03.8	+2.0
PGOR				⇑S	Sn	18 57 29.6	+2.2
ODBI	Odobesti	2.06	79	⇓S	Sn	18 57 30.7	+3.2
TIM	Timisoara	2.09	280	⇑S	Sb	18 57 32.2	+1.1
TIM	Timisoara	2.09	280	⇑P	Pb	18 57 06.1	+0.9
LEHL	Lehliu	2.11	115	⇑P	Pn	18 57 03.3	+0.8
LEHL				⇑S	Sb	18 57 32.9	+1.2
ZAGS	Zajecar	2.11	221	ePn	Pn	18 57 02.3	-0.2
BANR	Banloc	2.13	270	⇓P	Pn	18 57 05.3	+2.5
BANR				⇑S	Sn	18 57 31.8	+2.7
BANR	Banloc	2.13	270	Pn	Pn	18 57 04.4	+1.6
	comp=Z,5.7nm,SNR=55						
BMR	Baia Mare	2.31	349	⇓P	Pn	18 57 06.7	+1.4
BMR				⇑S	Sb	18 57 37.9	+0.5
BMR	Baia Mare	2.31	349	⇑P	Pn	18 57 06.8	+1.6
BMR	Baia Mare	2.31	349	Pn	Pn	18 57 06.6	+1.4
	comp=Z,12nm,SNR=186						
BURAR	Bucovina Array	2.32	18	⇑P	Pn	18 57 07.5	+2.0
BURAR	Bucovina Array	2.32	18	⇑P	Pn	18 57 07.5	+2.0
BURAR	Bucovina Array	2.32	18		Pn	18 57 06.5	+1.0
BUR08	Bucovina Ar. S	2.34	17	Pn	Pn	18 57 07.0	+1.2
BORR	Bors	2.35	316	⇓P	Pn	18 57 07.6	+1.8
BORR				⇓S	Sb	18 57 38.9	+0.3
PVL	Pavlikeni	2.35	159	eP	Pn	18 57 06.0	+0.2
GHRR		2.37	73	⇓P	Pn	18 57 08.7	+2.7
GHRR				⇑S	Sn	18 57 38.4	+3.5
SVIS	Svilajnac	2.39	242	ePn	Pn	18 57 09.0	+2.7
AMRR	Amara	2.39	108	⇓P	Pn	18 57 07.3	+1.0
AMRR				⇑S	Sn	18 57 37.2	+1.7
AMRR	Amara	2.39	108	⇓P	Pn	18 57 07.3	+1.0
ZAPS	Zavoj	2.40	208	ePn	Pn	18 57 07.4	+0.8
RASA	Rasa	2.44	118	⇓P	Pn	18 57 07.7	+0.6
RASA				⇑S	Sb	18 57 41.1	-0.1
SZH	Strazhica	2.49	149	i P	Pn	18 57 07.8	0.0
RAZG	Razgrad	2.50	137	⇑S	Sn	18 57 41.9	+3.7
BOVS	Bovan	2.50	226	⇓P	Pn	18 57 08.3	+0.5
BOVS	Bovan	2.50	226	ePn	Pn	18 57 08.5	+0.7
LTVH	Ltavrtes, Hu	2.52	322	⇑P	Pn	18 57 09.7	+1.7
LTVH				⇓S	Sn	18 57 40.8	+2.2
LTVH	Ltavrtes, Hu	2.52	322	ePN	Pn	18 57 09.8	+1.7
LTVH				ePG	Pg	18 57 16.4	+0.6
LTVH	Ltavrtes, Hu	2.52	322	Pn	Pn	18 57 09.8	+1.7
	comp=Z,4.2nm,SNR=49						
LTVH				Pg	Pg	18 57 16.4	+0.6
CEI	Carei	2.56	333	⇑P	Pn	18 57 11.1	+2.4
CEI	Carei	2.56	333	⇑P	Pn	18 57 11.1	+2.4
BIR	Birlad	2.57	69	⇓P	Pn	18 57 11.1	+2.3
BIR	Birlad	2.57	69	⇓P	Pn	18 57 11.1	+2.3
AMBH	Ambrzfalva	2.58	293	⇓P	Pn	18 57 10.3	+1.4
AMBH				⇑S	Sn	18 57 44.0	+4.0
AMBH	Ambrzfalva	2.58	293	eP	Pn	18 57 10.3	+1.4
AMBH	Ambrzfalva	2.58	293	ePG	Pg	18 57 18.0	+1.2
AMBH	Ambrzfalva	2.58	293	Pn	Pn	18 57 10.3	+1.4
	comp=Z,4.1nm,SNR=42						
AMBH				Pg	Pg	18 57 18.0	+1.2
RAKU	Rahkiv	2.62	0	⇑iP	Pn	18 57 11.0	+1.5
RAKU				Pm		18 57 24.0	
RAKU				eS	Sn	18 57 43.4	+2.3
RAKU				Sm		18 57 59.1	
VARL	Varlezi	2.63	78	⇑P	Pn	18 57 10.0	+0.3
VARL				⇑S	Sn	18 57 44.6	+3.1
TATR	Tatarca	2.74	85	⇑S	Sn	18 57 47.2	+3.1
HARR	Harsova	2.77	104	⇓P	Pn	18 57 12.4	+0.9
HARR	Harsova	2.77	104	⇓P	Pn	18 57 12.4	+0.9
VLDR	Vladesti	2.79	80	⇑P	Pn	18 57 14.4	+2.6
VLDR				⇑S	Sn	18 57 48.8	+3.5
NSLU	Nyzhne Selyshc	2.79	4	eP	Pn	18 57 14.0	+2.1
NSLU				Pm		18 57 26.0	
NSLU				eS	Sb	18 57 50.5	-0.9
NSLU				Sm		18 58 14.9	
TRSU	Trosnyk	2.81	343	⇓iP	Pn	18 57 13.3	+1.2
TRSU				Pm		18 57 41.5	
TRSU				eS	Sn	18 57 49.6	+3.8
TRSU				Sm		18 58 11.3	
VASR	Vaslui	2.81	63	⇑S	Sn	18 57 48.6	+2.7
CFR	Carcaliu	2.82	93	⇑P	Pn	18 57 13.1	+1.0
CFR				⇓S	Sn	18 57 48.8	+2.8
CFR	Carcaliu	2.82	93	⇑P	Pn	18 57 13.2	+1.0
KORU	Korolevo	2.83	346	eP	Pn	18 57 14.2	+1.7
KORU				Pm		18 57 25.9	
KORU				eS	Sn	18 57 49.9	+3.4
KORU				Sm		18 58 09.2	
PGB	Panagyurishte	2.86	180	i P	Pn	18 57 13.5	+0.6
VTS	Vitosha	2.87	194	P	Pn	18 57 12.9	-0.2
VTS						18 57 45.9	
VTS	Vitosha	2.87	194	i P	Pn	18 57 13.8	+0.7
VTS	Vitosha	2.87	194	Pn	Pn	18 57 12.9	-0.2
VTS				Sn	Sn	18 57 45.9	-1.7
VTS	Vitosha	2.87	194	ePn	Pn	18 57 13.2	+0.1
GRUS	Gruza	2.89	239	ePn	Pn	18 57 15.1	+1.9
GRUS				eSn	Sn	18 57 51.1	+3.2
TLBR	Topalu	2.89	106	⇓P	Pn	18 57 15.6	+2.3
TRUS	Trudelj	2.92	247	ePn	Pn	18 57 15.5	+1.8
TRPA	Tarpa	2.94	338	⇑P	Pn	18 57 14.5	+0.6
TRPA	Tarpa	2.94	338	ePN	Pn	18 57 14.4	+0.6
TRPA				ePG	Pg	18 57 24.9	+1.2
TRPA	Tarpa	2.94	338	Pn	Pn	18 57 14.4	+0.6
	comp=Z,2.0nm,SNR=47						
TRPA				Pg	Pg	18 57 24.9	+1.2
KSV	Kosov	2.97	12	eP	Pn	18 57 15.8	+1.5
BERU	Beregovo	3.01	340	⇑iP	Pn	18 57 14.9	+0.1
BERU				Pm		18 57 31.8	
BERU				eS	Sn	18 57 53.3	+2.6
BERU				Sm		18 58 10.9	
BRIU	Brid	3.03	345	eP	Pn	18 57 16.3	+1.2
BRIU				Pm		18 57 39.9	
BRIU				eS	Sn	18 57 53.9	+2.6
BRIU				Sm		18 58 33.1	
LEOM	Leova	3.04	68	⇓S	Sn	18 57 53.2	+1.6
LEOM	Leova	3.04	68	⇓P	Pn	18 57 15.2	-0.1
TPGR	Topolog	3.07	99	⇑P	Pn	18 57 16.7	+1.1
TPGR				⇓S	Sn	18 57 55.2	+3.0
FRGS	Fruska Gora	3.08	267	⇓P	Pn	18 57 17.6	+1.7
FRGS	Fruska Gora	3.08	267	ePn	Pn	18 57 16.2	+0.3
FRGS	Fruska Gora	3.08	267	ePn	Pn	18 57 17.6	+1.7
SELS	Selova	3.09	226	ePn	Pn	18 57 16.9	+0.9
BARS	Barje	3.10	214	ePn	Pn	18 57 16.6	+0.5
MEZ	Mezhgor'ye	3.13	352	eP	Pn	18 57 18.6	+2.0
MEZ				Pm		18 57 30.6	
MEZ				eS	Sn	18 57 56.6	+2.7
MEZ				Sm		18 58 12.0	
BOSS	Bosilegrad	3.16	203	ePn	Pn	18 57 17.8	+0.9
TIRR	Tirgusor	3.17	106	⇓P	Pn	18 57 17.6	+0.6
TIRR	Tirgusor	3.17	106	P	Pn	18 57 16.7	-0.3
TIRR						18 57 52.3	
TIRR	Tirgusor	3.17	106	Pn	Pn	18 57 16.7	-0.3
TIRR				Sn	Sn	18 57 52.3	-2.4
MUKU	Mukachevo	3.21	342	⇑eP	Pn	18 57 18.8	+1.3
MUKU				Pm		18 57 37.2	
MUKU				eS	Sn	18 57 59.0	+3.4
MUKU				Sm		18 58 23.0	
PRD	Provadia	3.21	132	i P	Pn	18 57 18.6	+1.0
DIVS	Divibare	3.25	248	ePn	Pn	18 57 19.7	+1.5
DIVS	Divibare	3.25	248	Pn	Pn	18 57 19.1	+0.9
DIVS	Divibare	3.25	248	ePn	Pn	18 57 19.9	+1.7
ROIA	ROIAK	3.27	134	i P	Pn	18 57 19.6	+1.1
MFTR	Murfatlar	3.28	111	⇑P	Pn	18 57 20.7	+2.2
MFTR				⇓S	Sn	18 58 01.0	+3.7
BSZH	Besenyszg	3.29	306	⇑P	Pn	18 57 20.4	+1.7
BSZH	Besenyszg	3.29	306	ePN	Pn	18 57 20.4	+1.7
BSZH	Besenyszg	3.29	306	Pn	Pn	18 57 20.4	+1.7
	comp=Z,2.5nm,SNR=20						
TLCR		3.29	92	⇓P	Pn	18 57 20.6	+1.9
TLCR				⇓S	Sn	18 58 00.3	+2.6
TLCR		3.29	92	⇓P	Pn	18 57 20.6	+1.9
STNU	Starunia	3.31	4	⇑iP	Pn	18 57 21.9	+2.9
PLD	Plovdiv	3.33	173	i P	Pn	18 57 18.4	-0.9
HOLU	Holmets	3.34	339	⇑iP	Pn	18 57 20.6	+1.1
HOLU				eS	Sn	18 58 04.7	+5.7
PSN	Preselentsi	3.36	120	i P	Pn	18 57 20.2	+0.6
TEKS	Tekeris	3.40	257	ePn	Pn	18 57 20.1	-0.1
TEKS	Tekeris	3.40	257	ePn	Pn	18 57 21.6	+1.4
IVAS	Ivanjica	3.40	239	ePn	Pn	18 57 21.1	+0.7
UZH	Uzhgorod	3.46	339	eP	Pn	18 57 21.5	+0.4
UZH				eS	Sn	18 58 01.0	-1.0
UZH				MLR	MLR		
	comp=Z,250nm,1.2s						
UZH	Uzhgorod	3.46	339	eP	Pn	18 57 23.6	+2.5
UZH				Pm		18 57 42.5	
UZH				eS	Sn	18 58 05.1	+3.1
UZH				Sm		18 58 36.5	
DIM	Dimitrovgrad	3.51	163	eP	Pn	18 57 22.5	+0.8
DIM	Dimitrovgrad	3.51	163	eP	Pn	18 57 21.1	-0.6
BLJ	Bijeljina	3.52	261	ePn	Pn	18 57 23.4	+1.5
KMPD	K-Podol'skiy	3.52	26	⇓iP	Pn	18 57 24.7	+2.8
KMPD				eS	Sn	18 58 05.4	+2.0
MANR	Mangalia	3.54	115	⇑P	Pn	18 57 23.6	+1.4
MANR				⇑S	Sn	18 58 06.6	+2.7
MILM	Milestii Mici	3.57	63	⇑P	Pn	18 57 24.2	+1.7
MILM	Milestii Mici	3.57	63	eP	Pn	18 57 23.0	+0.5
MILM				eS	Sn	18 58 06.0	+1.5
MILM				pmax	pmax		
	comp=Z,120nm,0.9s						
MILM	Milestii Mici	3.57	63	eP	Pn	18 57 23.0	+0.5
MILM				Pm		18 57 28.0	
MILM				eS	Sn	18 58 06.0	+1.5
MILM				Sm		18 58 23.0	
KIS	Kishinev	3.60	62	eP	Pn	18 57 24.0	+1.0
	comp=Z,5.0nm,1.1s						
KIS				eS	Sn	18 58 08.0	+2.6
KIS				eLq	LQ	18 58 24.0	
	comp=Z,400nm,7.6s						
KIS	Kishinev	3.60	62	eP	Pn	18 57 24.0	+1.0
KIS				eS	Sn	18 58 08.0	+2.6
KIS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIS	Kishinev	3.60	62	eP	Pn	18 57 24.0	+1.0
KIS				Pm		18 57 30.0	
KIS				eS	Sn	18 58 08.0	+2.6
KIS				Sm		18 58 31.0	
KKB	Krupnik	3.63	193	i P	Pn	18 57 24.2	+0.8
SJES	Sjenica	3.69	236	ePn	Pn	18 57 25.6	+1.2
BBLS	Lazići	3.73	247	ePn	Pn	18 57 26.8	+2.0
BBLS	Lazići	3.73	247	ePn	Pn	18 57 26.4	+1.6
KOLS	Kolonicke sedl	3.75	341	eP	Pn	18 57 26.7	+1.6
KOLS	Kolonicke sedl	3.75	341	Pg	Pn	18 57 27.9	+2.9
KOLS	Kolonicke sedl	3.75	341	ePN	Pn	18 57 26.7	+1.6
KOLS				eSG	Sg	18 58 30.8	+3.0
STZU	Stuzhytsa	3.75	344	eP	Pn	18 57 26.9	+1.8
MMB	Musomiste	3.83	185	i P	Pn	18 57 26.9	+0.7
SHIU	Shidnytsya	3.85	352	eP	Pn	18 57 28.3	+1.8
PSZ	Piszkesteto	3.86	312	⇓P	Pn	18 57 27.2	+0.6
PSZ	Piszkesteto	3.86	312	ePN	Pn	18 57 27.2	+0.6
PSZ	Piszkesteto	3.86	312	⇑P	Pn	18 57 27.4	+0.8
PSZ	Piszkesteto	3.86	312	Pb	Pn	18 57 27.2	+0.6
	comp=Z,1.6nm,SNR=36						
PSZ	Piszkesteto	3.86	312	Pn	Pn	18 57 27.1	+0.5
RUDO	Rudo	3.87	244	ePn	Pn	18 57 24.5	-2.2
KDZ	Kurdzhali	3.87	166	i P	Pn	18 57 26.4	-0.3
MORH	Mrgy, Hungar	3.94	284	⇓P	Pn	18 57 28.2	+0.5
MORH	Mrgy, Hungar	3.94	284	ePN	Pn	18 57 28.2	+0.5
MORH	Mrgy, Hungar	3.94	284	ePn	Pn	18 57 28.1	+0.5
MORH	Mrgy, Hungar	3.94	284	Pn	Pn	18 57 28.2	+0.5
	comp=Z,1.5nm,SNR=17						
SKO	Skopje	3.96	211	i Pn	Pn	18 57 29.6	+1.6
SORM	Soroca	3.96	45	⇑P	Pn	18 57 29.7	+1.8
SORM	Soroca	3.96	45	⇑P	Pn	18 57 29.7	+1.8
KECS	Kecovo	3.97	322	eP	Pn	18 57 29.8	+1.8
KECS	Kecovo	3.97	322	Pn	Pn	18 57 29.9	+1.8
	comp=Z,8.5nm,SNR=53						
KECS	Kecovo	3.97	322	ePN	Pn	18 57 29.8	+1.8
KECS				eSG	Sg	18 58 35.7	+0.8
STIP	Stip	3.98	202	i Pn	Pn	18 57 26.2	-2.0
STIP				eSn	Sn	18 58 10.1	-4.8
IVA	Berane	3.98	232	⇑iPn	Pn	18 57 29.0	+0.6
IVA				i Sn	Sn	18 58 14.8	-0.2
PLE	Pljevlja	4.00	240	⇑iPn	Pn	18 57 29.6	+1.0
PLE				i Sn	Sn	18 58 15.6	+0.1
EDRB	Edirne	4.03	151	P	Pn	18 57 28.4	-0.5
NVR	Nevrokopi	4.07	183	P	Pn	18 57 29.6	+0.2
NVR				S	Sn	18 58 16.2	-0.7
	comp=Z,275nm,0.8s						
HORU	Horodok	4.10	21	eP	Pn	18 57 33.5	+3.6
HORU				eS	Sn	18 58 23.6	+5.8
BUD	Budapest	4.11	302	ePN	Pn	18 57 30.7	+0.8
BUD	Budapest	4.11	302	Pn	Pn	18 57 30.7	+0.8
	comp=Z,0.7nm,SNR=9.1						
PURM	Purcari	4.14	72	⇑P	Pn	18 57 32.9	+2.5
PVY	Plav	4.14	229	⇑iPn	Pn	18 57 31.7	+1.2
PVY				i Sn	Sn	18 58 18.0	-0.8
KOME	Kolasin	4.21	234	⇑iPn	Pn	18 57 32.2	+0.7
KOME				i Sn	Sn	18 58 20.5	-0.1
A267A	Kaloz	4.23	293	Pn	Pn	18 57 32.8	+1.1
	comp=Z,1.3nm,SNR=15						
VAY	Valandovo	4.25	196	i Pn	Pn	18 57 32.4	+0.5
VAY				eSn	Sn	18 58 19.2	-2.2
A266A	Gyulaj	4.26	287	Pn	Pn	18 57 33.0	+1.0
	comp=Z,2.3nm,SNR=32						
KOVH	Kovagotottos	4.29	281	ePN	Pn	18 57 33.0	+0.5
KOVH	Kovagotottos	4.29	281	Pn	Pn	18 57 33.0	+0.5
	comp=Z,0.5nm,SNR=6.9						
SRS	Serrai	4.31	186	P	Pn	18 57 33.0	+0.2
KWP	Kalwaria Pacla	4.33	347	P	Pn	18 57 34.5	+1.4
KWP	Kalwaria Pacla	4.33	347	Pn	Pn	18 57 35.9	+2.9
	comp=Z,1.1nm,SNR=11						
KWP	Kalwaria Pacla	4.33	347		Pn	18 57 34.5	+1.4
KNT	Kendrikon	4.35	193	P	Pn	18 57 33.4	+0.1
KNT				S	Sn	18 58 22.9	-0.9
	comp=Z,255nm,0.5s						
RDO	Rodhopi	4.38	166	P	Pn	18 57 33.5	-0.2
RDO				S	Sn	18 58 22.6	-2.0
	comp=Z,320nm,0.6s						
IZAB	Izabela	4.38	318	eP	Pn	18 57 35.0	+1.2
LVV	L'vov	4.41	359	eP	Pn	18 57 34.4	+0.3
LVV				e		18 58 25.4	
LVV				pmax	pmax		
	comp=Z,50nm,1.0s						
LVV				smax	smax		
	comp=N,200nm,1.2s						
LVV	L'vov	4.41	359	eP	Pn	18 57 36.9	+2.8
STHS	Stebnicka Huta	4.47	335	eP	Pn	18 57 36.1	+1.2
STHS	Stebnicka Huta	4.47	335	ePN	Pn	18 57 36.1	+1.2
CSKK	Cskako	4.52	298	ePN	Pn	18 57 36.3	+0.6
CSKK	Cskako	4.52	298	Pn	Pn	18 57 36.3	+0.6
	SNR=41						
A265A	Kaposfured	4.55	285	Pn	Pn	18 57 37.2	+1.2
	comp=Z,1.1nm,SNR=6.9						
A269A	Baj	4.57	301	Pn	Pn	18 57 37.5	+1.2
	comp=Z,0.9nm,SNR=21						
NKME	Niksic	4.59	237	⇑iPn	Pn	18 57 38.1	+1.5
NKME				i Sn	Sn	18 58 29.6	-0.2
KOKK	Kokkinochori,	4.59	182	P	Pn	18 57 36.7	+0.1
TIH	Tihany	4.60	291	ePN	Pn	18 57 37.2	+0.4
TIH	Tihany	4.60	291	Pn	Pn	18 57 37.2	+0.4
	comp=Z,1.4nm,SNR=15						
SRO2	Moca	4.62	303	eP	Pn	18 57 37.3	+0.4
SRO2				e		18 58 33.5	
SRO2	Moca	4.62	303	ePN	Pn	18 57 37.3	+0.4
SRO2				eSN	Sn	18 58 33.5	+3.1
SOH	Sokhos	4.63	188	P	Pn	18 57 37.5	+0.4
PDG	Podgorica	4.63	232	⇓P	Pn	18 57 39.9	+2.8
PDG	Podgorica	4.63	232	ePn	Pn	18 57 38.8	+1.7
PDG	Podgorica	4.63	232	Pn	Pn	18 57 38.0	+0.9
TTG	Podgorica	4.63	232	⇓iPn	Pn	18 57 38.0	+0.9
TTG				i Sn	Sn	18 58 30.4	-0.3
GRG	Griva	4.63	197	P	Pn	18 57 38.2	+1.0
SRO	Srobarova	4.69	303	eP	Pn	18 57 39.4	+1.5
SRO				e		18 58 35.1	
SRO	Srobarova	4.69	303	Pg	Pn	18 57 39.6	+1.7
	comp=Z,3.2nm,SNR=39						
SRO	Srobarova	4.69	303	ePN	Pn	18 57 39.4	+1.5
SRO				eSN	Sn	18 58 35.1	+2.9
ALN	Alexandroupoli	4.72	162	P	Pn	18 57 38.3	0.0
ALN	Alexandroupoli	4.72	162	P	Pn	18 57 38.1	-0.3
ALN	Alexandroupoli	4.72	162	Pn	Pn	18 57 38.1	-0.3
CEME	Cevo	4.74	235	⇓iPn	Pn	18 57 40.2	+1.4
CEME				i Sn	Sn	18 58 33.7	0.0
BRY	Bratogost	4.76	240	ePn	Pn	18 57 41.4	+2.4
BRY	Bratogost	4.76	240	⇓iPn	Pn	18 57 40.3	+1.3
BRY				i Sn	Sn	18 58 34.5	+0.4
VYHS	Vyhne	4.77	312	eP	Pn	18 57 40.1	+1.0
VYHS				e		18 58 36.6	
VYHS	Vyhne	4.77	312	Pn	Pn	18 57 40.1	+1.0
	comp=Z,0.1nm,SNR=9.4						
VYHS	Vyhne	4.77	312	ePN	Pn	18 57 40.1	+1.0
VYHS				eSN	Sn	18 58 36.6	+2.3
NIE	Niedzica	4.79	328	ePn	Pn	18 57 42.2	+2.8
NIE	Niedzica	4.79	328	Pn	Pn	18 57 42.1	+2.8
	comp=Z,0.4nm,SNR=11						
DRME	Dracevica, Mon	4.83	230	ePn	Pn	18 57 42.6	+2.7
DRME	Dracevica, Mon	4.83	230	⇑iPn	Pn	18 57 40.6	+0.7
DRME				i Sn	Sn	18 58 35.6	-0.2
HORT	Hortiatis	4.87	190	P	Pn	18 57 40.9	+0.3
MPLH	Magyarpolny	4.91	293	ePN	Pn	18 57 42.1	+1.1
MPLH	Magyarpolny	4.91	293	Pn	Pn	18 57 42.1	+1.1
	comp=Z,1.1nm,SNR=12						
BUM	Brajici-Budva	4.92	233	⇓iPn	Pn	18 57 42.2	+1.1
BUM				i Sn	Sn	18 58 37.7	-0.2
LANS	Liptovska Anna	4.92	321	eP	Pn	18 57 43.2	+2.1
LANS	Liptovska Anna	4.92	321	ePN	Pn	18 57 43.2	+2.1
A263A	Hollad	4.92	287	Pn	Pn	18 57 42.3	+1.2
	comp=Z,0.8nm,SNR=9.5						
ULC	Ulcinj	4.96	228	⇑iPn	Pn	18 57 42.8	+1.1
ULC				i Sn	Sn	18 58 38.8	-0.1
TREB	Trebinje	4.98	239	ePn	Pn	18 57 46.2	+4.3
BLY	Banja Luka	4.98	265	ePn	Pn	18 57 43.8	+1.8
BLY	Banja Luka	4.98	265	Pg	Pb	18 57 53.3	-1.2
SMTH	Samothraki Isl	5.04	168	P	Pn	18 57 42.5	-0.3
HCY	Herceg Novi	5.05	236	ePn	Pn	18 57 45.7	+2.8
HCY	Herceg Novi	5.05	236	⇑iPn	Pn	18 57 43.9	+1.0
HCY				i Sn	Sn	18 58 41.1	-0.1
KOLL	Kolacno	5.05	311	ePN	Pn	18 57 43.8	+0.9
KOLL				eSN	Sn	18 58 43.3	+2.1
FNA	Florina	5.05	205	P	Pn	18 57 43.9	+0.9
FNA				S	Sn	18 58 41.2	-0.1
	comp=Z,98nm,0.4s						
FNA	Florina	5.05	205	P	Pn	18 57 43.5	+0.5
FNA	Florina	5.05	205		Pn	18 57 43.5	+0.5
PLG	Polygyros	5.06	186	P	Pn	18 57 43.5	+0.4
OUR	Ouranopolis	5.08	182	P	Pn	18 57 43.2	-0.1
MGRS	Mrkonjic Grad	5.12	261	ePn	Pn	18 57 45.7	+1.8
EGYH	Egyhazaskeszo	5.13	295	ePN	Pn	18 57 45.4	+1.4
EGYH	Egyhazaskeszo	5.13	295	Pn	Pn	18 57 45.4	+1.4
	comp=Z,93nm,0.8s,SNR=8.5						
EGYH				Pg	Pb	18 57 47.2	-10
MRAK	Mrakovica	5.14	268	ePn	Pn	18 57 44.9	+0.6
MOSL	Moslavina	5.21	275	ePn	Pn	18 57 47.1	+2.0
MOSL				Sn	Sn	18 58 44.5	-0.5
STON	Ston	5.30	244	ePn	Pn	18 57 49.4	+3.1
STON	Ston	5.30	244	ePn	Pn	18 57 49.6	+3.4
STON				Sn	Sn	18 58 50.5	+3.4
GADA	Gvkgeada	5.37	166	P	Pn	18 57 47.0	-0.3
RICI	Ricice	5.38	252	ePn	Pn	18 57 50.8	+3.3
RICI				Sn	Sn	18 58 51.8	+2.5
KALN	Kalnik	5.44	280	ePn	Pn	18 57 50.2	+1.9
KALN				Sn	Sn	18 58 50.7	0.0
MAKA	Makarska	5.54	250	ePn	Pn	18 57 53.1	+3.5
MAKA				Sn	Sn	18 58 54.8	+1.6
LIA	Limnos Island	5.56	172	P	Pn	18 57 49.5	-0.4
MODS	Modra-Piesok	5.57	305	eP	Pn	18 57 49.6	-0.5
MODS				e		18 58 52.5	
MODS	Modra-Piesok	5.57	305	Pn	Pn	18 57 49.6	-0.5
	comp=Z,390nm,0.8s,SNR=4.3						
MODS	Modra-Piesok	5.57	305	ePN	Pn	18 57 49.6	-0.5
MODS				eSN	Sn	18 58 52.5	-1.4
ZST	Bratislava	5.59	302	eP	Pn	18 57 51.1	+0.8
ZST				e		18 58 52.6	
ZST	Bratislava	5.59	302	Pn	Pn	18 57 51.1	+0.8
	comp=Z,454nm,0.6s,SNR=2.9						
ZST	Bratislava	5.59	302	ePN	Pn	18 57 51.0	+0.8
ZST				eSN	Sn	18 58 52.5	-1.8
JAVC	Velka Javorina	5.61	310	ePN	Pn	18 57 51.8	+1.1
JAVC	Velka Javorina	5.61	310	ePn	Pn	18 57 52.1	+1.5
KOGS	Kog	5.61	283	Pn	Pn	18 57 54.4	+3.7
OJC	Ojcow	5.63	330	P	Pn	18 57 52.1	+1.2
OJC	Ojcow	5.63	330	ePn	Pn	18 57 52.6	+1.7
OJC	Ojcow	5.63	330	Pg	Pn	18 57 52.4	+1.5
	comp=Z,25nm,0.7s,SNR=3.8						
OJC	Ojcow	5.63	330		Pn	18 57 52.1	+1.2
KIJV	Kijevo	5.70	258	ePn	Pn	18 57 54.5	+2.6

KIJV				Sn	Sn	18 58 59.3	+2.1
LOBO	**Lobor**	5.71	280	*e*Pn	Pn	18 57 53.8	+1.9
LOBO				Sn	Sn	18 58 56.4	-0.9
SOP	**Sopron**	5.71	296	*e*PN	Pn	18 57 52.8	+0.8
SOP	**Sopron**	5.71	296	Pn	Pn	18 57 52.8	+0.8
	comp=Z,39nm,0.7s,SNR=6.0						
PTJ	**Puntijarka**	5.76	278	*e*Pn	Pn	18 57 54.5	+1.7
PTJ				Sn	Sn	18 58 58.4	-0.4
PTJ	**Puntijarka**	5.76	278	Pn	Pb	18 58 05.1	-2.8
EZN	**Ezine**	5.81	163	P	Pn	18 57 53.9	+0.6
LSTV	**Lastovo**	5.86	246	*e*Pn	Pn	18 57 58.1	+4.1
LSTV				Sn	Sn	18 59 04.0	+2.9
HVAR	**Hvar**	5.97	251	*e*Pn	Pn	18 57 59.1	+3.6
HVAR				Sn	Sn	18 59 06.2	+2.6
OKC	**Ostrava-Krasne**	6.01	320	*e*PN	Pn	18 57 57.9	+1.9
OKC	**Ostrava-Krasne**	6.01	320	*e*P	Pn	18 57 57.9	+1.9
OKC	**Ostrava-Krasne**	6.01	320	Pg	Pb	18 58 08.9	-3.1
UDBI	**Udbina**	6.02	265	*e*Pn	Pn	18 57 58.6	+2.3
UDBI				Sn	Sn	18 59 06.6	+1.5
PLIT	**Plitvice**	6.06	268	*e*Pn	Pn	18 57 59.8	+2.9
PLIT				Sn	Sn	18 59 07.2	+1.1
OZLJ	**Ozalj**	6.11	275	*e*Pn	Pn	18 57 59.4	+1.9
OZLJ				Sn	Sn	18 59 06.9	-0.3
CRES	**Cresnjev**	6.12	277	*e*Pn	Pn	18 57 58.4	+0.8
MORI	**Morici**	6.22	259	*e*Pn	Pn	18 58 02.5	+3.5
MORI				Sn	Sn	18 59 11.9	+1.8
CONA	**Conrad Observa**	6.24	297	*e*Pn	Pn	18 57 59.7	+0.4
	comp=Z,4.1nm,0.7s,SNR=7.8						
CONA				*e*Sn	Sn	18 59 12.2	+1.7
	comp=Z,23nm,0.5s						
CONA	**Conrad Observa**	6.24	297	Pn	Pn	18 57 59.9	+0.6
	comp=Z,20nm,1.2s,SNR=3.5						
MORC	**Moravsky Berou**	6.25	317	⇑P	Pn	18 58 01.4	+2.0
MORC	**Moravsky Berou**	6.25	317	*e*PN	Pn	18 58 00.8	+1.4
MORC				*e*SN	Sn	18 59 12.9	+2.2
MORC	**Moravsky Berou**	6.25	317	⇑P	Pn	18 58 01.4	+2.0
MORC	**Moravsky Berou**	6.25	317	*e*Pn	Pn	18 58 01.3	+1.9
MORC	**Moravsky Berou**	6.25	317		Pn	18 58 00.7	+1.2
ARSA	**Arzberg**	6.26	290	*i* Pn	Pn	18 58 00.7	+1.2
	comp=Z,3.5nm,0.3s,SNR=20						
ARSA				*e*Sn	Sn	18 59 10.3	-0.5
	comp=Z,20nm,0.6s						
ARSA	**Arzberg**	6.26	290	*e*Pn	Pn	18 58 00.9	+1.4
ARSA	**Arzberg**	6.26	290	Pn	Pn	18 58 00.9	+1.4
	comp=Z,18nm,0.6s,SNR=2.4						
AKASG	**Malin Array Be**	6.29	31	Pn	Pn	18 57 59.6	-0.2
	comp=Z,2.3nm,0.3s,baz=221,slow=12,SNR=16						
AKASG				Lg	Lg	18 59 44.2	
	comp=Z,5.1nm,0.3s,baz=214,slow=29,SNR=6.8						
AKASG	**Malin Array Be**	6.29	31		Pn	18 57 59.0	-0.9
AKBB	**Malin Array Si**	6.29	31	P	Pn	18 57 58.8	-1.1
AKBB	**Malin Array Si**	6.29	31		Pn	18 57 58.8	-1.1
SIGR	**SIGRI**	6.32	168	P	Pn	18 58 00.1	-0.3
ZIRJ	**Zirje**	6.33	257	*e*Pn	Pn	18 58 03.2	+2.6
ZIRJ				Sn	Sn	18 59 14.6	+1.9
PRK	**Paraskevi**	6.36	165	P	Pn	18 58 01.9	+1.0
BALB	**Balikesir**	6.39	153		Pn	18 57 58.7	-2.6
KRUC	**Moravsky**	6.42	307	*e*PN	Pn	18 58 01.9	+0.1
KRUC				*e*SN	Sn	18 59 13.7	-1.2
KRUC	**Moravsky**	6.42	307	*e*Pn	Pn	18 58 01.9	+0.1
VRAC	**Vranov**	6.45	310	⇓P	Pn	18 58 03.3	+1.2
VRAC	**Vranov**	6.45	310	Pn	Pn	18 58 03.0	+0.9
	comp=Z,1.4nm,0.3s,baz=122,slow=13,SNR=24						
VRAC				Sn	Sn	18 59 17.2	+1.7
	comp=Z,3.1nm,0.3s,baz=238,slow=12,SNR=7.5						
VRAC				LR	LR	19 01 23.0	
	comp=Z,274nm,20.4s,baz=146,slow=46						
VRAC	**Vranov**	6.45	310	*e*PN	Pn	18 58 02.7	+0.6
VRAC				*e*SN	Sn	18 59 17.2	+1.7
VRAC	**Vranov**	6.45	310	*e*Pn	Pn	18 58 03.2	+1.1
SOKA	**Soboth**	6.48	285	*e*Pn	Pn	18 58 03.3	+0.7
	comp=Z,7.0nm,0.5s,SNR=17						
SOKA				*e*Sn	Sn	18 59 13.7	-2.7
	comp=Z,13nm,0.8s						
AGG	**Agios Georgios**	6.53	193	P	Pn	18 58 03.2	-0.1
AGG	**Agios Georgios**	6.53	193	Pn	Pn	18 58 03.2	-0.1
DUGI	**Dugi Otok**	6.64	261	*e*Pn	Pn	18 58 08.0	+3.3
DUGI				Sn	Sn	18 59 22.1	+1.9
NVLJ	**Novalja**	6.64	266	*e*Pn	Pn	18 58 07.9	+3.2
NVLJ				Sn	Sn	18 59 21.4	+1.2
OBKA	**Obir**	6.79	283	*e*Pn	Pn	18 58 08.9	+2.0
	comp=Z,2.0nm,0.6s						
OBKA	**Obir**	6.79	283	*e*Pn	Pn	18 58 06.5	-0.4
SEV	**Sevastopol'**	6.80	94	*e*P	Pn	18 58 06.9	0.0
SEV				*e*S	Sn	18 59 22.5	-1.7
SEV				pmax	pmax		
	comp=E,27nm,0.5s						
SEV				smax	smax		
	comp=E,14nm,0.4s						
SEV				smax	smax		
	comp=N,49nm,0.6s						
SEV	**Sevastopol'**	6.80	94	*e*P	Pn	18 58 06.9	0.0
SEV				Pm		18 58 14.7	
	comp=Z,27nm,0.5s						
SEV				*e*S	Sn	18 59 22.5	-1.7
SEV				Sm		18 59 28.5	
	comp=N,49nm,0.6s						
SEV				Sm		18 59 28.5	
	comp=E,14nm,0.4s						
SEV	**Sevastopol'**	6.80	94	*e*P	Pn	18 58 06.9	0.0
SEV				Pm		18 58 14.7	
SEV				*e*S	Sn	18 59 22.5	-1.7
SEV				Sm		18 59 22.5	
KRLC	**Kraliky**	6.82	316	*e*PN	Pn	18 58 08.7	+1.5
KRLC				*e*SN	Sn	18 59 26.0	+1.3
KRLC	**Kraliky**	6.82	316	*e*P	Pn	18 58 08.7	+1.5
KRLC				*e*		18 59 26.0	
CEY	**Cerknica**	6.84	276	*e*Pn	Pn	18 58 07.5	0.0
SIM	**Simferopol'**	7.05	90	*i* P	Pn	18 58 11.3	+0.9
SIM				*e*S	Sn	18 59 30.2	-0.2
SIM	**Simferopol'**	7.05	90	*e*P	Pn	18 58 11.0	+0.6
SIM				Pm		18 58 18.3	
	comp=Z,33nm,0.4s						
SIM				*e*S	Sn	18 59 29.4	-1.0
SIM				Sm		18 59 30.2	
	comp=N,76nm,0.9s						
SIM				Sm		18 59 30.2	
	comp=E,121nm,1.0s						
SIM	**Simferopol'**	7.05	90	*e*P	Pn	18 58 11.0	+0.6
SIM				Pm		18 58 18.3	
SIM				*e*S	Sn	18 59 29.4	-1.0
SIM				Sm		18 59 30.2	
SMRN	**Sveta Marina**	7.08	271	*e*Pn	Pn	18 58 12.8	+2.2
SMRN				Sn	Sn	18 59 30.6	-0.3
SGRT	**San Giovanni R**	7.12	242	Pn	Pn	18 58 12.0	+0.6
MDUB	**Mudurnu**	7.14	131		Pn	18 58 09.6	-2.2
BORA	**Eskisehir**	7.22	138	Pn	Pn	18 58 12.2	-0.6
DPC	**Dobruska-Polom**	7.22	316	*e*PN	Pn	18 58 14.2	+1.5
DPC	**Dobruska-Polom**	7.22	316	*e*P	Pn	18 58 14.2	+1.5
DPC	**Dobruska-Polom**	7.22	316	*e*Pn	Pn	18 58 15.0	+2.3
ALU	**Alushta**	7.29	92	⇑*e*P	Pn	18 58 13.6	-0.1
ALU				*e*S	Sn	18 59 36.2	-0.1
ALU				pmax	pmax		
	comp=Z,24nm,0.6s						
ALU				smax	smax		
	comp=N,175nm,0.6s						
ALU				smax	smax		
	comp=E,164nm,0.6s						
ALU	**Alushta**	7.29	92	⇑*e*P	Pn	18 58 13.6	-0.1
ALU				Pm		18 58 17.7	
	comp=Z,24nm,0.6s						
ALU				*e*S	Sn	18 59 36.2	-0.1
ALU				Sm		18 59 39.1	
	comp=N,175nm,0.6s						
ALU				Sm		18 59 39.1	
	comp=E,164nm,0.6s						
ALU	**Alushta**	7.29	92	⇑*e*P	Pn	18 58 13.6	-0.1
ALU				Pm		18 58 17.7	
ALU				*e*S	Sn	18 59 36.2	-0.1
ALU				Sm		18 59 39.1	
BRJN	**Brijuni**	7.38	270	*e*Pn	Pn	18 58 17.9	+3.1
BRJN				Sn	Sn	18 59 38.7	+0.3
OSTC	**Ostas**	7.41	317	*e*PN	Pn	18 58 16.9	+1.6
MYKA	**Terra Mystica**	7.42	283	*e*Pn	Pn	18 58 18.4	+2.8
	comp=E,1.0nm,0.3s						
UPC	**Upice**	7.47	316	*e*PN	Pn	18 58 17.8	+1.6
UPC	**Upice**	7.47	316	*e*P	Pn	18 58 17.8	+1.6
CHVC	**Chvalec**	7.50	317	*e*PN	Pn	18 58 18.6	+2.0
CKRC	**Cesky Krumlov**	7.53	300	*e*PN	Pn	18 58 17.8	+0.8
CKRC	**Cesky Krumlov**	7.53	300	*e*Pn	Pn	18 58 19.3	+2.3
KSP	**Ksiaz**	7.56	319	*e*Pn	Pn	18 58 19.7	+2.3
SUDU	**Sudak**	7.68	90	⇑*e*P	Pn	18 58 19.1	+0.1
SUDU				*i* S	Sn	18 59 43.7	-2.2
SUDU				pmax	pmax		
	comp=Z,36nm,0.6s						
SUDU				smax	smax		
	comp=N,95nm,0.6s						
SUDU				smax	smax		
	comp=E,48nm,0.6s						
SUDU	**Sudak**	7.68	90	⇑*e*P	Pn	18 58 19.1	+0.1
SUDU				Pm		18 58 24.7	
	comp=Z,36nm,0.6s						
SUDU				*i* S	Sn	18 59 43.7	-2.2
SUDU				Sm		18 59 50.7	
	comp=N,95nm,0.6s						
SUDU				Sm		18 59 50.7	
	comp=E,48nm,0.6s						
SUDU	**Sudak**	7.68	90	⇑*e*P	Pn	18 58 19.1	+0.1
SUDU				Pm		18 58 24.7	
SUDU				*i* S	Sn	18 59 43.7	-2.2
SUDU				Sm		18 59 50.7	
ZOU	**Zoufplan**	7.88	282		Pn	18 58 21.1	-0.8
GEC2	**GERESS Array S**	7.91	299	*e*Pn	Pn	18 58 23.7	+1.4
GEC2	**GERESS Array S**	7.91	299		Pn	18 58 23.4	+1.1
GERES	**GERESS Array B**	7.91	299	Pn	Pn	18 58 23.1	+0.8
	comp=E,0.8nm,0.3s,baz=104,slow=14,SNR=32						
GERES				Sn	Sn	18 59 50.3	-1.4
	comp=E,1.1nm,0.3s,baz=114,slow=26,SNR=5.2						
GERES				LR	LR	19 01 13.1	
	comp=E,131nm,21.8s,baz=123,slow=36						
BZK	**Bozkurt**	7.92	112	Pn	Pn	18 58 22.0	-0.3
PRU	**Pruhonice**	7.94	309	*e*PN	Pn	18 58 23.2	+0.7
PRU				*e*SN	Sn	18 59 51.6	-0.5
PRU	**Pruhonice**	7.94	309	*e*P	Pn	18 58 23.2	+0.7
PRU				*e*		18 59 51.6	
STAL	**STALIGIAL**	8.04	280		Pn	18 58 24.3	+0.3
KHC	**Kasperske Hory**	8.10	301	*e*PN	Pn	18 58 25.8	+1.0
KHC				*e*SN	Sn	18 59 54.7	-1.5
KHC	**Kasperske Hory**	8.10	301	*e*P	Pn	18 58 25.8	+1.0
KHC				*e*		18 59 54.7	
KHC	**Kasperske Hory**	8.10	301	*e*Pn	Pn	18 58 26.6	+1.9
KHC	**Kasperske Hory**	8.10	301		Pn	18 58 25.8	+1.0
ABTA	**Abfaltersbach**	8.21	284	*e*Pn	Pn	18 58 29.2	+2.9
	comp=E,1.8nm,0.6s						
PVCC	**Panska Ves**	8.22	312	*e*PN	Pn	18 58 26.9	+0.5
PVCC	**Panska Ves**	8.22	312	*e*P	Pn	18 58 26.9	+0.5
PAOL	**Paolisi**	8.26	241		Pn	18 58 28.1	+1.1
TIP	**Timpagrande**	8.30	224	Pn	Pn	18 58 27.9	+0.3
AQU	**L'Aquila**	8.35	252	P	Pn	18 58 28.7	+0.4
AQU	**L'Aquila**	8.35	252		Pn	18 58 28.7	+0.4
NRCA	**Norcia**	8.35	256		Pn	18 58 27.5	-0.9
ITM	**Ithomi**	8.39	192	Pn	Pn	18 58 27.6	-1.2
ANTO	**Ankara**	8.44	128	P	Pn	18 58 28.0	-1.4
ANTO	**Ankara**	8.44	128	Pn	Pn	18 58 28.0	-1.4
WET	**Wettzell**	8.53	300	*e*Pn	Pn	18 58 32.0	+1.3
MURB	**Monte Urbino**	8.61	260	Pn	Pn	18 58 31.7	-0.1
CTI	**Castel Tesino**	8.78	279	P	Pn	18 58 34.3	+0.2
CTI	**Castel Tesino**	8.78	279		Pn	18 58 34.3	+0.2
TEOL	**Teolo**	8.79	274	Pn	Pn	18 58 34.0	-0.2
WTTA	**Wattenberg**	8.86	287	*e*Pn	Pn	18 58 38.1	+2.7
	comp=E,3.4nm,0.6s						
WATA	**Walderalm**	8.91	287	*e*Pn	Pn	18 58 39.6	+3.6
	comp=E,2.9nm,0.3s						
BR131	**Keskin Array S**	9.01	126	P	Pn	18 58 36.5	-0.9
BR131	**Keskin Array S**	9.01	126	Pn	Pn	18 58 36.5	-0.9
BRTR	**Keskin Array B**	9.01	126	Pn	Pn	18 58 38.0	+0.6
	comp=E,0.2nm,0.3s,baz=291,slow=11,SNR=2.3						
BRTR				LR	LR	19 02 25.6	
	comp=E,237nm,21.4s,baz=315,slow=40						
BRTR	**Keskin Array B**	9.01	126	Pn	Pn	18 58 36.2	-1.2
SQTA	**Sankt Quirin**	9.14	286	*e*Pn	Pn	18 58 41.9	+2.7
	comp=E,1.1nm,0.3s						
MOTA	**Moosalm**	9.23	287	*e*Pn	Pn	18 58 42.3	+1.9
	comp=E,1.9nm,0.4s						
NKC	**Novy Kostel**	9.23	306	*e*PN	Pn	18 58 40.4	+0.1
NKC	**Novy Kostel**	9.23	306	*e*P	Pn	18 58 40.4	+0.1
MNK	**Minsk**	9.41	13	*i* P	Pn	18 58 38.7	-4.0
MNK				*i* S	Sn	19 00 23.4	-4.8
MNK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MNK				pmax	pmax		
	comp=N,19nm,0.9s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,97nm,12.0s						
MNK				MLR	MLR		
	comp=N,141nm,14.0s						
MNK				MLR	MLR		
	comp=E,21nm,14.0s						
MNK	**Minsk**	9.41	13	*i* P	Pn	18 58 38.7	-3.9
	comp=E,1.0nm,0.9s						
MNK				*i* P	Pn	18 58 38.7	-3.9
	comp=N,19nm,0.9s						
MNK				*i* P	Pn	18 58 38.7	-3.9
	comp=Z,3.0nm,0.7s,baz=16						
MNK				*i* PP	PnPn	18 58 46.4	-3.8
MNK				*i* S	Sn	19 00 23.5	-4.8
MNK				*i* SS	SnSn	19 00 35.6	-4.2
MNK				*i* LQ	LQ	19 01 18.8	
MNK				*i* LR	LR	19 02 00.8	
MNK				*i* LRM	MLR	19 02 27.2	
	comp=Z,97nm,11.9s						
MNK				*i* LRM	MLR	19 02 30.1	
	comp=N,141nm,13.6s						
MNK				*i* LRM	MLR	19 02 31.9	
	comp=E,21nm,14.4s						
FETA	**Feichten**	9.45	285	*e*Pn	Pn	18 58 46.9	+3.5
	comp=E,0.7nm,0.4s						
CLL	**Collm**	9.48	312	*e*P	Pn	18 58 45.0	+1.4
CLL	**Collm**	9.48	312	*e*Pn	Pn	18 58 45.0	+1.4
CLL				*e*		18 58 52.0	
CLL				*e*Sn	Sn	19 00 11.0	-19
CLL				*e*		19 00 30.0	
CLL				*e*Sg		19 01 28.0	
CLL				Lmax		19 02 00.0	
CLL	**Collm**	9.48	312	Pn	Pn	18 58 44.8	+1.2
SALO	**Salr**	9.58	276		Pn	18 58 46.0	+0.9
GRA1	**Grafenberg Arr**	9.74	301	Pn	Pn	18 58 46.4	-0.8
GRF	**Grafenberg Arr**	9.74	301	P	Pn	18 58 46.4	-0.8
MOX	**Moxa**	9.89	306	P	Pn	18 58 52.6	+3.2
DAVOX	**Davos/Dischmat**	10.02	283	LR	LR	19 03 13.1	
	comp=E,342nm,20.0s,baz=84,slow=41						
PABE	**Paberze**	10.11	359	Pn	Pn	18 58 52.1	-0.1
IDI	**Anoyia**	10.13	177	LR	LR	19 03 17.3	
	comp=E,147nm,19.8s,baz=324,slow=41						
MSSA	**Maissana**	10.46	269	Pn	Pn	18 58 55.9	-1.2
BNN	**Bunyan**	10.87	123	Pn	Pn	18 59 02.4	-0.4
RAFF	**Raffo Rosso**	11.00	225	Pn	Pn	18 59 04.3	-0.2
CORL	**Corleone**	11.05	231	Pn	Pn	18 59 04.7	-0.6
BFO	**Black Forest**	11.22	291	P	Pn	18 59 08.2	+0.6
BFO	**Black Forest**	11.22	291	Pn	Pn	18 59 08.2	+0.6
VORD	**Divnogorie**	11.52	56	*e*P	Pn	18 59 11.3	-0.3
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR	**Storozhevoye**	11.55	54	*e*P	Pn	18 59 11.3	-0.6
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
SENIN	**Lac Senin/Sane**	11.79	281	Pn	Pn	18 59 15.3	-0.2
LPSR	**Galich'ya Gora**	12.06	48	*e*P	Pn	18 59 16.6	-2.3
LPSR				pmax	pmax		
	comp=Z,20nm,0.7s						
OBN	**Obninsk**	12.52	35	*i* P	Pn	18 59 22.6	-2.6
OBN				pmax	pmax		
	comp=Z,21nm,1.0s						
OBN				MLR	MLR		
	comp=Z,100nm,11.0s						
CSS	**Mathiatis**	12.56	143	Pn	Pn	18 59 23.5	-2.5
VRH	**Novokhopyorsk**	13.04	57	*e*P	Pn	18 59 30.7	-1.5
VRH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KOPT	**Kop Dagi**	13.16	108	Pn	Pn	18 59 34.1	-0.2
VSU	**Vasula**	13.16	6	⇓*e*P	Pn	18 59 33.6	-0.4
VSU				pmax	pmax		
	comp=Z,55nm,0.9s						
KIV	**Kislovodsk**	13.27	90	*e*P	Pn	18 59 39.5	+3.9
KIV				*e*S	Sn	19 02 08.0	+5.1
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,59nm,12.0s						
KIV	**Kislovodsk**	13.27	90	Pn	Pn	18 59 35.9	+0.3
GOF	**Gofitskoye**	13.32	85	⇑*e*P	P	18 59 46.8	+1.0
MOS	**Moscow**	13.39	35	*e*P	Pn	18 59 33.8	-3.3
KBZ	**Khabaz**	13.47	91	LR	LR	19 05 29.3	
	comp=Z,72nm,19.9s,baz=296,slow=40						
ONI	**Oni**	14.17	95	P	Pn	18 59 48.8	+0.9
ONI	**Oni**	14.17	95	Pn	Pn	18 59 48.8	+0.9
GURO	**Guroymak-BITLI**	14.94	111	Pn	Pn	18 59 56.4	-2.1
GEVA	**Gevas**	15.75	110	Pn	Pn	19 00 05.7	-3.4
SIRT	**Sirnak**	15.80	114	Pn	Pn	19 00 05.0	-4.6
GNI	**Garni**	15.99	102	LR	LR	19 07 47.1	
	comp=Z,46nm,19.2s,baz=304,slow=42						
GNI	**Garni**	15.99	102	P	Pn	19 00 07.5	-4.7
GNI				pmax	pmax		
	comp=Z,14nm,1.0s						
GNI	**Garni**	15.99	102	Pn	Pn	19 00 07.5	-4.7
GNI				IAmb	IAmb	19 00 36.2	
	comp=Z,14nm,1.0s						
HFS	**Hagfors**	16.01	341	LR	LR	19 07 18.4	
	comp=Z,331nm,19.2s,baz=156,slow=41						
FINES	**FINESS Array B**	16.10	3	Pn	Pn	19 00 08.6	-4.7
	comp=Z,0.3nm,0.3s,baz=165,slow=16,SNR=11						
FINES	**FINESS Array B**	16.10	3	*i* P	Pn	19 00 10.5	-2.8
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	16.10	3	Pn	Pn	19 00 08.5	-4.8
FIA1	**FINESS Array S**	16.10	3	Pn	Pn	19 00 09.4	-3.9
FIA1				IAmb	IAmb	19 00 16.9	
	comp=Z,56nm,1.6s						
GHAJ	**Ghor Haditha**	16.66	144	Pn	Pn	19 00 17.4	-3.2
GHAJ				IAmb	IAmb	19 00 38.3	
	comp=Z,18nm,1.2s						
KONO	**Kongsberg**	16.73	334	P	Pn	19 00 20.9	-0.4
KONO				pmax	pmax		
	comp=Z,65nm,1.5s						
KONO	**Kongsberg**	16.73	334	Pn	Pn	19 00 20.9	-0.4
KONO				IAmb	IAmb	19 00 32.9	
	comp=Z,65nm,1.5s						
BELG	**Belogornoye**	16.89	57	⇑*e*P	Pn	19 00 23.1	-0.3
BELG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NB2	**NORSAR Subarra**	17.41	339	P	Pn	19 00 25.8	-4.1
	comp=Z,1.3nm,0.6s,baz=141,slow=12						
NOA	**NORSAR Array B**	17.41	339	Pn	Pn	19 00 27.1	-2.8
	comp=Z,0.0nm,0.3s,baz=81,slow=17,SNR=2.9						
NOA				LR	LR	19 07 30.0	
	comp=Z,99nm,19.5s,baz=155,slow=38						
KLMR	**Klimovskoe**	17.93	25	*e*P	Pn	19 00 31.0	-5.2
KLMR				*e*		19 03 48.7	
KLMR				pmax	pmax		
	comp=Z,38nm,1.1s						
KLMR	**Klimovskoe**	17.93	25	*e*Pn	Pn	19 00 31.1	-5.2
KLMR				AMP		19 00 39.3	
	comp=Z,38nm,1.1s						
KLMR				*e*Sn	Sn	19 03 48.8	-7.0
KLMR				*e*Sn	Sn	19 03 48.8	-7.0
KLMR				⇓Lg	Lg	19 05 50.7	
KLMR				⇓Lg	Lg	19 05 50.7	
KLMR				⇓Lg	Lg	19 05 50.7	
EKA	**Eskdalemuir Ar**	19.93	310	P	P	19 00 59.8	+1.0
	baz=112,slow=11,SNR=5.2						
ESK	**Eskdalemuir**	19.95	310	P	P	19 00 55.8	-3.2
ESK				pmax	pmax		
	comp=Z,38nm,1.3s						
ESK	**Eskdalemuir**	19.95	310	P	P	19 00 55.8	-3.2
KIRV	**Kirov**	20.23	40	P	P	19 01 03.1	+1.1
	comp=Z,14nm,0.7s,baz=241,slow=2.4,SNR=4.9						
KIRV	**Kirov**	20.23	40	⇓*i*P	P	19 01 02.2	+0.2
PRGR	**Permogore**	20.50	30	*e*P	P	19 01 06.6	+1.7
PRGR				*e*S	S	19 04 57.1	+3.3
PRGR				pmax	pmax		
	comp=Z,18nm,0.9s						
ESDC	**Sonseca Array**	21.44	264	P	P	19 01 16.5	+1.1
	comp=Z,1.2nm,0.7s,baz=57,slow=8.3,SNR=8.4						
ESDC				LR	LR	19 10 44.1	
	comp=Z,89nm,21.1s,baz=315,slow=40						
APA	**Apatity**	22.74	9	⇓*i*P	P	19 01 29.0	+0.1
APA				pmax	pmax		
	comp=Z,13nm,1.2s						
APA				MLR	MLR		
	comp=Z,1µm,14.0s						
AKTO	**Aktyubinsk**	23.11	65	P	P	19 01 34.6	+1.6
	comp=Z,2.4nm,0.7s,baz=272,slow=8.9,SNR=9.0						
AKTO				LR	LR	19 11 54.3	
	comp=Z,79nm,19.3s,baz=264,slow=40						
LVZ	**Lovozero**	23.20	10	P	P	19 01 33.5	-0.3
LVZ				pmax	pmax		
	comp=Z,43nm,1.0s						
LVZ	**Lovozero**	23.20	10	P	P	19 01 33.5	-0.3
MTE	**Manteigas**	23.66	269	P	P	19 01 35.2	-3.5
ARU	**Arti**	24.07	50	P	P	19 01 43.3	+1.0
	comp=Z,3.8nm,0.7s,baz=255,slow=5.4,SNR=12						
ARU	**Arti**	24.07	50	*d* *i*P	P	19 01 43.9	+1.6
ARU				S	S	19 06 00.7	+1.6
ARU				pmax	pmax		
	comp=Z,45nm,2.0s						
ARU	**Arti**	24.07	50	P	P	19 01 40.2	-2.1
ARCES	**ARCESS Array B**	24.20	1	P	P	19 01 46.1	+2.7
	comp=Z,1.9nm,0.8s,baz=180,slow=5.6,SNR=4.6						
ARCES				LR	LR	19 11 50.8	
	comp=Z,182nm,19.2s,baz=215,slow=38						
ARCES	**ARCESS Array B**	24.20	1	IAmb	IAmb	19 01 58.2	
	comp=Z,19nm,1.4s						
PESTR	**Estremoz**	24.33	266	P	P	19 01 41.5	-3.4
PESTR				IAmb	IAmb	19 02 25.7	
	comp=Z,11nm,1.3s						
ABKAR	**Akbulak array**	24.41	68	P	P	19 01 41.0	-4.5
ABKAR	**Akbulak array**	24.41	68	P	P	19 01 40.8	-4.6
ABKAR				IAmb	IAmb	19 02 02.9	
	comp=Z,4.3nm,0.9s						
SVE	**Sverdlovsk**	25.27	50	*e*P	P	19 01 56.5	+3.3
SVE				pmax	pmax		
	comp=Z,26nm,1.4s						
MDT	**Midelt**	25.47	250	LR	LR	19 12 24.6	
	comp=Z,62nm,18.5s,baz=60,slow=38						
GEYT	**Alibeck**	26.30	94	P	P	19 02 04.6	+1.8
	comp=Z,2.1nm,0.7s,baz=30,slow=13,SNR=4.5						
GEYT	**Alibeck**	26.30	94	P	P	19 02 01.0	-1.7
GEYT				IAmb	IAmb	19 02 14.1	
	comp=Z,2.8nm,0.7s						
BRVK	**Borovoye**	30.61	59	⇓*e*P	P	19 02 43.7	+2.7
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRVK	**Borovoye**	30.61	59	P	P	19 02 38.8	-2.2
BRVK				IAmb	IAmb	19 02 44.5	
	comp=Z,5.0nm,0.8s						
BVAR	**Borovoye Array**	30.68	59	P	P	19 02 44.0	+2.4
	comp=Z,2.8nm,0.8s,baz=247,slow=11,SNR=16						
BVAR	**Borovoye Array**	30.68	59	P	P	19 02 44.0	+2.4
KKAR	**Karatay Array**	32.93	77	P	P	19 03 00.2	-1.3
KKAR	**Karatay Array**	32.93	77	P	P	19 03 00.2	-1.3
AAK	**Ala-Archa**	35.82	76	⇓*e*P	P	19 03 28.4	+1.6
AAK				pmax	pmax		
	comp=Z,21nm,1.6s						
AAK	**Ala-Archa**	35.82	76	P	P	19 03 26.3	-0.5
AAK				IAmb	IAmb	19 03 29.8	
	comp=Z,6.8nm,1.4s						
KURBB	**Kurchatov Arra**	36.05	62	P	P	19 03 29.9	+1.5
	comp=Z,0.5nm,0.3s,baz=288,slow=9.4,SNR=4.6						
KURK	**Kurchatov**	36.08	61	P	P	19 03 29.9	+1.3
KURK	**Kurchatov**	36.08	61	P	P	19 03 29.9	+1.3
KURK	**Kurchatov**	36.08	61	IAmb	IAmb	19 03 49.6	
	comp=Z,7.2nm,1.6s						
TORD	**Torodi Ar. Bea**	37.39	218	P	P	19 03 41.7	+1.6
	comp=Z,1.9nm,0.6s,baz=16,slow=8.2,SNR=13						
TORD	**Torodi Ar. Bea**	37.39	218	P	P	19 03 39.0	-1.1
TORD				IAmb	IAmb	19 03 42.9	
	comp=Z,7.9nm,1.4s						
ZALV	**Zalesovo Beam**	39.05	55	P	P	19 03 55.9	+2.1
	comp=Z,3.4nm,0.8s,baz=278,slow=4.3,SNR=5.0						
ZALV	**Zalesovo Beam**	39.05	55	P	P	19 03 53.3	-0.4
NRIK	**Noril'sk**	39.14	30	⇓*e*P	P	19 03 57.2	+2.9
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.9s						
NRIK	**Noril'sk**	39.14	30	P	P	19 03 53.1	-1.2
NRIK				IAmb	IAmb	19 04 20.3	
	comp=Z,8.9nm,1.6s						
MAKZ	**Makanchi**	39.33	67	P	P	19 03 56.7	+0.5
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.5s						
MAKZ	**Makanchi**	39.33	67	P	P	19 03 56.7	+0.5
MK31	**Makanchi Array**	39.53	66	P	P	19 03 56.8	-1.1
MK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MK31	**Makanchi Array**	39.53	66	P	P	19 03 56.8	-1.1
MKAR	**Makanchi Array**	39.53	66	P	P	19 03 59.2	+1.3
	comp=Z,1.2nm,0.9s,baz=276,slow=8.9,SNR=7.3						
MKAR	**Makanchi Array**	39.53	66	P	P	19 03 57.6	-0.3
DGZ	**Jazzator, Alta**	41.80	60	⇓*e*P	P	19 04 18.9	+2.2
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						

WMQ	Urumqi	44.20	68	*e*P	P	19 04 36.5	+0.4
TIXI	Tiksi	51.93	23⇓	*e*P	P	19 05 37.5	+2.1
SONM	Songino Array	53.94	56	P	P	19 05 53.2	+2.4
	comp=Z,3.1nm,0.9s,baz=290,slow=7.5,SNR=21						
GTA	Gaotai	54.27	68	*e*P	P	19 05 51.5	-1.8
GTA				pP	sP	19 06 01.5	+2.2
GTA				sP	pP	19 06 06.0	+8.3
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ULN	Ulaanbaatar	54.31	55⇓	*e*P	P	19 05 55.4	+1.9
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LZH	Lanzhou	58.77	69	*e*P	P	19 06 27.5	+2.0
LZH				sP	sP	19 06 46.0	+14
LZH				pmax	pmax		
	comp=Z,8.0nm,1.4s						
HHC	Hu-ho-hao-te	60.88	60	*e*P	P	19 06 38.8	-1.0
HHC				pmax	pmax		
	comp=Z,140nm,6.6s						
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BILL	Bilibino	63.35	15	*i* P	P	19 06 58.8	+3.0
BILL				pmax	pmax		
	comp=Z,3.0nm,1.4s						
CMAR	Chiang Mai Arr	66.49	87	P	P	19 07 16.8	-0.2
	comp=Z,0.6nm,0.8s,baz=302,slow=6.8,SNR=6.4						
CMAR	Chiang Mai Arr	66.49	87	*i* P	P	19 07 17.2	+0.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MA2	Magadan	66.59	26⇓	*e*P	P	19 07 17.7	+0.7
MA2				pmax	pmax		
	comp=Z,14nm,1.7s						
KLR	Kul'dur	66.64	43	LR	LR	19 40 28.2	
	comp=Z,36nm,18.0s,baz=344,slow=40						
YKA	Yellowknife Ar	67.50	341	P	P	19 07 23.6	+0.9
	comp=Z,1.5nm,0.9s,baz=24,slow=6.2,SNR=15						
KSRS	Korea Array	72.75	54	LR	LR	19 43 47.8	
	comp=Z,28nm,18.1s,baz=205,slow=39						

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*TUL **29** 19:17:39.4±1.3, 35°.663N±0°.010×97°.40W±0°.02, h6km±2km, ML2.6, mb_Lg2.2/5(NEIC), Error ellipse: s-maj=1.9km s-min=1.3km az=119.0*

NEIC 29 19:17:39.5±1.2**, 35°.672N**±0°.009×**97°.40W**±0°.02**, h8**km±3km**, Error ellipse: s-maj=1.9km s-min=1.3km az=107.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	Oakdale Elemen	0.09	193	Pg	Pg	19 17 41.6	-0.1
OK009				Sg	Sg	19 17 43.4	0.0
OK025	Westminster Rd	0.10	151		Pg	19 17 41.9	0.0
OK025				Sg	Sg	19 17 43.8	+0.2
OK029	Liberty Lake	0.13	340	Pg	Pg	19 17 42.6	+0.2
OK029				Sg	Sg	19 17 45.1	+0.6
OK001	Jones High Sch	0.14	141	Pg	Pg	19 17 42.6	+0.1
OK001				Sg	Sg	19 17 45.1	+0.5
OK005	Luther M Schoo	0.17	96	Pg	Pg	19 17 43.3	+0.3
OK005				Sg	Sg	19 17 46.2	+0.8
BCOK	Bluff Creek, N	0.17	265	Pg	Pg	19 17 43.1	+0.1
BCOK				Sg	Sg	19 17 46.0	+0.5
OKCFA	Oklahoma City	0.26	190		Pg	19 17 44.6	0.0
OKCFA				Sg	Sg	19 17 48.7	+0.5
OKCSW	OKLAHOMA CITY	0.27	187	Pg	Pg	19 17 44.7	-0.1
OKCSW				Sg	Sg	19 17 48.9	+0.5
FNO	Franklin	0.41	180	Pg	Pg	19 17 47.5	-0.1
FNO				Sg	Sg	19 17 53.5	+0.5
OK031	S. Brethren Rd	0.53	58		Pg	19 17 49.9	0.0
OK031				Sg	Sg	19 17 57.4	+0.5
OK030	Cody Creek RV	0.56	63		Pg	19 17 50.3	-0.1
OK030				Sg	Sg	19 17 58.2	+0.5
OK034	N. Norfolk Rd.	0.65	59	Pg	Pg	19 17 52.0	0.0
OK034				IAmb_Lg		19 18 00.0	
	comp=Z,16nm,0.9s						
OK034				Sg	Sg	19 18 01.1	+0.5
W35A	Tecumseh	0.67	140	Pg	Pg	19 17 52.2	-0.2
W35A				Sg	Sg	19 18 01.5	+0.3
QUOK	Quay	0.75	48		Pg	19 17 53.8	-0.1
QUOK				Sg	Sg	19 18 04.1	+0.4
CROK	Carrier	0.96	330		Pg	19 17 57.6	-0.3
CROK				Sg	Sb	19 18 11.2	0.0
BLOK	Blackwell	1.10	8	Pg	Pg	19 18 00.1	-0.5
BLOK				Sg	Sb	19 18 15.7	+0.5
X34A	Smith Ranch, M	1.13	199	Pg	Pg	19 18 01.0	-0.1
X34A				Sn	Sn	19 18 16.9	-0.4
GC02	Grant County #	1.23	343	Pn	Pn	19 18 02.6	-0.5
OK032	Salt Plains WL	1.31	330		Pn	19 18 03.3	-0.8
TUL1	Leonard	1.33	79	Pn	Pn	19 18 03.2	-1.1
KAN13	South Haven SW	1.34	357	Pn	Pn	19 18 04.5	0.0
KAN14	Manchester OK	1.36	341		Pn	19 18 04.7	-0.1
T35A	Sooner Cattle	1.43	30	Pn	Pn	19 18 05.9	+0.1
U32A	Winter Ranch,	1.48	299	Pn	Pn	19 18 06.4	0.0
KAN05	Bluff City Nor	1.48	345		Pb	19 18 07.0	-0.3
KAN01	Argonia South	1.51	349		Pn	19 18 06.7	-0.2
KAN10	Anthony SW Sta	1.55	339	Pn	Pn	19 18 07.8	+0.4
KAN06	Argonia West S	1.62	347	Pn	Pn	19 18 08.0	-0.3
KAN08	Anthony NE Sta	1.62	344	Pn	Pn	19 18 08.5	+0.1
LOOK	Love County	1.69	174	Pn	Pn	19 18 08.3	-0.9
X37A	Clayton	1.98	122		Pn	19 18 13.6	+0.3
X37A				IAmb_Lg		19 18 44.1	
	comp=Z,16nm,1.0s						
U38A	Gravette	2.56	72		Pn	19 18 21.0	-0.3
HHAR	Hobbs	2.87	77	Pn	Pn	19 18 23.4	-2.1
W39A	Magazine	2.99	98	Pn	Pn	19 18 24.8	-2.4
MIAR	Mount Ida	3.33	109	Pn	Pn	19 18 30.0	-1.8
KSU1	Kansas State U	3.48	10	Pn	Pn	19 18 33.3	-0.6
CBKS	Cedar Bluff	3.65	330	Pn	Pn	19 18 34.3	-2.0
U40A	Yellville	3.75	78	Pn	Pn	19 18 36.8	-0.8
U40A				IAmb_Lg		19 19 36.9	
	comp=Z,7.5nm,0.8s						
S39A	Bolivar	3.85	57	Pn	Pn	19 18 35.7	-3.2
X40A	Basin Creek Fa	3.92	106	Pn	Pn	19 18 38.1	-1.9

IDC 29 19:18:55.9±8.1**, 26°.94S**×**176°.49W, h0**km**, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.6**/26**, mbtmp3.6**/2**, MS3.5**/6**, Ms1 3.5**/6**, ms1mx3.2**/31**, Error ellipse: s-maj=416.2km s-min=61.1km az=155.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.62	208	Sn	Sn	19 20 13.6	+1.5
	190nm,0.3s,baz=110,slow=20,SNR=5.7						
MSVF	Nonsavu	10.46	330	LR	LR	19 24 52.6	
	comp=Z,314nm,18.0s,baz=163,slow=34						
DZM	Mont Dzumac	16.27	284	LR	LR	19 27 40.3	
	comp=Z,143nm,19.7s,baz=24,slow=32						
RAR	Rarotonga	16.29	73	LR	LR	19 27 42.6	
	comp=Z,83nm,20.0s,baz=316,slow=32						
PPT	Papeete	26.55	75	LR	LR	19 34 41.4	
	comp=Z,41nm,18.4s,baz=129,slow=36						
HNR	Honiara	28.27	304	LR	LR	19 33 48.8	
	comp=Z,102nm,18.9s,baz=148,slow=32						
ASAR	Alice Springs	44.74	263	P	P	19 27 10.5	-0.8
	0.3nm,0.6s,baz=93,slow=7.4,SNR=8.7						
WRA	Warramunga Arr	45.42	268	P	P	19 27 17.6	+0.9
	1.2nm,0.8s,baz=107,slow=8.5,SNR=3.3						
DLBC	Dease Lake	93.44	22	LR	LR	20 04 08.5	
	comp=Z,108nm,22.0s,baz=156,slow=29						
AKASG	Malin Array Be	149.24	327	PKPbc	PKPbc	19 38 45.6	-0.6
	0.2nm,0.4s,baz=39,slow=4.2,SNR=5.3						

DJA 29 19:34:03.6±0.3**, 10°S**±5°×**11°8E**±°**, h43**km±35km**, M3.9**/13**, mb4.3**/1**, MLv3.7**/13**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWSI	Taliwang, Sumb	1.06	324	P	Pn	19 34 22.1	0.0
TWSI				S	Sn	19 34 35.7	0.0
WBSI	Waikabubak, Su	1.85	91	P	Pn	19 34 32.5	-0.5
WBSI				S	Sn	19 34 55.5	+0.2
IGBI	Denpasar	2.46	288	P	Pn	19 34 42.0	+0.7
IGBI				S	Sn	19 35 10.7	+0.5
BASI	Baing, Sumba	3.08	102	P	Pn	19 34 50.5	+0.7
BASI				S	Sn	19 35 25.2	-0.2
JAGI	Jajag, Banyuwa	3.50	289	P	Pn	19 34 55.3	-0.3
JAGI				S	Sn	19 35 35.8	-0.1
EDFI	Ende, Flores	4.21	79	P	Pn	19 35 05.4	-0.1
GMJI	Gumukmas	4.23	288	P	Pn	19 35 05.6	0.0
BSSI	Bau Bau, Buton	4.54	41	P	Pn	19 35 09.8	0.0
MMRI	Maumere	4.77	79	P	Pn	19 35 13.0	0.0
BKSI	Bulukumba	4.99	31	P	Pn	19 35 15.6	-0.4
PCJI	Pacitan	6.41	282	P	Pn	19 35 35.6	0.0

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*AEIC **29** 19:46:22±2.6, 51°.98N±0°.10×170°.7W±0°.1, h26km±5km, Error ellipse: s-maj=16.0km s-min=5.3km az=150.0*

*NEIC **29** 19:46:24.8±2.2, 52°.2N±0°.1×170°.8W±0°.1, h40km±4km, mb4.0/13, ML3.6(AEIC), Error ellipse: s-maj=22.0km s-min=6.5km az=157.0*

*IDC **29** 19:46:26.6±6.4, 52°.40N×170°.89W, h53km±59km, mb3.4/5, mb1 3.7/7, mb1mx3.2/50, mbtmp3.8/7, ML3.5/2, MS3.2/1, Ms1 3.2/1, ms1mx2.6/29, Error ellipse: s-maj=62.8km s-min=25.3km az=5.0*

ISC 29 19:46:23.5±1.0**, 52°.2N**±0°.2×**170°.72W**±0°.07**, h31**km**, n58, σ1s.36**/52**, mb3.9**/6**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	1.40	54		Pn	19 46 46.3	-0.6
NIKH				Sn	Sn	19 47 01.3	-2.9
OKSP	Okmok Steeple	1.84	53		Pn	19 46 53.2	+0.3
OKCE	Okmok Cone E	2.00	50		Pn	19 46 56.1	+0.9
OKNC	Okmok New Cone	2.04	49		Pn	19 46 56.8	+1.1
OKNC					Sb	19 47 23.6	-1.3
KOFP	Korovin Flat P	2.08	274		Pn	19 46 57.0	+0.7
OKFG	Magazine Ridge	2.11	53		Pn	19 46 57.6	+0.9
ATKA	Atka Island	2.14	272		Pn	19 46 56.8	-0.3
KOKL	Mount Kliuchef	2.15	276		Pn	19 46 58.0	+0.8
MAPS	Pakushin South	2.82	53		Pn	19 47 07.4	+1.0
MSW	Makushin Switc	2.95	52		Pn	19 47 09.7	+1.4
MSW					Sn	19 47 45.8	+3.1
MTBL	Makushin Table	3.04	52		Pn	19 47 11.1	+1.6
UNV	Unalaska Valle	3.05	55		Pn	19 47 10.5	+0.9
GSTR	Great Sitkin T	3.29	271		Pn	19 47 11.9	-1.1
GSMY	Great Sitkin M	3.29	270		Pn	19 47 13.6	+0.6
GSMY					Sn	19 47 53.0	+1.9
GSTD	Great Sitkin T	3.35	270		Pn	19 47 14.3	+0.6
AKRB	Akutan Reef Bi	3.42	53		Pn	19 47 17.0	+2.3
AKUT	Akutan	3.57	54	Pn	Pn	19 47 18.0	+1.2
AKUT				Sn	Sn	19 48 01.1	+3.2
KIWB	Kanaga Island	3.99	268		Pn	19 47 22.9	+0.4
KIMD	Kanaga Island	4.05	267		Pn	19 47 24.6	+1.3
FALS	False Pass	5.12	55	Pn	Pn	19 47 40.4	+2.4
SDPT	Sand Point	6.86	58	Pn	Pn	19 48 03.0	+1.2
OHAK	Old Harbor	11.28	56	Pn	Pn	19 49 02.1	-0.2
Q19K	Cape Douglas,	11.79	48	Pn	Pn	19 49 08.5	-0.8
KDAK	Kodiak Island	11.82	54	P	Pn	19 49 10.5	+0.6
	0.5nm,0.3s,baz=275,slow=4.3,SNR=6.2						
KDAK	Kodiak Island	11.82	54	Pn	Pn	19 49 08.6	-1.2
J20K	Nowinta River	14.81	29	Pn	Pn	19 49 51.7	+1.1
BPAW	Bear Paw Mtn.	15.77	33	Pn	Pn	19 50 03.1	0.0
BPAW				IAmb	IAmb	19 50 23.7	
	comp=Z,11nm,1.4s						
SCM	Sheep Creek Mo	15.91	43	Pn	Pn	19 50 04.1	-0.9
KLU	Klutina	16.37	46	Pn	Pn	19 50 08.3	-2.5
KLU				IAmb	IAmb	19 50 31.9	
	comp=Z,22nm,1.3s						
M24K	Tolsona, Glenn	16.52	43	Pn	Pn	19 50 12.7	0.0
N25K	Chitina, Valde	17.00	46	Pn	Pn	19 50 18.1	-0.7
N25K				IAmb	IAmb	19 50 53.5	
	comp=Z,20nm,1.4s						
VRDI	Verde Repeater	17.38	48	Pn	Pn	19 50 22.4	-1.3
VRDI				IAmb	IAmb	19 50 25.0	
	comp=Z,15nm,1.4s						
H24K	Noodor Dome	17.90	31		Pn	19 50 29.3	-0.5
BARN	Barnard Glacie	18.16	49	P	Pn	19 50 32.0	-1.2
BARN				IAmb	IAmb	19 50 49.1	
	comp=Z,24nm,1.6s						
SCRK	Sand Creek	18.26	39	P	P	19 50 33.0	-1.4
LOGN	Logan Glacier	18.41	50	P	P	19 50 35.9	-0.1
PETK	Petropavlovsk-	19.12	285	P	Pn	19 50 44.2	-0.5
	comp=Z,0.4nm,0.3s,baz=99,slow=14,SNR=5.9						
TOLK	Toolik Lake Re	19.36	23	P	P	19 50 46.6	+0.4
BMAR	Burnt Mountain	19.92	30	P	P	19 50 52.7	+0.3
INK	Inuvik	23.98	34	P	P	19 51 33.4	-1.4
INK				IAmb	IAmb	19 51 35.5	
	comp=Z,6.4nm,1.4s						
YKA	Yellowknife Ar	31.00	48	P	P	19 52 37.1	-0.6
H11N2	WAKE ISLAND Hy	36.78	217	T	T	20 32 46.2	
	baz=23,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	36.79	217	T	T	20 32 39.4	
	baz=23,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	36.80	217	T	T	20 32 40.2	
	baz=23,slow=76,SNR=7.0						
H11S1	WAKE ISLAND Hy	37.98	216	T	T	20 34 17.7	
	baz=23,slow=76,SNR=152						
H11S2	WAKE ISLAND Hy	37.99	216	T	T	20 34 15.5	
	baz=23,slow=76,SNR=127						
H11S3	WAKE ISLAND Hy	37.99	216	T	T	20 34 15.9	
	baz=23,slow=76,SNR=96						
USRK	Ussuriysk Ar.	38.12	281	LR	LR	20 09 15.3	
	comp=Z,36nm,19.5s,baz=113,slow=36						
PDAR	Pinedale Array	41.26	78	P	P	19 54 07.6	+1.8
	comp=Z,0.3nm,0.6s,baz=318,slow=2.0,SNR=4.1						
SONM	Songino Array	50.69	300	P	P	19 55 19.2	-0.7
	comp=Z,0.4nm,0.7s,baz=56,slow=6.9,SNR=2.9						
SONM	Songino Array	50.69	300	IAmb	IAmb	19 55 43.9	
	comp=Z,3.0nm,1.5s						
WMQ	Urumqi	63.00	307	*e*P	P	19 56 48.3	+1.1
MKAR	Makanchi Array	63.34	313	P	P	19 56 47.4	-2.0
	comp=Z,0.3nm,0.7s,baz=35,slow=8.8,SNR=2.2						
CMAR	Chiang Mai Arr	75.85	282	P	P	19 58 06.5	-0.3
	comp=Z,1.5nm,0.7s,baz=26,slow=6.4,SNR=10						
ASAR	Alice Springs	89.63	229	P	P	19 59 18.1	+0.1
	comp=Z,0.8nm,0.7s,baz=26,slow=4.8,SNR=8.3						
H03N2	Juan Fernandez	116.62	111	T	T	22 12 36.4	
	baz=318,slow=77,SNR=8.6						
H03N1	Juan Fernandez	116.63	111	T	T	22 12 36.4	
	baz=318,slow=77,SNR=11						
H03N3	Juan Fernandez	116.64	111	T	T	22 12 32.5	
	baz=318,slow=77,SNR=9.0						

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*ANF **29** 19:51:54.7±0.1, 36°.14N×117°.99W, h10km±1km, ML3.0/18, Error ellipse: s-maj=1.1km s-min=1.0km az=40.0*

*PAS **29** 19:51:55.2±1.7, 36°.15N±0°.02×117°.98W±0°.02, h1km±3km, ML3.0/110, ML2.8/90(NEIC), Error ellipse: s-maj=3.4km s-min=2.7km az=172.0*

*NEIC **29** 19:51:55.0±1.6, 36°.16N±0°.02×117°.99W±0°.01, h2km±6km, Error ellipse: s-maj=3.4km s-min=0.7km az=200.0*

ISC 29 19:51:55.1±1.1**, 36°.16N**±0°.02×**117°.98W**±0°.02**, h4**km±10km**, n71, σ0s.72**/93**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CWC	Cottonwood Cre	0.30	344	P	Pg	19 52 01.1	+0.2
	baz=165						
CWC				S	Sg	19 52 05.3	+0.5
	baz=165						
MPMC	Manual Prospec	0.41	104	P	Pg	19 52 03.1	+0.1
	baz=283,SNR=384						
MPMC				S	Sg	19 52 08.8	+0.5
	baz=283						
ISA	Isabella, Lake	0.64	220	Pg	Pg	19 52 07.2	-0.1
ISA				Sg	Sg	19 52 15.7	+0.1
ISA				IAML		19 52 16.0	
	comp=N,480nm,0.2s						
ISA				IAML		19 52 17.2	
	comp=E,585nm,0.2s						
ISA	Isabella, Lake	0.64	220	P	Pg	19 52 07.2	-0.1
	baz=39,SNR=65						
ISA				S	Sg	19 52 15.4	-0.1
	baz=39						
LRMC	Laurel Mtn Rad	0.72	160	P	Pg	19 52 08.8	0.0
	baz=340,SNR=52						
LRMC				S	Sg	19 52 18.3	+0.2
	baz=340						
QSM	Queen of Sheba	0.92	102		Pg	19 52 12.5	-0.1
QSM				Sg	Sg	19 52 25.2	+0.6
QSM				IAML		19 52 28.7	
	comp=E,361nm,0.8s						
QSM				IAML		19 52 31.9	
	comp=N,314nm,0.8s						
TIN	Tinemaha, Big	0.92	347	P	Pb	19 52 13.1	-0.5
	baz=168,SNR=28						
TIN				S	Sb	19 52 25.7	-0.6
	baz=168						
FURC	Furnace Creek,	0.95	71	P	Pg	19 52 13.6	+0.3
	baz=251,SNR=91						
FURC				S	Sg	19 52 26.6	+0.9
	baz=251						
VES	Vestal, Richgr	0.95	251	P	Pg	19 52 13.3	0.0
	baz=71,SNR=10						
VES				S	Sg	19 52 25.6	0.0
	baz=71						
GRAC	Grapevine Rang	0.97	30	P	Pg	19 52 13.8	+0.1
	baz=210,SNR=52						
GRAC				S	Sb	19 52 27.2	-0.5
	baz=210						
HELL	Mitchell Peak,	0.99	302		Pg	19 52 13.7	-0.4
HELL					Sg	19 52 26.7	-0.4
GWY	Greenwater Val	1.06	88	Pg	Pg	19 52 15.3	-0.1
GWY				Sg	Sg	19 52 29.3	+0.1
GWY				IAML		19 52 35.7	
	comp=N,250nm,0.8s						
LCH	Last Change Ra	1.11	14		Pg	19 52 15.7	-0.6
LCH				Sg	Sg	19 52 30.6	-0.1
LCH				IAML		19 52 35.0	
	comp=E,209nm,0.3s						
VOG	Valley Oaks Go	1.15	279	P	Pg	19 52 16.9	-0.2
	baz=98						
ARVC	Arvin	1.24	214	P	Pg	19 52 18.3	-0.6
	baz=34						
ARVC				S	Sg	19 52 34.8	-0.1
	baz=34						
EDW2	Edwards Air Fo	1.27	181	P	Pg	19 52 18.6	-0.9
	baz=0.5,SNR=44						
EDW2				S	Sg	19 52 35.1	-0.8
	baz=0.5						
GSC	Goldstone, Bar	1.28	131	Pn	Pg	19 52 18.9	-0.7
GSC				IAML		19 52 42.0	
	comp=E,167nm,0.8s						
GSC	Goldstone, Bar	1.28	131	P	Pg	19 52 19.0	-0.6
	baz=312,SNR=85						
GSC				S	Sg	19 52 36.3	+0.2
	baz=312						
MTUM	Tungsten Hills	1.28	339		Pg	19 52 19.4	-0.3
SHOC	Shoshone, Teco	1.40	100	Pg	Pn	19 52 21.9	+0.5
	baz=281						
SHOC				S	Sg	19 52 40.3	+0.2
	baz=281						
TPNV	Topopah Spring	1.60	60		Pn	19 52 24.2	-0.1
TPNV				Sn	Sn	19 52 45.9	+0.4
TPNV				IAML		19 52 49.6	
	comp=E,80nm,0.8s						
TPNV				IAML		19 52 49.9	
	comp=E,82nm,0.6s						
TPNV	Topopah Spring	1.60	60	Pb	Pn	19 52 24.2	-0.1
	baz=240,SNR=45						
TPNV				S	Sn	19 52 45.6	+0.1
	baz=240						
MLAC	Mammoth, Mammo	1.62	335	Pg	Pb	19 52 25.8	0.0
	baz=155						
MLAC				Sb	Sg	19 52 47.6	+0.3
	baz=155						
OSI	Osito Audit: C	1.66	202		Pn	19 52 25.3	+0.4
TUQ	Turquoise Moun	1.82	113	P	Pn	19 52 26.4	-0.8
	baz=294						
THIS	South End of C	1.88	257		Pn	19 52 28.9	+0.9
HEC	Hector,Ludlow	1.88	134	Pb	Pn	19 52 29.1	+1.0
	baz=315						
HEC				Sb	Sb	19 52 54.7	+0.7
	baz=315						
PAGB	Antelope Grade	1.89	258		Pn	19 52 28.9	+0.7
TRAM	Private Proper	1.92	256		Pn	19 52 29.6	+1.0
MWC	Mount Wilson	1.93	182		Pn	19 52 29.3	+0.5
MWC				IAML		19 52 59.4	
	comp=N,68nm,0.5s						
MWC				IAML		19 53 03.9	
	comp=E,68nm,0.6s						
PKM	Mcpherson Peak	1.96	230	Pb	Pn	19 52 30.3	+1.0
	baz=49						
PKM				Sb	Sb	19 52 56.0	-0.4
	baz=49						
PASC	Pasadena Art C	1.99	185	Pn	Pb	19 52 31.4	-0.4
TPH	Tonopah	2.01	17		Pb	19 52 32.6	+0.3
TSCN	Private Proper	2.02	253		Pn	19 52 30.9	+0.9
LHV	Little Huntoon	2.13	349		Pn	19 52 31.9	+0.5
LHV				IAML		19 53 09.6	
	comp=E,72nm,0.7s						
LHV				IAML		19 53 14.1	
	comp=N,49nm,1.0s						
NV11	Mina Array Sit	2.28	356		Pn	19 52 33.5	-0.1
NVAR	Mina Array Bea	2.29	354		Pn	19 52 33.2	-0.6
PMPB	Monarch Peak	2.29	272		Pn	19 52 34.6	+0.9
SHPR	Sheep Range	2.30	80	Pn	Pn	19 52 33.5	-0.4
GMRC	Granite Mounta	2.33	125	P	Pn	19 52 33.0	-1.4
	baz=306						
RAMR	Ramage Ranch	2.41	258		Pn	19 52 36.2	+1.0
RYN	Ryan	2.51	350		Pn	19 52 36.2	-0.6
PRN	Pahroc Range	2.66	61		Pn	19 52 37.6	-1.2
PRN				IAML		19 53 27.2	
	comp=N,59nm,0.7s						
PRN				IAML		19 53 28.3	
	comp=E,54nm,0.5s						
CMB	Columbia Colle	2.69	315	Pn	Pn	19 52 41.4	+2.2
CMB				IAML		19 53 21.0	
	comp=E,53nm,0.5s						
PFO	Pinyon Flats O	2.83	153	Pn	Pn	19 52 40.9	-0.3
SAO	San Andreas Ge	2.86	283	Pn	Pn	19 52 42.0	+0.4
KVN	Kaiserville	2.89	358		Pn	19 52 42.4	+0.3
R11A	Troy Canyon, C	2.90	40		Pn	19 52 42.4	+0.1
R11A				IAML		19 53 29.7	
	comp=N,20nm,0.7s						
R11A				IAML		19 53 29.8	
	comp=E,32nm,0.8s						
YERR	Yerington	3.00	341		Pn	19 52 44.5	+0.9
YERR				IAML		19 53 32.4	
	comp=E,37nm,0.5s						
YERR				IAML		19 53 40.5	
	comp=N,22nm,0.6s						
PNTR	Pine Nut	3.20	337		Pn	19 52 45.5	-0.9
PNTR				IAML		19 53 41.0	
	comp=E,35nm,1.0s						
PNTR				IAML		19 53 51.6	
	comp=N,22nm,1.4s						
EMB	Emerald Bay	3.28	330		Pn	19 52 45.8	-1.7
RUBR	Rubicon Trail	3.37	330	Pn	Pn	19 52 47.9	-0.8
VCNR	Virginia City	3.40	338	Pn	Pn	19 52 49.0	-0.2
VCNR				IAML		19 53 45.9	
	comp=N,22nm,0.6s						
VCNR				IAML		19 53 48.8	
	comp=E,21nm,0.9s						
W13A	Hualapai Mount	3.50	106		Pn	19 52 50.1	-0.3
MPK	Martis Peak	3.53	333		Pn	19 52 51.1	+0.2
BAR	Barrett	3.63	162	Pn	Pn	19 52 52.2	+0.1
BAR				IAML		19 53 32.2	
	comp=E,13nm,4.7s						
BAR				IAML		19 53 43.5	
	comp=N,12nm,4.5s						
PAHR	Pah Rah Range	3.71	343		Pn	19 52 52.1	-1.3
PAHR				IAML		19 54 05.0	
	comp=E,12nm,4.7s						
LCMT	Little Creek M	3.90	76		Pn	19 52 57.0	+1.1
CCUT	Cedar City	3.95	68		Pn	19 52 57.0	+0.3
CCUT				IAML		19 54 03.2	
	comp=E,9.5nm,4.3s						
CCUT				IAML		19 55 06.8	
	comp=N,9.0nm,4.8s						
GLA	Glamis	4.04	139		Pn	19 52 59.0	+1.2
GLA				IAML		19 54 09.5	
	comp=N,9.6nm,0.9s						
GLA				IAML		19 54 10.2	
	comp=E,18nm,0.9s						
PSUT	Pine Spring	4.05	53		Pn	19 52 58.1	0.0
PSUT				IAML		19 54 08.4	
	comp=N,16nm,1.5s						
PSUT				IAML		19 54 18.0	
	comp=E,19nm,2.5s						
SPR3	Spring Creek 3	4.05	44		Pn	19 52 58.2	0.0
SPR3				IAML		19 54 03.8	
	comp=E,13nm,0.7s						
SPR3				IAML		19 54 07.5	
	comp=N,13nm,0.7s						
KNB	Kanab	4.24	77		Pn	19 53 00.3	-0.3
KNB				IAML		19 53 41.2	
	comp=N,7.6nm,4.7s						
KNB				IAML		19 54 09.8	
	comp=E,12nm,4.6s						
BMN	Battle Mountai	4.31	8	Pn	Pn	19 53 00.7	-0.9
BMN				IAML		19 55 11.3	
	comp=E,8.2nm,4.8s						
ORV	Oroville	4.39	322	Pn	Pn	19 53 04.2	+1.7
ORV				IAML		19 54 15.6	
	comp=N,12nm,0.7s						
ORV				IAML		19 54 16.6	
	comp=E,15nm,0.6s						
U15A	North Rim	4.60	85		Pn	19 53 05.8	+0.1
U15A				IAML		19 53 41.5	
	comp=N,8.1nm,4.1s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
U15A				IAML		19 54 04.8	
	comp=E,9.9nm,4.8s						
TCRU	**Three Creeks R**	5.04	59		Pn	19 53 13.6	+1.9
ELK	**Elko**	5.06	24		Pn	19 53 13.2	+1.3
MVU	**Marysvale**	5.16	61		Pn	19 53 12.5	-0.8
MSU	**Marysvale**	5.18	61	Pn	Pn	19 53 13.4	-0.3
WUAZ	**Wupatki**	5.40	95		Pn	19 53 16.9	+0.3

RSNC 29 20:02:09.9±0.9**,5°.27N×73°.74W,h147**^{km}±4^{km}**,ML3.3, Mw3.5,5C-2D,Fault plane solution: NP1:**φ$_s$35.00000°, δ58.00000°,λ-162.00000°.**,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPBC	**San Pablo de B**	0.51	319	eP	Pn	20 02 30.8	-0.2
SPBC				eS	Sn	20 02 47.1	-0.1
SPBC				i		20 02 49.7	
	comp=Z,542nm,0.1s						
CHIC	**Chingaza**	0.63	180	eP	Pn	20 02 31.9	-0.3
CHIC				eS	Sn	20 02 48.5	-0.6
CHIC				i		20 02 52.0	
	comp=Z,259nm,0.3s						
ROSC	**El Rosal**	0.72	234	iP	Pn	20 02 33.6	+0.9
ROSC				eS	Sn	20 02 51.7	+1.7
ROSC				i		20 02 54.1	
	comp=Z,213nm,0.3s						
RUSC	**La Rusia**	0.90	46	⇓eP	Pn	20 02 34.2	+0.1
RUSC				eS	Sn	20 02 52.7	+0.2
RUSC				i		20 02 54.0	
	comp=Z,152nm,0.3s						
VILC	**Villavicencio,**	1.15	178	⇑iP	Pn	20 02 35.3	-0.6
VILC				eS	Sn	20 02 55.3	-0.5
VILC				i		20 02 57.5	
	comp=Z,13µm,0.5s						
NORC	**Norcasia**	1.17	285	⇑eP	Pn	20 02 35.5	-0.5
NORC				eS	Sn	20 02 55.3	-0.5
NORC				i		20 02 56.9	
	comp=Z,309nm,0.1s						
BARC	**Barichara**	1.43	23	eP	Pn	20 02 37.9	-0.8
BARC				eS	Sn	20 02 59.7	-1.1
BARC				i		20 03 04.8	
	comp=Z,188nm,0.3s						
PTBC	**PUERTO BERRIO,**	1.45	331	eP	Pn	20 02 37.5	-1.3
PTBC				eS	Sn	20 03 00.0	-0.9
PTBC				i		20 03 02.4	
	comp=Z,219nm,0.7s						
GUY2C	**Guyana, Caldas**	1.62	269	eP	Pn	20 02 40.8	-0.2
GUY2C				eS	Sn	20 03 06.1	+1.3
GUY2C				i		20 03 12.5	
	comp=Z,57nm,0.5s						
BRRC	**Barranca, Sant**	1.83	1	⇑iP	Pn	20 02 42.9	0.0
BRRC				eS	Sn	20 03 07.7	-0.6
BRRC				i		20 03 10.4	
	comp=Z,151nm,0.2s						
PTGC	**Puerto Gaitan,**	1.92	124	eP	Pn	20 02 43.2	-0.7
PTGC				eS	Sn	20 03 08.5	-1.5
PTGC				i		20 03 12.9	
	comp=Z,244nm,0.4s						
PRAC	**Prado**	1.92	217	⇑iP	Pn	20 02 43.7	-0.3
PRAC				eS	Sn	20 03 10.1	0.0
PRAC				i		20 03 12.1	
	comp=Z,152nm,0.5s						
HELC	**Santa Helena**	2.00	297	eP	Pn	20 02 45.0	-0.2
HELC				eS	Sn	20 03 11.7	-0.7
HELC				i		20 03 18.1	
	comp=Z,79nm,0.2s						
ORTC	**Ortega, Tolima**	2.02	228	eP	Pn	20 02 44.4	-0.7
ORTC				eS	Sn	20 03 11.5	-0.7
ORTC				i		20 03 14.9	
	comp=Z,83nm,0.1s						
PAMC	**Pamplona, Colo**	2.30	27	eP	Pn	20 02 49.1	+0.2
PAMC				eS	Sn	20 03 19.1	+0.2
PAMC				i		20 03 22.8	
	comp=Z,70nm,0.7s						
CBOC	**Ciudad Bolivar**	2.34	285	eP	Pn	20 02 48.9	-0.2
CBOC				eS	Sn	20 03 18.3	-0.9
CBOC				i		20 03 26.8	
	comp=Z,26nm,0.6s						
ZARC	**Zaragoza, Cauc**	2.48	333	⇓iP	Pn	20 02 48.5	-2.1
ZARC				eS	Sn	20 03 19.8	-2.3
ZARC				i		20 03 26.9	
	comp=Z,169nm,0.2s						
OCAC	**Ocana**	2.98	8	iP	Pn	20 02 56.5	-0.6
OCAC				eS	Sn	20 03 32.7	-0.8
OCAC				i		20 03 40.8	
	comp=Z,225nm,0.4s						
DBBC	**Dabeiba**	3.01	305	eP	Pn	20 02 56.8	-0.6
DBBC				eS	Sn	20 03 31.0	-3.1
DBBC				i		20 03 35.8	
	comp=Z,179nm,0.3s						
UREC	**San Jos de Ur**	3.05	324	⇑eP	Pn	20 02 55.2	-2.6
UREC				eS	Sn	20 03 31.4	-3.4
UREC				i		20 03 36.8	
	comp=Z,86nm,0.2s						
SMLC	**San Martn de**	3.53	355	iP	Pn	20 03 01.8	-2.2
SMLC				eS	Sn	20 03 43.6	-2.3
SMLC				i		20 03 45.9	
	comp=Z,118nm,0.3s						
SJCC	**San Jacinto, C**	4.82	343	eP	Pn	20 03 17.3	-3.7
SJCC				eS	Sn	20 04 10.8	-5.6
SJCC				i		20 04 13.9	
	comp=Z,24nm,0.5s						

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*NEIC **29** 20:02:41.3±0.9,23°.52S±0°.05×179°.3W±0°.2,h564^{km}±22^{km}, mb4.5/13,Error ellipse: s-maj=32.4km s-min=4.6km az=81.0*

*IDC **29** 20:02:50.9±2.6,23°.13S×178°.89E,h527^{km}±91^{km},mb2.8/4, mb1 3.1/5,mb1mx2.9/27,mbtmp3.9/5,Error ellipse: s-maj=115.2km s-min=35.9km az=33.0*

ISC 29 20:02:40.1±1.9**,23°.6S**±0°.1×**179°.3W**±0°.2**,h536**^{km}**,n22,** σ**1**^{s}**28**/21**,mb4.3**/10**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	6.32	337	P	P	20 04 23.2	+1.9
	9.8nm,0.3s,baz=60,slow=24,SNR=30						
MSVF	**Nonsavu**	6.32	337	P	P	20 04 23.0	+1.7
PINNC	**Pines Island,**	12.20	272	P	P	20 05 22.4	+1.6
URZ	**Urewera**	14.93	191	P	P	20 05 49.2	+0.3
URZ				IAmb	IAmb	20 06 01.5	
	comp=Z,16nm,1.2s						
QRZ	**Quartz Range**	18.49	200	P	P	20 06 24.9	+2.0
LTZ	**Lake Taylor**	20.36	198	P	P	20 06 40.0	0.0
EIDS	**Eidsvold**	26.95	260	P	P	20 07 38.5	-0.5
EIDS				IAmb	IAmb	20 07 49.1	
	comp=Z,26nm,1.4s						
CAN	**Canberra**	29.82	240	P	P	20 08 04.2	+0.4
CAN				IAmb	IAmb	20 08 09.2	
	comp=Z,24nm,1.5s						
CTAO	**Charters Tower**	32.08	270	P	P	20 08 23.1	-0.3
CTAO				IAmb	IAmb	20 08 24.1	
	comp=Z,32nm,1.6s						
TOO	**Toolangi**	33.12	237	P	P	20 08 32.7	+0.7
TOO				IAmb	IAmb	20 08 52.3	
	comp=Z,11nm,1.6s						
KWAJ	**Kwajalein Atol**	34.63	337	P	P	20 08 43.0	-1.9
STKA	**Stephens Creek**	35.40	248	P	P	20 08 51.4	+0.3
	comp=Z,0.7nm,0.4s,baz=90,slow=8.6,SNR=5.3						
STKA	**Stephens Creek**	35.40	248	P	P	20 08 50.8	-0.3
BBOO	**Buckleboo**	40.12	247	P	P	20 09 28.9	-0.8
BBOO				IAmb	IAmb	20 09 45.8	
	comp=Z,25nm,1.6s						
AS31	**Alice Springs**	42.68	260	P	P	20 09 49.2	-0.9
ASAR	**Alice Springs**	42.68	260	P	P	20 09 49.3	-0.8
	comp=Z,0.5nm,0.4s,baz=96,slow=7.4,SNR=17						
ASAR	**Alice Springs**	42.68	260	P	P	20 09 49.0	-1.1
WB0	**Warramunga Arr**	43.02	266	P	P	20 09 51.3	-1.5
WRA	**Warramunga Arr**	43.03	266	P	P	20 09 51.6	-1.2
	comp=Z,0.6nm,0.3s,baz=102,slow=8.5,SNR=6.5						
WRA	**Warramunga Arr**	43.03	266	P	P	20 09 51.0	-1.8
FORT	**Forrest**	46.98	249	P	P	20 10 22.0	-0.9
FORT				IAmb	IAmb	20 10 23.4	
	comp=Z,10nm,0.9s						
VNDA	**Vanda**	54.73	185	P	P	20 11 32.2	+14
	comp=Z,0.3nm,0.3s,baz=10,slow=11,SNR=1.1						

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*ATH **29** 20:09:21.3,36°.60N×26°.59E,h212^{km}±6^{km},ML3.8/14, Error ellipse: s-maj=6.5km s-min=1.9km az=59.0*

*IDC **29** 20:09:33.8±1.1,36°.52N×26°.65E,h142^{km}±12^{km},mb3.6/8, mb1 3.7/16,mb1mx3.4/56,mbtmp4.1/16,MS2.7/1, Ms1 2.7/1,ms1mx2.3/29,Error ellipse: s-maj=14.5km s-min=11.7km az=140.0*

*NEIC **29** 20:09:33.4±2.4,36°.62N±0°.07×26°.59E±0°.06,h141^{km}±8^{km}, mb4.2/24,ML3.5(THE),Error ellipse: s-maj=10.1km s-min=6.5km az=173.0*

*DDA **29** 20:09:33.5,36°.34N×26°.26E,h39^{km}±6^{km},ML3.5*

*ISK **29** 20:09:34.9,36°.62N×26°.58E,h123^{km}±1^{km},ML3.4/25*

*THE **29** 20:09:35.6,36°.57N×26°.56E,h159^{km}±3^{km},ML3.8/10, Error ellipse: s-maj=3.5km s-min=0.8km az=83.0*

*HLW **29** 20:09:39.5,36°.01N×26°.95E,h29^{km}±24^{km},Md4.3,Ml4.5*

ISC 29 20:09:32.9±0.6**,36°.57N**±0°.03×**26°.61E**±0°.03**,h143**^{km}±5^{km}**, n246,**σ**1**^{s}**47**/286**,mb4.3**/13**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOSK	**Kos Island**	0.35	58	PG	Pn	20 09 53.5	+0.7
NISR	**Nisiros**	0.42	84	P	Pn	20 09 54.0	+0.9
BODT	**Bodrum**	0.75	48	P	Pn	20 09 55.8	+0.7
BODT				S	Sn	20 10 11.5	-0.4
BODT	**Bodrum**	0.75	48	PG	Pn	20 09 55.8	+0.7
BODT				SG	Sn	20 10 09.9	-2.0
DAT	**Datca**	0.79	78	P	Pn	20 09 56.2	+0.7
DAT				S	Sn	20 10 13.0	+0.3
DAT	**Datca**	0.79	78	iP	Pn	20 09 56.4	+0.8
DAT	**Datca**	0.79	78	PG	Pn	20 09 56.3	+0.7
DAT				SG	Sn	20 10 10.9	-1.8
BDRM	**Kayabasi**	0.83	53	iP	Pn	20 09 56.5	+0.8
THR8	**Santorini-Mono**	0.93	260	P	Pn	20 09 57.1	+0.7
THR8	**Santorini-Mono**	0.93	260	P	Pn	20 09 57.2	+0.8
SANT	**Santorini**	0.95	259	P	Pn	20 09 57.4	+0.7
SANT				AML	AML	20 10 14.6	
	comp=N,2095µm,0.8s						
SANT				AML	AML	20 10 15.7	
	comp=E,1286µm,0.5s						
SANT	**Santorini**	0.95	259	PG	Pn	20 09 56.8	+0.1
SANT	**Santorini**	0.95	259		Pn	20 09 56.9	+0.2
THR2	**Thira island,**	0.96	263	P	Pn	20 09 58.0	+1.3
THT2	**Imerovigli**	0.97	263	P	Pn	20 09 58.2	+1.4
THT2	**Imerovigli**	0.97	263	P	Pn	20 09 57.7	+0.9
STAX	**Taxiarchis Har**	0.99	261	P	Pn	20 09 57.8	+0.9
THR3	**Thira Island,**	0.99	261	P	Pn	20 09 57.9	+0.9
THR3	**Thira Island,**	0.99	261	P	Pn	20 09 57.9	+0.9
THR6	**Thira Island,**	1.00	258	P	Pn	20 09 57.7	+0.6
THR6	**Thira Island,**	1.00	258	P	Pn	20 09 58.0	+0.9
APE	**Apeiranthos**	1.00	300	P	Pn	20 09 57.8	+0.6
APE				S	Sn	20 10 15.2	-0.4
APE	**Apeiranthos**	1.00	300	P	Pn	20 09 57.8	+0.6
APE				AML	AML	20 10 15.3	
	comp=N,1126µm,0.6s						
APE				AML	AML	20 10 15.9	
	comp=E,1062µm,0.5s						
APE	**Apeiranthos**	1.00	300	PG	Pn	20 09 57.8	+0.6
DDIM	**Aydin, Didim**	1.02	29	iP	Pn	20 09 58.4	+1.1
THR5	**Thira Island,**	1.03	262	P	Pn	20 09 57.9	+0.6
SMG	**Samos**	1.15	9	P	Pn	20 09 58.9	+0.4
SMG	**Samos**	1.15	9	P	Pn	20 09 58.8	+0.4
SMG				AML	AML	20 10 18.0	
	comp=E,1038µm,0.6s						
SMG				AML	AML	20 10 18.2	
	comp=N,1040µm,0.7s						
GCAM	**G?zelcaml?**	1.24	23	iP	Pn	20 09 59.7	+0.5
GCAM				iS	Sn	20 10 18.9	-0.5
GCAM	**G?zelcaml?**	1.24	23	PN	Pn	20 09 59.8	+0.6
ARG	**Arkhangelos**	1.27	106	P	Pn	20 10 00.9	+1.3
ARG				S	Sn	20 10 20.7	+0.8
	comp=N,3µm,0.4s						
ARG	**Arkhangelos**	1.27	106	P	Pn	20 10 00.9	+1.3
ARG				AML	AML	20 10 21.5	
	comp=N,4495µm,0.4s						
ARG				AML	AML	20 10 21.6	
	comp=E,8773µm,0.4s						
ARG	**Arkhangelos**	1.27	106	PN	Pn	20 10 00.9	+1.3
TURN	**Turunc**	1.33	80	iP	Pn	20 10 01.2	+1.1
TURN				iS	Sn	20 10 19.6	-1.3
TURN	**Turunc**	1.33	80	PN	Pn	20 10 01.3	+1.1
STIA	**Sitia Lasithi**	1.43	197	P	Pn	20 10 02.2	+1.0
STIA				S	Sn	20 10 22.5	-0.3
YER	**Yerkesik**	1.45	67	P	Pn	20 10 03.2	+1.6
YER				S	Sn	20 10 24.8	+1.4
YER	**Yerkesik**	1.45	67	PN	Pn	20 10 03.2	+1.6
YER				SN	Sn	20 10 22.8	-0.6
ZKR	**Zakros**	1.48	193	P	Pn	20 10 03.0	+1.1
ZKR				S	Sn	20 10 25.0	+1.1
	comp=E,2µm,0.4s						
ZKR	**Zakros**	1.48	193	P	Pn	20 10 03.1	+1.3
ZKR				AML	AML	20 10 26.8	
	comp=E,5067µm,0.4s						
ZKR				AML	AML	20 10 29.1	
	comp=N,1174µm,0.4s						
ZKR	**Zakros**	1.48	193	PN	Pn	20 10 03.3	+1.4
ZKR				SN	Sn	20 10 24.5	+0.6
AYDN	**Tasoluk**	1.49	42	iP	Pn	20 10 03.2	+1.3
AYDN				iS	Sn	20 10 24.9	+0.8
DGB	**zmir**	1.50	8	iP	Pn	20 10 02.5	+0.5
DGB				iS	Sn	20 10 22.6	-1.6
TNSA	**Tinos**	1.51	310	P	Pn	20 10 02.6	+0.5
MULA	**Mugla, Merkez-**	1.53	63	iP	Pn	20 10 04.1	+1.7
MULA				iS	Sn	20 10 24.8	-0.1
NPS	**Neapolis**	1.53	212	P	Pn	20 10 03.0	+0.6
NPS				S	Sn	20 10 24.2	-0.7
	comp=N,5µm,0.3s						
NPS	**Neapolis**	1.53	212	P	Pn	20 10 02.9	+0.6
NPS				AML	AML	20 10 25.3	
	comp=E,6616µm,0.4s						
NPS				AML	AML	20 10 25.4	
	comp=N,6076µm,0.2s						
ZEYE	**Izmir, Urla-Ze**	1.67	357	iP	Pn	20 10 03.9	+0.1
ZEYE				iS	Sn	20 10 22.7	-4.9
ZEYE				IAML		20 10 27.0	
	comp=E,242nm,0.7s						
FRMA	**Ierapetra Chan**	1.71	205	P	Pn	20 10 05.9	+1.6
AYDB	**Zeytinkoy-Aydi**	1.71	36	PN	Pn	20 10 05.4	+0.9
HRKL	**Herakleio**	1.75	225	P	Pn	20 10 06.3	+1.5
HRKL	**Herakleio**	1.75	225	PN	Pn	20 10 05.8	+1.0
IACM	**Heraklion**	1.77	225	P	Pn	20 10 06.2	+1.1
IACM				S	Sn	20 10 29.2	-0.4
IACM	**Heraklion**	1.77	225	P	Pn	20 10 06.1	+1.1
KSTL	**Kastelli Herak**	1.78	225	P	Pn	20 10 05.9	+0.8
URLA	**Izmir**	1.79	360	iP	Pn	20 10 05.5	+0.2
URLA				IAML		20 10 30.0	
	comp=E,315nm,0.8s						
URLA				IAML		20 10 33.0	
	comp=N,358nm,0.9s						
URLA	**Izmir**	1.79	360	PN	Pn	20 10 05.8	+0.6
BLCB	**Balcova**	1.85	10	P	Pn	20 10 06.6	+0.8
BLCB	**Balcova**	1.85	10	PN	Pn	20 10 06.6	+0.8
CHOS	**Chios island**	1.87	346	P	Pn	20 10 06.8	+0.6
CHOS	**Chios island**	1.87	346	P	Pn	20 10 06.7	+0.6
CHOS	**Chios island**	1.87	346	PN	Pn	20 10 06.8	+0.6
IDI	**Anoyia**	1.89	228	P	Pn	20 10 06.9	+0.4
	comp=N,44nm,0.3s,baz=47,slow=5.0,SNR=1852						
IDI				S	Sn	20 10 30.6	-1.5
	comp=N,51nm,0.3s,baz=53,slow=16,SNR=9.9						
IDI	**Anoyia**	1.89	228	P	Pn	20 10 06.9	+0.4
IDI				S	Sn	20 10 30.9	-1.3
	comp=N,1µm,0.4s						
IDI	**Anoyia**	1.89	228	P	Pn	20 10 06.9	+0.4
IDI				AML	AML	20 10 32.4	
	comp=N,3360µm,0.5s						
IDI				AML	AML	20 10 34.1	
	comp=E,2136µm,0.3s						
FETY	**Fethiye**	1.99	87	iP	Pn	20 10 08.9	+1.4
FETY				iS	Sn	20 10 31.8	-2.2
FETY				IAML		20 10 36.0	
	comp=N,728nm,0.8s						
FETY				IAML		20 10 36.0	
	comp=E,382nm,0.3s						
FETY	**Fethiye**	1.99	87	PN	Pn	20 10 09.3	+1.8
TAVA	**DENIZLI_Tavas**	2.05	63	iP	Pn	20 10 09.8	+1.5
TAVA				iS	Sn	20 10 34.9	-0.6
CAEL	**Denizli, Camel**	2.24	75	iP	Pn	20 10 10.3	-0.4
CAEL				iS	Sn	20 10 38.5	-1.2
VAM	**Vamos**	2.27	240	P	Pn	20 10 11.4	+0.4
VAM				S	Sn	20 10 38.5	-1.7
	comp=E,2µm,0.3s						
VAM	**Vamos**	2.27	240	P	Pn	20 10 11.5	+0.6
VAM				AML	AML	20 10 44.4	
	comp=N,1877µm,0.2s						
VAM				AML	AML	20 10 46.1	
	comp=E,1523µm,0.4s						
IMMV	**Iera Moni Meta**	2.40	243	P	Pn	20 10 13.5	+1.0
IMMV				S	Sn	20 10 42.2	-0.8
	comp=E,1µm,0.5s						
IMMV	**Iera Moni Meta**	2.40	243	P	Pn	20 10 13.4	+0.8
IMMV				AML	AML	20 10 44.1	
	comp=N,1905µm,0.4s						
IMMV				AML	AML	20 10 45.8	
	comp=E,1965µm,0.5s						
IMMV	**Iera Moni Meta**	2.40	243	PN	Pn	20 10 14.5	+2.0
ZEDA	**zmir-Bergama**	2.42	9	iP	Pn	20 10 13.2	+0.5
ZEDA				iS	Sn	20 10 40.0	-3.4
ZEDA				IAML		20 10 45.0	
	comp=E,151nm,1.1s						
KSL	**Kastellorizon**	2.43	99	P	Pn	20 10 14.3	+1.4
KSL				AML	AML	20 10 45.6	
	comp=N,3116µm,0.4s						
KSL				AML	AML	20 10 45.9	
	comp=E,5767µm,0.5s						
AKAS	**Kas**	2.44	97	iP	Pn	20 10 14.6	+1.5
AKAS				iS	Sn	20 10 42.0	-1.9
AKAS				IAML		20 10 49.0	
	comp=E,845nm,0.5s						
AKAS	**Kas**	2.44	97	PN	Pn	20 10 15.3	+2.2
AKAS	**Kas**	2.44	97		Pn	20 10 14.3	+1.3
GOLH	**Golhisar**	2.46	73	iP	Pn	20 10 15.3	+2.0
GOLH				iS	Sn	20 10 41.7	-2.6
GOLH				IAML		20 10 47.0	
	comp=N,235nm,0.4s						
GOLH				IAML		20 10 52.0	
	comp=E,255nm,0.4s						
AKHS	**Akhisar**	2.50	22	iP	Pn	20 10 14.1	+0.5
DKL	**Dikili**	2.51	5	PN	Pn	20 10 15.1	+1.3
RODP	**Rodopos**	2.52	247	P	Pn	20 10 14.8	+0.8
RODP				S	Sn	20 10 44.4	-1.2
	comp=E,192nm,0.4s						
KULA	**Kula-Manisa**	2.54	39	PN	Pn	20 10 15.5	+1.3
VLY	**Voula,Athens**	2.59	301	P	Pn	20 10 16.0	+1.1
VLY				AML	AML	20 10 48.8	
	comp=N,263µm,1.0s						
VLY				AML	AML	20 10 49.2	
	comp=E,369µm,0.7s						
ELL	**Elmali**	2.66	85	PN	Pn	20 10 17.9	+2.1
ELL	**Elmali**	2.66	85	Pn	Pn	20 10 17.4	+1.6
GVD	**Gavdhos**	2.68	231	P	Pn	20 10 17.5	+1.5
GVD				S	Sn	20 10 48.5	-0.7
	comp=E,1µm,0.5s						
GVD	**Gavdhos**	2.68	231	P	Pn	20 10 17.6	+1.5
GVD				AML	AML	20 10 51.8	
	comp=E,3052µm,0.6s						
GVD				AML	AML	20 10 53.1	
	comp=N,2759µm,0.4s						
SIGR	**SIGRI**	2.71	347	PN	Pn	20 10 17.5	+1.2
KNDR	**Palaiochora Ch**	2.72	242	P	Pn	20 10 20.1	+3.6
ANKY	**Antikythira Is**	2.77	256	P	Pn	20 10 17.6	+0.5
USAK	**Uak-Merkez**	2.87	41	iP	Pn	20 10 19.5	+1.1
KTHA	**Kythira Island**	2.88	265	P	Pn	20 10 19.2	+0.7
KTHA				S	Sn	20 10 51.4	-2.3
	comp=N,140nm,0.2s						
KTHA	**Kythira Island**	2.88	265	P	Pn	20 10 19.2	+0.7
KTHA				AML	AML	20 10 54.1	
	comp=N,263µm,0.3s						
KTHA				AML	AML	20 10 56.6	
	comp=E,323µm,0.2s						
PASA	**Karahalli, USA**	2.90	51	iP	Pn	20 10 20.0	+1.2
PASA				iS	Sn	20 10 51.3	-2.9
KTHR	**Kythira**	2.93	265	P	Pn	20 10 20.6	+1.5
STEP	**BALIKESIR_Sava**	2.94	17	iP	Pn	20 10 20.8	+1.6
BUHA	**Balikesir, Bur**	2.95	7	iP	Pn	20 10 20.0	+0.6
VLI	**Veliai**	2.96	274	P	Pn	20 10 20.1	+0.6
VLI				S	Sn	20 10 53.1	-2.4
	comp=E,145nm,0.3s						
VLI	**Veliai**	2.96	274	P	Pn	20 10 20.4	+0.9
VLI				AML	AML	20 10 55.8	
	comp=N,223µm,0.3s						
VLI				AML	AML	20 10 58.5	
	comp=E,150µm,0.3s						
BRDR	**BURDUR-Merkez**	2.98	67	iP	Pn	20 10 21.5	+1.7
BRDR				iS	Sn	20 10 54.0	-2.0
DEMI	**Demirci**	2.98	33	iP	Pn	20 10 20.4	+0.6
AKUM	**Antalya-Kumluc**	3.02	94	iP	Pn	20 10 21.9	+1.7
AKUM				iS	Sn	20 10 54.2	-2.5
AKUM				IAML		20 11 00.0	
	comp=N,381nm,0.8s						
AKUM				IAML		20 11 00.0	
	comp=E,441nm,0.3s						
BASM	**Basmaki-Afyon**	3.06	63	PN	Pn	20 10 22.6	+1.8
SIMA	**Simav-Kutahya**	3.13	36	PN	Pn	20 10 23.5	+1.7
BALB	**Balikesir**	3.23	18	Pn	Pn	20 10 19.7	-3.2
BUCA	**Burdur, Bucak-**	3.25	75	iP	Pn	20 10 25.5	+2.2
BUCA				iS	Sn	20 11 01.0	-1.2
BUCA				IAML		20 11 05.0	
	comp=E,93nm,0.6s						
BUCA				IAML		20 11 06.0	
	comp=N,98nm,0.5s						
ANTB	**Antalya**	3.26	83	PN	Pn	20 10 25.8	+2.5
EZN	**Ezine**	3.26	356	PN	Pn	20 10 24.8	+1.5
KZIL	**AFYON_Kizioren**	3.28	58	iP	Pn	20 10 24.9	+1.2
BCK	**Bucak**	3.30	73	PN	Pn	20 10 26.4	+2.4
ISP	**Isparta**	3.36	67	PN	Pn	20 10 26.7	+1.9
GDZ	**Gediz**	3.39	41	iP	Pn	20 10 25.8	+0.7
BAGO	**Egridir - ISPA**	3.62	66	iP	Pn	20 10 29.2	+1.1
TVSB	**Tavsanli**	3.65	37	PN	Pn	20 10 30.4	+1.9
SHUT	**Suhut-Afyon**	3.70	56	PN	Pn	20 10 31.3	+2.1
ITM	**Ithomi**	3.81	281	Pn	Pn	20 10 32.0	+1.5
ANDZ	**Kutahya, Merke**	3.92	40	iP	Pn	20 10 33.6	+1.6
YVAC	**Isparta, Yalva**	4.06	64	iP	Pn	20 10 36.0	+2.1
AGG	**Agios Georgios**	4.19	307		Pn	20 10 36.4	+1.0
SEDI	**Konya, Seydise**	4.21	76	iP	Pn	20 10 37.9	+2.1
SEDI				iS	Sn	20 11 23.4	-1.4
ALN	**Alexandroupoli**	4.35	354	Pn	Pn	20 10 38.2	+0.7
KDHN	**Kadinhani**	4.79	64	iP	Pn	20 10 45.6	+2.1
SLUM	**Salum**	5.19	193	P	Pn	20 10 49.1	+0.2
	baz=199						
SLUM				AMP		20 11 00.0	
	baz=199						
SLUM				S	Sn	20 11 40.3	-7.7
	baz=199						
MATC	**Matruh**	5.23	174	P	Pn	20 10 50.1	+0.8
	baz=176						
CSS	**Mathiatis**	5.69	104		Pn	20 10 55.0	-0.4
FNA	**Florina**	5.88	317	Pn	Pn	20 10 56.9	-1.0
BR131	**Keskin Array S**	6.37	58	Pn	Pn	20 11 02.0	-2.6
BRTR	**Keskin Array B**	6.37	58	P	Pn	20 11 07.3	+2.7
	comp=N,0.2nm,0.3s,baz=227,slow=16,SNR=5.7						
BRTR	**Keskin Array B**	6.37	58		Pn	20 11 04.8	+0.1
VTS	**Vitosha**	6.58	338	Pn	Pn	20 11 03.7	-3.7
SWA2		7.37	188	P	Pn	20 11 17.6	-0.3
	baz=191						
HMYD	**Mayadein**	7.61	151	P	Pn	20 11 21.2	0.0
	baz=151						
HNAT	**Natroun**	7.69	153	S	Sn	20 12 35.9	-12
	baz=153						
KOT	**Kottamia**	7.93	145	P	Pn	20 11 25.3	-0.2
	baz=144						
HHAG	**Hagoal**	8.04	144	P	Pn	20 11 26.8	-0.1
	baz=142						
MMAI	**Mount Meron Ar**	8.05	114	P	Pn	20 11 26.0	-1.1
	comp=N,6.8nm,0.3s,baz=298,slow=13,SNR=58						
MMAI				S	Sn	20 12 52.0	-4.7
	comp=N,12nm,0.3s,baz=306,slow=25,SNR=16						
HSAF	**As Saff**	8.07	148	P	Pn	20 11 26.4	-1.0
	baz=147						
RYAN	**Fayoum**	8.07	157	P	Pn	20 11 27.3	0.0
	baz=156						
GLL	**Jalalah**	8.17	147	P	Pn	20 11 28.7	0.0
	baz=146						
TIP	**Timpagrande**	8.22	291	Pn	Pn	20 11 27.7	-1.6
SUZ	**Suez**	8.49	140	P	Pn	20 11 32.8	-0.2
	baz=139						
CEL	**Celeste**	8.70	284	Pn	Pn	20 11 35.5	-0.2
MLR	**Muntele Rosu**	8.93	357	P	Pn	20 11 39.6	+0.8
	comp=N,0.2nm,0.3s,baz=152,slow=6.1,SNR=4.9						
MLR				LR	LR	20 15 38.7	
	comp=N,44nm,19.7s,baz=302,slow=41						
MLR	**Muntele Rosu**	8.93	357	Pn	Pn	20 11 37.0	-1.8
DIVS	**Divibare**	9.06	328		Pn	20 11 40.9	+0.3
GHAJ	**Ghor Haditha**	9.10	123		Pn	20 11 41.7	+0.7
HFRF	**Wahat Farafira**	9.50	171	P	Pn	20 11 46.5	+0.1
	baz=172						
ASF	**Jabal al Asfar**	9.56	114	P	Pn	20 11 47.9	+0.6
	comp=N,0.9nm,0.3s,baz=322,slow=4.6,SNR=8.0						
TAMRE	**El Minia**	9.58	156	P	Pn	20 11 46.8	-0.7
	baz=156						
EIL	**Elat**	9.80	132	P	Pn	20 11 49.5	-0.9
	comp=N,2.6nm,0.3s,baz=324,slow=4.0,SNR=17						
EIL				S	Sn	20 13 33.6	-5.3

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      comp=N,5.8nm,0.3s,baz=64,slow=13,SNR=9.6
RAFF  Raffo Rosso        9.84 277  Pn    Pn     20 11 49.0 -1.9
SGRT  San Giovanni R     9.90 305  Pn    Pn     20 11 50.1 -1.6
NUB   Nuweibaa          10.11 136  P     Pn     20 11 54.1 -0.4
      baz=135
TR2   Tor 2             10.12 142  P     Pn     20 11 53.3 -1.4
      baz=141
HKAT  Jabal Katrina     10.15 140  P     Pn     20 11 55.0 -0.3
      baz=139
PAOL  Paolisi           10.40 299  Pn    Pn     20 11 57.3 -1.1
CORL  Corleone          10.70 281  Pn    Pn     20 12 00.5 -1.8
BURAR Bucovina Array    11.09 355  Pn    Pn     20 12 06.6 -0.8
BUR08 Bucovina Ar. S    11.12 355  Pn    Pn     20 12 06.9 -1.0
HDK1  Dakhla            11.24 167  P     Pn     20 12 09.7 +0.1
      baz=167
AKRG  Al Kharijah       11.52 162  P     Pn     20 12 12.7 -0.4
      baz=162
GTR   Jabal at Tayr     11.53 162  P     Pn     20 12 12.9 -0.4
      baz=162
NRCA  Norcia            12.13 305  Pn    Pn     20 12 20.6 -0.4
PSZ   Piszkesteto       12.38 338  Pn    P      20 12 31.0 +0.6
MURB  Monte Urbino      12.71 306  P     P      20 12 36.8 +2.7
SOKA  Soboth            13.29 323  P     Pn     20 12 37.7 +1.6
      comp=N,4.3nm,0.9s,SNR=5.5
OBKA  Obir              13.41 322 i P    P      20 12 42.9 +1.0
      comp=N,2.3nm,0.6s
ARSA  Arzberg           13.48 326 eP     Pn     20 12 41.3 +2.9
      comp=N,2.3nm,0.6s
CASP  Castiglione de    13.62 302  Pn    Pn     20 12 37.8 -2.4
OSSC  Osservatorio P    13.66 305  Pn    Pn     20 12 37.8 -2.9
JAVC  Velka Javorina    13.92 335 eP     P      20 12 49.3 +1.8
MYKA  Terra Mystica     13.96 320 eP     P      20 12 48.4 +0.5
      comp=N,5.3nm,0.6s,SNR=5.2
ZCCA  Zocca             14.21 308        Pn     20 12 47.4 -0.2
STAL  STALIGIAL         14.21 317        Pn     20 12 46.8 -0.9
AKASG Malin Array Be    14.25   7  P     P      20 12 51.3 +0.2
      comp=N,2.4nm,0.3s,baz=197,slow=11,SNR=19
AKASG Malin Array Be    14.25   7  P     Pn     20 12 46.9 -1.2
AKBB  Malin Array Si    14.25   7  P     Pn     20 12 47.0 -1.1
ZOU   Zoufplan          14.26 319  P     Pn     20 12 47.9 -0.6
TEOL  Teolo             14.29 313        Pn     20 12 47.2 -1.4
KIV   Kislovodsk        14.31  54  P     Pn     20 12 46.4 -2.6
KBA   Koelnbreinsper    14.41 321 eP     P      20 12 54.8 +1.8
      comp=N,14nm,0.6s,SNR=5.6
OJC   Ojcow             14.51 342  P     Pn     20 12 53.5 +2.2
KRUC  Moravsky          14.55 332 eP     P      20 12 54.7 +0.3
ABTA  Abfaltersbach     14.63 318 eP     Pn     20 12 54.9 +2.0
      comp=N,12nm,0.6s,SNR=9.5
VRAC  Vranov            14.68 333  P     P      20 12 56.7 +0.8
      comp=N,1.0nm,0.3s,baz=145,slow=11,SNR=13
VRAC  Vranov            14.68 333 eP     P      20 12 56.6 +0.8
CTI   Castel Tesino     14.68 315        P      20 12 55.8 -0.3
MORC  Moravsky Berou    14.75 336 eP     P      20 12 57.8 +1.1
MORC  Moravsky Berou    14.75 336        Pn     20 12 56.0 +1.5
SALO  Salr              15.11 312        Pn     20 13 00.6 +1.7
SALO                               IAmb  IAmb   20 13 03.2
      comp=Z,16nm,0.9s
MSSA  Maissana          15.13 306  P     Pn     20 13 00.7 +1.6
CKRC  Cesky Krumlov     15.20 328 eP     P      20 13 01.8 +0.1
KRLC  Kraliky           15.26 335 eP     P      20 13 04.4 +2.0
WTTA  Wattenberg        15.42 319 eP     P      20 13 05.9 +1.7
      comp=Z,5.8nm,0.7s,SNR=5.6
GEC2  GERESS Array S    15.48 326        Pn     20 13 04.3 +0.7
GERES GERESS Array B    15.48 326  P     Pn     20 13 05.1 +1.5
      comp=Z,0.2nm,0.3s,baz=138,slow=12,SNR=42
GERES GERESS Array B    15.48 326  P     Pn     20 13 04.5 +0.9
WATA  Walderalm         15.49 319 eP     P      20 13 06.1 +1.0
      comp=Z,6.0nm,0.7s
SQTA  Sankt Quirin      15.62 318 eP     P      20 13 07.6 +1.1
      comp=Z,2.3nm,0.4s
DPC   Dobruska-Polom    15.65 335 eP     Pn     20 13 06.2 +0.6
KHC   Kasperske Hory    15.75 327 eP     Pn     20 13 07.4 +0.6
KHC   Kasperske Hory    15.75 327  P     Pn     20 13 07.7 +0.9
KHC                                IAmb  IAmb   20 13 10.2
      comp=Z,7.5nm,0.8s
FETA  Feichten          15.76 316 i P    P      20 13 09.7 +1.7
      SNR=13
OSTC  Ostas             15.86 335 eP     P      20 13 11.7 +2.7
PRU   Pruhonice         16.01 331 eP     Pn     20 13 10.8 +0.9
DAVOX Davos/Dischmat    16.11 314  P     P      20 13 14.0 +2.1
      comp=Z,0.4nm,0.3s,baz=124,slow=20,SNR=6.4
DAVA  Damuels           16.39 316 eP     P      20 13 15.8 +0.8
      comp=Z,3.1nm,0.3s,SNR=6.3
BNI   Bardonecchia      17.28 306  P     Pn     20 13 26.8 +1.3
BNI                                IAmb  IAmb   20 13 42.1
      comp=Z,10nm,1.3s
SENIN Lac Senin/Sane    17.43 310        P      20 13 26.9 +0.4
SENIN                              IAmb  IAmb   20 13 33.0
      comp=Z,7.8nm,0.7s
SUW   Suwalki           17.61 353 eP     P      20 13 29.3 +1.2
SUW   Suwalki           17.61 353  P     P      20 13 28.4 +0.3
CLL   Collm             17.65 331 eP     P      20 13 29.0 +0.4
CLL   Collm             17.65 331  P     P      20 13 29.6 +0.9
BFO   Black Forest      17.84 317  P     Pn     20 13 32.7 +0.6
IDID  Didziasalis       18.75   0 eP     P      20 13 41.2 +0.6
SSB   Saint Sauveur     18.77 304  P     P      20 13 41.7 +0.7
SSB                                IAmb  IAmb   20 14 03.6
      comp=Z,12nm,1.3s
PABE  Paberze           19.03 355 eP     P      20 13 44.1 +0.5
PABE  Paberze           19.03 355  P     P      20 13 43.3 -0.2
WLF   Walferdange       19.78 318  P     P      20 13 52.4 +0.6
WLF                                IAmb  IAmb   20 13 56.0
      comp=Z,14nm,1.1s
BELG  Belogornoye       21.67  37  P     P      20 14 13.4 +1.4
      comp=Z,6.0nm,0.4s,baz=1.2,slow=1.4,SNR=10
MTSE  Matsula           22.24 356 eP     P      20 14 17.3 -0.4
ESDC  Sonseca Array     24.20 287  P     P      20 14 37.3 +1.1
      comp=Z,0.7nm,0.7s,baz=81,slow=9.8,SNR=6.4
PAB   San Pablo         24.50 286  P     P      20 14 38.5 -0.5
PAB                                IAmb  IAmb   20 14 49.0
      comp=Z,15nm,1.6s
FINES FINESS Array B    24.90 359  P     P      20 14 43.5 +1.3
      comp=Z,2.7nm,0.5s,baz=243,slow=3.7,SNR=21
FINES FINESS Array B    24.90 359  P     P      20 14 42.4 +0.2
FIA1  FINESS Array S    24.90 359  P     P      20 14 43.2 +1.1
HFS   Hagfors           25.00 345  P     P      20 14 43.1  0.0
      comp=Z,1.7nm,0.5s,baz=156,slow=15,SNR=10
NAO01 NORSAR Array S    26.28 343  P     P      20 14 53.5 -1.1
NB2   NORSAR Subarra    26.37 343  P     P      20 14 54.3 -1.2
      comp=Z,10nm,1.4s,baz=151,slow=9.3
NBO00 NORSAR Array S    26.47 343  P     P      20 14 55.3 -1.0
ARU   Arti              29.22  37  P     P      20 15 21.7 +0.8
      comp=Z,0.3nm,0.4s,baz=252,slow=13,SNR=3.0
ARU   Arti              29.22  37  IAmb  IAmb   20 15 44.2
      comp=Z,7.4nm,1.5s
TORD  Torodi Ar. Bea    32.30 230  P     P      20 15 49.8 +1.5
      comp=Z,7.1nm,0.5s,baz=32,slow=8.9,SNR=81
KOWA  Kowa              35.06 239  P     P      20 16 11.7 -0.6
KOWA                               IAmb  IAmb   20 16 26.7
      comp=Z,8.0nm,1.6s
DBIC  Dimbokro          41.37 232  P     P      20 17 06.2 +1.2
      comp=Z,2.4nm,0.6s,baz=38,slow=7.9,SNR=6.0
DBIC  Dimbokro          41.37 232  P     P      20 17 05.6 +0.6
DBIC                               IAmb  IAmb   20 17 33.4
      comp=Z,15nm,1.4s
TIC   Toumodi           41.49 232 eP     P      20 17 07.2 +1.2
KIC   Kosan Boka        41.53 231 eP     P      20 17 06.9 +0.6
      comp=Z,3.8nm,0.5s
LIC   Lamto             41.81 231 eP     P      20 17 08.5 -0.2
      comp=Z,17nm,0.8s
MK31  Makanchi Array    42.02  58  P     P      20 17 10.9 +0.9
MKAR  Makanchi Array    42.02  58  P     P      20 17 11.4 +1.4
      comp=Z,0.4nm,0.5s,baz=268,slow=8.1,SNR=9.3
MKAR                               ScP   ScP    20 22 39.5 +0.3
      comp=Z,0.4nm,0.5s,baz=266,slow=3.5,SNR=8.2
LBTB  Lobatse           61.26 181  P     P      20 19 33.6 +0.6
BOSA  Boshof            64.85 181  P     P      20 19 56.5 -0.2
BATG  Bathurst New B    65.87 312  P     P      20 20 02.8 -0.2
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*IDC **29** 20:10:56.8±4.0, 6°.69N×73°.13W, h163^{km}±33^{km}, mb3.1/3, mb1 3.5/4, mb1mx3.1/27, mbtmp3.6/4, Error ellipse: s-maj=69.1km s-min=35.5km az=84.0*

*RSNC **29** 20:10:57.5±0.8, 6°.80N×73°.14W, h140^{km}±3^{km}, ML3.6, Mw3.8, Fault plane solution: NP1:φ$_s$10.00000°, δ83.00000°, λ158.00000°.*

ISC 29 20:10:55.4±0.9**, 6°.85N**±0°.03×**73°.07W**±0°.05**, h154**^{km}±6^{km}**,**
n31, σ1°.29/58**, mb3.2**/3**, 5C-4D, Northern Colombia**

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Code  Station Name       Δ°   AZ°  Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
BARC  Barichara          0.28 204⇑iP     Pn     20 11 16.6 -0.1
BARC                              eS     Sn     20 11 30.9 -1.9
BARC                              i             20 11 32.4
      comp=Z,982nm,0.3s
PAMC  Pamplona, Colo     0.61  37⇓eP     Pn     20 11 19.5 +1.1
PAMC                              eS     Sn     20 11 36.2 +0.3
PAMC                              i             20 11 38.4
      comp=Z,841nm,0.5s
BRRC  Barranca, Sant     0.69 292 eP     Pn     20 11 18.8 +0.5
BRRC                              eS     Sn     20 11 35.4 -0.3
BRRC                              i             20 11 39.7
      comp=Z,784nm,0.1s
RUSC  La Rusia           0.95 181⇑eP     Pn     20 11 20.5 -0.2
RUSC                              eS     Sn     20 11 39.1 -0.9
RUSC                              i             20 11 40.7
      comp=Z,420nm,0.4s
OCAC  Ocana              1.41 350 eP     Pn     20 11 24.9 +0.4
OCAC                              eS     Sn     20 11 46.5 -0.3
OCAC                              i             20 11 52.0
      comp=Z,1μm,0.2s
PTBC  PUERTO BERRIO,     1.41 258 eP     Pn     20 11 23.6 -0.8
PTBC                              eS     Sn     20 11 44.5 -2.0
PTBC                              i             20 11 47.3
      comp=Z,322nm,0.5s
SPBC  San Pablo de B     1.55 220⇓iP     Pn     20 11 25.8 -0.1
SPBC                              eS     Sn     20 11 47.5 -1.8
SPBC                              i             20 11 53.3
      comp=Z,336nm,0.2s
ZARC  Zaragoza, Cauc     1.89 290 eP     Pn     20 11 29.7 +0.2
ZARC                              eS     Sn     20 11 55.1 -0.5
ZARC                              i             20 12 00.9
      comp=Z,449nm,0.4s
SMLC  San Martn de       2.18 333 eP     Pn     20 11 33.2 +0.2
SMLC                              eS     Sn     20 12 02.6 +0.7
SMLC                              i             20 12 04.3
      comp=Z,504nm,0.4s
NORC  Norcasia           2.20 235 eP     Pn     20 11 32.8 -0.4
NORC                             ⇑iP            20 11 33.1
NORC                              eS     Sn     20 12 00.4 -1.7
NORC                              i             20 12 06.5
      comp=Z,211nm,0.2s
CHIC  Chingaza           2.30 197⇓iP     Pn     20 11 34.9 +0.2
CHIC                              eS     Sn     20 12 03.6 -1.3
CHIC                              i             20 12 07.3
      comp=Z,158nm,0.3s
ROSC  El Rosal           2.35 212  P     Pn     20 11 36.8 +1.5
      comp=Z,32nm,0.3s,baz=130,slow=23,SNR=20
ROSC                               S     Sn     20 12 05.2 -0.8
      comp=Z,109nm,0.3s,baz=34,slow=20,SNR=25
ROSC  El Rosal           2.35 212 eP     Pn     20 11 36.4 +1.1
ROSC                              eS     Sn     20 12 07.4 +1.4
ROSC                              i             20 12 11.3
      comp=Z,374nm,0.4s
HELC  Santa Helena       2.53 255 eP     Pn     20 11 37.7 +0.3
HELC                              eS     Sn     20 12 08.6 -1.2
HELC                              i             20 12 15.7
      comp=Z,167nm,0.4s
VILC  Villavicencio,     2.79 193 eP     Pn     20 11 40.5 +0.1
VILC                              eS     Sn     20 12 14.8 -0.4
PTGC  Puerto Gaitan,     2.79 160⇑iP     Pn     20 11 39.8 -0.5
PTGC                              eS     Sn     20 12 12.7 -2.4
PTGC                              i             20 12 15.5
      comp=Z,225nm,0.4s
GUY2C Guyana, Caldas     2.79 235 eP     Pn     20 11 41.2 +0.4
GUY2C                             eS     Sn     20 12 15.2 -0.7
GUY2C                             i             20 12 22.0
      comp=Z,197nm,0.3s
CBOC  Ciudad Bolivar     3.08 252 eP     Pn     20 11 44.7 +0.6
CBOC                              eS     Sn     20 12 20.6 -1.2
CBOC                              i             20 12 24.4
      comp=Z,70nm,0.4s
DBBC  Dabeiba            3.12 273⇓iP     Pn     20 11 44.8 +0.2
DBBC                              eS     Sn     20 12 19.8 -2.8
DBBC                              i             20 12 27.2
      comp=Z,490nm,0.5s
MOTC  Monteria, Cord     3.21 307 i P    Pn     20 11 44.5 -1.2
MOTC                              eS     Sn     20 12 22.1 -2.4
MOTC                              i             20 12 23.9
      comp=Z,69nm,0.2s
ANIL  Santa Ana          3.29 225 eP     Pn     20 11 48.3 +1.3
ANIL                              eS     Sn     20 12 26.3 -0.6
ANIL                              i             20 12 35.9
      comp=Z,294nm,0.3s
PRAC  Prado              3.60 210 eP     Pn     20 11 50.4 -0.2
PRAC                              eS     Sn     20 12 32.6 -0.9
PRAC                              i             20 12 38.5
      comp=Z,225nm,0.4s
ORTC  Ortega, Tolima     3.63 217 eP     Pn     20 11 51.1 -0.1
ORTC                              eS     Sn     20 12 34.0 -0.3
ORTC                              i             20 12 39.9
      comp=Z,134nm,0.3s
PLMC  San Jos del P      3.73 239 eP     Pn     20 11 52.7 +0.3
PLMC                              eS     Sn     20 12 35.2 -1.5
PLMC                              i             20 12 39.8
      comp=Z,66nm,0.3s
CRJC  Cerrejon, Guaj     4.15   3⇑iP     Pn     20 11 57.4 -0.5
CRJC                              eS     Sn     20 12 44.5 -2.0
CRJC                              i             20 12 53.8
      comp=Z,91nm,0.2s
GUVC  San Jose del G     4.29 174 eP     Pn     20 11 59.6 -0.1
GUVC                              eS     Sn     20 12 46.2 -3.6
GUVC                              i             20 12 52.7
      comp=Z,177nm,0.2s
SMRC  Santa Marta, M     4.44 345 eP     Pn     20 12 01.1 -0.5
SMRC                              eS     Sn     20 12 49.9 -3.3
SMRC                              i             20 12 54.3
      comp=Z,54nm,0.4s
PDAR  Pinedale Array    48.09 324  P     P      20 19 20.9 +1.1
      comp=Z,0.3nm,0.5s,baz=125,slow=10,SNR=4.1
NVAR  Mina Array Bea    51.50 315  P     P      20 19 47.6 +1.9
      comp=Z,0.1nm,0.4s,baz=153,slow=8.6,SNR=2.9
YKA   Yellowknife Ar    63.26 340  P     P      20 21 07.9 +0.6
      comp=Z,1.0nm,0.6s,baz=132,slow=6.5,SNR=21
ASAR  Alice Springs    149.17 234  PKPbc PKPbc  20 30 26.3 -0.4
      comp=Z,0.2nm,0.5s,baz=114,slow=3.4,SNR=4.7
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*IDC **29** 20:17:13.0±1.2, 23°.48N×123°.61E, h0^{km}, mb3.8/6, mb1 3.9/8, mb1mx3.6/44, mbtmp3.8/8, ML3.5/2, MS3.0/3, Ms1 3.0/3, ms1mx2.6/36, Error ellipse: s-maj=29.0km s-min=23.3km az=142.0*

*JMA **29** 20:17:16.9±0.2, 23°.46N×123°.67E, h49^{km}±3^{km}, M3.8*

*NIED **29** 20:17:16.9, 23°.46N×123°.67E, h49^{km}, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.12; $M_{\theta\theta}$4.58; $M_{\phi\phi}$-2.46; $M_{r\theta}$0.71; $M_{\theta\phi}$-0.83; $M_{\phi r}$-2.36; Fault plane solution: $M_0$4.75000×10^{14} NP1: φ$_s$313.00000°, δ68.00000°, λ-39.00000°. NP2:φ$_s$60.00000°, δ54.00000°, λ-153.00000°.*

*NEIC **29** 20:17:17.2±2.9, 23°.41N±0°.02×123°.61E±0°.07, h32^{km}±6^{km}, mb4.4/15 Error ellipse: s-maj=9.7km s-min=3.3km az=93.0*

ISC 29 20:17:15.8±0.7**, 23°.39N**±0°.07×**123°.60E**±0°.04**, h21**^{km}±4^{km}**,**
n55, σ1°.71/73**, mb4.1**/12**, Southwestern Ryukyu Islands**

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Code  Station Name       Δ°   AZ°  Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
HATJ  Hateruma jima      0.69  16  P     Pb     20 17 29.3 +0.1
HATJ                               S     Sb     20 17 38.5 +0.2
JKRS  Kuro-shima         0.93  24  P     Pb     20 17 32.9 -0.2
JKRS                               S     Sb     20 17 44.4 -0.6
IRIF  Iriomote-Funau     0.95   7  P     Pb     20 17 33.1 -0.5
IRIF                              eS     Sb     20 17 45.0 -0.7
JIJ   Ishigaki jima      1.09  27  P     Pn     20 17 34.7 -1.2
JIJ                                S     Sb     20 17 47.4 -2.4
YOJ   Yonaguni jima      1.20 333  P     Pn     20 17 37.3 -0.1
YOJ                                S     Sb     20 17 51.6 -1.2
YOJ   Yonaguni jima      1.20 333        Pn     20 17 36.1 -1.2
YOJ                                Sn    Sb     20 17 51.4 -1.4
YOJ   Yonaguni jima      1.20 333  P     Pn     20 17 37.2 -0.1
JYNG  Yonagunijimaku     1.22 331  P     Pn     20 17 37.4 -0.2
JYNG                               S     Sb     20 17 51.6 -1.7
JISG  Ishigakijimahi     1.36  28  P     Pn     20 17 38.3 -1.3
JISG                              eS     Sn     20 17 53.9 -3.1
JTJ   Tarama             1.60  39  P     Pn     20 17 42.2 -0.7
JTJ                                S     Sn     20 18 01.1 -1.9
NACB  Ninganchiao        2.00 293        Pn     20 17 47.3 -1.0
NACB                               Sn    Sn     20 18 09.0 -3.7
JIRB  Irabujima          2.03  45  P     Pn     20 17 47.9 -0.9
JIRB                               S     Sn     20 18 11.1 -2.4
JMJ2  Miyako jima3       2.08  49  P     Pn     20 17 48.7 -0.7
JMJ2                               S     Sn     20 18 12.9 -1.8
YULB  Yu-li              2.11 271        Pn     20 17 49.0 -1.0
YULB                               Sn    Sn     20 18 12.0 -3.7
JOGS  Gusukube           2.14  50  P     Pn     20 17 49.8 -0.5
JOGS                               S     Sn     20 18 15.0 -1.3
JIKM  Ikemajima          2.15  44  P     Pn     20 17 49.6 -0.8
JIKM                               S     Sn     20 18 14.3 -2.1
TWG   Pinlang            2.39 257        Pn     20 17 52.6 -1.2
TWG                                Sn    Sn     20 18 19.8 -2.7
YHNB  Yeheng             2.40 303        Pn     20 17 54.1 +0.2
YHNB                               Sn    Sn     20 18 19.0 -3.7
YHNB  Yeheng             2.40 303  P     Pn     20 17 54.4 +0.4
SSLB  Suanglung          2.46 280        Pn     20 17 54.0 -0.8
SSLB                               Sn    Sn     20 18 21.0 -3.1
SSLB  Suanglung          2.46 280  P     Pn     20 17 54.4 -0.3
TATO  Taipei             2.49 310  Pn    Pn     20 17 54.4 -0.8
TPUB  Ta-pu              2.73 269        Pn     20 17 59.5 +1.1
TPUB  Ta-pu              2.73 269  P     Pn     20 17 59.9 +1.4
KNMB  Chin-men Tao       4.89 284  Pn    Pn     20 18 27.7 -0.4
JOW   Kunigami           5.45  50  Pn    Pn     20 18 33.1 -2.8
      5.6nm,0.3s,baz=181,slow=16,SNR=16
JOW                                Sn    Sn     20 19 32.4 -5.6
      0.9nm,0.3s,baz=97,slow=25,SNR=1.2
JOW   Kunigami           5.45  50        Pn     20 18 32.3 -3.5
HKPS  Hong Kong Po S     8.79 265  Pn    Pn     20 19 21.0 -0.8
JNU   Nakatsue          11.62  32  Pn    Pn     20 19 58.0 -2.5
KSRS  Korea Array       14.50  14  Pn    Pn     20 20 42.0 +2.2
      0.2nm,0.3s,baz=198,slow=11,SNR=5.5
KSRS                               LR    LR     20 25 53.8
      comp=Z,43nm,18.2s,baz=217,slow=36
MAJO  Matsushiro        18.19  41  P     Pn     20 21 26.9 -0.2
MAJO                               IAmb  IAmb   20 22 22.5
      comp=Z,55nm,1.9s
MJAR  Matsushiro Arr    18.19  41  P     P      20 21 27.9 +0.7
      comp=Z,0.1nm,0.3s,baz=238,slow=8.7,SNR=6.2
MJB9  Matsu-Tunnel      18.19  41  P     Pn     20 21 26.9 -0.2
MJB9                               IAmb  IAmb   20 22 22.5
      comp=Z,57nm,1.9s
JMM   Marumori          20.62  42  P     P      20 21 51.9 -1.9
JMM                                IAmb  IAmb   20 22 36.0
      comp=Z,39nm,1.2s
GUMO  Guam              22.38 112  LR    LR     20 28 00.3
      comp=Z,25nm,21.6s,baz=175,slow=29
CMAR  Chiang Mai Arr    23.53 263  P     P      20 22 25.4 +0.6
      comp=Z,0.2nm,0.4s,baz=65,slow=5.4,SNR=4.2
ASAJ  Asahikawa         25.90  32  P     P      20 22 46.3  0.0
      comp=Z,9.8nm,0.8s,baz=235,slow=14,SNR=7.8
JKA   Kamikawa-asahi    25.90  32  P     P      20 22 46.3  0.0
KLR   Kul'dur           26.58  12  LR    LR     20 35 03.2
      comp=Z,60nm,18.9s,baz=294,slow=40
SONM  Songino Array     27.99 335  P     P      20 23 04.7 -0.5
SONM                               IAmb  IAmb   20 24 02.0
      comp=Z,8.5nm,1.9s
MK31  Makanchi Array    40.45 316  P     P      20 24 51.8 -1.0
MKAR  Makanchi Array    40.45 316  P     P      20 24 52.7 -0.1
      comp=Z,0.7nm,0.6s,baz=102,slow=9.0,SNR=14
MKAR  Makanchi Array    40.45 316  P     P      20 24 52.2 -0.6
MAKZ  Makanchi          40.65 316  P     P      20 24 53.9 -0.6
MAKZ                               IAmb  IAmb   20 25 33.3
      comp=Z,5.3nm,1.6s
KURK  Kurchatov         44.12 320  P     P      20 25 22.5 -0.1
WB0   Warramunga Arr    44.17 165  P     P      20 25 20.8 -2.4
WB0                                IAmb  IAmb   20 26 49.0
      comp=Z,28nm,1.6s
ASAR  Alice Springs     47.83 167  P     P      20 25 53.2 +1.0
      comp=Z,0.4nm,0.7s,baz=352,slow=7.4,SNR=5.3
BRVK  Borovoye          49.76 321  P     P      20 26 06.3 -0.4
BRVK                               IAmb  IAmb   20 26 21.3
      comp=Z,5.7nm,1.5s
ABKAR Akbulak array     55.57 315  P     P      20 26 50.6 +0.9
ABKAR                              IAmb  IAmb   20 26 51.3
      comp=Z,3.0nm,0.7s
ABKAR Akbulak array     55.57 315  P     P      20 26 50.6 +0.9
ABKAR                              PcP   PcP    20 27 48.4 -1.0
SDPT  Sand Point        63.15  38  P     P      20 27 41.9  0.0
TOLK  Toolik Lake Re    67.30  23  P     P      20 28 07.6 -1.2
FINES FINESS Array B    73.24 330  P     P      20 28 45.1 -0.1
      comp=Z,3.2nm,1.1s,baz=69,slow=7.6,SNR=4.1
YKA   Yellowknife Ar    82.83  23  P     P      20 29 41.1 +2.7
      comp=Z,0.2nm,0.5s,baz=312,slow=5.4,SNR=6.2
GERES GERESS Array B    84.85 321  P     P      20 29 49.3 +0.2
      comp=Z,0.5nm,0.7s,baz=49,slow=4.1,SNR=6.2
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*IDC **29** 20:20:23.0±1.2, 26°.06S×70°.52W, h0^{km}, mb4.1/2, mb1 3.9/4, mb1mx3.7/36, mbtmp3.9/4, ML3.6/2, MS2.7/1, Ms1 2.7/1, ms1mx2.4/21, Error ellipse: s-maj=53.6km s-min=22.0km az=126.0*

*NEIC **29** 20:20:25.9, 25°.80S×70°.98W, h36^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}3.40; $M_{\theta\theta}$0.66; $M_{\phi\phi}$-4.06; $M_{r\theta}$1.04; $M_{\theta\phi}$-0.27; $M_{\phi r}$-0.37; Fault plane solution: $M_0$3.94000×10^{14} NP1:φ$_s$165.47000°, δ50.35000°, λ65.21000°. NP2:φ$_s$21.37000°, δ45.65000°, λ116.83000°. Principal axes: T 3.7702, Plg71.0000°, Azm10.0000°; N 0.3155, Plg19.0000°, Azm182.0000°; P -4.0857, Plg2.0000°, Azm273.0000°;*

*NEIC **29** 20:20:26.4±2.5, 25°.80S±0°.03×70°.97W±0°.10, h30^{km}±7^{km}, mb4.4/3, Mwr3.7/16, ML4.0(GUC) Error ellipse: s-maj=12.9km s-min=4.9km az=88.0*

*GUC **29** 20:20:27.6±0.6, 25°.78S×70°.62W, h39^{km}±6^{km}, ML4.0*

ISC 29 20:20:26.8±1.3**, 25°.79S**±0°.04×**70°.94W**±0°.08**, h37**^{km}±2^{km}**,**
n66, σ1°.24/68**, Near coast of northern Chile**

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Code  Station Name       Δ°   AZ°  Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
PB14  IPOC Station P     1.26  23 eP     Pn     20 20 48.9 +0.8
PB14                              i S    Sn     20 21 04.7 +0.6
PB14  IPOC Station P     1.26  23        Pn     20 20 49.0 +0.8
PB14                               Sn    Sn     20 21 04.6 +0.6
GO03  Copiap             1.90 161 eP     Pn     20 20 58.2 +1.4
GO03                              eS     Sn     20 21 20.7 +1.3
GO03                               IAML         20 21 24.9
      comp=E,1μm,0.5s
GO03  Copiap             1.90 161  Pn    Pn     20 20 58.6 +1.8
GO03                                     Sn     20 21 20.8 +1.3
AC02  Maricunga          1.93 123 eP     Pn     20 20 57.5  0.0
AC02                              eS     Sn     20 21 19.7 -1.1
AC02                               IAML         20 21 24.3
      comp=E,2μm,0.2s
AC02  Maricunga          1.93 123  Pn    Pn     20 20 57.5  0.0
AC02                               Sn    Sn     20 21 20.1 -0.6
PB10  IPOC Station P     2.30   9 eP     Pn     20 21 02.6 +0.4
PB10  IPOC Station P     2.30   9  Pn    Pn     20 21 02.6 +0.4
AC04  Llanos de Chal     2.40 183 eP     Pn     20 21 02.3 -1.3
AC04                               IAML         20 21 52.8
      comp=N,460nm,0.7s
AC04  Llanos de Chal     2.40 183  Pn    Pn     20 21 03.3 -0.3
PB15  IPOC Station P     2.90  28 eP     Pn     20 21 11.8 +1.1
PB15  IPOC Station P     2.90  28        Pn     20 21 11.8 +1.1
PB05  IPOC Station P     3.00  13 i P    Pn     20 21 12.5 +0.5
LCO   Las Campanas       3.21 176 eP     Pn     20 21 15.8 +0.9
LCO   Las Campanas       3.21 176  Pn    Pn     20 21 16.5 +1.5
PB06  IPOC Station P     3.32  22 i P    Pn     20 21 17.1 +0.7
PB06                               IAML         20 22 21.0
      comp=N,401nm,0.4s
PB06  IPOC Station P     3.32  22        Pn     20 21 16.8 +0.4
PB04  IPOC Station P     3.52  12 i P    Pn     20 21 19.2 +0.1
PB04                               IAML         20 22 20.0
      comp=N,436nm,0.3s
PB04  IPOC Station P     3.52  12        Pn     20 21 19.2 +0.1
PB04                               Sn    Sn     20 21 58.3 -1.3
LVC   Limon Verde        3.67  31  Pn    Pn     20 21 23.0 +1.6
      comp=N,3.9nm,0.3s,baz=199,slow=7.2,SNR=43
LVC                                Sn    Sn     20 22 06.7 +3.1
      comp=N,25nm,0.3s,baz=46,slow=16,SNR=5.7
LVC                                LR    LR     20 22 47.8
      comp=N,95nm,18.3s,baz=215,slow=39
LVC   Limon Verde        3.67  31 eP     Pn     20 21 22.9 +1.5
LVC   Limon Verde        3.67  31  Pn    Pn     20 21 22.2 +0.8
PB03  IPOC Station P     3.88  17 i P    Pn     20 21 24.1 -0.1
PB07  IPOC Station P     4.16  14 eP     Pn     20 21 28.0  0.0
PB07  IPOC Station P     4.16  14        Pn     20 21 27.9 -0.1
PB09  IPOC Station P     4.27  22 eP     Pn     20 21 30.7 +1.3
PB09  IPOC Station P     4.27  22        Pn     20 21 30.8 +1.3
GO04  Tololo Observa     4.36 178 eP     Pn     20 21 31.7 +0.9
GO04  Tololo Observa     4.36 178  Pn    Pn     20 21 32.7 +2.0
PB02  IPOC Station P     4.56  12 eP     Pn     20 21 31.4 -2.0
CO06  Fray Jorge         4.90 187        Pn     20 21 36.9 -1.0
PB01  IPOC Station P     4.91  16 eP     Pn     20 21 38.0 -0.2
PB01  IPOC Station P     4.91  16        Pn     20 21 38.2  0.0
CO03  El Pedregal        5.03 178  Pn    Pn     20 21 40.5 +0.7
TA01  Diego Aracena      5.25   8  Pn    Pn     20 21 35.7 -7.0
TA02  Huaiquique         5.55   8  Pn    Pn     20 21 40.9 -5.9
PB08  IPOC Station P     5.86  17        Pn     20 21 45.8 -5.7
PB11  IPOC Station P     6.12  11        Pn     20 21 51.2 -3.7
VA03  San Esteban        6.95 177        Pn     20 22 06.4 +0.2
```

PB12	**IPOC Station P**	**7.17**	**5**	Pn	**Pn**	**20 22 08.5**	**-0.7**
MT02	**Curacav**	**7.44**	**181**	Pn	**Pn**	**20 22 11.8**	**-1.0**
PB16	**IPOC Station P**	**7.54**	**10**	Pn	**Pn**	**20 22 13.9**	**-0.9**
MT09	**Talagante**	**7.96**	**180**	Pn	**Pn**	**20 22 18.3**	**-1.7**
MT01	**Popeta**	**8.05**	**182**	Pn	**Pn**	**20 22 20.2**	**-0.9**
BO01	**Tunca**	**8.57**	**181**	Pn	**Pn**	**20 22 26.9**	**-1.4**
BO02	**Sierra Bellavi**	**8.97**	**179**	Pn	**Pn**	**20 22 32.6**	**-1.3**
LPAZ	**La Paz**	**9.82**	**16**	Pn	**Pn**	**20 22 47.4**	**+1.4**
	comp=N,0.3nm,0.3s,baz=185,slow=4.3,SNR=3.1						
LPAZ	**La Paz**	**9.82**	**16**		**Pn**	**20 22 43.8**	**-2.2**
H03N1	**Juan Fernandez**	**10.30**	**220**	Pn	**Pn**	**20 22 53.3**	**+1.5**
	baz=286,slow=74,SNR=6.9						
H03N1				T	T	20 33 24.4	
	baz=48,slow=72,SNR=130						
H03N2	**Juan Fernandez**	**10.31**	**220**	Pn	**Pn**	**20 22 54.0**	**+2.2**
H03N2				T	T	20 33 26.7	
	baz=48,slow=72,SNR=122						
H03N3	**Juan Fernandez**	**10.32**	**220**	Pn	**Pn**	**20 22 52.9**	**+0.8**
	baz=103,slow=74,SNR=5.7						
H03N3				T	T	20 33 23.5	
	baz=48,slow=72,SNR=115						
H03S3	**Juan Fernandez**	**10.58**	**219**	Pn	**Pn**	**20 22 54.8**	**-0.7**
	SNR=8.8						
H03S1	**Juan Fernandez**	**10.59**	**219**	Pn	**Pn**	**20 22 54.8**	**-0.8**
	SNR=5.1						
H03S2	**Juan Fernandez**	**10.59**	**219**	Pn	**Pn**	**20 22 54.9**	**-0.8**
	SNR=4.7						
LL01	**San Ignacio de**	**16.59**	**184**	P	**Pn**	**20 24 17.3**	**+0.9**
LL01				IAmb	IAmb	20 24 25.2	
	comp=Z,62nm,1.4s						
ITAB	**Concordia**	**16.90**	**99**	P	**P**	**20 24 22.4**	**+0.2**
ITAB				IAmb	IAmb	20 24 36.8	
	comp=Z,35nm,1.5s						
BDFB	**Brasilia**	**23.67**	**69**	P	**P**	**20 25 34.1**	**-1.2**
	comp=Z,1.9nm,0.6s,baz=243,slow=16,SNR=3.5						
BDFB	**Brasilia**	**23.67**	**69**	P	**P**	**20 25 34.0**	**-1.2**
BDFB				IAmb	IAmb	20 25 48.2	
	comp=Z,15nm,1.3s						
TORD	**Torodi Ar. Bea**	**80.55**	**70**	P	**P**	**20 32 36.1**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=262,slow=4.9,SNR=15						
H11S2	**WAKE ISLAND Hy**	**126.46**	**275**	T	T	22 58 57.5	
	baz=307,slow=74,SNR=6.2						
H11S1	**WAKE ISLAND Hy**	**126.47**	**275**	T	T	22 59 06.7	
	baz=307						
H11S3	**WAKE ISLAND Hy**	**126.48**	**275**	T	T	22 59 00.7	
	baz=307,slow=74,SNR=6.6						
ZALV	**Zalesovo Beam**	**146.61**	**26**	PKPbc	**PKiKP**	**20 40 06.1**	**-0.7**
	comp=Z,1.2nm,0.4s,baz=276,slow=5.7,SNR=4.3						
ZALV	**Zalesovo Beam**	**146.61**	**26**		**PKPdf**	**20 40 02.1**	**-0.3**
MKAR	**Makanchi Array**	**150.17**	**38**	PKPbc	**PKiKP**	**20 40 15.3**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=332,slow=2.1,SNR=5.0						
MKAR	**Makanchi Array**	**150.17**	**38**		**PKPdf**	**20 40 09.9**	**+1.4**

NEIC 29 20:24:42.8±0.8,**36°.504N**±0°.008×**98°.90W**±0°.05, **h16**^{km}±3^{km},**mb_Lg3.0**/15,**Error ellipse: s-maj=5.9km s-min=1.0km az=83.0,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.15**	**214**	Pg	Pg	20 24 46.5	-0.4
U32A				Sg	Sg	20 24 48.7	-0.8
OK035	**E0210 Rd and N**	**0.25**	**36**	Pg	Pg	20 24 48.6	+0.2
OK035				Sg	Sg	20 24 52.7	+0.5
OK032	**Salt Plains WL**	**0.63**	**61**	Pg	Pg	20 24 54.8	-0.4
OK032				Sg	Sg	20 25 03.2	-0.3
CROK	**Carrier**	**0.74**	**90**		Pg	20 24 56.6	-0.6
CROK				Sg	Sg	20 25 06.1	-0.8
KAN14	**Manchester OK**	**0.88**	**59**		Pb	20 24 59.5	-0.2
KAN14				Sg	Sb	20 25 11.1	0.0
KAN10	**Anthony SW Sta**	**0.89**	**46**	Pg	Pb	20 24 59.7	-0.2
KAN10				Sg	Sg	20 25 11.8	-0.1
GC02	**Grant County #**	**0.90**	**67**	Pg	Pb	20 24 59.8	-0.3
GC02				Sg	Sb	20 25 11.9	0.0
KAN16	**Harper SW Stat**	**0.98**	**43**		Pb	20 25 01.6	+0.1
KAN16					Sn	20 25 15.2	-0.4
KAN05	**Bluff City Nor**	**1.02**	**53**		Pb	20 25 01.8	-0.3
KAN05					Sg	20 25 15.7	-0.2
KAN08	**Anthony NE Sta**	**1.03**	**46**		Pb	20 25 02.4	0.0
KAN08					Sn	20 25 16.9	0.0
KAN12	**Harper NE Stat**	**1.07**	**42**		Pn	20 25 03.1	-0.1
KAN12				Sg	Sb	20 25 15.0	-1.8
KAN06	**Argonia West S**	**1.12**	**48**		Pn	20 25 03.8	0.0
KAN06					Sn	20 25 18.7	-0.2
KAN01	**Argonia South**	**1.12**	**54**		Pn	20 25 03.9	0.0
KAN01					Sn	20 25 18.7	-0.2
KAN13	**South Haven SW**	**1.25**	**66**		Pb	20 25 06.0	0.0
KAN13					Sn	20 25 22.2	+0.1
BCOK	**Bluff Creek, N**	**1.34**	**129**		Pn	20 25 06.3	-0.6
BCOK					Sn	20 25 24.1	-0.3
OK029	**Liberty Lake**	**1.36**	**121**	Pn	Pn	20 25 06.3	-0.9
OK029				Sn	Sb	20 25 25.4	+0.2
BLOK	**Blackwell**	**1.38**	**79**		Pn	20 25 07.6	+0.2
OK025	**Westminster Rd**	**1.56**	**126**	Pn	Pn	20 25 10.4	+0.4
OKCFA	**Oklahoma City**	**1.60**	**132**	Pn	Pn	20 25 10.4	-0.1
OKCSW	**OKLAHOMA CITY**	**1.61**	**132**	Pn	Pn	20 25 10.7	+0.1
FNO	**Franklin**	**1.74**	**135**	Pn	Pn	20 25 12.8	+0.5
OK031	**S. Brethren Rd**	**1.75**	**108**	Pn	Pn	20 25 12.6	+0.1
QUOK	**Quay**	**1.80**	**100**	Pn	Pn	20 25 13.1	-0.1
OK030	**Cody Creek RV**	**1.80**	**108**	Pn	Pn	20 25 13.2	-0.1
OK034	**N. Norfolk Rd.**	**1.83**	**105**	Pn	Pn	20 25 13.7	0.0
R32A	**Long Quarter,**	**1.92**	**4**	Pn	Pn	20 25 14.4	-0.5
R32A				IAmb_Lg		20 25 46.5	
	comp=Z,19nm,1.0s						
T35A	**Sooner Cattle**	**1.96**	**77**	Pn	Pn	20 25 15.9	+0.5
X34A	**Smith Ranch, M**	**2.09**	**155**		Pn	20 25 17.7	+0.5
X34A				IAmb_Lg		20 25 52.9	
	comp=Z,16nm,0.7s						
W35A	**Tecumseh**	**2.12**	**129**	Pn	Pn	20 25 17.8	+0.1
CBKS	**Cedar Bluff**	**2.40**	**344**	Pn	Pn	20 25 21.9	+0.4
AMTX	**Amarillo**	**2.78**	**235**	Pn	Pn	20 25 27.0	+0.2
AMTX				IAmb_Lg		20 26 11.0	
	comp=Z,24nm,1.2s						
OGNE	**Ogallala**	**5.07**	**332**	IAmb_Lg		20 27 30.0	
	comp=Z,143nm,1.0s						
K31A	**O'Neill**	**6.11**	**1**	IAmb_Lg		20 28 03.1	
	comp=Z,36nm,0.8s						
ISCO	**Idaho Springs**	**6.23**	**304**	IAmb_Lg		20 28 17.4	
	comp=Z,25nm,1.1s						
SMCO	**Snowmass**	**6.93**	**295**	IAmb_Lg		20 28 40.3	
	comp=Z,21nm,1.3s						
PHWY	**Pilot Hill**	**7.01**	**315**	IAmb_Lg		20 28 36.4	
	comp=Z,54nm,1.2s						
RWWY	**Rawlins**	**8.28**	**311**	IAmb_Lg		20 29 22.7	
	comp=Z,31nm,1.3s						

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*IDC **29** 20:25:10.3±0.9,34°.36S×109°.66W,h0^{km},mb4.3/7, mb1 4.5/7,mb1mx4.1/35,mbtmp4.3/7,MS4.0/10, Ms1 4.0/10,ms1mx3.8/19,Error ellipse: s-maj=29.5km s-min=23.3km az=20.0*

*NEIC **29** 20:25:11.9±1.4,34°.6S±0°.1×109°.5W±0°.2,h13^{km}±4^{km}, mb4.8/43,Error ellipse: s-maj=25.1km s-min=20.3km az=66.0*

*GCMT **29** 20:25:12.9±0.4,34°.48S±0°.03×109°.28W±0°.03,h28^{km}±1^{km}, MW4.9/69,Moment Tensor Solution. s15,c15; s69,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.71±.17; $M_{\theta\theta}$-1.88±.12; $M_{\phi\phi}$2.59±.14; $M_{r\theta}$-1.30±.23; $M_{\theta\phi}$1.16±.13; $M_{\phi r}$0.84±.21; Best double couple: $M_0$3.01800×10^{16} NP1:ϕ_s54.00000°,δ61.00000°,λ-18.00000°. NP2: ϕ_s153.00000°,δ75.00000°,λ-150.00000°. Principal axes: T 2.9540, Plg9.0000°, Azm281.0000°; N 0.1300, Plg56.0000°, Azm177.0000°; P -3.0820, Plg32.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 20:25:11.4±0.8,**34°.6S**±0°.1×**109°.3W**±0°.1,**h10**^{km},**n75, σ1^{s}.17**/56,**mb4.8**/27,**MS4.1**/13,**Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**7.39**	**0**	LR	LR	20 29 09.3	
	comp=Z,1μm,18.6s,baz=140,slow=33						
H03S2	**Juan Fernandez**	**25.12**	**97**	T	T	20 56 46.5	
	baz=262,SNR=676						
H03S1	**Juan Fernandez**	**25.14**	**97**	T	T	20 56 47.1	
	baz=262,SNR=723						
H03S3	**Juan Fernandez**	**25.14**	**97**	T	T	20 56 44.7	
	baz=262,SNR=666						
H03N2	**Juan Fernandez**	**25.19**	**96**	T	T	20 56 43.1	
	baz=266,slow=73,SNR=71						
H03N3	**Juan Fernandez**	**25.20**	**96**	T	T	20 56 44.4	
	baz=266,slow=73,SNR=73						
H03N1	**Juan Fernandez**	**25.21**	**96**	T	T	20 56 45.2	
	baz=266,slow=73,SNR=86						
GO05	**Huala**	**30.62**	**102**	P	**P**	**20 31 26.2**	**+0.5**
GO05				IAmb	IAmb	20 31 28.2	
	comp=Z,16nm,1.2s						
ML02	**Panimavida**	**30.90**	**103**	P	**P**	**20 31 28.4**	**+0.2**
PLCA	**Paso Flores**	**31.14**	**113**	P	**P**	**20 31 32.8**	**+2.5**
	comp=Z,1.4nm,0.7s,baz=310,slow=11,SNR=3.9						
PLCA				LR	LR	20 41 02.1	
	comp=Z,148nm,18.4s,baz=293,slow=30						
PLCA	**Paso Flores**	**31.14**	**113**	P	**P**	**20 31 30.3**	**-0.1**
MT01	**Popeta**	**31.39**	**100**	P	**P**	**20 31 30.1**	**-2.3**
BO01	**Tunca**	**31.41**	**101**	P	**P**	**20 31 31.6**	**-1.2**
BO01				IAmb	IAmb	20 31 35.6	
	comp=Z,18nm,1.1s						
GO09	**Cerro Castillo**	**31.43**	**134**	P	**P**	**20 31 32.8**	**+0.2**
MG05	**Puerto Natales**	**31.45**	**134**	P	**P**	**20 31 31.6**	**-1.2**
BO02	**Sierra Bellavi**	**31.58**	**102**	P	**P**	**20 31 33.5**	**-0.8**
BO02				IAmb	IAmb	20 31 37.0	
	comp=Z,12nm,0.8s						
MT09	**Talagante**	**31.62**	**100**	P	**P**	**20 31 35.0**	**+0.3**
MT09				IAmb	IAmb	20 31 37.1	
	comp=Z,14nm,1.1s						
VA03	**San Esteban**	**32.21**	**98**	P	**P**	**20 31 38.6**	**-1.2**
CO03	**El Pedregal**	**32.60**	**94**	P	**P**	**20 31 43.0**	**-0.3**
CO03				IAmb	IAmb	20 31 49.4	
	comp=Z,16nm,1.5s						
GO04	**Tololo Observa**	**32.71**	**93**	P	**P**	**20 31 44.7**	**+0.2**
LCO	**Las Campanas**	**33.16**	**91**	P	**P**	**20 31 50.4**	**+2.0**
LCO				IAmb	IAmb	20 31 51.1	
	comp=Z,17nm,1.2s						
ZON	**Zonda**	**34.05**	**97**	P	**P**	**20 31 56.4**	**+0.5**
ZON				IAmb	IAmb	20 31 59.4	
	comp=Z,24nm,1.3s						
AC02	**Maricunga**	**35.24**	**89**	P	**P**	**20 32 07.1**	**+0.3**
AC02				IAmb	IAmb	20 32 10.0	
	comp=Z,10nm,0.8s						
TBI	**Tubuai**	**36.62**	**277**	*e*LR	LR	20 42 02.6	
	comp=Z,1μm,26.8s						
PB06	**IPOC Station P**	**36.63**	**82**	P	**P**	**20 32 19.2**	**+0.9**
PB06				IAmb	IAmb	20 32 21.1	
	comp=Z,21nm,0.9s						
PB07	**IPOC Station P**	**36.83**	**80**	P	**P**	**20 32 21.1**	**+1.1**
PB07				IAmb	IAmb	20 32 26.8	
	comp=Z,26nm,1.5s						
TA01	**Diego Aracena**	**37.17**	**78**	P	**P**	**20 32 23.6**	**+1.0**
TA01				IAmb	IAmb	20 32 32.9	
	comp=Z,23nm,1.1s						
LVC	**Limon Verde**	**37.21**	**82**	P	**P**	**20 32 26.4**	**+2.9**
	comp=Z,12nm,1.1s,baz=234,slow=9.6,SNR=9.0						
LVC	**Limon Verde**	**37.21**	**82**	P	**P**	**20 32 21.9**	**-1.5**
LVC				IAmb	IAmb	20 32 27.4	
	comp=Z,21nm,1.1s						
PB09	**IPOC Station P**	**37.32**	**81**	P	**P**	**20 32 24.2**	**0.0**
PB01	**IPOC Station P**	**37.49**	**80**	P	**P**	**20 32 25.2**	**-0.3**
PB01				IAmb	IAmb	20 32 29.0	
	comp=Z,16nm,1.3s						
PB11	**IPOC Station P**	**38.00**	**78**	P	**P**	**20 32 31.2**	**+1.3**
TAOE	**Nuku Hiva Isla**	**38.10**	**305**	*e*LR	LR	20 42 44.5	
	comp=Z,369nm,26.4s						
PB08	**IPOC Station P**	**38.21**	**79**	P	**P**	**20 32 31.9**	**-0.1**
MEH	**Mehetia**	**38.24**	**286**	*e*T	T	21 12 50.2	
	comp=Z,41nm,0.2s						
PB16	**IPOC Station P**	**38.87**	**76**	P	**P**	**20 32 38.5**	**+0.8**
TIAR	**Tiarei**	**39.43**	**285**	*e*T	T	21 14 19.8	
	comp=Z,2.3nm,0.2s						
PPT2	**Papeete2**	**39.59**	**285**	*e*LR	LR	20 43 25.0	
	comp=Z,881nm,25.5s,baz=114						
PPT	**Papeete**	**39.61**	**285**	LR	LR	20 44 36.9	
	comp=Z,328nm,19.0s,baz=127,slow=30						
PMSA	**Palmer Station**	**40.63**	**152**	P	**P**	**20 32 49.7**	**-1.5**
PMSA				IAmb	IAmb	20 34 03.6	
	comp=Z,34nm,1.5s						
LPAZ	**La Paz**	**41.09**	**74**	P	**P**	**20 32 58.8**	**+2.6**
	comp=Z,1.3nm,0.5s,baz=232,slow=10,SNR=5.9						
LPAZ				LR	LR	20 45 46.4	
	comp=Z,152nm,20.9s,baz=248,slow=30						
LPAZ	**La Paz**	**41.09**	**74**	P	**P**	**20 32 56.4**	**+0.2**
ITQB	**Itaqui**	**44.50**	**99**	P	**P**	**20 33 22.7**	**-0.4**
CPUP	**Villa Florida**	**45.17**	**94**	LR	LR	20 49 08.3	
	comp=Z,248nm,19.1s,baz=233,slow=32						
PLTB	**Pedras Altas**	**46.24**	**103**	P	**P**	**20 33 36.0**	**-0.9**
SIV	**San Ignacio**	**46.92**	**79**	P	**P**	**20 33 44.1**	**+1.7**
	comp=Z,6.2nm,0.8s,baz=242,slow=9.2,SNR=23						
PTLB	**Pontes e Lacer**	**48.78**	**80**	P	**P**	**20 33 57.0**	**+0.2**
PTLB				IAmb	IAmb	20 33 59.3	
	comp=Z,12nm,1.3s						
AQDB	**Aquidauana**	**49.07**	**88**	P	**P**	**20 33 59.0**	**0.0**
AQDB				IAmb	IAmb	20 34 01.1	
	comp=Z,9.1nm,0.9s						
QSPA	**South Pole Qui**	**55.65**	**180**	P	**P**	**20 34 49.5**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=144,slow=6.4,SNR=1.5						
QSPA	**South Pole Qui**	**55.65**	**180**	IAmb	IAmb	20 35 03.7	
	comp=Z,18nm,1.7s						
VNDA	**Vanda**	**56.31**	**195**	LR	LR	20 54 07.7	
	comp=Z,117nm,19.4s,baz=122,slow=31						
BDFB	**Brasilia**	**57.80**	**87**	LR	LR	20 57 43.1	
	comp=Z,136nm,19.4s,baz=164,slow=34						
GSC	**Goldstone, Bar**	**69.84**	**353**	P	**P**	**20 36 21.3**	**-0.8**
GSC				IAmb	IAmb	20 36 24.8	
	comp=Z,9.0nm,1.1s						
CCUT	**Cedar City**	**71.83**	**357**	P	**P**	**20 36 34.4**	**+0.1**
NV11	**Mina Array Sit**	**73.07**	**353**	P	**P**	**20 36 41.4**	**-0.2**
NV11				IAmb	IAmb	20 36 44.9	
	comp=Z,7.3nm,1.1s						
NVAR	**Mina Array Bea**	**73.08**	**353**	P	**P**	**20 36 41.7**	**-0.1**
	comp=Z,2.9nm,0.9s,baz=184,slow=7.0,SNR=16						
NVAR	**Mina Array Bea**	**73.08**	**353**	P	**P**	**20 36 41.4**	**-0.5**
DZM	**Mont Dzumac**	**73.26**	**255**	*e*LR	LR	20 58 57.7	
	comp=Z,148nm,26.2s						
SPR3	**Spring Creek 3**	**73.32**	**356**	P	**P**	**20 36 44.0**	**+0.6**
KVN	**Kaiserville**	**73.68**	**353**	P	**P**	**20 36 45.9**	**+0.6**
KVN				IAmb	IAmb	20 36 48.5	
	comp=Z,8.0nm,1.2s						
BMN	**Battle Mountai**	**74.96**	**354**	P	**P**	**20 36 52.3**	**-0.4**
BMN				IAmb	IAmb	20 36 55.5	
	comp=Z,12nm,1.4s						
BW06	**Boulder Array**	**76.94**	**360**	P	**P**	**20 37 03.9**	**-0.1**
BW06				IAmb	IAmb	20 37 05.3	
	comp=Z,7.8nm,1.2s						
PD31	**Pinedale Array**	**76.94**	**360**	P	**P**	**20 37 04.2**	**+0.2**
PD31				IAmb	IAmb	20 37 05.3	
	comp=Z,6.9nm,1.2s						
PDAR	**Pinedale Array**	**76.94**	**360**	P	**P**	**20 37 03.0**	**-1.1**
	comp=Z,2.9nm,1.0s,baz=172,slow=4.2,SNR=10						
PDAR				LR	LR	21 06 05.9	
	comp=Z,95nm,20.0s,baz=143,slow=32						
HLID	**Hailey**	**77.87**	**356**	P	**P**	**20 37 09.0**	**-0.2**
G08A	**Pilot Rock**	**79.94**	**353**	P	**P**	**20 37 20.5**	**+0.1**
B04A	**Port Angeles**	**83.20**	**350**	P	**P**	**20 37 37.5**	**0.0**
PMG	**Port Moresby**	**95.65**	**255**	LR	LR	21 12 29.0	
	comp=Z,32nm,20.7s,baz=130,slow=30						
SCHQ	**Schefferville**	**96.22**	**23**	LR	LR	21 18 57.9	
	comp=Z,121nm,20.1s,baz=61,slow=34						
CLL	**Collm**	**135.77**	**49**	*e*PKPdf	**PKPdf**	**20 44 32.0**	**+0.3**
XAN	**Xi'an**	**148.51**	**280**	PKPbc	**PKiKP**	**20 44 59.0**	**-1.1**
XAN				PKPab	**sPKPab**	**20 45 08.3**	**+3.1**
BRTR	**Keskin Array B**	**150.18**	**69**	PKPbc	**PKiKP**	**20 45 03.3**	**-0.2**
	comp=Z,3.4nm,1.0s,baz=321,slow=3.2,SNR=5.2						
CMAR	**Chiang Mai Arr**	**150.18**	**245**	PKPbc	**PKiKP**	**20 45 03.2**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=194,slow=1.8,SNR=14						
CMAR	**Chiang Mai Arr**	**150.18**	**245**		**PKiKP**	**20 45 02.6**	**-1.3**
SONM	**Songino Array**	**150.29**	**307**	PKPbc	**PKPbc**	**20 45 01.5**	**-1.1**
	comp=Z,2.0nm,1.0s,baz=87,slow=3.0,SNR=11						

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*IDC **29** 20:26:15.1±2.0,43°.43N×105°.20W,h0^{km},mb4.1/1, mb1 3.7/5,mb1mx3.5/40,mbtmp3.5/5,ML3.3/4,MS3.0/4, Ms1 2.9/4,ms1mx2.6/92,Error ellipse: s-maj=47.3km s-min=8.8km az=152.0*

*NEIC **29** 20:26:16.4±1.8,43°.56N±0°.05×105°.20W±0°.04,h0^{km}±1^{km}, ML3.6/62,Error ellipse: s-maj=8.7km s-min=4.7km az=161.0*

ISC 29 20:26:15.1±0.9,**43°.56N**±0°.05×**105°.13W**±0°.06,**h0**^{km},**n61, σ1^{s}.12**/57,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.97**	**54**		**Pn**	**20 26 36.2**	**0.0**
K22A	**Casper**	**1.37**	**229**		**Pg**	**20 26 41.0**	**-0.2**
PHWY	**Pilot Hill**	**2.27**	**186**	Pn	**Pb**	**20 26 56.4**	**-0.6**
RWWY	**Rawlins**	**2.42**	**220**		**Pn**	**20 26 58.0**	**+1.9**
RWWY				IAML		20 27 33.0	
	390nm,0.9s						
RWWY				IAML		20 27 36.6	
	298nm,1.0s						
N23A	**Red Feather La**	**2.73**	**193**	Pn	**Pb**	**20 27 03.2**	**-1.7**
N23A				IAML		20 27 52.3	
	comp=E,178nm,0.9s						
N23A				IAML		20 27 58.2	
	comp=N,171nm,1.1s						
LAO	**LASA Array**	**3.23**	**346**		**Pn**	**20 27 07.9**	**+0.9**
LAO				IAML		20 28 01.8	
	comp=N,213nm,1.0s						
BW06	**Boulder Array**	**3.34**	**258**		**Pn**	**20 27 09.5**	**+0.8**
PD31	**Pinedale Array**	**3.34**	**258**		**Pn**	**20 27 09.3**	**+0.5**
PDAR	**Pinedale Array**	**3.34**	**258**	Pn	**Pn**	**20 27 09.5**	**+0.8**
	comp=N,2.9nm,0.3s,baz=77,slow=16,SNR=48						
PDAR				Lg	Lg	20 27 57.5	
	comp=N,15nm,0.3s,baz=72,slow=35,SNR=13						
PDAR				LR	LR	20 28 19.1	
	comp=N,60nm,21.6s,baz=74,slow=38						
PDAR	**Pinedale Array**	**3.34**	**258**		**Pn**	**20 27 09.1**	**+0.3**
RLMT	**Red Lodge**	**3.36**	**299**		**Pn**	**20 27 09.5**	**+0.5**
RLMT				IAML		20 28 32.3	
	comp=N,64nm,2.6s						
RLMT				IAML		20 28 37.6	
	comp=N,91nm,1.3s						
OGNE	**Ogallala**	**3.48**	**138**		**Pn**	**20 27 12.6**	**+2.0**
ISCO	**Idaho Springs**	**3.77**	**186**		**Pn**	**20 27 16.7**	**+1.9**
YMP	**Mirror Lake Pl**	**3.81**	**290**		**Pn**	**20 27 15.4**	**+0.1**
YMP				IAML		20 28 21.3	
	comp=E,130nm,0.9s						
LKWY	**Lake**	**3.93**	**287**		**Pn**	**20 27 16.7**	**-0.3**
LKWY				IAML		20 28 26.5	
	comp=E,60nm,1.3s						
LKWY				IAML		20 28 38.4	
	comp=E,75nm,1.5s						
GCMT	**Greycliff**	**3.94**	**306**		**Pn**	**20 27 17.0**	**+0.1**
LOHW	**Long Hollow**	**3.98**	**273**		**Pn**	**20 27 18.4**	**+0.8**
LOHW				IAML		20 28 23.9	
	comp=E,40nm,1.2s						
LOHW				IAML		20 28 29.7	
	comp=E,40nm,3.1s						
H17A	**Grant Village**	**4.02**	**284**		**Pn**	**20 27 19.5**	**+1.4**
H17A				IAML		20 28 23.1	
	comp=N,61nm,1.4s						
H17A				IAML		20 28 23.6	
	comp=E,58nm,2.2s						
YUF	**Upper Falls**	**4.04**	**288**	Pn	**Pn**	**20 27 19.1**	**+0.6**
FLWY	**Flagg Ranch**	**4.07**	**279**		**Pn**	**20 27 19.7**	**+0.9**
FLWY				IAML		20 28 31.9	
	comp=E,70nm,3.0s						
MOOW	**Moose Ponds**	**4.08**	**275**		**Pn**	**20 27 20.4**	**+1.4**
SNOW	**Snow King Moun**	**4.10**	**271**		**Pn**	**20 27 19.6**	**+0.5**
SNOW				IAML		20 28 36.2	
	comp=E,100nm,1.1s						
SNOW				IAML		20 28 45.0	
	comp=E,67nm,1.2s						
O20A	**White River Ci**	**4.13**	**215**		**Pn**	**20 27 19.8**	**+0.2**
O20A				IAML		20 29 06.5	
	comp=N,94nm,1.3s						
O20A				IAML		20 29 37.6	
	comp=E,71nm,1.4s						
YNR	**Norris Junctio**	**4.16**	**288**		**Pn**	**20 27 20.4**	**+0.3**
YNR				IAML		20 28 35.6	
	comp=E,44nm,2.2s						
YPP	**Pitchstone Pla**	**4.17**	**282**		**Pn**	**20 27 19.2**	**-0.9**
REDW	**Red Top Meadow**	**4.17**	**269**		**Pn**	**20 27 20.5**	**+0.2**
REDW				IAML		20 28 33.8	
	comp=E,95nm,0.8s						
REDW				IAML		20 28 39.3	
	comp=E,98nm,1.2s						
YMR	**Madison River**	**4.35**	**287**		**Pn**	**20 27 22.7**	**+0.1**
YMR				IAML		20 28 50.4	
	comp=N,88nm,1.1s						
YMR				IAML		20 28 52.4	
	comp=E,81nm,1.2s						
E28A	**Huff**	**4.36**	**45**		**Pn**	**20 27 25.3**	**+2.8**
AHID	**Auburn Hatcher**	**4.44**	**262**		**Pn**	**20 27 23.8**	**-0.1**
AHID				IAML		20 28 40.0	
	comp=E,59nm,1.2s						
AHID				IAML		20 28 49.9	
	comp=E,69nm,1.2s						
RDMU	**Red Mountain**	**4.45**	**229**		**Pn**	**20 27 24.0**	**-0.1**
RDMU				IAML		20 28 42.4	
	comp=E,58nm,0.9s						
RDMU				IAML		20 28 48.2	
	comp=N,46nm,1.6s						
SUSD	**Miller**	**4.54**	**77**		**Pn**	**20 27 24.6**	**-0.5**
YHL	**Hebgen Lake**	**4.54**	**289**		**Pn**	**20 27 25.0**	**-0.3**
YHL				IAML		20 28 40.5	
	comp=N,61nm,1.3s						
YHL				IAML		20 28 59.4	
	comp=E,60nm,1.0s						
ECR	**Eagle Creek**	**4.58**	**266**		**Pn**	**20 27 26.8**	**+0.9**
SMCO	**Snowmass**	**4.59**	**198**		**Pn**	**20 27 26.5**	**+0.4**
SMCO				IAML		20 29 02.8	
	comp=E,48nm,1.1s						
SMCO				IAML		20 29 16.5	
	comp=E,41nm,1.2s						
QLMT	**Earthquake Lak**	**4.71**	**288**		Pn	20 27 22.6	-4.9
K31A	**O'Neill**	**4.76**	**99**		**Pn**	**20 27 27.8**	**-0.3**
KSCO	**Kaye Shedlock'**	**4.92**	**157**		**Pn**	**20 27 30.7**	**+0.3**
DGMT	**Dagmar**	**4.96**	**7**		**Pn**	**20 27 30.9**	**+0.1**
P18A	**Preston Nutter**	**5.49**	**226**		**Pn**	**20 27 38.8**	**+0.4**
EGMT	**Eagleton**	**5.52**	**326**		**Pn**	**20 27 39.1**	**+0.6**
BGNE	**Belgrade**	**5.59**	**110**		**Pn**	**20 27 39.5**	**+0.1**
LRM	**Limekiln Ridge**	**5.69**	**296**		**Pn**	**20 27 41.1**	**0.0**
HRY	**Holter Researc**	**5.70**	**306**		**Pn**	**20 27 41.4**	**+0.4**
MCMT	**McKenzie Canyo**	**5.70**	**286**		**Pn**	**20 27 44.6**	**+3.4**
P17A	**Butcher Ranch,**	**5.86**	**228**		**Pn**	**20 27 45.0**	**+1.6**
HVU	**Hansel Valley**	**5.91**	**255**		**Pn**	**20 27 43.7**	**-0.3**
SRU	**San Rafael Swe**	**6.02**	**224**		**Pn**	**20 27 46.5**	**+0.9**
CBKS	**Cedar Bluff**	**6.24**	**138**		**Pn**	**20 27 48.5**	**0.0**
TMUT	**Trail Mountain**	**6.24**	**229**		**Pn**	**20 27 49.7**	**+1.0**
NLU	**North Lily Min**	**6.32**	**238**		**Pn**	**20 27 48.5**	**-1.1**
Q16A	**Castle Valley**	**6.50**	**227**		**Pn**	**20 27 52.3**	**+0.2**
DUG	**Dugway, Tooele**	**6.65**	**242**		**Pn**	**20 27 53.5**	**-0.6**
HLID	**Hailey**	**6.75**	**273**		**Pn**	**20 27 57.8**	**+2.3**
ANMO	**Albuquerque**	**8.66**	**187**	LR	LR	20 31 56.1	
	comp=E,83nm,20.1s,baz=23,slow=40						
I10CA	**LAC DU BONNET**	**9.11**	**40**	*i*		21 18 45.0	
	baz=218,slow=317,SNR=6.0						
ULM	**Lac du Bonnet**	**9.21**	**40**	Pn	**Pn**	**20 28 29.2**	**+0.1**
	comp=E,1.4nm,0.3s,baz=232,slow=11,SNR=8.1						
ULM				Lg	Lg	20 31 01.7	
	comp=E,0.4nm,0.3s,baz=107,slow=11,SNR=4.0						
ULM				LR	LR	20 32 03.6	
	comp=E,97nm,21.2s,baz=272,slow=37						
ULM	**Lac du Bonnet**	**9.21**	**40**		**Pn**	**20 28 28.7**	**-0.4**
NVAR	**Mina Array Bea**	**11.20**	**247**	Pn	**Pn**	**20 28 59.6**	**+3.1**
	comp=E,0.1nm,0.3s,baz=59,slow=11,SNR=3.1						
YKA	**Yellowknife Ar**	**19.77**	**347**	P	**Pn**	**20 30 47.5**	**-0.4**
	comp=E,0.1nm,0.3s,baz=156,slow=11,SNR=4.0						
MDP	**Montagnes des**	**59.89**	**114**	LR	LR	21 01 19.7	
	comp=E,66nm,21.7s,baz=260,slow=35						
ARCES	**ARCESS Array B**	**61.56**	**18**	P	**P**	**20 36 33.9**	**+0.4**
	comp=E,1.9nm,0.8s,baz=331,slow=7.3,SNR=4.0						

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*TUL **29** 20:27:25.5±1.3,35°.66N±0°.02×97°.40W±0°.03,h6^{km}±7^{km}, ML3.0,mb_Lg2.6/35(NEIC),Error ellipse: s-maj=3.5km s-min=2.2km az=116.0*

*ANF **29** 20:27:25.5±0.2,35°.69N×97°.40W,h8^{km},ML3.0/5,Error ellipse: s-maj=2.3km s-min=2.2km az=109.0*

*NEIC **29** 20:27:25.7±1.0,35°.68N±0°.02×97°.41W±0°.03,h8^{km}±7^{km}, Error ellipse: s-maj=4.4km s-min=2.5km az=131.0*

ISC 29 20:27:25.6±0.9,**35°.68N**±0°.02×**97°.40W**±0°.02,**h9**^{km}±5^{km},**n66,σ0^{s}.77**/82,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	**Oakdale Elemen**	**0.10**	**190**	Pg	**Pg**	**20 27 27.7**	**-0.4**
OK009				Sg	**Sg**	**20 27 29.5**	**-0.4**
OK025	**Westminster Rd**	**0.11**	**153**		**Pg**	**20 27 28.1**	**-0.2**
OK025				Sg	**Sg**	**20 27 29.8**	**-0.4**
OK029	**Liberty Lake**	**0.12**	**339**		**Pg**	**20 27 28.8**	**+0.3**
OK029				Sg	**Sg**	**20 27 31.2**	**+0.7**
OK001	**Jones High Sch**	**0.15**	**143**	Pg	**Pg**	**20 27 28.7**	**-0.1**
OK001				Sg	**Sg**	**20 27 31.2**	**0.0**
BCOK	**Bluff Creek, N**	**0.17**	**262**	Pg	**Pg**	**20 27 29.2**	**0.0**
BCOK				Sg	**Sg**	**20 27 31.9**	**+0.2**
OK005	**Luther M Schoo**	**0.17**	**98**	Pg	**Pg**	**20 27 29.4**	**+0.2**
OK005				Sg	**Sg**	**20 27 32.3**	**+0.5**
OKCFA	**Oklahoma City**	**0.27**	**189**	Pg	**Pg**	**20 27 30.8**	**-0.1**

OKCFA				Sg	Sg	20 27 34.7	+0.1
OKCFA	Oklahoma City	0.27	189	P	Pg	20 27 30.9	-0.1
	baz=7.3						
OKCFA				S	Sg	20 27 34.8	+0.3
	baz=7.3						
OKCSW	OKLAHOMA CITY	0.28	186	Pg	Pg	20 27 31.0	-0.1
OKCSW				Sg	Sg	20 27 35.0	+0.2
FNO	Franklin	0.42	180	Pg	Pg	20 27 33.5	-0.3
FNO				Sg	Sg	20 27 39.6	+0.2
OK031	S. Brethren Rd	0.53	59	Pg	Pg	20 27 36.1	+0.2
OK031				Sg	Sg	20 27 43.4	+0.5
OK030	Cody Creek RV	0.56	64		Pg	20 27 36.5	0.0
OK030				IAmb_Lg		20 27 43.6	
	comp=Z,50nm,0.9s						
OK030				Sg	Sg	20 27 44.3	+0.6
OK034	N. Norfolk Rd.	0.65	59	Pg	Pg	20 27 38.0	-0.1
OK034				Sg	Sg	20 27 47.0	+0.3
W35A	Tecumseh	0.68	141	Pg	Pg	20 27 38.2	-0.5
W35A				Sg	Sg	20 27 47.5	-0.1
QUOK	Quay	0.75	49	Pg	Pg	20 27 39.9	-0.1
QUOK				Sg	Sg	20 27 50.1	+0.4
CROK	Carrier	0.95	330	Pg	Pg	20 27 43.7	-0.1
BLOK	Blackwell	1.09	8	Pg	Pg	20 27 46.1	-0.3
X34A	Smith Ranch, M	1.13	198	Pg	Pg	20 27 47.0	-0.3
GC02	Grant County #	1.23	343		Pb	20 27 48.5	-0.4
OK032	Salt Plains WL	1.30	330		Pn	20 27 49.6	-0.3
TUL1	Leonard	1.33	80		Pn	20 27 49.4	-0.8
TUL1	Leonard	1.33	80	P	Pn	20 27 49.4	-0.8
	baz=260						
TUL1				S	Sn	20 28 08.7	+0.7
	baz=260						
KAN13	South Haven SW	1.33	357		Pn	20 27 50.5	+0.2
KAN14	Manchester OK	1.35	341		Pn	20 27 50.7	+0.1
T35A	Sooner Cattle	1.43	30		Pn	20 27 51.7	+0.1
T35B	Sooner Cattle	1.43	30	P	Pn	20 27 52.0	+0.4
	baz=211						
T35B				S	Sn	20 28 11.1	+0.5
	baz=211						
U32A	Winter Ranch,	1.47	299	Pn	Pn	20 27 52.4	+0.1
U32A	Winter Ranch,	1.47	299	P	Pn	20 27 52.5	+0.2
	baz=118						
U32A				S	Sg	20 28 12.8	-0.1
	baz=118						
OK035	E0210 Rd and N	1.47	314	Pn	Pn	20 27 52.4	+0.2
KAN05	Bluff City Nor	1.48	345	Pn	Pn	20 27 52.7	+0.4
KAN01	Argonia South	1.50	349	Pn	Pn	20 27 53.2	+0.6
KAN10	Anthony SW Sta	1.54	339	Pn	Pn	20 27 53.6	+0.4
KAN06	Argonia West S	1.61	347	Pn	Pn	20 27 54.8	+0.7
KAN08	Anthony NE Sta	1.61	344	Pn	Pn	20 27 55.0	+0.9
KAN16	Harper SW Stat	1.63	341	Pn	Pn	20 27 55.1	+0.6
KAN12	Harper NE Stat	1.68	344	Pn	Pn	20 27 56.2	+1.0
LOOK	Love County	1.69	174	Pn	Pn	20 27 56.1	+0.8
LOOK				IAmb_Lg		20 28 19.6	
	comp=Z,20nm,1.0s						
X37A	Clayton	1.99	123	Pn	Pn	20 28 00.1	+0.8
X37A				IAmb_Lg		20 28 31.5	
	comp=Z,22nm,0.8s						
X37A	Clayton	1.99	123	P	Pn	20 28 00.1	+0.8
	baz=304						
X37A				Sb	Sg	20 28 28.7	-0.8
	baz=304						
Z35A	Perchaven, San	2.35	177	Pn	Pn	20 28 05.2	+1.0
Z35A				IAmb_Lg		20 28 44.0	
	comp=Z,16nm,0.8s						
U38A	Gravette	2.56	72	Pn	Pn	20 28 08.1	+0.9
U38A				IAmb_Lg		20 28 51.9	
	comp=Z,18nm,0.7s						
HHAR	Hobbs	2.87	77	Pn	Pn	20 28 12.1	+0.7
W39A	Magazine	2.99	98	Pn	Pn	20 28 13.9	+0.8
W39A				IAmb_Lg		20 29 05.9	
	comp=Z,24nm,0.8s						
W39A	Magazine	2.99	98	P	Pn	20 28 13.7	+0.5
	baz=280						
MIAR	Mount Ida	3.33	109	Pn	Pn	20 28 18.6	+0.8
MIAR				IAmb_Lg		20 29 19.7	
	comp=Z,14nm,0.9s						
ABTX	Abilene, Hawle	3.57	212	Pn	Pn	20 28 21.2	+0.1
AMTX	Amarillo	3.59	258	Pn	Pn	20 28 22.8	+1.3
AMTX				IAmb_Lg		20 29 28.4	
	comp=Z,13nm,0.8s						
WHTX	Lake Whitney,	3.68	181	Pn	Pn	20 28 22.9	+0.3
WHTX				IAmb_Lg		20 29 26.9	
	comp=Z,16nm,1.3s						
U40A	Yellville	3.75	78	Pn	Pn	20 28 22.5	-1.0
U40A				IAmb_Lg		20 29 22.5	
	comp=Z,10nm,0.8s						
S39A	Bolivar	3.84	57	Pn	Pn	20 28 25.2	+0.3
X40A	Basin Creek Fa	3.93	106	Pn	Pn	20 28 27.2	+1.2
X40A				IAmb_Lg		20 29 33.6	
	comp=Z,37nm,0.9s						
WHAR	Wooly Hollow	4.19	94	Pn	Pn	20 28 30.0	+0.4
FCAR	Ozark Folk Cen	4.29	86	Pn	Pn	20 28 32.6	+1.6
FCAR				IAmb_Lg		20 29 45.6	
	comp=Z,14nm,0.7s						
MGMO	Mountain Grove	4.39	69	Pn	Pn	20 28 31.6	-0.8
MGMO				IAmb_Lg		20 29 50.5	
	comp=Z,13nm,0.9s						
MSTX	Muleshoe	4.74	250	Pn	Pn	20 28 36.7	-0.5
R40A	Maddies Statio	4.87	56	Pn	Pn	20 28 40.3	+1.4
R40A				IAmb_Lg		20 30 12.7	
	comp=Z,6.2nm,0.8s						
435B	Jarrell	4.89	182	IAmb_Lg		20 30 08.5	
	comp=Z,17nm,0.9s						
P38A	Dawn	4.99	37	Pn	Pn	20 28 40.2	-0.5
LCAR	Lake Charles	5.09	84	Pn	Pn	20 28 40.4	-1.5
N35A	Tabor	5.35	14	Pn	Pn	20 28 42.5	-3.1
JCT	Junction City	5.56	202	IAmb_Lg		20 30 29.6	
	comp=Z,17nm,1.0s						
P40A	Paris	5.73	46	Pn	Pn	20 28 49.5	-1.3
P40A				IAmb_Lg		20 30 29.8	
	comp=Z,19nm,0.7s						
PBMO	Poplar Bluff	5.74	77	Pn	Pn	20 28 50.8	-0.1
PBMO				IAmb_Lg		20 30 30.7	
	comp=Z,18nm,0.8s						
T25A	Trinidad	5.84	286	IAmb_Lg		20 30 42.7	
	comp=Z,43nm,1.0s						
FVM	French Village	6.05	66	Pn	Pn	20 28 53.0	-2.2
HALT	Halls	6.56	86	Pn	Pn	20 29 00.5	-1.5

NNC 29 20:31:20.0±9.6, 37°.02N×70°.59E, h0^{km}, mb3.5, mpv3.3, 3C-3D, Error ellipse: s-maj=79.6km s-min=57.8km az=163.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK08	Karatay Array	6.08	359	⇑P	Pn	20 32 53.8	+2.6
	0.6nm,0.3s,baz=179,slow=12						
KK08				⇑S	Sn	20 34 04.4	+2.9
	3.6nm,0.4s,baz=186,slow=24						
AAK	Ala-Archa	6.37	27	⇑P	Pn	20 32 55.2	-0.1
	2.0nm,0.5s						
AAK				⇓S	Sn	20 34 08.6	-0.2
	1.7nm,0.5s						
TKM2	Tokmak 2	7.04	32	⇓P	Pn	20 33 03.4	-1.2
	1.2nm,0.6s						
TKM2				⇓S	Sn	20 34 24.8	-0.6
	0.7nm,0.5s						
AB31	Akbulak array	14.47	331	P	Pn	20 34 45.5	-0.5
	0.1nm,0.3s,baz=152,slow=12,SNR=20						

BUC 29 20:41:26.9±0.5, 45°.29N×26°.13E, h140^{km}±4^{km}, ml3.1/10, 24C-15D, Error ellipse: s-maj=3.7km s-min=2.4km az=166.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEHR	Nehoiu	0.18	40	⇑P	Pn	20 41 46.9	+1.0
NEHR				⇑S	Sn	20 42 00.4	-0.1
MLR	Muntele Rosu	0.24	327	⇓P	Pn	20 41 47.0	+0.8
MLR				⇓S	Sn	20 42 01.2	+0.3
SECR		0.26	190	⇓P	Pn	20 41 47.0	+0.9
PLAR	PLOIESTI	0.38	191	⇓P	Pn	20 41 47.4	+0.9
COVR	Voineasa-Covas	0.56	5	⇑P	Pn	20 41 47.6	+0.2
COVR				⇑S	Sn	20 42 03.6	+0.5
SULR		0.62	172	⇑P	Pn	20 41 48.4	+0.7
PLOR	Plostina	0.67	33	⇑P	Pn	20 41 48.0	-0.1
PLOR				⇑S	Sn	20 42 04.9	+0.6
VRI	Vrincioaia	0.71	36	⇑P	Pn	20 41 49.4	+1.0
VRI				⇑S	Sn	20 42 05.4	+0.6
VOIR		0.78	281	⇓P	Pn	20 41 48.8	-0.1
VOIR				⇓S	Sn	20 42 05.7	0.0
DOPR	Dopca	0.85	323	⇑P	Pn	20 41 49.2	-0.3
DOPR				⇑S	Sn	20 42 06.6	-0.1
ARR	Arges	1.06	275	⇓P	Pn	20 41 51.2	-0.1
ARR				⇑S	Sn	20 42 09.9	0.0
HUMR	Humele	1.12	227	⇓P	Pn	20 41 51.2	-0.6
HUMR				⇑S	Sn	20 42 10.4	-0.2
GHRR		1.18	49	⇑P	Pn	20 41 53.1	+0.7
GHRR				⇑S	Sn	20 42 13.1	+1.3
TESR	Tescani	1.27	16	⇑P	Pn	20 41 53.6	+0.3
TESR				⇓S	Sn	20 42 13.3	-0.2
TATR	Tatarca	1.39	76	⇓S	Sn	20 42 16.7	+1.3
CFR	Carcaliu	1.42	94	⇓P	Pn	20 41 54.9	+0.1
CFR				⇑S	Sn	20 42 15.6	-0.4
VLDR	Vladesti	1.48	67	⇓P	Pn	20 41 55.8	+0.4
VLDR				⇑S	Sn	20 42 18.2	+1.1
TPGR	Topolog	1.68	104	⇑P	Pn	20 41 57.4	-0.2
TPGR				⇑S	Sn	20 42 20.5	-0.7
TIRR	Tirgusor	1.82	116	⇑P	Pn	20 41 59.3	0.0
TIRR				⇑S	Sn	20 42 23.7	-0.3
LEOM	Leova	1.89	51	⇓S	Sn	20 42 25.8	+0.3
TLCR		1.90	92	⇑P	Pn	20 42 00.3	+0.2
TLCR				⇓S	Sn	20 42 26.0	+0.4
MILM	Milestii Mici	2.48	48	⇑P	Pn	20 42 06.4	-0.7
MILM				⇓S	Sn	20 42 36.9	-1.2

BUC 29 20:42:12.7±0.2, 45°.38N×24°.19E, h5^{km}±2^{km}, ml2.0/9, 21C-7D, Error ellipse: s-maj=2.4km s-min=1.6km az=6.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOT	Lotru	0.30	284	⇓P	Pg	20 42 19.3	+0.7
LOT				⇑S	Sg	20 42 23.7	+1.1
ARR	Arges	0.32	91	⇑P	Pg	20 42 19.1	+0.2
ARR				⇑S	Sg	20 42 22.9	-0.2
VOIR		0.61	84	⇑P	Pg	20 42 24.1	-0.4
VOIR				⇑S	Sg	20 42 32.7	+0.3
MDB	Medias	0.78	10	⇑P	Pb	20 42 28.3	-0.5
MDB				⇓S	Sb	20 42 40.0	+0.3
GZR	Gura Zlata	0.99	272	⇓P	Pg	20 42 32.0	+0.3
GZR				⇑S	Sg	20 42 44.8	+0.1
HUMR	Humele	1.02	146	⇑P	Pb	20 42 33.1	+0.2
HUMR				⇑S	Sg	20 42 45.9	+0.5
DEV	Deva	1.03	300	⇓P	Pg	20 42 32.0	-0.5
DEV				⇑S	Sg	20 42 46.2	+0.3
MLR	Muntele Rosu	1.25	84	⇑P	Pn	20 42 37.3	+0.3
HERR	Herculane	1.35	249	⇑P	Pg	20 42 39.1	+0.6
HERR				⇑S	Sb	20 42 56.2	+0.2
CJR	Cluj-Napoca	1.40	343	⇑P	Pn	20 42 38.9	-0.1
CJR				⇑S	Sb	20 42 57.6	0.0
NEHR	Nehoiu	1.49	87	⇑P	Pn	20 42 40.0	-0.2
DRGR		1.75	325	⇑P	Pn	20 42 43.3	-0.6
DRGR				⇑S	Sb	20 43 07.6	-0.1
BZS	Buzias	1.82	279	⇑P	Pn	20 42 45.1	+0.3
BZS				⇓S	Sn	20 43 08.5	+0.2
MDVR	Moldovita	1.85	252	⇓S	Sb	20 43 10.7	+0.1
SIRR	Siria	1.98	298	⇓P	Pn	20 42 46.7	-0.2
SIRR				⇑S	Sb	20 43 13.6	-0.7
BURAR	Bucovina Array	2.35	17	⇑P	Pn	20 42 52.6	+0.4

*TUL **29** 20:43:16.7±1.6, 35°.66N±0°.01×97°.40W±0°.01, h6^{km}±4^{km}, ML2.7, mb_Lg2.4/12(NEIC), Error ellipse: s-maj=1.8km s-min=0.4km az=145.0*

NEIC 29 20:43:16.8±1.2, 35°.67N±0°.01×97°.40W±0°.02, h10^{km}±3^{km}, Error ellipse: s-maj=2.4km s-min=1.9km az=97.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	Oakdale Elemen	0.09	192	Pg	Pg	20 43 18.9	-0.3
OK009				Sg	Sg	20 43 20.7	-0.3
OK025	Westminster Rd	0.10	151		Pg	20 43 19.2	-0.2
OK025				Sg	Sg	20 43 21.2	-0.1
OK029	Liberty Lake	0.13	340		Pg	20 43 19.9	+0.1
OK029				Sg	Sg	20 43 22.4	+0.5
OK001	Jones High Sch	0.14	141	Pg	Pg	20 43 19.9	0.0
OK001				Sg	Sg	20 43 22.4	+0.2
BCOK	Bluff Creek, N	0.17	265		Pg	20 43 20.4	0.0
BCOK				Sg	Sg	20 43 23.3	+0.4
OKCFA	Oklahoma City	0.26	189		Pg	20 43 21.9	-0.2
OKCFA				Sg	Sg	20 43 26.0	+0.4
OKCSW	OKLAHOMA CITY	0.27	187		Pg	20 43 22.1	-0.1
OKCSW				Sg	Sg	20 43 26.3	+0.5
FNO	Franklin	0.41	180		Pg	20 43 24.9	0.0
FNO				Sg	Sg	20 43 30.9	+0.6
OK031	S. Brethren Rd	0.54	58		Pg	20 43 27.3	+0.1
OK031				Sg	Sg	20 43 34.7	+0.5
OK030	Cody Creek RV	0.56	63		Pg	20 43 27.6	0.0
OK030				Sg	Sg	20 43 35.7	+0.6
OK034	N. Norfolk Rd.	0.65	59		Pg	20 43 29.2	-0.2
OK034				Sg	Sg	20 43 38.4	+0.5
W35A	Tecumseh	0.67	140		Pg	20 43 29.6	-0.2
W35A				Sg	Sg	20 43 38.7	+0.2
QUOK	Quay	0.75	48		Pg	20 43 31.0	-0.2
QUOK				Sg	Sg	20 43 41.5	+0.5
CROK	Carrier	0.96	331		Pg	20 43 34.9	-0.3
CROK				Sg	Sb	20 43 48.1	-0.1
BLOK	Blackwell	1.10	8		Pg	20 43 37.3	-0.6
BLOK				Sg	Sb	20 43 52.3	+0.1
X34A	Smith Ranch, M	1.13	198	Pg	Pb	20 43 38.1	-0.2
X34A				Sg	Sn	20 43 54.1	-0.1
GC02	Grant County #	1.23	343		Pn	20 43 39.8	-0.4
GC02				Sg	Sn	20 43 57.0	+0.2
OK032	Salt Plains WL	1.31	330	Pn	Pn	20 43 40.6	-0.5
TUL1	Leonard	1.33	79		Pn	20 43 40.6	-0.8
TUL1				IAmb_Lg		20 44 01.4	
	comp=Z,19nm,1.1s						
KAN13	South Haven SW	1.34	357		Pn	20 43 41.6	+0.1
KAN14	Manchester OK	1.36	341		Pn	20 43 42.0	+0.1
T35A	Sooner Cattle	1.43	30	Pn	Pn	20 43 43.1	+0.2
U32A	Winter Ranch,	1.48	299	Pn	Pn	20 43 43.9	+0.4
OK035	E0210 Rd and N	1.48	315	Pn	Pn	20 43 42.2	-1.3
KAN05	Bluff City Nor	1.48	345	Pn	Pn	20 43 43.7	+0.1
KAN01	Argonia South	1.51	349		Pb	20 43 44.4	-0.4
KAN10	Anthony SW Sta	1.55	339	Pn	Pn	20 43 44.3	-0.2
KAN06	Argonia West S	1.62	347		Pn	20 43 45.0	-0.4
KAN08	Anthony NE Sta	1.62	344	Pn	Pn	20 43 44.3	-1.1
KAN16	Harper SW Stat	1.64	341	Pn	Pn	20 43 46.1	+0.4
LOOK	Love County	1.69	174	Pn	Pn	20 43 45.9	-0.5
X37A	Clayton	1.98	122	Pn	Pb	20 43 51.9	-1.0
U38A	Gravette	2.56	72	Pn	Pn	20 43 59.1	+0.7
U38A				IAmb_Lg		20 44 38.7	
	comp=Z,8.5nm,0.7s						
HHAR	Hobbs	2.87	77	Pn	Pn	20 44 00.3	-2.3
R32A	Long Quarter,	2.94	339	Pn	Pn	20 44 03.6	0.0
W39A	Magazine	2.99	98	Pn	Pn	20 44 02.9	-1.4
MIAR	Mount Ida	3.33	109	Pn	Pn	20 44 06.4	-2.5
ABTX	Abilene, Hawle	3.56	212	Pn	Pn	20 44 09.3	-2.9
ABTX				IAmb_Lg		20 45 12.9	
	comp=Z,7.9nm,1.1s						
AMTX	Amarillo	3.59	259	Pn	Pn	20 44 10.1	-2.5
U40A	Yellville	3.75	78	Pn	Pn	20 44 13.6	-1.1
S39A	Bolivar	3.85	57	Pn	Pn	20 44 13.7	-2.4
S39A				IAmb_Lg		20 45 17.4	
	comp=Z,8.6nm,0.9s						
X40A	Basin Creek Fa	3.93	106	Pn	Pn	20 44 17.5	+0.3
WHAR	Wooly Hollow	4.19	94	Pn	Pn	20 44 20.6	-0.2
FCAR	Ozark Folk Cen	4.29	86	Pn	Pn	20 44 20.6	-1.5
MGMO	Mountain Grove	4.39	69	Pn	Pn	20 44 23.6	0.0
R40A	Maddies Statio	4.87	56	Pn	Pn	20 44 27.4	-2.7
P38A	Dawn	5.00	37	Pn	Pn	20 44 28.9	-2.9
P38A				IAmb_Lg		20 45 54.9	
	comp=Z,14nm,1.1s						
CCM	Cathedral Cave	5.48	62	Pn	Pn	20 44 37.4	-1.1
P40A	Paris	5.73	46	Pn	Pn	20 44 40.0	-1.9
P40A				IAmb_Lg		20 46 23.4	
	comp=Z,13nm,0.8s						
T25A	Trinidad	5.84	287	Pn	Pn	20 44 41.6	-2.1

SKHL 29 20:45:13.6±0.5, 44°.20N×148°.80E, h48^{km}±6^{km}, mb4.4/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.23	328	*i* P	Pn	20 45 33.7	-0.7
KUR				AMB	AMB	20 45 34.4	
	70nm,0.3s						
KUR				*i* S	Sn	20 45 47.9	-1.9
KUR				A	A	20 45 49.5	
	940nm,0.4s						
KUR				A	A	20 45 49.5	
	690nm,0.4s						
KUR				A	A	20 45 49.9	
	3µm,2.0s						
KUR				A	A	20 45 49.9	
	2µm,2.0s						
YUK	Yuzh-Kuril'sk	2.12	267	*e*P	Pn	20 45 45.6	-1.0
YUK				AMB	AMB	20 45 48.0	
	120nm,0.4s						
YUK				*e*S	Sn	20 46 09.7	-2.0
YUK				A	A	20 46 18.2	
	490nm,0.3s						
YUK				A	A	20 46 18.2	
	180nm,0.3s						
GRPR	Tuman	2.19	266	*e*P	Pn	20 45 47.7	+0.2
GRPR				AMB	AMB	20 45 49.0	
	30nm,0.4s						
GRPR				AMB	AMB	20 45 49.0	
	30nm,0.4s						
GRPR				AMB	AMB	20 45 49.0	
	80nm,0.4s						
GRPR				*e*S	Sn	20 46 11.5	-1.9
GRPR				A	A	20 46 16.0	
	510nm,0.5s						
GRPR				A	A	20 46 16.0	
	180nm,0.5s						
NMR	Nemuro--Hokkai	2.38	251	*i* P	Pn	20 45 48.7	-1.3
NMR				*i* S	Sn	20 46 15.4	-2.5
GLVR	Golovnino	2.41	260	*e*P	Pn	20 45 50.1	-0.4
GLVR				AMB	AMB	20 45 56.0	
	80nm,0.4s						
GLVR				*e*S	Sn	20 46 17.1	-1.7
JKA	Kamikawa-asahi	4.46	271	*e*P	Pn	20 46 17.7	-1.0
YSS	Yuzh-Sakhalins	5.06	305	*e*P	Pn	20 46 26.6	-0.2
YSS				AMB	AMB	20 46 33.4	
	20nm,0.5s						
SKR	Severo-Kuril's	8.16	35	*e*P	Pn	20 47 11.6	+2.3
SKR				AMB	AMB	20 47 16.8	
	10.0nm,0.7s						
MKAR	Makanchi Array	45.43	298	*e*P	P	20 53 28.0	+0.5

SKHL 29 20:49:12.7±0.8, 44°.20N×148°.80E, h60^{km}±9^{km}, mb4.6/11, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.23	328	*i* P	Pn	20 49 33.3	-0.4
KUR				AMB	AMB	20 49 34.0	
	540nm,0.4s						
KUR				*i* S	Sn	20 49 47.9	-1.5
KUR				A	A	20 49 48.4	
	3µm,0.4s						
KUR				A	A	20 49 48.4	
	850nm,0.4s						
KUR				A	A	20 49 49.9	
	3µm,2.0s						
KUR				A	A	20 49 49.9	
	2µm,2.0s						
YUK	Yuzh-Kuril'sk	2.12	267	*i* P	Pn	20 49 45.0	-0.8
YUK				AMB	AMB	20 49 47.0	
	290nm,0.5s						
YUK				*i* S	Sn	20 50 09.5	-1.5
YUK				A	A	20 50 12.0	
	510nm,0.4s						
YUK				A	A	20 50 12.0	
	950nm,0.4s						
GRPR	Tuman	2.19	266	*e*P	Pn	20 49 46.0	-0.7
GRPR				AMB	AMB	20 49 51.0	
	260nm,0.4s						
GRPR				*e*S	Sn	20 50 11.5	-1.2
GRPR				A	A	20 50 13.0	
	980nm,0.4s						
GRPR				A	A	20 50 13.0	
	340nm,0.4s						
NMR	Nemuro--Hokkai	2.38	251	*e*P	Pn	20 49 48.2	-1.0
NMR				*e*S	Sn	20 50 15.0	-2.2
GLVR	Golovnino	2.41	260	*i* P	Pn	20 49 49.6	-0.1
GLVR				AMB	AMB	20 49 53.0	
	270nm,0.4s						
GLVR				*e*S	Sn	20 50 16.0	-2.1
GLVR				A	A	20 50 22.5	
	600nm,0.5s						
GLVR				A	A	20 50 22.5	
	1µm,0.5s						
YSS	Yuzh-Sakhalins	5.06	305	*e*P	Pn	20 50 26.9	+1.0
YSS				AMB	AMB	20 50 33.4	
	20nm,0.6s						
YSS				*e*S	Sn	20 51 20.7	-2.3
YSS				A	A	20 51 24.0	
	30nm,0.5s						
YSS				A	A	20 51 24.0	
	120nm,0.5s						
UGL	Uglegorsk	6.73	319	*e*P	Pn	20 50 49.9	+1.2
UGL				AMB	AMB	20 50 52.2	
	20nm,0.5s						
TYV	Tymovskoe	7.85	330	*e*P	Pn	20 51 06.5	+2.4
TYV				AMB	AMB	20 51 11.2	
	10.0nm,0.7s						
SKR	Severo-Kuril's	8.16	35	*e*P	Pn	20 51 11.1	+2.8
SKR				AMB	AMB	20 51 15.7	
	20nm,0.7s						
SKR				*e*S	Sn	20 52 38.4	-0.6
SKR				A	A	20 52 52.7	
	130nm,0.9s						
SKR				A	A	20 52 52.7	
	150nm,0.9s						
OKH	Okha	10.12	340	*e*P	Pn	20 51 37.6	+2.5
OKH				AMB	AMB	20 51 40.7	
	10.0nm,0.8s						
KLR	Kul'dur	12.73	299	*e*P	Pn	20 52 09.9	-0.8
YAK	Yakutsk	21.08	335	*e*P	P	20 53 53.7	+2.0
MKAR	Makanchi Array	45.43	298	*e*P	P	20 57 27.8	+2.4
KURK	Kurchatov	46.26	304	*e*P	P	20 57 33.4	+1.6

*VIE **29** 20:54:15.4±0.1, 47°.58N×12°.86E, h6^{km}±1^{km}, mb2.3/18, ml3.0/20, Error ellipse: s-maj=1.0km s-min=0.7km az=157.0 12 km WSW of Berchtesgaden*
*BGR **29** 20:54:16.7±0.3, 47°.60N×12°.94E, h5^{km}, ML2.7/9, Error ellipse: s-maj=10.0km s-min=7.8km az=13.0*
*ROM **29** 20:54:16.4±0.2, 47°.576N±0°.010×12°.88E±0°.01, h9^{km}, ML2.3/4, Error ellipse: s-maj=1.2km s-min=0.7km az=19.0*
*PRU **29** 20:54:16.4±0.0, 47°.63N×13°.08E, h0^{km}*
*LDG **29** 20:54:16.4±0.1, 47°.60N×12°.83E, h3^{km}, Ml2.6/29, Error ellipse: s-maj=3.4km s-min=2.4km az=161.0*
*STR **29** 20:54:22.9±5.7, 48°N±16°×1°2E±4°7, h10^{km}, MLv3.4/6*

ISC 29 20:54:15.5±1.0, 47°.59N±0°.01×12°.83E±0°.01, h8^{km}±9^{km}, n148, σ2^{s}.05/239, 2C, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBA	Koelnbreinsper	0.62	145	*i* Pg	Pg	20 54 27.4	-0.3
	21nm,0.1s,SNR=37						
KBA				*e*Sg	Sb	20 54 36.1	-1.6
	19nm,0.1s						
KBA	Koelnbreinsper	0.62	145	*e*Pg	Pg	20 54 27.3	-0.3
RISI	Rein	0.82	219	P	Pg	20 54 31.8	+0.5
RISI				S	Sb	20 54 43.7	+0.3
WTTA	Wattenberg	0.87	248	*e*Pg	Pg	20 54 32.6	+0.4
	5.1nm,0.1s,SNR=18						
WTTA	Wattenberg	0.87	248	P	Pg	20 54 32.8	+0.6
WTTA	Wattenberg	0.87	248	*e*Pg	Pg	20 54 32.9	+0.6
ABTA	Abfaltersbach	0.87	194	*e*Pg	Pg	20 54 32.6	+0.3
	3.2nm,0.1s,SNR=35						
ABTA				*e*Sg	Sb	20 54 44.2	-0.6
	58nm,0.3s						
WATA	Walderalm	0.89	254	*e*Pg	Pg	20 54 32.9	+0.3
	6.8nm,0.1s,SNR=11						
FVI	Forni Avoltri	1.00	182	P	Pg	20 54 34.7	0.0
FVI				AML	AML		
	comp=E,189µm,0.5s						
FVI				AML	AML		
	comp=N,123µm,0.7s						
MOA	Molln	1.01	75	*e*Pg	Pg	20 54 34.3	-0.6
	comp=N,0.9nm,0.1s,SNR=114						
MOA				*e*Sg	Sg	20 54 47.9	0.0
	comp=N,27nm,0.1s						
MOA	Molln	1.01	75	*e*Pg	Pg	20 54 34.3	-0.6
ZOU	Zoufplan	1.04	174	P	Pg	20 54 35.3	-0.2
ZOU				S	Sb	20 54 49.2	-0.5
ZOU				AML	AML		
	comp=N,228µm,0.5s						

ZOU				AML	AML		
	comp=E,229µm,0.8s						
MYKA	**Terra Mystica**	**1.11**	**150**	*e*Pg	**Pg**	**20 54 36.0**	**-0.9**
	comp=E,0.9nm,0.1s,SNR=4.7						
MYKA				*e*Sg	**Sb**	**20 54 51.7**	**0.0**
	comp=E,26nm,0.3s						
CLUD	**Cludinico**	**1.14**	**178**	P	**Pg**	**20 54 37.0**	**-0.4**
CLUD				S	**Sb**	**20 54 52.3**	**0.0**
CLUD				AML	AML		
	comp=E,136µm,1.3s						
CLUD				AML	AML		
	comp=N,144µm,0.7s						
ACOM	**Acomizza, Ital**	**1.15**	**156**	P	**Pg**	**20 54 36.9**	**-0.6**
ACOM				S	**Sb**	**20 54 53.1**	**+0.4**
SQTA	**Sankt Quirin**	**1.16**	**252**	*e*Pg	**Pg**	**20 54 38.1**	**+0.3**
	comp=N,5.9nm,0.1s,SNR=36						
BRES	**Bressanone**	**1.16**	**220**	P	**Pb**	**20 54 38.4**	**+0.4**
BRES				AML	AML		
	comp=E,333µm,1.2s						
BRES				AML	AML		
	comp=N,454µm,0.4s						
PART	**Garmisch-Parte**	**1.16**	**266**	*e*Pg	**Pn**	**20 54 39.8**	**+1.7**
ROSI	**Rosskopf**	**1.17**	**236**	P	**Pg**	**20 54 37.9**	**0.0**
ROSI				S	**Sb**	**20 54 55.0**	**+1.6**
FUR	**Furstenfeldbru**	**1.19**	**299**	*e*Pn	**Pb**	**20 54 39.5**	**+1.2**
FUR				*e*Sg	**Sn**	**20 54 56.4**	**+1.7**
MOTA	**Moosalm**	**1.19**	**259**	*e*Pg	**Pg**	**20 54 38.5**	**+0.1**
	comp=N,0.8nm,0.2s,SNR=50						
MOTA				*e*Sg	**Sb**	**20 54 56.0**	**+1.9**
PTCC	**Patocco-Chiusa**	**1.24**	**163**	P	**Pg**	**20 54 38.8**	**-0.5**
PTCC				S	**Sb**	**20 54 55.2**	**-0.1**
PTCC				AML	AML		
	comp=E,149µm,0.6s						
PTCC				AML	AML		
	comp=E,150µm,0.6s						
PTCC				AML	AML		
	comp=N,141µm,0.6s						
ZUGS	**Zugspitze, Sch**	**1.26**	**263**	*e*Pn	**Pn**	**20 54 41.3**	**+1.6**
CIMO	**Cimolais**	**1.31**	**192**	P	**Pg**	**20 54 40.2**	**-0.4**
CIMO				S	**Sb**	**20 54 57.8**	**+0.5**
STAL	**STALIGIAL**	**1.33**	**183**	P	**Pg**	**20 54 40.7**	**-0.4**
ABSI	**Aberstueckl**	**1.34**	**230**	P	**Pg**	**20 54 41.0**	**-0.3**
ABSI				S	**Sn**	**20 54 60.0**	**+1.2**
MPRI	**Monte Prat**	**1.36**	**175**	P	**Pg**	**20 54 41.1**	**-0.4**
MPRI				S	**Sb**	**20 54 59.0**	**+0.4**
GEC2	**GERESS Array S**	**1.38**	**25**	*e*Pn	**Pn**	**20 54 40.7**	**-0.5**
RETA	**Reutte**	**1.40**	**266**	*e*Pg	**Pb**	**20 54 42.9**	**+0.9**
	comp=N,4.8nm,0.2s,SNR=33						
RETA				*e*Sg	**Sn**	**20 55 02.6**	**+2.6**
	comp=N,6.0nm,0.2s						
AGOR	**Agordo**	**1.41**	**202**	P	**Pb**	**20 54 43.0**	**+0.9**
AGOR				S	**Sn**	**20 55 02.4**	**+2.1**
KOSI	**Kohlern**	**1.50**	**222**	P	**Pg**	**20 54 44.3**	**0.0**
KOSI				S	**Sg**	**20 55 04.6**	**+0.8**
KOSI				AML	AML		
	comp=E,236µm,0.7s						
KOSI				AML	AML		
	comp=N,246µm,1.0s						
FETA	**Feichten**	**1.54**	**249**	*e*Pg	**Pb**	**20 54 45.0**	**+0.8**
	comp=N,1.7nm,0.1s,SNR=18						
FETA				*e*Sg	**Sg**	**20 55 06.6**	**+1.7**
	comp=N,1.5nm,0.1s						
WET	**Wettzell**	**1.55**	**1**	*e*Pn	**Pn**	**20 54 43.1**	**-0.3**
APPI	**Appiano**	**1.56**	**225**	P	**Pb**	**20 54 45.2**	**+0.5**
APPI				S	**Sg**	**20 55 05.8**	**+0.2**
APPI				AML	AML		
	comp=E,228µm,0.3s						
APPI				AML	AML		
	comp=N,235µm,0.7s						
CKRC	**Cesky Krumlov**	**1.58**	**38**	*e*PG	**Pn**	**20 54 44.3**	**+0.5**
CKRC				*e*SG	**Sn**	**20 55 03.7**	**-0.7**
CKRC	**Cesky Krumlov**	**1.58**	**38**	*e*Pn	**Pn**	**20 54 44.4**	**+0.6**
CKRC				*e*Sg	**Sn**	**20 55 05.3**	**+0.9**
OBKA	**Obir**	**1.60**	**132**	*e*Pg	**Pg**	**20 54 45.5**	**-0.7**
	comp=N,10nm,0.3s,SNR=22						
OBKA				Sg	**Sg**	**20 55 06.2**	**-0.7**
	comp=N,16nm,0.2s						
OBKA	**Obir**	**1.60**	**132**	*e*Pg	**Pg**	**20 54 46.2**	**0.0**
KHC	**Kasperske Hory**	**1.62**	**18**	*e*PN	**Pn**	**20 54 44.0**	**-0.4**
KHC				*e*PG	**Pb**	**20 54 45.3**	**-0.3**
KHC				*e*SN	**Sn**	**20 55 04.7**	**-0.7**
KHC				*e*SG	**Sb**	**20 55 06.5**	**+0.3**
	comp=N,134nm,0.3s						
KHC	**Kasperske Hory**	**1.62**	**18**	*e*Pn	**Pn**	**20 54 44.1**	**-0.2**
KHC				*e*Sg	**Sb**	**20 55 07.4**	**+1.2**
VARN	**Col Varnada, M**	**1.68**	**197**	P	**Pb**	**20 54 47.1**	**+0.6**
SABO	**M.te Sabotino**	**1.70**	**161**	P	**Pb**	**20 54 47.2**	**+0.2**
SABO				AML	AML		
	comp=E,380µm,0.7s						
SABO				AML	AML		
	comp=N,307µm,0.8s						
OBER	**Oberstdorf**	**1.73**	**265**	*e*Pn	**Pg**	**20 54 49.0**	**+0.4**
OBER				*e*Sg	**Sg**	**20 55 13.5**	**+2.5**
SOKA	**Soboth**	**1.76**	**120**	*e*Pn	**Pn**	**20 54 46.8**	**+0.4**
	comp=N,0.9nm,0.1s,SNR=15						
SOKA				*e*Sn	**Sg**	**20 55 10.9**	**-1.3**
	comp=N,2.7nm,0.1s						
UBR	**Ueberruh**	**1.84**	**274**	*e*Pn	**Pb**	**20 54 50.1**	**+0.7**
ARSA	**Arzberg**	**1.86**	**100**	*e*Pn	**Pn**	**20 54 47.9**	**+0.2**
	comp=N,3.9nm,0.3s						
ARSA	**Arzberg**	**1.86**	**100**	*e*Pg	**Pb**	**20 54 50.0**	**+0.2**
LJU	**Ljubljana**	**1.94**	**142**	P	**Pb**	**20 54 50.1**	**-0.9**
DAVA	**Damuels**	**2.02**	**262**	*e*Pg	**Pb**	**20 54 54.0**	**+1.5**
	comp=N,6.7nm,0.3s						
DAVA				*e*Sg	**Sg**	**20 55 22.5**	**+2.0**
	comp=N,23nm,0.3s						
DAVA	**Damuels**	**2.02**	**262**	*e*Pn	**Pb**	**20 54 52.9**	**+0.4**
DOSS	**Dosso del Somm**	**2.05**	**214**	P	**Pb**	**20 54 52.3**	**-0.7**
DOSS				AML	AML		
	comp=E,387µm,0.5s						
DOSS				AML	AML		
	comp=E,263µm,0.8s						
DOSS				AML	AML		
	comp=N,384µm,0.5s						
DOSS				AML	AML		
	comp=N,278µm,0.8s						
CONA	**Conrad Observa**	**2.08**	**80**	*e*Pn	**Pn**	**20 54 51.1**	**+0.4**
	comp=N,0.4nm,0.1s,SNR=22						
GRF	**Grafenberg Arr**	**2.35**	**334**	*e*Pg	**Pg**	**20 55 00.8**	**+0.2**
MAGA	**Magasa**	**2.36**	**221**	P	**Pn**	**20 54 56.4**	**+1.7**
MAGA				AML	AML		
	comp=E,344µm,0.5s						
MAGA				AML	AML		
	comp=N,252µm,0.7s						
PLONS	**Plons/SG**	**2.41**	**258**	*e*Pn	**Pn**	**20 54 57.9**	**+2.7**
TREC	**Trest**	**2.46**	**45**	*e*SG	**Sb**	**20 55 29.5**	**-0.8**
	comp=N,40nm,0.6s						
GUT	**Gutenstein**	**2.54**	**282**	P	**Pn**	**20 54 58.3**	**+1.2**
LOBO	**Lobor**	**2.65**	**122**	*e*Pn	**Pn**	**20 54 58.5**	**0.0**
LOBO				Sn	**Sn**	**20 55 29.8**	**-0.9**
PRU	**Pruhonice**	**2.65**	**25**	*e*PG	**Pb**	**20 55 03.5**	**+0.3**
PRU				*e*SG	**Sb**	**20 55 38.3**	**+2.4**
	comp=N,26nm,0.4s						
PRU	**Pruhonice**	**2.65**	**25**	*e*Pg	**Pg**	**20 55 05.6**	**-0.8**
NKC	**Novy Kostel**	**2.65**	**355**	*e*PN	**Pn**	**20 54 59.0**	**+0.4**
NKC				*e*PG	**Pb**	**20 55 05.3**	**+2.0**
NKC				*e*SG	**Sg**	**20 55 40.8**	**+0.1**
	comp=N,32nm,0.4s						
NKC	**Novy Kostel**	**2.65**	**355**	*e*Pg	**Pg**	**20 55 06.4**	**+0.1**
OZLJ	**Ozalj**	**2.69**	**136**	*e*Pn	**Pn**	**20 54 59.6**	**+0.7**
OZLJ				Sn	**Sn**	**20 55 31.6**	**0.0**
PRA	**Prague**	**2.70**	**23**	*e*SG	**Sb**	**20 55 40.1**	**+2.9**
	comp=N,21nm,0.3s						
SMRN	**Sveta Marina**	**2.72**	**160**	*i* Pn	**Pn**	**20 55 01.0**	**+1.6**
SMRN				Sn	**Sn**	**20 55 34.1**	**+1.7**
PTJ	**Puntijarka**	**2.74**	**127**	*e*Pn	**Pn**	**20 55 00.1**	**+0.3**
PTJ				Sn	**Sn**	**20 55 32.8**	**-0.3**
BRJN	**Brijuni**	**2.76**	**166**	*e*Pn	**Pn**	**20 55 01.6**	**+1.6**
BRJN				Sn	**Sn**	**20 55 35.7**	**+2.2**
KRUC	**Moravsky**	**2.80**	**57**	*e*PN	**Pn**	**20 55 00.1**	**-0.4**
KRUC				*e*SN	**Sn**	**20 55 33.6**	**-0.8**
MNTV	**Mantova**	**2.82**	**211**	P	**Pg**	**20 55 08.1**	**-1.5**
LEOD	**Capriano del C**	**2.83**	**222**	⇑P	**Pb**	**20 55 06.8**	**+0.5**
KALN	**Kalnik**	**2.89**	**119**	*e*Pn	**Pn**	**20 55 02.1**	**+0.3**
KALN				Sn	**Sn**	**20 55 35.5**	**-1.2**
SLE	**Schleitheim**	**2.93**	**275**	P	**Pn**	**20 55 03.6**	**+1.2**
SLE	**Schleitheim**	**2.93**	**275**	*e*Pn	**Pn**	**20 55 03.6**	**+1.2**
ZST	**Bratislava**	**2.94**	**77**	*e*PG	**Pg**	**20 55 10.2**	**-1.6**
ZST				*e*SG	**Sb**	**20 55 46.5**	**+2.3**
VRAC	**Vranov**	**3.04**	**54**	*e*PN	**Pn**	**20 55 03.6**	**-0.2**
VRAC				*e*SN	**Sn**	**20 55 39.5**	**-0.9**
MODS	**Modra-Piesok**	**3.09**	**74**	*e*PG	**Pb**	**20 55 11.4**	**+0.7**
MODS				*e*SG	**Sb**	**20 55 49.0**	**+0.5**
BFO	**Black Forest**	**3.11**	**285**	*e*Pn	**Pn**	**20 55 06.2**	**+1.4**
PVCC	**Panska Ves**	**3.15**	**21**	*e*PG	**Pb**	**20 55 11.9**	**+0.2**
PVCC				*e*SG	**Sg**	**20 55 54.6**	**-2.2**
	comp=N,44nm,0.2s						
PVCC	**Panska Ves**	**3.15**	**21**	*e*Pn	**Pn**	**20 55 05.2**	**-0.2**
MOX	**Moxa**	**3.16**	**346**	*e*Pn	**Pn**	**20 55 04.5**	**-0.9**
SULZ	**Cheisacher**	**3.19**	**271**	P	**Pn**	**20 55 07.2**	**+1.2**
OPP	**Oppenau**	**3.24**	**288**	P	**Pn**	**20 55 07.8**	**+1.2**
FELD	**Feldberg im Sc**	**3.27**	**277**	P	**Pn**	**20 55 08.0**	**+1.0**
KIZ	**Kirchzarten**	**3.33**	**278**	P	**Pn**	**20 55 08.8**	**+0.9**
PLIT	**Plitvice**	**3.34**	**143**	*e*Pn	**Pn**	**20 55 09.2**	**+1.2**
PLIT				Sn	**Sn**	**20 55 48.6**	**+0.9**
NVLJ	**Novalja**	**3.35**	**154**	*e*Pn	**Pn**	**20 55 09.4**	**+1.4**
NVLJ				Sn	**Sn**	**20 55 49.3**	**+1.4**
MOSL	**Moslavina**	**3.35**	**125**	*e*Pn	**Pn**	**20 55 07.6**	**-0.5**
MOSL				Sn	**Sn**	**20 55 46.9**	**-1.3**
BALST	**Balsthal**	**3.49**	**268**	P	**Pn**	**20 55 11.2**	**+1.1**
BALST	**Balsthal**	**3.49**	**268**	*e*Pn	**Pn**	**20 55 11.2**	**+1.1**
VOGT	**Vogtsburg - To**	**3.51**	**280**	P	**Pn**	**20 55 12.1**	**+1.9**
UPC	**Upice**	**3.59**	**35**	*e*PG	**Pb**	**20 55 19.8**	**+0.6**
UPC				*e*SG	**Sb**	**20 56 06.4**	**+3.5**
	comp=N,23nm,0.3s						
DPC	**Dobruska-Polom**	**3.59**	**39**	*e*PN	**Pn**	**20 55 10.9**	**-0.6**
DPC				*e*PG	**Pb**	**20 55 19.9**	**+0.6**
DPC				*e*SG	**Sb**	**20 56 07.4**	**+4.4**
	comp=N,17nm,0.3s						
DPC	**Dobruska-Polom**	**3.59**	**39**	*e*Pg	**Pg**	**20 55 23.0**	**-1.4**
KRLC	**Kraliky**	**3.61**	**45**	*e*PN	**Pn**	**20 55 11.1**	**-0.6**
KRLC				*e*SG	**Sb**	**20 56 06.3**	**+2.9**
	comp=N,22nm,0.6s						
CHVC	**Chvalec**	**3.67**	**34**	*e*PG	**Pb**	**20 55 21.1**	**+0.5**
CHVC				*e*SG	**Sb**	**20 56 09.6**	**+4.3**
	comp=N,21nm,0.7s						
UDBI	**Udbina**	**3.69**	**145**	*e*Pn	**Pn**	**20 55 14.8**	**+2.1**
UDBI				Sn	**Sn**	**20 55 58.2**	**+1.9**
OSTC	**Ostas**	**3.71**	**36**	*e*PG	**Pb**	**20 55 20.7**	**-0.5**
OSTC				*e*SG	**Sb**	**20 56 09.8**	**+3.5**
	comp=N,24nm,0.8s						
CLL	**Collm**	**3.72**	**2**	*e*Pn	**Pn**	**20 55 13.0**	**-0.2**
CLL				*e*		20 55 21.0	
CLL				*e*Pg	**Pg**	**20 55 26.0**	**-0.8**
CLL				*e*		20 55 29.0	
CLL				*e*Sn	Sn	20 55 49.0	-8.1
CLL				*e*		20 55 55.0	
CLL				*e*		20 56 01.0	
CLL				*e*		20 56 11.0	
CLL				*e*Sg	**Sg**	**20 56 14.0**	**-0.9**
	comp=Z,9.0nm,0.6s						
BOURR	**Bourrignon**	**3.80**	**269**	P	**Pn**	**20 55 15.4**	**+1.1**
MORC	**Moravsky Berou**	**3.81**	**53**	*e*PN	**Pn**	**20 55 14.0**	**-0.5**
MORC				*e*SN	**Sn**	**20 55 59.4**	**-0.1**
MORC	**Moravsky Berou**	**3.81**	**53**	*e*Pn	**Pn**	**20 55 14.1**	**-0.5**
CDF	**Champ du Feu**	**3.81**	**284**	*e*P	**Pn**	**20 55 15.7**	**+1.1**
CDF	**Champ du Feu**	**3.81**	**284**	*e*Pg	**Pb**	**20 55 26.7**	**+3.6**
CDF				*e*Sg	**Sb**	**20 56 14.9**	**+5.5**
	comp=Z,4.5nm,0.3s						
MOF	**Molkenrain**	**3.85**	**276**	P	**Pn**	**20 55 16.4**	**+1.3**
DUGI	**Dugi Otok**	**3.92**	**156**	*e*Pn	**Pn**	**20 55 17.6**	**+1.6**
DUGI				Sn	**Sn**	**20 56 02.9**	**+0.7**
HINF	**Hinteralfeld**	**4.04**	**275**	*e*P	**Pn**	**20 55 18.5**	**+0.9**
HINF				*e*Sn	**Sn**	**20 56 01.6**	**-3.5**
	comp=Z,4.1nm,0.3s						
HINF				*e*Sg	**Sg**	**20 56 22.3**	**-2.8**
	comp=Z,2.5nm,0.2s						
APEC	**Apecchio**	**4.04**	**184**	S	Sn	20 55 44.0	-21
VYHS	**Vyhne**	**4.13**	**75**	*e*SG	**Sb**	**20 56 19.9**	**+1.4**
ABH	**Alteburg**	**4.18**	**305**	P	**Pn**	**20 55 21.0**	**+1.6**
OKC	**Ostrava-Krasne**	**4.18**	**56**	*e*SG	**Sg**	**20 56 25.3**	**-4.3**
	comp=Z,25nm,0.6s						
CHMF	**Charmoille**	**4.21**	**268**	P	**Pn**	**20 55 20.8**	**+0.9**
MORI	**Morici**	**4.24**	**151**	*e*Pn	**Pn**	**20 55 21.9**	**+1.7**
MORI				Sn	**Sn**	**20 56 11.5**	**+1.6**
EL6	**Elcito**	**4.27**	**177**	⇑P	**Pn**	**20 55 22.9**	**+2.1**
BRANT	**Les Verrieres**	**4.37**	**264**	P	**Pn**	**20 55 23.5**	**+1.3**
KIJV	**Kijevo**	**4.38**	**144**	*e*Pn	**Pn**	**20 55 23.7**	**+1.5**
KIJV				Sn	**Sn**	**20 56 15.5**	**+2.2**
HAU	**Haudompre**	**4.38**	**278**	*e*P	**Pn**	**20 55 24.2**	**+1.9**
HAU	**Haudompre**	**4.38**	**278**	*e*Pg	**Pg**	**20 55 37.6**	**-1.9**
HAU				*e*Sn	**Sn**	**20 56 09.8**	**-3.8**
HAU				*e*Sg	**Sg**	**20 56 33.1**	**-3.1**
	comp=Z,4.9nm,0.3s						
ZIRJ	**Zirje**	**4.41**	**152**	*e*Pn	**Pn**	**20 55 24.1**	**+1.6**
ZIRJ				Sn	**Sn**	**20 56 14.6**	**+0.6**
LPG	**La Plagne**	**4.69**	**246**	*e*P	**Pn**	**20 55 30.3**	**+3.6**
LPG				*e*Sn	**Sn**	**20 56 18.5**	**-2.8**
	comp=Z,0.5nm,0.3s						
LPL	**La Plagne**	**4.69**	**246**	*e*P	**Pn**	**20 55 30.2**	**+3.5**
LPL				*e*Sn	**Sn**	**20 56 18.4**	**-2.9**
	comp=Z,1.8nm,0.4s						
CABF	**La Chapelle**	**4.70**	**260**	*e*P	**Pn**	**20 55 27.8**	**+1.0**
CABF				*e*Sn	**Sn**	**20 56 18.1**	**-3.4**
	comp=Z,1.8nm,0.3s						
CABF				*e*Sg	**Sg**	**20 56 43.9**	**-2.6**
	comp=Z,0.9nm,0.2s						
PAGF	**Fort de Pagny**	**4.86**	**284**	*e*P	**Pn**	**20 55 30.6**	**+1.8**
	baz=105						
PAGF	**Fort de Pagny**	**4.86**	**284**	*e*Pg	**Pb**	**20 55 45.0**	**+4.3**
PAGF				*e*Sg	**Sg**	**20 56 47.5**	**-3.8**
	comp=Z,1.7nm,0.3s						
MBDF	**Montbardon**	**5.09**	**238**	*e*P	**Pn**	**20 55 35.6**	**+3.5**
MBDF				*e*Sn	**Sn**	**20 56 28.3**	**-2.8**
	comp=Z,0.3nm,0.2s						
RICI	**Ricice**	**5.09**	**142**	*e*Pn	**Pn**	**20 55 33.5**	**+1.4**
RICI				Sn	**Sn**	**20 56 32.6**	**+1.6**
HVAR	**Hvar**	**5.10**	**149**	*e*Pn	**Pn**	**20 55 33.1**	**+1.0**
HVAR				Sn	**Sn**	**20 56 31.3**	**+0.2**
SAVF	**Savonnieres en**	**5.26**	**284**	*e*P	**Pn**	**20 55 37.2**	**+2.9**
SAVF				*e*Sg	**Sg**	**20 57 00.5**	**-3.8**
	comp=Z,3.8nm,0.5s						
SFTF	**Sexfontaines**	**5.27**	**280**	*e*P	**Pn**	**20 55 36.0**	**+1.5**
	baz=99						
SFTF				*e*Sn	**Sn**	**20 56 31.3**	**-4.1**
SFTF				*e*Sg	**Sg**	**20 57 00.7**	**-4.0**
	comp=Z,3.1nm,0.3s						
MEZF	**Maizieres J'vi**	**5.29**	**283**	*e*P	**Pn**	**20 55 36.7**	**+1.9**
MEZF				*e*Sn	**Sn**	**20 56 31.7**	**-4.1**
MEZF				*e*Sg	**Sg**	**20 57 00.9**	**-4.4**
	comp=Z,0.6nm,0.3s						
SBF	**Sospel**	**5.30**	**227**	*e*P	**Pn**	**20 55 38.9**	**+3.9**
ORIF	**Oris-en-Rattie**	**5.51**	**243**	*e*Pn	**Pn**	**20 55 37.7**	**-0.1**
ORIF				*e*Sn	**Sn**	**20 56 38.2**	**-3.2**
	comp=Z,0.6nm,0.2s						
PGF	**Pioggiola**	**5.72**	**210**	*e*Pn	**Pn**	**20 55 40.9**	**+0.1**
FRF	**La Foret Royal**	**5.92**	**229**	*e*P	**Pn**	**20 55 47.2**	**+3.8**
LOR	**Lormes**	**6.09**	**270**	*e*P	**Pn**	**20 55 48.6**	**+2.8**
	baz=89						
LOR				*e*Sn	**Sn**	**20 56 50.8**	**-4.8**
	comp=Z,0.8nm,0.3s						
LOR				*e*Sg	**Sg**	**20 57 27.7**	**-3.3**
	comp=Z,1.1nm,0.2s						
LIK	**San Giovanni I**	**6.11**	**175**	P	**Pb**	**20 56 00.7**	**-1.4**
BAIF	**Baives**	**6.20**	**297**	*e*P	**Pn**	**20 55 48.9**	**+1.7**
BAIF				*e*Sn	**Sn**	**20 56 54.0**	**-4.2**
	comp=Z,0.8nm,0.3s						
BAIF				*e*Sg	**Sg**	**20 57 28.4**	**-6.1**
	comp=Z,1.0nm,0.3s						
SMF	**Signal de Mont**	**6.20**	**265**	*e*P	**Pn**	**20 55 51.1**	**+3.8**
SMF				*e*Sn	**Sn**	**20 56 53.6**	**-4.8**
	comp=Z,0.9nm,0.2s						
SMRF	**Simiane la Rot**	**6.23**	**237**	*e*P	**Pn**	**20 55 50.6**	**+3.0**
VIVF	**Saint-Julien-l**	**6.28**	**247**	*e*Pn	**Pn**	**20 55 48.3**	**-0.1**
VIVF				*e*Sn	**Sn**	**20 56 56.4**	**-3.9**
	comp=Z,0.7nm,0.2s						
SSF	**Saint Saulge**	**6.36**	**269**	*e*P	**Pn**	**20 55 51.3**	**+1.9**
SSF				*e*Sn	**Sn**	**20 56 57.1**	**-5.0**
	comp=Z,0.3nm,0.2s						
AVF	**Avril sur Loir**	**6.50**	**266**	*e*P	**Pn**	**20 55 53.2**	**+1.8**
AVF				*e*Sn	**Sn**	**20 57 00.8**	**-4.9**
	comp=Z,0.3nm,0.3s						
BGF	**Bois d'Agland**	**6.89**	**265**	*e*Pn	**Pn**	**20 55 57.0**	**+0.2**
BGF	**Bois d'Agland**	**6.89**	**265**	*e*P	**Pn**	**20 55 59.7**	**+2.9**
BGF				*e*Sn	**Sn**	**20 57 09.8**	**-5.5**
	comp=Z,2.7nm,0.2s						
LASF	**Ste Croix**	**7.18**	**244**	*e*Pn	**Pn**	**20 56 00.0**	**-0.7**
LASF				*e*Sn	**Sn**	**20 57 18.0**	**-4.5**
	comp=Z,0.5nm,0.3s						
TCF	**Toulx Ste Croi**	**7.38**	**264**	*e*Pn	**Pn**	**20 56 03.7**	**+0.2**
TCF				*e*Sn	**Sn**	**20 57 22.1**	**-5.3**
	comp=Z,0.9nm,0.2s						
MTLF	**Montolieu**	**8.58**	**244**	*e*Pn	**Pn**	**20 56 19.5**	**-0.4**
MTLF				*e*Sn	**Sn**	**20 57 51.7**	**-5.1**
	comp=Z,0.3nm,0.2s						
LFF	**La Frestale**	**8.78**	**257**	*e*Pn	**Pn**	**20 56 19.9**	**-2.8**
MFF	**Saint Martin d**	**8.91**	**268**	*e*Pn	**Pn**	**20 56 23.8**	**-0.5**

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*NOU **29** 21:07:59.7, 13°.88S×166°.33E, h0^{km}, mb4.8/14, Vanuatu Islands*

*NEIC **29** 21:08:17.4±1.9, 14°.9S±0°.1×167°.5E±0°.2, h127^{km}±6^{km}, mb4.4/12, Error ellipse: s-maj=22.4km s-min=15.9km az=102.0*

*IDC **29** 21:08:18.4±4.4, 14°.86S×167°.34E, h136^{km}±38^{km}, mb3.7/8, mb1 3.9/9, mb1mx3.7/29, mbtmp4.1/9, MS2.4/1, Ms1 2.4/1, ms1mx2.3/27, Error ellipse: s-maj=29.9km s-min=26.8km az=74.0*

ISC 29 21:08:17.2±0.9, 14°.83S±0°.08×167°.4E±0°.1, h129^{km}, n40, σ1^{s}.15/40, mb4.3/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.65**	**200**		**Pn**	**21 08 36.5**	**-0.6**
SANVU				Sn	**Sn**	**21 08 51.0**	**-1.2**
DVP	**Devils Point**	**2.97**	**166**	P	**Pn**	**21 09 03.8**	**+0.4**
LIFNC	**LIFOU**	**5.92**	**182**	Pn	**Pn**	**21 09 40.2**	**-2.4**
LIFNC	**LIFOU**	**5.92**	**182**	P	**Pn**	**21 09 40.8**	**-1.8**
KOUNC	**Koumac, New Ca**	**6.43**	**207**	P	Pn	21 09 40.1	-9.4
MARNC	**Mare, Loyalty**	**6.64**	**175**	Pn	**Pn**	**21 09 50.0**	**-2.3**
MARNC	**Mare, Loyalty**	**6.64**	**175**	P	**Pn**	**21 09 50.8**	**-1.5**
YATNC	**Mamie plateau,**	**7.21**	**184**	P	**Pn**	**21 09 58.6**	**-1.4**
DZM	**Mont Dzumac**	**7.26**	**187**	P	**Pn**	**21 10 01.1**	**+0.3**
	7.0nm,0.3s,baz=46,slow=16,SNR=54						
DZM				S	**Sn**	**21 11 24.3**	**+2.4**
	5.0nm,0.3s,baz=343,slow=21,SNR=3.1						
DZM				LR	LR	21 11 36.1	
	comp=Z,29nm,20.3s,baz=250,slow=27						
DZM	**Mont Dzumac**	**7.26**	**187**		**Pn**	**21 10 00.5**	**-0.4**
DZM	**Mont Dzumac**	**7.26**	**187**	P	**Pn**	**21 10 00.8**	**0.0**
NOUC	**Port Laguerre**	**7.31**	**188**	P	**Pn**	**21 10 02.0**	**+0.6**
ONTNC	**Ouen Toro**	**7.50**	**187**		**Pn**	**21 10 03.8**	**0.0**
ONTNC	**Ouen Toro**	**7.50**	**187**	P	**Pn**	**21 10 04.7**	**+0.9**
OUENC	**Ouen Island, N**	**7.57**	**184**	P	**Pn**	**21 10 05.4**	**+0.6**
PINNC	**Pines Island,**	**7.74**	**180**	Pn	**Pn**	**21 10 07.5**	**+0.3**
PINNC	**Pines Island,**	**7.74**	**180**	P	**Pn**	**21 10 08.1**	**+0.9**
EIDS	**Eidsvold**	**18.57**	**233**	P	**Pn**	**21 12 25.8**	**-0.3**
EIDS				IAmb	IAmb	21 12 26.8	
	comp=Z,9.9nm,0.8s						
BKZ	**Black Stump Fm**	**25.52**	**163**	P	**P**	**21 13 33.6**	**-0.2**
BKZ				IAmb	IAmb	21 13 35.4	
	comp=Z,27nm,1.5s						
LTZ	**Lake Taylor**	**28.16**	**172**	P	**P**	**21 13 57.4**	**-0.1**
LTZ				IAmb	IAmb	21 14 02.1	
	comp=Z,19nm,1.4s						
STKA	**Stephens Creek**	**29.05**	**230**	P	**P**	**21 14 05.9**	**+0.6**
	comp=Z,5.2nm,0.5s,baz=47,slow=8.2,SNR=28						
STKA	**Stephens Creek**	**29.05**	**230**	P	**P**	**21 14 05.6**	**+0.2**
WB0	**Warramunga Arr**	**31.89**	**256**	P	**P**	**21 14 29.1**	**-1.5**
WRA	**Warramunga Arr**	**31.95**	**256**	P	**P**	**21 14 29.2**	**-1.9**
	comp=Z,1.4nm,0.9s,baz=86,slow=9.2,SNR=3.6						
AS31	**Alice Springs**	**32.78**	**249**	P	**P**	**21 14 36.7**	**-1.7**
ASAR	**Alice Springs**	**32.78**	**249**	P	**P**	**21 14 36.9**	**-1.5**
	comp=Z,3.9nm,0.7s,baz=79,slow=8.8,SNR=36						
ASAR				PcP	**PcP**	**21 17 20.2**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=89,slow=2.5,SNR=4.6						
ASAR	**Alice Springs**	**32.78**	**249**	P	**P**	**21 14 36.6**	**-1.7**
BBOO	**Buckleboo**	**33.64**	**232**	P	**P**	**21 14 45.8**	**+0.2**
BBOO				IAmb	IAmb	21 14 46.6	
	comp=Z,6.2nm,0.7s						
KNRA	**Kununurra**	**37.28**	**264**	P	**P**	**21 15 17.2**	**+0.2**
FORT	**Forrest**	**39.38**	**239**	P	**P**	**21 15 33.8**	**-0.6**
VNDA	**Vanda**	**62.77**	**181**	P	**P**	**21 18 28.2**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=2.0,slow=7.7,SNR=9.9						
VNDA	**Vanda**	**62.77**	**181**	P	**P**	**21 18 28.1**	**-0.2**
VNDA				IAmb	IAmb	21 18 44.4	
	comp=Z,5.8nm,1.4s						
CMAR	**Chiang Mai Arr**	**75.13**	**294**	P	**P**	**21 19 47.1**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=129,slow=5.4,SNR=4.4						
SONM	**Songino Array**	**82.67**	**324**	P	**P**	**21 20 27.5**	**+1.2**
	comp=Z,0.3nm,0.8s,baz=137,slow=4.6,SNR=4.7						
SONM	**Songino Array**	**82.67**	**324**	P	**P**	**21 20 27.6**	**+1.2**
SHL	**Shillong**	**83.75**	**298**	P	**P**	**21 20 32.3**	**-0.2**
SHL				IAmb	IAmb	21 20 33.6	
	comp=Z,7.4nm,1.1s						
IMAR	**Indian Mountai**	**85.62**	**15**	P	**P**	**21 20 41.4**	**+0.7**
ILAR	**Eielson Array**	**86.57**	**18**	P	**P**	**21 20 44.7**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=242,slow=5.6,SNR=4.4						
MKAR	**Makanchi Array**	**97.38**	**316**	P	Pdif	21 21 36.7	+0.6
	comp=Z,0.5nm,0.7s,baz=86,slow=7.4,SNR=5.7						
MKAR	**Makanchi Array**	**97.38**	**316**	P	Pdif	21 21 36.4	+0.3

IDC 29 21:19:11.9±3.1, 48°.83S×124°.88E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.6/26, mbtmp3.7/3, MS3.6/4, Ms1 3.5/4, ms1mx3.3/14, Error ellipse: s-maj=78.1km s-min=49.2km az=160.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**16.03**	**326**	T	T	21 39 51.0	
	baz=152,slow=74,SNR=18						
H01W2	**Cape Leeuwin H**	**16.03**	**326**	T	T	21 39 39.8	
	baz=152,slow=74,SNR=18						
H01W3	**Cape Leeuwin H**	**16.05**	**326**	T	T	21 39 44.3	
	baz=152,slow=74,SNR=16						
STKA	**Stephens Creek**	**21.11**	**43**	P	P	21 23 58.7	+0.7
	2.7nm,0.8s,baz=221,slow=10,SNR=8.4						
STKA				LR	LR	21 30 33.3	
	comp=Z,80nm,19.9s,baz=204,slow=32						
ASAR	**Alice Springs**	**26.11**	**19**	P	P	21 24 46.8	-0.6
	0.7nm,0.8s,baz=193,slow=9.3,SNR=7.4						
ASAR				LR	LR	21 34 08.2	
	comp=Z,93nm,20.4s,baz=172,slow=34						
WRA	**Warramunga Arr**	**29.81**	**18**	LR	LR	21 38 02.9	
	comp=Z,146nm,18.4s,baz=170,slow=38						
VNDA	**Vanda**	**32.07**	**166**	LR	LR	21 36 09.5	
	comp=Z,130nm,18.8s,baz=330,slow=32						
CMAR	**Chiang Mai Arr**	**70.86**	**334**	P	P	21 30 30.9	+0.4
	0.5nm,0.7s,baz=185,slow=5.5,SNR=7.3						
YKA	**Yellowknife Ar**	**145.14**	**44**	PKPbc	PKPbc	21 38 48.4	-1.2
	1.3nm,0.7s,baz=268,slow=3.7,SNR=26						

IDC 29 21:21:06.3±52.0, 22°.33S×177°.97W, h0^{km}, mb4.5/3, mb1 4.7/3, mb1mx3.8/24, mbtmp4.5/3, Error ellipse: s-maj=957.4km s-min=150.8km az=85.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.05**	**246**	P	P	21 28 17.6	-0.5
	1.0nm,0.3s,baz=89,slow=9.2,SNR=7.3						
ASAR	**Alice Springs**	**44.15**	**259**	P	P	21 29 16.9	-0.2
	3.4nm,0.5s,baz=97,slow=7.4,SNR=70						
WRA	**Warramunga Arr**	**44.40**	**264**	P	P	21 29 19.4	+0.3
	7.8nm,0.4s,baz=100,slow=8.4,SNR=86						

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*NEIC **29** 21:28:30.7±1.2, 56°.3S±0°.1×26°.9W±0°.2, h104^{km}±1^{km}, mb4.7/34, Error ellipse: s-maj=16.9km s-min=13.2km az=212.0*

*IDC **29** 21:28:31.4±2.0, 56°.30S×26°.79W, h110^{km}±16^{km}, mb4.2/9, mb1 4.3/11, mb1mx4.0/23, mbtmp4.6/11, Error ellipse: s-maj=18.4km s-min=14.6km az=77.0*

ISC 29 21:28:30.0±0.4, 56°.29S±0°.07×26°.92W±0°.08, h101^{km}, n61, σ0^{s}.87/58, mb4.6/21, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.82**	**286**	Pn	**Pn**	**21 29 54.3**	**+0.5**
VNA1	**Neumayer--Stat**	**16.52**	**158**	P	**Pn**	**21 32 15.4**	**+0.3**
VNA2	**Neumayer--Watz**	**16.91**	**158**	P	**P**	**21 32 20.5**	**+0.1**
	baz=314,slow=14						
SNAA	**Sanae**	**18.46**	**156**	P	**Pn**	**21 32 41.4**	**+2.6**
SNAA	**Sanae**	**18.46**	**156**	P	**P**	**21 32 36.9**	**-0.5**
	1.2nm,0.3s,baz=294,slow=9.6,SNR=49						
SNAA	**Sanae**	**18.46**	**156**	P	**P**	**21 32 37.0**	**-0.5**
SNAA				IAmb	IAmb	21 32 44.5	
	comp=Z,35nm,0.7s						
EFI	**East Falkland**	**18.79**	**271**	P	**P**	**21 32 41.5**	**+0.5**
EFI				IAmb	IAmb	21 32 51.4	
	comp=Z,60nm,1.4s						
PMSA	**Palmer Station**	**19.86**	**230**	P	**Pn**	**21 32 54.8**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=59,slow=7.3,SNR=10						
PMSA	**Palmer Station**	**19.86**	**230**	P	**P**	**21 32 54.1**	**+1.6**
SMAI	**San Martin Ant**	**21.68**	**221**	P	**P**	**21 33 12.5**	**+0.4**
PLTB	**Pedras Altas**	**30.77**	**312**	P	**P**	**21 34 36.1**	**+0.5**
QSPA	**South Pole Qui**	**33.96**	**180**	P	**P**	**21 35 03.6**	**+0.2**
	comp=Z,5.1nm,0.4s,baz=200,slow=3.7,SNR=11						

QSPA	South Pole Qui	33.96	180	P	P	21 35 03.8	+0.4
QSPA				IAmb	IAmb	21 35 04.1	
	comp=Z,10.0nm,0.8s						
ITAB	Concordia	34.20	318	P	P	21 35 06.3	+0.7
CPUP	Villa Florida	37.08	311	P	P	21 35 30.2	0.0
	comp=Z,1.7nm,0.4s,baz=139,slow=6.5,SNR=7.3						
CPUP	Villa Florida	37.08	311	P	P	21 35 29.8	-0.5
MT09	Talagante	37.53	288	P	P	21 35 32.3	-1.8
MT09				IAmb	IAmb	21 35 53.9	
	comp=Z,12nm,1.3s						
MT02	Curacav	38.00	288	P	P	21 35 36.5	-1.4
MT02				IAmb	IAmb	21 35 53.7	
	comp=Z,12nm,1.2s						
MAW	Mawson	39.87	143	P	P	21 35 53.4	+0.3
	comp=Z,4.3nm,0.6s,baz=82,slow=8.8,SNR=2.3						
MAW	Mawson	39.87	143	P	P	21 35 52.8	-0.3
SUR	Sutherland	40.56	74	P	P	21 36 00.4	+0.9
AQDB	Aquidauana	41.68	317	P	P	21 36 08.0	-0.5
BDFB	Brasilia	43.65	330	P	P	21 36 26.1	+1.5
LVC	Limon Verde	45.55	300	P	P	21 36 40.6	+0.7
LVC				IAmb	IAmb	21 36 42.8	
	comp=Z,8.7nm,0.8s						
SBA	Scott Base	45.85	184	P	P	21 36 42.0	+0.9
SBA				IAmb	IAmb	21 37 06.2	
	comp=Z,16nm,1.4s						
BOSA	Boshof	45.88	75	P	P	21 36 42.0	-0.2
	comp=Z,5.5nm,0.9s,baz=206,slow=5.3,SNR=8.0						
BOSA	Boshof	45.88	75	P	P	21 36 41.8	-0.5
BOSA				IAmb	IAmb	21 36 43.1	
	comp=Z,10nm,1.1s						
VNDA	Vanda	46.34	183	P	P	21 36 45.5	+0.5
	comp=Z,10nm,0.7s,baz=188,slow=6.2,SNR=47						
VNDA	Vanda	46.34	183	P	P	21 36 45.4	+0.3
VNDA				IAmb	IAmb	21 36 48.3	
	comp=Z,9.6nm,0.7s						
PB09	IPOC Station P	46.40	300	P	P	21 36 46.8	+0.4
PB09				IAmb	IAmb	21 36 50.6	
	comp=Z,7.8nm,0.6s						
PB07	IPOC Station P	46.77	300	P	P	21 36 49.6	+0.4
PB01	IPOC Station P	47.16	300	P	P	21 36 52.7	+0.5
PB01				IAmb	IAmb	21 36 53.2	
	comp=Z,7.8nm,0.7s						
PTLB	Pontes e Lacer	47.57	316	P	P	21 36 55.4	+0.2
PTLB				IAmb	IAmb	21 36 56.4	
	comp=Z,14nm,1.3s						
H10S2	ASCENSION HYDR	48.19	16	T	T	22 29 39.0	
	baz=189,slow=74,SNR=17						
H10S3	ASCENSION HYDR	48.19	16	T	T	22 29 46.8	
	baz=31,slow=74,SNR=20						
PB11	IPOC Station P	48.34	301	P	P	21 37 01.5	+0.1
LBTB	Lobatse	48.94	73	P	P	21 37 05.6	-0.2
LBTB				IAmb	IAmb	21 37 07.4	
	comp=Z,6.7nm,0.7s						
H10N1	ASCENSION HYDR	49.31	16	T	T	22 30 47.8	
	baz=189,slow=75,SNR=6.1						
H10N3	ASCENSION HYDR	49.31	16	T	T	22 31 11.4	
	baz=189,slow=75,SNR=11						
H10N2	ASCENSION HYDR	49.32	16	T	T	22 30 48.1	
	baz=189,slow=75,SNR=7.5						
PB16	IPOC Station P	49.49	302	P	P	21 37 11.0	+0.3
PB16				IAmb	IAmb	21 37 11.8	
	comp=Z,3.8nm,0.4s						
TSUM	Tsumeb	49.67	60	P	P	21 37 11.7	+0.2
TSUM				IAmb	IAmb	21 37 13.2	
	comp=Z,5.9nm,0.8s						
LPAZ	La Paz	50.64	305	P	P	21 37 20.3	+0.9
	comp=Z,8.1nm,0.5s,baz=118,slow=4.8,SNR=41						
LPAZ	La Paz	50.64	305	P	P	21 37 20.0	+0.6
CASY	Casey	53.63	160	P	P	21 37 40.4	+0.2
CASY				IAmb	IAmb	21 38 08.7	
	comp=Z,6.5nm,1.0s						
LSZ	Lusaka	58.32	68	P	P	21 38 14.0	-0.4
BOAV	Boa Vista	64.56	322	P	P	21 38 55.9	-0.3
BOAV				IAmb	IAmb	21 39 07.4	
	comp=Z,15nm,1.5s						
DBIC	Dimbokro	65.32	24	P	P	21 39 01.9	+0.8
	comp=Z,3.1nm,0.8s,baz=185,slow=7.1,SNR=4.5						
DBIC	Dimbokro	65.32	24	P	P	21 39 01.8	+0.7
DBIC				IAmb	IAmb	21 39 18.8	
	comp=Z,14nm,1.4s						
TORD	Torodi Ar. Bea	73.19	29	P	P	21 39 50.1	+0.5
	comp=Z,3.1nm,0.6s,baz=200,slow=6.7,SNR=19						
BIRV	Birongo	74.09	320	P	P	21 39 54.8	-0.1
ZARC	Zaragoza, Cauc	74.76	310	P	P	21 39 57.5	-1.3
TAU	Tasmania Unive	81.05	176	P	P	21 40 33.2	-0.1
ASAR	Alice Springs	98.72	162	P	P	21 41 56.9	-1.0
	comp=Z,0.6nm,0.6s,baz=183,slow=4.0,SNR=9.0						
ASAR				PP	PP	21 45 56.4	-2.8
	comp=Z,0.9nm,1.0s,baz=187,slow=5.7,SNR=4.1						
ASAR	Alice Springs	98.72	162	P	Pdif	21 41 59.2	+1.3
FINES	FINESS Array B	124.53	28	PKP	PKPdf	21 47 15.2	-0.6
	comp=Z,3.5nm,1.1s,baz=219,slow=2.4,SNR=7.3						
YKA	Yellowknife Ar	136.45	318	PKP	PKPdf	21 47 38.3	0.0
	comp=Z,0.3nm,0.5s,baz=132,slow=2.3,SNR=7.7						
YKA				SKPbc	SKPbc	21 50 59.5	-1.6
	comp=Z,1.3nm,0.9s,baz=128,slow=2.3,SNR=12						
INK	Inuvik	146.08	320	PKPbc	PKPbc	21 47 57.1	+0.6
	comp=Z,2.0nm,0.5s,baz=64,slow=1.9,SNR=19						
INK				SKPbc	SKPbc	21 51 25.1	-0.8
	comp=Z,1.8nm,0.9s,baz=91,slow=4.3,SNR=3.7						
ILAR	Eielson Array	150.39	311	PKPbc	PKPbc	21 48 07.6	-0.3
	comp=Z,0.7nm,0.4s,baz=138,slow=5.0,SNR=18						
ILAR	Eielson Array	150.39	311		PKPbc	21 48 07.8	-0.1
SONM	Songino Array	150.59	87	PKPbc	PKPbc	21 48 08.8	-0.4
	comp=Z,1.5nm,0.5s,baz=226,slow=3.6,SNR=24						

IDC 29 21:28:43.6±1.9**,56°.55S×27°.13W,h0^{km},mb4.5**/2**, mb1 4.6**/2**,mb1mx3.9**/20**,mbtmp4.5**/2**,Error ellipse: s-maj=81.6km s-min=45.4km az=7.0,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	50.69	305	P	P	21 37 45.7	+0.2
	3.9nm,0.6s,baz=202,slow=7.7,SNR=6.1						
TORD	Torodi Ar. Bea	73.47	29	P	P	21 40 17.7	0.0
	3.5nm,0.6s,baz=200,slow=6.4,SNR=6.4						
YKA	Yellowknife Ar	136.56	318	PKP	PKiKP	21 48 06.9	-0.8
	0.3nm,0.6s,baz=118,slow=2.5,SNR=3.9						
ILAR	Eielson Array	150.47	311	PKPbc	PKPbc	21 48 33.9	-1.5
	1.7nm,0.9s,baz=135,slow=3.0,SNR=4.8						
SONM	Songino Array	150.72	87	PKPbc	PKPbc	21 48 36.8	0.0
	1.1nm,0.8s,baz=234,slow=3.3,SNR=5.2						

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*ANF **29** 21:40:46.9±0.2, 35°.71N×97°.41W, h6^{km}, ML3.6/9, Error ellipse: s-maj=2.4km s-min=2.2km az=110.0*

*TUL **29** 21:40:47±1.1, 35°.67N±0°.01×97°.41W±0°.02, h6^{km}±5^{km}, ML3.3, mb_Lg3.2/71(NEIC), Error ellipse: s-maj=2.2km s-min=1.8km az=72.0*

*NEIC **29** 21:40:47.3±1.0, 35°.69N±0°.01×97°.41W±0°.02, h7^{km}±4^{km}, Error ellipse: s-maj=2.3km s-min=1.8km az=84.0*

ISC 29 21:40:47.3±0.9**,35°.69N**±0°.02×**97°.41W**±0°.02**,h8**^{km}±6^{km}**, n87,σ0ˢ.56**/84**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	Oakdale Elemen	0.10	187		Pg	21 40 49.2	-0.5
OK025	Westminster Rd	0.12	152		Pg	21 40 49.6	-0.3
OK025				Sg	Sg	21 40 51.6	-0.2
OK029	Liberty Lake	0.12	340	Pg	Pg	21 40 50.0	+0.1
OK029				Sg	Sg	21 40 52.2	+0.4
OK001	Jones High Sch	0.16	143	Pg	Pg	21 40 50.3	-0.3
BCOK	Bluff Creek, N	0.17	260	Pg	Pg	21 40 50.5	-0.3
BCOK				Sg	Sg	21 40 53.2	+0.1
OK005	Luther M Schoo	0.18	100		Pg	21 40 50.9	0.0
OKCFA	Oklahoma City	0.27	188		Pg	21 40 52.3	-0.4
OKCFA				Sg	Sg	21 40 56.4	0.0
OKCFA	Oklahoma City	0.27	188	P	Pg	21 40 52.3	-0.4
	baz=8.0,SNR=50						
OKCFA				S	Sg	21 40 56.5	+0.1
	baz=8.0						
OKCSW	OKLAHOMA CITY	0.28	185	Pg	Pg	21 40 52.5	-0.3
OKCSW				Sg	Sg	21 40 56.7	+0.1
FNO	Franklin	0.43	179	Pg	Pg	21 40 55.2	-0.4
FNO				Sg	Sg	21 41 01.3	+0.1
OK031	S. Brethren Rd	0.53	60	Pg	Pg	21 40 57.6	0.0
OK031				Sg	Sg	21 41 05.1	+0.5
OK030	Cody Creek RV	0.56	64		Pg	21 40 58.0	-0.1
OK030				Sg	Sg	21 41 05.9	+0.4
OK034	N. Norfolk Rd.	0.65	60	Pg	Pg	21 40 59.6	-0.2
OK034				Sg	Sg	21 41 08.6	+0.3
W35A	Tecumseh	0.69	141	Pg	Pg	21 40 60.0	-0.6
W35A				Sg	Sg	21 41 09.2	-0.2
QUOK	Quay	0.75	49		Pg	21 41 01.4	-0.3
QUOK				Sg	Sg	21 41 11.7	+0.3
CROK	Carrier	0.94	330		Pg	21 41 05.0	-0.4
CROK				Sg	Sb	21 41 18.0	-0.6
BLOK	Blackwell	1.08	8		Pg	21 41 07.5	-0.6
BLOK				Sg	Sg	21 41 22.0	-0.2
X34A	Smith Ranch, M	1.14	198		Pg	21 41 08.5	-0.6
X34A				Sg	Sb	21 41 24.1	-0.1
GC02	Grant County #	1.22	343		Pg	21 41 09.8	-1.0
OK032	Salt Plains WL	1.29	330		Pn	21 41 10.9	-0.8
KAN13	South Haven SW	1.33	358		Pn	21 41 11.8	-0.3
TUL1	Leonard	1.33	80	Pn	Pn	21 41 10.8	-1.4
TUL1	Leonard	1.33	80	P	Pn	21 41 10.9	-1.3
	baz=260						
TUL1				S	Sn	21 41 30.4	+0.3
	baz=260						
KAN14	Manchester OK	1.35	341		Pn	21 41 12.0	-0.4
T35A	Sooner Cattle	1.43	30	Pn	Pn	21 41 13.1	-0.4
T35B	Sooner Cattle	1.43	30	P	Pn	21 41 13.3	-0.2
	baz=210,SNR=62						
T35B				S	Sg	21 41 32.9	-0.3
	baz=210						
OK035	E0210 Rd and N	1.47	314		Pn	21 41 13.7	-0.4
U32A	Winter Ranch,	1.47	299	Pn	Pn	21 41 13.8	-0.3
U32A	Winter Ranch,	1.47	299	P	Pn	21 41 13.8	-0.3
	baz=118,SNR=5.7						
U32A				S	Sg	21 41 34.0	-0.5
	baz=118						
KAN05	Bluff City Nor	1.47	345	Pn	Pn	21 41 14.1	0.0
KAN01	Argonia South	1.49	349	Pn	Pn	21 41 14.6	+0.1
KAN10	Anthony SW Sta	1.54	339	Pn	Pn	21 41 15.1	0.0
KAN06	Argonia West S	1.60	347	Pn	Pn	21 41 16.2	+0.3
KAN08	Anthony NE Sta	1.60	344	Pn	Pn	21 41 16.2	+0.2
KAN08				IAmb_Lg		21 41 40.4	
	comp=Z,139nm,1.1s						
KAN16	Harper SW Stat	1.63	341	Pn	Pn	21 41 16.2	0.0
KAN12	Harper NE Stat	1.68	344	Pn	Pn	21 41 17.5	+0.5
LOOK	Love County	1.70	174	Pn	Pn	21 41 17.3	0.0
LOOK				IAmb_Lg		21 41 43.4	
	comp=Z,94nm,0.7s						
X37A	Clayton	2.00	123	Pn	Pn	21 41 21.6	+0.3
X37A				IAmb_Lg		21 41 52.4	
	comp=Z,79nm,0.9s						
X37A	Clayton	2.00	123	P	Pn	21 41 21.6	+0.3
	baz=304,SNR=32						
X37A				S	Sb	21 41 48.4	-0.4
	baz=304						
Z35A	Perchaven, San	2.35	177	Pn	Pn	21 41 26.9	+0.6
Z35A	Perchaven, San	2.35	177	P	Pn	21 41 27.0	+0.8
	baz=357,SNR=18						
U38A	Gravette	2.56	72	Pn	Pn	21 41 29.6	+0.5
HHAR	Hobbs	2.87	77	Pn	Pn	21 41 33.8	+0.3
W39A	Magazine	3.00	98	Pn	Pn	21 41 35.1	+0.1
W39A				IAmb_Lg		21 42 30.5	
	comp=Z,65nm,0.9s						
W39A	Magazine	3.00	98	P	Pn	21 41 35.2	+0.1
	baz=280,SNR=39						
Z38A	Mt. Pleasant	3.14	140	IAmb_Lg		21 42 29.3	
	comp=Z,63nm,0.7s						
MIAR	Mount Ida	3.34	109	Pn	Pn	21 41 40.6	+0.8
MIAR	Mount Ida	3.34	109	S	Sn	21 42 20.4	+0.8
	baz=291						
KSU1	Kansas State U	3.47	10	IAmb_Lg		21 42 42.2	
	comp=Z,36nm,0.7s						
AMTX	Amarillo	3.59	258	Pn	Pn	21 41 44.2	+0.9
CBKS	Cedar Bluff	3.63	330	Pn	Pn	21 41 44.5	+0.6
U40A	Yellville	3.75	78	Pn	Pn	21 41 46.7	+1.2
U40A				IAmb_Lg		21 42 48.2	
	comp=Z,68nm,0.8s						
S39A	Bolivar	3.84	57	Pn	Pn	21 41 46.1	-0.7
S39A				IAmb_Lg		21 42 57.7	
	comp=Z,45nm,0.9s						
237A	Washetta, Mont	3.91	160	Pn	Pn	21 41 47.1	-0.6
X40A	Basin Creek Fa	3.94	106	Pn	Pn	21 41 48.4	+0.4
X40A				IAmb_Lg		21 42 56.1	
	comp=Z,79nm,0.8s						
X40A	Basin Creek Fa	3.94	106	P	Pn	21 41 48.7	+0.7
	baz=289,SNR=7.4						
X40A				P	Pn	21 41 48.7	+0.7
	baz=289,SNR=7.4						
WLAR	White Oak Lake	4.06	118	IAmb_Lg		21 43 06.6	
	comp=Z,55nm,0.9s						
WHAR	Wooly Hollow	4.20	94	Pn	Pn	21 41 51.4	-0.2
WHAR				IAmb_Lg		21 43 00.6	
	comp=Z,49nm,1.0s						
W41B	Gary Mavity, V	4.24	95	P	Pn	21 41 52.4	+0.2
	baz=278,SNR=11						
FCAR	Ozark Folk Cen	4.30	86	IAmb_Lg		21 43 09.6	
	comp=Z,36nm,0.7s						
MGMO	Mountain Grove	4.39	69	Pn	Pn	21 41 54.7	+0.4
MGMO				IAmb_Lg		21 43 16.9	
	comp=Z,36nm,0.8s						
R40A	Maddies Statio	4.87	56	Pn	Pn	21 42 00.5	-0.3
R40A				IAmb_Lg		21 43 26.7	
	comp=Z,22nm,0.8s						
435B	Jarrell	4.89	182	IAmb_Lg		21 43 29.1	
	comp=Z,44nm,0.9s						
CCAR	Cane Creek	4.96	109	IAmb_Lg		21 43 32.9	
	comp=Z,64nm,1.0s						
P38A	Dawn	4.99	37	IAmb_Lg		21 43 38.4	
	comp=Z,23nm,0.8s						
N33A	J Bar K, Exete	5.04	360	IAmb_Lg		21 43 30.3	
	comp=Z,43nm,0.7s						
LCAR	Lake Charles	5.09	84	Pn	Pn	21 42 03.0	-0.9
LCAR				IAmb_Lg		21 43 32.5	
	comp=Z,26nm,1.0s						
KSCO	Kaye Shedlock'	5.32	310		Pn	21 42 07.9	+0.7
KSCO				IAmb_Lg		21 43 43.5	
	comp=Z,28nm,0.7s						
CCM	Cathedral Cave	5.48	63	IAmb_Lg		21 43 46.5	
	comp=Z,38nm,0.8s						
JCT	Junction City	5.57	202	Pn	Pn	21 42 09.9	-0.6
BGNE	Belgrade	5.74	354	IAmb_Lg		21 43 54.7	
	comp=Z,43nm,0.9s						
PBMO	Poplar Bluff	5.74	77	IAmb_Lg		21 44 00.0	
	comp=Z,30nm,0.7s						
LPAR	Lepanto	5.79	89	IAmb_Lg		21 44 01.4	
	comp=Z,39nm,0.8s						
143A	Socs Landing,	5.79	119	IAmb_Lg		21 44 06.9	
	comp=Z,32nm,0.9s						
T25A	Trinidad	5.83	286	IAmb_Lg		21 44 03.0	
	comp=Z,35nm,0.8s						
FVM	French Village	6.05	66	IAmb_Lg		21 43 59.8	
	comp=Z,41nm,0.8s						
OGNE	Ogallala	6.39	327	Pn	Pn	21 42 22.7	+0.9
OGNE				IAmb_Lg		21 44 15.2	
	comp=Z,33nm,0.8s						
SLM	Saint Louis	6.44	61	IAmb_Lg		21 44 14.7	
	comp=Z,22nm,0.9s						
SDCO	Great Sand Dun	6.82	290		Pn	21 42 29.4	+1.4
SDCO				IAmb_Lg		21 44 27.1	
	comp=Z,18nm,1.2s						
S44A	Carbondale	6.85	71	IAmb_Lg		21 44 31.8	
	comp=Z,41nm,0.9s						
SCIA	State Center	7.02	27	IAmb_Lg		21 44 40.0	
	comp=Z,32nm,0.7s						
T45A	Paducah	7.19	77	IAmb_Lg		21 44 43.6	
	comp=Z,40nm,0.7s						
Q44A	Meyer Farm, Va	7.42	62	IAmb_Lg		21 44 57.1	
	comp=Z,37nm,0.7s						
ISCO	Idaho Springs	7.69	305	Pn	Pn	21 42 41.4	+1.5
PHWY	Pilot Hill	8.44	314	IAmb_Lg		21 45 23.1	
	comp=Z,20nm,1.1s						
N23A	Red Feather La	8.49	310	IAmb_Lg		21 45 26.9	
	comp=Z,24nm,0.9s						
JFWS	Jewell Farm	9.10	35	IAmb_Lg		21 45 48.1	
	comp=Z,27nm,0.8s						

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*TUL **29** 22:17:47.9±1.0, 35°.94N±0°.02×97°.30W±0°.05, h7^{km}±7^{km}, ML3.3, mb_Lg3.1/49(NEIC), Error ellipse: s-maj=5.5km s-min=2.4km az=65.0*

*ANF **29** 22:17:47.9±0.3, 35°.97N×97°.30W, h7^{km}, ML3.6/11, Error ellipse: s-maj=3.2km s-min=2.5km az=126.0*

*NEIC **29** 22:17:48.0±1.2, 35°.97N±0°.02×97°.28W±0°.05, h7^{km}±7^{km}, Error ellipse: s-maj=7.1km s-min=0.9km az=64.0*

ISC 29 22:17:48.0±0.9**,35°.96N**±0°.02×**97°.30W**±0°.02**,h10**^{km}±9^{km}**, n87,σ0ˢ.62**/87**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	Liberty Lake	0.20	218	Pg	Pg	22 17 52.0	-0.3
OK029					Sg	22 17 55.0	-0.2
OK005	Luther M Schoo	0.32	164	Pg	Pg	22 17 54.2	-0.1
OK031	S. Brethren Rd	0.37	91	Pg	Pg	22 17 55.5	+0.1
OK031				Sg	Sg	22 18 00.8	+0.5
OK025	Westminster Rd	0.38	185	Pg	Pg	22 17 55.3	-0.2
OK025				Sg	Sg	22 18 00.6	+0.1
OK009	Oakdale Elemen	0.39	195	Pg	Pg	22 17 55.5	-0.1
BCOK	Bluff Creek, N	0.39	220	Pg	Pg	22 17 55.5	-0.2
BCOK				Sg	Sg	22 18 01.0	+0.1
OK001	Jones High Sch	0.40	179	Pg	Pg	22 17 55.6	-0.2
OK030	Cody Creek RV	0.42	94		Pg	22 17 56.3	+0.1
OK030				Sg	Sg	22 18 02.2	+0.4
OK034	N. Norfolk Rd.	0.48	84	Pg	Pg	22 17 57.4	+0.1
QUOK	Quay	0.52	66	Pg	Pg	22 17 58.4	+0.2
OKCFA	Oklahoma City	0.56	193		Pg	22 17 58.5	-0.2
OKCFA	Oklahoma City	0.56	193	P	Pg	22 17 58.6	-0.2
	baz=13,SNR=28						
OKCFA				S	Sg	22 18 06.2	+0.2
	baz=13						
OKCSW	OKLAHOMA CITY	0.56	192	Pg	Pg	22 17 58.7	-0.2
FNO	Franklin	0.70	187	Pg	Pg	22 18 01.1	-0.5
CROK	Carrier	0.78	315	Pg	Pg	22 18 02.9	-0.1
BLOK	Blackwell	0.80	5	Pg	Pg	22 18 03.4	-0.1
W35A	Tecumseh	0.88	157	Pg	Pg	22 18 03.8	-1.0
GC02	Grant County #	1.00	333	Pg	Pg	22 18 06.9	-0.3
KAN13	South Haven SW	1.06	352		Pg	22 18 07.9	-0.5
OK032	Salt Plains WL	1.12	319		Pg	22 18 08.8	-0.7
KAN14	Manchester OK	1.13	332		Pg	22 18 09.3	-0.4
T35A	Sooner Cattle	1.15	33	Pg	Pg	22 18 09.5	-0.6
T35B	Sooner Cattle	1.15	33	P	Pg	22 18 09.5	-0.5
	baz=213						
T35B				S	Sb	22 18 25.0	+0.1
	baz=213						
TUL1	Leonard	1.22	92		Pg	22 18 10.2	-1.4
TUL1	Leonard	1.22	92	P	Pg	22 18 10.1	-1.4
	baz=272						
TUL1				S	Sg	22 18 26.7	-0.7
	baz=272						
KAN05	Bluff City Nor	1.24	338		Pb	22 18 11.3	-0.2
KAN01	Argonia South	1.25	343		Pb	22 18 11.5	-0.2
KAN10	Anthony SW Sta	1.33	331	Pn	Pn	22 18 12.8	+0.2
OK035	E0210 Rd and N	1.36	304		Pn	22 18 13.1	0.0
KAN06	Argonia West S	1.36	341		Pn	22 18 13.5	+0.4
KAN08	Anthony NE Sta	1.38	337		Pn	22 18 13.7	+0.4
KAN16	Harper SW Stat	1.41	334		Pn	22 18 14.1	+0.4
X34A	Smith Ranch, M	1.42	198		Pn	22 18 14.3	+0.5
U32A	Winter Ranch,	1.44	287	Pn	Pn	22 18 14.5	+0.3
U32A	Winter Ranch,	1.44	287	P	Pn	22 18 14.5	+0.3
	baz=107,SNR=20						
U32A				S	Sg	22 18 34.1	-0.2
	baz=107						
KAN12	Harper NE Stat	1.45	337		Pb	22 18 14.9	-0.2
LOOK	Love County	1.96	177		Pn	22 18 22.1	+0.8
X37A	Clayton	2.09	130		Pn	22 18 23.9	+0.9
X37A				IAmb_Lg		22 18 56.9	
	comp=Z,75nm,0.7s						
X37A	Clayton	2.09	130	P	Pn	22 18 23.9	+0.9
	baz=311,SNR=38						
X37A				S	Sb	22 18 51.6	-0.2
	baz=311						
U38A	Gravette	2.41	78		Pn	22 18 28.0	+0.7
U38A	Gravette	2.41	78	P	Pn	22 18 28.2	+0.8
	baz=259,SNR=49						
Z35A	Perchaven, San	2.62	179	Pn	Pn	22 18 30.8	+0.5
Z35A	Perchaven, San	2.62	179	P	Pn	22 18 31.2	+0.8
	baz=359,SNR=8.1						
R32A	Long Quarter,	2.71	336		Pn	22 18 32.5	+0.9
HHAR	Hobbs	2.74	82		Pn	22 18 32.4	+0.4
W39A	Magazine	2.96	104		Pn	22 18 35.6	+0.6
W39A				IAmb_Lg		22 19 28.3	
	comp=Z,51nm,0.8s						
W39A	Magazine	2.96	104	P	Pn	22 18 35.9	+0.9
	baz=286,SNR=10.0						
KSU1	Kansas State U	3.19	10		Pn	22 18 39.8	+1.7
KSU1				IAmb_Lg		22 19 32.2	
	comp=Z,45nm,0.9s						
Z38A	Mt. Pleasant	3.30	144	Pn	Pn	22 18 40.4	+0.7
Z38A				IAmb_Lg		22 19 39.7	
	comp=Z,37nm,1.1s						
Z38A	Mt. Pleasant	3.30	144	P	Pn	22 18 40.4	+0.7
	baz=325						
MIAR	Mount Ida	3.36	114		Pn	22 18 41.8	+1.4
MIAR	Mount Ida	3.36	114	P	Pn	22 18 41.2	+0.7
	baz=296,SNR=16						
CBKS	Cedar Bluff	3.45	326	IAmb_Lg		22 19 45.6	
	comp=Z,31nm,0.9s						
U40A	Yellville	3.62	82		Pn	22 18 44.3	+0.2
U40A	Yellville	3.62	82	P	Pn	22 18 44.4	+0.3
	baz=265,SNR=25						
U40A				P	Pn	22 18 44.4	+0.3
	baz=265,SNR=25						
S39A	Bolivar	3.63	60	Pn	Pn	22 18 44.4	+0.2
S39A	Bolivar	3.63	60	P	Pn	22 18 45.0	+0.8
	baz=242,SNR=10						
AMTX	Amarillo	3.73	255	Pn	Pn	22 18 47.1	+1.4
AMTX				IAmb_Lg		22 19 50.7	
	comp=Z,43nm,0.8s						
X40A	Basin Creek Fa	3.94	111		Pn	22 18 47.4	-1.1
WHTX	Lake Whitney,	3.96	182	Pn	Pn	22 18 48.5	-0.2
WLAR	White Oak Lake	4.12	122	IAmb_Lg		22 20 00.3	
	comp=Z,30nm,0.8s						
237A	Washetta, Mont	4.14	162	Pn	Pn	22 18 50.9	-0.3
WHAR	Wooly Hollow	4.14	98	Pn	Pn	22 18 50.8	-0.4
WHAR				IAmb_Lg		22 20 04.8	
	comp=Z,31nm,0.7s						
FCAR	Ozark Folk Cen	4.20	89		Pn	22 18 52.4	+0.4
FCAR				IAmb_Lg		22 20 04.0	
	comp=Z,31nm,0.7s						
MGMO	Mountain Grove	4.22	72	IAmb_Lg		22 20 12.1	
	comp=Z,28nm,0.8s						
R40A	Maddies Statio	4.64	58	Pn	Pn	22 18 58.8	+0.7
R40A				IAmb_Lg		22 20 26.6	
	comp=Z,28nm,0.8s						
P38A	Dawn	4.72	38		Pn	22 18 58.4	-0.8
P38A				IAmb_Lg		22 20 26.0	
	comp=Z,33nm,0.8s						
MSTX	Muleshoe	4.91	248		Pn	22 19 02.8	+0.9
LCAR	Lake Charles	4.98	87	Pn	Pn	22 19 02.0	-0.7
N35A	Tabor	5.07	14	Pn	Pn	22 19 04.5	+0.6
435B	Jarrell	5.17	183	IAmb_Lg		22 20 40.6	
	comp=Z,31nm,0.7s						
KSCO	Kaye Shedlock'	5.22	307	Pn	Pn	22 19 07.2	+1.0
KSCO				IAmb_Lg		22 20 47.1	
	comp=Z,23nm,1.1s						
CCM	Cathedral Cave	5.28	65	Pn	Pn	22 19 07.5	+0.6
P40A	Paris	5.48	48	Pn	Pn	22 19 10.2	+0.6
P40A				IAmb_Lg		22 20 47.8	
	comp=Z,33nm,0.7s						
P40A	Paris	5.48	48	P	Pn	22 19 10.5	+0.9
	baz=231,SNR=5.3						
BGNE	Belgrade	5.48	353	Pn	Pn	22 19 10.0	+0.3
BGNE				IAmb_Lg		22 20 58.0	
	comp=Z,35nm,0.7s						
N38A	Joes South For	5.79	32		Pn	22 19 13.3	-0.5
T25A	Trinidad	5.84	284	Pn	Pn	22 19 15.1	+0.3
T25A				IAmb_Lg		22 21 04.2	
	comp=Z,23nm,0.9s						
JCT	Junction City	5.85	202	Pn	Pn	22 19 14.9	+0.1
JCT				IAmb_Lg		22 21 02.9	
	comp=Z,34nm,0.8s						
FVM	French Village	5.86	68	Pn	Pn	22 19 15.4	+0.5
W45A	Hickory Valley	6.66	95	IAmb_Lg		22 21 20.7	
	comp=Z,32nm,0.9s						
S44A	Carbondale	6.68	73	IAmb_Lg		22 21 27.1	
	comp=Z,27nm,0.8s						
SCIA	State Center	6.74	27	IAmb_Lg		22 21 26.3	
	comp=Z,33nm,0.8s						
K31A	O'Neill	6.75	351	IAmb_Lg		22 21 32.8	
	comp=Z,30nm,0.9s						
T45A	Paducah	7.05	79	IAmb_Lg		22 21 38.7	
	comp=Z,35nm,0.8s						
OLIL	Olney	7.83	67	IAmb_Lg		22 22 00.9	
	comp=Z,20nm,1.1s						
N23A	Red Feather La	8.38	309	IAmb_Lg		22 22 37.5	
	comp=Z,10nm,0.7s						

IDC 29 22:21:42.4±1.7**,0°.85N×121°.58E,h0^{km},mb3.4**/3**, mb1 3.7**/4**,mb1mx3.4**/34**,mbtmp3.5**/4**,ML3.5**/1**,Error ellipse: s-maj=149.4km s-min=26.7km az=63.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.25	168	P	P	22 26 08.3	-0.2
	0.1nm,0.3s,baz=34,slow=14,SNR=1.7						

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WRA    Warramunga Arr    24.16 149  P        P         22 27 00.5  0.0
       0.8nm,0.5s,baz=325,slow=11,SNR=16
ASAR   Alice Springs     27.16 155  P        P         22 27 27.9 +0.3
       0.4nm,0.6s,baz=344,slow=14,SNR=8.1
MKAR   Makanchi Array    57.15 329  P        P         22 31 30.7 -0.3
       0.4nm,1.0s,baz=121,slow=6.4,SNR=2.0
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*IDC **29** 22:36:02.5±0.6, 41°.03S×44°.10E, h0^{km}, mb4.2/11, mb1 4.4/11, mb1mx4.0/33, mbtmp4.2/11, MS3.6/16, Ms1 3.6/16, ms1mx3.5/36, Error ellipse: s-maj=21.5km s-min=20.9km az=164.0*

*NEIC **29** 22:36:04.8±1.8, 41°.2S±0°.1×44°.2E±0°.2, h10^{km}±1^{km}, mb4.6/24, Error ellipse: s-maj=20.3km s-min=16.0km az=240.0*

ISC 29 22:36:04.1±0.4**, 41°.11S**±0°.08×**44°.23E**±0°.10**, h10^{km}, n73, σ0ˢ78**/59**, mb4.5**/20**, MS3.7**/15**, Crozet Islands region**

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Code   Station Name        Δ°   AZ°  Phase ID            Time      Res
                                     Op       ISC       h  m  s    ISC
CRZF   Crozet Islands     7.66 136  Pn       Pn        22 37 54.2 -1.4
VOI    Vohitsoka         19.27   7  P        P         22 40 27.4 -1.6
BOSA   Boshof            19.90 303  P        Pn        22 40 39.3 +1.9
       0.1nm,0.3s,baz=156,slow=12,SNR=6.2
BOSA                                LR       LR        22 46 37.0
       comp=Z,109nm,21.6s,baz=158,slow=32
BOSA   Boshof            19.90 303  P        Pn        22 40 38.1 +0.6
SUR    Sutherland        20.65 287  LR       LR        22 47 10.1
       comp=Z,62nm,18.9s,baz=144,slow=32
SUR    Sutherland        20.65 287  P        Pn        22 40 45.0 -1.3
SUR                                 IAmb     IAmb      22 40 58.8
       comp=Z,59nm,1.4s
ABPO   Ambohimpanom      22.17   8  P        P         22 41 00.6 +0.2
ABPO                                IAmb     IAmb      22 41 13.9
       comp=Z,32nm,1.6s
LBTB   Lobatse           22.32 310  LR       LR        22 48 35.8
       comp=Z,111nm,18.1s,baz=137,slow=34
LBTB   Lobatse           22.32 310  P        P         22 41 00.4 -1.6
LBTB                                IAmb     IAmb      22 41 08.7
       comp=Z,28nm,1.5s
MATP   Matopo            24.58 322  LR       LR        22 49 58.7
       comp=Z,46nm,20.3s,baz=130,slow=34
MAW    Mawson            28.43 165  LR       LR        22 50 55.8
       comp=Z,139nm,18.8s,baz=348,slow=31
LSZ    Lusaka            29.27 327  LR       LR        22 52 56.4
       comp=Z,179nm,18.9s,baz=180,slow=35
WIN    Windhoek          29.36 301  P        P         22 42 06.1 -1.4
WIN                                 IAmb     IAmb      22 42 33.4
       comp=Z,24nm,1.6s
SNAA   Sanae             38.35 202  P        P         22 43 25.5 +0.7
SNAA   Sanae             38.35 202  P        P         22 43 25.3 +0.5
       comp=Z,2.8nm,0.6s,baz=96,slow=7.8,SNR=13
SNAA   Sanae             38.35 202  P        P         22 43 25.1 +0.3
VNA2   Neumayer--Watz    39.39 204  P        P         22 43 34.2 +0.8
       baz=56,slow=6.0
VNA1   Neumayer--Stat    39.56 205  P        P         22 43 35.7 +0.9
QSPA   South Pole Qui    49.09 180  P        P         22 44 51.3  0.0
       comp=Z,3.4nm,0.7s,baz=265,slow=4.8,SNR=9.9
QSPA   South Pole Qui    49.09 180  P        P         22 44 51.4  0.0
QSPA                                IAmb     IAmb      22 45 00.2
       comp=Z,9.9nm,1.1s
H01W2  Cape Leeuwin H    54.09 108  T        T         23 43 48.2
       baz=242,slow=75,SNR=7.5
H01W3  Cape Leeuwin H    54.10 108  T        T         23 43 45.9
       baz=242,slow=75,SNR=8.3
H01W1  Cape Leeuwin H    54.11 108  T        T         23 43 49.2
       baz=242,slow=75,SNR=14
VNDA   Vanda             55.73 167  LR       LR        23 07 23.4
       comp=Z,98nm,18.6s,baz=304,slow=34
VNDA   Vanda             55.73 167  P        P         22 45 40.8 +0.6
RAYN   Ar Rayn           64.32   1  P        P         22 46 41.0 +1.3
RAYN                                IAmb     IAmb      22 46 47.9
       comp=Z,5.8nm,1.4s
FORT   Forrest           66.20 111  P        P         22 46 53.0 +0.9
TORD   Torodi Ar. Bea    66.78 314  P        P         22 46 55.3 -0.5
       comp=Z,1.0nm,0.7s,baz=139,slow=5.2,SNR=7.8
TORD                                LR       LR        23 16 20.7
       comp=Z,36nm,18.2s,baz=310,slow=36
BBOO   Buckleboo         70.55 117  P        P         22 47 19.5 +0.1
MG05   Puerto Natales    72.49 216  P        P         22 47 29.9 -0.8
ASAR   Alice Springs     74.61 108  P        P         22 47 44.5 +0.8
       comp=Z,1.5nm,0.8s,baz=225,slow=6.7,SNR=9.9
ASAR                                LR       LR        23 16 24.2
       comp=Z,64nm,18.4s,baz=136,slow=32
ASAR   Alice Springs     74.61 108  P        P         22 47 42.4 -1.2
STKA   Stephens Creek    74.82 119  P        P         22 47 46.0 +1.3
       comp=Z,6.9nm,0.6s,baz=241,slow=3.3,SNR=18
STKA   Stephens Creek    74.82 119  P        P         22 47 44.3 -0.4
WRA    Warramunga Arr    77.25 105  P        P         22 47 59.8 +1.0
       comp=Z,2.6nm,0.9s,baz=222,slow=4.3,SNR=7.2
WRA    Warramunga Arr    77.25 105  P        P         22 47 59.2 +0.5
WB0    Warramunga Arr    77.40 105  P        P         22 47 59.7 +0.1
CM31   Chiang Mai Arr    77.98  52  P        P         22 48 03.2 +0.5
CM31                                IAmb     IAmb      22 48 04.2
       comp=Z,6.2nm,0.9s
CMAR   Chiang Mai Arr    77.98  52  P        P         22 48 03.2 +0.6
       comp=Z,2.1nm,0.9s,baz=225,slow=6.3,SNR=14
CMAR                                LR       LR        23 15 36.6
       comp=Z,38nm,20.2s,baz=218,slow=30
CMAR   Chiang Mai Arr    77.98  52  P        P         22 48 02.6 -0.1
NIL    Nilore            79.06  24  P        P         22 48 08.2  0.0
PLCA   Paso Flores       79.33 225  P        P         22 48 10.1 +0.1
       comp=Z,2.1nm,0.9s,baz=148,slow=10,SNR=4.0
PLCA                                LR       LR        23 21 23.7
       comp=Z,21nm,18.0s,baz=162,slow=34
PLCA   Paso Flores       79.33 225  P        P         22 48 09.6 -0.5
PLCA                                IAmb     IAmb      22 48 16.6
       comp=Z,8.7nm,1.4s
SHL    Shillong          79.71  43  P        P         22 48 12.5 +0.3
SHL                                 IAmb     IAmb      22 48 19.8
       comp=Z,5.1nm,0.9s
GNI    Garni             80.88   0  LR       LR        23 26 13.6
       comp=Z,24nm,19.8s,baz=175,slow=37
CPUP   Villa Florida     81.19 243  P        P         22 48 20.1 -0.1
       comp=Z,2.6nm,0.8s,baz=145,slow=2.1,SNR=4.5
BDFB   Brasilia          81.55 257  P        P         22 48 22.9 +0.5
       comp=Z,1.1nm,0.6s,baz=102,slow=7.8,SNR=3.2
LSA    Lhasa             82.75  40  P        P         22 48 29.2 +0.5
KEST   Kesra             82.91 332  P        P         22 48 29.9 +1.1
KEST                                IAmb     IAmb      22 48 31.5
       comp=Z,4.6nm,0.9s
AQDB   Aquidauana        83.94 248  P        P         22 48 34.3 -0.3
AQDB                                IAmb     IAmb      22 48 36.9
       comp=Z,5.9nm,1.0s
KBZ    Khabaz            84.47 359  LR       LR        23 27 30.0
       comp=Z,56nm,18.0s,baz=206,slow=37
BSWZ   Blackbirch Sta    85.80 145  P        P         22 48 44.2 +0.6
MDT    Midelt            86.25 321  LR       LR        23 25 18.8
       comp=Z,42nm,19.3s,baz=164,slow=34
KKAR   Karatay Array     87.12  19  P        P         22 48 50.1 +0.3
BURAR  Bucovina Array    89.94 347  P        P         22 49 03.1 +0.1
BURAR                               IAmb     IAmb      22 49 12.2
       comp=Z,5.0nm,1.1s
ESDC   Sonseca Array     91.59 325  LR       LR        23 31 22.6
       comp=Z,51nm,18.2s,baz=190,slow=36
MKAR   Makanchi Array    93.85  25  P        P         22 49 20.4 -0.8
       comp=Z,0.3nm,0.7s,baz=204,slow=3.2,SNR=2.5
MKAR   Makanchi Array    93.85  25  P        P         22 49 20.1 -1.0
LPAZ   La Paz            95.36 243  LR       LR        23 27 22.0
       comp=Z,33nm,19.6s,baz=24,slow=32
B35A   Bob, Littlefor   149.58 298  PKPbc    PKPbc     22 55 52.8 -0.3
L34A   Svendsen Farm,   150.68 285  PKPbc    PKPbc     22 55 55.7 -0.4
ULM    Lac du Bonnet    150.97 302  PKPbc    PKPbc     22 55 55.6 -0.9
       comp=Z,9.9nm,0.7s,baz=83,slow=3.6,SNR=13
AGMN   Agassiz Nation   151.00 298  PKPbc    PKPbc     22 55 56.6 +0.1
ECSD   EROS Data Cent   151.16 288  PKPbc    PKPbc     22 55 57.0 -0.2
F33A   5 Mile Ranch,    151.18 293  PKPbc    PKPbc     22 55 56.9 -0.1
TOLK   Toolik Lake Re   151.44  11  PKPbc    PKiKP     22 55 58.0 +0.5
INK    Inuvik           152.72 358  PKPbc    PKPbc     22 55 59.5 -0.3
       comp=Z,3.6nm,0.9s,baz=15,slow=5.2,SNR=8.4
INK    Inuvik           152.72 358           PKPbc     22 55 59.3 -0.5
IMAR   Indian Mountai   153.10  16  PKPbc    PKiKP     22 56 01.3 +0.3
BMAR   Burnt Mountain   153.19   8  PKPbc    PKiKP     22 56 01.5 +0.3
H21K   Melozitna Rive   153.58  16  PKPbc    PKPbc     22 56 02.0 +0.1
YKA    Yellowknife Ar   155.14 337  PKP      PKPdf     22 55 55.5 -0.9
       comp=Z,0.6nm,0.9s,baz=63,slow=1.8,SNR=4.9
YKA                                 PKPbc    pPKPbc    22 56 04.7 -3.1
       comp=Z,0.7nm,0.7s,baz=29,slow=1.8,SNR=9.6
YKA                                 PKPab    PKPab     22 56 20.4 -0.7
       comp=Z,1.1nm,0.7s,baz=37,slow=4.6,SNR=16
PDAR   Pinedale Array   160.45 284  PKP      PKPdf     22 56 02.4 -1.5
       comp=Z,1.0nm,1.0s,baz=168,slow=2.7,SNR=5.3
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*TUL **29** 22:40:20±1.4, 35°.94N±0°.01×97°.29W±0°.02, h5^{km}±7^{km}, ML2.6, mb_Lg2.4/8(NEIC), Error ellipse: s-maj=2.3km s-min=1.6km az=134.0*

NEIC 29 22:40:20.2±0.7**, 35°.96N**±0°.02×**97°.31W**±0°.02**, h7^{km}±7^{km}, Error ellipse: s-maj=2.5km s-min=1.4km az=144.0, Oklahoma**

```
Code   Station Name        Δ°   AZ°  Phase ID            Time      Res
                                     Op       ISC       h  m  s    ISC
OK025  Westminster Rd     0.38 183           Pg        22 40 27.5 -0.1
OK025                               Sg       Sg        22 40 32.5 -0.1
OK031  S. Brethren Rd     0.38  91  Pg       Pg        22 40 27.7  0.0
OK031                               Sg       Sg        22 40 33.0 +0.3
BCOK   Bluff Creek, N     0.39 219  Pg       Pg        22 40 27.8  0.0
BCOK                                Sg       Sg        22 40 33.2 +0.3
OK030  Cody Creek RV      0.43  94           Pg        22 40 28.5  0.0
OK030                               Sg       Sg        22 40 34.4 +0.2
OK034  N. Norfolk Rd.     0.49  84  Pg       Pg        22 40 29.6  0.0
OK034                               Sg       Sg        22 40 36.3 +0.4
QUOK   Quay               0.53  67  Pg       Pg        22 40 30.6 +0.1
OKCFA  Oklahoma City      0.56 192  Pg       Pg        22 40 30.6 -0.4
OKCSW  OKLAHOMA CITY      0.56 191  Pg       Pg        22 40 30.9 -0.3
FNO    Franklin           0.71 186  Pg       Pg        22 40 33.3 -0.5
FNO                                 Sg       Sg        22 40 42.4 -0.6
CROK   Carrier            0.77 315  Pg       Pg        22 40 35.2 +0.2
BLOK   Blackwell          0.80   5  Pg       Pg        22 40 35.8 +0.2
W35A   Tecumseh           0.88 156  Pg       Pg        22 40 36.1 -1.1
GC02   Grant County #     0.99 334  Pg       Pg        22 40 39.2  0.0
KAN13  South Haven SW     1.06 353  Pg       Pg        22 40 40.4 -0.2
OK032  Salt Plains WL     1.11 319  Pg       Pg        22 40 41.3 -0.3
KAN14  Manchester OK      1.12 332           Pg        22 40 41.6 -0.2
T35A   Sooner Cattle      1.15  34           Pg        22 40 41.8 -0.5
KAN05  Bluff City Nor     1.23 339           Pg        22 40 43.7 -0.2
TUL1   Leonard            1.23  92  Pg       Pg        22 40 42.3 -1.6
KAN01  Argonia South      1.24 343  Pg       Pb        22 40 43.8 -0.3
KAN10  Anthony SW Sta     1.32 332           Pn        22 40 45.1  0.0
KAN06  Argonia West S     1.36 341  Pn       Pn        22 40 45.8 +0.1
KAN08  Anthony NE Sta     1.37 337  Pn       Pn        22 40 45.7 -0.1
KAN16  Harper SW Stat     1.40 335           Pn        22 40 45.7 -0.6
X34A   Smith Ranch, M     1.42 198           Pn        22 40 46.4 -0.2
U32A   Winter Ranch,      1.43 287  Pn       Pn        22 40 46.5 -0.2
LOOK   Love County        1.97 177  Pn       Pn        22 40 54.3 +0.3
X37A   Clayton            2.10 130  Pn       Pn        22 40 56.0 +0.2
U38A   Gravette           2.41  78  Pn       Pn        22 41 00.5 +0.3
HHAR   Hobbs              2.75  82  Pn       Pn        22 41 05.0 +0.2
W39A   Magazine           2.97 104  Pn       Pn        22 41 08.4 +0.5
W39A                                IAmb_Lg            22 41 57.6
       comp=Z,11nm,0.9s
MIAR   Mount Ida          3.37 114  Pn       Pn        22 41 13.8 +0.6
U40A   Yellville          3.63  82  Pn       Pn        22 41 17.2 +0.3
U40A                                IAmb_Lg            22 42 17.0
       comp=Z,12nm,1.1s
S39A   Bolivar            3.63  60  Pn       Pn        22 41 17.3 +0.3
X40A   Basin Creek Fa     3.95 111  IAmb_Lg            22 42 25.6
       comp=Z,12nm,0.8s
N23A   Red Feather La     8.37 309  IAmb_Lg            22 45 06.7
       comp=Z,3.4nm,0.8s
```

NNC 29 23:14:30.4±6.2**, 38°.63N×73°.20E, h0^{km}, mb3.9, mpv3.6, 2C-5D, Error ellipse: s-maj=46.4km s-min=31.1km az=163.0, Tajikistan-Xinjiang border region**

```
Code   Station Name        Δ°   AZ°  Phase ID            Time      Res
                                     Op       ISC       h  m  s    ISC
MRKS   Merke              4.11   0  Pg       Pb        23 15 42.3 -1.3
       2.4nm,0.2s
MRKS                                Lg       Lg        23 16 35.9
       7.6nm,0.4s
AAK    Ala-Archa          4.12  13 ⇓Pn       Pn        23 15 35.5 +0.8
       3.4nm,0.7s
AAK                                ⇑Sn       Sb        23 16 30.2 -4.0
       9.1nm,0.8s
IUG    Iuzhnay            4.26 326  Pg       Pg        23 15 49.6 -2.5
       214nm,0.5s
IUG                                 Lg       Lg        23 16 46.1
       34nm,0.5s
TKM2   Tokmak 2           4.65  22 ⇓Pg       Pb        23 15 53.8 +0.9
       2.1nm,0.7s
TKM2                               ⇓Lg       Lg        23 16 56.0
       3.4nm,0.8s
KK08   Karatay Array      4.92 336 ⇓Pn       Pn        23 15 45.4 -0.1
       0.7nm,0.3s,baz=151,slow=12
KK08                               ⇓Sn       Sn        23 16 43.2  0.0
       3.4nm,0.6s,baz=144,slow=24
DGS    Degeres            5.00  22  Pg       Pb        23 15 59.0 +0.1
       3.6nm,0.4s
DGS                                 Lg       Lg        23 17 03.0
       1.9nm,0.6s
KTBS   Karatobe           5.71  26  Pg       Pb        23 16 12.4 +1.5
       1.9nm,0.4s
KTBS                                Lg       Lg        23 17 27.6
       4.4nm,0.5s
AB31   Akbulak array     14.26 322  P        Pn        23 17 50.2 -3.2
       0.3nm,0.6s,baz=130,slow=9.1,SNR=8.8
AKTO   Aktyubinsk        15.98 323 ⇑P        P         23 18 18.8 -1.2
       0.9nm,0.6s
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*IDC **29** 23:17:53.5±1.4, 39°.06N×29°.05E, h0^{km}, mb3.3/3, mb1 3.5/9, mb1mx3.3/41, mbtmp3.4/9, ML3.2/6, Error ellipse: s-maj=21.8km s-min=16.0km az=48.0*

*ISK **29** 23:17:54.8, 39°.14N×29°.14E, h11^{km}, ML3.6/53*

*DDA **29** 23:17:55.1, 39°.14N×29°.13E, h11^{km}±1^{km}, MW3.8*

ISC 29 23:17:55.6±0.8**, 39°.13N**±0°.02×**29°.13E**±0°.02**, h12^{km}**±5^{km}**, n118, σ0ˢ68**/151**, mb3.4**/3**, 13C-3D, Turkey**

```
Code   Station Name        Δ°   AZ°  Phase ID            Time      Res
                                     Op       ISC       h  m  s    ISC
SIMA   Simav-Kutahya      0.12 249  PG       Pg        23 17 58.7 -0.1
SIMA                                SG       Sg        23 18 01.1 -0.1
SHAP   Saphane-Kutahy     0.13 146  PG       Pg        23 17 58.6 -0.3
SHAP                                SG       Sg        23 18 00.7 -0.6
GEDZ   Gediz              0.23 111  PG       Pg        23 18 00.7 +0.1
GEDZ                                SG       Sg        23 18 03.9  0.0
GDZ    Gediz              0.28  98 i P       Pg        23 18 01.1 -0.3
GDZ                                i S       Sg        23 18 05.0 -0.2
GDZ                                 IAML               23 18 05.0
       comp=N,4μm,0.2s
GDZ                                 IAML               23 18 05.0
       comp=E,4μm,0.1s
DEMI   Demirci            0.33 255 i P       Pg        23 18 02.2 -0.2
DEMI                               i S       Sg        23 18 06.6 -0.3
DEMI                                IAML               23 18 11.0
       comp=N,1μm,0.6s
DEMI                                IAML               23 18 11.0
       comp=E,2μm,0.3s
TVSB   Tavsanli           0.41  39  PG       Pg        23 18 03.3 -0.5
TVSB                                SG       Sg        23 18 08.7 -0.6
USAK   Uak-Merkez         0.42 192 i P       Pg        23 18 04.0  0.0
USAK                               i S       Sg        23 18 09.4 -0.3
USAK                                IAML               23 18 11.0
       comp=N,2μm,0.2s
USAK                                IAML               23 18 12.0
       comp=E,3μm,0.4s
DST    Dursunbey          0.62 320  PG       Pg        23 18 06.8 -0.9
DURS   Dursunbey          0.69 313 i P       Pg        23 18 08.6 -0.5
DURS                               i S       Sg        23 18 18.1 -0.1
DURS                                IAML               23 18 23.0
       comp=E,1μm,0.5s
DURS                                IAML               23 18 24.0
       comp=N,1μm,0.3s
ANDZ   Kutahya, Merke     0.71  57 i P       Pg        23 18 08.6 -0.7
ANDZ                               i S       Sb        23 18 20.6 +0.9
ANDZ                                IAML               23 18 23.0
       comp=N,2μm,0.3s
ANDZ                                IAML               23 18 23.0
       comp=E,3μm,0.3s
KULA   Kula-Manisa        0.71 211  PG       Pg        23 18 09.0 -0.5
PASA   Karahalli, USA     0.83 160 i P       Pg        23 18 11.4 -0.2
PASA                               i S       Sg        23 18 21.3 -1.2
PASA                                IAML               23 18 27.0
       comp=N,1μm,0.4s
PASA                                IAML               23 18 27.0
       comp=E,2μm,0.6s
KHL    Karahalli          0.86 159  PG       Pb        23 18 12.4 -0.1
ORLT   Orhaneli           0.93 349  PG       Pg        23 18 12.8 -0.8
AFYO   Afyonkarahisar     0.97 110 i P       Pb        23 18 14.6 +0.2
AFYO                               i S       Sg        23 18 27.1 +0.1
AFYO                                IAML               23 18 31.0
       comp=E,2μm,0.4s
AFYO                                IAML               23 18 32.0
       comp=N,1μm,0.5s
ULDT   Uludag             1.01   0 i P       Pg        23 18 14.1 -1.0
ULDT                               i S       Sg        23 18 27.4 -1.0
ULDT                                IAML               23 18 31.0
       comp=N,3μm,0.7s
ULDT                                IAML               23 18 31.0
       comp=E,2μm,0.5s
GOMA   Golmarmara-Man     1.04 246  PG       Pb        23 18 15.2 -0.2
AKHS   Akhisar            1.06 257 i P       Pb        23 18 15.6 -0.2
AKHS                               i S       Sn        23 18 30.3 -0.6
AKHS                                IAML               23 18 34.0
       comp=E,860nm,0.6s
AKHS                                IAML               23 19 00.0
       comp=N,1.0nm,1.7s
AKS    Akhisar            1.06 257  PG       Pb        23 18 15.5 -0.3
BALB   Balikesir          1.10 298  PN       Pb        23 18 16.3 -0.2
AUKIR  Kırka- Seyitga     1.10  82 i P       Pn        23 18 17.7 +0.8
AUKIR                              i S       Sg        23 18 31.2 +0.2
AUKIR                               IAML               23 18 35.0
       comp=N,960nm,0.5s
AUKIR                               IAML               23 18 35.0
       comp=E,1μm,0.5s
STEP   BALIKESIR_Sava     1.12 283 i P       Pb        23 18 16.8 -0.2
STEP                               i S       Sn        23 18 32.5 -0.1
STEP                                IAML               23 18 36.0
       comp=E,2μm,0.4s
STEP                                IAML               23 18 37.0
       comp=N,1μm,0.7s
IGD    Bursa              1.14   3 i P       Pb        23 18 16.4 -0.8
IGD                                i S       Sg        23 18 32.7 +0.5
IGD                                 IAML               23 18 34.0
       comp=E,824nm,0.4s
IGD                                 IAML               23 18 35.0
       comp=N,788nm,0.2s
KZIL   AFYON_Kizioren     1.18 137 i P       Pb        23 18 17.7 -0.2
KZIL                               i S       Sb        23 18 32.7 -0.4
KZIL                                IAML               23 18 36.0
       comp=N,1μm,0.5s
KZIL                                IAML               23 18 36.0
       comp=E,692nm,0.7s
BILE   Bilecik/Merkez     1.18  29 i P       Pb        23 18 17.4 -0.6
BILE                               i S       Sb        23 18 33.3 +0.1
BILE                                IAML               23 18 36.0
       comp=E,1μm,0.5s
BILE                                IAML               23 18 37.0
       comp=N,2μm,0.9s
CAVI   Cavuskoy           1.20  27  PN       Pn        23 18 17.6 -0.7
IZI    Iznik              1.23  12  PN       Pn        23 18 18.7 -0.1
SHUT   Suhut-Afyon        1.25 117  PN       Pn        23 18 18.6 -0.4
MDNY   Mudanya-Bursa      1.25 351  PN       Pn        23 18 18.7 -0.2
BORA   Eskisehir          1.27  53 i P       Pn        23 18 19.2  0.0
BORA                               i S       Sb        23 18 35.5 -0.3
BORA                                IAML               23 18 39.0
       comp=N,556nm,0.4s
BORA                                IAML               23 18 39.0
       comp=E,952nm,0.5s
KCTX   Karacabey (Bur     1.28 332  PN       Pn        23 18 19.2 -0.2
GEMT   Gemlik             1.30   2  PN       Pn        23 18 19.3 -0.3
BALY   Balya              1.32 298 i P       Pn        23 18 19.9  0.0
BALY                               i S       Sb        23 18 36.5 -0.7
BALY                                IAML               23 18 40.0
       comp=N,847nm,0.7s
BALY                                IAML               23 18 40.0
       comp=E,460nm,0.7s
SGAZ   Eskisehir, Sey     1.38  73 i P       Pn        23 18 20.8  0.0
SGAZ                               i S       Sn        23 18 38.1 -1.0
SGAZ                                IAML               23 18 45.0
       comp=E,349nm,0.5s
SGAZ                                IAML               23 18 47.0
       comp=N,275nm,0.6s
ADVT   Abdulvahap         1.38  20  PN       Pn        23 18 20.6 -0.1
ESKT   Eskisehir          1.39  73  PN       Pn        23 18 19.4 -1.5
BASM   Basmaki-Afyon      1.41 149  PN       Pn        23 18 20.9 -0.2
GONE   Gonen-Balikesi     1.45 310  PN       Pn        23 18 21.8 +0.3
YLV    Yalova             1.45   7  PN       Pn        23 18 21.3 -0.4
KURT   Yalova, Merkez     1.46   2 i P       Pn        23 18 20.6 -1.2
KURT                               i P       Pb        23 18 21.1 -1.6
KURT                                IAML               23 18 43.0
       comp=N,914nm,0.4s
KURT                                IAML               23 18 43.0
       comp=N,890nm,0.5s
KURT                                IAML               23 18 45.0
       comp=E,591nm,0.5s
KURT                                IAML               23 18 46.0
       comp=E,589nm,0.8s
SRCK   Saricakaya, Es     1.47  51  PN       Pn        23 18 22.1 +0.2
GPA    Golpazari          1.47  38  PN       Pn        23 18 22.2 +0.2
TRML   Termal-Yalova      1.48   1  PN       Pn        23 18 21.7 -0.3
CIFT   Cifteler, Eski     1.52  81  PN       Pn        23 18 22.5 -0.1
AYDB   Zeytinkoy-Aydi     1.53 220  PN       Pn        23 18 22.4 -0.4
EDC    Edincik            1.56 322  PN       Pn        23 18 22.9 -0.3
BRDR   BURDUR-Merkez      1.61 153 i P       Pn        23 18 23.5 -0.4
BRDR                               i S       Sg        23 18 48.1 +0.8
BRDR                                IAML               23 18 52.0
       comp=E,630nm,0.6s
BRDR                                IAML               23 18 57.0
       comp=N,393nm,0.5s
ZEDA   zmir-Bergama       1.61 265 i P       Pg        23 18 25.7 -0.8
ZEDA                               i S       Sg        23 18 46.5 -0.8
ZEDA                                IAML               23 18 49.0
       comp=E,211nm,0.7s
ZEDA                                IAML               23 18 51.0
       comp=N,194nm,0.6s
GEYV   SAKARYA_Geyve      1.62  33 i P       Pb        23 18 25.9 +0.4
GEYV                               i S       Sb        23 18 46.7 +0.7
GEYV                                IAML               23 18 49.0
       comp=E,473nm,0.7s
GEYV                                IAML               23 18 57.0
       comp=N,524nm,0.6s
BUHA   Balikesir, Bur     1.64 284 i P       Pn        23 18 24.1 -0.1
BUHA                               i S       Sb        23 18 46.8 +0.5
BUHA                                IAML               23 18 49.0
       comp=E,886nm,0.8s
BUHA                                IAML               23 18 51.0
       comp=N,424nm,0.8s
TAVA   DENIZLI_Tavas      1.67 186 i P       Pg        23 18 26.8 -0.8
TAVA                                IAML               23 18 54.0
       comp=E,83nm,0.5s
TAVA                                IAML               23 18 56.0
       comp=N,211nm,1.0s
GULT   Gulveren           1.68  39  PN       Pn        23 18 24.9  0.0
KNL    Balıkesir          1.68 313 i P       Pn        23 18 25.6 +0.7
KNL                                i S       Sb        23 18 47.6  0.0
KNL                                 IAML               23 18 50.0
       comp=N,1μm,1.3s
KNL                                 IAML               23 18 50.0
       comp=E,1μm,0.7s
TUZL   Tuzla-Istanbul     1.69   3 i P       Pb        23 18 27.3 +0.8
ISP    Isparta            1.70 140  PN       Pn        23 18 24.9 -0.3
BAGO   Egridir - ISPA     1.73 131 i P       Pn        23 18 25.2 -0.3
BAGO                               i S       Sg        23 18 52.5 +1.4
BAGO                                IAML               23 18 59.0
       comp=E,140nm,1.2s
BAGO                                IAML               23 19 01.0
       comp=N,148nm,0.9s
DKL    Dikili             1.73 269  PN       Pn        23 18 25.9 +0.4
HRT    Hereke             1.74  14  PN       Pn        23 18 25.3 -0.4
AYDN   Tasoluk            1.77 214 i P       Pg        23 18 28.9 -0.6
AYDN                               i S       Sg        23 18 52.2 -0.2
AYDN                                IAML               23 18 57.0
       comp=E,169nm,1.3s
AYDN                                IAML               23 18 59.0
       comp=N,108nm,0.4s
BLCB   Balcova            1.79 246  PN       Pn        23 18 26.8 +0.5
SAUV   Serdivan-Sakar     1.85  29  PN       Pn        23 18 27.0 -0.2
YVAC   Isparta, Yalva     1.86 117 i P       Pn        23 18 27.6 +0.2
YVAC                                IAML               23 18 57.0
       comp=N,62nm,0.5s
YVAC                                IAML               23 19 01.0
       comp=E,73nm,0.5s
SVRH   Sivrihisar-ESK     1.88  80  PN       Pn        23 18 27.9 +0.2
MRMT   Marmara Adasi      1.89 322  PN       Pn        23 18 27.4 -0.3
KAVV   Kandilli-Istan     1.93 358  PN       Pn        23 18 28.6 +0.3
ISK    Istanbul-Kandi     1.94 358  PN       Pn        23 18 27.6 -0.7
BTAS   Taskesti           2.04  44 i P       Pg        23 18 34.0 -0.6
BTAS                               i S       Sg        23 18 59.8 -1.2
BTAS                                IAML               23 19 06.0
       comp=E,711nm,0.5s
BTAS                                IAML               23 19 10.0
       comp=N,583nm,0.5s
KAYN   Sakarya, Kayna     2.06  26 i P       Pb        23 18 33.6 +0.7
KAYN                                IAML               23 19 03.0
       comp=N,165nm,0.7s
KAYN                                IAML               23 19 03.0
       comp=E,268nm,0.5s
SILT   Sile               2.06  11  PN       Pn        23 18 29.9 -0.1
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GCAM	G?zelcaml?	2.06	227	PN	Pn	23 18 30.5	+0.5
BGKT	Bogazkoy	2.07	352	PN	Pn	23 18 30.4	+0.3
MDUB	Mudurnu	2.08	49	PN	Pn	23 18 30.8	+0.4
YER	Yerkesik	2.10	199	PN	Pn	23 18 30.6	0.0
MAR2	Marsite Statio	2.12	319	PN	Pn	23 18 31.0	+0.3
KLYT	Kilyos	2.12	358	PN	Pn	23 18 30.5	-0.4
KAND	Kocaeli-Kandir	2.12	22	*i* P	Pb	23 18 35.1	+1.1
KAND				IAML		23 19 05.0	
	comp=N,258nm,0.4s						
KAND				IAML		23 19 05.0	
	comp=E,293nm,0.5s						
URLA	Izmir	2.13	250	PN	Pn	23 18 30.7	-0.3
MAR6	Marsite Statio	2.13	318	PN	Pn	23 18 31.5	+0.5
GZKV	Gazikoy-Tekird	2.13	320	PN	Pn	23 18 31.2	+0.2
MAR3	Marsite Statio	2.14	319	PN	Pn	23 18 30.8	-0.4
CTKS	Kestanelik-??a	2.16	347	PN	Pn	23 18 29.9	-1.5
RKY	Sarkoy-Tekirda	2.16	317	PN	Pn	23 18 31.9	+0.4
SAHE	Sakarya_HENDEK	2.17	37	*i* P	Pb	23 18 35.7	+0.9
SAHE				IAML		23 19 07.0	
	comp=N,228nm,0.8s						
SAHE				IAML		23 19 09.0	
	comp=E,232nm,0.6s						
CAME	Cameli-Denizli	2.19	176	PN	Pn	23 18 32.3	+0.4
LPK	Lapseki	2.21	305	PN	Pn	23 18 30.8	-1.3
SLVT	Silivri	2.21	342	PN	Pn	23 18 32.5	+0.4
DOGA	KONYA_Doganhis	2.23	116	*i* P	Pg	23 18 37.3	-1.1
DOGA				IAML		23 19 14.0	
	comp=N,48nm,0.6s						
DOGA				IAML		23 19 20.0	
	comp=E,51nm,0.7s						
EZN	Ezine	2.28	289	PN	Pn	23 18 33.2	+0.2
BRTR	Keskin Array B	3.54	79	Pn	Pn	23 18 51.6	+1.1
	comp=E,0.6nm,0.3s,baz=257,slow=13,SNR=10						
BRTR				Sn	Sn	23 19 31.5	-0.9
	comp=E,2.5nm,0.3s,baz=253,slow=25,SNR=12						
BRTR				Lg	Lg	23 19 50.0	
	comp=E,0.7nm,0.3s,baz=284,slow=15,SNR=3.7						
IDI	Anoyia	5.11	223	Pn	Pn	23 19 10.1	-1.9
	comp=E,0.2nm,0.3s,baz=47,slow=18,SNR=1.4						
TIRR	Tirgusor	5.35	354	⇑P	Pn	23 19 15.8	+0.6
TIRR				⇑S	Pg	23 19 45.2	+7.1
VTS	Vitosha	5.67	310	P	Pn	23 19 20.3	+0.6
TPGR	Topolog	5.75	355	⇓P	Pn	23 19 20.7	0.0
TPGR				⇑S	Pg	23 19 52.2	+6.6
TLCR		6.06	358	⇑P	Pn	23 19 25.6	+0.7
BOSS	Bosilegrad	6.06	306	*e*P	Pn	23 19 26.4	+1.4
CFR	Carcaliu	6.09	353	⇑P	Pn	23 19 25.4	0.0
CFR				⇓S	Pg	23 19 57.3	+5.2
ZAPS	Zavoj	6.41	312	*e*P	Pn	23 19 31.7	+1.8
NEHR	Nehoiu	6.63	342	⇑P	Pn	23 19 34.1	+1.2
BARS	Barje	6.65	306	*e*P	Pn	23 19 34.2	+1.1
VLDR	Vladesti	6.76	354	P	Pn	23 19 34.3	-0.2
MLR	Muntele Rosu	6.78	341	⇑P	Pn	23 19 35.8	+0.8
MLR	Muntele Rosu	6.78	341	Pn	Pn	23 19 35.8	+0.8
	comp=E,0.5nm,0.3s,baz=117,slow=5.1,SNR=14						
MTUR	Matau	6.80	335	⇑P	Pn	23 19 36.2	+1.0
PLOR	Plostina	6.96	346	⇑P	Pn	23 19 38.0	+0.6
ZAGS	Zajecar	6.98	314	*e*P	Pn	23 19 38.5	+0.9
VOIR		6.99	336	⇑P	Pn	23 19 38.6	+0.8
VOIR				⇑S	Pg	23 20 10.7	+1.3
COVR	Voineasa-Covas	7.05	343	⇓P	Pn	23 19 40.0	+1.4
SELS	Selova	7.29	307	*e*P	Pn	23 19 42.6	+0.6
DOPR	Dopca	7.37	339	⇑P	Pn	23 19 43.8	+0.8
GRUS	Gruza	7.90	310	*e*P	Pn	23 19 50.9	+0.6
MMAI	Mount Meron Ar	7.94	138	Pn	Pn	23 19 51.0	+0.2
	comp=E,1.8nm,0.3s,baz=319,slow=11,SNR=17						
IVAS	Ivanjica	8.08	306	*e*P	Pn	23 19 53.2	+0.4
BURAR	Bucovina Array	8.95	343	⇑P	Pn	23 20 05.8	+1.2
ASF	Jabal al Asfar	9.38	135	Pn	Pn	23 20 11.2	+0.5
	comp=E,0.1nm,0.3s,baz=352,slow=16,SNR=2.0						
EIL	Elat	10.59	151	Pn	Pn	23 20 26.2	-0.8
	comp=E,0.2nm,0.3s,baz=168,slow=9.3,SNR=1.5						
EIL				Sn	Sn	23 22 24.2	-1.4
	comp=E,0.2nm,0.3s,baz=322,slow=12,SNR=1.5						
FINES	FINESS Array B	22.42	356	P	P	23 22 54.8	+1.0
	comp=E,1.4nm,0.8s,baz=163,slow=9.9,SNR=4.0						
MKAR	Makanchi Array	39.00	61	P	P	23 25 21.9	+0.1
	comp=E,0.2nm,0.7s,baz=272,slow=8.5,SNR=2.5						
SONM	Songino Array	54.55	54	P	P	23 27 23.7	+0.2
	comp=E,0.3nm,0.7s,baz=282,slow=7.2,SNR=2.3						

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*ISK **29** 23:18:26.8, 39°.15N×29°.14E, h8^{km}, ML3.5/22*
*DDA **29** 23:18:27.0, 39°.12N×29°.11E, h7^{km}±3^{km}, ML3.6*
ISC 29 23:18:27.3±0.9, **39°.14N**±0°.02×**29°.12E**±0°.02, **h12**^{km}±7^{km},
n30, σ**0**^{s}**29**/38, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIMA	Simav-Kutahya	0.12	241	PG	Pg	23 18 30.7	+0.2
SIMA				SG	Sg	23 18 32.9	0.0
SHAP	Saphane-Kutahy	0.14	147	PG	Pg	23 18 30.6	-0.2
SHAP				SG	Sg	23 18 32.9	-0.4
GEDZ	Gediz	0.25	114	PG	Pg	23 18 32.7	+0.2
GEDZ				SG	Sg	23 18 35.9	-0.1
GDZ	Gediz	0.28	101	*i* P	Pg	23 18 33.0	-0.2
GDZ				*i* S	Sg	23 18 37.1	-0.1
DEMI	Demirci	0.33	252	*i* P	Pg	23 18 34.2	+0.2
DEMI				*i* S	Sg	23 18 38.6	+0.1
TVSB	Tavsanli	0.40	41	PG	Pg	23 18 35.1	-0.2
TVSB				SG	Sg	23 18 40.7	-0.1
USAK	Uak-Merkez	0.44	191	*i* P	Pg	23 18 35.9	0.0
USAK				*i* S	Sg	23 18 41.4	-0.3
DST	Dursunbey	0.60	320	PG	Pg	23 18 38.9	-0.1
DURS	Dursunbey	0.68	313	*i* P	Pb	23 18 40.9	-0.1
DURS				*i* S	Sb	23 18 50.4	0.0
DURS				IAML		23 18 55.0	
	comp=E,2μm,0.3s						
KULA	Kula-Manisa	0.72	210	PG	Pg	23 18 40.9	-0.4
PASA	Karahalli, USA	0.84	160	*i* P	Pb	23 18 43.6	-0.3
KHL	Karahalli	0.88	159	PG	Pb	23 18 44.3	-0.2
ORLT	Orhaneli	0.92	349	PG	Pg	23 18 44.7	-0.3
ULDT	Uludag	1.00	1	*i* P	Pb	23 18 46.9	+0.3
GOMA	Golmarmara-Man	1.03	245	PG	Pg	23 18 46.8	-0.4
AKS	Akhisar	1.05	256	PG	Pb	23 18 47.5	+0.1
BALB	Balikesir	1.08	298	PN	Pn	23 18 48.3	+0.1
CAVI	Cavuskoy	1.19	28	PN	Pg	23 18 49.8	-0.4
IZI	Iznik	1.22	13	PN	Pb	23 18 50.4	+0.1
MDNY	Mudanya-Bursa	1.24	352	PN	Pg	23 18 50.8	-0.3
SHUT	Suhut-Afyon	1.26	117	PN	Pg	23 18 51.4	-0.1
KCTX	Karacabey (Bur	1.27	332	PN	Pn	23 18 50.9	+0.1
GEMT	Gemlik	1.29	2	PN	Pb	23 18 51.7	+0.2
ADVT	Abdulvahap	1.37	20	PN	Pn	23 18 52.6	+0.4
BASM	Basmaki-Afyon	1.42	149	PN	Pb	23 18 53.8	0.0
GONE	Gonen-Balikesi	1.43	310	PN	Pb	23 18 53.6	-0.2
YLV	Yalova	1.43	8	PN	Pn	23 18 53.6	+0.5
TRML	Termal-Yalova	1.46	2	PN	Pn	23 18 54.1	+0.6
AYDB	Zeytinkoy-Aydi	1.54	219	PN	Pn	23 18 55.1	+0.5
EDC	Edincik	1.54	321	PN	Pb	23 18 55.4	-0.4

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*WEL **29** 23:36:00, 40°.53S×175°.92E, h21^{km}, ML4.7, Mw4.5, Moment Tensor Solution. s5 Moment tensor: Scale 10^{15} Nm; M_{rr}-0.43; $M_{\theta\theta}$-0.00; $M_{\phi\phi}$0.43; $M_{r\theta}$0.77; $M_{\theta\phi}$-2.39; $M_{\phi r}$4.84; Fault plane solution: $M_0$5.45000×10^{15} NP1: ϕ_s278.00000°, δ26.00000°, λ-176.00000°. NP2: ϕ_s184.00000°, δ88.00000°, λ-64.00000°. Principal axes: T -571.4100, Plg38.0000°, Azm251.0000°; N 52.8500, Plg26.0000°, Azm3.0000°; P 518.5600, Plg41.0000°, Azm118.0000°;*

*IDC **29** 23:36:12.5±1.1, 40°.58S×176°.06E, h0^{km}, mb4.6/5, mb1 4.7/6, mb1mx4.3/25, mbtmp4.5/6, ML3.8/1, MS3.6/8, Ms1 3.6/8, ms1mx3.4/20 Error ellipse: s-maj=37.4km s-min=24.2km az=145.0*

*NOU **29** 23:36:16.4, 40°.78S×176°.29E, h52^{km}, MLv4.7/9, North Island, New Zealand*

*WEL **29** 23:36:17.9, 41°S±2°×17°6E±°, h25^{km}±3^{km}, M4.7/13, ML5.1/13, MLv4.7/13, Error ellipse: s-maj=0.0km s-min=0.0km az=85.9*

*IASPEI **29** 23:36:18.2±0.9, 40°.55S±0°.02×175°.96E±0°.03, h29^{km}±4^{km}, mb4.8/15, MS3.7/9, Error ellipse: s-maj=4.5km s-min=3.0km az=125.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **29** 23:36:18.4±1.6, 40°.61S±0°.05×176°.06E±0°.08, h36^{km}±5^{km}, mb4.8/17, ML4.7(WEL), Error ellipse: s-maj=9.6km s-min=5.7km az=126.0*

ISC 29 23:36:18.1±0.6, **40°.56S**±0°.02×**175°.99E**±0°.02, **h31**^{km}±4^{km},
n251, σ**1**^{s}**24**/260, **mb4.8**/15, **MS3.7**/9, **1C**, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRWZ	Pori Road	0.01	297	P	Pb	23 36 22.6	-0.6
PRWZ				S	Sb	23 36 26.3	-0.4
TIWZ	Tintock	0.23	199	P	Pb	23 36 24.9	+0.1
TIWZ				S	Sn	23 36 30.1	+0.1
BFZ	Birch Farm	0.23	121	P	Pb	23 36 25.0	+0.2
BFZ				S	Sn	23 36 30.5	+0.4
BFZ	Birch Farm	0.23	121		Pb	23 36 24.7	-0.1
BFZ				Sn	Sn	23 36 30.1	-0.1
BFZ	Birch Farm	0.23	121	P	Pb	23 36 25.1	+0.3
POWZ	Post Office Ro	0.24	315	P	Pb	23 36 23.9	-0.9
POWZ				S	Sb	23 36 28.6	-0.8
DVHZ	Dannevirke	0.30	28	P	Pb	23 36 24.8	-0.8
DVHZ				S	Sb	23 36 29.9	-0.7
MRZ	Mangatainoka R	0.33	252	P	Pb	23 36 25.5	-0.5
MRZ				S	Sb	23 36 30.9	-0.4
CPWZ	Castlepoint	0.39	155	P	Pn	23 36 28.4	+0.9
CPWZ				S	Sn	23 36 37.5	+3.6
ANWZ	Angora Road	0.39	75	P	Pn	23 36 27.4	-0.1
ANWZ				S	Sn	23 36 35.6	+1.7
HOWZ	Holdsworth Sta	0.49	226	P	Pb	23 36 28.6	+0.1
HOWZ				S	Sn	23 36 36.7	+0.2
TSZ	Takapari Road	0.50	358	P	Pb	23 36 27.9	-0.7
TSZ				S	Sb	23 36 35.4	-0.4
TMWZ	Te Maipa	0.55	187	P	Pn	23 36 30.3	+0.5
PRHZ	Porangahau	0.58	60	P	Pn	23 36 30.4	+0.2
PRHZ				S	Sn	23 36 40.9	+2.3
WPHZ	Waipukurau	0.61	35	P	Pn	23 36 30.6	+0.1
WPHZ				S	Sn	23 36 40.6	+1.3
OHWZ	Ohakea	0.62	304	P	Pn	23 36 30.9	+0.1
PNHZ	Pukenui	0.67	14	P	Pb	23 36 31.2	-0.1
OGWZ	Otaki Gorge	0.67	247	P	Pn	23 36 31.4	0.0
MTW	Mount Morrison	0.70	211	P	Pn	23 36 32.0	+0.2
PXZ	Pawanui	0.85	52	P	Pn	23 36 34.1	+0.2
TRWZ	Traveller	0.87	195	P	Pb	23 36 34.4	-0.2
KIW	Kapiti Island	0.87	249	P	Pb	23 36 34.9	+0.2
CAW	Cannon Point	0.89	232	P	Pb	23 36 34.7	-0.2
PAWZ	Paruwai Farm	0.92	207	P	Pn	23 36 35.1	+0.2
KRHZ	Kereru	0.96	18	P	Pb	23 36 35.9	-0.3
MSWZ	Moikau Station	1.02	213	P	Pn	23 36 36.1	-0.2
MSWZ	Moikau Station	1.02	213		Pn	23 36 35.9	-0.3
MSWZ				Sn	Sn	23 36 49.3	-0.2
KAHZ	Kahuranaki	1.03	42	P	Pn	23 36 36.7	+0.4
BHHZ	Black Hill Sta	1.07	3	P	Pb	23 36 37.9	-0.2
WAZ	Wanganui	1.11	316	P	Pb	23 36 39.2	+0.5
PLWZ	Palliser	1.15	208	P	Pn	23 36 37.7	-0.4
PLWZ	Palliser	1.15	208		Pn	23 36 37.6	-0.5
PLWZ				Sn	Sn	23 36 53.2	+0.4
MOVZ	Moawhango	1.17	351	P	Pb	23 36 39.3	-0.4
WEL	Wellington	1.17	231	P	Pn	23 36 38.5	+0.2
KWHZ	Kaweka Forest	1.18	17	P	Pn	23 36 39.1	+0.5
BHW	Baring Head	1.20	224	P	Pn	23 36 38.6	-0.1
BHW	Baring Head	1.20	224		Pn	23 36 38.5	-0.1
BHW				Sn	Sn	23 36 54.1	+0.3
SNZO	South Karori	1.23	232	Pn	Pn	23 36 39.0	-0.1
SNZO	South Karori	1.23	232	P	Pn	23 36 39.3	+0.3
CKHZ	Cape Kidnapper	1.23	43	P	Pn	23 36 39.3	+0.2
MTVZ	Mangateitei	1.24	341	P	Pb	23 36 40.7	-0.2
MCHZ	McNeill Hill	1.24	26	P	Pn	23 36 39.8	+0.5
WNVZ	Wahianoa	1.27	346	P	Pb	23 36 41.0	-0.5
TRVZ	Turoa	1.30	345	P	Pb	23 36 41.6	-0.5
WHVZ	Whangaehu Hut	1.31	346	P	Pb	23 36 41.9	-0.4
TUVZ	Tukino	1.32	349	P	Pb	23 36 41.9	-0.3
DRZ	Dome Shelter	1.32	346	P	Pb	23 36 42.3	-0.2
FWVZ	Far West T-bar	1.34	346	P	Pb	23 36 42.2	-0.6
PKVZ	Pokaka	1.36	339	P	Pb	23 36 42.4	-0.6
SNVZ	South Ngauruho	1.40	349	P	Pb	23 36 43.1	-0.6
NGZ	Ngauruhoe	1.41	348	P	Pb	23 36 43.3	-0.6
OTVZ	Oturere	1.42	350	P	Pb	23 36 43.4	-0.6
ETVZ	East Tongariro	1.44	351	P	Pb	23 36 43.7	-0.6
BKZ	Black Stump Fm	1.45	16	P	Pn	23 36 42.4	+0.2
BKZ	Black Stump Fm	1.45	16	Pn	Pn	23 36 42.5	+0.3
BKZ	Black Stump Fm	1.45	16	P	Pn	23 36 43.2	+1.0
TCW	Tory Channel	1.45	243	P	Pn	23 36 42.2	+0.1
NNVZ	North Ngauruho	1.46	349	P	Pb	23 36 44.0	-0.6
TMVZ	Te Maari	1.46	351	P	Pb	23 36 43.9	-0.8
WTVZ	West Tongariro	1.48	348	P	Pb	23 36 44.1	-0.8
NTVZ	North Tongarir	1.48	351	P	Pb	23 36 44.1	-0.9
KRVZ	Karewarewa	1.49	350	P	Pb	23 36 44.6	-0.5
ARHZ	Aropaoanui	1.51	31	P	Pn	23 36 43.6	+0.6
TWVZ	Taurewa	1.55	344	P	Pb	23 36 45.2	-0.9
RITZ	Rihia Road	1.58	356	P	Pb	23 36 45.8	-0.9
DUWZ	D'Urville Isla	1.59	261	P	Pn	23 36 44.3	+0.3
NMHZ	Naumai	1.59	24	P	Pn	23 36 45.2	+1.0
KATZ	Kakaramea	1.60	352	P	Pb	23 36 45.9	-1.1
LREZ	Lake Rotokare	1.64	312	P	Pb	23 36 47.2	-0.4
HATZ	Hinemaiaia	1.67	3	P	Pb	23 36 46.8	-1.3
RATZ	Rangitukua	1.70	354	P	Pn	23 36 47.0	+1.4
VRZ	Vera Road	1.72	326	P	Pn	23 36 47.3	+1.5
MRHZ	Matea Rd	1.76	11	P	Pn	23 36 47.0	+0.6
TUWZ	Tuamarina	1.77	240	P	Pn	23 36 46.1	-0.5
TUWZ	Tuamarina	1.77	240		Pn	23 36 46.0	-0.5
CMWZ	Cape Campbell	1.79	228	P	Pn	23 36 47.0	+0.2
CMWZ	Cape Campbell	1.79	228	Pn	Pn	23 36 46.8	0.0
MTHZ	Maungataniwha	1.83	21	P	Pn	23 36 47.6	+0.2
RAHZ	Arahi	1.85	28	P	Pn	23 36 47.9	+0.2
PREZ	Palmer Road	1.86	310	P	Pb	23 36 50.2	-1.1
WHTZ	Whakaora	1.89	359	P	Pb	23 36 51.5	-0.5
DREZ	Durham Road	1.94	314	P	Pb	23 36 51.1	-1.6
NEZ	North Egmont	1.94	311	P	Pb	23 36 51.3	-1.6
MHEZ	Mangahewa	1.96	319	P	Pb	23 36 52.8	-0.2
BSWZ	Blackbirch Sta	1.97	233	P	Pn	23 36 48.8	-0.5
BSWZ	Blackbirch Sta	1.97	233		Pn	23 36 48.8	-0.5
KHEZ	Kahui Hut	1.97	309	P	Pb	23 36 51.7	-1.7
NMEZ	Namu Road	1.98	305	P	Pb	23 36 51.8	-1.6
KNZ	Kokohu	2.01	41	P	Pn	23 36 49.1	-0.7
ALRZ	Allen Road	2.02	8	P	Pn	23 36 51.0	+1.0
MHGZ	Mahia Peninsul	2.04	47	P	Pn	23 36 49.5	-0.8
WPRZ	Whakapapatarin	2.04	4	P	Pn	23 36 51.0	+0.6
PKE	Pukeiti	2.06	311	P	Pb	23 36 52.8	-2.0
SNGZ	Shannon Statio	2.06	31	P	Pn	23 36 50.5	-0.1
KUTZ	Kaahu Road	2.07	356	P	Pn	23 36 51.9	+1.1
NBEZ	Newall Road No	2.08	308	P	Pb	23 36 53.3	-1.7
NNZ	Nelson	2.08	251	P	Pn	23 36 50.9	+0.1
NNZ	Nelson	2.08	251		Pn	23 36 51.2	+0.4
PRRZ	Plateau Road	2.08	9	P	Pb	23 36 55.5	+0.3
RTZ	Ruatahuna	2.09	22	P	Pn	23 36 51.2	+0.2
HRRZ	Handcock Road	2.18	6	P	Pn	23 36 53.0	+0.7
PRGZ	Paritu Road	2.19	42	P	Pn	23 36 51.6	-0.9
GRRZ	Galatos Road	2.21	3	P	Pb	23 36 55.3	-2.0
HIZ	Hauiti	2.22	337	P	Pn	23 36 54.2	+1.5
HIZ	Hauiti	2.22	337	P	Pb	23 36 55.4	-2.2
TLZ	Tolley Road	2.25	351	P	Pn	23 36 55.2	+1.9
HSRZ	Hossack Road	2.25	5	P	Pn	23 36 54.2	+1.0
RRRZ	Republican Roa	2.26	11	P	Pn	23 36 55.6	+2.3
RIGZ	Rimuhau	2.31	37	P	Pn	23 36 53.2	-0.7
HLRZ	Highlands Stat	2.32	7	P	Pb	23 37 00.4	+1.1
RAGZ	Rawiri	2.34	29	P	Pn	23 36 53.8	-0.7
TARZ	Mount Tarawera	2.36	10	P	Pn	23 36 54.9	+0.1
UTU	Utuhina	2.39	4	P	Pb	23 37 02.7	+2.4
MKRZ	Makatiti	2.45	9	P	Pb	23 36 59.3	-2.1
URZ	Urewera	2.46	21	Pn	Pn	23 36 54.9	-1.0
	21nm,0.3s,baz=121,slow=24,SNR=71						
URZ				Sn	Sn	23 37 25.1	+0.1
	77nm,0.3s,baz=59,slow=19,SNR=7.8						
URZ				LR	LR	23 38 11.5	
	comp=Z,432nm,20.1s,baz=211,slow=49						
URZ	Urewera	2.46	21	P	Pn	23 36 55.0	-1.0
URZ	Urewera	2.46	21	Pn	Pn	23 36 54.5	-1.5
URZ	Urewera	2.46	21	P	Pn	23 36 55.3	-0.7
OMRZ	Omania	2.47	7	P	Pb	23 37 00.5	-1.3
OMRZ				P	Pn	23 37 01.2	+5.0
EDRZ	Edgecumbe	2.52	14	P	Pn	23 36 58.8	+1.9
MWZ	Matawai	2.52	29	P	Pn	23 36 55.8	-1.2
KARZ	Kaharoa	2.54	5	P	Pb	23 37 01.4	-1.7
TKGZ	Te Karaka	2.56	35	P	Pn	23 36 56.6	-0.8
KHZ	Kahutara	2.61	224	P	Pn	23 36 56.6	-1.5
KHZ	Kahutara	2.61	224	Pn	Pn	23 36 56.6	-1.5
KHZ	Kahutara	2.61	224	P	Pn	23 36 56.8	-1.3
THZ	Tophouse	2.62	242	P	Pn	23 36 57.4	-0.9
MARZ	Manawahe	2.63	12	P	Pb	23 37 03.6	-0.9
QRZ	Quartz Range	2.64	263	P	Pn	23 36 58.4	-0.1
QRZ	Quartz Range	2.64	263	Pn	Pn	23 36 58.4	-0.1
QRZ	Quartz Range	2.64	263	P	Pn	23 36 58.5	0.0
CNGZ	Carnagh Statio	2.69	40	P	Pn	23 36 58.4	-0.8
KMRZ	Kaimai	2.71	359	P	Pb	23 37 03.4	-2.5
OPRZ	Ohinepanea	2.75	9	P	Pn	23 37 01.8	+1.8
WHRZ	Whale Island	2.81	16	P	Pn	23 37 02.3	+1.5
TGRZ	Tauranga	2.83	4	P	Pb	23 37 04.9	-3.1
TWGZ	Tauwhareparae	2.84	34	P	Pn	23 37 00.7	-0.6
TOZ	Tahuroa Road	2.85	352	P	Pn	23 37 00.7	-0.7
RUGZ	Raukumara Rang	2.91	27	P	Pn	23 37 01.4	-0.8
PUZ	Puketiti	3.05	36	P	Pn	23 37 02.5	-1.7
PKGZ	Pakihiroa	3.12	32	P	Pn	23 37 04.5	-0.7
HAZ	Te Kaha	3.13	27	P	Pn	23 37 04.6	-0.6
GVZ	Greta Valley S	3.26	222	P	Pn	23 37 05.4	-1.7
MYRZ	Mayor Island	3.28	4	P	Pn	23 37 09.2	+1.9
WMGZ	Waiomatatini S	3.33	35	P	Pn	23 37 06.8	-1.1
DSZ	Denniston Nort	3.37	248	P	Pn	23 37 07.8	-0.8
LTZ	Lake Taylor	3.56	230	P	Pn	23 37 09.5	-1.6
AMCZ	Amberley	3.61	223	P	Pn	23 37 10.3	-1.5
ETAZ	East Tamaki Re	3.69	347	P	Pn	23 37 14.9	+1.9
WTAZ	Waiatarua	3.79	343	P	Pn	23 37 16.5	+2.2
KUZ	Kuaotunu	3.81	357	P	Pn	23 37 16.6	+1.9
WIAZ	Waiheke Island	3.82	350	P	Pn	23 37 16.4	+1.6
OKCZ	Okains Bay	3.84	214	P	Pn	23 37 12.9	-2.1
MBAZ	Motutapu North	3.88	347	P	Pn	23 37 17.2	+1.7
MQZ	McQueen's Vall	4.00	217	P	Pn	23 37 14.4	-2.8
MQZ	McQueen's Vall	4.00	217	Pn	Pn	23 37 15.0	-2.2
AKCZ	Akaroa Harbour	4.02	214	P	Pn	23 37 16.1	-1.4
INZ	Inchbonnie	4.03	236	P	Pn	23 37 16.0	-1.7
OXZ	Oxford	4.04	226	P	Pn	23 37 15.2	-2.5
ABAZ	Army Bay	4.06	347	P	Pn	23 37 21.3	+3.3
RACZ	Rakaia	4.26	221	P	Pn	23 37 19.0	-1.8
GRZ	Great Barrier	4.32	354	P	Pn	23 37 22.4	+0.7
WACZ	Wakanui South	4.57	221	P	Pn	23 37 22.6	-2.4
WVZ	Waitaha Valley	4.66	236	P	Pn	23 37 24.3	-1.9
WCZ	Waipu Caves	4.79	344	P	Pn	23 37 29.8	+1.7
RPZ	Rata Peaks	4.83	228	P	Pn	23 37 26.7	-2.0
RPZ	Rata Peaks	4.83	228	Pn	Pn	23 37 26.9	-1.8
RPZ	Rata Peaks	4.83	228	P	Pn	23 37 27.0	-1.7
ARCZ	Arundel	4.92	225	P	Pn	23 37 28.1	-1.8
GCSZ	Gaunt Creek Bo	5.04	235	P	Pn	23 37 29.5	-2.0
TMZ	Timaru	5.30	222	P	Pn	23 37 33.0	-2.1
FOZ	Fox Glacier	5.47	235	P	Pn	23 37 35.4	-2.0
OUZ	Omahuta	5.66	340	P	Pn	23 37 42.7	+2.7
OUZ	Omahuta	5.66	340	Pn	Pn	23 37 41.0	+1.0
LBZ	Lake Benmore	5.75	226	P	Pn	23 37 39.4	-1.8
LBZ	Lake Benmore	5.75	226	Pn	Pn	23 37 39.2	-2.0
ODZ	Otahua Downs	5.96	219	P	Pn	23 37 41.6	-2.5
ODZ	Otahua Downs	5.96	219	P	Pn	23 37 41.4	-2.7
CTZ	Chatham Island	6.35	122	P	Pn	23 37 49.2	-0.2
HHSZ	Highcliff Hill	6.62	215	P	Pn	23 37 52.0	-1.1
WKZ	Wanaka	6.67	228	P	Pn	23 37 52.8	-1.1
EAZ	Earnscleugh	6.77	224	P	Pn	23 37 53.0	-2.2
MLZ	Mavora Lakes	7.50	228	P	Pn	23 38 03.4	-2.0
WHZ	Wether Hill Ro	7.92	225	P	Pn	23 38 16.2	+5.1
WHZ	Wether Hill Ro	7.92	225	Pn	Pn	23 38 09.4	-1.7
DCZ	Deep Cove	8.12	230	P	Pn	23 38 13.6	0.0
APZ	The Paps	8.53	220	P	Pn	23 38 17.4	-2.0
PYZ	Puysegur Point	8.79	227	P	Pn	23 38 22.2	-0.8
PYZ	Puysegur Point	8.79	227	Pn	Pn	23 38 22.0	-0.9
DZM	Mont Dzumac	20.13	333	LR	LR	23 47 42.9	
	comp=Z,159nm,21.8s,baz=138,slow=34						
DZM	Mont Dzumac	20.13	333	*e*LR	LR	23 45 36.8	
	comp=Z,310nm,23.9s						
DZM	Mont Dzumac	20.13	333		Pn	23 40 50.7	-0.9
CNB	Canberra Magne	21.60	275	P	P	23 41 07.8	+2.4
	baz=22,SNR=6.8						
ARMA	Armidale	22.20	289	P	P	23 41 11.6	-0.3
ARMA				IAmb	IAmb	23 41 22.7	
	comp=Z,42nm,1.5s						
TOO	Toolangi	23.81	267	P	P	23 41 29.6	+1.4
	baz=24,SNR=5.1						
TOO	Toolangi	23.81	267	P	P	23 41 29.1	+0.9
TOO				IAmb	IAmb	23 41 30.4	
	comp=Z,25nm,1.1s						
EIDS	Eidsvold	25.69	299	P	P	23 41 46.5	+1.2
EIDS				IAmb	IAmb	23 42 00.0	
	comp=Z,35nm,1.5s						
RAR	Rarotonga	28.21	54	LR	LR	23 52 31.2	
	comp=Z,91nm,19.1s,baz=312,slow=35						
STKA	Stephens Creek	28.92	276	P	P	23 42 14.9	+0.6
	comp=Z,4.3nm,0.8s,baz=99,slow=10,SNR=9.3						
STKA				LR	LR	23 52 42.4	
	comp=Z,175nm,20.4s,baz=175,slow=34						
STKA	Stephens Creek	28.92	276	P	P	23 42 15.8	+1.5
	baz=29,SNR=5.9						
STKA	Stephens Creek	28.92	276	P	P	23 42 15.7	+1.3
BBOO	Buckleboo	32.72	271	P	P	23 42 47.8	0.0
	baz=33,SNR=9.2						
BBOO	Buckleboo	32.72	271	P	P	23 42 47.6	-0.3
BBOO				IAmb	IAmb	23 42 48.5	
	comp=Z,10nm,0.8s						
PAE	Paea	37.40	63	*e*T	T	00 22 25.9	
	comp=Z,3.3nm,0.4s						
PPT2	Papeete2	37.45	63	*e*LR	LR	23 53 37.2	
	comp=Z,163nm,25.2s						
AS31	Alice Springs	39.01	283	P	P	23 43 41.4	-0.5
ASAR	Alice Springs	39.01	283	P	P	23 43 41.4	-0.5
	comp=Z,9.4nm,0.4s,baz=132,slow=7.8,SNR=179						
ASAR				PcP	PcP	23 45 50.4	-1.3
	comp=Z,1.3nm,0.8s,baz=126,slow=3.5,SNR=4.7						
ASAR				LR	LR	00 00 05.7	
	comp=Z,201nm,19.1s,baz=147,slow=37						
ASAR	Alice Springs	39.01	283	P	P	23 43 41.6	-0.3
ASAR					PcP	23 45 49.5	-2.2
COEN	Coen	39.02	303	P	P	23 43 42.1	+0.2
COEN				IAmb	IAmb	23 43 52.0	
	comp=Z,18nm,1.1s						
FORT	Forrest	39.72	269	P	P	23 43 47.3	-0.4
FORT				IAmb	IAmb	23 43 49.6	
	comp=Z,20nm,0.9s						
WB2	Warramunga Arr	40.95	288	P	P	23 43 57.5	-0.4
WB2				IAmb	IAmb	23 43 58.3	
	comp=Z,24nm,0.7s						
WRA	Warramunga Arr	40.96	287	P	P	23 43 57.2	-0.7
	comp=Z,19nm,0.6s,baz=126,slow=8.0,SNR=113						
WRA	Warramunga Arr	40.96	287	P	P	23 43 57.3	-0.7
WB0	Warramunga Arr	41.03	288	P	P	23 43 58.2	-0.4
WB0				IAmb	IAmb	23 43 58.8	
	comp=Z,14nm,0.7s						
WRKA	Warakurna	42.45	276	P	P	23 44 09.1	-1.1
	baz=42,SNR=18						
KNRA	Kununurra	47.75	287	P	P	23 44 53.7	+1.4
	baz=48,SNR=3.8						
KNRA	Kununurra	47.75	287	P	P	23 44 52.3	0.0
MTN	Manton Dam	47.95	292	P	P	23 44 54.9	+1.1
MEEK	Meekatharra	48.96	268	P	P	23 45 00.9	-0.8
	baz=49,SNR=13						
MORW	Morawa	49.67	264	P	P	23 45 07.4	+0.4
	baz=50,SNR=3.2						
MORW	Morawa	49.67	264	P	P	23 45 07.2	+0.2
TAOE	Nuku Hiva Isla	50.07	63	*e*LR	LR	23 59 26.3	
	comp=Z,110nm,23.6s						
PSA00	Pilbara Seismi	50.81	274	P	P	23 45 14.3	-1.4
PSA00				IAmb	IAmb	23 45 33.8	
	comp=Z,8.9nm,1.3s						
PSA00	Pilbara Seismi	50.81	274	P	P	23 45 14.9	-0.8
PSA00				IAmb	IAmb	23 45 40.1	
	comp=Z,29nm,1.2s						
MAW	Mawson	61.08	204	LR	LR	00 11 45.0	
	comp=Z,107nm,18.5s,baz=253,slow=35						
SYO	Syowa Base	66.08	196	⇑*e*pP	pP	23 47 12.5	+1.3
SNAA	Sanae	68.07	180	P	P	23 47 15.5	+1.3
VNA3	Neumayer Olymp	68.43	178	P	P	23 47 18.1	+1.7
VNA2	Neumayer--Watz	68.80	179	P	P	23 47 20.8	+2.1
	baz=177,slow=5.0						
KSRS	Korea Array	89.26	324	P	P	23 49 09.7	-1.0
	comp=Z,1.4nm,0.8s,baz=159,slow=7.3,SNR=3.1						
KSRS				LR	LR	00 29 56.7	
	comp=Z,20nm,19.2s,baz=104,slow=36						
NJ2	Nanjing	89.48	314	*e*P	P	23 49 14.3	+2.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	Chiang Mai Arr	92.39	292	P	P	23 49 25.4	-0.4
	comp=Z,0.7nm,0.6s,baz=154,slow=3.6,SNR=6.3						
CMAR				LR	LR	00 35 30.3	
	comp=Z,23nm,18.1s,baz=192,slow=38						
CMAR	Chiang Mai Arr	92.39	292		P	23 49 25.8	+0.1
HHC	Hu-ho-hao-te	99.93	316	*e*P	Pdif	23 50 03.0	+3.4
YKA	Yellowknife Ar	116.70	29	PKP	PKPdf	23 54 58.0	0.0
	comp=Z,0.3nm,0.7s,baz=252,slow=1.9,SNR=6.0						
YKA	Yellowknife Ar	116.70	29		PKPdf	23 54 57.3	-0.8
MK31	Makanchi Array	120.29	307	PKPdf	PKPdf	23 55 04.2	-1.4
MKAR	Makanchi Array	120.29	307	PKP	PKPdf	23 55 04.1	-1.5
	comp=Z,0.7nm,0.6s,baz=220,slow=1.4,SNR=10						
MKAR	Makanchi Array	120.29	307	PKPdf	PKPdf	23 55 03.3	-2.2

MAKZ	Makanchi	120.48	307	PKPdf	PKPdf	23 55 04.7	-1.2
KSH	Kashi	120.86	297	PKP	PKiKP	23 55 08.8	+1.7
KURK	Kurchatov	124.20	310	PKPdf	PKPdf	23 55 12.2	-0.6
GURO	Guroymak-BITLI	144.75	282	PKPdf	PKPbc	23 55 50.8	+0.1
ONI	Oni	144.79	289	PKPdf	PKPab	23 55 50.4	-0.1
KBZ	Khabaz	145.43	291	PKPbc	PKPdf	23 55 51.4	-1.0
	comp=Z,4.7nm,0.8s,baz=122,slow=3.3,SNR=9.0						
ARCES	ARCESS Array B	147.09	341	PKPbc	PKPbc	23 55 56.2	-0.5
	comp=Z,3.9nm,0.7s,baz=53,slow=1.6,SNR=22						
ARCES	ARCESS Array B	147.09	341	PKPbc	PKPbc	23 55 56.0	-0.7
FIA1	FINESS Array S	152.22	329	PKPbc	PKPbc	23 56 07.9	-1.6
FINES	FINESS Array B	152.23	329	PKPbc	PKPbc	23 56 08.9	-0.7
	comp=Z,1.7nm,0.7s,baz=54,slow=2.8,SNR=6.9						
FINES				PKPab	sPKPdf	23 56 17.4	+0.7
	comp=Z,4.4nm,0.9s,baz=43,slow=2.4,SNR=6.8						
TORD	Torodi Ar. Bea	152.24	192	PKPbc	PKPbc	23 56 11.1	+0.1
	comp=Z,0.3nm,0.4s,baz=163,slow=3.1,SNR=4.5						
GERES	GERESS Array B	164.95	309	PKPab	PKPab	23 57 14.2	-0.9
	comp=Z,0.5nm,0.8s,baz=64,slow=3.1,SNR=3.7						

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*NEIC **29** 23:52:11.8±0.7, 35°.68N±0°.02×97°.42W±0°.02, h7^{km}±7^{km}, Error ellipse: s-maj=3.0km s-min=1.7km az=131.0*

*TUL **29** 23:52:11.6±1.2, 35°.66N±0°.02×97°.40W±0°.02, h7^{km}±7^{km}, ML2.8, mb_Lg2.6/23(NEIC), Error ellipse: s-maj=3.0km s-min=1.6km az=131.0*

*ANF **29** 23:52:11.3±0.7, 35°.69N×97°.39W, h6^{km}±6^{km}, ML3.1/4, Error ellipse: s-maj=5.2km s-min=2.0km az=177.0*

ISC 29 23:52:11.7±0.9, **35°.68N**±0°.02×**97°.41W**±0°.02, **h9**^{km}±7^{km}, **n51**, σ**0ˢ.54**/57, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	Oakdale Elemen	0.10	187	Pg	Pg	23 52 13.9	-0.3
OK025	Westminster Rd	0.11	149	Pg	Pg	23 52 14.2	-0.2
OK025				Sg	Sg	23 52 16.0	-0.2
OK001	Jones High Sch	0.15	140	Pg	Pg	23 52 14.9	-0.1
BCOK	Bluff Creek, N	0.16	263	Pg	Pg	23 52 15.3	+0.1
BCOK				Sg	Sg	23 52 18.2	+0.6
OK005	Luther M Schoo	0.18	97	Pg	Pg	23 52 15.5	+0.1
OKCFA	Oklahoma City	0.27	187		Pg	23 52 16.9	-0.1
OKCFA				Sg	Sg	23 52 20.9	+0.3
OKCFA	Oklahoma City	0.27	187	P	Pg	23 52 16.9	-0.1
	baz=9.9						
OKCFA				S	Sg	23 52 20.9	+0.3
	baz=9.9						
OKCSW	OKLAHOMA CITY	0.27	185	Pg	Pg	23 52 17.1	-0.1
OKCSW				Sg	Sg	23 52 21.1	+0.3
FNO	Franklin	0.42	179	Pg	Pg	23 52 19.7	-0.2
FNO				Sg	Sg	23 52 25.7	+0.2
OK031	S. Brethren Rd	0.54	59	Pg	Pg	23 52 22.2	0.0
OK031				Sg	Sg	23 52 29.6	+0.3
OK030	Cody Creek RV	0.57	64		Pg	23 52 22.6	-0.1
OK030				Sg	Sg	23 52 30.4	+0.3
W35A	Tecumseh	0.68	140	Pg	Pg	23 52 24.3	-0.6
QUOK	Quay	0.75	49	Pg	Pg	23 52 26.0	-0.3
QUOK				Sg	Sg	23 52 36.2	+0.1
CROK	Carrier	0.95	331	Pg	Pg	23 52 29.8	-0.2
BLOK	Blackwell	1.09	8		Pg	23 52 32.3	-0.5
X34A	Smith Ranch, M	1.13	198	Pg	Pg	23 52 32.9	-0.5
GC02	Grant County #	1.23	343		Pb	23 52 34.5	-0.6
OK032	Salt Plains WL	1.30	330		Pn	23 52 35.7	-0.4
KAN13	South Haven SW	1.33	358		Pn	23 52 36.6	0.0
TUL1	Leonard	1.33	80		Pn	23 52 35.3	-1.3
TUL1	Leonard	1.33	80	P	Pn	23 52 35.5	-1.1
	baz=260						
TUL1				S	Sb	23 52 54.7	+0.5
	baz=260						
KAN14	Manchester OK	1.35	341		Pn	23 52 36.7	-0.2
T35A	Sooner Cattle	1.43	30	Pn	Pn	23 52 37.8	-0.2
T35B	Sooner Cattle	1.43	30	P	Pn	23 52 37.8	-0.2
	baz=210						
T35B				S	Sn	23 52 57.4	+0.5
	baz=210						
U32A	Winter Ranch,	1.47	299	Pn	Pn	23 52 38.5	0.0
U32A	Winter Ranch,	1.47	299	P	Pn	23 52 38.6	+0.1
	baz=118						
U32A				S	Sg	23 52 58.8	-0.2
	baz=118						
OK035	E0210 Rd and N	1.47	315	Pn	Pn	23 52 38.5	0.0
KAN05	Bluff City Nor	1.48	345	Pn	Pn	23 52 38.6	0.0
KAN01	Argonia South	1.50	349	Pn	Pn	23 52 39.0	+0.1
KAN10	Anthony SW Sta	1.54	339	Pn	Pn	23 52 39.6	+0.1
KAN06	Argonia West S	1.61	347	Pn	Pn	23 52 40.7	+0.3
LOOK	Love County	1.69	174	IAmb_Lg		23 53 06.0	
	comp=Z,26nm,1.3s						
X37A	Clayton	1.99	122	Pn	Pn	23 52 46.0	+0.3
X37A	Clayton	1.99	122	P	Pn	23 52 45.8	+0.1
	baz=304						
W39A	Magazine	3.00	98	Pn	Pn	23 52 59.0	-0.5
Z38A	Mt. Pleasant	3.13	140		Pn	23 53 01.7	+0.4
MIAR	Mount Ida	3.34	109	Pn	Pn	23 53 05.1	+1.0
KSU1	Kansas State U	3.48	10	Pn	Pn	23 53 06.2	+0.1
KSU1				IAmb_Lg		23 54 08.9	
	comp=Z,23nm,0.8s						
ABTX	Abilene, Hawle	3.56	212	Pn	Pn	23 53 08.0	+0.7
ABTX				IAmb_Lg		23 54 08.9	
	comp=Z,12nm,0.8s						
AMTX	Amarillo	3.58	258	Pn	Pn	23 53 06.6	-1.0
CBKS	Cedar Bluff	3.64	330	IAmb_Lg		23 54 09.7	
	comp=Z,14nm,0.9s						
U40A	Yellville	3.75	78	Pn	Pn	23 53 10.2	+0.3
U40A				IAmb_Lg		23 54 16.1	
	comp=Z,15nm,0.7s						
S39A	Bolivar	3.85	57	Pn	Pn	23 53 12.0	+0.8
S39A				IAmb_Lg		23 54 14.5	
	comp=Z,11nm,0.8s						
X40A	Basin Creek Fa	3.94	106	Pn	Pn	23 53 13.4	+1.1
X40A				IAmb_Lg		23 54 18.7	
	comp=Z,23nm,0.7s						
WLAR	White Oak Lake	4.06	118	IAmb_Lg		23 54 29.2	
	comp=Z,13nm,0.8s						
WHAR	Wooly Hollow	4.20	94	Pn	Pn	23 53 16.5	+0.6
R40A	Maddies Statio	4.87	56	Pn	Pn	23 53 27.1	+1.9
R40A				IAmb_Lg		23 54 57.8	
	comp=Z,8.6nm,0.8s						
435B	Jarrell	4.88	182	IAmb_Lg		23 54 51.7	
	comp=Z,15nm,0.7s						
P38A	Dawn	5.00	37	IAmb_Lg		23 54 59.6	
	comp=Z,10nm,0.7s						
T25A	Trinidad	5.83	287	IAmb_Lg		23 55 22.7	
	comp=Z,16nm,0.9s						
SDCO	Great Sand Dun	6.82	290	Pn	Pn	23 53 52.8	+0.5
SDCO				IAmb_Lg		23 55 51.2	
	comp=Z,6.1nm,1.2s						

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*NNC **29** 23:53:02.4±0.3, 42°.98N×75°.49E, h0^{km}, mpv2.7, Error ellipse: s-maj=2.2km s-min=1.7km az=177.0*

*KRNET **29** 23:53:02.1±0.1, 42°.97N×75°.52E, h18^{km}, mb2.0*

*KNET **29** 23:53:02.7±0.4, 42°.98N×75°.47E, h0^{km}, ml1.1, Error ellipse: s-maj=4.0km s-min=1.8km az=14.0*

ISC 29 23:53:02.6±0.9, **42°.96N**±0°.03×**75°.51E**±0°.02, **h8**^{km}±5^{km}, **n28**, σ**0ˢ.34**/55, **30C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TKM2	Tokmak 2	0.08	123	⇑P	Pg	23 53 04.8	-0.1
	25nm,0.1s,SNR=88						
TKM2				⇓S	Sg	23 53 06.5	0.0
	1µm,0.1s						
TKM2	Tokmak 2	0.08	123	⇑P	Pg	23 53 04.8	-0.1
	1.5nm,0.1s						
TKM2				⇑S	Sg	23 53 06.4	0.0
	62nm,0.1s						
TKM2	Tokmak 2	0.08	123	⇑*i*P	Pg	23 53 04.8	-0.1
	baz=31						
TKM2				⇑*i*S	Sg	23 53 06.3	-0.2
	baz=31						
DGS	Degeres	0.34	35	P	Pg	23 53 09.6	+0.3
	3.8nm,0.0s						
DGS				S	Sg	23 53 14.4	+0.6
	14nm,0.1s						
KST	Kastek	0.34	76	P	Pg	23 53 09.5	+0.2
	6.3nm,0.1s						
KST				S	Sg	23 53 14.5	+0.6
	14nm,0.2s						
KBK	Karagaybulak	0.51	234	⇑P	Pg	23 53 12.9	+0.4
	1.6nm,0.1s,SNR=11						
KBK				⇑S	Sg	23 53 20.4	+1.1
	13nm,0.1s						
KBK	Karagaybulak	0.51	234	⇑*i*P	Pg	23 53 12.6	0.0
	baz=34						
KBK				⇑*i*S	Sg	23 53 19.9	+0.6
	baz=34						
CHMS	Chumysh	0.56	274	⇓P	Pg	23 53 13.3	0.0
	1.2nm,0.1s,SNR=7.8						
CHMS				⇑S	Sg	23 53 20.9	+0.2
	5.1nm,0.1s						
CHMS	Chumysh	0.56	274	⇑*i*P	Pg	23 53 13.3	0.0
	baz=73						
CHMS				⇑*i*S	Sg	23 53 20.8	+0.2
	baz=73						
BOOM	Boomskoye usch	0.57	146	⇑*i*P	Pg	23 53 13.4	-0.2
	baz=47						
BOOM				⇑*i*S	Sg	23 53 21.1	0.0
	baz=47						
FRU1	Bishkek	0.66	257	⇑*i*P	Pg	23 53 15.1	-0.3
	baz=59						
FRU1				⇑*i*S	Sg	23 53 24.5	+0.5
	baz=59						
MTBS	Maitube	0.69	76	P	Pg	23 53 16.3	+0.3
	1.1nm,0.1s						
MTBS				S	Sg	23 53 25.3	+0.2
	6.5nm,0.1s						
KRBS	Karabastau	0.74	9	P	Pg	23 53 16.9	0.0
	0.6nm,0.0s						
KRBS				S	Sg	23 53 26.7	+0.1
	6.6nm,0.1s						
USP	Ospenovka	0.80	293	⇓P	Pg	23 53 17.6	-0.4
	0.7nm,0.1s,SNR=7.5						
USP				⇑S	Sg	23 53 28.6	+0.2
	3.7nm,0.2s						
USP	Ospenovka	0.80	293	⇑*i*P	Pg	23 53 17.4	-0.5
	baz=92						
USP				⇑*i*S	Sg	23 53 28.4	+0.1
	baz=92						
SGDS	Sogindy	0.81	308	P	Pg	23 53 18.0	-0.1
	2.8nm,0.1s						
SGDS				S	Sg	23 53 28.8	+0.2
	3.1nm,0.1s						
AAK	Ala-Archa	0.81	247	⇓P	Pg	23 53 17.9	-0.4
	0.2nm,0.2s						
AAK				⇑S	Sg	23 53 28.9	0.0
	0.7nm,0.3s						
AAK	Ala-Archa	0.81	247	⇑*i*P	Pg	23 53 17.7	-0.5
	baz=47						
AAK				⇑*i*S	Sg	23 53 28.9	0.0
	baz=47						
TNSS	Tian-Shan	1.06	85	P	Pg	23 53 22.8	-0.1
	0.9nm,0.1s						
TNSS				S	Sg	23 53 37.1	+0.4
	1.6nm,0.2s						
KUU	Kurty	1.11	33	P	Pg	23 53 23.6	-0.2
	0.8nm,0.1s						
KUU				S	Sg	23 53 38.1	-0.2
	2.6nm,0.1s						
KTBS	Karatobe	1.14	48	P	Pg	23 53 24.0	-0.4
	2.3nm,0.1s						
KTBS				S	Sg	23 53 38.9	-0.3
	7.6nm,0.2s						
MDOK	Medeo	1.15	79	Pg	Pg	23 53 24.3	-0.3
	1.6nm,0.1s						
MDOK				Lg	Lg	23 53 39.5	
	2.7nm,0.1s						
KOTS	Kotyrbulak	1.21	76	P	Pg	23 53 25.5	-0.2
	1.8nm,0.1s						
KOTS				S	Sb	23 53 41.9	+0.4
	5.7nm,0.1s						
EKS2	Erkin-Say	1.31	257	⇑P	Pn	23 53 27.4	+0.1
	1.1nm,0.2s,SNR=6.7						
EKS2				⇑S	Sb	23 53 45.3	+0.8
	1.6nm,0.2s						
EKS2	Erkin-Say	1.31	257	⇑*i*P	Pn	23 53 26.8	-0.4
	baz=57						
EKS2				⇑*i*S	Sb	23 53 44.4	0.0
	baz=57						
CHKK	Chushkaly	1.40	50	P	Pb	23 53 29.0	+0.1
	1.1nm,0.1s						
CHKK				S	Sg	23 53 47.4	-0.2
	5.8nm,0.2s						
ARLS	Aral	1.41	219	⇑*i*P	Pn	23 53 28.3	-0.3
	baz=19						
ARLS				⇑*i*S	Sb	23 53 47.2	-0.1
	baz=19						
KDJ	Kajisay	1.49	123	⇑*i*P	Pn	23 53 29.5	-0.3
	baz=24						
KDJ				⇑*i*S	Sn	23 53 49.4	-0.1
	baz=24						

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*KOLA **30** 00:24:55.8, 67°.65N×33°.77E, h0^{km}, ML1.8, Khibiny, mines Kirovsk, Yukspor*

*NAO **30** 00:24:55.6±1.4, 67°.66N×33°.75E, ML2.5*

*HEL **30** 00:24:56.5±0.5, 67°.75N×33°.63E, h0^{km}, ML1.8, Explosion*

ISC 30 00:24:53.0±1.5, **67°.50N**±0°.05×**33°.95E**±0°.07, **h0**^{km}, **n12**, σ**1ˢ.47**/19, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	Apatity	0.22	289	P	Pg	00 24 58.6	+1.4
APZ9	Apatity	0.22	289	Pg	Pg	00 24 58.5	+1.3
APZ9				Lg	Lg	00 25 01.9	
APA0	Apatity Array	0.38	287	Pg	Pg	00 25 01.0	+0.6
	baz=79,slow=16						
APA0				Lg	Lg	00 25 05.0	
	baz=76,slow=37						
APA0				Rg	Rg	00 25 06.8	
	baz=90,slow=56						
APA0	Apatity Array	0.38	287	P	Pg	00 25 00.9	+0.6
APA0				S	Sg	00 25 05.1	-0.2
VRF	Varrio	1.68	281	*e*P	Pn	00 25 23.8	+0.1
VRF				*e*S	Sn	00 25 43.5	-2.4
VRF				MSG		00 25 48.5	
	comp=Z,8.2nm,0.3s						
TERR	Teriberka	1.77	14	P	Pn	00 25 24.9	+0.1
TERR				S	Sn	00 25 45.8	-2.1
KU6	Riekki	2.19	229	*e*P	Pg	00 25 34.8	0.0
KU6				*e*S	Sg	00 26 03.5	+0.3
MSF	Maaselka	2.52	233	*e*P	Pb	00 25 40.0	+0.9
MSF				*e*S	Sg	00 26 13.1	-0.7
KEV	Kevo	3.41	315	Pn	Pn	00 25 49.2	+1.9
KEV				Sn	Sn	00 26 26.2	-2.1
KEV				Lg	Lg	00 26 35.7	
ARA0	ARCESS Array S	3.72	307	Pn	Pn	00 25 51.8	+0.2
	baz=122,slow=16						
ARA0				Pg	Pb	00 26 00.3	+0.8
	baz=115,slow=16						
ARA0				Sn	Sn	00 26 32.9	-3.2
	baz=117,slow=28						
ARA0				Lg	Lg	00 26 44.2	
	baz=116,slow=37						
ARCES	ARCESS Array B	3.72	307	P	Pn	00 25 52.0	+0.3
FIA0	FINESS Array S	6.96	213	Lg	Lg	00 28 32.7	
	baz=18,slow=37						

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*DJA **30** 00:31:42.5±0.6, 6°S±4°×14°9E±°, h66^{km}±8^{km}, M4.8/12, mb4.3/12, mB5.1/1, MLv5.0/2, Mw(mB)4.5/1, MwMwp5.6/1, Mwp5.7/1*

*IDC **30** 00:31:42.0±11.0, 6°.37S×149°.27E, h52^{km}±99^{km}, mb3.9/5, mb1 4.2/6, mb1mx3.9/27, mbtmp4.2/6, ML4.5/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/26, Error ellipse: s-maj=53.1km s-min=26.4km az=73.0*

*NEIC **30** 00:31:43.6±1.2, 6°.30S±0°.10×149°.18E±0°.10, h54^{km}±9^{km}, mb4.4/14, Error ellipse: s-maj=19.2km s-min=3.8km az=136.0*

ISC 30 00:31:42.9±0.6, **6°.18S**±0°.08×**149°.04E**±0°.09, **h60**^{km}, **n47**, σ**1ˢ.50**/43, **mb4.3**/17, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	3.69	58	Pn	Pn	00 32 37.3	-0.2
RABL	Rabaul	3.69	58	P	Pn	00 32 38.1	+0.7
PMG	Port Moresby	3.71	210	Pn	Pn	00 32 38.4	+0.7
PMG	Port Moresby	3.71	210	P	Pn	00 32 39.4	+1.7
PMG	Port Moresby	3.71	210	P	Pn	00 32 39.1	+1.4
COEN	Coen	9.65	216	Pn	Pn	00 33 59.6	+0.5
HNR	Honiara	11.28	107	LR	LR	00 38 04.8	
	comp=Z,110nm,19.6s,baz=307,slow=35						
FAKI	Fak Fak	17.04	280	P	Pn	00 35 32.6	-4.7
	27nm,1.3s						
SIJI	Sorong	18.50	286	LR	LR	00 44 15.4	
	comp=Z,78nm,19.1s,baz=50,slow=40						
EIDS	Eidsvold	19.18	174		P	00 36 01.2	-0.6
EIDS				IAmb	IAmb	00 36 10.2	
	comp=Z,21nm,1.4s						
WB0	Warramunga Arr	19.62	225	P	P	00 36 07.3	+0.7
WB0				IAmb	IAmb	00 36 08.6	
	comp=Z,18nm,0.8s						
WRAB	Tennant Creek	19.77	225	P	Pn	00 36 09.1	-1.1
WB2	Warramunga Arr	19.77	225	P	P	00 36 08.7	+0.5
WB2				IAmb	IAmb	00 36 09.8	
	comp=Z,21nm,0.7s						
WRA	Warramunga Arr	19.78	225	P	Pn	00 36 09.2	-1.1
	comp=Z,1.5nm,0.3s,baz=50,slow=10,SNR=79						
WRA	Warramunga Arr	19.78	225	P	P	00 36 08.0	-0.4
RMQ	Roma	20.20	181	P	Pn	00 36 13.9	-1.3
	comp=Z,21nm,0.8s						
KNRA	Kununurra	22.01	243	P	P	00 36 32.5	+0.2
AS31	Alice Springs	22.68	218	P	P	00 36 40.3	+0.8
ASAR	Alice Springs	22.68	218	P	P	00 36 39.0	-0.6
	comp=Z,5.1nm,0.8s,baz=54,slow=9.0,SNR=47						
ASAR				S	S	00 40 44.1	+0.4
	comp=Z,1.4nm,0.9s,baz=31,slow=20,SNR=4.5						
ASAR				LR	LR	00 46 50.5	
	comp=Z,80nm,18.3s,baz=6.5,slow=40						
ASAR	Alice Springs	22.68	218	P	P	00 36 39.5	-0.1
INKA	Innaminka	22.85	199	P	P	00 36 42.6	+1.4
	comp=Z,18nm,0.4s						
DZM	Mont Dzumac	23.08	135	P	P	00 36 42.2	-1.5
DZM				IAmb	IAmb	00 36 56.3	
	comp=Z,21nm,1.1s						
ARMA	Armidale	24.24	175	P	P	00 36 53.4	-1.0
ARMA				IAmb	IAmb	00 36 56.0	
	comp=Z,35nm,1.4s						
OOD	Oodnadatta	24.96	209	P	P	00 37 03.4	+2.6
	comp=Z,20nm,0.8s						
CMSA	Cobar Meteorol	25.42	187	P	P	00 37 05.3	+0.3
	comp=Z,17nm,1.1s						
FITZ	Fitzroy Crossi	25.72	240	P	P	00 37 08.5	+0.6
	comp=Z,9.9nm,0.9s,baz=39,slow=9.2,SNR=16						
LCRK	Leigh Creek	26.20	202	P	P	00 37 12.5	+0.4
	comp=Z,25nm,2.2s						
STKA	Stephens Creek	26.50	194	P	P	00 37 13.0	-1.8
	comp=Z,4.2nm,0.7s,baz=2.9,slow=10,SNR=11						
STKA	Stephens Creek	26.50	194	P	P	00 37 14.3	-0.5
STKA	Stephens Creek	26.50	194	P	P	00 37 16.2	+1.4
	comp=Z,1.5nm,0.9s						
GTOI	Gorontalo	26.85	284	P	P	00 37 16.1	-2.0
	comp=Z,4.6nm,0.9s						
EDFI	Ende, Flores	27.23	263	P	P	00 37 20.2	-1.5
	comp=Z,6.3nm,1.0s						
FORT	Forrest	31.41	216	P	P	00 37 58.6	+0.1
TOO	Toolangi	31.42	185	P	P	00 37 58.8	+0.4
TOO				IAmb	IAmb	00 38 10.7	
	comp=Z,14nm,1.5s						
SKJI	Sukabumi	42.20	266	P	P	00 39 23.2	-7.1
KS19	Wonju Array Si	47.73	337	P	P	00 40 14.2	+0.4
PETK	Petropavlovsk-	59.51	6	pP	pP	00 41 53.0	-2.9
	comp=Z,3.8nm,0.7s,baz=164,slow=5.4,SNR=6.3						
SONM	Songino Array	65.56	330	P	P	00 42 22.6	+2.3
	comp=Z,0.2nm,0.7s,baz=122,slow=5.4,SNR=1.8						
SONM	Songino Array	65.56	330	P	P	00 42 23.3	+2.9
SONM				IAmb	IAmb	00 42 42.2	
	comp=Z,2.3nm,1.4s						
VNDA	Vanda	71.63	177	P	P	00 42 57.1	-0.4
	comp=Z,1.0nm,0.6s,baz=352,slow=4.3,SNR=6.2						
VNDA	Vanda	71.63	177	P	P	00 42 57.6	+0.1
VNDA				IAmb	IAmb	00 43 00.2	
	comp=Z,4.1nm,1.3s						
MKAR	Makanchi Array	78.93	320	P	P	00 43 42.0	+1.9
	comp=Z,0.2nm,0.5s,baz=122,slow=5.2,SNR=4.4						
MKAR	Makanchi Array	78.93	320	P	P	00 43 43.8	+3.7
ILAR	Eielson Array	84.85	23	P	P	00 44 10.8	0.0
	comp=Z,0.3nm,0.7s,baz=260,slow=5.1,SNR=4.5						
TORD	Torodi Ar. Bea	147.10	285	PKPbc	PKPbc	00 51 19.9	-0.3
	comp=Z,0.7nm,0.5s,baz=68,slow=4.0,SNR=13						
BDFB	Brasilia	152.52	142	PKPbc	PKPbc	00 51 32.9	-0.8
	comp=Z,2.4nm,0.5s,baz=138,slow=2.0,SNR=4.7						
BDFB	Brasilia	152.52	142		PKPbc	00 51 33.0	-0.7

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*TUL **30** 00:33:17.2±1.5, 35°.68N±0°.01×97°.40W±0°.01, h6^{km}±4^{km}, ML2.6, ML2.4/30(NEIC), Error ellipse: s-maj=1.8km s-min=1.4km az=142.0*

NEIC 30 00:33:17.2±0.7, **35°.70N**±0°.01×**97°.42W**±0°.01, **h7**^{km}±4^{km}, **Error ellipse: s-maj=2.2km s-min=1.0km az=136.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	Oakdale Elemen	0.12	183	Pg	Pg	00 33 19.6	-0.3
OK009				Sg	Sg	00 33 21.5	-0.2
OK025	Westminster Rd	0.13	152		Pg	00 33 19.9	-0.2
OK025				Sg	Sg	00 33 21.8	-0.2
OK025				IAML		00 33 22.1	
	2µm,0.3s						
OK025				IAML		00 33 22.1	
	2µm,0.3s						
BCOK	Bluff Creek, N	0.16	255	Pg	Pg	00 33 20.9	+0.3
BCOK				Sg	Sg	00 33 23.8	+0.9
OK001	Jones High Sch	0.17	143	Pg	Pg	00 33 20.6	-0.2
OK001				Sg	Sg	00 33 23.2	0.0
OKCFA	Oklahoma City	0.28	186		Pg	00 33 22.7	-0.2
OKCFA				Sg	Sg	00 33 26.7	+0.1
OKCFA				IAML		00 33 27.0	
	comp=E,530nm,0.5s						
OKCSW	OKLAHOMA CITY	0.29	184	Pg	Pg	00 33 22.8	-0.2
OKCSW				Sg	Sg	00 33 27.2	+0.2
FNO	Franklin	0.44	178	Pg	Pg	00 33 25.6	-0.3
FNO				Sg	Sg	00 33 31.8	+0.2
FNO				IAML		00 33 32.0	
	comp=E,442nm,0.3s						
OK031	S. Brethren Rd	0.53	61	Pg	Pg	00 33 27.6	+0.1
OK031				Sg	Sg	00 33 34.9	+0.4
OK031				IAML		00 33 35.4	
	comp=E,217nm,0.2s						
OK031				IAML		00 33 35.4	
	comp=E,325nm,0.1s						
OK030	Cody Creek RV	0.56	66		Pg	00 33 28.1	0.0
OK030				Sg	Sg	00 33 36.0	+0.6
OK030				IAML		00 33 36.2	
	comp=E,204nm,0.2s						
QUOK	Quay	0.74	50	Pg	Pg	00 33 31.4	-0.1
QUOK				Sg	Sg	00 33 41.7	+0.5
QUOK				IAML		00 33 42.2	
	comp=N,210nm,0.4s						
QUOK				IAML		00 33 42.9	
	comp=E,146nm,0.2s						
CROK	Carrier	0.93	330		Pg	00 33 35.2	+0.2
CROK				IAML		00 33 55.9	
	comp=E,140nm,0.3s						
CROK				IAML		00 33 57.4	
	comp=N,108nm,0.3s						
BLOK	Blackwell	1.07	9	Pg	Pg	00 33 37.5	-0.3
X34A	Smith Ranch, M	1.15	197	Pg	Pg	00 33 38.9	-0.4
X34A				IAML		00 33 55.7	
	comp=E,98nm,0.5s						
X34A				IAML		00 33 55.7	
	comp=N,85nm,0.3s						
GC02	Grant County #	1.20	343		Pg	00 33 39.9	-0.5
OK032	Salt Plains WL	1.27	330	Pn	Pn	00 33 41.0	-0.4
KAN13	South Haven SW	1.31	358	Pn	Pn	00 33 41.9	-0.1
KAN14	Manchester OK	1.33	341	Pn	Pn	00 33 42.1	-0.1
TUL1	Leonard	1.34	80	Pn	Pn	00 33 40.9	-1.4
TUL1				IAML		00 34 02.8	
	comp=E,52nm,0.6s						
TUL1				IAML		00 34 03.4	
	comp=N,44nm,0.7s						
T35A	Sooner Cattle	1.42	31	Pn	Pn	00 33 43.1	-0.3
U32A	Winter Ranch,	1.45	298	Pn	Pn	00 33 43.7	-0.2
X37A	Clayton	2.01	123	Pn	Pn	00 33 52.0	+0.5
ABTX	Abilene, Hawle	3.58	212	Pn	Pn	00 34 14.2	+1.0
S39A	Bolivar	3.84	58	Pn	Pn	00 34 17.8	+1.1
R40A	Maddies Statio	4.86	56	Pn	Pn	00 34 30.8	0.0
SDCO	Great Sand Dun	6.81	290	Pn	Pn	00 34 59.0	+1.3

WEL 30 00:44:21.3, 43°S±4°×17°2E±°, h10^{km}±6^{km}, **M2.1**/3, **ML2.3**/11, **MLv2.1**/3, **Error ellipse: s-maj=0.0km s-min=0.0km az=69.8, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OXZ	Oxford	0.35	146	P	Pb	00 44 30.0	+0.2
OXZ				S	Sb	00 44 35.0	-0.3
INZ	Inchbonnie	0.39	322	P	Pb	00 44 30.3	-0.1
INZ				S	Sb	00 44 35.4	-1.0
LTZ	Lake Taylor	0.45	56	P	Pb	00 44 31.7	+0.4
LTZ				S	Sb	00 44 38.1	0.0
MHCZ	Mount Hutt	0.52	197	P	Pb	00 44 33.0	+0.4

AMCZ	**Amberley**	**0.66**	**103**	P	Pn	00 44 36.5	-0.3
RACZ	**Rakaia**	**0.74**	**159**	P	Pn	00 44 37.7	-0.2
RPZ	**Rata Peaks**	**0.86**	**217**	P	Pn	00 44 40.3	+0.7
WACZ	**Wakanui South**	**0.91**	**177**	P	Pn	00 44 40.6	+0.4
GVZ	**Greta Valley S**	**0.93**	**86**	P	Pn	00 44 41.3	+0.8
MQZ	**McQueen's Vall**	**0.93**	**137**	P	Pg	00 44 39.2	-0.1
MQZ				S	Sb	00 44 52.9	+0.9
ARCZ	**Arundel**	**1.01**	**205**	P	Pn	00 44 41.9	+0.3
DSZ	**Denniston Nort**	**1.29**	**1**	P	Pg	00 44 46.7	+0.6
DSZ				S	Sg	00 45 03.2	+0.5
KHZ	**Kahutara**	**1.44**	**65**	P	Pg	00 45 04.5	+16
TMZ	**Timaru**	**1.46**	**202**	P	Pb	00 44 48.3	-0.3
BSWZ	**Blackbirch Sta**	**2.04**	**51**	P	Pn	00 44 52.9	-2.9
BSWZ	**Blackbirch Sta**	**2.04**	**51**	P	Pn	00 44 52.9	-2.9
BSWZ				S	Sn	00 44 55.6	-26
NNZ	**Nelson**	**2.17**	**34**	P	Pg	00 45 04.0	+1.0
NNZ				S	Sn	00 45 14.3	-10
CMWZ	**Cape Campbell**	**2.22**	**55**	P	Pn	00 44 53.8	-4.4
CMWZ				S	Sn	00 44 57.4	-28
TUWZ	**Tuamarina**	**2.27**	**46**	P	Pn	00 44 57.2	-1.7
TUWZ	**Tuamarina**	**2.27**	**46**	P	Pn	00 44 57.2	-1.7
QRZ	**Quartz Range**	**2.28**	**15**	P	Pg	00 45 17.7	+13
TCW	**Tory Channel**	**2.61**	**46**	P	Pn	00 45 01.4	-2.1
TCW	**Tory Channel**	**2.61**	**46**	P	Pn	00 45 01.3	-2.2
TCW				S	Sn	00 45 10.0	-25
DUWZ	**D'Urville Isla**	**2.75**	**36**	P	Pb	00 45 08.1	-2.4
DUWZ	**D'Urville Isla**	**2.75**	**36**	P	Pb	00 45 08.1	-2.4
BHW	**Baring Head**	**2.82**	**56**	P	Pn	00 45 04.7	-1.7
BHW	**Baring Head**	**2.82**	**56**	P	Pn	00 45 04.8	-1.6
PLWZ	**Palliser**	**2.97**	**62**	P	Pn	00 45 08.2	-0.4
PLWZ	**Palliser**	**2.97**	**62**	P	Pn	00 45 08.2	-0.4
MSWZ	**Moikau Station**	**3.05**	**59**	P	Pn	00 45 09.0	-0.6
MSWZ	**Moikau Station**	**3.05**	**59**	P	Pn	00 45 09.0	-0.6
CAW	**Cannon Point**	**3.12**	**53**	P	Pn	00 45 10.2	-0.4
CAW	**Cannon Point**	**3.12**	**53**	P	Pn	00 45 10.2	-0.4
PAWZ	**Paruwai Farm**	**3.18**	**60**	P	Pn	00 45 10.6	-0.8
PAWZ	**Paruwai Farm**	**3.18**	**60**	P	Pn	00 45 10.6	-0.8
KIW	**Kapiti Island**	**3.19**	**48**	P	Pn	00 45 11.1	-0.5
KIW	**Kapiti Island**	**3.19**	**48**	P	Pn	00 45 11.1	-0.5
MTW	**Mount Morrison**	**3.35**	**57**	P	Pn	00 45 12.7	-1.0
MTW	**Mount Morrison**	**3.35**	**57**	P	Pn	00 45 12.6	-1.1
OGWZ	**Otaki Gorge**	**3.37**	**50**	P	Pn	00 45 13.9	0.0
OGWZ	**Otaki Gorge**	**3.37**	**50**	P	Pn	00 45 13.9	0.0
HOWZ	**Holdsworth Sta**	**3.51**	**54**	P	Pn	00 45 15.3	-0.7
HOWZ	**Holdsworth Sta**	**3.51**	**54**	P	Pn	00 45 15.3	-0.7
TMWZ	**Te Maipa**	**3.62**	**59**	P	Pn	00 45 16.3	-1.2
TMWZ	**Te Maipa**	**3.62**	**59**	P	Pn	00 45 16.3	-1.2
MRZ	**Mangatainoka R**	**3.70**	**51**	P	Pn	00 45 17.9	-0.7
MRZ	**Mangatainoka R**	**3.70**	**51**	P	Pn	00 45 17.9	-0.6
PUZ	**Puketiti**	**7.00**	**47**	P	Pn	00 46 03.1	-0.8

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*ANF **30** 01:48:56.3±0.1, 34°.18N×117°.42W, h8^{km}±1^{km}, ML4.8/43, Error ellipse: s-maj=1.2km s-min=1.0km az=33.0*

*PAS **30** 01:48:57.3±1.6, 34°.19N±0°.02×117°.41W±0°.02, h7^{km}±5^{km}, Mwr4.4/6, mb4.2/15(NEIC), ML4.5/70(NEIC), Mwr4.3/76(NEIC), Error ellipse: s-maj=2.9km s-min=0.4km az=221.0*

*NEIC **30** 01:48:57.2±1.7, 34°.20N±0°.02×117°.40W±0°.02, h6^{km}±4^{km}, Error ellipse: s-maj=2.3km s-min=1.7km az=206.0*

*NEIC **30** 01:48:57.3, 34°.19N×117°.41W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.10; $M_{\theta\theta}$-4.41; $M_{\phi\phi}$4.31; $M_{r\theta}$0.77; $M_{\theta\phi}$-1.30; $M_{\phi r}$1.76; Fault plane solution: $M_0$4.94000×10^{15} NP1:ϕ_s306.00000°, δ68.00000°, λ175.00000°. NP2:ϕ_s37.00000°, δ86.00000°, λ22.00000°. Principal axes: T 5.0507, Plg19.0000°, Azm264.0000°; N -0.2249, Plg67.0000°, Azm48.0000°; P -4.8258, Plg12.0000°, Azm169.0000°;*

*NEIC **30** 01:48:57.3, 34°.19N×117°.41W, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.22; $M_{\theta\theta}$-3.32; $M_{\phi\phi}$3.54; $M_{r\theta}$0.73; $M_{\theta\phi}$-1.24; $M_{\phi r}$-0.54; Fault plane solution: $M_0$3.76000×10^{15} NP1:ϕ_s215.03000°, δ75.96000°, λ-0.85000°. NP2:ϕ_s305.23000°, δ89.18000°, λ-165.96000°. Principal axes: T 3.8616, Plg9.0000°, Azm79.0000°; N -0.2100, Plg76.0000°, Azm309.0000°; P -3.6516, Plg10.0000°, Azm171.0000°;*

*IDC **30** 01:48:57.5±1.1, 34°.18N×117°.29W, h0^{km}, mb4.0/5, mb1 4.1/10, mb1mx3.8/43, mbtmp3.8/10, ML3.6/5, MS3.6/18, Ms1 3.6/18, ms1mx3.5/39 Error ellipse: s-maj=18.3km s-min=5.9km az=55.0*

ISC 30 01:48:57.3±0.8**, 34°.18N**±0°.02×**117°.42W**±0°.02**, h9**^{km}±5^{km}**, n148, σ1^s.00**/171**, mb4.2**/10**, MS3.7**/13**, 2D, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFSC	**Central Fire S**	**0.13**	**121**		**Pg**	**01 49 00.6**	**+0.2**
CFSC					**Sg**	**01 49 03.6**	**+1.1**
BFSC	**Mount Baldy Ra**	**0.21**	**288**	P	**Pg**	**01 49 01.4**	**-0.3**
	baz=103,SNR=1000						
BFSC				S	**Sg**	**01 49 04.4**	**-0.3**
	baz=103						
RSBC	**Riverside Bore**	**0.22**	**159**		**Pg**	**01 49 01.7**	**-0.1**
RSBC	**Riverside Bore**	**0.22**	**159**		**Sg**	**01 49 05.0**	**+0.2**
BBRC	**Big Bear Solar**	**0.42**	**78**	P	**Pg**	**01 49 05.2**	**-0.5**
	baz=260,SNR=1000						
BBRC				S	**Sg**	**01 49 11.2**	**-0.1**
	baz=260						
MWC	**Mount Wilson**	**0.53**	**275**		**Pg**	**01 49 07.2**	**-0.5**
MWC				Sg	**Sg**	**01 49 14.8**	**+0.1**
MWC				IAML		01 49 15.7	
	comp=N,25μm,0.8s						
MWC				IAML		01 49 16.5	
	comp=E,28μm,0.3s						
CBCC	**Caltech Broad**	**0.59**	**267**		**Pg**	**01 49 08.5**	**-0.2**
CBCC					**Sg**	**01 49 16.9**	**+0.5**
MURC	**Murrieta**	**0.60**	**162**	P	**Pg**	**01 49 08.4**	**-0.6**
	baz=343,SNR=1000						
MURC				S	**Sg**	**01 49 16.6**	**-0.3**
	baz=343						
PASC	**Pasadena Art C**	**0.63**	**270**		**Pg**	**01 49 08.9**	**-0.7**
PASC				Sg	**Sg**	**01 49 17.6**	**-0.3**
DECC	**Green Verdugo**	**0.76**	**276**	P	**Pg**	**01 49 11.5**	**-0.5**
	baz=94,SNR=770						
DECC				S	**Sg**	**01 49 21.9**	**-0.1**
	baz=94						
RRX	**Edison Barstow**	**0.78**	**27**	P	**Pg**	**01 49 11.6**	**-0.8**
	baz=207,SNR=808						
RRX				S	**Sg**	**01 49 22.3**	**-0.4**
	baz=207						
GVDA	**Garner Valley**	**0.80**	**129**		**Pg**	**01 49 12.1**	**-0.7**
GVDA					**Sg**	**01 49 22.5**	**-0.7**
EDW2	**Edwards Air Fo**	**0.85**	**326**	P	**Pg**	**01 49 12.6**	**-1.1**
	baz=145,SNR=1000						
EDW2				S	**Sg**	**01 49 23.5**	**-1.3**
	baz=145						
FMP	**Fort Macarthur**	**0.86**	**238**	P	**Pg**	**01 49 13.1**	**-0.8**
	baz=56,SNR=182						
FMP				Sb	**Sb**	**01 49 26.3**	**+0.3**
	baz=56						
DJJ	**Donna J Jenkin**	**0.86**	**266**		**Pg**	**01 49 12.8**	**-1.1**
PFO	**Pinyon Flats O**	**0.98**	**125**	Pg	**Pg**	**01 49 15.1**	**-1.0**
	comp=E,806nm,0.3s,baz=294,slow=15,SNR=8406						
PFO				Lg	Lg	01 49 27.7	
	comp=E,2μm,0.3s,baz=162,slow=14,SNR=50						
PFO				LR	LR	01 49 35.2	
	comp=E,382nm,20.0s,baz=298,slow=42						
PFO	**Pinyon Flats O**	**0.98**	**125**	Pg	**Pg**	**01 49 15.2**	**-1.0**
PFO				Sg	**Sg**	**01 49 27.8**	**-1.1**
PFO				IAML		01 49 29.7	
	comp=E,12μm,1.0s						
PFO	**Pinyon Flats O**	**0.98**	**125**	P	**Pg**	**01 49 15.2**	**-1.0**
	baz=306,SNR=1000						
PFO				S	**Sg**	**01 49 27.8**	**-1.1**
	baz=306						
I57US	**PINON FLAT INF**	**0.98**	**125**	Pg	**Pg**	**01 49 15.0**	**-1.3**
	baz=309,slow=29,SNR=2.2						
HEC	**Hector,Ludlow**	**1.11**	**54**	P	**Pb**	**01 49 17.5**	**-1.2**
	baz=235,SNR=1000						
HEC				S	**Sb**	**01 49 32.4**	**-0.9**
	baz=235						
CIS	**Catalina Islan**	**1.13**	**227**	P	**Pb**	**01 49 17.6**	**-1.5**
	baz=46,SNR=359						
CIS				S	**Sb**	**01 49 33.5**	**-0.3**
	baz=46						
OSI	**Osito Audit: C**	**1.16**	**293**	Pg	**Pb**	**01 49 18.3**	**-1.3**
OSI				Sg	**Sb**	**01 49 33.2**	**-1.6**
OSI	**Osito Audit: C**	**1.16**	**293**	P	**Pb**	**01 49 18.1**	**-1.5**
	baz=111,SNR=370						
OSI				S	**Sb**	**01 49 34.5**	**-0.4**
	baz=111						
BELC	**Belle Mtn. Jos**	**1.19**	**98**	P	**Pb**	**01 49 19.4**	**-0.8**
	baz=280,SNR=1000						
BELC				S	**Sb**	**01 49 35.5**	**-0.3**
	baz=280						
GSC	**Goldstone, Bar**	**1.23**	**24**		**Pn**	**01 49 19.6**	**-1.2**
GSC	**Goldstone, Bar**	**1.23**	**24**	P	**Pn**	**01 49 19.7**	**-1.2**
	baz=204,SNR=1000						
GSC				S	**Sb**	**01 49 35.9**	**-1.0**
	baz=204						
109C	**Camp Elliot, M**	**1.31**	**168**	P	**Pn**	**01 49 20.1**	**-1.6**
	baz=349,SNR=480						
109C				S	**Sb**	**01 49 37.4**	**-1.5**
	baz=349						
LRMC	**Laurel Mtn Rad**	**1.32**	**351**	P	**Pn**	**01 49 21.0**	**-1.1**
	baz=170,SNR=1000						
LRMC				S	**Sb**	**01 49 39.5**	**+0.1**
	baz=170						
ARVC	**Arvin**	**1.50**	**310**	P	**Pn**	**01 49 23.5**	**-0.9**
	baz=128,SNR=517						
ARVC				S	**Sn**	**01 49 44.0**	**0.0**
	baz=128						
SCI2	**San Clemente I**	**1.52**	**219**	P	**Pn**	**01 49 23.4**	**-1.2**
	baz=38,SNR=144						
SCI2				S	**Sn**	**01 49 44.9**	**+0.4**
	baz=38						
MONP2	**Monument Peak**	**1.53**	**147**	P	**Pn**	**01 49 24.4**	**-0.6**
	baz=328,SNR=1000						
MONP2				S	**Sn**	**01 49 44.8**	**-0.3**
	baz=328						
GMRC	**Granite Mounta**	**1.58**	**67**	P	**Pn**	**01 49 24.3**	**-1.3**
	baz=248,SNR=1000						
GMRC				Sb	**Sb**	**01 49 47.3**	**+0.5**
	baz=248						
BAR	**Barrett**	**1.62**	**157**		**Pn**	**01 49 25.1**	**-0.9**
BAR				IAML		01 49 47.3	
	comp=E,7μm,0.2s						
BAR				IAML		01 49 50.9	
	comp=N,5μm,0.5s						
TJX	**Tijuana**	**1.69**	**169**		**Pn**	**01 49 26.6**	**-0.4**
BC3	**Big Chuckawall**	**1.72**	**107**	P	**Pn**	**01 49 26.6**	**-0.9**
	baz=289,SNR=1000						
BC3				S	**Sn**	**01 49 49.2**	**-0.4**
	baz=289						
ISA	**Isabella, Lake**	**1.72**	**330**	Pn	**Pn**	**01 49 26.6**	**-0.9**
ISA				IAML		01 49 54.6	
	comp=E,4μm,1.0s						
ISA	**Isabella, Lake**	**1.72**	**330**	P	**Pn**	**01 49 26.6**	**-0.9**
	baz=149,SNR=693						
ISA				S	**Sn**	**01 49 49.8**	**+0.2**
	baz=149						
TKX	**Tecate**	**1.74**	**157**		**Pn**	**01 49 27.2**	**-0.5**
TKX				IAML		01 49 50.7	
	comp=E,5μm,0.3s						
TKX				IAML		01 49 51.9	
	comp=N,5μm,0.3s						
TUQ	**Turquoise Moun**	**1.76**	**44**	P	**Pn**	**01 49 27.0**	**-1.1**
	baz=225,SNR=1000						
TUQ				Sb	**Sb**	**01 49 52.7**	**+0.6**
	baz=225						
SWSC	**Sam W. Stewart**	**1.83**	**132**	P	**Pn**	**01 49 27.4**	**-1.4**
	baz=313,SNR=564						
SWSC				Sb	**Sb**	**01 49 54.5**	**+0.7**
	baz=313						
QSM	**Queen of Sheba**	**1.84**	**14**		**Pn**	**01 49 28.0**	**-1.1**
QSM				IAML		01 50 01.0	
	comp=N,5μm,0.5s						
QSM				IAML		01 50 03.6	
	comp=E,5μm,0.6s						
IKP	**In-Ko-Pah, Jac**	**1.88**	**144**	P	**Pn**	**01 49 28.9**	**-0.7**
	baz=325,SNR=461						
IKP				Sb	**Sb**	**01 49 55.4**	**+0.1**
	baz=325						
MPMC	**Manual Prospec**	**1.88**	**358**	P	**Pn**	**01 49 28.8**	**-1.0**
	baz=178,SNR=1000						
IRM	**Iron Mountain**	**1.89**	**90**	P	**Pn**	**01 49 28.6**	**-1.2**
	baz=272,SNR=1000						
RMX	**La Rumorosa**	**1.93**	**144**		**Pn**	**01 49 30.3**	**-0.1**
RMX				IAML		01 50 03.8	
	comp=E,3μm,1.1s						
SHOC	**Shoshone, Teco**	**1.96**	**28**	P	**Pn**	**01 49 29.8**	**-0.9**
	baz=209,SNR=444						
SNCC	**San Nicolas Is**	**1.98**	**243**	P	**Pn**	**01 49 29.4**	**-1.6**
	baz=61,SNR=24						
GWY	**Greenwater Val**	**2.10**	**17**		**Pn**	**01 49 31.7**	**-1.1**
GWY				IAML		01 50 05.9	
	comp=N,3μm,0.6s						
GWY				IAML		01 50 17.9	
	comp=E,5μm,0.9s						
PKM	**Mcpherson Peak**	**2.10**	**290**	P	**Pn**	**01 49 32.6**	**-0.2**
	baz=109,SNR=484						
VES	**Vestal, Richgr**	**2.15**	**321**	P	**Pn**	**01 49 32.8**	**-0.5**
	baz=140,SNR=237						
VES				S	**Sn**	**01 50 00.6**	**+0.4**
	baz=140						
CWC	**Cottonwood Cre**	**2.32**	**347**	P	**Pn**	**01 49 35.3**	**-0.6**
	baz=166						
FURC	**Furnace Creek,**	**2.33**	**11**	P	**Pn**	**01 49 35.1**	**-0.7**
	baz=191,SNR=321						
CCX	**Cicese**	**2.39**	**164**		**Pn**	**01 49 36.5**	**-0.1**
CCX				IAML		01 50 16.9	
	comp=N,2μm,0.6s						
CCX				IAML		01 50 18.4	
	comp=E,2μm,1.0s						
NEE2	**Needles Airpor**	**2.39**	**75**	P	**Pn**	**01 49 35.3**	**-1.3**
	baz=257,SNR=351						
GLA	**Glamis**	**2.44**	**117**	Pn	**Pn**	**01 49 35.7**	**-1.6**
GLA	**Glamis**	**2.44**	**117**	P	**Pn**	**01 49 36.1**	**-1.2**
	baz=299,SNR=91						
CPBX	**Cerro Prieto**	**2.49**	**134**	Pn	**Pn**	**01 49 36.6**	**-1.4**
VOG	**Valley Oaks Go**	**2.68**	**324**	P	**Pn**	**01 49 40.3**	**-0.3**
	baz=142,SNR=14						
PDMCI	**Parker Dam,Lak**	**2.72**	**86**	P	**Pn**	**01 49 40.6**	**-0.6**
	baz=268,SNR=144						
PAGB	**Antelope Grade**	**2.79**	**305**		**Pn**	**01 49 41.5**	**-0.7**
PAGB				IAML		01 50 43.8	
	comp=N,2μm,1.1s						
PAGB				IAML		01 50 46.4	
	comp=E,1μm,1.2s						
GRAC	**Grapevine Rang**	**2.82**	**1**	P	**Pn**	**01 49 42.8**	**+0.2**
	baz=181,SNR=98						
TPNV	**Topopah Spring**	**2.93**	**19**		**Pn**	**01 49 44.0**	**-0.2**
TPNV				IAML		01 50 35.2	
	comp=E,1μm,0.8s						
TPNV				IAML		01 50 37.2	
	comp=E,1μm,1.3s						
TPNV	**Topopah Spring**	**2.93**	**19**	P	**Pn**	**01 49 44.2**	**0.0**
	baz=199,SNR=148						
TIN	**Tinemaha, Big**	**2.95**	**347**	P	**Pn**	**01 49 44.8**	**+0.3**
	baz=167,SNR=18						
SHPR	**Sheep Range**	**2.97**	**38**	Pn	**Pn**	**01 49 44.5**	**-0.3**
SHPR				IAML		01 50 32.5	
	comp=N,1μm,1.0s						
LCH	**Last Change Ra**	**3.06**	**357**	Pn	**Pn**	**01 49 45.9**	**-0.1**
PMPB	**Monarch Peak**	**3.44**	**307**	Pn	**Pn**	**01 49 50.5**	**-0.6**
PMPB				IAML		01 50 56.5	
	comp=N,1μm,0.9s						
MLAC	**Mammoth, Mammo**	**3.63**	**342**	P	**Pn**	**01 49 54.4**	**+0.5**
	baz=161,SNR=26						
PRN	**Pahroc Range**	**3.76**	**30**	Pn	**Pn**	**01 49 55.4**	**-0.1**
PRN				IAML		01 51 10.1	
	comp=N,888nm,1.1s						
SFX	**San Felipe**	**3.81**	**145**	Pn	**Pn**	**01 49 56.0**	**-0.1**
SAO	**San Andreas Ge**	**4.18**	**309**	Pn	**Pn**	**01 50 00.6**	**-0.7**
NV11	**Mina Array Sit**	**4.29**	**352**	Pn	**Pn**	**01 50 03.4**	**+0.5**
NVAR	**Mina Array Bea**	**4.31**	**351**	Pn	**Pn**	**01 50 04.0**	**+0.8**
	comp=N,1.9nm,0.3s,baz=174,slow=14,SNR=37						
NVAR				Pg	**Pb**	**01 50 15.1**	**+1.8**
	comp=N,15nm,0.3s,baz=166,slow=16,SNR=33						
NVAR				Lg	Lg	01 51 16.8	
	comp=N,7.0nm,0.3s,baz=176,slow=21,SNR=0.9						
NVAR				LR	LR	01 51 58.3	
	comp=N,863nm,19.4s,baz=208,slow=42						
R11A	**Troy Canyon, C**	**4.42**	**19**	Pn	**Pn**	**01 50 05.3**	**+0.5**
R11A				IAML		01 51 23.9	
	comp=E,360nm,1.9s						
R11A	**Troy Canyon, C**	**4.42**	**19**	P	**Pn**	**01 50 04.0**	**-0.8**
	baz=200,SNR=9.7						
LCMT	**Little Creek M**	**4.43**	**49**	Pn	**Pn**	**01 50 05.0**	**+0.2**
LCMT				IAML		01 51 20.8	
	comp=N,375nm,1.5s						
214A	**Organ Pipe Nat**	**4.46**	**118**	Pn	**Pn**	**01 50 05.0**	**-0.1**
214A				IAML		01 51 28.6	
	comp=E,334nm,1.5s						
214A				IAML		01 51 29.5	
	comp=N,377nm,1.4s						
214A	**Organ Pipe Nat**	**4.46**	**118**	P	**Pn**	**01 50 04.6**	**-0.5**
	baz=301,SNR=6.5						
CMB	**Columbia Colle**	**4.54**	**329**	Pn	**Pn**	**01 50 06.5**	**+0.3**
CMB				IAML		01 51 22.9	
	comp=N,376nm,1.2s						
CMB				IAML		01 51 24.2	
	comp=E,298nm,1.3s						
KNB	**Kanab**	**4.70**	**52**		**Pn**	**01 50 09.0**	**+0.5**
KNB				IAML		01 51 38.3	
	comp=E,524nm,0.9s						
CCUT	**Cedar City**	**4.71**	**43**	Pn	**Pn**	**01 50 09.6**	**+0.8**
CCUT				IAML		01 51 26.6	
	comp=N,263nm,1.2s						
CCUT				IAML		01 51 27.4	
	comp=E,392nm,1.1s						
KVN	**Kaiserville**	**4.90**	**354**	Pn	**Pn**	**01 50 11.5**	**+0.2**
SZCU	**Shurtz Canyon**	**4.90**	**45**	Pn	**Pn**	**01 50 11.7**	**+0.3**
X16A	**Lo Mia Camp, P**	**4.96**	**86**	Pn	**Pn**	**01 50 12.3**	**+0.2**
X16A				IAML		01 51 42.8	
	comp=E,239nm,1.4s						
X16A				IAML		01 51 45.0	
	comp=N,351nm,1.4s						
WUAZ	**Wupatki**	**5.15**	**73**	Pn	**Pn**	**01 50 15.4**	**+0.7**
WUAZ				IAML		01 51 43.0	
	comp=N,422nm,0.8s						
WUAZ				IAML		01 51 58.2	
	comp=N,375nm,1.1s						
WUAZ	**Wupatki**	**5.15**	**73**	P	**Pn**	**01 50 15.1**	**+0.4**
	baz=257,SNR=23						
SPR3	**Spring Creek 3**	**5.42**	**26**	Pn	**Pn**	**01 50 18.0**	**-0.6**
TUC	**Tucson**	**5.86**	**107**	P	**Pn**	**01 50 23.4**	**-1.1**
	baz=290						
X18A	**Snowflake**	**6.19**	**85**	Pn	**Pn**	**01 50 29.9**	**+0.8**
BMN	**Battle Mountai**	**6.25**	**1**	Pn	**Pn**	**01 50 30.3**	**+0.5**
ORV	**Oroville**	**6.29**	**330**	Pn	**Pn**	**01 50 30.9**	**+0.7**
GDXM	**Geysers**	**6.33**	**318**	Pn	**Pn**	**01 50 30.6**	**-0.3**
W18A	**Petrified Fore**	**6.40**	**79**	P	**Pn**	**01 50 31.8**	**-0.2**
	baz=264,SNR=12						
ELK	**Elko**	**6.78**	**14**	Pn	**Pn**	**01 50 38.0**	**+0.8**
	comp=N,0.8nm,0.3s,baz=191,slow=10,SNR=18						
ELK				Pg	**Pg**	**01 51 02.6**	**-4.6**
	comp=N,3.0nm,0.3s,baz=217,slow=16,SNR=25						
ELK				Lg	Lg	01 52 30.1	
	comp=N,5.9nm,0.3s,baz=92,slow=23,SNR=8.0						
ELK	**Elko**	**6.78**	**14**	Pn	**Pn**	**01 50 37.8**	**+0.6**
319A	**Douglas**	**7.40**	**110**	Pn	**Pn**	**01 50 45.8**	**+0.2**
WDC	**Whiskeytown Da**	**7.58**	**329**		**Pn**	**01 50 48.1**	**+0.2**
MVCO	**Mesa Verde**	**7.87**	**65**	Pn	**Pn**	**01 50 51.9**	**-0.2**
MOD	**Modoc Plateau**	**8.04**	**344**	Pn	**Pn**	**01 50 53.5**	**-0.9**
121A	**Cookes Peak, D**	**8.23**	**99**		**Pn**	**01 50 57.6**	**+0.6**
121A	**Cookes Peak, D**	**8.23**	**99**	P	**Pn**	**01 50 57.5**	**+0.5**
	baz=284,SNR=61						
YBH	**Yreka Blue Hor**	**8.62**	**333**	Pn	**Pn**	**01 51 05.8**	**+3.5**
	comp=N,0.2nm,0.3s,baz=164,slow=8.0,SNR=4.9						
YBH				Lg	Lg	01 53 28.4	
	comp=N,0.2nm,0.3s,baz=270,slow=5.8,SNR=5.3						
LENM	**Lemitar**	**8.66**	**87**		**Pn**	**01 51 02.6**	**-0.4**
ANMO	**Albuquerque**	**9.08**	**82**	Pn	**Pn**	**01 51 10.0**	**+1.3**
	comp=N,0.5nm,0.3s,baz=267,slow=12,SNR=16						
ANMO				Lg	Lg	01 53 40.6	
	comp=N,0.1nm,0.3s,baz=144,slow=17,SNR=4.3						
ANMO				LR	LR	01 54 58.3	
	comp=N,312nm,19.7s,baz=261,slow=40						
MNTX	**Cornudas Mount**	**10.41**	**100**		**Pn**	**01 51 27.7**	**+0.8**
MNTX	**Cornudas Mount**	**10.41**	**100**	P	**Pn**	**01 51 27.2**	**+0.4**
	baz=287,SNR=20						
PD31	**Pinedale Array**	**10.56**	**33**	Pn	**Pn**	**01 51 29.8**	**+0.8**
PDAR	**Pinedale Array**	**10.56**	**33**	Pn	**Pn**	**01 51 31.9**	**+3.0**
	comp=N,0.1nm,0.3s,baz=219,slow=12,SNR=12						
PDAR				Lg	Lg	01 54 26.6	
	comp=N,0.1nm,0.3s,baz=217,slow=28,SNR=3.1						
PDAR				LR	LR	01 55 52.9	
	comp=N,157nm,20.4s,baz=285,slow=40						
LPIG	**La Paz**	**11.80**	**146**	LR	LR	01 55 56.4	
	comp=N,178nm,20.2s,baz=340,slow=36						
JTMT	**Jette**	**13.76**	**9**	Pn	**Pn**	**01 52 12.3**	**-0.4**
OGNE	**Ogallala**	**13.94**	**57**	Pn	**Pn**	**01 52 15.6**	**+0.5**
RSSD	**Black Hills**	**14.35**	**42**	Pn	**Pn**	**01 52 20.1**	**-0.7**
WALA	**Waterton Lakes**	**15.10**	**9**	P	**P**	**01 52 37.0**	**+0.9**
WALA				IAmb	IAmb	01 52 41.4	
	comp=Z,6.8nm,0.7s						
Z35A	**Perchaven, San**	**16.80**	**87**		**P**	**01 52 53.9**	**-1.0**
WHTX	**Lake Whitney,**	**16.88**	**92**	Pn	**Pn**	**01 52 53.8**	**+0.1**
435B	**Jarrell**	**17.07**	**96**	P	**P**	**01 52 57.7**	**-0.3**
TUL1	**Leonard**	**17.80**	**78**	P	**P**	**01 53 07.2**	**+1.2**
TUL1				IAmb	IAmb	01 53 12.9	
	comp=Z,19nm,1.1s						
BBB	**Bella Bella**	**19.58**	**340**	LR	LR	02 01 54.9	
	comp=Z,102nm,18.3s,baz=185,slow=40						
R40A	**Maddies Statio**	**20.68**	**71**	P	**P**	**01 53 37.4**	**-0.1**
R40A				IAmb	IAmb	01 53 43.1	
	comp=Z,15nm,0.8s						
AGMN	**Agassiz Nation**	**21.39**	**42**	P	**P**	**01 53 45.0**	**-0.2**
AGMN				IAmb	IAmb	01 53 53.2	
	comp=Z,13nm,1.0s						
ULM	**Lac du Bonnet**	**22.52**	**38**	P	**P**	**01 53 59.0**	**+1.8**
	comp=Z,6.5nm,0.9s,baz=233,slow=11,SNR=4.7						
ULM				LR	LR	02 03 47.0	
	comp=Z,59nm,20.5s,baz=304,slow=40						
ULM	**Lac du Bonnet**	**22.52**	**38**	P	**P**	**01 53 58.3**	**+1.1**
ULM				IAmb	IAmb	01 54 04.1	
	comp=Z,8.6nm,1.1s						
DLBC	**Dease Lake**	**25.70**	**345**	P	**P**	**01 54 31.0**	**+3.4**
	comp=Z,3.9nm,0.8s,baz=176,slow=14,SNR=6.9						
DLBC				LR	LR	02 04 08.4	
	comp=Z,234nm,18.8s,baz=154,slow=35						
DLBC	**Dease Lake**	**25.70**	**345**		**P**	**01 54 28.4**	**+0.8**
CMIG	**Matias Romero**	**26.40**	**124**	LR	LR	02 05 00.4	
	comp=Z,174nm,18.3s,baz=258,slow=37						
TKL	**Tuckaleechee C**	**27.56**	**77**	LR	LR	02 05 52.5	
	comp=Z,178nm,20.6s,baz=258,slow=37						
YKA	**Yellowknife Ar**	**28.39**	**3**	P	**P**	**01 54 52.6**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=178,slow=9.1,SNR=17						
YKA				LR	LR	02 06 50.4	
	comp=Z,189nm,18.2s,baz=0.0,slow=38						
YKA	**Yellowknife Ar**	**28.39**	**3**	P	**P**	**01 54 51.8**	**+0.1**
INK	**Inuvik**	**35.39**	**350**	P	**P**	**01 55 54.9**	**+1.9**
	comp=Z,1.3nm,0.7s,baz=178,slow=7.2,SNR=8.6						
ILAR	**Eielson Array**	**35.46**	**339**	P	**P**	**01 55 55.4**	**+1.8**
	comp=Z,2.3nm,0.8s,baz=156,slow=7.8,SNR=19						
ILAR				LR	LR	02 10 23.0	
	comp=Z,98nm,18.6s,baz=168,slow=36						
ILAR	**Eielson Array**	**35.46**	**339**	P	**P**	**01 55 54.4**	**+0.7**
BPAW	**Bear Paw Mtn.**	**36.32**	**336**	P	**P**	**01 56 01.8**	**+0.7**
BPAW				IAmb	IAmb	01 56 06.4	
	comp=Z,5.0nm,0.9s						
MLY	**Manley**	**36.84**	**337**	P	**P**	**01 56 05.9**	**+0.4**
MLY				IAmb	IAmb	01 56 12.3	
	comp=Z,4.0nm,0.8s						
K20K	**Telida**	**36.97**	**333**	P	**P**	**01 56 07.3**	**+0.7**
A36M	**Sachs Harbour**	**38.10**	**356**	P	**P**	**01 56 16.6**	**+0.6**
A36M				IAmb	IAmb	01 56 21.5	
	comp=Z,4.6nm,0.8s						
IMAR	**Indian Mountai**	**38.41**	**337**	P	**P**	**01 56 20.4**	**+1.7**
SCHQ	**Schefferville**	**40.48**	**44**	LR	LR	02 13 10.9	
	comp=Z,222nm,19.2s,baz=292,slow=36						
RES	**Resolute Bay**	**42.05**	**9**	P	**P**	**01 56 50.1**	**+1.3**
RES				IAmb	IAmb	01 57 01.2	
	comp=Z,6.7nm,1.4s						
PPTF	**Pamatai, Papee**	**59.89**	**216**	P	**P**	**01 59 04.1**	**+0.4**
NOA	**NORSAR Array B**	**76.32**	**23**	LR	LR	02 32 52.3	
	comp=Z,53nm,18.7s,baz=315,slow=34						
PMOZ	**Porto Moniz, M**	**79.76**	**57**	P	**P**	**02 01 05.3**	**-0.8**
FINES	**FINESS Array B**	**80.20**	**17**	LR	LR	02 38 11.1	
	comp=Z,61nm,19.2s,baz=316,slow=37						
BEBN	**Eben Emael**	**81.67**	**33**	*d*P	**P**	**02 01 15.4**	**-0.3**
BCLA	**Clavier**	**81.78**	**33**	*d*PcP	**PcP**	**02 01 20.8**	**-1.3**
PLCA	**Paso Flores**	**86.14**	**146**	LR	LR	02 33 55.6	
	comp=Z,39nm,18.0s,baz=216,slow=31						
KSRS	**Korea Array**	**86.37**	**314**	LR	LR	02 37 36.3	
	comp=Z,13nm,20.0s,baz=35,slow=34						
AKASG	**Malin Array Be**	**90.51**	**20**	LR	LR	02 40 55.2	
	comp=Z,35nm,18.3s,baz=295,slow=34						
JOW	**Kunigami**	**93.09**	**305**	LR	LR	02 35 51.3	
	comp=Z,30nm,21.2s,baz=122,slow=30						

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*ANF **30** 01:53:44.6±0.1, 34°.18N×117°.40W, h11^{km}±1^{km}, ML4.1/39, Error ellipse: s-maj=1.2km s-min=1.0km az=15.0*

*IDC **30** 01:53:45.5±1.8, 34°.05N×117°.40W, h0^{km}, mb3.3/2, mb1 3.6/4, mb1mx3.4/34, mbtmp3.2/4, ML2.9/2, Error ellipse: s-maj=28.4km s-min=7.4km az=51.0*

*PAS **30** 01:53:45.5±1.8, 34°.19N±0°.02×117°.41W±0°.01, h8^{km}±6^{km}, Mwr3.8/6, ML3.7/68(NEIC), Error ellipse: s-maj=2.6km s-min=1.6km az=202.0*

*NEIC **30** 01:53:45.5, 34°.19N×117°.41W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.30; $M_{\theta\theta}$-3.69; $M_{\phi\phi}$3.99; $M_{r\theta}$0.60; $M_{\theta\phi}$-4.04; $M_{\phi r}$0.64; Fault plane solution: $M_0$5.65000×10^{14} NP1:ϕ_s292.00000°, δ81.00000°, λ-176.00000°. NP2:ϕ_s201.00000°, δ86.00000°, λ-9.00000°. Principal axes: T 5.7432, Plg3.0000°, Azm247.0000°; N -0.1956, Plg81.0000°, Azm358.0000°; P -5.5477, Plg9.0000°, Azm156.0000°;*

*NEIC **30** 01:53:45.3±2.0, 34°.20N±0°.01×117°.40W±0°.01, h16km±2km Error ellipse: s-maj=2.0km s-min=1.1km az=221.0*

ISC 30 01:53:45.7±0.8**, 34°.17N**±0°.02×**117°.41W**±0°.02**, h10**km±6km**, n94, σ1^{s}11**/126**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFSC	**Central Fire S**	**0.13**	**121**		**Pg**	**01 53 48.7**	**+0.1**
CFSC					**Sg**	**01 53 51.6**	**+0.9**
RSBC	**Riverside Bore**	**0.21**	**160**		**Pg**	**01 53 49.9**	**-0.1**
RSBC					**Sg**	**01 53 53.0**	**0.0**
BFSC	**Mount Baldy Ra**	**0.21**	**288**	P	**Pg**	**01 53 49.7**	**-0.4**
	baz=104,SNR=1000						
BFSC				S	**Sg**	**01 53 52.8**	**-0.4**
	baz=104						
BBRC	**Big Bear Solar**	**0.42**	**77**	P	**Pg**	**01 53 53.5**	**-0.4**
	baz=260,SNR=401						
BBRC				S	**Sg**	**01 53 59.1**	**-0.4**
	baz=260						
MWC	**Mount Wilson**	**0.54**	**276**	Pg	**Pg**	**01 53 55.6**	**-0.6**
MWC				Sg	**Sg**	**01 54 03.0**	**-0.2**
MWC				IAML		01 54 04.3	
	comp=E,5µm,0.7s						
MWC				IAML		01 54 04.3	
	comp=N,6µm,0.6s						
GVRC	**Garvey Reservo**	**0.60**	**258**		**Pg**	**01 53 57.1**	**-0.2**
MURC	**Murrieta**	**0.60**	**162**	P	**Pg**	**01 53 56.7**	**-0.5**
	baz=343,SNR=244						
MURC				S	**Sg**	**01 54 04.8**	**-0.3**
	baz=343						
PASC	**Pasadena Art C**	**0.64**	**270**		**Pg**	**01 53 57.3**	**-0.7**
PASC				Sg	**Sg**	**01 54 05.9**	**-0.5**
PASC				IAML		01 54 06.7	
	comp=E,3µm,0.5s						
GR2C	**Griffith Obs.**	**0.74**	**266**		**Pg**	**01 53 59.0**	**-0.9**
DECC	**Green Verdugo**	**0.77**	**276**	P	**Pg**	**01 53 59.9**	**-0.6**
	baz=95,SNR=62						
DECC				S	**Sg**	**01 54 10.3**	**-0.1**
	baz=95						
RRX	**Edison Barstow**	**0.78**	**26**	P	**Pg**	**01 53 59.9**	**-0.9**
	baz=206,SNR=32						
RRX				S	**Sg**	**01 54 10.4**	**-0.5**
	baz=206						
GVDA	**Garner Valley**	**0.79**	**129**		**Pg**	**01 54 00.2**	**-0.8**
GVDA					**Sg**	**01 54 10.5**	**-0.8**
EDW2	**Edwards Air Fo**	**0.85**	**326**	P	**Pg**	**01 54 01.0**	**-1.2**
	baz=145,SNR=123						
EDW2				S	**Sg**	**01 54 12.0**	**-1.3**
	baz=145						
FMP	**Fort Macarthur**	**0.86**	**238**	P	**Pg**	**01 54 01.5**	**-0.8**
	baz=57,SNR=47						
FMP				Sb	**Sb**	**01 54 14.5**	**+0.1**
	baz=57						
PFO	**Pinyon Flats O**	**0.97**	**125**	Pg	**Pg**	**01 54 03.4**	**-1.0**
	comp=E,260nm,0.3s,baz=297,slow=17,SNR=53						
PFO				Lg	Lg	01 54 15.5	
	comp=E,349nm,0.3s,baz=348,slow=4.4,SNR=4.5						
PFO	**Pinyon Flats O**	**0.97**	**125**	Pg	**Pg**	**01 54 03.2**	**-1.2**
PFO				Sg	**Sg**	**01 54 16.0**	**-1.0**
PFO				IAML		01 54 17.7	
	comp=E,2µm,0.8s						
PFO	**Pinyon Flats O**	**0.97**	**125**	P	**Pg**	**01 54 03.4**	**-1.0**
	baz=306,SNR=126						
PFO				S	**Sg**	**01 54 15.9**	**-1.1**
	baz=306						
HEC	**Hector,Ludlow**	**1.11**	**53**	P	**Pb**	**01 54 05.7**	**-1.3**
	baz=234,SNR=64						
HEC				S	**Sg**	**01 54 20.3**	**-1.1**
	baz=234						
CIS	**Catalina Islan**	**1.13**	**228**	P	**Pb**	**01 54 06.3**	**-1.1**
	baz=46,SNR=78						
CIS				S	**Sb**	**01 54 21.8**	**-0.4**
	baz=46						
OSI	**Osito Audit: C**	**1.17**	**293**		**Pb**	**01 54 06.7**	**-1.3**
OSI				Sg	**Sb**	**01 54 22.4**	**-0.9**
OSI	**Osito Audit: C**	**1.17**	**293**	P	**Pb**	**01 54 07.2**	**-0.8**
	baz=111,SNR=54						
OSI				S	**Sb**	**01 54 22.8**	**-0.5**
	baz=111						
BELC	**Belle Mtn. Jos**	**1.19**	**98**	P	**Pb**	**01 54 07.6**	**-0.8**
	baz=280,SNR=140						
BELC				S	**Sg**	**01 54 23.5**	**-0.4**
	baz=280						
GSC	**Goldstone, Bar**	**1.23**	**24**		**Pn**	**01 54 07.9**	**-1.2**
GSC				Sg	**Sb**	**01 54 23.4**	**-1.8**
GSC	**Goldstone, Bar**	**1.23**	**24**	P	**Pn**	**01 54 07.9**	**-1.2**
	baz=204,SNR=86						
GSC				S	**Sb**	**01 54 23.9**	**-1.3**
	baz=204						
109C	**Camp Elliot, M**	**1.30**	**169**		**Pn**	**01 54 08.2**	**-1.8**
109C				IAML		01 54 28.3	
	comp=N,2µm,0.3s						
109C	**Camp Elliot, M**	**1.30**	**169**	P	**Pn**	**01 54 08.3**	**-1.7**
	baz=349,SNR=67						
109C				S	**Sb**	**01 54 25.8**	**-1.3**
	baz=349						
LRMC	**Laurel Mtn Rad**	**1.32**	**350**	P	**Pn**	**01 54 09.3**	**-1.1**
	baz=170,SNR=88						
LRMC				S	**Sb**	**01 54 27.2**	**-0.7**
	baz=170						
ARVC	**Arvin**	**1.51**	**310**	P	**Pn**	**01 54 12.2**	**-0.6**
	baz=128,SNR=35						
ARVC				S	**Sn**	**01 54 32.1**	**-0.4**
	baz=128						
SCI2	**San Clemente I**	**1.52**	**219**	P	**Pn**	**01 54 12.1**	**-0.9**
	baz=38,SNR=35						
MONP2	**Monument Peak**	**1.52**	**147**	P	**Pn**	**01 54 12.7**	**-0.5**
	baz=328,SNR=82						
MONP2				S	**Sn**	**01 54 32.6**	**-0.6**
	baz=328						
GMRC	**Granite Mounta**	**1.57**	**67**	P	**Pn**	**01 54 12.4**	**-1.4**
	baz=248,SNR=47						
GMRC				S	**Sn**	**01 54 32.9**	**-1.4**
	baz=248						
BAR	**Barrett**	**1.61**	**157**		**Pn**	**01 54 13.2**	**-1.0**
BAR				IAML		01 54 35.4	
	comp=N,1µm,0.2s						
TJX	**Tijuana**	**1.68**	**170**	Pn	**Pn**	**01 54 15.1**	**-0.1**
BC3	**Big Chuckawall**	**1.71**	**107**	P	**Pn**	**01 54 14.8**	**-0.9**
	baz=289,SNR=63						
BC3				S	**Sn**	**01 54 36.7**	**-1.0**
	baz=289						
ISA	**Isabella, Lake**	**1.72**	**330**	Pn	**Pn**	**01 54 14.8**	**-1.1**
ISA				IAML		01 54 42.9	
	comp=E,680nm,0.7s						
ISA	**Isabella, Lake**	**1.72**	**330**	P	**Pn**	**01 54 14.9**	**-1.0**
	baz=149,SNR=108						
ISA				Sb	**Sb**	**01 54 39.3**	**0.0**
	baz=149						
TKX	**Tecate**	**1.73**	**157**		**Pn**	**01 54 15.4**	**-0.6**
TKX				IAML		01 54 39.4	
	comp=E,880nm,0.5s						
TKX				IAML		01 54 41.3	
	comp=N,947nm,0.3s						
TUQ	**Turquoise Moun**	**1.76**	**44**	P	**Pn**	**01 54 15.1**	**-1.3**
	baz=225						
TUQ				Sb	**Sb**	**01 54 40.2**	**-0.2**
	baz=225						
SWSC	**Sam W. Stewart**	**1.82**	**132**	P	**Pn**	**01 54 15.6**	**-1.5**
	baz=313,SNR=15						
SWSC				Sb	**Sb**	**01 54 42.5**	**+0.6**
	baz=313						
IKP	**In-Ko-Pah, Jac**	**1.87**	**144**	P	**Pn**	**01 54 17.1**	**-0.8**
	baz=325,SNR=38						
IRM	**Iron Mountain**	**1.88**	**90**	P	**Pn**	**01 54 16.9**	**-1.1**
	baz=272						
MPMC	**Manual Prospec**	**1.88**	**358**	P	**Pn**	**01 54 17.1**	**-1.1**
	baz=178,SNR=24						
RMX	**La Rumorosa**	**1.92**	**144**	Pn	**Pn**	**01 54 18.6**	**-0.1**
RMX				IAML		01 54 49.7	
	comp=E,510nm,0.5s						
SHOC	**Shoshone, Teco**	**1.96**	**28**	Pg	**Pb**	**01 54 21.8**	**+0.2**
	baz=209						
SNCC	**San Nicolas Is**	**1.99**	**243**	Pn	**Pn**	**01 54 17.4**	**-1.9**
SNCC				IAML		01 54 48.9	
	comp=E,432nm,0.8s						
SNCC	**San Nicolas Is**	**1.99**	**243**	P	**Pn**	**01 54 17.6**	**-1.7**
	baz=61						
GWY	**Greenwater Val**	**2.10**	**17**	Pn	**Pn**	**01 54 19.8**	**-1.3**
GWY				IAML		01 54 52.8	
	comp=N,803nm,0.5s						
PKM	**Mcpherson Peak**	**2.11**	**291**	P	**Pn**	**01 54 20.9**	**-0.3**
	baz=109						
VES	**Vestal, Richgr**	**2.16**	**321**	P	**Pn**	**01 54 20.9**	**-0.8**
	baz=140						
CWC	**Cottonwood Cre**	**2.33**	**347**	P	**Pn**	**01 54 23.5**	**-0.7**
	baz=166						
FURC	**Furnace Creek,**	**2.33**	**11**	Pg	**Pg**	**01 54 28.7**	**-1.7**
	baz=191						
CCX	**Cicese**	**2.38**	**164**	Pn	**Pn**	**01 54 24.5**	**-0.3**
CCX				IAML		01 55 00.9	
	comp=N,498nm,0.7s						
CCX				IAML		01 55 03.4	
	comp=E,504nm,0.6s						
NEE2	**Needles Airpor**	**2.38**	**75**	P	**Pn**	**01 54 24.4**	**-0.4**
	baz=257,SNR=32						
GLA	**Glamis**	**2.43**	**117**	Pn	**Pn**	**01 54 24.3**	**-1.3**
GLA				IAML		01 55 05.3	
	comp=N,590nm,0.6s						
GLA	**Glamis**	**2.43**	**117**	P	**Pn**	**01 54 24.5**	**-1.1**
	baz=299						
VOG	**Valley Oaks Go**	**2.68**	**324**	P	**Pn**	**01 54 28.6**	**-0.3**
	baz=142						
PDMCI	**Parker Dam,Lak**	**2.71**	**86**	P	**Pn**	**01 54 28.9**	**-0.5**
	baz=268						
PAGB	**Antelope Grade**	**2.80**	**305**	Pn	**Pn**	**01 54 30.5**	**-0.1**
PAGB				IAML		01 55 26.8	
	comp=N,256nm,0.9s						
PAGB				IAML		01 55 34.7	
	comp=E,179nm,1.0s						
GRAC	**Grapevine Rang**	**2.82**	**1**	Pg	**Pg**	**01 54 37.9**	**-1.8**
	baz=181						
TPNV	**Topopah Spring**	**2.93**	**19**	Pn	**Pn**	**01 54 32.9**	**+0.4**
TPNV				IAML		01 55 20.1	
	comp=E,277nm,0.6s						
TPNV				IAML		01 55 21.2	
	comp=E,253nm,0.5s						
TPNV	**Topopah Spring**	**2.93**	**19**	P	**Pn**	**01 54 32.5**	**0.0**
	baz=199						
TIN	**Tinemaha, Big**	**2.95**	**347**	Pg	**Pg**	**01 54 40.3**	**-1.9**
	baz=167						
SHPR	**Sheep Range**	**2.97**	**38**	Pn	**Pn**	**01 54 32.8**	**-0.2**
LCH	**Last Change Ra**	**3.06**	**357**	Pn	**Pn**	**01 54 33.8**	**-0.5**
PRN	**Pahroc Range**	**3.76**	**30**	Pn	**Pn**	**01 54 44.8**	**+1.0**
PRN				IAML		01 55 49.7	
	comp=E,195nm,0.7s						
LHV	**Little Huntoon**	**4.17**	**348**	Pn	**Pn**	**01 54 50.7**	**+1.4**
LHV				IAML		01 56 12.3	
	comp=N,72nm,1.1s						
LHV				IAML		01 56 27.2	
	comp=E,64nm,1.1s						
SAO	**San Andreas Ge**	**4.19**	**309**	Pn	**Pn**	**01 54 49.0**	**-0.7**
NVAR	**Mina Array Bea**	**4.31**	**351**	Pn	**Pn**	**01 54 52.6**	**+1.1**
	comp=E,0.6nm,0.3s,baz=178,slow=15,SNR=2.7						
NVAR				Pg	**Pb**	**01 55 04.3**	**+2.7**
	comp=E,4.8nm,0.3s,baz=174,slow=18,SNR=12						
NVAR				Lg	Lg	01 56 03.5	
	baz=166,slow=27,SNR=1.7						
NVAR	**Mina Array Bea**	**4.31**	**351**		**Pn**	**01 54 51.9**	**+0.4**
LCMT	**Little Creek M**	**4.42**	**49**	Pn	**Pn**	**01 54 52.8**	**-0.2**
RYN	**Ryan**	**4.54**	**349**	Pn	**Pn**	**01 54 54.6**	**0.0**
CMB	**Columbia Colle**	**4.54**	**329**	Pn	**Pn**	**01 54 55.1**	**+0.5**
KNB	**Kanab**	**4.70**	**52**	Pn	**Pn**	**01 54 57.0**	**+0.2**
KNB				IAML		01 56 20.3	
	comp=E,55nm,1.1s						
KNB				IAML		01 56 28.4	
	comp=N,66nm,1.1s						
CCUT	**Cedar City**	**4.71**	**43**	Pn	**Pn**	**01 54 57.7**	**+0.7**
CCUT				IAML		01 56 14.6	
	comp=N,42nm,1.0s						
CCUT				IAML		01 56 15.5	
	comp=E,49nm,1.6s						
U15A	**North Rim**	**4.76**	**60**	Pn	**Pn**	**01 54 58.2**	**+0.5**
U15A				IAML		01 56 23.9	
	comp=N,66nm,0.9s						
U15A				IAML		01 56 30.6	
	comp=E,79nm,1.1s						
SZCU	**Shurtz Canyon**	**4.90**	**45**	Pn	**Pn**	**01 55 00.0**	**+0.4**
SZCU				IAML		01 56 22.4	
	comp=E,36nm,0.4s						
KVN	**Kaiserville**	**4.90**	**354**	Pn	**Pn**	**01 55 00.7**	**+1.1**
X16A	**Lo Mia Camp, P**	**4.95**	**85**	Pn	**Pn**	**01 54 59.9**	**-0.4**
X16A				IAML		01 56 29.1	
	comp=E,35nm,0.8s						
X16A				IAML		01 56 33.0	
	comp=N,37nm,1.6s						
WUAZ	**Wupatki**	**5.14**	**73**	Pn	**Pn**	**01 55 03.9**	**+0.9**
WUAZ				IAML		01 56 34.6	
	comp=N,53nm,1.1s						
WUAZ				IAML		01 56 37.5	
	comp=N,49nm,1.3s						
PKCU	**Pink Cliffs**	**5.28**	**50**	Pn	**Pn**	**01 55 06.1**	**+1.1**
MTPU	**Mount Pierson**	**5.73**	**46**	Pn	**Pn**	**01 55 12.1**	**+1.0**
TUC	**Tucson**	**5.86**	**107**	Pn	**Pn**	**01 55 11.5**	**-1.2**
TCRU	**Three Creeks R**	**5.97**	**41**	Pn	**Pn**	**01 55 15.2**	**+0.8**
MVU	**Marysvale**	**6.03**	**43**	Pn	**Pn**	**01 55 14.3**	**-0.9**
MSU	**Marysvale**	**6.05**	**43**	Pn	**Pn**	**01 55 16.1**	**+0.6**
X18A	**Snowflake**	**6.18**	**85**	Pn	**Pn**	**01 55 16.4**	**-0.9**
ORV	**Oroville**	**6.29**	**330**	Pn	**Pn**	**01 55 18.4**	**-0.2**
W18A	**Petrified Fore**	**6.40**	**79**	Pn	**Pn**	**01 55 21.2**	**+0.9**
HOPS	**Hopland Field**	**6.62**	**318**	Pn	**Pn**	**01 55 22.0**	**-1.1**
ELK	**Elko**	**6.79**	**14**	Pn	**Pn**	**01 55 28.6**	**+3.0**
	comp=N,0.2nm,0.3s,baz=190,slow=14,SNR=1.2						
ELK				Pg	**Pg**	**01 55 51.7**	**-3.9**
	comp=N,0.7nm,0.3s,baz=217,slow=16,SNR=4.5						
ELK				Lg	Lg	01 57 17.5	
	comp=N,1.3nm,0.3s,baz=110,slow=21,SNR=5.4						
121A	**Cookes Peak, D**	**8.22**	**99**	Pn	**Pn**	**01 55 45.5**	**+0.3**
MNTX	**Cornudas Mount**	**10.41**	**100**	Pn	**Pn**	**01 56 15.1**	**+0.1**
YKA	**Yellowknife Ar**	**28.40**	**3**	P	**P**	**01 59 43.6**	**+3.6**
	comp=N,0.1nm,0.5s,baz=179,slow=9.0,SNR=1.9						
ILAR	**Eielson Array**	**35.46**	**339**	P	**P**	**02 00 44.5**	**+2.5**
	comp=N,0.5nm,0.7s,baz=150,slow=8.3,SNR=6.5						

IDC 30 02:04:22.3±2.3**, 5°.31S**×**113°.61E, h0**km**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.5**/24**, mbtmp3.5**/3**, Error ellipse: s-maj=215.3km s-min=11.0km az=53.0, Java Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.87**	**128**	P	P	02 09 47.7	+0.8
	0.5nm,0.8s,baz=311,slow=8.8,SNR=1.5						
ASAR	**Alice Springs**	**26.75**	**135**	P	P	02 10 03.8	-0.2
	0.6nm,0.5s,baz=316,slow=9.1,SNR=8.5						
MKAR	**Makanchi Array**	**58.82**	**335**	P	P	02 14 22.6	-0.1
	0.2nm,0.4s,baz=161,slow=7.1,SNR=7.8						

IDC 30 02:24:59.5±2.8**, 6°.47S**×**129°.90E, h128**km±38km**, mb3.1**/1**, mb1 3.2**/5**, mb1mx2.6**/36**, mbtmp3.5**/5**, Error ellipse: s-maj=67.4km s-min=21.5km az=89.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.73**	**14**	P	Pn	02 26 22.8	+0.3
	1.0nm,0.3s,baz=204,slow=23,SNR=6.7						
SIJI				S	Sn	02 27 22.2	-4.9
	2.9nm,0.3s,baz=228,slow=23,SNR=8.1						
FITZ	**Fitzroy Crossi**	**12.28**	**199**	P	Pn	02 27 49.7	-0.5
	0.1nm,0.3s,baz=31,slow=10,SNR=12						
FITZ				S	Sn	02 29 60.0	-5.7
	0.5nm,0.3s,baz=214,slow=16,SNR=7.5						
WRA	**Warramunga Arr**	**14.07**	**163**	P	Pn	02 28 12.0	-1.3
	0.2nm,0.3s,baz=349,slow=14,SNR=8.4						
WRA				S	Sn	02 30 39.4	-9.5
	0.3nm,0.3s,baz=342,slow=20,SNR=2.9						
ASAR	**Alice Springs**	**17.53**	**168**	P	Pn	02 28 56.9	+0.8
	0.1nm,0.3s,baz=341,slow=9.2,SNR=4.9						
MKAR	**Makanchi Array**	**67.73**	**327**	P	P	02 35 43.1	-0.1
	0.2nm,0.4s,baz=112,slow=9.9,SNR=4.9						

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*NIED **30** 02:28:07.0, 41°.73N×144°.31E, h27km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.22; $M_{\theta\theta}$-1.27; $M_{\phi\phi}$-3.96; $M_{r\theta}$-0.41; $M_{\theta\phi}$-4.69; $M_{\phi r}$2.68; Fault plane solution: $M_0$7.08000×10^{14} NP1:ϕ_s15.00000°, δ58.00000°, λ61.00000°. NP2:ϕ_s241.00000°, δ42.00000°, λ128.00000°.*

*JMA **30** 02:28:07.0±0.2, 41°.73N×144°.31E, h27km±3km, M4.0*

*NEIC **30** 02:28:08.2±1.4, 41°.74N±0°.08×144°.3E±0°.1, h31km±7km, mb4.1/8, Error ellipse: s-maj=14.9km s-min=7.2km az=131.0*

*IDC **30** 02:28:10.1±4.0, 41°.74N×143°.99E, h38km±32km, mb3.6/9, mb1 3.8/11, mb1mx3.5/44, mbtmp3.8/11, ML3.0/2, MS2.8/2, Ms1 2.8/2, ms1mx2.5/39, Error ellipse: s-maj=41.8km s-min=25.4km az=151.0*

ISC 30 02:28:08.0±0.9**, 41°.73N**±0°.08×**144°.37E**±0°.08**, h35**km**, n48, σ0^{s}86**/41**, mb4.0**/12**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERM	**Erimo**	**0.95**	**288**		**Pn**	**02 28 24.5**	**-0.4**
JEM	**Erimo**	**0.95**	**288**	P	**Pn**	**02 28 24.4**	**-0.5**
JTHR	**Tokachihiroo**	**0.97**	**305**	P	**Pn**	**02 28 24.4**	**-0.8**
JTHR				*e*S	**Sn**	**02 28 37.6**	**-0.2**
JCH	**Churui**	**1.16**	**320**	P	**Pn**	**02 28 27.0**	**-0.7**
JCH				*e*S	**Sn**	**02 28 42.1**	**-0.2**
JOB	**Onbets**	**1.23**	**341**	P	**Pn**	**02 28 28.1**	**-0.7**
JAK	**Akkeshi**	**1.28**	**11**	P	**Pn**	**02 28 28.8**	**-0.7**
JAK				*e*S	**Sn**	**02 28 45.3**	**-0.1**
JNBK	**Urakawa-nobuka**	**1.32**	**295**	P	**Pn**	**02 28 29.8**	**-0.2**
JSHD	**Hidakashinhida**	**1.57**	**296**	P	**Pn**	**02 28 33.6**	**+0.2**
JEW	**Eniwo**	**2.43**	**298**	Pn	**Pn**	**02 28 45.9**	**+0.6**
JKA	**Kamikawa-asahi**	**2.71**	**332**	Pn	**Pn**	**02 28 48.8**	**-0.3**
ASAJ	**Asahikawa**	**2.71**	**332**	Pn	**Pn**	**02 28 49.1**	**0.0**
	2.6nm,0.3s,baz=192,slow=14,SNR=9.8						
ASAJ				LR	LR	02 30 13.1	
	comp=Z,161nm,18.4s,baz=166,slow=47						
JMM	**Marumori**	**4.74**	**217**	Pn	**Pn**	**02 29 15.2**	**-1.9**
MJAR	**Matsushiro Arr**	**7.06**	**225**	Pn	**Pn**	**02 29 47.5**	**-1.4**
	0.1nm,0.3s,baz=27,slow=14,SNR=7.0						
MJAR				LR	LR	02 32 46.8	
	comp=Z,67nm,20.5s,baz=100,slow=40						
MJAR	**Matsushiro Arr**	**7.06**	**225**	Pn	**Pn**	**02 29 48.6**	**-0.3**
JWT	**Wachi**	**9.53**	**230**	Pn	**Pn**	**02 30 24.0**	**+1.3**
JMN	**Monobe**	**11.52**	**229**	Pn	**Pn**	**02 30 50.0**	**0.0**
SONM	**Songino Array**	**27.43**	**296**	P	**P**	**02 33 51.3**	**+0.8**
	1.0nm,0.6s,baz=93,slow=9.9,SNR=7.2						
SONM	**Songino Array**	**27.43**	**296**	P	**P**	**02 33 50.1**	**-0.4**
SONM				IAmb	IAmb	02 33 52.6	
	comp=Z,3.9nm,1.3s						
H11N2	**WAKE ISLAND Hy**	**29.09**	**132**	T	T	03 04 47.7	
	baz=324,slow=75,SNR=73						
H11N1	**WAKE ISLAND Hy**	**29.11**	**132**	T	T	03 05 09.1	
	baz=324,slow=75,SNR=63						
H11N3	**WAKE ISLAND Hy**	**29.11**	**132**	T	T	03 04 56.8	
	baz=324,slow=75,SNR=39						
H11S1	**WAKE ISLAND Hy**	**29.98**	**134**	T	T	03 05 57.0	
	baz=326,slow=76,SNR=59						
H11S3	**WAKE ISLAND Hy**	**29.98**	**134**	T	T	03 06 00.9	
	baz=326,slow=76,SNR=48						
H11S2	**WAKE ISLAND Hy**	**30.00**	**134**	T	T	03 06 04.6	
	baz=326,slow=76,SNR=39						
ZAA0	**Zalesovo Array**	**40.61**	**308**	P	**P**	**02 35 45.1**	**+0.9**
ZALV	**Zalesovo Beam**	**40.61**	**308**	P	**P**	**02 35 43.9**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=95,slow=8.0,SNR=6.3						
ZALV	**Zalesovo Beam**	**40.61**	**308**	P	**P**	**02 35 43.1**	**-1.0**
IMAR	**Indian Mountai**	**41.46**	**33**	P	**P**	**02 35 51.3**	**+0.4**
MK31	**Makanchi Array**	**43.73**	**299**	P	**P**	**02 36 08.9**	**-0.8**
MKAR	**Makanchi Array**	**43.73**	**299**	P	**P**	**02 36 09.0**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=82,slow=11,SNR=8.5						
MKAR	**Makanchi Array**	**43.73**	**299**	P	**P**	**02 36 08.4**	**-1.3**
MAKZ	**Makanchi**	**43.93**	**299**	P	**P**	**02 36 11.8**	**+0.4**
MAKZ				IAmb	IAmb	02 36 17.7	
	comp=Z,3.3nm,1.1s						
ILAR	**Eielson Array**	**44.32**	**35**	P	P	02 36 18.5	+4.3
	comp=Z,0.5nm,0.9s,baz=273,slow=8.7,SNR=4.8						
INK	**Inuvik**	**49.17**	**29**	P	**P**	**02 36 53.4**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=299,slow=3.9,SNR=3.6						
INK	**Inuvik**	**49.17**	**29**	P	**P**	**02 36 53.1**	**+1.1**
BRVK	**Borovoye**	**49.26**	**310**	P	**P**	**02 36 53.4**	**+0.5**
BRVK				IAmb	IAmb	02 37 05.9	
	comp=Z,2.4nm,0.9s						
C36M	**Paulatuk**	**52.21**	**27**	P	**P**	**02 37 15.9**	**+1.0**
KKAR	**Karatay Array**	**52.85**	**298**	P	**P**	**02 37 20.0**	**-0.1**
ABKAR	**Akbulak array**	**56.73**	**309**	P	**P**	**02 37 48.3**	**+0.3**
ABKAR				IAmb	IAmb	02 38 02.7	
	comp=Z,1.4nm,0.8s						
FINES	**FINESS Array B**	**65.72**	**332**	P	**P**	**02 38 48.2**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=49,slow=13,SNR=5.4						
FINES	**FINESS Array B**	**65.72**	**332**	P	**P**	**02 38 48.7**	**0.0**
KBZ	**Khabaz**	**69.58**	**311**	P	**P**	**02 39 14.1**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=48,slow=5.3,SNR=3.6						
NOA	**NORSAR Array B**	**70.72**	**338**	P	**P**	**02 39 21.7**	**+1.6**
	comp=Z,1.8nm,1.1s,baz=37,slow=6.6,SNR=2.2						
AKASG	**Malin Array Be**	**71.97**	**323**	P	**P**	**02 39 27.4**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=46,slow=5.4,SNR=2.1						
GRFO	**Grafenberg**	**80.10**	**331**	P	**P**	**02 40 12.2**	**-1.9**
H03N2	**Juan Fernandez**	**145.00**	**91**	T	T	05 30 05.0	
	baz=301,slow=77,SNR=5.7						
H03N3	**Juan Fernandez**	**145.02**	**91**	T	T	05 30 05.1	
	baz=301,slow=77,SNR=5.4						
H03N1	**Juan Fernandez**	**145.02**	**91**	T	T	05 30 02.3	
	baz=301,slow=77,SNR=6.3						

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*PRU **30** 02:38:15.3±0.0, 51°.53N×16°.05E, h0km*

*VIE **30** 02:38:15.6±1.0, 51°.46N×15°.94E, h0km, mb2.5/2, ml2.4/2, Error ellipse: s-maj=10.8km s-min=3.7km az=48.0 85 km WNW of Wroclaw Suspected Mining induced.*

ISC 30 02:38:14.4±1.3**, 51°.54N**±0°.06×**16°.06E**±0°.03**, h0**km**, n19, σ0^{s}64**/41**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.71**	**168**	*e*Pg	**Pg**	**02 38 28.6**	**+0.7**
KSP				*e*Sg	**Sg**	**02 38 38.0**	**+0.8**
CHVC	**Chvalec**	**0.95**	**180**	*e*PG	**Pb**	**02 38 33.3**	**-0.4**
CHVC				*e*SG	**Sb**	**02 38 45.9**	**-0.9**
OSTC	**Ostas**	**0.99**	**174**	*e*PG	**Pb**	**02 38 34.0**	**-0.3**
OSTC				*e*SG	**Sb**	**02 38 47.1**	**-0.8**
	comp=Z,16nm,0.2s						
UPC	**Upice**	**1.03**	**182**	*e*PG	**Pg**	**02 38 34.5**	**+0.4**
UPC				*e*SG	**Sb**	**02 38 48.7**	**-0.5**
	comp=Z,26nm,0.3s						
DPC	**Dobruska-Polom**	**1.20**	**172**	*e*PG	**Pg**	**02 38 37.4**	**+0.1**
DPC				*e*SG	**Sg**	**02 38 52.8**	**-0.1**
PVCC	**Panska Ves**	**1.38**	**223**	*e*PG	**Pn**	**02 38 41.0**	**+0.2**
PVCC				*e*SG	**Sn**	**02 38 59.9**	**+0.1**
	comp=Z,62nm,0.2s						
KRLC	**Kraliky**	**1.53**	**162**	*e*PG	**Pn**	**02 38 43.3**	**+0.3**
KRLC				*e*SG	**Sg**	**02 39 02.6**	**-1.0**
PRU	**Pruhonice**	**1.82**	**212**	*e*PN	**Pn**	**02 38 46.4**	**-0.6**
PRU				*e*PG	**Pb**	**02 38 48.4**	**-0.2**
PRU				*e*SG	**Sb**	**02 39 12.1**	**+0.1**
	comp=Z,18nm,0.3s						
CLL	**Collm**	**1.93**	**264**	*e*Pn	**Pn**	**02 38 48.0**	**-0.4**
CLL				*e*Pg	**Pb**	**02 38 50.0**	**-0.3**
CLL				*e*		02 38 55.0	
CLL				*e*Sg	**Sg**	**02 39 17.0**	**+0.8**
	comp=Z,8.0nm,0.7s						
MORC	**Moravsky Berou**	**2.00**	**151**	*e*PN	**Pn**	**02 38 49.1**	**-0.4**
MORC				*e*SG	**Sg**	**02 39 18.6**	**0.0**
VRAC	**Vranov**	**2.26**	**171**	*e*PN	**Pn**	**02 38 53.2**	**+0.2**
VRAC				*e*SG	**Sg**	**02 39 27.0**	**+0.2**
KRUC	**Moravsky**	**2.49**	**175**	*e*PN	**Pn**	**02 38 56.8**	**+0.7**
KRUC				*e*SG	**Sg**	**02 39 34.5**	**+0.3**
NKC	**Novy Kostel**	**2.63**	**242**	*e*PN	**Pn**	**02 38 58.6**	**+0.5**
NKC				*e*PG	**Pg**	**02 39 04.2**	**-0.6**
NKC				*e*SG	**Sg**	**02 39 39.9**	**+1.1**
	comp=Z,18nm,0.3s						
OJC	**Ojcow**	**2.71**	**118**	*e*Pg	**Pg**	**02 39 06.2**	**-0.1**
OJC				*e*Sg	**Sg**	**02 39 42.0**	**+0.5**
JAVC	**Velka Javorina**	**2.88**	**158**	*e*PN	**Pn**	**02 39 01.9**	**+0.4**
KHC	**Kasperske Hory**	**2.88**	**214**	*e*PN	**Pn**	**02 39 01.2**	**-0.4**
KHC				*e*PG	**Pb**	**02 39 07.8**	**+1.1**
KHC				*e*SN	**Sn**	**02 39 36.7**	**-0.3**
KHC				*e*SG	**Sg**	**02 39 46.7**	**-0.3**
CKRC	**Cesky Krumlov**	**2.94**	**203**	*e*PN	**Pn**	**02 39 04.2**	**+1.8**
CKRC				*e*PG	**Pg**	**02 39 09.7**	**-1.0**
CKRC				*e*SG	**Sg**	**02 39 48.9**	**+0.1**
CONA	**Conrad Observa**	**3.62**	**182**	*i* Pn	**Pn**	**02 39 12.5**	**+0.8**
	comp=Z,0.3nm,0.2s						
MOA	**Molln**	**3.87**	**198**	*e*Pn	**Pn**	**02 39 15.6**	**+0.5**
	comp=Z,1.0nm,0.3s						

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*IDC **30** 02:58:34.6±0.7, 34°.33S×109°.38W, h0km, mb4.4/12, mb1 4.5/12, mb1mx4.4/28, mbtmp4.4/12, MS4.0/8, Ms1 4.0/8, ms1mx3.7/22, Error ellipse: s-maj=21.0km s-min=19.5km az=6.0*

*NEIC **30** 02:58:36.5±1.6, 34°.4S±0°.1×109°.4W±0°.2, h10km±1km, mb5.0/114, Error ellipse: s-maj=24.8km s-min=20.1km*

az=266.0

*GCMT **30** 02:58:36.5±0.3, 34°.68S±0°.04×109°.20W±0°.03, $h14^{km}\pm1^{km}$, MW4.8/69, Moment Tensor Solution. s25,c27; s69,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.97±.19; $M_{\theta\theta}$0.12±.13; $M_{\phi\phi}$1.85±.12; $M_{r\theta}$-1.09±.38; $M_{\theta\phi}$-0.65±.07; $M_{\phi r}$0.12±.23; Best double couple: $M_0$2.28300×10^{16} NP1:ϕ_s2.00000°, δ43.00000°, λ-56.00000°. NP2: ϕ_s139.00000°, δ56.00000°, λ-117.00000°. Principal axes: T 2.1270, Plg7.0000°, Azm248.0000°; N 0.3120, Plg22.0000°, Azm155.0000°; P -2.4400, Plg66.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 02:58:35.2±0.4, **34°.38S**±0°.09×**109°.45W**±0°.08, **$h10^{km}$, n149,** σ**1ˢ20**/132, **mb4.9**/64, **MS4.2**/12, **2C-1D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	7.23	1	LR	LR	03 02 27.1	
	comp=Z,204nm,18.7s,baz=116,slow=32						
H03S2	**Juan Fernandez**	25.23	97	T	T	03 30 12.5	
	SNR=517						
H03S1	**Juan Fernandez**	25.25	97	T	T	03 30 12.1	
	SNR=687						
H03S3	**Juan Fernandez**	25.25	97	T	T	03 30 11.6	
	SNR=879						
H03N2	**Juan Fernandez**	25.30	97	T	T	03 30 10.9	
	baz=266,slow=73,SNR=58						
H03N3	**Juan Fernandez**	25.30	97	T	T	03 30 16.3	
	baz=266,slow=73,SNR=49						
H03N1	**Juan Fernandez**	25.32	97	T	T	03 30 15.3	
	baz=266,slow=73,SNR=42						
GO07	**Milladeo Hill,**	29.06	118	P	**P**	**03 04 36.7**	**+1.1**
LL05	**Los Muermos**	29.09	115	P	**P**	**03 04 36.6**	**+0.7**
LR03	**Panguipulli**	29.94	111	P	**P**	**03 04 44.0**	**+0.5**
LR03				IAmb	IAmb	03 04 46.5	
	comp=Z,19nm,0.9s						
LL02	**Futaleuf**	30.39	118	P	**P**	**03 04 47.9**	**+0.4**
COYC	**Coyhaique**	30.48	123	P	**P**	**03 04 49.5**	**+1.4**
COYC				IAmb	IAmb	03 04 52.0	
	comp=Z,19nm,1.2s						
GO05	**Huala**	30.74	102	P	**P**	**03 04 49.8**	**-0.8**
GO05				IAmb	IAmb	03 04 53.1	
	comp=Z,19nm,0.9s						
ML02	**Panimavida**	31.03	104	P	**P**	**03 04 52.7**	**-0.5**
PLCA	**Paso Flores**	31.29	113	P	**P**	**03 04 56.4**	**+0.8**
	comp=Z,3.5nm,0.9s,baz=284,slow=6.6,SNR=7.7						
PLCA	**Paso Flores**	31.29	113	P	**P**	**03 04 55.5**	**0.0**
BO01	**Tunca**	31.53	101	P	**P**	**03 04 57.0**	**-0.6**
BO01				IAmb	IAmb	03 04 59.9	
	comp=Z,25nm,1.0s						
GO09	**Cerro Castillo**	31.61	134	P	**P**	**03 04 59.2**	**+1.1**
GO09				IAmb	IAmb	03 05 01.7	
	comp=Z,33nm,0.9s						
MG05	**Puerto Natales**	31.64	134	P	**P**	**03 04 58.2**	**-0.1**
BO02	**Sierra Bellavi**	31.70	102	P	**P**	**03 04 59.2**	**0.0**
BO02				IAmb	IAmb	03 05 03.3	
	comp=Z,16nm,0.8s						
MT09	**Talagante**	31.73	100	P	**P**	**03 04 59.1**	**-0.4**
MT09				IAmb	IAmb	03 05 02.0	
	comp=Z,26nm,1.1s						
MT05	**Renca**	32.02	99	P	**P**	**03 05 01.8**	**-0.2**
PEL	**Peldehue**	32.12	99	P	**P**	**03 05 02.3**	**-0.5**
PEL				IAmb	IAmb	03 05 05.4	
	comp=Z,38nm,1.2s						
VA03	**San Esteban**	32.32	98	P	**P**	**03 05 04.0**	**-0.7**
VA03				IAmb	IAmb	03 05 05.7	
	comp=Z,32nm,1.1s						
GO10	**Punta Arenas**	32.96	137	P	**P**	**03 05 10.2**	**+0.3**
GO03	**Copiap**	34.13	89	P	**P**	**03 05 19.8**	**-0.7**
GO03				IAmb	IAmb	03 05 27.1	
	comp=Z,57nm,1.7s						
ZON	**Zonda**	34.16	97	P	**P**	**03 05 20.5**	**-0.2**
AC02	**Maricunga**	35.33	89	P	**P**	**03 05 31.2**	**-0.1**
AC02				IAmb	IAmb	03 05 34.4	
	comp=Z,18nm,0.9s						
TBI	**Tubuai**	36.52	277	*e*LR	LR	03 15 24.8	
	comp=Z,1µm,27.0s						
TBI	**Tubuai**	36.52	277	*e*T	T	03 43 54.0	
	comp=Z,4.8nm,0.3s						
PB15	**IPOC Station P**	36.55	83	P	**P**	**03 05 41.7**	**+0.2**
PB06	**IPOC Station P**	36.69	82	P	**P**	**03 05 42.4**	**-0.2**
PB06				IAmb	IAmb	03 05 46.0	
	comp=Z,34nm,1.0s						
PB07	**IPOC Station P**	36.89	81	P	**P**	**03 05 45.2**	**+0.8**
PB07				IAmb	IAmb	03 05 46.3	
	comp=Z,28nm,1.3s						
TA01	**Diego Aracena**	37.22	79	P	**P**	**03 05 47.1**	**+0.1**
TA01				IAmb	IAmb	03 05 49.9	
	comp=Z,46nm,1.1s						
LVC	**Limon Verde**	37.28	83	P	**P**	**03 05 48.6**	**+0.7**
	comp=Z,17nm,0.9s,baz=236,slow=9.3,SNR=9.7						
LVC	**Limon Verde**	37.28	83	P	**P**	**03 05 48.9**	**+1.0**
LVC				IAmb	IAmb	03 05 52.3	
	comp=Z,28nm,1.1s						
PB09	**IPOC Station P**	37.39	81	P	**P**	**03 05 49.4**	**+0.9**
TA02	**Huaiquique**	37.41	78	P	**P**	**03 05 48.2**	**-0.3**
PB01	**IPOC Station P**	37.55	80	P	**P**	**03 05 49.6**	**-0.3**
PB01				IAmb	IAmb	03 05 53.2	
	comp=Z,28nm,1.0s						
TAOE	**Nuku Hiva Isla**	37.93	305	*e*LR	LR	03 16 08.8	
	comp=Z,308nm,24.9s						
PB11	**IPOC Station P**	38.05	78	P	**P**	**03 05 53.4**	**-0.8**
PB11				IAmb	IAmb	03 05 56.2	
	comp=Z,30nm,1.2s						
MEH	**Mehetia**	38.10	286	*e*T	T	03 46 08.2	
	comp=Z,32nm,0.2s						
PB12	**IPOC Station P**	38.11	76	P	**P**	**03 05 55.0**	**+0.4**
PB12				IAmb	IAmb	03 05 57.8	
	comp=Z,36nm,1.1s						
PB08	**IPOC Station P**	38.27	79	P	**P**	**03 05 56.9**	**+0.6**
PB08				IAmb	IAmb	03 06 00.0	
	comp=Z,24nm,1.0s						
TIAR	**Tiarei**	39.30	285	*e*T	T	03 47 36.8	
	comp=Z,0.9nm,0.2s						
ATAH	**Atahualpa**	39.42	54	P	**P**	**03 06 06.9**	**+0.9**
	comp=Z,10nm,0.9s,baz=252,slow=9.9,SNR=7.0						
PPT2	**Papeete2**	39.47	285	*e*S	**S**	**03 12 04.9**	**-3.2**
	comp=Z,84nm,27.5s						
PPT2				*e*LQ	LQ	03 15 09.6	
	comp=Z,260nm,28.5s						
PPT2				*e*LR	LR	03 16 48.3	
	comp=Z,846nm,25.8s,baz=120						
PPT	**Papeete**	39.48	285	LR	LR	03 17 44.4	
	comp=Z,408nm,21.3s,baz=120,slow=29						
LPAZ	**La Paz**	41.13	75	LR	LR	03 20 02.5	
	comp=Z,132nm,18.7s,baz=234,slow=31						
LPAZ	**La Paz**	41.13	75	P	**P**	**03 06 20.9**	**+0.6**
LPAZ				IAmb	IAmb	03 06 24.9	
	comp=Z,53nm,1.9s						
CZSB	**Cruzeiro do Su**	42.95	60	P	**P**	**03 06 34.5**	**0.0**
CZSB				IAmb	IAmb	03 06 37.3	
	comp=Z,34nm,1.1s						
ITQB	**Itaqui**	44.62	99	P	**P**	**03 06 46.5**	**-1.3**
OTAV	**Otavalo**	45.03	47	P	**P**	**03 06 51.1**	**-0.8**
OTAV				IAmb	IAmb	03 06 56.2	
	comp=Z,40nm,1.8s						
CPUP	**Villa Florida**	45.27	94	P	**P**	**03 06 54.4**	**+1.3**
	comp=Z,2.9nm,0.8s,baz=252,slow=10,SNR=4.1						
CPUP				LR	LR	03 22 22.2	
	comp=Z,298nm,20.3s,baz=256,slow=32						
CPUP	**Villa Florida**	45.27	94	P	**P**	**03 06 52.8**	**-0.3**
PLTB	**Pedras Altas**	46.37	103	P	**P**	**03 07 00.2**	**-1.6**
ETMB	**Extrema**	46.44	69	P	**P**	**03 07 02.0**	**-0.4**
ETMB				IAmb	IAmb	03 07 04.5	
	comp=Z,11nm,1.3s						
SIV	**San Ignacio**	46.98	80	P	**P**	**03 07 07.0**	**+0.4**
	comp=Z,15nm,0.9s,baz=246,slow=9.1,SNR=36						
TBTG	**Tabatinga, AM**	47.39	60	P	**P**	**03 07 09.4**	**-0.5**
FLOC	**Florencia**	47.80	49	P	**P**	**03 07 13.3**	**+0.2**
FLOC				IAmb	IAmb	03 07 20.7	
	comp=Z,26nm,1.2s						
PTLB	**Pontes e Lacer**	48.84	80	P	**P**	**03 07 20.7**	**-0.4**
PTLB				IAmb	IAmb	03 07 22.8	
	comp=Z,22nm,1.3s						
AQDB	**Aquidauana**	49.15	88	P	**P**	**03 07 22.4**	**-1.0**
AQDB				IAmb	IAmb	03 07 25.4	
	comp=Z,14nm,0.9s						
VILB	**Vilhena**	49.34	77	P	**P**	**03 07 24.6**	**-0.4**
RIOS	**Rincon, Osa**	49.39	35	P	**P**	**03 07 25.7**	**+0.5**
CAO2	**Cobano, Puntar**	49.53	32	P	**P**	**03 07 27.6**	**+1.3**
CAO2				IAmb	IAmb	03 07 35.1	
	comp=Z,30nm,1.3s						
CDITO	**Canoas**	49.58	36	P	**P**	**03 07 28.3**	**+1.6**
BRU2	**Volcan**	49.86	36	P	**P**	**03 07 28.6**	**-0.4**
JTS	**Las Juntas de**	50.14	32	P	**P**	**03 07 31.9**	**+1.0**
JTS				IAmb	IAmb	03 07 34.1	
	comp=Z,12nm,1.1s						
RIMA	**Rio Macho**	50.16	34	P	**P**	**03 07 32.4**	**+1.1**
RIMA				IAmb	IAmb	03 07 40.1	
	comp=Z,16nm,1.3s						
COVE	**Coope Vega, Sa**	50.76	32	P	**P**	**03 07 37.5**	**+2.0**
ROSC	**El Rosal**	51.17	47	P	**P**	**03 07 40.4**	**+1.2**
	comp=Z,14nm,0.7s,baz=190,slow=5.5,SNR=8.5						
ROSC	**El Rosal**	51.17	47	P	**P**	**03 07 40.8**	**+1.6**
H06S1	**SOCORRO T**	52.84	358	T	T	04 02 29.0	
	SNR=8.6						
ZARC	**Zaragoza, Cauc**	52.96	45	P	**P**	**03 07 50.2**	**-1.8**
MOTC	**Monteria, Cord**	53.54	43	P	**P**	**03 07 57.0**	**+0.7**
MOTC				IAmb	IAmb	03 08 04.5	
	comp=Z,28nm,1.5s						
SPB	**Sao Paulo**	54.57	96	P	**P**	**03 08 03.8**	**-0.1**
SJCC	**San Jacinto, C**	54.72	43	P	**P**	**03 08 05.5**	**+0.5**
SJCC				IAmb	IAmb	03 09 44.0	
	comp=Z,36nm,1.4s						
MACA	**Manacapuru-AM**	54.89	67	P	**P**	**03 08 04.9**	**-1.4**
QSPA	**South Pole Qui**	55.82	180	P	**P**	**03 08 13.5**	**+1.0**
	comp=Z,4.3nm,1.0s,baz=134,slow=5.8,SNR=5.3						
QSPA	**South Pole Qui**	55.82	180	P	**P**	**03 08 13.0**	**+0.5**
QSPA				IAmb	IAmb	03 08 15.1	
	comp=Z,18nm,1.6s						
VNDA	**Vanda**	56.45	195	P	**P**	**03 08 19.9**	**+3.3**
	comp=Z,1.7nm,0.9s,baz=102,slow=9.5,SNR=2.5						
VNDA				LR	LR	03 27 43.5	
	comp=Z,78nm,19.1s,baz=88,slow=31						
SDV	**Santo Domingo**	56.59	48	P	**P**	**03 08 17.9**	**-0.8**
SDV				IAmb	IAmb	03 08 19.9	
	comp=Z,14nm,0.9s						
BDFB	**Brasilia**	57.88	87	P	**P**	**03 08 27.6**	**-0.1**
	comp=Z,5.9nm,0.9s,baz=282,slow=6.1,SNR=7.9						
BDFB				LR	LR	03 31 05.1	
	comp=Z,224nm,18.8s,baz=321,slow=34						
BDFB	**Brasilia**	57.88	87	P	**P**	**03 08 27.6**	**-0.1**
BDFB				IAmb	IAmb	03 08 31.0	
	comp=Z,28nm,1.6s						
BAUV	**El Baul**	58.26	50	P	**P**	**03 08 28.6**	**-1.6**
VNA3	**Neumayer Olymp**	60.90	159	P	**P**	**03 08 47.1**	**-0.6**
VNA1	**Neumayer--Stat**	61.55	158	P	**P**	**03 08 52.3**	**+0.3**
VNA2	**Neumayer--Watz**	61.70	159	P	**P**	**03 08 53.1**	**0.0**
	baz=257,slow=5.2						
SNAA	**Sanae**	62.72	160	P	**P**	**03 08 59.8**	**-0.2**
SNAA	**Sanae**	62.72	160	P	**P**	**03 08 59.5**	**-0.5**
SNAA				IAmb	IAmb	03 09 01.1	
	comp=Z,18nm,1.4s						
JCT	**Junction City**	65.15	9	P	**P**	**03 09 16.9**	**+0.6**
JCT				IAmb	IAmb	03 09 25.6	
	comp=Z,27nm,1.5s						
435B	**Jarrell**	65.77	11	P	**P**	**03 09 21.5**	**+1.2**
435B				IAmb	IAmb	03 09 30.2	
	comp=Z,8.9nm,0.9s						
WHTX	**Lake Whitney,**	66.97	11	P	**P**	**03 09 28.5**	**+0.5**
WHTX				IAmb	IAmb	03 09 37.6	
	comp=Z,9.7nm,1.0s						
NATX	**Nacogdoches**	67.24	14	P	**P**	**03 09 31.0**	**+1.3**
LENM	**Lemitar**	68.22	2	P	**P**	**03 09 36.5**	**+0.5**
X16A	**Lo Mia Camp, P**	68.46	358	P	**P**	**03 09 37.4**	**-0.2**
X16A				IAmb	IAmb	03 09 47.5	
	comp=Z,9.9nm,1.5s						
X18A	**Snowflake**	68.55	360	P	**P**	**03 09 39.4**	**+1.3**
X18A				IAmb	IAmb	03 09 48.3	
	comp=Z,9.3nm,1.2s						
143A	**Socs Landing,**	68.85	16	P	**P**	**03 09 40.9**	**+1.2**
SHPR	**Sheep Range**	70.72	355	P	**P**	**03 09 53.9**	**+2.5**
SHPR				IAmb	IAmb	03 10 06.2	
	comp=Z,11nm,1.5s						
TPNV	**Topopah Spring**	71.24	354	P	**P**	**03 09 56.7**	**+2.1**
SDCO	**Great Sand Dun**	71.85	3	P	**P**	**03 10 00.5**	**+2.1**
NV11	**Mina Array Sit**	72.89	353	IAmb	IAmb	03 10 18.1	
	comp=Z,8.8nm,1.1s						
NVAR	**Mina Array Bea**	72.90	353	P	**P**	**03 10 06.9**	**+2.3**
	comp=Z,3.2nm,0.9s,baz=191,slow=6.6,SNR=17						
SPR3	**Spring Creek 3**	73.15	356	P	**P**	**03 10 06.4**	**+0.2**
DZM	**Mont Dzumac**	73.22	255	*e*LR	LR	03 32 25.1	
	comp=Z,255nm,27.8s						
KVN	**Kaiserville**	73.50	353	IAmb	IAmb	03 10 18.6	
	comp=Z,11nm,1.1s						
YERR	**Yerington**	73.56	352	P	**P**	**03 10 10.6**	**+2.2**
SYO	**Syowa Base**	74.41	169	⇑*e*P	**P**	**03 10 13.8**	**+0.9**
SYO	**Syowa Base**	74.41	169	⇓*e*PcP	**PcP**	**03 10 25.0**	**-2.5**
RDMU	**Red Mountain**	74.58	360	IAmb	IAmb	03 10 24.5	
	comp=Z,19nm,1.4s						
JLU	**Jordanelle**	74.63	358	P	**P**	**03 10 15.3**	**+0.6**
JLU				IAmb	IAmb	03 10 23.8	
	comp=Z,17nm,1.5s						
MOD	**Modoc Plateau**	76.56	352	IAmb	IAmb	03 10 39.3	
	comp=Z,12nm,1.1s						
K22A	**Casper**	76.70	2	IAmb	IAmb	03 10 36.2	
	comp=Z,34nm,1.5s						
BW06	**Boulder Array**	76.77	360	P	**P**	**03 10 27.4**	**+0.5**
BW06				IAmb	IAmb	03 10 36.0	
	comp=Z,11nm,1.3s						
PDAR	**Pinedale Array**	76.77	360	P	**P**	**03 10 27.9**	**+0.9**
	comp=Z,2.5nm,0.9s,baz=161,slow=5.8,SNR=17						
HLID	**Hailey**	77.70	356	IAmb	IAmb	03 10 42.2	
	comp=Z,11nm,1.1s						
J08A	**Circle Bar Ran**	77.80	353	IAmb	IAmb	03 10 46.4	
	comp=Z,28nm,1.7s						
P52A	**Corning**	77.85	21	P	**P**	**03 10 33.8**	**+1.0**
FLWY	**Flagg Ranch**	78.10	359	IAmb	IAmb	03 10 44.7	
	comp=Z,30nm,1.6s						
I07A	**Izee**	78.62	353	IAmb	IAmb	03 10 45.5	
	comp=Z,14nm,1.1s						
YMR	**Madison River**	78.69	359	P	**P**	**03 10 38.3**	**+0.7**
YMR				IAmb	IAmb	03 10 54.2	
	comp=Z,11nm,1.2s						
LAO	**LASA Array**	80.75	2	IAmb	IAmb	03 10 55.8	
	comp=Z,10nm,1.0s						
E03A	**Lebam**	81.55	350	P	**P**	**03 10 54.4**	**+1.8**
NEW	**Newport**	82.56	355	P	**P**	**03 10 59.5**	**+1.6**
NEW				IAmb	IAmb	03 11 08.0	
	comp=Z,13nm,1.2s						
STKA	**Stephens Creek**	86.17	234	LR	LR	03 44 25.0	
	comp=Z,102nm,18.5s,baz=196,slow=32						
YKA	**Yellowknife Ar**	96.62	358	P	**P**	**03 12 04.1**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=171,slow=4.8,SNR=5.9						
ASAR	**Alice Springs**	96.65	236	LR	LR	03 49 45.7	
	comp=Z,76nm,19.1s,baz=174,slow=32						
NJ2	**Nanjing**	139.82	281	*e*PKP	**PKPdf**	**03 18 03.8**	**+0.2**
MNK	**Minsk**	144.22	43	*i* PKP	**PKPab**	**03 18 08.6**	**0.0**
	comp=E,1.0nm,0.8s						
MNK				*i* PKP	**PKPab**	**03 18 08.6**	**0.0**
	comp=N,6.0nm,0.8s						
MNK				*i* PKP	**PKPab**	**03 18 08.6**	**0.0**
	comp=Z,15nm,0.8s,baz=286						
MNK				*i* PP	**PP**	**03 21 24.1**	**-1.9**
MNK				*i* SKP		03 21 43.4	
MNK				*i* PKS	**PKSdf**	**03 21 44.2**	**-1.9**
MNK				*i* PPP	PPP	03 24 35.9	
MNK				*i* SKS	**SKSdf**	**03 25 18.4**	**-1.5**
MNK				*i* SKKS	**SKKSdf**	**03 34 32.4**	**-1.0**
MNK				*i* SS	**SS**	**03 40 11.2**	**-0.1**
MNK				*i* SSS	SSS	03 45 37.8	
MNK				*i* LR	LR	04 19 50.1	
MNK				*i* LRM	MLR	04 23 37.6	
	comp=Z,51nm,6.7s						
MNK				*i* LRM	MLR	04 23 49.4	
	comp=N,132nm,15.3s						
MNK				*i* LRM	MLR	04 23 55.1	
	comp=E,22nm,17.2s						
AKASG	**Malin Array Be**	145.97	49	PKPbc	**PKPdf**	**03 18 12.8**	**-1.0**
	comp=E,3.8nm,0.9s,baz=272,slow=3.8,SNR=11						
AKASG	**Malin Array Be**	145.97	49		**PKPdf**	**03 18 13.7**	**-0.1**
KLMR	**Klimovskoe**	146.83	27	*e*PKPdf	**PKPdf**	**03 18 15.3**	**+0.3**
KLMR				AMP		03 18 23.9	
	comp=Z,35nm,1.5s						
HHC	**Hu-ho-hao-te**	147.10	294	*e*PKPbc	**PKPdf**	**03 18 12.5**	**-3.8**
BTO	**Baotou**	148.27	293	*e*PKPbc	**PKPdf**	**03 18 15.5**	**-2.7**
XAN	**Xi'an**	148.39	280	PKPbc	**PKiKP**	**03 18 24.0**	**+0.3**
XAN				PKPab	**sPKPab**	**03 18 32.0**	**+3.4**
SONM	**Songino Array**	150.12	308	PKPbc	**PKPbc**	**03 18 26.4**	**+0.4**
	comp=Z,5.5nm,0.9s,baz=142,slow=2.1,SNR=25						
SONM	**Songino Array**	150.12	308	PKPbc	**PKPbc**	**03 18 25.6**	**-0.5**
CMAR	**Chiang Mai Arr**	150.17	245	PKPbc	**PKiKP**	**03 18 28.4**	**+0.6**
	comp=Z,2.2nm,0.4s,baz=186,slow=1.6,SNR=19						
CMAR	**Chiang Mai Arr**	150.17	245	PKPbc	**PKPbc**	**03 18 27.2**	**+0.3**
BRTR	**Keskin Array B**	150.20	69	PKPbc	**PKPbc**	**03 18 24.9**	**-1.7**
	comp=Z,6.2nm,1.1s,baz=222,slow=1.7,SNR=8.3						
BRTR	**Keskin Array B**	150.20	69		**PKPbc**	**03 18 24.6**	**-2.0**
KMI	**Kunming**	150.67	260	⇑PKPbc	**PKPdf**	**03 18 21.0**	**-1.7**
KMI				pPKP	sPKPdf	03 18 26.5	+0.5
KMI				sPKP		03 18 29.0	
CD2	**Chengdu**	151.90	272	PKPbc	**PKPdf**	**03 18 23.0**	**-1.2**
LZH	**Lanzhou**	152.82	283	*e*PKPbc	**PKiKP**	**03 18 34.0**	**+1.1**
LZH				sPKP		03 18 44.8	
GTA	**Gaotai**	156.12	291	*e*PKP	**PKPdf**	**03 18 30.3**	**+0.3**
GTA				PKPab	**pPKPab**	**03 19 00.5**	**+0.4**
ZALV	**Zalesovo Beam**	158.00	337	PKP	**PKPdf**	**03 18 30.4**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=180,slow=2.5,SNR=5.2						
ZALV				PKPab	**PKPab**	**03 19 05.9**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=336,slow=3.2,SNR=1.8						
ZALV	**Zalesovo Beam**	158.00	337		**PKPdf**	**03 18 29.8**	**-1.9**
ZALV				PKPab	**PKPab**	**03 19 05.1**	**+0.1**
WMQ	**Urumqi**	163.72	310	*e*PKP	**PKPdf**	**03 18 39.0**	**+0.7**
WMQ				LR	LR		
	comp=Z,230nm,22.5s						
MKAR	**Makanchi Array**	164.75	328	PKP	**PKPdf**	**03 18 40.0**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=56,slow=2.6,SNR=3.0						

*GCG **30** 03:25:30.3±0.3, 13°.65N×91°.39W, $h62^{km}\pm36^{km}$, MD4.7*

*INET **30** 03:25:34.4, 14°.13N×91°.09W, $h8^{km}$, ML5.3*

*IDC **30** 03:25:34.0±0.6, 14°.37N×90°.80W, $h84^{km}\pm3^{km}$, mb4.3/24, mb1 4.5/27, mb1mx4.3/41, mbtmp4.6/27, MS3.8/16, Ms1 3.8/16, ms1mx3.7/23, Error ellipse: s-maj=18.1km s-min=8.9km az=54.0*

*NEIC **30** 03:25:34, 14°.13N×91°.12W, $h86^{km}$, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-2.32; $M_{\theta\theta}$1.80; $M_{\phi\phi}$0.52; $M_{r\theta}$3.41; $M_{\theta\phi}$-0.80; $M_{\phi r}$-0.42; Fault plane solution: $M_0$4.11000×10^{16} NP1:ϕ_s126.51000°, δ18.01000°, λ-65.09000°. NP2:ϕ_s280.48000°, δ73.71000°, λ-97.80000°. Principal axes: T 3.9602, Plg28.0000°, Azm17.0000°; N 0.2838, Plg7.0000°, Azm283.0000°; P -4.2440, Plg61.0000°, Azm179.0000°;*

*NEIC **30** 03:25:34.0±1.7, 14°.14N±0°.07×91°.11W±0°.07, $h81^{km}\pm1^{km}$, mb4.9/254, Mwr5.0/20, Md5.2(SNET) Error ellipse: s-maj=12.3km s-min=6.9km az=222.0*

*UCR **30** 03:25:34.4±1.1, 14°.07N×91°.19W, $h66^{km}\pm12^{km}$, ML5.0, mb5.0(NEIC)*

*SNET **30** 03:25:35.1±0.9, 14°.13N×91°.10W, $h25^{km}\pm5^{km}$, ML5.1*

*GCMT **30** 03:25:35.0±0.3, 14°.19N±0°.01×91°.21W±0°.02, $h76^{km}\pm4^{km}$, MW5.0/85, Moment Tensor Solution. s44,c52; s85,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.17±.17; $M_{\theta\theta}$0.02±.17; $M_{\phi\phi}$0.14±.17; $M_{r\theta}$3.55±.08; $M_{\theta\phi}$-1.40±.15; $M_{\phi r}$-1.16±.09; Best double couple: $M_0$3.95200×10^{16} NP1:ϕ_s186.00000°, δ18.00000°, λ-10.00000°. NP2: ϕ_s285.00000°, δ87.00000°, λ-108.00000°. Principal axes: T 4.2750, Plg39.0000°, Azm31.0000°; N -0.6460, Plg18.0000°, Azm286.0000°; P -3.6290, Plg45.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **30** 03:25:35.0±0.0, 14°.20N×91°.00W, $h88^{km}$, mB5.3/2, Ms5.2/2, Ms7 4.8/3*

ISC 30 03:25:33.2±0.4, **14°.16N**±0°.05×**91°.11W**±0°.05, **$h84^{km}$**$\pm3^{km}$, **$h84^{km}$:pP-P, n639,** σ**1ˢ25**/633, **mb4.9**/131, **7C-15D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	0.39	42	⇓*i*P	**Pn**	**03 25 48.5**	**+1.8**
PCG	**Pacaya**	0.54	65	⇓*i*P	**Pn**	**03 25 50.1**	**+2.2**
RTAL	**Retalhuleu**	0.67	303	⇓*i*P	**Pn**	**03 25 48.3**	**-0.6**
RTAL	**Retalhuleu**	0.67	303	Pn	**Pn**	**03 25 48.4**	**-0.6**
RTAL				Sn	**Sn**	**03 25 58.8**	**-1.8**
STG3	**Santiaguito 3,**	0.70	321	⇓*i*P	**Pn**	**03 25 50.0**	**+0.6**
NBG	**Las Nubes**	0.85	60	*e*P	**Pn**	**03 25 54.4**	**+3.3**
HUEH	**Huehuetenango**	1.21	342	⇓*i*P	**Pn**	**03 25 57.1**	**+1.8**
HUEH				*e*S	**Sn**	**03 26 15.2**	**+3.4**
HUEH	**Huehuetenango**	1.21	342	Pn	**Pn**	**03 25 57.1**	**+1.8**
HUEH				Sn	**Sn**	**03 26 12.7**	**+0.8**
SLOZ	**Alcaldia de Sa**	1.29	96	*i* P	**Pn**	**03 25 58.0**	**+1.9**
NUBE	**Las Nubes**	1.32	101	⇓*i*P	**Pn**	**03 25 58.1**	**+1.7**
NUBE	**Las Nubes**	1.32	101	⇓*i*P	**Pn**	**03 25 58.1**	**+1.7**
RTR	**El Retiro**	1.45	100	*i* P	**Pn**	**03 26 00.1**	**+2.0**
RTR	**El Retiro**	1.45	100	*i* P	**Pn**	**03 26 00.1**	**+2.0**
SBLS	**San Blas**	1.48	102	*e*P	**Pn**	**03 26 00.5**	**+1.9**
SBLS	**San Blas**	1.48	102	*e*P	**Pn**	**03 26 00.5**	**+1.9**
CEVE	**Cerro Verde**	1.48	103	*e*P	**Pn**	**03 26 00.8**	**+2.2**
CEVE	**Cerro Verde**	1.48	103	*e*P	**Pn**	**03 26 00.8**	**+2.2**
UNIC	**Universidad Ca**	1.53	97	*e*P	**Pn**	**03 26 00.8**	**+1.8**
UNIC	**Universidad Ca**	1.53	97	*e*P	**Pn**	**03 26 00.8**	**+1.8**
JAYA	**Jayaque - finc**	1.69	107	⇓*i*P	**Pn**	**03 26 02.8**	**+1.5**
JAYA				IAML		03 26 27.5	
	comp=Z,26µm,0.3s						
JAYA	**Jayaque - finc**	1.69	107	⇓*i*P	**Pn**	**03 26 02.8**	**+1.5**
JAYA				IAML		03 26 27.5	
	comp=Z,26µm,0.3s						
CEDA	**San Andres**	1.70	102	*e*P	**Pn**	**03 26 03.4**	**+2.1**
CEDA				IAML		03 26 50.7	
	comp=Z,18µm,0.5s						
CEDA	**San Andres**	1.70	102	*e*P	**Pn**	**03 26 03.4**	**+2.1**
CEDA				IAML		03 26 50.7	
	comp=Z,18µm,0.5s						
MTO3	**Montecristo**	1.71	82	*e*P	**Pn**	**03 26 03.3**	**+1.7**
MTO3	**Montecristo**	1.71	82	*e*P	**Pn**	**03 26 03.3**	**+1.7**
MTO3	**Montecristo**	1.71	82	Pn	**Pn**	**03 26 03.0**	**+1.4**
TACO	**Tacachico**	1.71	96	*i* P	**Pn**	**03 26 03.0**	**+1.5**
TACO	**Tacachico**	1.71	96	*i* P	**Pn**	**03 26 03.0**	**+1.5**
ESQI	**Esquipulas**	1.76	77	*e*P	**Pn**	**03 26 04.0**	**+1.8**
ESQI	**Esquipulas**	1.76	77	Pn	**Pn**	**03 26 03.5**	**+1.3**
BOQS	**Boqueron**	1.83	103	⇑*e*P	**Pn**	**03 26 05.2**	**+2.0**
BOQS	**Boqueron**	1.83	103	⇑*e*P	**Pn**	**03 26 05.2**	**+2.0**
MAGS	**Ministerio de**	1.83	105	*e*P	**Pn**	**03 26 05.0**	**+1.9**
MAGS				IAML		03 26 39.0	
	comp=Z,29µm,0.4s						
ITCA	**Escuela Especi**	1.84	105	*e*P	**Pn**	**03 26 05.2**	**+2.0**
ITCA	**Escuela Especi**	1.84	105	*e*P	**Pn**	**03 26 05.2**	**+2.0**
LALI	**Alcalda de L**	1.86	111	*e*P	**Pn**	**03 26 05.2**	**+1.8**
LALI	**Alcalda de L**	1.86	111	*e*P	**Pn**	**03 26 05.2**	**+1.8**
UEES	**Universidad Ev**	1.87	103	*e*P	**Pn**	**03 26 05.9**	**+2.3**
UEES	**Universidad Ev**	1.87	103	*e*P	**Pn**	**03 26 05.9**	**+2.3**
SNET	**Serv Nac Est T**	1.88	104	*e*P	**Pn**	**03 26 05.7**	**+1.9**
SNET				IAML		03 26 35.4	
	comp=Z,12µm,0.3s						
SNET	**Serv Nac Est T**	1.88	104	*e*P	**Pn**	**03 26 05.7**	**+1.9**
SNET				IAML		03 26 35.4	
	comp=Z,12µm,0.3s						
SNET	**Serv Nac Est T**	1.88	104	Pn	**Pn**	**03 26 04.8**	**+1.1**
SEMO	**Seminario San**	1.89	104	*e*P	**Pn**	**03 26 06.2**	**+2.5**
OPAM	**Oficina de Pla**	1.91	103	*e*P	**Pn**	**03 26 06.2**	**+2.1**
OPAM	**Oficina de Pla**	1.91	103	*e*P	**Pn**	**03 26 06.2**	**+2.1**
IGN	**Direccin Gen**	1.94	103	*e*P	**Pn**	**03 26 06.4**	**+2.0**
IGN	**Direccin Gen**	1.94	103	*e*P	**Pn**	**03 26 06.4**	**+2.0**
AEIL	**Aeropuerto Ilo**	1.99	103	*e*P	**Pn**	**03 26 07.5**	**+2.3**
AEIL	**Aeropuerto Ilo**	1.99	103	*e*P	**Pn**	**03 26 07.5**	**+2.3**
LBRS	**Las Brisas**	2.05	102	⇑*i*P	**Pn**	**03 26 08.2**	**+2.2**
LBRS	**Las Brisas**	2.05	102	⇑*i*P	**Pn**	**03 26 08.2**	**+2.2**
LFRS	**El Faro**	2.06	105	⇑*i*P	**Pn**	**03 26 07.9**	**+1.8**
LFRS	**El Faro**	2.06	105	⇑*i*P	**Pn**	**03 26 07.9**	**+1.8**
LLGN	**La Laguna**	2.10	90	*e*P	**Pn**	**03 26 08.4**	**+1.8**
LLGN	**La Laguna**	2.10	90	*e*P	**Pn**	**03 26 08.4**	**+1.8**
PAVA	**Las Pavas**	2.16	102	⇓*i*P	**Pn**	**03 26 09.4**	**+2.0**
PAVA	**Las Pavas**	2.16	102	⇓*i*P	**Pn**	**03 26 09.4**	**+2.0**
CCIG	**Comitan**	2.33	335	Pn	**Pn**	**03 26 11.2**	**+1.4**
TECO	**Alcaldia de Te**	2.35	105	*i* P	**Pn**	**03 26 11.8**	**+2.0**
SCLA	**Alcaldia de Sa**	2.36	101	⇓*i*P	**Pn**	**03 26 12.1**	**+2.1**
SCLA	**Alcaldia de Sa**	2.36	101	⇓*i*P	**Pn**	**03 26 12.1**	**+2.1**
COEB	**Comit de Eme**	2.59	104	*e*P	**Pn**	**03 26 15.1**	**+1.9**
COEB	**Comit de Eme**	2.59	104	*e*P	**Pn**	**03 26 15.1**	**+1.9**
ALJI	**Alcalda de J**	2.60	108	*e*P	**Pn**	**03 26 15.4**	**+2.1**
ALJI	**Alcalda de J**	2.60	108	*e*P	**Pn**	**03 26 15.4**	**+2.1**
LCY	**Lacayo**	2.83	105	*e*P	**Pn**	**03 26 18.8**	**+2.3**
LCY	**Lacayo**	2.83	105	*e*P	**Pn**	**03 26 18.8**	**+2.3**
PETF	**Flores**	2.99	23	⇑*i*P	**Pn**	**03 26 21.9**	**+3.4**
PETF	**Flores**	2.99	23	Pn	**Pn**	**03 26 20.6**	**+2.1**
LCND	**La Caada**	3.24	105	⇓*e*P	**Pn**	**03 26 23.9**	**+2.0**
LCND	**La Caada**	3.24	105	⇓*e*P	**Pn**	**03 26 23.9**	**+2.0**
TGUH	**Tegucigalpa,Un**	3.72	91	Pn	**Pn**	**03 26 29.6**	**+1.0**
CRIN	**San Cristobal**	4.21	110	Pn	**Pn**	**03 26 35.6**	**+0.5**
CMIG	**Matias Romero**	4.66	309	P	**Pn**	**03 26 41.7**	**+0.6**
	comp=Z,34nm,0.3s,baz=145,slow=7.6,SNR=102						
CMIG				S	**Sn**	**03 27 33.3**	**-0.7**
	comp=Z,46nm,0.3s,baz=56,slow=18,SNR=3.8						
MATN	**Matagalpa**	5.19	103	Pn	**Pn**	**03 26 48.2**	**-0.2**
BOAB	**BOACO BROADBAN**	5.57	107	Pn	**Pn**	**03 26 53.6**	**0.0**

ACON	Acoyapa	6.18	110	Pn	Pn	03 27 01.9	0.0
HZTE	Horizontes, Gu	6.38	122	Pn	Pn	03 27 05.9	+1.2
GBS3	Finca Las Img	6.46	121	eP	Pn	03 27 08.7	+2.9
LAPC	Finca la Perla	6.49	121	eP	Pn	03 27 08.6	+2.4
BUEV	Buena Vista	6.50	120	eP	Pn	03 27 08.5	+2.2
BUAI	Buenos Aires	6.52	119	eP	Pn	03 27 08.3	+1.8
LIM1	Limonal	6.68	120	eP	Pn	03 27 11.2	+2.5
ORTG	Ortega, Santa	6.69	124	Pn	Pn	03 27 10.4	+1.5
GUAB	Guayabo de Bag	6.69	120	eP	Pn	03 27 11.1	+2.2
GUAI	GUAI	6.70	125	eP	Pn	03 27 11.6	+2.6
COLC	Colonia	6.74	120	eP	Pn	03 27 12.5	+3.0
CUI	Cuipilapa	6.77	120	eP	Pn	03 27 13.0	+3.0
DUNO	Dulce Nombre,	6.83	126	Pn	Pn	03 27 12.9	+2.1
ACAL	Aguas Claras	6.89	120	eP	Pn	03 27 14.1	+2.4
PTEN	Parque Tenorio	6.89	119	eP	Pn	03 27 13.7	+2.1
ESPN	Las Esperanzas	6.91	106	Pn	Pn	03 27 11.2	-0.7
JTS	Las Juntas de	7.14	122	P	Pn	03 27 15.1	0.0
FORC	Fortuna	7.29	120	eP	Pn	03 27 20.3	+3.3
CAO2	Cobano, Puntar	7.37	126		Pn	03 27 17.8	-0.3
COVE	Coope Vega, Sa	7.39	117	Pn	Pn	03 27 19.6	+1.2
TLIG	Tlapa	7.93	296	Pn	Pn	03 27 26.5	+0.6
HDC	Heredia	7.99	120	Pn	Pn	03 27 26.7	-0.1
CVTR	Volcan Turrial	8.28	119	Pn	Pn	03 27 31.1	+0.1
RIMA	Rio Macho	8.33	121	Pn	Pn	03 27 32.9	+1.5
PEZE	Perez Zeledon,	8.69	122	Pn	Pn	03 27 36.0	-0.3
SRBA	San Rafael, Bu	9.03	122		Pn	03 27 41.5	+0.6
EDPN	Palmar Norte	9.11	124	eP	Pn	03 27 45.2	+3.4
EDBA	Buenos Aires	9.14	122	eP	Pn	03 27 45.1	+2.7
RIOS	Rincon, Osa	9.21	125	Pn	Pn	03 27 43.3	0.0
EDSV	San Vito	9.58	123	eP	Pn	03 27 51.5	+3.1
CDITO	Canoas	9.80	124		Pn	03 27 52.0	+0.7
BRU2	Volcan	9.82	122		Pn	03 27 53.3	+1.5
MOIG	Morelia	11.09	301	Pn	Pn	03 28 10.2	+1.0
SOR	Soroa	11.52	41	Pn	Pn	03 28 14.9	+0.2
MTDJ	Mount Denham	13.65	71	eP	P	03 28 51.4	+2.2
ZAIG	Zacatecas	13.83	310		Pn	03 28 45.7	-0.1
735A	Kenedy	15.89	338	P	Pn	03 29 13.3	+1.4
735A				IAmb	IAmb	03 29 16.3	
	comp=Z,80nm,1.1s						
833A	Chaparral WMA,	16.06	333	P	P	03 29 16.0	+0.1
	baz=150						
SJCC	San Jacinto, C	16.15	103	eP	P	03 29 16.7	-0.3
SJCC	San Jacinto, C	16.15	103	Pn	Pn	03 29 14.1	-1.2
DBBC	Dabeiba	16.27	114	eP	P	03 29 18.6	+0.2
DWPF	Disney Wildern	16.54	31	P	Pn	03 29 21.1	+1.0
DWPF	Disney Wildern	16.54	31	P	P	03 29 21.6	+0.4
	baz=215						
UREC	San Jos de Ur	16.56	111	eP	P	03 29 21.2	-0.4
441A	DeRidder	16.62	354		P	03 29 22.2	+0.2
CBOC	Ciudad Bolivar	16.99	118	eP	P	03 29 28.0	+1.6
656A	Willston	17.09	26		Pn	03 29 27.8	+1.0
553A	Crawfordville	17.10	20		Pn	03 29 27.8	+0.9
451A	Vernon	17.11	16		P	03 29 28.2	+0.8
342A	Flagon Creek P	17.17	356		P	03 29 29.2	+1.1
346A	Big Creek Wild	17.21	5		P	03 29 29.4	+0.8
344A	Westbrook Farm	17.21	1		P	03 29 29.2	+0.6
HELC	Santa Helena	17.25	116	eP	P	03 29 29.9	+0.4
PLMC	San Jos del P	17.26	121	eP	P	03 29 30.5	+1.2
ZARC	Zaragoza, Cauc	17.28	111	eP	Pn	03 29 29.3	+0.1
ZARC	Zaragoza, Cauc	17.28	111	P	P	03 29 29.5	+0.1
BRAL	Brewton	17.33	12	P	Pn	03 29 30.6	+0.9
BRAL	Brewton	17.33	12	P	Pn	03 29 31.3	+1.5
	baz=193,SNR=12						
SMLC	San Martn de	17.52	106	eP	P	03 29 31.1	-1.1
435B	Jarrell	17.58	341		Pn	03 29 33.8	+1.1
435B	Jarrell	17.58	341	P	Pn	03 29 33.9	+1.1
	baz=159						
YOTC	Yotoco, Valle	17.73	123	eP	Pn	03 29 36.8	+2.0
NATX	Nacogdoches	17.82	350	P	P	03 29 35.7	+0.5
NATX	Nacogdoches	17.82	350	P	Pn	03 29 36.2	+0.6
	baz=169						
GUY2C	Guyana, Caldas	17.87	118	eP	Pn	03 29 38.5	+1.6
VBMS	Vicksburg	17.98	2	P	Pn	03 29 38.2	+0.6
VBMS	Vicksburg	17.98	2	P	Pn	03 29 38.8	+1.2
	baz=182,SNR=8.0						
PTBC	PUERTO BERRIO,	18.04	113	eP	P	03 29 37.5	-0.3
JCT	Junction City	18.11	335		Pn	03 29 40.0	+0.8
JCT	Junction City	18.11	335	P	Pn	03 29 39.8	+0.6
	baz=152,SNR=11						
NORC	Norcasia	18.13	117	eP	Pn	03 29 39.4	-0.2
352A	Blakely	18.15	17	P	Pn	03 29 41.5	+1.9
ANIL	Santa Ana	18.22	120	eP	Pn	03 29 42.7	+1.7
237A	Washetta, Mont	18.27	347	P	P	03 29 39.7	-0.5
237A				IAmb	IAmb	03 29 44.5	
	comp=Z,71nm,1.4s						
250A	Grady	18.28	13	P	Pn	03 29 41.8	+0.6
250A				IAmb	IAmb	03 29 46.3	
	comp=Z,164nm,1.2s						
POPC	Popayan, Colom	18.35	128	eP	Pn	03 29 44.3	+1.9
OCAC	Ocana	18.41	107	eP	P	03 29 41.5	-0.6
OCAC	Ocana	18.41	107	P	P	03 29 41.4	-0.7
143A	Socs Landing,	18.46	359	P	P	03 29 42.9	+0.7
BRRC	Barranca, Sant	18.47	111	eP	P	03 29 43.0	+0.5
456A	Hilliard	18.49	25	P	P	03 29 43.7	+1.1
146A	Union	18.49	5	P	P	03 29 43.6	+1.0
TIGA	Tifton	18.53	21	P	P	03 29 43.4	+0.4
TIGA	Tifton	18.53	21	P	P	03 29 44.3	+1.3
	baz=203						
HPIG		18.61	315	P	P	03 29 44.5	+0.3
SOTA	Rioblanco	18.66	129	eP	Pn	03 29 50.0	+3.6
OTAV	Otavalo	18.66	137	eP	Pn	03 29 47.6	+1.2
OTAV	Otavalo	18.66	137	eP	Pn	03 29 47.1	+0.7
OTAV	Otavalo	18.66	137	P	P	03 29 44.7	-0.4
ORTC	Ortega, Tolima	18.67	122	eP	Pn	03 29 47.6	+1.5
WHTX	Lake Whitney,	18.68	343	P	P	03 29 45.0	+0.3
WHTX	Lake Whitney,	18.68	343	P	P	03 29 45.3	+0.7
	baz=160,SNR=10.0						
SPBC	San Pablo de B	18.78	115	eP	P	03 29 46.0	-0.1
ROSC	El Rosal	18.96	118	P	P	03 29 48.6	+0.3
	comp=Z,5.0nm,0.3s,baz=282,slow=23,SNR=13						
ROSC				LR	LR	03 37 50.8	
	comp=Z,108nm,21.1s,baz=44,slow=39						
ROSC	El Rosal	18.96	118	P	Pn	03 29 49.6	-0.2
ROSC				IAmb	IAmb	03 29 53.4	
	comp=Z,46nm,0.7s						
Z41A	Richland Creek	19.07	356	P	P	03 29 49.7	+0.7
	baz=175						
PRAC	Prado	19.08	121	eP	Pn	03 29 51.3	+0.4
Z47A	Carrollton	19.15	8	P	P	03 29 50.6	+0.7
Z47A				IAmb	IAmb	03 29 57.2	
	comp=Z,131nm,1.1s						
BARC	Barichara	19.16	111	eP	P	03 29 50.1	-0.3
PAMC	Pamplona, Colo	19.31	109	eP	P	03 29 52.5	+0.3
Z38A	Mt. Pleasant	19.34	350	P	P	03 29 52.9	+1.0
255A	Hazlehurst	19.37	23	P	P	03 29 52.7	+0.5
255A				IAmb	IAmb	03 30 09.5	
	comp=Z,168nm,1.4s						
GARC	Garzon, Huila	19.48	126	eP	Pn	03 29 57.1	+1.2
WLAR	White Oak Lake	19.52	355	P	P	03 29 54.2	+0.3
RUSC	La Rusia	19.55	113	eP	P	03 29 54.5	-0.3
CHIC	Chingaza	19.57	117	eP	Pn	03 29 56.4	-0.7
SDDR	Presa de Saban	19.59	73	eP	Pn	03 29 56.9	0.0
Y45A	Yeager Farm, C	19.67	4	P	P	03 29 57.0	+1.5
Y45A				IAmb	IAmb	03 30 10.0	
	comp=Z,140nm,1.2s						
CFLOR	Florencia	19.74	128	eP	Pn	03 30 02.3	+3.7
FLOC	Florencia	19.74	128	eP	Pn	03 29 59.2	+0.5
VILC	Villavicencio,	19.87	119	eP	Pn	03 30 00.8	+0.6
ABTX	Abilene, Hawle	19.96	338	P	P	03 29 59.6	+0.9
	baz=155,SNR=25						
Y49A	Blount Mountai	20.07	11	P	P	03 29 58.6	-1.2
Y49A				IAmb	IAmb	03 30 04.8	
	comp=Z,85nm,0.9s						
SC01	Santiago de lo	20.20	72	P	P	03 30 02.2	+0.8
X40A	Basin Creek Fa	20.30	356	P	P	03 30 03.1	+0.9
X40A				IAmb	IAmb	03 30 05.6	
	comp=Z,70nm,1.4s						
X40A	Basin Creek Fa	20.30	356	P	P	03 30 02.9	+0.7
	baz=175,SNR=13						
GOGA	Godfrey	20.39	19	P	P	03 30 04.7	+1.5
GOGA				IAmb	IAmb	03 30 19.2	
	comp=Z,94nm,1.0s						
GOGA	Godfrey	20.39	19	P	P	03 30 04.6	+1.3
	baz=202,SNR=15						
MIAR	Mount Ida	20.42	354	P	P	03 30 05.3	+1.8
MIAR				IAmb	IAmb	03 30 23.1	
	comp=Z,42nm,0.9s						
MIAR	Mount Ida	20.42	354	P	P	03 30 04.3	+0.8
	baz=173,SNR=10						
TAMC	Tame, Arauca	20.49	110	eP	P	03 30 04.1	-0.4
LOOK	Love County	20.50	345	P	P	03 30 05.2	+0.7
X48A	Hartselle	20.53	10	P	P	03 30 05.6	+0.7
X48A				IAmb	IAmb	03 30 21.2	
	comp=Z,58nm,0.8s						
Y52A	Lilburn	20.63	17	P	P	03 30 06.3	+0.4
Y52A				IAmb	IAmb	03 30 10.6	
	comp=Z,72nm,0.7s						
SOCV	Socops	20.70	104	eP	P	03 30 05.5	-1.3
X37A	Clayton	20.70	350		P	03 30 07.9	+1.3
X37A				IAmb	IAmb	03 30 26.6	
	comp=Z,89nm,1.1s						
SDV	Santo Domingo	20.73	102	eP	P	03 30 05.8	-1.6
SDV	Santo Domingo	20.73	102	eP	P	03 30 06.4	-0.9
SDV	Santo Domingo	20.73	102	P	P	03 30 06.2	-1.2
SDV				IAmb	IAmb	03 30 13.6	
	comp=Z,42nm,0.7s						
FPAL	Fort Paine	20.89	13	P	P	03 30 10.3	+1.6
FPAL				IAmb	IAmb	03 30 13.2	
	comp=Z,59nm,0.9s						
W41B	Gary Mavity, V	20.95	357	P	P	03 30 09.6	+0.3
	baz=177,SNR=9.8						
WHAR	Wooly Hollow	21.07	357	P	P	03 30 11.1	+0.6
WHAR				IAmb	IAmb	03 30 14.0	
	comp=Z,61nm,1.1s						
W39A	Magazine	21.08	354	P	P	03 30 11.1	+0.4
W39A	Magazine	21.08	354	P	P	03 30 11.3	+0.6
	baz=173,SNR=10						
X51A	Calhoun	21.09	14	P	P	03 30 11.9	+1.1
X51A				IAmb	IAmb	03 30 19.4	
	comp=Z,42nm,0.9s						
X34A	Smith Ranch, M	21.24	345		P	03 30 11.1	-1.3
HBAR	Harrisburg	21.31	1	P	P	03 30 13.1	0.0
NHSC	New Hope	21.32	26	P	P	03 30 16.1	+2.8
NHSC	New Hope	21.32	26	P	P	03 30 13.7	+0.4
	baz=210,SNR=6.8						
LPAR	Lepanto	21.36	2	P	P	03 30 13.0	-0.7
LPAR				IAmb	IAmb	03 30 17.3	
	comp=Z,124nm,1.2s						
SWET	Sewanee	21.48	12	P	P	03 30 16.4	+1.4
SWET				IAmb	IAmb	03 30 18.3	
	comp=Z,44nm,0.8s						
HODGE	Hodges	21.53	20	P	P	03 30 16.7	+1.2
HODGE				IAmb	IAmb	03 30 19.0	
	comp=Z,49nm,0.8s						
W50A	Signal Mountai	21.59	13	P	P	03 30 17.1	+0.9
W50A				IAmb	IAmb	03 30 36.6	
	comp=Z,59nm,0.8s						
FCAR	Ozark Folk Cen	21.66	358	P	P	03 30 17.0	+0.1
FCAR				IAmb	IAmb	03 30 19.1	
	comp=Z,41nm,0.9s						
GNAR	Gosnell	21.73	2	P	P	03 30 17.9	+0.2
FNO	Franklin	21.76	346		P	03 30 17.8	-0.2
FNO				IAmb	IAmb	03 30 30.6	
	comp=Z,66nm,1.2s						
MNTX	Cornudas Mount	21.81	326	P	P	03 30 19.3	+0.7
MNTX				IAmb	IAmb	03 30 22.2	
	comp=Z,68nm,0.9s						
MNTX	Cornudas Mount	21.81	326	P	P	03 30 19.6	+1.0
	baz=140,SNR=76						
LCAR	Lake Charles	21.82	360	P	P	03 30 18.5	-0.1
LCAR				IAmb	IAmb	03 30 29.9	
	comp=Z,64nm,1.2s						
W52A	Murphy	21.83	16	P	P	03 30 19.4	+0.7
W52A				IAmb	IAmb	03 30 38.9	
	comp=Z,32nm,0.8s						
V48A	Smith Brothers	21.83	9	P	P	03 30 19.7	+1.0
V48A				IAmb	IAmb	03 30 38.6	
	comp=Z,29nm,0.8s						
OKCFA	Oklahoma City	21.92	346	P	P	03 30 19.2	-0.5
JSC	Jenkinsville	21.93	22	P	P	03 30 20.2	+0.4
JSC				IAmb	IAmb	03 30 22.4	
	comp=Z,24nm,0.6s						
CPCT	Cooper Cave	22.01	14	P	P	03 30 21.8	+1.2
BG3	Lake Jocassee	22.02	18	P	P	03 30 22.3	+1.6
BG3				IAmb	IAmb	03 30 24.2	
	comp=Z,58nm,0.9s						
TUL1	Leonard	22.06	350	P	P	03 30 20.8	-0.4
	baz=168						
WVT	Waverly	22.07	7	P	P	03 30 20.2	-1.1
WVT				IAmb	IAmb	03 30 31.9	
	comp=Z,78nm,1.1s						
WVT	Waverly	22.07	7	P	P	03 30 21.4	+0.2
	baz=188						
U40A	Yellville	22.16	356	P	P	03 30 21.7	-0.5
	baz=176,SNR=12						
MSTX	Muleshoe	22.38	334	P	P	03 30 24.8	+0.1
	baz=149,SNR=7.9						
U38A	Gravette	22.38	353	P	P	03 30 24.1	-0.5
TKL	Tuckaleechee C	22.40	16	P	P	03 30 24.4	-0.4
	comp=Z,36nm,0.5s,baz=184,slow=8.6,SNR=66						
ELOV	Elorza	22.41	106	eP	P	03 30 23.6	-1.4
PARMO	Parma	22.44	3	P	P	03 30 24.7	-0.5
PARMO				IAmb	IAmb	03 30 26.9	
	comp=Z,68nm,0.8s						
PBMO	Poplar Bluff	22.53	1	P	P	03 30 25.9	-0.2
PBMO				IAmb	IAmb	03 30 37.7	
	comp=Z,52nm,1.1s						
BIRD	Birdtown, Kers	22.55	23	P	P	03 30 26.2	-0.2
BIRD				IAmb	IAmb	03 30 28.6	
	comp=Z,40nm,1.0s						
V52A	Sevierville	22.62	16	P	P	03 30 28.1	+1.0
V52A				IAmb	IAmb	03 30 29.8	
	comp=Z,83nm,1.1s						
Y59A	Loris	22.64	27	P	P	03 30 26.0	-1.4
KMSC	Kings Mountain	22.67	21	P	P	03 30 28.7	+1.0
KMSC				IAmb	IAmb	03 30 30.0	
	comp=Z,73nm,0.8s						
KMSC	Kings Mountain	22.67	21	P	P	03 30 28.1	+0.4
	baz=205,SNR=23						
V53A	Saluda	22.68	18	P	P	03 30 29.0	+1.2
V53A				IAmb	IAmb	03 30 30.0	
	comp=Z,67nm,1.1s						
AMTX	Amarillo	22.73	337	P	P	03 30 28.2	-0.2
	baz=153						
T45A	Paducah	22.87	5	P	P	03 30 28.9	-0.7
BAUV	El Baul	23.18	100	P	P	03 30 29.8	-3.2
TZTN	Tazewell	23.30	16	P	P	03 30 33.3	-0.5
	baz=199,SNR=16						
S44A	Carbondale	23.50	4	P	P	03 30 36.1	+0.6
S44A				IAmb	IAmb	03 30 45.9	
	comp=Z,67nm,1.1s						
121A	Cookes Peak, D	23.79	323	P	P	03 30 40.2	+1.8
	baz=136,SNR=17						
CCM	Cathedral Cave	23.80	360	P	P	03 30 38.3	+0.1
CCM				IAmb	IAmb	03 30 39.5	
	comp=Z,46nm,0.8s						
CCM	Cathedral Cave	23.80	360	P	P	03 30 38.4	+0.1
	baz=180						
CNNC	Cliffs of the	24.13	27	P	P	03 30 41.7	+0.4
	baz=213						
WCI	Wyandotte Cave	24.35	9	P	P	03 30 42.3	-1.0
WCI				IAmb	IAmb	03 30 44.5	
	comp=Z,55nm,1.0s						
WCI	Wyandotte Cave	24.35	9	P	P	03 30 43.5	+0.3
	baz=191						
Y22D	IRIS PASSCAL I	24.46	327	P	P	03 30 44.9	+0.4
	baz=140						
LENM	Lemitar	24.56	327	P	P	03 30 47.3	+1.9
ATAH	Atahualpa	24.64	148	P	P	03 30 48.5	+2.0
	comp=Z,75nm,1.0s,baz=335,slow=5.1,SNR=24						
BLA	Blacksburg	24.86	21	P	P	03 30 48.5	+0.6
	baz=205						
ANMO	Albuquerque	24.90	329	P	P	03 30 50.0	+1.5
	comp=Z,2.6nm,0.4s,baz=135,slow=11,SNR=20						
ANMO				PcP	PcP	03 34 22.9	+0.5
	comp=Z,4.3nm,1.0s,baz=120,slow=5.8,SNR=4.7						
ANMO	Albuquerque	24.90	329	P	P	03 30 50.3	+1.8
ANMO	Albuquerque	24.90	329	P	P	03 30 50.2	+1.6
	baz=142						
KSU1	Kansas State U	25.31	350	P	P	03 30 52.4	+0.4
	baz=167						
TUC	Tucson	25.48	318	P	P	03 30 55.1	+1.4
TUC	Tucson	25.48	318	P	P	03 30 55.8	+2.1
	baz=131						
T25A	Trinidad	25.78	335	P	P	03 30 58.0	+1.5
	baz=149						
P49A	Miami Univ. Ec	25.89	11	P	P	03 30 57.2	0.0
	baz=194						
P52A	Corning	26.57	16	P	P	03 31 03.5	+0.1
	baz=200						
214A	Organ Pipe Nat	26.60	315	P	P	03 31 05.2	+1.4
	baz=127,SNR=19						
SDCO	Great Sand Dun	26.75	334	P	P	03 31 06.4	+1.0
	baz=148						
KSCO	Kaye Shedlock’	26.76	340	P	P	03 31 05.7	+0.4
	baz=155						
W18A	Petrified Fore	26.78	324	P	P	03 31 07.3	+1.8
	baz=137,SNR=23						
CBN	Corbin Frederi	26.87	24	P	P	03 31 06.4	+0.4
	baz=210						
ACSO	Alum Creek Sta	26.93	14	IAmb	IAmb	03 31 07.5	
	comp=Z,22nm,0.8s						
ACSO	Alum Creek Sta	26.93	14	P	P	03 31 06.6	0.0
	baz=198,SNR=5.5						
O52A	Adamsville	27.11	16	IAmb	IAmb	03 31 09.7	
	comp=Z,33nm,0.7s						
MCWV	Mont Chateau	27.26	19	P	P	03 31 10.0	+0.4
	baz=204						
S22A	4UR Ranch, Cre	27.33	332	P	P	03 31 11.4	+0.9
	baz=145						
O53A	New Philadelph	27.40	17	P	P	03 31 11.2	+0.4
	baz=201						
MVCO	Mesa Verde	27.70	329	P	P	03 31 14.4	+0.6
	baz=142,SNR=7.8						
P57A	Homestead Farm	27.73	22	IAmb	IAmb	03 31 16.0	
	comp=Z,29nm,0.9s						
WUAZ	Wupatki	28.00	323	P	P	03 31 18.0	+1.6
WUAZ				IAmb	IAmb	03 31 21.5	
	comp=Z,26nm,0.9s						
WUAZ	Wupatki	28.00	323	P	P	03 31 18.5	+2.1
	baz=134,SNR=23						
O56A	Blue Knob Stat	28.23	21	IAmb	IAmb	03 31 20.0	
	comp=Z,29nm,0.9s						
O56A	Blue Knob Stat	28.23	21	P	P	03 31 19.0	+0.7
	baz=206						
N54A	Moraine State	28.41	18	IAmb	IAmb	03 31 21.3	
	comp=Z,33nm,1.1s						
N54A	Moraine State	28.41	18	P	P	03 31 19.9	+0.1
	baz=203						
GLA	Glamis	28.62	315	P	P	03 31 23.7	+1.9
GLA				IAmb	IAmb	03 31 27.1	
	comp=Z,27nm,1.1s						
GLA	Glamis	28.62	315	P	P	03 31 23.7	+1.9
	baz=126						
M53A	WI Miller and	28.66	16	P	P	03 31 22.5	+0.5
	baz=201						
JFWS	Jewell Farm	28.66	1	P	P	03 31 22.4	+0.4
	baz=182						
SSPA	Standing Stone	28.80	21	P	P	03 31 22.9	-0.4
SSPA				IAmb	IAmb	03 31 23.9	
	comp=Z,44nm,1.4s						
SSPA	Standing Stone	28.80	21	P	P	03 31 23.5	+0.3
	baz=207						
PDMCI	Parker Dam,Lak	28.91	318	P	P	03 31 25.6	+1.3
	baz=128,SNR=10						
P60A	Greenville	28.94	25	P	P	03 31 24.6	+0.1
	baz=212						
U15A	North Rim	29.17	323	IAmb	IAmb	03 31 30.8	
	comp=Z,21nm,1.0s						
SWSC	Sam W. Stewart	29.23	314	P	P	03 31 28.9	+1.8
	baz=124						
IKP	In-Ko-Pah, Jac	29.29	313	P	P	03 31 29.2	+1.5
	baz=123						
BC3	Big Chuckawall	29.40	316	P	P	03 31 30.8	+2.0
	baz=126,SNR=22						
IRM	Iron Mountain	29.48	317	P	P	03 31 31.0	+1.6
	baz=127,SNR=10						
NEE2	Needles Airpor	29.51	318	P	P	03 31 31.1	+1.5
	baz=128						
MONP2	Monument Peak	29.64	313	P	P	03 31 32.8	+1.7
	baz=123						
M57A	Sunshine Farm,	29.69	22	IAmb	IAmb	03 31 32.7	
	comp=Z,38nm,0.8s						
LUPA	Lehigh Univers	29.72	25	IAmb	IAmb	03 31 33.1	
	comp=Z,34nm,0.8s						
N59A	State Game Lan	29.83	24	P	P	03 31 32.4	0.0
	baz=211						
ECSD	EROS Data Cent	29.85	352	P	P	03 31 32.7	+0.2
	baz=169						
KNB	Kanab	29.88	324	IAmb	IAmb	03 31 36.9	
	comp=Z,31nm,0.9s						
O20A	White River Ci	29.92	333	P	P	03 31 34.7	+1.3
	baz=145						
BELC	Belle Mtn. Jos	29.97	316	P	P	03 31 35.1	+1.3
	baz=125,SNR=7.6						
TPFO	Pinon Flats	30.05	314	P	P	03 31 35.7	+1.1
	baz=124						
PFO	Pinyon Flats O	30.06	315	P	P	03 31 34.8	+0.2
	comp=Z,6.0nm,1.0s,baz=126,slow=8.7,SNR=7.1						
PFO	Pinyon Flats O	30.06	315	P	P	03 31 34.5	-0.2
PFO	Pinyon Flats O	30.06	315	P	P	03 31 35.4	+0.7
	baz=124						
LCMT	Little Creek M	30.12	323	P	P	03 31 35.0	-0.2
LCMT				IAmb	IAmb	03 31 38.8	
	comp=Z,19nm,1.1s						
SRU	San Rafael Swe	30.18	329	P	P	03 31 36.5	+0.8
GMRC	Granite Mounta	30.20	317	P	P	03 31 37.0	+1.1
	baz=127,SNR=17						
MTPU	Mount Pierson	30.25	326	P	P	03 31 37.6	+1.1
MTPU				IAmb	IAmb	03 31 41.0	
	comp=Z,26nm,0.9s						
Q16A	Castle Valley	30.36	328	P	P	03 31 37.7	+0.4
SZCU	Shurtz Canyon	30.44	324	P	P	03 31 38.6	+0.5
SZCU				IAmb	IAmb	03 31 41.9	
	comp=Z,30nm,1.0s						
P17A	Butcher Ranch,	30.56	329	P	P	03 31 40.6	+1.5
CCUT	Cedar City	30.56	324	P	P	03 31 41.3	+2.1
CCUT				IAmb	IAmb	03 31 43.3	
	comp=Z,30nm,1.1s						
CCUT					PcP	03 34 38.1	+1.9
MSU	Marysvale	30.59	326	P	P	03 31 41.1	+1.7
MSU					PcP	03 34 37.4	+1.2
MVU	Marysvale	30.60	326	P	P	03 31 41.5	+2.0
TMUT	Trail Mountain	30.66	328	P	P	03 31 40.8	+0.7
PAL	Palisades	30.66	26	P	P	03 31 39.6	-0.1
	baz=214						
HEC	Hector,Ludlow	30.67	317	P	P	03 31 42.2	+2.2
	baz=126,SNR=11						
TUQ	Turquoise Moun	30.76	318	P	P	03 31 42.7	+1.8
	baz=127,SNR=8.9						
TCRU	Three Creeks R	30.80	326	P	P	03 31 41.9	+0.6
TCRU				IAmb	IAmb	03 31 44.8	
	comp=Z,29nm,0.9s						
BINY	Binghamton	30.85	22	P	P	03 31 41.3	-0.1
	baz=209						
SUSD	Miller	30.91	349	P	P	03 31 40.8	-1.1
	baz=165						
SHPR	Sheep Range	30.94	320	P	P	03 31 44.6	+2.2
SHPR				IAmb	IAmb	03 31 46.2	
	comp=Z,21nm,1.3s						
SPMN	Marine on St.	31.00	358	P	P	03 31 42.7	+0.1
	baz=177						
GLMI	Grayling	31.06	9	P	P	03 31 42.6	-0.5
	baz=192						
GSC	Goldstone, Bar	31.26	317	P	P	03 31 46.7	+1.5
GSC	Goldstone, Bar	31.26	317	P	P	03 31 46.4	+1.2
	baz=126						
CIS	Catalina Islan	31.33	312	P	P	03 31 47.6	+1.9
	baz=121						
KSCT	Kent School, K	31.44	26	P	P	03 31 45.9	-0.6
KSCT				IAmb	IAmb	03 31 47.9	
	comp=Z,34nm,0.8s						
PRN	Pahroc Range	31.46	322	P	P	03 31 47.1	+0.1
PRN					PcP	03 34 39.1	+0.7
PSUT	Pine Spring	31.52	325	P	P	03 31 48.5	+0.9
PSUT				IAmb	IAmb	03 31 51.3	
	comp=Z,21nm,1.1s						
NLU	North Lily Min	31.60	328	P	P	03 31 49.6	+1.4
NLU					PcP	03 34 38.5	-0.3
QSM	Queen of Sheba	31.69	318	P	P	03 31 50.8	+1.9
QSM				IAmb	IAmb	03 31 52.6	
	comp=Z,19nm,1.1s						
QSM					PcP	03 34 40.3	+1.4
GWY	Greenwater Val	31.70	318	P	P	03 31 50.8	+1.7
GWY				IAmb	IAmb	03 31 52.8	
	comp=Z,22nm,1.4s						
GWY				PcP	PcP	03 34 40.4	+1.3
JLU	Jordanelle	31.78	330	P	P	03 31 50.7	+0.9
RSSD	Black Hills	31.84	342	P	P	03 31 50.5	+0.2
	baz=156						
TPNV	Topopah Spring	31.90	320	P	P	03 31 51.8	+1.0
TPNV	Topopah Spring	31.90	320	P	P	03 31 52.9	+2.0
	baz=129,SNR=11						
LRMC	Laurel Mtn Rad	31.95	316	P	P	03 31 53.1	+1.8
	baz=125						
CTU	Camp Tracy	31.99	330	P	P	03 31 53.5	+1.9
CTU				IAmb	IAmb	03 31 54.9	
	comp=Z,14nm,1.0s						
FURC	Furnace Creek,	31.99	319	P	P	03 31 53.4	+2.0
	baz=127						
SPR3	Spring Creek 3	32.12	325	P	P	03 31 53.2	+0.3
SPR3				IAmb	IAmb	03 31 56.1	
	comp=Z,30nm,1.2s						
SPR3					PcP	03 34 41.9	+1.5

DUG	Dugway, Tooele	32.15	328		P	03 31 54.8	+1.7
DUG				PcP	PcP	03 34 39.8	-0.5
DUG	Dugway, Tooele	32.15	328	P	P	03 31 54.3	+1.3
	baz=138,SNR=6.2						
MPMC	Manual Prospec	32.16	317	P	P	03 31 54.8	+1.7
	baz=126,SNR=12						
L61B	Northampton	32.37	26	P	P	03 31 55.2	+0.5
	baz=215						
BOAV	Boa Vista	32.39	108	*e*P	P	03 31 52.8	-2.4
R11A	Troy Canyon, C	32.40	323	P	P	03 31 56.1	+0.9
R11A				IAmb	IAmb	03 31 59.3	
	comp=Z,39nm,1.4s						
R11A	Troy Canyon, C	32.40	323	P	P	03 31 57.6	+2.4
	baz=132,SNR=29						
ARVC	Arvin	32.53	315	P	P	03 31 58.1	+1.9
	baz=123						
ISA	Isabella, Lake	32.58	316	P	P	03 31 58.7	+1.9
ISA				IAmb	IAmb	03 32 01.9	
	comp=Z,20nm,1.3s						
ISA					PcP	03 34 42.6	+1.1
ISA	Isabella, Lake	32.58	316	P	P	03 31 58.9	+2.2
	baz=124,SNR=5.4						
GRAC	Grapevine Rang	32.63	319	P	P	03 31 59.3	+2.1
	baz=127,SNR=11						
BW06	Boulder Array	32.64	334	P	P	03 31 58.5	+1.2
	baz=145						
PDAR	Pinedale Array	32.64	334	P	P	03 31 57.3	-0.1
	comp=Z,1.4nm,0.7s,baz=131,slow=9.7,SNR=10						
PDAR				PcP	PcP	03 34 41.4	-0.3
	comp=Z,0.6nm,0.3s,baz=126,slow=4.7,SNR=9.0						
PDAR				ScP	ScP	03 38 19.1	+0.8
	comp=Z,1.7nm,0.9s,baz=134,slow=6.4,SNR=7.3						
PDAR				LR	LR	03 47 02.1	
	comp=Z,130nm,21.2s,baz=144,slow=40						
CWC	Cottonwood Cre	32.77	317	P	P	03 32 00.3	+1.8
	baz=126						
SPUT	South Promonto	32.80	330	IAmb	IAmb	03 32 01.9	
	comp=Z,18nm,1.2s						
BGU	Big Grassy Mou	32.81	329	P	P	03 32 00.4	+1.7
BGU				IAmb	IAmb	03 32 01.9	
	comp=Z,12nm,0.9s						
BGU					PcP	03 34 42.3	+0.2
HRV	Adam Dziewonsk	32.91	27	P	P	03 32 00.6	+1.2
	baz=217						
VES	Vestal, Richgr	33.09	316	P	P	03 32 03.2	+2.1
	baz=124,SNR=8.0						
HVU	Hansel Valley	33.32	330	IAmb	IAmb	03 32 07.2	
	comp=Z,36nm,1.4s						
LONY	Lake Ozonia	33.46	22	P	P	03 32 04.3	+0.1
	baz=210,SNR=5.1						
REDW	Red Top Meadow	33.68	334	IAmb	IAmb	03 32 09.9	
	comp=Z,39nm,1.4s						
SNOW	Snow King Moun	33.72	334	IAmb	IAmb	03 32 10.9	
	comp=Z,25nm,1.1s						
PAGB	Antelope Grade	33.83	315	IAmb	IAmb	03 32 11.7	
	comp=Z,39nm,1.3s						
ELK	Elko	33.83	326	P	P	03 32 09.2	+1.4
	comp=Z,10nm,0.7s,baz=140,slow=7.2,SNR=57						
ELK				PcP	PcP	03 34 45.5	+0.4
	comp=Z,5.1nm,0.9s,baz=185,slow=1.9,SNR=9.8						
ELK	Elko	33.83	326	P	P	03 32 09.5	+1.8
ELK				IAmb	IAmb	03 32 11.2	
	comp=Z,20nm,1.1s						
ELK					PcP	03 34 46.0	+1.0
MLAC	Mammoth, Mammo	33.95	319	P	P	03 32 10.0	+1.1
	baz=126						
NVAR	Mina Array Bea	34.09	320	P	P	03 32 12.0	+1.9
	comp=Z,30nm,0.9s,baz=135,slow=8.4,SNR=156						
NVAR				PcP	PcP	03 34 46.5	+0.6
	comp=Z,8.2nm,0.8s,baz=133,slow=3.5,SNR=14						
NVAR				ScP	ScP	03 38 25.8	+2.4
	comp=Z,4.3nm,0.9s,baz=134,slow=4.6,SNR=15						
NVAR				LR	LR	03 46 42.2	
	comp=Z,130nm,18.2s,baz=136,slow=37						
AGMN	Agassiz Nation	34.26	354	P	P	03 32 11.2	+0.1
	baz=172						
ETMB	Extrema	34.31	133	*e*P	P	03 32 12.5	+0.6
ETMB	Extrema	34.31	133	P	P	03 32 11.6	-0.3
ETMB				IAmb	IAmb	03 32 13.5	
	comp=Z,22nm,0.8s						
MDND	Maddock	34.32	350	IAmb	IAmb	03 32 14.0	
	comp=Z,18nm,0.9s						
MDND	Maddock	34.32	350	P	P	03 32 11.3	-0.3
	baz=165						
RYN	Ryan	34.35	320	IAmb	IAmb	03 32 15.5	
	comp=Z,19nm,1.1s						
KVN	Kaiserville	34.35	321	P	P	03 32 14.1	+1.8
KVN				IAmb	IAmb	03 32 15.3	
	comp=Z,28nm,1.1s						
KVN				PcP	PcP	03 34 46.0	-0.5
RLMT	Red Lodge	34.49	337	P	P	03 32 13.4	0.0
	baz=148						
BMN	Battle Mountai	34.72	324	IAmb	IAmb	03 32 18.4	
	comp=Z,18nm,1.0s						
MACA	Manacapuru-AM	34.73	117	*e*P	P	03 32 15.0	-0.6
MACA	Manacapuru-AM	34.73	117	P	P	03 32 14.9	-0.6
YMR	Madison River	34.78	335	IAmb	IAmb	03 32 19.3	
	comp=Z,14nm,1.4s						
LAO	LASA Array	34.82	342	P	P	03 32 16.6	+0.6
	baz=154						
YERR	Yerington	35.01	320	IAmb	IAmb	03 32 21.2	
	comp=Z,15nm,0.6s						
CMB	Columbia Colle	35.19	318	P	P	03 32 21.2	+1.9
PNTR	Pine Nut	35.30	320	IAmb	IAmb	03 32 23.8	
	comp=Z,18nm,0.9s						
VCNR	Virginia City	35.45	320	IAmb	IAmb	03 32 25.0	
	comp=Z,13nm,1.1s						
HLID	Hailey	35.46	330	IAmb	IAmb	03 32 24.7	
	comp=Z,18nm,1.3s						
HLID	Hailey	35.46	330	P	P	03 32 22.3	+0.6
	baz=139,SNR=13						
PAHR	Pah Rah Range	35.54	321	IAmb	IAmb	03 32 25.5	
	comp=Z,16nm,1.1s						
BOZ	Bozeman (W)	35.81	335	P	P	03 32 24.9	+0.2
	baz=144						
MFID	Camas Ranch	36.04	329	P	P	03 32 27.5	+0.9
MFID				IAmb	IAmb	03 32 30.8	
	comp=Z,10nm,0.9s						
MFID				PcP	PcP	03 34 52.2	+1.0
ULM	Lac du Bonnet	36.20	355	P	P	03 32 26.2	-1.4
	comp=Z,4.6nm,0.5s,baz=176,slow=9.3,SNR=6.7						
ULM				pP	pP	03 32 47.1	-0.9
	comp=Z,4.9nm,0.6s,baz=167,slow=8.3,SNR=3.4						
ULM				LR	LR	03 49 28.6	
	comp=Z,102nm,20.2s,baz=162,slow=40						
ULM	Lac du Bonnet	36.20	355	IAmb	IAmb	03 32 26.7	
	comp=Z,11nm,0.9s						
ORV	Oroville	36.77	319	IAmb	IAmb	03 32 36.7	
	comp=Z,34nm,1.4s						
WVOR	Wild Horse Val	36.85	325	IAmb	IAmb	03 32 36.5	
	comp=Z,27nm,1.1s						
EGMT	Eagleton	37.14	339	P	P	03 32 35.9	0.0
	baz=149						
GDXM	Geysers	37.19	317	IAmb	IAmb	03 32 40.0	
	comp=Z,18nm,1.2s						
PLID	Pearl Lake	37.35	331	IAmb	IAmb	03 32 40.1	
	comp=Z,22nm,1.2s						
J08A	Circle Bar Ran	37.38	326	P	P	03 32 39.8	+1.8
J08A					PcP	03 34 57.1	+1.8
O03E	Paynes Creek	37.38	320	P	P	03 32 39.2	+1.2
	baz=125,SNR=8.9						
MOD	Modoc Plateau	37.45	323	P	P	03 32 38.7	0.0
MOD				IAmb	IAmb	03 32 41.2	
	comp=Z,30nm,1.4s						
MOD					PcP	03 34 57.4	+1.7
D62A	Allapoint, All	37.64	25	IAmb	IAmb	03 32 41.1	
	comp=Z,25nm,0.9s						
LPAZ	La Paz	37.83	142	LR	LR	03 47 05.0	
	comp=Z,119nm,20.7s,baz=325,slow=34						
LPAZ	La Paz	37.83	142	*e*P	P	03 32 43.4	+0.8
LPAZ	La Paz	37.83	142	P	P	03 32 42.6	+0.1
O02D	Mt. Diablo Mer	37.94	319	P	P	03 32 43.4	+0.7
	baz=124,SNR=5.6						
M04C	Macdoel	38.28	322	P	P	03 32 46.3	+0.7
	baz=127,SNR=9.6						
I07A	Izee	38.42	327	IAmb	IAmb	03 32 49.9	
	comp=Z,13nm,1.1s						
PB12	IPOC Station P	38.47	147	P	P	03 32 47.6	+0.2
PB12				IAmb	IAmb	03 32 49.4	
	comp=Z,32nm,1.2s						
KMRM	Mail Ridge	38.55	319	P	P	03 32 49.3	+1.5
M02C	Callahan	38.67	321	P	P	03 32 48.8	0.0
	baz=125						
PB16	IPOC Station P	38.68	146	IAmb	IAmb	03 32 52.6	
	comp=Z,14nm,0.9s						
K04D	Chiloquin, OR	38.74	323	P	P	03 32 50.9	+1.5
	baz=128						
YBH	Yreka Blue Hor	38.78	321	P	P	03 32 50.4	+0.7
	comp=Z,3.1nm,0.5s,baz=173,slow=8.5,SNR=11						
YBH				PcP	PcP	03 34 59.9	+0.2
	comp=Z,3.7nm,0.9s,baz=110,slow=8.4,SNR=3.9						
L04D	Klamath Falls	38.82	322	P	P	03 32 50.8	+0.7
	baz=127,SNR=6.2						
J05D	Fort Rock, OR	38.85	324	P	P	03 32 51.1	+0.7
	baz=129						
PINE	Pine Mountain	39.01	325		P	03 32 52.7	+0.9
PINE				IAmb	IAmb	03 32 54.1	
	comp=Z,24nm,1.0s						
J04D	Umpqua Nationa	39.33	324	P	P	03 32 54.9	+0.5
	baz=128,SNR=8.6						
I05D	Terrebonne, OR	39.58	325	P	P	03 32 57.1	+0.7
	baz=130						
ITTB	Itaituba	39.62	115	*e*P	P	03 32 54.9	-2.1
MALB	Monte Alegre	39.82	111	*e*P	P	03 32 58.4	-0.2
I04A	Tendick Farm,	39.84	324	P	P	03 32 59.6	+1.1
	baz=128						
G05D	Wamic, OR	40.16	327	P	P	03 33 02.3	+1.3
	baz=131,SNR=6.1						
TA01	Diego Aracena	40.18	149	P	P	03 33 02.4	+1.0
D08A	Wollman Farm,	40.18	330	P	P	03 33 02.0	+0.8
D08A				IAmb	IAmb	03 33 03.3	
	comp=Z,15nm,1.2s						
NEW	Newport	40.24	333	P	P	03 33 02.7	+1.0
	baz=139						
H04A	Detroit Lake	40.27	325	P	P	03 33 03.1	+1.1
E07A	Sunnyside	40.29	329	P	P	03 33 03.2	+1.1
I03D	Drain, OR	40.32	323	P	P	03 33 03.2	+0.8
	baz=127						
J01E	Myrtle Point	40.34	322	P	P	03 33 03.1	+0.5
	baz=126						
HOOD	Mount Hood Mea	40.39	326	P	P	03 33 05.6	+2.5
C09A	Chrisman Ranch	40.41	332	P	P	03 33 04.0	+0.9
C09A				IAmb	IAmb	03 33 05.5	
	comp=Z,14nm,1.1s						
KEBM	Edson Butte	40.42	322	P	P	03 33 04.7	+1.4
H04D	Lebanon	40.48	325	P	P	03 33 04.3	+0.6
	baz=128						
F05D	White Salmon	40.65	327	P	P	03 33 06.4	+1.3
	baz=131,SNR=6.0						
VILB	Vilhena	40.78	130	*e*P	P	03 33 06.7	+0.2
VILB	Vilhena	40.78	130	P	P	03 33 06.5	0.0
I02E	Swisshome, OR	40.85	323	P	P	03 33 08.2	+1.5
	baz=127						
PB01	IPOC Station P	40.93	148	P	P	03 33 07.4	-0.3
PB01				IAmb	IAmb	03 33 09.5	
	comp=Z,10nm,0.8s						
LTY	Liberty	41.17	329	P	P	03 33 08.2	-1.3
LTY				IAmb	IAmb	03 33 11.2	
	comp=Z,22nm,1.4s						
G03D	McMinnville, O	41.20	325	P	P	03 33 10.4	+0.8
	baz=128						
MCPB	Macapa, AP	41.26	107	*e*P	P	03 33 07.3	-3.2
NPGB	Novo Progresso	41.26	118	*e*P	P	03 33 08.4	-2.1
F04D	Rainier, OR	41.61	326	P	P	03 33 14.0	+1.1
	baz=130						
E04D	Cinebar	41.67	327	P	P	03 33 14.7	+1.3
	baz=130						
PB09	IPOC Station P	41.68	149	P	P	03 33 13.5	-0.5
PB09				IAmb	IAmb	03 33 16.9	
	comp=Z,31nm,1.0s						
D05A	Enumclaw	41.79	328	IAmb	IAmb	03 33 16.9	
	comp=Z,36nm,1.0s						
LVC	Limon Verde	42.53	149	*e*P	P	03 33 23.0	+1.9
LVC	Limon Verde	42.53	149	P	P	03 33 20.5	-0.5
LVC				IAmb	IAmb	03 33 24.0	
	comp=Z,32nm,1.2s						
B05A	Bryant	42.56	329	P	P	03 33 20.6	-0.1
	baz=132						
D03D	Eldon	42.58	328	P	P	03 33 21.3	+0.5
	baz=131						
PDRB	Porto dos Gac	42.63	125	*e*P	P	03 33 21.4	-0.3
NLWA	Neilton Lookou	42.89	327	IAmb	IAmb	03 33 26.3	
	comp=Z,36nm,1.1s						
CLDB	Colider	42.95	124	*e*P	P	03 33 23.1	-1.2
A04D	Lummi Island	43.17	330	P	P	03 33 26.6	+1.1
	baz=132						
PTLB	Pontes e Lacer	43.19	132	*e*P	P	03 33 26.0	0.0
PTLB	Pontes e Lacer	43.19	132	P	P	03 33 24.6	-1.4
LLLB	Lillooet	44.08	332	P	P	03 33 33.1	+0.2
FCC	Fort Churchill	44.58	358	P	P	03 33 36.4	-0.2
SCHQ	Schefferville	44.78	20	P	P	03 33 37.6	-0.7
	comp=Z,21nm,0.8s,baz=225,slow=6.9,SNR=25						
SCHQ	Schefferville	44.78	20	P	P	03 33 37.8	-0.5
TMAB	Tom-Au,PA,Br	45.68	108	*e*P	P	03 33 43.9	-2.2
PRPB	Parauapebas	45.68	113	*e*P	P	03 33 44.2	-1.9
AC02	Maricunga	46.01	152	P	P	03 33 48.2	-0.7
AC02				IAmb	IAmb	03 33 52.0	
	comp=Z,33nm,1.2s						
SALV	Santo Antonio	46.02	129	*e*P	P	03 33 48.1	-0.5
SNDB	Serra Nova Dou	47.24	121	*e*P	P	03 33 58.1	-0.1
BBB	Bella Bella	48.05	330	P	P	03 34 05.4	+1.5
	comp=Z,19nm,1.1s,baz=132,slow=6.5,SNR=4.0						
SMTB	Santa Maria do	48.86	115	*e*P	P	03 34 09.4	-1.4
ARAG	Araguaiana, MT	48.88	126	*e*P	P	03 34 10.6	-0.3
AQDB	Aquidauana	48.95	134	*e*P	P	03 34 11.5	+0.2
AQDB	Aquidauana	48.95	134	IAmb	IAmb	03 34 12.1	
	comp=Z,14nm,1.1s						
ROSB	Rosrio	49.56	106	*e*P	P	03 34 13.9	-2.2
PEXB	Peixe	49.81	120	*e*P	P	03 34 17.2	-0.7
ZON	Zonda	50.29	155	P	P	03 34 21.9	+0.6
MT02	Curacav	50.86	158	P	P	03 34 26.3	+0.7
YKA	Yellowknife Ar	51.07	346	P	P	03 34 26.1	-0.6
	comp=Z,8.0nm,0.8s,baz=148,slow=7.6,SNR=84						
YKA				pP	pP	03 34 47.1	-0.8
	comp=Z,5.7nm,0.7s,baz=150,slow=7.5,SNR=10						
YKA				PcP	PcP	03 35 40.9	-0.6
	comp=Z,3.3nm,0.8s,baz=147,slow=3.8,SNR=11						
YKA				ScP	ScP	03 39 30.3	-0.1
	comp=Z,1.0nm,0.9s,baz=143,slow=4.2,SNR=5.8						
YKA				LR	LR	03 58 43.1	
	comp=Z,85nm,19.3s,baz=0.0,slow=39						
YKA	Yellowknife Ar	51.07	346	P	P	03 34 26.0	-0.7
MT01	Popeta	51.37	159	IAmb	IAmb	03 34 30.6	
	comp=Z,19nm,1.2s						
BDFB	Brasilia	51.88	123	P	P	03 34 33.0	-0.6
	comp=Z,4.3nm,0.6s,baz=287,slow=10,SNR=10						
BDFB				PcP	PcP	03 35 45.5	+0.1
	comp=Z,3.8nm,0.8s,baz=150,slow=4.1,SNR=3.2						
CPUP	Villa Florida	51.95	141	P	P	03 34 33.1	-0.7
	comp=Z,3.4nm,0.8s,baz=327,slow=11,SNR=4.2						
CPUP				LR	LR	03 56 00.4	
	comp=Z,87nm,21.7s,baz=322,slow=35						
CPUP	Villa Florida	51.95	141	IAmb	IAmb	03 34 33.6	
	comp=Z,9.5nm,1.1s						
GO05	Huala	52.18	160	P	P	03 34 35.7	+0.3
ITRB	Iturama	52.35	129	*e*P	P	03 34 37.6	+0.7
PCMB	Pacaembu	52.84	132	*e*P	P	03 34 40.8	+0.3
SDBA	SAO DESIDERIO	52.85	118	*e*P	P	03 34 39.8	-0.9
DLBC	Dease Lake	52.86	336	P	P	03 34 41.1	+0.9
	comp=Z,7.4nm,0.5s,baz=137,slow=4.3,SNR=34						
DLBC	Dease Lake	52.86	336	IAmb	IAmb	03 34 43.2	
	comp=Z,20nm,1.1s						
IPMB	Ipameri, GO	53.01	126	*e*P	P	03 34 41.8	-0.1
TAOE	Nuku Hiva Isla	53.76	248	*e*LR	LR	03 50 09.6	
	comp=Z,213nm,27.8s						
TAOE	Nuku Hiva Isla	53.76	248	*e*T	T	04 31 49.8	
	comp=Z,28nm,0.3s						
BB19B	Bebedouro	54.54	129	*e*P	P	03 34 52.9	-0.1
JANB	Januaria	54.64	120	*e*P	P	03 34 53.9	+0.1
ITQB	Itaqui	54.82	143	*e*P	P	03 34 55.0	+0.3
P33M	Teslin, Yukon	55.09	336	P	P	03 34 57.2	+0.7
	baz=128						
LC01	Cunco	55.76	162	P	P	03 35 01.8	+0.4
MC01	Montes Claros	55.77	122	*e*P	P	03 35 02.2	+0.2
ITAB	Concordia	55.89	137	*e*P	P	03 35 01.8	-0.8
RCLB	Rio Claro- Sao	56.08	130	*e*P	P	03 35 04.1	+0.1
DIAM	Diamantina, MG	56.81	123	*e*P	P	03 35 09.5	+0.1
VAO	Valinhos	56.84	130	*e*P	P	03 35 09.5	0.0
SPB	Sao Paulo	56.85	131	*e*P	P	03 35 11.5	+2.1
M31M	Drury Creek, Y	56.92	337	P	P	03 35 10.1	+0.7
	baz=128						
N31M	Braeburn, Yuko	57.02	336	P	P	03 35 10.9	+0.7
	baz=126						
CPSB	Cacapava Do Su	57.26	141	*e*P	P	03 35 12.7	+0.6
BSCB	Bom Sucesso	57.37	127	*e*P	P	03 35 14.4	+1.2
PET01	Itanhaem-SP	57.38	131	*e*P	P	03 35 14.1	+0.9
PLCA	Paso Flores	57.85	162	P	P	03 35 16.8	+0.6
	comp=Z,12nm,1.1s,baz=340,slow=7.0,SNR=18						
PLCA				LR	LR	03 56 17.2	
	comp=Z,47nm,18.4s,baz=344,slow=32						
PLCA	Paso Flores	57.85	162	*e*P	P	03 35 17.3	+1.1
PLCA	Paso Flores	57.85	162	P	P	03 35 16.3	+0.1
M30M	Minto, Yukon	58.05	337	P	P	03 35 18.0	+0.7
	baz=125						
GDU01	Guandu, BA	58.06	116	*e*P	P	03 35 18.0	-0.1
PLTB	Pedras Altas	58.12	142	*e*P	P	03 35 17.7	-0.5
CMC01	Camacan, BA	58.84	118	*e*P	P	03 35 23.6	+0.1
MESA	MESA	58.89	333	P	P	03 35 23.3	-0.1
	baz=118						
C36M	Paulatuk	58.93	347	P	P	03 35 23.2	0.0
	baz=142						
SJMB	Sao Joao De Ma	59.04	122	*e*P	P	03 35 25.2	+0.4
GUA01	Guaratinga, BA	59.17	119	*e*P	P	03 35 24.8	-0.9
BSFB	Barra de Sao F	59.38	122	*e*P	P	03 35 27.5	+0.3
NAN01	Guarapari, ES	59.50	121	*e*P	P	03 35 28.2	+0.3
LL02	Futaleuf	59.74	164	IAmb	IAmb	03 35 31.2	
	comp=Z,12nm,1.4s						
DUB01	Friburgo-RJ	59.83	126	*e*P	P	03 35 30.6	+0.3
M27K	Edge Creek, AK	59.92	335	P	P	03 35 30.9	+0.4
	baz=120						
MCARA	McCarthy VSAT	59.92	334	P	P	03 35 30.5	+0.3
	baz=118						
RIB01	Linhares ES	59.99	122	*e*P	P	03 35 31.3	-0.1
I29M	Ogilvie Camp,	60.20	339	P	P	03 35 32.6	+0.5
	baz=125						
BCAR	Beaver Creek A	60.24	336	P	P	03 35 32.7	+0.2
L27K	Beaver Creek,	60.26	336	P	P	03 35 32.8	+0.2
	baz=120						
CAM01	Campos-RJ	60.26	126	*e*P	P	03 35 33.8	+0.6
ALF01	Guarapari-ES	60.38	124	*e*P	P	03 35 34.5	+0.5
BMRM	Bremner River	60.42	333	P	P	03 35 34.4	+0.7
	baz=116						
INK	Inuvik	60.53	343	P	P	03 35 33.8	-0.4
	comp=Z,4.4nm,0.6s,baz=126,slow=6.2,SNR=39						
INK	Inuvik	60.53	343	IAmb	IAmb	03 35 35.2	
	comp=Z,5.0nm,0.7s						
INK	Inuvik	60.53	343	P	P	03 35 34.1	-0.1
	baz=131						
RES	Resolute Bay	60.56	359	IAmb	IAmb	03 35 34.5	
	comp=Z,6.4nm,0.9s						
N25K	Chitina, Valde	60.70	334	P	P	03 35 36.8	+1.1
N25K				IAmb	IAmb	03 35 40.5	
	comp=Z,19nm,1.3s						
N25K	Chitina, Valde	60.70	334	P	P	03 35 36.6	+0.9
	baz=117						
EYAK	Cordova Ski Ar	60.74	332	P	P	03 35 36.4	+0.6
	baz=115						
KLU	Klutina	61.22	333	P	P	03 35 39.7	+0.6
	baz=115						
A36M	Sachs Harbour	61.26	349	P	P	03 35 37.4	-1.8
A36M				IAmb	IAmb	03 35 39.7	
	comp=Z,6.6nm,0.8s						
A36M					pP	03 36 00.7	-0.2
A36M	Sachs Harbour	61.26	349	P	P	03 35 38.5	-0.7
	baz=142						
SCRK	Sand Creek	61.55	336	P	P	03 35 41.7	+0.3
	baz=118						
M24K	Tolsona, Glenn	61.59	334	P	P	03 35 41.9	+0.3
	baz=115						
J26L	Joseph Creek	61.64	337	P	P	03 35 42.3	+0.4
	baz=119						
PAX	Paxson	61.67	335	P	P	03 35 42.1	-0.1
	baz=116						
RIDG	Independent Ri	61.77	336	P	P	03 35 42.7	-0.2
	baz=117						
COYC	Coyhaique	61.90	165	P	P	03 35 44.1	+0.4
COYC				IAmb	IAmb	03 35 45.7	
	comp=Z,18nm,1.1s						
COYC					pP	03 36 04.8	-0.3
SCM	Sheep Creek Mo	61.97	333	P	P	03 35 44.9	+0.7
	baz=114						
SML	Sawmill	62.40	333	P	P	03 35 47.4	+0.3
	baz=113						
WAT6	Susitna Watana	62.45	334	P	P	03 35 48.0	+0.5
	baz=114						
PMR	Palmer	62.67	333	P	P	03 35 48.7	0.0
	baz=112						
HDA	Harding Lake	62.90	336	P	P	03 35 50.3	0.0
	baz=116						
IL31		63.03	337	P	P	03 35 50.2	-0.9
ILAR	Eielson Array	63.03	337	P	P	03 35 50.9	-0.2
	comp=Z,4.9nm,0.9s,baz=164,slow=4.7,SNR=35						
ILAR				LR	LR	04 06 45.8	
	comp=Z,98nm,18.3s,baz=140,slow=39						
ILAR	Eielson Array	63.03	337	P	P	03 35 51.0	-0.2
ILAR				pP	pP	03 36 13.1	+0.2
KDAK	Kodiak Island	63.03	328	P	P	03 35 51.9	+0.7
	baz=107						
RND	Reindeer	63.25	335	P	P	03 35 53.4	+0.7
RND				IAmb	IAmb	03 35 55.8	
	comp=Z,26nm,1.2s						
MCK	McKinley	63.41	335	P	P	03 35 54.5	+0.7
	baz=113						
BMAR	Burnt Mountain	63.44	340	P	P	03 35 54.1	+0.3
BMAR				pP	pP	03 36 15.1	-0.8
CUT	Chulitna	63.47	333	P	P	03 35 54.6	+0.5
	baz=111						
TRF	Thorofare Moun	63.86	335	P	P	03 35 57.1	+0.2
	baz=112						
H24K	Noodor Dome	63.87	337	P	P	03 35 58.2	+1.4
H24K	Noodor Dome	63.87	337	P	P	03 35 57.5	+0.7
	baz=115						
I23K	Minto, Yukon-K	64.15	336	P	P	03 35 58.5	+0.1
I23K				IAmb	IAmb	03 36 01.6	
	comp=Z,16nm,1.3s						
I23K	Minto, Yukon-K	64.15	336	P	P	03 35 58.6	+0.1
	baz=114						
BPAW	Bear Paw Mtn.	64.39	335	P	P	03 35 59.9	-0.2
BPAW	Bear Paw Mtn.	64.39	335	P	P	03 36 00.1	-0.1
	baz=112						
CAST	Castle Rocks	64.61	334	P	P	03 36 01.3	-0.2
	baz=110						
MLY	Manley	64.64	336	P	P	03 36 01.7	-0.1
MLY				IAmb	IAmb	03 36 04.3	
	comp=Z,8.9nm,0.8s						
MLY	Manley	64.64	336	P	P	03 36 01.1	-0.7
	baz=112,SNR=8.2						
N19K	Bonanza Creek	64.85	331	P	P	03 36 03.7	+0.4
	baz=107						
L20K	Farewell, AK	65.07	333	P	P	03 36 04.2	-0.4
	baz=108,SNR=6.8						
I21K	Tanana	65.19	336	P	P	03 36 05.2	0.0
	baz=111						
COLD	Coldfoot	65.30	338	P	P	03 36 06.0	+0.1
	baz=114						
K20K	Telida	65.43	334	P	P	03 36 06.5	-0.3
K20K				IAmb	IAmb	03 36 08.7	
	comp=Z,28nm,1.4s						
K20K	Telida	65.43	334	P	P	03 36 06.5	-0.3
	baz=108						
TOLK	Toolik Lake Re	65.67	340	P	P	03 36 07.9	-0.4
	baz=115						
H21K	Melozitna Rive	65.68	336	P	P	03 36 08.0	-0.4
	baz=110						
J20K	Nowinta River	65.72	335	P	P	03 36 08.5	-0.2
	baz=108						
PPT	Papeete	65.73	243	LR	LR	03 58 23.9	
	comp=Z,101nm,20.8s,baz=62,slow=30						
PPT2	Papeete2	65.74	243	*e*LR	LR	03 55 45.0	
	comp=Z,302nm,28.8s						
EUNU	Eureka	65.95	1	P	P	03 36 09.2	-0.8
EUNU				IAmb	IAmb	03 36 11.7	
	comp=Z,15nm,1.1s						
TTA	Tatalina	66.15	333	P	P	03 36 11.0	-0.5
TTA				IAmb	IAmb	03 36 13.7	
	comp=Z,9.7nm,1.0s						
TTA	Tatalina	66.15	333	P	P	03 36 11.3	-0.2
	baz=106						
FALS	False Pass	68.36	324	P	P	03 36 25.6	0.0
	baz=96						
UNV	Unalaska Valle	70.08	322	P	P	03 36 36.6	+0.4
	baz=93						
ANM	Nome	70.56	334	P	P	03 36 39.2	+0.3
	baz=98						
NIKH	Nikolski High	71.45	321	P	P	03 36 45.2	+0.6
	baz=91						
SPIA	Saint Paul Isl	72.33	326	P	P	03 36 50.3	+0.6
	baz=91						
ESDC	Sonseca Array	78.94	52	P	P	03 37 25.8	-2.2
	comp=Z,1.4nm,0.7s,baz=288,slow=4.8,SNR=7.0						
ESDC				pP	pP	03 37 49.4	-1.1
	comp=Z,3.0nm,0.8s,baz=287,slow=6.2,SNR=8.0						
ESDC				sP	sP	03 37 58.6	-1.1
	comp=Z,1.4nm,0.7s,baz=285,slow=4.8,SNR=3.6						
BILL	Bilibino	81.63	338	P	P	03 37 41.8	+0.1
BILL				IAmb	IAmb	03 37 42.9	
	comp=Z,9.0nm,0.6s						
NB2	NORSAR Subarra	83.59	29	P	P	03 37 51.9	-0.2
	comp=Z,1.5nm,0.7s,baz=288,slow=5.6						

NOA	NORSAR Array B	83.59	29	P	P	03 37 51.3	-0.8
	comp=Z,2.7nm,0.8s,baz=289,slow=5.3,SNR=6.9						
NOA				LR	LR	04 15 44.1	
	comp=Z,37nm,18.8s,baz=285,slow=36						
DBIC	Dimbokro	84.78	84	LR	LR	04 12 43.5	
	comp=Z,24nm,20.2s,baz=311,slow=34						
ARCES	ARCESS Array B	85.71	18	P	P	03 38 01.4	-1.2
	comp=Z,2.1nm,0.6s,baz=272,slow=5.1,SNR=21						
ARCES	ARCESS Array B	85.71	18	P	P	03 38 01.5	-1.0
ARCES				IAmb	IAmb	03 38 03.2	
	comp=Z,22nm,1.4s						
DAVA	Damuels	87.01	42	*e*P	P	03 38 09.5	-0.1
	comp=Z,4.1nm,1.0s						
RETA	Reutte	87.52	42	*e*P	P	03 38 10.2	-1.7
	comp=Z,0.9nm,0.3s						
RETA				*e*P	pP	03 38 34.5	-0.2
	comp=Z,2.1nm,0.5s						
FETA	Feichten	87.64	42	*e*P	P	03 38 11.4	-1.2
	comp=Z,1.7nm,0.7s						
FETA				*e*P	pP	03 38 34.5	-0.9
	comp=Z,2.6nm,0.8s						
CLL	Collm	87.66	38	*i* pP	pP	03 38 34.9	-0.3
	comp=Z,59nm,2.0s						
MOTA	Moosalm	87.78	42	*e*P	P	03 38 12.6	-0.7
	comp=Z,1.9nm,0.6s						
MOTA				*e*P	pP	03 38 35.9	-0.2
	comp=Z,2.6nm,0.7s						
GERES	GERESS Array B	88.93	40	P	P	03 38 17.4	-1.2
	comp=Z,0.5nm,0.7s,baz=277,slow=3.4,SNR=5.4						
GERES				pP	pP	03 38 41.3	-0.2
	comp=Z,1.9nm,1.0s,baz=304,slow=3.1,SNR=5.2						
GERES				LR	LR	04 17 58.2	
	comp=Z,48nm,18.6s,baz=292,slow=36						
TORD	Torodi Ar. Bea	89.50	77	P	P	03 38 19.5	-2.3
	comp=Z,0.3nm,0.7s,baz=298,slow=4.8,SNR=5.9						
FINES	FINESS Array B	89.99	25	P	P	03 38 22.2	-0.9
	comp=Z,3.5nm,1.0s,baz=316,slow=5.3,SNR=5.8						
FINES				pP	pP	03 38 46.3	+0.5
	comp=Z,5.3nm,1.0s,baz=262,slow=4.1,SNR=2.9						
FINES				LR	LR	04 19 05.6	
	comp=Z,77nm,18.2s,baz=302,slow=36						
KEST	Kesra	90.11	53	P	P	03 38 24.2	-0.1
	comp=Z,3.5nm,0.8s,baz=252,slow=3.0,SNR=4.8						
TIXI	Tiksi	90.28	348	P	P	03 38 23.4	-0.9
NRIK	Noril'sk	96.71	0	LR	LR	04 25 49.3	
	comp=Z,172nm,20.3s,baz=4.0,slow=38						
AKASG	Malin Array Be	97.12	34	LR	LR	04 25 24.1	
	comp=Z,28nm,18.1s,baz=280,slow=37						
DZM	Mont Dzumac	106.54	251	*e*LR	LR	04 14 56.2	
	comp=Z,80nm,26.1s						
SONM	Songino Array	116.33	347	PKP	PKiKP	03 44 07.1	-0.2
	comp=Z,0.3nm,0.6s,baz=5.2,slow=3.3,SNR=3.7						
SONM	Songino Array	116.33	347		PKiKP	03 44 07.0	-0.4
KSRS	Korea Array	116.90	326	PKP	PKiKP	03 44 09.2	+0.7
	comp=Z,3.0nm,0.8s,baz=342,slow=1.0,SNR=11						
MKAR	Makanchi Array	119.04	5	PKP	PKPdf	03 44 10.9	-1.6
	comp=Z,1.5nm,0.7s,baz=17,slow=2.0,SNR=14						
BOSA	Boshof	119.64	115	PKP	PKiKP	03 44 13.8	-0.5
	comp=Z,8.5nm,0.9s,baz=239,slow=2.3,SNR=8.6						
GEYT	Alibeck	120.68	28	PKP	PKPdf	03 44 15.4	-0.5
	comp=Z,1.4nm,0.4s,baz=235,slow=5.1,SNR=3.3						
HHC	Hu-ho-hao-te	121.37	340	*e*PKP	PKPdf	03 44 16.8	-0.4
WMQ	Urumqi	122.29	1	*e*PKP	PKiKP	03 44 19.8	+0.8
WMQ				LR	LR		
	comp=Z,230nm,21.7s						
KSH	Kashi	125.26	12	PKP	PKiKP	03 44 26.5	+1.4
GTA	Gaotai	125.74	350	*e*PKP	PKiKP	03 44 26.5	+0.4
NJ2	Nanjing	125.82	328	*e*PKP	PKiKP	03 44 27.5	+1.3
LZH	Lanzhou	128.06	345	*e*PKP	PKiKP	03 44 31.0	+0.1
XAN	Xi'an	128.41	339	PKP	PKiKP	03 44 32.0	+0.5
STKA	Stephens Creek	128.89	240	PKP	PKiKP	03 44 34.4	+2.1
	comp=Z,1.2nm,0.6s,baz=109,slow=3.5,SNR=3.5						
CD2	Chengdu	132.96	342	PKP	PKPdf	03 44 39.3	-0.2
WRA	Warramunga Arr	136.27	256	PKP	PKiKP	03 44 46.6	-1.0
	comp=Z,5.4nm,0.8s,baz=86,slow=1.9,SNR=18						
WRA				pPKP	pPKPdf	03 45 09.8	+0.4
	comp=Z,1.3nm,0.6s,baz=84,slow=2.1,SNR=2.5						
WRA				SKP		03 48 17.2	
	comp=Z,1.3nm,1.0s,baz=89,slow=2.1,SNR=6.8						
ASAR	Alice Springs	136.53	251	PKhKP	PKPpre	03 44 40.4	
	comp=Z,0.7nm,0.6s,baz=101,slow=3.3,SNR=12						
ASAR				PKP	PKiKP	03 44 48.0	0.0
	comp=Z,2.0nm,0.9s,baz=94,slow=2.0,SNR=14						
ASAR				pPKP	pPKPdf	03 45 10.8	+0.9
	comp=Z,1.0nm,0.6s,baz=95,slow=2.3,SNR=2.8						
ASAR				SKP		03 48 17.4	
	comp=Z,1.4nm,0.9s,baz=95,slow=2.2,SNR=7.0						
CMAR	Chiang Mai Arr	146.11	343	PKPbc	PKPbc	03 45 04.0	-0.6
	comp=Z,16nm,0.7s,baz=336,slow=3.9,SNR=62						
CMAR				pPKPbc	pPKPdf	03 45 27.9	+0.8
	comp=Z,3.2nm,0.6s,baz=328,slow=3.5,SNR=2.6						
CMAR	Chiang Mai Arr	146.11	343	PKPdf	PKPdf	03 45 03.5	-0.1
HYB	Hyderabad	147.01	18	*i* PKP	PKPbc	03 45 06.0	-1.2

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*TUL **30** 03:45:08.2±0.9, 36.°73N±0.°01×98.°01W±0.°02, h7^{km}±1^{km}, ML3.7, mb_Lg3.4/90(NEIC), Error ellipse: s-maj=2.8km s-min=2.1km az=94.0*

*ANF **30** 03:45:08.2±0.2, 36.°70N×98.°00W, h5^{km}, ML4.1/15, Error ellipse: s-maj=2.1km s-min=1.8km az=18.0*

*NEIC **30** 03:45:08.3±0.9, 36.°71N±0.°01×97.°99W±0.°02, h6^{km}±7^{km}, Error ellipse: s-maj=2.8km s-min=2.2km az=83.0*

ISC 30 03:45:08.3±1.1**, 36.°71N**±0.°02×**97.°99W**±0.°02**, h5**^{km}±9^{km}**, n96,** σ**0**^{s}**44**/80**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.18	37	Pg	Pg	03 45 11.7	-0.1
GC02				Sg	Sg	03 45 14.7	+0.5
OK032	Salt Plains WL	0.20	298	Pg	Pg	03 45 11.9	-0.3
OK032				Sg	Sg	03 45 14.8	0.0
CROK	Carrier	0.20	178		Pg	03 45 12.8	+0.5
KAN14	Manchester OK	0.25	6		Pg	03 45 12.8	-0.3
KAN14				Sg	Sg	03 45 16.6	+0.1
KAN05	Bluff City Nor	0.41	14		Pg	03 45 16.2	0.0
KAN05				Sg	Sg	03 45 21.8	+0.2
KAN10	Anthony SW Sta	0.42	349	Pg	Pg	03 45 16.4	-0.1
KAN01	Argonia South	0.48	23		Pg	03 45 17.6	0.0
KAN01				Sg	Sg	03 45 24.0	+0.1
KAN13	South Haven SW	0.51	54	Pg	Pg	03 45 18.2	0.0
KAN13				Sg	Sg	03 45 25.1	+0.3
KAN08	Anthony NE Sta	0.52	2	Pg	Pg	03 45 18.1	-0.2
KAN08				Sg	Sg	03 45 25.1	+0.1
KAN16	Harper SW Stat	0.52	354		Pg	03 45 18.2	-0.1
KAN06	Argonia West S	0.55	11		Pg	03 45 18.6	-0.3
KAN06				Sg	Sg	03 45 26.1	0.0
OK035	E0210 Rd and N	0.58	270	Pg	Pg	03 45 19.0	-0.3
KAN12	Harper NE Stat	0.59	360		Pg	03 45 19.0	-0.6
BLOK	Blackwell	0.63	85	Pg	Pg	03 45 20.0	-0.4
U32A	Winter Ranch,	0.88	248	Pg	Pg	03 45 24.6	-0.6
U32A				Sg	Sg	03 45 36.6	+0.2
U32A	Winter Ranch,	0.88	248	P	Pg	03 45 24.6	-0.6
	baz=68,SNR=130						
U32A				S	Sg	03 45 36.7	+0.2
	baz=68						
BCOK	Bluff Creek, N	1.09	163	Pg	Pg	03 45 28.4	-0.9
QUOK	Quay	1.17	117	Pg	Pg	03 45 30.4	-0.3
QUOK				Sg	Sg	03 45 45.8	0.0
OK031	S. Brethren Rd	1.20	129		Pg	03 45 30.9	-0.4
T35A	Sooner Cattle	1.21	80		Pg	03 45 30.9	-0.5
T35B	Sooner Cattle	1.21	80	P	Pg	03 45 30.9	-0.5
	baz=260,SNR=1000						
T35B				S	Sb	03 45 47.6	0.0
	baz=260						
OK025	Westminster Rd	1.25	155		Pg	03 45 31.7	-0.4
OKCFA	Oklahoma City	1.36	161		Pn	03 45 33.4	-0.6
OKCFA	Oklahoma City	1.36	161	P	Pn	03 45 33.4	-0.6
	baz=341,SNR=19						
OKCFA				S	Sn	03 45 52.7	+0.2
	baz=341						
OKCSW	OKLAHOMA CITY	1.38	161		Pn	03 45 33.7	-0.6
FNO	Franklin	1.53	161		Pn	03 45 36.0	-0.3
R32A	Long Quarter,	1.80	342		Pn	03 45 40.3	+0.2
R32A				IAmb_Lg		03 46 05.1	
	comp=Z,158nm,0.8s						
R32A	Long Quarter,	1.80	342	P	Pn	03 45 40.6	+0.4
	baz=162,SNR=64						
R32A				S	Sb	03 46 04.5	-0.3
	baz=162						
TUL1	Leonard	1.95	114	Pn	Pn	03 45 42.0	0.0
TUL1				IAmb_Lg		03 46 15.5	
	comp=Z,161nm,0.8s						
TUL1	Leonard	1.95	114	P	Pn	03 45 42.1	0.0
	baz=294,SNR=82						
X34A	Smith Ranch, M	2.11	176		Pn	03 45 44.6	+0.3
X34A				IAmb_Lg		03 46 18.4	
	comp=Z,103nm,0.8s						
CBKS	Cedar Bluff	2.52	327	Pn	Pn	03 45 49.7	-0.3
CBKS	Cedar Bluff	2.52	327	P	Pn	03 45 50.0	+0.1
	baz=146,SNR=60						
CBKS				S	Sn	03 46 21.7	+0.7
	baz=146						
KSU1	Kansas State U	2.63	24	Pn	Pn	03 45 51.3	-0.1
KSU1				IAmb_Lg		03 46 36.1	
	comp=Z,112nm,0.8s						
KSU1	Kansas State U	2.63	24	P	Pn	03 45 51.3	-0.1
	baz=205,SNR=14						
LOOK	Love County	2.79	166		Pn	03 45 54.0	+0.3
U38A	Gravette	2.92	94	Pn	Pn	03 45 55.6	+0.2
U38A	Gravette	2.92	94	P	Pn	03 45 56.1	+0.7
	baz=276,SNR=29						
X37A	Clayton	3.01	134	Pn	Pn	03 45 57.2	+0.6
X37A				IAmb_Lg		03 46 47.8	
	comp=Z,88nm,0.7s						
X37A	Clayton	3.01	134	P	Pn	03 45 56.9	+0.3
	baz=315,SNR=18						
HHAR	Hobbs	3.29	96		Pn	03 46 00.9	+0.3
HHAR				IAmb_Lg		03 46 57.9	
	comp=Z,98nm,0.9s						
Z35A	Perchaven, San	3.42	170		Pn	03 46 02.8	+0.4
AMTX	Amarillo	3.51	240		Pn	03 46 04.7	+1.0
W39A	Magazine	3.73	113		Pn	03 46 07.0	+0.4
W39A				IAmb_Lg		03 47 12.3	
	comp=Z,135nm,1.0s						
W39A	Magazine	3.73	113	P	Pn	03 46 07.2	+0.5
	baz=295,SNR=12						
S39A	Bolivar	3.85	74		Pn	03 46 08.0	-0.3
S39A				IAmb_Lg		03 47 14.5	
	comp=Z,89nm,0.8s						
S39A	Bolivar	3.85	74	P	Pn	03 46 08.0	-0.3
	baz=256,SNR=36						
N33A	J Bar K, Exete	4.04	6	Pn	Pn	03 46 09.7	-1.2
U40A	Yellville	4.15	93		Pn	03 46 12.3	-0.1
U40A				IAmb_Lg		03 47 24.2	
	comp=Z,83nm,0.8s						
U40A	Yellville	4.15	93	P	Pn	03 46 12.5	+0.1
	baz=276,SNR=30						
U40A				P	Pn	03 46 12.5	+0.1
	baz=276,SNR=30						
MIAR	Mount Ida	4.20	120	IAmb_Lg		03 47 28.1	
	comp=Z,53nm,0.9s						
Z38A	Mt. Pleasant	4.24	143	Pn	Pn	03 46 13.3	-0.2
KSCO	Kaye Shedlock'	4.33	303	Pn	Pn	03 46 15.2	+0.2
KSCO	Kaye Shedlock'	4.33	303	P	Pn	03 46 15.3	+0.4
	baz=121,SNR=18						
P38A	Dawn	4.56	49	Pn	Pn	03 46 18.5	+0.4
MGMO	Mountain Grove	4.61	83		Pn	03 46 18.9	+0.3
MGMO				IAmb_Lg		03 47 34.1	
	comp=Z,50nm,0.8s						
BGNE	Belgrade	4.69	359		Pn	03 46 19.1	-0.8
BGNE				IAmb_Lg		03 47 40.1	
	comp=Z,63nm,0.8s						
BGNE	Belgrade	4.69	359	P	Pn	03 46 19.0	-0.8
	baz=178,SNR=6.9						
WHTX	Lake Whitney,	4.73	174	Pn	Pn	03 46 20.1	-0.2
WHTX	Lake Whitney,	4.73	174	P	Pn	03 46 20.3	+0.1
	baz=355,SNR=11						
X40A	Basin Creek Fa	4.75	116	Pn	Pn	03 46 20.8	+0.1
X40A				IAmb_Lg		03 47 42.6	
	comp=Z,85nm,0.8s						
FCAR	Ozark Folk Cen	4.81	98		Pn	03 46 22.6	+1.1
R40A	Maddies Statio	4.82	69		Pn	03 46 21.3	-0.3
R40A				IAmb_Lg		03 47 47.2	
	comp=Z,60nm,0.8s						
R40A	Maddies Statio	4.82	69	P	Pn	03 46 21.2	-0.3
	baz=252,SNR=28						
WHAR	Wooly Hollow	4.84	105	Pn	Pn	03 46 22.2	+0.5
WHAR				IAmb_Lg		03 47 47.3	
	comp=Z,58nm,0.9s						
WLAR	White Oak Lake	5.01	126	IAmb_Lg		03 47 56.9	
	comp=Z,70nm,0.9s						
237A	Washetta, Mont	5.03	158	IAmb_Lg		03 47 59.0	
	comp=Z,40nm,1.0s						
OGNE	Ogallala	5.28	325	IAmb_Lg		03 47 59.2	
	comp=Z,86nm,0.8s						
L34A	Svendsen Farm,	5.40	13	IAmb_Lg		03 47 55.9	
	comp=Z,41nm,0.7s						
P40A	Paris	5.47	57	IAmb_Lg		03 48 07.2	
	comp=Z,48nm,0.8s						
CCM	Cathedral Cave	5.54	74	IAmb_Lg		03 48 10.4	
	comp=Z,52nm,0.9s						
CCAR	Cane Creek	5.80	117	IAmb_Lg		03 48 20.8	
	comp=Z,54nm,0.8s						
435B	Jarrell	5.92	177	IAmb_Lg		03 48 30.1	
	comp=Z,33nm,0.8s						
K31A	O'Neill	5.94	355	IAmb_Lg		03 48 28.0	
	comp=Z,64nm,0.7s						
HBAR	Harrisburg	6.05	99	IAmb_Lg		03 48 29.1	
	comp=Z,74nm,0.7s						
PBMO	Poplar Bluff	6.07	87	IAmb_Lg		03 48 30.8	
	comp=Z,39nm,0.8s						
FVM	French Village	6.16	76	IAmb_Lg		03 48 23.7	
	comp=Z,44nm,0.7s						
LPAR	Lepanto	6.32	98	IAmb_Lg		03 48 33.6	
	comp=Z,67nm,0.9s						
JCT	Junction City	6.39	194	IAmb_Lg		03 48 45.9	
	comp=Z,35nm,0.9s						
SLM	Saint Louis	6.45	70	IAmb_Lg		03 48 34.8	
	comp=Z,49nm,0.8s						
GNAR	Gosnell	6.48	94	IAmb_Lg		03 48 38.3	
	comp=Z,68nm,0.8s						
143A	Socs Landing,	6.74	124	IAmb_Lg		03 48 54.9	
	comp=Z,34nm,0.7s						
GLAT	Glass	7.03	91	IAmb_Lg		03 49 04.2	
	comp=Z,55nm,0.7s						
HALT	Halls	7.03	94	IAmb_Lg		03 49 04.2	
	comp=Z,42nm,0.8s						
S44A	Carbondale	7.04	79	IAmb_Lg		03 49 09.2	
	comp=Z,32nm,0.7s						
UTMT	University of	7.36	90	IAmb_Lg		03 49 04.1	
	comp=Z,52nm,0.9s						
PHWY	Pilot Hill	7.40	311	IAmb_Lg		03 49 15.2	
	comp=Z,28nm,0.9s						
Y45A	Yeager Farm, C	7.47	110	IAmb_Lg		03 49 21.1	
	comp=Z,40nm,0.8s						
N23A	Red Feather La	7.48	306	IAmb_Lg		03 49 14.3	
	comp=Z,36nm,0.8s						
L40A	Anamosa	7.49	42	IAmb_Lg		03 49 07.3	
	comp=Z,47nm,0.9s						
T45A	Paducah	7.50	85	IAmb_Lg		03 49 18.1	
	comp=Z,46nm,0.8s						
Y22D	IRIS PASSCAL I	7.75	253	IAmb_Lg		03 49 23.3	
	comp=Z,40nm,0.7s						
I37A	Lemond, Waseca	8.09	24	IAmb_Lg		03 49 29.3	
	comp=Z,30nm,0.7s						
RWWY	Rawlins	8.71	308	IAmb_Lg		03 49 60.0	
	comp=Z,37nm,1.1s						
K22A	Casper	8.85	315	IAmb_Lg		03 50 10.4	
	comp=Z,35nm,1.0s						
I40A	Norwalk	9.12	36	IAmb_Lg		03 50 04.6	
	comp=Z,23nm,0.8s						

IDC 30 03:56:36.2±1.5**, 4.°52N**×**124.°55E, h0**^{km}**, mb3.8**/6**, mb1 3.9**/6**, mb1mx3.5**/37**, mbtmp3.8**/6**, MS3.4**/1**, Ms1 3.6**/1**, ms1mx2.6**/35**, Error ellipse: s-maj=139.9km s-min=18.3km az=66.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.50	177	P	P	04 01 37.9	+0.3
	2.3nm,0.9s,baz=354,slow=10,SNR=1.8						
WRA	Warramunga Arr	26.15	159	P	P	04 02 12.6	+0.2
	0.6nm,0.4s,baz=337,slow=9.8,SNR=5.5						
CMAR	Chiang Mai Arr	28.60	301	LR	LR	04 14 30.5	
	comp=Z,67nm,19.0s,baz=180,slow=38						
ASAR	Alice Springs	29.47	162	P	P	04 02 42.0	-0.1
	0.4nm,0.6s,baz=334,slow=7.3,SNR=4.7						
STKA	Stephens Creek	39.67	157	P	P	04 04 09.6	-0.5
	1.0nm,0.7s,baz=336,slow=12,SNR=2.9						
MKAR	Makanchi Array	55.68	326	P	P	04 06 14.8	+0.4
	1.1nm,0.3s,baz=123,slow=7.4,SNR=21						
KURBB	Kurchatov Arra	59.91	328	P	P	04 06 43.4	-0.6
	0.6nm,0.5s,baz=134,slow=6.3,SNR=9.5						

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*SOME **30** 04:09:34.1, 43.°90N×82.°68E, h10^{km}*

*NNC **30** 04:09:37.0±1.5, 44.°00N×82.°54E, h12^{km}±7^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=12.3km s-min=5.0km az=130.0*

ISC 30 04:09:33.3±1.8**, 43.°90N**±0.°05×**82.°71E**±0.°06**, h2**^{km}±12^{km}**, n49,** σ**2**^{s}**04**/73**, 10C-7D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.77	256	*e*P	Pn	04 10 06.2	+1.1
	8.0nm,0.2s						
KTMS				*e*S	Sb	04 10 29.4	+0.2
	104nm,0.3s						
KTMS	Ketmen	1.77	256	P	Pn	04 10 06.2	+1.1
	8.0nm,0.2s						
KTMS				S	Sb	04 10 29.4	+0.2
	104nm,0.3s						
DJR	Jarkent	2.15	283	*e*P	Pb	04 10 12.8	-0.1
	5.3nm,0.2s						
DJR				*e*S	Sb	04 10 40.5	+0.5
	39nm,0.2s						
DJR	Jarkent	2.15	283	Pg	Pb	04 10 12.8	-0.1
	5.3nm,0.2s						
DJR				Lg	Lg	04 10 40.5	
	39nm,0.2s						
SHLS	Shalkode	2.48	254	*e*P	Pn	04 10 13.8	-0.9
	9.0nm,0.2s						
SHLS				*e*S	Sn	04 10 42.3	-3.3
	96nm,0.3s						
SHLS	Shalkode	2.48	254	Pg	Pn	04 10 13.8	-0.9
	9.0nm,0.2s						
SHLS				Lg	Lg	04 10 42.3	
	96nm,0.3s						
KAPS	Kapalarasan	2.77	301	*e*P	Pb	04 10 22.9	-0.5
	3.5nm,0.1s						
KAPS				*e*S	Sb	04 10 58.1	+0.3
	57nm,0.3s						
KAPS	Kapalarasan	2.77	301	Pg	Pb	04 10 22.9	-0.5
	3.5nm,0.1s						
KAPS				Lg	Lg	04 10 58.1	
	57nm,0.3s						
UZB	Uzynbulak	2.79	256	*e*P	Pn	04 10 22.4	+3.4
	3.8nm,0.2s						
UZB				*e*S	Sb	04 10 57.7	-0.8
	17nm,0.3s						
UZB	Uzynbulak	2.79	256	Pg	Pb	04 10 23.3	-0.5
	3.8nm,0.2s						
UZB				Lg	Lg	04 10 58.0	
	17nm,0.3s						
MK31	Makanchi Array	2.91	354	⇑Pn	Pn	04 10 21.7	+1.1
	0.6nm,0.2s,baz=191,slow=15,SNR=461						
MK31				⇑Pg	Pg	04 10 29.9	+1.0
	2.5nm,0.2s,baz=172,slow=16,SNR=26						
MK31				⇑Lg	Lg	04 11 01.4	
	48nm,0.7s,baz=179,slow=27,SNR=5.6						
MAKZ	Makanchi	2.95	350	⇑Pn	Pn	04 10 21.9	+0.8
	1.6nm,0.3s						
MAKZ				⇑Pg	Pg	04 10 30.9	+1.1
	5.1nm,0.4s						
MAKZ				⇑Lg	Lg	04 11 08.1	
	5.5nm,0.3s						
BLB	Baldybastay	3.06	275	Pg	Pb	04 10 30.3	+1.8
	7.9nm,0.1s						
BLB				Lg	Lg	04 11 10.6	
	62nm,0.2s						
ZHN	Zhinishke	3.19	258	*e*P	Pb	04 10 31.0	+0.3
	7.8nm,0.2s						
ZHN				*e*S	Sb	04 11 11.7	+1.6
	40nm,0.2s						
ZHN	Zhinishke	3.19	258	Pg	Pb	04 10 31.0	+0.3
	7.8nm,0.2s						
ZHN				Lg	Lg	04 11 11.7	
	40nm,0.2s						
SATY	Saty	3.24	256	*e*P	Pb	04 10 31.4	-0.3
	3.6nm,0.1s						
SATY				*e*S	Sb	04 11 12.4	+0.8
	21nm,0.2s						
SATY	Saty	3.24	256	Pg	Pb	04 10 31.3	-0.3
	3.6nm,0.1s						
SATY				Lg	Lg	04 11 12.4	
	21nm,0.2s						
TDK	Taldyqorghan	3.27	291	*e*P	Pg	04 10 35.2	-0.8
	31nm,0.4s						
TDK				*e*S	Sg	04 11 19.3	+1.0
	108nm,0.4s						
TDK	Taldyqorghan	3.27	291	Pg	Pg	04 10 35.2	-0.8
	31nm,0.4s						
TDK				Lg	Lg	04 11 19.3	
	108nm,0.4s						
ARXS	Arharly	3.53	277	*e*P	Pb	04 10 39.1	+2.6
	1.9nm,0.1s						
ARXS				*e*S	Sg	04 11 26.8	0.0
	22nm,0.4s						
ARXS	Arharly	3.53	277	Pg	Pb	04 10 39.1	+2.6
	1.9nm,0.1s						
ARXS				Lg	Lg	04 11 26.8	
	22nm,0.4s						
ZSN	Zaisan	3.86	22	*e*P	Pb	04 10 41.5	-0.5
	3.0nm,0.2s						
ZSN				*e*S	Sb	04 11 30.1	+0.9
	45nm,0.4s						
ZSN	Zaisan	3.86	22	Pg	Pb	04 10 41.5	-0.5
	3.0nm,0.2s						
ZSN				Lg	Lg	04 11 30.1	
	45nm,0.4s						
KOTS	Kotyrbulak	4.12	263	*e*P	Pg	04 10 51.5	-0.7
	3.2nm,0.3s						
KOTS				*e*S	Sg	04 11 47.5	+1.9
	35nm,0.5s						
KOTS	Kotyrbulak	4.12	263	Pg	Pg	04 10 51.5	-0.7
	3.2nm,0.3s						
KOTS				Lg	Lg	04 11 47.5	
	35nm,0.5s						
CHKK	Chushkaly	4.14	271	*e*P	Pg	04 10 50.8	-1.7
	1.3nm,0.1s						
CHKK				*e*S	Sg	04 11 46.8	+0.7
	25nm,0.2s						
CHKK	Chushkaly	4.14	271	Pg	Pg	04 10 50.8	-1.7
	1.3nm,0.1s						
CHKK				Lg	Lg	04 11 46.8	
	25nm,0.2s						
MDOK	Medeo	4.18	262	*e*P	Pb	04 10 51.2	+3.5
	3.6nm,0.5s						
MDOK				*e*S	Sg	04 11 46.4	-1.2
	7.5nm,0.4s						
MDOK	Medeo	4.18	262	Pg	Pg	04 10 54.8	+1.4
	3.8nm,0.6s						
MDOK				Lg	Lg	04 11 48.8	
	23nm,1.1s						
MDOK	Medeo	4.18	262	Pg	Pb	04 10 51.2	+3.5
	3.6nm,0.5s						
MDOK				Lg	Lg	04 11 46.4	
	7.5nm,0.4s						
TNSS	Tian-Shan	4.28	260	*e*P	Pg	04 10 54.0	-1.3
	3.1nm,0.2s						
TNSS				*e*S	Sg	04 11 51.2	+0.4
	4.9nm,0.3s						
TNSS	Tian-Shan	4.28	260	Pg	Pg	04 10 54.0	-1.3
	3.1nm,0.2s						
TNSS				Lg	Lg	04 11 51.2	
	4.9nm,0.3s						
KTBS	Karatobe	4.37	270	*e*P	Pg	04 10 56.5	-0.5
	1.5nm,0.3s						
KTBS				*e*S	Sg	04 11 55.5	+2.1
	14nm,0.3s						
KTBS	Karatobe	4.37	270	Pg	Pg	04 10 56.5	-0.5
	1.5nm,0.3s						
KTBS				Lg	Lg	04 11 55.6	
	14nm,0.3s						
KUU	Kurty	4.60	272	*e*P	Pb	04 10 58.8	+4.0
	1.1nm,0.3s						
KUU				*e*S	Sg	04 11 59.5	-1.6
	17nm,0.3s						
KUU	Kurty	4.60	272	Pg	Pb	04 10 58.8	+4.0
	1.1nm,0.3s						
KUU				Lg	Lg	04 11 59.5	
	17nm,0.3s						
MTBS	Maitube	4.63	263	*e*P	Pb	04 10 59.3	+4.1
	1.7nm,0.3s						
MTBS				*e*S	Sg	04 12 00.3	-1.7
	7.6nm,0.4s						
MTBS	Maitube	4.63	263	Pg	Pb	04 10 59.3	+4.1
	1.7nm,0.3s						
MTBS				Lg	Lg	04 12 00.4	
	7.6nm,0.4s						
KST	Kastek	4.98	262	*e*P	Pb	04 11 04.5	+3.2
	4.1nm,0.5s						
KST				*e*S	Sg	04 12 09.8	-3.6
	12nm,0.5s						
KST	Kastek	4.98	262	Pg	Pg	04 11 07.9	-0.9
	4.1nm,0.5s						
KST				Lg	Lg	04 12 15.2	
	12nm,0.5s						
DGS	Degeres	5.08	265	*e*P	Pb	04 11 06.0	+3.1

	1.0nm,0.3s						
DGS				eS	Sg	04 12 11.9	-4.5
	3.8nm,0.6s						
DGS	Degeres	5.08	265	Pg	Pb	04 11 06.0	+3.1
	1.0nm,0.3s						
DGS				Lg	Lg	04 12 12.0	
	3.8nm,0.6s						
KRBS	Karabastau	5.10	270	eP	Pb	04 11 06.1	+3.0
	1.0nm,0.4s						
KRBS				eS	Sg	04 12 11.9	-5.0
	4.3nm,0.3s						
KRBS	Karabastau	5.10	270	Pg	Pb	04 11 06.2	+3.0
	1.0nm,0.4s						
KRBS				Lg	Lg	04 12 13.8	
	4.3nm,0.3s						
TKM2	Tokmak 2	5.27	262	⇑Pg	Pg	04 11 14.4	+0.1
	0.9nm,0.3s						
TKM2				⇑Lg	Lg	04 12 23.3	
	4.3nm,0.4s						
AAK	Ala-Archa	6.13	261	⇓Pg	Pg	04 11 29.4	-1.3
	0.5nm,0.3s						
AAK				⇑Lg	Lg	04 12 49.4	
	3.2nm,0.6s						
KURBB	Kurchatov Arra	7.30	339	⇓Pn	Pn	04 11 19.9	-0.9
	2.7nm,0.5s						
KURBB				⇓Sn	Sn	04 12 44.0	-0.2
	4.9nm,0.5s						
KURBB				⇑Lg	Lg	04 13 24.7	
	26nm,0.7s						
KURK	Kurchatov	7.36	339	⇓Pn	Pn	04 11 20.2	-1.4
	1.2nm,0.6s						
KURK				⇓Sn	Sn	04 12 44.7	-1.0
	2.2nm,0.6s						
KURK				⇓Lg	Lg	04 13 26.5	
	7.6nm,0.5s						
OTUK	Ortayu	8.41	305	⇓Lg	Lg	04 13 59.6	
	6.5nm,0.7s						

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*IDC **30** 04:29:02.5±3.7, 57°.84S×149°.59E, h0^{km}, mb4.2/3, mb1 4.4/3, mb1mx3.7/23, mbtmp4.2/3, MS3.6/5, Ms1 3.6/5, ms1mx3.3/13, Error ellipse: s-maj=215.6km s-min=32.9km az=80.0*

ISC 30 04:29:02.9±3.3**, 57°.8S**±0°.5×**15°0E**±°**, h10^{km}, n22, σ1^{s}13**/8**, mb4.2**/3**, MS3.6**/5**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	20.21	173	LR	LR	04 39 17.9	
	comp=Z,71nm,19.9s,baz=338,slow=30						
URZ	Urewera	26.20	53	LR	LR	04 44 03.5	
	comp=Z,161nm,18.4s,baz=211,slow=34						
H01W1	Cape Leeuwin H	33.26	298	T	T	05 09 51.8	
	baz=145,slow=75,SNR=54						
H01W2	Cape Leeuwin H	33.27	298	T	T	05 09 51.8	
	baz=145,slow=75,SNR=48						
H01W3	Cape Leeuwin H	33.28	298	T	T	05 09 53.0	
	baz=145,slow=75,SNR=48						
ASAR	Alice Springs	36.09	334	P	P	04 36 04.0	-0.7
	2.1nm,1.0s,baz=164,slow=9.7,SNR=11						
MAW	Mawson	37.90	219	LR	LR	04 50 45.3	
	comp=Z,153nm,18.8s,baz=61,slow=35						
WRA	Warramunga Arr	39.59	336	P	P	04 36 34.7	+0.5
	5.1nm,0.9s,baz=167,slow=7.5,SNR=12						
FITZ	Fitzroy Crossi	43.66	325	P	P	04 37 07.9	+0.4
	4.1nm,0.8s,baz=180,slow=12,SNR=3.7						
PLCA	Paso Flores	76.04	149	LR	LR	05 11 38.4	
	comp=Z,28nm,18.2s,baz=194,slow=34						
H08S2	Diego Garcia H	77.10	276	T	T	06 04 23.9	
	baz=148,slow=76,SNR=14						
H08S1	Diego Carcia H	77.11	276	T	T	06 04 24.4	
	baz=148,slow=76,SNR=10						
H08S3	Diego Garcia H	77.12	276	T	T	06 04 29.4	
	baz=148,slow=76,SNR=18						
H03S2	Juan Fernandez	79.79	140	T	T	06 10 20.0	
	SNR=28						
H03S1	Juan Fernandez	79.79	140	T	T	06 10 21.3	
	SNR=31						
H03S3	Juan Fernandez	79.81	140	T	T	06 10 20.9	
	SNR=26						
CMAR	Chiang Mai Arr	87.06	312	LR	LR	05 24 13.3	
	comp=Z,28nm,18.0s,baz=201,slow=38						
TORD	Torodi Ar. Bea	129.53	221	PKP	PKiKP	04 48 13.7	+1.2
	0.4nm,0.9s,baz=248,slow=0.8,SNR=1.9						
AKASG	Malin Array Be	145.87	284	PKPbc	PKPdf	04 48 39.7	-0.9
	2.2nm,0.7s,baz=102,slow=2.4,SNR=8.2						
KEST	Kesra	146.06	246	PKPbc	PKPbc	04 48 42.9	+0.5
	8.7nm,1.0s,baz=307,slow=4.1,SNR=5.6						
FINES	FINESS Array B	152.32	301	PKPbc	PKiKP	04 48 58.1	+0.5
	1.9nm,0.8s,baz=90,slow=2.8,SNR=2.1						
GERES	GERESS Array B	153.03	270	PKPbc	PKPbc	04 48 57.8	-1.7
	0.9nm,0.8s,baz=130,slow=2.1,SNR=5.8						

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*PDG **30** 04:59:04.5±0.3, 43°.18N×17°.10E, h0^{km}±11^{km}, ML3.1/12, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*
*KRSZO **30** 04:59:05.6±0.8, 43°.14N×17°.16E, h10^{km}±5^{km}, ML3.7/15, Error ellipse: s-maj=3.8km s-min=2.2km az=36.0*
*RHSSO **30** 04:59:06.1±0.3, 43°.10N×17°.10E, h6^{km}±2^{km}, ML2.9/17*
*PRU **30** 04:59:07.3±0.0, 43°.16N×17°.25E, h0^{km}*
*BEO **30** 04:59:09.1±0.5, 43°.31N×17°.45E, h0^{km}, ML2.5/7*

ISC 30 04:59:05.9±1.1**, 43°.13N**±0°.02×**17°.14E**±0°.02**, h2^{km}**±9^{km}**, n124, σ0^{s}86**/213**, 22C-14D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKA	Makarska	0.18	331	ePg	Pg	04 59 09.7	+0.4
MAKA				Sg	Sg	04 59 12.7	+1.0
RICI	Ricice	0.36	359	ePg	Pg	04 59 12.8	-0.1
RICI				Sg	Sg	04 59 18.6	+1.1
LSTV	Lastovo	0.41	207	ePg	Pg	04 59 12.3	-1.4
LSTV				Sg	Sg	04 59 18.8	-0.2
STON	Ston	0.49	122	⇑iPg	Pg	04 59 14.5	-0.7
STON				eSg	Sg	04 59 22.5	+0.9
STON	Ston	0.49	122	ePg	Pg	04 59 14.7	-0.5
STON				Sg	Sg	04 59 22.1	+0.5
STON	Ston	0.49	122	ePg	Pb	04 59 18.2	+1.0
STON				eSg	Sg	04 59 22.7	+1.1
HVAR	Hvar	0.51	275	ePg	Pg	04 59 14.9	-0.7
HVAR				Sg	Sg	04 59 22.5	+0.3
TREB	Trebinje	0.98	115	ePg	Pg	04 59 24.0	-0.7
TREB				eSg	Sg	04 59 38.2	+0.8
TREB	Trebinje	0.98	115	ePg	Pg	04 59 24.4	-0.3
TREB				eSg	Sb	04 59 39.0	0.0
KIJV	Kijevo	1.02	329	ePg	Pg	04 59 25.1	-0.4
KIJV				Sg	Sb	04 59 40.1	-0.1
BRY	Bratogost	1.05	102	ePg	Pg	04 59 25.5	-0.6
BRY				eSg	Sb	04 59 40.7	-0.5
BRY	Bratogost	1.05	102	⇑iPg	Pg	04 59 24.6	-1.5
BRY				i Sg	Sb	04 59 41.9	+0.7
ZIRJ	Zirje	1.21	296	ePg	Pg	04 59 28.1	-1.0
ZIRJ				Sg	Sg	04 59 44.4	-0.3
HCY	Herceg Novi	1.21	124	ePg	Pg	04 59 27.6	-1.5
HCY				eSg	Sg	04 59 44.3	-0.5
HCY	Herceg Novi	1.21	124	⇓iPg	Pg	04 59 27.7	-1.4
HCY				i Sg	Sn	04 59 47.5	+0.7
MORI	Morici	1.27	306	i Pg	Pg	04 59 29.9	-0.4
MORI				Sg	Sn	04 59 48.2	-0.1
MGRS	Mrkonjic Grad	1.28	358	⇓iPg	Pg	04 59 30.2	-0.3
MGRS				eSg	Sn	04 59 48.4	-0.3
UPM	Unac-Piva	1.29	86	ePg	Pg	04 59 30.2	-0.5
UPM				eSg	Sb	04 59 48.4	+0.2
UPM	Unac-Piva	1.29	86	⇑iPg	Pg	04 59 29.1	-1.6
UPM				i Sg	Sn	04 59 49.3	+0.2
NKME	Niksic	1.38	105	⇓iPg	Pg	04 59 30.9	-1.5
NKME				i Sg	Sn	04 59 52.9	+1.8
NKY	Niksic	1.40	103	⇑iPg	Pg	04 59 30.8	-1.9
NKY				i Sg	Sn	04 59 53.5	+1.9
CEME	Cevo	1.43	114	⇓iPg	Pn	04 59 31.7	-1.3
CEME				i Sg	Sn	04 59 53.9	+1.5
BUM	Brajici-Budva	1.54	122	⇑iPn	Pn	04 59 34.0	-0.4
BUM				i Sn	Sb	04 59 55.7	+0.6
BLY	Banja Luka	1.62	1	ePn	Pg	04 59 36.4	-0.4
BLY				eSn	Sn	04 59 56.7	-0.1
BLY	Banja Luka	1.62	1	Pb	Pg	04 59 36.8	-0.1
	comp=Z,0.3nm,SNR=3.7						
BLY	Banja Luka	1.62	1	ePn	Pg	04 59 36.5	-0.4
PLE	Pljevlja	1.66	82	⇓iPn	Pn	04 59 35.7	-0.4
PLE				i Sn	Sg	05 00 00.9	+1.8
RUDO	Rudo	1.70	73	ePn	Pn	04 59 36.9	+0.4
RUDO				eSn	Sg	04 59 59.9	-0.5
PDG	Podgorica	1.71	114	⇑P	Pn	04 59 36.6	0.0
PDG				⇓S	Sb	05 00 00.2	+0.3
PDG	Podgorica	1.71	114	ePn	Pn	04 59 36.5	-0.2
PDG				eSn	Sn	04 59 59.1	+0.1
PDG	Podgorica	1.71	114	ePg	Pn	04 59 37.1	+0.4
PDG				eSg	Sb	05 00 00.1	+0.2
TTG	Podgorica	1.71	114	⇓iPn	Pn	04 59 36.6	0.0
TTG				i Sn	Sg	05 00 01.2	+0.4
UDBI	Udbina	1.71	325	ePn	Pb	04 59 37.6	-0.5
UDBI				Sn	Sg	05 00 01.0	0.0
DUGI	Dugi Otok	1.74	300	ePn	Pn	04 59 37.3	+0.2
DUGI				Sn	Sb	05 00 00.8	-0.1
DOB	Doboj	1.74	23	ePn	Pn	04 59 36.8	-0.4
DOB				eSn	Sb	05 00 00.2	-0.7
KOME	Kolasin	1.77	98	⇑iPn	Pn	04 59 37.9	+0.3
KOME				i Sn	Sg	05 00 04.3	+1.7
DRME	Dracevica, Mon	1.78	121	ePn	Pn	04 59 37.6	-0.1
DRME				eSn	Sn	05 00 01.3	+0.4
DRME	Dracevica, Mon	1.78	121	⇑iPn	Pn	04 59 37.7	0.0
DRME				i Sn	Sg	05 00 05.1	+2.0
BBLS	Lazići	1.80	65	ePn	Pn	04 59 38.8	+0.7
BBLS				eSn	Sb	05 00 02.6	-0.2
BBLS	Lazići	1.80	65	ePg	Pn	04 59 37.8	-0.3
BBLS				eSg	Sn	04 59 58.8	-2.8
PRIJ	Prijedor	1.87	351	ePn	Pn	04 59 38.9	0.0
PRIJ				eSn	Sn	05 00 03.5	+0.5
MRAK	Mrakovica	1.89	355	⇑iPn	Pn	04 59 39.8	+0.6
MRAK				eSn	Sn	05 00 03.2	-0.4
ULC	Ulcinj	1.95	126	⇓iPn	Pn	04 59 40.7	+0.7
ULC				i Sn	Sg	05 00 09.0	+0.6
IVA	Berane	2.04	96	⇑iPn	Pn	04 59 41.7	+0.4
IVA				i Sn	Sg	05 00 10.7	-0.6
PLIT	Plitvice	2.06	328	ePn	Pn	04 59 42.6	+1.1
PLIT				Sn	Sb	05 00 10.2	+0.2
SJES	Sjenica	2.08	85	ePg	Pn	04 59 43.1	+1.3
SJES				eSg	Sn	05 00 06.3	-2.0
PVY	Plav	2.14	104	⇑iPn	Pn	04 59 43.5	+0.7
PVY				i Sn	Sb	05 00 13.5	+1.0
NVLJ	Novalja	2.18	312	ePn	Pn	04 59 43.1	0.0
NVLJ				Sn	Sn	05 00 10.6	0.0
TEKS	Tekeris	2.23	50	ePn	Pn	04 59 44.3	+0.4
TEKS				eSn	Sn	05 00 12.3	+0.2
TEKS	Tekeris	2.23	50	ePg	Pn	04 59 43.6	-0.3
IVAS	Ivanjica	2.24	78	ePg	Pn	04 59 44.5	+0.4
BLJ	Bijeljina	2.25	42	ePn	Pn	04 59 43.7	-0.5
BLJ				eSn	Sn	05 00 11.5	-1.0
DIVS	Divibare	2.29	64	ePn	Pn	04 59 45.1	+0.4
DIVS				eSn	Sn	05 00 13.4	0.0
DIVS	Divibare	2.29	64	ePg	Pn	04 59 45.0	+0.4
DIVS				eSg	Sn	05 00 13.3	-0.1
MOSL	Moslavina	2.50	354	ePn	Pn	04 59 47.4	-0.2
MOSL				Sn	Sn	05 00 19.6	+1.1
MATE	Matera	2.50	188	⇑P	Pb	04 59 50.9	-0.6
TRUS	Trudelj	2.61	64	ePg	Pn	04 59 49.5	+0.4
GRUS	Gruza	2.71	73	ePg	Pn	04 59 51.0	+0.6
GRUS				eSg	Sn	05 00 25.2	+1.4
OZLJ	Ozalj	2.76	335	ePn	Pn	04 59 51.6	+0.6
OZLJ				Sn	Sn	05 00 26.3	+1.4
FRGS	Fruska Gora	2.79	43	⇓P	Pn	04 59 50.8	-0.8
FRGS				⇑S	Sn	05 00 23.8	-2.1
FRGS	Fruska Gora	2.79	43	ePn	Pn	04 59 51.8	+0.2
FRGS				eSn	Sn	05 00 25.9	+0.1
FRGS	Fruska Gora	2.79	43	ePn	Pn	04 59 50.6	-1.0
ZAG	Zagreb	2.82	343	ePn	Pn	04 59 51.8	-0.1
ZAG				eSn	Sn	05 00 26.1	-0.3
SMRN	Sveta Marina	2.87	313	ePn	Pn	04 59 53.0	+0.4
SMRN				Sn	Sn	05 00 28.1	+0.4
PTJ	Puntijarka	2.90	344	ePn	Pn	04 59 53.0	-0.1
PTJ				Sn	Sn	05 00 30.0	+1.4
RIY	Rijeka	2.91	320	ePn	Pn	04 59 53.3	+0.2
RIY				eSn	Sn	05 00 28.4	-0.2
RIY	Rijeka	2.91	320	ePn	Pn	04 59 53.3	+0.2
RIY				Sn	Sn	05 00 30.0	+1.4
SELS	Selova	2.91	87	ePn	Pn	04 59 53.2	-0.1
CRES	Cresnjev	2.95	336	ePn	Pn	04 59 54.5	+0.8
CRES	Cresnjev	2.95	336	⇓iPn	Pn	04 59 54.2	+0.4
CRES				eSn	Sn	05 00 29.2	-0.5
CRES	Cresnjev	2.95	336	Pn	Pn	04 59 54.8	+1.0
	comp=Z,0.7nm,SNR=2.5						
CRES				Sn	Sn	05 00 32.0	+2.3
BRJN	Brijuni	3.02	307	ePn	Pn	04 59 54.8	+0.2
BRJN				Sn	Sn	05 00 31.2	-0.2
KOVH	Kovagotottos	3.03	13	eP	Pn	04 59 54.7	-0.2
KOVH				eS	Sn	05 00 30.6	-1.2
KOVH	Kovagotottos	3.03	13	Pn	Pn	04 59 54.7	-0.2
	comp=Z,0.1nm,SNR=1.4						
KOVH				Sn	Sn	05 00 30.6	-1.2
KALN	Kalnik	3.04	351	ePn	Pn	04 59 54.7	-0.3
KALN				Sn	Sn	05 00 31.9	0.0
LOBO	Lobor	3.12	346	ePn	Pn	04 59 56.0	0.0
LOBO				Sn	Sn	05 00 34.0	+0.2
CEY	Cerknica	3.25	324	⇓iPn	Pn	04 59 57.9	0.0
CEY				eSn	Sn	05 00 36.0	-1.2
MORH	Mrgy, Hungar	3.26	19	eP	Pn	04 59 57.8	-0.2
MORH				eS	Sn	05 00 36.9	-0.5
MORH	Mrgy, Hungar	3.26	19	ePn	Pn	04 59 57.8	-0.2
MORH				eSn	Sn	05 00 37.0	-0.4
MORH	Mrgy, Hungar	3.26	19	Pn	Pn	04 59 57.8	-0.2
	comp=Z,0.2nm,SNR=2.2						
MORH				Lg	Lg	05 00 36.9	
BOVS	Bovan	3.37	80	ePn	Pn	05 00 00.3	+0.8
KOGS	Kog	3.38	350	i Pn	Pn	04 59 59.8	+0.2
KOGS				i Sn	Sn	05 00 39.9	-0.3
KOGS				IAML		05 00 49.3	
	comp=Z,11nm,0.4s						
KOGS	Kog	3.38	350	Pg	Pn	05 00 00.0	+0.5
	comp=Z,0.3nm,SNR=2.0						
KOGS				Lg	Lg	05 00 40.1	
BARS	Barje	3.45	94	ePn	Pn	05 00 02.1	+1.5
LJU	Ljubljana	3.46	328	ePn	Pn	05 00 00.0	-0.7
LJU				eSn	Sn	05 00 41.6	-0.6
A263A	Hollad	3.51	2	Pn	Pn	05 00 02.0	+0.5
	comp=Z,0.3nm,SNR=3.5						
ZAGS	Zajecar	3.77	78	ePn	Pn	05 00 05.6	+0.6
PERS	Pernice	3.79	338	i Pn	Pn	05 00 05.9	+0.6
TIH	Tihany	3.81	8	eP	Pn	05 00 05.3	-0.1
TIH	Tihany	3.81	8	Pn	Pn	05 00 05.3	-0.1
	comp=Z,0.4nm,SNR=2.0						
OBKA	Obir	3.85	332	ePn	Pn	05 00 06.8	+0.7
	comp=Z,0.7nm,0.1s						
OBKA	Obir	3.85	332	Pg	Pn	05 00 07.7	+1.5
	comp=Z,0.1nm,SNR=1.3						
ZAPS	Zavoj	4.02	86	ePn	Pn	05 00 10.1	+1.6
MPLH	Magyarpolny	4.05	4	eP	Pn	05 00 09.5	+0.6
MPLH				eS	Sn	05 00 58.2	+1.4
MPLH	Magyarpolny	4.05	4	Pn	Pn	05 00 09.5	+0.6
	comp=Z,0.3nm,SNR=3.3						
MPLH				Sn	Sn	05 00 58.2	+1.4
BZS	Buzias	4.06	51	⇑P	Pn	05 00 08.3	-0.7
BZS				⇓S	Sn	05 00 56.1	-0.9
BZS	Buzias	4.06	51	Pg	Pn	05 00 08.6	-0.4
	comp=Z,0.1nm,SNR=2.3						
BZS				Lg	Lg	05 00 56.5	
BLKB	Belogradchik	4.07	81	⇑S	Sn	05 00 57.7	+0.4
HERR	Herculane	4.19	64	⇓P	Pn	05 00 11.1	+0.4
HERR				⇑S	Sn	05 00 59.3	-1.0
ARSA	Arzberg	4.27	345	i Pn	Pn	05 00 12.3	+0.4
	comp=Z,5.4nm,0.3s,SNR=19						
ARSA				eSn	Sn	05 01 03.4	+1.0
	comp=Z,2.5nm,0.3s						
ARSA	Arzberg	4.27	345	Pn	Pn	05 00 12.6	+0.7
	comp=Z,0.1nm,SNR=2.0						
ARSA				Sn	Sn	05 01 02.0	-0.3
SIRR	Siria	4.50	44	⇑P	Pn	05 00 14.5	-0.6
SIRR				⇑S	Sn	05 01 06.0	-1.9
SIRR	Siria	4.50	44	Pn	Pn	05 00 14.4	-0.6
	comp=Z,0.1nm,SNR=2.0						
SIRR				Lg	Lg	05 01 06.2	
VTS	Vitosha	4.51	94	⇑P	Pn	05 00 15.5	+0.2
VTS				⇑S	Sn	05 01 09.4	+1.0
GZR	Gura Zlata	4.64	59	⇑P	Pn	05 00 17.4	+0.4
GZR				⇓S	Sn	05 01 10.6	-0.8
GZR	Gura Zlata	4.64	59	Pn	Pn	05 00 17.5	+0.4
	comp=Z,0.1nm,SNR=1.8						
CONA	Conrad Observa	4.88	350	i Pn	Pn	05 00 21.0	+0.6
	comp=Z,2.1nm,0.3s,SNR=8.5						
CONA				eSn	Sn	05 01 17.9	+0.5
	comp=Z,1.3nm,0.3s						
ABTA	Abfaltersbach	4.88	319	ePn	Pn	05 00 20.4	0.0
	comp=Z,0.4nm,0.3s						
ZST	Bratislava	5.06	360	ePN	Pn	05 00 23.4	+0.6
MOA	Molln	5.13	338	i Pn	Pn	05 00 24.5	+0.8
	comp=Z,0.8nm,0.2s						
MOA				eSn	Sn	05 01 25.2	+1.7
	comp=Z,1.7nm,0.4s						
PSZ	Piszkesteto	5.16	21	⇑P	Pn	05 00 23.8	-0.4
PSZ	Piszkesteto	5.16	21	eP	Pn	05 00 24.0	-0.2
PSZ				eS	Sn	05 01 23.9	-0.4
PSZ	Piszkesteto	5.16	21	Pn	Pn	05 00 24.0	-0.2
	comp=Z,0.1nm,SNR=1.9						
PSZ				Sn	Sn	05 01 23.9	-0.4
MODS	Modra-Piesok	5.24	1	Pn	Pn	05 00 25.1	-0.1
	comp=Z,137nm,2.3s,SNR=1.4						
MODS	Modra-Piesok	5.24	1	ePN	Pn	05 00 25.0	-0.3
MODS				eSN	Sn	05 01 23.5	-2.7
VYHS	Vyhne	5.49	12	ePN	Pn	05 00 29.5	+0.8
VYHS				eSN	Sn	05 01 31.5	-0.9
KOLL	Kolacno	5.52	9	ePN	Pn	05 00 30.0	+1.0
KOLL				eSN	Sn	05 01 31.1	-1.9
WTTA	Wattenberg	5.67	319	i Pn	Pn	05 00 32.0	+0.7
	comp=Z,0.7nm,0.2s						
WATA	Walderalm	5.75	319	ePn	Pn	05 00 32.8	+0.4
	comp=Z,0.3nm,0.1s						
SQTA	Sankt Quirin	5.85	316	i Pn	Pn	05 00 34.1	+0.4
	comp=Z,0.6nm,0.2s						
MOTA	Moosalm	5.99	317	ePn	Pn	05 00 35.7	0.0
	comp=Z,0.4nm,0.3s						
LANS	Liptovska Anna	6.23	14	ePN	Pn	05 00 38.5	-0.4
RETA	Reutte	6.26	316	ePn	Pn	05 00 39.6	+0.3
	comp=Z,0.2nm,0.2s						
KHC	Kasperske Hory	6.49	339	ePN	Pn	05 00 44.1	+1.7
KHC				eSN	Sn	05 01 56.0	-1.0

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*IDC **30** 05:06:09.4±1.8, 53°.14N×133°.11W, h0^{km}, mb3.8/2, mb1 3.4/8, mb1mx3.3/35, mbtmp3.3/8, ML3.4/6, Error ellipse: s-maj=30.8km s-min=15.1km az=46.0*
*PGC **30** 05:06:10.8±2.8, 53°.25N×133°.13W, h28^{km}, ML3.7/17, ML3.7/16, 87km west of Sandspit, Bc Haida Gwaii Region*

ISC 30 05:06:10.9±1.4**, 53°.32N**±0°.03×**132°.85W**±0°.04**, h7^{km}**±10^{km}**, n50, σ1^{s}64**/70**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIB	Dawson Inlet,	0.25	117	P	Pb	05 06 19.1	+1.3
DIB				S	Sb	05 06 24.2	+1.8
H02S1	DAWSON INLET T	0.25	117	Pg	Pb	05 06 19.0	+1.2
H02S1				Lg	Lg	05 06 24.2	
MOBC	Moresby Island	0.56	108	P	Pb	05 06 24.4	+1.3
MOBC				S	Sn	05 06 33.6	-1.3
HG1B	Mitchell Dam	0.58	131	P	Pb	05 06 24.1	+0.7
HG1B				S	Sb	05 06 33.3	+1.5
NDB	Naden	0.64	355	P	Pb	05 06 24.4	-0.1
NDB				S	Sb	05 06 33.9	+0.2
MASB	Masset	0.85	35	P	Pn	05 06 29.9	+0.5
MASB				S	Sn	05 06 42.4	+0.2
LIB	Langara Island	0.95	353	P	Pg	05 06 29.1	-0.1
LIB				S	Sg	05 06 41.5	+0.1
BNB	Barry Inlet	1.00	138	P	Pg	05 06 30.1	0.0
BNB				S	Sb	05 06 44.4	+0.5
BNAB	Bonilla	1.34	82	Pn	Pn	05 06 35.9	-0.1
BNAB				Pg	Pg	05 06 37.2	+0.7
BNAB				Sg	Sg	05 06 56.9	+3.0
HG4B	Hotspring	1.44	135	Pn	Pn	05 06 36.5	-0.9
HG4B				Sg	Sg	05 06 58.2	+1.2
BNKB	Banks Island	1.77	88	Pn	Pn	05 06 42.0	0.0
BNKB				Pg	Pb	05 06 44.5	+0.8
BNKB				Sg	Sg	05 07 09.3	+1.6
GRNB	Grenville Isla	1.80	72	Pn	Pn	05 06 42.5	0.0
GRNB				Pg	Pg	05 06 45.5	0.0
GRNB				Sg	Sg	05 07 10.8	+1.9
RUBB	Prince Rupert	1.84	56	Pn	Pn	05 06 43.3	+0.3
RUBB				Pg	Pg	05 06 46.4	+0.2
RUBB				Sg	Sg	05 07 11.7	+1.6
HWKB	Hawksbury Isla	2.23	81	Pn	Pn	05 06 48.8	+0.5
HWKB				Sg	Sg	05 07 23.3	+0.8
MBLB	Minette Bay Lo	2.62	72	Pn	Pn	05 06 54.0	+0.5
MBLB				Sg	Sg	05 07 35.1	+0.3
KITB	Kitimat	2.62	71	Pn	Pn	05 06 53.9	+0.3
KITB				Pg	Pg	05 06 59.9	-1.2
KITB				Sg	Sg	05 07 35.9	+0.9
BUTB	Butedale	2.65	94	Pn	Pn	05 06 55.1	+0.9
BUTB				Sg	Sg	05 07 35.8	-0.3
BBB	Bella Bella	3.09	110	Pn	Pn	05 07 00.5	+0.3
	2.2nm,0.3s,baz=294,slow=9.7,SNR=29						
BBB				Lg	Lg	05 07 47.5	
	22nm,0.3s,baz=351,slow=17,SNR=4.3						
BBB	Bella Bella	3.09	110	Pn	Pn	05 06 59.8	-0.4
BBB				Sg	Sg	05 07 48.0	-2.3
HOLB	Holberg	3.96	131	Pn	Pn	05 07 10.8	-1.3
HOLB				Sn	Sn	05 07 57.8	-1.0
PHC	Port Hardy	4.25	126	Pn	Pn	05 07 14.4	-1.6
PHC				Sn	Sn	05 08 02.2	-3.6
MAYB	Maynard	4.57	127	Pn	Pn	05 07 21.2	+0.6
MAYB				Sn	Sn	05 08 13.3	-0.7
TLCB	Telegraph Cove	4.64	124	Pn	Pn	05 07 21.4	0.0
TLCB				Sn	Sn	05 08 14.1	-1.4
FSB	Fort Saint Jam	5.17	74	Pn	Pn	05 07 30.6	+1.9
FSB				Pg	Pg	05 07 46.9	-3.1
FSB				Sg	Sg	05 08 53.5	-3.4
FSJB	Fort St James	5.19	74	Pn	Pn	05 07 31.1	+2.1
FSJB				Pg	Pg	05 07 47.3	-3.0
FSJB				Sg	Sg	05 08 53.7	-3.7
DLBC	Dease Lake	5.37	16	Pn	Pn	05 07 34.5	+3.0
	2.3nm,0.3s,baz=212,slow=8.5,SNR=36						
DLBC				Lg	Lg	05 09 03.5	
	3.9nm,0.3s,baz=300,slow=20,SNR=10						
DLBC	Dease Lake	5.37	16	Pn	Pn	05 07 34.2	+2.6
DLBC				Sg	Sg	05 08 59.9	-3.4
BESE	Bessie Mountai	5.39	349	Sg	Sg	05 09 00.6	-3.4
BMBC	Bull Mountain	6.79	62	Sg	Sg	05 09 46.8	-1.9
NBC5	NorthernBC 5	7.16	50	Pn	Pn	05 07 58.0	+1.9
LLLB	Lillooet	7.30	107	Sg	Sg	05 10 01.8	-3.3
WHY	Whitehorse	7.45	352	Pn	Pn	05 08 00.2	+0.2
FNBB	Fort Nelson	7.83	41	Pn	Pn	05 08 06.9	+1.6
WTMTA	White Mountain	8.27	68	Sg	Sg	05 10 30.8	-5.4
BDMTA	Bald Mountain	8.34	74	Sg	Sg	05 10 31.8	-6.4
BRLDA	Berland Lookou	9.20	79	Sg	Sg	05 10 58.7	
PNT	Penticton	9.20	110	Sg	Sg	05 11 01.1	
SLEB	Sale Mountain	9.28	98	Sg	Sg	05 10 59.8	
YKA	Yellowknife Ar	13.31	39	Pn	Pn	05 09 19.5	-0.6
	0.1nm,0.3s,baz=229,slow=12,SNR=6.1						
ILAR	Eielson Array	13.52	334	Pn	Pn	05 09 23.4	+0.4
	0.0nm,0.3s,baz=165,slow=14,SNR=1.8						
INK	Inuvik	15.04	359	Pn	Pn	05 09 43.7	0.0
	0.0nm,0.3s,baz=178,slow=8.2,SNR=2.2						
PDAR	Pinedale Array	18.73	115	P	Pn	05 10 31.4	+0.8
	0.1nm,0.3s,baz=325,slow=5.7,SNR=3.1						
H11N2	WAKE ISLAND Hy	56.71	258	T	T	06 17 16.8	
	baz=38,slow=76,SNR=222						
H11N3	WAKE ISLAND Hy	56.71	258	T	T	06 17 16.6	
	baz=38,slow=76,SNR=181						
H11N1	WAKE ISLAND Hy	56.73	258	T	T	06 17 17.8	
	baz=38,slow=76,SNR=140						
H11S1	WAKE ISLAND Hy	57.78	257	T	T	06 18 41.9	
	baz=23,slow=79,SNR=8.5						
H11S2	WAKE ISLAND Hy	57.79	257	T	T	06 18 39.9	
	baz=23,slow=79,SNR=9.5						
H11S3	WAKE ISLAND Hy	57.80	257	T	T	06 18 39.6	
	baz=23,slow=79,SNR=7.9						
ZALV	Zalesovo Beam	68.62	337	P	P	05 17 14.7	+0.5
	0.5nm,0.4s,baz=27,slow=9.7,SNR=2.1						
MKAR	Makanchi Array	75.86	336	P	P	05 17 57.5	-0.1
	0.7nm,0.8s,baz=40,slow=6.7,SNR=4.6						

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*TUL **30** 05:14:50±1.0, 36°.07N±0°.01×97°.35W±0°.01, h6^{km}±7^{km}, ML2.6, mb_Lg2.2/6(NEIC), Error ellipse: s-maj=1.8km s-min=1.2km az=191.0*

NEIC 30 05:14:49.8±0.7**, 36°.08N**±0°.01×**97°.35W**±0°.01**, h8^{km}**±7^{km}**, Error ellipse: s-maj=1.9km s-min=1.1km az=134.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK031	S. Brethren Rd	0.43	107		Pg	05 14 58.4	+0.2
OK031				Sg	Sg	05 15 04.5	+0.6
BCOK	Bluff Creek, N	0.47	207		Pg	05 14 58.9	0.0
BCOK				Sg	Sg	05 15 05.7	+0.7
OK025	Westminster Rd	0.50	179		Pg	05 14 59.7	+0.3
QUOK	Quay	0.53	80		Pg	05 15 00.3	+0.3
QUOK				Sg	Sg	05 15 07.5	+0.6
CROK	Carrier	0.67	310		Pg	05 15 02.9	+0.2
CROK				Sg	Sg	05 15 12.1	+0.7
OKCFA	Oklahoma City	0.67	187		Pg	05 15 02.6	-0.1

OKCFA				IAmb_Lg		05 15 11.8	
	comp=Z,33nm,0.8s						
OKCSW	**OKLAHOMA CITY**	**0.68**	**186**		Pg	05 15 02.8	0.0
BLOK	**Blackwell**	**0.69**	**9**		Pg	05 15 03.2	+0.1
FNO	**Franklin**	**0.82**	**183**		Pg	05 15 05.4	-0.2
FNO				IAmb_Lg		05 15 16.7	
	comp=Z,23nm,0.9s						
GC02	**Grant County #**	**0.87**	**332**		Pg	05 15 06.6	0.0
KAN13	**South Haven SW**	**0.94**	**354**		Pg	05 15 07.8	-0.1
W35A	**Tecumseh**	**1.00**	**157**		Pg	05 15 08.4	-0.6
OK032	**Salt Plains WL**	**1.00**	**316**		Pg	05 15 08.9	-0.2
KAN14	**Manchester OK**	**1.01**	**331**	Pg	Pg	05 15 08.9	-0.2
T35A	**Sooner Cattle**	**1.07**	**39**		Pg	05 15 10.3	-0.2
KAN05	**Bluff City Nor**	**1.11**	**338**		Pg	05 15 10.8	-0.3
KAN01	**Argonia South**	**1.12**	**343**		Pg	05 15 11.0	-0.3
KAN10	**Anthony SW Sta**	**1.20**	**330**	Pn	Pb	05 15 12.5	-0.4
KAN06	**Argonia West S**	**1.24**	**341**	Pn	Pn	05 15 13.2	-0.3
KAN08	**Anthony NE Sta**	**1.25**	**337**	Pn	Pn	05 15 13.4	-0.3
TUL1	**Leonard**	**1.27**	**97**		Pn	05 15 13.2	-0.7
KAN16	**Harper SW Stat**	**1.28**	**334**		Pn	05 15 13.9	-0.2
KAN12	**Harper NE Stat**	**1.32**	**337**		Pn	05 15 14.6	-0.1
U32A	**Winter Ranch,**	**1.37**	**283**		Pn	05 15 15.1	-0.2
X34A	**Smith Ranch, M**	**1.53**	**195**		Pb	05 15 18.1	-0.3
LOOK	**Love County**	**2.09**	**176**	Pn	Pn	05 15 26.1	+1.0
X37A	**Clayton**	**2.20**	**132**	Pn	Pn	05 15 27.7	+1.1
X37A				IAmb_Lg		05 16 04.5	
	comp=Z,13nm,0.8s						
U40A	**Yellville**	**3.65**	**84**	IAmb_Lg		05 16 54.7	
	comp=Z,6.1nm,0.7s						

OMAN 30 05:29:44.2±0.7**, 20°.37N**×**59°.08E, h2**^{km}±4^{km}**, ml3.6**/11**, Error ellipse: s-maj=14.6km s-min=3.3km az=304.0, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DQM	**DQM**	**1.51**	**253**	P	Pn	05 30 12.1	-0.1
JLN	**Jalan Bani Buh**	**1.80**	**10**	P	Pn	05 30 15.9	-0.3
JLN				S	Sb	05 30 40.6	-0.2
WBK	**Wadi Bani Khal**	**2.23**	**357**	P	Pn	05 30 22.7	+0.5
WBK				S	Sb	05 30 52.9	-0.4
SMDO	**Samad**	**2.84**	**341**	P	Pn	05 30 30.2	-0.4
WSAR	**Wadi Sarin**	**2.88**	**352**	P	Pn	05 30 31.4	+0.2
WSAR				S	Sb	05 31 11.0	-1.1
BSY	**Bisya**	**2.94**	**324**	P	Pn	05 30 31.9	0.0
BIDO	**Bidbid**	**3.26**	**344**	P	Pn	05 30 36.6	+0.4
HOQ	**Hoqain**	**3.59**	**333**	P	Pn	05 30 41.7	+0.8
SHAO	**Shalim**	**4.01**	**235**	P	Pn	05 30 47.3	+0.7
	SNR=17						
SOHO	**SOHO**	**4.42**	**328**	P	Pn	05 30 54.4	+2.0
SOHO				S	Sn	05 31 43.5	-0.9
ASHO	**Ashiyiah**	**5.12**	**328**	P	Pn	05 31 03.5	+1.5

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*ROM **30** 05:42:19.4±0.5, 42°.39N±0°.04×15°.18E±0°.04, h9^{km}, ML2.5/7, Error ellipse: s-maj=4.8km s-min=1.6km az=32.0*

ISC 30 05:42:18.8±1.3**, 42°.41N**±0°.03×**15°.16E**±0°.03**, h4**^{km}±11^{km}**, n37, σ0^{s}.87**/52**, 2C, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TREM	**Isole Tremiti**	**0.38**	**137**	P	**Pb**	**05 42 27.7**	**-0.4**
FRES	**Fresagrandinar**	**0.57**	**221**	P	**Pg**	**05 42 28.9**	**-0.7**
MELA	**Melanico ??? S**	**0.70**	**182**	P	**Pg**	**05 42 31.1**	**-1.1**
SGRT	**San Giovanni R**	**0.78**	**146**	P	**Pg**	**05 42 33.1**	**-0.6**
SGRT				S	**Sb**	**05 42 45.1**	**-0.9**
SGRT				AML	AML		
	comp=E,390µm,1.0s						
SGRT				AML	AML		
	comp=N,314µm,1.5s						
TRIV	**Trivento**	**0.78**	**216**	P	**Pg**	**05 42 34.3**	**+0.5**
LPEL	**Lama dei Pelig**	**0.81**	**244**	P	**Pg**	**05 42 35.2**	**+0.9**
LPEL				AML	AML		
	comp=E,208µm,0.2s						
LPEL				AML	AML		
	comp=N,169µm,0.2s						
MSAG	**Monte S. Angel**	**0.89**	**141**	P	**Pg**	**05 42 35.5**	**-0.3**
MSAG				S	**Sb**	**05 42 48.9**	**-0.1**
MSAG				AML	AML		
	comp=N,661µm,0.8s						
MSAG				AML	AML		
	comp=E,509µm,1.6s						
MSAG				AML	AML		
	comp=N,682µm,0.4s						
MSAG				AML	AML		
	comp=E,510µm,1.6s						
MSAG				AML	AML		
	comp=E,458µm,1.6s						
MSAG				AML	AML		
	comp=N,660µm,0.8s						
MSAG				AML	AML		
	comp=N,682µm,0.4s						
GATE	**Gambatesa**	**0.91**	**192**	P	**Pn**	**05 42 37.9**	**-0.5**
BSSO	**Busso**	**0.96**	**207**	P	**Pg**	**05 42 37.8**	**+0.6**
VCEL	**Villa Celiera**	**0.98**	**270**	P	**Pg**	**05 42 37.7**	**+0.1**
VCEL				AML	AML		
	comp=E,177µm,1.5s						
VCEL				AML	AML		
	comp=N,158µm,1.5s						
MIDA	**Miranda**	**1.02**	**222**	P	**Pg**	**05 42 37.3**	**-1.1**
T0110	**Collepietro**	**1.04**	**261**	P	**Pb**	**05 42 39.7**	**+0.3**
TERO	**Teramo**	**1.17**	**281**	P	**Pb**	**05 42 41.2**	**-0.5**
TERO				AML	AML		
	comp=E,36µm,1.5s						
TERO				AML	AML		
	comp=N,39µm,0.6s						
CERA	**Filignano**	**1.17**	**227**	P	**Pb**	**05 42 41.6**	**-0.1**
FAGN	**Fagnano**	**1.18**	**264**	P	**Pb**	**05 42 41.6**	**-0.2**
FAGN				AML	AML		
	comp=E,332µm,0.6s						
FAGN				AML	AML		
	comp=N,201µm,0.4s						
HVAR	**Hvar**	**1.22**	**50**	*e*Pg	**Pn**	**05 42 41.8**	**-0.9**
HVAR				Sg	**Sg**	**05 42 58.9**	**+0.9**
ZIRJ	**Zirje**	**1.30**	**16**	*e*Pg	**Pn**	**05 42 42.6**	**-1.1**
ZIRJ				Sg	**Sb**	**05 43 00.2**	**-0.6**
LSTV	**Lastovo**	**1.33**	**74**	*e*Pn	**Pn**	**05 42 43.0**	**-1.1**
LSTV				Sg	**Sg**	**05 43 02.0**	**+0.6**
SMA1	**SAN MARTINO**	**1.37**	**280**	P	**Pn**	**05 42 44.8**	**0.0**
MORI	**Morici**	**1.51**	**15**	*e*Pn	**Pn**	**05 42 45.8**	**-0.8**
MORI				Sn	**Sn**	**05 43 06.6**	**-0.3**
NRCA	**Norcia**	**1.57**	**287**	AML	AML		
	comp=N,69µm,1.3s						
NRCA				AML	AML		
	comp=E,57µm,1.0s						
DUGI	**Dugi Otok**	**1.59**	**357**	*e*Pn	**Pn**	**05 42 47.2**	**-0.5**
DUGI				Sn	**Sn**	**05 43 08.9**	**+0.2**
MAKA	**Makarska**	**1.62**	**56**	*e*Pn	**Pn**	**05 42 48.7**	**+0.5**
MAKA				Sn	**Sb**	**05 43 09.8**	**-0.4**
RICI	**Ricice**	**1.81**	**52**	*e*Pn	**Pn**	**05 42 50.2**	**-0.6**
RICI				Sn	**Sn**	**05 43 14.6**	**+0.4**
KIJV	**Kijevo**	**1.84**	**29**	*e*Pn	**Pn**	**05 42 51.3**	**+0.1**
KIJV				Sn	**Sn**	**05 43 15.4**	**+0.5**
STON	**Ston**	**1.93**	**75**	*e*Pn	**Pn**	**05 42 52.6**	**+0.2**
STON				Sn	**Sn**	**05 43 16.8**	**-0.3**
NOCI	**Noci**	**2.15**	**138**	⇑P	**Pn**	**05 42 55.6**	**+0.1**
NOCI				AML	AML		
	comp=E,85µm,1.5s						
NOCI				AML	AML		
	comp=N,102µm,1.6s						
UDBI	**Udbina**	**2.17**	**11**	*e*Pn	**Pn**	**05 42 56.2**	**+0.4**
UDBI				Sn	**Sn**	**05 43 23.6**	**+0.5**
NVLJ	**Novalja**	**2.17**	**354**	*e*Pn	**Pn**	**05 42 56.4**	**+0.7**
NVLJ				Sn	**Sn**	**05 43 22.3**	**-0.7**
PE3	**Peglio**	**2.34**	**304**	S	**Sb**	**05 43 31.0**	**+0.1**
PLIT	**Plitvice**	**2.50**	**8**	*e*Pn	**Pn**	**05 42 59.5**	**-0.7**
PLIT				Sn	**Sn**	**05 43 30.8**	**-0.4**
BRJN	**Brijuni**	**2.70**	**338**	*e*Pn	**Pn**	**05 43 02.0**	**-1.0**
BRJN				Sn	**Sn**	**05 43 35.6**	**-0.6**
MOSL	**Moslavina**	**3.41**	**19**	*e*Pn	**Pn**	**05 43 12.7**	**-0.1**
MOSL				Sn	**Sn**	**05 43 53.5**	**-0.1**
LJU	**Ljubljana**	**3.67**	**353**	S	**Sn**	**05 44 04.0**	**+4.0**
ZONE	**Zone**	**4.95**	**314**	P	**Pg**	**05 43 52.8**	**-0.8**
ABSI	**Aberstueckl**	**5.12**	**329**	⇑P	**Pn**	**05 43 35.8**	**-0.6**
VLS	**Valsamata**	**5.92**	**134**	P	**Pb**	**05 44 04.3**	**+1.8**

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*IDC **30** 05:44:12.1±0.8, 38°.79N×74°.70E, h0^{km}, mb4.0/16, mb1 4.1/23, mb1mx3.9/54, mbtmp4.0/23, ML3.3/7, MS3.3/9, Ms1 3.3/9, ms1mx3.1/40, Error ellipse: s-maj=15.1km s-min=14.6km az=75.0*

*SOME **30** 05:44:12.7, 38°.97N×74°.68E, h10^{km}*

*NNC **30** 05:44:17.7±2.5, 39°.18N×74°.80E, h6^{km}±18^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=18.7km s-min=11.0km az=159.0*

*MOS **30** 05:44:18.5±1.4, 38°.98N×74°.60E, h53^{km}, mb4.7/14, Error ellipse: s-maj=8.0km s-min=4.4km az=82.8*

*NEIC **30** 05:44:20.4±1.5, 38°.97N±0°.08×74°.70E±0°.09, h55^{km}±8^{km}, mb4.4/15, Error ellipse: s-maj=12.7km s-min=8.7km az=149.0*

ISC 30 05:44:14.5±0.5**, 38°.86N**±0°.04×**74°.64E**±0°.03**, h10**^{km}**, n171, σ2^{s}.38**/197**, mb4.2**/30**, MS3.4**/9**, 15C-10D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**2.30**	**287**		**Pb**	**05 44 56.2**	**-0.1**
BTK	**Batken**	**3.19**	**293**	PN	**Pb**	**05 45 09.2**	**-2.2**
BTK	**Batken**	**3.19**	**293**		**Pb**	**05 45 09.2**	**-2.2**
AML	**Almayashu**	**3.35**	**348**	P	**Pn**	**05 45 09.6**	**+2.3**
	SNR=8.7						
UCH	**Uchtor**	**3.37**	**358**	P	**Pn**	**05 45 10.1**	**+2.4**
	SNR=29						
ULHL	**Ulahol**	**3.60**	**19**	P	**Pb**	**05 45 17.5**	**-0.9**
	SNR=26						
TARG	**Taragay, Kyrgy**	**3.75**	**39**		**Pn**	**05 45 14.8**	**+1.9**
BOOM	**Boomskoye usch**	**3.76**	**15**	PN	**Pn**	**05 45 14.5**	**+1.7**
BOOM	**Boomskoye usch**	**3.76**	**15**	Pn	**Pn**	**05 45 14.5**	**+1.7**
AAK	**Ala-Archa**	**3.78**	**358**	Pn	**Pn**	**05 45 14.8**	**+1.8**
	3.7nm,0.3s,baz=178,slow=7.9,SNR=46						
AAK				Sn	**Sn**	**05 46 02.7**	**+5.1**
	8.2nm,0.3s,baz=296,slow=19,SNR=6.6						
AAK	**Ala-Archa**	**3.78**	**358**	P	**Pn**	**05 45 15.6**	**+2.5**
	SNR=27						
AAK	**Ala-Archa**	**3.78**	**358**	⇓Pg	**Pb**	**05 45 22.5**	**+1.0**
	82nm,0.7s						
AAK				⇓Lg	Lg	05 46 01.5	
	49nm,0.7s						
AAK	**Ala-Archa**	**3.78**	**358**		**Pn**	**05 45 15.1**	**+2.1**
KDJ	**Kajisay**	**3.80**	**30**	PN	**Pn**	**05 45 15.5**	**+2.2**
KDJ	**Kajisay**	**3.80**	**30**	Pn	**Pn**	**05 45 15.5**	**+2.2**
KBK	**Karagaybulak**	**3.80**	**3**	P	**Pn**	**05 45 16.0**	**+2.7**
	SNR=8.6						
EKS2	**Erkin-Say**	**3.86**	**350**	P	**Pn**	**05 45 18.0**	**+4.0**
	SNR=19						
FRU1	**Bishkek**	**3.95**	**360**	PN	**Pb**	**05 45 20.7**	**-3.6**
FRU1	**Bishkek**	**3.95**	**360**		**Pb**	**05 45 20.7**	**-3.6**
MRKS	**Merke**	**4.03**	**345**	*e*P	**Pb**	**05 45 24.8**	**-0.9**
	16nm,0.1s						
MRKS				*e*S	**Sb**	**05 46 17.2**	**+2.7**
	46nm,0.6s						
MRKS	**Merke**	**4.03**	**345**	Pg	**Pb**	**05 45 24.8**	**-0.9**
	22nm,0.6s						
MRKS				Lg	Lg	05 46 17.2	
	46nm,0.6s						
TKM2	**Tokmak 2**	**4.12**	**10**	P	**Pn**	**05 45 20.0**	**+2.2**
	SNR=159						
TKM2	**Tokmak 2**	**4.12**	**10**	PN	Pn	05 45 22.7	+4.9
TKM2	**Tokmak 2**	**4.12**	**10**	⇑Pg	Pn	05 45 22.7	+4.9
	33nm,0.4s						
TKM2				⇑Lg	Lg	05 46 12.1	
	254nm,0.8s						
CHMS	**Chumysh**	**4.14**	**1**	P	**Pn**	**05 45 20.3**	**+2.4**
	SNR=28						
CHGR	**Chuyangaron**	**4.29**	**269**		**Pn**	**05 45 23.4**	**+3.4**
KST	**Kastek**	**4.30**	**13**	*e*P	**Pb**	**05 45 29.8**	**-0.5**
	46nm,0.2s						
KST				*e*S	**Sb**	**05 46 25.5**	**+3.1**
	148nm,0.8s						
KST	**Kastek**	**4.30**	**13**	Pg	**Pb**	**05 45 29.8**	**-0.5**
	77nm,0.5s						
KST				Lg	Lg	05 46 25.5	
	148nm,0.8s						
USP	**Ospenovka**	**4.41**	**359**	P	**Pn**	**05 45 25.7**	**+4.1**
	SNR=15						
IZV	**Izvestkoviy**	**4.43**	**19**	*e*P	**Pb**	**05 45 32.6**	**0.0**
	92nm,0.6s						
IZV				*e*S	**Sb**	**05 46 30.2**	**+4.0**
	136nm,0.9s						
IZV	**Izvestkoviy**	**4.43**	**19**	Pg	**Pb**	**05 45 32.6**	**0.0**
	92nm,0.6s						
IZV				Lg	Lg	05 46 30.2	
	136nm,0.9s						
DGS	**Degeres**	**4.46**	**11**	*e*P	**Pb**	**05 45 33.3**	**+0.2**
	53nm,0.4s						
DGS				*e*S	**Sb**	**05 46 31.3**	**+4.3**
	99nm,0.6s						
DGS	**Degeres**	**4.46**	**11**	Pg	**Pb**	**05 45 33.3**	**+0.2**
	87nm,0.5s						
DGS				Lg	Lg	05 46 32.5	
	99nm,0.6s						
MTBS	**Maitube**	**4.48**	**17**	*e*P	**Pb**	**05 45 33.5**	**+0.2**
	21nm,0.3s						
MTBS				*e*S	**Sb**	**05 46 31.8**	**+4.4**
	79nm,0.7s						
MTBS	**Maitube**	**4.48**	**17**	Pg	**Pb**	**05 45 33.5**	**+0.2**
	45nm,0.7s						
MTBS				Lg	Lg	05 46 31.8	
	79nm,0.7s						
TNSS	**Tian-Shan**	**4.53**	**22**	*e*P	**Pb**	**05 45 34.0**	**-0.3**
	43nm,0.6s						
TNSS				*e*S	**Sb**	**05 46 32.9**	**+3.8**
	51nm,0.6s						
TNSS	**Tian-Shan**	**4.53**	**22**	*e*Pn	**Pn**	**05 45 24.4**	**+0.9**
	baz=23						
TNSS	**Tian-Shan**	**4.53**	**22**	Pg	**Pb**	**05 45 34.0**	**-0.3**
	43nm,0.6s						
TNSS				Lg	Lg	05 46 32.9	
	51nm,0.6s						
SGDS	**Sogindy**	**4.59**	**360**	*e*Pn	**Pn**	**05 45 25.1**	**+1.0**
	baz=0.8						
SGDS	**Sogindy**	**4.59**	**360**	Pg	**Pb**	**05 45 36.0**	**+0.8**
	41nm,0.6s						
SGDS				Lg	Lg	05 46 36.5	
	24nm,0.8s						
PRZ	**Przheval'sk**	**4.62**	**37**	PN	**Pn**	**05 45 26.9**	**+2.4**
PRZ	**Przheval'sk**	**4.62**	**37**		**Pn**	**05 45 26.9**	**+2.4**
MDOK	**Medeo**	**4.67**	**22**	*e*P	**Pb**	**05 45 35.9**	**-0.8**
	33nm,0.2s						
MDOK				*e*S	**Sb**	**05 46 35.7**	**+2.7**
	98nm,0.8s						
MDOK	**Medeo**	**4.67**	**22**	*e*Pn	**Pn**	**05 45 26.0**	**+0.7**
	baz=23						
MDOK	**Medeo**	**4.67**	**22**	*e*PN	**Pn**	**05 45 26.0**	**+0.7**
MDOK	**Medeo**	**4.67**	**22**	⇑Pg	**Pb**	**05 45 36.7**	**0.0**
	42nm,0.6s						
MDOK				⇓Lg	Lg	05 46 33.0	
	163nm,0.9s						
MDOK	**Medeo**	**4.67**	**22**	Pg	**Pb**	**05 45 35.9**	**-0.8**
	51nm,0.5s						
MDOK				Lg	Lg	05 46 35.7	
	98nm,0.8s						
KNDC	**Almaty**	**4.70**	**21**	PN	**Pb**	**05 45 37.9**	**+0.8**
KNDC	**Almaty**	**4.70**	**21**	⇑Pg	**Pb**	**05 45 37.9**	**+0.8**
	129nm,0.6s						
KNDC				⇑Lg	Lg	05 46 33.8	
	240nm,0.6s						
KOTS	**Kotyrbulak**	**4.76**	**22**	*e*P	**Pb**	**05 45 38.3**	**+0.3**
	29nm,0.2s						
KOTS				*e*S	**Sb**	**05 46 40.0**	**+4.6**
	185nm,0.6s						
KOTS	**Kotyrbulak**	**4.76**	**22**	Pg	**Pb**	**05 45 38.3**	**+0.3**
	33nm,0.6s						
KOTS				Lg	Lg	05 46 40.0	
	185nm,0.6s						
IUG	**Iuzhnay**	**4.81**	**315**	*e*P	**Pb**	**05 45 40.0**	**+0.9**
	630nm,0.2s						
IUG				*e*S	**Sb**	**05 46 42.7**	**+5.7**
	118nm,0.9s						
IUG	**Iuzhnay**	**4.81**	**315**	*e*Pg	**Pg**	**05 45 44.6**	**-2.1**
	baz=315						
IUG	**Iuzhnay**	**4.81**	**315**	Pg	**Pb**	**05 45 41.8**	**+2.8**
	890nm,0.6s						
IUG				Lg	Lg	05 46 46.7	
	118nm,0.9s						
KRBS	**Karabastau**	**4.90**	**9**	*e*P	**Pb**	**05 45 41.7**	**+1.2**
	20nm,0.2s						
KRBS				*e*S	**Sb**	**05 46 46.0**	**+6.6**
	56nm,0.6s						
KRBS	**Karabastau**	**4.90**	**9**	Pg	**Pb**	**05 45 41.7**	**+1.2**
	35nm,0.4s						
KRBS				Lg	Lg	05 46 46.0	
	56nm,0.6s						
SATY	**Saty**	**5.07**	**33**	*e*P	**Pb**	**05 45 42.9**	**-0.6**
	40nm,0.1s						
SATY				*e*S	**Sb**	**05 46 47.4**	**+2.8**
	84nm,0.3s						
SATY	**Saty**	**5.07**	**33**	*e*Pn	**Pn**	**05 45 31.4**	**+0.6**
	3.7nm,0.7s,baz=34						
SATY	**Saty**	**5.07**	**33**	*e*PN	**Pn**	**05 45 31.4**	**+0.6**
SATY				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KTBS	**Karatobe**	**5.09**	**17**	*e*P	**Pb**	**05 45 45.1**	**+1.4**
	comp=Z,25nm,0.1s						
KTBS				*e*S	**Sb**	**05 46 51.8**	**+6.9**
	comp=Z,82nm,0.7s						
KTBS	**Karatobe**	**5.09**	**17**	Pg	**Pb**	**05 45 45.1**	**+1.4**
	comp=Z,45nm,0.7s						
KTBS				Lg	Lg	05 46 51.8	
	comp=Z,82nm,0.7s						
CHM	**Chimkent**	**5.17**	**314**	*e*P	**Pb**	**05 45 47.7**	**+2.8**
	comp=Z,129nm,0.0s						
CHM				*e*S	**Sg**	**05 46 56.3**	**-4.0**
	comp=Z,189nm,0.0s						
ZHN	**Zhinishke**	**5.18**	**32**	*e*Pn	**Pn**	**05 45 32.7**	**+0.6**
	baz=33						
ZHN	**Zhinishke**	**5.18**	**32**	*e*PN	**Pn**	**05 45 32.7**	**+0.6**
KUU	**Kurty**	**5.19**	**14**	*e*P	**Pb**	**05 45 46.0**	**+0.5**
	comp=Z,37nm,0.3s						
KUU				*e*S	**Sb**	**05 46 53.0**	**+5.1**
	comp=Z,187nm,0.7s						
KUU	**Kurty**	**5.19**	**14**	*e*Pn	**Pn**	**05 45 33.7**	**+1.4**
	baz=14						
KUU				*e*Pg	**Pg**	**05 45 51.8**	**-2.2**
	baz=14						
KUU	**Kurty**	**5.19**	**14**	*e*PN	**Pn**	**05 45 33.7**	**+1.4**
KUU	**Kurty**	**5.19**	**14**	Pg	**Pb**	**05 45 45.9**	**+0.5**
	comp=Z,66nm,0.8s						
KUU				Lg	Lg	05 46 53.0	
	comp=Z,187nm,0.7s						
KK02	**Karatay Array**	**5.27**	**325**	⇑Pn	**Pn**	**05 45 35.0**	**+1.6**
	comp=Z,5.7nm,0.4s,baz=128,slow=12						
KK02				⇑Pg	**Pb**	**05 45 51.4**	**+4.7**
	comp=Z,18nm,0.6s,baz=137,slow=15						
KK02				⇓Lg	Lg	05 46 59.3	
	comp=Z,29nm,0.6s,baz=136,slow=29						
KKAR	**Karatay Array**	**5.27**	**325**	PN	**Pn**	**05 45 35.5**	**+2.1**
KKAR	**Karatay Array**	**5.27**	**325**		**Pn**	**05 45 35.5**	**+2.1**
CHKK	**Chushkaly**	**5.30**	**19**	*e*P	**Pb**	**05 45 48.4**	**+1.2**
	comp=Z,42nm,0.2s						
CHKK				*e*S	**Sb**	**05 46 57.1**	**+6.3**
	comp=Z,72nm,0.3s						
CHKK	**Chushkaly**	**5.30**	**19**	*e*Pn	**Pn**	**05 45 34.7**	**+1.0**
	baz=20						
CHCP	**Chirah Chowk**	**5.30**	**193**	P	**Pn**	**05 45 38.4**	**+4.5**
CHCP				S	**Sg**	**05 47 09.0**	**+4.2**
UZB	**Uzynbulak**	**5.42**	**36**	*e*P	**Pb**	**05 45 51.1**	**+1.7**
	comp=Z,28nm,0.4s						
UZB				*e*S	**Sg**	**05 47 01.6**	**-6.8**
	comp=Z,54nm,0.5s						
UZB	**Uzynbulak**	**5.42**	**36**	*e*Pn	**Pn**	**05 45 36.3**	**+0.8**
	comp=Z,3.0nm,0.7s,baz=37						
UZB	**Uzynbulak**	**5.42**	**36**	*e*PN	**Pn**	**05 45 36.3**	**+0.8**
UZB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CEP	**Cherat**	**5.48**	**205**	P	Pn	05 45 41.7	+5.3
CEP				S	**Sg**	**05 47 08.0**	**-2.6**
BRLS	**Borolday**	**5.53**	**320**	*e*P	**Pb**	**05 45 53.1**	**+1.9**
	comp=Z,14nm,0.1s						
BRLS				*e*S	**Sb**	**05 47 05.8**	**+8.1**
	comp=Z,31nm,0.6s						
BRLS	**Borolday**	**5.53**	**320**	*e*Pn	**Pn**	**05 45 36.2**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=318						
BRLS				*e*Pg	**Pb**	**05 45 56.0**	**+4.7**
	baz=318						
BRLS	**Borolday**	**5.53**	**320**	*e*PN	**Pn**	**05 45 36.2**	**-0.8**
BRLS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRLS	**Borolday**	**5.53**	**320**	Pg	**Pb**	**05 45 53.8**	**+2.5**
	comp=Z,14nm,0.4s						
BRLS				Lg	Lg	05 47 07.5	
	comp=Z,31nm,0.6s						
SHLS	**Shalkode**	**5.63**	**39**	*e*P	**Pg**	**05 45 57.8**	**-4.7**
	comp=Z,18nm,0.2s						
SHLS				*e*S	**Sg**	**05 47 12.8**	**-2.6**
	comp=Z,24nm,0.2s						
SHLS	**Shalkode**	**5.63**	**39**	*e*Pn	**Pn**	**05 45 41.9**	**+3.4**
	comp=Z,3.7nm,0.6s,baz=42						
SHLS				*e*Pg	**Pg**	**05 46 03.2**	**+0.8**
	baz=42						
SHLS	**Shalkode**	**5.63**	**39**	*e*PN	**Pn**	**05 45 41.9**	**+3.4**
SHLS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BTLS	**Baital**	**6.20**	**356**	*e*Pn	**Pn**	**05 45 46.7**	**+0.6**
	baz=357						
BTLS				*e*Pg	**Pg**	**05 46 09.5**	**-3.7**
	baz=357						
BTLS	**Baital**	**6.20**	**356**	*e*PN	**Pn**	**05 45 46.6**	**+0.6**
DJR	**Jarkent**	**6.69**	**34**	*e*P	**Pb**	**05 46 15.3**	**+4.3**
	comp=Z,9.4nm,0.1s						
DJR				*e*S	**Sg**	**05 47 44.2**	**-5.2**
	comp=Z,20nm,0.0s						
MAKZ	**Makanchi**	**9.60**	**32**	P	**Pn**	**05 46 34.6**	**+1.9**
MAKZ	**Makanchi**	**9.60**	**32**	Pn	**Pn**	**05 46 34.6**	**+1.9**
MK31	**Makanchi Array**	**9.72**	**33**	P	**Pn**	**05 46 35.2**	**+0.9**
MK31	**Makanchi Array**	**9.72**	**33**	⇑P	**Pn**	**05 46 34.8**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=210,slow=15,SNR=30						
MK31	**Makanchi Array**	**9.72**	**33**		**Pn**	**05 46 35.2**	**+0.9**
MKAR	**Makanchi Array**	**9.72**	**33**	Pn	**Pn**	**05 46 35.2**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=220,slow=15,SNR=26						
MKAR				LR	LR	05 50 38.8	
	comp=Z,161nm,19.2s,baz=220,slow=40						
MKAR	**Makanchi Array**	**9.72**	**33**	Pn	**Pn**	**05 46 34.8**	**+0.5**
WMQ	**Urumqi**	**10.99**	**59**	*e*P	**Pn**	**05 46 51.0**	**-0.9**
WMQ				pP		05 46 54.0	
WMQ				PP	**PnPn**	**05 47 02.5**	**+3.0**
WMQ				S	**Sn**	**05 48 52.5**	**-2.4**
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,5.3s						
WMQ				smax	smax		
	comp=N,16nm,1.1s						
WMQ				smax	smax		
	comp=E,17nm,1.5s						
KURBB	**Kurchatov Arra**	**12.08**	**12**	Pn	**Pn**	**05 47 06.3**	**-0.4**
	comp=E,0.0nm,0.3s,baz=197,slow=12,SNR=2.7						
KURBB				Lg	Lg	05 50 36.6	
	comp=E,0.2nm,0.3s,baz=204,slow=29,SNR=6.2						
KURK	**Kurchatov**	**12.19**	**12**	⇑*e*P	**Pn**	**05 47 10.0**	**+1.9**
KURK	**Kurchatov**	**12.19**	**12**		**Pn**	**05 47 06.3**	**-1.8**
GEYT	**Alibeck**	**13.00**	**271**	Pn	**Pn**	**05 47 18.0**	**-1.3**
	comp=E,0.5nm,0.3s,baz=197,slow=13,SNR=4.2						
GEYT				LR	LR	05 53 05.8	
	comp=E,96nm,19.8s,baz=220,slow=41						
DGZ	**Jazzator, Alta**	**14.17**	**36**	⇑*e*P	**Pn**	**05 47 35.9**	**+0.5**
BVAR	**Borovoye Array**	**14.47**	**350**	Pn	**Pn**	**05 47 37.0**	**-2.3**
	comp=E,0.1nm,0.3s,baz=169,slow=17,SNR=4.1						
BVAR				Lg	Lg	05 51 47.3	
	comp=E,0.2nm,0.3s,baz=156,slow=22,SNR=4.0						
BRVK	**Borovoye**	**14.52**	**349**	P	**P**	**05 47 46.3**	**-0.3**
BRVK	**Borovoye**	**14.52**	**349**	P	**P**	**05 47 46.3**	**-0.3**
AB31	**Akbulak array**	**14.80**	**319**	P	**Pn**	**05 47 42.4**	**-1.3**
AB31	**Akbulak array**	**14.80**	**319**	⇓P	**Pn**	**05 47 42.4**	**-1.3**
	comp=E,5.6nm,0.7s,baz=136,slow=16,SNR=42						
ABKAR	**Akbulak array**	**14.80**	**319**	Pn	**Pn**	**05 47 41.7**	**-2.1**
AKTO	**Aktyubinsk**	**16.51**	**320**	Pn	**Pn**	**05 48 04.7**	**-1.3**
	comp=E,0.2nm,0.3s,baz=136,slow=15,SNR=11						
AKTO	**Aktyubinsk**	**16.51**	**320**	⇑P	**Pn**	**05 48 06.4**	**+0.3**
	comp=E,12nm,1.1s						
ZAA0	**Zalesovo Array**	**16.62**	**21**	Pn	**Pn**	**05 48 06.0**	**-1.4**
ZAA0				IAmb	IAmb	05 48 11.8	
	comp=Z,5.8nm,0.8s						
ZALV	**Zalesovo Beam**	**16.62**	**21**	Pn	**Pn**	**05 48 06.0**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=209,slow=11,SNR=11						
ZALV				LR	LR	05 54 47.2	
	comp=Z,73nm,18.4s,baz=50,slow=38						
ZALV	**Zalesovo Beam**	**16.62**	**21**	*i* P	**Pn**	**05 48 08.3**	**+0.9**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**16.62**	**21**	Pn	**Pn**	**05 48 06.3**	**-1.1**
GTA	**Gaotai**	**19.52**	**80**	*e*P	**Pn**	**05 48 43.5**	**+0.1**
GTA				pP	pP	05 48 46.5	+0.4
GTA				sP	sP	05 48 49.5	+1.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARU	**Arti**	**20.56**	**334**	P	**P**	**05 48 52.8**	**-0.4**
	comp=Z,3.3nm,0.7s,baz=126,slow=4.8,SNR=14						
ARU	**Arti**	**20.56**	**334**	*c i*P	Pn	05 48 55.3	-0.1
ARU						05 49 10.2	
ARU				SS	**PcP**	**05 53 06.5**	**+2.6**
ARU				pmax	pmax		
	comp=Z,14nm,0.9s						

ARU	Arti	20.56	334		P	05 48 53.0	-0.1
ARU				IAmb	IAmb	05 48 57.9	
	comp=Z,13nm,0.9s						
WSAR	Wadi Sarin	20.70	226	LR	LR	05 58 01.8	
	comp=Z,28nm,21.9s,baz=76,slow=40						
GROC	Groznyy	22.14	291	eP	P	05 49 07.9	-2.3
GROC				pmax	pmax		
	comp=Z,23nm,0.5s						
GNI	Garni	23.06	283	P	P	05 49 19.5	-0.8
GNI				pmax	pmax		
	comp=Z,30nm,1.2s						
GNI	Garni	23.06	283	P	P	05 49 19.5	-0.8
GNI				IAmb	IAmb	05 49 30.1	
	comp=Z,30nm,1.1s						
ZAK	Zakamensk	23.27	51	eP	P	05 49 21.4	-0.8
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ONI	Oni	23.86	289	P	P	05 49 29.4	+1.3
ONI				pmax	pmax		
	comp=Z,13nm,0.9s						
ONI	Oni	23.86	289	P	P	05 49 29.4	+1.3
ONI				IAmb	IAmb	05 49 32.7	
	comp=Z,13nm,0.9s						
KBZ	Khabaz	24.26	292	⇓eP	P	05 49 29.2	-2.4
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONM	Songino Array	24.63	58	P	P	05 49 35.5	+0.3
	comp=Z,1.5nm,0.7s,baz=258,slow=11,SNR=6.6						
SONM				LR	LR	06 00 09.6	
	comp=Z,78nm,18.4s,baz=188,slow=39						
ULN	Ulaanbaatar	25.07	58	⇓iP	P	05 49 41.6	+2.4
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIRV	Kirov	25.55	329	P	P	05 49 43.4	+0.2
	comp=Z,10nm,0.6s,baz=138,slow=4.7,SNR=4.0						
BRTR	Keskin Array B	31.55	285	LR	LR	06 06 31.3	
	comp=Z,69nm,18.6s,baz=4.0,slow=42						
PALK	Pallekele	31.91	169	LR	LR	06 05 08.8	
	comp=Z,54nm,18.4s,baz=150,slow=40						
AKASG	Malin Array Be	33.83	306	P	P	05 50 56.9	+0.1
	comp=Z,0.4nm,0.4s,baz=79,slow=7.2,SNR=10						
AKASG	Malin Array Be	33.83	306	IAmb	IAmb	05 50 58.8	
	comp=Z,0.9nm,0.9s						
AKBB	Malin Array Si	33.83	306	⇓eP	P	05 50 56.4	-0.3
AKBB				pmax	pmax		
	comp=Z,13nm,1.9s						
MNK	Minsk	34.97	312	iP	P	05 51 04.4	-2.2
MNK				i		05 52 23.1	
MNK				i		05 53 35.8	
MNK				iS	S	05 56 34.3	-3.8
MNK				iSS	SnSn	05 58 51.1	-1.7
MNK				pmax	pmax		
	comp=E,4.0nm,1.4s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,33nm,1.4s						
MNK				MLR	MLR		
	comp=E,20nm,14.0s						
MNK				MLR	MLR		
	comp=N,91nm,15.0s						
MNK				MLR	MLR		
	comp=Z,175nm,16.0s						
MNK	Minsk	34.97	312	iP	P	05 51 04.4	-2.1
	comp=E,4.0nm,1.4s						
MNK				iP	P	05 51 04.4	-2.1
	comp=N,33nm,1.4s						
MNK				iP	P	05 51 04.4	-2.1
	comp=Z,6.0nm,0.8s,baz=97						
MNK				iPP	PnPn	05 52 23.1	-0.1
MNK				iPPP	PPP	05 52 36.2	
MNK				iS	S	05 56 34.3	-3.7
MNK				iSS	SnSn	05 58 51.2	-1.7
MNK				iSSS	SSS	05 59 08.9	
MNK				iLQ	LQ	06 02 45.1	
MNK				iLR	LR	06 05 24.6	
MNK				iLRM	MLR	06 07 57.0	
	comp=E,20nm,14.1s						
MNK				iLRM	MLR	06 07 57.0	
	comp=N,91nm,14.7s						
MNK				iLRM	MLR	06 08 03.1	
	comp=Z,175nm,16.3s						
FIA1	FINESS Array S	37.23	323	P	P	05 51 25.5	-0.3
FINES	FINESS Array B	37.23	323	P	P	05 51 25.7	-0.2
	comp=Z,1.4nm,0.4s,baz=117,slow=9.7,SNR=16						
ZEA	Zeya	38.35	50	eP	P	05 51 38.1	+2.7
ARCES	ARCESS Array B	40.13	336	P	P	05 51 50.3	+0.1
	comp=Z,2.0nm,0.6s,baz=116,slow=9.6,SNR=14						
ARCES	ARCESS Array B	40.13	336	P	P	05 51 49.8	-0.4
ARCES				pmax	pmax		
	comp=Z,12nm,1.3s						
ARCES	ARCESS Array B	40.13	336	P	P	05 51 49.8	-0.4
ARCES				IAmb	IAmb	05 51 52.8	
	comp=Z,12nm,1.2s						
YAK	Yakutsk	40.37	37	LR	LR	06 08 30.5	
	comp=Z,39nm,19.7s,baz=262,slow=36						
KSRS	Korea Array	41.42	75	LR	LR	06 11 32.8	
	comp=Z,57nm,18.8s,baz=332,slow=40						
KLR	Kul'dur	41.43	56	P	P	05 52 00.9	-0.2
	comp=Z,0.9nm,0.6s,baz=261,slow=10,SNR=2.2						
KLR	Kul'dur	41.43	56	⇓eP	P	05 52 01.7	+0.6
TIXI	Tiksi	42.51	22	⇑iP	P	05 52 08.9	-0.6
TIXI				pmax	pmax		
	comp=Z,12nm,2.4s						
TIXI	Tiksi	42.51	22	P	P	05 52 08.6	-0.9
TIXI				IAmb	IAmb	05 52 11.8	
	comp=Z,3.8nm,0.8s						
GERES	GERESS Array B	43.98	304	P	P	05 52 21.3	-0.6
	comp=Z,1.2nm,0.7s,baz=72,slow=8.6,SNR=9.9						
KHC	Kasperske Hory	44.01	304	⇓eP	P	05 52 20.4	-1.7
NC405	NORSAR Array S	44.05	322	P	P	05 52 19.6	-2.6
NC303	NORSAR Array S	44.22	322	P	P	05 52 23.5	0.0
NB2	NORSAR Subarra	44.29	321	P	P	05 52 23.6	-0.6
	comp=Z,10.0nm,1.2s,baz=90,slow=8.6						
NOA	NORSAR Array B	44.29	321	P	P	05 52 23.6	-0.6
	comp=Z,1.9nm,0.8s,baz=90,slow=7.9,SNR=5.8						
BILL	Bilibino	55.21	27	⇑eP	P	05 53 47.8	+0.7
BILL				e		05 54 52.1	
BILL				e		05 55 55.1	
BILL				eS	S	06 01 35.7	+5.6
BILL				pmax	pmax		
	comp=Z,10.0nm,2.1s						
BILL				MLR	MLR		
	comp=Z,72nm,18.0s						
ESDC	Sonseca Array	58.91	298	P	P	05 54 13.8	-0.1
	comp=Z,0.7nm,0.7s,baz=57,slow=6.2,SNR=4.0						
ANM	Nome	66.73	24	P	P	05 55 06.2	+0.7
ANM				pmax	pmax		
	comp=Z,11nm,1.5s						
ANM	Nome	66.73	24	P	P	05 55 06.2	+0.7
ANM				IAmb	IAmb	05 55 14.6	
	comp=Z,11nm,1.5s						
TOLK	Toolik Lake Re	67.89	16	P	P	05 55 12.3	-0.5
TOLK				IAmb	IAmb	05 55 25.5	
	comp=Z,3.9nm,0.9s						
TORD	Torodi Ar. Bea	68.64	270	P	P	05 55 17.7	-0.5
	comp=Z,1.8nm,0.6s,baz=47,slow=5.8,SNR=12						
IMAR	Indian Mountai	69.03	19	P	P	05 55 19.1	-0.8
INK	Inuvik	71.09	11	P	P	05 55 32.0	-0.4
	comp=Z,1.6nm,0.6s,baz=347,slow=6.8,SNR=16						
INK	Inuvik	71.09	11	IAmb	IAmb	05 55 35.0	
	comp=Z,2.7nm,0.9s						
COLA	College	71.39	18	⇑eP	P	05 55 33.5	-0.8
COLA				pmax	pmax		
	comp=Z,22nm,2.3s						
ILAR	Eielson Array	71.70	17	P	P	05 55 34.8	-1.4
	comp=Z,1.0nm,0.8s,baz=327,slow=5.5,SNR=10						
SCM	Sheep Creek Mo	74.07	19	P	P	05 55 49.4	-1.0
SCM				pmax	pmax		
	comp=Z,28nm,1.4s						
SCM	Sheep Creek Mo	74.07	19	P	P	05 55 49.4	-1.0
BCAR	Beaver Creek A	74.33	16	P	P	05 55 52.2	+0.3
YKA	Yellowknife Ar	78.72	4	P	P	05 56 16.4	-0.3
	comp=Z,1.5nm,0.8s,baz=346,slow=5.5,SNR=29						
WRA	Warramunga Arr	80.86	125	P	P	05 56 27.8	-1.0
	comp=Z,1.2nm,0.8s,baz=315,slow=4.1,SNR=3.9						
WRA	Warramunga Arr	80.86	125	IAmb	IAmb	05 56 29.9	
	comp=Z,0.5nm,1.5s						
ASAR	Alice Springs	83.31	127	P	P	05 56 39.9	-1.8
	comp=Z,0.7nm,0.7s,baz=312,slow=5.2,SNR=10						

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*SKO **30** 05:47:13.2, 41.°84N×19.°91E, h36^{km}*
*ATH **30** 05:47:21.7, 41.°65N×20.°93E, h7^{km}±4^{km}, ML2.3/1, Error ellipse: s-maj=4.5km s-min=2.6km az=176.0*
*TIR **30** 05:47:21.9, 41.°57N×20.°89E, h10^{km}±3^{km}, Md2.6, Ml2.3*
*THE **30** 05:47:22.2, 41.°60N×20.°91E, h3^{km}±13^{km}, ML2.0/3, Error ellipse: s-maj=13.8km s-min=0.3km az=295.0*
*BEO **30** 05:47:23.5±0.4, 41.°55N×20.°95E, h8^{km}±6^{km}, ML1.9/9*
ISC 30 05:47:22.5±1.0**, 41.°58N**±0.°02×**20.°89E**±0.°02**, h8**^{km}±9^{km}**, n35, σ0^{s}.88**/62**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHP	Peshkopia	0.35	287	P	Pg	05 47 29.2	-0.3
PHP				S	Sg	05 47 34.4	+0.2
PHP	Peshkopia	0.35	287	P	Pg	05 47 29.2	-0.3
	baz=289						
PHP				S	Sg	05 47 33.8	-0.4
	baz=289						
PHP				AMP			
	comp=N,4.0nm,0.1s,baz=289						
OHR	Ohrid	0.47	188	iPg	Pg	05 47 32.1	+0.3
OHR				iSg	Sb	05 47 39.3	-1.0
OHR				eLg	Lg	05 47 40.2	
	comp=E,167nm,0.4s						
OHR				eLg	Lg	05 47 40.3	
	comp=N,143nm,0.5s						
OHR	Ohrid	0.47	188	ePg	Pg	05 47 32.0	+0.3
OHR				eSg	Sg	05 47 38.4	+0.4
SKO	Skopje	0.57	46	iPg	Pb	05 47 34.1	-0.6
SKO				iSg	Sb	05 47 41.7	-1.3
TIR	Tirane	0.81	254	P	Pg	05 47 37.8	-0.2
TIR	Tirane	0.81	254	P	Pg	05 47 38.1	+0.1
	baz=254						
TIR				S	Sb	05 47 49.5	-0.3
	baz=254						
TIR				AMP			
	comp=E,0.1nm,0.1s,baz=254						
FNA	Florina	0.88	155	P	Pg	05 47 38.9	-0.4
FNA				S	Sb	05 47 52.0	+0.1
	comp=E,198nm,0.4s						
FNA	Florina	0.88	155	P	Pg	05 47 39.0	-0.4
FNA				S	Sb	05 47 52.0	+0.1
FNA				AML	AML	05 47 52.7	
	comp=E,336µm,0.3s						
FNA				AML	AML	05 47 53.7	
	comp=N,412µm,0.3s						
FNA	Florina	0.88	155	iPg	Pg	05 47 39.0	-0.4
FNA				iSg	Sb	05 47 52.1	+0.1
FNA	Florina	0.88	155	P	Pg	05 47 38.9	-0.4
	baz=154						
FNA				S	Sb	05 47 52.1	+0.1
	baz=154						
KBN	Korca	0.96	185	P	Pg	05 47 40.7	-0.3
KBN				S	Sb	05 47 55.0	+0.7
	comp=N,55nm,0.4s						
KBN	Korca	0.96	185	P	Pb	05 47 41.3	-0.2
	baz=185						
KBN				S	Sn	05 47 55.5	-0.8
	baz=185						
KBN				AMP			
	comp=N,0.2nm,0.3s,baz=185						
STIP	Stip	0.98	83	iPg	Pn	05 47 44.0	+1.4
STIP				iSg	Sn	05 48 00.4	+3.8
BCI	Bajram Curri	1.00	322	P	Pn	05 47 42.5	-0.4
	baz=323						
BCI				S	Sn	05 47 56.4	-0.8
	baz=323						
BCI				AMP			
	comp=N,0.3nm,0.7s,baz=323						
NEST	Nestorio	1.17	174	P	Pg	05 47 44.4	-0.6
NEST				S	Sn	05 48 02.1	+0.6
	comp=N,48nm,0.5s						
NEST	Nestorio	1.17	174	P	Pg	05 47 44.4	-0.6
NEST				S	Sn	05 48 01.2	-0.4
VAY	Valandovo	1.29	101	iPg	Pg	05 47 47.3	+0.1
VAY				iSg	Sn	05 48 04.4	+0.1
VAY				eLg	Lg	05 48 04.9	
	comp=E,18nm,0.4s						
VAY				eLg	Lg	05 48 05.1	
	comp=N,25nm,0.5s						
VAY	Valandovo	1.29	101	ePg	Pg	05 47 46.5	-0.8
VAY				eSg	Sb	05 48 02.9	-0.8
GRG	Griva	1.30	118	iPg	Pg	05 47 47.1	-0.3
GRG				iSg	Sn	05 48 05.3	+0.7
PENT	Pentalofos	1.40	172	P	Pb	05 47 48.5	-0.4
BARS	Barje	1.41	29	iPn	Pg	05 47 50.2	+0.6
BARS	Barje	1.41	29	ePg	Pg	05 47 50.2	+0.6
BARS				eSg	Sg	05 48 08.1	+0.1
LSK	Leskovik	1.45	189	P	Pg	05 47 50.6	+0.4
	baz=189						
LSK				S	Sg	05 48 10.0	+1.0
	baz=189						
LSK				AMP			
	comp=N,0.3nm,0.5s,baz=189						
PDG	Podgorica	1.48	305	ePg	Pg	05 47 51.4	+0.4
PDG				eSg	Sg	05 48 12.7	+2.4
BEY	Berane	1.49	330	iPn	Pg	05 47 51.7	+0.6
BOSS	Bosilegrad	1.50	52	ePg	Pg	05 47 51.1	-0.1
BOSS				eSg	Sg	05 48 10.9	+0.3
KNT	Kendrikon	1.57	105	P	Pn	05 47 50.1	-0.6
KNT	Kendrikon	1.57	105	iPn	Pg	05 47 51.5	-1.1
SELS	Selova	1.65	6	ePn	Pb	05 47 51.9	-1.3
SELS				eSg	Sg	05 48 17.3	+1.8
KPRO	Kipourio	1.66	167	P	Pb	05 47 53.1	-0.4
SJES	Sjenica	1.81	338	ePg	Pg	05 47 57.0	-0.3
SJES				eSg	Sg	05 48 21.7	+0.9
VTS	Vitosha	2.03	59	iPn	Pb	05 47 59.0	-0.8
VTS	Vitosha	2.03	59	ePg	Pb	05 47 58.7	-1.1
VTS				eSg	Sb	05 48 24.7	-0.5
IVAS	Ivanjica	2.07	345	ePg	Pg	05 48 01.5	-0.7
IVAS				eSg	Sg	05 48 29.7	+0.7

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*IDC **30** 05:50:06.7±2.4, 27.°83N×85.°65E, h0^{km}, mb3.7/5, mb1 3.8/7, mb1mx3.3/48, mbtmp3.7/7, ML4.0/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/42, Error ellipse: s-maj=81.0km s-min=22.3km az=68.0*
ISC 30 05:50:09.1±2.5**, 27.°9N**±0.°3×**85.°6E**±0.°5**, h18**^{km}**, n8, σ0^{s}.96**/7**, mb3.6**/5**, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	15.45	124	Pn	Pn	05 53 46.4	+0.1
	0.3nm,0.3s,baz=306,slow=11,SNR=4.2						
MKAR	Makanchi Array	19.09	353	P	Pn	05 54 31.1	-0.4
	0.3nm,0.3s,baz=176,slow=10,SNR=15						
KURBB	Kurchatov Arra	23.36	349	P	P	05 55 16.1	-0.4
	0.4nm,0.3s,baz=168,slow=9.5,SNR=1.9						
SONM	Songino Array	25.72	34	P	P	05 55 38.0	-0.5
	1.1nm,0.7s,baz=218,slow=10.0,SNR=5.9						
ZALV	Zalesovo Beam	26.08	359	P	P	05 55 43.3	+1.8
	0.5nm,0.3s,baz=186,slow=13,SNR=2.1						
MJAR	Matsushiro Arr	44.92	65	LR	LR	06 16 18.7	
	comp=Z,32nm,19.1s,baz=10.0,slow=35						
WRA	Warramunga Arr	66.96	130	P	P	06 01 00.8	-0.2
	0.4nm,0.5s,baz=321,slow=6.6,SNR=2.6						
ASAR	Alice Springs	69.26	133	P	P	06 01 15.3	-0.1
	0.3nm,0.8s,baz=325,slow=6.2,SNR=2.3						

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*MDD **30** 05:56:14.7±0.9, 35.°39N×3.°68W, h12^{km}±10^{km}, mbLg2.3/16, Error ellipse: s-maj=9.4km s-min=6.1km az=167.0, PRXIMO*
*CNRM **30** 05:56:14.2, 35.°54N×3.°60W, h16^{km}, ml2.6*
*SFS **30** 05:56:14.0, 35.°48N×3.°72W, ML2.5, ALBORAN SUR*
ISC 30 05:56:13.9±1.1**, 35.°49N**±0.°02×**3.°66W**±0.°02**, h12**^{km}±9^{km}**, n30, σ1^{s}.28**/59**, 1C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	Palemas	0.35	221	P	Pb	05 56 22.8	+0.6
PALE				S	Sb	05 56 28.2	+0.4
EMEL	Melilla	0.60	108	P	Pg	05 56 26.0	+0.4
	47nm,0.3s,SNR=7.9						
EMEL				S	Sg	05 56 33.6	+0.1
	689nm,0.2s,SNR=7.9						
GOG	Mont Gurugu	0.60	116	P	Pg	05 56 25.7	+0.1
GOG				S	Sg	05 56 33.1	-0.4
EALB	Alboran	0.68	48	⇑P	Pb	05 56 28.5	+0.8
	25nm,0.2s,SNR=18						
EALB				S	Sb	05 56 38.1	+1.0
	57nm,0.2s,SNR=7.9						
AKLM	AKL	0.99	190	P	Pn	05 56 33.5	-0.2
AKLM				S	Sn	05 56 47.0	-0.7
CHAS	Isla Isabel II	1.05	106	eP	Pb	05 56 32.7	-1.3
CHAS				eS	Sb	05 56 45.2	-2.5
ELGU	Los Guajares,	1.38	1	P	Pn	05 56 39.2	+0.1
	1.3nm,0.1s,SNR=7.9						
ELGU				S	Sn	05 56 56.1	-1.2
	58nm,0.2s,SNR=7.9						
EMIJ	Mijas	1.41	320	P	Pn	05 56 38.9	-0.5
	0.7nm,0.1s,SNR=7.9						
EMIJ				S	Sn	05 56 56.8	-1.1
	14nm,0.2s,SNR=7.9						
EMAL	Malaga-Limoner	1.42	334	eP	Pn	05 56 39.6	+0.1
EMAL				eS	Sn	05 56 57.2	-1.0
EMAL	Malaga-Limoner	1.42	334	P	Pn	05 56 39.6	+0.1
EMAL				S	Sn	05 56 57.2	-1.0
CHEFC	Chefchaouen	1.43	255	P	Pg	05 56 41.2	-0.1
CHEFC				S	Sg	05 56 59.7	-0.2
JBK	JBK	1.46	142	P	Pn	05 56 38.9	-1.3
JBK				S	Sn	05 56 57.1	-2.3
ECEU	Ceuta	1.46	287	P	Pn	05 56 39.6	-0.5
	4.5nm,0.2s,SNR=7.9						
ECEU				S	Sn	05 56 57.4	-1.8
	17nm,0.2s,SNR=7.9						
EBER	Berja	1.54	24	P	Pn	05 56 41.3	-0.1
	2.4nm,0.2s,SNR=7.9						
EBER				S	Sb	05 57 02.8	+0.8
	20nm,0.4s,SNR=7.9						
EGOR	Sierra Gorda,	1.66	347	P	Pn	05 56 43.4	+0.4
	0.3nm,0.2s,SNR=7.9						
EGOR				S	Sn	05 57 02.7	-1.7
	7.5nm,0.2s,SNR=7.9						
GORA	Gorafe	2.05	14	P	Pb	05 56 50.7	-0.5
	2.9nm,0.2s,SNR=7.9						
GORA				S	Sb	05 57 15.8	-0.8
	21nm,0.4s,SNR=7.9						
EQES	Quesada	2.36	11	P	Pb	05 56 55.2	-1.2
	1.9nm,0.1s,SNR=7.9						
EQES				S	Sn	05 57 22.5	+1.0
	22nm,0.5s,SNR=7.9						
MD31	MD31	2.77	200	P	Pn	05 56 58.8	+0.6
MD31				S	Sn	05 57 33.9	+2.3
EADA	Adamuz	2.77	345	P	Pn	05 57 00.6	+2.4
	0.1nm,0.1s,SNR=7.9						
EADA				S	Sn	05 57 31.4	-0.3
	8.3nm,0.4s,SNR=7.9						
SESP	Santiago Espad	2.77	18	S	Sn	05 57 32.7	+0.8
	9.7nm,0.5s,SNR=7.9						
MDT	Midelt	2.78	197	P	Pn	05 56 59.8	+1.4
MDT				S	Sn	05 57 34.4	+2.4
TDRA	Tendrara	2.79	151	P	Pb	05 57 03.1	-0.7
TDRA				S	Sn	05 57 34.1	+1.9
EZAR	Zarzadilla de	2.86	33	P	Pn	05 56 59.5	+0.1
	0.3nm,0.2s,SNR=7.9						
EZAR				S	Sn	05 57 33.2	-0.6
	2.3nm,0.3s,SNR=7.9						
ECAB	El Cabril	2.94	332	P	Pn	05 57 02.9	+2.3
	0.1nm,0.1s,SNR=7.9						
ECAB				S	Sn	05 57 36.3	+0.4
	3.7nm,0.5s,SNR=7.9						
EMIN	Mina Concepcio	3.33	314	P	Pn	05 57 06.3	+0.6
	0.9nm,0.1s,SNR=7.9						
EMIN				S	Sn	05 57 43.0	-2.3
	0.7nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.57	28	P	Pn	05 57 11.5	+2.3
	0.6nm,0.1s,SNR=7.9						
ETOB				S	Sn	05 57 52.6	+1.2
	0.9nm,0.3s,SNR=7.9						
EGRO	El Granado	3.70	305	P	Pn	05 57 10.7	-0.1
	0.5nm,0.2s,SNR=7.9						
EGRO				S	Sn	05 57 52.6	-1.8
	1.6nm,0.2s,SNR=7.9						
PVAQ	Vaqueiros	3.79	301	P	Pn	05 57 13.4	+1.2
PVAQ				S	Sn	05 57 55.8	-1.0
PAB	San Pablo	4.09	352	P	Pn	05 57 18.9	+2.6
	0.1nm,0.3s,SNR=7.9						
PAB				S	Sn	05 58 03.9	-0.3
	1.2nm,0.4s,SNR=7.9						
EBAD	Badajoz	4.22	322	P	Pn	05 57 19.4	+1.3
	0.8nm,0.1s,SNR=7.9						
EBAD				S	Sn	05 58 07.0	-0.4
	3.2nm,0.3s,SNR=7.9						

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*TUL **30** 06:00:10.7±1.1, 36.°59N±0.°02×98.°38W±0.°02, h5^{km}±6^{km}, ML3.3, mb_Lg3.1/64(NEIC), Error ellipse: s-maj=2.3km s-min=1.9km az=138.0*
*NEIC **30** 06:00:10.9±1.0, 36.°570N±0.°007×98.°38W±0.°02, h9^{km}±6^{km}, Error ellipse: s-maj=2.3km s-min=1.0km az=83.0*
*ANF **30** 06:00:11.2±0.7, 36.°55N×98.°37W, h8^{km}±7^{km}, ML3.7/7, Error ellipse: s-maj=5.0km s-min=2.7km az=63.0*
ISC 30 06:00:10.9±1.0**, 36.°57N**±0.°02×**98.°37W**±0.°02**, h8**^{km}±10^{km}**, n72, σ0^{s}.54**/63**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.26	28	Pg	Pg	06 00 16.2	0.0
OK032				Sg	Sg	06 00 20.1	+0.3
OK035	E0210 Rd and N	0.31	296	Pg	Pg	06 00 16.9	-0.1
OK035				Sg	Sg	06 00 21.2	+0.1
CROK	Carrier	0.32	102	Pg	Pg	06 00 17.5	+0.4
CROK				Sg	Sg	06 00 22.3	+0.9
GC02	Grant County #	0.49	55	Pg	Pg	06 00 20.6	+0.1
GC02				Sg	Sg	06 00 27.7	+0.6
KAN14	Manchester OK	0.50	40		Pg	06 00 20.6	-0.1
KAN14				Sg	Sg	06 00 27.5	+0.2
U32A	Winter Ranch,	0.55	250		Pg	06 00 21.4	-0.1
U32A				Sg	Sg	06 00 29.0	+0.3
U32A	Winter Ranch,	0.55	250	P	Pg	06 00 21.3	-0.2
	baz=69,SNR=26						
U32A				S	Sg	06 00 29.0	+0.3
	baz=69						
KAN10	Anthony SW Sta	0.59	21	Pg	Pg	06 00 22.3	-0.1
KAN10				Sg	Sg	06 00 30.2	+0.1
KAN05	Bluff City Nor	0.67	36		Pg	06 00 23.8	-0.1
KAN05				Sg	Sg	06 00 32.7	+0.1
KAN16	Harper SW Stat	0.70	20		Pg	06 00 24.1	-0.3
KAN16				Sg	Sg	06 00 33.5	0.0
KAN08	Anthony NE Sta	0.73	26	Pg	Pg	06 00 24.7	-0.3
KAN08				Sg	Sg	06 00 34.4	-0.1
KAN01	Argonia South	0.76	40		Pg	06 00 25.2	-0.3
KAN01				Sg	Sg	06 00 35.4	-0.1
KAN12	Harper NE Stat	0.78	22		Pg	06 00 25.6	-0.5
KAN12				Sg	Sg	06 00 36.2	0.0
KAN06	Argonia West S	0.79	31		Pg	06 00 25.9	-0.3
KAN06				Sg	Sg	06 00 36.2	-0.2
KAN13	South Haven SW	0.84	58	Pg	Pg	06 00 26.7	-0.4
BLOK	Blackwell	0.94	78	Pg	Pg	06 00 28.7	-0.4
BCOK	Bluff Creek, N	1.10	146		Pg	06 00 31.5	-0.6
BCOK				Sg	Sb	06 00 46.8	+0.1
OK025	Westminster Rd	1.29	140		Pn	06 00 34.9	-0.5
OK025					Sn	06 00 53.0	+0.2
OKCFA	Oklahoma City	1.37	147		Pn	06 00 36.1	-0.3
OKCFA	Oklahoma City	1.37	147	P	Pn	06 00 36.1	-0.3
	baz=327,SNR=18						
OKCFA				S	Sg	06 00 55.2	+0.2
	baz=327						
OK031	S. Brethren Rd	1.38	116		Pn	06 00 36.6	+0.1
OKCSW	OKLAHOMA CITY	1.39	147		Pn	06 00 36.5	-0.1
QUOK	Quay	1.40	106		Pn	06 00 37.0	+0.3
QUOK					Sg	06 00 55.9	0.0
FNO	Franklin	1.53	149		Pn	06 00 38.8	+0.2
T35A	Sooner Cattle	1.53	76		Pn	06 00 39.0	+0.4
T35B	Sooner Cattle	1.53	76	P	Pn	06 00 39.0	+0.4
	baz=258						
T35B				S	Sb	06 00 59.7	+0.6
	baz=258						
W35A	Tecumseh	1.86	139		Pn	06 00 43.7	+0.6
R32A	Long Quarter,	1.87	352		Pn	06 00 43.9	+0.7
R32A				IAmb_Lg		06 01 12.3	
	comp=Z,70nm,0.8s						
R32A	Long Quarter,	1.87	352	P	Pn	06 00 44.3	+1.0
	baz=172,SNR=71						
R32A				S	Sb	06 01 09.1	+0.2
	baz=172						
X34A	Smith Ranch, M	2.01	167		Pn	06 00 46.5	+1.2
TUL1	Leonard	2.18	107		Pb	06 00 49.3	-1.4
TUL1				IAmb_Lg		06 01 23.4	
	comp=Z,59nm,0.7s						
TUL1	Leonard	2.18	107	P	Pn	06 00 48.4	+0.8
	baz=288,SNR=7.7						
CBKS	Cedar Bluff	2.49	334		Pn	06 00 51.9	+0.1
LOOK	Love County	2.75	159		Pn	06 00 55.9	+0.5
KSU1	Kansas State U	2.88	28		Pn	06 00 58.0	+0.8
X37A	Clayton	3.14	128	Pn	Pn	06 01 01.9	+1.2
X37A				IAmb_Lg		06 01 57.0	
	comp=Z,42nm,0.8s						
X37A	Clayton	3.14	128	P	Pn	06 01 01.9	+1.2
	baz=310,SNR=7.3						

U38A	Gravette	3.21	91	IAmb_Lg		06 01 55.3	
	comp=Z,29nm,0.8s						
Z35A	Perchaven, San	3.36	164	Pn	Pn	06 01 04.9	+1.1
W39A	Magazine	3.96	109	IAmb_Lg		06 02 24.7	
	comp=Z,42nm,0.8s						
ABTX	Abilene, Hawle	4.08	195	IAmb_Lg		06 02 19.4	
	comp=Z,23nm,0.9s						
KSCO	Kaye Shedlock'	4.16	307	IAmb_Lg		06 02 26.9	
	comp=Z,35nm,0.7s						
S39A	Bolivar	4.18	73	P	Pn	06 01 15.0	-0.1
	baz=256,SNR=28						
N33A	J Bar K, Exete	4.22	9	IAmb_Lg		06 02 31.1	
	comp=Z,30nm,0.7s						
Z38A	Mt. Pleasant	4.32	139	IAmb_Lg		06 02 29.4	
	comp=Z,26nm,1.0s						
MIAR	Mount Ida	4.40	116	IAmb_Lg		06 02 30.1	
	comp=Z,27nm,0.7s						
U40A	Yellville	4.45	91	IAmb_Lg		06 02 34.1	
	comp=Z,56nm,0.9s						
BGNE	Belgrade	4.83	2	Pn	Pn	06 01 24.5	+0.5
BGNE	Belgrade	4.83	2	P	Pn	06 01 24.4	+0.4
	baz=182,SNR=5.7						
T25A	Trinidad	4.88	278	IAmb_Lg		06 02 54.4	
	comp=Z,40nm,0.8s						
MGMO	Mountain Grove	4.92	81	Pn	Pn	06 01 26.2	+0.9
X40A	Basin Creek Fa	4.97	113	IAmb_Lg		06 02 54.2	
	comp=Z,39nm,0.9s						
FCAR	Ozark Folk Cen	5.09	96	IAmb_Lg		06 02 51.4	
	comp=Z,20nm,0.8s						
WHAR	Wooly Hollow	5.09	103	IAmb_Lg		06 03 00.3	
	comp=Z,56nm,1.2s						
WLAR	White Oak Lake	5.18	122	IAmb_Lg		06 03 08.9	
	comp=Z,37nm,1.1s						
OGNE	Ogallala	5.22	328	IAmb_Lg		06 03 10.2	
	comp=Z,30nm,0.9s						
L34A	Svendsen Farm,	5.60	15	Pn	Pn	06 01 35.3	+0.7
P40A	Paris	5.79	57	IAmb_Lg		06 03 19.9	
	comp=Z,24nm,0.7s						
435B	Jarrell	5.81	173	IAmb_Lg		06 03 29.4	
	comp=Z,29nm,1.1s						
N38A	Joes South For	5.82	42	IAmb_Lg		06 03 24.3	
	comp=Z,40nm,0.8s						
LCAR	Lake Charles	5.84	93	IAmb_Lg		06 03 21.3	
	comp=Z,19nm,0.7s						
CCM	Cathedral Cave	5.87	73	IAmb_Lg		06 03 21.2	
	comp=Z,29nm,0.9s						
PBMO	Poplar Bluff	6.38	86	IAmb_Lg		06 03 35.4	
	comp=Z,24nm,0.7s						
SCIA	State Center	6.66	35	IAmb_Lg		06 03 45.2	
	comp=Z,32nm,0.8s						
143A	Socs Landing,	6.91	122	IAmb_Lg		06 04 02.9	
	comp=Z,14nm,0.8s						
N41A	Harden Midland	7.18	53	IAmb_Lg		06 04 06.1	
	comp=Z,29nm,0.8s						
N23A	Red Feather La	7.33	308	IAmb_Lg		06 04 03.8	
	comp=Z,20nm,0.8s						
S44A	Carbondale	7.36	79	IAmb_Lg		06 04 02.2	
	comp=Z,25nm,1.1s						
W45A	Hickory Valley	7.59	98	IAmb_Lg		06 04 15.0	
	comp=Z,26nm,0.9s						
P43A	Skaggs, Pawnee	7.62	64	IAmb_Lg		06 04 18.2	
	comp=Z,33nm,0.8s						
SUSD	Miller	7.88	357	IAmb_Lg		06 04 26.4	
	comp=Z,19nm,0.8s						
JFWS	Jewell Farm	8.90	42	IAmb_Lg		06 05 07.9	
	comp=Z,16nm,0.8s						

NOU 30 06:03:35.9, 15°.29S×166°.35E, h20^{km}, MLv4.8/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.84	101	P	Pn	06 03 52.2	-0.4
DVP	Devils Point	3.00	144	P	Pn	06 04 23.0	+0.7
KOUNC	Koumac, New Ca	5.59	200	P	Pn	06 04 58.6	+0.7
DZM	Mont Dzumac	6.75	179	P	Pn	06 05 13.1	-0.8
YATNC	Mamie plateau,	6.75	176	P	Pn	06 05 13.6	-0.3
NOUC	Port Laguerre	6.78	180	P	Pn	06 05 14.7	+0.5

IDC 30 06:17:07.7±7.9, 51°.33N×108°.98E, h0^{km}, mb1 3.0/1, mb1mx2.8/39, mbtmp3.0/1, ML2.9/1, Error ellipse: s-maj=68.8km s-min=55.4km az=117.0, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	3.88	207	Pn	Pn	06 18 08.9	+0.3
	0.8nm,0.3s,baz=28,slow=12,SNR=27						
SONM				Pg	Pb	06 18 18.7	+1.7
	1.5nm,0.3s,baz=26,slow=17,SNR=9.7						
SONM				Lg	Lg	06 19 10.2	
	1.0nm,0.3s,baz=20,slow=26,SNR=5.6						
I34MN	SONGINO INFRAS	3.91	206	*i*		06 44 10.0	
	baz=25,slow=347						
I45RU	USSURIYSK INFR	16.98	106	*i*		07 58 00.0	
	baz=307,slow=325,SNR=0.4						

NNC 30 06:18:59.6±4.2, 53°.88N×91°.11E, h0^{km}, mb3.5, mpv3.3, 10C-4D, Error ellipse: s-maj=31.6km s-min=24.1km az=50.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	3.72	274	⇑Pg	Pb	06 20 06.7	+0.5
	1.4nm,0.9s						
ZAA0				⇓Lg	Lg	06 20 57.5	
	4.5nm,0.7s						
KURK	Kurchatov	8.29	253	⇑Pn	Pn	06 21 01.9	+1.0
	1.5nm,0.4s						
KURK				⇑Sn	Sn	06 22 37.9	+2.7
	2.4nm,0.6s						
KURK				⇑Lg	Lg	06 23 22.7	
	5.6nm,0.6s						
KURBB	Kurchatov Arra	8.38	252	⇑Pn	Pn	06 21 02.1	-0.1
	1.6nm,0.5s						
KURBB				⇑Sn	Sn	06 22 35.6	-1.8
	12nm,0.8s						
KURBB				⇑Lg	Lg	06 23 28.6	
	15nm,0.7s						
MK31	Makanchi Array	9.06	222	⇑Pn	Pn	06 21 14.0	+2.4
	0.4nm,0.7s,baz=38,slow=12,SNR=5.8						
MK31				⇓Sn	Sn	06 22 56.1	+1.9
	1.5nm,0.8s,baz=46,slow=23,SNR=3.9						
MK31				⇓Lg	Lg	06 23 45.0	
	3.8nm,0.8s,baz=39,slow=27						
MAKZ	Makanchi	9.17	223	⇓Pn	Pn	06 21 11.5	-1.6
	0.5nm,0.6s						
MAKZ				⇑Sn	Sn	06 22 59.3	+2.3
	1.1nm,0.6s						
MAKZ				⇑Lg	Lg	06 23 49.6	
	9.4nm,1.3s						

IDC 30 06:52:05.3±15.0, 8°.77S×119°.16E, h0^{km}, mb3.4/2, mb1 3.6/3, mb1mx2.8/37, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=304.5km s-min=170.0km az=10.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.41	129	P	Pn	06 56 21.7	-0.6
	0.1nm,0.3s,baz=303,slow=12,SNR=6.5						
ASAR	Alice Springs	20.46	138	P	Pn	06 56 45.9	-1.0
	0.4nm,0.5s,baz=314,slow=9.7,SNR=13						
STKA	Stephens Creek	31.03	141	P	P	06 58 24.3	-0.7
	0.8nm,0.5s,baz=337,slow=9.6,SNR=3.1						

INET 30 07:04:44.0, 11°.96N×86°.79W, h69^{km}, ML3.5, Near coast of Nicaragua

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IDC 30 07:07:51.4±2.5, 1°.77N×127°.69E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.4/29, mbtmp3.4/3, MS3.4/1, Ms1 3.4/1, ms1mx2.4/32, Error ellipse: s-maj=206.5km s-min=25.0km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	Lembang	21.78	247	LR	LR	07 22 37.5	
	comp=Z,94nm,20.6s,baz=144,slow=41						
WRA	Warramunga Arr	22.54	163	P	P	07 12 54.0	+0.8
	0.6nm,0.4s,baz=342,slow=10,SNR=9.2						
ASAR	Alice Springs	25.99	167	P	P	07 13 25.4	-0.8
	0.2nm,0.5s,baz=350,slow=7.5,SNR=5.9						
MKAR	Makanchi Array	59.71	325	P	P	07 17 58.0	+0.1
	0.3nm,0.4s,baz=116,slow=7.2,SNR=8.2						

IDC 30 07:30:05.1±6.6, 19°.91S×176°.22W, h0^{km}, mb3.7/2, mb1 3.9/2, mb1mx3.5/41, mbtmp3.7/2, Error ellipse: s-maj=336.1km s-min=97.6km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	46.28	256	P	P	07 38 32.9	0.0
	1.0nm,0.7s,baz=98,slow=7.4,SNR=16						
WRA	Warramunga Arr	46.34	261	P	P	07 38 33.1	-0.3
	0.3nm,0.4s,baz=97,slow=7.8,SNR=7.7						
AKASG	Malin Array Be	143.28	333	PKP	PKPdf	07 49 40.5	-0.8
	0.6nm,0.4s,baz=43,slow=4.1,SNR=5.8						

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*TUL **30** 07:32:48.6±1.5, 35°.67N±0°.02×97°.40W±0°.03, h6^{km}±6^{km}, ML3.1, mb_Lg3.2/87(NEIC), Error ellipse: s-maj=4.3km s-min=1.8km az=115.0*

*ANF **30** 07:32:48.6±0.4, 35°.70N×97°.41W, h5^{km}, ML3.6/11, Error ellipse: s-maj=4.1km s-min=3.4km az=108.0*

*NEIC **30** 07:32:48.7±1.0, 35°.690N±0°.009×97°.44W±0°.03, h5^{km}±6^{km}, Error ellipse: s-maj=3.2km s-min=1.3km az=97.0*

ISC 30 07:32:48.7±1.0, 35°.69N±0°.02×97°.41W±0°.02, h5^{km}±9^{km}, n87, σ0^{s}64/68, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	Oakdale Elemen	0.10	185		Pg	07 32 50.9	0.0
OK025	Westminster Rd	0.12	150		Pg	07 32 51.1	-0.1
BCOK	Bluff Creek, N	0.16	260	Pg	Pg	07 32 52.3	+0.3
OK005	Luther M Schoo	0.18	100	Pg	Pg	07 32 52.5	+0.2
OKCFA	Oklahoma City	0.27	187		Pg	07 32 53.9	0.0
OKCFA				Sg	Sg	07 32 57.7	+0.2
OKCFA	Oklahoma City	0.27	187	P	Pg	07 32 53.9	0.0
	baz=0.6,SNR=39						
OKCFA				S	Sg	07 32 57.9	+0.3
	baz=0.6						
OKCSW	OKLAHOMA CITY	0.28	184	Pg	Pg	07 32 54.0	-0.2
OKCSW				Sg	Sg	07 32 58.1	+0.3
FNO	Franklin	0.43	179	Pg	Pg	07 32 56.7	-0.2
FNO				Sg	Sg	07 33 02.6	+0.1
OK031	S. Brethren Rd	0.54	60	Pg	Pg	07 32 59.1	0.0
OK031				Sg	Sg	07 33 06.6	+0.6
QUOK	Quay	0.75	49	Pg	Pg	07 33 02.9	-0.2
QUOK				Sg	Sg	07 33 13.4	+0.5
CROK	Carrier	0.94	331		Pg	07 33 06.8	0.0
BLOK	Blackwell	1.08	8		Pg	07 33 09.1	-0.4
X34A	Smith Ranch, M	1.14	198		Pg	07 33 09.9	-0.5
GC02	Grant County #	1.22	343		Pg	07 33 11.6	-0.4
OK032	Salt Plains WL	1.29	330		Pn	07 33 12.6	-0.7
OK032					Sb	07 33 30.2	-0.1
OK032				Sn	Sn	07 33 30.9	-0.1
KAN13	South Haven SW	1.33	358		Pn	07 33 13.6	-0.3
TUL1	Leonard	1.34	80	IAmb_Lg		07 33 33.4	
	comp=Z,118nm,1.1s						
TUL1	Leonard	1.34	80	P	Pn	07 33 12.4	-1.6
	baz=261						
TUL1				S	Sg	07 33 30.7	-0.9
	baz=261						
KAN14	Manchester OK	1.34	341		Pn	07 33 13.8	-0.3
T35B	Sooner Cattle	1.43	30	P	Pn	07 33 14.8	-0.5
	baz=212,SNR=56						
T35B				S	Sb	07 33 34.1	-0.2
	baz=212						
U32A	Winter Ranch,	1.46	299	Pn	Pn	07 33 15.6	-0.2
U32A	Winter Ranch,	1.46	299	P	Pn	07 33 15.6	-0.2
	baz=118,SNR=13						
U32A				S	Sg	07 33 35.7	-0.1
	baz=118						
OK035	E0210 Rd and N	1.46	315		Pn	07 33 15.4	-0.4
KAN05	Bluff City Nor	1.47	345		Pn	07 33 15.7	-0.1
KAN01	Argonia South	1.49	349		Pn	07 33 15.8	-0.3
KAN10	Anthony SW Sta	1.54	339		Pn	07 33 16.5	-0.3
KAN06	Argonia West S	1.60	347		Pn	07 33 17.9	+0.3
KAN08	Anthony NE Sta	1.60	344		Pn	07 33 17.9	+0.2
KAN08				IAmb_Lg		07 33 41.7	
	comp=Z,161nm,1.1s						
KAN16	Harper SW Stat	1.62	341		Pn	07 33 18.1	+0.1
KAN12	Harper NE Stat	1.68	344		Pb	07 33 19.3	-0.7
LOOK	Love County	1.70	173		Pn	07 33 18.1	-0.9
X37A	Clayton	2.00	123	Pn	Pn	07 33 23.0	-0.1
X37A				IAmb_Lg		07 33 54.8	
	comp=Z,185nm,1.1s						
X37A	Clayton	2.00	123	P	Pn	07 33 23.3	+0.3
	baz=304,SNR=24						
X37A				S	Sb	07 33 49.7	-0.9
	baz=304						
Z35A	Perchaven, San	2.35	177		Pn	07 33 28.3	+0.4
Z35A	Perchaven, San	2.35	177	P	Pn	07 33 28.6	+0.6
	baz=356						
Z35A				S	Sn	07 33 58.7	+1.5
	baz=356						
U38A	Gravette	2.56	72	IAmb_Lg		07 34 12.0	
	comp=Z,61nm,0.7s						
U38A	Gravette	2.56	72	P	Pn	07 33 32.5	+1.6
	baz=254,SNR=17						
HHAR	Hobbs	2.88	77		Pn	07 33 36.0	+0.8
W39A	Magazine	3.00	98	Pn	Pn	07 33 36.9	0.0
W39A				IAmb_Lg		07 34 29.0	
	comp=Z,88nm,0.8s						
W39A	Magazine	3.00	98	P	Pn	07 33 36.8	-0.1
	baz=280,SNR=15						
Z38A	Mt. Pleasant	3.14	140	IAmb_Lg		07 34 34.7	
	comp=Z,48nm,0.7s						
MIAR	Mount Ida	3.34	109	Pn	Pn	07 33 42.1	+0.5
MIAR				IAmb_Lg		07 34 42.9	
	comp=Z,50nm,0.9s						
MIAR	Mount Ida	3.34	109	P	Pn	07 33 42.2	+0.7
	baz=291,SNR=12						
KSU1	Kansas State U	3.47	10		Pn	07 33 43.4	+0.2
KSU1				IAmb_Lg		07 34 45.9	
	comp=Z,67nm,0.8s						
KSU1	Kansas State U	3.47	10	P	Pn	07 33 43.5	+0.2
	baz=191						
ABTX	Abilene, Hawle	3.57	212	IAmb_Lg		07 34 42.2	
	comp=Z,40nm,0.9s						
AMTX	Amarillo	3.58	258		Pn	07 33 45.9	+0.9
CBKS	Cedar Bluff	3.63	330	Pn	Pn	07 33 46.5	+0.9
CBKS				IAmb_Lg		07 34 49.8	
	comp=Z,51nm,0.9s						
U40A	Yellville	3.75	78	Pn	Pn	07 33 47.8	+0.5
U40A				IAmb_Lg		07 34 52.0	
	comp=Z,64nm,0.8s						
U40A	Yellville	3.75	78	P	Pn	07 33 48.0	+0.8
	baz=261,SNR=6.5						
U40A				P	Pn	07 33 48.0	+0.8
	baz=261,SNR=6.5						
S39A	Bolivar	3.85	57	P	Pn	07 33 49.4	+0.9
	baz=240,SNR=5.6						
237A	Washetta, Mont	3.91	160	Pn	Pn	07 33 48.7	-0.6
237A				IAmb_Lg		07 34 58.9	
	comp=Z,32nm,1.0s						
WLAR	White Oak Lake	4.07	118	IAmb_Lg		07 35 07.9	
	comp=Z,37nm,0.8s						
WHAR	Wooly Hollow	4.20	94	Pn	Pn	07 33 52.9	-0.4
WHAR				IAmb_Lg		07 35 06.8	
	comp=Z,79nm,1.1s						
FCAR	Ozark Folk Cen	4.30	86	Pn	Pn	07 33 54.7	-0.1
FCAR				IAmb_Lg		07 35 11.9	
	comp=Z,41nm,0.8s						
MGMO	Mountain Grove	4.40	69	IAmb_Lg		07 35 09.1	
	comp=Z,46nm,1.0s						
MSTX	Muleshoe	4.73	250	IAmb_Lg		07 35 18.4	
	comp=Z,35nm,1.2s						
R40A	Maddies Statio	4.87	56	Pn	Pn	07 34 03.3	+0.8
435B	Jarrell	4.89	182	IAmb_Lg		07 35 26.9	
	comp=Z,68nm,0.9s						
CCAR	Cane Creek	4.96	109	IAmb_Lg		07 35 38.8	
	comp=Z,53nm,0.9s						
P38A	Dawn	4.99	37		Pn	07 34 06.5	+2.3
P38A				IAmb_Lg		07 35 39.3	
	comp=Z,24nm,0.8s						
N33A	J Bar K, Exete	5.04	360	IAmb_Lg		07 35 37.7	
	comp=Z,43nm,0.9s						
LCAR	Lake Charles	5.10	84	IAmb_Lg		07 35 30.2	
	comp=Z,23nm,0.8s						
KSCO	Kaye Shedlock'	5.32	310	Pn	Pn	07 34 09.7	+0.8
KSCO				IAmb_Lg		07 35 40.1	
	comp=Z,31nm,0.8s						
N35A	Tabor	5.35	15	Pn	Pn	07 34 09.4	+0.2
JCT	Junction City	5.56	202	IAmb_Lg		07 35 52.8	
	comp=Z,60nm,0.8s						
BGNE	Belgrade	5.74	354	IAmb_Lg		07 36 02.1	
	comp=Z,54nm,0.8s						
PBMO	Poplar Bluff	5.75	77	IAmb_Lg		07 35 58.1	
	comp=Z,53nm,0.7s						
143A	Socs Landing,	5.80	119	IAmb_Lg		07 36 07.6	
	comp=Z,29nm,0.9s						
T25A	Trinidad	5.83	286	IAmb_Lg		07 35 55.2	
	comp=Z,51nm,0.9s						
FVM	French Village	6.05	66	IAmb_Lg		07 36 07.5	
	comp=Z,21nm,0.8s						
PVMO	Portageville	6.29	81	IAmb_Lg		07 36 23.3	
	comp=Z,56nm,0.8s						
OGNE	Ogallala	6.38	327	IAmb_Lg		07 36 29.0	
	comp=Z,31nm,0.9s						
LNXT	Lenox	6.44	84	IAmb_Lg		07 36 23.8	
	comp=Z,57nm,0.8s						
SLM	Saint Louis	6.44	61	IAmb_Lg		07 36 30.7	
	comp=Z,22nm,0.8s						
W45A	Hickory Valley	6.74	92	IAmb_Lg		07 36 25.8	
	comp=Z,41nm,0.8s						
SDCO	Great Sand Dun	6.81	290	IAmb_Lg		07 36 26.9	
	comp=Z,21nm,1.2s						
S44A	Carbondale	6.85	71	IAmb_Lg		07 36 31.8	
	comp=Z,38nm,0.9s						
SCIA	State Center	7.02	27	IAmb_Lg		07 36 40.7	
	comp=Z,36nm,0.8s						
Q44A	Meyer Farm, Va	7.42	62	IAmb_Lg		07 36 56.0	
	comp=Z,41nm,1.1s						
L40A	Anamosa	7.99	35	IAmb_Lg		07 37 04.2	
	comp=Z,25nm,0.9s						
OLIL	Olney	8.03	65	IAmb_Lg		07 37 19.6	
	comp=Z,37nm,0.9s						
Z47A	Carrollton	8.11	105	IAmb_Lg		07 37 28.1	
	comp=Z,28nm,0.9s						
O44A	Mansfield	8.36	55	IAmb_Lg		07 37 20.6	
	comp=Z,26nm,0.8s						
PHWY	Pilot Hill	8.44	314	IAmb_Lg		07 37 25.9	
	comp=Z,16nm,1.1s						
N23A	Red Feather La	8.48	310	IAmb_Lg		07 37 33.2	
	comp=Z,19nm,0.8s						
JFWS	Jewell Farm	9.10	35	IAmb_Lg		07 38 01.9	
	comp=Z,22nm,0.8s						

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*PGC **30** 07:39:28.8±0.1, 48°.62N×123°.29W, h58^{km}, ML4.4/41, Mw4.7, 9km Ese of Sidney, Bc Vancouver Island, Canada Region*

*BJI **30** 07:39:28.0±0.0, 48°.82N×123°.64W, h54^{km}, mB5.3/18, mb4.8/39, Ms4.9/4, Ms7 4.6/4*

*NEIC **30** 07:39:29.1±1.1, 48°.61N±0°.03×123°.29W±0°.04, h50^{km}±4^{km}, Error ellipse: s-maj=5.1km s-min=3.5km az=201.0*

*SEA **30** 07:39:29.3±1.3, 48°.59N±0°.02×123°.30W±0°.05, h53^{km}±4^{km}, ML4.8/178, mb4.8/156(NEIC), Mwr4.7/38(NEIC), Mwr4.7(OTT), Mww4.7(NEIC), Error ellipse: s-maj=5.1km s-min=2.9km az=72.0*

*IDC **30** 07:39:29.4±0.4, 48°.69N×123°.09W, h54^{km}±3^{km}, mb4.2/25, mb1 4.3/34, mb1mx4.2/53, mbtmp4.4/34, MS3.8/24, Ms1 3.8/24, ms1mx3.7/49, Error ellipse: s-maj=15.0km s-min=9.4km az=58.0*

*NEIC **30** 07:39:29.6, 48°.58N×123°.27W, h52^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.92; $M_{\theta\theta}$-0.23; $M_{\phi\phi}$1.14; $M_{r\theta}$0.60; $M_{\theta\phi}$-0.26; $M_{\phi r}$-0.34; Fault plane solution: $M_0$1.28000×10^{16} NP1:ϕ_s324.45000°, δ62.16000°, λ-119.56000°. NP2:ϕ_s194.97000°, δ39.72000°, λ-46.96000°. Principal axes: T 1.2855, Plg12.0000°, Azm75.0000°; N -0.0147, Plg26.0000°, Azm339.0000°; P -1.2708, Plg61.0000°, Azm189.0000°;*

*NEIC **30** 07:39:29.6, 48°.62N×123°.30W, h54^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.08; $M_{\theta\theta}$0.22; $M_{\phi\phi}$0.88; $M_{r\theta}$0.66; $M_{\theta\phi}$-0.77; $M_{\phi r}$-0.63; Fault plane solution: $M_0$1.60000×10^{16} NP1:ϕ_s317.00000°, δ64.00000°, λ-100.00000°. NP2:ϕ_s159.00000°, δ28.00000°, λ-71.00000°. Principal axes: T 1.6693, Plg18.0000°, Azm55.0000°; N -0.2574, Plg9.0000°, Azm322.0000°; P -1.4118, Plg70.0000°, Azm207.0000°;*

*NEIC **30** 07:39:30, 48°.70N×123°.46W, h46^{km}, Moment Tensor Solution. Duration: 4^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.27; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$1.39; $M_{r\theta}$0.42; $M_{\theta\phi}$-0.42; $M_{\phi r}$-0.32; Fault plane solution: $M_0$1.49000×10^{16} NP1: ϕ_s181.00000°, δ39.00000°, λ-65.00000°. NP2: ϕ_s331.00000°, δ55.00000°, λ-108.00000°. Principal axes: T 1.5579, Plg8.0000°, Azm74.0000°; N -0.1353, Plg15.0000°, Azm342.0000°; P -1.4227, Plg73.0000°, Azm193.0000°;*

ISC 30 07:39:29.0±0.3, 48°.61N±0°.02×123°.27W±0°.02, h55^{km}±2^{km}, h55^{km}:pP-P, n553, σ1^{s}32/565, mb4.8/100, MS4.0/21, 95C-84D, Fault plane solution: NP1:ϕ_s164.00507°, δ44.91282°, λ-75.70253°. NP2:ϕ_s324.21304°, δ46.83027°, λ-103.83146°. Principal axes: T Plg0.9732°, Azm63.9468°; N Plg10.0413°, Azm333.7744°; P Plg79.9106°, Azm159.4251°; Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
B011	North Saanich	0.12	290		Pn	07 39 37.3	0.0
B011					Sn	07 39 43.4	0.0
B011	North Saanich	0.12	290	P	Pn	07 39 37.4	0.0
B011				S	Sn	07 39 43.4	0.0
PA01	PA01 North	0.12	291	P	Pn	07 39 37.4	+0.1
PA01				S	Sn	07 39 43.2	-0.2
PA12	PA12 Sannich	0.12	289	P	Pn	07 39 37.4	0.0
PA12				S	Sn	07 39 43.5	+0.1
B009	North Saanich	0.12	289	P	Pn	07 39 37.4	0.0
B009				S	Sn	07 39 43.3	-0.1
B010	North Saanich	0.12	290	P	Pn	07 39 37.4	0.0
B010				S	Sn	07 39 43.0	-0.4
PGC	Sidney	0.12	290		Pn	07 39 37.4	0.0
PGC					Sn	07 39 43.6	+0.2
PGC	Sidney	0.12	290	P	Pn	07 39 37.4	0.0
PGC				S	Sn	07 39 43.4	0.0
SNB	Saturna Island	0.18	22		Pn	07 39 38.0	+0.3
SNB					Sn	07 39 44.9	+0.9
SNB	Saturna Island	0.18	22	P	Pn	07 39 38.0	+0.3
SNB				S	Sn	07 39 44.5	+0.5
UWFH	University of	0.18	110		Pn	07 39 37.5	-0.1
UWFH					Sn	07 39 43.8	-0.1
VGZ	Gonzales	0.20	190		Pn	07 39 37.5	-0.2
VGZ					Sn	07 39 43.7	-0.3
VGZ	Gonzales	0.20	190	P	Pn	07 39 37.5	-0.2
VGZ				S	Sn	07 39 43.5	-0.5
GOBB	Galiano Island	0.38	336	P	Pn	07 39 39.5	+0.3
GOBB				S	Sn	07 39 46.6	0.0
A04D	Lummi Island	0.39	73		Pn	07 39 39.4	0.0
A04D					Sn	07 39 47.2	+0.4
A04D	Lummi Island	0.39	73	P	Pn	07 39 39.4	0.0
	baz=255,SNR=1000						
A04D				S	Sn	07 39 46.8	-0.1
	baz=255						
ERW	Mount Erie	0.46	109		Pn	07 39 39.8	-0.2
ERW					Sn	07 39 47.6	-0.5
STW	Striped Peak	0.53	210		Pn	07 39 40.6	-0.2
STW	Striped Peak	0.53	210	P	Pn	07 39 40.7	-0.2
STW				S	Sn	07 39 49.4	0.0
SVOH	Skagit Valley	0.53	127		Pn	07 39 40.9	0.0
SVOH					Sn	07 39 49.6	+0.2
SVOH	Skagit Valley	0.53	127	P	Pn	07 39 41.0	+0.2
SVOH				S	Sn	07 39 49.0	-0.4
SQM	Sequim	0.56	164		Pn	07 39 41.1	0.0
B04A	Port Angeles	0.57	196		Pn	07 39 40.9	-0.4
B04A	Port Angeles	0.57	196		Pn	07 39 40.9	-0.4
B926	Mesachie Lake	0.61	291		Pn	07 39 41.4	-0.4
B926					Sn	07 39 50.9	-0.1
B926	Mesachie Lake	0.61	291	P	Pn	07 39 41.4	-0.4
B926				S	Sn	07 39 50.7	-0.3
CLRS	Cowichan Lake	0.61	291		Pn	07 39 41.4	-0.3
CLRS	Cowichan Lake	0.61	291	P	Pn	07 39 41.4	-0.3
CLRS				S	Sn	07 39 50.5	-0.5
BLN	Blyn Mountain	0.63	161		Pn	07 39 42.1	0.0
BLN	Blyn Mountain	0.63	161	P	Pn	07 39 42.1	0.0
BLN				S	Sn	07 39 51.6	-0.1
PFB	Port Renfrew	0.78	268		Pn	07 39 43.4	-0.5
PFB	Port Renfrew	0.78	268	P	Pn	07 39 43.4	-0.5
PFB				S	Sn	07 39 54.7	-0.1

NLLB	**Nanaimo Lost L**	**0.78**	**323**		**Pn**	**07 39 41.4**	**-2.5**
NLLB	**Nanaimo Lost L**	**0.78**	**323**	P	**Pn**	**07 39 43.9**	**0.0**
NLLB				S	**Sn**	**07 39 54.5**	**-0.4**
OBC	**Olympics--Boni**	**0.79**	**223**		**Pn**	**07 39 44.3**	**+0.3**
OBC	**Olympics--Boni**	**0.79**	**223**	P	**Pn**	**07 39 44.4**	**+0.3**
CMW	**Cultus Mountai**	**0.79**	**103**		**Pn**	**07 39 43.9**	**-0.3**
CMW	**Cultus Mountai**	**0.79**	**103**	P	**Pn**	**07 39 43.9**	**-0.3**
P403	**Sandy Floe Qua**	**0.80**	**227**		**Pn**	**07 39 44.2**	**+0.1**
BIB	**Bowen Island**	**0.80**	**359**	P	**Pn**	**07 39 44.2**	**+0.1**
BIB				S	**Sn**	**07 39 55.2**	**-0.1**
HNBB	**Haney**	**0.82**	**34**	P	**Pn**	**07 39 44.1**	**-0.3**
HNBB				S	**Sn**	**07 39 55.1**	**-0.7**
B013	**Quilcene**	**0.83**	**163**		**Pn**	**07 39 44.2**	**-0.3**
B013					**Sn**	**07 39 56.3**	**+0.4**
OSD	**Olympics--Snow**	**0.84**	**200**		**Pn**	**07 39 45.4**	**+0.5**
OSD	**Olympics--Snow**	**0.84**	**200**	P	**Pn**	**07 39 45.4**	**+0.5**
OSD				S	**Sn**	**07 39 57.3**	**+0.8**
B05A	**Bryant**	**0.86**	**113**		**Pn**	**07 39 44.6**	**-0.2**
B05A	**Bryant**	**0.86**	**113**	P	**Pn**	**07 39 44.7**	**-0.2**
	baz=294,SNR=1000						
B05A				S	**Sn**	**07 39 56.2**	**-0.3**
	baz=294						
A05A	**Maple Falls**	**0.88**	**63**	P	**Pn**	**07 39 45.3**	**+0.1**
A05A				S	**Sn**	**07 39 57.0**	**-0.1**
VDB	**Vedder Mountai**	**0.88**	**61**		**Pn**	**07 39 45.0**	**-0.2**
VDB	**Vedder Mountai**	**0.88**	**61**	P	**Pn**	**07 39 45.1**	**-0.2**
VDB				S	**Sn**	**07 39 57.1**	**-0.1**
GHNB	**Nanoose**	**0.94**	**318**	P	**Pn**	**07 39 46.1**	**+0.1**
GHNB				S	**Sn**	**07 39 58.4**	**-0.2**
OCP	**Olym-Cheeka Pk**	**0.95**	**251**		**Pn**	**07 39 45.9**	**-0.2**
OCP	**Olym-Cheeka Pk**	**0.95**	**251**	P	**Pn**	**07 39 45.9**	**-0.2**
HDW	**Hoodsport**	**0.97**	**171**	P	**Pn**	**07 39 46.8**	**+0.3**
HDW				S	**Sn**	**07 39 59.8**	**+0.4**
JCW	**Jim Creek**	**0.99**	**114**		**Pn**	**07 39 46.5**	**-0.1**
JCW	**Jim Creek**	**0.99**	**114**	P	**Pn**	**07 39 46.6**	**-0.1**
MGB	**Mount Grey**	**1.02**	**293**		**Pn**	**07 39 46.7**	**-0.4**
MGB	**Mount Grey**	**1.02**	**293**	P	**Pn**	**07 39 46.7**	**-0.4**
MGB				S	**Sn**	**07 39 58.5**	**-2.0**
WPB	**Watts Point**	**1.05**	**2**	P	**Pn**	**07 39 47.3**	**-0.1**
WPB				S	**Sn**	**07 40 00.8**	**-0.4**
SHB	**Sechelt**	**1.07**	**338**		**Pn**	**07 39 47.7**	**0.0**
SHB	**Sechelt**	**1.07**	**338**	P	**Pn**	**07 39 47.8**	**0.0**
SHB				S	**Sn**	**07 40 01.2**	**-0.5**
D03D	**Eldon**	**1.08**	**173**		**Pn**	**07 39 48.2**	**+0.4**
D03D	**Eldon**	**1.08**	**173**	P	**Pn**	**07 39 48.2**	**+0.4**
	baz=353,SNR=1000						
D03D				S	**Sn**	**07 40 01.6**	**-0.3**
	baz=353						
GNW	**Green Mountain**	**1.09**	**164**	P	**Pn**	**07 39 48.1**	**+0.2**
GNW				S	**Sn**	**07 40 01.8**	**-0.2**
SHUK	**Shuksan-Mt. Ba**	**1.09**	**76**		**Pn**	**07 39 48.0**	**-0.1**
C03A	**Quillayute Air**	**1.09**	**233**		**Pn**	**07 39 48.2**	**+0.3**
RPW	**Rockport**	**1.18**	**97**		**Pn**	**07 39 49.4**	**+0.1**
RPW	**Rockport**	**1.18**	**97**	P	**Pn**	**07 39 49.4**	**+0.1**
B927	**Port Alberni**	**1.18**	**302**	P	**Pn**	**07 39 49.0**	**-0.2**
B927				S	**Sn**	**07 40 03.5**	**-0.8**
B928	**Bamfield**	**1.25**	**281**	P	**Pn**	**07 39 49.7**	**-0.4**
B928				S	**Sn**	**07 40 02.8**	**-3.1**
BFSB	**Bamfield**	**1.25**	**281**	P	**Pn**	**07 39 49.7**	**-0.4**
NLWA	**Neilton Lookou**	**1.28**	**198**		**Pn**	**07 39 50.6**	**0.0**
SMW	**South Mountain**	**1.29**	**182**	P	**Pn**	**07 39 51.2**	**+0.5**
SMW				S	**Sn**	**07 40 07.6**	**+0.6**
TXB	**Texada**	**1.33**	**325**	P	**Pn**	**07 39 51.2**	**0.0**
TXB				S	**Sn**	**07 40 09.0**	**+1.0**
C05A	**Tolt Reservoir**	**1.40**	**130**	P	**Pn**	**07 39 52.1**	**-0.1**
C05A				S	**Sn**	**07 40 09.5**	**-0.1**
HOPB	**Hope**	**1.45**	**57**	P	**Pn**	**07 39 52.7**	**-0.1**
HOPB				S	**Sn**	**07 40 11.4**	**+0.7**
D04E	**Lakebay**	**1.47**	**167**	P	**Pn**	**07 39 53.8**	**+0.7**
	baz=347,SNR=254						
D04E				S	**Sn**	**07 40 12.4**	**+1.3**
	baz=347						
WISH	**Wishkah**	**1.53**	**193**		**Pn**	**07 39 54.1**	**+0.2**
WISH	**Wishkah**	**1.53**	**193**	P	**Pn**	**07 39 54.1**	**+0.2**
WISH				S	**Sn**	**07 40 12.7**	**+0.1**
B012	**Ucluelet**	**1.53**	**283**	P	**Pn**	**07 39 53.3**	**-0.6**
WSLR	**Whistler**	**1.54**	**8**		**Pn**	**07 39 54.4**	**+0.3**
WSLR	**Whistler**	**1.54**	**8**	P	**Pn**	**07 39 54.3**	**+0.3**
WSLR				S	**Sn**	**07 40 13.4**	**+0.4**
D05A	**Enumclaw**	**1.66**	**148**		**Pn**	**07 39 56.9**	**+1.2**
D05A	**Enumclaw**	**1.66**	**148**	P	**Pn**	**07 39 56.8**	**+1.0**
D05A				S	**Sn**	**07 40 17.4**	**+1.4**
BTB	**Buttle Lake**	**1.71**	**301**	P	**Pn**	**07 39 56.5**	**0.0**
GSM	**Grass Mountain**	**1.72**	**144**		**Pn**	**07 39 57.2**	**+0.5**
C06D	**Leavenworth**	**1.73**	**112**	P	**Pn**	**07 39 56.9**	**+0.2**
	baz=294,SNR=1000						
C06D				S	**Sn**	**07 40 17.8**	**+0.1**
	baz=294						
MWAB	**Mount Washingt**	**1.75**	**311**	P	**Pn**	**07 39 56.8**	**-0.2**
TOFB	**Tofino**	**1.82**	**288**	P	**Pn**	**07 39 57.1**	**-0.8**
CBB	**Campbell River**	**1.98**	**317**		**Pn**	**07 40 00.0**	**0.0**
CBB	**Campbell River**	**1.98**	**317**	P	**Pn**	**07 39 60.0**	**0.0**
FMW	**Mount Fremont**	**2.00**	**147**	P	**Pn**	**07 40 00.8**	**+0.4**
SPLB	**Strathcona Par**	**2.02**	**310**	P	**Pn**	**07 40 00.3**	**-0.3**
SLFW	**Sugar Loaf**	**2.02**	**114**		**Pn**	**07 40 01.2**	**+0.3**
NLW	**Nelson Butte**	**2.03**	**104**		**Pn**	**07 40 00.9**	**+0.1**
E03A	**Lebam**	**2.07**	**186**		**Pn**	**07 40 01.3**	**0.0**
E03A	**Lebam**	**2.07**	**186**	P	**Pn**	**07 40 01.3**	**0.0**
E03A				S	**Sn**	**07 40 24.1**	**-1.8**
E04D	**Cinebar**	**2.11**	**167**	P	**Pn**	**07 40 02.4**	**+0.6**
	baz=347,SNR=654						
E04D				S	**Sn**	**07 40 27.1**	**+0.3**
	baz=347						
GDR	**Gold River**	**2.16**	**304**		**Pn**	**07 40 02.8**	**+0.4**
GDR	**Gold River**	**2.16**	**304**	P	**Pn**	**07 40 02.8**	**+0.4**
LLLB	**Lillooet**	**2.20**	**24**		**Pn**	**07 40 03.4**	**+0.3**
LLLB	**Lillooet**	**2.20**	**24**	P	**Pn**	**07 40 03.4**	**+0.3**
LTY	**Liberty**	**2.21**	**127**		**Pn**	**07 40 03.8**	**+0.4**
LTY	**Liberty**	**2.21**	**127**	P	**Pn**	**07 40 03.7**	**+0.4**
LTY				S	**Sn**	**07 40 29.6**	**+0.1**
ETB	**Estevan Point**	**2.28**	**291**	P	**Pn**	**07 40 03.5**	**-0.6**
NC89	**ODP889**	**2.37**	**273**	P	**Pn**	**07 40 04.5**	**-0.7**
NC89				S	**Sn**	**07 40 33.5**	**+0.5**
PNT	**Penticton**	**2.51**	**72**		**Pn**	**07 40 07.7**	**+0.3**
PNT	**Penticton**	**2.51**	**72**	P	**Pn**	**07 40 07.7**	**+0.3**
F04D	**Rainier, OR**	**2.53**	**176**	P	**Pn**	**07 40 08.2**	**+0.6**
	baz=356,SNR=31						
F04D				S	**Sn**	**07 40 37.6**	**+0.4**
	baz=356						
NCRB	**Newcastle Ridg**	**2.55**	**316**	P	**Pn**	**07 40 08.2**	**+0.2**
B08A	**Colville Reser**	**2.63**	**94**		**Pn**	**07 40 08.9**	**-0.1**
B08A	**Colville Reser**	**2.63**	**94**	P	**Pn**	**07 40 08.9**	**-0.1**
WOSB	**Woss**	**2.66**	**307**	P	**Pn**	**07 40 09.6**	**+0.2**
EDB	**Eliza Dome**	**2.82**	**298**		**Pn**	**07 40 11.7**	**+0.2**
EDB	**Eliza Dome**	**2.82**	**298**	P	**Pn**	**07 40 11.1**	**-0.4**
F05D	**White Salmon**	**2.99**	**155**	P	**Pn**	**07 40 14.7**	**+0.9**
	baz=336,SNR=20						
F05D				S	**Sn**	**07 40 48.5**	**0.0**
	baz=336						
TLCB	**Telegraph Cove**	**3.02**	**311**	P	**Pn**	**07 40 14.3**	**+0.1**
E07A	**Sunnyside**	**3.09**	**130**	Pn	**Pn**	**07 40 15.1**	**-0.2**
MAYB	**Maynard**	**3.11**	**307**	P	**Pn**	**07 40 16.3**	**+0.7**
NC27	**ODP1027**	**3.12**	**256**	P	**Pn**	**07 40 12.6**	**-2.7**
PACB	**Port Alice, BC**	**3.30**	**305**	P	**Pn**	**07 40 18.7**	**+0.7**
PACB				S	**Sn**	**07 40 54.8**	**-1.3**
D08A	**Wollman Farm,**	**3.32**	**116**	Pn	**Pn**	**07 40 17.8**	**-0.6**
HAWA	**Hanford**	**3.37**	**130**		**Pn**	**07 40 18.6**	**-0.4**
G03D	**McMinnville, O**	**3.40**	**180**	P	**Pn**	**07 40 20.1**	**+0.7**
	baz=360,SNR=109						
G03D				S	**Sn**	**07 40 57.8**	**-0.7**
	baz=360						
HEBO	**Mount Hebo**	**3.41**	**186**		**Pn**	**07 40 19.6**	**-0.1**
PHC	**Port Hardy**	**3.42**	**309**		**Pn**	**07 40 20.6**	**+0.9**
PHC	**Port Hardy**	**3.42**	**309**	P	**Pn**	**07 40 20.3**	**+0.6**
PHC				S	**Sn**	**07 40 57.0**	**-2.0**
C09A	**Chrisman Ranch**	**3.44**	**102**		**Pn**	**07 40 19.8**	**-0.3**
C09A	**Chrisman Ranch**	**3.44**	**102**	P	**Pn**	**07 40 19.8**	**-0.3**
HOOD	**Mount Hood Mea**	**3.47**	**161**		**Pn**	**07 40 21.6**	**+1.0**
F07A	**Phinny Hill Vi**	**3.54**	**139**		**Pn**	**07 40 21.5**	**+0.1**
G05D	**Wamic, OR**	**3.62**	**158**	P	**Pn**	**07 40 23.8**	**+1.2**
	baz=339,SNR=43						
HOLB	**Holberg**	**3.76**	**305**	P	**Pn**	**07 40 24.9**	**+0.5**
HOLB				S	**Sn**	**07 41 05.1**	**-2.2**
KEMF	**NEPTUNE Canada**	**3.94**	**263**	P	**Pn**	**07 40 24.4**	**-2.3**
KEMF				S	**Sn**	**07 41 06.9**	**-4.6**
H04A	**Detroit Lake**	**4.00**	**169**		**Pn**	**07 40 28.6**	**+0.9**
COR	**Corvallis**	**4.02**	**180**		**Pn**	**07 40 29.1**	**+1.1**
H04D	**Lebanon**	**4.10**	**175**	P	**Pn**	**07 40 30.0**	**+0.9**
	baz=355,SNR=29						
H04D				S	**Sn**	**07 41 14.7**	**-1.1**
	baz=355						
NEW	**Newport**	**4.11**	**92**	Pn	**Pn**	**07 40 29.1**	**-0.2**
NEW	**Newport**	**4.11**	**92**	P	**Pn**	**07 40 29.0**	**-0.2**
	baz=277						
SLEB	**Sale Mountain**	**4.20**	**50**	P	**Pn**	**07 40 30.3**	**-0.3**
BLBC	**Blue River**	**4.30**	**35**	P	**Pn**	**07 40 32.2**	**+0.1**
G08A	**Pilot Rock**	**4.44**	**137**		**Pn**	**07 40 33.2**	**-0.7**
I05D	**Terrebonne, OR**	**4.47**	**162**	P	**Pn**	**07 40 34.7**	**+0.5**
	baz=343,SNR=26						
I02E	**Swisshome, OR**	**4.52**	**185**	P	**Pn**	**07 40 35.1**	**+0.3**
	baz=4.7,SNR=91						
I02E				S	**Sn**	**07 41 24.1**	**-1.9**
	baz=4.7						
BBB	**Bella Bella**	**4.73**	**321**	P	**Pn**	**07 40 37.4**	**-0.3**
	2.0nm,0.3s,baz=166,slow=4.6,SNR=65						
BBB				S	**Sn**	**07 41 29.4**	**-1.8**
	26nm,0.3s,baz=325,slow=8.1,SNR=3.6						
BBB				LR	LR	07 42 26.1	
	comp=Z,568nm,19.6s,baz=146,slow=37						
BBB	**Bella Bella**	**4.73**	**321**	P	**Pn**	**07 40 37.2**	**-0.4**
MNB	**Mounoet Dainar**	**4.76**	**39**	P	**Pn**	**07 40 38.6**	**+0.2**
I04A	**Tendick Farm,**	**4.85**	**173**	P	**Pn**	**07 40 40.2**	**+0.8**
	baz=353,SNR=37						
I04A				S	**Sn**	**07 41 33.2**	**-1.1**
	baz=353						
I03D	**Drain, OR**	**4.91**	**181**	P	**Pn**	**07 40 41.0**	**+0.9**
	baz=0.5,SNR=47						
I03D				S	**Sn**	**07 41 34.6**	**-1.1**
	baz=0.5						
I07A	**Izee**	**5.22**	**149**		**Pn**	**07 40 46.0**	**+1.4**
J04D	**Umpqua Nationa**	**5.43**	**171**	P	**Pn**	**07 40 48.1**	**+0.6**
	baz=352,SNR=10						
J01E	**Myrtle Point**	**5.47**	**185**	P	**Pn**	**07 40 48.1**	**+0.3**
	baz=4.5						
J01E				S	**Sn**	**07 41 47.3**	**-2.0**
	baz=4.5						
J05D	**Fort Rock, OR**	**5.51**	**164**	P	**Pn**	**07 40 49.7**	**+1.2**
	baz=346,SNR=18						
BUTB	**Butedale**	**5.54**	**326**	P	**Pn**	**07 40 49.3**	**+0.4**
BSMT	**Bassoo Peak**	**5.72**	**94**	P	**Pn**	**07 40 51.2**	**-0.3**
KEBM	**Edson Butte**	**5.78**	**188**	Pn	**Pn**	**07 40 52.6**	**+0.4**
FSJB	**Fort St James**	**5.89**	**354**	P	**Pn**	**07 40 54.7**	**+1.0**
FSB	**Fort Saint Jam**	**5.91**	**354**	P	**Pn**	**07 40 54.6**	**+0.6**
K02D	**Willamette Mer**	**5.92**	**183**	P	**Pn**	**07 40 54.9**	**+0.8**
	baz=2.4,SNR=115						
K02D				S	**Sn**	**07 41 58.7**	**-1.9**
	baz=2.4						
JTMT	**Jette**	**6.08**	**95**	Pn	**Pn**	**07 40 55.7**	**-0.5**
JTMT	**Jette**	**6.08**	**95**	P	**Pn**	**07 40 55.7**	**-0.5**
K04D	**Chiloquin, OR**	**6.08**	**169**	P	**Pn**	**07 40 57.3**	**+1.0**
	baz=350						
K05A	**Summer Lake**	**6.11**	**163**		**Pn**	**07 40 57.7**	**+0.9**
WALA	**Waterton Lakes**	**6.20**	**82**	P	**Pn**	**07 40 58.8**	**+0.8**
HWKB	**Hawksbury Isla**	**6.22**	**326**	P	**Pn**	**07 40 59.6**	**+1.5**
J08A	**Circle Bar Ran**	**6.22**	**146**		**Pn**	**07 40 59.0**	**+0.7**
PRDA	**Priddis**	**6.25**	**65**	P	**Pn**	**07 40 59.7**	**+1.2**
HG4B	**Hotspring**	**6.26**	**309**	P	**Pn**	**07 40 58.6**	**0.0**
BNKB	**Banks Island**	**6.31**	**321**	P	**Pn**	**07 40 59.1**	**-0.2**
MBLB	**Minette Bay Lo**	**6.38**	**330**	P	Pn	07 41 06.0	+5.8
KITB	**Kitimat**	**6.42**	**331**	P	**Pn**	**07 41 04.1**	**+3.3**
L04D	**Klamath Falls**	**6.43**	**174**	P	**Pn**	**07 41 02.4**	**+1.3**
	baz=354,SNR=97						
L04D				S	**Sn**	**07 42 10.6**	**-2.5**
	baz=354						
L02E	**Cave Junction**	**6.45**	**182**	P	**Pn**	**07 41 02.6**	**+1.3**
	baz=1.9,SNR=39						
L02E				S	**Sn**	**07 42 11.6**	**-2.0**
	baz=1.9						
BRLDA	**Berland Lookou**	**6.61**	**32**	P	**Pn**	**07 41 04.2**	**+0.8**
BNB	**Barry Inlet**	**6.70**	**310**	P	**Pn**	**07 41 04.8**	**+0.1**
GRNB	**Grenville Isla**	**6.72**	**324**	P	**Pn**	**07 41 06.4**	**+1.5**
BNAB	**Bonilla**	**6.74**	**319**	P	**Pn**	**07 41 06.7**	**+1.5**
YBH	**Yreka Blue Hor**	**6.89**	**176**	P	**Pn**	**07 41 09.2**	**+1.8**
	0.9nm,0.3s,baz=13,slow=12,SNR=35						
M04C	**Macdoel**	**6.90**	**171**	P	**Pn**	**07 41 09.7**	**+2.2**
	baz=352						
OVMT	**Ovando**	**7.09**	**99**	P	**Pn**	**07 41 09.2**	**-0.9**
HG1B	**Mitchell Dam**	**7.09**	**311**	P	**Pn**	**07 41 10.3**	**+0.3**
M02C	**Callahan**	**7.22**	**177**	P	**Pn**	**07 41 14.6**	**+2.7**
	baz=358						
MFID	**Camas Ranch**	**7.33**	**132**		**Pn**	**07 41 12.9**	**-0.6**
DIB	**Dawson Inlet,**	**7.42**	**312**	P	**Pn**	**07 41 14.7**	**+0.3**
BMBC	**Bull Mountain**	**7.48**	**5**	P	**Pn**	**07 41 17.1**	**+1.6**
SWHSA	**Sweathouse Loo**	**7.49**	**30**	P	**Pn**	**07 41 15.5**	**+0.1**
WTMTA	**White Mountain**	**7.52**	**18**	P	**Pn**	**07 41 15.9**	**0.0**
LYMT	**Lyon Mountain**	**7.58**	**98**	P	**Pn**	**07 41 17.5**	**+0.5**
MKRVA	**Milk River, Al**	**7.60**	**82**	P	**Pn**	**07 41 17.6**	**+0.5**
N02D	**Trinity Center**	**7.64**	**177**	P	**Pn**	**07 41 19.3**	**+1.6**
	baz=357						
HLID	**Hailey**	**7.96**	**126**	P	**Pn**	**07 41 21.9**	**-0.2**
	baz=312						
NDB	**Naden**	**8.08**	**315**	P	**Pn**	**07 41 24.8**	**+1.2**
LIB	**Langara Island**	**8.32**	**316**	P	**Pn**	**07 41 29.0**	**+2.2**
O03E	**Paynes Creek**	**8.38**	**172**	P	**Pn**	**07 41 29.6**	**+1.9**
	baz=353						
STPRA	**Salt Prairie L**	**8.41**	**30**	P	**Pn**	**07 41 27.2**	**-0.9**
O02D	**Mt. Diablo Mer**	**8.44**	**177**	P	**Pn**	**07 41 30.3**	**+1.7**
	baz=358						
BOZ	**Bozeman (W)**	**8.49**	**106**	P	**Pn**	**07 41 28.9**	**-0.5**
	baz=295						
NBC5	**NorthernBC 5**	**8.94**	**2**	P	**Pn**	**07 41 36.7**	**+1.4**
EGMT	**Eagleton**	**9.03**	**89**	P	**Pn**	**07 41 36.0**	**-0.7**
	baz=279						
H17A	**Grant Village**	**9.71**	**111**	P	**Pn**	**07 41 47.5**	**+1.3**
	baz=300						
ELK	**Elko**	**9.72**	**141**	P	**Pn**	**07 41 47.3**	**+1.0**
	0.4nm,0.3s,baz=330,slow=12,SNR=43						
ELK				LR	LR	07 45 43.7	
	comp=Z,310nm,18.7s,baz=336,slow=39						
REDW	**Red Top Meadow**	**10.11**	**117**		**Pn**	**07 41 53.8**	**+2.2**
RLMT	**Red Lodge**	**10.21**	**105**	Pn	**Pn**	**07 41 53.0**	**+0.2**
RLMT	**Red Lodge**	**10.21**	**105**	P	**Pn**	**07 41 52.9**	**0.0**
	baz=295						
FNBB	**Fort Nelson**	**10.30**	**1**	P	Pn	07 41 42.5	-11
DLBC	**Dease Lake**	**10.63**	**340**	P	**Pn**	**07 42 00.1**	**+1.7**
	0.1nm,0.3s,baz=169,slow=12,SNR=5.5						
DLBC				LR	LR	07 46 10.6	
	comp=Z,529nm,18.9s,baz=154,slow=38						
DLBC	**Dease Lake**	**10.63**	**340**	P	**Pn**	**07 42 02.6**	**+4.2**
NVAR	**Mina Array Bea**	**10.79**	**159**	P	**Pn**	**07 42 03.4**	**+2.5**
	0.5nm,0.3s,baz=336,slow=11,SNR=44						
NVAR				LR	LR	07 46 26.2	
	comp=Z,454nm,20.4s,baz=345,slow=38						
BW06	**Boulder Array**	**11.22**	**116**	P	**Pn**	**07 42 08.8**	**+2.0**
	baz=306						
PDAR	**Pinedale Array**	**11.22**	**116**	P	**Pn**	**07 42 08.7**	**+1.9**
	1.1nm,0.3s,baz=307,slow=12,SNR=64						
PDAR				LR	LR	07 46 40.0	
	comp=Z,256nm,21.8s,baz=319,slow=39						
DUG	**Dugway, Tooele**	**11.25**	**135**	P	**Pn**	**07 42 08.4**	**+1.4**
	baz=322						
LAO	**LASA Array**	**11.66**	**93**	P	**Pn**	**07 42 12.4**	**-0.2**
	baz=286						
R11A	**Troy Canyon, C**	**11.67**	**149**	P	**Pn**	**07 42 14.6**	**+1.8**
	baz=334						
DGMT	**Dagmar**	**12.65**	**83**	P	**Pn**	**07 42 25.0**	**-1.0**
	baz=278						
CWC	**Cottonwood Cre**	**12.74**	**161**	P	**Pn**	**07 42 28.9**	**+1.4**
	baz=344						
FURC	**Furnace Creek,**	**13.01**	**156**	P	**Pn**	**07 42 33.2**	**+2.2**
	baz=341						
K22A	**Casper**	**13.14**	**111**	P	**Pn**	**07 42 32.5**	**-0.3**
	baz=303						
MPMC	**Manual Prospec**	**13.24**	**159**	P	**Pn**	**07 42 35.8**	**+1.5**
	baz=343						
ISA	**Isabella, Lake**	**13.41**	**163**	Pn	**Pn**	**07 42 39.5**	**+3.0**
ISA	**Isabella, Lake**	**13.41**	**163**	P	**Pn**	**07 42 38.3**	**+1.8**
	baz=346						
O20A	**White River Ci**	**13.67**	**123**	P	**Pn**	**07 42 40.6**	**+0.5**
	baz=313						
LRMC	**Laurel Mtn Rad**	**13.75**	**160**	P	**Pn**	**07 42 41.3**	**+0.1**
	baz=344						
PKM	**Mcpherson Peak**	**13.95**	**168**	P	**Pn**	**07 42 45.3**	**+1.5**
	baz=350						
RSSD	**Black Hills**	**14.01**	**101**	Pn	**Pn**	**07 42 45.0**	**+0.3**
RSSD	**Black Hills**	**14.01**	**101**	P	**Pn**	**07 42 43.8**	**-1.0**
	baz=296						
GSC	**Goldstone, Bar**	**14.13**	**158**	P	**Pn**	**07 42 47.7**	**+1.5**
	baz=342						
TUQ	**Turquoise Moun**	**14.24**	**155**	P	**Pn**	**07 42 47.3**	**-0.4**
	baz=340						
EDW2	**Edwards Air Fo**	**14.27**	**162**	P	**Pn**	**07 42 49.2**	**+1.3**
	baz=346						
N23A	**Red Feather La**	**14.51**	**116**	P	**Pn**	**07 42 50.8**	**-0.5**
	baz=308						
HEC	**Hector,Ludlow**	**14.70**	**157**	P	**Pn**	**07 42 55.3**	**+1.6**
	baz=342						
YKA	**Yellowknife Ar**	**14.73**	**16**	P	**Pn**	**07 42 51.1**	**-2.7**
	1.2nm,0.3s,baz=201,slow=12,SNR=180						
YKA				LR	LR	07 48 51.5	
	comp=Z,443nm,20.0s,baz=0.0,slow=38						
YKA	**Yellowknife Ar**	**14.73**	**16**	Pn	**Pn**	**07 42 51.2**	**-2.6**
FARO	**Faro, Yukon**	**14.77**	**341**	P	**P**	**07 43 01.9**	**+2.7**
GMRC	**Granite Mounta**	**14.92**	**155**	P	**Pn**	**07 42 57.6**	**+0.9**
	baz=340						
BFSC	**Mount Baldy Ra**	**14.95**	**162**	P	**Pn**	**07 42 58.0**	**+1.0**
	baz=346						
M31M	**Drury Creek, Y**	**14.98**	**340**	P	**Pn**	**07 42 58.9**	**+1.8**
	baz=150						
BBRC	**Big Bear Solar**	**15.10**	**159**	P	**Pn**	**07 42 60.0**	**+1.0**
	baz=344						
E28A	**Huff**	**15.36**	**89**	IAmb	IAmb	07 43 21.1	
	comp=Z,86nm,0.9s						
ISCO	**Idaho Springs**	**15.40**	**118**	P	**Pn**	**07 43 02.7**	**-0.2**
	baz=311						
BELC	**Belle Mtn. Jos**	**15.57**	**157**	P	**Pn**	**07 43 05.3**	**+0.3**
	baz=342						
IRM	**Iron Mountain**	**15.66**	**154**	P	**Pn**	**07 43 06.9**	**+0.8**
	baz=340						
MURC	**Murrieta**	**15.67**	**161**	P	**Pn**	**07 43 06.2**	**0.0**
	baz=345						
MVCO	**Mesa Verde**	**15.68**	**131**	P	**Pn**	**07 43 06.7**	**+0.2**
	baz=321						
WUAZ	**Wupatki**	**15.76**	**142**	P	**Pn**	**07 43 08.7**	**+1.3**
	baz=330						
MDND	**Maddock**	**15.78**	**84**	P	**Pn**	**07 43 05.7**	**-1.8**
	baz=282						
PFO	**Pinyon Flats O**	**15.83**	**159**	P	**P**	**07 43 09.8**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=333,slow=7.8,SNR=11						
PFO				LR	LR	07 49 52.5	
	comp=Z,310nm,18.3s,baz=308,slow=39						
PFO	**Pinyon Flats O**	**15.83**	**159**	P	**P**	**07 43 10.5**	**-0.6**
PFO	**Pinyon Flats O**	**15.83**	**159**	P	**Pn**	**07 43 09.2**	**+0.9**
	baz=343						
PDMCI	**Parker Dam,Lak**	**15.83**	**151**	P	**Pn**	**07 43 08.6**	**+0.4**
	baz=337						
TPFO	**Pinon Flats**	**15.83**	**159**	P	**Pn**	**07 43 09.2**	**+0.9**
	baz=343						
M30M	**Minto, Yukon**	**15.89**	**337**	P	**P**	**07 43 11.7**	**+0.1**
	baz=146						
BC3	**Big Chuckawall**	**16.04**	**156**	P	**Pn**	**07 43 12.1**	**+1.1**
	baz=341						
S22A	**4UR Ranch, Cre**	**16.14**	**126**	P	**Pn**	**07 43 13.5**	**+1.1**
	baz=318						
Q24A	**Divide**	**16.22**	**120**	P	**Pn**	**07 43 14.3**	**+0.9**
	baz=312						
109C	**Camp Elliot, M**	**16.37**	**161**	P	**P**	**07 43 16.7**	**-0.4**
	baz=345						
MONP2	**Monument Peak**	**16.52**	**159**	P	**Pn**	**07 43 17.3**	**+0.1**
	baz=344						
SWSC	**Sam W. Stewart**	**16.62**	**158**	P	**P**	**07 43 19.1**	**-0.7**
	baz=342						
BAR	**Barrett**	**16.67**	**160**		**P**	**07 43 20.0**	**-0.4**
X16A	**Lo Mia Camp, P**	**16.69**	**144**	Pn	**P**	**07 43 21.6**	**+0.8**
GLA	**Glamis**	**16.79**	**155**	P	**P**	**07 43 21.5**	**-0.2**
	baz=340						
W18A	**Petrified Fore**	**16.80**	**138**	P	**P**	**07 43 21.8**	**-0.2**
	baz=328						
IKP	**In-Ko-Pah, Jac**	**16.83**	**159**	P	**Pn**	**07 43 21.1**	**+0.3**
	baz=343						
SDCO	**Great Sand Dun**	**16.86**	**123**	P	**Pn**	**07 43 22.0**	**+0.6**
	baz=316						
OGNE	**Ogallala**	**16.88**	**109**		**P**	**07 43 22.4**	**-0.4**
OGNE				IAmb	IAmb	07 43 24.2	
	comp=Z,77nm,0.8s						
OGNE	**Ogallala**	**16.88**	**109**	P	**Pn**	**07 43 21.0**	**-0.5**
	baz=304						
SUSD	**Miller**	**17.22**	**95**	P	**Pn**	**07 43 22.9**	**-2.7**
	baz=293						
M26K	**Nabesna, AK**	**17.66**	**329**	P	**P**	**07 43 33.2**	**+2.1**
	baz=132						
KSCO	**Kaye Shedlock’**	**17.67**	**115**	IAmb	IAmb	07 43 34.2	
	comp=Z,87nm,1.1s						
KSCO	**Kaye Shedlock’**	**17.67**	**115**	P	**Pn**	**07 43 31.0**	**-0.2**
	baz=310						
DAWY	**Dawson**	**17.79**	**336**	P	**P**	**07 43 32.9**	**+0.3**
	baz=143						
DAWY	**Dawson**	**17.79**	**336**	P	**Pn**	**07 43 30.6**	**-1.8**
ULM	**Lac du Bonnet**	**17.86**	**74**	P	**Pn**	**07 43 30.4**	**-2.9**
	comp=Z,9.8nm,0.3s,baz=281,slow=10,SNR=60						
ULM				LR	LR	07 50 40.9	
	comp=Z,642nm,19.9s,baz=297,slow=38						
ULM	**Lac du Bonnet**	**17.86**	**74**	P	**Pn**	**07 43 29.9**	**-3.4**
T25A	**Trinidad**	**17.91**	**123**	P	**Pn**	**07 43 34.1**	**-0.1**
	baz=316						
AGMN	**Agassiz Nation**	**18.15**	**81**	P	**P**	**07 43 33.6**	**-3.0**
	baz=281						
214A	**Organ Pipe Nat**	**18.42**	**151**	P	**P**	**07 43 39.8**	**+0.1**
	baz=338						
ANMO	**Albuquerque**	**18.48**	**131**	P	**Pn**	**07 43 41.7**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=322,slow=15,SNR=9.6						
ANMO	**Albuquerque**	**18.48**	**131**	P	**Pn**	**07 43 41.1**	**0.0**
ANMO	**Albuquerque**	**18.48**	**131**	P	**P**	**07 43 40.8**	**+0.3**
	baz=323						
F33A	**5 Mile Ranch,**	**18.50**	**88**	IAmb	IAmb	07 43 40.9	
	comp=Z,84nm,1.3s						
I29M	**Ogilvie Camp,**	**18.59**	**340**	P	**Pn**	**07 43 43.1**	**+1.0**
	baz=147						
TUC	**Tucson**	**18.81**	**145**	P	**Pn**	**07 43 46.5**	**+1.5**
TUC	**Tucson**	**18.81**	**145**	P	**Pn**	**07 43 45.0**	**0.0**
	baz=334						
ECSD	**EROS Data Cent**	**19.05**	**95**	P	**P**	**07 43 43.0**	**-3.5**
	baz=294						
SCRK	**Sand Creek**	**19.07**	**331**	P	**Pn**	**07 43 48.7**	**+0.8**
	baz=134						
BGNE	**Belgrade**	**19.11**	**103**	IAmb	IAmb	07 43 48.7	
	comp=Z,71nm,0.8s						
BGNE	**Belgrade**	**19.11**	**103**	P	**P**	**07 43 46.0**	**-1.3**
	baz=301						
EPYK	**Eagle Plains**	**19.14**	**343**	P	**Pn**	**07 43 48.9**	**+0.3**
EPYK				IAmb	IAmb	07 44 14.9	
	comp=Z,84nm,1.8s						
EPYK	**Eagle Plains**	**19.14**	**343**	P	**Pn**	**07 43 48.8**	**+0.1**
	baz=152						
EPYK	**Eagle Plains**	**19.14**	**343**	P	**Pn**	**07 43 49.0**	**+0.3**
EPLO	**Experimental L**	**19.31**	**76**	P	**P**	**07 43 45.3**	**-4.0**
J26L	**Joseph Creek**	**19.31**	**333**	P	**Pn**	**07 43 50.9**	**+0.2**
	baz=136						
CBKS	**Cedar Bluff**	**19.56**	**111**	P	**P**	**07 43 51.2**	**-1.0**
	baz=308						
KUKN	**Kugluktuk,NWT**	**19.71**	**9**	P	**P**	**07 43 52.9**	**-0.7**
121A	**Cookes Peak, D**	**19.84**	**138**	IAmb	IAmb	07 44 17.0	
	comp=Z,57nm,0.9s						
121A	**Cookes Peak, D**	**19.84**	**138**	P	**Pn**	**07 43 57.0**	**-0.4**
	baz=329						
FCC	**Fort Churchill**	**19.89**	**48**	P	**P**	**07 43 53.5**	**-1.9**
FCC	**Fort Churchill**	**19.89**	**48**	P	**P**	**07 43 53.0**	**-2.5**
L34A	**Svendsen Farm,**	**19.99**	**99**	IAmb	IAmb	07 44 38.9	
	comp=Z,49nm,0.8s						
SOLO	**Sioux Lookout**	**20.31**	**74**	P	**P**	**07 43 56.1**	**-4.2**
INK	**Inuvik**	**20.41**	**349**	P	**P**	**07 44 01.9**	**+0.8**
	comp=Z,12nm,0.8s,baz=153,slow=13,SNR=26						
INK				LR	LR	07 52 37.4	
	comp=Z,254nm,20.0s,baz=140,slow=39						
INK	**Inuvik**	**20.41**	**349**	P	Pn	07 44 03.3	-0.3
	baz=160						
INK	**Inuvik**	**20.41**	**349**	P	Pn	07 44 02.5	-1.2
R32A	**Long Quarter,**	**20.43**	**111**	IAmb	IAmb	07 44 06.0	
	comp=Z,32nm,1.0s						
IL31		**20.54**	**331**	IAmb	IAmb	07 44 24.6	
	comp=Z,54nm,1.6s						
ILAR	**Eielson Array**	**20.54**	**331**	P	Pn	07 44 04.6	-0.5
	comp=Z,5.7nm,0.8s,baz=139,slow=8.8,SNR=40						
SPU	**Mount Spurr**	**20.58**	**318**	P	Pn	07 44 05.4	-0.4
PRP	**Porcupine Dome**	**20.62**	**333**	P	Pn	07 44 05.2	-1.0
	baz=134						
CCB	**Clear Creek Bu**	**20.76**	**330**	P	Pn	07 44 06.4	-1.3
C36M	**Paulatuk**	**20.81**	**359**	P	**P**	**07 44 05.3**	**0.0**
C36M	**Paulatuk**	**20.81**	**359**	P	**P**	**07 44 05.5**	**+0.1**
	baz=178						
C36M	**Paulatuk**	**20.81**	**359**	P	**P**	**07 44 04.7**	**-0.6**
ATKO	**Atikokan Iron**	**20.83**	**77**	P	**P**	**07 43 59.0**	**-6.8**
COLA	**College**	**20.92**	**330**	P	Pn	07 44 08.6	-1.0
	baz=129						
TCOL	**CIGO, UAF Yank**	**20.92**	**330**	P	Pn	07 44 08.6	-1.0
	baz=129						
POKR	**Poker Plat Res**	**20.94**	**331**	P	**P**	**07 44 08.1**	**+1.3**
	baz=131						
SPMN	**Marine on St.**	**21.02**	**88**	P	**P**	**07 44 08.1**	**+0.3**
	baz=290						
N35A	**Tabor**	**21.02**	**101**	P	**P**	**07 44 06.8**	**-1.1**
AMTX	**Amarillo**	**21.06**	**123**	P	**P**	**07 44 08.7**	**+0.2**
AMTX				IAmb	IAmb	07 44 33.1	
	comp=Z,39nm,0.9s						

AMTX	**Amarillo**	**21.06**	**123**	P	**P**	**07 44 08.4**	**-0.1**
	baz=317						
I37A	**Lemond, Waseca**	**21.07**	**91**	IAmb	IAmb	07 44 10.9	
	comp=Z,43nm,0.8s						
EYMN	**Ely**	**21.09**	**80**	P	**P**	**07 44 08.1**	**-0.5**
EYMN	**Ely**	**21.09**	**80**	P	**P**	**07 44 08.2**	**-0.3**
	baz=284						
MSTX	**Muleshoe**	**21.15**	**126**	P	**P**	**07 44 09.4**	**0.0**
	baz=320						
PKLO	**Pickle Lake**	**21.23**	**70**	P	**P**	**07 44 04.7**	**-5.4**
KSU1	**Kansas State U**	**21.35**	**106**	P	**P**	**07 44 09.8**	**-1.7**
KSU1	**Kansas State U**	**21.35**	**106**	P	**P**	**07 44 10.7**	**-0.8**
	baz=305						
E38A	**The Farm, Brul**	**21.40**	**83**	IAmb	IAmb	07 44 28.1	
	comp=Z,69nm,1.1s						
PPLA	**Purkeypile**	**21.41**	**323**	P	**P**	**07 44 14.6**	**+2.6**
	baz=118						
OK035	**E0210 Rd and N**	**21.52**	**114**	IAmb	IAmb	07 44 32.4	
	comp=Z,46nm,0.8s						
H24K	**Noodor Dome**	**21.55**	**332**	IAmb	IAmb	07 44 33.2	
	comp=Z,30nm,1.0s						
H24K	**Noodor Dome**	**21.55**	**332**	P	**P**	**07 44 15.0**	**+1.5**
	baz=131						
BPAW	**Bear Paw Mtn.**	**21.56**	**326**	IAmb	IAmb	07 44 38.4	
	comp=Z,35nm,0.8s						
BPAW	**Bear Paw Mtn.**	**21.56**	**326**	P	**P**	**07 44 15.1**	**+1.6**
	baz=123						
U32A	**Winter Ranch,**	**21.57**	**116**	IAmb	IAmb	07 44 32.9	
	comp=Z,31nm,0.8s						
I23K	**Minto, Yukon-K**	**21.59**	**330**	P	**P**	**07 44 16.1**	**+2.3**
	baz=128						
CAST	**Castle Rocks**	**21.62**	**324**	IAmb	IAmb	07 44 36.1	
	comp=Z,42nm,1.0s						
CAST	**Castle Rocks**	**21.62**	**324**	P	**P**	**07 44 15.9**	**+1.7**
	baz=120						
KAN10	**Anthony SW Sta**	**21.63**	**113**	IAmb	IAmb	07 44 33.7	
	comp=Z,78nm,1.3s						
MNTX	**Cornudas Mount**	**21.64**	**135**	P	**P**	**07 44 15.0**	**+0.4**
MNTX	**Cornudas Mount**	**21.64**	**135**	P	**P**	**07 44 15.1**	**+0.4**
	baz=327						
CHUM	**Lake Minchumin**	**21.94**	**325**	P	**P**	**07 44 18.5**	**+1.0**
	baz=120						
MLY	**Manley**	**21.99**	**328**	IAmb	IAmb	07 44 40.4	
	comp=Z,35nm,0.9s						
MLY	**Manley**	**21.99**	**328**	P	**P**	**07 44 18.6**	**+0.4**
	baz=125						
KAN13	**South Haven SW**	**22.08**	**112**	IAmb	IAmb	07 44 23.3	
	comp=Z,21nm,0.6s						
SCIA	**State Center**	**22.10**	**96**	P	**P**	**07 44 18.7**	**-0.7**
SCIA				IAmb	IAmb	07 44 23.4	
	comp=Z,37nm,0.9s						
SCIA	**State Center**	**22.10**	**96**	P	**P**	**07 44 17.6**	**-1.9**
	baz=298						
TBO	**Thunder Bay**	**22.28**	**77**	P	**P**	**07 44 17.5**	**-3.9**
I21K	**Tanana**	**22.51**	**328**	P	**P**	**07 44 25.0**	**+1.3**
	baz=124						
T35A	**Sooner Cattle**	**22.74**	**111**	IAmb	IAmb	07 44 45.9	
	comp=Z,34nm,0.8s						
J20K	**Nowinta River**	**22.79**	**325**	IAmb	IAmb	07 44 49.8	
	comp=Z,24nm,0.8s						
J20K	**Nowinta River**	**22.79**	**325**	P	**P**	**07 44 27.7**	**+1.1**
	baz=118						
BCOK	**Bluff Creek, N**	**22.89**	**115**	IAmb	IAmb	07 44 47.5	
	comp=Z,53nm,1.0s						
TTA	**Tatalina**	**23.00**	**321**	P	**P**	**07 44 30.6**	**+1.8**
	baz=113						
H21K	**Melozitna Rive**	**23.06**	**329**	P	**P**	**07 44 30.8**	**+1.4**
	baz=123						
QUOK	**Quay**	**23.09**	**113**	IAmb	IAmb	07 44 49.3	
	comp=Z,28nm,0.9s						
OKCFA	**Oklahoma City**	**23.14**	**115**	IAmb	IAmb	07 44 50.1	
	comp=Z,43nm,0.8s						
OK031	**S. Brethren Rd**	**23.16**	**113**	IAmb	IAmb	07 44 49.9	
	comp=Z,31nm,0.9s						
COLD	**Coldfoot**	**23.17**	**333**	P	**P**	**07 44 31.9**	**+1.5**
	baz=130						
FNO	**Franklin**	**23.28**	**115**	IAmb	IAmb	07 44 50.3	
	comp=Z,51nm,0.9s						
A36M	**Sachs Harbour**	**23.48**	**358**	P	**P**	**07 44 34.2**	**+1.0**
A36M				IAmb	IAmb	07 44 54.7	
	comp=Z,41nm,0.8s						
A36M	**Sachs Harbour**	**23.48**	**358**	P	**P**	**07 44 34.1**	**+1.0**
	baz=177						
A36M	**Sachs Harbour**	**23.48**	**358**	P	**P**	**07 44 34.2**	**+1.0**
JFWS	**Jewell Farm**	**23.61**	**91**	P	**P**	**07 44 31.8**	**-3.0**
	baz=296						
GTO	**Geraldton**	**23.62**	**73**	P	**P**	**07 44 31.3**	**-3.5**
TUL1	**Leonard**	**23.83**	**112**	P	**P**	**07 44 35.5**	**-1.3**
	baz=311						
ABTX	**Abilene, Hawle**	**23.87**	**123**	IAmb	IAmb	07 44 57.8	
	comp=Z,29nm,0.9s						
ABTX	**Abilene, Hawle**	**23.87**	**123**	P	**P**	**07 44 36.8**	**-0.5**
	baz=319						
TOLK	**Toolik Lake Re**	**23.94**	**336**	IAmb	IAmb	07 44 55.8	
	comp=Z,30nm,0.8s						
TOLK	**Toolik Lake Re**	**23.94**	**336**	P	**P**	**07 44 39.9**	**+2.2**
	baz=134						
GCSA	**Galena City Sc**	**24.10**	**324**	P	**P**	**07 44 41.2**	**+2.1**
	baz=116						
U38A	**Gravette**	**24.36**	**109**	IAmb	IAmb	07 45 07.5	
	comp=Z,27nm,0.9s						
L42A	**Oliver, Polo**	**24.40**	**93**	IAmb	IAmb	07 44 41.9	
	comp=Z,46nm,0.9s						
R40A	**Maddies Statio**	**24.60**	**103**	IAmb	IAmb	07 44 43.6	
	comp=Z,33nm,0.8s						
HHAR	**Hobbs**	**24.74**	**109**	P	**P**	**07 44 44.2**	**-0.9**
HHAR				IAmb	IAmb	07 44 46.1	
	comp=Z,23nm,1.1s						
X37A	**Clayton**	**24.96**	**114**	IAmb	IAmb	07 45 08.5	
	comp=Z,30nm,1.2s						
U40A	**Yellville**	**25.38**	**108**	IAmb	IAmb	07 45 10.0	
	comp=Z,34nm,0.8s						
U40A	**Yellville**	**25.38**	**108**	P	**P**	**07 44 48.9**	**-2.1**
	baz=308						
CCM	**Cathedral Cave**	**25.40**	**103**	P	**P**	**07 44 48.9**	**-2.2**
	baz=305						
JCT	**Junction City**	**25.43**	**127**	P	**P**	**07 44 51.7**	**+0.1**
JCT				IAmb	IAmb	07 44 53.3	
	comp=Z,26nm,0.8s						
JCT	**Junction City**	**25.43**	**127**	P	**P**	**07 44 51.3**	**-0.2**
	baz=322						
W39A	**Magazine**	**25.53**	**111**	IAmb	IAmb	07 45 12.9	
	comp=Z,24nm,0.9s						
W39A	**Magazine**	**25.53**	**111**	P	**P**	**07 44 50.9**	**-1.4**
	baz=311						
WHTX	**Lake Whitney,**	**25.57**	**121**	IAmb	IAmb	07 45 14.2	
	comp=Z,34nm,1.1s						
WHTX	**Lake Whitney,**	**25.57**	**121**	P	**P**	**07 44 52.2**	**-0.6**
	baz=318						
M44A	**Midewin, Midew**	**25.76**	**93**	IAmb	IAmb	07 44 54.4	
	comp=Z,44nm,1.0s						
MIAR	**Mount Ida**	**26.09**	**112**	P	**P**	**07 44 56.5**	**-0.9**
	baz=312						
FCAR	**Ozark Folk Cen**	**26.13**	**108**	IAmb	IAmb	07 44 59.4	
	comp=Z,22nm,0.9s						
Q44A	**Meyer Farm, Va**	**26.38**	**99**	IAmb	IAmb	07 45 50.8	
	comp=Z,24nm,0.9s						
W41B	**Gary Mavity, V**	**26.51**	**109**	P	**P**	**07 45 00.3**	**-0.8**
	baz=310						
LPIG	**La Paz**	**26.52**	**153**	LR	LR	07 55 38.0	
	comp=Z,126nm,20.2s,baz=327,slow=36						
X40A	**Basin Creek Fa**	**26.59**	**111**	IAmb	IAmb	07 45 23.9	
	comp=Z,19nm,0.9s						
X40A	**Basin Creek Fa**	**26.59**	**111**	P	**P**	**07 45 00.8**	**-1.1**
	baz=311						
SFIN	**Lafayette**	**26.88**	**94**	IAmb	IAmb	07 45 03.5	
	comp=Z,21nm,0.7s						
SFIN	**Lafayette**	**26.88**	**94**	P	**P**	**07 45 02.0**	**-2.5**
	baz=300						
P46A	**Rosedale**	**27.20**	**96**	IAmb	IAmb	07 45 07.2	
	comp=Z,18nm,0.9s						
833A	**Chaparral WMA,**	**27.37**	**129**	P	**P**	**07 45 10.1**	**+1.2**
	baz=324						
A21K	**Barrow**	**27.53**	**337**	P	**P**	**07 45 10.9**	**+0.9**
	baz=128						
CCAR	**Cane Creek**	**27.62**	**110**	IAmb	IAmb	07 45 31.6	
	comp=Z,44nm,1.2s						
BLO	**Bloomington**	**27.88**	**96**	IAmb	IAmb	07 45 12.2	
	comp=Z,50nm,1.3s						
WCI	**Wyandotte Cave**	**28.54**	**97**	P	**P**	**07 45 16.6**	**-2.6**
	baz=303						
T47A	**Sharon Grove**	**28.70**	**100**	IAmb	IAmb	07 46 19.5	
	comp=Z,30nm,1.6s						
WVT	**Waverly**	**28.74**	**102**	P	**P**	**07 45 19.5**	**-1.5**
WVT				IAmb	IAmb	07 45 29.1	
	comp=Z,33nm,1.7s						
WVT	**Waverly**	**28.74**	**102**	P	**P**	**07 45 18.4**	**-2.6**
	baz=307						
RES	**Resolute Bay**	**28.80**	**15**	P	**P**	**07 45 20.5**	**-0.7**
	comp=Z,4.6nm,0.8s,baz=222,slow=9.5,SNR=14						
RES				LR	LR	07 57 14.7	
	comp=Z,315nm,20.1s,baz=286,slow=37						
RES	**Resolute Bay**	**28.80**	**15**	P	**P**	**07 45 20.8**	**-0.5**
RES	**Resolute Bay**	**28.80**	**15**	P	**P**	**07 45 20.3**	**-1.0**
P49A	**Miami Univ. Ec**	**28.89**	**94**	P	**P**	**07 45 19.4**	**-2.9**
	baz=301						
ACSO	**Alum Creek Sta**	**29.68**	**91**	P	**P**	**07 45 26.9**	**-2.5**
	baz=300						
SADO	**Sadowa**	**30.20**	**80**	LR	LR	07 56 54.5	
	comp=Z,247nm,20.7s,baz=342,slow=35						
P52A	**Corning**	**30.55**	**92**	P	**P**	**07 45 33.4**	**-3.7**
	baz=301						
M53A	**WI Miller and**	**30.63**	**87**	P	**P**	**07 45 34.2**	**-3.5**
	baz=298						
S51A	**Beattyville**	**30.64**	**96**	IAmb	IAmb	07 45 36.8	
	comp=Z,18nm,0.8s						
O53A	**New Philadelph**	**30.85**	**90**	P	**P**	**07 45 36.0**	**-3.7**
	baz=300						
W50A	**Signal Mountai**	**30.93**	**101**	IAmb	IAmb	07 45 39.6	
	comp=Z,51nm,1.9s						
FPAL	**Fort Paine**	**31.14**	**103**	IAmb	IAmb	07 45 41.4	
	comp=Z,18nm,0.9s						
M54A	**Oil Creek Stat**	**31.27**	**87**	P	**P**	**07 45 39.8**	**-3.6**
	baz=298						
TZTN	**Tazewell**	**31.29**	**98**	P	**P**	**07 45 41.0**	**-2.7**
	baz=305						
N54A	**Moraine State**	**31.31**	**88**	P	**P**	**07 45 40.2**	**-3.6**
	baz=299						
X51A	**Calhoun**	**31.61**	**102**	IAmb	IAmb	07 45 45.7	
	comp=Z,20nm,0.8s						
TKL	**Tuckaleechee C**	**31.66**	**99**	P	**P**	**07 45 45.3**	**-1.6**
	comp=Z,2.2nm,0.5s,baz=162,slow=0.9,SNR=6.1						
V52A	**Sevierville**	**31.67**	**99**	IAmb	IAmb	07 46 28.7	
	comp=Z,38nm,1.6s						
MCWV	**Mont Chateau**	**32.05**	**90**	P	**P**	**07 45 47.3**	**-3.0**
	baz=301						
V53A	**Saluda**	**32.28**	**98**	IAmb	IAmb	07 45 51.8	
	comp=Z,17nm,0.8s						
R55A	**Marlinton**	**32.59**	**92**	IAmb	IAmb	07 45 54.6	
	comp=Z,17nm,0.8s						
O56A	**Blue Knob Stat**	**32.59**	**88**	P	**P**	**07 45 52.1**	**-3.0**
	baz=300						
FRB	**Frobisher Bay**	**32.82**	**42**	P	**P**	**07 45 54.2**	**-2.5**
SSPA	**Standing Stone**	**32.86**	**87**	P	**P**	**07 45 54.4**	**-3.0**
	baz=300						
BLA	**Blacksburg**	**32.98**	**94**	IAmb	IAmb	07 45 58.1	
	comp=Z,15nm,0.8s						
BLA	**Blacksburg**	**32.98**	**94**	P	**P**	**07 45 55.9**	**-2.6**
	baz=304						
V55A	**Taylorsville**	**33.23**	**97**	IAmb	IAmb	07 46 00.0	
	comp=Z,15nm,0.7s						
GOGA	**Godfrey**	**33.24**	**102**	P	**P**	**07 45 58.8**	**-1.9**
	baz=309						
PAULI	**Pauline**	**33.45**	**99**	IAmb	IAmb	07 46 01.6	
	comp=Z,17nm,0.8s						
HODGE	**Hodges**	**33.51**	**100**	IAmb	IAmb	07 46 02.4	
	comp=Z,8.2nm,0.8s						
KMSC	**Kings Mountain**	**33.57**	**98**	P	**P**	**07 46 01.3**	**-2.3**
	baz=307						
EUNU	**Eureka**	**34.01**	**11**	P	**P**	**07 46 07.4**	**+0.3**
N59A	**State Game Lan**	**34.13**	**85**	P	**P**	**07 46 05.4**	**-3.0**
	baz=299						
CBN	**Corbin Frederi**	**34.45**	**90**	P	**P**	**07 46 09.4**	**-1.8**
	baz=303						
SCHQ	**Schefferville**	**34.68**	**58**	LR	LR	08 00 18.6	
	comp=Z,322nm,21.1s,baz=292,slow=36						
CMIG	**Matias Romero**	**39.02**	**134**	P	**P**	**07 46 50.8**	**+0.6**
	comp=Z,7.0nm,0.8s,baz=341,slow=8.5,SNR=15						
MTO3	**Montecristo**	**44.06**	**129**	P	**P**	**07 47 33.3**	**+1.6**
MTO3				IAmb	IAmb	07 47 53.8	
	comp=Z,25nm,1.0s						
SEY	**Seymchan**	**45.97**	**321**	P	**P**	**07 47 46.8**	**+0.7**
	comp=Z,4.5nm,0.6s,baz=86,slow=8.3,SNR=14						
DAG	**Danmarks Havn**	**46.42**	**18**	*i* P	**P**	**07 47 48.0**	**-1.5**
DAG				*i* P	**P**	**07 47 48.7**	**-0.8**
DAG				*e*S	**pP**	**07 48 03.6**	**-0.2**
DBG	**Daneborg**	**47.24**	**21**	*e*P	**P**	**07 47 56.2**	**+0.3**
DBG				*e*S	**pP**	**07 48 10.0**	**-0.2**
PETK	**Petropavlovsk-**	**47.71**	**307**	P	**P**	**07 48 00.2**	**+0.4**
	comp=Z,6.7nm,0.7s,baz=71,slow=12,SNR=11						
PETK				pP	**pP**	**07 48 14.7**	**+0.4**
	comp=Z,5.0nm,0.9s,baz=64,slow=14,SNR=2.1						
PETK				LR	LR	08 05 31.1	
	comp=Z,47nm,21.7s,baz=77,slow=33						
UREC	**San Jos de Ur**	**57.14**	**119**	*e*P	**P**	**07 49 09.9**	**-0.2**
CBOC	**Ciudad Bolivar**	**58.40**	**121**	*e*P	**P**	**07 49 19.4**	**+0.3**
PTBC	**PUERTO BERRIO,**	**58.74**	**119**	*e*P	**P**	**07 49 20.7**	**-0.6**
TRO	**Tromso**	**58.87**	**15**	*e*P	**P**	**07 49 22.3**	**+0.9**
PLMC	**San Jos del P**	**59.03**	**122**	*e*P	**P**	**07 49 23.3**	**0.0**
TAOE	**Nuku Hiva Isla**	**59.12**	**200**	*e*LR	LR	08 06 50.3	
	comp=Z,113nm,26.6s						
JETT	**Jettan, Norway**	**59.18**	**14**	*e*P	**P**	**07 49 25.4**	**+1.8**
NORC	**Norcasia**	**59.30**	**120**	*e*P	**P**	**07 49 26.0**	**+0.8**
BARC	**Barichara**	**59.45**	**118**	*e*P	**P**	**07 49 26.8**	**+0.4**
SOCV	**Socops**	**59.49**	**114**	*e*P	**P**	**07 49 26.5**	**0.0**
SPBC	**San Pablo de B**	**59.69**	**119**	*e*P	**P**	**07 49 27.9**	**0.0**
YOTC	**Yotoco, Valle**	**59.75**	**122**	*e*P	**P**	**07 49 29.7**	**+1.3**
ARA0	**ARCESS Array S**	**59.96**	**12**	*e*P	**P**	**07 49 30.7**	**+1.7**
ARCES	**ARCESS Array B**	**59.96**	**12**	P	**P**	**07 49 28.5**	**-0.5**
	comp=Z,4.9nm,1.0s,baz=352,slow=4.9,SNR=6.7						
ARCES				pP	**pP**	**07 49 43.5**	**-0.3**
	comp=Z,7.6nm,0.9s,baz=342,slow=5.7,SNR=3.2						
ARCES				LR	LR	08 14 56.2	
	comp=Z,141nm,19.4s,baz=285,slow=36						
RUSC	**La Rusia**	**60.07**	**118**	*e*P	**P**	**07 49 31.0**	**0.0**
KTK1	**Kautokeino**	**60.11**	**13**	*e*P	**P**	**07 49 30.2**	**+0.2**
NRIK	**Noril'sk**	**60.20**	**348**	P	**P**	**07 49 30.3**	**-0.3**
	comp=Z,5.7nm,0.7s,baz=29,slow=4.8,SNR=12						
NRIK				pP	**pP**	**07 49 45.9**	**+0.4**
	comp=Z,10.0nm,0.8s,baz=24,slow=5.3,SNR=5.4						
BAUV	**El Baul**	**60.70**	**111**	P	**P**	**07 49 34.8**	**+0.1**
CHIC	**Chingaza**	**60.71**	**120**	*e*P	**P**	**07 49 35.1**	**-0.1**
HEF	**Hetta**	**60.73**	**13**	*e*P	**P**	**07 49 35.6**	**+1.4**
POPC	**Popayan, Colom**	**60.76**	**124**	*e*P	**P**	**07 49 35.8**	**+0.4**
ELOV	**Elorza**	**61.33**	**114**	*e*P	**P**	**07 49 40.8**	**+1.8**
NSS	**Namsos**	**61.92**	**20**	*e*P	**P**	**07 49 41.9**	**-0.4**
FLOC	**Florencia**	**62.11**	**123**	*e*P	**P**	**07 49 44.7**	**+0.4**
AKN	**Aaknes**	**62.66**	**24**	*e*P	**P**	**07 49 48.5**	**+1.2**
SKAR	**Skarslia**	**64.26**	**24**	*e*P	**P**	**07 49 58.8**	**+0.9**
NB2	**NORSAR Subarra**	**64.72**	**23**	P	**P**	**07 50 01.1**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=323,slow=6.9						
NB2	**NORSAR Subarra**	**64.72**	**23**	P	**P**	**07 50 01.1**	**+0.2**
	baz=323,slow=6.9						
NOA	**NORSAR Array B**	**64.72**	**23**	P	**P**	**07 50 00.2**	**-0.8**
	comp=Z,2.9nm,0.9s,baz=327,slow=6.8,SNR=4.3						
NOA				pP	**pP**	**07 50 15.2**	**-0.7**
	comp=Z,2.7nm,0.7s,baz=326,slow=6.8,SNR=5.6						
NOA				LR	LR	08 17 43.6	
	comp=Z,106nm,18.0s,baz=320,slow=36						
USRK	**Ussuriysk Ar.**	**66.53**	**311**	P	**P**	**07 50 13.6**	**+0.8**
	comp=Z,5.2nm,0.7s,baz=25,slow=6.3,SNR=6.4						
USRK				pP	**pP**	**07 50 28.3**	**+0.4**
	comp=Z,4.0nm,0.7s,baz=58,slow=4.6,SNR=3.2						
FINES	**FINESS Array B**	**67.57**	**15**	P	**P**	**07 50 19.4**	**+0.4**
	comp=Z,10nm,0.6s,baz=353,slow=4.0,SNR=46						
FINES				pP	**pP**	**07 50 33.9**	**-0.3**
	comp=Z,26nm,0.7s,baz=354,slow=5.7,SNR=18						
FINES				LR	LR	08 18 10.5	
	comp=Z,130nm,18.8s,baz=315,slow=34						
ATAH	**Atahualpa**	**68.01**	**131**	P	**P**	**07 50 24.2**	**+1.2**
	comp=Z,8.0nm,0.8s,baz=145,slow=3.1,SNR=6.5						
MJAR	**Matsushiro Arr**	**68.64**	**301**	pP	pP	07 50 41.8	+0.4
	comp=Z,1.3nm,0.6s,baz=31,slow=5.5,SNR=3.1						
PPT2	**Papeete2**	**69.95**	**207**	*e*LR	LR	08 11 52.3	
	comp=Z,116nm,28.0s						
KLMR	**Klimovskoe**	**70.01**	**9**	*e*P	**P**	**07 50 34.2**	**-0.1**
KLMR				AMP		07 50 50.3	
	comp=Z,67nm,1.5s						
CN2	**Changchun**	**70.03**	**314**	*e*P	**P**	**07 50 35.0**	**+0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CZSB	**Cruzeiro do Su**	**71.47**	**126**	IAmb	IAmb	07 51 06.2	
	comp=Z,16nm,0.8s						
KSRS	**Korea Array**	**73.58**	**308**	P	**P**	**07 50 57.4**	**+1.3**
	comp=Z,2.6nm,1.0s,baz=41,slow=6.7,SNR=5.1						
KSRS				LR	LR	08 23 25.9	
	comp=Z,14nm,18.0s,baz=25,slow=36						
CLL	**Collm**	**73.67**	**27**	*e*P	**P**	**07 50 58.0**	**+1.6**
CLL				*e*(pP)	**pP**	**07 51 10.0**	**-1.6**
CLL	**Collm**	**73.67**	**27**	P	**P**	**07 50 56.6**	**+0.2**
CLL				IAmb	IAmb	07 51 14.5	
	comp=Z,23nm,1.5s						
MNK	**Minsk**	**74.42**	**17**	*i* P	**P**	**07 51 00.0**	**-0.7**
	comp=E,4.0nm,0.9s						
MNK				*i* P	**P**	**07 51 00.0**	**-0.7**
	comp=N,28nm,0.8s						
MNK				*i* P	**P**	**07 51 00.0**	**-0.7**
	comp=Z,26nm,0.8s,baz=341						
MNK				*i* PcP	**PcP**	**07 51 14.0**	**-1.1**
MNK				*i* PP	**PP**	**07 53 46.2**	**-0.6**
MNK				*i* PPP	PPP	07 55 31.1	
MNK				*i* S	**S**	**08 00 30.9**	**0.0**
MNK				*i* SS	**SS**	**08 05 18.5**	**+1.9**
MNK				*i* SSS	SSS	08 08 38.2	
MNK				*i* LR	LR	08 24 34.8	
MNK				*i* LRM	MLR	08 27 12.9	
	comp=Z,93nm,6.7s						
MNK				*i* LRM	MLR	08 27 14.8	
	comp=E,36nm,13.1s						
MNK				*i* LRM	MLR	08 27 20.8	
	comp=N,24nm,6.4s						
ULN	**Ulaanbaatar**	**74.47**	**327**	P	**P**	**07 51 02.4**	**+1.1**
MACA	**Manacapuru-AM**	**74.69**	**113**	IAmb	IAmb	07 51 17.6	
	comp=Z,17nm,1.1s						
SONM	**Songino Array**	**74.73**	**328**	P	**P**	**07 51 04.2**	**+1.3**
	comp=Z,2.6nm,0.6s,baz=41,slow=3.9,SNR=16						
SONM				pP	**pP**	**07 51 19.9**	**+1.7**
	comp=Z,2.1nm,0.7s,baz=72,slow=3.3,SNR=6.5						
SONM				LR	LR	08 24 10.3	
	comp=Z,88nm,18.1s,baz=39,slow=36						
ZALV	**Zalesovo Beam**	**75.09**	**343**	P	**P**	**07 51 05.0**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=9.5,slow=4.5,SNR=4.2						
ZALV				pP	**pP**	**07 51 20.0**	**+0.1**
	comp=Z,4.9nm,0.7s,baz=14,slow=5.2,SNR=6.6						
CHVC	**Chvalec**	**75.20**	**25**	*e*P	**P**	**07 51 06.8**	**+1.5**
ARU	**Arti**	**75.32**	**359**	P	**P**	**07 51 06.1**	**+0.2**
ARU				IAmb	IAmb	07 51 22.0	
	comp=Z,16nm,0.8s						
TBI	**Tubuai**	**75.37**	**205**	*e*LR	LR	08 14 21.9	
	comp=Z,97nm,32.5s						
DPC	**Dobruska-Polom**	**75.49**	**25**	*e*P	**P**	**07 51 07.9**	**+0.9**
KHC	**Kasperske Hory**	**75.76**	**28**	*e*P	**P**	**07 51 09.3**	**+0.7**
KRLC	**Kraliky**	**75.87**	**25**	*e*P	**P**	**07 51 10.3**	**+1.1**
KRLC				*e*pP	**pP**	**07 51 24.9**	**+0.4**
GERES	**GERESS Array B**	**76.05**	**28**	P	**P**	**07 51 11.0**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=328,slow=4.7,SNR=9.8						
GERES				pP	**pP**	**07 51 25.9**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=333,slow=4.8,SNR=6.5						
VRAC	**Vranov**	**76.50**	**26**	⇓P	pP	07 51 28.8	+0.7
VRAC	**Vranov**	**76.50**	**26**	P	**P**	**07 51 13.3**	**+0.6**
	comp=Z,1.9nm,0.4s,baz=351,slow=6.2,SNR=4.6						
VRAC				pP	**pP**	**07 51 28.4**	**+0.3**
	comp=Z,4.4nm,0.6s,baz=285,slow=6.0,SNR=5.0						
FETA	**Feichten**	**76.70**	**30**	*e*P	**P**	**07 51 15.5**	**+1.4**
	comp=Z,2.6nm,0.7s						
ESDC	**Sonseca Array**	**77.00**	**44**	P	**P**	**07 51 15.3**	**-0.6**
	comp=Z,4.5nm,0.9s,baz=315,slow=6.0,SNR=14						
ESDC	**Sonseca Array**	**77.00**	**44**	P	**P**	**07 51 16.2**	**+0.4**
ESDC				IAmb	IAmb	07 51 17.4	
	comp=Z,8.0nm,1.1s						
CONA	**Conrad Observa**	**77.53**	**27**	*e*P	**P**	**07 51 19.7**	**+1.1**
	comp=Z,5.0nm,1.3s						
MODS	**Modra-Piesok**	**77.54**	**26**	*e*P	**P**	**07 51 19.6**	**+1.0**
BRVK	**Borovoye**	**78.06**	**352**	P	**P**	**07 51 22.1**	**+0.8**
BRVK				IAmb	IAmb	07 51 38.2	
	comp=Z,13nm,0.8s						
AKASG	**Malin Array Be**	**78.29**	**17**	P	**P**	**07 51 22.6**	**-0.1**
	comp=Z,2.8nm,0.6s,baz=341,slow=4.9,SNR=16						
AKASG				pP	**pP**	**07 51 37.5**	**-0.6**
	comp=Z,8.4nm,0.7s,baz=344,slow=5.2,SNR=17						
OBKA	**Obir**	**78.39**	**28**	*e*P	**P**	**07 51 22.9**	**-0.6**
	comp=Z,15nm,1.1s						
SOKA	**Soboth**	**78.39**	**28**	*e*P	**P**	**07 51 24.2**	**+0.8**
	comp=Z,11nm,1.4s						
HHC	**Hu-ho-hao-te**	**78.61**	**321**	*e*P	**P**	**07 51 26.5**	**+1.7**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,5.7s						
PSZ	**Piszkesteto**	**78.69**	**24**	⇓P	pP	07 51 41.2	+0.8
KURK	**Kurchatov**	**79.29**	**346**	P	**P**	**07 51 28.0**	**-0.1**
KURK				IAmb	IAmb	07 51 44.1	
	comp=Z,7.6nm,0.7s						
BUR08	**Bucovina Ar. S**	**80.30**	**21**	IAmb	IAmb	07 51 54.3	
	comp=Z,24nm,1.6s						
BURAR	**Bucovina Array**	**80.33**	**21**	⇓P	**P**	**07 51 35.5**	**+1.4**
SORM	**Soroca**	**80.55**	**19**	⇓P	**P**	**07 51 35.1**	**+0.1**
SIRR	**Siria**	**80.68**	**24**	⇓P	**P**	**07 51 36.6**	**+0.8**
LPAZ	**La Paz**	**81.04**	**127**	IAmb	IAmb	07 52 00.8	
	comp=Z,8.8nm,0.8s						
BZS	**Buzias**	**81.27**	**24**	⇓P	**P**	**07 51 39.4**	**+0.5**
AKTO	**Aktyubinsk**	**81.33**	**359**	LR	LR	08 32 17.4	
	comp=Z,51nm,18.7s,baz=336,slow=39						
GZR	**Gura Zlata**	**81.79**	**23**	⇑P	**P**	**07 51 42.4**	**+0.6**
PB12	**IPOC Station P**	**81.84**	**130**	P	**P**	**07 51 43.1**	**+0.9**
MDVR	**Moldovita**	**82.07**	**24**	⇓P	pP	07 51 58.7	0.0
COVR	**Voineasa-Covas**	**82.23**	**21**	⇓P	pP	07 52 00.5	+1.0
ARR	**Arges**	**82.29**	**22**	⇓P	pP	07 51 60.0	+0.1
PLOR	**Plostina**	**82.33**	**21**	⇓P	**P**	**07 51 43.5**	**-1.0**
VOIR		**82.33**	**22**	⇓P	**P**	**07 51 45.7**	**+1.1**
VRI	**Vrincioaia**	**82.33**	**21**	⇓P	P	07 51 38.9	-5.7
MKAR	**Makanchi Array**	**82.41**	**343**	P	**P**	**07 51 45.1**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=7.1,slow=4.9,SNR=12						
MKAR				pP	**pP**	**07 51 59.9**	**-0.5**
	comp=Z,2.8nm,0.6s,baz=15,slow=5.1,SNR=11						
NJ2	**Nanjing**	**82.44**	**311**	*e*P	**P**	**07 51 43.5**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
MAKZ	**Makanchi**	**82.46**	**343**	P	**P**	**07 51 45.5**	**+0.4**
MAKZ				IAmb	IAmb	07 52 01.5	
	comp=Z,11nm,0.8s						
ABKAR	**Akbulak array**	**82.48**	**358**	IAmb	IAmb	07 52 01.7	
	comp=Z,12nm,1.1s						
BOVS	**Bovan**	**83.12**	**25**	⇓P	**P**	**07 51 48.5**	**-0.1**
PDG	**Podgorica**	**83.52**	**27**	⇓P	**P**	**07 51 50.7**	**0.0**
WMQ	**Urumqi**	**84.02**	**338**	*e*P	**P**	**07 51 55.5**	**+2.1**
WMQ				pP	pP	07 52 10.3	+1.4
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.7s						
GTA	**Gaotai**	**84.41**	**328**	*e*P	**P**	**07 51 56.0**	**+0.5**
GTA				pP	pP	07 52 11.3	+0.3
GTA				sP	sP	07 52 18.5	+1.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
VTS	**Vitosha**	**84.49**	**24**	⇑P	**P**	**07 51 56.3**	**+0.5**
SIV	**San Ignacio**	**84.67**	**121**	P	**P**	**07 51 56.8**	**0.0**
	comp=Z,3.7nm,0.8s,baz=294,slow=2.8,SNR=22						
SIV				pP	**pP**	**07 52 12.2**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=340,slow=2.7,SNR=6.3						
XAN	**Xi'an**	**85.47**	**319**	P	**P**	**07 52 01.8**	**+1.0**
XAN				pP	pP	07 52 16.8	+0.4
XAN				sP	sP	07 52 24.8	+2.4
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
KEST	**Kesra**	**86.03**	**37**	P	**P**	**07 52 03.5**	**-0.1**
	comp=Z,4.7nm,0.9s,baz=306,slow=3.6,SNR=4.0						
KEST				LR	LR	08 29 56.5	
	comp=Z,146nm,18.6s,baz=281,slow=35						
KBZ	**Khabaz**	**87.25**	**10**	P	**P**	**07 52 08.1**	**-1.1**
	comp=Z,2.9nm,0.8s,baz=27,slow=5.1,SNR=4.0						
KBZ				pP	**pP**	**07 52 25.4**	**+0.6**
	comp=Z,10.0nm,0.8s,baz=351,slow=3.3,SNR=9.7						
AAK	**Ala-Archa**	**87.80**	**347**	P	**P**	**07 52 13.4**	**+1.3**
AAK				IAmb	IAmb	07 52 28.7	
	comp=Z,5.0nm,1.0s						
BRTR	**Keskin Array B**	**89.70**	**18**	P	**P**	**07 52 20.9**	**-0.3**
	comp=Z,1.9nm,0.9s,baz=46,slow=11,SNR=2.9						
BRTR				pP	**pP**	**07 52 36.9**	**+0.1**
	comp=Z,3.2nm,0.8s,baz=14,slow=1.5,SNR=6.1						
BRTR				LR	LR	08 32 47.6	
	comp=Z,93nm,18.1s,baz=336,slow=36						
KSH	**Kashi**	**90.61**	**345**	P	**P**	**07 52 29.3**	**+3.9**
KSH				pP	pP	07 52 42.8	+1.8
KSH				sP	sP	07 52 47.0	-0.1
KSH				PP	**PP**	**07 56 07.5**	**+7.7**
KSH				S	**S**	**08 03 20.0**	**+3.3**
KSH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GEYT	**Alibeck**	**93.83**	**359**	LR	LR	08 40 05.1	
	comp=Z,89nm,18.0s,baz=355,slow=39						
DZM	**Mont Dzumac**	**94.11**	**241**	*e*LR	LR	08 23 06.0	
	comp=Z,102nm,24.5s						
CPUP	**Villa Florida**	**95.00**	**125**	LR	LR	08 40 17.8	
	comp=Z,13nm,18.4s,baz=36,slow=38						
WRA	**Warramunga Arr**	**112.80**	**265**	PKiKP	**PKiKP**	**07 57 59.4**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=20,slow=2.0,SNR=6.1						
WRA				pPKiKP	**pPKiKP**	**07 58 14.8**	**-1.0**

	comp=Z,0.9nm,0.7s,baz=38,slow=1.8,SNR=3.2						
ASAR	**Alice Springs**	**115.70**	**263**	PKP	**PKPdf**	**07 58 04.8**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=82,slow=2.4,SNR=15						
ASAR				pPKP	PKiKP	07 58 20.6	+16
	comp=Z,0.9nm,0.5s,baz=51,slow=1.8,SNR=5.2						
STKA	**Stephens Creek**	**116.33**	**251**	PKP	**PKPdf**	**07 58 05.3**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=167,slow=1.1,SNR=9.3						
VNDA	**Vanda**	**133.82**	**197**	PKP	**PKiKP**	**07 58 39.9**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=41,slow=3.2,SNR=3.2						
VNA3	**Neumayer Olymp**	**142.54**	**151**	PKPdf	**PKPdf**	**07 58 50.6**	**-3.5**
VNA2	**Neumayer--Watz**	**143.29**	**150**	PKPdf	PKPbc	07 58 53.2	+0.5
	baz=278,slow=4.1						
SNAA	**Sanae**	**144.68**	**152**	PKPdf	PKPbc	07 58 57.0	0.0
BOSA	**Boshof**	**148.66**	**62**	PKPbc	**PKPbc**	**07 59 10.1**	**+0.2**
	comp=Z,6.7nm,0.6s,baz=326,slow=2.2,SNR=17						
MAW	**Mawson**	**160.69**	**187**	PKPab	**PKPab**	**08 00 04.2**	**+0.8**
	comp=Z,7.1nm,0.8s,baz=90,slow=1.0,SNR=5.0						

IDC ***30*** *08:02:32.8±2.4, 24°.65N×90°.86E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/36, mbtmp3.4/5, ML3.7/1 Error ellipse: s-maj=86.5km s-min=23.7km az=67.0*

ISC 30 08:02:39.0±1.7**, 24°.83N**±0°.10×**91°.4E**±0°.2**, h35km, n6, σ1s.74**/7**, mb3.3**/4**, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	**Shillong**	**0.88**	**33**	i PG	**Pn**	**08 02 54.0**	**-1.0**
SHL				i SG	**Sn**	**08 03 07.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**9.49**	**130**	Pn	**Pn**	**08 04 52.4**	**-0.8**
	0.2nm,0.3s,baz=304,slow=14,SNR=4.4						
MKAR	**Makanchi Array**	**23.08**	**344**	P	**P**	**08 07 40.0**	**-1.5**
	0.3nm,0.4s,baz=163,slow=8.0,SNR=8.7						
SONM	**Songino Array**	**25.87**	**24**	P	**P**	**08 08 10.1**	**+2.6**
	0.3nm,0.5s,baz=210,slow=10,SNR=2.2						
WRA	**Warramunga Arr**	**61.08**	**133**	P	**P**	**08 12 50.1**	**+0.4**
	0.9nm,0.8s,baz=324,slow=7.0,SNR=4.6						
ASAR	**Alice Springs**	**63.45**	**136**	P	**P**	**08 13 06.5**	**+0.9**
	0.4nm,1.0s,baz=313,slow=6.6,SNR=4.4						

IDC ***30*** *08:25:03.6±3.2, 35°.24S×178°.86E, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.7/26, mbtmp3.8/3, ML3.6/1, Error ellipse: s-maj=65.4km s-min=43.3km az=95.0*

WEL ***30*** *08:25:13.5±1.0, 36°S±11°×17°9E±1°1, h165km±12km, M3.7/28, ML4.0/30, MLv3.7/28, Error ellipse: s-maj=0.0km s-min=0.0km az=127.4*

ISC 30 08:25:16.5±1.9**, 36°.4S**±0°.1×**179°.3E**±0°.1**, h163**km±13km**, n50, σ1s.67**/62**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.61**	**205**	P	**Pn**	**08 25 47.0**	**-1.2**
WMGZ				S	**Sn**	**08 26 15.5**	**+2.8**
PKGZ	**Pakihiroa**	**1.80**	**211**	P	**Pn**	**08 25 48.7**	**-1.5**
PKGZ				S	**Sn**	**08 26 16.4**	**+0.1**
HAZ	**Te Kaha**	**1.83**	**220**	P	**Pn**	**08 25 48.5**	**-2.0**
HAZ				S	**Sn**	**08 26 16.1**	**-0.6**
PUZ	**Puketiti**	**1.89**	**205**	P	**Pn**	**08 25 49.9**	**-1.3**
PUZ				S	**Sn**	**08 26 19.0**	**+0.9**
RUGZ	**Raukumara Rang**	**2.05**	**218**	P	**Pn**	**08 25 51.0**	**-2.0**
TWGZ	**Tauwhareparae**	**2.09**	**209**	P	**Pn**	**08 25 52.4**	**-0.9**
TWGZ				S	**Sn**	**08 26 23.6**	**+1.6**
CNGZ	**Carnagh Statio**	**2.28**	**201**	P	**Pn**	**08 25 55.2**	**-0.4**
TKGZ	**Te Karaka**	**2.37**	**208**	P	**Pn**	**08 25 55.4**	**-1.1**
TKGZ				S	**Sn**	**08 26 29.7**	**+2.0**
MWZ	**Matawai**	**2.41**	**215**	P	**Pn**	**08 25 55.9**	**-1.2**
MWZ				S	**Sn**	**08 26 29.9**	**+1.2**
URZ	**Urewera**	**2.56**	**221**	Pn	**Pn**	**08 25 56.7**	**-2.2**
	5.9nm,0.3s,baz=122,slow=24,SNR=28						
URZ				Sn	**Sn**	**08 26 31.5**	**-0.3**
	17nm,0.3s,baz=121,slow=24,SNR=51						
URZ	**Urewera**	**2.56**	**221**	P	**Pn**	**08 25 57.0**	**-1.9**
URZ				S	**Sn**	**08 26 31.1**	**-0.7**
RAGZ	**Rawiri**	**2.59**	**214**	P	**Pn**	**08 25 58.3**	**-1.1**
MARZ	**Manawahe**	**2.63**	**231**	P	**Pn**	**08 25 58.1**	**-1.7**
RIGZ	**Rimuhau**	**2.63**	**207**	P	**Pn**	**08 25 58.9**	**-1.0**
EDRZ	**Edgecumbe**	**2.67**	**228**	P	**Pn**	**08 26 01.9**	**+1.6**
PRGZ	**Paritu Road**	**2.79**	**203**	P	**Pn**	**08 26 01.4**	**-0.3**
SNGZ	**Shannon Statio**	**2.86**	**212**	P	**Pn**	**08 26 02.0**	**-0.7**
TARZ	**Mount Tarawera**	**2.89**	**229**	P	**Pn**	**08 26 03.7**	**+0.7**
RTZ	**Ruatahuna**	**2.90**	**218**	P	**Pn**	**08 25 59.4**	**-3.7**
RTZ				S	**Sn**	**08 26 39.3**	**-0.1**
MUGZ	**Murupara**	**2.90**	**222**	P	**Pn**	**08 26 01.6**	**-1.6**
MHGZ	**Mahia Peninsul**	**2.99**	**201**	P	**Pn**	**08 26 03.4**	**-0.8**
MHGZ				S	**Sn**	**08 26 44.0**	**+2.7**
KMRZ	**Kaimai**	**3.04**	**240**	P	**Pn**	**08 26 01.3**	**-3.6**
RAHZ	**Arahi**	**3.08**	**213**	P	**Pn**	**08 26 05.0**	**-0.5**
PRRZ	**Plateau Road**	**3.13**	**226**	P	**Pn**	**08 26 05.2**	**-0.8**
MTHZ	**Maungataniwha**	**3.15**	**217**	P	**Pn**	**08 26 05.7**	**-0.5**
MTHZ				S	**Sn**	**08 26 46.1**	**+1.2**
NMHZ	**Naumai**	**3.36**	**215**	P	**Pn**	**08 26 07.9**	**-1.0**
ARHZ	**Aropaoanui**	**3.41**	**211**	P	**Pn**	**08 26 09.3**	**-0.2**
BKZ	**Black Stump Fm**	**3.56**	**217**	P	**Pn**	**08 26 09.7**	**-1.8**
MCHZ	**McNeill Hill**	**3.69**	**213**	P	**Pn**	**08 26 11.6**	**-1.4**
AWAZ	**Awhitu Peninsu**	**3.78**	**258**	P	**Pn**	**08 26 14.4**	**+0.2**
KWHZ	**Kaweka Forest**	**3.80**	**215**	P	**Pn**	**08 26 13.0**	**-1.5**
KAHZ	**Kahuranaki**	**3.92**	**208**	P	**Pn**	**08 26 14.9**	**-1.1**
TMVZ	**Te Maari**	**3.94**	**225**	P	**Pn**	**08 26 15.2**	**-1.2**
NTVZ	**North Tongarir**	**3.95**	**225**	P	**Pn**	**08 26 15.0**	**-1.5**
ETVZ	**East Tongariro**	**3.95**	**224**	P	**Pn**	**08 26 14.9**	**-1.7**
OTVZ	**Oturere**	**4.00**	**224**	P	**Pn**	**08 26 15.7**	**-1.5**
KRHZ	**Kereru**	**4.00**	**214**	P	**Pn**	**08 26 15.1**	**-1.9**
NNVZ	**North Ngauruho**	**4.00**	**225**	P	**Pn**	**08 26 19.7**	**+2.5**
WTVZ	**West Tongariro**	**4.01**	**226**	P	**Pn**	**08 26 18.9**	**+1.6**
BHHZ	**Black Hill Sta**	**4.02**	**218**	P	**Pn**	**08 26 16.2**	**-1.2**
SNVZ	**South Ngauruho**	**4.03**	**224**	P	**Pn**	**08 26 16.6**	**-1.0**
NGZ	**Ngauruhoe**	**4.04**	**225**	P	**Pn**	**08 26 21.4**	**+3.7**
MOVZ	**Moawhango**	**4.12**	**221**	P	**Pn**	**08 26 17.6**	**-1.1**
WNVZ	**Wahianoa**	**4.15**	**223**	P	**Pn**	**08 26 18.2**	**-0.9**
TSZ	**Takapari Road**	**4.52**	**214**	P	**Pn**	**08 26 21.9**	**-1.9**
MRZ	**Mangatainoka R**	**5.18**	**213**	P	**Pn**	**08 26 30.0**	**-2.4**
CAW	**Cannon Point**	**5.77**	**213**	P	**Pn**	**08 26 36.9**	**-3.2**
ASAR	**Alice Springs**	**40.92**	**275**	P	**P**	**08 32 44.1**	**+1.1**
	0.6nm,0.6s,baz=118,slow=7.9,SNR=10						
WRA	**Warramunga Arr**	**42.45**	**280**	P	**P**	**08 32 56.5**	**+1.0**
	1.1nm,0.5s,baz=119,slow=7.7,SNR=26						
FINES	**FINESS Array B**	**149.75**	**335**	PKPbc	**PKPab**	**08 44 51.2**	**-0.8**
	3.1nm,0.9s,baz=113,slow=3.2,SNR=2.2						

IDC 30 08:32:27.5±63.0**, 20°.32S**×**179°.77W, h0**km**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/28**, mbtmp3.9**/3**, Error ellipse: s-maj=1131.0km s-min=146.1km az=82.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.37**	**244**	P	P	08 39 32.9	-0.7
	1.4nm,0.5s,baz=98,slow=12,SNR=11						
ASAR	**Alice Springs**	**42.94**	**257**	P	P	08 40 28.5	0.0
	1.4nm,0.8s,baz=93,slow=8.0,SNR=10						
WRA	**Warramunga Arr**	**42.98**	**262**	P	P	08 40 29.1	+0.3
	0.4nm,0.4s,baz=94,slow=7.9,SNR=11						

IDC ***30*** *08:44:22.6±1.1, 50°.01S×163°.14E, h0km, mb4.1/6, mb1 4.2/6, mb1mx3.9/29, mbtmp4.1/6, MS3.7/16, Ms1 3.7/16, ms1mx3.6/31, Error ellipse: s-maj=59.5km s-min=22.9km az=58.0*

ISC 30 08:44:26.4±0.7**, 49°.76S**±0°.09×**163°.83E**±0°.09**, h35km, n75, σ1s.29**/69**, mb4.2**/7**, MS3.6**/15**, Auckland Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ	**The Paps**	**4.04**	**45**	P	**Pn**	**08 45 24.9**	**-0.7**
APZ				S	**Sn**	**08 46 10.7**	**-1.0**
PYZ	**Puysegur Point**	**4.08**	**29**	P	**Pn**	**08 45 24.0**	**-2.2**
PYZ				S	**Sn**	**08 46 10.4**	**-2.2**
WHZ	**Wether Hill Ro**	**4.76**	**37**	P	**Pn**	**08 45 34.9**	**-0.6**
WHZ				S	**Sn**	**08 46 29.3**	**-0.3**
SYZ	**Scrubby Hill**	**4.80**	**50**	P	**Pn**	**08 45 36.0**	**0.0**
SYZ				S	**Sn**	**08 46 28.5**	**-1.8**
DCZ	**Deep Cove**	**4.85**	**29**	P	**Pn**	**08 45 35.5**	**-1.3**
DCZ				S	**Sn**	**08 46 31.3**	**-0.3**
MLZ	**Mavora Lakes**	**5.27**	**35**	P	**Pn**	**08 45 42.9**	**+0.3**
TUZ	**Tuapeka**	**5.45**	**48**	P	**Pn**	**08 45 44.9**	**-0.2**
TUZ				S	**Sn**	**08 46 45.9**	**-0.6**
EAZ	**Earnscleugh**	**5.86**	**41**	P	**Pn**	**08 45 49.6**	**-1.1**
EAZ				S	**Sn**	**08 46 58.4**	**+1.8**
HHSZ	**Highcliff Hill**	**5.98**	**52**	P	**Pn**	**08 45 52.9**	**+0.6**
WKZ	**Wanaka**	**6.07**	**37**	P	**Pn**	**08 45 53.8**	**+0.2**
WKZ				S	**Sn**	**08 47 03.4**	**+1.7**
ODZ	**Otahua Downs**	**6.61**	**47**	P	**Pn**	**08 45 59.4**	**-1.5**
ODZ				S	**Sn**	**08 47 14.3**	**-0.6**
JCZ	**Jackson Bay**	**6.62**	**33**	P	**Pn**	**08 46 02.6**	**+1.4**
JCZ				S	**Sn**	**08 47 18.5**	**+3.0**
LBZ	**Lake Benmore**	**6.91**	**41**	P	**Pn**	**08 46 02.6**	**-2.5**
LBZ				S	**Sn**	**08 47 22.1**	**-0.3**
TMZ	**Timaru**	**7.27**	**45**	P	**Pn**	**08 46 09.5**	**-0.6**
FOZ	**Fox Glacier**	**7.47**	**36**	P	**Pn**	**08 46 12.5**	**-0.2**
FOZ				S	**Sn**	**08 47 35.4**	**-0.7**
ARCZ	**Arundel**	**7.69**	**44**	P	**Pn**	**08 46 14.5**	**-1.3**
RPZ	**Rata Peaks**	**7.82**	**42**	P	**Pn**	**08 46 14.7**	**-2.9**
GCSZ	**Gaunt Creek Bo**	**7.85**	**37**	P	**Pn**	**08 46 17.1**	**-0.8**
WACZ	**Wakanui South**	**8.00**	**46**	P	**Pn**	**08 46 18.8**	**-1.1**
WVZ	**Waitaha Valley**	**8.21**	**38**	P	**Pn**	**08 46 23.4**	**+0.5**
RACZ	**Rakaia**	**8.30**	**46**	P	**Pn**	**08 46 23.7**	**-0.5**
MQZ	**McQueen's Vall**	**8.56**	**48**	P	**Pn**	**08 46 26.6**	**-1.1**
OXZ	**Oxford**	**8.56**	**44**	P	**Pn**	**08 46 26.2**	**-1.6**
AKCZ	**Akaroa Harbour**	**8.57**	**50**	P	**Pn**	**08 46 28.6**	**+0.8**
OKCZ	**Okains Bay**	**8.75**	**50**	P	**Pn**	**08 46 31.2**	**+0.9**
INZ	**Inchbonnie**	**8.79**	**40**	P	**Pn**	**08 46 30.2**	**-0.7**
LTZ	**Lake Taylor**	**9.10**	**43**	P	**Pn**	**08 46 34.2**	**-0.9**
GVZ	**Greta Valley S**	**9.30**	**47**	P	**Pn**	**08 46 39.4**	**+1.5**
DSZ	**Denniston Nort**	**9.76**	**38**	P	**Pn**	**08 46 43.1**	**-1.1**
KHZ	**Kahutara**	**9.96**	**46**	P	**Pn**	**08 46 48.7**	**+1.8**
THZ	**Tophouse**	**10.20**	**42**	P	**Pn**	**08 46 50.2**	**-0.1**
BSWZ	**Blackbirch Sta**	**10.67**	**45**	P	**Pn**	**08 46 59.6**	**+3.0**
QRZ	**Quartz Range**	**10.83**	**38**	P	**Pn**	**08 46 57.4**	**-1.4**
NNZ	**Nelson**	**10.85**	**42**	P	**Pn**	**08 46 58.6**	**-0.4**
DUWZ	**D'Urville Isla**	**11.43**	**42**	P	**Pn**	**08 47 07.4**	**+0.4**
CAW	**Cannon Point**	**11.70**	**47**	P	**Pn**	**08 47 12.1**	**+1.4**
MRZ	**Mangatainoka R**	**12.29**	**47**	P	**Pn**	**08 47 18.3**	**-0.5**
PREZ	**Palmer Road**	**12.74**	**39**	P	**Pn**	**08 47 24.7**	**-0.3**
NEZ	**North Egmont**	**12.78**	**39**	P	**Pn**	**08 47 26.5**	**+1.0**
PKE	**Pukeiti**	**12.80**	**38**	P	**Pn**	**08 47 26.0**	**+0.2**
TARZ	**Mount Tarawera**	**14.67**	**43**	P	**Pn**	**08 47 49.3**	**-1.9**
URZ	**Urewera**	**14.92**	**45**	LR	LR	08 54 13.5	
	comp=Z,887nm,18.1s,baz=211,slow=38						
STKA	**Stephens Creek**	**24.39**	**309**	P	**P**	**08 49 42.5**	**+1.3**
	1.7nm,0.6s,baz=139,slow=11,SNR=8.3						
STKA				LR	LR	08 57 29.4	
	comp=Z,77nm,18.7s,baz=196,slow=32						
DZM	**Mont Dzumac**	**27.71**	**5**	LR	LR	08 59 05.4	
	comp=Z,176nm,20.3s,baz=202,slow=32						
VNDA	**Vanda**	**27.87**	**181**	LR	LR	08 58 46.4	
	comp=Z,178nm,19.9s,baz=352,slow=31						
MSVF	**Nonsavu**	**33.95**	**25**	LR	LR	09 03 40.9	
	comp=Z,178nm,18.1s,baz=230,slow=34						
ASAR	**Alice Springs**	**35.00**	**307**	P	**P**	**08 51 14.3**	**-1.1**
	1.9nm,0.7s,baz=141,slow=7.9,SNR=23						
ASAR				LR	LR	09 05 31.4	
	comp=Z,134nm,18.0s,baz=174,slow=36						
WRA	**Warramunga Arr**	**37.90**	**311**	P	**P**	**08 51 38.6**	**-1.5**
	2.8nm,0.8s,baz=146,slow=9.9,SNR=9.6						
H01W1	**Cape Leeuwin H**	**38.88**	**273**	T	T	09 32 44.8	
	baz=129,slow=76,SNR=123						
H01W2	**Cape Leeuwin H**	**38.89**	**273**	T	T	09 32 44.3	
	baz=129,slow=76,SNR=110						
H01W3	**Cape Leeuwin H**	**38.90**	**273**	T	T	09 32 46.2	
	baz=129,slow=76,SNR=123						
HNR	**Honiara**	**40.33**	**354**	LR	LR	09 07 28.0	
	comp=Z,93nm,19.5s,baz=238,slow=34						
QSPA	**South Pole Qui**	**40.36**	**180**	P	**P**	**08 51 59.3**	**-1.1**
	6.0nm,0.9s,baz=353,slow=3.8,SNR=14						
QSPA				LR	LR	09 06 16.3	
	comp=Z,76nm,18.1s,baz=357,slow=33						
RAR	**Rarotonga**	**40.46**	**59**	LR	LR	09 07 22.5	
	comp=Z,79nm,20.1s,baz=225,slow=34						
PMG	**Port Moresby**	**42.56**	**335**	LR	LR	09 07 02.6	
	comp=Z,131nm,19.8s,baz=160,slow=32						
FITZ	**Fitzroy Crossi**	**43.96**	**302**	P	**P**	**08 52 29.3**	**-0.7**
	2.2nm,0.7s,baz=162,slow=8.1,SNR=1.9						
FITZ				LR	LR	09 09 34.4	
	comp=Z,121nm,21.8s,baz=94,slow=35						
PPT	**Papeete**	**49.20**	**66**	LR	LR	09 12 01.1	
	comp=Z,29nm,18.9s,baz=246,slow=33						
KAPI	**Kappang**	**57.98**	**305**	LR	LR	09 17 58.5	
	comp=Z,48nm,18.7s,baz=185,slow=35						
SNAA	**Sanae**	**58.50**	**185**	P	**P**	**08 54 17.6**	**-0.9**
VNA3	**Neumayer Olymp**	**59.21**	**182**	P	**P**	**08 54 22.7**	**-0.6**
VNA2	**Neumayer--Watz**	**59.45**	**183**	P	**P**	**08 54 23.9**	**-1.1**
	baz=156,slow=8.8						
VNA1	**Neumayer--Stat**	**59.76**	**183**	P	**P**	**08 54 26.3**	**-0.8**
PMSA	**Palmer Station**	**59.91**	**158**	LR	LR	09 14 29.6	
	comp=Z,72nm,20.3s,baz=216,slow=30						
PLCA	**Paso Flores**	**78.00**	**141**	LR	LR	09 24 41.1	
	comp=Z,42nm,19.8s,baz=163,slow=31						
H08S2	**Diego Garcia H**	**85.09**	**264**	T	T	10 30 20.3	
	baz=140,slow=76,SNR=61						
H08S1	**Diego Carcia H**	**85.10**	**264**	T	T	10 30 24.8	
	baz=140,slow=76,SNR=31						
H08S3	**Diego Garcia H**	**85.11**	**264**	T	T	10 30 21.8	
	baz=140,slow=76,SNR=52						
CMAR	**Chiang Mai Arr**	**88.76**	**301**	P	**P**	**08 57 17.0**	**+0.7**
	0.4nm,0.3s,baz=134,slow=3.9,SNR=2.3						
KSRS	**Korea Array**	**92.46**	**332**	LR	LR	09 39 57.6	
	comp=Z,24nm,18.3s,baz=353,slow=36						
XAN	**Xi'an**	**96.58**	**317**	P	**P**	**08 57 53.5**	**+1.4**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
YKA	**Yellowknife Ar**	**129.05**	**36**	PKP	**PKiKP**	**09 03 30.5**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=238,slow=1.3,SNR=4.2						
SPITS	**Spitsbergen Ar**	**149.05**	**348**	PKPbc	**PKPab**	**09 04 12.4**	**-1.0**
	comp=Z,6.5nm,0.7s,baz=91,slow=6.7,SNR=4.4						
AKASG	**Malin Array Be**	**151.29**	**290**	PKPbc	**PKiKP**	**09 04 17.6**	**+2.0**
	comp=Z,1.5nm,0.6s,baz=77,slow=2.5,SNR=9.1						
ARCES	**ARCESS Array B**	**152.00**	**330**	PKPbc	**PKiKP**	**09 04 16.7**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=17,slow=1.3,SNR=5.3						
FINES	**FINESS Array B**	**153.93**	**313**	PKPbc	**PKiKP**	**09 04 22.6**	**+1.9**
	comp=Z,0.7nm,0.5s,baz=94,slow=5.7,SNR=5.4						

JSN ***30*** *08:45:35.6±0.6, 19°.32N×80°.05W, h46km, MD4.1*

SSNC ***30*** *08:45:36.5±2.5, 19°.50N×79°.89W, h25km±21km, MD3.6, ML2.7, MW3.0*

ISC 30 08:45:35.2±1.6**, 19°.50N**±0°.08×**79°.90W**±0°.09**, h35km, n9, σ1s.01**/15**, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CVJ	**Coleyville**	**2.57**	**119**	*i* P	**Pn**	**08 46 15.0**	**+0.5**
MTDJ	**Mount Denham**	**2.57**	**119**	*e*P	**Pn**	**08 46 14.3**	**-0.1**
MTDJ				*e*S	**Sn**	**08 46 42.8**	**-1.8**
MTDJ	**Mount Denham**	**2.57**	**119**	*i* P	**Pn**	**08 46 15.0**	**+0.5**
MGV	**Manicaragua**	**2.60**	**358**	*e*P	**Pn**	**08 46 14.5**	**-0.3**
MGV				*e*S	**Sn**	**08 46 43.2**	**-2.0**
MGV				*e*Sg	**Sn**	**08 46 45.1**	**0.0**
MGV				IAML		08 46 46.8	
	comp=N,44nm,0.2s						
MGV				IAML		08 46 47.1	
	comp=E,39nm,0.1s						
LMGC	**Las Mercedes**	**2.78**	**78**	*e*P	**Pn**	**08 46 18.5**	**+1.2**
LMGC				*e*S	**Sn**	**08 46 50.1**	**+0.5**
LMGC				IAML		08 46 54.3	
	comp=E,8.5nm,0.1s						
LMGC				IAML		08 46 54.4	
	comp=N,11nm,0.1s						
STH	**Stony Hill**	**3.25**	**115**	*i* P	**Pn**	**08 46 23.8**	**0.0**
STH				*i* S	**Sn**	**08 47 00.9**	**-0.4**
GWJ	**Greenwich**	**3.32**	**115**	*i* P	**Pn**	**08 46 25.6**	**+0.7**
HOJ	**Hope**	**3.33**	**116**	*i* P	**Pn**	**08 46 25.7**	**+0.8**
SOR	**Soroa**	**4.38**	**319**	*e*P	**Pn**	**08 46 40.4**	**+1.1**
SOR				*e*S	**Sn**	**08 47 28.7**	**-0.4**
SOR				IAML		08 47 40.9	
	comp=N,4.5nm,0.4s						
SOR				IAML		08 47 41.5	
	comp=E,6.2nm,0.2s						

WEL 30 08:47:03.6, 39°S±6°×**17°6E**±1°0**, h124**km±13km**, M2.5**/41**, ML1.9**/9**, MLv2.5**/41**, Error ellipse: s-maj=0.0km s-min=0.0km az=98.7, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALRZ	**Allen Road**	**0.19**	**66**	P	Pn	08 47 20.8	+0.2
KUTZ	**Kaahu Road**	**0.28**	**303**	P	Pn	08 47 20.6	-0.3
MRHZ	**Matea Rd**	**0.30**	**130**	P	Pn	08 47 21.6	+0.6
HSRZ	**Hossack Road**	**0.34**	**17**	P	Pn	08 47 20.8	-0.4
MUGZ	**Murupara**	**0.54**	**72**	P	Pn	08 47 21.8	-0.4
NGRZ	**Ngongotaha**	**0.54**	**6**	P	Pn	08 47 24.1	+1.8
TLZ	**Tolley Road**	**0.55**	**304**	P	Pn	08 47 21.2	-1.1
NTVZ	**North Tongarir**	**0.57**	**217**	P	Pn	08 47 23.3	+0.8
TMVZ	**Te Maari**	**0.57**	**214**	P	Pn	08 47 23.1	+0.6
ETVZ	**East Tongariro**	**0.59**	**213**	P	Pn	08 47 23.2	+0.6
BKZ	**Black Stump Fm**	**0.60**	**151**	P	Pn	08 47 23.6	+1.0
MTHZ	**Maungataniwha**	**0.60**	**111**	P	Pn	08 47 23.5	+0.9
NNVZ	**North Ngauruho**	**0.63**	**219**	P	Pn	08 47 23.4	+0.5
WTVZ	**West Tongariro**	**0.63**	**221**	P	Pn	08 47 23.2	+0.3
OTVZ	**Oturere**	**0.63**	**214**	P	Pn	08 47 23.4	+0.5
SNVZ	**South Ngauruho**	**0.66**	**214**	P	Pn	08 47 23.6	+0.5
NGZ	**Ngauruhoe**	**0.67**	**217**	P	Pn	08 47 23.7	+0.5
RTZ	**Ruatahuna**	**0.68**	**88**	P	Pn	08 47 23.3	+0.1
NMHZ	**Naumai**	**0.70**	**131**	P	Pn	08 47 25.2	+1.8
TUVZ	**Tukino**	**0.72**	**210**	P	Pn	08 47 24.1	+0.5
FWVZ	**Far West T-bar**	**0.76**	**216**	P	Pn	08 47 24.2	+0.2
TRVZ	**Turoa**	**0.79**	**214**	P	Pn	08 47 24.6	+0.3
WNVZ	**Wahianoa**	**0.80**	**211**	P	Pn	08 47 24.5	+0.3
RAHZ	**Arahi**	**0.80**	**110**	P	Pn	08 47 25.3	+1.2
KWHZ	**Kaweka Forest**	**0.82**	**163**	P	Pn	08 47 25.5	+1.2
MOVZ	**Moawhango**	**0.82**	**200**	P	Pn	08 47 24.5	+0.2
BHHZ	**Black Hill Sta**	**0.85**	**183**	P	Pn	08 47 25.2	+0.6
URZ	**Urewera**	**0.87**	**64**	P	Pn	08 47 23.3	-1.3
PKVZ	**Pokaka**	**0.88**	**223**	P	Pn	08 47 24.7	-0.2
MTVZ	**Mangateitei**	**0.90**	**214**	P	Pn	08 47 25.1	+0.1
MCHZ	**McNeill Hill**	**0.92**	**151**	P	Pn	08 47 26.9	+1.8
ARHZ	**Aropaoanui**	**0.92**	**133**	P	Pn	08 47 26.7	+1.5
SNGZ	**Shannon Statio**	**0.96**	**99**	P	Pn	08 47 26.1	+0.6
HIZ	**Hauiti**	**1.00**	**277**	P	Pn	08 47 23.9	-2.0
KRHZ	**Kereru**	**1.02**	**169**	P	Pn	08 47 27.1	+1.0
TOZ	**Tahuroa Road**	**1.03**	**332**	P	Pn	08 47 23.2	-3.0
MWZ	**Matawai**	**1.15**	**75**	P	Pn	08 47 26.3	-1.1
PNHZ	**Pukenui**	**1.27**	**177**	P	Pn	08 47 29.1	+0.4
RIGZ	**Rimuhau**	**1.29**	**93**	P	Pn	08 47 28.7	-0.1
KAHZ	**Kahuranaki**	**1.29**	**153**	P	Pn	08 47 30.1	+1.1
TKGZ	**Te Karaka**	**1.37**	**82**	P	Pn	08 47 29.5	-0.2
RUGZ	**Raukumara Rang**	**1.40**	**62**	P	Pn	08 47 27.4	-2.8
TSZ	**Takapari Road**	**1.42**	**185**	P	Pn	08 47 30.4	+0.1
WPHZ	**Waipukurau**	**1.44**	**170**	P	Pn	08 47 31.0	+0.4
MHGZ	**Mahia Peninsul**	**1.48**	**111**	P	Pn	08 47 31.4	+0.4
PXZ	**Pawanui**	**1.50**	**158**	P	Pn	08 47 31.9	+0.7
TWGZ	**Tauwhareparae**	**1.53**	**73**	P	Pn	08 47 30.9	-0.8
HAZ	**Te Kaha**	**1.58**	**57**	P	Pn	08 47 29.1	-3.0
CNGZ	**Carnagh Statio**	**1.64**	**85**	P	Pn	08 47 32.4	-0.5
DVHZ	**Dannevirke**	**1.66**	**179**	P	Pn	08 47 32.7	-0.3
PRHZ	**Porangahau**	**1.67**	**166**	P	Pn	08 47 33.5	+0.3
PKGZ	**Pakihiroa**	**1.71**	**65**	P	Pn	08 47 32.7	-1.1
POWZ	**Post Office Ro**	**1.77**	**189**	P	Pn	08 47 33.6	-0.7
PUZ	**Puketiti**	**1.77**	**72**	P	Pn	08 47 33.1	-1.4
ANWZ	**Angora Road**	**1.84**	**172**	P	Pn	08 47 35.1	0.0
PRWZ	**Pori Road**	**1.91**	**183**	P	Pn	08 47 35.5	-0.6
WMGZ	**Waiomatatini S**	**1.98**	**66**	P	Pn	08 47 36.1	-0.8
BFZ	**Birch Farm**	**2.04**	**177**	P	Pn	08 47 36.8	-0.8
MRZ	**Mangatainoka R**	**2.06**	**192**	P	Pn	08 47 36.5	-1.4
TIWZ	**Tintock**	**2.14**	**185**	P	Pn	08 47 37.8	-1.1
OGWZ	**Otaki Gorge**	**2.29**	**198**	P	Pn	08 47 39.0	-1.8
HOWZ	**Holdsworth Sta**	**2.30**	**191**	P	Pn	08 47 39.0	-1.9
KIW	**Kapiti Island**	**2.41**	**202**	P	Pn	08 47 39.8	-2.5
TMWZ	**Te Maipa**	**2.47**	**184**	P	Pn	08 47 41.1	-2.0
MTW	**Mount Morrison**	**2.56**	**191**	P	Pn	08 47 41.7	-2.5
CAW	**Cannon Point**	**2.59**	**198**	P	Pn	08 47 42.2	-2.5
TRWZ	**Traveller**	**2.77**	**187**	P	Pn	08 47 44.6	-2.3
PAWZ	**Paruwai Farm**	**2.79**	**191**	P	Pn	08 47 44.4	-2.8
MSWZ	**Moikau Station**	**2.85**	**193**	P	Pn	08 47 45.0	-2.9
PLWZ	**Palliser**	**3.00**	**193**	P	Pn	08 47 46.7	-3.3

DJA ***30*** *08:54:09.3±0.7, 0°S±6°×12°3E±°, h136km±8km, M3.9/6, MLv3.9/6*

IDC ***30*** *08:54:10.6±15.0, 0°.03N×123°.33E, h170km±162km, mb3.2/7, mb1 3.4/8, mb1mx3.2/55, mbtmp3.7/8, Error ellipse: s-maj=95.5km s-min=19.1km az=55.0*

ISC 30 08:54:08.8±0.8**, 0°.09S**±0°.08×**123°.24E**±0°.07**, h150km, n16, σ1s.30**/17**, mb3.5**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.76**	**342**	P	**Pn**	**08 54 32.3**	**+0.6**
GTOI				S	**Sn**	**08 54 50.6**	**+1.4**
KMSI	**Cibinong**	**0.99**	**48**	P	**Pn**	**08 54 34.3**	**+0.8**
LUWI	**Luwuk**	**1.05**	**207**	P	**Pn**	**08 54 33.7**	**-0.3**
MRSI	**Marisa**	**1.42**	**294**	P	**Pn**	**08 54 36.1**	**-1.4**
MRSI				S	**Sn**	**08 54 56.8**	**-2.7**
APSI	**Ampana**	**1.79**	**243**	P	**Pn**	**08 54 42.2**	**+0.7**
SANI	**Sanana**	**3.36**	**125**	P	**Pn**	**08 54 59.1**	**-1.7**
MPSI	**Mapaga**	**3.37**	**277**	P	**Pn**	**08 55 01.9**	**+1.0**
TTSI	**Tana Toraja**	**4.51**	**229**	P	Pn	08 55 34.8	+19
FITZ	**Fitzroy Crossi**	**18.05**	**173**	P	**P**	**08 58 09.7**	**+1.0**
	baz=1.4,slow=8.8						
WRA	**Warramunga Arr**	**22.52**	**152**	P	**P**	**08 58 56.4**	**+0.2**
	2.4nm,0.5s,baz=332,slow=10,SNR=53						
ASAR	**Alice Springs**	**25.62**	**157**	P	**P**	**08 59 25.5**	**+1.0**
	0.6nm,0.8s,baz=349,slow=13,SNR=10						
CMAR	**Chiang Mai Arr**	**30.16**	**309**	P	**P**	**09 00 05.5**	**+0.6**
	0.5nm,0.3s,baz=131,slow=6.2,SNR=4.1						
STKA	**Stephens Creek**	**36.06**	**153**	P	**P**	**09 00 57.1**	**+1.1**
	0.7nm,0.5s,baz=335,slow=6.0,SNR=4.8						
SONM	**Songino Array**	**49.94**	**345**	P	**P**	**09 02 46.8**	**-0.6**
	0.8nm,0.7s,baz=158,slow=8.8,SNR=5.6						
MKAR	**Makanchi Array**	**58.82**	**328**	P	**P**	**09 03 50.4**	**-1.1**
	0.2nm,0.3s,baz=123,slow=8.6,SNR=7.0						
KURBB	**Kurchatov Arra**	**63.17**	**330**	P	**P**	**09 04 19.3**	**-1.4**
	0.2nm,0.4s,baz=118,slow=5.9,SNR=1.8						

IDC ***30*** *09:00:20.3±1.8, 24°.28S×179°.94W, h493km±15km, mb3.5/13, mb1 3.7/14, mb1mx3.3/39, mbtmp4.3/14, Error ellipse: s-maj=22.9km s-min=16.3km az=135.0*

NEIC ***30*** *09:00:21.7±1.3, 24°.4S±0°.2×179°.9W±0°.1, h514km±9km, mb4.5/24, Error ellipse: s-maj=24.4km s-min=14.0km az=201.0*

ISC 30 09:00:21.2±0.7**, 24°.38S**±0°.10×**179°.9W**±0°.1**, h505km, n48, σ0s.94**/49**, mb4.3**/23**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.87**	**344**	P	**P**	**09 02 05.9**	**-0.6**
	3.9nm,0.3s,baz=155,slow=12,SNR=4.8						
DZM	**Mont Dzumac**	**12.73**	**278**	P	**P**	**09 03 09.0**	**+1.4**
	0.7nm,0.3s,baz=86,slow=16,SNR=2.3						
DZM	**Mont Dzumac**	**12.73**	**278**	P	**P**	**09 03 08.4**	**+0.8**
THZ	**Tophouse**	**18.33**	**197**	P	**P**	**09 04 03.1**	**-1.1**
THZ				IAmb	IAmb	09 04 03.9	
	comp=Z,28nm,1.4s						
ARMA	**Armidale**	**25.91**	**250**	P	**P**	**09 05 11.7**	**-0.9**
ARMA				IAmb	IAmb	09 05 30.2	
	comp=Z,22nm,1.3s						
EIDS	**Eidsvold**	**26.29**	**262**	P	**P**	**09 05 15.6**	**-0.3**
EIDS				IAmb	IAmb	09 05 25.4	
	comp=Z,22nm,1.4s						
TBI	**Tubuai**	**27.87**	**94**	*e*LR	LR	09 05 32.8	
	comp=Z,81nm,25.0s						
CTAO	**Charters Tower**	**31.54**	**271**	P	**P**	**09 06 02.2**	**+0.5**
TOO	**Toolangi**	**32.24**	**238**	P	**P**	**09 06 08.3**	**+0.9**
TOO				IAmb	IAmb	09 06 23.4	
	comp=Z,9.4nm,1.1s						
TAU	**Tasmania Unive**	**32.65**	**227**	P	**P**	**09 06 11.5**	**+0.8**
STKA	**Stephens Creek**	**34.60**	**249**	P	**P**	**09 06 27.8**	**+0.4**
	comp=Z,5.1nm,0.5s,baz=92,slow=10,SNR=34						
STKA	**Stephens Creek**	**34.60**	**249**	P	**P**	**09 06 27.9**	**+0.4**
PMG	**Port Moresby**	**34.70**	**290**	P	**P**	**09 06 28.1**	**-0.4**
	comp=Z,14nm,0.7s,baz=157,slow=10,SNR=3.6						
PMG	**Port Moresby**	**34.70**	**290**	P	**P**	**09 06 28.7**	**+0.2**
PMG				IAmb	IAmb	09 06 29.1	
	comp=Z,15nm,0.8s						
COEN	**Coen**	**36.25**	**280**	P	**P**	**09 06 41.8**	**+0.5**
COEN				IAmb	IAmb	09 06 56.2	
	comp=Z,13nm,1.2s						
BBOO	**Buckleboo**	**39.31**	**247**	P	**P**	**09 07 05.5**	**-0.8**
AS31	**Alice Springs**	**42.01**	**261**	P	**P**	**09 07 27.6**	**-0.4**
ASAR	**Alice Springs**	**42.01**	**261**	P	**P**	**09 07 27.7**	**-0.3**
	comp=Z,3.7nm,0.5s,baz=95,slow=6.7,SNR=66						
ASAR				ScP	**ScP**	**09 12 15.5**	**+1.8**
	comp=Z,0.4nm,0.9s,baz=121,slow=3.4,SNR=4.1						
ASAR	**Alice Springs**	**42.01**	**261**	P	**P**	**09 07 27.4**	**-0.6**
WR0	**Warramunga Arr**	**42.24**	**267**	P	**P**	**09 07 29.2**	**-0.6**
WR0				IAmb	IAmb	09 07 29.7	
	comp=Z,12nm,1.2s						
WB2	**Warramunga Arr**	**42.42**	**267**	P	**P**	**09 07 30.4**	**-0.9**
WB2				IAmb	IAmb	09 07 31.2	
	comp=Z,23nm,1.1s						
WB0	**Warramunga Arr**	**42.43**	**267**	P	**P**	**09 07 30.4**	**-0.9**
WB0				IAmb	IAmb	09 07 31.2	
	comp=Z,12nm,0.7s						
WRA	**Warramunga Arr**	**42.43**	**267**	P	**P**	**09 07 30.6**	**-0.7**
	comp=Z,9.9nm,0.5s,baz=101,slow=8.3,SNR=77						

WRA				ScP	ScP	09 12 18.6	+3.2
	comp=Z,1.8nm,0.9s,baz=100,slow=4.3,SNR=7.0						
WRA	Warramunga Arr	42.43	267	P	P	09 07 30.4	-0.9
FORT	Forrest	46.20	250	P	P	09 07 59.1	-1.2
MTN	Manton Dam	47.55	275	P	P	09 08 09.8	-0.9
MTN				IAmb	IAmb	09 08 23.6	
	comp=Z,22nm,1.2s						
KNRA	Kununurra	48.74	270	P	P	09 08 19.4	-0.2
FITZ	Fitzroy Crossi	50.85	266	P	P	09 08 35.1	0.0
	comp=Z,9.7nm,0.6s,baz=126,slow=7.8,SNR=17						
PSA00	Pilbara Seismi	55.13	260	P	P	09 09 04.3	-1.4
MORW	Morawa	56.76	250	P	P	09 09 16.5	-0.4
MORW				IAmb	IAmb	09 09 45.1	
	comp=Z,32nm,1.4s						
CASY	Casey	59.71	206	P	P	09 09 35.4	-0.7
QSPA	South Pole Qui	65.70	180	P	P	09 10 15.6	+0.5
	comp=Z,0.9nm,0.8s,baz=326,slow=1.2,SNR=6.5						
QSPA	South Pole Qui	65.70	180	P	P	09 10 15.9	+0.8
MJAR	Matsushiro Arr	72.32	326	P	P	09 10 53.4	-1.9
	comp=Z,1.5nm,0.7s,baz=155,slow=6.3,SNR=4.6						
JWT	Wachi	72.87	323	P	P	09 10 58.0	-0.4
SMAI	San Martin Ant	75.64	159	P	P	09 11 13.4	-0.2
SMAI				IAmb	IAmb	09 11 30.7	
	comp=Z,24nm,1.5s						
MAW	Mawson	77.32	200	P	P	09 11 23.2	+0.4
KSRS	Korea Array	78.65	320	P	P	09 11 30.0	-0.4
	comp=Z,1.2nm,0.6s,baz=131,slow=5.1,SNR=4.3						
USRK	Ussuriysk Ar.	81.20	327	P	P	09 11 43.3	-0.4
	comp=Z,0.9nm,0.4s,baz=135,slow=5.7,SNR=2.3						
NVAR	Mina Array Bea	85.06	44	P	P	09 12 03.3	-0.1
	comp=Z,0.3nm,0.7s,baz=221,slow=6.8,SNR=2.0						
CMAR	Chiang Mai Arr	89.74	290	P	P	09 12 26.9	+1.2
	comp=Z,0.6nm,0.3s,baz=108,slow=3.1,SNR=5.5						
ILAR	Eielson Array	92.48	14	P	P	09 12 38.6	+1.4
	comp=Z,0.8nm,1.1s,baz=200,slow=6.7,SNR=2.4						
PDAR	Pinedale Array	93.00	44	P	P	09 12 40.4	-0.1
	comp=Z,0.3nm,0.7s,baz=139,slow=3.2,SNR=3.6						
FINES	FINESS Array B	138.92	341	PKP	PKPdf	09 18 49.7	+0.5
	comp=Z,4.2nm,1.0s,baz=66,slow=4.8,SNR=4.2						
FINES				SKPbc	SKPbc	09 21 36.1	-0.2
	comp=Z,6.2nm,1.0s,baz=62,slow=4.5,SNR=5.2						
HFS	Hagfors	143.03	349	PKhKP	PKPpre	09 18 52.6	
	comp=Z,2.1nm,0.4s,baz=46,slow=4.2,SNR=13						
AKASG	Malin Array Be	145.40	327	PKPbc	PKPdf	09 19 00.2	-0.7
	comp=Z,0.8nm,0.3s,baz=46,slow=4.4,SNR=6.4						
BRTR	Keskin Array B	147.91	307	PKPbc	PKPbc	09 19 08.2	-1.3
	comp=Z,1.1nm,0.7s,baz=123,slow=3.0,SNR=2.8						
MMAI	Mount Meron Ar	147.95	294	PKPbc	PKPbc	09 19 09.5	-0.2
	comp=Z,2.9nm,0.4s,baz=76,slow=7.2,SNR=5.7						

IDC 30 09:07:55.5±2.8**, 25°.51N**×**142°.35E, h0^{km}, mb3.7**/6**, mb1 3.8**/6**, mb1mx3.3**/62**, mbtmp3.7**/6**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.6**/58**, Error ellipse: s-maj=123.8km s-min=24.3km az=77.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	40.72	269	LR	LR	09 32 16.0	
	comp=Z,16nm,18.7s,baz=25,slow=36						
WRA	Warramunga Arr	45.85	191	P	P	09 16 20.3	+0.7
	0.6nm,0.7s,baz=12,slow=8.7,SNR=5.1						
ASAR	Alice Springs	49.57	190	P	P	09 16 47.3	-1.1
	0.9nm,1.1s,baz=19,slow=5.9,SNR=2.6						
MKAR	Makanchi Array	51.60	311	P	P	09 17 03.8	+0.1
	0.3nm,0.6s,baz=105,slow=9.1,SNR=2.4						
KURBB	Kurchatov Arra	54.26	315	P	P	09 17 22.8	-0.3
	0.8nm,0.6s,baz=92,slow=7.7,SNR=8.1						
BVAR	Borovoye Array	59.31	318	P	P	09 17 59.0	0.0
	0.3nm,0.4s,baz=112,slow=9.8,SNR=3.6						
DLBC	Dease Lake	67.42	35	LR	LR	09 48 36.2	
	comp=Z,61nm,18.6s,baz=287,slow=36						
FINES	FINESS Array B	79.43	334	P	P	09 20 03.5	+0.1
	2.3nm,0.8s,baz=67,slow=3.6,SNR=8.5						

HEL ***30*** *09:09:43.5±0.5, 60°.86N×28°.90E, h0^{km}, ML2.5, Explosion*
NAO ***30*** *09:09:44.8±1.8, 60°.72N×28°.76E, ML2.6*
IDC ***30*** *09:09:45.8±1.7, 60°.79N×28°.67E, h0^{km}, mb1 3.4/3, mb1mx2.8/55, mbtmp3.4/3, ML2.6/3, Error ellipse: s-maj=14.9km s-min=11.6km az=166.0*
BER ***30*** *09:09:45.0±2.9, 60°.78N×28°.81E, h0^{km}, ML2.6(NAO), Suspected explosion*
ISC 30 09:09:46.1±1.2**, 60°.95N**±0°.04×**28°.43E**±0°.06**, h0^{km}, n31, σ2^{s}05**/48**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	Virojoki	0.59	227	PG	Pg	09 09 56.9	-0.6
	baz=60						
VJF				SG	Sg	09 10 07.3	+2.2
FIA0	FINESS Array S	1.24	295	Pg	Pg	09 10 10.0	+0.1
	baz=121,slow=16						
FIA0				Lg	Lg	09 10 31.8	
	baz=117,slow=37						
FIA0				Rg	Rg	09 10 40.0	
	baz=120,slow=37						
FIA0	FINESS Array S	1.24	295	Pg	Pg	09 10 10.0	+0.1
	baz=121,slow=16						
FIA0				Sg	Sn	09 10 31.8	+3.6
	baz=117,slow=37						
FIA0				Rg	Rg	09 10 40.0	
	baz=120,slow=37						
FIA0	FINESS Array S	1.24	295	PG	Pg	09 10 10.0	+0.1
FINES	FINESS Array B	1.24	295	Pg	Pg	09 10 09.9	+0.1
	4.9nm,0.3s,baz=116,slow=17,SNR=157						
FINES				Lg	Lg	09 10 30.6	
	12nm,0.3s,baz=115,slow=32,SNR=16						
FINES				Rg	Rg	09 10 38.0	
	121nm,0.7s,baz=113,slow=29,SNR=26						
PVF	Pernaja	1.32	253	PG	Pg	09 10 10.3	-1.1
	baz=73						
PVF				MSG		09 10 29.4	
	comp=Z,83nm,0.2s						
PVF				SN	Sn	09 10 32.3	+2.2
KAF	Kangasniemi	1.55	320	PG	Pg	09 10 15.8	0.0
KAF				SN	Sn	09 10 40.9	+5.2
NUR	Nurmijrvi	1.91	258	PG	Pn	09 10 21.4	+1.5
NUR				SG	Sg	09 10 49.3	+1.9
ARBE	Arbavere	1.95	220	PG	Pn	09 10 20.3	-0.1
ARBE				SG	Sn	09 10 47.5	+2.0
SUF	Sumiainen	2.08	330	PG	Pb	09 10 24.0	-0.7
	baz=139						
SUF				MSG		09 10 51.1	
	comp=Z,22nm,0.2s						
SUF				SG	Sg	09 10 54.6	+1.7
KEF	Keuruu	2.10	307	PG	Pb	09 10 23.9	-1.1
KEF				MSG		09 10 52.7	
	comp=Z,16nm,0.2s						
KEF				SG	Sg	09 10 57.1	+3.7
MEF	Metsahovi	2.12	252	PB	Pn	09 10 23.6	+0.8
MEF				MSG		09 10 51.9	
	comp=Z,29nm,0.2s						
MEF				SG	Sb	09 10 53.9	+1.7
JOF	Joensuu	2.40	33	PG	Pn	09 10 24.3	-2.4
JOF				SG	Sn	09 10 55.0	-1.8
VSU	Vasula	2.64	200	SG	Sn	09 11 05.4	+2.9
RAF	Rauma	3.25	274	PN	Pn	09 10 40.1	+1.8
	baz=86						
RAF				SB	Sb	09 11 23.6	-1.0
VAF	Ylistaro	3.43	310	PB	Pb	09 10 45.2	-2.6
OUF	Merijarvi	3.83	335	PB	Pb	09 10 51.7	-2.9
AAL	Aland	4.23	263	SN	Sn	09 11 44.6	+2.7
OUL	Oulu	4.31	346	PG	Pb	09 11 03.3	+0.6
OUL				SG	Sg	09 12 00.9	-3.5
I43RU	DUBNA INFRASON	6.23	129	*i*		09 44 19.7	
	baz=318,slow=311,SNR=7.9						
HFS	Hagfors	7.31	270	Pn	Pn	09 11 34.0	0.0
	comp=Z,0.2nm,0.3s,baz=84,slow=16,SNR=12						
HFS				Sn	Sn	09 12 56.4	-1.3
	comp=Z,0.3nm,0.3s,baz=80,slow=25,SNR=1.8						
HFS				Lg	Lg	09 13 37.5	
	comp=Z,0.7nm,0.3s,baz=82,slow=30,SNR=5.0						
HFS	Hagfors	7.31	270	Pn	Pn	09 11 34.6	+0.5
	baz=77,slow=14						
HFS				Sn	Sn	09 12 57.7	0.0
	baz=81,slow=28						
HFS				Lg	Lg	09 13 36.7	
	baz=90,slow=37						
HFS	Hagfors	7.31	270	Pn	Pn	09 11 34.6	+0.5
	baz=77,slow=14						
HFS				Sn	Sn	09 12 57.7	0.0
	baz=81,slow=28						
HFS				Sg	Sg	09 13 36.7	-4.0
	baz=90,slow=37						
NRA0	NORESS Array S	8.25	276	Pn	Pn	09 11 47.6	+0.7
	baz=78,slow=14						
NRA0				Sn	Sn	09 13 21.2	+0.5
	baz=71,slow=22						
NRA0	NORESS Array S	8.25	276	Pn	Pn	09 11 47.6	+0.7
	baz=78,slow=14						
NB2	NORSAR Subarra	8.37	278	Pn	Pn	09 11 48.6	+0.1
	baz=84,slow=14						
NB2	NORSAR Subarra	8.37	278	Pn	Pn	09 11 48.6	+0.1
	baz=84,slow=14						
NOA	NORSAR Array B	8.37	278	Pn	Pn	09 11 48.7	+0.1
	comp=Z,0.0nm,0.3s,baz=88,slow=12,SNR=12						
NOA				Sn	Sn	09 13 18.1	-5.5
	comp=Z,0.0nm,0.3s,baz=50,slow=22,SNR=1.2						
NOA				Lg	Lg	09 14 13.5	
	comp=Z,0.1nm,0.3s,baz=118,slow=6.5,SNR=4.1						
ARA0	ARCESS Array S	8.71	353	Pn	Pn	09 11 52.7	-0.5
	baz=164,slow=14						
ARA0	ARCESS Array S	8.71	353	Pn	Pn	09 11 52.7	-0.5
	baz=164,slow=14						
ARCES	ARCESS Array B	8.71	353	Pn	Pn	09 11 52.8	-0.4
	baz=164,slow=12,SNR=9.6						

TAP ***30*** *09:26:22.9, 24°.13N×122°.25E, h20^{km}, ML2.7, D*
JMA ***30*** *09:26:23.2±0.1, 24°.03N×122°.25E, h22^{km}±4^{km}, M1.8*
ISC 30 09:26:21.4±1.1**, 24°.05N**±0°.02×**122°.26E**±0°.02**, h15^{km}**±9^{km}**, n69, σ0^{s}73**/123**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	Wuta	0.58	312	*i* P	Pb	09 26 33.4	+0.1
	baz=316						
EWUT				S	Sb	09 26 41.2	-0.2
	baz=316						
ETL	Fush Village	0.59	280	P	Pn	09 26 35.2	0.0
	baz=257						
ETL				S	Sn	09 26 44.1	-0.5
	baz=257						
ENA	Nanau	0.60	309	*i* P	Pb	09 26 33.7	+0.1
	baz=313						
ENA				*e*S	Sb	09 26 42.2	+0.3
	baz=313						
TWD	Chiawan	0.60	273	*i* P	Pn	09 26 35.2	-0.3
	baz=250						
TWD				*e*S	Sn	09 26 43.9	-1.0
	baz=250						
NACB	Ninganchiao	0.61	281	P	Pn	09 26 34.9	-0.7
	baz=257						
NACB				S	Sn	09 26 44.7	-0.5
	baz=257						
TWC	Suao	0.67	326	P	Pb	09 26 34.4	-0.3
	baz=323						
TWC				S	Sb	09 26 42.8	-1.0
	baz=323						
ETM	Tongmen	0.70	263	P	Pb	09 26 36.1	+0.7
	baz=245						
ETM				S	Sn	09 26 46.5	-0.9
	baz=245						
ETLH	Xiulin Townshi	0.72	282	P	Pn	09 26 36.4	-0.7
	baz=262						
ETLH				S	Sn	09 26 47.1	-0.9
	baz=262						
NDS	Dongshan	0.76	320	*i* P	Pb	09 26 36.3	0.0
	baz=322						
NDS				S	Sb	09 26 46.4	-0.1
	baz=322						
ESL	Shilin	0.79	253	*i* P	Pn	09 26 37.7	-0.3
	baz=236						
ESL				*e*S	Sn	09 26 49.1	-0.4
	baz=236						
YOJ	Yonaguni jima	0.80	59	P	Pn	09 26 38.5	+0.4
	baz=63						
YOJ				S	Sn	09 26 50.4	+0.6
	baz=63						
YOJ	Yonaguni jima	0.80	59	P	Pn	09 26 38.2	+0.1
YOJ				*e*S	Sn	09 26 50.1	+0.3
EGS		0.84	340	P	Pn	09 26 38.2	-0.5
	baz=338						
EGS				S	Sn	09 26 49.5	-1.3
	baz=338						
EGFH	Guangfu	0.85	243	P	Pb	09 26 38.1	+0.2
	baz=227						
EGFH				S	Sn	09 26 51.2	+0.2
	baz=227						
TWE	Neicheng	0.85	321	*i* P	Pn	09 26 38.6	-0.2
	baz=322						
TWE				*e*S	Sb	09 26 49.4	+0.2
	baz=322						
ENTT	Nioudou	0.86	313	*i* P	Pn	09 26 38.7	-0.3
	baz=317						
ENTT				S	Sb	09 26 49.8	+0.5
	baz=317						
NDT	Datong Townshi	0.87	309	*i* P	Pn	09 26 39.1	0.0
	baz=312						
NDT				S	Sb	09 26 49.5	-0.2
	baz=312						
NNSB	Datong	0.88	295	P	Pn	09 26 39.2	-0.1
	baz=291						
NNSB				S	Sn	09 26 51.4	-0.6
	baz=291						
NTC	Toucheng	0.89	334	*i* P	Pn	09 26 38.9	-0.4
	baz=331						
NTC				S	Sn	09 26 51.4	-0.5
	baz=331						
NNS	Nan Shan	0.89	296	*i* P	Pn	09 26 39.8	+0.3
	baz=292						
NNS				*i* S	Sn	09 26 51.7	-0.5
	baz=292						
FUSS	Fushou	0.94	282	*i* P	Pn	09 26 40.8	+0.4
	baz=278						
FUSS				S	Sn	09 26 54.5	+0.8
	baz=278						
HGSD	Ruisui	0.94	234	P	Pn	09 26 41.2	+1.1
	baz=232						
HGSD				S	Sn	09 26 53.7	+0.3
	baz=232						
TWB1	Santiao Chiao	0.98	346	P	Pn	09 26 41.1	+0.4
	baz=344						
TWB1				*e*S	Sn	09 26 54.1	-0.2
	baz=344						
CHGB	Renai	0.99	271	P	Pn	09 26 41.1	+0.2
	baz=253						
CHGB				S	Sn	09 26 54.8	+0.1
	baz=253						
OWD	Renai	0.99	264	*i* P	Pn	09 26 41.1	+0.2
	baz=261						
OWD				S	Sn	09 26 55.7	+0.9
	baz=261						
TIPB	Shuangxi	0.99	337	*i* P	Pn	09 26 40.6	-0.2
	baz=335						
TIPB				S	Sb	09 26 52.6	-0.7
	baz=335						
NWLT	Wulai	0.99	317	*i* P	Pn	09 26 41.1	+0.3
	baz=313						
NWLT				S	Sn	09 26 54.0	-0.7
	baz=313						
TWT	Tachien	1.01	282	P	Pn	09 26 42.0	+0.8
	baz=264						
YHNB	Yeheng	1.01	308	P	Pn	09 26 41.4	+0.3
	baz=304						
YHNB				S	Sb	09 26 54.1	+0.3
	baz=304						
EHY	Hungye	1.01	238	*i* P	Pn	09 26 41.3	+0.2
	baz=225						
EHY				S	Sn	09 26 56.1	+1.0
	baz=225						
TDCB	Techi	1.02	281	P	Pn	09 26 41.7	+0.4
	baz=264						
TDCB				S	Sn	09 26 55.9	+0.5
	baz=264						
NSK	Sanguang	1.03	307	*i* P	Pn	09 26 41.5	+0.2
	baz=304						
NSK				*i* S	Sn	09 26 54.9	-0.6
	baz=304						
VWDT	VWDT	1.06	254	P	Pn	09 26 42.3	+0.6
	baz=238						
VWDT				S	Sn	09 26 57.6	+1.4
	baz=238						
YULB	Yu-li	1.10	233	P	Pn	09 26 42.9	+0.6
	baz=249						
YULB				S	Sn	09 26 57.6	+0.5
	baz=249						
NWF	Wu-fen Shan	1.10	337	*i* P	Pn	09 26 42.0	-0.4
	baz=335						
NWF				*i* S	Sn	09 26 56.7	-0.6
	baz=335						
TWA	Mucha	1.11	327	*i* P	Pn	09 26 44.0	+1.6
	baz=335						
TWA				*e*S	Sn	09 26 57.8	+0.3
	baz=335						
EYUL	Yuli	1.11	231	S	Sn	09 26 59.0	+1.5
	baz=247						
NHDH	Xindian Distri	1.12	324	P	Pn	09 26 44.4	+1.8
	baz=335						
NHDH				*i* S	Sn	09 26 58.0	+0.2
	baz=335						
WHP	Taichung City	1.22	281	*i* P	Pg	09 26 45.4	+0.5
	baz=266						
SSLB	Suanglung	1.22	258	P	Pg	09 26 44.4	-0.5
	baz=243						
FULB	Fuli	1.23	226	*i* P	Pn	09 26 44.2	+0.2
	baz=211						
FULB				S	Sb	09 27 00.6	+0.7
	baz=211						
WCS	Beigang Elemen	1.23	270	*i* P	Pg	09 26 44.8	-0.3
	baz=258						
WCS				*e*S	Sn	09 27 02.5	+2.1
	baz=258						
SMLT	Sun Moon Lake	1.25	262	*i* P	Pg	09 26 45.1	-0.4
	baz=248						
CHKT	Chengkung	1.25	221	S	Sb	09 26 59.4	-1.3
	baz=208						
YM01	YM01	1.25	330	*e*P	Pg	09 26 46.0	+0.4
	baz=344						
LIOB	Emei	1.27	298	*i* P	Pg	09 26 46.4	+0.4
	baz=295						
LIOB				S	Sn	09 27 03.2	+1.6
	baz=295						
NSTT	Nanjuang	1.28	297	*i* P	Pg	09 26 46.3	+0.2
	baz=294						
NSTT				S	Sg	09 27 04.2	+1.4
	baz=294						
TYC	Yuchr	1.29	264	*i* P	Pg	09 26 45.8	-0.5
	baz=261						
TYC				*e*S	Sg	09 27 03.2	+0.2
	baz=261						
ANP	Anpu	1.31	329	P	Pg	09 26 46.1	-0.6
	baz=328						
ANP				S	Sb	09 27 00.7	-1.8
	baz=328						
IRIF	Iriomote-Funau	1.38	78	P	Pg	09 26 48.2	+0.3
EDH	Donghe	1.39	219	*i* P	Pn	09 26 46.0	-0.2
	baz=208						
EDH				*i* S	Sn	09 27 03.2	-1.0
	baz=208						
ELDTW	Lidau	1.43	233	*i* P	Pn	09 26 47.5	+0.6
	baz=219						
ELDTW				S	Sn	09 27 05.7	+0.3
	baz=219						
ALS	Alishan	1.44	248	*i* P	Pg	09 26 48.5	-0.6
	baz=246						
CHN5	Tsauling	1.51	253	*i* P	Pg	09 26 49.9	-0.7
	baz=240						
CHN5				S	Sg	09 27 10.3	0.0
	baz=240						
LONT	Longtian	1.54	222	*e*S	Sn	09 27 08.9	+0.9
	baz=223						
LDUT	Ludao	1.55	208	*e*S	Sn	09 27 06.4	-2.0
	baz=208						
JKRS	Kuro-shima	1.61	83	P	Pg	09 26 52.2	-0.2
JKRS				*e*S	Sb	09 27 11.8	+0.8
WDLH	Douliu	1.61	257	*e*S	Sg	09 27 14.6	+1.2
	baz=242						
TPUB	Ta-pu	1.67	244	P	Pb	09 26 51.8	-0.1
	baz=243						
TPUB				S	Sg	09 27 15.0	-0.2
	baz=243						
CHN4	Tsaushan	1.68	246	*i* P	Pg	09 26 53.5	-0.1
	baz=234						
CHN4				*i* S	Sg	09 27 15.7	+0.3
	baz=234						
WRL	Guolierlin Hig	1.73	265	*e*S	Sg	09 27 15.9	-1.0
	baz=264						
JIJ	Ishigaki jima	1.75	79	P	Pb	09 26 52.9	-0.3
JIJ				*e*S	Sb	09 27 15.3	+0.3
TWK	Hsinying	1.80	245	P	Pn	09 26 52.8	+0.8
	baz=244						
TWK				S	Sg	09 27 18.9	-0.5
	baz=244						
CHN1	Nanshi	1.81	242	*i* P	Pg	09 26 55.2	-0.9
	baz=241						
CHN1				*i* S	Sg	09 27 18.9	-0.7
	baz=241						
SLGT	Liugui	1.81	235	*i* P	Pb	09 26 55.0	+0.7
	baz=224						
SLGT				*i* S	Sb	09 27 17.4	+0.5
	baz=224						
TSMG	Majia	2.00	228	P	Pb	09 26 56.9	-0.6
	baz=221						
TSMG				S	Sb	09 27 21.9	-0.3
	baz=221						
MASBT	Mashibuluo	2.07	226	P	Pb	09 26 58.3	-0.4
	baz=220						
MASBT				*e*S	Sb	09 27 23.9	-0.3
	baz=220						
EAST	Anshuo	2.11	218	*e*S	Sn	09 27 23.2	+1.1
	baz=219						
LYUB	Lan-yu	2.13	197	*e*S	Sn	09 27 20.8	-1.9
	baz=208						

IDC 30 09:27:35.3±863.0**, 56°.27N**×**51°.14E, h0^{km}, Error ellipse: s-maj=391.2km s-min=142.5km az=131.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	7.17	142	*i*		10 14 50.0	
	baz=327,slow=322,SNR=2.0						
I46RU	ZALESOVO INFRA	19.29	83	*i*		11 27 30.0	
	baz=292,slow=322,SNR=1.1						
I34MN	SONGINO INFRAS	34.18	80	*i*		12 57 40.0	
	baz=301,slow=321,SNR=0.5						

EAF ***30*** *09:31:32.6±4.0, 25°.97S×29°.15E, h0^{km}±24^{km}, MD4.2*
BUL ***30*** *09:31:32.9±3.5, 25°.97S×29°.12E, h0^{km}±20^{km}, MD4.6*
IDC ***30*** *09:31:34.1±8.3, 26°.00S×28°.68E, h0^{km}, mb1 2.6/1, mb1mx2.6/41, mbtmp2.6/1, ML2.0/1, Error ellipse: s-maj=90.4km s-min=56.5km az=138.0*
ISC 30 09:31:31.3±1.0**, 26°.04S**±0°.05×**29°.25E**±0°.04**, h3^{km}, n15, σ1^{s}92**/24**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	Changalane	2.66	96	*i* P	Pb	09 32 19.5	0.0
CNG	Changalane	2.66	96	*i* P	Pb	09 32 19.5	0.0
MOPA	Mopani	3.18	38	*i* P	Pn	09 32 23.0	+0.7
MOPA				*i* Sg	Sb	09 33 08.9	+1.3
MOPA	Mopani	3.18	38	*i* P	Pn	09 32 23.0	+0.7
MOPA				*i* Sg	Sb	09 33 08.9	+1.3
LBTB	Lobatse	3.45	286	*i* P	Pn	09 32 27.8	+1.7
LBTB				*i* Sg	Sb	09 33 17.1	+1.5
LBTB	Lobatse	3.45	286	*i* P	Pn	09 32 27.8	+1.7
LBTB				*i* Sg	Sb	09 33 17.1	+1.5
MSNA	Messina	3.74	11	*i* P	Pn	09 32 31.9	+1.8
MSNA				*i* Sg	Sb	09 33 25.1	+1.2
MSNA	Messina	3.74	11	*i* P	Pn	09 32 31.9	+1.8
MSNA				*i* Sg	Sb	09 33 25.1	+1.2
BOSA	Boshof	4.38	233	Pn	Pn	09 32 36.1	-2.7
	0.1nm,0.3s,baz=51,slow=14,SNR=1.8						
BOSA				Pg	Pb	09 32 48.2	-0.7
	0.2nm,0.3s,baz=46,slow=16,SNR=6.7						
BOSA				Lg	Lg	09 33 41.5	
	2.4nm,0.3s,baz=328,slow=22,SNR=18						
BOSA				Rg	Rg	09 34 11.0	
	1.7nm,0.4s,baz=4.5,slow=22,SNR=0.8						
BOSA	Boshof	4.38	233	*i* P	Pn	09 32 39.4	+0.5
BOSA				*i* Sg	Sb	09 33 44.4	+2.2
BOSA	Boshof	4.38	233	*i* P	Pn	09 32 39.4	+0.5
BOSA				*i* Sg	Sb	09 33 44.4	+2.2
I47ZA	BOSHOF INFRASO	4.40	233	*i*		09 55 00.0	
	baz=50,slow=300,SNR=2.1						
MATP	Matopo	5.63	353	*i* P	Pn	09 32 56.8	+0.8
MATP				*i* S	Sn	09 33 57.1	-4.1
MATP	Matopo	5.63	353	*i* P	Pn	09 32 56.8	+0.8
MATP				*i* S	Sn	09 33 57.1	-4.1
I35NA	TSUMEB INFRASO	12.74	300	*i*		10 51 20.0	
	baz=125,slow=312,SNR=2.1						

NNC 30 09:46:42.0±2.8**, 53°.78N**×**88°.28E, h0^{km}, mb3.7, mpv3.3, 8C-6D, Error ellipse: s-maj=21.7km s-min=12.3km**

az=55.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	2.05	276	⇑Pn	Pn	09 47 17.4	-0.4
	4.6nm,0.7s						
ZAA0				⇑Sn	Sb	09 47 45.4	-0.8
	17nm,0.8s						
KURK	Kurchatov	6.67	247	⇑Pn	Pn	09 48 21.2	0.0
	3.0nm,0.7s						
KURK				⇓Sn	Sn	09 49 39.9	+2.0
	2.9nm,1.0s						
KURK				⇓Lg	Lg	09 50 15.1	
	11nm,1.2s						
KURBB	Kurchatov Arra	6.77	246	⇓Pn	Pn	09 48 22.2	-0.4
	4.1nm,0.6s						
KURBB				⇓Sn	Sn	09 49 37.8	-2.5
	7.3nm,0.7s						
KURBB				⇑Lg	Lg	09 50 16.5	
	12nm,0.8s						
MK31	Makanchi Array	7.97	211	⇑Pn	Pn	09 48 37.3	-1.8
	1.2nm,0.8s,baz=28,slow=14,SNR=6.3						
MK31				⇓Sn	Sn	09 50 11.5	+1.5
	2.2nm,0.9s,baz=22,slow=16,SNR=4.7						
MK31				⇑Lg	Lg	09 50 57.7	
	3.5nm,0.8s,baz=35,slow=31,SNR=5.2						
MAKZ	Makanchi	8.06	213	⇑Pn	Pn	09 48 43.6	+3.3
	1.1nm,0.8s						
MAKZ				⇑Sn	Sn	09 50 13.8	+1.8
	3.2nm,1.1s						
MAKZ				⇓Lg	Lg	09 51 00.9	
	5.9nm,1.1s						

WEL 30 09:57:55.5, 41°S±2°×17°6E±°, h31^{km}±3^{km}, M3.3/26, ML3.6/26, MLv3.3/26, Error ellipse: s-maj=0.0km s-min=0.0km az=82.3, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRWZ	Pori Road	0.08	51	P	Pb	09 58 01.3	+0.4
PRWZ				S	Sb	09 58 06.0	+1.3
TIWZ	Tintock	0.17	180	P	Pn	09 58 02.0	+0.1
TIWZ				S	Sn	09 58 07.0	+1.1
POWZ	Post Office Ro	0.23	338	P	Pb	09 58 02.3	+0.1
POWZ				S	Sn	09 58 07.6	+0.2
MRZ	Mangatainoka R	0.24	257	P	Pb	09 58 02.6	+0.2
MRZ				S	Sn	09 58 07.6	+0.1
BFZ	Birch Farm	0.28	105	P	Pb	09 58 03.2	+0.3
BFZ				S	Sn	09 58 08.9	+0.2
DVHZ	Dannevirke	0.38	35	P	Pb	09 58 04.0	-0.2
DVHZ				S	Sb	09 58 10.2	+0.2
CPWZ	Castlepoint	0.39	142	P	Pn	09 58 05.4	+0.5
HOWZ	Holdsworth Sta	0.40	224	P	Pn	09 58 04.9	-0.2
HOWZ				S	Sn	09 58 11.8	+0.1
ANWZ	Angora Road	0.47	72	P	Pn	09 58 05.9	-0.2
TMWZ	Te Maipa	0.50	180	P	Pn	09 58 06.4	0.0
TSZ	Takapari Road	0.55	6	P	Pb	09 58 06.7	-0.1
TSZ				S	Sb	09 58 14.8	+0.2
OGWZ	Otaki Gorge	0.58	249	P	Pn	09 58 07.6	0.0
OHWZ	Ohakea	0.59	313	P	Pn	09 58 08.5	+0.8
MTW	Mount Morrison	0.62	208	P	Pb	09 58 07.9	-0.1
MTW				S	Sn	09 58 17.6	+0.6
PRHZ	Porangahau	0.67	59	P	Pb	09 58 08.6	-0.1
WPHZ	Waipukurau	0.69	38	P	Pb	09 58 09.2	+0.2
PNHZ	Pukenui	0.73	19	P	Pn	09 58 09.6	-0.1
PNHZ				S	Sn	09 58 20.6	+0.7
KIW	Kapiti Island	0.78	251	P	Pb	09 58 10.7	+0.1
KIW				S	Sn	09 58 22.0	+0.9
CAW	Cannon Point	0.80	231	P	Pn	09 58 10.6	+0.1
TRWZ	Traveller	0.80	191	P	Pn	09 58 10.4	-0.2
TRWZ				S	Sb	09 58 21.7	+0.1
PAWZ	Paruwai Farm	0.85	204	P	Pn	09 58 11.0	-0.2
PAWZ				S	Sb	09 58 22.9	0.0
MSWZ	Moikau Station	0.94	211	P	Pn	09 58 12.0	-0.5
MSWZ				S	Sb	09 58 27.0	+1.5
PXZ	Pawanui	0.94	53	P	Pn	09 58 12.2	-0.4
KRHZ	Kereru	1.03	21	P	Pn	09 58 13.7	-0.1
PLWZ	Palliser	1.07	206	P	Pn	09 58 13.7	-0.7
WEL	Wellington	1.08	231	P	Pn	09 58 14.3	-0.1
WAZ	Wanganui	1.10	321	P	Pb	09 58 16.2	+0.3
BHW	Baring Head	1.11	223	P	Pn	09 58 14.4	-0.4
KAHZ	Kahuranaki	1.11	43	P	Pn	09 58 14.7	-0.2
BHHZ	Black Hill Sta	1.12	7	P	Pn	09 58 15.4	+0.3
BHHZ				S	Sb	09 58 30.2	-0.6
MOVZ	Moawhango	1.20	355	P	Pn	09 58 16.7	+0.5
KWHZ	Kaweka Forest	1.25	19	P	Pn	09 58 16.9	0.0
KWHZ				S	Sb	09 58 33.9	-0.5
MTVZ	Mangateitei	1.26	345	P	Pb	09 58 17.9	-0.8
WNVZ	Wahianoa	1.30	350	P	Pn	09 58 18.4	+0.8
WNVZ				S	Sb	09 58 36.0	+0.2
CKHZ	Cape Kidnapper	1.32	44	P	Pn	09 58 17.2	-0.5
MCHZ	McNeill Hill	1.32	28	P	Pn	09 58 17.7	0.0
TRVZ	Turoa	1.33	349	P	Pn	09 58 19.0	+0.9
WHVZ	Whangaehu Hut	1.34	350	P	Pb	09 58 19.5	-0.7
TUVZ	Tukino	1.35	352	P	Pb	09 58 19.5	-0.7
DRZ	Dome Shelter	1.35	349	P	Pb	09 58 19.9	-0.5
TCW	Tory Channel	1.36	243	P	Pn	09 58 18.0	-0.2
FWVZ	Far West T-bar	1.38	349	P	Pb	09 58 19.8	-0.9
PKVZ	Pokaka	1.38	342	P	Pn	09 58 19.6	+1.0
SNVZ	South Ngauruho	1.43	352	P	Pn	09 58 20.4	+1.0
NGZ	Ngauruhoe	1.45	351	P	Pn	09 58 20.7	+1.1
OTVZ	Oturere	1.45	353	P	Pn	09 58 20.8	+1.1
ETVZ	East Tongariro	1.48	355	P	Pn	09 58 20.9	+0.9
NNVZ	North Ngauruho	1.49	352	P	Pn	09 58 21.3	+1.1
TMVZ	Te Maari	1.50	355	P	Pn	09 58 21.1	+0.9
DUWZ	D'Urville Isla	1.50	262	P	Pn	09 58 20.5	+0.2
WTVZ	West Tongariro	1.51	351	P	Pn	09 58 21.5	+1.0
BKZ	Black Stump Fm	1.51	18	P	Pn	09 58 20.2	-0.3
NTVZ	North Tongarir	1.52	354	P	Pn	09 58 21.4	+0.9
KRVZ	Karewarewa	1.52	353	P	Pn	09 58 21.8	+1.2
TWVZ	Taurewa	1.57	347	P	Pn	09 58 22.3	+1.0
ARHZ	Aropaoanui	1.59	33	P	Pn	09 58 21.3	-0.2
LREZ	Lake Rotokare	1.61	315	P	Pb	09 58 24.6	0.0
RITZ	Rihia Road	1.63	359	P	Pn	09 58 23.0	+1.0
KATZ	Kakaramea	1.64	355	P	Pn	09 58 23.3	+1.1
NMHZ	Naumai	1.67	25	P	Pn	09 58 22.6	0.0
TUWZ	Tuamarina	1.68	240	P	Pn	09 58 21.9	-0.8
VRZ	Vera Road	1.72	329	P	Pn	09 58 24.5	+1.3
RATZ	Rangitukua	1.74	357	P	Pn	09 58 24.3	+0.7
MRHZ	Matea Rd	1.82	13	P	Pn	09 58 23.5	-1.2
PREZ	Palmer Road	1.83	313	P	Pb	09 58 27.6	-0.8
BSWZ	Blackbirch Sta	1.88	233	P	Pn	09 58 24.6	-0.8
WATZ	Wairara	1.90	356	P	Pn	09 58 26.1	+0.4
MTHZ	Maungataniwha	1.90	23	P	Pn	09 58 25.7	-0.1
NEZ	North Egmont	1.92	314	P	Pb	09 58 29.2	-0.6
DREZ	Durham Road	1.92	317	P	Pb	09 58 30.1	+0.3
RAHZ	Arahi	1.93	29	P	Pn	09 58 25.3	-0.7
WHTZ	Whakaora	1.94	2	P	Pn	09 58 26.9	+0.5
KHEZ	Kahui Hut	1.95	312	P	Pb	09 58 29.4	-0.9
NMEZ	Namu Road	1.95	307	P	Pb	09 58 29.7	-0.6
NNZ	Nelson	1.99	251	P	Pn	09 58 26.9	-0.1
PKE	Pukeiti	2.03	313	P	Pb	09 58 30.6	-1.1
NBEZ	Newall Road No	2.05	310	P	Pb	09 58 31.5	-0.5
ALRZ	Allen Road	2.07	10	P	Pn	09 58 27.5	-0.6
WPRZ	Whakapapatarin	2.10	6	P	Pn	09 58 28.2	-0.2
KUTZ	Kaahu Road	2.12	359	P	Pn	09 58 29.0	+0.3
MHGZ	Mahia Peninsul	2.13	48	P	Pn	09 58 27.9	-1.0
SNGZ	Shannon Statio	2.14	32	P	Pn	09 58 28.1	-1.0
PRRZ	Plateau Road	2.14	11	P	Pn	09 58 28.5	-0.5
RTZ	Ruatahuna	2.16	23	P	Pn	09 58 28.7	-0.7
MUGZ	Murupara	2.23	18	P	Pn	09 58 29.4	-0.9
HIZ	Hauiti	2.24	339	P	Pn	09 58 31.4	+1.1
TLZ	Tolley Road	2.29	353	P	Pn	09 58 31.0	-0.1
HSRZ	Hossack Road	2.31	7	P	Pn	09 58 31.3	-0.1
RRRZ	Republican Roa	2.32	12	P	Pn	09 58 31.1	-0.4
TARZ	Mount Tarawera	2.42	12	P	Pn	09 58 32.4	-0.5
KHZ	Kahutara	2.52	224	P	Pn	09 58 32.5	-1.7
THZ	Tophouse	2.53	242	P	Pn	09 58 33.4	-1.0
URZ	Urewera	2.53	22	P	Pn	09 58 32.7	-1.7
QRZ	Quartz Range	2.56	264	P	Pn	09 58 34.6	-0.1
MWZ	Matawai	2.60	30	P	Pn	09 58 33.6	-1.8
TKGZ	Te Karaka	2.65	36	P	Pn	09 58 34.2	-1.7
TOZ	Tahuroa Road	2.89	354	P	Pn	09 58 39.8	+0.5
TWGZ	Tauwhareparae	2.92	34	P	Pn	09 58 38.6	-1.2
RUGZ	Raukumara Rang	2.98	28	P	Pn	09 58 38.9	-1.8
GVZ	Greta Valley S	3.18	221	P	Pn	09 58 41.2	-2.1
PKGZ	Pakihiroa	3.21	33	P	Pn	09 58 42.4	-1.3
HAZ	Te Kaha	3.21	28	P	Pn	09 58 41.7	-1.9
DSZ	Denniston Nort	3.28	248	P	Pn	09 58 43.9	-0.9
OKCZ	Okains Bay	3.75	213	P	Pn	09 58 48.8	-2.5
MQZ	McQueen's Vall	3.92	217	P	Pn	09 58 50.4	-3.0
TMZ	Timaru	5.22	222	P	Pn	09 59 09.0	-2.3
CTZ	Chatham Island	6.39	122	P	Pn	09 59 26.5	-0.8

IDC 30 10:17:23.4±1.9, 15°.48N×145°.96E, h112^{km}±19^{km}, mb3.5/11, mb1 3.7/12, mb1mx3.5/42, mbtmp3.9/12, Error ellipse: s-maj=24.2km s-min=16.1km az=85.0

NEIC 30 10:17:25.3±1.6, 15°.37N±0°.09×145°.8E±0°.1, h130^{km}±4^{km}, mb4.3/14, Error ellipse: s-maj=19.4km s-min=13.4km az=100.0

ISC 30 10:17:26.8±0.6, 15°.30N±0°.08×145°.7E±0°.1, h150^{km}, n40, σ1^{s}16/35, mb4.0/18, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.90	206	P	Pn	10 17 59.2	-1.5
	118nm,0.3s,baz=355,slow=0.4,SNR=54						
GUMO				S	Sn	10 18 25.7	-1.1
	170nm,0.3s,baz=144,slow=23,SNR=17						
GUMO	Guam	1.90	206		Pn	10 18 00.9	+0.2
H11S3	WAKE ISLAND Hy	20.30	78	T	T	10 42 55.9	
	baz=264,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	20.31	78	T	T	10 43 18.8	
	baz=264,slow=75,SNR=3.6						
H11S2	WAKE ISLAND Hy	20.31	78	T	T	10 42 55.8	
	baz=264,slow=75,SNR=7.7						
H11N1	WAKE ISLAND Hy	20.64	75	T	T	10 43 13.2	
	baz=263,slow=75,SNR=3.3						
H11N2	WAKE ISLAND Hy	20.65	75	T	T	10 43 13.8	
	baz=263,slow=75,SNR=6.0						
H11N3	WAKE ISLAND Hy	20.66	75	T	T	10 43 16.1	
	baz=263,slow=75,SNR=4.7						
JNU	Nakatsue	22.28	325	P	P	10 22 11.7	-0.1
	3.3nm,0.7s,baz=351,slow=3.1,SNR=5.5						
JNU	Nakatsue	22.28	325	P	P	10 22 09.3	-2.5
JNU				IAmb	IAmb	10 22 21.1	
	comp=Z,8.4nm,1.1s						
KSRS	Korea Array	27.14	328	P	P	10 22 55.4	-0.5
	comp=Z,1.7nm,0.7s,baz=145,slow=10,SNR=6.8						
WRA	Warramunga Arr	36.77	198	P	P	10 24 22.0	+1.9
	comp=Z,0.6nm,0.8s,baz=22,slow=8.5,SNR=9.7						
ASAR	Alice Springs	40.42	197	P	P	10 24 52.5	+2.1
	comp=Z,0.1nm,0.4s,baz=17,slow=6.5,SNR=6.1						
ASAR	Alice Springs	40.42	197	P	P	10 24 48.9	-1.6
EIDS	Eidsvold	40.76	173	P	P	10 24 53.1	0.0
EIDS				IAmb	IAmb	10 25 09.9	
	comp=Z,20nm,1.4s						
UGM	Wanagama	41.83	239	P	P	10 25 02.2	0.0
CHTO	Chiang Mai	44.78	281	P	P	10 25 27.3	+1.5
CM31	Chiang Mai Arr	44.80	281	P	P	10 25 24.0	-1.9
CM31				IAmb	IAmb	10 25 43.2	
	comp=Z,7.7nm,1.4s						
CMAR	Chiang Mai Arr	44.80	281	P	P	10 25 27.6	+1.6
	comp=Z,0.2nm,0.3s,baz=72,slow=6.7,SNR=4.3						
MSVF	Nonsavu	45.74	135	P	P	10 25 33.4	0.0
SONM	Songino Array	45.85	323	P	P	10 25 34.2	+0.3
	comp=Z,1.1nm,0.8s,baz=141,slow=8.1,SNR=5.0						
SONM	Songino Array	45.85	323	P	P	10 25 33.8	-0.2
ZAA0	Zalesovo Array	60.74	324	P	P	10 27 22.0	-0.4
ZAA0				IAmb	IAmb	10 27 24.5	
	comp=Z,1.9nm,0.8s						
ZALV	Zalesovo Beam	60.74	324	P	P	10 27 22.4	0.0
	comp=Z,1.4nm,0.6s,baz=111,slow=8.4,SNR=6.0						
ZALV	Zalesovo Beam	60.74	324	P	P	10 27 22.0	-0.4
MK31	Makanchi Array	60.86	315	P	P	10 27 23.8	+0.3
MK31				IAmb	IAmb	10 27 25.2	
	comp=Z,3.0nm,0.5s						
MKAR	Makanchi Array	60.86	315	P	P	10 27 24.6	+1.1
	comp=Z,3.9nm,0.4s,baz=92,slow=8.4,SNR=91						
MKAR	Makanchi Array	60.86	315	P	P	10 27 24.4	+1.0
MAKZ	Makanchi	61.08	315	P	P	10 27 25.2	+0.3
KURK	Kurchatov	63.84	319	P	P	10 27 43.4	+0.3
KURK				IAmb	IAmb	10 27 44.3	
	comp=Z,12nm,1.1s						
BOOM	Boomskoye usch	64.98	310	P	P	10 27 52.5	+1.6
BOOM				IAmb	IAmb	10 27 52.9	
	comp=Z,2.9nm,0.6s						
I23K	Minto, Yukon-K	65.76	25	P	P	10 27 55.6	+0.4
IL31		66.67	26	P	P	10 27 59.4	-1.6
IL31				IAmb	IAmb	10 27 59.9	
	comp=Z,2.8nm,1.1s						
ILAR	Eielson Array	66.67	26	P	P	10 27 59.4	-1.8
	comp=Z,0.6nm,0.4s,baz=252,slow=5.7,SNR=21						
BMAR	Burnt Mountain	68.21	23	P	P	10 28 10.9	+0.2
KKAR	Karatay Array	68.97	311	P	P	10 28 17.3	+1.3
ABKAR	Akbulak array	75.85	318	P	P	10 28 56.5	-0.1
YKA	Yellowknife Ar	80.96	28	P	P	10 29 24.0	-0.3
	comp=Z,1.2nm,0.6s,baz=286,slow=5.2,SNR=31						
YKA	Yellowknife Ar	80.96	28	P	P	10 29 23.8	-0.5
NVAR	Mina Array Bea	85.20	52	P	P	10 29 47.8	+0.9
	comp=Z,0.3nm,0.6s,baz=268,slow=5.4,SNR=3.8						

IDC 30 10:46:38.2±0.6, 19°.18N×121°.24E, h0^{km}, mb4.1/22, mb1 4.2/25, mb1mx4.1/57, mbtmp4.2/25, ML3.8/3, MS3.6/16, Ms1 3.7/16, ms1mx3.5/48, Error ellipse: s-maj=18.7km s-min=13.6km az=76.0

MAN 30 10:46:43.9, 19°.27N×121°.18E, h15^{km}, mb5.1, ML4.1, MS4.1

NEIC 30 10:46:44±1.9, 19°.32N±0°.08×121°.13E±0°.07, h29^{km}±4^{km}, mb4.5/43, Error ellipse: s-maj=11.5km s-min=8.8km az=151.0

BJI 30 10:46:46.7±0.0, 19°.64N×120°.77E, h25^{km}, mB4.7/22, mb4.2/33, ML4.1/3, Ms4.1/24, Ms7 4.0/21

ISC 30 10:46:43.7±0.3, 19°.35N±0°.03×121°.16E±0°.04, h32^{km}, n121, σ1^{s}81/123, mb4.3/45, MS3.6/19, 8C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBP	Basco	1.32	35	⇑*i*P	Pn	10 47 07.0	+1.0
BBP				*i* S	Sb	10 47 29.2	+4.5
SGCP	Mt. Cagua	1.38	143	⇑*i*P	Pn	10 47 07.2	+0.4
SGCP				*i* S	Sb	10 47 25.6	-0.7
APYP	Conner	1.48	177	⇑*e*P	Pn	10 47 08.1	0.0
APYP				*e*S	Sn	10 47 26.6	+0.2
SIPP	Brgy, Tapao	1.57	205	⇓*i*P	Pn	10 47 09.9	+0.5
SIPP				*i* S	Sb	10 47 45.2	+14
SAMP	Sagada Mountai	2.27	186	⇑*i*P	Pn	10 47 20.2	+1.1
SAMP				*i* S	Sb	10 47 50.7	-1.0
BOLP	Bolinao	3.18	202	⇑*e*P	Pn	10 47 32.9	+1.3
BOLP				*e*S	Sb	10 48 19.2	+1.2
SMPP	San Manuel, Pa	3.21	188	⇑*e*P	Pn	10 47 34.4	+2.4
SMPP				*i* S	Sn	10 48 11.4	+2.2
TWG	Pinlang	3.46	359		Pn	10 47 35.1	-0.3
SCZP	Santa Cruz	3.75	199	⇓*e*P	Pn	10 47 43.4	+4.1
SCZP				*i* S	Sb	10 48 34.9	+0.7
PCPH	Palayan	3.77	181	⇑*e*P	Pn	10 47 43.5	+3.9
TPUB	Ta-pu	3.97	353	Pn	Pn	10 47 42.0	-0.4
YULB	Yu-li	4.03	2		Pn	10 47 44.2	+1.0
SSLB	Suanglung	4.42	358		Pn	10 47 49.1	+0.4
SSLB				Sn	Sn	10 48 37.3	-1.8
NACB	Ninganchiao	4.82	5		Pn	10 47 53.7	-0.4
YHNB	Yeheng	5.30	2		Pn	10 48 01.7	+0.9
YOJ	Yonaguni jima	5.37	18	Pn	Pn	10 48 01.4	-0.3
QZH	Quanzhou	6.06	337	Pn	Pn	10 48 10.0	-1.1
QZH				Sn	Sn	10 49 13.5	-5.9
QZH				smax	smax		
	comp=N,43nm,0.6s						
QZH				smax	smax		
	comp=E,60nm,0.6s						
QZH				LR	LR		
	comp=N,750nm,14.2s						
QZH				LR	LR		
	comp=E,430nm,17.0s						
QZH				LR	LR		
	comp=Z,790nm,19.4s						
HKPS	Hong Kong Po S	7.19	295	Pn	Pn	10 48 24.0	-2.6
JOW	Kunigami	9.91	40	Pn	Pn	10 49 04.5	+0.4
	3.1nm,0.3s,baz=199,slow=9.2,SNR=26						
JOW				LR	LR	10 51 21.0	
	comp=Z,75nm,21.8s,baz=274,slow=28						
JOW	Kunigami	9.91	40	Pn	Pn	10 49 05.5	+1.5
QIZ	Qiongzhong	10.70	270	P	Pn	10 49 15.0	+0.1
QIZ				S	Sn	10 51 14.8	+1.1
QIZ				LR	LR		
	comp=E,820nm,13.1s						
QIZ				LR	LR		
	comp=Z,740nm,12.4s						
QIZ	Qiongzhong	10.70	270	Pn	Pn	10 49 12.0	-2.9
NJ2	Nanjing	12.82	351	*e*P	Pn	10 49 46.3	+2.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
JNU	Nakatsue	16.24	30	Pn	Pn	10 50 29.6	+0.1
	0.1nm,0.3s,baz=177,slow=6.4,SNR=6.0						
JNU	Nakatsue	16.24	30		Pn	10 50 31.2	+1.6
JNU				IAmb	IAmb	10 50 35.8	
	comp=Z,31nm,1.0s						
XAN	Xi'an	18.25	326	⇑P	Pn	10 50 56.3	+1.7
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
XAN				LR	LR		
	comp=Z,450nm,16.5s						
XAN				LR	LR		
	comp=Z,380nm,14.4s						
XAN				LR	LR		
	comp=Z,560nm,15.8s						
KSRS	Korea Array	18.98	17	P	P	10 51 02.6	+0.1
	comp=Z,0.6nm,0.3s,baz=199,slow=12,SNR=20						
KSRS				LR	LR	10 59 25.9	
	comp=Z,251nm,19.4s,baz=192,slow=40						
CHTO	Chiang Mai	21.01	272	P	P	10 51 25.0	+0.2
CM31	Chiang Mai Arr	21.04	271	P	P	10 51 24.5	-0.6
CM31				IAmb	IAmb	10 51 38.5	
	comp=Z,20nm,1.4s						
CMAR	Chiang Mai Arr	21.04	271	P	P	10 51 24.8	-0.4
	comp=Z,3.2nm,0.8s,baz=72,slow=9.7,SNR=21						
CMAR				PcP	PcP	10 55 32.3	+0.9
	comp=Z,0.8nm,0.6s,baz=100,slow=0.5,SNR=6.8						
CMAR				LR	LR	10 59 05.2	
	comp=Z,78nm,19.4s,baz=160,slow=35						
CMAR	Chiang Mai Arr	21.04	271	P	P	10 51 25.1	-0.1
BJT	Baijiatuau	21.05	349	P	P	10 51 26.2	+1.2
BJT				IAmb	IAmb	10 51 31.0	
	comp=Z,17nm,0.7s						
BJI	Beijing	21.07	349	P	P	10 51 30.5	+5.3
BJI				pmax	pmax		
	comp=Z,30nm,0.8s						
BJI				LR	LR		
	comp=Z,250nm,11.1s						
BJI				LR	LR		
	comp=Z,250nm,14.1s						
INU	Inuyama	21.22	38	P	P	10 51 28.6	+1.7
INU				IAmb	IAmb	10 51 36.0	
	comp=Z,29nm,1.0s						
JHJ	Hachijo jima 2	21.56	47	LR	LR	10 58 04.6	
	comp=Z,161nm,21.6s,baz=244,slow=32						
JGF	Kuroka	21.60	38	P	P	10 51 30.8	-0.2
JGF				IAmb	IAmb	10 51 41.1	
	comp=Z,14nm,1.0s						
LZH	Lanzhou	22.59	321	*e*P	P	10 51 42.3	+0.5
LZH				pP	pP	10 51 48.5	-1.0
LZH				sP	sP	10 51 54.5	+1.4
LZH				sS	sS	10 55 56.0	-4.5
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				LR	LR		
	comp=Z,500nm,11.5s						
LZH				LR	LR		
	comp=Z,450nm,12.0s						
LZH				LR	LR		
	comp=Z,540nm,13.6s						
MAT	Matsushiro	22.75	38	P	P	10 51 41.5	-1.8
MAT				*e*S	S	10 55 40.8	-9.2
MJAR	Matsushiro Arr	22.75	38	P	P	10 51 43.8	+0.5
	comp=Z,3.2nm,0.9s,baz=238,slow=8.8,SNR=7.1						
MJAR				LR	LR	11 00 24.7	
	comp=Z,72nm,21.9s,baz=220,slow=36						
MJAR	Matsushiro Arr	22.75	38	P	P	10 51 43.5	+0.3
HHC	Hu-ho-hao-te	22.95	341	*e*P	P	10 51 48.3	+2.8
HHC				sP	pwP	10 52 03.3	+5.8
HHC				S	S	10 55 55.5	+1.9
HHC				pmax	pmax		
	comp=Z,14nm,1.3s						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
HHC				LR	LR		
	comp=Z,530nm,17.7s						
HHC				LR	LR		
	comp=Z,330nm,13.4s						
HHC				LR	LR		
	comp=Z,550nm,15.3s						
BTO	Baotou	23.24	338	*e*P	P	10 51 54.5	+6.1
BTO				LR	LR		
	comp=Z,1µm,17.6s						
BTO				LR	LR		
	comp=Z,1µm,13.9s						
GUMO	Guam	23.43	101	LR	LR	11 00 56.8	
	comp=Z,210nm,19.1s,baz=278,slow=37						
USA0B	Ussuriysk Arra	26.38	18	P	P	10 52 18.6	+1.5
USA0B				IAmb	IAmb	10 52 20.3	
	comp=Z,5.5nm,0.7s						
USRK	Ussuriysk Ar.	26.38	18	P	P	10 52 17.3	+0.2
	comp=Z,5.1nm,0.8s,baz=205,slow=11,SNR=8.8						
USRK				LR	LR	11 03 29.2	
	comp=Z,143nm,19.1s,baz=199,slow=38						
USRK	Ussuriysk Ar.	26.38	18	P	P	10 52 17.7	+0.6
GTA	Gaotai	27.19	322	*e*P	P	10 52 32.8	+8.2
GTA				pP	sP	10 52 36.5	0.0
GTA				sP	pwP	10 52 40.8	+3.7
GTA				S	S	10 57 14.5	+13
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,130nm,6.0s						
GTA				LR	LR		
	comp=N,150nm,14.5s						
GTA				LR	LR		
	comp=E,200nm,13.1s						
GTA				LR	LR		
	comp=Z,230nm,14.9s						
PSI	Prapat	27.26	236	LR	LR	11 02 46.8	
	comp=Z,149nm,18.7s,baz=43,slow=36						
JAY	Jayapura	29.00	136	LR	LR	11 03 48.1	
	comp=Z,27nm,19.6s,slow=36						
LEM	Lembang	29.23	208	LR	LR	11 04 32.7	
	comp=Z,102nm,18.6s,baz=351,slow=37						
GSI	Gunungsitoli	29.24	235	P	P	10 52 42.5	-0.5
ASAJ	Asahikawa	30.52	31	LR	LR	11 05 24.8	
	comp=Z,118nm,20.1s,baz=225,slow=37						
ULN	Ulaanbaatar	30.68	341	P	P	10 52 56.0	+0.4
ULN				IAmb	IAmb	10 53 02.8	
	comp=Z,4.9nm,1.0s						
SONM	Songino Array	30.85	340	P	P	10 52 58.2	+1.1
	comp=Z,1.2nm,0.8s,baz=158,slow=10,SNR=7.0						
SONM				LR	LR	11 06 41.4	
	comp=Z,284nm,18.7s,baz=176,slow=39						
SONM	Songino Array	30.85	340	P	P	10 52 58.1	+1.0
KLR	Kul'dur	31.00	14	P	P	10 52 58.5	+0.2
	comp=Z,1.4nm,0.8s,baz=202,slow=7.1,SNR=4.8						
KLR				LR	LR	11 06 52.5	
	comp=Z,238nm,19.6s,baz=186,slow=39						
MANU	Manus Island	33.38	127	P	P	10 53 19.3	-0.2
KNRA	Kununurra	35.60	167	P	P	10 53 37.1	-1.4
WMQ	Urumqi	37.12	319	*e*P	P	10 53 53.8	+2.3
COEN	Coen	39.56	145	P	P	10 54 10.4	-1.7
COEN				IAmb	IAmb	10 54 29.6	
	comp=Z,23nm,1.4s						
WRA	Warramunga Arr	41.13	161	P	P	10 54 22.3	-2.8
	comp=Z,0.8nm,0.3s,baz=344,slow=7.1,SNR=32						
MK31	Makanchi Array	41.90	320	P	P	10 54 32.4	+1.2
MKAR	Makanchi Array	41.90	320	P	P	10 54 32.6	+1.4
	comp=Z,1.6nm,0.6s,baz=115,slow=8.8,SNR=23						
MKAR	Makanchi Array	41.90	320	P	P	10 54 32.5	+1.3
MAKZ	Makanchi	42.09	320	P	P	10 54 33.4	+0.6
WAKE	Wake Island	42.83	82	P	P	10 54 37.7	-1.4
H11N1	WAKE ISLAND Hy	43.00	82	T	T	11 40 39.0	
	baz=278,slow=75,SNR=29						
H11N2	WAKE ISLAND Hy	43.00	82	T	T	11 40 26.6	
	baz=278,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	43.01	82	T	T	11 40 30.9	
	baz=278,slow=75,SNR=25						
YAK	Yakutsk	43.06	6	LR	LR	11 13 50.8	
	comp=Z,79nm,18.0s,baz=240,slow=38						
PETK	Petropavlovsk-	43.94	31	P	P	10 54 47.6	0.0
	comp=Z,5.7nm,0.9s,baz=204,slow=3.2,SNR=2.6						
PETK	Petropavlovsk-	43.94	31	P	P	10 54 48.4	+0.8
ZALV	Zalesovo Beam	44.34	330	P	P	10 54 51.6	+0.8
	comp=Z,1.4nm,0.5s,baz=122,slow=6.7,SNR=8.8						
ZALV				LR	LR	11 14 20.4	
	comp=Z,140nm,18.3s,baz=63,slow=37						
ZALV	Zalesovo Beam	44.34	330	P	P	10 54 51.8	+1.0
AS31	Alice Springs	44.52	163	P	P	10 54 52.2	-0.3
ASAR	Alice Springs	44.52	163	P	P	10 54 50.4	-2.2
	comp=Z,1.2nm,0.4s,baz=347,slow=6.7,SNR=39						
ASAR	Alice Springs	44.52	163	P	P	10 54 49.9	-2.7
AAK	Ala-Archa	45.54	311	P	P	10 55 00.8	+0.1

KURK	Kurchatov	45.86	323	P	P	10 55 03.4	+0.5
KURK				IAmb	IAmb	10 55 12.9	
	comp=Z,11nm,1.3s						
KURBB	Kurchatov Arra	45.87	323	P	P	10 55 04.1	+1.2
	comp=Z,5.2nm,0.7s,baz=121,slow=7.6,SNR=30						
CTAO	Charters Tower	46.27	147	P	P	10 55 04.6	-1.9
KKAR	Karatay Array	48.50	311	P	P	10 55 24.7	+1.1
BVAR	Borovoye Array	51.46	323	P	P	10 55 47.5	+1.6
	comp=Z,0.8nm,0.6s,baz=135,slow=15,SNR=5.5						
BRVK	Borovoye	51.53	323	P	P	10 55 47.3	+0.9
BRVK				IAmb	IAmb	10 55 48.6	
	comp=Z,3.1nm,0.8s						
TIXI	Tiksi	52.50	3	P	P	10 55 53.0	-0.4
TIXI				IAmb	IAmb	10 55 53.8	
	comp=Z,6.0nm,0.8s						
BBOO	Buckleboo	53.78	164	P	P	10 56 02.6	-0.6
NRIK	Noril'sk	54.06	346	P	P	10 56 05.8	+1.0
	comp=Z,2.9nm,0.7s,baz=158,slow=7.4,SNR=5.6						
NRIK	Noril'sk	54.06	346	P	P	10 56 05.6	+0.8
NRIK				IAmb	IAmb	10 56 22.1	
	comp=Z,6.7nm,0.9s						
STKA	Stephens Creek	54.57	159	P	P	10 56 07.7	-1.3
	comp=Z,1.2nm,0.8s,baz=250,slow=7.0,SNR=3.9						
STKA	Stephens Creek	54.57	159	P	P	10 56 08.3	-0.7
BILL	Bilibino	56.23	19	P	P	10 56 20.9	+0.3
BILL				IAmb	IAmb	10 56 38.3	
	comp=Z,2.8nm,0.6s						
ABKAR	Akbulak array	56.86	317	P	P	10 56 24.9	-0.4
ABKAR	Akbulak array	56.86	317	P	P	10 56 25.8	+0.4
ABKAR				IAmb	IAmb	10 56 27.3	
	comp=Z,3.6nm,0.8s						
GEYT	Alibeck	57.32	303	P	P	10 56 28.6	-0.2
GEYT				IAmb	IAmb	10 56 50.8	
	comp=Z,4.2nm,1.1s						
GYA0B	ALIBECK ARRAY	57.32	303	P	P	10 56 28.7	-0.1
GYA0B				IAmb	IAmb	10 56 37.5	
	comp=Z,4.3nm,0.6s						
AKTO	Aktyubinsk	58.27	318	P	P	10 56 35.9	+0.7
	comp=Z,1.6nm,0.6s,baz=94,slow=9.0,SNR=6.7						
ARU	Arti	58.99	325	P	P	10 56 40.5	+0.4
	comp=Z,0.8nm,0.3s,baz=349,slow=6.8,SNR=4.0						
ARU	Arti	58.99	325	P	P	10 56 40.5	+0.4
TOO	Toolangi	61.07	158	P	P	10 56 54.0	-0.7
BELG	Belogornoye	64.90	320	P	P	10 57 20.1	+0.2
	comp=Z,11nm,1.1s,baz=117,slow=5.2,SNR=3.8						
KLMR	Klimovskoe	69.25	329	*e*P	P	10 57 45.9	-1.5
KLMR				AMP		10 57 52.6	
	comp=Z,16nm,1.4s						
IMAR	Indian Mountai	70.52	26	P	P	10 57 56.7	+1.6
K20K	Telida	70.56	28	P	P	10 57 56.3	+0.8
H21K	Melozitna Rive	70.93	26	P	P	10 57 58.8	+1.1
H21K				IAmb	IAmb	10 58 14.3	
	comp=Z,11nm,1.4s						
CAST	Castle Rocks	71.45	28	P	P	10 58 02.2	+1.3
CAST				IAmb	IAmb	10 58 04.2	
	comp=Z,6.0nm,0.9s						
TOLK	Toolik Lake Re	71.89	23	P	P	10 58 04.6	+1.2
H24K	Noodor Dome	72.92	26	P	P	10 58 11.0	+1.4
ILAR	Eielson Array	73.52	27	P	P	10 58 12.8	-0.3
	comp=Z,0.5nm,0.7s,baz=291,slow=4.4,SNR=5.3						
ARCES	ARCESS Array B	74.01	339	P	P	10 58 15.5	-0.4
	comp=Z,5.1nm,1.0s,baz=52,slow=8.2,SNR=5.3						
ARCES	ARCESS Array B	74.01	339	P	P	10 58 14.9	-1.0
ARCES				IAmb	IAmb	10 58 18.0	
	comp=Z,9.2nm,1.1s						
FINES	FINESS Array B	75.61	330	P	P	10 58 25.6	+0.4
	comp=Z,1.6nm,0.8s,baz=64,slow=7.9,SNR=1.3						
AKASG	Malin Array Be	76.48	319	P	P	10 58 29.3	-1.1
	comp=Z,0.2nm,0.2s,baz=63,slow=6.0,SNR=3.5						
INK	Inuvik	77.70	22	P	P	10 58 36.8	-0.1
INK				IAmb	IAmb	10 58 54.8	
	comp=Z,2.8nm,0.8s						
A36M	Sachs Harbour	78.73	17	P	P	10 58 42.0	-0.6
C36M	Paulatuk	80.35	19	P	P	10 58 52.0	+0.6
C36M				IAmb	IAmb	10 59 15.3	
	comp=Z,7.3nm,1.4s						
NOA	NORSAR Array B	82.48	333	P	P	10 59 02.1	-0.9
	comp=Z,2.4nm,1.1s,baz=65,slow=5.2,SNR=2.5						
NOA				LR	LR	11 38 52.9	
	comp=Z,161nm,19.3s,baz=60,slow=38						
RES	Resolute Bay	83.42	9	P	P	10 59 08.4	+0.9
CASY	Casey	85.74	184	P	P	10 59 19.8	+0.7
CLL	Collm	85.89	323	*e*P	P	10 59 21.0	+0.6
YKA	Yellowknife Ar	87.42	23	P	P	10 59 27.8	+0.1
	comp=Z,7.2nm,0.8s,baz=312,slow=4.7,SNR=111						
YKA	Yellowknife Ar	87.42	23	P	P	10 59 27.9	+0.3

IDC ***30*** *10:48:52.9±1.3, 19°.30N×121°.45E, h0^{km}, mb3.6/4, mb1 3.9/4, mb1mx3.4/55, mbtmp3.6/4, Error ellipse: s-maj=84.4km s-min=26.5km az=73.0*

MAN ***30*** *10:48:55.8, 19°.45N×121°.20E, h19^{km}, mb4.6, ML3.5, MS3.4*

ISC 30 10:48:59.5±1.0**, 19°.44N**±0°.06×**121°.4E**±0°.1**, h52**^{km}**, n8,** σ**2**^{s}**15**/11**, mb3.4**/4**, 3C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	1.15	30	⇓*e*P	Pn	10 49 17.0	-2.2
SGCP	Mt. Cagua	1.36	151	⇑*e*P	Pn	10 49 21.3	-0.8
SGCP				*e*S	Sn	10 49 40.0	+1.1
APYP	Conner	1.57	184	⇑*e*P	Pn	10 49 22.2	-2.9
APYP				*e*S	Sn	10 49 47.7	+3.4
SAMP	Sagada Mountai	2.39	191	⇑*e*P	Pn	10 49 34.3	-1.9
SAMP				*e*S	Sn	10 50 04.2	-0.1
WRA	Warramunga Arr	41.16	161	P	P	10 56 37.4	-1.5
	0.4nm,0.5s,baz=343,slow=8.8,SNR=5.6						
ASAR	Alice Springs	44.56	164	P	P	10 57 06.0	-0.5
	0.2nm,0.4s,baz=345,slow=7.1,SNR=4.4						
KURBB	Kurchatov Arra	45.90	323	P	P	10 57 18.3	+1.5
	0.4nm,0.7s,baz=120,slow=8.2,SNR=1.5						
YKA	Yellowknife Ar	87.26	23	P	P	11 01 41.6	+1.4
	0.9nm,0.8s,baz=313,slow=4.4,SNR=9.1						

IDC ***30*** *10:55:58.1±6.2, 36°.33N×70°.28E, h158^{km}±56^{km}, mb3.2/3, mb1 3.2/8, mb1mx2.8/59, mbtmp3.8/8, Error ellipse: s-maj=63.3km s-min=41.3km az=139.0*

NNC ***30*** *10:56:04.4±4.9, 36°.72N×70°.34E, h168^{km}±69^{km}, mb3.0, mpv3.7, Error ellipse: s-maj=42.7km s-min=30.5km az=41.0*

ISC 30 10:56:02.7±0.8**, 36°.56N**±0°.06×**70°.42E**±0°.10**, h204**^{km}**, n16,** σ**1**^{s}**83**/23**, 7C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.98	155	P	Pn	10 56 52.9	+0.3
CEP				S	S	10 57 30.0	-0.9
CHCP	Chirah Chowk	3.71	140	P	Pn	10 57 01.8	+0.6
THW	Thamme Wali	3.91	163	P	Pn	10 57 03.3	-0.3
KK02	Karatay Array	6.54	1	⇑P	Pn	10 57 37.1	+0.2
	3.3nm,0.6s						
KK02				⇓S	S	10 58 48.2	-3.4
	6.8nm,0.5s						
AAK	Ala-Archa	6.84	26	P	Pn	10 57 41.1	+0.1
	1.2nm,0.3s,baz=185,slow=4.3,SNR=13						
AAK				S	S	10 58 57.5	-1.3
	2.1nm,0.3s,baz=11,slow=20,SNR=30						
AAK	Ala-Archa	6.84	26	⇑P	Pn	10 57 41.8	+0.8
	2.6nm,0.5s						
AAK				⇑S	S	10 58 58.2	-0.6
	30nm,0.6s						
TKM2	Tokmak 2	7.50	30	⇑P	Pn	10 57 49.6	-0.1
	2.6nm,0.5s						
TKM2				⇓S	S	10 59 11.9	-2.7
	12nm,0.8s						
MKAR	Makanchi Array	13.52	37	P	Pn	10 59 07.2	+0.7
	0.2nm,0.3s,baz=236,slow=6.4,SNR=11						
AB31	Akbulak array	14.81	332	⇑P	Pn	10 59 21.5	-0.8
	0.6nm,0.5s,baz=144,slow=11,SNR=21						
AB31				⇓S	S	11 02 05.5	-1.0
	0.6nm,0.6s,baz=152,slow=23,SNR=2.5						
KURBB	Kurchatov Arra	15.22	20	P	Pn	10 59 27.0	-0.3
	0.0nm,0.3s,baz=210,slow=10,SNR=6.2						
BVAR	Borovoye Array	16.47	360	P	Pn	10 59 42.6	+0.3
	0.4nm,0.3s,baz=176,slow=8.9,SNR=6.6						
AKTO	Aktyubinsk	16.50	331	P	Pn	10 59 41.8	-0.9
	0.4nm,0.3s,baz=144,slow=11,SNR=12						
AKTO	Aktyubinsk	16.50	331	⇑P	P	10 59 41.4	-0.4
	6.0nm,0.8s						
AKTO				⇑S	S	11 02 49.7	+5.8
	1.0nm,1.0s						
ZALV	Zalesovo Beam	20.06	25	P	P	11 00 21.6	+1.4
	1.8nm,0.5s,baz=219,slow=11,SNR=10						
ARCES	ARCESS Array B	40.92	338	P	P	11 03 26.6	+1.9
	1.1nm,0.8s,baz=113,slow=9.2,SNR=0.8						
TORD	Torodi Ar. Bea	65.25	268	P	P	11 06 21.5	-1.3
	0.3nm,0.5s,baz=52,slow=5.7,SNR=1.9						

IDC ***30*** *11:08:28.4±0.6, 21°.90S×174°.43W, h0^{km}, mb4.7/17, mb1 4.9/19, mb1mx4.8/28, mbtmp4.7/19, ML4.1/2, MS4.6/27, Ms1 4.6/27, ms1mx4.5/40, Error ellipse: s-maj=21.8km s-min=16.4km az=139.0*

BJI ***30*** *11:08:33.0±0.0, 21°.90S×174°.60W, h30^{km}, mB5.6/30, mb5.1/38, Ms5.1/18, Ms7 4.8/19*

GCMT ***30*** *11:08:33.0±0.1, 22°.11S±0°.01×173°.87W±0°.01, h13^{km}, MW5.1/121, Moment Tensor Solution. s68,c109; s121,c204; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.62±.15; M$_{\theta\theta}$-1.44±.10; M$_{\phi\phi}$-4.18±.11; M$_{r\theta}$1.54±.24; M$_{\theta\phi}$-2.56±.07; M$_{\phi r}$2.72±.24; Best double couple: M$_0$6.47200×10^{16} NP1:φ$_s$212.00000°, δ31.00000°, λ91.00000°. NP2:φ$_s$30.00000°, δ59.00000°, λ89.00000°. Principal axes: T 6.4250, Plg76.0000°, Azm298.0000°; N 0.0930, Plg1.0000°, Azm31.0000°; P -6.5180, Plg14.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***30*** *11:08:34.2±1.0, 21°.96S×174°.53W, h49^{km}, mb5.2/33 Error ellipse: s-maj=11.4km s-min=9.6km az=47.0*

NEIC ***30*** *11:08:36±1.7, 21°.98S±0°.08×174°.47W±0°.08, h46^{km}±5^{km}, mb5.0/177, Error ellipse: s-maj=11.8km s-min=10.4km az=140.0*

ISC 30 11:08:35.4±0.5**, 22°.01S**±0°.05×**174°.41W**±0°.06**, h47**^{km}±3^{km}**, h47**^{km}**:pP-P, n414,** σ**1**^{s}**43**/361**, mb5.0**/142**, MS4.7**/37**, 10C-1D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.11	56		Pn	11 09 38.5	-11
NIUE					Sn	11 10 28.9	-18
RAO	Raoul Island	7.88	203	Sn	Sn	11 11 51.9	-3.3
	25nm,0.3s,baz=248,slow=22,SNR=11						
RAO	Raoul Island	7.88	203	P	Pn	11 10 28.5	+1.1
RAO	Raoul Island	7.88	203	Pn	Pn	11 10 28.5	+1.1
GLKZ	Green Lake	7.89	203	P	Pn	11 10 23.8	-3.8
GLKZ				S	Sn	11 11 53.8	-1.6
MSVF	Nonsavu	8.27	300	Pn	Pn	11 10 34.6	+1.7
	4.3nm,0.3s,baz=120,slow=13,SNR=35						
MSVF				LR	LR	11 13 28.8	
	comp=Z,9μm,19.2s,baz=85,slow=37						
MSVF	Nonsavu	8.27	300	*i* P	Pn	11 10 33.2	+0.3
MSVF	Nonsavu	8.27	300	Pn	Pn	11 10 35.4	+2.5
AFI	Afiamalu	8.43	18	Pn	Pn	11 10 25.1	-10
	16nm,0.3s,baz=25,slow=5.3,SNR=12						
AFI				Sn	Sn	11 11 52.6	-16
	18nm,0.3s,baz=31,slow=22,SNR=4.1						
RAR	Rarotonga	13.64	89	Pn	Pn	11 11 34.6	-12
	11nm,0.3s,baz=259,slow=8.4,SNR=11						
OUZ	Omahuta	16.84	216	P	P	11 12 30.8	+1.5
OUZ	Omahuta	16.84	216		P	11 12 31.7	+2.4
KUZ	Kuaotunu	17.00	208	P	P	11 12 33.3	+2.2
HAZ	Te Kaha	17.08	202	P	Pn	11 12 24.1	-6.7
HAZ				S	Sn	11 15 26.1	-14
LIFNC	LIFOU	17.14	271		P	11 12 32.6	-0.1
LIFNC				IAmb	IAmb	11 12 54.8	
	comp=Z,108nm,0.9s						
PUZ	Puketiti	17.21	200	P	Pn	11 12 22.7	-10
PUZ				S	Sn	11 15 24.6	-18
MWZ	Matawai	17.69	201	P	Pn	11 12 37.0	-1.3
MWZ				S	Sn	11 15 37.4	-17
DZM	Mont Dzumac	17.75	266	*e*P	P	11 12 42.7	+3.0
	comp=Z,133nm,1.1s						
DZM				*e*LR	LR	11 16 51.4	
	comp=Z,1μm,20.5s						
DZM	Mont Dzumac	17.75	266	P	Pn	11 12 38.9	-0.4
	comp=Z,0.5nm,0.3s,baz=95,slow=16,SNR=4.6						
DZM	Mont Dzumac	17.75	266	P	Pn	11 12 37.1	-2.3
URZ	Urewera	17.77	202	P	Pn	11 12 39.0	-0.2
	comp=Z,0.9nm,0.3s,baz=301,slow=24,SNR=11						
URZ				S	Sn	11 15 41.3	-15
	comp=Z,0.4nm,0.3s,baz=301,slow=24,SNR=64						
URZ				LR	LR	11 18 20.9	
	comp=Z,2μm,19.3s,baz=31,slow=33						
URZ	Urewera	17.77	202	P	Pn	11 12 39.2	-0.1
URZ				S	Sn	11 15 40.0	-16
RIGZ	Rimuhau	17.95	200	P	P	11 12 42.2	+0.6
RIGZ				S	Sn	11 15 45.1	-16
RAHZ	Arahi	18.36	201	P	Pn	11 12 48.8	+2.2
RAHZ				S	Sn	11 15 55.9	-15
SANVU	Saraoutou	18.59	287	P	P	11 12 47.3	-1.5
SANVU				IAmb	IAmb	11 13 09.6	
	comp=Z,131nm,1.1s						
SANVU	Saraoutou	18.59	287	P	Pn	11 12 50.0	+0.6
BKZ	Black Stump Fm	18.79	202	P	Pn	11 12 51.3	-0.4
BKZ				S	Sn	11 16 04.6	-17
BKZ	Black Stump Fm	18.79	202	P	P	11 12 50.3	-0.6
HIZ	Hauiti	18.86	207	P	Pn	11 12 55.7	+3.1
HIZ	Hauiti	18.86	207	P	P	11 12 50.1	-1.4
TMVZ	Te Maari	19.04	204	P	Pn	11 12 57.3	+2.5
SNVZ	South Ngauruho	19.12	204	P	P	11 12 55.0	+0.3
KAHZ	Kahuranaki	19.22	201	P	P	11 12 56.0	+0.4
KAHZ				S	S	11 16 14.2	-17
BFZ	Birch Farm	20.23	201	P	P	11 13 07.3	+0.8
BFZ				IAmb	IAmb	11 13 25.6	
	comp=Z,71nm,0.9s						
TUWZ	Tuamarina	21.71	204	P	P	11 13 19.2	-3.2
TBI	Tubuai	23.05	98	*e*LR	LR	11 18 55.7	
	comp=Z,3μm,27.2s,baz=274						
PAE	Paea	23.74	84	*e*P	P	11 13 38.1	-5.4
	comp=Z,33nm,1.7s						
PAE	Paea	23.74	84	*e*T	T	11 38 08.2	
	comp=Z,3.5nm,0.3s						
PPT2	Papeete2	23.76	84	*e*P	P	11 13 38.7	-5.1
	comp=Z,107nm,1.4s						
PPT2				*e*LR	LR	11 18 57.9	
	comp=Z,4μm,26.2s,baz=255						
PPT	Papeete	23.77	84	LR	LR	11 21 18.2	
	comp=Z,2μm,18.9s,baz=262,slow=32						
OXZ	Oxford	24.07	205	P	P	11 13 46.7	+0.5
OXZ				IAmb	IAmb	11 13 55.8	
	comp=Z,30nm,0.7s						
PMOR	Pomariorio Ree	26.07	79	*e*P	P	11 14 00.4	-4.2
	comp=Z,45nm,1.3s						
VAH	Vaihoa	26.23	80	*e*P	P	11 14 01.7	-4.5
	comp=Z,45nm,1.6s						
HNR	Honiara	27.61	293	LR	LR	11 23 28.8	
	comp=Z,766nm,22.0s,baz=132,slow=33						
EIDS	Eidsvold	31.73	257	P	P	11 14 53.2	-1.8
RMQ	Roma	33.80	255	P	P	11 15 13.2	0.0
	comp=Z,16nm,0.9s						
CAN	Canberra	34.54	239	P	P	11 15 18.1	-1.4
CAN				pmax	pmax		
	comp=Z,22nm,1.3s						
CAN	Canberra	34.54	239	P	P	11 15 18.1	-1.4
CAN				IAmb	IAmb	11 15 38.9	
	comp=Z,22nm,1.3s						
TAOE	Nuku Hiva Isla	35.42	74	*e*LR	LR	11 24 15.8	
	comp=Z,2μm,27.7s,baz=239						
CMSA	Cobar Meteorol	36.70	246	P	P	11 15 38.0	0.0
	comp=Z,11nm,0.9s						
CTAO	Charters Tower	36.70	266	P	P	11 15 36.8	-1.3
CTAO				pmax	pmax		
	comp=Z,19nm,0.9s						
CTAO	Charters Tower	36.70	266	P	P	11 15 36.8	-1.3
CTAO				IAmb	IAmb	11 15 55.8	
	comp=Z,18nm,0.9s						
TOO	Toolangi	37.79	237	P	P	11 15 47.4	+0.1
TOO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TOO	Toolangi	37.79	237	P	P	11 15 47.4	+0.1
TOO	Toolangi	37.79	237	P	P	11 15 51.1	+3.8
	comp=Z,12nm,0.9s						
QLP	Quilpie	37.85	255	P	P	11 15 46.9	-0.9
	comp=Z,33nm,1.3s						
TAU	Tasmania Unive	38.00	228	P	P	11 15 50.2	+1.3
TAU				pmax	pmax		
	comp=Z,32nm,1.1s						
TAU	Tasmania Unive	38.00	228	P	P	11 15 50.2	+1.3
TAU				IAmb	IAmb	11 15 50.6	
	comp=Z,32nm,1.1s						
MTSU	Mount Surprise	38.88	268	P	P	11 15 56.4	-0.2
	comp=Z,14nm,0.7s						
PMG	Port Moresby	38.94	283	P	P	11 15 55.6	-1.5
	comp=Z,27nm,0.8s,baz=102,slow=12,SNR=7.6						
PMG	Port Moresby	38.94	283	P	P	11 15 56.2	-0.9
PMG				pmax	pmax		
	comp=Z,23nm,0.9s						
PMG	Port Moresby	38.94	283	P	P	11 15 56.2	-0.9
PMG				IAmb	IAmb	11 16 00.0	
	comp=Z,23nm,0.9s						
PMG	Port Moresby	38.94	283	P	P	11 15 56.6	-0.5
PMG	Port Moresby	38.94	283	P	P	11 15 56.6	-0.5
BRAT	Ballarat	39.00	237	P	P	11 15 59.8	+2.5
	comp=Z,6.7nm,0.8s						
STKA	Stephens Creek	40.20	246	P	P	11 16 05.8	-1.6
	comp=Z,3.4nm,0.7s,baz=82,slow=8.3,SNR=14						
STKA				LR	LR	11 31 49.5	
	comp=Z,1μm,19.4s,baz=77,slow=35						
STKA	Stephens Creek	40.20	246	P	P	11 16 06.5	-0.9
	comp=Z,1.4nm,1.1s						
ARPS	Mount Arapiles	40.51	239	P	P	11 16 13.9	+4.0
	comp=Z,15nm,0.8s						
INKA	Innaminka	40.91	253	P	P	11 16 13.1	-0.2
	comp=Z,53nm,1.4s						
COEN	Coen	41.02	274	P	P	11 16 13.9	-0.5
HTT	Hallett	42.54	244	P	P	11 16 26.5	-0.2
	comp=Z,17nm,0.9s						
LCRK	Leigh Creek	43.07	249	P	P	11 16 29.7	-1.2
	comp=Z,19nm,0.8s						
BBOO	Buckleboo	44.92	245	P	P	11 16 43.9	-1.8
BBOO	Buckleboo	44.92	245	P	P	11 16 46.1	+0.4
	comp=Z,12nm,0.7s						
WAKE	Wake Island	45.02	334		pP	11 16 57.3	-0.9
OOD	Oodnadatta	45.39	252	P	P	11 16 48.9	-0.6
	comp=Z,46nm,0.8s						
MULG	Mulgathing	46.66	249	P	P	11 16 57.7	-1.8
	comp=Z,36nm,0.8s						
AS31	Alice Springs	47.45	258	P	P	11 17 04.7	-1.1
ASAR	Alice Springs	47.45	258	P	P	11 17 04.2	-1.6
	comp=Z,17nm,0.9s,baz=91,slow=8.1,SNR=70						
ASAR				PcP	PcP	11 18 35.4	-0.4
	comp=Z,2.5nm,0.7s,baz=95,slow=3.4,SNR=4.7						
ASAR				LR	LR	11 37 36.7	
	comp=Z,863nm,18.1s,baz=92,slow=37						
ASAR	Alice Springs	47.45	258	P	P	11 17 04.7	-1.1
ASAR	Alice Springs	47.45	258	P	P	11 17 04.7	-1.1
WR0	Warramunga Arr	47.53	263	P	P	11 17 05.2	-1.2
WR0				IAmb	IAmb	11 17 09.3	
	comp=Z,25nm,1.4s						
WB0	Warramunga Arr	47.71	263	P	P	11 17 06.1	-1.7
WB0				IAmb	IAmb	11 17 10.2	
	comp=Z,15nm,0.8s						
WB2	Warramunga Arr	47.71	263	P	P	11 17 05.8	-2.0
WB2				IAmb	IAmb	11 17 09.0	
	comp=Z,16nm,0.9s						
WRAB	Tennant Creek	47.71	263	P	P	11 17 05.4	-2.4
WRAB				pmax	pmax		
	comp=Z,19nm,1.3s						
WRAB	Tennant Creek	47.71	263	P	P	11 17 05.7	-2.1
WRA	Warramunga Arr	47.72	263	P	P	11 17 05.8	-2.1
	comp=Z,9.5nm,0.9s,baz=91,slow=8.2,SNR=32						
WRA				PcP	PcP	11 18 36.8	+0.1
	comp=Z,3.5nm,0.7s,baz=100,slow=4.1,SNR=4.5						
WRA	Warramunga Arr	47.72	263	P	P	11 17 06.3	-1.6
WRA	Warramunga Arr	47.72	263	P	P	11 17 06.3	-1.6
FORT	Forrest	51.80	248	P	P	11 17 37.6	-1.1
FORT	Forrest	51.80	248	P	P	11 17 37.5	-1.2
WRKA	Warakurna	52.29	255	P	P	11 17 41.1	-1.5
MTN	Manton Dam	52.53	270	P	P	11 17 43.1	-1.2
GUMO	Guam	53.35	308	LR	LR	11 38 51.3	
	comp=Z,248nm,21.1s,baz=136,slow=34						
KNRA	Kununurra	53.90	266	P	P	11 17 52.7	-1.7
FITZ	Fitzroy Crossi	56.15	262	LR	LR	11 42 55.1	
	comp=Z,636nm,18.0s,baz=92,slow=37						
SBA	Scott Base	56.62	185	P	P	11 18 14.6	+1.5
SBA				pmax	pmax		
	comp=Z,37nm,1.4s						
SBA	Scott Base	56.62	185	P	P	11 18 14.6	+1.5
SBA				IAmb	IAmb	11 18 36.3	
	comp=Z,37nm,1.4s						
VNDA	Vanda	56.74	186	P	P	11 18 15.3	+1.4
	comp=Z,4.7nm,1.1s,baz=0.5,slow=7.7,SNR=6.2						
VNDA				LR	LR	11 38 39.8	
	comp=Z,264nm,20.6s,baz=24,slow=32						
VNDA	Vanda	56.74	186	P	P	11 18 12.1	-1.9
VNDA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VNDA	Vanda	56.74	186	P	P	11 18 12.1	-1.9
SIJI	Sorong	56.86	284	LR	LR	11 40 59.6	
	comp=Z,604nm,20.0s,baz=108,slow=34						
RPN	Rapa Nui	58.83	109	LR	LR	11 36 42.6	
	comp=Z,327nm,21.7s,baz=253,slow=29						
SOEI	Soe	59.89	271	P	P	11 18 36.4	-0.7
SOEI	Soe	59.89	271	P	P	11 18 37.0	-0.1
BATI	Baumata	60.30	271	LR	LR	11 45 42.6	
	comp=Z,693nm,18.2s,baz=142,slow=37						
PSA00	Pilbara Seismi	60.59	257	P	P	11 18 40.7	-1.0
PSA00	Pilbara Seismi	60.59	257	P	P	11 18 40.9	-0.8
PSA00				IAmb	IAmb	11 19 05.9	
	comp=Z,16nm,1.1s						
MORW	Morawa	62.36	248	P	P	11 18 53.1	-0.4
MORW				IAmb	IAmb	11 19 03.1	
	comp=Z,26nm,1.2s						
GTOI	Gorontalo	64.96	282	P	P	11 19 11.0	+0.2
	comp=Z,10nm,1.5s						
QSPA	South Pole Qui	68.07	180	P	P	11 19 32.3	+2.3
QSPA				IAmb	IAmb	11 19 56.9	
	comp=Z,11nm,0.9s						
JYT	Yasato	72.08	323	P	P	11 19 54.8	+0.1
PCJI	Pacitan	72.57	268	P	P	11 19 56.5	-1.7
	comp=Z,95nm,0.7s						
JMM	Marumori	72.94	324	P	P	11 19 59.5	-0.3
JMM				IAmb	IAmb	11 20 02.7	
	comp=Z,28nm,0.9s						
MJAR	Matsushiro Arr	73.43	322	P	P	11 20 02.2	-0.6
	comp=Z,16nm,0.7s,baz=158,slow=5.5,SNR=34						
MJAR				LR	LR	11 54 07.5	
	comp=Z,65nm,18.0s,baz=70,slow=37						
MJAR	Matsushiro Arr	73.43	322	P	P	11 20 02.3	-0.5
MJAR				pmax	pmax		
	comp=Z,15nm,0.8s						
MJAR	Matsushiro Arr	73.43	322	P	P	11 20 02.2	-0.5
MJAR				IAmb	IAmb	11 20 05.1	
	comp=Z,15nm,0.8s						
MAJO	Matsushiro	73.43	322	P	P	11 20 01.9	-0.9
MAJO				pmax	pmax		
	comp=Z,16nm,0.7s						
MAJO	Matsushiro	73.43	322	P	P	11 20 01.9	-0.9
MAJO				IAmb	IAmb	11 20 05.2	
	comp=Z,16nm,0.7s						
MAT	Matsushiro	73.43	322	P	P	11 20 01.6	-1.2
MAT				*e*S	SKiKP	11 29 33.6	+3.8
MJB9	Matsu-Tunnel	73.44	322	P	P	11 20 01.9	-1.0
MJB9				IAmb	IAmb	11 20 05.1	
	comp=Z,16nm,0.7s						
JOW	Kunigami	73.71	308	LR	LR	11 48 07.8	
	comp=Z,276nm,20.3s,baz=132,slow=32						
JWT	Wachi	74.22	319	P	P	11 20 07.2	-0.2
JWT				IAmb	IAmb	11 20 13.8	
	comp=Z,30nm,1.2s						
JSD	Sado	74.45	323	P	P	11 20 09.3	+0.7
YUK	Yuzh-Kuril'sk	75.13	332	*e*P	P	11 20 02.8	-10
YUK				*e*PPP	PPP	11 24 43.0	
YUK				*e*S	S	11 29 47.0	-0.3
JHS	Saijyo	75.44	318	P	P	11 20 15.3	+0.8
JHS				IAmb	IAmb	11 20 17.8	
	comp=Z,27nm,0.8s						
SMAI	San Martin Ant	75.99	158	P	P	11 20 19.8	+2.7
SKR	Severo-Kuril's	76.91	341	*e*P	P	11 20 20.7	-1.7
SKR				*e*S	S	11 30 03.0	-3.6
SKR				*e*SS	SS	11 35 00.8	-3.8
SKR				pmax	pmax		
	comp=Z,300nm,4.7s						
SKR				MLR	MLR		
	comp=Z,400nm,20.0s						
KSM	Kuching	76.93	277	P	P	11 20 23.4	0.0
KSM	Kuching	76.93	277	P	P	11 20 23.9	+0.5
TKX	Tecate	77.41	47	P	P	11 20 26.4	+0.6
TKX				IAmb	IAmb	11 20 27.2	
	comp=Z,12nm,0.9s						
MWC	Mount Wilson	77.44	45	P	P	11 20 26.3	+0.3
MWC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MWC	Mount Wilson	77.44	45	P	P	11 20 26.3	+0.3
ARVC	Arvin	77.49	44	P	P	11 20 27.0	+1.0
	baz=232						
MURC	Murrieta	77.63	46	P	P	11 20 27.5	+0.5
	baz=233						
BFSC	Mount Baldy Ra	77.71	45	P	P	11 20 28.1	+0.6
	baz=233						

MONP2	**Monument Peak**	**77.73**	**47**	P	**P**	**11 20 28.6**	**+0.8**
	baz=234						
VES	**Vestal, Richgr**	**77.77**	**43**	P	**P**	**11 20 28.4**	**+0.8**
	baz=231						
KMRM	**Mail Ridge**	**77.85**	**37**	P	**P**	**11 20 28.8**	**+0.7**
EDW2	**Edwards Air Fo**	**77.88**	**44**	P	**P**	**11 20 28.9**	**+0.5**
	baz=232,SNR=8.0						
SBJI	**Serang**	**77.98**	**268**	P	**P**	**11 20 27.7**	**-1.6**
	comp=Z,48nm,0.5s						
ISA	**Isabella, Lake**	**78.05**	**44**	P	**P**	**11 20 29.2**	**-0.1**
ISA				pmax	pmax		
	comp=Z,17nm,1.4s						
ISA	**Isabella, Lake**	**78.05**	**44**	P	**P**	**11 20 29.2**	**-0.1**
ISA				IAmb	IAmb	11 20 34.9	
	comp=Z,17nm,1.4s						
ISA	**Isabella, Lake**	**78.05**	**44**	P	**P**	**11 20 30.0**	**+0.7**
	baz=232						
PFO	**Pinyon Flats O**	**78.13**	**46**	P	**P**	**11 20 30.5**	**+0.7**
PFO				pmax	pmax		
	comp=Z,12nm,1.2s						
PFO	**Pinyon Flats O**	**78.13**	**46**	P	**P**	**11 20 30.5**	**+0.7**
PFO	**Pinyon Flats O**	**78.13**	**46**	P	**P**	**11 20 30.7**	**+0.8**
	baz=234						
TPFO	**Pinon Flats**	**78.13**	**46**	P	**P**	**11 20 30.9**	**+1.1**
	baz=234						
BBRC	**Big Bear Solar**	**78.21**	**46**	P	**P**	**11 20 31.1**	**+0.7**
	baz=233						
CGJI	**Cibinong**	**78.21**	**268**	P	**P**	**11 20 29.9**	**-0.7**
	comp=Z,27nm,0.8s						
O02D	**Mt. Diablo Mer**	**78.34**	**38**	P	**P**	**11 20 31.0**	**+0.2**
	baz=228						
CMB	**Columbia Colle**	**78.35**	**41**	P	**P**	**11 20 30.5**	**-0.3**
CMB				pmax	pmax		
	comp=Z,13nm,1.1s						
CMB	**Columbia Colle**	**78.35**	**41**	P	**P**	**11 20 30.5**	**-0.3**
CMB				IAmb	IAmb	11 20 32.6	
	comp=Z,12nm,1.1s						
LRMC	**Laurel Mtn Rad**	**78.45**	**44**	P	**P**	**11 20 32.2**	**+0.7**
	baz=232,SNR=6.8						
PETK	**Petropavlovsk-**	**78.62**	**343**	P	**P**	**11 20 31.6**	**-0.4**
	comp=Z,14nm,0.6s,baz=109,slow=7.2,SNR=23						
PETK				LR	LR	11 50 44.0	
	comp=Z,430nm,20.7s,baz=156,slow=32						
PETK	**Petropavlovsk-**	**78.62**	**343**	P	**P**	**11 20 31.2**	**-0.8**
PETK	**Petropavlovsk-**	**78.62**	**343**	P	**P**	**11 20 31.1**	**-0.8**
BELC	**Belle Mtn. Jos**	**78.67**	**46**	P	**P**	**11 20 33.1**	**+0.2**
	baz=234,SNR=6.2						
ORV	**Oroville**	**78.67**	**39**	P	**P**	**11 20 32.4**	**-0.2**
ORV				pmax	pmax		
	comp=Z,22nm,1.4s						
ORV	**Oroville**	**78.67**	**39**	P	**P**	**11 20 32.4**	**-0.2**
ORV				IAmb	IAmb	11 20 44.9	
	comp=Z,22nm,1.4s						
WDC	**Whiskeytown Da**	**78.75**	**38**	P	**P**	**11 20 32.5**	**-0.4**
WDC				pmax	pmax		
	comp=Z,25nm,1.3s						
WDC	**Whiskeytown Da**	**78.75**	**38**	P	**P**	**11 20 32.5**	**-0.4**
WDC				IAmb	IAmb	11 20 35.7	
	comp=Z,25nm,1.2s						
YSS	**Yuzh-Sakhalins**	**78.77**	**332**	*e*P	**P**	**11 20 33.4**	**+0.6**
YSS				*e*S	**S**	**11 30 28.2**	**+1.3**
YSS				MLR	MLR		
	comp=Z,300nm,18.0s						
YSS				MLR	MLR		
	comp=N,200nm,17.0s						
YSS				MLR	MLR		
	comp=E,100nm,17.0s						
YSS	**Yuzh-Sakhalins**	**78.77**	**332**	P	**P**	**11 20 33.1**	**+0.3**
YSS				IAmb	IAmb	11 20 36.3	
	comp=Z,27nm,0.9s						
CWC	**Cottonwood Cre**	**78.78**	**43**	P	**P**	**11 20 34.1**	**+0.6**
	baz=232						
BC3	**Big Chuckawall**	**78.83**	**47**	P	**P**	**11 20 34.5**	**+0.8**
	baz=234,SNR=6.3						
GLA	**Glamis**	**78.91**	**48**	P	**P**	**11 20 34.7**	**+0.6**
GLA				pmax	pmax		
	comp=Z,29nm,1.5s						
GLA	**Glamis**	**78.91**	**48**	P	**P**	**11 20 34.7**	**+0.6**
GLA				IAmb	IAmb	11 20 47.5	
	comp=Z,29nm,1.5s						
GLA	**Glamis**	**78.91**	**48**	P	**P**	**11 20 34.8**	**+0.8**
	baz=235						
GSC	**Goldstone, Bar**	**78.91**	**45**	P	**P**	**11 20 34.9**	**+0.8**
GSC				pmax	pmax		
	comp=Z,15nm,1.3s						
GSC	**Goldstone, Bar**	**78.91**	**45**	P	**P**	**11 20 34.9**	**+0.8**
GSC	**Goldstone, Bar**	**78.91**	**45**	P	**P**	**11 20 34.9**	**+0.8**
	baz=233,SNR=5.1						
MPMC	**Manual Prospec**	**78.92**	**44**	P	**P**	**11 20 34.8**	**+0.6**
	baz=232,SNR=7.4						
N02D	**Trinity Center**	**78.92**	**37**	P	**P**	**11 20 35.2**	**+1.2**
	baz=228						
HEC	**Hector,Ludlow**	**78.94**	**45**	P	**P**	**11 20 34.4**	**+0.2**
	baz=233,SNR=7.2						
O03E	**Paynes Creek**	**78.98**	**38**	P	**P**	**11 20 33.7**	**-0.6**
	baz=229						
M02C	**Callahan**	**79.12**	**37**	P	**P**	**11 20 35.0**	**-0.1**
	baz=228						
IRM	**Iron Mountain**	**79.33**	**46**	P	**P**	**11 20 37.0**	**+0.7**
	baz=234,SNR=8.8						
GMRC	**Granite Mounta**	**79.36**	**46**	P	**P**	**11 20 37.1**	**+0.5**
	baz=234						
YBH	**Yreka Blue Hor**	**79.43**	**37**	IAmb	IAmb	11 20 39.0	
	comp=Z,14nm,1.1s						
PNTR	**Pine Nut**	**79.50**	**40**	IAmb	IAmb	11 20 39.4	
	comp=Z,24nm,0.8s						
K02D	**Willamette Mer**	**79.56**	**35**	P	**P**	**11 20 37.4**	**0.0**
	baz=227						
TUQ	**Turquoise Moun**	**79.57**	**45**	P	**P**	**11 20 38.4**	**+0.7**
	baz=234						
FURC	**Furnace Creek,**	**79.57**	**44**	P	**P**	**11 20 38.6**	**+1.1**
	baz=233						
GRAC	**Grapevine Rang**	**79.57**	**43**	P	**P**	**11 20 38.9**	**+1.3**
	baz=232						
VCNR	**Virginia City**	**79.60**	**40**	IAmb	IAmb	11 20 39.9	
	comp=Z,13nm,1.0s						
LHV	**Little Huntoon**	**79.64**	**42**	IAmb	IAmb	11 20 43.8	
	comp=Z,25nm,1.2s						
YERR	**Yerington**	**79.65**	**41**	IAmb	IAmb	11 20 50.7	
	comp=Z,23nm,1.2s						
214A	**Organ Pipe Nat**	**79.69**	**49**	P	**P**	**11 20 38.7**	**+0.4**
	baz=236,SNR=5.5						
KASI	**Kota Agung**	**79.71**	**268**	P	**P**	**11 20 38.3**	**-0.5**
	comp=Z,55nm,1.1s						
NVAR	**Mina Array Bea**	**79.87**	**41**	P	**P**	**11 20 39.3**	**-0.1**
	comp=Z,7.1nm,0.7s,baz=224,slow=7.8,SNR=47						
NVAR				LR	LR	11 49 10.2	
	comp=Z,514nm,19.5s,baz=230,slow=31						
M04C	**Macdoel**	**79.95**	**37**	P	**P**	**11 20 40.6**	**+1.0**
	baz=228						
L04D	**Klamath Falls**	**79.98**	**37**	P	**P**	**11 20 40.7**	**+0.9**
	baz=228						
DBO	**Dodson Butte**	**80.08**	**35**	IAmb	IAmb	11 21 04.3	
	comp=Z,20nm,1.4s						
PDMCI	**Parker Dam,Lak**	**80.09**	**47**	P	**P**	**11 20 41.4**	**+1.0**
	baz=235						
KSRS	**Korea Array**	**80.25**	**317**	P	**P**	**11 20 41.8**	**+0.6**
	comp=Z,5.2nm,0.8s,baz=134,slow=6.0,SNR=15						
KSRS				LR	LR	11 51 40.1	
	comp=Z,176nm,20.1s,baz=121,slow=32						
TPNV	**Topopah Spring**	**80.26**	**44**	P	**P**	**11 20 41.0**	**-0.5**
TPNV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TPNV	**Topopah Spring**	**80.26**	**44**	P	**P**	**11 20 41.0**	**-0.5**
TPNV	**Topopah Spring**	**80.26**	**44**	P	**P**	**11 20 42.3**	**+0.8**
	baz=233						
KSAR	**Wonju Array Be**	**80.27**	**317**	P	**P**	**11 20 41.3**	**0.0**
KSAR	**Wonju Array Be**	**80.27**	**317**	P	**P**	**11 20 41.2**	**0.0**
MDSI	**Maura Dua**	**80.38**	**269**	P	**P**	**11 20 41.7**	**-0.7**
	comp=Z,20nm,0.9s						
J04D	**Umpqua Nationa**	**80.77**	**36**	P	**P**	**11 20 44.3**	**+0.2**
	baz=228						
I04A	**Tendick Farm,**	**80.98**	**35**	P	**P**	**11 20 46.0**	**+1.1**
	baz=228						
K05A	**Summer Lake**	**81.10**	**37**	IAmb	IAmb	11 20 48.1	
	comp=Z,28nm,1.0s						
MAW	**Mawson**	**81.26**	**199**	LR	LR	11 55 34.1	
	comp=Z,606nm,19.0s,baz=81,slow=35						
J05D	**Fort Rock, OR**	**81.28**	**36**	P	**P**	**11 20 46.5**	**-0.2**
	baz=229						
PRN	**Pahroc Range**	**81.30**	**44**	IAmb	IAmb	11 20 50.1	
	comp=Z,16nm,1.2s						
TUC	**Tucson**	**81.32**	**50**	P	**P**	**11 20 47.9**	**+0.8**
TUC				pmax	pmax		
	comp=Z,11nm,1.1s						
TUC	**Tucson**	**81.32**	**50**	P	**P**	**11 20 47.9**	**+0.8**
TUC	**Tucson**	**81.32**	**50**	P	**P**	**11 20 47.5**	**+0.4**
	baz=237						
R11A	**Troy Canyon, C**	**81.52**	**43**	P	**P**	**11 20 48.4**	**+0.3**
	baz=233						
MNAI	**Manna**	**81.56**	**269**	P	**P**	**11 20 47.4**	**-1.4**
	comp=Z,143nm,1.0s						
BMN	**Battle Mountai**	**81.77**	**40**	P	**P**	**11 20 50.3**	**+0.9**
BMN				pmax	pmax		
	comp=Z,21nm,1.4s						
BMN	**Battle Mountai**	**81.77**	**40**	P	**P**	**11 20 50.3**	**+0.9**
BMN				IAmb	IAmb	11 20 52.1	
	comp=Z,21nm,1.4s						
PINE	**Pine Mountain**	**81.77**	**36**	P	**P**	**11 20 49.5**	**+0.1**
PINE				IAmb	IAmb	11 21 02.9	
	comp=Z,23nm,1.1s						
TYV	**Tymovskoe**	**81.81**	**334**	*e*P	**P**	**11 20 50.7**	**+1.6**
TYV				pmax	pmax		
	comp=Z,13nm,1.2s						
TYV				pmax	pmax		
	comp=Z,200nm,5.4s						
319A	**Douglas**	**81.90**	**52**	P	**P**	**11 20 51.3**	**+1.1**
319A				IAmb	IAmb	11 20 52.4	
	comp=Z,13nm,1.0s						
319A				pP	**pP**	**11 21 02.9**	**+0.8**
I05D	**Terrebonne, OR**	**81.92**	**35**	P	**P**	**11 20 50.2**	**+0.3**
	baz=229						
X16A	**Lo Mia Camp, P**	**82.01**	**48**	IAmb	IAmb	11 20 53.2	
	comp=Z,14nm,1.1s						
USRK	**Ussuriysk Ar.**	**82.11**	**324**	P	**P**	**11 20 52.0**	**+1.1**
	comp=Z,6.4nm,0.8s,baz=143,slow=4.9,SNR=8.0						
USRK				LR	LR	11 53 57.5	
	comp=Z,421nm,19.6s,baz=124,slow=33						
WVOR	**Wild Horse Val**	**82.18**	**38**	IAmb	IAmb	11 21 04.8	
	comp=Z,24nm,1.4s						
LCMT	**Little Creek M**	**82.24**	**45**	IAmb	IAmb	11 21 05.0	
	comp=Z,12nm,1.2s						
H03S2	**Juan Fernandez**	**82.37**	**123**	T	T	12 53 02.6	
	baz=250,SNR=8.8						
H03S1	**Juan Fernandez**	**82.39**	**123**	T	T	12 52 59.1	
	baz=250,SNR=12						
H03S3	**Juan Fernandez**	**82.39**	**123**	T	T	12 53 02.1	
	baz=250,SNR=7.8						
KNB	**Kanab**	**82.52**	**45**	IAmb	IAmb	11 21 06.8	
	comp=Z,36nm,1.5s						
G05D	**Wamic, OR**	**82.53**	**35**	P	**P**	**11 20 53.3**	**+0.2**
	baz=228						
U15A	**North Rim**	**82.54**	**46**	IAmb	IAmb	11 20 56.3	
	comp=Z,13nm,1.0s						
WUAZ	**Wupatki**	**82.66**	**47**	IAmb	IAmb	11 20 56.5	
	comp=Z,12nm,1.1s						
WUAZ	**Wupatki**	**82.66**	**47**	P	**P**	**11 20 54.5**	**+0.3**
	baz=237						
MASI	**Maura Aman, Be**	**82.67**	**270**	P	**P**	**11 20 54.7**	**+0.1**
	comp=Z,1µmcomp=Z,100nm,1.0s						
SZCU	**Shurtz Canyon**	**82.68**	**45**	IAmb	IAmb	11 21 08.1	
	comp=Z,21nm,1.4s						
SPR3	**Spring Creek 3**	**82.69**	**43**	P	**P**	**11 20 54.8**	**+0.3**
I07A	**Izee**	**82.75**	**36**	P	**P**	**11 20 54.9**	**+0.5**
COYC	**Coyhaique**	**82.76**	**136**	P	**P**	**11 20 55.8**	**+1.3**
COYC				IAmb	IAmb	11 21 08.9	
	comp=Z,18nm,1.0s						
E04D	**Cinebar**	**82.76**	**33**	P	**P**	**11 20 54.6**	**+0.4**
	baz=227						
J08A	**Circle Bar Ran**	**82.86**	**38**	IAmb	IAmb	11 20 56.9	
	comp=Z,19nm,1.2s						
F05D	**White Salmon**	**82.88**	**34**	P	**P**	**11 20 54.9**	**+0.1**
	baz=228						
ZAIG	**Zacatecas**	**82.90**	**62**	P	**P**	**11 20 56.1**	**+0.2**
D04E	**Lakebay**	**83.08**	**33**	P	**P**	**11 20 56.4**	**+0.6**
	baz=227						
PKCU	**Pink Cliffs**	**83.10**	**45**	IAmb	IAmb	11 20 59.8	
	comp=Z,30nm,1.1s						
D03D	**Eldon**	**83.16**	**32**	P	**P**	**11 20 57.2**	**+0.9**
	baz=227						
NJ2	**Nanjing**	**83.43**	**308**	*e*P	**P**	**11 20 58.5**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
MTPU	**Mount Pierson**	**83.52**	**45**	IAmb	IAmb	11 21 01.9	
	comp=Z,22nm,1.0s						
121A	**Cookes Peak, D**	**83.59**	**51**	IAmb	IAmb	11 21 01.4	
	comp=Z,11nm,1.1s						
121A	**Cookes Peak, D**	**83.59**	**51**	P	**P**	**11 20 59.4**	**+0.3**
	baz=239						
TCRU	**Three Creeks R**	**83.67**	**44**	IAmb	IAmb	11 21 02.1	
	comp=Z,15nm,1.0s						
F07A	**Phinny Hill Vi**	**83.69**	**35**	IAmb	IAmb	11 21 01.0	
	comp=Z,19nm,1.2s						
MDJ	**Mudanjiang**	**83.69**	**323**	P	**P**	**11 21 00.0**	**+0.9**
MDJ				pP	pP	11 21 10.0	-1.5
MDJ				sP	sP	11 21 13.3	-3.0
MDJ				S	**S**	**11 31 23.8**	**+5.7**
MDJ				sS	sS	11 31 40.5	+1.0
MDJ				SS	**SS**	**11 36 52.3**	**+5.9**
MDJ				pmax	pmax		
	comp=Z,19nm,1.9s						
MDJ				LR	LR		
	comp=Z,240nm,17.9s						
MDJ				LR	LR		
	comp=Z,390nm,19.1s						
MDJ				LR	LR		
	comp=Z,640nm,20.8s						
MDJ	**Mudanjiang**	**83.69**	**323**	IAmb	IAmb	11 21 15.1	
	comp=Z,22nm,1.2s						
G08A	**Pilot Rock**	**83.82**	**36**	IAmb	IAmb	11 21 01.8	
	comp=Z,24nm,1.1s						
B05A	**Bryant**	**84.15**	**32**	P	**P**	**11 21 01.5**	**+0.2**
	baz=228						
E07A	**Sunnyside**	**84.16**	**34**	IAmb	IAmb	11 21 03.6	
	comp=Z,22nm,1.0s						
HAWA	**Hanford**	**84.22**	**35**	IAmb	IAmb	11 21 15.1	
	comp=Z,26nm,1.3s						
DUG	**Dugway, Tooele**	**84.34**	**43**	P	**P**	**11 21 03.3**	**+0.6**
	baz=235						
MFID	**Camas Ranch**	**84.41**	**39**	IAmb	IAmb	11 21 04.7	
	comp=Z,12nm,1.0s						
BMO	**Blue Mountains**	**84.45**	**37**	IAmb	IAmb	11 21 15.3	
	comp=Z,12nm,1.1s						
E08A	**Dider Farm, El**	**84.54**	**35**	IAmb	IAmb	11 21 05.8	
	comp=Z,14nm,1.1s						
Q16A	**Castle Valley**	**84.67**	**44**	IAmb	IAmb	11 21 21.0	
	comp=Z,31nm,1.5s						
TMUT	**Trail Mountain**	**84.86**	**44**	IAmb	IAmb	11 21 11.6	
	comp=Z,21nm,1.0s						
MNTX	**Cornudas Mount**	**84.93**	**53**	IAmb	IAmb	11 21 07.6	
	comp=Z,12nm,1.1s						
MNTX	**Cornudas Mount**	**84.93**	**53**	P	**P**	**11 21 05.7**	**0.0**
	baz=240						
D08A	**Wollman Farm,**	**84.97**	**34**	P	**P**	**11 21 05.1**	**-0.4**
D08A				IAmb	IAmb	11 21 07.5	
	comp=Z,16nm,1.0s						
E09A	**Wood Farm, Sta**	**85.04**	**35**	IAmb	IAmb	11 21 07.4	
	comp=Z,16nm,1.1s						
F10A	**Beach Ranch, E**	**85.19**	**36**	IAmb	IAmb	11 21 08.0	
	comp=Z,20nm,1.0s						
SPUT	**South Promonto**	**85.20**	**42**	IAmb	IAmb	11 21 08.8	
	comp=Z,12nm,1.1s						
PWL	**Port Wells**	**85.23**	**12**	P	**P**	**11 21 04.6**	**-1.9**
	baz=204						
HVU	**Hansel Valley**	**85.27**	**41**	IAmb	IAmb	11 21 19.7	
	comp=Z,10.0nm,1.0s						
HLID	**Hailey**	**85.32**	**39**	IAmb	IAmb	11 21 09.6	
	comp=Z,10.0nm,1.1s						
HLID	**Hailey**	**85.32**	**39**	P	**P**	**11 21 07.6**	**0.0**
	baz=234						
PLID	**Pearl Lake**	**85.33**	**37**	IAmb	IAmb	11 21 09.2	
	comp=Z,16nm,1.2s						
JLU	**Jordanelle**	**85.43**	**43**	IAmb	IAmb	11 21 20.7	
	comp=Z,8.7nm,1.2s						
MVCO	**Mesa Verde**	**85.52**	**47**	P	**P**	**11 21 08.1**	**-0.7**
	baz=238						
KLR	**Kul'dur**	**85.55**	**328**	LR	LR	11 55 30.3	
	comp=Z,476nm,19.8s,baz=134,slow=33						
KLR	**Kul'dur**	**85.55**	**328**	*i* P	**P**	**11 21 08.0**	**-0.3**
KLR				pmax	pmax		
	comp=Z,21nm,3.0s						
CN2	**Changchun**	**85.55**	**321**	*e*P	**P**	**11 21 08.8**	**+0.3**
CN2				sP	pwP	11 21 27.0	+0.3
CN2				S	**S**	**11 31 36.0**	**-0.6**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,200nm,19.0s						
CN2				LR	LR		
	comp=Z,300nm,19.0s						
CN2				LR	LR		
	comp=Z,300nm,21.0s						
B08A	**Colville Reser**	**85.60**	**33**	IAmb	IAmb	11 21 09.9	
	comp=Z,12nm,1.2s						
LC01	**Cunco**	**85.65**	**130**	P	**P**	**11 21 09.2**	**-0.2**
LC01				IAmb	IAmb	11 21 11.1	
	comp=Z,24nm,1.2s						
P18A	**Preston Nutter**	**85.66**	**44**	IAmb	IAmb	11 21 26.2	
	comp=Z,10nm,1.1s						
ANMO	**Albuquerque**	**85.77**	**50**	*ce*P	**P**	**11 21 10.5**	**+0.5**
ANMO				pmax	pmax		
	comp=Z,27nm,1.3s						
ANMO	**Albuquerque**	**85.77**	**50**	P	**P**	**11 21 10.2**	**+0.2**
ANMO	**Albuquerque**	**85.77**	**50**	P	**P**	**11 21 10.1**	**+0.1**
	baz=240						
C09A	**Chrisman Ranch**	**85.79**	**34**	P	**P**	**11 21 10.0**	**+0.4**
C09A				IAmb	IAmb	11 21 22.0	
	comp=Z,13nm,1.1s						
PLCA	**Paso Flores**	**85.80**	**132**	P	**P**	**11 21 10.3**	**+0.2**
	comp=Z,5.3nm,1.1s,baz=239,slow=8.6,SNR=7.1						
PLCA				LR	LR	11 53 40.4	
	comp=Z,406nm,18.2s,baz=244,slow=32						
PLCA	**Paso Flores**	**85.80**	**132**	P	**P**	**11 21 10.9**	**+0.8**
PLCA				pmax	pmax		
	comp=Z,18nm,1.5s						
PLCA	**Paso Flores**	**85.80**	**132**	P	**P**	**11 21 10.9**	**+0.8**
PLCA				IAmb	IAmb	11 21 23.3	
	comp=Z,18nm,1.4s						
LLLB	**Lillooet**	**85.84**	**30**	P	**P**	**11 21 10.3**	**+0.6**
LLLB				IAmb	IAmb	11 21 22.2	
	comp=Z,15nm,1.2s						
TTA	**Tatalina**	**85.89**	**8**	P	**P**	**11 21 09.2**	**-0.6**
	baz=197						
HWUT	**Hardware Ranch**	**85.92**	**42**	P	**P**	**11 21 10.6**	**0.0**
SYO	**Syowa Base**	**85.97**	**192**	⇑*e*P	**P**	**11 21 10.0**	**-0.2**
WHN	**Wuhan**	**86.04**	**305**	⇓P	**P**	**11 21 12.5**	**+1.3**
SNAA	**Sanae**	**86.39**	**177**	P	**P**	**11 21 12.7**	**+0.3**
SNAA				pmax	pmax		
	comp=Z,20nm,1.3s						
SNAA	**Sanae**	**86.39**	**177**	P	**P**	**11 21 12.7**	**+0.3**
SNAA				IAmb	IAmb	11 21 14.8	
	comp=Z,20nm,1.3s						
VNA3	**Neumayer Olymp**	**86.39**	**175**	P	**P**	**11 21 12.7**	**+0.4**
K20K	**Telida**	**86.57**	**9**	P	**P**	**11 21 12.7**	**-0.4**
	baz=199						
MNSI	**Mandailing Nat**	**86.59**	**272**	P	**P**	**11 21 12.5**	**-1.9**
	comp=Z,3µmcomp=Z,45nm,0.8s						
IPM	**Ipoh**	**86.64**	**276**	P	**P**	**11 21 15.7**	**+1.1**
TIA	**Tai'an**	**86.77**	**311**	P	**P**	**11 21 15.0**	**+0.3**
TIA				pmax	pmax		
	comp=Z,12nm,0.7s						
VNA2	**Neumayer--Watz**	**86.87**	**176**	P	**P**	**11 21 16.1**	**+1.4**
	baz=179,slow=3.3						
S22A	**4UR Ranch, Cre**	**86.93**	**47**	P	**P**	**11 21 16.3**	**+0.4**
	baz=239						
CAST	**Castle Rocks**	**86.94**	**10**	P	**P**	**11 21 13.9**	**-1.0**
	baz=201						
VNA1	**Neumayer--Stat**	**87.08**	**175**	P	**P**	**11 21 17.5**	**+1.8**
O20A	**White River Ci**	**87.23**	**45**	IAmb	IAmb	11 21 29.2	
	comp=Z,6.6nm,0.9s						
O20A	**White River Ci**	**87.23**	**45**	P	**P**	**11 21 16.6**	**-0.5**
	baz=238						
J20K	**Nowinta River**	**87.34**	**9**	P	**P**	**11 21 16.4**	**-0.4**
	baz=199						
NVL	**N'lazarevskaya**	**87.38**	**182**	*e*P	**pP**	**11 21 31.8**	**+2.8**
NVL				pmax	pmax		
	comp=Z,18nm,0.6s						
RND	**Reindeer**	**87.47**	**11**		pP	11 21 30.2	+0.3
GCSA	**Galena City Sc**	**87.53**	**7**	P	**P**	**11 21 17.4**	**-0.2**
	baz=196						
SMCO	**Snowmass**	**87.57**	**46**	IAmb	IAmb	11 21 31.6	
	comp=Z,8.2nm,1.1s						
MCK	**McKinley**	**87.76**	**11**	P	**P**	**11 21 18.1**	**-0.7**
	baz=204						
BW06	**Boulder Array**	**87.80**	**42**	IAmb	IAmb	11 21 46.1	
	comp=Z,9.2nm,1.3s						
BW06	**Boulder Array**	**87.80**	**42**	P	**P**	**11 21 19.7**	**-0.1**
	baz=237						
PD31	**Pinedale Array**	**87.80**	**42**	IAmb	IAmb	11 21 46.1	
	comp=Z,9.2nm,1.4s						
PDAR	**Pinedale Array**	**87.80**	**42**	P	**P**	**11 21 17.6**	**-2.3**
	comp=Z,2.5nm,0.8s,baz=213,slow=2.6,SNR=20						
PDAR				LR	LR	12 01 16.5	
	comp=Z,371nm,18.1s,baz=254,slow=36						
SDCO	**Great Sand Dun**	**87.84**	**48**	P	**P**	**11 21 20.4**	**+0.2**
	baz=240						
MSTX	**Muleshoe**	**87.95**	**52**	P	**P**	**11 21 20.5**	**0.0**
	baz=242						
833A	**Chaparral WMA,**	**87.95**	**58**	P	**P**	**11 21 20.7**	**+0.2**
	baz=244						
M27K	**Edge Creek, AK**	**87.97**	**15**	P	**P**	**11 21 19.9**	**-0.2**
	baz=210						
H17A	**Grant Village**	**88.07**	**40**	P	**P**	**11 21 20.8**	**-0.3**
	baz=236						
BOZ	**Bozeman (W)**	**88.12**	**39**	P	**P**	**11 21 21.3**	**+0.1**
	baz=236						
MT01	**Popeta**	**88.23**	**126**	IAmb	IAmb	11 21 24.1	
	comp=Z,15nm,0.9s						
T25A	**Trinidad**	**88.30**	**49**	P	**P**	**11 21 22.7**	**+0.5**
	baz=241						
WRH	**Wood River Hil**	**88.59**	**11**	P	**P**	**11 21 22.5**	**-0.2**
I21K	**Tanana**	**88.61**	**9**		pwP	11 21 38.9	-2.6
I21K	**Tanana**	**88.61**	**9**	P	**P**	**11 21 22.1**	**-0.6**
	baz=201						
SEY	**Seymchan**	**88.63**	**345**	P	**P**	**11 21 21.7**	**-1.2**
	comp=Z,8.0nm,0.8s,baz=142,slow=6.2,SNR=16						
SEY	**Seymchan**	**88.63**	**345**	*i* P	**P**	**11 21 22.5**	**-0.4**
GSI	**Gunungsitoli**	**88.64**	**272**	P	**P**	**11 21 26.1**	**+1.9**
Q24A	**Divide**	**88.69**	**47**	P	**P**	**11 21 23.6**	**-0.6**
	baz=240						
CCB	**Clear Creek Bu**	**88.80**	**11**		pP	11 21 36.0	0.0
H21K	**Melozitna Rive**	**88.94**	**9**	P	**P**	**11 21 23.6**	**-0.7**
	baz=200						
MDM	**Murphy Dome**	**89.01**	**11**		pP	11 21 35.2	-1.9
ILAR	**Eielson Array**	**89.08**	**11**	P	**P**	**11 21 23.9**	**-1.1**
	comp=Z,2.6nm,0.9s,baz=216,slow=4.8,SNR=12						
RLMT	**Red Lodge**	**89.25**	**40**	P	**P**	**11 21 26.6**	**+0.1**
	baz=237						
BJI	**Beijing**	**89.33**	**314**	P	**P**	**11 21 28.0**	**+1.3**
BJI				sP	**pP**	**11 21 41.0**	**+1.7**
BJI				pmax	pmax		
	comp=Z,14nm,1.8s						
J26L	**Joseph Creek**	**89.48**	**13**	P	**P**	**11 21 26.7**	**-0.3**
	baz=208						
ABTX	**Abilene, Hawle**	**89.66**	**55**	IAmb	IAmb	11 21 45.6	
	comp=Z,13nm,1.2s						
ABTX	**Abilene, Hawle**	**89.66**	**55**	P	**P**	**11 21 28.6**	**0.0**
	baz=244						
H24K	**Noodor Dome**	**89.87**	**11**	P	**P**	**11 21 28.4**	**-0.4**
	baz=205						
DAWY	**Dawson**	**90.02**	**15**	P	**P**	**11 21 29.8**	**+0.3**
	baz=212						
RDOG	**Red Dog Mine**	**90.19**	**4**		pP	11 21 43.4	+0.8
EGAK	**Eagle**	**90.23**	**14**	P	**P**	**11 21 29.6**	**-0.8**
	baz=211						
GYA	**Guiyang**	**90.31**	**298**	⇑P	**P**	**11 21 33.0**	**+1.2**
GYA				S	**S**	**11 32 22.5**	**-0.5**
KSCO	**Kaye Shedlock'**	**90.43**	**48**	P	**P**	**11 21 32.9**	**+0.8**
	baz=242						
ZEA	**Zeya**	**90.59**	**330**	*e*P	**pP**	**11 21 43.1**	**-1.8**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
COLD	**Coldfoot**	**90.78**	**9**	P	**P**	**11 21 33.2**	**+0.3**
	baz=202						
MTO3	**Montecristo**	**90.83**	**75**	P	**P**	**11 21 35.9**	**+1.3**
BILL	**Bilibino**	**90.91**	**353**	⇑*e*P	**P**	**11 21 33.9**	**+0.5**
BILL				*e*		11 25 07.3	
BILL				*i* S	**SKKSac**	**11 32 14.2**	**-1.6**
BILL				*e*SS	SS	11 38 44.9	+14
BILL				pmax	pmax		
	comp=Z,16nm,2.4s						
BILL				MLR	MLR		
	comp=Z,361nm,18.0s						
BILL	**Bilibino**	**90.91**	**353**	P	**P**	**11 21 33.9**	**+0.5**
BILL				IAmb	IAmb	11 21 46.5	
	comp=Z,12nm,1.3s						
HKT	**Hockley**	**91.46**	**58**	*i* P	**P**	**11 21 35.1**	**-1.7**
HKT				pmax	pmax		
	comp=Z,16nm,1.6s						
XAN	**Xi'an**	**91.72**	**306**	⇑P	**P**	**11 21 39.5**	**+1.4**
XAN				pP	pP	11 21 51.0	+0.3
XAN				sP	pwP	11 21 56.8	+0.6
XAN				pmax	pmax		
	comp=Z,31nm,0.7s						
XAN				LR	LR		
	comp=Z,440nm,12.4s						
XAN				LR	LR		
	comp=Z,570nm,11.7s						

XAN				LR	LR		
	comp=Z,330nm,15.1s						
HIA	Hailar	91.88	323	*i* P	P	11 21 39.6	+1.1
HIA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LAO	LASA Array	91.88	40	P	P	11 21 39.4	+0.8
LAO	LASA Array	91.88	40	P	P	11 21 38.6	+0.1
	baz=240						
RSSD	Black Hills	91.95	43	P	P	11 21 38.4	-0.7
RSSD				pmax	pmax		
	comp=Z,16nm,1.4s						
RSSD	Black Hills	91.95	43	P	P	11 21 38.4	-0.7
RSSD	Black Hills	91.95	43	P	P	11 21 39.9	+0.8
	baz=241						
CBKS	Cedar Bluff	92.34	49	P	P	11 21 41.0	+0.1
	baz=244						
HHC	Hu-ho-hao-te	92.81	313	*e*P	P	11 21 44.5	+1.4
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,83nm,6.6s						
KAN06	Argonia West S	93.00	51	IAmb	IAmb	11 21 45.3	
	comp=Z,12nm,1.2s						
KMI	Kunming	93.02	296	⇑P	P	11 21 46.3	+1.8
KMI				pP	pP	11 21 55.5	-1.7
KMI				sP	sP	11 22 00.5	-1.4
KMI				S	S	11 32 46.5	-1.2
KMI				SS	SS	11 38 58.5	-4.9
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,160nm,3.5s						
KMI				LR	LR		
	comp=Z,240nm,18.5s						
KMI				LR	LR		
	comp=Z,330nm,23.3s						
KMI				LR	LR		
	comp=Z,440nm,21.1s						
JTS	Las Juntas de	93.29	80	*i* P	P	11 21 45.3	-0.5
JTS				pmax	pmax		
	comp=Z,13nm,1.0s						
JTS	Las Juntas de	93.29	80	P	P	11 21 46.6	+0.8
JTS				pP	pP	11 21 59.0	+1.0
BTO	Baotou	93.75	312	*e*P	P	11 21 50.0	+2.6
CM31	Chiang Mai Arr	93.77	288	P	P	11 21 47.2	-0.7
CM31					pP	11 22 00.8	+0.2
CMAR	Chiang Mai Arr	93.77	288	P	P	11 21 48.1	+0.3
	comp=Z,7.0nm,0.8s,baz=129,slow=2.7,SNR=30						
CMAR				LR	LR	12 01 10.4	
	comp=Z,58nm,20.7s,baz=184,slow=34						
CHTO	Chiang Mai	93.90	289	P	P	11 21 48.2	-0.3
CHTO				pmax	pmax		
	comp=Z,11nm,0.8s						
CHTO	Chiang Mai	93.90	289	P	P	11 21 48.2	-0.3
CHTO	Chiang Mai	93.90	289	P	P	11 21 50.2	+1.7
DGMT	Dagmar	93.96	39	P	P	11 21 49.0	+1.0
	baz=241						
CD2	Chengdu	94.42	301	*e*P	P	11 21 50.5	-0.2
BGNE	Belgrade	94.57	47	P	P	11 21 51.4	+0.3
	baz=245						
YAK	Yakutsk	94.78	337	LR	LR	12 01 13.3	
	comp=Z,180nm,18.8s,baz=89,slow=33						
YAK	Yakutsk	94.78	337	*i* P	P	11 21 51.8	+0.4
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
INK	Inuvik	94.88	14	P	P	11 21 51.3	-0.4
	baz=218						
YKA	Yellowknife Ar	96.50	24	P	P	11 21 58.1	-1.2
	comp=Z,0.6nm,0.8s,baz=235,slow=4.5,SNR=13						
YKA				LR	LR	12 02 40.6	
	comp=Z,209nm,18.2s,baz=0.0,slow=34						
ECSD	EROS Data Cent	96.57	45	P	P	11 22 00.1	-0.1
	baz=246						
LPAZ	La Paz	98.39	111	LR	LR	12 00 10.7	
	comp=Z,606nm,18.1s,baz=244,slow=32						
AGMN	Agassiz Nation	98.88	41	P	P	11 22 09.4	-1.0
	baz=247						
SONM	Songino Array	99.10	318	P	Pdif	11 22 12.2	+0.7
	comp=Z,0.2nm,0.4s,baz=134,slow=6.2,SNR=2.1						
SONM				LR	LR	12 04 16.5	
	comp=Z,115nm,19.1s,baz=125,slow=34						
GTA	Gaotai	100.52	308	*e*P	Pdif	11 22 22.0	+3.9
GTA				pP	pP	11 22 31.5	+0.7
GTA				sP	sPdif	11 22 35.0	-0.5
GTA				SKS		11 32 56.5	
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,63nm,6.4s						
GTA				LR	LR		
	comp=Z,120nm,17.1s						
GTA				LR	LR		
	comp=Z,170nm,17.8s						
GTA				LR	LR		
	comp=Z,200nm,22.2s						
WMQ	Urumqi	110.45	310	*e*PKP	PKiKP	11 27 03.5	+0.9
WMQ				LR	LR		
	comp=Z,230nm,20.5s						
KSH	Kashi	118.50	304	PKP	PKiKP	11 27 19.8	+1.5
BRVK	Borovoye	122.45	320	*i* PKIKP	PKPdf	11 27 24.9	-0.3
BOSA	Boshof	126.22	202	PKP	PKiKP	11 27 35.9	+1.9
	comp=Z,3.1nm,1.0s,baz=146,slow=7.3,SNR=3.6						
ARU	Arti	128.34	326	*i* PKIKP	PKPdf	11 27 36.3	-0.1
ARU						11 29 41.1	
ARU						11 34 43.6	
ARU				SS	SS	11 46 44.8	-8.4
ARCES	ARCESS Array B	130.97	351	PKP	PKPdf	11 27 40.6	-0.4
	comp=Z,5.9nm,1.1s,baz=40,slow=2.1,SNR=3.8						
BELG	Belogornoye	135.79	324	*i* PKIKP	PKPdf	11 27 50.8	+0.3
MAK	Makhachkala	139.46	311	*e*P	Pdif	11 25 08.9	-2.0
MAK				*e*PPP	PPP	11 33 51.2	
GURO	Guroymak-BITLI	144.75	306		PKPbc	11 28 06.9	+0.4
AKASG	Malin Array Be	145.91	333	PKPbc	PKPdf	11 28 08.7	-0.1
	comp=Z,6.7nm,0.8s,baz=39,slow=4.3,SNR=26						
AKASG	Malin Array Be	145.91	333	PKP2	PKPdf	11 28 08.9	+0.1
AKASG	Malin Array Be	145.91	333	PKPdf	PKPdf	11 28 08.8	+0.1
AKBB	Malin Array Si	145.91	333	PKP2	PKPab	11 28 09.8	-0.2
AKBB	Malin Array Si	145.91	333	PKPdf	PKPab	11 28 09.8	-0.2
LVV	L'vov	148.66	337	*e*PKIKP	PKPdf	11 28 12.2	-1.2
CLL	Collm	150.19	351	*e*PKIKP	PKPbc	11 28 21.0	+0.1
CLL				*i*		11 28 25.2	
CLL	Collm	150.19	351	*e*PKPbc	PKPbc	11 28 21.0	+0.1
CLL				*i* (PKPab)	PKPab	11 28 25.2	-1.8
CLL				*e*		11 28 30.0	
CLL				LmH		12 40 00.0	
	comp=N,300nm,18.9s						
CLL				LmH		12 40 00.0	
	comp=E,300nm,18.2s						
CLL				LmV		12 40 00.0	
	comp=Z,400nm,18.6s						
CLL	Collm	150.19	351	PKPdf	PKPdf	11 28 16.3	+0.5
CLL					PKPab	11 28 25.3	-1.7
UZH	Uzhgorod	150.28	337	*e*PKIKP	PKiKP	11 28 24.0	+2.0
UZH				*i*		11 28 36.0	
UZH				*i*		11 28 39.3	
BRTR	Keskin Array B	150.32	313	PKPbc	PKPbc	11 28 21.7	-0.2
	comp=Z,1.5nm,0.6s,baz=98,slow=2.5,SNR=4.3						
DPC	Dobruska-Polom	150.48	346	⇑*e*PKP	PKiKP	11 28 22.3	-0.2
DPC	Dobruska-Polom	150.48	346	*e*PKIKP	PKiKP	11 28 22.3	-0.2
LANS	Liptovska Anna	150.75	341	*e*PKIKP	PKiKP	11 28 23.1	0.0
LANS				*e*		11 28 29.1	
LANS	Liptovska Anna	150.75	341	*e*PKP	PKiKP	11 28 23.1	0.0
LANS				*e*		11 28 29.1	
PRU	Pruhonice	151.19	348	⇑*e*PKP	PKPbc	11 28 23.4	0.0
PRU				*e*PKPAB	sPKPdf	11 28 33.4	-1.2
PRU	Pruhonice	151.19	348	*e*PKIKP	PKPbc	11 28 23.4	0.0
PRU				*e*		11 28 33.4	
MODS	Modra-Piesok	152.08	343	*e*PKIKP	PKPbc	11 28 22.9	-2.6
MODS	Modra-Piesok	152.08	343	*e*PKP	PKPbc	11 28 22.9	-2.6
KHC	Kasperske Hory	152.20	349	⇑*e*PKP	PKPbc	11 28 25.9	+0.1
KHC				*e*PKPAB	PKPab	11 28 34.1	-1.4
KHC				*e*pPKP	sPKPbc	11 28 42.1	-1.1
KHC	Kasperske Hory	152.20	349	*e*PKIKP	PKPbc	11 28 25.9	+0.1
KHC				*e*		11 28 34.1	
KHC				*e*		11 28 42.1	
CKRC	Cesky Krumlov	152.36	348	⇑*e*PKP	PKiKP	11 28 27.4	+1.0
GERES	GERESS Array B	152.45	348	PKPbc	PKPbc	11 28 26.3	-0.1
	comp=Z,1.1nm,0.7s,baz=48,slow=2.0,SNR=7.3						

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*TUL **30** 11:22:48.5±1.1, 35°.94N±0°.01×97°.30W±0°.02, h8^{km}±7^{km}, ML3.2, mb_Lg2.8/37(NEIC), Error ellipse: s-maj=2.4km s-min=1.3km az=141.0*

*ANF **30** 11:22:48.5±0.2, 35°.97N×97°.30W, h6^{km}, ML3.4/13, Error ellipse: s-maj=2.7km s-min=2.2km az=130.0*

*NEIC **30** 11:22:48.5±0.8, 35°.960N±0°.008×97°.32W±0°.02, h6^{km}±7^{km}, Error ellipse: s-maj=2.9km s-min=1.2km az=91.0*

ISC 30 11:22:48.6±1.1, 35°.96N±0°.02×97°.30W±0°.02, h8^{km}±11^{km}, n82, σ0^{s}.52/86, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK005	Luther M Schoo	0.32	163	Pg	Pg	11 22 54.7	-0.2
OK005				Sg	Sg	11 22 59.5	+0.4
OK031	S. Brethren Rd	0.38	91	Pg	Pg	11 22 56.1	+0.1
OK031				Sg	Sg	11 23 01.6	+0.6
OK025	Westminster Rd	0.38	184		Pg	11 22 55.8	-0.2
OK025				Sg	Sg	11 23 01.3	+0.3
BCOK	Bluff Creek, N	0.39	220	Pg	Pg	11 22 56.0	-0.2
BCOK				Sg	Sg	11 23 01.5	+0.1
QUOK	Quay	0.53	66	Pg	Pg	11 22 58.9	+0.1
QUOK				Sg	Sg	11 23 06.3	+0.6
OKCFA	Oklahoma City	0.56	193		Pg	11 22 59.1	-0.3
OKCFA				Sg	Sg	11 23 07.0	+0.4
OKCFA	Oklahoma City	0.56	193	P	Pg	11 22 59.1	-0.3
	baz=11,SNR=46						
OKCFA				S	Sg	11 23 06.8	+0.2
	baz=11						
OKCSW	OKLAHOMA CITY	0.56	191	Pg	Pg	11 22 59.2	-0.3
FNO	Franklin	0.71	186	Pg	Pg	11 23 01.8	-0.4
FNO				Sg	Sg	11 23 11.6	+0.2
CROK	Carrier	0.77	315	Pg	Pg	11 23 03.5	0.0
BLOK	Blackwell	0.80	5	Pg	Pg	11 23 04.0	-0.1
W35A	Tecumseh	0.88	156		Pg	11 23 04.6	-0.9
GC02	Grant County #	1.00	333	Pg	Pg	11 23 07.5	-0.3
KAN13	South Haven SW	1.06	352		Pg	11 23 08.7	-0.3
OK032	Salt Plains WL	1.12	319		Pg	11 23 09.6	-0.5
KAN14	Manchester OK	1.13	332		Pg	11 23 09.8	-0.4
T35A	Sooner Cattle	1.15	34	Pg	Pg	11 23 10.1	-0.6
T35B	Sooner Cattle	1.15	34	P	Pg	11 23 10.1	-0.6
	baz=214,SNR=336						
T35B				S	Sg	11 23 25.6	0.0
	baz=214						
TUL1	Leonard	1.23	92	Pn	Pg	11 23 10.6	-1.5
TUL1	Leonard	1.23	92	P	Pg	11 23 10.7	-1.5
	baz=273						
TUL1				S	Sg	11 23 27.6	-0.5
	baz=273						
KAN05	Bluff City Nor	1.23	338		Pg	11 23 11.8	-0.6
KAN01	Argonia South	1.25	343		Pg	11 23 12.0	-0.5
KAN10	Anthony SW Sta	1.32	331		Pn	11 23 13.4	-0.1
OK035	E0210 Rd and N	1.36	304		Pn	11 23 13.5	-0.4
KAN06	Argonia West S	1.36	341		Pn	11 23 13.9	-0.1
KAN08	Anthony NE Sta	1.37	337		Pn	11 23 14.1	-0.1
KAN16	Harper SW Stat	1.40	334		Pn	11 23 14.6	0.0
X34A	Smith Ranch, M	1.42	198		Pn	11 23 14.7	-0.2
U32A	Winter Ranch,	1.44	287	Pn	Pn	11 23 14.9	-0.2
U32A	Winter Ranch,	1.44	287	P	Pn	11 23 14.9	-0.2
	baz=107						
U32A				S	Sg	11 23 35.0	+0.2
	baz=107						
KAN12	Harper NE Stat	1.45	337		Pn	11 23 15.4	+0.2
LOOK	Love County	1.97	177		Pn	11 23 22.9	+0.6
X37A	Clayton	2.09	130		Pn	11 23 24.6	+0.7
X37A	Clayton	2.09	130	P	Pn	11 23 24.4	+0.4
	baz=311,SNR=60						
U38A	Gravette	2.41	78		Pn	11 23 28.8	+0.4
U38A	Gravette	2.41	78	P	Pn	11 23 28.8	+0.4
	baz=259,SNR=87						
Z35A	Perchaven, San	2.62	179		Pn	11 23 31.4	+0.1
Z35A				IAmb_Lg		11 24 16.3	
	comp=Z,17nm,0.7s						
Z35A	Perchaven, San	2.62	179	P	Pn	11 23 31.8	+0.5
	baz=359,SNR=7.1						
R32A	Long Quarter,	2.70	336		Pn	11 23 32.4	-0.1
R32A	Long Quarter,	2.70	336	S	Sn	11 24 06.5	+1.1
	baz=155						
HHAR	Hobbs	2.74	82		Pn	11 23 33.5	+0.4
HHAR	Hobbs	2.74	82	P	Pn	11 23 33.4	+0.4
	baz=264						
W39A	Magazine	2.97	104		Pn	11 23 36.2	+0.2
W39A				IAmb_Lg		11 24 23.6	
	comp=Z,46nm,1.0s						
W39A	Magazine	2.97	104	P	Pn	11 23 36.3	+0.2
	baz=286,SNR=18						
KSU1	Kansas State U	3.18	10	Pn	Pn	11 23 39.6	+0.5
KSU1	Kansas State U	3.18	10	IAmb_Lg		11 24 31.8	
	comp=Z,21nm,0.8s						
Z38A	Mt. Pleasant	3.30	144		Pn	11 23 41.2	+0.5
MIAR	Mount Ida	3.36	114	Pn	Pn	11 23 42.2	+0.7
MIAR	Mount Ida	3.36	114	P	Pn	11 23 42.5	+1.0
	baz=296,SNR=18						
U40A	Yellville	3.62	82		Pn	11 23 45.2	+0.1
U40A				IAmb_Lg		11 24 49.3	
	comp=Z,18nm,0.7s						
U40A	Yellville	3.62	82	P	Pn	11 23 45.2	+0.1
	baz=265,SNR=25						
U40A				P	Pn	11 23 45.2	+0.1
	baz=265,SNR=25						
S39A	Bolivar	3.63	60	Pn	Pn	11 23 45.4	+0.2
S39A				IAmb_Lg		11 24 43.0	
	comp=Z,13nm,0.7s						
S39A	Bolivar	3.63	60	P	Pn	11 23 45.6	+0.5
	baz=243,SNR=14						
AMTX	Amarillo	3.73	255		Pn	11 23 46.7	0.0
AMTX				IAmb_Lg		11 24 48.2	
	comp=Z,26nm,0.7s						
X40A	Basin Creek Fa	3.94	111		Pn	11 23 50.1	+0.6
WHTX	Lake Whitney,	3.96	182	Pn	Pn	11 23 49.2	-0.5
WLAR	White Oak Lake	4.13	122	IAmb_Lg		11 25 00.6	
	comp=Z,17nm,0.8s						
237A	Washetta, Mont	4.14	162	Pn	Pn	11 23 51.5	-0.6
WHAR	Wooly Hollow	4.14	98	Pn	Pn	11 23 52.2	+0.1
W41B	Gary Mavity, V	4.20	99	P	Pn	11 23 53.0	0.0
	baz=282,SNR=9.1						
FCAR	Ozark Folk Cen	4.20	89	Pn	Pn	11 23 53.0	0.0
FCAR				IAmb_Lg		11 25 02.0	
	comp=Z,18nm,0.7s						
MGMO	Mountain Grove	4.22	72	Pn	Pn	11 23 54.0	+0.6
MGMO				IAmb_Lg		11 25 04.9	
	comp=Z,15nm,0.7s						
R40A	Maddies Statio	4.65	58	Pn	Pn	11 23 59.3	+0.1
R40A	Maddies Statio	4.65	58	P	Pn	11 23 59.4	+0.3
	baz=242,SNR=36						
P38A	Dawn	4.72	38		Pn	11 24 00.7	+0.5
P38A				IAmb_Lg		11 25 19.4	
	comp=Z,17nm,0.8s						
N33A	J Bar K, Exete	4.77	359	Pn	Pn	11 23 59.9	-1.0
N33A				IAmb_Lg		11 25 27.1	
	comp=Z,15nm,0.8s						
MSTX	Muleshoe	4.91	248		Pn	11 24 03.3	+0.4
LCAR	Lake Charles	4.99	87	Pn	Pn	11 24 03.0	-0.8
LCAR				IAmb_Lg		11 25 27.8	
	comp=Z,11nm,0.9s						
N35A	Tabor	5.06	14	Pn	Pn	11 24 03.9	-1.0
KSCO	Kaye Shedlock'	5.21	307	IAmb_Lg		11 25 36.1	
	comp=Z,10nm,0.7s						
CCM	Cathedral Cave	5.28	65	Pn	Pn	11 24 08.5	+0.7
BGNE	Belgrade	5.48	353	Pn	Pn	11 24 10.5	-0.2
P40A	Paris	5.48	48	Pn	Pn	11 24 10.3	-0.2
PBMO	Poplar Bluff	5.61	80	IAmb_Lg		11 25 50.6	
	comp=Z,26nm,0.8s						
T25A	Trinidad	5.84	284	Pn	Pn	11 24 15.8	0.0
JCT	Junction City	5.85	202		Pn	11 24 14.6	-1.2
JCT				IAmb_Lg		11 26 07.2	
	comp=Z,18nm,0.8s						
SLM	Saint Louis	6.23	63	IAmb_Lg		11 26 07.1	
	comp=Z,19nm,1.1s						
W45A	Hickory Valley	6.67	95	IAmb_Lg		11 26 28.0	
	comp=Z,18nm,0.8s						
S44A	Carbondale	6.68	73	IAmb_Lg		11 26 22.3	
	comp=Z,15nm,0.7s						
ECSD	EROS Data Cent	7.78	4	Pn	Pn	11 24 42.1	-0.1
HDIL	Hopedale	7.79	52	Pn	Pn	11 24 41.8	-0.5
SPMN	Marine on St.	9.86	19	IAmb_Lg		11 28 14.5	
	comp=Z,6.9nm,1.1s						

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*PRU **30** 11:28:05.7±0.0, 51°.48N×16°.16E, h0^{km}*

ISC 30 11:28:05.1±2.4, 51°.5N±0°.1×16°.15E±0°.06, h0^{km}, n15, σ0^{s}.59/28, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.68	172	*e*Pg	Pg	11 28 18.5	+0.3
KSP				*e*Sg	Sg	11 28 26.7	-0.3
CHVC	Chvalec	0.94	184	*e*PG	Pg	11 28 23.1	+0.1
CHVC				*e*SG	Sg	11 28 35.1	0.0
	comp=Z,11nm,0.5s						
OSTC	Ostas	0.96	177	*e*PG	Pg	11 28 23.9	+0.3
OSTC				*e*SG	Sg	11 28 36.0	-0.1
UPC	Upice	1.02	185	*e*PG	Pg	11 28 24.9	+0.3
UPC				*e*SG	Sg	11 28 37.1	-0.6
	comp=Z,13nm,0.2s						
DPC	Dobruska-Polom	1.18	175	*e*PG	Pg	11 28 27.3	-0.3
DPC				*e*SG	Sg	11 28 41.7	-1.1
DPC	Dobruska-Polom	1.18	175	*e*	Pg	11 28 27.3	-0.3
DPC	Dobruska-Polom	1.18	175	*e*	Sg	11 28 41.7	-1.1
PVCC	Panska Ves	1.41	226	*e*PG	Pn	11 28 31.9	-0.1
PVCC				*e*SG	Sg	11 28 50.1	-0.2
KRLC	Kraliky	1.50	164	*e*PG	Pn	11 28 33.4	+0.1
KRLC				*e*SG	Sg	11 28 52.3	-1.0
	comp=Z,11nm,0.5s						
PRU	Pruhonice	1.84	214	*e*PG	Pn	11 28 38.2	+0.3
PRU				*e*SG	Sg	11 29 03.8	-0.4
MORC	Moravsky Berou	1.96	153	*e*PN	Pn	11 28 39.4	-0.2
MORC				*e*SG	Sb	11 29 06.6	0.0
VRAC	Vranov	2.23	173	*e*PN	Pn	11 28 44.1	+0.8
VRAC				*e*SG	Sb	11 29 15.2	+0.8
KRUC	Moravsky	2.47	176	*e*SG	Sg	11 29 22.9	-1.3
NKC	Novy Kostel	2.67	243	*e*PG	Pg	11 28 55.8	-0.5
NKC				*e*SG	Sg	11 29 30.4	-0.6
KHC	Kasperske Hory	2.90	216	*e*PN	Pn	11 28 52.8	+0.2
KHC				*e*PG	Pb	11 28 58.1	+0.4
KHC				*e*SG	Sg	11 29 37.9	-0.4

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*IDC **30** 11:39:37.3±5.3, 6°.37S×154°.48E, h75^{km}±45^{km}, mb3.5/7, mb1 3.8/9, mb1mx3.6/34, mbtmp3.9/9, ML3.0/2, MS3.2/1, Ms1 3.2/1, ms1mx3.0/23, Error ellipse: s-maj=48.0km s-min=27.2km az=121.0*

ISC 30 11:39:34.0±1.0, 6°.4S±0°.2×154°.7E±0°.2, h48^{km}, n15, σ0^{s}.86/16, mb4.2/12, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.03	248	P	Pn	11 41 29.3	+1.2
	1.5nm,0.3s,baz=74,slow=8.9,SNR=7.2						
PMG				LR	LR	11 44 25.4	
	comp=Z,160nm,18.1s,baz=54,slow=37						
CTA	Charters Tower	15.88	210	P	P	11 43 16.9	-0.4
	0.3nm,0.3s,baz=47,slow=4.3,SNR=4.1						
WRA	Warramunga Arr	23.91	234	P	P	11 44 43.2	-0.3
	6.0nm,1.0s,baz=57,slow=9.7,SNR=13						
WRA				PcP	PcP	11 48 26.0	+0.5
	1.4nm,1.0s,baz=70,slow=2.9,SNR=5.1						
ASAR	Alice Springs	26.34	227	P	P	11 45 04.4	-1.3
	0.5nm,0.8s,baz=65,slow=8.5,SNR=7.4						
SONM	Songino Array	68.67	327	P	P	11 50 32.2	-0.4
	0.4nm,0.7s,baz=145,slow=4.1,SNR=4.5						
GUN	Gumba	74.55	301	*e*P	P	11 51 08.6	0.0
	16nm,0.7s						
DMN	Daman	75.13	301	*e*P	P	11 51 12.0	+0.1
	29nm,0.8s						
KOLN	Koldanda	76.46	300	*e*P	P	11 51 19.3	-0.1
	20nm,0.8s						
DANN	Dangsing	76.47	301	*e*P	P	11 51 19.0	-0.6
	15nm,0.6s						
PYUN	Piuthan	77.06	301	*e*P	P	11 51 21.9	-0.9
	19nm,0.9s						
MKAR	Makanchi Array	82.76	319	P	P	11 51 53.1	+0.2
	0.2nm,0.4s,baz=95,slow=7.1,SNR=6.0						
ILAR	Eielson Array	82.94	22	P	P	11 51 52.7	-0.8
	0.5nm,0.8s,baz=255,slow=4.9,SNR=4.9						
NVAR	Mina Array Bea	91.60	52	P	P	11 52 37.9	+1.5
	1.4nm,0.9s,baz=260,slow=7.1,SNR=8.2						
YKA	Yellowknife Ar	95.96	28	P	P	11 52 55.9	+0.3
	0.2nm,0.7s,baz=265,slow=4.8,SNR=2.7						
TORD	Torodi Ar. Bea	152.57	286	PKPbc	PKPbc	11 59 25.0	-1.2
	1.3nm,0.7s,baz=66,slow=2.0,SNR=7.4						

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*BUL **30** 11:43:45.1±2.1, 25°.97S×29°.53E, h0^{km}±14^{km}, MD3.8*

*EAF **30** 11:43:46.2±0.9, 25°.91S×29°.63E, h2^{km}±6^{km}, MD3.6*

ISC 30 11:43:47.9±2.2, 25°.69S±0°.09×29°.8E±0°.1, h10^{km}, n10, σ1^{s}.12/20, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNG	Changalane	2.23	106	*i* P	Pn	11 44 25.6	+0.6
CNG				*i* S	Sn	11 44 53.1	+0.4
CNG	Changalane	2.23	106	*i* P	Pn	11 44 25.6	+0.6
CNG				*i* S	Sn	11 44 53.1	+0.4
MOPA	Mopani	2.61	34	*i* P	Pb	11 44 33.1	-1.7
MOPA				*i* S	Sb	11 45 06.3	-0.6
MOPA	Mopani	2.61	34	*i* P	Pb	11 44 33.1	-1.7
MOPA				*i* S	Sb	11 45 06.3	-0.6
MSNA	Messina	3.33	4	*i* P	Pn	11 44 41.7	+1.6
MSNA				*i* Sg	Sg	11 45 36.8	+1.7
MSNA	Messina	3.33	4	*i* P	Pn	11 44 41.7	+1.6
MSNA				*i* Sg	Sg	11 45 36.8	+1.7
MATP	Matopo	5.37	347	*i* P	Pn	11 45 08.6	+0.3
MATP				*i* S	Sn	11 46 10.2	-0.1
MATP	Matopo	5.37	347	*i* P	Pn	11 45 08.6	+0.3
MATP				*i* S	Sn	11 46 10.2	-0.1
BLWY	Bulawayo	5.63	349	*i* P	Pn	11 45 12.4	+0.6
BLWY				*i* S	Sn	11 46 15.7	-1.0
BLWY	Bulawayo	5.63	349	*i* P	Pn	11 45 12.4	+0.6
BLWY				*i* S	Sn	11 46 15.7	-1.0

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*BJI **30** 11:53:48.1±0.0, 40°.91N×142°.92E, h51^{km}, mB4.9/19, mb4.4/28, Ms3.9/4, Ms7 3.8/5*

*JMA **30** 11:53:49.0±0.2, 40°.90N×142°.71E, h21^{km}±3^{km}, M4.1*

JMA Felt I J1.

*NIED **30** 11:53:49.0, 40°.90N×142°.71E, h21^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.03; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$-0.87; $M_{r\theta}$0.40; $M_{\theta\phi}$-0.28; $M_{\phi r}$0.82; Fault plane solution: $M_0$1.35000×10^{15} NP1:ϕ_s23.00000°, δ66.00000°, λ94.00000°. NP2:ϕ_s195.00000°, δ24.00000°, λ82.00000°.*

*MOS **30** 11:53:49.4±1.0, 40°.99N×142°.75E, h48^{km}, mb4.6/17 Error ellipse: s-maj=8.6km s-min=5.7km az=86.7*

*NEIC **30** 11:53:51.7±1.2, 40°.90N±0°.06×142°.8E±0°.1, h52^{km}±7^{km}, mb4.5/20, Error ellipse: s-maj=13.5km s-min=7.1km az=110.0*

*IDC **30** 11:53:52.2±0.7, 40°.92N×142°.65E, h53^{km}±6^{km}, mb3.8/18, mb1 3.9/24, mb1mx3.8/65, mbtmp4.1/24, MS3.5/3, Ms1 3.6/3, ms1mx3.0/50, Error ellipse: s-maj=13.9km s-min=12.0km az=94.0*

ISC 30 11:53:51.0±0.6, 40°.91N±0°.03×142°.78E±0°.04, h48^{km}±5^{km}, n142, σ1^{s}.38/168, mb4.3/38, MS3.8/3, 9C-11D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	1.08	230	⇓P	Pn	11 54 07.7	-1.9
JKEN				*e*S	Sn	11 54 21.1	-2.4
JARK	Aomorirokkasho	1.08	276	⇓P	Pn	11 54 07.6	-2.1
JARK				*e*S	Sn	11 54 21.1	-2.4
JANG	Nango	1.10	242	⇓P	Pn	11 54 08.2	-1.8
JANG				*e*S	Sn	11 54 22.0	-2.1
ERM	Erimo	1.14	14	*e*P	Pn	11 54 10.2	-0.3
ERM				SN	Sn	11 54 27.5	+2.4
ERM	Erimo	1.14	14		Pn	11 54 11.0	+0.4
ERM				Sn	Sn	11 54 25.7	+0.6
JEM	Erimo	1.14	14	P	Pn	11 54 10.0	-0.6
JEM				*e*S	Sn	11 54 25.3	+0.2
JAHD	Aomorihigashid	1.15	289	⇓P	Pn	11 54 08.7	-1.9
JAHD				*e*S	Sn	11 54 22.3	-3.0
JTH	Tanohata	1.20	216	⇓P	Pn	11 54 09.5	-1.8
JTH				*e*S	Sn	11 54 24.1	-2.2
JTM	Tenmabayashi	1.31	265	⇓P	Pn	11 54 11.4	-1.4
JTM				S	Sn	11 54 27.3	-1.8
JTM	Tenmabayashi	1.31	265		Pn	11 54 11.6	-1.2
JNBK	Urakawa-nobuka	1.37	359	⇑P	Pn	11 54 13.4	-0.3
JNBK				*e*S	Sn	11 54 32.1	+1.4
JOT	Ohata	1.40	290	⇓P	Pn	11 54 12.4	-1.6
JOT				S	Sn	11 54 29.8	-1.4
JKB	Kayabe	1.64	307	⇓P	Pn	11 54 16.0	-1.3
JKB				S	Sn	11 54 35.1	-2.2
JCH	Churui	1.76	14	P	Pn	11 54 18.9	-0.1
JCH				S	Sn	11 54 40.2	0.0
JAH	Hinai	1.79	247	⇓P	Pn	11 54 19.2	-0.1
JAH				S	Sn	11 54 41.0	+0.2
JOM	Ohasama	1.83	219	P	Pn	11 54 19.8	-0.2

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JOM                                  eS    Sn     11 54 42.8 +0.8
JIAM  Iburiatsuma        1.83 340    P     Pn     11 54 21.2 +1.2
JSR   Shiriuchi          1.89 290   ⇓P     Pn     11 54 20.3 -0.4
JSR                                  S     Sn     11 54 42.6 -0.8
JBT2  Biratori 2         1.90 351    P     Pn     11 54 20.9  0.0
JBT2                                 eS    Sn     11 54 43.9 +0.4
JEW   Eniwo              2.17 333    P     Pn     11 54 24.9 +0.2
JEW                                  S     Sn     11 54 51.6 +1.2
JEW   Eniwo              2.17 333          Pn     11 54 25.4 +0.8
JOMM  Oshimamatsumae     2.19 287    P     Pn     11 54 24.1 -0.7
JOMM                                 eS    Sn     11 54 49.9 -0.7
ASAJ  Asahikawa          3.21 358    P     Pn     11 54 39.5 +0.6
      16nm,0.3s,baz=205,slow=13,SNR=187
ASAJ                                 S     Sn     11 55 17.4 +1.6
      11nm,0.3s,baz=104,slow=31,SNR=7.7
JKA   Kamikawa-asahi     3.21 358          Pn     11 54 39.4 +0.5
NMR   Nemuro--Hokkai     3.29  41⇑iP     Pn     11 54 38.6 -1.4
NMR                                  eS    Sn     11 55 13.1 -4.8
JMM   Marumori           3.41 208          Pn     11 54 41.7 +0.2
GLVR  Golovnino          3.48  35    eP    Pn     11 54 42.3 -0.3
GLVR                                 i S   Sn     11 55 20.0 -2.5
GLVR                                 smax  smax
      comp=N,263nm,0.2s
GLVR                                 smax  smax
      comp=E,783nm,0.3s
RUSJ  Misakicho          3.68  29    eP    Pn     11 54 45.9 +0.6
RUSJ                                 eS    Sn     11 55 26.9 -0.4
YUK   Yuzh-Kuril'sk      3.87  35d iP    Pn     11 54 47.2 -0.6
YUK                                  eS    Sn     11 55 28.5 -3.5
YUK                                  pmax  pmax
      comp=Z,149nm,0.2s
YUK                                  pmax  pmax
      comp=N,30nm,0.1s
YUK                                  smax  smax
      comp=N,401nm,0.4s
YUK                                  smax  smax
      comp=E,456nm,0.4s
SHO   Shikotan           4.21  44⇑iP     Pn     11 54 50.9 -1.7
SHO                                  eS    Sn     11 55 34.6 -5.9
SHO                                  pmax  pmax
      comp=E,24nm,0.4s
SHO                                  pmax  pmax
      comp=Z,34nm,0.4s
SHO                                  pmax  pmax
      comp=N,13nm,0.1s
SHO                                  smax  smax
      comp=E,196nm,0.4s
SHO                                  smax  smax
      comp=N,171nm,0.3s
JSD   Sado               4.52 232    Pn    Pn     11 54 57.6 +0.7
JYT   Yasato             5.09 204          Pn     11 55 04.0 -0.7
MJAR  Matsushiro Arr     5.64 221    P     Pn     11 55 13.5 +1.3
      comp=N,0.4nm,0.3s,baz=33,slow=14,SNR=22
MJAR  Matsushiro Arr     5.64 221    P     Pn     11 55 13.9 +1.7
MJAR  Matsushiro Arr     5.64 221    Pn    Pn     11 55 13.9 +1.7
MJB9  Matsu-Tunnel       5.64 221          Pn     11 55 14.1 +1.8
MAJO  Matsushiro         5.64 221    P     Pn     11 55 13.9 +1.7
MAJO  Matsushiro         5.64 221    Pn    Pn     11 55 13.9 +1.7
MAT   Matsushiro         5.64 221    P     Pn     11 55 13.8 +1.6
MAT                                  eS    Sn     11 56 18.6 +2.9
KUR   Kuril'sk           5.71  39    P     Pn     11 55 11.6 -1.4
KUR                                  S     Sn     11 56 16.5 -0.7
KUR                                  pmax  pmax
      comp=Z,135nm,0.6s
KUR                                  smax  smax
      comp=E,91nm,0.6s
KUR                                  smax  smax
      comp=N,37nm,0.4s
YSS   Yuzh-Sakhalins     6.05 360    i P   Pn     11 55 17.3 -0.4
JGF   Kuroka             6.80 221    Pn    Pn     11 55 29.9 +1.7
INU   Inuyama            7.17 221    Pn    Pn     11 55 32.3 -0.9
JSG   Sagara             7.21 212    Pn    Pn     11 55 33.4 -0.3
JWT   Wachi              8.09 228    Pn    Pn     11 55 47.9 +2.2
JHJ2  Mitsune            8.13 198    Pn    Pn     11 55 46.7 +0.3
USA0B Ussuriysk Arra     8.62 296    P     Pn     11 55 54.1 +1.1
USA0B Ussuriysk Arra     8.62 296    Pn    Pn     11 55 54.1 +1.1
USRK  Ussuriysk Ar.      8.62 296    P     Pn     11 55 53.6 +0.6
      baz=102,slow=13,SNR=13
USRK  Ussuriysk Ar.      8.62 296    P     Pn     11 55 54.5 +1.5
USRK  Ussuriysk Ar.      8.62 296          Pn     11 55 54.5 +1.5
TYV   Tymovskoe          9.96 360    eP    Pn     11 56 04.2 -7.1
TYV                                  pmax  pmax
      comp=Z,12nm,1.4s
TYV                                  pmax  pmax
      comp=Z,400nm,4.6s
MDJ   Mudanjiang        10.38 295    P     Pn     11 56 17.8 +0.6
MDJ                                  pP           11 56 25.3
MDJ                                  sP           11 56 29.3
MDJ                                  S     Sn     11 58 11.8 -0.2
MDJ                                  sS           11 58 22.5
MDJ                                  SS    SnSn   11 58 23.5 -0.4
MDJ                                  pmax  pmax
      comp=Z,9.0nm,2.1s
MDJ                                  pmax  pmax
      comp=Z,260nm,7.7s
MDJ                                  LR    LR
      comp=Z,280nm,9.5s
MDJ                                  LR    LR
      comp=Z,230nm,8.1s
MDJ                                  LR    LR
      comp=Z,500nm,18.5s
KLR   Kul'dur           11.40 321    P     Pn     11 56 32.5 +1.6
      comp=Z,0.1nm,0.3s,baz=126,slow=14,SNR=9.5
KLR   Kul'dur           11.40 321ceP     Pn     11 56 30.4 -0.6
KLR                                  pmax  pmax
      comp=Z,7.0nm,1.5s
KSRS  Korea Array       12.04 258    P     Pn     11 56 41.5 +1.8
      comp=Z,0.4nm,0.3s,baz=63,slow=14,SNR=10
KSRS                                 LR    LR     12 00 26.4
      comp=Z,186nm,21.0s,baz=106,slow=33
JNU   Nakatsue          12.28 235    P     Pn     11 56 43.4 +0.3
      comp=Z,0.3nm,0.3s,baz=108,slow=4.6,SNR=4.6
JNU   Nakatsue          12.28 235    Pn    Pn     11 56 43.5 +0.4
CN2   Changchun         13.15 288    eP    Pn     11 56 55.8 +0.9
CN2                                  pmax  pmax
      comp=Z,10.0nm,0.5s
SKR   Severo-Kuril’s    13.47  39    eP    Pn     11 56 51.4 -7.9
SKR                                  pmax  pmax
      comp=Z,85nm,1.4s
SKR                                  MLR   MLR
      comp=Z,400nm,18.0s
ZEA   Zeya              16.55 326    eP    Pn     11 57 37.1 -2.4
ZEA                                  pmax  pmax
      comp=Z,10.0nm,0.9s
HIA   Hailar            18.24 305    P     P      11 57 59.5 -0.7
HIA                                  pmax  pmax
      comp=Z,6.0nm,0.5s
HIA   Hailar            18.24 305    P     P      11 57 59.5 -0.7
NJ2   Nanjing           21.12 253    eP    P      11 58 30.5 -1.1
NJ2                                  pmax  pmax
      comp=Z,16nm,0.5s
YAK   Yakutsk           22.59 344    P     P      11 58 46.5 -0.6
      comp=Z,6.0nm,0.4s,baz=1.3,slow=3.0,SNR=4.4
YAK   Yakutsk           22.59 344ceP     P      11 58 44.1 -2.9
YAK                                  pmax  pmax
      comp=Z,16nm,0.7s
SEY   Seymchan          22.79  11    P     P      11 58 46.8 -2.4
      comp=Z,1.0nm,0.5s,baz=217,slow=9.0,SNR=4.8
HHC   Hu-ho-hao-te      23.55 280    eP    P      11 58 57.5 +0.5
HHC                                  pmax  pmax
      comp=Z,8.0nm,0.8s
HHC                                  pmax  pmax
      comp=Z,160nm,6.6s
ULN   Ulaanbaatar       26.29 297ceP     P      11 59 21.1 -0.9
ULN                                  pmax  pmax
      comp=Z,7.0nm,1.7s
SONM  Songino Array     26.73 297    P     P      11 59 25.8 -0.1
      comp=Z,2.1nm,0.5s,baz=88,slow=8.8,SNR=23
SONM  Songino Array     26.73 297    P     P      11 59 26.0 +0.1
SONM                                 pmax  pmax
      comp=Z,2.0nm,0.7s
SONM  Songino Array     26.73 297    P     P      11 59 26.0 +0.1
GUMO  Guam              27.27 176    LR    LR     12 09 22.8
      comp=Z,54nm,21.7s,baz=106,slow=34
ZAK   Zakamensk         28.89 303    eP    P      11 59 43.0 -2.2
ZAK                                  pmax  pmax
      comp=Z,3.0nm,1.1s
H11N2 WAKE ISLAND Hy    29.47 129    T     T      12 31 33.4
      baz=321,slow=75,SNR=33
H11N1 WAKE ISLAND Hy    29.48 129    T     T      12 31 35.5
      baz=321,slow=75,SNR=29
H11N3 WAKE ISLAND Hy    29.49 129    T     T      12 31 05.7
      baz=321,slow=75,SNR=28
BILL  Bilibino          30.02  17⇑eP     P      11 59 54.1 -0.7
BILL                                 e            12 00 47.2
LZH   Lanzhou           30.68 274    eP    P      12 00 02.0 +0.8
LZH                                  pP    pP     12 00 13.0 -0.2
LZH                                  pmax  pmax
      comp=Z,19nm,1.0s
GTA   Gaotai            32.63 282    eP    P      12 00 18.0 -0.3
GTA                                  pP    pP     12 00 29.5 -0.9
GTA                                  sP    sP     12 00 35.3 -0.6
GTA                                  pmax  pmax
      comp=Z,2.0nm,1.0s
GTA                                  LR    LR
      comp=Z,250nm,16.4s
WMQ   Urumqi            40.18 293    eP    P      12 01 23.0 +0.5
WMQ                                  pmax  pmax
      comp=Z,15nm,0.9s
ZAA0  Zalesovo Array    40.20 309    P     P      12 01 22.7 +0.3
ZAA0                                 IAmb  IAmb   12 01 22.9
      comp=Z,5.7nm,0.7s
ZALV  Zalesovo Beam     40.20 309    P     P      12 01 22.3 -0.2
      comp=Z,4.2nm,0.4s,baz=90,slow=8.1,SNR=22
ZALV  Zalesovo Beam     40.20 309    P     P      12 01 22.6 +0.1
K20K  Telida            42.56  36    P     P      12 01 41.1 -0.5
K20K                                 IAmb  IAmb   12 01 53.8
      comp=Z,9.4nm,1.4s
IMAR  Indian Mountai    42.80  33    P     P      12 01 45.6 +2.0
MK31  Makanchi Array    43.08 299    P     P      12 01 46.2 +0.1
MK31                                 pmax  pmax
      comp=Z,5.0nm,0.9s
MK31  Makanchi Array    43.08 299    P     P      12 01 46.1 +0.1
MKAR  Makanchi Array    43.08 299    P     P      12 01 46.1  0.0
      comp=Z,2.5nm,0.5s,baz=85,slow=11,SNR=59
MKAR                                 pP    pwP    12 01 59.5 -1.1
      comp=Z,3.5nm,0.8s,baz=80,slow=10.0,SNR=8.7
MKAR  Makanchi Array    43.08 299    P     P      12 01 46.3 +0.2
MAKZ  Makanchi          43.28 299    P     P      12 01 47.8  0.0
MAKZ                                 pmax  pmax
      comp=Z,5.0nm,1.0s
MAKZ  Makanchi          43.28 299    P     P      12 01 47.8  0.0
CMAR  Chiang Mai Arr    43.60 252    P     P      12 01 51.2 +0.6
      comp=Z,0.6nm,0.6s,baz=49,slow=7.4,SNR=4.8
CMAR                                 pP    pP     12 02 04.4 +1.3
      comp=Z,1.4nm,0.7s,baz=44,slow=7.6,SNR=6.0
CMAR                                 LR    LR     12 21 37.5
      comp=Z,104nm,18.6s,baz=205,slow=38
CMAR  Chiang Mai Arr    43.60 252    P     P      12 01 49.5 -1.1
KURK  Kurchatov         44.48 305    P     P      12 01 56.9 -0.3
KURK                                 pmax  pmax
      comp=Z,16nm,1.3s
KURK  Kurchatov         44.48 305    P     P      12 01 56.9 -0.3
KURK                                 IAmb  IAmb   12 01 57.6
      comp=Z,16nm,1.2s
KURBB Kurchatov Arra    44.55 305    P     P      12 01 57.6 -0.3
      comp=Z,9.5nm,0.5s,baz=78,slow=8.8,SNR=22
ILAR  Eielson Array     45.68  34    P     P      12 02 08.3 +1.7
      comp=Z,0.7nm,0.7s,baz=268,slow=6.0,SNR=8.1
GLI   Glacier Island    45.97  40    P     P      12 02 10.1 +1.1
DOT   Dot Lake          47.02  36    P     P      12 02 16.8 -0.4
BCAR  Beaver Creek A    48.12  36    P     P      12 02 24.9 -0.8
BOOM  Boomskoye usch    48.74 295    P     P      12 02 30.7 -0.3
BOOM                                 pmax  pmax
      comp=Z,4.0nm,0.8s
BOOM  Boomskoye usch    48.74 295    P     P      12 02 30.7 -0.3
BOOM                                 IAmb  IAmb   12 02 45.6
      comp=Z,4.4nm,0.8s
BVAR  Borovoye Array    48.83 310    P     P      12 02 31.3  0.0
      comp=Z,1.5nm,0.3s,baz=90,slow=6.1,SNR=12
BRVK  Borovoye          48.88 310    P     P      12 02 31.2 -0.5
BRVK                                 pmax  pmax
      comp=Z,6.0nm,1.2s
BRVK  Borovoye          48.88 310    P     P      12 02 31.2 -0.5
BRVK                                 IAmb  IAmb   12 02 46.2
      comp=Z,6.0nm,1.1s
KSM   Kuching           49.01 225    P     P      12 02 32.1 -1.0
AAK   Ala-Archa         49.67 296    P     P      12 02 38.3 +0.2
AAK                                  pmax  pmax
      comp=Z,2.0nm,0.5s
AAK   Ala-Archa         49.67 296    P     P      12 02 38.3 +0.2
AAK                                  IAmb  IAmb   12 02 41.9
      comp=Z,2.0nm,0.5s
KSH   Kashi             49.89 292    P     P      12 02 44.0 +4.3
INK   Inuvik            50.47  29    P     P      12 02 45.1 +1.6
      comp=Z,1.5nm,0.6s,baz=302,slow=7.2,SNR=12
INK   Inuvik            50.47  29    P     P      12 02 45.2 +1.8
INK                                  pmax  pmax
      comp=Z,8.0nm,1.5s
INK   Inuvik            50.47  29    P     P      12 02 45.2 +1.8
INK                                  IAmb  IAmb   12 03 04.9
      comp=Z,8.2nm,1.4s
HNR   Honiara           52.53 158    P     P      12 03 01.8 +2.3
      comp=Z,284nm,0.6s,baz=109,slow=13,SNR=5.8
ABKAR Akbulak array     56.31 309    P     P      12 03 26.7 +0.1
YKA   Yellowknife Ar    59.94  32    P     P      12 03 52.4 +0.6
      comp=Z,0.4nm,1.0s,baz=299,slow=6.3,SNR=3.9
YKA   Yellowknife Ar    59.94  32    P     P      12 03 52.0 +0.2
WB0   Warramunga Arr    60.86 189    P     P      12 03 58.6  0.0
WRA   Warramunga Arr    61.04 189    P     P      12 03 59.3 -0.5
      comp=Z,1.2nm,0.8s,baz=5.7,slow=6.9,SNR=7.1
WRA                                  pP    pwP    12 04 14.6 +1.9
      comp=Z,0.8nm,0.5s,baz=5.9,slow=7.0,SNR=3.2
WRA   Warramunga Arr    61.04 189    i P   P      12 03 59.7  0.0
WRA                                  pmax  pmax
      comp=Z,1.0nm,0.8s
ASAR  Alice Springs     64.77 189    P     P      12 04 24.3 -0.2
      comp=Z,0.8nm,0.8s,baz=360,slow=5.6,SNR=8.6
ASAR  Alice Springs     64.77 189    P     P      12 04 23.7 -0.8
OBN   Obninsk           65.65 323⇑eP     P      12 04 28.7 -1.1
OBN                                  e            12 05 04.3
OBN                                  e            12 06 55.8
OBN                                  pmax  pmax
      comp=Z,7.0nm,1.0s
FIA1  FINESS Array S    65.89 332    P     P      12 04 31.7 +0.4
FINES FINESS Array B    65.90 332    P     P      12 04 31.2 -0.2
      comp=Z,4.8nm,0.6s,baz=45,slow=8.3,SNR=17
FINES FINESS Array B    65.90 332    P     P      12 04 31.6 +0.3
FINES FINESS Array B    65.90 332    P     P      12 04 31.6 +0.3
NC405 NORSAR Array S    70.83 337    P     P      12 05 01.4 -0.8
NC204 NORSAR Array S    70.97 338    P     P      12 05 03.4 +0.2
HFS   Hagfors           71.00 336    P     P      12 05 03.5 +0.2
      comp=Z,2.8nm,0.4s,baz=37,slow=6.2,SNR=16
NB2   NORSAR Subarra    71.03 337    P     P      12 05 02.9 -0.6
      comp=Z,0.7nm,0.5s,baz=35,slow=6.5
NOA   NORSAR Array B    71.03 337    P     P      12 05 03.6 +0.1
      comp=Z,2.3nm,0.9s,baz=36,slow=6.1,SNR=4.4
NVAR  Mina Array Bea    71.85  55    P     P      12 05 09.9 +0.8
      comp=Z,0.2nm,0.7s,baz=286,slow=7.4,SNR=2.6
NVAR                                 pP    pwP    12 05 25.2 +0.6
      comp=Z,0.9nm,0.8s,baz=281,slow=5.5,SNR=5.4
NVAR  Mina Array Bea    71.85  55    P     P      12 05 10.3 +1.3
AKASG Malin Array Be    71.89 322    P     P      12 05 08.7 -0.1
      comp=Z,1.2nm,0.4s,baz=44,slow=6.3,SNR=9.3
AKASG Malin Array Be    71.89 322ceP     P      12 05 08.6 -0.2
AKASG                                pmax  pmax
      comp=Z,1.0nm,0.4s
LKWY  Lake              72.58  46    P     P      12 05 12.5 -0.9
LKWY                                 pmax  pmax
      comp=Z,7.0nm,0.7s
LKWY  Lake              72.58  46    P     P      12 05 12.5 -0.9
LKWY                                 IAmb  IAmb   12 05 17.4
      comp=Z,7.0nm,0.7s
PDAR  Pinedale Array    74.22  47    pP    pP     12 05 39.1 +3.0
      comp=Z,0.4nm,0.5s,baz=263,slow=3.2,SNR=3.8
GERES GERESS Array B    79.98 329    P     P      12 05 55.7 +0.7
      comp=Z,0.5nm,0.5s,baz=40,slow=6.6,SNR=8.3
GERES GERESS Array B    79.98 329    P     P      12 05 55.5 +0.4
OLIL  Olney             88.14  37    P     P      12 06 36.6  0.0
```

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*IDC **30** 11:55:27.5±2.1, 13°.86N×121°.05E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.0/65, mbtmp3.4/4, Error ellipse: s-maj=90.2km s-min=23.9km az=51.0*

*MAN **30** 11:55:47.1, 13°.76N×120°.60E, h161km, mb4.4, ML3.3, MS3.1*

ISC 30 11:55:46.6±0.9**, 13°.75N**±0°.07×**120°.6E**±0°.1**, h172**km±7km**, n14, σ0ˢ.73**/19**, mb3.2**/4**, 4C-5D, Mindoro**

```
Code  Station Name        Δ°    AZ°     Phase ID          Time     Res
                                      Op     ISC       h  m  s    ISC
LUBP  Lubang             0.37 268⇑eP     Pn     11 56 10.9 +0.9
LUBP                                 i S   Sn     11 56 28.1 +0.2
PGP   Puerto Galera      0.40 128⇑eP     Pn     11 56 10.2  0.0
PGP                                  i S   Sn     11 56 27.2 -1.0
TGY   Tagaytay City      0.46  40    eP    Pn     11 56 04.0 -6.5
MACP  Maragondon, Ca     0.52   9⇓eP     Pn     11 56 10.8 +0.1
MACP                                 i S   Sn     11 56 28.9 -0.2
BOAC  Boac               1.21 103⇑iP     Pn     11 56 15.5 +0.2
BOAC                                 i S   Sn     11 56 38.0 +0.6
SJMP  San Jose           1.36 160⇓iP     Pn     11 56 17.0 +0.3
SJMP                                 eS    Sn     11 56 39.6 -0.2
SCZP  Santa Cruz         2.13 341⇓iP     Pn     11 56 24.7  0.0
BOLP  Bolinao            2.71 345⇓eP     Pn     11 56 31.6 +0.2
BOLP                                 i S   Sn     11 57 06.1 -0.2
RCP   Roxas              3.00 136⇓eP     Pn     11 56 36.1 +1.2
APYP  Conner             4.13   8⇑iP     Pn     11 56 49.8 +0.5
CMAR  Chiang Mai Arr    21.35 286    P     P      12 00 21.1 +0.6
      0.7nm,0.6s,baz=92,slow=9.0,SNR=4.8
WRA   Warramunga Arr    36.09 158    P     P      12 02 30.6 -1.5
      0.4nm,0.6s,baz=330,slow=9.9,SNR=4.7
ASAR  Alice Springs     39.38 161    P     P      12 02 58.9 -0.8
      0.2nm,0.3s,baz=335,slow=7.3,SNR=17
MKAR  Makanchi Array    45.95 324    P     P      12 03 52.9 +0.5
      0.4nm,0.6s,baz=128,slow=9.3,SNR=2.5
```

ISC 30 11:56:33.5±1.4**, 49°.02N**±0°.06×**18°.14E**±0°.05**, h10**km**, n7, σ0ˢ.38**/9**, Czech and Slovak Republics**

```
Code  Station Name        Δ°    AZ°     Phase ID          Time     Res
                                      Op     ISC       h  m  s    ISC
JAVC  Velka Javorina     0.35 243    ePG   Pg     11 56 40.3 -0.2
JAVC                                 eSG   Sg     11 56 45.3 +0.2
KOLL  Kolacno            0.47 159    ePG   Pg     11 56 43.2 +0.5
KOLL                                 eSG   Sb     11 56 50.6 -0.3
VYHS  Vyhne              0.70 139    ePG   Pb     11 56 47.3 -0.4
MORC  Moravsky Berou     0.85 333    ePG   Pg     11 56 50.3 +0.3
MODS  Modra-Piesok       0.86 222    ePG   Pb     11 56 50.8 +0.2
VRAC  Vranov             1.06 287    ePG   Pg     11 56 53.9 +0.1
KRUC  Moravsky           1.15 273    ePG   Pb     11 56 55.2 -0.3
```

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*EAF **30** 12:11:50.5±2.2, 25°.95S×29°.11E, h0km±27km, MD3.8*

*BUL **30** 12:11:50.5±2.2, 25°.95S×29°.11E, h0km±27km, MD4.0*

ISC 30 12:11:50.2±1.6**, 25°.87S**±0°.07×**29°.19E**±0°.09**, h3**km**, n10, σ1ˢ.19**/20**, South Africa**

```
Code  Station Name        Δ°    AZ°     Phase ID          Time     Res
                                      Op     ISC       h  m  s    ISC
LBTB  Lobatse            3.36 284    i P   Pn     12 12 43.9 +0.3
LBTB                                 i Sg  Sb     12 13 32.9 +1.1
LBTB  Lobatse            3.36 284    i P   Pn     12 12 43.9 +0.3
LBTB                                 i Sg  Sb     12 13 32.9 +1.1
MSNA  Messina            3.59  12    i P   Pn     12 12 47.6 +0.8
MSNA                                 i S   Sn     12 13 28.9 -0.8
MSNA  Messina            3.59  12    i P   Pn     12 12 47.6 +0.8
MSNA                                 i S   Sn     12 13 28.9 -0.8
BOSA  Boshof             4.45 231    i P   Pn     12 12 58.8 +0.2
BOSA                                 i Sg  Sb     12 14 03.4 +0.3
BOSA  Boshof             4.45 231    i P   Pn     12 12 58.8 +0.2
BOSA                                 i Sg  Sb     12 14 03.4 +0.3
MATP  Matopo             5.45 353    i P   Pn     12 13 13.1 +0.6
MATP                                 i S   Sn     12 14 14.2 -1.6
MATP  Matopo             5.45 353    i P   Pn     12 13 13.1 +0.6
MATP                                 i S   Sn     12 14 14.2 -1.6
BLWY  Bulawayo           5.72 355    i P   Pn     12 13 17.6 +1.3
BLWY                                 i S   Sn     12 14 20.5 -2.1
BLWY  Bulawayo           5.72 355    i P   Pn     12 13 17.6 +1.3
BLWY                                 i S   Sn     12 14 20.5 -2.1
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*IDC **30** 12:31:29.7±3.8, 2°.61N×127°.84E, h160km±42km, mb3.1/6, mb1 3.2/7, mb1mx2.9/40, mbtmp3.6/7, MS3.4/1, Ms1 3.4/1, ms1mx2.3/18, Error ellipse: s-maj=56.5km s-min=15.6km az=80.0*

*DJA **30** 12:31:32.6±0.8, 2°N±7°×12°8E±°, h132km±6km, M4.0/7, mb4.2/2, mB5.0/1, MLv3.9/7, Mw(mB)4.4/1*

ISC 30 12:31:28.9±0.8**, 2°.56N**±0°.08×**127°.69E**±0°.08**, h150**km**, n14, σ1ˢ.62**/15**, mb3.4**/6**, Northern Molucca Sea**

```
Code  Station Name        Δ°    AZ°     Phase ID          Time     Res
                                      Op     ISC       h  m  s    ISC
TNTI  Ternate            1.81 190    P     Pn     12 32 03.8 +1.9
LBMI  Labuha             3.18 183    P     Pn     12 32 21.6 +2.9
SANI  Sanana             4.88 200    P     Pn     12 32 40.8 -0.1
SANI                                 S     Sn     12 33 34.1 -2.9
SWI   Sorong             4.93 134    P     Pn     12 32 43.2 +1.7
SIJI  Sorong             4.94 134    P     Pn     12 32 42.2 +0.6
      3.6nm,0.3s,baz=337,slow=14,SNR=13
SIJI                                 S     Sn     12 33 38.0 -0.3
      2.8nm,0.3s,baz=136,slow=19,SNR=6.3
GTOI  Gorontalo          5.05 248    P     Pn     12 32 45.2 +2.2
      0.1nm20nm,0.5s
FITZ  Fitzroy Crossi    20.63 186    P     P      12 35 56.9 +0.1
      baz=9.7,slow=3.8
WRA   Warramunga Arr    23.30 164    P     P      12 36 22.9 -0.6
      0.6nm,0.6s,baz=346,slow=9.8,SNR=10
ASAR  Alice Springs     26.76 167    P     P      12 36 56.0 +1.1
      0.2nm,0.3s,baz=347,slow=7.6,SNR=1.8
PSI   Prapat            28.73 271    LR    LR     12 50 22.7
      comp=Z,67nm,18.1s,baz=324,slow=39
KSRS  Korea Array       34.72   0    P     P      12 38 03.5 -1.1
      0.9nm,0.5s,baz=177,slow=9.8,SNR=5.4
STKA  Stephens Creek    36.71 160    P     P      12 38 21.2 -0.4
      0.5nm,0.4s,baz=338,slow=12,SNR=3.1
SONM  Songino Array     48.70 341    P     P      12 39 57.9 -0.3
      0.3nm,0.6s,baz=158,slow=4.7,SNR=2.1
MKAR  Makanchi Array    59.05 325    P     P      12 41 13.4 +0.2
      0.2nm,0.3s,baz=112,slow=7.2,SNR=7.6
```

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*ATH **30** 12:37:36.8, 38°.46N×20°.42E, h17km±1km, ML2.5/3, Error ellipse: s-maj=3.4km s-min=0.8km az=281.0*

*THE **30** 12:37:37.1, 38°.45N×20°.41E, h8km±4km, ML2.4/8, Error ellipse: s-maj=4.1km s-min=0.3km az=104.0*

ISC 30 12:37:36.2±0.9**, 38°.46N**±0°.02×**20°.38E**±0°.04**, h18**km±4km**, n32, σ1ˢ.05**/52**, Greece**

```
Code  Station Name        Δ°    AZ°     Phase ID          Time     Res
                                      Op     ISC       h  m  s    ISC
FSK   Fiskardo           0.14  92    P     Pg     12 37 39.9 -0.4
FSK   Fiskardo           0.14  92    P     Pg     12 37 39.9 -0.4
FSK                                  AML   AML    12 37 43.0
      comp=E,8870μm,0.2s
FSK                                  AML   AML    12 37 44.4
      comp=N,5280μm,0.4s
KEF3  Kipouria, Keph     0.26 186    P     Pg     12 37 42.1 +0.1
KEF3                                 S     Sg     12 37 46.0  0.0
      comp=N,4μm,0.2s
KEF3  Kipouria, Keph     0.26 186    P     Pg     12 37 42.1 +0.1
EVGI  Lefkada island     0.27  54    P     Pg     12 37 41.9 -0.2
EVGI                                 S     Sg     12 37 45.7 -0.5
      comp=N,2μm,0.1s
EVGI  Lefkada island     0.27  54    P     Pg     12 37 41.9 -0.2
DRAG  Dragano-Lefkad     0.27  34    P     Pg     12 37 41.9 -0.2
DRAG                                 S     Sg     12 37 46.9 +0.7
      comp=N,5μm,0.2s
DRAG  Dragano-Lefkad     0.27  34    P     Pg     12 37 41.9 -0.2
DRAG                                 S     Sg     12 37 46.9 +0.7
LXRA  Lixouri, Kepha     0.27 171    P     Pg     12 37 42.5 +0.5
LXRA                                 S     Sb     12 37 47.3 +0.7
ARGA  Argostoli. Kep     0.30 165    P     Pb     12 37 43.7 +0.7
VLS   Valsamata          0.33 150    P     Pg     12 37 43.0 -0.2
VLS                                  S     Sg     12 37 48.1 +0.1
      comp=N,2μm,0.1s
VLS   Valsamata          0.33 150    P     Pg     12 37 43.0 -0.2
VLS                                  S     Sg     12 37 48.1 +0.1
VLS                                  AML   AML    12 37 48.3
      comp=E,3603μm,0.2s
VLS                                  AML   AML    12 37 48.5
      comp=N,3775μm,0.1s
NYDR  Nydri-Lefkada      0.35  45    P     Pg     12 37 43.5 -0.1
NYDR                                 S     Sg     12 37 48.8 +0.2
NYDR  Nydri-Lefkada      0.35  45    P     Pg     12 37 43.5 -0.1
NYDR                                 S     Sg     12 37 48.8 +0.2
PSDA  Pessada-Kefalo     0.38 156    P     Pg     12 37 44.0 -0.1
PSDA                                 S     Sg     12 37 49.6 +0.1
      comp=N,220nm,0.2s
PSDA  Pessada-Kefalo     0.38 156    P     Pg     12 37 44.0 -0.1
LKD2  Lefkada island     0.39  33    P     Pg     12 37 44.2 -0.1
LKD2                                 S     Sg     12 37 50.3 +0.5
      comp=N,395nm,0.2s
LKD2  Lefkada island     0.39  33    P     Pg     12 37 44.2 -0.1
LKD2                                 S     Sg     12 37 50.3 +0.5
LKD2                                 AML   AML    12 37 52.9
      comp=N,822μm,0.2s
LKD2                                 AML   AML    12 37 55.8
      comp=E,797μm,0.4s
TSLK  Tsoukalades, L     0.42  30    P     Pg     12 37 45.0 +0.2
TSLK                                 S     Sb     12 37 51.7 +0.6
      comp=E,720nm,0.2s
```

TSLK	Tsoukalades, L	0.42	30	P	Pg	12 37 45.0	+0.2
TSLK				S	Sb	12 37 51.7	+0.6
IGT	Igoumenitsa	1.07	358	P	Pb	12 37 57.1	+1.0
IGT				S	Sn	12 38 13.6	+2.9
	comp=E,65nm,0.2s						
DRO	Drossia	1.16	116	P	Pb	12 37 57.8	0.0
EFP	Efpalio	1.20	91	P	Pb	12 37 57.7	-0.6
ANX	Ano Chora	1.21	83	P	Pn	12 37 58.5	+0.1
LAKA	Lakka	1.27	100	P	Pn	12 37 59.1	0.0
SERG	Sergoula	1.31	92	P	Pn	12 37 59.9	+0.3
KLV	Kalavryta, Ach	1.45	106	P	Pn	12 38 02.1	+0.4
STON	Ston	4.85	336	*e*Pn	Pn	12 38 49.1	+0.9
STON				Sn	Sn	12 39 40.5	-3.5
LSTV	Lastovo	5.05	329	*e*Pn	Pn	12 38 50.7	-0.3
LSTV				Sn	Sn	12 39 46.3	-2.7
HVAR	Hvar	5.58	329	*e*Pn	Pn	12 38 58.5	+0.3
HVAR				Sn	Sn	12 39 59.1	-2.7
MORI	Morici	6.45	328	*e*Pn	Pn	12 39 10.5	+0.3
MORI				Sn	Sn	12 40 21.3	-2.0
DUGI	Dugi Otok	6.83	326	*e*Pn	Pn	12 39 16.9	+1.5
DUGI				Sn	Sn	12 40 30.5	-2.1

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*IDC **30** 12:50:10.6±2.7, 18.°04S×178.°47W, h606^{km}±20^{km}, mb3.3/6, mb1 3.5/7, mb1mx3.0/37, mbtmp4.3/7, Error ellipse: s-maj=62.1km s-min=25.8km az=139.0*

*NEIC **30** 12:50:12.9±1.4, 18.°1S±0.°2×178.°7W±0.°1, h608^{km}±12^{km}, mb4.5/15, Error ellipse: s-maj=28.3km s-min=12.0km az=151.0*

ISC 30 12:50:11.6±1.1**, 18.°0S**±0.°2×**178.°7W**±0.°2**, h600**^{km}**, n27, σ1^{s}17**/29**, mb4.4**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.13	274	P	P	12 51 32.6	+1.0
	6.6nm,0.3s,baz=128,slow=3.2,SNR=32						
MSVF	Nonsavu	3.13	274	P	P	12 51 32.8	+1.3
OUZ	Omahuta	18.49	200	P	P	12 53 52.6	+1.1
OUZ				IAmb	IAmb	12 53 57.8	
	comp=Z,39nm,1.5s						
LTZ	Lake Taylor	25.89	195	P	P	12 54 56.8	-0.7
CTAO	Charters Tower	33.18	261	P	P	12 56 00.5	0.0
CTAO				IAmb	IAmb	12 56 29.3	
	comp=Z,16nm,1.1s						
PMG	Port Moresby	34.22	280	P	P	12 56 08.9	-0.3
PMG				IAmb	IAmb	12 56 11.3	
	comp=Z,14nm,0.8s						
COEN	Coen	36.85	271	P	P	12 56 31.8	+0.9
COEN				IAmb	IAmb	12 56 32.5	
	comp=Z,9.9nm,0.8s						
TOO	Toolangi	36.93	231	P	P	12 56 31.9	+0.6
TOO				IAmb	IAmb	12 56 54.6	
	comp=Z,13nm,1.5s						
STKA	Stephens Creek	38.37	241	P	P	12 56 43.1	+0.1
	comp=Z,3.1nm,0.9s,baz=85,slow=12,SNR=6.5						
BBOO	Buckleboo	43.15	241	P	P	12 57 20.7	-0.1
WB0	Warramunga Arr	44.34	260	P	P	12 57 29.4	-0.7
WB0				IAmb	IAmb	12 57 30.8	
	comp=Z,16nm,1.5s						
WB2	Warramunga Arr	44.36	260	P	P	12 57 29.5	-0.8
WRA	Warramunga Arr	44.37	260	P	P	12 57 29.6	-0.8
	comp=Z,3.5nm,0.8s,baz=95,slow=7.7,SNR=98						
WRA				PcP	PcP	12 58 59.7	-1.3
	comp=Z,0.4nm,0.3s,baz=90,slow=3.7,SNR=4.9						
AS31	Alice Springs	44.52	254	P	P	12 57 31.4	-0.2
ASAR	Alice Springs	44.53	254	P	P	12 57 31.3	-0.3
	comp=Z,12nm,0.8s,baz=87,slow=8.6,SNR=142						
ASAR				PcP	PcP	12 59 00.3	-1.2
	comp=Z,0.5nm,0.5s,baz=106,slow=3.9,SNR=4.5						
MTN	Manton Dam	48.54	269	P	P	12 58 01.1	-0.7
FORT	Forrest	49.75	245	P	P	12 58 09.6	-0.9
FORT				IAmb	IAmb	12 58 34.7	
	comp=Z,19nm,0.9s						
KNRA	Kununurra	50.23	264	P	P	12 58 14.4	+0.2
SIJI	Sorong	52.01	283	P	P	12 58 27.2	+0.2
	comp=Z,8.1nm,0.5s,baz=105,slow=3.5,SNR=7.5						
PSA00	Pilbara Seismi	57.64	255	P	P	12 59 05.2	-1.0
PSA00				IAmb	IAmb	12 59 31.2	
	comp=Z,22nm,1.1s						
GAMB	Gambell	81.67	3	P	P	13 01 29.3	+1.6
GAMB				IAmb	IAmb	13 01 29.9	
	comp=Z,24nm,0.8s						
ILAR	Eielson Array	86.02	13	P	P	13 01 46.5	-2.6
	comp=Z,0.2nm,0.5s,baz=222,slow=5.2,SNR=4.4						
CMAR	Chiang Mai Arr	88.67	290	P	P	13 02 03.0	+0.4
	comp=Z,0.8nm,0.7s,baz=90,slow=2.3,SNR=6.9						
CMAR	Chiang Mai Arr	88.67	290	P	P	13 02 02.5	-0.1
CLL	Collm	145.48	347	*e*PKPbc	PKPdf	13 08 42.0	-0.1
GERES	GERESS Array B	147.62	345	PKPbc	PKPdf	13 08 48.4	+2.5
	comp=Z,0.7nm,0.6s,baz=29,slow=2.2,SNR=3.7						
GERES	GERESS Array B	147.62	345		PKPdf	13 08 48.5	+2.7

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*KMA **30** 12:57:10.3, 33.°24N×139.°50E, h35^{km}*

*BJI **30** 12:57:33.9±0.0, 33.°91N×137.°29E, h339^{km}, mB4.6/34, mb4.6/64*

*JMA **30** 12:57:34.6±0.2, 33.°93N×137.°32E, h349^{km}±2^{km}, M4.4*

*MOS **30** 12:57:34.9±0.8, 33.°83N×137.°23E, h342^{km}, mb4.5/35, Error ellipse: s-maj=8.4km s-min=5.0km az=113.4*

*NIED **30** 12:57:34.7, 33.°93N×137.°32E, h349^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.01; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-0.06; $M_{r\theta}$-1.36; $M_{\theta\phi}$0.28; $M_{\phi r}$-4.49; Fault plane solution: $M_0$4.70000×10^{15} NP1:ϕ_s17.00000°, δ90.00000°, λ-93.00000°. NP2:ϕ_s281.00000°, δ3.00000°, λ-6.00000°.*

*IDC **30** 12:57:35.8±0.8, 33.°82N×137.°24E, h336^{km}±8^{km}, mb3.9/27, mb1 3.9/35, mb1mx3.8/54, mbtmp4.6/35 Error ellipse: s-maj=9.9km s-min=7.5km az=92.0*

*NEIC **30** 12:57:36.2±1.5, 33.°88N±0.°07×137.°32E±0.°08, h338^{km}±5^{km}, mb4.5/103, Error ellipse: s-maj=10.0km s-min=9.3km az=133.0*

ISC 30 12:57:35.9±0.4**, 33.°90N**±0.°04×**137.°27E**±0.°04**, h338**^{km}±3^{km}**, h337**^{km}**:pP-P, n357, σ1^{s}09**/396**, mb4.4**/114**, 27C-6D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO3	TONANKAI O.B.S	0.12	110	⇑P	Pn	12 58 18.8	+0.7
TTO3				*e*S	S	12 58 53.1	+1.3
TTO4	TONANKAI O.B.S	0.25	65	P	Pn	12 58 18.6	+0.6
TTO4				*e*S	S	12 58 53.0	+1.3
TTO2	TONANKAI O.B.S	0.26	230	⇑P	Pn	12 58 18.6	+0.6
TK01	Tokai 1	0.30	117	S	S	12 58 52.9	+1.1
TK02	Tokai 2	0.41	84	P	Pn	12 58 18.8	+0.5
TK02				*e*S	S	12 58 53.5	+1.3
TTO1	TONANKAI O.B.S	0.49	235	⇑P	Pn	12 58 18.8	+0.4
TTO1				*e*S	S	12 58 54.1	+1.7
TTO5	TONANKAI O.B.S	0.51	47	P	Pn	12 58 19.3	+0.8
TTO5				*e*S	S	12 58 53.7	+1.0
JIE	Ise	0.67	317	P	Pn	12 58 19.4	+0.3
JIE				*e*S	S	12 58 53.2	-0.6
JSG	Sagara	1.08	44		Pn	12 58 21.2	+0.7
JSG				Sn	S	12 58 57.7	+1.3
JTNC	Tanabenakahech	1.38	267	⇑P	Pn	12 58 22.1	0.0
JTNC				*e*S	S	12 58 58.7	-0.5
JWY	Kouya	1.42	283	⇑P	Pn	12 58 22.8	+0.4
JWY				*e*S	S	12 58 59.0	-0.7
INU	Inuyama	1.46	352	Pn	Pn	12 58 22.8	+0.3
INU				Sn	S	12 58 59.3	-0.5
JGF	Kuroka	1.70	3		Pn	12 58 24.1	+0.1
JFNN	Fujinakano	1.74	42	P	Pn	12 58 24.4	+0.2
JYTA	Yamagatataniai	1.74	346	⇑P	Pn	12 58 24.2	0.0
JYTA				*e*S	S	12 59 02.5	-0.5
JYN	Shimob	1.91	33	P	Pn	12 58 25.6	+0.2
JOD2	Odawara 2	2.03	47	⇓P	Pn	12 58 26.0	-0.2
JWT	Wachi	2.06	312	P	Pn	12 58 26.9	+0.5
JWT				*e*S	S	12 59 06.4	-0.6
JWT	Wachi	2.06	312	Pn	Pn	12 58 26.9	+0.5
JHJ	Hachijo jima 2	2.24	110	P	Pn	12 58 27.4	-0.5
	100nm,0.3s,baz=278,slow=18,SNR=58						
JHJ				S	S	12 59 12.3	+2.7
	20nm,0.3s,baz=81,slow=23,SNR=1.0						
JHJ2	Mitsune	2.27	110	P	Pn	12 58 27.4	-0.7
JHJ2	Mitsune	2.27	110	Pn	Pn	12 58 27.4	-0.7
JAI	Aioi	2.34	268	⇑P	Pn	12 58 28.7	0.0
JKG	Kaga	2.49	342	⇑P	Pn	12 58 30.0	+0.3
JRY	Ryogami san	2.50	32	⇓P	Pn	12 58 29.5	-0.4
JRY				*e*S	S	12 59 12.6	-0.7
JAOM	Aogashimamukai	2.54	124	P	Pn	12 58 30.0	-0.3
MJAR	Matsushiro Arr	2.74	16	P	Pn	12 58 31.8	-0.1
	2.4nm,0.3s,baz=189,slow=9.4,SNR=228						
MJAR				S	S	12 59 15.9	-1.1
	1.3nm,0.3s,baz=192,slow=16,SNR=18						
MJAR	Matsushiro Arr	2.74	16	P	Pn	12 58 32.0	0.0
MJAR	Matsushiro Arr	2.74	16	Pn	Pn	12 58 32.0	0.0
MAJO	Matsushiro	2.75	16	P	Pn	12 58 31.9	-0.1
MAJO	Matsushiro	2.75	16	Pn	Pn	12 58 31.9	-0.1
MAT	Matsushiro	2.75	16	P	Pn	12 58 31.8	-0.2
MAT				S	S	12 59 15.6	-1.4
MAT	Matsushiro	2.75	16	P	Pn	12 58 31.8	-0.2
MAT				S	S	12 59 15.9	-1.1
MJB9	Matsu-Tunnel	2.75	16		Pn	12 58 31.7	-0.3
JMN	Monobe	2.82	267	⇑P	Pn	12 58 33.0	+0.2
JMN	Monobe	2.82	267	Pn	Pn	12 58 33.0	+0.2
JAG	Ashikaga	3.09	35	P	Pn	12 58 33.7	-1.4
BSO1	Boso 1	3.16	75	P	Pn	12 58 32.8	-2.4
BSO1				*e*S	S	12 59 20.7	-2.3
JYT	Yasato	3.34	45		Pn	12 58 35.7	-1.7
JHS	Saijyo	3.60	289	⇑P	Pn	12 58 40.6	+0.5
JHS				*e*S	S	12 59 31.9	+0.2
JHS	Saijyo	3.60	289		Pn	12 58 40.7	+0.7
JTO	Tosashimizu	3.88	256	⇑P	Pn	12 58 42.9	0.0
JTO				S	S	12 59 36.3	-0.5
JOI	OKI	4.07	307	P	Pn	12 58 45.0	+0.3
JSD	Sado	4.20	11	Pn	Pn	12 58 45.8	-0.4
JMM	Marumori	4.88	35	Pn	Pn	12 58 52.3	-1.2
JNU	Nakatsue	5.39	263	P	Pn	12 58 59.9	+0.5
	3.5nm,0.3s,baz=80,slow=4.8,SNR=64						
JNU	Nakatsue	5.39	263		Pn	12 58 59.7	+0.4
JSU	Suzuyama	6.22	249		Pn	12 59 09.1	+0.2
KSULJ	Uljin	7.00	296	P	Pn	12 59 18.7	+0.7
	SNR=8.8						
KSTBA	Taebaek	7.50	298	P	Pn	12 59 25.1	+1.2
	SNR=12						
KSYOW	Yeongwol	7.89	297	P	Pn	12 59 29.8	+1.3
	SNR=42						
KSCPR	CHUPUNGNYEONG	7.96	290	P	Pn	12 59 30.8	+1.4
	SNR=11						
OKCB	Cheongsan-myeo	8.13	290	P	Pn	12 59 33.0	+1.6
	SNR=13						
KSCHJ	Chungju	8.14	294	P	Pn	12 59 34.0	+2.5
	SNR=9.5						
KSBON	Boeun	8.17	291	P	Pn	12 59 33.8	+2.0
	SNR=16						
KSWJU	Wonju	8.27	298	P	Pn	12 59 34.3	+1.3
	SNR=12						
NAWB	Namwon	8.27	283	P	Pn	12 59 35.0	+1.9
	SNR=6.4						
KSRS	Korea Array	8.38	298	P	Pn	12 59 35.8	+1.5
	1.6nm,0.3s,baz=113,slow=12,SNR=66						
KSRS				S	S	13 01 12.9	+2.0
	baz=110,slow=22,SNR=6.4						
KSAR	Wonju Array Be	8.41	297	P	Pn	12 59 35.3	+0.7
KSAR	Wonju Array Be	8.41	297	Pn	Pn	12 59 35.3	+0.7
KS19	Wonju Array Si	8.45	298		Pn	12 59 36.0	+0.9
KSIJA	INJE	8.47	301	P	Pn	12 59 38.1	+2.7
	SNR=6.6						
TJN	Taejon	8.48	290	*ce*P	Pn	12 59 35.9	+0.4
SEHB	SEOHWA	8.49	303	P	Pn	12 59 37.0	+1.3
	SNR=9.1						
KSCHC	Chuncheon	8.59	299	P	Pn	12 59 38.4	+1.6
	SNR=8.3						
KSJEU	Jeongeup	8.66	283	P	Pn	12 59 39.1	+1.4
	SNR=7.6						
KSCEA	Cheonan	8.68	292	P	Pn	12 59 39.5	+1.7
	SNR=19						
KSICN	Icheon	8.70	296	P	Pn	12 59 40.2	+2.1
	SNR=14						
HWCB	Hwacheon	8.88	302	P	Pn	12 59 43.0	+2.6
	SNR=5.6						
KSCWO	Cheorwon	8.93	301	P	Pn	12 59 42.5	+1.6
	SNR=5.9						
KSSWO	Suwon	9.03	295	P	Pn	12 59 43.7	+1.5
	SNR=41						
KSSEO	Seoul	9.14	296	P	P	12 59 47.0	+0.8
	SNR=8.5						
ERM	Erimo	9.34	28	P	Pn	12 59 45.7	0.0
ERM	Erimo	9.34	28	Pn	Pn	12 59 45.7	0.0
YNCB	YEONCHEON	9.34	299	P	P	12 59 49.3	+0.9
	SNR=8.2						
INCN	Inchon	9.36	295	P	Pn	12 59 46.7	+0.6
INCN	Inchon	9.36	295	Pn	Pn	12 59 46.7	+0.6
JEW	Eniwo	9.51	19	Pn	Pn	12 59 47.2	-0.5
KSDEI	Deokjeokdo	9.69	293	P	P	12 59 53.0	+0.8
	SNR=9.5						
JOW	Kunigami	10.48	230	P	Pn	12 59 59.0	-0.7
	1.2nm,0.3s,baz=88,slow=11,SNR=4.4						
JOW	Kunigami	10.48	230		Pn	12 59 59.2	-0.4
ASAJ	Asahikawa	11.01	21	P	Pn	13 00 06.2	+0.5
	0.8nm,0.3s,baz=177,slow=17,SNR=16						
ASAJ				S	S	13 02 05.0	-4.0
	1.2nm,0.3s,baz=62,slow=22,SNR=6.1						
JKA	Kamikawa-asahi	11.01	21	P	Pn	13 00 06.2	+0.5
USA0B	Ussuriysk Arra	11.07	340	P	Pn	13 00 07.5	+1.1
USA0B	Ussuriysk Arra	11.07	340		Pn	13 00 07.5	+1.1
USRK	Ussuriysk Ar.	11.07	340	P	Pn	13 00 07.0	+0.6
	baz=153,slow=12,SNR=54						
USRK	Ussuriysk Ar.	11.07	340	P	Pn	13 00 06.7	+0.2
RUSJ	Misakicho	11.92	29	*e*P	P	13 00 19.8	+2.9
RUSJ				*e*S	S	13 02 24.2	-5.2
MDJ	Mudanjiang	12.23	333	P	Pn	13 00 21.0	+0.6
MDJ				sP		13 01 34.3	
MDJ				S	S	13 02 37.5	+1.4
MDJ				ScP	ScP	13 08 33.0	+0.3
MDJ				PcS	PcS	13 09 07.3	+0.8
MDJ				ScS	ScS	13 12 09.0	+0.3
MDJ				pmax	pmax		
	comp=Z,74nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,140nm,4.2s						
MDJ	Mudanjiang	12.23	333	P	Pn	13 00 20.7	+0.4
CN2	Changchun	13.49	321	*e*P	P	13 00 34.5	+0.1
CN2				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS	Yuzh-Sakhalins	13.69	16	*e*P	Pn	13 00 38.3	+0.8
YSS				*e*S	S	13 03 05.0	-1.1
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NJ2	Nanjing	15.56	268	⇑*i*P	P	13 00 55.0	-2.2
NJ2				pmax	pmax		
	comp=Z,45nm,0.7s						
KLR	Kul'dur	15.85	347	P	P	13 01 00.3	+0.2
	comp=Z,3.4nm,0.3s,baz=166,slow=9.5,SNR=99						
KLR	Kul'dur	15.85	347	*ce*P	P	13 00 59.6	-0.5
NACB	Ninganchiao	16.77	239	P	P	13 01 10.7	+0.4
NACB				IAmb	IAmb	13 01 11.0	
	comp=Z,23nm,0.6s						
BJI	Beijing	17.91	296	P	P	13 01 22.0	-0.4
BJI				pmax	pmax		
	comp=Z,31nm,0.6s						
BJT	Baijiatuau	17.91	296	P	P	13 01 22.4	0.0
BJT				pmax	pmax		
	comp=Z,18nm,0.7s						
BJT	Baijiatuau	17.91	296	P	P	13 01 22.4	0.0
BJT				IAmb	IAmb	13 01 23.7	
	comp=Z,18nm,0.7s						
TPUB	Ta-pu	18.00	238	P	P	13 01 23.1	-0.5
WHN	Wuhan	19.67	266	⇑P	P	13 01 40.5	-0.7
WHN				pmax	pmax		
	comp=Z,140nm,0.7s						
HIA	Hailar	20.11	325	P	P	13 01 44.3	-1.2
HIA				pmax	pmax		
	comp=Z,17nm,0.8s						
HIA	Hailar	20.11	325	P	P	13 01 44.2	-1.2
HIA				IAmb	IAmb	13 01 47.0	
	comp=Z,17nm,0.8s						
ZEA	Zeya	21.06	343	*e*P	P	13 01 54.9	+0.7
ZEA				pmax	pmax		
	comp=E,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC	Hu-ho-hao-te	21.52	296	*e*P	P	13 01 59.5	+0.8
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC				pmax	pmax		
	comp=Z,210nm,6.6s						
BTO	Baotou	22.64	295	*e*P	P	13 02 10.0	+1.2
XAN	Xi'an	23.48	278	⇓P	P	13 02 16.5	+0.1
XAN				pmax	pmax		
	comp=Z,30nm,0.9s						
ENH	Enshi	23.78	269	P	P	13 02 18.4	-0.8
PETK	Petropavlovsk-	24.10	31	P	P	13 02 23.1	+1.3
	comp=Z,6.3nm,0.8s,baz=226,slow=14,SNR=4.7						
ULN	Ulaanbaatar	26.56	311	*ce*P	P	13 02 45.0	+1.0
ULN				pmax	pmax		
	comp=Z,51nm,1.3s						
ULN	Ulaanbaatar	26.56	311	P	P	13 02 45.0	+1.0
ULN				IAmb	IAmb	13 02 47.4	
	comp=Z,30nm,0.8s						
SONM	Songino Array	26.97	310	P	P	13 02 48.8	+1.2
	comp=Z,20nm,0.8s,baz=121,slow=7.4,SNR=63						
SONM				pP	pP	13 03 51.5	+1.4
	comp=Z,7.1nm,1.0s,baz=119,slow=9.4,SNR=6.1						
SONM	Songino Array	26.97	310	P	P	13 02 48.8	+1.2
SONM				IAmb	IAmb	13 02 51.5	
	comp=Z,19nm,0.8s						
LZH	Lanzhou	27.39	284	*e*P	P	13 02 52.5	+1.0
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
GYA	Guiyang	27.40	263	⇑*i*P	P	13 02 51.0	-0.6
GYA				pmax	pmax		
	comp=Z,49nm,1.0s						
YAK	Yakutsk	28.56	353	*ce*P	P	13 03 01.3	+0.1
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YAK	Yakutsk	28.56	353	P	P	13 03 01.6	+0.4
YAK				IAmb	IAmb	13 03 02.3	
	comp=Z,9.8nm,0.6s						
BOD	Bodaibo	28.61	334	*e*P	P	13 03 01.0	-0.7
BOD				pmax	pmax		
	comp=Z,8.0nm,1.8s						
ZAK	Zakamensk	29.77	314	*e*P	P	13 03 12.7	+0.5
ZAK				pmax	pmax		
	comp=Z,15nm,1.1s						
WAKE	Wake Island	29.91	112	P	P	13 03 12.3	-1.4
GTA	Gaotai	30.39	291	⇓P	P	13 03 17.5	-0.3
GTA				pP	pP	13 04 22.5	+0.9
GTA				sP	sP	13 05 05.0	+4.1
GTA				pmax	pmax		
	comp=Z,20nm,1.2s						
KMI	Kunming	31.18	263	⇑P	P	13 03 24.5	-0.4
KMI				pP	pP	13 04 27.0	-1.9
KMI				pmax	pmax		
	comp=Z,14nm,1.2s						
MOY	Mondy	31.57	315	*e*P	P	13 03 29.0	+1.1
SLVN	Son La	31.96	256	P	P	13 03 31.5	0.0
SLVN				IAmb	IAmb	13 04 26.4	
	comp=Z,39nm,1.7s						
UBPT	Khong Chiam	34.14	245	P	P	13 03 49.8	-0.5
SIJI	Sorong	35.05	190	P	P	13 03 57.2	-0.7
	comp=Z,3.2nm,0.5s,baz=232,slow=2.4,SNR=3.7						
FAKI	Fak Fak	36.93	188	P	P	13 04 12.8	-1.0
FAKI				IAmb	IAmb	13 04 42.9	
	comp=Z,41nm,1.2s						
CHTO	Chiang Mai	37.24	256	P	P	13 04 16.6	+0.2
CHTO				pmax	pmax		
	comp=Z,12nm,0.9s						
CHTO	Chiang Mai	37.24	256	P	P	13 04 16.6	+0.2
CM31	Chiang Mai Arr	37.43	256	P	P	13 04 17.8	-0.2
CM31				IAmb	IAmb	13 04 19.2	
	comp=Z,8.3nm,0.6s						
CMAR	Chiang Mai Arr	37.43	256	P	P	13 04 18.1	+0.1
	comp=Z,6.4nm,0.7s,baz=48,slow=7.6,SNR=50						
CMAR				ScP	ScP	13 09 44.2	+1.2
	comp=Z,0.9nm,1.0s,baz=32,slow=4.3,SNR=4.4						
BILL	Bilibino	38.00	17	⇑*e*P	P	13 04 21.8	-0.2
BILL				*e**PP	pP	13 05 25.3	-2.7
BILL				*e*		13 05 59.7	
BILL				*e*S	S	13 09 45.5	-2.6
BILL				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BILL	Bilibino	38.00	17	P	P	13 04 22.8	+0.8
TIXI	Tiksi	38.07	356	*ce*P	P	13 04 22.0	-0.5
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TIXI	Tiksi	38.07	356	P	P	13 04 22.8	+0.3
WMQ	Urumqi	39.33	300	*e*P	P	13 04 34.5	+1.1
WMQ				pmax	pmax		
	comp=Z,24nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,280nm,5.3s						
DGZ	Jazzator, Alta	39.59	309	*d i*P	P	13 04 36.5	+0.9
DGZ				pmax	pmax		
	comp=Z,36nm,0.8s						
KSM	Kuching	40.95	224	P	P	13 04 47.0	+0.2
KSM	Kuching	40.95	224	P	P	13 04 47.3	+0.5
KSM				IAmb	IAmb	13 04 48.3	
	comp=Z,16nm,0.8s						
ZAA0	Zalesovo Array	41.63	315	P	P	13 04 52.1	+0.3
ZALV	Zalesovo Beam	41.63	315	P	P	13 04 51.7	-0.1
	comp=Z,3.5nm,0.7s,baz=100,slow=7.4,SNR=19						
ZALV				PcP	PcP	13 06 41.4	-0.1
	comp=Z,2.3nm,0.6s,baz=110,slow=2.7,SNR=7.5						
ZALV	Zalesovo Beam	41.63	315	P	P	13 04 52.1	+0.3
MK31	Makanchi Array	43.00	304	P	P	13 05 03.6	+0.7
MK31				pmax	pmax		
	comp=Z,16nm,0.8s						
MK31	Makanchi Array	43.00	304	P	P	13 05 03.6	+0.7
MK31				IAmb	IAmb	13 05 04.3	
	comp=Z,16nm,0.8s						
MKAR	Makanchi Array	43.00	304	P	P	13 05 03.5	+0.6
	comp=Z,18nm,0.7s,baz=86,slow=10,SNR=179						
MKAR				ScP	ScP	13 10 03.9	-0.6
	comp=Z,0.4nm,0.6s,baz=88,slow=3.0,SNR=3.8						
MKAR	Makanchi Array	43.00	304	P	P	13 05 03.8	+0.8
MAKZ	Makanchi	43.21	304	P	P	13 05 05.3	+0.7
MAKZ				pmax	pmax		
	comp=Z,15nm,0.6s						
MAKZ	Makanchi	43.21	304	P	P	13 05 05.3	+0.7
MAKZ				IAmb	IAmb	13 05 05.7	
	comp=Z,15nm,0.6s						
JRMM	Jerantut	44.04	235	P	P	13 05 12.0	+0.6
GUN	Gumba	44.12	277	*e*P	P	13 05 12.1	-0.3
IPM	Ipoh	44.61	237	P	P	13 05 15.0	-1.0
IPM	Ipoh	44.61	237	P	P	13 05 15.1	-1.0
IPM				IAmb	IAmb	13 05 16.2	
	comp=Z,21nm,0.8s						
PKI	Pulchoki	44.63	276	*e*P	P	13 05 15.4	-1.0
	comp=Z,9.6nm,0.7s						
PKIN	Phulchoki	44.64	276	*e*P	P	13 05 15.5	-0.9
	comp=Z,7.8nm,0.5s						
KKN	Kakani	44.66	277	*e*P	P	13 05 15.7	-0.8
MYKOM	Kota Tinggi	44.67	232	P	P	13 05 17.0	+0.6
NRIK	Noril'sk	44.77	337	P	P	13 05 17.0	+0.6
	comp=Z,7.7nm,0.6s,baz=114,slow=9.1,SNR=14						
NRIK	Noril'sk	44.77	337	*ce*P	P	13 05 16.6	+0.2
NRIK				pmax	pmax		
	comp=Z,16nm,1.1s						
NRIK	Noril'sk	44.77	337	P	P	13 05 17.1	+0.6
GKN	Gorkha	45.11	277	*e*P	P	13 05 19.5	-0.5
KURK	Kurchatov	45.28	310	P	P	13 05 21.1	+0.4
KURK				pmax	pmax		
	comp=Z,32nm,0.9s						
KURK	Kurchatov	45.28	310	P	P	13 05 21.1	+0.4
KURK				IAmb	IAmb	13 05 21.7	
	comp=Z,32nm,0.8s						
KURBB	Kurchatov Arra	45.34	310	P	P	13 05 21.3	+0.2
	comp=Z,17nm,0.8s						
KURBB	Kurchatov Arra	45.34	310	P	P	13 05 20.7	-0.4
DANN	Dangsing	45.71	278	*e*P	P	13 05 24.8	0.0
	comp=Z,62nm,0.5s						
KOLN	Koldanda	46.05	278	*e*P	P	13 05 26.8	-0.5
PYUN	Piuthan	46.44	278	*e*P	P	13 05 29.8	-0.5
TARG	Taragay, Kyrgy	46.80	298	P	P	13 05 32.1	-1.1
MTN	Manton Dam	46.85	188	P	P	13 05 32.1	-1.0
MTN				IAmb	IAmb	13 06 30.9	
	comp=Z,57nm,1.4s						
PSI	Prapat	47.27	238	P	P	13 05 35.6	-1.1
	comp=Z,5.0nm,0.8s,baz=94,slow=6.7,SNR=6.2						
PSI	Prapat	47.27	238	P	P	13 05 36.0	-0.7
PSI				pmax	pmax		
	comp=Z,11nm,1.0s						
RPSI	Rantau Prapat	47.35	237	P	P	13 05 36.0	-1.1
BKNI	Bangkinang	47.62	233	P	P	13 05 37.6	-1.6
BKNI				IAmb	IAmb	13 05 40.1	
	comp=Z,41nm,0.8s						
COEN	Coen	47.92	172	P	P	13 05 41.3	-0.1
COEN				IAmb	IAmb	13 05 48.7	
	comp=Z,71nm,1.9s						
BOOM	Boomskoye usch	48.02	299	P	P	13 05 42.7	+0.6
BOOM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BOOM	Boomskoye usch	48.02	299	P	P	13 05 42.7	+0.6
TKM2	Tokmak 2	48.19	300	P	P	13 05 44.1	+0.7
	SNR=8.0						
TKM2	Tokmak 2	48.19	300	*i* P	P	13 05 43.7	+0.2
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.5s						

KSH	Kashi	48.63	295	P	P	13 05 51.0	+4.3
KSH				pmax	pmax		
	comp=Z,13nm,1.0s						
KBK	Karagaybulak	48.71	300	P	P	13 05 47.9	+0.6
	SNR=7.7						
USP	Ospenovka	48.91	300	P	P	13 05 49.0	+0.3
	SNR=5.4						
AAK	Ala-Archa	49.04	300	P	P	13 05 50.2	+0.3
	comp=Z,2.4nm,0.5s,baz=110,slow=6.9,SNR=14						
AAK	Ala-Archa	49.04	300	P	P	13 05 50.0	+0.2
	SNR=5.0						
AAK	Ala-Archa	49.04	300	*ce*P	P	13 05 49.9	+0.1
AAK				pmax	pmax		
	comp=Z,19nm,1.7s						
AAK	Ala-Archa	49.04	300	P	P	13 05 49.8	-0.1
GSI	Gunungsitoli	49.28	237	P	P	13 05 51.4	-0.3
	comp=Z,66nm,1.1s						
GSI	Gunungsitoli	49.28	237	P	P	13 05 51.4	-0.3
LEM	Lembang	49.29	220	P	P	13 05 51.6	-0.4
	comp=Z,22nm,0.7s,baz=321,slow=23,SNR=5.2						
MDSI	Maura Dua	49.34	226	P	P	13 05 50.9	-1.2
	comp=Z,17nm,1.1s						
MASI	Maura Aman, Be	49.47	229	P	P	13 05 54.6	+1.4
OTUK	Ortayu	49.57	307	P	P	13 05 53.4	-0.1
AML	Almayashu	49.73	299	P	P	13 05 54.9	-0.3
	SNR=20						
KNRA	Kununurra	49.96	191	P	P	13 05 56.2	-0.4
KNRA				IAmb	IAmb	13 06 52.5	
	comp=Z,59nm,1.5s						
BRVK	Borovoye	50.29	314	P	P	13 05 59.6	+0.9
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRVK	Borovoye	50.29	314	P	P	13 05 59.6	+0.9
J20K	Nowinta River	50.79	32	P	P	13 06 04.4	+2.1
K20K	Telida	50.80	33	P	P	13 06 04.9	+2.5
K20K				IAmb	IAmb	13 06 14.2	
	comp=Z,68nm,1.9s						
IMAR	Indian Mountai	51.05	29	P	P	13 06 05.5	+1.3
H21K	Melozitna Rive	51.42	30	P	P	13 06 09.1	+2.1
PPLA	Purkeypile	51.65	33	P	P	13 06 09.5	+0.7
CAST	Castle Rocks	51.70	33	P	P	13 06 10.9	+1.9
CAST				IAmb	IAmb	13 07 37.3	
	comp=Z,53nm,2.0s						
KKAR	Karatay Array	51.80	301	P	P	13 06 10.6	+0.5
KKAR	Karatay Array	51.80	301	P	P	13 06 10.6	+0.5
NIL	Nilore	52.40	289	P	P	13 06 14.7	+0.1
NIL				pmax	pmax		
	comp=Z,19nm,0.6s						
NIL	Nilore	52.40	289	P	P	13 06 14.7	+0.1
NIL				IAmb	IAmb	13 06 15.8	
	comp=Z,19nm,0.6s						
TOLK	Toolik Lake Re	52.78	26	P	P	13 06 18.9	+2.0
I23K	Minto, Yukon-K	52.86	31	P	P	13 06 19.2	+1.9
I23K				IAmb	IAmb	13 06 24.5	
	comp=Z,45nm,1.9s						
FITZ	Fitzroy Crossi	52.88	194	P	P	13 06 17.6	-0.5
	comp=Z,4.4nm,0.6s,baz=34,slow=8.8,SNR=9.6						
GAR	Garm	53.01	296	P	P	13 06 19.7	+0.6
GAR				IAmb	IAmb	13 06 19.9	
	comp=Z,14nm,0.8s						
MCK	McKinley	53.10	32	P	P	13 06 20.3	+1.1
MCK				pmax	pmax		
	comp=Z,59nm,1.8s						
MCK	McKinley	53.10	32	P	P	13 06 20.3	+1.1
MCK				IAmb	IAmb	13 07 54.0	
	comp=Z,59nm,1.8s						
RND	Reindeer	53.15	33	P	P	13 06 20.5	+0.8
RND				pmax	pmax		
	comp=Z,23nm,1.2s						
RND	Reindeer	53.15	33	P	P	13 06 20.5	+0.8
RND				IAmb	IAmb	13 07 48.2	
	comp=Z,23nm,1.2s						
WB0	Warramunga Arr	53.44	183	P	P	13 06 21.2	-0.9
WB0				IAmb	IAmb	13 08 22.7	
	comp=Z,43nm,1.9s						
SML	Sawmill	53.50	35	P	P	13 06 23.4	+1.2
WRAB	Tennant Creek	53.61	183	P	P	13 06 22.3	-1.0
WRAB				pmax	pmax		
	comp=Z,46nm,2.0s						
WRAB	Tennant Creek	53.61	183	P	P	13 06 22.3	-1.0
WRAB				IAmb	IAmb	13 07 58.4	
	comp=Z,46nm,1.9s						
WB2	Warramunga Arr	53.62	183	P	P	13 06 22.4	-1.1
WRA	Warramunga Arr	53.62	183	P	P	13 06 22.3	-1.1
	comp=Z,4.5nm,0.8s,baz=0.2,slow=7.6,SNR=98						
WRA	Warramunga Arr	53.62	183	*i* P	P	13 06 22.2	-1.2
WRA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
WRA	Warramunga Arr	53.62	183	P	P	13 06 22.4	-1.1
WR0	Warramunga Arr	53.62	183	P	P	13 06 22.3	-1.2
IL31		53.93	31	P	P	13 06 25.9	+0.8
IL31				IAmb	IAmb	13 07 22.1	
	comp=Z,27nm,1.9s						
ILAR	Eielson Array	53.93	31	P	P	13 06 25.7	+0.6
	comp=Z,1.0nm,0.5s,baz=258,slow=4.8,SNR=16						
CHGR	Chuyangaron	53.97	296	P	P	13 06 26.3	+0.3
CHGR				pmax	pmax		
	comp=Z,49nm,0.7s						
CHGR	Chuyangaron	53.97	296	P	P	13 06 26.3	+0.3
BMAR	Burnt Mountain	54.69	28	P	P	13 06 33.3	+2.8
HYB	Hyderabad	54.72	268	*i* P	P	13 06 31.0	-0.5
SCRK	Sand Creek	55.26	32	P	P	13 06 35.7	+0.9
SCRK				IAmb	IAmb	13 06 44.6	
	comp=Z,32nm,1.9s						
SVE	Sverdlovsk	55.28	319	*e*P	P	13 06 35.9	+1.0
SVE				pmax	pmax		
	comp=Z,25nm,1.0s						
KBL	Kabul	55.38	291	P	P	13 06 35.3	-1.0
KBL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KBL	Kabul	55.38	291	P	P	13 06 35.3	-1.0
BCAR	Beaver Creek A	56.37	33	P	P	13 06 42.6	+0.1
ARU	Arti	56.48	319	*d i*P	P	13 06 43.2	-0.1
ARU						13 07 33.9	
ARU				*PP	pP	13 07 53.1	-2.0
ARU						13 08 50.3	
ARU				S	S	13 14 09.7	+2.4
ARU				SS	SS	13 17 56.0	-3.9
ARU				pmax	pmax		
	comp=Z,22nm,0.9s						
ARU	Arti	56.48	319	P	P	13 06 43.5	+0.2
ARU				IAmb	IAmb	13 06 44.4	
	comp=Z,18nm,0.8s						
SANVU	Saraoutou	56.77	145	P	P	13 06 46.3	+0.5
AS31	Alice Springs	57.34	184	P	P	13 06 48.7	-1.0
ASAR	Alice Springs	57.34	184	P	P	13 06 49.0	-0.7
	comp=Z,3.4nm,0.8s,baz=12,slow=13,SNR=54						
ASAR	Alice Springs	57.34	184	P	P	13 06 48.4	-1.2
AB31	Akbulak array	57.38	311	*i* P	P	13 06 49.4	-0.3
ABKAR	Akbulak array	57.38	311	P	P	13 06 49.6	-0.1
ABKAR				IAmb	IAmb	13 06 50.7	
	comp=Z,18nm,1.1s						
ABKAR	Akbulak array	57.38	311	P	P	13 06 49.5	-0.2
AKTO	Aktyubinsk	58.26	312	P	P	13 06 54.7	-1.0
INK	Inuvik	58.69	26	P	P	13 06 59.4	+1.1
INK				pmax	pmax		
	comp=Z,23nm,2.0s						
INK	Inuvik	58.69	26	P	P	13 06 59.4	+1.1
INK				IAmb	IAmb	13 07 10.6	
	comp=Z,23nm,2.0s						
WHY	Whitehorse	60.10	35	P	P	13 07 10.4	+2.2
WHY				IAmb	IAmb	13 07 12.3	
	comp=Z,40nm,1.9s						
A36M	Sachs Harbour	60.40	21	P	P	13 07 11.6	+1.7
HRA	Herat	60.66	294	P	P	13 07 13.5	+0.9
HRA				IAmb	IAmb	13 07 13.7	
	comp=Z,7.3nm,0.6s						
KIRV	Kirov	60.70	323	*ce*P	P	13 07 12.5	+0.4
C36M	Paulatuk	61.66	23	P	P	13 07 19.5	+1.2
GEYT	Alibeck	62.38	299	P	P	13 07 24.1	+0.5
	comp=Z,4.7nm,0.8s,baz=212,slow=8.2,SNR=6.7						
GEYT	Alibeck	62.38	299	P	P	13 07 23.7	+0.1
BELG	Belogornoye	63.77	317	*i* P	P	13 07 32.3	-0.1
BELG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KLMR	Klimovskoe	64.58	328	*e*P	P	13 07 35.9	-1.5
KLMR				pmax	pmax		
	comp=Z,28nm,1.4s						
KLMR	Klimovskoe	64.58	328	*e*P	P	13 07 36.0	-1.5
KLMR				AMP		13 07 37.7	
	comp=Z,28nm,1.4s						
FORT	Forrest	64.92	189	P	P	13 07 39.9	-0.1
STKA	Stephens Creek	65.56	176	P	P	13 07 43.9	0.0
	comp=Z,1.9nm,0.6s,baz=344,slow=8.1,SNR=6.5						
STKA	Stephens Creek	65.56	176	P	P	13 07 44.0	0.0
STKA				pmax	pmax		
	comp=Z,4.0nm,1.8s						
STKA	Stephens Creek	65.56	176	P	P	13 07 44.0	0.0
ARCES	ARCESS Array B	65.71	339	P	P	13 07 44.9	+0.3
	comp=Z,3.6nm,0.8s,baz=65,slow=6.8,SNR=9.0						
ARCES	ARCESS Array B	65.71	339	P	P	13 07 45.5	+0.9
ARCES				pmax	pmax		
	comp=Z,128nm,2.0s						
ARCES	ARCESS Array B	65.71	339	P	P	13 07 45.5	+0.9
BBOO	Buckleboo	66.37	181	P	P	13 07 49.3	+0.2
BBOO				IAmb	IAmb	13 09 57.8	
	comp=Z,13nm,1.3s						
RES	Resolute Bay	66.44	13	P	P	13 07 50.2	+1.1
RES				pmax	pmax		
	comp=Z,15nm,1.9s						
RES	Resolute Bay	66.44	13	P	P	13 07 50.1	+1.1
RES				IAmb	IAmb	13 09 54.5	
	comp=Z,15nm,1.9s						
VRH	Novokhopyorsk	67.60	317	*e*P	P	13 07 56.0	-0.7
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YKA	Yellowknife Ar	68.19	28	P	P	13 08 00.8	+0.7
	comp=Z,1.7nm,0.8s,baz=297,slow=6.2,SNR=16						
YKA	Yellowknife Ar	68.19	28	P	P	13 08 00.2	+0.1
LPSR	Galich'ya Gora	68.50	320	*e*P	P	13 08 01.8	-0.4
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
OBN	Obninsk	68.55	323⇑	*e*P	P	13 08 02.4	0.0
OBN				*e**PP	pP	13 09 16.3	-1.1
OBN				*e*		13 10 44.7	
OBN				*e*PPP	PPP	13 12 19.2	
OBN				pmax	pmax		
	comp=Z,37nm,2.5s						
VSR	Storozhevoye	69.03	318	*e*P	P	13 08 05.2	-0.3
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORD	Divnogorie	69.07	318	*e*P	P	13 08 05.4	-0.3
VORD				pmax	pmax		
	comp=Z,9.0nm,0.6s						
FIA1	FINESS Array S	69.97	332	P	P	13 08 11.1	+0.1
FINES	FINESS Array B	69.97	332	P	P	13 08 11.2	+0.2
	comp=Z,7.3nm,0.5s,baz=64,slow=5.6,SNR=82						
FINES	FINESS Array B	69.97	332	*i* P	P	13 08 11.1	+0.1
FINES				pmax	pmax		
	comp=Z,7.0nm,0.5s						
FINES	FINESS Array B	69.97	332	P	P	13 08 11.5	+0.5
KBZ	Khabaz	70.33	310	P	P	13 08 13.9	+0.4
	comp=Z,10nm,1.0s,baz=158,slow=1.0,SNR=8.1						
KBZ	Khabaz	70.33	310	*ce*P	P	13 08 13.6	+0.1
KBZ				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV	Kislovodsk	70.36	310⇑	*e*P	P	13 08 14.6	+0.8
KIV				*e**PP	pP	13 09 30.6	+1.4
KIV				*e*		13 10 54.6	
KIV				*e*S	S	13 16 52.7	-5.5
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
KIV	Kislovodsk	70.36	310	P	P	13 08 13.9	+0.1
KIV				IAmb	IAmb	13 08 16.8	
	comp=Z,16nm,1.0s						
IDID	Didziasalis	73.21	326	*e*P	P	13 08 30.5	+0.2
IIGN	Ignalina	73.43	326	*e*P	P	13 08 32.6	+1.0
NACGM	Naroch	73.43	326	*i* P	P	13 08 32.1	+0.6
GURO	Guroymak-BITLI	73.44	305	P	P	13 08 33.1	+1.0
GURO				IAmb	IAmb	13 08 34.1	
	comp=Z,6.9nm,0.9s						
SIRT	Sirnak	73.69	304	P	P	13 08 33.8	+0.3
PABE	Paberze	74.37	327	*e*P	P	13 08 37.4	+0.5
AKASG	Malin Array Be	74.65	321	P	P	13 08 38.5	-0.2
	comp=Z,7.0nm,0.7s,baz=51,slow=6.2,SNR=23						
AKASG	Malin Array Be	74.65	321	P	P	13 08 38.7	+0.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	Malin Array Be	74.65	321	P	P	13 08 38.7	+0.1
AKBB	Malin Array Si	74.65	321	P	P	13 08 38.0	-0.6
AKBB				pmax	pmax		
	comp=Z,50nm,2.0s						
AKBB	Malin Array Si	74.65	321	P	P	13 08 38.0	-0.6
MARD	Mardin	74.92	305	P	P	13 08 40.8	+0.2
NC405	NORSAR Array S	75.49	336	P	P	13 08 42.7	-0.5
K05A	Summer Lake	75.55	48	P	P	13 08 46.0	+1.9
NC204	NORSAR Array S	75.69	336	P	P	13 08 45.3	+0.9
NB2	NORSAR Subarra	75.71	336	P	P	13 08 44.2	-0.3
	comp=Z,4.5nm,0.7s,baz=44,slow=5.9						
NOA	NORSAR Array B	75.71	336	P	P	13 08 44.3	-0.3
	comp=Z,4.9nm,0.9s,baz=44,slow=5.6,SNR=8.9						
J08A	Circle Bar Ran	76.68	47	P	P	13 08 52.2	+1.8
J08A				IAmb	IAmb	13 08 52.9	
	comp=Z,7.6nm,1.2s						
WVOR	Wild Horse Val	77.10	47	P	P	13 08 53.7	+1.0
WVOR				pmax	pmax		
	comp=Z,18nm,1.8s						
WVOR	Wild Horse Val	77.10	47	P	P	13 08 53.7	+1.0
WVOR				IAmb	IAmb	13 10 46.5	
	comp=Z,18nm,1.8s						
PLID	Pearl Lake	77.16	44	P	P	13 08 53.8	+0.6
PLID				IAmb	IAmb	13 09 58.3	
	comp=Z,15nm,1.9s						
SOCY	Socotra	77.78	277	P	P	13 08 55.1	-1.7
FCC	Fort Churchill	78.28	25	P	P	13 08 59.2	+0.5
FCC				pmax	pmax		
	comp=Z,10.0nm,1.6s						
FCC	Fort Churchill	78.28	25	P	P	13 08 59.2	+0.5
FCC				IAmb	IAmb	13 10 12.0	
	comp=Z,10nm,1.6s						
BRTR	Keskin Array B	78.33	310	P	P	13 09 00.1	+0.5
	comp=Z,4.3nm,0.8s,baz=90,slow=6.2,SNR=6.4						
CMB	Columbia Colle	78.45	52	P	P	13 09 01.4	+1.3
CMB				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CMB	Columbia Colle	78.45	52	P	P	13 09 01.4	+1.3
CMB				IAmb	IAmb	13 09 02.0	
	comp=Z,6.0nm,1.2s						
BUR08	Bucovina Ar. S	78.59	320	P	P	13 09 01.7	+0.9
BUR08				IAmb	IAmb	13 09 02.1	
	comp=Z,8.0nm,0.9s						
BURAR	Bucovina Array	78.60	320	P	P	13 09 01.7	+0.8
BURAR				IAmb	IAmb	13 09 02.6	
	comp=Z,7.3nm,0.9s						
KWP	Kalwaria Pacla	78.64	323	P	P	13 09 01.6	+0.8
KWP	Kalwaria Pacla	78.64	323	P	P	13 09 01.6	+0.8
RAYN	Ar Rayn	78.65	291	P	P	13 09 01.8	+0.4
RAYN				pmax	pmax		
	comp=Z,12nm,0.8s						
RAYN	Ar Rayn	78.65	291	P	P	13 09 01.8	+0.4
YERR	Yerington	78.66	51	P	P	13 09 02.8	+1.4
YERR				IAmb	IAmb	13 09 11.1	
	comp=Z,23nm,1.9s						
DLMT	Dillon	78.94	42	P	P	13 09 04.2	+1.5
DLMT				IAmb	IAmb	13 09 04.9	
	comp=Z,3.9nm,0.8s						
RYN	Ryan	79.33	51	P	P	13 09 06.4	+1.4
KVN	Kaiserville	79.35	50	P	P	13 09 06.8	+1.7
KVN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KVN	Kaiserville	79.35	50	P	P	13 09 06.8	+1.7
KVN				IAmb	IAmb	13 09 07.4	
	comp=Z,6.3nm,1.1s						
NVAR	Mina Array Bea	79.58	51	P	P	13 09 07.8	+1.4
	comp=Z,2.8nm,0.9s,baz=292,slow=5.1,SNR=17						
TPH	Tonopah	80.48	50	P	P	13 09 10.7	-0.4
TPH				pmax	pmax		
	comp=Z,30nm,1.0s						
TPH	Tonopah	80.48	50	P	P	13 09 10.7	-0.4
LANS	Liptovska Anna	80.56	324	*e*P	P	13 09 12.3	+1.2
LANS	Liptovska Anna	80.56	324	*e*P	P	13 09 12.3	+1.2
MORC	Moravsky Berou	81.06	325	P	P	13 09 14.4	+0.6
MORC				pmax	pmax		
	comp=Z,16nm,1.2s						
CHVC	Chvalec	81.19	327	*e*P	P	13 09 14.4	0.0
KRLC	Kraliky	81.21	326	*e*P	P	13 09 15.1	+0.5
KRLC	Kraliky	81.21	326	*e*P	P	13 09 15.1	+0.5
DPC	Dobruska-Polom	81.24	326	*e*P	P	13 09 15.6	+0.9
DPC	Dobruska-Polom	81.24	326	*e*P	P	13 09 15.6	+0.9
UPC	Upice	81.27	326	*e*P	P	13 09 15.6	+0.8
UPC	Upice	81.27	326	*e*P	P	13 09 15.6	+0.8
BKZ	Black Stump Fm	81.28	150	P	P	13 09 15.0	+0.1
VYHS	Vyhne	81.31	324	*e*P	P	13 09 15.9	+0.9
VYHS	Vyhne	81.31	324	*e*P	P	13 09 15.9	+0.9
QSM	Queen of Sheba	81.94	52	P	P	13 09 19.8	+1.2
QSM				IAmb	IAmb	13 09 20.5	
	comp=Z,12nm,1.2s						
CLL	Collm	82.05	328	*e*P	P	13 09 19.0	+0.2
CLL				pmax	pmax		
	comp=Z,11nm,1.0s						
CLL	Collm	82.05	328	*e*P	P	13 09 19.0	+0.2
	comp=Z,11nm,1.0s						
CLL	Collm	82.05	328	P	P	13 09 18.6	-0.2
CLL				IAmb	IAmb	13 09 20.4	
	comp=Z,10nm,0.9s						
MODS	Modra-Piesok	82.15	324	*e*P	P	13 09 19.6	+0.2
MODS	Modra-Piesok	82.15	324	*e*P	P	13 09 19.6	+0.2
PDAR	Pinedale Array	82.27	43	P	P	13 09 21.2	+0.8
	comp=Z,1.2nm,0.7s,baz=298,slow=3.3,SNR=13						
PRU	Pruhonice	82.31	327	*e*P	P	13 09 20.7	+0.5
PRU	Pruhonice	82.31	327	*e*P	P	13 09 20.7	+0.5
NKC	Novy Kostel	83.07	328	*e*P	P	13 09 24.4	+0.3
NKC	Novy Kostel	83.07	328	*e*P	P	13 09 24.4	+0.3
CONA	Conrad Observa	83.14	325	*e*P	P	13 09 24.8	+0.3
	comp=Z,8.0nm,1.1s						
CKRC	Cesky Krumlov	83.25	326	*e*P	P	13 09 26.2	+1.2
KHC	Kasperske Hory	83.36	327	*e*P	P	13 09 26.1	+0.5
KHC	Kasperske Hory	83.36	327	P	P	13 09 26.3	+0.7
KHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KHC	Kasperske Hory	83.36	327	P	P	13 09 26.3	+0.7
KHC				IAmb	IAmb	13 09 27.0	
	comp=Z,6.2nm,1.0s						
GERES	GERESS Array B	83.51	326	P	P	13 09 26.7	+0.2
	comp=Z,2.4nm,0.7s,baz=46,slow=5.8,SNR=8.3						
GERES	GERESS Array B	83.51	326	P	P	13 09 27.0	+0.5
GERES	GERESS Array B	83.51	326	P	P	13 09 26.9	+0.5
ABTA	Abfaltersbach	85.58	325	*e*P	P	13 09 35.8	-1.0
	comp=Z,7.5nm,1.0s						
DAVA	Damuels	86.39	327	*e*P	P	13 09 36.0	-4.8
	comp=Z,0.5nm,0.1s						
ITM	Ithomi	87.15	314	P	P	13 09 43.6	-0.8
PLCA	Paso Flores	156.91	115	PKPab	PKPab	13 17 23.4	+0.1
	comp=Z,1.0nm,0.7s,baz=275,slow=4.0,SNR=4.6						

WEL 30 12:58:11.1±1.3, 33°S±28°×18°.0E±4°.1, h291km±51km, M4.3/4, mB4.4/1, ML4.2/9, MLv4.3/4, Mw(mB)3.6/1, Error ellipse: s-maj=0.1km s-min=0.0km az=121.6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	5.26	195	P	Pn	12 59 29.4	-1.8
HAZ				S	S	13 00 35.8	+0.2
PKGZ	Pakihiroa	5.33	192	P	Pn	12 59 33.7	+1.6
PKGZ				S	S	13 00 38.0	+0.8
PUZ	Puketiti	5.48	190	P	Pn	12 59 34.8	+1.0
PUZ				S	S	13 00 39.8	-0.6
RUGZ	Raukumara Rang	5.48	195	P	Pn	12 59 33.8	-0.2
RUGZ				S	S	13 00 39.0	-1.6
MWZ	Matawai	5.87	195	P	Pn	12 59 39.5	+1.0
MWZ				S	S	13 00 49.7	+0.7
CNGZ	Carnagh Statio	5.89	190	P	Pn	12 59 38.0	-0.7
URZ	Urewera	5.90	199	P	Pn	12 59 38.9	0.0
MUGZ	Murupara	6.20	200	P	Pn	12 59 43.2	+0.7
MUGZ				S	S	13 00 57.9	+1.7
MTHZ	Maungataniwha	6.53	199	P	Pn	12 59 46.5	-0.1
MTHZ				S	S	13 01 04.0	+0.5
WHTZ	Whakaora	6.64	205	P	Pn	12 59 46.9	-1.0
BKZ	Black Stump Fm	6.92	200	P	Pn	12 59 50.7	-0.6
BKZ				S	S	13 01 12.4	+0.2
KWHZ	Kaweka Forest	7.18	200	P	Pn	12 59 53.8	-0.7

IDC 30 13:09:46.0±3.1, 30°.06S×177°.51W, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.7/21, mbtmp3.8/3, ML2.7/1, Error ellipse: s-maj=64.3km s-min=20.8km az=89.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.88	336	Pn	Pn	13 10 06.4	+0.8
	317nm,0.3s,baz=349,slow=23,SNR=15						
RAO				Sn	Sn	13 10 18.1	-1.0
	300nm,0.3s,baz=16,slow=23,SNR=6.7						
URZ	Urewera	9.31	207	Pn	Pn	13 12 01.0	-0.4
	0.1nm,0.3s,baz=307,slow=20,SNR=1.8						
URZ				Sn	Sn	13 13 41.8	-5.0
	0.3nm,0.3s,baz=301,slow=24,SNR=55						
ASAR	Alice Springs	43.55	266	P	P	13 17 51.5	-0.3
	0.3nm,0.5s,baz=106,slow=7.3,SNR=7.0						
WRA	Warramunga Arr	44.51	272	P	P	13 17 59.6	+0.1
	0.9nm,0.3s,baz=110,slow=8.1,SNR=52						
FINES	FINESS Array B	144.97	340	PKP	PKPab	13 29 23.1	-0.6
	2.3nm,0.8s,baz=29,slow=4.4,SNR=6.0						

*GUC **30** 13:25:20.9±0.8, 22°.03S×68°.70W, h109km±4km, ML3.5*
*IDC **30** 13:25:44.7±8.9, 19°.98S×68°.63W, h247km±58km, mb3.3/2, mb1 3.5/2, mb1mx2.9/36, mbtmp3.8/2, Error ellipse: s-maj=107.9km s-min=51.0km az=25.0*
ISC 30 13:25:22.0±1.0, 22°.00S±0°.04×68°.87W±0°.08, h112km±7km, n18, σ1s.31/33, 4C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.40	301	*e*P	Pn	13 25 38.2	-0.4
PB09				*e*S	Sn	13 25 51.3	+0.1
PB09				IAML		13 25 52.8	
	comp=N,2µm,0.2s						
LVC	Limon Verde	0.60	183⇑	*e*P	Pn	13 25 38.6	-1.6
LVC				*e*S	Sn	13 25 52.5	-1.4
PB03	IPOC Station P	0.82	267⇓	*e*P	Pn	13 25 41.5	-0.2
PB03				*e*S	Sn	13 25 57.5	+0.8
PB03				IAML		13 25 58.3	
	comp=N,2µm,0.3s						
PB06	IPOC Station P	0.95	223	*e*P	Pn	13 25 42.4	-0.6
PB06				*e*S	Sn	13 25 59.4	+0.5
PB06				IAML		13 26 00.5	
	comp=E,2µm,0.4s						
PB07	IPOC Station P	0.98	286	*e*P	Pn	13 25 43.4	0.0
PB07				*i* S	Sn	13 26 00.5	+1.0
PB07				IAML		13 26 01.7	
	comp=N,1µm,0.1s						
PB01	IPOC Station P	1.11	329	*e*P	Pn	13 25 44.0	-0.7
PB01				*e*S	Sn	13 26 02.1	+0.4
PB01				IAML		13 26 04.0	
	comp=E,1µm,0.7s						
PB02	IPOC Station P	1.17	305	*e*P	Pn	13 25 44.9	-0.4
PB02				*e*S	Sn	13 26 02.9	0.0
PB02				IAML		13 26 09.7	
	comp=E,1µm,0.2s						
PB04	IPOC Station P	1.23	254	*e*P	Pn	13 25 45.8	-0.2
PB04				*i* S	Sn	13 26 05.1	+1.0
PB04				IAML		13 26 09.5	
	comp=N,1µm,0.2s						
PB15	IPOC Station P	1.32	205⇑	*e*P	Pn	13 25 46.3	-0.7
PB15				*e*S	Sn	13 26 06.5	+0.4
PB05	IPOC Station P	1.49	235	*e*P	Pn	13 25 48.5	-0.5
PB05				*e*S	Sn	13 26 09.7	+0.3
PB05				IAML		13 26 11.6	
	comp=E,480nm,0.4s						
PB08	IPOC Station P	1.87	352	*e*P	Pn	13 25 53.4	-0.5
PB08				*e*S	Sn	13 26 18.4	+0.3
PB08				IAML		13 26 20.6	
	comp=N,234nm,0.3s						
TA01	Diego Aracena	1.88	319	*e*P	Pn	13 25 52.6	-1.0
TA01				*e*S	Sn	13 26 18.3	+0.6
TA01				IAML		13 26 19.3	
	comp=E,457nm,0.2s						
PB10	IPOC Station P	2.16	226⇑	*e*P	Pn	13 25 56.1	-1.0
PB10				*e*S	Sn	13 26 21.1	-2.9
PB10				IAML		13 26 24.5	
	comp=E,123nm,0.3s						
PB11	IPOC Station P	2.35	342	*e*P	Pn	13 25 58.4	-1.3
PB11				*i* S	Sn	13 26 27.8	-0.8
PB12	IPOC Station P	3.64	338⇑	*e*P	Pn	13 26 15.3	-1.4
PB12				*e*S	Sn	13 26 55.1	-3.9
PB12				IAML		13 26 56.7	
	comp=E,106nm,0.1s						
LPAZ	La Paz	5.73	7	P	Pn	13 26 45.8	+0.4
	comp=E,0.2nm,0.3s,baz=202,slow=11,SNR=2.0						
LPAZ				S	Sn	13 27 34.4	-16
	comp=E,0.2nm,0.3s,baz=243,slow=2.2,SNR=5.3						
TORD	Torodi Ar. Bea	77.49	70	P	P	13 37 08.7	+2.9
	comp=E,0.6nm,0.5s,baz=257,slow=5.5,SNR=5.9						
YKA	Yellowknife Ar	91.67	341	P	P	13 38 15.0	-1.2
	comp=E,0.3nm,0.7s,baz=136,slow=4.4,SNR=7.0						

*IDC **30** 13:41:49.4±0.5, 59.°50S×26.°02W, $h0^{km}$, mb3.8/5, mb1 4.0/5, mb1mx3.7/19, mbtmp3.8/5, MS4.0/3, Ms1 3.9/3, ms1mx3.2/23, Error ellipse: s-maj=24.1km s-min=17.3km az=48.0*

ISC 30 13:41:51.8±0.9**, 59.°9S**±0.°1×**25.°8W**±0.°2**, $h16^{km}$, n14, $\sigma 3^{s}.73$**/14**, mb3.8**/5**, MS3.7**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	12.98	153	P	Pn	13 44 59.7	+4.5
VNA3	Neumayer Olymp	13.14	157	P	Pn	13 45 01.5	+4.1
VNA3				S	Sn	13 47 17.6	-5.3
VNA2	Neumayer--Watz	13.38	153	P	Pn	13 45 04.5	+3.8
	baz=310,slow=16						
VNA2				S	Sn	13 47 24.0	-4.9
	baz=315,slow=22						
SNAA	Sanae	14.96	151	P	P	13 45 26.3	-1.5
SNAA				S	Sn	13 48 02.9	-4.5
QSPA	South Pole Qui	30.35	180	LR	LR	13 59 41.5	
	comp=Z,158nm,20.0s,baz=191,slow=35						
PLCA	Paso Flores	33.54	285	P	P	13 48 29.0	-1.5
	0.8nm,0.9s,baz=127,slow=5.1,SNR=4.2						
MAW	Mawson	36.67	140	LR	LR	14 02 51.4	
	comp=Z,82nm,18.4s,baz=200,slow=34						
VNDA	Vanda	42.76	182	P	P	13 49 51.8	+4.1
	1.3nm,0.8s,baz=171,slow=5.8,SNR=3.8						
LPAZ	La Paz	53.22	306	P	P	13 51 07.7	-2.2
	0.7nm,0.6s,baz=135,slow=4.3,SNR=2.2						
TORD	Torodi Ar. Bea	76.09	28	P	P	13 53 38.1	-0.2
	0.6nm,0.6s,baz=202,slow=6.5,SNR=2.3						
RAO	Raoul Island	88.26	204	LR	LR	14 28 53.1	
	comp=Z,326nm,18.1s,baz=110,slow=32						
ASAR	Alice Springs	95.10	161	P	P	13 55 15.2	+1.2
	0.3nm,0.6s,baz=180,slow=4.6,SNR=4.8						
YKA	Yellowknife Ar	139.46	314	PKP	PKPdf	14 01 15.4	-1.3
	0.3nm,0.6s,baz=127,slow=2.2,SNR=7.1						
SONM	Songino Array	150.04	92	PKPbc	PKPbc	14 01 40.8	+0.2
	1.0nm,0.7s,baz=218,slow=3.0,SNR=6.0						

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*IDC **30** 13:45:56.5±2.2, 26.°44S×141.°74E, $h0^{km}$, mb1 3.8/5, mb1mx3.3/31, mbtmp3.6/5, ML3.5/4, Error ellipse: s-maj=28.9km s-min=19.0km az=67.0*

*NOU **30** 13:45:58.5, 26.°53S×141.°72E, $h0^{km}$, MLv3.9/8, Queensland, Australia*

ISC 30 13:45:56.7±0.9**, 26.°38S**±0.°06×**141.°67E**±0.°07**, $h10^{km}$, n13, $\sigma 2^{s}.36$**/16**, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INKA	Innaminka	1.58	211	P	Pb	13 46 26.6	+0.6
QLP	Quilpie	2.31	95	P	Pn	13 46 35.9	+1.1
LCRK	Leigh Creek	5.06	216	P	Pn	13 47 14.1	+1.5
STKA	Stephens Creek	5.47	181	Pn	Pn	13 47 18.8	+0.5
	0.8nm,0.3s,baz=5.9,slow=14,SNR=20						
STKA				Sn	Sn	13 48 16.7	-4.7
	1.7nm,0.3s,baz=271,slow=24,SNR=6.2						
STKA				Lg	Lg	13 48 49.5	
	1.1nm,0.3s,baz=72,slow=21,SNR=3.4						
STKA	Stephens Creek	5.47	181	P	Pn	13 47 19.0	+0.7
	1.6nm,3.0s						
OOD	Oodnadatta	5.51	254	P	Pn	13 47 20.9	+2.1
	11nm,1.1s						
QIS	Mount Isa	6.10	341	P	Pn	13 47 32.9	+5.9
	9.6nm,0.6s						
CMSA	Cobar Meteorol	6.23	146	P	Pn	13 47 30.5	+1.8
	6.0nm,0.6s						
ASAR	Alice Springs	7.54	289	Pn	Pn	13 47 49.1	+2.4
	0.6nm,0.3s,baz=111,slow=15,SNR=37						
ASAR				Sn	Sn	13 49 09.7	-2.8
	0.8nm,0.3s,baz=107,slow=24,SNR=8.0						
ASAR				Lg	Lg	13 49 59.6	
	0.3nm,0.3s,baz=110,slow=25,SNR=0.8						
CTA	Charters Tower	7.55	35	Pn	Pn	13 47 48.3	+1.4
	1.1nm,0.3s,baz=205,slow=8.1,SNR=12						
CTA				Sn	Sn	13 49 09.6	-3.0
	2.1nm,0.3s,baz=255,slow=22,SNR=7.6						
MULG	Mulgathing	7.75	238	P	Pn	13 47 51.7	+2.2
	5.6nm,1.8s						
WRA	Warramunga Arr	9.30	312	Pn	Pn	13 48 12.0	+1.1
	0.4nm,0.3s,baz=136,slow=13,SNR=22						
WRA				Sn	Sn	13 49 52.8	-2.8
	0.9nm,0.3s,baz=144,slow=23,SNR=8.3						
WRA				Lg	Lg	13 50 58.5	
	0.5nm,0.3s,baz=139,slow=26,SNR=4.7						
FITZ	Fitzroy Crossi	16.96	296	Pn	Pn	13 49 54.7	+0.5
	baz=90,slow=12						

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*IDC **30** 13:51:55.8±2.3, 5.°16S×129.°64E, $h198^{km}$±31^{km}, mb3.4/3, mb1 3.3/7, mb1mx2.8/57, mbtmp3.8/7, MS3.2/1, Ms1 3.2/1, ms1mx2.3/22, Error ellipse: s-maj=51.8km s-min=16.6km az=82.0*

ISC 30 13:51:55.1±0.7**, 5.°25S**±0.°06×**129.°8E**±0.°1**, $h200^{km}$, n17, $\sigma 2^{s}.96$**/20**, mb3.6**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.73	6	P	Pn	13 52 26.3	+3.0
FAKI	Fak Fak	3.34	46	P	Pn	13 52 50.1	+1.2
SIJI	Sorong	4.58	18	P	Pn	13 53 04.4	+0.1
	5.2nm,0.3s,baz=83,slow=23,SNR=25						
SIJI				S	Sn	13 53 54.1	-4.6
	5.6nm,0.3s,baz=82,slow=21,SNR=24						
DRS	Darwin Rock St	7.21	172	P	Pn	13 53 40.7	+2.6
	14nm,1.0s						
MTN	Manton Dam	7.65	170	P	Pn	13 53 46.8	+3.0
KNRA	Kununurra	10.41	186	P	P	13 54 24.3	-2.8
	26nm,1.6s						
FITZ	Fitzroy Crossi	13.41	197	P	P	13 54 59.6	-0.7
	0.2nm,0.3s,baz=23,slow=12,SNR=1.5						
FITZ				S	S	13 57 21.1	-6.2
	0.3nm,0.3s,baz=187,slow=16,SNR=2.5						
WRA	Warramunga Arr	15.24	164	P	P	13 55 21.7	+0.9
	0.2nm,0.3s,baz=342,slow=13,SNR=7.7						
WRA				S	S	13 58 05.1	-4.7
	0.4nm,0.3s,baz=336,slow=22,SNR=7.9						
COEN	Coen	15.73	124	P	Pn	13 55 29.0	+2.6
	16nm,2.2s						
JAGI	Jajag, Banyuwa	15.89	258	P	Pn	13 55 33.2	+4.9
QIS	Mount Isa	17.93	149	P	Pn	13 55 52.9	+0.4
	7.0nm,0.8s						
ASAR	Alice Springs	18.72	168	P	Pn	13 56 01.4	-0.3
	0.2nm,0.3s,baz=348,slow=10.0,SNR=15						
ASAR				S	S	13 59 21.3	-0.2
	0.1nm,0.3s,baz=348,slow=17,SNR=4.7						
WRKA	Warakurna	19.73	184	P	Pn	13 56 13.8	+0.1
JOW	Kunigami	31.93	357	LR	LR	14 08 33.5	
	comp=Z,43nm,21.3s,baz=178,slow=31						
CMAR	Chiang Mai Arr	38.51	308	P	P	13 58 57.6	-0.7
	0.5nm,0.4s,baz=138,slow=7.6,SNR=5.7						
MKAR	Makanchi Array	66.69	326	P	P	14 02 24.1	-0.4
	0.8nm,0.6s,baz=118,slow=7.8,SNR=11						
KURBB	Kurchatov Arra	70.95	328	P	P	14 02 50.3	-0.3
	1.0nm,0.6s,baz=129,slow=5.0,SNR=11						

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*DJA **30** 13:59:46.8±0.7, 2°S±4°×10°1E±°, $h30^{km}$±11^{km}, M4.1/10, mb4.5/1, MLv3.9/10*

*NEIC **30** 13:59:47.8±1.1, 2.°06S±0.°07×100.°66E±0.°08, $h79^{km}$±8^{km}, mb4.2/13, Error ellipse: s-maj=15.0km s-min=2.2km az=47.0*

*IDC **30** 13:59:47.4±4.0, 2.°04S×100.°71E, $h80^{km}$±34^{km}, mb3.8/10, mb1 3.8/11, mb1mx3.3/58, mbtmp4.0/11, MS3.1/4, Ms1 3.2/4, ms1mx2.8/45, Error ellipse: s-maj=54.1km s-min=14.7km az=55.0*

ISC 30 13:59:45.0±0.7**, 2.°09S**±0.°05×**100.°64E**±0.°05**, $h56^{km}$, n50, $\sigma 1^{s}.62$**/42**, mb4.2**/15**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRJI	Kerinci	0.82	90	P	Pn	14 00 02.1	+1.5
PPSI	Pulau Pagai	0.92	223	P	Pn	14 00 04.1	+2.2
PPI	Padang Panjang	1.64	351	P	Pn	14 00 12.6	+1.1
SISI	Saibi	1.73	296	P	Pn	14 00 13.1	+0.4
MASI	Maura Aman, Be	1.91	123	P	Pn	14 00 17.8	+2.6
BKNI	Bangkinang	2.43	9	P	Pn	14 00 33.1	+11
BKNI	Bangkinang	2.43	9	Pn	Pn	14 00 24.5	+2.1
MNSI	Mandailing Nat	3.06	340	P	Pn	14 00 34.8	+3.9
MNAI	Manna	3.23	134	Pn	Pn	14 00 36.0	+2.8
LHSI	Lahat	3.35	121	P	Pn	14 00 55.5	+21
DSRI	Dabo	4.25	68	P	Pn	14 00 48.4	+1.2
MDSI	Maura Dua	4.26	124	P	Pn	14 00 49.6	+2.3
GSI	Gunungsitoli	4.56	318		Pn	14 00 54.0	+2.6
MYKOM	Kota Tinggi	5.01	40	Pn	Pn	14 00 59.4	+1.7
RPSI	Rantau Prapat	5.05	340		Pn	14 01 01.1	+2.9
PSI	Prapat	5.15	341	P	Pn	14 01 01.1	+1.4
	0.9nm,0.3s,baz=156,slow=11,SNR=6.7						
PSI				LR	LR	14 03 00.5	
	comp=Z,74nm,20.2s,baz=220,slow=38						
IPM	Ipoh	6.54	3	Pn	Pn	14 01 22.4	+3.8
KULM	Kulim	7.33	0	Pn	Pn	14 01 32.3	+2.8
UBPT	Khong Chiam	17.91	15	P	Pn	14 03 51.2	+1.0
UBPT				IAmb	IAmb	14 03 57.4	
	comp=Z,26nm,1.4s						
KAPI	Kappang	19.29	99	LR	LR	14 12 58.3	
	comp=Z,43nm,18.7s,baz=252,slow=41						
CMAR	Chiang Mai Arr	20.49	355	P	P	14 04 17.4	-1.1
	comp=Z,0.4nm,0.7s,baz=185,slow=9.1,SNR=2.5						
CMAR				LR	LR	14 14 01.3	
	comp=Z,21nm,18.8s,baz=265,slow=42						
H08S2	Diego Garcia H	28.57	258	T	T	14 34 41.1	
	baz=81,slow=75,SNR=13						
H08S3	Diego Garcia H	28.58	258	T	T	14 34 44.2	
	baz=81,slow=75,SNR=20						
H08S1	Diego Carcia H	28.59	258	T	T	14 34 42.5	
	baz=81,slow=75,SNR=4.1						
WB0	Warramunga Arr	37.37	120	P	P	14 06 51.5	-1.1
WRA	Warramunga Arr	37.40	121	P	P	14 06 51.7	-1.2
	comp=Z,0.4nm,0.4s,baz=316,slow=10.0,SNR=12						
WRA	Warramunga Arr	37.40	121	IAmb	IAmb	14 06 56.5	
	comp=Z,0.3nm,1.3s						
AS31	Alice Springs	38.68	126	P	P	14 07 03.5	-0.2
ASAR	Alice Springs	38.68	126	P	P	14 07 03.8	+0.1
	comp=Z,2.4nm,0.6s,baz=304,slow=7.7,SNR=52						
ASAR				PcP	PcP	14 09 14.9	0.0
	comp=Z,0.4nm,0.7s,baz=307,slow=2.7,SNR=4.5						
SONM	Songino Array	49.97	5	P	P	14 08 33.1	-0.5
	comp=Z,0.6nm,0.4s,baz=188,slow=9.4,SNR=5.0						
SONM	Songino Array	49.97	5	IAmb	IAmb	14 09 00.9	
	comp=Z,2.8nm,1.4s						
MK31	Makanchi Array	51.29	344	P	P	14 08 43.1	-0.3
MK31				IAmb	IAmb	14 08 44.1	
	comp=Z,2.5nm,0.7s						
MKAR	Makanchi Array	51.29	344	P	P	14 08 43.6	+0.2
	comp=Z,3.1nm,0.6s,baz=159,slow=8.7,SNR=47						
MKAR	Makanchi Array	51.29	344	P	P	14 08 43.4	0.0
MAKZ	Makanchi	51.39	344	P	P	14 08 44.2	0.0
MAKZ				IAmb	IAmb	14 08 44.4	
	comp=Z,2.3nm,0.9s						
USRK	Ussuriysk Ar.	53.94	28	P	P	14 09 02.2	-0.7
	comp=Z,1.3nm,0.7s,baz=222,slow=2.6,SNR=4.4						
USRK	Ussuriysk Ar.	53.94	28	P	P	14 09 02.5	-0.4
KURBB	Kurchatov Arra	55.82	343	P	P	14 09 16.0	-0.5
	comp=Z,1.6nm,0.8s,baz=158,slow=7.0,SNR=9.6						
KURK	Kurchatov	55.88	343	P	P	14 09 16.5	-0.4
KURK				IAmb	IAmb	14 09 18.0	
	comp=Z,3.2nm,0.9s						
ZAA0	Zalesovo Array	57.38	349	P	P	14 09 27.0	-0.4
ZALV	Zalesovo Beam	57.38	349	P	P	14 09 27.0	-0.4
	comp=Z,1.6nm,0.3s,baz=166,slow=5.0,SNR=19						
ZALV	Zalesovo Beam	57.38	349	P	P	14 09 26.7	-0.7
KLR	Kul'dur	57.76	24	P	P	14 09 29.8	-0.4
	comp=Z,0.6nm,0.5s,baz=244,slow=8.6,SNR=4.4						
BVAR	Borovoye Array	60.49	340	P	P	14 09 47.9	-1.2
	comp=Z,0.5nm,0.3s,baz=153,slow=10.0,SNR=6.4						
BRVK	Borovoye	60.55	339	P	P	14 09 48.8	-0.7
ABKAR	Akbulak array	62.03	331	P	P	14 09 59.1	-0.4
ABKAR				IAmb	IAmb	14 10 20.0	
	comp=Z,2.1nm,0.9s						
ABKAR	Akbulak array	62.03	331	P	P	14 09 59.2	-0.3
MAW	Mawson	70.36	194	P	P	14 10 52.7	+0.1
MAW				IAmb	IAmb	14 11 03.2	
	comp=Z,4.7nm,1.4s						
URZ	Urewera	78.09	129	LR	LR	14 48 21.1	
	comp=Z,109nm,20.1s,baz=31,slow=37						
ARCES	ARCESS Array B	86.78	340	P	P	14 12 21.6	-1.2
	comp=Z,3.3nm,0.9s,baz=94,slow=5.9,SNR=5.5						

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*EAF **30** 14:12:07.1±2.8, 25.°88S×29.°22E, $h0^{km}$±21^{km}, MD4.1*

BUL 30 14:12:07.7±1.9**, 25.°90S×29.°18E, $h0^{km}$**±14^{km}**, MD4.4, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	Mopani	3.12	41	*i* P	Pn	14 12 56.7	-1.5
MOPA				*i* Sg	Sb	14 13 41.1	-1.5
MOPA	Mopani	3.12	41	*i* P	Pn	14 12 56.7	-1.5
MOPA				*i* Sg	Sb	14 13 41.1	-1.5
LBTB	Lobatse	3.35	284	*i* P	Pn	14 13 02.2	+0.7
LBTB				*i* Sg	Sb	14 13 50.6	+1.1
LBTB	Lobatse	3.35	284	*i* P	Pn	14 13 02.2	+0.7
LBTB				*i* Sg	Sb	14 13 50.6	+1.1
BOSA	Boshof	4.41	231	*i* P	Pn	14 13 15.2	-0.9
BOSA	Boshof	4.41	231	*i* P	Pn	14 13 15.2	-0.9
MATP	Matopo	5.48	353	*i* S	Sn	14 14 30.9	-3.8
MATP	Matopo	5.48	353	*i* S	Sn	14 14 30.9	-3.8

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*NEIC **30** 14:46:47.7±1.5, 5.°96S±0.°09×155.°0E±0.°1, $h185^{km}$±8^{km}, mb4.5/29, Error ellipse: s-maj=16.7km s-min=13.5km az=80.0*

*IDC **30** 14:46:53.0±3.0, 6.°06S×155.°00E, $h246^{km}$±30^{km}, mb3.5/14, mb1 3.6/16, mb1mx3.5/38, mbtmp4.1/16, Error ellipse: s-maj=17.2km s-min=11.5km az=67.0*

ISC 30 14:46:48.8±0.6**, 5.°97S**±0.°07×**154.°83E**±0.°10**, $h200^{km}$, n57, $\sigma 0^{s}.93$**/52**, mb4.3**/24**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	3.19	304	Pn	Pn	14 47 37.6	-3.1
PMG	Port Moresby	8.33	245	P	Pn	14 48 54.1	+7.7
	1.6nm,0.3s,baz=54,slow=8.4,SNR=6.5						
COEN	Coen	13.95	234		Pn	14 49 58.3	+0.1
CTAO	Charters Tower	16.32	210	P	P	14 50 24.5	-1.9
CTAO				IAmb	IAmb	14 50 42.9	
	comp=Z,13nm,1.2s						
DZM	Mont Dzumac	19.56	146	P	P	14 51 00.2	-1.4
	comp=Z,2.6nm,0.3s,baz=276,slow=7.4,SNR=16						
DZM	Mont Dzumac	19.56	146	IAmb	IAmb	14 51 05.8	
	comp=Z,37nm,1.4s						
EIDS	Eidsvold	19.62	190	P	P	14 51 03.4	+1.2
EIDS				IAmb	IAmb	14 51 32.7	
	comp=Z,12nm,1.1s						
OUENC	Ouen Island, N	20.05	146	P	P	14 51 07.2	+0.4
FAKI	Fak Fak	22.71	277	P	P	14 51 33.8	0.0
WR0	Warramunga Arr	24.13	233	P	P	14 51 47.4	+0.8
WR0				IAmb	IAmb	14 51 48.2	
	comp=Z,17nm,1.0s						
WRAB	Tennant Creek	24.26	233	P	P	14 51 48.6	+0.8
WRAB				IAmb	IAmb	14 51 49.4	
	comp=Z,11nm,0.7s						
WB2	Warramunga Arr	24.27	233	P	P	14 51 49.0	+1.1
WB2				IAmb	IAmb	14 51 49.5	
	comp=Z,10.0nm,0.6s						
WRA	Warramunga Arr	24.28	233	P	P	14 51 49.0	+1.1
	comp=Z,6.6nm,0.5s,baz=59,slow=9.7,SNR=108						
WRA	Warramunga Arr	24.28	233	P	P	14 51 48.0	+0.1
MTN	Manton Dam	24.34	252	P	P	14 51 50.2	+1.7
MTN				IAmb	IAmb	14 51 50.8	
	comp=Z,15nm,0.8s						
ARMA	Armidale	24.51	187	P	P	14 51 50.9	+0.9
ARMA				IAmb	IAmb	14 52 11.9	
	comp=Z,21nm,1.3s						
AS31	Alice Springs	26.74	227	P	P	14 52 10.3	+0.2
ASAR	Alice Springs	26.74	227	P	P	14 52 10.2	+0.1
	comp=Z,1.1nm,0.7s,baz=56,slow=9.2,SNR=27						
ASAR				S	S	14 56 31.2	+0.3
	comp=Z,0.3nm,0.6s,baz=59,slow=14,SNR=5.1						
STKA	Stephens Creek	28.59	204	P	P	14 52 26.6	+0.2
	comp=Z,0.5nm,0.4s,baz=60,slow=12,SNR=4.7						
CAN	Canberra	29.70	190	P	P	14 52 35.1	-1.0
CAN				IAmb	IAmb	14 52 51.8	
	comp=Z,24nm,1.4s						
BBOO	Buckleboo	31.92	211	P	P	14 52 55.4	-0.3
BBOO				IAmb	IAmb	14 53 10.3	
	comp=Z,8.0nm,1.2s						
MMRI	Maumere	32.43	263	P	P	14 53 00.8	+0.5
OUZ	Omahuta	33.86	152	P	P	14 53 12.5	+0.1
OUZ				IAmb	IAmb	14 53 17.3	
	comp=Z,27nm,1.4s						
KMRZ	Kaimai	37.09	152	P	P	14 53 44.4	+4.4
TAU	Tasmania Unive	37.39	189	P	P	14 53 43.1	+0.8
OMRZ	Omania	37.51	152	P	P	14 53 43.8	+0.4
URZ	Urewera	37.98	151	P	P	14 53 46.2	-1.2
	comp=Z,7.4nm,0.8s,baz=301,slow=23,SNR=12						
URZ	Urewera	37.98	151	P	P	14 53 46.7	-0.7
URZ	Urewera	37.98	151	IAmb	IAmb	14 53 50.5	
	comp=Z,24nm,1.3s						
RUGZ	Raukumara Rang	38.03	150	P	P	14 53 47.1	-0.8
PKGZ	Pakihiroa	38.17	150	P	P	14 53 48.6	-0.4
MWZ	Matawai	38.24	151	P	P	14 53 49.2	-0.4
TWGZ	Tauwhareparae	38.34	150	P	P	14 53 50.2	-0.2
PUZ	Puketiti	38.40	150	P	P	14 53 49.8	-1.1
NMHZ	Naumai	38.50	152	P	P	14 53 52.0	+0.2
KWHZ	Kaweka Forest	38.59	153	P	P	14 53 52.5	0.0
UGM	Wanagama	44.01	265	P	P	14 54 37.1	+0.2
JNU	Nakatsue	45.03	331	P	P	14 54 44.9	+0.2
JNU				IAmb	IAmb	14 54 48.4	
	comp=Z,27nm,1.5s						
MJAR	Matsushiro Arr	45.06	341	P	P	14 54 43.8	-1.1
	comp=Z,2.3nm,0.7s,baz=161,slow=7.4,SNR=7.1						
MJAR	Matsushiro Arr	45.06	341	P	P	14 54 44.5	-0.4
KSRS	Korea Array	49.96	332	P	P	14 55 22.9	+0.4
	comp=Z,1.2nm,0.7s,baz=148,slow=6.3,SNR=4.6						
USRK	Ussuriysk Ar.	54.02	340	P	P	14 55 53.0	+0.8
	comp=Z,2.0nm,0.7s,baz=172,slow=4.3,SNR=5.8						
USRK	Ussuriysk Ar.	54.02	340	P	P	14 55 53.7	+1.4
PEA0B	Petropavlovsk-	58.90	2	P	P	14 56 27.3	+0.7
PETK	Petropavlovsk-	58.90	2	P	P	14 56 27.4	+0.8
	comp=Z,7.5nm,0.8s,baz=176,slow=8.9,SNR=7.7						
CMAR	Chiang Mai Arr	60.20	295	P	P	14 56 37.0	+0.9
	comp=Z,0.4nm,0.8s,baz=92,slow=3.8,SNR=4.5						
MA2	Magadan	65.41	358	P	P	14 57 09.7	-0.1
MA2				IAmb	IAmb	14 57 20.7	
	comp=Z,12nm,1.2s						
SONM	Songino Array	68.39	327	P	P	14 57 30.1	+1.2
	comp=Z,1.0nm,0.4s,baz=141,slow=5.2,SNR=19						
SONM	Songino Array	68.39	327	IAmb	IAmb	14 57 30.7	
	comp=Z,4.0nm,1.2s						
BILL	Bilibino	74.28	4	P	P	14 58 04.4	+0.8
MK31	Makanchi Array	82.53	319	P	P	14 58 49.9	+0.7
MKAR	Makanchi Array	82.53	319	P	P	14 58 49.4	+0.1
	comp=Z,1.0nm,0.8s,baz=112,slow=4.7,SNR=10						
ZALV	Zalesovo Beam	83.24	326	P	P	14 58 51.6	-1.0
	comp=Z,1.1nm,0.7s,baz=102,slow=4.9,SNR=4.6						
QSPA	South Pole Qui	84.00	180	P	P	14 58 55.9	-0.7
	comp=Z,0.9nm,0.6s,baz=215,slow=0.3,SNR=17						
QSPA	South Pole Qui	84.00	180	IAmb	IAmb	14 58 56.7	
	comp=Z,2.9nm,1.2s						
NVAR	Mina Array Bea	91.22	52	P	P	14 59 31.3	-0.5
	comp=Z,0.4nm,0.6s,baz=245,slow=7.7,SNR=3.1						
TORD	Torodi Ar. Bea	152.58	287	PKPbc	PKPbc	15 06 21.1	-1.4
	comp=Z,0.2nm,0.5s,baz=55,slow=6.0,SNR=1.6						

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*IDC **30** 14:56:03.5±1.8, 59.°46S×25.°61W, $h38^{km}$±14^{km}, mb3.9/5, mb1 4.0/5, mb1mx3.7/21, mbtmp4.1/5, MS3.4/1, Ms1 3.5/1, ms1mx2.9/15, Error ellipse: s-maj=11.3km s-min=6.9km az=69.0*

ISC 30 14:56:02.6±0.9**, 59.°7S**±0.°1×**25.°7W**±0.°2**, $h32^{km}$, n13, $\sigma 2^{s}.19$**/13**, mb4.1**/5**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	13.16	154	P	Pn	14 59 08.7	+1.9
VNA2	Neumayer--Watz	13.55	154	P	Pn	14 59 12.8	+0.6
	baz=313,slow=15						
VNA2				S	Sn	15 01 34.4	-7.1
	baz=310,slow=22						
SNAA	Sanae	15.13	152	P	Pn	14 59 35.1	+1.5
SNAA				S	Sn	15 02 14.4	-5.5
SNAA	Sanae	15.13	152	Pn	Pn	14 59 35.3	+1.6
	baz=324,slow=17						
QSPA	South Pole Qui	30.59	180	P	P	15 02 15.3	+2.1
	2.2nm,0.6s,baz=239,slow=0.3,SNR=41						
PLCA	Paso Flores	33.56	284	P	P	15 02 39.3	-0.1
	1.1nm,0.8s,baz=130,slow=8.0,SNR=7.4						
VNDA	Vanda	43.00	182	LR	LR	15 22 16.5	
	comp=Z,45nm,18.5s,baz=224,slow=36						
LPAZ	La Paz	53.15	306	P	P	15 05 16.2	-1.7
	0.9nm,0.4s,baz=103,slow=6.8,SNR=6.7						
TORD	Torodi Ar. Bea	75.84	27	P	P	15 07 45.9	+0.6
	0.4nm,0.3s,baz=198,slow=6.1,SNR=7.2						
ASAR	Alice Springs	95.30	161	P	P	15 09 23.6	+0.4
	0.5nm,0.6s,baz=184,slow=3.9,SNR=16						
YKA	Yellowknife Ar	139.35	315	PKP	PKPdf	15 15 24.3	-0.4
	0.3nm,0.5s,baz=129,slow=2.2,SNR=9.0						
SONM	Songino Array	149.96	92	PKPbc	PKiKP	15 15 49.5	0.0
	1.3nm,0.7s,baz=217,slow=2.8,SNR=9.0						
ILAR	Eielson Array	153.03	306	PKPbc	PKPbc	15 15 54.0	-1.0
	0.4nm,0.5s,baz=157,slow=2.4,SNR=5.0						

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*ANF **30** 14:56:15.3±0.9, 43.°28N×126.°66W, $h10^{km}$, ML3.5/11, Error ellipse: s-maj=9.2km s-min=5.7km az=71.0*

*NEIC **30** 14:56:15.3±1.5, 43.°31N±0.°07×126.°8W±0.°1, $h10^{km}$±2^{km}, ML3.2/42, Error ellipse: s-maj=15.5km s-min=11.2km az=251.0*

*IDC **30** 14:56:15.8±2.6, 43.°49N×126.°30W, $h0^{km}$, mb3.4/3, mb1 3.7/5, mb1mx3.4/33, mbtmp3.4/5, ML3.4/2, MS2.9/4, Ms1 2.9/4, ms1mx2.7/21, Error ellipse: s-maj=49.2km s-min=18.8km az=51.0*

ISC 30 14:56:15.5±1.6**, 43.°31N**±0.°07×**126.°71W**±0.°10**, $h10^{km}$, n65, $\sigma 0^{s}.88$**/68**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	1.80	103		Pn	14 56 44.9	-1.7
KEBM				IAML		14 57 14.2	
	comp=N,209nm,1.1s						
J01E	Myrtle Point	2.04	93	P	Pn	14 56 48.1	-1.7
	baz=275						
J01E				S	Sn	14 57 14.9	-0.4
	baz=275						
KBO	Bosley Butte	2.14	120	Pn	Pn	14 56 49.5	-1.7
KBO				IAML		14 57 25.9	
	comp=E,138nm,2.3s						
KBO				IAML		14 57 26.7	
	comp=N,132nm,2.6s						
I02E	Swisshome, OR	2.23	68	P	Pn	14 56 51.2	-1.2
	baz=250,SNR=102						
I02E				S	Sn	14 57 19.3	-0.6
	baz=250						
K02D	Willamette Mer	2.32	104	P	Pn	14 56 52.2	-1.6
	baz=286,SNR=120						
K02D				S	Sn	14 57 21.0	-1.4
	baz=286						
I03D	Drain, OR	2.48	80	P	Pn	14 56 55.0	-0.9
	baz=262,SNR=80						
I03D				S	Sn	14 57 26.2	+0.1
	baz=262						
L02E	Cave Junction	2.56	116	P	Pn	14 56 55.8	-1.3
	baz=298						
L02E				S	Sn	14 57 27.9	-0.5
	baz=298						
COR	Corvallis	2.77	61		Pn	14 56 59.5	-0.4
BUCK	Buck Mountain	2.84	71		Pn	14 57 01.0	+0.1
HUMO	Hull Mountain	2.85	103		Pn	14 57 00.4	-0.5
HEBO	Mount Hebo	2.85	47	Pn	Pn	14 57 00.1	-0.9
HEBO				IAML		14 58 01.5	
	comp=N,103nm,2.0s						
H04D	Lebanon	3.12	66	P	Pn	14 57 04.7	+0.1
	baz=249,SNR=18						
G03D	McMinnville, O	3.12	51	P	Pn	14 57 04.0	-0.7
	baz=234,SNR=24						
G03D				S	Sn	14 57 41.7	-0.3
	baz=234						
I04A	Tendick Farm,	3.16	80	P	Pn	14 57 05.3	0.0
	baz=263,SNR=43						
I04A				S	Sn	14 57 44.6	+1.4
	baz=263						
YBH	Yreka Blue Hor	3.35	117	Pn	Pn	14 57 08.0	+0.1
	comp=N,1.3nm,0.3s,baz=295,slow=11,SNR=25						
YBH				Sn	Sn	14 57 49.7	+1.8
	comp=N,0.6nm,0.3s,baz=14,slow=7.8,SNR=1.9						
YBH				LR	LR	14 58 09.4	
	comp=N,62nm,21.1s,baz=300,slow=36						
YBH	Yreka Blue Hor	3.35	117		Pn	14 57 08.4	+0.4
J04D	Umpqua Nationa	3.36	90	P	Pn	14 57 08.9	+0.7
	baz=273,SNR=16						
L04D	Klamath Falls	3.42	107	P	Pn	14 57 09.0	0.0
	baz=290,SNR=34						
M02C	Callahan	3.44	123	P	Pn	14 57 08.5	-0.7
	baz=305						
H04A	Detroit Lake	3.54	66	Pn	Pn	14 57 11.0	+0.5
H04A				IAML		14 57 57.7	
	comp=N,47nm,0.4s						
KMRM	Mail Ridge	3.82	143	Pn	Pn	14 57 15.2	+0.9
KMRM				IAML		14 58 04.9	

	comp=N,40nm,2.6s						
KMRM				IAML		14 59 49.3	
	comp=E,42nm,3.7s						
F04D	Rainier, OR	3.83	42	P	Pn	14 57 14.0	-0.4
	baz=225,SNR=5.8						
E03A	Lebam	3.93	34	Pn	Pn	14 57 15.5	-0.4
E03A				IAML		14 57 46.7	
	comp=N,39nm,3.9s						
J05D	Fort Rock, OR	4.00	89	P	Pn	14 57 16.7	-0.2
	baz=272						
I05D	Terrebonne, OR	4.02	73	P	Pn	14 57 16.9	-0.3
	baz=257,SNR=8.3						
HOOD	Mount Hood Mea	4.15	59	Pn	Pn	14 57 20.0	+1.0
HOOD				IAML		14 58 12.9	
	comp=N,39nm,0.7s						
PINE	Pine Mountain	4.22	81	Pn	Pn	14 57 20.4	+0.3
PINE				IAML		14 58 23.1	
	comp=N,23nm,4.6s						
PINE				IAML		14 59 07.4	
	comp=E,18nm,4.7s						
K05A	Summer Lake	4.31	96		Pn	14 57 21.4	+0.2
K05A				IAML		14 58 10.1	
	comp=N,33nm,5.0s						
K05A				IAML		14 58 48.6	
	comp=E,23nm,4.3s						
G05D	Wamic, OR	4.33	62	P	Pn	14 57 21.7	+0.3
	baz=246,SNR=30						
WISH	Wishkah	4.34	28		Pn	14 57 20.9	-0.5
E04D	Cinebar	4.38	41	P	Pn	14 57 21.7	-0.3
	baz=224,SNR=22						
NLWA	Neilton Lookou	4.55	25		Pn	14 57 23.6	-0.7
NLWA				IAML		14 58 20.0	
	comp=E,24nm,0.5s						
NLWA				IAML		14 58 22.3	
	comp=E,29nm,1.4s						
F05D	White Salmon	4.55	54	P	Pn	14 57 24.6	+0.2
	baz=238,SNR=34						
D04E	Lakebay	4.76	34	P	Pn	14 57 27.3	0.0
	baz=218						
C03A	Quillayute Air	4.87	17	Pn	Pn	14 57 28.3	-0.4
D03D	Eldon	4.93	30	P	Pn	14 57 28.6	-1.0
	baz=213						
D05A	Enumclaw	5.11	39		Pn	14 57 32.4	+0.4
B04A	Port Angeles	5.25	24	Pn	Pn	14 57 33.6	-0.4
I07A	Izee	5.28	79		Pn	14 57 34.8	+0.3
I07A				IAML		14 59 16.8	
	comp=E,12nm,3.4s						
I07A				IAML		14 59 36.8	
	comp=N,9.7nm,4.8s						
F07A	Phinny Hill Vi	5.49	60	Pn	Pn	14 57 37.8	+0.6
PGC	Sidney	5.80	22	Pn	Pn	14 57 41.3	-0.2
LTY	Liberty	5.81	45		Pn	14 57 42.6	+0.9
E07A	Sunnyside	5.85	54	Pn	Pn	14 57 43.1	+0.9
G08A	Pilot Rock	5.91	68		Pn	14 57 43.8	+0.7
WVOR	Wild Horse Val	6.00	96		Pn	14 57 44.0	-0.4
E08A	Dider Farm, El	6.30	57		Pn	14 57 48.9	+0.6
E09A	Wood Farm, Sta	6.87	59		Pn	14 57 55.4	-0.8
BMO	Blue Mountains	6.95	74		Pn	14 57 57.4	+0.1
B08A	Colville Reser	7.21	43	Pn	Pn	14 58 01.4	+0.5
F10A	Beach Ranch, E	7.27	65		Pn	14 58 01.8	0.0
C09A	Chrisman Ranch	7.43	50		Pn	14 58 04.7	+0.8
LLLB	Lillooet	8.01	23	Pn	Pn	14 58 12.2	+0.3
NEW	Newport	8.33	50	Pn	Pn	14 58 16.6	+0.3
ELK	Elko	8.92	103	LR	LR	15 01 10.2	
	comp=N,72nm,21.1s,baz=172,slow=34						
LRM	Limekiln Ridge	10.48	71	Pn	Pn	14 58 46.6	+0.7
WALA	Waterton Lakes	10.57	53	Pn	Pn	14 58 50.2	+3.2
BOZ	Bozeman (W)	11.02	73	Pn	Pn	14 58 54.9	+1.6
PDAR	Pinedale Array	12.57	87	Pn	Pn	14 59 14.9	+0.5
	comp=N,0.0nm,0.3s,baz=293,slow=13,SNR=5.1						
PDAR				LR	LR	15 04 41.2	
	comp=N,86nm,19.4s,baz=310,slow=41						
PFO	Pinyon Flats O	12.57	137	LR	LR	15 04 05.2	
	comp=N,109nm,18.9s,baz=358,slow=38						
YKA	Yellowknife Ar	20.49	16	P	P	15 00 53.0	-0.1
	comp=N,0.9nm,0.8s,baz=205,slow=11,SNR=14						
ULM	Lac du Bonnet	22.12	61	P	P	15 01 10.4	-0.4
	comp=N,2.3nm,0.6s,baz=256,slow=11,SNR=2.9						
ILAR	Eielson Array	24.33	339	P	P	15 01 33.6	+0.6
	comp=N,0.5nm,0.7s,baz=152,slow=7.4,SNR=4.6						
H11S1	WAKE ISLAND Hy	60.60	268	T	T	16 11 48.8	
	baz=50,slow=75,SNR=20						
H11S2	WAKE ISLAND Hy	60.61	268	T	T	16 11 49.4	
	baz=50,slow=75,SNR=25						
H11S3	WAKE ISLAND Hy	60.62	268	T	T	16 11 50.2	
	baz=50,slow=75,SNR=21						

*IDC **30** 15:29:10.0±2.7, 6°.27S×147°.72E, h0^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.5/39, mbtmp3.7/5, ML3.7/2, MS3.1/2, Ms1 3.1/2, ms1mx2.7/23, Error ellipse: s-maj=53.0km s-min=37.3km az=84.0*

ISC 30 15:29:18.8±2.8**, 6°.2S**±0°.2×**147°.3E**±0°.3**, h50**^{km}**, n13,** σ**0**^{s}.**80**/13**, mb3.8**/5**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.20	182	P	Pn	15 30 06.7	0.0
PMG	Port Moresby	3.20	182	P	Pn	15 30 06.7	0.0
COEN	Coen	8.71	207	P	Pn	15 31 21.9	-0.3
	16nm,1.7s						
MTSU	Mount Surprise	12.22	193	P	Pn	15 32 11.7	+1.4
	2.9nm,1.0s						
SIJI	Sorong	16.81	288	P	Pn	15 33 11.9	+0.9
	0.3nm,0.3s,baz=90,slow=20,SNR=2.1						
SIJI				LR	LR	15 40 04.1	
	comp=Z,72nm,18.3s,baz=100,slow=38						
WRAB	Tennant Creek	18.55	221	P	P	15 33 31.5	-0.1
WRA	Warramunga Arr	18.57	221	P	P	15 33 31.1	-0.7
	0.3nm,0.3s,baz=52,slow=11,SNR=22						
ASAR	Alice Springs	21.62	215	P	P	15 34 04.6	-0.3
	0.6nm,0.4s,baz=51,slow=8.2,SNR=34						
OOD	Oodnadatta	24.14	206	P	P	15 34 30.4	+0.2
	7.7nm,0.7s						
FITZ	Fitzroy Crossi	24.19	239	P	P	15 34 30.4	-0.4
	2.5nm,0.9s,baz=67,slow=15						
FITZ				LR	LR	15 44 12.2	
	comp=Z,42nm,21.7s,baz=176,slow=37						
LCRK	Leigh Creek	25.59	198	P	P	15 34 43.9	+0.5
	10nm,0.8s						
STKA	Stephens Creek	26.10	191	P	P	15 34 46.6	-1.5
	0.7nm,0.5s,baz=3.4,slow=7.6,SNR=5.2						
TORD	Torodi Ar. Bea	145.39	284	PKPbc	PKPbc	15 48 51.8	-0.5
	1.3nm,0.6s,baz=73,slow=4.4,SNR=8.4						

*MOS **30** 15:31:43.9±1.1, 44°.90N×147°.30E, h151^{km}, mb4.0/19, Error ellipse: s-maj=8.3km s-min=6.6km az=77.1*

*SKHL **30** 15:31:44.8±0.3, 44°.80N×147°.40E, h141^{km}±6^{km}, mb5.1/9, msha5.7/6*

*NEIC **30** 15:31:45.5±2.5, 44°.97N±0°.07×147°.3E±0°.1, h144^{km}±7^{km}, mb4.2/38, Error ellipse: s-maj=13.0km s-min=10.4km az=110.0*

*IDC **30** 15:31:46.4±0.8, 45°.10N×147°.13E, h154^{km}±6^{km}, mb3.5/18, mb1 3.7/26, mb1mx3.6/50, mbtmp4.0/26, MS2.5/1, Ms1 2.5/1, ms1mx2.1/29, Error ellipse: s-maj=12.8km s-min=9.8km az=134.0*

*JMA **30** 15:31:47.1±0.6, 44°.63N×147°.22E, h145^{km}, M4.0*

*NIED **30** 15:31:47.1, 44°.63N×147°.22E, h145^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.05; $M_{\theta\theta}$1.95; $M_{\phi\phi}$-2.00; $M_{r\theta}$-0.87; $M_{\theta\phi}$-0.46; $M_{\phi r}$-1.02; Fault plane solution: $M_0$2.42000×10^{15} NP1:ϕ_s51.00000°, δ88.00000°, λ-147.00000°. NP2:ϕ_s320.00000°, δ57.00000°, λ-3.00000°.*

ISC 30 15:31:44.5±0.5**, 44°.90N**±0°.04×**147°.32E**±0°.05**, h141**^{km}±4^{km}**, n200,** σ**1**^{s}.**31**/225**, mb4.1**/53**, 11C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.52	49	*d* *i*PN	Pn	15 32 05.2	+0.4
KUR				*i* S	Sn	15 32 20.9	+0.6
KUR				pmax	pmax		
	comp=Z,1µm,0.5s						
KUR				pmax	pmax		
	comp=E,1µm,0.6s						
KUR				pmax	pmax		
	comp=N,755nm,0.3s						
KUR				smax	smax		
	comp=E,16µm,2.0s						
KUR				smax	smax		
	comp=N,12µm,1.7s						
KUR				smax	smax		
	comp=N,3µm,0.6s						
KUR				smax	smax		
	comp=E,1.0nm,0.6s						
KUR	Kuril'sk	0.52	49	*i* P	Pn	15 32 05.3	+0.4
KUR				AMB	AMB	15 32 11.3	
	comp=E,1µm,0.5s						
KUR				AMB	AMB	15 32 11.3	
	comp=E,1µm,0.5s						
KUR				*i* S	Sn	15 32 20.9	+0.6
KUR				A	A	15 32 22.1	
	comp=E,12µm,2.0s						
KUR				A	A	15 32 22.1	
	comp=E,16µm,2.0s						
KUR				A	A	15 32 22.5	
	comp=E,3µm,0.5s						
KUR				A	A	15 32 22.5	
	comp=E,1µm,0.5s						
SHO	Shikotan	1.08	199	*c* *i*PN	Pn	15 32 08.8	-0.3
SHO				*e*S	Sn	15 32 26.0	-1.9
SHO				pmax	pmax		
	comp=N,402nm,0.2s						
SHO				pmax	pmax		
	comp=Z,893nm,0.2s						
SHO				pmax	pmax		
	comp=E,213nm,0.1s						
SHO				smax	smax		
	comp=N,5µm,0.3s						
SHO				smax	smax		
	comp=E,3µm,0.3s						
SHO	Shikotan	1.08	199	*i* P	Pn	15 32 08.9	-0.2
SHO				AMB	AMB	15 32 09.0	
	comp=E,400nm,0.2s						
SHO				AMB	AMB	15 32 09.0	
	comp=E,210nm,0.2s						
SHO				AMB	AMB	15 32 09.0	
	comp=E,890nm,0.2s						
SHO				*e*S	Sn	15 32 26.8	-1.1
SHO				A	A	15 32 27.2	
	comp=E,5µm,0.3s						
SHO				A	A	15 32 27.2	
	comp=E,3µm,0.3s						
YUK	Yuzh-Kuril'sk	1.35	231	*c* *i*PN	Pn	15 32 12.6	+0.8
YUK				*e*S	Sn	15 32 33.3	+0.8
YUK				pmax	pmax		
	comp=E,136nm,0.2s						
YUK				pmax	pmax		
	comp=Z,518nm,0.2s						
YUK				pmax	pmax		
	comp=N,44nm,0.1s						
YUK				smax	smax		
	comp=N,4µm,0.6s						
YUK				smax	smax		
	comp=E,1µm,0.5s						
YUK	Yuzh-Kuril'sk	1.35	231	*i* P	Pn	15 32 12.7	+0.9
YUK				AMB	AMB	15 32 13.4	
	comp=E,50nm,0.2s						
YUK				AMB	AMB	15 32 13.4	
	comp=E,140nm,0.2s						
YUK				AMB	AMB	15 32 13.4	
	comp=E,520nm,0.2s						
YUK				*e*S	Sn	15 32 33.3	+0.8
YUK				A	A	15 32 34.8	
	comp=E,4µm,0.6s						
YUK				A	A	15 32 34.8	
	comp=E,1µm,0.6s						
RUSJ	Misakicho	1.68	243	⇑*i*PN	Pn	15 32 16.3	+1.0
RUSJ				*e*S	Sn	15 32 39.3	+0.4
GLVR	Golovnino	1.73	229	*e*PN	Pn	15 32 16.9	+1.0
GLVR				*e*S	Sn	15 32 40.1	+0.1
GLVR				pmax	pmax		
	comp=Z,504nm,0.3s						
GLVR				smax	smax		
	comp=E,3µm,0.4s						
GLVR				smax	smax		
	comp=N,2µm,0.3s						
GLVR	Golovnino	1.73	229	*e*P	Pn	15 32 16.5	+0.6
GLVR				AMB	AMB	15 32 17.6	
	comp=N,500nm,0.3s						
GLVR				*e*S	Sn	15 32 40.1	+0.1
GLVR				A	A	15 32 43.1	
	comp=N,2µm,0.4s						
GLVR				A	A	15 32 43.1	
	comp=N,3µm,0.4s						
JRA	Rausu	1.84	239	P	Pn	15 32 18.0	+0.8
NEM2	Nemuro 2	1.90	217	P	Pn	15 32 17.7	-0.2
NEM2				*e*S	Sn	15 32 41.2	-2.3
NMR	Nemuro--Hokkai	1.91	217	⇑*i*PN	Pn	15 32 17.7	-0.2
NMR				*i* S	Sn	15 32 41.1	-2.4
NMR	Nemuro--Hokkai	1.91	217	*i* P	Pn	15 32 17.7	-0.2
NMR				*i* S	Sn	15 32 41.9	-1.6
JNSB	Nemuroshibetsu	2.00	237	P	Pn	15 32 20.1	+1.0
JNK	Nakash	2.28	236	P	Pn	15 32 23.4	+0.9
JKHN	Kushirohamanak	2.39	221	P	Pn	15 32 23.8	0.0
JKHN				*e*S	Sn	15 32 52.1	-1.8
AKK	Akkeshi	2.59	224	*e*P	Pn	15 32 26.4	+0.1
AKK				*e*S	Sn	15 32 57.7	-0.8
JTKR	Abashiri--Toko	2.61	250	P	Pn	15 32 27.5	+1.0
JAK	Akkeshi	2.68	226	P	Pn	15 32 27.6	+0.2
JAK				*e*S	Sn	15 32 59.2	-1.3
JMP	Maruseppu	2.97	254	P	Pn	15 32 32.1	+1.0
JAR	Ashorobuto	3.02	239	P	Pn	15 32 33.0	+1.3
JSE	Soyaes	3.36	273	P	Pn	15 32 37.5	+1.4
JKK2	Kamakawa 2	3.43	254	P	Pn	15 32 38.7	+1.6
JKA	Kamikawa-asahi	3.46	259	*e*P	Pn	15 32 39.4	+2.0
JKA	Kamikawa-asahi	3.46	259	Pn	Pn	15 32 38.9	+1.4
ASAJ	Asahikawa	3.47	259	P	Pn	15 32 39.4	+1.9
	comp=N,19nm,0.3s,baz=355,slow=4.0,SNR=310						
ASAJ				LR	LR	15 33 46.5	
	comp=N,72nm,20.5s,baz=348,slow=36						
JCH	Churui	3.66	233	P	Pn	15 32 40.6	+0.6
JCH				*e*S	Sn	15 33 20.6	-2.5
YSS	Yuzh-Sakhalins	3.79	305	*e*PN	Pn	15 32 42.3	+0.6
YSS				*e*S	Sn	15 33 26.3	+0.2
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS				smax	smax		
	comp=E,110nm,1.0s						
YSS	Yuzh-Sakhalins	3.79	305	AMB	AMB	15 32 44.1	
	comp=E,30nm,0.5s						
YSS				*e*S	Sn	15 33 26.3	+0.2
YSS				A	A	15 33 31.2	
	comp=E,20nm,0.8s						
YSS				A	A	15 33 31.2	
	comp=E,50nm,0.8s						
YSS	Yuzh-Sakhalins	3.79	305		Pn	15 32 42.6	+0.9
JFR	Furan	3.82	245	P	Pn	15 32 43.7	+1.6
JWK2	Keihoku	3.86	278	P	Pn	15 32 45.2	+2.6
JHR	Hokuryu	4.18	256	P	Pn	15 32 49.0	+2.2
ERM	Erimo	4.18	228	PN	Pn	15 32 47.6	+0.8
ERM	Erimo	4.18	228	Pn	Pn	15 32 47.6	+0.8
JNBK	Urakawa-nobuka	4.22	233	P	Pn	15 32 47.0	-0.4
JNBK				*e*S	Sn	15 33 32.3	-4.0
JRBN	Rebuntou	4.46	279	P	Pn	15 32 51.8	+1.4
JEW	Eniwo	4.71	246	P	Pn	15 32 55.9	+2.0
JEW	Eniwo	4.71	246	Pn	Pn	15 32 55.5	+1.6
JKB	Kayabe	5.48	239	P	Pn	15 33 03.6	-0.5
JKB				*e*S	Sn	15 34 01.8	-4.3
UGL	Uglegorsk	5.51	321	*e*PN	Pn	15 33 05.2	+0.7
UGL				*e*S	Sn	15 34 05.9	-1.0
UGL				pmax	pmax		
	comp=Z,40nm,0.9s						
UGL				smax	smax		
	comp=E,70nm,1.3s						
UGL				smax	smax		
	comp=N,70nm,1.1s						
UGL	Uglegorsk	5.51	321	*e*P	Pn	15 33 06.1	+1.6
UGL				AMB	AMB	15 33 16.0	
	comp=N,40nm,0.9s						
UGL				*e*S	Sn	15 34 06.9	0.0
UGL				A	A	15 34 21.0	
	comp=N,70nm,0.9s						
UGL				A	A	15 34 21.0	
	comp=N,80nm,0.9s						
JTM	Tenmabayashi	6.16	230	Pn	Pn	15 33 11.3	-1.9
TYV	Tymovskoe	6.74	334	*e*P	Pn	15 33 22.0	+1.1
TYV				AMB	AMB	15 33 23.0	
	comp=N,10.0nm,0.8s						
SKR	Severo-Kuril's	8.28	43	*e*PN	Pn	15 33 42.0	+0.5
SKR				*e*S	Sn	15 35 10.7	-2.7
SKR				smax	smax		
	comp=N,321nm,1.0s						
SKR				smax	smax		
	comp=E,257nm,0.9s						
SKR	Severo-Kuril's	8.28	43	*e*P	Pn	15 33 42.0	+0.5
SKR				AMB	AMB	15 33 48.0	
	comp=E,60nm,0.6s						
SKR				*e*S	Sn	15 35 10.7	-2.7
SKR				A	A	15 35 27.8	
	comp=E,20nm,0.5s						
SKR				A	A	15 35 27.8	
	comp=E,30nm,0.5s						
JMM	Marumori	8.56	217	Pn	Pn	15 33 43.2	-2.2
PAU	Pauzhetka	9.13	41	*e*P	Pn	15 33 52.8	0.0
PAU				AMB	AMB	15 33 53.6	
	comp=E,50nm,0.5s						
PAU				*e*S	Sn	15 35 30.8	-3.1
PAU				A	A	15 35 38.5	
	comp=E,50nm,0.7s						
PAU				A	A	15 35 38.5	
	comp=E,30nm,0.7s						
NKL	Nikolayevsk	9.34	335	*e*P	Pn	15 33 56.1	+0.5
NKL				AMB	AMB	15 33 57.3	
	comp=E,20nm,0.8s						
GRNR	Gornyy	9.39	313	⇓*i*PN	Pn	15 33 57.7	+1.4
GRNR				pmax	pmax		
	comp=E,10.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				pmax	pmax		
	comp=N,6.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,90nm,17.0s						
GRNR				MLR	MLR		
	comp=N,60nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,100nm,16.0s						
GRNR	Gornyy	9.39	313	*e*P	Pn	15 33 57.7	+1.4
GRNR				AMB	AMB	15 33 58.4	
	comp=Z,10.0nm,1.0s						
GRNR				AMB	AMB	15 33 58.4	
	comp=Z,10.0nm,1.0s						
JSD	Sado	9.65	228	Pn	Pn	15 33 58.2	-1.7
JYT	Yasato	10.21	214		Pn	15 34 04.5	-2.9
PEA0B	Petropavlovsk-	10.67	36	PN	Pn	15 34 14.5	+1.1
PEA0B	Petropavlovsk-	10.67	36	Pn	Pn	15 34 14.5	+1.1
PETK	Petropavlovsk-	10.67	36	P	Pn	15 34 13.2	-0.1
	comp=Z,0.4nm,0.3s,baz=179,slow=12,SNR=11						
PETK	Petropavlovsk-	10.67	36	Pn	Pn	15 34 13.0	-0.4
MJB9	Matsu-Tunnel	10.83	223	Pn	Pn	15 34 15.2	-0.4
MAJO	Matsushiro	10.83	223	*i* PN	Pn	15 34 15.3	-0.3
MAJO	Matsushiro	10.83	223	Pn	Pn	15 34 15.1	-0.5
MJAR	Matsushiro Arr	10.83	223	P	Pn	15 34 16.1	+0.5
	comp=Z,0.1nm,0.3s,baz=27,slow=15,SNR=8.0						
MJAR	Matsushiro Arr	10.83	223	Pn	Pn	15 34 14.9	-0.8
USRK	Ussuriysk Ar.	10.97	272	P	Pn	15 34 16.1	-1.3
	baz=86,slow=12,SNR=11						
USRK	Ussuriysk Ar.	10.97	272	PN	Pn	15 34 18.0	+0.6
USRK	Ussuriysk Ar.	10.97	272	Pn	Pn	15 34 18.0	+0.6
KLR	Kul'dur	11.47	298	P	Pn	15 34 24.0	+0.1
	comp=Z,0.3nm,0.3s,baz=107,slow=14,SNR=23						
KLR	Kul'dur	11.47	298	*ce*PN	Pn	15 34 24.4	+0.5
KLR	Kul'dur	11.47	298	*e*P	Pn	15 34 24.4	+0.5
JWT	Wachi	13.23	228	Pn	Pn	15 34 47.7	+0.8
CN2	Changchun	15.68	274	*e*P	Pn	15 35 16.0	-1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA	Zeya	15.75	311	*e*P	Pn	15 35 18.3	-0.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA	Zeya	15.75	311	*e*P	Pn	15 35 18.2	-0.1
ZEA				AMB	AMB	15 35 19.2	
	comp=Z,10.0nm,1.0s						
KSRS	Korea Array	16.36	250	P	Pn	15 35 25.4	-0.6
	comp=Z,0.5nm,0.3s,baz=57,slow=10,SNR=16						
KS19	Wonju Array Si	16.38	250	P	P	15 35 28.5	+2.1
KS19				IAmb	IAmb	15 35 42.8	
	comp=Z,8.2nm,1.1s						
SEY	Seymchan	18.31	7	P	P	15 35 46.0	-1.3
	comp=Z,0.1nm,0.3s,baz=177,slow=12,SNR=5.3						
SEY	Seymchan	18.31	7	*i* P	Pn	15 35 49.4	+0.3
SEY	Seymchan	18.31	7	*e*P	Pn	15 35 49.4	+0.3
YAK	Yakutsk	20.00	335	P	P	15 36 02.5	-3.2
	comp=Z,0.1nm,0.3s,baz=127,slow=3.3,SNR=7.6						
YAK	Yakutsk	20.00	335	P	P	15 36 03.4	-2.3
YAK				IAmb	IAmb	15 36 04.5	
	comp=Z,9.1nm,0.5s						
HHC	Hu-ho-hao-te	26.38	274	*e*P	P	15 37 08.3	+0.7
HHC				pmax	pmax		
	comp=Z,220nm,5.9s						
HHC				pmax	pmax		
	comp=Z,14nm,1.2s						
ULN	Ulaanbaatar	27.72	291	*ce*P	P	15 37 18.4	-1.2
ULN				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	Songino Array	28.16	291	P	P	15 37 22.8	-0.7
	comp=Z,1.8nm,0.6s,baz=82,slow=8.2,SNR=17						
SONM				pP	pwP	15 37 55.9	-0.5
	comp=Z,1.0nm,0.7s,baz=87,slow=9.7,SNR=2.9						
SONM	Songino Array	28.16	291	P	P	15 37 24.0	+0.5
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	28.16	291	P	P	15 37 24.0	+0.5
TIXI	Tiksi	28.27	348	P	P	15 37 20.9	-3.0
	comp=Z,0.4nm,0.5s,baz=33,slow=2.1,SNR=1.1						
TIXI				pP	pwP	15 37 56.5	-0.6
	comp=Z,3.0nm,0.7s,baz=140,slow=8.4,SNR=5.3						
H11N2	WAKE ISLAND Hy	29.90	141	T	T	16 08 49.6	
	baz=332,slow=76,SNR=112						
H11N1	WAKE ISLAND Hy	29.91	141	T	T	16 08 51.8	
	baz=332,slow=76,SNR=113						
H11N3	WAKE ISLAND Hy	29.92	141	T	T	16 08 52.8	
	baz=332,slow=76,SNR=122						
H11S1	WAKE ISLAND Hy	30.89	142	T	T	16 10 05.7	
	baz=333,slow=76,SNR=212						
H11S3	WAKE ISLAND Hy	30.89	142	T	T	16 10 03.7	
	baz=333,slow=76,SNR=136						
H11S2	WAKE ISLAND Hy	30.90	142	T	T	16 10 06.5	
	baz=333,slow=76,SNR=166						
XAN	Xi'an	31.30	263	P	P	15 37 53.0	+1.8
XAN				pP	pwP	15 38 24.3	+0.6
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ENH	Enshi	33.02	257	P	P	15 38 05.3	-1.0
LZH	Lanzhou	33.87	270	⇑P	P	15 38 15.3	+1.6
LZH				pP	pP	15 38 28.3	-15
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
GTA	Gaotai	35.24	278	⇓P	P	15 38 26.5	+1.1
GTA				pP	pP	15 38 54.0	-1.0
GTA				sP	sP	15 39 11.0	+0.2
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
J20K	Nowinta River	37.36	38	P	P	15 38 44.2	+1.3
J20K				IAmb	IAmb	15 38 45.2	
	comp=Z,3.5nm,0.8s						
IMAR	Indian Mountai	37.63	35	P	P	15 38 46.3	+1.1
H21K	Melozitna Rive	38.00	36	P	P	15 38 48.7	+0.3
H21K				IAmb	IAmb	15 38 49.4	
	comp=Z,3.1nm,1.1s						
CAST	Castle Rocks	38.26	39	P	P	15 38 52.3	+1.7
CAST				IAmb	IAmb	15 38 52.8	
	comp=Z,3.1nm,0.8s						
NEA2	Nenana	39.57	37	P	P	15 39 02.6	+1.2
RND	Reindeer	39.71	39	P	P	15 39 04.9	+2.2
RND				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RND	Reindeer	39.71	39	P	P	15 39 04.9	+2.2
COLA	College	40.08	37	*i* P	P	15 39 05.2	-0.4
COLA				pmax	pmax		
	comp=Z,65nm,3.8s						
ZALV	Zalesovo Beam	40.41	306	P	P	15 39 07.9	-0.6
	comp=Z,0.5nm,0.4s,baz=93,slow=7.2,SNR=3.1						
ZALV				PcP	PcP	15 41 09.4	+0.9
	comp=Z,1.1nm,0.5s,baz=66,slow=3.3,SNR=4.7						
ZALV	Zalesovo Beam	40.41	306	P	P	15 39 08.0	-0.5
ILAR	Eielson Array	40.50	37	P	P	15 39 09.2	+0.1
	comp=Z,1.0nm,0.8s,baz=268,slow=8.1,SNR=5.1						
KMI	Kunming	40.89	256	⇓P	P	15 39 14.3	+1.3
KMI				pmax	pmax		
	comp=Z,20nm,0.9s						
WMQ	Urumqi	41.80	290	*e*P	P	15 39 22.0	+2.0
L27K	Beaver Creek,	42.91	39	P	P	15 39 30.6	+1.9
L27K				IAmb	IAmb	15 39 30.9	
	comp=Z,2.7nm,0.8s						
BCAR	Beaver Creek A	42.93	39	P	P	15 39 30.6	+1.7
M27K	Edge Creek, AK	43.01	40	P	P	15 39 29.7	0.0
M27K				IAmb	IAmb	15 39 32.6	
	comp=Z,7.2nm,0.9s						
MK31	Makanchi Array	44.17	297	P	P	15 39 37.5	-1.5
MK31				pmax	pmax		
	comp=Z,2.0nm,1.0s						

MK31	Makanchi Array	44.17	297	P	P	15 39 37.5	-1.5
MKAR	Makanchi Array	44.17	297	P	P	15 39 37.6	-1.4
	comp=Z,0.8nm,0.5s,baz=75,slow=8.4,SNR=18						
MKAR				ScP	ScP	15 44 59.1	-0.7
	comp=Z,0.5nm,0.7s,baz=59,slow=4.7,SNR=3.7						
MKAR	Makanchi Array	44.17	297	c *i*P	P	15 39 39.0	0.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	44.17	297	*e*P	P	15 39 39.0	0.0
MKAR	Makanchi Array	44.17	297	P	P	15 39 38.6	-0.4
KURK	Kurchatov	45.00	303	P	P	15 39 43.7	-1.8
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KURK	Kurchatov	45.00	303	P	P	15 39 43.7	-1.8
INK	Inuvik	45.35	31	P	P	15 39 47.9	-0.1
	comp=Z,0.7nm,0.4s,baz=306,slow=1.7,SNR=4.3						
INK	Inuvik	45.35	31	P	P	15 39 48.0	0.0
INK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
INK	Inuvik	45.35	31	P	P	15 39 48.0	0.0
CHTO	Chiang Mai	47.72	253	P	P	15 40 07.9	+0.8
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CHTO	Chiang Mai	47.72	253	P	P	15 40 07.9	+0.8
CHTO				IAmb	IAmb	15 40 09.8	
	comp=Z,5.7nm,0.7s						
SIJI	Sorong	47.75	202	P	P	15 40 09.1	+1.8
	comp=Z,0.9nm,0.3s,baz=13,slow=18,SNR=1.6						
CMAR	Chiang Mai Arr	47.97	253	P	P	15 40 09.8	+0.8
	comp=Z,1.6nm,0.6s,baz=38,slow=7.1,SNR=16						
CMAR				PcP	PcP	15 41 36.4	+1.3
	comp=Z,0.5nm,0.6s,baz=24,slow=2.1,SNR=4.3						
CMAR	Chiang Mai Arr	47.97	253	c *i*P	P	15 40 10.8	+1.8
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	Chiang Mai Arr	47.97	253	P	P	15 40 08.5	-0.5
BRVK	Borovoye	48.92	309	*i* P	P	15 40 13.7	-2.2
BRVK				pmax	pmax		
	comp=Z,11nm,2.4s						
BRVK	Borovoye	48.92	309	P	P	15 40 17.9	+2.0
BRVK				IAmb	IAmb	15 40 30.1	
	comp=Z,1.7nm,0.7s						
KDJ	Kajisay	49.48	293	P	P	15 40 21.2	+0.7
KDJ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KDJ	Kajisay	49.48	293	P	P	15 40 21.2	+0.7
KDJ				IAmb	IAmb	15 40 29.3	
	comp=Z,3.2nm,0.8s						
BOOM	Boomskoye usch	50.11	294	P	P	15 40 25.9	+0.6
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOOM	Boomskoye usch	50.11	294	P	P	15 40 25.9	+0.6
BOOM				IAmb	IAmb	15 40 29.6	
	comp=Z,3.3nm,0.8s						
AAK	Ala-Archa	50.98	295	c *e*P	P	15 40 31.0	-0.8
AAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
AAK	Ala-Archa	50.98	295	*e*P	P	15 40 31.0	-0.8
GUN	Gumba	51.08	272	*e*P	P	15 40 33.3	+0.4
	comp=Z,18nm,0.3s						
KKN	Kakani	51.58	273	*e*P	P	15 40 37.5	+1.1
PKI	Pulchoki	51.61	272	*e*P	P	15 40 37.4	+0.5
	comp=Z,11nm,0.5s						
PKIN	Phulchoki	51.62	272	*e*P	P	15 40 37.2	+0.4
	comp=Z,12nm,0.4s						
DMN	Daman	51.81	273	*e*P	P	15 40 39.1	+0.9
	comp=Z,20nm,0.6s						
GKN	Gorkha	51.90	273	*e*P	P	15 40 39.4	+0.6
	comp=Z,17nm,0.4s						
DANN	Dangsing	52.32	274	*e*P	P	15 40 43.2	+1.1
KOLN	Koldanda	52.78	274	*e*P	P	15 40 46.3	+1.0
	comp=Z,2.9nm,0.2s						
PYUN	Piuthan	53.01	275	*e*P	P	15 40 47.9	+0.8
KKAR	Karatay Array	53.29	297	P	P	15 40 48.0	-0.6
KKAR	Karatay Array	53.29	297	P	P	15 40 48.0	-0.6
YKA	Yellowknife Ar	54.78	34	P	P	15 40 59.6	+0.5
	comp=Z,1.5nm,0.8s,baz=300,slow=7.0,SNR=20						
YKA				pP	pwP	15 41 34.8	+1.1
	comp=Z,0.5nm,0.7s,baz=301,slow=7.0,SNR=3.9						
YKA	Yellowknife Ar	54.78	34	P	P	15 40 59.4	+0.3
ABKAR	Akbulak array	56.45	308	P	P	15 41 10.1	-1.1
CHGR	Chuyangaron	56.51	293	P	P	15 41 11.7	-0.2
CHGR				pmax	pmax		
	comp=Z,11nm,1.0s						
CHGR	Chuyangaron	56.51	293	P	P	15 41 11.7	-0.2
ARCES	ARCESS Array B	58.22	339	P	P	15 41 22.1	-1.2
	comp=Z,2.0nm,0.7s,baz=42,slow=6.5,SNR=5.5						
ARCES	ARCESS Array B	58.22	339	P	P	15 41 22.5	-0.8
ARCES	ARCESS Array B	58.22	339	P	P	15 41 22.5	-0.8
COEN	Coen	58.69	185	P	P	15 41 29.2	+2.1
KBL	Kabul	58.92	289	P	P	15 41 28.1	-0.9
KBL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KBL	Kabul	58.92	289	P	P	15 41 28.1	-0.9
FIA1	FINESS Array S	63.91	333	P	P	15 41 59.8	-2.0
FINES	FINESS Array B	63.91	333	P	P	15 41 59.8	-2.0
	comp=Z,3.5nm,0.7s,baz=41,slow=6.7,SNR=18						
FINES	FINESS Array B	63.91	333	P	P	15 41 59.4	-2.4
GEYT	Alibeck	64.00	298	P	P	15 42 01.6	-1.2
	comp=Z,1.6nm,0.5s,baz=42,slow=14,SNR=3.7						
WB0	Warramunga Arr	65.42	193	P	P	15 42 12.6	+0.6
WB0				IAmb	IAmb	15 42 19.6	
	comp=Z,4.0nm,1.0s						
WR0	Warramunga Arr	65.58	193	P	P	15 42 13.6	+0.5
WR0				IAmb	IAmb	15 42 29.7	
	comp=Z,6.0nm,1.1s						
WB2	Warramunga Arr	65.60	193	P	P	15 42 13.8	+0.7
WB2				IAmb	IAmb	15 42 14.3	
	comp=Z,3.9nm,0.9s						
WRA	Warramunga Arr	65.60	193	P	P	15 42 13.6	+0.5
	comp=Z,1.6nm,0.8s,baz=9.0,slow=6.7,SNR=10.0						
WRA	Warramunga Arr	65.60	193	*i* P	P	15 42 12.6	-0.6
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	65.60	193	P	P	15 42 13.7	+0.5
NVAR	Mina Array Bea	66.87	58	P	P	15 42 22.1	+0.6
	comp=Z,0.8nm,0.6s,baz=296,slow=6.7,SNR=8.9						
NVAR				pP	pP	15 42 57.4	+1.9
	comp=Z,0.6nm,0.6s,baz=293,slow=5.8,SNR=3.7						
NVAR	Mina Array Bea	66.87	58	P	P	15 42 21.8	+0.3
NB201	NORSAR Array S	68.55	339	P	P	15 42 29.7	-1.7
R11A	Troy Canyon, C	68.56	57	P	P	15 42 33.5	+1.4
NOA	NORSAR Array B	68.58	339	P	P	15 42 30.1	-1.4
	comp=Z,1.0nm,0.6s,baz=32,slow=6.6,SNR=4.0						
GWY	Greenwater Val	69.31	59	P	P	15 42 38.7	+2.0
GWY				IAmb	IAmb	15 42 39.2	
	comp=Z,2.8nm,0.9s						
ASAR	Alice Springs	69.32	193	P	P	15 42 38.2	+1.7
	comp=Z,0.8nm,0.8s,baz=12,slow=6.7,SNR=12						
ASAR	Alice Springs	69.32	193	P	P	15 42 37.8	+1.3
AKASG	Malin Array Be	70.73	324	P	P	15 42 43.5	-1.4
	comp=Z,0.8nm,0.5s,baz=40,slow=6.3,SNR=7.5						
AKASG	Malin Array Be	70.73	324	c *e*P	P	15 42 44.2	-0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
UOSS	Minazif	73.59	289	P	P	15 43 03.1	+0.8
BUR08	Bucovina Ar. S	74.77	324	P	P	15 43 08.6	-0.4
BURAR	Bucovina Array	74.79	324	P	P	15 43 09.1	+0.1
DPC	Dobruska-Polom	76.03	330	*e*P	PcP	15 43 24.4	-3.3
DPC	Dobruska-Polom	76.03	330	*e*P	PcP	15 43 24.4	-3.3
VYHS	Vyhne	76.64	328	*e*P	P	15 43 21.0	+1.6
VYHS	Vyhne	76.64	328	*e*P	P	15 43 21.0	+1.6
KHC	Kasperske Hory	78.02	331	*e*P	P	15 43 27.6	+0.5
KHC	Kasperske Hory	78.02	331	*e*P	P	15 43 27.6	+0.5
GERES	GERESS Array B	78.22	331	P	P	15 43 27.3	-1.0
	comp=Z,0.7nm,0.6s,baz=46,slow=5.8,SNR=6.3						
GERES	GERESS Array B	78.22	331	P	P	15 43 28.2	-0.1
GERES	GERESS Array B	78.22	331	P	P	15 43 28.1	-0.1
DIVS	Divibare	79.79	324	P	P	15 43 37.0	+0.1
DIVS				IAmb	IAmb	15 43 37.1	
	comp=Z,2.1nm,0.7s						
RAYN	Ar Rayn	81.63	295	P	P	15 43 48.1	+1.1
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
RAYN	Ar Rayn	81.63	295	P	P	15 43 48.0	+1.1
RAYN				IAmb	IAmb	15 43 48.6	
	comp=Z,2.2nm,0.6s						
NRCA	Norcia	83.57	328	P	P	15 43 57.0	+0.2
NRCA				IAmb	IAmb	15 44 08.3	
	comp=Z,5.8nm,1.0s						
BNI	Bardonecchia	83.88	333	P	P	15 43 58.9	+0.5
BNI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BNI	Bardonecchia	83.88	333	P	P	15 43 58.9	+0.5
BNI				IAmb	IAmb	15 44 16.4	
	comp=Z,3.2nm,1.1s						
ITM	Ithomi	84.58	319	P	P	15 44 00.7	-1.2
PLCA	Paso Flores	152.08	95	PKPbc	PKiKP	15 51 23.8	+0.8
	comp=Z,0.7nm,0.5s,baz=236,slow=5.5,SNR=4.9						
PLCA	Paso Flores	152.08	95	PKIKP	PKiKP	15 51 24.1	+1.1
PLCA	Paso Flores	152.08	95	PKPbc	PKiKP	15 51 24.1	+1.1

IDC 30 15:52:23.2±1.6, 2°.15N×127°.16E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.3/23, mbtmp3.2/3, Error ellipse: s-maj=158.2km s-min=10.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.06	163	P	P	15 57 30.4	0.0
	0.3nm,0.4s,baz=341,slow=11,SNR=19						
ASAR	Alice Springs	26.49	166	P	P	15 58 02.2	-0.2
	0.3nm,0.8s,baz=352,slow=7.6,SNR=8.1						
MKAR	Makanchi Array	59.09	326	P	P	16 02 25.4	0.0
	0.2nm,0.4s,baz=113,slow=8.2,SNR=5.3						

NNC 30 16:00:52.8±5.8, 36°.28N×68°.04E, h0km, mb3.8, mpv3.5, 1C-1D, Error ellipse: s-maj=53.5km s-min=43.9km az=124.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	Karatay Array	7.07	15	P	Pn	16 02 39.6	+2.0
	2.8nm,1.0s,baz=198,slow=13						
KK02				S	Sn	16 03 59.2	+0.5
	0.9nm,0.5s,baz=198,slow=21						
AAK	Ala-Archa	8.07	36	P	Pn	16 02 50.7	-0.7
	2.9nm,0.6s						
AAK				⇑S	Sn	16 04 26.1	+2.6
	3.6nm,0.6s						
TKM2	Tokmak 2	8.83	39	P	Pn	16 03 00.3	-1.6
	0.9nm,0.7s						
TKM2				⇓S	Sn	16 04 42.7	+0.6
	0.8nm,0.6s						

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*VAO **30** 16:18:47.6±1.7, 15°.68S×72°.44W, h137km±7km, mb4.2*

*NEIC **30** 16:18:51.4±1.9, 15°.9S±0°.1×72°.1W±0°.1, h138km±17km, mb4.3/6, Error ellipse: s-maj=18.9km s-min=14.6km az=89.0*

*IDC **30** 16:18:52.1±1.9, 15°.85S×71°.87W, h136km±19km, mb3.5/3, mb1 3.7/8, mb1mx3.5/26, mbtmp4.1/8, MS2.0/1, Ms1 2.0/1, ms1mx2.0/17, Error ellipse: s-maj=33.9km s-min=20.8km az=31.0*

*GUC **30** 16:18:54.3±0.4, 16°.26S×72°.28W, h143km±9km, ML4.5*

ISC 30 16:18:51.5±0.8, 16°.07S±0°.07×72°.16W±0°.08, h150km, n57, σ1ˢ.34/55, mb4.2/6, 2D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	2.87	143	⇓*i*P	Pn	16 19 38.3	+1.1
AP01				*e*S	Sn	16 20 11.8	-0.8
AP01	Chacalluta	2.87	143		Pn	16 19 38.3	+1.1
PB12	IPOC Station P	3.08	146	⇓*i*P	Pn	16 19 40.4	+0.5
PB12				IAML		16 20 21.4	
	comp=E,827nm,0.3s						
PB12	IPOC Station P	3.08	146	Pn	Pn	16 19 40.5	+0.5
PB16	IPOC Station P	3.39	132		Pn	16 19 45.5	+1.1
LPAZ	La Paz	3.88	94	P	Pn	16 19 49.6	-1.1
	comp=E,15nm,0.3s,baz=283,slow=11,SNR=211						
LPAZ	La Paz	3.88	94	*e*P	Pn	16 19 50.4	-0.4
LPAZ	La Paz	3.88	94	Pn	Pn	16 19 49.7	-1.0
PB11	IPOC Station P	4.38	147	*e*P	Pn	16 19 56.9	0.0
PB11				*e*S	Sn	16 20 44.6	-3.2
PB11	IPOC Station P	4.38	147		Pn	16 19 56.8	-0.1
TA02	Huaiquique	4.60	156	*e*P	Pn	16 20 00.5	+0.8
TA02				*e*S	Sn	16 20 50.1	-2.6
TA02	Huaiquique	4.60	156		Pn	16 20 00.5	+0.8
TA01	Diego Aracena	4.85	158	*e*P	Pn	16 20 03.7	+0.7
TA01				*i* S	Sn	16 20 56.6	-2.1
TA01	Diego Aracena	4.85	158	Pn	Pn	16 20 03.9	+1.0
PB08	IPOC Station P	4.96	145	*e*P	Pn	16 20 05.3	+0.6
PB08				*e*S	Sn	16 20 59.1	-2.7
PB08	IPOC Station P	4.96	145	Pn	Pn	16 20 05.8	+1.1
PB01	IPOC Station P	5.56	153	*e*P	Pn	16 20 12.4	0.0
PB01	IPOC Station P	5.56	153	Pn	Pn	16 20 12.9	+0.5
PB07	IPOC Station P	6.03	159		Pn	16 20 19.5	+0.8
NNA	Nana	6.09	311	P	Pn	16 20 19.9	+0.4
	comp=E,4.0nm,0.3s,baz=129,slow=8.0,SNR=4.3						
NNA				S	Sn	16 21 25.3	-3.1
	comp=E,3.3nm,0.3s,baz=27,slow=16,SNR=6.0						
PB09	IPOC Station P	6.33	155	Pn	Pn	16 20 23.7	+1.0
PB04	IPOC Station P	6.51	163		Pn	16 20 24.5	-0.7
PB06	IPOC Station P	7.04	160		Pn	16 20 32.7	+0.5
LVC	Limon Verde	7.19	155	P	Pn	16 20 36.0	+1.5
	comp=E,4.0nm,0.3s,baz=343,slow=9.6,SNR=27						
LVC				S	Sn	16 21 54.8	-0.4
	comp=E,12nm,0.3s,baz=260,slow=24,SNR=19						
LVC				LR	LR	16 22 48.9	
	comp=E,12nm,18.8s,baz=335,slow=32						
LVC	Limon Verde	7.19	155	*e*P	Pn	16 20 36.6	+2.1
LVC	Limon Verde	7.19	155	Pn	Pn	16 20 35.5	+1.1
PB15	IPOC Station P	7.54	161		Pn	16 20 39.5	+0.6
PB10	IPOC Station P	7.56	169	Pn	Pn	16 20 39.8	+0.8
ETMB	Extrema	8.49	44	*e*P	Pn	16 20 45.7	-5.9
ETMB	Extrema	8.49	44	Pn	Pn	16 20 45.6	-5.9
PB14	IPOC Station P	8.67	169	Pn	Pn	16 20 55.2	+1.1
SIV	San Ignacio	10.66	91	P	Pn	16 21 15.9	-4.4
	comp=E,1.6nm,0.3s,baz=273,slow=12,SNR=18						
VILB	Vilhena	11.99	77	Pn	Pn	16 21 36.0	-1.7
PTLB	Pontes e Lacer	12.55	89	*e*P	Pn	16 21 45.5	+0.5
PTLB	Pontes e Lacer	12.55	89	Pn	Pn	16 21 42.0	-3.0
PDRB	Porto dos Gac	15.62	75	*e*P	Pn	16 22 23.1	-0.7
SALV	Santo Antonio	15.83	92	*e*P	Pn	16 22 27.1	+0.8
PP1B	Ponte de Pedra	16.61	98	*e*P	P	16 22 35.3	-0.4
CLDB	Colider	16.73	74	*e*P	P	16 22 35.3	-1.7
NPGB	Novo Progresso	18.73	63	*e*P	P	16 22 57.3	-1.6
PTGA	Pitinga	19.41	39	P	P	16 23 04.2	-2.1
	comp=E,0.5nm,0.3s,baz=331,slow=23,SNR=8.4						
ARAG	Araguaiana, MT	19.58	92	*e*P	P	16 23 06.7	-1.3
ITTB	Itaituba	19.89	56	*e*P	P	16 23 09.5	-1.9
SNDB	Serra Nova Dou	20.64	81	*e*P	P	16 23 18.2	-1.3
ITRB	Iturama	21.06	103	*e*P	P	16 23 24.8	+0.9
ITAB	Concordia	21.65	124	P	P	16 23 32.9	+2.8
ITAB				IAmb	IAmb	16 23 53.1	
	comp=Z,21nm,1.1s						
BB19B	Bebedouro	22.94	106	*e*P	P	16 23 43.8	+0.9
IPMB	Ipameri, GO	22.98	98	*e*P	P	16 23 42.8	-0.4
BDFB	Brasilia	23.23	92	P	P	16 23 45.2	-0.5
	comp=Z,4.7nm,0.6s,baz=279,slow=13,SNR=7.8						
BDFB	Brasilia	23.23	92	P	P	16 23 45.5	-0.1
PEXB	Peixe	23.47	83	*e*P	P	16 23 47.3	-0.4
SDV	Santo Domingo	24.84	4		P	16 23 56.5	-3.8
SDV				IAmb	IAmb	16 24 02.8	
	comp=Z,7.9nm,0.9s						
BAUV	El Baul	25.18	10	P	P	16 24 03.0	-0.2
SJCC	San Jacinto, C	25.97	353	P	P	16 24 10.7	+0.3
SJCC				IAmb	IAmb	16 24 12.7	
	comp=Z,10nm,0.9s						
JANB	Januaria	26.84	92	*e*P	P	16 24 18.5	+0.2
TORD	Torodi Ar. Bea	78.56	73	P	P	16 30 36.7	-0.2
	comp=Z,1.3nm,0.8s,baz=270,slow=6.0,SNR=6.2						
YKA	Yellowknife Ar	85.08	342	P	P	16 31 13.1	+3.1
	comp=Z,0.2nm,0.6s,baz=129,slow=5.3,SNR=3.2						

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*NOU **30** 16:36:49.7, 37°.00S×178°.57E, h156km, mb4.1/9, Off E. Coast of N. Island, N.Z.*

*IDC **30** 16:37:01.0±4.2, 37°.67S×178°.03E, h83km±42km, mb3.3/2, mb1 3.6/2, mb1mx3.3/26, mbtmp3.6/2, Error ellipse: s-maj=115.0km s-min=47.0km az=176.0*

*WEL **30** 16:37:02.3±0.7, 37°S±6°×17°8E±°, h31km±5km, M3.4/29, ML3.7/29, MLv3.4/29, Error ellipse: s-maj=0.0km s-min=0.0km az=17.0*

ISC 30 16:37:00.8±1.1, 37°.36S±0°.06×177°.79E±0°.05, h67km±7km, n129, σ1ˢ.68/143, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.39	181	P	Pn	16 37 11.8	-0.6
HAZ				S	Sn	16 37 20.5	-0.4
MXZ	Matakaoa Point	0.46	116	P	Pn	16 37 11.8	-1.1
WIZ	White Island	0.51	251	P	Pn	16 37 13.6	+0.2
WIZ				S	Sn	16 37 22.3	-0.3
WSRZ	White Island S	0.51	252	P	Pn	16 37 14.3	+0.8
PKGZ	Pakihiroa	0.57	157	P	Pn	16 37 14.1	-0.1
PKGZ				S	Sn	16 37 23.9	-0.1
RUGZ	Raukumara Rang	0.61	188	P	Pn	16 37 14.1	-0.5
RUGZ				S	Sn	16 37 23.7	-1.1
WMGZ	Waiomatatini S	0.67	133	P	Pn	16 37 16.6	+1.4
WMGZ				S	Sn	16 37 29.0	+3.2
PUZ	Puketiti	0.80	153	P	Pn	16 37 17.7	+1.0
PUZ				S	Sn	16 37 31.6	+3.1
WHRZ	Whale Island	0.81	232	P	Pn	16 37 17.4	+0.6
WHRZ				S	Sn	16 37 29.0	+0.3
TWGZ	Tauwhareparae	0.83	170	P	Pn	16 37 18.4	+1.3
TWGZ				S	Sn	16 37 33.9	+4.9
MWZ	Matawai	0.99	192	P	Pn	16 37 19.4	+0.3
MWZ				S	Sn	16 37 32.1	-0.6
URZ	Urewera	1.05	211	P	Pn	16 37 20.0	+0.3
	54nm,0.3s,baz=121,slow=24,SNR=306						
URZ				S	Sn	16 37 33.7	0.0
	70nm,0.3s,baz=359,slow=19,SNR=9.2						
URZ	Urewera	1.05	211	P	Pn	16 37 20.0	+0.3
URZ				S	Sn	16 37 33.8	0.0
URZ	Urewera	1.05	211	P	Pn	16 37 21.3	+1.6
TKGZ	Te Karaka	1.08	178	P	Pn	16 37 21.4	+1.3
MARZ	Manawahe	1.08	235	P	Pn	16 37 20.6	+0.4
MARZ				S	Sn	16 37 35.1	+0.4
OPRZ	Ohinepanea	1.09	243	P	Pn	16 37 20.4	+0.1
OPRZ				S	Sn	16 37 34.3	-0.6
EDRZ	Edgecumbe	1.12	228	P	Pn	16 37 21.2	+0.5
CNGZ	Carnagh Statio	1.17	164	P	Pn	16 37 22.6	+1.3
RAGZ	Rawiri	1.17	195	P	Pn	16 37 22.6	+1.2
MYRZ	Mayor Island	1.24	273	P	Pn	16 37 22.3	+0.1
TGRZ	Tauranga	1.27	253	P	Pn	16 37 23.1	+0.5
MKRZ	Makatiti	1.30	233	P	Pn	16 37 25.1	+2.0
TARZ	Mount Tarawera	1.34	229	P	Pn	16 37 25.1	+1.5
RIGZ	Rimuhau	1.34	181	P	Pn	16 37 24.9	+1.3
OMRZ	Omania	1.35	236	P	Pn	16 37 24.6	+0.9
MUGZ	Murupara	1.38	216	P	Pn	16 37 24.4	+0.4
KARZ	Kaharoa	1.39	241	P	Pn	16 37 24.9	+0.7
RRRZ	Republican Roa	1.41	226	P	Pn	16 37 25.3	+0.9
RTZ	Ruatahuna	1.41	207	P	Pn	16 37 25.0	+0.5
HLRZ	Highlands Stat	1.45	232	P	Pn	16 37 26.1	+1.2
SNGZ	Shannon Statio	1.46	194	P	Pn	16 37 27.1	+1.9
NGRZ	Ngongotaha	1.47	239	P	Pn	16 37 26.3	+1.0
UTU	Utuhina	1.50	237	P	Pn	16 37 27.2	+1.5
KMRZ	Kaimai	1.55	251	P	Pn	16 37 26.7	+0.4
HSRZ	Hossack Road	1.55	232	P	Pn	16 37 28.0	+1.7
PRGZ	Paritu Road	1.56	177	P	Pn	16 37 27.1	+0.7
HRRZ	Handcock Road	1.57	229	P	Pn	16 37 28.3	+1.7
PRRZ	Plateau Road	1.58	224	P	Pn	16 37 28.0	+1.2
RAHZ	Arahi	1.65	199	P	Pn	16 37 29.7	+2.0
GRRZ	Galatos Road	1.66	233	P	Pn	16 37 29.3	+1.5
ALRZ	Allen Road	1.66	223	P	Pn	16 37 28.8	+1.0
KNZ	Kokohu	1.66	183	P	Pn	16 37 28.4	+0.6
MTHZ	Maungataniwha	1.67	206	P	Pn	16 37 29.0	+1.1
WPRZ	Whakapapatarin	1.73	228	P	Pn	16 37 29.8	+1.0
KUZ	Kuaotunu	1.77	290	P	Pn	16 37 29.0	-0.2
MHGZ	Mahia Peninsul	1.79	177	P	Pn	16 37 30.3	+0.7
MRHZ	Matea Rd	1.83	216	P	Pn	16 37 31.1	+1.0
TOZ	Tahuroa Road	1.86	258	P	Pn	16 37 30.9	+0.5
NMHZ	Naumai	1.90	204	P	Pn	16 37 33.5	+2.4
KUTZ	Kaahu Road	1.92	234	P	Pn	16 37 32.7	+1.4
WHTZ	Whakaora	1.95	227	P	Pn	16 37 34.7	+3.0
ARHZ	Aropaoanui	2.00	198	P	Pn	16 37 33.8	+1.4
TLZ	Tolley Road	2.03	241	P	Pn	16 37 33.6	+0.9
BKZ	Black Stump Fm	2.07	209	P	Pn	16 37 34.4	+1.1
BKZ	Black Stump Fm	2.07	209	P	Pn	16 37 34.7	+1.3
WATZ	Wairara	2.11	230	P	Pn	16 37 35.2	+1.4
GRZ	Great Barrier	2.18	300	P	Pn	16 37 34.9	+0.1
RATZ	Rangitukua	2.19	226	P	Pn	16 37 37.5	+2.6
WIAZ	Waiheke Island	2.20	284	P	Pn	16 37 35.6	+0.6
RITZ	Rihia Road	2.22	223	P	Pn	16 37 38.1	+2.7
MCHZ	McNeill Hill	2.25	202	P	Pn	16 37 37.0	+1.2
KATZ	Kakaramea	2.31	225	P	Pn	16 37 39.3	+2.7
ETAZ	East Tamaki Re	2.32	279	P	Pn	16 37 37.7	+0.9
KWHZ	Kaweka Forest	2.32	207	P	Pn	16 37 37.8	+1.0
CKHZ	Cape Kidnapper	2.36	193	P	Pn	16 37 37.5	+0.3
MBAZ	Motutapu North	2.39	283	P	Pn	16 37 38.5	+0.9
TMVZ	Te Maari	2.40	223	P	Pn	16 37 40.0	+2.1
NTVZ	North Tongarir	2.40	223	P	Pn	16 37 40.3	+2.4
ETVZ	East Tongariro	2.41	222	P	Pn	16 37 39.5	+1.4
KRVZ	Karewarewa	2.42	224	P	Pn	16 37 40.8	+2.7
OTVZ	Oturere	2.46	222	P	Pn	16 37 40.8	+2.1
NNVZ	North Ngauruho	2.46	223	P	Pn	16 37 40.9	+2.2
WTVZ	West Tongariro	2.46	224	P	Pn	16 37 41.2	+2.5
EPAZ	Eden Park BICE	2.48	280	P	Pn	16 37 40.3	+1.4
SNVZ	South Ngauruho	2.49	222	P	Pn	16 37 41.2	+2.1
ABAZ	Army Bay	2.49	287	P	Pn	16 37 39.9	+1.0
HBAZ	Herne Bay Bore	2.50	281	P	Pn	16 37 40.5	+1.4
NGZ	Ngauruhoe	2.50	223	P	Pn	16 37 41.6	+2.3
TWVZ	Taurewa	2.52	227	P	Pn	16 37 42.0	+2.5
BHHZ	Black Hill Sta	2.52	212	P	Pn	16 37 40.8	+1.3
AWAZ	Awhitu Peninsu	2.53	276	P	Pn	16 37 40.8	+1.3
KAHZ	Kahuranaki	2.53	196	P	Pn	16 37 39.9	+0.3
KRHZ	Kereru	2.54	206	P	Pn	16 37 40.1	+0.4
TUVZ	Tukino	2.54	221	P	Pn	16 37 41.7	+1.9
FWVZ	Far West T-bar	2.58	222	P	Pn	16 37 42.5	+2.0
WHVZ	Whangaehu Hut	2.58	221	P	Pn	16 37 42.3	+1.9
HIZ	Hauiti	2.59	243	P	Pn	16 37 41.9	+1.6
HIZ	Hauiti	2.59	243	P	Pn	16 37 42.0	+1.7
MOVZ	Moawhango	2.59	217	P	Pn	16 37 41.5	+1.0
WTAZ	Waiatarua	2.61	278	P	Pn	16 37 41.8	+1.2
WNVZ	Wahianoa	2.61	221	P	Pn	16 37 42.5	+1.6
TRVZ	Turoa	2.62	222	P	Pn	16 37 42.8	+1.8
RVAZ	Riverhead Bore	2.64	282	P	Pn	16 37 42.2	+1.2
PKVZ	Pokaka	2.72	224	P	Pn	16 37 44.2	+2.1
MTVZ	Mangateitei	2.72	221	P	Pn	16 37 44.0	+1.8
PXZ	Pawanui	2.76	195	P	Pn	16 37 42.0	-0.7
PNHZ	Pukenui	2.84	206	P	Pn	16 37 43.5	-0.2
WPHZ	Waipukurau	2.90	201	P	Pn	16 37 44.1	-0.4
VRZ	Vera Road	2.97	233	P	Pn	16 37 47.9	+2.5
PRHZ	Porangahau	3.04	197	P	Pn	16 37 45.6	-0.9
WCZ	Waipu Caves	3.11	296	P	Pn	16 37 48.0	+0.6
DVHZ	Dannevirke	3.20	203	P	Pn	16 37 47.3	-1.3
WAZ	Wanganui	3.25	222	P	Pn	16 37 51.2	+1.9
ANWZ	Angora Road	3.26	198	P	Pn	16 37 48.4	-1.0
DREZ	Durham Road	3.36	236	P	Pn	16 37 55.3	+4.4
LREZ	Lake Rotokare	3.39	231	P	Pn	16 37 54.1	+2.9
POWZ	Post Office Ro	3.41	207	P	Pn	16 37 51.8	+0.3
OHWZ	Ohakea	3.44	213	P	Pn	16 37 52.5	+0.6
PREZ	Palmer Road	3.47	234	P	Pn	16 37 56.8	+4.4
NEZ	North Egmont	3.48	236	P	Pn	16 37 56.1	+3.6
PRWZ	Pori Road	3.49	203	P	Pn	16 37 52.0	-0.6
PKE	Pukeiti	3.51	237	P	Pn	16 37 55.9	+3.0
BFZ	Birch Farm	3.53	199	P	Pn	16 37 52.0	-1.1
BFZ	Birch Farm	3.53	199	P	Pn	16 37 52.0	-1.1
KHEZ	Kahui Hut	3.54	236	P	Pn	16 37 57.3	+3.9
NBEZ	Newall Road No	3.62	237	P	Pn	16 37 58.2	+3.7
TIWZ	Tintock	3.72	203	P	Pn	16 37 55.0	-0.7
OUZ	Omahuta	4.01	301	P	Pn	16 38 00.8	+1.2
OGWZ	Otaki Gorge	4.01	210	P	Pn	16 37 58.9	-0.7
SNZO	South Karori	4.61	210	P	Pn	16 38 06.0	-1.9
QRZ	Quartz Range	5.36	228	P	Pn	16 38 16.8	-1.3
KHZ	Kahutara	6.01	212	P	Pn	16 38 24.7	-2.4
CTZ	Chatham Island	7.66	148	P	Pn	16 38 48.2	-1.3
RPZ	Rata Peaks	8.16	217	P	Pn	16 38 53.5	-2.9
ODZ	Otahua Downs	9.37	213	P	Pn	16 39 10.4	-2.6
ASAR	Alice Springs	39.85	277	P	P	16 44 28.3	+0.4
	0.5nm,0.6s,baz=122,slow=7.9,SNR=14						
ASAR				PcP	PcP	16 46 31.1	-1.6
	0.2nm,0.5s,baz=115,slow=4.5,SNR=4.8						
WRA	Warramunga Arr	41.49	282	P	P	16 44 42.0	+0.6
	0.6nm,0.5s,baz=123,slow=7.0,SNR=12						
FINES	FINESS Array B	150.12	333	PKPbc	PKPbc	16 56 42.0	-0.9
	2.3nm,0.8s,baz=48,slow=2.1,SNR=1.8						

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*IDC **30** 16:46:35.3±1.7, 3°.72S×152°.15E, h456km±20km, mb3.6/17, mb1 3.7/18, mb1mx3.6/32, mbtmp4.4/18, Error ellipse: s-maj=15.3km s-min=8.5km az=96.0*

*NEIC **30** 16:46:35.1±1.8, 3°.65S±0°.10×152°.3E±0°.1, h451km±8km, mb4.2/51, Error ellipse: s-maj=18.9km s-min=13.9km az=73.0*

ISC 30 16:46:34.8±0.4, 3°.69S±0°.06×152°.23E±0°.09, h450km, n95, σ0ˢ.95/97, mb4.0/48, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.51	187	P	P	16 47 30.2	+0.3
RABL	Rabaul	0.51	187	P	P	16 47 30.4	+0.4
MANU	Manus Island	5.12	288	P	P	16 48 01.6	+1.2
PMG	Port Moresby	7.59	221	P	P	16 48 27.5	+1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PMG	Port Moresby	7.59	221	P	P	16 48 27.8	+1.9
PMG	Port Moresby	7.59	221	P	P	16 48 27.8	+1.9
COEN	Coen	13.56	221	P	P	16 49 32.1	+1.5
MTSU	Mount Surprise	16.32	208	P	P	16 50 01.6	+1.6
	15nm,0.7s						
CTA	Charters Tower	17.31	199	P	P	16 50 10.7	+0.2
	1.7nm,0.3s,baz=27,slow=10,SNR=11						
CTAO	Charters Tower	17.31	199	P	P	16 50 10.7	+0.2
CTAO				IAmb	IAmb	16 50 13.1	
	comp=Z,12nm,0.9s						
SANVU	Saraoutou	18.81	129	P	P	16 50 23.8	-1.6
SANVU	Saraoutou	18.81	129	P	P	16 50 25.6	+0.2
FAKI	Fak Fak	19.96	272	P	P	16 50 36.1	+0.1
LIFNC	LIFOU	22.41	141	P	P	16 50 58.4	+0.3
LIFNC	LIFOU	22.41	141	P	P	16 50 59.3	+1.2
DZM	Mont Dzumac	22.90	144	P	P	16 51 03.2	+0.5
	comp=Z,11nm,0.5s,baz=300,slow=14,SNR=13						
DZM	Mont Dzumac	22.90	144	P	P	16 51 03.1	+0.5
WB0	Warramunga Arr	23.63	226	P	P	16 51 08.5	-0.6
WB0				IAmb	IAmb	16 51 09.0	
	comp=Z,7.1nm,0.5s						
WR0	Warramunga Arr	23.64	225	P	P	16 51 08.7	-0.6
WR0				IAmb	IAmb	16 51 09.4	
	comp=Z,6.6nm,0.6s						
WRAB	Tennant Creek	23.76	226	P	P	16 51 09.8	-0.6
WB2	Warramunga Arr	23.77	226	P	P	16 51 09.9	-0.5
WRA	Warramunga Arr	23.78	226	P	P	16 51 10.0	-0.5
	comp=Z,9.2nm,0.5s,baz=49,slow=9.2,SNR=110						
WRA				ScP	ScP	16 57 35.4	+0.7
	comp=Z,0.9nm,0.8s,baz=47,slow=2.6,SNR=4.8						
WRA	Warramunga Arr	23.78	226	P	P	16 51 08.8	-1.7
AS31	Alice Springs	26.60	220	P	P	16 51 34.7	-0.9
AS31				IAmb	IAmb	16 51 35.2	
	comp=Z,4.1nm,0.3s						
ASAR	Alice Springs	26.61	220	P	P	16 51 34.7	-0.9
	comp=Z,4.7nm,0.4s,baz=51,slow=8.4,SNR=299						
ASAR				S	S	16 55 33.0	-4.7
	comp=Z,0.6nm,0.6s,baz=50,slow=14,SNR=5.5						
ASAR	Alice Springs	26.61	220	P	P	16 51 34.3	-1.3
FITZ	Fitzroy Crossi	29.71	239	P	P	16 52 01.9	-1.0
	comp=Z,1.5nm,0.6s,baz=57,slow=8.4,SNR=1.6						
STKA	Stephens Creek	29.77	198	P	P	16 52 02.6	-0.6
	comp=Z,1.1nm,0.4s,baz=21,slow=9.6,SNR=7.8						
STKA	Stephens Creek	29.77	198	P	P	16 52 02.7	-0.5
CAN	Canberra	31.62	185	P	P	16 52 19.9	+0.7
CAN				IAmb	IAmb	16 52 35.5	
	comp=Z,6.6nm,1.1s						
BBOO	Buckleboo	32.69	206	P	P	16 52 27.2	-1.2
BBOO				IAmb	IAmb	16 52 27.8	
	comp=Z,3.2nm,0.5s						
FORT	Forrest	35.30	218	P	P	16 52 49.7	-0.8
JOW	Kunigami	38.16	324	P	P	16 53 15.1	+0.8
TAU	Tasmania Unive	39.30	186	P	P	16 53 23.8	+0.5
TAU				IAmb	IAmb	16 53 37.7	
	comp=Z,20nm,1.1s						
TPUB	Ta-pu	40.85	313	P	P	16 53 35.7	-0.5
TPUB				IAmb	IAmb	16 53 37.0	
	comp=Z,18nm,0.9s						
SSLB	Suanglung	40.91	313	P	P	16 53 36.7	+0.1
SSLB				IAmb	IAmb	16 53 37.8	
	comp=Z,11nm,0.9s						
QRZ	Quartz Range	41.25	156	P	P	16 53 40.9	+1.8
JNU	Nakatsue	41.82	333	P	P	16 53 43.7	0.0
MJAR	Matsushiro Arr	42.11	343	P	P	16 53 44.6	-1.3
	comp=Z,0.7nm,0.3s,baz=169,slow=7.9,SNR=13						
MJAR	Matsushiro Arr	42.11	343	P	P	16 53 44.5	-1.5
MAJO	Matsushiro	42.11	343	P	P	16 53 44.5	-1.5
MAJO				IAmb	IAmb	16 53 46.9	
	comp=Z,6.1nm,0.9s						
THZ	Tophouse	42.19	157	P	P	16 53 47.1	+0.4
THZ				IAmb	IAmb	16 54 07.4	
	comp=Z,4.3nm,0.7s						
JHS	Saijyo	42.47	337	P	P	16 53 48.6	-0.2
JHS				IAmb	IAmb	16 53 49.4	
	comp=Z,12nm,0.9s						
BHW	Baring Head	42.70	155	P	P	16 53 50.6	0.0
KHZ	Kahutara	43.00	157	P	P	16 53 52.2	-0.7
DCZ	Deep Cove	43.62	165	P	P	16 53 57.8	+0.1
DCZ				IAmb	IAmb	16 53 58.3	
	comp=Z,11nm,1.0s						
WHZ	Wether Hill Ro	44.22	164	P	P	16 54 01.8	-0.6
WHZ				IAmb	IAmb	16 54 03.7	
	comp=Z,17nm,0.9s						
JTM	Tenmabayashi	45.42	348	P	P	16 54 11.1	-0.7
JTM				IAmb	IAmb	16 54 22.9	
	comp=Z,21nm,1.1s						
KSRS	Korea Array	46.76	333	P	P	16 54 21.3	-0.7
	comp=Z,3.7nm,0.8s,baz=151,slow=8.0,SNR=13						
USRK	Ussuriysk Ar.	51.02	341	P	P	16 54 53.7	-0.1
	comp=Z,2.5nm,0.4s,baz=145,slow=5.8,SNR=21						
USRK	Ussuriysk Ar.	51.02	341	P	P	16 54 53.3	-0.5
USA0B	Ussuriysk Arra	51.02	341	P	P	16 54 53.6	-0.2
USA0B				IAmb	IAmb	16 54 54.7	
	comp=Z,6.3nm,0.9s						
KULM	Kulim	52.28	280	P	P	16 55 03.2	-0.4
KULM				IAmb	IAmb	16 55 19.4	
	comp=Z,7.9nm,0.9s						
PEA0B	Petropavlovsk-	56.77	4	P	P	16 55 34.6	0.0
PETK	Petropavlovsk-	56.77	4	P	P	16 55 34.0	-0.5
	comp=Z,3.0nm,0.5s,baz=156,slow=6.5,SNR=21						
PETK	Petropavlovsk-	56.77	4	P	P	16 55 33.7	-0.8
CMAR	Chiang Mai Arr	56.89	295	P	P	16 55 37.2	+1.2
	comp=Z,2.3nm,0.7s,baz=115,slow=5.2,SNR=20						
SONM	Songino Array	65.08	328	P	P	16 56 30.5	+0.6
	comp=Z,1.5nm,0.4s,baz=142,slow=5.4,SNR=30						
SONM	Songino Array	65.08	328	P	P	16 56 29.9	0.0
CASY	Casey	68.91	197	P	P	16 56 53.0	0.0
CASY				IAmb	IAmb	16 56 53.3	
	comp=Z,3.6nm,0.5s						
GUN	Gumba	71.06	301	*e*P	P	16 57 07.6	+0.5
	comp=Z,12nm,0.5s						
PKI	Pulchoki	71.38	301	*e*P	P	16 57 09.1	+0.1
	comp=Z,3.1nm,0.4s						
PKIN	Phulchoki	71.39	301	*e*P	P	16 57 09.1	+0.1
	comp=Z,4.6nm,0.4s						
KKN	Kakani	71.54	301	*e*P	P	16 57 10.0	+0.2
	comp=Z,5.6nm,0.4s						
GKN	Gorkha	72.15	301	*e*P	P	16 57 13.0	-0.3
	comp=Z,5.4nm,0.3s						
BILL	Bilibino	72.24	6	P	P	16 57 12.8	0.0
BILL				IAmb	IAmb	16 57 14.2	
	comp=Z,4.4nm,1.1s						
VNDA	Vanda	73.95	178	P	P	16 57 22.9	+0.4
	comp=Z,1.8nm,0.6s,baz=341,slow=6.9,SNR=12						
VNDA	Vanda	73.95	178	P	P	16 57 23.2	+0.7
J20K	Nowinta River	78.36	21	P	P	16 57 48.3	+1.2
J20K				IAmb	IAmb	16 58 11.0	
	comp=Z,4.2nm,1.1s						
CAST	Castle Rocks	78.69	22	P	P	16 57 49.0	0.0
MK31	Makanchi Array	79.12	319	P	P	16 57 51.8	+0.1
MKAR	Makanchi Array	79.12	319	P	P	16 57 51.9	+0.2
	comp=Z,0.9nm,0.5s,baz=96,slow=7.3,SNR=22						
MKAR	Makanchi Array	79.12	319	P	P	16 57 51.7	+0.1
MAKZ	Makanchi	79.33	319	P	P	16 57 52.8	0.0
MAKZ				IAmb	IAmb	16 57 53.5	
	comp=Z,2.6nm,0.8s						
SML	Sawmill	79.35	25	P	P	16 57 52.9	+0.3
IMAR	Indian Mountai	79.53	20	P	P	16 57 53.6	+0.3
H21K	Melozitna Rive	79.67	20	P	P	16 57 54.9	+0.8
ZAA0	Zalesovo Array	79.92	326	P	P	16 57 55.0	-0.6
ZAA0				IAmb	IAmb	16 57 55.7	
	comp=Z,3.6nm,0.8s						
ZALV	Zalesovo Beam	79.92	326	P	P	16 57 55.0	-0.7
	comp=Z,2.6nm,0.5s,baz=106,slow=5.4,SNR=12						
I23K	Minto, Yukon-K	80.62	21	P	P	16 57 58.7	-0.4
CCB	Clear Creek Bu	80.94	22	P	P	16 57 59.8	-1.0
CCB				IAmb	IAmb	16 58 22.6	
	comp=Z,4.5nm,1.2s						
IL31		81.35	22	P	P	16 58 02.0	-0.8
ILAR	Eielson Array	81.35	22	P	P	16 58 01.9	-1.0
	comp=Z,2.7nm,0.6s,baz=247,slow=5.3,SNR=24						
ILAR	Eielson Array	81.35	22	P	P	16 58 01.6	-1.4
H24K	Noodor Dome	81.50	21	P	P	16 58 04.1	+0.3
M27K	Edge Creek, AK	82.32	25	P	P	16 58 09.1	+0.9
M27K				IAmb	IAmb	16 58 27.2	
	comp=Z,3.7nm,1.1s						
TOLK	Toolik Lake Re	82.34	18	P	P	16 58 08.6	+0.6
BOOM	Boomskoye usch	82.42	314	P	P	16 58 09.9	+0.7
BOOM				IAmb	IAmb	16 58 14.4	
	comp=Z,4.4nm,1.1s						
BMAR	Burnt Mountain	83.41	20	P	P	16 58 14.1	+0.6
AAK	Ala-Archa	83.49	313	P	P	16 58 15.2	+0.7
AAK				IAmb	IAmb	16 58 16.0	
	comp=Z,2.7nm,0.7s						
NRIK	Noril'sk	84.73	341	P	P	16 58 19.4	-0.5
	comp=Z,1.2nm,0.3s,baz=134,slow=6.5,SNR=4.1						
QSPA	South Pole Qui	86.27	180	P	P	16 58 27.5	0.0
QSPA				IAmb	IAmb	16 58 28.5	
	comp=Z,4.4nm,0.7s						
YKA	Yellowknife Ar	94.71	28	P	P	16 59 06.3	-0.2
	comp=Z,0.1nm,0.5s,baz=278,slow=4.8,SNR=4.0						
PTGA	Pitinga	147.53	97	PKPbc	PKPbc	17 05 28.7	+0.1
	comp=Z,1.5nm,0.3s,baz=122,slow=7.1,SNR=4.1						
TORD	Torodi Ar. Bea	149.41	290	PKPbc	PKPbc	17 05 33.9	+0.7
	comp=Z,0.5nm,0.7s,baz=86,slow=2.7,SNR=2.4						

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*GUC **30** 16:48:36.3±0.6, 20°.02S×69°.13W, h94^{km}±2^{km}, ML3.7*

*IDC **30** 16:48:38.0±1.5, 20°.07S×68°.77W, h122^{km}±16^{km}, mb3.5/2, mb1 3.6/6, mb1mx3.3/26, mbtmp3.9/6, MS2.4/1, Ms1 2.5/1, ms1mx2.2/16, Error ellipse: s-maj=33.5km s-min=15.0km az=104.0*

ISC 30 16:48:35.2±0.8**, 20°.02S**±0°.04×**69°.19W**±0°.07**, h97**^{km}±7^{km}**, n26, σ1^{s}43**/39**, 5C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.12	166	*e*P	Pn	16 48 49.8	+0.5
PB08				*e*S	Sn	16 49 00.7	+0.9
PB08				IAML		16 49 03.1	
	comp=N,3µm,0.2s						
PB11	IPOC Station P	0.51	300⇓	*e*P	Pn	16 48 51.5	+0.6
PB11				*e*S	Sn	16 49 03.6	+1.0
PB11				IAML		16 49 04.9	
	comp=E,2µm,0.2s						
TA02	Huaiquique	0.92	254⇑	*e*P	Pn	16 48 55.4	+0.9
TA02				*e*S	Sn	16 49 10.3	+1.3
TA02				IAML		16 49 14.2	
PB01	IPOC Station P	1.06	196	*e*P	Pn	16 48 56.6	+0.5
PB01				*e*S	Sn	16 49 12.7	+0.8
PB01				IAML		16 49 13.3	
	comp=E,1µm,0.2s						
TA01	Diego Aracena	1.08	240⇓	*e*P	Pn	16 48 56.6	+0.4
TA01				*e*S	Sn	16 49 12.5	+0.4
TA01				IAML		16 49 17.2	
	comp=E,2µm,0.5s						
PB02	IPOC Station P	1.46	207	*e*P	Pn	16 49 01.3	+0.5
PB02				*e*S	Sn	16 49 21.2	+1.0
PB02				IAML		16 49 26.7	
	comp=E,2µm,0.2s						
PB12	IPOC Station P	1.77	322	*e*P	Pn	16 49 05.6	+0.9
PB12				*e*S	Sn	16 49 28.5	+1.3
PB12				IAML		16 49 33.3	
	comp=E,1µm,0.3s						
PB09	IPOC Station P	1.77	182	*e*P	Pn	16 49 05.7	+0.9
PB09				*e*S	Sn	16 49 28.9	+1.6
PB09				IAML		16 49 34.5	
	comp=E,475nm,0.4s						
PB07	IPOC Station P	1.82	201	*e*P	Pn	16 49 06.1	+0.6
PB07				*e*S	Sn	16 49 29.2	+0.7
PB07				IAML		16 49 35.9	
	comp=N,1µm,0.2s						
AP01	Chacalluta	1.97	326⇑	*e*P	Pn	16 49 08.3	+1.1
AP01				*e*S	Sn	16 49 33.0	+1.2
PB03	IPOC Station P	2.09	195⇑	*e*P	Pn	16 49 09.8	+0.8
PB03				*e*S	Sn	16 49 35.4	+0.7
PB03				IAML		16 49 42.1	
	comp=N,499nm,0.3s						
PB04	IPOC Station P	2.47	201⇑	*e*P	Pn	16 49 15.2	+1.2
PB04				*e*S	Sn	16 49 44.4	+0.7
PB04				IAML		16 49 55.2	
	comp=N,477nm,0.1s						
PB04				IAML		16 49 56.8	
	comp=E,498nm,0.4s						
LVC	Limon Verde	2.59	174	P	Pn	16 49 18.3	+2.5
	comp=E,15nm,0.3s,baz=0.4,slow=9.6,SNR=87						
LVC				S	Sn	16 49 50.4	+3.6
	comp=E,38nm,0.3s,baz=254,slow=21,SNR=21						
LVC	Limon Verde	2.59	174	*e*P	Pn	16 49 18.2	+2.5
LVC				*e*S	Sn	16 49 48.0	+1.2
PB06	IPOC Station P	2.70	188⇑	*e*P	Pn	16 49 18.0	+1.0
PB06				*e*S	Sn	16 49 50.0	+0.9
PB06				IAML		16 50 01.0	
	comp=N,449nm,0.3s						
PB05	IPOC Station P	2.97	198	*e*P	Pn	16 49 21.6	+1.0
PB05				*e*S	Sn	16 49 56.0	+0.4
PB05				IAML		16 50 09.0	
	comp=E,302nm,0.3s						
LPAZ	La Paz	3.84	15	P	Pn	16 49 36.0	+3.2
	comp=E,3.5nm,0.3s,baz=188,slow=7.9,SNR=77						
LPAZ				LR	LR	16 51 47.5	
	comp=E,44nm,19.0s,baz=218,slow=50						
SIV	San Ignacio	8.70	64	P	Pn	16 50 36.4	-1.9
	comp=E,1.0nm,0.3s,baz=255,slow=11,SNR=16						
CPUP	Villa Florida	12.58	122	P	Pn	16 51 28.9	-1.8
	comp=E,0.1nm,0.3s,baz=303,slow=11,SNR=4.0						
TORD	Torodi Ar. Bea	77.11	71	P	P	17 00 16.2	-2.4
	comp=E,0.3nm,0.5s,baz=253,slow=5.6,SNR=5.0						
YKA	Yellowknife Ar	89.71	341	P	P	17 01 22.4	+0.3
	comp=E,0.7nm,0.7s,baz=136,slow=4.8,SNR=16						
H11S2	WAKE ISLAND Hy	127.42	278	T	T	19 27 14.3	
	baz=101,slow=74,SNR=13						
H11S1	WAKE ISLAND Hy	127.43	278	T	T	19 27 21.4	
	baz=101,slow=74,SNR=7.6						
H11S3	WAKE ISLAND Hy	127.44	278	T	T	19 27 22.4	
	baz=101,slow=74,SNR=10						
MKAR	Makanchi Array	144.58	34	PKP	PKPab	17 07 59.5	+0.3
	comp=E,0.2nm,0.5s,baz=338,slow=2.6,SNR=4.5						
SONM	Songino Array	152.02	6	PKPbc	PKPbc	17 08 19.5	+0.2
	comp=E,0.6nm,0.7s,baz=147,slow=1.2,SNR=3.6						

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*KRNET **30** 17:12:27.6±0.1, 39°.01N×75°.24E, mb3.2*

*NNC **30** 17:12:27.0±4.9, 39°.16N×75°.77E, h6^{km}±29^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=36.7km s-min=32.8km az=110.0*

*SOME **30** 17:12:32.1, 39°.27N×73°.92E, h0^{km}*

ISC 30 17:12:29.6±2.4**, 38°.94N**±0°.10×**75°.17E**±0°.06**, h8**^{km}±12^{km}**, n25, σ2^{s}20**/45**, 19C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	1.68	310⇑	*e*P	Pn	17 12 59.6	+0.1
	baz=7.0						
SFK			⇑	*e*S	Sn	17 13 21.7	+0.4
	baz=7.0						
SALK	Salom-Alik	2.19	332⇑	*e*P	Pn	17 13 07.0	+0.4
	baz=30						
SALK			⇑	*e*S	Sb	17 13 36.4	-0.8
	baz=30						
OHH	Osh	2.42	311⇑	*i*P	Pn	17 13 11.0	+1.3
	baz=9.0						
OHH			⇑	*i*S	Sb	17 13 42.6	-1.0
	baz=9.0						
DRK	Karamyk	2.67	283⇑	*i*P	Pn	17 13 14.7	+1.4
	baz=81						
DRK			⇑	*i*S	Sb	17 13 49.6	-1.4
	baz=81						
ARLS	Aral	2.98	348⇑	*i*P	Pn	17 13 18.4	+0.9
	baz=47						
ARLS			⇑	*i*S	Sn	17 13 55.1	+1.6
	baz=47						
KDJ	Kajisay	3.53	25⇑	*i*P	Pn	17 13 25.0	0.0
	baz=25						
KDJ			⇑	*i*S	Sn	17 14 07.2	+0.2
	baz=25						
BTK	Batken	3.55	290⇓	*i*P	Pn	17 13 26.4	+1.3
	baz=88						
BTK			⇓	*i*S	Sn	17 14 09.8	+2.5
	baz=88						
BOOM	Boomskoye usch	3.59	9⇑	*i*P	Pn	17 13 25.7	-0.1
	baz=8.0						
BOOM			⇑	*i*S	Sn	17 14 08.3	-0.2
	baz=8.0						
AAK	Ala-Archa	3.73	352	⇓Pg	Pb	17 13 32.3	-3.5
	6.5nm,0.8s						
AAK				Lg	Lg	17 14 23.3	
	13nm,0.9s						
ARK	Arkit	3.76	320⇑	*i*P	Pn	17 13 29.4	+1.3
	baz=19						
ARK			⇑	*i*S	Sn	17 14 14.2	+1.6
	baz=19						
TKM2	Tokmak 2	3.99	5	⇑Pg	Pb	17 13 36.1	-4.1
	3.5nm,0.5s						
TKM2				⇑Lg	Lg	17 14 24.5	
	13nm,0.5s						
MRKS	Merke	4.07	339	*e*P	Pb	17 13 37.9	-3.8
	1.8nm,0.2s						
MRKS				*e*S	Sn	17 14 24.9	+4.6
	4.3nm,0.1s						
KST	Kastek	4.14	8	*e*P	Pg	17 13 49.5	+0.6
	3.5nm,0.1s						
KST				*e*S	Sg	17 14 45.0	+2.5
	15nm,0.1s						
MTBS	Maitube	4.29	12	*e*P	Pg	17 13 51.7	-0.1
	2.5nm,0.0s						
MTBS				*e*S	Sg	17 14 48.1	+0.7
	6.4nm,0.1s						
DGS	Degeres	4.32	6	*e*P	Pg	17 13 52.2	-0.1
	5.9nm,0.9s						
DGS				*e*S	Sg	17 14 49.2	+0.9
	7.2nm,0.2s						
MDOK	Medeo	4.45	18	*e*P	Pg	17 13 56.1	+1.2
	3.7nm,0.1s						
MDOK				*e*S	Sg	17 14 56.2	+3.7
	12nm,0.7s						
KOTS	Kotyrbulak	4.53	18	*e*P	Pg	17 13 58.7	+2.3
	3.6nm,0.1s						
KOTS				*e*S	Sg	17 15 00.2	+5.1
	25nm,0.2s						
KRBS	Karabastau	4.76	4	*e*P	Pg	17 13 58.5	-2.4
	2.2nm,0.2s						
KRBS				*e*S	Sg	17 15 00.1	-2.5
	4.1nm,0.3s						
SATY	Saty	4.79	30	*e*P	Pg	17 14 07.3	+6.0
	4.7nm,0.1s						
SATY				*e*S	Sg	17 15 15.2	+12
	8.6nm,0.1s						
KTBS	Karatobe	4.90	13	*e*P	Pg	17 14 03.0	-0.4
	4.0nm,0.1s						
KTBS				*e*S	Sg	17 15 08.2	+1.3
	13nm,0.2s						
KUU	Kurty	5.02	10	*e*P	Pg	17 14 05.8	0.0
	3.8nm,0.2s						
KUU				*e*S	Sg	17 15 13.2	+2.3
	9.2nm,0.2s						
IUG	Iuzhnay	5.06	311	*e*P	Pn	17 13 49.1	+3.3
	64nm,0.1s						
IUG				*e*S	Sn	17 14 44.0	-0.5
	9.6nm,0.2s						
CHKK	Chushkaly	5.09	15	*e*P	Pg	17 14 07.6	+0.4
	3.3nm,0.6s						
CHKK				*e*S	Sg	17 15 16.1	+2.9
	5.4nm,0.0s						
KK02	Karatay Array	5.45	321	⇓Pn	Pn	17 13 50.7	-0.4
	0.8nm,0.5s,baz=133,slow=11						
KK02				⇑Lg	Lg	17 14 59.3	
	3.3nm,0.7s,baz=133,slow=27						
BRLS	Borolday	5.74	317	*e*P	Pn	17 13 59.2	+4.0
	0.9nm,0.1s						
BRLS				*e*S	Sn	17 15 01.3	0.0
	1.2nm,0.2s						

IDC 30 17:40:24.1±45.0**, 17°.09S**×**172°.72W, h0**^{km}**, mb4.0**/3**, mb1 4.1**/3**, mb1mx3.5**/31**, mbtmp4.0**/3**, Error ellipse: s-maj=873.1km s-min=187.5km az=80.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	43.78	242	P	P	17 48 33.6	+1.9
	0.5nm,0.4s,baz=81,slow=13,SNR=2.9						
WRA	Warramunga Arr	50.11	258	P	P	17 49 20.3	-1.2
	0.3nm,0.4s,baz=102,slow=8.1,SNR=15						
ASAR	Alice Springs	50.23	253	P	P	17 49 22.1	-0.2
	4.2nm,0.5s,baz=89,slow=8.2,SNR=110						

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*ANF **30** 18:13:43.4±0.2, 35°.68N×97°.39W, h7^{km}, ML3.5/4, Error ellipse: s-maj=2.3km s-min=2.2km az=102.0*

*NEIC **30** 18:13:43.9±1.8, 35°.68N±0°.02×97°.42W±0°.04, h8^{km}±5^{km}, Error ellipse: s-maj=5.3km s-min=2.5km az=69.0*

*TUL **30** 18:13:45.4±1.5, 35°.67N±0°.02×97°.40W±0°.02, h7^{km}±7^{km}, ML3.0, mb_Lg3.0/78(NEIC), Error ellipse: s-maj=2.9km s-min=2.3km az=127.0*

ISC 30 18:13:43.9±0.9**, 35°.68N**±0°.02×**97°.42W**±0°.03**, h10**^{km}±6^{km}**, n79, σ0^{s}91**/61**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	Oakdale Elemen	0.10	184		Pg	18 13 45.7	-0.8
OK009				Sg	Sg	18 13 49.3	+1.0
OK025	Westminster Rd	0.12	148	Pg	Pg	18 13 46.1	-0.7
OK029	Liberty Lake	0.12	344	Pg	Pg	18 13 46.8	0.0
OK029				Sg	Sg	18 13 48.6	-0.2
OK001	Jones High Sch	0.16	140	Pg	Pg	18 13 46.7	-0.6
BCOK	Bluff Creek, N	0.16	261	Pg	Pg	18 13 47.2	-0.2
OK005	Luther M Schoo	0.18	98	Pg	Pg	18 13 47.4	-0.4
OKCFA	Oklahoma City	0.27	186	Pg	Pg	18 13 48.8	-0.5
OKCFA	Oklahoma City	0.27	186	P	Pg	18 13 48.8	-0.5
	baz=8.6						
OKCSW	OKLAHOMA CITY	0.28	184		Pg	18 13 48.9	-0.6
OKCSW				Sg	Sb	18 13 54.9	-0.8
FNO	Franklin	0.42	178	Pg	Pg	18 13 51.6	-0.6
FNO				Sg	Sb	18 13 59.2	-0.7
OK031	S. Brethren Rd	0.54	60		Pg	18 13 53.9	-0.5
OK030	Cody Creek RV	0.57	64		Pg	18 13 54.4	-0.5
OK034	N. Norfolk Rd.	0.66	60		Pg	18 13 56.0	-0.6
W35A	Tecumseh	0.69	140	Pg	Pg	18 13 56.2	-1.0
W35A				Sg	Sb	18 14 07.2	-0.4
QUOK	Quay	0.75	49		Pg	18 13 57.8	-0.6
CROK	Carrier	0.94	331		Pg	18 14 01.6	-0.4
BLOK	Blackwell	1.09	8	Pg	Pg	18 14 04.1	-0.7
X34A	Smith Ranch, M	1.13	198	Pg	Pg	18 14 04.9	-0.7
GC02	Grant County #	1.22	343		Pb	18 14 06.5	-0.6
OK032	Salt Plains WL	1.29	330		Pn	18 14 07.5	-0.5
KAN13	South Haven SW	1.33	358	Pn	Pn	18 14 08.3	-0.2
TUL1	Leonard	1.34	80		Pn	18 14 07.4	-1.3
TUL1				IAmb_Lg		18 14 30.6	
	comp=Z,72nm,0.7s						
TUL1	Leonard	1.34	80	P	Pn	18 14 07.4	-1.3
	baz=261						
TUL1				S	Sg	18 14 26.7	-0.3
	baz=261						
KAN14	Manchester OK	1.35	341		Pn	18 14 08.5	-0.3
T35A	Sooner Cattle	1.43	30	Pn	Pn	18 14 09.7	-0.3
T35B	Sooner Cattle	1.43	30	P	Pn	18 14 09.8	-0.2
	baz=211						
T35B				S	Sg	18 14 29.6	-0.4
	baz=211						
U32A	Winter Ranch,	1.46	299	Pn	Pn	18 14 10.4	+0.1
U32A	Winter Ranch,	1.46	299	P	Pn	18 14 10.5	+0.1
	baz=118						
OK035	E0210 Rd and N	1.46	315		Pn	18 14 10.4	0.0
KAN05	Bluff City Nor	1.47	346		Pn	18 14 10.6	+0.1
KAN01	Argonia South	1.49	349		Pn	18 14 10.9	+0.1
KAN10	Anthony SW Sta	1.54	339		Pn	18 14 11.3	-0.1
KAN06	Argonia West S	1.60	347		Pn	18 14 12.6	+0.3
KAN08	Anthony NE Sta	1.60	344		Pn	18 14 12.7	+0.4
KAN16	Harper SW Stat	1.63	341		Pn	18 14 12.9	+0.3
LOOK	Love County	1.70	173	Pn	Pn	18 14 13.9	+0.3
LOOK				IAmb_Lg		18 14 41.4	
	comp=Z,92nm,1.0s						
X37A	Clayton	2.00	122		Pn	18 14 18.1	+0.4
X37A				IAmb_Lg		18 14 50.8	
	comp=Z,80nm,0.8s						
X37A	Clayton	2.00	122	P	Pn	18 14 17.4	-0.3
	baz=304						
X37A				Sb	Sb	18 14 46.5	+1.2
	baz=304						
Z35A	Perchaven, San	2.35	177	IAmb_Lg		18 15 05.2	
	comp=Z,50nm,1.2s						
U38A	Gravette	2.57	72		Pn	18 14 27.5	+1.9
U38A				IAmb_Lg		18 15 10.5	
	comp=Z,44nm,0.8s						
HHAR	Hobbs	2.88	77		Pn	18 14 31.8	+1.9
HHAR				IAmb_Lg		18 15 22.5	
	comp=Z,50nm,0.8s						
R32A	Long Quarter,	2.92	340		Pn	18 14 31.9	+1.4
W39A	Magazine	3.00	98		Pn	18 14 31.8	+0.2
W39A				IAmb_Lg		18 15 25.7	
	comp=Z,66nm,0.8s						
MIAR	Mount Ida	3.34	109		Pn	18 14 37.2	+1.0
KSU1	Kansas State U	3.47	10		Pn	18 14 39.3	+1.3
KSU1				IAmb_Lg		18 15 42.2	
	comp=Z,57nm,0.8s						
ABTX	Abilene, Hawle	3.57	212	IAmb_Lg		18 15 42.7	
	comp=Z,33nm,0.7s						
AMTX	Amarillo	3.58	258	Pn	Pn	18 14 40.9	+1.4
AMTX				IAmb_Lg		18 15 46.6	
	comp=Z,26nm,0.8s						
CBKS	Cedar Bluff	3.63	330	Pn	Pn	18 14 40.9	+0.6
CBKS				IAmb_Lg		18 15 48.4	
	comp=Z,41nm,0.9s						

WHTX	Lake Whitney,	3.68	181		Pn	18 14 42.7	+1.8
U40A	Yellville	3.76	78		Pn	18 14 43.4	+1.4
U40A				IAmb_Lg		18 15 45.8	
	comp=Z,34nm,0.7s						
S39A	Bolivar	3.85	57		Pn	18 14 44.8	+1.6
S39A				IAmb_Lg		18 15 52.6	
	comp=Z,34nm,0.8s						
X40A	Basin Creek Fa	3.94	106		Pn	18 14 45.9	+1.5
WLAR	White Oak Lake	4.07	118	IAmb_Lg		18 16 01.9	
	comp=Z,58nm,1.1s						
WHAR	Wooly Hollow	4.20	94	IAmb_Lg		18 15 59.8	
	comp=Z,42nm,1.0s						
W41B	Gary Mavity, V	4.25	95	Pn	Pn	18 14 50.4	+1.7
W41B				IAmb_Lg		18 16 09.2	
	comp=Z,34nm,0.8s						
FCAR	Ozark Folk Cen	4.31	86	IAmb_Lg		18 16 02.4	
	comp=Z,30nm,0.7s						
MGMO	Mountain Grove	4.40	69	IAmb_Lg		18 16 02.9	
	comp=Z,23nm,0.8s						
Z41A	Richland Creek	4.51	121	IAmb_Lg		18 16 18.8	
	comp=Z,38nm,0.7s						
R40A	Maddies Statio	4.87	56		Pn	18 14 59.1	+1.8
R40A				IAmb_Lg		18 16 31.9	
	comp=Z,21nm,0.9s						
435B	Jarrell	4.89	182	IAmb_Lg		18 16 25.5	
	comp=Z,46nm,0.7s						
P38A	Dawn	5.00	37	IAmb_Lg		18 16 37.3	
	comp=Z,22nm,0.7s						
KSCO	Kaye Shedlock'	5.32	310	IAmb_Lg		18 16 44.7	
	comp=Z,36nm,0.9s						
CCM	Cathedral Cave	5.49	63	IAmb_Lg		18 16 42.1	
	comp=Z,24nm,0.7s						
BGNE	Belgrade	5.75	354		Pn	18 15 10.4	+1.1
BGNE				IAmb_Lg		18 16 58.8	
	comp=Z,33nm,0.7s						
143A	Socs Landing,	5.80	119	IAmb_Lg		18 17 04.8	
	comp=Z,25nm,0.8s						
T25A	Trinidad	5.83	286	IAmb_Lg		18 16 53.7	
	comp=Z,34nm,0.9s						
OGNE	Ogallala	6.39	327	IAmb_Lg		18 17 20.4	
	comp=Z,21nm,0.7s						
SLM	Saint Louis	6.45	61	IAmb_Lg		18 17 17.3	
	comp=Z,20nm,1.0s						
W45A	Hickory Valley	6.74	92	IAmb_Lg		18 17 22.6	
	comp=Z,28nm,0.7s						
S44A	Carbondale	6.86	71	IAmb_Lg		18 17 37.2	
	comp=Z,23nm,0.8s						
Q24A	Divide	6.98	300	IAmb_Lg		18 17 37.4	
	comp=Z,14nm,0.8s						
SCIA	State Center	7.03	27	IAmb_Lg		18 17 30.4	
	comp=Z,26nm,0.8s						
Q44A	Meyer Farm, Va	7.42	62	IAmb_Lg		18 17 50.0	
	comp=Z,25nm,0.9s						
833A	Chaparral WMA,	7.53	193	IAmb_Lg		18 17 59.7	
	comp=Z,16nm,0.9s						
L40A	Anamosa	7.99	35	IAmb_Lg		18 18 06.5	
	comp=Z,24nm,0.9s						
OLIL	Olney	8.03	65	IAmb_Lg		18 18 16.3	
	comp=Z,20nm,0.9s						
N23A	Red Feather La	8.49	310	IAmb_Lg		18 18 29.5	
	comp=Z,19nm,0.9s						
JFWS	Jewell Farm	9.11	35	IAmb_Lg		18 18 41.2	
	comp=Z,18nm,0.7s						
K22A	Casper	9.92	317	IAmb_Lg		18 19 10.8	
	comp=Z,8.5nm,0.9s						

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*IDC **30** 18:26:31.1±0.6,24°.29S×176°.01W,h0^{km},mb4.6/15, mb1 4.7/16,mb1mx4.5/33,mbtmp4.6/16,ML4.2/1,MS4.1/21, Ms1 4.2/21,ms1mx4.1/30,Error ellipse: s-maj=20.5km s-min=18.6km az=78.0*

*NEIC **30** 18:26:34.6±2.0,24°.5S±0°.1×175°.9W±0°.1,h24^{km}±4^{km}, mb4.9/57,Error ellipse: s-maj=19.9km s-min=15.9km az=104.0*

*GCMT **30** 18:26:34.6±0.4,24°.37S±0°.04×175°.32W±0°.04,h28^{km}±1^{km}, MW5.0/61,Moment Tensor Solution. s27,c30; s61,c76; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.31±.23; $M_{\theta\theta}$-1.20±.15; $M_{\phi\phi}$-2.11±.14; $M_{r\theta}$0.05±.28; $M_{\theta\phi}$-0.87±.09; $M_{\phi r}$1.47±.20; Best double couple: $M_0$3.30100×10^{16} NP1:ϕ_s218.00000°,δ34.00000°,λ105.00000°. NP2: ϕ_s20.00000°,δ58.00000°,λ80.00000°. Principal axes: T 3.6890, Plg75.0000°, Azm262.0000°; N -0.7760, Plg8.0000°, Azm26.0000°; P -2.9130, Plg12.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **30** 18:26:41.7±0.0,23°.73S×175°.29W,h86^{km},mB5.5/12, mb5.0/24,Ms5.6/3,Ms7 5.2/3*

ISC 30 18:26:35.7±0.4,**24°.53S**±0°.06×**175°.91W**±0°.09,**h35**^{km},**n132**,σ**1^{s}.51**/125,**mb4.9**/44,**MS4.1**/20,**6C,South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.03	200	Pn	Pn	18 27 48.7	+0.1
NIUE	Niue	7.77	47		Pn	18 28 15.5	-11
NIUE					Sn	18 29 26.7	-26
MSVF	Nonsavu	8.81	319	Pn	Pn	18 28 40.9	+0.3
	5.8nm,0.3s,baz=138,slow=13,SNR=24						
MSVF				LR	LR	18 31 47.2	
	comp=Z,2µm,19.3s,baz=125,slow=37						
MSVF	Nonsavu	8.81	319		Pn	18 28 42.7	+2.1
AFI	Afiamalu	11.27	21	Pn	Pn	18 29 05.5	-8.8
	9.2nm,0.3s,baz=201,slow=1.9,SNR=6.4						
AFI				Sn	Sn	18 31 00.2	-19
	7.0nm,0.3s,baz=49,slow=23,SNR=3.0						
URZ	Urewera	14.92	202	Pn	Pn	18 30 03.9	0.0
	1.0nm,0.3s,baz=301,slow=24,SNR=5.6						
URZ				Sn	Sn	18 32 42.7	-5.3
	0.8nm,0.3s,baz=300,slow=24,SNR=2.0						
URZ				LR	LR	18 34 50.1	
	comp=Z,563nm,19.8s,baz=31,slow=33						
URZ	Urewera	14.92	202	Pn	P	18 30 06.8	-2.3
RAR	Rarotonga	15.23	81	LR	LR	18 36 05.3	
	comp=Z,753nm,18.6s,baz=272,slow=38						
RAR	Rarotonga	15.23	81	Pn	Pn	18 29 56.8	-11
DZM	Mont Dzumac	16.40	275	*e*Pn	P	18 30 28.2	+2.4
	138nm,1.4s						
DZM				*e*LR	LR	18 34 25.1	
	comp=Z,969nm,22.1s						
DZM	Mont Dzumac	16.40	275	Pn	P	18 30 28.1	+2.3
	0.7nm,0.3s,baz=186,slow=14,SNR=5.9						
DZM				LR	LR	18 35 25.0	
	comp=Z,671nm,21.8s,baz=104,slow=33						
SANVU	Saraoutou	18.25	297	Pn	P	18 30 43.4	-2.8
SANVU				IAmb	IAmb	18 31 03.2	
	comp=Z,56nm,0.8s						
TUWZ	Tuamarina	18.85	204	P	P	18 30 51.2	-1.4
TBI	Tubuai	24.19	93	*e*LR	LR	18 37 30.2	
	comp=Z,610nm,28.8s,baz=262						
PPT2	Papeete2	25.50	79	*e*LQ	LQ	18 36 58.2	
	comp=Z,419nm,23.5s						
PPT2				*e*LR	LR	18 38 04.8	
	comp=Z,553nm,22.5s,baz=243						
PPT	Papeete	25.51	79	LR	LR	18 41 17.4	
	comp=Z,608nm,18.0s,baz=252,slow=35						
CTA	Charters Tower	35.21	270	P	P	18 33 27.6	+0.8
	comp=Z,2.8nm,0.3s,baz=94,slow=3.7,SNR=1.8						
CTAO	Charters Tower	35.21	270	P	P	18 33 27.6	+0.8
CTAO				IAmb	IAmb	18 33 42.9	
	comp=Z,10nm,0.7s						
TAOE	Nuku Hiva Isla	37.48	72	*e*LR	LR	18 43 37.6	
	comp=Z,240nm,22.6s						
STKA	Stephens Creek	37.97	249	LR	LR	18 48 43.8	
	comp=Z,635nm,18.1s,baz=73,slow=35						
PMG	Port Moresby	38.24	287	P	P	18 33 51.6	-1.1
AS31	Alice Springs	45.61	260	P	P	18 34 52.8	-0.1
ASAR	Alice Springs	45.61	260	P	P	18 34 53.0	+0.1
	comp=Z,4.3nm,0.8s,baz=102,slow=8.2,SNR=23						
ASAR				S	S	18 41 37.5	+4.2
	comp=Z,0.8nm,0.9s,baz=104,slow=16,SNR=5.2						
ASAR				LR	LR	18 53 59.4	
	comp=Z,705nm,18.1s,baz=116,slow=36						
ASAR	Alice Springs	45.61	260	P	P	18 34 52.3	-0.6
WB2	Warramunga Arr	46.07	265	P	P	18 34 55.0	-1.5
WB2				IAmb	IAmb	18 35 00.4	
	comp=Z,12nm,1.1s						
WRAB	Tennant Creek	46.08	265	P	P	18 34 55.8	-0.7
WRAB				IAmb	IAmb	18 35 09.4	
	comp=Z,15nm,1.1s						
WB0	Warramunga Arr	46.08	266	P	P	18 34 54.1	-2.5
WB0				IAmb	IAmb	18 34 56.7	
	comp=Z,9.6nm,0.7s						
WRA	Warramunga Arr	46.09	265	P	P	18 34 55.6	-1.0
	comp=Z,4.7nm,0.6s,baz=104,slow=7.9,SNR=33						
WRA				LR	LR	18 54 10.0	
	comp=Z,602nm,18.0s,baz=90,slow=36						
WRA	Warramunga Arr	46.09	265	P	P	18 34 55.1	-1.6
VNDA	Vanda	54.10	186	P	P	18 36 00.1	+3.6
	comp=Z,5.1nm,1.0s,baz=341,slow=4.2,SNR=6.7						
VNDA				LR	LR	18 55 04.2	
	comp=Z,83nm,20.8s,baz=11,slow=32						
VNDA	Vanda	54.10	186	P	P	18 35 56.6	+0.1
FITZ	Fitzroy Crossi	54.50	265	P	P	18 36 00.8	+0.5
	comp=Z,5.6nm,0.8s,baz=94,slow=10,SNR=7.7						
SIJI	Sorong	56.19	286	P	P	18 36 10.8	-1.7
	comp=Z,20nm,0.6s,baz=92,slow=8.9,SNR=12						
CASY	Casey	61.19	206	P	P	18 36 47.6	+1.1
QSPA	South Pole Qui	65.56	180	P	P	18 37 17.9	+2.3
	comp=Z,5.3nm,0.9s,baz=52,slow=1.7,SNR=13						
QSPA	South Pole Qui	65.56	180	P	P	18 37 18.4	+2.9
TOLI2	Tolitoli	66.36	283	P	P	18 37 19.9	-1.5
TOLI2				IAmb	IAmb	18 37 22.0	
	comp=Z,9.2nm,0.8s						
JHJ	Hachijo jima 2	71.19	322	LR	LR	19 08 31.6	
	comp=Z,64nm,18.1s,baz=88,slow=36						
SMAI	San Martin Ant	74.17	158	P	P	18 38 07.0	-1.2
INU	Inuyama	74.38	322	P	P	18 38 09.3	-0.7
INU				IAmb	IAmb	18 38 28.6	
	comp=Z,10nm,1.0s						
MJAR	Matsushiro Arr	74.59	323	P	P	18 38 09.9	-1.2
	comp=Z,3.9nm,0.7s,baz=158,slow=5.7,SNR=12						
MJAR				LR	LR	19 09 34.3	
	comp=Z,72nm,19.3s,baz=55,slow=35						
MJAR	Matsushiro Arr	74.59	323	P	P	18 38 10.5	-0.6
MAW	Mawson	78.43	200	LR	LR	19 10 45.5	
	comp=Z,157nm,20.4s,baz=64,slow=34						
PETK	Petropavlovsk-	80.65	344	P	P	18 38 44.5	-0.1
	comp=Z,5.4nm,0.9s,baz=106,slow=9.4,SNR=3.9						
PETK				LR	LR	19 12 18.0	
	comp=Z,88nm,19.3s,baz=164,slow=34						
KSRS	Korea Array	81.17	318	P	P	18 38 48.1	+0.5
	comp=Z,3.8nm,1.1s,baz=134,slow=3.6,SNR=7.8						
KSRS				LR	LR	19 11 14.0	
	comp=Z,75nm,18.7s,baz=137,slow=33						
KSAR	Wonju Array Be	81.19	318	P	P	18 38 46.5	-1.3
GSC	Goldstone, Bar	81.66	45	P	P	18 38 43.3	-7.2
QSM	Queen of Sheba	82.03	45	P	P	18 38 43.6	-8.7
QSM				IAmb	IAmb	18 39 05.8	
	comp=Z,12nm,1.4s						
GWY	Greenwater Val	82.29	45	P	P	18 38 54.5	+0.6
LCH	Last Change Ra	82.32	43	P	P	18 38 52.0	-2.0
LHV	Little Huntoon	82.43	42	P	P	18 38 55.4	+1.1
LHV				IAmb	IAmb	18 39 10.4	
	comp=Z,9.8nm,1.1s						
RYN	Ryan	82.66	42	P	P	18 38 56.4	+0.7
RYN				IAmb	IAmb	18 39 08.2	
	comp=Z,12nm,1.5s						
NVAR	Mina Array Bea	82.67	42	P	P	18 38 56.3	+0.5
	comp=Z,1.2nm,0.7s,baz=223,slow=8.5,SNR=12						
NVAR				LR	LR	19 16 28.6	
	comp=Z,139nm,18.1s,baz=266,slow=36						
NVAR	Mina Array Bea	82.67	42	P	P	18 38 55.5	-0.3
NV11	Mina Array Sit	82.76	42	P	P	18 38 57.1	+0.8
TPNV	Topopah Spring	83.03	44	P	P	18 38 57.2	-0.5
TPH	Tonopah	83.11	43	P	P	18 38 58.9	+0.7
KVN	Kaiserville	83.18	42	P	P	18 38 57.2	-1.3
USA0B	Ussuriysk Arra	83.37	325	P	P	18 38 59.7	+0.7
USRK	Ussuriysk Ar.	83.37	325	P	P	18 38 59.8	+0.8
	comp=Z,14nm,0.8s,baz=121,slow=4.0,SNR=20						
USRK	Ussuriysk Ar.	83.37	325	P	P	18 38 59.5	+0.5
SHPR	Sheep Range	83.45	45	P	P	18 38 59.3	-0.6
W13A	Hualapai Mount	83.46	47	P	P	18 38 56.8	-3.3
W13A				IAmb	IAmb	18 39 12.6	
	comp=Z,14nm,1.4s						
SNAA	Sanae	83.93	178	P	P	18 39 02.7	+1.0
SNAA	Sanae	83.93	178	P	P	18 39 03.2	+1.4
SNAA				IAmb	IAmb	18 39 18.4	
	comp=Z,9.8nm,0.9s						
TUC	Tucson	83.99	51	P	P	18 39 01.9	-0.8
VNA3	Neumayer Olymp	84.00	176	P	P	18 39 03.7	+1.6
PRN	Pahroc Range	84.06	44	P	P	18 39 03.8	+0.9
PRN				IAmb	IAmb	18 39 15.8	
	comp=Z,18nm,1.3s						
KDAK	Kodiak Island	84.30	12	LR	LR	19 07 54.5	
	comp=Z,433nm,21.3s,baz=314,slow=30						
VNA2	Neumayer--Watz	84.46	176	P	P	18 39 05.4	+1.1
	baz=232,slow=5.5						
BMN	Battle Mountai	84.57	41	P	P	18 39 05.3	-0.2
BMN				IAmb	IAmb	18 39 16.9	
	comp=Z,6.4nm,1.2s						
PINE	Pine Mountain	84.62	37	P	P	18 39 06.7	+1.0
PINE				IAmb	IAmb	18 39 18.4	
	comp=Z,14nm,1.2s						
X16A	Lo Mia Camp, P	84.71	49	P	P	18 39 06.7	+0.3
X16A				IAmb	IAmb	18 39 19.3	
	comp=Z,10.0nm,1.2s						
MDJ	Mudanjiang	84.91	324	P	P	18 39 08.0	+1.1
MDJ				pmax	pmax		
	comp=Z,21nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,230nm,5.7s						
MDJ	Mudanjiang	84.91	324	P	P	18 39 06.8	-0.1
LCMT	Little Creek M	85.00	46	P	P	18 39 07.6	-0.1
LCMT				IAmb	IAmb	18 39 20.3	
	comp=Z,14nm,1.4s						
LC01	Cunco	85.07	131	P	P	18 39 09.3	+1.2
LC01				IAmb	IAmb	18 39 11.6	
	comp=Z,8.4nm,1.0s						
PLCA	Paso Flores	85.12	133	P	P	18 39 08.9	+0.5
	comp=Z,1.7nm,0.9s,baz=224,slow=6.6,SNR=4.2						
PLCA				LR	LR	19 10 54.6	
	comp=Z,66nm,18.9s,baz=230,slow=31						
CCUT	Cedar City	85.23	45	P	P	18 39 06.8	-2.2
CCUT				IAmb	IAmb	18 39 21.8	
	comp=Z,13nm,1.3s						
KNB	Kanab	85.27	46	P	P	18 39 09.4	+0.3
U15A	North Rim	85.28	46	P	P	18 39 10.0	+0.7
WUAZ	Wupatki	85.38	48	P	P	18 39 09.5	-0.1
WUAZ				IAmb	IAmb	18 39 22.4	
	comp=Z,20nm,1.4s						
SZCU	Shurtz Canyon	85.44	45	P	P	18 39 10.8	+0.8
SZCU				IAmb	IAmb	18 39 22.8	
	comp=Z,9.2nm,1.2s						
MTPU	Mount Pierson	86.28	45	P	P	18 39 14.5	+0.2
MTPU				IAmb	IAmb	18 39 27.7	
	comp=Z,13nm,1.3s						
MSU	Marysvale	86.55	45	P	P	18 39 12.4	-3.1
CN2	Changchun	86.66	322	*e*P	P	18 39 16.0	+0.5
CN2				pmax	pmax		
	comp=Z,20nm,1.3s						
G08A	Pilot Rock	86.67	36	P	P	18 39 15.3	-0.4
G08A				IAmb	IAmb	18 39 28.7	
	comp=Z,7.5nm,1.2s						
MNTX	Cornudas Mount	87.54	54	P	P	18 39 20.2	+0.1
MNTX				IAmb	IAmb	18 39 32.5	
	comp=Z,6.5nm,1.1s						
TMUT	Trail Mountain	87.62	45	P	P	18 39 20.0	-0.7
TMUT				IAmb	IAmb	18 39 33.8	
	comp=Z,6.1nm,0.9s						
SRU	San Rafael Swe	87.95	45	P	P	18 39 20.4	-1.8
SRU				IAmb	IAmb	18 39 26.4	
	comp=Z,9.4nm,1.4s						
ANMO	Albuquerque	88.44	50	P	P	18 39 22.5	-2.1
ANMO				IAmb	IAmb	18 39 37.0	
	comp=Z,8.3nm,1.2s						
ENH	Enshi	89.88	303	P	P	18 39 32.2	+1.0
SDCO	Great Sand Dun	90.55	48	P	P	18 39 33.8	-0.8
PDAR	Pinedale Array	90.59	42	LR	LR	19 13 59.4	
	comp=Z,78nm,18.9s,baz=304,slow=32						
BOZ	Bozeman (W)	90.95	39	P	P	18 39 35.5	-0.6
BOZ				IAmb	IAmb	18 39 48.2	
	comp=Z,14nm,1.4s						
ILAR	Eielson Array	91.82	12	P	P	18 39 37.9	-1.6
	comp=Z,0.8nm,0.8s,baz=246,slow=4.5,SNR=3.3						
XAN	Xi'an	92.09	307	⇑P	P	18 39 43.5	+2.0
XAN				pmax	pmax		
	comp=Z,16nm,1.1s						
CM31	Chiang Mai Arr	93.26	289	P	P	18 39 48.2	+1.0
CMAR	Chiang Mai Arr	93.26	289	P	P	18 39 48.5	+1.3
	comp=Z,8.4nm,0.8s,baz=135,slow=3.4,SNR=84						
CMAR				LR	LR	19 23 38.7	
	comp=Z,45nm,18.0s,baz=180,slow=37						
CMAR	Chiang Mai Arr	93.26	289	P	P	18 39 48.6	+1.5
CHTO	Chiang Mai	93.41	289	P	P	18 39 48.9	+1.0
LPAZ	La Paz	98.74	112	LR	LR	19 17 18.8	
	comp=Z,69nm,18.5s,baz=245,slow=31						
SONM	Songino Array	100.04	318	LR	LR	19 20 54.5	
	comp=Z,41nm,19.8s,baz=46,slow=33						
GTA	Gaotai	101.00	308	*e*P	Pdif	18 40 25.0	+3.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
ZALV	Zalesovo Beam	114.82	320	PKP	PKiKP	18 45 11.6	-0.7
	comp=Z,0.6nm,0.6s,baz=57,slow=1.4,SNR=3.9						
MKAR	Makanchi Array	115.34	312	PKP	PKiKP	18 45 12.7	-0.8
	comp=Z,0.7nm,0.9s,baz=45,slow=1.9,SNR=5.3						
MKAR	Makanchi Array	115.34	312		PKPdf	18 45 11.7	-1.8
ARCES	ARCESS Array B	133.22	350	PKP	PKiKP	18 45 48.6	+0.4
	comp=Z,5.2nm,1.0s,baz=352,slow=2.5,SNR=5.2						
FINES	FINESS Array B	140.17	344	PKP	PKiKP	18 46 01.9	-0.7
	comp=Z,2.0nm,0.8s,baz=126,slow=3.3,SNR=3.9						
NACGM	Naroch	145.32	337	*i* PKP	PKPdf	18 46 08.6	-0.8
PABE	Paberze	145.78	340	*e*P	PKPab	18 46 09.9	-1.1
SUW	Suwalki	147.28	339	*e*P	PKPdf	18 46 12.6	-0.1
AKASG	Malin Array Be	147.46	330	PKPbc	PKPbc	18 46 15.0	-0.7
	comp=Z,5.6nm,0.6s,baz=42,slow=3.9,SNR=21						
BRTR	Keskin Array B	150.92	309	PKPbc	PKiKP	18 46 25.6	+0.1
	comp=Z,2.8nm,0.8s,baz=98,slow=2.5,SNR=5.1						
BRTR	Keskin Array B	150.92	309		PKPdf	18 46 19.8	+0.5
RUE	Ruedersdorf	151.14	348	*e*P	PKiKP	18 46 24.6	-0.8
OSTC	Ostas	152.38	343	⇑*e*PKP	PKiKP	18 46 28.6	+0.6
OSTC				*e*PKPAB	PKPab	18 46 35.4	-2.5
CLL	Collm	152.40	348	*e*PKPdf	PKPdf	18 46 21.0	+0.1
CLL				*i* PKPbc	PKiKP	18 46 27.9	-0.1
	comp=Z,10.0nm,0.9s						
CLL				*i* PKiKP	pPKPdf	18 46 29.3	-1.7
CLL				*i*		18 46 31.3	
CLL				*i* (PKPab)	PKPab	18 46 36.5	-1.4
	comp=Z,27nm,1.5s						
CLL				*e*		18 46 41.0	
UPC	Upice	152.47	343	⇑*e*PKP	PKiKP	18 46 28.8	+0.6
DPC	Dobruska-Polom	152.53	343	⇑*e*PKP	PKiKP	18 46 28.8	+0.4
DPC				*e*PKPAB	PKPab	18 46 37.5	-1.1
LANS	Liptovska Anna	152.63	338	*e*PKP	PKiKP	18 46 30.1	+1.5
PRU	Pruhonice	153.32	345	⇑*e*PKP	PKiKP	18 46 30.8	+0.8
KHC	Kasperske Hory	154.34	346	⇑*e*PKP	PKiKP	18 46 33.5	+1.3
KHC				*e*PKPAB	sPKPbc	18 46 44.4	-2.1
GERES	GERESS Array B	154.58	345	PKPbc	PKiKP	18 46 33.5	+0.7
	comp=Z,0.5nm,0.6s,baz=46,slow=5.6,SNR=2.7						
GERES				PKPab	PKPab	18 46 48.1	+0.7
	comp=Z,0.8nm,0.8s,baz=82,slow=1.9,SNR=3.8						
CONA	Conrad Observa	154.85	341	*e*P	PKPab	18 46 49.7	+1.2
	comp=Z,9.9nm,1.3s						
ARSA	Arzberg	155.56	341	*e*P	PKPab	18 46 51.6	+0.1
	comp=Z,7.8nm,1.2s						
KBA	Koelnbreinsper	156.32	344	*e*P	PKPab	18 46 52.3	-2.6
	comp=Z,8.1nm,1.2s						
WATA	Walderalm	156.48	347	*e*P	PKPab	18 46 52.4	-3.1
	comp=Z,12nm,1.3s						
SQTA	Sankt Quirin	156.66	348	*e*P	PKPab	18 46 55.5	-0.8
	comp=Z,13nm,1.7s						
ABTA	Abfaltersbach	156.83	345	*e*P	PKPab	18 46 55.6	-1.4
	comp=Z,13nm,1.5s						
TORD	Torodi Ar. Bea	168.45	168	PKP	PKPdf	18 46 39.5	0.0
	comp=Z,1.0nm,1.0s,baz=324,slow=3.1,SNR=3.5						
TORD				PKPab	PKPab	18 47 52.3	+3.9
	comp=Z,0.5nm,0.7s,baz=201,slow=4.5,SNR=1.8						
TORD	Torodi Ar. Bea	168.45	168		PKPdf	18 46 38.6	-0.9

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*IDC **30** 19:25:06.7±1.8,0°.73S×125°.31E,h0^{km},mb3.8/4, mb1 4.1/5,mb1mx3.6/47,mbtmp3.9/5,ML4.4/1,MS2.5/1, Ms1 2.5/1,ms1mx2.1/38,Error ellipse: s-maj=133.5km s-min=26.1km az=66.0*

ISC 30 19:25:14.5±1.4,**1°.2S**±0°.3×**124°.4E**±0°.5,**h50**^{km},**n13**, σ**1^{s}.78**/11,**mb4.0**/8,**Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTN	Manton Dam	13.36	150	P	P	19 28 35.5	+5.7
	35nm,1.7s						
KNRA	Kununurra	15.01	163	P	P	19 28 49.0	+0.8
	16nm,0.6s						
FITZ	Fitzroy Crossi	16.83	176	P	P	19 29 10.1	+1.8
	1.0nm,0.3s,baz=9.5,slow=10,SNR=22						
WRAB	Tennant Creek	21.01	153	P	P	19 29 54.4	+0.3
WRA	Warramunga Arr	21.02	153	P	P	19 29 53.0	-1.2
	3.3nm,0.5s,baz=335,slow=9.9,SNR=40						
WRKA	Warakurna	23.99	171	P	P	19 30 22.3	-2.4
	4.7nm,1.2s						
ASAR	Alice Springs	24.16	158	P	P	19 30 24.6	-1.7
	1.2nm,0.3s,baz=331,slow=8.3,SNR=63						
QIS	Mount Isa	24.32	143	P	P	19 30 30.1	+2.4
	8.3nm,0.5s						
GUMO	Guam	25.08	53	LR	LR	19 38 51.6	
	comp=Z,12nm,20.8s,baz=94,slow=34						
MULG	Mulgathing	30.34	163	P	P	19 31 19.4	-2.2
	6.2nm,2.0s						
LCRK	Leigh Creek	31.91	157	P	P	19 31 34.6	-0.8
	13nm,1.6s						
STKA	Stephens Creek	34.57	154	P	P	19 31 58.0	-0.6
	1.1nm,0.4s,baz=334,slow=8.6,SNR=5.4						
MKAR	Makanchi Array	60.36	328	P	P	19 35 18.6	+0.1
	0.3nm,0.6s,baz=131,slow=6.1,SNR=2.6						

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*IDC **30** 19:34:13.7±0.4,34°.79N×25°.71E,h0^{km},mb3.5/6, mb1 3.6/6,mb1mx3.4/37,mbtmp3.5/6,Error ellipse: s-maj=14.3km s-min=2.9km az=31.0*

*ISK **30** 19:34:19.3,34°.72N×25°.58E,h12^{km},ML3.2/8*

*THE **30** 19:34:20.7,34°.83N×25°.55E,h4^{km}±2^{km},ML2.8/7,Error ellipse: s-maj=2.5km s-min=0.5km az=25.0*

*ATH **30** 19:34:20.4,34°.88N×25°.59E,h36^{km}±9^{km},ML2.9/5,Error ellipse: s-maj=11.0km s-min=2.0km az=3.0*

ISC 30 19:34:19.4±1.0,**34°.86N**±0°.06×**25°.58E**±0°.03,**h34**^{km}±3^{km}, **n33**,σ**1^{s}.79**/45,**mb3.4**/6,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRMA	Ierapetra Chan	0.20	38	P	Pb	19 34 27.2	+1.2
FRMA				S	Sb	19 34 31.9	+1.3
	622nm,0.6s						
NPS	Neapolis	0.41	3	P	Pn	19 34 29.4	+0.4
NPS				S	Sn	19 34 35.8	+0.5
	992nm,0.5s						
NPS	Neapolis	0.41	3	P	Pn	19 34 29.4	+0.4
NPS				AML	AML	19 34 44.5	
	comp=E,2188µm,0.5s						
NPS				AML	AML	19 34 46.1	
	comp=N,1622µm,0.5s						
STIA	Sitia Lasithi	0.54	50	P	Pn	19 34 32.7	+2.0
STIA				S	Sn	19 34 41.3	+2.7
ZKR	Zakros	0.58	64	P	Pb	19 34 32.2	+0.9
ZKR				S	Sn	19 34 42.6	+3.0
	comp=N,1µm,0.6s						
ZKR	Zakros	0.58	64	P	Pb	19 34 32.2	+0.9
ZKR				AML	AML	19 34 44.3	
	comp=E,3390µm,0.6s						
ZKR				AML	AML	19 34 44.7	
	comp=N,1111µm,0.6s						
ZKR	Zakros	0.58	64	PG	Pb	19 34 32.5	+1.2
ZKR				SG	Sn	19 34 42.2	+2.6
HRKL	Herakleio	0.60	319	PG	Pb	19 34 33.5	+1.9
HRKL				SG	Sn	19 34 43.9	+3.8
KSTL	Kastelli Herak	0.61	317	P	Pn	19 34 29.0	-2.6
KSTL				S	Sb	19 34 35.9	-4.4
	comp=N,1µm,0.4s						
SIVA	Sivas	0.66	284	P	Pb	19 34 33.0	+0.5
SIVA				S	Sn	19 34 43.2	+1.8
	comp=N,3µm,0.5s						
SIVA	Sivas	0.66	284	P	Pb	19 34 33.0	+0.5
SIVA				S	Sn	19 34 43.2	+1.8
SIVA				AML	AML	19 34 51.1	
	comp=N,4729µm,0.4s						
SIVA				AML	AML	19 34 55.4	
	comp=E,7259µm,0.5s						
IDI	Anoyia	0.71	307	Pn	Pn	19 34 32.9	-0.3
	comp=E,34nm,0.3s,baz=158,slow=7.6,SNR=59						
IDI				Sn	Sb	19 34 46.8	+3.7
	comp=E,115nm,0.3s,baz=10,slow=15,SNR=18						
IDI	Anoyia	0.71	307	P	Pb	19 34 34.1	+0.6
IDI	Anoyia	0.71	307	P	Pn	19 34 33.5	+0.4
IDI				AML	AML	19 34 48.9	
	comp=E,1432µm,0.4s						
IDI				AML	AML	19 34 49.5	
	comp=N,1529µm,0.5s						
GVDS	Gavdos	1.23	270	PN	Pb	19 34 43.4	+1.3
GVD	Gavdhos	1.23	270	P	Pb	19 34 42.5	+0.4
GVD				S	Sb	19 34 59.9	+2.2
	comp=N,705nm,0.5s						
GVD	Gavdhos	1.23	270	P	Pb	19 34 42.5	+0.4
GVD				AML	AML	19 35 05.9	

	comp=N,1051µm,0.4s						
GVD				AML	AML	19 35 12.7	
	comp=E,1506µm,0.4s						
GVD	Gavdhos	1.23	270	PN	Pb	19 34 42.8	+0.7
VAM	Vamos	1.26	296	P	Pb	19 34 43.7	+1.1
VAM				S	Sb	19 35 00.7	+2.2
	comp=E,642nm,0.5s						
VAM	Vamos	1.26	296	P	Pb	19 34 43.7	+1.1
IMMV	Iera Moni Meta	1.44	295	P	Pb	19 34 46.2	+0.5
IMMV	Iera Moni Meta	1.44	295	P	Pb	19 34 46.2	+0.5
IMMV	Iera Moni Meta	1.44	295	PN	Pb	19 34 46.7	+1.0
SANT	Santorini	1.51	356	PN	Pb	19 34 48.6	+1.7
KNDR	Palaiochora Ch	1.60	284	PN	Pb	19 34 49.4	+1.0
APE	Apeiranthos	2.21	359	PN	Pb	19 34 58.7	0.0
TURN	Turunc	2.89	48	PN	Pb	19 35 07.8	-2.4
FINES	FINESS Array B	26.61	1	P	P	19 39 52.5	-1.8
	comp=E,3.4nm,1.0s,baz=161,slow=13,SNR=3.5						
TORD	Torodi Ar. Bea	30.56	231	P	P	19 40 29.1	-0.9
	comp=E,0.2nm,0.4s,baz=35,slow=8.7,SNR=1.9						
MKAR	Makanchi Array	43.65	56	P	P	19 42 20.2	-0.5
	comp=E,0.4nm,0.6s,baz=271,slow=7.5,SNR=6.3						
ZALV	Zalesovo Beam	44.96	46	P	P	19 42 30.1	-0.9
	comp=E,0.3nm,0.3s,baz=263,slow=8.0,SNR=2.5						
SONM	Songino Array	59.41	51	P	P	19 44 17.9	-0.7
	comp=E,0.2nm,0.6s,baz=282,slow=8.8,SNR=2.4						
YKA	Yellowknife Ar	77.84	342	P	P	19 46 11.9	-1.2
	comp=E,0.1nm,0.5s,baz=22,slow=5.2,SNR=3.2						

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*MAN **30** 19:36:15.5, 7°.80N×127°.16E, h1^{km}, mb5.3, ML4.2, MS4.4*

*IDC **30** 19:36:23.1±5.9, 7°.84N×127°.11E, h72^{km}±51^{km}, mb3.5/8, mb1 3.6/8, mb1mx3.4/35, mbtmp3.8/8, MS4.1/1, Ms1 4.1/1, ms1mx2.7/25, Error ellipse: s-maj=52.4km s-min=15.9km az=64.0*

ISC 30 19:36:18.6±2.2**, 7°.87N**±0°.04×**127°.0E**±0°.1**, h32**^{km}±14^{km}**, n22,** σ2^{s}.**32**/30**, mb3.8**/8**, 3C-6D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.74	295	⇓eP	Pn	19 36 33.6	+0.7
BIPH				eS	Sn	19 36 46.0	+3.0
MATI	Mati	1.20	220	⇓iP	Pn	19 36 38.9	-0.3
MATI				eS	Sn	19 36 53.6	-0.8
DAV	Davao City (W)	1.65	241	P	Pb	19 36 50.2	+1.8
	62nm,0.3s,baz=349,slow=9.9,SNR=7.5						
DAV				S	Sb	19 37 12.0	+3.2
	76nm,0.3s,baz=72,slow=23,SNR=6.7						
DAV				LR	LR	19 37 56.3	
	comp=Z,397nm,18.1s,baz=26,slow=55						
BUTP	Butuan	1.77	308	⇓iP	Pb	19 36 50.5	0.0
BUTP				eS	Sb	19 37 20.8	+8.4
KCP	Kidapawan	2.11	246	⇑eP	Pb	19 36 54.5	-1.8
KCP				i S	Sb	19 37 22.6	+0.5
DDMP	Don Marcelino,	2.19	217	⇓iP	Pn	19 36 54.4	+1.5
DDMP				eS	Sb	19 37 23.3	-1.1
GSPH	General Santos	2.73	230	⇑eP	Pn	19 37 01.5	+1.2
MSLP	Maasin	3.11	316	⇓iP	Pn	19 37 08.6	+3.1
MSLP				eS	Sb	19 37 57.7	+6.9
MSLP	Maasin	3.11	316	⇓eP	Pb	19 37 09.4	-3.9
TBP	Tagbilaran	3.62	300	⇑eP	Pn	19 37 08.8	-3.8
LLP	Lapu-Lapu	3.88	309	eP	Pn	19 37 16.5	+0.3
LLP				eS	Sb	19 38 13.5	+0.4
SNPH	Sibulan	4.03	292	i P	Pn	19 37 17.5	-0.7
SNPH				i S	Sb	19 38 13.4	-3.9
FITZ	Fitzroy Crossi	25.84	183	P	P	19 41 46.9	-0.4
	2.4nm,0.8s,baz=342,slow=3.1,SNR=9.0						
WRA	Warramunga Arr	28.56	166	P	P	19 42 12.2	+0.4
	0.2nm,0.4s,baz=348,slow=9.8,SNR=1.2						
ASAR	Alice Springs	32.05	168	P	P	19 42 41.9	-0.8
	0.2nm,0.3s,baz=342,slow=7.4,SNR=8.7						
ASAR				PcP	PcP	19 45 32.6	+0.6
	0.3nm,0.7s,baz=357,slow=3.9,SNR=1.7						
STKA	Stephens Creek	41.90	161	P	P	19 44 07.4	+1.2
	0.7nm,0.7s,baz=336,slow=12,SNR=1.5						
MKAR	Makanchi Array	54.39	323	P	P	19 45 43.3	+0.7
	1.1nm,0.7s,baz=125,slow=7.8,SNR=12						
ZALV	Zalesovo Beam	57.08	332	P	P	19 46 02.2	+0.5
	0.9nm,0.8s,baz=139,slow=7.0,SNR=4.0						
RAR	Rarotonga	77.39	114	LR	LR	20 18 05.3	
	comp=Z,104nm,19.8s,baz=340,slow=32						
ARCES	ARCESS Array B	86.69	340	P	P	19 48 58.9	-0.1
	2.8nm,0.8s,baz=78,slow=7.9,SNR=5.2						
FINES	FINESS Array B	88.35	332	P	P	19 49 06.3	-0.7
	1.5nm,0.8s,baz=56,slow=3.2,SNR=7.0						
TORD	Torodi Ar. Bea	121.84	291	PKP	PKPdf	19 55 09.4	-1.2
	0.4nm,0.9s,baz=76,slow=1.4,SNR=4.3						

IDC 30 19:48:26.9±4.6**, 4°.60S**×**153°.79E, h0**^{km}**, mb3.4**/2**, mb1 3.7**/2**, mb1mx3.3**/29**, mbtmp3.4**/2**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/17**, Error ellipse: s-maj=219.7km s-min=56.2km az=121.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	21.26	146	LR	LR	19 59 58.3	
	comp=Z,91nm,20.2s,baz=228,slow=32						
WRA	Warramunga Arr	24.32	230	P	P	19 53 47.0	+0.5
	0.7nm,0.7s,baz=55,slow=9.8,SNR=6.0						
ASAR	Alice Springs	26.97	223	P	P	19 54 10.3	-0.2
	0.3nm,0.8s,baz=58,slow=8.9,SNR=4.4						
TORD	Torodi Ar. Bea	151.18	289	PKPbc	PKPbc	20 08 22.8	-0.5
	0.3nm,0.7s,baz=90,slow=2.6,SNR=1.9						

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*WEL **30** 19:50:00, 40°.54S×173°.51E, h141^{km}, ML5.1, Mw4.6, Moment Tensor Solution. s8 Moment tensor: Scale 10^{16} Nm; M$_{rr}$0.12; M$_{\theta\theta}$0.40; M$_{\phi\phi}$-0.52; M$_{r\theta}$0.71; M$_{\theta\phi}$0.42; M$_{\phi r}$-0.36; Fault plane solution: M$_0$1.01000×10^{16} NP1: φ$_s$22.00000°, δ38.00000°, λ173.00000°. NP2: φ$_s$117.00000°, δ86.00000°, λ52.00000°. Principal axes: T -1038.9400, Plg37.0000°, Azm354.0000°; N 990.2300, Plg38.0000°, Azm120.0000°; P 48.7100, Plg31.0000°, Azm237.0000°;*

*IDC **30** 19:50:47.6±1.8, 40°.48S×173°.51E, h140^{km}±17^{km}, mb4.2/10, mb1 4.3/12, mb1mx4.2/25, mbtmp4.6/12, MS3.4/3, Ms1 3.4/3, ms1mx3.0/18 Error ellipse: s-maj=16.4km s-min=13.4km az=55.0*

*NOU **30** 19:50:47.8, 40°.64S×173°.44E, h134^{km}, mb4.7/31, Cook Strait, New Zealand*

*NEIC **30** 19:50:48.2±1.4, 40°.56S±0°.06×173°.42E±0°.09, h142^{km}±6^{km}, mb4.6/34, Error ellipse: s-maj=10.0km s-min=9.1km az=131.0*

*WEL **30** 19:50:49.9±0.9, 41°S±3°×17°3E±°, h119^{km}±7^{km}, M4.9/12, MLv4.9/12, Error ellipse: s-maj=0.0km s-min=0.0km az=89.2*

ISC 30 19:50:48.2±0.6**, 40°.62S**±0°.03×**173°.43E**±0°.03**, h149**^{km}±4^{km}**, n294,** σ2^{s}.**01**/359**, mb4.7**/29**, 5C-6D, Fault plane solution: NP1:** φ$_s$116.89870°**,** δ82.00356°**,** λ45.94403°. **NP2:** φ$_s$18.71718°**,** δ44.62880°**,** λ168.57877°. **Principal axes:** T Plg36.9843°**,** Azm348.9075°**;** N Plg43.5194°**,** Azm124.5647°**;** P Plg23.8825°**,** Azm239.4284°**; Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.42	116	P	Pn	19 51 08.4	-0.7
DUWZ				S	Sn	19 51 22.8	-2.1
NNZ	Nelson	0.60	183	P	Pn	19 51 09.3	-0.6
NNZ				S	Sn	19 51 25.2	-1.4
NNZ	Nelson	0.60	183		Pn	19 51 09.3	-0.6
QRZ	Quartz Range	0.71	253	P	Pn	19 51 09.7	-1.0
QRZ				S	Sn	19 51 25.3	-2.5
QRZ	Quartz Range	0.71	253		Pn	19 51 09.6	-1.0
QRZ	Quartz Range	0.71	253	P	Pn	19 51 08.9	-1.8
TCW	Tory Channel	0.87	133	P	Pn	19 51 11.7	-0.1
TCW				S	Sn	19 51 28.3	-1.6
TUWZ	Tuamarina	0.90	154	P	Pn	19 51 11.8	-0.3
TUWZ				S	Sn	19 51 29.3	-0.9
TUWZ	Tuamarina	0.90	154		Pn	19 51 11.6	-0.4
BSWZ	Blackbirch Sta	1.14	163	P	Pn	19 51 14.2	0.0
BSWZ				S	Sn	19 51 33.2	-0.9
BSWZ	Blackbirch Sta	1.14	163		Pn	19 51 14.0	-0.1
KIW	Kapiti Island	1.15	102	P	Pn	19 51 13.7	-0.6
KIW				S	Sn	19 51 31.3	-2.8
SNZO	South Karori	1.19	126		Pn	19 51 13.9	-0.6
SNZO	South Karori	1.19	126	P	Pn	19 51 14.5	0.0
THZ	Tophouse	1.21	199	P	Pn	19 51 14.4	-0.4
THZ				S	Sn	19 51 34.1	-1.1
THZ	Tophouse	1.21	199		Pn	19 51 14.3	-0.5
WEL	Wellington	1.21	124	P	Pn	19 51 14.6	-0.2
WEL				S	Sn	19 51 33.0	-2.1
NMEZ	Namu Road	1.26	16	P	Pn	19 51 14.1	-1.1
NMEZ				S	Sn	19 51 34.3	-1.5
CMWZ	Cape Campbell	1.27	152	P	Pn	19 51 16.2	+0.8
CMWZ				S	Sn	19 51 36.6	+0.4
CMWZ	Cape Campbell	1.27	152		Pn	19 51 15.7	+0.3
CAW	Cannon Point	1.33	112	P	Pn	19 51 15.6	-0.4
OGWZ	Otaki Gorge	1.34	99	P	Pn	19 51 15.6	-0.4
OGWZ				S	Sn	19 51 34.6	-2.7
BHW	Baring Head	1.34	126	P	Pn	19 51 15.7	-0.4
BHW				S	Sn	19 51 34.5	-2.9
BHW	Baring Head	1.34	126		Pn	19 51 15.6	-0.4
LREZ	Lake Rotokare	1.38	33	P	Pn	19 51 15.5	-0.9
NBEZ	Newall Road No	1.39	14	P	Pn	19 51 15.5	-1.1
PREZ	Palmer Road	1.40	24	P	Pn	19 51 15.5	-1.2
PREZ				S	Sn	19 51 37.0	-1.5
KHEZ	Kahui Hut	1.40	19	P	Pn	19 51 15.6	-1.3
NEZ	North Egmont	1.45	21	P	Pn	19 51 15.7	-1.6
NEZ				S	Sn	19 51 36.4	-2.9
WAZ	Wanganui	1.48	55	P	Pn	19 51 16.9	-0.6
WAZ				S	Sn	19 51 40.1	+0.3
PKE	Pukeiti	1.49	17	P	Pn	19 51 16.5	-1.2
PKE				S	Sn	19 51 36.8	-3.3
OHWZ	Ohakea	1.50	75	P	Pn	19 51 17.2	-0.5
OHWZ				S	Sn	19 51 39.5	-0.7
DREZ	Durham Road	1.55	23	P	Pn	19 51 17.0	-1.3
DREZ				S	Sn	19 51 39.5	-1.7
MSWZ	Moikau Station	1.59	121	P	Pn	19 51 18.3	-0.4
MSWZ				S	Sn	19 51 39.2	-2.8
MSWZ	Moikau Station	1.59	121		Pn	19 51 18.1	-0.6
HOWZ	Holdsworth Sta	1.61	101	P	Pn	19 51 18.2	-0.7
HOWZ				S	Sn	19 51 38.9	-3.5
MRZ	Mangatainoka R	1.64	92	P	Pn	19 51 18.3	-0.8
MRZ				S	Sn	19 51 39.6	-3.3
DSZ	Denniston Nort	1.66	227	P	Pn	19 51 18.8	-0.7
MTW	Mount Morrison	1.66	109	P	Pn	19 51 18.9	-0.5
MTW				S	Sn	19 51 40.7	-2.6
PLWZ	Palliser	1.67	125	P	Pn	19 51 19.2	-0.4
PLWZ	Palliser	1.67	125		Pn	19 51 18.9	-0.7
MHEZ	Mangahewa	1.69	24	P	Pn	19 51 18.7	-1.1
MHEZ				S	Sn	19 51 42.2	-1.7
PAWZ	Paruwai Farm	1.69	117	P	Pn	19 51 19.4	-0.4
KHZ	Kahutara	1.79	177	P	Pn	19 51 20.8	0.0
KHZ	Kahutara	1.79	177	Pn	Pn	19 51 20.7	-0.2
KHZ	Kahutara	1.79	177	P	Pn	19 51 20.8	-0.1
POWZ	Post Office Ro	1.80	83	P	Pn	19 51 20.0	-1.0
VRZ	Vera Road	1.81	35	P	Pn	19 51 19.6	-1.5
TIWZ	Tintock	1.88	96	P	Pn	19 51 21.1	-0.7
TRWZ	Traveller	1.88	115	P	Pn	19 51 21.6	-0.2
TMWZ	Te Maipa	1.93	105	P	Pn	19 51 22.0	-0.5
PRWZ	Pori Road	1.94	89	P	Pn	19 51 21.8	-0.7
PKVZ	Pokaka	1.99	49	P	Pn	19 51 21.9	-1.3
MTVZ	Mangateitei	2.00	52	P	Pn	19 51 22.1	-1.3
TSZ	Takapari Road	2.02	75	P	Pn	19 51 22.3	-1.2
TRVZ	Turoa	2.10	52	P	Pn	19 51 23.1	-1.6
WNVZ	Wahianoa	2.11	53	P	Pn	19 51 23.1	-1.6
DVHZ	Dannevirke	2.12	82	P	Pn	19 51 23.3	-1.3
DVHZ				S	Sn	19 51 49.0	-3.6
DRZ	Dome Shelter	2.12	51	P	Pn	19 51 24.0	-1.1
DRZ				S	Sn	19 51 52.5	-0.8
CPWZ	Castlepoint	2.13	99	P	Pn	19 51 24.6	-0.1
CPWZ				S	Sn	19 51 51.1	-1.7
FWVZ	Far West T-bar	2.13	51	P	Pn	19 51 23.4	-1.6
FWVZ				S	Sn	19 51 52.1	-1.2
WHVZ	Whangaehu Hut	2.13	52	P	Pn	19 51 23.9	-1.2
WHVZ				S	Sn	19 51 51.5	-1.9
BFZ	Birch Farm	2.15	93	P	Pn	19 51 24.0	-1.0
BFZ				S	Sn	19 51 49.7	-3.5
BFZ	Birch Farm	2.15	93		Pn	19 51 23.8	-1.2
BFZ	Birch Farm	2.15	93	P	Pn	19 51 24.0	-1.0
MOVZ	Moawhango	2.16	57	P	Pn	19 51 23.3	-2.0
MOVZ				S	Sn	19 51 51.0	-2.7
TUVZ	Tukino	2.18	52	P	Pn	19 51 24.2	-1.4
TUVZ				S	Sn	19 51 53.4	-0.9
TWVZ	Taurewa	2.19	46	P	Pn	19 51 23.9	-1.8
TWVZ				S	Sn	19 51 51.8	-2.5
NGZ	Ngauruhoe	2.21	50	P	Pn	19 51 24.1	-1.8
NGZ				S	Sn	19 51 52.9	-2.0
SNVZ	South Ngauruho	2.23	51	P	Pn	19 51 24.4	-1.7
PNHZ	Pukenui	2.24	72	P	Pn	19 51 24.6	-1.5
PNHZ				S	Sn	19 51 53.8	-1.4
WTVZ	West Tongariro	2.24	49	P	Pn	19 51 24.4	-1.9
WTVZ				S	Sn	19 51 53.0	-2.5
NNVZ	North Ngauruho	2.25	49	P	Pn	19 51 24.5	-1.9
OTVZ	Oturere	2.25	50	P	Pn	19 51 24.7	-1.8
OTVZ				S	Sn	19 51 54.5	-1.4
KRVZ	Karewarewa	2.29	49	P	Pn	19 51 24.9	-1.9
ETVZ	East Tongariro	2.30	51	P	Pn	19 51 25.2	-1.8
NTVZ	North Tongarir	2.30	49	P	Pn	19 51 25.2	-1.8
TMVZ	Te Maari	2.31	50	P	Pn	19 51 25.4	-1.7
BHHZ	Black Hill Sta	2.32	62	P	Pn	19 51 25.2	-2.0
BHHZ				S	Sn	19 51 54.1	-2.9
LTZ	Lake Taylor	2.33	201	P	Pn	19 51 26.5	-0.7
LTZ				S	Sn	19 51 54.4	-2.8
LTZ	Lake Taylor	2.33	201	Pn	Pn	19 51 26.3	-0.8
ANWZ	Angora Road	2.33	87	P	Pn	19 51 26.2	-1.0
ANWZ				S	Sn	19 51 54.1	-3.0
GVZ	Greta Valley S	2.36	187	P	Pn	19 51 27.0	-0.6
WPHZ	Waipukurau	2.37	77	P	Pn	19 51 26.4	-1.3
HIZ	Hauiti	2.38	28	P	Pn	19 51 25.8	-2.0
HIZ				S	Sn	19 51 54.7	-3.6
HIZ	Hauiti	2.38	28		Pn	19 51 25.5	-2.3
HIZ	Hauiti	2.38	28	P	Pn	19 51 25.8	-2.0
KATZ	Kakaramea	2.40	47	P	Pn	19 51 26.4	-1.8
KRHZ	Kereru	2.46	68	P	Pn	19 51 27.0	-1.9
PRHZ	Porangahau	2.47	83	P	Pn	19 51 27.9	-1.1
PRHZ				S	Sn	19 51 57.3	-3.0
RITZ	Rihia Road	2.49	50	P	Pn	19 51 27.6	-1.6
RATZ	Rangitukua	2.52	47	P	Pn	19 51 28.1	-1.4
INZ	Inchbonnie	2.57	215	P	Pn	19 51 29.5	-0.7
INZ				S	Sn	19 51 59.5	-3.1
KWHZ	Kaweka Forest	2.59	63	P	Pn	19 51 28.6	-1.9
KWHZ				S	Sn	19 52 00.9	-2.2
WATZ	Wairara	2.61	44	P	Pn	19 51 29.4	-1.3
HATZ	Hinemaiaia	2.69	51	P	Pn	19 51 29.3	-2.3
PXZ	Pawanui	2.69	78	P	Pn	19 51 30.1	-1.5
PXZ				S	Sn	19 52 03.3	-1.8
WHTZ	Whakaora	2.76	46	P	Pn	19 51 31.5	-1.2
KAHZ	Kahuranaki	2.77	74	P	Pn	19 51 31.1	-1.6
BKZ	Black Stump Fm	2.77	59	P	Pn	19 51 30.3	-2.4
BKZ				S	Sn	19 52 03.1	-3.9
BKZ	Black Stump Fm	2.77	59	Pn	Pn	19 51 30.1	-2.7
BKZ	Black Stump Fm	2.77	59	P	Pn	19 51 30.3	-2.4
MCHZ	McNeill Hill	2.77	66	P	Pn	19 51 31.1	-1.6
MCHZ				S	Sn	19 52 05.6	-1.4
TLZ	Tolley Road	2.81	36	P	Pn	19 51 31.1	-2.1
KUTZ	Kaahu Road	2.82	42	P	Pn	19 51 32.0	-1.3
OXZ	Oxford	2.89	201	P	Pn	19 51 32.6	-1.5
OXZ				S	Sn	19 52 05.8	-3.9
OXZ	Oxford	2.89	201		Pn	19 51 32.4	-1.7
MRHZ	Matea Rd	2.92	53	P	Pn	19 51 31.7	-2.9
MRHZ				S	Sn	19 52 06.2	-4.1
CKHZ	Cape Kidnapper	2.96	72	P	Pn	19 51 33.7	-1.3
WPRZ	Whakapapatarin	2.98	46	P	Pn	19 51 33.4	-1.9
NMHZ	Naumai	3.01	61	P	Pn	19 51 34.1	-1.7
ALRZ	Allen Road	3.05	49	P	Pn	19 51 33.9	-2.3
ARHZ	Aropaoanui	3.06	65	P	Pn	19 51 34.2	-2.1
GRRZ	Galatos Road	3.08	43	P	Pn	19 51 34.9	-1.7
OKCZ	Okains Bay	3.11	185	P	Pn	19 51 35.8	-1.1
OKCZ				S	Sn	19 52 10.5	-4.2
PRRZ	Plateau Road	3.12	48	P	Pn	19 51 35.0	-2.2
MQZ	McQueen's Vall	3.13	190	P	Pn	19 51 35.3	-1.9
MQZ				S	Sn	19 52 10.3	-4.9
MQZ	McQueen's Vall	3.13	190	Pn	Pn	19 51 35.0	-2.2
HRRZ	Handcock Road	3.14	46	P	Pn	19 51 35.4	-1.9
WVZ	Waitaha Valley	3.17	218	P	Pn	19 51 36.5	-1.1
WVZ				S	Sn	19 52 12.2	-3.7
MTHZ	Maungataniwha	3.17	57	P	Pn	19 51 35.0	-2.8
MTHZ				S	Sn	19 52 12.3	-3.8
HSRZ	Hossack Road	3.17	44	P	Pn	19 51 35.9	-1.9
MHCZ	Mount Hutt	3.22	205	P	Pn	19 51 36.7	-1.7
RACZ	Rakaia	3.25	197	P	Pn	19 51 37.2	-1.4
UTU	Utuhina	3.25	42	P	Pn	19 51 37.2	-1.6
AKCZ	Akaroa Harbour	3.27	187	P	Pn	19 51 37.5	-1.4
AKCZ				S	Sn	19 52 14.0	-4.3
HLRZ	Highlands Stat	3.28	45	P	Pn	19 51 37.8	-1.4
RAHZ	Arahi	3.29	60	P	Pn	19 51 37.0	-2.3
RAHZ				S	Sn	19 52 16.1	-2.8
RRRZ	Republican Roa	3.30	47	P	Pn	19 51 37.2	-2.3
NGRZ	Ngongotaha	3.30	41	P	Pn	19 51 37.8	-1.6
TOZ	Tahuroa Road	3.31	30	P	Pn	19 51 37.0	-2.4
TOZ				S	Sn	19 52 15.1	-4.0
MUGZ	Murupara	3.36	51	P	Pn	19 51 37.2	-2.9
MUGZ				S	Sn	19 52 16.5	-3.8
TARZ	Mount Tarawera	3.37	46	P	Pn	19 51 38.2	-2.2
KMRZ	Kaimai	3.39	36	P	Pn	19 51 38.6	-2.0
KARZ	Kaharoa	3.39	41	P	Pn	19 51 38.8	-1.9
OMRZ	Omania	3.39	43	P	Pn	19 51 38.8	-1.8
RTZ	Ruatahuna	3.40	55	P	Pn	19 51 37.7	-3.0
RTZ				S	Sn	19 52 17.1	-4.2
MKRZ	Makatiti	3.42	44	P	Pn	19 51 39.3	-1.7
WACZ	Wakanui South	3.52	199	P	Pn	19 51 40.8	-1.3
SNGZ	Shannon Statio	3.53	60	P	Pn	19 51 39.8	-2.6
SNGZ				S	Sn	19 52 20.9	-3.5
GCSZ	Gaunt Creek Bo	3.55	220	P	Pn	19 51 41.1	-1.4
RPZ	Rata Peaks	3.56	209	P	Pn	19 51 40.8	-1.9
RPZ				S	Sn	19 52 19.9	-5.1
RPZ	Rata Peaks	3.56	209	Pn	Pn	19 51 40.2	-2.4
RPZ	Rata Peaks	3.56	209	P	Pn	19 51 41.7	-1.0
EDRZ	Edgecumbe	3.59	47	P	Pn	19 51 40.4	-2.8
TGRZ	Tauranga	3.63	38	P	Pn	19 51 41.7	-2.0
KNZ	Kokohu	3.64	65	P	Pn	19 51 40.8	-2.9
MARZ	Manawahe	3.64	45	P	Pn	19 51 41.6	-2.2
AWAZ	Awhitu Peninsu	3.68	15	P	Pn	19 51 43.4	-0.8
AWAZ				S	Sn	19 52 25.8	-1.9
OPRZ	Ohinepanea	3.69	42	P	Pn	19 51 42.0	-2.4
URZ	Urewera	3.70	52	P	Pn	19 51 40.9	-3.7
	148nm,0.3s,baz=301,slow=24,SNR=872						
URZ				S	Sn	19 52 23.7	-4.5
	369nm,0.3s,baz=46,slow=13,SNR=17						
URZ				LR	LR	19 53 07.1	
	comp=Z,166nm,21.0s,baz=211,slow=39						
URZ	Urewera	3.70	52	P	Pn	19 51 41.0	-3.5
URZ				S	Sn	19 52 23.2	-5.0
URZ	Urewera	3.70	52	P	Pn	19 51 41.3	-3.2
ARCZ	Arundel	3.72	206	P	Pn	19 51 42.7	-2.0
RAGZ	Rawiri	3.74	57	P	Pn	19 51 42.3	-2.9
RAGZ				S	Sn	19 52 25.4	-3.9
MHGZ	Mahia Peninsul	3.75	68	P	Pn	19 51 42.6	-2.6
MHGZ				S	Sn	19 52 26.3	-2.9
WTAZ	Waiatarua	3.79	14	P	Pn	19 51 44.5	-1.3
PRGZ	Paritu Road	3.83	65	P	Pn	19 51 43.3	-2.9
PRGZ				S	Sn	19 52 26.4	-4.9
ETAZ	East Tamaki Re	3.85	18	P	Pn	19 51 45.5	-1.0
RIGZ	Rimuhau	3.85	62	P	Pn	19 51 43.6	-3.0
EPAZ	Eden Park BICE	3.88	16	P	Pn	19 51 46.6	-0.3
WHRZ	Whale Island	3.90	46	P	Pn	19 51 45.3	-1.8
HBAZ	Herne Bay Bore	3.90	16	P	Pn	19 51 46.7	-0.5
MWZ	Matawai	3.91	56	P	Pn	19 51 44.1	-3.2
RVAZ	Riverhead Bore	3.95	14	P	Pn	19 51 46.9	-0.9
FOZ	Fox Glacier	3.96	222	P	Pn	19 51 46.1	-1.7
FOZ	Fox Glacier	3.96	222	Pn	Pn	19 51 45.5	-2.4
MYRZ	Mayor Island	3.99	34	P	Pn	19 51 47.0	-1.4
MBAZ	Motutapu North	4.02	17	P	Pn	19 51 48.2	-0.5
WIAZ	Waiheke Island	4.05	20	P	Pn	19 51 48.1	-1.0
TKGZ	Te Karaka	4.05	59	P	Pn	19 51 46.1	-3.1
TMZ	Timaru	4.16	205	P	Pn	19 51 48.6	-2.0
ABAZ	Army Bay	4.16	16	P	Pn	19 51 49.9	-0.7
RUGZ	Raukumara Rang	4.23	53	P	Pn	19 51 47.3	-4.3
KUZ	Kuaotunu	4.27	26	P	Pn	19 51 49.8	-2.2
CNGZ	Carnagh Statio	4.27	62	P	Pn	19 51 48.9	-3.0
TWGZ	Tauwhareparae	4.29	57	P	Pn	19 51 49.2	-3.1
HAZ	Te Kaha	4.43	51	P	Pn	19 51 49.6	-4.5
LBZ	Lake Benmore	4.46	211	P	Pn	19 51 52.6	-1.8
LBZ	Lake Benmore	4.46	211	Pn	Pn	19 51 51.6	-2.9
PKGZ	Pakihiroa	4.53	54	P	Pn	19 51 52.0	-3.4
PUZ	Puketiti	4.53	57	P	Pn	19 51 51.4	-4.0
GRZ	Great Barrier	4.65	21	P	Pn	19 51 55.7	-1.3
WCZ	Waipu Caves	4.73	9	P	Pn	19 51 57.1	-1.0
WMGZ	Waiomatatini S	4.78	56	P	Pn	19 51 54.6	-4.0
ODZ	Otahua Downs	4.87	204	P	Pn	19 51 58.5	-1.4
ODZ	Otahua Downs	4.87	204		Pn	19 51 58.1	-1.7
ODZ	Otahua Downs	4.87	204	P	Pn	19 51 59.0	-0.8
JCZ	Jackson Bay	4.87	223	P	Pn	19 51 57.9	-2.0
MXZ	Matakaoa Point	4.87	53		Pn	19 51 56.0	-3.9
WKZ	Wanaka	5.31	216	P	Pn	19 52 02.8	-2.9
WKZ	Wanaka	5.31	216	Pn	Pn	19 52 02.2	-3.5
OUZ	Omahuta	5.39	1	P	Pn	19 52 06.3	-0.6
OUZ	Omahuta	5.39	1	P	Pn	19 52 06.1	-0.8
EAZ	Earnscleugh	5.51	212	P	Pn	19 52 05.8	-2.5
HHSZ	Highcliff Hill	5.65	200	P	Pn	19 52 09.1	-1.1
MSZ	Milford Sound	5.73	223	P	Pn	19 52 09.2	-2.0
TUZ	Tuapeka	6.01	206	P	Pn	19 52 13.6	-1.3
MLZ	Mavora Lakes	6.13	218	P	Pn	19 52 14.2	-2.5
MLZ	Mavora Lakes	6.13	218		Pn	19 52 13.2	-3.4
WHZ	Wether Hill Ro	6.61	215	P	Pn	19 52 20.3	-2.7
WHZ	Wether Hill Ro	6.61	215	Pn	Pn	19 52 20.1	-2.9
DCZ	Deep Cove	6.67	221	P	Pn	19 52 21.2	-2.6
DCZ	Deep Cove	6.67	221	Pn	Pn	19 52 20.2	-3.6
SYZ	Scrubby Hill	6.68	206	P	Pn	19 52 22.3	-1.6
APZ	The Paps	7.35	211	P	Pn	19 52 29.8	-3.1
PYZ	Puysegur Point	7.40	219	P	Pn	19 52 31.9	-1.7
PYZ	Puysegur Point	7.40	219	Pn	Pn	19 52 30.1	-3.4
CTZ	Chatham Island	8.02	116	P	Pn	19 52 41.5	-0.2
PINNC	Pines Island,	18.65	342	P	Pn	19 54 55.6	-1.2
OUENC	Ouen Island, N	18.98	341	P	P	19 54 59.0	+0.7
OUENC				IAmb	IAmb	19 55 14.2	
	comp=Z,66nm,1.4s						
OUENC	Ouen Island, N	18.98	341	P	Pn	19 55 00.5	-0.2
YATNC	Mamie plateau,	19.32	341	P	Pn	19 55 04.7	+0.1
	comp=Z,33nm,1.0s						
DZM	Mont Dzumac	19.42	340	P	P	19 55 03.8	+0.7
	comp=Z,1.4nm,0.3s,baz=178,slow=12,SNR=10						
DZM	Mont Dzumac	19.42	340	P	P	19 55 03.9	+0.7
DZM				IAmb	IAmb	19 55 05.9	
	comp=Z,24nm,0.9s						
DZM	Mont Dzumac	19.42	340	P	Pn	19 55 05.3	-0.5
TAU	Tasmania Unive	19.59	255	P	Pn	19 55 06.0	-1.5
TAU				IAmb	IAmb	19 55 23.2	
	comp=Z,26nm,0.8s						
CAN	Canberra	19.95	278	P	P	19 55 09.0	+0.3
TOO	Toolangi	21.86	269	P	P	19 55 29.8	+0.7
MSVF	Nonsavu	23.16	11	P	P	19 55 41.7	0.0
	comp=Z,11nm,0.4s,baz=104,slow=23,SNR=17						
MSVF	Nonsavu	23.16	11	P	P	19 55 41.6	0.0
MSVF	Nonsavu	23.16	11	P	P	19 55 42.8	+1.2
EIDS	Eidsvold	24.04	302	P	P	19 55 51.5	+2.0
EIDS				IAmb	IAmb	19 55 53.4	
	comp=Z,27nm,1.2s						
STKA	Stephens Creek	27.00	279	P	P	19 56 17.0	+0.8
	comp=Z,4.9nm,0.8s,baz=120,slow=10,SNR=13						
STKA	Stephens Creek	27.00	279	P	P	19 56 16.7	+0.5
HTT	Hallett	28.34	274	P	P	19 56 31.2	+3.1
	comp=Z,6.5nm,2.6s						
LCRK	Leigh Creek	30.22	278	P	P	19 56 45.3	+0.5
	comp=Z,26nm,0.8s						
BBOO	Buckleboo	30.77	273	P	P	19 56 47.2	-2.4
BBOO				IAmb	IAmb	19 56 53.1	
	comp=Z,12nm,1.1s						
BBOO	Buckleboo	30.77	273	P	P	19 56 49.5	-0.1
	comp=Z,12nm,0.9s						
MULG	Mulgathing	33.45	275	P	P	19 57 14.7	+1.7
AS31	Alice Springs	37.13	285	P	P	19 57 42.7	-2.0
ASAR	Alice Springs	37.13	285	P	P	19 57 44.5	-0.2
	comp=Z,3.6nm,0.7s,baz=124,slow=7.3,SNR=49						
ASAR				PcP	PcP	20 00 01.6	-0.2
	comp=Z,1.0nm,0.6s,baz=124,slow=3.9,SNR=4.5						
ASAR	Alice Springs	37.13	285	P	P	19 57 43.5	-1.1
ASAR					PcP	20 00 00.9	-0.8
VNDA	Vanda	37.32	184	P	P	19 57 47.4	+1.9
	comp=Z,3.6nm,0.7s,baz=4.0,slow=9.1,SNR=9.4						
VNDA				LR	LR	20 09 53.4	
	comp=Z,47nm,19.3s,baz=256,slow=31						
VNDA	Vanda	37.32	184	P	P	19 57 46.7	+1.2
VNDA				IAmb	IAmb	19 58 01.1	
	comp=Z,13nm,1.4s						
SBA	Scott Base	37.44	182	P	P	19 57 48.5	+2.0
COEN	Coen	37.46	306	P	P	19 57 48.5	+1.2
COEN				IAmb	IAmb	19 58 15.6	
	comp=Z,20nm,1.4s						
FORT	Forrest	37.77	270	P	P	19 57 49.3	-0.5
FORT	Forrest	37.77	270	P	P	19 57 50.5	+0.7
	comp=Z,40nm,1.3s						
WR0	Warramunga Arr	38.98	290	P	P	19 57 59.2	-0.8
WB2	Warramunga Arr	39.12	290	P	P	19 58 00.8	-0.5
WRAB	Tennant Creek	39.13	290	P	P	19 58 00.5	-0.8
WRAB				IAmb	IAmb	19 58 07.9	
	comp=Z,11nm,1.3s						
WRAB	Tennant Creek	39.13	290	P	P	19 58 02.1	+0.8
WRA	Warramunga Arr	39.13	290	P	P	19 58 01.1	-0.2

	comp=Z,2.7nm,0.5s,baz=126,slow=8.3,SNR=32						
WRA	Warramunga Arr	39.13	290	P	P	19 58 01.1	-0.2
WB0	Warramunga Arr	39.21	290	P	P	19 58 01.6	-0.3
WB0				IAmb	IAmb	19 58 22.1	
	comp=Z,10nm,1.3s						
WRKA	Warakurna	40.53	278	P	P	19 58 11.9	-1.0
	comp=Z,11nm,0.7s						
CASY	Casey	42.83	212	P	P	19 58 29.6	-1.4
CASY				IAmb	IAmb	19 58 31.2	
	comp=Z,6.8nm,0.7s						
NWAO	Narrogin (SRO)	45.01	261	P	P	19 58 49.8	+1.0
KLBR	Kellerberrin	45.22	263	P	P	19 58 50.6	+0.1
KNRA	Kununurra	45.92	290	P	P	19 58 56.8	+0.6
KNRA				IAmb	IAmb	19 58 57.0	
	comp=Z,42nm,1.5s						
MTN	Manton Dam	46.18	295	P	P	19 58 58.4	+0.3
MTN				IAmb	IAmb	19 59 03.7	
	comp=Z,38nm,1.4s						
MTN	Manton Dam	46.18	295	P	P	19 58 59.2	+1.0
MUN	Mundaring	46.21	262	P	P	19 58 58.0	-0.2
BLDU	Ballidu	46.47	264	P	P	19 59 00.8	+0.5
MEEK	Meekatharra	47.02	270	P	P	19 59 03.5	-1.1
MORW	Morawa	47.73	265	P	P	19 59 09.4	-0.7
MORW				IAmb	IAmb	19 59 10.8	
	comp=Z,25nm,1.1s						
MORW	Morawa	47.73	265	P	P	19 59 10.8	+0.7
PSA00	Pilbara Seismi	48.88	276	P	P	19 59 18.5	-0.5
PSA00				IAmb	IAmb	19 59 30.8	
	comp=Z,18nm,1.1s						
MBWA	Marble Bar	49.20	276	P	P	19 59 22.5	+1.1
QSPA	South Pole Qui	49.50	180	P	P	19 59 25.2	+1.9
	comp=Z,30nm,0.6s,baz=14,slow=1.1,SNR=41						
QSPA	South Pole Qui	49.50	180	P	P	19 59 24.5	+1.2
GIRL	Giralia	52.53	271	P	P	19 59 46.6	+0.4
GIRL	Giralia	52.53	271	P	P	19 59 47.3	+1.0
FAKI	Fak Fak	52.77	304	P	P	19 59 47.0	-1.2
SOEI	Soe	53.14	291	P	P	19 59 52.5	+1.5
SNAA	Sanae	67.98	181	P	P	20 01 30.7	0.0
SNAA	Sanae	67.98	181	P	P	20 01 30.2	-0.4
SNAA				IAmb	IAmb	20 01 32.2	
	comp=Z,8.9nm,1.2s						
VNA3	Neumayer Olymp	68.42	179	P	P	20 01 33.5	+0.1
VNA2	Neumayer--Watz	68.76	180	P	P	20 01 35.8	+0.4
	baz=178,slow=7.5						
VNA1	Neumayer--Stat	69.03	179	P	P	20 01 37.6	+0.5
PLCA	Paso Flores	80.34	136	P	P	20 02 45.4	+2.5
	comp=Z,1.8nm,0.6s,baz=245,slow=5.8,SNR=9.5						
JNU	Nakatsue	83.23	325	P	P	20 02 57.8	0.0
JWT	Wachi	83.25	330	P	P	20 02 58.8	+1.0
MJAR	Matsushiro Arr	83.32	332	P	P	20 02 58.4	+0.2
	comp=Z,2.0nm,0.7s,baz=163,slow=5.6,SNR=7.4						
MAT	Matsushiro	83.32	332	P	P	20 02 58.5	+0.4
JHS	Saijyo	83.90	328	P	P	20 03 01.9	+0.7
JHS				IAmb	IAmb	20 03 13.8	
	comp=Z,22nm,1.3s						
NJ2	Nanjing	88.16	316	*e*P	P	20 03 23.8	+1.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KSRS	Korea Array	88.18	325	P	P	20 03 22.9	+1.0
	comp=Z,6.0nm,0.8s,baz=146,slow=5.3,SNR=15						
KSAR	Wonju Array Be	88.18	325	P	P	20 03 22.6	+0.6
CMAR	Chiang Mai Arr	90.62	294	P	P	20 03 35.0	+1.2
	comp=Z,1.6nm,0.5s,baz=149,slow=3.4,SNR=16						
CMAR	Chiang Mai Arr	90.62	294	P	P	20 03 34.4	+0.5
NNA	Nana	96.75	112	LR	LR	20 39 22.8	
	comp=Z,56nm,22.0s,baz=102,slow=30						
HHC	Hu-ho-hao-te	98.64	317	*e*P	Pdif	20 04 14.0	+3.9
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,250nm,6.6s						
LZH	Lanzhou	99.51	310	*e*P	Pdif	20 04 20.5	+6.3
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
WMQ	Urumqi	113.98	308	*e*PKP	PKiKP	20 09 09.8	+0.7
MKAR	Makanchi Array	118.79	308	PKP	PKPdf	20 09 16.3	-1.9
	comp=Z,0.2nm,0.7s,baz=75,slow=1.6,SNR=4.3						
KBZ	Khabaz	143.64	292	PKP	PKPbc	20 10 03.2	+0.4
	comp=Z,3.6nm,0.8s,baz=136,slow=4.1,SNR=7.1						
DBIC	Dimbokro	146.16	183	PKPbc	PKPdf	20 10 10.5	+0.3
	comp=Z,3.4nm,0.5s,baz=167,slow=4.1,SNR=6.2						
ARCES	ARCESS Array B	146.51	340	PKPbc	PKPbc	20 10 09.8	-1.0
	comp=Z,3.2nm,0.8s,baz=48,slow=1.2,SNR=8.8						
BRTR	Keskin Array B	149.44	282	PKPbc	PKPbc	20 10 19.4	-0.3
	comp=Z,2.3nm,0.7s,baz=151,slow=5.4,SNR=6.1						
FINES	FINESS Array B	151.25	327	PKPbc	PKPbc	20 10 22.2	-0.8
	comp=Z,5.2nm,1.0s,baz=27,slow=4.7,SNR=11						
TORD	Torodi Ar. Bea	151.69	197	PKPbc	PKPbc	20 10 23.8	-1.6
	comp=Z,1.0nm,0.5s,baz=116,slow=2.4,SNR=16						
AKASG	Malin Array Be	153.27	304	PKPbc	PKPbc	20 10 27.4	-0.4
	comp=Z,0.4nm,0.5s,baz=68,slow=3.1,SNR=1.4						

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*IDC **30** 20:23:16.7±3.2, 15.°04N×93.°88W, h0^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.7/28, mbtmp3.6/6, ML3.4/1, MS2.3/1, Ms1 2.3/1, ms1mx2.1/21 Error ellipse: s-maj=134.6km s-min=49.5km az=59.0*

*MEX **30** 20:23:18.0±0.9, 14.°58N×94.°32W, h16^{km}±999^{km}, MD4.2*

ISC 30 20:23:19.9±1.4**, 14.°8N**±0.°1×**94.°20W**±0.°08**, h33^{km}, n14,** σ**1.^{s}33**/18**, mb3.8**/5**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.33	45	*i* P	Pn	20 23 41.2	-1.0
PCIG				*i* S	Sb	20 23 59.7	-1.5
PATR	El Naranjo	1.93	79	*e*P	Pn	20 23 49.1	-1.5
PAVE	Pavencul	2.00	77	*e*P	Pn	20 23 50.6	-1.0
CHUJ	Union Juarez	2.04	80	*e*P	Pn	20 23 51.2	-1.0
TGIG		2.26	27	*e*P	Pn	20 23 56.4	+1.4
CMIG	Matias Romero	2.42	344	Pn	Pn	20 23 55.5	-1.6
	9.3nm,0.3s,baz=172,slow=11,SNR=73						
CMIG				Sn	Sn	20 24 23.7	-1.9
	27nm,0.3s,baz=82,slow=20,SNR=11						
CMIG				LR	LR	20 24 57.4	
	comp=Z,57nm,18.2s,baz=314,slow=45						
CMIG	Matias Romero	2.42	344	*e*P	Pn	20 23 55.5	-1.6
CMIG				*i* S	Sn	20 24 24.2	-1.3
CCIG	Comitan	2.50	52	*e*P	Pn	20 23 60.0	+1.6
UXUV	UXUV	2.55	1	*e*P	Pn	20 23 59.3	+0.4
UXUV				*e*S	Sn	20 24 29.6	+0.8
PDAR	Pinedale Array	30.89	338	P	P	20 29 34.7	+1.1
	0.4nm,0.9s,baz=155,slow=8.8,SNR=1.8						
NVAR	Mina Array Bea	31.77	322	P	P	20 29 42.8	+1.4
	0.1nm,0.3s,baz=140,slow=7.4,SNR=3.7						
YKA	Yellowknife Ar	49.82	348	P	P	20 32 09.4	0.0
	0.6nm,0.6s,baz=154,slow=7.1,SNR=11						
INK	Inuvik	59.12	344	P	P	20 33 17.4	+0.5
	1.0nm,0.9s,baz=135,slow=7.1,SNR=3.2						
ILAR	Eielson Array	61.32	337	P	P	20 33 32.4	+0.4
	0.7nm,0.9s,baz=170,slow=5.3,SNR=5.7						

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*JMA **30** 20:49:25.8±0.1, 24.°53N×121.°83E, h69^{km}±2^{km}, M2.4*

*TAP **30** 20:49:26.2, 24.°53N×121.°82E, h68^{km}, ML3.1, C*

ISC 30 20:49:26.3±1.2**, 24.°56N**±0.°02×**121.°86E**±0.°02**, h70^{km}**±5^{km}**, n102,** σ**1.^{s}01**/193**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.05	352	P	Pn	20 49 36.7	+0.1
	baz=33						
TWC				S	Sn	20 49 44.4	+0.4
	baz=33						
EWUT	Wuta	0.13	212	P	Pn	20 49 36.7	0.0
	baz=206						
EWUT				S	Sn	20 49 44.4	+0.1
	baz=206						
NDS	Dongshan	0.15	300	P	Pn	20 49 37.0	+0.3
	baz=316						
NDS				S	Sn	20 49 44.8	+0.4
	baz=316						
ENA	Nanau	0.17	219	*i* P	Pn	20 49 36.8	-0.1
	baz=222						
ENA				*i* S	Sn	20 49 44.8	+0.3
	baz=222						
ILA	Ilan	0.23	334	*i* P	Pn	20 49 37.9	+0.8
	baz=336						
ILA				*i* S	Sn	20 49 46.3	+1.3
	baz=336						
TWE	Neicheng	0.24	313	*i* P	Pn	20 49 37.5	+0.3
	baz=319						
TWE				S	Sn	20 49 45.2	+0.1
	baz=319						
ENTT	Nioudou	0.28	287	*i* P	Pn	20 49 37.6	+0.2
	baz=295						
ENTT				*i* S	Sn	20 49 46.5	+0.9
	baz=295						
NTC	Toucheng	0.29	355	*i* P	Pn	20 49 38.1	+0.6
	baz=353						
NTC				*i* S	Sn	20 49 46.5	+0.8
	baz=353						
NDT	Datong Townshi	0.32	278	*i* P	Pn	20 49 37.8	+0.1
	baz=284						
NDT				S	Sn	20 49 45.7	-0.3
	baz=284						
NWLT	Wulai	0.39	304	*i* P	Pn	20 49 38.2	0.0
	baz=310						
NWLT				*i* S	Sn	20 49 46.3	-0.6
	baz=310						
TIPB	Shuangxi	0.41	356	*i* P	Pn	20 49 39.0	+0.6
	baz=350						
TIPB				*i* S	Sn	20 49 47.9	+0.6
	baz=350						
NNSB	Datong	0.45	253	P	Pn	20 49 38.7	-0.1
	baz=249						
NNSB				S	Sn	20 49 47.6	-0.5
	baz=249						
YHNB	Yeheng	0.45	284	P	Pn	20 49 38.6	-0.2
	baz=289						
YHNB				*i* S	Sn	20 49 47.3	-0.7
	baz=289						
ETL	Fush Village	0.45	208	P	Pn	20 49 38.2	-0.6
	baz=217						
ETL				S	Sn	20 49 46.9	-1.0
	baz=217						
NACB	Ninganchiao	0.45	212	P	Pn	20 49 37.8	-1.0
	baz=210						
NACB				S	Sn	20 49 46.5	-1.4
	baz=210						
TWB1	Santiao Chiao	0.46	15	*i* P	Pn	20 49 39.0	+0.1
	baz=28						
TWB1				*i* S	Sn	20 49 48.4	+0.4
	baz=28						
NSK	Sanguang	0.47	284	*i* P	Pn	20 49 38.7	-0.2
	baz=289						
NSK				*i* S	Sn	20 49 47.4	-0.8
	baz=289						
TWA	Mucha	0.49	329	*i* P	Pn	20 49 39.2	+0.1
	baz=325						
TWA				*i* S	Sn	20 49 48.6	+0.2
	baz=325						
ETLH	Xiulin Townshi	0.49	224	P	Pn	20 49 38.7	-0.5
	baz=232						
ETLH				S	Sn	20 49 47.6	-1.0
	baz=232						
NHDH	Xindian Distri	0.50	323	*i* P	Pn	20 49 39.2	0.0
	baz=318						
NHDH				*i* S	Sn	20 49 48.6	0.0
	baz=318						
NWF	Wu-fen Shan	0.51	352	*i* P	Pn	20 49 39.8	+0.4
	baz=348						
NWF				*i* S	Sn	20 49 49.6	+0.6
	baz=348						
TWD	Chiawan	0.53	207	*i* P	Pn	20 49 38.9	-0.6
	baz=215						
TWD				*i* S	Sn	20 49 47.9	-1.3
	baz=215						
NHY	Taipei	0.55	331	*e*S	Sn	20 49 50.1	+0.7
	baz=327						
TAP	Taipei	0.57	326	*i* P	Pn	20 49 40.0	+0.1
	baz=322						
TAP				*i* S	Sn	20 49 49.7	-0.2
	baz=322						
HWA	Hwalien	0.62	202	P	Pn	20 49 40.1	-0.3
	baz=210						
HWA				*i* S	Sn	20 49 50.7	-0.1
	baz=210						
FUSS	Fushou	0.64	241	*i* P	Pn	20 49 41.1	+0.2
	baz=242						
FUSS				*i* S	Sn	20 49 51.6	+0.1
	baz=242						
YM01	YM01	0.64	336	P	Pn	20 49 40.8	+0.1
	baz=331						
YM01				S	Sn	20 49 51.4	+0.2
	baz=331						
TWS1	Kuangyinshan	0.67	324	*i* P	Pn	20 49 41.2	+0.3
	baz=319						
TWS1				*i* S	Sn	20 49 52.2	+0.5
	baz=319						
WHF	Hehuan Shan	0.68	233	*i* P	Pn	20 49 41.6	+0.2
	baz=230						
WHF				*i* S	Sn	20 49 52.0	-0.6
	baz=230						
TWT	Tachien	0.69	244	*i* P	Pn	20 49 42.0	+0.6
	baz=239						
TWT				*i* S	Sn	20 49 52.2	-0.2
	baz=239						
ANP	Anpu	0.69	334	*i* P	Pn	20 49 41.1	-0.3
	baz=330						
ANP				*i* S	Sn	20 49 52.5	+0.2
	baz=330						
TDCB	Techi	0.71	245	P	Pn	20 49 41.9	+0.4
	baz=241						
TDCB				S	Sn	20 49 52.5	-0.2
	baz=241						
NTST	Danshui	0.71	329	*i* P	Pn	20 49 41.7	+0.4
	baz=331						
NTST				*i* S	Sn	20 49 53.2	+0.8
	baz=331						
NCU	National Centr	0.73	304	*i* P	Pn	20 49 42.0	+0.4
	baz=297						
NCU				*i* S	Sn	20 49 52.8	-0.1
	baz=297						
NCUH	Zhongli	0.73	304	*i* P	Pn	20 49 41.4	-0.3
	baz=307						
NCUH				*i* S	Sn	20 49 52.5	-0.4
	baz=307						
TWY	Chenhua	0.75	342	*i* P	Pn	20 49 42.5	+0.7
	baz=336						
TWY				*i* S	Sn	20 49 54.5	+1.3
	baz=336						
LIOB	Emei	0.77	277	*i* P	Pn	20 49 42.3	+0.2
	baz=279						
LIOB				*i* S	Sn	20 49 53.4	-0.4
	baz=279						
NSTT	Nanjuang	0.78	275	*i* P	Pn	20 49 42.2	0.0
	baz=287						
NSTT				*i* S	Sn	20 49 53.7	-0.3
	baz=287						
CHGB	Renai	0.80	232	P	Pn	20 49 42.9	+0.3
	baz=232						
CHGB				S	Sn	20 49 54.3	-0.3
	baz=232						
SBCB	Hsinchu	0.83	287	P	Pn	20 49 43.0	+0.3
	baz=299						
SBCB				S	Sn	20 49 55.1	+0.3
	baz=299						
ESL	Shilin	0.84	208	*i* P	Pn	20 49 41.5	-1.4
	baz=211						
ESL				*i* S	Sn	20 49 52.9	-2.2
	baz=211						
OWD	Renai	0.86	226	*i* P	Pn	20 49 43.3	0.0
	baz=221						
OWD				*i* S	Sn	20 49 55.9	0.0
	baz=221						
WHP	Taichung City	0.88	252	*i* P	Pn	20 49 43.9	+0.5
	baz=252						
WHP				S	Sn	20 49 56.1	+0.1
	baz=252						
EGFH	Guangfu	0.97	204	*i* P	Pn	20 49 42.4	-2.1
	baz=209						
EGFH				S	Sn	20 49 56.0	-1.9
	baz=209						
NMLH	Miaoli	0.97	269	*i* P	Pn	20 49 44.5	0.0
	baz=270						
NMLH				*i* S	Sn	20 49 57.7	-0.2
	baz=270						
JYNG	Yonagunijimaku	1.00	96	P	Pn	20 49 44.6	-0.2
JYNG				S	Sn	20 49 58.4	-0.1
WCS	Beigang Elemen	1.00	240	P	Pn	20 49 45.1	+0.4
	baz=250						
WCS				S	Sn	20 49 58.2	-0.3
	baz=250						
NSY	Sanyi	1.01	262	*i* P	Pn	20 49 45.2	+0.3
	baz=263						
NSY				*i* S	Sn	20 49 59.4	+0.6
	baz=263						
TWQ1	Liyutan	1.01	258	*i* P	Pn	20 49 44.6	-0.4
	baz=259						
TWQ1				*i* S	Sn	20 49 59.0	+0.1
	baz=259						
YOJ	Yonaguni jima	1.06	95	P	Pn	20 49 45.5	0.0
YOJ				S	Sn	20 49 59.6	-0.2
PCYT	Pengchaiyu	1.08	10	*e*S	Sn	20 50 01.0	+0.6
	baz=12						
SMLT	Sun Moon Lake	1.10	233	*i* P	Pn	20 49 46.8	+0.5
	baz=232						
SMLT				*i* S	Sn	20 50 03.4	+2.3
	baz=232						
TYC	Yuchr	1.12	235	*i* P	Pn	20 49 46.9	+0.5
	baz=230						
TYC				*i* S	Sn	20 50 02.6	+1.3
	baz=230						
SSLB	Suanglung	1.13	227	P	Pn	20 49 46.9	+0.4
	baz=231						
SSLB				S	Sn	20 50 02.3	+0.8
	baz=231						
WDJ	Dajia District	1.13	259	P	Pn	20 49 46.5	+0.1
	baz=260						
WDJ				*i* S	Sn	20 50 01.4	-0.1
	baz=260						
HGSD	Ruisui	1.13	201	P	Pn	20 49 46.0	-0.5
	baz=208						
HGSD				S	Sn	20 50 01.8	+0.2
	baz=208						
TCU	Taichung	1.15	249	P	Pn	20 49 48.0	+1.3
	baz=260						
TCU				S	Sn	20 50 02.9	+0.9
	baz=260						
EHY	Hungye	1.16	205	*i* P	Pn	20 49 44.9	-2.0
	baz=203						
WJS	Zhushan	1.27	235	*i* P	Pn	20 49 47.5	-0.8
	baz=247						
WJS				*i* S	Sn	20 50 06.2	+1.5
	baz=247						
WNT	Mingjian	1.27	238	*i* P	Pn	20 49 48.2	0.0
	baz=249						
WNT				*i* S	Sn	20 50 05.6	+0.9
	baz=249						
YULB	Yu-li	1.27	204	P	Pn	20 49 47.6	-0.7
	baz=203						
YULB				*e*S	Sn	20 50 03.4	-1.3
	baz=203						
WCHH	Zhanghua	1.28	248	P	Pn	20 49 48.3	-0.1
	baz=259						
WCHH				S	Sn	20 50 04.9	0.0
	baz=259						
EYUL	Yuli	1.30	202	P	Pn	20 49 48.7	0.0
	baz=207						
EYUL				*e*S	Sn	20 50 03.7	-1.8
	baz=207						
ALS	Alishan	1.42	223	*i* P	Pn	20 49 51.7	+1.2
	baz=233						
ALS				*i* S	Sn	20 50 09.8	+1.1
	baz=233						
CHN5	Tsauling	1.44	229	*i* P	Pn	20 49 51.1	+0.5
	baz=239						
CHN5				*i* S	Sn	20 50 11.4	+2.5
	baz=239						
FULB	Fuli	1.45	201	P	Pn	20 49 50.8	+0.2
	baz=208						
FULB				S	Sn	20 50 08.8	-0.2
	baz=208						
WDLH	Douliu	1.48	235	*i* P	Pn	20 49 51.4	+0.3
	baz=246						
WDLH				S	Sn	20 50 10.8	+1.1
	baz=246						
WRL	Guolierlin Hig	1.50	244	P	Pn	20 49 50.7	-0.6
	baz=254						
WRL				S	Sn	20 50 09.4	-0.8
	baz=254						
CHKT	Chengkung	1.52	197	*e*S	Sn	20 50 10.9	+0.3
	baz=186						
ELDTW	Lidau	1.57	210	*i* P	Pn	20 49 51.4	-0.9
	baz=201						
ELDTW				S	Sn	20 50 12.0	+0.1
	baz=201						
WTK	Tuku	1.60	237	P	Pn	20 49 52.5	-0.1
	baz=249						
WTK				S	Sn	20 50 12.7	+0.3
	baz=249						
EDH	Donghe	1.66	198	*i* P	Pn	20 49 52.3	-1.2
	baz=197						
EDH				*i* S	Sn	20 50 11.7	-2.2
	baz=197						
CHY	Chiayi	1.68	231	*e*P	Pn	20 49 53.4	-0.3
	baz=242						
CHY				*e*S	Sn	20 50 16.6	+2.1
	baz=242						
TPUB	Ta-pu	1.68	222	P	Pn	20 49 54.6	+0.8
	baz=233						
TPUB				S	Sn	20 50 17.3	+2.8
	baz=233						
STYH	Taoyuan	1.70	216	P	Pn	20 49 54.9	+0.9
	baz=207						
STYH				S	Sn	20 50 16.6	+1.7
	baz=207						
IRIF	Iriomote-Funau	1.72	97	P	Pn	20 49 54.1	-0.1
IRIF				*e*S	Sn	20 50 14.9	-0.5
WTP	Ta-pu	1.73	221	*i* P	Pn	20 49 55.2	+0.8
	baz=232						
WTP				*i* S	Sn	20 50 18.6	+2.9
	baz=232						
WSF	Szhu	1.75	239	P	Pn	20 49 54.5	-0.1
	baz=239						
WSF				S	Sn	20 50 16.4	+0.3
	baz=239						
LONT	Longtian	1.77	202	*e*P	Pn	20 49 54.3	-0.7
	baz=191						
TWK	Hsinying	1.80	225	*i* P	Pn	20 49 56.0	+0.7
	baz=237						
TWK				*i* S	Sn	20 50 20.0	+2.7
	baz=237						
SNST	Tainan City	1.82	223	*e*S	Sn	20 50 20.1	+2.3
	baz=236						
CHN1	Nanshi	1.83	222	*i* P	Pn	20 49 56.1	+0.3
	baz=233						
CHN1				*i* S	Sn	20 50 20.5	+2.5
	baz=233						
HATJ	Hateruma jima	1.85	105	*e*S	Sn	20 50 19.1	+0.7
ICHU	Yijhu	1.87	231	P	Pn	20 49 57.0	+0.7
	baz=231						
ICHU				S	Sn	20 50 19.0	0.0
	baz=231						
TWGBT	Beinan	1.87	202	*e*P	Pn	20 49 56.1	-0.2
	baz=193						
SGST	Jiashian	1.88	219	P	Pn	20 49 56.3	0.0
	baz=230						
SGST				S	Sn	20 50 20.2	+1.0
	baz=230						
SLGT	Liugui	1.91	216	*i* P	Pn	20 49 57.9	+1.1
	baz=215						
SLGT				*i* S	Sn	20 50 22.6	+2.6
	baz=215						
JKRS	Kuro-shima	1.99	99	P	Pn	20 49 58.2	+0.4
JKRS				*e*S	Sn	20 50 22.1	+0.3
JIJ	Ishigaki jima	2.09	95	P	Pn	20 49 59.0	-0.2
JIJ				*e*S	Sn	20 50 23.4	-0.9
SSD	Sandimen	2.13	212	P	Pn	20 50 01.1	+1.4
	baz=211						
SSD				S	Sn	20 50 27.2	+2.1
	baz=211						
TSMG	Majia	2.15	211	*e*P	Pn	20 50 00.8	+0.7
	baz=210						
TSMG				*e*S	Sn	20 50 25.9	+0.1
	baz=210						
JISG	Ishigakijimahi	2.23	89	P	Pn	20 50 01.1	0.0
MASBT	Mashibuluo	2.24	210	P	Pn	20 50 03.0	+1.8
	baz=209						
MASBT				*e*S	Sn	20 50 30.8	+2.9
	baz=209						
PHUB	P'eng-hu	2.33	244	P	Pn	20 50 01.1	-1.3
	baz=245						
PHUB				*e*S	Sn	20 50 26.4	-3.7
	baz=245						
MATB	Ma-tsu	2.35	313	*e*S	Sn	20 50 28.2	-2.2
	baz=312						
EAST	Anshuo	2.36	203	P	Pn	20 50 03.8	+1.0
	baz=193						
EAST				*e*S	Sn	20 50 31.0	+0.2
	baz=193						
PTMZ	Houxiangcun	2.53	281	P	Pn	20 50 04.0	-1.2
	baz=281						
PTMZ				S	Sn	20 50 33.0	-2.0
	baz=281						
LYJJ	Jianjiangzhen	2.74	317	*e*P	Pn	20 50 08.4	+0.4
	baz=317						
XPSS	Dashiqiu	2.80	328	*e*P	Pn	20 50 08.1	-0.7
	baz=326						
XPSS				*e*S	Sn	20 50 40.2	-1.2
	baz=326						

KNM	Kinmen	3.12	268	eP	Pn	20 50 14.4	+1.2
	baz=268						
KNM				eS	Sn	20 50 50.0	+0.7
	baz=268						
KNMB	Chin-men Tao	3.16	269	P	Pn	20 50 12.6	-1.1
	baz=269						
KNMB				eS	Sn	20 50 48.3	-1.9
	baz=269						
AXDP	Jialang	3.55	276	eP	Pn	20 50 18.4	-0.6
	baz=275						
AXDP				eS	Sn	20 50 59.3	-0.5
	baz=275						

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*EAF **30** 20:51:24.2±13.0, 20°.32S×31°.98E, h10^{km}, MD4.1*

BUL 30 20:51:23.9±13.0**, 20°.30S×32°.01E, h10**^{km}**, MD4.5, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	Messina	2.75	222	iP	Pg	20 52 18.5	+1.9
MSNA	Messina	2.75	222	iP	Pg	20 52 18.5	+1.9
MATP	Matopo	3.29	267	iP	Pn	20 52 17.5	+1.8
MATP	Matopo	3.29	267	iP	Pn	20 52 17.5	+1.8
TETE	Tete	4.39	20	iP	Pn	20 52 30.5	-0.2
TETE	Tete	4.39	20	iP	Pn	20 52 30.5	-0.2
CNG	Changalane	5.96	178	iP	Pn	20 52 53.5	+1.3
CNG	Changalane	5.96	178	iP	Pn	20 52 53.5	+1.3

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*IDC **30** 21:17:03.3±1.4, 6°.21S×150°.42E, h0^{km}, mb4.2/5, mb1 4.4/5, mb1mx3.9/28, mbtmp4.2/5, MS3.1/5, Ms1 3.1/5, ms1mx2.9/28, Error ellipse: s-maj=49.3km s-min=22.4km az=120.0*

*NEIC **30** 21:17:11.2±1.7, 6°.2S±0°.1×150°.1E±0°.1, h35^{km}±2^{km}, mb4.3/12, Error ellipse: s-maj=27.5km s-min=4.4km az=138.0*

*DJA **30** 21:17:11.6±3.5, 6°S±9°×15°0E±°, h17^{km}±28^{km}, M5.0/6, mb4.9/6, MLv5.0/2*

ISC 30 21:17:12.1±0.8**, 6°.2S**±0°.1×**150°.1E**±0°.1**, h52**^{km}**, n38, σ1^{s}50**/36**, mb4.2**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	2.89	47	Pn	Pn	21 17 56.7	+1.1
RABL	Rabaul	2.89	47	P	Pn	21 17 58.1	+2.5
PMG	Port Moresby	4.30	222	LR	LR	21 20 03.7	
	comp=Z,175nm,20.0s,baz=40,slow=40						
PMG	Port Moresby	4.30	222		Pn	21 18 16.1	+1.1
PMG				Sn	Sn	21 19 04.0	+0.1
PMG	Port Moresby	4.30	222	P	Pn	21 18 16.4	+1.4
PMG	Port Moresby	4.30	222	P	Pn	21 18 16.6	+1.6
JAY	Jayapura	10.01	291	LR	LR	21 24 04.4	
	comp=Z,119nm,18.6s,baz=78,slow=41						
COEN	Coen	10.27	221		Pn	21 19 36.7	-0.2
HNR	Honiara	10.32	109	LR	LR	21 23 12.1	
	comp=Z,113nm,19.6s,baz=284,slow=37						
KDU	Kakadu	18.50	248	P	P	21 21 23.9	-0.3
	46nm,0.8s						
EIDS	Eidsvold	19.11	177	P	P	21 21 30.2	-0.5
EIDS				IAmb	IAmb	21 21 33.8	
	comp=Z,24nm,1.5s						
MTN	Manton Dam	19.79	249	P	P	21 21 38.4	+0.1
MTN				IAmb	IAmb	21 21 39.2	
	comp=Z,48nm,0.8s						
MTN	Manton Dam	19.79	249	P	Pn	21 21 39.8	-0.4
	comp=Z,61nm,0.8s						
DRS	Darwin Rock St	19.89	250	P	P	21 21 40.0	+0.7
	comp=Z,60nm,0.8s						
WB0	Warramunga Arr	20.35	227	P	P	21 21 44.4	0.0
WB0				IAmb	IAmb	21 21 45.2	
	comp=Z,11nm,0.6s						
WRAB	Tennant Creek	20.49	227	P	Pn	21 21 48.7	+0.3
WRA	Warramunga Arr	20.50	227	P	P	21 21 46.0	0.0
	comp=Z,10.0nm,0.5s,baz=52,slow=11,SNR=103						
WRA	Warramunga Arr	20.50	227	P	P	21 21 44.9	-1.1
QLP	Quilpie	21.03	195	P	P	21 21 56.4	+4.8
	comp=Z,16nm,0.8s						
KNRA	Kununurra	22.91	244	P	P	21 22 11.1	-0.7
KNRA	Kununurra	22.91	244	P	P	21 22 12.6	+0.8
	comp=Z,123nm,0.8s						
AS31	Alice Springs	23.31	220	P	P	21 22 15.6	-0.2
ASAR	Alice Springs	23.31	220	P	P	21 22 15.7	-0.1
	comp=Z,0.9nm,0.5s,baz=56,slow=9.2,SNR=28						
ASAR				S	S	21 26 24.7	0.0
	comp=Z,1.0nm,1.0s,baz=56,slow=14,SNR=4.2						
ASAR				LR	LR	21 30 44.5	
	comp=Z,40nm,21.8s,baz=22,slow=35						
ASAR	Alice Springs	23.31	220	P	P	21 22 15.4	-0.3
BATI	Baumata	26.42	260	P	P	21 22 46.2	+2.0
	comp=Z,28nm,0.7s,baz=141,slow=3.7,SNR=6.0						
BATI	Baumata	26.42	260	P	P	21 22 48.7	+4.5
FITZ	Fitzroy Crossi	26.60	241	P	P	21 22 45.0	-0.8
	comp=Z,9.6nm,0.5s,baz=61,slow=7.1,SNR=19						
STKA	Stephens Creek	26.76	196	P	P	21 22 46.1	-0.9
	comp=Z,1.1nm,0.6s,baz=34,slow=10.0,SNR=4.0						
STKA				LR	LR	21 33 11.4	
	comp=Z,44nm,19.6s,baz=23,slow=36						
STKA	Stephens Creek	26.76	196	P	P	21 22 46.4	-0.7
MMRI	Maumere	27.69	263	P	P	21 22 54.1	-1.5
UGM	Wanagama	39.26	265	P	P	21 24 35.7	-0.4
ULN	Ulaanbaatar	65.76	330	P	P	21 27 52.7	+0.9
ULN				IAmb	IAmb	21 28 05.9	
	comp=Z,1.6nm,1.1s						
SONM	Songino Array	66.07	329	P	P	21 27 54.0	+0.2
	comp=Z,0.3nm,0.8s,baz=149,slow=6.5,SNR=1.9						
SONM	Songino Array	66.07	329	P	P	21 27 53.6	-0.2
SONM				IAmb	IAmb	21 27 59.8	
	comp=Z,1.2nm,1.1s						
VNDA	Vanda	71.57	177	P	P	21 28 27.5	+0.2
VNDA				IAmb	IAmb	21 28 37.0	
	comp=Z,6.6nm,1.5s						
ILAR	Eielson Array	84.47	23	P	P	21 29 37.0	-1.9
	comp=Z,0.5nm,0.3s,baz=237,slow=5.0,SNR=4.5						
GERES	GERESS Array B	123.75	327	PKP	PKPdf	21 36 03.1	-1.2
	comp=Z,0.8nm,0.6s,baz=27,slow=0.3,SNR=4.5						
TORD	Torodi Ar. Bea	148.07	285	PKPbc	PKPbc	21 36 52.2	-0.8
	comp=Z,2.8nm,0.7s,baz=84,slow=2.5,SNR=21						

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*IDC **30** 21:29:17.4±2.1, 30°.63S×72°.00W, h0^{km}, mb4.1/4, mb1 3.9/8, mb1mx3.8/24, mbtmp3.8/8, ML3.6/4, MS3.1/3, Ms1 3.1/3, ms1mx2.8/21, Error ellipse: s-maj=69.2km s-min=23.6km az=102.0*

*SJA **30** 21:29:18.4±0.6, 30°.53S×71°.96W, h9^{km}, ML4.1, MW3.7*

*GUC **30** 21:29:22.2±0.6, 30°.70S×71°.62W, h28^{km}±2^{km}, ML4.3*

*NEIC **30** 21:29:23.0±1.9, 30°.68S±0°.04×71°.74W±0°.04, h26^{km}±5^{km}, mb4.5/8, ML4.3(GUC), Error ellipse: s-maj=6.4km s-min=4.1km az=134.0*

ISC 30 21:29:21.8±0.9**, 30°.69S**±0°.02×**71°.83W**±0°.04**, h27**^{km}±5^{km}**, n107, σ2^{s}14**/129**, mb4.3**/6**, 3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.17	84	⇓iP	Pb	21 29 27.4	+0.1
CO06				iS	Sb	21 29 30.7	-0.4
CO06				IAML		21 29 31.4	
	comp=N,107μm,0.2s						
CO06	Fray Jorge	0.17	84		Pb	21 29 27.2	-0.1
CO06				Sg	Sb	21 29 30.9	-0.3
CO03	El Pedregal	1.00	99	⇓iP	Pn	21 29 39.1	-1.0
CO03				eS	Sb	21 29 50.7	-2.6
CO03				IAML		21 29 55.1	
	comp=E,7μm,0.2s						
CO03	El Pedregal	1.00	99		Pn	21 29 39.1	-1.0
CO03					Sb	21 29 51.7	-1.6
CO03	El Pedregal	1.00	99	eP	Pn	21 29 39.1	-1.0
CO03				eS	Sb	21 29 52.9	-0.4
CO03				IAML		21 29 56.2	
	comp=Z,3μm,0.5s						
GO04	Tololo Observa	1.03	60	⇓iP	Pn	21 29 40.2	-0.5
GO04				eS	Sn	21 29 53.1	-1.4
GO04	Tololo Observa	1.03	60		Pn	21 29 40.2	-0.5
GO04				Sg	Sn	21 29 53.9	-0.6
GO04	Tololo Observa	1.03	60	eP	Pn	21 29 38.6	-2.1
VA06	Catapilco	1.92	166	eP	Pn	21 29 52.6	-0.1
VA06				IAML		21 30 26.8	
	comp=E,3μm,0.2s						
LCO	Las Campanas	1.94	31	eP	Pn	21 29 52.8	-0.5
LCO	Las Campanas	1.94	31	Pn	Pn	21 29 53.6	+0.3
LCO				Sn	Sn	21 30 17.9	+1.0
LCO	Las Campanas	1.94	31	eP	Pn	21 29 53.0	-0.3
AROD	Rodeo	2.10	76	eP	Pb	21 29 58.0	-1.5
AROD				eS	Sb	21 30 27.1	+1.8
VA01	Torpederas	2.33	176	eP	Pb	21 30 01.0	-2.1
VA01	Torpederas	2.33	176		Pb	21 30 01.0	-2.1
VA01	Torpederas	2.33	176	eP	Pb	21 30 01.9	-1.3
VA01				eS	Sn	21 30 24.1	-2.0
VA03	San Esteban	2.34	152	eP	Pn	21 30 00.5	+1.9
VA03				IAML		21 30 40.2	
	comp=E,2μm,0.5s						
VA03	San Esteban	2.34	152	Pn	Pn	21 30 00.5	+1.9
VA03	San Esteban	2.34	152	eP	Pn	21 30 01.0	+2.4
VA03				eP	Pb	21 30 01.2	-2.1
VA03				eS	Sb	21 30 35.2	+3.4
VA03				IAML		21 30 39.7	
	comp=Z,883nm,0.3s						
ROCH	El Roble	2.38	163	eP	Pb	21 29 59.5	-4.6
ROCH				eP	Pn	21 29 59.4	+0.1
ROCH				IAML		21 30 40.7	
	comp=N,1μm,0.5s						
ROCH				IAML		21 30 41.4	
	comp=N,2μm,0.3s						
ACCO	Cerro Coronel	2.39	88	eP	Pb	21 30 02.0	-2.3
ACCO				eS	Sb	21 30 37.0	+3.6
RTLS	Leoncito	2.44	118	eP	Pb	21 30 04.0	-1.1
RTLS				eS	Sb	21 30 32.6	-2.2
RTLS				IAML		21 30 44.0	
	comp=Z,2μm,0.6s						
AC04	Llanos de Chal	2.56	15	eP	Pn	21 30 01.1	-0.5
AC04				IAML		21 30 46.2	
	comp=E,608nm,0.4s						
AC04	Llanos de Chal	2.56	15		Pn	21 30 01.4	-0.2
AC04	Llanos de Chal	2.56	15	eP	Pn	21 30 01.0	-0.6
AC04				eS	Sb	21 30 35.1	-3.1
AC04				IAML		21 30 50.6	
	comp=Z,501nm,0.5s						
AUSP	Uspallata	2.59	127	eP	Pn	21 30 00.7	-1.6
AUSP				eP	Pb	21 30 06.0	-1.7
AUSP				eP	Pb	21 30 06.2	-1.5
AUSP				eS	Sb	21 30 41.7	+2.5
MT02	Curacav	2.63	167	eP	Pn	21 30 05.0	+2.5
MT02	Curacav	2.63	167		Pn	21 30 04.3	+1.8
MT02	Curacav	2.63	167	eP	Pb	21 30 06.0	-2.2
MT02				eS	Sn	21 30 35.1	+1.6
MT02				eS	Sb	21 30 41.4	+1.3
MT02				IAML		21 30 46.8	
	comp=Z,766nm,0.6s						
PEL	Peldehue	2.63	159	eP	Pn	21 30 03.2	+0.6
PEL				IAML		21 30 44.8	
	comp=N,1μm,0.7s						
PEL	Peldehue	2.63	159		Pn	21 30 04.2	+1.6
PEL	Peldehue	2.63	159	eP	Pb	21 30 06.0	-2.3
PEL				eP	Pn	21 30 06.2	+3.6
PEL				eS	Sb	21 30 44.9	+4.6
ZON	Zonda	2.84	108	Pn	Pn	21 30 08.4	+3.0
ZON	Zonda	2.84	108	eP	Pb	21 30 08.9	-2.9
ZON				eS	Sb	21 30 46.1	0.0
ZON				IAML		21 30 53.7	
	comp=Z,296nm,0.7s						
MT05	Renca	2.85	161	eP	Pn	21 30 06.1	+0.5
MT05				IAML		21 30 54.7	
	comp=E,1μm,0.4s						
MT05	Renca	2.85	161	Pn	Pn	21 30 06.5	+0.9
MT05	Renca	2.85	161	eP	Pn	21 30 08.8	+3.2
MT05				eS	Sb	21 30 48.4	+1.9
MT05				IAML		21 30 56.0	
	comp=Z,674nm,0.9s						
VA05	Santo Domingo	2.96	176	eP	Pb	21 30 11.3	-2.6
VA05				IAML		21 30 59.1	
	comp=E,959nm,0.7s						
VA05	Santo Domingo	2.96	176		Pn	21 30 07.8	+0.8
RTCV	Cerro Valdivia	3.05	113	eP	Pb	21 30 12.0	-3.5
RTCV				eS	Sb	21 30 55.1	+2.9
MT09	Talagante	3.16	167	eP	Pn	21 30 10.2	+0.3
MT09				IAML		21 31 06.0	
	comp=E,562nm,0.3s						
MT09	Talagante	3.16	167		Pn	21 30 11.1	+1.2
ASAL	Salagasta	3.18	127	eP	Pn	21 30 14.0	+3.8
ASAL				eS	Sb	21 30 54.6	-1.4
MT01	Popeta	3.20	171	eP	Pn	21 30 12.1	+1.7
MT01	Popeta	3.20	171		Pn	21 30 12.4	+2.0
ARCO	CERRO ARCO	3.27	132	eP	Pb	21 30 16.0	-3.3
ARCO				eS	Sb	21 30 59.6	+0.9
ARCO				IAML		21 31 07.9	
	comp=Z,407nm,1.1s						
GO03	Copiap	3.39	25	eP	Pn	21 30 13.0	0.0
GO03				IAML		21 31 10.1	
	comp=E,696nm,0.7s						
GO03	Copiap	3.39	25		Pn	21 30 12.9	-0.1
GO03	Copiap	3.39	25	eP	Pn	21 30 13.4	+0.4
GO03				eS	Sb	21 30 59.6	-2.3
GO03				eS	Sb	21 31 09.8	+7.8
LMEL	Las Melosas	3.44	157	eP	Pn	21 30 15.6	+1.8
LMEL				IAML		21 31 08.0	
	comp=E,527nm,0.1s						
BO04	La Punta	3.45	163	eP	Pn	21 30 14.6	+0.8
BO04				IAML		21 31 14.6	
	comp=E,470nm,0.5s						
AAGR	Agrelo	3.50	134	eP	Pb	21 30 19.0	-4.1
AAGR				eS	Sb	21 31 14.7	+10
BO01	Tunca	3.74	170	eP	Pn	21 30 20.2	+2.4
BO01	Tunca	3.74	170		Pn	21 30 19.8	+2.0
BO01	Tunca	3.74	170	eP	Pb	21 30 24.1	-3.2
BO01				eS	Sb	21 31 10.7	-1.5
BO01				IAML		21 31 24.6	
	comp=Z,134nm,0.9s						
AVFE	Valle Fertil	3.77	91	eP	Pn	21 30 20.9	+2.6
AVFE				eS	Sb	21 31 08.7	-4.4
AVFE				IAML		21 31 17.7	
	comp=Z,252nm,0.7s						
BO02	Sierra Bellavi	4.18	168	eP	Pn	21 30 26.3	+2.3
BO02	Sierra Bellavi	4.18	168	Pn	Pn	21 30 25.6	+1.6
BO02	Sierra Bellavi	4.18	168	eP	Pb	21 30 30.0	-4.8
BO02				eS	Sn	21 31 07.2	-4.9
BO02				IAML		21 31 32.0	
	comp=Z,226nm,0.6s						
ACLC	CERRO LA CRUZ	4.42	75	eP	Pn	21 30 30.0	+2.8
ACLC				eP	Pn	21 30 30.1	+2.8
ACLC				eS	Sb	21 31 28.7	-3.0
ACLC				IAML		21 31 33.8	
	comp=Z,350nm,0.5s						
AC02	Maricunga	4.51	32	eP	Pn	21 30 29.5	+0.6
AC02				IAML		21 31 46.6	
	comp=E,380nm,0.4s						
AC02	Maricunga	4.51	32	Pn	Pn	21 30 29.2	+0.3
AC02	Maricunga	4.51	32	eP	Pn	21 30 30.0	+1.1
AC02				eS	Sb	21 31 33.1	-1.7
AC02				IAML		21 31 47.7	
	comp=Z,187nm,0.8s						
APLL	PUNTA DE LOS L	4.59	88	eP	Pn	21 30 32.0	+2.6
PB14	IPOC Station P	6.17	12	Pn	Pn	21 30 48.8	-2.7
H03N1	Juan Fernandez	6.60	244	T	T	21 37 50.5	
	baz=72,slow=72,SNR=9739						
H03N2	Juan Fernandez	6.62	244	T	T	21 37 52.7	
	baz=72,slow=72,SNR=9265						
H03N3	Juan Fernandez	6.62	244	T	T	21 37 49.8	
	baz=72,slow=72,SNR=7714						
H03S3	Juan Fernandez	6.76	241	T	T	21 37 58.3	
	baz=63,SNR=5.1						
H03S1	Juan Fernandez	6.76	240	T	T	21 37 58.1	
	baz=63,SNR=6.3						
H03S2	Juan Fernandez	6.78	241	T	T	21 37 58.9	
	baz=63,SNR=6.8						
AHML	Horco Molle	6.91	57	eP	Pn	21 31 00.7	-0.7
AHML				eS	Sn	21 32 26.1	+7.1
PB15	IPOC Station P	7.75	16	Pn	Pn	21 31 11.5	-1.5
LC01	Cunco	8.19	180	Pn	Pn	21 31 19.2	+0.3
LVC	Limon Verde	8.46	19	Pn	Pn	21 31 20.1	-2.9
	comp=Z,0.3nm,0.3s,baz=186,slow=9.2,SNR=1.2						
LVC				LR	LR	21 34 39.4	
	comp=Z,114nm,20.5s,baz=208,slow=38						
LVC	Limon Verde	8.46	19	eP	Pn	21 31 24.0	+1.0
PB07	IPOC Station P	9.10	12	Pn	Pn	21 31 32.5	+0.9
PB09	IPOC Station P	9.16	15	Pn	Pn	21 31 34.0	+1.6
PB01	IPOC Station P	9.84	13	Pn	Pn	21 31 40.4	-1.2
PLCA	Paso Flores	10.07	174	Pn	Pn	21 31 44.9	+0.1
	comp=Z,0.1nm,0.3s,baz=351,slow=14,SNR=1.2						
PLCA				LR	LR	21 35 43.7	
	comp=Z,81nm,20.6s,baz=352,slow=38						
PLCA	Paso Flores	10.07	174	Pn	Pn	21 31 46.0	+1.3
LL04	Puerto Octay	10.21	182	Pn	Pn	21 31 48.2	+1.7
ITQB	Itaqui	13.20	89	Pn	Pn	21 32 24.7	-2.8
CPUP	Villa Florida	13.47	75	LR	LR	21 38 28.1	
	comp=Z,94nm,19.0s,baz=270,slow=40						
CPUP	Villa Florida	13.47	75	Pn	Pn	21 32 30.9	-0.3
LPAZ	La Paz	14.73	14	Pn	Pn	21 32 48.1	-0.9
	comp=Z,0.2nm,0.3s,baz=201,slow=9.4,SNR=4.9						
LPAZ	La Paz	14.73	14	Pn	Pn	21 32 49.4	+0.3
PLTB	Pedras Altas	15.63	99	Pn	Pn	21 32 59.6	-0.7
SIV	San Ignacio	17.64	36	P	Pn	21 33 25.6	-0.1
	comp=Z,0.2nm,0.3s,baz=207,slow=11,SNR=8.4						
BDFB	Brasilia	26.45	61	P	P	21 34 58.7	+1.9
	comp=Z,2.3nm,0.5s,baz=212,slow=8.6,SNR=4.6						
BDFB	Brasilia	26.45	61	P	P	21 34 57.1	+0.3
BOAV	Boa Vista	34.62	20	P	P	21 36 08.6	-0.3
BOAV				IAmb	IAmb	21 36 12.3	
	comp=Z,12nm,1.4s						
SNAA	Sanae	54.59	159	P	P	21 38 48.0	+0.5
	comp=Z,0.9nm,0.6s,baz=251,slow=11,SNR=6.4						
SNAA	Sanae	54.59	159	P	P	21 38 47.9	+0.5
SNAA				IAmb	IAmb	21 39 03.4	
	comp=Z,5.4nm,1.3s						
DBIC	Dimbokro	73.97	72	P	P	21 40 55.0	-0.2
	comp=Z,1.4nm,0.5s,baz=225,slow=6.9,SNR=5.1						
DBIC	Dimbokro	73.97	72	P	P	21 40 55.3	+0.1
DBIC				IAmb	IAmb	21 41 06.2	
	comp=Z,7.5nm,1.3s						
G65A	Princeton	75.63	3	P	P	21 41 06.3	+2.3
BOSA	Boshof	81.46	118	P	P	21 41 37.2	+0.2
TORD	Torodi Ar. Bea	82.93	70	P	P	21 41 44.4	-0.2
	comp=Z,0.4nm,0.4s,baz=278,slow=5.7,SNR=14						
LBTB	Lobatse	83.54	115	P	P	21 41 48.0	+0.1
LBTB				IAmb	IAmb	21 42 04.4	
	comp=Z,3.9nm,1.1s						
H11S2	WAKE ISLAND Hy	125.93	271	T	T	00 07 02.7	
	baz=115,slow=75,SNR=116						
H11S1	WAKE ISLAND Hy	125.94	271	T	T	00 07 01.7	
	baz=115,slow=75,SNR=109						
H11S3	WAKE ISLAND Hy	125.95	271	T	T	00 07 04.0	
	baz=115,slow=75,SNR=143						
H11N3	WAKE ISLAND Hy	126.26	273	T	T	00 07 28.9	
	baz=116,slow=76,SNR=24						
H11N1	WAKE ISLAND Hy	126.27	273	T	T	00 07 30.6	
	baz=116,slow=76,SNR=9.4						
H11N2	WAKE ISLAND Hy	126.27	273	T	T	00 07 30.7	
	baz=116,slow=76,SNR=29						
ZALV	Zalesovo Beam	151.30	29	PKPbc	PKiKP	21 49 12.8	-0.1
	comp=Z,3.0nm,0.9s,baz=302,slow=3.1,SNR=11						

NNC 30 21:32:48.1±11.0**, 36°.96N×70°.57E, h0**^{km}**, mb3.6, mpv3.2, 4C-2D, Error ellipse: s-maj=90.9km s-min=83.6km az=155.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK02	Karatay Array	6.14	360	⇑P	Pn	21 34 20.4	+0.3
	0.9nm,0.4s,baz=183,slow=13						
KK02				⇑S	Sn	21 35 33.9	+2.8
	0.8nm,0.6s,baz=191,slow=20						
AAK	Ala-Archa	6.43	27	⇑P	Pn	21 34 25.1	+0.9
	1.4nm,0.8s						
AAK				⇑S	Sn	21 35 36.0	-2.4
	1.0nm,0.5s						
TKM2	Tokmak 2	7.10	31	⇓P	Pn	21 34 32.7	-0.8
	2.2nm,0.9s						
TKM2				⇓S	Sn	21 35 57.6	+2.7
	0.9nm,0.6s						

IDC 30 21:33:08.1±1.3**, 6°.00S×130°.94E, h0**^{km}**, mb3.3**/1**, mb1 3.7**/3**, mb1mx3.4**/20**, mbtmp3.5**/3**, ML3.9**/2**, Error ellipse: s-maj=56.6km s-min=10.2km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.24	167	Pn	Pn	21 36 31.3	0.0
	0.6nm,0.3s,baz=349,slow=15,SNR=36						
WRA				Sn	Sn	21 38 56.9	-13
	0.7nm,0.3s,baz=337,slow=22,SNR=8.7						
ASAR	Alice Springs	17.79	171	P	Pn	21 37 17.4	0.0
	0.4nm,0.3s,baz=334,slow=9.3,SNR=19						
ASAR				S	Sn	21 40 21.2	-15
	0.2nm,0.3s,baz=353,slow=28,SNR=4.7						
MKAR	Makanchi Array	67.92	326	P	P	21 44 08.8	0.0
	0.2nm,0.6s,baz=127,slow=6.8,SNR=4.4						

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*NEIC **30** 21:55:37.3±1.2, 22°.05S±0°.04×68°.50W±0°.07, h107^{km}±6^{km}, Error ellipse: s-maj=10.1km s-min=6.5km az=92.0*

*GUC **30** 21:55:37.7±0.7, 22°.05S×68°.53W, h108^{km}±4^{km}, ML3.8*

*IDC **30** 21:55:38.7±0.9, 22°.12S×68°.03W, h112^{km}±9^{km}, mb3.7/4, mb1 3.6/7, mb1mx3.5/29, mbtmp3.9/7, Error ellipse: s-maj=10.6km s-min=7.0km az=14.0*

ISC 30 21:55:37.1±0.7**, 22°.05S**±0°.04×**68°.55W**±0°.07**, h113**^{km}±7^{km}**, n48, σ0^{s}86**/66**, mb4.2**/5**, 4C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.65	210	⇓eP	Pn	21 55 55.7	-0.2
LVC				eS	Sn	21 56 09.5	-0.6
LVC	Limon Verde	0.65	210		Pn	21 55 55.7	-0.2
LVC				Sn	Sn	21 56 09.4	-0.6
PB09	IPOC Station P	0.69	291	eP	Pn	21 55 56.3	+0.4
PB09				eS	Sn	21 56 10.0	0.0
PB09				IAML		21 56 11.5	
	comp=N,2μm,0.5s						
PB09	IPOC Station P	0.69	291		Pn	21 55 56.1	+0.2
PB09				Sn	Sn	21 56 10.3	+0.3
PB03	IPOC Station P	1.11	270	⇑eP	Pn	21 55 59.8	-0.2
PB03				eS	Sn	21 56 17.2	0.0
PB03				IAML		21 56 19.0	
	comp=N,2μm,0.3s						
PB06	IPOC Station P	1.15	235	eP	Pn	21 56 00.5	+0.2
PB06				eS	Sn	21 56 18.1	+0.1
PB06				IAML		21 56 19.0	
	comp=N,2μm,0.4s						
PB06	IPOC Station P	1.15	235		Pn	21 56 00.6	+0.2
PB06				Sn	Sn	21 56 17.9	0.0
PB07	IPOC Station P	1.28	284	eP	Pn	21 56 01.8	+0.1
PB07				eS	Sn	21 56 20.4	0.0
PB07				IAML		21 56 21.9	
	comp=Z,3μm,0.5s						
PB07	IPOC Station P	1.28	284		Pn	21 56 01.6	-0.1
PB07				Sn	Sn	21 56 19.8	-0.6
PB01	IPOC Station P	1.32	319	eP	Pn	21 56 02.2	0.0
PB01				eS	Sn	21 56 21.3	+0.1
PB01				IAML		21 56 23.9	
	comp=E,2μm,0.3s						
PB01	IPOC Station P	1.32	319		Pn	21 56 02.1	-0.1
PB15	IPOC Station P	1.44	216	eP	Pn	21 56 03.9	+0.3
PB15				eS	Sn	21 56 24.3	+0.6
PB15	IPOC Station P	1.44	216		Pn	21 56 03.9	+0.3
PB02	IPOC Station P	1.44	300	eP	Pn	21 56 03.5	-0.1
PB02				eS	Sn	21 56 23.0	-0.6
PB02				IAML		21 56 27.2	
	comp=E,3μm,0.4s						
PB04	IPOC Station P	1.51	259	⇑eP	Pn	21 56 04.1	-0.3
PB04				eS	Sn	21 56 25.1	0.0
PB04				IAML		21 56 30.9	
	comp=N,2μm,0.3s						
PB04	IPOC Station P	1.51	259		Pn	21 56 04.1	-0.3
PB05	IPOC Station P	1.73	242	⇑eP	Pn	21 56 06.6	-0.4
PB05				eS	Sn	21 56 28.9	-0.8
PB05				IAML		21 56 36.4	
	comp=E,628nm,0.5s						
PB08	IPOC Station P	1.98	343	eP	Pn	21 56 11.6	+1.2
PB08				eS	Sn	21 56 36.0	+0.4
PB08				IAML		21 56 40.9	
	comp=E,692nm,0.3s						
PB08	IPOC Station P	1.98	343		Pn	21 56 11.6	+1.2
TA01	Diego Aracena	2.11	314	⇑eP	Pn	21 56 11.0	-0.7
TA01				eS	Sn	21 56 37.4	-0.8
TA01	Diego Aracena	2.11	314		Pn	21 56 10.9	-0.8
TA02	Huaiquique	2.30	320		Pn	21 56 13.3	-0.8
PB10	IPOC Station P	2.35	231	eP	Pn	21 56 14.9	+0.1
PB10				eS	Sn	21 56 41.2	-2.5
PB10				IAML		21 56 52.9	
	comp=E,202nm,0.2s						
PB10	IPOC Station P	2.35	231		Pn	21 56 16.3	+1.5
PB11	IPOC Station P	2.50	335	eP	Pn	21 56 16.6	-0.2
PB11				eS	Sn	21 56 46.9	-0.3
PB11				IAML		21 56 51.3	
	comp=N,879nm,0.6s						
PB11	IPOC Station P	2.50	335	Pn	Pn	21 56 16.6	-0.2
PB14	IPOC Station P	3.08	213	Pn	Pn	21 56 24.8	+0.2
PB12	IPOC Station P	3.80	334		Pn	21 56 32.1	-1.9
PB16	IPOC Station P	3.80	346		Pn	21 56 34.5	+0.1

AP01	**Chacalluta**	4.02	335	Pn	Pn	21 56 36.8	-0.1
AC02	**Maricunga**	4.80	186		Pn	21 56 47.2	-0.6
GO03	**Copiap**	5.73	195	Pn	Pn	21 56 58.1	-1.8
LPAZ	**La Paz**	5.74	4	P	Pn	21 57 03.1	+2.5
	comp=N,0.8nm,0.3s,baz=181,slow=7.0,SNR=12						
GO04	**Tololo Observa**	8.34	194	Pn	Pn	21 57 35.9	+0.5
SIV	**San Ignacio**	9.29	51	P	Pn	21 57 45.4	-2.8
	comp=N,1.4nm,0.3s,baz=239,slow=11,SNR=25						
MT02	**Curacav**	11.40	191	Pn	Pn	21 58 16.8	+0.3
ITAB	**Concordia**	15.80	112		P	21 59 13.8	-1.0
ITAB				IAmb	IAmb	21 59 25.4	
	comp=Z,39nm,1.5s						
PLCA	**Paso Flores**	18.71	185	P	Pn	21 59 47.9	-0.6
	comp=Z,0.1nm,0.3s,baz=343,slow=8.5,SNR=4.6						
PLCA	**Paso Flores**	18.71	185	P	Pn	21 59 47.9	-0.6
PLCA				IAmb	IAmb	22 00 02.8	
	comp=Z,7.6nm,1.5s						
SNAA	**Sanae**	61.66	161	P	P	22 05 43.1	+0.5
	comp=Z,2.3nm,0.8s,baz=251,slow=10.0,SNR=5.8						
SNAA	**Sanae**	61.66	161	P	P	22 05 42.9	+0.2
SNAA				IAmb	IAmb	22 06 01.4	
	comp=Z,7.4nm,1.3s						
QSPA	**South Pole Qui**	68.15	180	P	P	22 06 26.6	+1.7
QSPA				IAmb	IAmb	22 06 26.8	
	comp=Z,3.0nm,0.7s						
DBIC	**Dimbokro**	68.57	73	P	P	22 06 28.0	-0.2
	comp=Z,3.5nm,1.0s,baz=243,slow=6.0,SNR=2.2						
DBIC	**Dimbokro**	68.57	73	P	P	22 06 27.9	-0.3
TORD	**Torodi Ar. Bea**	77.23	70	P	P	22 07 18.4	-0.8
	comp=Z,0.8nm,0.6s,baz=255,slow=5.1,SNR=9.3						
TORD	**Torodi Ar. Bea**	77.23	70	P	P	22 07 18.6	-0.6
YKA	**Yellowknife Ar**	91.81	340	P	P	22 08 32.5	+0.8
	comp=Z,0.2nm,0.6s,baz=132,slow=5.2,SNR=2.9						
MKAR	**Makanchi Array**	145.87	37	PKPbc	PKPab	22 15 04.2	+0.3
	comp=Z,1.0nm,0.7s,baz=304,slow=2.8,SNR=6.3						

IDC 30 22:05:51.3±0.5**, 45°.68N×99°.23E, h0^{km}, mb3.6**/1**, mb1 3.3**/5**, mb1mx2.9**/65**, mbtmp3.3**/5**, ML2.5**/4**, Error ellipse: s-maj=8.5km s-min=2.3km az=0.0, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	5.38	64	Pn	Pn	22 07 12.6	-0.3
	0.4nm,0.3s,baz=244,slow=14,SNR=28						
SONM				Pg	Pb	22 07 29.6	+3.5
	7.1nm,0.3s,baz=252,slow=18,SNR=49						
SONM				Lg	Lg	22 08 41.7	
	20nm,0.3s,baz=252,slow=31,SNR=8.5						
MKAR	**Makanchi Array**	11.79	282	Pn	Pn	22 08 41.8	+1.1
	0.0nm,0.3s,baz=105,slow=15,SNR=2.2						
MKAR				Sn	Sn	22 10 59.0	+6.1
	0.1nm,0.3s,baz=92,slow=24,SNR=2.5						
MKAR				Lg	Lg	22 12 05.3	
	0.1nm,0.3s,baz=84,slow=31,SNR=6.2						
ZALV	**Zalesovo Beam**	12.44	317	Pn	Pn	22 08 50.7	+1.3
	0.1nm,0.3s,baz=110,slow=13,SNR=1.9						
ZALV				Lg	Lg	22 12 25.9	
	0.1nm,0.3s,baz=139,slow=27,SNR=5.3						
KURBB	**Kurchatov Arra**	14.66	297	Pn	Pn	22 09 20.1	+0.3
	0.0nm,0.3s,baz=97,slow=12,SNR=5.0						
KURBB				Lg	Lg	22 13 31.0	
	0.0nm,0.3s,baz=100,slow=31,SNR=4.8						
BVAR	**Borovoye Array**	20.08	302	P	Pn	22 10 27.1	-0.7
	2.5nm,0.7s,baz=101,slow=8.0,SNR=6.9						

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*IDC **30** 22:08:12.3±4.8, 36°.92N×69°.90E, h0^{km}, mb4.0/3, mb1 3.7/10, mb1mx3.3/59, mbtmp3.7/10, ML3.3/7, Error ellipse: s-maj=70.4km s-min=22.2km az=164.0*

*SOME **30** 22:08:26.9, 38°.00N×69°.70E, h0^{km}*

*NNC **30** 22:08:37.7±7.3, 37°.60N×68°.68E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=56.2km s-min=50.1km az=2.0*

ISC 30 22:08:21.4±1.3**, 37°.79N**±0°.08×**69°.65E**±0°.06**, h12^{km}, n19,** σ**2^{s}.45**/29**, 5C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	4.37	4	*e*P	**Pg**	**22 09 43.3**	**-1.7**
	128nm,0.4s						
IUG				*e*S	**Sg**	**22 10 38.9**	**-2.7**
	44nm,0.2s						
CHM	**Chimkent**	4.53	360	*e*P	**Pg**	**22 09 47.8**	**-0.3**
	1.2nm,0.4s						
CHM				*e*S	**Sg**	**22 10 46.5**	**-0.3**
	56nm,0.2s						
BRLS	**Borolday**	5.24	1	*e*P	**Pb**	**22 09 53.7**	**+0.8**
	2.3nm,0.1s						
BRLS				*e*S	**Sb**	**22 10 57.0**	**+1.2**
	10nm,0.2s						
KK02	**Karatay Array**	5.35	7	⇑P	**Pg**	**22 10 01.6**	**-2.3**
	5.1nm,0.5s,baz=188,slow=17						
KK02				⇑S	**Sg**	**22 11 09.9**	**-3.2**
	13nm,0.5s,baz=193,slow=29						
MRKS	**Merke**	5.66	28	*e*P	**Pg**	**22 10 07.6**	**-2.1**
	8.7nm,0.4s						
MRKS				*e*S	**Sg**	**22 11 20.6**	**-2.3**
	21nm,0.5s						
AAK	**Ala-Archa**	6.10	36	Pn	**Pn**	**22 09 55.0**	**+3.5**
	2.2nm,0.3s,baz=196,slow=6.7,SNR=38						
AAK				Sn	**Sn**	**22 11 07.8**	**+6.6**
	0.7nm,0.3s,baz=247,slow=8.1,SNR=3.5						
AAK	**Ala-Archa**	6.10	36	⇓P	**Pg**	**22 10 17.8**	**-0.4**
	2.8nm,0.5s						
AAK				⇑S	**Sg**	**22 11 35.8**	**-1.3**
	16nm,1.0s						
TKM2	**Tokmak 2**	6.85	40	⇑P	**Pg**	**22 10 30.0**	**-2.4**
	1.9nm,0.5s						
TKM2				⇑S	**Sg**	**22 11 57.5**	**-3.6**
	6.6nm,0.9s						
KST	**Kastek**	7.12	41	*e*P	**Pg**	**22 10 35.2**	**-2.5**
	4.4nm,0.7s						
KST				*e*S	**Sg**	**22 12 08.2**	**-1.7**
	4.3nm,0.2s						
DGS	**Degeres**	7.17	39	*e*P	**Pg**	**22 10 35.6**	**-3.0**
	2.7nm,0.2s						
DGS				*e*S	**Sg**	**22 12 08.3**	**-3.1**
	4.1nm,0.2s						
GEYT	**Alibeck**	9.13	274	Pn	**Pn**	**22 10 30.7**	**-2.3**
	0.3nm,0.3s,baz=93,slow=16,SNR=2.2						
GEYT				Sn	Sn	22 12 08.2	-7.4
	1.2nm,0.3s,baz=158,slow=13,SNR=6.7						
MKAR	**Makanchi Array**	12.97	42	Pn	**Pn**	**22 11 26.3**	**+0.9**
	0.1nm,0.3s,baz=225,slow=15,SNR=4.8						
KURBB	**Kurchatov Arra**	14.31	23	Pn	**Pn**	**22 11 41.9**	**-1.8**
	0.0nm,0.3s,baz=218,slow=12,SNR=1.6						
AKTO	**Aktyubinsk**	15.13	330	Pn	**Pn**	**22 11 56.9**	**+2.0**
	0.3nm,0.3s,baz=146,slow=18,SNR=3.9						
BVAR	**Borovoye Array**	15.25	2	Pn	**Pn**	**22 11 55.8**	**-0.6**
	0.1nm,0.3s,baz=166,slow=9.7,SNR=1.6						
ZALV	**Zalesovo Beam**	19.24	28	P	**P**	**22 12 45.1**	**-0.2**
	0.3nm,0.3s,baz=229,slow=11,SNR=7.1						
ARU	**Arti**	20.07	342	P	**P**	**22 12 54.8**	**+0.4**
	0.6nm,0.4s,baz=158,slow=11,SNR=4.6						
BELG	**Belogornoye**	21.21	321	P	**P**	**22 13 06.5**	**-0.3**
	9.0nm,0.6s,baz=150,slow=20,SNR=12						
ARCES	**ARCESS Array B**	39.55	337	P	**P**	**22 15 52.4**	**+0.6**
	5.2nm,1.0s,baz=98,slow=6.7,SNR=5.7						

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*TUL **30** 22:24:35.6±1.2, 36°.29N±0°.01×96°.66W±0°.01, h4^{km}±6^{km}, ML2.5, ML2.5/44(NEIC), Error ellipse: s-maj=1.8km s-min=1.2km az=151.0*

NEIC 30 22:24:35.6±1.1**, 36°.29N**±0°.01×**96°.65W**±0°.02**, h12^{km}**±3^{km}**, Error ellipse: s-maj=2.5km s-min=1.4km az=107.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QUOK	**Quay**	0.13	201	Pg	Pg	22 24 38.5	-0.4
QUOK				Sg	Sg	22 24 40.4	-0.9
QUOK				IAML		22 24 40.7	
	comp=E,1µm,0.2s						
OK034	**N. Norfolk Rd.**	0.29	190	Pg	Pg	22 24 41.4	-0.1
OK034				Sg	Sg	22 24 45.4	-0.1
OK031	**S. Brethren Rd**	0.37	204	Pg	Pg	22 24 42.9	-0.2
OK031				Sg	Sg	22 24 48.2	+0.2
OK031				IAML		22 24 48.3	
	comp=E,327nm,0.2s						
OK031				IAML		22 24 48.4	
	comp=E,443nm,0.1s						
OK030	**Cody Creek RV**	0.38	197		Pg	22 24 43.1	-0.1
OK030				Sg	Sg	22 24 48.4	+0.1
T35A	**Sooner Cattle**	0.63	10	Pg	Pg	22 24 47.9	-0.1
T35A				Sg	Sg	22 24 56.2	-0.1
BLOK	**Blackwell**	0.65	316	Pg	Pg	22 24 48.4	0.0
BLOK				Sg	Sg	22 24 56.8	-0.1
BLOK				IAML		22 24 58.4	
	comp=N,223nm,0.2s						
BLOK				IAML		22 24 59.0	
	comp=E,214nm,0.2s						
TUL1	**Leonard**	0.79	119	Pg	Pg	22 24 50.9	-0.1
TUL1				Sg	Sg	22 25 01.3	-0.1
OK025	**Westminster Rd**	0.90	218	Pg	Pg	22 24 52.5	-0.6
OK025					Sb	22 25 05.2	-0.1
OK025				IAML		22 25 05.3	
	comp=E,251nm,0.2s						
OK025				IAML		22 25 05.4	
	comp=E,194nm,0.2s						
KAN13	**South Haven SW**	0.98	317	Pg	Pg	22 24 54.2	-0.3
KAN13				Sg	Sg	22 25 07.2	-0.2
KAN13				IAML		22 25 08.9	
	comp=E,167nm,0.1s						
KAN13				IAML		22 25 14.7	
	comp=N,164nm,0.2s						
BCOK	**Bluff Creek, N**	1.00	231	Pg	Pb	22 24 54.7	-0.3
BCOK					Sb	22 25 08.2	+0.1
BCOK				IAML		22 25 08.5	
	comp=E,117nm,0.1s						
BCOK				IAML		22 25 08.5	
	comp=N,147nm,0.2s						
OKCFA	**Oklahoma City**	1.09	217	Pg	Pb	22 24 55.6	-0.8
OKCFA				Sg	Sg	22 25 10.8	0.0
OKCFA				IAML		22 25 14.1	
	comp=N,82nm,0.1s						
OKCFA				IAML		22 25 16.2	
	comp=E,91nm,0.4s						
CROK	**Carrier**	1.10	282	Pg	Pb	22 24 56.3	-0.3
CROK				IAML		22 25 15.5	
	comp=E,148nm,0.3s						
CROK				IAML		22 25 17.6	
	comp=N,162nm,0.3s						
GC02	**Grant County #**	1.12	300	Pg	Pb	22 24 56.8	-0.1
W35A	**Tecumseh**	1.15	189	Pg	Pb	22 24 56.7	-0.8
W35A				IAML		22 25 17.4	
	comp=E,67nm,0.4s						
KAN17	**Caldwell West**	1.17	310	Pg	Pb	22 24 57.6	-0.2
KAN17				Sg	Sg	22 25 13.2	-0.1
FNO	**Franklin**	1.20	211	Pg	Pn	22 24 57.7	-0.5
FNO				IAML		22 25 16.2	
	comp=E,141nm,0.2s						
FNO				IAML		22 25 17.0	
	comp=N,95nm,0.2s						
KAN01	**Argonia South**	1.24	314	Pg	Pn	22 24 58.8	0.0
KAN14	**Manchester OK**	1.25	302	Pg	Pb	22 24 59.2	+0.1
KAN05	**Bluff City Nor**	1.28	310	Pg	Pb	22 24 59.6	+0.1
OK032	**Salt Plains WL**	1.36	293		Pb	22 25 00.8	-0.1
KAN10	**Anthony SW Sta**	1.43	306	Pn	Pb	22 25 02.3	+0.1
KAN16	**Harper SW Stat**	1.47	310	Pn	Pb	22 25 02.9	0.0
U38A	**Gravette**	1.83	85	Pn	Pb	22 25 08.5	-0.6
X34A	**Smith Ranch, M**	1.94	210	Pn	Pb	22 25 10.4	-0.6
X37A	**Clayton**	2.00	148	Pn	Pb	22 25 10.6	-1.3
HHAR	**Hobbs**	2.19	89		Pn	22 25 13.4	+1.5
LOOK	**Love County**	2.34	191	Pn	Pn	22 25 15.5	+1.6
W39A	**Magazine**	2.58	114		Pn	22 25 18.3	+1.2
S39A	**Bolivar**	3.01	61	Pn	Pn	22 25 24.3	+1.2
MIAR	**Mount Ida**	3.06	124	Pn	Pn	22 25 23.4	-0.3
U40A	**Yellville**	3.07	88	Pn	Pn	22 25 25.8	+1.9
MGMO	**Mountain Grove**	3.62	75	Pn	Pn	22 25 33.0	+1.4
WHAR	**Wooly Hollow**	3.68	104	Pn	Pn	22 25 33.9	+1.5
R40A	**Maddies Statio**	4.02	59	Pn	Pn	22 25 39.0	+2.0

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*BEO **30** 22:57:49.9±0.7, 39°.78N×23°.59E, h0^{km}, ML3.5/13*

*ISK **30** 22:57:51.3, 39°.89N×23°.47E, h10^{km}, ML3.7/24*

*THE **30** 22:57:52.7, 39°.91N×23°.44E, h7^{km}±1^{km}, ML3.5/10, Error ellipse: s-maj=1.0km s-min=0.4km az=196.0*

*ATH **30** 22:57:52.2, 39°.88N×23°.49E, h19^{km}±5^{km}, ML3.4/23, Error ellipse: s-maj=5.4km s-min=1.0km az=81.0*

*SOF **30** 22:57:53.8, 39°.82N×23°.51E, h51^{km}, MD3.8*

*DDA **30** 22:57:54.0, 39°.86N×23°.49E, h49^{km}±100^{km}, ML3.5*

ISC 30 22:57:52.4±0.8**, 39°.89N**±0°.02×**23°.47E**±0°.02**, h16^{km}**±6^{km}**, n197,** σ**1^{s}.58**/236**, 15C-13D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	0.16	76	P	**Pg**	**22 57 56.6**	**0.0**
PAIG				S	**Sg**	**22 57 59.3**	**-0.1**
	25µm,0.4s						
PAIG	**Paliouri**	0.16	76	P	**Pg**	**22 57 56.6**	**0.0**
PAIG				S	**Sg**	**22 57 59.3**	**-0.1**
PAIG				AML	AML	22 57 59.7	
	comp=N,66983µm,0.5s						
PAIG				AML	AML	22 57 59.9	
	comp=E,31047µm,0.3s						
PLG	**Polygyros**	0.49	358	P	**Pg**	**22 58 01.3**	**-0.9**
PLG				S	**Sg**	**22 58 07.6**	**-1.2**
	comp=E,5µm,0.4s						
PLG	**Polygyros**	0.49	358	P	**Pg**	**22 58 01.3**	**-0.9**
PLG				S	**Sg**	**22 58 07.6**	**-1.2**
PLG				AML	AML	22 58 08.0	
	comp=E,10187µm,0.4s						
PLG				AML	AML	22 58 11.6	
	comp=N,9926µm,0.4s						
XOR	**Xorichti**	0.56	203	P	**Pb**	**22 58 03.7**	**-0.2**
XOR				S	**Sg**	**22 58 12.9**	**+1.8**
	comp=N,5µm,0.5s						
XOR	**Xorichti**	0.56	203	P	**Pb**	**22 58 03.7**	**-0.2**
XOR				AML	AML	22 58 14.7	
	comp=N,16761µm,0.5s						
XOR				AML	AML	22 58 16.2	
	comp=E,4579µm,0.4s						
OUR	**Ouranopolis**	0.59	41	P	**Pb**	**22 58 04.0**	**-0.3**
OUR				S	**Sb**	**22 58 12.2**	**-0.3**
	comp=E,9µm,0.5s						
OUR	**Ouranopolis**	0.59	41	P	**Pb**	**22 58 04.0**	**-0.3**
OUR				S	**Sb**	**22 58 10.8**	**-1.7**
OUR				AML	AML	22 58 12.8	
	comp=E,18759µm,0.3s						
OUR				AML	AML	22 58 16.4	
	comp=N,23005µm,0.6s						
OUR	**Ouranopolis**	0.59	41	PG	**Pb**	**22 58 04.1**	**-0.3**
OUR				SG	**Sb**	**22 58 12.0**	**-0.5**
NEO	**Neokhori**	0.61	199	P	**Pb**	**22 58 04.6**	**0.0**
NEO				S	**Sg**	**22 58 13.1**	**+0.6**
	comp=N,5µm,0.4s						
NEO	**Neokhori**	0.61	199	P	**Pb**	**22 58 04.6**	**0.0**
NEO				S	**Sg**	**22 58 13.1**	**+0.6**
NEO				AML	AML	22 58 16.3	
	comp=N,15477µm,0.5s						
NEO				AML	AML	22 58 25.1	
	comp=E,7374µm,0.5s						
HORT	**Hortiatis**	0.77	338	PG	**Pb**	**22 58 06.3**	**-1.1**
HORT				SG	**Sb**	**22 58 17.4**	**-0.2**
ALNA	**Alonissos**	0.80	157	P	**Pg**	**22 58 08.2**	**+0.3**
ALNA				AML	AML	22 58 22.9	
	comp=E,15224µm,0.5s						
ALNA				AML	AML	22 58 23.0	
	comp=N,17032µm,0.5s						
THE	**Thessaloniki**	0.84	333	P	**Pb**	**22 58 07.6**	**-1.0**
THE	**Thessaloniki**	0.84	333	P	**Pb**	**22 58 07.6**	**-1.0**
THE				AML	AML	22 58 20.1	
	comp=E,2754µm,0.5s						
THE				AML	AML	22 58 20.8	
	comp=N,2594µm,0.5s						
LRSO	**Larissa Observ**	0.86	256	P	**Pb**	**22 58 09.3**	**+0.4**
LRSO				S	**Sb**	**22 58 20.6**	**+0.4**
	comp=N,6µm,0.7s						
LRSO	**Larissa Observ**	0.86	256	P	**Pb**	**22 58 09.3**	**+0.4**
LRSO				AML	AML	22 58 23.2	
	comp=N,14542µm,0.7s						
LRSO				AML	AML	22 58 25.7	
	comp=E,9810µm,0.8s						
SOH	**Sokhos**	0.94	354	P	**Pb**	**22 58 09.5**	**-0.8**
SOH				S	**Sg**	**22 58 23.4**	**+0.4**
	comp=E,4µm,0.6s						
SOH	**Sokhos**	0.94	354	P	**Pb**	**22 58 09.5**	**-0.8**
SOH				AML	AML	22 58 25.9	
	comp=E,12218µm,0.6s						
SOH				AML	AML	22 58 27.8	
	comp=N,9382µm,0.6s						
KOKK	**Kokkinochori,**	1.01	23	P	**Pb**	**22 58 11.4**	**-0.1**
THL	**Klokotos Trika**	1.17	255	P	**Pn**	**22 58 14.0**	**0.0**
THL	**Klokotos Trika**	1.17	255	P	**Pn**	**22 58 14.0**	**0.0**
THAS	**Thassos island**	1.19	53	P	**Pn**	**22 58 14.4**	**0.0**
THAS				S	**Sg**	**22 58 32.7**	**+1.7**
	comp=N,4µm,0.4s						
THAS	**Thassos island**	1.19	53	P	**Pn**	**22 58 14.4**	**0.0**
THAS				AML	AML	22 58 30.3	
	comp=N,9511µm,0.4s						
THAS				AML	AML	22 58 33.2	
	comp=E,5893µm,0.4s						
SRS	**Serrai**	1.23	4	P	**Pn**	**22 58 14.8**	**-0.2**
SRS	**Serrai**	1.23	4	P	**Pn**	**22 58 14.7**	**-0.2**
SRS				AML	AML	22 58 34.3	
	comp=N,2686µm,0.5s						
SRS				AML	AML	22 58 38.4	
	comp=E,1959µm,0.5s						
ATAL	**Atalanti**	1.24	197	P	**Pn**	**22 58 15.1**	**+0.1**
ATAL	**Atalanti**	1.24	197	P	**Pn**	**22 58 15.1**	**+0.1**
ATAL				AML	AML	22 58 35.8	
	comp=E,1790µm,0.6s						
ATAL				AML	AML	22 58 45.3	
	comp=N,2016µm,1.4s						
KVLA	**Kavala**	1.26	33	P	**Pn**	**22 58 15.4**	**+0.1**
LKR	**Lokris**	1.29	197	P	**Pb**	**22 58 16.0**	**-0.2**
LKR	**Lokris**	1.29	197	P	**Pb**	**22 58 16.0**	**-0.2**
LKR				AML	AML	22 58 39.3	
	comp=N,1182µm,0.5s						
LKR				AML	AML	22 58 39.6	
	comp=E,1258µm,1.0s						
LIA	**Limnos Island**	1.31	89	P	**Pb**	**22 58 16.5**	**-0.2**
LIA				S	**Sg**	**22 58 36.4**	**+1.5**
	comp=E,1µm,0.6s						
LIA	**Limnos Island**	1.31	89	P	**Pb**	**22 58 16.5**	**-0.2**
LIA				AML	AML	22 58 37.4	
	comp=E,2726µm,0.8s						
LIA				AML	AML	22 58 42.9	
	comp=N,2240µm,0.5s						
KYMI	**Kymi, Euboea I**	1.34	159	P	**Pb**	**22 58 16.7**	**-0.5**
KYMI	**Kymi, Euboea I**	1.34	159	P	**Pb**	**22 58 16.7**	**-0.5**
GRG	**Griva**	1.35	323	PN	**Pn**	**22 58 16.6**	**+0.1**
KNT	**Kendrikon**	1.35	341	P	**Pb**	**22 58 17.3**	**+0.1**
KNT				S	**Sb**	**22 58 35.6**	**+1.4**
	comp=N,1µm,0.6s						
KNT	**Kendrikon**	1.35	341	P	**Pb**	**22 58 17.3**	**+0.1**
KNT	**Kendrikon**	1.35	341	PN	**Pn**	**22 58 16.8**	**+0.3**
KNT				SN	**Sb**	**22 58 35.6**	**+1.4**
MAKR	**Makrakomi, Fth**	1.36	230	P	**Pb**	**22 58 17.6**	**+0.2**
MAKR	**Makrakomi, Fth**	1.36	230	P	**Pb**	**22 58 17.6**	**+0.2**
MAKR				AML	AML	22 58 55.9	
	comp=E,2863µm,0.9s						
MAKR				AML	AML	22 58 56.3	
	comp=N,5093µm,1.2s						
KAVA	**Kavala**	1.36	35	P	**Pn**	**22 58 16.8**	**+0.1**
KAVA	**Kavala**	1.36	35	P	**Pn**	**22 58 16.8**	**+0.1**
KAVA				AML	AML	22 58 38.0	
	comp=E,3844µm,0.5s						
KAVA				AML	AML	22 58 39.2	
	comp=N,3866µm,0.4s						
KZN	**Kozani**	1.37	288	P	**Pn**	**22 58 17.4**	**+0.5**
KZN	**Kozani**	1.37	288	P	**Pn**	**22 58 17.5**	**+0.5**
NVR	**Nevrokopi**	1.49	11	P	**Pn**	**22 58 19.0**	**+0.5**
NVR	**Nevrokopi**	1.49	11	P	**Pn**	**22 58 19.0**	**+0.5**
NVR				AML	AML	22 58 43.7	
	comp=N,1107µm,0.4s						
NVR				AML	AML	22 58 43.9	
	comp=E,1728µm,0.4s						
VAY	**Valandovo**	1.59	335	*i* Pn	**Pn**	**22 58 20.5**	**+0.7**
VAY				*i* Sn	**Sb**	**22 58 42.3**	**+1.1**
VAY	**Valandovo**	1.59	335	*e*Pg	**Pb**	**22 58 20.9**	**-0.4**
VAY				*e*Sg	**Sg**	**22 58 44.4**	**+0.8**
EVR	**Evrytania**	1.61	234	P	**Pn**	**22 58 20.7**	**+0.5**
EVR	**Evrytania**	1.61	234	P	**Pn**	**22 58 20.7**	**+0.5**
EVR				AML	AML	22 59 02.4	
	comp=E,1872µm,1.5s						
EVR				AML	AML	22 59 10.3	
	comp=N,1534µm,0.7s						
KPRO	**Kipourio**	1.62	273	P	**Pb**	**22 58 21.5**	**-0.5**
KPRO	**Kipourio**	1.62	273	P	**Pb**	**22 58 21.5**	**-0.5**
VIL2	**Platees**	1.68	186	P	**Pb**	**22 58 22.3**	**-0.6**
VIL2				AML	AML	22 58 53.0	
	comp=E,1486µm,0.7s						
VIL2				AML	AML	22 58 59.1	
	comp=N,1233µm,0.9s						
SMTH	**Samothraki Isl**	1.68	69	P	**Pn**	**22 58 21.0**	**-0.1**
SMTH	**Samothraki Isl**	1.68	69	P	**Pn**	**22 58 21.0**	**-0.1**
SMTH				AML	AML	22 58 50.1	
	comp=E,774µm,0.6s						
SMTH				AML	AML	22 58 51.4	
	comp=N,1013µm,0.4s						
MMB	**Musomiste**	1.71	6	*i* P	**Pn**	**22 58 21.8**	**+0.2**
ANX	**Ano Chora**	1.77	224	P	**Pn**	**22 58 23.3**	**+0.9**
ANX	**Ano Chora**	1.77	224	P	**Pn**	**22 58 23.3**	**+0.9**
FNA	**Florina**	1.84	300	P	**Pn**	**22 58 24.1**	**+0.8**
FNA	**Florina**	1.84	300	P	**Pn**	**22 58 24.1**	**+0.8**
FNA	**Florina**	1.84	300	*i* P	**Pn**	**22 58 23.5**	**+0.2**
FNA				*i* S	**Sn**	**22 58 47.1**	**+0.9**
FNA	**Florina**	1.84	300	PN	**Pn**	**22 58 23.7**	**+0.4**
SERG	**Sergoula**	1.84	217	P	**Pn**	**22 58 23.8**	**+0.5**
SERG	**Sergoula**	1.84	217	P	**Pn**	**22 58 23.8**	**+0.5**
DION	**Dionisos Attik**	1.84	169	P	**Pn**	**22 58 24.2**	**+0.9**
DION	**Dionisos Attik**	1.84	169	P	**Pn**	**22 58 24.2**	**+0.9**
PTL	**Penteli**	1.86	170	P	**Pn**	**22 58 24.5**	**+0.9**
PTL	**Penteli**	1.86	170	P	**Pn**	**22 58 24.5**	**+0.9**
PTL				AML	AML	22 58 57.9	
	comp=N,1272µm,0.7s						
PTL				AML	AML	22 59 03.6	
	comp=E,1122µm,1.0s						
GADA	**Gvkgeada**	1.89	80	PN	**Pn**	**22 58 24.1**	**+0.2**
GOKA	**anakkale-Gk**	1.89	80	*i* P	**Pn**	**22 58 23.9**	**-0.1**
EFP	**Efpalio**	1.90	220	P	**Pn**	**22 58 24.8**	**+0.7**
EFP	**Efpalio**	1.90	220	P	**Pn**	**22 58 24.8**	**+0.7**
LTK	**Loutraki**	1.90	192	P	**Pn**	**22 58 24.4**	**+0.2**
LTK	**Loutraki**	1.90	192	P	**Pn**	**22 58 24.3**	**+0.2**
ATH	**Athens Observa**	1.92	174	P	**Pn**	**22 58 25.5**	**+1.1**
ATH	**Athens Observa**	1.92	174	P	**Pn**	**22 58 25.5**	**+1.1**
NEST	**Nestorio**	1.93	287	P	**Pn**	**22 58 25.8**	**+1.2**
NEST	**Nestorio**	1.93	287	P	**Pn**	**22 58 25.8**	**+1.2**
ATHU	**Athens Univers**	1.93	173	P	**Pn**	**22 58 25.3**	**+0.8**
ATHU	**Athens Univers**	1.93	173	P	**Pn**	**22 58 25.3**	**+0.8**
SIGR	**SIGRI**	1.96	109	P	**Pn**	**22 58 25.9**	**+1.0**
SIGR	**SIGRI**	1.96	109	P	**Pn**	**22 58 25.9**	**+1.0**
SIGR	**SIGRI**	1.96	109	PN	**Pn**	**22 58 25.6**	**+0.7**
BOZC	**Bozcaada**	1.99	90	*i* P	**Pn**	**22 58 25.6**	**+0.4**
BOZC	**Bozcaada**	1.99	90	PN	**Pn**	**22 58 25.9**	**+0.6**
KARY	**Karystos**	2.00	158	P	**Pn**	**22 58 26.3**	**+0.9**
KKB	**Krupnik**	2.00	352	*i* P	**Pn**	**22 58 26.0**	**+0.5**
LAKA	**Lakka**	2.01	216	P	**Pn**	**22 58 26.6**	**+0.9**
LAKA	**Lakka**	2.01	216	P	**Pn**	**22 58 26.6**	**+0.9**
RDO	**Rodhopi**	2.02	51	P	**Pn**	**22 58 25.8**	**+0.2**
RDO	**Rodhopi**	2.02	51	P	**Pn**	**22 58 25.8**	**+0.2**
RDO				AML	AML	22 59 01.6	
	comp=N,1503µm,0.5s						
RDO				AML	AML	22 59 03.0	
	comp=E,1002µm,0.5s						
RDO	**Rodhopi**	2.02	51	PN	**Pn**	**22 58 25.6**	**-0.1**
RZN	**Rozhen**	2.03	27	*i* P	**Pn**	**22 58 27.1**	**+1.0**
VLY	**Voula,Athens**	2.05	173	P	**Pn**	**22 58 27.0**	**+0.9**
VLY	**Voula,Athens**	2.05	173	P	**Pn**	**22 58 27.0**	**+0.9**
STIP	**Stip**	2.05	332	*i* Pn	**Pn**	**22 58 26.8**	**+0.6**
ECEA	**Canakkale, Ece**	2.08	85	*i* P	**Pn**	**22 58 27.4**	**+0.9**
KOCA	**Canakkale, Ayv**	2.09	100	*i* P	**Pn**	**22 58 27.2**	**+0.5**
KLV	**Kalavryta, Ach**	2.11	210	P	**Pn**	**22 58 27.7**	**+0.7**
KLV	**Kalavryta, Ach**	2.11	210	P	**Pn**	**22 58 27.7**	**+0.7**
EZN	**Ezine**	2.20	91	PN	**Pn**	**22 58 29.0**	**+0.9**
ALN	**Alexandroupoli**	2.21	62	P	**Pn**	**22 58 28.6**	**+0.3**
ALN	**Alexandroupoli**	2.21	62	P	**Pn**	**22 58 28.6**	**+0.3**
ALN				AML	AML	22 59 07.2	
	comp=E,791µm,0.6s						
ALN				AML	AML	22 59 08.3	
	comp=N,1264µm,0.7s						
ALN	**Alexandroupoli**	2.21	62	*i* P	**Pn**	**22 58 28.7**	**+0.3**
ALN				*i* S	**Sn**	**22 58 54.7**	**-0.6**
ALN				IAML		22 59 07.0	
	comp=E,163nm,0.6s						
ALN	**Alexandroupoli**	2.21	62	PN	**Pn**	**22 58 28.6**	**+0.3**
CAVK	**Edirne/Enez-Ca**	2.21	68	*i* P	**Pn**	**22 58 29.3**	**+0.9**
CAVK				*i* S	**Sb**	**22 58 59.0**	**-0.1**
CAVK				IAML		22 59 06.0	
	comp=N,432nm,1.0s						
CAVK				IAML		22 59 21.0	
	comp=E,379nm,0.9s						
ENEZ	**Enez**	2.22	67	PN	**Pn**	**22 58 28.7**	**+0.3**
PRK	**Paraskevi**	2.26	106	P	**Pb**	**22 58 31.3**	**-1.4**
KDZ	**Kurdzhali**	2.30	39	*i* P	**Pn**	**22 58 29.2**	**-0.4**
GELI	**Tayfur-Gelibol**	2.36	77	PN	**Pn**	**22 58 30.9**	**+0.6**
DRO	**Drossia**	2.37	216	P	**Pn**	**22 58 32.5**	**+1.9**
BAYC	**CANAKKALE_Bayr**	2.37	93	*i* P	**Pn**	**22 58 30.8**	**+0.2**
BAYC				*i* S	**Sn**	**22 58 58.6**	**-0.8**
OHR	**Ohrid**	2.38	302	*i* Pn	**Pb**	**22 58 36.6**	**+1.7**
OHR				*i* Sn	**Sb**	**22 59 06.7**	**+2.7**

OHR	Ohrid	2.38	302	*e*Pn	Pn	22 58 31.7	+1.0
PLD	Plovdiv	2.40	22	PN	Pn	22 58 31.9	+0.9
PLD	Plovdiv	2.40	22	*i* P	Pn	22 58 32.7	+1.7
LKD2	Lefkada island	2.44	244	P	Pb	22 58 34.7	-1.2
IGT	Igoumenitsa	2.45	263	P	Pb	22 58 34.2	-1.8
NYDR	Nydri-Lefkada	2.45	242	P	Pn	22 58 33.3	+1.7
ERIK	Erikli-Kesan	2.45	70	PN	Pn	22 58 32.8	+1.1
CHOS	Chios island	2.50	126	P	Pn	22 58 34.0	+1.5
CHOS	Chios island	2.50	126	P	Pn	22 58 34.1	+1.5
EVGI	Lefkada island	2.53	241	P	Pb	22 58 36.0	-1.3
AYVA	Ayvalik	2.55	102	*i* P	Pn	22 58 32.7	-0.4
LPK	Lapseki	2.57	78	PN	Pn	22 58 34.3	+1.1
SKO	Skopje	2.59	324	*i* Pn	Pn	22 58 35.1	+1.5
KESN	Edirne-Kesan	2.62	68	*i* P	Pn	22 58 33.9	-0.5
FSK	Fiskardo	2.67	239	P	Pb	22 58 39.2	-0.6
UKOP	Uzunkopru-Edir	2.71	62	PN	Pn	22 58 36.3	+1.1
BOSS	Bosilegrad	2.71	344	*e*Pn	Pn	22 58 36.5	+1.2
BOSS				*e*Sn	Sb	22 59 11.3	-2.2
VTS	Vitosha	2.73	356	⇓P	Pn	22 58 37.0	+1.3
VTS				⇑S	Sb	22 59 13.6	-0.7
VTS	Vitosha	2.73	356	*i* P	Pn	22 58 37.1	+1.4
VTS	Vitosha	2.73	356	*e*Pn	Pn	22 58 36.8	+1.1
VTS				*e*Sn	Sn	22 59 10.3	+1.8
DKL	Dikili	2.78	106	PN	Pn	22 58 37.3	+1.2
BUHA	Balikesir, Bur	2.81	97	*i* P	Pn	22 58 37.2	+0.6
KEK	Kerkira	2.84	268	P	Pn	22 58 39.9	+2.9
ZEDA	zmir-Bergama	2.94	107	*i* P	Pn	22 58 37.9	-0.4
RKY	Sarkoy-Tekirda	2.94	73	PN	Pn	22 58 39.9	+1.4
ITM	Ithomi	2.96	205	PN	Pn	22 58 39.9	+1.2
KRBG	Karabiga-Canak	2.98	79	PN	Pn	22 58 40.4	+1.6
MAR3	Marsite Statio	3.04	72	PN	Pn	22 58 40.7	+0.9
MAR2	Marsite Statio	3.05	73	PN	Pn	22 58 41.2	+1.3
GZKV	Gazikoy-Tekird	3.07	72	PN	Pn	22 58 41.6	+1.5
TIR	Tirane	3.11	299	⇑P	Pn	22 58 42.5	+1.8
EDRB	Edirne	3.16	51	PN	Pn	22 58 42.8	+1.4
BARS	Barje	3.18	337	*e*Pn	Pn	22 58 42.7	+1.0
BARS	Barje	3.18	337	*e*Pn	Pg	22 58 58.0	+4.7
MRMT	Marmara Adasi	3.23	76	PN	Pn	22 58 43.7	+1.2
APE	Apeiranthos	3.24	150	⇓P	Pn	22 58 42.8	+0.2
STEP	BALIKESIR_Sava	3.32	97	*i* P	Pn	22 58 44.3	+0.7
KIRK	Kırklareli	3.34	54	*i* P	Pn	22 58 44.8	+0.9
KIRK				*i* S	Sb	22 59 33.1	+1.6
ZAPS	Zavoj	3.44	350	*e*Pn	Pn	22 58 46.5	+1.2
ZAPS				*e*Sn	Sn	22 59 30.0	+4.2
ARMN	Kirklareli, Me	3.59	55	*i* P	Pg	22 58 59.1	-2.1
SELS	Selova	3.77	333	*e*Pn	Pn	22 58 50.3	+0.5
DURS	Dursunbey	3.87	93	*i* P	Pn	22 58 48.9	-2.3
BOVS	Bovan	3.97	341	⇑P	Pn	22 58 53.0	+0.4
BOVS	Bovan	3.97	341	*e*Pn	Pn	22 58 52.9	+0.4
ZAGS	Zajecar	4.03	347	*e*Pn	Pn	22 58 54.1	+0.7
PDG	Podgorica	4.07	310	⇑P	Pn	22 58 54.0	+0.1
PDG				⇑S	Sn	22 59 44.2	+3.0
AYDN	Tasoluk	4.10	121	*i* P	Pn	22 58 53.9	-0.5
VLAD	Vladila	4.17	9	⇓P	Pn	22 58 58.0	+2.8
SJES	Sjenica	4.27	323	*e*Pn	Pn	22 58 58.3	+1.5
ULDT	Uludag	4.36	85	*i* P	Pn	22 58 57.7	-0.3
COPA	Copaceanca	4.44	16	⇑P	Pn	22 59 00.2	+1.3
IVAS	Ivanjica	4.45	327	*e*Pn	Pn	22 59 01.0	+1.9
GRUS	Gruza	4.50	334	*e*Pn	Pn	22 59 00.9	+1.1
KUBS	Kucevo	4.72	344	*e*Pn	Pn	22 59 02.9	+0.1
HUMR	Humele	4.77	13	⇓P	Pn	22 59 05.3	+1.8
TRUS	Trudelj	4.90	333	*e*Pn	Pn	22 59 06.4	+1.1
DIVS	Divibare	4.94	329	*e*Pn	Pn	22 59 06.7	+0.7
BBLS	Lazići	5.00	324	*e*Pn	Pn	22 59 08.3	+1.5
HERR	Herculane	5.05	351	⇑P	Pn	22 59 07.4	0.0
MDVR	Moldovita	5.06	346	⇑P	Pn	22 59 08.1	+0.5
STFAR	Stefanesti-Arg	5.09	12	⇑P	Pn	22 59 10.7	+2.7
TIP	Timpagrande	5.24	264	⇓P	Pn	22 59 11.1	+1.0
STON	Ston	5.27	306	*i* Pn	Pn	22 59 09.7	-0.6
STON				Sn	Sn	23 00 05.9	-4.7
VOIR		5.67	11	⇑P	Pn	22 59 17.8	+1.8
BZS	Buzias	5.89	347	⇓P	Pn	22 59 19.2	+0.4
MLR	Muntele Rosu	5.89	17	⇑P	Pn	22 59 21.3	+2.2
MAKA	Makarska	5.91	307	*e*Pn	Pn	22 59 19.0	-0.2
MAKA				Sn	Sn	23 00 21.1	-5.4
NEHR	Nehoiu	5.92	20	⇓P	Pn	22 59 22.2	+2.9
RICI	Ricice	5.96	309	*e*Pn	Pn	22 59 19.9	0.0
RICI				Sn	Sn	23 00 23.2	-4.5
HVAR	Hvar	6.21	304	*e*Pn	Pn	22 59 22.8	-0.5
HVAR				Sn	Sn	23 00 27.3	-6.7
DOPR	Dopca	6.24	12	⇓P	Pn	22 59 25.4	+1.6
COVR	Voineasa-Covas	6.28	18	⇓P	Pn	22 59 26.9	+2.5
PLOR	Plostina	6.40	20	⇓P	Pn	22 59 28.3	+2.4
VRI	Vrincioaia	6.44	21	⇑P	Pn	22 59 29.2	+2.8
VRI				⇓S	Sn	23 00 42.6	+3.0
VLDR	Vladesti	6.85	28	⇑P	Pn	22 59 34.9	+2.8
DRGR		6.92	356	⇑P	Pn	22 59 34.9	+1.8
ZIRJ	Zirje	6.96	305	*e*Pn	Pn	22 59 33.6	0.0
ZIRJ				Sn	Sn	23 00 45.2	-7.1
MORI	Morici	7.03	307	*e*Pn	Pn	22 59 34.4	-0.2
MORI				Sn	Sn	23 00 48.2	-5.8
BIR	Birlad	7.06	24	⇑P	Pn	22 59 37.6	+2.6
UDBI	Udbina	7.36	312	*e*Pn	Pn	22 59 39.6	+0.4
UDBI				Sn	Sn	23 00 58.4	-4.1
DUGI	Dugi Otok	7.49	306	*e*Pn	Pn	22 59 39.6	-1.3
DUGI				Sn	Sn	23 00 59.2	-6.3
BURAR	Bucovina Array	7.83	9	⇓P	Pn	22 59 48.2	+2.6
PURM	Purcari	8.12	33	⇓P	Pn	22 59 50.8	+1.4

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*FUNV **30** 23:11:54.9, 11°.63N×70°.33W, h18^{km}, MW3.4*

ISC 30 23:11:54.6±1.1, **11°.64N**±0°.04×**70°.33W**±0°.03, **h30**^{km}±11^{km}, **n18**, σ**0^{s}.95**/36, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MONV	Montecano	0.47	49	*e*P	Pb	23 12 04.4	-0.1
MONV				*e*S	Sb	23 12 11.5	+0.1
DABV	Dabajuro	0.78	202	*e*P	Pb	23 12 09.2	-0.4
DABV				*e*S	Sb	23 12 19.8	0.0
DABV	Dabajuro	0.78	202	*e*P	Pb	23 12 09.0	-0.5
DABV				*e*S	Sb	23 12 19.7	-0.1
SIQV	Siquisique	1.11	152	*e*P	Pn	23 12 15.1	+0.9
SIQV				*e*S	Sb	23 12 29.9	+0.4
JACV	Jacura	1.57	110	*e*P	Pn	23 12 21.8	+1.3
JACV				*e*S	Sn	23 12 41.1	+1.1
URIC	Uribia, Colomb	1.62	272	*e*P	Pn	23 12 21.0	-0.2
URIC				*e*S	Sn	23 12 41.0	-0.1
TORV	Torococo	2.07	177	*e*P	Pn	23 12 28.5	+1.0
TORV				*e*S	Sn	23 12 53.5	+1.1
SANV	Sanarito	2.27	160	*e*P	Pn	23 12 30.8	+0.7
SANV				*e*S	Sn	23 12 57.5	+0.3
CRJC	Cerrejon, Guaj	2.57	256	*e*P	Pn	23 12 35.7	+1.3
CRJC				*e*S	Sn	23 13 04.2	-0.5
MAPV	Macapo	2.58	134	*e*P	Pn	23 12 35.5	+1.2
MAPV				*e*S	Sn	23 13 05.3	+0.6
MCQV	Machiques	2.68	234	*e*P	Pn	23 12 37.3	+1.6
MCQV				*e*S	Sn	23 13 06.7	-0.5
TURV	Turiamo	2.72	116	*e*P	Pn	23 12 36.6	+0.4
TURV				*e*S	Sn	23 13 06.6	-1.6
VIGV	El Vigia	2.96	200	*e*P	Pn	23 12 40.2	+0.6
VIGV				*e*S	Sn	23 13 13.3	-1.0
BENV	Beln	3.16	122	*e*P	Pn	23 12 43.2	+0.7
BENV				*e*S	Sn	23 13 19.1	-0.1
SOCV	Socops	3.38	189	*e*P	Pn	23 12 45.3	-0.1
SOCV				*e*S	Sn	23 13 23.3	-1.1
SOCV	Socops	3.38	189	*e*P	Pn	23 12 45.8	+0.4
SOCV				*e*S	Sn	23 13 23.0	-1.4
BAUV	El Baul	3.50	140	*e*P	Pn	23 12 47.6	+0.5
BAUV				*e*S	Sn	23 13 26.1	-1.5
BIRV	Birongo	4.16	106	*e*P	Pn	23 12 55.8	-0.3
BIRV				*e*S	Sn	23 13 41.5	-2.1

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*NEIC **30** 23:18:01.8±0.5, 29°.30N±0°.08×130°.4E±0°.1, h31^{km}±7^{km}, mb4.4/9, Error ellipse: s-maj=19.4km s-min=9.2km az=114.0*

*JMA **30** 23:18:01.7±0.1, 29°.28N×130°.41E, h58^{km}±3^{km}, M3.1*

*IDC **30** 23:18:01.4±2.4, 29°.21N×130°.50E, h43^{km}±16^{km}, mb3.6/10, mb1 3.6/12, mb1mx3.3/67, mbtmp3.8/12, ML3.1/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/34, Error ellipse: s-maj=42.3km s-min=10.6km az=114.0*

ISC 30 23:18:02.1±1.3, **29°.24N**±0°.06×**130°.43E**±0°.07, **h43**^{km}±11^{km}, **n45**, σ**0^{s}.55**/53, **mb4.2**/13, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.77	321	P	Pn	23 18 16.0	-0.6
JNN				S	Sn	23 18 27.3	+0.2
JYAK	Yakushimahirau	0.99	4	P	Pn	23 18 19.1	-0.6
JYAK				S	Sn	23 18 33.1	+0.6
JZK	Kikaishima	1.01	204	P	Pn	23 18 20.6	+0.8
JTAJ	Takarajima	1.08	266	P	Pn	23 18 21.3	+0.6
JAM	Amami Oshima	1.10	221	P	Pn	23 18 21.4	+0.3
JMTN	Minamitane	1.22	19	P	Pn	23 18 22.2	-0.6
JMTN				S	Sn	23 18 38.6	+0.5
JKC	Kuchinoerabu	1.23	351	P	Pn	23 18 22.6	-0.3
JKC				S	Sn	23 18 39.0	+0.6
JAMN	Amaminishikomi	1.48	228	P	Pn	23 18 26.7	+0.4
JTN	Tanegashima 3	1.49	19	P	Pn	23 18 25.9	-0.5
JTN				S	Sn	23 18 45.0	+0.4
JTK	Tokunoshima	1.95	222	P	Pn	23 18 33.7	+1.0
JTSR	Tashiro 2	1.96	12	P	Pn	23 18 32.8	-0.2
JTSR				S	Sn	23 18 56.5	+0.1
JSU	Suzuyama	2.26	1	Pn	Pn	23 18 36.7	-0.3
JNAR	Kushima--Naru	2.39	18	P	Pn	23 18 39.1	+0.3
JNAR				S	Sn	23 19 08.0	+1.1
JOW	Kunigami	3.06	219	P	Pn	23 18 48.4	+0.4
	3.0nm,0.3s,baz=96,slow=20,SNR=12						
JOW				S	Sn	23 19 23.1	-0.3
	5.3nm,0.3s,baz=358,slow=23,SNR=3.9						
JOW	Kunigami	3.06	219		Pn	23 18 48.0	-0.1
JNU	Nakatsue	3.89	6	P	Pn	23 18 60.0	+0.6
	2.8nm,0.3s,baz=186,slow=12,SNR=30						
JNU				S	Sn	23 19 43.7	-0.1
	0.9nm,0.3s,baz=245,slow=22,SNR=1.8						
JNU	Nakatsue	3.89	6		Pn	23 18 59.3	-0.1
JMN	Monobe	5.36	32	Pn	Pn	23 19 18.7	-0.8
JHS	Saijyo	6.18	21	Pn	Pn	23 19 29.9	-0.9
JWT	Wachi	7.35	34	Pn	Pn	23 19 46.5	-0.4
INU	Inuyama	8.25	41	Pn	Pn	23 19 58.9	-0.4
KSRS	Korea Array	8.45	346	LR	LR	23 23 22.8	
	comp=Z,29nm,19.4s,baz=345,slow=38						
KLR	Kul'dur	19.99	3	P	P	23 22 30.1	-0.7
	1.3nm,0.6s,baz=172,slow=14,SNR=5.5						
SONM	Songino Array	26.25	322	P	P	23 23 32.3	-0.9
	0.5nm,0.7s,baz=136,slow=9.7,SNR=5.2						
SONM				LR	LR	23 35 27.7	
	comp=Z,57nm,19.5s,baz=90,slow=40						
MK31	Makanchi Array	41.08	309	P	P	23 25 41.5	0.0
MKAR	Makanchi Array	41.08	309	P	P	23 25 41.6	+0.1
	0.5nm,0.4s,baz=92,slow=9.9,SNR=14						
MKAR	Makanchi Array	41.08	309	P	P	23 25 41.5	0.0
KURK	Kurchatov	44.06	314	P	P	23 26 05.5	0.0
KURK				IAmb	IAmb	23 26 06.5	
	comp=Z,4.0nm,0.6s						
KURBB	Kurchatov Arra	44.10	314	P	P	23 26 06.0	0.0
	comp=Z,2.5nm,0.5s,baz=98,slow=8.9,SNR=21						
KKAR	Karatay Array	49.33	303	P	P	23 26 47.1	+0.1
BVAR	Borovoye Array	49.39	316	P	P	23 26 47.5	+0.3
	comp=Z,1.2nm,0.3s,baz=110,slow=8.2,SNR=9.8						
BRVK	Borovoye	49.45	316	P	P	23 26 47.8	0.0
BRVK				IAmb	IAmb	23 26 48.5	
	comp=Z,3.2nm,0.6s						
ABKAR	Akbulak array	56.05	312	P	P	23 27 36.8	+0.2
ABKAR	Akbulak array	56.05	312	P	P	23 27 36.6	0.0
ARU	Arti	56.28	321	P	P	23 27 38.3	+0.3
	comp=Z,0.3nm,0.3s,baz=117,slow=11,SNR=3.1						
ARU	Arti	56.28	321	P	P	23 27 38.0	0.0
ARU				IAmb	IAmb	23 27 38.9	
	comp=Z,5.3nm,1.0s						
BMAR	Burnt Mountain	61.46	26	P	P	23 28 14.9	+1.0
FINES	FINESS Array B	71.21	331	P	P	23 29 15.3	-0.9
	comp=Z,2.8nm,0.9s,baz=62,slow=4.5,SNR=6.9						
RES	Resolute Bay	72.23	11	P	P	23 29 23.4	+1.2
AKASG	Malin Array Be	74.51	320	P	P	23 29 35.1	-0.9
	comp=Z,0.6nm,0.4s,baz=58,slow=6.4,SNR=4.0						
AKBB	Malin Array Si	74.51	320	P	P	23 29 36.1	+0.1
AKBB				IAmb	IAmb	23 29 36.2	
	comp=Z,7.2nm,1.3s						
YKA	Yellowknife Ar	74.98	26	P	P	23 29 38.0	-0.6
	comp=Z,0.1nm,0.4s,baz=305,slow=6.0,SNR=4.2						
BRTR	Keskin Array B	76.72	308	P	P	23 29 49.2	+0.1
	comp=Z,1.0nm,0.7s,baz=5.0,slow=4.9,SNR=2.3						
BUR08	Bucovina Ar. S	78.30	318	P	P	23 29 58.1	+0.3
BURAR	Bucovina Array	78.30	318	P	P	23 29 58.0	+0.2
BURAR				IAmb	IAmb	23 30 15.5	
	comp=Z,2.3nm,1.2s						

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*NEIC **30** 23:20:56.8±1.7, 0°.02N±0°.06×123°.82E±0°.05, h143^{km}±6^{km}, mb4.6/43, Error ellipse: s-maj=9.0km s-min=7.8km az=187.0*

*IDC **30** 23:20:56.4±1.4, 0°.06N×123°.77E, h151^{km}±13^{km}, mb3.9/20, mb1 3.9/23, mb1mx3.7/57, mbtmp4.3/23, MS2.6/1, Ms1 2.8/1, ms1mx2.3/30, Error ellipse: s-maj=13.8km s-min=8.4km az=76.0*

*DJA **30** 23:20:58.4±0.3, 0°S±3°×12°4E±°, h115^{km}±6^{km}, M4.5/15, mb4.6/6, mB4.8/5, MLv4.6/15, Mw(mB)4.0/5*

*KLM **30** 23:20:59, 0°.15S×123°.94E, h127^{km}, mb4.9*

ISC 30 23:20:56.7±0.6, **0°.00N**±0°.04×**123°.86E**±0°.04, **h148**^{km}±6^{km}, **n126**, σ**1^{s}.25**/142, **mb4.5**/56, **1C-2D**, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.58	12	P	Pn	23 21 20.1	+1.9
LUWI	Luwuk	1.50	226	P	Pn	23 21 26.0	-0.1
LUWI				S	Sn	23 21 46.9	-1.8
LUWI	Luwuk	1.50	226		Pn	23 21 25.7	-0.4
LUWI				Sn	Sn	23 21 46.7	-2.0
LUWI	Luwuk	1.50	226	P	Pn	23 21 26.1	-0.1
MRSI	Marisa	1.98	284	P	Pn	23 21 31.1	-0.3
MRSI				S	Sn	23 21 55.9	-2.2
APSI	Ampana	2.39	248	P	Pn	23 21 36.6	+0.2
APSI				S	Sn	23 22 05.9	-1.0
SANI	Sanana	2.94	134	P	Pn	23 21 41.8	-1.5
SANI				S	Sn	23 22 14.8	-4.5
SANI	Sanana	2.94	134	P	Pn	23 21 41.9	-1.4
TOLI2	Tolitoli	3.27	290	Pn	Pn	23 21 47.3	-0.1
TOLI2				Sn	Sn	23 22 24.0	-2.8
TOLI2	Tolitoli	3.27	290	P	Pn	23 21 50.1	+2.7
TNTI	Ternate	3.59	78	P	Pn	23 21 52.0	+0.5
TNTI				S	Sn	23 22 32.7	-1.3
TNTI	Ternate	3.59	78	Pn	Pn	23 21 51.8	+0.3
TNTI				Sn	Sn	23 22 32.7	-1.3
LBMI	Labuha	3.69	100	P	Pn	23 21 52.8	-0.1
LBMI				S	Sn	23 22 35.1	-1.4
MPSI	Mapaga	3.98	275	P	Pn	23 21 57.6	+1.0
TTSI	Tana Toraja	5.05	233	P	Pn	23 22 12.1	+1.4
	0.4nm1µm53nm,0.5s						
SPSI	Sidrap Palu	5.68	226	P	Pn	23 22 20.8	+1.7
	0.4nm1µm95nm,0.5s						
BNSI	Bone	5.76	221	P	Pn	23 22 22.3	+2.1
	0.2nm855nm30nm,0.6s						
KAPI	Kappang	6.46	219	P	Pn	23 22 30.7	+1.2
	1.3nm,0.3s,baz=175,slow=19,SNR=1.7						
KAPI				S	Sn	23 23 41.4	-0.8
	2.6nm,0.3s,baz=104,slow=20,SNR=6.0						
KAPI	Kappang	6.46	219		Pn	23 22 30.4	+0.9
MYLDM	Lahad Datu	7.43	314	Pn	Pn	23 22 44.0	+1.5
SWI	Sorong	7.45	97	P	Pn	23 22 44.3	+1.6
	0.2nm48nm,0.8s						
SIJI	Sorong	7.45	97	P	Pn	23 22 43.9	+1.0
	5.0nm,0.3s,baz=290,slow=7.5,SNR=17						
SIJI				S	Sn	23 24 08.6	+2.5
	0.3nm,0.3s,baz=255,slow=22,SNR=1.5						
SIJI	Sorong	7.45	97	P	Sn	23 24 08.6	+2.5
SPMM	Sapulut	8.74	302	P	Pn	23 23 03.0	+2.9
FAKI	Fak Fak	8.87	109	Pn	Pn	23 23 01.1	-0.7
FAKI	Fak Fak	8.87	109	P	Pn	23 23 01.3	-0.5
KKM	Kota Kinabalu	9.71	308	P	Pn	23 23 19.0	+5.9
LQP	Lukban	14.21	351	⇑*e*P	P	23 24 14.7	+0.2
MTN	Manton Dam	14.66	151	Pn	Pn	23 24 16.6	-0.4
UGM	Wanagama	15.45	239	P	P	23 24 29.7	+1.6
UGM				IAmb	IAmb	23 24 36.3	
	comp=Z,40nm,1.1s						
KNRA	Kununurra	16.31	163	P	P	23 24 38.1	+0.4
KNRA				IAmb	IAmb	23 24 41.2	
	comp=Z,33nm,0.8s						
FITZ	Fitzroy Crossi	18.07	175	P	P	23 24 57.4	+0.5
	comp=Z,1.3nm,0.3s,baz=9.0,slow=7.9,SNR=30						
DLV	T Lat	19.33	308	P	P	23 25 10.8	-0.2
DLV				IAmb	IAmb	23 25 35.2	
	comp=Z,58nm,1.3s						
MBWA	Marble Bar	21.41	191	P	P	23 25 32.3	-0.7
JRMM	Jerantut	21.71	280	P	P	23 25 39.0	+2.6
PSA00	Pilbara Seismi	21.80	190	P	P	23 25 36.1	-1.0
PSA00				IAmb	IAmb	23 25 39.2	
	comp=Z,19nm,0.8s						
PSA00	Pilbara Seismi	21.80	190	P	P	23 25 36.3	-0.8
PSA00				IAmb	IAmb	23 25 37.4	
	comp=Z,12nm,1.4s						
PSA00	Pilbara Seismi	21.80	190	P	P	23 25 36.7	-0.4
	comp=Z,21nm,0.7s						
WB0	Warramunga Arr	22.19	153	P	P	23 25 40.1	-1.0
WB0				IAmb	IAmb	23 25 42.3	
	comp=Z,16nm,1.1s						
WRAB	Tennant Creek	22.32	153	P	P	23 25 42.3	-0.1
WRA	Warramunga Arr	22.32	153	P	P	23 25 41.7	-0.7
	comp=Z,3.7nm,0.4s,baz=334,slow=10,SNR=85						
WRA				PcP	PcP	23 29 32.3	-0.3
	comp=Z,0.3nm,0.4s,baz=339,slow=1.9,SNR=1.7						
WRA	Warramunga Arr	22.32	153	P	P	23 25 41.2	-1.2
TPUB	Ta-pu	23.37	352	P	P	23 25 51.8	-0.3
COEN	Coen	23.62	127	P	P	23 25 54.9	+0.4
COEN				IAmb	IAmb	23 25 56.8	
	comp=Z,12nm,1.0s						
COEN	Coen	23.62	127	P	P	23 25 54.9	+0.4
	comp=Z,18nm,2.6s						
UBPT	Khong Chiam	23.68	311	P	P	23 25 53.9	-1.1
UBPT				IAmb	IAmb	23 26 15.6	
	comp=Z,15nm,1.3s						
SSLB	Suanglung	23.81	353	P	P	23 25 55.5	-0.7
SSLB				IAmb	IAmb	23 26 01.8	
	comp=Z,15nm,0.7s						
GIRL	Giralia	24.38	202	P	P	23 26 01.3	0.0
GIRL	Giralia	24.38	202	P	P	23 26 02.0	+0.7
	comp=Z,102nm,1.7s						
WRKA	Warakurna	25.26	171	P	P	23 26 08.8	-0.5
	comp=Z,34nm,0.7s						
AS31	Alice Springs	25.47	158	P	P	23 26 11.5	+0.3
ASAR	Alice Springs	25.47	158	P	P	23 26 11.4	+0.2
	comp=Z,2.9nm,0.6s,baz=335,slow=7.7,SNR=36						
ASAR				PcP	PcP	23 29 39.5	+0.1
	comp=Z,1.2nm,0.5s,baz=355,slow=2.1,SNR=9.6						
ASAR				ScP	ScP	23 33 04.3	-0.7
	comp=Z,1.3nm,0.8s,baz=321,slow=1.8,SNR=7.7						
ASAR	Alice Springs	25.47	158	P	P	23 26 11.9	+0.7
ASAR					PcP	23 29 39.6	+0.3
ASAR					ScP	23 33 04.7	-0.3
QIS	Mount Isa	25.59	144	P	P	23 26 13.1	+0.8
	comp=Z,23nm,0.9s						
MEEK	Meekatharra	26.96	190	P	P	23 26 23.9	-0.7
	comp=Z,27nm,1.8s						
MORW	Morawa	29.86	194	P	P	23 26 49.6	-0.6
MORW				IAmb	IAmb	23 26 58.8	
	comp=Z,36nm,1.5s						
OOD	Oodnadatta	29.88	159	P	P	23 26 51.1	+0.7
	comp=Z,5.8nm,0.8s						
CMAR	Chiang Mai Arr	30.59	308	P	P	23 26 57.2	+0.3
	comp=Z,1.0nm,0.6s,baz=132,slow=7.0,SNR=11						
CMAR				ScP	ScP	23 33 19.8	-1.2
	comp=Z,1.0nm,0.8s,baz=162,slow=2.8,SNR=7.5						
CMAR				LR	LR	23 40 09.7	
	comp=Z,12nm,19.9s,baz=10.0,slow=38						
CHTO	Chiang Mai	30.79	309	P	P	23 26 58.3	-0.3
FORT	Forrest	30.87	173	P	P	23 26 59.0	-0.1
FORT	Forrest	30.87	173	P	P	23 26 58.5	-0.6
	comp=Z,83nm,0.7s						
BLDU	Ballidu	31.20	192	P	P	23 27 00.8	-1.2
	comp=Z,19nm,0.7s						
MULG	Mulgathing	31.64	163	P	P	23 27 06.1	+0.2
	comp=Z,13nm,1.4s						
JCJ	Chichijima	32.19	32	P	P	23 27 10.6	-0.2
NJ2	Nanjing	32.23	352	*e*P	P	23 27 11.5	+0.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KMI	Kunming	32.27	322	⇓P	P	23 27 13.3	+1.6
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NWAO	Narrogin (SRO)	33.34	190	P	P	23 27 20.8	+0.1
JNU	Nakatsue	33.60	11	P	P	23 27 23.3	+0.3
JNU				IAmb	IAmb	23 27 28.2	
	comp=Z,17nm,1.2s						
BBOO	Buckleboo	34.60	162	P	P	23 27 31.8	+0.1
BBOO				IAmb	IAmb	23 27 43.3	
	comp=Z,25nm,1.4s						
BBOO	Buckleboo	34.60	162	P	P	23 27 31.4	-0.2
	comp=Z,8.6nm,1.5s						
JMN	Monobe	34.84	15	P	P	23 27 34.2	+0.5
STKA	Stephens Creek	35.87	154	P	P	23 27 42.9	+0.4
	comp=Z,9.6nm,0.6s,baz=328,slow=9.4,SNR=27						
STKA	Stephens Creek	35.87	154	P	P	23 27 43.1	+0.6
STKA	Stephens Creek	35.87	154	P	P	23 27 42.7	+0.2
	comp=Z,3.5nm,0.9s						
JHS	Saijyo	35.88	13	P	P	23 27 41.6	-0.9
JHS				IAmb	IAmb	23 28 06.8	
	comp=Z,27nm,1.4s						
HTT	Hallett	36.15	158	P	P	23 27 45.6	+0.7
	comp=Z,13nm,1.0s						
XAN	Xi'an	36.65	339	P	P	23 27 49.0	-0.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
JWT	Wachi	36.72	16	P	P	23 27 49.7	+0.1
JWT				IAmb	IAmb	23 28 11.9	
	comp=Z,25nm,1.4s						
KSRS	Korea Array	37.46	5	P	P	23 27 55.5	-0.3
	comp=Z,2.0nm,0.7s,baz=185,slow=9.4,SNR=7.8						
CMSA	Cobar Meteorol	37.57	149	P	P	23 27 57.8	+0.9
	comp=Z,12nm,1.0s						
MJAR	Matsushiro Arr	38.72	19	P	P	23 28 05.5	-0.9
	comp=Z,3.7nm,0.7s,baz=197,slow=9.0,SNR=9.4						
MAT	Matsushiro	38.72	19	P	P	23 28 05.4	-1.0
ARMA	Armidale	40.15	141	P	P	23 28 19.9	+1.4
ARMA				IAmb	IAmb	23 28 25.9	
	comp=Z,26nm,1.4s						
ARPS	Mount Arapiles	40.20	157	P	P	23 28 19.9	+1.2
	comp=Z,33nm,0.8s						
HHC	Hu-ho-hao-te	42.17	346	*e*P	P	23 28 38.0	+3.2
HHC				pmax	pmax		
	comp=Z,59nm,7.6s						
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CAN	Canberra	42.24	149	P	P	23 28 37.2	+1.8
CAN				IAmb	IAmb	23 28 38.1	
	comp=Z,10nm,0.7s						
CAN	Canberra	42.24	149	P	P	23 28 37.5	+2.0
TOO	Toolangi	42.39	154	P	P	23 28 38.0	+1.4
TOO				IAmb	IAmb	23 28 53.8	
	comp=Z,13nm,1.5s						
USA0B	Ussuriysk Arra	44.60	8	P	P	23 28 54.2	+0.1
USA0B				IAmb	IAmb	23 29 06.8	
	comp=Z,6.6nm,0.8s						
USRK	Ussuriysk Ar.	44.60	8	P	P	23 28 54.0	-0.1
	comp=Z,3.2nm,0.6s,baz=201,slow=5.9,SNR=7.2						
USRK	Ussuriysk Ar.	44.60	8	P	P	23 28 54.0	-0.1
MDJ	Mudanjiang	44.71	6	P	P	23 28 57.8	+2.8
MDJ				pmax	pmax		
	comp=Z,15nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.3s						
GTA	Gaotai	44.97	333	⇓P	P	23 28 58.0	+0.7
GTA				pP	pP	23 29 30.5	0.0
GTA				sP	sP	23 29 45.8	-1.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ASAJ	Asahikawa	46.99	18	P	P	23 29 13.0	+0.1
	comp=Z,4.5nm,0.8s,baz=342,slow=30,SNR=1.7						
KLR	Kul'dur	49.51	7	P	P	23 29 31.1	-1.0
	comp=Z,2.1nm,0.8s,baz=250,slow=1.4,SNR=7.8						
SONM	Songino Array	50.01	345	P	P	23 29 34.3	-1.8
	comp=Z,1.4nm,0.7s,baz=160,slow=8.7,SNR=12						
SONM	Songino Array	50.01	345	P	P	23 29 35.0	-1.0
WMQ	Urumqi	54.24	328	*e*P	P	23 30 09.5	+2.1
PRZ	Przheval'sk	58.75	322	P	P	23 30 38.9	-0.6
PRZ				IAmb	IAmb	23 31 05.8	
	comp=Z,7.6nm,1.1s						
MK31	Makanchi Array	59.07	328	P	P	23 30 39.8	-1.6
MKAR	Makanchi Array	59.07	328	P	P	23 30 39.9	-1.5
	comp=Z,1.2nm,0.5s,baz=120,slow=8.1,SNR=24						
KDJ	Kajisay	59.31	321	P	P	23 30 42.7	-0.6
KDJ				IAmb	IAmb	23 30 53.5	
	comp=Z,7.7nm,1.1s						
MLZ	Mavora Lakes	59.68	145	P	P	23 30 45.5	-0.1
MLZ				IAmb	IAmb	23 30 53.9	
	comp=Z,15nm,1.3s						
PETK	Petropavlovsk-	59.95	23	P	P	23 30 47.8	+0.6
RPZ	Rata Peaks	60.48	142	P	P	23 30 51.6	+0.6
AAK	Ala-Archa	61.28	320	P	P	23 30 55.6	-1.1
	comp=Z,1.1nm,0.7s,baz=229,slow=7.5,SNR=4.1						
AAK	Ala-Archa	61.28	320	P	P	23 30 56.6	0.0
KBL	Kabul	61.60	310	P	P	23 30 58.5	-0.6
BKZ	Black Stump Fm	61.85	136	P	P	23 31 00.8	+0.5
URZ	Urewera	61.90	134	P	P	23 31 00.3	-0.3
	comp=Z,4.0nm,0.4s,baz=301,slow=24,SNR=7.3						
URZ	Urewera	61.90	134	P	P	23 31 00.8	+0.2

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YAK   Yakutsk          62.03   3  P        P        23 31 00.2 -0.9
      comp=Z,6.0nm,0.4s,baz=182,slow=0.7,SNR=7.6
YAK   Yakutsk          62.03   3  P        P        23 31 00.1 -0.9
ZALV  Zalesovo Beam    62.67 335  P        P        23 31 02.6 -2.8
      comp=Z,0.8nm,0.6s,baz=114,slow=6.6,SNR=5.0
ZALV  Zalesovo Beam    62.67 335  P        P        23 31 04.4 -1.1
KURBB Kurchatov Arra   63.40 330  P        P        23 31 07.5 -2.8
      comp=Z,2.3nm,0.7s,baz=132,slow=6.0,SNR=18
KURK  Kurchatov        63.41 330  P        P        23 31 08.7 -1.7
KURK                              IAmb     IAmb     23 31 10.7
      comp=Z,5.7nm,0.7s
CASY  Casey            66.82 186  P        P        23 31 32.1  0.0
CASY                              IAmb     IAmb     23 31 33.2
      comp=Z,6.5nm,0.7s
TIXI  Tiksi            71.61   2  P        P        23 31 59.7 -1.8
      comp=Z,3.4nm,0.4s,baz=159,slow=2.9,SNR=14
TIXI  Tiksi            71.61   2  P        P        23 32 00.3 -1.2
TIXI                              IAmb     IAmb     23 32 01.0
      comp=Z,5.1nm,0.5s
NRIK  Noril'sk         73.38 347  P        P        23 32 11.1 -1.0
      comp=Z,1.2nm,0.6s,baz=103,slow=10,SNR=3.6
VNDA  Vanda            80.13 172  P        P        23 32 49.7  0.0
      comp=Z,1.2nm,0.6s,baz=316,slow=6.2,SNR=8.0
VNDA  Vanda            80.13 172  P        P        23 32 49.9 +0.1
IMAR  Indian Mountai   86.89  24  P        P        23 33 25.0 +0.5
KTH   Kantishna Hill   87.86  27  P        P        23 33 31.3 +2.0
QSPA  South Pole Qui   89.93 180  P        P        23 33 38.2 -0.8
      comp=Z,0.7nm,0.3s,baz=282,slow=2.8
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NEIC ***31*** *00:53:13.3±1.3, 21°.23N±0°.08×121°.80E±0°.09, h125km±6km, mb4.6/62, Error ellipse: s-maj=12.4km s-min=10.5km az=61.0*

TAP ***31*** *00:53:14.2, 21°.41N×121°.80E, h147km, ML5.0, D*

JMA ***31*** *00:53:14.6±0.3, 21°.36N×121°.80E, h120km, M3.6*

BJI ***31*** *00:53:14.6±0.0, 21°.35N×121°.77E, h129km, mB4.5/12, mb4.2/28*

IDC ***31*** *00:53:16.2±1.0, 21°.23N×121°.99E, h163km±9km, mb3.9/26, mb1 4.0/29, mb1mx3.8/59, mbtmp4.4/29, MS3.2/2, Ms1 3.2/2, ms1mx2.8/30, Error ellipse: s-maj=15.8km s-min=8.0km az=78.0*

ISC 31 00:53:14.4±0.5**, 21°.31N**±0°.03×**121°.81E**±0°.03**, h142**km±4km**, n317, σ1ˢ50**/435**, mb4.5**/56**, 7C-55D, Taiwan region**

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Code  Station Name        Δ°  AZ°   Phase ID        Time     Res
                                  Op      ISC     h  m  s   ISC
LYUB  Lan-yu             0.72 343⇓iP      Pn      00 53 35.7 -0.5
      baz=342
LYUB                               S      Sn      00 53 51.6 -1.2
      baz=342
LAY   Lan-yu             0.77 342 i P     Pn      00 53 35.5 -1.0
      baz=341
LAY                               eS      Sn      00 53 51.5 -1.9
      baz=341
BBP   Basco              0.87 171⇑eP      Pn      00 53 36.5 -0.9
TSEB  Hengchuen, Pin     1.03 305 i P     Pn      00 53 39.3 +0.6
      baz=299
TSEB                               S      Sn      00 53 57.0 -0.1
      baz=299
SNW   Nanwan             1.18 303 eP      Pn      00 53 40.9 +0.8
      baz=300
SNW                               eS      Sn      00 53 59.6  0.0
      baz=300
HEN   Hengchun           1.22 305⇓iP      Pn      00 53 40.7 +0.3
      baz=301
HEN                                S      Sn      00 53 59.1 -1.1
      baz=301
SLIU  Shizi              1.31 314⇓iP      Pn      00 53 41.0 -0.3
      baz=311
SLIU                              eS      Sn      00 54 00.1 -1.8
      baz=311
TAW   Tawu               1.35 321 i P     Pn      00 53 40.9 -0.8
      baz=319
TAW                               eS      Sn      00 54 00.2 -2.4
      baz=319
EAST  Anshuo             1.40 320⇓iP      Pn      00 53 41.6 -0.6
      baz=318
EAST                              eS      Sn      00 54 01.5 -2.0
      baz=318
LDUT  Ludao              1.40 347⇓iP      Pn      00 53 40.8 -1.4
      baz=346
LDUT                              eS      Sn      00 54 01.4 -2.1
      baz=346
ECL   Taimali            1.51 328 i P     Pn      00 53 42.2 -1.2
      baz=327
ECL                                S      Sn      00 54 03.1 -2.6
      baz=327
SCZT  Fangliau           1.53 314⇓iP      Pn      00 53 43.4 -0.3
      baz=312
SCZT                               S      Sn      00 54 04.3 -1.8
      baz=312
TTN   Taitung            1.57 337  P      Pn      00 53 43.7 -0.3
      baz=336
TTN                               eS      Sn      00 54 05.5 -1.3
      baz=336
SSPT  Xinbi              1.65 316⇓iP      Pn      00 53 45.0 +0.1
      baz=313
SSPT                              eS      Sn      00 54 07.4 -0.9
      baz=313
TWGBT Beinan             1.65 336⇓iP      Pn      00 53 43.8 -1.2
      baz=335
TWGBT                             eS      Sn      00 54 05.4 -3.1
      baz=335
TWG   Pinlang            1.66 336         Pn      00 53 43.6 -1.5
TWG                                Sn     Sn      00 54 05.1 -3.5
WLCH  Liuqiu             1.69 308⇓iP      Pn      00 53 46.7 +1.3
      baz=306
WLCH                              eS      Sn      00 54 11.0 +1.8
      baz=306
MASBT Mashibuluo         1.70 320⇓iP      Pn      00 53 45.3 -0.3
      baz=318
MASBT                              S      Sn      00 54 07.3 -2.1
      baz=318
TWP   Hsiaoliuchiu       1.70 308⇓iP      Pn      00 53 46.8 +1.3
      baz=305
TWP                               eS      Sn      00 54 10.7 +1.4
      baz=305
LONT  Longtian           1.71 338 i P     Pn      00 53 44.7 -1.0
      baz=338
LONT                              eS      Sn      00 54 07.1 -2.6
      baz=338
EDH   Donghe             1.72 344⇓iP      Pn      00 53 45.0 -0.8
      baz=344
EDH                               eS      Sn      00 54 08.3 -1.6
      baz=344
TSMG  Majia              1.76 322⇓iP      Pn      00 53 45.9 -0.4
      baz=320
TSMG                              eS      Sn      00 54 08.9 -1.8
      baz=320
SSD   Sandimen           1.80 323⇓iP      Pn      00 53 46.3 -0.4
      baz=321
SSD                                S      Sn      00 54 09.1 -2.4
      baz=321
CHKT  Chengkung          1.83 347⇓iP      Pn      00 53 46.1 -0.9
      baz=347
CHKT                              eS      Sn      00 54 10.5 -1.6
      baz=347
TSPT  Pingtung City      1.83 318 eP      Pn      00 53 47.8 +0.7
      baz=316
TSPT                              eS      Sn      00 54 12.0 -0.1
      baz=316
ECS   Chishang           1.86 343 eP      Pn      00 53 46.9 -0.5
      baz=342
ECS                               eS      Sn      00 54 11.8 -1.0
      baz=342
SGLT  Jiouru             1.87 319 eP      Pn      00 53 48.5 +1.1
      baz=317
SGLT                              eS      Sn      00 54 14.3 +1.5
      baz=317
KAU   Kaohsiung          1.88 312 eP      Pn      00 53 48.4 +0.8
      baz=310
KAU                               eS      Sn      00 54 13.6 +0.6
      baz=310
FULB  Fuli               1.94 346⇓iP      Pn      00 53 47.7 -0.7
      baz=345
FULB                              eS      Sn      00 54 13.6 -0.9
      baz=345
TWM1  Shoushan           1.98 320  P      Pn      00 53 49.5 +0.7
      baz=318
TWM1                              eS      Sn      00 54 16.9 +1.6
      baz=318
SNJT  Kaohsiung City     1.99 317⇓eP      Pn      00 53 49.4 +0.5
      baz=315
SNJT                              eS      Sn      00 54 13.4 -1.9
      baz=315
SLGT  Liugui             2.00 327⇓iP      Pn      00 53 48.8 -0.2
      baz=326
SLGT                              eS      Sn      00 54 13.8 -1.8
      baz=326
ELDTW Lidau              2.01 339  P      Pn      00 53 48.2 -1.1
      baz=338
ELDTW                             eS      Sn      00 54 13.8 -2.3
      baz=338
ECBN  Changbin           2.03 351 eP      Pn      00 53 48.6 -0.7
      baz=350
ECBN                              eS      Sn      00 54 15.2 -1.1
      baz=350
EYUL  Yuli               2.08 347 eP      Pn      00 53 49.0 -1.0
      baz=347
STYH  Taoyuan            2.09 333⇓iP      Pn      00 53 49.9 -0.2
      baz=332
STYH                              eS      Sn      00 54 16.2 -1.3
      baz=332
STYT  Tauyuan            2.09 332⇓eP      Pn      00 53 49.8 -0.4
      baz=331
STYT                              eS      Sn      00 54 15.7 -1.9
      baz=331
TWF1  Yuli               2.09 347⇓iP      Pn      00 53 48.9 -1.3
      baz=347
TWF1                              eS      Sn      00 54 17.5 -0.1
      baz=347
SGST  Jiashian           2.10 327⇓iP      Pn      00 53 49.1 -1.1
      baz=326
SGST                              eS      Sn      00 54 15.5 -2.3
      baz=326
YULB  Yu-li              2.13 347⇓iP      Pn      00 53 49.3 -1.3
      baz=347
YULB                              eS      Sn      00 54 15.3 -3.1
      baz=347
YULB  Yu-li              2.13 347         Pn      00 53 49.3 -1.3
HGSD  Ruisui             2.20 351 eP      Pn      00 53 50.4 -1.1
      baz=351
HGSD                              eS      Sn      00 54 18.0 -2.0
      baz=351
CHN3  Shinhua            2.21 323 eP      Pn      00 53 52.2 +0.6
      baz=321
CHN3                              eS      Sn      00 54 20.8 +0.7
      baz=321
CHN1  Nanshi             2.21 328 ⇓P      Pn      00 53 51.2 -0.4
      baz=326
CHN1                              eS      Sn      00 54 18.5 -1.8
      baz=326
WTP   Ta-pu              2.23 330⇓iP      Pn      00 53 51.3 -0.5
      baz=329
WTP                               eS      Sn      00 54 18.1 -2.5
      baz=329
EHY   Hungye             2.23 348 ⇓P      Pn      00 53 50.7 -1.2
      baz=348
EHY                               eS      Sn      00 54 17.6 -3.1
      baz=348
TAI   Tainan             2.25 319 eP      Pn      00 53 52.4 +0.4
      baz=317
TAI                               eS      Sn      00 54 19.9 -1.0
      baz=317
SNST  Tainan City        2.26 328 ⇓P      Pn      00 53 51.7 -0.5
      baz=326
SNST                              eS      Sn      00 54 19.4 -1.8
      baz=326
TAI1  Yung-k'ang         2.27 320 eP      Pn      00 53 52.4 +0.3
      baz=318
TAI1                              eS      Sn      00 54 20.5 -0.7
      baz=318
TPUB  Ta-pu              2.27 331⇓iP      Pn      00 53 51.7 -0.5
      baz=330
TPUB                              eS      Sn      00 54 18.8 -2.6
      baz=330
TPUB  Ta-pu              2.27 331  Pn     Pn      00 53 51.5 -0.7
TPUB                               Sn     Sn      00 54 19.6 -1.8
TPUB  Ta-pu              2.27 331  P      Pn      00 53 51.8 -0.5
SSHA  Shanhua            2.30 322 eP      Pn      00 53 53.0 +0.4
      baz=321
SSHA                              eS      Sn      00 54 21.4 -0.8
      baz=321
TWK   Hsinying           2.30 328 ⇓P      Pn      00 53 52.1 -0.6
      baz=327
TWK                               eS      Sn      00 54 20.4 -1.8
      baz=327
YUS   Yu-Shan            2.31 340⇓eP      Pn      00 53 53.0 -0.3
      baz=339
YUS                               eS      Sn      00 54 21.9 -1.3
      baz=339
CHN4  Tsaushan           2.33 331⇓eP      Pn      00 53 52.4 -0.6
      baz=330
CHN4                              eS      Sn      00 54 20.4 -2.2
      baz=330
EGFH  Guangfu            2.38 351 eP      Pn      00 53 52.9 -0.7
      baz=351
ALS   Alishan            2.38 337⇓eP      Pn      00 53 53.4 -0.5
      baz=337
ALS                               eS      Sn      00 54 22.9 -1.5
      baz=337
SCLT  Jiali              2.39 321 ⇓P      Pn      00 53 53.7  0.0
      baz=320
SCLT                              eS      Sn      00 54 22.9 -1.1
      baz=320
ICHU  Yijhu              2.49 325 ⇓P      Pn      00 53 54.3 -0.6
      baz=324
ICHU                              eS      Sn      00 54 23.9 -2.3
      baz=324
CHN5  Tsauling           2.51 335 ⇓P      Pn      00 53 54.4 -0.9
      baz=335
CHN5                              eS      Sn      00 54 25.1 -1.7
      baz=335
VWDT  VWDT               2.51 346 ⇓P      Pn      00 53 55.2  0.0
      baz=345
VWDT                              eS      Sn      00 54 26.4 -0.4
      baz=345
CHN8  Yiju               2.51 324 ⇓P      Pn      00 53 54.8 -0.5
      baz=323
CHN8                              eS      Sn      00 54 24.7 -2.1
      baz=323
ESL   Shilin             2.52 352 eP      Pn      00 53 54.5 -0.8
      baz=352
ESL                               eS      Sn      00 54 24.9 -2.0
      baz=352
CHY   Chiayi             2.53 330 ⇓P      Pn      00 53 54.7 -0.8
      baz=329
CHY                               eS      Sn      00 54 24.6 -2.6
      baz=329
CHN2  Minshiung          2.54 331⇓eP      Pn      00 53 55.0 -0.5
      baz=330
CHN2                              eS      Sn      00 54 25.7 -1.6
      baz=330
TEYL  Yanliau Villag     2.56 356 eP      Pn      00 53 55.9 +0.1
      baz=356
TEYL                              eS      Sn      00 54 29.6 +1.8
      baz=356
SSLB  Suanglung          2.59 342 ⇓P      Pn      00 53 55.5 -0.8
      baz=342
SSLB                              eS      Sn      00 54 26.8 -1.9
      baz=342
SSLB  Suanglung          2.59 342  Pn     Pn      00 53 55.4 -0.8
SSLB                               Sn     Sn      00 54 26.7 -1.9
SSLB  Suanglung          2.59 342  P      Pn      00 53 55.7 -0.6
WGK   Gukeng             2.63 334 ⇓P      Pn      00 53 56.0 -0.8
      baz=333
WGK                               eS      Sn      00 54 28.0 -1.5
      baz=333
WDLH  Douliu             2.65 334⇓eP      Pn      00 53 56.1 -0.9
      baz=333
WDLH                              eS      Sn      00 54 27.8 -2.0
      baz=333
ETM   Tongmen            2.66 354 eP      Pn      00 53 56.5 -0.7
      baz=354
ETM                               eS      Sn      00 54 27.5 -2.7
      baz=354
HWA   Hwalien            2.66 356 eP      Pn      00 53 56.4 -0.8
      baz=356
WJS   Zhushan            2.70 338 ⇓P      Pn      00 53 56.9 -0.6
      baz=338
WJS                               eS      Sn      00 54 29.7 -1.2
      baz=338
SMLT  Sun Moon Lake      2.70 342  P      Pn      00 53 57.0 -0.7
      baz=342
SMLT                              eS      Sn      00 54 30.2 -1.0
      baz=342
OWD   Renai              2.70 348 eP      Pn      00 53 57.9 +0.2
      baz=347
OWD                               eS      Sn      00 54 26.5 -4.7
      baz=347
WTK   Tuku               2.71 331 ⇓P      Pn      00 53 56.7 -1.1
      baz=330
WTK                               eS      Sn      00 54 28.8 -2.4
      baz=330
TYC   Yuchr              2.73 341 eP      Pn      00 53 57.2 -0.8
      baz=341
TYC                               eS      Sn      00 54 30.1 -1.6
      baz=341
WSF   Szhu               2.75 328 eP      Pn      00 53 57.1 -1.0
      baz=327
WSF                               eS      Sn      00 54 29.3 -2.7
      baz=327
WUSB  Renai              2.75 347 eP      Pn      00 53 58.1 -0.2
      baz=346
WUSB                              eS      Sn      00 54 30.9 -1.4
      baz=346
WNT   Mingjian           2.76 338 ⇓P      Pn      00 53 57.9 -0.5
      baz=337
WNT                               eS      Sn      00 54 30.9 -1.5
      baz=337
TWD   Chiawan            2.77 356 eP      Pn      00 53 58.0 -0.5
      baz=356
TWD                               eS      Sn      00 54 31.6 -0.9
      baz=356
WDGT  Dungji             2.78 315 ⇓P      Pn      00 53 57.9 -0.8
      baz=313
WDGT                              eS      Sn      00 54 29.9 -2.9
      baz=313
WNT1  Nantou City        2.79 338 eP      Pn      00 53 58.4 -0.4
      baz=337
CHGB  Renai              2.80 348 eP      Pn      00 53 59.1 -0.1
      baz=348
CHGB                              eS      Sn      00 54 32.4 -1.3
      baz=348
WPL   Puli Township      2.81 344 eP      Pn      00 53 58.4 -0.5
      baz=343
DPDB  Guoxing            2.83 343 eP      Pn      00 53 58.7 -0.7
      baz=343
NACB  Ninganchiao        2.86 356 ⇓P      Pn      00 53 58.9 -0.8
      baz=356
NACB                              eS      Sn      00 54 32.5 -2.2
      baz=356
NACB  Ninganchiao        2.86 356         Pn      00 53 58.9 -0.8
WCS   Beigang Elemen     2.86 343 eP      Pn      00 53 58.8 -0.9
      baz=343
WCS                               eS      Sn      00 54 33.1 -1.5
      baz=343
WHF   Hehuan Shan        2.87 350⇓eP      Pn      00 53 59.6 -0.6
      baz=350
WHF                               eS      Sn      00 54 34.1 -1.4
      baz=350
WYL   Yuanlin Townsh     2.88 337 eP      Pn      00 53 59.2 -0.6
      baz=336
WMLT  Mailiao            2.89 330 eP      Pn      00 53 58.9 -1.0
      baz=329
ETLH  Xiulin Townshi     2.90 354 eP      Pn      00 53 59.2 -1.1
      baz=354
ETLH                              eS      Sn      00 54 32.7 -3.0
      baz=354
WRL   Guolierlin Hig     2.90 333⇓eP      Pn      00 53 58.9 -1.2
      baz=332
WRL                               eS      Sn      00 54 32.7 -2.9
      baz=332
VCHM  Qimei              2.91 311 ⇓P      Pn      00 53 59.4 -0.8
      baz=309
VCHM                              eS      Sn      00 54 33.0 -2.6
      baz=309
WTCT  Ta-ch'eng          2.91 331 eP      Pn      00 53 59.3 -1.0
      baz=330
WTCT                              eS      Sn      00 54 33.6 -2.1
      baz=330
FUSS  Fushou             2.97 350⇓eP      Pn      00 54 01.2 -0.1
      baz=350
FUSS                              eS      Sn      00 54 34.9 -2.7
      baz=350
TWT   Tachien            2.99 349 eP      Pn      00 54 01.4  0.0
      baz=348
WCHH  Zhanghua           2.99 337  P      Pn      00 54 00.6 -0.7
      baz=337
WCHH                              eS      Sn      00 54 35.9 -1.7
      baz=337
TDCB  Techi              2.99 348 eP      Pn      00 54 01.7 +0.2
      baz=348
TDCB                              eS      Sn      00 54 36.2 -1.7
      baz=348
TCU   Taichung           3.02 340 eP      Pn      00 54 01.1 -0.5
      baz=339
TCU                               eS      Sn      00 54 36.7 -1.5
      baz=339
PHUB  P'eng-hu           3.02 317 ⇓P      Pn      00 54 00.7 -1.0
      baz=316
PHUB                              eS      Sn      00 54 35.0 -3.3
      baz=316
SGCP  Mt. Cagua          3.06 176⇑eP      Pn      00 54 01.3 -0.9
WHP   Taichung City      3.06 345  P      Pn      00 54 01.8 -0.5
      baz=345
WHP                               eS      Sn      00 54 38.1 -1.3
      baz=345
PNG   Penghu             3.07 318 ⇓P      Pn      00 54 01.4 -0.9
      baz=316
PNG                               eS      Sn      00 54 36.2 -3.1
      baz=316
EWUT  Wuta               3.12 359 eP      Pn      00 54 02.5 -0.5
      baz=360
NNSB  Datong             3.13 353 eP      Pn      00 54 02.9 -0.3
      baz=353
NNSB                              eS      Sn      00 54 38.9 -2.2
      baz=353
NNS   Nan Shan           3.14 353 eP      Pn      00 54 03.2 -0.2
      baz=353
NNS                               eS      Sn      00 54 40.0 -1.3
      baz=353
TWQ1  Liyutan            3.17 343 eP      Pn      00 54 03.1 -0.5
      baz=342
TWQ1                              eS      Sn      00 54 39.0 -2.8
      baz=342
WDJ   Dajia District     3.21 341 eP      Pn      00 54 04.1 -0.1
      baz=340
LATG  Datong             3.22 355 eP      Pn      00 54 04.0 -0.4
      baz=355
LATG                              eS      Sn      00 54 40.1 -3.0
      baz=355
NSY   Sanyi              3.24 343 eP      Pn      00 54 03.9 -0.7
      baz=342
TWC   Suao               3.29   1 eP      Pn      00 54 05.2 +0.1
      baz=1.0
TWC                               eS      Sn      00 54 43.5 -0.9
      baz=1.0
NDT   Datong Townshi     3.29 355 eP      Pn      00 54 05.0 -0.2
      baz=355
HATJ  Hateruma jima      3.30  34  P      Pn      00 54 05.1 -0.1
HATJ                              eS      Sn      00 54 44.1 -0.5
JYNG  Yonagunijimaku     3.30  18  P      Pn      00 54 06.1 +0.8
NDS   Dongshan           3.31 358 eP      Pn      00 54 06.1 +0.7
      baz=359
ENTT  Nioudou            3.32 356 eP      Pn      00 54 05.5 -0.1
      baz=356
ENTT                              eS      Sn      00 54 43.1 -2.2
      baz=356
YOJ   Yonaguni jima      3.33  19 eP      Pn      00 54 06.0 +0.4
      baz=20
YOJ   Yonaguni jima      3.33  19  P      Pn      00 54 06.0 +0.4
YOJ                               eS      Sn      00 54 45.5 +0.2
YOJ   Yonaguni jima      3.33  19         Pn      00 54 06.0 +0.4
YOJ   Yonaguni jima      3.33  19  P      Pn      00 54 06.5 +0.9
NMLH  Miaoli             3.35 344 eP      Pn      00 54 05.0 -0.9
      baz=343
NMLH                              eS      Sn      00 54 43.3 -2.6
      baz=343
YHNB  Yeheng             3.37 353 eP      Pn      00 54 06.2 -0.1
      baz=353
YHNB                              eS      Sn      00 54 45.4 -1.0
      baz=353
YHNB  Yeheng             3.37 353  Pn     Pn      00 54 06.3  0.0
YHNB  Yeheng             3.37 353  P      Pn      00 54 06.5 +0.2
NSK   Sanguang           3.38 353 eP      Pn      00 54 06.6 +0.2
      baz=353
NSK                               eS      Sn      00 54 45.6 -1.1
      baz=353
NSTT  Nanjuang           3.39 347 eP      Pn      00 54 05.4 -1.0
      baz=347
TWE   Neicheng           3.40 358 eP      Pn      00 54 07.6 +1.0
      baz=358
LIOB  Emei               3.40 348 eP      Pn      00 54 05.8 -0.8
      baz=347
FUSB  Fushanzhiwuyua     3.44 357 eP      Pn      00 54 07.0 -0.3
      baz=357
NWLT  Wulai              3.46 355 eP      Pn      00 54 07.8 +0.3
      baz=355
APYP  Conner             3.47 189⇑eP      Pn      00 54 07.4 -0.2
IRIF  Iriomote-Funau     3.49  30  P      Pn      00 54 07.7 -0.1
IRIF                              eS      Sn      00 54 49.0 -0.2
```

NTC	**Toucheng**	**3.53**	**0**	*e*P	**Pn**	**00 54 08.1**	**-0.2**
	baz=1.0						
JKRS	**Kuro-shima**	**3.55**	**34**	*e*S	**Sn**	**00 54 50.3**	**-0.2**
TIPB	**Shuangxi**	**3.65**	**0**	*e*P	**Pn**	**00 54 10.5**	**+0.7**
TWA	**Mucha**	**3.66**	**357**	*e*P	**Pn**	**00 54 10.3**	**+0.3**
	baz=357						
TATO	**Taipei**	**3.66**	**355**	*e*P	**Pn**	**00 54 10.3**	**+0.3**
	baz=356						
TATO	**Taipei**	**3.66**	**355**	Pn	**Pn**	**00 54 09.7**	**-0.3**
TWB1	**Santiao Chiao**	**3.69**	**2**	*e*P	**Pn**	**00 54 10.1**	**-0.2**
	baz=3.0						
JIJ	**Ishigaki jima**	**3.72**	**35**	P	**Pn**	**00 54 10.3**	**-0.5**
JIJ				*e*S	**Sn**	**00 54 53.3**	**-1.3**
NWF	**Wu-fen Shan**	**3.75**	**360**	*e*P	**Pn**	**00 54 11.7**	**+0.5**
	baz=360						
WFSB	**Wu-fen Shan**	**3.75**	**360**	*e*P	**Pn**	**00 54 11.9**	**+0.8**
	baz=360						
WFSB				*e*S	**Sn**	**00 54 51.8**	**-3.3**
	baz=360						
SXI1	**Grass Mountain**	**3.77**	**1**	*e*P	**Pn**	**00 54 11.7**	**+0.2**
	baz=1.0						
TWS1	**Kuangyinshan**	**3.79**	**355**	*e*P	**Pn**	**00 54 11.8**	**+0.1**
	baz=355						
YM01	**YM01**	**3.83**	**357**	*e*P	**Pn**	**00 54 12.3**	**+0.1**
	baz=357						
JISG	**Ishigakijimahi**	**3.99**	**35**	P	**Pn**	**00 54 14.0**	**-0.3**
JISG				*e*S	**Sn**	**00 55 00.5**	**-0.4**
JTJ	**Tarama**	**4.25**	**38**	P	**Pn**	**00 54 17.5**	**-0.2**
JTJ				*e*S	**Sn**	**00 55 06.8**	**-0.2**
SAMP	**Sagada Mountai**	**4.29**	**192**	⇑*e*P	**Pn**	**00 54 19.5**	**+1.1**
CAUP	**Cauayan**	**4.34**	**180**	⇑*e*P	**Pn**	**00 54 20.5**	**+1.5**
KNM	**Kinmen**	**4.39**	**315**	*e*P	**Pn**	**00 54 19.9**	**+0.3**
	baz=313						
KNM				*e*S	**Sn**	**00 55 10.0**	**-0.3**
	baz=313						
KNMB	**Chin-men Tao**	**4.45**	**315**	*e*P	**Pn**	**00 54 19.4**	**-1.0**
	baz=314						
KNMB				*e*S	**Sn**	**00 55 09.0**	**-2.8**
	baz=314						
KNMB	**Chin-men Tao**	**4.45**	**315**		**Pn**	**00 54 19.4**	**-1.0**
PTMZ	**Houxiangcun**	**4.46**	**327**	⇓*e*P	**Pn**	**00 54 19.4**	**-1.1**
	baz=326						
PTMZ				*e*S	**Sn**	**00 55 08.4**	**-3.6**
	baz=326						
ZPLA	**Ao Xicun**	**4.57**	**306**	*e*P	**Pn**	**00 54 21.4**	**-0.5**
	baz=304						
ZPLA				*e*S	**Sn**	**00 55 11.6**	**-2.9**
	baz=304						
JIRB	**Irabujima**	**4.67**	**41**	*e*S	**Sn**	**00 55 17.2**	**+0.2**
QZH	**Quanzhou**	**4.68**	**321**	P	**Pn**	**00 54 22.3**	**-1.1**
QZH				S	**Sn**	**00 55 14.0**	**-3.1**
QZH				smax	smax		
	comp=N,210nm,0.3s						
QZH				smax	smax		
	comp=E,190nm,0.3s						
DSXP	**Dongshan**	**4.71**	**301**	*e*P	**Pn**	**00 54 23.4**	**-0.4**
	baz=300						
DSXP				*e*S	**Sn**	**00 55 16.3**	**-1.5**
	baz=300						
JMJ2	**Miyako jima3**	**4.71**	**43**	*e*S	**Sn**	**00 55 19.0**	**+1.2**
JOGS	**Gusukube**	**4.77**	**43**	*e*S	**Sn**	**00 55 18.7**	**-0.6**
VDOS	**Pratas Island**	**4.79**	**264**	*e*P	**Pn**	**00 54 25.3**	**+0.5**
	baz=262						
AXDP	**Jialang**	**5.03**	**316**	*e*P	**Pn**	**00 54 27.3**	**-0.7**
	baz=315						
MATB	**Ma-tsu**	**5.12**	**341**	*e*P	**Pn**	**00 54 27.2**	**-2.0**
	baz=340						
MATB				*e*S	**Sn**	**00 55 22.4**	**-5.1**
	baz=340						
MSUT	**Lienchiang**	**5.14**	**341**	*e*P	**Pn**	**00 54 27.9**	**-1.6**
	baz=340						
MSUT				*e*S	**Sn**	**00 55 23.0**	**-5.1**
	baz=340						
SMPP	**San Manuel, Pa**	**5.24**	**192**	⇑*e*P	**Pn**	**00 54 31.3**	**+0.3**
LYJJ	**Jianjiangzhen**	**5.55**	**341**	*e*P	**Pn**	**00 54 33.2**	**-1.7**
	baz=340						
SCZP	**Santa Cruz**	**5.79**	**198**	⇑*e*P	**Pn**	**00 54 38.2**	**-0.1**
XPSS	**Dashiqiu**	**5.79**	**345**	*e*P	**Pn**	**00 54 36.3**	**-1.8**
	baz=345						
SXFK	**Yanhouchang**	**6.34**	**324**	*e*P	**Pn**	**00 54 44.7**	**-0.9**
	baz=323						
JOW	**Kunigami**	**8.07**	**46**	P	**Pn**	**00 55 08.3**	**-0.4**
	1.2nm,0.3s,baz=242,slow=17,SNR=2.0						
JOW	**Kunigami**	**8.07**	**46**		**Pn**	**00 55 07.9**	**-0.8**
NJ2	**Nanjing**	**11.02**	**347**	*e*P	**Pn**	**00 55 49.0**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
WHN	**Wuhan**	**11.38**	**325**	⇓P	**Pn**	**00 55 54.8**	**+2.0**
ENH	**Enshi**	**14.24**	**311**	Pn	**Pn**	**00 56 25.9**	**-3.7**
JNU	**Nakatsue**	**14.26**	**32**	P	**Pn**	**00 56 30.3**	**+0.4**
	0.2nm,0.3s,baz=157,slow=18,SNR=3.8						
JNU	**Nakatsue**	**14.26**	**32**		**Pn**	**00 56 30.5**	**+0.6**
JNU	**Nakatsue**	**14.26**	**32**	P	**Pn**	**00 56 30.7**	**+0.8**
MYLDM	**Lahad Datu**	**16.35**	**192**		**Pn**	**00 56 55.5**	**-0.5**
MYLDM				IAmb	IAmb	00 57 11.2	
	comp=Z,21nm,1.0s						
JHS	**Saijyo**	**16.87**	**34**	P	**P**	**00 57 01.4**	**-0.5**
JHS				IAmb	IAmb	00 57 19.4	
	comp=Z,34nm,1.5s						
KSRS	**Korea Array**	**16.94**	**17**	P	**Pn**	**00 57 03.2**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=198,slow=11,SNR=13						
KSRS				pP	**pwP**	**00 57 29.4**	**-3.2**
	comp=Z,0.3nm,0.3s,baz=199,slow=12,SNR=6.1						
XAN	**Xi'an**	**17.04**	**321**	P	**Pn**	**00 57 06.3**	**+2.0**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
JWT	**Wachi**	**18.33**	**38**	P	**Pn**	**00 57 19.1**	**-0.4**
JWT				IAmb	IAmb	00 57 21.5	
	comp=Z,26nm,0.8s						
BJI	**Beijing**	**19.28**	**347**	P	**P**	**00 57 28.5**	**+0.4**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
INU	**Inuyama**	**19.32**	**40**	P	**P**	**00 57 29.9**	**+1.2**
INU				IAmb	IAmb	00 57 31.7	
	comp=Z,19nm,0.7s						
INU	**Inuyama**	**19.32**	**40**	P	**Pn**	**00 57 31.4**	**+0.2**
JCJ	**Chichijima**	**19.45**	**69**	P	**P**	**00 57 29.8**	**-0.2**
JGF	**Kuroka**	**19.70**	**40**	P	**P**	**00 57 33.7**	**+1.0**
JGF				IAmb	IAmb	00 57 35.5	
	comp=Z,11nm,0.7s						
TOLI2	**Tolitoli**	**20.10**	**183**	P	**P**	**00 57 37.2**	**0.0**
TOLI2				IAmb	IAmb	00 57 43.0	
	comp=Z,28nm,1.1s						
GAMI	**Galela, Maluku**	**20.21**	**162**	P	**P**	**00 57 38.7**	**+0.4**
	comp=Z,105nm,0.7s						
GTOI	**Gorontalo**	**20.58**	**177**	P	**P**	**00 57 42.1**	**-0.2**
	comp=Z,248nmcomp=Z,23nm,0.8s						
MRSI	**Marisa**	**20.70**	**180**	P	Pn	00 57 48.6	+1.0
MAT	**Matsushiro**	**20.84**	**40**	P	**P**	**00 57 44.8**	**-0.1**
MJAR	**Matsushiro Arr**	**20.84**	**40**	P	**P**	**00 57 45.0**	**0.0**
	comp=Z,3.6nm,0.8s,baz=226,slow=8.7,SNR=9.0						
MJAR	**Matsushiro Arr**	**20.84**	**40**	P	**P**	**00 57 46.4**	**+1.5**
MPSI	**Mapaga**	**20.93**	**185**	P	Pn	00 57 48.3	-1.9
	comp=Z,44nm,0.6s						
SBUM	**Sibu**	**20.94**	**208**	P	**P**	**00 57 44.6**	**-1.6**
TNTI	**Ternate**	**21.12**	**164**	P	**P**	**00 57 51.1**	**+3.0**
TNTI	**Ternate**	**21.12**	**164**	P	**P**	**00 57 46.5**	**-1.6**
TNTI				IAmb	IAmb	00 57 51.6	
	comp=Z,29nm,0.7s						
HHC	**Hu-ho-hao-te**	**21.34**	**338**	*e*P	**P**	**00 57 51.3**	**+1.0**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,73nm,6.7s						
LZH	**Lanzhou**	**21.52**	**317**	*e*P	**P**	**00 57 57.3**	**+4.9**
LZH				pP	pP	00 58 21.3	+3.1
LZH				sP	sP	00 58 32.5	-3.4
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
APSI	**Ampana**	**22.08**	**180**	P	**P**	**00 58 00.2**	**+2.0**
	comp=Z,49nm,1.2s						
LUWI	**Luwuk**	**22.23**	**177**	P	**P**	**00 57 58.7**	**-1.0**
LUWI				IAmb	IAmb	00 58 22.8	
	comp=Z,32nm,0.8s						
LBMI	**Labuha**	**22.51**	**165**	P	P	00 58 12.6	+10
SANI	**Sanana**	**23.57**	**170**	P	**P**	**00 58 13.2**	**+1.0**
	comp=Z,36nm,0.6s						
MMSI	**Mamuju**	**24.02**	**187**	P	**P**	**00 58 18.4**	**+2.1**
	comp=Z,14nm,0.6s						
TTSI	**Tana Toraja**	**24.28**	**185**	P	**P**	**00 58 25.8**	**+7.1**
USRK	**Ussuriysk Ar.**	**24.34**	**18**	P	**P**	**00 58 19.9**	**+0.9**
	comp=Z,2.1nm,0.5s,baz=211,slow=8.9,SNR=7.3						
USRK	**Ussuriysk Ar.**	**24.34**	**18**	P	**P**	**00 58 19.1**	**+0.2**
SPSI	**Sidrap Palu**	**25.20**	**185**	P	**P**	**00 58 33.0**	**+6.0**
JTM	**Tenmabayashi**	**25.38**	**36**	P	**P**	**00 58 28.1**	**-0.3**
BBKI	**Banjar Baru**	**25.55**	**196**	P	**P**	**00 58 36.1**	**+5.9**
FAKI	**Fak Fak**	**26.16**	**156**	P	**P**	**00 58 35.9**	**+0.2**
FAKI				IAmb	IAmb	00 58 37.0	
	comp=Z,18nm,0.7s						
FAKI	**Fak Fak**	**26.16**	**156**	P	**P**	**00 58 34.9**	**-0.8**
IPM	**Ipoh**	**26.21**	**233**	P	P	00 58 22.8	-13
KAPI	**Kappang**	**26.24**	**185**	P	**P**	**00 58 36.2**	**-0.1**
	comp=Z,4.3nm,0.5s,baz=315,slow=3.1,SNR=5.1						
KAPI	**Kappang**	**26.24**	**185**	P	**P**	**00 58 36.0**	**-0.4**
KAPI				IAmb	IAmb	00 58 37.4	
	comp=Z,30nm,1.4s						
RGRI	**Rengat**	**28.73**	**224**	P	**P**	**00 59 01.6**	**+2.9**
KLR	**Kul'dur**	**28.97**	**14**	P	**P**	**00 59 01.2**	**+0.8**
	comp=Z,1.9nm,0.8s,baz=230,slow=7.3,SNR=6.2						
KLR				pP	**pwP**	**00 59 34.9**	**-0.4**
	comp=Z,3.1nm,0.8s,baz=232,slow=5.6,SNR=6.0						
KLR				LR	LR	01 12 45.4	
	comp=Z,41nm,18.4s,baz=197,slow=40						
ULN	**Ulaanbaatar**	**29.04**	**339**	P	**P**	**00 59 01.9**	**+0.6**
SONM	**Songino Array**	**29.24**	**338**	P	**P**	**00 59 03.6**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=156,slow=9.5,SNR=12						
SONM				pP	**pwP**	**00 59 39.3**	**+4.3**
	comp=Z,0.6nm,0.7s,baz=141,slow=9.3,SNR=2.4						
SONM	**Songino Array**	**29.24**	**338**	P	**P**	**00 59 03.3**	**+0.3**
LBFI	**Labuhan Bajo,**	**29.66**	**184**	P	**P**	**00 59 07.0**	**+0.1**
	comp=Z,33nm,1.1s						
EDFI	**Ende, Flores**	**29.87**	**180**	P	**P**	**00 59 08.5**	**-0.3**
	comp=Z,35nm,0.8s						
BATI	**Baumata**	**31.37**	**176**	P	**P**	**00 59 20.3**	**-1.6**
	comp=Z,16nm,0.4s,baz=294,slow=20,SNR=4.6						
MTN	**Manton Dam**	**35.15**	**164**	P	**P**	**00 59 52.4**	**-2.2**
MTN	**Manton Dam**	**35.15**	**164**	P	**P**	**00 59 52.8**	**-1.9**
WMQ	**Urumqi**	**36.09**	**316**	*e*P	**P**	**01 00 05.8**	**+3.2**
KNRA	**Kununurra**	**37.38**	**169**	P	**P**	**01 00 12.1**	**-1.5**
KNRA				IAmb	IAmb	01 00 32.0	
	comp=Z,22nm,1.2s						
KNRA	**Kununurra**	**37.38**	**169**	P	**P**	**01 00 11.6**	**-2.0**
FITZ	**Fitzroy Crossi**	**39.34**	**174**	P	**P**	**01 00 28.4**	**-1.6**
	comp=Z,4.1nm,0.4s,baz=4.9,slow=7.5,SNR=29						
MK31	**Makanchi Array**	**40.83**	**318**	P	**P**	**01 00 43.4**	**+1.3**
MK31				IAmb	IAmb	01 00 49.6	
	comp=Z,6.0nm,0.5s						
MKAR	**Makanchi Array**	**40.83**	**318**	P	**P**	**01 00 43.5**	**+1.4**
	comp=Z,4.1nm,0.5s,baz=109,slow=9.6,SNR=39						
MKAR				ScP	**ScP**	**01 06 14.7**	**-2.0**
	comp=Z,0.5nm,0.8s,baz=108,slow=4.7,SNR=2.7						
MKAR	**Makanchi Array**	**40.83**	**318**	P	**P**	**01 00 43.0**	**+1.0**
COEN	**Coen**	**40.84**	**147**	P	**P**	**01 00 41.4**	**-1.1**
COEN				IAmb	IAmb	01 00 53.6	
	comp=Z,26nm,1.4s						
COEN	**Coen**	**40.84**	**147**	P	**P**	**01 00 41.5**	**-0.9**
WB0	**Warramunga Arr**	**42.64**	**162**	P	**P**	**01 00 55.3**	**-1.7**
WB0				IAmb	IAmb	01 00 56.3	
	comp=Z,6.5nm,0.8s						
PSA00	**Pilbara Seismi**	**42.66**	**183**	P	**P**	**01 00 56.2**	**-0.9**
PSA00				IAmb	IAmb	01 01 22.2	
	comp=Z,6.4nm,1.2s						
KDJ	**Kajisay**	**42.69**	**310**	P	**P**	**01 00 58.8**	**+1.3**
KDJ				IAmb	IAmb	01 01 01.5	
	comp=Z,5.6nm,0.9s						
WRAB	**Tennant Creek**	**42.78**	**163**	P	**P**	**01 00 56.9**	**-1.2**
WRA	**Warramunga Arr**	**42.79**	**163**	P	**P**	**01 00 56.5**	**-1.6**
	comp=Z,2.4nm,0.4s,baz=333,slow=11,SNR=48						
WRA				ScP	**ScP**	**01 06 22.0**	**-2.8**
	comp=Z,0.4nm,0.8s,baz=343,slow=4.1,SNR=5.0						
WRA	**Warramunga Arr**	**42.79**	**163**	P	**P**	**01 00 56.6**	**-1.6**
ZAA0	**Zalesovo Array**	**42.98**	**329**	P	**P**	**01 00 59.3**	**-0.1**
ZALV	**Zalesovo Beam**	**42.98**	**329**	P	**P**	**01 00 59.8**	**+0.5**
	comp=Z,2.4nm,0.4s,baz=115,slow=8.0,SNR=4.4						
GIRL	**Giralia**	**44.30**	**190**	P	**P**	**01 01 10.6**	**+0.3**
KURK	**Kurchatov**	**44.68**	**322**	P	**P**	**01 01 13.6**	**+0.7**
KURK				IAmb	IAmb	01 01 19.5	
	comp=Z,6.4nm,0.5s						
KURBB	**Kurchatov Arra**	**44.69**	**322**	P	**P**	**01 01 14.5**	**+1.4**
	comp=Z,3.7nm,0.5s,baz=112,slow=7.7,SNR=26						
QIS	**Mount Isa**	**45.10**	**156**	P	**P**	**01 01 15.3**	**-1.3**
AS31	**Alice Springs**	**46.23**	**165**	P	**P**	**01 01 24.7**	**-0.8**
ASAR	**Alice Springs**	**46.23**	**165**	P	**P**	**01 01 24.2**	**-1.3**
	comp=Z,1.2nm,0.3s,baz=344,slow=7.1,SNR=45						
ASAR				ScP	**ScP**	**01 06 36.1**	**-2.8**
	comp=Z,0.7nm,0.7s,baz=347,slow=3.8,SNR=5.2						
ASAR	**Alice Springs**	**46.23**	**165**	P	**P**	**01 01 24.7**	**-0.7**
WRKA	**Warakurna**	**46.50**	**172**	P	**P**	**01 01 26.3**	**-1.3**
CTAO	**Charters Tower**	**47.58**	**148**	P	**P**	**01 01 36.0**	**0.0**
CTAO				IAmb	IAmb	01 02 01.8	
	comp=Z,15nm,1.4s						
MEEK	**Meekatharra**	**47.76**	**184**	P	**P**	**01 01 36.7**	**-0.6**
BVAR	**Borovoye Array**	**50.27**	**322**	P	**P**	**01 01 57.4**	**+1.2**
	comp=Z,1.8nm,0.3s,baz=90,slow=5.0,SNR=18						
MORW	**Morawa**	**50.39**	**187**	P	**P**	**01 01 56.2**	**-1.1**
TIXI	**Tiksi**	**50.52**	**3**	P	**P**	**01 01 56.7**	**-1.0**
	comp=Z,1.9nm,0.3s,baz=177,slow=4.4,SNR=4.1						
OOD	**Oodnadatta**	**50.62**	**164**	P	**P**	**01 01 58.1**	**-0.9**
FORT	**Forrest**	**52.13**	**173**	P	**P**	**01 02 09.4**	**-0.8**
FORT	**Forrest**	**52.13**	**173**	P	**P**	**01 02 09.7**	**-0.5**
NRIK	**Noril'sk**	**52.32**	**345**	P	**P**	**01 02 10.7**	**-0.5**
	comp=Z,2.0nm,0.6s,baz=121,slow=9.7,SNR=7.6						
NRIK	**Noril'sk**	**52.32**	**345**	P	**P**	**01 02 11.3**	**+0.2**
NRIK				IAmb	IAmb	01 02 12.4	
	comp=Z,9.8nm,1.4s						
MULG	**Mulgathing**	**52.63**	**167**	P	**P**	**01 02 12.8**	**-1.1**
KLBR	**Kellerberrin**	**52.74**	**184**	P	**P**	**01 02 13.9**	**-0.8**
LCRK	**Leigh Creek**	**53.82**	**162**	P	**P**	**01 02 22.0**	**-0.6**
BBOO	**Buckleboo**	**55.51**	**165**	P	**P**	**01 02 34.3**	**-0.5**
BBOO	**Buckleboo**	**55.51**	**165**	P	**P**	**01 02 33.9**	**-0.8**
ABKAR	**Akbulak array**	**55.88**	**316**	P	**P**	**01 02 38.3**	**+1.1**
ABKAR				IAmb	IAmb	01 02 39.7	
	comp=Z,2.4nm,0.8s						
ABKAR	**Akbulak array**	**55.88**	**316**	P	**P**	**01 02 38.0**	**+0.8**
STKA	**Stephens Creek**	**56.18**	**160**	P	**P**	**01 02 38.5**	**-0.9**
	comp=Z,3.5nm,0.7s,baz=338,slow=8.7,SNR=9.9						
STKA				LR	LR	01 31 03.9	
	comp=Z,24nm,18.1s,baz=225,slow=40						
STKA	**Stephens Creek**	**56.18**	**160**	P	**P**	**01 02 39.0**	**-0.5**
HTT	**Hallett**	**56.83**	**163**	P	**P**	**01 02 43.8**	**-0.3**
AKTO	**Aktyubinsk**	**57.24**	**317**	P	**P**	**01 02 47.0**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=70,slow=12,SNR=2.6						
ARU	**Arti**	**57.76**	**324**	P	**P**	**01 02 50.5**	**+0.1**
	comp=Z,3.4nm,0.4s,baz=97,slow=7.4,SNR=27						
ARU	**Arti**	**57.76**	**324**	P	**P**	**01 02 50.7**	**+0.3**
TOO	**Toolangi**	**62.67**	**159**	P	**P**	**01 03 24.5**	**+0.5**
TOO				IAmb	IAmb	01 03 40.4	
	comp=Z,13nm,1.3s						
CHGN	**Chignik**	**66.91**	**37**	P	**P**	**01 03 51.3**	**+0.1**
A21K	**Barrow**	**67.29**	**20**	P	**P**	**01 03 54.2**	**+0.8**
A21K				IAmb	IAmb	01 03 55.2	
	comp=Z,11nm,0.7s						
O18K	**Koktuh Hills**	**68.32**	**33**	P	**P**	**01 04 01.4**	**+1.3**
IMAR	**Indian Mountai**	**68.49**	**26**	P	**P**	**01 04 01.9**	**+0.9**
H21K	**Melozitna Rive**	**68.91**	**26**	P	**P**	**01 04 05.0**	**+1.4**
H21K				IAmb	IAmb	01 04 05.9	
	comp=Z,9.8nm,0.8s						
CAST	**Castle Rocks**	**69.44**	**29**	P	**P**	**01 04 07.4**	**+0.4**
CAST				IAmb	IAmb	01 04 09.4	
	comp=Z,15nm,0.8s						
OHAK	**Old Harbor**	**69.62**	**35**	P	**P**	**01 04 08.4**	**+0.3**
RAYN	**Ar Rayn**	**69.76**	**288**	P	**P**	**01 04 11.2**	**+1.5**
COLD	**Coldfoot**	**69.79**	**24**	P	**P**	**01 04 09.7**	**+0.7**
MLY	**Manley**	**69.83**	**27**	P	**P**	**01 04 10.4**	**+1.0**
MLY				IAmb	IAmb	01 04 12.0	
	comp=Z,9.5nm,1.0s						
BPAW	**Bear Paw Mtn.**	**69.84**	**28**	P	**P**	**01 04 10.6**	**+1.2**
BPAW				IAmb	IAmb	01 04 11.3	
	comp=Z,21nm,1.4s						
TOLK	**Toolik Lake Re**	**69.85**	**23**	P	**P**	**01 04 10.3**	**+0.9**
TOLK				IAmb	IAmb	01 04 11.7	
	comp=Z,5.9nm,0.8s						
KDAK	**Kodiak Island**	**69.92**	**35**	P	**P**	**01 04 10.0**	**+0.1**
NEA2	**Nenana**	**70.60**	**27**	P	**P**	**01 04 15.2**	**+1.2**
NEA2				IAmb	IAmb	01 04 15.6	
	comp=Z,10nm,0.8s						
MDM	**Murphy Dome**	**70.90**	**27**	P	**P**	**01 04 16.7**	**+0.9**
MDM				IAmb	IAmb	01 04 17.7	
	comp=Z,6.4nm,0.8s						
IL31		**71.50**	**27**	P	**P**	**01 04 18.8**	**-0.5**
ILAR	**Eielson Array**	**71.50**	**27**	P	**P**	**01 04 18.2**	**-1.1**
	comp=Z,2.0nm,0.7s,baz=269,slow=4.9,SNR=24						
ILAR	**Eielson Array**	**71.50**	**27**	P	**P**	**01 04 18.8**	**-0.6**
BMAR	**Burnt Mountain**	**71.90**	**24**	P	**P**	**01 04 23.2**	**+1.4**
SPITS	**Spitsbergen Ar**	**72.40**	**348**	P	**P**	**01 04 24.5**	**-0.1**
	comp=Z,30nm,1.2s,baz=74,slow=11,SNR=1.9						
ARCES	**ARCESS Array B**	**72.41**	**338**	P	**P**	**01 04 25.0**	**+0.2**
	comp=Z,5.9nm,1.0s,baz=71,slow=6.0,SNR=2.0						
SCRK	**Sand Creek**	**72.90**	**27**	P	**P**	**01 04 27.9**	**0.0**
SCRK				IAmb	IAmb	01 04 43.4	
	comp=Z,4.0nm,1.0s						
M26K	**Nabesna, AK**	**73.72**	**29**	P	**P**	**01 04 33.6**	**+1.0**
M26K				IAmb	IAmb	01 04 34.4	
	comp=Z,8.3nm,0.8s						
BCAR	**Beaver Creek A**	**74.08**	**28**	P	**P**	**01 04 36.4**	**+1.6**
FINES	**FINESS Array B**	**74.21**	**330**	P	**P**	**01 04 35.6**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=66,slow=4.6,SNR=7.0						
FINES	**FINESS Array B**	**74.21**	**330**	P	**P**	**01 04 36.3**	**+0.9**
AKASG	**Malin Array Be**	**75.40**	**319**	P	**P**	**01 04 41.5**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=56,slow=6.3,SNR=2.3						
INK	**Inuvik**	**75.66**	**22**	P	**P**	**01 04 43.1**	**-0.5**
	comp=Z,3.1nm,0.9s,baz=279,slow=6.8,SNR=11						
INK	**Inuvik**	**75.66**	**22**	P	**P**	**01 04 43.4**	**-0.2**
A36M	**Sachs Harbour**	**76.69**	**17**	P	**P**	**01 04 49.7**	**+0.4**
A36M				IAmb	IAmb	01 04 50.5	
	comp=Z,7.4nm,0.8s						
CSS	**Mathiatis**	**76.92**	**303**	P	**P**	**01 04 50.1**	**-1.3**
BURAR	**Bucovina Array**	**78.84**	**317**	P	**P**	**01 05 02.1**	**+0.2**
BUR08	**Bucovina Ar. S**	**78.84**	**317**	P	**P**	**01 05 02.7**	**+0.8**
ELL	**Elmali**	**79.03**	**305**	P	**P**	**01 05 03.3**	**+0.1**
KWP	**Kalwaria Pacla**	**79.72**	**319**	P	**P**	**01 05 07.0**	**+0.6**
VTS	**Vitosha**	**81.89**	**313**	P	**P**	**01 05 19.1**	**+0.7**
YKA	**Yellowknife Ar**	**85.38**	**23**	P	**P**	**01 05 35.5**	**0.0**
	comp=Z,5.8nm,0.7s,baz=311,slow=4.7,SNR=126						
YKA	**Yellowknife Ar**	**85.38**	**23**	P	**P**	**01 05 35.3**	**-0.2**
NVAR	**Mina Array Bea**	**98.12**	**43**	P	**P**	**01 06 34.0**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=294,slow=6.8,SNR=2.7						

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*IDC **31** 01:23:48.0±1.1, 2°.06N×126°.06E, h0^{km}, mb3.8/6, mb1 4.0/6, mb1mx3.7/36, mbtmp3.8/6, MS2.8/1, Ms1 2.8/1, ms1mx2.4/32, Error ellipse: s-maj=68.7km s-min=20.0km az=73.0*

*DJA **31** 01:23:53.6±0.3, 2°N±3°×12°6E±°, h10^{km}, M4.2/8, mb4.4/2, mB4.6/2, MLv4.1/8, Mw(mB)3.7/2*

ISC 31 01:23:57.5±0.8, **1°.96N**±0°.06×**126°.08E**±0°.06, **h83**^{km}, **n15**, σ**1^{s}.78**/15, **mb3.7**/5, **1D**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**1.71**	**94**	P	**Pn**	**01 24 25.0**	**-0.7**
TNTI	**Ternate**	**1.74**	**132**	P	**Pn**	**01 24 23.7**	**-2.4**
SGSI	**Sangihe**	**1.81**	**342**	P	**Pn**	**01 24 25.1**	**-1.9**
SGSI				S	**Sn**	**01 24 46.8**	**-2.6**
KMSI	**Cibinong**	**2.51**	**237**	P	**Pn**	**01 24 34.8**	**-1.5**
GTOI	**Gorontalo**	**3.34**	**247**	P	**Pn**	**01 24 45.8**	**-1.7**
SANI	**Sanana**	**3.98**	**181**	P	**Pn**	**01 24 53.3**	**-2.9**
KCP	**Kidapawan**	**5.12**	**349**	⇓*e*P	**Pn**	**01 25 12.6**	**+0.8**
APSI	**Ampana**	**5.27**	**237**	P	**Pn**	**01 25 14.2**	**+0.4**
KAPI	**Kappang**	**9.38**	**222**	LR	LR	01 29 29.0	
	comp=Z,51nm,19.7s,baz=132,slow=36						
FITZ	**Fitzroy Crossi**	**19.93**	**181**	P	**P**	**01 28 22.5**	**-0.4**
	1.6nm,0.5s,baz=11,slow=11,SNR=1.8						
WRA	**Warramunga Arr**	**23.22**	**160**	P	**P**	**01 28 57.1**	**-0.6**
	3.5nm,0.6s,baz=338,slow=11,SNR=42						
ASAR	**Alice Springs**	**26.58**	**164**	P	**P**	**01 29 29.3**	**+1.1**
	1.2nm,0.6s,baz=344,slow=7.7,SNR=19						
STKA	**Stephens Creek**	**36.73**	**158**	P	**P**	**01 30 58.8**	**+1.9**
	3.0nm,0.8s,baz=337,slow=10,SNR=6.2						
MKAR	**Makanchi Array**	**58.65**	**326**	P	**P**	**01 33 46.5**	**+0.3**
	0.3nm,0.5s,baz=120,slow=8.7,SNR=9.5						
ILAR	**Eielson Array**	**86.97**	**25**	P	**P**	**01 36 34.4**	**+1.1**
	0.2nm,0.6s,baz=261,slow=5.6,SNR=4.6						

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*FUNV **31** 01:31:08.1, 8°.50N×71°.49W, h5^{km}, MW3.2*

ISC 31 01:31:07.0±1.4, **8°.54N**±0°.06×**71°.45W**±0°.03, **h2**^{km}±12^{km}, **n15**, σ**1^{s}.01**/26, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.64**	**113**	*e*P	**Pg**	**01 31 19.1**	**-0.2**
SOCV				*e*S	**Sg**	**01 31 27.4**	**-0.2**
SDV	**Santo Domingo**	**0.88**	**67**	*e*P	**Pb**	**01 31 24.9**	**-0.1**
SDV				*e*S	**Sg**	**01 31 36.2**	**+0.8**
CAPV	**Capacho**	**1.08**	**232**	*e*P	**Pg**	**01 31 27.7**	**-0.1**
CAPV				*e*S	**Sg**	**01 31 41.8**	**-0.1**
PAMC	**Pamplona, Colo**	**1.72**	**226**	*e*P	**Pg**	**01 31 40.3**	**+0.3**
PAMC				*e*S	**Sg**	**01 32 02.5**	**+0.3**
OCAC	**Ocana**	**1.87**	**261**	*e*P	**Pb**	**01 31 41.2**	**-0.8**
OCAC				*e*S	**Sb**	**01 32 05.5**	**-0.5**
BARC	**Barichara**	**2.58**	**222**	*e*S	**Sb**	**01 32 26.4**	**-0.1**
SIQV	**Siquisique**	**2.65**	**37**	*e*P	**Pn**	**01 31 51.6**	**+0.8**
SIQV				*e*S	**Sn**	**01 32 24.5**	**+0.9**
BRRC	**Barranca, Sant**	**2.65**	**238**	*e*S	**Sg**	**01 32 30.8**	**-1.6**
CRJC	**Cerrejon, Guaj**	**2.84**	**330**	*e*P	**Pn**	**01 31 54.6**	**+1.1**
CRJC				*e*S	**Sn**	**01 32 28.8**	**+0.4**
RUSC	**La Rusia**	**3.08**	**212**	*e*S	**Sb**	**01 32 43.1**	**+1.9**
MAPV	**Macapo**	**3.22**	**66**	*e*P	**Pn**	**01 31 58.6**	**-0.1**
MAPV				*e*S	**Sn**	**01 32 37.0**	**-0.7**
BAUV	**El Baul**	**3.39**	**83**	*e*P	**Pn**	**01 32 02.1**	**+1.1**
BAUV				*e*S	**Sn**	**01 32 40.5**	**-1.4**
ZARC	**Zaragoza, Cauc**	**3.53**	**253**	*e*S	**Sb**	**01 32 55.3**	**+1.7**
MONV	**Montecano**	**3.70**	**23**	*e*P	**Pn**	**01 32 04.6**	**-0.6**
MONV				*e*S	**Sn**	**01 32 47.5**	**-1.9**
BENV	**Beln**	**4.06**	**69**	*e*P	**Pn**	**01 32 10.6**	**+0.4**
BENV				*e*S	**Sn**	**01 32 57.2**	**-1.1**

RSNC 31 01:31:08.6±0.8, **7°.40N**×**73°.17W**, **h132**^{km}±4^{km}, **ML2.3**, **1C**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAMC	**Pamplona, Colo**	**0.47**	**97**	*e*P	**Pn**	**01 31 28.5**	**+2.1**
PAMC				*e*S	**Sn**	**01 31 43.0**	**+1.4**
BRRC	**Barranca, Sant**	**0.61**	**242**	⇑*i*P	**Pn**	**01 31 28.2**	**+0.3**
BRRC				*e*S	**Sn**	**01 31 43.4**	**-0.9**
BRRC				*i*		01 31 43.9	
	comp=Z,52nm,0.1s						
BARC	**Barichara**	**0.80**	**181**	*e*P	**Pn**	**01 31 30.1**	**+0.6**
BARC				*e*S	**Sn**	**01 31 46.4**	**-0.6**
BARC				*i*		01 31 47.6	
	comp=Z,57nm,0.1s						
OCAC	**Ocana**	**0.85**	**350**	*e*P	**Pn**	**01 31 30.0**	**+1.6**
OCAC				*e*S	**Sn**	**01 31 47.2**	**+2.0**
RUSC	**La Rusia**	**1.50**	**177**	*e*P	**Pn**	**01 31 37.2**	**+0.7**
RUSC				*e*S	**Sn**	**01 31 58.8**	**-0.8**
PTBC	**PUERTO BERRIO,**	**1.53**	**236**	*e*P	**Pn**	**01 31 36.4**	**-0.5**
PTBC				*e*S	**Sn**	**01 31 58.1**	**-2.2**
PTBC				*i*		01 31 59.9	
	comp=Z,17nm,0.2s						
SMLC	**San Martn de**	**1.66**	**328**	*e*P	**Pn**	**01 31 37.3**	**+0.8**
ZARC	**Zaragoza, Cauc**	**1.67**	**273**	*e*P	**Pn**	**01 31 38.3**	**+0.2**
ZARC				*e*S	**Sn**	**01 32 01.9**	**-0.5**
ZARC				*i*		01 32 04.3	
	comp=Z,24nm,0.3s						
UREC	**San Jos de Ur**	**2.37**	**279**	*e*P	**Pn**	**01 31 47.3**	**+1.0**
UREC				*e*S	**Sn**	**01 32 14.3**	**-2.8**
UREC				*i*		01 32 23.9	
	comp=Z,8.8nm,0.2s						
NORC	**Norcasia**	**2.48**	**223**	*e*P	**Pn**	**01 31 48.7**	**+0.2**
NORC				*e*S	**Sn**	**01 32 19.1**	**-1.9**
NORC				*i*		01 32 27.1	
	comp=Z,9.3nm,0.2s						
HELC	**Santa Helena**	**2.63**	**243**	*e*P	**Pn**	**01 31 50.5**	**-0.1**
HELC				*e*S	**Sn**	**01 32 23.5**	**-1.1**
HELC				*i*		01 32 31.5	
	comp=Z,7.1nm,0.5s						
CHIC	**Chingaza**	**2.80**	**191**	*e*P	**Pn**	**01 31 52.5**	**-0.2**
GUY2C	**Guyana, Caldas**	**3.07**	**225**	*e*P	**Pn**	**01 31 57.2**	**+0.9**
GUY2C				*e*S	**Sn**	**01 32 33.9**	**-1.1**
GUY2C				*i*		01 32 45.7	
	comp=Z,6.2nm,0.4s						
ANIL	**Santa Ana**	**3.64**	**218**	*e*P	**Pn**	**01 32 06.2**	**+2.6**
ANIL				*e*S	**Sn**	**01 32 50.8**	**+2.7**
ANIL				*i*		01 32 56.4	
	comp=Z,13nm,0.4s						

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*IDC **31** 01:43:25.6±1.1, 9°.84N×62°.13W, h0^{km}, mb3.5/4, mb1 3.9/7, mb1mx3.6/37, mbtmp3.8/7, ML4.1/3, MS3.1/4, Ms1 3.1/4, ms1mx2.9/26, Error ellipse: s-maj=25.3km s-min=15.3km az=17.0*

*TRN **31** 01:43:31.7, 9°.60N×62°.52W, h23^{km}*

*FUNV **31** 01:43:34.9, 9°.78N×62°.50W, h27^{km}, MW4.6*

ISC 31 01:43:30.3±0.6, **9°.47N**±0°.05×**62°.47W**±0°.04, **h31**^{km}, **n50**, σ**2^{s}.30**/58, **mb3.6**/6, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPP	**Pointe-a-Pierr**	**1.31**	**50**	*e*P	**Pb**	**01 43 55.5**	**+1.3**
CRUV	**Carupano**	**1.41**	**328**	*e*S	**Sn**	**01 44 08.7**	**-2.7**

```
TRN   Trinidad (W)      1.57  42 eP     Pn     01 43 57.1 +1.1
TRN                              eS     Sn     01 44 16.4 +1.1
TBH   Brigand Hill      1.71  54 eP     Pb     01 44 00.7 -0.4
PCRV  Puerto La Cruz    2.25 288  Pn    Pb     01 44 08.4 -1.9
      88nm,0.3s,baz=79,slow=11,SNR=152
PCRV                              Pg    Pn     01 44 11.8 +6.4
      88nm,0.3s,baz=88,slow=8.9,SNR=46
PCRV                              Lg    Lg     01 44 40.7
      257nm,0.3s,baz=314,slow=18,SNR=18
PCRV  Puerto La Cruz    2.25 288 eP     Pn     01 44 08.7 +3.3
PCRV                             eS     Sn     01 44 32.0 -0.1
PRGV  PARIAGUAN         2.26 252 eS     Sb     01 44 38.6 +0.5
GRFF  Grenada Fort F    2.66  16 eP     Pn     01 44 12.3 +1.3
GRFF                             eS     Sn     01 44 41.1 -1.2
GRGR  Grenville         2.76  17 eP     Pn     01 44 13.5 +1.0
GRGR                             eS     Sn     01 44 44.7 -0.1
GCMP  Grenada, Carri    3.16  19 eP     Pn     01 44 19.1 +1.1
GCMP                             eS     Sn     01 44 54.5 -0.2
MERV  Las Mercedes      3.78 267 eP     Pn     01 44 29.7 +3.2
MERV                             eS     Sn     01 45 12.0 +2.0
SVOC  Richmond Hill,    3.86  18 eP     Pn     01 44 28.1 +0.6
SVOC                             eS     Sn     01 45 12.1 +0.3
BIRV  Birongo           3.87 285 eP     Pn     01 44 31.1 +3.4
BIRV                             eS     Sn     01 45 10.3 -1.9
SVB   Belmont           3.96  17 eP     Pn     01 44 31.2 +2.3
CACV  CAICARA DEL OR    4.45 245 eS     Sn     01 45 18.7 -7.8
MCLT  Moule a Chique    4.47  19 eP     Pn     01 44 37.0 +1.1
SLBI  Saint Lucia, B    4.75  18 eP     Pn     01 44 40.7 +0.9
SLBI  Saint Lucia, B    4.75  18 eS     Sn     01 45 31.6 -2.2
BENV  Beln              5.08 276 eP     Pn     01 44 47.1 +2.7
BENV                             eS     Sn     01 45 39.8 -2.3
MPOM  Morne Pois Mar    5.18  18 eP     Pn     01 44 47.4 +1.6
MPOM  Morne Pois Mar    5.18  18 eS     Sn     01 45 43.6 -0.9
BIM   Bigot             5.20  15 eP     Pn     01 44 46.7 +0.7
BIM   Bigot             5.20  15 eS     Sn     01 45 42.6 -2.2
TRMF  Trois Ilets       5.22  15 eP     Pn     01 44 48.0 +1.8
ZAM   Aeronautique      5.26  15 eP     Pn     01 44 50.8 +4.0
LPMF  Morne Lapointe    5.28  16 eP     Pn     01 44 49.5 +2.4
MVM   Montagne Vaucl    5.28  17 eP     Pn     01 44 49.8 +2.7
FDF   Fort de France    5.38  14 eP     Pn     01 44 49.8 +1.3
FDF   Fort de France    5.38  14 eS     Sn     01 45 48.3 -1.3
PML   Morne Lenard      5.42  13 eP     Pn     01 44 51.1 +2.0
GBMF  Grand Be          5.44  13 eP     Pn     01 44 54.7 +5.3
PCM   Pelee Case Pet    5.45  13 eP     Pn     01 44 50.4 +0.9
BAUV  El Baul           5.53 265 eP     Pn     01 44 53.1 +2.6
BAUV  El Baul           5.53 265 eP     Pn     01 44 53.0 +2.5
BAUV                             eS     Sn     01 45 51.9 -1.1
MAPV  Macapo            5.92 274 eP     Pn     01 44 58.6 +2.8
MAPV                             eS     Sn     01 46 00.1 -2.6
DSLB  Salisbury         6.01  10 eP     Pn     01 44 59.7 +2.5
PAYV  Puerto Ayacuch    6.53 232 eS     Sn     01 46 19.9 +2.1
MAGL  Barre de l'ile    6.54  10 e      Pn     01 45 08.4 +4.0
CBE   Ff, Capester      6.61   7 e      Pn     01 45 04.7 -0.7
PTGA  Pitinga          10.44 166 Pn     Pn     01 45 58.9 +1.0
      1.0nm,0.3s,baz=336,slow=19,SNR=18
PTGA                             Sn     Sn     01 47 51.7 -2.3
      2.1nm,0.3s,baz=322,slow=22,SNR=2.8
PTGA                             Lg     Lg     01 48 54.4
      13nm,0.3s,baz=260,slow=22,SNR=20
PTGA                             LR     LR     01 50 30.1
      comp=Z,53nm,19.3s,baz=335,slow=40
MDP   Montagnes des    10.67 113 Pn     Pn     01 45 58.9 -2.3
      1.1nm,0.3s,baz=300,slow=15,SNR=27
MDP                              Sn     Sn     01 47 50.2 -9.5
      3.4nm,0.3s,baz=50,slow=14,SNR=5.9
ROSC  El Rosal         12.62 249 LR     LR     01 52 11.4
      comp=Z,121nm,19.2s,baz=222,slow=40
ATAH  Atahualpa        22.89 224 LR     LR     01 57 33.3
      comp=Z,46nm,19.2s,baz=25,slow=36
SIV   San Ignacio      25.34 177 P      P      01 48 57.7 +3.1
      0.8nm,0.6s,baz=15,slow=9.0,SNR=5.6
NNA   Nana             25.66 214 LR     LR     02 00 02.3
      comp=Z,44nm,18.5s,baz=12,slow=38
TORD  Torodi Ar. Bea   62.89  80 pP     P      01 53 55.5 +1.5
      0.5nm,0.7s,baz=303,slow=6.3,SNR=2.5
YKA   Yellowknife Ar   64.79 336 P      P      01 54 04.3 -1.4
      0.1nm,0.5s,baz=110,slow=7.2,SNR=4.9
NOA   NORSAR Array B   73.88  29 P      P      01 54 58.4 -3.7
      0.8nm,0.8s,baz=255,slow=5.7,SNR=3.3
ILAR  Eielson Array    79.11 334 P      P      01 55 31.8 +0.2
      0.3nm,0.9s,baz=96,slow=6.4,SNR=2.0
FINES FINESS Array B   81.06  29 pP     P      01 55 43.6 +1.5
      5.2nm,1.1s,baz=275,slow=5.2,SNR=4.4
```

IDC 31 01:56:24.5±3.5**, 27°.72N×85°.52E, h0^{km}, mb3.5**/3**, mb1 3.6**/4**, mb1mx3.3**/29**, mbtmp3.4**/4**, ML3.3**/1**, Error ellipse: s-maj=111.8km s-min=30.0km az=79.0, Nepal**

```
Code  Station Name      Δ°  AZ°   Phase ID          Time     Res
                                  Op     ISC      h  m  s    ISC
MKAR  Makanchi Array   19.21 353  P      P       02 00 49.9  0.0
      0.1nm,0.3s,baz=181,slow=10,SNR=5.8
XAN   Xi'an            21.03  67  P      P       02 01 15.8 +5.9
XAN                               pmax   pmax
      comp=Z,6.0nm,1.2s
SONM  Songino Array    25.84  33  P      P       02 01 57.8 +0.1
      comp=Z,0.5nm,0.5s,baz=223,slow=9.2,SNR=6.1
WRA   Warramunga Arr   66.91 130  P      P       02 07 18.8  0.0
      comp=Z,0.4nm,0.6s,baz=323,slow=6.6,SNR=2.2
ASAR  Alice Springs    69.20 133  P      P       02 07 33.3  0.0
      comp=Z,0.3nm,0.6s,baz=313,slow=6.7,SNR=1.9
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*KRNET **31** 02:20:05.2±0.1, 42°.84N×73°.49E, h21^{km}, mb2.1*
*NNC **31** 02:20:05.7±0.3, 42°.84N×73°.53E, h0^{km}, mb2.7, mpv2.5, Error ellipse: s-maj=3.8km s-min=1.7km az=176.0*
*SOME **31** 02:20:05.4, 42°.83N×73°.50E, h15^{km}*
ISC 31 02:20:05.5±0.9**, 42°.82N**±0°.03×**73°.51E**±0°.02**, h16**^{km}±7^{km}**, n27, σ0^{s}80**/53**, 22C-6D, Kyrgyzstan**

```
Code  Station Name      Δ°  AZ°   Phase ID          Time     Res
                                  Op     ISC      h  m  s    ISC
MRKS  Merke            0.22 251⇓eP    Pg     02 20 10.5 -0.1
      6.6nm,0.1s
MRKS                            eS    Sg     02 20 13.9 -0.2
      35nm,0.1s
MRKS  Merke            0.22 251  P    Pg     02 20 10.5 -0.1
      3.7nm,0.0s
MRKS                             S    Sg     02 20 13.9 -0.2
      47nm,0.2s
MRKS  Merke            0.22 251⇓eP    Pg     02 20 10.5 -0.1
      baz=43
MRKS                           ⇓eS    Sg     02 20 13.9 -0.2
      baz=43
EKS2  Erkin-Say        0.25 128⇑eP    Pg     02 20 11.6 +0.5
      baz=30
EKS2                           ⇑eS    Sb     02 20 16.1 +0.1
      baz=30
AML   Almayashu        0.70 169⇑iP    Pg     02 20 19.0 -0.3
      baz=68
AML                            ⇑iS    Sg     02 20 29.0 +0.4
      baz=68
AAK   Ala-Archa        0.75 104 ⇑P    Pg     02 20 20.0 -0.1
      1.3nm,0.8s
AAK                             ⇑S    Sb     02 20 30.7 +0.4
      2.8nm,0.3s
AAK   Ala-Archa        0.75 104⇑eP    Pg     02 20 19.8 -0.3
      baz=5.0
AAK                            ⇑iS    Sg     02 20 30.3 +0.3
      baz=5.0
MNAS  Manas            0.81 246⇑iP    Pg     02 20 20.3 -1.1
      baz=44
MNAS                           ⇑eS    Sg     02 20 31.1 -1.0
      baz=44
USP   Ospenovka        0.85  58⇓eP    Pb     02 20 21.1 -0.9
      baz=60
USP                            ⇓iS    Sg     02 20 33.0 -0.4
      baz=60
UCH   Uchtor           0.95 128⇑iP    Pb     02 20 23.1 -0.8
      baz=29
UCH                            ⇑iS    Sb     02 20 36.5 +0.2
      baz=29
KBK   Karagaybulak     1.07  98⇑iP    Pb     02 20 25.1 -0.7
      baz=99
KBK                            ⇑iS    Sb     02 20 39.7  0.0
      baz=99
ARLS  Aral             1.13 147⇑iP    Pb     02 20 26.7 -0.1
      baz=47
ARLS                           ⇑iS    Sn     02 20 42.8 +0.7
      baz=47
TKM2  Tokmak 2         1.54  85 ⇑P    Pb     02 20 33.8  0.0
      2.2nm,0.6s
TKM2                            ⇑S    Sg     02 20 54.9 -0.3
      1.2nm,0.2s
DGS   Degeres          1.71  75 eP    Pb     02 20 36.6 -0.1
      0.8nm,0.2s
DGS                             eS    Sb     02 20 59.1 +1.0
      6.2nm,0.5s
DGS   Degeres          1.71  75  P    Pb     02 20 36.6 -0.1
      0.8nm,0.2s
DGS                              S    Sb     02 20 58.7 +0.7
      6.1nm,0.4s
DGS   Degeres          1.71  75 eP    Pb     02 20 36.6 -0.1
      baz=76
DGS                             eS    Sb     02 20 59.1 +1.0
      baz=76
KRBS  Karabastau       1.81  60⇑eP    Pb     02 20 38.1 -0.2
      2.2nm,0.2s
KRBS                            eS    Sb     02 21 01.6 +0.8
      4.3nm,0.2s
KRBS  Karabastau       1.81  60  P    Pb     02 20 38.1 -0.2
      2.2nm,0.3s
KRBS                             S    Sb     02 21 01.6 +0.8
      4.3nm,0.2s
KRBS  Karabastau       1.81  60⇑eP    Pb     02 20 38.1 -0.2
      baz=61
KRBS                           ⇑eS    Sb     02 21 01.6 +0.8
      baz=61
KST   Kastek           1.81  82 eP    Pb     02 20 39.0 +0.5
      1.1nm,0.2s
KST                             eS    Sg     02 21 02.7 -1.3
      4.9nm,0.4s
KST   Kastek           1.81  82  P    Pb     02 20 39.0 +0.5
      2.6nm,0.4s
KST                              S    Sg     02 21 02.7 -1.3
      5.0nm,0.5s
KST   Kastek           1.81  82 eP    Pb     02 20 39.0 +0.5
      baz=83
KST                             eS    Sg     02 21 02.7 -1.3
      baz=83
KK09  Karatay Array    2.23 279 ⇓Pn   Pb     02 20 45.3 -0.2
      0.8nm,0.8s,baz=194,slow=17
KK09                            ⇑Sn   Sb     02 21 14.4 +1.5
      0.6nm,0.3s,baz=199,slow=24
KUU   Kurty            2.33  61 eP    Pb     02 20 47.5 +0.4
      0.8nm,0.3s
KUU                             eS    Sb     02 21 17.6 +1.9
      2.0nm,0.3s
KUU   Kurty            2.33  61  Pg   Pb     02 20 47.5 +0.4
      1.0nm,0.2s
KUU                              Lg   Lg     02 21 17.6
      1.7nm,0.1s
KOTS  Kotyrbulak       2.67  80 eP    Pb     02 20 54.3 +1.2
      1.4nm,0.3s
KOTS                            eS    Sg     02 21 29.0 -2.5
      2.7nm,0.4s
BRLS  Borolday         2.71 276 eP    Pg     02 20 56.7 -0.8
      0.3nm,0.1s
BRLS                            eS    Sg     02 21 32.7 +0.2
      0.9nm,0.7s
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*SSNC **31** 02:20:42.9±1.5, 19°.25N×73°.74W, h2^{km}±8^{km}, ML4.4, MW4.3*
*JSN **31** 02:20:43.7±3.1, 19°.17N×73°.79W, h0^{km}±512^{km}, MD5.0*
*OSPL **31** 02:20:43.5±5.5, 19°.46N×73°.77W, h2^{km}±21^{km}, Mc5.0, ML4.5*
*NEIC **31** 02:20:43.7, 19°.44N×73°.65W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$4.06; M$_{\theta\theta}$-1.90; M$_{\phi\phi}$-2.15; M$_{r\theta}$2.07; M$_{\theta\phi}$7.57; M$_{\phi r}$2.04; Fault plane solution: M$_0$8.84000×10^{15} NP1:φ$_s$353.78000°, δ64.33000°, λ151.23000°. NP2:φ$_s$97.16000°, δ64.29000°, λ28.74000°. Principal axes: T 7.8028, Plg38.0000°, Azm315.0000°; N 1.7990, Plg52.0000°, Azm136.0000°; P -9.6018, Plg0.0000°, Azm45.0000°;*
*NEIC **31** 02:20:43.1±1.9, 19°.44N±0°.05×73°.63W±0°.03, h10^{km}±1^{km}, mb4.7/309, Mwr4.6/19 Error ellipse: s-maj=8.5km s-min=5.4km az=181.0*
*IDC **31** 02:20:44.8±0.5, 19°.39N×73°.63W, h22^{km}±2^{km}, mb4.3/24, mb1 4.5/28, mb1mx4.4/43, mbtmp4.5/28, ML3.8/3, MS3.9/12, Ms1 3.9/12, ms1mx3.7/34, Error ellipse: s-maj=13.8km s-min=9.5km az=62.0*
*GCMT **31** 02:20:48.1±0.3, 19°.52N±0°.02×73°.65W±0°.03, h27^{km}±1^{km}, MW4.8/67, Moment Tensor Solution. s15,c18; s67,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.01±.20; M$_{\theta\theta}$-1.15±.12; M$_{\phi\phi}$-0.86±.12; M$_{r\theta}$0.46±.17; M$_{\theta\phi}$1.66±.06; M$_{\phi r}$-0.27±.18; Best double couple: M$_0$2.40200×10^{16} NP1:φ$_s$317.00000°, δ39.00000°, λ97.00000°. NP2: φ$_s$128.00000°, δ51.00000°, λ84.00000°. Principal axes: T 2.0760, Plg82.0000°, Azm6.0000°; N 0.6520, Plg5.0000°, Azm132.0000°; P -2.7290, Plg6.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 31 02:20:43.7±0.4**, 19°.39N**±0°.03×**73°.72W**±0°.03**, h17**^{km}±2^{km}**, h18**^{km}**:pP-P, n537, σ1^{s}21**/481**, mb4.7**/169**, MS3.9**/13**, 3D, Haiti region**

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Code  Station Name      Δ°  AZ°   Phase ID          Time     Res
                                  Op     ISC      h  m  s    ISC
MASC  Masc             0.91 328 eP    Pb     02 21 00.4 -0.7
MASC                            eS    Sb     02 21 11.3 -1.6
GTBY  Guantanamo Bay   1.41 292 eP    Pn     02 21 07.9 -0.7
GTBY                            eS    Sn     02 21 26.6 -0.2
GTBY  Guantanamo Bay   1.41 292       Pn     02 21 07.9 -0.7
GTBY                             Sn   Sn     02 21 26.4 -0.4
GTBY  Guantanamo Bay   1.41 292 i P   Pn     02 21 07.9 -0.7
GTBY                            eS    Sn     02 21 26.2 -0.6
GTBY                             IAML        02 21 36.6
      comp=Z,4μm,1.4s
PAPH  Port-au-Prince   1.60 123 i P   Pn     02 21 09.9 -1.2
PAPH                            eS    Sn     02 21 30.0 -1.4
PAPH                             IAML        02 21 40.1
      comp=Z,3μm,0.4s
NQUSE US Embassy, Po   1.62 120       Pn     02 21 10.3 -1.1
MOAC  Moa              1.72 317 eP    Pn     02 21 13.0 +0.2
MOAC                            eS    Sn     02 21 35.2 +0.9
MOAC                             IAML        02 21 37.0
      comp=E,4μm,0.3s
MOAC                             IAML        02 21 50.2
      comp=N,3μm,0.6s
RCC   Rio Carpintero   1.95 288 eP    Pn     02 21 14.8 -1.2
RCC                             eS    Sn     02 21 38.5 -1.6
RCC                              IAML        02 21 39.8
      comp=N,3μm,0.2s
RCC                              IAML        02 21 40.7
      comp=E,3μm,0.4s
LONE2 Loma La Sidra    2.29 111 i P   Pn     02 21 20.3 -0.4
LONE2                           eS    Sb     02 21 50.4 -2.1
LONE2                            IAML        02 22 01.1
      comp=Z,10μm,1.3s
LOPE2 Hotel El Peder   2.31 126 i P   Pn     02 21 20.7 -0.2
SDDR  Presa de Saban   2.34 100 eP    Pn     02 21 20.1 -1.2
SDDR  Presa de Saban   2.34 100  Pn   Pn     02 21 20.1 -1.2
SDDR  Presa de Saban   2.34 100 i P   Pn     02 21 20.1 -1.2
SDDR                            eS    Sn     02 21 48.4 -1.3
SDDR                             IAML        02 22 01.5
      comp=Z,3μm,0.9s
LOPP1 Punta Rusia, P   2.42  79 eS    Sn     02 21 52.4 +0.7
HLGC  Holguin          2.65 305 eP    Pb     02 21 28.6 -2.1
HLGC                            eS    Sb     02 22 01.3 -1.8
HLGC                             IAML        02 22 14.4
      comp=N,727nm,0.6s
HLGC                             IAML        02 22 18.9
      comp=E,1μm,0.5s
CMJ   Castle Mountai   2.81 244 i P   Pn     02 21 24.6 -3.2
LOBA2 Hotel Casa Bon   2.81 117 eP    Pn     02 21 28.1 +0.3
LOBA2                           eS    Sb     02 22 07.8 +0.2
LOBA2                            IAML        02 22 27.2
      comp=Z,2μm,1.0s
SC01  Santiago de lo   2.83  89       Pn     02 21 26.9 -1.1
SC01  Santiago de lo   2.83  89 i P   Pn     02 21 28.4 +0.4
SC01                            eSg   Sg     02 22 15.5 +0.9
LMGC  Las Mercedes     3.16 283 eP    Pn     02 21 30.7 -2.0
HOJ   Hope             3.19 245⇓iP    Pn     02 21 34.1 +1.2
STH   Stony Hill       3.21 246 i P   Pn     02 21 32.6 -0.7
GRTK  Grand Turk       3.21  49⇓iP    Pn     02 21 33.1 -0.3
GRTK                            eS    Sn     02 22 12.3 +1.1
GRTK  Grand Turk       3.21  49  Pn   Pn     02 21 32.6 -0.8
GRTK  Grand Turk       3.21  49 i P   Pn     02 21 33.1 -0.3
GRTK                            eS    Sn     02 22 08.3 -3.0
GRTK                             IAML        02 22 13.7
      comp=Z,1μm,0.3s
LOSC1 San Cristbal     3.56 105 eSG   Sg     02 22 34.5 -3.6
SDD   Santo Domingo    3.72 104       Pn     02 21 40.8 +0.5
SDD   Santo Domingo    3.72 104 i P   Pn     02 21 43.7 +3.3
SDD                             eSG   Sg     02 22 42.5 -0.8
SDD                              IAML        02 22 52.3
      comp=Z,598nm,1.1s
MTDJ  Mount Denham     3.79 253 eP    Pn     02 21 40.0 -1.4
MTDJ                            eS    Sn     02 22 21.3 -4.5
MTDJ  Mount Denham     3.79 253  Pn   Pn     02 21 40.2 -1.2
CVJ   Coleyville       3.79 253 i P   Pn     02 21 40.5 -1.0
MCJ   Malvern          4.03 249⇓iP    Pn     02 21 44.6 -0.1
MCJ                             i S   Sn     02 22 29.2 -2.4
CCCC  Cccc             4.20 296 eP    Pn     02 21 43.2 -3.7
CCCC                            eS    Sn     02 22 28.5 -7.1
CCCC                             IAML        02 22 47.0
      comp=N,152nm,0.4s
CCCC                             IAML        02 22 47.8
      comp=E,205nm,0.6s
PCDR  Punta Cana, DR   5.13  99  Pn   Pn     02 22 00.2 +0.5
CRPR  Cabo Rojo, PR    6.42 101  Pn   Pn     02 22 17.1 -0.4
MGV   Manicaragua      6.45 296 eP    Pn     02 22 16.5 -1.3
MGV                             eS    Sn     02 23 27.3 -3.8
MGV                              IAML        02 23 32.5
      comp=N,87nm,0.7s
MGV                              IAML        02 23 32.9
      comp=E,48nm,0.5s
AOPR  Arecibo Observ   6.68  98       Pn     02 22 20.5 -0.5
OBIP  Obispado Ponce   6.88 100       Pn     02 22 23.5 -0.2
CELP  Cerrillos        6.89 100       Pn     02 22 23.6 -0.4
GCPR  Guaynabo City    7.31  97       Pn     02 22 27.6 -2.1
CBYP  Canovanas        7.53  97       Pn     02 22 30.4 -2.4
HUMP  Col San Antoni   7.56  98       Pn     02 22 31.2 -1.9
SOR   Soroa            9.30 293 eP    Pn     02 22 56.0 -1.1
PRVC  Isla de Provid   9.46 232  Pn   Pn     02 23 00.7 +1.4
SJCC  San Jacinto, C   9.55 189       Pn     02 23 00.9 +0.5
MOTC  Monteria, Cord  10.72 190       Pn     02 23 17.0 +0.5
SDV   Santo Domingo   10.87 164 eP    Pn     02 23 18.6 -0.1
SDV   Santo Domingo   10.87 164  Pn   Pn     02 23 19.7 +1.0
BAUV  El Baul         11.76 151  Pn   Pn     02 23 29.9 -0.8
BCIP  Isla Barro Col  11.76 211  Pn   Pn     02 23 30.1 -0.7
ZARC  Zaragoza, Cauc  11.88 185       Pn     02 23 33.0 +0.5
ESPN  Las Esperanzas  12.44 236       Pn     02 23 43.0 +3.0
PCRV  Puerto La Cruz  12.69 135  Pn   Pn     02 23 42.2 -1.2
      comp=E,3.3nm,0.3s,baz=324,slow=3.8,SNR=4.9
656A  Willston        12.77 323  Pn   Pn     02 23 42.5 -1.9
JTS   Las Juntas de   14.12 232  Pn   Pn     02 24 05.4 +2.3
JTS   Las Juntas de   14.12 232  Pn   Pn     02 24 04.5 +1.4
CRIN  San Cristobal   14.43 245  Pn   Pn     02 24 09.2 +1.9
ROSC  El Rosal        14.48 182  Pn   Pn     02 24 10.4 +2.2
      comp=E,2.6nm,0.3s,baz=86,slow=18,SNR=4.9
NHSC  New Hope        14.83 338  P    Pn     02 24 14.3 +1.7
      baz=155
BBSR  BB Station      15.25  30       Pn     02 24 14.6 -3.6
154A  Montrose        15.62 329  IAmb IAmb   02 24 30.5
      comp=Z,48nm,0.7s
352A  Blakely         15.71 322  IAmb IAmb   02 24 35.2
      comp=Z,63nm,1.3s
X58A  Rowland         15.90 343  IAmb IAmb   02 24 33.5
      comp=Z,41nm,0.8s
GOGA  Godfrey         16.45 330  P    Pn     02 24 35.0 +1.3
      baz=146
BRAL  Brewton         16.80 317  P    Pn     02 24 39.2 +1.1
      baz=131
KMSC  Kings Mountain  17.07 338  P    P      02 24 43.4 +0.1
      baz=155,SNR=5.4
CCIG  Comitan         17.80 263       P      02 24 53.8 +2.2
T60A  Surry           17.88 352  P    Pn     02 24 51.2 -0.3
T60A                             IAmb IAmb   02 24 53.3
      comp=Z,80nm,0.8s
FPAL  Fort Paine      18.41 327  IAmb IAmb   02 25 01.2
      comp=Z,69nm,1.4s
TKL   Tuckaleechee C  18.47 333  P    P      02 24 58.4 -0.3
      comp=Z,0.2nm,0.3s,baz=154,slow=13,SNR=6.0
CPCT  Cooper Cave     18.62 331  P    Pn     02 25 01.5 +0.8
BLA   Blacksburg      18.70 343       P      02 25 01.6 +0.4
BLA                              IAmb IAmb   02 25 04.1
      comp=Z,34nm,0.8s
BLA   Blacksburg      18.70 343  P    Pn     02 25 02.7 +1.1
      baz=160,SNR=13
Z47A  Carrollton      18.80 320  P    Pn     02 25 03.6 +0.8
CBN   Corbin Frederi  19.01 351  IAmb IAmb   02 25 15.7
      comp=Z,34nm,0.7s
CBN   Corbin Frederi  19.01 351  P    Pn     02 25 06.0 +0.6
      baz=169
TZTN  Tazewell        19.14 335  P    Pn     02 25 07.6 +0.6
      baz=150
344A  Westbrook Farm  19.47 311  P    Pn     02 25 10.7 -0.3
S54A  Dingess, Beckl  19.50 342  IAmb IAmb   02 25 12.8
      comp=Z,21nm,0.8s
V48A  Smith Brothers  19.97 327  P    P      02 25 16.0 +0.9
V48A                             IAmb IAmb   02 25 19.4
      comp=Z,22nm,0.8s
T50A  Nancy           20.08 333  P    P      02 25 15.3 -1.0
S51A  Beattyville     20.12 337  P    P      02 25 15.1 -1.6
SDMD  Soldier's Deli  20.13 353  P    P      02 25 13.2 -3.7
Y45A  Yeager Farm, C  20.16 319  IAmb IAmb   02 25 25.1
      comp=Z,62nm,0.9s
CMIG  Matias Romero   20.23 267  P    Pn     02 25 19.6 -0.4
      comp=Z,7.9nm,0.8s,baz=78,slow=8.6,SNR=21
P57A  Homestead Farm  20.36 350  IAmb IAmb   02 25 31.1
      comp=Z,49nm,1.5s
Q54A  Coxs Mills      20.47 344  IAmb IAmb   02 25 28.0
      comp=Z,35nm,1.4s
342A  Flagon Creek P  20.57 309  IAmb IAmb   02 25 28.7
      comp=Z,38nm,0.8s
MVL   Millersville    20.66 354  IAmb IAmb   02 25 28.6
      comp=Z,31nm,1.4s
WVT   Waverly         20.79 326  P    P      02 25 24.9 +0.9
WVT   Waverly         20.79 326  P    Pn     02 25 25.9 -0.5
      baz=140
W45A  Hickory Valley  20.82 322  IAmb IAmb   02 25 33.6
      comp=Z,50nm,1.1s
Q52A  Bidwell         20.86 341  IAmb IAmb   02 25 34.3
      comp=Z,36nm,0.8s
R50A  Paris           20.96 336  IAmb IAmb   02 25 31.8
      comp=Z,29nm,0.8s
T47A  Sharon Grove    21.09 329  IAmb IAmb   02 25 29.5
      comp=Z,34nm,1.0s
P53A  Whipple         21.09 343  IAmb IAmb   02 25 32.9
      comp=Z,32nm,0.8s
LUPA  Lehigh Univers  21.18 357  IAmb IAmb   02 25 40.9
      comp=Z,27nm,1.1s
O56A  Blue Knob Stat  21.22 350  IAmb IAmb   02 25 34.4
      comp=Z,27nm,0.9s
O56A  Blue Knob Stat  21.22 350  P    P      02 25 30.1 +1.5
      baz=167
BOAV  Boa Vista       21.26 141 eP    P      02 25 29.5 +0.2
BOAV  Boa Vista       21.26 141  P    P      02 25 28.5 -0.7
Q51A  Peebles         21.27 339  IAmb IAmb   02 25 34.8
      comp=Z,49nm,0.9s
R49A  Shelbyville     21.30 335  IAmb IAmb   02 25 31.9
      comp=Z,24nm,0.9s
P52A  Corning         21.44 342  IAmb IAmb   02 25 36.4
      comp=Z,41nm,1.1s
P52A  Corning         21.44 342  P    P      02 25 32.3 +1.4
      baz=158,SNR=11
SSPA  Standing Stone  21.47 351  P    P      02 25 33.0 +1.7
SSPA                             IAmb IAmb   02 25 36.6
      comp=Z,20nm,0.9s
SSPA  Standing Stone  21.47 351  P    P      02 25 32.6 +1.3
      baz=169
N59A  State Game Lan  21.52 356  IAmb IAmb   02 25 37.1
      comp=Z,20nm,0.8s
N59A  State Game Lan  21.52 356  P    P      02 25 33.8 +1.9
      baz=174,SNR=5.4
PAL   Palisades       21.54 360  P    P      02 25 32.9 +0.9
      baz=179
P51A  Williamsport    21.58 340  IAmb IAmb   02 25 37.4
      comp=Z,42nm,0.9s
ODNJ  Ogdensburg      21.63 358  IAmb IAmb   02 25 49.8
      comp=Z,43nm,1.4s
TRNY  Table Rock, Ra  21.69 359  IAmb IAmb   02 25 38.7
      comp=Z,49nm,1.4s
WCI   Wyandotte Cave  21.72 332  P    P      02 25 34.8 +0.8
WCI   Wyandotte Cave  21.72 332  P    P      02 25 35.4 +1.4
      baz=146
O53A  New Philadelph  21.76 344  P    P      02 25 35.6 +1.2
      baz=160,SNR=10.0
LPAR  Lepanto         21.79 321  IAmb IAmb   02 25 37.0
      comp=Z,49nm,1.1s
O52A  Adamsville      21.80 343  IAmb IAmb   02 25 40.2
      comp=Z,57nm,1.1s
Z41A  Richland Creek  21.93 313  P    P      02 25 37.5 +1.2
      baz=124,SNR=6.6
HBAR  Harrisburg      21.97 321  IAmb IAmb   02 25 43.5
      comp=Z,57nm,1.1s
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M57A	Sunshine Farm,	22.07	353	IAmb	IAmb	02 25 57.8	
	comp=Z,28nm,1.1s						
N54A	Moraine State	22.16	347	IAmb	IAmb	02 25 43.2	
	comp=Z,36nm,1.1s						
N54A	Moraine State	22.16	347	P	P	02 25 40.1	+1.4
	baz=164,SNR=7.2						
KSPA	Keystone Colle	22.16	356	IAmb	IAmb	02 25 43.4	
	comp=Z,20nm,1.0s						
N53A	Lisbon	22.20	346	IAmb	IAmb	02 25 47.0	
	comp=Z,22nm,0.9s						
P49A	Miami Univ. Ec	22.20	337	IAmb	IAmb	02 25 41.4	
	comp=Z,38nm,1.1s						
P49A	Miami Univ. Ec	22.20	337	P	P	02 25 40.1	+0.9
	baz=151,SNR=8.9						
ACSO	Alum Creek Sta	22.24	341	IAmb	IAmb	02 25 48.8	
	comp=Z,34nm,0.9s						
ACSO	Alum Creek Sta	22.24	341	P	P	02 25 41.1	+1.5
	baz=156,SNR=7.4						
WLAR	White Oak Lake	22.39	313	IAmb	IAmb	02 25 46.8	
	comp=Z,47nm,1.1s						
P48A	Milroy	22.41	336	IAmb	IAmb	02 25 45.2	
	comp=Z,54nm,1.4s						
M55A	Ridgway	22.42	350	IAmb	IAmb	02 25 45.2	
	comp=Z,16nm,0.9s						
NATX	Nacogdoches	22.50	307	P	P	02 25 43.9	+1.5
NATX	Nacogdoches	22.50	307	P	P	02 25 44.1	+1.7
	baz=118						
BLO	Bloomington	22.61	333	IAmb	IAmb	02 25 47.4	
	comp=Z,36nm,0.9s						
LCAR	Lake Charles	22.61	321	IAmb	IAmb	02 25 47.5	
	comp=Z,36nm,1.2s						
M54A	Oil Creek Stat	22.62	348	P	P	02 25 44.5	+0.9
	baz=165,SNR=7.0						
HKT	Hockley	22.64	302	P	P	02 25 45.4	+1.5
HKT				IAmb	IAmb	02 25 47.4	
	comp=Z,40nm,1.4s						
O49A	Covington	22.64	339	IAmb	IAmb	02 25 46.6	
	comp=Z,36nm,1.2s						
X40A	Basin Creek Fa	22.66	315	IAmb	IAmb	02 25 48.2	
	comp=Z,41nm,1.4s						
X40A	Basin Creek Fa	22.66	315	P	P	02 25 45.7	+1.6
	baz=127,SNR=11						
PBMO	Poplar Bluff	22.68	323	IAmb	IAmb	02 25 47.6	
	comp=Z,30nm,1.0s						
N51A	Ashland	22.70	343	IAmb	IAmb	02 25 47.1	
	comp=Z,42nm,1.1s						
W41B	Gary Mavity, V	22.70	318	P	P	02 25 45.7	+1.1
	baz=129,SNR=6.9						
S44A	Carbondale	22.72	327	IAmb	IAmb	02 25 48.2	
	comp=Z,34nm,0.8s						
M53A	WI Miller and	22.76	346	P	P	02 25 46.4	+1.3
	baz=163						
WHAR	Wooly Hollow	22.80	318	P	P	02 25 46.4	+0.8
BINY	Binghamton	22.82	356	IAmb	IAmb	02 25 54.9	
	comp=Z,25nm,1.1s						
BINY	Binghamton	22.82	356	P	P	02 25 46.9	+1.2
	baz=174						
L56A	Greenwood	22.91	353	IAmb	IAmb	02 25 57.4	
	comp=Z,54nm,1.4s						
FCAR	Ozark Folk Cen	23.08	319	IAmb	IAmb	02 25 52.3	
	comp=Z,32nm,1.2s						
MIAR	Mount Ida	23.19	315	IAmb	IAmb	02 26 01.0	
	comp=Z,30nm,1.4s						
MIAR	Mount Ida	23.19	315	P	P	02 25 50.6	+1.0
	baz=125,SNR=6.5						
K57A	Scipio Center	23.39	355	IAmb	IAmb	02 25 53.9	
	comp=Z,26nm,0.8s						
FVM	French Village	23.55	325	IAmb	IAmb	02 25 56.7	
	comp=Z,14nm,0.9s						
W39A	Magazine	23.71	316	P	P	02 25 56.5	+1.8
	baz=126,SNR=16						
TBTG	Tabatinga, AM	23.73	171	*e*P	P	02 25 56.7	+1.6
U40A	Yellville	23.83	319	IAmb	IAmb	02 26 00.2	
	comp=Z,14nm,1.0s						
U40A	Yellville	23.83	319	P	P	02 25 57.1	+1.1
	baz=130,SNR=6.0						
SFIN	Lafayette	23.86	334	IAmb	IAmb	02 25 59.7	
	comp=Z,23nm,0.8s						
SFIN	Lafayette	23.86	334	P	P	02 25 57.6	+1.5
	baz=147						
J58A	Remsen	23.93	357	IAmb	IAmb	02 26 06.3	
	comp=Z,20nm,1.1s						
MGMO	Mountain Grove	24.00	321	IAmb	IAmb	02 26 00.2	
	comp=Z,25nm,0.8s						
J59A	Piesco	24.01	359	IAmb	IAmb	02 26 06.9	
	comp=Z,12nm,0.8s						
J57A	Williamstown	24.02	356	IAmb	IAmb	02 26 06.3	
	comp=Z,25nm,0.9s						
CCM	Cathedral Cave	24.05	324	P	P	02 25 58.4	+0.5
CCM				IAmb	IAmb	02 26 01.2	
	comp=Z,25nm,0.8s						
CCM	Cathedral Cave	24.05	324	P	P	02 25 59.0	+1.1
	baz=136						
PTGA	Pitinga	24.13	144	P	P	02 25 58.8	0.0
	comp=Z,8.2nm,0.8s,baz=324,slow=23,SNR=10						
L48A	N Adams	24.25	340	IAmb	IAmb	02 26 01.3	
	comp=Z,16nm,0.8s						
O44A	Mansfield	24.26	332	IAmb	IAmb	02 26 02.4	
	comp=Z,32nm,1.0s						
435B	Jarrell	24.35	302	IAmb	IAmb	02 26 04.3	
	comp=Z,18nm,0.7s						
435B	Jarrell	24.35	302	P	P	02 26 02.2	+1.4
	baz=112						
X37A	Clayton	24.44	313	IAmb	IAmb	02 26 04.6	
	comp=Z,25nm,0.8s						
NCB	Newcomb	24.51	359	IAmb	IAmb	02 26 12.2	
	comp=Z,21nm,0.9s						
WHTX	Lake Whitney,	24.73	305	IAmb	IAmb	02 26 06.9	
	comp=Z,26nm,0.9s						
WHTX	Lake Whitney,	24.73	305	P	P	02 26 05.1	+0.9
	baz=115,SNR=8.2						
U38A	Gravette	24.85	317	IAmb	IAmb	02 26 09.0	
	comp=Z,23nm,1.2s						
HDIL	Hopedale	24.96	331	IAmb	IAmb	02 26 09.6	
	comp=Z,24nm,0.8s						
HDIL	Hopedale	24.96	331	P	P	02 26 07.1	+0.9
	baz=143,SNR=6.8						
MDP	Montagnes des	24.97	122	P	P	02 26 05.9	-0.7
	comp=Z,21nm,0.7s,baz=327,slow=8.6,SNR=6.1						
833A	Chaparral WMA,	25.06	296	P	P	02 26 08.4	+1.1
	baz=105						
LONY	Lake Ozonia	25.16	359	IAmb	IAmb	02 26 19.1	
	comp=Z,17nm,0.9s						
TUL1	Leonard	25.46	315	P	P	02 26 12.1	+1.3
	baz=124,SNR=23						
SADO	Sadowa	25.70	351	P	P	02 26 14.1	+1.2
	comp=Z,10nm,0.8s,baz=214,slow=3.8,SNR=5.5						
N41A	Harden Midland	25.82	329	IAmb	IAmb	02 26 17.6	
	comp=Z,22nm,0.9s						
MACA	Manacapuru-AM	25.82	149	*e*P	P	02 26 14.8	+0.6
MACA	Manacapuru-AM	25.82	149	P	P	02 26 14.8	+0.6
JCT	Junction City	26.04	300	IAmb	IAmb	02 26 21.9	
	comp=Z,32nm,1.3s						
JCT	Junction City	26.04	300	P	P	02 26 17.3	+1.1
	baz=109						
FNO	Franklin	26.21	312	IAmb	IAmb	02 26 22.3	
	comp=Z,22nm,0.9s						
QUOK	Quay	26.22	314	IAmb	IAmb	02 26 20.0	
	comp=Z,23nm,0.8s						
L42A	Oliver, Polo	26.29	332	IAmb	IAmb	02 26 22.6	
	comp=Z,17nm,0.9s						
P38A	Dawn	26.42	324	IAmb	IAmb	02 26 21.3	
	comp=Z,15nm,0.8s						
T35A	Sooner Cattle	26.51	316	IAmb	IAmb	02 26 22.5	
	comp=Z,21nm,0.9s						
BCOK	Bluff Creek, N	26.56	312	IAmb	IAmb	02 26 22.9	
	comp=Z,22nm,0.8s						
ABTX	Abilene, Hawle	26.68	305	IAmb	IAmb	02 26 24.3	
	comp=Z,13nm,1.2s						
ABTX	Abilene, Hawle	26.68	305	P	P	02 26 23.1	+1.2
	baz=113						
BLOK	Blackwell	26.89	315	IAmb	IAmb	02 26 26.2	
	comp=Z,28nm,0.9s						
CZSB	Cruzeiro do Su	26.97	178	*e*P	P	02 26 26.3	+1.7
L40A	Anamosa	27.04	330	IAmb	IAmb	02 26 29.8	
	comp=Z,22nm,0.8s						
KAN13	South Haven SW	27.20	315	IAmb	IAmb	02 26 29.0	
	comp=Z,30nm,1.1s						
CROK	Carrier	27.27	314	IAmb	IAmb	02 26 33.0	
	comp=Z,24nm,1.0s						
JFWS	Jewell Farm	27.28	333	P	P	02 26 27.7	+0.6
	baz=144,SNR=7.4						
KAN01	Argonia South	27.47	315	IAmb	IAmb	02 26 32.2	
	comp=Z,35nm,1.3s						
KAN05	Bluff City Nor	27.52	315	IAmb	IAmb	02 26 31.3	
	comp=Z,15nm,0.7s						
KAN08	Anthony NE Sta	27.65	315	IAmb	IAmb	02 26 37.0	
	comp=Z,17nm,1.1s						
KAN10	Anthony SW Sta	27.67	315	IAmb	IAmb	02 26 33.1	
	comp=Z,25nm,1.0s						
KAN12	Harper NE Stat	27.70	315	IAmb	IAmb	02 26 33.6	
	comp=Z,28nm,1.2s						
KSU1	Kansas State U	27.87	320	P	P	02 26 33.1	+0.6
	baz=128,SNR=9.3						
SCIA	State Center	27.89	328	IAmb	IAmb	02 26 34.0	
	comp=Z,11nm,0.8s						
SCIA	State Center	27.89	328	P	P	02 26 33.5	+0.9
	baz=138						
MALB	Monte Alegre	28.48	136	*e*P	P	02 26 38.4	+0.3
AMTX	Amarillo	29.15	308	IAmb	IAmb	02 26 46.0	
	comp=Z,14nm,0.8s						
AMTX	Amarillo	29.15	308	P	P	02 26 44.5	+0.5
	baz=115						
ITTB	Itaituba	29.51	141	*e*P	P	02 26 46.5	-0.8
I37A	Lemond, Waseca	29.56	330	P	P	02 26 45.1	-2.3
I37A				IAmb	IAmb	02 26 50.3	
	comp=Z,8.7nm,0.6s						
MSTX	Muleshoe	29.61	305	P	P	02 26 47.1	-1.1
MSTX				IAmb	IAmb	02 26 50.1	
	comp=Z,7.4nm,0.9s						
MSTX	Muleshoe	29.61	305	P	P	02 26 49.0	+0.8
	baz=112						
CBKS	Cedar Bluff	29.68	316	P	P	02 26 49.3	+0.6
CBKS	Cedar Bluff	29.68	316	P	P	02 26 49.8	+1.1
	baz=123,SNR=17						
ETMB	Extrema	29.95	165	*e*P	P	02 26 51.9	+0.8
ETMB	Extrema	29.95	165	P	P	02 26 51.5	+0.3
ETMB				IAmb	IAmb	02 26 53.0	
	comp=Z,10nm,0.7s						
BGNE	Belgrade	30.23	322	P	P	02 26 54.1	+0.6
	baz=129						
SPMN	Marine on St.	30.23	333	P	P	02 26 54.3	+0.9
	baz=142						
ECSD	EROS Data Cent	30.94	327	P	P	02 27 00.1	+0.4
ECSD				IAmb	IAmb	02 27 00.9	
	comp=Z,11nm,0.8s						
ECSD	EROS Data Cent	30.94	327	P	P	02 27 00.3	+0.6
	baz=134,SNR=12						
MNTX	Cornudas Mount	30.97	300	P	P	02 27 00.3	+0.2
MNTX				IAmb	IAmb	02 27 02.2	
	comp=Z,6.2nm,0.9s						
MNTX	Cornudas Mount	30.97	300	P	P	02 27 01.2	+1.1
	baz=106,SNR=13						
F36A	Milaca	31.05	333	P	P	02 27 00.4	-0.3
F36A				IAmb	IAmb	02 27 02.2	
	comp=Z,16nm,1.4s						
K31A	O'Neill	31.35	323	P	P	02 27 04.0	+0.6
KSCO	Kaye Shedlock'	31.71	314	IAmb	IAmb	02 27 09.2	
	comp=Z,20nm,1.1s						
KSCO	Kaye Shedlock'	31.71	314	P	P	02 27 07.9	+1.2
	baz=120						
NPGB	Novo Progresso	31.90	144	*e*P	P	02 27 08.4	0.0
EYMN	Ely	31.93	337	P	P	02 27 08.7	+0.3
EYMN				IAmb	IAmb	02 27 10.4	
	comp=Z,15nm,0.9s						
EYMN	Ely	31.93	337	P	P	02 27 09.4	+1.0
	baz=147						
T25A	Trinidad	32.10	310	P	P	02 27 11.8	+1.6
	baz=115,SNR=15						
F33A	5 Mile Ranch,	32.29	330	P	P	02 27 10.5	-1.1
F33A				IAmb	IAmb	02 27 14.3	
	comp=Z,11nm,0.8s						
OGNE	Ogallala	32.33	318	P	P	02 27 13.1	+1.1
	baz=123						
BNM	Barren Site	32.68	303	P	P	02 27 15.5	+0.1
ANMO	Albuquerque	32.81	305	P	P	02 27 17.0	+0.6
ANMO	Albuquerque	32.81	305	P	P	02 27 18.0	+1.5
	baz=110						
B35A	Bob, Littlefor	33.12	335	P	P	02 27 18.5	-0.3
SDCO	Great Sand Dun	33.14	310	P	P	02 27 18.2	-1.2
SDCO				IAmb	IAmb	02 27 22.2	
	comp=Z,12nm,1.1s						
SDCO	Great Sand Dun	33.14	310	P	P	02 27 20.9	+1.4
	baz=114,SNR=19						
121A	Cookes Peak, D	33.15	300	P	P	02 27 21.2	+1.7
	baz=105						
TMAB	Tom-Au,PA,Br	33.19	128	*e*P	P	02 27 19.3	-0.4
Q24A	Divide	33.42	312	P	P	02 27 23.0	+1.1
	baz=117,SNR=6.1						
AGMN	Agassiz Nation	33.95	333	P	P	02 27 26.1	+0.1
AGMN				IAmb	IAmb	02 27 29.0	
	comp=Z,12nm,0.9s						
AGMN	Agassiz Nation	33.95	333	P	P	02 27 26.9	+0.9
	baz=140,SNR=8.1						
S22A	4UR Ranch, Cre	34.10	309	P	P	02 27 29.0	+1.2
	baz=113,SNR=7.5						
ISCO	Idaho Springs	34.12	313	P	P	02 27 28.7	+0.8
ISCO				IAmb	IAmb	02 27 31.6	
	comp=Z,7.7nm,0.8s						
ISCO	Idaho Springs	34.12	313	P	P	02 27 29.4	+1.4
	baz=117,SNR=15						
319A	Douglas	34.12	298	P	P	02 27 28.7	+0.8
PRPB	Parauapebas	34.64	135	*e*P	P	02 27 32.0	-0.3
SMCO	Snowmass	34.79	312	P	P	02 27 33.0	-0.9
SMCO				IAmb	IAmb	02 27 36.6	
	comp=Z,17nm,1.2s						
VILB	Vilhena	34.79	156	*e*P	P	02 27 34.4	+0.7
VILB	Vilhena	34.79	156	P	P	02 27 33.0	-0.7
VILB				IAmb	IAmb	02 27 35.0	
	comp=Z,14nm,0.9s						
N23A	Red Feather La	34.85	315	P	P	02 27 35.4	+1.1
	baz=118						
CLDB	Colider	34.88	148	*e*P	P	02 27 34.0	-0.3
E28A	Huff	34.98	327	P	P	02 27 35.0	-0.1
PDRB	Porto dos Gac	35.06	150	*e*P	P	02 27 36.1	+0.1
MVCO	Mesa Verde	35.14	308	P	P	02 27 37.7	+1.0
	baz=111						
MDND	Maddock	35.31	329	P	P	02 27 38.2	+0.4
MDND	Maddock	35.31	329	P	P	02 27 38.7	+0.9
	baz=134,SNR=6.5						
RSSD	Black Hills	35.33	321	P	P	02 27 39.0	+0.8
	baz=124						
X18A	Snowflake	35.42	303	P	P	02 27 39.3	+0.1
X18A				IAmb	IAmb	02 27 43.6	
	comp=Z,13nm,1.4s						
ULM	Lac du Bonnet	35.48	335	P	P	02 27 39.4	+0.2
	comp=Z,12nm,0.9s,baz=147,slow=8.8,SNR=8.9						
ULM				LR	LR	02 43 13.0	
	comp=Z,253nm,18.5s,baz=162,slow=38						
ULM	Lac du Bonnet	35.48	335	P	P	02 27 39.2	0.0
ULM				IAmb	IAmb	02 27 40.3	
	comp=Z,14nm,1.1s						
TUC	Tucson	35.57	299	P	P	02 27 41.7	+1.4
	baz=102						
SCHQ	Schefferville	35.77	7	P	P	02 27 42.8	+1.2
	comp=Z,13nm,0.9s,baz=198,slow=7.4,SNR=16						
SCHQ				LR	LR	02 41 32.1	
	comp=Z,179nm,19.6s,baz=158,slow=35						
LPAZ	La Paz	35.88	171	P	P	02 27 45.2	+1.6
	comp=Z,1.1nm,0.5s,baz=358,slow=3.1,SNR=6.9						
LPAZ				LR	LR	02 44 45.3	
	comp=Z,178nm,18.9s,baz=334,slow=40						
LPAZ	La Paz	35.88	171	*e*P	P	02 27 44.6	+1.0
LPAZ	La Paz	35.88	171	P	P	02 27 43.2	-0.4
RWWY	Rawlins	36.07	315	P	P	02 27 43.0	-1.7
RWWY				IAmb	IAmb	02 27 46.4	
	comp=Z,19nm,1.2s						
O20A	White River Ci	36.08	312	P	P	02 27 44.7	-0.1
O20A				IAmb	IAmb	02 27 48.0	
	comp=Z,13nm,0.9s						
O20A	White River Ci	36.08	312	P	P	02 27 46.3	+1.6
	baz=115,SNR=7.0						
K22A	Casper	36.08	317	P	P	02 27 45.2	+0.6
K22A	Casper	36.08	317	P	P	02 27 45.8	+1.1
	baz=120,SNR=14						
ROSB	Rosrio	36.56	124	*e*P	P	02 27 48.0	-0.8
X16A	Lo Mia Camp, P	36.58	302	P	P	02 27 49.6	+0.5
WUAZ	Wupatki	36.81	304	P	P	02 27 50.7	-0.4
WUAZ				IAmb	IAmb	02 27 54.4	
	comp=Z,12nm,1.1s						
WUAZ	Wupatki	36.81	304	P	P	02 27 52.9	+1.9
	baz=106,SNR=5.3						
RDMU	Red Mountain	37.18	312	P	P	02 27 53.5	-0.7
214A	Organ Pipe Nat	37.19	298	P	P	02 27 54.0	-0.1
214A	Organ Pipe Nat	37.19	298	P	P	02 27 55.5	+1.4
	baz=100						
P18A	Preston Nutter	37.30	311	P	P	02 27 55.3	+0.1
P18A				IAmb	IAmb	02 28 06.0	
	comp=Z,20nm,1.4s						
SIV	San Ignacio	37.30	160	P	P	02 27 54.8	-0.3
	comp=Z,3.0nm,0.7s,baz=359,slow=9.8,SNR=17						
PTLB	Pontes e Lacer	37.48	156	*e*P	P	02 27 55.6	-1.0
PTLB	Pontes e Lacer	37.48	156	P	P	02 27 56.0	-0.6
P17A	Butcher Ranch,	37.59	310	P	P	02 27 56.1	-1.5
P17A				IAmb	IAmb	02 27 59.7	
	comp=Z,11nm,1.1s						
U15A	North Rim	37.78	305	P	P	02 28 00.3	+1.0
U15A				IAmb	IAmb	02 28 12.3	
	comp=Z,13nm,1.2s						
TMUT	Trail Mountain	37.87	310	P	P	02 28 00.1	0.0
TMUT				IAmb	IAmb	02 28 02.8	
	comp=Z,12nm,1.3s						
DGMT	Dagmar	38.02	327	IAmb	IAmb	02 28 04.8	
	comp=Z,11nm,1.0s						
DGMT	Dagmar	38.02	327	P	P	02 28 02.0	+1.1
	baz=129						
LAO	LASA Array	38.05	323	P	P	02 28 00.4	-0.8
LAO				IAmb	IAmb	02 28 02.9	
	comp=Z,15nm,1.1s						
LAO	LASA Array	38.05	323	P	P	02 28 01.5	+0.2
	baz=125,SNR=5.4						
SMTB	Santa Maria do	38.10	135	*e*P	P	02 28 02.1	+0.2
BW06	Boulder Array	38.11	316	P	P	02 28 01.1	-0.9
BW06	Boulder Array	38.11	316	P	P	02 28 02.4	+0.4
	baz=116,SNR=7.3						
PD31	Pinedale Array	38.11	316	P	P	02 28 00.9	-1.1
PDAR	Pinedale Array	38.11	316	P	P	02 28 02.6	+0.7
	comp=Z,2.3nm,0.8s,baz=120,slow=9.3,SNR=24						
PDAR				LR	LR	02 45 06.2	
	comp=Z,141nm,19.1s,baz=106,slow=38						
PDAR	Pinedale Array	38.11	316	P	P	02 28 02.1	+0.1
SNDB	Serra Nova Dou	38.21	143	*e*P	P	02 28 02.4	-0.3
MSU	Marysvale	38.32	308	P	P	02 28 03.6	-0.1
MVU	Marysvale	38.34	308	P	P	02 28 03.6	-0.5
MVU				IAmb	IAmb	02 28 08.1	
	comp=Z,16nm,1.2s						
KNB	Kanab	38.35	306	P	P	02 28 04.4	+0.3
JLU	Jordanelle	38.52	312	P	P	02 28 04.1	-1.4
SZCU	Shurtz Canyon	38.72	306	P	P	02 28 07.3	+0.1
NLU	North Lily Min	38.73	310	P	P	02 28 07.1	-0.1
NLU				IAmb	IAmb	02 28 09.9	
	comp=Z,16nm,1.3s						
CTU	Camp Tracy	38.76	312	P	P	02 28 07.5	+0.1
CCUT	Cedar City	38.92	306	P	P	02 28 07.5	-1.4
RLMT	Red Lodge	39.02	319	P	P	02 28 09.3	-0.4
RLMT				IAmb	IAmb	02 28 11.2	
	comp=Z,13nm,0.9s						
RLMT	Red Lodge	39.02	319	P	P	02 28 10.5	+0.8
	baz=119,SNR=15						
AHID	Auburn Hatcher	39.13	315	P	P	02 28 10.7	+0.2
LOHW	Long Hollow	39.17	316	P	P	02 28 11.6	+0.7
SNOW	Snow King Moun	39.20	316	P	P	02 28 11.1	-0.1
REDW	Red Top Meadow	39.22	316	P	P	02 28 11.7	+0.3
SALV	Santo Antonio	39.30	152	*e*P	P	02 28 09.9	-2.0
MOOW	Moose Ponds	39.32	316	P	P	02 28 13.1	+0.9
MOOW				IAmb	IAmb	02 28 14.3	
	comp=Z,23nm,0.9s						
DUG	Dugway, Tooele	39.34	310	P	P	02 28 11.7	-0.6
DUG				IAmb	IAmb	02 28 14.9	
	comp=Z,12nm,1.1s						
DUG	Dugway, Tooele	39.34	310	P	P	02 28 13.7	+1.4
	baz=110,SNR=9.7						
YMP	Mirror Lake Pl	39.40	318	P	P	02 28 12.1	-0.8
YMP				IAmb	IAmb	02 28 27.3	
	comp=Z,18nm,0.9s						
ECR	Eagle Creek	39.43	315	P	P	02 28 11.1	-2.0
FLWY	Flagg Ranch	39.44	317	P	P	02 28 12.2	-1.0
FLWY				IAmb	IAmb	02 28 22.7	
	comp=Z,22nm,1.1s						
LKWY	Lake	39.47	318	P	P	02 28 13.7	+0.2
SPUT	South Promonto	39.48	312	P	P	02 28 12.9	-0.5
SPUT				IAmb	IAmb	02 28 15.6	
	comp=Z,9.2nm,0.9s						
H17A	Grant Village	39.50	317	P	P	02 28 13.5	-0.2
H17A	Grant Village	39.50	317	P	P	02 28 15.1	+1.4
	baz=117						
IRM	Iron Mountain	39.52	300	P	P	02 28 15.5	+1.8
	baz=101,SNR=7.6						
GCMT	Greycliff	39.60	320	P	P	02 28 14.8	+0.5
BC3	Big Chuckawall	39.68	300	P	P	02 28 16.9	+1.7
	baz=100						
YNR	Norris Junctio	39.72	318	P	P	02 28 14.6	-0.8
BGU	Big Grassy Mou	39.75	311	P	P	02 28 16.9	+1.3
BGU				IAmb	IAmb	02 28 27.6	
	comp=Z,13nm,1.2s						
YMR	Madison River	39.88	318	P	P	02 28 16.2	-0.5
YMR				IAmb	IAmb	02 28 28.0	
	comp=Z,21nm,1.4s						
HVU	Hansel Valley	39.88	313	P	P	02 28 14.8	-2.0
SHPR	Sheep Range	40.03	304	P	P	02 28 18.0	-0.1
GMRC	Granite Mounta	40.06	301	P	P	02 28 19.7	+1.4
	baz=101						
SPR3	Spring Creek 3	40.07	308	P	P	02 28 18.6	0.0
PEXB	Peixe	40.09	139	*e*P	P	02 28 18.8	+0.3
YHL	Hebgen Lake	40.10	318	P	P	02 28 19.0	+0.3
YHL				IAmb	IAmb	02 28 22.9	
	comp=Z,17nm,1.1s						
PRN	Pahroc Range	40.17	305	P	P	02 28 19.2	0.0
QLMT	Earthquake Lak	40.24	318	P	P	02 28 21.3	+1.5
MONP2	Monument Peak	40.35	298	P	P	02 28 22.6	+1.7
	baz=99						
TUQ	Turquoise Moun	40.40	302	P	P	02 28 22.8	+1.7
	baz=102,SNR=5.9						
BOZ	Bozeman (W)	40.72	319	P	P	02 28 23.5	-0.1
BOZ				IAmb	IAmb	02 28 26.1	
	comp=Z,12nm,1.1s						
BOZ	Bozeman (W)	40.72	319	P	P	02 28 24.7	+1.1
	baz=117,SNR=13						
SHOC	Shoshone, Teco	40.78	303	P	P	02 28 26.2	+2.1
	baz=102						
EGMT	Eagleton	40.79	323	P	P	02 28 23.5	-0.6
EGMT				IAmb	IAmb	02 28 26.2	
	comp=Z,10nm,0.9s						
EGMT	Eagleton	40.79	323	P	P	02 28 25.4	+1.3
	baz=122						
R11A	Troy Canyon, C	40.83	307	P	P	02 28 23.4	-1.3
R11A	Troy Canyon, C	40.83	307	P	P	02 28 26.6	+1.9
	baz=106						
TPNV	Topopah Spring	40.99	304	P	P	02 28 27.1	+1.1
TPNV	Topopah Spring	40.99	304	P	P	02 28 28.1	+2.1
	baz=103						
ARAG	Araguaiana, MT	41.00	147	*e*P	P	02 28 25.0	-1.0
GSC	Goldstone, Bar	41.08	302	P	P	02 28 28.7	+2.0
	baz=101						
MURC	Murrieta	41.10	299	P	P	02 28 28.8	+2.0
	baz=99						
GWY	Greenwater Val	41.15	303	P	P	02 28 25.8	-1.5
MCMT	McKenzie Canyo	41.15	317	P	P	02 28 27.8	+0.4
PP1B	Ponte de Pedra	41.16	152	*e*P	P	02 28 27.4	+0.1
DLMT	Dillon	41.22	318	P	P	02 28 27.9	+0.1
DLMT				IAmb	IAmb	02 28 30.5	
	comp=Z,23nm,1.1s						
QSM	Queen of Sheba	41.26	303	P	P	02 28 27.5	-0.5
ELK	Elko	41.27	310	P	P	02 28 28.9	+0.6
LRM	Limekiln Ridge	41.33	319	P	P	02 28 28.8	0.0
HRY	Holter Researc	41.36	320	P	P	02 28 29.3	+0.4
FURC	Furnace Creek,	41.36	303	P	P	02 28 31.2	+2.4
	baz=102						
BFSC	Mount Baldy Ra	41.58	300	P	P	02 28 32.7	+1.8
	baz=99						
HLID	Hailey	41.67	315	P	P	02 28 32.8	+1.3
HLID	Hailey	41.67	315	P	P	02 28 32.8	+1.3
	baz=112,SNR=11						
MPMC	Manual Prospec	41.77	303	P	P	02 28 34.2	+1.7
	baz=101						
LRMC	Laurel Mtn Rad	41.82	302	P	P	02 28 34.3	+1.6
	baz=101						
GRAC	Grapevine Rang	41.87	304	P	P	02 28 35.2	+2.1
	baz=102						
EDW2	Edwards Air Fo	41.96	301	P	P	02 28 35.8	+1.9
	baz=100						
TPH	Tonopah	42.01	306	P	P	02 28 34.9	+0.5
CIS	Catalina Islan	42.08	299	P	P	02 28 36.5	+1.7
	baz=98						
LCH	Last Change Ra	42.14	304	P	P	02 28 36.1	+0.7
SDBA	SAO DESIDERIO	42.48	136	*e*P	P	02 28 37.6	-0.6
ISA	Isabella, Lake	42.48	302	P	P	02 28 39.9	+1.7
	baz=100						
MFID	Camas Ranch	42.58	314	P	P	02 28 38.0	-0.9
MSO	Missoula	42.70	319	P	P	02 28 38.8	-1.0
NV11	Mina Array Sit	42.80	306	P	P	02 28 41.8	+1.0
KVN	Kaiserville	42.91	307	P	P	02 28 42.6	+0.9
KVN				IAmb	IAmb	02 28 44.3	
	comp=Z,25nm,1.4s						
NVAR	Mina Array Bea	42.91	306	P	P	02 28 43.5	+1.7
	comp=Z,1.2nm,0.7s,baz=104,slow=7.1,SNR=8.7						
NVAR				PcP	PcP	02 30 33.8	+1.3
	comp=Z,1.8nm,0.9s,baz=138,slow=3.6,SNR=5.2						
NVAR	Mina Array Bea	42.91	306	P	P	02 28 41.4	-0.4

VES	Vestal, Richgr	43.01	302	P	P	02 28 44.0	+1.7
	baz=100						
BDFB	Brasilia	43.03	142	P	P	02 28 42.4	-0.3
	comp=Z,17nm,0.8s,baz=310,slow=10,SNR=26						
BDFB				LR	LR	02 47 13.8	
	comp=Z,180nm,18.9s,baz=320,slow=37						
BDFB	Brasilia	43.03	142	P	P	02 28 42.4	-0.3
BDFB				IAmb	IAmb	02 28 43.8	
	comp=Z,23nm,0.9s						
PLID	Pearl Lake	43.30	316	P	P	02 28 44.2	-0.6
PLID				IAmb	IAmb	02 28 46.6	
	comp=Z,14nm,1.0s						
JTMT	Jette	43.32	320	P	P	02 28 46.0	+1.2
JTMT				IAmb	IAmb	02 28 47.0	
	comp=Z,7.9nm,0.9s						
AQDB	Aquidauana	43.38	155	*e*P	P	02 28 46.2	+0.8
AQDB	Aquidauana	43.38	155	P	P	02 28 46.1	+0.8
YERR	Yerington	43.76	306	P	P	02 28 49.5	+0.9
YERR				IAmb	IAmb	02 28 59.1	
	comp=Z,25nm,1.3s						
BMO	Blue Mountains	44.08	315	P	P	02 28 49.7	-1.3
BMO				IAmb	IAmb	02 28 52.5	
	comp=Z,17nm,1.5s						
WVOR	Wild Horse Val	44.21	311	P	P	02 28 50.2	-1.9
WVOR				IAmb	IAmb	02 29 01.4	
	comp=Z,16nm,1.4s						
J08A	Circle Bar Ran	44.38	313	P	P	02 28 53.9	+0.6
J08A				IAmb	IAmb	02 29 02.4	
	comp=Z,11nm,1.0s						
F10A	Beach Ranch, E	44.44	317	P	P	02 28 53.3	-0.5
F10A				IAmb	IAmb	02 28 54.8	
	comp=Z,7.6nm,0.9s						
IPMB	Ipameri, GO	44.80	144	*e*P	P	02 28 56.5	-0.4
JANB	Januaria	44.83	138	*e*P	P	02 28 56.5	-0.7
RCBR	Riachuelo	44.88	120	*e*P	P	02 28 58.5	+0.9
ITRB	Iturama	45.10	148	*e*P	P	02 28 59.5	+0.3
E09A	Wood Farm, Sta	45.23	317	P	P	02 28 60.0	0.0
E09A				IAmb	IAmb	02 29 01.6	
	comp=Z,11nm,1.1s						
NEW	Newport	45.26	320	P	P	02 29 00.4	+0.1
NEW				IAmb	IAmb	02 29 02.1	
	comp=Z,15nm,1.1s						
NEW	Newport	45.26	320	P	P	02 29 01.5	+1.2
	baz=114,SNR=9.8						
G08A	Pilot Rock	45.33	315	P	P	02 29 01.8	+0.9
G08A				IAmb	IAmb	02 29 03.1	
	comp=Z,14nm,1.1s						
C09A	Chrisman Ranch	45.79	319	IAmb	IAmb	02 29 05.9	
	comp=Z,5.9nm,0.9s						
E08A	Dider Farm, El	45.81	317	IAmb	IAmb	02 29 16.7	
	comp=Z,5.2nm,0.9s						
D08A	Wollman Farm,	45.92	318	IAmb	IAmb	02 29 14.5	
	comp=Z,5.6nm,0.9s						
MC01	Montes Claros	46.30	139	*e*P	P	02 29 08.1	-0.7
M04C	Macdoel	46.34	310	P	P	02 29 10.2	+1.2
	baz=104						
B08A	Colville Reser	46.66	319	P	P	02 29 11.9	+0.6
L04D	Klamath Falls	46.78	310	P	P	02 29 13.5	+1.1
	baz=104						
J04D	Umpqua Nationa	46.89	312	P	P	02 29 14.5	+1.1
	baz=105						
GDU01	Guandu, BA	47.05	132	*e*P	P	02 29 13.9	-0.7
F05D	White Salmon	47.19	315	P	P	02 29 16.6	+1.2
	baz=108						
I04A	Tendick Farm,	47.24	312	P	P	02 29 16.7	+0.7
	baz=105						
CPUP	Villa Florida	48.16	160	P	P	02 29 22.8	-0.2
	comp=Z,2.0nm,0.7s,baz=356,slow=9.1,SNR=4.2						
CPUP				LR	LR	02 51 09.1	
	comp=Z,170nm,19.4s,baz=348,slow=38						
CPUP	Villa Florida	48.16	160	P	P	02 29 22.8	-0.2
CMC01	Camacan, BA	48.22	133	*e*P	P	02 29 23.2	-0.5
BSFB	Barra de Sao F	49.84	138	*e*P	P	02 29 36.2	+0.1
RIB01	Linhares ES	50.48	138	*e*P	P	02 29 41.0	0.0
PARB	Paraibuna	50.55	146	*e*P	P	02 29 41.6	+0.1
YKA	Yellowknife Ar	51.41	337	P	P	02 29 47.3	-0.1
	comp=Z,11nm,0.8s,baz=129,slow=8.0,SNR=186						
YKA				pP	sP	02 29 55.4	+0.9
	comp=Z,10nm,0.9s,baz=122,slow=8.4,SNR=23						
YKA				PcP	PcP	02 31 02.2	+0.4
	comp=Z,2.3nm,0.9s,baz=121,slow=3.9,SNR=5.3						
YKA				LR	LR	02 51 58.6	
	comp=Z,134nm,18.1s,baz=0.0,slow=36						
CPSB	Cacapava Do Su	53.22	158	*e*P	P	02 30 00.8	-0.4
BO01	Tunca	53.54	177	P	P	02 30 03.4	-0.1
BO01				IAmb	IAmb	02 30 04.4	
	comp=Z,12nm,0.8s						
PLTB	Pedras Altas	54.40	159	*e*P	P	02 30 09.3	-0.5
PLTB	Pedras Altas	54.40	159	P	P	02 30 08.5	-1.3
RES	Resolute Bay	56.49	353	P	P	02 30 24.7	+0.4
RES				IAmb	IAmb	02 30 33.1	
	comp=Z,9.8nm,0.8s						
TULEG	Thule	57.23	1	P	P	02 30 29.0	-0.6
TULEG				IAmb	IAmb	02 30 31.0	
	comp=Z,12nm,1.0s						
LC01	Cunco	58.01	178	P	P	02 30 35.3	-0.2
P33M	Teslin, Yukon	58.13	330	P	P	02 30 37.4	+1.2
	baz=107						
SIT	Sitka	58.55	326	P	P	02 30 39.7	+0.6
	baz=103						
WHY	Whitehorse	59.23	330	P	P	02 30 44.7	+0.8
	baz=106						
M31M	Drury Creek, Y	59.45	332	P	P	02 30 46.1	+0.8
	baz=107						
N31M	Braeburn, Yuko	59.88	331	P	P	02 30 49.3	+1.0
	baz=105						
PLCA	Paso Flores	59.89	177	P	P	02 30 48.8	+0.2
	comp=Z,11nm,0.9s,baz=347,slow=8.7,SNR=21						
PLCA				LR	LR	02 58 09.2	
	comp=Z,43nm,19.3s,baz=27,slow=38						
PLCA	Paso Flores	59.89	177	*e*P	P	02 30 49.0	+0.5
PLCA	Paso Flores	59.89	177	P	P	02 30 47.6	-0.9
LL04	Puerto Octay	60.01	179	P	P	02 30 49.0	-0.2
A36M	Sachs Harbour	60.24	344	P	P	02 30 50.6	+0.1
A36M	Sachs Harbour	60.24	344	P	P	02 30 50.2	-0.3
	baz=122,SNR=24						
INK	Inuvik	61.12	338	P	P	02 30 56.6	0.0
	baz=111						
DAWY	Dawson	62.13	333	P	P	02 31 04.0	+0.5
	baz=103						
ESDC	Sonseca Array	62.49	55	P	P	02 31 06.7	+0.3
	comp=Z,2.0nm,0.9s,baz=276,slow=8.0,SNR=7.2						
ESDC				pP	sP	02 31 14.4	+0.5
	comp=Z,3.5nm,1.0s,baz=277,slow=6.8,SNR=7.9						
ESDC				LR	LR	02 53 18.8	
	comp=Z,84nm,19.6s,baz=235,slow=31						
M27K	Edge Creek, AK	62.88	331	P	P	02 31 09.8	+1.0
	baz=100						
L27K	Beaver Creek,	62.99	332	P	P	02 31 09.6	+0.3
L27K				IAmb	IAmb	02 31 18.9	
	comp=Z,6.1nm,0.8s						
L27K	Beaver Creek,	62.99	332	P	P	02 31 10.3	+1.0
	baz=100						
L26K	Log Cabin Wild	63.66	332	P	P	02 31 14.8	+1.0
	baz=99						
MENT	Mentasta	63.82	331	P	P	02 31 16.3	+1.5
BMRM	Bremner River	63.96	329	P	P	02 31 16.8	+1.0
	baz=97						
J26L	Joseph Creek	64.00	333	P	P	02 31 16.9	+0.9
	baz=100,SNR=5.2						
SCRK	Sand Creek	64.10	333	P	P	02 31 18.0	+1.2
SCRK	Sand Creek	64.10	333	P	P	02 31 17.9	+1.2
	baz=99,SNR=8.6						
RIDG	Independent Ri	64.44	332	P	P	02 31 20.0	+1.1
	baz=98						
EYAK	Cordova Ski Ar	64.48	329	P	P	02 31 20.7	+1.7
	baz=96						
PAX	Paxson	64.62	331	P	P	02 31 20.8	+0.7
	baz=97						
KLU	Klutina	64.66	330	P	P	02 31 21.4	+1.1
	baz=96						
Q23K	Middleton Isla	64.67	327	P	P	02 31 21.7	+1.3
	baz=95						
M24K	Tolsona, Glenn	64.84	330	P	P	02 31 22.9	+1.3
	baz=96						
BMAR	Burnt Mountain	64.92	336	P	P	02 31 22.8	+0.9
HDA	Harding Lake	65.44	333	P	P	02 31 26.8	+1.5
	baz=96						
IL31		65.46	333	IAmb	IAmb	02 31 33.7	
	comp=Z,5.2nm,0.8s						
ILAR	Eielson Array	65.46	333	P	P	02 31 25.4	0.0
	comp=Z,2.2nm,0.8s,baz=103,slow=4.8,SNR=20						
ILAR				pP	sP	02 31 32.9	+0.3
	comp=Z,5.3nm,1.0s,baz=100,slow=5.3,SNR=16						
ILAR				LR	LR	03 00 48.2	
	comp=Z,68nm,19.6s,baz=98,slow=37						
ILAR	Eielson Array	65.46	333	P	P	02 31 25.7	+0.3
WAT6	Susitna Watana	65.61	331	P	P	02 31 27.5	+0.8
	baz=95						
POKR	Poker Plat Res	65.73	334	P	P	02 31 28.2	+1.0
	baz=96						
SML	Sawmill	65.83	330	P	P	02 31 28.9	+1.0
	baz=94						
CCB	Clear Creek Bu	65.83	333	P	P	02 31 27.9	+0.1
CCB				IAmb	IAmb	02 31 29.8	
	comp=Z,6.1nm,1.0s						
H24K	Noodor Dome	65.99	334	P	P	02 31 30.0	+1.1
H24K	Noodor Dome	65.99	334	P	P	02 31 29.8	+0.9
	baz=96						
KOWA	Kowa	66.47	82	P	P	02 31 32.4	-0.4
I23K	Minto, Yukon-K	66.54	333	P	P	02 31 33.3	+1.0
I23K	Minto, Yukon-K	66.54	333	P	P	02 31 32.7	+0.4
	baz=94,SNR=7.3						
CUT	Chulitna	66.77	330	P	P	02 31 34.2	+0.4
	baz=92						
TOLK	Toolik Lake Re	66.94	337	P	P	02 31 35.4	+0.4
TOLK	Toolik Lake Re	66.94	337	P	P	02 31 35.8	+0.9
	baz=96						
COLD	Coldfoot	67.05	336	P	P	02 31 36.3	+0.7
COLD	Coldfoot	67.05	336	P	P	02 31 36.6	+1.0
	baz=95,SNR=6.4						
MLY	Manley	67.12	333	IAmb	IAmb	02 31 46.4	
	comp=Z,12nm,1.2s						
MLY	Manley	67.12	333	P	P	02 31 36.6	+0.5
	baz=93						
I21K	Tanana	67.65	333	P	P	02 31 39.6	+0.2
I21K	Tanana	67.65	333	P	P	02 31 40.0	+0.6
	baz=92						
PPLA	Purkeypile	67.68	331	P	P	02 31 39.6	-0.2
	baz=91						
TIC	Toumodi	67.76	91	*e*P	P	02 31 40.2	-0.8
LIC	Lamto	67.88	91	*e*P	P	02 31 39.9	-1.8
	comp=Z,22nm,0.7s						
KDAK	Kodiak Island	67.89	325	P	P	02 31 42.5	+1.5
	baz=88						
DBIC	Dimbokro	67.90	91	P	P	02 31 41.7	-0.1
	comp=Z,5.2nm,0.7s,baz=297,slow=5.3,SNR=9.6						
DBIC				LR	LR	02 56 49.1	
	comp=Z,70nm,21.9s,baz=323,slow=32						
DBIC	Dimbokro	67.90	91	P	P	02 31 40.9	-0.9
DBIC				IAmb	IAmb	02 31 42.8	
	comp=Z,7.1nm,0.8s						
H21K	Melozitna Rive	68.01	334	P	P	02 31 42.3	+0.7
	baz=92						
KIC	Kosan Boka	68.11	91	*e*P	P	02 31 42.3	-0.9
	comp=Z,15nm,0.7s						
OHAK	Old Harbor	68.29	325	P	P	02 31 44.4	+0.9
	baz=88						
Q19K	Cape Douglas,	68.42	327	P	P	02 31 45.1	+0.7
	baz=88						
J20K	Nowinta River	68.56	332	P	P	02 31 45.1	0.0
J20K	Nowinta River	68.56	332	P	P	02 31 45.4	+0.2
	baz=90						
O19K	Port Alsworth	68.72	328	P	P	02 31 46.6	+0.5
	baz=88						
TTA	Tatalina	69.42	331	P	P	02 31 51.2	+0.5
	baz=88						
A21K	Barrow	69.51	340	P	P	02 31 51.8	+1.0
A21K	Barrow	69.51	340	P	P	02 31 51.3	+0.4
	baz=90						
GCSA	Galena City Sc	69.73	333	P	P	02 31 52.9	+0.6
	baz=88						
NB2	NORSAR Subarra	70.80	31	P	P	02 31 59.5	+0.4
	comp=Z,15nm,1.0s,baz=278,slow=6.5						
NOA	NORSAR Array B	70.80	31	P	P	02 32 00.0	+0.9
	comp=Z,3.5nm,0.9s,baz=275,slow=6.3,SNR=5.3						
NOA				pP	sP	02 32 06.0	-0.3
	comp=Z,6.1nm,0.9s,baz=277,slow=6.3,SNR=6.7						
CHNA	Chernabura Isl	72.03	323	P	P	02 32 09.0	+2.5
	baz=82						
TORD	Torodi Ar. Bea	72.17	82	P	P	02 32 07.6	-0.5
	comp=Z,2.3nm,0.8s,baz=291,slow=5.9,SNR=14						
TORD				pP	sP	02 32 15.0	-0.6
	comp=Z,5.9nm,1.0s,baz=289,slow=5.2,SNR=14						
FETA	Feichten	72.35	46	*e*P	P	02 32 08.6	-0.3
	comp=Z,10nm,1.5s						
MOTA	Moosalm	72.55	45	*e*P	P	02 32 10.5	+0.5
	comp=Z,5.9nm,0.9s						
SQTA	Sankt Quirin	72.64	45	*e*P	P	02 32 10.6	0.0
	comp=Z,5.8nm,1.0s						
WTTA	Wattenberg	72.92	45	*e*P	P	02 32 13.7	+1.4
	comp=Z,7.0nm,1.1s						
CLL	Collm	73.09	41	*e*PP	PP	02 34 52.0	-3.5
KEST	Kesra	73.47	57	P	P	02 32 16.3	+0.6
	comp=Z,3.4nm,0.7s,baz=43,slow=1.1,SNR=7.1						
KEST	Kesra	73.47	57	P	P	02 32 16.2	+0.6
KHC	Kasperske Hory	73.85	43	*e*P	P	02 32 18.1	+0.6
KHC				*e*pP	sP	02 32 25.4	+0.4
GERES	GERESS Array B	73.99	43	P	P	02 32 18.8	+0.4
	comp=Z,1.7nm,0.8s,baz=258,slow=3.8,SNR=13						
GERES				pP	sP	02 32 25.6	-0.3
	comp=Z,3.0nm,0.8s,baz=272,slow=3.5,SNR=10						
GERES	GERESS Array B	73.99	43	P	P	02 32 18.9	+0.5
KBA	Koelnbreinsper	74.10	45	*e*P	P	02 32 17.5	-1.7
	comp=Z,7.0nm,1.4s						
PRU	Pruhonice	74.30	42	*e*P	P	02 32 20.7	+0.6
PRU				*e*pP	sP	02 32 26.9	-0.6
MOA	Molln	74.56	44	*e*P	P	02 32 21.7	+0.1
	comp=Z,6.4nm,1.0s						
OBKA	Obir	75.03	46	*e*P	P	02 32 21.9	-2.5
	comp=Z,2.3nm,0.7s						
UPC	Upice	75.12	41	*e*P	P	02 32 25.1	+0.3
UPC				*e*pP	sP	02 32 33.3	+1.0
ARCES	ARCESS Array B	75.18	21	P	P	02 32 24.9	+0.1
	comp=Z,3.2nm,0.4s,baz=284,slow=4.0,SNR=49						
ARCES				pP	sP	02 32 32.2	+0.1
	comp=Z,4.7nm,0.7s,baz=290,slow=4.3,SNR=2.8						
OSTC	Ostas	75.23	41	*e*P	P	02 32 25.9	+0.4
SOKA	Soboth	75.32	45	*e*P	P	02 32 26.1	0.0
	comp=Z,4.3nm,1.0s						
DPC	Dobruska-Polom	75.35	41	*e*P	P	02 32 26.2	0.0
DPC				*e*pP	sP	02 32 33.6	0.0
ARSA	Arzberg	75.52	45	*e*P	P	02 32 27.4	+0.2
	comp=Z,2.2nm,0.8s						
CONA	Conrad Observa	75.59	44	*e*P	P	02 32 28.2	+0.5
	comp=Z,7.9nm,1.6s						
OJC	Ojcow	77.54	41	P	P	02 32 38.9	+0.3
FINES	FINESS Array B	77.74	29	P	P	02 32 39.8	+0.3
	comp=Z,6.5nm,0.7s,baz=290,slow=2.6,SNR=28						
KWP	Kalwaria Pacla	79.51	41	P	P	02 32 50.0	+0.5
NACGM	Naroch	80.21	35	*i* P	P	02 32 57.4	+4.3
MNK	Minsk	80.95	35	*i* P	P	02 32 54.9	-2.2
	comp=E,1.0nm,1.0s						
MNK				*i* P	P	02 32 54.9	-2.2
	comp=N,9.0nm,1.0s						
MNK				*i* P	P	02 32 54.9	-2.2
	comp=Z,18nm,1.0s,baz=290						
MNK				*i* PP	PP	02 35 59.2	-2.1
MNK				*i* PPP	PPP	02 37 49.1	
MNK				*i* S	S	02 43 04.5	-0.6
MNK				*i* SS	SS	02 47 11.3	-67
MNK				*i* SSS	SSS	02 52 00.4	
MNK				*i* LR	LR	03 05 34.9	
MNK				*i* LRM	MLR	03 10 40.0	
	comp=E,27nm,19.1s						
MNK				*i* LRM	MLR	03 10 40.0	
	comp=N,103nm,19.1s						
MNK				*i* LRM	MLR	03 10 40.0	
	comp=Z,101nm,19.1s						
MLR	Muntele Rosu	82.93	44	P	P	02 33 08.7	+0.8
AKASG	Malin Array Be	83.09	39	P	P	02 33 08.0	-0.5
	comp=Z,0.5nm,0.4s,baz=283,slow=4.1,SNR=5.5						
AKASG				pP	sP	02 33 15.1	-0.8
	comp=Z,1.3nm,0.6s,baz=284,slow=3.9,SNR=5.3						
KLMR	Klimovskoe	83.95	27	*e*P	P	02 33 10.7	-1.9
KLMR				AMP		02 33 21.8	
	comp=Z,25nm,1.2s						
SHEM	Shemya Is, Ala	87.40	326	LR	LR	03 13 15.1	
	comp=Z,82nm,19.5s,baz=290,slow=36						
QIZ	Qiongzhong	141.66	355	PKP	PKPdf	02 40 14.0	-1.0
QIZ				PP	PP	02 43 16.5	-0.4
CMAR	Chiang Mai Arr	141.70	11	PKP	PKPdf	02 40 14.8	-0.3
	comp=Z,0.8nm,0.4s,baz=322,slow=2.8,SNR=5.5						
STKA	Stephens Creek	145.97	242	PKPbc	PKPbc	02 40 22.8	-0.1
	comp=Z,7.7nm,1.0s,baz=108,slow=6.2,SNR=13						
WRA	Warramunga Arr	153.58	264	PKP	PKPdf	02 40 34.2	-0.4
	comp=Z,2.6nm,0.9s,baz=84,slow=1.1,SNR=9.7						
WRA				pPKP	pPKPdf	02 40 41.1	+0.9
	comp=Z,5.6nm,0.7s,baz=88,slow=2.7,SNR=23						
WRA	Warramunga Arr	153.58	264	PKPdf	PKPdf	02 40 34.5	0.0
ASAR	Alice Springs	153.97	256	PKP	PKPdf	02 40 34.8	-0.2
	comp=Z,1.4nm,0.7s,baz=96,slow=1.6,SNR=16						
ASAR				pPKP	sPKPdf	02 40 41.8	-0.8
	comp=Z,2.0nm,0.7s,baz=90,slow=2.1,SNR=12						

HLW ***31*** *02:43:06.4, 35°.62N×23°.35E, h9^{km}±22^{km}, Ml4.3*
ISK ***31*** *02:43:11.2, 34°.89N×23°.00E, h13^{km}, ML4.2/22*
MOS ***31*** *02:43:13.6±1.8, 34°.90N×23°.40E, h13^{km}, mb4.5/11, Error ellipse: s-maj=8.7km s-min=4.0km az=83.1*
NEIC ***31*** *02:43:14.8±1.4, 34°.90N±0°.04×23°.23E±0°.04, h16^{km}±4^{km}, Error ellipse: s-maj=6.6km s-min=3.9km az=211.0*
THE ***31*** *02:43:15.3, 34°.92N×23°.22E, h0^{km}±1^{km}, ML3.7/8, Error ellipse: s-maj=1.5km s-min=0.4km az=233.0*
ATH ***31*** *02:43:16.0, 34°.96N×23°.29E, h22^{km}±1^{km}, ML3.7/8, Error ellipse: s-maj=4.5km s-min=1.2km az=35.0*
IDC ***31*** *02:43:17.9±2.2, 35°.10N×23°.36E, h32^{km}±16^{km}, mb3.9/16, mb1 4.0/21, mb1mx3.8/50, mbtmp4.1/21, ML3.8/5, MS3.6/3, Ms1 3.6/3, ms1mx3.1/41, Error ellipse: s-maj=16.9km s-min=12.6km az=1.0*
ISC 31 02:43:14.7±1.0**, 35°.00N**±0°.03×**23°.28E**±0°.03**, h14**^{km}±6^{km}**, n302,** σ**2^{s}.09**/343**, mb4.1**/26**, 22C, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.41	55	P	Pb	02 43 24.1	+0.4
KNDR				S	Sb	02 43 31.2	+1.4
	8μm,0.6s						
KNDR	Palaiochora Ch	0.41	55	PG	Pb	02 43 23.8	+0.1
KNDR				SG	Sb	02 43 33.1	+3.3
KNDR	Palaiochora Ch	0.41	55		Pb	02 43 24.1	+0.4
KNDR					Sb	02 43 31.2	+1.4
GVD	Gavdhos	0.69	103	P	Pn	02 43 29.0	-1.0
GVD				S	Sn	02 43 40.1	-0.3
GVD	Gavdhos	0.69	103	P	Pn	02 43 28.9	-1.0
GVD				S	Sb	02 43 38.5	+0.7
GVD				AML	AML	02 43 47.5	
	comp=E,33934μm,0.9s						
GVD				AML	AML	02 43 47.8	
	comp=N,39996μm,0.8s						
GVD	Gavdhos	0.69	103	PG	Pb	02 43 28.7	+0.3
GVD				SG	Sn	02 43 41.8	+1.4
GVD	Gavdhos	0.69	103		Pn	02 43 29.0	-1.0
GVD					Sn	02 43 40.1	-0.3
RODP	Rodopos	0.69	35	P	Pn	02 43 30.4	+0.4
RODP				S	Sn	02 43 42.2	+1.8
RODP	Rodopos	0.69	35	PG	Pb	02 43 29.5	+1.0
RODP				SG	Sn	02 43 42.3	+1.8
RODP	Rodopos	0.69	35		Pn	02 43 30.4	+0.4
RODP					Sn	02 43 42.2	+1.8
GVDS	Gavdos	0.69	103	P	Pb	02 43 28.7	+0.3
GVDS				S	Sb	02 43 39.2	+1.4
	comp=N,10μm,0.6s						
GVDS	Gavdos	0.69	103	PG	Pb	02 43 28.7	+0.3
GVDS	Gavdos	0.69	103		Pb	02 43 28.7	+0.3
GVDS					Sb	02 43 39.2	+1.4
IMMV	Iera Moni Meta	0.74	51	P	Pn	02 43 31.1	+0.4
IMMV				S	Sn	02 43 43.6	+1.9
	comp=N,9μm,0.6s						
IMMV	Iera Moni Meta	0.74	51	P	Pn	02 43 31.1	+0.4
IMMV				AML	AML	02 43 51.5	
	comp=E,17135μm,0.8s						
IMMV				AML	AML	02 43 54.0	
	comp=N,21447μm,0.6s						
IMMV	Iera Moni Meta	0.74	51	PG	Pn	02 43 30.6	-0.1
IMMV	Iera Moni Meta	0.74	51		Pn	02 43 31.1	+0.4
IMMV					Sn	02 43 43.6	+1.9
VAM	Vamos	0.86	61	P	Pn	02 43 33.2	+0.8
VAM				S	Sn	02 43 47.3	+2.6
	comp=N,7μm,0.6s						
VAM	Vamos	0.86	61	P	Pn	02 43 33.1	+0.7
VAM				AML	AML	02 43 55.0	
	comp=N,11206μm,0.9s						
VAM				AML	AML	02 43 59.3	
	comp=E,17716μm,0.8s						
VAM	Vamos	0.86	61	P	Pn	02 43 33.2	+0.8
VAM						02 43 47.3	
VAM	Vamos	0.86	61		Pn	02 43 33.2	+0.8
VAM					Sn	02 43 47.3	+2.6
ANKY	Antikythira Is	0.87	1	P	Pn	02 43 33.5	+1.0
ANKY				S	Sn	02 43 47.8	+2.9
	comp=E,5μm,0.8s						
ANKY	Antikythira Is	0.87	1	P	Pn	02 43 33.5	+1.0
ANKY				AML	AML	02 43 58.3	
	comp=N,9164μm,0.8s						
ANKY				AML	AML	02 44 02.2	
	comp=E,10504μm,0.8s						
ANKY	Antikythira Is	0.87	1		Pn	02 43 33.5	+1.0
ANKY					Sn	02 43 47.8	+2.9
PRNS	Prines Rethymn	1.07	70	P	Pn	02 43 35.7	+0.5
PRNS				S	Sn	02 43 51.7	+1.9
	comp=E,2μm,1.0s						
PRNS	Prines Rethymn	1.07	70		Pn	02 43 35.7	+0.5
PRNS					Sn	02 43 51.7	+1.9
TMBK	Timbaki Herakl	1.22	86	P	Pn	02 43 39.3	+1.9
TMBK				S	Sn	02 43 57.9	+4.2
	comp=E,3μm,0.8s						
TMBK	Timbaki Herakl	1.22	86		Pn	02 43 39.3	+1.9
TMBK					Sn	02 43 57.9	+4.2
SIVA	Sivas	1.26	89	P	Pb	02 43 39.4	+1.2
KTHA	Kythira Island	1.27	352	P	Pb	02 43 40.8	+2.4
KTHA				AML	AML	02 44 04.9	
	comp=E,8031μm,0.8s						
KTHA				AML	AML	02 44 08.2	
	comp=N,2621μm,0.7s						
KTHR	Kythira	1.28	350	P	Pb	02 43 40.4	+1.8
KTHR	Kythira	1.28	350		Pb	02 43 40.4	+1.8
IDI	Anoyia	1.35	77	Pg	Pg	02 43 42.0	+1.2
	comp=N,70nm,0.3s,baz=258,slow=14,SNR=124						
IDI				LR	LR	02 44 29.5	
	comp=N,479nm,18.5s,baz=120,slow=56						
IDI	Anoyia	1.35	77	P	Pg	02 43 41.1	+0.3
IDI				S	Sn	02 44 01.4	+4.4
	comp=N,2μm,0.6s						
IDI	Anoyia	1.35	77	P	Pg	02 43 41.1	+0.3
IDI				AML	AML	02 44 12.8	
	comp=N,3413μm,0.5s						
IDI				AML	AML	02 44 20.4	
	comp=E,3010μm,0.7s						
HRKL	Herakleio	1.53	78	PN	Pg	02 43 43.1	-1.0
MNVA	Monemvasia	1.70	353	P	Pg	02 43 48.1	+0.8
VLI	Veliai	1.74	351	P	Pg	02 43 48.5	+0.4
VLI				AML	AML	02 44 30.3	
	comp=E,2882μm,1.0s						
VLI				AML	AML	02 44 37.8	
	comp=N,2733μm,0.9s						
MHLO	Agia Marina, M	1.92	28	P	Pb	02 43 49.9	+0.5
NPS	Neapolis	1.93	81	P	Pg	02 43 50.8	-1.1
NPS				AML	AML	02 44 32.2	
	comp=E,2431μm,0.7s						
NPS				AML	AML	02 44 38.5	
	comp=N,1762μm,1.2s						
NPS	Neapolis	1.93	81	P	Pg	02 43 51.4	-0.4
THR6	Thira Island,	2.19	51	P	Pb	02 43 53.9	-0.3
THR5	Thira Island,	2.20	49	P	Pb	02 43 53.6	-0.7
THR3	Thira Island,	2.23	50	P	Pb	02 43 53.9	-0.9
SANT	Santorini	2.24	52	PN	Pn	02 43 52.6	+1.2
SANT	Santorini	2.24	52	Pn	Pn	02 43 52.1	+0.6
PYL	PYLOS	2.27	327	P	Pb	02 43 54.0	-1.3
THR2	Thira island,	2.27	50	P	Pb	02 43 54.2	-1.3
THR8	Santorini-Mono	2.28	51	P	Pb	02 43 54.4	-1.2
KRND	KRANIDI	2.38	358	P	Pb	02 43 57.7	+0.3
ZKR	Zakros	2.42	86	P	Pb	02 43 57.3	-0.6
ZKR	Zakros	2.42	86	PN	Pn	02 43 55.2	+1.4
ITM	Ithomi	2.44	334	P	Pb	02 43 57.1	-1.2
ITM	Ithomi	2.44	334	PN	Pn	02 43 51.9	-2.2
ITM	Ithomi	2.44	334		Pb	02 43 57.0	-1.3
EPID	Epidavros	2.61	357	P	Pb	02 44 01.1	-0.3
APE	Apeiranthos	2.76	41	P	Pn	02 44 00.5	+2.0
APE	Apeiranthos	2.76	41	PN	Pn	02 43 59.6	+1.1
VLY	Voula,Athens	2.88	8	P	Pb	02 44 03.2	-2.6
ATH	Athens Observa	2.99	7	P	Pb	02 44 05.2	-2.5
ATH	Athens Observa	2.99	7	P	Pb	02 44 05.7	-2.0
ATHU	Athens Univers	2.99	8	P	Pn	02 44 04.8	+3.1
PTL	Penteli	3.08	9	P	Pn	02 44 06.2	+3.2
DION	Dionisos Attik	3.12	10	P	Pn	02 44 06.7	+3.2
KARY	Karystos	3.17	17	P	Pn	02 44 07.2	+3.0
KLV	Kalavryta, Ach	3.17	344	P	Pb	02 44 08.5	-2.4
VIL2	Platees	3.21	360	P	Pn	02 44 07.1	+2.4
LAKA	Lakka	3.40	342	P	Pb	02 44 11.2	-3.5
KOSK	Kos Island	3.48	59	PN	Pn	02 44 10.2	+1.8
TRIZ	Trizonia	3.50	344	P	Pn	02 44 11.7	+3.1
SERG	Sergoula	3.55	344	P	Pn	02 44 12.8	+3.4

KYMI	Kymi, Euboea I	3.69	10	P	Pn	02 44 14.2	+3.0
ATAL	Atalanti	3.69	357	P	Pn	02 44 15.5	+4.2
ANX	Ano Chora	3.75	344	P	Pn	02 44 15.5	+3.3
BODT	Bodrum	3.86	57	PN	Pn	02 44 16.0	+2.3
CHOS	Chios island	4.05	33	P	Pn	02 44 18.9	+2.5
CHOS	Chios island	4.05	33	PN	Pn	02 44 17.9	+1.6
AGG	Agios Georgios	4.09	350	P	Pn	02 44 20.2	+3.5
AGG	Agios Georgios	4.09	350	P	Pn	02 44 20.1	+3.3
AGG	Agios Georgios	4.09	350	PN	Pn	02 44 16.5	-0.3
AGG	Agios Georgios	4.09	350		Pn	02 44 20.1	+3.3
ARG	Arkhangelos	4.13	72	P	Pn	02 44 20.1	+2.7
GCAM	G?zelcaml?	4.18	49	PN	Pn	02 44 20.2	+2.2
URLA	Izmir	4.29	38	PN	Pn	02 44 21.1	+1.6
BLCB	Balcova	4.54	41	PN	Pn	02 44 24.7	+1.8
SIGR	SIGRI	4.68	25	PN	Pn	02 44 26.6	+1.7
MATC	Matruh	4.92	137	P	Pn	02 44 28.9	+0.6
	baz=141						
OUR	Ouranopolis	5.36	6	PN	Pn	02 44 35.4	+1.2
EZN	Ezine	5.39	26	P	Pn	02 44 36.7	+2.0
EZN	Ezine	5.39	26	PN	Pn	02 44 36.7	+2.0
GADA	Gvkgeada	5.59	21	PN	Pn	02 44 39.4	+2.1
HORT	Hortiatis	5.59	359	PN	Pn	02 44 38.4	+0.9
ELL	Elmali	5.66	70	P	Pn	02 44 40.2	+1.7
ELL	Elmali	5.66	70	Pn	Pn	02 44 40.2	+1.7
KBN	Korca	5.95	341	P	Pn	02 44 42.9	+0.5
KBN	Korca	5.95	341		Pn	02 44 42.9	+0.5
FNA	Florina	5.97	346	P	Pn	02 44 44.8	+2.2
FNA	Florina	5.97	346	PN	Pn	02 44 42.8	+0.2
FNA	Florina	5.97	346	Pn	Pn	02 44 44.8	+2.2
GRG	Griva	5.99	354	PN	Pn	02 44 43.8	+0.9
SWA2		6.03	162	P	Pn	02 44 44.0	+0.6
	baz=163						
KNT	Kendrikon	6.16	357	PN	Pn	02 44 46.1	+0.8
ALN	Alexandroupoli	6.28	20	PN	Pn	02 44 48.9	+2.0
VAY	Valandovo	6.34	355	P	Pn	02 44 52.2	+4.6
VAY	Valandovo	6.34	355	i Pn	Pn	02 44 51.1	+3.4
VAY				i Sn	Sn	02 46 03.0	+3.3
RDO	Rodhopi	6.39	16	PN	Pn	02 44 50.4	+2.0
OHR	Ohrid	6.41	343	i Pn	Pn	02 44 48.8	+0.1
TIP	Timpagrande	6.67	311	⇑P	Pn	02 44 53.3	+0.9
TIP	Timpagrande	6.67	311	Pn	Pn	02 44 53.1	+0.8
STIP	Stip	6.74	353	i Pn	Pn	02 44 56.2	+3.0
SKO	Skopje	7.11	349	i Pn	Pn	02 45 00.2	+1.9
BOSS	Bosilegrad	7.51	355	eP	Pn	02 45 06.7	+2.9
RAFF	Raffo Rosso	7.55	290		Pn	02 45 05.0	+0.7
VAE	Valguarnera	7.58	292	Pn	Pn	02 45 07.3	+2.5
	comp=N,0.8nm,0.3s,baz=23,slow=21,SNR=2.2						
VAE				Sn	Sn	02 46 36.2	+5.7
	comp=N,1.2nm,0.3s,baz=119,slow=18,SNR=2.7						
VTS	Vitosha	7.61	360	⇑P	Pn	02 45 06.5	+1.3
VTS	Vitosha	7.61	360	P	Pn	02 45 06.8	+1.5
VTS	Vitosha	7.61	360	Pn	Pn	02 45 06.8	+1.5
MATE	Matera	7.67	319	⇑P	Pn	02 45 06.5	+0.5
DRME	Dracevica, Mon	7.86	337	ePn	Pn	02 45 08.3	-0.2
BARS	Barje	7.89	352	eP	Pn	02 45 10.6	+1.6
PDG	Podgorica	8.06	338	⇑P	Pn	02 45 09.4	-1.8
PDG	Podgorica	8.06	338	ePn	Pn	02 45 11.0	-0.2
PDG	Podgorica	8.06	338	Pn	Pn	02 45 11.5	+0.2
HNAT	Natroun	8.20	129	P	Pn	02 45 13.3	+0.1
	baz=132						
HCY	Herceg Novi	8.32	335	ePn	Pn	02 45 13.7	-1.2
SELS	Selova	8.38	349	eP	Pn	02 45 15.8	+0.1
TREB	Trebinje	8.61	335	ePn	Pn	02 45 17.9	-0.9
SJES	Sjenica	8.64	344	eP	Pn	02 45 19.9	+0.5
BOVS	Bovan	8.71	352	⇑P	Pn	02 45 19.5	-0.7
BOVS	Bovan	8.71	352	eP	Pn	02 45 20.8	+0.6
ZAGS	Zajecar	8.84	355	eP	Pn	02 45 23.4	+1.4
IVAS	Ivanjica	8.90	345	eP	Pn	02 45 22.3	-0.6
HFRF	Wahat Farafira	8.93	150	P	Pn	02 45 23.1	-0.2
	baz=152						
HFRF				AMP		02 47 00.0	
	baz=152						
GLL	Jalalah	8.95	125	P	Pn	02 45 21.4	-2.2
	baz=128						
STON	Ston	8.98	333	ePn	Pn	02 45 22.2	-1.6
STON	Ston	8.98	333	ePn	Pn	02 45 22.3	-1.6
STON				Sn	Sn	02 46 55.1	-10
GRUS	Gruza	9.10	348	eP	Pn	02 45 25.5	0.0
RUDO	Rudo	9.12	342	ePn	Pn	02 45 24.8	-1.1
LSTV	Lastovo	9.21	329	ePn	Pn	02 45 24.9	-2.2
LSTV				Sn	Sn	02 47 00.6	-10
NBNS	Bani Suef	9.32	131	P	Pn	02 45 26.4	-2.2
	baz=133						
NBNS				AMP		02 47 00.0	
	baz=133						
NBNS				S	Sn	02 47 09.6	-3.7
	baz=133						
BBLS	Lazići	9.35	342	ePn	Pn	02 45 28.2	-0.8
BBLS	Lazići	9.35	342	eP	Pn	02 45 28.8	-0.2
DIVS	Divibare	9.43	345	ePn	Pn	02 45 29.3	-0.9
DIVS	Divibare	9.43	345	eP	Pn	02 45 29.5	-0.7
TRUS	Trudelj	9.47	347	eP	Pn	02 45 29.9	-0.8
BRTR	Keskin Array B	9.50	57	Pn	Pn	02 45 35.0	+3.8
	comp=N,0.3nm,0.3s,baz=246,slow=15,SNR=3.5						
BRTR	Keskin Array B	9.50	57	P	Pn	02 45 35.0	+3.8
BR131	Keskin Array S	9.50	57	P	Pn	02 45 32.0	+0.8
BR131	Keskin Array S	9.50	57		Pn	02 45 32.0	+0.8
MAKA	Makarska	9.60	331	ePn	Pn	02 45 30.7	-1.6
MAKA				Sn	Sn	02 47 09.0	-11
RICI	Ricice	9.73	333	ePn	Pn	02 45 31.9	-2.2
RICI				Sn	Sn	02 47 13.1	-10
HVAR	Hvar	9.74	329	ePn	Pn	02 45 31.7	-2.6
HVAR				Sn	Sn	02 47 13.3	-10
TEKS	Tekeris	9.96	344	ePn	Pn	02 45 35.3	-2.1
TEKS	Tekeris	9.96	344	eP	Pn	02 45 35.8	-1.6
MMAI	Mount Meron Ar	10.26	98	Pn	Pn	02 45 40.9	-0.6
	comp=N,2.7nm,0.3s,baz=266,slow=13,SNR=11						
GZR	Gura Zlata	10.39	358	⇑P	Pn	02 45 44.7	+1.4
GZR	Gura Zlata	10.39	358	⇑P	Pn	02 45 44.7	+1.4
KIJV	Kijevo	10.44	332	ePn	Pn	02 45 42.5	-1.4
KIJV				Sn	Sn	02 47 30.5	-10
ZIRJ	Zirje	10.47	328	ePn	Pn	02 45 42.0	-2.3
ZIRJ				Sn	Sn	02 47 30.7	-11
FRGS	Fruska Gora	10.49	346	⇑P	Pn	02 45 43.2	-1.4
FRGS	Fruska Gora	10.49	346	ePn	Pn	02 45 42.1	-2.5
FRGS	Fruska Gora	10.49	346	eP	Pn	02 45 44.0	-0.6
VOIR		10.51	7	⇑P	Pn	02 45 46.3	+1.3
VOIR		10.51	7	⇑P	Pn	02 45 46.3	+1.3
GRB	Gharib	10.52	127	P	Pn	02 45 43.7	-1.3
	baz=129						
MGRS	Mrkonjic Grad	10.54	335	ePn	Pn	02 45 43.1	-2.2
MORI	Morici	10.61	329	ePn	Pn	02 45 45.0	-1.2
MORI				Sn	Sn	02 47 34.0	-11
MLR	Muntele Rosu	10.68	10	⇑P	Pn	02 45 51.0	+3.7
MLR	Muntele Rosu	10.68	10	⇑P	Pn	02 45 51.0	+3.7
BZS	Buzias	10.68	354	⇑P	Pn	02 45 46.4	-0.8
BZS	Buzias	10.68	354	⇑P	Pn	02 45 46.4	-0.8
BLY	Banja Luka	10.80	336	ePn	Pn	02 45 47.3	-1.5
DUGI	Dugi Otok	10.99	327	ePn	Pn	02 45 49.7	-1.8
DUGI				Sn	Sn	02 47 43.6	-11
DOPR	Dopca	11.07	8	⇑P	Pn	02 45 54.5	+1.9
MRAK	Mrakovica	11.13	336	ePn	Pn	02 45 52.4	-1.0
UDBI	Udbina	11.13	331	ePn	Pn	02 45 52.4	-1.0
UDBI				Sn	Sn	02 47 47.6	-10
PLOR	Plostina	11.14	12	⇑P	Pn	02 45 58.8	+5.3
PLOR	Plostina	11.14	12	⇑P	Pn	02 45 58.8	+5.3
VRI	Vrincioaia	11.17	13	⇑P	Pn	02 46 00.1	+6.2
VRI	Vrincioaia	11.17	13	⇑P	Pn	02 46 00.1	+6.2
EIL	Elat	11.21	115	Pn	Pn	02 45 52.8	-1.7
	comp=N,1.1nm,0.3s,baz=300,slow=0.7,SNR=8.8						
EIL				Sn	Sn	02 47 51.7	-8.0
	comp=N,0.3nm,0.3s,baz=128,slow=12,SNR=2.1						
HBST	Basata	11.29	118	P	Pn	02 45 53.8	-1.8
	baz=120						
AKRG	Al Kharijah	11.33	145	P	Pn	02 45 56.5	+0.3
	baz=146						
NUB	Nuweibaa	11.34	119	P	Pn	02 45 53.7	-2.5
	baz=121						
GTR	Jabal at Tayr	11.36	144	P	Pn	02 45 56.6	0.0
	baz=146						
PLIT	Plitvice	11.48	332	ePn	Pn	02 45 56.4	-1.7
PLIT				Sn	Sn	02 47 55.7	-10
NVLJ	Novalja	11.53	328	ePn	Pn	02 45 56.9	-1.9
NVLJ				Sn	Sn	02 47 57.4	-10
MOSL	Moslavina	11.71	337	ePn	Pn	02 45 60.0	-1.3
HHRG	Al Ghardaqah	11.74	129	P	Pn	02 46 02.2	+0.4
	baz=131						
MORH	Mrgy, Hungar	11.74	344	ePn	Pn	02 46 00.0	-1.7
KOVH	Kovagotottos	11.75	342	eP	Pn	02 46 01.3	-0.6
OZLJ	Ozalj	12.16	333	ePn	Pn	02 46 06.2	-1.2
PTJ	Puntijarka	12.23	335	ePn	Pn	02 46 06.2	-2.2
KALN	Kalnik	12.26	337	ePn	Pn	02 46 06.8	-2.1
BRJN	Brijuni	12.29	326	ePn	Pn	02 46 06.6	-2.6
BRJN				Sn	Sn	02 48 15.2	-11
RIY	Rijeka	12.30	330	ePn	Pn	02 46 08.4	-1.0
CRES	Cresnjev	12.34	334	ePn	Pn	02 46 08.0	-1.9
LOBO	Lobor	12.41	336	ePn	Pn	02 46 09.4	-1.4
CEY	Cerknica	12.66	331	ePn	Pn	02 46 12.3	-2.0
LJU	Ljubljana	12.88	332	ePn	Pn	02 46 15.5	-1.7
MPLH	Magyarpolny	12.90	342	eP	Pn	02 46 16.3	-1.2
SOKA	Soboth	13.22	334	ePn	Pn	02 46 20.9	-1.1
	comp=N,1.7nm,0.4s,SNR=6.4						
SOKA				eSn	Sn	02 48 42.7	-6.1
	comp=N,0.8nm,0.6s						
OBKA	Obir	13.26	333	ePn	Pn	02 46 21.9	-0.6
	comp=N,0.8nm,0.2s						
OBKA				eSn	Sn	02 48 45.2	-4.4
	comp=N,4.3nm,0.7s						
ARSA	Arzberg	13.55	337	ePn	Pn	02 46 26.6	+0.1
	comp=N,1.1nm,0.3s						
ARSA				eSn	Sn	02 48 50.1	-6.8
	comp=N,0.6nm,0.4s						
VYHS	Vyhne	13.88	348	eP	Pn	02 46 34.8	+3.9
VYHS	Vyhne	13.88	348	ePN	Pn	02 46 34.8	+3.9
ZOU	Zoufplan	13.92	329	Pn	Pn	02 46 31.3	-0.4
KOLL	Kolacno	14.04	347	ePN	P	02 46 37.5	-3.4
CONA	Conrad Observa	14.05	339	ePn	Pn	02 46 33.3	-0.1
	comp=N,1.3nm,0.5s						
CONA				eSn	Sn	02 49 01.4	-7.7
	comp=N,2.3nm,0.7s						
MODS	Modra-Piesok	14.09	343	eP	P	02 46 39.6	-1.9
MODS	Modra-Piesok	14.09	343	ePN	P	02 46 39.6	-1.9
KBA	Koelnbreinsper	14.19	331	ePn	Pn	02 46 35.2	-0.1
	comp=N,0.6nm,0.3s						
KBA				eSn	Sn	02 49 10.1	-2.5
	comp=N,0.9nm,0.5s						
ABTA	Abfaltersbach	14.27	329	ePn	Pn	02 46 36.2	-0.1
	comp=N,0.2nm,0.2s						
ABTA				eSn	Sn	02 49 06.2	-8.1
	comp=N,2.2nm,0.7s						
MOA	Molln	14.49	335	i Pn	Pn	02 46 39.8	+0.5
	comp=N,2.0nm,0.3s,SNR=4.7						
MOA				eSn	Sn	02 49 14.7	-5.1
	comp=N,1.2nm,0.5s						
KRUC	Moravsky	14.94	342	ePN	P	02 46 52.5	+1.5
WTTA	Wattenberg	15.05	328	ePn	Pn	02 46 47.6	+0.6
	comp=N,1.2nm,0.3s						
WTTA				eSn	Sn	02 49 30.3	-3.2
	comp=N,1.7nm,0.5s						
VRAC	Vranov	15.12	343	ePN	P	02 46 54.2	+1.2
VRAC	Vranov	15.12	343	P	P	02 46 54.6	+1.6
WATA	Walderalm	15.13	328	ePn	Pn	02 46 48.3	+0.3
	comp=N,0.5nm,0.2s						
WATA				eSn	Sn	02 49 28.4	-6.9
	comp=N,0.2nm,0.2s						
SQTA	Sankt Quirin	15.20	327	ePn	Pn	02 46 50.0	+1.0
	comp=N,0.9nm,0.4s						
SQTA				eSn	Sn	02 49 33.6	-3.5
	comp=N,1.1nm,0.5s						
FETA	Feichten	15.27	326	ePn	P	02 46 53.2	-1.5
	comp=N,12nm,0.8s						
FETA				eSn	Sn	02 49 43.2	+4.3
	comp=N,1.5nm,0.8s						
OKC	Ostrava-Krasne	15.30	347	eP	P	02 46 57.0	+2.1
OKC	Ostrava-Krasne	15.30	347	eP	P	02 46 57.0	+2.1
MOTA	Moosalm	15.34	327	ePn	Pn	02 46 51.1	+0.2
	comp=N,4.1nm,0.9s						
MOTA				eSn	Sn	02 49 39.8	-0.8
	comp=N,1.5nm,0.6s						
MORC	Moravsky Berou	15.36	346	ePN	P	02 46 57.1	+1.5
MORC	Moravsky Berou	15.36	346	P	Pn	02 46 51.3	+0.3
MORC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MORC	Moravsky Berou	15.36	346	Pn	Pn	02 46 51.2	+0.3
GEC2	GERESS Array S	15.54	336	Pn	Pn	02 46 53.8	+0.3
GEC2				IAmb	IAmb	02 47 00.8	
	comp=Z,7.2nm,0.8s						
GERES	GERESS Array B	15.54	336	Pn	Pn	02 46 53.4	0.0
	comp=Z,0.4nm,0.3s,baz=160,slow=14,SNR=15						
GERES	GERESS Array B	15.54	336	P	Pn	02 46 53.8	+0.3
GERES	GERESS Array B	15.54	336	Pn	Pn	02 46 53.8	+0.3
RETA	Reutte	15.60	327	ePn	P	02 46 56.8	-1.6
	comp=Z,4.8nm,0.5s						
RETA				eSn	Sn	02 49 41.4	-5.4
	comp=Z,2.1nm,0.7s						
KHC	Kasperske Hory	15.83	336	eP	P	02 47 03.2	+2.3
KHC	Kasperske Hory	15.83	336	eP	P	02 47 03.2	+2.3
KHC	Kasperske Hory	15.83	336	Pn	Pn	02 46 57.7	+0.6
KHC				IAmb	IAmb	02 47 04.5	
	comp=Z,32nm,1.4s						
DAVA	Damuels	15.86	325	i Pn	P	02 47 00.9	-0.5
	comp=Z,6.2nm,0.7s,SNR=12						
DAVA				eSn	Sn	02 49 46.8	-6.4
	comp=Z,1.4nm,0.6s						
DPC	Dobruska-Polom	16.16	344	eP	P	02 47 06.5	+2.0
DPC	Dobruska-Polom	16.16	344	eP	P	02 47 06.5	+2.0
AKASG	Malin Array Be	16.28	14	Pn	Pn	02 47 01.9	-0.9
	comp=Z,1.0nm,0.3s,baz=206,slow=10,SNR=6.9						
AKASG				LR	LR	02 53 23.6	
	comp=Z,118nm,21.4s,baz=290,slow=38						
AKASG	Malin Array Be	16.28	14	P	Pn	02 47 04.1	+1.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AKASG	Malin Array Be	16.28	14		Pn	02 47 04.1	+1.3
AKBB	Malin Array Si	16.28	14	i P	Pn	02 47 02.9	+0.1
PRU	Pruhonice	16.29	340	eP	P	02 47 07.5	+1.6
PRU	Pruhonice	16.29	340	eP	P	02 47 07.5	+1.6
OSTC	Ostas	16.38	344	eP	P	02 47 09.3	+2.4
UPC	Upice	16.38	343	eP	P	02 47 09.1	+2.2
UPC	Upice	16.38	343	eP	P	02 47 09.1	+2.2
PRA	Prague	16.39	339	eP	P	02 47 09.0	+2.0
PRA	Prague	16.39	339	eP	P	02 47 09.0	+2.0
CHVC	Chvalec	16.44	344	eP	P	02 47 09.9	+2.3
KBZ	Khabaz	17.47	54	ceP	Pn	02 47 13.7	-4.1
KBZ				pmax	pmax		
	comp=Z,11nm,1.3s						
NCK	Nalchik	17.85	56	i P	Pn	02 47 20.9	-1.6
CLL	Collm	17.91	339	i P	P	02 47 26.0	+2.2
CLL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CLL	Collm	17.91	339	i P	P	02 47 26.0	+2.2
	comp=Z,5.0nm,0.6s						
CLL				epP	pwP	02 47 30.0	-1.2
VORD	Divnogorie	19.73	31	eP	Pn	02 47 46.7	+1.5
VORD				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MNK	Minsk	19.77	8	i P	P	02 47 42.2	-1.9
MNK				i S	S	02 51 25.8	-0.5
MNK				pmax	pmax		
	comp=N,11nm,0.7s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MNK	Minsk	19.77	8	i P	P	02 47 42.3	-1.8
	comp=E,1.0nm,0.7s						
MNK				i P	P	02 47 42.3	-1.8
	comp=N,11nm,0.7s						
MNK				i P	P	02 47 42.3	-1.8
	comp=Z,2.0nm,0.7s,baz=191						
MNK				i S	S	02 51 25.8	-0.5
VSR	Storozhevoye	19.86	30	eP	P	02 47 44.7	-0.5
VSR				pmax	pmax		
	comp=Z,20nm,1.9s						
NACGM	Naroch	20.05	6	i P	P	02 47 46.5	-0.7
PABE	Paberze	20.51	1	P	P	02 47 52.0	-0.2
LPSR	Galich'ya Gora	20.83	28	eP	P	02 47 56.5	+0.8
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.8s						
ESDC	Sonseca Array	22.12	290	P	P	02 48 10.9	+1.2
	comp=Z,3.4nm,0.9s,baz=81,slow=8.9,SNR=12						
OBN	Obninsk	22.12	21	eP	P	02 48 10.2	+0.7
OBN				ePPP	PPP	02 48 38.9	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BELG	Belogornoye	24.56	37	i P	P	02 48 33.6	-0.2
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HFS	Hagfors	25.91	349	P	P	02 48 45.5	-0.5
	comp=Z,3.6nm,0.4s,baz=148,slow=12,SNR=22						
FINES	FINESS Array B	26.52	3	P	P	02 48 50.6	-1.0
	comp=Z,3.3nm,0.8s,baz=172,slow=9.9,SNR=12						
NB2	NORSAR Subarra	27.19	347	P	P	02 48 57.5	-0.1
	comp=Z,2.5nm,0.7s,baz=156,slow=9.3						
NOA	NORSAR Array B	27.19	347	P	P	02 48 57.3	-0.3
	comp=Z,0.7nm,0.6s,baz=154,slow=10,SNR=10						
EKA	Eskdalemuir Ar	27.30	326	P	P	02 48 59.6	+1.0
	comp=Z,1.8nm,0.6s,baz=125,slow=8.6,SNR=8.4						
GEYT	Alibeck	28.08	74	P	P	02 49 06.3	+0.4
	comp=Z,0.7nm,0.4s,baz=336,slow=3.3,SNR=4.0						
GEYT	Alibeck	28.08	74	P	P	02 49 05.3	-0.5
GEYT				IAmb	IAmb	02 49 21.6	
	comp=Z,4.3nm,1.3s						
TORD	Torodi Ar. Bea	29.23	227	P	P	02 49 17.5	+1.3
	comp=Z,0.8nm,0.5s,baz=29,slow=8.3,SNR=12						
AKTO	Aktyubinsk	29.50	48	P	P	02 49 16.2	-2.1
	comp=Z,1.4nm,0.7s,baz=278,slow=5.5,SNR=4.3						
ARU	Arti	32.11	37	i P	P	02 49 40.0	-1.2
ARU				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ARCES	ARCESS Array B	34.61	1	P	P	02 50 02.0	-0.9
	comp=Z,1.4nm,0.5s,baz=202,slow=6.1,SNR=20						
ARCES				LR	LR	03 05 40.8	
	comp=Z,182nm,19.0s,baz=250,slow=39						
ARCES	ARCESS Array B	34.61	1	P	P	02 50 02.3	-0.6
ARCES				pmax	pmax		
	comp=Z,17nm,1.4s						
ARCES	ARCESS Array B	34.61	1	P	P	02 50 02.3	-0.6
MBAR	Mbarara	36.10	167	i P	P	02 50 18.9	+2.5
DBIC	Dimbokro	38.28	229	P	P	02 50 36.2	+1.5
	comp=Z,1.1nm,0.4s,baz=46,slow=7.6,SNR=1.9						
AAK	Ala-Archa	40.11	63	ceP	P	02 50 50.8	+0.7
AAK				pmax	pmax		
	comp=Z,14nm,1.7s						
KURK	Kurchatov	42.48	51	P	P	02 51 09.0	-0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURK	Kurchatov	42.48	51	P	P	02 51 09.0	-0.1
KURK				IAmb	IAmb	02 51 15.6	
	comp=Z,3.7nm,1.0s						
MK31	Makanchi Array	45.15	56	i P	P	02 51 30.7	0.0
MK31	Makanchi Array	45.15	56	P	P	02 51 30.7	0.0
MK31				IAmb	IAmb	02 51 31.3	
	comp=Z,1.6nm,0.6s						
MKAR	Makanchi Array	45.15	56	P	P	02 51 30.9	+0.2
	comp=Z,2.2nm,0.5s,baz=269,slow=7.5,SNR=36						
MKAR	Makanchi Array	45.15	56	P	P	02 51 30.7	0.0
ZALV	Zalesovo Beam	46.23	46	P	P	02 51 38.4	-0.7
	comp=Z,3.0nm,0.3s,baz=271,slow=8.8,SNR=14						
DGZ	Jazzator, Alta	48.19	52	i P	P	02 51 54.4	-0.3
DGZ				pmax	pmax		
	comp=Z,6.0nm,2.1s						
SONM	Songino Array	60.78	50	P	P	02 53 26.5	+0.3
	comp=Z,1.9nm,0.6s,baz=280,slow=6.9,SNR=24						
ULN	Ulaanbaatar	61.18	50	P	P	02 53 28.7	-0.3
ULN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ULN	Ulaanbaatar	61.18	50	P	P	02 53 28.6	-0.3
ULN				IAmb	IAmb	02 53 30.5	
	comp=Z,4.0nm,1.1s						
TIXI	Tiksi	61.86	20	ceP	P	02 53 33.8	+0.9
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SCHQ	Schefferville	62.30	319	P	P	02 53 37.8	+1.6
	comp=Z,1.3nm,0.4s,baz=78,slow=9.1,SNR=5.1						
SCHQ	Schefferville	62.30	319	P	P	02 53 36.8	+0.6
SCHQ				IAmb	IAmb	02 53 51.1	
	comp=Z,3.8nm,1.2s						
BOSA	Boshof	63.30	178	LR	LR	03 24 29.3	
	comp=Z,45nm,19.7s,baz=3.0,slow=39						
CMAR	Chiang Mai Arr	68.12	82	P	P	02 54 14.7	+0.2
	comp=Z,0.3nm,0.4s,baz=300,slow=7.6,SNR=4.5						
BILL	Bilibino	73.59	14	eP	P	02 54 49.7	+2.7
BILL				e		02 55 03.1	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.6s						
YKA	Yellowknife Ar	77.12	341	P	P	02 55 08.3	+1.1
	comp=Z,0.2nm,0.4s,baz=32,slow=5.2,SNR=9.6						
YKA	Yellowknife Ar	77.12	341	P	P	02 55 07.1	-0.1
WRA	Warramunga Arr	118.11	96	PKP	PKPdf	03 02 01.5	-0.1
	comp=Z,0.6nm,0.8s,baz=326,slow=1.8,SNR=2.5						
ASAR	Alice Springs	119.54	99	PKP	PKPdf	03 02 04.3	0.0
	comp=Z,0.4nm,0.6s,baz=306,slow=1.6,SNR=6.1						
ASAR	Alice Springs	119.54	99		PKPdf	03 02 03.3	-1.0

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*IDC **31** 02:44:22.4±3.1, 6°.21S×154°.40E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.7/28, mbtmp3.8/6, MS3.2/3, Ms1 3.2/3, ms1mx2.8/39, Error ellipse: s-maj=95.3km s-min=28.4km az=110.0*

ISC 31 02:44:29.4±3.5**, 6°.3S**±0°.3×**154°.4E**±0°.7**, h50^{km}, n9, σ0^s.48**/7**, mb3.8**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.78	246	LR	LR	02 49 34.0	
	comp=Z,127nm,18.3s,baz=332,slow=40						
WRA	Warramunga Arr	23.72	233	P	P	02 49 37.3	+0.2
	0.5nm,0.4s,baz=55,slow=9.2,SNR=11						
ASAR	Alice Springs	26.19	227	P	P	02 49 59.1	-0.5
	1.4nm,0.9s,baz=60,slow=7.6,SNR=7.5						
ASAR				LR	LR	03 00 31.5	
	comp=Z,70nm,18.2s,baz=66,slow=37						
STKA	Stephens Creek	28.12	204	LR	LR	03 01 39.4	
	comp=Z,47nm,18.2s,baz=26,slow=37						
CMAR	Chiang Mai Arr	59.92	295	P	P	02 54 30.8	0.0
	0.3nm,0.3s,baz=90,slow=4.7,SNR=4.5						
SONM	Songino Array	68.40	327	P	P	02 55 26.1	+0.1
	0.6nm,0.6s,baz=152,slow=6.8,SNR=4.4						
MKAR	Makanchi Array	82.46	319	P	P	02 56 46.7	+0.1
	1.3nm,0.7s,baz=93,slow=7.6,SNR=10.0						
ZALV	Zalesovo Beam	83.25	326	P	P	02 56 49.8	-0.6
	1.5nm,0.7s,baz=110,slow=6.5,SNR=6.9						
TORD	Torodi Ar. Bea	152.23	286	PKPbc	PKiKP	03 04 21.5	+0.5
	1.5nm,0.5s,baz=54,slow=2.2,SNR=16						

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*IDC **31** 03:14:50.0±2.3, 2°.17N×96°.12E, h0^{km}, mb3.7/5, mb1 3.7/7, mb1mx3.4/63, mbtmp3.6/7, ML3.3/2, MS2.4/1, Ms1 2.4/1, ms1mx2.3/42, Error ellipse: s-maj=59.5km s-min=26.5km az=44.0*

ISC 31 03:14:54.1±1.9**, 2°.2N**±0°.2×**96°.2E**±0°.2**, h27^{km}, n13, σ0^s.32**/7**, mb3.7**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	2.80	78	Pn	Pn	03 15 37.1	-0.2
	1.2nm,0.3s,baz=287,slow=11,SNR=9.6						
PSI				LR	LR	03 16 52.9	
	comp=Z,67nm,19.0s,baz=297,slow=43						
CMAR	Chiang Mai Arr	16.38	9	Pn	Pn	03 18 42.7	+0.4
	0.1nm,0.3s,baz=195,slow=12,SNR=4.0						
H08S2	Diego Garcia H	25.58	247	T	T	03 46 58.2	
	baz=68,slow=76,SNR=12						
H08S3	Diego Garcia H	25.58	247	T	T	03 46 55.3	
	baz=68,slow=76,SNR=10						
H08S1	Diego Carcia H	25.60	247	T	T	03 46 59.5	
	baz=68,slow=76,SNR=8.9						
H01W3	Cape Leeuwin H	40.55	157	T	T	04 05 47.0	
	baz=333,slow=76,SNR=24						
H01W2	Cape Leeuwin H	40.56	157	T	T	04 05 48.0	
	baz=333,slow=76,SNR=22						
H01W1	Cape Leeuwin H	40.57	157	T	T	04 05 48.2	
	baz=333,slow=76,SNR=20						
WRA	Warramunga Arr	43.42	122	P	P	03 22 55.2	+0.2
	0.5nm,0.8s,baz=302,slow=9.1,SNR=2.1						
MKAR	Makanchi Array	46.04	347	P	P	03 23 15.6	+0.1
	1.2nm,0.7s,baz=161,slow=8.5,SNR=12						
SONM	Songino Array	46.31	10	P	P	03 23 17.7	0.0
	0.3nm,0.5s,baz=194,slow=8.8,SNR=3.8						
ZALV	Zalesovo Beam	52.42	352	P	P	03 24 04.3	+0.2
	0.9nm,0.4s,baz=173,slow=6.5,SNR=5.6						
BVAR	Borovoye Array	54.98	341	P	P	03 24 22.6	-0.4
	0.5nm,0.6s,baz=143,slow=9.9,SNR=2.6						

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*IDC **31** 03:23:20.8±0.7, 7°.39N×94°.43E, h0^{km}, mb4.1/16, mb1 4.2/16, mb1mx3.8/55, mbtmp4.1/16, MS3.7/15, Ms1 3.7/15, ms1mx3.5/52, Error ellipse: s-maj=31.2km s-min=15.6km az=55.0*

*DJA **31** 03:23:20.3±0.4, 7°N±4°×9°3E±°, h10^{km}, M4.7/13, mb4.5/13, mB5.3/5, MLv4.7/6, Mw(mB)4.7/5, MwMwp5.8/1, Mwp5.9/1*

*NEIC **31** 03:23:25.4±1.6, 7°.26N±0°.07×94°.40E±0°.03, h35^{km}±2^{km}, mb4.7/31, Error ellipse: s-maj=12.3km s-min=3.2km az=163.0*

*NDI **31** 03:23:37.6±4.2, 8°.19N×94°.04E, h40^{km}, mb4.2, mb4.7(NEIC)*

ISC 31 03:23:24.3±0.4**, 7°.41N**±0°.06×**94°.45E**±0°.07**, h24^{km}, n114,** σ**1^s.87**/102**, mb4.5**/40**, MS3.7**/11**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	3.30	131	P	Pb	03 24 24.3	+2.2
LHMI	Lhok Sumawe	3.30	131	Pn	Pn	03 24 12.5	-2.0
LHMI				Sn	Sn	03 24 46.8	-6.1
LASI	Langsa, Aceh	4.57	130	P	Pb	03 24 41.5	-2.3
	1.2nm172nm,0.4s						
TPTI		4.94	146	P	Pn	03 24 40.3	+3.2
	0.2nm67nm,1.0s						
SRIT	Nakonsritamara	5.24	77		Pn	03 24 42.7	+1.5
SNSI	Sinabang, Aceh	5.31	159	P	Pn	03 24 42.0	-0.2
	3.7nm169nm,0.9s						
DGPR	DIGLIPUR	5.92	346	*e*P	Pn	03 24 54.6	+4.1
PSI	Prapat	6.39	136	Pn	Pn	03 24 54.4	-2.8
	0.7nm,0.3s,baz=322,slow=14,SNR=9.1						
PSI				LR	LR	03 27 40.1	
	comp=Z,524nm,19.9s,baz=304,slow=40						
PSI	Prapat	6.39	136	P	Pn	03 25 03.4	+6.3
	0.0nm339nm13nm,0.8s						
RPSI	Rantau Prapat	6.47	136		Pn	03 24 54.4	-3.7
KULM	Kulim	6.51	109	P	Pn	03 24 58.7	0.0
KULM	Kulim	6.51	109	Pn	Pn	03 24 57.4	-1.3
IPM	Ipoh	7.16	114	P	Pn	03 25 07.1	-0.5
IPM	Ipoh	7.16	114	Pn	Pn	03 25 06.9	-0.7
MNSI	Mandailing Nat	8.33	142	P	Pn	03 25 27.0	+3.4
BKNI	Bangkinang	9.63	137	Pn	Pn	03 25 39.3	-2.2
PPI	Padang Panjang	9.81	143	P	Pn	03 25 46.4	+2.4
CM31	Chiang Mai Arr	11.82	21	Pn	Pn	03 26 14.5	+3.1
CMAR	Chiang Mai Arr	11.82	21	Pn	Pn	03 26 14.0	+2.5
	0.3nm,0.3s,baz=216,slow=14,SNR=6.5						
CMAR				LR	LR	03 30 57.8	
	comp=Z,214nm,18.3s,baz=249,slow=39						
CMAR	Chiang Mai Arr	11.82	21		Pn	03 26 13.8	+2.3
CHTO	Chiang Mai	12.15	21	P	Pn	03 26 19.0	+3.0
	7.1nm,1.2s						
CHTO	Chiang Mai	12.15	21	Pn	Pn	03 26 19.1	+3.2
CMMT	Chiang Mai	12.15	21	P	P	03 26 23.6	-4.8
	12nm,1.2s						
PALK	Pallekele	13.64	270	LR	LR	03 31 12.2	
	comp=Z,436nm,21.9s,baz=192,slow=35						
MDSI	Maura Dua	15.30	140	P	P	03 27 03.1	-0.3
	777nm14nm,0.9s						
KLSI		15.80	139	P	P	03 27 11.2	+2.1
	25µm8.6nm,0.9s						
SLVN	Son La	16.58	32	P	Pn	03 27 17.9	+2.5
SILR	SILCHAR	17.34	355	*e*P	P	03 27 26.6	+0.6
KOHI	KOHIMA	18.21	359	*e*P	Pn	03 27 36.3	+0.6
KOHI				IAmb	IAmb	03 27 45.4	
	comp=Z,20nm,0.8s						
SHL	Shillong	18.22	353	*e*P	Pn	03 27 36.9	+1.0
SHL				IAmb	IAmb	03 27 51.1	
	comp=Z,8.1nm,0.7s						
SHL				*e*S	Sn	03 30 50.4	-8.4
SHL	Shillong	18.22	353	P	Pn	03 27 34.0	-1.9
SBUM	Sibu	18.37	105	P	Pn	03 27 43.5	+5.8
	comp=Z,9.5nm,1.4s						
HYB	Hyderabad	18.42	304	*i* P	P	03 27 38.5	+0.4
HYB	Hyderabad	18.42	304	*e*P	Pn	03 27 40.0	+1.7
HYB				IAmb	IAmb	03 27 45.3	
	comp=Z,13nm,0.8s						
LEM	Lembang	19.30	137	LR	LR	03 36 35.8	
	comp=Z,278nm,20.1s,baz=278,slow=41						
PKI	Pulchoki	21.80	338	*e*P	P	03 28 15.6	+0.5
	comp=Z,39nm,0.8s						
PKIN	Phulchoki	21.81	338	*e*P	P	03 28 15.4	+0.2
GUN	Gumba	21.94	339	*e*P	P	03 28 16.7	+0.1
	comp=Z,30nm,0.7s						
DMN	Daman	21.95	337	*e*P	P	03 28 16.7	+0.1
	comp=Z,58nm,0.8s						
LSA	Lhasa	22.39	352	P	P	03 28 22.0	+0.5
LSA				IAmb	IAmb	03 28 31.8	
	comp=Z,22nm,0.7s						
GKN	Gorkha	22.49	337	*e*P	P	03 28 21.5	-0.8
BHPL	Bhopal	22.70	316	*e*P	P	03 28 26.8	+2.3
BHPL				IAmb	IAmb	03 28 32.0	
	comp=Z,23nm,1.1s						
KOLN	Koldanda	22.71	334	*e*P	P	03 28 24.1	-0.6
DANN	Dangsing	23.15	335	*e*P	P	03 28 28.1	-1.2
	comp=Z,44nm,0.8s						
PYUN	Piuthan	23.26	334	*e*P	P	03 28 28.8	-1.5
	comp=Z,26nm,0.7s						
MYLDM	Lahad Datu	24.01	94	P	P	03 28 48.3	+11
	comp=Z,38nm,1.5s						
ABJI	Asem Bagus	24.85	127	P	P	03 28 58.0	+13
H08S3	Diego Garcia H	26.51	236	T	T	03 55 50.9	
	baz=55,slow=75,SNR=83						
H08S2	Diego Garcia H	26.52	236	T	T	03 55 47.0	
	baz=55,slow=75,SNR=77						
H08S1	Diego Carcia H	26.53	236	T	T	03 55 47.7	
	baz=55,slow=75,SNR=41						
KAPI	Kappang	28.10	115	LR	LR	03 39 37.5	
	comp=Z,96nm,21.8s,baz=314,slow=35						
LUWI	Luwuk	29.47	105	P	P	03 29 26.9	+0.1
NIL	Nilore	32.65	326	P	P	03 29 53.7	-0.9
NIL				IAmb	IAmb	03 29 57.2	
	comp=Z,17nm,0.8s						
KBL	Kabul	35.72	323	P	P	03 30 20.3	-1.2
KBL				IAmb	IAmb	03 30 24.1	
	comp=Z,7.9nm,1.1s						
TARG	Taragay, Kyrgy	37.23	339	P	P	03 30 34.9	+0.5
DRK	Karamyk	37.86	331	P	P	03 30 39.9	+0.3
CHGR	Chuyangaron	38.58	328	P	P	03 30 44.0	-1.5
BTK	Batken	38.78	331	P	P	03 30 47.7	+0.5
BTK				IAmb	IAmb	03 31 03.8	
	comp=Z,14nm,1.0s						
AAK	Ala-Archa	39.25	337	P	P	03 30 52.5	+1.4
	comp=Z,2.2nm,0.9s,baz=164,slow=5.4,SNR=7.4						
AAK	Ala-Archa	39.25	337	P	P	03 30 50.6	-0.6
MK31	Makanchi Array	40.60	347	P	P	03 31 01.7	-0.4
MKAR	Makanchi Array	40.60	347	P	P	03 31 02.3	+0.1
	comp=Z,5.1nm,0.8s,baz=166,slow=7.2,SNR=27						
MKAR	Makanchi Array	40.60	347	P	P	03 31 01.9	-0.3
MAKZ	Makanchi	40.69	347	P	P	03 31 03.1	+0.2
MAKZ				IAmb	IAmb	03 31 09.7	
	comp=Z,6.8nm,0.7s						
KKAR	Karatay Array	41.31	333	P	P	03 31 07.8	-0.2
SONM	Songino Array	41.55	12	P	P	03 31 11.6	+1.6
	comp=Z,1.8nm,0.9s,baz=191,slow=5.9,SNR=7.0						
SONM	Songino Array	41.55	12	P	P	03 31 10.8	+0.8
ULN	Ulaanbaatar	41.72	13	P	P	03 31 20.0	+8.5
KSRS	Korea Array	42.61	40	LR	LR	03 51 08.1	
	comp=Z,69nm,19.1s,baz=248,slow=39						
GEYT	Alibeck	44.75	318	P	P	03 31 35.8	-0.2
	comp=Z,4.2nm,0.7s,baz=156,slow=7.4,SNR=6.7						
GEYT				LR	LR	03 51 10.0	
	comp=Z,140nm,18.6s,baz=45,slow=37						
GEYT	Alibeck	44.75	318	P	P	03 31 36.0	0.0
GEYT				IAmb	IAmb	03 31 43.8	
	comp=Z,7.3nm,0.7s						
GYA0B	ALIBECK ARRAY	44.75	318	P	P	03 31 36.1	+0.1
GYA0B				IAmb	IAmb	03 31 43.8	
	comp=Z,10nm,0.7s						
KURBB	Kurchatov Arra	45.07	346	P	P	03 31 38.9	+0.6
	comp=Z,9.5nm,0.9s,baz=164,slow=7.1,SNR=35						
KURK	Kurchatov	45.13	346	P	P	03 31 38.7	0.0
KURK				IAmb	IAmb	03 31 45.6	
	comp=Z,8.1nm,0.8s						
ZAA0	Zalesovo Array	47.05	352	P	P	03 31 53.6	-0.3
ZAA0				IAmb	IAmb	03 32 02.9	
	comp=Z,12nm,0.9s						
ZALV	Zalesovo Beam	47.05	352	P	P	03 31 54.0	+0.2
	comp=Z,3.0nm,0.7s,baz=194,slow=5.5,SNR=17						
ZALV	Zalesovo Beam	47.05	352	P	P	03 31 54.4	+0.6
WB0	Warramunga Arr	47.70	125	P	P	03 31 58.5	-0.9
WRA	Warramunga Arr	47.75	125	P	P	03 31 59.1	-0.7
	comp=Z,1.5nm,0.9s,baz=304,slow=9.0,SNR=5.5						
WRA				PcP	PcP	03 33 29.3	+0.4
	comp=Z,0.6nm,0.7s,baz=307,slow=2.7,SNR=1.9						
WRA				LR	LR	03 54 34.5	
	comp=Z,92nm,18.4s,baz=60,slow=39						
WRA	Warramunga Arr	47.75	125	P	P	03 31 58.3	-1.5
WB2	Warramunga Arr	47.76	125	P	P	03 31 59.1	-0.7
WB2				IAmb	IAmb	03 32 22.1	
	comp=Z,5.4nm,0.8s						
MJAR	Matsushiro Arr	49.24	47	LR	LR	03 55 30.7	
	comp=Z,46nm,18.1s,baz=30,slow=39						
ASAR	Alice Springs	49.39	130	P	P	03 32 12.4	0.0
	comp=Z,2.5nm,0.9s,baz=299,slow=7.3,SNR=15						
ASAR				PcP	PcP	03 33 35.5	+0.7
	comp=Z,0.8nm,0.7s,baz=315,slow=3.1,SNR=4.7						
ASAR	Alice Springs	49.39	130	P	P	03 32 10.5	-1.9
ASAR					PcP	03 33 33.9	-0.9
BVAR	Borovoye Array	49.52	341	P	P	03 32 12.4	-0.5
	comp=Z,2.8nm,0.8s,baz=157,slow=9.6,SNR=12						
RAYN	Ar Rayn	49.55	295	P	P	03 32 12.4	-1.4
BRVK	Borovoye	49.58	341	P	P	03 32 13.3	-0.1
BRVK				IAmb	IAmb	03 32 15.3	
	comp=Z,4.2nm,0.9s						
FORT	Forrest	49.79	141	P	P	03 32 15.1	-0.2
ABKAR	Akbulak array	50.78	331	P	P	03 32 21.9	-0.6
ABKAR	Akbulak array	50.78	331	P	P	03 32 22.3	-0.2
ABKAR				IAmb	IAmb	03 32 24.6	
	comp=Z,10nm,1.1s						
AKTO	Aktyubinsk	52.50	331	P	P	03 32 35.1	-0.2
	comp=Z,3.4nm,0.9s,baz=133,slow=17,SNR=5.2						
ARU	Arti	56.43	337	P	P	03 33 03.9	+0.1
	comp=Z,0.5nm,0.3s,baz=155,slow=6.3,SNR=5.3						
KMBO	Kilima Mbogo	57.68	264	P	P	03 33 15.5	+1.8
	comp=Z,5.4nm,0.7s,baz=64,slow=9.3,SNR=3.9						
KMBO	Kilima Mbogo	57.68	264	P	P	03 33 12.0	-1.8
KMBO				IAmb	IAmb	03 33 23.0	
	comp=Z,7.3nm,0.9s						
STKA	Stephens Creek	59.57	134	LR	LR	04 01 55.6	
	comp=Z,57nm,19.2s,baz=325,slow=39						
MMAI	Mount Meron Ar	60.13	304	LR	LR	04 02 00.4	
	comp=Z,29nm,19.9s,baz=330,slow=39						
BRTR	Keskin Array B	62.96	311	P	P	03 33 48.8	-0.5
	comp=Z,0.9nm,0.6s,baz=124,slow=7.8,SNR=2.8						
BRTR				LR	LR	04 04 13.1	
	comp=Z,94nm,18.4s,baz=12,slow=39						
BRTR	Keskin Array B	62.96	311	P	P	03 33 48.9	-0.4
KLMR	Klimovskoe	67.00	334	*e*P	P	03 34 13.0	-2.0
KLMR				AMP		03 34 20.1	
	comp=Z,22nm,1.3s						
TIXI	Tiksi	67.62	11	P	P	03 34 19.2	+0.5
TIXI				IAmb	IAmb	03 34 25.9	
	comp=Z,7.7nm,0.8s						
FINES	FINESS Array B	73.26	332	P	P	03 34 52.5	-0.9
	comp=Z,3.8nm,0.7s,baz=98,slow=5.2,SNR=10.0						
BOSA	Boshof	75.60	238	LR	LR	04 05 36.8	
	comp=Z,34nm,18.7s,baz=18,slow=34						
GERES	GERESS Array B	78.37	318	P	P	03 35 22.8	-0.2
	comp=Z,1.3nm,0.8s,baz=87,slow=5.0,SNR=10						
GERES				LR	LR	04 15 05.8	
	comp=Z,56nm,18.5s,baz=350,slow=40						
GERES	GERESS Array B	78.37	318	P	P	03 35 22.9	0.0
WTTA	Wattenberg	79.73	317	*e*P	P	03 35 32.1	+1.5
	comp=Z,6.7nm,0.9s						
SQTA	Sankt Quirin	80.02	317	*e*P	P	03 35 33.2	+1.1
	comp=Z,3.3nm,0.8s						
MOTA	Moosalm	80.09	317	*e*P	P	03 35 33.0	+0.5
	comp=Z,3.5nm,0.9s						
NB2	NORSAR Subarra	80.28	331	P	P	03 35 32.4	-0.7
	comp=Z,2.8nm,0.7s,baz=96,slow=5.1						
FETA	Feichten	80.35	316	*e*P	P	03 35 35.9	+2.0
	comp=Z,4.4nm,1.0s						
KEST	Kesra	81.76	305	LR	LR	04 17 24.6	
	comp=Z,64nm,19.0s,baz=298,slow=40						
TORD	Torodi Ar. Bea	91.00	283	P	P	03 36 27.6	+0.3
	comp=Z,0.5nm,0.8s,baz=66,slow=3.1,SNR=2.9						
TORD	Torodi Ar. Bea	91.00	283	P	P	03 36 26.5	-0.8
TORD				IAmb	IAmb	03 36 36.8	
	comp=Z,9.6nm,1.8s						
NVAR	Mina Array Bea	125.15	31	PKP	PKPdf	03 42 24.5	+0.9
	comp=Z,0.3nm,0.6s,baz=292,slow=4.8,SNR=2.5						
NVAR	Mina Array Bea	125.15	31		PKPdf	03 42 23.2	-0.4

IDC ***31*** *03:50:29.1±1.0, 30°.89N×57°.04E, h0^{km}, mb3.9/13, mb1 4.0/16, mb1mx3.8/42, mbtmp3.9/16, ML3.5/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/51, Error ellipse: s-maj=25.1km s-min=18.3km az=164.0*

TEH ***31*** *03:50:30.2, 31°.09N×57°.08E, h8^{km}, ML4.3*

THR ***31*** *03:50:31.3±0.9, 31°.08N×57°.05E, h16^{km}±8^{km}, ML4.0*

NEIC ***31*** *03:50:32.1±2.5, 31°.03N±0°.04×57°.08E±0°.04, h10^{km}±1^{km}, Error ellipse: s-maj=6.7km s-min=5.1km az=228.0*

DSN ***31*** *03:50:49.9±3.0, 29°.88N×56°.36E, h10^{km}, ML3.4/6, Error ellipse: s-maj=179.9km s-min=28.3km az=92.0*

ISC 31 03:50:31.0±0.5, **31°.06N**±0°.04×**57°.09E**±0°.04, **h10^{km}, n176, σ1^{s}.58**/166, **mb3.9**/14, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHGB	Koh Gabri	0.86	218	*e*Pg	Pg	03 50 47.1	-0.6
KHGB	Koh Gabri	0.86	218	Pg	Pg	03 50 47.1	-0.6
TVBK	TV Kerman	1.10	195	*e*Pg	Pg	03 50 52.4	+0.1
TVBK				*e*		03 50 54.1	
	comp=Z,93µm,0.4s						
TVBK	TV Kerman	1.10	195	Pg	Pg	03 50 52.4	+0.1
KRBR	Kerman	1.11	195	*e*Pg	Pg	03 50 52.5	0.0
KRBR				IAML		03 51 11.4	
	comp=E,3µm,0.3s						
KRBR				IAML		03 51 16.0	
	comp=N,2µm,0.4s						
KRBR	Kerman	1.11	195	*e*Pg	Pg	03 50 52.5	0.0
KRBR	Kerman	1.11	195	Pg	Pg	03 50 52.4	0.0
CHMN	Cheshme madani	1.25	162	*e*Pg	Pn	03 50 54.9	0.0
CHMN				*e*		03 51 16.8	
	comp=Z,42µm,0.3s						
CHMN	Cheshme madani	1.25	162		Pn	03 50 54.8	-0.1
NGRK	Negar Kerman	1.44	193	*e*Pg	Pn	03 50 58.8	+1.2
NGRK				*e*		03 51 00.1	
	comp=Z,76µm,0.4s						
NGRK	Negar Kerman	1.44	193		Pn	03 50 58.7	+1.2
BSRN	Basiran	1.96	62	*e*Pn	Pn	03 51 05.6	+1.1
BSRN				IAML		03 51 35.8	
	comp=E,1µm,0.2s						
BSRN				IAML		03 51 37.2	
	comp=N,1µm,0.4s						
BSRN	Basiran	1.96	62	*e*Pn	Pn	03 51 05.6	+1.1
BSRN	Basiran	1.96	62	Pn	Pn	03 51 05.5	+1.1
TPRV	Parvadeh(Tabas	2.00	350	*e*Pn	Pn	03 51 05.9	+0.9
TPRV	Parvadeh(Tabas	2.00	350	Pn	Pn	03 51 05.9	+0.9
IKOO	Kooshah	2.12	50	*e*Pn	Pn	03 51 08.1	+1.2
IKOO	Kooshah	2.12	50	Pn	Pn	03 51 08.0	+1.2
IMEH	Mehriz	2.15	280	*e*		03 51 43.3	
	comp=Z,17µm,0.4s						
IMEH				*e*Pn	Pn	03 51 08.4	+1.2
KBAM	BAM	2.25	148	*e*		03 51 47.2	
	comp=Z,24µm,0.3s						
KBAM				*e*Pn	Pn	03 51 09.8	+1.4
ITEG	Tejag	2.31	37	*e*Pn	Pn	03 51 10.1	+0.7
ITEG				*e*		03 51 52.4	
	comp=Z,17µm,0.5s						
ITEG	Tejag	2.31	37	Pn	Pn	03 51 10.1	+0.7
YZKH	Yazd	2.51	303	*e*Pn	Pn	03 51 13.0	+0.9
YZKH				*e*Sg	Sb	03 51 48.9	+1.5
YZKH				IAML		03 51 56.8	
	comp=E,782nm,0.4s						
YZKH				IAML		03 51 58.9	
	comp=N,673nm,0.5s						
YZKH	Yazd	2.51	303	*e*Pn	Pn	03 51 13.0	+0.9
YZKH	Yazd	2.51	303	Pn	Pn	03 51 12.9	+0.9
TKDS	Koohdasht(Taba	2.55	1	*e*Pn	Pn	03 51 13.9	+1.3
TKDS				*e*		03 51 59.9	
	comp=Z,19µm,0.4s						
TKDS	Koohdasht(Taba	2.55	1	Pn	Pn	03 51 13.9	+1.3
NHDN	Nehbandan	2.55	82	*e*Pn	Pn	03 51 14.2	+1.5
NHDN	Nehbandan	2.55	82	Pn	Pn	03 51 14.1	+1.4
ICHK	Chekchek	2.58	298	*e*Pn	Pn	03 51 14.6	+1.5
ICHK				*e*		03 52 00.5	
	comp=Z,12µm,0.4s						
ICHK	Chekchek	2.58	298	Pn	Pn	03 51 14.5	+1.5
TABS	Tabas	2.58	0	*e*Pn	Pn	03 51 14.2	+1.1
TABS				IAML		03 52 00.9	
	comp=N,1µm,0.4s						
TABS				IAML		03 52 05.7	
	comp=E,484nm,0.4s						
TABS	Tabas	2.58	0	*e*Pn	Pn	03 51 14.2	+1.1
TABS	Tabas	2.58	0	Pn	Pn	03 51 14.2	+1.1
AFRZ	Afriz	2.87	34	*e*Pn	Pn	03 51 18.0	+1.0
AFRZ				*e*		03 52 10.9	
	comp=Z,10µm,0.7s						
AFRZ	Afriz	2.87	34	Pn	Pn	03 51 18.0	+1.0
IDAH	Dahanechah	2.89	54	*e*Pn	Pn	03 51 19.4	+1.9
IDAH				*e*		03 52 16.2	
	comp=Z,8µm,1.0s						
IDAH	Dahanechah	2.89	54	Pn	Pn	03 51 19.3	+1.8
TNSJ	Nastanj	2.93	352	*e*Pn	Pn	03 51 18.9	+1.1
TNSJ	Nastanj	2.93	352	Pn	Pn	03 51 18.9	+1.1
ISAD	Sadrabad	3.04	287	*e*Pn	Pn	03 51 20.1	+0.6
ISAD	Sadrabad	3.04	287	Pn	Pn	03 51 20.0	+0.6
IMON	Monand	3.05	45	*e*Pn	Pn	03 51 21.6	+2.0
IMON	Monand	3.05	45	Pn	Pn	03 51 21.5	+2.0
KHNJ	Kahnooj	3.14	170	*e*Pn	Pn	03 51 22.8	+2.1
KHNJ	Kahnooj	3.14	170	Pn	Pn	03 51 22.8	+2.1
ZHSF	Zahedan	3.49	113	*e*Pn	Pn	03 51 27.7	+2.1
ZHSF	Zahedan	3.49	113	*e*Pn	Pn	03 51 27.7	+2.1
ZHSF	Zahedan	3.49	113	Pn	Pn	03 51 27.7	+2.1
ANAR	Anarak	3.56	308	*e*Pn	Pn	03 51 27.2	+0.7
ANAR	Anarak	3.56	308	Pn	Pn	03 51 27.2	+0.7
ZHDN	Zahedan	3.62	116	*e*Pn	Pn	03 51 29.4	+2.1
ZHDN	Zahedan	3.62	116	Pn	Pn	03 51 29.3	+2.0
IBND	Bandar-abas	3.63	188	*e*Pn	Pn	03 51 30.3	+3.0
GENO	Geno	3.73	193	*e*Pn	Pn	03 51 31.3	+2.4
GENO				*e*		03 51 47.5	
	comp=Z,4µm,0.4s						
GENO	Geno	3.73	193	Pn	Pn	03 51 31.3	+2.4
SHRT	Shahrakht	3.74	45	*e*Pn	Pn	03 51 31.5	+2.6
SHRT				IAML		03 52 42.0	
	comp=E,145nm,0.5s						
SHRT				IAML		03 52 46.4	
	comp=N,156nm,0.8s						
SHRT	Shahrakht	3.74	45	*e*Pn	Pn	03 51 31.5	+2.6
SHRT	Shahrakht	3.74	45	Pn	Pn	03 51 31.4	+2.6
NASN	Na'in	4.04	297	*e*Pn	Pn	03 51 34.0	+0.7
NASN				IAML		03 52 49.8	
	comp=N,75nm,0.5s						
NASN				IAML		03 52 53.4	
	comp=E,108nm,0.6s						
NASN	Na'in	4.04	297	*e*Pn	Pn	03 51 34.0	+0.7
NASN	Na'in	4.04	297	Pn	Pn	03 51 33.9	+0.7
IRAM	Ramesheh	4.10	282	*e*Pn	Pn	03 51 35.5	+1.5
IRAM	Ramesheh	4.10	282	Pn	Pn	03 51 35.5	+1.5
LAR1	LAR	4.13	216	*e*Pn	Pn	03 51 36.2	+2.0
LAR1	LAR	4.13	216	Pn	Pn	03 51 36.1	+1.9
IZEF	Zefreh	4.45	296	*e*Pn	Pn	03 51 40.1	+1.3
IZEF	Zefreh	4.45	296	Pn	Pn	03 51 40.0	+1.3
GHIR	Ghir-Karzin	4.52	233	*e*Pn	Pn	03 51 41.2	+1.6
GHIR				IAML		03 53 08.0	
	comp=N,46nm,0.5s						
GHIR				IAML		03 53 08.6	
	comp=E,30nm,0.6s						
GHIR	Ghir-Karzin	4.52	233	*e*Pn	Pn	03 51 41.2	+1.6
GHIR	Ghir-Karzin	4.52	233	Pn	Pn	03 51 41.2	+1.6
KLNJ	Kolanjah	4.72	271	*e*Pn	Pn	03 51 44.2	+1.5
KLNJ	Kolanjah	4.72	271	Pn	Pn	03 51 44.1	+1.4
SHRO	Shahrood	5.00	350	*e*Pn	Pn	03 51 47.7	+1.4
SHRO				IAML		03 53 11.7	
	comp=N,179nm,0.5s						
SHRO				IAML		03 53 16.4	
	comp=E,153nm,0.6s						
SHRO	Shahrood	5.00	350	*e*Pn	Pn	03 51 47.7	+1.4
SHRO	Shahrood	5.00	350	Pn	Pn	03 51 47.7	+1.4
SHME	Shamm	5.06	190	P	Pn	03 51 47.2	+0.2
SHME	Shamm	5.06	190	P		03 51 47.2	
KRSH	Karshahi	5.10	306	*e*Pn	Pn	03 51 48.7	+1.0
KRSH	Karshahi	5.10	306	Pn	Pn	03 51 48.7	+1.0
IANJ	Anjilo	5.14	330	*e*Pn	Pn	03 51 48.6	+0.2
IANJ	Anjilo	5.14	330	Pn	Pn	03 51 48.5	+0.2
BANOM	Banah	5.16	188	P	Pn	03 51 50.7	+2.2
BANOM	Banah	5.16	188	P		03 51 50.7	
IKLH	Kolahrood	5.19	297	*e*Pn	Pn	03 51 51.1	+2.0
IKLH	Kolahrood	5.19	297	Pn	Pn	03 51 51.0	+2.0
ISFB	Sefidab	5.25	310	*e*Pn	Pn	03 51 50.6	+0.9
ISFB	Sefidab	5.25	310	Pn	Pn	03 51 50.5	+0.9
SBZV	Sabzevar	5.33	4	*e*Pn	Pn	03 51 51.8	+0.8
SBZV	Sabzevar	5.33	4	Pn	Pn	03 51 51.8	+0.8
SHK1	Shahrekord	5.44	285	*e*Pn	Pn	03 51 55.2	+2.7
HRA	Herat	5.46	51		Pn	03 51 52.9	+0.1
JRKH	Jarkhoshk	5.55	28	*e*Pn	Pn	03 51 56.5	+2.7
JRKH	Jarkhoshk	5.55	28	Pn	Pn	03 51 56.5	+2.7
ISHM	Shahmirzad	5.70	327	*e*Pn	Pn	03 51 58.4	+2.3
ISHM	Shahmirzad	5.70	327	Pn	Pn	03 51 58.3	+2.2
IMYA	Miami	5.84	25	*e*Pn	Pn	03 52 00.0	+2.1
IMYA	Miami	5.84	25	Pn	Pn	03 51 59.9	+2.1
IFIR	Firoozkooh	5.84	323	*e*Pn	Pn	03 51 59.2	+1.3
IFIR	Firoozkooh	5.84	323	Pn	Pn	03 51 59.2	+1.3
SRVN	Saravan	5.89	127	*e*Pn	Pn	03 52 01.5	+2.9
SRVN	Saravan	5.89	127	Pn	Pn	03 52 01.4	+2.9
GHVR	GHOM	5.96	306	*e*Pn	Pn	03 52 01.7	+2.3
GHVR	GHOM	5.96	306	*e*Pn	Pn	03 52 01.7	+2.3
GHVR	GHOM	5.96	306	Pn	Pn	03 52 01.7	+2.3
IVRN	Varamin	5.98	312	*e*Pn	Pn	03 52 00.6	+0.9
IVRN	Varamin	5.98	312	Pn	Pn	03 52 00.6	+0.9
IKRD	Kardeh	6.05	19	*e*Pn	Pn	03 52 03.0	+2.1
IKRD	Kardeh	6.05	19	Pn	Pn	03 52 02.9	+2.1
IGLO	Ghaloghah	6.07	334	*e*Pn	Pn	03 52 03.3	+2.1
IGLO	Ghaloghah	6.07	334	Pn	Pn	03 52 03.2	+2.1
UOSS	Minazif	6.14	188	P	Pn	03 52 03.6	+1.8
UOSS	Minazif	6.14	188		Pn	03 51 59.9	-2.0
UOSS	Minazif	6.14	188	P		03 52 03.6	
NAZ	Nazwa, Dubai	6.18	192	P		03 52 03.4	
NAZ	Nazwa, Dubai	6.18	192	P	Pn	03 52 03.4	+1.0
IDMV	Damavand	6.19	318	*e*Pn	Pn	03 52 03.7	+1.0
IDMV	Damavand	6.19	318	Pn	Pn	03 52 03.6	+0.9
DAMV	Damavand	6.26	318	*e*Pn	Pn	03 52 04.7	+1.0
DAMV	Damavand	6.26	318	*e*Pn	Pn	03 52 04.7	+1.0
DAMV	Damavand	6.26	318	Pn	Pn	03 52 04.7	+1.0
HATD	Hatta, Dubai	6.26	188	P		03 52 09.0	
HATD	Hatta, Dubai	6.27	188	P	Pn	03 52 09.0	+5.4
IQOM	Qom	6.32	308	*e*Pn	Pn	03 52 05.9	+1.4
IQOM	Qom	6.32	308	Pn	Pn	03 52 05.9	+1.4
IMND	Minoodasht	6.34	348	*e*Pn	Pn	03 52 06.8	+2.2
IMND	Minoodasht	6.34	348	Pn	Pn	03 52 06.8	+2.2
ASHO	Ashiyiah	6.41	188	P		03 52 07.0	
ASHO				S		03 53 09.0	
ASHO	Ashiyiah	6.42	188	P	Pn	03 52 07.0	+1.4
ASHO				S	Sn	03 53 09.0	-10
FAQ	Al Faqa, Dubai	6.43	192	P	Pn	03 52 08.3	+2.6
FAQ	Al Faqa, Dubai	6.43	192	P		03 52 08.3	
BJRD	Bojnurd	6.63	2	*e*Pn	Pn	03 52 09.9	+1.2
BJRD	Bojnurd	6.63	2	*e*Pn	Pn	03 52 09.9	+1.2
BJRD	Bojnurd	6.63	2	Pn	Pn	03 52 09.9	+1.2
MRVT	Maraveh tapeh	6.64	353	*e*Pn	Pn	03 52 10.8	+2.1
MRVT	Maraveh tapeh	6.64	353	*e*Pn	Pn	03 52 10.8	+2.1
MRVT	Maraveh tapeh	6.64	353	Pn	Pn	03 52 10.8	+2.1
AMIS	Naft Sefid	6.71	277	*e*Pn	Pn	03 52 11.5	+1.9
ASAO	Ashtian	6.89	302	*e*Pn	Pn	03 52 14.1	+1.6
ASAO	Ashtian	6.89	302	*e*Pn	Pn	03 52 14.1	+1.6
ASAO	Ashtian	6.89	302	Pn	Pn	03 52 14.0	+1.6
GEYT	Alibeck	6.91	7	Pn	Pn	03 52 14.9	+2.5
	comp=E,0.9nm,0.3s,baz=180,slow=16,SNR=11						
GEYT				Lg	Lg	03 54 17.6	
	comp=E,0.3nm,0.3s,baz=191,slow=35,SNR=2.2						
GEYT	Alibeck	6.91	7		Pn	03 52 09.8	-2.6
GYA0B	ALIBECK ARRAY	6.91	7		Pn	03 52 13.7	+1.2
CHTH	Charan	6.95	316	*e*Pn	Pn	03 52 14.1	+0.9
CHTH	Charan	6.95	316	*e*Pn	Pn	03 52 14.1	+0.9
CHTH	Charan	6.95	316	Pn	Pn	03 52 14.0	+0.9
QABG	Abgarm-Qazvin	7.81	308	*e*Pn	Pn	03 52 26.0	+1.1
QABG	Abgarm-Qazvin	7.81	308	Pn	Pn	03 52 26.0	+1.1
WSAR	Wadi Sarin	7.91	170	Pn	Pn	03 52 26.8	+0.6
	comp=E,1.3nm,0.3s,baz=29,slow=11,SNR=8.1						
WSAR				LR	LR	03 56 29.6	
	comp=E,75nm,18.8s,baz=342,slow=46						
CHGR	Chuyangaron	12.47	49	Pn	Pn	03 53 28.2	-0.4
BTK	Batken	14.32	47		Pn	03 53 51.9	-2.0
DRK	Karamyk	14.65	51	Pn	Pn	03 53 56.5	-2.1
AAK	Ala-Archa	18.06	45	P	Pn	03 54 43.4	+1.2
	comp=E,0.1nm,0.3s,baz=218,slow=12,SNR=5.3						
AAK	Ala-Archa	18.06	45	P	Pn	03 54 38.7	-3.5
AAK				IAmb	IAmb	03 54 54.6	
	comp=Z,2.8nm,0.8s						
ABKAR	Akbulak array	18.30	6	P	Pn	03 54 43.8	-1.2
AKTO	Aktyubinsk	19.37	2	P	P	03 54 57.7	+0.9
	comp=Z,0.2nm,0.3s,baz=182,slow=12,SNR=9.5						
BRTR	Keskin Array B	20.94	301	P	P	03 55 15.1	+1.0
	comp=Z,2.5nm,0.7s,baz=118,slow=14,SNR=6.1						
BRTR	Keskin Array B	20.94	301	P	P	03 55 10.4	-3.8
BVAR	Borovoye Array	23.99	20	P	P	03 55 47.0	+1.3
	comp=Z,2.5nm,0.8s,baz=203,slow=11,SNR=11						
MK31	Makanchi Array	24.97	44	P	P	03 55 53.4	-1.3
MK31				IAmb	IAmb	03 55 56.9	
	comp=Z,4.7nm,1.4s						
MKAR	Makanchi Array	24.97	44	P	P	03 55 56.0	+1.3
	comp=Z,1.4nm,0.7s,baz=231,slow=10,SNR=15						
MKAR	Makanchi Array	24.97	44	P	P	03 55 53.2	-1.5
KURBB	Kurchatov Arra	25.24	33	P	P	03 55 58.6	+1.6
	comp=Z,1.5nm,0.2s,baz=234,slow=9.3,SNR=7.1						
KURK	Kurchatov	25.34	33	P	P	03 55 55.2	-2.7
KURK				IAmb	IAmb	03 56 04.9	
	comp=Z,4.8nm,1.2s						
KIRV	Kirov	28.02	351	LR	LR	04 10 35.7	
	comp=Z,209nm,19.1s,baz=319,slow=43						
ZAA0	Zalesovo Array	30.33	33	P	P	03 56 43.1	+0.5
ZALV	Zalesovo Beam	30.33	33	P	P	03 56 43.4	+0.8
	comp=Z,2.8nm,0.5s,baz=243,slow=9.7,SNR=16						
ZALV	Zalesovo Beam	30.33	33	P	P	03 56 41.1	-1.5
SUW	Suwalki	33.41	323	P	P	03 57 08.4	-1.3

GERES	GERESS Array B	37.12	311	P	P	03 57 41.9	0.0
	comp=Z,0.8nm,0.6s,baz=99,slow=8.5,SNR=8.8						
SONM	Songino Array	40.85	51	P	P	03 58 14.3	+1.1
	comp=Z,0.6nm,0.8s,baz=266,slow=7.9,SNR=4.4						
TORD	Torodi Ar. Bea	53.79	264	P	P	03 59 53.5	-0.6
	comp=Z,2.0nm,0.6s,baz=56,slow=7.4,SNR=9.4						
TORD	Torodi Ar. Bea	53.79	264	P	P	03 59 52.1	-2.1
TORD				IAmb	IAmb	03 59 57.7	
	comp=Z,3.3nm,1.2s						
KSRS	Korea Array	57.65	63	P	P	04 00 22.0	+0.5
	comp=Z,1.1nm,0.6s,baz=289,slow=6.0,SNR=3.6						
ILAR	Eielson Array	82.66	10	P	P	04 02 54.0	-0.3
	comp=Z,0.5nm,0.6s,baz=324,slow=4.7,SNR=12						
ILAR	Eielson Array	82.66	10	P	P	04 02 53.8	-0.6
YKA	Yellowknife Ar	86.54	356	P	P	04 03 14.0	0.0
	comp=Z,0.2nm,0.6s,baz=355,slow=5.1,SNR=4.5						
YKA	Yellowknife Ar	86.54	356	P	P	04 03 11.9	-2.1
WRA	Warramunga Arr	89.76	113	P	P	04 03 29.4	-0.6
	comp=Z,0.6nm,0.8s,baz=317,slow=3.9,SNR=5.2						
WRA	Warramunga Arr	89.76	113	P	P	04 03 28.8	-1.2
ASAR	Alice Springs	91.45	117	P	P	04 03 37.7	-0.2
	comp=Z,0.5nm,0.9s,baz=311,slow=5.2,SNR=6.0						
ASAR	Alice Springs	91.45	117	P	P	04 03 35.5	-2.4

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*TAP **31** 03:58:14.6, 23°.97N×122°.40E, h19^{km}, ML3.1, D*

*JMA **31** 03:58:14.2±0.1, 23°.96N×122°.39E, h15^{km}±3^{km}, M2.6*

ISC 31 03:58:12.6±1.0**, 23°.98N**±0°.02×**122°.42E**±0°.02**, h12**^{km}±9^{km}**,**
n86, $\sigma 0^{s}.57$/165**, 2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.67	45	P	Pn	03 58 27.6	-0.3
JYNG				S	Sn	03 58 36.4	-1.9
EHP	Heping Village	0.71	298	eP	Pn	03 58 27.9	-0.5
	baz=299						
EHP				S	Sb	03 58 36.7	+0.2
	baz=299						
YOJ	Yonaguni jima	0.72	48	⇓P	Pn	03 58 28.6	0.0
	baz=47						
YOJ				S	Sn	03 58 39.1	-0.4
	baz=47						
YOJ	Yonaguni jima	0.72	48	P	Pn	03 58 28.6	0.0
YOJ				eS	Sn	03 58 37.9	-1.7
HWA	Hwalien	0.75	270	P	Pn	03 58 28.3	-0.6
	baz=270						
HWA				eS	Sb	03 58 37.7	0.0
	baz=270						
EWUT	Wuta	0.75	308	eP	Pn	03 58 28.7	-0.3
	baz=309						
EWUT				S	Sb	03 58 38.9	+1.1
	baz=309						
ETL	Fush Village	0.75	284	eP	Pb	03 58 28.2	+0.5
	baz=284						
TEYL	Yanliau Villag	0.76	262	P	Pb	03 58 28.4	+0.6
	baz=264						
TEYL				eS	Sg	03 58 37.4	-0.1
	baz=264						
TWD	Chiawan	0.76	278	eP	Pg	03 58 27.3	-0.1
	baz=278						
TWD				S	Sg	03 58 38.0	+0.5
	baz=278						
ENA	Nanau	0.77	306	i P	Pn	03 58 28.6	-0.6
	baz=307						
ENA				i S	Sb	03 58 39.1	+0.8
	baz=307						
NACB	Ninganchiao	0.78	285	P	Pb	03 58 28.4	+0.3
	baz=285						
NACB				S	Sb	03 58 39.2	+0.5
	baz=285						
TWC	Suao	0.82	320	⇓iP	Pb	03 58 29.0	+0.2
	baz=322						
TWC				i S	Sb	03 58 39.8	+0.1
	baz=322						
ETM	Tongmen	0.85	269	P	Pb	03 58 29.4	+0.1
	baz=269						
ETM				S	Sb	03 58 41.2	+0.5
	baz=269						
TEGC	Jichi Village	0.85	252	eP	Pn	03 58 30.8	+0.4
	baz=251						
TEGC				S	Sb	03 58 41.8	+1.1
	baz=251						
ETLH	Xiulin Townshi	0.89	285	P	Pn	03 58 30.7	-0.3
	baz=285						
ETLH				S	Sb	03 58 42.2	+0.3
	baz=285						
NDS	Dongshan	0.92	315	P	Pn	03 58 31.5	+0.1
	baz=316						
NDS				S	Sg	03 58 42.6	+0.2
	baz=316						
ESL	Shilin	0.92	260	P	Pn	03 58 31.0	-0.4
	baz=259						
ESL				S	Sb	03 58 43.1	+0.5
	baz=259						
EGFH	Guangfu	0.96	252	P	Pn	03 58 31.6	-0.3
	baz=251						
EGFH				eS	Sb	03 58 44.7	+0.8
	baz=251						
LATG	Datong	0.99	304	P	Pn	03 58 32.5	+0.1
	baz=305						
LATG				S	Sn	03 58 46.0	-0.3
	baz=305						
ILA	Ilan	1.00	322	eP	Pn	03 58 32.3	-0.1
	baz=323						
ILA				eS	Sb	03 58 45.1	+0.2
	baz=323						
TWE	Neicheng	1.01	317	P	Pn	03 58 32.7	+0.1
	baz=318						
TWE				i S	Sb	03 58 45.8	+0.5
	baz=318						
ENTT	Nioudou	1.02	310	i P	Pn	03 58 33.5	+0.7
	baz=311						
ENTT				S	Sn	03 58 46.6	-0.4
	baz=311						
NTC	Toucheng	1.03	328	eP	Pn	03 58 33.4	+0.6
	baz=329						
NTC				eS	Sb	03 58 46.5	+0.7
	baz=329						
HGSD	Ruisui	1.03	242	P	Pb	03 58 32.2	-0.2
	baz=242						
HGSD				S	Sn	03 58 46.8	-0.5
	baz=242						
NDT	Datong Townshi	1.04	307	i P	Pn	03 58 34.3	+1.3
	baz=307						
NDT				i S	Sb	03 58 46.4	+0.3
	baz=307						
NNSB	Datong	1.05	296	P	Pn	03 58 33.2	-0.1
	baz=296						
NNSB				S	Sg	03 58 46.8	+0.1
	baz=296						
NNS	Nan Shan	1.06	296	P	Pg	03 58 33.2	0.0
	baz=296						
NNS				i S	Sb	03 58 47.6	+0.7
	baz=296						
WHF	Hehuan Shan	1.07	279	i P	Pb	03 58 33.4	0.0
	baz=279						
WHF				i S	Sg	03 58 47.1	-0.3
	baz=279						
FUSB	Fushanzhiwuyua	1.09	316	P	Pn	03 58 34.3	+0.6
	baz=316						
FUSB				S	Sn	03 58 49.2	+0.4
	baz=316						
TWB1	Santiao Chiao	1.10	339	P	Pn	03 58 34.3	+0.5
	baz=340						
TWB1				i S	Sn	03 58 49.3	+0.4
	baz=340						
FUSS	Fushou	1.11	284	eP	Pn	03 58 34.1	-0.1
	baz=284						
FUSS				S	Sn	03 58 49.4	-0.2
	baz=284						
EHY	Hungye	1.11	245	eP	Pg	03 58 33.9	-0.2
	baz=244						
EHY				S	Sn	03 58 49.3	+0.1
	baz=244						
TIPB	Shuangxi	1.13	331	i P	Pg	03 58 35.2	+0.8
	baz=332						
TIPB				i S	Sg	03 58 49.2	0.0
	baz=332						
OWD	Renai	1.14	269	eP	Pg	03 58 35.4	+0.7
	baz=269						
OWD				eS	Sb	03 58 49.3	+0.1
	baz=269						
CHGB	Renai	1.15	274	P	Pb	03 58 34.4	-0.1
	baz=274						
CHGB				S	Sb	03 58 49.0	-0.4
	baz=274						
NWLT	Wulai	1.16	314	P	Pg	03 58 35.0	0.0
	baz=314						
NWLT				eS	Sg	03 58 50.2	+0.1
	baz=314						
TWT	Tachien	1.17	284	P	Pg	03 58 35.4	+0.1
	baz=283						
TWT				eS	Sb	03 58 50.3	+0.2
	baz=283						
YHNB	Yeheng	1.18	306	P	Pn	03 58 34.9	0.0
	baz=306						
YHNB				S	Sn	03 58 51.1	+0.1
	baz=306						
YULB	Yu-li	1.19	241	P	Pn	03 58 34.9	-0.2
	baz=240						
YULB				S	Sb	03 58 49.6	-0.7
	baz=240						
TDCB	Techi	1.19	284	P	Pn	03 58 34.1	-1.1
	baz=283						
TDCB				S	Sg	03 58 51.1	0.0
	baz=283						
EYUL	Yuli	1.19	238	eP	Pg	03 58 35.4	-0.2
	baz=238						
EYUL				eS	Sn	03 58 51.5	+0.3
	baz=238						
WUSB	Renai	1.19	271	P	Pg	03 58 35.5	-0.2
	baz=271						
WUSB				S	Sb	03 58 50.9	+0.1
	baz=271						
NSK	Sanguang	1.20	306	i P	Pg	03 58 35.4	-0.3
	baz=306						
NSK				i S	Sg	03 58 51.1	-0.1
	baz=306						
VWDT	VWDT	1.20	260	P	Pb	03 58 35.1	-0.1
	baz=259						
VWDT				S	Sb	03 58 50.9	+0.3
	baz=259						
SXI1	Grass Mountain	1.22	336	P	Pb	03 58 35.5	-0.2
	baz=336						
SXI1				S	Sg	03 58 51.9	-0.1
	baz=336						
NWF	Wu-fen Shan	1.24	332	i P	Pg	03 58 36.0	-0.5
	baz=332						
NWF				i S	Sn	03 58 52.7	+0.3
	baz=332						
IRIF	Iriomote-Funau	1.25	73	P	Pg	03 58 37.8	+1.2
IRIF				eS	Sn	03 58 54.3	+1.8
TWA	Mucha	1.26	323	P	Pg	03 58 36.5	-0.4
	baz=323						
TWA				eS	Sb	03 58 52.3	-0.1
	baz=323						
HATJ	Hateruma jima	1.27	86	P	Pg	03 58 37.7	+0.7
HATJ				eS	Sn	03 58 54.4	+1.4
NHDH	Xindian Distri	1.28	320	eP	Pg	03 58 36.9	-0.3
	baz=321						
NHDH				eS	Sb	03 58 51.9	-1.1
	baz=321						
FULB	Fuli	1.29	233	P	Pb	03 58 36.6	-0.3
	baz=232						
FULB				eS	Sb	03 58 53.5	0.0
	baz=232						
CHKT	Chengkung	1.31	228	P	Pg	03 58 38.0	+0.2
	baz=227						
CHKT				eS	Sb	03 58 53.9	+0.1
	baz=227						
SSLB	Suanglung	1.36	262	P	Pn	03 58 37.5	+0.1
	baz=262						
SSLB				S	Sb	03 58 54.9	-0.4
	baz=262						
WHP	Taichung City	1.38	283	eP	Pg	03 58 38.9	-0.4
	baz=283						
WHP				eS	Sn	03 58 56.1	+0.1
	baz=283						
WCS	Beigang Elemen	1.39	274	eP	Pb	03 58 38.2	-0.2
	baz=273						
WCS				eS	Sn	03 58 56.2	+0.2
	baz=273						
SMLT	Sun Moon Lake	1.40	266	eP	Pb	03 58 38.6	-0.1
	baz=266						
SMLT				eS	Sn	03 58 56.4	0.0
	baz=266						
YM01	YM01	1.40	326	eP	Pg	03 58 39.0	-0.5
	baz=327						
YM01				eS	Sb	03 58 56.7	+0.1
	baz=327						
EDH	Donghe	1.43	226	eP	Pn	03 58 38.5	+0.1
	baz=225						
EDH				eS	Sn	03 58 56.2	-0.9
	baz=225						
TWS1	Kuangyinshan	1.45	321	eP	Pb	03 58 39.6	+0.1
	baz=321						
TWS1				eS	Sn	03 58 56.9	-0.5
	baz=321						
LIOB	Emei	1.45	298	eP	Pn	03 58 38.4	-0.2
	baz=298						
LIOB				eS	Sb	03 58 58.6	+0.7
	baz=298						
NSTT	Nanjuang	1.45	297	P	Pb	03 58 39.6	0.0
	baz=297						
NSTT				S	Sn	03 58 56.3	-1.3
	baz=297						
ANP	Anpu	1.46	326	eP	Pn	03 58 38.8	0.0
	baz=326						
ANP				eS	Sn	03 58 57.6	-0.3
	baz=326						
JKRS	Kuro-shima	1.47	80	P	Pg	03 58 41.9	+1.0
JKRS				eS	Sg	03 59 00.5	+0.4
NTST	Danshui	1.48	323	eS	Sb	03 58 59.2	+0.5
	baz=323						
TWY	Chenhua	1.49	330	eS	Sb	03 58 59.2	0.0
	baz=330						
NCU	National Centr	1.50	312	eP	Pb	03 58 40.5	+0.2
	baz=312						
NCU				eS	Sn	03 58 57.5	-1.2
	baz=312						
NCUH	Zhongli	1.50	311	eP	Pb	03 58 39.9	-0.5
	baz=311						
NCUH				eS	Sb	03 58 59.5	+0.1
	baz=311						
ELDTW	Lidau	1.51	239	P	Pn	03 58 39.0	-0.6
	baz=238						
ELDTW				S	Sn	03 58 58.4	-0.8
	baz=238						
ALS	Alishan	1.55	253	P	Pb	03 58 41.0	-0.5
	baz=252						
ALS				S	Sn	03 59 00.8	+0.2
	baz=252						
WJS	Zhushan	1.56	265	eP	Pn	03 58 40.5	+0.4
	baz=264						
WJS				eS	Sb	03 59 01.4	+0.3
	baz=264						
LDUT	Ludao	1.57	214	eS	Sg	03 59 02.0	-1.1
	baz=213						
WNT	Mingjian	1.59	267	eP	Pb	03 58 42.0	0.0
	baz=266						
WNT				eS	Sn	03 59 01.8	+0.7
	baz=266						
LONT	Longtian	1.60	228	eP	Pn	03 58 40.8	+0.1
	baz=227						
LONT				eS	Sb	03 59 02.0	-0.1
	baz=227						
TCU	Taichung	1.61	276	eS	Sn	03 59 01.8	+0.4
	baz=276						
JIJ	Ishigaki jima	1.62	76	P	Pg	03 58 43.1	-0.6
JIJ				eS	Sg	03 59 03.0	-1.7
CHN5	Tsauling	1.64	257	eP	Pb	03 58 42.2	-0.6
	baz=256						
CHN5				eS	Sb	03 59 03.5	0.0
	baz=256						
PCYT	Pengchaiyu	1.68	349	eP	Pb	03 58 43.3	-0.1
	baz=350						
WCHH	Zhanghua	1.71	274	eS	Sn	03 59 03.5	-0.4
	baz=273						
TPUB	Ta-pu	1.78	248	eP	Pb	03 58 45.0	-0.1
	baz=247						
TPUB				eS	Sn	03 59 06.1	+0.4
	baz=247						
WTP	Ta-pu	1.81	247	eP	Pn	03 58 44.4	+0.7
	baz=246						
WTP				eS	Sn	03 59 07.2	+0.6
	baz=246						
JISG	Ishigakijimahi	1.83	70	P	Pb	03 58 45.7	-0.3
JISG				eS	Sb	03 59 08.2	-0.6
CHN2	Minshiung	1.84	256	eP	Pn	03 58 44.6	+0.6
	baz=256						
CHN2				eS	Sn	03 59 07.2	0.0
	baz=256						
SLGT	Liugui	1.90	239	eP	Pb	03 58 47.0	-0.3
	baz=238						
SLGT				eS	Sn	03 59 09.6	+0.8
	baz=238						
CHN1	Nanshi	1.91	246	eP	Pb	03 58 46.8	-0.6
	baz=245						
CHN1				eS	Sn	03 59 09.8	+0.8
	baz=245						
SGST	Jiashian	1.91	243	eP	Pb	03 58 47.2	-0.2
	baz=241						
SGST				eS	Sn	03 59 09.3	+0.4
	baz=241						
TWK	Hsinying	1.91	249	eP	Pb	03 58 47.2	-0.2
	baz=248						
TWK				eS	Sn	03 59 09.8	+0.8
	baz=248						

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*NEIC **31** 04:35:43.7±1.4, 23°.85S±0°.05×68°.96W±0°.08, h96^{km}±9^{km}, mb4.2/5, ML3.6(GUC), Error ellipse: s-maj=11.4km s-min=6.0km az=112.0*

*GUC **31** 04:35:44.3±0.8, 23°.82S×69°.00W, h99^{km}±6^{km}, ML3.8*

*VAO **31** 04:35:45.7±1.3, 23°.73S×68°.80W, h100^{km}, mb4.2*

*IDC **31** 04:35:45.1±1.1, 23°.78S×68°.78W, h94^{km}±7^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.5/32, mbtmp3.9/6, MS2.6/1, Ms1 2.6/1, ms1mx2.3/17, Error ellipse: s-maj=27.7km s-min=13.8km az=76.0*

ISC 31 04:35:43.9±0.6**, 23°.83S**±0°.04×**68°.94W**±0°.06**, h91**^{km}±6^{km}**,**
n75, $\sigma 1^{s}.03$/89**, mb4.0**/8**, 6C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	0.78	321	⇓iP	Pn	04 36 02.1	+0.5
PB15				i S	Sn	04 36 15.5	+0.7
PB15	IPOC Station P	0.78	321		Pn	04 36 01.9	+0.3
PB15				Sn	Sn	04 36 15.5	+0.7
LVC	Limon Verde	1.21	1	P	Pn	04 36 07.1	+0.5
	136nm,0.3s,baz=156,slow=8.9,SNR=1678						
LVC				S	Sn	04 36 24.0	+0.5
	728nm,0.3s,baz=50,slow=19,SNR=44						
LVC				LR	LR	04 36 26.4	
	comp=Z,23nm,19.3s,baz=67,slow=35						
LVC	Limon Verde	1.21	1	eP	Pn	04 36 07.0	+0.4
LVC				i S	Sn	04 36 24.1	+0.6
LVC	Limon Verde	1.21	1	eP	Pn	04 36 07.3	+0.8
PB06	IPOC Station P	1.26	332	⇓iP	Pn	04 36 07.4	+0.5
PB06				i S	Sn	04 36 24.9	+0.8
PB06				IAML		04 36 29.4	
	comp=E,2μm,0.2s						
PB06	IPOC Station P	1.26	332		Pn	04 36 07.3	+0.4
PB06				Sn	Sn	04 36 24.8	+0.6
PB05	IPOC Station P	1.51	310	⇓iP	Pn	04 36 10.4	+0.4
PB05				i S	Sn	04 36 29.6	-0.2
PB10	IPOC Station P	1.51	282		Pn	04 36 10.3	+0.4
PB10				Sn	Sn	04 36 29.2	-0.4
PB14	IPOC Station P	1.56	239	⇑iP	Pn	04 36 11.3	+0.5
PB14				eS	Sn	04 36 31.5	+0.5
PB14	IPOC Station P	1.56	239		Pn	04 36 11.2	+0.4
PB04	IPOC Station P	1.86	323	eP	Pn	04 36 14.8	+0.3
PB04				eS	Sn	04 36 36.7	-0.9
PB04				IAML		04 36 45.6	
	comp=E,851nm,0.4s						
PB04	IPOC Station P	1.86	323		Pn	04 36 14.7	+0.3
PB03	IPOC Station P	1.92	337	⇑iP	Pn	04 36 15.9	+0.5
PB03				i S	Sn	04 36 38.0	-1.1
PB03				IAML		04 36 40.5	
	comp=N,932nm,0.4s						
PB09	IPOC Station P	2.04	352	⇑iP	Pn	04 36 18.3	+1.4
PB09				eS	Sn	04 36 43.5	+1.5
PB09				IAML		04 36 49.1	
	comp=N,925nm,0.5s						
PB09	IPOC Station P	2.04	352		Pn	04 36 18.3	+1.4
PB07	IPOC Station P	2.26	337	⇑iP	Pn	04 36 20.1	+0.2
PB07				eS	Sn	04 36 46.8	-0.5
PB07				IAML		04 37 04.7	
	comp=E,652nm,0.4s						
PB07	IPOC Station P	2.26	337		Pn	04 36 19.8	-0.1
PB01	IPOC Station P	2.81	350	⇑eP	Pn	04 36 27.2	0.0
PB01				eS	Sn	04 36 59.8	-0.5
PB01				IAML		04 37 04.9	
	comp=E,610nm,0.2s						
PB01	IPOC Station P	2.81	350		Pn	04 36 27.1	0.0
AC02	Maricunga	3.00	183	⇑iP	Pn	04 36 31.7	+1.7
AC02	Maricunga	3.00	183		Pn	04 36 31.5	+1.5
TA01	Diego Aracena	3.44	340	Pn	Pn	04 36 35.3	-0.2
PB08	IPOC Station P	3.67	357		Pn	04 36 38.8	-0.2
TA02	Huaiquique	3.71	342		Pn	04 36 39.2	+0.1
GO03	Copiap	3.93	197	Pn	Pn	04 36 41.2	-0.9
PB11	IPOC Station P	4.10	351	Pn	Pn	04 36 43.3	-1.2
AC04	Llanos de Chal	4.76	203	Pn	Pn	04 36 50.9	-2.5
PB12	IPOC Station P	5.34	346	Pn	Pn	04 36 58.5	-2.9
PB16	IPOC Station P	5.49	354		Pn	04 37 03.0	-0.8
GO04	Tololo Observa	6.54	194		Pn	04 37 15.5	-2.2
CO03	El Pedregal	7.16	192		Pn	04 37 23.1	-2.9
CO06	Fray Jorge	7.23	199		Pn	04 37 23.5	-3.5
LPAZ	La Paz	7.54	6	P	Pn	04 37 32.2	+0.5
	comp=E,1.0nm,0.3s,baz=190,slow=7.2,SNR=26						
LPAZ	La Paz	7.54	6	eP	Pn	04 37 31.9	+0.1
LPAZ	La Paz	7.54	6	Pn	Pn	04 37 32.0	+0.2
SIV	San Ignacio	10.74	45	P	Pn	04 38 10.8	-4.1
	comp=E,3.7nm,0.3s,baz=226,slow=12,SNR=79						
PTLB	Pontes e Lacer	12.43	50	eP	Pn	04 38 37.0	-0.6
PTLB	Pontes e Lacer	12.43	50	Pn	Pn	04 38 36.8	-0.8
AQDB	Aquidauana	12.71	77	eP	Pn	04 38 40.9	-0.4
VILB	Vilhena	13.62	39	eP	Pn	04 38 53.0	-0.5
VILB	Vilhena	13.62	39	Pn	Pn	04 38 52.9	-0.5
NNA	Nana	13.96	326	LR	LR	04 43 50.2	
	comp=E,22nm,19.5s,baz=26,slow=35						
ETMB	Extrema	14.17	11	Pn	Pn	04 38 56.0	-4.6
SALV	Santo Antonio	14.74	60	eP	Pn	04 39 07.1	-0.7
PDRB	Porto dos Gac	16.80	46	eP	Pn	04 39 33.7	0.0
ITRB	Iturama	17.74	80	eP	P	04 39 43.6	-1.1
CLDB	Colider	17.96	46	eP	P	04 39 46.0	-1.2
ARAG	Araguaiana, MT	18.02	66	eP	P	04 39 48.0	+0.2
BB19B	Bebedouro	19.07	86	eP	P	04 39 59.5	+0.3
RCLB	Rio Claro- Sao	19.74	90	eP	P	04 40 05.7	-0.9
VAO	Valinhos	20.18	92	eP	P	04 40 10.7	-0.7
IPMB	Ipameri, GO	20.21	77	eP	P	04 40 11.9	+0.2
NPGB	Novo Progresso	21.18	40	eP	P	04 40 20.6	-1.4
BDFB	Brasilia	21.29	71	P	P	04 40 22.3	-1.1
	comp=E,2.7nm,0.6s,baz=254,slow=12,SNR=5.3						
BDFB	Brasilia	21.29	71	P	P	04 40 22.1	-1.4
MACA	Manacapuru-AM	22.04	22	eP	P	04 40 29.7	-1.6
MACA	Manacapuru-AM	22.04	22	P	P	04 40 29.5	-1.7
PEXB	Peixe	22.80	63	eP	P	04 40 37.8	-1.4
PTGA	Pitinga	24.55	22	P	P	04 40 54.9	-0.4
	comp=E,2.3nm,0.4s,baz=329,slow=22,SNR=9.9						
JANB	Januaria	24.78	74	eP	P	04 40 57.1	-0.4
SMTB	Santa Maria do	25.26	57	eP	P	04 41 02.4	+0.5
PRPB	Parauapebas	25.42	49	eP	P	04 41 02.8	-0.5
SDBA	SAO DESIDERIO	25.47	68	eP	P	04 41 03.1	-0.6
MALB	Monte Alegre	26.06	35	eP	P	04 41 07.9	-1.1
BOAV	Boa Vista	27.32	19	P	P	04 41 19.2	-1.1
BOAV				IAmb	IAmb	04 41 25.2	
	comp=Z,15nm,1.5s						
SNAA	Sanae	60.10	161	P	P	04 45 41.6	+0.2
SNAA				IAmb	IAmb	04 45 42.6	
	comp=Z,1.8nm,0.8s						
QSPA	South Pole Qui	66.38	180	P	P	04 46 24.1	+1.1
QSPA				IAmb	IAmb	04 46 26.7	
	comp=Z,2.9nm,1.1s						
NVAR	Mina Array Bea	77.30	322	P	P	04 47 30.5	+1.7
	comp=Z,0.3nm,0.5s,baz=160,slow=3.7,SNR=2.2						
TORD	Torodi Ar. Bea	78.17	70	P	P	04 47 33.8	0.0
	comp=Z,1.2nm,0.6s,baz=264,slow=5.4,SNR=14						
TORD				pP	pP	04 47 58.7	+0.2
	comp=Z,1.0nm,0.6s,baz=253,slow=5.0,SNR=3.8						
YKA	Yellowknife Ar	93.36	341	P	P	04 48 48.6	+0.3
	comp=Z,0.3nm,0.7s,baz=137,slow=4.3,SNR=3.9						
YKA				pP	pP	04 49 13.5	+0.1
	comp=Z,0.2nm,0.6s,baz=139,slow=4.7,SNR=2.6						
ASAR	Alice Springs	127.84	207	PKP	PKPdf	04 54 39.9	+0.2
	comp=Z,0.6nm,0.8s,baz=130,slow=2.7,SNR=5.7						
ASAR				pPKP	pPKPdf	04 55 06.0	+0.1
	comp=Z,0.2nm,0.8s,baz=126,slow=1.5,SNR=1.6						
ASAR	Alice Springs	127.84	207		PKPdf	04 54 39.5	-0.2
WRA	Warramunga Arr	130.94	209	PKP	PKPdf	04 54 46.2	+0.6
	comp=Z,0.7nm,0.9s,baz=156,slow=1.5,SNR=2.6						
MKAR	Makanchi Array	147.50	38	PKPbc	PKPbc	04 55 18.1	+0.7
	comp=Z,1.4nm,1.0s,baz=318,slow=1.6,SNR=5.1						

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*JMA **31** 05:10:41.8±0.3, 37°.37N×135°.24E, h384^{km}±4^{km}, M3.3*

*IDC **31** 05:10:42.5±1.1, 37°.42N×135°.25E, h381^{km}±15^{km}, mb3.0/5, mb1 3.3/9, mb1mx2.8/36, mbtmp3.9/9, Error ellipse: s-maj=23.6km s-min=17.2km az=62.0*

ISC 31 05:10:42.3±0.8, 37°.31N±0°.09×135°.36E±0°.07, h400^{km}, n25, σ1^{s}.62/31, mb3.2/5, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKG	Kaga	1.29	142	P	Pn	05 11 32.8	-1.8
JHG	Hegura jima	1.35	66	P	Pn	05 11 33.4	-1.3
JSZ	Suzu	1.60	84	P	Pn	05 11 35.0	-0.9
JOI	OKI	1.98	240	P	Pn	05 11 35.8	-2.3
JWT	Wachi	2.02	179	P	Pn	05 11 37.0	-1.5
JWT				S	S	05 12 20.0	-3.8
JYTA	Yamagatataniai	2.04	147	P	Pn	05 11 37.2	-1.3
JYTA				eS	S	05 12 20.3	-3.6
MAT	Matsushiro	2.41	108	P	Pn	05 11 40.2	-0.8
MAT				eS	S	05 12 26.9	-1.5
MAT	Matsushiro	2.41	108	P	Pn	05 11 40.2	-0.8
MJAR	Matsushiro Arr	2.41	108	P	Pn	05 11 40.7	-0.3
	2.8nm,0.3s,baz=287,slow=9.6,SNR=230						
JSD	Sado	2.41	72	P	Pn	05 11 39.7	-1.2
JHS	Saijyo	2.93	219	P	Pn	05 11 43.5	-1.6
JWY	Kouya	3.09	176	P	Pn	05 11 45.6	-0.8
JIE	Ise	3.11	159	P	Pn	05 11 46.3	-0.2
JRY	Ryogami san	3.12	113	P	Pn	05 11 46.4	-0.2
JOD2	Odawara 2	3.64	123	P	Pn	05 11 50.7	-0.4
JOD2				eS	S	05 12 45.6	-1.1
JMK	Ichinoseki	4.90	69	P	Pn	05 12 02.7	-0.5
JMK				eS	S	05 13 06.8	-2.2
BSO1	Boso 1	5.27	118	P	Pn	05 12 06.3	-0.2
BSO1				eS	S	05 13 13.9	-1.2
KSRS	Korea Array	5.92	274	P	Pn	05 12 12.8	-1.3
	0.6nm,0.3s,baz=91,slow=12,SNR=12						
USRK	Ussuriysk Ar.	7.35	341	P	Pn	05 12 28.6	-1.1
	baz=151,slow=11,SNR=17						
ASAJ	Asahikawa	8.74	37	P	Pn	05 12 44.5	-1.1
	8.6nm,0.3s,baz=236,slow=12,SNR=71						
SONM	Songino Array	23.66	306	P	P	05 15 19.6	-0.2
	0.7nm,0.7s,baz=110,slow=9.0,SNR=4.3						
CMAR	Chiang Mai Arr	36.97	250	P	P	05 17 16.8	+1.3
	0.9nm,0.5s,baz=40,slow=7.7,SNR=5.6						
MKAR	Makanchi Array	39.86	301	P	P	05 17 39.1	+0.1
	0.4nm,0.5s,baz=89,slow=11,SNR=6.9						
WRA	Warramunga Arr	56.95	181	P	P	05 19 50.3	+2.6
	0.5nm,0.5s,baz=356,slow=7.6,SNR=7.4						
FINES	FINESS Array B	66.25	330	P	P	05 20 50.0	+1.5
	2.0nm,0.8s,baz=49,slow=8.6,SNR=4.9						

KRSC 31 05:12:22.2±0.8, 51°.94N×158°.88E, h40^{km}±11^{km}, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.51	255	eP	Pn	05 12 33.9	+0.8
KDTR				eS	Sn	05 12 41.0	+0.2
RUS	Russkaya	0.54	336	eP	Pn	05 12 34.7	+1.2
RUS				eS	Sn	05 12 42.4	+0.9
ASAK	Asacha	0.75	307	eP	Pn	05 12 37.5	+1.1
ASAK				eS	Sn	05 12 47.4	+0.8
GRL	Gorelyy	0.79	321	eP	Pn	05 12 38.3	+1.3
GRL				eS	Sn	05 12 49.0	+1.4
KRMR	Karymshinskiy	1.00	333	eP	Pn	05 12 41.0	+1.2
KRMR				eS	Sn	05 12 53.9	+1.3
PET	Petropavlovsk	1.09	353	eP	Pn	05 12 42.3	+1.3
PET				eS	Sn	05 12 56.1	+1.2
DALK	Dalny	1.09	356	eP	Pn	05 12 42.3	+1.3
DALK				eS	Sn	05 12 56.1	+1.2
NLC	Nalytchevo	1.26	13	eP	Pn	05 12 43.7	+0.3
NLC				eS	Sn	05 12 58.6	-0.5
UGLR	Uglovaya	1.27	359	eP	Pn	05 12 45.0	+1.4
SMAR	Somma	1.32	358	eP	Pn	05 12 45.6	+1.2
AVH	Avacha	1.33	356	eP	Pn	05 12 46.1	+1.8
AVH				eS	Sn	05 13 03.3	+2.5
SPN	Mys Shipunski	1.35	31	eP	Pn	05 12 46.7	+2.1
SPN				eS	Sn	05 13 04.0	+2.7
KOK	Koryaka	1.36	354	eP	Pn	05 12 46.7	+1.9
KOK				eS	Sn	05 13 04.4	+2.7
PAU	Pauzhetka	1.37	250	eP	Pn	05 12 45.9	+1.1
PAU				eS	Sn	05 13 02.3	+0.6
APC	Apacha	1.44	314	eP	Pn	05 12 48.0	+2.2
APC				eS	Sn	05 13 06.9	+3.4
GNL	Ganaly	1.84	342	eP	Pn	05 12 53.4	+1.9
GNL				eS	Sn	05 13 15.8	+2.2
KII	Karymskiy	2.13	9	eP	Pn	05 12 57.9	+2.6
KII				eS	Sn	05 13 23.5	+3.0
TUMD	Tumrok D	3.39	15	P	Pn	05 13 16.7	+4.1
TUMR	Tumrok	3.43	12	eP	Pn	05 13 17.6	+4.3
KBTR	Krutoberegovo	4.86	27	eP	Pn	05 13 36.5	+3.7

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*IDC **31** 05:30:09.9±2.4, 30°.83N×57°.09E, h0^{km}, mb3.5/7, mb1 3.6/9, mb1mx3.4/46, mbtmp3.5/9, ML3.4/2, MS3.3/5, Ms1 3.3/5, ms1mx2.9/47, Error ellipse: s-maj=53.5km s-min=22.9km az=154.0*

*TEH **31** 05:30:11.2, 31°.06N×57°.07E, h7^{km}, ML4.2*

*THR **31** 05:30:12.1±0.7, 31°.09N×57°.08E, h14^{km}±6^{km}, ML3.8*

ISC 31 05:30:12.9±0.7, 31°.02N±0°.04×57°.06E±0°.04, h10^{km}, n78, σ0^{s}.94/77, mb3.5/6, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHGB	Koh Gabri	0.81	218	ePg	Pg	05 30 28.0	-0.6
KHGB				eSg	Sg	05 30 39.2	-0.1
TVBK	TV Kerman	1.06	194	ePg	Pg	05 30 33.4	+0.1
TVBK				e		05 30 35.0	
	comp=Z,44µm,0.5s						
KRBR	Kerman	1.06	194	ePg	Pg	05 30 33.4	0.0
KRBR				IAML		05 30 51.6	
	comp=N,1µm,0.2s						
KRBR				IAML		05 30 53.6	
	comp=E,2µm,0.5s						
KRBR	Kerman	1.06	194	ePg	Pg	05 30 33.4	0.0
CHMN	Cheshme madani	1.22	160	ePg	Pn	05 30 35.8	-0.6
NGRK	Negar Kerman	1.40	192	ePg	Pb	05 30 39.7	+0.4
NGRK				e		05 30 41.0	
	comp=Z,35µm,0.2s						
BSRN	Basiran	2.00	61	ePn	Pn	05 30 46.4	-0.5
BSRN				IAML		05 31 20.0	
	comp=E,596nm,0.5s						
BSRN				IAML		05 31 24.0	
	comp=N,568nm,0.7s						
BSRN	Basiran	2.00	61	ePn	Pn	05 30 46.4	-0.5
TPRV	Parvadeh(Tabas	2.03	351	ePn	Pn	05 30 46.9	-0.4
IMEH	Mehriz	2.13	281	ePn	Pn	05 30 49.2	+0.4
IMEH				e		05 31 19.7	
	comp=Z,15µm,0.4s						
IKOO	Kooshah	2.17	49	ePn	Pn	05 30 49.8	+0.5
IKOO				e		05 31 23.6	
	comp=Z,17µm,0.4s						
KBAM	BAM	2.23	147	ePn	Pn	05 30 50.8	+0.8
KBAM				e		05 31 32.3	
	comp=Z,26µm,0.7s						
ITEG	Tejag	2.36	37	e	Sg	05 31 31.8	+3.0
	comp=Z,12µm,0.5s						
YZKH	Yazd	2.51	304	ePn	Pn	05 30 54.3	+0.5
YZKH				eSg	Sb	05 31 29.8	+0.7
YZKH				IAML		05 31 33.7	
	comp=N,602nm,0.7s						
YZKH				IAML		05 31 35.0	
	comp=E,590nm,0.6s						
YZKH	Yazd	2.51	304	ePn	Pn	05 30 54.3	+0.5
ICHK	Chekchek	2.57	299	ePn	Pn	05 30 55.6	+0.8
NHDN	Nehbandan	2.59	81	ePn	Pn	05 30 55.9	+0.9
TKDS	Koohdasht(Taba	2.59	1	ePn	Pn	05 30 54.8	-0.2
TKDS				e		05 31 42.2	
	comp=Z,15µm,0.5s						
TABS	Tabas	2.62	1	ePn	Pn	05 30 55.2	-0.2
TABS				IAML		05 31 45.3	
	comp=E,210nm,0.5s						
TABS				IAML		05 31 50.4	
	comp=N,546nm,0.7s						
TABS	Tabas	2.62	1	ePn	Pn	05 30 55.2	-0.2
AFRZ	Afriz	2.92	34	ePn	Pn	05 30 59.0	-0.5
AFRZ				e		05 31 50.6	
	comp=Z,9µm,0.7s						
IDAH	Dahanechah	2.94	54	ePn	Pn	05 31 00.7	+0.8
IDAH				e		05 32 00.0	
	comp=Z,6µm,0.5s						
TNSJ	Nastanj	2.96	353	ePn	Pn	05 30 59.6	-0.5
ISAD	Sadrabad	3.02	288	ePn	Pn	05 31 01.9	+0.9
ISAD				e		05 31 49.5	
	comp=Z,6µm,0.8s						
IMON	Monand	3.10	45	ePn	Pn	05 31 02.9	+0.8
IMON				e		05 31 58.7	
	comp=Z,5µm,0.6s						
ZHSF	Zahedan	3.50	113	ePn	Pn	05 31 08.4	+0.8
ZHSF	Zahedan	3.50	113	ePn	Pn	05 31 08.4	+0.8
ANAR	Anarak	3.56	308	ePn	Pn	05 31 09.1	+0.7
IBND	Bandar-abas	3.58	187	ePn	Pn	05 31 10.9	+2.4
IBND				e		05 32 19.5	
	comp=Z,6µm,0.8s						
ZHDN	Zahedan	3.62	115	ePn	Pn	05 31 10.3	+1.1
GENO	Geno	3.69	192	ePn	Pn	05 31 11.2	+1.1
GENO				e		05 31 26.1	
	comp=Z,3µm,0.8s						
SHRT	Shahrakht	3.79	45	ePn	Pn	05 31 11.3	-0.1
SHRT				IAML		05 32 22.3	
	comp=E,93nm,0.7s						
SHRT				IAML		05 32 32.3	
	comp=N,97nm,0.7s						
SHRT	Shahrakht	3.79	45	ePn	Pn	05 31 11.3	-0.1
NASN	Na'in	4.03	297	ePn	Pn	05 31 15.7	+0.7
NASN				IAML		05 32 24.0	
	comp=N,55nm,0.6s						
NASN				IAML		05 32 28.7	
	comp=E,83nm,0.5s						
NASN	Na'in	4.03	297	ePn	Pn	05 31 15.7	+0.7
IRAM	Ramesheh	4.08	282	ePn	Pn	05 31 16.2	+0.7
IZEF	Zefreh	4.44	296	ePn	Pn	05 31 21.4	+0.9
GHIR	Ghir-Karzin	4.47	234	ePn	Pn	05 31 22.9	+2.1
GHIR				IAML		05 32 48.2	
	comp=N,49nm,0.6s						
GHIR				IAML		05 32 48.5	
	comp=E,31nm,0.6s						
GHIR	Ghir-Karzin	4.47	234	ePn	Pn	05 31 22.9	+2.1
KLNJ	Kolanjah	4.70	271	ePn	Pn	05 31 25.5	+1.4
SHRO	Shahrood	5.04	350	ePn	Pn	05 31 28.6	0.0
SHRO				IAML		05 32 55.2	
	comp=N,66nm,0.5s						
SHRO				IAML		05 33 02.0	
	comp=E,115nm,0.6s						
SHRO	Shahrood	5.04	350	ePn	Pn	05 31 28.6	0.0
KRSH	Karshahi	5.10	307	ePn	Pn	05 31 30.0	+0.5
IANJ	Anjilo	5.16	330	ePn	Pn	05 31 29.8	-0.6
IKLH	Kolahrood	5.18	298	ePn	Pn	05 31 32.9	+2.1
ISFB	Sefidab	5.25	311	ePn	Pn	05 31 31.8	+0.3
SBZV	Sabzevar	5.38	5	ePn	Pn	05 31 33.4	0.0
JRKH	Jarkhoshk	5.60	29	ePn	Pn	05 31 38.4	+2.1
ISHM	Shahmirzad	5.72	328	ePn	Pn	05 31 38.9	+0.7
IMYA	Miami	5.88	25	ePn	Pn	05 31 40.8	+0.5
SRVN	Saravan	5.89	126	ePn	Pn	05 31 42.2	+1.8
IVRN	Varamin	5.98	313	ePn	Pn	05 31 41.9	+0.3
IGLO	Ghaloghah	6.10	335	ePn	Pn	05 31 44.2	+0.9
IKRD	Kardeh	6.10	19	ePn	Pn	05 31 44.7	+1.4
DAMV	Damavand	6.27	319	ePn	Pn	05 31 46.0	+0.3
DAMV	Damavand	6.27	319	ePn	Pn	05 31 46.0	+0.3
KHMZ	Khomeyn	6.59	296	ePn	Pn	05 31 50.3	+0.2
KHMZ	Khomeyn	6.59	296	ePn	Pn	05 31 50.3	+0.2
BJRD	Bojnurd	6.67	2	ePn	Pn	05 31 51.7	+0.6
BJRD	Bojnurd	6.67	2	ePn	Pn	05 31 51.7	+0.6
MRVT	Maraveh tapeh	6.67	353	ePn	Pn	05 31 51.7	+0.7
MRVT	Maraveh tapeh	6.67	353	ePn	Pn	05 31 51.7	+0.7
ASAO	Ashtian	6.89	303	ePn	Pn	05 31 54.9	+0.7
ASAO	Ashtian	6.89	303	ePn	Pn	05 31 54.9	+0.7
GEYT	Alibeck	6.95	7	Pn	Pn	05 31 55.6	+0.7
	comp=E,0.8nm,0.3s,baz=166,slow=12,SNR=7.3						
GEYT				LR	LR	05 35 22.3	
	comp=E,112nm,21.2s,baz=75,slow=44						
CHTH	Charan	6.96	316	ePn	Pn	05 31 55.4	+0.3
CHTH	Charan	6.96	316	ePn	Pn	05 31 55.4	+0.3
AAK	Ala-Archa	18.11	45	LR	LR	05 42 34.4	
	comp=E,73nm,19.6s,baz=306,slow=41						
AKTO	Aktyubinsk	19.41	2	P	Pn	05 34 39.0	-1.3
	comp=E,0.1nm,0.3s,baz=182,slow=17,SNR=4.3						
AKTO				LR	LR	05 43 56.2	
	comp=E,76nm,21.5s,baz=308,slow=42						
BRTR	Keskin Array B	20.94	301	P	P	05 34 55.8	-0.2
	comp=E,0.9nm,0.7s,baz=128,slow=10.0,SNR=4.1						
BVAR	Borovoye Array	24.04	20	P	P	05 35 28.2	+0.2
	comp=E,0.9nm,0.8s,baz=198,slow=14,SNR=3.6						
MKAR	Makanchi Array	25.02	44	P	P	05 35 36.1	-0.9
	comp=E,0.5nm,0.8s,baz=243,slow=6.3,SNR=2.7						
KURBB	Kurchatov Arra	25.29	33	P	P	05 35 40.0	+0.7
	comp=E,0.3nm,0.6s,baz=237,slow=9.0,SNR=3.4						
ARU	Arti	25.43	2	LR	LR	05 46 16.5	
	comp=E,148nm,18.2s,baz=296,slow=38						
ZALV	Zalesovo Beam	30.38	33	P	P	05 36 24.6	-0.3
	comp=E,0.6nm,0.5s,baz=248,slow=8.9,SNR=3.6						
GERES	GERESS Array B	37.13	311	P	P	05 37 23.4	-0.3
	comp=E,0.6nm,0.7s,baz=98,slow=9.6,SNR=5.2						
TORD	Torodi Ar. Bea	53.76	264	P	P	05 39 34.2	-1.5
	comp=E,1.0nm,0.7s,baz=54,slow=7.6,SNR=4.4						
KLR	Kul'dur	57.60	48	LR	LR	06 05 16.1	
	comp=E,61nm,18.1s,baz=328,slow=36						

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*IDC **31** 05:39:53.5±1.5, 21°.58N×121°.60E, h0^{km}, mb3.4/6, mb1 3.6/6, mb1mx3.4/37, mbtmp3.4/6, Error ellipse: s-maj=59.2km s-min=21.9km az=60.0*

*JMA **31** 05:39:53.9±0.3, 21°.96N×121°.59E, h5^{km}, M3.8*

*TAP **31** 05:39:54.3, 21°.82N×121°.49E, h15^{km}, ML3.2, D*

ISC 31 05:39:55.3±1.0, 21°.87N±0°.04×121°.52E±0°.03, h18^{km}±3^{km}, n84, σ1^{s}.23/97, mb3.5/6, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYUB	Lan-yu	0.14	25	i P	Pg	05 39 59.5	+0.1
	baz=25						
LYUB				S	Sg	05 40 03.0	+0.7
	baz=25						
LAY	Lan-yu	0.17	10	P	Pg	05 40 00.0	+0.2
	baz=21						
LAY				S	Sg	05 40 03.8	+0.9
	baz=21						
TSEB	Hengchuen, Pin	0.58	273	P	Pb	05 40 06.8	+0.1
	baz=266						
TSEB				eS	Sb	05 40 15.5	+1.0
	baz=266						
TWKBT	Hengchun	0.66	276	P	Pb	05 40 07.4	-0.7
	baz=281						
TWKBT				eS	Sb	05 40 17.1	+0.1
	baz=281						
TWK1	Hengchun	0.67	276	P	Pg	05 40 07.3	-1.2
	baz=281						
TWK1				eS	Sg	05 40 16.0	-1.4
	baz=281						
SNW	Nanwan	0.72	277	eP	Pb	05 40 09.0	-0.2
	baz=282						
HEN	Hengchun	0.74	280	eP	Pb	05 40 08.7	-0.8
	baz=285						
HEN				eS	Sg	05 40 18.1	-1.5
	baz=285						
SLIU	Shizi	0.75	297	eP	Pb	05 40 09.2	-0.6
	baz=302						
TAW	Tawu	0.75	310	eP	Pb	05 40 10.2	+0.4
	baz=315						
LDUT	Ludao	0.80	357	eP	Pn	05 40 11.1	-0.4
	baz=358						
EAST	Anshuo	0.80	309	eP	Pg	05 40 10.0	-1.0
	baz=314						
ECL	Taimali	0.89	324	eP	Pg	05 40 10.9	-1.8
	baz=328						
SCZT	Fangliau	0.97	301	eP	Pb	05 40 13.6	+0.1
	baz=316						
SCZT				eS	Sg	05 40 26.5	-0.5
	baz=316						
TWGBT	Beinan	1.02	337	eP	Pg	05 40 12.6	-2.6
	baz=325						
SSPT	Xinbi	1.07	305	eP	Pn	05 40 15.7	+0.4
	baz=321						
LONT	Longtian	1.09	341	eP	Pn	05 40 16.9	+1.3
	baz=330						
MASBT	Mashibuluo	1.10	312	eP	Pg	05 40 14.5	-2.2
	baz=324						
EDH	Donghe	1.11	350	eP	Pg	05 40 13.6	-3.2
	baz=351						
TSMG	Majia	1.16	316	eP	Pn	05 40 17.2	+0.6
	baz=327						
WLCH	Liuqiu	1.16	294	eP	Pn	05 40 16.8	+0.2
	baz=297						
TWP	Hsiaoliuchiu	1.17	294	eP	Pg	05 40 16.3	-1.6
	baz=297						
SSD	Sandimen	1.20	317	eP	Pg	05 40 17.4	-1.1
	baz=329						
SSD				eS	Sg	05 40 33.9	-0.2
	baz=329						
CHKT	Chengkung	1.23	353	eP	Pn	05 40 17.1	-0.5
	baz=3.0						
SGLT	Jiouru	1.27	312	eP	Pn	05 40 17.7	-0.5
	baz=325						
FULB	Fuli	1.34	351	eP	Pg	05 40 20.2	-0.9
	baz=1.0						
SLGT	Liugui	1.38	324	eP	Pb	05 40 20.2	-0.3
	baz=334						
TWM1	Shoushan	1.39	313	eP	Pg	05 40 21.0	-1.1
	baz=325						
ELDTW	Lidau	1.39	341	eP	Pg	05 40 21.0	-1.1
	baz=342						
STYH	Taoyuan	1.46	332	eP	Pb	05 40 21.6	-0.3
	baz=344						
STYT	Tauyuan	1.47	331	eP	Pb	05 40 22.0	0.0
	baz=343						
STYT				eS	Sg	05 40 42.3	-0.3
	baz=343						
EYUL	Yuli	1.48	353	eP	Pb	05 40 21.9	-0.3
	baz=4.0						
SGST	Jiashian	1.48	324	eP	Pn	05 40 21.2	+0.1
	baz=326						
TWF1	Yuli	1.49	352	eP	Pb	05 40 21.7	-0.7
	baz=3.0						
YULB	Yu-li	1.53	352	eP	Pn	05 40 21.3	-0.3
	baz=2.0						
CHN1	Nanshi	1.59	325	eP	Pb	05 40 24.3	+0.1
	baz=327						
CHN1				eS	Sb	05 40 45.1	+1.1
	baz=327						
WTP	Ta-pu	1.60	329	eP	Pb	05 40 24.1	-0.2
	baz=330						
HGSD	Ruisui	1.61	357	eP	Pb	05 40 24.2	-0.3
	baz=6.0						
EHY	Hungye	1.64	354	eP	Pb	05 40 24.3	-0.6
	baz=2.0						
SNST	Tainan City	1.64	325	eP	Pn	05 40 23.4	+0.2
	baz=326						
TPUB	Ta-pu	1.64	330	eP	Pb	05 40 24.6	-0.4
	baz=332						
TPUB				eS	Sb	05 40 46.8	+1.5
	baz=332						
TWK	Hsinying	1.68	326	eP	Pn	05 40 24.8	+1.0
	baz=327						
YUS	Yu-Shan	1.69	342	eP	Pg	05 40 26.9	-1.1
	baz=343						
CHN4	Tsaushan	1.70	330	eP	Pb	05 40 25.2	-0.9
	baz=332						
CHN4				eS	Sb	05 40 48.3	+1.2
	baz=332						
ALS	Alishan	1.76	338	eP	Pn	05 40 26.1	+1.0
	baz=340						
ALS				eS	Sb	05 40 50.1	+1.1
	baz=340						
ICHU	Yijhu	1.87	323	eP	Pn	05 40 26.8	+0.4
	baz=324						
CHN5	Tsauling	1.88	336	eP	Pb	05 40 28.2	-0.9
	baz=337						
CHN5				eS	Sb	05 40 52.9	+0.5
	baz=337						
VWDT	VWDT	1.90	350	eP	Pn	05 40 27.9	+1.1
	baz=350						
ESL	Shilin	1.93	358	eP	Pn	05 40 27.5	+0.2
	baz=5.0						
SSLB	Suanglung	1.98	345	eP	Pn	05 40 28.9	+1.0
	baz=355						
SMLT	Sun Moon Lake	2.08	344	eP	Pn	05 40 30.8	+1.5
	baz=345						
TYC	Yuchr	2.11	343	eP	Pb	05 40 32.0	-1.0
	baz=344						
CHGB	Renai	2.20	352	eP	Pb	05 40 33.5	-1.1
	baz=3.0						
WCS	Beigang Elemen	2.25	346	eP	Pb	05 40 34.0	-1.2
	baz=331						
WHF	Hehuan Shan	2.27	354	eP	Pb	05 40 35.0	-1.0
	baz=355						
NACB	Ninganchiao	2.29	2	eP	Pb	05 40 34.4	-1.7
	baz=11						
ETLH	Xiulin Townshi	2.32	359	eP	Pn	05 40 33.2	+0.5
	baz=349						
FUSS	Fushou	2.38	354	eP	Pn	05 40 35.1	+1.6
	baz=4.0						
TDCB	Techi	2.39	352	eP	Pb	05 40 36.3	-1.6
	baz=3.0						
PHUB	P'eng-hu	2.43	313	eP	Pn	05 40 34.7	+0.7
	baz=313						
WHP	Taichung City	2.45	348	eP	Pb	05 40 36.7	-2.1
	baz=358						
PNG	Penghu	2.48	313	eP	Pn	05 40 34.5	-0.1
	baz=314						
HATJ	Hateruma jima	3.03	44	P	Pn	05 40 42.2	0.0
HATJ				eS	Sn	05 41 17.2	-0.8
TIPB	Shuangxi	3.10	5	eP	Pb	05 40 46.5	-3.3
	baz=353						
IRIF	Iriomote-Funau	3.19	39	P	Pn	05 40 44.6	+0.2
IRIF				eS	Sn	05 41 21.7	-0.2
JKRS	Kuro-shima	3.29	44	P	Pn	05 40 46.5	+0.7
JIJ	Ishigaki jima	3.46	44	P	Pn	05 40 47.9	-0.3
JIJ				eS	Sn	05 41 26.5	-2.2
JISG	Ishigakijimahi	3.73	43	P	Pn	05 40 52.1	+0.2
JISG				S	Sn	05 41 34.0	-1.3
KNMB	Chin-men Tao	3.87	312	eP	Pn	05 40 53.0	-0.8
	baz=312						
JTJ	Tarama	4.02	46	P	Pn	05 40 56.4	+0.5
JTJ				eS	Sn	05 41 42.1	-0.4
AXDP	Jialang	4.44	313	eP	Pn	05 41 00.8	-0.8
	baz=313						
JMJ	Miyako jima 2	4.54	49	eP	Pn	05 41 02.2	-0.8
	baz=48						
VDOS	Pratas Island	4.62	256	eP	Pn	05 41 03.4	-0.7
	baz=257						
CMAR	Chiang Mai Arr	21.46	265	P	P	05 44 44.1	+1.3
	0.6nm,0.8s,baz=58,slow=7.1,SNR=4.3						
MKAR	Makanchi Array	40.23	318	P	P	05 47 34.6	+3.8
	0.3nm,0.6s,baz=139,slow=12,SNR=2.3						
ZALV	Zalesovo Beam	42.35	328	P	P	05 47 51.2	+3.1
	0.8nm,0.5s,baz=104,slow=6.1,SNR=3.3						
H11N1	WAKE ISLAND Hy	42.36	84	T	T	06 32 59.5	
	baz=282,slow=75,SNR=8.5						
H11N2	WAKE ISLAND Hy	42.36	84	T	T	06 32 59.8	
	baz=282,slow=75,SNR=9.7						
H11N3	WAKE ISLAND Hy	42.37	84	T	T	06 32 60.0	
	baz=282,slow=75,SNR=9.0						
H11S3	WAKE ISLAND Hy	42.42	86	T	T	06 33 02.5	
	baz=283,slow=75,SNR=36						
H11S1	WAKE ISLAND Hy	42.42	86	T	T	06 33 00.5	
	baz=283,slow=75,SNR=41						
H11S2	WAKE ISLAND Hy	42.43	86	T	T	06 33 05.8	
	baz=283,slow=75,SNR=40						
WRA	Warramunga Arr	43.41	162	P	P	05 47 55.2	-1.8
	0.5nm,0.6s,baz=342,slow=8.9,SNR=6.3						
KURBB	Kurchatov Arra	44.08	321	P	P	05 48 05.0	+2.9
	0.6nm,0.7s,baz=114,slow=8.0,SNR=2.0						
ASAR	Alice Springs	46.84	164	P	P	05 48 23.4	-0.9
	0.5nm,1.0s,baz=349,slow=9.4,SNR=2.6						

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*IDC **31** 06:26:36.8±1.5, 30°.07S×72°.12W, h0^{km}, mb3.8/1, mb1 3.7/3, mb1mx3.5/33, mbtmp3.6/3, ML3.8/2, Error ellipse: s-maj=55.9km s-min=31.3km az=121.0*

*GUC **31** 06:26:38.5±0.6, 29°.98S×71°.95W, h33^{km}±5^{km}, ML3.5*

ISC 31 06:26:40.6±1.1, 29°.98S±0°.04×72°.1W±0°.1, h25^{km}, n21, σ1^{s}.59/26, 2C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.79	153	i S	Sb	06 27 04.1	-1.7
CO06				IAML		06 27 06.9	
	comp=E,2µm,0.5s						
CO03	El Pedregal	1.46	126	⇓iP	Pn	06 27 03.9	-1.5
CO03				i S	Sn	06 27 22.8	-1.0
CO03				IAML		06 27 33.0	
	comp=E,1µm,0.4s						
LCO	Las Campanas	1.52	51	⇑iP	Pn	06 27 05.3	-1.2
LCO				i S	Sn	06 27 25.3	-0.3
AC04	Llanos de Chal	1.96	26	eP	Pn	06 27 10.1	-2.2
AC04				eS	Sn	06 27 33.6	-2.5
AC04				IAML		06 27 52.5	
	comp=N,179nm,0.5s						
VA06	Catapilco	2.66	166	eP	Pn	06 27 20.5	-1.3
VA03	San Esteban	3.06	156	eP	Pn	06 27 27.6	+0.1
VA03				i S	Sn	06 28 01.1	-2.3
ROCH	El Roble	3.12	164	⇑iP	Pn	06 27 27.3	-1.1
ROCH				eS	Sn	06 28 05.7	+0.8
ROCH				IAML		06 28 23.5	
	comp=N,548nm,0.6s						
MT02	Curacav	3.37	167	eP	Pn	06 27 30.3	-1.2
PEL	Peldehue	3.37	160	eP	Pn	06 27 30.9	-0.8
PEL				eS	Sn	06 28 10.5	-0.4

PEL				IAML		06 28 35.4	
	comp=N,167nm,0.6s						
MT05	Renca	3.59	162	eP	Pn	06 27 34.2	-0.4
FCH	Farellones	3.67	156	eP	Pn	06 27 36.5	+0.6
FCH				iS	Sn	06 28 20.7	+2.2
LMEL	Las Melosas	4.17	158	eP	Pn	06 27 43.1	+0.3
BO04	La Punta	4.19	163	eP	Pn	06 27 42.3	-0.6
GO05	Huala	5.02	179	eP	Pn	06 27 51.5	-2.8
H03N1	Juan Fernandez	6.79	238	Pn	Pn	06 28 15.9	-2.5
	baz=3.6,slow=74,SNR=5.7						
H03N1				T	T	06 35 31.8	
	baz=70,slow=72,SNR=69						
H03N2	Juan Fernandez	6.80	238	Pn	Pn	06 28 16.2	-2.3
	baz=258,slow=74,SNR=5.4						
H03N2				T	T	06 35 32.2	
	baz=70,slow=72,SNR=55						
H03N3	Juan Fernandez	6.80	238	Pn	Pn	06 28 15.8	-2.7
H03N3				T	T	06 35 33.4	
	baz=70,slow=72,SNR=89						
PLCA	Paso Flores	10.80	174	Pn	Pn	06 29 12.6	-1.1
	comp=N,0.2nm,0.3s,baz=338,slow=12,SNR=8.2						
LPAZ	La Paz	14.09	16	Pn	Pn	06 30 01.1	+1.9
	comp=N,0.1nm,0.3s,baz=205,slow=14,SNR=7.6						
TORD	Torodi Ar. Bea	82.87	70	P	P	06 39 03.4	+0.1
	comp=N,0.6nm,0.7s,baz=273,slow=5.3,SNR=3.5						
ZALV	Zalesovo Beam	150.77	28	PKPbc	PKPbc	06 46 30.8	+0.6
	comp=N,2.0nm,0.5s,baz=302,slow=3.1,SNR=11						
ZALV				pPKPbc	pPKPbc	06 46 40.5	+3.1
	comp=N,2.2nm,0.7s,baz=295,slow=3.8,SNR=6.7						

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*IDC **31** 06:31:00.3±3.2, 15°.04N×93°.84W, h0^{km}, mb3.8/7, mb1 4.0/8, mb1mx3.7/42, mbtmp3.8/8, ML3.5/1, MS2.9/3, Ms1 2.9/3, ms1mx2.8/32, Error ellipse: s-maj=78.5km s-min=40.7km az=38.0*

*MEX **31** 06:31:01.8±1.1, 14°.68N×94°.37W, h16^{km}±15^{km}, MD4.2*

ISC 31 06:30:58.6±3.9**, 14°.74N**±0°.09×**94°.29W**±0°.05**, h3**^{km}±24^{km}**, n17,** σ**2^{s}.00**/22**, mb4.0**/7**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.41	47	iP	Pn	06 31 24.9	-0.3
PCIG				iS	Sn	06 31 42.1	-2.3
PATR	El Naranjo	2.02	79	eP	Pn	06 31 32.8	-1.1
HUIG	Huatulco	2.03	300	eP	Pn	06 31 32.3	-1.5
HUIG				iS	Sn	06 31 54.1	-5.6
PAVE	Pavencul	2.09	77	eP	Pn	06 31 34.3	-0.6
PAVE				eS	Sn	06 32 00.2	-1.4
CHUJ	Union Juarez	2.14	80	eP	Pn	06 31 34.8	-0.7
CHUJ				eS	Sn	06 32 00.2	-2.5
TGIG		2.32	29	eP	Pb	06 31 40.2	-0.9
TGIG				eS	Sb	06 32 09.4	-0.8
CMIG	Matias Romero	2.40	346	Pn	Pn	06 31 39.2	+0.2
	12nm,0.3s,baz=171,slow=13,SNR=122						
CMIG				Sn	Sn	06 32 07.8	-1.1
	34nm,0.3s,baz=37,slow=18,SNR=18						
CMIG				LR	LR	06 32 18.7	
	comp=Z,75nm,20.1s,baz=272,slow=34						
CMIG	Matias Romero	2.40	346	iP	Pn	06 31 39.2	+0.2
CMIG				iS	Sn	06 32 07.4	-1.6
TKL	Tuckaleechee C	22.87	22	LR	LR	06 45 01.3	
	comp=Z,37nm,20.3s,baz=136,slow=38						
ANMO	Albuquerque	22.91	334	P	P	06 36 06.1	+2.1
	0.6nm,0.5s,baz=174,slow=12,SNR=5.8						
PFO	Pinyon Flats O	27.50	317	LR	LR	06 48 01.3	
	comp=Z,96nm,19.6s,baz=85,slow=37						
NVAR	Mina Array Bea	31.72	323	P	P	06 37 27.3	+3.2
	0.8nm,0.8s,baz=148,slow=9.7,SNR=5.3						
YKA	Yellowknife Ar	49.82	348	P	P	06 39 53.1	+0.4
	0.7nm,0.6s,baz=156,slow=7.2,SNR=15						
FRB	Frobisher Bay	52.12	14	P	P	06 40 09.1	-0.8
	2.6nm,0.7s,baz=224,slow=10.0,SNR=8.0						
INK	Inuvik	59.11	344	P	P	06 41 00.9	+0.8
	1.1nm,0.9s,baz=122,slow=6.1,SNR=3.7						
RES	Resolute Bay	59.94	360	P	P	06 41 05.9	+0.1
	1.1nm,0.7s,baz=188,slow=9.6,SNR=4.5						
ILAR	Eielson Array	61.29	337	P	P	06 41 16.1	+0.9
	1.3nm,1.0s,baz=157,slow=4.9,SNR=6.6						

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*CNRM **31** 06:52:05.1, 35°.49N×5°.01W, h81^{km}, ml2.9*

*MDD **31** 06:52:08.2±1.0, 35°.63N×4°.90W, h60^{km}±9^{km}, mb3.6/12, Error ellipse: s-maj=9.2km s-min=5.5km az=13.0, PRXIMO*

*SFS **31** 06:52:08.0, 36°.53N×4°.88W, h67^{km}, ML3.2, ALBORAN W.*

*INMG **31** 06:52:09.6±1.6, 35°.71N×5°.03W, h60^{km}±8^{km}, ML2.3, Error ellipse: s-maj=6.1km s-min=4.0km az=171.0*

ISC 31 06:52:05.4±1.2**, 35°.57N**±0°.03×**4°.94W**±0°.03**, h75**^{km}±7^{km}**, n63,** σ**1^{s}.63**/111**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEU	Ceuta	0.48	313	P	Pn	06 52 19.3	+0.8
CEU				S	Sn	06 52 26.9	-1.3
CEU	Ceuta	0.48	313	P	Pn	06 52 19.3	+0.8
CEU				S	Sn	06 52 26.9	-1.3
ECEU	Ceuta	0.49	313	P	Pn	06 52 20.1	+1.5
	10nm,0.1s,SNR=5.2						
ECEU				S	Sn	06 52 28.8	+0.5
	7.0nm,0.8s,SNR=13						
CHEFC	Chefchaouen	0.57	216	P	Pn	06 52 20.8	+1.3
CHEFC				S	Sn	06 52 30.0	+0.3
PALE	Palemas	0.89	113	P	Pn	06 52 23.0	+0.1
PALE				S	Sn	06 52 35.0	-0.8
EMIJ	Mijas	1.00	8	P	Pn	06 52 24.1	-0.2
	1.4nm,0.1s,SNR=9.9						
EMIJ				S	Sn	06 52 37.3	-0.9
	3.9nm,0.3s,SNR=8.5						
EMAL	Malaga-Limoner	1.26	19	P	Pn	06 52 26.2	-1.2
EMAL				S	Sn	06 52 42.1	-1.8
EMAL	Malaga-Limoner	1.26	19	P	Pn	06 52 26.2	-1.2
EMAL				S	Sn	06 52 42.1	-1.8
ESPR	Espera	1.50	330	P	Pn	06 52 32.1	+1.6
	1.0nm,0.2s,SNR=7.9						
ESPR				S	Sn	06 52 49.9	+0.5
	3.2nm,0.3s,SNR=7.9						
EALB	Alboran	1.59	76	S	Sn	06 52 50.8	-0.8
	SNR=7.9						
EMEL	Melilla	1.64	99	P	Pn	06 52 34.0	+1.6
	44nm,0.1s,SNR=7.9						
EMEL				S	Sn	06 52 52.1	-0.7
	9.9nm,0.3s,SNR=7.9						
ELGU	Los Guajares,	1.67	39	P	Pn	06 52 33.1	+0.2
	1.8nm,0.1s,SNR=7.9						
ELGU				S	Sn	06 52 52.4	-1.3
	18nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	1.68	23	P	Pn	06 52 34.2	+1.1
	1.2nm,0.2s,SNR=7.9						
EGOR				S	Sn	06 52 52.8	-1.1
	7.0nm,0.4s,SNR=7.9						
IFR	Ifrane	2.05	184	P	Pn	06 52 38.3	+0.2
IFR				S	Sn	06 53 00.5	-2.4
EBER	Berja	2.12	51	P	Pn	06 52 40.1	+1.1
	1.2nm,0.2s,SNR=7.0						
EBER				S	Sn	06 53 03.9	-0.7
	3.4nm,0.3s,SNR=7.8						
JBK	JBK	2.30	122	P	Pn	06 52 42.3	+0.8
JBK				S	Sn	06 53 07.6	-1.4
GORA	Gorafe	2.44	38	P	Pn	06 52 44.7	+1.5
	8.3nm,0.1s,SNR=7.9						
ECAB	El Cabril	2.53	351	P	Pn	06 52 45.6	+1.2
	0.4nm,0.1s,SNR=16						
ECAB				S	Sn	06 53 13.2	-1.0
	2.4nm,0.3s,SNR=16						
EMIN	Mina Concepcio	2.60	328	P	Pn	06 52 46.3	+1.0
	1.0nm,0.1s,SNR=10						
EMIN				S	Sn	06 53 14.6	-1.2
	3.3nm,0.2s,SNR=11						
EADA	Adamuz	2.61	6	P	Pn	06 52 47.0	+1.6
	0.5nm,0.1s,SNR=7.9						
EADA				S	Sn	06 53 14.9	-1.3
	3.6nm,0.9s,SNR=4.1						
ENIJ	Nijar	2.61	57	S	Sn	06 53 16.0	-0.2
	11nm,0.4s,SNR=7.9						
EQES	Quesada	2.69	33	P	Pn	06 52 47.6	+1.0
	0.8nm,0.2s,SNR=7.9						
MD31	MD31	2.70	177	P	Pn	06 52 47.5	+0.8
MD31				S	Sn	06 53 15.3	-3.0
MDT	Midelt	2.76	174	P	Pn	06 52 48.6	+1.0
MDT				S	Sn	06 53 18.1	-1.8
EGRO	El Granado	2.84	314	P	Pn	06 52 49.6	+1.1
	0.8nm,0.1s,SNR=13						
EGRO				S	Sn	06 53 20.1	-1.5
	4.7nm,0.2s,SNR=14						
PVAQ	Vaqueiros	2.90	310	eP	Pn	06 52 50.3	+1.1
PVAQ				eS	Sn	06 53 21.7	-1.3
PVAQ				A	A	06 53 22.8	
	18nm,0.3s						
PVAQ	Vaqueiros	2.90	310	P	Pn	06 52 49.6	+0.3
PVAQ				S	Sn	06 53 22.4	-0.6
PBDV	Barranco-do-Ve	2.94	306	eP	Pn	06 52 51.2	+1.3
PBDV				eS	Sn	06 53 22.9	-1.2
PBDV				A	A	06 53 27.3	
	6.0nm,0.1s						
PBAR	Barrancos	3.10	328	eS	Sn	06 53 27.3	-0.7
SESP	Santiago Espad	3.19	36	P	Pn	06 52 56.2	+2.8
	0.3nm,0.1s,SNR=7.9						
SESP				S	Sn	06 53 31.5	+1.1
	6.9nm,0.6s,SNR=7.9						
PCVE	Castro Verde	3.24	310	eP	Pn	06 52 55.9	+2.0
PCVE				eS	Sn	06 53 29.9	-1.4
PCVE				A	A	06 53 33.8	
	7.3nm,0.4s						
PBEJ	Beja	3.40	317	eS	Sn	06 53 33.6	-1.7
PBEJ				A	A	06 53 34.6	
	6.2nm,0.1s						
MORF	Marmelete	3.46	301	eS	Sn	06 53 35.5	-1.4
MORF				A	A	06 53 36.1	
	10nm,0.6s						
PFVI	Vila Bisbo	3.51	298	eP	Pn	06 52 59.6	+2.0
PFVI				eS	Sn	06 53 36.3	-1.6
PFVI				A	A	06 53 44.3	
	22nm,0.8s						
PFVI	Vila Bisbo	3.51	298	S	Sn	06 53 36.3	-1.6
	6.1nm,0.1s,SNR=7.9						
EBAD	Badajoz	3.59	333	P	Pn	06 53 00.2	+1.5
	2.1nm,0.1s,SNR=18						
EBAD				S	Sn	06 53 38.4	-1.5
	1.6nm,0.3s,SNR=18						
PTEO	Sao Teotonio	3.63	304	eS	Sn	06 53 40.2	-0.7
PNCL	Nicolau / Gran	3.84	312	eP	Pn	06 53 03.4	+1.3
PNCL				eS	Sn	06 53 44.5	-1.5
PNCL				A	A	06 53 47.6	
	6.0nm,0.3s						
EVO	Evora	3.85	321	S	Sn	06 53 43.4	-2.8
EVO	Evora	3.85	321	eP	Pn	06 53 03.7	+1.5
EVO				eS	Sn	06 53 45.0	-1.2
EVO				A	A	06 53 46.3	
	13nm,0.7s						
PESTR	Estremoz	3.92	328	eP	Pn	06 53 05.0	+1.8
PESTR				eS	Sn	06 53 46.2	-1.7
PESTR				A	A	06 53 53.3	
	2.9nm,0.8s						
PESTR	Estremoz	3.92	328	P	Pn	06 53 04.1	+0.9
PESTR				S	Sn	06 53 47.2	-0.7
PAB	San Pablo	4.00	7	P	Pn	06 53 05.9	+1.6
	0.3nm,0.2s,SNR=7.9						
PAB				S	Sn	06 53 47.8	-2.2
	4.0nm,0.6s,SNR=7.9						
ESDC	Sonseca Array	4.17	10	P	Pn	06 53 08.0	+1.4
	0.5nm,0.2s,baz=195,slow=13,SNR=6.5						
ESDC				S	Sn	06 53 52.5	-1.6
	29nm,2.8s,baz=193,slow=22,SNR=5.2						
PMRV	Marv??o	4.32	334	eP	Pn	06 53 10.4	+1.7
PMRV				eS	Sn	06 53 56.1	-1.7
PMRV				A	A	06 54 10.9	
	1.8nm,0.3s						
PMTG	Montargil	4.37	324	eP	Pn	06 53 10.9	+1.6
PMTG				eS	Sn	06 53 56.9	-2.0
PMTG				A	A	06 53 59.6	
	3.3nm,0.4s						
PCBR	Castelo Branco	4.72	335	eP	Pn	06 53 15.8	+1.8
PCBR				eS	Sn	06 54 05.1	-2.3
PCBR				A	A	06 54 08.7	
	2.4nm,0.3s						
PMAFR	Mafra	4.84	316	eS	Sn	06 54 09.6	-0.9
OUZM	OUZ	4.89	199	P	Pn	06 53 18.1	+1.5
OUZM				S	Sn	06 54 11.2	-0.8
OUK	Oukaimeden	4.99	210	P	Pn	06 53 18.1	-0.1
OUK				S	Sn	06 54 12.5	-2.3
PSBE	So Bento	4.99	323	eP	Pn	06 53 19.7	+1.9
PSBE				eS	Sn	06 54 12.2	-2.0
PSBE				A	A	06 54 14.9	
	7.1nm,0.5s						
GUD	Guadarrama	5.10	7	P	Pn	06 53 21.2	+1.7
	0.4nm,0.2s,SNR=7.9						
MTE	Manteigas	5.25	338	eP	Pn	06 53 23.1	+1.8
MTE				eS	Sn	06 54 20.5	0.0
PCAS	Casmilo, Conde	5.29	329	eS	Sn	06 54 17.0	-4.5
PCAS				A	A	06 54 23.6	
	3.3nm,0.7s						
PVIS	Viseu	5.64	336	eS	Sn	06 54 28.7	-1.5
PVIS				A	A	06 54 40.5	
	3.7nm,0.6s						
ETOR	Torete	5.71	23	P	Pn	06 53 29.7	+2.0
	9.1nm,0.2s,SNR=7.9						
ETOR				S	Sn	06 54 29.7	-2.3
	53nm,1.8s,SNR=7.9						
MVO	Moncorvo	5.82	344	eP	Pn	06 53 31.0	+1.8
MVO				eS	Sn	06 54 32.3	-2.3
MVO				A	A	06 54 45.7	
	2.4nm,0.9s						
MVO	Moncorvo	5.82	344	P	Pn	06 53 31.0	+1.8
	1.5nm,0.1s,SNR=7.9						
MVO				S	Sn	06 54 32.2	-2.5
	3.0nm,0.8s,SNR=7.9						
PVRL	Vila Real	6.10	340	eP	Pn	06 53 34.9	+1.9
PVRL				eS	Sn	06 54 40.1	-1.3
POLO	Lamas de Olo	6.21	340	eP	Pn	06 53 36.6	+2.0
POLO				eS	Sn	06 54 42.3	-1.9
PBRG	Braganca	6.38	348	eP	Pn	06 53 38.8	+1.9
PBRG				eS	Sn	06 54 46.5	-1.8
ELOB	Lobios	6.75	340	P	Pn	06 53 43.8	+1.9
	0.3nm,0.2s,SNR=7.9						
ELOB				S	Sn	06 54 53.8	-3.4
	31nm,0.9s,SNR=7.9						
PGAV	Gavieira, Arco	6.90	339	eP	Pn	06 53 46.5	+2.6

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*GUC **31** 07:03:22.0±0.5, 24°.13S×67°.54W, h225^{km}±7^{km}, ML3.6*

*IDC **31** 07:03:23.4±2.0, 23°.91S×67°.03W, h179^{km}±21^{km}, mb3.0/2, mb1 3.2/6, mb1mx3.1/27, mbtmp3.5/6, Error ellipse: s-maj=32.4km s-min=24.4km az=153.0*

ISC 31 07:03:20.2±1.2**, 24°.31S**±0°.07×**67°.2W**±0°.1**, h180**^{km}±14^{km}**, n20,** σ**1^{s}.28**/32**, 7C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	2.28	318	P	Pn	07 04 02.2	+1.4
	baz=126,slow=6.5						
LVC				S	S	07 04 32.8	+0.6
	14nm,0.3s,baz=168,slow=22,SNR=5.2						
LVC	Limon Verde	2.28	318	⇑iP	Pn	07 04 02.0	+1.2
LVC				iS	S	07 04 32.7	+0.6
PB15	IPOC Station P	2.32	298	⇑iP	Pn	07 04 02.4	+1.4
PB15				iS	S	07 04 33.3	+0.7
PB06	IPOC Station P	2.67	306	⇑iP	Pn	07 04 06.1	+1.1
PB06				iS	S	07 04 39.3	-0.5
PB06				IAML		07 04 42.0	
	comp=E,215nm,0.1s						
PB05	IPOC Station P	3.08	298	⇑iP	Pn	07 04 10.5	+0.6
PB05				iS	S	07 04 46.7	-1.9
PB05				IAML		07 04 49.7	
	comp=E,75nm,0.3s						
PB09	IPOC Station P	3.11	323	⇓iP	Pn	07 04 11.8	+1.5
PB09				iS	S	07 04 49.2	-0.1
PB09				IAML		07 04 50.6	
	comp=N,76nm,0.4s						
PB10	IPOC Station P	3.13	284	⇑iP	Pn	07 04 11.3	+0.8
PB10				iS	S	07 04 48.7	-0.8
PB10				IAML		07 04 55.6	
	comp=E,63nm,0.7s						
PB03	IPOC Station P	3.23	314	⇑iP	Pn	07 04 12.3	+0.5
PB03				iS	S	07 04 50.6	-1.3
PB03				IAML		07 04 51.4	
	comp=N,80nm,0.3s						
PB04	IPOC Station P	3.32	306	⇑iP	Pn	07 04 13.3	+0.4
PB04				iS	S	07 04 52.2	-1.8
PB04				IAML		07 04 54.4	
	comp=E,123nm,0.5s						
PB07	IPOC Station P	3.54	316	⇓iP	Pn	07 04 15.7	0.0
PB07				iS	S	07 04 56.9	-2.1
PB01	IPOC Station P	3.86	327	eP	Pn	07 04 19.5	-0.1
PB01				iS	S	07 05 03.9	-2.1
GO03	Copiap	4.24	219	eP	Pn	07 04 23.9	-0.5
GO03				iS	S	07 05 13.0	-1.6
PB08	IPOC Station P	4.51	337	eP	Pn	07 04 29.1	+0.8
PB08				iS	S	07 05 19.8	-1.7
LPAZ	La Paz	8.03	354	P	Pn	07 05 14.8	+0.3
	comp=E,0.5nm,0.3s,baz=158,slow=7.6,SNR=13						
SIV	San Ignacio	10.10	36	P	Pn	07 05 38.6	-2.5
	comp=E,0.2nm,0.3s,baz=212,slow=14,SNR=7.5						
PLCA	Paso Flores	16.61	189	P	Pn	07 07 11.3	+8.6
	comp=E,0.1nm,0.3s,baz=1.3,slow=12,SNR=4.9						
BDFB	Brasilia	20.01	68	P	P	07 07 39.1	-0.2
	comp=E,0.4nm,0.3s,baz=230,slow=10,SNR=4.3						
TORD	Torodi Ar. Bea	76.89	69	P	P	07 14 53.6	+0.7
	comp=E,0.2nm,0.4s,baz=259,slow=4.4,SNR=1.8						
YKA	Yellowknife Ar	94.34	340	P	P	07 16 20.5	+1.8
	comp=E,0.1nm,0.5s,baz=136,slow=4.4,SNR=2.1						
MKAR	Makanchi Array	146.91	40	PKPbc	PKiKP	07 22 42.9	-0.8
	comp=E,0.3nm,0.6s,baz=299,slow=3.2,SNR=4.8						

IDC 31 07:31:24.5±4.4**, 30°.16S**×**179°.28W, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.4**/26**, mbtmp3.8**/3**, Error ellipse: s-maj=175.2km s-min=68.3km az=160.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	33.45	257	P	P	07 38 05.5	+0.2
	1.9nm,0.9s,baz=99,slow=14,SNR=7.1						
ASAR	Alice Springs	42.01	267	P	P	07 39 17.4	-0.4
	0.4nm,0.5s,baz=109,slow=7.5,SNR=14						
WRA	Warramunga Arr	42.98	273	P	P	07 39 25.7	0.0
	0.4nm,0.3s,baz=112,slow=7.8,SNR=11						
FINES	FINESS Array B	144.53	339	PKP	PKPdf	07 51 01.6	-0.6
	5.6nm,1.1s,baz=31,slow=3.2,SNR=8.1						

SKHL 31 08:17:06.0±0.2**, 42°.80N**×**146°.20E, h51**^{km}±3^{km}**, mb5.3**/4**, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NMR	Nemuro--Hokkai	0.67	329	iP	Pn	08 17 18.2	-1.1
NMR				iS	Sn	08 17 27.4	-1.6
GRPR	Tuman	1.23	345	eP	Pn	08 17 25.4	-1.5
GRPR				AMB	AMB	08 17 26.0	
	3µm,0.4s						
GRPR				iS	Sn	08 17 39.9	-2.5
GRPR				A	A	08 17 42.0	
	12µm,0.6s						
GRPR				A	A	08 17 42.0	
	6µm,0.6s						
YUK	Yuzh-Kuril'sk	1.26	349	iP	Pn	08 17 25.9	-1.3
YUK				AMB	AMB	08 17 26.0	
	2µm,0.4s						
YUK				iS	Sn	08 17 40.5	-2.5
YUK				A	A	08 17 44.0	
	10µm,0.5s						
YUK				A	A	08 17 44.0	
	6µm,0.5s						
KUR	Kuril'sk	2.71	26	eP	Pn	08 17 47.0	-0.1
KUR				AMB	AMB	08 17 55.5	
	330nm,0.5s						
KUR				iS	Sn	08 18 17.0	-1.6
KUR				A	A	08 18 35.0	
	720nm,0.4s						
KUR				A	A	08 18 35.0	
	860nm,0.4s						
YSS	Yuzh-Sakhalins	4.82	331	eP	Pn	08 18 16.5	+0.5
YSS				AMB	AMB	08 18 17.0	
	40nm,0.6s						
YSS				eS	Sn	08 19 08.6	-1.8
YSS				A	A	08 19 12.0	
	50nm,0.6s						
TEY	Ternei	7.28	291	erx	rx	08 18 54.7	
TYV	Tymovskoe	8.42	344	eP	Pn	08 19 05.6	+0.3
TYV				AMB	AMB	08 19 06.7	
	10.0nm,1.0s						
TYV				eS	Sn	08 20 37.2	-1.7
TYV				A	A	08 20 40.3	
	10.0nm,2.0s						
TYV				A	A	08 20 40.7	
	500nm,5.0s						
KLR	Kul'dur	11.92	308	eP	Pn	08 19 54.6	+1.5
EKMR	Ekimchan	13.56	324	eP	Pn	08 20 15.8	+0.3
EKMR				AMB	AMB	08 20 26.0	
	8.0nm,0.9s						
BMKR	Bomnak	16.47	322	eP	Pn	08 20 52.8	-0.5
MA2	Magadan	17.03	8	eP	Pn	08 20 58.9	-1.4
KROS	Kirovskiy	17.17	319	eP	Pn	08 21 00.5	-1.6
KROS				AMB	AMB	08 21 08.0	
	4.0nm,0.8s						
SEY	Seymchan	20.49	8	eP	P	08 21 40.4	+1.1
BILL	Bilibino	27.46	16	eP	P	08 22 49.7	+2.8
ULN	Ulaanbaatar	27.77	294	eP	P	08 22 51.5	+1.5
TIXI	Tiksi	30.16	349	eP	P	08 23 13.7	+3.0
MKAR	Makanchi Array	44.41	298	eP	P	08 25 13.7	+2.2
KURK	Kurchatov	45.49	305	eP	P	08 25 22.2	+2.2
AAK	Ala-Archa	51.14	296	eP	P	08 26 06.7	+2.9
ARU	Arti	54.57	317	eP	P	08 26 30.6	+2.0
OBN	Obninsk	65.67	324	eP	P	08 27 46.3	+1.7
KIV	Kislovodsk	69.88	312	eP	P	08 28 13.3	+1.9
KBZ	Khabaz	69.91	311	eP	P	08 28 14.1	+2.6

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*MDD **31** 08:29:44.8±0.9, 36°.40N×4°.50W, h70^{km}±6^{km}, mb2.7/9, Error ellipse: s-maj=8.4km s-min=4.9km az=157.0, PRXIMO*

*SFS **31** 08:29:45.0, 36°.41N×4°.46W, h66^{km}, ML2.8, ALBORAN W.*

*CNRM **31** 08:29:45.1, 36°.31N×4°.74W, h53^{km}*

*INMG **31** 08:29:46.4±1.5, 36°.54N×4°.63W, h85^{km}±4^{km}, ML2.0, Error ellipse: s-maj=7.1km s-min=3.6km az=156.0*

ISC 31 08:29:43.2±1.2**, 36°.43N**±0°.03×**4°.50W**±0°.03**, h80**^{km}±7^{km}**, n33,** σ**1^{s}.33**/61**, 2C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMIJ	Mijas	0.26	303	⇑P	Pn	08 29 55.4	+0.1
	5.1nm,0.1s,SNR=18						
EMIJ				S	Sn	08 30 02.9	-1.4
	5.2nm,0.3s,SNR=7.6						
EMAL	Malaga-Limoner	0.34	10	P	Pn	08 29 56.3	+0.5
EMAL				S	Sn	08 30 04.7	-0.3
EMAL	Malaga-Limoner	0.34	10	P	Pn	08 29 56.3	+0.5
EMAL				S	Sn	08 30 04.7	-0.3
EGOR	Sierra Gorda,	0.75	25	P	Pn	08 30 01.0	+1.4
	1.3nm,0.2s,SNR=7.9						
EGOR				S	Sn	08 30 11.8	0.0
	8.1nm,0.6s,SNR=7.9						
ELGU	Los Guajares,	0.83	58	P	Pn	08 30 00.2	-0.2
	2.0nm,0.1s,SNR=7.9						
ELGU				S	Sn	08 30 12.3	-0.9
	7.3nm,0.2s,SNR=7.9						
ECEU	Ceuta	0.88	234	S	Sn	08 30 14.1	+0.1
	3.5nm,0.4s,SNR=7.9						
ESPR	Espera	1.18	293	S	Sn	08 30 20.1	-0.2
	2.4nm,0.3s,SNR=4.6						
PALE	Palemas	1.29	159	P	Pn	08 30 06.7	+0.9
PALE				S	Sn	08 30 22.7	-0.2
EBER	Berja	1.38	70	P	Pn	08 30 07.3	+0.2
	0.9nm,0.2s,SNR=4.2						
EBER				S	Sn	08 30 24.0	-1.2
	4.2nm,0.5s,SNR=7.9						
EADA	Adamuz	1.74	358	P	Pn	08 30 13.1	+1.5
	1.2nm,0.1s,SNR=16						
EADA				S	Sn	08 30 33.4	+0.1
	2.8nm,0.2s,SNR=12						
EQES	Quesada	1.79	39	S	Sn	08 30 34.9	+0.4
	3.5nm,0.4s,SNR=7.9						
ECAB	El Cabril	1.80	336	P	Pn	08 30 13.3	+0.9
	0.3nm,0.1s,SNR=7.9						
ECAB				S	Sn	08 30 34.2	-0.5
	3.1nm,0.3s,SNR=17						
EMIN	Mina Concepcio	2.19	308	P	Pn	08 30 18.4	+0.7
	1.0nm,0.1s,SNR=7.9						
EMIN				S	Sn	08 30 42.9	-1.1
	1.5nm,0.4s,SNR=7.9						
EGRO	El Granado	2.63	296	P	Pn	08 30 24.4	+0.9
	1.5nm,0.1s,SNR=7.9						
EGRO				S	Sn	08 30 52.7	-1.8
	6.8nm,0.3s,SNR=7.9						
PVAQ	Vaqueiros	2.75	292	eP	Pn	08 30 26.8	+1.6
PVAQ				eS	Sn	08 30 56.0	-1.5
PVAQ				A	A	08 30 59.0	
	3.8nm,0.7s						
PVAQ	Vaqueiros	2.75	292	P	Pn	08 30 26.7	+1.5
PVAQ				S	Sn	08 30 56.3	-1.2
PBDV	Barranco-do-Ve	2.87	288	eP	Pn	08 30 28.3	+1.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV				*e*S	Sn	08 30 59.0	-1.3
PBDV				A	A	08 31 07.8	
	4.3nm,0.6s						
EBAD	Badajoz	3.06	320	P	Pn	08 30 30.5	+1.2
	0.7nm,0.1s,SNR=8.6						
EBAD				S	Sn	08 31 04.2	-0.7
	6.2nm,0.2s,SNR=7.9						
PCVE	Castro Verde	3.08	294	⇑*e*P	Pn	08 30 31.0	+1.5
PCVE				*e*S	Sn	08 31 03.9	-1.4
PCVE				A	A	08 31 13.0	
	3.2nm,0.8s						
PAB	San Pablo	3.12	2	P	Pn	08 30 31.1	+1.0
	0.2nm,0.1s,SNR=7.9						
PAB				S	Sn	08 31 05.0	-1.5
	2.3nm,0.4s,SNR=7.9						
ETOB	Tobarra	3.23	46	P	Pn	08 30 32.8	+1.2
	0.5nm,0.2s,SNR=7.9						
ETOB				S	Sn	08 31 08.1	-1.0
	2.7nm,0.5s,SNR=7.9						
ESDC	Sonseca Array	3.27	7	P	Pn	08 30 33.8	+1.6
	2.2nm,0.6s,baz=344,slow=5.5,SNR=7.9						
ESDC				S	Sn	08 31 08.8	-1.3
	5.0nm,0.8s,baz=186,slow=23,SNR=3.7						
PESTR	Estremoz	3.46	316	*e*P	Pn	08 30 36.1	+1.4
PESTR				*e*S	Sn	08 31 12.9	-1.6
PESTR	Estremoz	3.46	316	P	Pn	08 30 36.5	+1.8
PESTR				S	Sn	08 31 13.6	-1.0
EVO	Evora	3.50	308	*e*P	Pn	08 30 36.8	+1.6
EVO				*e*S	Sn	08 31 14.1	-1.4
EVO				A	A	08 31 15.4	
	2.8nm,0.3s						
MD31	MD31	3.56	183	P	Pn	08 30 36.8	+0.6
MD31				S	Sn	08 31 15.8	-1.4
PNCL	Nicolau / Gran	3.63	299	*e*S	Sn	08 31 16.4	-2.2
PMRV	Marv??o	3.77	324	*e*P	Pn	08 30 40.4	+1.4
PMRV				*e*S	Sn	08 31 19.4	-2.8
PMRV				A	A	08 31 24.1	
	2.6nm,0.8s						
PMTG	Montargil	3.96	313	*e*S	Sn	08 31 25.2	-1.5
GUD	Guadarrama	4.22	4	P	Pn	08 30 46.9	+1.7
	0.1nm,0.2s,SNR=7.9						
GUD				S	Sn	08 31 31.3	-2.0
	5.5nm,0.5s,SNR=7.9						
ETOR	Torete	4.79	23	P	Pn	08 30 54.0	+1.1
	5.2nm,0.1s,SNR=10						
ETOR				S	Sn	08 31 44.8	-2.3
	14nm,0.7s,SNR=7.9						
MVO	Moncorvo	5.13	338	*e*P	Pn	08 30 59.2	+1.7
MVO				*e*S	Sn	08 31 54.8	-0.6
MVO	Moncorvo	5.13	338	P	Pn	08 30 58.7	+1.2
	1.2nm,0.2s,SNR=7.9						
MVO				S	Sn	08 31 53.0	-2.3
	9.1nm,0.6s,SNR=7.9						

NNC ***31*** *08:47:55.3±1.3, 51°.71N×75°.42E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=23.1km s-min=8.5km az=27.0, Suspected Mining explosion.*

IDC ***31*** *08:47:58.2±1.1, 51°.73N×75°.47E, h0^{km}, mb1 2.7/4, mb1mx2.7/46, mbtmp2.7/4, ML2.2/4, Error ellipse: s-maj=23.1km s-min=8.9km az=29.0*

ISC 31 08:47:55.0±1.0**, 51°.66N**±0°.09×**75°.16E**±0°.06**, h0^{km}, n11, σ0^{s}.89**/10**, 5C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.37	115	Pn	Pn	08 48 35.8	+0.8
	0.7nm,0.3s,baz=303,slow=19,SNR=9.2						
KURBB				Lg	Lg	08 49 06.7	
	1.2nm,0.3s,baz=308,slow=30,SNR=11						
KURBB	Kurchatov Arra	2.37	115	⇑Pg	Pb	08 48 37.1	-1.4
	4.0nm,0.5s,baz=300,slow=17						
KURBB				⇑Lg	Lg	08 49 07.7	
	71nm,0.6s,baz=298,slow=30						
KURK	Kurchatov	2.38	112	⇓Pg	Pn	08 48 35.3	+0.1
	3.6nm,0.7s						
KURK				⇓Lg	Lg	08 49 04.1	
	17nm,0.6s						
BVAR	Borovoye Array	3.23	297	Pn	Pb	08 48 52.3	-0.8
	0.2nm,0.3s,baz=110,slow=8.7,SNR=8.0						
BVAR				Lg	Lg	08 49 42.3	
	1.9nm,0.3s,baz=113,slow=30,SNR=11						
BRVK	Borovoye	3.30	297	⇑Pg	Pg	08 48 58.2	0.0
	2.5nm,0.6s						
BRVK				⇓Lg	Lg	08 49 42.6	
	14nm,1.0s						
I46RU	ZALESOVO INFRA	6.29	65	*i*		09 22 40.0	
	baz=250,slow=335,SNR=2.3						
ZALV	Zalesovo Beam	6.29	65	Pn	Pn	08 49 30.0	+1.0
	0.3nm,0.3s,baz=253,slow=13,SNR=6.1						
ZALV				Sn	Sn	08 50 41.4	0.0
	0.2nm,0.3s,baz=259,slow=23,SNR=3.8						
ZALV				Lg	Lg	08 51 11.6	
	0.2nm,0.3s,baz=255,slow=22,SNR=3.1						
MAKZ	Makanchi	6.60	135	⇓Lg	Lg	08 51 20.5	
	4.5nm,0.8s						
MK31	Makanchi Array	6.75	133	⇑Sn	Sn	08 50 53.0	+0.2
	0.8nm,0.6s,baz=327,slow=19,SNR=6.3						
MK31				⇑Lg	Lg	08 51 28.1	
	3.2nm,0.6s,baz=324,slow=25,SNR=4.1						
MKAR	Makanchi Array	6.75	133	Pn	Pn	08 49 36.3	+1.0
	0.1nm,0.3s,baz=317,slow=12,SNR=4.5						
MKAR				Sn	Sn	08 50 53.4	+0.6
	0.4nm,0.3s,baz=331,slow=21,SNR=8.8						
MKAR				Lg	Lg	08 51 24.5	
	0.4nm,0.3s,baz=323,slow=25,SNR=5.0						
AAK	Ala-Archa	9.04	183	Lg	Lg	08 52 45.2	
	0.1nm,0.3s,baz=228,slow=20,SNR=4.0						

IDC ***31*** *08:54:57.6±3.9, 15°.18N×93°.63W, h0^{km}, mb3.6/5, mb1 4.0/6, mb1mx3.7/40, mbtmp3.6/6, ML3.5/1, MS3.0/4, Ms1 3.0/4, ms1mx2.8/28, Error ellipse: s-maj=140.8km s-min=48.8km az=48.0*

MEX ***31*** *08:54:59.3±1.2, 14°.75N×94°.37W, h16^{km}±14^{km}, MD4.2*

ISC 31 08:54:56.7±2.8**, 15°.0N**±0°.1×**94°.30W**±0°.05**, h5^{km}**±15^{km}**, n17, σ1^{s}.73**/21**, mb3.5**/5**, MS3.0**/3**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.28	54	*i* P	Pg	08 55 21.9	+0.6
HUIG	Huatulco	1.93	295	*i* P	Pn	08 55 29.2	-1.0
HUIG				*i* S	Sn	08 55 50.8	-4.0
THIG		1.96	91	*i* P	Pn	08 55 29.9	-0.8
PATR	El Naranjo	2.00	85	*e*P	Pn	08 55 30.1	-1.2
PATR				*e*S	Sn	08 55 54.5	-2.4
PAVE	Pavencul	2.06	83	*e*P	Pn	08 55 31.4	-0.9
PAVE				*e*S	Sn	08 55 57.1	-1.3
CHUJ	Union Juarez	2.12	86	*e*P	Pn	08 55 32.1	-0.9
CHUJ				*e*S	Sn	08 55 58.1	-1.8
TGIG		2.14	32	*e*P	Pb	08 55 36.0	-0.1
TGIG				*e*S	Sg	08 56 05.2	-0.5
CMIG	Matias Romero	2.21	345	Pn	Pb	08 55 36.1	-1.0
	14nm,0.3s,baz=169,slow=11,SNR=170						
CMIG				Sn	Sb	08 56 04.5	-0.2
	28nm,0.3s,baz=58,slow=17,SNR=6.1						
CMIG				LR	LR	08 56 15.4	
	comp=Z,102nm,19.2s,baz=304,slow=35						
CMIG	Matias Romero	2.21	345	*i* P	Pb	08 55 36.1	-1.0
CMIG				*i* S	Sb	08 56 04.8	+0.1
CCIG	Comitan	2.47	57	*e*P	Pb	08 55 40.4	-1.2
ANMO	Albuquerque	22.72	333	P	P	09 00 02.8	+3.0
	1.1nm,0.8s,baz=161,slow=11,SNR=4.8						
ANMO				LR	LR	09 10 57.8	
	comp=Z,58nm,18.7s,baz=19,slow=42						
ATAH	Atahualpa	27.02	143	LR	LR	09 08 21.5	
	comp=Z,28nm,18.6s,baz=321,slow=30						
PFO	Pinyon Flats O	27.34	317	LR	LR	09 13 00.6	
	comp=Z,67nm,21.3s,baz=350,slow=39						
PDAR	Pinedale Array	30.67	338	P	P	09 01 14.3	+1.8
	0.7nm,1.1s,baz=133,slow=7.5,SNR=2.6						
NVAR	Mina Array Bea	31.55	322	P	P	09 01 24.2	+3.9
	0.4nm,0.7s,baz=133,slow=7.6,SNR=4.8						
YKA	Yellowknife Ar	49.62	348	P	P	09 03 49.8	+1.0
	0.8nm,0.7s,baz=155,slow=7.3,SNR=15						
ILAR	Eielson Array	61.10	337	P	P	09 05 13.0	+1.4
	0.6nm,0.8s,baz=151,slow=5.0,SNR=6.7						

IDC 31 09:05:56.1±11.0**, 54°.27S**×**30°.90W, h0^{km}, mb3.7**/1**, mb1 3.7**/1**, mb1mx3.4**/26**, mbtmp3.7**/1**, Error ellipse: s-maj=652.8km s-min=79.7km az=148.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	72.64	33	P	P	09 17 25.4	0.0
	0.3nm,0.5s,baz=198,slow=6.4,SNR=2.2						
YKA	Yellowknife Ar	133.43	321	PKP	PKPdf	09 25 12.3	-0.4
	0.1nm,0.6s,baz=125,slow=2.2,SNR=4.4						
ILAR	Eielson Array	147.34	314	PKPbc	PKPbc	09 25 39.4	-0.8
	0.5nm,0.8s,baz=134,slow=2.6,SNR=4.3						

IDC 31 09:06:35.3±1.3**, 31°.53N**×**120°.97E, h0^{km}, mb3.5**/3**, mb1 3.6**/4**, mb1mx3.3**/41**, mbtmp3.3**/4**, ML3.1**/1**, Error ellipse: s-maj=81.3km s-min=24.7km az=79.0, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	19.72	330	P	P	09 11 06.2	-0.2
	0.1nm,0.3s,baz=131,slow=15,SNR=2.7						
WRA	Warramunga Arr	52.76	164	P	P	09 15 51.2	-1.0
	0.3nm,0.6s,baz=349,slow=10,SNR=7.0						
ASAR	Alice Springs	56.27	166	P	P	09 16 18.4	+0.8
	0.3nm,0.5s,baz=349,slow=7.2,SNR=7.3						
YKA	Yellowknife Ar	76.30	23	P	P	09 18 25.8	+0.1
	0.3nm,0.7s,baz=322,slow=5.7,SNR=9.3						

IDC ***31*** *09:12:56.1±5.0, 26°.37S×28°.89E, h0^{km}, mb1 3.0/3, mb1mx2.8/54, mbtmp3.0/3, ML2.4/3, Error ellipse: s-maj=41.1km s-min=25.9km az=75.0*

EAF ***31*** *09:12:57.8±2.9, 26°.30S×28°.97E, h7^{km}±58^{km}, MD4.9*

BUL ***31*** *09:12:57.8±2.9, 26°.30S×28°.97E, h7^{km}±58^{km}, MD5.6*

ISC 31 09:12:53.7±1.9**, 26°.30S**±0°.06×**29°.1E**±0°.1**, h6^{km}, n11, σ3^{s}.54**/18**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	3.40	291	Pn	Pn	09 13 49.6	+2.2
	0.2nm,0.3s,baz=109,slow=11,SNR=2.0						
LBTB				Pg	Pb	09 13 55.2	+0.8
	1.1nm,0.3s,baz=108,slow=16,SNR=17						
LBTB				Lg	Lg	09 14 40.4	
	6.9nm,0.3s,baz=8.7,slow=23,SNR=30						
LBTB	Lobatse	3.40	291	*i* P	Pn	09 13 50.8	+3.4
LBTB				*i* Sg	Sg	09 14 40.8	-2.0
LBTB	Lobatse	3.40	291	*i* P	Pn	09 13 50.8	+3.4
LBTB				*i* Sg	Sg	09 14 40.8	-2.0
BOSA	Boshof	4.11	235	Pn	Pn	09 13 56.9	-0.4
	0.1nm,0.3s,baz=62,slow=13,SNR=3.6						
BOSA				Pg	Pb	09 14 04.3	-2.4
	0.1nm,0.3s,baz=129,slow=2.9,SNR=3.6						
BOSA				Lg	Lg	09 15 00.4	
	3.0nm,0.3s,baz=155,slow=20,SNR=9.9						
BOSA	Boshof	4.11	235	*i* P	Pn	09 14 01.1	+3.8
BOSA				*i* Sg	Sb	09 15 00.9	+4.3
BOSA	Boshof	4.11	235	*i* P	Pn	09 14 01.1	+3.8
BOSA				*i* Sg	Sb	09 15 00.9	+4.3
I47ZA	BOSHOF INFRASO	4.13	235	*i*		09 35 50.0	
	baz=55,slow=304,SNR=0.8						
MATP	Matopo	5.87	355	*i* P	Pn	09 14 24.8	+3.4
MATP				*i* S	Sn	09 15 25.6	-3.4
MATP	Matopo	5.87	355	*i* P	Pn	09 14 24.8	+3.4
MATP				*i* S	Sn	09 15 25.6	-3.4
SUR	Sutherland	9.42	228	Pn	Pn	09 15 11.5	+1.3
	0.2nm,0.3s,baz=63,slow=14,SNR=1.2						
SUR				Sn	Sn	09 16 51.1	-5.6
	0.4nm,0.3s,baz=80,slow=20,SNR=1.9						
I35NA	TSUMEB INFRASO	12.75	301	*i*		10 31 50.0	
	baz=124,slow=314,SNR=1.0						

NIED ***31*** *09:22:43.1, 47°.11N×153°.77E, h30^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.18; $M_{\theta\theta}$2.60; $M_{\phi\phi}$-2.42; $M_{r\theta}$-1.21; $M_{\theta\phi}$0.28; $M_{\phi r}$0.56; Fault plane solution: $M_0$2.84000×10^{15} NP1: ϕ_s312.00000°, δ87.00000°, λ26.00000°. NP2: ϕ_s220.00000°, δ64.00000°, λ177.00000°.*

JMA ***31*** *09:22:43.0±0.8, 47°.11N×153°.77E, h30^{km}, M4.6*

SKHL ***31*** *09:22:46.4±0.2, 47°.20N×153°.50E, h83^{km}±7^{km}, mb5.4/12, mbv5.5/2, msha6.2/5*

MOS ***31*** *09:22:46.7±1.5, 47°.37N×153°.22E, h76^{km}, mb4.6/20, Error ellipse: s-maj=8.0km s-min=5.2km az=68.8*

IDC ***31*** *09:22:47.3±0.6, 47°.40N×153°.07E, h62^{km}±5^{km}, mb3.9/26, mb1 4.0/27, mb1mx3.9/67, mbtmp4.2/27, MS3.5/21, Ms1 3.5/21, ms1mx3.4/43, Error ellipse: s-maj=14.0km s-min=10.8km az=138.0*

NEIC ***31*** *09:22:49.2±1.6, 47°.5N±0°.1×153°.0E±0°.1, h74^{km}±6^{km}, mb4.7/75, Error ellipse: s-maj=17.4km s-min=11.2km az=137.0*

ISC 31 09:22:45.9±0.5**, 47°.26N**±0°.05×**153°.32E**±0°.05**, h57^{km}**±4^{km}**, h58^{km}:pP-P, n258, σ1^{s}.79**/252**, mb4.5**/86**, MS3.8**/14**, 10C-8D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.89	27	*e*PN	Pn	09 23 42.2	-0.9
SKR				*e*S	Sn	09 24 22.9	-4.5
SKR				pmax	pmax		
	comp=Z,345nm,0.7s						
SKR				pmax	pmax		
	comp=Z,2μm,3.8s						
SKR				smax	smax		
	comp=N,1μm,0.5s						
SKR				smax	smax		
	comp=E,1μm,0.4s						
SKR				MLR	MLR		
	comp=Z,4μm,12.0s						
SKR	Severo-Kuril's	3.89	27	*e*P	Pn	09 23 43.9	+0.8
SKR				AMB	AMB	09 23 44.5	
	comp=Z,350nm,0.6s						
SKR				*e*S	Sn	09 24 26.5	-0.9
SKR				A	A	09 24 32.5	
	comp=Z,1μm,0.5s						
SKR				A	A	09 24 32.5	
	comp=Z,1μm,0.5s						
KUR	Kuril'sk	4.29	244	*e*PN	Pn	09 23 51.4	+2.7
KUR				S	Sn	09 24 41.6	+4.2
KUR				pmax	pmax		
	comp=Z,280nm,0.8s						
KUR				pmax	pmax		
	comp=E,64nm,0.5s						
KUR				pmax	pmax		
	comp=N,46nm,0.6s						
KUR				smax	smax		
	comp=N,396nm,0.6s						
KUR				smax	smax		
	comp=E,239nm,0.4s						
KUR	Kuril'sk	4.29	244	*e*P	Pn	09 23 51.2	+2.5
KUR				AMB	AMB	09 23 52.8	
	comp=E,380nm,0.7s						
KUR				*e*S	Sn	09 24 39.2	+1.8
KUR				A	A	09 24 57.3	
	comp=E,530nm,0.6s						
KUR				A	A	09 24 57.3	
	comp=E,420nm,0.6s						
PAU	Pauzhetka	4.79	27	*e*P	Pn	09 23 57.1	+1.7
PAU				AMB	AMB	09 23 58.1	
	comp=E,30nm,0.3s						
PAU				*e*S	Sn	09 24 49.7	+0.2
PAU				A	A	09 24 55.5	
	comp=E,490nm,0.3s						
PAU				A	A	09 24 55.5	
	comp=E,430nm,0.3s						
SHO	Shikotan	5.68	236	⇓*i*PN	Pn	09 24 07.2	-0.5
SHO				pmax	pmax		
	comp=Z,32nm,0.3s						
SHO	Shikotan	5.68	236	*i* P	Pn	09 24 07.2	-0.5
SHO				AMB	AMB	09 24 11.8	
	comp=Z,320nm,0.4s						
SHO				*e*S	Sn	09 25 11.9	+0.4
SHO				A	A	09 25 30.2	
	comp=Z,360nm,0.6s						
SHO				A	A	09 25 30.2	
	comp=Z,290nm,0.6s						
YUK	Yuzh-Kuril'sk	6.14	241	*ce*PN	Pn	09 24 15.7	+1.7
YUK	Yuzh-Kuril'sk	6.14	241	*i* P	Pn	09 24 16.2	+2.2
YUK				AMB	AMB	09 24 18.5	
	comp=Z,140nm,0.3s						
YUK				AMB	AMB	09 24 20.3	
	comp=Z,300nm,1.0s						
YUK				*e*S	Sn	09 25 23.4	+0.5
YUK				A	A	09 25 42.6	
	comp=Z,500nm,2.0s						
YUK				A	A	09 25 42.6	
	comp=Z,200nm,2.0s						
YUK				A	A	09 25 50.3	
	comp=Z,730nm,0.6s						
YUK				A	A	09 25 50.3	
	comp=Z,650nm,0.6s						
RUSJ	Misakicho	6.48	244	*e*PN	Pn	09 24 24.6	+6.0
PEA0B	Petropavlovsk-	6.49	24	PN	Pn	09 24 17.9	-0.9
PEA0B	Petropavlovsk-	6.49	24	Pn	Pn	09 24 17.9	-0.9
PETK	Petropavlovsk-	6.49	24	P	Pn	09 24 20.1	+1.4
	comp=Z,1.6nm,0.3s,baz=181,slow=10.0,SNR=36						
PETK				LR	LR	09 26 48.4	
	comp=Z,188nm,20.1s,baz=198,slow=38						
PETK	Petropavlovsk-	6.49	24	PN	Pn	09 24 17.7	-1.1
PETK	Petropavlovsk-	6.49	24	Pn	Pn	09 24 17.7	-1.1
GLVR	Golovnino	6.52	240	*e*PN	Pn	09 24 20.1	+1.0
GLVR				S	Sn	09 25 43.9	+12
GLVR				pmax	pmax		
	comp=Z,105nm,0.3s						
GLVR				pmax	pmax		
	comp=N,36nm,0.1s						
GLVR				pmax	pmax		
	comp=E,32nm,0.1s						
GLVR	Golovnino	6.52	240	*e*P	Pn	09 24 20.1	+1.0
GLVR				AMB	AMB	09 24 21.0	
	comp=E,110nm,0.3s						
NEM2	Nemuro 2	6.61	237	P	Pn	09 24 19.9	-0.5
NEM2				*e*S	Sn	09 25 31.2	-3.1
NMR	Nemuro--Hokkai	6.62	237	⇓*i*PN	Pn	09 24 19.9	-0.6
NMR				S	Sn	09 25 41.2	+6.7
NMR	Nemuro--Hokkai	6.62	237	*i* P	Pn	09 24 20.9	+0.4
JRA	Rausu	6.64	243	P	Pn	09 24 23.8	+3.0
PET	Petropavlovsk	6.71	29	*e*PN	Pn	09 24 25.5	+3.8
PET				MLR	MLR		
	comp=Z,200nm,19.0s						
PET	Petropavlovsk	6.71	29	*e*P	Pn	09 24 23.9	+2.2
PET				AMB	AMB	09 24 28.5	
	comp=Z,40nm,0.6s						
PET				*e*S	Sn	09 25 35.6	-1.0
PET	Petropavlovsk	6.71	29	Pn	Pn	09 24 22.5	+0.8
JNK	Nakash	7.08	242	P	Pn	09 24 28.3	+1.5
YSS	Yuzh-Sakhalins	7.22	271	⇑*e*PN	Pn	09 24 32.7	+4.0
YSS				*e*S	Sn	09 25 53.3	+4.1
YSS				pmax	pmax		
	comp=Z,110nm,0.9s						
YSS				smax	smax		
	comp=E,40nm,1.0s						
YSS	Yuzh-Sakhalins	7.22	271	*e*P	Pn	09 24 31.1	+2.4
YSS				AMB	AMB	09 24 35.1	
	comp=E,190nm,0.7s						
YSS				*e*S	Sn	09 25 49.8	+0.6
YSS				A	A	09 25 58.2	
	comp=E,50nm,0.5s						
YSS				A	A	09 25 58.2	
	comp=E,80nm,0.5s						
YSS	Yuzh-Sakhalins	7.22	271	Pn	Pn	09 24 31.9	+3.2
JTKR	Abashiri--Toko	7.38	247	P	Pn	09 24 33.8	+2.9
JAK	Akkeshi	7.44	238	P	Pn	09 24 31.1	-0.7
JAK				*e*S	Sn	09 25 50.4	-4.3
JMP	Maruseppu	7.70	249	P	Pn	09 24 39.1	+3.7
UGL	Uglegorsk	7.75	288	*e*PN	Pn	09 24 39.3	+3.4
UGL				pmax	pmax		
	comp=Z,130nm,0.6s						
UGL	Uglegorsk	7.75	288	*e*P	Pn	09 24 39.3	+3.4
UGL				AMB	AMB	09 24 41.0	
	comp=Z,130nm,0.6s						
JAR	Ashorobuto	7.82	243	P	Pn	09 24 38.4	+1.5
JAR				*e*S	Sn	09 26 05.2	+1.3
TYV	Tymovskoe	7.88	301	*e*PN	Pn	09 24 41.0	+3.3
TYV				*e*S	Sn	09 26 06.4	+1.0
TYV				pmax	pmax		
	comp=Z,400nm,4.1s						
TYV				pmax	pmax		
	comp=Z,51nm,0.8s						
TYV				smax	smax		
	comp=N,12nm,1.0s						
TYV				smax	smax		
	comp=E,6.0nm,1.0s						
TYV				smax	smax		
	comp=N,400nm,4.8s						
TYV				smax	smax		
	comp=E,800nm,4.8s						
TYV	Tymovskoe	7.88	301	*e*P	Pn	09 24 41.0	+3.3
TYV				AMB	AMB	09 24 43.5	
	comp=E,400nm,4.0s						
TYV				AMB	AMB	09 24 43.6	
	comp=E,50nm,0.8s						
TYV				*e*S	Sn	09 26 06.4	+1.0
TYV				A	A	09 26 08.4	
	comp=E,20nm,0.7s						
TYV				A	A	09 26 08.4	
	comp=E,10.0nm,0.7s						
TYV				A	A	09 26 12.5	
	comp=E,400nm,5.0s						
TYV				A	A	09 26 12.5	
	comp=E,800nm,5.0s						
JOB	Onbets	8.00	240	P	Pn	09 24 40.2	+0.8
JOB				*e*S	Sn	09 26 06.7	-1.7
JKA	Kamikawa-asahi	8.14	251	*e*P	Pn	09 24 45.2	+3.9
JKA	Kamikawa-asahi	8.14	251	Pn	Pn	09 24 45.2	+3.9
ASAJ	Asahikawa	8.14	251	LR	LR	09 27 39.0	
	comp=E,270nm,21.3s,baz=355,slow=36						
ASAJ	Asahikawa	8.14	251	P	Pn	09 24 45.6	+4.2
ASAJ	Asahikawa	8.14	251	PN	Pn	09 24 45.2	+3.8
JWK2	Keihoku	8.15	260	P	Pn	09 24 47.4	+5.9
JKK2	Kamakawa 2	8.16	249	P	Pn	09 24 44.7	+3.1
JCH	Churui	8.45	240	P	Pn	09 24 45.5	-0.1
JCH				*e*S	Sn	09 26 16.4	-3.1
JFR	Furan	8.61	246	P	Pn	09 24 50.3	+2.5
JRBN	Rebuntou	8.68	262	P	Pn	09 24 53.8	+5.1
ERM	Erimo	8.94	238	PN	Pn	09 24 53.7	+1.4
ERM	Erimo	8.94	238	Pn	Pn	09 24 53.7	+1.4
JBT2	Biratori 2	8.96	244	P	Pn	09 24 53.3	+0.7
JNBK	Urakawa-nobuka	9.02	240	P	Pn	09 24 52.5	-0.8
OKH	Okha	9.14	317	*e*P	Pn	09 24 59.0	+4.1
OKH				AMB	AMB	09 25 00.9	
	comp=E,60nm,0.6s						
JEW	Eniwo	9.49	247	Pn	Pn	09 25 02.4	+2.6
NKL	Nikolayevsk	10.02	311	*e*P	Pn	09 25 10.8	+3.9
NKL				AMB	AMB	09 25 14.6	
	comp=E,20nm,0.8s						
JKB	Kayabe	10.28	243	P	Pn	09 25 09.3	-1.3
JYM2	Yakumo 2	10.55	246	P	Pn	09 25 13.7	-0.6
JTM	Tenmabayashi	10.94	238	Pn	Pn	09 25 19.3	-0.2
JANG	Nango	10.96	235	P	Pn	09 25 16.4	-3.4
JANG				*e*S	Sn	09 27 10.0	-11
JTH	Tanohata	11.06	233	*e*S	Sn	09 27 12.3	-11
OFUJ	Ofunato	11.79	230	*e*S	Sn	09 27 30.1	-11
JRG	Rokugo	12.12	234	P	Pn	09 25 33.2	-2.5
JIO	Ouri	12.42	229	P	Pn	09 25 36.8	-3.0
MA2	Magadan	12.43	354	*d i*PN	Pn	09 25 40.9	+1.1
MA2	Magadan	12.43	354	*e*P	Pn	09 25 40.9	+1.1
MA2	Magadan	12.43	354	Pn	Pn	09 25 40.7	+0.8
JMM	Marumori	13.15	229	Pn	Pn	09 25 46.5	-3.3
JSD	Sado	14.39	236	Pn	Pn	09 26 08.1	+1.6
SHEM	Shemya Is, Ala	14.42	60	LR	LR	09 31 28.7	
	comp=E,51nm,21.0s,baz=302,slow=36						
KLR	Kul'dur	14.50	286	LR	LR	09 31 54.5	
	comp=E,206nm,19.4s,baz=102,slow=38						
KLR	Kul'dur	14.50	286	⇑*e*P	P	09 26 11.5	-1.5
KLR	Kul'dur	14.50	286	*e*P	Pn	09 26 06.6	-1.2
USA0B	Ussuriysk Arra	15.20	266	P	P	09 26 21.1	+0.3
USA0B				pmax	pmax		
	comp=Z,12nm,0.8s						
USA0B	Ussuriysk Arra	15.20	266	P	P	09 26 21.1	+0.3
USRK	Ussuriysk Ar.	15.20	266	LR	LR	09 31 58.1	
	comp=Z,137nm,18.9s,baz=95,slow=37						
MJA0	Matsu Arr-Jizo	15.48	232	*e*P	P	09 26 23.9	-0.2
MAJO	Matsushiro	15.51	232	⇓*e*P	P	09 26 24.8	+0.5
MAJO	Matsushiro	15.51	232	Pn	Pn	09 26 21.9	+1.0
MAT	Matsushiro	15.51	232	P	Pn	09 26 21.6	+0.7
MJAR	Matsushiro Arr	15.51	232	P	Pn	09 26 19.2	-1.7
	comp=Z,0.1nm,0.3s,baz=26,slow=14,SNR=10						
MJAR				LR	LR	09 31 49.2	
	comp=Z,74nm,21.8s,baz=20,slow=35						
MJAR	Matsushiro Arr	15.51	232	P	P	09 26 23.3	-1.0
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MJAR	Matsushiro Arr	15.51	232	P	P	09 26 23.3	-1.0
VLA	Vladivostok	15.66	263	⇓*e*P	Pn	09 26 22.8	0.0
VLA	Vladivostok	15.66	263	*e*P	Pn	09 26 22.8	0.0
SEY	Seymchan	15.72	358	⇓*e*P	P	09 26 25.3	-1.1
JHJ	Hachijo jima 2	17.47	221	LR	LR	09 35 34.7	
	comp=Z,22nm,18.9s,baz=82,slow=44						

ZEA	**Zeya**	**17.75**	**301**	*e*P	**P**	**09 26 50.5**	**+1.6**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				MLR	MLR		
	comp=E,100nm,13.0s						
ZEA	**Zeya**	**17.75**	**301**	*e*P	**Pn**	**09 26 47.0**	**-1.7**
ZEA				AMB	AMB	09 26 56.5	
	comp=E,10.0nm,0.9s						
JWT	**Wachi**	**17.97**	**235**	P	**Pn**	**09 26 52.8**	**+1.2**
JWT				IAmb	IAmb	09 27 03.9	
	comp=Z,50nm,1.3s						
YAK	**Yakutsk**	**19.97**	**326**	LR	LR	09 34 32.0	
	comp=Z,120nm,19.9s,baz=94,slow=36						
YAK	**Yakutsk**	**19.97**	**326**	*e*P	**Pn**	**09 27 15.3**	**0.0**
YAK				*e*S	**Sn**	**09 30 56.1**	**-2.8**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				smax	smax		
	comp=E,194nm,5.2s						
YAK				smax	smax		
	comp=N,144nm,5.2s						
YAK	**Yakutsk**	**19.97**	**326**	*e*P	**Pn**	**09 27 15.2**	**0.0**
KSRS	**Korea Array**	**21.09**	**252**	P	**P**	**09 27 26.5**	**+1.0**
	comp=N,8.4nm,0.9s,baz=52,slow=10,SNR=15						
KSRS				LR	LR	09 34 14.5	
	comp=N,121nm,20.4s,baz=16,slow=33						
KSRS	**Korea Array**	**21.09**	**252**	*e*P	**P**	**09 27 29.6**	**+4.2**
KSRS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BILL	**Bilibino**	**21.86**	**13**	*e*P	**P**	**09 27 32.2**	**-1.2**
BILL				*e**SP	sP	09 28 02.0	+10
BILL				pmax	pmax		
	comp=Z,14nm,3.0s						
BILL	**Bilibino**	**21.86**	**13**	*e*P	**P**	**09 27 32.2**	**-1.2**
TJN	**Taejon**	**22.09**	**250**	⇑*e*P	**P**	**09 27 34.1**	**-2.1**
TIXI	**Tiksi**	**27.02**	**343**	LR	LR	09 40 14.1	
	comp=Z,94nm,19.9s,baz=272,slow=39						
TIXI	**Tiksi**	**27.02**	**343**	⇑*e*P	**P**	**09 28 24.3**	**+2.2**
TIXI				pmax	pmax		
	comp=Z,5.0nm,2.1s						
H11N2	**WAKE ISLAND Hy**	**29.61**	**153**	T	T	10 00 42.7	
	baz=341,slow=76,SNR=1867						
H11N1	**WAKE ISLAND Hy**	**29.62**	**153**	T	T	10 00 40.3	
	baz=341,slow=76,SNR=1464						
H11N3	**WAKE ISLAND Hy**	**29.62**	**153**	T	T	10 00 40.4	
	baz=341,slow=76,SNR=857						
H11S1	**WAKE ISLAND Hy**	**30.70**	**155**	T	T	10 02 02.6	
	baz=342,slow=76,SNR=1524						
H11S3	**WAKE ISLAND Hy**	**30.71**	**155**	T	T	10 02 03.6	
	baz=342,slow=76,SNR=1061						
H11S2	**WAKE ISLAND Hy**	**30.72**	**155**	T	T	10 02 04.0	
	baz=342,slow=76,SNR=1716						
ULN	**Ulaanbaatar**	**30.87**	**288**	⇑*e*P	**P**	**09 28 55.4**	**-1.4**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
SONM	**Songino Array**	**31.30**	**289**	P	**P**	**09 29 00.6**	**0.0**
	comp=Z,0.4nm,0.5s,baz=63,slow=8.2,SNR=3.9						
SONM				PcP	**PcP**	**09 31 53.3**	**0.0**
	comp=Z,0.6nm,0.8s,baz=109,slow=2.5,SNR=3.8						
SONM				LR	LR	09 42 27.8	
	comp=Z,116nm,18.9s,baz=319,slow=38						
TTA	**Tatalina**	**31.94**	**42**	P	**P**	**09 29 07.1**	**+1.2**
TTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TTA	**Tatalina**	**31.94**	**42**	P	**P**	**09 29 07.1**	**+1.2**
K20K	**Telida**	**32.86**	**41**	P	**P**	**09 29 15.6**	**+1.8**
J20K	**Nowinta River**	**32.89**	**40**	P	**P**	**09 29 15.1**	**+1.0**
IMAR	**Indian Mountai**	**33.27**	**37**	P	**P**	**09 29 18.4**	**+1.0**
A21K	**Barrow**	**33.49**	**27**	P	**P**	**09 29 19.8**	**+0.6**
A21K				IAmb	IAmb	09 29 34.9	
	comp=Z,7.1nm,0.8s						
H21K	**Melozitna Rive**	**33.62**	**37**	P	**P**	**09 29 21.7**	**+1.3**
PPLA	**Purkeypile**	**33.69**	**42**	P	**P**	**09 29 23.2**	**+1.9**
PPLA				IAmb	IAmb	09 29 43.8	
	comp=Z,19nm,1.4s						
KTH	**Kantishna Hill**	**34.28**	**41**	P	**P**	**09 29 28.1**	**+1.9**
GUMO	**Guam**	**34.30**	**195**	LR	LR	09 40 26.6	
	comp=Z,40nm,19.9s,baz=124,slow=31						
I23K	**Minto, Yukon-K**	**35.01**	**38**	P	**P**	**09 29 34.0**	**+1.6**
I23K				IAmb	IAmb	09 29 35.2	
	comp=Z,12nm,1.5s						
RND	**Reindeer**	**35.21**	**41**	P	**P**	**09 29 34.4**	**+0.1**
RND				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RND	**Reindeer**	**35.21**	**41**	P	**P**	**09 29 34.4**	**+0.1**
TOLK	**Toolik Lake Re**	**35.24**	**32**	P	**P**	**09 29 35.6**	**+1.2**
TOLK				IAmb	IAmb	09 29 51.4	
	comp=Z,20nm,1.4s						
MDM	**Murphy Dome**	**35.49**	**39**	P	**P**	**09 29 38.4**	**+1.7**
MDM				IAmb	IAmb	09 29 40.3	
	comp=Z,8.2nm,1.1s						
SML	**Sawmill**	**35.50**	**44**	P	**P**	**09 29 38.2**	**+1.4**
WRH	**Wood River Hil**	**35.54**	**40**	P	**P**	**09 29 37.8**	**+0.7**
WRH				IAmb	IAmb	09 29 47.0	
	comp=Z,7.7nm,1.3s						
H24K	**Noodor Dome**	**35.66**	**37**	P	**P**	**09 29 39.2**	**+1.2**
H24K				IAmb	IAmb	09 29 40.4	
	comp=Z,9.2nm,1.4s						
CCB	**Clear Creek Bu**	**35.67**	**39**	P	**P**	**09 29 39.2**	**+1.1**
XAN	**Xi'an**	**35.70**	**265**	⇑P	**P**	**09 29 40.5**	**+1.7**
XAN				pP	sP	09 29 56.3	-2.9
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SCM	**Sheep Creek Mo**	**35.98**	**44**	P	**P**	**09 29 42.0**	**+1.1**
SCM				pmax	pmax		
	comp=Z,46nm,1.5s						
SCM	**Sheep Creek Mo**	**35.98**	**44**	P	**P**	**09 29 42.0**	**+1.1**
HDA	**Harding Lake**	**36.04**	**40**	P	**P**	**09 29 42.0**	**+0.7**
HDA				IAmb	IAmb	09 29 47.5	
	comp=Z,7.9nm,1.3s						
ILAR	**Eielson Array**	**36.06**	**39**	P	**P**	**09 29 42.1**	**+0.6**
	comp=Z,2.1nm,1.0s,baz=262,slow=7.5,SNR=9.1						
ILAR				pP	**pwP**	**09 29 57.5**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=259,slow=5.1,SNR=4.9						
FYU	**Fort Yukon**	**36.75**	**36**	P	**P**	**09 29 49.3**	**+2.1**
BMAR	**Burnt Mountain**	**37.02**	**35**	P	**P**	**09 29 51.5**	**+1.8**
M26K	**Nabesna, AK**	**37.95**	**43**	P	**P**	**09 29 59.8**	**+2.2**
M26K				IAmb	IAmb	09 30 00.7	
	comp=Z,14nm,1.1s						
NRIK	**Noril'sk**	**38.40**	**329**	LR	LR	09 46 58.3	
	comp=Z,153nm,18.4s,baz=18,slow=38						
NRIK	**Noril'sk**	**38.40**	**329**	⇑*e*P	**P**	**09 29 59.5**	**-1.7**
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
L27K	**Beaver Creek,**	**38.40**	**42**	P	**P**	**09 30 03.5**	**+2.1**
L27K				IAmb	IAmb	09 30 04.4	
	comp=Z,16nm,1.4s						
BCAR	**Beaver Creek A**	**38.42**	**42**	P	**P**	**09 30 03.6**	**+2.1**
EGAK	**Eagle**	**38.51**	**39**	P	**P**	**09 30 03.4**	**+1.2**
EGAK				IAmb	IAmb	09 30 03.8	
	comp=Z,9.3nm,1.1s						
BARN	**Barnard Glacie**	**38.77**	**45**	P	**P**	**09 30 05.8**	**+1.1**
CTGM	**Chitina Glacie**	**38.95**	**45**	P	**P**	**09 30 07.7**	**+1.6**
GTA	**Gaotai**	**39.03**	**279**	*e*P	**P**	**09 30 09.0**	**+1.9**
GTA				pP	pP	09 30 12.5	-8.7
GTA				sP	sP	09 30 15.0	-13
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
EPYK	**Eagle Plains**	**40.17**	**36**	P	**P**	**09 30 17.9**	**+1.9**
EPYK				IAmb	IAmb	09 30 39.8	
	comp=Z,16nm,1.5s						
INK	**Inuvik**	**41.14**	**33**	P	**P**	**09 30 25.5**	**+1.6**
	comp=Z,5.0nm,0.7s,baz=292,slow=6.9,SNR=29						
INK				pP	**pwP**	**09 30 40.6**	**-0.3**
	comp=Z,2.2nm,0.5s,baz=301,slow=5.8,SNR=5.4						
INK	**Inuvik**	**41.14**	**33**	P	**P**	**09 30 25.8**	**+1.8**
INK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
INK	**Inuvik**	**41.14**	**33**	P	**P**	**09 30 25.8**	**+1.8**
INK				IAmb	IAmb	09 30 26.6	
	comp=Z,5.9nm,0.8s						
ZALV	**Zalesovo Beam**	**42.43**	**305**	P	**P**	**09 30 32.5**	**-2.1**
	comp=Z,0.6nm,0.5s,baz=65,slow=5.9,SNR=4.4						
ZALV				PcP	**PcP**	**09 32 26.2**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=76,slow=6.1,SNR=6.4						
ZALV				LR	LR	09 49 21.1	
	comp=Z,119nm,18.2s,baz=60,slow=38						
A36M	**Sachs Harbour**	**43.33**	**27**	P	**P**	**09 30 43.0**	**+1.3**
C36M	**Paulatuk**	**44.30**	**30**	P	**P**	**09 30 50.9**	**+1.4**
C36M				IAmb	IAmb	09 30 51.8	
	comp=Z,19nm,1.1s						
DLBC	**Dease Lake**	**45.14**	**46**	P	**P**	**09 30 58.6**	**+2.2**
DLBC				IAmb	IAmb	09 31 08.3	
	comp=Z,19nm,1.4s						
H02S1	**DAWSON INLET T**	**45.86**	**54**	T	T	10 20 55.0	
	SNR=235						
MK31	**Makanchi Array**	**46.84**	**297**	⇑*e*P	**P**	**09 31 07.9**	**-2.0**
MKAR	**Makanchi Array**	**46.84**	**297**	P	**P**	**09 31 08.3**	**-1.6**
	comp=Z,1.0nm,0.8s,baz=58,slow=8.7,SNR=1.8						
MKAR				PcP	**PcP**	**09 32 41.9**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=72,slow=4.0,SNR=3.8						
MKAR				LR	LR	09 52 17.1	
	comp=Z,93nm,19.7s,baz=351,slow=38						
KURK	**Kurchatov**	**47.20**	**303**	P	**P**	**09 31 10.9**	**-1.7**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**47.20**	**303**	*e*P	**P**	**09 31 10.9**	**-1.7**
KURK	**Kurchatov**	**47.20**	**303**	P	**P**	**09 31 10.9**	**-1.7**
KURBB	**Kurchatov Arra**	**47.30**	**303**	P	**P**	**09 31 11.9**	**-1.4**
	comp=Z,3.1nm,0.9s,baz=67,slow=8.2,SNR=12						
YKA	**Yellowknife Ar**	**50.43**	**37**	P	**P**	**09 31 38.4**	**+1.2**
	comp=Z,6.4nm,0.7s,baz=297,slow=7.3,SNR=76						
YKA				PcP	**PcP**	**09 32 55.1**	**+0.4**
	comp=Z,1.1nm,0.9s,baz=301,slow=3.7,SNR=5.9						
YKA	**Yellowknife Ar**	**50.43**	**37**	P	**P**	**09 31 38.3**	**+1.1**
BVAR	**Borovoye Array**	**50.65**	**309**	P	**P**	**09 31 37.9**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=104,slow=6.3,SNR=4.9						
BVAR				PcP	**PcP**	**09 32 55.4**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=132,slow=1.1,SNR=6.4						
BRVK	**Borovoye**	**50.69**	**309**	⇑*e*P	**P**	**09 31 37.8**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
BRVK	**Borovoye**	**50.69**	**309**	*e*P	**P**	**09 31 37.8**	**-1.5**
RABL	**Rabaul**	**51.24**	**181**		pP	09 32 04.0	+6.0
CHTO	**Chiang Mai**	**52.38**	**256**	P	**P**	**09 31 52.5**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CHTO	**Chiang Mai**	**52.38**	**256**	P	**P**	**09 31 52.5**	**+0.2**
CHTO				IAmb	IAmb	09 31 54.3	
	comp=Z,8.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**52.63**	**256**	P	**P**	**09 31 55.2**	**+1.0**
	comp=Z,3.8nm,0.7s,baz=34,slow=7.5,SNR=24						
CMAR				LR	LR	09 56 10.7	
	comp=Z,27nm,18.1s,baz=310,slow=38						
CMAR	**Chiang Mai Arr**	**52.63**	**256**	*e*P	**P**	**09 31 55.8**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**52.63**	**256**	P	**P**	**09 31 54.6**	**+0.4**
AAK	**Ala-Archa**	**53.74**	**296**	P	**P**	**09 32 01.8**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=115,slow=12,SNR=3.7						
AAK	**Ala-Archa**	**53.74**	**296**	⇓*e*P	**P**	**09 32 00.3**	**-2.0**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AAK	**Ala-Archa**	**53.74**	**296**	*e*P	**P**	**09 32 00.4**	**-1.9**
ARU	**Arti**	**54.73**	**317**	P	**P**	**09 32 07.8**	**-1.2**
	comp=Z,1.1nm,0.3s,baz=54,slow=8.7,SNR=3.6						
ARU	**Arti**	**54.73**	**317**	IAmb	IAmb	09 32 08.5	
	comp=Z,16nm,1.4s						
ARCES	**ARCESS Array B**	**57.42**	**341**	P	**P**	**09 32 27.5**	**-0.5**
	comp=Z,3.5nm,0.9s,baz=30,slow=5.4,SNR=5.2						
ARCES				pP	**pwP**	**09 32 45.0**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=22,slow=3.9,SNR=1.4						
ARCES	**ARCESS Array B**	**57.42**	**341**	*e*P	**P**	**09 32 28.5**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
K05A	**Summer Lake**	**57.87**	**60**	P	**P**	**09 32 33.5**	**+1.6**
ABKAR	**Akbulak array**	**58.21**	**310**	P	**P**	**09 32 32.5**	**-1.4**
AKTO	**Aktyubinsk**	**58.49**	**312**	PcP	**PcP**	**09 33 25.5**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=22,slow=5.4,SNR=3.7						
PLID	**Pearl Lake**	**59.27**	**55**	P	**P**	**09 32 43.0**	**+1.4**
CHGR	**Chuyangaron**	**59.36**	**295**	P	**P**	**09 32 40.2**	**-1.9**
FCC	**Fort Churchill**	**60.76**	**33**	P	**P**	**09 32 51.6**	**+0.4**
FCC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FCC	**Fort Churchill**	**60.76**	**33**	P	**P**	**09 32 51.6**	**+0.4**
FCC				IAmb	IAmb	09 32 52.4	
	comp=Z,5.4nm,0.7s						
LRM	**Limekiln Ridge**	**60.77**	**53**	P	**P**	**09 32 53.6**	**+1.7**
BOZ	**Bozeman (W)**	**61.36**	**53**	P	**P**	**09 32 57.1**	**+1.3**
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOZ	**Bozeman (W)**	**61.36**	**53**	P	**P**	**09 32 57.1**	**+1.3**
BOZ				IAmb	IAmb	09 32 58.5	
	comp=Z,5.3nm,0.9s						
COEN	**Coen**	**61.61**	**191**	P	**P**	**09 32 59.5**	**+2.0**
KVN	**Kaiserville**	**61.80**	**62**	P	**P**	**09 33 01.2**	**+2.3**
KVN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KVN	**Kaiserville**	**61.80**	**62**	P	**P**	**09 33 01.2**	**+2.3**
NVAR	**Mina Array Bea**	**62.07**	**63**	P	**P**	**09 33 02.5**	**+1.7**
	comp=Z,0.6nm,0.8s,baz=286,slow=7.3,SNR=4.9						
NVAR				pP	**pwP**	**09 33 18.3**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=292,slow=7.2,SNR=11						
NVAR	**Mina Array Bea**	**62.07**	**63**	P	**P**	**09 33 03.3**	**+2.5**
BELG	**Belogornoye**	**62.25**	**318**	P	**P**	**09 33 00.7**	**-0.7**
	comp=Z,4.3nm,0.5s,baz=16,slow=2.2,SNR=4.7						
BELG	**Belogornoye**	**62.25**	**318**	⇓*e*P	**P**	**09 32 59.6**	**-1.8**
BELG				pmax	pmax		
	comp=Z,2.0nm,1.2s						
RLMT	**Red Lodge**	**62.94**	**52**	IAmb	IAmb	09 33 25.6	
	comp=Z,7.1nm,1.2s						
MOOW	**Moose Ponds**	**63.03**	**54**	P	**P**	**09 33 09.0**	**+1.9**
MOOW				IAmb	IAmb	09 33 26.1	
	comp=Z,6.4nm,1.4s						
REDW	**Red Top Meadow**	**63.22**	**54**	P	**P**	**09 33 10.3**	**+1.9**
REDW				IAmb	IAmb	09 33 27.7	
	comp=Z,7.4nm,1.1s						
LAO	**LASA Array**	**63.51**	**49**	IAmb	IAmb	09 33 13.2	
	comp=Z,11nm,1.0s						
FIA1	**FINESS Array S**	**63.64**	**335**	P	**P**	**09 33 09.0**	**-1.5**
FINES	**FINESS Array B**	**63.64**	**335**	P	**P**	**09 33 08.8**	**-1.7**
	comp=Z,3.3nm,0.5s,baz=32,slow=7.7,SNR=42						
FINES				LR	LR	10 04 17.0	
	comp=Z,123nm,20.3s,baz=320,slow=39						
FINES	**FINESS Array B**	**63.64**	**335**	*e*P	**P**	**09 33 09.9**	**-0.6**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SPR3	**Spring Creek 3**	**64.08**	**60**	P	**P**	**09 33 16.0**	**+1.8**
PDAR	**Pinedale Array**	**64.33**	**54**	P	**P**	**09 33 16.6**	**+0.9**
	comp=Z,2.1nm,0.9s,baz=296,slow=2.0,SNR=14						
PDAR				pP	**pwP**	**09 33 33.0**	**-0.6**
	comp=Z,4.0nm,0.9s,baz=293,slow=2.1,SNR=16						
PDAR				LR	LR	10 04 12.5	
	comp=Z,22nm,18.3s,baz=5.0,slow=39						
PDAR	**Pinedale Array**	**64.33**	**54**	P	**P**	**09 33 17.3**	**+1.6**
NLU	**North Lily Min**	**64.77**	**58**	P	**P**	**09 33 19.2**	**+0.7**
NLU				IAmb	IAmb	09 33 37.2	
	comp=Z,6.4nm,1.0s						
OBN	**Obninsk**	**64.97**	**326**	*e*P	**P**	**09 33 19.0**	**-0.3**
OBN				*e**PP	**sP**	**09 33 40.6**	**+0.3**
OBN				*e*		09 33 51.2	
OBN				*e*		09 35 43.7	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OBN	**Obninsk**	**64.97**	**326**	*e*P	**P**	**09 33 19.0**	**-0.3**
SMRI	**Semarang**	**66.04**	**228**	P	**P**	**09 33 23.3**	**-3.4**
SRU	**San Rafael Swe**	**66.22**	**58**	IAmb	IAmb	09 33 46.4	
	comp=Z,8.4nm,0.8s						
RSSD	**Black Hills**	**66.38**	**50**	P	**P**	**09 33 29.1**	**+0.2**
RSSD				pmax	pmax		
	comp=Z,9.0nm,0.8s						
RSSD	**Black Hills**	**66.38**	**50**	P	**P**	**09 33 29.1**	**+0.2**
RSSD				IAmb	IAmb	09 33 30.8	
	comp=Z,9.5nm,0.8s						
NB2	**NORSAR Subarra**	**67.79**	**341**	P	**P**	**09 33 36.7**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**67.79**	**341**	P	**P**	**09 33 37.0**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=28,slow=6.0,SNR=19						
MNK	**Minsk**	**68.63**	**329**	*i* P	**P**	**09 33 39.3**	**-3.3**
MNK				*i* *PP	**pwP**	**09 34 00.1**	**-0.3**
MNK				*i*		09 34 02.8	
MNK				*i* *SP	**PcP**	**09 34 09.6**	**+2.4**
MNK				*i* S	**S**	**09 42 36.1**	**-4.5**
MNK				*i* *SS	sS	09 43 12.1	+5.5
MNK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,13nm,0.9s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,931nm,19.0s						
MNK				MLR	MLR		
	comp=E,82nm,19.0s						
MNK				MLR	MLR		
	comp=Z,138nm,19.0s						
F33A	**5 Mile Ranch,**	**69.04**	**45**	IAmb	IAmb	09 33 46.7	
	comp=Z,8.8nm,0.8s						
WRA	**Warramunga Arr**	**69.04**	**199**	P	**P**	**09 33 45.8**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=18,slow=6.8,SNR=12						
WRA	**Warramunga Arr**	**69.04**	**199**	*e*P	**P**	**09 33 46.5**	**+1.0**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ECSD	**EROS Data Cent**	**70.43**	**46**	IAmb	IAmb	09 33 55.2	
	comp=Z,13nm,0.9s						
KBZ	**Khabaz**	**70.61**	**314**	LR	LR	10 08 47.2	
	comp=Z,104nm,18.1s,baz=346,slow=39						
SPMN	**Marine on St.**	**71.14**	**43**	IAmb	IAmb	09 33 59.8	
	comp=Z,7.3nm,0.8s						
AKASG	**Malin Array Be**	**71.20**	**326**	P	**P**	**09 33 57.4**	**-1.0**
	comp=Z,1.3nm,0.4s,baz=36,slow=6.5,SNR=8.4						
AKASG				LR	LR	10 06 54.4	
	comp=Z,95nm,20.1s,baz=345,slow=37						
ASAR	**Alice Springs**	**72.74**	**199**	P	**P**	**09 34 09.3**	**+1.5**
	comp=Z,2.9nm,0.7s,baz=9.7,slow=5.1,SNR=30						
ASAR				pP	**PcP**	**09 34 26.0**	**+1.1**
	comp=Z,1.9nm,0.8s,baz=14,slow=5.0,SNR=6.1						
SCHQ	**Schefferville**	**72.78**	**23**	P	**P**	**09 34 08.2**	**+0.3**
	comp=Z,3.5nm,0.7s,baz=281,slow=4.8,SNR=6.5						
BUR08	**Bucovina Ar. S**	**75.22**	**327**	P	**P**	**09 34 22.5**	**+0.2**
VLDQ	**Val d'Or**	**75.24**	**32**	P	**P**	**09 34 21.3**	**-0.9**
VLDQ				IAmb	IAmb	09 34 38.5	
	comp=Z,10nm,1.1s						
EKA	**Eskdalemuir Ar**	**75.88**	**346**	P	**P**	**09 34 25.7**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=24,slow=4.8,SNR=5.3						
CLL	**Collm**	**76.06**	**336**	P	**P**	**09 34 25.8**	**-1.1**
CLL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CLL	**Collm**	**76.06**	**336**	*i* P	**P**	**09 34 25.7**	**-1.1**
	comp=Z,10.0nm,1.1s						
CLL	**Collm**	**76.06**	**336**	P	**P**	**09 34 25.8**	**-1.1**
CLL				IAmb	IAmb	09 34 27.6	
	comp=Z,6.3nm,0.7s						
U40A	**Yellville**	**77.88**	**49**	IAmb	IAmb	09 34 38.2	
	comp=Z,11nm,0.8s						
GERES	**GERESS Array B**	**78.06**	**334**	P	**P**	**09 34 37.7**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=43,slow=6.0,SNR=12						
GERES	**GERESS Array B**	**78.06**	**334**	*e*P	**P**	**09 34 37.9**	**-0.4**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CONA	**Conrad Observa**	**78.21**	**332**	*e*P	**P**	**09 34 38.5**	**-0.6**
	comp=Z,5.8nm,1.4s						
ARSA	**Arzberg**	**78.92**	**332**	*e*P	**P**	**09 34 42.9**	**0.0**
	comp=Z,1.4nm,0.5s						
STKA	**Stephens Creek**	**79.48**	**190**	P	**P**	**09 34 47.7**	**+1.8**
	comp=Z,2.4nm,0.9s,baz=343,slow=11,SNR=3.9						
SOKA	**Soboth**	**79.58**	**332**	*e*P	**P**	**09 34 45.9**	**-0.8**
	comp=Z,7.5nm,1.3s						
WCI	**Wyandotte Cave**	**79.64**	**44**	P	**P**	**09 34 47.0**	**0.0**
WCI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WCI	**Wyandotte Cave**	**79.64**	**44**	P	**P**	**09 34 47.0**	**0.0**
WCI				IAmb	IAmb	09 34 48.8	
	comp=Z,8.9nm,1.1s						
KBA	**Koelnbreinsper**	**79.75**	**333**	*e*P	**P**	**09 34 45.7**	**-2.0**
	comp=Z,4.3nm,0.5s						
WATA	**Walderalm**	**80.04**	**335**	*e*P	**P**	**09 34 48.9**	**-0.3**
	comp=Z,16nm,1.6s						
WTTA	**Wattenberg**	**80.09**	**335**	*e*P	**P**	**09 34 49.1**	**-0.5**
	comp=Z,17nm,1.4s						
MOTA	**Moosalm**	**80.17**	**335**	*e*P	**P**	**09 34 48.7**	**-1.3**
	comp=Z,11nm,1.2s						
VTS	**Vitosha**	**80.20**	**325**	P	**P**	**09 34 49.1**	**-1.1**
VTS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VTS	**Vitosha**	**80.20**	**325**	P	**P**	**09 34 49.1**	**-1.1**
VTS				IAmb	IAmb	09 34 50.9	
	comp=Z,9.8nm,0.8s						
SQTA	**Sankt Quirin**	**80.25**	**335**	*e*P	**P**	**09 34 49.3**	**-1.1**
	comp=Z,9.0nm,1.1s						
ABTA	**Abfaltersbach**	**80.30**	**334**	*e*P	**P**	**09 34 51.4**	**+0.9**
	comp=Z,13nm,1.5s						
FETA	**Feichten**	**80.57**	**335**	*e*P	**P**	**09 34 51.4**	**-0.7**
	comp=Z,4.8nm,1.2s						
DAVOX	**Davos/Dischmat**	**81.03**	**336**	P	**P**	**09 34 54.7**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=168,slow=0.5,SNR=5.1						
T50A	**Nancy**	**81.29**	**43**	IAmb	IAmb	09 34 57.0	
	comp=Z,5.0nm,0.7s						
CLTN	**Cedars of Leba**	**81.33**	**45**	IAmb	IAmb	09 35 14.8	
	comp=Z,18nm,1.5s						
SWET	**Sewanee**	**82.23**	**45**	IAmb	IAmb	09 35 01.7	
	comp=Z,7.9nm,0.8s						
PPT	**Papeete**	**82.34**	**126**	LR	LR	10 04 38.0	
	comp=Z,53nm,20.8s,baz=65,slow=30						
RAYN	**Ar Rayn**	**84.31**	**299**	P	**P**	**09 35 12.1**	**+0.3**
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RAYN	**Ar Rayn**	**84.31**	**299**	P	**P**	**09 35 12.1**	**+0.3**
RAYN				IAmb	IAmb	09 35 12.7	
	comp=Z,3.4nm,0.7s						
H03N2	**Juan Fernandez**	**138.61**	**90**	T	T	12 16 54.8	
	baz=309,slow=77,SNR=11						
H03N1	**Juan Fernandez**	**138.62**	**90**	T	T	12 16 56.2	
	baz=309,slow=77,SNR=9.0						
H03N3	**Juan Fernandez**	**138.62**	**90**	T	T	12 17 04.6	
	baz=309,slow=77,SNR=13						
CPUP	**Villa Florida**	**148.09**	**60**	PKPbc	**PKPbc**	**09 42 25.0**	**0.0**
	comp=Z,2.3nm,0.7s,baz=13,slow=1.9,SNR=3.9						
PLCA	**Paso Flores**	**148.11**	**95**	PKPbc	**PKPbc**	**09 42 25.1**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=297,slow=4.5,SNR=3.3						
VNA2	**Neumayer--Watz**	**154.53**	**195**	P	**PKPab**	**09 42 54.1**	**+0.6**
	baz=149,slow=4.5						
VNA3	**Neumayer Olymp**	**154.62**	**193**	P	**PKPab**	**09 42 53.0**	**-0.9**

MOS ***31*** *10:08:15.6±0.0, 43.°41N×40.°94E, h14km, MPVA3.1*
TIF ***31*** *10:08:18.6, 43.°48N×41.°10E, h14km±2km*
ISC 31 10:08:16.4±1.1**, 43.°44N**±0.°04×**40.°96E**±0.°02**, h9km**±10km**,**
n18, σ0.s78/36**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARXR	**Arkhyz**	**0.26**	**62**	*i* Pg	**Pg**	**10 08 22.1**	**+0.4**
ARXR				*i* Sg	**Sb**	**10 08 26.5**	**-1.5**
RPOR	**Krasnaya Polya**	**0.57**	**298**	*i* Pg	**Pg**	**10 08 27.4**	**0.0**
RPOR				*e*Sg	**Sg**	**10 08 35.8**	**+0.9**
VSLR	**Vesyoloye**	**0.68**	**272**	*i* Pg	**Pg**	**10 08 28.4**	**-0.9**
VSLR				*i* Sg	**Sg**	**10 08 38.8**	**+0.5**
AHMR	**Akhmetovskaya**	**0.72**	**5**	*i* Pg	**Pg**	**10 08 31.1**	**+0.9**
AHMR				*i* Sg	**Sb**	**10 08 42.1**	**+1.0**
GUZR	**Guzeripl'**	**0.83**	**313**	*e*Pg	**Pg**	**10 08 31.7**	**-0.5**
GUZR				*e*Sg	**Sg**	**10 08 44.0**	**+0.9**
SOC	**Sochi**	**0.92**	**280**	*e*Pg	**Pb**	**10 08 33.5**	**-0.9**
SOC				*e*Sg	**Sb**	**10 08 45.9**	**-0.8**
CHVG	**Ch'k'valeri**	**1.09**	**131**	P	**Pn**	**10 08 39.2**	**+1.3**
CHVG				S	**Sn**	**10 08 53.8**	**+0.7**
SHA1	**Shidzhatmaz**	**1.27**	**76**	*e*Pg	**Pn**	**10 08 40.1**	**-0.4**
SHA1				*e*Sg	**Sg**	**10 08 57.3**	**+0.1**
NEY	**Neytrino**	**1.30**	**98**	*i* Pg	**Pn**	**10 08 40.2**	**-0.6**
NEY				*e*Sg	**Sg**	**10 08 57.6**	**-0.5**
KIV	**Kislovodsk**	**1.35**	**67**	*e*Pg	**Pg**	**10 08 42.3**	**0.0**
KIV				*e*Sg	**Sg**	**10 08 59.9**	**0.0**
KIV0	**Kislovodsk Arr**	**1.36**	**67**	*e*Pg	**Pg**	**10 08 42.3**	**-0.1**
KIV0				*e*Sg	**Sg**	**10 08 59.9**	**-0.3**
KBZ	**Khabaz**	**1.44**	**78**	*e*Pg	**Pb**	**10 08 43.1**	**-0.2**
KBZ				*e*Sg	**Sg**	**10 09 02.0**	**-0.5**
BEYR	**Belyy Ugol+**	**1.46**	**66**	*e*Pg	**Pb**	**10 08 43.7**	**-0.1**
BEYR				*e*Sg	**Sg**	**10 09 03.0**	**-0.4**
PYA1	**Pyatigorsk**	**1.67**	**67**	*e*Pg	**Pb**	**10 08 46.6**	**-0.6**
PYA1				*e*Sg	**Sg**	**10 09 08.7**	**-1.3**
TKB	**Tkibuli**	**1.85**	**125**	P	**Pb**	**10 08 50.4**	**+0.1**
TKB				S	**Sg**	**10 09 15.8**	**+0.1**
ALER	**Alexandrovskoy**	**1.93**	**46**	*i* Pg	**Pn**	**10 08 49.6**	**+0.2**
ALER				*e*Sg	**Sb**	**10 09 16.5**	**+0.6**
ONI	**Oni**	**2.02**	**114**	P	**Pb**	**10 08 53.7**	**+0.5**
ONI				S	**Sg**	**10 09 19.3**	**-1.8**
ABS	**Abastumani**	**2.17**	**140**	P	**Pb**	**10 08 55.7**	**-0.2**
ABS				S	**Sb**	**10 09 24.1**	**+1.3**

IDC ***31*** *10:08:34.2±2.6, 6.°18S×130.°56E, h54km±37km, mb3.4/1, mb1 3.6/5, mb1mx3.2/27, mbtmp3.6/5, ML3.5/4, Error ellipse: s-maj=80.2km s-min=15.9km az=92.0*
ISC 31 10:08:33.1±1.0**, 6.°29S**±0.°06×**130.°7E**±0.°2**, h50km, n5,**
σ2.s97/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.42	6	P	Pn	10 09 50.4	-1.0
	1.5nm,0.3s,baz=204,slow=19,SNR=2.7						
SIJI				S	Sn	10 10 52.3	-0.1
	8.4nm,0.3s,baz=138,slow=23,SNR=25						
FITZ	Fitzroy Crossi	12.72	202	P	Pn	10 11 33.3	+1.9
	0.2nm,0.3s,baz=30,slow=13,SNR=8.5						
FITZ				S	Sn	10 13 48.2	-3.4
	0.2nm,0.3s,baz=258,slow=22,SNR=8.0						
WRA	Warramunga Arr	14.04	166	P	Pn	10 11 50.6	+1.3
	0.3nm,0.3s,baz=352,slow=13,SNR=23						
WRA				S	Sn	10 14 19.8	-3.8
	0.4nm,0.3s,baz=332,slow=22,SNR=4.1						
ASAR	Alice Springs	17.56	170	P	P	10 12 38.3	+3.4
	0.1nm,0.3s,baz=344,slow=8.4,SNR=13						
MKAR	Makanchi Array	68.00	326	P	P	10 19 26.7	-0.4
	0.4nm,0.4s,baz=113,slow=7.8,SNR=8.6						

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*SOME **31** 10:20:57.1,43.°63N×69.°80E*

*NNC **31** 10:20:57.7±0.9,43.°61N×69.°74E,h0^{km},mb3.8,mpv3.3, Error ellipse: s-maj=4.6km s-min=3.4km az=113.0, Suspected Mining explosion.*

*KRNET **31** 10:20:58.2±0.1,43.°50N×69.°10E,mb3.1*

ISC 31 10:20:58.7±3.2,**43.°46N**±0.°09×**69.°6E**±0.°1,**h0^{km},n21,** σ**1.s34**/28,**12C-6D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK09	Karatay Array	0.74	117	⇑P	Pg	10 21 12.1	-0.8
	3.6nm,0.5s,baz=316,slow=13						
KK09				⇓S	Sg	10 21 22.6	+0.1
	55nm,0.8s,baz=311,slow=27						
TRKS	Terek-Say	2.24	149	⇑*i*P	Pg	10 21 41.4	-0.3
	baz=42						
TRKS				⇑*i*S	Sg	10 22 12.6	+1.9
	baz=42						
MNAS	Manas	2.34	113	⇑*i*P	Pg	10 21 43.2	-0.5
	baz=11						
MNAS				⇑*i*S	Sg	10 22 16.2	+2.2
	baz=11						
ARK	Arkit	2.41	133	⇓*i*P	Pb	10 21 43.3	+0.3
	baz=28						
ARK				⇓*i*S	Sg	10 22 16.7	+0.6
	baz=28						
MRKS	Merke	2.75	104	Pg	Pb	10 21 47.7	-1.2
	7.3nm,0.4s						
MRKS				Lg	Lg	10 22 24.5	
	11nm,0.6s						
EKS2	Erkin-Say	3.17	103	P	Pb	10 21 54.8	-1.1
	SNR=12						
EKS2	Erkin-Say	3.17	103	⇑*i*P	Pb	10 21 54.8	-1.1
	baz=2.0						
EKS2				⇑*e*S	Sb	10 22 36.3	+1.2
	baz=2.0						
AML	Almayashu	3.29	112	P	Pb	10 21 57.4	-0.9
	SNR=8.1						
AML	Almayashu	3.29	112	⇑*i*P	Pb	10 21 56.4	-1.9
	baz=11						
AML				⇑*e*S	Sb	10 22 39.1	0.0
	baz=11						
USP	Ospenovka	3.58	91	P	Pb	10 22 02.7	-0.3
	SNR=13						
USP	Ospenovka	3.58	91	⇓*i*P	Pb	10 22 00.7	-2.3
	baz=92						
USP				⇓*e*S	Sb	10 22 46.5	-0.5
	baz=92						
AAK	Ala-Archa	3.68	101	P	Pb	10 22 03.4	-1.4
	SNR=14						
AAK	Ala-Archa	3.68	101	⇑Pg	Pb	10 22 03.1	-1.6
	5.0nm,0.5s						
AAK				⇑Lg	Lg	10 22 53.0	
	3.3nm,0.6s						
UCH	Uchtor	3.82	107	P	Pb	10 22 06.1	-1.2
	SNR=6.8						
TKM2	Tokmak 2	4.42	95	⇑Pg	Pb	10 22 14.6	-2.8
	7.2nm,1.0s						
TKM2				⇓Lg	Lg	10 23 15.0	
	7.4nm,1.0s						
KRBS	Karabastau	4.42	85	Pg	Pb	10 22 16.2	-1.2
	4.2nm,0.5s						
KRBS				Lg	Lg	10 23 12.5	
	6.4nm,0.6s						
DGS	Degeres	4.51	91	Pg	Pb	10 22 18.9	+0.1
	4.0nm,0.7s						
DGS				Lg	Lg	10 23 17.3	
	8.7nm,0.5s						
KST	Kastek	4.67	93	Pg	Pb	10 22 21.4	-0.2
	4.3nm,0.5s						
KST				Lg	Lg	10 23 22.3	
	8.6nm,0.8s						
KUU	Kurty	4.91	83	Pg	Pb	10 22 25.8	+0.2
	2.1nm,0.5s						
KUU				Lg	Lg	10 23 29.0	
	7.5nm,0.6s						
KTBS	Karatobe	5.15	85	Pg	Pb	10 22 30.6	+0.8
	3.3nm,0.5s						
KTBS				Lg	Lg	10 23 37.3	
	11nm,0.5s						
ARXS	Arharly	6.00	80	Pg	Pb	10 22 46.3	+2.1
	2.6nm,0.5s						
ARXS				Lg	Lg	10 24 04.5	
	4.3nm,0.4s						

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*IDC **31** 10:40:23.9±5.3,7.°69S×126.°98E,h234^{km}±69^{km},mb3.5/1, mb1 3.5/5,mb1mx2.9/43,mbtmp4.1/5,Error ellipse: s-maj=71.8km s-min=52.4km az=74.0*

ISC 31 10:40:21.9±2.6,**7.°6S**±0.°2×**127.°2E**±0.°1,**h200^{km},n5,** σ**1.s04**/7,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	4.35	234	P	Pn	10 41 28.4	+0.3
	32nm,0.3s,baz=92,slow=1.1,SNR=13						
BATI				S	Sn	10 42 20.2	0.0
	7.2nm,0.3s,baz=260,slow=23,SNR=1.9						
FITZ	Fitzroy Crossi	10.51	188	P	Pn	10 42 49.3	+1.5
	0.2nm,0.3s,baz=13,slow=11,SNR=1.2						
FITZ				S	S	10 44 44.7	-0.9
	0.3nm,0.3s,baz=92,slow=19,SNR=1.4						
WRA	Warramunga Arr	14.04	151	P	Pn	10 43 33.1	+0.7
	0.4nm,0.3s,baz=324,slow=12,SNR=17						
ASAR	Alice Springs	17.18	159	P	Pn	10 44 09.8	-0.5
	0.9nm,0.3s,baz=336,slow=12,SNR=28						
STKA	Stephens Creek	27.58	153	P	P	10 45 49.8	-0.7
	1.6nm,0.6s,baz=326,slow=15,SNR=4.0						

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*IDC **31** 10:56:53.9±0.4,11.°58N×86.°15W,h0^{km},mb4.9/22, mb1 5.1/23,mb1mx4.9/33,mbtmp4.9/23,ML5.1/1,MS5.4/26, Ms1 5.4/26,ms1mx5.4/29,Error ellipse: s-maj=21.6km s-min=10.0km az=59.0*

*MOS **31** 10:56:57.8±1.0,11.°44N×86.°43W,h33^{km},mb5.6/19, MS5.5/25,Error ellipse: s-maj=11.9km s-min=6.1km az=119.3*

*UCR **31** 10:56:57.5±2.1,11.°40N×86.°52W,h1^{km}±7^{km},ML5.0, MW5.6,mb5.8(NEIC)*

*NEIC **31** 10:56:58.1±2.9,11.°15N±0.°05×86.°62W±0.°06,h20^{km}±1^{km}, mb5.7/567,Ms_20 5.6/311,Mwb5.6/53,Mwr5.8/43,Mww5.8, Error ellipse: s-maj=11.6km s-min=7.2km az=235.0*

*INET **31** 10:56:58.5,11.°09N×86.°69W,h15^{km},MW5.7*

*NEIC **31** 10:56:59.4,11.°16N×86.°62W,h20^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.41; M$_{\theta\theta}$-2.37; M$_{\phi\phi}$-0.04; M$_{r\theta}$1.52; M$_{\theta\phi}$1.36; M$_{\phi r}$-0.84; Fault plane solution: M$_0$3.25000×10^{17} NP1:φ$_s$117.57000°, δ61.42000°,λ93.15000°. NP2:φ$_s$291.01000°,δ28.74000°, λ84.24000°. Principal axes: T 2.9273, Plg73.0000°, Azm35.0000°; N 0.5741, Plg3.0000°, Azm296.0000°; P -3.5014, Plg16.0000°, Azm205.0000°;*

*NEIC **31** 10:56:59.4,11.°16N×86.°62W,h20^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.39; M$_{\theta\theta}$-3.29; M$_{\phi\phi}$-0.10; M$_{r\theta}$4.00; M$_{\theta\phi}$0.12; M$_{\phi r}$-2.42; Fault plane solution: M$_0$5.75000×10^{17} NP1:φ$_s$114.44000°, δ72.97000°,λ102.46000°. NP2:φ$_s$257.41000°,δ20.99000°, λ54.84000°. Principal axes: T 6.0260, Plg60.0000°, Azm42.0000°; N -0.6006, Plg12.0000°, Azm291.0000°; P -5.4254, Plg27.0000°, Azm195.0000°;*

*SNET **31** 10:56:59.8±1.8,10.°93N×86.°99W,h35^{km}±816^{km},ML5.4*

*BJI **31** 10:57:00.0±0.0,11.°20N×86.°60W,h43^{km},mB5.6/37, Ms6.0/52,Ms7 5.8/51*

*GCMT **31** 10:57:02.1±0.1,10.°97N±0.°01×86.°83W±0.°01,h32^{km}, MW5.8/146,Moment Tensor Solution. s146,c302; s146,c412; Duration: 2.s0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$5.28±.06; M$_{\theta\theta}$-3.72±.04; M$_{\phi\phi}$-1.56±.05; M$_{r\theta}$3.52±.08; M$_{\theta\phi}$3.05±.04; M$_{\phi r}$-2.29±.08; Best double couple: M$_0$6.98200×10^{17} NP1:φ$_s$307.00000°,δ27.00000°, λ93.00000°. NP2:φ$_s$124.00000°,δ63.00000°,λ89.00000°. Principal axes: T 6.6860, Plg71.0000°, Azm31.0000°; N 0.5920, Plg1.0000°, Azm124.0000°; P -7.2780, Plg18.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **31** 10:57:04,10.°97N×86.°64W,h24^{km},Moment Tensor Solution. Duration: 8.s0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$5.27; M$_{\theta\theta}$-2.82; M$_{\phi\phi}$-2.45; M$_{r\theta}$3.57; M$_{\theta\phi}$3.28; M$_{\phi r}$-1.26; Fault plane solution: M$_0$6.78000×10^{17} NP1: φ$_s$328.00000°,δ31.00000°,λ115.00000°. NP2: φ$_s$120.00000°,δ62.00000°,λ76.00000°. Principal axes: T 6.6189, Plg69.0000°, Azm1.0000°; N 0.3055, Plg12.0000°, Azm126.0000°; P -6.9244, Plg16.0000°, Azm220.0000°;*

*GCG **31** 10:57:08.3±2.9,11.°57N×86.°96W,h32^{km}±999^{km},MD5.2*

ISC 31 10:56:58.8±0.6,**11.°28N**±0.°03×**86.°53W**±0.°03,**h33^{km}**±3^{km}, **n1194,**σ**1.s57**/813,**mb5.7**/313,**MS5.6**/217,**12C-10D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HZTE	Horizontes, Gu	1.08	121		Pb	10 57 18.9	0.0
GBS3	Finca Las Img	1.17	115	*e*P	Pb	10 57 19.7	-0.7
LAPC	Finca la Perla	1.19	115	*e*P	Pn	10 57 19.8	+0.6
BUEV	Buena Vista	1.20	113	*e*P	Pb	10 57 20.3	-0.8
BUAI	Buenos Aires	1.24	108	*e*P	Pb	10 57 22.3	+0.5
BUAI				*i* S	Sb	10 57 41.5	+4.0
LIM1	Limonal	1.38	114	*e*P	Pb	10 57 23.6	-0.6
ORTG	Ortega, Santa	1.39	131		Pn	10 57 22.8	+0.8
GUAB	Guayabo de Bag	1.40	114	*e*P	Pb	10 57 23.7	-0.7
GUAI	GUAI	1.42	135	*e*P	Pn	10 57 22.6	+0.3
COLC	Colonia	1.44	115	*e*P	Pb	10 57 24.4	-0.7
BOAB	BOACO BROADBAN	1.44	36	Pn	Pb	10 57 26.0	+0.9
HORNC	Hornillas	1.44	113	*i* P	Pb	10 57 24.6	-0.6
CUI	Cuipilapa	1.48	114	*e*P	Pb	10 57 24.5	-1.2
ACON	Acoyapa	1.50	63		Pb	10 57 26.6	+0.6
CRIN	San Cristobal	1.50	340		Pb	10 57 25.4	-0.8
DUNO	Dulce Nombre,	1.57	139		Pn	10 57 23.4	-1.0
ACAL	Aguas Claras	1.60	113	*e*P	Pb	10 57 27.1	-0.8
PTEN	Parque Tenorio	1.62	110	⇑*e*P	Pb	10 57 27.2	-0.9
MATN	Matagalpa	1.75	20		Pb	10 57 29.0	-1.4
JTS	Las Juntas de	1.84	122	Pn	Pn	10 57 28.3	+0.2
JTS				LR	LR	10 58 23.2	
	comp=Z,70µm,21.5s,slow=52						
JTS	Las Juntas de	1.84	122	*e*P	Pn	10 57 29.1	+1.1
JTS				*e*S	Sb	10 57 57.2	+2.8
JTS	Las Juntas de	1.84	122	*ce*P	Pn	10 57 29.4	+1.3
JTS	Las Juntas de	1.84	122	*e*P	Pn	10 57 28.3	+0.2
JTS	Las Juntas de	1.84	122	Pn	Pn	10 57 29.1	+1.1
CASO	Castillo	1.96	115	*e*P	Pb	10 57 32.8	-1.0
ARE1	Arenal 1	1.96	114	*e*P	Pb	10 57 33.3	-0.6
FORC	Fortuna	2.00	114	*e*P	Pn	10 57 32.3	+2.0
LAFE	Finca La Fe, P	2.16	132	*e*P	Pb	10 57 37.5	+0.2
COVE	Coope Vega, Sa	2.16	105	*e*P	Pn	10 57 33.6	+1.0
COVE	Coope Vega, Sa	2.16	105		Pn	10 57 34.3	+1.8
SRA1	San Ramn	2.34	120	*e*P	Pb	10 57 38.5	-2.0
ESPN	Las Esperanzas	2.37	67		Pb	10 57 38.7	-2.1
LCND	La Caada	2.42	327	*e*P	Pn	10 57 37.2	+1.1
LCND				*e*S	Sb	10 58 08.9	-2.2
LCND				IAML		10 58 17.6	
	comp=Z,26µm,0.5s						
LCND	La Caada	2.42	327	*e*P	Pn	10 57 37.2	+1.1
LCND				*e*S	Sb	10 58 08.9	-2.2
LCND				IAML		10 58 17.6	
	comp=Z,26µm,0.5s						
HDC	Heredia	2.69	118	*e*P	Pb	10 57 43.5	-3.0
HDC	Heredia	2.69	118		Pn	10 57 41.9	+1.9
PACA	Pacayal	2.79	321	*e*P	Pn	10 57 44.0	+2.6
PACA				*e*S	Sn	10 58 17.2	+3.2
PACA	Pacayal	2.79	321	*e*P	Pn	10 57 44.0	+2.6
PACA				*e*S	Sn	10 58 17.2	+3.2
ALJI	Alcalda de J	2.85	316	*e*P	Pn	10 57 42.6	+0.6
ALJI				*e*S	Sn	10 58 15.3	+0.1
ALJI	Alcalda de J	2.85	316	*e*P	Pn	10 57 42.6	+0.6
ALJI				*e*S	Sn	10 58 15.3	+0.1
TGUH	Tegucigalpa,Un	2.86	345	⇑*i*P	Pn	10 57 44.9	+2.7
TGUH	Tegucigalpa,Un	2.86	345	Pn	Pn	10 57 45.3	+3.0
LCR2	La Lucha 2	2.92	121	*e*P	Pn	10 57 46.5	+3.4
COEB	Comit de Eme	2.95	319	*e*P	Pn	10 57 44.5	+1.0
COEB				*e*S	Sn	10 58 21.1	+3.4
COEB				IAML		10 58 34.5	
	comp=Z,12µm,0.5s						
COEB	Comit de Eme	2.95	319	*e*P	Pn	10 57 44.5	+1.0
COEB				*e*S	Sn	10 58 21.1	+3.4
COEB				IAML		10 58 34.5	
	comp=Z,12µm,0.5s						
CVTR	Volcan Turrial	3.00	114		Pn	10 57 46.4	+2.0
RIMA	Rio Macho	3.02	119	*e*P	Pn	10 57 47.9	+3.3
RIMA	Rio Macho	3.02	119	Pn	Pn	10 57 46.5	+1.9
PQSS	Presa 15 de Se	3.06	320	*e*P	Pn	10 57 46.3	+1.4
PQSS				*e*S	Sn	10 58 22.5	+2.1
PEZE	Perez Zeledon,	3.38	124	*e*P	Pn	10 57 52.5	+3.1
PEZE	Perez Zeledon,	3.38	124		Pn	10 57 51.4	+2.0
LFRS	El Faro	3.40	314	*e*P	Pn	10 57 50.3	+0.7
LFRS	El Faro	3.40	314	*e*P	Pn	10 57 50.3	+0.7
SNET	Serv Nac Est T	3.56	313	*e*P	Pn	10 57 53.6	+1.7
SNET				IAML		10 58 49.3	
	comp=Z,6µm,0.4s						
SNET	Serv Nac Est T	3.56	313	*e*P	Pn	10 57 53.6	+1.7
SNET				*e*S	Sn	10 58 32.9	-0.1
SNET				IAML		10 58 49.3	
	comp=Z,6µm,0.4s						
SNET	Serv Nac Est T	3.56	313		Pn	10 57 53.0	+1.1
SRBA	San Rafael, Bu	3.73	123	*e*P	Pn	10 57 56.1	+1.9
SRBA	San Rafael, Bu	3.73	123		Pn	10 57 55.1	+1.0
EDBA	Buenos Aires	3.83	123	*e*P	Pn	10 57 57.9	+2.3
MTO3	Montecristo	4.15	319		Pn	10 58 01.7	+1.6
ESQI	Esquipulas	4.26	320		Pn	10 58 03.9	+2.4
EDSV	San Vito	4.27	125	*e*P	Pn	10 58 05.3	+3.6
BRU2	Volcan	4.52	123	*e*P	Pn	10 58 07.6	+2.5
BRU2	Volcan	4.52	123		Pn	10 58 06.6	+1.5
MRL	Marmol	4.87	321	*e*P	Pn	10 58 16.5	+6.5
NBG	Las Nubes	4.96	312	*e*P	Pn	10 58 14.4	+3.1
PCG	Pacaya	5.04	308	*e*P	Pn	10 58 16.2	+3.9
FUG	Fuego 3	5.25	307	*e*P	Pn	10 58 17.9	+2.6
FUG				*e*S	Sn	10 59 12.7	-2.1
PRVC	Isla de Provid	5.47	67	*e*P	Pn	10 58 21.1	+3.1
PRVC	Isla de Provid	5.47	67	Pn	Pn	10 58 21.3	+3.3
STG3	Santiaguito 3,	5.98	305	*e*P	Pn	10 58 27.9	+2.7
STG3				*e*S	Sn	10 59 31.1	-1.6
HUEH	Huehuetenango	6.29	310		Pn	10 58 31.6	+2.1
BCIP	Isla Barro Col	6.92	107	P	Pn	10 58 39.4	+1.5
BCIP	Isla Barro Col	6.92	107	*e*P	Pn	10 58 37.9	-0.1
BCIP	Isla Barro Col	6.92	107	Pn	Pn	10 58 39.4	+1.5
CCIG	Comitan	7.38	313		Pn	10 58 46.6	+2.2
CAPC	Capurgana	9.42	105	*e*P	Pn	10 59 13.7	+1.4
PTAC	Punta Ardita,	9.54	115	*e*P	Pn	10 59 10.0	-3.9
CMIG	Matias Romero	9.95	306	Pn	Pn	10 59 20.6	+1.1
	comp=Z,18nm,0.3s,baz=134,slow=7.4,SNR=187						
CMIG				Sn	Sn	11 01 08.4	-1.7
	comp=Z,3.9nm,0.3s,baz=88,slow=14,SNR=1.3						
CMIG				LR	LR	11 03 02.4	
	comp=Z,10µm,20.2s,baz=134,slow=36						
SOLC	Bahia Solano	10.32	118	*e*P	Pn	10 59 36.6	+12
LCCY	Blossom Villag	10.40	36	Pn	Pn	10 59 28.1	+2.4
MOTC	Monteria, Cord	10.99	102	*e*P	Pn	10 59 33.5	-0.3
MOTC	Monteria, Cord	10.99	102	Pn	Pn	10 59 35.8	+2.0
PIZC	Pizarro, Choco	11.03	124	*e*P	Pn	10 59 46.3	+12
DBBC	Dabeiba	11.03	112	*e*P	Pn	10 59 40.6	+6.0
CVJ	Coleyville	11.11	50	⇓*i*P	Pn	10 59 42.7	+7.1
MTDJ	Mount Denham	11.11	50	*e*P	Pn	10 59 41.2	+5.7
MTDJ	Mount Denham	11.11	50	Pn	Pn	10 59 38.3	+2.8
SJCC	San Jacinto, C	11.25	96	*e*P	Pn	10 59 37.3	-0.1
UREC	San Jos de Ur	11.40	107	*e*P	Pn	10 59 39.9	+0.4
STH	Stony Hill	11.58	53	*i* P	Pn	10 59 49.1	+7.1
HOJ	Hope	11.59	54	⇓*i*P	Pn	10 59 49.8	+7.8
GWJ	Greenwich	11.64	53	*i* P	Pn	10 59 48.2	+5.3
CBOC	Ciudad Bolivar	11.71	116	*e*P	Pn	10 59 42.6	-1.3
SOR	Soroa	11.94	16	P	Pn	10 59 50.0	+3.2
SOR	Soroa	11.94	16	Pn	Pn	10 59 50.0	+3.2
PLMC	San Jos del P	11.96	121	*e*P	Pn	10 59 47.4	+0.2
HELC	Santa Helena	11.99	114	*e*P	Pn	10 59 49.2	+1.3
SMRC	Santa Marta, M	12.08	89	*e*P	Pn	10 59 49.2	+0.5
ARGC	Ariguani, Magd	12.16	96	*e*P	Pn	10 59 52.4	+2.5
TUMC	Tumaco	12.17	140	*e*P	P	10 59 58.7	-3.5
YOTC	Yotoco, Valle	12.42	125	*e*P	Pn	10 59 53.9	+0.4
PAYG	Puerto Ayora	12.44	198	*e*P	Pn	10 59 53.8	0.0
GUY2C	Guyana, Caldas	12.58	118	*e*P	Pn	10 59 58.0	+2.0
PTBC	PUERTO BERRIO,	12.82	111	*e*P	Pn	10 59 59.9	+0.9
NORC	Norcasia	12.86	115	*e*P	Pn	11 00 01.6	+2.2
ANIL	Santa Ana	12.92	121	*e*P	Pn	11 00 02.4	+1.9
POPC	Popayan, Colom	13.07	131	*e*P	Pn	11 00 04.8	+2.2
TLIG	Tlapa	13.22	300		Pn	11 00 05.5	+1.1
BRRC	Barranca, Sant	13.32	107	*e*P	Pn	11 00 03.0	-2.7
ORTC	Ortega, Tolima	13.36	122	*e*P	Pn	11 00 07.7	+1.4
OCAC	Ocana	13.37	102	*e*P	Pn	11 00 04.9	-1.6
PAC1	Pacto, Paraso	13.37	144	*e*P	Pn	11 00 07.6	+1.0
SOTA	Rioblanco	13.39	132	*e*P	Pn	11 00 07.8	+0.6
CRJC	Cerrejon, Guaj	13.40	90	*e*P	Pn	11 00 05.8	-1.1
PCON	Cinco Dias	13.42	131	*e*P	Pn	11 00 10.3	+2.7
CMBC	Cumbal	13.42	139	*e*P	P	11 00 24.5	+8.0
MARP	Paez Belalcaza	13.42	128	*e*P	Pn	11 00 08.9	+1.5
GCUF	Volcan Galeras	13.52	137	*e*P	Pn	11 00 13.0	+4.1
SPBC	San Pablo de B	13.53	113	*e*P	Pn	11 00 09.6	+0.9
CUSE	Cuicocha Este	13.57	143	*e*P	P	11 00 19.4	+1.3
OTAV	Otavalo	13.59	143	P	Pn	11 00 09.7	-0.1
OTAV	Otavalo	13.59	143		Pn	11 00 09.7	-0.1
TULM	Tulcn-Chalpat	13.62	140	*e*P	P	11 00 21.2	+2.4
ROSC	El Rosal	13.67	117	Pn	Pn	11 00 13.4	+2.5
	comp=Z,1.5nm,0.3s,baz=115,slow=21,SNR=1.8						
ROSC				LR	LR	11 05 19.8	
	comp=Z,27µm,18.4s,baz=326,slow=38						
PRAC	Prado	13.77	122	*e*P	Pn	11 00 13.1	+1.2
BETC	Betania	13.93	127	*e*P	P	11 00 20.6	-1.1
GTBY	Guantanamo Bay	13.96	51	*e*P	P	11 00 19.4	-2.6
GTBY	Guantanamo Bay	13.96	51	Pn	Pn	11 00 17.8	+3.4
BARC	Barichara	13.98	108	*e*P	Pn	11 00 13.6	-1.4
GARC	Garzon, Huila	14.20	129	*e*P	P	11 00 32.0	+7.1
PAMC	Pamplona, Colo	14.20	105	*e*P	P	11 00 27.1	+1.9
URIC	Uribia, Colomb	14.26	87	*e*P	Pn	11 00 18.9	+0.4
CHIC	Chingaza	14.29	117	*e*P	Pn	11 00 21.0	+1.7
RUSC	La Rusia	14.33	111	*e*P	Pn	11 00 20.6	+0.7
FLOC	Florencia	14.47	131	*e*P	Pn	11 00 22.7	+1.2
VILC	Villavicencio,	14.57	118	*e*P	Pn	11 00 25.5	+2.5
UNM	Universidad Na	14.58	305	P	Pn	11 00 23.0	-0.2
UNM	Universidad Na	14.58	305	Pn	Pn	11 00 23.0	-0.2
TAMC	Tame, Arauca	15.34	107	*e*P	Pn	11 00 33.3	+0.2
061Z	Ochoppi	15.46	19	P	P	11 00 38.6	0.0
MACC	Macarena, Meta	15.51	125	*e*P	Pn	11 00 35.8	+0.5
DABV	Dabajuro	15.61	90	*e*P	Pn	11 00 37.3	+0.8
SOCV	Socops	15.73	99	*e*P	Pn	11 00 36.1	-2.0
SDV	Santo Domingo	15.83	97	*e*P	Pn	11 00 39.2	-0.4
SDV	Santo Domingo	15.83	97	P	P	11 00 42.9	-0.2
SDV				IAmb	IAmb	11 00 55.2	
	comp=Z,763nm,1.5s						
PTGC	Puerto Gaitan,	15.90	115	*e*P	Pn	11 00 39.3	-1.0
GUVC	San Jose del G	16.29	121	*e*P	P	11 00 58.4	+10
MOIG	Morelia	16.40	302	P	P	11 00 49.1	-0.3
SDDR	Presa de Saban	16.58	61	*e*P	Pn	11 00 44.1	-4.9
SDDR	Presa de Saban	16.58	61	P	P	11 00 54.1	+2.9
SDDR				IAmb	IAmb	11 01 06.9	
	comp=Z,1µm,1.8s						
ELOV	Elorza	17.36	103	*e*P	Pn	11 00 58.0	-0.8
DWPF	Disney Wildern	17.42	15	P	P	11 01 03.0	+2.7
DWPF				IAmb	IAmb	11 01 40.9	
	comp=Z,1µm,1.9s						
DWPF	Disney Wildern	17.42	15	P	P	11 01 03.1	+2.8
	baz=197						
GRTK	Grand Turk	17.92	53	P	P	11 01 07.1	+1.1
GRTK				IAmb	IAmb	11 01 21.8	
	comp=Z,703nm,1.2s						
BAUV	El Baul	18.35	96	IAmb	IAmb	11 01 40.2	
	comp=Z,2µm,1.8s						
656A	Willston	18.39	11	P	Pn	11 01 13.4	+2.2
553A	Crawfordville	18.92	6	IAmb	IAmb	11 01 31.3	
	comp=Z,1µm,1.8s						
ZAIG	Zacatecas	19.10	309	P	Pn	11 01 21.5	+1.3
451A	Vernon	19.26	2	P	Pn	11 01 23.3	+1.6
KVTX	Kingsville	19.39	328	P	Pn	11 01 22.8	-0.5
KVTX				IAmb	IAmb	11 02 14.8	
	comp=Z,471nm,1.4s						
456A	Hilliard	19.80	12	IAmb	IAmb	11 02 03.1	
	comp=Z,820nm,1.4s						
BRAL	Brewton	19.80	359	P	Pn	11 01 28.2	0.0
BRAL	Brewton	19.80	359	P	Pn	11 01 29.2	+0.9
	baz=179,SNR=6.1						
BIRV	Birongo	19.92	90	IAmb	IAmb	11 01 55.8	
	comp=Z,330nm,1.3s						
CRPR	Cabo Rojo, PR	19.94	68	P	Pn	11 01 29.3	-0.6
CRPR				IAmb	IAmb	11 01 43.8	
	comp=Z,411nm,1.1s						
MLPR	Magueyes Islan	19.99	68	IAmb	IAmb	11 01 41.2	
	comp=Z,477nm,1.2s						
ATAH	Atahualpa	20.00	156	P	Pn	11 01 31.4	+0.3
	comp=Z,18nm,0.8s,baz=340,slow=9.0,SNR=11						
ATAH				LR	LR	11 07 21.8	
	comp=Z,8µm,19.4s,baz=333,slow=31						
352A	Blakely	20.16	4	IAmb	IAmb	11 02 01.2	
	comp=Z,721nm,1.2s						
TIGA	Tifton	20.25	7	P	Pn	11 01 33.8	+0.3
	baz=189,SNR=37						
OBIP	Obispado Ponce	20.41	68	P	Pn	11 01 34.5	-0.9
735A	Kenedy	20.42	331	IAmb	IAmb	11 01 48.8	
	comp=Z,217nm,0.9s						
CELP	Cerrillos	20.44	68	IAmb	IAmb	11 01 50.0	
	comp=Z,702nm,1.2s						
HKT	Hockley	20.50	336	P	Pn	11 01 35.2	-1.2
HKT				pmax	pmax		
	comp=Z,888nm,1.5s						
HKT	Hockley	20.50	336	P	P	11 01 35.2	+1.1
HKT				IAmb	IAmb	11 01 38.7	
	comp=Z,888nm,1.5s						
342A	Flagon Creek P	20.71	346		Pn	11 01 38.5	-0.3
833A	Chaparral WMA,	20.80	326	P	P	11 01 38.3	+0.9
833A	Chaparral WMA,	20.80	326	P	P	11 01 37.2	-0.2
	baz=143,SNR=75						
SJG	San Juan	20.84	69	P	P	11 01 38.8	+0.9
SJG				pmax	pmax		
	comp=Z,993nm,1.4s						
SJG				MLR	MLR		
	comp=Z,12µm,19.0s						
SJG	San Juan	20.84	69	*e*P	P	11 01 36.5	-1.5
SJG	San Juan	20.84	69	P	P	11 01 38.8	+0.9
PDPR	Patillas Dam,	20.93	69	P	P	11 01 40.0	+1.0
PDPR				IAmb	IAmb	11 02 03.8	
	comp=Z,614nm,1.4s						
GCPR	Guaynabo City	20.96	68	IAmb	IAmb	11 02 09.1	
	comp=Z,217nm,1.0s						
HUMP	Col San Antoni	21.13	69	IAmb	IAmb	11 02 06.1	
	comp=Z,607nm,1.3s						
CBYP	Canovanas	21.16	68	IAmb	IAmb	11 02 13.4	
	comp=Z,415nm,1.3s						
VBMS	Vicksburg	21.16	351	P	P	11 01 42.9	+1.7
	baz=170,SNR=20						
257A	Skidaway Islan	21.22	13	P	P	11 01 45.2	+3.4
152A	Waverly Hall	21.36	4	IAmb	IAmb	11 01 57.4	
	comp=Z,424nm,1.1s						
MTP	Monte Pirata	21.39	69	IAmb	IAmb	11 02 19.6	
	comp=Z,462nm,1.2s						
146A	Union	21.39	354	P	P	11 01 45.1	+1.4
PCRV	Puerto La Cruz	21.54	91	P	P	11 01 45.4	-0.2
	comp=Z,54nm,0.5s,baz=224,slow=6.6,SNR=25						
CUPR	Culebra, Puert	21.69	69	P	P	11 01 47.8	+0.8
NATX	Nacogdoches	21.72	341	P	P	11 01 48.4	+1.1
	baz=158,SNR=60						
143A	Socs Landing,	21.79	349	IAmb	IAmb	11 02 31.5	
	comp=Z,776nm,1.5s						
435B	Jarrell	21.95	334	IAmb	IAmb	11 02 03.5	
	comp=Z,425nm,1.1s						
435B	Jarrell	21.95	334	P	P	11 01 50.0	+0.2
	baz=150,SNR=27						
Z51A	Franklin	21.97	3	IAmb	IAmb	11 01 56.2	
	comp=Z,468nm,1.4s						
STVI	Saint Thomas	22.00	69	P	P	11 01 51.6	+1.2
CDVI	St. Croix	22.02	70	P	P	11 01 51.6	+0.9
CDVI				IAmb	IAmb	11 02 04.2	
	comp=Z,382nm,1.1s						
GOGA	Godfrey	22.21	7	IAmb	IAmb	11 02 30.2	
	comp=Z,536nm,1.4s						
GOGA	Godfrey	22.21	7	P	P	11 01 54.2	+1.7
	baz=188,SNR=55						
NHSC	New Hope	22.50	14	IAMs_20	IAMs_20	11 10 40.2	
	comp=Z,16µm,20.0s						
NHSC	New Hope	22.50	14	P	P	11 01 57.5	+1.9
	baz=197,SNR=16						

TBTG	Tabatinga, AM	22.57	132	*e*P	P	11 01 56.2	-0.4
TBTG	Tabatinga, AM	22.57	132	*e*P	P	11 01 56.7	+0.1
TBTG	Tabatinga, AM	22.57	132	P	P	11 01 57.3	+0.7
TBTG				IAmb	IAmb	11 02 11.4	
	comp=Z,385nm,1.0s						
Y52A	Lilburn	22.60	5	IAmb	IAmb	11 02 27.7	
	comp=Z,322nm,1.1s						
Z41A	Richland Creek	22.62	346	P	P	11 01 57.1	+0.2
Z41A				IAmb	IAmb	11 02 00.8	
	comp=Z,244nm,0.8s						
Z41A	Richland Creek	22.62	346	P	P	11 01 56.8	-0.1
	baz=164,SNR=42						
JCT	Junction City	22.74	329	P	P	11 01 57.6	-0.7
	baz=145,SNR=34						
WHTX	Lake Whitney,	22.95	336	IAmb	IAmb	11 02 11.2	
	comp=Z,293nm,0.8s						
WHTX	Lake Whitney,	22.95	336	P	P	11 02 00.2	-0.2
	baz=152,SNR=63						
WLAR	White Oak Lake	23.11	346	IAmb	IAmb	11 02 04.5	
	comp=Z,282nm,0.8s						
FPAL	Fort Paine	23.17	2	P	P	11 02 03.4	+0.7
HODGE	Hodges	23.18	9	IAmb	IAmb	11 02 32.5	
	comp=Z,379nm,1.3s						
CZSB	Cruzeiro do Su	23.36	143	*e*P	P	11 02 05.5	+0.8
CZSB	Cruzeiro do Su	23.36	143	P	P	11 02 06.4	+1.8
Y58A	Scranton	23.39	15	P	P	11 02 06.5	+1.8
Y58A				IAmb	IAmb	11 02 08.1	
	comp=Z,166nm,0.7s						
JSC	Jenkinsville	23.40	11	IAmb	IAmb	11 02 08.5	
	comp=Z,208nm,0.9s						
SABA	Saba	23.41	72	*e*P	P	11 02 01.7	-3.4
SEUS	St. Eustatius	23.62	72	*e*P	P	11 02 06.8	-0.4
SEUS	St. Eustatius	23.62	72	IAMs_20	IAMs_20	11 12 26.4	
	comp=Z,13µm,19.0s						
SMRT	St. Maarten	23.66	71	*e*P	P	11 02 07.9	+0.4
Y59A	Loris	23.67	16	P	P	11 02 08.5	+1.1
X40A	Basin Creek Fa	23.81	347	IAmb	IAmb	11 02 11.5	
	comp=Z,349nm,1.6s						
X40A				IAMs_20	IAMs_20	11 12 47.8	
	comp=Z,15µm,22.0s						
X40A	Basin Creek Fa	23.81	347	P	P	11 02 08.2	-0.6
	baz=165,SNR=70						
W52A	Murphy	23.83	5	P	P	11 02 09.9	+0.9
W52A				IAmb	IAmb	11 02 38.7	
	comp=Z,168nm,1.0s						
PAULI	Pauline	23.83	10	P	P	11 02 10.0	+1.0
PAULI				IAmb	IAmb	11 02 38.8	
	comp=Z,252nm,1.1s						
BG3	Lake Jocassee	23.84	7	IAmb	IAmb	11 02 52.7	
	comp=Z,456nm,1.5s						
W50A	Signal Mountai	23.84	2	IAmb	IAmb	11 02 12.0	
	comp=Z,172nm,0.6s						
Y60A	Bolivia	23.87	17	IAmb	IAmb	11 02 44.9	
	comp=Z,236nm,1.1s						
W45A	Hickory Valley	23.90	355	IAmb	IAmb	11 02 11.5	
	comp=Z,326nm,0.8s						
BIRD	Birdtown, Kers	23.91	12	IAmb	IAmb	11 02 12.8	
	comp=Z,127nm,0.6s						
MIAR	Mount Ida	24.04	346	P	P	11 02 10.2	-0.7
MIAR				pmax	pmax		
	comp=Z,225nm,0.7s						
MIAR				MLR	MLR		
	comp=Z,13µm,22.0s						
MIAR	Mount Ida	24.04	346	P	P	11 02 10.2	-0.7
MIAR				IAmb	IAmb	11 02 13.4	
	comp=Z,225nm,0.7s						
MIAR	Mount Ida	24.04	346	P	P	11 02 10.3	-0.6
	baz=163,SNR=195						
Z35A	Perchaven, San	24.05	338	IAmb	IAmb	11 02 42.8	
	comp=Z,188nm,0.9s						
X58A	Rowland	24.08	15	IAmb	IAmb	11 02 47.7	
	comp=Z,234nm,1.2s						
CPCT	Cooper Cave	24.14	4	IAmb	IAmb	11 02 23.9	
	comp=Z,365nm,1.3s						
KMSC	Kings Mountain	24.23	10	IAmb	IAmb	11 02 44.6	
	comp=Z,439nm,1.5s						
KMSC	Kings Mountain	24.23	10	P	P	11 02 13.8	+1.2
	baz=193,SNR=50						
W41B	Gary Mavity, V	24.35	349	P	P	11 02 13.4	-0.4
	baz=167,SNR=133						
V48A	Smith Brothers	24.36	359	IAmb	IAmb	11 02 55.4	
	comp=Z,584nm,1.9s						
GRGR	Grenville	24.38	85	*e*P	P	11 02 12.2	-2.0
GRGR	Grenville	24.38	85	P	P	11 02 14.5	+0.3
TKL	Tuckaleechee C	24.40	5	P	P	11 02 15.0	+0.8
	comp=Z,56nm,0.6s,baz=175,slow=12,SNR=63						
TKL	Tuckaleechee C	24.40	5	IAmb	IAmb	11 02 45.3	
	comp=Z,361nm,1.2s						
ABTX	Abilene, Hawle	24.43	332	IAmb	IAmb	11 02 26.8	
	comp=Z,314nm,1.1s						
ABTX	Abilene, Hawle	24.43	332	P	P	11 02 14.0	-0.6
	baz=148,SNR=72						
W57A	Gilead	24.50	13	IAmb	IAmb	11 02 17.9	
	comp=Z,120nm,0.7s						
V53A	Saluda	24.52	7	IAmb	IAmb	11 02 54.3	
	comp=Z,424nm,1.4s						
V52A	Sevierville	24.60	6	IAmb	IAmb	11 02 47.4	
	comp=Z,291nm,1.3s						
TDBA	Terre de Bas,	24.62	77	*e*P	P	11 02 16.0	-0.4
HALT	Halls	24.66	355	P	P	11 02 16.2	-0.3
CBE	Ff, Capester	24.67	76	*e*P	P	11 02 13.9	-3.1
ANBD	Bethesda, Anti	24.68	74	*e*P	P	11 02 15.2	-1.7
TRN	Trinidad (W)	24.68	89	*e*P	P	11 02 11.3	-5.6
H06E1	SOCORRO T-PHAS	24.69	290	T	T	11 27 45.2	
	SNR=165						
CLTN	Cedars of Leba	24.71	0	IAmb	IAmb	11 02 47.3	
	comp=Z,188nm,1.2s						
H06S1	SOCORRO T	24.71	290	T	T	11 27 47.0	
	SNR=23						
W39A	Magazine	24.71	346	IAmb	IAmb	11 02 18.8	
	comp=Z,143nm,0.8s						
W39A				IAMs_20	IAMs_20	11 13 28.5	
	comp=Z,16µm,22.0s						
W39A	Magazine	24.71	346	P	P	11 02 17.2	+0.2
	baz=163,SNR=69						
WVT	Waverly	24.77	357	P	P	11 02 17.3	-0.3
WVT				pmax	pmax		
	comp=Z,262nm,1.5s						
WVT	Waverly	24.77	357	P	P	11 02 17.3	-0.3
WVT				IAmb	IAmb	11 02 55.1	
	comp=Z,262nm,1.5s						
WVT	Waverly	24.77	357	P	P	11 02 16.7	-0.9
	baz=177						
DSLB	Salisbury	24.77	78	*e*P	P	11 02 18.3	+0.4
ANWB	Willy Bob	24.77	72	*e*P	P	11 02 15.9	-1.9
SVB	Belmont	24.78	83	*e*P	P	11 02 13.3	-4.6
SVB	Belmont	24.78	83	IAmb	IAmb	11 02 30.3	
	comp=Z,276nm,0.9s						
MDN	Morne-Daniel	24.79	78	*e*P	P	11 02 19.7	+1.7
DLPL	La Plaine	24.93	78	*e*P	P	11 02 19.7	+0.4
V55A	Taylorsville	24.94	10	IAmb	IAmb	11 02 31.4	
	comp=Z,318nm,1.4s						
FDF	Fort de France	24.96	79	*e*P	P	11 02 20.7	+1.1
MAGL	Barre de l’ile	24.97	76	*e*P	P	11 02 18.9	-0.6
BIM	Bigot	25.02	80	*e*P	P	11 02 20.7	+0.6
FCAR	Ozark Folk Cen	25.02	349	IAmb	IAmb	11 02 20.8	
	comp=Z,155nm,0.7s						
NNA	Nana	25.04	157	P	P	11 02 24.5	+4.3
	comp=Z,13nm,0.8s,baz=350,slow=11,SNR=2.7						
NNA	Nana	25.04	157	P	P	11 02 16.5	-3.7
NNA				pmax	pmax		
	comp=Z,176nm,1.4s						
NNA				MLR	MLR		
	comp=Z,7µm,19.0s						
NNA	Nana	25.04	157	P	P	11 02 16.5	-3.7
NNA				IAmb	IAmb	11 02 38.3	
	comp=Z,176nm,1.4s						
LCAR	Lake Charles	25.04	351	IAmb	IAmb	11 02 20.9	
	comp=Z,158nm,0.8s						
SLBI	Saint Lucia, B	25.08	81	*e*P	P	11 02 20.0	-0.6
MCLT	Moule a Chique	25.10	82	*e*P	P	11 02 21.6	+0.8
CNNC	Cliffs of the	25.12	17	IAmb	IAmb	11 02 51.2	
	comp=Z,146nm,0.9s						
CNNC				IAMs_20	IAMs_20	11 13 14.6	
	comp=Z,16µm,18.0s						
CNNC	Cliffs of the	25.12	17	P	P	11 02 21.7	+1.1
	baz=200,SNR=8.9						
U49A	Red Boiling Sp	25.14	1	IAmb	IAmb	11 02 51.2	
	comp=Z,307nm,1.2s						
MPOM	Morne Pois Mar	25.22	80	*e*P	P	11 02 20.4	-1.5
MPOM	Morne Pois Mar	25.22	80	IAmb	IAmb	11 02 40.0	
	comp=Z,280nm,1.0s						
ILAM	Ilet Lapin Mar	25.23	79	*e*P	P	11 02 24.5	+2.5
HICK	Hickman	25.27	355	IAmb	IAmb	11 02 51.4	
	comp=Z,334nm,1.1s						
TZTN	Tazewell	25.30	6	IAmb	IAmb	11 02 52.5	
	comp=Z,456nm,1.6s						
TZTN	Tazewell	25.30	6	P	P	11 02 23.3	+0.9
	baz=187,SNR=15						
TOSP	Speyside	25.49	87	*e*P	P	11 02 22.2	-2.2
U54A	Nelsons Funny	25.49	9	IAmb	IAmb	11 02 36.9	
	comp=Z,394nm,1.2s						
U56A	King	25.57	12	IAmb	IAmb	11 02 38.7	
	comp=Z,344nm,1.2s						
T47A	Sharon Grove	25.61	359	IAmb	IAmb	11 03 08.7	
	comp=Z,256nm,1.1s						
U40A	Yellville	25.62	348	IAmb	IAmb	11 02 26.6	
	comp=Z,226nm,0.8s						
U40A	Yellville	25.62	348	P	P	11 02 24.8	-0.5
	baz=166,SNR=137						
PBMO	Poplar Bluff	25.63	353	IAmb	IAmb	11 02 28.2	
	comp=Z,129nm,0.7s						
T50A	Nancy	25.68	3	IAmb	IAmb	11 02 58.1	
	comp=Z,272nm,1.5s						
HHAR	Hobbs	25.78	346	IAmb	IAmb	11 02 27.7	
	comp=Z,131nm,0.7s						
TUL1	Leonard	25.92	343	P	P	11 02 27.0	-1.0
	baz=159,SNR=67						
LPIG	La Paz	25.94	303	P	P	11 02 28.9	+0.6
	comp=Z,21nm,0.9s,baz=147,slow=4.0,SNR=1.3						
LPIG				LR	LR	11 12 42.4	
	comp=Z,5µm,18.6s,baz=120,slow=36						
T42A	Van Buren	25.97	352	IAmb	IAmb	11 02 29.3	
	comp=Z,125nm,0.8s						
OKCFA	Oklahoma City	26.00	339	IAmb	IAmb	11 02 32.1	
	comp=Z,152nm,0.9s						
U38A	Gravette	26.04	345	IAmb	IAmb	11 02 29.9	
	comp=Z,137nm,0.9s						
U59A	Littleton	26.19	16	IAmb	IAmb	11 03 02.1	
	comp=Z,179nm,1.2s						
MGMO	Mountain Grove	26.28	350	IAmb	IAmb	11 02 32.6	
	comp=Z,358nm,1.6s						
S51A	Beattyville	26.38	5	IAmb	IAmb	11 03 03.1	
	comp=Z,322nm,1.5s						
BLA	Blacksburg	26.40	11	IAmb	IAmb	11 03 04.6	
	comp=Z,278nm,1.2s						
BLA				IAMs_20	IAMs_20	11 13 18.6	
	comp=Z,13µm,19.0s						
BLA	Blacksburg	26.40	11	P	P	11 02 33.3	+0.9
	baz=194,SNR=22						
S44A	Carbondale	26.42	355	IAmb	IAmb	11 02 34.0	
	comp=Z,154nm,0.8s						
T57A	Hurt	26.44	13	IAmb	IAmb	11 02 35.5	
	comp=Z,86nm,0.7s						
MNTX	Cornudas Mount	26.76	322	IAmb	IAmb	11 02 41.4	
	comp=Z,483nm,2.0s						
MNTX	Cornudas Mount	26.76	322	P	P	11 02 34.9	-0.8
	baz=136,SNR=76						
S54A	Dingess, Beckl	26.82	9	IAmb	IAmb	11 03 14.5	
	comp=Z,542nm,1.8s						
T59A	Double "B" Far	26.83	16	IAmb	IAmb	11 02 39.1	
	comp=Z,391nm,1.8s						
WCI	Wyandotte Cave	26.84	0	P	P	11 02 35.1	-1.2
WCI				pmax	pmax		
	comp=Z,151nm,0.8s						
WCI	Wyandotte Cave	26.84	0	P	P	11 02 35.1	-1.2
WCI				IAmb	IAmb	11 02 38.7	
	comp=Z,151nm,0.8s						
WCI	Wyandotte Cave	26.84	0	P	P	11 02 36.1	-0.2
	baz=181						
R49A	Shelbyville	26.93	2	IAmb	IAmb	11 03 15.3	
	comp=Z,330nm,1.4s						
R50A	Paris	26.96	4	IAmb	IAmb	11 03 16.0	
	comp=Z,201nm,1.4s						
CCM	Cathedral Cave	27.00	352	P	P	11 02 36.4	-1.3
CCM				pmax	pmax		
	comp=Z,111nm,0.8s						
CCM				MLR	MLR		
	comp=Z,6µm,22.0s						
CCM	Cathedral Cave	27.00	352	P	P	11 02 36.4	-1.3
CCM				IAmb	IAmb	11 02 38.6	
	comp=Z,111nm,0.8s						
CCM	Cathedral Cave	27.00	352	P	P	11 02 36.9	-0.8
	baz=170						
MSTX	Muleshoe	27.03	329	IAmb	IAmb	11 02 51.8	
	comp=Z,210nm,0.8s						
MSTX	Muleshoe	27.03	329	P	P	11 02 37.2	-1.0
	baz=143,SNR=44						
T35A	Sooner Cattle	27.07	342	IAmb	IAmb	11 02 40.0	
	comp=Z,416nm,1.8s						
BLOK	Blackwell	27.14	341	IAmb	IAmb	11 03 14.2	
	comp=Z,417nm,1.8s						
CROK	Carrier	27.16	339	IAmb	IAmb	11 02 48.5	
	comp=Z,130nm,0.8s						
T60A	Surry	27.22	17	IAmb	IAmb	11 02 56.1	
	comp=Z,457nm,1.6s						
AMTX	Amarillo	27.25	332	IAmb	IAmb	11 02 52.2	
	comp=Z,177nm,0.9s						
AMTX	Amarillo	27.25	332	P	P	11 02 39.8	-0.4
	baz=146						
R53A	Hurricane	27.25	8	IAmb	IAmb	11 03 18.9	
	comp=Z,166nm,1.2s						
BOAV	Boa Vista	27.27	107	*e*P	P	11 02 40.4	-0.1
BOAV	Boa Vista	27.27	107	P	P	11 02 39.1	-1.3
OLIL	Olney	27.38	357	IAmb	IAmb	11 02 42.8	
	comp=Z,127nm,0.8s						
R40A	Maddies Statio	27.39	350	IAmb	IAmb	11 02 41.7	
	comp=Z,110nm,0.7s						
U32A	Winter Ranch,	27.42	338	IAmb	IAmb	11 02 51.0	
	comp=Z,194nm,1.0s						
KAN13	South Haven SW	27.46	341	IAmb	IAmb	11 03 25.6	
	comp=Z,168nm,1.1s						
KAN17	Caldwell West	27.58	340	IAmb	IAmb	11 02 55.3	
	comp=Z,96nm,0.7s						
KAN05	Bluff City Nor	27.67	340	IAmb	IAmb	11 02 48.0	
	comp=Z,88nm,0.7s						
KAN01	Argonia South	27.68	340	IAmb	IAmb	11 02 48.0	
	comp=Z,100nm,0.7s						
BLO	Bloomington	27.78	0	IAmb	IAmb	11 02 46.2	
	comp=Z,136nm,0.8s						
Q51A	Peebles	27.78	5	IAmb	IAmb	11 03 15.0	
	comp=Z,211nm,1.0s						
KAN08	Anthony NE Sta	27.81	340	IAmb	IAmb	11 02 58.9	
	comp=Z,111nm,0.7s						
Q52A	Bidwell	27.83	7	IAmb	IAmb	11 03 22.9	
	comp=Z,203nm,1.1s						
KAN12	Harper NE Stat	27.89	340	IAmb	IAmb	11 02 59.7	
	comp=Z,90nm,0.6s						
CBN	Corbin Frederi	28.04	15	IAMs_20	IAMs_20	11 13 58.0	
	comp=Z,15µm,21.0s						
CBN	Corbin Frederi	28.04	15	P	P	11 02 48.1	+1.1
	baz=200,SNR=16						
Q54A	Coxs Mills	28.06	9	IAmb	IAmb	11 02 49.9	
	comp=Z,109nm,0.8s						
P48A	Milroy	28.09	2	IAmb	IAmb	11 02 48.8	
	comp=Z,358nm,1.4s						
P49A	Miami Univ. Ec	28.19	3	IAmb	IAmb	11 03 17.8	
	comp=Z,144nm,1.2s						
P49A	Miami Univ. Ec	28.19	3	P	P	11 02 47.6	-0.7
	baz=184,SNR=22						
P46A	Rosedale	28.23	359	IAmb	IAmb	11 02 50.1	
	comp=Z,139nm,0.9s						
P51A	Williamsport	28.26	6	IAmb	IAmb	11 03 19.0	
	comp=Z,205nm,1.4s						
P52A	Corning	28.51	7	P	P	11 02 51.5	+0.2
	baz=189,SNR=40						
121A	Cookes Peak, D	28.81	321	IAmb	IAmb	11 03 08.7	
	comp=Z,119nm,1.1s						
121A	Cookes Peak, D	28.81	321	P	P	11 02 55.0	+0.8
	baz=133,SNR=25						
O49A	Covington	28.86	3	IAmb	IAmb	11 02 56.0	
	comp=Z,405nm,1.8s						
MCWV	Mont Chateau	28.88	11	IAmb	IAmb	11 02 57.3	
	comp=Z,92nm,0.8s						
MCWV				IAMs_20	IAMs_20	11 14 55.2	
	comp=Z,12µm,19.0s						
MCWV	Mont Chateau	28.88	11	P	P	11 02 55.1	+0.6
	baz=194,SNR=14						
PTGA	Pitinga	28.97	113	P	P	11 02 56.1	+0.4
	comp=Z,5.0nm,0.5s,baz=281,slow=11,SNR=9.5						
PTGA				LR	LR	11 15 32.0	
	comp=Z,9µm,18.9s,baz=293,slow=39						
PTGA	Pitinga	28.97	113	P	P	11 02 56.1	+0.4
SFIN	Lafayette	28.99	359	IAmb	IAmb	11 02 56.5	
	comp=Z,150nm,0.8s						
SFIN	Lafayette	28.99	359	P	P	11 02 54.6	-0.9
	baz=179,SNR=39						
ACSO	Alum Creek Sta	29.01	6	IAmb	IAmb	11 02 58.5	
	comp=Z,115nm,0.7s						
ACSO				IAMs_20	IAMs_20	11 14 21.5	
	comp=Z,10µm,21.0s						
ACSO	Alum Creek Sta	29.01	6	P	P	11 02 55.9	+0.2
	baz=187,SNR=43						
BBSR	BB Station	29.07	40	P	P	11 02 57.1	+0.9
BBSR				IAmb	IAmb	11 03 11.0	
	comp=Z,105nm,1.1s						
BBSR	BB Station	29.07	40	IAMs_20	IAMs_20	11 13 27.2	
	comp=Z,14µm,20.0s						
ETMB	Extrema	29.11	135	*e*P	P	11 02 56.8	0.0
ETMB	Extrema	29.11	135	P	P	11 02 56.5	-0.3
ETMB				IAmb	IAmb	11 03 09.9	
	comp=Z,205nm,1.0s						
KSU1	Kansas State U	29.13	344	IAmb	IAmb	11 03 06.0	
	comp=Z,186nm,0.9s						
KSU1	Kansas State U	29.13	344	P	P	11 02 55.4	-1.3
	baz=160,SNR=37						
R32A	Long Quarter,	29.14	340	IAmb	IAmb	11 03 06.2	
	comp=Z,79nm,0.8s						
O53A	New Philadelph	29.24	8	P	P	11 02 57.9	+0.2
	baz=191,SNR=28						
Q61A	Milford	29.25	18	P	P	11 02 59.2	+1.4
	baz=203						
Y22D	IRIS PASSCAL I	29.36	324	IAmb	IAmb	11 03 27.1	
	comp=Z,197nm,1.1s						
Y22D	IRIS PASSCAL I	29.36	324	P	P	11 02 59.9	+0.9
	baz=136						
MACA	Manacapuru-AM	29.45	118	*e*P	P	11 02 59.6	-0.2
MACA	Manacapuru-AM	29.45	118	P	P	11 02 59.0	-0.8
MACA				IAmb	IAmb	11 03 00.8	
	comp=Z,131nm,0.7s						
N47A	Urbana	29.50	1	IAmb	IAmb	11 03 00.7	
	comp=Z,121nm,1.4s						
N49A	Columbus Grove	29.60	4	IAmb	IAmb	11 03 02.5	
	comp=Z,175nm,0.8s						
O56A	Blue Knob Stat	29.73	12	IAMs_20	IAMs_20	11 15 02.5	
	comp=Z,11µm,20.0s						
O56A	Blue Knob Stat	29.73	12	P	P	11 03 03.0	+1.0
	baz=196,SNR=30						
ANMO	Albuquerque	29.73	326	P	P	11 03 02.6	+0.3
	comp=Z,20nm,0.7s,baz=145,slow=7.0,SNR=91						
ANMO				PcP	PcP	11 06 07.6	+1.7
	comp=Z,11nm,0.9s,baz=77,slow=6.4,SNR=3.7						
ANMO	Albuquerque	29.73	326	P	P	11 03 02.6	+0.3
ANMO						11 06 07.6	
ANMO	Albuquerque	29.73	326		PcP	11 06 07.6	+1.7
ANMO	Albuquerque	29.73	326	P	P	11 03 02.6	+0.3
ANMO	Albuquerque	29.73	326	P	P	11 03 02.9	+0.6
	baz=138						
N51A	Ashland	29.75	6	IAmb	IAmb	11 03 11.4	
	comp=Z,95nm,1.1s						
N53A	Lisbon	29.84	9	IAmb	IAmb	11 03 05.2	
	comp=Z,118nm,0.9s						
CBKS	Cedar Bluff	29.85	339	P	P	11 03 01.3	-1.9
CBKS				IAmb	IAmb	11 03 12.7	
	comp=Z,98nm,1.1s						
CBKS					PcP	11 06 07.3	+1.4
CBKS	Cedar Bluff	29.85	339	P	P	11 03 02.5	-0.7
	baz=154						
N38A	Joes South For	29.99	350	IAmb	IAmb	11 03 04.9	
	comp=Z,142nm,0.7s						
P60A	Greenville	30.02	17	IAmb	IAmb	11 03 07.3	
	comp=Z,261nm,1.7s						
P60A				IAMs_20	IAMs_20	11 15 58.3	
	comp=Z,11µm,18.0s						
P60A	Greenville	30.02	17	P	P	11 03 05.4	+0.8
	baz=202,SNR=10						
M44A	Midewin, Midew	30.02	358	IAmb	IAmb	11 03 05.1	
	comp=Z,108nm,1.0s						
N54A	Moraine State	30.13	10	IAMs_20	IAMs_20	11 15 35.1	
	comp=Z,9µm,19.0s						
N54A	Moraine State	30.13	10	P	P	11 03 05.9	+0.3
	baz=193,SNR=15						
M50A	Fremont	30.17	5	IAmb	IAmb	11 03 35.4	
	comp=Z,134nm,1.1s						
SSPA	Standing Stone	30.22	13	P	P	11 03 06.8	+0.4
SSPA				IAmb	IAmb	11 03 09.2	
	comp=Z,131nm,0.7s						
SSPA	Standing Stone	30.22	13	IAMs_20	IAMs_20	11 15 16.7	
	comp=Z,13µm,20.0s						
SSPA	Standing Stone	30.22	13	P	P	11 03 07.0	+0.6
	baz=197						
T25A	Trinidad	30.36	331	IAmb	IAmb	11 03 24.3	
	comp=Z,235nm,1.9s						
T25A	Trinidad	30.36	331	P	P	11 03 08.4	+0.4
	baz=144,SNR=23						
HQIL	Hanson Quary C	30.43	358	IAmb	IAmb	11 03 08.7	
	comp=Z,103nm,0.9s						
M53A	WI Miller and	30.48	9	P	P	11 03 08.9	+0.2
	baz=192,SNR=18						
M52A	Chesterland	30.49	8	IAmb	IAmb	11 03 10.4	
	comp=Z,202nm,1.4s						
L48A	N Adams	30.61	3	IAmb	IAmb	11 03 10.8	
	comp=Z,102nm,0.8s						
TUC	Tucson	30.61	317	P	P	11 03 10.2	+0.2
TUC				pmax	pmax		
	comp=Z,44nm,1.1s						
TUC				MLR	MLR		
	comp=Z,11µm,19.0s						
TUC	Tucson	30.61	317	P	P	11 03 10.2	+0.2
TUC	Tucson	30.61	317	IAMs_20	IAMs_20	11 17 06.8	
	comp=Z,11µm,19.0s						
TUC	Tucson	30.61	317	P	P	11 03 11.0	+1.0
	baz=128						
M54A	Oil Creek Stat	30.71	10	IAmb	IAmb	11 03 12.9	
	comp=Z,76nm,0.8s						
M54A				IAMs_20	IAMs_20	11 16 28.6	
	comp=Z,9µm,19.0s						
M54A	Oil Creek Stat	30.71	10	P	P	11 03 10.7	0.0
	baz=193,SNR=16						
L44A	Lake County Fo	30.81	358	P	P	11 03 10.2	-1.4
	baz=178,SNR=16						
AAM	Ann Arbor	31.01	4	IAMs_20	IAMs_20	11 15 33.4	
	comp=Z,10µm,21.0s						
AAM	Ann Arbor	31.01	4	P	P	11 03 13.0	-0.4
	baz=186,SNR=7.8						
N59A	State Game Lan	31.01	16	IAMs_20	IAMs_20	11 16 08.6	
	comp=Z,10µm,20.0s						
N59A	State Game Lan	31.01	16	P	P	11 03 14.6	+1.2
	baz=201,SNR=73						
SCIA	State Center	31.07	350	IAmb	IAmb	11 03 16.0	
	comp=Z,109nm,0.7s						
SCIA	State Center	31.07	350	P	P	11 03 12.8	-1.1
	baz=168,SNR=17						
KSCO	Kaye Shedlock’	31.12	335	IAmb	IAmb	11 03 28.8	
	comp=Z,81nm,0.8s						
KSCO	Kaye Shedlock’	31.12	335	P	P	11 03 14.0	-0.5
	baz=149,SNR=14						
BRNJ	Basking Ridge	31.14	18	IAmb	IAmb	11 03 25.2	
	comp=Z,77nm,0.8s						
ERPA	Erie	31.25	9	IAMs_20	IAMs_20	11 16 37.9	
	comp=Z,9µm,18.0s						
ERPA	Erie	31.25	9	P	P	11 03 15.7	+0.2
	baz=193,SNR=12						
K43A	Burlington	31.35	357	IAmb	IAmb	11 03 16.8	
	comp=Z,150nm,1.1s						
SDCO	Great Sand Dun	31.37	330	P	P	11 03 17.4	+0.4
	baz=143,SNR=69						
PAL	Palisades	31.63	18	P	P	11 03 19.2	+0.4
	baz=204,SNR=5.6						
TRNY	Table Rock, Ra	31.66	18	IAmb	IAmb	11 03 20.8	
	comp=Z,155nm,1.8s						
JFWS	Jewell Farm	31.69	355	P	P	11 03 18.2	-1.1
	baz=173,SNR=52						
N62A	Caumsett State	31.70	19	IAmb	IAmb	11 03 21.6	
	comp=Z,88nm,0.7s						
BGNE	Belgrade	31.70	343	P	P	11 03 18.6	-0.9
	baz=158,SNR=17						
W18A	Petrified Fore	31.75	322	IAmb	IAmb	11 03 34.6	
	comp=Z,92nm,0.8s						
W18A	Petrified Fore	31.75	322	P	P	11 03 21.4	+1.2
	baz=133,SNR=20						
214A	Organ Pipe Nat	31.79	314	P	P	11 03 21.6	+1.2
	baz=125						
J47A	Sunmer	31.88	2	IAmb	IAmb	11 03 22.7	
	comp=Z,106nm,0.9s						
WSPT	Westport, CT	31.96	19	IAmb	IAmb	11 03 41.5	
	comp=Z,94nm,1.1s						
S22A	4UR Ranch, Cre	32.03	329	P	P	11 03 23.2	+0.5
	baz=140,SNR=36						
BINY	Binghamton	32.16	15	IAMs_20	IAMs_20	11 16 35.9	
	comp=Z,12µm,21.0s						
BINY	Binghamton	32.16	15	P	P	11 03 24.1	+0.6
	baz=200,SNR=34						
Q24A	Divide	32.18	332	P	P	11 03 23.4	-0.7
	baz=144						
YLE	Yale	32.22	19	IAmb	IAmb	11 03 43.4	
	comp=Z,121nm,1.0s						
KSCT	Kent School, K	32.42	18	IAmb	IAmb	11 03 28.3	
	comp=Z,275nm,1.8s						
MVCO	Mesa Verde	32.51	326	IAmb	IAmb	11 03 38.0	
	comp=Z,57nm,0.9s						
MVCO	Mesa Verde	32.51	326	P	P	11 03 27.5	+0.6

	baz=137,SNR=40						
OGNE	Ogallala	32.55	338	IAmb	IAmb	11 03 37.5	
	comp=Z,207nm,1.2s						
OGNE	Ogallala	32.55	338	P	P	11 03 27.2	+0.2
	baz=151,SNR=7.3						
J55A	Hilton	32.76	12	IAmb	IAmb	11 03 30.4	
	comp=Z,78nm,0.8s						
LPAZ	La Paz	32.89	146	P	P	11 03 31.4	+0.6
	comp=Z,1.1nm,0.4s,baz=311,slow=9.0,SNR=6.5						
LPAZ				ScP	ScP	11 10 01.5	+4.5
	comp=Z,5.2nm,1.1s,baz=330,slow=7.5,SNR=3.8						
LPAZ				LR	LR	11 17 04.3	
	comp=Z,8µm,19.8s,baz=316,slow=37						
LPAZ	La Paz	32.89	146	*e*P	P	11 03 30.8	0.0
LPAZ	La Paz	32.89	146	*e*P	P	11 03 30.9	0.0
WUAZ	Wupatki	33.01	321	P	P	11 03 32.1	+0.9
	baz=131,SNR=26						
ISCO	Idaho Springs	33.06	333	IAmb	IAmb	11 03 42.4	
	comp=Z,122nm,1.8s						
ISCO	Idaho Springs	33.06	333	P	P	11 03 31.8	0.0
	baz=144						
SMCO	Snowmass	33.21	330	IAmb	IAmb	11 03 47.0	
	comp=Z,190nm,1.6s						
M65A	Busby, Falmout	33.23	22	IAMs_20	IAMs_20	11 18 40.5	
	comp=Z,12µm,19.0s						
QUA2	Belchertown	33.28	19	IAmb	IAmb	11 03 52.9	
	comp=Z,91nm,1.1s						
J57A	Williamstown	33.30	14	IAmb	IAmb	11 03 42.9	
	comp=Z,135nm,1.0s						
L61B	Northampton	33.33	19	P	P	11 03 34.3	+0.6
	baz=205,SNR=8.5						
GLMI	Grayling	33.47	2	P	P	11 03 33.7	-1.2
	baz=184,SNR=8.5						
ECSD	EROS Data Cent	33.50	347	IAMs_20	IAMs_20	11 19 22.2	
	comp=Z,10µm,22.0s						
ECSD	EROS Data Cent	33.50	347	IAmb	IAmb	11 03 35.2	
	comp=Z,93nm,0.8s						
ECSD	EROS Data Cent	33.50	347	P	P	11 03 33.2	-1.9
	baz=162,SNR=72						
WES	Weston	33.72	20	IAmb	IAmb	11 04 15.0	
	comp=Z,137nm,1.5s						
J59A	Piesco	33.73	16	IAmb	IAmb	11 04 14.1	
	comp=Z,166nm,1.2s						
BCX	Boston College	33.73	21	IAmb	IAmb	11 03 47.7	
	comp=Z,78nm,1.2s						
HRV	Adam Dziewonsk	33.74	20	P	P	11 03 38.1	+0.8
HRV				pmax	pmax		
	comp=Z,53nm,1.2s						
HRV				MLR	MLR		
	comp=Z,20µm,20.0s						
HRV	Adam Dziewonsk	33.74	20	P	P	11 03 38.1	+0.8
GLA	Glamis	33.81	314	IAmb	IAmb	11 03 43.1	
	comp=Z,199nm,2.0s						
GLA	Glamis	33.81	314	P	P	11 03 39.3	+1.2
	baz=124,SNR=6.2						
ACCN	Adirondack Com	33.88	17	IAmb	IAmb	11 03 40.9	
	comp=Z,224nm,1.7s						
PB16	IPOC Station P	33.88	150	IAmb	IAmb	11 04 05.7	
	comp=Z,108nm,1.0s						
PB16				IAMs_20	IAMs_20	11 18 16.4	
	comp=Z,12µm,21.0s						
G40A	Rib Lake	34.02	355	IAmb	IAmb	11 03 40.1	
	comp=Z,108nm,0.8s						
PDMCI	Parker Dam,Lak	34.05	317	P	P	11 03 41.0	+0.9
	baz=126,SNR=12						
N23A	Red Feather La	34.10	333	P	P	11 03 41.2	+0.4
	baz=145						
J61A	Chester	34.18	18	IAmb	IAmb	11 03 52.3	
	comp=Z,225nm,1.4s						
SPMN	Marine on St.	34.26	352	P	P	11 03 40.1	-1.6
	baz=169,SNR=69						
NCB	Newcomb	34.27	16	IAmb	IAmb	11 03 43.7	
	comp=Z,273nm,1.8s						
ITTB	Itaituba	34.36	115	*e*P	P	11 03 42.5	-0.5
F42A	Maple Grove Fa	34.39	358	IAmb	IAmb	11 03 43.0	
	comp=Z,58nm,0.8s						
SWSC	Sam W. Stewart	34.44	313	P	P	11 03 45.4	+1.9
	baz=122,SNR=7.2						
IKP	In-Ko-Pah, Jac	34.51	313	P	P	11 03 45.8	+1.6
	baz=122,SNR=9.1						
O20A	White River Ci	34.57	330	P	P	11 03 45.3	+0.6
	baz=141,SNR=36						
FFD	Franklin Falls	34.57	19	IAmb	IAmb	11 03 47.3	
	comp=Z,282nm,1.6s						
BC3	Big Chuckawall	34.58	315	P	P	11 03 46.0	+1.2
	baz=124,SNR=12						
HNH	Hanover	34.59	18	IAmb	IAmb	11 03 47.1	
	comp=Z,310nm,1.9s						
HNH				IAMs_20	IAMs_20	11 18 30.2	
	comp=Z,15µm,20.0s						
MALB	Monte Alegre	34.64	110	*e*P	P	11 03 44.7	-0.7
NEE2	Needles Airpor	34.64	317	P	P	11 03 46.4	+1.2
	baz=126						
IRM	Iron Mountain	34.65	316	P	P	11 03 46.4	+1.1
	baz=125,SNR=6.6						
SUSD	Miller	34.74	344	P	P	11 03 44.3	-1.6
	baz=159,SNR=12						
LONY	Lake Ozonia	34.78	15	IAMs_20	IAMs_20	11 18 52.3	
	comp=Z,11µm,18.0s						
LONY	Lake Ozonia	34.78	15	P	P	11 03 46.2	-0.1
	baz=201,SNR=34						
MONP2	Monument Peak	34.86	313	P	P	11 03 48.9	+1.6
	baz=122,SNR=14						
KNB	Kanab	34.88	322	IAmb	IAmb	11 03 59.4	
	comp=Z,227nm,1.7s						
F36A	Milaca	34.98	351	IAmb	IAmb	11 03 47.9	
	comp=Z,126nm,0.8s						
E43A	Lone Tree Farm	34.98	359	IAmb	IAmb	11 03 48.5	
	comp=Z,130nm,0.8s						
SRU	San Rafael Swe	34.98	327	IAmb	IAmb	11 04 00.9	
	comp=Z,79nm,0.8s						
VT1	Waterbury	35.02	17	IAmb	IAmb	11 04 26.7	
	comp=Z,72nm,1.1s						
PB11	IPOC Station P	35.03	152	IAmb	IAmb	11 04 14.5	
	comp=Z,145nm,1.3s						
BELC	Belle Mtn. Jos	35.15	315	P	P	11 03 51.2	+1.4
	baz=123						
LBNH	Lisbon	35.18	18	IAmb	IAmb	11 03 52.2	
	comp=Z,259nm,1.7s						
LBNH				IAMs_20	IAMs_20	11 18 28.9	
	comp=Z,14µm,20.0s						
LBNH	Lisbon	35.18	18	P	P	11 03 50.5	+0.8
	baz=206,SNR=9.7						
P18A	Preston Nutter	35.21	327	IAmb	IAmb	11 04 01.9	
	comp=Z,129nm,1.3s						
FRNY	Flat Rock	35.24	16	IAmb	IAmb	11 03 52.0	
	comp=Z,206nm,1.6s						
TPFO	Pinon Flats	35.26	314	P	P	11 03 51.7	+1.0
	baz=122,SNR=11						
PFO	Pinyon Flats O	35.26	314	P	P	11 03 51.7	+0.9
PFO				pmax	pmax		
	comp=Z,31nm,1.2s						
PFO				MLR	MLR		
	comp=Z,6µm,22.0s						
PFO	Pinyon Flats O	35.26	314	P	P	11 03 51.7	+0.9
PFO	Pinyon Flats O	35.26	314	P	P	11 03 52.3	+1.6
	baz=122,SNR=10						
RWWY	Rawlins	35.30	333	IAmb	IAmb	11 04 00.9	
	comp=Z,100nm,1.1s						
GMRC	Granite Mounta	35.35	316	P	P	11 03 52.9	+1.5
	baz=125,SNR=11						
109C	Camp Elliot, M	35.35	312	P	P	11 03 52.9	+1.6
	baz=121						
P17A	Butcher Ranch,	35.36	327	IAmb	IAmb	11 04 04.7	
	comp=Z,108nm,0.9s						
SZCU	Shurtz Canyon	35.41	322	IAmb	IAmb	11 04 04.5	
	comp=Z,98nm,1.4s						
E38A	The Farm, Brul	35.47	354	IAmb	IAmb	11 03 52.4	
	comp=Z,133nm,0.9s						
TMUT	Trail Mountain	35.49	326	IAmb	IAmb	11 04 03.9	
	comp=Z,86nm,1.3s						
VILB	Vilhena	35.53	132	*e*P	P	11 03 53.1	0.0
RDMU	Red Mountain	35.56	329	IAmb	IAmb	11 04 03.8	
	comp=Z,188nm,1.8s						
PB08	IPOC Station P	35.60	151	IAMs_20	IAMs_20	11 17 46.8	
	comp=Z,7µm,22.0s						
D41A	Chassel	35.71	358	IAmb	IAmb	11 03 54.6	
	comp=Z,101nm,1.0s						
TCRU	Three Creeks R	35.71	324	IAmb	IAmb	11 04 06.2	
	comp=Z,81nm,1.1s						
H62A	Milan	35.72	19	IAmb	IAmb	11 03 56.9	
	comp=Z,303nm,2.0s						
MURC	Murrieta	35.78	313	P	P	11 03 56.5	+1.4
	baz=122,SNR=21						
K22A	Casper	35.78	334	P	P	11 03 54.9	-0.2
	baz=145,SNR=17						
HEC	Hector,Ludlow	35.84	316	P	P	11 03 57.3	+1.7
	baz=124,SNR=7.9						
TUQ	Turquoise Moun	35.90	317	P	P	11 03 56.9	+0.7
	baz=125						
BBRC	Big Bear Solar	35.93	314	P	P	11 03 58.3	+1.7
	baz=123,SNR=13						
NPGB	Novo Progresso	35.97	119	*e*P	P	11 03 55.3	-1.6
RSSD	Black Hills	36.05	338	P	P	11 03 56.8	-0.6
RSSD				pmax	pmax		
	comp=Z,42nm,1.0s						
RSSD				MLR	MLR		
	comp=Z,4µm,21.0s						
RSSD	Black Hills	36.05	338	P	P	11 03 56.8	-0.6
RSSD	Black Hills	36.05	338	P	P	11 03 57.7	+0.3
	baz=150						
MCPB	Macapa, AP	36.16	106	*e*P	P	11 03 57.3	-1.2
WVL	Waterville	36.21	21	IAmb	IAmb	11 04 10.2	
	comp=Z,227nm,1.5s						
RRX	Edison Barstow	36.31	315	P	P	11 04 01.2	+1.5
	baz=123						
SHOC	Shoshone, Teco	36.40	317	P	P	11 04 01.6	+1.3
	baz=125						
GSC	Goldstone, Bar	36.42	316	P	P	11 04 02.1	+1.5
	baz=124						
BFSC	Mount Baldy Ra	36.44	314	P	P	11 04 01.8	+1.0
	baz=122,SNR=7.3						
SCI2	San Clemente I	36.45	311	P	P	11 04 02.1	+1.4
	baz=119						
CIS	Catalina Islan	36.56	312	P	P	11 04 03.4	+1.7
	baz=120,SNR=11						
FMP	Fort Macarthur	36.63	313	P	P	11 04 03.8	+1.6
	baz=120						
EYMN	Ely	36.79	354	P	P	11 04 01.0	-2.5
	baz=172,SNR=15						
D32A	Dogwood Acres,	36.82	348	IAmb	IAmb	11 04 03.5	
	comp=Z,134nm,0.7s						
DECC	Green Verdugo	36.93	313	P	P	11 04 06.4	+1.5
	baz=121						
PKME	Peaks-Kenny Pk	36.95	20	IAmb	IAmb	11 04 15.2	
	comp=Z,234nm,1.4s						
PKME	Peaks-Kenny Pk	36.95	20	P	P	11 04 04.9	+0.1
	baz=209,SNR=8.5						
TPNV	Topopah Spring	36.99	319	P	P	11 04 06.8	+1.3
	baz=126,SNR=35						
PB09	IPOC Station P	36.99	153	IAmb	IAmb	11 04 23.8	
	comp=Z,80nm,0.9s						
PB09				IAMs_20	IAMs_20	11 19 05.6	
	comp=Z,6µm,18.0s						
SIV	San Ignacio	37.00	137	P	P	11 04 05.5	-0.1
	comp=Z,93nm,0.8s,baz=313,slow=8.4,SNR=237						
SIV				PcP	PcP	11 06 27.4	+1.0
	comp=Z,17nm,0.7s,baz=353,slow=2.2,SNR=3.7						
SIV	San Ignacio	37.00	137	P	P	11 04 05.5	-0.1
DUG	Dugway, Tooele	37.00	326	IAMs_20	IAMs_20	11 21 39.7	
	comp=Z,8µm,19.0s						
DUG	Dugway, Tooele	37.00	326	P	P	11 04 06.3	+0.7
	baz=134,SNR=14						
EDW2	Edwards Air Fo	37.01	315	P	P	11 04 06.6	+1.0
	baz=122,SNR=13						
FURC	Furnace Creek,	37.11	318	P	P	11 04 07.5	+1.2
	baz=125,SNR=8.9						
LRMC	Laurel Mtn Rad	37.11	316	P	P	11 04 07.5	+0.9
	baz=123,SNR=9.7						
E28A	Huff	37.18	344	IAmb	IAmb	11 04 08.4	
	comp=Z,98nm,0.8s						
PDAR	Pinedale Array	37.23	332	P	P	11 04 06.7	-0.8
	comp=Z,9.7nm,0.7s,baz=131,slow=10,SNR=74						
PDAR				PcP	PcP	11 06 27.8	+0.9
	comp=Z,7.7nm,0.5s,baz=145,slow=5.6,SNR=16						
PDAR				ScP	ScP	11 10 14.8	+3.0
	comp=Z,1.1nm,0.7s,baz=125,slow=6.4,SNR=4.5						
PDAR				LR	LR	11 22 20.2	
	comp=Z,6µm,21.9s,baz=134,slow=41						
PDAR	Pinedale Array	37.23	332	P	P	11 04 06.3	-1.2
BW06	Boulder Array	37.23	332	IAmb	IAmb	11 04 16.9	
	comp=Z,169nm,1.9s						
BW06	Boulder Array	37.23	332	P	P	11 04 06.8	-0.7
	baz=141,SNR=18						
MPMC	Manual Prospec	37.30	317	P	P	11 04 09.0	+0.8
	baz=124,SNR=30						
PDRB	Porto dos Gac	37.33	127	*e*P	P	11 04 07.5	-0.9
OSI	Osito Audit: C	37.39	314	P	P	11 04 10.0	+1.2
	baz=121						
R11A	Troy Canyon, C	37.41	321	P	P	11 04 10.4	+1.3
	baz=129,SNR=10						
B35A	Bob, Littlefor	37.45	352	IAmb	IAmb	11 05 15.5	
	comp=Z,74nm,0.4s						
VLDQ	Val d'Or	37.50	10	IAmb	IAmb	11 04 10.6	
	comp=Z,206nm,1.9s						
CLDB	Colider	37.65	125	*e*P	P	11 04 09.3	-1.8
AGMN	Agassiz Nation	37.72	350	IAmb	IAmb	11 04 11.5	
	comp=Z,247nm,1.3s						
AGMN	Agassiz Nation	37.72	350	P	P	11 04 09.6	-1.8
	baz=165,SNR=76						
ARVC	Arvin	37.73	314	P	P	11 04 13.2	+1.6
	baz=121,SNR=10						
GRAC	Grapevine Rang	37.74	318	P	P	11 04 12.9	+1.1
	baz=125						
ISA	Isabella, Lake	37.76	315	P	P	11 04 13.3	+1.3
	baz=122,SNR=11						
F64A	Sherman	37.80	21	IAmb	IAmb	11 04 49.6	
	comp=Z,122nm,1.3s						
LVC	Limon Verde	37.85	153	P	P	11 04 14.7	+1.6
	comp=Z,7.0nm,0.9s,baz=306,slow=5.6,SNR=8.3						
LVC				PcP	PcP	11 06 30.5	+1.2
	comp=Z,4.4nm,0.6s,baz=347,slow=5.9,SNR=5.2						
LVC	Limon Verde	37.85	153	P	P	11 04 13.6	+0.5
LVC				pmax	pmax		
	comp=Z,94nm,1.3s						
LVC				MLR	MLR		
	comp=Z,5µm,19.0s						
LVC	Limon Verde	37.85	153	P	P	11 04 13.6	+0.5
CWC	Cottonwood Cre	37.91	317	P	P	11 04 14.5	+1.2
	baz=124						
PTLB	Pontes e Lacer	37.96	134	*e*P	P	11 04 13.2	-0.5
PTLB	Pontes e Lacer	37.96	134	IAmb	IAmb	11 04 15.1	
	comp=Z,94nm,0.8s						
MDND	Maddock	38.07	346	P	P	11 04 13.3	-1.0
	baz=159,SNR=33						
VES	Vestal, Richgr	38.27	315	P	P	11 04 17.7	+1.5
	baz=122,SNR=21						
TPH	Tonopah	38.27	319	IAmb	IAmb	11 04 38.1	
	comp=Z,140nm,1.1s						
PKM	Mcpherson Peak	38.30	313	P	P	11 04 18.1	+1.4
	baz=120,SNR=11						
TIN	Tinemaha, Big	38.35	317	P	P	11 04 18.4	+1.5
	baz=124						
LOHW	Long Hollow	38.37	331	IAmb	IAmb	11 04 27.8	
	comp=Z,157nm,1.6s						
PQI	Presque Isle	38.61	21	IAMs_20	IAMs_20	11 21 30.7	
	comp=Z,12µm,19.0s						
VOG	Valley Oaks Go	38.73	316	P	P	11 04 21.0	+1.0
	baz=122						
FLWY	Flagg Ranch	38.77	332	IAMs_20	IAMs_20	11 23 28.9	
	comp=Z,9µm,22.0s						
RLMT	Red Lodge	38.95	334	P	P	11 04 21.0	-0.9
	baz=143,SNR=28						
H17A	Grant Village	38.95	332	P	P	11 04 22.4	+0.3
	baz=141,SNR=12						
YMP	Mirror Lake Pl	39.03	333	IAmb	IAmb	11 04 43.5	
	comp=Z,241nm,1.9s						
LAO	LASA Array	39.04	338	P	P	11 04 21.8	-0.7
	baz=149,SNR=17						
MLAC	Mammoth, Mammo	39.07	318	P	P	11 04 24.4	+1.2
	baz=124						
LMN	Caledonia Moun	39.12	24	IAmb	IAmb	11 04 24.8	
	comp=Z,87nm,0.7s						
NVAR	Mina Array Bea	39.17	319	P	P	11 04 25.2	+1.2
	comp=Z,24nm,0.7s,baz=128,slow=7.1,SNR=114						
NVAR				PcP	PcP	11 06 34.4	+1.4
	comp=Z,53nm,0.6s,baz=126,slow=3.2,SNR=53						
NVAR				ScP	S	11 10 23.7	+1.6
	comp=Z,2.9nm,0.7s,baz=140,slow=4.5,SNR=7.6						
NVAR				LR	LR	11 22 52.4	
	comp=Z,7µm,19.4s,baz=136,slow=40						
NVAR	Mina Array Bea	39.17	319	P	P	11 04 24.8	+0.8
YHL	Hebgen Lake	39.58	332	IAmb	IAmb	11 04 38.7	
	comp=Z,269nm,1.7s						
ULM	Lac du Bonnet	39.62	351	P	P	11 04 24.9	-2.3
	comp=Z,70nm,0.7s,baz=165,slow=8.7,SNR=85						
ULM				LR	LR	11 23 32.0	
	comp=Z,3µm,19.4s,baz=166,slow=41						
ULM	Lac du Bonnet	39.62	351	IAmb	IAmb	11 04 26.7	
	comp=Z,121nm,0.9s						
BMN	Battle Mountai	39.70	322	IAmb	IAmb	11 04 39.8	
	comp=Z,140nm,1.2s						
DGMT	Dagmar	39.91	342	IAmb	IAmb	11 04 30.9	
	comp=Z,160nm,0.8s						
DGMT	Dagmar	39.91	342	P	P	11 04 29.1	-0.7
	baz=153,SNR=60						
GBN	Guysborough	40.18	28	P	P	11 04 33.0	+1.0
HLID	Hailey	40.21	328	IAMs_20	IAMs_20	11 24 24.7	
	comp=Z,7µm,20.0s						
HLID	Hailey	40.21	328	P	P	11 04 32.5	+0.1
	baz=135,SNR=49						
BOZ	Bozeman (W)	40.36	333	IAmb	IAmb	11 04 44.2	
	comp=Z,252nm,1.9s						
BOZ	Bozeman (W)	40.36	333	P	P	11 04 33.9	+0.3
	baz=140,SNR=79						
PNTR	Pine Nut	40.38	319	P	P	11 04 35.6	+1.6
SAO	San Andreas Ge	40.38	315	P	P	11 04 34.8	+1.0
SAO				pmax	pmax		
	comp=Z,24nm,0.9s						
SAO				MLR	MLR		
	comp=Z,7µm,22.0s						
SAO	San Andreas Ge	40.38	315	P	P	11 04 34.8	+1.0
SAO				IAMs_20	IAMs_20	11 23 01.6	
	comp=Z,7µm,22.0s						
PRPB	Parauapebas	40.44	114	*e*P	P	11 04 32.9	-1.7
TMAB	Tom-Au,PA,Br	40.56	107	*e*P	P	11 04 35.0	-0.5
DLMT	Dillon	40.62	332	IAMs_20	IAMs_20	11 24 06.9	
	comp=Z,7µm,22.0s						
SALV	Santo Antonio	40.75	131	*e*P	P	11 04 36.1	-1.0
MFID	Camas Ranch	40.85	327	IAMs_20	IAMs_20	11 23 40.6	
	comp=Z,6µm,21.0s						
EGMT	Eagleton	41.48	336	P	P	11 04 42.3	-0.5
	baz=145,SNR=22						
WVOR	Wild Horse Val	41.78	324	IAMs_20	IAMs_20	11 24 54.0	
	comp=Z,5µm,18.0s						
ORV	Oroville	41.87	318	IAMs_20	IAMs_20	11 24 09.1	
	comp=Z,6µm,22.0s						
SNDB	Serra Nova Dou	41.93	122	*e*P	P	11 04 46.0	-0.8
MCCM	Marconi Confer	42.06	316	IAmb	IAmb	11 04 50.9	
	comp=Z,81nm,0.8s						
MCCM				IAMs_20	IAMs_20	11 23 42.0	
	comp=Z,6µm,22.0s						
PLID	Pearl Lake	42.09	329	IAMs_20	IAMs_20	11 25 42.5	
	comp=Z,7µm,21.0s						
J08A	Circle Bar Ran	42.26	325	IAmb	IAmb	11 05 07.8	
	comp=Z,203nm,2.0s						
PP1B	Ponte de Pedra	42.44	132	*e*P	P	11 04 50.2	-0.6
MOD	Modoc Plateau	42.44	322	IAMs_20	IAMs_20	11 25 04.4	
	comp=Z,5µm,20.0s						
O03E	Paynes Creek	42.46	319	P	P	11 04 50.3	-0.6
	baz=123						
BMO	Blue Mountains	42.60	327	IAMs_20	IAMs_20	11 26 07.1	
	comp=Z,7µm,19.0s						
LCO	Las Campanas	42.87	159	*e*P	P	11 04 57.7	+3.2
LCO	Las Campanas	42.87	159	P	P	11 04 57.6	+3.2
O02D	Mt. Diablo Mer	43.04	318	P	P	11 04 54.6	-1.0
	baz=122,SNR=6.4						
WDC	Whiskeytown Da	43.09	319	P	P	11 04 54.6	-1.3
WDC				pmax	pmax		
	comp=Z,21nm,1.3s						
WDC				MLR	MLR		
	comp=Z,3µm,22.0s						
WDC	Whiskeytown Da	43.09	319	P	P	11 04 54.6	-1.3
KCPM	Cahto Peak	43.31	317	IAmb	IAmb	11 05 01.5	
	comp=Z,412nm,2.0s						
M04C	Macdoel	43.31	321	P	P	11 04 57.9	+0.1
	baz=125,SNR=9.3						
N02D	Trinity Center	43.41	319	P	P	11 04 57.5	-1.1
	baz=123						
ARAG	Araguaiana, MT	43.59	127	*e*P	P	11 04 58.9	-1.3
SMTB	Santa Maria do	43.60	116	*e*P	P	11 04 59.1	-1.2
M02C	Callahan	43.73	320	P	P	11 05 00.5	-0.6
	baz=123						
K04D	Chiloquin, OR	43.73	322	P	P	11 05 00.4	-0.8
	baz=125						
AQDB	Aquidauana	43.77	136	*e*P	P	11 05 01.6	+0.1
AQDB	Aquidauana	43.77	136	P	P	11 05 01.6	+0.1
AQDB				IAmb	IAmb	11 05 02.8	
	comp=Z,105nm,1.1s						
J05D	Fort Rock, OR	43.81	323	P	P	11 05 01.1	-0.8
	baz=126						
YBH	Yreka Blue Hor	43.82	320	P	P	11 05 02.2	+0.3
YBH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YBH				MLR	MLR		
	comp=Z,7µm,22.0s						
YBH	Yreka Blue Hor	43.82	320	P	P	11 05 02.2	+0.3
YBH				IAMs_20	IAMs_20	11 25 18.9	
	comp=Z,7µm,22.0s						
L04D	Klamath Falls	43.84	321	P	P	11 05 01.1	-1.0
	baz=124,SNR=12						
RPN	Rapa Nui	44.12	210	IAMs_20	IAMs_20	11 18 26.5	
	comp=Z,8µm,20.0s						
E09A	Wood Farm, Sta	44.16	329	IAmb	IAmb	11 05 14.2	
	comp=Z,100nm,1.3s						
JCC	Jacoby Creek,	44.18	318	P	P	11 05 05.9	+1.3
J04D	Umpqua Nationa	44.30	323	P	P	11 05 05.6	-0.3
	baz=126,SNR=9.0						
HUMO	Hull Mountain	44.46	321	IAMs_20	IAMs_20	11 27 04.8	
	comp=Z,8µm,18.0s						
ROSB	Rosrio	44.47	106	*e*P	P	11 05 06.2	-1.1
I05D	Terrebonne, OR	44.50	324	P	P	11 05 07.3	+0.1
	baz=127,SNR=6.9						
PEXB	Peixe	44.51	120	*e*P	P	11 05 05.4	-2.2
E08A	Dider Farm, El	44.61	328	IAmb	IAmb	11 05 17.4	
	comp=Z,97nm,1.3s						
L02E	Cave Junction	44.61	320	P	P	11 05 09.9	+1.8
	baz=123						
HAWA	Hanford	44.79	328	IAMs_20	IAMs_20	11 27 33.1	
	comp=Z,6µm,20.0s						
I04A	Tendick Farm,	44.80	323	P	P	11 05 08.9	-0.8
	baz=126,SNR=18						
NEW	Newport	44.87	331	P	P	11 05 09.1	-1.0
NEW				pmax	pmax		
	comp=Z,25nm,1.1s						
NEW				MLR	MLR		
	comp=Z,4µm,19.0s						
NEW	Newport	44.87	331	P	P	11 05 09.1	-1.0
NEW	Newport	44.87	331	P	P	11 05 08.8	-1.3
	baz=135,SNR=11						
DRLN	Deer Lake	44.87	27	P	P	11 05 09.8	-0.3
DRLN				IAmb	IAmb	11 05 19.6	
	comp=Z,95nm,0.9s						
D08A	Wollman Farm,	44.92	329	P	P	11 05 10.4	0.0
D08A				IAmb	IAmb	11 06 54.2	
	comp=Z,168nm,1.7s						
K02D	Willamette Mer	44.94	321	P	P	11 05 10.1	-0.7
	baz=123						
KBO	Bosley Butte	45.03	320	IAmb	IAmb	11 05 22.7	
	comp=Z,115nm,1.2s						
G05D	Wamic, OR	45.03	325	P	P	11 05 11.7	+0.3
	baz=128,SNR=16						
H03N2	Juan Fernandez	45.05	171	T	T	11 53 07.2	
	baz=349,slow=76,SNR=16						
H03N1	Juan Fernandez	45.06	171	T	T	11 53 09.8	
	baz=349,slow=76,SNR=11						
H03N3	Juan Fernandez	45.07	171	T	T	11 53 10.9	
	baz=349,slow=76,SNR=6.0						
E07A	Sunnyside	45.07	328	IAmb	IAmb	11 05 21.8	
	comp=Z,145nm,1.1s						
H04A	Detroit Lake	45.19	324	IAmb	IAmb	11 05 22.8	
	comp=Z,109nm,1.2s						
I03D	Drain, OR	45.30	322	P	P	11 05 13.4	-0.2
	baz=124,SNR=6.9						
J01E	Myrtle Point	45.36	321	P	P	11 05 14.1	+0.1
	baz=123,SNR=6.3						
BUCK	Buck Mountain	45.37	323	IAmb	IAmb	11 06 56.0	
	comp=Z,69nm,0.7s						
H04D	Lebanon	45.42	324	P	P	11 05 13.9	-0.6
	baz=126,SNR=7.9						
KEBM	Edson Butte	45.45	321	IAmb	IAmb	11 05 30.4	
	comp=Z,99nm,1.0s						
F05D	White Salmon	45.51	326	P	P	11 05 15.9	+0.8
	baz=128,SNR=16						
I02E	Swisshome, OR	45.83	322	P	P	11 05 17.9	+0.2
	baz=124						
LTY	Liberty	45.95	328	IAmb	IAmb	11 05 30.8	
	comp=Z,82nm,1.3s						
F04A	Amboy	46.07	325	IAmb	IAmb	11 06 57.7	
	comp=Z,59nm,0.8s						
G03D	McMinnville, O	46.12	324	P	P	11 05 19.5	-0.4
	baz=126,SNR=11						
SCHQ	Schefferville	46.15	16	P	P	11 05 18.1	-2.0
	comp=Z,42nm,0.6s,baz=215,slow=6.5,SNR=133						
SCHQ				PcP	PcP	11 06 55.0	-0.7
	comp=Z,19nm,0.6s,baz=250,slow=3.0,SNR=7.6						
SCHQ				LR	LR	11 24 47.5	
	comp=Z,10µm,21.7s,baz=209,slow=37						
SCHQ	Schefferville	46.15	16	P	P	11 05 18.9	-1.2
VA03	San Esteban	46.38	161	IAmb	IAmb	11 05 40.9	
	comp=Z,94nm,0.9s						
F04D	Rainier, OR	46.49	325	P	P	11 05 22.8	-0.1
	baz=127,SNR=6.5						

C06D	**Leavenworth**	**46.49**	**328**	P	**P**	**11 05 22.5**	**-0.4**
	baz=130,SNR=7.6						
E04D	**Cinebar**	**46.53**	**326**	P	**P**	**11 05 22.1**	**-1.0**
	baz=128						
BDFB	**Brasilia**	**46.58**	**124**	P	**P**	**11 05 22.8**	**-1.3**
	comp=Z,51nm,0.8s,baz=292,slow=9.3,SNR=50						
BDFB				LR	LR	11 25 54.7	
	comp=Z,7µm,18.6s,baz=308,slow=38						
BDFB	**Brasilia**	**46.58**	**124**	IAmb	IAmb	11 05 25.5	
	comp=Z,70nm,1.0s						
D05A	**Enumclaw**	**46.60**	**327**	IAmb	IAmb	11 05 33.8	
	comp=Z,75nm,1.0s						
CPUP	**Villa Florida**	**46.94**	**143**	P	**P**	**11 05 26.2**	**-0.4**
	comp=Z,14nm,0.7s,baz=333,slow=8.3,SNR=24						
CPUP				LR	LR	11 28 13.7	
	comp=Z,4µm,18.2s,baz=324,slow=40						
CPUP	**Villa Florida**	**46.94**	**143**	*e*P	**P**	**11 05 25.9**	**-0.8**
CPUP	**Villa Florida**	**46.94**	**143**	IAmb	IAmb	11 05 39.3	
	comp=Z,195nm,1.9s						
D04E	**Lakebay**	**47.02**	**327**	P	**P**	**11 05 26.6**	**-0.3**
	baz=128						
E03A	**Lebam**	**47.07**	**325**	IAmb	IAmb	11 07 01.8	
	comp=Z,69nm,0.7s						
ITRB	**Iturama**	**47.08**	**131**	*e*P	**P**	**11 05 27.3**	**-0.6**
B06A	**Marblemount**	**47.18**	**329**	IAmb	IAmb	11 05 37.6	
	comp=Z,80nm,1.0s						
MT09	**Talagante**	**47.18**	**162**	IAmb	IAmb	11 05 54.8	
	comp=Z,63nm,1.0s						
B05A	**Bryant**	**47.33**	**328**	P	**P**	**11 05 28.1**	**-1.3**
	baz=129,SNR=5.6						
D03D	**Eldon**	**47.41**	**327**	P	**P**	**11 05 28.9**	**-1.1**
	baz=128,SNR=9.4						
WISH	**Wishkah**	**47.52**	**326**	IAmb	IAmb	11 06 11.6	
	comp=Z,125nm,1.4s						
SDBA	**SAO DESIDERIO**	**47.56**	**118**	*e*P	**P**	**11 05 30.0**	**-1.7**
PCMB	**Pacaembu**	**47.61**	**133**	*e*P	**P**	**11 05 31.3**	**-0.7**
IPMB	**Ipameri, GO**	**47.71**	**127**	*e*P	**P**	**11 05 31.6**	**-1.3**
NLWA	**Neilton Lookou**	**47.74**	**326**	IAmb	IAmb	11 05 43.3	
	comp=Z,87nm,1.2s						
A04D	**Lummi Island**	**47.94**	**328**	P	**P**	**11 05 33.1**	**-0.9**
	baz=129						
B04A	**Port Angeles**	**47.95**	**327**	IAmb	IAmb	11 05 44.8	
	comp=Z,94nm,1.1s						
GO05	**Huala**	**48.07**	**164**	IAmb	IAmb	11 06 02.4	
	comp=Z,73nm,1.0s						
BO02	**Sierra Bellavi**	**48.19**	**163**	P	**P**	**11 05 37.0**	**+0.8**
BO02				IAmb	IAmb	11 05 57.1	
	comp=Z,104nm,1.1s						
BB19B	**Bebedouro**	**49.27**	**131**	*e*P	**P**	**11 05 43.6**	**-1.2**
JANB	**Januaria**	**49.33**	**121**	*e*P	**P**	**11 05 43.8**	**-1.6**
ITQB	**Itaqui**	**49.88**	**145**	*e*P	**P**	**11 05 49.5**	**+0.3**
ITQB	**Itaqui**	**49.88**	**145**	IAmb	IAmb	11 06 00.1	
	comp=Z,121nm,1.0s						
MC01	**Montes Claros**	**50.46**	**123**	*e*P	**P**	**11 05 52.5**	**-1.4**
ITAB	**Concordia**	**50.79**	**140**	*e*P	**P**	**11 05 56.4**	**+0.3**
ITAB	**Concordia**	**50.79**	**140**	IAmb	IAmb	11 06 06.8	
	comp=Z,141nm,1.2s						
RCLB	**Rio Claro- Sao**	**50.82**	**131**	*e*P	**P**	**11 05 55.8**	**-0.7**
DIAM	**Diamantina, MG**	**51.50**	**124**	*e*P	**P**	**11 06 00.7**	**-1.2**
TIJ01	**Guaruva-PR**	**51.58**	**135**	*e*P	**P**	**11 06 01.6**	**-0.7**
VAO	**Valinhos**	**51.59**	**131**	*e*P	**P**	**11 06 01.4**	**-1.0**
SPB	**Sao Paulo**	**51.61**	**132**	*e*P	**P**	**11 06 01.1**	**-1.2**
SPB	**Sao Paulo**	**51.61**	**132**	IAMs_20	IAMs_20	11 28 39.5	
	comp=Z,7µm,21.0s						
LC01	**Cunco**	**51.75**	**165**	P	**P**	**11 06 03.0**	**-0.2**
LC01				IAmb	IAmb	11 06 23.2	
	comp=Z,116nm,1.1s						
BSCB	**Bom Sucesso**	**52.08**	**128**	*e*P	**P**	**11 06 04.9**	**-1.2**
PET01	**Itanhaem-SP**	**52.15**	**133**	*e*P	**P**	**11 06 06.3**	**-0.1**
CPSB	**Cacapava Do Su**	**52.25**	**143**	*e*P	**P**	**11 06 06.9**	**-0.2**
GDU01	**Guandu, BA**	**52.78**	**117**	*e*P	**P**	**11 06 09.0**	**-2.3**
PARB	**Paraibuna**	**52.78**	**131**	*e*P	**P**	**11 06 10.4**	**-0.8**
PLTB	**Pedras Altas**	**53.16**	**145**	*e*P	**P**	**11 06 13.9**	**+0.1**
PLTB	**Pedras Altas**	**53.16**	**145**	P	**P**	**11 06 13.6**	**-0.2**
PLTB				IAmb	IAmb	11 06 24.3	
	comp=Z,64nm,1.0s						
RCBR	**Riachuelo**	**53.17**	**106**	*e*P	**P**	**11 06 12.0**	**-2.2**
LPA	**La Plata**	**53.33**	**151**	*de*P	**P**	**11 06 13.2**	**-1.7**
LPA				PCP	**PcP**	**11 07 27.9**	**+5.7**
LPA				PP	**PP**	**11 08 12.0**	**-3.6**
LPA				PPP	PPP	11 09 31.2	
LPA				S	**S**	**11 13 45.0**	**+0.4**
LPA				SS	SKiKP	11 17 41.6	+12
LPA				SSS	SSS	11 19 13.9	
CMC01	**Camacan, BA**	**53.55**	**119**	*e*P	**P**	**11 06 16.3**	**-0.6**
TER01	**Tubaro-SC**	**53.61**	**138**	*e*P	**P**	**11 06 17.1**	**0.0**
SJMB	**Sao Joao De Ma**	**53.73**	**123**	*e*P	**P**	**11 06 17.1**	**-1.1**
MAN01	**Angra dos Reis**	**53.75**	**129**	*e*P	**P**	**11 06 15.8**	**-2.6**
PLCA	**Paso Flores**	**53.82**	**165**	P	**P**	**11 06 18.8**	**+0.2**
	comp=Z,6.2nm,0.8s,baz=335,slow=8.3,SNR=32						
PLCA				LR	LR	11 25 34.5	
	comp=Z,2µm,18.0s,baz=4.0,slow=32						
PLCA	**Paso Flores**	**53.82**	**165**	P	**P**	**11 06 18.5**	**0.0**
PLCA				pmax	pmax		
	comp=Z,86nm,1.0s						
PLCA	**Paso Flores**	**53.82**	**165**	*e*P	**P**	**11 06 19.5**	**+1.0**
PLCA	**Paso Flores**	**53.82**	**165**	P	**P**	**11 06 18.5**	**0.0**
PLCA				IAmb	IAmb	11 06 45.2	
	comp=Z,86nm,1.0s						
VAS01	**Vassouras-RJ**	**53.82**	**128**	*e*P	**P**	**11 06 17.9**	**-0.9**
GUA01	**Guaratinga, BA**	**53.87**	**120**	*e*P	**P**	**11 06 18.7**	**-0.5**
BSFB	**Barra de Sao F**	**54.08**	**123**	*e*P	**P**	**11 06 19.9**	**-0.8**
DUB01	**Friburgo-RJ**	**54.54**	**128**	*e*P	**P**	**11 06 24.3**	**+0.2**
RIB01	**Linhares ES**	**54.69**	**123**	*e*P	**P**	**11 06 23.5**	**-1.6**
CAM01	**Campos-RJ**	**54.96**	**127**	*e*P	**P**	**11 06 26.7**	**-0.4**
YKA	**Yellowknife Ar**	**54.98**	**345**	P	**P**	**11 06 24.4**	**-2.1**
	comp=Z,21nm,0.7s,baz=142,slow=7.1,SNR=215						
YKA				PcP	**PcP**	**11 07 28.2**	**+0.2**
	comp=Z,5.8nm,0.6s,baz=147,slow=4.1,SNR=16						
YKA				ScP	**ScP**	**11 11 26.6**	**+2.3**
	comp=Z,0.7nm,0.6s,baz=146,slow=4.5,SNR=4.4						
YKA				LR	LR	11 32 11.0	
	comp=Z,4µm,21.4s,baz=0.0,slow=39						
YKA				PKPPKP	P'P'df	11 36 28.5	-8.6
	comp=Z,0.8nm,0.8s,baz=342,slow=3.1,SNR=6.5						
YKA	**Yellowknife Ar**	**54.98**	**345**	P	**P**	**11 06 24.4**	**-2.1**
YKA						11 07 28.2	
YKA	**Yellowknife Ar**	**54.98**	**345**		**PcP**	**11 07 28.2**	**+0.2**
YKA	**Yellowknife Ar**	**54.98**	**345**	P	**P**	**11 06 24.8**	**-1.7**
ALF01	**Guarapari-ES**	**55.07**	**125**	*e*P	**P**	**11 06 26.3**	**-1.6**
TAOE	**Nuku Hiva Isla**	**56.95**	**252**	*e*S	**S**	**11 14 33.8**	**-0.2**
	comp=Z,3µm,25.4s						
TAOE				*e*LR	LR	11 23 19.0	
	comp=Z,6µm,23.8s,baz=61						
TAOE	**Nuku Hiva Isla**	**56.95**	**252**	*e*T	T	12 07 36.0	
	comp=Z,47nm,0.2s						
CRAG	**Craig**	**57.07**	**330**	P	**P**	**11 06 42.2**	**+0.6**
	baz=122						
WRAK	**Wrangell Islan**	**57.22**	**332**	P	**P**	**11 06 42.5**	**-0.2**
	baz=123						
DLBC	**Dease Lake**	**57.35**	**335**	IAmb	IAmb	11 06 45.5	
	comp=Z,60nm,0.9s						
COYC	**Coyhaique**	**58.07**	**168**	IAmb	IAmb	11 07 15.7	
	comp=Z,139nm,1.1s						
SIT	**Sitka**	**58.95**	**331**	P	**P**	**11 06 54.3**	**-0.4**
	baz=121						
JIS	**Juneau Island**	**59.15**	**333**	IAMs_20	IAMs_20	11 35 07.3	
	comp=Z,6µm,22.0s						
P33M	**Teslin, Yukon**	**59.55**	**335**	P	**P**	**11 06 58.4**	**-0.6**
	baz=125,SNR=6.6						
SKAG	**Skagway**	**60.20**	**334**	P	**P**	**11 07 03.0**	**-0.4**
	baz=122						
WHY	**Whitehorse**	**60.65**	**335**	P	**P**	**11 07 07.3**	**+0.7**
	baz=123						
M31M	**Drury Creek, Y**	**61.30**	**337**	P	**P**	**11 07 10.0**	**-0.9**
	baz=124,SNR=5.7						
N31M	**Braeburn, Yuko**	**61.46**	**336**	P	**P**	**11 07 10.6**	**-1.5**
	baz=122,SNR=5.2						
PNL	**Peninsula**	**62.10**	**333**	P	**P**	**11 07 15.3**	**-1.0**
	baz=118						
M30M	**Minto, Yukon**	**62.45**	**336**	P	**P**	**11 07 16.8**	**-1.8**
	baz=122,SNR=7.4						
PINM	**Pinnacle**	**62.68**	**333**	P	**P**	**11 07 18.7**	**-1.5**
	baz=117						
C36M	**Paulatuk**	**62.77**	**346**	IAMs_20	IAMs_20	11 39 45.7	
	comp=Z,4µm,20.0s						
C36M	**Paulatuk**	**62.77**	**346**	P	**P**	**11 07 18.4**	**-2.2**
	baz=138,SNR=8.0						
LOGN	**Logan Glacier**	**63.34**	**334**	IAmb	IAmb	11 07 28.7	
	comp=Z,179nm,1.8s						
LOGN				IAMs_20	IAMs_20	11 37 18.1	
	comp=Z,6µm,21.0s						
MESA	**MESA**	**63.48**	**333**	P	**P**	**11 07 24.5**	**-1.2**
	baz=116						
YUK3	**Moose Creek**	**63.54**	**335**	P	**P**	**11 07 24.8**	**-1.3**
	baz=118						
CTGM	**Chitina Glacie**	**63.55**	**334**	IAmb	IAmb	11 07 27.6	
	comp=Z,32nm,0.8s						
CTGM				IAMs_20	IAMs_20	11 38 17.6	
	comp=Z,5µm,21.0s						
CTG	**Chitna Glacier**	**63.55**	**334**	P	**P**	**11 07 25.1**	**-1.0**
	baz=117						
BARN	**Barnard Glacie**	**63.73**	**334**	IAMs_20	IAMs_20	11 38 46.4	
	comp=Z,5µm,22.0s						
ISLE	**Juniper Island**	**63.83**	**333**	IAMs_20	IAMs_20	11 37 27.1	
	comp=Z,6µm,22.0s						
J29M	**Klondike Camp**	**63.97**	**338**	P	**P**	**11 07 28.2**	**-0.6**
	baz=121						
BVCY	**Beaver Creek**	**64.01**	**335**	P	**P**	**11 07 27.8**	**-1.2**
	baz=118						
BGLC	**Bering Glacier**	**64.06**	**332**	P	**P**	**11 07 28.0**	**-1.2**
	baz=114						
TGL	**Tana Glacier**	**64.12**	**333**	IAMs_20	IAMs_20	11 37 45.5	
	comp=Z,6µm,22.0s						
DAWY	**Dawson**	**64.22**	**337**	IAmb	IAmb	11 08 06.8	
	comp=Z,77nm,1.8s						
DAWY	**Dawson**	**64.22**	**337**	P	**P**	**11 07 28.9**	**-1.5**
	baz=120,SNR=7.4						
CRQE	**Cirque**	**64.23**	**333**	P	**P**	**11 07 30.0**	**-0.6**
	baz=115						
CRQM	**Cirque**	**64.26**	**333**	IAMs_20	IAMs_20	11 37 38.3	
	comp=Z,5µm,21.0s						
M27K	**Edge Creek, AK**	**64.41**	**335**	IAMs_20	IAMs_20	11 38 48.9	
	comp=Z,5µm,22.0s						
M27K	**Edge Creek, AK**	**64.41**	**335**	P	**P**	**11 07 31.1**	**-0.5**
	baz=117						
MCARA	**McCarthy VSAT**	**64.47**	**334**	IAMs_20	IAMs_20	11 38 45.9	
	comp=Z,5µm,20.0s						
MCARA	**McCarthy VSAT**	**64.47**	**334**	P	**P**	**11 07 31.2**	**-0.7**
	baz=115						
EPYK	**Eagle Plains**	**64.47**	**340**	IAmb	IAmb	11 07 32.6	
	comp=Z,39nm,0.8s						
EPYK				IAMs_20	IAMs_20	11 40 53.8	
	comp=Z,3µm,20.0s						
EPYK	**Eagle Plains**	**64.47**	**340**	P	**P**	**11 07 31.0**	**-0.9**
	baz=124,SNR=19						
I29M	**Ogilvie Camp,**	**64.48**	**339**	P	**P**	**11 07 30.5**	**-1.5**
	baz=122,SNR=21						
INK	**Inuvik**	**64.59**	**342**	P	**P**	**11 07 31.3**	**-1.3**
	baz=128,SNR=40						
VRDI	**Verde Repeater**	**64.59**	**333**	IAMs_20	IAMs_20	11 38 08.1	
	comp=Z,3µm,20.0s						
BCAR	**Beaver Creek A**	**64.69**	**336**	P	**P**	**11 07 32.5**	**-0.9**
L27K	**Beaver Creek,**	**64.70**	**336**	IAmb	IAmb	11 07 34.6	
	comp=Z,40nm,0.8s						
L27K				IAMs_20	IAMs_20	11 39 52.7	
	comp=Z,4µm,19.0s						
L27K	**Beaver Creek,**	**64.70**	**336**	P	**P**	**11 07 33.3**	**-0.2**
	baz=117						
GLB	**Gilahina Butte**	**64.84**	**333**	IAmb	IAmb	11 07 36.9	
	comp=Z,132nm,1.9s						
GLB				IAMs_20	IAMs_20	11 38 36.6	
	comp=Z,4µm,20.0s						
M26K	**Nabesna, AK**	**64.89**	**335**	P	**P**	**11 07 34.4**	**-0.3**
	baz=116						
A36M	**Sachs Harbour**	**64.99**	**348**	IAMs_20	IAMs_20	11 40 26.5	
	comp=Z,3µm,20.0s						
A36M	**Sachs Harbour**	**64.99**	**348**	P	**P**	**11 07 33.0**	**-2.1**
	baz=138,SNR=45						
BMRM	**Bremner River**	**65.00**	**333**	IAmb	IAmb	11 07 38.1	
	comp=Z,172nm,1.7s						
BMRM				IAMs_20	IAMs_20	11 38 25.8	
	comp=Z,5µm,22.0s						
BMRM	**Bremner River**	**65.00**	**333**	P	**P**	**11 07 35.3**	**-0.2**
	baz=114						
ICESG	**Greenland Ices**	**65.04**	**17**	*i* P	**P**	**11 07 33.7**	**-2.2**
EGAK	**Eagle**	**65.24**	**337**	IAMs_20	IAMs_20	11 37 52.3	
	comp=Z,5µm,22.0s						
EGAK	**Eagle**	**65.24**	**337**	P	**P**	**11 07 35.5**	**-1.4**
	baz=118,SNR=8.8						
N25K	**Chitina, Valde**	**65.25**	**333**	IAmb	IAmb	11 07 40.0	
	comp=Z,102nm,1.6s						
N25K	**Chitina, Valde**	**65.25**	**333**	P	**P**	**11 07 36.4**	**-0.8**
	baz=114						
L26K	**Log Cabin Wild**	**65.31**	**335**	IAmb	IAmb	11 07 38.7	
	comp=Z,166nm,1.9s						
L26K				IAMs_20	IAMs_20	11 41 27.1	
	comp=Z,3µm,18.0s						
L26K	**Log Cabin Wild**	**65.31**	**335**	P	**P**	**11 07 36.8**	**-0.6**
	baz=116,SNR=7.7						
EYAK	**Cordova Ski Ar**	**65.36**	**332**	P	**P**	**11 07 37.4**	**-0.3**
	baz=112						
DIV	**Divide**	**65.58**	**333**	IAmb	IAmb	11 07 49.6	
	comp=Z,126nm,1.8s						
KLU	**Klutina**	**65.79**	**333**	IAMs_20	IAMs_20	11 41 39.8	
	comp=Z,4µm,20.0s						
KLU	**Klutina**	**65.79**	**333**	P	**P**	**11 07 40.7**	**+0.1**
	baz=112,SNR=5.3						
HARP	**HAARP**	**65.81**	**334**	P	**P**	**11 07 40.3**	**-0.3**
	baz=114						
DOT	**Dot Lake**	**65.87**	**336**	IAmb	IAmb	11 07 42.0	
	comp=Z,48nm,0.8s						
TULEG	**Thule**	**65.93**	**4**	IAMs_20	IAMs_20	11 36 50.7	
	comp=Z,5µm,20.0s						
SCRK	**Sand Creek**	**65.97**	**336**	IAmb	IAmb	11 07 42.3	
	comp=Z,121nm,2.0s						
SCRK				IAMs_20	IAMs_20	11 39 57.8	
	comp=Z,5µm,22.0s						
SCRK	**Sand Creek**	**65.97**	**336**	P	**P**	**11 07 41.3**	**-0.5**
	baz=115,SNR=9.1						
VAH	**Vaihoa**	**65.98**	**248**	*e*P	**P**	**11 07 45.1**	**+2.6**
	comp=Z,69nm,1.2s						
J26L	**Joseph Creek**	**66.03**	**337**	P	**P**	**11 07 41.9**	**-0.2**
	baz=116,SNR=22						
M24K	**Tolsona, Glenn**	**66.13**	**334**	P	**P**	**11 07 42.7**	**-0.1**
	baz=112						
PMOR	**Pomariorio Ree**	**66.15**	**248**	*e*T	T	12 19 16.4	
	comp=Z,11nm,0.3s						
PAX	**Paxson**	**66.17**	**335**	P	**P**	**11 07 42.2**	**-0.9**
	baz=114,SNR=13						
RIDG	**Independent Ri**	**66.22**	**336**	IAMs_20	IAMs_20	11 39 21.3	
	comp=Z,5µm,20.0s						
RIDG	**Independent Ri**	**66.22**	**336**	P	**P**	**11 07 42.6**	**-0.7**
	baz=114,SNR=7.7						
SCM	**Sheep Creek Mo**	**66.54**	**333**	IAmb	IAmb	11 09 29.4	
	comp=Z,105nm,1.7s						
SCM	**Sheep Creek Mo**	**66.54**	**333**	P	**P**	**11 07 44.7**	**-0.7**
	baz=111						
PWL	**Port Wells**	**66.65**	**332**	P	**P**	**11 07 46.2**	**+0.1**
	baz=110						
PMOZ	**Porto Moniz, M**	**66.66**	**59**	*e*LR	LR	11 28 49.2	
	comp=Z,5µm,18.0s						
KNK	**Knik Glacier**	**66.90**	**333**	P	**P**	**11 07 47.2**	**-0.4**
	baz=110						
SEW	**Seward**	**66.93**	**331**	P	**P**	**11 07 46.9**	**-0.8**
	baz=108						
SML	**Sawmill**	**66.98**	**333**	IAMs_20	IAMs_20	11 39 15.9	
	comp=Z,4µm,21.0s						
SML	**Sawmill**	**66.98**	**333**	P	**P**	**11 07 47.5**	**-0.7**
	baz=110						
WAT6	**Susitna Watana**	**66.99**	**334**	P	**P**	**11 07 46.8**	**-1.6**
	baz=111,SNR=8.7						
DHY	**Denali Highway**	**67.01**	**334**	IAMs_20	IAMs_20	11 38 00.1	
	comp=Z,3µm,22.0s						
DHY	**Denali Highway**	**67.01**	**334**	P	**P**	**11 07 49.1**	**+0.6**
	baz=112						
PRP	**Porcupine Dome**	**67.22**	**337**	IAMs_20	IAMs_20	11 40 35.3	
	comp=Z,5µm,20.0s						
PRP	**Porcupine Dome**	**67.22**	**337**	P	**P**	**11 07 49.0**	**-0.7**
	baz=114,SNR=13						
GHO	**Glory Hole Cre**	**67.23**	**333**	IAmb	IAmb	11 07 50.5	
	comp=Z,40nm,0.8s						
GHO				IAMs_20	IAMs_20	11 41 38.6	
	comp=Z,5µm,20.0s						
PMR	**Palmer**	**67.26**	**333**	P	**P**	**11 07 49.1**	**-0.8**
	baz=109						
MEH	**Mehetia**	**67.29**	**245**	*e*P	**P**	**11 07 54.0**	**+3.1**
	comp=Z,14nm,0.9s						
HDA	**Harding Lake**	**67.34**	**336**	IAmb	IAmb	11 07 50.8	
	comp=Z,53nm,0.8s						
HDA				IAMs_20	IAMs_20	11 40 47.7	
	comp=Z,4µm,21.0s						
HDA	**Harding Lake**	**67.34**	**336**	P	**P**	**11 07 49.5**	**-0.9**
	baz=113						
EFI	**East Falkland**	**67.36**	**161**	⇑*e*P	**P**	**11 07 52.6**	**+2.1**
EFI				pmax	pmax		
	comp=Z,98nm,1.8s						
EFI	**East Falkland**	**67.36**	**161**	IAMs_20	IAMs_20	11 42 11.4	
	comp=Z,3µm,19.0s						
RC01	**Rabbit Creek A**	**67.38**	**332**	IAmb	IAmb	11 07 52.7	
	comp=Z,42nm,0.9s						
RC01				IAMs_20	IAMs_20	11 42 30.7	
	comp=Z,5µm,20.0s						
RC01	**Rabbit Creek A**	**67.38**	**332**	P	**P**	**11 07 49.7**	**-1.0**
	baz=109						
BRSE	**Bradley Lake S**	**67.44**	**330**	P	**P**	**11 07 51.5**	**+0.4**
	baz=107						
ILAR	**Eielson Array**	**67.45**	**336**	P	**P**	**11 07 49.6**	**-1.4**
	comp=Z,19nm,0.7s,baz=128,slow=4.3,SNR=183						
ILAR				LR	LR	11 40 30.3	
	comp=Z,5µm,21.9s,baz=123,slow=39						
ILAR	**Eielson Array**	**67.45**	**336**	P	**P**	**11 07 49.9**	**-1.2**
ILAR	**Eielson Array**	**67.45**	**336**	P	**P**	**11 07 49.9**	**-1.2**
FYU	**Fort Yukon**	**67.55**	**338**	IAmb	IAmb	11 07 53.8	
	comp=Z,142nm,1.9s						
FYU				IAMs_20	IAMs_20	11 42 02.5	
	comp=Z,4µm,20.0s						
BMAR	**Burnt Mountain**	**67.69**	**339**	P	**P**	**11 07 51.6**	**-1.0**
RND	**Reindeer**	**67.75**	**334**	IAMs_20	IAMs_20	11 38 32.8	
	comp=Z,4µm,22.0s						
M22K	**Willow**	**67.76**	**333**	P	**P**	**11 07 52.0**	**-1.0**
	baz=108						
CCB	**Clear Creek Bu**	**67.77**	**336**	IAmb	IAmb	11 07 53.4	
	comp=Z,128nm,1.9s						
CCB				IAMs_20	IAMs_20	11 40 15.8	
	comp=Z,5µm,21.0s						
POKR	**Poker Plat Res**	**67.80**	**336**	IAmb	IAmb	11 07 53.8	
	comp=Z,29nm,0.7s						
POKR				IAMs_20	IAMs_20	11 40 31.0	
	comp=Z,5µm,22.0s						
POKR	**Poker Plat Res**	**67.80**	**336**	P	**P**	**11 07 51.9**	**-1.3**
	baz=112,SNR=14						
WRH	**Wood River Hil**	**67.82**	**336**	IAMs_20	IAMs_20	11 42 07.5	
	comp=Z,4µm,20.0s						
KDAK	**Kodiak Island**	**67.83**	**328**	P	**P**	**11 07 52.3**	**-1.2**
	baz=105						
COLA	**College**	**67.87**	**336**	*i* P	**P**	**11 07 52.4**	**-1.2**
COLA	**College**	**67.87**	**336**	P	**P**	**11 07 52.4**	**-1.2**
COLA				IAmb	IAmb	11 07 53.9	
	comp=Z,32nm,0.8s						
COLA	**College**	**67.87**	**336**	IAMs_20	IAMs_20	11 40 20.0	
	comp=Z,4µm,20.0s						
COLA	**College**	**67.87**	**336**	P	**P**	**11 07 52.2**	**-1.5**
	baz=112						
TCOL	**CIGO, UAF Yank**	**67.88**	**336**	IAmb	IAmb	11 07 53.9	
	comp=Z,32nm,0.8s						
TCOL				IAMs_20	IAMs_20	11 40 19.6	
	comp=Z,5µm,20.0s						
TCOL	**CIGO, UAF Yank**	**67.88**	**336**	P	**P**	**11 07 52.9**	**-0.8**
	baz=112,SNR=14						
MCK	**McKinley**	**67.90**	**335**	IAmb	IAmb	11 07 54.8	
	comp=Z,57nm,1.0s						
MCK				IAMs_20	IAMs_20	11 41 35.7	
	comp=Z,3µm,21.0s						
MCK	**McKinley**	**67.90**	**335**	P	**P**	**11 07 52.9**	**-1.0**
	baz=110,SNR=12						
CUT	**Chulitna**	**68.03**	**333**	IAMs_20	IAMs_20	11 40 35.0	
	comp=Z,3µm,21.0s						
CUT	**Chulitna**	**68.03**	**333**	P	**P**	**11 07 54.0**	**-0.7**
	baz=109						
MDM	**Murphy Dome**	**68.05**	**336**	IAmb	IAmb	11 08 04.4	
	comp=Z,113nm,1.9s						
MDM				IAMs_20	IAMs_20	11 40 25.4	
	comp=Z,5µm,21.0s						
OHAK	**Old Harbor**	**68.06**	**327**	P	**P**	**11 07 55.1**	**+0.1**
	baz=104						
H24K	**Noodor Dome**	**68.24**	**337**	IAMs_20	IAMs_20	11 41 07.4	
	comp=Z,4µm,21.0s						
H24K	**Noodor Dome**	**68.24**	**337**	P	**P**	**11 07 55.3**	**-0.8**
	baz=112,SNR=14						
NEA2	**Nenana**	**68.26**	**336**	IAmb	IAmb	11 07 56.5	
	comp=Z,33nm,0.8s						
NEA2				IAMs_20	IAMs_20	11 42 09.7	
	comp=Z,3µm,20.0s						
NEA2	**Nenana**	**68.26**	**336**	P	**P**	**11 07 54.7**	**-1.5**
	baz=111,SNR=12						
BWN	**Browne**	**68.27**	**335**	IAMs_20	IAMs_20	11 41 42.7	
	comp=Z,3µm,21.0s						
TIAR	**Tiarei**	**68.33**	**246**	*e*P	**P**	**11 07 59.9**	**+2.5**
	comp=Z,0.4nm,0.8s						
TRF	**Thorofare Moun**	**68.38**	**334**	IAmb	IAmb	11 07 58.9	
	comp=Z,53nm,0.9s						
TRF	**Thorofare Moun**	**68.38**	**334**	P	**P**	**11 07 56.2**	**-0.9**
	baz=109,SNR=13						
PPT	**Papeete**	**68.54**	**246**	LR	LR	11 31 02.9	
	comp=Z,2µm,18.1s,baz=64,slow=30						
PPT2	**Papeete2**	**68.54**	**246**	*e*S	**S**	**11 16 57.0**	**-2.3**
	comp=Z,2µm,24.0s						
PPT2	**Papeete2**	**68.54**	**246**	*e*LR	LR	11 28 38.7	
	comp=Z,5µm,24.0s,baz=57						
SPCR	**Spurr Chakacha**	**68.55**	**332**	P	**P**	**11 07 57.4**	**-0.8**
	baz=106						
I23K	**Minto, Yukon-K**	**68.57**	**336**	IAMs_20	IAMs_20	11 41 58.9	
	comp=Z,5µm,22.0s						
I23K	**Minto, Yukon-K**	**68.57**	**336**	P	**P**	**11 07 57.0**	**-1.1**
	baz=110,SNR=31						
PAE	**Paea**	**68.57**	**246**	*e*P	**P**	**11 08 02.3**	**+3.4**
	comp=Z,16nm,1.2s						
NEEM	**North Greenlan**	**68.63**	**8**	*i* P	**P**	**11 07 55.6**	**-3.0**
Q19K	**Cape Douglas,**	**68.66**	**329**	P	**P**	**11 07 57.6**	**-1.2**
	baz=104						
KTH	**Kantishna Hill**	**68.68**	**334**	IAmb	IAmb	11 07 59.2	
	comp=Z,37nm,0.8s						
KTH				IAMs_20	IAMs_20	11 40 11.8	
	comp=Z,5µm,22.0s						
BPAW	**Bear Paw Mtn.**	**68.88**	**335**	IAmb	IAmb	11 08 00.5	
	comp=Z,58nm,0.8s						
BPAW				IAMs_20	IAMs_20	11 42 04.5	
	comp=Z,3µm,20.0s						
BPAW	**Bear Paw Mtn.**	**68.88**	**335**	P	**P**	**11 07 59.0**	**-1.1**
	baz=109,SNR=21						
PPLA	**Purkeypile**	**69.03**	**333**	P	**P**	**11 07 59.7**	**-1.5**
	baz=107,SNR=7.8						
MLY	**Manley**	**69.08**	**336**	IAmb	IAmb	11 08 01.9	
	comp=Z,60nm,0.7s						
MLY				IAMs_20	IAMs_20	11 41 18.5	
	comp=Z,3µm,20.0s						
MLY	**Manley**	**69.08**	**336**	P	**P**	**11 08 00.0**	**-1.3**
	baz=109,SNR=54						
CAST	**Castle Rocks**	**69.14**	**334**	IAMs_20	IAMs_20	11 41 39.9	
	comp=Z,3µm,22.0s						
CAST	**Castle Rocks**	**69.14**	**334**	P	**P**	**11 07 59.7**	**-2.0**
	baz=107,SNR=12						
O19K	**Port Alsworth**	**69.30**	**330**	IAMs_20	IAMs_20	11 41 54.0	
	comp=Z,3µm,20.0s						
O19K	**Port Alsworth**	**69.30**	**330**	P	**P**	**11 08 01.2**	**-1.4**
	baz=104						
CHUM	**Lake Minchumin**	**69.37**	**334**	P	**P**	**11 08 02.1**	**-0.9**
	baz=107,SNR=8.7						
N19K	**Bonanza Creek**	**69.52**	**331**	IAMs_20	IAMs_20	11 40 43.0	
	comp=Z,3µm,19.0s						
N19K	**Bonanza Creek**	**69.52**	**331**	P	**P**	**11 08 03.5**	**-0.7**
	baz=104						
P18K	**Big Mountain,**	**69.56**	**329**	IAMs_20	IAMs_20	11 36 43.9	
	comp=Z,3µm,20.0s						
P18K	**Big Mountain,**	**69.56**	**329**	P	**P**	**11 08 04.3**	**0.0**
	baz=103						
COLD	**Coldfoot**	**69.61**	**338**	P	**P**	**11 08 04.5**	**0.0**
	baz=110,SNR=25						
I21K	**Tanana**	**69.62**	**336**	IAmb	IAmb	11 08 05.2	
	comp=Z,129nm,1.6s						
I21K				IAMs_20	IAMs_20	11 39 44.9	
	comp=Z,4µm,22.0s						
I21K	**Tanana**	**69.62**	**336**	P	**P**	**11 08 03.5**	**-1.1**
	baz=108						
L20K	**Farewell, AK**	**69.66**	**333**	P	**P**	**11 08 03.7**	**-1.3**
	baz=105						
TOLK	**Toolik Lake Re**	**69.90**	**340**	IAMs_20	IAMs_20	11 41 32.2	
	comp=Z,3µm,20.0s						
TOLK	**Toolik Lake Re**	**69.90**	**340**	P	**P**	**11 08 05.9**	**-0.4**
	baz=112,SNR=14						
K20K	**Telida**	**69.98**	**334**	IAmb	IAmb	11 08 08.2	
	comp=Z,55nm,1.3s						
K20K				IAMs_20	IAMs_20	11 41 07.1	
	comp=Z,4µm,22.0s						
K20K	**Telida**	**69.98**	**334**	P	**P**	**11 08 05.5**	**-1.4**
	baz=105						
H21K	**Melozitna Rive**	**70.10**	**336**	IAmb	IAmb	11 08 07.1	
	comp=Z,120nm,2.0s						
H21K				IAMs_20	IAMs_20	11 43 27.4	
	comp=Z,4µm,20.0s						
H21K	**Melozitna Rive**	**70.10**	**336**	P	**P**	**11 08 06.2**	**-1.4**
	baz=107						
J20K	**Nowinta River**	**70.23**	**335**	IAmb	IAmb	11 08 08.9	
	comp=Z,185nm,1.8s						
J20K				IAMs_20	IAMs_20	11 43 09.8	
	comp=Z,3µm,19.0s						
J20K	**Nowinta River**	**70.23**	**335**	P	**P**	**11 08 07.3**	**-1.1**
	baz=106						
TBI	**Tubuai**	**70.50**	**240**	*e*S	**S**	**11 17 21.4**	**-0.7**
	comp=Z,2µm,25.8s						
TBI	**Tubuai**	**70.50**	**240**	*e*LR	LR	11 29 33.9	

	comp=Z,5µm,24.8s,baz=66						
IMAR	Indian Mountai	70.56	336	P	P	11 08 09.6	-0.8
CHGN	Chignik	70.65	326	P	P	11 08 10.2	-0.8
	baz=99,SNR=11						
TTA	Tatalina	70.73	333	P	P	11 08 10.3	-1.2
	baz=104,SNR=8.2						
GCSA	Galena City Sc	71.52	335	P	P	11 08 14.8	-1.3
	baz=103						
SDPT	Sand Point	71.67	325	P	P	11 08 16.4	-0.8
SDPT	Sand Point	71.67	325	P	P	11 08 16.6	-0.6
	baz=97						
A21K	Barrow	73.05	342	IAMs_20	IAMs_20	11 45 54.5	
	comp=Z,2µm,20.0s						
A21K	Barrow	73.05	342	P	P	11 08 24.1	-1.0
	baz=106,SNR=22						
PMST	Lisbon--Monsan	73.20	53	eLQ	LQ	11 09 00.3	
FALS	False Pass	73.31	324	P	P	11 08 26.9	-0.1
	baz=94,SNR=8.0						
MORF	Marmelete	73.65	54	eLQ	LQ	11 08 54.6	
PGAV	Gavieira, Arco	73.84	49	eLR	LR	11 36 08.1	
	comp=Z,4µm,20.0s						
PMTG	Montargil	73.94	52	eLQ	LQ	11 08 59.3	
DAG	Danmarks Havn	74.09	13	i P	P	11 08 28.0	-3.2
EVO	Evora	74.12	53	eLQ	LQ	11 08 59.8	
PCVE	Castro Verde	74.13	54	eLQ	LQ	11 08 58.7	
PVIS	Viseu	74.15	51	eLQ	LQ	11 08 50.5	
PVRL	Vila Real	74.27	50	eLQ	LQ	11 09 05.8	
PVAQ	Vaqueiros	74.39	54	eLQ	LQ	11 09 02.4	
PVAQ	Vaqueiros	74.39	54	eLQ	LQ	11 28 47.1	
PVAQ				eLR	LR	11 32 26.7	
	comp=Z,4µm,18.0s						
MTE	Manteigas	74.42	51	eLQ	LQ	11 09 02.2	
MTE	Manteigas	74.42	51	eLQ	LQ	11 29 45.3	
MTE				eLR	LR	11 34 16.3	
	comp=Z,8µm,20.0s						
PESTR	Estremoz	74.44	53	eLQ	LQ	11 08 57.2	
PCBR	Castelo Branco	74.49	52	eLQ	LQ	11 08 54.9	
RDOG	Red Dog Mine	74.52	338	P	P	11 08 42.3	+8.4
	baz=99,SNR=5.3						
PMRV	Marv??o	74.57	52	eLQ	LQ	11 09 00.1	
PMRV	Marv??o	74.57	52	eLR	LR	11 34 07.5	
	comp=Z,4µm,20.0s						
MVO	Moncorvo	74.79	50	eLQ	LQ	11 08 36.2	
MVO	Moncorvo	74.79	50	eLR	LR	11 34 10.4	
	comp=Z,3µm,20.0s						
PBRG	Braganca	74.99	50	eLQ	LQ	11 09 09.8	
UNV	Unalaska Valle	75.07	323	P	P	11 08 37.4	+0.1
	baz=92,SNR=7.0						
ANM	Nome	75.09	334	IAMs_20	IAMs_20	11 46 23.6	
	comp=Z,3µm,19.0s						
ANM	Nome	75.09	334	P	P	11 08 37.3	0.0
	baz=95,SNR=6.9						
NIKH	Nikolski High	76.47	322	P	P	11 08 45.3	-0.1
	baz=89						
ESDC	Sonseca Array	77.21	52	P	P	11 08 47.7	-2.2
	comp=Z,3.1nm,0.6s,baz=288,slow=5.2,SNR=22						
SPIA	Saint Paul Isl	77.21	326	P	P	11 08 50.4	+1.0
	baz=89						
PMSA	Palmer Station	77.71	170	eP	P	11 08 53.6	+1.7
GAMB	Gambell	77.83	333	IAMs_20	IAMs_20	11 48 01.8	
	comp=Z,2µm,21.0s						
GAMB	Gambell	77.83	333	P	P	11 08 52.8	+0.1
	baz=89						
CART	Cartagena	79.71	54	IAMs_20	IAMs_20	11 39 14.7	
	comp=Z,3µm,19.0s						
ATKA	Atka Island	79.76	321	IAmb	IAmb	11 09 20.7	
	comp=Z,140nm,1.4s						
KOWA	Kowa	80.09	77	P	P	11 09 03.9	-2.2
KOWA				IAMs_20	IAMs_20	11 47 30.6	
	comp=Z,2µm,18.0s						
TIC	Toumodi	80.44	85	ePKP2	P	11 09 06.3	-1.7
LIC	Lamto	80.50	86	ePKP2	P	11 09 05.5	-2.9
	comp=Z,195nm,1.8s						
DBIC	Dimbokro	80.59	85	P	P	11 09 06.8	-2.1
	comp=Z,2.8nm,0.6s,baz=317,slow=2.7,SNR=4.2						
DBIC				LR	LR	11 44 15.8	
	comp=Z,979nm,19.0s,baz=283,slow=35						
DBIC	Dimbokro	80.59	85	P	P	11 09 06.8	-2.1
KIC	Kosan Boka	80.76	85	ePKP2	P	11 09 06.9	-2.8
	comp=Z,37nm,1.2s						
NB2	NORSAR Subarra	83.95	29	P	P	11 09 23.0	-2.6
	comp=Z,19nm,1.2s,baz=284,slow=4.8						
NB2	NORSAR Subarra	83.95	29	P	P	11 09 23.0	-2.6
	baz=284,slow=4.8						
NOA	NORSAR Array B	83.95	29	P	P	11 09 23.3	-2.3
	comp=Z,3.9nm,0.8s,baz=285,slow=5.0,SNR=12						
NOA				LR	LR	11 46 01.5	
	comp=Z,2µm,18.8s,baz=275,slow=35						
SHEL	Horse Pasture	84.38	107	IAMs_20	IAMs_20	11 44 37.1	
	comp=Z,3µm,21.0s						
TORD	Torodi Ar. Bea	85.79	78	P	P	11 09 32.6	-3.1
	comp=Z,0.8nm,0.7s,baz=287,slow=5.0,SNR=4.1						
TORD				PKKPbc	PKKPbc	11 27 37.9	+1.1
	comp=Z,0.6nm,0.6s,baz=67,slow=1.4,SNR=4.3						
TORD				PKPPKP		11 35 48.3	
	comp=Z,0.4nm,0.7s,baz=78,slow=2.4,SNR=2.3						
TORD				LR	LR	11 44 12.9	
	comp=Z,2µm,21.1s,baz=285,slow=33						
TORD	Torodi Ar. Bea	85.79	78	P	P	11 09 33.0	-2.7
BILL	Bilibino	85.93	339⇓	eP	P	11 09 34.5	-0.8
BILL				e		11 12 51.5	
BILL				ePPP	PPP	11 14 45.7	
BILL				eS	SKSac	11 19 57.5	-1.0
BILL				pmax	pmax		
	comp=Z,84nm,2.1s						
BILL				MLR	MLR		
	comp=Z,2µm,23.0s						
BILL	Bilibino	85.93	339	P	P	11 09 34.2	-1.1
BILL				IAmb	IAmb	11 09 35.2	
	comp=Z,150nm,2.0s						
BILL				IAMs_20	IAMs_20	11 51 57.0	
	comp=Z,2µm,20.0s						
DAVA	Damuels	86.12	43	eP	pP	11 09 51.3	+4.0
	comp=Z,82nm,1.3s						
RETA	Reutte	86.66	42	eP	pP	11 09 53.5	+3.6
	comp=Z,67nm,1.3s						
FETA	Feichten	86.74	43	eP	pP	11 09 54.4	+4.0
	comp=Z,53nm,1.3s						
MOTA	Moosalm	86.92	42	eP	pP	11 09 55.3	+4.1
	comp=Z,50nm,1.5s						
ARCES	ARCESS Array B	87.00	19	P	P	11 09 38.8	-1.7
	comp=Z,2.5nm,0.5s,baz=287,slow=3.8,SNR=16						
ARCES				PP	PP	11 13 02.4	-1.1
	comp=Z,3.6nm,0.9s,baz=302,slow=10,SNR=3.8						
ARCES				LR	LR	11 47 21.9	
	comp=Z,2µm,19.4s,baz=280,slow=35						
ARCES	ARCESS Array B	87.00	19	IAmb	IAmb	11 10 25.1	
	comp=Z,122nm,1.8s						
SQTA	Sankt Quirin	87.02	43	eP	P	11 09 53.7	+12
	comp=Z,38nm,1.5s						
VLC	Villacollemand	87.14	46	IAMs_20	IAMs_20	11 46 09.2	
	comp=Z,2µm,20.0s						
CLL	Collm	87.18	38	eP	P	11 09 42.0	+0.3
CLL				i *SP	sP	11 10 00.2	+4.3
CLL				i		11 13 08.7	
CLL				eS	S	11 20 19.0	-0.1
CLL				MLR	MLR		
	comp=Z,4µm,18.8s						
CLL	Collm	87.18	38	eP	P	11 09 42.0	+0.3
CLL				epP	pP	11 09 50.0	-2.2
CLL				i		11 10 00.2	
CLL				i		11 10 14.4	
	comp=Z,60nm,1.4s						
CLL				i PP	PP	11 13 08.7	+3.3
CLL				ePPP	PPP	11 15 02.0	
CLL				ePPPP		11 16 42.0	
CLL				eS	S	11 20 19.0	-0.1
CLL				ePS	PS	11 21 25.0	+0.7
CLL				eSS	SS	11 26 24.0	+21
CLL				eSSS	SSS	11 29 48.0	
CLL				e		11 31 36.0	
CLL				Lm	MLR	11 47 00.0	
	comp=N,2µm,19.5s						
CLL				Lm	MLR	11 47 00.0	
	comp=E,3µm,19.0s						
CLL				Lm	MLR	11 47 00.0	
	comp=Z,4µm,18.8s						
WATA	Walderalm	87.23	42	eP	pP	11 09 54.3	+1.6
	comp=Z,28nm,1.3s						
WTTA	Wattenberg	87.29	42	eP	pP	11 09 54.9	+1.9
	comp=Z,40nm,2.0s						
VSL	Villasalto	87.43	50	IAMs_20	IAMs_20	11 45 43.0	
	comp=Z,3µm,19.0s						
ABTA	Abfaltersbach	87.99	43	eP	P	11 10 00.3	+14
	comp=Z,67nm,1.4s						
KHC	Kasperske Hory	88.09	40	eP	P	11 09 44.4	-1.8
KHC				ex	x	11 10 06.4	
KHC				ex	x	11 10 21.0	
KHC				AMS	AMS	11 46 10.0	
	comp=Z,8µm,18.7s						
KHC	Kasperske Hory	88.09	40⇑	eP	P	11 09 44.9	-1.3
KHC				pmax	pmax		
	comp=Z,51nm,2.4s						
KEST	Kesra	88.21	54	LR	LR	11 44 15.6	
	comp=Z,3µm,21.8s,baz=225,slow=32						
GERES	GERESS Array B	88.24	41	P	P	11 09 44.9	-2.1
	comp=Z,0.8nm,0.7s,baz=293,slow=2.9,SNR=7.8						
GERES				LR	LR	11 47 27.9	
	comp=Z,4µm,18.4s,baz=276,slow=35						
GERES	GERESS Array B	88.24	41	P	P	11 09 46.1	-0.9
GERES	GERESS Array B	88.24	41	P	P	11 09 46.1	-0.9
KBA	Koelnbreinsper	88.46	42	eP	pP	11 10 01.0	+2.3
	comp=Z,38nm,1.4s						
MYKA	Terra Mystica	88.78	43	eP	pP	11 10 01.2	+1.2
	comp=Z,37nm,1.4s						
MOA	Molln	88.87	41	eP	pP	11 10 02.5	+2.1
	comp=Z,19nm,1.3s						
UPC	Upice	89.23	39	eP	P	11 09 57.9	+6.4
UPC				AMS	AMS	11 49 20.0	
	comp=Z,3µm,19.7s						
UPC	Upice	89.23	39	eP	P	11 09 57.9	+6.4
UPC				MLR	MLR		
	comp=Z,3µm,19.7s						
OBKA	Obir	89.41	43	eP	pP	11 10 05.0	+2.0
	comp=Z,9.2nm,0.9s						
DPC	Dobruska-Polom	89.46	39	eP	P	11 09 41.9	-11
DPC				AMS	AMS	11 48 20.0	
	comp=Z,3µm,18.1s						
DPC	Dobruska-Polom	89.46	39	eP	P	11 09 41.9	-11
DPC				MLR	MLR		
	comp=Z,3µm,18.1s						
SOKA	Soboth	89.69	42	eP	pP	11 10 05.6	+1.3
	comp=Z,26nm,1.6s						
AQU	L'Aquila	89.72	47	IAMs_20	IAMs_20	11 45 14.4	
	comp=Z,3µm,20.0s						
ARSA	Arzberg	89.85	42	eP	pP	11 10 05.7	+0.7
	comp=Z,13nm,1.2s						
CONA	Conrad Observa	89.88	41	eP	pP	11 10 06.4	+1.2
	comp=Z,34nm,1.4s						
KLNR	Kaliningrad	90.37	34⇑	eP	P	11 09 59.2	+2.5
KLNR				pmax	pmax		
	comp=Z,102nm,0.9s						
APA	Apatity	90.49	19⇓	iP	P	11 09 56.4	-0.6
APA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,4µm,18.0s						
FINES	FINESS Array B	90.62	26	P	P	11 09 56.3	-1.4
	comp=Z,6.0nm,0.8s,baz=258,slow=4.2,SNR=10.0						
FINES				LR	LR	11 46 38.2	
	comp=Z,4µm,21.8s,baz=283,slow=33						
FINES	FINESS Array B	90.62	26	P	P	11 09 56.9	-0.8
FINES	FINESS Array B	90.62	26	P	P	11 09 56.9	-0.8
CEL	Celeste	92.66	50	IAMs_20	IAMs_20	11 49 22.4	
	comp=Z,3µm,20.0s						
SEY	Seymchan	93.38	337⇓	eP	P	11 10 10.1	-0.4
UZH	Uzhgorod	93.71	39	eP	P	11 10 17.9	+5.6
UZH				e		11 10 28.0	
NACGM	Naroch	93.76	32	i P	P	11 10 19.2	+6.8
DIVS	Divibare	93.80	44	IAMs_20	IAMs_20	11 53 34.3	
	comp=Z,2µm,19.0s						
PDG	Podgorica	93.84	46	IAMs_20	IAMs_20	11 49 22.6	
	comp=Z,2µm,20.0s						
TIXI	Tiksi	93.96	349	i P	P	11 10 11.5	-1.5
TIXI				MLR	MLR		
	comp=Z,3µm,21.0s						
TIXI	Tiksi	93.96	349	IAMs_20	IAMs_20	11 55 01.5	
	comp=Z,3µm,21.0s						
LVV	L'vov	94.31	37	eP	P	11 10 21.5	+6.4
LVV				MLR	MLR		
	comp=N,1µm,19.0s						
LVV				MLR	MLR		
	comp=E,2µm,19.0s						
LVV				MLR	MLR		
	comp=Z,3µm,19.0s						
MNK	Minsk	94.51	32	i P	P	11 10 14.4	-1.5
MNK				i S	SKSac	11 20 46.8	-2.0
MNK				i SS	SS	11 27 50.0	+1.8
MNK				i SSS	SSS	11 31 27.4	
MNK				pmax	pmax		
	comp=N,12nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,1µm,20.0s						
MNK				MLR	MLR		
	comp=N,1µm,20.0s						
MNK				MLR	MLR		
	comp=E,185nm,20.0s						
TIR	Tirane	94.63	46	IAMs_20	IAMs_20	11 51 03.2	
	comp=Z,2µm,19.0s						
PET	Petropavlovsk	95.39	327c	iP	P	11 10 22.0	+2.1
PET				e		11 14 17.7	
PET				e		11 20 50.8	
PET				eS	S	11 21 32.2	-1.5
PET				ePS	PS	11 22 52.8	-2.2
PET				eSS	SS	11 28 15.2	+15
PET				pmax	pmax		
	comp=Z,700nm,13.9s						
PET				pmax	pmax		
	comp=Z,1µm,14.5s						
PET				pmax	pmax		
	comp=Z,700nm,15.8s						
PET				MLR	MLR		
	comp=Z,2µm,19.0s						
PET	Petropavlovsk	95.39	327	IAMs_20	IAMs_20	11 50 20.8	
	comp=Z,2µm,22.0s						
FUNA	Funafuti	95.79	262	IAMs_20	IAMs_20	11 39 20.6	
	comp=Z,2µm,20.0s						
PETK	Petropavlovsk-	95.86	327	P	P	11 10 22.2	+0.1
	comp=Z,4.6nm,0.8s,baz=45,slow=4.9,SNR=8.8						
PETK				LR	LR	11 52 03.9	
	comp=Z,603nm,21.8s,baz=59,slow=34						
MA2	Magadan	95.88	334	IAMs_20	IAMs_20	11 58 18.8	
	comp=Z,2µm,22.0s						
VNA3	Neumayer Olymp	96.41	162	P	P	11 10 24.5	+0.3
KLMR	Klimovskoe	96.50	23	eP	P	11 10 21.1	-3.7
KLMR				e		11 14 16.0	
KLMR				eSSS	SSS	11 32 00.2	
KLMR				pmax	pmax		
	comp=Z,24nm,1.5s						
KLMR	Klimovskoe	96.50	23	eP	P	11 10 21.1	-3.7
KLMR				AMP		11 10 26.5	
	comp=Z,24nm,1.5s						
KLMR				ePP	PP	11 14 16.0	-2.5
KLMR				eSS	SS	11 28 04.9	-11
KLMR				eSS	SS	11 28 04.9	-11
KLMR				eSSS	SSS	11 32 00.3	
KLMR				eSSS	SSS	11 32 00.3	
KLMR				LQ	LQ	11 45 22.3	
KLMR				LQ	LQ	11 45 22.3	
KLMR				LR	LR	11 48 09.2	
AKASG	Malin Array Be	96.96	35	LR	LR	11 54 12.2	
	comp=Z,3µm,18.3s,baz=280,slow=36						
VNA2	Neumayer--Watz	97.05	161	P	Pdif	11 10 27.1	0.0
	baz=301,slow=6.6						
OBN	Obninsk	98.56	29	eP	P	11 10 32.6	-1.5
OBN				e		11 14 34.9	
OBN				ePPP	PPP	11 16 38.9	
OBN				eS	SKSac	11 21 08.8	-0.9
OBN				eSSS	SSS	11 32 36.7	
OBN				pmax	pmax		
	comp=Z,12nm,1.8s						
OBN				MLR	MLR		
	comp=Z,2µm,17.0s						
SNAA	Sanae	98.64	161	Pdiff	Pdif	11 10 34.6	+0.4
SNAA	Sanae	98.64	161	IAMs_20	IAMs_20	11 53 33.2	
	comp=Z,1µm,20.0s						
NRIK	Noril'sk	99.48	2	LR	LR	11 57 13.7	
	comp=Z,2µm,20.4s,baz=0.5,slow=36						
SANT	Santorini	100.47	50	IAMs_20	IAMs_20	11 55 10.3	
	comp=Z,2µm,20.0s						
MXZ	Matakaoa Point	100.84	234	IAMs_20	IAMs_20	11 47 19.1	
	comp=Z,2µm,20.0s						
QSPA	South Pole Qui	101.25	180	IAMs_20	IAMs_20	11 50 23.7	
	comp=Z,2µm,18.0s						
YAK	Yakutsk	101.64	343	IAMs_20	IAMs_20	12 06 13.2	
	comp=Z,2µm,19.0s						
URZ	Urewera	101.85	233	IAMs_20	IAMs_20	11 46 19.7	
	comp=Z,3µm,21.0s						
H11S1	WAKE ISLAND Hy	101.96	292	T	T	13 04 34.2	
	baz=77,slow=74,SNR=6.5						
H11S2	WAKE ISLAND Hy	101.96	292	T	T	13 04 32.1	
	baz=77,slow=74,SNR=7.1						
H11S3	WAKE ISLAND Hy	101.97	292	T	T	13 04 23.5	
	baz=77,slow=74,SNR=5.2						
ISP	Isparta	103.57	47	IAMs_20	IAMs_20	12 00 12.6	
	comp=Z,2µm,19.0s						
SNZO	South Karori	103.91	230	IAMs_20	IAMs_20	11 47 43.9	
	comp=Z,3µm,21.0s						
SBA	Scott Base	104.45	192	IAMs_20	IAMs_20	11 50 33.1	
	comp=Z,1µm,18.0s						
CSS	Mathiatis	106.88	48	IAMs_20	IAMs_20	11 55 22.8	
	comp=Z,1µm,22.0s						
YSS	Yuzh-Sakhalins	107.26	327	IAMs_20	IAMs_20	12 01 35.8	
	comp=Z,2µm,22.0s						
KIV	Kislovodsk	108.28	36	IAMs_20	IAMs_20	12 03 35.6	
	comp=Z,1µm,18.0s						
DZM	Mont Dzumac	109.81	251	ePP	PP	11 15 58.9	-1.0
	comp=Z,208nm,24.6s						
DZM				eSP	SP	11 25 23.2	-1.7
	comp=Z,674nm,32.0s						
DZM				eSS	SS	11 31 23.0	+0.3
	comp=Z,3µm,27.9s						
DZM	Mont Dzumac	109.81	251	eLR	LR	11 47 52.4	
	comp=Z,2µm,21.0s						
ERM	Erimo	110.08	323	IAMs_20	IAMs_20	12 03 38.5	
	comp=Z,2µm,21.0s						
MAK	Makhachkala	111.63	35	eP	Pdif	11 11 27.8	-4.8
MAK				i		11 15 29.2	
MAK				e		11 16 12.6	
MAK				pmax	pmax		
	comp=Z,323nm,1.6s						
GNI	Garni	111.79	38	IAMs_20	IAMs_20	12 03 13.9	
	comp=Z,2µm,19.0s						
SYO	Syowa Base	112.93	162⇑	ePdiff	Pdif	11 11 36.8	-0.9
SYO	Syowa Base	112.93	162⇑	epPdiff	pPdif	11 11 43.7	-4.5
BOSA	Boshof	114.37	116	PKP	PKPdf	11 15 35.5	-0.6
	comp=Z,7.3nm,0.6s,baz=284,slow=1.8,SNR=20						
BOSA				PKKPbc	PKKPbc	11 26 18.3	+2.5
	comp=Z,2.4nm,0.6s,baz=107,slow=3.4,SNR=11						
ZALV	Zalesovo Beam	114.62	6	PKP	PKiKP	11 15 34.6	-1.0
	comp=Z,8.3nm,0.5s,baz=286,slow=2.1,SNR=51						
ZALV				PKKPab	PKKPab	11 26 26.6	+4.5
	comp=Z,1.1nm,0.7s,baz=177,slow=2.5,SNR=6.2						
HIA	Hailar	115.43	341	IAMs_20	IAMs_20	12 10 15.9	
	comp=Z,2µm,21.0s						
MDJ	Mudanjiang	115.46	332	IAMs_20	IAMs_20	12 13 32.9	
	comp=Z,1µm,20.0s						
MAJO	Matsushiro	116.48	321⇓	iPKIKP	PKiKP	11 15 41.0	+1.2
MAJO	Matsushiro	116.48	321	IAMs_20	IAMs_20	11 58 53.2	
	comp=Z,1µm,22.0s						
MAT	Matsushiro	116.48	321	PKP	PKPdf	11 15 39.1	-0.7
MJAR	Matsushiro Arr	116.48	321	PKP	PKPdf	11 15 39.3	-0.5
	comp=Z,3.0nm,0.6s,baz=94,slow=0.6,SNR=14						
MJAR	Matsushiro Arr	116.48	321	PKIKP	PKPdf	11 15 39.8	0.0
MJAR						11 15 47.3	
MJAR	Matsushiro Arr	116.48	321		PKPdf	11 15 39.8	0.0
MJAR				pPKPdf	pPKPdf	11 15 47.3	-3.3
LSZ	Lusaka	116.54	102	IAMs_20	IAMs_20	12 04 23.6	
	comp=Z,2µm,20.0s						
KURK	Kurchatov	116.92	11	PKIKP	PKPdf	11 15 39.1	-1.1
KURK	Kurchatov	116.92	11	PKPdf	PKPdf	11 15 39.1	-1.1
ZAK	Zakamensk	118.01	353	ePKIKP	PKPdf	11 15 41.9	-0.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	Ulaanbaatar	119.89	349	PKIKP	PKPdf	11 15 45.6	-0.7
ULN	Ulaanbaatar	119.89	349	PKPdf	PKPdf	11 15 45.6	-0.7
SONM	Songino Array	120.04	350	PKP	PKPdf	11 15 45.5	-1.0
	comp=Z,8.5nm,0.6s,baz=339,slow=1.4,SNR=86						
SONM				PKKPbc	PKKPbc	11 25 55.2	-1.4
	comp=Z,0.5nm,0.7s,baz=191,slow=4.4,SNR=4.3						
SONM	Songino Array	120.04	350	PKPdf	PKPdf	11 15 45.5	-1.0
SNY	Shenyang	120.34	334 ⇓	PKP	PKPdf	11 15 47.0	0.0
SNY				SKKS		11 24 05.8	
SNY				SS	SS	11 33 44.8	+7.2
SNY				LR	LR		
	comp=Z,960nm,18.0s						
SNY				LR	LR		
	comp=Z,520nm,17.5s						
SNY				LR	LR		
	comp=Z,2µm,17.3s						
GEYT	Alibeck	120.92	32	PKP	PKPdf	11 15 48.0	-0.3
	comp=Z,9.4nm,0.6s,baz=270,slow=4.4,SNR=29						
GEYT	Alibeck	120.92	32		PKPdf	11 15 48.2	-0.1
ZSN	Zaisan	121.04	7	ePKP	PKPdf	11 15 46.5	-1.8
	baz=6.6						
ZSN	Zaisan	121.04	7	ePKIKP	PKPdf	11 15 46.5	-1.8
BTLS	Baital	121.26	16	ePKP	PKPdf	11 15 47.6	-1.1
	baz=16						
BTLS	Baital	121.26	16	ePKIKP	PKPdf	11 15 47.6	-1.1
MAKZ	Makanchi	121.27	9	PKIKP	PKPdf	11 15 47.4	-1.4
MAKZ	Makanchi	121.27	9	PKPdf	PKPdf	11 15 47.4	-1.4
MK31	Makanchi Array	121.33	9c	ePKIKP	PKPdf	11 15 47.6	-1.3
MKAR	Makanchi Array	121.33	9	PKP	PKPdf	11 15 47.3	-1.5
	comp=Z,5.1nm,0.6s,baz=304,slow=3.0,SNR=44						
MKAR				PKKPab	PKKPab	11 25 57.4	+4.8
	comp=Z,1.1nm,0.9s,baz=191,slow=3.7,SNR=5.0						
MKAR	Makanchi Array	121.33	9c	ePKIKP	PKPdf	11 15 47.7	-1.2
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR	Makanchi Array	121.33	9	PKPdf	PKPdf	11 15 47.4	-1.5
KSRS	Korea Array	121.74	328	PKP	PKPdf	11 15 49.5	-0.4
	comp=Z,18nm,0.8s,baz=11,slow=1.4,SNR=46						
KSRS				SKP	SKPdf	11 19 27.2	+4.2
	comp=Z,1.4nm,0.8s,baz=135,slow=0.5,SNR=4.4						
KSAR	Wonju Array Be	121.77	328	PKIKP	PKPdf	11 15 49.1	-0.8
KSAR						11 15 57.4	
KSAR	Wonju Array Be	121.77	328	PKPdf	PKPdf	11 15 49.1	-0.8
KSAR				pPKPdf	pPKPdf	11 15 57.4	-3.2
FURI	Furi	121.94	72	IAMs_20	IAMs_20	12 05 41.5	
	comp=Z,1µm,21.0s						
KKAR	Karatay Array	121.96	20	PKIKP	PKPdf	11 15 49.4	-0.8
KKAR	Karatay Array	121.96	20	PKPdf	PKPdf	11 15 49.4	-0.8
TDK	Taldyqorghan	122.35	13	ePKP	PKPdf	11 15 49.1	-1.9
	baz=12						
TDK	Taldyqorghan	122.35	13	ePKIKP	PKPdf	11 15 49.0	-1.9
INCN	Inchon	122.38	329	IAMs_20	IAMs_20	12 16 11.1	
	comp=Z,1µm,20.0s						
IUG	Iuzhnay	122.64	21	ePKP	PKPdf	11 15 51.0	-0.7
	baz=20						
IUG	Iuzhnay	122.64	21	ePKIKP	PKPdf	11 15 50.9	-0.7
SGDS	Sogindy	122.89	16	ePKP	PKPdf	11 15 51.2	-0.9
	baz=16						
KUU	Kurty	122.92	15	ePKP	PKPdf	11 15 50.4	-1.6
	baz=14						
KUU	Kurty	122.92	15	ePKIKP	PKPdf	11 15 50.4	-1.6
USP	Ospenovka	123.02	16	P	PKPdf	11 15 52.0	-0.2
	SNR=28						
CHKK	Chushkaly	123.12	14	ePKP	PKPdf	11 15 51.2	-1.1
	baz=14						
KMBO	Kilima Mbogo	123.31	84	i PKIKP	PKiKP	11 15 55.4	+1.3
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMBO	Kilima Mbogo	123.31	84	IAMs_20	IAMs_20	12 14 04.0	
	comp=Z,1µm,19.0s						
CHMS	Chumysh	123.34	16	P	PKPdf	11 15 52.9	0.0
	SNR=7.3						
EKS2	Erkin-Say	123.37	17	P	PKiKP	11 15 53.4	+0.1
	SNR=9.8						
AAK	Ala-Archa	123.60	17	P	PKiKP	11 15 53.8	0.0
	SNR=11						
AAK	Ala-Archa	123.60	17	PKIKP	PKPdf	11 15 53.1	-0.5
AAK				MLR	MLR		
	comp=Z,2µm,20.0s						
AAK	Ala-Archa	123.60	17	PKPdf	PKPdf	11 15 53.1	-0.5
TKM2	Tokmak 2	123.64	16	P	PKPdf	11 15 53.7	+0.1
	SNR=6.4						
KBK	Karagaybulak	123.71	16	P	PKPdf	11 15 53.9	+0.1
	SNR=5.7						
MDOK	Medeo	123.78	14	ePKP	PKPdf	11 15 52.5	-1.4
	baz=14						
MDOK	Medeo	123.78	14	ePKIKP	PKPdf	11 15 52.5	-1.4
AML	Almayashu	123.84	18	P	PKiKP	11 15 55.1	+0.5
	SNR=34						
KPKS	Kokpek	123.88	13	ePKP	PKPdf	11 15 52.6	-1.4
	baz=13						
KPKS	Kokpek	123.88	13	ePKIKP	PKPdf	11 15 52.5	-1.4
UCH	Uchtor	123.99	17	P	PKiKP	11 15 55.2	+0.3
	SNR=20						
SATY	Saty	124.20	13	ePKP	PKPdf	11 15 53.5	-1.1
	baz=13						
SATY	Saty	124.20	13	ePKIKP	PKPdf	11 15 53.5	-1.1
UZB	Uzynbulak	124.25	13	ePKP	PKPdf	11 15 53.8	-1.0
	baz=13						
UZB	Uzynbulak	124.25	13	ePKIKP	PKPdf	11 15 53.7	-1.0

SHLS	**Shalkode**	**124.34**	**12**	*e*PKP	**PKPdf**	**11 15 54.1**	**-0.9**
	baz=12						
SHLS	**Shalkode**	**124.34**	**12**	*e*PKIKP	**PKPdf**	**11 15 54.0**	**-0.9**
KIBK	**Kibwezi**	**124.34**	**85**	IAMs_20	IAMs_20	12 10 08.4	
	comp=Z,1µm,20.0s						
ULHL	**Ulahol**	**124.44**	**15**	P	**PKiKP**	**11 15 55.5**	**0.0**
	SNR=27						
CAN	**Canberra**	**124.46**	**235**	IAMs_20	IAMs_20	12 00 10.5	
	comp=Z,2µm,20.0s						
BJI	**Beijing**	**124.77**	**339**	PKP	**PKiKP**	**11 15 56.0**	**+0.1**
BJI				AMB	AMB		
	comp=Z,380nm,10.2s						
BJI				LR	LR		
	comp=Z,2µm,18.9s						
BJI				LR	LR		
	comp=Z,720nm,20.2s						
BJI				LR	LR		
	comp=Z,2µm,26.0s						
BJT	**Baijiatuau**	**124.79**	**339**	IAMs_20	IAMs_20	12 15 01.4	
	comp=Z,2µm,22.0s						
WMQ	**Urumqi**	**124.92**	**5**	PKP	**PKPdf**	**11 15 56.0**	**+0.1**
WMQ				sPKP		11 16 11.5	
WMQ				PP	PP	11 17 50.8	+7.9
WMQ				AMB	AMB		
	comp=Z,230nm,11.6s						
WMQ				LR	LR		
	comp=Z,3µm,24.7s						
WMQ				LR	LR		
	comp=Z,2µm,22.3s						
WMQ				LR	LR		
	comp=Z,3µm,27.1s						
HHC	**Hu-ho-hao-te**	**125.50**	**343**	*e*PKP	**PKiKP**	**11 15 57.5**	**0.0**
HHC				PP	**PP**	**11 17 48.8**	**+1.7**
HHC				LR	LR		
	comp=Z,2µm,21.0s						
HHC				LR	LR		
	comp=Z,1µm,20.9s						
HHC				LR	LR		
	comp=Z,3µm,21.0s						
BTO	**Baotou**	**126.15**	**344**	*e*PKP	**PKiKP**	**11 15 59.0**	**+0.2**
BTO				LR	LR		
	comp=Z,5µm,18.2s						
BTO				LR	LR		
	comp=Z,2µm,22.1s						
KSH	**Kashi**	**126.91**	**17**	PKP	**PKiKP**	**11 16 01.3**	**+0.9**
KSH				LR	LR		
	comp=Z,1µm,17.2s						
KSH				LR	LR		
	comp=Z,2µm,18.7s						
KSH				LR	LR		
	comp=Z,2µm,22.0s						
PMG	**Port Moresby**	**127.21**	**267**	IAMs_20	IAMs_20	12 01 51.9	
	comp=Z,2µm,20.0s						
TIA	**Tai'an**	**127.76**	**336**	PKP	**PKPdf**	**11 16 01.0**	**-0.5**
TIA				AMB	AMB		
	comp=Z,430nm,11.6s						
TIA				LR	LR		
	comp=Z,850nm,19.0s						
TIA				LR	LR		
	comp=Z,720nm,19.4s						
TIA				LR	LR		
	comp=Z,2µm,19.1s						
CTAO	**Charters Tower**	**128.60**	**253**	PKIKP	**PKPdf**	**11 16 01.5**	**-2.0**
CTAO	**Charters Tower**	**128.60**	**253**	PKPdf	**PKPdf**	**11 16 01.5**	**-2.0**
CTAO	**Charters Tower**	**128.60**	**253**	IAMs_20	IAMs_20	12 02 22.4	
	comp=Z,1µm,20.0s						
UOSS	**Minazif**	**128.85**	**45**	IAMs_20	IAMs_20	12 17 02.2	
	comp=Z,1µm,20.0s						
KBL	**Kabul**	**128.88**	**26**	PKIKP	**PKPdf**	**11 16 03.9**	**0.0**
KBL	**Kabul**	**128.88**	**26**	PKPdf	**PKPdf**	**11 16 03.9**	**0.0**
GTA	**Gaotai**	**129.23**	**354**	*e*PKP	**PKPdf**	**11 16 03.5**	**-0.9**
GTA				PP	**PP**	**11 18 13.8**	**+2.3**
GTA				AMB	AMB		
	comp=Z,290nm,9.8s						
GTA				LR	LR		
	comp=Z,2µm,21.1s						
GTA				LR	LR		
	comp=Z,1µm,21.4s						
GTA				LR	LR		
	comp=Z,3µm,21.4s						
SSE	**Sheshan**	**130.17**	**329**	PKP	**PKiKP**	**11 16 07.0**	**0.0**
SSE				LR	LR		
	comp=Z,360nm,18.2s						
SSE				LR	LR		
	comp=Z,370nm,19.4s						
SSE				LR	LR		
	comp=Z,520nm,22.0s						
NJ2	**Nanjing**	**130.54**	**331**	*e*PKP	**PKiKP**	**11 16 07.5**	**-0.2**
NJ2				LR	LR		
	comp=Z,950nm,23.5s						
NJ2				LR	LR		
	comp=Z,1µm,21.8s						
NJ2				LR	LR		
	comp=Z,1µm,22.7s						
STKA	**Stephens Creek**	**131.23**	**237**	PKP	**PKiKP**	**11 16 08.8**	**-0.2**
	comp=Z,4.4nm,0.5s,baz=87,slow=2.3,SNR=24						
STKA	**Stephens Creek**	**131.23**	**237**	PKPdf	**PKPdf**	**11 16 08.1**	**-0.1**
NIL	**Nilore**	**131.35**	**23**	PKIKP	**PKPdf**	**11 16 06.9**	**-1.5**
NIL				MLR	MLR		
	comp=Z,2µm,21.0s						
NIL	**Nilore**	**131.35**	**23**	PKPdf	**PKPdf**	**11 16 06.9**	**-1.5**
LZH	**Lanzhou**	**131.89**	**349**	*e*PKP	**PKPdf**	**11 16 09.5**	**0.0**
LZH				sPKP		11 16 26.5	
LZH				AMB	AMB		
	comp=Z,320nm,8.0s						
LZH				LR	LR		
	comp=Z,3µm,18.1s						
LZH				LR	LR		
	comp=Z,2µm,18.0s						
LZH				LR	LR		
	comp=Z,3µm,20.6s						
XAN	**Xi'an**	**132.60**	**343**	PKP	**PKPdf**	**11 16 10.8**	**0.0**
XAN				sPKP		11 16 24.3	
XAN				PP	**PP**	**11 18 40.0**	**+6.6**
XAN				AMB	AMB		
	comp=Z,350nm,11.7s						
XAN				LR	LR		
	comp=Z,1µm,20.6s						
XAN				LR	LR		
	comp=Z,2µm,22.7s						
XAN				LR	LR		
	comp=Z,3µm,23.4s						
WHN	**Wuhan**	**133.83**	**335**	⇓PKP	**PKPdf**	**11 16 13.5**	**+0.4**
WHN				PP	**PP**	**11 18 45.5**	**+4.1**
WHN				LR	LR		
	comp=Z,2µm,18.3s						
WHN				LR	LR		
	comp=Z,3µm,18.8s						
WHN				LR	LR		
	comp=Z,3µm,20.8s						
SOCY	**Socotra**	**134.39**	**60**	IAMs_20	IAMs_20	12 21 40.3	
	comp=Z,936nm,20.0s						
QZH	**Quanzhou**	**136.45**	**326**	*e*PKP	PKPpre	11 16 12.0	
QZH				PP	**PP**	**11 18 57.8**	**-0.5**
QZH				LR	LR		
	comp=Z,1µm,19.0s						
QZH				LR	LR		
	comp=Z,530nm,16.1s						
QZH				LR	LR		
	comp=Z,1µm,22.4s						
CD2	**Chengdu**	**136.91**	**347**	PKP	**PKPdf**	**11 16 18.0**	**-0.9**
CD2				PP	**PP**	**11 19 01.3**	**+0.7**
CD2				AMB	AMB		
	comp=Z,80nm,6.6s						
CD2				LR	LR		
	comp=Z,180nm,20.0s						
CD2				LR	LR		
	comp=Z,2µm,19.6s						
DANN	**Dangsing**	**139.50**	**13**	*e*P	**PKPdf**	**11 16 24.4**	**+0.3**
	comp=Z,132nm,0.6s						
PYUN	**Piuthan**	**139.56**	**14**	*e*P	**PKPdf**	**11 16 23.9**	**-0.2**
	comp=Z,26nm,0.7s						
ASAR	**Alice Springs**	**139.65**	**247**	PKhKP	PKPpre	11 16 14.3	
	comp=Z,1.3nm,0.6s,baz=111,slow=3.0,SNR=8.7						
ASAR				SKPbc	**SKiKP**	**11 20 03.3**	**+2.9**
	comp=Z,5.4nm,0.9s,baz=101,slow=3.3,SNR=5.4						
ASAR				SKPab	**SKPab**	**11 20 09.4**	**+1.1**
	comp=Z,5.3nm,0.9s,baz=103,slow=2.9,SNR=7.0						
ASAR	**Alice Springs**	**139.65**	**247**	PKHKP	PKPpre	11 16 17.6	
ASAR	**Alice Springs**	**139.65**	**247**		PKPpre	11 16 17.6	
WRAB	**Tennant Creek**	**139.78**	**252**	*ce*PKIKP	**PKPdf**	**11 16 25.0**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,41nm,1.7s						
WRA	**Warramunga Arr**	**139.79**	**252**	PKhKP	PKPpre	11 16 14.5	
	comp=Z,1.3nm,0.6s,baz=93,slow=3.0,SNR=14						
WRA				PKP	**PKPdf**	**11 16 25.2**	**+0.8**
	comp=Z,11nm,0.6s,baz=93,slow=2.1,SNR=37						
WRA				SKPab	**SKPab**	**11 20 10.2**	**+1.3**
	comp=Z,2.8nm,0.9s,baz=93,slow=2.7,SNR=5.1						
WRA	**Warramunga Arr**	**139.79**	**252**	PKPdf	**PKPdf**	**11 16 22.6**	**-1.8**
KOLN	**Koldanda**	**140.03**	**14**	*e*P	**PKPdf**	**11 16 24.7**	**-0.2**
	comp=Z,25nm,0.6s						
GYA	**Guiyang**	**140.36**	**341**	⇓PKP	**PKPdf**	**11 16 26.3**	**+0.8**
GYA				PP	**PP**	**11 19 26.3**	**+4.1**
GYA				SKKS		11 26 14.5	
GYA				AMB	AMB		
	comp=Z,300nm,12.9s						
GYA				LR	LR		
	comp=Z,1µm,26.1s						
GUN	**Gumba**	**140.36**	**11**	*e*P	**PKPdf**	**11 16 23.0**	**-2.7**
	comp=Z,56nm,0.6s						
KKN	**Kakani**	**140.36**	**11**	*e*P	**PKPdf**	**11 16 23.3**	**-2.3**
	comp=Z,26nm,0.6s						
DMN	**Daman**	**140.51**	**12**	*e*P	**PKPdf**	**11 16 23.1**	**-2.8**
	comp=Z,6.5nm,0.2s						
PKIN	**Phulchoki**	**140.59**	**11**	*e*P	**PKPdf**	**11 16 21.8**	**-4.3**
	comp=Z,25nm,0.6s						
PKI	**Pulchoki**	**140.60**	**11**	*e*P	**PKPdf**	**11 16 21.8**	**-4.4**
	comp=Z,26nm,0.8s						
HKPS	**Hong Kong Po S**	**140.97**	**329**	IAMs_20	IAMs_20	12 32 18.4	
	comp=Z,1µm,20.0s						
SAUI	**Saumlaki**	**142.57**	**272**	IAMs_20	IAMs_20	12 14 58.5	
	comp=Z,1µm,19.0s						
TNTI	**Ternate**	**144.25**	**287**	IAMs_20	IAMs_20	12 15 30.0	
	comp=Z,658nm,20.0s						
QIZ	**Qiongzhong**	**145.83**	**332**	PKPbc	**PKPdf**	**11 16 34.8**	**-0.3**
QIZ				PP	**PP**	**11 19 57.0**	**+1.6**
QIZ				SS	SS	11 38 49.5	+2.6
QIZ				AMB	AMB		
	comp=Z,830nm,4.1s						
QIZ				LR	LR		
	comp=Z,1µm,18.2s						
QIZ				LR	LR		
	comp=Z,910nm,17.8s						
QIZ				LR	LR		
	comp=Z,2µm,17.7s						
HYB	**Hyderabad**	**147.91**	**28**	*i* PKP	**PKPdf**	**11 16 38.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**148.18**	**254**	PKPbc	**PKPbc**	**11 16 42.5**	**+0.2**
	comp=Z,15nm,0.8s,baz=153,slow=3.5,SNR=18						
NWAO	**Narrogin (SRO)**	**149.33**	**222**	IAMs_20	IAMs_20	12 12 04.1	
	comp=Z,1µm,21.0s						
CHTO	**Chiang Mai**	**149.62**	**350**	PKHKP	PKPpre	11 16 40.7	
CHTO	**Chiang Mai**	**149.62**	**350**	P	**PKPdf**	**11 16 40.6**	**-0.8**
	comp=Z,3µmcomp=Z,916nmcomp=Z,39nm,1.9s						
CHTO	**Chiang Mai**	**149.62**	**350**	PKPdf	**PKPdf**	**11 16 40.7**	**-0.7**
CHTO	**Chiang Mai**	**149.62**	**350**	IAMs_20	IAMs_20	12 32 43.9	
	comp=Z,1µm,21.0s						
CMMT	**Chiang Mai**	**149.62**	**350**	P	**PKPdf**	**11 16 40.1**	**-1.3**
	comp=Z,2µmcomp=Z,65nm,1.9s						
SOEI	**Soe**	**149.69**	**270**	IAMs_20	IAMs_20	12 16 17.9	
	comp=Z,1µm,22.0s						
CMAR	**Chiang Mai Arr**	**149.97**	**350**	PKP	**PKPdf**	**11 16 41.6**	**-0.4**
	comp=Z,9.9nm,0.8s,baz=316,slow=2.3,SNR=54						
CMAR				PKPbc	**PKPbc**	**11 16 46.9**	**0.0**
	comp=Z,30nm,0.7s,baz=332,slow=2.9,SNR=58						
CMAR	**Chiang Mai Arr**	**149.97**	**350**	PKPdf	**PKPdf**	**11 16 41.8**	**-0.1**
APSI	**Ampana**	**150.18**	**288**	P	**PKPdf**	**11 16 44.0**	**+1.6**
MPSI	**Mapaga**	**151.31**	**292**	P	**PKPdf**	**11 16 44.0**	**-0.2**
	comp=Z,2µmcomp=Z,97nm,0.6s						
MMRI	**Maumere**	**151.55**	**273**	IAMs_20	IAMs_20	12 17 20.3	
	comp=Z,793nm,22.0s						
KKM	**Kota Kinabalu**	**151.57**	**306**	IAMs_20	IAMs_20	12 37 28.3	
	comp=Z,857nm,22.0s						
TTSI	**Tana Toraja**	**152.63**	**285**	P	**PKPbc**	**11 16 50.1**	**-3.1**
PSA00	**Pilbara Seismi**	**152.75**	**245**	PKPdf	**PKPdf**	**11 16 44.9**	**-1.2**
MMSI	**Mamuju**	**153.37**	**287**	P	**PKPbc**	**11 16 54.5**	**-0.3**
	comp=Z,434nmcomp=Z,15nm,0.8s						
LBFI	**Labuhan Bajo,**	**153.82**	**274**	P	**PKiKP**	**11 16 57.3**	**+1.5**
SBUM	**Sibu**	**156.90**	**305**	IAMs_20	IAMs_20	12 42 21.0	
	comp=Z,754nm,22.0s						
PSI	**Prapat**	**165.00**	**338**	PKP	**PKPdf**	**11 16 59.4**	**-1.5**
	comp=Z,20nm,1.1s,baz=264,slow=2.8,SNR=11						
LEM	**Lembang**	**165.34**	**286**	PKP	**PKPdf**	**11 17 01.3**	**+0.1**
	comp=Z,13nm,0.7s,baz=158,slow=7.7,SNR=11						
LEM	**Lembang**	**165.34**	**286**		**PKPdf**	**11 17 01.3**	**+0.1**

*NEIC **31** 10:59:21.0±1.5, 4°.6S±0°.1×152°.9E±0°.1, h60^{km}±9^{km}, mb4.5/11, Error ellipse: s-maj=19.9km s-min=14.8km az=60.0*

*IDC **31** 10:59:23.1±5.6, 4°.80S×152°.93E, h84^{km}±44^{km}, mb3.8/9, mb1 3.9/10, mb1mx3.7/40, mbtmp4.1/10, ML2.3/1, MS3.4/3, Ms1 3.4/3, ms1mx3.0/39, Error ellipse: s-maj=50.9km s-min=22.3km az=105.0*

ISC 31 10:59:20.2±0.8**, 4°.67S**±0°.09×**153°.0E**±0°.1**, h55**^{km}**, n36, σ1^{s}.10**/36**, mb4.3**/18**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.93**	**301**		**Pn**	**10 59 37.4**	**+0.2**
RABL	**Rabaul**	**0.93**	**301**	P	**Pn**	**10 59 37.7**	**+0.5**
PMG	**Port Moresby**	**7.43**	**230**	P	**Pn**	**11 01 08.3**	**+2.2**
	2.6nm,0.3s,baz=42,slow=17,SNR=8.9						
PMG				S	**Sn**	**11 02 29.3**	**+0.2**
	3.6nm,0.3s,baz=126,slow=9.6,SNR=6.1						
PMG				LR	LR	11 03 52.7	
	comp=Z,93nm,21.8s,baz=79,slow=37						
PMG	**Port Moresby**	**7.43**	**230**		**Pn**	**11 01 06.9**	**+0.8**
PMG	**Port Moresby**	**7.43**	**230**	P	**Pn**	**11 01 08.6**	**+2.4**
PMG	**Port Moresby**	**7.43**	**230**	P	**Pn**	**11 01 08.5**	**+2.4**
HNR	**Honiara**	**8.39**	**125**	LR	LR	11 04 21.9	
	comp=Z,109nm,20.0s,baz=286,slow=36						
HNR	**Honiara**	**8.39**	**125**	P	**Pn**	**11 01 19.8**	**+0.6**
COEN	**Coen**	**13.35**	**226**	Pn	**Pn**	**11 02 27.5**	**+0.5**
QIS	**Mount Isa**	**20.45**	**218**	P	**P**	**11 03 53.5**	**+0.2**
	7.2nm,1.1s						
KDU	**Kakadu**	**21.75**	**247**	P	**P**	**11 04 06.3**	**-1.0**
	15nm,1.5s						
MTN	**Manton Dam**	**23.04**	**248**	P	**P**	**11 04 21.0**	**+0.1**
MTN				IAmb	IAmb	11 04 46.1	
	comp=Z,32nm,1.3s						
WB0	**Warramunga Arr**	**23.50**	**229**	P	**P**	**11 04 24.5**	**-0.9**
WB0				IAmb	IAmb	11 04 26.5	
	comp=Z,17nm,0.9s						
WR0	**Warramunga Arr**	**23.51**	**228**	P	**P**	**11 04 24.9**	**-0.5**
WR0				IAmb	IAmb	11 04 26.7	
	comp=Z,20nm,1.1s						
WRAB	**Tennant Creek**	**23.64**	**229**	P	**P**	**11 04 26.4**	**-0.3**
WRAB				IAmb	IAmb	11 04 27.8	
	comp=Z,12nm,0.8s						
WRAB	**Tennant Creek**	**23.64**	**229**	P	**P**	**11 04 26.1**	**-0.5**
WB2	**Warramunga Arr**	**23.64**	**228**	P	**P**	**11 04 25.9**	**-0.8**
WB2				IAmb	IAmb	11 04 27.9	
	comp=Z,12nm,0.7s						
WRA	**Warramunga Arr**	**23.65**	**229**	P	**P**	**11 04 26.1**	**-0.7**
	comp=Z,9.5nm,0.7s,baz=53,slow=9.8,SNR=70						
WRA	**Warramunga Arr**	**23.65**	**229**	P	**P**	**11 04 25.8**	**-1.0**
INKA	**Innaminka**	**25.72**	**206**	P	**P**	**11 04 43.7**	**-1.8**
	comp=Z,12nm,0.9s						
KNRA	**Kununurra**	**26.17**	**244**	P	**P**	**11 04 49.9**	**+0.1**
AS31	**Alice Springs**	**26.35**	**222**	P	**P**	**11 04 49.6**	**-1.8**
ASAR	**Alice Springs**	**26.35**	**222**	P	**P**	**11 04 50.6**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=59,slow=9.0,SNR=18						
STKA	**Stephens Creek**	**29.09**	**200**	P	**P**	**11 05 15.1**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=27,slow=9.7,SNR=3.3						
FITZ	**Fitzroy Crossi**	**29.86**	**241**	P	**P**	**11 05 21.6**	**-1.1**
	comp=Z,5.2nm,0.5s,baz=70,slow=5.3,SNR=14						
FITZ				LR	LR	11 17 23.5	
	comp=Z,529nm,20.8s,baz=201,slow=36						
MULG	**Mulgathing**	**31.10**	**213**	P	**P**	**11 05 31.9**	**-1.6**
	comp=Z,15nm,2.9s						
HTT	**Hallett**	**31.46**	**203**	P	**P**	**11 05 36.4**	**-0.3**
	comp=Z,8.4nm,1.1s						
FORT	**Forrest**	**34.99**	**219**	P	**P**	**11 06 05.9**	**-1.5**
PSA00	**Pilbara Seismi**	**36.23**	**239**	P	**P**	**11 06 17.0**	**-1.2**
PETK	**Petropavlovsk-**	**57.70**	**3**	P	**P**	**11 09 05.5**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=174,slow=6.7,SNR=4.1						
CMAR	**Chiang Mai Arr**	**57.97**	**295**	P	**P**	**11 09 08.5**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=107,slow=6.2,SNR=4.9						
SONM	**Songino Array**	**66.31**	**328**	P	**P**	**11 10 03.3**	**+0.3**
	comp=Z,0.8nm,1.1s,baz=115,slow=6.8,SNR=2.9						
MKAR	**Makanchi Array**	**80.34**	**319**	P	**P**	**11 11 25.6**	**0.0**
	comp=Z,0.3nm,0.5s,baz=103,slow=6.1,SNR=6.1						
ZALV	**Zalesovo Beam**	**81.14**	**326**	P	**P**	**11 11 29.3**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=118,slow=7.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	**150.42**	**288**	PKPbc	**PKPbc**	**11 19 06.0**	**-0.7**
	comp=Z,2.6nm,0.7s,baz=56,slow=2.1,SNR=13						
TORD	**Torodi Ar. Bea**	**150.42**	**288**		**PKPbc**	**11 19 05.8**	**-0.9**

TAP 31 11:06:42.9, 24°.04N×122°.03E, h26^{km}±1^{km}**, ML2.1, D,**

Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.39**	**288**	P	Pb	11 06 51.2	-0.1
	baz=274						
ETL				*e*S	Sb	11 06 57.0	0.0
	baz=274						
HWA	**Hwalien**	**0.39**	**261**	*e*P	Pb	11 06 51.6	+0.2
	baz=259						
TWD	**Chiawan**	**0.39**	**276**	P	Pb	11 06 51.4	-0.1
	baz=274						
TWD				*e*S	Sb	11 06 57.8	+0.5
	baz=274						
NACB	**Ninganchiao**	**0.41**	**289**	P	Pb	11 06 51.6	-0.1
	baz=276						
NACB				*e*S	Sb	11 06 58.1	+0.3
	baz=276						
EWUT	**Wuta**	**0.46**	**331**	*e*P	Pn	11 06 53.4	-0.5
	baz=336						
EWUT				*e*S	Sn	11 07 00.6	-0.6
	baz=336						
ENA	**Nanau**	**0.46**	**326**	*e*P	Pb	11 06 53.0	+0.4
	baz=332						
ENA				*e*S	Sn	11 07 00.4	-1.0
	baz=332						
ETM	**Tongmen**	**0.49**	**261**	*e*P	Pb	11 06 52.8	-0.3
	baz=259						
ETM				*e*S	Sb	11 07 00.1	+0.2
	baz=259						
ETLH	**Xiulin Townshi**	**0.52**	**288**	P	Pb	11 06 53.4	-0.3
	baz=277						
ETLH				*e*S	Sb	11 07 01.2	+0.3
	baz=277						
ESL	**Shilin**	**0.59**	**247**	*e*P	Pb	11 06 54.1	-0.6
	baz=237						
NDS	**Dongshan**	**0.65**	**334**	*e*P	Pb	11 06 56.0	+0.3
	baz=338						
NDS				*e*S	Sn	11 07 05.7	-0.4
	baz=338						
EGFH	**Guangfu**	**0.66**	**236**	*e*P	Pb	11 06 55.3	-0.6
	baz=235						
EGFH				*e*S	Sb	11 07 05.1	+0.4
	baz=235						
NNSB	**Datong**	**0.70**	**303**	P	Pb	11 06 56.6	0.0
	baz=292						
NNSB				*e*S	Sb	11 07 06.4	+0.4
	baz=292						
WHF	**Hehuan Shan**	**0.70**	**279**	P	Pb	11 06 56.5	-0.3
	baz=277						
WHF				*e*S	Sb	11 07 06.7	+0.4
	baz=277						
NNS	**Nan Shan**	**0.71**	**304**	P	Pb	11 06 57.0	+0.1
	baz=293						
NNS				*e*S	Sb	11 07 07.0	+0.6
	baz=293						
ENTT	**Nioudou**	**0.73**	**325**	*e*P	Pn	11 06 57.5	-0.1
	baz=324						
ENTT				*e*S	Sn	11 07 07.9	0.0
	baz=324						
FUSS	**Fushou**	**0.74**	**286**	P	Pb	11 06 57.4	0.0
	baz=285						
FUSS				*e*S	Sb	11 07 07.8	+0.5
	baz=285						
TWE	**Neicheng**	**0.75**	**334**	*e*P	Pn	11 06 58.2	+0.3
	baz=334						
TWE				*e*S	Sn	11 07 08.9	+0.5
	baz=334						
HGSD	**Ruisui**	**0.78**	**225**	*e*P	Pb	11 06 57.4	-0.4
	baz=215						
HGSD				*e*S	Sb	11 07 07.9	-0.1
	baz=215						
CHGB	**Renai**	**0.78**	**272**	P	Pb	11 06 57.7	-0.3
	baz=259						
CHGB				*e*S	Sn	11 07 08.9	-0.5
	baz=259						
OWD	**Renai**	**0.78**	**264**	P	Pb	11 06 57.6	-0.4
	baz=262						
OWD				*e*S	Sb	11 07 08.1	-0.2
	baz=262						
TWT	**Tachien**	**0.80**	**285**	*e*P	Pn	11 06 59.1	+0.3
	baz=283						
TWT				*e*S	Sn	11 07 10.5	+0.5
	baz=283						
TDCB	**Techi**	**0.82**	**285**	*e*P	Pb	11 06 58.5	-0.1
	baz=284						
TDCB				*e*S	Sn	11 07 10.1	-0.3
	baz=284						
EHY	**Hungye**	**0.84**	**231**	*e*P	Pb	11 06 57.8	-1.1
	baz=229						
EHY				*e*S	Sb	11 07 09.1	-0.6
	baz=229						
VWDT	**VWDT**	**0.86**	**251**	*e*P	Pb	11 06 59.0	-0.2
	baz=237						
VWDT				*e*S	Sb	11 07 09.9	-0.4
	baz=237						
YHNB	**Yeheng**	**0.86**	**317**	*e*P	Pb	11 06 59.2	-0.1
	baz=305						
YHNB				*e*S	Sn	11 07 11.2	-0.1
	baz=305						
NWLT	**Wulai**	**0.87**	**327**	*e*S	Sn	11 07 11.7	+0.2
	baz=326						
NSK	**Sanguang**	**0.88**	**316**	*e*P	Pn	11 06 59.7	0.0
	baz=305						
NSK				*e*S	Sn	11 07 11.4	-0.2
	baz=305						
YULB	**Yu-li**	**0.93**	**226**	*e*P	Pn	11 06 58.9	-1.5
	baz=239						
YULB				*e*S	Sb	11 07 10.8	-1.5
	baz=239						
YULB	**Yu-li**	**0.93**	**226**	P	Pn	11 06 59.4	-1.0
TIPB	**Shuangxi**	**0.94**	**349**	*e*S	Sn	11 07 13.9	+0.7
	baz=358						
EYUL	**Yuli**	**0.95**	**223**	*e*P	Pb	11 07 00.7	0.0
	baz=213						
EYUL				*e*S	Sn	11 07 13.1	-0.1
	baz=213						
SSLB	**Suanglung**	**1.01**	**256**	*e*P	Pn	11 07 00.8	-0.7
	baz=263						
SSLB				*e*S	Sn	11 07 15.2	+0.3
	baz=263						
WHP	**Taichung City**	**1.01**	**284**	*e*P	Pb	11 07 01.9	0.0
	baz=272						
WCS	**Beigang Elemen**	**1.02**	**271**	*e*P	Pn	11 07 01.5	-0.1
	baz=270						
SMLT	**Sun Moon Lake**	**1.04**	**261**	*e*P	Pn	11 07 01.8	-0.2
	baz=260						
FULB	**Fuli**	**1.07**	**219**	*e*P	Pb	11 07 02.7	-0.2
	baz=205						
FULB				*e*S	Sn	11 07 15.9	-0.6
	baz=205						
TYC	**Yuchr**	**1.08**	**263**	*e*P	Pn	11 07 02.3	-0.1
	baz=262						
LIOB	**Emei**	**1.10**	**303**	*e*P	Pb	11 07 03.7	+0.4
	baz=301						
LIOB				*e*S	Sb	11 07 18.5	+1.3
	baz=301						
NSTT	**Nanjuang**	**1.10**	**302**	*e*P	Pb	11 07 03.3	0.0
	baz=300						
NSTT				*e*S	Sb	11 07 17.7	+0.4
	baz=300						
ALS	**Alishan**	**1.24**	**245**	*e*P	Pn	11 07 05.2	+0.4
	baz=244						
EDH	**Donghe**	**1.25**	**212**	*e*P	Pn	11 07 04.7	-0.1
	baz=201						
EDH				*e*S	Sn	11 07 18.2	-2.7
	baz=201						
TPUB	**Ta-pu**	**1.48**	**240**	*e*P	Pb	11 07 09.4	-0.4
	baz=239						
TPUB				*e*S	Sb	11 07 28.8	+0.7
	baz=239						
CHN4	**Tsaushan**	**1.48**	**243**	*e*P	Pb	11 07 09.9	+0.1
	baz=231						
CHN4				*e*S	Sb	11 07 29.8	+1.6
	baz=231						
WTP	**Ta-pu**	**1.52**	**239**	*e*P	Pb	11 07 09.9	-0.5
	baz=238						
CHN1	**Nanshi**	**1.62**	**238**	*e*P	Pb	11 07 11.1	-1.0
	baz=237						
CHN1				*e*S	Sb	11 07 32.2	+0.1
	baz=237						
SLGT	**Liugui**	**1.64**	**231**	*e*P	Pn	11 07 10.8	+0.6
	baz=229						
SLGT				*e*S	Sb	11 07 33.2	+0.4
	baz=229						

*IDC **31** 11:21:04.7±4.7, 20°.51S×179°.57W, h649^{km}±34^{km}, mb2.7/5,* *mb1 3.1/6,mb1mx2.9/20,mbtmp3.7/6,Error ellipse: s-maj=144.2km s-min=19.4km az=150.0*

ISC 31 11:21:04.8±1.7**,20°.5S**±0°.5×**179°.6W**±0°.3**,h650^{km},n8,** σ**1^{s}.00**/9**,mb3.3**/5**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.51**	**321**	P	**P**	**11 22 30.8**	**-0.3**
	4.3nm,0.3s,baz=268,slow=22,SNR=5.6						
ASAR	**Alice Springs**	**43.05**	**257**	P	**P**	**11 28 10.8**	**+0.5**
	0.8nm,0.6s,baz=98,slow=7.4,SNR=11						
ASAR				PcP	**PcP**	**11 29 45.0**	**+0.1**
	0.4nm,0.6s,baz=100,slow=3.4,SNR=4.1						
WRA	**Warramunga Arr**	**43.10**	**262**	P	**P**	**11 28 11.1**	**+0.3**
	0.2nm,0.3s,baz=97,slow=7.5,SNR=12						
NVAR	**Mina Array Bea**	**82.05**	**44**	P	**P**	**11 32 19.9**	**+0.4**
	0.5nm,0.6s,baz=221,slow=8.1,SNR=5.5						
ILAR	**Eielson Array**	**88.63**	**13**	P	**P**	**11 32 50.8**	**+0.7**
	0.3nm,0.4s,baz=214,slow=5.8,SNR=5.6						
PDAR	**Pinedale Array**	**89.98**	**44**	P	**P**	**11 32 57.4**	**+0.2**
	0.3nm,0.6s,baz=214,slow=7.9,SNR=4.1						
ARCES	**ARCESS Array B**	**128.61**	**349**	PKP	**PKPdf**	**11 38 59.0**	**-0.1**
	10nm,1.2s,baz=48,slow=1.3,SNR=4.0						
AKASG	**Malin Array Be**	**142.24**	**330**	PKP	**PKPdf**	**11 39 22.6**	**-2.2**
	0.9nm,0.3s,baz=44,slow=4.2,SNR=11						

INET 31 11:23:04.3,11°.17N×86°.65W,h10^{km},MW3.6,Near coast of Nicaragua

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THR ***31*** *11:27:36.0±0.8,26°.58N×56°.92E,h16^{km},ML3.5*
OMAN ***31*** *11:27:37.2±0.2,26°.83N×57°.20E,h36^{km}±26^{km},ml3.4/19, Error ellipse: s-maj=3.1km s-min=1.8km az=346.0*
TEH ***31*** *11:27:37.0,26°.65N×56°.87E,h19^{km},ML3.7*
DSN ***31*** *11:27:38.1±1.8,26°.55N×56°.98E,h10^{km},ML3.2/9,Error ellipse: s-maj=25.7km s-min=7.2km az=158.0*

ISC 31 11:27:37.6±1.4**,26°.65N**±0°.02×**56°.93E**±0°.03**,h15^{km}**±11^{km}**, n75,**σ**1^{s}.27**/96**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**0.87**	**336**	*e*Pg	**Pb**	**11 27 53.8**	**-0.6**
IBND				*e*Sg	**Sg**	**11 28 06.8**	**+0.9**
IBND				*e*		11 28 19.5	
	comp=Z,45µm,0.3s						
BANOM	**Banah**	**0.92**	**218**	*e*P	**Pb**	**11 27 53.2**	**-2.1**
	SNR=118						
BANOM				S	**Sg**	**11 28 07.6**	**+0.2**
BANOM	**Banah**	**0.92**	**218**	*e*Pn	**Pb**	**11 27 53.5**	**-1.8**
BANOM	**Banah**	**0.92**	**218**	P	**Pb**	**11 27 52.9**	**-2.3**
BANOM				S	**Sb**	**11 28 06.1**	**-1.2**
BANOM	**Banah**	**0.92**	**218**	*e*P		11 27 53.2	
	SNR=118						
BANOM				S		11 28 07.6	
SHME	**Shamm**	**0.93**	**230**	*e*P	**Pb**	**11 27 54.0**	**-1.4**
	SNR=137						
SHME				S	**Sg**	**11 28 07.8**	**+0.2**
SHME	**Shamm**	**0.93**	**230**	*e*Pn	**Pb**	**11 27 54.0**	**-1.4**
SHME	**Shamm**	**0.93**	**230**	P	**Pb**	**11 27 54.2**	**-1.2**
SHME				S	**Sb**	**11 28 06.8**	**-0.7**
SHME	**Shamm**	**0.93**	**230**	*e*P		11 27 54.0	
	SNR=137						
SHME				S		11 28 07.8	
GENO	**Geno**	**1.01**	**318**	*e*Pg	**Pb**	**11 27 56.1**	**-0.8**
GENO				*e*		11 28 13.4	
	comp=Z,22µm,0.5s						
JSK1	**Jask**	**1.26**	**143**	*e*Pg	**Pb**	**11 28 00.8**	**-0.2**
JSK1				*e*Sg	**Sg**	**11 28 20.3**	**+2.1**
MASF	**Masafi**	**1.45**	**209**	P	**Pb**	**11 28 04.4**	**0.0**
	SNR=11						
MASF				S	**Sg**	**11 28 25.8**	**+1.5**
MSFE	**Esma-Masafi**	**1.46**	**209**	*e*P	**Pb**	**11 28 04.7**	**+0.2**
	SNR=12						
MSFE				*e*P	**Pb**	**11 28 04.7**	**+0.2**
	SNR=11						
MSFE	**Esma-Masafi**	**1.46**	**209**	*e*Pn	**Pn**	**11 28 03.5**	**0.0**
MSFE	**Esma-Masafi**	**1.46**	**209**	*e*P		11 28 04.7	
	SNR=12						
MSFE				*e*P		11 28 04.7	
	SNR=11						
KHNJ	**Kahnooj**	**1.47**	**28**	*e*Pg	**Pn**	**11 28 03.7**	**+0.1**
UMQ	**Umm Al-Quwin**	**1.60**	**226**	*e*Pn	**Pn**	**11 28 05.2**	**-0.1**
UMQ	**Umm Al-Quwin**	**1.60**	**226**	P	**Pb**	**11 28 07.3**	**+0.4**
UMQ				S	**Sg**	**11 28 30.7**	**+1.6**
UOSS	**Minazif**	**1.82**	**201**	*e*P	**Pn**	**11 28 08.4**	**0.0**
	SNR=16						
UOSS	**Minazif**	**1.82**	**201**	*e*Pn	**Pn**	**11 28 08.1**	**-0.3**
UOSS	**Minazif**	**1.82**	**201**	P	**Pb**	**11 28 09.7**	**-1.0**
UOSS				S	**Sg**	**11 28 34.6**	**-1.5**
UOSS	**Minazif**	**1.82**	**201**	*e*P		11 28 08.4	
	SNR=16						
HATD	**Hatta, Dubai**	**1.95**	**202**	*e*P	**Pb**	**11 28 11.2**	**-1.7**
	SNR=11						
HATD	**Hatta, Dubai**	**1.95**	**202**	*e*Pn	**Pn**	**11 28 10.6**	**+0.3**
HATD	**Hatta, Dubai**	**1.95**	**202**	*e*P		11 28 11.2	
	SNR=11						
NAZ	**Nazwa, Dubai**	**2.01**	**215**	*e*P	**Pb**	**11 28 12.4**	**-1.5**
	SNR=7.5						
NAZ	**Nazwa, Dubai**	**2.01**	**215**	*e*Pn	**Pn**	**11 28 11.3**	**+0.3**
NAZ	**Nazwa, Dubai**	**2.01**	**215**	P	**Pb**	**11 28 12.6**	**-1.3**
NAZ	**Nazwa, Dubai**	**2.01**	**215**	*e*P		11 28 12.4	
	SNR=7.5						
ASHO	**Ashiyiah**	**2.11**	**202**	*e*P	**Pn**	**11 28 13.4**	**+0.9**
	SNR=12						
ASHO	**Ashiyiah**	**2.11**	**202**	*e*Pn	**Pn**	**11 28 13.1**	**+0.7**
ASHO	**Ashiyiah**	**2.11**	**202**	P	**Pb**	**11 28 14.0**	**-1.6**
	SNR=12						
ASHO	**Ashiyiah**	**2.11**	**202**	*e*P		11 28 13.4	
	SNR=12						
FAQ	**Al Faqa, Dubai**	**2.25**	**213**	*e*P	**Pn**	**11 28 15.4**	**+1.0**
	SNR=9.6						
FAQ	**Al Faqa, Dubai**	**2.25**	**213**	*e*Pn	**Pn**	**11 28 15.3**	**+1.0**
FAQ	**Al Faqa, Dubai**	**2.25**	**213**	P	**Pn**	**11 28 15.6**	**+1.3**
	SNR=9.6						
FAQ				S	**Sb**	**11 28 45.9**	**+0.3**
FAQ	**Al Faqa, Dubai**	**2.25**	**213**	*e*P		11 28 15.4	
	SNR=9.6						
ASUD	**Al Ashush, Dub**	**2.48**	**216**	*e*P	**Pn**	**11 28 18.6**	**+1.2**
	SNR=35						
ASUD	**Al Ashush, Dub**	**2.48**	**216**	*e*Pn	**Pn**	**11 28 18.8**	**+1.4**
ASUD	**Al Ashush, Dub**	**2.48**	**216**	P	**Pn**	**11 28 18.9**	**+1.4**
	SNR=35						
ASUD	**Al Ashush, Dub**	**2.48**	**216**	*e*P		11 28 18.6	
	SNR=35						
LAR1	**LAR**	**2.50**	**295**	*e*Pn	**Pn**	**11 28 17.0**	**-0.8**
LAR1				*e*		11 29 07.1	
	comp=Z,6µm,0.4s						
SOHO	**SOHO**	**2.53**	**188**	P	**Pn**	**11 28 16.2**	**-1.9**
SOHO	**SOHO**	**2.53**	**188**	*e*Pn	**Pn**	**11 28 18.7**	**+0.5**
SOHO	**SOHO**	**2.53**	**188**	P	**Pn**	**11 28 16.9**	**-1.3**
SOHO	**SOHO**	**2.53**	**188**	P		11 28 16.2	
KBAM	**BAM**	**2.82**	**28**	*e*Pn	**Pn**	**11 28 23.7**	**+1.4**
KBAM				*e*		11 29 13.4	
	comp=Z,2µm,0.3s						
NGRK	**Negar Kerman**	**2.99**	**357**	*e*Pn	**Pn**	**11 28 25.3**	**+0.4**
NGRK				*e*		11 29 03.4	
	comp=Z,2µm,0.3s						
HOQ	**Hoqain**	**3.07**	**173**	P	**Pn**	**11 28 24.3**	**-1.3**
HOQ				S	**Sn**	**11 29 02.1**	**-0.1**
CHMN	**Cheshme madani**	**3.25**	**9**	*e*	**Sg**	**11 29 21.2**	**-0.8**
	comp=Z,1µm,0.4s						
BIDO	**Bidbid**	**3.30**	**161**	*e*Pn	**Pn**	**11 28 26.9**	**-1.8**
BIDO	**Bidbid**	**3.30**	**161**	P	**Pn**	**11 28 28.3**	**-0.5**
BIDO				S	**Sn**	**11 29 08.0**	**+0.3**
ARQ	**Araqi**	**3.32**	**187**	P	**Pn**	**11 28 30.4**	**+1.3**
ARQ				S	**Sn**	**11 29 11.6**	**+3.3**
KRBR	**Kerman**	**3.33**	**357**	*e*Pn	**Pn**	**11 28 30.7**	**+1.3**
KRBR				IAML		11 29 12.5	
	comp=N,102nm,0.2s						
KRBR				IAML		11 29 12.9	
	comp=E,105nm,0.5s						
KRBR	**Kerman**	**3.33**	**357**	*e*Pn	**Pn**	**11 28 30.7**	**+1.3**
TVBK	**TV Kerman**	**3.33**	**357**	*e*Pn	**Pn**	**11 28 30.1**	**+0.6**
TVBK				*e*		11 29 12.9	
	comp=Z,3µm,0.2s						
CHBR	**Chabahar**	**3.36**	**107**	*e*Pn	**Pn**	**11 28 29.8**	**+0.2**
CHBR	**Chabahar**	**3.36**	**107**	*e*Pn	**Pn**	**11 28 29.8**	**+0.2**
SMDO	**Samad**	**3.71**	**164**	P	**Pn**	**11 28 34.2**	**-0.4**
SMDO				S	**Sn**	**11 29 19.1**	**+0.9**
WSAR	**Wadi Sarin**	**3.73**	**155**	P	**Pn**	**11 28 34.3**	**-0.4**
WSAR				S	**Sn**	**11 29 17.4**	**-1.0**
KHGB	**Koh Gabri**	**3.73**	**354**	*e*Pn	**Pn**	**11 28 35.9**	**+0.9**
KHGB				*e*		11 29 22.7	
	comp=Z,901nm,0.3s						
GHIR	**Ghir-Karzin**	**3.87**	**296**	*e*Pn	**Pn**	**11 28 37.4**	**+0.7**
GHIR				IAML		11 29 46.6	
	comp=N,34nm,0.4s						
GHIR	**Ghir-Karzin**	**3.87**	**296**	*e*Pn	**Pn**	**11 28 37.4**	**+0.7**
BSY	**Bisya**	**3.89**	**176**	P	**Pn**	**11 28 37.5**	**+0.5**
BSY				S	**Sn**	**11 29 24.5**	**+2.0**
NGCH	**Negor - Chabah**	**4.00**	**108**	*e*Pn	**Pn**	**11 28 39.5**	**+1.2**
UMZA	**Um Al Zommool**	**4.24**	**203**	*e*Pn	**Pn**	**11 28 41.9**	**+0.3**
UMZA	**Um Al Zommool**	**4.24**	**203**	P	**Pn**	**11 28 43.1**	**+1.4**
UMZA				S	**Sn**	**11 29 34.8**	**+3.9**
ZHDN	**Zahedan**	**4.39**	**50**	*e*Pn	**Pn**	**11 28 45.8**	**+1.9**
JMDO	**Jabal Madar**	**4.39**	**166**	P	**Pn**	**11 28 44.2**	**+0.4**
JMDO				S	**Sn**	**11 29 36.2**	**+1.4**
WBK	**Wadi Bani Khal**	**4.43**	**155**	P	**Pn**	**11 28 43.3**	**-1.0**
WBK				S	**Sn**	**11 29 34.7**	**-1.0**
ZHSF	**Zahedan**	**4.50**	**48**	*e*Pn	**Pn**	**11 28 46.1**	**+0.7**
ZHSF	**Zahedan**	**4.50**	**48**	*e*Pn	**Pn**	**11 28 46.1**	**+0.7**
SRVN	**Saravan**	**4.93**	**80**	*e*Pn	**Pn**	**11 28 52.9**	**+1.5**
JLN	**Jalan Bani Buh**	**5.02**	**153**	P	**Pn**	**11 28 51.7**	**-0.7**
JLN				S	**Sn**	**11 29 47.9**	**-2.3**
SHMA	**Al-Shehemyia**	**5.42**	**263**	P	**Pn**	**11 28 58.3**	**+0.4**
TRNA	**Turayna**	**5.50**	**251**	P	**Pn**	**11 28 59.1**	**0.0**
BSRN	**Basiran**	**5.63**	**19**	*e*Pn	**Pn**	**11 29 03.5**	**+2.5**
BSRN	**Basiran**	**5.63**	**19**	*e*Pn	**Pn**	**11 29 03.5**	**+2.5**
YZKH	**Yazd**	**6.07**	**341**	*e*Pn	**Pn**	**11 29 07.9**	**+0.9**
YZKH	**Yazd**	**6.07**	**341**	*e*Pn	**Pn**	**11 29 07.9**	**+0.9**
KLNJ	**Kolanjah**	**6.39**	**314**	*e*Pn	**Pn**	**11 29 12.2**	**+0.6**
IRAM	**Ramesheh**	**6.50**	**323**	*e*Pn	**Pn**	**11 29 12.1**	**-0.9**
DQM	**DQM**	**6.71**	**175**	P	**Pn**	**11 29 14.8**	**-0.9**
IGAR	**Gharneh**	**7.14**	**325**	*e*Pn	**Pn**	**11 29 20.6**	**-1.2**
IBRJ	**Brojen**	**7.21**	**318**	*e*Pn	**Pn**	**11 29 21.9**	**-0.9**

VIE ***31*** *11:35:11.6±0.7,51°.39N×16°.03E,h0^{km},mb2.5/3,ml2.5/4, Error ellipse: s-maj=4.6km s-min=4.2km az=72.0 76 km WNW of Wroclaw Suspected Mining induced.*
PRU ***31*** *11:35:11.2±0.0,51°.48N×16°.11E,h0^{km}*

ISC 31 11:35:10.3±1.3**,51°.50N**±0°.06×**16°.12E**±0°.03**,h0^{km},n20,** σ**0^{s}.80**/43**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**170**	*e*Pg	**Pg**	**11 35 23.1**	**+0.1**
KSP				*e*Sg	**Sg**	**11 35 31.6**	**0.0**
CHVC	**Chvalec**	**0.91**	**182**	*e*PG	**Pg**	**11 35 27.9**	**+0.2**
CHVC				*e*SG	**Sg**	**11 35 39.8**	**+0.3**
	comp=Z,17nm,0.5s						
OSTC	**Ostas**	**0.94**	**176**	*e*PG	**Pg**	**11 35 28.6**	**+0.2**
OSTC				*e*SG	**Sg**	**11 35 40.7**	**+0.1**
	comp=Z,16nm,0.3s						
UPC	**Upice**	**0.99**	**184**	*e*PG	**Pg**	**11 35 29.2**	**-0.1**
UPC				*e*SG	**Sg**	**11 35 42.1**	**-0.1**
	comp=Z,58nm,0.4s						
DPC	**Dobruska-Polom**	**1.16**	**173**	*e*PG	**Pg**	**11 35 32.0**	**-0.4**
DPC				*e*SG	**Sg**	**11 35 47.2**	**-0.2**
	comp=Z,16nm,0.4s						
PVCC	**Panska Ves**	**1.38**	**226**	*e*PG	**Pg**	**11 35 36.3**	**-0.3**
PVCC				*e*SG	**Sb**	**11 35 55.4**	**+0.4**
	comp=Z,62nm,0.3s						
KRLC	**Kraliky**	**1.49**	**163**	*e*PG	**Pn**	**11 35 38.2**	**-0.1**
KRLC				*e*SG	**Sg**	**11 35 55.9**	**-2.1**
	comp=Z,24nm,0.5s						
PRU	**Pruhonice**	**1.81**	**214**	*e*PN	**Pn**	**11 35 41.8**	**-0.9**
PRU				*e*PG	**Pb**	**11 35 43.8**	**-0.5**
PRU				*e*SG	**Sb**	**11 36 07.9**	**+0.4**
	comp=Z,12nm,0.6s						
MORC	**Moravsky Berou**	**1.95**	**152**	*e*PN	**Pn**	**11 35 43.6**	**-1.0**
MORC				*e*SG	**Sb**	**11 36 10.8**	**-0.7**
CLL	**Collm**	**1.96**	**266**	*e*Pg	**Pb**	**11 35 46.0**	**-0.8**
CLL				*e*Sg	**Sg**	**11 36 13.0**	**-0.2**
	comp=Z,12nm,0.4s						
OKC	**Ostrava-Krasne**	**2.11**	**141**	*e*PG	**Pb**	**11 35 48.9**	**-0.4**
OKC				*e*SG	**Sg**	**11 36 17.2**	**-0.7**
	comp=Z,13nm,0.6s						
VRAC	**Vranov**	**2.21**	**172**	*e*PN	**Pn**	**11 35 48.9**	**+0.6**
VRAC				*e*SG	**Sb**	**11 36 19.6**	**+0.5**
KRUC	**Moravsky**	**2.45**	**176**	*e*PN	**Pn**	**11 35 51.8**	**+0.4**
KRUC				*e*SG	**Sg**	**11 36 27.8**	**-1.0**
NKC	**Novy Kostel**	**2.65**	**243**	*e*PN	**Pn**	**11 35 54.4**	**+0.2**
NKC				*e*PG	**Pg**	**11 36 00.8**	**-0.2**
NKC				*e*SG	**Sg**	**11 36 36.7**	**+1.5**
	comp=Z,18nm,0.3s						
OJC	**Ojcow**	**2.66**	**117**	*e*Pg	**Pg**	**11 36 02.3**	**+1.1**
OJC				*e*Sg	**Sg**	**11 36 36.9**	**+1.1**
KHC	**Kasperske Hory**	**2.87**	**215**	*e*PN	**Pn**	**11 35 57.3**	**-0.1**
KHC				*e*PG	**Pb**	**11 36 02.5**	**+0.1**
KHC				*e*SN	**Sn**	**11 36 31.7**	**-0.9**
KHC				*e*SG	**Sg**	**11 36 43.6**	**+1.1**
MODS	**Modra-Piesok**	**3.22**	**166**	*e*SG	**Sg**	**11 36 53.6**	**+0.1**
CONA	**Conrad Observa**	**3.58**	**183**	*e*Pn	**Pn**	**11 36 07.6**	**+0.5**
	comp=Z,0.7nm,0.4s						
CONA				*e*Sg	**Sg**	**11 37 06.3**	**+1.2**
	comp=Z,4.2nm,0.3s						
MOA	**Molln**	**3.84**	**199**	*e*Pn	**Pn**	**11 36 10.6**	**-0.1**
	comp=Z,0.4nm,0.2s						
MOA				*e*Sg	**Sg**	**11 37 15.1**	**+1.4**
	comp=Z,3.3nm,0.4s						
ARSA	**Arzberg**	**4.27**	**185**	*e*Pn	**Pn**	**11 36 18.2**	**+1.6**
	comp=Z,0.6nm,0.2s						
ARSA				*e*Sg	**Sg**	**11 37 28.8**	**+1.5**
	comp=Z,1.3nm,0.3s						

IDC ***31*** *11:35:24.1±7.5,36°.40N×99°.13W,h0^{km},mb3.3/2, mb1 3.7/4,mb1mx3.5/33,mbtmp3.4/4,ML3.2/2,Error ellipse: s-maj=103.5km s-min=37.0km az=165.0*
TUL ***31*** *11:35:26.4±1.1,36°.61N±0°.04×98°.81W±0°.04,h6^{km}±7^{km}, ML3.2,mb_Lg3.2/81(NEIC),Error ellipse: s-maj=6.0km s-min=4.5km az=163.0*
ANF ***31*** *11:35:27.5±0.2,36°.58N×98°.80W,h10^{km},ML4.2/18,Error ellipse: s-maj=2.9km s-min=2.2km az=96.0*
NEIC ***31*** *11:35:27.2±1.2,36°.60N±0°.04×98°.76W±0°.04,h8^{km}±7^{km}, Error ellipse: s-maj=6.3km s-min=4.6km az=154.0*

ISC 31 11:35:26.5±0.8**,36°.60N**±0°.02×**98°.77W**±0°.03**,h11^{km}**±6^{km}**, n109,**σ**0^{s}.99**/97**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK035	**E0210 Rd and N**	**0.12**	**25**	Pg	**Pg**	**11 35 29.6**	**0.0**
OK035				Sg	**Sg**	**11 35 31.5**	**-0.2**
U32A	**Winter Ranch,**	**0.29**	**220**	Pg	**Pg**	**11 35 32.4**	**0.0**
U32A				Sg	**Sg**	**11 35 36.4**	**+0.1**
U32A	**Winter Ranch,**	**0.29**	**220**	P	**Pg**	**11 35 32.4**	**0.0**
	baz=42,SNR=241						
U32A				S	**Sg**	**11 35 36.6**	**+0.3**
	baz=42						
CROK	**Carrier**	**0.64**	**98**	Pg	**Pg**	**11 35 39.3**	**+0.4**
KAN14	**Manchester OK**	**0.74**	**61**	Pg	**Pg**	**11 35 40.9**	**+0.1**
KAN14					**Sg**	**11 35 50.6**	**+0.1**
KAN14				Sg	**Sb**	**11 35 51.0**	**-0.5**
KAN10	**Anthony SW Sta**	**0.75**	**46**	Pg	**Pg**	**11 35 41.1**	**+0.1**
GC02	**Grant County #**	**0.77**	**71**	Pg	**Pg**	**11 35 41.7**	**+0.3**
GC02				Sg	**Sb**	**11 35 52.4**	**-0.1**
KAN16	**Harper SW Stat**	**0.84**	**42**	Pg	**Pg**	**11 35 42.6**	**-0.1**
KAN16				Sg	**Sb**	**11 35 54.2**	**-0.2**
KAN05	**Bluff City Nor**	**0.88**	**55**	Pg	**Pg**	**11 35 43.5**	**+0.1**
KAN05				Sg	**Sb**	**11 35 55.6**	**+0.1**
KAN08	**Anthony NE Sta**	**0.90**	**46**		**Pg**	**11 35 43.7**	**0.0**
KAN08				Sg	**Sg**	**11 35 55.8**	**+0.4**
KAN17	**Caldwell West**	**0.92**	**61**		**Pg**	**11 35 44.3**	**0.0**
KAN12	**Harper NE Stat**	**0.93**	**41**	Pg	**Pg**	**11 35 44.4**	**0.0**
KAN06	**Argonia West S**	**0.98**	**48**		**Pb**	**11 35 45.4**	**+0.1**
KAN01	**Argonia South**	**0.98**	**56**		**Pg**	**11 35 45.4**	**0.0**
KAN01				Sg	**Sg**	**11 35 58.4**	**+0.2**
KAN13	**South Haven SW**	**1.12**	**68**	Pg	**Pg**	**11 35 48.0**	**0.0**
BLOK	**Blackwell**	**1.26**	**82**		**Pb**	**11 35 50.4**	**+0.2**
BCOK	**Bluff Creek, N**	**1.33**	**135**		**Pn**	**11 35 51.3**	**+0.3**
BCOK				Sn	**Sg**	**11 36 09.6**	**+0.3**
OK009	**Oakdale Elemen**	**1.49**	**133**	Sn	**Sg**	**11 36 14.7**	**+0.2**
OK025	**Westminster Rd**	**1.54**	**131**		**Pb**	**11 35 55.0**	**0.0**
OKCFA	**Oklahoma City**	**1.60**	**137**		**Pb**	**11 35 55.7**	**-0.2**
OKCFA	**Oklahoma City**	**1.60**	**137**	P	**Pb**	**11 35 55.9**	**0.0**
	baz=320,SNR=20						
OKCFA				S	**Sg**	**11 36 17.9**	**+0.1**
	baz=320						
OKCSW	**OKLAHOMA CITY**	**1.61**	**137**		**Pb**	**11 35 56.0**	**-0.2**
OK031	**S. Brethren Rd**	**1.69**	**112**		**Pb**	**11 35 57.4**	**-0.1**
QUOK	**Quay**	**1.72**	**104**		**Pb**	**11 35 58.1**	**+0.1**
OK030	**Cody Creek RV**	**1.74**	**112**		**Pb**	**11 35 58.0**	**-0.4**
FNO	**Franklin**	**1.74**	**140**		**Pb**	**11 35 58.0**	**-0.4**
R32A	**Long Quarter,**	**1.82**	**1**		**Pb**	**11 35 59.2**	**-0.5**
R32A	**Long Quarter,**	**1.82**	**1**	P	**Pb**	**11 35 59.2**	**-0.5**
	baz=181,SNR=50						
R32A				S	**Sb**	**11 36 23.6**	**+1.1**
	baz=181						
T35A	**Sooner Cattle**	**1.84**	**80**	IAmb_Lg		11 36 25.8	
	comp=Z,83nm,0.8s						
T35B	**Sooner Cattle**	**1.84**	**80**	P	**Pb**	**11 35 59.5**	**-0.6**
	baz=261,SNR=91						
T35B				S	**Sg**	**11 36 24.8**	**-0.9**
	baz=261						
X34A	**Smith Ranch, M**	**2.14**	**159**		**Pb**	**11 36 04.3**	**-0.9**
CBKS	**Cedar Bluff**	**2.34**	**341**	Pn	**Pn**	**11 36 06.1**	**+1.3**
CBKS	**Cedar Bluff**	**2.34**	**341**	P	**Pn**	**11 36 06.2**	**+1.3**
	baz=160,SNR=72						
CBKS				S	**Sb**	**11 36 38.1**	**+0.6**
	baz=160						
TUL1	**Leonard**	**2.50**	**105**		**Pn**	**11 36 08.3**	**+1.2**
TUL1				IAmb_Lg		11 36 50.1	
	comp=Z,100nm,1.0s						
TUL1	**Leonard**	**2.50**	**105**	P	**Pn**	**11 36 08.7**	**+1.6**
	baz=287,SNR=25						
LOOK	**Love County**	**2.91**	**153**	Pn	**Pn**	**11 36 13.0**	**+0.4**
AMTX	**Amarillo**	**2.92**	**235**	Pn	**Pn**	**11 36 14.9**	**+2.0**
KSU1	**Kansas State U**	**3.03**	**34**	Pn	**Pn**	**11 36 15.8**	**+1.6**
KSU1	**Kansas State U**	**3.03**	**34**	P	**Pn**	**11 36 16.1**	**+1.9**
	baz=215,SNR=18						
X37A	**Clayton**	**3.42**	**125**	Pn	**Pn**	**11 36 20.9**	**+1.2**
X37A				IAmb_Lg		11 37 22.4	
	comp=Z,66nm,0.8s						
X37A	**Clayton**	**3.42**	**125**	P	**Pn**	**11 36 21.1**	**+1.4**
	baz=308,SNR=25						
Z35A	**Perchaven, San**	**3.49**	**159**	Pn	**Pn**	**11 36 22.2**	**+1.6**
Z35A	**Perchaven, San**	**3.49**	**159**	P	**Pn**	**11 36 22.3**	**+1.6**
	baz=340,SNR=10						
U38A	**Gravette**	**3.54**	**91**	Pn	**Pn**	**11 36 23.0**	**+1.7**
KSCO	**Kaye Shedlock'**	**3.89**	**309**		**Pn**	**11 36 27.5**	**+1.3**
KSCO				IAmb_Lg		11 37 37.4	
	comp=Z,56nm,0.8s						
KSCO	**Kaye Shedlock'**	**3.89**	**309**	P	**Pn**	**11 36 27.6**	**+1.3**
	baz=127,SNR=15						
HHAR	**Hobbs**	**3.91**	**93**		**Pn**	**11 36 28.0**	**+1.6**
ABTX	**Abilene, Hawle**	**4.03**	**191**	Pn	**Pn**	**11 36 29.1**	**+0.9**
ABTX				IAmb_Lg		11 37 38.9	
	comp=Z,46nm,0.9s						
ABTX	**Abilene, Hawle**	**4.03**	**191**	P	**Pn**	**11 36 29.5**	**+1.4**
	baz=10,SNR=15						
MSTX	**Muleshoe**	**4.20**	**232**	Pn	**Pn**	**11 36 31.4**	**+0.9**
MSTX				IAmb_Lg		11 37 45.3	
	comp=Z,50nm,0.8s						
N33B	**J Bar K, Exete**	**4.26**	**14**	P	**Pn**	**11 36 31.3**	**+0.1**
	baz=194,SNR=15						
W39A	**Magazine**	**4.29**	**108**		**Pn**	**11 36 33.1**	**+1.5**
W39A				IAmb_Lg		11 37 52.9	
	comp=Z,55nm,0.8s						
S39A	**Bolivar**	**4.49**	**74**		**Pn**	**11 36 35.4**	**+1.0**
S39A				IAmb_Lg		11 37 49.3	
	comp=Z,42nm,0.8s						
S39A	**Bolivar**	**4.49**	**74**	P	**Pn**	**11 36 35.5**	**+1.2**
	baz=258,SNR=12						
T25A	**Trinidad**	**4.55**	**278**	Pn	**Pn**	**11 36 35.9**	**+0.4**
T25A				IAmb_Lg		11 37 51.7	
	comp=Z,66nm,1.1s						
Z38A	**Mt. Pleasant**	**4.56**	**136**	Pn	**Pn**	**11 36 36.0**	**+0.7**
Z38A				IAmb_Lg		11 38 02.0	
	comp=Z,51nm,0.9s						
MIAR	**Mount Ida**	**4.71**	**114**		**Pn**	**11 36 39.3**	**+2.0**
WHTX	**Lake Whitney,**	**4.73**	**166**		**Pn**	**11 36 38.7**	**+1.0**
WHTX	**Lake Whitney,**	**4.73**	**166**	P	**Pn**	**11 36 38.6**	**+1.0**
	baz=348,SNR=15						
U40A	**Yellville**	**4.78**	**91**		**Pn**	**11 36 39.1**	**+0.8**
U40A				IAmb_Lg		11 37 59.2	
	comp=Z,57nm,0.8s						
U40A	**Yellville**	**4.78**	**91**	P	**Pn**	**11 36 39.1**	**+0.8**
	baz=275,SNR=9.3						
U40A				P	**Pn**	**11 36 39.1**	**+0.8**
	baz=275,SNR=9.3						
BGNE	**Belgrade**	**4.82**	**6**	Pn	**Pn**	**11 36 39.7**	**+0.7**
BGNE	**Belgrade**	**4.82**	**6**	P	**Pn**	**11 36 39.7**	**+0.7**
	baz=186,SNR=15						
N35A	**Tabor**	**4.91**	**29**		**Pn**	**11 36 41.0**	**+0.9**
N35A	**Tabor**	**4.91**	**29**	P	**Pn**	**11 36 41.0**	**+0.9**
	baz=211,SNR=11						
OGNE	**Ogallala**	**5.03**	**331**		**Pn**	**11 36 43.2**	**+1.3**
OGNE				IAmb_Lg		11 38 15.2	
	comp=Z,61nm,0.7s						
OGNE	**Ogallala**	**5.03**	**331**	P	**Pn**	**11 36 44.0**	**+2.1**
	baz=148,SNR=7.9						
P38A	**Dawn**	**5.12**	**52**	Pn	**Pn**	**11 36 44.3**	**+1.3**
P38A	**Dawn**	**5.12**	**52**	P	**Pn**	**11 36 44.5**	**+1.5**
	baz=235,SNR=14						
237A	**Washetta, Mont**	**5.20**	**151**	IAmb_Lg		11 38 22.9	
	comp=Z,49nm,0.8s						
MGMO	**Mountain Grove**	**5.24**	**82**		**Pn**	**11 36 45.9**	**+1.2**
MGMO				IAmb_Lg		11 38 16.6	
	comp=Z,29nm,0.9s						
X40A	**Basin Creek Fa**	**5.28**	**112**	IAmb_Lg		11 38 19.2	
	comp=Z,32nm,0.7s						
FCAR	**Ozark Folk Cen**	**5.42**	**96**	IAmb_Lg		11 38 18.9	
	comp=Z,27nm,0.8s						
WHAR	**Wooly Hollow**	**5.42**	**102**	IAmb_Lg		11 38 22.1	
	comp=Z,44nm,1.0s						
R40A	**Maddies Statio**	**5.44**	**70**	IAmb_Lg		11 38 23.2	
	comp=Z,31nm,0.9s						
WLAR	**White Oak Lake**	**5.47**	**120**	IAmb_Lg		11 38 24.0	
	comp=Z,29nm,0.9s						
W41B	**Gary Mavity, V**	**5.48**	**103**	IAmb_Lg		11 38 27.2	
	comp=Z,26nm,0.8s						
SDCO	**Great Sand Dun**	**5.49**	**284**		**Pn**	**11 36 49.9**	**+1.5**
435B	**Jarrell**	**5.89**	**170**	IAmb_Lg		11 38 40.2	
	comp=Z,35nm,0.7s						
K31A	**O'Neill**	**6.01**	**0**		**Pn**	**11 36 55.9**	**+0.5**
N38A	**Joes South For**	**6.02**	**44**	Pn	**Pn**	**11 36 56.1**	**+0.7**
N38A	**Joes South For**	**6.02**	**44**	P	**Pn**	**11 36 56.2**	**+0.7**
	baz=228,SNR=10						
P40A	**Paris**	**6.06**	**59**	Pn	**Pn**	**11 36 56.6**	**+0.8**
JCT	**Junction City**	**6.17**	**188**	Pn	**Pn**	**11 36 59.0**	**+1.6**
JCT				IAmb_Lg		11 38 49.4	
	comp=Z,43nm,0.8s						
CCM	**Cathedral Cave**	**6.17**	**74**	IAmb_Lg		11 38 45.4	
	comp=Z,32nm,1.0s						
LCAR	**Lake Charles**	**6.17**	**93**	IAmb_Lg		11 38 43.1	
	comp=Z,23nm,1.0s						
T42A	**Van Buren**	**6.17**	**84**	IAmb_Lg		11 38 54.5	
	comp=Z,28nm,1.0s						
ISCO	**Idaho Springs**	**6.26**	**303**		**Pn**	**11 36 59.7**	**+0.7**
ANMO	**Albuquerque**	**6.46**	**257**	Lg	Lg	11 38 46.6	
	comp=Z,1.1nm,0.3s,baz=350,slow=16,SNR=4.5						
PBMO	**Poplar Bluff**	**6.71**	**86**	IAmb_Lg		11 39 09.3	
	comp=Z,32nm,0.8s						
FVM	**French Village**	**6.79**	**76**	IAmb_Lg		11 39 09.4	
	comp=Z,31nm,0.7s						
N23A	**Red Feather La**	**7.05**	**310**	IAmb_Lg		11 39 14.3	
	comp=Z,41nm,0.8s						
SLM	**Saint Louis**	**7.07**	**71**	IAmb_Lg		11 39 15.3	
	comp=Z,28nm,0.7s						
ECSD	**EROS Data Cent**	**7.31**	**12**	Pn	**Pn**	**11 37 12.7**	**-0.5**
ECSD				IAmb_Lg		11 39 17.0	
	comp=Z,18nm,0.8s						
N41A	**Harden Midland**	**7.43**	**54**	IAmb_Lg		11 39 27.6	
	comp=Z,32nm,0.7s						
S44A	**Carbondale**	**7.68**	**79**	IAmb_Lg		11 39 29.0	
	comp=Z,29nm,0.7s						
SUSD	**Miller**	**7.83**	**359**	IAmb_Lg		11 39 37.5	
	comp=Z,25nm,0.7s						
W45A	**Hickory Valley**	**7.91**	**98**	IAmb_Lg		11 39 52.6	
	comp=Z,26nm,0.7s						
I37A	**Lemond, Waseca**	**8.46**	**27**	IAmb_Lg		11 40 07.9	
	comp=Z,24nm,1.0s						
K22A	**Casper**	**8.50**	**318**	IAmb_Lg		11 40 05.5	
	comp=Z,23nm,1.1s						
RSSD	**Black Hills**	**8.52**	**333**	IAmb_Lg		11 40 05.7	
	comp=Z,19nm,0.7s						
L42A	**Oliver, Polo**	**8.88**	**50**	IAmb_Lg		11 40 17.9	
	comp=Z,28nm,1.0s						
JFWS	**Jewell Farm**	**9.10**	**44**	IAmb_Lg		11 40 30.8	
	comp=Z,20nm,0.7s						
F33A	**5 Mile Ranch,**	**9.42**	**11**	IAmb_Lg		11 40 30.2	
	comp=Z,13nm,0.9s						
SPMN	**Marine on St.**	**9.72**	**26**	IAmb_Lg		11 40 37.7	
	comp=Z,13nm,0.9s						
PDAR	**Pinedale Array**	**10.34**	**310**	Pn	**Pn**	**11 37 54.6**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=121,slow=14,SNR=7.7						
PDAR				Lg	Lg	11 40 47.4	
	comp=Z,0.3nm,0.3s,baz=102,slow=32,SNR=3.8						
ULM	**Lac du Bonnet**	**13.80**	**8**	Pn	**Pn**	**11 38 38.4**	**-3.5**
	comp=Z,0.2nm,0.3s,baz=197,slow=13,SNR=1.8						

YKA	**Yellowknife Ar**	27.72	344	P	P	11 41 15.1	+0.6
	comp=Z,0.1nm,0.6s,baz=152,slow=8.3,SNR=4.6						
ILAR	**Eielson Array**	39.95	330	P	P	11 42 59.7	-0.7
	comp=Z,0.5nm,0.8s,baz=116,slow=6.1,SNR=4.5						

IDC ***31*** *12:00:15.3±0.9, 15°.15S×173°.66W, h0km, mb4.1/9, mb1 4.4/9, mb1mx4.0/32, mbtmp4.1/9, Error ellipse: s-maj=47.9km s-min=19.8km az=141.0*

NEIC ***31*** *12:00:20.0±2.8, 15°.17S±0°.09×173°.4W±0°.1, h25km±5km, mb4.6/16, Error ellipse: s-maj=19.0km s-min=11.2km az=116.0*

ISC 31 12:00:19.6±0.6**, 15°.11S**±0°.09×**173°.4W**±0°.1**, h30km, n42, σ1.s73**/30**, mb4.4**/18**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	1.94	52	Pn	Pn	12 00 49.7	-0.8
	293nm,0.3s,baz=174,slow=1.5,SNR=86						
AFI				Sn	Sn	12 01 09.6	-4.3
	464nm,0.3s,baz=3.8,slow=23,SNR=23						
NIUE	**Niue**	5.13	141	Pn	Pn	12 01 34.4	0.0
XMAS	**Kiritimati**	23.20	44	P	P	12 05 27.2	+3.1
BKZ	**Black Stump Fm**	25.58	199	P	P	12 05 45.9	-0.2
BKZ				IAmb	IAmb	12 05 49.3	
	comp=Z,26nm,1.5s						
HNR	**Honiara**	26.68	279	P	P	12 05 57.0	+0.7
	comp=Z,123nm,0.6s,baz=127,slow=13,SNR=5.0						
LTZ	**Lake Taylor**	30.22	201	P	P	12 06 27.5	-0.1
LTZ				IAmb	IAmb	12 06 31.5	
	comp=Z,14nm,1.2s						
WHZ	**Wether Hill Ro**	34.48	203	P	P	12 07 04.5	-0.4
H11S2	**WAKE ISLAND Hy**	38.74	329	T	T	12 48 03.2	
	baz=146,slow=75,SNR=8.1						
H11S3	**WAKE ISLAND Hy**	38.75	329	T	T	12 48 15.4	
	baz=146,slow=75,SNR=7.4						
H11S1	**WAKE ISLAND Hy**	38.76	329	T	T	12 48 12.8	
	baz=146,slow=75,SNR=6.5						
H11N3	**WAKE ISLAND Hy**	39.68	330	T	T	12 49 36.2	
	baz=147,slow=74,SNR=4.2						
H11N1	**WAKE ISLAND Hy**	39.69	330	T	T	12 50 02.2	
	baz=147,slow=74,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	39.70	330	T	T	12 49 41.2	
	baz=147						
WB0	**Warramunga Arr**	49.92	257	P	P	12 09 09.1	-1.9
WB0				IAmb	IAmb	12 09 31.8	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	49.96	257	P	P	12 09 08.9	-2.4
	comp=Z,0.6nm,0.3s,baz=98,slow=5.8,SNR=36						
WRA	**Warramunga Arr**	49.96	257	IAmb	IAmb	12 09 17.6	
	comp=Z,0.4nm,1.4s						
AS31	**Alice Springs**	50.24	252	P	P	12 09 11.3	-2.2
ASAR	**Alice Springs**	50.25	252	P	P	12 09 11.0	-2.5
	comp=Z,3.0nm,0.7s,baz=86,slow=8.3,SNR=56						
YBH	**Yreka Blue Hor**	73.34	37	P	P	12 11 50.8	+2.1
	comp=Z,3.6nm,0.8s,baz=210,slow=1.4,SNR=14						
YBH	**Yreka Blue Hor**	73.34	37		P	12 11 50.7	+2.1
YBH				IAmb	IAmb	12 11 52.3	
	comp=Z,7.0nm,1.1s						
NVAR	**Mina Array Bea**	74.08	42	P	P	12 11 55.1	+1.8
	comp=Z,2.9nm,0.8s,baz=228,slow=10.0,SNR=25						
NV11	**Mina Array Sit**	74.18	42		P	12 11 55.5	+1.8
NV11				IAmb	IAmb	12 11 56.4	
	comp=Z,3.6nm,0.9s						
KVN	**Kaiserville**	74.56	42	P	P	12 11 57.6	+1.6
KVN				IAmb	IAmb	12 11 58.6	
	comp=Z,4.7nm,1.0s						
QSPA	**South Pole Qui**	74.94	180	P	P	12 11 58.0	+0.3
	comp=Z,0.6nm,0.8s,baz=71,slow=2.2,SNR=3.6						
QSPA	**South Pole Qui**	74.94	180	P	P	12 11 57.4	-0.3
PINE	**Pine Mountain**	75.64	36	P	P	12 12 04.6	+2.5
BMN	**Battle Mountai**	75.90	41	P	P	12 12 05.7	+2.0
BMN				IAmb	IAmb	12 12 06.3	
	comp=Z,4.3nm,0.9s						
HLID	**Hailey**	79.37	39		P	12 12 23.9	+0.9
HLID				IAmb	IAmb	12 12 32.5	
	comp=Z,7.6nm,1.2s						
CCB	**Clear Creek Bu**	81.87	11	P	P	12 12 35.9	+0.3
CCB				IAmb	IAmb	12 12 36.6	
	comp=Z,7.7nm,1.0s						
PDAR	**Pinedale Array**	82.02	42	P	P	12 12 38.4	+1.1
	comp=Z,0.6nm,0.8s,baz=225,slow=4.0,SNR=5.7						
ILAR	**Eielson Array**	82.15	11	P	P	12 12 37.4	+0.2
	comp=Z,0.7nm,0.7s,baz=236,slow=6.6,SNR=12						
H03S2	**Juan Fernandez**	85.32	124	T	T	13 49 07.3	
	baz=242,SNR=41						
H03S1	**Juan Fernandez**	85.34	124	T	T	13 49 08.4	
	baz=242,SNR=40						
H03S3	**Juan Fernandez**	85.34	124	T	T	13 49 04.4	
	baz=242,SNR=46						
H03N2	**Juan Fernandez**	85.42	123	T	T	13 49 18.8	
	baz=258,slow=72,SNR=14						
H03N3	**Juan Fernandez**	85.42	123	T	T	13 49 16.9	
	baz=258,slow=72,SNR=19						
H03N1	**Juan Fernandez**	85.44	123	T	T	13 49 13.2	
	baz=258,slow=72,SNR=18						
INK	**Inuvik**	87.97	14	P	P	12 13 07.0	+0.8
	comp=Z,1.5nm,1.0s,baz=227,slow=6.7,SNR=3.6						
YKA	**Yellowknife Ar**	89.81	23	P	P	12 13 15.6	+0.7
	comp=Z,0.8nm,0.9s,baz=242,slow=4.8,SNR=12						
GERES	**GERESS Array B**	145.86	352	PKPbc	PKPab	12 19 56.6	0.0
	comp=Z,1.2nm,0.8s,baz=27,slow=3.3,SNR=9.6						
BRTR	**Keskin Array B**	145.96	321	PKPbc	PKPab	12 19 57.2	-0.2
	comp=Z,2.0nm,0.8s,baz=66,slow=3.1,SNR=6.4						
DAVOX	**Davos/Dischmat**	148.31	356	PKPbc	PKiKP	12 20 04.3	-0.6
	comp=Z,2.9nm,0.8s,baz=357,slow=6.1,SNR=6.8						

BUL ***31*** *12:01:58.4±1.4, 26°.12S×29°.10E, h0km±27km, MD5.0*

EAF ***31*** *12:01:58.4±1.4, 26°.12S×29°.10E, h0km±27km, MD4.5*

IDC ***31*** *12:02:01.5±5.0, 26°.13S×28°.89E, h0km, mb1 3.1/3, mb1mx2.9/48, mbtmp3.2/3, ML2.5/3, Error ellipse: s-maj=40.9km s-min=24.7km az=71.0*

ISC 31 12:01:56.4±1.8**, 26°.04S**±0°.05×**29°.1E**±0°.1**, h3km, n11, σ2.s59**/18**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	3.33	287	Pn	Pb	12 02 54.2	-1.9
	0.1nm,0.3s,baz=106,slow=9.1,SNR=1.4						
LBTB				Pg	Pg	12 02 59.3	-0.9
	1.3nm,0.3s,baz=106,slow=17,SNR=43						
LBTB				Lg	Lg	12 03 42.7	
	4.0nm,0.3s,baz=15,slow=23,SNR=36						
LBTB	**Lobatse**	3.33	287	*i* P	Pn	12 02 52.4	+3.0
LBTB				*i* Sg	Sg	12 03 42.5	-0.8
LBTB	**Lobatse**	3.33	287	*i* P	Pn	12 02 52.4	+3.0
LBTB				*i* Sg	Sg	12 03 42.5	-0.8
BOSA	**Boshof**	4.28	232	Pn	Pn	12 03 03.6	+1.1
	0.1nm,0.3s,baz=56,slow=14,SNR=1.5						
BOSA				Pg	Pg	12 03 16.4	-2.1
	0.4nm,0.3s,baz=47,slow=17,SNR=10						
BOSA				Lg	Lg	12 04 10.9	
	0.9nm,0.3s,baz=150,slow=21,SNR=16						
BOSA	**Boshof**	4.28	232	*i* P	Pn	12 03 04.1	+1.5
BOSA				*i* Sg	Sb	12 04 08.6	+4.1
BOSA	**Boshof**	4.28	232	*i* P	Pn	12 03 04.1	+1.5
BOSA				*i* Sg	Sb	12 04 08.6	+4.1
I47ZA	**BOSHOF INFRASO**	4.29	232	*i*		12 30 50.0	
	baz=51,slow=300,SNR=1.4						
MATP	**Matopo**	5.61	354	*i* P	Pn	12 03 23.2	+2.3
MATP				*i* S	Sn	12 04 25.1	-1.0
MATP	**Matopo**	5.61	354	*i* P	Pn	12 03 23.2	+2.3
MATP				*i* S	Sn	12 04 25.1	-1.0
SUR	**Sutherland**	9.61	227	Pn	Pn	12 04 18.4	+2.6
	0.2nm,0.3s,baz=14,slow=5.7,SNR=6.3						
SUR				Sn	Sn	12 06 00.7	-3.8
	0.1nm,0.3s,baz=313,slow=19,SNR=1.8						
I35NA	**TSUMEB INFRASO**	12.63	300	*i*		13 17 00.0	
	baz=130,slow=301,SNR=0.9						

NOU 31 12:03:44.8, 17°.06S×167°.52E, h26km, MLv4.7/16**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	0.92	136	P	Pn	12 04 02.0	0.0
RTV	**Rentapao**	1.13	130	P	Pn	12 04 05.2	+0.3
MARNC	**Mare, Loyalty**	4.42	174	P	Pn	12 04 49.4	-0.9
KOUNC	**Koumac, New Ca**	4.63	221	P	Pn	12 04 53.6	+0.5
YATNC	**Mamie plateau,**	5.01	187	P	Pn	12 04 57.1	-1.2
DZM	**Mont Dzumac**	5.09	191	P	Pn	12 04 59.3	-0.2
NOUC	**Port Laguerre**	5.14	193	P	Pn	12 05 00.2	0.0
ONTNC	**Ouen Toro**	5.32	191	P	Pn	12 05 02.7	+0.2
OUENC	**Ouen Island, N**	5.37	187	P	Pn	12 05 03.6	+0.3
PINNC	**Pines Island,**	5.53	181	P	Pn	12 05 05.9	+0.5

IDC ***31*** *12:16:53.5±7.2, 5°.81S×148°.76E, h76km±59km, mb3.4/2, mb1 3.5/4, mb1mx3.2/30, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=87.1km s-min=48.8km az=119.0*

ISC 31 12:16:52.5±3.1**, 5°.5S**±0°.2×**148°.3E**±0°.6**, h50km, n5, σ1.s38**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	4.03	196	P	Pn	12 17 53.2	+1.4
	5.4nm,0.3s,baz=22,slow=8.7,SNR=14						
PMG				S	Sn	12 18 36.3	-1.4
	20nm,0.3s,baz=37,slow=16,SNR=16						
WRA	**Warramunga Arr**	19.75	222	P	P	12 21 18.8	+0.3
	0.2nm,0.3s,baz=50,slow=11,SNR=11						
ASAR	**Alice Springs**	22.76	216	P	P	12 21 50.3	-0.6
	0.6nm,0.5s,baz=50,slow=9.7,SNR=10						
FITZ	**Fitzroy Crossi**	25.42	239	P	P	12 22 16.2	+0.5
	2.4nm,0.9s,baz=47,slow=10,SNR=1.8						
TORD	**Torodi Ar. Bea**	146.22	285	PKPbc	PKPdf	12 36 26.4	-1.1
	0.6nm,1.0s,baz=57,slow=2.9,SNR=2.4						

TEH ***31*** *12:42:09.8, 29°.26N×51°.29E, h6km, ML3.6*

THR ***31*** *12:42:11.0±0.9, 29°.24N×51°.20E, h15km±19km, ML3.0*

KISR ***31*** *12:42:12.5±0.9, 28°.18N×49°.98E, h297km±59km, ML3.8*

ISC 31 12:42:12.7±0.9**, 29°.30N**±0°.05×**51°.32E**±0°.05**, h10km, n39, σ1.s09**/43**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAZ1	**Kazerun**	0.43	41	*e*Pg	Pg	12 42 19.2	-2.0
SHI	**Shiraz**	1.10	72	*e*Pg	Pg	12 42 32.5	-1.4
ABEH	**Behbahan**	1.59	325	*e*Pg	Pn	12 42 42.1	+1.1
KLNJ	**Kolanjah**	1.72	8	*e*Pn	Pn	12 42 44.4	+1.3
KLNJ				*e*		12 43 18.5	
	comp=Z,3μm,0.6s						
QIR1	**Qir**	1.72	118	*e*Pg	Pb	12 42 44.5	0.0
QIR1				*e*		12 43 18.4	
	comp=Z,9μm,0.4s						
GHIR	**Ghir-Karzin**	1.78	124	*e*Pg	Pn	12 42 45.1	+1.4
GHIR				*e*Sg	Sb	12 43 08.8	+0.9
GHIR				IAML		12 43 16.1	
	comp=N,316nm,0.4s						
GHIR				IAML		12 43 26.2	
	comp=E,261nm,0.8s						
GHIR	**Ghir-Karzin**	1.78	124	*e*Pn	Pn	12 42 45.1	+1.4
JHRM	**Jahrom**	2.13	111	*e*Pn	Pn	12 42 49.4	+0.9
JHRM				*e*		12 43 35.4	
	comp=Z,6μm,0.5s						
IBRJ	**Brojen**	2.60	359	*e*Pn	Pn	12 42 55.7	+0.6
IRAM	**Ramesheh**	2.67	20	*e*Pn	Pn	12 42 56.8	+0.8
AMIS	**Naft Sefid**	2.94	324	*e*Pn	Pn	12 42 59.3	-0.2
QRN	**Al-Qurain**	3.03	260	*e*P	Pn	12 43 00.9	+0.2
QRN				*e*S	Sn	12 43 38.2	+1.2
QRN				IAML		12 43 40.1	
	comp=Z,172nm,0.4s						
RDF	**Al-Radifah**	3.32	264	*e*P	Pn	12 43 05.2	+0.5
RDF				*e*S	Sn	12 43 43.4	-0.8
RDF				IAML		12 43 49.6	
	comp=Z,155nm,0.5s						
IPIR	**Pirpir**	3.40	354	*e*Pn	Pn	12 43 06.7	+0.7
IMEH	**Mehriz**	3.53	53	*e*Pn	Pn	12 43 09.2	+1.3
IZEF	**Zefreh**	3.69	13	*e*Pn	Pn	12 43 11.5	+1.4
NASN	**Na'in**	3.72	20	*e*Pn	Pn	12 43 11.8	+1.3
NASN	**Na'in**	3.72	20	*e*Pn	Pn	12 43 11.8	+1.3
RST	**Umm Al-Ruwaisa**	3.77	274	*e*P	Pn	12 43 11.3	+0.3
RST				*e*S	Sn	12 43 55.6	+0.1
RST				IAML		12 43 57.2	
	comp=Z,158nm,0.6s						
IKLH	**Kolahrood**	4.01	3	*e*Pn	Pn	12 43 15.6	+1.1
YZKH	**Yazd**	4.18	42	*e*Pn	Pn	12 43 18.1	+1.5
YZKH				IAML		12 44 10.0	
	comp=E,7.5nm,0.4s						
YZKH				IAML		12 44 18.9	
	comp=N,6.1nm,0.4s						
YZKH	**Yazd**	4.18	42	*e*Pn	Pn	12 43 18.1	+1.5
KHGB	**Koh Gabri**	4.61	75	*e*Pn	Pn	12 43 23.3	+0.6
KHGB				*e*		12 43 40.3	
	comp=Z,332nm,0.6s						
KRSH	**Karshahi**	4.71	8	*e*Pn	Pn	12 43 24.6	+0.6
KRBR	**Kerman**	4.79	80	*e*Pn	Pn	12 43 26.5	+1.3
KRBR	**Kerman**	4.79	80	*e*Pn	Pn	12 43 26.5	+1.3
IQOM	**Qom**	5.53	358	*e*Pn	Pn	12 43 36.5	+1.1
BANOM	**Banah**	5.55	126	*e*Pn	Pn	12 43 33.9	-1.6
IVRN	**Varamin**	5.69	3	*e*Pn	Pn	12 43 38.6	+1.2
MSFE	**Esma-Masafi**	5.83	131	*e*Pn	Pn	12 43 38.6	-0.6
TPRV	**Parvadeh(Tabas**	5.92	50	*e*Pn	Pn	12 43 40.8	+0.3
FAQ	**Al Faqa, Dubai**	5.92	139	*e*Pn	Pn	12 43 40.7	+0.1
UOSS	**Minazif**	6.14	134	*e*Pn	Pn	12 43 42.9	-0.7
HATD	**Hatta, Dubai**	6.19	135	*e*Pn	Pn	12 43 44.4	+0.2
KBAM	**BAM**	6.24	90	*e*Pn	Pn	12 43 45.7	+0.7
KBAM				*e*		12 43 49.3	
	comp=Z,211nm,0.4s						
ASHO	**Ashiyiah**	6.25	136	*e*Pn	Pn	12 43 44.3	-0.7
TNSJ	**Nastanj**	6.48	43	*e*Pn	Pn	12 43 48.9	+0.6
BSRN	**Basiran**	7.24	67	*e*Pn	Pn	12 44 00.2	+1.5
BSRN	**Basiran**	7.24	67	*e*Pn	Pn	12 44 00.2	+1.5

IDC ***31*** *13:03:17.7±6.5, 23°.65N×123°.49E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.4/39, mbtmp3.7/5, Error ellipse: s-maj=177.2km s-min=55.3km az=14.0*

JMA ***31*** *13:03:24.7±0.1, 23°.96N×123°.59E, h31km±1km, M3.6*

JMA Felt I J1.

NIED ***31*** *13:03:24.8, 23°.96N×123°.59E, h31km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}2.83; $M_{\theta\theta}$-3.73; $M_{\phi\phi}$0.90; $M_{r\theta}$3.70; $M_{\theta\phi}$-2.20; $M_{\phi r}$4.22; Fault plane solution: $M_0$6.87000×10^{14} NP1:ϕ_s43.00000°, δ76.00000°, λ70.00000°. NP2:ϕ_s280.00000°, δ25.00000°, λ144.00000°.*

ISC 31 13:03:24.4±1.3**, 24°.0N**±0°.1×**123°.61E**±0°.05**, h33km**±3km**, n13, σ0.s62**/21**, mb3.5**/5**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	0.20	64	P	Pb	13 03 31.0	0.0
HATJ				S	Sb	13 03 35.7	+0.2
IRIF	**Iriomote-Funau**	0.38	17	P	Pb	13 03 33.3	0.0
IRIF				S	Sn	13 03 39.6	-0.1
JKRS	**Kuro-shima**	0.45	54	P	Pn	13 03 34.8	+0.2
JKRS				S	Sn	13 03 41.8	+0.3
JIJ	**Ishigaki jima**	0.62	51	P	Pn	13 03 36.9	0.0
JIJ				S	Sb	13 03 45.4	-0.3
YOJ	**Yonaguni jima**	0.73	312	P	Pn	13 03 38.5	0.0
YOJ				*e*S	Sn	13 03 49.1	+0.5
JYNG	**Yonagunijimaku**	0.77	308	P	Pn	13 03 39.1	+0.1
JYNG				*e*S	Sn	13 03 49.9	+0.4
JISG	**Ishigakijimahi**	0.89	46	P	Pb	13 03 41.0	-0.4
JISG				S	Sb	13 03 53.2	+0.3
JTJ	**Tarama**	1.20	56	P	Pb	13 03 46.6	0.0
JTJ				S	Sb	13 04 02.5	+0.7
SONM	**Songino Array**	27.47	334	P	P	13 09 08.8	+1.2
	0.2nm,0.4s,baz=141,slow=7.6,SNR=2.2						
MKAR	**Makanchi Array**	40.04	315	P	P	13 10 56.1	-0.3
	0.6nm,0.6s,baz=96,slow=9.3,SNR=5.9						
ZALV	**Zalesovo Beam**	41.64	326	P	P	13 11 07.6	-1.8
	0.8nm,0.5s,baz=116,slow=8.7,SNR=5.7						
FINES	**FINESS Array B**	72.74	330	P	P	13 14 48.8	-0.2
	1.8nm,0.8s,baz=68,slow=9.2,SNR=3.4						
YKA	**Yellowknife Ar**	82.29	23	P	P	13 15 42.8	+0.5
	0.1nm,0.5s,baz=304,slow=5.4,SNR=5.1						

IDC ***31*** *13:05:35.4±2.0, 7°.64S×128°.61E, h144km±22km, mb3.3/3, mb1 3.5/8, mb1mx3.2/33, mbtmp3.9/8, Error ellipse: s-maj=24.2km s-min=19.6km az=116.0*

ISC 31 13:05:35.2±0.9**, 7°.79S**±0°.07×**128°.71E**±0°.10**, h150km, n8, σ2.s45**/11**, mb3.5**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	5.53	244	P	Pn	13 06 56.8	+1.1
	9.2nm,0.3s,baz=177,slow=3.5,SNR=11						
BATI				S	Sn	13 07 58.0	-0.6
	6.3nm,0.3s,baz=133,slow=24,SNR=3.6						
SIJI	**Sorong**	7.33	20	P	Pn	13 07 18.6	-1.2
	0.7nm,0.3s,baz=115,slow=23,SNR=9.1						
FITZ	**Fitzroy Crossi**	10.67	196	P	Pn	13 08 05.0	+0.8
	0.5nm,0.3s,baz=15,slow=11,SNR=28						
FITZ				S	Sn	13 09 58.3	-4.0
WRA	**Warramunga Arr**	13.26	156	P	Pn	13 08 39.6	+1.8
	1.8nm,0.3s,baz=340,slow=14,SNR=70						
WRA				S	Sn	13 11 02.0	-2.6
	0.9nm,0.3s,baz=328,slow=23,SNR=6.2						
ASAR	**Alice Springs**	16.56	163	P	Pn	13 09 23.0	+4.2
	0.5nm,0.3s,baz=338,slow=9.4,SNR=27						
SONM	**Songino Array**	58.79	343	P	P	13 15 17.9	+0.1
	0.3nm,0.7s,baz=161,slow=9.2,SNR=1.8						
MKAR	**Makanchi Array**	68.19	328	P	P	13 16 19.4	0.0
	0.3nm,0.4s,baz=113,slow=7.8,SNR=13						
ZALV	**Zalesovo Beam**	71.73	334	P	P	13 16 40.1	-0.7
	1.0nm,0.5s,baz=125,slow=5.7,SNR=7.2						

EAF ***31*** *13:52:31.7±2.0, 26°.20S×27°.95E, h0km±38km, MD5.2*

BUL 31 13:52:31.7±2.0**, 26°.20S×27°.95E, h0km**±38km**, MD6.1, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	2.43	299	*i* P	Pn	13 53 13.2	+0.4
LBTB				*i* Sg	Sb	13 53 47.1	+0.2
LBTB	**Lobatse**	2.43	299	*i* P	Pn	13 53 13.2	+0.4
LBTB				*i* Sg	Sb	13 53 47.1	+0.2
BOSA	**Boshof**	3.39	224	*i* P	Pn	13 53 26.7	+0.7
BOSA				*i* Sg	Sb	13 54 15.8	+1.1
BOSA	**Boshof**	3.39	224	*i* P	Pn	13 53 26.7	+0.7
BOSA				*i* Sg	Sb	13 54 15.8	+1.1
MATP	**Matopo**	5.77	5	*i* P	Pn	13 53 57.6	-1.1
MATP				*i* S	Sn	13 54 59.6	-6.2
MATP	**Matopo**	5.77	5	*i* P	Pn	13 53 57.6	-1.1
MATP				*i* S	Sn	13 54 59.6	-6.2

NOU 31 14:16:02.4, 16°.33S×167°.53E, h33km, MLv4.6/16**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	0.93	340	P	Pn	14 16 18.9	-0.3
DVP	**Devils Point**	1.52	156	P	Pn	14 16 28.2	+0.9
LIFNC	**LIFOU**	4.43	184	P	Pn	14 17 05.2	-2.1
MARNC	**Mare, Loyalty**	5.14	175	P	Pn	14 17 16.4	-0.8
KOUNC	**Koumac, New Ca**	5.21	216	P	Pn	14 17 19.1	+1.1
YATNC	**Mamie plateau,**	5.73	186	P	Pn	14 17 24.7	-0.5
DZM	**Mont Dzumac**	5.80	190	P	Pn	14 17 26.7	+0.4
NOUC	**Port Laguerre**	5.86	191	P	Pn	14 17 27.4	+0.5
ONTNC	**Ouen Toro**	6.03	190	P	Pn	14 17 29.0	-0.3
OUENC	**Ouen Island, N**	6.09	186	P	Pn	14 17 31.4	+1.2
PINNC	**Pines Island,**	6.25	181	P	Pn	14 17 32.9	+0.6

IDC ***31*** *14:31:58.1±2.0, 1°.26N×126°.05E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.0/39, mbtmp3.4/3, Error ellipse: s-maj=184.8km s-min=25.3km az=65.0*

DJA ***31*** *14:32:03.3±0.8, 1°N±5°×12°6E±°, h10km±8km, M3.6/8, MLv3.6/8*

ISC 31 14:32:05.4±1.0**, 1°.27N**±0°.07×**126°.18E**±0°.04**, h54km, n12, σ1.s02**/15**, mb3.5**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	1.29	113	P	Pn	14 32 27.4	+0.3
TNTI				S	Sn	14 32 43.6	+0.3
MNI	**Manado**	1.35	277	P	Pn	14 32 27.6	-0.4
MNI				S	Sn	14 32 43.8	-1.1
GAMI	**Galela, Maluku**	1.70	71	P	Pn	14 32 33.8	+1.0
KMSI	**Cibinong**	2.30	253	P	Pn	14 32 41.0	0.0
KMSI				S	Sn	14 33 08.4	+0.2
LBMI	**Labuha**	2.31	145	P	Pn	14 32 41.0	-0.1
SGSI	**Sangihe**	2.49	345	P	Pn	14 32 44.4	+0.9
GTOI	**Gorontalo**	3.23	259	P	Pn	14 32 54.7	+1.0
LUWI	**Luwuk**	4.11	236	P	Pn	14 33 07.4	+1.7
APSI	**Ampana**	5.02	244	P	Pn	14 33 20.1	+1.8
WRA	**Warramunga Arr**	22.55	160	P	P	14 36 59.8	-1.4
	0.8nm,0.4s,baz=338,slow=11,SNR=23						
ASAR	**Alice Springs**	25.90	164	P	P	14 37 32.7	+0.1
	0.5nm,0.8s,baz=346,slow=12,SNR=16						
MKAR	**Makanchi Array**	59.27	326	P	P	14 42 01.1	-0.5
	0.3nm,0.7s,baz=121,slow=7.6,SNR=5.5						

IDC ***31*** *14:40:42.7±1.0, 21°.40S×68°.21W, h130km±15km, mb3.4/2, mb1 3.4/5, mb1mx3.2/25, mbtmp3.8/5, Error ellipse: s-maj=33.3km s-min=19.1km az=120.0*

GUC ***31*** *14:40:43.1±0.5, 21°.32S×68°.45W, h132km±4km, ML3.5*

ISC 31 14:40:42.1±0.9**, 21°.28S**±0°.05×**68°.38W**±0°.08**, h128km**±9km**, n18, σ1.s56**/32**, 4C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	0.96	237	*e*P	Pn	14 41 05.3	+0.7
PB09				*e*S	Sn	14 41 22.3	+0.7
PB09				IAML		14 41 24.0	
	comp=E,1μm,0.5s						
PB01	**IPOC Station P**	1.06	282⇑	*e*P	Pn	14 41 05.5	0.0
PB01				*e*S	Sn	14 41 23.1	-0.1
PB01				IAML		14 41 25.1	
	comp=E,1μm,0.2s						
PB08	**IPOC Station P**	1.34	327	*e*P	Pn	14 41 09.9	+1.2
PB08				*e*S	Sn	14 41 30.4	+1.5
PB08				IAML		14 41 31.0	
	comp=N,622nm,0.2s						
LVC	**Limon Verde**	1.42	200	P	Pn	14 41 10.0	+0.5
	comp=N,18nm,0.3s,baz=16,slow=9.4,SNR=153						
LVC				S	Sn	14 41 30.2	-0.1
	comp=N,58nm,0.3s,baz=219,slow=18,SNR=57						
LVC	**Limon Verde**	1.42	200⇑	*e*P	Pn	14 41 09.9	+0.4
LVC				*e*S	Sn	14 41 30.0	-0.3
PB07	**IPOC Station P**	1.48	252⇑	*e*P	Pn	14 41 09.9	0.0
PB07				*e*S	Sn	14 41 30.4	-0.7
PB07				IAML		14 41 31.7	
	comp=E,1μm,0.4s						
PB03	**IPOC Station P**	1.49	239	*e*P	Pn	14 41 10.1	0.0
PB03				*e*S	Sn	14 41 30.9	-0.6
PB03				IAML		14 41 32.3	
	comp=N,651nm,0.2s						
PB06	**IPOC Station P**	1.80	218	*e*P	Pn	14 41 13.7	0.0
PB06				*e*S	Sn	14 41 37.5	-0.4
PB06				IAML		14 41 38.1	
	comp=E,631nm,0.3s						
TA01	**Diego Aracena**	1.83	292	*e*P	Pn	14 41 13.6	-0.2
TA01				*e*S	Sn	14 41 37.2	-0.9
TA01				IAML		14 41 39.2	
	comp=N,847nm,0.2s						
PB04	**IPOC Station P**	1.95	237⇑	*e*P	Pn	14 41 14.8	-0.7
PB04				*e*S	Sn	14 41 39.8	-1.4
PB04				IAML		14 41 41.5	
	comp=E,526nm,0.1s						
PB15	**IPOC Station P**	2.17	208	*e*P	Pn	14 41 18.6	+0.3
PB15				*e*S	Sn	14 41 46.0	-0.1
PB05	**IPOC Station P**	2.31	227	*e*P	Pn	14 41 19.3	-0.6
PB05				*e*S	Sn	14 41 47.1	-1.8
PB05				IAML		14 41 56.0	
	comp=N,156nm,0.2s						
PB16	**IPOC Station P**	3.11	340	*e*P	Pn	14 41 32.2	+1.5
PB16				*e*S	Sn	14 42 10.3	+2.2
PB16				IAML		14 42 12.8	
	comp=E,44nm,0.5s						
LPAZ	**La Paz**	4.97	3	P	Pn	14 41 58.4	+3.1
	comp=E,0.5nm,0.3s,baz=142,slow=4.7,SNR=18						
SIV	**San Ignacio**	8.69	54	P	Pn	14 42 42.8	-2.1
	comp=E,0.9nm,0.3s,baz=237,slow=12,SNR=15						
SIV				S	Sn	14 44 15.6	-5.8
	comp=E,0.2nm,0.3s,baz=285,slow=7.7,SNR=3.6						
BDFB	**Brasilia**	20.11	77	P	P	14 45 06.1	+0.1
	comp=E,0.8nm,0.3s,baz=252,slow=6.0,SNR=7.0						
TORD	**Torodi Ar. Bea**	76.81	70	P	P	14 52 20.1	-0.2
	comp=E,0.9nm,0.6s,baz=253,slow=5.4,SNR=5.7						
YKA	**Yellowknife Ar**	91.14	340	P	P	14 53 32.7	+0.8
	comp=E,0.1nm,0.5s,baz=131,slow=4.2,SNR=6.0						

IDC ***31*** *14:50:08.2±1.2, 11°.56N×121°.34E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/62, mbtmp3.7/6, MS3.0/2, Ms1 3.0/2, ms1mx2.7/33, Error ellipse: s-maj=59.1km s-min=18.9km az=60.0*

MAN ***31*** *14:50:11.3, 11°.59N×121°.21E, h26km, mb4.9, ML3.8, MS3.8*

ISC 31 14:50:10.2±0.8**, 11°.67N**±0°.05×**121°.25E**±0°.06**, h10km, n18,**

σ1s.45/20, mb3.6/6, 8C-3D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUYO	**Cuyo Island**	0.84	195	⇑eP	Pg	14 50 25.7	-0.8
JAP	**San Jose, Anti**	1.15	143	⇑eP	Pn	14 50 33.5	+1.2
JAP				eS	Sn	14 50 51.0	+3.0
RCP	**Roxas**	1.47	94	⇓eP	Pn	14 50 37.0	+0.2
RCP				eS	Sn	14 50 53.0	-3.1
ENPP	**El Nido**	1.84	256	⇑eP	Pn	14 50 41.0	-0.9
PGP	**Puerto Galera**	1.84	351	⇓eP	Pn	14 50 42.6	+0.7
BOAC	**Boac**	1.87	18	⇑eP	Pn	14 50 42.5	+0.2
LUBP	**Lubang**	2.27	335	⇑eP	Pn	14 50 48.4	+0.6
MACP	**Maragondon, Ca**	2.63	349	⇑eP	Pn	14 50 54.4	+1.6
SNPH	**Sibulan**	3.03	140	⇓iP	Pn	14 50 58.7	+0.4
SNPH				i S	Sn	14 51 34.3	-0.3
TBP	**Tagbilaran**	3.24	127	⇑eP	Pn	14 51 01.7	+0.6
PAGZ	**Pagadian**	4.34	151	⇑eP	Pn	14 51 17.9	+1.6
DAV	**Davao City (W)**	6.26	137	LR	LR	14 54 41.4	
	comp=Z,78nm,19.4s,baz=176,slow=45						
CMAR	**Chiang Mai Arr**	22.56	290	P	P	14 55 11.8	+1.1
	2.0nm,1.0s,baz=96,slow=8.0,SNR=15						
WRA	**Warramunga Arr**	33.95	158	P	P	14 56 52.9	-1.1
	0.6nm,0.8s,baz=331,slow=10,SNR=5.5						
ASAR	**Alice Springs**	37.24	161	P	P	14 57 20.1	-2.1
	0.6nm,0.7s,baz=338,slow=7.5,SNR=7.8						
ASAR				LR	LR	15 14 29.2	
	comp=Z,35nm,18.5s,baz=329,slow=39						
SONM	**Songino Array**	38.15	344	P	P	14 57 29.9	+0.2
	0.4nm,0.7s,baz=168,slow=8.8,SNR=3.3						
MKAR	**Makanchi Array**	47.98	324	P	P	14 58 50.0	+0.7
	1.1nm,0.6s,baz=129,slow=8.2,SNR=9.3						
KURBB	**Kurchatov Arra**	52.17	327	P	P	14 59 21.7	+0.7
	0.5nm,0.5s,baz=114,slow=9.2,SNR=6.8						

IDC 31 15:20:49.2±2.1**, 0°.34S×127°.50E, h0^{km}, mb3.1**/3**, mb1 3.4**/3**, mb1mx3.2**/27**, mbtmp3.2**/3**, MS2.8**/2**, Ms1 2.8**/2**, ms1mx2.4**/17**, Error ellipse: s-maj=156.6km s-min=26.7km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	3.80	98	LR	LR	15 23 24.3	
	comp=Z,69nm,20.8s,baz=84,slow=41						
FITZ	**Fitzroy Crossi**	17.74	186	LR	LR	15 30 52.5	
	comp=Z,78nm,21.9s,baz=170,slow=34						
WRA	**Warramunga Arr**	20.60	161	P	P	15 25 30.2	+0.1
	0.7nm,0.9s,baz=340,slow=11,SNR=8.4						
ASAR	**Alice Springs**	24.00	165	P	P	15 26 05.9	0.0
	0.2nm,0.3s,baz=343,slow=11,SNR=5.5						
MKAR	**Makanchi Array**	61.33	326	P	P	15 31 06.7	-0.1
	0.1nm,0.4s,baz=117,slow=8.0,SNR=5.7						

IDC 31 15:27:09.8±2.4**, 3°.92N×127°.27E, h0^{km}, mb3.1**/3**, mb1 3.3**/3**, mb1mx3.1**/32**, mbtmp3.1**/3**, Error ellipse: s-maj=172.1km s-min=29.4km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	24.70	164	P	P	15 32 33.0	0.0
	0.3nm,0.8s,baz=344,slow=10,SNR=6.3						
ASAR	**Alice Springs**	28.17	167	P	P	15 33 04.1	0.0
	0.1nm,0.5s,baz=352,slow=7.8,SNR=6.7						
MKAR	**Makanchi Array**	57.71	325	P	P	15 37 02.4	-0.1
	0.1nm,0.6s,baz=119,slow=7.8,SNR=1.3						

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*IDC **31** 15:47:33.0±1.4, 35°.09N×134°.19E, h0^{km}, mb3.2/2, mb1 3.3/5, mb1mx3.1/43, mbtmp3.1/5, ML2.8/3, MS2.9/2, Ms1 2.9/2, ms1mx2.5/19, Error ellipse: s-maj=27.6km s-min=13.7km az=155.0*

*NIED **31** 15:47:34.6, 35°.11N×134°.24E, h15^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.54; $M_{\theta\theta}$3.16; $M_{\phi\phi}$-2.62; $M_{r\theta}$-1.05; $M_{\theta\phi}$2.83; $M_{\phi r}$-0.75; Fault plane solution: $M_0$4.21000×10^{14} NP1: ϕ_s202.00000°, δ84.00000°, λ166.00000°. NP2: ϕ_s294.00000°, δ76.00000°, λ6.00000°.*

*JMA **31** 15:47:34.5, 35°.11N×134°.24E, h15^{km}, M4.0 Broadband fault plane solution: P waves. NP1:ϕ_s290.00000°, δ67.00000°, λ-10.00000°. NP2:ϕ_s24.00000°, δ81.00000°, λ-156.00000°. Principal axes: T Plg10.0000°, Azm155.0000°; N Plg65.0000°, Azm43.0000°; P Plg23.0000°, Azm249.0000°;*

JMA Felt III J1.

ISC 31 15:47:34.3±1.0**, 35°.12N**±0°.04×**134°.22E**±0°.03**, h12^{km}**±7^{km}**, n15, σ1s.15**/23**, 3C-5D, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAD	**Aida**	0.18	194	⇑P	Pg	15 47 38.8	+0.4
JAD				S	Sg	15 47 41.7	+0.5
JKS	**Kasai**	0.53	104	⇓P	Pg	15 47 44.4	-0.3
JKS				S	Sg	15 47 51.4	-0.3
JKSM	**Kasumi**	0.59	37	⇓P	Pg	15 47 45.8	-0.1
JJS	**Sakaide**	0.78	198	⇑P	Pb	15 47 49.0	-0.8
JJS				i S	Sb	15 47 59.4	-0.9
JAWN	**Awajishima-nag**	0.84	138	⇑P	Pg	15 47 50.0	-0.6
JAWN				S	Sb	15 48 01.3	-0.8
JKY	**Yasaka**	0.88	54	⇓P	Pg	15 47 50.9	-0.5
JKY				S	Sg	15 48 02.6	-0.4
JHS	**Saijyo**	0.91	263	⇓P	Pb	15 47 51.6	-0.5
JHS				S	Sb	15 48 04.0	-0.2
JWT	**Wachi**	0.98	80	⇓P	Pg	15 47 52.4	-0.8
JNU	**Nakatsue**	3.41	235	Pn	Pn	15 48 28.7	+1.4
	2.2nm,0.3s,baz=51,slow=6.5,SNR=19						
JNU				Lg	Lg	15 49 21.3	
	9.2nm,0.3s,baz=266,slow=18,SNR=7.2						
MAT	**Matsushiro**	3.54	65	P	Pn	15 48 30.2	+1.2
MAT				eS	Sn	15 49 14.0	+3.2
MJAR	**Matsushiro Arr**	3.54	65	Pn	Pn	15 48 30.9	+1.8
	0.2nm,0.3s,baz=251,slow=13,SNR=13						
MJAR				Pg	Pg	15 48 40.5	-1.6
	1.6nm,0.3s,baz=243,slow=16,SNR=29						
MJAR				Lg	Lg	15 49 26.1	
	1.0nm,0.3s,baz=261,slow=38,SNR=5.2						
KSRS	**Korea Array**	5.60	296	Pn	Pn	15 48 57.6	+0.3
	0.5nm,0.3s,baz=110,slow=15,SNR=4.8						
KSRS				Sn	Sn	15 50 01.4	-0.1
	1.2nm,0.3s,baz=110,slow=24,SNR=7.7						
KSRS				LR	LR	15 51 16.1	
	comp=Z,22nm,18.2s,baz=0.0,slow=40						
SONM	**Songino Array**	24.27	310	P	P	15 52 51.9	+0.6
	0.3nm,0.8s,baz=130,slow=4.5,SNR=2.2						
ZALV	**Zalesovo Beam**	38.99	314	LR	LR	16 12 23.1	
	comp=Z,82nm,18.4s,baz=334,slow=38						
WRA	**Warramunga Arr**	54.76	180	P	P	15 57 02.7	-1.0
	0.7nm,0.9s,baz=354,slow=7.7,SNR=2.5						

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*UUSS **31** 16:06:17.9±1.9, 37°.93N±0°.02×112°.51W±0°.03, h5^{km}±6^{km}, ML2.6/10, ML2.5/6(REN), ML2.6/93(NEIC), Error ellipse: s-maj=4.1km s-min=2.1km az=119.0*

*REN **31** 16:06:17.9±1.6, 37°.89N±0°.02×112°.49W±0°.03, h8^{km}±2^{km}, Error ellipse: s-maj=4.1km s-min=2.3km az=112.0*

NEIC 31 16:06:18.0±1.5**, 37°.90N**±0°.01×**112°.52W**±0°.04**, h10^{km}**±5^{km}**, Error ellipse: s-maj=4.7km s-min=1.7km az=103.0, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTPU	**Mount Pierson**	0.30	63		Pg	16 06 23.4	-0.8
MTPU				IAML		16 06 28.6	
	comp=N,1µm,0.4s						
MTPU				IAML		16 06 29.0	
	comp=E,948nm,0.6s						
MTPU	**Mount Pierson**	0.30	63		Sg	16 06 28.4	+0.2
BHU	**Blowhard Mount**	0.41	221		Pb	16 06 26.9	-0.7
DWU	**Dry Willow Pea**	0.43	298		Pg	16 06 26.6	+0.2
PKCU	**Pink Cliffs**	0.49	160	Pg	Pg	16 06 27.9	+0.3
PKCU				IAML		16 06 42.4	
	comp=N,820nm,0.8s						
BTU	**Barney Top**	0.53	106		Pg	16 06 28.6	+0.1
SZCU	**Shurtz Canyon**	0.54	236		Pg	16 06 28.4	-0.2
SZCU				IAML		16 06 40.9	
	comp=E,795nm,0.2s						
SZCU				IAML		16 06 41.2	
	comp=N,702nm,0.2s						
MVU	**Marysvale**	0.65	22		Pg	16 06 30.4	-0.2
NMUT	**North Mineral**	0.66	337		Pg	16 06 30.8	-0.1
MSU	**Marysvale**	0.67	24		Pg	16 06 30.8	-0.1
TCRU	**Three Creeks R**	0.71	5	Pg	Pg	16 06 30.9	-0.8
TCRU				Sg	Sg	16 06 40.6	-0.3
TCRU				IAML		16 06 42.0	
	comp=N,258nm,0.3s						
TCRU				IAML		16 06 42.1	
	comp=E,269nm,0.3s						
ZNPU	**Zion National**	0.73	221		Pg	16 06 32.2	+0.2
ARUT	**Antelope Range**	0.73	261		Pg	16 06 32.6	+0.3
CCUT	**Cedar City**	0.75	242		Pg	16 06 32.6	0.0
CCUT				Sg	Sb	16 06 43.6	-0.2
EKU	**East Kanab**	0.83	179		Pg	16 06 33.9	-0.1
IMU	**Iron Mountain**	0.88	326		Pg	16 06 35.0	0.0
KNB	**Kanab**	0.92	195	Pg	Pg	16 06 35.3	-0.3
KNB				Sg	Sg	16 06 47.5	-0.2
LCMT	**Little Creek M**	1.06	213		Pg	16 06 37.9	-0.5
LCMT				Sg	Sg	16 06 52.2	+0.1
LCMT				IAML		16 06 55.1	
	comp=N,265nm,0.1s						
HMU	**Henry Mountain**	1.41	88		Pn	16 06 43.9	-0.1
Q16A	**Castle Valley**	1.47	46		Pb	16 06 45.2	-0.4
U15A	**North Rim**	1.48	173		Pb	16 06 45.5	-0.4
U15A					Sn	16 07 04.2	-0.5
U15A				IAML		16 07 05.7	
	comp=N,101nm,0.3s						
U15A				IAML		16 07 06.8	
	comp=E,101nm,0.4s						
FLU	**Fool Peak**	1.50	10		Pn	16 06 45.4	+0.2
TMUT	**Trail Mountain**	1.73	36		Pn	16 06 49.1	+0.6
TMUT				IAML		16 07 14.3	
	comp=N,41nm,0.4s						
SPR3	**Spring Creek 3**	1.79	308		Pn	16 06 49.0	-0.3
SPR3				IAML		16 07 16.2	
	comp=E,36nm,0.5s						
SPR3				IAML		16 07 18.8	
	comp=N,46nm,0.5s						
SRU	**San Rafael Swe**	1.98	52		Pb	16 06 53.2	-1.1
SRU				IAML		16 07 23.8	
	comp=E,39nm,0.5s						
PRN	**Pahroc Range**	2.07	257		Pn	16 06 53.2	+0.2
NLU	**North Lily Min**	2.08	10		Pb	16 06 54.7	-1.2
P17A	**Butcher Ranch,**	2.10	41	Pn	Pb	16 06 55.1	-1.1
DUG	**Dugway, Tooele**	2.30	354		Pb	16 06 58.5	-1.1
R11A	**Troy Canyon, C**	2.46	281		Pn	16 06 58.5	+0.2
R11A				IAML		16 07 37.8	
	comp=E,17nm,0.5s						
R11A				IAML		16 07 38.0	
	comp=N,18nm,0.4s						
P18A	**Preston Nutter**	2.48	45		Pb	16 07 01.9	-0.9
P18A				IAML		16 07 36.1	
	comp=N,20nm,0.6s						
P18A				IAML		16 07 36.1	
	comp=E,33nm,0.5s						
SHPR	**Sheep Range**	2.53	237		Pn	16 07 00.5	+1.2
SHPR				IAML		16 07 38.4	
	comp=E,18nm,0.5s						
WUAZ	**Wupatki**	2.56	158		Pb	16 07 02.0	-2.0
W13A	**Hualapai Mount**	3.01	202		Pn	16 07 05.1	-0.8
W13A				IAML		16 08 02.0	
	comp=N,16nm,0.7s						
BGU	**Big Grassy Mou**	3.04	353		Pn	16 07 05.0	-1.4
BGU				IAML		16 07 26.9	
	comp=E,11nm,4.9s						
TPNV	**Topopah Spring**	3.12	253		Pn	16 07 06.0	-1.4
MVCO	**Mesa Verde**	3.27	101	Pn	Pn	16 07 06.8	-2.8
SPUT	**South Promonto**	3.40	1	Pn	Pn	16 07 11.3	0.0
SPUT				IAML		16 09 24.9	
	comp=E,24nm,1.3s						
RDMU	**Red Mountain**	3.51	40	Pn	Pn	16 07 11.5	-1.4
RDMU				IAML		16 07 36.4	
	comp=N,8.7nm,4.5s						
RDMU				IAML		16 08 09.4	
	comp=E,11nm,4.5s						
ELK	**Elko**	3.53	324		Pn	16 07 13.3	+0.1
W18A	**Petrified Fore**	3.57	140		Pn	16 07 14.6	+0.9
X16A	**Lo Mia Camp, P**	3.59	166		Pn	16 07 14.7	+0.8
X16A				IAML		16 08 16.6	
	comp=E,15nm,0.5s						
X16A				IAML		16 08 22.9	
	comp=N,17nm,0.6s						
TPH	**Tonopah**	3.72	274		Pn	16 07 16.6	+1.0
GWY	**Greenwater Val**	3.73	244		Pn	16 07 14.6	-1.3
GWY				IAML		16 07 57.9	
	comp=N,9.4nm,2.9s						
GWY				IAML		16 08 31.9	
	comp=E,12nm,4.8s						
HVU	**Hansel Valley**	3.88	357		Pn	16 07 16.7	-1.1
HVU				IAML		16 08 23.5	
	comp=N,8.4nm,4.4s						
HVU				IAML		16 08 57.8	
	comp=E,8.8nm,4.8s						
X18A	**Snowflake**	3.96	148		Pn	16 07 19.3	+0.3
Y14A	**Wickenburg**	3.98	186		Pn	16 07 19.0	-0.2
Y14A				IAML		16 08 23.6	
	comp=E,15nm,0.8s						
QSM	**Queen of Sheba**	3.98	242	Pn	Pn	16 07 19.3	+0.1
QSM				IAML		16 08 54.7	
	comp=E,14nm,0.7s						
LCH	**Last Change Ra**	4.12	262		Pn	16 07 21.7	+0.5
LCH				IAML		16 08 32.1	
	comp=N,7.2nm,2.0s						
LCH				IAML		16 08 36.5	
	comp=E,6.6nm,2.6s						
GSC	**Goldstone, Bar**	4.32	234		Pn	16 07 23.7	-0.1
GSC				IAML		16 08 41.8	
	comp=N,8.8nm,3.7s						
GSC				IAML		16 09 44.0	
	comp=E,12nm,3.0s						
BMN	**Battle Mountai**	4.44	306	Pn	Pn	16 07 23.8	-1.7
BMN				IAML		16 08 38.8	
	comp=N,6.9nm,4.1s						
BMN				IAML		16 10 07.0	
	comp=E,5.8nm,4.5s						
NV11	**Mina Array Sit**	4.47	278		Pn	16 07 26.5	+0.5
NV11				IAML		16 08 60.0	
	comp=N,6.5nm,4.3s						
NV11				IAML		16 09 44.3	
	comp=E,8.6nm,4.7s						
S22A	**4UR Ranch, Cre**	4.51	90	Pn	Pn	16 07 26.2	-0.5
S22A				IAML		16 08 01.3	
	comp=N,7.5nm,3.7s						
KVN	**Kaiserville**	4.52	286		Pn	16 07 24.5	-2.3
KVN				IAML		16 08 43.2	
	comp=N,6.6nm,0.6s						
KVN				IAML		16 08 45.7	
	comp=E,8.1nm,1.1s						
SMCO	**Snowmass**	4.53	72	Pn	Pn	16 07 26.5	-0.6
SMCO				IAML		16 08 41.5	
	comp=E,10nm,1.5s						
NVAR	**Mina Array Bea**	4.59	278		Pn	16 07 28.3	+0.6
LHV	**Little Huntoon**	4.73	276		Pn	16 07 29.9	+0.5
RYN	**Ryan**	4.78	281		Pn	16 07 28.8	-1.4
RYN				IAML		16 08 58.8	
	comp=N,9.6nm,3.2s						
GLA	**Glamis**	5.19	202		Pn	16 07 34.6	-1.2
PAHR	**Pah Rah Range**	5.65	291	Pn	Pn	16 07 40.4	-1.8
PNTR	**Pine Nut**	5.68	284	Pn	Pn	16 07 40.4	-2.2
ANMO	**Albuquerque**	5.71	119	Pn	Pn	16 07 41.8	-1.3
TUC	**Tucson**	5.76	165	Pn	Pn	16 07 41.7	-2.0
LENM	**Lemitar**	5.84	128	Pn	Pn	16 07 43.2	-1.6

IDC 31 16:08:40.9±6.8**, 27°.20N×143°.70E, h0^{km}, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.3**/29**, mbtmp3.5**/4**, ML2.4**/1**, Error ellipse: s-maj=276.7km s-min=26.2km az=75.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	10.41	335	Pn	Pn	16 11 10.4	-1.1
	0.0nm,0.3s,baz=157,slow=12,SNR=1.4						
WRA	**Warramunga Arr**	47.73	192	P	P	16 17 19.8	+0.1
	0.6nm,0.5s,baz=13,slow=8.6,SNR=10						
ASAR	**Alice Springs**	51.45	192	P	P	16 17 47.5	-0.5
	0.3nm,0.8s,baz=3.6,slow=6.6,SNR=2.3						
KURBB	**Kurchatov Arra**	53.93	314	P	P	16 18 06.2	+0.1
	0.4nm,0.5s,baz=90,slow=6.6,SNR=8.1						

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*MDD **31** 16:09:09.1±0.2, 36°.12N×3°.10W, h12^{km}±5^{km}, mbLg2.8/23, Error ellipse: s-maj=5.7km s-min=3.7km az=94.0, PRXIMO*

*INMG **31** 16:09:09.0±1.6, 36°.07N×3°.03W, h22^{km}±5^{km}, ML2.3, Error ellipse: s-maj=4.6km s-min=3.6km az=169.0*

*SFS **31** 16:09:09.0, 36°.10N×3°.00W, h11^{km}, ML2.7, ALBORAN N.*

*CNRM **31** 16:09:10.7, 35°.95N×3°.21W, h40^{km}, ml2.5*

ISC 31 16:09:07.8±0.9**, 36°.05N**±0°.02×**3°.04W**±0°.02**, h27^{km}**±7^{km}**, n58, σ1s.74**/101**, 1C-2D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EALB	**Alboran**	0.11	176	⇓P	Pb	16 09 13.0	+0.2
	1µm,0.5s,SNR=18						
EALB				S	Sb	16 09 15.9	-0.2
	3µm,0.1s						
EMEL	**Melilla**	0.76	175	P	Pn	16 09 23.0	+0.3
	90nm,0.2s,SNR=7.9						
EMEL				S	Sn	16 09 34.0	+0.8
	629nm,0.1s,SNR=12						
GOG	**Mont Gurugu**	0.83	177	P	Pb	16 09 24.0	+0.3
GOG				S	Sb	16 09 35.0	+0.5
EBER	**Berja**	0.85	8	P	Pb	16 09 23.2	-0.9
	33nm,0.3s,SNR=88						
EBER				S	Sb	16 09 33.4	-1.8
	539nm,0.3s						
ELGU	**Los Guajares,**	0.94	330	⇓P	Pb	16 09 24.1	-1.4
	7.4nm,0.1s,SNR=18						
ELGU				S	Sb	16 09 36.2	-1.4
	207nm,0.2s,SNR=7.9						
CHAS	**Isla Isabel II**	1.00	150	P	Pn	16 09 25.7	-0.3
CHAS				S	Sb	16 09 37.6	-1.6
PALE	**Palemas**	1.11	221	P	Pb	16 09 28.7	+0.4
PALE				S	Sb	16 09 40.8	-1.6
ENIJ	**Nijar**	1.14	36	P	Pn	16 09 28.0	0.0
	1.0nm,0.4s,SNR=7.9						
ENIJ				S	Sn	16 09 40.4	-2.3
	118nm,0.3s,SNR=7.9						
EMAL	**Malaga-Limoner**	1.32	303	P	Pb	16 09 32.8	+0.8
EMAL				S	Sn	16 09 45.1	-2.1
EMAL	**Malaga-Limoner**	1.32	303	P	Pb	16 09 32.8	+0.8
EMAL				S	Sn	16 09 45.1	-2.1
EGOR	**Sierra Gorda,**	1.36	321	P	Pn	16 09 30.8	-0.4
	0.7nm,0.3s,SNR=7.9						
EGOR				S	Sn	16 09 47.8	-0.6
	34nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	1.49	291	P	Pn	16 09 31.8	-0.9
	0.7nm,0.3s,SNR=15						
EMIJ				S	Sn	16 09 48.4	-2.9
	38nm,0.2s,SNR=11						
EQES	**Quesada**	1.75	359	P	Pb	16 09 38.5	-0.7
	0.0nm,0.2s,SNR=37						
EQES				S	Sn	16 09 59.0	+1.2
	82nm,0.4s,SNR=20						
JBK	**JBK**	1.76	167	P	Pn	16 09 37.5	+0.8
JBK				S	Sn	16 09 58.2	0.0
CEU	**Ceuta**	1.90	266	S	Sn	16 09 58.1	-3.2
CEU	**Ceuta**	1.90	266	S	Sn	16 09 58.1	-3.2
ECEU	**Ceuta**	1.90	266	S	Sn	16 10 00.5	-0.9
	4.8nm,0.2s,SNR=4.8						
SMIR	**Smir Dam**	1.93	260	P	Pb	16 09 41.4	-0.9
SMIR				S	Sn	16 10 02.1	-0.2
TLOR	**Lorca, Murcia**	1.93	34	S	Sn	16 10 01.4	-1.0
	126nm,0.3s,SNR=7.9						
LIJA	**Lijar**	2.08	295	P	Pb	16 09 47.0	+2.1
LIJA				S	Sn	16 10 04.8	-1.4
CHEFC	**Chefchaouen**	2.10	244	P	Pn	16 09 42.3	+1.1
CHEFC				S	Sn	16 10 02.3	-4.1
SESP	**Santiago Espad**	2.10	11	⇑P	Pb	16 09 43.5	-1.8
	7.9nm,0.2s,SNR=18						
SESP				S	Sn	16 10 08.5	+1.8
	75nm,0.4s,SNR=7.9						
EMUR	**La Murta**	2.30	38	P	Pn	16 09 45.6	+1.7
	1.5nm,0.4s,SNR=5.6						
EMUR				S	Sn	16 10 09.5	-1.8
	25nm,0.5s,SNR=10						
EADA	**Adamuz**	2.44	330	P	Pn	16 09 47.0	+1.1
	1.8nm,0.3s,SNR=19						
EADA				S	Sn	16 10 14.7	-0.2
	11nm,0.2s,SNR=5.1						
ECAB	**El Cabril**	2.77	317	P	Pn	16 09 51.0	+0.6
	0.0nm,0.1s,SNR=7.9						
ECAB				S	Sn	16 10 23.0	0.0
	14nm,0.5s,SNR=7.9						
ETOB	**Tobarra**	2.85	24	P	Pn	16 09 52.3	+0.8
	0.7nm,0.1s,SNR=22						
ETOB				S	Sn	16 10 24.8	-0.2
	18nm,0.4s,SNR=7.0						
OKGL	**Djebel Kef Gue**	2.99	89	S	Sn	16 10 27.7	-0.6
	61nm,0.3s,SNR=4.0						
AFON	**Font Roja**	3.28	37	S	Sn	16 10 35.5	-0.2
	5.0nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	3.37	302	P	Pn	16 09 59.7	+1.0
	1.0nm,0.2s,SNR=7.9						
EMIN				S	Sn	16 10 36.7	-1.1
	2.6nm,0.1s,SNR=7.9						
MD31	**MD31**	3.48	205	P	Pn	16 10 02.8	+2.6
MD31				S	Sn	16 10 40.1	-0.4
MDT	**Midelt**	3.48	202	P	Pn	16 09 59.8	-0.5
MDT				S	Sn	16 10 40.0	-0.6
PAB	**San Pablo**	3.64	344	P	Pn	16 10 04.1	+1.8
	0.2nm,0.3s,SNR=7.9						
PAB				S	Sn	16 10 44.4	0.0
	0.8nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	3.69	349	P	Pn	16 10 05.0	+2.0
	0.3nm,0.3s,baz=169,slow=12,SNR=6.5						
ESDC				S	Sn	16 10 43.9	-1.7
	2.0nm,0.3s,baz=29,slow=21,SNR=148						
EGRO	**El Granado**	3.86	294	P	Pn	16 10 07.4	+2.1
	0.5nm,0.2s,SNR=7.9						
EGRO				S	Sn	16 10 48.5	-1.3
	5.7nm,0.4s,SNR=7.9						
PVAQ	**Vaqueiros**	3.99	291	ePn	Pn	16 10 09.1	+2.0
PVAQ				eSn	Sn	16 10 51.8	-1.2
PVAQ				A	A	16 10 56.2	
	5.1nm,0.3s						
PVAQ	**Vaqueiros**	3.99	291	P	Pn	16 10 09.3	+2.2
PVAQ				S	Sn	16 10 50.4	-2.6
PBDV	**Barranco-do-Ve**	4.11	288	ePn	Pn	16 10 10.1	+1.3
PBDV				eSn	Sn	16 10 54.9	-1.0
PBDV				A	A	16 11 04.3	
	3.9nm,0.8s						
EBAD	**Badajoz**	4.16	312	P	Pn	16 10 10.5	+1.1
	0.5nm,0.2s,SNR=7.2						
EBAD				S	Sn	16 10 55.7	-1.4
	7.3nm,0.2s,SNR=7.9						
UCM	**Universidad Co**	4.25	358	P	Pb	16 10 25.9	+4.1
UCM				S	Sb	16 11 15.9	+3.2
PCVE	**Castro Verde**	4.30	293	ePn	Pn	16 10 13.2	+1.7
PCVE				eSn	Sn	16 11 00.4	-0.4
PCVE				A	A	16 11 04.0	
	3.6nm,0.5s						
EIBI	**Ibiza**	4.58	48	P	Pn	16 10 15.3	0.0
	0.6nm,0.1s,SNR=7.9						
EIBI				S	Sn	16 11 03.6	-4.0
	4.1nm,0.4s,SNR=7.9						
PESTR	**Estremoz**	4.58	309	ePn	Pn	16 10 16.4	+1.1
PESTR				eSn	Sn	16 11 06.5	-1.1
PESTR				A	A	16 11 07.7	
	3.0nm,0.7s						
GUD	**Guadarrama**	4.67	350	P	Pn	16 10 17.9	+1.3
	8.6nm,1.1s,SNR=7.9						
GUD				S	Sn	16 11 07.7	-2.2
	0.6nm,0.3s,SNR=7.9						
EVO	**Evora**	4.67	303	S	Sn	16 11 07.4	-2.4
EVO	**Evora**	4.67	303	ePn	Pn	16 10 14.8	-1.7
EVO				eSn	Sn	16 11 08.6	-1.2
EVO				A	A	16 11 16.4	
	4.1nm,0.2s						
MORF	**Marmelete**	4.68	287	eSn	Sn	16 11 10.6	+0.6
PFVI	**Vila Bisbo**	4.78	285	eSn	Sn	16 11 11.5	-0.9
PTEO	**Sao Teotonio**	4.80	290	eSn	Sn	16 11 13.8	+0.9
PMRV	**Marv??o**	4.82	316	ePn	Pn	16 10 19.8	+1.2
PMRV				eSn	Sn	16 11 12.0	-1.5
PMRV				A	A	16 11 26.6	
	2.7nm,0.7s						
ETOR	**Torete**	4.82	9	P	Pn	16 10 19.4	+0.8
	12nm,0.9s,SNR=7.9						
ETOR				S	Sn	16 11 11.9	-1.8
	2.6nm,0.4s,SNR=7.9						
PNCL	**Nicolau / Gran**	4.84	297	ePn	Pn	16 10 20.5	+1.7
PNCL				eSn	Sn	16 11 12.5	-1.5
PMTG	**Montargil**	5.10	308	ePn	Pn	16 10 23.9	+1.5
PMTG				eSn	Sn	16 11 18.5	-1.9
PCBR	**Castelo Branco**	5.16	319	eSn	Sn	16 11 19.1	-2.6
MTE	**Manteigas**	5.60	322	ePn	Pn	16 10 31.2	+1.9
PSBE	**So Bento**	5.72	309	ePn	Pn	16 10 34.0	+3.1
MVO	**Moncorvo**	5.98	330	ePn	Pn	16 10 36.3	+1.7
MVO				eSn	Sn	16 11 37.2	-5.0
MVO	**Moncorvo**	5.98	330	P	Pn	16 10 36.5	+1.9
	122nm,1.4s,SNR=7.9						
POLO	**Lamas de Olo**	6.48	326	ePn	Pn	16 10 42.9	+1.4

*THE **31** 16:09:43.6, 38°.31N×20°.41E, h12^{km}, ML2.6/4, Error ellipse: s-maj=0.9km s-min=0.2km az=243.0*
*ATH **31** 16:09:43.5, 38°.31N×20°.41E, h14^{km}±1^{km}, ML2.5/2, Error ellipse: s-maj=2.2km s-min=0.7km az=266.0*
ISC 31 16:09:41.5±0.9, **38°.29N**±0°.03×**20°.38E**±0°.04, **h23**^{km}±5^{km}, **n32**, σ**1^{s}.17**/59, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.05	136	P	Pb	16 09 46.1	+0.6
KEF4				S	Sb	16 09 47.9	-0.3
KEF4	Livadi, Kephal	0.05	136	P	Pb	16 09 46.0	+0.6
KEF4				S	Sb	16 09 47.8	-0.3
DMLN	Damoulianata-K	0.05	189	P	Pb	16 09 46.4	+0.8
DMLN				S	Sb	16 09 48.3	0.0
	6µm,0.1s						
DMLN	Damoulianata-K	0.05	189	P	Pb	16 09 46.5	+0.8
DMLN				S	Sb	16 09 48.3	0.0
KEF3	Kipouria, Keph	0.09	198	P	Pb	16 09 46.6	+0.8
KEF3				S	Sb	16 09 49.0	+0.3
KEF3	Kipouria, Keph	0.09	198	P	Pb	16 09 46.5	+0.8
KEF3				S	Sb	16 09 48.8	+0.2
LXRA	Lixouri, Kepha	0.10	155	P	Pb	16 09 47.0	+1.1
LXRA				S	Sb	16 09 49.5	+0.8
VLS	Valsamata	0.20	125	P	Pn	16 09 47.9	-1.3
VLS				S	Sb	16 09 51.1	+0.4
	2µm,0.1s						
VLS	Valsamata	0.20	125	P	Pn	16 09 47.8	-1.4
VLS				S	Sb	16 09 51.0	+0.4
VLS				AML	AML	16 09 51.8	
	comp=N,4911µm,0.1s						
VLS				AML	AML	16 09 51.8	
	comp=E,4301µm,0.1s						
FSK	Fiskardo	0.22	40	P	Pb	16 09 48.0	+0.8
FSK				S	Sb	16 09 50.9	-0.2
	comp=E,2µm,0.1s						
FSK	Fiskardo	0.22	40	P	Pb	16 09 48.1	+0.8
FSK				S	Sb	16 09 50.8	-0.3
FSK				AML	AML	16 09 51.5	
	comp=E,6661µm,0.1s						
FSK				AML	AML	16 09 53.1	
	comp=N,1938µm,0.2s						
PSDA	Pessada-Kefalo	0.24	138	P	Pn	16 09 48.8	-0.9
PSDA				S	Sb	16 09 52.6	+1.2
PSDA	Pessada-Kefalo	0.24	138	P	Pn	16 09 48.8	-0.9
PSDA				S	Sb	16 09 52.3	+0.9
EVGI	Lefkada island	0.39	33	P	Pn	16 09 50.8	-1.0
EVGI				S	Sb	16 09 56.4	+0.8
	comp=N,782nm,0.1s						
EVGI	Lefkada island	0.39	33	P	Pn	16 09 50.8	-1.0
EVGI				S	Sb	16 09 56.2	+0.6
DRAG	Dragano-Lefkad	0.42	21	P	Pn	16 09 51.2	-1.0
DRAG				S	Sb	16 09 57.4	+1.1
DRAG	Dragano-Lefkad	0.42	21	P	Pn	16 09 51.2	-1.0
DRAG				S	Sb	16 09 57.2	+0.9
NYDR	Nydri-Lefkada	0.49	30	P	Pn	16 09 52.3	-0.9
NYDR				S	Sb	16 09 59.7	+1.5
NYDR	Nydri-Lefkada	0.49	30	P	Pn	16 09 52.2	-0.9
LKD2	Lefkada island	0.54	23	P	Pn	16 09 53.2	-0.7
LKD2				S	Sb	16 10 00.7	+0.9
TSLK	Tsoukalades, L	0.57	22	P	Pn	16 09 53.9	-0.4
LTHK	Lithakia	0.68	148	P	Pn	16 09 56.5	+0.7
LAKA	Lakka	1.26	92	P	Pb	16 10 05.8	+1.3
KLV	Kalavryta, Ach	1.41	100	P	Pb	16 10 08.8	+1.5
STON	Ston	5.01	337	*e*Pn	Pn	16 10 56.9	+1.7
STON				Sn	Sn	16 11 50.8	-1.7
LSTV	Lastovo	5.20	330	*e*Pn	Pn	16 10 58.9	+0.9
LSTV				Sn	Sn	16 11 55.0	-2.2
HVAR	Hvar	5.72	330	*e*Pn	Pn	16 11 05.6	+0.5
HVAR				Sn	Sn	16 12 07.4	-2.6
RICI	Ricice	5.75	336	*e*Pn	Pn	16 11 07.0	+1.5
RICI				Sn	Sn	16 12 09.2	-1.5
ZIRJ	Zirje	6.45	328	*e*Pn	Pn	16 11 15.4	+0.4
ZIRJ				Sn	Sn	16 12 26.1	-1.8
KIJV	Kijevo	6.45	334	*e*Pn	Pn	16 11 15.8	+0.8
KIJV				Sn	Sn	16 12 26.2	-1.7
MORI	Morici	6.59	329	*e*Pn	Pn	16 11 18.6	+1.6
MORI				Sn	Sn	16 12 29.3	-2.1
DUGI	Dugi Otok	6.97	326	*e*Pn	Pn	16 11 23.4	+1.2
DUGI				Sn	Sn	16 12 38.5	-2.3

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*SOME **31** 16:22:25.6, 43°.13N×87°.40E, h10^{km}*
*IDC **31** 16:22:27.6±1.4, 42°.15N×87°.26E, h0^{km}, mb3.9/4, mb1 3.9/8, mb1mx3.3/61, mbtmp3.7/8, ML3.2/4, Error ellipse: s-maj=36.7km s-min=19.2km az=54.0*
*NEIC **31** 16:22:30.1±1.8, 42°.19N±0°.07×87°.3E±0°.1, h25^{km}±7^{km}, mb4.1/4, Error ellipse: s-maj=15.4km s-min=4.2km az=126.0*
*NNC **31** 16:22:34.7±1.5, 42°.40N×86°.80E, h0^{km}, mb4.3, mpv4.1, Error ellipse: s-maj=11.9km s-min=8.8km az=139.0*
ISC 31 16:22:27.7±0.6, **42°.07N**±0°.06×**86°.91E**±0°.03, **h10**^{km}, **n63**, σ**2^{s}.38**/62, **mb4.0**/6, **9C-7D**, **Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	1.85	18	Pg	Pn	16 22 59.0	-0.5
WMQ				Sg	Sn	16 23 21.0	-2.0
WMQ				smax	smax		
	comp=N,470nm,0.7s						
WMQ				smax	smax		
	comp=E,690nm,0.5s						
ZSN	Zaisan	5.57	346	*e*P	Pn	16 23 54.0	+3.3
	comp=E,3.9nm,0.2s						
ZSN				*e*S	Sn	16 24 56.9	+2.1
	comp=E,15nm,0.3s						
SHLS	Shalkode	5.60	284	*e*P	Pg	16 24 08.8	-6.1
	comp=E,20nm,0.5s						
SHLS				*e*S	Sg	16 25 22.0	-5.4
	comp=E,151nm,0.8s						
SHLS	Shalkode	5.60	284	Pg	Pg	16 24 08.8	-6.1
	comp=E,20nm,0.5s						
SHLS				Lg	Lg	16 25 22.0	
	comp=E,151nm,0.8s						
DJR	Jarkent	5.67	296	*e*P	Pg	16 24 13.6	-2.7
	comp=E,7.5nm,0.2s						
DJR				*e*S	Sg	16 25 29.7	0.0
	comp=E,35nm,0.5s						
DJR	Jarkent	5.67	296	Pg	Pg	16 24 13.6	-2.7
	comp=E,7.5nm,0.2s						
DJR				Lg	Lg	16 25 29.7	
	comp=E,35nm,0.5s						
MK31	Makanchi Array	5.76	327	⇑Pn	Pn	16 23 59.0	+5.7
	comp=E,3.5nm,0.3s,baz=140,slow=14,SNR=5.3						
MK31				⇓Sn	Sn	16 25 00.7	+1.2
	comp=E,3.2nm,0.4s						
MK31				Lg	Lg	16 25 24.9	
	comp=E,9.7nm,0.5s,baz=141,slow=28,SNR=11						
MK31	Makanchi Array	5.76	327		Pn	16 23 55.6	+2.3
MKAR	Makanchi Array	5.76	327	Pn	Pn	16 23 56.3	+3.0
	comp=E,4.9nm,0.3s,baz=146,slow=15,SNR=126						
MKAR				Lg	Lg	16 25 26.2	
	comp=E,5.1nm,0.3s,baz=139,slow=31,SNR=8.1						
MKAR	Makanchi Array	5.76	327		Pn	16 23 56.0	+2.7
MAKZ	Makanchi	5.91	325	⇓Pn	Pn	16 24 01.6	+6.4
	comp=E,1.9nm,0.5s						
MAKZ				⇑Lg	Lg	16 25 31.7	
	comp=E,12nm,0.6s						
MAKZ	Makanchi	5.91	325		Pn	16 23 58.2	+3.0
UZB	Uzynbulak	5.92	283	*e*P	Pg	16 24 19.3	-1.7
	comp=E,16nm,0.6s						
UZB				*e*S	Sg	16 25 39.6	+2.0
	comp=E,52nm,0.6s						
UZB	Uzynbulak	5.92	283	Pg	Pg	16 24 19.3	-1.7
	comp=E,16nm,0.6s						
UZB				Lg	Lg	16 25 39.6	
	comp=E,52nm,0.6s						
KPKS	Kokpek	6.21	286	*e*P	Pg	16 24 24.7	-1.9
	comp=E,11nm,0.5s						
KPKS				*e*S	Sg	16 25 48.9	+1.9
	comp=E,67nm,0.5s						
PRZ	Przheval'sk	6.32	277		Pn	16 24 05.2	+4.0
KAPS	Kapalarasan	6.35	303	*e*P	Pg	16 24 26.5	-2.7
	comp=E,6.9nm,0.7s						
KAPS				*e*S	Sg	16 25 51.9	+0.6
	comp=E,28nm,0.7s						
SATY	Saty	6.35	282	*e*P	Pg	16 24 28.1	-1.3
	comp=E,17nm,0.5s						
SATY				*e*S	Sg	16 25 55.0	+3.4
	comp=E,53nm,0.8s						
SATY	Saty	6.35	282	Pg	Pg	16 24 28.1	-1.3
	comp=E,17nm,0.5s						
SATY				Lg	Lg	16 25 55.0	
	comp=E,53nm,0.8s						
BLB	Baldybastay	6.50	291	Pg	Pg	16 24 28.8	-3.2
	comp=E,21nm,0.4s						
BLB				Lg	Lg	16 25 56.3	
	comp=E,34nm,0.5s						
TARG	Taragay, Kyrgy	6.80	270		Pn	16 24 12.4	+4.5
ARXS	Arharly	6.98	291	*e*P	Pg	16 24 36.0	-5.2
	comp=E,6.2nm,0.5s						
ARXS				*e*S	Sg	16 26 08.8	-2.8
	comp=E,25nm,0.6s						
KDJ	Kajisay	7.23	274		Pn	16 24 17.8	+4.2
KOTS	Kotyrbulak	7.31	282	*e*P	Pg	16 24 45.2	-2.5
	comp=E,6.1nm,0.4s						
KOTS				*e*S	Sg	16 26 24.6	+2.2
	comp=E,43nm,0.6s						
KOTS	Kotyrbulak	7.31	282	Pg	Pg	16 24 45.2	-2.5
	comp=E,6.1nm,0.4s						
KOTS				Lg	Lg	16 26 24.6	
	comp=E,43nm,0.6s						
MDOK	Medeo	7.35	282	*e*P	Pg	16 24 46.2	-2.2
	comp=E,4.8nm,0.6s						
MDOK				*e*S	Sg	16 26 26.0	+2.3
	comp=E,20nm,0.8s						
MDOK	Medeo	7.35	282	⇑Pn	Pn	16 24 20.1	+4.9
	comp=E,3.1nm,0.6s						
MDOK				⇑Pg	Pg	16 24 46.8	-1.7
	comp=E,5.4nm,0.5s						
MDOK				⇑Lg	Lg	16 26 23.6	
	comp=E,24nm,0.6s						
MDOK	Medeo	7.35	282	Pg	Pg	16 24 46.2	-2.2
	comp=E,4.8nm,0.6s						
MDOK				Lg	Lg	16 26 26.0	
	comp=E,20nm,0.8s						
TNSS	Tian-Shan	7.42	281	*e*P	Pg	16 24 47.8	-1.9
	comp=E,4.5nm,0.6s						
TNSS				*e*S	Sg	16 26 29.1	+3.3
	comp=E,9.1nm,0.6s						
TNSS	Tian-Shan	7.42	281	Pg	Pg	16 24 47.8	-1.9
	comp=E,4.5nm,0.6s						
TNSS				Lg	Lg	16 26 29.1	
	comp=E,9.1nm,0.6s						
CHKK	Chushkaly	7.49	287	*e*P	Pg	16 24 48.5	-2.6
	comp=E,3.0nm,0.3s						
CHKK				*e*S	Sg	16 26 29.6	+1.5
	comp=E,15nm,0.6s						
CHKK	Chushkaly	7.49	287	Pg	Pg	16 24 48.5	-2.6
	comp=E,3.0nm,0.3s						
CHKK				Lg	Lg	16 26 29.6	
	comp=E,15nm,0.6s						
KTBS	Karatobe	7.69	286	*e*P	Pg	16 24 50.4	-4.3
	comp=E,3.6nm,0.7s						
KTBS				*e*S	Sg	16 26 33.2	-1.1
	comp=E,34nm,0.7s						
MTBS	Maitube	7.80	281	*e*P	Pg	16 24 57.0	0.0
	comp=E,5.5nm,0.5s						
MTBS				*e*S	Sg	16 26 44.5	+6.5
	comp=E,15nm,0.6s						
BOOM	Boomskoye usch	8.14	277		Pn	16 24 29.9	+3.8
DGS	Degeres	8.29	282	*e*P	Pg	16 25 02.4	-4.0
	comp=E,4.1nm,0.3s						
DGS				*e*S	Sg	16 26 54.1	+0.5
	comp=E,13nm,0.7s						
DGS	Degeres	8.29	282	Pg	Pg	16 25 02.4	-4.0
	comp=E,4.1nm,0.3s						
DGS				Lg	Lg	16 26 54.1	
	comp=E,13nm,0.7s						
TKM2	Tokmak 2	8.40	280	⇓Pn	Pn	16 24 34.6	+5.0
	comp=E,3.1nm,0.4s						
TKM2				⇓Lg	Lg	16 26 56.5	
	comp=E,7.3nm,0.8s						
KRBS	Karabastau	8.41	285	*e*P	Pg	16 25 04.9	-3.7
	comp=E,2.1nm,0.2s						
KRBS				*e*S	Sg	16 26 58.4	+1.0
	comp=E,8.2nm,0.6s						
KRBS	Karabastau	8.41	285	Pg	Pg	16 25 04.9	-3.7
	comp=E,2.1nm,0.2s						
KRBS				Lg	Lg	16 26 58.4	
	comp=E,8.2nm,0.6s						
AAK	Ala-Archa	9.21	278	Pn	Pn	16 24 45.4	+4.7
	comp=E,0.3nm,0.3s,baz=128,slow=10,SNR=5.4						
AAK				Lg	Lg	16 27 26.9	
	comp=E,0.3nm,0.3s,baz=257,slow=22,SNR=3.8						
AAK	Ala-Archa	9.21	278	⇑Pg	Pg	16 25 20.9	
	comp=E,4.0nm,0.9s						
AAK				⇑Lg	Lg	16 27 20.3	
	comp=E,10nm,1.1s						
AAK	Ala-Archa	9.21	278	Pn	Pn	16 24 44.6	+3.9
GTA	Gaotai	10.15	101	*e*P	Pn	16 24 54.0	+0.4
GTA				pP		16 24 57.0	
GTA				sP		16 25 00.0	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				smax	smax		
	comp=N,24nm,0.9s						
GTA				smax	smax		
	comp=E,20nm,1.3s						
KURBB	Kurchatov Arra	10.32	329	Pn	Pn	16 24 56.3	+0.5
	comp=E,0.1nm,0.3s,baz=136,slow=12,SNR=5.9						
KURBB				Lg	Lg	16 27 53.6	
	comp=E,0.1nm,0.3s,baz=141,slow=32,SNR=3.6						
KURBB	Kurchatov Arra	10.32	329	⇓Pn	Pn	16 24 59.8	+4.0
	comp=E,2.9nm,1.1s						
KURBB				⇓Lg	Lg	16 27 52.4	
	comp=E,18nm,0.7s						
KURK	Kurchatov	10.36	329	⇑Pn	Pn	16 24 58.6	+2.3
	comp=E,2.8nm,1.0s						
KURK				⇓Lg	Lg	16 27 53.4	
	comp=E,10nm,0.8s						
KURK	Kurchatov	10.36	329		Pn	16 24 56.3	0.0
ZAA0	Zalesovo Array	11.97	354	Pn	Pn	16 25 15.8	-2.4
ZALV	Zalesovo Beam	11.97	354	Pn	Pn	16 25 16.8	-1.4
	comp=E,0.3nm,0.3s,baz=180,slow=14,SNR=6.1						
KK07	Karatay Array	12.14	280	⇑Lg	Lg	16 28 54.0	
	comp=E,1.4nm,0.8s						
NIL	Nilore	13.66	236	Pn	Pn	16 25 44.0	+2.5
BRVK	Borovoye	15.66	320	Pn	Pn	16 26 10.6	+2.2
BRVK				IAmb	IAmb	16 26 18.1	
	comp=Z,2.8nm,0.8s						
ABKAR	Akbulak array	20.10	300		Pn	16 27 03.4	+0.3
CM31	Chiang Mai Arr	25.67	153	P	P	16 27 59.1	+1.3
CM31				IAmb	IAmb	16 28 01.4	
	comp=Z,9.6nm,1.5s						
CMAR	Chiang Mai Arr	25.67	153	P	P	16 27 58.4	+0.6
	comp=Z,1.6nm,1.0s,baz=334,slow=9.1,SNR=11						
CMAR	Chiang Mai Arr	25.67	153	P	P	16 27 57.3	-0.5
INCN	Inchon	30.68	85	P	P	16 28 36.9	-5.5
MAJO	Matsushiro	39.59	80	P	P	16 29 56.7	-2.5
MAJO				IAmb	IAmb	16 30 07.5	
	comp=Z,5.4nm,1.1s						
FINES	FINESS Array B	40.55	320	P	P	16 30 10.6	+3.8
	comp=Z,2.8nm,0.9s,baz=90,slow=11,SNR=2.0						
FINES	FINESS Array B	40.55	320	P	P	16 30 07.6	+0.8
NOA	NORSAR Array B	47.72	320	P	P	16 31 05.3	+1.0
	comp=Z,1.6nm,0.9s,baz=77,slow=7.7,SNR=2.9						
TORD	Torodi Ar. Bea	77.79	277	P	P	16 34 29.5	+4.0
	comp=Z,0.6nm,0.5s,baz=42,slow=4.6,SNR=3.8						

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*NEIC **31** 16:31:32.3±1.4, 37°.13N±0°.03×97°.65W±0°.04, h9^{km}±6^{km}, Error ellipse: s-maj=6.1km s-min=2.6km az=220.0*
NEIC 31 16:31:32.3±1.2, **37°.13N**±0°.03×**97°.66W**±0°.03, **h6**^{km}±7^{km}, **mb_Lg2.8**/34, **ML2.7**/23, **Error ellipse: s-maj=5.4km s-min=2.5km az=217.0**, **Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN01	Argonia South	0.08	286		Pg	16 31 34.2	0.0
KAN01				Sg	Sg	16 31 35.6	0.0
KAN17	Caldwell West	0.12	225		Pg	16 31 35.1	+0.2
KAN17				Sg	Sg	16 31 36.9	+0.3
KAN05	Bluff City Nor	0.17	263	Pg	Pg	16 31 36.0	+0.3
KAN05				Sg	Sg	16 31 38.6	+0.5
KAN13	South Haven SW	0.19	129	Pg	Pg	16 31 36.3	+0.3
KAN13				Sg	Sg	16 31 39.0	+0.5
KAN06	Argonia West S	0.20	306		Pg	16 31 36.5	+0.3
KAN06				Sg	Sg	16 31 38.4	-0.5
KAN08	Anthony NE Sta	0.27	291		Pg	16 31 37.8	+0.3
KAN08				Sg	Sg	16 31 41.8	+0.7
KAN14	Manchester OK	0.30	235	Pg	Pg	16 31 38.4	+0.3
KAN14				Sg	Sg	16 31 42.5	+0.4
KAN12	Harper NE Stat	0.32	302	Pg	Pg	16 31 38.8	+0.3
KAN12				Sg	Sg	16 31 43.2	+0.5
GC02	Grant County #	0.32	210	Pg	Pg	16 31 38.7	+0.2
GC02				Sg	Sg	16 31 43.1	+0.3
KAN16	Harper SW Stat	0.34	286	Pg	Pg	16 31 38.9	0.0
KAN16				Sg	Sg	16 31 43.9	+0.5
KAN10	Anthony SW Sta	0.35	269	Pg	Pg	16 31 39.3	+0.2
KAN10				Sg	Sg	16 31 44.4	+0.8
BLOK	Blackwell	0.51	136	Pg	Pg	16 31 42.2	0.0
BLOK				Sg	Sg	16 31 49.5	+0.6
OK032	Salt Plains WL	0.55	234	Sg	Sg	16 31 51.0	+1.0
CROK	Carrier	0.68	203	Pg	Pg	16 31 45.3	0.0
CROK				Sg	Sg	16 31 54.5	+0.4
OK035	E0210 Rd and N	0.94	244		Pg	16 31 49.8	-0.5
T35A	Sooner Cattle	0.94	103		Pg	16 31 49.9	-0.4
T35A					Pb	16 31 50.1	-0.9
QUOK	Quay	1.23	141	Pg	Pg	16 31 55.2	-0.6
QUOK				Sg	Sg	16 32 11.3	-0.3
U32A	Winter Ranch,	1.31	236		Pn	16 31 56.7	-0.5
OK031	S. Brethren Rd	1.35	150		Pn	16 31 57.4	-0.3
OK030	Cody Creek RV	1.39	149		Pn	16 31 57.9	-0.4
BCOK	Bluff Creek, N	1.47	178		Pn	16 31 59.5	+0.2
R32A	Long Quarter,	1.54	327		Pn	16 32 00.6	+0.3
OK025	Westminster Rd	1.57	170		Pn	16 32 01.1	+0.4
OKCFA	Oklahoma City	1.72	174	Pn	Pn	16 32 02.6	-0.1
OKCSW	OKLAHOMA CITY	1.73	174	Pn	Pn	16 32 02.6	-0.3
FNO	Franklin	1.88	174		Pn	16 32 05.4	+0.4
TUL1	Leonard	1.94	128		Pn	16 32 06.1	+0.4
TUL1				IAmb_Lg		16 32 33.6	
	comp=Z,53nm,0.8s						
KSU1	Kansas State U	2.13	22		Pn	16 32 09.1	+0.7
CBKS	Cedar Bluff	2.35	316		Pn	16 32 12.2	+0.8
X34A	Smith Ranch, M	2.53	183		Pn	16 32 14.5	+0.6
U38A	Gravette	2.72	104		Pn	16 32 16.9	+0.5
HHAR	Hobbs	3.11	105		Pn	16 32 22.1	+0.3
X37A	Clayton	3.14	143		Pn	16 32 23.1	+0.8
X37A				IAmb_Lg		16 33 17.5	
	comp=Z,18nm,0.7s						
LOOK	Love County	3.16	173		Pn	16 32 23.2	+0.7
S39A	Bolivar	3.50	79		Pn	16 32 27.3	+0.1
S39A				IAmb_Lg		16 33 27.9	
	comp=Z,20nm,0.7s						
N33A	J Bar K, Exete	3.61	3		Pn	16 32 27.5	-1.2
N33A				IAmb_Lg		16 33 32.5	
	comp=Z,23nm,0.8s						
W39A	Magazine	3.68	120		Pn	16 32 29.6	-0.1
W39A				IAmb_Lg		16 33 34.2	
	comp=Z,20nm,0.8s						
Z35A	Perchaven, San	3.81	175	Pn	Pn	16 32 31.5	+0.1
U40A	Yellville	3.94	100		Pn	16 32 33.2	0.0
AMTX	Amarillo	3.96	237		Pn	16 32 33.7	+0.1
AMTX				IAmb_Lg		16 33 39.4	
	comp=Z,24nm,0.8s						
N35A	Tabor	4.04	22		Pn	16 32 34.5	-0.1
P38A	Dawn	4.09	51		Pn	16 32 35.3	0.0
P38A				IAmb_Lg		16 33 47.8	
	comp=Z,24nm,0.8s						
MIAR	Mount Ida	4.20	127	Pn	Pn	16 32 34.9	-1.9
MIAR				IAmb_Lg		16 33 44.6	
	comp=Z,25nm,1.1s						
BGNE	Belgrade	4.29	355		Pn	16 32 38.6	+0.6
MGMO	Mountain Grove	4.31	88		Pn	16 32 38.0	-0.3
KSCO	Kaye Shedlock'	4.35	297	Pn	Pn	16 32 38.5	-0.5
KSCO				IAmb_Lg		16 33 54.5	
	comp=Z,18nm,0.8s						
R40A	Maddies Statio	4.43	73		Pn	16 32 40.0	+0.1
R40A				IAmb_Lg		16 33 55.0	
	comp=Z,19nm,0.9s						
Z38A	Mt. Pleasant	4.44	150	Pn	Pn	16 32 37.8	-2.3
FCAR	Ozark Folk Cen	4.63	104	Pn	Pn	16 32 41.9	-0.9
WHAR	Wooly Hollow	4.71	111	Pn	Pn	16 32 42.7	-1.2
WHAR				IAmb_Lg		16 34 05.7	
	comp=Z,16nm,1.0s						
X40A	Basin Creek Fa	4.72	123	Pn	Pn	16 32 41.3	-2.8
W41B	Gary Mavity, V	4.79	112	Pn	Pn	16 32 43.8	-1.2
W41B				IAmb_Lg		16 34 10.3	
	comp=Z,11nm,0.7s						
L34A	Svendsen Farm,	4.93	11	Pn	Pn	16 32 46.0	-0.9
P40A	Paris	5.02	60		Pn	16 32 46.9	-1.2
N38A	Joes South For	5.03	42	Pn	Pn	16 32 48.3	+0.1
N38A				IAmb_Lg		16 34 14.5	
	comp=Z,16nm,0.8s						
WLAR	White Oak Lake	5.06	131	IAmb_Lg		16 34 25.8	
	comp=Z,20nm,0.8s						
CCM	Cathedral Cave	5.18	78	Pn	Pn	16 32 50.7	+0.5
MSTX	Muleshoe	5.23	234	Pn	Pn	16 32 48.6	-2.5
LCAR	Lake Charles	5.34	99	Pn	Pn	16 32 53.5	+1.0
T25A	Trinidad	5.39	272	Pn	Pn	16 32 51.5	-2.0
PBMO	Poplar Bluff	5.80	91	Pn	Pn	16 32 57.7	-1.2
FVM	French Village	5.81	79	Pn	Pn	16 32 56.9	-2.1
FVM				IAmb_Lg		16 34 34.9	
	comp=Z,12nm,1.2s						
SCIA	State Center	5.88	34	IAmb_Lg		16 34 55.4	
	comp=Z,17nm,0.8s						
SLM	Saint Louis	6.06	73	Pn	Pn	16 33 03.0	+0.6
SLM				IAmb_Lg		16 34 45.0	
	comp=Z,20nm,0.8s						
Q24A	Divide	6.19	289	Pn	Pn	16 33 03.5	-0.9
SDCO	Great Sand Dun	6.27	278	Pn	Pn	16 33 03.7	-1.9
N41A	Harden Midland	6.39	54	Pn	Pn	16 33 06.3	-0.7
ECSD	EROS Data Cent	6.64	7	Pn	Pn	16 33 09.7	-0.7
ISCO	Idaho Springs	6.79	296	Pn	Pn	16 33 10.2	-2.4
JCT	Junction City	6.87	196	IAmb_Lg		16 35 11.8	
	comp=Z,14nm,1.2s						
L40A	Anamosa	7.00	43	Pn	Pn	16 33 13.4	-1.8
Q44A	Meyer Farm, Va	7.05	73	Pn	Pn	16 33 15.3	-0.7

IDC 31 16:54:13.7±1.6, **2°.87S**×**139°.48E**, **h0**^{km}, **mb3.3**/2, **mb1 3.7**/3, **mb1mx3.3**/21, **mbtmp3.5**/3, **ML3.6**/1, **Error ellipse: s-maj=33.7km s-min=15.1km az=155.0**, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.28	74	Pg	Pg	16 54 37.4	-0.8
	12nm,0.3s,baz=228,slow=12,SNR=27						
JAY				Lg	Lg	16 54 55.4	
	22nm,0.3s,baz=96,slow=19,SNR=6.3						
JAY				LR	LR	16 55 14.6	
	comp=Z,75nm,20.1s,baz=20,slow=48						
WRA	Warramunga Arr	17.70	196	P	Pn	16 58 21.2	-0.6
	0.2nm,0.3s,baz=17,slow=13,SNR=10						
ASAR	Alice Springs	21.37	194	P	P	16 59 03.3	+0.4
	0.5nm,0.4s,baz=23,slow=10,SNR=24						
MKAR	Makanchi Array	70.38	322	P	P	17 05 29.8	+0.2
	0.4nm,0.9s,baz=107,slow=9.8,SNR=2.0						

IDC 31 17:05:37.2±1.9, **0°.41N**×**125°.18E**, **h0**^{km}, **mb3.3**/3, **mb1 3.6**/3, **mb1mx3.3**/32, **mbtmp3.4**/3, **Error ellipse: s-maj=178.0km s-min=26.6km az=64.0**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.13	157	P	P	17 10 33.6	-1.0
	0.4nm,0.4s,baz=334,slow=11,SNR=14						
ASAR	Alice Springs	25.39	161	P	P	17 11 07.3	+0.8
	0.3nm,0.4s,baz=352,slow=15,SNR=7.0						
MKAR	Makanchi Array	59.43	327	P	P	17 15 41.7	-0.1
	0.3nm,0.7s,baz=118,slow=8.5,SNR=4.4						

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*NORS **31** 17:13:24.3±0.0, 41°.29N×44°.43E, h2^{km}, MPVA3.8*
*TIF **31** 17:13:24.1, 41°.16N×44°.40E, h12^{km}±1^{km}*
ISC 31 17:13:24.7±1.4, **41°.15N**±0°.05×**44°.39E**±0°.02, **h5**^{km}±10^{km}, **n25**, σ**0^{s}.69**/48, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMNI	Dmanisi	0.24	320	P	Pg	17 13 29.6	+0.2
DMNI				S	Sg	17 13 33.2	+0.7
KZRT	Kazreti	0.24	1	P	Pg	17 13 29.4	+0.1
KZRT				S	Sg	17 13 32.9	+0.3
TRLG	Trialeti	0.45	331	P	Pg	17 13 33.3	-0.1
TRLG				S	Sg	17 13 39.8	+0.5
BGD	Bogdanovka	0.61	281	P	Pg	17 13 36.6	+0.1
BGD				S	Sb	17 13 45.7	-1.3
BTNK	Botanikuri	0.61	30	P	Pg	17 13 34.6	-1.9
BTNK				S	Sg	17 13 43.3	-1.2
BRNG	Burnasheti	0.64	318	P	Pg	17 13 37.3	+0.3
BRNG				S	Sb	17 13 46.9	-0.9
SEAG	Tbilisi Sea	0.69	26	P	Pg	17 13 37.7	-0.2
SEAG				S	Sg	17 13 47.6	+0.7
AKH	Akhalkalaki	0.73	291	P	Pg	17 13 38.4	-0.2
AKH				S	Sg	17 13 48.5	+0.3
DGRG	David-gareji	0.80	67	P	Pg	17 13 40.1	+0.1
DGRG				S	Sb	17 13 52.5	+0.3

GUDG	Gudauri	1.32	3	P	Pn	17 13 51.0	+1.1
DDFL	Dedoflistskaro	1.33	77	P	Pb	17 13 51.6	+1.3
ABS	Abastumani	1.33	298	P	Pg	17 13 49.5	-0.8
ABS				S	Sn	17 14 08.5	+0.1
PNSH	Pansheti	1.50	6	P	Pn	17 13 52.1	-0.2
PNSH				S	Sg	17 14 13.7	+1.0
LGD	Lagodekhi	1.55	63	P	Pn	17 13 52.8	-0.2
LGD				S	Sn	17 14 13.8	+0.4
TKB	Tkibuli	1.59	319	P	Pb	17 13 54.2	-0.5
TKB				S	Sg	17 14 15.5	-0.4
ONI	Oni	1.60	334	P	Pn	17 13 53.8	+0.1
ONI				S	Sg	17 14 16.0	-0.2
LACR	Lac	1.68	358	*e*Pg	Pb	17 13 55.5	-0.7
LACR				*e*Sg	Sg	17 14 18.6	0.0
DIGR	Digorskoe uzhe	1.85	341	*e*Pg	Pb	17 13 59.1	-0.1
DIGR				*e*Sg	Sg	17 14 24.3	+0.1
ARNR	Ardon	2.03	358	*e*Pg	Pb	17 14 01.6	-0.5
ARNR				*e*Sg	Sg	17 14 30.4	+0.4
BTLR	Botlikh	2.04	41	*e*Pg	Pb	17 14 02.1	-0.2
BTLR				*e*Sg	Sb	17 14 28.7	+0.8
LSNR	Lesken	2.17	349	*e*Pg	Pb	17 14 04.5	0.0
LSNR				*e*Sg	Sg	17 14 34.6	+0.2
DVE	Vedeno	2.22	35	*e*Pg	Pn	17 14 03.3	+1.1
DVE				*e*Sg	Sg	17 14 35.2	-0.8
GNBR	Gunib	2.29	56	*e*Pg	Pb	17 14 05.2	-1.2
GNBR				*e*Sg	Sb	17 14 35.5	+0.5
NEY	Neytrino	2.44	330	*e*Pn	Pb	17 14 09.4	+0.3
NEY				*e*Sn	Sb	17 14 40.0	+0.4
AKT	Akhty	2.54	81	*e*Pn	Pb	17 14 09.9	-0.8
AKT				*e*Sn	Sb	17 14 41.8	-0.5

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*NEIC **31** 17:25:39.5±1.7, 18.°8N±0.°1×69.°03W±0.°05, h152^{km}±19^{km}, Error ellipse: s-maj=16.0km s-min=7.3km az=180.0*
*RSPR **31** 17:25:40.8, 19.°06N×68.°89W, h142^{km}±8^{km}, MD3.7/10*
*OSPL **31** 17:25:42.1±1.0, 18.°32N×69.°17W, h130^{km}, ML2.7*
ISC 31 17:25:39.4±1.1**, 18.°6N**±0.°1×**69.°12W**±0.°03**, h150**^{km}**, n59, σ1^{s}21**/68**, 14C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.71	97	Pn	Pn	17 26 00.8	-1.1
IDE	Isla Desecheo	1.58	98	⇑*e*P	Pn	17 26 09.3	-0.5
IDE	Isla Desecheo	1.58	98	*e*S	Sn	17 26 31.0	-2.1
SC01	Santiago de lo	1.73	299	Pn	Pn	17 26 11.4	0.0
SC01				IAML		17 26 38.4	
	comp=N,184nm,0.2s						
SC01	Santiago de lo	1.73	299	*i* P	Pn	17 26 12.1	+0.7
SC01				*e*S	Sn	17 26 35.7	-0.3
SC01				IAML		17 26 43.5	
	comp=Z,112nm,0.5s						
AGPR	Aguadilla, PR	1.91	94	⇑*e*P	Pn	17 26 14.0	+0.5
AGPR	Aguadilla, PR	1.91	94	*e*S	Sn	17 26 38.6	-1.0
AGPR	Aguadilla, PR	1.91	94		Pn	17 26 14.0	+0.5
AGPR					Sn	17 26 38.6	-1.0
AGPR	Aguadilla, PR	1.91	94	IAML		17 26 47.0	
	comp=E,170nm,0.5s						
AGPR				IAML		17 26 53.7	
	comp=N,130nm,1.1s						
AGPR	Aguadilla, PR	1.91	94	*i* P	Pn	17 26 14.6	+1.1
AGPR				IAML		17 26 44.5	
	comp=Z,61nm,0.9s						
PRSN	Puerto Rico Se	1.92	101	Pn	Pn	17 26 13.3	-0.3
LOBA2	Hotel Casa Bon	1.94	255	*i* P	Pn	17 26 12.6	-1.3
LOBA2				*e*S	Sn	17 26 35.6	-4.7
LOBA2				IAML		17 26 40.0	
	comp=Z,39nm,0.7s						
LSP	Las Mesas	1.98	102	⇑*e*P	Pn	17 26 15.3	+1.0
LSP	Las Mesas	1.98	102	*e*S	Sn	17 26 41.1	0.0
CRPR	Cabo Rojo, PR	2.00	107	⇑*e*P	Pn	17 26 14.2	-0.4
CRPR	Cabo Rojo, PR	2.00	107	*e*S	Sn	17 26 41.1	-0.4
CRPR	Cabo Rojo, PR	2.00	107		Pn	17 26 14.2	-0.4
CRPR					Sn	17 26 41.1	-0.4
CRPR	Cabo Rojo, PR	2.00	107	*i* P	Pn	17 26 14.1	-0.4
CRPR				IAML		17 26 44.7	
	comp=Z,48nm,1.1s						
MLPR	Magueyes Islan	2.07	107	⇑*e*P	Pn	17 26 15.7	+0.4
MLPR	Magueyes Islan	2.07	107	*e*S	Sn	17 26 44.3	+1.4
MLPR	Magueyes Islan	2.07	107		Pn	17 26 14.6	-0.7
MLPR	Magueyes Islan	2.07	107		Sn	17 26 44.3	+1.4
SDDR	Presa de Saban	2.09	281		Pn	17 26 16.4	+0.8
SDDR					Sn	17 26 43.1	-0.3
SDDR				IAML		17 26 46.1	
	comp=Z,74nm,0.8s						
SDDR				IAML		17 26 49.5	
	comp=Z,80nm,1.0s						
SDDR	Presa de Saban	2.09	281	*i* P	Pn	17 26 16.8	+1.2
SDDR				IAML		17 26 48.2	
	comp=Z,42nm,0.8s						
AOPR	Arecibo Observ	2.26	96	⇑*e*P	Pn	17 26 17.7	0.0
AOPR	Arecibo Observ	2.26	96	*e*S	Sn	17 26 46.7	-0.4
AOPR	Arecibo Observ	2.26	96		Pn	17 26 17.7	0.0
AOPR					Sn	17 26 46.7	-0.4
UUPR	Utuado, UPR, P	2.31	98	⇑*e*P	Pn	17 26 18.3	+0.1
UUPR	Utuado, UPR, P	2.31	98	*e*S	Sn	17 26 46.3	-1.7
UUPR	Utuado, UPR, P	2.31	98		Pn	17 26 18.3	+0.1
UUPR					Sn	17 26 46.3	-1.7
OBIP	Obispado Ponce	2.45	103	⇑*e*P	Pn	17 26 21.0	+1.1
OBIP				*e*S	Sn	17 26 51.8	+0.6
OBIP	Obispado Ponce	2.45	103		Pn	17 26 21.0	+1.1
OBIP					Sn	17 26 51.8	+0.6
EMPR	Esperanza - Ma	2.46	93	⇑*e*P	Pn	17 26 20.0	0.0
EMPR	Esperanza - Ma	2.46	93	*e*S	Sn	17 26 50.2	-1.1
EMPR	Esperanza - Ma	2.46	93		Pn	17 26 20.0	0.0
EMPR					Sn	17 26 50.2	-1.1
CELP	Cerrillos	2.47	102	⇑*e*P	Pn	17 26 20.2	0.0
CELP	Cerrillos	2.47	102	*e*S	Sn	17 26 51.7	+0.1
CELP	Cerrillos	2.47	102		Pn	17 26 20.2	0.0
CELP					Sn	17 26 51.7	+0.1
CELP	Cerrillos	2.47	102	IAML		17 26 53.7	
	comp=N,71nm,0.3s						
CELP				IAML		17 26 56.3	
	comp=E,58nm,0.9s						
SJG	San Juan	2.86	99	Pn	Pn	17 26 21.9	-3.1
SJG				IAML		17 27 05.5	
	comp=E,52nm,0.7s						
SJG				IAML		17 27 07.2	
	comp=E,64nm,0.4s						
PDPR	Patillas Dam,	3.00	101	Pn	Pn	17 26 26.2	-0.5
PDPR				IAML		17 27 08.2	
	comp=E,74nm,2.1s						
CBYP	Canovanas	3.12	96	⇑*e*P	Pn	17 26 28.0	-0.3
CBYP	Canovanas	3.12	96		Pn	17 26 28.0	-0.3
HUMP	Col San Antoni	3.14	98	⇑*e*P	Pn	17 26 28.7	+0.2
HUMP	Col San Antoni	3.14	98	*e*S	Sn	17 27 04.5	-2.1
HUMP	Col San Antoni	3.14	98		Pn	17 26 28.7	+0.2
HUMP					Sn	17 27 04.5	-2.1
HUMP	Col San Antoni	3.14	98	IAML		17 27 07.6	
	comp=N,56nm,0.2s						
MTP	Monte Pirata	3.43	98	⇑*e*P	Pn	17 26 32.5	+0.3
MTP	Monte Pirata	3.43	98	*e*S	Sn	17 27 11.6	-1.6
MTP	Monte Pirata	3.43	98		Pn	17 26 32.5	+0.3
MTP					Sn	17 27 11.6	-1.6
MTP	Monte Pirata	3.43	98	IAML		17 27 20.7	
	comp=E,40nm,0.3s						
MTP				IAML		17 27 31.8	
	comp=N,30nm,2.4s						
CUPR	Culebra, Puert	3.66	94	⇑*e*P	Pn	17 26 34.1	-1.1
CUPR	Culebra, Puert	3.66	94	*e*S	Sn	17 27 17.5	-0.9
CUPR	Culebra, Puert	3.66	94		Pn	17 26 34.1	-1.1
CUPR					Sn	17 27 17.5	-0.9
STVI	Saint Thomas	3.96	93	⇑*i*P	Pn	17 26 38.9	-0.3
STVI	Saint Thomas	3.96	93	*e*S	Sn	17 27 22.6	-3.0
STVI	Saint Thomas	3.96	93		Pn	17 26 38.9	-0.3
STVI	Saint Thomas	3.96	93	IAML		17 28 00.9	
	comp=N,37nm,3.2s						
BAUV	El Baul	9.66	174	Pn	Pn	17 27 57.0	+2.0

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*ISU **31** 17:38:54, 41.°34N×73.°07E, h20^{km}*
*KRNET **31** 17:38:54.5±0.1, 41.°40N×72.°87E, h18^{km}, mb3.1*
*SOME **31** 17:38:55.2, 41.°43N×72.°88E, h10^{km}*
*KNET **31** 17:38:56.9±0.6, 41.°51N×72.°98E, h8^{km}±2^{km}, ml2.6, Error ellipse: s-maj=5.7km s-min=2.8km az=114.0*
*NNC **31** 17:38:56.2±1.0, 41.°49N×72.°82E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=10.0km s-min=3.3km az=174.0*
ISC 31 17:38:54.2±1.1**, 41.°41N**±0.°02×**72.°91E**±0.°02**, h5**^{km}±10^{km}**, n71, σ1^{s}44**/121**, 44C-22D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.81	299	⇑*i*P	Pb	17 39 09.3	-1.5
	baz=1.0						
ARK				⇑*i*S	Sg	17 39 20.5	+0.2
	baz=1.0						
OHH	Osh	0.89	186	⇑*i*P	Pb	17 39 11.0	-1.1
	baz=84						
OHH				⇑*i*S	Sg	17 39 23.1	+0.5
	baz=84						
AML	Almayashu	0.93	39	⇑P	Pb	17 39 12.8	-0.3
	25nm,0.2s,SNR=57						
AML				⇓S	Sg	17 39 25.6	+1.4
	91nm,0.2s						
AML	Almayashu	0.93	39	⇑*i*P	Pb	17 39 12.7	-0.4
	baz=40						
AML				⇑*i*S	Sg	17 39 25.7	+1.5
	baz=40						
NAM	Namangan	1.03	247	*e*P	Pg	17 39 16.0	+2.1
NAM				*e*S	Sn	17 39 30.0	-0.1
MNAS	Manas	1.12	344	⇑*i*P	Pn	17 39 15.5	-1.2
	baz=46						
MNAS				⇑*i*S	Sg	17 39 31.3	+1.0
	baz=46						
ARLS	Aral	1.15	66	⇓*i*P	Pb	17 39 16.7	0.0
	baz=67						
ARLS				⇓*i*S	Sg	17 39 32.8	+1.6
	baz=67						
TRKS	Terek-Say	1.34	276	⇑*i*P	Pb	17 39 18.7	-1.1
	baz=73						
TRKS				⇑*i*S	Sb	17 39 35.8	-1.5
	baz=73						
MRKS	Merke	1.36	10	*e*P	Pg	17 39 20.5	+0.3
	37nm,0.2s						
MRKS				*e*S	Sg	17 39 38.9	+1.0
	135nm,0.3s						
EKS2	Erkin-Say	1.41	27	⇓P	Pg	17 39 21.4	+0.2
	10nm,0.2s,SNR=21						
EKS2				⇑S	Sg	17 39 40.9	+1.4
	43nm,0.3s						
EKS2	Erkin-Say	1.41	27	⇓*i*P	Pb	17 39 20.8	-0.3
	baz=28						
EKS2				⇓*i*S	Sg	17 39 40.4	+0.9
	baz=28						
UCH	Uchtor	1.45	55	⇓P	Pg	17 39 22.4	+0.4
	22nm,0.2s,SNR=49						
UCH				⇓S	Sg	17 39 42.6	+1.8
	29nm,0.2s						
UCH	Uchtor	1.45	55	⇑*i*P	Pb	17 39 22.2	+0.2
	baz=55						
UCH				⇑*i*S	Sg	17 39 42.0	+1.1
	baz=55						
SFK	Sufi-Kurgan	1.46	162	⇑*e*P	Pb	17 39 21.5	-0.5
	baz=61						
SFK				⇑*e*S	Sg	17 39 41.5	+0.4
	baz=61						
AAK	Ala-Archa	1.71	43	⇓P	Pg	17 39 26.8	0.0
	15nm,0.2s,SNR=22						
AAK				⇓S	Sg	17 39 48.9	-0.1
	30nm,0.2s						
AAK	Ala-Archa	1.71	43	⇓P	Pg	17 39 26.9	+0.1
	9.3nm,0.6s						
AAK				⇓S	Sg	17 39 50.7	+1.7
	31nm,0.7s						
AAK	Ala-Archa	1.71	43	⇑*i*P	Pb	17 39 26.4	+0.3
	baz=44						
AAK				⇑*i*S	Sg	17 39 49.6	+0.6
	baz=44						
DZA	Taraz	1.89	322	*e*P	Pg	17 39 30.2	-0.2
	38nm,0.2s						
DZA				*e*S	Sg	17 39 55.4	+0.4
	292nm,0.4s						
DZA	Taraz	1.89	322	Pg	Pg	17 39 31.4	+0.9
	102nm,0.1s						
DZA				Lg	Lg	17 39 57.2	
	292nm,0.4s						
FRU1	Bishkek	1.90	42	⇑*i*P	Pb	17 39 29.8	+0.4
	baz=42						
FRU1				⇑*i*S	Sg	17 39 55.5	+0.3
	baz=42						
KBK	Karagaybulak	1.97	50	⇓P	Pg	17 39 31.9	0.0
	16nm,0.2s,SNR=20						
KBK	Karagaybulak	1.97	50	⇑*i*P	Pb	17 39 30.4	-0.2
	baz=50						
KBK				⇑*i*S	Sg	17 39 56.8	-0.5
	baz=50						
BTK	Batken	2.08	230	*e*P	Pb	17 39 30.0	-2.5
BTK				*e*S	Sg	17 40 00.0	-1.1
BTK	Batken	2.08	230	⇑*i*P	Pb	17 39 31.7	-0.8
	baz=30						
BTK				⇑*i*S	Sb	17 39 58.6	-0.1
	baz=30						
CHMS	Chumysh	2.10	40	⇑P	Pg	17 39 34.0	-0.4
	23nm,0.3s,SNR=11						
CHMS				⇓S	Sg	17 40 02.5	+0.9
	23nm,0.2s						
CHMS	Chumysh	2.10	40	⇑*i*P	Pb	17 39 32.5	-0.2
	baz=41						
CHMS				⇑*i*S	Sb	17 40 00.0	+0.9
	baz=41						
DRK	Karamyk	2.10	204	⇑*i*P	Pb	17 39 32.2	-0.7
	baz=3.0						
DRK				⇑*i*S	Sb	17 39 59.6	+0.2
	baz=3.0						
CHMG	Chimgan	2.18	275	*e*P	Pg	17 39 35.0	-1.0
CHMG				*e*S	Sg	17 40 03.0	-1.3
USP	Ospenovka	2.20	32	⇑P	Pb	17 39 35.0	+0.5
	24nm,0.3s,SNR=57						
USP				⇓S	Sg	17 40 04.5	-0.4
	56nm,0.2s						
USP	Ospenovka	2.20	32	⇓*i*P	Pb	17 39 33.5	-1.0
	baz=32						
USP				⇓*i*S	Sb	17 40 02.2	+0.1
	baz=32						
IUG	Iuzhnay	2.28	290	*e*P	Pg	17 39 36.6	-1.1
	547nm,0.2s						
IUG				*e*S	Sg	17 40 06.3	-1.0
	480nm,0.4s						
SGDS	Sogindy	2.41	31	Pg	Pg	17 39 39.4	-0.9
	16nm,0.5s						
SGDS				Lg	Lg	17 40 11.1	
	57nm,0.6s						
KK09	Karatay Array	2.48	315	⇑Pg	Pb	17 39 38.6	-0.7
	12nm,0.5s						
KK09				⇑Lg	Lg	17 40 12.3	
	54nm,0.7s						
YBZ	Yangibazar	2.50	269	*e*P	Pg	17 39 42.0	-0.2
YBZ				*e*S	Sn	17 40 05.0	-1.6
BOOM	Boomskoye usch	2.51	63	⇑*i*P	Pb	17 39 38.1	-1.7
	baz=64						
BOOM				⇑*i*S	Sb	17 40 10.1	-0.9
	baz=64						
TKM2	Tokmak 2	2.51	52	⇑P	Pb	17 39 40.6	+0.8
	22nm,0.3s,SNR=24						
TKM2	Tokmak 2	2.51	52	⇑Pn	Pb	17 39 40.6	+0.8
	21nm,0.5s						
TKM2				⇓Lg	Lg	17 40 15.5	
	38nm,0.6s						
TKM2	Tokmak 2	2.51	52	⇑*i*P	Pb	17 39 38.4	-1.4
	baz=52						
TKM2				⇑*i*S	Sb	17 40 10.2	-0.8
	baz=52						
TGS	TashGRES	2.55	272	*e*P	Pg	17 39 46.0	+3.0
TGS				*e*S	Sg	17 40 20.0	+3.9
ULHL	Ulahol	2.63	70	⇑*i*P	Pb	17 39 39.9	-2.0
	baz=70						
ULHL				⇑*i*S	Sb	17 40 12.9	-1.6
	baz=70						
CHM	Chimkent	2.63	291	*e*P	Pg	17 39 44.1	-0.5
	2.0nm,0.2s						
CHM				*e*S	Sg	17 40 18.9	+0.2
	255nm,0.5s						
TAS	Tashkent	2.72	270	⇓*i*P	Pb	17 39 40.0	-3.3
	baz=70						
TAS				⇓*i*S	Sb	17 40 13.7	-3.3
	baz=70						
KST	Kastek	2.80	53	*e*P	Pg	17 39 46.9	-0.8
	15nm,0.3s						
KST				*e*S	Sg	17 40 24.2	+0.3
	59nm,0.7s						
KST	Kastek	2.80	53	Pg	Pg	17 39 46.9	-0.8
	15nm,0.3s						
KST				Lg	Lg	17 40 24.2	
	59nm,0.7s						
BRLS	Borolday	2.80	306	*e*P	Pb	17 39 45.1	+0.4
	43nm,0.4s						
BRLS				*e*S	Sg	17 40 21.1	-3.0
	76nm,0.5s						
BRLS	Borolday	2.80	306	Pg	Pb	17 39 45.1	+0.4
	43nm,0.4s						
BRLS				Lg	Lg	17 40 21.1	
	76nm,0.5s						
DGS	Degeres	2.81	48	*e*P	Pg	17 39 47.1	-0.8
	7.5nm,0.3s						
DGS				*e*S	Sg	17 40 24.2	0.0
	47nm,0.7s						
DGS	Degeres	2.81	48	Pg	Pg	17 39 47.1	-0.8
	7.5nm,0.3s						
DGS				Lg	Lg	17 40 24.2	
	47nm,0.7s						
KRBS	Karabastau	3.07	41	*e*P	Pb	17 39 51.2	+2.0
	6.9nm,0.3s						
KRBS				*e*S	Sg	17 40 31.1	-1.6
	23nm,0.5s						
KRBS	Karabastau	3.07	41	Pg	Pb	17 39 51.3	+2.0
	6.9nm,0.3s						
KRBS				Lg	Lg	17 40 31.1	
	23nm,0.5s						
MTBS	Maitube	3.13	55	*e*P	Pg	17 39 52.9	-1.2
	2.8nm,0.2s						
MTBS				*e*S	Sg	17 40 34.3	-0.4
	27nm,0.8s						
MTBS	Maitube	3.13	55	Pg	Pg	17 39 52.9	-1.2
	2.8nm,0.2s						
MTBS				Lg	Lg	17 40 34.3	
	27nm,0.8s						
TNSS	Tian-Shan	3.41	60	*e*P	Pg	17 39 58.6	-1.0
	3.5nm,0.4s						
TNSS				*e*S	Sg	17 40 43.6	-0.1
	8.1nm,0.7s						
TNSS	Tian-Shan	3.41	60	Pg	Pg	17 39 58.6	-1.0
	3.5nm,0.4s						
TNSS				Lg	Lg	17 40 43.6	
	8.1nm,0.7s						
MDOK	Medeo	3.54	59	*e*P	Pg	17 40 00.3	-1.6
	5.5nm,0.3s						
MDOK				*e*S	Sg	17 40 46.9	-0.9
	17nm,0.0s						
MDOK	Medeo	3.54	59	⇑Pg	Pg	17 40 00.2	-1.7
	6.3nm,0.7s						
MDOK				⇑Lg	Lg	17 40 49.0	
	26nm,0.9s						
MDOK	Medeo	3.54	59	Pg	Pg	17 40 00.3	-1.6
	5.5nm,0.3s						
MDOK				Lg	Lg	17 40 46.9	
	17nm,0.0s						
KOTS	Kotyrbulak	3.61	58	*e*P	Pg	17 40 02.4	-1.0
	5.8nm,0.3s						
KOTS				*e*S	Sg	17 40 50.3	+0.1
	36nm,0.6s						
KOTS	Kotyrbulak	3.61	58	Pg	Pg	17 40 02.4	-1.0
	5.8nm,0.3s						
KOTS				Lg	Lg	17 40 50.3	
	36nm,0.6s						
CHKK	Chushkaly	3.88	50	*e*P	Pg	17 40 06.2	-2.2
	0.8nm,0.1s						
CHKK				*e*S	Sg	17 40 57.2	-1.5
	28nm,0.5s						
CHKK	Chushkaly	3.88	50	Pg	Pg	17 40 06.2	-2.2
	0.8nm,0.1s						
CHKK				Lg	Lg	17 40 57.2	
	28nm,0.5s						
CHGR	Chuyangaron	3.98	228	⇓*i*P	Pn	17 39 57.9	+2.0
	baz=27						
CHGR				⇓*i*S	Sn	17 40 43.8	+0.8
	baz=27						
SATY	Saty	4.40	66	*e*P	Pg	17 40 16.3	-2.2
	2.3nm,0.3s						
SATY				*e*S	Sg	17 41 14.2	-1.3
	12nm,0.6s						
SATY	Saty	4.40	66	Pg	Pg	17 40 16.3	-2.2
	2.3nm,0.3s						
SATY				Lg	Lg	17 41 14.2	
	12nm,0.6s						
ARXS	Arharly	4.58	51	*e*P	Pg	17 40 19.9	-2.0
	4.3nm,0.4s						
ARXS				*e*S	Sg	17 41 21.1	-0.1
	16nm,0.8s						
ARXS	Arharly	4.58	51	Pg	Pg	17 40 19.9	-2.0
	4.3nm,0.4s						
ARXS				Lg	Lg	17 41 21.1	
	16nm,0.8s						
KPKS	Kokpek	4.74	62	*e*P	Pg	17 40 22.5	-2.5
	5.2nm,0.6s						
KPKS				*e*S	Sg	17 41 24.9	-1.6
	15nm,0.6s						
UZB	Uzynbulak	4.86	67	*e*P	Pg	17 40 23.9	-3.3
	2.9nm,0.2s						
UZB				*e*S	Sg	17 41 27.4	-2.7
	10nm,0.5s						
UZB	Uzynbulak	4.86	67	Pg	Pg	17 40 23.9	-3.3
	2.9nm,0.2s						
UZB				Lg	Lg	17 41 27.5	
	10nm,0.5s						
BLB	Baldybastay	4.90	55	Pg	Pg	17 40 25.3	-2.8
	7.6nm,0.6s						
BLB				Lg	Lg	17 41 29.2	
	18nm,0.5s						
MK31	Makanchi Array	8.63	48	⇑Pn	Pn	17 41 02.4	+2.7
	1.8nm,1.0s,baz=231,slow=13,SNR=5.6						
MK31				⇑Lg	Lg	17 43 30.9	
	1.4nm,0.7s,baz=238,slow=27						

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*MOS **31** 17:50:55.5±0.0, 43.°07N×44.°07E, h11^{km}, MPVA4.1*
*NORS **31** 17:50:55.5±0.0, 43.°05N×44.°11E, h11^{km}, MPVA4.1, FELT I=III-IV MSK at Cora-Ursdon*
*TIF **31** 17:50:56.5, 43.°10N×44.°07E, h4^{km}±1^{km}*
*IASPEI **31** 17:50:57.3±0.8, 43.°09N±0.°02×44.°10E±0.°02, h9^{km}±6^{km}, Error ellipse: s-maj=2.8km s-min=2.2km az=23.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*DRS **31** 17:50:57.3±0.0, 42.°96N×44.°12E, h16^{km}*
ISC 31 17:50:57.6±0.8**, 43.°11N**±0.°01×**44.°12E**±0.°01**, h11**^{km}±5^{km}**, n116, σ1^{s}29**/218**, 8C-1D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KORR	Kora	0.04	240	*e*PG	Pg	17 50 58.4	-1.4
ARNR	Ardon	0.14	59	*i* PG	Pg	17 51 00.5	-0.4
ARNR	Ardon	0.14	59	*i* Pg	Pg	17 51 00.5	-0.4
ARNR				*e*Sg	Sg	17 51 03.9	+0.6
STDR	Stavd-Durt	0.26	351	*e*PG	Pg	17 51 03.5	+0.5
STDR				*e*S	Sb	17 51 09.4	+0.4
STDR	Stavd-Durt	0.26	351	*i* Pg	Pg	17 51 03.3	+0.2
STDR				*e*Sg	Sb	17 51 09.2	+0.2
LSNR	Lesken	0.27	308	*i* PG	Pg	17 51 03.2	0.0
LSNR				*e*S	Sb	17 51 08.5	-0.8
LSNR				pmax	pmax		
	comp=Z,459nm,0.2s						
LSNR				smax	smax		
	comp=N,2μm,0.3s						
LSNR	Lesken	0.27	308	*i* Pg	Pg	17 51 03.0	-0.3
LSNR				*e*Sg	Sg	17 51 08.2	+1.2
LACR	Lac	0.31	155	*e*PG	Pg	17 51 02.9	-1.0
LACR				*e*S	Sg	17 51 08.3	+0.2
LACR	Lac	0.31	155	*e*Pg	Pg	17 51 02.9	-1.0
LACR				*e*Sg	Sg	17 51 08.3	+0.2
BTKR	Batakoyurt	0.41	49	*e*PG	Pb	17 51 06.2	-0.7
BTKR				*e*S	Sb	17 51 12.4	-0.7
BTKR	Batakoyurt	0.41	49	*e*Pg	Pb	17 51 06.2	-0.7
BTKR				*e*Sg	Sb	17 51 12.4	-0.7
VLKR	Vladikavkaz	0.41	98	*e*PG	Pg	17 51 05.6	-0.2
VLKR				*e*S	Sb	17 51 13.0	-0.3
VLKR	Vladikavkaz	0.41	98	*e*Pg	Pg	17 51 05.5	-0.2
VLKR				*e*Sg	Sb	17 51 12.2	-1.1
DIGR	Digorskoe uzhe	0.45	242	*e*PG	Pg	17 51 05.4	-1.1
DIGR				*e*S	Sg	17 51 11.8	-0.6
DIGR	Digorskoe uzhe	0.45	242	*e*Pg	Pg	17 51 05.4	-1.1
DIGR				*e*Sg	Sg	17 51 11.8	-0.6
NCK	Nalchik	0.54	316	*e*PG	Pb	17 51 08.9	-0.4
NCK				*e*S	Sb	17 51 18.8	+1.7
NCK	Nalchik	0.54	316	*e*Pg	Pb	17 51 08.8	-0.4
NCK				*e*Sg	Sb	17 51 18.1	+1.1
KMGR	Komgaron	0.55	95	*e*PG	Pg	17 51 07.2	-1.1
KMGR				*e*S	Sb	17 51 17.0	-0.2
KMGR	Komgaron	0.55	95	*e*Pg	Pb	17 51 09.6	+0.2
KMGR				*e*Sg	Sb	17 51 17.4	+0.2
PNSH	Pansheti	0.60	142	P	Pg	17 51 08.0	-1.3
PNSH				S	Sg	17 51 16.5	-0.7
PNSH	Pansheti	0.60	142	PG	Pg	17 51 07.9	-1.3

PNSH				S	Sg	17 51 16.5	-0.7
PRTR	Priterechnaya	0.65	10	*e*PG	Pn	17 51 12.0	-0.9
PRTR				*e*S	Sn	17 51 24.0	+0.8
PRTR	Priterechnaya	0.65	10	*e*Pg	Pn	17 51 12.0	-0.9
PRTR				*e*Sg	Sn	17 51 23.9	+0.8
GUDG	Gudauri	0.69	158	P	Pb	17 51 12.0	+0.1
GUDG				S	Sb	17 51 21.9	+0.3
GUDG	Gudauri	0.69	158	PG	Pb	17 51 12.0	+0.1
GUDG				S	Sb	17 51 21.9	+0.3
ONI	Oni	0.71	224	P	Pg	17 51 10.6	-0.8
ONI				S	Sg	17 51 21.0	+0.2
ONI	Oni	0.71	224	PG	Pg	17 51 10.6	-0.8
ONI				S	Sg	17 51 20.9	+0.2
TRKR	Terskaya	0.76	36	*e*PG	Pn	17 51 14.2	-0.1
TRKR				*e*S	Sn	17 51 26.9	+1.1
TRKR				pmax	pmax		
	comp=Z,270nm,0.6s						
TRKR				smax	smax		
	comp=N,237nm,0.4s						
TRKR	Terskaya	0.76	36	*e*Pg	Pn	17 51 14.3	-0.1
TRKR				*e*Sg	Sn	17 51 27.0	+1.1
KBTC	Kuba-Taba	0.88	324	*e*PG	Pb	17 51 14.8	-0.1
KBTC				*e*S	Sn	17 51 29.3	+0.5
KBTC	Kuba-Taba	0.88	324	*e*Pg	Pb	17 51 14.8	-0.1
KBTC				*e*Sg	Sn	17 51 29.3	+0.5
NEY	Neytrino	1.03	278	*e*PG	Pg	17 51 16.1	-1.4
NEY				*e*S	Sg	17 51 29.8	-1.1
NEY	Neytrino	1.03	278	*i* Pg	Pg	17 51 16.0	-1.4
NEY				*i* Sg	Sg	17 51 29.5	-1.4
KBZ	Khabaz	1.08	305	*i* PG	Pb	17 51 16.9	-1.5
KBZ				*i* S	Sn	17 51 34.4	+0.6
KBZ	Khabaz	1.08	305	*i* Pg	Pb	17 51 16.9	-1.5
KBZ				*i* Sg	Sn	17 51 34.4	+0.6
TKB	Tkibuli	1.12	228	P	Pb	17 51 18.1	-1.0
TKB				S	Sn	17 51 34.2	-0.6
TKB	Tkibuli	1.12	228	PG	Pb	17 51 18.1	-1.0
TKB				S	Sn	17 51 34.2	-0.6
PYA1	Pyatigorsk	1.21	322	*e*PG	Pn	17 51 20.1	-0.4
PYA1				*e*S	Sn	17 51 36.9	-0.1
PYA1	Pyatigorsk	1.21	322	*e*Pg	Pn	17 51 20.1	-0.4
PYA1				*e*Sg	Sn	17 51 36.9	-0.1
SHA1	Shidzhatmaz	1.24	301	⇑*i*PG	Pn	17 51 20.8	-0.3
SHA1				*e*S	Sn	17 51 38.0	+0.1
SHA1	Shidzhatmaz	1.24	301	*e*Pg	Pn	17 51 20.0	-1.1
SHA1				*e*Sg	Sg	17 51 37.6	+0.1
BEYR	Belyy Ugol+	1.31	314	*e*PG	Pn	17 51 22.0	+0.1
BEYR				*e*S	Sg	17 51 40.0	+0.3
BEYR	Belyy Ugol+	1.31	314	*e*Pg	Pn	17 51 21.9	+0.1
BEYR				*e*Sg	Sg	17 51 40.0	+0.3
KIV0	Kislovodsk Arr	1.34	310	*i* Pg	Pn	17 51 22.3	-0.1
KIV0				*e*Sg	Sn	17 51 40.5	+0.2
KIV	Kislovodsk	1.34	310	*e*PG	Pn	17 51 22.3	-0.1
KIV				*e*S	Sn	17 51 40.5	+0.1
KIV	Kislovodsk	1.34	310	*e*Pg	Pn	17 51 22.3	-0.1
KIV				*e*Sg	Sn	17 51 40.5	+0.1
SEAG	Tbilisi Sea	1.44	159	PG	Pg	17 51 27.6	+2.4
DVE	Vedeno	1.48	95	*e*PG	Pg	17 51 25.3	-0.7
DVE				*e*S	Sg	17 51 45.3	+0.1
DVE	Vedeno	1.48	95	*e*Pg	Pg	17 51 25.3	-0.7
DVE				*e*Sg	Sg	17 51 45.3	+0.1
BRNG	Burnasheti	1.50	188	P	Pb	17 51 25.3	-0.3
BRNG				S	Sg	17 51 47.9	+2.0
BTNK	Botanikuri	1.51	160	P	Pn	17 51 23.5	-1.2
BTNK				S	Sb	17 51 44.8	-0.1
BTNK	Botanikuri	1.51	160	PG	Pn	17 51 23.5	-1.2
BTNK				S	Sb	17 51 44.8	-0.1
CHVG	Ch'k'valeri	1.54	256	P	Pg	17 51 27.3	0.0
CHVG	Ch'k'valeri	1.54	256	PG	Pg	17 51 27.3	0.0
TRLG	Trialeti	1.57	180	P	Pb	17 51 26.1	-0.6
TRLG				S	Sg	17 51 47.7	-0.3
TRLG	Trialeti	1.57	180	PG	Pb	17 51 26.2	-0.6
TRLG				S	Sg	17 51 47.7	-0.3
BTLR	Botlikh	1.61	105	*e*PG	Pb	17 51 26.6	-0.7
BTLR				*i* S	Sg	17 51 49.1	-0.2
BTLR				pmax	pmax		
	comp=Z,61nm,0.5s						
BTLR				smax	smax		
	comp=E,185nm,0.3s						
BTLR	Botlikh	1.61	105	*e*Pg	Pb	17 51 26.7	-0.7
BTLR				*e*Sg	Sg	17 51 48.8	-0.5
ABS	Abastumani	1.66	216	P	Pb	17 51 27.8	-0.5
ABS				S	Sg	17 51 51.0	-0.1
ABS	Abastumani	1.66	216	PN	Pb	17 51 27.8	-0.5
ABS				S	Sg	17 51 51.0	-0.1
KZRT	Kazreti	1.73	173	PN	Pg	17 51 30.4	-0.5
AKH	Akhalkalaki	1.76	196	P	Pb	17 51 29.7	-0.3
AKH	Akhalkalaki	1.76	196	PN	Pb	17 51 29.7	-0.3
DMNI	Dmanisi	1.78	178	P	Pb	17 51 29.7	-0.6
DMNI				S	Sg	17 51 53.7	-1.1
DMNI	Dmanisi	1.78	178	PN	Pb	17 51 29.7	-0.6
DMNI				S	Sg	17 51 53.7	-1.1
DLMR	Dylym	1.84	90	*e*PN	Pb	17 51 30.2	-1.1
DLMR				*e*S	Sg	17 51 56.7	-0.1
DLMR	Dylym	1.84	90	*e*Pg	Pb	17 51 30.2	-1.1
DLMR				*e*Sg	Sg	17 51 56.7	-0.1
ALER	Alexandrovskoy	1.87	333	*e*PN	Pn	17 51 29.8	+0.2
ALER				*e*S	Sb	17 51 55.1	-0.1
ALER	Alexandrovskoy	1.87	333	*e*Pg	Pb	17 51 32.1	+0.2
ALER				*e*Sg	Sg	17 51 56.9	-0.8
BGD	Bogdanovka	1.88	192	P	Pb	17 51 31.1	-1.0
BGD				S	Sg	17 51 58.3	+0.2
BGD	Bogdanovka	1.88	192	PN	Pb	17 51 31.1	-1.0
BGD				S	Sg	17 51 58.3	+0.2
DGRG	David-gareji	1.90	150	P	Pb	17 51 31.9	-0.4
DGRG				S	Sg	17 52 01.6	+3.0
DGRG	David-gareji	1.90	150	PN	Pb	17 51 31.9	-0.4
DGRG				S	Sg	17 52 01.7	+3.0
XNZR	Khunzakh	1.98	106	*e*PN	Pb	17 51 33.2	-0.7
XNZR				*e*S	Sg	17 51 59.9	-1.5
XNZR	Khunzakh	1.98	106	*e*Pg	Pb	17 51 33.2	-0.7
XNZR				*e*Sg	Sg	17 51 59.9	-1.5
DBC	Dubki	1.99	92	*e*PN	Pb	17 51 33.6	-0.2
DBC				*e*S	Sg	17 52 00.5	-1.0
DBC	Dubki	1.99	92	*e*Pg	Pb	17 51 33.6	-0.2
DBC				*e*Sg	Sg	17 52 00.5	-1.0
UNCR	Uncukul	2.00	100	*e*PN	Pb	17 51 34.5	+0.4
UNCR				*i* S	Sg	17 52 03.2	+1.2
UNCR				pmax	pmax		
	comp=Z,78nm,0.4s						
UNCR				smax	smax		
	comp=N,203nm,0.5s						
UNCR	Uncukul	2.00	100	*e*Pg	Pb	17 51 34.6	+0.4
UNCR				*e*Sg	Sg	17 52 02.7	+0.7
LGD	Lagodekhi	2.02	128	P	Pb	17 51 34.5	+0.1
LGD				S	Sg	17 52 02.2	-0.4
LGD	Lagodekhi	2.02	128	PN	Pb	17 51 34.5	+0.1
LGD				S	Sg	17 52 02.2	-0.4
KRNR	Karanay	2.06	97	*e*PN	Pb	17 51 33.8	-1.4
KRNR				*e*S	Sb	17 52 00.6	-0.3
KRNR	Karanay	2.06	97	*e*Pg	Pb	17 51 33.8	-1.4
KRNR				*e*Sg	Sb	17 52 00.6	-0.3
GOF	Gofitskoye	2.10	339	⇑*e*PN	Pb	17 51 34.9	-0.8
GOF				*e*S	Sg	17 52 06.6	+1.6
GOF				pmax	pmax		
	comp=Z,11nm,0.6s						
GOF				smax	smax		
	comp=N,93nm,0.8s						
GOF				smax	smax		
	comp=E,37nm,0.4s						
GOF	Gofitskoye	2.10	339	*e*Pg	Pb	17 51 34.8	-0.9
ARXR	Arkhyz	2.12	283	*e*PN	Pb	17 51 36.1	-0.1
ARXR				*e*S	Sg	17 52 04.8	-1.1
ARXR	Arkhyz	2.12	283	*e*Pg	Pb	17 51 36.1	-0.1
ARXR				*e*Sg	Sg	17 52 04.8	-1.1
NVNR	Nevinnomyssk	2.17	315	*e*PN	Pg	17 51 38.2	-1.0
NVNR				*e*S	Sg	17 52 06.9	-0.4
NVNR	Nevinnomyssk	2.17	315	*e*Pn	Pg	17 51 38.2	-1.0
NVNR				*e*Sn	Sg	17 52 06.9	-0.4
ARKR	Arakani	2.17	102	*e*PN	Pb	17 51 36.8	-0.2
ARKR				*e*S	Sg	17 52 06.8	-0.7
ARKR				*i* S	Sb	17 52 07.7	+3.7
ARKR				pmax	pmax		
	comp=Z,22nm,0.4s						
ARKR				smax	smax		
	comp=E,52nm,0.3s						
ARKR				smax	smax		
	comp=N,67nm,0.4s						
ARKR				smax	smax		
	comp=N,60nm,0.8s						
ARKR	Arakani	2.17	102	*e*Pg	Pb	17 51 37.3	+0.3
ARKR				*e*Sg	Sb	17 52 04.7	+0.7
BUJR	Buynaksk	2.21	96	*e*PN	Pb	17 51 37.9	+0.3
BUJR				*e*S	Sg	17 52 08.8	+0.1
BUJR	Buynaksk	2.21	96	*e*Pg	Pb	17 51 37.9	+0.3
BUJR				*e*Sg	Sg	17 52 08.8	+0.1
GNBR	Gunib	2.21	108	*e*PN	Pb	17 51 36.4	-1.3
GNBR				*e*S	Sb	17 52 05.2	0.0
GNBR				*i* S	Sg	17 52 05.7	-3.1
GNBR				pmax	pmax		
	comp=Z,24nm,0.3s						
GNBR				smax	smax		
	comp=N,103nm,0.4s						
GNBR				smax	smax		
	comp=E,101nm,0.3s						
GNBR				smax	smax		
	comp=N,95nm,0.4s						
GNBR	Gunib	2.21	108	*e*Pg	Pb	17 51 36.5	-1.3
GNBR				*e*Sg	Sb	17 52 05.8	+0.6
DDFL	Dedoflistskaro	2.23	138	P	Pg	17 51 39.8	-0.5
DDFL				S	Sg	17 52 15.5	+6.3
DDFL	Dedoflistskaro	2.23	138	PN	Pg	17 51 39.8	-0.5
DDFL				S	Sg	17 52 15.5	+6.3
KMKR	Kumukh	2.41	113	*e*PN	Pb	17 51 40.2	-0.8
KMKR				*e*S	Sb	17 52 11.8	+1.0
KMKR				*i* S	Sg	17 52 12.3	-2.6
KMKR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KMKR				smax	smax		
	comp=N,102nm,0.6s						
KMKR				smax	smax		
	comp=E,94nm,0.5s						
KMKR				smax	smax		
	comp=N,110nm,0.6s						
KMKR	Kumukh	2.41	113	*e*Pn	Pb	17 51 40.3	-0.8
KMKR				*e*Sn	Sb	17 52 11.8	+1.0
AHMR	Akhmetovskaya	2.47	296	*e*PN	Pb	17 51 42.5	+0.5
AHMR				*e*S	Sb	17 52 14.4	+2.0
AHMR	Akhmetovskaya	2.47	296	*e*Pn	Pb	17 51 42.5	+0.5
AHMR				*e*Sn	Sb	17 52 14.4	+2.0
SGKR	Sergokala	2.69	103	*e*PN	Pb	17 51 44.8	-0.9
SGKR				*e*S	Sb	17 52 18.1	-0.6
RPOR	Krasnaya Polya	2.87	283	*e*PN	Pb	17 51 47.1	-1.8
RPOR				*e*S	Sn	17 52 18.0	+0.1
GUZR	Guzeripl'	3.04	288	*e*PN	Pb	17 51 51.5	-0.3
GUZR				*e*S	Sb	17 52 31.0	+2.0
AKT	Akhty	3.13	120	*e*PN	Pb	17 51 54.2	+0.8
AKT				*e*S	Sb	17 52 33.8	+2.1
SOC	Sochi	3.25	280	*e*PN	Pn	17 51 46.9	-1.6
SOC				*e*		17 52 26.1	
SOC				MLR	MLR		
	comp=Z,73nm,14.0s						
BRTR	Keskin Array B	8.57	250	*i* P	Pn	17 53 04.5	+2.8
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AKTO	Aktyubinsk	12.01	48	P	Pn	17 53 51.5	+2.9
AKTO				S	Sn	17 55 58.9	-3.6
AKTO	Aktyubinsk	12.01	48	⇑P	Pn	17 53 51.1	+2.4
	comp=Z,3.5nm,1.4s						
AKTO				⇑S	Sn	17 55 58.9	-3.6
	comp=Z,2.5nm,1.0s						
AB31	Akbulak array	12.56	55	P	Pn	17 53 57.5	+1.3
AB31	Akbulak array	12.56	55	⇑P	Pn	17 53 57.5	+1.3
	comp=Z,1.4nm,0.8s,baz=244,slow=12,SNR=14						
AB31				⇓S	Sn	17 56 10.0	-6.0
	comp=Z,0.7nm,0.6s,baz=246,slow=24,SNR=3.2						
OBN	Obninsk	12.98	340	*e*P	Pn	17 54 03.3	+1.4
OBN				pmax	pmax		
	comp=Z,5.0nm,0.4s						
BRVK	Borovoye	20.01	51	⇑*e*P	P	17 55 30.6	+0.5
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AAK	Ala-Archa	22.21	81	⇑*e*P	P	17 55 54.9	+0.7
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KURK	Kurchatov	24.59	60	⇑*e*P	P	17 56 19.9	+2.4
MKAR	Makanchi Array	27.08	69	*i* P	P	17 56 39.7	-0.5

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*IDC **31** 18:04:15.8±9.9, 14°.79S×167°.09E, h98^{km}±38^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.4/30, mbtmp4.1/4, Error ellipse: s-maj=121.1km s-min=36.1km az=61.0*

*NOU **31** 18:04:15.7, 14°.73S×167°.39E, h124^{km}, MLv5.1/14, Vanuatu Islands*

ISC 31 18:04:16.9±1.9**, 14°.9S**±0°.1×**167°.1E**±0°.2**, h100**^{km}**, n13, σ1^{s}65**/15**, mb4.0**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.58	173	P	Pn	18 04 36.7	+3.4
DVP	Devils Point	3.02	160	P	Pn	18 05 03.3	+0.5
KOUNC	Koumac, New Ca	6.27	205	P	Pn	18 05 49.2	+2.4
YATNC	Mamie plateau,	7.16	182	P	Pn	18 05 57.9	-1.0
DZM	Mont Dzumac	7.19	185	P	Pn	18 05 59.9	+0.4
	3.7nm,0.3s,baz=123,slow=19,SNR=29						
DZM				S	Sn	18 07 19.5	-0.2
	3.0nm,0.3s,baz=151,slow=23,SNR=1.9						
DZM	Mont Dzumac	7.19	185	P	Pn	18 06 00.2	+0.7
NOUC	Port Laguerre	7.24	186	P	Pn	18 06 01.3	+1.3
ONTNC	Ouen Toro	7.43	185	P	Pn	18 06 03.8	+1.2
OUENC	Ouen Island, N	7.51	182	P	Pn	18 06 05.2	+1.4
PINNC	Pines Island,	7.71	178	P	Pn	18 06 07.4	+1.0
STKA	Stephens Creek	28.80	230	P	P	18 10 05.8	+0.3
	2.5nm,0.4s,baz=52,slow=9.1,SNR=14						
WRA	Warramunga Arr	31.66	256	P	P	18 10 29.5	-1.5
	0.2nm,0.4s,baz=85,slow=8.2,SNR=6.2						
ASAR	Alice Springs	32.50	249	P	P	18 10 36.8	-1.5
	1.0nm,0.4s,baz=78,slow=9.2,SNR=63						
ASAR				ScP	ScP	18 16 56.5	-1.6
	0.5nm,0.7s,baz=93,slow=3.9,SNR=4.9						

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*TRN **31** 18:06:22.3, 15°.98N×61°.55W, h140^{km}, MD4.0*

*IDC **31** 18:06:22.6±1.1, 15°.92N×61°.79W, h132^{km}±19^{km}, mb3.5/6, mb1 3.8/7, mb1mx3.4/47, mbtmp3.9/7, Error ellipse: s-maj=55.8km s-min=8.6km az=80.0*

ISC 31 18:06:22.8±0.7**, 15°.94N**±0°.04×**61°.60W**±0°.07**, h144**^{km}±5^{km}**, n51, σ0^{s}73**/76**, mb3.9**/6**, 2C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TDBA	Terre de Bas,	0.10	200	*e*P	Pn	18 06 42.8	+0.6
TDBA				*e*S	Sn	18 06 56.7	-0.2
TBG	Guadaloupe-3	0.10	205	*e*P	Pn	18 06 42.8	+0.5
TBG				*e*S	Sn	18 06 56.7	-0.2
CBE	Ff, Capester	0.12	357	*e*P	Pn	18 06 42.8	+0.5
MAGL	Barre de l'ile	0.31	89	*e*P	Pn	18 06 43.3	+0.6
MAGL				*e*S	Sn	18 06 57.8	+0.1
MDCT	Cottage Hill,	0.35	158	*e*P	Pn	18 06 43.3	+0.5
MDCT				*e*S	Sn	18 06 57.7	-0.3
DSLB	Salisbury	0.53	161	⇑*i*P	Pn	18 06 44.1	+0.4
DSLB				*e*S	Sn	18 06 59.5	0.0
H05N1	Guadeloupe/Mar	0.64	55	P	Pn	18 06 44.9	+0.6
H05N1				S	Sn	18 07 00.6	0.0
MDN	Morne-Daniel	0.65	162	⇑*i*P	Pn	18 06 44.7	+0.3
MDN				*e*S	Sn	18 07 00.3	-0.5
DLPL	La Plaine	0.70	151	*e*P	Pn	18 06 45.3	+0.6
DLPL				*e*S	Sn	18 07 01.3	0.0
ANBD	Bethesda, Anti	1.11	352	⇓*i*P	Pn	18 06 48.2	+0.2
ANBD				*e*S	Sn	18 07 06.3	-0.9
SVN	Savane Anatole	1.17	159	*e*P	Pn	18 06 48.9	+0.1
ANDO	Antigua, Disas	1.18	349	*e*P	Pn	18 06 48.7	0.0
ANDO				*e*S	Sn	18 07 07.8	-0.7
PCM	Pelee Case Pet	1.18	161	*e*P	Pn	18 06 48.8	0.0
PCM	Pelee Case Pet	1.18	161	*e*P	Pn	18 06 49.3	+0.5
BAMF	Morne Balai	1.20	159	*e*P	Pn	18 06 49.3	+0.3
GBMF	Grand Be	1.22	160	*e*P	Pn	18 06 49.2	+0.1
PML	Morne Lenard	1.22	161	*e*P	Pn	18 06 49.1	0.0
FDF	Fort de France	1.28	160	*e*P	Pn	18 06 49.8	0.0
ILAM	Ilet Lapin Mar	1.36	149	*e*P	Pn	18 06 50.5	0.0
ILAM				*e*S	Sn	18 07 11.4	-0.1
ZAM	Aeronautique	1.47	158	*e*P	Pn	18 06 51.8	+0.2
LPMF	Morne Lapointe	1.49	156	*e*P	Pn	18 06 51.7	-0.2
TRMF	Trois Ilets	1.50	159	*e*P	Pn	18 06 52.1	+0.1
BIM	Bigot	1.51	160	*e*P	Pn	18 06 52.3	+0.2
BIM				*e*S	Sn	18 07 15.0	+0.6
NVDO	Nevis, Disaste	1.52	320	*e*P	Pn	18 06 52.1	-0.1
NVDO				*e*S	Sn	18 07 14.2	-0.4
MVM	Montagne Vaucl	1.54	154	*e*P	Pn	18 06 52.6	+0.1
MPOM	Morne Pois Mar	1.65	154	*e*P	Pn	18 06 53.8	+0.2
MPOM				*e*S	Sn	18 07 16.4	-0.8
H05S1	Guadeloupe/Mar	1.68	154	P	Pn	18 06 54.1	+0.2
	SNR=575						
H05S1				S	Sn	18 07 17.9	+0.2
ANWB	Willy Bob	1.72	354	⇓*i*P	Pn	18 06 54.5	+0.1
ANWB				*e*S	Sn	18 07 17.4	-1.3
SKI	Saint Kitts	1.76	322	*e*P	Pn	18 06 55.2	+0.4
SKI				*e*S	Sn	18 07 19.2	-0.2
SLBI	Saint Lucia, B	2.00	162	*e*P	Pn	18 06 57.5	-0.2
SLBI				*e*S	Sn	18 07 24.6	+0.3
SEUS	St. Eustatius	2.03	320	*e*P	Pn	18 06 58.4	+0.4
SEUS				*e*S	Sn	18 07 25.6	+0.7
SABA	Saba	2.29	317	*e*S	Sn	18 07 30.8	+0.2
MCLT	Moule a Chique	2.31	164	*e*P	Pn	18 07 02.4	+1.0
MCLT				*e*S	Sn	18 07 31.6	+0.5
SMRT	St. Maarten	2.52	326	*e*	Pn	18 07 02.7	-1.3
SMRT				*e*S	Sn	18 07 35.0	-0.7
SVB	Belmont	2.68	173	*e*P	Pn	18 07 06.0	0.0
SVB				*e*S	Sn	18 07 39.2	0.0
BBGH	Gun Hill	3.42	144	*e*P	Pn	18 07 16.4	+1.1
BBGH				*e*S	Sn	18 07 54.8	-1.2
GCMP	Grenada, Carri	3.44	177	*e*P	Pn	18 07 16.2	+0.5
GCMP				*e*S	Sn	18 07 56.8	+0.1
BBSP	Saint Philip	3.50	143	*e*P	Pn	18 07 17.2	+0.7
BBSP				*e*S	Sn	18 07 57.9	-0.2
GRGR	Grenville	3.79	181	*e*	Pn	18 07 26.6	+6.4
GRGR				*e*S	Sn	18 08 04.8	+0.1
TOSP	Speyside	4.73	167	*e*	Pn	18 07 34.5	+1.8
TOSP	Speyside	4.73	167	*e*S	Sn	18 08 25.2	-1.8
TRN	Trinidad (W)	5.27	178	*e*P	Pn	18 07 40.7	+0.9
TRN	Trinidad (W)	5.27	178	*e*S	Sn	18 08 37.4	-2.4
MDP	Montagnes des	13.91	140	P	Pn	18 09 31.9	-2.1
	0.2nm,0.3s,baz=80,slow=9.7,SNR=1.3						
MDP				S	Sn	18 11 56.2	-12
	3.7nm,0.3s,baz=234,slow=20,SNR=16						
PTGA	Pitinga	16.65	174	P	P	18 10 07.5	-0.3
	0.8nm,0.3s,baz=337,slow=11,SNR=6.8						
SCHQ	Schefferville	39.02	355	P	P	18 13 37.4	+2.2
	1.5nm,0.4s,baz=182,slow=7.8,SNR=8.4						
PDAR	Pinedale Array	48.77	313	P	P	18 14 53.7	+0.2
	1.6nm,0.8s,baz=118,slow=9.9,SNR=10						
NVAR	Mina Array Bea	54.28	306	P	P	18 15 34.8	+0.3
	0.5nm,0.6s,baz=104,slow=6.3,SNR=5.1						
PLCA	Paso Flores	56.99	188	P	P	18 15 52.5	-1.0
	1.1nm,0.8s,baz=48,slow=12,SNR=4.0						
YKA	Yellowknife Ar	59.30	334	P	P	18 16 09.3	+0.2
	1.4nm,0.6s,baz=106,slow=7.4,SNR=25						
ILAR	Eielson Array	73.71	334	P	P	18 17 41.2	+0.5
	0.3nm,0.4s,baz=88,slow=4.8,SNR=6.6						

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*TAP **31** 18:21:13.7, 24°.84N×122°.95E, h116^{km}, ML2.7, D*

*JMA **31** 18:21:13.8±0.4, 24°.78N×122°.86E, h129^{km}±4^{km}, M2.0*

ISC 31 18:21:15.6±2.2**, 24°.75N**±0°.08×**122°.87E**±0°.03, **h112**^{km}±16^{km}**, n37, σ0^{s}88**/62**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.32	157	*e*P	Pn	18 21 31.0	-0.7
	baz=168						
IRIF	Iriomote-Funau	0.89	118	P	Pn	18 21 36.0	+0.2
IRIF				S	Sn	18 21 51.7	+0.6
TIPB	Shuangxi	0.98	283	*e*P	Pn	18 21 36.4	-0.4
	baz=270						
TIPB				*e*S	Sn	18 21 52.6	-0.1
	baz=270						
NWF	Wu-fen Shan	1.04	288	*e*S	Sn	18 21 53.7	-0.3
	baz=276						
ENA	Nanau	1.08	253	*e*P	Pn	18 21 37.7	-0.1
	baz=244						
ENA				*e*S	Sn	18 21 54.9	+0.3
	baz=244						
HATJ	Hateruma jima	1.10	129	P	Pn	18 21 38.6	+0.6
HATJ				*e*S	Sn	18 21 56.6	+1.7
TWE	Neicheng	1.10	269	*e*P	Pn	18 21 38.3	+0.3
	baz=262						
TWE				*e*S	Sn	18 21 55.7	+0.8
	baz=262						
JKRS	Kuro-shima	1.16	116	P	Pn	18 21 39.0	+0.4
JKRS				S	Sn	18 21 57.0	+1.0
ENTT	Nioudou	1.19	265	*e*P	Pn	18 21 39.1	+0.1
	baz=257						
ENTT				*e*S	Sn	18 21 58.0	+1.2
	baz=257						
JIJ	Ishigaki jima	1.22	108	P	Pn	18 21 39.0	-0.3
JIJ				S	Sn	18 21 57.0	-0.3
NWLT	Wulai	1.25	271	*e*S	Sn	18 21 58.0	+0.1
	baz=267						
NDT	Datong Townshi	1.25	263	*e*P	Pn	18 21 39.8	+0.2
	baz=260						
NDT				*e*S	Sn	18 21 58.5	+0.7
	baz=260						
ETL	Fush Village	1.28	243	S	Sn	18 21 58.8	+0.2
	baz=234						
NACB	Ninganchiao	1.30	244	*e*P	Pn	18 21 39.5	-0.7
	baz=242						
NACB				S	Sn	18 21 59.5	+0.6
	baz=242						
JISG	Ishigakijimahi	1.32	97	P	Pn	18 21 39.7	-0.7
JISG				S	Sn	18 21 58.7	-0.5
TWD	Chiawan	1.34	240	*e*S	Sn	18 21 59.5	-0.3
	baz=232						
YHNB	Yeheng	1.36	267	P	Pn	18 21 40.8	-0.2
	baz=263						
YHNB				*e*S	Sn	18 22 00.4	+0.1
	baz=263						
ETLH	Xiulin Townshi	1.38	247	*e*P	Pn	18 21 40.5	-0.7
	baz=245						
ETLH				*e*S	Sn	18 22 00.3	-0.4
	baz=245						
NSK	Sanguang	1.38	267	*e*P	Pn	18 21 40.8	-0.4
	baz=263						
NSK				*e*S	Sn	18 22 00.3	-0.3
	baz=263						
NNSB	Datong	1.40	257	*e*P	Pn	18 21 41.0	-0.5
	baz=247						
NNSB				*e*S	Sn	18 22 01.0	-0.1
	baz=247						
WHF	Hehuan Shan	1.59	248	*e*P	Pn	18 21 43.4	-0.6
	baz=245						
WHF				*e*S	Sn	18 22 04.9	-0.6
	baz=245						
TWT	Tachien	1.62	252	*e*S	Sn	18 22 06.6	+0.6
	baz=244						
JTJ	Tarama	1.67	93	*e*S	Sn	18 22 05.8	-0.8
CHGB	Renai	1.70	246	*e*P	Pn	18 21 45.0	-0.2
	baz=239						
CHGB				*e*S	Sn	18 22 08.1	+0.5
	baz=239						
EGFH	Guangfu	1.71	231	*e*P	Pn	18 21 42.9	-2.1
	baz=230						
EGFH				*e*S	Sn	18 22 06.5	-0.9
	baz=230						
OWD	Renai	1.74	243	*e*S	Sn	18 22 08.8	+0.3
	baz=236						
WHP	Taichung City	1.82	255	*e*P	Pn	18 21 46.0	-0.5
	baz=250						
WHP				*e*S	Sn	18 22 10.5	+0.5
	baz=250						
HGSD	Ruisui	1.82	227	*e*P	Pn	18 21 47.0	+0.5
	baz=224						
HGSD				*e*S	Sn	18 22 10.3	+0.2
	baz=224						
VWDT	VWDT	1.87	238	*e*P	Pn	18 21 47.1	+0.1
	baz=232						
VWDT				*e*S	Sn	18 22 10.9	-0.1
	baz=232						
EHY	Hungye	1.88	229	*e*P	Pn	18 21 46.1	-1.2
	baz=228						
EHY				*e*S	Sn	18 22 10.4	-1.0
	baz=228						
YULB	Yu-li	1.98	227	P	Pn	18 21 47.2	-1.2
	baz=233						
YULB				S	Sn	18 22 12.3	-1.2
	baz=233						
SSLB	Suanglung	2.00	242	*e*P	Pn	18 21 48.9	+0.2
	baz=236						
SSLB				*e*S	Sn	18 22 15.3	+1.3
	baz=236						
TYC	Yuchr	2.02	246	*e*P	Pn	18 21 49.2	+0.2
	baz=239						
TYC				*e*S	Sn	18 22 15.7	+1.2
	baz=239						
ELDTW	Lidau	2.30	228	*e*P	Pn	18 21 51.9	-0.8
	baz=227						
CHN5	Tsauling	2.31	241	*e*S	Sn	18 22 23.9	+2.7
	baz=233						
LDUT	Ludao	2.44	212	*e*S	Sn	18 22 23.6	-0.4
	baz=209						
TPUB	Ta-pu	2.51	235	*e*S	Sn	18 22 28.7	+3.0

baz=234

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*RSNC **31** 18:23:34.4±1.0, 6°.80N×73°.14W, h147km±4km, ML3.1, Mw3.7, Fault plane solution: NP1:ϕ_s28.00000°, δ54.00000°, λ78.00000°.*
*IDC **31** 18:23:36.6±6.2, 6°.79N×73°.65W, h180km±31km, mb3.1/1, mb1 3.4/2, mb1mx2.9/22, mbtmp3.6/2, Error ellipse: s-maj=235.0km s-min=39.6km az=94.0*
ISC 31 18:23:32.2±1.0, **6°.84N**±0°.03×**73°.12W**±0°.03, **h163**km±6km, **n31**, σ1s.**80**/61, **6C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**195**	⇑*i*P	**Pn**	**18 23 54.6**	**+0.1**
BARC				*e*S	**Sn**	**18 24 09.1**	**-2.5**
BARC				*i*		18 24 11.0	
	comp=Z,288nm,0.2s						
PAMC	**Pamplona, Colo**	**0.65**	**40**	⇑*e*P	**Pn**	**18 23 57.4**	**+1.0**
PAMC				*e*S	**Sn**	**18 24 14.2**	**-0.7**
PAMC				*i*		18 24 17.1	
	comp=Z,205nm,0.6s						
BRRC	**Barranca, Sant**	**0.65**	**294**	⇑*i*P	**Pn**	**18 23 56.5**	**+0.7**
BRRC				*e*S	**Sn**	**18 24 13.0**	**-0.9**
BRRC				*i*		18 24 17.0	
	comp=Z,365nm,0.4s						
RUSC	**La Rusia**	**0.94**	**178**	⇑*i*P	**Pn**	**18 23 58.4**	**+0.1**
RUSC				*e*S	**Sn**	**18 24 16.3**	**-2.0**
RUSC				*i*		18 24 18.4	
	comp=Z,113nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	*e*P	**Pn**	**18 24 01.1**	**-0.3**
PTBC				*e*S	**Sn**	**18 24 22.5**	**-1.3**
PTBC				*i*		18 24 28.4	
	comp=Z,162nm,0.3s						
TAMC	**Tame, Arauca**	**1.38**	**107**	*e*	**Pn**	**18 24 01.8**	**+0.3**
TAMC				⇑*i*P	**Pn**	**18 24 02.9**	**+1.3**
TAMC				*e*S	**Sn**	**18 24 23.6**	**-0.5**
TAMC				*i*		18 24 23.7	
	comp=Z,94nm,0.3s						
OCAC	**Ocana**	**1.41**	**352**	*e*P	**Pn**	**18 24 02.6**	**+0.6**
OCAC				*e*S	**Sn**	**18 24 24.7**	**-0.3**
OCAC				*i*		18 24 30.0	
	comp=Z,279nm,0.3s						
SPBC	**San Pablo de B**	**1.51**	**219**	⇑*e*P	**Pn**	**18 24 03.5**	**+0.5**
SPBC				*e*S	**Sn**	**18 24 25.1**	**-1.6**
SPBC				*i*		18 24 29.2	
	comp=Z,208nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	*e*P	**Pn**	**18 24 07.0**	**+0.6**
ZARC				*e*S	**Sn**	**18 24 33.1**	**+0.3**
ZARC				*i*		18 24 38.9	
	comp=Z,150nm,0.3s						
NORC	**Norcasia**	**2.15**	**234**	*e*P	**Pn**	**18 24 10.3**	**+0.3**
NORC				*e*S	**Sn**	**18 24 38.0**	**-1.1**
NORC				*i*		18 24 43.3	
	comp=Z,92nm,0.2s						
SMLC	**San Martn de**	**2.17**	**334**	*e*P	**Pn**	**18 24 10.6**	**+0.6**
SMLC				*e*S	**Sn**	**18 24 39.5**	**+0.1**
SMLC				*i*		18 24 43.4	
	comp=Z,170nm,0.1s						
CHIC	**Chingaza**	**2.28**	**196**	*e*P	**Pn**	**18 24 12.8**	**+1.0**
CHIC				*e*S	**Sn**	**18 24 42.0**	**-0.3**
CHIC				*i*		18 24 44.3	
	comp=Z,71nm,0.3s						
ROSC	**El Rosal**	**2.32**	**211**	P	**Pn**	**18 24 14.5**	**+2.3**
	comp=Z,20nm,0.3s,baz=130,slow=19,SNR=10						
ROSC				S	**Sn**	**18 24 44.4**	**+1.3**
	comp=Z,15nm,0.3s,baz=116,slow=17,SNR=8.4						
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	**18 24 15.0**	**+0.9**
HELC				*e*S	**Sn**	**18 24 45.6**	**-0.8**
HELC				*i*		18 24 53.8	
	comp=Z,100nm,0.4s						
UREC	**San Jos de Ur**	**2.56**	**291**	*e*P	**Pn**	**18 24 14.2**	**-0.5**
UREC				*e*S	**Sn**	**18 24 45.2**	**-2.5**
UREC				*i*		18 24 56.3	
	comp=Z,105nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.75**	**234**	*e*P	**Pn**	**18 24 18.7**	**+1.2**
GUY2C				*e*S	**Sn**	**18 24 53.3**	**+0.8**
GUY2C				*i*		18 25 00.6	
	comp=Z,62nm,0.2s						
VILC	**Villavicencio,**	**2.77**	**192**	*e*P	**Pn**	**18 24 18.2**	**+0.8**
VILC				*e*S	**Sn**	**18 24 51.1**	**-1.4**
PTGC	**Puerto Gaitan,**	**2.80**	**160**	*e*P	**Pn**	**18 24 17.6**	**-0.1**
PTGC				*e*S	**Sn**	**18 24 50.6**	**-2.3**
PTGC				*i*		18 24 53.6	
	comp=Z,49nm,0.2s						
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*e*P	**Pn**	**18 24 22.2**	**+1.4**
CBOC				*e*S	**Sn**	**18 24 58.3**	**0.0**
CBOC				*i*		18 25 12.2	
	comp=Z,17nm,0.3s						
DBBC	**Dabeiba**	**3.08**	**274**	*e*P	**Pn**	**18 24 21.9**	**+0.7**
DBBC				*e*S	**Sn**	**18 24 58.2**	**-0.8**
DBBC				*i*		18 25 01.5	
	comp=Z,129nm,0.3s						
ANIL	**Santa Ana**	**3.26**	**224**	*e*P	**Pn**	**18 24 25.7**	**+2.1**
ANIL				*e*S	**Sn**	**18 25 02.5**	**-1.1**
ANIL				*i*		18 25 08.6	
	comp=Z,136nm,0.5s						
PRAC	**Prado**	**3.57**	**210**	*e*P	**Pn**	**18 24 28.1**	**+0.8**
PRAC				*e*S	**Sn**	**18 25 09.1**	**-1.1**
PRAC				*i*		18 25 13.7	
	comp=Z,46nm,0.3s						
ORTC	**Ortega, Tolima**	**3.60**	**216**	*e*P	**Pn**	**18 24 28.8**	**+1.1**
ORTC				*e*S	**Sn**	**18 25 10.1**	**-0.8**
ORTC				*i*		18 25 18.3	
	comp=Z,37nm,0.7s						
ELOV	**Elorza**	**3.61**	**87**	*e*P	**Pn**	**18 24 28.6**	**+0.9**
ELOV				*e*S	**Sn**	**18 25 09.5**	**-1.5**
SJCC	**San Jacinto, C**	**3.66**	**326**	*e*P	**Pn**	**18 24 28.2**	**-0.3**
SJCC				*e*S	**Sn**	**18 25 07.7**	**-4.7**
SJCC				*i*		18 25 17.1	
	comp=Z,18nm,0.2s						
PLMC	**San Jos del P**	**3.69**	**239**	*e*P	**Pn**	**18 24 30.0**	**+1.1**
PLMC				*e*S	**Sn**	**18 25 07.4**	**-5.6**
PLMC				*i*		18 25 24.1	
	comp=Z,17nm,0.4s						
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	*e*P	**Pn**	**18 24 35.1**	**+0.1**
CRJC				*e*S	**Sn**	**18 25 20.9**	**-3.2**
CRJC				*i*		18 25 26.6	
	comp=Z,28nm,0.3s						
YOTC	**Yotoco, Valle**	**4.29**	**229**	*e*P	**Pn**	**18 24 37.3**	**+0.7**
YOTC				*e*S	**Sn**	**18 25 22.6**	**-4.4**
YOTC				*i*		18 25 43.9	
	comp=Z,2.4nm,0.6s						
MACC	**Macarena, Meta**	**4.72**	**189**	*e*P	**Pn**	**18 24 41.8**	**-0.4**
MACC				*e*S	**Sn**	**18 25 31.1**	**-5.8**
MACC				*i*		18 25 37.4	
	comp=Z,16nm,0.5s						
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**18 33 44.7**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=133,slow=6.7,SNR=11						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKPbc**	**18 43 05.9**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=110,slow=2.8,SNR=5.5						

MAN 31 18:24:09.6, 10°.49N×122°.32E, h33km, mb3.6, ML2.3, MS1.8, 2C-4D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAP	**San Jose, Anti**	**0.45**	**305**	⇓*e*P	Pn	18 24 20.8	+1.1
CNOP	**Candoni, Negro**	**0.73**	**154**	⇓*e*P	Pb	18 24 24.1	+0.1
RCP	**Roxas**	**1.14**	**21**	⇑*e*P	Pn	18 24 29.0	-0.3
RCP				*e*S	Sn	18 24 44.5	+0.7
CUYO	**Cuyo Island**	**1.33**	**286**	⇑*e*P	Pn	18 24 31.9	+0.1
SNPH	**Sibulan**	**1.46**	**142**	⇓*i*P	Pn	18 24 34.7	+1.0
SNPH				*i* S	Sb	18 24 54.1	-0.3
LLP	**Lapu-Lapu**	**1.63**	**96**	⇓*e*P	Pn	18 24 36.0	0.0
LLP				*e*S	Sn	18 24 55.9	0.0

IDC 31 18:25:05.3±1.7, **8°.73S**×**124°.02E**, **h0**km, **mb3.4**/1, **mb1 3.5**/4, **mb1mx3.1**/26, **mbtmp3.4**/4, **ML3.4**/3, **Error ellipse: s-maj=120.1km s-min=26.7km az=64.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.44**	**171**	Pn	Pn	18 27 22.6	-0.2
	0.5nm,0.3s,baz=0.1,slow=9.4,SNR=17						
FITZ				Sn	Sn	18 28 55.3	-14
	2.2nm,0.3s,baz=178,slow=17,SNR=13						
WRA	**Warramunga Arr**	**14.96**	**139**	Pn	Pn	18 28 37.5	-0.7
	0.1nm,0.3s,baz=318,slow=14,SNR=16						
WRA				Sn	Sn	18 31 11.2	-14
	0.3nm,0.3s,baz=298,slow=22,SNR=8.2						
ASAR	**Alice Springs**	**17.61**	**149**	P	P	18 29 13.1	-0.3
	0.1nm,0.3s,baz=319,slow=12,SNR=5.9						
MKAR	**Makanchi Array**	**66.59**	**330**	P	P	18 35 57.5	0.0
	0.2nm,0.4s,baz=135,slow=6.9,SNR=6.2						

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*RSNC **31** 18:37:57.6±1.0, 6°.82N×73°.18W, h148km±4km, ML3.1, Mw3.6, Fault plane solution: NP1:ϕ_s0.00000°, δ38.00000°, λ-82.00000°.*
*IDC **31** 18:37:57.9±6.5, 6°.78N×73°.20W, h169km±41km, mb3.0/1, mb1 3.3/2, mb1mx2.9/22, mbtmp3.5/2, Error ellipse: s-maj=172.1km s-min=45.5km az=98.0*
ISC 31 18:37:55.8±1.0, **6°.82N**±0°.03×**73°.15W**±0°.04, **h160**km±6km, **n30**, σ1s.**49**/58, **1C-5D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**188**	⇓*i*P	**Pn**	**18 38 17.7**	**0.0**
BARC				*e*S	**Sn**	**18 38 32.8**	**-1.5**
BARC				*i*		18 38 35.6	
	comp=Z,254nm,0.3s						
BRRC	**Barranca, Sant**	**0.62**	**297**	⇓*i*P	**Pn**	**18 38 19.4**	**+0.6**
BRRC				*e*S	**Sn**	**18 38 36.1**	**-0.4**
BRRC				*i*		18 38 39.7	
	comp=Z,226nm,0.2s						
PAMC	**Pamplona, Colo**	**0.68**	**41**	⇓*i*P	**Pn**	**18 38 20.7**	**+0.9**
PAMC				*e*S	**Sn**	**18 38 37.5**	**-0.7**
PAMC				*i*		18 38 40.8	
	comp=Z,171nm,0.2s						
RUSC	**La Rusia**	**0.93**	**176**	⇓*i*P	**Pn**	**18 38 21.6**	**+0.1**
RUSC				*e*S	**Sn**	**18 38 40.0**	**-1.2**
RUSC				*i*		18 38 41.9	
	comp=Z,78nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.33**	**258**	*e*P	**Pn**	**18 38 24.1**	**-0.3**
PTBC				*e*S	**Sn**	**18 38 44.9**	**-1.4**
PTBC				*i*		18 38 50.5	
	comp=Z,107nm,0.1s						
TAMC	**Tame, Arauca**	**1.40**	**106**	⇑*i*P	**Pn**	**18 38 26.1**	**+0.9**
TAMC				*i*		18 38 47.0	
	comp=Z,106nm,0.3s						
TAMC				*e*S	**Sn**	**18 38 47.8**	**+0.1**
OCAC	**Ocana**	**1.42**	**353**	*e*P	**Pn**	**18 38 25.7**	**+0.3**
OCAC				*e*S	**Sn**	**18 38 47.1**	**-1.2**
OCAC				*i*		18 38 50.8	
	comp=Z,188nm,0.2s						
SPBC	**San Pablo de B**	**1.48**	**218**	*e*P	**Pn**	**18 38 26.5**	**+0.5**
SPBC				*e*S	**Sn**	**18 38 49.0**	**-0.3**
SPBC				*i*		18 38 55.6	
	comp=Z,180nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.82**	**292**	*e*P	**Pn**	**18 38 30.0**	**+0.5**
ZARC				*e*S	**Sn**	**18 38 54.9**	**-0.6**
ZARC				*i*		18 39 00.7	
	comp=Z,114nm,0.4s						
NORC	**Norcasia**	**2.12**	**234**	*e*P	**Pn**	**18 38 33.8**	**+0.9**
NORC				*e*S	**Sn**	**18 39 01.6**	**0.0**
NORC				*i*		18 39 07.0	
	comp=Z,95nm,0.1s						
SMLC	**San Martn de**	**2.17**	**335**	*e*P	**Pn**	**18 38 33.9**	**+0.4**
SMLC				*e*S	**Sn**	**18 39 02.0**	**-0.6**
SMLC				*i*		18 39 06.1	
	comp=Z,142nm,0.1s						
CHIC	**Chingaza**	**2.25**	**195**	*e*P	**Pn**	**18 38 35.7**	**+0.8**
CHIC				*e*S	**Sn**	**18 39 05.2**	**+0.1**
CHIC				*i*		18 39 10.5	
	comp=Z,63nm,0.3s						
ROSC	**El Rosal**	**2.29**	**211**	P	**Pn**	**18 38 37.9**	**+2.6**
	comp=Z,24nm,0.3s,baz=128,slow=13,SNR=20						
ROSC				S	**Sn**	**18 39 07.9**	**+2.2**
	comp=Z,56nm,0.3s,baz=104,slow=16,SNR=10						
HELC	**Santa Helena**	**2.44**	**255**	*e*P	**Pn**	**18 38 38.0**	**+0.9**
HELC				*e*S	**Sn**	**18 39 08.6**	**-0.3**
HELC				*i*		18 39 16.4	
	comp=Z,76nm,0.3s						
UREC	**San Jos de Ur**	**2.54**	**292**	*e*P	**Pn**	**18 38 37.3**	**-0.5**
UREC				*e*S	**Sn**	**18 39 08.2**	**-2.2**
UREC				*i*		18 39 21.2	
	comp=Z,45nm,0.1s						
GUY2C	**Guyana, Caldas**	**2.71**	**234**	*e*P	**Pn**	**18 38 41.8**	**+1.3**
GUY2C				*e*S	**Sn**	**18 39 15.0**	**0.0**
GUY2C				*i*		18 39 24.4	
	comp=Z,77nm,0.6s						
VILC	**Villavicencio,**	**2.75**	**191**	*e*P	**Pn**	**18 38 40.9**	**+0.4**
VILC				*e*S	**Sn**	**18 39 14.6**	**-0.6**
VILC				*i*		18 39 25.2	
	comp=Z,3µm,0.4s						
PTGC	**Puerto Gaitan,**	**2.79**	**159**	⇓*e*P	**Pn**	**18 38 40.9**	**-0.2**
PTGC				*e*S	**Sn**	**18 39 14.2**	**-1.9**
PTGC				*i*		18 39 17.1	
	comp=Z,52nm,0.2s						
CBOC	**Ciudad Bolivar**	**3.00**	**252**	*e*P	**Pn**	**18 38 45.3**	**+1.6**
CBOC				*e*S	**Sn**	**18 39 20.1**	**-0.7**
CBOC				*i*		18 39 38.8	
	comp=Z,22nm,0.5s						
DBBC	**Dabeiba**	**3.04**	**274**	*e*P	**Pn**	**18 38 45.0**	**+0.8**
DBBC				*e*S	**Sn**	**18 39 18.2**	**-3.5**
DBBC				*i*		18 39 24.1	
	comp=Z,162nm,0.4s						
ARGC	**Ariguani, Magd**	**3.21**	**340**	*e*P	**Pn**	**18 38 47.4**	**+1.3**
ARGC				*e*S	**Sn**	**18 39 25.8**	**+0.5**
ARGC				*i*		18 39 33.5	
	comp=Z,14nm,0.2s						
PRAC	**Prado**	**3.54**	**209**	*e*P	**Pn**	**18 38 51.2**	**+0.8**
PRAC				*e*S	**Sn**	**18 39 32.8**	**-0.1**
PRAC				*i*		18 39 40.2	
	comp=Z,67nm,0.2s						
ORTC	**Ortega, Tolima**	**3.57**	**216**	*e*P	**Pn**	**18 38 51.9**	**+1.1**
ORTC				*e*S	**Sn**	**18 39 34.3**	**+0.7**
ORTC				*i*		18 39 41.7	
	comp=Z,33nm,0.3s						
PLMC	**San Jos del P**	**3.65**	**239**	*e*P	**Pn**	**18 38 53.2**	**+1.3**
PLMC				*e*S	**Sn**	**18 39 35.3**	**-0.2**
PLMC				*i*		18 39 41.3	
	comp=Z,18nm,0.2s						
SJCC	**San Jacinto, C**	**3.66**	**327**	*e*P	**Pn**	**18 38 51.9**	**0.0**
SJCC				*e*S	**Sn**	**18 39 32.4**	**-3.3**
SJCC				*i*		18 39 37.2	
	comp=Z,16nm,0.3s						
YOTC	**Yotoco, Valle**	**4.25**	**229**	*e*P	**Pn**	**18 39 00.1**	**+0.4**
YOTC				*e*S	**Sn**	**18 39 45.2**	**-4.3**
YOTC				*i*		18 39 57.2	
	comp=Z,4.3nm,0.2s						
GUVC	**San Jose del G**	**4.28**	**173**	*e*P	**Pn**	**18 39 00.5**	**+0.5**
GUVC				*e*S	**Sn**	**18 39 48.4**	**-1.7**
GUVC				*i*		18 39 54.7	
	comp=Z,30nm,0.2s						
MACC	**Macarena, Meta**	**4.70**	**189**	*e*P	**Pn**	**18 39 04.6**	**-0.8**
MACC				*e*S	**Sn**	**18 39 54.8**	**-5.1**
MACC				*i*		18 40 02.6	
	comp=Z,12nm,0.3s						
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**18 48 08.2**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=132,slow=6.7,SNR=6.6						
WRA	**Warramunga Arr**	**150.31**	**241**	PKPbc	**PKiKP**	**18 57 29.6**	**-0.2**
	comp=Z,0.3nm,0.9s,baz=90,slow=0.8,SNR=1.0						

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*MOS **31** 18:53:17.7±1.4, 39°.69N×142°.17E, h56km, mb4.3/5, Error ellipse: s-maj=11.2km s-min=6.5km az=72.1*
*NIED **31** 18:53:18.6, 39°.63N×142°.11E, h48km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}6.26; $M_{\theta\theta}$0.22; $M_{\phi\phi}$-6.48; $M_{r\theta}$3.38; $M_{\theta\phi}$-1.81; $M_{\phi r}$4.77; Fault plane solution: $M_0$8.84000×10^{14} NP1:ϕ_s28.00000°, δ66.00000°, λ103.00000°. NP2:ϕ_s179.00000°, δ27.00000°, λ64.00000°.*
*JMA **31** 18:53:18.5, 39°.63N×142°.11E, h48km±1km, M3.9*
JMA Felt II J1.
*NEIC **31** 18:53:18.5±1.5, 39°.65N±0°.06×142°.04E±0°.07, h47km±7km, mb4.3/20, Error ellipse: s-maj=11.1km s-min=3.0km az=136.0*
*IDC **31** 18:53:23.2±2.4, 39°.58N×141°.96E, h92km±22km, mb3.6/16, mb1 3.7/20, mb1mx3.7/35, mbtmp3.9/20, MS2.7/3, Ms1 2.7/3, ms1mx2.6/38, Error ellipse: s-maj=19.1km s-min=14.3km az=105.0*
ISC 31 18:53:18.3±0.8, **39°.63N**±0°.04×**142°.21E**±0°.05, **h51**km±7km, **n101**, σ1s.**46**/108, **mb4.1**/33, **2C-10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.31**	**260**	⇑P	**Pn**	**18 53 26.9**	**-0.7**
MIYJ				S	**Sn**	**18 53 32.7**	**-1.6**
JTH	**Tanohata**	**0.41**	**319**	⇓P	**Pn**	**18 53 28.1**	**-0.5**
JTH				*i* S	**Sn**	**18 53 34.7**	**-1.3**
OFUJ	**Ofunato**	**0.69**	**218**	⇑P	**Pn**	**18 53 31.3**	**-0.7**
OFUJ				*e*S	**Sn**	**18 53 40.4**	**-1.5**
JOM	**Ohasama**	**0.73**	**258**	⇓P	**Pn**	**18 53 31.7**	**-0.8**
JOM				S	**Sn**	**18 53 41.1**	**-1.7**
JKZ	**Kuzumaki**	**0.77**	**298**	⇓P	**Pn**	**18 53 32.3**	**-0.7**
JKZ				S	**Sn**	**18 53 41.8**	**-1.9**
JANG	**Nango**	**0.92**	**324**	⇓P	**Pn**	**18 53 34.2**	**-0.7**
JANG				*e*S	**Sn**	**18 53 45.5**	**-1.7**
JKMT	**Kesennumamotoy**	**1.00**	**215**	⇓P	**Pn**	**18 53 35.5**	**-0.5**
JKMT				S	**Sn**	**18 53 47.5**	**-1.6**
JMK	**Ichinoseki**	**1.02**	**229**	⇓P	**Pn**	**18 53 35.7**	**-0.7**
JMK				*e*S	**Sn**	**18 53 48.2**	**-1.5**
JRG	**Rokugo**	**1.24**	**260**	⇓P	**Pn**	**18 53 38.5**	**-0.8**
JRG				*e*S	**Sn**	**18 53 53.0**	**-2.0**
JAH	**Hinai**	**1.34**	**295**	⇓P	**Pn**	**18 53 40.0**	**-0.6**
JIO	**Ouri**	**1.35**	**210**	⇓P	**Pn**	**18 53 40.3**	**-0.5**
JTM	**Tenmabayashi**	**1.45**	**323**	⇓P	**Pn**	**18 53 41.7**	**-0.5**
JTM	**Tenmabayashi**	**1.45**	**323**	Pn	**Pn**	**18 53 41.7**	**-0.5**
JMM	**Marumori**	**2.08**	**213**		**Pn**	**18 53 49.8**	**-1.0**
ERM	**Erimo**	**2.49**	**16**	P	**Pn**	**18 53 57.4**	**+1.1**
ERM	**Erimo**	**2.49**	**16**	Pn	**Pn**	**18 53 57.4**	**+1.1**
JEW	**Eniwo**	**3.26**	**350**		**Pn**	**18 54 08.5**	**+1.6**
JSD	**Sado**	**3.47**	**244**		**Pn**	**18 54 09.4**	**-0.4**
JYT	**Yasato**	**3.75**	**206**		**Pn**	**18 54 13.4**	**-0.2**
MJAR	**Matsushiro Arr**	**4.41**	**227**	P	**Pn**	**18 54 25.0**	**+2.3**
	0.9nm,0.3s,baz=32,slow=13,SNR=86						
MJAR				LR	LR	18 56 11.3	
	comp=Z,51nm,21.7s,baz=35,slow=40						
MJAR	**Matsushiro Arr**	**4.41**	**227**		**Pn**	**18 54 23.8**	**+1.1**
MJB9	**Matsu-Tunnel**	**4.41**	**227**	Pn	**Pn**	**18 54 23.9**	**+1.1**
MAJO	**Matsushiro**	**4.41**	**227**	P	**Pn**	**18 54 23.8**	**+1.1**
MAJO	**Matsushiro**	**4.41**	**227**	Pn	**Pn**	**18 54 23.8**	**+1.1**
MAT	**Matsushiro**	**4.41**	**227**	P	**Pn**	**18 54 23.9**	**+1.2**
MAT				*e*S	**Sn**	**18 55 16.0**	**+3.1**
ASAJ	**Asahikawa**	**4.49**	**4**	P	**Pn**	**18 54 24.9**	**+1.1**
	2.4nm,0.3s,baz=209,slow=13,SNR=18						
ASAJ	**Asahikawa**	**4.49**	**4**	P	**Pn**	**18 54 24.8**	**+1.0**
JKA	**Kamikawa-asahi**	**4.49**	**4**		**Pn**	**18 54 24.8**	**+1.0**
NMR	**Nemuro--Hokkai**	**4.58**	**34**	*e*P	**Pn**	**18 54 24.3**	**-0.6**
NMR				*e*S	**Sn**	**18 55 13.2**	**-3.5**
GLVR	**Golovnino**	**4.79**	**30**	*e*P	**Pn**	**18 54 28.1**	**+0.2**
GLVR				*e*S	**Sn**	**18 55 19.9**	**-2.2**
GLVR				smax	smax		
	comp=N,482nm,0.3s						
GLVR				smax	smax		
	comp=E,203nm,0.3s						
RUSJ	**Misakicho**	**5.01**	**26**	*e*P	**Pn**	**18 54 32.7**	**+1.8**
RUSJ				*e*S	**Sn**	**18 55 27.4**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**5.18**	**31**	*e*P	**Pn**	**18 54 33.2**	**+0.1**
YUK				*e*S	**Sn**	**18 55 28.5**	**-3.0**
YUK				pmax	pmax		
	comp=N,53nm,0.2s						
YUK				pmax	pmax		
	comp=Z,102nm,0.2s						
YUK				smax	smax		
	comp=E,398nm,0.7s						
YUK				smax	smax		
	comp=N,288nm,0.3s						
SHO	**Shikotan**	**5.46**	**38**	*e*P	**Pn**	**18 54 37.0**	**-0.1**
SHO				*e*S	**Sn**	**18 55 32.7**	**-5.9**
SHO				pmax	pmax		
	comp=Z,17nm,0.5s						
SHO				pmax	pmax		
	comp=E,14nm,0.4s						
SHO				pmax	pmax		
	comp=N,10.0nm,0.1s						
SHO				smax	smax		
	comp=E,197nm,0.3s						
SHO				smax	smax		
	comp=N,127nm,0.2s						
JGF	**Kuroka**	**5.57**	**225**		**Pn**	**18 54 35.9**	**-2.7**
INU	**Inuyama**	**5.94**	**226**	Pn	**Pn**	**18 54 42.6**	**-1.1**
JWT	**Wachi**	**6.94**	**233**	Pn	**Pn**	**18 54 56.6**	**-0.8**
KUR	**Kuril'sk**	**6.99**	**35**	*e*P	**Pn**	**18 55 00.8**	**+2.9**
KUR				*e*S	**Sn**	**18 56 13.8**	**-2.2**
KUR				pmax	pmax		
	comp=Z,53nm,0.8s						
KUR				smax	smax		
	comp=N,63nm,0.4s						
KUR				smax	smax		
	comp=E,92nm,0.4s						
USRK	**Ussuriysk Ar.**	**8.88**	**304**	P	**Pn**	**18 55 26.1**	**+2.2**
	baz=108,slow=14,SNR=4.9						
USRK				LR	LR	18 58 33.8	
	comp=E,82nm,21.1s,baz=158,slow=36						
MDJ	**Mudanjiang**	**10.61**	**302**	Pn	**Pn**	**18 55 48.8**	**+1.2**
JNU	**Nakatsue**	**11.20**	**238**	P	**Pn**	**18 55 57.7**	**+1.9**
	comp=E,0.3nm,0.3s,baz=180,slow=6.1,SNR=4.8						
KSRS	**Korea Array**	**11.40**	**264**	P	Pn	18 56 02.5	+4.2
	comp=E,1.1nm,0.3s,baz=70,slow=14,SNR=24						
KS19	**Wonju Array Si**	**11.43**	**264**	Pn	**Pn**	**18 56 01.8**	**+3.0**
KSAR	**Wonju Array Be**	**11.44**	**264**	P	**Pn**	**18 56 01.6**	**+2.7**
KSAR	**Wonju Array Be**	**11.44**	**264**	Pn	**Pn**	**18 56 01.6**	**+2.7**
PETK	**Petropavlovsk-**	**17.15**	**33**	LR	LR	19 04 19.4	
	comp=E,38nm,18.3s,baz=34,slow=38						
YAK	**Yakutsk**	**23.70**	**345**	P	**P**	**18 58 22.8**	**-2.3**
YAK				IAmb	IAmb	18 58 25.9	
	comp=Z,12nm,0.7s						
SEY	**Seymchan**	**24.13**	**11**	P	**P**	**18 58 30.8**	**+1.8**
	comp=Z,4.3nm,0.9s,baz=206,slow=7.7,SNR=19						
SONM	**Songino Array**	**26.95**	**300**	P	**P**	**18 58 54.1**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=77,slow=8.5,SNR=7.8						
SONM	**Songino Array**	**26.95**	**300**	IAmb	IAmb	18 59 03.0	
	comp=Z,1.6nm,1.4s						
ENH	**Enshi**	**28.27**	**261**	P	**P**	**18 59 05.0**	**-1.8**
ENH				IAmb	IAmb	18 59 31.6	
	comp=Z,8.8nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**29.05**	**126**	T	T	19 29 51.2	
	baz=318,slow=75,SNR=259						
H11N1	**WAKE ISLAND Hy**	**29.06**	**126**	T	T	19 29 57.0	
	baz=318,slow=75,SNR=181						
H11N3	**WAKE ISLAND Hy**	**29.07**	**126**	T	T	19 29 58.3	
	baz=318,slow=75,SNR=170						
H11S1	**WAKE ISLAND Hy**	**29.85**	**128**	T	T	19 31 02.9	
	baz=320,slow=76,SNR=39						
H11S3	**WAKE ISLAND Hy**	**29.85**	**128**	T	T	19 30 60.0	
	baz=320,slow=76,SNR=32						
H11S2	**WAKE ISLAND Hy**	**29.86**	**128**	T	T	19 31 01.5	
	baz=320,slow=76,SNR=34						
TIXI	**Tiksi**	**32.80**	**352**	P	**P**	**18 59 45.7**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	**Tiksi**	**32.80**	**352**	P	**P**	**18 59 45.7**	**-0.5**
TIXI				IAmb	IAmb	18 59 51.1	
	comp=Z,2.0nm,0.8s						
SPIA	**Saint Paul Isl**	**35.24**	**44**	P	**P**	**19 00 06.1**	**-1.4**
ZAA0	**Zalesovo Array**	**40.68**	**310**	P	**P**	**19 00 53.0**	**-0.3**
ZAA0				IAmb	IAmb	19 00 53.6	
	comp=Z,4.8nm,1.1s						
ZALV	**Zalesovo Beam**	**40.68**	**310**	P	**P**	**19 00 53.0**	**-0.3**
	comp=Z,3.0nm,0.4s,baz=94,slow=8.5,SNR=27						
ZALV				PcP	**PcP**	**19 02 54.2**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=102,slow=3.3,SNR=8.0						
ZALV	**Zalesovo Beam**	**40.68**	**310**	P	**P**	**19 00 52.9**	**-0.5**
NRIK	**Noril'sk**	**41.20**	**334**	P	**P**	**19 00 56.5**	**-0.9**
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NRIK	**Noril'sk**	**41.20**	**334**	P	**P**	**19 00 56.5**	**-0.9**
CMAR	**Chiang Mai Arr**	**42.80**	**253**	P	**P**	**19 01 10.9**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=37,slow=5.6,SNR=4.7						
MK31	**Makanchi Array**	**43.32**	**300**	P	**P**	**19 01 14.6**	**-0.5**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK31	**Makanchi Array**	**43.32**	**300**	P	**P**	**19 01 14.6**	**-0.5**
MKAR	**Makanchi Array**	**43.32**	**300**	P	**P**	**19 01 14.6**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=84,slow=10,SNR=27						
MAKZ	**Makanchi**	**43.53**	**300**	P	**P**	**19 01 15.8**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MAKZ	**Makanchi**	**43.53**	**300**	P	**P**	**19 01 15.8**	**-0.9**
MAKZ				IAmb	IAmb	19 01 17.1	
	comp=Z,2.6nm,0.8s						
KURK	**Kurchatov**	**44.87**	**306**	P	**P**	**19 01 26.2**	**-1.1**
KURK	**Kurchatov**	**44.87**	**306**	P	**P**	**19 01 26.2**	**-1.1**
KURK				IAmb	IAmb	19 01 45.6	
	comp=Z,7.8nm,1.0s						
ILAR	**Eielson Array**	**46.98**	**34**	P	**P**	**19 01 45.6**	**+1.8**
	comp=Z,0.8nm,0.8s,baz=269,slow=6.1,SNR=6.5						
GUN	**Gumba**	**47.57**	**274**	*e*P	**P**	**19 01 47.8**	**-1.5**
	comp=Z,7.5nm,0.3s						
KKN	**Kakani**	**48.09**	**274**	*e*P	**P**	**19 01 52.8**	**-0.4**
	comp=Z,7.6nm,0.7s						
GKN	**Gorkha**	**48.48**	**275**	*e*P	**P**	**19 01 55.1**	**-1.0**
	comp=Z,3.1nm,0.3s						

DANN	Dangsing	48.99	275	eP	P	19 02 00.2	+0.1
	comp=Z,26nm,0.5s						
KOLN	Koldanda	49.40	275	eP	P	19 02 03.3	+0.1
	comp=Z,3.9nm,0.4s						
PYUN	Piuthan	49.70	276	eP	P	19 02 05.3	-0.2
	comp=Z,7.2nm,0.7s						
INK	Inuvik	51.80	28	P	P	19 02 22.7	+2.3
	comp=Z,1.0nm,0.4s,baz=300,slow=9.7,SNR=5.7						
INK	Inuvik	51.80	28	IAmb	IAmb	19 02 46.4	
	comp=Z,5.5nm,1.4s						
ARU	Arti	54.85	318	P	P	19 02 43.0	0.0
ARU				IAmb	IAmb	19 02 43.7	
	comp=Z,5.3nm,0.7s						
CHGR	Chuyangaron	55.15	294	P	P	19 02 45.4	-0.1
ABKAR	Akbulak array	56.77	309	P	P	19 02 56.3	-0.6
ABKAR				IAmb	IAmb	19 02 57.2	
	comp=Z,4.8nm,0.6s						
WRA	Warramunga Arr	59.72	189	P	P	19 03 17.1	-0.6
	comp=Z,0.7nm,0.7s,baz=7.0,slow=7.3,SNR=7.8						
RES	Resolute Bay	59.94	15	P	P	19 03 19.3	+0.8
RES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
RES	Resolute Bay	59.94	15	P	P	19 03 19.3	+0.8
RES				IAmb	IAmb	19 03 19.6	
	comp=Z,1.4nm,0.7s						
YKA	Yellowknife Ar	61.26	31	P	P	19 03 28.8	+1.1
	comp=Z,0.3nm,0.7s,baz=304,slow=6.8,SNR=4.5						
ARCES	ARCESS Array B	61.80	339	P	P	19 03 31.7	+0.5
	comp=Z,4.8nm,1.0s,baz=46,slow=6.9,SNR=3.6						
ASAR	Alice Springs	63.44	189	P	P	19 03 42.6	-0.1
	comp=Z,0.5nm,0.8s,baz=13,slow=11,SNR=7.2						
FIA1	FINESS Array S	66.82	332	P	P	19 04 03.5	-0.6
FINES	FINESS Array B	66.82	332	P	P	19 04 04.0	-0.2
	comp=Z,3.1nm,0.8s,baz=28,slow=9.7,SNR=12						
FINES	FINESS Array B	66.82	332	P	P	19 04 03.9	-0.3
NC405	NORSAR Array S	71.83	337	P	P	19 04 34.7	-0.5
NB2	NORSAR Subarra	72.04	337	P	P	19 04 36.6	+0.1
	comp=Z,0.8nm,0.5s,baz=36,slow=6.5						
NOA	NORSAR Array B	72.04	337	P	P	19 04 36.3	-0.1
	comp=Z,0.7nm,0.8s,baz=53,slow=7.0,SNR=6.4						
AKASG	Malin Array Be	72.63	322	P	P	19 04 39.8	-0.3
	comp=Z,1.6nm,0.6s,baz=45,slow=6.5,SNR=7.2						
PDAR	Pinedale Array	75.41	46	P	P	19 04 58.5	+1.6
	comp=Z,0.3nm,0.7s,baz=319,slow=5.9,SNR=3.6						
BURAR	Bucovina Array	76.67	322	P	P	19 05 04.2	+0.5
CLL	Collm	79.16	330	i P	P	19 05 17.5	+0.2
GERES	GERESS Array B	80.84	328	P	P	19 05 26.8	+0.3
	comp=Z,0.3nm,0.6s,baz=39,slow=6.3,SNR=5.2						

STR ***31*** *19:06:15.5±0.6, 47˚N±2˚×˚±˚, h9^{km}±2^{km}, MLv2.1/11, preliminary*
PRU ***31*** *19:06:16.1±0.0, 47°.53N×8°.78E, h0^{km}*
LDG ***31*** *19:06:16.9±0.1, 47°.46N×8°.65E, h4^{km}, Ml2.5/19, Error ellipse: s-maj=0.9km s-min=0.8km az=145.0*
ZUR ***31*** *19:06:16.2, 47°.46N×8°.66E, h6^{km}, MLh2.2/71, Error ellipse: s-maj=1.3km s-min=0.5km az=284.0*
BGR ***31*** *19:06:17.1±0.2, 47°.48N×8°.65E, h5^{km}, ML2.1/18, Error ellipse: s-maj=2.2km s-min=1.1km az=21.0*
ISC 31 19:06:15.7±0.7**, 47°.47N**±0°.01×**8°.62E**±0°.01**, h12**^{km}±3^{km}**, n153, σ1^{s}00**/284**, 31C-38D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKLW	Kloten, Waffen	0.04	262	⇑Pg	Pg	19 06 17.9	0.0
	16nm,SNR=99						
SKLW				⇑Pg	Pg	19 06 17.9	0.0
SKLW				Sg	Sg	19 06 19.4	-0.2
STIEG	Stiegenhof Hun	0.04	37	⇓Pg	Pg	19 06 17.4	-0.7
	25nm,SNR=31						
STIEG				⇓Pg	Pg	19 06 17.4	-0.7
ZUR	Degenried	0.10	195	⇓Pg	Pg	19 06 18.8	+0.2
	2.7nm,SNR=23						
ZUR				⇓Pg	Pg	19 06 18.8	+0.2
ZUR				Sg	Sg	19 06 20.9	+0.2
ZUR	Degenried	0.10	195	Pg	Pg	19 06 18.9	+0.2
ZUR				Sg	Sg	19 06 20.9	+0.2
FLACH	Flaach	0.11	341	⇓Pg	Pg	19 06 19.2	+0.5
FLACH				⇓Pg	Pg	19 06 19.2	+0.5
	2.7nm,SNR=22						
FLACH				Sg	Sg	19 06 21.8	+0.9
EWZT2	Wettswil, ZR	0.16	214	Pg	Pg	19 06 20.2	+0.8
	2.5nm,SNR=5.1						
EWZT2				Pg	Pg	19 06 20.2	+0.8
TRULL	Truellikon	0.18	13	⇓Pg	Pg	19 06 20.6	+0.7
	2.6nm,SNR=24						
TRULL				⇓Pg	Pg	19 06 20.6	+0.7
TRULL				Sg	Sg	19 06 23.8	+1.0
BOBI	Bbikon, Wasse	0.21	292	⇑Pg	Pb	19 06 21.5	+0.1
	1.7nm,SNR=4.1						
BOBI				⇑Pg	Pb	19 06 21.5	+0.1
SCHS	Schaffhausen,	0.24	2	Pg	Pg	19 06 21.6	+0.8
	0.8nm,SNR=4.1						
SCHS				Pg	Pg	19 06 21.6	+0.8
WEIN	Weingarten	0.26	76	⇑Pg	Pg	19 06 21.3	+0.3
	1.3nm,SNR=13						
WEIN				⇑Pg	Pg	19 06 21.3	+0.3
WEIN				Sg	Sg	19 06 25.3	+0.6
STEIN	Stein am Rhein	0.26	40	⇓Pg	Pg	19 06 21.9	+0.7
	2.3nm,SNR=24						
STEIN				⇓Pg	Pg	19 06 21.9	+0.7
STEIN				Sg	Sg	19 06 26.0	+1.1
ACHB	Acheberg	0.28	296	Pg	Pb	19 06 22.6	0.0
ACHB				Pg	Pb	19 06 22.6	0.0
	1.0nm,SNR=16						
ACHB				Sg	Sb	19 06 27.1	-0.1
SLE	Schleitheim	0.31	344	⇓Pg	Pb	19 06 22.9	-0.3
SLE				⇓Pg	Pb	19 06 22.9	-0.3
	0.5nm,SNR=4.4						
SLE				Sg	Sb	19 06 27.6	-0.5
SLE	Schleitheim	0.31	344	Pg	Pb	19 06 22.9	-0.3
SLE	Schleitheim	0.31	344	⇓iPg	Pb	19 06 22.9	-0.3
SLE				Sg	Sb	19 06 27.6	-0.5
SISB	Singen-Schiene	0.32	47	Pg	Pg	19 06 22.9	+0.7
SISB				Sg	Sg	19 06 27.5	+1.0
METMA	Mettma DE	0.35	315	⇓Pg	Pb	19 06 23.7	-0.1
METMA				⇓Pg	Pb	19 06 23.7	-0.1
	0.3nm,SNR=2.1						
METMA				Sg	Sb	19 06 28.9	-0.4
METMA	Mettma DE	0.35	315	⇓iPg	Pb	19 06 23.8	-0.1
METMA				Sg	Sb	19 06 28.9	-0.4
METMA				S*	Sg	19 06 29.2	+1.8
METMA				SmS		19 06 35.5	
SULZ	Cheisacher	0.35	280	⇑Pg	Pb	19 06 24.1	+0.2
SULZ				⇑Pg	Pb	19 06 24.1	+0.2
	0.5nm,SNR=3.5						
SULZ	Cheisacher	0.35	280	Pg	Pb	19 06 24.1	+0.2
SULZ	Cheisacher	0.35	280	⇑Pg	Pb	19 06 24.1	+0.2
EMMET	Emmethof	0.41	266	⇑Pg	Pb	19 06 25.1	+0.2
	0.3nm,SNR=1.9						
EMMET				⇑Pg	Pb	19 06 25.1	+0.2
WALHA	Wallhausen, DE	0.44	50	⇑Pg	Pg	19 06 25.1	+0.6
	0.5nm,SNR=3.8						
WALHA				⇑Pg	Pg	19 06 25.1	+0.6
WALHA				Sg	Sb	19 06 31.5	-0.5
WALHA	Wallhausen, DE	0.44	50	Pg	Pg	19 06 25.0	+0.6
WALHA				Sg	Sb	19 06 31.6	-0.5
EMING	Emmingen-Lipti	0.45	19	⇓Pg	Pg	19 06 25.3	+0.8
EMING				⇓Pg	Pg	19 06 25.3	+0.8
	0.3nm,SNR=3.5						
EMING	Emmingen-Lipti	0.45	19	⇓Pg	Pg	19 06 25.3	+0.8
EMING				eSg	Sb	19 06 31.8	-0.5
SGT00	Sennhlsen	0.47	95	⇑Pg	Pg	19 06 25.4	+0.5
SGT00				⇑Pg	Pg	19 06 25.4	+0.5
	0.9nm,SNR=2.4						
ROTHE	Rothenfluh	0.47	271	⇑Pg	Pb	19 06 26.5	+0.5
ROTHE				⇑Pg	Pb	19 06 26.5	+0.5
	0.3nm,SNR=2.1						
DAGMA	Lutertal, Dagm	0.48	240	Pg	Pb	19 06 26.3	+0.3
	0.3nm,SNR=1.5						
DAGMA				Pg	Pb	19 06 26.3	+0.3
ROMAN	Romanshorn, Fo	0.49	79	⇑Pg	Pg	19 06 25.9	+0.5
	0.3nm,SNR=1.8						
ROMAN				⇑Pg	Pg	19 06 25.9	+0.5
ROMAN				Sg	Sg	19 06 32.7	+0.7
ROMAN	Romanshorn, Fo	0.49	79	⇑Pg	Pg	19 06 25.9	+0.5
ROMAN				Sg	Sg	19 06 32.7	+0.7
MUO	Muotathal	0.50	179	⇓Pg	Pb	19 06 26.5	0.0
	0.3nm,SNR=2.3						
MUO				⇓Pg	Pb	19 06 26.5	0.0
MUO				Sg	Sb	19 06 34.0	+0.2
BERGE	Lenzkirch (DE)	0.50	324	⇓Pg	Pb	19 06 26.6	+0.1
BERGE				⇓Pg	Pb	19 06 26.6	+0.1
	0.2nm,SNR=2.8						
BERGE				Sg	Sb	19 06 33.7	0.0
BERGE	Lenzkirch (DE)	0.50	324	⇓iPg	Pb	19 06 26.6	+0.1
BERGE				PmP		19 06 29.3	
BERGE				eSg	Sb	19 06 33.7	0.0
SGT04	Schlatt-Haslen	0.51	103	⇑Pg	Pg	19 06 26.3	+0.6
SGT04				⇑Pg	Pg	19 06 26.3	+0.6
	0.5nm,SNR=4.3						
SGT05	Eggersriet	0.57	92	⇑Pg	Pg	19 06 27.4	+0.6
SGT05				⇑Pg	Pg	19 06 27.4	+0.6
	0.3nm,SNR=2.4						
FELD	Feldberg im Sc	0.58	315	⇓Pg	Pb	19 06 28.2	+0.3
FELD				⇓Pg	Pb	19 06 28.2	+0.3
	0.2nm,SNR=2.5						
FELD	Feldberg im Sc	0.58	315	Pg	Pb	19 06 28.2	+0.3
FELD	Feldberg im Sc	0.58	315	⇓Pg	Pb	19 06 28.2	+0.3
FELD				PmP		19 06 30.5	
FELD				SmS		19 06 40.4	
BNALP	Bannalp	0.61	193	⇓Pg	Pb	19 06 28.7	+0.3
	0.3nm,SNR=1.9						
BNALP				⇓Pg	Pb	19 06 28.7	+0.3
LIENZ	Kamor/St.Gall	0.62	106	⇑Pg	Pg	19 06 28.3	+0.6
	0.2nm,SNR=2.4						
LIENZ	Kamor/St.Gall	0.62	106	⇑Pg	Pg	19 06 28.3	+0.6
BALST	Balsthal	0.64	258	Pg	Pb	19 06 29.3	+0.5
	0.2nm,SNR=1.1						
BALST				Pg	Pb	19 06 29.3	+0.5
BALST	Balsthal	0.64	258	Pg	Pb	19 06 29.4	+0.5
BALST	Balsthal	0.64	258	Pg	Pb	19 06 29.3	+0.5
BALST				eSg	Sn	19 06 39.1	-1.6
BALST				SmS		19 06 42.8	
ENDD	Endenburg	0.65	293	Pg	Pb	19 06 29.4	+0.5
ENDD				PmP		19 06 31.5	
ENDD				SmS		19 06 42.1	
PLONS	Plons/SG	0.67	129	⇑Pg	Pg	19 06 29.0	+0.5
PLONS				⇑Pg	Pg	19 06 29.0	+0.5
	0.3nm,SNR=2.1						
PLONS	Plons/SG	0.67	129	ePg	Pg	19 06 29.1	+0.5
PLONS				ePn	Pn	19 06 32.0	+1.0
PLONS				eSg	Sg	19 06 38.0	+0.6
KIZ	Kirchzarten	0.68	316	Pg	Pb	19 06 29.8	+0.4
KIZ				Pg	Pb	19 06 29.8	+0.4
	0.4nm,SNR=3.4						
KIZ	Kirchzarten	0.68	316	Sg	Sb	19 06 39.9	+1.0
KIZ	Kirchzarten	0.68	316	Pg	Pb	19 06 29.9	+0.4
KIZ	Kirchzarten	0.68	316	Pg	Pb	19 06 29.8	+0.4
KIZ				PmP		19 06 31.6	
KIZ				SmS		19 06 42.4	
GUT	Gutenstein	0.69	29	⇓Pg	Pg	19 06 29.6	+0.6
	0.3nm,SNR=1.8						
GUT				⇓Pg	Pg	19 06 29.6	+0.6
GUT	Gutenstein	0.69	29	Pg	Pg	19 06 29.6	+0.6
GUT	Gutenstein	0.69	29	⇓Pg	Pg	19 06 29.6	+0.6
GUT				Sg	Sb	19 06 39.0	-0.1
GUT				SmS		19 06 42.7	
FBB	Freiburg im Br	0.74	316	PmP		19 06 32.5	
DAVA	Damuels	0.88	102	Pg	Pb	19 06 32.9	+0.1
	0.2nm,SNR=1.7						
DAVA				Pg	Pb	19 06 32.9	+0.1
DAVA	Damuels	0.88	102	ePg	Pb	19 06 32.9	+0.1
	1.8nm,0.1s,SNR=53						
DAVA				eSg	Sg	19 06 45.0	+1.0
	11nm,0.2s						
DAVA	Damuels	0.88	102	Pg	Pb	19 06 32.9	+0.1
DAVA				PmP		19 06 35.2	
DAVA				eSg	Sg	19 06 45.2	+1.2
NALPS	Val Nalps	0.88	174	⇓Pg	Pg	19 06 33.3	+0.7
	0.2nm,SNR=2.4						
NALPS				⇓Pg	Pg	19 06 33.3	+0.7
BFO	Black Forest	0.88	347	⇓Pg	Pg	19 06 33.4	+0.7
BFO	Black Forest	0.88	347	⇓Pg	Pg	19 06 33.4	+0.7
BFO				PmP		19 06 34.2	
BFO				eSg	Sg	19 06 45.5	+1.1
VOGT	Vogtsburg - To	0.89	314	Pg	Pn	19 06 34.3	+0.3
VOGT	Vogtsburg - To	0.89	314	PmP		19 06 34.7	
VOGT				Sg	Sn	19 06 46.5	-0.2
BOURR	Bourrignon	0.95	266	Pg	Pn	19 06 35.4	+0.5
BOURR				Pg	Pn	19 06 35.4	+0.5
	0.3nm,SNR=2.2						
BOURR	Bourrignon	0.95	266	Pg	Pn	19 06 35.3	+0.5
BOURR	Bourrignon	0.95	266	Sg	Sn	19 06 49.2	+1.0
BOURR	Bourrignon	0.95	266	Pg	Pn	19 06 35.3	+0.5
BOURR				PmP		19 06 36.0	
FUSIO	Fusio	1.01	178	Pg	Pg	19 06 35.8	+0.6
FUSIO				Pg	Pg	19 06 35.8	+0.6
	0.2nm,SNR=2.1						
UBR	Ueberruh	1.03	78	⇑Pg	Pg	19 06 36.2	+0.7
	0.3nm,SNR=2.5						
UBR				⇑Pg	Pg	19 06 36.2	+0.7
UBR	Ueberruh	1.03	78	⇑Pg	Pg	19 06 36.2	+0.7
UBR				PmP		19 06 37.5	
UBR				Sg	Sn	19 06 50.0	-0.2
UBR				SmS		19 06 52.5	
OPP	Oppenau	1.07	344	Pg	Pg	19 06 36.8	+0.6
OPP				Pn	Pn	19 06 37.6	+1.1
OPP	Oppenau	1.07	344	⇓Pn	Pg	19 06 36.8	+0.6
OPP				PmP		19 06 37.6	
OPP				SmS		19 06 52.6	
MOF	Molkenrain	1.08	291	Pg	Pg	19 06 38.0	+1.5
MOF				Sg	Sn	19 06 53.5	+2.0
MOF	Molkenrain	1.08	291	Pg	Pg	19 06 37.9	+1.5
MOF				PmP		19 06 38.7	
MOF				SmS		19 06 53.6	
FIESA	Fiescheralp	1.09	199	Pg	Pg	19 06 37.3	+0.6
	0.3nm,SNR=2.8						
FIESA				Pg	Pg	19 06 37.3	+0.6
BUCH	Bad Urach	1.10	26	⇓Pn	Pn	19 06 37.0	+0.1
BUCH				PmP		19 06 38.1	
DAVOX	Davos/Dischmat	1.10	128	Pg	Pb	19 06 37.0	+0.3
	0.3nm,SNR=2.9						
DAVOX				Pg	Pb	19 06 37.0	+0.3
LBG	Lerchenberg	1.20	6	Pn	Pb	19 06 38.5	+0.1
LBG				PmP		19 06 39.7	
ECH	Echery	1.24	308	Pn	Pg	19 06 39.8	+0.3
ECH				Sn	Sg	19 06 57.3	+1.8
ECH	Echery	1.24	308	Pn	Pb	19 06 39.4	+0.4
ECH				Pg	Pg	19 06 40.5	+1.1
ECH				eSg	Sg	19 06 57.2	+1.7
HINF	Hinteralfeld	1.25	287	ePg	Pg	19 06 40.9	+1.3
HINF				eSg	Sn	19 06 55.5	-0.1
	18nm,0.3s						
WLS	Welschbruch	1.27	318	Pn	Pg	19 06 40.5	+0.3
WLS				Sg	Sg	19 06 58.4	+1.7
CDF	Champ du Feu	1.31	317	ePg	Pg	19 06 41.2	+0.4
CDF				eSg	Sg	19 06 58.3	+0.5
	14nm,0.2s						
TORNY	Torny/Romont	1.33	239	Pg	Pg	19 06 41.6	+0.4
TORNY	Torny/Romont	1.33	239	Sg	Sg	19 07 01.3	+2.8
CHMF	Charmoille	1.36	261	Pg	Pb	19 06 41.4	+0.4
CHMF				Pg	Pb	19 06 41.4	+0.4
	0.9nm,SNR=1.9						
CHMF	Charmoille	1.36	261	Pn	Pb	19 06 41.4	+0.4
CHMF				Pg	Pg	19 06 43.0	+1.2
CHMF				Sn	Sg	19 07 01.1	+1.8
CHMF	Charmoille	1.36	261	Pn	Pb	19 06 41.4	+0.4
CHMF				Pg	Pg	19 06 42.9	+1.2
STU	Stuttgart	1.36	16	Sg	Sg	19 07 00.6	+1.1
RETA	Reutte	1.45	88	ePg	Pg	19 06 43.9	+0.4
	5.4nm,0.1s,SNR=23						
RETA				eSg	Sg	19 07 03.6	+1.1
	7.3nm,0.3s						
RETA	Reutte	1.45	88	Pg	Pg	19 06 44.0	+0.4
FETA	Feichten	1.50	107	ePg	Pg	19 06 45.2	+0.6
	0.8nm,0.1s,SNR=11						
FETA				eSg	Sg	19 07 04.0	-0.1
	0.2nm,0.1s						
HDH	Heidenheim-Cha	1.54	43	Sg	Sg	19 07 05.5	+0.2
BRET	Bretten	1.55	2	Pg	Pg	19 06 45.9	+0.5
BRET				Sn	Sn	19 07 02.5	-0.5
BRET				Sg	Sg	19 07 06.5	+1.1
BRANT	Les Verrieres	1.56	251	Pn	Pb	19 06 44.9	+0.4
ZUGS	Zugspitze, Sch	1.60	91	ePg	Pg	19 06 47.0	+0.6
ZUGS				eSg	Sg	19 07 09.2	+2.0
HAU	Haudompre	1.63	290	ePg	Pg	19 06 47.5	+0.6
HAU				eSg	Sg	19 07 08.8	+0.8
	28nm,0.3s						
PART	Garmisch-Parte	1.69	88	ePg	Pg	19 06 47.8	-0.3
PART				eSg	Sg	19 07 10.8	+0.8
MOTA	Moosalm	1.69	93	ePg	Pb	19 06 47.6	+0.9
	0.6nm,0.1s,SNR=10						
MOTA				eSg	Sg	19 07 10.7	+0.6
	2.9nm,0.1s						
SQTA	Sankt Quirin	1.78	97	ePg	Pb	19 06 49.3	+1.1
	3.9nm,0.1s,SNR=16						
SQTA				eSg	Sg	19 07 13.1	+0.3
	4.2nm,0.1s						
NORI	Noerdlinger Ri	1.84	46	eSg	Sg	19 07 15.1	+0.4
GIMEL	St. Georges /	1.86	241	Pn	Pb	19 06 49.0	-0.7
FUR	Furstenfeldbru	1.92	68	eSg	Sg	19 07 18.0	+0.6
CABF	La Chapelle	1.93	245	ePg	Pg	19 06 53.4	+0.7
CABF				eSg	Sg	19 07 18.7	+0.9
	9.1nm,0.4s						
SIND	Sindeldorf	1.99	19	Pg	Pg	19 06 54.3	+0.4
WATA	Walderalm	2.01	93	ePg	Pb	19 06 52.3	+0.1
	0.5nm,0.1s						
WATA				eSg	Sg	19 07 19.8	-0.5
	1.5nm,0.1s						
WTTA	Wattenberg	2.06	95	ePg	Pb	19 06 53.0	-0.1
	0.8nm,0.1s,SNR=5.0						
WTTA				eSg	Sb	19 07 19.7	+1.0
	1.4nm,0.2s						
WTTA	Wattenberg	2.06	95	ePg	Pb	19 06 53.3	+0.2
WTTA				eSg	Sb	19 07 20.1	+1.4
TOD	Tromm	2.14	3	Pn	Pn	19 06 51.3	+0.1
PAGF	Fort de Pagny	2.23	300	ePg	Pg	19 06 58.8	+0.4
	baz=122						
PAGF				eSg	Sg	19 07 28.1	+0.9
	5.3nm,0.2s						
LPL	La Plagne	2.35	214	ePg	Pg	19 07 01.1	+0.4
LPL				eSg	Sg	19 07 31.7	+0.6
	4.8nm,0.4s						
LPG	La Plagne	2.36	214	ePg	Pg	19 07 01.4	+0.6
LPG				eSg	Sg	19 07 31.9	+0.5
	4.9nm,0.5s						
MILB	Miltenberg	2.40	10	ePn	Pn	19 06 54.4	-0.3
MILB				ePg	Pg	19 07 02.5	+0.8
MILB				eSg	Sg	19 07 32.7	-0.1
GRC1	Grafenberg Arr	2.47	51	Pn	Pn	19 06 55.0	-0.7
GRC1				Sn	Sn	19 07 23.8	-1.9
ABH	Alteburg	2.52	344	Pn	Pn	19 06 57.7	+1.3
ABH	Alteburg	2.52	344	Pn	Pn	19 06 57.6	+1.2
ABH				ePg	Pg	19 07 04.2	+0.3
ABH				eSg	Sg	19 07 36.8	+0.3
SFTF	Sexfontaines	2.52	288	ePn	Pn	19 06 57.4	+1.0
	baz=110						
SFTF	Sexfontaines	2.52	288	ePg	Pg	19 07 03.3	-0.7
	baz=112						
SFTF				eSn	Sn	19 07 27.1	0.0
SFTF				eSg	Sg	19 07 37.1	+0.4
	4.6nm,0.2s						
MEZF	Maizieres J’vi	2.61	295	ePn	Pn	19 06 59.0	+1.4
	baz=114						
MEZF	Maizieres J’vi	2.61	295	ePg	Pg	19 07 05.6	-0.1
	baz=116						
MEZF				eSn	Sn	19 07 28.4	-0.8
MEZF				eSg	Sg	19 07 39.9	+0.4
	8.7nm,0.4s						
SAVF	Savonnieres en	2.61	297	eP	Pb	19 07 00.8	-1.6
SAVF	Savonnieres en	2.61	297	ePg	Pg	19 07 06.5	+0.8
	baz=118						
SAVF				eSg	Sg	19 07 37.9	-1.6
	5.9nm,0.4s,baz=113						
GRB2	Grafenberg Arr	2.72	47	Pn	Pn	19 06 58.5	-0.7
WLF	Walferdange	2.74	324	eSg	Sg	19 07 43.7	0.0
ABTA	Abfaltersbach	2.75	104	ePg	Pb	19 07 03.8	-1.1
	0.1nm,0.1s						
ABTA				eSg	Sg	19 07 44.5	+0.4
	0.5nm,0.2s						
TNS	Taunus Mts	2.76	358	eSg	Sg	19 07 44.8	+0.5
GRFO	Grafenberg	2.81	37	eSg	Sg	19 07 45.5	-0.6
GRF	Grafenberg Arr	2.82	37	eSn	Sn	19 07 33.8	-0.5
GRF				eSg	Sg	19 07 45.3	-0.8
MBDF	Montbardon	3.03	206	ePg	Pg	19 07 12.9	-0.8
MBDF				eSg	Sg	19 07 53.8	+0.9
	6.8nm,0.6s						
ORIF	Oris-en-Rattie	3.18	218	ePg	Pg	19 07 16.4	-0.2
ORIF				eSg	Sg	19 07 56.2	-1.6
	2.5nm,0.5s						
LOR	Lormes	3.24	268	ePn	Pn	19 07 08.0	+1.7
LOR	Lormes	3.24	268	ePg	Pg	19 07 17.1	-0.7
	baz=90						
LOR				eSn	Sn	19 07 42.9	-1.9
LOR				eSg	Sg	19 07 58.9	-0.9
	3.1nm,0.2s						
WET	Wettzell	3.30	58	ePn	Pn	19 07 07.1	0.0
WET				eSn	Sn	19 07 44.0	-2.3
WET				eSg	Sg	19 08 00.1	-1.5
SMF	Signal de Mont	3.37	258	ePn	Pn	19 07 09.2	+1.1
SMF	Signal de Mont	3.37	258	ePg	Pg	19 07 19.8	-0.4
SMF				eSn	Sn	19 07 45.4	-2.5
SMF				eSg	Sg	19 08 03.6	-0.2
	1.7nm,0.2s						
SSF	Saint Saulge	3.51	265	ePn	Pn	19 07 11.9	+2.0
SSF	Saint Saulge	3.51	265	ePg	Pg	19 07 21.6	-1.2
SSF				eSg	Sg	19 08 05.7	-2.5
	1.9nm,0.3s						
AVF	Avril sur Loir	3.66	261	ePn	Pn	19 07 14.1	+2.1
AVF				eSn	Sn	19 07 52.5	-2.6
AVF				eSg	Sg	19 08 10.8	-2.3
GEC2	GERESS Array S	3.67	66	ePn	Pn	19 07 12.9	+0.6
GEC2				eSn	Sn	19 07 53.5	-2.0
GEC2				eSg	Sg	19 08 11.8	-1.7
KHC	Kasperske Hory	3.70	61	ePN	Pn	19 07 13.0	+0.3
KHC				ex	x	19 07 23.0	
KHC				eSN	Sn	19 07 53.4	-2.8
KHC				eSG	Sg	19 08 10.6	-3.9
	comp=Z,4.8nm,0.4s						
MOX	Moxa	3.74	31	eSg	Sg	19 08 14.2	-1.5
NKC	Novy Kostel	3.75	41	eSN	Sn	19 07 55.4	-1.9
VIVF	Saint-Julien-l	3.79	228	ePn	Pn	19 07 14.4	+0.6
VIVF	Saint-Julien-l	3.79	228	ePg	Pg	19 07 27.3	-0.9
VIVF				eSn	Sn	19 07 56.8	-1.5
VIVF				eSg	Sg	19 08 14.6	-2.7
	1.2nm,0.3s						
MOA	Molln	3.83	82	ePn	Pn	19 07 15.8	+1.4
MOA				eSn	Sn	19 07 59.3	-0.1
MOA				eSg	Sg	19 08 18.2	-0.5
BAIF	Baives	3.90	313	eP	Pn	19 07 18.4	+3.0
BAIF				eSn	Sn	19 08 00.0	-1.1
BAIF				eSg	Sg	19 08 18.2	-2.8
	1.3nm,0.4s						
OBKA	Obir	4.17	101	ePg	Pn	19 07 21.9	+2.8
	0.2nm,0.1s						
SOKA	Soboth	4.45	98	ePg	Pn	19 07 25.2	+2.2
	0.1nm,0.1s						
SOKA				eSg	Sn	19 07 43.5	-31
	0.2nm,0.2s						
TCF	Toulx Ste Croi	4.55	257	ePn	Pn	19 07 24.7	+0.4
TCF	Toulx Ste Croi	4.55	257	ePg	Pg	19 07 41.4	-1.4
TCF				eSn	Sn	19 08 15.5	-1.6
TCF				eSg	Sg	19 08 38.6	-3.1
CLL	Collm	4.79	35	eSg	Sg	19 08 49.0	-0.4
CONA	Conrad Observa	4.91	82	ePg	Pn	19 07 30.5	+1.2
	0.3nm,0.2s						
CONA				eSn	Sn	19 08 26.8	+0.8
	0.1nm,0.1s						

BJI ***31*** *19:08:00.0±0.0, 31°.03N×142°.11E, h15^{km}, mB4.9/38, mb4.5/62, Ms4.8/65, Ms7 4.7/61*
JMA ***31*** *19:08:02.7±0.2, 31°.18N×141°.97E, h5^{km}, M4.7*
NIED ***31*** *19:08:02.8, 31°.18N×141°.97E, h5^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.98; $M_{\theta\theta}$0.32; $M_{\phi\phi}$-2.30; $M_{r\theta}$0.87; $M_{\theta\phi}$0.35; $M_{\phi r}$2.46; Fault plane solution: $M_0$3.40000×10^{16} NP1:ϕ_s13.00000°, δ71.00000°, λ106.00000°. NP2:ϕ_s151.00000°, δ24.00000°, λ51.00000°.*
MOS ***31*** *19:08:03.3±1.1, 31°.09N×141°.68E, h14^{km}, mb5.0/40, MS4.4/7 Error ellipse: s-maj=7.7km s-min=4.1km az=115.5*
IDC ***31*** *19:08:03.1±0.5, 31°.08N×141°.70E, h0^{km}, mb4.5/22, mb1 4.6/25, mb1mx4.4/38, mbtmp4.4/25, ML3.7/3, MS4.4/28, Ms1 4.4/28, ms1mx4.2/45, Error ellipse: s-maj=16.3km s-min=13.1km az=79.0*
NEIC ***31*** *19:08:07±1.7, 31°.12N±0°.06×141°.8E±0°.1, h23^{km}±5^{km}, mb4.8/151, Error ellipse: s-maj=14.0km s-min=8.5km az=73.0*
DSN ***31*** *19:08:09.4±1.5, 30°.69N×141°.10E, h15^{km}, mb5.4/12, Error ellipse: s-maj=45.7km s-min=36.1km az=47.0, Hypocentre not reviewed by the ISC*
GCMT ***31*** *19:08:10.0±0.3, 30°.95N±0°.03×141°.84E±0°.02, h20^{km}, MW5.0/93, Moment Tensor Solution. s22,c29; s93,c137;*

Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.02±.17; $M_{\theta\theta}$-0.07±.09; $M_{\phi\phi}$-2.95±.11; $M_{r\theta}$0.69±.20; $M_{\theta\phi}$0.21±.07; $M_{\phi r}$1.23±.19; Best double couple: $M_0$3.30300×10^{16} NP1:ϕ_s164.00000°,δ35.00000°,λ70.00000°. NP2: ϕ_s9.00000°,δ57.00000°,λ104.00000°. Principal axes: T 3.4110, Plg74.0000°, Azm316.0000°; N -0.2120, Plg12.0000°, Azm181.0000°; P -3.1950, Plg11.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 31 19:08:05.0±0.6**, 31°.11N**±0°.04×**141°.74E**±0°.04**, h12^{km}**±3^{km}**, h12^{km}:pP-P, n471, σ1^{s}.44**/500**, mb4.8**/166**, MS4.5**/44**, 33C-18D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.58	321	P	Pn	19 08 47.4	+1.0
JHJ2	Mitsune	2.58	321	Pn	Pn	19 08 46.1	-0.3
JHJ	Hachijo jima 2	2.60	321	Pn	Pn	19 08 47.4	+0.6
	29nm,0.3s,baz=93,slow=22,SNR=9.4						
BSO1	Boso 1	3.59	350	P	Pn	19 08 59.7	-0.2
BSO1				eS	Sn	19 09 42.5	+0.6
CBIJ	Chichi jima	4.02	174	P	Pn	19 09 07.4	+1.1
JCJ	Chichijima	4.02	174		Pn	19 09 05.8	-0.5
JOD2	Odawara 2	4.70	332	P	Pn	19 09 17.2	+1.5
JHU	Hanno	5.15	337	P	Pn	19 09 23.4	+1.5
JHU				eS	Sn	19 10 23.9	+2.6
JYT	Yasato	5.26	346	P	Pn	19 09 24.5	+1.1
JYT	Yasato	5.26	346		Pn	19 09 22.2	-1.1
JRY	Ryogami san	5.43	335	P	Pn	19 09 27.8	+2.0
JRY				eS	Sn	19 10 31.3	+3.1
JHO	Hitachi	5.57	350	P	Pn	19 09 26.3	-1.3
JHO				eS	Sn	19 10 28.4	-3.1
JAO	Obara	5.59	319	P	Pn	19 09 32.8	+4.8
JAG	Ashikaga	5.63	341	P	Pn	19 09 29.0	+0.6
JGF	Kuroka	5.79	322		Pn	19 09 31.8	+1.2
INU	Inuyama	5.79	318	Pn	Pn	19 09 30.6	0.0
MJAR	Matsushiro Arr	6.16	332	Pn	Pn	19 09 37.3	+1.6
	1.0nm,0.3s,baz=158,slow=11,SNR=88						
MJAR				LR	LR	19 12 07.8	
	comp=Z,3μm,18.7s,baz=175,slow=40						
MJAR	Matsushiro Arr	6.16	332	P	Pn	19 09 37.5	+1.8
MJAR	Matsushiro Arr	6.16	332		Pn	19 09 37.5	+1.8
MAJO	Matsushiro	6.16	332	P	Pn	19 09 37.6	+1.9
MAJO	Matsushiro	6.16	332	Pn	Pn	19 09 37.6	+1.9
MAT	Matsushiro	6.16	332	P	Pn	19 09 37.5	+1.7
MAT				S	Sn	19 10 45.0	-1.1
MJB9	Matsu-Tunnel	6.17	332		Pn	19 09 37.6	+1.8
JWT	Wachi	6.75	310	Pn	Pn	19 09 45.0	+1.3
JMM	Marumori	6.78	354		Pn	19 09 42.9	-1.4
JSD	Sado	7.48	338	Pn	Pn	19 09 54.2	+0.4
JNU	Nakatsue	9.43	285	LR	LR	19 14 03.3	
	comp=Z,4μm,18.5s,baz=118,slow=38						
JTM	Tenmabayashi	9.67	357	Pn	Pn	19 10 23.0	-0.8
ERM	Erimo	10.94	6	⇑eP	Pn	19 10 40.4	-0.8
ERM	Erimo	10.94	6	Pn	Pn	19 10 36.6	-4.7
JEW	Eniwo	11.71	359	Pn	Pn	19 10 49.0	-2.8
JOW	Kunigami	12.54	253	LR	LR	19 15 41.5	
	comp=Z,2μm,18.9s,baz=108,slow=37						
KSRS	Korea Array	13.05	303	LR	LR	19 16 10.5	
	comp=Z,1μm,18.6s,baz=117,slow=37						
TJN	Taejon	13.06	298	⇑eP	Pn	19 11 08.3	-2.0
YUK	Yuzh-Kuril'sk	13.30	13	P	Pn	19 11 16.8	+3.3
YUK				S	Sn	19 13 48.3	+7.0
YUK				MLR	MLR		
	comp=Z,462nm,13.0s						
YUK				MLR	MLR		
	comp=N,701nm,11.0s						
INCN	Inchon	14.00	301	P	Pn	19 11 20.2	-3.0
INCN	Inchon	14.00	301		Pn	19 11 20.2	-3.0
USRK	Ussuriysk Ar.	15.16	332	Pn	Pn	19 11 37.4	-1.4
	baz=129,slow=15,SNR=4.0						
YSS	Yuzh-Sakhalins	15.84	3	eP	Pn	19 11 45.3	-2.3
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				MLR	MLR		
	comp=N,2μm,14.0s						
YSS				MLR	MLR		
	comp=Z,2μm,14.0s						
YSS	Yuzh-Sakhalins	15.84	3	Pn	Pn	19 11 44.9	-2.7
MDJ	Mudanjiang	16.52	328	P	P	19 11 58.5	-0.5
MDJ				pP	sP	19 12 03.8	+1.8
MDJ				sP	pwP	19 12 07.3	-0.5
MDJ				PP	pwP	19 12 07.3	-0.5
MDJ				S	Sn	19 15 00.0	+0.4
MDJ				pmax	pmax		
	comp=Z,11nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,360nm,6.4s						
MDJ				LR	LR		
	comp=Z,2μm,19.6s						
MDJ				LR	LR		
	comp=Z,2μm,19.6s						
MDJ				LR	LR		
	comp=Z,2μm,16.5s						
MDJ	Mudanjiang	16.52	328	P	Pn	19 11 55.0	-1.4
CN2	Changchun	18.06	319	eP	Pn	19 12 13.3	-2.4
CN2				ePP	PnPn	19 12 28.3	+1.6
CN2				eS	Sn	19 15 31.3	-5.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,320nm,7.0s						
CN2				LR	LR		
	comp=Z,2μm,14.0s						
CN2				LR	LR		
	comp=Z,2μm,14.0s						
CN2				LR	LR		
	comp=Z,2μm,14.0s						
SNY	Shenyang	18.07	311	⇓P	Pn	19 12 15.8	+0.1
SNY				S	Sn	19 15 39.8	+2.7
SNY				pmax	pmax		
	comp=Z,29nm,0.9s						
SNY				LR	LR		
	comp=Z,2μm,14.7s						
SNY				LR	LR		
	comp=Z,2μm,14.7s						
SNY				LR	LR		
	comp=Z,2μm,15.4s						
DL2	Dalian	18.20	301	P	P	19 12 21.5	+4.0
DL2				S	S	19 15 45.5	-0.1
DL2				pmax	pmax		
	comp=Z,140nm,5.2s						
DL2				LR	LR		
	comp=Z,1μm,12.6s						
DL2				LR	LR		
	comp=Z,2μm,16.1s						
DL2				LR	LR		
	comp=Z,3μm,16.1s						
NACB	Ninganchiao	19.12	254	P	P	19 12 27.3	-0.6
NACB				IAmb	IAmb	19 12 38.4	
	comp=Z,37nm,0.8s						
NJ2	Nanjing	19.52	279	eP	P	19 12 32.5	+0.4
NJ2				pP	sP	19 12 36.5	+1.3
NJ2				sP	pwP	19 12 42.5	+1.9
NJ2				S	Sn	19 16 12.3	0.0
NJ2				pmax	pmax		
	comp=Z,15nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,440nm,5.7s						
NJ2				LR	LR		
	comp=Z,870nm,18.9s						
NJ2				LR	LR		
	comp=Z,1μm,19.4s						
NJ2				LR	LR		
	comp=Z,2μm,18.5s						
KLR	Kul'dur	19.61	340	P	P	19 12 31.9	-1.1
	comp=Z,0.3nm,0.3s,baz=137,slow=12,SNR=15						
KLR	Kul'dur	19.61	340	⇑eP	P	19 12 32.7	-0.3
YULB	Yu-li	19.71	252	P	P	19 12 34.3	-0.1
TYV	Tymovskoe	19.74	2	eP	Pn	19 12 36.6	+0.7
TYV				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TYV				pmax	pmax		
	comp=Z,300nm,3.5s						
SSLB	Suanglung	19.82	253	P	Pn	19 12 36.6	-0.4
GRNR	Gornyy	20.03	350	⇑iP	Pn	19 12 41.9	+2.5
GRNR				pmax	pmax		
	comp=N,10.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TPUB	Ta-pu	20.30	253	P	P	19 12 41.5	+0.7
TIA	Tai'an	21.09	291	eP	P	19 12 47.0	-2.2
TIA				pmax	pmax		
	comp=Z,11nm,1.1s						
TIA				LR	LR		
	comp=Z,2μm,16.7s						
TIA				LR	LR		
	comp=Z,2μm,17.7s						
TIA				LR	LR		
	comp=Z,2μm,14.7s						
NKL	Nikolayevsk	22.04	358	eP	P	19 12 59.3	+0.2
NKL				pmax	pmax		
	comp=N,3.0nm,0.7s						
NKL				pmax	pmax		
	comp=E,3.0nm,0.7s						
NKL				pmax	pmax		
	comp=Z,20nm,1.0s						
NKL				MLR	MLR		
	comp=N,29nm,11.0s						
NKL				MLR	MLR		
	comp=E,36nm,11.0s						
NKL				MLR	MLR		
	comp=Z,443nm,16.0s						
BJT	Baijiatuau	22.56	300	P	P	19 13 03.9	-1.0
BJT				pmax	pmax		
	comp=Z,20nm,0.8s						
BJT	Baijiatuau	22.56	300	P	P	19 13 03.9	-1.0
BJI	Beijing	22.56	300	P	P	19 13 03.5	-1.4
BJI				S	S	19 17 12.5	+0.5
BJI				pmax	pmax		
	comp=Z,32nm,1.3s						
BJI				pmax	pmax		
	comp=Z,220nm,6.7s						
BJI				LR	LR		
	comp=Z,1μm,14.5s						
BJI				LR	LR		
	comp=Z,2μm,17.4s						
BJI				LR	LR		
	comp=Z,3μm,17.5s						
WHN	Wuhan	23.51	276	P	P	19 13 17.3	+2.5
WHN				S	S	19 17 32.0	+3.6
WHN				LR	LR		
	comp=Z,2μm,14.4s						
WHN				LR	LR		
	comp=Z,7μm,20.6s						
WHN				LR	LR		
	comp=Z,5μm,17.0s						
HIA	Hailar	24.57	324	P	P	19 13 24.0	-0.7
HIA				pmax	pmax		
	comp=Z,29nm,1.0s						
HIA	Hailar	24.57	324	P	P	19 13 24.0	-0.7
HIA				IAmb	IAmb	19 13 43.0	
	comp=Z,29nm,1.0s						
PETK	Petropavlovsk-	24.86	23	LR	LR	19 25 22.2	
	comp=Z,516nm,18.9s,baz=213,slow=42						
ZEA	Zeya	24.92	339	eP	P	19 13 27.8	+0.2
ZEA				eS	S	19 17 43.9	-6.7
ZEA				pmax	pmax		
	comp=Z,200nm,6.1s						
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=E,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,50nm,0.9s						
PET	Petropavlovsk	25.12	24	eP	P	19 13 33.6	+4.2
PET				eS	S	19 17 52.8	-0.9
PET				MLR	MLR		
	comp=Z,900nm,16.0s						
HHC	Hu-ho-hao-te	26.17	300	eP	P	19 13 38.0	-1.3
HHC				S	S	19 18 06.5	-4.5
HHC				SS	SnSn	19 19 14.5	+5.0
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,230nm,4.2s						
HHC				LR	LR		
	comp=Z,1μm,13.3s						
HHC				LR	LR		
	comp=Z,2μm,14.0s						
HHC				LR	LR		
	comp=Z,3μm,15.9s						
BTO	Baotou	27.27	299	eP	P	19 13 49.3	0.0
BTO				S	S	19 18 27.3	-1.1
BTO				LR	LR		
	comp=Z,6μm,14.7s						
BTO				LR	LR		
	comp=Z,11μm,16.3s						
XAN	Xi'an	27.75	285	P	P	19 13 52.8	-0.7
XAN				pP	pwP	19 14 01.5	-1.0
XAN				sP	sP	19 14 05.0	+8.4
XAN				S	S	19 18 29.8	-6.0
XAN				pmax	pmax		
	comp=Z,17nm,1.3s						
XAN				LR	LR		
	comp=Z,910nm,16.5s						
XAN				LR	LR		
	comp=Z,1μm,16.5s						
XAN				LR	LR		
	comp=Z,1μm,14.4s						
QIZ	Qiongzhong	31.18	255	P	P	19 14 24.0	0.0
QIZ				S	S	19 19 31.0	+1.0
QIZ				LR	LR		
	comp=Z,540nm,9.2s						
QIZ				LR	LR		
	comp=Z,510nm,8.2s						
QIZ				LR	LR		
	comp=Z,650nm,17.6s						
ULN	Ulaanbaatar	31.24	312	c iP	P	19 14 25.4	+1.0
ULN				pmax	pmax		
	comp=Z,41nm,1.7s						
ULN	Ulaanbaatar	31.24	312	P	P	19 14 25.2	+0.7
ULN				IAmb	IAmb	19 14 26.8	
	comp=Z,22nm,1.0s						
SONM	Songino Array	31.64	312	P	P	19 14 28.6	+0.5
	comp=Z,8.1nm,0.7s,baz=115,slow=8.9,SNR=45						
SONM				LR	LR	19 27 48.7	
	comp=Z,657nm,18.3s,baz=96,slow=38						
SONM	Songino Array	31.64	312	P	P	19 14 28.4	+0.4
SONM				pmax	pmax		
	comp=Z,20nm,1.2s						
SONM	Songino Array	31.64	312	P	P	19 14 28.4	+0.4
SONM				IAmb	IAmb	19 14 30.2	
	comp=Z,20nm,1.2s						
LZH	Lanzhou	31.82	289	eP	P	19 14 33.8	+4.1
LZH				sP	pwP	19 14 43.3	+4.6
LZH				sS	sS	19 19 54.5	+11
LZH				SS	SnSn	19 21 31.8	+4.5
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				LR	LR		
	comp=Z,790nm,13.5s						
LZH				LR	LR		
	comp=Z,1μm,13.0s						
LZH				LR	LR		
	comp=Z,980nm,15.2s						
YAK	Yakutsk	31.91	349	eP	P	19 14 29.2	-0.7
YAK				e*PP	pwP	19 14 38.7	-0.3
YAK				e		19 15 35.6	
YAK				ePPP	PPP	19 15 51.3	
YAK				e		19 17 19.1	
YAK				eS	S	19 19 38.7	-1.7
YAK				eSS	SnSn	19 21 29.9	+1.2
YAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,66nm,2.9s						
YAK				pmax	pmax		
	comp=N,47nm,2.5s						
YAK				pmax	pmax		
	comp=E,44nm,2.8s						
YAK				smax	smax		
	comp=E,104nm,5.3s						
YAK				smax	smax		
	comp=N,72nm,4.7s						
YAK				MLR	MLR		
	comp=Z,790nm,18.0s						
YAK				MLR	MLR		
	comp=N,552nm,17.0s						
YAK				MLR	MLR		
	comp=E,225nm,19.0s						
YAK	Yakutsk	31.91	349	P	P	19 14 28.6	-1.3
YAK				IAmb	IAmb	19 14 47.6	
	comp=Z,8.2nm,0.8s						
CD2	Chengdu	32.45	280	P	P	19 14 35.0	-0.2
CD2				S	S	19 19 49.0	-0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,1μm,14.5s						
CD2				LR	LR		
	comp=Z,2μm,14.9s						
SEY	Seymchan	32.56	9	P	P	19 14 36.2	+0.5
	comp=Z,4.6nm,0.9s,baz=178,slow=7.9,SNR=10						
SEY	Seymchan	32.56	9	⇑eP	P	19 14 35.6	-0.1
BOD	Bodaibo	32.80	333	eP	P	19 14 38.9	+1.1
BOD				pmax	pmax		
	comp=Z,14nm,1.4s						
TNTI	Ternate	33.11	207	P	P	19 14 40.1	-0.8
TNTI				IAmb	IAmb	19 14 41.2	
	comp=Z,18nm,0.9s						
MYLDM	Lahad Datu	33.80	225	P	P	19 14 47.8	+0.8
ZAK	Zakamensk	34.41	315	eP	P	19 14 52.8	+0.7
ZAK				pmax	pmax		
	comp=Z,15nm,1.7s						
IRK	Irkutsk	34.51	319	eP	P	19 14 53.4	+0.6
IRK				pmax	pmax		
	comp=Z,63nm,2.4s						
GTA	Gaotai	34.97	295	⇓P	P	19 14 56.0	-1.1
GTA				pP	sP	19 15 01.0	+0.8
GTA				sP	pwP	19 15 04.8	-1.3
GTA				PcP	PcP	19 17 30.5	+1.1
GTA				sS	sS	19 20 37.0	+4.6
GTA				SS	SnSn	19 22 41.5	-2.2
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,61nm,5.5s						
GTA				LR	LR		
	comp=Z,870nm,14.2s						
GTA				LR	LR		
	comp=Z,2μm,17.4s						
GTA				LR	LR		
	comp=Z,2μm,16.0s						
MOY	Mondy	36.20	317	eP	P	19 15 08.1	+0.6
MOY				pmax	pmax		
	comp=Z,51nm,3.1s						
BILL	Bilibino	39.66	14	⇑eP	P	19 15 38.8	+2.5
BILL				e		19 17 06.0	
BILL				ePPP	PPP	19 17 32.4	
BILL				e		19 17 41.6	
BILL				pmax	pmax		
	comp=Z,16nm,2.4s						
BILL	Bilibino	39.66	14	P	P	19 15 36.3	+0.1
CHTO	Chiang Mai	40.45	263	P	P	19 15 42.3	-1.2
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CHTO	Chiang Mai	40.45	263	P	P	19 15 42.3	-1.2
CM31	Chiang Mai Arr	40.61	262	P	P	19 15 43.9	-0.9
CMAR	Chiang Mai Arr	40.61	262	P	P	19 15 44.2	-0.6
	comp=Z,1.9nm,0.7s,baz=55,slow=6.9,SNR=19						
CMAR				LR	LR	19 33 54.7	
	comp=Z,768nm,19.1s,baz=110,slow=38						
CMAR	Chiang Mai Arr	40.61	262	P	P	19 15 43.5	-1.3
TIXI	Tiksi	41.19	354	c iP	P	19 15 47.4	-1.5
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.6s						
TIXI	Tiksi	41.19	354	P	P	19 15 47.6	-1.3
KAPI	Kappang	41.61	214	P	P	19 15 52.8	-0.2
KAPI				pmax	pmax		
	comp=Z,16nm,1.0s						
KAPI	Kappang	41.61	214	P	P	19 15 52.8	-0.2
KAPI				IAmb	IAmb	19 15 59.0	
	comp=Z,16nm,0.9s						
WMQ	Urumqi	44.00	302	eP	P	19 16 12.5	+0.2
WMQ				pP	sP	19 16 17.5	+2.0
WMQ				sP	pwP	19 16 26.5	+5.1
WMQ				pmax	pmax		
	comp=Z,19nm,2.3s						
WMQ				pmax	pmax		
	comp=Z,250nm,3.6s						
DGZ	Jazzator, Alta	44.28	311	c iP	P	19 16 15.1	+0.6
DGZ				pmax	pmax		
	comp=Z,15nm,0.9s						
COEN	Coen	44.83	178	P	P	19 16 19.8	+0.8
MTN	Manton Dam	44.88	195	P	P	19 16 17.9	-1.4
ZSN	Zaisan	45.91	308	eP	P	19 16 26.9	-0.5
	comp=Z,17nm,1.4s,baz=308						
ZSN	Zaisan	45.91	308	eP	P	19 16 26.9	-0.5
ZSN				pmax	pmax		
	comp=Z,17nm,1.4s						
ZAA0	Zalesovo Array	46.26	317	P	P	19 16 29.6	-0.3
ZAA0				IAmb	IAmb	19 16 34.9	
	comp=Z,17nm,1.1s						
ZALV	Zalesovo Beam	46.26	317	P	P	19 16 29.7	-0.2
	comp=Z,7.1nm,0.7s,baz=99,slow=6.6,SNR=39						
ZALV				PcP	PcP	19 18 05.2	-0.1
	comp=Z,6.1nm,0.8s,baz=100,slow=2.8,SNR=6.8						
ZALV				LR	LR	19 36 27.1	
	comp=Z,383nm,18.7s,baz=93,slow=37						
ZALV	Zalesovo Beam	46.26	317	i P	P	19 16 30.3	+0.4
ZALV				pmax	pmax		
	comp=Z,13nm,0.9s						
ZALV	Zalesovo Beam	46.26	317	P	P	19 16 29.6	-0.3
ANM	Nome	46.59	28	P	P	19 16 33.5	+1.1
ANM				pmax	pmax		
	comp=Z,18nm,1.4s						
ANM	Nome	46.59	28	P	P	19 16 33.5	+1.1
ANM				IAmb	IAmb	19 16 51.5	
	comp=Z,18nm,1.4s						
MK31	Makanchi Array	47.69	307	P	P	19 16 41.4	+0.1
MK31				IAmb	IAmb	19 16 42.7	
	comp=Z,14nm,1.2s						
MKAR	Makanchi Array	47.69	307	P	P	19 16 41.3	-0.1
	comp=Z,6.2nm,0.8s,baz=87,slow=9.2,SNR=46						
MKAR				LR	LR	19 37 47.4	
	comp=Z,307nm,19.0s,baz=88,slow=37						
MKAR	Makanchi Array	47.69	307	i P	P	19 16 41.7	+0.4
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MKAR	Makanchi Array	47.69	307	P	P	19 16 41.4	+0.1
MAKZ	Makanchi	47.91	307	P	P	19 16 43.3	+0.3
MAKZ				pmax	pmax		
	comp=Z,24nm,1.3s						
MAKZ	Makanchi	47.91	307	P	P	19 16 43.3	+0.3
KNRA	Kununurra	48.16	197	P	P	19 16 44.3	-0.8
GUN	Gumba	48.29	281	eP	P	19 16 45.8	-0.8
	comp=Z,38nm,0.8s						
NRIK	Noril'sk	48.79	338	P	P	19 16 49.8	+0.4
	comp=Z,14nm,0.9s,baz=114,slow=9.1,SNR=14						
NRIK				LR	LR	19 37 09.4	
	comp=Z,350nm,20.2s,baz=121,slow=36						
NRIK	Noril'sk	48.79	338	ceP	P	19 16 49.2	-0.2
NRIK				pmax	pmax		
	comp=Z,17nm,0.9s						
NRIK	Noril'sk	48.79	338	P	P	19 16 49.6	+0.2
NRIK				IAmb	IAmb	19 16 54.5	
	comp=Z,14nm,0.9s						
PKI	Pulchoki	48.79	281	eP	P	19 16 49.1	-1.3
	comp=Z,12nm,1.0s						
PKIN	Phulchoki	48.80	281	eP	P	19 16 49.4	-1.0
	comp=Z,8.9nm,0.9s						
KKN	Kakani	48.83	281	eP	P	19 16 49.1	-1.5
	comp=Z,24nm,0.8s						
SEM	Semipalatinsk	48.92	312	eP	P	19 16 49.2	-1.8
	baz=312						
SEM	Semipalatinsk	48.92	312	eP	P	19 16 49.1	-1.8
GKN	Gorkha	49.30	282	eP	P	19 16 53.0	-1.1
	comp=Z,20nm,1.0s						
DANN	Dangsing	49.93	282	eP	P	19 16 58.0	-1.1
	comp=Z,14nm,0.5s						
KURK	Kurchatov	49.95	312	P	P	19 16 58.2	-0.4
KURK				pmax	pmax		
	comp=Z,20nm,0.9s						
KURK	Kurchatov	49.95	312	P	P	19 16 58.2	-0.4
SHLS	Shalkode	50.03	302	eP	P	19 16 56.0	-3.4
	baz=302						
SHLS	Shalkode	50.03	302	eP	P	19 16 56.0	-3.4
P18K	Big Mountain,	50.15	36	P	P	19 16 60.0	0.0
SVW2	Sparrevohn	50.16	34	P	P	19 17 00.3	+0.3
SVW2				IAmb	IAmb	19 17 07.1	
	comp=Z,23nm,1.4s						
O18K	Koktuh Hills	50.20	36	P	P	19 17 00.9	+0.6
KOLN	Koldanda	50.25	282	eP	P	19 17 00.6	-0.8
UZB	Uzynbulak	50.35	302	eP	P	19 17 01.2	-0.7
	baz=302						
UZB	Uzynbulak	50.35	302	eP	P	19 17 01.2	-0.7
TDK	Taldyqorghan	50.55	305	eP	P	19 17 02.6	-0.7
	baz=305						

TDK	**Taldyqorghan**	50.55	305	*e*P	P	19 17 02.5	-0.7
KPKS	**Kokpek**	50.55	303	*e*P	P	19 17 02.3	-1.0
	baz=303						
KPKS	**Kokpek**	50.55	303	*e*P	P	19 17 02.3	-1.0
L19K	**White Mountain**	50.64	33	P	P	19 17 03.5	-0.1
PYUN	**Piuthan**	50.65	282	*e*P	P	19 17 03.6	-0.9
ZHN	**Zhinishke**	50.77	302	*e*P	P	19 17 04.6	-0.4
	baz=302						
ZHN	**Zhinishke**	50.77	302	*e*P	P	19 17 04.6	-0.4
SATY	**Saty**	50.81	302	*e*P	P	19 17 04.6	-0.7
	comp=Z,10nm,1.5s,baz=302						
SATY	**Saty**	50.81	302	*e*P	P	19 17 04.6	-0.7
SATY				pmax	pmax		
	comp=Z,10.0nm,1.5s						
OHAK	**Old Harbor**	51.04	39	P	P	19 17 06.6	-0.1
WB0	**Warramunga Arr**	51.08	189	P	P	19 17 06.8	-0.5
WB0				IAmb	IAmb	19 17 27.6	
	comp=Z,18nm,1.0s						
CTAO	**Charters Tower**	51.09	175	P	P	19 17 08.1	+0.7
CTAO				pmax	pmax		
	comp=Z,14nm,1.2s						
CTAO	**Charters Tower**	51.09	175	P	P	19 17 08.1	+0.7
CTAO				IAmb	IAmb	19 17 08.3	
	comp=Z,14nm,1.2s						
K20K	**Telida**	51.15	31	P	P	19 17 08.6	+1.2
K20K				IAmb	IAmb	19 17 26.5	
	comp=Z,14nm,1.0s						
J20K	**Nowinta River**	51.23	30	P	P	19 17 09.4	+1.5
J20K				IAmb	IAmb	19 17 27.1	
	comp=Z,14nm,1.1s						
WRAB	**Tennant Creek**	51.25	189	P	P	19 17 08.2	-0.4
WRAB				pmax	pmax		
	comp=Z,17nm,1.0s						
WRAB	**Tennant Creek**	51.25	189	P	P	19 17 08.2	-0.4
WRAB				IAmb	IAmb	19 17 21.2	
	comp=Z,17nm,1.0s						
WR0	**Warramunga Arr**	51.25	189	P	P	19 17 08.1	-0.5
WR0				IAmb	IAmb	19 17 16.6	
	comp=Z,14nm,0.9s						
WB2	**Warramunga Arr**	51.26	189	P	P	19 17 08.3	-0.3
WB2				IAmb	IAmb	19 17 29.5	
	comp=Z,12nm,0.9s						
WRA	**Warramunga Arr**	51.26	189	P	P	19 17 08.2	-0.4
	comp=Z,4.5nm,0.5s,baz=6.1,slow=7.6,SNR=137						
WRA				LR	LR	19 39 15.4	
	comp=Z,336nm,18.3s,baz=25,slow=37						
WRA	**Warramunga Arr**	51.26	189	*i* P	P	19 17 08.1	-0.6
WRA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
WRA	**Warramunga Arr**	51.26	189	P	P	19 17 07.6	-1.0
KDAK	**Kodiak Island**	51.43	39	P	P	19 17 08.3	-1.3
KDAK				pmax	pmax		
	comp=Z,66nm,1.4s						
KDAK	**Kodiak Island**	51.43	39	P	P	19 17 08.3	-1.3
IMAR	**Indian Mountai**	51.67	28	P	P	19 17 11.9	+0.6
CHKK	**Chushkaly**	51.71	304	*e*P	P	19 17 10.1	-1.9
	baz=304						
MDOK	**Medeo**	51.77	303	*e*P	P	19 17 12.0	-0.7
	baz=303						
MDOK	**Medeo**	51.77	303	*e*P	P	19 17 11.9	-0.7
TNSS	**Tian-Shan**	51.87	303	*e*P	P	19 17 13.4	-0.2
	baz=302						
PPLA	**Purkeypile**	51.95	32	P	P	19 17 14.6	+1.0
PPLA				IAmb	IAmb	19 17 23.3	
	comp=Z,27nm,1.4s						
H21K	**Melozitna Rive**	52.00	29	P	P	19 17 14.7	+0.9
H21K				IAmb	IAmb	19 17 32.3	
	comp=Z,28nm,1.5s						
CAST	**Castle Rocks**	52.04	31	P	P	19 17 15.1	+0.9
CAST				IAmb	IAmb	19 17 17.7	
	comp=Z,14nm,1.2s						
KUU	**Kurty**	52.17	304	*e*P	P	19 17 14.1	-1.3
	comp=Z,22nm,1.8s,baz=304						
KUU	**Kurty**	52.17	304	*e*P	P	19 17 14.1	-1.3
KUU				pmax	pmax		
	comp=Z,21nm,1.8s						
BOOM	**Boomskoye usch**	52.69	302	P	P	19 17 19.3	-0.2
BOOM				pmax	pmax		
	comp=Z,15nm,1.4s						
BOOM	**Boomskoye usch**	52.69	302	P	P	19 17 19.3	-0.2
BOOM				IAmb	IAmb	19 17 31.5	
	comp=Z,14nm,1.4s						
TKM2	**Tokmak 2**	52.86	303	P	P	19 17 22.1	+1.3
	SNR=12						
TKM2	**Tokmak 2**	52.86	303	*i* P	P	19 17 20.3	-0.5
TKM2				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KSH	**Kashi**	53.26	298	P	P	19 17 28.3	+4.6
KSH				pP	pwP	19 17 33.0	+0.2
KSH				PP	PP	19 19 30.8	+7.2
KSH				ScS	ScS	19 27 12.8	-0.5
KSH				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KSH				LR	LR		
	comp=Z,870nm,13.2s						
KSH				LR	LR		
	comp=Z,1µm,15.1s						
KSH				LR	LR		
	comp=Z,1µm,16.7s						
I23K	**Minto, Yukon-K**	53.38	29	P	P	19 17 25.1	+1.2
KBK	**Karagaybulak**	53.38	302	P	P	19 17 25.7	+1.1
	SNR=6.5						
SGDS	**Sogindy**	53.46	303	*e*P	P	19 17 23.8	-1.3
	baz=303						
RND	**Reindeer**	53.49	32	P	P	19 17 24.8	-0.1
RND				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RND	**Reindeer**	53.49	32	P	P	19 17 24.8	-0.1
RND				IAmb	IAmb	19 17 28.0	
	comp=Z,8.1nm,0.8s						
FRU1	**Bishkek**	53.58	303	P	P	19 17 25.8	-0.1
FRU1				pmax	pmax		
	comp=Z,36nm,1.5s						
FRU1	**Bishkek**	53.58	303	P	P	19 17 25.8	-0.1
USP	**Ospenovka**	53.59	303	P	P	19 17 26.6	+0.7
	SNR=7.2						
BTLS	**Baital**	53.60	305	*e*P	P	19 17 24.4	-1.6
	comp=Z,20nm,1.6s,baz=305						
BTLS	**Baital**	53.60	305	*e*P	P	19 17 24.3	-1.6
BTLS				pmax	pmax		
	comp=Z,20nm,1.6s						
TOLK	**Toolik Lake Re**	53.66	25	P	P	19 17 27.3	+1.3
TOLK				IAmb	IAmb	19 17 30.8	
	comp=Z,13nm,1.1s						
AAK	**Ala-Archa**	53.72	302	*i* P	P	19 17 27.7	+0.6
	SNR=7.2						
AAK	**Ala-Archa**	53.72	302	⇓*e*P	P	19 17 27.6	+0.6
AAK				pmax	pmax		
	comp=Z,36nm,1.7s						
AAK	**Ala-Archa**	53.72	302	P	P	19 17 27.0	0.0
AAK	**Ala-Archa**	53.72	302	*i* P		19 17 27.7	
	SNR=7.2						
UCH	**Uchtor**	53.78	302	P	P	19 17 29.1	+1.3
	SNR=8.9						
BRZS	**Berezniki**	53.80	312	*e*P	P	19 17 26.9	-0.4
	baz=312						
BRZS	**Berezniki**	53.80	312	*e*P	P	19 17 26.9	-0.4
MDM	**Murphy Dome**	53.85	30	P	P	19 17 27.7	+0.3
MDM				IAmb	IAmb	19 17 34.4	
	comp=Z,19nm,1.2s						
H24K	**Noodor Dome**	54.05	29	P	P	19 17 29.0	+0.1
H24K				IAmb	IAmb	19 17 36.2	
	comp=Z,8.6nm,1.1s						
OTUK	**Ortayu**	54.26	310	*i* P	P	19 17 30.4	-0.3
OTUK				pmax	pmax		
	comp=Z,25nm,1.0s						
HDA	**Harding Lake**	54.37	30	P	P	19 17 30.9	-0.4
HDA				IAmb	IAmb	19 17 36.4	
	comp=Z,9.3nm,0.8s						
AML	**Almayashu**	54.40	302	P	P	19 17 33.8	+1.5
	SNR=14						
AML	**Almayashu**	54.40	302	*i* P	P	19 17 33.6	+1.3
	SNR=20						
AML	**Almayashu**	54.40	302	*i* P		19 17 33.6	
	SNR=20						
IL31		54.41	30	P	P	19 17 31.0	-0.4
IL31				IAmb	IAmb	19 17 35.0	
	comp=Z,5.9nm,0.8s						
ILAR	**Eielson Array**	54.41	30	P	P	19 17 31.5	0.0
	comp=Z,4.0nm,0.7s,baz=263,slow=6.0,SNR=22						
ILAR				LR	LR	19 38 35.0	
	comp=Z,75nm,21.7s,baz=281,slow=34						
ILAR	**Eielson Array**	54.41	30	P	P	19 17 30.7	-0.8
BRVK	**Borovoye**	54.93	316	*ce*P	P	19 17 35.6	+0.1
BRVK				pmax	pmax		
	comp=Z,17nm,1.3s						
BRVK	**Borovoye**	54.93	316	P	P	19 17 35.5	+0.1
BRVK				IAmb	IAmb	19 17 40.7	
	comp=Z,10nm,0.8s						
AS31	**Alice Springs**	54.98	189	P	P	19 17 35.3	-0.8
ASAR	**Alice Springs**	54.98	189	P	P	19 17 35.2	-0.9
	comp=Z,4.1nm,0.6s,baz=3.2,slow=5.3,SNR=136						
ASAR				LR	LR	19 40 01.7	
	comp=Z,344nm,21.0s,baz=18,slow=35						
BMAR	**Burnt Mountain**	55.43	27	P	P	19 17 40.6	+1.7
DZA	**Taraz**	55.94	303	*e*P	P	19 17 42.6	-0.4
	baz=303						
DZA	**Taraz**	55.94	303	*e*P	P	19 17 42.5	-0.4
DRK	**Karamyk**	56.41	299	P	P	19 17 46.7	0.0
DRK				IAmb	IAmb	19 18 01.3	
	comp=Z,17nm,1.4s						
KKAR	**Karatay Array**	56.48	304	P	P	19 17 46.6	-0.2
KKAR	**Karatay Array**	56.48	304	P	P	19 17 46.5	-0.2
L27K	**Beaver Creek,**	56.67	32	P	P	19 17 49.2	+1.3
BCAR	**Beaver Creek A**	56.69	32	P	P	19 17 48.7	+0.6
NIL	**Nilore**	56.91	292	P	P	19 17 50.1	+0.1
NIL				pmax	pmax		
	comp=Z,18nm,0.7s						
NIL	**Nilore**	56.91	292	P	P	19 17 50.1	+0.1
BRLS	**Borolday**	56.98	304	*e*P	P	19 17 50.8	+0.4
	baz=304						
BRLS	**Borolday**	56.98	304	*e*P	P	19 17 50.7	+0.4
BTK	**Batken**	56.99	300	P	P	19 17 51.3	+0.7
BTK				pmax	pmax		
	comp=Z,15nm,1.5s						
BTK	**Batken**	56.99	300	P	P	19 17 51.3	+0.7
BTK				IAmb	IAmb	19 17 52.2	
	comp=Z,15nm,1.4s						
IUG	**Iuzhnay**	57.05	303	*e*P	P	19 17 50.5	-0.4
	baz=303						
IUG	**Iuzhnay**	57.05	303	*e*P	P	19 17 50.5	-0.4
DZM	**Mont Dzumac**	57.95	153	*e*S	S	19 26 02.4	+5.0
	comp=Z,75nm,23.5s						
DZM				*e*LR	LR	19 34 54.2	
	comp=Z,257nm,24.2s						
EPYK	**Eagle Plains**	58.57	28	P	P	19 18 02.0	+0.9
CHGR	**Chuyangaron**	58.61	299	P	P	19 18 02.0	0.0
INK	**Inuvik**	59.56	25	P	P	19 18 08.5	+0.6
	comp=Z,5.2nm,0.8s,baz=289,slow=5.6,SNR=11						
INK	**Inuvik**	59.56	25	P	P	19 18 07.8	-0.1
INK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
INK	**Inuvik**	59.56	25	P	P	19 18 07.8	-0.1
INK				IAmb	IAmb	19 18 12.0	
	comp=Z,8.4nm,1.1s						
SVE	**Sverdlovsk**	59.84	321	*e*P	P	19 18 10.5	+0.5
SVE				pmax	pmax		
	comp=Z,28nm,1.2s						
KBL	**Kabul**	59.95	294	P	P	19 18 09.9	-1.5
KBL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBL	**Kabul**	59.95	294	P	P	19 18 09.9	-1.5
KBL				IAmb	IAmb	19 18 38.0	
	comp=Z,6.1nm,0.9s						
ARU	**Arti**	61.05	321	*d i*P	P	19 18 18.3	0.0
ARU						19 18 58.7	
ARU				S	S	19 26 38.6	+2.0
ARU				SS	SS	19 30 34.6	-1.1
ARU				pmax	pmax		
	comp=Z,39nm,1.3s						
ARU				MLR	MLR		
	comp=Z,372nm,17.0s						
ARU	**Arti**	61.05	321	P	P	19 18 17.3	-1.0
A36M	**Sachs Harbour**	61.66	21	P	P	19 18 22.8	+0.6
A36M				IAmb	IAmb	19 18 27.2	
	comp=Z,10.0nm,0.8s						
AB31	**Akbulak array**	62.05	313	*i* P	P	19 18 25.4	+0.2
AB31				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ABKAR	**Akbulak array**	62.05	313	P	P	19 18 24.9	-0.3
ABKAR	**Akbulak array**	62.05	313	P	P	19 18 25.2	0.0
ABKAR				IAmb	IAmb	19 18 30.4	
	comp=Z,34nm,1.4s						
STKA	**Stephens Creek**	62.65	180	P	P	19 18 29.4	+0.2
	comp=Z,3.2nm,0.7s,baz=355,slow=8.4,SNR=7.8						
STKA				LR	LR	19 45 05.8	
	comp=Z,311nm,20.4s,baz=18,slow=36						
STKA	**Stephens Creek**	62.65	180	P	P	19 18 29.0	-0.2
STKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
STKA	**Stephens Creek**	62.65	180	P	P	19 18 28.9	-0.2
C36M	**Paulatuk**	62.71	23	P	P	19 18 28.7	-0.6
C36M				IAmb	IAmb	19 18 33.0	
	comp=Z,10nm,0.8s						
FORT	**Forrest**	62.91	193	P	P	19 18 29.5	-1.4
AKTO	**Aktyubinsk**	62.92	314	*i* P	P	19 18 30.3	-0.7
AKTO				pmax	pmax		
	comp=Z,12nm,1.1s						
KIRV	**Kirov**	65.18	325	*ce*P	P	19 18 45.9	+0.3
HRA	**Herat**	65.27	296	P	P	19 18 47.4	+0.5
HRA				IAmb	IAmb	19 18 48.4	
	comp=Z,13nm,1.1s						
PRGR	**Permogore**	65.91	329	*e*P	P	19 18 50.4	+0.1
PRGR				pmax	pmax		
	comp=Z,37nm,1.2s						
EUNU	**Eureka**	65.99	8	P	P	19 18 50.5	-0.2
EUNU				IAmb	IAmb	19 18 54.8	
	comp=Z,5.8nm,0.9s						
GEYT	**Alibeck**	67.04	301	P	P	19 18 58.7	+0.6
	comp=Z,7.1nm,1.0s,baz=12,slow=3.6,SNR=10						
GEYT				LR	LR	19 49 14.9	
	comp=Z,223nm,20.1s,baz=60,slow=37						
GEYT	**Alibeck**	67.04	301	P	P	19 18 58.7	+0.6
GEYT				IAmb	IAmb	19 19 04.5	
	comp=Z,14nm,1.2s						
GYA0B	**ALIBECK ARRAY**	67.04	301	P	P	19 18 58.1	+0.1
RES	**Resolute Bay**	68.26	14	P	P	19 19 05.2	+0.1
RES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
RES	**Resolute Bay**	68.26	14	P	P	19 19 05.2	+0.1
BELG	**Belogornoye**	68.37	319	⇑*e*P	P	19 19 06.3	+0.2
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YKA	**Yellowknife Ar**	68.81	29	P	P	19 19 08.4	-0.3
	comp=Z,2.9nm,0.7s,baz=295,slow=6.3,SNR=26						
YKA				LR	LR	19 58 23.6	
	comp=Z,47nm,18.0s,baz=0.0,slow=44						
YKA	**Yellowknife Ar**	68.81	29	*i* P	P	19 19 11.3	+2.6
YKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKA	**Yellowknife Ar**	68.81	29	P	P	19 19 07.9	-0.8
KLMR	**Klimovskoe**	68.93	329	*e*P	P	19 19 07.1	-2.4
KLMR				*e*		19 21 40.6	
KLMR				pmax	pmax		
	comp=Z,15nm,1.1s						
KLMR	**Klimovskoe**	68.93	329	*e*P	P	19 19 07.1	-2.4
KLMR				AMP		19 19 13.7	
	comp=Z,15nm,1.1s						
KLMR				*e*PP	PP	19 21 40.6	-0.7
ARCES	**ARCESS Array B**	69.64	340	P	P	19 19 14.3	+0.6
	comp=Z,5.9nm,0.8s,baz=43,slow=9.1,SNR=4.8						
ARCES				LR	LR	19 54 38.1	
	comp=Z,287nm,18.3s,baz=55,slow=40						
RAO	**Raoul Island**	71.26	143	LR	LR	19 46 25.8	
	comp=Z,474nm,20.1s,baz=28,slow=32						
DAG	**Danmarks Havn**	71.68	355	*i* P	P	19 19 25.0	-1.1
VRH	**Novokhopyorsk**	72.19	319	*e*P	P	19 19 28.7	-0.8
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MOS	**Moscow**	72.20	325	*e*P	P	19 19 29.9	+0.4
MAK	**Makhachkala**	72.38	310	*e*P	P	19 19 26.5	-4.3
MAK				*e*S	S	19 28 49.8	-4.4
MAK				MLR	MLR		
	comp=Z,1µm,16.0s						
B08A	**Colville Reser**	72.88	44	P	P	19 19 33.9	+0.1
B08A				IAmb	IAmb	19 19 38.7	
	comp=Z,11nm,1.2s						
OBN	**Obninsk**	73.03	325	⇓*e*P	P	19 19 34.4	0.0
OBN				*e*		19 19 51.1	
OBN				*e*		19 22 21.1	
OBN				*e*PPP	PPP	19 24 03.8	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
LPSR	**Galich'ya Gora**	73.06	322	*e*P	P	19 19 32.2	-2.4
LPSR				pmax	pmax		
	comp=Z,20nm,1.8s						
BANOM	**Banah**	73.44	291	P	P	19 19 38.5	+1.0
BANOM	**Banah**	73.44	291	P		19 19 38.5	
SHME	**Shamm**	73.51	291	*i* P	P	19 19 38.8	+1.0
	SNR=5.7						
SHME	**Shamm**	73.51	291	*i* P		19 19 38.8	
	SNR=5.7						
VSR	**Storozhevoye**	73.60	320	*e*P	P	19 19 35.9	-2.0
VSR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HAWA	**Hanford**	73.68	45	P	P	19 19 38.4	-0.1
D08A	**Wollman Farm,**	73.74	45	P	P	19 19 38.4	-0.4
D08A				IAmb	IAmb	19 19 43.6	
	comp=Z,10nm,1.3s						
MSFE	**Esma-Masafi**	73.81	290	P	P	19 19 40.7	+1.0
MSFE	**Esma-Masafi**	73.81	290	P		19 19 40.7	
UOSS	**Minazif**	73.96	290	P	P	19 19 41.0	+0.5
UOSS	**Minazif**	73.96	290	P		19 19 41.0	
PINE	**Pine Mountain**	74.01	48	P	P	19 19 42.2	+1.5
PINE				IAmb	IAmb	19 19 46.3	
	comp=Z,17nm,1.2s						
SOHO	**SOHO**	74.06	289	*i* P	P	19 19 41.8	+0.7
	SNR=7.5						
SOHO	**SOHO**	74.06	289	*i* P		19 19 41.8	
	SNR=7.5						
HATD	**Hatta, Dubai**	74.08	290	*i* P	P	19 19 42.3	+1.1
	SNR=6.6						
HATD	**Hatta, Dubai**	74.08	290	*i* P		19 19 42.3	
	SNR=6.6						
FINES	**FINESS Array B**	74.19	333	P	P	19 19 41.3	+0.2
	comp=Z,1.8nm,0.5s,baz=72,slow=6.2,SNR=18						
FINES	**FINESS Array B**	74.19	333	*i* P	P	19 19 41.2	+0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ASHO	**Ashiyiah**	74.20	289	P	P	19 19 42.9	+0.9
ASHO	**Ashiyiah**	74.20	289	P		19 19 42.9	
NEW	**Newport**	74.23	43	P	P	19 19 42.5	+0.8
NEW				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NEW	**Newport**	74.23	43	P	P	19 19 42.5	+0.8
NEW				IAmb	IAmb	19 19 46.6	
	comp=Z,10nm,1.2s						
NAZ	**Nazwa, Dubai**	74.38	290	P	P	19 19 43.6	+0.7
NAZ	**Nazwa, Dubai**	74.38	290	P		19 19 43.6	
WDC	**Whiskeytown Da**	74.45	52	P	P	19 19 42.3	-0.8
WDC				pmax	pmax		
	comp=Z,11nm,1.5s						
WDC	**Whiskeytown Da**	74.45	52	P	P	19 19 42.3	-0.8
WDC				IAmb	IAmb	19 20 01.2	
	comp=Z,11nm,1.5s						
E09A	**Wood Farm, Sta**	74.46	45	P	P	19 19 43.4	+0.3
K05A	**Summer Lake**	74.54	49	P	P	19 19 42.7	-1.1
K05A				IAmb	IAmb	19 19 57.7	
	comp=Z,13nm,1.2s						
FAQ	**Al Faqa, Dubai**	74.55	290	P	P	19 19 44.3	+0.3
FAQ	**Al Faqa, Dubai**	74.55	290	P		19 19 44.3	
NCK	**Nalchik**	74.68	312	⇓*e*P	P	19 19 45.1	+0.7
NCK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KBZ	**Khabaz**	75.01	312	P	P	19 19 46.7	+0.4
	comp=Z,6.8nm,0.9s,baz=37,slow=6.0,SNR=10						
KBZ				LR	LR	19 57 13.0	
	comp=Z,224nm,18.1s,baz=78,slow=39						
KBZ	**Khabaz**	75.01	312	*ce*P	P	19 19 47.1	+0.9
KBZ				pmax	pmax		
	comp=Z,16nm,1.2s						
KIV	**Kislovodsk**	75.04	312	*de*P	P	19 19 48.0	+1.4
KIV				*e*S	S	19 29 28.4	+4.0
KIV				pmax	pmax		
	comp=Z,25nm,1.7s						
KIV				MLR	MLR		
	comp=Z,275nm,16.0s						
KIV	**Kislovodsk**	75.04	312	P	P	19 19 47.5	+1.0
ORV	**Oroville**	75.64	52	P	P	19 19 49.7	-0.3
ORV				pmax	pmax		
	comp=Z,11nm,1.4s						
ORV	**Oroville**	75.64	52	P	P	19 19 49.7	-0.3
ORV				IAmb	IAmb	19 19 56.0	
	comp=Z,11nm,1.4s						
WALA	**Waterton Lakes**	75.67	41	P	P	19 19 49.4	-0.8
WALA				IAmb	IAmb	19 20 00.2	
	comp=Z,22nm,1.4s						
VSU	**Vasula**	75.71	331	⇑*e*P	P	19 19 52.8	+2.8
VSU				pmax	pmax		
	comp=Z,51nm,1.1s						
BMO	**Blue Mountains**	75.79	46	P	P	19 19 51.3	+0.4
BMO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BMO	**Blue Mountains**	75.79	46	P	P	19 19 51.3	+0.4
J08A	**Circle Bar Ran**	75.79	48	P	P	19 19 50.9	0.0
J08A				IAmb	IAmb	19 19 57.9	
	comp=Z,13nm,1.3s						
PLID	**Pearl Lake**	76.47	45	P	P	19 19 54.4	-0.6
PAHR	**Pah Rah Range**	76.99	51	P	P	19 19 56.9	-1.0
PAHR				IAmb	IAmb	19 20 03.6	
	comp=Z,12nm,1.5s						
CMB	**Columbia Colle**	77.13	53	P	P	19 19 58.6	+0.1
CMB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CMB	**Columbia Colle**	77.13	53	P	P	19 19 58.6	+0.1
MFID	**Camas Ranch**	77.43	47	P	P	19 20 00.3	+0.1
MFID				IAmb	IAmb	19 20 05.4	
	comp=Z,17nm,1.4s						
YERR	**Yerington**	77.45	52	P	P	19 20 01.3	+0.9
MNK	**Minsk**	77.56	327	*i* P	P	19 19 58.5	-2.1
MNK				*i*		19 20 08.4	
MNK				*i* S	S	19 29 49.3	-2.2
MNK				pmax	pmax		
	comp=E,1.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,292nm,18.0s						
MNK				MLR	MLR		
	comp=Z,365nm,18.0s						
MNK				MLR	MLR		
	comp=E,55nm,18.0s						
NACGM	**Naroch**	77.83	328	*i* P	P	19 20 06.6	+4.6
HRY	**Holter Researc**	78.10	42	P	P	19 20 04.3	+0.4
RYN	**Ryan**	78.11	52	P	P	19 20 04.3	+0.2
GURO	**Guroymak-BITLI**	78.13	308	P	P	19 20 05.2	+1.0
GURO				IAmb	IAmb	19 20 10.5	
	comp=Z,9.5nm,1.1s						
KVN	**Kaiserville**	78.18	52	P	P	19 20 04.2	-0.4
KVN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KVN	**Kaiserville**	78.18	52	P	P	19 20 04.2	-0.4
KVN				IAmb	IAmb	19 20 11.2	
	comp=Z,9.5nm,1.3s						
LRM	**Limekiln Ridge**	78.22	43	P	P	19 20 05.4	+0.7
HLID	**Hailey**	78.24	46	P	P	19 20 05.3	+0.6
LHV	**Little Huntoon**	78.31	52	P	P	19 20 03.4	-1.6
LHV				IAmb	IAmb	19 20 12.3	
	comp=Z,23nm,1.5s						
NVAR	**Mina Array Bea**	78.36	52	P	P	19 20 06.3	+0.7
	comp=Z,2.7nm,0.6s,baz=292,slow=5.6,SNR=23						
NVAR				LR	LR	19 52 01.5	
	comp=Z,364nm,18.4s,baz=276,slow=34						
NVAR	**Mina Array Bea**	78.36	52	P	P	19 20 05.7	+0.1
DLMT	**Dillon**	78.38	44	P	P	19 20 05.6	+0.1
DLMT				IAmb	IAmb	19 20 12.1	
	comp=Z,7.0nm,0.8s						
NV11	**Mina Array Sit**	78.46	52	P	P	19 20 06.0	-0.1
BOZ	**Bozeman (W)**	78.83	43	P	P	19 20 07.8	-0.2
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BOZ	**Bozeman (W)**	78.83	43	P	P	19 20 07.8	-0.2
BOZ				IAmb	IAmb	19 20 13.9	
	comp=Z,9.7nm,1.2s						
AKASG	**Malin Array Be**	79.17	323	P	P	19 20 09.4	-0.1
	comp=Z,1.3nm,0.5s,baz=49,slow=5.6,SNR=18						
AKASG				LR	LR	19 57 43.5	
	comp=Z,621nm,18.1s,baz=55,slow=38						
AKASG	**Malin Array Be**	79.17	323	*i* P	P	19 20 09.3	-0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	79.17	323	P	P	19 20 08.0	-1.5
AKBB	**Malin Array Si**	79.17	323	P	P	19 20 08.2	-1.3
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AKBB	**Malin Array Si**	79.17	323	P	P	19 20 08.2	-1.3
AKBB				IAmb	IAmb	19 20 10.6	
	comp=Z,7.2nm,0.8s						
FCC	**Fort Churchill**	79.18	26	P	P	19 20 08.1	-1.2
FCC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FCC	**Fort Churchill**	79.18	26	P	P	19 20 08.1	-1.2
ELK	**Elko**	79.19	49	P	P	19 20 08.2	-2.0
ELK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ELK	**Elko**	79.19	49	P	P	19 20 08.2	-2.0

TPH	Tonopah	79.27	52	P	P	19 20 09.2	-1.4
TPH				pmax	pmax		
	comp=Z,55nm,1.4s						
TPH	Tonopah	79.27	52	P	P	19 20 09.2	-1.4
QLMT	Earthquake Lak	79.36	44	P	P	19 20 10.9	-0.1
LCH	Last Change Ra	79.42	53	P	P	19 20 11.5	+0.2
YHL	Hebgen Lake	79.50	44	P	P	19 20 12.8	+1.0
YHL				IAmb	IAmb	19 20 19.0	
	comp=Z,18nm,1.4s						
YMR	Madison River	79.73	44	P	P	19 20 12.6	-0.4
NB2	NORSAR Subarra	79.75	338	P	P	19 20 12.3	-0.3
	comp=Z,7.8nm,1.1s,baz=43,slow=5.6						
NOA	NORSAR Array B	79.75	338	P	P	19 20 12.6	0.0
	comp=Z,1.5nm,0.6s,baz=40,slow=5.2,SNR=7.4						
NOA				LR	LR	19 58 46.7	
	comp=Z,347nm,20.1s,baz=35,slow=38						
YNR	Norris Junctio	79.87	44	P	P	19 20 14.3	+0.5
YNR				IAmb	IAmb	19 20 26.7	
	comp=Z,11nm,1.2s						
YFT	Old Faithful	79.93	44	P	P	19 20 13.8	-0.3
YFT				IAmb	IAmb	19 20 23.8	
	comp=Z,15nm,1.3s						
H17A	Grant Village	80.11	44	P	P	19 20 17.1	+2.0
LKWY	Lake	80.12	44	P	P	19 20 15.1	-0.1
LKWY				pmax	pmax		
	comp=Z,14nm,1.2s						
LKWY	Lake	80.12	44	P	P	19 20 15.1	-0.1
LKWY				IAmb	IAmb	19 20 33.5	
	comp=Z,14nm,1.2s						
HVU	Hansel Valley	80.21	47	P	P	19 20 16.0	+0.4
HVU				pmax	pmax		
	comp=Z,14nm,1.4s						
HVU	Hansel Valley	80.21	47	P	P	19 20 16.0	+0.4
HVU				IAmb	IAmb	19 20 30.3	
	comp=Z,14nm,1.4s						
FLWY	Flagg Ranch	80.21	44	P	P	19 20 14.7	-1.0
FLWY				IAmb	IAmb	19 20 21.8	
	comp=Z,14nm,1.2s						
R11A	Troy Canyon, C	80.23	51	P	P	19 20 16.2	+0.5
R11A				IAmb	IAmb	19 20 22.5	
	comp=Z,13nm,1.5s						
MOOW	Moose Ponds	80.37	45	P	P	19 20 16.1	-0.4
RLMT	Red Lodge	80.47	43	P	P	19 20 16.6	-0.4
RLMT				IAmb	IAmb	19 20 22.6	
	comp=Z,17nm,1.4s						
TPNV	Topopah Spring	80.52	53	P	P	19 20 16.4	-0.9
TPNV				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TPNV	Topopah Spring	80.52	53	P	P	19 20 16.4	-0.9
LOHW	Long Hollow	80.53	45	P	P	19 20 17.9	+0.5
GWY	Greenwater Val	80.63	53	P	P	19 20 17.6	-0.4
GWY				IAmb	IAmb	19 20 24.2	
	comp=Z,17nm,1.3s						
DUG	Dugway, Tooele	81.05	48	P	P	19 20 20.2	+0.1
DUG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DUG	Dugway, Tooele	81.05	48	P	P	19 20 20.2	+0.1
DUG				IAmb	IAmb	19 20 25.3	
	comp=Z,7.5nm,0.9s						
PRN	Pahroc Range	81.09	52	P	P	19 20 21.2	+0.9
SORM	Soroca	81.16	322	⇓P	P	19 20 20.1	-0.2
SORM	Soroca	81.16	322	⇓P	P	19 20 20.1	-0.2
SHPR	Sheep Range	81.49	53	P	P	19 20 21.9	-0.6
BW06	Boulder Array	81.64	45	P	P	19 20 23.0	-0.3
PD31	Pinedale Array	81.64	45	P	P	19 20 23.2	-0.1
PDAR	Pinedale Array	81.64	45	P	P	19 20 23.6	+0.2
	comp=Z,2.0nm,0.7s,baz=279,slow=2.3,SNR=14						
PDAR				LR	LR	19 53 29.0	
	comp=Z,120nm,19.4s,baz=339,slow=33						
PDAR	Pinedale Array	81.64	45	P	P	19 20 23.4	+0.1
JLU	Jordanelle	81.69	47	P	P	19 20 22.8	-0.8
JLU				IAmb	IAmb	19 20 28.9	
	comp=Z,10.0nm,1.1s						
PPT	Papeete	81.77	116	LR	LR	19 53 01.1	
	comp=Z,146nm,18.4s,baz=326,slow=33						
PPT2	Papeete2	81.78	116	eLR	LR	19 45 51.9	
	comp=Z,195nm,21.2s						
CCUT	Cedar City	82.14	51	P	P	19 20 24.5	-1.5
LVV	L'vov	82.33	325	eP	P	19 20 29.8	+3.3
MSU	Marysvale	82.39	50	P	P	19 20 26.6	-0.7
MSU	Marysvale	82.39	50	P	P	19 20 26.6	-0.7
LCMT	Little Creek M	82.51	51	P	P	19 20 27.7	-0.2
MTPU	Mount Pierson	82.65	50	P	P	19 20 28.9	+0.1
MTPU				IAmb	IAmb	19 20 30.5	
	comp=Z,8.5nm,1.3s						
P17A	Butcher Ranch,	82.78	48	P	P	19 20 29.3	+0.1
KNB	Kanab	82.79	51	P	P	19 20 29.8	+0.4
KNB				pmax	pmax		
	comp=Z,21nm,1.5s						
KNB	Kanab	82.79	51	P	P	19 20 29.8	+0.4
SCTR	Scanteiesti	82.85	320	⇑P	P	19 20 28.8	-0.4
GIRR	Girov	82.87	321	P	P	19 20 29.9	+0.6
RDMU	Red Mountain	82.89	47	P	P	19 20 30.1	+0.2
BR131	Keskin Array S	83.00	312	P	P	19 20 28.4	-1.9
BR131				pmax	pmax		
	comp=Z,20nm,1.0s						
BR131	Keskin Array S	83.00	312	P	P	19 20 28.4	-1.9
BRTR	Keskin Array B	83.00	312	P	P	19 20 29.8	-0.5
	comp=Z,7.2nm,0.9s,baz=93,slow=3.8,SNR=22						
BRTR				LR	LR	20 01 34.1	
	comp=Z,154nm,18.0s,baz=46,slow=39						
BRTR	Keskin Array B	83.00	312	i P	P	19 20 31.2	+0.8
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRTR	Keskin Array B	83.00	312	P	P	19 20 28.4	-1.9
P18A	Preston Nutter	83.00	48	P	P	19 20 31.1	+0.5
P18A				IAmb	IAmb	19 20 36.7	
	comp=Z,10nm,0.9s						
TESR	Tescani	83.07	321	⇓P	P	19 20 31.3	+0.9
CFR	Carcaliu	83.07	319	⇑P	P	19 20 30.5	+0.1
CFR	Carcaliu	83.07	319	⇑P	P	19 20 30.5	+0.1
KWP	Kalwaria Pacla	83.11	325	eP	P	19 20 31.8	+1.2
KWP	Kalwaria Pacla	83.11	325	P	P	19 20 30.9	+0.3
KWP	Kalwaria Pacla	83.11	325	P	P	19 20 30.9	+0.3
TPGR	Topolog	83.11	319	⇓P	P	19 20 31.6	+1.0
SRU	San Rafael Swe	83.12	48	P	P	19 20 29.6	-1.4
SRU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SRU	San Rafael Swe	83.12	48	P	P	19 20 29.6	-1.4
SRU				IAmb	IAmb	19 20 35.1	
	comp=Z,6.6nm,0.9s						
BUR08	Bucovina Ar. S	83.13	322	P	P	19 20 31.0	+0.2
BUR08				IAmb	IAmb	19 20 36.2	
	comp=Z,6.6nm,1.1s						
BURAR	Bucovina Array	83.14	322	⇑P	P	19 20 32.0	+1.2
BURAR	Bucovina Array	83.14	322	⇑P	P	19 20 32.0	+1.2
RAYN	Ar Rayn	83.19	293	i P	P	19 20 32.2	+0.7
	SNR=22						
RAYN	Ar Rayn	83.19	293	P	P	19 20 31.8	+0.3
RAYN				pmax	pmax		
	comp=Z,26nm,1.2s						
RAYN	Ar Rayn	83.19	293	P	P	19 20 31.8	+0.3
RAYN	Ar Rayn	83.19	293	i P		19 20 32.2	
	SNR=22						
VRI	Vrincioaia	83.43	320	⇑P	P	19 20 33.7	+1.4
VRI	Vrincioaia	83.43	320	⇑P	P	19 20 33.7	+1.4
PLOR	Plostina	83.48	320	⇑P	P	19 20 32.1	-0.5
PLOR	Plostina	83.48	320	⇑P	P	19 20 32.1	-0.5
RWWY	Rawlins	83.69	45	P	P	19 20 31.9	-2.2
RWWY				IAmb	IAmb	19 20 37.9	
	comp=Z,14nm,1.4s						
OZUR		83.80	321	⇑P	P	19 20 35.3	+1.1
UZH	Uzhgorod	83.97	324	eP	P	19 20 37.0	+2.1
UZH				e		19 20 38.8	
UZH				i		19 20 42.2	
BMR	Baia Mare	83.99	323	⇓P	P	19 20 36.3	+1.2
BMR	Baia Mare	83.99	323	⇓P	P	19 20 36.3	+1.2
DOPR	Dopca	84.09	321	⇑P	P	19 20 36.6	+0.9
MLR	Muntele Rosu	84.09	320	⇑P	P	19 20 36.0	+0.2
MLR	Muntele Rosu	84.09	320	⇑P	P	19 20 36.0	+0.2
OJC	Ojcow	84.11	327	eP	P	19 20 36.2	+0.5
OJC	Ojcow	84.11	327	P	P	19 20 35.0	-0.6
OJC				pmax	pmax		
	comp=Z,21nm,1.2s						
OJC	Ojcow	84.11	327	P	P	19 20 35.0	-0.6
TRPA	Tarpa	84.18	324	⇑P	P	19 20 36.8	+0.8
NIE	Niedzica	84.42	326	eP	P	19 20 38.9	+1.6
WUAZ	Wupatki	84.60	52	P	P	19 20 39.1	+0.4
WUAZ				IAmb	IAmb	19 20 57.3	
	comp=Z,5.4nm,0.9s						
VOIR		84.61	321	⇑P	P	19 20 38.4	0.0
VOIR		84.61	321	⇑P	P	19 20 38.4	0.0
N23A	Red Feather La	84.93	45	P	P	19 20 41.0	+0.7
DRGR		84.97	323	⇓P	P	19 20 40.9	+0.7
DRGR		84.97	323	⇓P	P	19 20 40.9	+0.7
LANS	Liptovska Anna	85.00	326	eP	P	19 20 41.9	+1.7
LANS				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LANS	Liptovska Anna	85.00	326	eP	P	19 20 41.9	+1.7
KSP	Ksiaz	85.28	329	eP	P	19 20 42.4	+0.9
SMCO	Snowmass	85.33	47	P	P	19 20 42.9	+0.4
SMCO				IAmb	IAmb	19 20 52.9	
	comp=Z,9.9nm,1.1s						
MORC	Moravsky Berou	85.47	327	⇑P	P	19 20 43.9	+1.3
MORC	Moravsky Berou	85.47	327	eP	P	19 20 42.9	+0.3
MORC	Moravsky Berou	85.47	327	⇑P	P	19 20 43.9	+1.3
VYHS	Vyhne	85.76	326	eP	P	19 20 45.2	+1.2
VYHS				pmax	pmax		
	comp=Z,22nm,1.2s						
VYHS	Vyhne	85.76	326	eP	P	19 20 45.2	+1.2
JAVC	Velka Javorina	86.06	327	eP	P	19 20 46.9	+1.4
VRAC	Vranov	86.24	328	P	P	19 20 46.9	+0.6
VRAC	Vranov	86.24	328	eP	P	19 20 46.5	+0.1
VRAC	Vranov	86.24	328	P	P	19 20 46.9	+0.6
BZS	Buzias	86.32	323	P	P	19 20 46.8	0.0
BZS	Buzias	86.32	323	P	P	19 20 46.8	0.0
CLL	Collm	86.37	331	eP	P	19 20 47.0	+0.1
CLL				e		19 20 53.0	
CLL	Collm	86.37	331	eP	P	19 20 47.0	+0.1
CLL				epP	pwP	19 20 53.0	-3.2
CLL				i		19 21 05.8	
KRUC	Moravsky	86.51	327	eP	P	19 20 47.7	+0.1
MODS	Modra-Piesok	86.58	327	eP	P	19 20 46.6	-1.5
MODS	Modra-Piesok	86.58	327	eP	P	19 20 46.6	-1.5
F33A	5 Mile Ranch,	87.12	36	P	P	19 20 50.8	+0.1
F33A				IAmb	IAmb	19 20 54.1	
	comp=Z,6.8nm,0.8s						
MORH	Mrgy, Hungar	87.43	324	⇓P	P	19 20 51.9	-0.3
VTS	Vitosha	87.44	320	P	P	19 20 52.0	-0.5
VTS	Vitosha	87.44	320	P	P	19 20 52.0	-0.5
CONA	Conrad Observa	87.57	327	eP	P	19 20 53.4	+0.4
	comp=Z,9.8nm,1.8s						
FRGS	Fruska Gora	87.57	323	⇓P	P	19 20 52.9	0.0
GERES	GERESS Array B	87.89	329	P	P	19 20 55.6	+1.1
	comp=Z,0.5nm,0.6s,baz=34,slow=5.3,SNR=5.5						
GERES				LR	LR	20 04 38.0	
	comp=Z,318nm,18.5s,baz=29,slow=39						
GERES	GERESS Array B	87.89	329	P	P	19 20 53.3	-1.2
ARSA	Arzberg	88.21	327	eP	P	19 20 56.9	+0.9
	comp=Z,5.0nm,1.4s						
ECSD	EROS Data Cent	88.39	38	P	P	19 20 56.8	-0.1
ECSD				IAmb	IAmb	19 21 01.0	
	comp=Z,9.0nm,1.2s						
SOKA	Soboth	88.86	326	eP	P	19 20 59.0	-0.1
	comp=Z,11nm,2.0s						
OBKA	Obir	89.21	327	eP	P	19 21 00.4	-0.4
	comp=Z,11nm,1.4s						
MYKA	Terra Mystica	89.55	327	eP	P	19 21 02.2	-0.2
	comp=Z,4.3nm,0.9s						
WATA	Walderalm	89.96	329	eP	P	19 21 04.2	-0.2
	comp=Z,7.3nm,1.2s						
ABTA	Abfaltersbach	89.98	328	eP	P	19 21 03.6	-0.8
	comp=Z,4.5nm,1.3s						
WTTA	Wattenberg	89.99	329	eP	P	19 21 04.3	-0.2
	comp=Z,6.7nm,1.5s						
SQTA	Sankt Quirin	90.21	329	eP	P	19 21 06.9	+1.5
	comp=Z,12nm,1.7s						
BGES	Gesves	90.25	334	dP	P	19 21 04.6	-0.8
FETA	Feichten	90.58	329	eP	P	19 21 07.2	0.0
	comp=Z,4.8nm,1.0s						
DAVA	Damuels	90.75	330	eP	P	19 21 08.0	0.0
	comp=Z,10.0nm,1.1s						
SCHQ	Schefferville	90.94	16	LR	LR	20 03 26.6	
	comp=Z,49nm,21.9s,baz=82,slow=36						
KEST	Kesra	99.88	322	LR	LR	20 13 35.5	
	comp=Z,112nm,18.3s,baz=280,slow=39						
TORD	Torodi Ar. Bea	121.62	313	PKP	PKPdf	19 26 59.2	-0.1
	comp=Z,0.4nm,0.6s,baz=31,slow=1.5,SNR=4.9						
LPAZ	La Paz	149.05	68	PKPbc	PKiKP	19 27 55.5	-0.2
	comp=Z,4.1nm,0.8s,baz=325,slow=3.9,SNR=16						
LPAZ	La Paz	149.05	68		PKPbc	19 27 55.0	+0.6
PLCA	Paso Flores	152.28	119	PKPbc	PKiKP	19 28 02.1	+1.1
	comp=Z,2.5nm,0.8s,baz=198,slow=5.4,SNR=5.9						

IDC 31 19:39:49.4±3.3**, 6°.53N**×**124°.74E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/47**, mbtmp3.4**/3**, Error ellipse: s-maj=356.7km s-min=26.1km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.95	160	P	P	19 45 41.8	0.0
	0.2nm,0.6s,baz=341,slow=8.0,SNR=1.3						
ASAR	Alice Springs	31.32	164	P	P	19 46 11.6	-0.1
	0.3nm,0.3s,baz=339,slow=7.3,SNR=20						
MKAR	Makanchi Array	54.14	325	P	P	19 49 16.4	0.0
	0.2nm,0.5s,baz=122,slow=8.1,SNR=7.5						

IDC 31 19:47:41.6±22.0**, 12°.60S**×**166°.54E, h205^{km}**±203^{km}**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.0**/37**, mbtmp3.8**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.7**/13**, Error ellipse: s-maj=146.5km s-min=65.4km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	29.89	226	P	P	19 53 30.1	-0.1
	4.0nm,1.1s,baz=48,slow=15,SNR=3.3						
ASAR	Alice Springs	32.83	246	P	P	19 53 56.1	0.0
	0.4nm,0.7s,baz=71,slow=9.2,SNR=5.8						
BATI	Baumata	42.06	269	LR	LR	20 11 37.9	
	comp=Z,37nm,18.8s,baz=66,slow=34						
ILAR	Eielson Array	84.73	18	P	P	19 59 52.2	0.0
	0.2nm,0.4s,baz=231,slow=5.5,SNR=4.6						
ARCES	ARCESS Array B	118.02	345	PKP	PKPdf	20 06 03.2	-0.2
	2.3nm,0.9s,baz=76,slow=1.9,SNR=8.5						

IDC 31 19:57:14.9±5.9**, 2°.56N**×**95°.71E, h0^{km}, mb3.9**/3**, mb1 3.7**/5**, mb1mx3.3**/46**, mbtmp3.7**/5**, ML3.3**/2**, MS2.8**/4**, Ms1 2.9**/4**, ms1mx2.7**/42**, Error ellipse: s-maj=119.8km s-min=37.9km az=25.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	3.22	86	Pn	Pn	19 58 06.9	+0.1
	1.5nm,0.3s,baz=272,slow=7.1,SNR=8.4						
PSI				LR	LR	19 59 39.7	
	comp=Z,48nm,19.9s,baz=243,slow=45						
LEM	Lembang	15.11	128	LR	LR	20 07 46.1	
	comp=Z,82nm,19.5s,baz=167,slow=42						
CMAR	Chiang Mai Arr	16.11	11	Pn	Pn	20 01 03.7	+0.7
	0.1nm,0.3s,baz=201,slow=11,SNR=7.7						
CMAR				LR	LR	20 06 39.0	
	comp=Z,23nm,19.8s,baz=90,slow=35						
KAPI	Kappang	25.17	107	LR	LR	20 13 29.6	
	comp=Z,41nm,18.6s,baz=291,slow=39						
H08S2	Diego Garcia H	25.29	246	T	T	20 28 57.2	
	baz=68,slow=76,SNR=49						
H08S3	Diego Garcia H	25.29	246	T	T	20 28 57.3	
	baz=68,slow=76,SNR=39						
H08S1	Diego Carcia H	25.30	246	T	T	20 28 58.5	
	baz=68,slow=76,SNR=38						
H01W3	Cape Leeuwin H	41.07	157	T	T	20 48 28.6	
	baz=333,slow=76,SNR=66						
H01W2	Cape Leeuwin H	41.08	157	T	T	20 48 29.6	
	baz=333,slow=76,SNR=99						
H01W1	Cape Leeuwin H	41.09	157	T	T	20 48 29.9	
	baz=333,slow=76,SNR=83						
MKAR	Makanchi Array	45.58	347	P	P	20 05 36.8	+0.1
	1.2nm,0.7s,baz=161,slow=8.2,SNR=15						
SONM	Songino Array	46.03	10	P	P	20 05 39.7	-0.7
	1.1nm,0.8s,baz=193,slow=8.5,SNR=9.0						
ZALV	Zalesovo Beam	52.00	352	P	P	20 06 25.9	0.0
	1.1nm,0.6s,baz=180,slow=8.7,SNR=6.7						

BUL ***31*** *19:57:17.8±0.7, 26°.41S×28°.08E, h13^{km}±13^{km}, MD4.7*
EAF ***31*** *19:57:17.8±0.7, 26°.41S×28°.08E, h13^{km}±13^{km}, MD4.3*
PRE ***31*** *19:57:26.7±1.4, 26°.42S×27°.72E, h2^{km}, ML2.4*
ISC 31 19:57:24.9±1.8**, 26°.35S**±0°.05×**27°.77E**±0°.06**, h3^{km}**±14^{km}**, n12, σ1^{s}.12**/16**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRAO	HartRAO	0.46	351	eP	Pn	19 57 37.5	-1.1
HRAO				eS	Sb	19 57 43.5	+0.4
HRAO				IAML		19 57 44.3	
	comp=Z,144nm,0.1s						
PRYS	Parys	0.68	212	eP	Pg	19 57 38.7	+0.7
PRYS				eS	Sg	19 57 46.0	-1.0
PRYS				IAML		19 57 53.5	
	comp=Z,221nm,0.9s						
SLR	Silverton	0.76	37	eP	Pn	19 57 43.7	+0.9
SLR				eS	Sn	19 57 54.4	-0.5
SLR				IAML		19 57 60.0	
	comp=Z,96nm,1.1s						
KSR	Koster	0.93	302	eP	Pn	19 57 45.2	+0.2
KSR				eS	Sn	19 57 57.6	-1.3
KSR				IAML		19 58 03.6	
	comp=Z,206nm,0.2s						
SWZ	Schweizer	2.33	249	eP	Pb	19 58 06.7	-1.0
SWZ				eS	Sn	19 58 34.4	+0.7
SWZ				IAML		19 58 38.5	
	comp=Z,39nm,0.4s						
LBTB	Lobatse	2.37	304	i Sg	Sb	19 58 39.7	+1.8
LBTB	Lobatse	2.37	304	i Sg	Sb	19 58 39.7	+1.8
BOSA	Boshof	3.17	224	eP	Pn	19 58 16.9	+0.9
BOSA				eS	Sn	19 58 53.5	-0.9
BOSA				IAML		19 59 09.3	
	comp=Z,11nm,2.0s						
BOSA	Boshof	3.17	224	i P	Pn	19 58 09.3	-6.6
BOSA				i Sg	Sb	19 59 01.4	+0.1
BOSA	Boshof	3.17	224	i P	Pn	19 58 09.3	-6.6
BOSA				i Sg	Sb	19 59 01.4	+0.1
MATP	Matopo	5.93	7	i P	Pn	19 58 45.7	-8.1
MATP				i S	Sn	19 59 48.6	-14
MATP	Matopo	5.93	7	i P	Pn	19 58 45.7	-8.1
MATP				i S	Sn	19 59 48.6	-14

CNRM ***31*** *20:04:37.9, 36°.26N×7°.37W, h30^{km}, ml3.0*
MDD ***31*** *20:04:40.8±0.8, 36°.54N×7°.27W, h24^{km}±7^{km}, mbLg2.9/35, Error ellipse: s-maj=7.3km s-min=3.1km az=22.0, PRXIMO*
SFS ***31*** *20:04:40.0, 36°.50N×7°.20W, h24^{km}, ML2.8, GOLFO DE CADIZ*
INMG ***31*** *20:04:41.4±1.7, 36°.51N×7°.30W, h26^{km}±7^{km}, ML2.7, Error ellipse: s-maj=3.3km s-min=2.2km az=44.0*
IGIL ***31*** *20:04:41.0, 36°.50N×7°.31W, h30^{km}, ML2.8*
ISC 31 20:04:38.1±2.1**, 36°.46N**±0°.03×**7°.25W**±0°.02**, h34^{km}**±4^{km}**, n114, σ1^{s}.95**/215**, 8D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNO	Arenosillo	0.76	33	P	Pb	20 05 03.1	+10
ARNO	Arenosillo	0.76	33	P	Pb	20 05 03.1	+10
PFARO	Faro	0.78	317	eS	Sn	20 05 05.1	+1.8
PBDV	Barranco-do-Ve	0.95	325	⇓iP	Pn	20 04 56.4	+1.2
PBDV				eS	Sn	20 05 07.8	+0.2
PBDV				A	A	20 05 09.6	
	99nm,0.4s						
PBDV	Barranco-do-Ve	0.95	325	P	Pn	20 04 56.4	+1.2
PBDV				S	Sn	20 05 07.8	+0.2
	99nm,0.4s						
PVAQ	Vaqueiros	1.01	339	⇓iP	Pn	20 04 57.3	+1.3
PVAQ				eS	Sn	20 05 09.3	+0.2
PVAQ				A	A	20 05 10.3	
	155nm,0.3s						
PVAQ	Vaqueiros	1.01	339	P	Pn	20 04 57.3	+1.3
PVAQ				S	Sn	20 05 09.3	+0.2
	155nm,0.3s						
PVAQ	Vaqueiros	1.01	339	P	Pn	20 04 56.8	+0.8
PVAQ				S	Sn	20 05 10.4	+1.4
EGRO	El Granado	1.09	350	⇓P	Pn	20 04 58.5	+1.5
	38nm,0.3s,SNR=18						
EGRO				S	Sn	20 05 11.3	+0.3
	158nm,0.1s						
ESPR	Espera	1.20	70	P	Pn	20 05 00.5	+2.1
	14nm,0.2s,SNR=22						
ESPR				S	Sn	20 05 15.1	+1.6
	74nm,0.2s,SNR=9.3						
PCVE	Castro Verde	1.33	332	eP	Pn	20 05 01.8	+1.5
PCVE				eS	Sn	20 05 17.4	+0.5
PCVE				A	A	20 05 18.0	
	78nm,0.4s						
PCVE	Castro Verde	1.33	332	P	Pn	20 05 01.8	+1.5
PCVE				S	Sn	20 05 17.4	+0.5
	78nm,0.4s						
EMIN	Mina Concepcio	1.39	19	P	Pn	20 05 02.4	+1.3
	2.8nm,0.3s,SNR=66						
EMIN				S	Sn	20 05 18.2	-0.1
	47nm,0.1s,SNR=16						
MORF	Marmelete	1.40	307	eP	Pn	20 05 02.3	+1.0
MORF				eS	Sn	20 05 18.0	-0.8
MORF				IAML		20 05 25.8	
	comp=E,126nm,0.2s						
MORF	Marmelete	1.40	307	eP	Pn	20 05 02.4	+1.0
MORF				eS	Sn	20 05 19.1	+0.3
MORF				A	A	20 05 25.5	
	comp=E,94nm,0.1s						
MORF	Marmelete	1.40	307	P	Pn	20 05 02.4	+1.0
MORF				S	Sn	20 05 19.1	+0.3
	comp=E,94nm,0.1s						
PFVI	Vila Bisbo	1.43	298	eP	Pn	20 05 02.9	+1.1
PFVI				eS	Sn	20 05 19.5	+0.1
PFVI				A	A	20 05 27.2	
	comp=E,51nm,0.3s						
PFVI	Vila Bisbo	1.43	298	P	Pn	20 05 02.8	+1.1
	comp=E,5.2nm,0.1s,SNR=7.9						
PFVI				S	Sn	20 05 19.4	0.0
	comp=E,76nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	1.43	298	P	Pn	20 05 02.9	+1.1
PFVI				S	Sn	20 05 20.6	+1.3
LIJA	Lijar	1.55	73	P	Pn	20 05 07.2	+3.7
LIJA				S	Sn	20 05 21.0	-1.5
LIJA	Lijar	1.55	73	P	Pn	20 05 07.2	+3.7
LIJA				S	Sn	20 05 21.0	-1.5
PTEO	Sao Teotonio	1.60	313	⇓eP	Pn	20 05 05.6	+1.5
PTEO				eS	Sn	20 05 23.6	0.0
PTEO				A	A	20 05 32.6	
	comp=E,52nm,0.2s						
PTEO	Sao Teotonio	1.60	313	P	Pn	20 05 05.6	+1.5
PTEO				S	Sn	20 05 23.6	0.0
	comp=E,26nm,0.2s						
ECEU	Ceuta	1.62	110	P	Pn	20 05 07.7	+3.4
	comp=E,7.9nm,0.3s,SNR=6.1						
ECEU				S	Sn	20 05 27.6	+3.6
	comp=E,16nm,0.1s,SNR=4.5						
PBEJ	Beja	1.64	343	ePn	Pn	20 05 06.0	+1.4
PBEJ				eSn	Sn	20 05 25.0	+0.5
PBEJ				A	A	20 05 30.9	
	comp=E,32nm,0.4s						
PBEJ	Beja	1.64	343	P	Pn	20 05 06.0	+1.4
PBEJ				S	Sn	20 05 25.0	+0.5
	comp=E,16nm,0.4s						
PBAR	Barrancos	1.72	6	ePn	Pn	20 05 07.3	+1.6
PBAR				eSn	Sn	20 05 26.5	0.0
PBAR	Barrancos	1.72	6	P	Pn	20 05 07.3	+1.6
PBAR				S	Sn	20 05 26.5	0.0
PNCL	Nicolau / Gran	1.94	329	⇓ePn	Pn	20 05 10.1	+1.4
PNCL				eSn	Sn	20 05 32.8	+0.9
PNCL				A	A	20 05 41.7	
	comp=E,38nm,0.4s						
PNCL	Nicolau / Gran	1.94	329	P	Pn	20 05 10.1	+1.4
PNCL				S	Sn	20 05 32.8	+0.9
	comp=E,38nm,0.4s						
EMIJ	Mijas	2.00	86	P	Pn	20 05 11.5	+2.0
	comp=E,3.0nm,0.4s,SNR=12						
EMIJ				S	Sn	20 05 35.0	+1.5
	comp=E,18nm,0.3s,SNR=9.9						
CHEFC	Chefchaouen	2.06	130	P	Pn	20 05 11.9	+1.4
CHEFC				S	Sn	20 05 32.8	-2.2
EVO	Evora	2.16	344	P	Pn	20 05 13.2	+1.6
EVO				S	Sn	20 05 37.0	-0.2
EVO	Evora	2.16	344	⇓iPn	Pn	20 05 13.3	+1.6
EVO				eSn	Sn	20 05 37.9	+0.6
EVO				A	A	20 05 38.1	
	comp=E,59nm,0.1s						
EVO	Evora	2.16	344	P	Pn	20 05 13.3	+1.6
EVO				S	Sn	20 05 37.9	+0.6
	comp=E,59nm,0.1s						
ECAB	El Cabril	2.18	42	P	Pn	20 05 14.0	+1.9
	comp=E,1.3nm,0.3s,SNR=20						
ECAB				S	Sn	20 05 37.0	-0.9
	comp=E,12nm,0.1s,SNR=9.2						
EBAD	Badajoz	2.30	5	P	Pn	20 05 14.9	+1.2
	comp=E,2.9nm,0.3s,SNR=37						
EBAD				S	Sn	20 05 39.6	-1.2
	comp=E,17nm,0.1s,SNR=9.3						
PESTR	Estremoz	2.42	354	ePn	Pn	20 05 16.5	+1.2

PESTR				eSn	Sn	20 05 43.1	-0.7
PESTR				A	A	20 05 59.5	
	comp=E,22nm,0.3s						
PESTR	Estremoz	2.42	354	P	Pn	20 05 16.7	+1.3
EGOR	Sierra Gorda,	2.61	75	P	Pn	20 05 20.9	+2.9
	comp=E,0.9nm,0.1s,SNR=7.9						
EGOR				S	Sn	20 05 50.0	+1.4
	comp=E,9.3nm,0.2s,SNR=7.9						
PMTG	Montargil	2.72	344	⇓ePn	Pn	20 05 20.9	+1.5
PMTG				eSn	Sn	20 05 51.6	+0.5
PMTG				A	A	20 06 08.2	
	comp=E,23nm,0.4s						
PMTG	Montargil	2.72	344	P	Pn	20 05 20.9	+1.5
PMTG				S	Sn	20 05 51.6	+0.5
	comp=E,23nm,0.4s						
EADA	Adamuz	2.73	51	P	Pn	20 05 22.1	+2.5
	comp=E,1.2nm,0.3s,SNR=18						
EADA				S	Sn	20 05 52.1	+0.6
	comp=E,11nm,0.1s,SNR=7.9						
PMST	Lisbon--Monsan	2.74	327	ePn	Pn	20 05 21.9	+2.1
PMST				eSn	Sn	20 05 52.0	+0.3
PMST				A	A	20 06 08.7	
	comp=E,34nm,0.7s						
SICH	Sidi Chahed	2.83	145	P	Pn	20 05 21.8	+0.8
SICH				S	Sn	20 05 50.9	-3.1
ELGU	Los Guajares,	2.94	81	P	Pn	20 05 24.8	+2.2
	comp=E,5.5nm,0.5s,SNR=7.9						
ELGU				S	Sn	20 05 56.8	0.0
	comp=E,14nm,0.1s,SNR=7.9						
PALE	Palemas	2.96	114	P	Pn	20 05 23.8	+1.0
PALE				S	Sn	20 05 58.7	+1.4
PMRV	Marv??o	2.97	358	ePn	Pn	20 05 24.2	+1.3
PMRV				eSn	Sn	20 05 57.1	-0.2
PMRV				A	A	20 06 24.1	
	comp=E,15nm,0.4s						
PMRV	Marv??o	2.97	358	P	Pn	20 05 24.2	+1.3
PMRV				S	Sn	20 05 57.1	-0.2
	comp=E,15nm,0.4s						
PMAFR	Mafra	2.97	328	ePn	Pn	20 05 24.7	+1.8
PMAFR				eSn	Sn	20 05 57.2	-0.1
PMAFR				A	A	20 05 59.9	
	comp=E,58nm,0.3s						
PMAFR	Mafra	2.97	328	P	Pn	20 05 24.6	+1.8
	comp=E,2.8nm,0.2s,SNR=7.9						
PMAFR				S	Sn	20 05 56.7	-0.6
	comp=E,101nm,0.3s,SNR=7.9						
ZHG	ZHG	3.05	170	P	Pn	20 05 24.1	+0.1
ZHG				S	Sn	20 05 57.0	-2.4
AVE	Averroes	3.16	182	P	Pb	20 05 33.0	-0.6
AVE				S	Sn	20 06 03.7	+1.7
AVE	Averroes	3.16	182	P	Pn	20 05 26.8	+1.3
AVE				S	Sn	20 05 56.9	-5.1
PSBE	So Bento	3.28	339	⇓ePn	Pn	20 05 29.2	+2.0
PSBE				eSn	Sn	20 06 05.5	+0.3
PSBE				A	A	20 06 25.7	
	comp=E,14nm,0.6s						
PCBR	Castelo Branco	3.38	357	ePn	Pn	20 05 30.0	+1.5
PCBR				eSn	Sn	20 06 06.9	-0.6
PCBR				A	A	20 06 07.9	
	comp=E,17nm,0.2s						
PCBR	Castelo Branco	3.38	357	P	Pn	20 05 30.0	+1.5
PCBR				S	Sn	20 06 06.9	-0.6
	comp=E,8.6nm,0.2s						
LCRM	LCR	3.39	144	P	Pn	20 05 29.2	+0.4
LCRM				S	Sn	20 06 07.0	-1.0
IFR	Ifrane	3.42	149	P	Pn	20 05 30.4	+1.2
IFR				S	Sn	20 06 05.3	-3.3
EALB	Alboran	3.45	97	S	Sn	20 06 09.1	-0.1
	comp=E,6.3nm,0.2s,SNR=7.9						
EBER	Berja	3.54	82	P	Pn	20 05 34.0	+3.1
	comp=E,6.8nm,0.9s,SNR=8.4						
EBER				S	Sn	20 06 13.0	+1.4
	comp=E,9.1nm,0.3s,SNR=5.1						
EQES	Quesada	3.60	67	P	Pn	20 05 33.7	+2.0
	comp=E,2.5nm,0.7s,SNR=11						
EQES				S	Sn	20 06 13.2	+0.1
	comp=E,3.6nm,0.3s,SNR=7.9						
GOG	Mont Gurugu	3.67	108	P	Pn	20 05 33.0	+0.4
GOG				S	Sn	20 06 15.2	+0.4
EPLA	Plasencia	3.72	14	P	Pn	20 05 34.5	+1.4
	comp=E,6.6nm,0.1s,SNR=7.9						
EPLA				S	Sn	20 06 15.1	-0.7
	comp=E,21nm,0.2s,SNR=7.9						
PCAS	Casmilo, Conde	3.72	345	ePn	Pn	20 05 34.3	+1.1
PCAS				eSn	Sn	20 06 14.4	-1.4
PCAS				A	A	20 06 40.6	
	comp=E,16nm,0.6s						
PCAS	Casmilo, Conde	3.72	345	P	Pn	20 05 34.3	+1.1
PCAS				S	Sn	20 06 14.4	-1.4
	comp=E,16nm,0.6s						
PAB	San Pablo	3.84	36	P	Pn	20 05 37.0	+2.1
	comp=E,1.0nm,0.2s,SNR=7.9						
PAB				S	Sn	20 06 15.6	-3.4
	comp=E,3.1nm,0.1s,SNR=7.9						
PAB	San Pablo	3.84	36	P	Pn	20 05 37.1	+2.1
MTE	Manteigas	3.94	357	ePn	Pn	20 05 38.5	+2.2
MTE				eSn	Sn	20 06 20.4	-1.0
MTE				A	A	20 06 47.3	
	comp=E,16nm,0.4s						
MTE	Manteigas	3.94	357	P	Pn	20 05 38.5	+2.2
MTE				S	Sn	20 06 20.4	-1.0
	comp=E,8.2nm,0.4s						
SRHM	Skhour des Reh	4.01	188	P	Pn	20 05 37.6	+0.3
SRHM				S	Sn	20 06 22.4	-0.9
ENIJ	Nijar	4.09	81	S	Sn	20 06 24.3	-0.6
	comp=E,3.4nm,0.2s,SNR=7.9						
SESP	Santiago Espad	4.10	65	P	Pn	20 05 40.7	+2.0
	comp=E,1.5nm,0.3s,SNR=7.9						
SESP				S	Sn	20 06 24.8	-0.7
	comp=E,9.1nm,0.1s,SNR=7.9						
ESDC	Sonseca Array	4.13	38	P	Pn	20 05 40.9	+2.0
	comp=E,0.4nm,0.2s,baz=224,slow=13,SNR=19						
ESDC				S	Sn	20 06 22.7	-3.3
	comp=E,1.1nm,0.3s,baz=222,slow=23,SNR=7.4						
MD31	MD31	4.13	149	P	Pn	20 05 40.1	+1.1
MD31				S	Sn	20 06 23.9	-2.3
MDT	Midelt	4.24	148	P	Pn	20 05 42.3	+1.8
MDT				S	Sn	20 06 25.5	-3.3
PVIS	Viseu	4.28	353	ePn	Pn	20 05 42.5	+1.6
PVIS				eSn	Sn	20 06 28.8	-0.9
PVIS				A	A	20 06 31.0	
	comp=E,6.3nm,0.1s						
PVIS	Viseu	4.28	353	P	Pn	20 05 42.5	+1.6
PVIS				S	Sn	20 06 28.8	-0.9
	comp=E,3.2nm,0.1s						
JBK	JBK	4.38	118	P	Pn	20 05 42.9	+0.5
JBK				S	Sn	20 06 30.9	-1.4
EZAR	Zarzadilla de	4.66	71	P	Pn	20 05 48.8	+2.6
	comp=E,1.0nm,0.1s,SNR=7.9						
EZAR				S	Sn	20 06 38.4	-0.7
	comp=E,7.6nm,0.2s,SNR=7.9						
MVO	Moncorvo	4.70	2	ePn	Pn	20 05 48.0	+1.3
MVO				eSn	Sn	20 06 37.9	-2.3
MVO				A	A	20 06 38.9	
	comp=E,9.1nm,0.3s						
MVO	Moncorvo	4.70	2	P	Pn	20 05 48.0	+1.3
	comp=E,0.6nm,0.2s,SNR=7.9						
MVO				S	Sn	20 06 37.8	-2.4
	comp=E,8.2nm,0.1s,SNR=7.9						
PVRL	Vila Real	4.82	356	ePn	Pn	20 05 49.7	+1.3
PVRL				eSn	Sn	20 06 40.2	-2.9
PVRL				A	A	20 06 43.9	
	comp=E,7.1nm,0.7s						
PVRL	Vila Real	4.82	356	P	Pn	20 05 49.7	+1.3
PVRL				S	Sn	20 06 40.2	-2.9
	comp=E,3.6nm,0.7s						
GUD	Guadarrama	4.83	29	P	Pn	20 05 50.7	+2.1
	comp=E,1.1nm,0.4s,SNR=12						
GUD				S	Sn	20 06 41.4	-2.1
	comp=E,2.2nm,0.2s						
POLO	Lamas de Olo	4.93	355	ePn	Pn	20 05 51.0	+1.1
POLO				eSn	Sn	20 06 43.2	-2.5
POLO				A	A	20 06 45.3	
	comp=E,2.4nm,0.4s						
POLO	Lamas de Olo	4.93	355	P	Pn	20 05 51.0	+1.1
POLO				S	Sn	20 06 43.2	-2.5
	comp=E,2.4nm,0.4s						
EMUR	La Murta	5.00	72	P	Pn	20 05 52.7	+1.9
	comp=E,6.4nm,1.2s,SNR=7.9						
EMUR				S	Sn	20 06 45.9	-1.5
	comp=E,5.6nm,0.4s,SNR=7.9						
ETOB	Tobarra	5.03	63	P	Pn	20 05 52.7	+1.5
	comp=E,1.4nm,0.4s,SNR=24						
ETOB				S	Sn	20 06 46.7	-1.6
	comp=E,3.4nm,0.1s,SNR=4.6						
OUK	Oukaimeden	5.26	186	P	Pn	20 05 55.4	+0.7
OUK				S	Sn	20 06 48.3	-6.1
PCAB	Cabril	5.28	354	ePn	Pn	20 05 56.8	+2.2
PCAB				eSn	Sn	20 06 51.2	-3.1
PCAB				A	A	20 06 56.6	
	comp=E,7.1nm,0.8s						
PCAB	Cabril	5.28	354	P	Pn	20 05 56.8	+2.2
PCAB				S	Sn	20 06 51.2	-3.1
	comp=E,3.6nm,0.8s						
PBRG	Braganca	5.35	4	ePn	Pn	20 05 57.1	+1.4
PBRG				eSn	Sn	20 06 53.5	-2.7
PBRG				A	A	20 06 55.8	
	comp=E,3.0nm,0.2s						
PBRG	Braganca	5.35	4	P	Pn	20 05 57.1	+1.4
PBRG				S	Sn	20 06 53.5	-2.7
	comp=E,1.5nm,0.2s						
ELOB	Lobios	5.44	354	P	Pn	20 05 58.4	+1.6
	comp=E,3.4nm,0.3s,SNR=12						
ELOB				S	Sn	20 06 54.9	-3.4
	comp=E,2.7nm,0.2s,SNR=5.3						
TDRA	Tendrara	5.49	127	P	Pn	20 05 57.7	0.0
TDRA				S	Sn	20 06 56.6	-3.1
ECAL	Calabor	5.49	4	P	Pn	20 05 59.1	+1.5
	comp=E,3.2nm,0.3s,SNR=16						
ECAL				S	Sn	20 06 56.7	-2.8
	comp=E,7.7nm,0.2s,SNR=7.9						
OUZM	OUZ	5.55	176	P	Pn	20 05 59.6	+1.1
OUZM				S	Sn	20 06 57.8	-3.4
PGAV	Gavieira, Arco	5.55	352	ePn	Pn	20 06 00.6	+2.1
PGAV				eSn	Sn	20 06 58.5	-2.7
PGAV				A	A	20 07 01.3	
	comp=E,4.1nm,0.8s						
PGAV	Gavieira, Arco	5.55	352	P	Pn	20 06 00.6	+2.1
PGAV				S	Sn	20 06 58.5	-2.7
	comp=E,4.1nm,0.8s						
AFON	Font Roja	5.77	66	P	Pn	20 06 03.4	+2.0
	comp=E,0.9nm,0.4s,SNR=7.9						
AFON				S	Sn	20 07 05.4	-1.1
	comp=E,2.9nm,0.3s,SNR=7.9						
TZRR	Tazzarine	5.83	166	P	Pn	20 06 03.1	+0.8
TZRR				S	Sn	20 07 03.5	-4.6
ECHE	Chera	5.86	56	P	Pn	20 06 04.9	+2.2
	comp=E,2.0nm,0.4s,SNR=7.9						
ECHE				S	Sn	20 07 06.7	-2.1
	comp=E,4.2nm,0.3s,SNR=7.9						
ETOR	Torete	5.96	41	P	Pn	20 06 06.4	+2.4
	comp=E,3.6nm,0.4s,SNR=9.6						
ETOR				S	Sn	20 07 07.4	-3.7
	comp=E,4.4nm,0.3s,SNR=7.9						
TTIG	Tnine Tigouga,	5.98	190	P	Pn	20 06 02.3	-2.1
EAGO	Agolada(Pontev	6.37	354	P	Pn	20 06 10.7	+1.1
	comp=E,52nm,0.8s,SNR=7.9						
EAGO				S	Sn	20 07 16.6	-4.6
	comp=E,2.1nm,0.2s,SNR=7.9						
ZGR	Zagora	6.47	167	P	Pn	20 06 10.7	-0.4
EMOS	Mosqueruela	6.60	52	P	Pn	20 06 15.1	+2.2
	comp=E,43nm,1.3s,SNR=7.9						
EMOS				S	Sn	20 07 25.5	-1.6
	comp=E,2.7nm,0.4s,SNR=7.9						
EARI	Arriondas	7.01	12	P	Pn	20 06 19.9	+1.5
	comp=E,48nm,1.3s,SNR=7.9						
EARI				S	Sn	20 07 33.4	-3.6
	comp=E,0.2nm,0.2s,SNR=7.8						
EIBI	Ibiza	7.28	67	S	Sn	20 07 40.5	-3.0
	comp=E,1.5nm,0.2s,SNR=7.9						
ELAN	Lanestosa	7.37	22	P	Pn	20 06 24.8	+1.4
	comp=E,9.1nm,1.0s,SNR=7.9						
ELAN				S	Sn	20 07 40.7	-5.2
	comp=E,0.9nm,0.2s,SNR=7.9						
EORO	Oroz-Betelu	7.89	34	P	Pn	20 06 32.7	+2.2
	comp=E,14nm,0.7s,SNR=7.9						
EALK	Alkurruntz	8.07	31	P	Pn	20 06 35.1	+2.2
	comp=E,1.5nm,0.3s,SNR=7.9						
EALK				S	Sn	20 07 57.8	-5.2
	comp=E,11nm,0.4s,SNR=7.9						
ATE	Arette	8.32	35	P	Pn	20 06 39.0	+2.6
	comp=E,1.5nm,0.9s,SNR=7.9						
ATE				S	Sn	20 08 04.7	-4.4
	comp=E,0.3nm,0.3s,SNR=7.9						

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*TUL **31** 20:31:14.3±2.1, 35°.79N±0°.01×97°.57W±0°.02, h6^{km}±5^{km}, ML2.6, mb_Lg2.2/13(NEIC), Error ellipse: s-maj=2.6km s-min=1.8km az=113.0*

NEIC 31 20:31:14.1±1.9**, 35°.81N**±0°.01×**97°.58W**±0°.02**, h9**^{km}±5^{km}**, Error ellipse: s-maj=2.4km s-min=1.8km az=90.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCOK	Bluff Creek, N	0.15	191		Pg	20 31 16.6	-0.7
BCOK				Sg	Sg	20 31 19.8	+0.3
OK025	Westminster Rd	0.29	139		Pg	20 31 19.7	-0.2
OK025				Sg	Sg	20 31 24.6	+0.7
OKCFA	Oklahoma City	0.40	165		Pg	20 31 20.2	-1.8
OKCFA				Sg	Sg	20 31 27.9	+0.6
OKCSW	OKLAHOMA CITY	0.41	164		Pg	20 31 22.3	+0.1
OKCSW				Sg	Sg	20 31 28.4	+0.8
FNO	Franklin	0.56	165		Pg	20 31 24.9	-0.1
FNO				Sg	Sg	20 31 33.1	+0.7
OK031	S. Brethren Rd	0.61	76		Pg	20 31 25.3	-0.7
OK031				Sg	Sb	20 31 35.0	-0.9
OK030	Cody Creek RV	0.65	79		Pg	20 31 25.7	-1.0
OK030					Sg	20 31 35.9	+0.7
OK034	N. Norfolk Rd.	0.73	73		Pg	20 31 26.5	-1.6
OK034				Sg	Sg	20 31 38.3	+0.7
CROK	Carrier	0.77	335		Pb	20 31 29.4	-0.4
QUOK	Quay	0.79	62		Pg	20 31 28.6	-0.7
BLOK	Blackwell	1.00	17		Pg	20 31 33.3	+0.1
GC02	Grant County #	1.07	348	Pn	Pb	20 31 34.7	-0.1
OK032	Salt Plains WL	1.12	333	Pg	Pb	20 31 35.7	0.0
KAN14	Manchester OK	1.19	345		Pb	20 31 36.4	-0.5
KAN13	South Haven SW	1.21	4	Pn	Pb	20 31 37.1	0.0
X34A	Smith Ranch, M	1.22	190	Pn	Pb	20 31 37.0	-0.3
KAN17	Caldwell West	1.25	353		Pb	20 31 37.9	+0.1
U32A	Winter Ranch,	1.29	297	Pn	Pn	20 31 36.9	-1.5
KAN05	Bluff City Nor	1.32	350	Pn	Pn	20 31 37.4	-1.4
KAN01	Argonia South	1.35	354		Pb	20 31 39.7	+0.1
KAN10	Anthony SW Sta	1.38	342	Pn	Pn	20 31 38.5	-1.1
T35A	Sooner Cattle	1.40	37		Pb	20 31 40.2	-0.2
TUL1	Leonard	1.45	85	Pn	Pn	20 31 40.0	-0.6
KAN08	Anthony NE Sta	1.45	347		Pn	20 31 39.8	-0.8
KAN06	Argonia West S	1.46	351		Pb	20 31 41.6	+0.1
KAN16	Harper SW Stat	1.47	345	Pn	Pn	20 31 41.1	+0.3
KAN12	Harper NE Stat	1.53	347	Pn	Pn	20 31 41.9	+0.3
LOOK	Love County	1.84	170	Pn	Pn	20 31 43.7	-2.2
LOOK				IAmb_Lg		20 32 14.4	
	comp=Z,15nm,0.7s						
X37A	Clayton	2.17	123		Pn	20 31 49.5	-1.0
AMTX	Amarillo	3.48	256	IAmb_Lg		20 33 03.3	
	comp=Z,5.8nm,0.9s						
ABTX	Abilene, Hawle	3.61	209	IAmb_Lg		20 33 08.1	
	comp=Z,7.1nm,1.1s						
S39A	Bolivar	3.90	60	IAmb_Lg		20 33 18.4	
	comp=Z,9.2nm,0.7s						
FCAR	Ozark Folk Cen	4.43	87	IAmb_Lg		20 33 39.0	
	comp=Z,6.0nm,0.8s						
P38A	Dawn	4.98	39	IAmb_Lg		20 33 48.6	
	comp=Z,4.9nm,0.8s						
ECSD	EROS Data Cent	7.95	5	IAmb_Lg		20 35 28.0	
	comp=Z,2.0nm,0.9s						

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*STR **31** 20:31:15.6±0.6, 47°N±6°×°±°, h0^{km}, MLv3.8/4, preliminary*

*LDG **31** 20:31:15.0±0.1, 46°.73N×2°.01W, h2^{km}, Ml2.3/23, Error ellipse: s-maj=1.9km s-min=1.0km az=51.0*

ISC 31 20:31:15.2±1.2**, 46°.75N**±0°.03×**1°.96W**±0°.03**, h15**^{km}±9^{km}**, n35,** σ**2^{s}.04**/71**, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHIF	Chize	1.23	119	Pn	Pg	20 31 38.9	-0.1
CHIF				Sg	Sg	20 31 55.7	+0.7
MFF	Saint Martin d	1.25	96	ePg	Pg	20 31 39.6	+0.3
MFF				eSg	Sg	20 31 56.2	+0.5
	8.5nm,0.2s						
MFF	Saint Martin d	1.25	96	Pn	Pg	20 31 39.1	-0.2
MFF				Pg	Pb	20 31 39.8	+1.3
QUIF	Quistinic	1.43	325	ePg	Pn	20 31 41.2	+0.6
QUIF				eSg	Sg	20 32 00.4	-0.9
	7.1nm,0.2s						
SGMF	Saint Gilles	1.56	345	ePg	Pb	20 31 44.5	+0.7
SGMF				eSg	Sg	20 32 04.9	-0.6
	7.7nm,0.3s						
GRR	Gorron	1.80	24	ePg	Pb	20 31 49.2	+1.3
GRR				eSg	Sg	20 32 12.6	-0.6
	5.8nm,0.3s						
ROSF	Rostrenen	1.82	331	ePg	Pb	20 31 48.7	+0.5
ROSF				eSg	Sb	20 32 12.7	+1.8
	5.4nm,0.3s						
ROSF	Rostrenen	1.82	331	Pg	Pb	20 31 49.0	+0.7
ROSF	Rostrenen	1.82	331	Sg	Sg	20 32 13.6	-0.2
LDF	La Druitiere	2.22	33	ePn	Pn	20 31 51.7	+0.2
LDF	La Druitiere	2.22	33	ePg	Pb	20 31 56.4	+1.3
LDF				eSg	Sg	20 32 25.6	-1.1
	4.3nm,0.3s						
FLN	La Foliniere	2.25	26	ePn	Pn	20 31 52.0	+0.2
FLN	La Foliniere	2.25	26	ePg	Pg	20 31 57.4	-0.9
FLN				eSn	Sn	20 32 19.3	0.0
FLN				eSg	Sg	20 32 26.0	-1.4
	1.9nm,0.2s						
LFF	La Frestale	2.61	133	ePg	Pb	20 32 02.3	+0.6
LFF				eSn	Sn	20 32 27.3	-1.0
LFF				eSg	Sg	20 32 37.8	-1.3
	4.3nm,0.3s						
RJF	Les Rejaudoux	2.82	120	ePg	Pb	20 32 07.7	+2.5
RJF				eSn	Sn	20 32 31.8	-1.6
RJF				eSg	Sb	20 32 43.7	+4.2
	5.2nm,0.3s						
TCF	Toulx Ste Croi	2.91	98	ePn	Pn	20 32 01.7	+0.7
TCF	Toulx Ste Croi	2.91	98	ePg	Pg	20 32 09.9	-1.1
TCF				eSn	Sn	20 32 35.5	-0.3
TCF				eSg	Sg	20 32 47.3	-1.4
	1.7nm,0.2s						
MONQ	Montcuq	3.25	136	Pn	Pn	20 32 06.6	+0.9
BGF	Bois d'Agland	3.31	92	ePn	Pn	20 32 06.7	+0.2
BGF				eSn	Sn	20 32 43.8	-1.8
BGF				eSg	Sg	20 32 59.6	-2.0
	14nm,0.4s						
CAF	Calviac	3.35	122	ePn	Pn	20 32 06.8	-0.2
CAF	Calviac	3.35	122	ePg	Pb	20 32 17.5	+3.2
CAF				eSn	Sn	20 32 45.2	-1.4
CAF				eSg	Sb	20 33 00.2	+5.4
	1.7nm,0.2s						
AVF	Avril sur Loir	3.65	87	ePn	Pn	20 32 11.3	+0.2
AVF	Avril sur Loir	3.65	87	ePg	Pg	20 32 23.9	-1.2
AVF				eSn	Sn	20 32 51.9	-2.0
AVF				eSg	Sg	20 33 09.9	-2.4
	0.9nm,0.3s						
SSF	Saint Saulge	3.76	83	ePn	Pn	20 32 12.7	+0.1
SSF	Saint Saulge	3.76	83	ePg	Pg	20 32 25.0	-2.1
SSF				eSn	Sn	20 32 54.8	-1.8
SSF				eSg	Sg	20 33 12.5	-3.3
	0.7nm,0.3s						
SMF	Signal de Mont	3.99	89	ePg	Pb	20 32 28.8	+3.6
SMF				eSn	Sn	20 33 00.5	-1.8
SMF				eSg	Sg	20 33 20.9	-2.4
	0.9nm,0.3s						
LOR	Lormes	4.01	80	ePn	Pn	20 32 16.5	+0.4
	baz=270						
LOR	Lormes	4.01	80	ePg	Pg	20 32 30.5	-1.5
	baz=267						
LOR				eSn	Sn	20 33 00.8	-2.1
LOR				eSg	Sg	20 33 21.6	-2.4
	1.1nm,0.3s						
EPF	Esparros	4.06	155	ePn	Pn	20 32 15.4	-1.4
EPF	Esparros	4.06	155	ePg	Pb	20 32 29.7	+3.3
EPF				eSn	Sn	20 33 00.6	-3.5
EPF				eSg	Sg	20 33 22.6	-2.9
	0.4nm,0.3s						
MTLF	Montolieu	4.51	138	ePn	Pn	20 32 21.3	-1.7
MTLF	Montolieu	4.51	138	ePg	Pb	20 32 38.2	+4.1
MTLF				eSn	Sn	20 33 12.6	-2.5
MTLF				eSg	Sg	20 33 36.8	-3.1
	0.2nm,0.3s						
LASF	Ste Croix	4.89	121	ePn	Pn	20 32 27.9	-0.3
LASF				eSn	Sn	20 33 20.7	-3.8
LASF				eSg	Sg	20 33 48.3	-3.7
	0.4nm,0.2s						
VIVF	Saint-Julien-l	5.01	110	ePn	Pn	20 32 28.5	-1.3
VIVF				eSn	Sn	20 33 25.1	-2.3
VIVF				eSg	Sg	20 33 54.4	-1.4
	0.3nm,0.3s						
ORIF	Oris-en-Rattie	5.77	106	eSg	Sg	20 34 17.4	-3.0

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*LDG **31** 20:42:00.8±0.0, 44°.76N×6°.75E, h5^{km}, Md3.3/3, Ml3.4/61, Error ellipse: s-maj=1.1km s-min=0.8km az=57.0*

*GEN **31** 20:42:00, 44°.75N×6°.75E, h5^{km}, ML3.2*

*IDC **31** 20:42:01.3±1.7, 44°.87N×6°.71E, h0^{km}, mb3.3/1, mb1 3.7/7, mb1mx3.3/61, mbtmp3.5/7, ML4.0/5, MS3.1/1, Ms1 3.1/1, ms1mx2.4/42, Error ellipse: s-maj=35.7km s-min=15.4km az=138.0*

*STR **31** 20:42:01.2±0.2, 45°N±2°×°±°, h4^{km}±2^{km}, MLv3.4/18, preliminary*

*BGR **31** 20:42:02.5±0.4, 44°.72N×6°.60E, h5^{km}, ML3.6/16, Error ellipse: s-maj=10.0km s-min=6.7km az=104.0*

*PRU **31** 20:42:02.9±0.0, 44°.83N×6°.88E, h0^{km}*

ISC 31 20:42:00.3±0.9**, 44°.76N**±0°.01×**6°.62E**±0°.01**, h8**^{km}±6^{km}**, n203,** σ**1^{s}.97**/353**, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBDF	Montbardon	0.11	105	ePg	Pg	20 42 02.5	-0.4
MBDF				eSg	Sg	20 42 03.2	-1.6
	71µm,0.3s						
RRL	Rocca Remolon	0.20	36	P	Pg	20 42 04.9	+0.4
RRL				S	Sg	20 42 07.6	+0.1
OGAG	Argentiere	0.31	191	Pg	Pg	20 42 04.3	-2.1
OGAG				Sg	Sg	20 42 06.3	-4.1
SURF	Saint Ours	0.31	153	Pg	Pg	20 42 06.4	0.0
PZZ	Stroppo	0.43	125	P	Pg	20 42 07.9	-0.8
PZZ				S	Sg	20 42 13.3	-1.0
OGMO	Fort Saint-Gob	0.46	6	Pg	Pg	20 42 09.9	+0.7
BHB	Bricherasio	0.47	79	P	Pg	20 42 08.7	-0.7
BHB				S	Sg	20 42 13.8	-1.6
ORIF	Oris-en-Rattie	0.55	287	ePg	Pb	20 42 13.0	+0.7
ORIF				eSg	Sb	20 42 20.7	+0.3
	2µm,0.2s						
ORIF	Oris-en-Rattie	0.55	287	Pg	Pb	20 42 13.1	+0.8
RSP	Reno Superiore	0.60	49	P	Pg	20 42 11.6	-0.3
RSP				S	Sg	20 42 18.9	-1.0
ISO	Isola	0.65	152	Pg	Pg	20 42 12.6	-0.2
OGDI	Digne	0.69	200	Pg	Pb	20 42 16.3	+1.8
LPG	La Plagne	0.75	7	ePg	Pg	20 42 15.3	+0.5
LPG	La Plagne	0.75	7	eP	Pb	20 42 16.9	+1.1
LPG				eSg	Sg	20 42 24.9	+0.4
	371nm,0.2s						
LPL	La Plagne	0.77	6	ePg	Pg	20 42 15.5	+0.4
LPL				eSg	Sg	20 42 25.6	+0.5
	1µm,0.3s						
ENR	Entracque	0.78	132	P	Pg	20 42 14.3	-1.0
ENR				S	Sg	20 42 25.1	-0.3
GRN	Grenoble	0.79	308	Pg	Pb	20 42 17.8	+1.5
LSD	Lago del Serru	0.79	27	P	Pg	20 42 15.3	-0.2
LSD				S	Sg	20 42 25.7	-0.2
SPIF	crte de Spivo	0.83	148	Pg	Pg	20 42 15.8	-0.3
BLAF	les Blancs	0.90	207	Pg	Pb	20 42 19.6	+1.4
RSL	Roselend	0.93	0	Pg	Pg	20 42 18.7	+0.4
MVIF	Mont Vial	0.94	156	Pg	Pg	20 42 18.5	+0.1
TURF	col de Turini	0.96	144	Pg	Pg	20 42 18.1	-0.5
MLYF	Mely	0.98	219	Pg	Pn	20 42 21.6	+1.2
GBOS	Grotte di Boss	1.01	120	P	Pg	20 42 18.4	-1.4
SAOF	Saorge	1.02	139	Pg	Pg	20 42 19.0	-0.8
SBF	Sospel	1.07	146	ePg	Pg	20 42 20.2	-0.5
SBF	Sospel	1.07	146	ePn	Pg	20 42 20.5	-0.2
SBF	Sospel	1.07	146	eP	Pb	20 42 22.1	+1.1
SBF				eSn	Sg	20 42 34.7	+0.1
	2µm,0.4s						
ESCA	l'Escarene	1.07	149	Pg	Pg	20 42 20.6	-0.2
OGSM	Saint Maurice	1.08	323	Pg	Pn	20 42 22.7	+1.0
CIRO	Champorcher	1.08	38	P	Pg	20 42 20.3	-0.7
CIRO				S	Sg	20 42 34.3	-0.8
SMRF	Simiane la Rot	1.08	224	eP	Pn	20 42 23.5	+1.7
SMRF				eSg	Sn	20 42 38.6	+1.6
	466nm,0.3s						
TRAV	Traversella	1.10	46	P	Pg	20 42 20.2	-1.2
TRAV				S	Sg	20 42 33.9	-1.8
MGRO	Montegrosso	1.11	130	P	Pg	20 42 20.2	-1.4
MGRO				S	Sg	20 42 34.6	-1.4
BSTF	la Bastide-des	1.12	219	Pn	Pn	20 42 25.3	+3.0
REMY	Saint-Rhmy-en	1.15	19	P	Pg	20 42 22.1	-0.2
REMY				S	Sb	20 42 38.5	+0.8
RUSF	Rustrel	1.15	225	Pn	Pn	20 42 25.3	+2.5
BURY	Giardini Botan	1.18	145	P	Pg	20 42 22.5	-0.5

BURY				S	Sg	20 42 38.7	+0.4
ROTM	Rocchetta Tana	1.24	85	P	Pg	20 42 23.3	-0.7
ROTM				S	Sg	20 42 40.0	0.0
IMI	Imperia	1.24	132	P	Pg	20 42 22.6	-1.5
IMI				S	Sg	20 42 39.4	-0.9
EILF	Villa Eilenroc	1.26	163	Pg	Pn	20 42 24.8	+0.6
EILF				Pn	Pb	20 42 25.3	+1.0
CANO	Canova, Maglio	1.28	115	P	Pn	20 42 23.2	-1.3
CANO				S	Sg	20 42 39.6	-1.8
ARTF	Artigues	1.31	207	Pg	Pg	20 42 26.7	+1.4
SAUF	chteau de Sau	1.36	234	Pn	Pg	20 42 27.9	+1.5
PCP	Piancastagn	1.39	98	P	Pn	20 42 24.9	-1.1
PCP				S	Sb	20 42 41.9	-2.5
VIVF	Saint-Julien-l	1.39	275	*e*Pg	Pg	20 42 28.4	+1.4
VIVF				*e*Sg	Sg	20 42 47.3	+2.3
	342nm,0.3s						
LMR	La Mourre	1.42	183	*e*Pg	Pn	20 42 27.5	+1.1
LMR	La Mourre	1.42	183	*e*P	Pb	20 42 28.2	+1.2
LMR				*e*Sg	Sb	20 42 46.6	+1.3
	495nm,0.3s						
SATI	Passo dei Sala	1.43	38	P	Pn	20 42 26.1	-0.7
OG35	Corcelles	1.49	331	Pn	Pg	20 42 29.7	+0.9
EMBD	Embd, Matterta	1.69	30	Pn	Pn	20 42 31.6	+1.3
GIMEL	St. Georges /	1.80	352	Pn	Pb	20 42 34.0	+0.5
CABF	La Chapelle	1.89	349	*e*Pn	Pn	20 42 32.7	-0.3
CABF	La Chapelle	1.89	349	*e*P	Pb	20 42 35.0	-0.2
CABF	La Chapelle	1.89	349	*e*Pg	Pg	20 42 36.7	+0.1
CABF				*e*Sn	Sn	20 42 55.8	-1.3
	9.9nm,0.2s						
CABF				*e*Sg	Sg	20 43 01.1	-0.1
	80nm,0.2s						
TRBF	Trabuc cave	2.02	252	Pn	Pn	20 42 36.3	+1.8
TORNY	Torny/Romont	2.03	7	Pn	Pb	20 42 37.4	-0.1
LASF	Ste Croix	2.09	252	*e*P	Pn	20 42 37.5	+1.8
LASF	Ste Croix	2.09	252	*e*Pg	Pg	20 42 41.2	+0.8
LASF				*e*Sn	Sn	20 43 01.6	-0.3
	28nm,0.2s						
LASF				*e*Sg	Sg	20 43 08.8	+1.3
	26nm,0.3s						
BRANT	Les Verrieres	2.19	357	Pn	Pn	20 42 39.2	+2.1
LBL	Lubilhac	2.44	282	Pn	Pn	20 42 42.8	+2.3
CHMF	Charmoille	2.49	0	Pn	Pn	20 42 43.0	+1.8
BOURR	Bourrignon	2.67	9	Pn	Pn	20 42 45.4	+1.7
BALST	Balsthal	2.69	16	Pn	Pn	20 42 45.7	+1.9
BALST	Balsthal	2.69	16	*e*Pn	Pn	20 42 45.8	+1.9
BALST				*e*Pg	Pg	20 42 52.0	+0.2
BALST				*e*Sg	Sg	20 43 26.9	+0.3
SMF	Signal de Mont	2.71	315	*e*P	Pn	20 42 46.4	+2.2
SMF	Signal de Mont	2.71	315	*e*Pg	Pg	20 42 52.7	+0.4
SMF				*e*Sn	Sn	20 43 16.2	-1.0
	46nm,0.3s						
SMF				*e*Sg	Sg	20 43 27.8	+0.3
	61nm,0.2s						
PYM	Petit Puy Mans	2.74	293	Pn	Pn	20 42 46.5	+1.9
AGO	Saint Agoulin	2.78	299	Pn	Pn	20 42 47.1	+2.0
PGF	Pioggiola	2.80	141	*e*Pn	Pn	20 42 44.5	-1.0
PGF	Pioggiola	2.80	141	*e*P	Pn	20 42 46.9	+1.4
PGF				*e*Sn	Sn	20 43 16.5	-3.0
	84nm,0.3s						
SULZ	Cheisacher	2.96	20	Pn	Pn	20 42 49.0	+1.4
SULZ	Cheisacher	2.96	20	*e*Pn	Pn	20 42 48.9	+1.4
SULZ				*e*Pg	Pg	20 42 57.3	+0.3
SULZ				*e*Sn	Sn	20 43 24.5	+1.2
SULZ				*e*Sg	Sg	20 43 37.3	+1.9
PLONS	Plons/SG	3.00	39	*e*Pn	Pn	20 42 49.6	+1.4
PLONS				*e*Pg	Pb	20 42 56.1	+2.2
PLONS				*e*Sn	Sn	20 43 27.2	+2.9
PLONS				*e*Sg	Sg	20 43 36.6	+0.1
DAVOX	Davos/Dischmat	3.05	47	Pn	Pn	20 42 50.9	+2.0
	2.5nm,0.3s,baz=258,slow=9.5,SNR=27						
DAVOX				Sn	Sn	20 43 26.3	+0.6
	4.1nm,0.3s,baz=165,slow=20,SNR=5.8						
DAVOX				Lg	Lg	20 43 33.9	
	7.1nm,0.3s,baz=190,slow=14,SNR=3.7						
AVF	Avril sur Loir	3.06	313	*e*P	Pn	20 42 51.6	+2.6
AVF	Avril sur Loir	3.06	313	*e*Pg	Pg	20 42 58.7	-0.2
AVF				*e*Sn	Sn	20 43 24.6	-1.2
	21nm,0.3s						
AVF				*e*Sg	Sg	20 43 38.9	+0.3
	83nm,0.5s						
HINF	Hinteralfeld	3.07	3	*e*P	Pn	20 42 50.3	+1.2
HINF	Hinteralfeld	3.07	3	*e*Pg	Pb	20 42 57.5	+2.4
HINF				*e*Sn	Sn	20 43 23.7	-2.3
	23nm,0.2s						
HINF				*e*Sg	Sg	20 43 37.0	-1.8
	7.3nm,0.2s						
LOR	Lormes	3.17	324	*e*P	Pn	20 42 52.8	+2.4
	baz=144						
LOR	Lormes	3.17	324	*e*Pg	Pg	20 43 00.4	-0.5
	baz=134						
LOR				*e*Sn	Sn	20 43 27.0	-1.4
LOR				*e*Sg	Sg	20 43 41.4	-0.5
	15nm,0.2s,baz=142						
METMA	Mettma DE	3.17	20	*e*Pn	Pn	20 42 52.1	+1.7
METMA				*e*Pg	Pg	20 43 00.4	-0.5
METMA				*e*Sn	Sn	20 43 28.9	+0.5
METMA				*e*Sg	Sg	20 43 42.0	0.0
SSF	Saint Saulge	3.17	318	*e*P	Pn	20 42 53.3	+2.8
SSF	Saint Saulge	3.17	318	*e*Pg	Pg	20 43 00.9	-0.1
SSF				*e*Sn	Sn	20 43 27.0	-1.4
	12nm,0.2s						
SSF				*e*Sg	Sg	20 43 42.0	-0.1
	34nm,0.3s						
BGF	Bois d'Agland	3.20	306	*e*P	Pn	20 42 53.4	+2.5
BGF	Bois d'Agland	3.20	306	*e*Pg	Pg	20 43 01.9	+0.3
BGF				*e*Sn	Sn	20 43 28.1	-1.2
	32nm,0.3s						
BGF				*e*Sg	Sg	20 43 43.3	+0.2
	106nm,0.3s						
CAF	Calviac	3.25	275	*e*P	Pn	20 42 54.4	+2.9
CAF				*e*Sn	Sn	20 43 29.4	-1.0
	19nm,0.3s						
CAF				*e*Sg	Sg	20 43 45.2	+0.7
	8.6nm,0.2s						
HAU	Haudompre	3.26	357	*e*P	Pn	20 42 53.1	+1.4
HAU	Haudompre	3.26	357	*e*Pg	Pg	20 43 01.3	-1.4
HAU				*e*Sn	Sn	20 43 28.3	-2.3
	68nm,0.3s						
HAU				*e*Sg	Sg	20 43 43.7	-1.2
	30nm,0.3s						
SLE	Schleitheim	3.28	23	*e*Pn	Pn	20 42 52.8	+0.9
SLE				*e*Sn	Sn	20 43 31.5	+0.4
SLE				*e*Sg	Sg	20 43 46.7	+1.2
BERGE	Lenzkirch (DE)	3.30	19	*e*Pn	Pn	20 42 53.0	+0.7
BERGE				*e*Pg	Pg	20 43 04.0	+0.5
BERGE				*e*Sn	Sn	20 43 31.7	0.0
BERGE				*e*Sg	Sg	20 43 46.2	0.0
DAVA	Damuels	3.40	41	*i* Pn	Pn	20 42 56.3	+2.5
	1.2nm,0.2s,SNR=24						
DAVA				*e*Sn	Sn	20 43 37.7	+3.4
	13nm,0.3s						
DAVA	Damuels	3.40	41	*e*Pn	Pn	20 42 57.2	+3.5
DAVA				*e*Sn	Sn	20 43 37.1	+2.7
TCF	Toulx Ste Croi	3.46	298	*e*P	Pn	20 42 57.4	+2.9
TCF	Toulx Ste Croi	3.46	298	*e*Pg	Pg	20 43 06.1	-0.4
TCF				*e*Sn	Sn	20 43 34.4	-1.2
	15nm,0.2s						
TCF				*e*Sg	Sg	20 43 51.4	+0.1
WALHA	Wallhausen, DE	3.46	29	*e*Pn	Pn	20 42 55.8	+1.3
WALHA				*e*Pg	Pg	20 43 05.3	-1.3
WALHA				*e*Sn	Sn	20 43 36.6	+0.9
WALHA				*e*Sg	Sg	20 43 52.5	+1.0
MTLF	Montolieu	3.48	248	*e*P	Pn	20 42 56.7	+2.0
MTLF	Montolieu	3.48	248	*e*Pg	Pg	20 43 06.8	-0.1
MTLF				*e*Sn	Sn	20 43 34.3	-1.7
	17nm,0.3s						
MTLF				*e*Sg	Sg	20 43 51.5	-0.4
	14nm,0.3s						
ECH	Echery	3.48	6	*e*Pn	Pn	20 42 56.0	+1.3
ECH				*e*Sn	Sn	20 43 34.7	-1.4
EMING	Emmingen-Lipti	3.50	25	*e*Pn	Pn	20 42 55.8	+0.9
EMING				*e*Pg	Pg	20 43 06.6	-0.7
EMING				*e*Sn	Sn	20 43 36.8	+0.3
EMING				*e*Sg	Sg	20 43 52.7	+0.2
SFTF	Sexfontaines	3.62	343	*e*P	Pn	20 42 59.0	+2.4
	baz=147						
SFTF	Sexfontaines	3.62	343	*e*Pg	Pg	20 43 08.3	-1.3
SFTF				*e*Sn	Sn	20 43 37.0	-2.5
	14nm,0.2s						
SFTF				*e*Sg	Sg	20 43 55.2	-1.3
	29nm,0.3s						
FETA	Feichten	3.66	50	*i* Pn	Pn	20 42 59.7	+2.4
	0.7nm,0.1s,SNR=16						
FETA				*e*Sn	Sn	20 43 41.2	+0.5
	4.0nm,0.3s						
RJF	Les Rejaudoux	3.66	280	*e*P	Pn	20 43 00.5	+3.3
RJF	Les Rejaudoux	3.66	280	*e*Pg	Pg	20 43 10.4	0.0
RJF				*e*Sn	Sn	20 43 39.3	-1.3
RJF				*e*Sg	Sg	20 43 57.7	-0.1
	72nm,0.5s						
CDF	Champ du Feu	3.69	7	*e*P	Pn	20 42 58.4	+0.8
CDF	Champ du Feu	3.69	7	*e*Pg	Pb	20 43 08.8	+3.1
CDF				*e*Sn	Sn	20 43 38.1	-3.2
	14nm,0.2s						
CDF				*e*Sg	Sg	20 43 56.0	-2.6
	15nm,0.4s						
HYF	Humbligny	3.74	314	*e*P	Pn	20 43 01.5	+3.2
HYF	Humbligny	3.74	314	*e*Pg	Pg	20 43 10.9	-1.1
HYF				*e*Sn	Sn	20 43 40.8	-1.8
HYF				*e*Sg	Sg	20 43 59.8	-0.7
BFO	Black Forest	3.77	18	*e*Pn	Pn	20 42 59.3	+0.6
BFO				*e*Sn	Sn	20 43 43.1	-0.1
UBR	Ueberruh	3.80	38	*e*Pn	Pn	20 43 01.6	+2.5
UBR				*e*Sn	Sn	20 43 44.7	+0.7
PAGF	Fort de Pagny	3.85	351	*e*P	Pn	20 43 02.0	+2.2
	baz=173						
PAGF				*e*Sn	Sn	20 43 42.4	-2.8
	25nm,0.2s,baz=162						
PAGF				*e*Sg	Sg	20 44 02.2	-1.7
	15nm,0.3s						
MEZF	Maizieres J'vi	3.90	344	*e*P	Pn	20 43 02.8	+2.3
	baz=155						
MEZF	Maizieres J'vi	3.90	344	*e*Pg	Pg	20 43 12.9	-2.1
	baz=166						
MEZF				*e*Sn	Sn	20 43 43.6	-2.8
	23nm,0.3s,baz=163						
MEZF				*e*Sg	Sg	20 44 03.8	-1.7
	60nm,0.5s						
RETA	Reutte	3.97	45	*i* Pn	Pn	20 43 02.9	+1.4
	1.0nm,0.2s,SNR=11						
RETA				*e*Sn	Sn	20 43 49.8	+1.6
	0.7nm,0.1s						
SAVF	Savonnieres en	4.00	346	*e*P	Pn	20 43 04.5	+2.7
	baz=163						
SAVF				*e*Sn	Sn	20 43 45.9	-2.9
	baz=160						
SAVF				*e*Sg	Sg	20 44 06.1	-2.5
	8.3nm,0.3s						
SQTA	Sankt Quirin	4.04	51	*i* Pn	Pn	20 43 04.3	+1.8
	1.0nm,0.1s,SNR=10						
SQTA				*e*Sn	Sn	20 43 51.2	+1.2
	12nm,0.4s						
MOTA	Moosalm	4.05	49	*i* Pn	Pn	20 43 04.2	+1.4
	1.8nm,0.2s,SNR=19						
MOTA				*e*Sn	Sn	20 43 50.7	+0.2
	9.2nm,0.4s						
LFF	La Frestale	4.19	275	*e*P	Pn	20 43 07.7	+3.3
LFF				*e*Sn	Sn	20 43 51.7	-1.8
	7.1nm,0.3s						
LFF				*e*Sg	Sg	20 44 14.3	-0.4
	52nm,0.5s						
WTTA	Wattenberg	4.30	53	*i* Pn	Pn	20 43 07.9	+1.8
	4.8nm,0.2s,SNR=21						
WTTA				*e*Sn	Sn	20 43 58.4	+1.8
	7.8nm,0.3s						
WTTA	Wattenberg	4.30	53	*e*Pn	Pn	20 43 08.4	+2.2
WATA	Walderalm	4.31	51	*i* Pn	Pn	20 43 07.8	+1.6
	0.4nm,0.2s,SNR=16						
WATA				*e*Sn	Sn	20 43 58.6	+1.9
	5.7nm,0.3s						
STU	Stuttgart	4.39	23	*e*Sn	Sn	20 43 57.9	-0.6
STU				*e*Sg	Sg	20 44 23.8	+2.6
ABTA	Abfaltersbach	4.58	62	*i* Pn	Pn	20 43 11.6	+1.7
	2.7nm,0.3s,SNR=17						
ABTA				*e*Sn	Sn	20 44 04.9	+1.6
	2.2nm,0.3s						
FUR	Furstenfeldbru	4.69	42	*e*Pn	Pn	20 43 13.7	+2.4
FUR				*e*Sn	Sn	20 44 05.0	-0.9
NORI	Noerdlinger Ri	4.83	33	*e*Sn	Sn	20 44 08.5	-0.8
EPF	Esparros	4.86	251	*e*Pn	Pn	20 43 14.8	+1.1
EPF	Esparros	4.86	251	*e*P	Pn	20 43 17.9	+4.2
EPF	Esparros	4.86	251	*e*Pg	Pg	20 43 31.6	-1.7
EPF				*e*Sn	Sn	20 44 06.7	-3.4
	5.3nm,0.4s						
EPF				*e*Sg	Sg	20 44 34.4	-1.8
	13nm,0.4s						
WLF	Walferdange	4.92	356	*e*Pn	Pn	20 43 17.0	+2.5
RIVT	Riveris	4.96	1	*e*Pn	Pn	20 43 16.6	+1.6
RIVT				*e*Sn	Sn	20 44 12.2	-0.3
RIVT				*e*Sg	Sg	20 44 42.8	+3.4
BRJN	Brijuni	5.07	86	*e*Pn	Pn	20 43 14.2	-2.4
BRJN				Sn	Sn	20 44 04.3	-11
MFF	Saint Martin d	5.09	294	*e*P	Pn	20 43 20.1	+3.3
MFF	Saint Martin d	5.09	294	*e*Pg	Pg	20 43 35.9	-1.8
MFF				*e*Sn	Sn	20 44 13.1	-2.6
	4.0nm,0.3s						
MFF				*e*Sg	Sg	20 44 42.3	-1.3
	18nm,0.5s						
ABH	Alteburg	5.17	7	*e*Pn	Pn	20 43 19.2	+1.3
ABH				*e*Sn	Sn	20 44 18.7	+1.0
KBA	Koelnbreinsper	5.24	61	*e*Pn	Pn	20 43 20.8	+1.8
	2.0nm,0.2s						
KBA				*e*Sn	Sn	20 44 21.2	+1.6
	1.3nm,0.0s						
MYKA	Terra Mystica	5.26	67	*e*Pn	Pn	20 43 20.6	+1.3
	1.4nm,0.3s						
MYKA				*e*Sn	Sn	20 44 21.8	+1.6
	1.8nm,0.3s						
SMRN	Sveta Marina	5.36	84	*e*Pn	Pn	20 43 17.8	-2.7
SMRN				Sn	Sn	20 44 12.2	-10
MILB	Miltenberg	5.39	19	*e*Pn	Pn	20 43 21.1	+0.2
GIVF	Givet	5.49	348	*e*P	Pn	20 43 24.7	+2.4
GIVF				*e*Sn	Sn	20 44 21.5	-4.0
GIVF				*e*Sg	Sg	20 44 53.1	-3.3
	5.7nm,0.3s						
ETSF	Etsaut	5.52	253	*e*Pn	Pn	20 43 23.1	+0.3
ETSF	Etsaut	5.52	253	*e*P	Pn	20 43 27.0	+4.2
ETSF	Etsaut	5.52	253	*e*Pg	Pg	20 43 45.6	-0.3
ETSF				*e*Sn	Sn	20 44 23.2	-3.2
	0.5nm,0.2s						
ETSF				*e*Sg	Sg	20 44 55.7	-1.6
	2.9nm,0.3s						
BAIF	Baives	5.55	344	*e*P	Pn	20 43 25.5	+2.3
BAIF				*e*Sn	Sn	20 44 23.4	-3.7
BAIF				*e*Sg	Sg	20 44 55.1	-3.4
	4.9nm,0.4s						
RIY	Rijeka	5.60	81	*e*Pn	Pn	20 43 21.4	-2.4
RIY				Sn	Sn	20 44 18.4	-10
TNS	Taunus Mts	5.61	12	*e*Pn	Pn	20 43 25.1	+1.1
TNS				*e*Sg	Sg	20 45 01.6	+1.4
AHRW	Bad Neuenahr-A	5.80	3	*e*Pn	Pn	20 43 28.0	+1.5
OBKA	Obir	5.83	70	*e*Pn	Pn	20 43 28.0	+0.9
	1.2nm,0.4s						
OBKA				*e*Sn	Sn	20 44 32.6	-1.6
	2.1nm,0.4s						
OBKA	Obir	5.83	70	*e*Pn	Pn	20 43 27.3	+0.2
GRFO	Grafenberg	5.85	31	*e*Pg	Pg	20 43 52.5	+0.3
GRF	Grafenberg Arr	5.85	31	*e*Sn	Sn	20 44 32.4	-2.0
GRF				*e*Sg	Sg	20 45 07.1	-0.9
NVLJ	Novalja	5.89	89	*e*Pn	Pn	20 43 25.5	-2.3
NVLJ				Sn	Sn	20 44 24.9	-10
SJPF	Ste Jean	5.90	257	*e*Pn	Pn	20 43 28.0	0.0
LDF	La Druitiere	6.02	312	*e*P	Pn	20 43 32.2	+2.6
LDF	La Druitiere	6.02	312	*e*Pg	Pg	20 43 53.2	-2.4
LDF				*e*Sn	Sn	20 44 35.4	-3.3
	3.8nm,0.3s						
LDF				*e*Sg	Sg	20 45 11.8	-1.7
	5.3nm,0.4s						
DUGI	Dugi Otok	6.09	94	*e*Pn	Pn	20 43 28.0	-2.7
DUGI				Sn	Sn	20 44 30.6	-10
WET	Wettzell	6.13	42	*e*Pn	Pn	20 43 31.1	-0.1
WET				*e*Sn	Sn	20 44 37.3	-4.2
MOA	Molln	6.13	57	*i* Pn	Pn	20 43 32.9	+1.7
	0.6nm,0.2s,SNR=9.7						
MOA				*e*Sn	Sn	20 44 40.6	-0.9
	2.8nm,0.3s						
MOA	Molln	6.13	57	*e*Pn	Pn	20 43 32.7	+1.5
MOA				*e*Sn	Sn	20 44 39.1	-2.4
SOKA	Soboth	6.20	69	*e*Pn	Pn	20 43 32.9	+0.9
	0.3nm,0.2s						
SOKA				*e*Sn	Sn	20 44 43.1	0.0
	1.6nm,0.5s						
GRR	Gorron	6.31	308	*e*P	Pn	20 43 36.3	+2.8
GRR				*e*Sn	Sn	20 44 42.6	-3.1
	3.6nm,0.3s						
GRR				*e*Sg	Sg	20 45 20.1	-2.6
	6.3nm,0.4s						
OZLJ	Ozalj	6.31	79	*e*Pn	Pn	20 43 30.8	-2.8
OZLJ				Sn	Sn	20 44 34.6	-11
FLN	La Foliniere	6.31	312	*e*P	Pn	20 43 36.3	+2.7
	baz=140						
FLN	La Foliniere	6.31	312	*e*Pg	Pg	20 43 58.4	-2.7
	baz=131						
FLN				*e*Sn	Sn	20 44 42.5	-3.4
	16nm,0.4s						
FLN				*e*Sg	Sg	20 45 20.4	-2.5
	7.3nm,0.3s						
GEC2	GERESS Array S	6.35	47	*e*Pn	Pn	20 43 34.1	-0.1
GEC2				*e*Sn	Sn	20 44 41.2	-5.7
GERES	GERESS Array B	6.35	47	Pn	Pn	20 43 34.2	0.0
	3.2nm,0.3s,baz=228,slow=12,SNR=95						
GERES				Sn	Sn	20 44 42.8	-4.2
	2.3nm,0.3s,baz=240,slow=23,SNR=7.6						
PLIT	Plitvice	6.41	86	*e*Pn	Pn	20 43 33.1	-1.8
PLIT				Sn	Sn	20 44 37.5	-11
KHC	Kasperske Hory	6.47	45	*e*PN	Pn	20 43 36.5	+0.7
KHC				*e*SN	Sn	20 44 45.7	-4.0
UDBI	Udbina	6.53	89	*e*Pn	Pn	20 43 35.0	-1.6
UDBI				Sn	Sn	20 44 41.5	-10
ZIRJ	Zirje	6.58	96	*e*Pn	Pn	20 43 35.3	-2.0
ZIRJ				Sn	Sn	20 44 42.7	-10
MORI	Morici	6.58	95	*e*Pn	Pn	20 43 34.9	-2.4
MORI				Sn	Sn	20 44 42.6	-10
CKRC	Cesky Krumlov	6.66	50	*e*PN	Pn	20 43 38.4	0.0
CKRC				*e*SN	Sn	20 44 50.5	-4.0
ARSA	Arzberg	6.68	65	*e*Pn	Pn	20 43 38.8	+0.1
	1.9nm,0.5s						
ARSA				*e*Sn	Sn	20 44 57.1	+2.1
	0.8nm,0.4s						
ARSA	Arzberg	6.68	65	*e*Pn	Pn	20 43 38.7	0.0
NKC	Novy Kostel	6.75	34	*e*PN	Pn	20 43 39.2	-0.5
NKC				*e*SN	Sn	20 44 53.1	-3.6
MOX	Moxa	6.79	28	*e*Sn	Sn	20 44 56.9	-0.7
MOX				*e*Sg	Sg	20 45 40.1	+2.1
KIJV	Kijevo	7.05	93	*e*Pn	Pn	20 43 40.9	-2.9
KIJV				Sn	Sn	20 44 53.9	-10
CONA	Conrad Observa	7.14	60	*e*Pn	Pn	20 43 46.2	+1.2
	0.7nm,0.2s						
CONA				*e*Sn	Sn	20 45 08.0	+1.7
	1.1nm,0.2s						
MOSL	Moslavina	7.21	80	*e*Pn	Pn	20 43 42.9	-3.1
MOSL				Sn	Sn	20 44 56.1	-12
SGMF	Saint Gilles	7.24	302	*e*Pn	Pn	20 43 48.0	+1.7
SGMF				*e*Sn	Sn	20 45 04.6	-3.9
SGMF				*e*Sg	Sg	20 45 50.3	-2.1
	1.3nm,0.3s						
HVAR	Hvar	7.26	99	*e*Pn	Pn	20 43 45.9	-0.8
HVAR				Sn	Sn	20 44 60.0	-9.3
QUIF	Quistinic	7.47	298	*e*Pn	Pn	20 43 51.4	+1.9
QUIF				*e*Sn	Sn	20 45 09.5	-4.9
QUIF				*e*Sg	Sg	20 45 56.5	-3.6
	3.5nm,0.5s						
PRU	Pruhonice	7.50	43	*e*PN	Pn	20 43 50.4	+0.5
PRU				*e*SN	Sn	20 45 10.7	-4.4
MAKA	Makarska	7.64	97	*e*Pn	Pn	20 43 49.5	-2.2
MAKA				Sn	Sn	20 45 09.5	-9.0
RICI	Ricice	7.67	96	*e*Pn	Pn	20 43 50.8	-1.5
RICI				Sn	Sn	20 45 09.2	-10
LSTV	Lastovo	7.70	101	*e*Pn	Pn	20 43 51.6	-1.0
LSTV				Sn	Sn	20 45 10.8	-9.1
ROSF	Rostrenen	7.70	301	*e*Pn	Pn	20 43 53.5	+0.8
ROSF				*e*Sn	Sn	20 45 15.1	-5.0
ROSF				*e*Sg	Sg	20 46 04.1	-3.3
	1.5nm,0.3s						
KRUC	Moravsky	7.96	54	*e*PN	Pn	20 43 54.9	-1.3
KRUC				*e*SN	Sn	20 45 19.7	-6.6
MODS	Modra-Piesok	8.19	60	*e*PN	Pn	20 44 01.7	+2.4
VRAC	Vranov	8.19	53	Pn	Pn	20 44 00.1	+0.7
	0.7nm,0.3s,baz=238,slow=12,SNR=8.7						
VRAC				Sn	Sn	20 45 28.0	-4.1
	0.2nm,0.3s,baz=150,slow=20,SNR=3.0						
VRAC	Vranov	8.19	53	*e*PN	Pn	20 43 59.8	+0.4
VRAC				*e*SN	Sn	20 45 26.8	-5.3
STON	Ston	8.23	99	*e*Pn	Pn	20 43 58.3	-1.6
STON				Sn	Sn	20 45 23.1	-10
UPC	Upice	8.56	44	*e*PN	Pn	20 44 05.2	+0.8
UPC				*e*SN	Sn	20 45 36.7	-4.4
DPC	Dobruska-Polom	8.62	46	*e*PN	Pn	20 44 04.7	-0.6
CHVC	Chvalec	8.63	44	*e*PN	Pn	20 44 05.2	-0.2
KRLC	Kraliky	8.70	49	*e*PN	Pn	20 44 06.5	+0.1
VYHS	Vyhne	9.20	62	*e*PN	Pn	20 44 16.7	+3.5
KEST	Kesra	9.25	166	Pn	Pn	20 44 17.8	+3.8
	0.1nm,0.3s,baz=35,slow=19,SNR=1.6						
ESDC	Sonseca Array	9.35	241	Pn	Pn	20 44 17.8	+2.5
	0.1nm,0.3s,baz=53,slow=14,SNR=8.1						
EKA	Eskdalemuir Ar	12.30	333	Pn	Pn	20 44 57.5	+2.0
	baz=138,slow=14,SNR=29						
EKA				Sn	Sn	20 47 08.6	-4.1
	baz=142,slow=24,SNR=1.4						
MDT	Midelt	14.77	220	LR	LR	20 51 18.4	
	comp=Z,72nm,19.1s,baz=325,slow=37						
MKAR	Makanchi Array	50.88	59	P	P	20 51 00.9	-0.5
	0.2nm,0.6s,baz=299,slow=7.2,SNR=4.8						

GUC 31 21:01:01.3±0.7,24°.87S×70°.25W,h46^{km}±4^{km},ML3.5,2C,
Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB14	IPOC Station P	0.28	329⇑	*i*P	Pn	21 01 10.3	+0.1
PB14				*e*S	Sn	21 01 17.7	+1.2
PB14				IAML		21 01 18.5	
	comp=E,4µm,0.0s						
PB10	IPOC Station P	1.38	348	*i* P	Pn	21 01 24.7	+0.6
PB10				*e*S	Sn	21 01 43.2	+2.1
PB15	IPOC Station P	1.80	23	*e*P	Pn	21 01 35.0	+4.9
PB05	IPOC Station P	2.01	1	*e*P	Pn	21 01 34.2	+1.3
AC02	Maricunga	2.20	153⇑	*i*P	Pn	21 01 37.7	+1.9
AC02				*e*S	Sn	21 02 05.0	+2.8
AC02				IAML		21 02 08.9	
	comp=E,603nm,0.2s						
PB06	IPOC Station P	2.24	16	*e*P	Pn	21 01 39.8	+3.7
PB06				IAML		21 02 18.7	
	comp=E,218nm,0.3s						
PB04	IPOC Station P	2.52	2	*e*P	Pn	21 01 40.9	+0.9
PB04				IAML		21 02 26.7	
	comp=N,180nm,0.2s						
LVC	Limon Verde	2.56	29	*e*P	Pn	21 01 47.8	+7.1
LVC				*e*S	Sn	21 02 21.9	+11
GO03	Copiap	2.71	180	*e*P	Pn	21 01 39.2	-3.3
GO03				IAML		21 02 20.4	
	comp=E,150nm,0.3s						
PB03	IPOC Station P	2.84	9	*e*P	Pn	21 01 46.3	+1.9
PB03				IAML		21 02 32.8	
	comp=E,101nm,0.3s						
PB07	IPOC Station P	3.14	6	*e*P	Pn	21 01 50.3	+1.8
PB07				IAML		21 02 54.1	
	comp=E,158nm,0.8s						
PB09	IPOC Station P	3.19	17	*e*P	Pn	21 01 53.6	+4.4
PB09				IAML		21 02 56.1	
	comp=E,103nm,0.5s						
PB02	IPOC Station P	3.55	5	*e*P	Pn	21 01 55.1	+1.1
PB02				IAML		21 02 57.7	
	comp=E,173nm,0.8s						
PB01	IPOC Station P	3.87	11	*e*P	Pn	21 02 00.3	+1.8
LCO	Las Campanas	4.15	186	*e*P	Pn	21 01 57.2	-5.2

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*IDC **31** 21:06:58.2±2.2, 13°.88N×122°.78E, h0^{km}, mb3.2/4, mb1 3.5/4, mb1mx3.3/33, mbtmp3.3/4, MS2.6/1, Ms1 2.6/1, ms1mx2.2/33, Error ellipse: s-maj=87.8km s-min=23.5km az=52.0*

*MAN **31** 21:06:58.7, 14°.62N×123°.18E, h17^{km}, mb4.6, ML3.5, MS3.3*

ISC 31 21:06:59.0±1.1,14°.57N±0°.06×123°.20E±0°.06,h29^{km},n22,
σ1^{s}.24/17,mb3.4/4,11D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCSP	San Jose Seism	0.96	161⇓	*e*P	Pb	21 07 17.8	+0.7
GQP	Guinayangan	0.98	228⇓	*e*P	Pn	21 07 16.5	-0.4
GQP				*e*S	Sn	21 07 29.8	0.0
BOAC	Boac	1.72	230⇓	*e*P	Pb	21 07 28.3	-1.6
QVP	Quezon City--P	2.13	272⇓	*e*P	Pn	21 07 34.1	+1.4
TGY	Tagaytay City	2.24	258⇓	*e*P	Pb	21 07 38.0	-0.9
TGY				*e*S	Sb	21 08 09.2	+2.9
PCPH	Palayan	2.26	296⇓	*e*P	Pn	21 07 34.2	-0.3
PCPH				*e*S	Sn	21 08 01.4	-0.1
MACP	Maragondon, Ca	2.42	263⇓	*e*P	Pn	21 07 38.1	+1.4
CAUP	Cauayan	2.71	331⇓	*e*P	Pn	21 07 41.1	+0.4

SMPP	**San Manuel, Pa**	**2.90**	**303**⇓	*e*P	**Pn**	**21 07 43.0**	**-0.3**
SCZP	**Santa Cruz**	**3.40**	**291**⇓	*e*P	**Pn**	**21 07 49.6**	**-0.5**
SGCP	**Mt. Cagua**	**3.82**	**343**⇓	*e*P	**Pn**	**21 07 56.6**	**+0.7**
DAV	**Davao City (W)**	**7.81**	**162**	LR	LR	21 11 55.1	
	comp=Z,51nm,20.3s,baz=338,slow=41						
CMAR	**Chiang Mai Arr**	**23.57**	**283**	P	**P**	**21 12 08.1**	**+0.6**
	0.3nm,0.5s,baz=101,slow=8.9,SNR=5.7						
WRA	**Warramunga Arr**	**36.00**	**162**	P	**P**	**21 13 55.8**	**-1.9**
	0.2nm,0.3s,baz=345,slow=9.2,SNR=6.9						
ASAR	**Alice Springs**	**39.41**	**164**	P	**P**	**21 14 26.1**	**-0.4**
	0.3nm,0.4s,baz=342,slow=7.1,SNR=13						
H11S3	**WAKE ISLAND Hy**	**41.80**	**78**	T	T	21 58 57.9	
	baz=272,slow=75						
H11S1	**WAKE ISLAND Hy**	**41.81**	**78**	T	T	21 58 54.6	
	baz=272,slow=75						
H11S2	**WAKE ISLAND Hy**	**41.82**	**78**	T	T	21 58 56.3	
	baz=272,slow=75						
H11N1	**WAKE ISLAND Hy**	**41.98**	**77**	T	T	21 59 10.0	
	baz=266						
H11N2	**WAKE ISLAND Hy**	**41.98**	**77**	T	T	21 59 11.8	
	baz=266						
H11N3	**WAKE ISLAND Hy**	**41.99**	**77**	T	T	21 59 12.5	
	baz=266						
MKAR	**Makanchi Array**	**46.82**	**322**	P	P	21 15 32.2	+5.9
	0.3nm,0.8s,baz=111,slow=8.2,SNR=2.0						

IDC 31 21:18:55.9±4.9**, 30°.89N**×**141°.20E, h0**^{km}**, mb3.6**/5**, mb1 3.7**/6**, mb1mx3.1**/54**, mbtmp3.5**/6**, ML2.6**/1**, Error ellipse: s-maj=193.9km s-min=20.5km az=71.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.17**	**337**	Pn	Pn	21 20 28.0	-0.3
	0.2nm,0.3s,baz=160,slow=11,SNR=9.8						
SONM	**Songino Array**	**31.45**	**313**	P	P	21 25 19.6	+0.4
	0.8nm,0.9s,baz=108,slow=8.2,SNR=5.3						
ZALV	**Zalesovo Beam**	**46.10**	**317**	P	P	21 27 21.3	-0.3
	0.7nm,0.8s,baz=101,slow=7.5,SNR=3.6						
MKAR	**Makanchi Array**	**47.46**	**307**	P	P	21 27 32.1	-0.3
	0.8nm,0.9s,baz=89,slow=9.5,SNR=7.5						
WRA	**Warramunga Arr**	**50.97**	**188**	P	P	21 27 59.3	-0.1
	0.3nm,0.4s,baz=6.4,slow=7.8,SNR=17						
ASAR	**Alice Springs**	**54.69**	**188**	P	P	21 28 26.9	-0.1
	0.2nm,0.3s,baz=5.4,slow=4.9,SNR=7.6						

IDC ***31*** *21:21:55.4±0.8, 51°.71N×175°.48W, h0^{km}, mb3.9/15, mb1 4.1/17, mb1mx3.7/66, mbtmp3.9/17, ML3.7/2, MS3.3/4, Ms1 3.3/4, ms1mx2.8/98, Error ellipse: s-maj=28.9km s-min=12.7km az=166.0*

AEIC ***31*** *21:22:00.6±2.1, 51°.58N±0°.09×175°.34W±0°.07, h36^{km}±7^{km}, Error ellipse: s-maj=13.0km s-min=5.0km az=161.0*

NEIC ***31*** *21:22:01.9±2.0, 51°.69N±0°.09×175°.38W±0°.08, h35^{km}±2^{km}, mb4.1/39, ML3.9/22(AEIC), Error ellipse: s-maj=15.9km s-min=7.2km az=164.0*

ISC 31 21:22:02.1±0.7**, 51°.67N**±0°.10×**175°.40W**±0°.04**, h47**^{km}**, n111, σ1**^{s}**23**/101**, mb4.1**/20**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSIG	**Igitkin Island**	**0.45**	**314**		**Pn**	**21 22 12.4**	**-0.2**
GSMY	**Great Sitkin M**	**0.55**	**312**		**Pn**	**21 22 13.8**	**0.0**
GSCK	**Great Sitkin C**	**0.58**	**306**		**Pn**	**21 22 14.1**	**-0.2**
GSTD	**Great Sitkin T**	**0.60**	**310**		**Pn**	**21 22 14.5**	**0.0**
GSTD					**Sn**	**21 22 23.5**	**+0.1**
ETKA	**Kagalaska Isla**	**0.65**	**287**		**Pn**	**21 22 14.5**	**-0.7**
ATKA	**Atka Island**	**0.91**	**54**	Pn	**Pn**	**21 22 17.2**	**-1.4**
ATKA	**Atka Island**	**0.91**	**54**		**Sn**	**21 22 29.2**	**-1.5**
KOKL	**Mount Kliuchef**	**0.99**	**48**		**Pn**	**21 22 19.1**	**-0.5**
KOFP	**Korovin Flat P**	**1.01**	**53**		**Pn**	**21 22 19.2**	**-0.7**
KIWB	**Kanaga Island**	**1.10**	**280**		**Pn**	**21 22 20.6**	**-0.5**
KIKV	**Kanaga Island**	**1.12**	**281**		**Pn**	**21 22 21.1**	**-0.3**
KICM	**Kanaga Island**	**1.14**	**283**		**Pn**	**21 22 21.4**	**-0.3**
KIMD	**Kanaga Island**	**1.15**	**275**		**Pn**	**21 22 21.1**	**-0.6**
KIMD					**Sn**	**21 22 35.8**	**-0.4**
TAFP	**Tanaga Falls P**	**1.62**	**279**		**Pn**	**21 22 28.5**	**+0.2**
TAFP					**Sn**	**21 22 49.6**	**+1.6**
TASE	**Tanaga Southea**	**1.65**	**277**		**Pn**	**21 22 28.9**	**+0.3**
GAEA	**Gareloi East**	**2.08**	**274**		**Pn**	**21 22 35.4**	**+0.9**
GALAA	**Gareloi Lava P**	**2.10**	**274**		**Pn**	**21 22 35.8**	**+1.0**
NIKH	**Nikolski High**	**4.22**	**69**	Pn	**Pn**	**21 23 03.3**	**-0.6**
MAPS	**Pakushin South**	**5.56**	**64**		**Pn**	**21 23 24.0**	**+1.7**
UNV	**Unalaska Valle**	**5.82**	**65**		**Pn**	**21 23 28.3**	**+2.6**
SPIA	**Saint Paul Isl**	**6.28**	**27**	Pn	**Pn**	**21 23 33.8**	**+1.8**
AKUT	**Akutan**	**6.33**	**63**	Pn	**Pn**	**21 23 36.1**	**+3.4**
SHEM	**Shemya Is, Ala**	**6.54**	**283**	LR	LR	21 25 57.4	
	comp=Z,190nm,20.9s,baz=99,slow=37						
FALS	**False Pass**	**7.86**	**61**	Pn	**Pn**	**21 23 54.2**	**+0.5**
SDPT	**Sand Point**	**9.62**	**62**	Pn	**Pn**	**21 24 19.0**	**+1.2**
CNBA	**Chernabura Isl**	**9.98**	**65**	Pn	**Pn**	**21 24 21.3**	**-1.5**
CHGN	**Chignik**	**11.01**	**58**	Pn	**Pn**	**21 24 37.3**	**+0.5**
GAMB	**Gambell**	**12.29**	**8**	Pn	**Pn**	**21 24 55.3**	**+1.1**
P18K	**Big Mountain,**	**13.75**	**48**	Pn	**Pn**	**21 25 14.7**	**+0.6**
ANM	**Nome**	**13.94**	**18**	P	**P**	**21 25 21.2**	**-2.5**
O18K	**Koktuh Hills**	**13.96**	**46**		**Pn**	**21 25 19.6**	**+2.5**
Q19K	**Cape Douglas,**	**14.31**	**51**	Pn	**Pn**	**21 25 23.0**	**+1.2**
TNA	**Tin City**	**14.44**	**13**	P	**P**	**21 25 27.4**	**-1.8**
KDAK	**Kodiak Island**	**14.49**	**56**	Pn	**Pn**	**21 25 20.8**	**-3.3**
	0.3nm,0.3s,baz=250,slow=2.3,SNR=13						
KDAK	**Kodiak Island**	**14.49**	**56**		**Pn**	**21 25 22.0**	**-2.0**
N19K	**Bonanza Creek**	**14.73**	**43**		**P**	**21 25 31.2**	**-1.3**
L19K	**White Mountain**	**15.30**	**39**		**P**	**21 25 39.0**	**+0.3**
L19K				IAmb	IAmb	21 25 41.5	
	comp=Z,18nm,1.3s						
TTA	**Tatalina**	**15.31**	**35**	Pn	**Pn**	**21 25 34.6**	**-0.3**
CNPM	**China Poot**	**15.68**	**51**	Pn	**Pn**	**21 25 40.0**	**+0.3**
CNPM				IAmb	IAmb	21 25 42.5	
	comp=Z,28nm,1.3s						
BRLK	**Bradley Lake**	**15.93**	**50**	Pn	**Pn**	**21 25 42.9**	**0.0**
BRLK				IAmb	IAmb	21 26 01.8	
	comp=Z,31nm,1.2s						
K20K	**Telida**	**16.27**	**36**		**P**	**21 25 50.8**	**+1.3**
PEA0B	**Petropavlovsk-**	**16.45**	**286**	Pn	**Pn**	**21 25 48.4**	**-1.1**
PEA0B				IAmb	IAmb	21 25 54.1	
	comp=Z,34nm,1.4s						
PETK	**Petropavlovsk-**	**16.45**	**286**	LR	LR	21 31 33.3	
	comp=Z,74nm,21.3s,baz=71,slow=35						
SEW	**Seward**	**16.73**	**50**	Pn	**Pn**	**21 25 51.3**	**-1.5**
CAST	**Castle Rocks**	**17.05**	**37**	Pn	**Pn**	**21 25 56.6**	**-0.2**
CAST				IAmb	IAmb	21 26 03.1	
	comp=Z,15nm,1.3s						
PWL	**Port Wells**	**17.50**	**48**	Pn	**Pn**	**21 26 01.3**	**-1.1**
KTH	**Kantishna Hill**	**17.56**	**38**		**Pn**	**21 26 03.4**	**+0.2**
KTH				IAmb	IAmb	21 26 08.8	
	comp=Z,30nm,1.2s						
GHO	**Glory Hole Cre**	**17.57**	**45**		**P**	**21 26 03.7**	**-0.1**
GHO				IAmb	IAmb	21 26 09.6	
	comp=Z,36nm,1.4s						
BPAW	**Bear Paw Mtn.**	**17.83**	**36**		**P**	**21 26 08.3**	**+1.7**
BPAW				IAmb	IAmb	21 26 14.5	
	comp=Z,18nm,1.4s						
IMAR	**Indian Mountai**	**18.05**	**29**		**Pn**	**21 26 10.3**	**+1.3**
H21K	**Melozitna Rive**	**18.13**	**31**	P	**Pn**	**21 26 12.1**	**+2.0**
H21K				IAmb	IAmb	21 26 21.8	
	comp=Z,14nm,1.4s						
SCM	**Sheep Creek Mo**	**18.29**	**45**	P	**Pn**	**21 26 13.1**	**+0.9**
RND	**Reindeer**	**18.30**	**40**	P	**P**	**21 26 12.0**	**+0.1**
MCK	**McKinley**	**18.42**	**39**	P	**P**	**21 26 12.9**	**-0.2**
MCK				IAmb	IAmb	21 26 22.9	
	comp=Z,12nm,1.2s						
BILL	**Bilibino**	**18.68**	**338**		**P**	**21 26 16.0**	**+0.1**
KLU	**Klutina**	**18.81**	**47**	P	**P**	**21 26 16.9**	**-0.7**
I23K	**Minto, Yukon-K**	**18.99**	**35**	P	**Pn**	**21 26 21.0**	**+0.6**
WRH	**Wood River Hil**	**19.10**	**37**	P	**Pn**	**21 26 21.7**	**-0.1**
MDM	**Murphy Dome**	**19.29**	**36**	P	**P**	**21 26 22.9**	**+0.2**
CCB	**Clear Creek Bu**	**19.30**	**37**	P	**Pn**	**21 26 24.0**	**-0.1**
CCB				IAmb	IAmb	21 26 41.3	
	comp=Z,12nm,1.3s						
N25K	**Chitina, Valde**	**19.45**	**47**	P	**P**	**21 26 23.6**	**-0.9**
IL31		**19.70**	**37**	P	**P**	**21 26 27.9**	**+0.8**
IL31				IAmb	IAmb	21 26 36.2	
	comp=Z,10nm,1.3s						
ILAR	**Eielson Array**	**19.70**	**37**	P	**P**	**21 26 25.4**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=237,slow=9.6,SNR=15						
ILAR	**Eielson Array**	**19.70**	**37**	P	**P**	**21 26 27.2**	**0.0**
H24K	**Noodor Dome**	**19.88**	**34**	P	**Pn**	**21 26 30.4**	**-0.7**
H24K				IAmb	IAmb	21 26 47.9	
	comp=Z,21nm,1.4s						
COLD	**Coldfoot**	**19.93**	**29**		**Pn**	**21 26 32.2**	**+0.5**
COLD				IAmb	IAmb	21 26 37.8	
	comp=Z,9.9nm,1.0s						
SEY	**Seymchan**	**20.48**	**316**	P	**P**	**21 26 35.5**	**-0.1**
	comp=Z,2.8nm,1.0s,baz=117,slow=11,SNR=5.2						
SCRK	**Sand Creek**	**20.50**	**41**	P	**P**	**21 26 35.5**	**-0.5**
CTGM	**Chitina Glacie**	**20.82**	**50**	P	**P**	**21 26 40.6**	**+1.1**
M27K	**Edge Creek, AK**	**20.89**	**46**	P	**P**	**21 26 40.2**	**0.0**
M27K				IAmb	IAmb	21 26 55.4	
	comp=Z,11nm,1.4s						
LOGN	**Logan Glacier**	**20.95**	**51**	P	**P**	**21 26 41.1**	**+0.2**
TOLK	**Toolik Lake Re**	**21.03**	**26**	P	**P**	**21 26 43.0**	**+1.4**
TOLK				IAmb	IAmb	21 26 54.2	
	comp=Z,10nm,1.1s						
L27K	**Beaver Creek,**	**21.11**	**44**	P	**P**	**21 26 43.8**	**+1.4**
L27K				IAmb	IAmb	21 26 59.6	
	comp=Z,11nm,1.4s						
BCAR	**Beaver Creek A**	**21.13**	**44**	P	**P**	**21 26 42.8**	**+0.2**
BMAR	**Burnt Mountain**	**21.84**	**32**	P	**P**	**21 26 51.0**	**+0.8**
INK	**Inuvik**	**26.00**	**34**	P	**P**	**21 27 30.7**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=260,slow=6.7,SNR=4.4						
INK	**Inuvik**	**26.00**	**34**	IAmb	IAmb	21 27 40.6	
	comp=Z,9.3nm,1.5s						
A36M	**Sachs Harbour**	**29.80**	**29**	P	**P**	**21 28 04.5**	**+0.5**
YAK	**Yakutsk**	**30.82**	**311**	LR	LR	21 39 57.0	
	comp=Z,73nm,20.7s,baz=78,slow=35						
KLR	**Kul'dur**	**33.13**	**287**	P	**P**	**21 28 33.1**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=62,slow=8.2,SNR=9.5						
KLR				LR	LR	21 41 56.0	
	comp=Z,62nm,19.4s,baz=6.0,slow=36						
YKA	**Yellowknife Ar**	**33.48**	**47**	P	**P**	**21 28 36.3**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=279,slow=8.6,SNR=6.0						
YKA				PcP	**PcP**	**21 31 15.4**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=281,slow=3.3,SNR=5.7						
H11N2	**WAKE ISLAND Hy**	**34.77**	**210**	T	T	22 05 33.0	
	baz=19,slow=76,SNR=53						
H11N3	**WAKE ISLAND Hy**	**34.78**	**210**	T	T	22 05 53.0	
	baz=19,slow=76,SNR=42						
H11N1	**WAKE ISLAND Hy**	**34.79**	**210**	T	T	22 05 58.3	
	baz=19,slow=76,SNR=44						
USRK	**Ussuriysk Ar.**	**35.36**	**279**	P	**P**	**21 28 51.3**	**-1.5**
	comp=Z,3.3nm,0.8s,baz=67,slow=11,SNR=3.5						
H11S1	**WAKE ISLAND Hy**	**35.98**	**210**	T	T	22 08 10.9	
	baz=19,slow=74						
H11S2	**WAKE ISLAND Hy**	**36.00**	**210**	T	T	22 07 29.8	
	baz=19						
H11S3	**WAKE ISLAND Hy**	**36.00**	**210**	T	T	22 07 37.0	
	baz=19,slow=74						
NEW	**Newport**	**36.78**	**72**	P	**P**	**21 29 05.0**	**0.0**
	comp=Z,1.7nm,0.6s,baz=282,slow=9.3,SNR=4.1						
NEW	**Newport**	**36.78**	**72**	IAmb	IAmb	21 29 17.1	
	comp=Z,6.0nm,1.3s						
BOZ	**Bozeman (W)**	**41.37**	**72**	P	**P**	**21 29 43.5**	**-0.1**
KSRS	**Korea Array**	**41.75**	**273**	P	**P**	**21 29 47.8**	**+1.3**
	comp=Z,1.9nm,0.9s,baz=48,slow=6.7,SNR=5.6						
ELK	**Elko**	**41.91**	**81**	P	**P**	**21 29 49.5**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=305,slow=11,SNR=4.5						
YHL	**Hebgen Lake**	**42.04**	**73**	P	**P**	**21 29 49.7**	**+0.5**
LKWY	**Lake**	**42.67**	**73**	P	**P**	**21 29 55.5**	**+1.3**
LKWY				IAmb	IAmb	21 30 03.5	
	comp=Z,3.4nm,0.9s						
R11A	**Troy Canyon, C**	**43.14**	**84**	P	**P**	**21 29 58.2**	**+0.2**
R11A				IAmb	IAmb	21 30 00.5	
	comp=Z,4.1nm,0.7s						
PDAR	**Pinedale Array**	**44.19**	**75**	P	**P**	**21 30 07.0**	**+0.5**
	comp=Z,2.8nm,0.7s,baz=311,slow=4.0,SNR=23						
SONM	**Songino Array**	**48.40**	**298**	P	**P**	**21 30 36.7**	**-2.5**
	comp=Z,0.8nm,1.1s,baz=64,slow=3.4,SNR=2.9						
SONM				PcP	**PcP**	**21 32 04.1**	**-0.9**
	comp=Z,1.2nm,0.9s,baz=71,slow=2.8,SNR=6.6						
HHC	**Hu-ho-hao-te**	**49.64**	**288**	*e*P	**P**	**21 30 52.0**	**+3.2**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,8.0s						
FRB	**Frobisher Bay**	**51.65**	**33**	P	**P**	**21 31 02.3**	**-1.2**
	comp=Z,1.1nm,0.3s,baz=330,slow=8.7,SNR=6.0						
XAN	**Xi'an**	**55.68**	**283**	P	P	21 31 45.0	+12
XAN				pP	sP	21 31 53.5	+1.7
XAN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
WMQ	**Urumqi**	**60.94**	**305**	*e*P	**P**	**21 32 13.3**	**+3.2**
MKAR	**Makanchi Array**	**61.49**	**310**	P	**P**	**21 32 12.2**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=50,slow=6.6,SNR=5.9						
L56A	**Greenwood**	**62.62**	**56**	P	**P**	**21 32 21.9**	**+0.6**
CMAR	**Chiang Mai Arr**	**73.08**	**278**	P	**P**	**21 33 28.1**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=23,slow=7.2,SNR=10.0						
WRA	**Warramunga Arr**	**83.73**	**227**	P	**P**	**21 34 24.5**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=36,slow=5.9,SNR=3.2						
ASAR	**Alice Springs**	**87.17**	**225**	P	**P**	**21 34 43.0**	**0.0**
	comp=Z,1.5nm,0.8s,baz=21,slow=4.6,SNR=11						
H03N2	**Juan Fernandez**	**119.20**	**108**	T	T	23 51 25.0	
	baz=317,slow=77,SNR=26						
H03N1	**Juan Fernandez**	**119.21**	**108**	T	T	23 51 26.4	
	baz=317,slow=77,SNR=34						
H03N3	**Juan Fernandez**	**119.21**	**108**	T	T	23 51 25.6	
	baz=317,slow=77,SNR=28						
BOSA	**Boshof**	**152.26**	**318**	PKPbc	**PKPbc**	**21 41 52.0**	**-0.4**
	comp=Z,3.5nm,0.8s,baz=332,slow=4.2,SNR=5.2						

TIR ***31*** *21:23:14.7, 41°.10N×20°.19E, h20^{km}±1^{km}, Md2.7, Ml1.9*

SKO ***31*** *21:23:15.7, 41°.40N×20°.32E, h10^{km}*

ISC 31 21:23:14.4±1.5**, 41°.19N**±0°.05×**20°.21E**±0°.04**, h11**^{km}±13^{km}**, n11, σ1**^{s}**39**/21**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.30**	**302**	*e*Pg	**Pb**	**21 23 22.1**	**+0.3**
TIR	**Tirane**	**0.30**	**302**	P	**Pb**	**21 23 22.4**	**+0.6**
	baz=316						
TIR				S	**Sb**	**21 23 28.2**	**+1.4**
	baz=316						
TIR				AMP			
	comp=N,0.3nm,0.4s,baz=316						
OHR	**Ohrid**	**0.45**	**99**	*e*Pg	**Pb**	**21 23 24.5**	**+0.1**
OHR				*i* Sg	**Sb**	**21 23 32.1**	**+1.0**
OHR				*e*Lg	Lg	21 23 32.2	
	comp=N,56nm,0.3s						
OHR				*e*Lg	Lg	21 23 32.3	
	comp=E,48nm,0.5s						
PHP	**Peshkopia**	**0.53**	**19**	P	**Pn**	**21 23 27.2**	**-0.7**
	baz=18						
PHP				S	**Sn**	**21 23 36.5**	**-0.4**
	baz=18						
PHP				AMP			
	comp=N,0.3nm,0.4s,baz=18						
KBN	**Korca**	**0.71**	**142**	P	**Pg**	**21 23 27.7**	**-0.5**
	baz=135						
KBN				S	**Sg**	**21 23 37.9**	**+0.4**
	baz=135						
KBN				AMP			
	comp=N,0.3nm,0.4s,baz=135						
FNA	**Florina**	**0.97**	**114**	*e*Pg	**Pb**	**21 23 33.8**	**+0.6**
FNA				*i* Sg	**Sn**	**21 23 48.0**	**+0.3**
FNA	**Florina**	**0.97**	**114**	P	**Pb**	**21 23 33.1**	**-0.1**
	baz=108						
FNA				S	**Sn**	**21 23 47.4**	**-0.3**
	baz=108						
LSK	**Leskovik**	**1.08**	**164**	P	**Pb**	**21 23 34.0**	**-1.1**
	baz=161						
LSK				S	**Sb**	**21 23 49.0**	**-0.1**
	baz=161						
STON	**Ston**	**2.52**	**313**	*e*Pn	**Pn**	**21 23 57.3**	**+2.2**
STON				Sn	**Sb**	**21 24 30.2**	**-0.2**
LSTV	**Lastovo**	**2.94**	**304**	*e*Pn	**Pn**	**21 24 00.6**	**-0.3**
LSTV				Sn	**Sn**	**21 24 35.1**	**-0.9**
RICI	**Ricice**	**3.24**	**316**	*e*Pn	**Pn**	**21 24 07.2**	**+2.0**
RICI				Sn	**Sb**	**21 24 47.3**	**-4.1**

IDC ***31*** *21:29:10.1±0.7, 50°.30S×114°.23E, h0^{km}, mb4.7/11, mb1 4.8/11, mb1mx4.5/33, mbtmp4.7/11, MS4.3/5, Ms1 4.3/5, ms1mx3.6/43, Error ellipse: s-maj=32.2km s-min=13.9km az=106.0*

NEIC ***31*** *21:29:11.5±1.8, 50°.38S±0°.09×114°.4E±0°.2, h10^{km}±1^{km}, mb4.9/21, Error ellipse: s-maj=24.0km s-min=15.5km az=278.0*

GCMT ***31*** *21:29:13.5±0.3, 50°.13S±0°.02×113°.91E±0°.04, h13^{km}±2^{km}, MW5.0/72, Moment Tensor Solution. s20,c25; s72,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.32±.15; M$_{\theta\theta}$2.84±.20; M$_{\phi\phi}$-2.52±.22; M$_{r\theta}$0.70±.37; M$_{\theta\phi}$1.81±.12; M$_{\phi r}$-1.25±.48; Best double couple: M$_0$3.54300×10^{16} NP1:φ$_s$30.00000°, δ70.00000°, λ-167.00000°. NP2: φ$_s$296.00000°, δ78.00000°, λ-20.00000°. Principal axes: T 3.4210, Plg5.0000°, Azm344.0000°; N 0.2390, Plg67.0000°, Azm86.0000°; P -3.6640, Plg23.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 21:29:11.2±0.5**, 50°.35S**±0°.08×**114°.4E**±0°.1**, h10**^{km}**, n52, σ0**^{s}**76**/42**, mb4.9**/21**, MS4.2**/6**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.44**	**359**	T	T	21 48 28.8	
	baz=179,slow=74,SNR=254						
H01W1	**Cape Leeuwin H**	**15.45**	**359**	T	T	21 48 24.1	
	baz=179,slow=74,SNR=311						
H01W3	**Cape Leeuwin H**	**15.46**	**359**	T	T	21 48 24.8	
	baz=179,slow=74,SNR=317						
CASY	**Casey**	**16.10**	**186**	Pn	**Pn**	**21 32 56.3**	**-0.9**
MORW	**Morawa**	**21.29**	**4**	P	**P**	**21 33 56.6**	**-1.2**
MORW				IAmb	IAmb	21 33 58.2	
	comp=Z,36nm,1.1s						
FORT	**Forrest**	**22.07**	**33**	P	**P**	**21 34 04.8**	**-1.3**
FORT				IAmb	IAmb	21 34 10.1	
	comp=Z,46nm,0.8s						
BBOO	**Buckleboo**	**23.73**	**51**	P	**P**	**21 34 23.6**	**+0.2**
BBOO				IAmb	IAmb	21 34 26.2	
	comp=Z,31nm,1.2s						
MCQ	**Macquarie Isla**	**27.14**	**116**	P	**P**	**21 34 53.5**	**-0.6**
STKA	**Stephens Creek**	**27.35**	**58**	P	**P**	**21 34 57.5**	**+1.3**
	comp=Z,6.4nm,0.8s,baz=221,slow=4.4,SNR=9.8						
MAW	**Mawson**	**30.46**	**216**	P	**P**	**21 35 24.1**	**+0.6**
	comp=Z,9.9nm,1.1s,baz=87,slow=15,SNR=4.2						
MAW				LR	LR	21 44 20.5	
	comp=Z,49nm,19.7s,baz=68,slow=30						
MAW	**Mawson**	**30.46**	**216**	P	**P**	**21 35 23.3**	**-0.2**
ASAR	**Alice Springs**	**30.67**	**37**	P	**P**	**21 35 25.8**	**-0.1**
	comp=Z,13nm,0.7s,baz=208,slow=7.8,SNR=162						
ASAR	**Alice Springs**	**30.67**	**37**	P	**P**	**21 35 25.4**	**-0.4**
AS31	**Alice Springs**	**30.67**	**37**	P	**P**	**21 35 25.5**	**-0.4**
VNDA	**Vanda**	**32.47**	**163**	P	**P**	**21 35 42.7**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=276,slow=11,SNR=11						
VNDA				LR	LR	21 48 23.7	
	comp=Z,497nm,18.1s,baz=333,slow=35						
VNDA	**Vanda**	**32.47**	**163**	P	**P**	**21 35 41.7**	**+0.6**
FITZ	**Fitzroy Crossi**	**33.42**	**20**	P	**P**	**21 35 50.6**	**+0.7**
	comp=Z,14nm,0.6s,baz=199,slow=9.5,SNR=30						
WRA	**Warramunga Arr**	**34.22**	**35**	P	**P**	**21 35 56.9**	**-0.1**
	comp=Z,19nm,0.7s,baz=204,slow=9.1,SNR=90						
WB2	**Warramunga Arr**	**34.23**	**35**	P	**P**	**21 35 56.8**	**-0.3**
WRAB	**Tennant Creek**	**34.24**	**35**	P	**P**	**21 35 57.5**	**+0.5**
WR0	**Warramunga Arr**	**34.28**	**35**	P	**P**	**21 35 57.4**	**-0.1**
WR0				IAmb	IAmb	21 35 58.3	
	comp=Z,23nm,0.8s						
WB0	**Warramunga Arr**	**34.41**	**35**	P	**P**	**21 35 58.4**	**-0.2**
WB0				IAmb	IAmb	21 35 59.3	
	comp=Z,22nm,0.8s						
KNRA	**Kununurra**	**36.49**	**24**	P	**P**	**21 36 16.4**	**0.0**
KNRA				IAmb	IAmb	21 36 33.8	
	comp=Z,29nm,1.2s						
FOZ	**Fox Glacier**	**37.69**	**102**	P	**P**	**21 36 26.1**	**-0.3**
LTZ	**Lake Taylor**	**39.62**	**102**	P	**P**	**21 36 42.6**	**-0.1**
LTZ				IAmb	IAmb	21 36 44.7	
	comp=Z,34nm,0.8s						
QSPA	**South Pole Qui**	**39.78**	**180**	P	**P**	**21 36 44.7**	**+0.8**
	comp=Z,4.2nm,0.6s,baz=318,slow=3.9						
QSPA				LR	LR	21 52 49.7	
	comp=Z,701nm,18.1s,baz=10.0,slow=36						
QSPA	**South Pole Qui**	**39.78**	**180**	IAmb	IAmb	21 36 47.5	
	comp=Z,8.2nm,0.8s						
KHZ	**Kahutara**	**40.60**	**102**	P	**P**	**21 36 51.4**	**+0.6**
KHZ				IAmb	IAmb	21 36 52.7	
	comp=Z,44nm,1.0s						
BATI	**Baumata**	**40.75**	**14**	P	**P**	**21 36 52.9**	**+0.6**
	comp=Z,16nm,0.6s,baz=179,slow=1.5,SNR=6.4						
LEM	**Lembang**	**43.75**	**350**	P	**P**	**21 37 18.2**	**+1.4**
	comp=Z,16nm,0.8s,baz=185,slow=15,SNR=3.9						
DZM	**Mont Dzumac**	**49.29**	**75**	LR	LR	21 57 11.9	
	comp=Z,198nm,18.0s,baz=256,slow=34						
SNAA	**Sanae**	**50.53**	**201**	P	**P**	**21 38 09.4**	**+0.4**
SNAA	**Sanae**	**50.53**	**201**	P	**P**	**21 38 09.1**	**0.0**
	comp=Z,15nm,0.9s,baz=146,slow=7.6,SNR=21						
SNAA	**Sanae**	**50.53**	**201**	P	**P**	**21 38 09.1**	**0.0**
SNAA				IAmb	IAmb	21 38 12.3	
	comp=Z,16nm,0.9s						
VNA2	**Neumayer--Watz**	**52.10**	**201**	P	**P**	**21 38 21.0**	**+0.2**
	baz=133,slow=6.5						
VNA3	**Neumayer Olymp**	**52.37**	**200**	P	**P**	**21 38 22.6**	**-0.3**
VNA1	**Neumayer--Stat**	**52.50**	**201**	P	**P**	**21 38 23.6**	**-0.1**
H08S2	**Diego Garcia H**	**54.95**	**306**	T	T	22 37 34.9	
	baz=148,slow=76,SNR=10						
H08S1	**Diego Carcia H**	**54.97**	**306**	T	T	22 37 35.1	
	baz=148,slow=76,SNR=10						
H08S3	**Diego Garcia H**	**54.98**	**306**	T	T	22 37 35.9	
	baz=148,slow=76,SNR=9.6						
HNR	**Honiara**	**55.42**	**59**	LR	LR	22 00 27.3	
	comp=Z,40nm,19.5s,baz=44,slow=34						
CM31	**Chiang Mai Arr**	**69.85**	**344**	P	**P**	**21 40 21.2**	**-0.7**
CM31				IAmb	IAmb	21 40 34.4	
	comp=Z,9.5nm,1.4s						
CMAR	**Chiang Mai Arr**	**69.85**	**344**	P	**P**	**21 40 21.1**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=189,slow=5.5,SNR=13						
CMAR	**Chiang Mai Arr**	**69.85**	**344**	P	**P**	**21 40 21.0**	**-0.9**
LSZ	**Lusaka**	**75.99**	**263**	P	**P**	**21 40 59.1**	**+0.4**
LSZ				IAmb	IAmb	21 41 06.9	
	comp=Z,12nm,1.4s						
COYC	**Coyhaique**	**84.30**	**175**	P	**P**	**21 41 40.5**	**-2.4**
AAK	**Ala-Archa**	**98.94**	**331**	LR	LR	22 21 51.8	
	comp=Z,487nm,21.8s,baz=186,slow=32						
KNB	**Kanab**	**143.97**	**93**		**PKPdf**	**21 48 46.0**	**-0.5**
SPR3	**Spring Creek 3**	**144.16**	**89**		**PKPdf**	**21 48 47.1**	**+0.1**
ELK	**Elko**	**144.54**	**86**		**PKPdf**	**21 48 48.3**	**+0.8**
PDAR	**Pinedale Array**	**149.22**	**87**	PKPbc	**PKPbc**	**21 49 00.0**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=222,slow=2.0,SNR=3.5						
YKA	**Yellowknife Ar**	**151.07**	**46**	PKPbc	**PKiKP**	**21 49 03.3**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=276,slow=2.1,SNR=11						

BJI ***31*** *21:29:32.8±0.0, 29°.73S×177°.23W, h4^{km}, mB5.7/24, mb5.3/43, Ms5.3/23, Ms7 4.9/21*

BGR ***31*** *21:29:32.3±0.0, 30°.86S×177°.17W, h12^{km}±1^{km}*

NOU ***31*** *21:29:33.3, 30°.75S×176°.78W, h40^{km}, mb5.6/80, Kermadec Islands Region*

MOS ***31*** *21:29:36.1±1.0, 30°.29S×178°.05W, h21^{km}, mb5.7/21, Error ellipse: s-maj=10.7km s-min=8.1km az=91.6*

NEIC ***31*** *21:29:38.9±2.1, 30°.36S±0°.05×178°.0W±0°.1, h27^{km}±3^{km}, mb5.4/226, Error ellipse: s-maj=13.5km s-min=6.9km az=100.0*

IDC ***31*** *21:29:40.1±0.9, 30°.23S×177°.92W, h44^{km}±7^{km}, mb5.0/25, mb1 5.1/27, mb1mx4.9/35, mbtmp5.2/27, ML4.3/2, MS4.4/28, Ms1 4.4/28, ms1mx4.2/55, Error ellipse: s-maj=10.3km s-min=8.3km az=78.0*

GCMT ***31*** *21:29:41.9±0.2, 30°.34S±0°.02×177°.72W±0°.01, h50^{km}±1^{km}, MW5.2/89, Moment Tensor Solution. s77,c107; s89,c130; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.58±.03; M$_{\theta\theta}$0.37±.03; M$_{\phi\phi}$-0.95±.02; M$_{r\theta}$0.08±.02; M$_{\theta\phi}$-0.16±.02; M$_{\phi r}$0.35±.02; Best double couple: M$_0$0.86000×10^{17} NP1:φ$_s$178.00000°, δ33.00000°, λ78.00000°. NP2:φ$_s$13.00000°, δ58.00000°, λ98.00000°. Principal axes: T 0.6660, Plg76.0000°, Azm307.0000°; N 0.3880, Plg7.0000°, Azm189.0000°; P -1.0540, Plg12.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 21:29:37.1±0.6**, 30°.40S**±0°.04×**177°.88W**±0°.05**, h25**^{km}±3^{km}**, h25**^{km}**:pP-P, n1070, σ1**^{s}**50**/1046**, mb5.5**/247**, MS4.6**/39**, 59C-49D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.14**	**358**	P	**Pn**	**21 29 57.5**	**-0.1**
	4µm,0.3s,baz=45,slow=13,SNR=51						
RAO				S	**Sn**	**21 30 10.4**	**-2.0**
	37µm,0.3s,baz=87,slow=24,SNR=31						
RAO	**Raoul Island**	**1.14**	**358**	P	**Pb**	**21 30 00.1**	**+1.9**
MXZ	**Matakaoa Point**	**7.81**	**203**	Pn	**Pn**	**21 31 28.7**	**-0.6**
URZ	**Urewera**	**8.87**	**207**	P	**Pn**	**21 31 41.4**	**-2.2**
	4.8nm,0.3s,baz=121,slow=24,SNR=35						
URZ				S	**Sn**	**21 33 22.7**	**-0.1**
	34nm,0.3s,baz=327,slow=21,SNR=5.8						
URZ	**Urewera**	**8.87**	**207**	Pn	**Pn**	**21 31 42.1**	**-1.6**
URZ	**Urewera**	**8.87**	**207**	P	**Pn**	**21 31 41.2**	**-2.5**
BKZ	**Black Stump Fm**	**9.89**	**206**	Pn	**Pn**	**21 31 54.9**	**-2.9**
BKZ	**Black Stump Fm**	**9.89**	**206**	P	**Pn**	**21 31 55.9**	**-1.9**

HIZ	Hauiti	10.07	215	P	Pn	21 31 59.3	-0.9
BFZ	Birch Farm	11.32	203		Pn	21 32 18.2	+0.9
BFZ	Birch Farm	11.32	203	P	Pn	21 32 12.9	-4.3
MSWZ	Moikau Station	12.32	205		Pn	21 32 29.7	-1.3
NFK	Norfolk Island	12.40	273	P	P	21 32 40.5	-3.4
	baz=12						
SNZO	South Karori	12.43	207		Pn	21 32 32.3	-0.2
PLWZ	Palliser	12.45	205	Pn	Pn	21 32 31.5	-1.3
BHW	Baring Head	12.45	206		Pn	21 32 33.5	+0.8
TUWZ	Tuamarina	12.84	209		Pn	21 32 36.2	-1.9
QRZ	Quartz Range	12.99	214	P	Pn	21 32 38.7	-1.5
CMWZ	Cape Campbell	13.00	207	Pn	Pn	21 32 42.8	+2.6
BSWZ	Blackbirch Sta	13.11	208	Pn	Pn	21 32 39.6	-2.1
MSVF	Nonsavu	13.14	343	P	Pn	21 32 45.3	+2.9
	2.0nm,0.3s,baz=160,slow=15,SNR=7.9						
MSVF				LR	LR	21 37 02.5	
	comp=Z,2µm,19.6s,baz=176,slow=34						
MSVF	Nonsavu	13.14	343⇑	*e*P	Pn	21 32 41.2	-1.2
MSVF				pmax	pmax		
	comp=Z,146nm,2.1s						
MSVF	Nonsavu	13.14	343		Pn	21 32 41.0	-1.4
MSVF	Nonsavu	13.14	343	P	Pn	21 32 46.6	+4.2
THZ	Tophouse	13.56	211	Pn	Pn	21 32 47.7	-0.2
KHZ	Kahutara	13.83	208	Pn	Pn	21 32 45.7	-5.8
KHZ	Kahutara	13.83	208	P	Pn	21 32 48.6	-2.9
LTZ	Lake Taylor	14.66	210	Pn	Pn	21 33 01.7	-1.3
OXZ	Oxford	15.20	209		Pn	21 33 09.2	-0.9
OXZ				IAmb	IAmb	21 33 18.8	
	comp=Z,100nm,0.5s						
PINNC	Pines Island,	15.25	297	P	P	21 33 15.2	-0.3
PINNC				IAmb	IAmb	21 33 21.8	
	comp=Z,332nm,1.2s						
PINNC	Pines Island,	15.25	297	P	P	21 33 20.8	+5.3
MQZ	McQueen's Vall	15.27	207	P	Pn	21 33 06.5	-4.5
OUENC	Ouen Island, N	15.82	297		P	21 33 24.0	+2.1
OUENC				IAmb	IAmb	21 33 36.5	
	comp=Z,275nm,0.8s						
OUENC	Ouen Island, N	15.82	297	P	P	21 33 27.4	+5.5
RPZ	Rata Peaks	15.94	210	P	Pn	21 33 18.7	-1.0
RPZ	Rata Peaks	15.94	210	P	Pn	21 33 16.8	-2.9
YATNC	Mamie plateau,	15.98	298	P	P	21 33 26.4	+2.7
ONTNC	Ouen Toro	16.18	296	P	Pn	21 33 23.9	+1.0
ONTNC	Ouen Toro	16.18	296	P	P	21 33 30.4	+4.5
DZM	Mont Dzumac	16.32	297	*e*Pn	P	21 33 29.3	+1.7
	comp=Z,410nm,0.8s						
DZM				*e*LR	LR	21 37 12.7	
	comp=Z,5µm,25.3s						
DZM	Mont Dzumac	16.32	297	P	P	21 33 29.7	+2.1
	comp=Z,1.5nm,0.3s,baz=92,slow=16,SNR=22						
DZM				LR	LR	21 38 32.2	
	comp=Z,3µm,18.6s,baz=106,slow=33						
DZM	Mont Dzumac	16.32	297		P	21 33 29.0	+1.5
DZM				IAmb	IAmb	21 33 41.2	
	comp=Z,218nm,0.7s						
DZM	Mont Dzumac	16.32	297	P	P	21 33 31.4	+3.8
FOZ	Fox Glacier	16.36	213	P	Pn	21 33 21.5	-3.6
NOUC	Port Laguerre	16.41	296	P	P	21 33 31.8	+3.3
LIFNC	LIFOU	16.48	302	P	P	21 33 29.4	+0.2
LIFNC				IAmb	IAmb	21 33 43.8	
	comp=Z,382nm,0.9s						
LIFNC	LIFOU	16.48	302	P	P	21 33 35.3	+6.1
LBZ	Lake Benmore	16.85	211		Pn	21 33 32.2	+0.9
ODZ	Otahua Downs	17.18	209	P	Pn	21 33 34.5	-0.9
ODZ	Otahua Downs	17.18	209	P	Pn	21 33 32.1	-3.3
AFI	Afiamalu	17.35	20	P	P	21 33 38.8	-0.1
	comp=Z,5.3nm,0.3s,baz=100,slow=12,SNR=2.3						
AFI				LR	LR	21 38 18.6	
	comp=Z,620nm,20.6s,baz=202,slow=30						
RTV	Rentapao	17.70	312	P	P	21 33 49.4	+6.7
	comp=Z,480µm,0.7s						
WKZ	Wanaka	17.72	212	Pn	Pn	21 33 41.4	-0.8
MLZ	Mavora Lakes	18.54	212	P	P	21 33 48.5	-3.5
RAR	Rarotonga	18.67	65	P	P	21 33 52.6	-0.8
	comp=Z,2.0nm,0.3s,baz=224,slow=10.0,SNR=5.2						
RAR				LR	LR	21 39 09.6	
	comp=Z,1µm,21.6s,baz=290,slow=31						
RAR	Rarotonga	18.67	65	P	P	21 33 52.7	-0.8
RAR				pmax	pmax		
	comp=Z,250nm,1.5s						
KOUNC	Koumac, New Ca	18.83	297	P	Pn	21 34 01.1	+5.2
WHZ	Wether Hill Ro	19.02	212		P	21 33 54.7	-2.5
DCZ	Deep Cove	19.07	214	P	Pn	21 33 58.2	-0.4
LHI	Lord Howe Isla	19.80	261	P	Pn	21 34 06.7	-0.8
	baz=20						
LHI	Lord Howe Isla	19.80	261		P	21 34 05.0	-0.8
LHI				IAmb	IAmb	21 34 13.2	
	comp=Z,224nm,1.0s						
PYZ	Puysegur Point	19.81	213	P	P	21 34 06.4	+0.6
SANVU	Saraoutou	20.22	314	P	P	21 34 11.4	+1.0
TBI	Tubuai	26.26	81	*e*S	S	21 39 37.2	-4.4
	comp=Z,560nm,29.2s						
TBI				*e*LR	LR	21 41 49.9	
	comp=Z,3µm,27.2s						
TBI	Tubuai	26.26	81	*e*T	T	22 01 51.0	
	comp=Z,164nm,0.3s						
ARMA	Armidale	26.26	262	P	P	21 35 11.8	+1.2
	baz=26,SNR=33						
ARMA	Armidale	26.26	262	P	P	21 35 11.4	+0.8
ARMA	Armidale	26.26	262	P	P	21 35 14.6	+3.9
	comp=Z,64nm,0.9s						
RIV	Riverview	26.40	254	P	P	21 35 11.6	-0.1
	baz=26,SNR=4.7						
MGCD	Mangrove Creek	26.46	256	P	P	21 35 15.6	+3.3
	baz=26,SNR=32						
MGCD	Mangrove Creek	26.46	256	P	P	21 35 16.2	+3.9
	comp=Z,201nm,0.8s						
SYDH	Sydney Hard Ro	26.75	255	P	P	21 35 18.7	+3.9
	comp=Z,194nm,0.8s						
EIDS	Eidsvold	27.84	273	P	P	21 35 24.8	+0.1
	baz=28,SNR=32						
EIDS	Eidsvold	27.84	273	P	P	21 35 24.6	-0.2
EIDS				IAmb	IAmb	21 35 28.2	
	comp=Z,47nm,0.8s						
EIDS	Eidsvold	27.84	273	P	P	21 35 27.0	+2.2
	comp=Z,72nm,0.9s						
CNB	Canberra Magne	27.88	251	P	P	21 35 26.7	+1.6
	baz=28,SNR=38						
CNB	Canberra Magne	27.88	251	P	P	21 35 28.0	+2.9
	comp=Z,106nm,0.9s						
MILA	Mila	28.12	247	P	P	21 35 28.4	+1.2
	baz=28,SNR=15						
CAN	Canberra	28.18	251	P	P	21 35 28.9	+1.2
CAN				pmax	pmax		
	comp=Z,96nm,0.8s						
CAN	Canberra	28.18	251	P	P	21 35 28.9	+1.2
CAN				IAmb	IAmb	21 35 31.9	
	comp=Z,96nm,0.8s						
CAN	Canberra	28.18	251	P	P	21 35 29.1	+1.4
PAE	Paea	28.70	70	*e*T	T	22 04 53.6	
	comp=Z,31nm,0.3s						
PPT2	Papeete2	28.74	70	*e*S	S	21 40 18.0	-3.0
	comp=Z,388nm,27.8s						
PPT2				*e*LR	LR	21 42 56.4	
	comp=Z,3µm,26.2s						
PPT2	Papeete2	28.74	70	*e*T	T	22 04 57.6	
	comp=Z,37nm,0.3s						
PPT	Papeete	28.75	70	P	P	21 35 34.0	+1.1
	comp=Z,20nm,0.7s,baz=221,slow=18,SNR=2.9						
PPT				LR	LR	21 44 01.2	
	comp=Z,553nm,21.4s,baz=244,slow=30						
PPT	Papeete	28.75	70	P	P	21 35 34.0	+1.1
TVO	Taravao	28.90	71	*e*T	T	22 05 08.9	
TIAR	Tiarei	28.94	70	*e*T	T	22 05 11.9	
	comp=Z,1.7nm,0.2s						
RK1H	Rockhampton Ha	29.00	276	P	P	21 35 37.5	+2.5
	comp=Z,221nm,0.7s						
HNR	Honiara	29.38	311	LR	LR	21 45 30.6	
	comp=Z,455nm,21.6s,baz=156,slow=32						
GLAD	Gladstone	29.48	240	P	P	21 35 41.2	+2.0
	comp=Z,59nm,0.8s						
RMQ	Roma	29.53	269	P	P	21 35 43.2	+3.4
	baz=30,SNR=76						
RMQ	Roma	29.53	269	P	P	21 35 43.2	+3.4
	comp=Z,164nm,0.7s						
MEH	Mehetia	29.83	72	*e*T	T	22 06 18.7	
	comp=Z,89nm,0.4s						
TAU	Tasmania Unive	30.37	236	P	P	21 35 48.6	+1.6
TAU				pmax	pmax		
	comp=Z,95nm,1.4s						
TAU	Tasmania Unive	30.37	236	P	P	21 35 48.6	+1.6
TAU				IAmb	IAmb	21 35 50.3	
	comp=Z,96nm,1.4s						
TAU	Tasmania Unive	30.37	236	P	P	21 35 48.7	+1.7
	comp=Z,63nm,2.0s						
TOO	Toolangi	31.06	247	P	P	21 35 55.7	+2.4
	baz=31,SNR=29						
TOO	Toolangi	31.06	247	P	P	21 35 53.6	+0.4
TOO				pmax	pmax		
	comp=Z,92nm,1.2s						
TOO	Toolangi	31.06	247	P	P	21 35 53.6	+0.4
TOO				IAmb	IAmb	21 35 56.9	
	comp=Z,92nm,1.2s						
TOO	Toolangi	31.06	247	P	P	21 35 55.4	+2.1
	comp=Z,69nm,1.0s						
CMSA	Cobar Meteorol	31.17	258	P	P	21 35 56.9	+2.7
	baz=31,SNR=50						
CMSA	Cobar Meteorol	31.17	258	P	P	21 35 56.6	+2.4
	comp=Z,129nm,1.0s						
VAH	Vaihoa	31.58	68	*e*T	T	22 08 29.8	
	comp=Z,125nm,0.2s						
QLP	Quilpie	33.41	267	P	P	21 36 15.9	+1.9
	baz=33,SNR=41						
QLP	Quilpie	33.41	267	P	P	21 36 15.7	+1.7
	comp=Z,289nm,0.8s						
CTA	Charters Tower	33.90	279	P	P	21 36 20.1	+1.8
CTA	Charters Tower	33.90	279	P	P	21 36 20.7	+2.4
	comp=Z,276nm,0.8s						
CTAO	Charters Tower	33.90	279	P	P	21 36 19.6	+1.3
CTAO				pmax	pmax		
	comp=Z,201nm,0.7s						
CTAO	Charters Tower	33.90	279	P	P	21 36 19.6	+1.3
CTAO	Charters Tower	33.90	279	P	P	21 36 21.4	+3.1
ARPS	Mount Arapiles	33.97	248	P	P	21 36 20.8	+2.1
	baz=34,SNR=15						
ARPS	Mount Arapiles	33.97	248	P	P	21 36 21.2	+2.5
	comp=Z,36nm,1.1s						
STKA	Stephens Creek	34.58	257	P	P	21 36 26.4	+2.3
	comp=Z,189nm,0.8s,baz=100,slow=10.0,SNR=179						
STKA				PKiKP	PKiKP	21 46 20.4	-0.9
	comp=Z,1.7nm,0.5s,baz=59,slow=2.5,SNR=4.7						
STKA				LR	LR	21 49 30.5	
	comp=Z,996nm,18.4s,baz=97,slow=34						
STKA	Stephens Creek	34.58	257	P	P	21 36 26.4	+2.3
	baz=34,SNR=20						
STKA	Stephens Creek	34.58	257	P	P	21 36 25.1	+1.0
STKA				pmax	pmax		
	comp=Z,42nm,0.8s						
STKA	Stephens Creek	34.58	257	P	P	21 36 25.1	+1.0
STKA				IAmb	IAmb	21 36 28.1	
	comp=Z,42nm,0.8s						
STKA	Stephens Creek	34.58	257	P	P	21 36 26.1	+2.0
	comp=Z,56nm,0.8s						
INKA	Innaminka	36.12	264	P	P	21 36 39.4	+2.1
	comp=Z,261nm,1.0s						
MTSU	Mount Surprise	36.40	281	P	P	21 36 41.8	+1.9
	baz=36,SNR=141						
MTSU	Mount Surprise	36.40	281	P	P	21 36 41.4	+1.6
	comp=Z,88nm,0.7s						
HTT	Hallett	36.60	254	P	P	21 36 43.5	+2.0
	baz=36,SNR=116						
HTT	Hallett	36.60	254	P	P	21 36 42.9	+1.4
	comp=Z,181nm,1.4s						
LCRK	Leigh Creek	37.68	258	P	P	21 36 51.7	+1.1
	comp=Z,402nm,0.7s						
WHYH	Whyalla	37.78	254	P	P	21 36 53.2	+1.9
	comp=Z,121nm,0.9s						
PMG	Port Moresby	38.70	295	LR	LR	21 50 02.3	
	comp=Z,634nm,21.2s,baz=142,slow=32						
PMG	Port Moresby	38.70	295	P	P	21 37 00.4	+1.1
PMG				pmax	pmax		
	comp=Z,28nm,0.9s						
PMG	Port Moresby	38.70	295	P	P	21 37 00.5	+1.1
	comp=Z,37nm,1.1s						
PMG	Port Moresby	38.70	295	P	P	21 37 00.4	+1.1
BBOO	Buckleboo	39.07	254	P	P	21 37 03.2	+0.9
	baz=39,SNR=86						
BBOO	Buckleboo	39.07	254	P	P	21 37 01.6	-0.6
BBOO				IAmb	IAmb	21 37 04.9	
	comp=Z,77nm,0.8s						
BBOO	Buckleboo	39.07	254	P	P	21 37 02.7	+0.4
	comp=Z,127nm,1.2s						
COEN	Coen	39.37	286	P	P	21 37 05.6	+0.6
COEN				IAmb	IAmb	21 37 08.6	
	comp=Z,44nm,0.8s						
COEN	Coen	39.37	286	P	P	21 37 06.3	+1.4
	comp=Z,72nm,0.9s						
QIS	Mount Isa	39.42	274	P	P	21 37 06.3	+1.0
	baz=39,SNR=30						
QIS	Mount Isa	39.42	274	P	P	21 37 05.8	+0.5
	comp=Z,56nm,1.0s						
OOD	Oodnadatta	40.44	262	P	P	21 37 15.1	+1.4
	comp=Z,103nm,0.8s						
TAOE	Nuku Hiva Isla	41.21	67	*e*LR	LR	21 48 40.1	
	comp=Z,2µm,27.0s						
MULG	Mulgathing	41.23	258	P	P	21 37 20.3	+0.1
	comp=Z,64nm,0.7s						
AS31	Alice Springs	43.21	267	P	P	21 37 35.4	-1.1
ASAR	Alice Springs	43.22	267	P	P	21 37 36.7	+0.2
	comp=Z,40nm,0.6s,baz=104,slow=7.0,SNR=344						
ASAR				PcP	PcP	21 39 25.0	-0.6
	comp=Z,8.4nm,0.7s,baz=120,slow=4.6,SNR=6.3						
ASAR				ScP	ScP	21 43 12.8	-2.5
	comp=Z,7.8nm,0.8s,baz=114,slow=4.2,SNR=12						
ASAR				S	S	21 44 02.5	+0.4
	comp=Z,2.1nm,0.8s,baz=112,slow=14,SNR=4.0						
ASAR				PKiKP	PKiKP	21 46 27.6	-1.2
	comp=Z,1.5nm,0.6s,baz=103,slow=1.6,SNR=10						
ASAR				ScS	ScS	21 47 32.4	-3.2
	comp=Z,1.1nm,0.8s,baz=111,slow=5.2,SNR=4.8						
ASAR				LR	LR	21 55 31.2	
	comp=Z,1µm,18.2s,baz=124,slow=36						
ASAR	Alice Springs	43.22	267	P	P	21 37 35.6	-0.9
ASAR					ScP	21 43 15.6	+0.3
MANU	Manus Island	43.34	304	P	P	21 37 36.8	-0.8
WR0	Warramunga Arr	44.02	272	P	P	21 37 42.6	-0.4
WB2	Warramunga Arr	44.19	272	P	P	21 37 44.3	-0.1
WRAB	Tennant Creek	44.20	272	*c i*P	P	21 37 44.0	-0.4
WRAB				pmax	pmax		
	comp=Z,174nm,1.0s						
WRAB	Tennant Creek	44.20	272	P	P	21 37 44.0	-0.4
WRAB	Tennant Creek	44.20	272	P	P	21 37 44.9	+0.5
WRA	Warramunga Arr	44.20	272	P	P	21 37 44.5	+0.1
	comp=Z,90nm,0.5s,baz=110,slow=8.1,SNR=641						
WRA				PcP	PP	21 39 28.3	+0.6
	comp=Z,9.8nm,0.8s,baz=112,slow=3.7,SNR=3.2						
WRA				ScP	ScP	21 43 17.0	-2.4
	comp=Z,3.1nm,1.0s,baz=114,slow=4.2,SNR=4.6						
WRA				S	S	21 44 13.0	-3.6
	comp=Z,13nm,0.9s,baz=110,slow=14,SNR=12						
WRA				PKiKP	PKiKP	21 46 28.6	-1.2
	comp=Z,2.0nm,0.6s,baz=99,slow=0.5,SNR=12						
WRA				LR	LR	21 55 31.3	
	comp=Z,682nm,18.1s,baz=76,slow=35						
WRA	Warramunga Arr	44.20	272	P	P	21 37 44.1	-0.4
WB0	Warramunga Arr	44.23	272	P	P	21 37 44.3	-0.4
FORT	Forrest	46.15	255	P	P	21 37 59.5	-0.3
	baz=46,SNR=68						
FORT	Forrest	46.15	255	P	P	21 37 59.0	-0.8
FORT				PcP	PcP	21 39 35.1	-0.5
FORT	Forrest	46.15	255	P	P	21 37 59.3	-0.5
	comp=Z,129nm,0.6s						
WRKA	Warakurna	47.59	263	P	P	21 38 10.3	-0.9
	baz=48,SNR=78						
WRKA	Warakurna	47.59	263	P	P	21 38 09.7	-1.4
	comp=Z,81nm,0.9s						
JAY	Jayapura	47.99	297	P	P	21 38 14.5	+0.2
	comp=Z,34nm,0.9s						
SBA	Scott Base	48.05	184	P	P	21 38 15.8	+1.9
SBA				pmax	pmax		
	comp=Z,66nm,1.1s						
SBA	Scott Base	48.05	184	P	P	21 38 15.8	+1.9
SBA				IAmb	IAmb	21 38 19.8	
	comp=Z,66nm,1.1s						
VNDA	Vanda	48.11	186	P	P	21 38 17.3	+2.9
	comp=Z,6.8nm,0.7s,baz=17,slow=8.2,SNR=14						
VNDA	Vanda	48.11	186	P	P	21 38 16.5	+2.1
VNDA				PcP	PcP	21 39 43.8	+2.1
GENI	Genyem	48.36	297	P	P	21 38 17.7	+0.6
	comp=Z,86nm,0.8s						
KDU	Kakadu	49.02	280	P	P	21 38 21.7	-0.5
	baz=49,SNR=9.6						
KDU	Kakadu	49.02	280	P	P	21 38 22.3	+0.1
	comp=Z,49nm,1.0s						
MTN	Manton Dam	50.09	279	P	P	21 38 29.9	-0.5
	baz=50,SNR=8.8						
MTN	Manton Dam	50.09	279	P	P	21 38 29.1	-1.3
MTN				IAmb	IAmb	21 38 32.8	
	comp=Z,28nm,0.6s						
MTN				PcP	PcP	21 39 48.4	-1.5
MTN	Manton Dam	50.09	279	P	P	21 38 30.8	+0.4
	comp=Z,38nm,0.6s						
DRS	Darwin Rock St	50.48	279	P	P	21 38 34.7	+1.3
	comp=Z,45nm,1.0s						
KNRA	Kununurra	50.81	274	P	P	21 38 35.9	0.0
	baz=51,SNR=55						
KNRA	Kununurra	50.81	274	P	P	21 38 35.3	-0.5
KNRA	Kununurra	50.81	274	P	P	21 38 35.4	-0.5
	comp=Z,86nm,0.8s						
SRPI	Serui, Papua	51.87	294	P	P	21 38 43.9	+0.1
FITZ	Fitzroy Crossi	52.47	270	P	P	21 38 48.4	+0.2
	comp=Z,46nm,0.8s,baz=134,slow=8.8,SNR=40						
FITZ	Fitzroy Crossi	52.47	270	P	P	21 38 47.7	-0.5
	baz=52,SNR=16						
HMH	Humu'ula Sheep	54.18	26	P	P	21 39 00.6	-0.4
FAKI	Fak Fak	54.44	290	P	P	21 39 01.7	-1.1
FAKI				IAmb	IAmb	21 39 03.3	
	comp=Z,52nm,1.1s						
FAKI	Fak Fak	54.44	290	P	P	21 39 01.9	-0.8
	comp=Z,55nm,1.0s						
KLBR	Kellerberrin	54.45	251	P	P	21 39 01.9	-0.7
	baz=54,SNR=21						
KLBR	Kellerberrin	54.45	251	P	P	21 39 01.8	-0.8
MEEK	Meekatharra	55.29	257	P	P	21 39 07.8	-1.0
	baz=55,SNR=16						
MEEK	Meekatharra	55.29	257	P	P	21 39 07.6	-1.2
BLDU	Ballidu	55.59	252	P	P	21 39 09.9	-1.0
	baz=56,SNR=12						
BLDU	Ballidu	55.59	252	P	P	21 39 09.8	-1.1
MUN	Mundaring	55.60	250	P	P	21 39 10.4	-0.6
	baz=56,SNR=7.0						
MUN	Mundaring	55.60	250	P	P	21 39 10.1	-0.8
PSA00	Pilbara Seismi	56.07	263	P	P	21 39 13.0	-1.5
PSA00				IAmb	IAmb	21 39 14.9	
	comp=Z,84nm,1.6s						
PSA00	Pilbara Seismi	56.07	263	P	P	21 39 12.9	-1.5
PSA00				IAmb	IAmb	21 40 14.5	
	comp=Z,11nm,0.8s						
PSA00	Pilbara Seismi	56.07	263	P	P	21 39 13.4	-1.0
MBWA	Marble Bar	56.33	264	P	P	21 39 15.7	-0.6
SIJI	Sorong	56.43	291	LR	LR	22 03 28.8	
	comp=Z,207nm,19.2s,baz=142,slow=36						
SIJI	Sorong	56.43	291	P	P	21 39 16.3	-0.8
	comp=Z,40nm,1.0s						
SWI	Sorong	56.44	291	P	P	21 39 16.5	-0.6
	comp=Z,89nm,0.7s						
GUMO	Guam	56.55	315	LR	LR	22 00 35.5	
	comp=Z,187nm,21.6s,baz=104,slow=33						
MORW	Morawa	56.63	253	P	P	21 39 17.8	-0.6
	baz=56,SNR=19						
MORW	Morawa	56.63	253	P	P	21 39 17.6	-0.7
MORW				IAmb	IAmb	21 39 18.4	
	comp=Z,44nm,1.0s						
MORW	Morawa	56.63	253	P	P	21 39 17.3	-1.1
AAI	Ambon	57.33	287	P	P	21 39 23.5	+0.1
	comp=Z,27nm,0.5s						
KRAI	Karang Ratu	57.37	287	P	P	21 39 23.1	-0.6
	comp=Z,2µmcomp=Z,47nm,0.7s						
SOEI	Soe	57.46	278	P	P	21 39 25.6	+1.1
	comp=Z,61nm,0.9s						
SOEI	Soe	57.46	278	P	P	21 39 24.4	-0.1
SOEI				IAmb	IAmb	21 39 38.3	
	comp=Z,44nm,0.7s						
SOEI	Soe	57.46	278	P	P	21 39 26.7	+2.2
BATI	Baumata	57.76	277	P	P	21 39 26.9	+0.4
	comp=Z,56nm,0.6s,baz=200,slow=2.5,SNR=18						
BATI				LR	LR	22 04 18.3	
	comp=Z,2µm,19.6s,baz=140,slow=36						
BATI	Baumata	57.76	277	P	P	21 39 27.1	+0.6
	comp=Z,40nm,0.6s						
RPN	Rapa Nui	59.33	105	LR	LR	21 58 37.5	
	comp=Z,331nm,21.6s,baz=332,slow=29						
LBMI	Labuha	59.62	289	P	P	21 39 39.3	-0.1
	comp=Z,35nm,0.7s						
QSPA	South Pole Qui	59.71	180	P	P	21 39 41.9	+2.4
	comp=Z,48nm,0.7s,baz=33,slow=2.8,SNR=32						
QSPA	South Pole Qui	59.71	180	IAmb	IAmb	21 39 48.9	
	comp=Z,203nm,0.9s						
MMRI	Maumere	59.75	278	P	P	21 39 40.3	0.0
MMRI	Maumere	59.75	278	P	P	21 39 40.0	-0.4
MMRI	Maumere	59.75	278	P	P	21 39 41.1	+0.8
SANI	Sanana	60.06	287	P	P	21 39 41.5	-0.9
	comp=Z,580nmcomp=Z,84nm,0.8s						
SANI	Sanana	60.06	287	P	P	21 39 41.6	-0.9
EDFI	Ende, Flores	60.16	278	P	P	21 39 42.8	-0.5
	comp=Z,27nm,0.6s						
BASI	Baing, Sumba	60.40	276	P	P	21 39 45.4	+0.6
GIRL	Giralia	60.45	260	P	P	21 39 45.5	+0.5
	baz=60,SNR=11						
GIRL	Giralia	60.45	260	P	P	21 39 45.2	+0.2
TNTI	Ternate	60.54	290	P	P	21 39 45.2	-0.5
	comp=Z,28nm,0.8s						
TNTI	Ternate	60.54	290	P	P	21 39 44.9	-0.8
TNTI				IAmb	IAmb	21 39 46.0	
	comp=Z,40nm,1.1s						
GAMI	Galela, Maluku	60.83	292	P	P	21 39 46.9	-0.8
	comp=Z,94nm,0.8s						
LBFI	Labuhan Bajo,	61.84	277	P	P	21 39 53.6	-1.0
	comp=Z,844nmcomp=Z,112nm,0.7s						
MNI	Manado	62.98	289	P	P	21 40 00.4	-1.8
	comp=Z,82nm,0.8s						
KMSI	Cibinong	63.19	288	P	P	21 40 02.9	-0.7
	comp=Z,57nm,1.0s						
BKSI	Bulukumba	63.24	280	P	P	21 40 03.2	-0.7
	comp=Z,26nm,0.7s						
LUWI	Luwuk	63.29	286	P	P	21 40 04.1	-0.1
	comp=Z,87nm,1.1s						
LUWI	Luwuk	63.29	286	P	P	21 40 03.5	-0.7
KAPI	Kappang	63.71	280	P	P	21 40 05.9	-1.1
KAPI				pmax	pmax		
	comp=Z,16nm,1.0s						
KAPI	Kappang	63.71	280	P	P	21 40 05.9	-1.1
BNSI	Bone	63.73	281	P	P	21 40 06.9	-0.2
	comp=Z,25nm,0.9s						
GTOI	Gorontalo	64.03	287	P	P	21 40 09.4	+0.3
	comp=Z,299nmcomp=Z,30nm,0.6s						
SPSI	Sidrap Palu	64.24	281	P	P	21 40 09.1	-1.4
	comp=Z,18nm,1.0s						
APSI	Ampana	64.30	285	P	P	21 40 10.9	0.0
	comp=Z,25nm,1.1s						
TTSI	Tana Toraja	64.69	282	P	P	21 40 12.5	-0.9
	comp=Z,1µmcomp=Z,34nm,0.9s						
MRSI	Marisa	64.82	287	P	P	21 40 12.5	-1.8
	comp=Z,32nm,0.6s						
KLNI	Mataram	65.13	275	P	P	21 40 15.0	-1.3
KHKI	Kahang-Kahang	65.58	275	P	P	21 40 17.4	-1.8
	comp=Z,41nm,0.8s						
MMSI	Mamuju	65.64	282	P	P	21 40 18.8	-0.9
	comp=Z,19nm,0.9s						
DAV	Davao City (W)	65.72	295	P	P	21 40 19.7	-0.4
IGBI	Denpasar	65.75	274	P	P	21 40 20.1	-0.3
	comp=Z,112nm,0.7s						
SRBI	Singaraja	66.06	275	P	P	21 40 21.3	-1.0
	comp=Z,44nm,0.8s						
TOLI2	Tolitoli	66.14	286	P	P	21 40 21.6	-1.2
TOLI2	Tolitoli	66.14	286	P	P	21 40 23.5	+0.7
MPSI	Mapaga	66.44	285	P	P	21 40 23.6	-1.2
	comp=Z,37nm,0.9s						
BYJI	Banyuwangi	66.73	274	P	P	21 40 26.1	-0.5
	comp=Z,37nm,0.7s						
JAGI	Jajag, Banyuwa	66.78	274	P	P	21 40 24.8	-2.2
	comp=Z,55nm,0.9s						
JAGI	Jajag, Banyuwa	66.78	274	P	P	21 40 25.4	-1.6
JAGI	Jajag, Banyuwa	66.78	274	P	P	21 40 28.5	+1.5
ABJI	Asem Bagus	67.04	274	P	P	21 40 27.9	-0.7
	comp=Z,3µmcomp=Z,28nm,0.8s						
GMJI	Gumukmas	67.49	274	P	P	21 40 30.5	-0.9
	comp=Z,60nm,0.9s						
BLJI	Banyuglugur	67.61	274	P	P	21 40 31.7	-0.5
	comp=Z,42nm,0.6s						
KMMI	Kalianget	67.64	275	P	P	21 40 31.9	-0.5
	comp=Z,3µmcomp=Z,82nm,1.9s						
KBKI	Kotabaru	67.65	280	P	P	21 40 32.1	-0.4
	comp=Z,503nmcomp=Z,23nm,0.8s						
SMKI	Samarinda	68.27	283	P	P	21 40 37.1	+0.7
	comp=Z,105nm,1.4s						
BBKI	Banjar Baru	68.70	279	P	P	21 40 38.3	-0.8
	comp=Z,31nm,1.1s						
SMAI	San Martin Ant	69.39	158	P	P	21 40 44.4	+2.0
PCJI	Pacitan	69.48	272	P	P	21 40 43.3	-0.6
	comp=Z,261nm,1.0s						
WOJI	Wonogiri, Jawa	69.87	273	P	P	21 40 46.0	-0.3
	comp=Z,80nm,1.0s						
MTKI	Muara Teweh, K	69.96	281	P	P	21 40 46.5	-0.4
	comp=Z,1µmcomp=Z,7.0nm,0.9s						
PKKI	Palangkaraya	70.07	279	P	P	21 40 46.7	-0.8
	comp=Z,112nm,0.9s						
UGM	Wanagama	70.18	272	P	P	21 40 47.2	-1.1
	comp=Z,79nm,1.2s						
UGM	Wanagama	70.18	272	P	P	21 40 48.8	+0.5

YOGI	Yogyakarta	70.43	272	P	P	21 40 49.7	0.0
	comp=Z,79nm,0.9s						
SMRI	Semarang	70.68	273	P	P	21 40 51.2	-0.1
	comp=Z,79nm,1.5s						
SPMM	Sapulut	71.71	287	P	P	21 40 57.0	-0.5
CTJI	Waduk Cacaban	71.78	273	P	P	21 40 57.7	-0.2
	comp=Z,52nm,1.1s						
PBKI	Pangkalan Bun	71.80	278	P	P	21 40 57.2	-0.8
	comp=Z,1µmcomp=Z,122nm,1.4s						
CMJI	Cimerak	72.04	271	P	P	21 40 58.2	-1.3
	comp=Z,51nm,0.9s						
PMSA	Palmer Station	72.22	156	P	P	21 41 01.0	+1.3
	comp=Z,21nm,0.9s,baz=233,slow=4.1,SNR=6.3						
PMSA	Palmer Station	72.22	156	P	P	21 41 01.1	+1.4
PMSA				IAmb	IAmb	21 41 02.5	
	comp=Z,26nm,0.9s						
MAW	Mawson	72.35	201	P	P	21 41 01.5	+1.0
	comp=Z,28nm,0.8s,baz=131,slow=7.7,SNR=22						
MAW	Mawson	72.35	201	P	P	21 41 01.8	+1.4
	baz=72,SNR=21						
MAW	Mawson	72.35	201	P	P	21 41 01.4	+1.0
MAW				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAW	Mawson	72.35	201	P	P	21 41 01.4	+1.0
KKM	Kota Kinabalu	72.66	288	P	P	21 41 02.8	-0.5
	comp=Z,73nm,0.8s						
KKM	Kota Kinabalu	72.66	288	P	P	21 41 02.0	-1.3
KKM	Kota Kinabalu	72.66	288	P	P	21 41 03.5	+0.2
LEM	Lembang	73.22	272	P	P	21 41 06.5	-0.3
	comp=Z,83nm,0.8s,baz=110,slow=7.5,SNR=25						
LEM	Lembang	73.22	272	P	P	21 41 06.5	-0.3
	comp=Z,60nm,0.8s						
STKI	Sintang	73.40	280	P	P	21 41 07.4	-0.1
	comp=Z,53nm,0.9s						
CNJI	Cibinong	73.41	271	P	P	21 41 06.4	-1.2
	comp=Z,1µmcomp=Z,148nm,0.9s						
SBUM	Sibu	74.02	283	P	P	21 41 11.6	+0.4
	comp=Z,17nm,1.1s						
SBUM	Sibu	74.02	283	P	P	21 41 10.8	-0.4
SKJI	Sukabumi	74.05	271	P	P	21 41 10.6	-0.8
	comp=Z,52nm,0.5s						
CGJI	Cibinong	74.99	271	P	P	21 41 15.1	-1.7
	comp=Z,722nmcomp=Z,98nm,1.0s						
KSM	Kuching	75.13	281	P	P	21 41 16.5	-1.1
	comp=Z,46nm,0.9s						
KSM	Kuching	75.13	281	P	P	21 41 17.5	-0.1
TPI	Tanjungpandan	75.22	276	P	P	21 41 17.4	-0.8
MG05	Puerto Natales	75.44	142	P	P	21 41 19.0	+0.2
MG05				IAmb	IAmb	21 41 22.6	
	comp=Z,30nm,0.8s						
GO10	Punta Arenas	75.44	143	P	P	21 41 19.3	+0.4
GO09	Cerro Castillo	75.74	141	P	P	21 41 20.6	0.0
GO09				IAmb	IAmb	21 41 38.8	
	comp=Z,56nm,1.2s						
USHA	Ushuaia	75.86	146	P	P	21 41 22.2	+1.0
	comp=Z,11nm,1.0s,baz=215,slow=2.9,SNR=4.9						
KASI	Kota Agung	76.56	271	P	P	21 41 24.0	-1.8
	comp=Z,664nmcomp=Z,68nm,1.0s						
KLI	Kotabumi	76.58	272	P	P	21 41 23.8	-2.1
	comp=Z,136nm,0.9s						
KLSI		76.77	272	P	P	21 41 25.4	-1.6
	comp=Z,26nm,1.1s						
PPBI	Pangkal Pinang	76.83	275	P	P	21 41 26.9	-0.4
	comp=Z,5µmcomp=Z,36nm,0.7s						
JYT	Yasato	77.09	326	P	P	21 41 27.7	-0.5
SYO	Syowa Base	77.14	193	⇑ iP	P	21 41 29.4	+1.3
SYO	Syowa Base	77.14	193	⇑ epP	pP	21 41 36.6	+1.6
LWLI	Liwa	77.19	272	P	P	21 41 28.7	-0.8
	comp=Z,108nm,0.7s						
MDSI	Maura Dua	77.35	272	P	P	21 41 28.4	-1.9
	comp=Z,547nmcomp=Z,68nm,0.9s						
INU	Inuyama	77.97	324	P	P	21 41 31.8	-1.3
INU				IAmb	IAmb	21 41 34.0	
	comp=Z,25nm,0.8s						
INU	Inuyama	77.97	324	P	P	21 41 33.4	+0.3
JGF	Kuroka	77.99	324	P	P	21 41 32.1	-1.3
JGF				IAmb	IAmb	21 41 33.8	
	comp=Z,20nm,0.7s						
SNAA	Sanae	78.15	178	P	P	21 41 35.0	+1.2
SNAA	Sanae	78.15	178	P	P	21 41 34.7	+0.8
	comp=Z,18nm,0.9s,baz=176,slow=4.6,SNR=24						
SNAA	Sanae	78.15	178	c iP	P	21 41 34.7	+0.8
SNAA				pmax	pmax		
	comp=Z,35nm,1.0s						
SNAA	Sanae	78.15	178	P	P	21 41 34.4	+0.5
SNAA				IAmb	IAmb	21 41 36.2	
	comp=Z,31nm,1.0s						
LHSI	Lahat	78.24	272	P	P	21 41 33.6	-1.6
	comp=Z,46nm,0.8s						
VNA3	Neumayer Olymp	78.30	176	P	P	21 41 35.7	+1.1
MJAR	Matsushiro Arr	78.30	325	P	P	21 41 33.7	-1.3
	comp=Z,9.8nm,0.6s,baz=153,slow=4.9,SNR=23						
MJAR	Matsushiro Arr	78.30	325	P	P	21 41 34.1	-0.9
MJAR				pmax	pmax		
	comp=Z,66nm,2.0s						
MJAR	Matsushiro Arr	78.30	325	P	P	21 41 34.1	-0.9
MJAR				IAmb	IAmb	21 41 51.4	
	comp=Z,66nm,2.0s						
MAJO	Matsushiro	78.30	325	d iP	P	21 41 34.1	-0.9
MAJO				pmax	pmax		
	comp=Z,26nm,1.1s						
MAJO	Matsushiro	78.30	325	P	P	21 41 33.5	-1.5
MAJO	Matsushiro	78.30	325	P	P	21 41 34.1	-0.9
MAT	Matsushiro	78.30	325	P	P	21 41 33.7	-1.3
MAT				eS	S	21 51 41.6	+13
MJB9	Matsu-Tunnel	78.31	325	P	P	21 41 34.0	-1.1
VNA2	Neumayer--Watz	78.73	177	P	P	21 41 38.4	+1.3
	baz=178,slow=5.3						
JWT	Wachi	78.75	323	P	P	21 41 36.2	-1.2
JWT				IAmb	IAmb	21 41 37.7	
	comp=Z,33nm,0.6s						
NVL	N'lazarevskaya	78.88	183	eP	P	21 41 40.6	+2.8
NVL				pmax	pmax		
	comp=Z,43nm,0.9s						
VNA1	Neumayer--Stat	78.96	176	P	P	21 41 39.3	+1.1
TPUB	Ta-pu	79.57	305	P	P	21 41 42.3	0.0
JNU	Nakatsue	79.63	318	P	P	21 41 41.2	-1.2
	comp=Z,18nm,0.8s,baz=113,slow=7.7,SNR=14						
JNU	Nakatsue	79.63	318	IAmb	IAmb	21 41 46.8	
	comp=Z,27nm,0.9s						
JNU	Nakatsue	79.63	318	P	P	21 41 42.1	-0.3
MASI	Maura Aman, Be	79.69	272	P	P	21 41 41.7	-1.6
	comp=Z,2µmcomp=Z,257nm,1.0s						
JHS	Saijyo	79.76	321	IAmb	IAmb	21 41 44.4	
	comp=Z,43nm,0.7s						
YHNB	Yeheng	79.91	306	P	P	21 41 44.3	+0.1
H03S2	Juan Fernandez	80.38	123	T	T	23 11 14.4	
	baz=239,SNR=306						
H03S1	Juan Fernandez	80.39	124	T	T	23 11 22.3	
	baz=239,SNR=335						
H03S3	Juan Fernandez	80.39	123	T	T	23 11 21.2	
	baz=239,SNR=387						
H03N3	Juan Fernandez	80.57	123	T	T	23 11 28.5	
	baz=241						
H03N2	Juan Fernandez	80.57	123	T	T	23 11 34.1	
	baz=241						
H03N1	Juan Fernandez	80.58	123	T	T	23 11 11.1	
	baz=241						
BTDF	Bukit Timah Da	80.65	277	P	P	21 41 47.9	-0.4
	comp=Z,30nm,1.5s						
KRJI	Kerinci	80.89	273	P	P	21 41 48.0	-1.8
	comp=Z,208nm,0.7s						
PLCA	Paso Flores	82.43	133	P	P	21 41 59.3	+1.8
	comp=Z,18nm,1.0s,baz=224,slow=5.4,SNR=29						
PLCA	Paso Flores	82.43	133	IAmb	IAmb	21 42 00.7	
	comp=Z,29nm,1.1s						
JKA	Kamikawa-asahi	82.49	332	P	P	21 41 58.6	+1.3
ASAJ	Asahikawa	82.49	332	P	P	21 41 57.5	+0.2
	baz=262,slow=3.1						
ASAJ				LR	LR	22 14 48.8	
	comp=Z,336nm,19.6s,baz=177,slow=33						
ASAJ	Asahikawa	82.49	332	P	P	21 41 58.6	+1.3
ASAJ				pmax	pmax		
	comp=Z,93nm,1.4s						
LC01	Cunco	82.59	131	P	P	21 41 59.5	+1.2
LC01				IAmb	IAmb	21 42 01.5	
	comp=Z,47nm,1.1s						
PPI	Padang Panjang	82.63	274	P	P	21 41 56.8	-2.0
	comp=Z,194nmcomp=Z,10nm,0.6s						
EFI	East Falkland	82.73	147	P	P	21 41 59.7	+1.0
EFI				pmax	pmax		
	comp=Z,78nm,1.3s						
EFI	East Falkland	82.73	147	P	P	21 41 59.7	+1.0
SISI	Saibi	83.32	272	P	P	21 42 02.1	-0.3
	comp=Z,17nm,0.7s						
NIKH	Nikolski High	83.39	5	P	P	21 42 02.5	+0.7
NIKH	Nikolski High	83.39	5	P	P	21 42 02.1	+0.3
	baz=188						
MNSI	Mandailing Nat	83.96	274	P	P	21 42 03.3	-2.4
	comp=Z,5µmcomp=Z,36nm,0.7s						
SNCC	San Nicolas Is	83.97	46	P	P	21 42 05.4	+0.2
	baz=228						
TJN	Taejon	83.97	318	ceP	P	21 42 05.5	+0.4
SCI2	San Clemente I	84.40	47	P	P	21 42 07.9	+0.5
	baz=228						
KSRS	Korea Array	84.42	320	P	P	21 42 07.8	+0.4
	comp=Z,7.1nm,0.7s,baz=141,slow=5.8,SNR=30						
LPIG	La Paz	84.44	58	LR	LR	22 10 33.4	
	comp=Z,191nm,21.7s,baz=214,slow=29						
UNV	Unalaska Valle	84.47	7	P	P	21 42 07.3	+0.1
	baz=190						
IPM	Ipoh	84.59	278	P	P	21 42 08.0	-0.9
IPM	Ipoh	84.59	278	P	P	21 42 07.6	-1.3
	comp=Z,46nm,0.8s						
IPM	Ipoh	84.59	278	P	P	21 42 07.8	-1.2
IPM				IAmb	IAmb	21 42 09.0	
	comp=Z,32nm,0.8s						
ML02	Panimavida	84.61	128	IAmb	IAmb	21 42 26.3	
	comp=Z,32nm,1.1s						
GO05	Huala	84.68	128	P	P	21 42 10.1	+1.0
GO05				IAmb	IAmb	21 42 11.4	
	comp=Z,30nm,1.1s						
CIS	Catalina Islan	84.76	46	P	P	21 42 09.6	+0.3
	baz=228						
YSS	Yuzh-Sakhalins	84.79	334	c iP	P	21 42 09.5	+0.5
YSS				pmax	pmax		
	comp=Z,69nm,0.8s						
YSS	Yuzh-Sakhalins	84.79	334	P	P	21 42 09.3	+0.3
PKM	Mcpherson Peak	84.89	44	P	P	21 42 11.6	+1.5
	baz=227						
PAGB	Antelope Grade	85.20	44	P	P	21 42 13.4	+1.9
KULM	Kulim	85.33	279	P	P	21 42 11.7	-0.9
KULM				IAmb	IAmb	21 42 12.9	
	comp=Z,28nm,0.8s						
OSI	Osito Audit: C	85.37	45	P	P	21 42 13.8	+1.4
	baz=228						
PSI	Prapat	85.54	276	P	P	21 42 12.0	-1.8
	comp=Z,10nm,1.2s						
PET	Petropavlovsk	85.56	346	⇓ eP	P	21 42 12.0	-0.7
PET				pmax	pmax		
	comp=Z,20nm,0.8s						
BO02	Sierra Bellavi	85.59	128	P	P	21 42 14.6	+0.9
BO02				IAmb	IAmb	21 42 16.1	
	comp=Z,52nm,1.4s						
MURC	Murrieta	85.65	47	P	P	21 42 15.3	+1.5
	baz=229,SNR=5.4						
MONP2	Monument Peak	85.69	48	P	P	21 42 16.0	+1.8
	baz=230,SNR=9.0						
RMX	La Rumorosa	85.72	48	P	P	21 42 16.0	+1.7
RMX				IAmb	IAmb	21 42 33.1	
	comp=Z,30nm,1.3s						
IKP	In-Ko-Pah, Jac	85.73	48	P	P	21 42 16.0	+1.8
	baz=230,SNR=7.1						
BFSC	Mount Baldy Ra	85.78	46	P	P	21 42 15.6	+1.0
	baz=229,SNR=8.1						
FALS	False Pass	85.82	8	P	P	21 42 14.2	+0.3
FALS	False Pass	85.82	8	P	P	21 42 15.8	+1.9
	baz=193						
PEA0B	Petropavlovsk-	85.84	346	deP	P	21 42 14.5	+0.4
PETK	Petropavlovsk-	85.84	346	P	P	21 42 14.0	-0.2
	comp=Z,52nm,0.9s,baz=157,slow=7.8,SNR=37						
HOPS	Hopland Field	85.84	40	P	P	21 42 15.7	+1.2
HOPS				IAmb	IAmb	21 42 17.3	
	comp=Z,44nm,1.1s						
GDXM	Geysers	85.86	40	P	P	21 42 16.3	+1.6
GDXM				IAmb	IAmb	21 42 33.6	
	comp=Z,19nm,1.0s						
GSI	Gunungsitoli	85.95	274	P	P	21 42 14.8	-0.9
	comp=Z,111nm,0.8s						
VES	Vestal, Richgr	85.97	44	P	P	21 42 16.3	+1.1
	baz=228,SNR=10						
EDW2	Edwards Air Fo	86.00	45	P	P	21 42 16.8	+1.3
	baz=228,SNR=12						
MT09	Talagante	86.01	127	IAmb	IAmb	21 42 18.0	
	comp=Z,40nm,1.2s						
KCPM	Cahto Peak	86.05	39	P	P	21 42 17.5	+1.8
KCPM				IAmb	IAmb	21 42 34.4	
	comp=Z,42nm,1.3s						
SWSC	Sam W. Stewart	86.12	48	P	P	21 42 17.7	+1.6
	baz=230						
PFO	Pinyon Flats O	86.13	47	LR	LR	22 13 30.1	
	comp=Z,160nm,20.5s,baz=230,slow=31						
PFO	Pinyon Flats O	86.13	47	P	P	21 42 18.0	+1.8
PFO				pmax	pmax		
	comp=Z,34nm,1.4s						
PFO	Pinyon Flats O	86.13	47	P	P	21 42 18.0	+1.8
PFO				IAmb	IAmb	21 42 35.1	
	comp=Z,34nm,1.4s						
PFO	Pinyon Flats O	86.13	47	P	P	21 42 17.8	+1.6
	baz=230,SNR=9.2						
TPFO	Pinon Flats	86.13	47	P	P	21 42 17.8	+1.6
	baz=230,SNR=8.3						
MT02	Curacav	86.20	126	IAmb	IAmb	21 42 20.5	
	comp=Z,17nm,0.7s						
ISA	Isabella, Lake	86.22	45	IAmb	IAmb	21 42 19.5	
	comp=Z,29nm,0.9s						
ISA	Isabella, Lake	86.22	45	P	P	21 42 18.3	+1.7
	baz=228,SNR=22						
BBRC	Big Bear Solar	86.26	47	P	P	21 42 18.8	+1.8
	baz=229						
NJ2	Nanjing	86.33	311	eP	P	21 42 17.0	0.0
NJ2				pmax	pmax		
	comp=Z,24nm,1.2s						
CHNA	Chernabura Isl	86.33	10	P	P	21 42 17.8	+1.3
	baz=196						
KMRM	Mail Ridge	86.36	38	P	P	21 42 19.0	+1.8
KMRM				IAmb	IAmb	21 42 36.1	
	comp=Z,35nm,1.1s						
MT05	Renca	86.40	127	P	P	21 42 19.3	+1.5
PEL	Peldehue	86.58	127	P	P	21 42 19.8	+1.2
PEL				pmax	pmax		
	comp=Z,62nm,1.3s						
PEL	Peldehue	86.58	127	P	P	21 42 19.8	+1.2
LRMC	Laurel Mtn Rad	86.58	45	P	P	21 42 20.0	+1.5
	baz=229,SNR=7.2						
RRX	Edison Barstow	86.61	46	P	P	21 42 19.6	+1.2
	baz=229						
BELC	Belle Mtn. Jos	86.67	47	P	P	21 42 20.9	+1.9
	baz=230,SNR=13						
CMB	Columbia Colle	86.69	42	P	P	21 42 20.0	+1.2
CMB				pmax	pmax		
	comp=Z,16nm,0.9s						
CMB	Columbia Colle	86.69	42	P	P	21 42 20.0	+1.2
CMB				IAmb	IAmb	21 42 21.1	
	comp=Z,16nm,0.9s						
SDPT	Sand Point	86.70	10	P	P	21 42 19.0	+0.7
	baz=195						
BC3	Big Chuckawall	86.80	48	P	P	21 42 21.7	+2.2
	baz=230,SNR=12						
GLA	Glamis	86.81	49	P	P	21 42 21.7	+2.2
	baz=230,SNR=6.5						
KHMM	Horse Mountain	86.82	38	P	P	21 42 21.0	+1.5
KHMM				IAmb	IAmb	21 42 22.3	
	comp=Z,19nm,0.9s						
O02D	Mt. Diablo Mer	86.83	39	P	P	21 42 21.4	+1.9
	baz=225,SNR=34						
VA03	San Esteban	86.88	126	IAmb	IAmb	21 42 38.5	
	comp=Z,70nm,1.9s						
HSIG		86.93	54	IAmb	IAmb	21 42 38.5	
	comp=Z,27nm,1.2s						
CWC	Cottonwood Cre	86.98	44	P	P	21 42 21.9	+1.5
	baz=228						
HEC	Hector,Ludlow	86.99	46	P	P	21 42 21.9	+1.5
	baz=230,SNR=5.9						
GSC	Goldstone, Bar	87.01	46	IAmb	IAmb	21 42 23.3	
	comp=Z,34nm,1.1s						
GSC	Goldstone, Bar	87.01	46	P	P	21 42 22.0	+1.6
	baz=229,SNR=19						
MPMC	Manual Prospec	87.08	45	P	P	21 42 22.6	+1.6
	baz=229,SNR=15						
OMMB	Old Mammoth Mi	87.21	43	P	P	21 42 23.2	+1.6
USRK	Ussuriysk Ar.	87.22	326	P	P	21 42 21.3	+0.2
	comp=Z,10nm,0.7s,baz=125,slow=4.4,SNR=24						
USA0B	Ussuriysk Arra	87.22	326	IAmb	IAmb	21 42 26.3	
	comp=Z,34nm,1.1s						
WDC	Whiskeytown Da	87.25	39	IAmb	IAmb	21 42 39.8	
	comp=Z,42nm,1.4s						
TPTI		87.27	275	P	P	21 42 20.8	-1.4
	comp=Z,18nm,0.8s						
TIN	Tinemaha, Big	87.30	44	P	P	21 42 24.0	+2.1
	baz=228						
IRM	Iron Mountain	87.31	48	P	P	21 42 24.1	+2.1
	baz=230,SNR=15						
MLAC	Mammoth, Mammo	87.32	43	P	P	21 42 23.5	+1.3
	baz=228						
GMRC	Granite Mounta	87.39	47	P	P	21 42 24.2	+1.8
	baz=230,SNR=5.8						
N02D	Trinity Center	87.44	38	P	P	21 42 24.1	+1.7
	baz=225,SNR=11						
O03E	Paynes Creek	87.45	39	P	P	21 42 23.3	+0.9
	baz=226,SNR=8.3						
214A	Organ Pipe Nat	87.45	50	P	P	21 42 24.5	+1.9
214A	Organ Pipe Nat	87.45	50	P	P	21 42 24.7	+2.1
	baz=232						
SPIA	Saint Paul Isl	87.47	4	P	P	21 42 23.5	+1.5
	baz=187						
TUQ	Turquoise Moun	87.64	46	P	P	21 42 25.2	+1.6
	baz=230						
M02C	Callahan	87.65	38	P	P	21 42 25.3	+1.9
	baz=225,SNR=11						
GWY	Greenwater Val	87.67	45	IAmb	IAmb	21 42 26.2	
	comp=Z,18nm,1.0s						
SHOC	Shoshone, Teco	87.72	46	P	P	21 42 25.4	+1.6
	baz=230						
FURC	Furnace Creek,	87.73	45	P	P	21 42 25.3	+1.5
	baz=229,SNR=5.5						
LCH	Last Change Ra	87.76	44	P	P	21 42 25.1	+1.0
GRAC	Grapevine Rang	87.78	44	P	P	21 42 25.5	+1.4
	baz=229						
L02E	Cave Junction	87.80	37	P	P	21 42 24.8	+0.8
	baz=225						
PNTR	Pine Nut	87.86	41	IAmb	IAmb	21 42 27.0	
	comp=Z,24nm,0.8s						
CO03	El Pedregal	87.87	125	P	P	21 42 25.9	+1.0
CO03				IAmb	IAmb	21 45 18.6	
	comp=Z,24nm,0.8s						
LHV	Little Huntoon	87.93	43	P	P	21 42 26.1	+1.5
LHV				IAmb	IAmb	21 42 27.4	
	comp=Z,19nm,0.9s						
CHGN	Chignik	87.93	11	P	P	21 42 25.0	+0.8
	baz=197						
YBH	Yreka Blue Hor	87.97	38	LR	LR	22 13 12.6	
	comp=Z,119nm,20.9s,baz=238,slow=30						
YBH	Yreka Blue Hor	87.97	38	P	P	21 42 26.3	+1.4
YBH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YBH	Yreka Blue Hor	87.97	38	P	P	21 42 26.3	+1.4
VCNR	Virginia City	87.97	41	P	P	21 42 26.3	+1.2
YERR	Yerington	87.99	42	P	P	21 42 26.2	+0.9
YERR				IAmb	IAmb	21 42 27.4	
	comp=Z,13nm,0.8s						
NEE2	Needles Airpor	88.04	47	P	P	21 42 27.1	+1.8
	baz=230						
PDMCI	Parker Dam,Lak	88.05	48	P	P	21 42 27.4	+2.1
	baz=231						
TYV	Tymovskoe	88.10	336	eP	P	21 42 28.3	+3.2
TYV				pmax	pmax		
	comp=Z,200nm,4.3s						
TYV				pmax	pmax		
	comp=Z,46nm,0.9s						
K02D	Willamette Mer	88.15	37	P	P	21 42 27.2	+1.5
	baz=224						
NVAR	Mina Array Bea	88.17	43	P	P	21 42 27.3	+1.2
	comp=Z,14nm,0.8s,baz=222,slow=8.2,SNR=93						
NVAR				PKKPbc	PKKPbc	22 00 11.2	-0.2
	comp=Z,1.2nm,0.6s,baz=111,slow=2.6,SNR=8.9						
NVAR				PKPPKP	P'P'df	22 08 18.7	+3.7
	comp=Z,0.4nm,0.4s,baz=72,slow=2.9,SNR=4.2						
NVAR				LR	LR	22 19 00.6	
	comp=Z,286nm,18.0s,baz=260,slow=34						
RYN	Ryan	88.17	42	P	P	21 42 27.0	+1.0
NV11	Mina Array Sit	88.25	43	P	P	21 42 27.1	+0.7
NV11				IAmb	IAmb	21 42 28.6	
	comp=Z,17nm,1.0s						
J01E	Myrtle Point	88.34	36	P	P	21 42 27.9	+1.4
	baz=224						
PAHR	Pah Rah Range	88.40	41	P	P	21 42 28.1	+1.0
PAHR				IAmb	IAmb	21 42 29.2	
	comp=Z,13nm,0.9s						
TPNV	Topopah Spring	88.42	45	P	P	21 42 28.6	+1.3
TPNV				pmax	pmax		
	comp=Z,34nm,1.9s						
TPNV	Topopah Spring	88.42	45	P	P	21 42 28.6	+1.3
TPNV				IAmb	IAmb	21 42 46.0	
	comp=Z,34nm,1.9s						
TPNV	Topopah Spring	88.42	45	P	P	21 42 28.9	+1.6
	baz=230,SNR=10						
WHN	Wuhan	88.43	307	⇑P	P	21 42 27.8	+0.6
HUMO	Hull Mountain	88.45	37	P	P	21 42 29.1	+2.0
M04C	Macdoel	88.47	38	P	P	21 42 28.6	+1.3
	baz=226,SNR=7.7						
L04D	Klamath Falls	88.52	38	P	P	21 42 28.5	+0.9
	baz=226,SNR=5.2						
Y14A	Wickenburg	88.56	49	P	P	21 42 29.7	+1.9
Y14A				IAmb	IAmb	21 42 30.9	
	comp=Z,26nm,1.1s						
TPH	Tonopah	88.57	43	P	P	21 42 29.3	+1.3
TPH				pmax	pmax		
	comp=Z,97nm,0.9s						
TPH	Tonopah	88.57	43	P	P	21 42 29.3	+1.3
MDJ	Mudanjiang	88.69	325	P	P	21 42 31.0	+2.9
MDJ				pmax	pmax		
	comp=Z,13nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,190nm,5.9s						
KVN	Kaiserville	88.70	42	IAmb	IAmb	21 42 30.6	
	comp=Z,14nm,0.9s						
W13A	Hualapai Mount	88.71	47	IAmb	IAmb	21 42 47.8	
	comp=Z,31nm,1.3s						
SHPR	Sheep Range	88.80	46	P	P	21 42 31.0	+1.9
SHPR				IAmb	IAmb	21 42 32.3	
	comp=Z,15nm,1.1s						
ZON	Zonda	88.88	126	P	P	21 42 31.0	+1.3
ZON				pmax	pmax		
	comp=Z,62nm,1.8s						
ZON	Zonda	88.88	126	P	P	21 42 31.0	+1.3
LCO	Las Campanas	88.89	123	P	P	21 42 31.5	+1.5
LCO				pmax	pmax		
	comp=Z,11nm,0.8s						
LCO	Las Campanas	88.89	123	P	P	21 42 31.4	+1.5
LCO				IAmb	IAmb	21 45 33.1	
	comp=Z,11nm,0.8s						
I03D	Drain, OR	89.02	36	P	P	21 42 31.1	+1.4
	baz=225						
TUC	Tucson	89.03	51	P	P	21 42 32.6	+2.5
TUC				pmax	pmax		
	comp=Z,65nm,1.6s						
TUC	Tucson	89.03	51	P	P	21 42 32.6	+2.5
TUC	Tucson	89.03	51	P	P	21 42 32.5	+2.3
	baz=233						
K04D	Chiloquin, OR	89.10	38	P	P	21 42 31.0	+0.7
	baz=226						
MOD	Modoc Plateau	89.38	39	IAmb	IAmb	21 42 33.7	
	comp=Z,12nm,0.8s						
PRN	Pahroc Range	89.45	45	IAmb	IAmb	21 42 35.4	
	comp=Z,32nm,1.3s						
319A	Douglas	89.49	53	IAmb	IAmb	21 42 51.7	
	comp=Z,45nm,1.4s						
I04A	Tendick Farm,	89.57	37	P	P	21 42 33.3	+0.9
	baz=225,SNR=7.6						
K05A	Summer Lake	89.63	38	IAmb	IAmb	21 42 35.5	
	comp=Z,23nm,1.0s						
OHAK	Old Harbor	89.72	13	P	P	21 42 33.6	+1.0
	baz=201						
R11A	Troy Canyon, C	89.73	44	P	P	21 42 34.5	+1.1
	baz=230						
J05D	Fort Rock, OR	89.83	38	P	P	21 42 34.8	+1.0
	baz=226,SNR=9.0						
X16A	Lo Mia Camp, P	89.87	49	IAmb	IAmb	21 42 37.7	
	comp=Z,31nm,1.0s						
H04D	Lebanon	89.92	36	P	P	21 42 35.2	+1.3
	baz=225						
TIA	Tai'an	90.05	313	⇑P	P	21 42 35.0	+0.3
TIA				pmax	pmax		
	comp=Z,23nm,1.1s						
BMN	Battle Mountai	90.12	42	IAmb	IAmb	21 42 37.8	
	comp=Z,25nm,1.3s						
G03D	McMinnville, O	90.14	35	P	P	21 42 36.3	+1.4
	baz=225						
CN2	Changchun	90.21	323	eP	P	21 42 33.5	-1.8
CN2				eSS	SS	21 59 26.8	-1.0
CN2				pmax	pmax		
	comp=Z,40nm,1.2s						
CN2				LR	LR		
	comp=Z,300nm,20.0s						
CN2				LR	LR		
	comp=Z,190nm,20.0s						
CN2				LR	LR		
	comp=Z,340nm,22.0s						
H04A	Detroit Lake	90.31	36	IAmb	IAmb	21 42 37.7	

	comp=Z,24nm,0.9s						
GRNR	Gornyy	90.33	333	⇑iP	P	21 42 36.7	+1.0
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,90nm,17.0s						
PINE	Pine Mountain	90.34	37	IAmb	IAmb	21 42 38.8	
	comp=Z,33nm,1.0s						
KDAK	Kodiak Island	90.38	13	P	P	21 42 36.7	+1.0
	comp=Z,9.3nm,0.9s,baz=224,slow=5.7,SNR=2.6						
KDAK	Kodiak Island	90.38	13	P	P	21 42 36.7	+1.0
KDAK				pmax	pmax		
	comp=Z,173nm,1.9s						
I05D	Terrebonne, OR	90.51	37	P	P	21 42 38.2	+1.4
	baz=226						
U15A	North Rim	90.55	47	IAmb	IAmb	21 42 40.7	
	comp=Z,26nm,1.1s						
CCUT	Cedar City	90.58	46	IAmb	IAmb	21 42 56.6	
	comp=Z,28nm,1.6s						
KNB	Kanab	90.58	47	IAmb	IAmb	21 42 40.6	
	comp=Z,20nm,1.0s						
WUAZ	Wupatki	90.58	48	IAmb	IAmb	21 42 40.6	
	comp=Z,23nm,1.1s						
WUAZ	Wupatki	90.58	48	P	P	21 42 39.6	+2.1
	baz=232						
SPR3	Spring Creek 3	90.90	44	IAmb	IAmb	21 42 57.0	
	comp=Z,24nm,1.7s						
X18A	Snowflake	90.92	50	IAmb	IAmb	21 42 42.3	
	comp=Z,19nm,1.1s						
SLVN	Son La	91.01	294	IAmb	IAmb	21 42 43.6	
	comp=Z,30nm,1.5s						
F04A	Amboy	91.07	35	IAmb	IAmb	21 42 41.3	
	comp=Z,25nm,0.8s						
KLR	Kul'dur	91.09	330	ceP	P	21 42 39.4	+0.2
KLR				pmax	pmax		
	comp=Z,23nm,0.9s						
G05D	Wamic, OR	91.14	36	P	P	21 42 41.0	+1.3
	baz=226						
121A	Cookes Peak, D	91.20	53	IAmb	IAmb	21 43 00.5	
	comp=Z,44nm,1.8s						
121A	Cookes Peak, D	91.20	53	P	P	21 42 41.7	+1.3
	baz=234						
Q19K	Cape Douglas,	91.25	12	P	P	21 42 40.1	+0.3
	baz=201						
SRDT	SRDT	91.26	286	P	P	21 42 40.9	+0.1
	comp=Z,26nm,1.5s						
I07A	Izee	91.29	38	IAmb	IAmb	21 42 42.8	
	comp=Z,18nm,1.0s						
J08A	Circle Bar Ran	91.36	39	IAmb	IAmb	21 42 43.1	
	comp=Z,17nm,1.0s						
P18K	Big Mountain,	91.41	11	P	P	21 42 40.8	+0.2
P18K	Big Mountain,	91.41	11	P	P	21 42 40.5	0.0
	baz=200						
W18A	Petrified Fore	91.41	50	IAmb	IAmb	21 42 44.4	
	comp=Z,23nm,1.2s						
W18A					sP	21 42 52.2	+1.5
W18A	Petrified Fore	91.41	50	P	P	21 42 43.0	+1.7
	baz=233						
ELK	Elko	91.47	42	LR	LR	22 21 31.7	
	comp=Z,259nm,18.2s,baz=256,slow=34						
MTPU	Mount Pierson	91.61	46	IAmb	IAmb	21 42 46.0	
	comp=Z,20nm,1.2s						
GYA	Guiyang	91.64	300	⇓P	P	21 42 44.5	+2.0
GYA				pmax	pmax		
	comp=Z,20nm,1.5s						
O18K	Koktuh Hills	91.85	11	P	P	21 42 42.7	+0.2
	baz=200						
D03D	Eldon	91.87	34	P	P	21 42 44.1	+1.2
	baz=225						
MSU	Marysvale	91.91	46		sP	21 42 53.8	+0.6
O19K	Port Alsworth	92.32	12	P	P	21 42 44.8	+0.2
	baz=200						
G08A	Pilot Rock	92.39	37	IAmb	IAmb	21 42 47.7	
	comp=Z,25nm,1.1s						
MNTX	Cornudas Mount	92.39	54	P	P	21 42 46.7	+0.9
	baz=236						
BRSE	Bradley Lake S	92.57	13	P	P	21 42 46.3	+0.5
	baz=203						
CMIG	Matias Romero	92.65	72	LR	LR	22 18 16.8	
	comp=Z,37nm,18.1s,baz=241,slow=32						
E07A	Sunnyside	92.79	36	IAmb	IAmb	21 43 05.4	
	comp=Z,31nm,1.5s						
HAWA	Hanford	92.84	36	IAmb	IAmb	21 42 52.2	
	comp=Z,10.0nm,0.8s						
MFID	Camas Ranch	92.85	40	IAmb	IAmb	21 42 49.8	
	comp=Z,15nm,0.9s						
N19K	Bonanza Creek	92.88	11	P	P	21 42 46.9	-0.5
	baz=200						
TMUT	Trail Mountain	92.98	46	IAmb	IAmb	21 42 51.4	
	comp=Z,20nm,1.3s						
BJI	Beijing	93.00	315	P	P	21 42 49.5	+1.2
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SRU	San Rafael Swe	93.30	46	IAmb	IAmb	21 43 08.1	
	comp=Z,15nm,1.2s						
MA2	Magadan	93.32	345	deP	P	21 42 48.8	-0.5
MA2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MA2	Magadan	93.32	345	P	P	21 42 48.8	-0.5
MA2				IAmb	IAmb	21 42 53.2	
	comp=Z,10.0nm,0.8s						
NNA	Nana	93.32	106	LR	LR	22 15 08.0	
	comp=Z,169nm,21.4s,baz=222,slow=29						
ANMO	Albuquerque	93.49	51	LR	LR	22 21 58.8	
	comp=Z,120nm,18.1s,baz=258,slow=34						
ANMO	Albuquerque	93.49	51	P	P	21 42 52.4	+1.4
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANMO	Albuquerque	93.49	51	P	P	21 42 52.4	+1.4
ANMO	Albuquerque	93.49	51	P	P	21 42 52.3	+1.3
	baz=235						
CMAR	Chiang Mai Arr	93.50	289	P	P	21 42 51.4	+0.3
	comp=Z,3.8nm,0.8s,baz=138,slow=4.2,SNR=18						
CMAR				PP	PP	21 46 34.0	-2.0
	comp=Z,0.7nm,0.8s,baz=132,slow=6.2,SNR=4.1						
CMAR				PKiKP	PKiKP	21 47 36.4	-0.8
	comp=Z,0.8nm,0.7s,baz=155,slow=0.8,SNR=6.3						
HVU	Hansel Valley	93.56	43	IAmb	IAmb	21 42 53.3	
	comp=Z,18nm,1.0s						
D08A	Wollman Farm,	93.60	36	IAmb	IAmb	21 42 54.0	
	comp=Z,12nm,0.7s						
SPCR	Spurr Chakacha	93.64	12	P	P	21 42 50.2	-0.6
	baz=202						
CMMT	Chiang Mai	93.68	290	P	P	21 42 51.7	-0.3
	comp=Z,8.8nm,0.8s						
CHTO	Chiang Mai	93.68	290	P	P	21 42 54.3	+2.3
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CHTO	Chiang Mai	93.68	290	P	P	21 42 52.0	0.0
CHTO	Chiang Mai	93.68	290	P	P	21 42 54.3	+2.3
HLID	Hailey	93.73	41	IAmb	IAmb	21 42 54.2	
	comp=Z,10nm,0.9s						
HLID	Hailey	93.73	41	P	P	21 42 53.1	+1.2
	baz=231						
F10A	Beach Ranch, E	93.75	38	IAmb	IAmb	21 42 53.0	
	comp=Z,12nm,0.8s						
PLID	Pearl Lake	93.83	39	IAmb	IAmb	21 42 54.1	
	comp=Z,12nm,0.9s						
LVC	Limon Verde	93.84	119	LR	LR	22 16 22.6	
	comp=Z,197nm,21.9s,baz=208,slow=30						
GAMB	Gambell	93.98	3	P	P	21 42 53.2	+1.0
	baz=185						
L19K	White Mountain	94.11	11	P	P	21 42 53.8	+0.9
	baz=200						
XAN	Xi'an	94.20	307	P	P	21 42 56.3	+2.2
XAN				pmax	pmax		
	comp=Z,12nm,1.5s						
XAN				LR	LR		
	comp=Z,450nm,19.9s						
XAN				LR	LR		
	comp=Z,400nm,18.6s						
XAN				LR	LR		
	comp=Z,780nm,22.7s						
C09A	Chrisman Ranch	94.42	36	IAmb	IAmb	21 42 56.2	
	comp=Z,6.5nm,0.6s						
ATAH	Atahualpa	94.54	101	LR	LR	22 15 04.7	
	comp=Z,138nm,21.9s,baz=245,slow=29						
L20K	Farewell, AK	94.54	11	P	P	21 42 54.9	0.0
	baz=201						
KNK	Knik Glacier	94.56	14	P	P	21 42 55.4	+0.5
	baz=205						
PMR	Palmer	94.58	13	P	P	21 42 55.4	+0.4
	baz=205						
TTA	Tatalina	94.64	10	IAmb	IAmb	21 43 13.3	
	comp=Z,22nm,1.2s						
TTA	Tatalina	94.64	10	P	P	21 42 56.8	+1.4
	baz=199						
S22A	4UR Ranch, Cre	94.85	49	P	P	21 42 58.3	+1.0
	baz=235						
PB11	IPOC Station P	94.89	116	P	P	21 42 59.8	+2.0
PB11				IAmb	IAmb	21 43 16.2	
	comp=Z,11nm,0.9s						
SML	Sawmill	94.94	14	P	P	21 42 58.4	+1.6
	baz=205						
MESA	MESA	94.96	17	P	P	21 42 57.1	+0.1
	baz=211						
BMRM	Bremner River	95.00	16	P	P	21 42 58.0	+0.9
	baz=208						
CUT	Chulitna	95.11	13	P	P	21 42 57.6	+0.2
	baz=204						
AHID	Auburn Hatcher	95.15	43	IAmb	IAmb	21 43 16.4	
	comp=Z,12nm,1.1s						
ANM	Nome	95.16	5	P	P	21 42 57.9	+0.3
	baz=191						
KLU	Klutina	95.17	15	P	P	21 42 59.1	+1.2
	baz=207						
NEW	Newport	95.31	36	LR	LR	22 21 28.2	
	comp=Z,160nm,18.1s,baz=232,slow=33						
NEW	Newport	95.31	36	P	P	21 42 59.0	+0.2
	baz=229						
O20A	White River Ci	95.32	46	P	P	21 42 59.9	+0.6
	baz=234						
K20K	Telida	95.34	11	P	P	21 42 59.0	+0.5
	baz=201						
MSTX	Muleshoe	95.48	54	IAmb	IAmb	21 43 17.6	
	comp=Z,15nm,1.3s						
MSTX	Muleshoe	95.48	54	P	P	21 42 59.7	-0.3
	baz=237						
N25K	Chitina, Valde	95.56	15	P	P	21 43 00.5	+0.8
	baz=208						
SDCO	Great Sand Dun	95.71	49	IAmb	IAmb	21 45 32.3	
	comp=Z,17nm,0.8s						
SDCO	Great Sand Dun	95.71	49	P	P	21 43 01.6	+0.4
	baz=236						
CAST	Castle Rocks	95.72	11	IAmb	IAmb	21 43 04.3	
	comp=Z,12nm,0.8s						
CAST	Castle Rocks	95.72	11	P	P	21 43 00.3	+0.1
	baz=202						
JCT	Junction City	95.74	58	P	P	21 43 01.4	+0.2
	baz=238						
WAT6	Susitna Watana	95.76	14	P	P	21 43 01.3	+0.6
	baz=206						
SNOW	Snow King Moun	95.77	42	IAmb	IAmb	21 43 03.4	
	comp=Z,23nm,1.3s						
TNA	Tin City	95.96	4	P	P	21 43 01.7	+0.5
	baz=189						
SEY	Seymchan	96.00	347	⇑iP	P	21 43 01.1	-0.4
BW06	Boulder Array	96.06	43	P	P	21 43 03.4	+0.7
	baz=234						
PDAR	Pinedale Array	96.06	43	P	P	21 43 02.7	0.0
	comp=Z,1.8nm,0.8s,baz=207,slow=3.5,SNR=13						
PDAR				PKKPbc	PKKPbc	21 59 49.4	-1.7
	comp=Z,1.9nm,0.7s,baz=75,slow=4.3,SNR=18						
PDAR				LR	LR	22 24 04.6	
	comp=Z,154nm,18.1s,baz=250,slow=34						
TRF	Thorofare Moun	96.07	12	P	P	21 43 01.8	-0.3
	baz=204						
J20K	Nowinta River	96.10	10	P	P	21 43 02.5	+0.5
J20K				IAmb	IAmb	21 43 03.2	
	comp=Z,32nm,1.6s						
J20K	Nowinta River	96.10	10	P	P	21 43 02.1	+0.2
	baz=201						
FLWY	Flagg Ranch	96.17	42	IAmb	IAmb	21 43 05.5	
	comp=Z,10nm,1.0s						
CD2	Chengdu	96.18	302	P	P	21 43 04.0	+0.8
CD2				S	S	21 54 23.0	+1.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,380nm,12.7s						
CD2				LR	LR		
	comp=Z,370nm,19.1s						
RND	Reindeer	96.29	13	IAmb	IAmb	21 43 19.7	
	comp=Z,20nm,1.1s						
ZEA	Zeya	96.30	331	eP	P	21 43 02.7	-0.4
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=Z,200nm,16.0s						
HHC	Hu-ho-hao-te	96.31	314	eP	P	21 43 05.8	+2.2
HHC				S	S	21 54 19.3	-2.7
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,6.9s						
HHC				LR	LR		
	comp=Z,250nm,17.8s						
HHC				LR	LR		
	comp=Z,270nm,16.5s						
HHC				LR	LR		
	comp=Z,320nm,17.8s						
YMR	Madison River	96.37	41	IAmb	IAmb	21 43 22.7	
	comp=Z,22nm,1.6s						
H17A	Grant Village	96.43	42	IAmb	IAmb	21 43 23.4	
	comp=Z,16nm,1.6s						
H17A	Grant Village	96.43	42	P	P	21 43 06.0	+1.7
	baz=233						
BOZ	Bozeman (W)	96.56	40	P	P	21 43 05.9	+1.2
	baz=233						
MCK	McKinley	96.57	13	P	P	21 43 04.9	+0.8
	baz=205						
PAX	Paxson	96.58	14	P	P	21 43 04.7	+0.4
	baz=208						
M27K	Edge Creek, AK	96.86	16	P	P	21 43 07.3	+1.7
	baz=211						
BTO	Baotou	97.14	313	eP	Pdif	21 43 11.5	+4.0
BTO				S	S	21 54 34.0	+4.9
BTO				LR	LR		
	comp=Z,1µm,20.0s						
BTO				LR	LR		
	comp=Z,1µm,20.0s						
N23A	Red Feather La	97.19	47	P	Pdif	21 43 09.3	+1.3
	baz=236						
WRH	Wood River Hil	97.40	13	IAmb	IAmb	21 43 25.1	
	comp=Z,24nm,1.3s						
RLMT	Red Lodge	97.61	42	P	Pdif	21 43 11.3	+1.7
	baz=234						
JTS	Las Juntas de	97.63	83	LR	LR	22 17 49.9	
	comp=Z,128nm,20.2s,slow=30						
H21K	Melozitna Rive	97.69	10	P	Pdif	21 43 10.6	+1.4
	baz=202						
N31M	Braeburn, Yuko	97.71	19	P	Pdif	21 43 11.1	+1.7
	baz=216						
I23K	Minto, Yukon-K	97.79	12	P	Pdif	21 43 11.8	+2.2
	baz=205						
SCRK	Sand Creek	97.79	14	P	Pdif	21 43 10.8	+1.0
	baz=209						
TCOL	CIGO, UAF Yank	97.81	12	P	Pdif	21 43 11.8	+2.1
	baz=206						
COLA	College	97.81	12	⇓eP	P	21 43 09.6	0.0
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
COLA	College	97.81	12	P	Pdif	21 43 11.6	+2.0
	baz=206						
K22A	Casper	97.82	45	P	Pdif	21 43 11.5	+0.9
	baz=236						
ILAR	Eielson Array	97.90	13	P	P	21 43 09.7	-0.4
	comp=Z,2.7nm,0.8s,baz=223,slow=5.5,SNR=26						
ILAR				PKiKP	PKiKP	21 47 42.1	-1.4
	comp=Z,0.7nm,0.8s,baz=210,slow=5.2,SNR=2.1						
LPAZ	La Paz	98.05	114	P	Pdif	21 43 13.6	+0.8
	comp=Z,1.1nm,0.6s,baz=348,slow=4.0,SNR=5.3						
POKR	Poker Plat Res	98.11	13	P	Pdif	21 43 13.8	+2.8
	baz=206						
J26L	Joseph Creek	98.34	14	P	Pdif	21 43 12.9	+0.7
	baz=210						
LZH	Lanzhou	98.81	307	eP	Pdif	21 43 20.3	+5.2
LZH				pP	sP	21 43 24.5	-0.3
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
LZH				LR	LR		
	comp=Z,430nm,17.6s						
LZH				LR	LR		
	comp=Z,460nm,17.3s						
LZH				LR	LR		
	comp=Z,410nm,19.5s						
BILL	Bilibino	98.85	354	eP	P	21 43 12.6	-1.7
BILL				e		21 47 14.2	
BILL				pmax	pmax		
	comp=Z,21nm,3.5s						
BILL				MLR	MLR		
	comp=Z,136nm,19.0s						
BILL	Bilibino	98.85	354		P	21 43 13.9	-0.4
COLD	Coldfoot	99.55	11	P	Pdif	21 43 18.8	+1.4
	baz=204						
RSSD	Black Hills	100.14	45	P	Pdif	21 43 21.9	+1.0
RSSD	Black Hills	100.14	45	Pdif	Pdif	21 43 21.9	+1.0
RSSD	Black Hills	100.14	45	P	Pdif	21 43 20.9	0.0
	baz=238						
YAK	Yakutsk	101.29	338	eP	Pdif	21 43 24.0	-1.2
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YAK	Yakutsk	101.29	338	Pdif	Pdif	21 43 26.1	+0.9
TUL1	Leonard	101.39	55	P	Pdif	21 43 26.9	+0.6
	baz=241						
ULN	Ulaanbaatar	102.85	318	⇑eP	Pdif	21 43 30.8	-2.0
ULN				pmax	pmax		
	comp=Z,2.0nm,1.3s						
SONM	Songino Array	103.21	318	Pdiff	Pdif	21 43 33.5	-0.9
	comp=Z,0.6nm,0.6s,baz=123,slow=2.0,SNR=6.7						
SONM				PKiKP	PKiKP	21 47 53.0	-0.7
	comp=Z,1.0nm,0.6s,baz=122,slow=2.9,SNR=7.9						
GTA	Gaotai	103.23	308	eP	PKiKP	21 47 53.8	-0.2
GTA				pP	PP	21 47 59.3	+8.9
GTA				sP		21 48 01.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
INK	Inuvik	103.75	16	Pdiff	Pdif	21 43 36.9	+0.9
	comp=Z,0.7nm,0.5s,baz=311,slow=4.0,SNR=2.2						
INK				PKiKP	PP	21 47 51.5	-1.8
	comp=Z,1.5nm,0.8s,baz=208,slow=4.3,SNR=4.2						
YKA	Yellowknife Ar	105.40	25	Pdiff	Pdif	21 43 44.0	+0.5
	comp=Z,0.2nm,0.7s,baz=241,slow=4.6,SNR=3.7						
YKA				PKiKP	PKiKP	21 47 56.5	-0.5
	comp=Z,0.8nm,0.6s,baz=257,slow=1.7,SNR=19						
YKA				PKKPbc	PKKPbc	21 59 20.1	-4.1
	comp=Z,4.5nm,0.7s,baz=39,slow=3.1,SNR=19						
YKA				PKKPab	PKKPab	21 59 39.5	+2.2
	comp=Z,2.7nm,0.9s,baz=45,slow=4.5,SNR=9.8						
ULM	Lac du Bonnet	107.99	42	PKKPab	PKKPab	21 59 27.3	+0.9
	comp=Z,3.8nm,0.8s,baz=96,slow=3.5,SNR=3.8						
PKI	Pulchoki	108.75	291	eP	PKiKP	21 48 04.6	-0.2
	comp=Z,15nm,0.7s						
PKIN	Phulchoki	108.77	291	eP	PKiKP	21 48 04.6	-0.2
	comp=Z,13nm,0.7s						
KKN	Kakani	108.95	292	eP	PKiKP	21 48 04.7	-0.4
WCI	Wyandotte Cave	109.21	56	P	PKiKP	21 48 04.0	-0.9
	baz=246						
GKN	Gorkha	109.55	292	eP	PKiKP	21 48 05.1	-1.0
KOLN	Koldanda	110.29	291	eP	PKiKP	21 48 04.2	-3.4
DANN	Dangsing	110.40	292	eP	PKiKP	21 48 06.4	-1.5
PYUN	Piuthan	110.92	291	eP	PKiKP	21 48 05.8	-3.0
	comp=Z,9.3nm,0.7s						
WMQ	Urumqi	113.31	308	ePKP	PKiKP	21 48 12.3	-0.3
WMQ				LR	LR		
	comp=Z,870nm,8.7s						
WMQ				LR	LR		
	comp=Z,450nm,11.7s						
WMQ				LR	LR		
	comp=Z,880nm,21.3s						
DGZ	Jazzator, Alta	115.39	314	d iPKIKP	PKPdf	21 48 15.9	-0.6
O56A	Blue Knob Stat	115.54	57	P	PKPdf	21 48 16.6	-0.4
	baz=251						
RES	Resolute Bay	117.21	17	PKP	PKPdf	21 48 18.0	-1.1
	comp=Z,4.7nm,0.8s,baz=280,slow=3.1,SNR=18						
BOSA	Boshof	117.30	203	PKP	PKiKP	21 48 21.2	+0.2
	comp=Z,11nm,0.9s,baz=184,slow=1.2,SNR=17						
BOSA	Boshof	117.30	203	PKIKP	PKiKP	21 48 22.0	+1.0
BOSA	Boshof	117.30	203	i P	PKiKP	21 48 22.1	+1.1
BOSA	Boshof	117.30	203	i P	PKiKP	21 48 22.1	+1.1
BOSA	Boshof	117.30	203	PKPdf	PKiKP	21 48 21.9	+1.0
HUMP	Col San Antoni	117.64	84		PKiKP	21 48 21.7	+0.1
MK31	Makanchi Array	117.85	310	c iPKIKP	PKPdf	21 48 19.9	-1.3
MKAR	Makanchi Array	117.85	310	PKP	PKPdf	21 48 20.1	-1.2
	comp=Z,10.0nm,0.6s,baz=153,slow=0.7,SNR=122						
MKAR				PKKPbc	PKKPbc	21 58 42.5	+0.1
	comp=Z,0.3nm,0.5s,baz=271,slow=4.6,SNR=4.1						
BINY	Binghamton	117.98	55	P	PKPdf	21 48 21.2	-0.4
	baz=253						
MAKZ	Makanchi	118.06	310	PKIKP	PKPdf	21 48 20.5	-1.1
MAKZ	Makanchi	118.06	310	PKPdf	PKPdf	21 48 20.5	-1.1
ZALV	Zalesovo Beam	118.10	318	PKP	PKPdf	21 48 20.0	-1.4
	comp=Z,7.7nm,0.6s,baz=149,slow=1.1,SNR=44						
PAL	Palisades	119.14	57	P	PKPdf	21 48 23.7	-0.1
	baz=254						
LONY	Lake Ozonia	119.62	53	P	PKPdf	21 48 24.1	-0.6
	baz=255						
NRIK	Noril'sk	119.68	336	PKP	PKPdf	21 48 23.0	-1.0
	comp=Z,14nm,0.7s,baz=100,slow=2.6,SNR=25						
NRIK	Noril'sk	119.68	336	c iPKIKP	PKPdf	21 48 23.2	-0.8
NRIK	Noril'sk	119.68	336	PKPdf	PKPdf	21 48 23.5	-0.5
EUNU	Eureka	119.98	12		PKPdf	21 48 24.0	-0.5
KDJ	Kajisay	120.15	304	PKIKP	PKPdf	21 48 25.2	-0.8
KDJ	Kajisay	120.15	304	PKPdf	PKPdf	21 48 25.2	-0.8
KSH	Kashi	120.33	301	PKP	PKiKP	21 48 27.3	+0.9
KSH				SS	SS	22 06 22.8	+2.5
KSH				LR	LR		
	comp=Z,370nm,11.2s						
KSH				LR	LR		
	comp=Z,210nm,10.1s						
KSH				LR	LR		
	comp=Z,290nm,10.5s						
L61B	Northampton	120.41	56	P	PKPdf	21 48 26.2	0.0
	baz=255						
LBTB	Lobatse	120.48	205	PKIKP	PKiKP	21 48 28.0	+0.7
LBTB	Lobatse	120.48	205	i P	PKiKP	21 48 28.1	+0.8
LBTB	Lobatse	120.48	205	i P	PKiKP	21 48 28.1	+0.8
LBTB	Lobatse	120.48	205	PKPdf	PKiKP	21 48 28.0	+0.7
NIL	Nilore	120.72	293	PKIKP	PKPdf	21 48 26.3	-0.8
NIL	Nilore	120.72	293	PKPdf	PKPdf	21 48 26.3	-0.8
ULHL	Ulahol	120.85	304	P	PKPdf	21 48 27.4	0.0
	SNR=17						
KURK	Kurchatov	121.12	314	c iPKIKP	PKPdf	21 48 25.8	-1.5
KURK				pmax	pmax		
	comp=Z,41nm,0.7s						
KURK	Kurchatov	121.12	314		PKKPab	21 58 30.4	+1.5
KURK	Kurchatov	121.12	314	PKPdf	PKPdf	21 48 26.2	-1.1
KURBB	Kurchatov Arra	121.16	314	PKP	PKPdf	21 48 26.5	-0.9
	comp=Z,39nm,0.7s,baz=106,slow=1.8,SNR=142						
KURBB				PKKPbc	PKKPbc	21 58 30.4	+0.1
	comp=Z,1.0nm,0.2s,baz=292,slow=4.8,SNR=4.1						
LBNH	Lisbon	121.38	54	P	PKPdf	21 48 28.0	-0.1
	baz=257						
TKM2	Tokmak 2	121.48	304	P	PKPdf	21 48 28.1	-0.5
	SNR=9.4						
KBK	Karagaybulak	121.88	304	P	PKPdf	21 48 28.8	-0.5
	SNR=18						
UCH	Uchtor	122.09	303	P	PKPdf	21 48 29.8	-0.2
	SNR=52						
CHMS	Chumysh	122.10	304	P	PKPdf	21 48 29.1	-0.5
	SNR=5.5						
AAK	Ala-Archa	122.20	304	i PKPdf		21 48 28.6	
	SNR=37						
AAK	Ala-Archa	122.20	304	PKP	PKPdf	21 48 29.3	-0.6
	comp=Z,15nm,0.6s,baz=158,slow=4.8,SNR=63						
AAK	Ala-Archa	122.20	304	P	PKPdf	21 48 29.5	-0.5
	SNR=18						
AAK	Ala-Archa	122.20	304	i PKPdf	PKPdf	21 48 28.6	-1.2
	SNR=37						
AAK	Ala-Archa	122.20	304	c iPKIKP	PKPdf	21 48 29.1	-0.8
AAK				pmax	pmax		
	comp=Z,55nm,0.8s						
AAK	Ala-Archa	122.20	304	PKPdf	PKPdf	21 48 29.4	-0.5
USP	Ospenovka	122.34	305	P	PKPdf	21 48 29.4	-0.5
	SNR=32						
AML	Almayashu	122.66	303	i PKPdf		21 48 30.9	
	SNR=59						
AML	Almayashu	122.66	303	P	PKPdf	21 48 30.8	-0.3
	SNR=59						
AML	Almayashu	122.66	303	i PKPdf	PKPdf	21 48 30.9	-0.2
	SNR=59						
EKS2	Erkin-Say	122.72	304	P	PKPdf	21 48 30.6	-0.2
	SNR=24						
PKME	Peaks-Kenny Pk	123.43	53	P	PKPdf	21 48 31.9	-0.1
	baz=259						
MATP	Matopo	123.46	210	i P	PKPdf	21 48 33.1	+0.1
MATP	Matopo	123.46	210	i P	PKPdf	21 48 33.1	+0.1
TULEG	Thule	123.75	15	i P	PKPdf	21 48 31.0	-0.6
TULEG	Thule	123.75	15		PKPdf	21 48 31.3	-0.3
KBL	Kabul	124.32	293	PKIKP	PKPdf	21 48 33.5	-0.8
KBL	Kabul	124.32	293	PKPdf	PKPdf	21 48 33.5	-0.8
G65A	Princeton	124.62	54		PKiKP	21 48 34.4	-0.1
FRB	Frobisher Bay	125.32	31	PKP	PKPdf	21 48 34.2	-0.7
	comp=Z,8.7nm,0.8s,baz=291,slow=2.5,SNR=16						
SCHQ	Schefferville	126.17	42	PKP	PKPdf	21 48 36.2	-0.7
	comp=Z,14nm,0.8s,baz=305,slow=1.4,SNR=13						
SCHQ	Schefferville	126.17	42	PKPdf	PKPdf	21 48 36.6	-0.3
BVAR	Borovoye Array	126.48	316	PKP	PKPdf	21 48 37.2	-0.4
	comp=Z,32nm,0.6s,baz=187,slow=2.7,SNR=159						
BRVK	Borovoye	126.54	316	c iPKIKP	PKPdf	21 48 36.7	-0.9

BRVK				pmax	pmax		
	comp=Z,38nm,0.8s						
BRVK	Borovoye	126.54	316	PKPdf	PKPdf	21 48 36.3	-1.3
LMN	Caledonia Moun	126.64	53	PKPdf	PKPdf	21 48 38.0	-0.1
NEEM	North Greenlan	127.20	13	iP	PKPdf	21 48 38.3	-0.4
UPNV	Upernavik	128.03	19	iP	PKPdf	21 48 39.9	0.0
ILULI	Ilulissat	130.92	22	iP	PKPdf	21 48 45.9	+0.4
SOHO	SOHO	131.61	276	iPKPdf		21 48 47.5	
	SNR=7.5						
SOHO	SOHO	131.61	276	iPKPdf	PKPdf	21 48 47.5	-0.7
	SNR=7.5						
SPA0	Spitsbergen Ar	131.71	356	ePKPdf	PKPdf	21 48 46.8	0.0
SPITS	Spitsbergen Ar	131.71	356	PKP	PKPdf	21 48 46.6	-0.3
	comp=Z,27nm,0.7s,baz=141,slow=5.5,SNR=9.0						
SFJD	Kangerlussuaq	131.96	25	PKP	PKPdf	21 48 47.6	+0.1
	comp=Z,8.0nm,0.6s,baz=301,slow=1.0,SNR=6.7						
SFJD	Kangerlussuaq	131.96	25	eP	PKPdf	21 48 47.9	+0.4
SVE	Sverdlovsk	131.96	321	ePKIKP	PKPdf	21 48 47.5	-0.3
SVE				pmax	pmax		
	comp=Z,29nm,1.0s						
UOSS	Minazif	132.17	277	PKPdf	PKPdf	21 48 48.3	-1.0
UOSS	Minazif	132.17	277	PKPdf	PKPdf	21 48 48.6	-0.7
UOSS	Minazif	132.17	277	PKPdf		21 48 48.3	
HATD	Hatta, Dubai	132.19	277	iPKPdf		21 48 48.5	
	SNR=8.0						
HATD	Hatta, Dubai	132.19	277	iPKPdf	PKPdf	21 48 48.5	-0.8
	SNR=8.0						
ASHO	Ashiyiah	132.21	277	iPKiKP	PKiKP	21 48 50.0	-0.5
	SNR=7.0						
ASHO	Ashiyiah	132.21	277	iPKiKP		21 48 50.0	
	SNR=7.0						
ALNE	Al Ain	132.26	276	PKPdf	PKPdf	21 48 48.9	-0.5
ALNE	Al Ain	132.26	276	PKPdf		21 48 48.9	
MSFE	Esma-Masafi	132.34	278	PKPdf	PKPdf	21 48 48.6	-1.0
MSFE	Esma-Masafi	132.34	278	PKPdf		21 48 48.6	
DAG	Danmarks Havn	132.53	6	iP	PKPdf	21 48 47.0	-1.4
FAQ	Al Faqa, Dubai	132.63	277	PKPdf	PKPdf	21 48 49.2	-0.9
FAQ	Al Faqa, Dubai	132.63	277	PKPdf		21 48 49.2	
NAZ	Nazwa, Dubai	132.65	277	PKPdf	PKPdf	21 48 49.0	-1.1
NAZ	Nazwa, Dubai	132.65	277	PKPdf		21 48 49.0	
ASUD	Al Ashush, Dub	132.81	277	PKPdf		21 48 50.1	
ASUD	Al Ashush, Dub	132.81	277	PKPdf	PKPdf	21 48 50.1	-0.3
ARU	Arti	133.16	321	PKP	PKPdf	21 48 49.0	-1.1
	comp=Z,12nm,0.5s,baz=104,slow=1.0,SNR=8.0						
ARU				SKPbc	SKPbc	21 52 13.1	-3.3
	comp=Z,1.3nm,0.5s,baz=150,slow=5.0,SNR=4.2						
ARU	Arti	133.16	321	c iPKIKP	PKPdf	21 48 49.2	-0.9
ARU				pmax	pmax		
	comp=Z,36nm,0.7s						
ARU	Arti	133.16	321	PKPdf	PKPdf	21 48 48.7	-1.4
GEYT	Alibeck	133.66	295	PKhKP	PKPpre	21 48 43.3	
	comp=Z,2.2nm,0.9s,baz=80,slow=18,SNR=4.9						
GEYT				PKP	PKPdf	21 48 51.6	-0.1
	comp=Z,11nm,0.8s,baz=96,slow=2.9,SNR=15						
GEYT				SKPbc	SKPbc	21 52 15.9	-2.9
	comp=Z,5.6nm,0.7s,baz=60,slow=16,SNR=6.7						
DY2G	Dye2	133.75	25	eP	PKiKP	21 48 51.9	-0.6
KMBO	Kilima Mbogo	134.16	233	PKP	PKiKP	21 48 54.5	-0.5
	comp=Z,5.3nm,0.8s,baz=41,slow=4.4,SNR=12						
KMBO				SKPbc	SKPbc	21 52 20.5	-1.1
	comp=Z,4.2nm,0.9s,baz=97,slow=4.5,SNR=5.7						
KMBO	Kilima Mbogo	134.16	233	PKiKP	PKiKP	21 48 55.3	+0.2
KMBO	Kilima Mbogo	134.16	233	PKiKP		21 48 55.3	
AKTO	Aktyubinsk	134.18	312	PKhKP	PKPpre	21 48 38.0	
	comp=Z,1.4nm,0.6s,baz=62,slow=3.0,SNR=6.5						
AKTO				PKP	PKPdf	21 48 51.8	-0.4
	comp=Z,13nm,0.7s,baz=86,slow=3.4,SNR=30						
AKTO				SKPbc	SKPbc	21 52 17.8	-2.3
	comp=Z,1.6nm,0.5s,baz=84,slow=8.2,SNR=4.1						
ICESG	Greenland Ices	134.53	20	iP	PKPdf	21 48 53.1	+0.3
DBG	Daneborg	134.59	8	iP	PKPdf	21 48 51.5	-0.8
KIRV	Kirov	137.38	325	PKP	PKPdf	21 48 57.4	-0.5
	comp=Z,43nm,0.5s,baz=68,slow=1.0,SNR=19						
KIRV	Kirov	137.38	325	c iPKIKP	PKPdf	21 48 57.2	-0.7
SCO	Scoresbysund	137.67	12	pPKPdf	pPKPdf	21 49 06.9	+1.6
PRGR	Permogore	137.87	331	ePKIKP	PKPdf	21 48 57.4	-1.3
PRGR				pmax	pmax		
	comp=Z,27nm,0.8s						
HAMF	Hammerfest	137.96	349	ePKPdf	PKPdf	21 48 58.2	-0.4
APA	Apatity	138.44	343	⇓iPKHKP	PKPpre	21 48 51.3	
APA				pmax	pmax		
	comp=Z,14nm,0.7s						
APA				MLR	MLR		
	comp=Z,2µm,30.0s						
ARA0	ARCESS Array S	138.61	348	e	PKPpre	21 48 51.8	
ARCES	ARCESS Array B	138.61	348	PKhKP	PKPpre	21 48 51.7	
	comp=Z,3.0nm,0.5s,baz=46,slow=2.6,SNR=25						
ARCES				PKP	PKPdf	21 49 00.0	+0.1
	comp=Z,13nm,0.6s,baz=36,slow=1.3,SNR=8.0						
LODK	Lodwar	138.70	236	PKPdf	PKiKP	21 49 03.5	-0.5
KTK1	Kautokeino	139.47	348	e	PKPpre	21 48 53.4	
TRO	Tromso	139.57	351	e	PKPpre	21 48 55.6	
TRO				ePKPdf	PKiKP	21 49 03.3	-0.6
BELG	Belogornoye	140.26	317	PKP	PKPdf	21 49 03.0	-0.3
	comp=Z,82nm,0.9s,baz=106,slow=1.3,SNR=9.3						
QRN	Al-Qurain	140.34	279	eP	PKPdf	21 48 58.6	-5.7
RDF	Al-Radifah	140.70	280	eP	PKPpre	21 48 58.6	
KLMR	Klimovskoe	140.81	332	ePKIKP	PKPdf	21 49 02.2	-1.9
KLMR				e		21 52 02.9	
KLMR				pmax	pmax		
	comp=Z,24nm,0.7s						
KLMR	Klimovskoe	140.81	332	ePKPdf	PKPdf	21 49 02.2	-1.9
KLMR				AMP		21 49 08.8	
	comp=Z,24nm,0.7s						
KLMR				ePP	PP	21 52 02.9	-1.7
RAYN	Ar Rayn	140.91	271	iPKPdf	PKPdf	21 49 03.3	-2.2
	SNR=5.6						
RAYN	Ar Rayn	140.91	271	PKIKP	PKPdf	21 49 03.2	-2.3
RAYN	Ar Rayn	140.91	271	PKPdf	PKPdf	21 49 03.2	-2.3
RAYN	Ar Rayn	140.91	271	iPKPdf		21 49 03.3	
	SNR=5.6						
RST	Umm Al-Ruwaisa	141.30	280	eP	PKPpre	21 48 59.7	
LOF	Lofoten	141.64	353	e	PKPpre	21 48 58.6	
STEI	Steigen	141.64	352	e	PKPdf	21 48 59.6	-5.8
STEI				ePKPdf	PKiKP	21 49 07.4	-0.8
FAUS	Fauske	142.16	352	e	PKPpre	21 49 00.3	
KONS	Konsvik	143.26	353	e	PKPbc	21 49 05.3	-0.1
MOR8	Moi Rana	143.42	352	e	PKPab	21 49 04.3	-0.5
MOR8				ePKPdf	PKPdf	21 49 08.5	-0.1
VRH	Novokhopyorsk	144.12	317	ePKHKP	PKPpre	21 49 06.6	
VRH				pmax	pmax		
	comp=Z,50nm,0.7s						
GNI	Garni	144.16	298	PKP	PKPbc	21 49 09.2	+0.1
	comp=Z,13nm,0.6s,baz=258,slow=3.0,SNR=8.5						
GNI	Garni	144.16	298	PKPdf	PKPbc	21 49 09.1	0.0
GNI	Garni	144.16	298	PKIKP	PKPbc	21 49 09.7	+0.6
GNI	Garni	144.16	298	PKPdf	PKPbc	21 49 09.7	+0.6
GNI	Garni	144.16	298	PKPdf		21 49 09.1	
NCK	Nalchik	144.73	303	dePKIKP	PKPbc	21 49 10.7	+0.1
GOF	Gofitskoye	144.88	306	⇑ePKIKP	PKPab	21 49 10.9	-0.1
AKH	Akhalkalaki	145.03	300	⇑P	PKPdf	21 49 12.3	-0.1
PUL	Pulkovo	145.04	335	eP	PKPbc	21 49 09.9	-1.1
LPSR	Galich'ya Gora	145.18	320	ePKP2	PKPbc	21 49 11.0	-0.7
LPSR				pmax	pmax		
	comp=Z,70nm,0.7s						
FINES	FINESS Array B	145.18	340	PKPbc	PKPbc	21 49 10.6	-0.8
	comp=Z,230nm,0.6s,baz=62,slow=3.4,SNR=1108						
KBZ	Khabaz	145.20	304	PKPbc	PKPbc	21 49 11.6	-0.5
	comp=Z,48nm,1.0s,baz=139,slow=2.0,SNR=51						
OBN	Obninsk	145.23	325	⇓P	PKPbc	21 49 11.5	-0.2
OBN	Obninsk	145.23	325	PKPbc	PKPbc	21 49 11.1	-0.6
	comp=Z,38nm,0.4s,baz=75,slow=2.6,SNR=35						
OBN	Obninsk	145.23	325	ePKP2	PKPbc	21 49 10.8	-1.0
OBN				e		21 52 29.4	
OBN				pmax	pmax		
	comp=Z,61nm,0.7s						
NSS	Namsos	145.29	353	ePKPbc	PKPdf	21 49 12.1	+0.2
KVAR	Kislovodsk Arr	145.31	304	PKPbc	PKPdf	21 49 12.9	+0.1
	comp=Z,8.8nm,0.6s,baz=90,slow=22,SNR=5.8						
KIV	Kislovodsk	145.31	304	iPKPbc		21 49 12.2	
	SNR=17						
KIV	Kislovodsk	145.31	304	⇑P	PKPbc	21 49 11.3	-1.3
KIV	Kislovodsk	145.31	304	iPKPbc	PKPbc	21 49 12.2	-0.4
	SNR=17						
KIV	Kislovodsk	145.31	304	c iPKIKP	PKPbc	21 49 12.1	-0.4
KIV				pmax	pmax		
	comp=Z,47nm,0.8s						
KIV	Kislovodsk	145.31	304		PKPbc	21 49 12.3	-0.4
NEY	Neytrino	145.40	303	dePKIKP	PKPab	21 49 13.3	+0.1
VSR	Storozhevoye	145.61	318	ePKIKP	PKPdf	21 49 12.2	-0.7
VSR				pmax	pmax		
	comp=Z,70nm,0.6s						
VORD	Divnogorie	145.63	317	ePKP2	PKPdf	21 49 12.1	-0.8
VORD				pmax	pmax		
	comp=Z,50nm,0.6s						
CHVG	Ch'k'valeri	145.93	302	⇓P	PKPdf	21 49 13.0	-0.7
CHVG	Ch'k'valeri	145.93	302	⇓PKIKP	PKPdf	21 49 13.0	-0.7
BCA	Borcka	146.43	300	⇓P	PKiKP	21 49 30.3	+11
TBLU	Trondheim	146.72	353	ePKPdf	PKPdf	21 49 15.2	+0.8
VSU	Vasula	147.27	336	eP	PKPbc	21 49 17.0	-0.7
VSU	Vasula	147.27	336	cePKP2	PKPbc	21 49 17.0	-0.7
SOC	Sochi	147.50	304	iPKP2	PKPbc	21 49 19.6	+0.7
SOC				e		21 52 42.7	
SOC				eSSS	SSS	22 17 18.0	
MOL	Molde	147.63	355	ePKPbc	PKPbc	21 49 18.6	0.0
KTUT	Trabzon	147.87	300	⇓P	PKPbc	21 49 19.8	-0.2
AAL	Aland	147.90	343	eP	PKPdf	21 49 17.3	+0.9
DOMB	Dombas	148.02	354	ePKPbc	PKPbc	21 49 19.1	-0.7
MTSE	Matsula	148.04	339	eP	PKPdf	21 49 18.1	+1.4
AKN	Aaknes	148.05	356	ePKPbc	PKPbc	21 49 19.9	0.0
NC303	NORSAR Array S	148.57	351	PKPbc	PKPbc	21 49 21.4	+0.2
NC303				PKPab	pPKPdf	21 49 25.3	+0.5
FOO	Floro	148.74	357	epPKPdf	PKPbc	21 49 21.4	-0.2
UPP	Uppsala	148.74	345	eP	PKPbc	21 49 20.0	-1.6
NB201	NORSAR Array S	148.75	351	PKPab	PKPab	21 49 28.5	+3.1
NB2	NORSAR Subarra	148.77	351	PKP	PKPbc	21 49 21.1	-0.7
	comp=Z,47nm,0.7s,baz=14,slow=2.6						
NB2	NORSAR Subarra	148.77	351	PKP	PKPbc	21 49 21.1	-0.7
	baz=14,slow=2.6						
NOA	NORSAR Array B	148.77	351	PKPbc	PKPbc	21 49 21.2	-0.5
	comp=Z,38nm,0.6s,baz=15,slow=4.2,SNR=85						
NBO00	NORSAR Array S	148.83	352	PKPab	PKPab	21 49 25.8	0.0
NAO01	NORSAR Array S	149.00	352	PKPab	PKPab	21 49 26.1	-0.4
NC602	NORSAR Array S	149.02	351	epPKPdf	PKPbc	21 49 21.8	-0.5
NC602	NORSAR Array S	149.02	351	PKPbc	PKPbc	21 49 22.3	-0.1
HYA	Hoyanger	149.11	356	epPKPdf	PKPbc	21 49 22.3	-0.2
SKAR	Skarslia	149.44	354	ePKPbc	PKPbc	21 49 23.7	+0.2
IDID	Didziasalis	149.56	332	eP	PKPdf	21 49 19.2	0.0
ISAL	Salakas	149.62	333	eP	PKPbc	21 49 22.8	-1.2
MNK	Minsk	149.64	330	iPKIKP	PKPdf	21 49 17.4	-2.0
MNK				i		21 52 54.8	
MNK				iSS	SS	22 12 07.7	-2.4
MNK				pmax	pmax		
	comp=Z,164nm,1.0s						
MNK				pmax	pmax		
	comp=E,5.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,45nm,1.0s						
IIGN	Ignalina	149.74	332	eP	PKPbc	21 49 23.0	-1.3
NACGM	Naroch	149.83	331	iPKP	PKPbc	21 49 24.4	-0.1
ASK	Askoy	149.84	357	ePKPbc	PKPbc	21 49 24.5	+0.2
OSL	Oslo	149.90	351	epPKPdf	PKPbc	21 49 24.2	-0.3
BER	Bergen	149.94	357	ePKPbc	PKPbc	21 49 24.6	0.0
LRW	Lerwick	150.18	3	eP	PKPbc	21 49 25.0	-0.1
GAZ	Gaziantep	150.19	293	PKPbc	PKPbc	21 49 25.6	-0.5
ASF	Jabal al Asfar	150.30	282	PKPbc	PKPbc	21 49 26.7	+0.2
	comp=N,56nm,0.9s,baz=62,slow=1.6,SNR=12						
KONO	Kongsberg	150.32	352	c iPKIKP	PKPbc	21 49 25.7	+0.2
KONO				pmax	pmax		
	comp=Z,87nm,1.0s						
KONO	Kongsberg	150.32	352	ePKPbc	PKPbc	21 49 25.4	-0.2
KONO	Kongsberg	150.32	352		PKPbc	21 49 25.3	-0.2
ODD1	Odda	150.33	355	ePKPbc	PKPbc	21 49 25.8	+0.2
PABE	Paberze	150.50	335	eP	PKPbc	21 49 24.9	-1.1
PABE	Paberze	150.50	335	PKPbc	PKiKP	21 49 26.4	-0.4
STRU	Stroemstad	150.71	350	iP	PKPbc	21 49 26.3	-0.2
PBUR	Paburge	150.81	337	eP	PKPbc	21 49 26.0	-0.8
BLS5	Blasjo	150.83	355	ePKPbc	PKiKP	21 49 27.2	-0.2
SIM	Simferopol'	151.03	309	iPKIKP	PKPbc	21 49 26.8	-0.9
AKASG	Malin Array Be	151.36	323	PKP	PKPdf	21 49 21.2	-1.1
	comp=Z,3.5nm,0.7s,baz=61,slow=2.0,SNR=14						
AKASG				PKPbc	PKPbc	21 49 27.4	-0.9
	comp=Z,105nm,0.7s,baz=46,slow=2.8,SNR=190						
AKBB	Malin Array Si	151.36	323	PKIKP	PKPbc	21 49 28.0	-0.3
AKBB	Malin Array Si	151.36	323	PKPbc	PKPbc	21 49 28.0	-0.3
LEWI	Lewis, Hebride	151.57	10	eP	PKPbc	21 49 27.4	-1.1
TJOU	Tjoern	151.60	349	iP	PKPbc	21 49 28.1	-0.5
EIL	Elat	151.62	277	PKP	PKPdf	21 49 22.4	-0.9
	comp=Z,7.7nm,0.8s,baz=74,slow=7.9,SNR=4.0						
EIL				PKPbc	PKPbc	21 49 29.3	-0.3
	comp=Z,81nm,0.9s,baz=92,slow=5.2,SNR=21						
MMAI	Mount Meron Ar	151.63	284	PKPbc	PKiKP	21 49 30.2	+0.1
	comp=Z,116nm,0.7s,baz=82,slow=7.7,SNR=88						
BORU	Boraas	151.79	348	iP	PKPbc	21 49 28.4	-0.7
HOMB	Homborsund	151.79	353	iP	PKiKP	21 49 29.4	0.0
HOMB	Homborsund	151.79	353	ePKPbc	PKiKP	21 49 29.4	0.0
MLA1	Latheron	151.84	6	eP	PKPbc	21 49 29.1	-0.1
SNART	Snartemo	151.85	354	iP	PKPbc	21 49 29.2	+0.1
SNART	Snartemo	151.85	354	ePKPbc	PKiKP	21 49 29.5	0.0
SUW	Suwalki	151.92	333	ePKP	PKPbc	21 49 29.3	-0.2
SUW	Suwalki	151.92	333	eP	PKPbc	21 49 27.9	-1.5
BLEU	Blekinge	152.36	343	iP	PKPbc	21 49 29.6	-0.7
FABU	Falkenberg	152.39	347	iP	PKPbc	21 49 29.8	-0.6
KAC	Achnashellach	152.42	9	eP	PKPbc	21 49 30.0	-0.5
OVD	Ostervraa, Den	152.50	350	iP	PKiKP	21 49 30.8	-0.1
KPL	Plockton	152.53	9	eP	PKPbc	21 49 30.5	-0.2
MCD	Coleburn Disti	152.57	6	eP	PKPbc	21 49 30.2	-0.6
MDO	Dochfour	152.59	8	eP	PKPbc	21 49 30.5	-0.4
DEL	Delary	152.66	346	iP	PKPbc	21 49 30.7	-0.3
BR131	Keskin Array S	152.69	299	PKIKP	PKPbc	21 49 31.8	-0.1
BR131	Keskin Array S	152.69	299	PKPbc	PKPbc	21 49 31.8	-0.1
BRTR	Keskin Array B	152.69	299	PKP	PKPdf	21 49 23.6	-1.2
	comp=Z,4.1nm,1.0s,baz=64,slow=2.9,SNR=8.4						
BRTR				PKPbc	PKPbc	21 49 30.9	-0.9
	comp=Z,30nm,0.9s,baz=143,slow=5.4,SNR=28						
BRTR	Keskin Array B	152.69	299	PKIKP	PKPbc	21 49 31.0	-0.9
PURM	Purcari	153.15	315	⇑P	PKPbc	21 49 32.4	0.0
SORM	Soroca	153.25	319	⇑P	PKPbc	21 49 32.0	-0.6
SORM	Soroca	153.25	319	⇑PKIKP	PKPbc	21 49 32.0	-0.6
ANTO	Ankara	153.31	299	PKIKP	PKPdf	21 49 25.6	0.0
ANTO						21 49 33.9	
ANTO	Ankara	153.31	299	PKPdf	PKPdf	21 49 25.6	0.0
ANTO				PKPbc	PKiKP	21 49 33.9	+0.6
MILM	Milestii Mici	153.60	316	⇑P	PKPbc	21 49 31.5	-1.9
MILM	Milestii Mici	153.60	316	c iPKIKP	PKPbc	21 49 32.5	-0.9
MILM				e		21 49 37.0	
MILM				pmax	pmax		
	comp=Z,80nm,0.9s						
BSD	Bornholm Skovb	153.66	343	iP	PKPbc	21 49 33.0	-0.2
LEF	Lefka	153.76	288	⇓P	PKPdf	21 49 29.1	+2.8
LEOM	Leova	154.16	316	⇑P	PKiKP	21 49 35.0	+0.3
LEOM	Leova	154.16	316	⇑PKIKP	PKiKP	21 49 35.0	+0.3
ESY	Stoneypath	154.27	6	eP	PKPbc	21 49 34.3	-0.3
TLCR		154.41	313	⇑P	PKPdf	21 49 28.5	+1.6
TLCR		154.41	313	⇑PKIKP	PKPdf	21 49 28.5	+1.6
BEL	Belsk	154.52	333	ePKP	PKiKP	21 49 35.8	+0.5
LVV	L'vov	154.53	326	ePKIKP	PKPdf	21 49 30.1	+3.2
VLDR	Vladesti	154.56	315	⇑P	PKPbc	21 49 34.8	-0.7
GKP	Gorka Klasztor	154.63	339	ePKP	PKiKP	21 49 35.5	+0.1
GKP	Gorka Klasztor	154.63	339	eP	PKPbc	21 49 35.0	-0.4
TATR	Tatarca	154.70	314	⇑P	PKPbc	21 49 35.5	-0.3
EKA	Eskdalemuir Ar	154.79	7	PKP	PKPdf	21 49 26.4	-0.7
	comp=Z,2.9nm,0.9s,baz=335,slow=1.0,SNR=3.9						
EKA				PKPab	PKPab	21 49 50.5	-0.2
	comp=Z,13nm,0.7s,baz=336,slow=2.8,SNR=10						
TPGR	Topolog	154.80	312	⇓P	PKPbc	21 49 34.7	-1.4
CFR	Carcaliu	154.84	313	⇓P	PKPbc	21 49 35.2	-0.9
CFR	Carcaliu	154.84	313	⇓PKIKP	PKPbc	21 49 35.2	-0.9
PRAR	RASCA	154.88	319	⇓P	PKPdf	21 49 29.2	+1.7
LIC	Lamto	155.03	163	ePKIKP	PKPdf	21 49 29.1	+0.4
	comp=Z,97nm,1.0s						
MFTR	Murfatlar	155.09	311	⇑P	PKPdf	21 49 32.4	+4.6
TESR	Tescani	155.09	317	⇓P	PKPdf	21 49 36.6	+8.8
HARR	Harsova	155.19	312	⇓P	PKPdf	21 49 29.6	+1.7
HARR	Harsova	155.19	312	⇓PKIKP	PKPdf	21 49 29.6	+1.7
KIC	Kosan Boka	155.23	164	ePKIKP	PKPdf	21 49 29.3	+0.3
	comp=Z,28nm,0.6s						
ODBI	Odobesti	155.23	315	⇑P	PKPdf	21 49 35.7	+7.7
BUR08	Bucovina Ar. S	155.29	321		PKPdf	21 49 38.4	+10
KWP	Kalwaria Pacla	155.29	327	PKP2	PKPab	21 49 52.7	-0.5
KWP	Kalwaria Pacla	155.29	327	PKPab	PKPab	21 49 52.7	-0.5
BUR01	Bucovina Ar. S	155.30	321	⇑P	PKPdf	21 49 37.8	+10
BURAR	Bucovina Array	155.30	321	PKPab	PKPab	21 49 53.1	-0.3
VRI	Vrincioaia	155.38	316	⇑P	PKPdf	21 49 36.1	+7.8
VRI	Vrincioaia	155.38	316	⇑PKIKP	PKPdf	21 49 36.1	+7.9
PLOR	Plostina	155.43	316	⇑P	PKPdf	21 49 37.3	+8.9
PLOR	Plostina	155.43	316	⇑PKIKP	PKPdf	21 49 37.3	+9.0
TIC	Toumodi	155.43	163	ePKIKP	PKPdf	21 49 29.6	+0.3
DBIC	Dimbokro	155.50	163	PKP	PKPdf	21 49 29.5	+0.2
	comp=Z,3.1nm,0.7s,baz=192,slow=0.5,SNR=7.5						
DBIC				PKPab	PKPab	21 49 55.3	+0.4
	comp=Z,18nm,0.9s,baz=192,slow=5.1,SNR=8.5						
DBIC	Dimbokro	155.50	163	PKP2	PKPab	21 49 55.1	+0.3
DBIC	Dimbokro	155.50	163	PKPab	PKPab	21 49 55.1	+0.3
BSEG	Bad Segeberg	155.74	348	ePKPdf	PKPdf	21 49 29.0	+0.6
	baz=20,slow=4.4						
BSEG				ePKPab	PKPab	21 49 55.1	+0.3
	baz=20,slow=4.4						
BSEG				epPKPab	pPKPab	21 49 58.5	-3.4
MLR	Muntele Rosu	156.04	316	⇓P	PKPdf	21 49 28.8	-0.5
MLR	Muntele Rosu	156.04	316	PKP	PKPdf	21 49 29.1	-0.2
	comp=Z,6.0nm,1.1s,baz=155,slow=3.2,SNR=4.2						
MLR	Muntele Rosu	156.04	316	⇓PKIKP	PKPdf	21 49 28.8	-0.5
DOPR	Dopca	156.12	317	⇑P	PKPdf	21 49 29.9	+0.6
UZH	Uzhgorod	156.17	326	ePKIKP	PKPdf	21 49 37.5	+8.4
UZH				e		21 49 42.5	
UZH				e		21 49 46.2	
BMR	Baia Mare	156.19	322	⇑P	PKPdf	21 49 30.0	+0.8
BMR	Baia Mare	156.19	322	⇑PKIKP	PKPdf	21 49 30.0	+0.8
SECR		156.20	315	⇓P	PKPdf	21 49 30.3	+1.0
RUE	Ruedersdorf	156.33	342	eP	PKPdf	21 49 28.2	-1.0
RUE	Ruedersdorf	156.33	342	ePKPdf	PKPdf	21 49 29.0	-0.1
	baz=20,slow=4.4						
TRPA	Tarpa	156.39	324	⇓P	PKPdf	21 49 28.6	-0.8
VOIR		156.61	316	⇑P	PKPdf	21 49 38.1	+8.1
VOIR		156.61	316	⇑PKIKP	PKPdf	21 49 38.1	+8.1
CBBR	Cluj-Babes-Bol	156.71	321	⇓P	PKPdf	21 49 39.9	+10
CJR	Cluj-Napoca	156.72	320	⇑P	PKPdf	21 49 37.3	+7.3
CJR	Cluj-Napoca	156.72	320	⇑PKIKP	PKPdf	21 49 37.3	+7.3
ARR	Arges	156.89	317	⇓P	PKPdf	21 49 31.0	+0.7
FLTG	Flechtingen	157.08	346	ePKPdf	PKPdf	21 49 29.5	-0.7
	baz=20,slow=4.4						
FLTG				ePKPab	PKPab	21 50 00.0	-0.6
	baz=20,slow=4.4						
FLTG				epPKPab	pPKPab	21 50 03.5	-4.1
LANS	Liptovska Anna	157.11	330	ePKIKP	PKPdf	21 49 43.4	+13
LANS	Liptovska Anna	157.11	330	ePKP	PKPdf	21 49 43.3	+13
LANS				e		21 50 01.3	
DRGR		157.16	322	⇑P	PKPdf	21 49 29.3	-1.3
DRGR		157.16	322	⇑PKIKP	PKPdf	21 49 29.3	-1.3
NRDL	Niedersach Rie	157.16	347	ePKPab	PKPab	21 50 00.8	-0.1
	baz=20,slow=4.4						
COPA	Copaceanca	157.17	313	⇓P	PKPdf	21 49 32.4	+1.9
OSTC	Ostas	157.26	336	ePKPDF	PKPdf	21 49 31.0	+0.5
CHVC	Chvalec	157.29	337	ePKPAB	PKPab	21 50 01.7	0.0
UPC	Upice	157.38	337	ePKPDF	PKPdf	21 49 30.8	+0.1
UPC				ePKPAB	PKPab	21 50 02.1	+0.1
UPC	Upice	157.38	337	ePKIKP	PKPdf	21 49 30.8	+0.1
ASSE	Asse, Remlinge	157.39	346	ePKPab	PKPab	21 50 01.8	-0.2
	baz=20,slow=4.4						
ASSE				epPKPab	pPKPab	21 50 05.6	-3.4
DPC	Dobruska-Polom	157.40	336	ePKPDF	PKPdf	21 49 31.2	+0.4
DPC				ePKPAB	PKPab	21 50 02.5	+0.3
DPC	Dobruska-Polom	157.40	336	ePKIKP	PKPdf	21 49 31.2	+0.4
MORC	Moravsky Berou	157.42	333	⇓P	PKPdf	21 49 29.9	-0.9
MORC	Moravsky Berou	157.42	333	ePKP	PKPdf	21 49 30.8	0.0
MORC	Moravsky Berou	157.42	333	⇓PKIKP	PKPdf	21 49 29.9	-0.9
MORC	Moravsky Berou	157.42	333	PKPab	PKPab	21 50 04.8	+2.5
KRLC	Kraliky	157.46	335	ePKPDF	PKPdf	21 49 30.5	-0.3
KRLC				ePKPAB	PKPab	21 50 02.1	-0.4
KRLC	Kraliky	157.46	335	ePKIKP	PKPdf	21 49 30.5	-0.3
CLL	Collm	157.60	342	⇓ePKIKP	PKPdf	21 49 33.0	+2.1
CLL				i		21 49 41.7	
CLL				pmax	pmax		
	comp=Z,12nm,0.8s						
CLL	Collm	157.60	342	ePKPdf	PKPdf	21 49 33.0	+2.1
CLL				iPKPdiff	sPKPdf	21 49 41.7	+1.1
	comp=Z,12nm,0.8s						
CLL				iPKPdiff2		21 49 44.5	
	comp=Z,9.0nm,0.8s						
CLL				iPKPab	PKPab	21 50 02.3	-0.6
	comp=Z,29nm,0.8s						
CLL				⇓iPKPab(2)		21 50 05.8	
	comp=Z,39nm,0.8s						
CLL	Collm	157.60	342	ePKPab	PKPab	21 50 02.7	-0.2
	baz=20,slow=4.4						
CLL				epPKPab	pPKPab	21 50 06.2	-3.8
IBBN	Ibbenburen	157.72	351	ePKPab	PKPab	21 50 03.5	+0.1
	baz=20,slow=4.4						
IBBN				epPKPab	pPKPab	21 50 06.9	-3.5
BRG	Berggiesshubel	157.72	340	ePKPdf	PKPdf	21 49 31.6	+0.5
	baz=20,slow=4.4						
BRG				ePKPab	PKPab	21 50 03.4	-0.1
	baz=20,slow=4.4						
BRG				epPKPab	pPKPab	21 50 06.9	-3.6
CLZ	Clausthal	157.72	346	ePKPab	PKPab	21 50 03.9	+0.4
	baz=20,slow=4.4						
CLZ				epPKPab	pPKPab	21 50 07.2	-3.4
PSZ	Piszkesteto	157.82	327	⇑P	PKPdf	21 49 30.4	-1.0
PSZ	Piszkesteto	157.82	327	⇑PKIKP	PKPdf	21 49 30.4	-1.0
PVCC	Panska Ves	157.83	339	ePKPAB	PKPab	21 50 04.7	+0.7
PVCC	Panska Ves	157.83	339	ePKP2	PKPab	21 50 04.7	+0.7
FBE	Freiberg	157.85	341	ePKPab	PKPab	21 50 04.3	+0.3
	baz=20,slow=4.4						
FBE				epPKPab	pPKPab	21 50 07.7	-3.4
VYHS	Vyhne	157.88	329	ePKP2	PKPab	21 50 04.1	-0.2
KOLL	Kolacno	158.00	330	ePKP	PKPdf	21 49 43.1	+12
KOLL				e		21 50 04.8	
NEUB	Neuenburg	158.00	344	ePKPab	PKPab	21 50 04.9	+0.2
	baz=20,slow=4.4						
NEUB				epPKPab	pPKPab	21 50 08.1	-3.6
SIRR	Siria	158.05	322	⇑P	PKPdf	21 49 31.3	-0.4
GTTG	Gottingen	158.09	347	ePKPab	PKPab	21 50 05.2	+0.1
	baz=20,slow=4.4						
GTTG				epPKPab	pPKPab	21 50 08.6	-3.5
VRAC	Vranov	158.16	334	⇓P	PKPdf	21 49 32.2	+0.5
VRAC	Vranov	158.16	334	PKP	PKPdf	21 49 31.5	-0.2
	comp=Z,2.4nm,1.0s,baz=180,slow=1.0,SNR=4.5						
VRAC				PKPab	PKPab	21 50 04.8	-0.6
	comp=Z,13nm,0.9s,baz=66,slow=3.6,SNR=9.6						
VRAC	Vranov	158.16	334	ePKP	PKPdf	21 49 31.0	-0.7
VRAC	Vranov	158.16	334	⇓PKIKP	PKPdf	21 49 32.2	+0.5
PRU	Pruhonice	158.31	338	ePKPDF	PKPdf	21 49 31.5	-0.3
PRU				ePKPAB	PKPab	21 50 06.2	+0.1
PRU	Pruhonice	158.31	338	ePKIKP	PKPdf	21 49 31.5	-0.3
PRU				e		21 50 06.2	
KRUC	Moravsky	158.44	334	ePKP	PKPdf	21 49 31.4	-0.6
BZS	Buzias	158.48	320	⇑PKIKP	PKPdf	21 49 30.6	-1.6
TANN	Tannenbergstha	158.55	342	ePKPdf	PKPdf	21 49 32.2	0.0
	baz=20,slow=4.4						
TANN				ePKPab	PKPab	21 50 07.1	-0.1
	baz=20,slow=4.4						
TANN				epPKPab	pPKPab	21 50 10.6	-3.7
MOX	Moxa	158.56	343	ePKPab	PKPab	21 50 07.3	+0.1
	baz=20,slow=4.4						
MOX				epPKPab	pPKPab	21 50 10.6	-3.6
WERD	Werda	158.56	342	ePKPdf	PKPdf	21 49 31.6	-0.6
	baz=20,slow=4.4						
WERD				ePKPab	PKPab	21 50 07.3	+0.1
	baz=20,slow=4.4						
WERD				epPKPab	pPKPab	21 50 10.8	-3.5
SRO	Srobarova	158.62	329	ePKP2	PKPab	21 50 07.8	+0.3
BUG	Bochum--Univer	158.63	351	ePKPdf	PKPdf	21 49 32.1	0.0
	baz=20,slow=4.4						
BUG				ePKPab	PKPab	21 50 07.0	-0.3
	baz=20,slow=4.4						
GUNZ	Gunzen	158.63	342	ePKPdf	PKPdf	21 49 32.0	-0.3
	baz=20,slow=4.4						
GUNZ				ePKPab	PKPab	21 50 08.1	+0.6
	baz=20,slow=4.4						
GUNZ				epPKPab	pPKPab	21 50 11.4	-3.2
MODS	Modra-Piesok	158.64	331	ePKIKP	PKPdf	21 49 31.9	-0.4
MODS				e		21 50 08.6	
MODS	Modra-Piesok	158.64	331	ePKP	PKPdf	21 49 31.8	-0.5
MODS				e		21 50 08.6	
WERN	Wernitzgruen	158.69	342	ePKPdf	PKPdf	21 49 32.6	+0.2
	baz=20,slow=4.4						
WERN				ePKPab	PKPab	21 50 08.3	+0.6
	baz=20,slow=4.4						
WERN				epPKPab	pPKPab	21 50 11.6	-3.2
NKC	Novy Kostel	158.72	342	ePKPDF	PKPdf	21 49 32.1	-0.2
NKC				ePKPAB	PKPab	21 50 07.8	-0.1
NKC	Novy Kostel	158.72	342	ePKIKP	PKPdf	21 49 32.1	-0.2
NKC				e		21 50 07.8	
UBBA	Unterbreizbach	158.77	346	ePKPab	PKPab	21 50 07.8	-0.1
	baz=20,slow=4.4						
ZST	Bratislava	158.85	331	ePKIKP	PKPdf	21 49 32.5	0.0
ZST	Bratislava	158.85	331	ePKP	PKPdf	21 49 32.5	0.0
ZST				e		21 50 10.4	
MANZ	Manzenberg	159.04	342	ePKPdf	PKPdf	21 49 32.7	0.0
	baz=20,slow=4.4						
MANZ				ePKPab	PKPab	21 50 09.2	-0.1
	baz=20,slow=4.4						
VTS	Vitosha	159.17	312	⇑PKIKP	PKPdf	21 49 32.3	-1.0
ROTZ	Rotzenmuhle	159.21	341	ePKPab	PKPab	21 50 10.0	0.0
	baz=20,slow=4.4						
ROTZ				epPKPab	pPKPab	21 50 13.7	-3.3
KHC	Kasperske Hory	159.37	338	ePKPDF	PKPdf	21 49 32.7	-0.5
KHC				ePKPAB	PKPab	21 50 10.7	-0.1

KHC	Kasperske Hory	159.37	338	*e*PKIKP	PKPdf	21 49 32.7	-0.5
KHC				*e*		21 50 10.7	
CKRC	Cesky Krumlov	159.39	337	*e*PKPDF	PKPdf	21 49 32.7	-0.5
CKRC				*e*PKPAB	PKPab	21 50 10.8	-0.1
BEBN	Eben Emael	159.45	354	*d*PKPab	PKPab	21 50 10.7	-0.3
AHRW	Bad Neuenahr-A	159.54	351	*e*PKPdf	PKPdf	21 49 33.1	-0.2
	baz=20,slow=4.4						
AHRW				*e*PKPab	PKPab	21 50 11.4	0.0
	baz=20,slow=4.4						
GRA1	Grafenberg Arr	159.54	343	PKPdf	PKPdf	21 49 34.5	+1.2
GRF	Grafenberg Arr	159.54	343	PKIKP	PKPdf	21 49 34.5	+1.2
GRF	Grafenberg Arr	159.54	343	*e*PKPab	PKPab	21 50 12.0	+0.6
	baz=20,slow=4.4						
GRF				*e*pPKPab	pPKPab	21 50 15.2	-3.2
GRFO	Grafenberg	159.54	343	PKIKP	PKPdf	21 49 34.8	+1.5
GRFO	Grafenberg	159.54	343	PKPdf	PKPdf	21 49 34.8	+1.5
GRFO					PKPab	21 50 12.2	+0.8
CONA	Conrad Observa	159.56	333	*e*P	PKPdf	21 49 32.7	-0.8
	comp=Z,3.1nm,0.8s						
CONA				*e*P	PKPab	21 50 11.8	+0.1
	comp=Z,10nm,1.1s						
WET	Wettzell	159.57	339	*e*PKPdf	PKPdf	21 49 32.7	-0.7
	baz=20,slow=4.4						
WET				*e*PKPab	PKPab	21 50 12.0	+0.3
	baz=20,slow=4.4						
GEC2	GERESS Array S	159.58	338	*e*PKPdf	PKPdf	21 49 32.8	-0.7
	baz=20,slow=4.4						
GEC2				*e*PKPab	PKPab	21 50 11.4	-0.3
	baz=20,slow=4.4						
GERES	GERESS Array B	159.58	338	PKP	PKPdf	21 49 32.7	-0.8
	comp=Z,3.1nm,0.9s,baz=75,slow=1.5,SNR=24						
GERES				PKPab	PKPab	21 50 11.6	-0.1
	comp=Z,5.8nm,0.8s,baz=32,slow=4.9,SNR=14						
BOVS	Bovan	159.59	316	⇓P	PKPdf	21 49 32.4	-1.1
MEM	Membach	159.60	353	*d*PKPab	PKPab	21 50 11.4	-0.2
BTNL	Ternell	159.61	353	*d*PKPab	PKPab	21 50 11.3	-0.4
MORH	Mrgy, Hungar	159.63	325	⇑P	PKPdf	21 49 32.3	-1.2
TNS	Taunus Mts	159.63	348	*e*PKPdf	PKPdf	21 49 34.1	+0.7
	baz=20,slow=4.4						
TNS				*e*PKPab	PKPab	21 50 12.0	+0.1
	baz=20,slow=4.4						
TNS				*e*pPKPab	pPKPab	21 50 15.4	-3.5
BSTI	Sart Tilman	159.67	354	*d*PKPab	PKPab	21 50 11.7	-0.2
FRGS	Fruska Gora	159.75	322	⇓P	PKPdf	21 49 33.3	-0.4
SNF	Seneffe	159.85	356	*d*PKPab	PKPab	21 50 12.7	0.0
BHOU	Houvegnez	159.85	353	*d*PKPab	PKPab	21 50 12.8	0.0
BCLA	Clavier	159.86	354	*d*PKPab	PKPab	21 50 12.3	-0.4
BGES	Gesves	159.91	354	*d*PKPab	PKPab	21 50 12.3	-0.7
BMRD	Maredsous	160.02	355	*d*PKPab	PKPab	21 50 13.2	-0.2
RCHB	Rochefort	160.13	354	*d*PKPab	PKPab	21 50 13.2	-0.7
MOA	Molln	160.23	335	*e*P	PKPdf	21 49 33.8	-0.3
	comp=Z,10nm,1.9s						
MOA				*e*P	PKPab	21 50 15.0	+0.5
	comp=Z,14nm,1.0s						
DOU	Dourbes	160.24	355	*d*PKPab	PKPab	21 50 13.8	-0.6
ARSA	Arzberg	160.25	332	*e*P	PKPdf	21 49 33.7	-0.5
	comp=Z,3.1nm,0.9s						
ARSA				*e*P	PKPab	21 50 15.2	+0.5
	comp=Z,6.0nm,1.2s						
DIVS	Divibare	160.33	319	PKPab	PKPab	21 50 14.4	-0.8
WLF	Walferdange	160.52	352	*e*PKPab	PKPab	21 50 16.2	+0.6
	baz=20,slow=4.4						
RJOB	Jochberg	160.84	338	*e*PKPdf	PKPdf	21 49 34.0	-0.9
	baz=20,slow=4.4						
RJOB				*e*PKPab	PKPab	21 50 17.8	+0.6
	baz=20,slow=4.4						
RJOB				*e*pPKPab	pPKPab	21 50 21.0	-3.3
STU	Stuttgart	160.88	346	*e*PKPab	PKPab	21 50 17.1	-0.1
	baz=20,slow=4.4						
SOKA	Soboth	160.91	332	*e*P	PKPdf	21 49 34.2	-0.8
	comp=Z,5.2nm,1.1s						
SOKA				*e*P	PKPab	21 50 16.7	-0.9
	comp=Z,8.9nm,0.8s						
FUR	Furstenfeldbru	160.92	341	*e*PKPab	PKPab	21 50 17.8	+0.3
	baz=20,slow=4.4						
FUR				*e*pPKPab	pPKPab	21 50 21.3	-3.2
KBA	Koelnbreinsper	161.22	336	*e*P	PKPdf	21 49 34.4	-1.0
	comp=Z,9.2nm,1.2s						
KBA				*e*P	PKPab	21 50 20.1	+1.0
	comp=Z,3.5nm,0.7s						
OBKA	Obir	161.24	332	*e*P	PKPdf	21 49 33.9	-1.5
	comp=Z,8.2nm,1.6s						
OBKA				*e*P	PKPab	21 50 16.6	-2.5
	comp=Z,8.1nm,1.1s						
BFO	Black Forest	161.47	347	PKP2	PKPab	21 50 18.3	-1.6
BFO	Black Forest	161.47	347	*e*PKPdf	PKPdf	21 49 34.4	-1.1
	baz=20,slow=4.4						
BFO				*e*PKPab	PKPab	21 50 19.8	-0.1
	baz=20,slow=4.4						
BFO				*e*pPKPab	pPKPab	21 50 23.6	-3.4
BFO	Black Forest	161.47	347		PKPab	21 50 18.3	-1.6
MYKA	Terra Mystica	161.49	334	*e*P	PKPdf	21 49 36.5	+0.9
	comp=Z,4.6nm,0.9s						
MYKA				*e*P	PKPab	21 50 18.9	-1.3
	comp=Z,19nm,1.2s						
WATA	Walderalm	161.58	339	*e*P	PKPdf	21 49 37.2	+1.4
	comp=Z,2.7nm,0.7s						
WATA				*e*P	PKPab	21 50 20.5	-0.1
	comp=Z,8.9nm,0.6s						
WTTA	Wattenberg	161.63	339	*e*P	PKPdf	21 49 36.3	+0.4
	comp=Z,11nm,1.1s						
WTTA				*e*P	PKPab	21 50 20.6	-0.3
	comp=Z,15nm,0.7s						
UBR	Ueberruh	161.68	343	*e*PKPdf	PKPdf	21 49 34.6	-1.1
	baz=20,slow=4.4						
UBR				*e*PKPab	PKPab	21 50 21.8	+0.9
	baz=20,slow=4.4						
RETA	Reutte	161.68	341	*e*P	PKPdf	21 49 37.1	+1.3
	comp=Z,3.3nm,1.0s						
RETA				*i* P	PKPab	21 50 20.7	-0.2
	comp=Z,17nm,0.8s,SNR=7.3						
MOTA	Moosalm	161.71	340	*e*P	PKPdf	21 49 37.7	+1.7
	comp=Z,5.5nm,0.8s						
MOTA				*i* P	PKPab	21 50 21.2	0.0
	comp=Z,30nm,1.0s,SNR=12						
ABTA	Abfaltersbach	161.79	337	*e*P	PKPdf	21 49 34.6	-1.4
	comp=Z,9.6nm,1.4s						
ABTA				*e*P	PKPab	21 50 20.8	-0.7
	comp=Z,19nm,0.8s						
SQTA	Sankt Quirin	161.79	340	*e*P	PKPdf	21 49 35.6	-0.4
	comp=Z,5.1nm,0.8s						
SQTA				*e*P	PKPab	21 50 21.4	-0.1
	comp=Z,18nm,0.9s						
DAVA	Damuels	162.10	343	*e*P	PKPdf	21 49 36.0	-0.3
	comp=Z,20nm,2.2s						
DAVA				*i* P	PKPab	21 50 22.8	-0.1
	comp=Z,23nm,0.7s,SNR=8.9						
FETA	Feichten	162.12	341	*e*P	PKPdf	21 49 35.6	-0.8
	comp=Z,8.5nm,1.0s						
FETA				*e*P	PKPab	21 50 23.0	0.0
	comp=Z,15nm,1.0s						
CLF	Chambon-Foret	162.40	360	PKPdf	PKPdf	21 49 37.6	+1.2
DAVOX	Davos/Dischmat	162.57	342	PKP	PKPdf	21 49 36.3	-0.6
	comp=Z,4.8nm,0.8s,baz=205,slow=2.8,SNR=10.0						
DAVOX				PKPab	PKPab	21 50 25.1	+0.2
	comp=Z,23nm,0.7s,baz=23,slow=2.7,SNR=24						
TORD	Torodi Ar. Bea	162.83	179	PKP	PKPdf	21 49 37.5	-0.3
	comp=Z,4.4nm,0.7s,baz=213,slow=0.4,SNR=16						
TORD				PKPab	PKPab	21 50 26.1	-0.5
	comp=Z,32nm,0.8s,baz=180,slow=3.3,SNR=39						
KOWA	Kowa	163.19	159		PKPdf	21 49 38.4	+0.2
KOWA				PKPab	PKPab	21 50 28.7	+0.5
PGAV	Gavieira, Arco	165.74	33	*e*PKPdf	PKPdf	21 49 39.9	+0.1
PCAB	Cabril	166.06	33	*e*PKPdf	PKPdf	21 49 41.0	+1.0
PVRL	Vila Real	166.54	34	*e*PKPdf	PKPdf	21 49 42.3	+1.9
PVIS	Viseu	166.88	36	*e*PKPdf	PKPdf	21 49 44.0	+3.4
MVO	Moncorvo	166.95	32	*e*PKPdf	PKPdf	21 49 41.9	+1.2
PCAS	Casmilo, Conde	167.04	39	*e*PKPdf	PKPdf	21 49 46.7	+6.0
MTE	Manteigas	167.29	36	*e*PKPdf	PKPdf	21 49 43.0	+2.0
VAE	Valguarnera	167.60	308	PKPab	PKPab	21 50 47.4	0.0
	comp=Z,7.0nm,0.9s,baz=31,slow=5.9,SNR=2.4						
PCBR	Castelo Branco	167.74	37	*e*PKPdf	PKPdf	21 49 42.4	+1.2
PMRV	Marv??o	168.09	38	*e*PKPdf	PKPdf	21 49 42.5	+1.0
PMRV	Marv??o	168.09	38	*e*PKPab	PKPab	21 50 49.5	+0.2
EVO	Evora	168.35	43	*e*PKPdf	PKPdf	21 49 43.1	+1.4
PESTR	Estremoz	168.37	41	*e*PKPdf	PKPdf	21 49 43.3	+1.6
MORF	Marmelete	168.71	50	*e*PKPdf	PKPdf	21 49 45.1	+3.1
PBEJ	Beja	168.77	45	*e*PKPdf	PKPdf	21 49 43.8	+1.8
PCVE	Castro Verde	168.91	47	*e*PKPdf	PKPdf	21 49 43.5	+1.4
PBDV	Barranco-do-Ve	169.21	48	*e*PKPdf	PKPdf	21 49 44.2	+1.9
ESDC	Sonseca Array	169.49	27	PKP	PKPdf	21 49 43.2	+0.7
	comp=Z,4.7nm,1.0s,baz=346,slow=3.2,SNR=16						
ESDC				PKPab	PKPab	21 50 55.7	+0.1
	comp=Z,2.9nm,0.9s,baz=327,slow=4.0,SNR=7.7						
ESDC				PP	PP	21 54 47.3	+2.6
	comp=Z,3.8nm,1.2s,baz=340,slow=3.0,SNR=4.6						
ESDC	Sonseca Array	169.49	27	PKPdf	PKPdf	21 49 43.2	+0.7
ESDC				PKPab	PKPab	21 50 56.3	+0.7
KEST	Kesra	171.94	313	PKP	PKPdf	21 49 44.1	+0.2
	comp=Z,6.0nm,0.8s,baz=156,slow=3.8,SNR=10						
KEST				PKPab	PKPab	21 51 06.2	-0.4
	comp=Z,7.3nm,1.0s,baz=313,slow=2.7,SNR=7.4						

JMA ***31*** *21:32:00.7±0.5, 44°.16N×148°.39E, h0km, M3.8*
SKHL ***31*** *21:32:02.0±0.2, 44°.60N×148°.50E, h45km±5km, mb4.3/2*
ISC 31 21:31:57.4±3.6,**44°.54N**±0°.08×**148°.6E**±0°.2,**h8**km±15km,
n16,σ**1**§**60**/26,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	0.85	325	*i* P	Pn	21 32 16.0	+0.4
KUR				AMB	AMB	21 32 16.6	
	80nm,0.2s						
KUR				*i* S	Sb	21 32 26.5	+0.6
KUR				A	A	21 32 27.6	
KUR				A	A	21 32 27.6	
SHO	Shikotan	1.42	242	*e*P	Pg	21 32 24.7	+0.2
SHO				AMB	AMB	21 32 26.3	
SHO				*e*S	Sn	21 32 41.9	-0.4
SHO				A	A	21 32 44.1	
SHO				A	A	21 32 44.1	
YUK	Yuzh-Kuril'sk	2.01	256	*i* P	Pb	21 32 33.1	-1.0
YUK				AMB	AMB	21 32 35.3	
	150nm,0.3s						
YUK				*i* S	Sn	21 32 56.1	-0.7
YUK				A	A	21 33 01.3	
YUK				A	A	21 33 01.3	
GLVR	Golovnino	2.33	251	*e*P	Pb	21 32 38.5	-1.2
GLVR				*e*S	Sn	21 33 05.7	+0.8
GLVR				A	A	21 33 09.6	
	100nm,0.3s						
GLVR				A	A	21 33 09.6	
	350nm,0.3s						
NEM2	Nemuro 2	2.35	241	P	Pn	21 32 37.1	+0.8
NEM2				*e*S	Sn	21 33 03.9	-1.5
NMR	Nemuro--Hokkai	2.36	241	*e*P	Pn	21 32 37.3	+0.9
NMR				*e*S	Sn	21 33 03.7	-1.9
JRA	Rausu	2.55	257	P	Pb	21 32 41.7	-1.6
JNSB	Nemuroshibetsu	2.67	255	P	Pb	21 32 43.5	-2.0
JKHN	Kushirohamanak	2.86	241	*e*S	Sn	21 33 16.8	-1.2
JNK	Nakash	2.93	252	P	Pn	21 32 46.4	+2.1
AKK	Akkeshi	3.10	242	*e*P	Pn	21 32 47.9	+1.4
AKK				*e*S	Sn	21 33 22.6	-1.1
JAK	Akkeshi	3.20	242	P	Pn	21 32 49.2	+1.3
JAK				*e*S	Sn	21 33 25.1	-1.2
JAR	Ashorobuto	3.68	252	P	Pn	21 32 57.8	+3.2
JAR				*e*S	Sn	21 33 39.9	+1.7
JNBK	Urakawa-nobuka	4.80	244	P	Pn	21 33 12.1	+2.2
JKB	Kayabe	6.11	247	P	Pn	21 33 30.0	+2.1
JKB				*e*S	Sn	21 34 36.4	-1.6
JOT	Ohata	6.35	243	P	Pn	21 33 32.6	+1.3

BJI ***31*** *21:51:05.9±0.0, 7°.50S×67°.55E, h5km, mB5.1/20, mb4.5/40, Ms4.9/27, Ms7 4.7/25*
IDC ***31*** *21:51:09.8±0.7, 7°.10S×68°.01E, h0km, mb4.3/28, mb1 4.4/28, mb1mx4.1/59, mbtmp4.3/28, MS4.2/45, Ms1 4.2/45, ms1mx4.1/76, Error ellipse: s-maj=18.8km s-min=14.7km az=8.0*
GCMT ***31*** *21:51:11.9±0.2, 7°.26S±0°.01×67°.91E±0°.01, h12km, MW5.1/115, Moment Tensor Solution. s46,c62; s115,c176; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.19±.10; $M_{\theta\theta}$2.65±.10; $M_{\phi\phi}$2.54±.10; $M_{r\theta}$1.33±.35; $M_{\theta\phi}$-2.83±.08; $M_{\phi r}$0.74±.34; Best double couple: $M_0$5.52400×10^{16} NP1:ϕ_s149.00000°, δ45.00000°, λ-68.00000°. NP2:ϕ_s300.00000°, δ49.00000°, λ-110.00000°. Principal axes: T 5.4440, Plg2.0000°, Azm44.0000°; N 0.1610, Plg15.0000°, Azm313.0000°; P -5.6040, Plg75.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***31*** *21:51:11.9±1.0, 7°.3S±0°.1×68°.03E±0°.08, h10km±1km, mb4.9/74 Error ellipse: s-maj=19.8km s-min=12.7km az=181.0*
ISC 31 21:51:11.4±0.5,**7°.35S**±0°.09×**67°.99E**±0°.06,**h12**km,**n209,**
σ**1**§**32**/170,**mb4.8**/80,**MS4.3**/50,**14C-8D,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	Diego Garcia	4.43	91		Pn	21 52 17.7	-0.7
H08S1	Diego Carcia H	4.46	94	T	T	21 56 48.0	
	baz=278						
H08S3	Diego Garcia H	4.47	94	T	T	21 57 01.0	
	baz=278,slow=74						
H08S2	Diego Garcia H	4.48	94	T	T	21 56 45.8	
	baz=278,slow=74						
MSEY	Mahe Island	12.72	281	Pn	Pn	21 54 12.9	+0.6
RER	Riviere de l'E	18.13	220		Pn	21 55 23.4	+0.2
HYB	Hyderabad	26.73	23	*i* P	P	21 56 51.0	-0.1
KMBO	Kilima Mbogo	31.25	280	P	P	21 57 33.5	+1.8
	1.2nm,0.4s,baz=153,slow=2.3,SNR=4.6						
KMBO	Kilima Mbogo	31.25	280	P	P	21 57 32.1	+0.4
ATD	Arta Tunnel	31.26	307	P	P	21 57 31.7	+0.2
	2.5nm,0.3s,baz=162,slow=16,SNR=1.4						
ATD				LR	LR	22 07 58.7	
	comp=Z,189nm,19.4s,baz=132,slow=32						
WSAR	Wadi Sarin	31.75	343	LR	LR	22 07 52.3	
	comp=Z,269nm,18.8s,baz=170,slow=32						
PSI	Prapat	32.48	73	LR	LR	22 09 08.1	
	comp=Z,2µm,20.2s,baz=238,slow=33						
BKNI	Bangkinang	33.83	78	P	P	21 57 53.2	-0.8
UOSS	Minazif	34.09	341	P	P	21 57 56.1	+0.1
UOSS				IAmb	IAmb	21 58 04.0	
	comp=Z,21nm,1.1s						
LODK	Lodwar	34.27	287	P	P	21 57 58.6	+0.7
RAYN	Ar Rayn	37.74	325	P	P	21 58 27.1	-0.4
LEM	Lembang	39.32	92	LR	LR	22 11 59.4	
	comp=Z,450nm,21.6s,baz=194,slow=32						
LSZ	Lusaka	39.76	255	LR	LR	22 13 47.9	
	comp=Z,692nm,18.6s,baz=92,slow=34						
LSZ	Lusaka	39.76	255	P	P	21 58 45.3	+0.7
CM31	Chiang Mai Arr	39.88	50	P	P	21 58 44.9	-0.5
CMAR	Chiang Mai Arr	39.88	50	P	P	21 58 45.9	+0.5
	comp=Z,3.7nm,0.8s,baz=243,slow=9.3,SNR=33						
CMAR				PcP	PcP	22 00 51.4	+0.1
	comp=Z,1.2nm,0.8s,baz=232,slow=5.1,SNR=5.5						
CMAR				LR	LR	22 12 49.9	
	comp=Z,308nm,21.9s,baz=235,slow=33						
CMAR	Chiang Mai Arr	39.88	50	P	P	21 58 44.6	-0.7
CHTO	Chiang Mai	40.09	49	P	P	21 58 46.7	-0.5
MATP	Matopo	40.36	247	LR	LR	22 14 23.3	
	comp=Z,656nm,18.3s,baz=86,slow=34						
NIL	Nilore	41.08	7	P	P	21 58 54.8	-0.3
NIL				IAmb	IAmb	21 58 58.3	
	comp=Z,23nm,1.2s						
RDF	Al-Radifah	41.09	332	*e*P	P	21 58 53.5	-1.8
KBL	Kabul	41.67	1	P	P	21 59 00.2	0.0
RST	Umm Al-Ruwaisa	41.84	332	*e*P	P	21 59 00.2	-1.2
HRA	Herat	41.86	353	P	P	21 59 00.7	-1.1
UGM	Wanagama	42.15	94	P	P	21 59 03.5	-0.7
LSA	Lhasa	43.05	30	P	P	21 59 11.5	-0.3
LBTB	Lobatse	44.10	242	LR	LR	22 15 58.3	
	comp=Z,1µm,18.9s,baz=69,slow=34						
BOSA	Boshof	45.48	237	P	P	21 59 32.5	+1.4
	comp=Z,4.6nm,0.9s,baz=67,slow=9.0,SNR=5.4						
BOSA				LR	LR	22 16 05.0	
	comp=Z,494nm,19.1s,baz=68,slow=33						
BOSA	Boshof	45.48	237	P	P	21 59 31.4	+0.4
BOSA				IAmb	IAmb	21 59 43.0	
	comp=Z,16nm,1.4s						
CHGR	Chuyangaron	45.78	1	P	P	21 59 32.8	-0.3
GEYT	Alibeck	45.98	349	LR	LR	22 18 48.5	
	comp=Z,89nm,18.4s,baz=154,slow=36						
GEYT	Alibeck	45.98	349	P	P	21 59 33.7	-0.9
GYA0B	ALIBECK ARRAY	45.98	349	P	P	21 59 33.1	-1.5
GYA0B				IAmb	IAmb	21 59 42.8	
	comp=Z,8.9nm,1.1s						
DRK	Karamyk	46.73	4	P	P	21 59 40.0	-0.7
DRK				IAmb	IAmb	21 59 43.4	
	comp=Z,13nm,0.9s						
KSH	Kashi	47.21	8	P	P	21 59 41.5	-2.9
KSH				pP	pP	21 59 48.0	+0.8
KSH				sP	sP	21 59 50.0	+1.7
KSH				S	S	22 06 28.0	-9.2
KSH				sS	pS	22 06 36.8	-3.8
KSH				SS	ScS	22 09 51.5	+13
KSH				pmax	pmax		
	comp=Z,26nm,0.9s						
KSH				LR	LR		
	comp=Z,180nm,6.9s						
KSH				LR	LR		
	comp=Z,230nm,7.9s						
BTK	Batken	47.24	3	P	P	21 59 43.8	-0.7
BTK				IAmb	IAmb	21 59 47.2	
	comp=Z,20nm,0.9s						
AML	Almayashu	49.52	6	P	P	21 59 59.4	-3.1
	SNR=11						
KDJ	Kajisay	49.95	9	P	P	22 00 04.9	-0.6
EKS2	Erkin-Say	50.05	6	P	P	22 00 06.2	0.0
	SNR=8.1						
AAK	Ala-Archa	50.10	6	P	P	22 00 06.9	+0.3
	SNR=6.7						
AAK	Ala-Archa	50.10	6	P	P	22 00 06.8	+0.3
AAK				IAmb	IAmb	22 00 15.3	
	comp=Z,13nm,1.2s						
BOOM	Boomskoye usch	50.13	8	P	P	22 00 06.3	-0.5
KBK	Karagaybulak	50.17	7	P	P	22 00 07.2	+0.1
	SNR=6.2						
KKAR	Karatay Array	50.26	2	P	P	22 00 07.2	-0.4
FRU1	Bishkek	50.28	6	P	P	22 00 07.6	-0.2
FRU1				IAmb	IAmb	22 00 10.9	
	comp=Z,12nm,1.0s						
SUR	Sutherland	50.34	234	LR	LR	22 20 42.5	
	comp=Z,416nm,18.2s,baz=67,slow=35						
H01W3	Cape Leeuwin H	50.41	130	T	T	22 54 19.0	
	baz=292,slow=75,SNR=23						
H01W2	Cape Leeuwin H	50.41	130	T	T	22 54 17.0	
	baz=292,slow=75,SNR=25						
H01W1	Cape Leeuwin H	50.43	130	T	T	22 54 20.2	
	baz=292,slow=75,SNR=24						
PRZ	Przheval'sk	50.49	10	P	P	22 00 09.4	-0.2
PRZ				IAmb	IAmb	22 00 12.9	
	comp=Z,12nm,1.2s						
TKM2	Tokmak 2	50.51	7	P	P	22 00 09.4	-0.3
	SNR=8.5						
SIRT	Sirnak	50.60	334	P	P	22 00 10.1	-0.3
MMAI	Mount Meron Ar	50.71	324	LR	LR	22 20 01.3	
	comp=Z,97nm,20.5s,baz=263,slow=34						
WIN	Windhoek	51.18	247	P	P	22 00 13.5	-1.7
WIN				IAmb	IAmb	22 00 24.8	
	comp=Z,14nm,1.5s						
CD2	Chengdu	51.19	40	*e*P	P	22 00 16.0	+1.1
KAPI	Kappang	51.49	91	LR	LR	22 19 12.3	
	comp=Z,139nm,21.7s,baz=289,slow=33						
GNI	Garni	51.91	337	P	P	22 00 20.7	+0.5
GAZ	Gaziantep	52.82	329	P	P	22 00 27.5	+0.5
GAZ				IAmb	IAmb	22 00 35.1	
	comp=Z,22nm,1.2s						
KARS	Kars	52.97	336	P	P	22 00 29.3	+1.2
MMRI	Maumere	53.70	95	P	P	22 00 33.3	-0.5
WMQ	Urumqi	53.97	18	*e*P	P	22 00 35.5	+0.2
WMQ				pmax	pmax		
	comp=Z,13nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,320nm,4.1s						
WMQ				LR	LR		
	comp=Z,940nm,8.5s						
WMQ				LR	LR		
	comp=Z,480nm,10.5s						
WMQ				LR	LR		
	comp=Z,880nm,23.9s						
ENH	Enshi	54.62	45	P	P	22 00 39.8	-0.5
ENH				IAmb	IAmb	22 00 42.5	
	comp=Z,14nm,1.1s						
BNN	Bunyan	54.80	329	P	P	22 00 41.6	0.0
GTA	Gaotai	55.07	30	*e*P	P	22 00 43.3	-0.2
GTA				pP	pP	22 00 48.3	+2.0
GTA				sP	pwP	22 00 51.8	+1.2
GTA				PcP	PcP	22 01 45.0	+0.1
GTA				S	S	22 08 29.5	+3.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.8s						
GTA				pmax	pmax		
	comp=Z,140nm,4.9s						
GTA				LR	LR		
	comp=Z,350nm,16.4s						
GTA				LR	LR		
	comp=Z,360nm,17.1s						
GTA				LR	LR		
	comp=Z,530nm,20.0s						
MAKZ	Makanchi	55.34	12	P	P	22 00 43.9	-1.2
MAKZ				IAmb	IAmb	22 00 52.4	
	comp=Z,10nm,1.1s						
MK31	Makanchi Array	55.38	12	P	P	22 00 45.1	-0.3
MKAR	Makanchi Array	55.38	12	P	P	22 00 43.9	-1.5
	comp=Z,2.5nm,0.7s,baz=209,slow=7.4,SNR=15						
MKAR				PcP	PcP	22 01 45.7	-0.1
	comp=Z,2.5nm,1.0s,baz=217,slow=2.9,SNR=3.6						
MKAR				LR	LR	22 23 40.6	
	comp=Z,328nm,20.6s,baz=176,slow=35						
MKAR	Makanchi Array	55.38	12	P	P	22 00 45.2	-0.2
TOKA	Tokat	55.62	331	P	P	22 00 45.7	-1.6
SOEI	Soe	55.65	97	P	P	22 00 47.9	-0.3
KBZ	Khabaz	55.69	338	P	P	22 00 46.5	-1.1
	comp=Z,12nm,1.1s,baz=173,slow=6.9,SNR=5.6						
XAN	Xi'an	56.53	41	⇓P	P	22 00 53.0	-1.0
XAN				pP	sP	22 01 00.5	+2.1
XAN				pmax	pmax		
	comp=Z,11nm,1.4s						
XAN				LR	LR		
	comp=Z,440nm,19.2s						
XAN				LR	LR		
	comp=Z,410nm,18.5s						
XAN				LR	LR		
	comp=Z,780nm,22.0s						
BR131	Keskin Array S	56.59	329	P	P	22 00 53.5	-0.9
BR131				IAmb	IAmb	22 01 02.3	
	comp=Z,24nm,1.2s						
BRTR	Keskin Array B	56.59	329	P	P	22 00 53.5	-0.9
	comp=Z,4.6nm,0.9s,baz=150,slow=9.3,SNR=16						
BRTR				LR	LR	22 25 27.3	
	comp=Z,97nm,18.2s,baz=132,slow=36						
ABKAR	Akbulak array	56.80	354	P	P	22 00 54.1	-1.4
ABKAR	Akbulak array	56.80	354	IAmb	IAmb	22 01 03.2	
	comp=Z,9.3nm,1.0s						
FITZ	Fitzroy Crossi	57.04	107	LR	LR	22 22 54.5	
	comp=Z,135nm,19.4s,baz=345,slow=33						
ANTO	Ankara	57.13	328	P	P	22 00 57.9	-0.3
ANTO				IAmb	IAmb	22 00 59.7	
	comp=Z,19nm,1.1s						
AKTO	Aktyubinsk	58.19	353	P	P	22 01 03.2	-2.0
	comp=Z,9.5nm,1.0s,baz=182,slow=7.3,SNR=17						
AKTO				LR	LR	22 26 26.5	
	comp=Z,151nm,18.9s,baz=138,slow=36						
KURBB	Kurchatov Arra	58.45	8	P	P	22 01 05.6	-1.5
	comp=Z,4.0nm,0.4s,baz=204,slow=7.1,SNR=18						
KURBB				LR	LR	22 26 10.8	
	comp=Z,348nm,19.1s,baz=146,slow=36						
KURK	Kurchatov	58.56	8	P	P	22 01 07.0	-0.8
KURK				IAmb	IAmb	22 01 09.9	
	comp=Z,16nm,1.0s						
DAV	Davao City (W)	59.20	77	LR	LR	22 26 08.8	
	comp=Z,129nm,20.5s,baz=252,slow=36						
TNTI	Ternate	59.77	85	P	P	22 01 17.0	0.0
TNTI				IAmb	IAmb	22 01 26.3	
	comp=Z,15nm,1.0s						
BVAR	Borovoye Array	60.17	2	P	P	22 01 17.4	-1.6
	comp=Z,4.2nm,0.9s,baz=170,slow=8.8,SNR=13						
BRVK	Borovoye	60.20	2	P	P	22 01 18.1	-1.1
BRVK				IAmb	IAmb	22 01 27.1	
	comp=Z,16nm,1.2s						
MAW	Mawson	60.27	182	LR	LR	22 21 08.6	
	comp=Z,375nm,21.7s,baz=42,slow=30						
BTO	Baotou	61.41	35	*e*P	P	22 01 31.0	+3.2
BTO				S	S	22 09 54.5	+5.8
BTO				LR	LR		
	comp=Z,1µm,22.1s						
BTO				LR	LR		
	comp=Z,1µm,15.5s						
BELG	Belogornoye	62.00	346	LR	LR	22 28 24.7	
	comp=Z,169nm,19.7s,baz=131,slow=36						
NJ2	Nanjing	62.32	48	*e*P	P	22 01 35.5	+1.6
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC	Hu-ho-hao-te	62.46	36	*e*P	P	22 01 37.5	+2.6
HHC				S	S	22 10 06.5	+4.4
HHC				SS	SS	22 14 08.3	+2.0
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,6.1s						
HHC				LR	LR		

	comp=Z,270nm,14.0s						
HHC				LR	LR		
	comp=Z,320nm,14.0s						
HHC				LR	LR		
	comp=Z,290nm,14.6s						
ZAA0	**Zalesovo Array**	**62.70**	**11**	IAmb	IAmb	22 01 41.5	
	comp=Z,9.1nm,1.4s						
ZALV	**Zalesovo Beam**	**62.70**	**11**	P	**P**	**22 01 34.0**	**-2.0**
	comp=Z,3.4nm,0.8s,baz=204,slow=6.5,SNR=9.6						
ZALV				LR	LR	22 27 55.0	
	comp=Z,305nm,20.5s,baz=189,slow=35						
ZALV	**Zalesovo Beam**	**62.70**	**11**	P	**P**	**22 01 34.7**	**-1.3**
HARR	**Harsova**	**63.10**	**329**	⇓P	**P**	**22 01 38.0**	**-0.8**
CFR	**Carcaliu**	**63.34**	**330**	⇓P	**P**	**22 01 41.0**	**+0.6**
SIJI	**Sorong**	**63.39**	**87**	LR	LR	22 28 07.8	
	comp=Z,74nm,20.8s,baz=238,slow=35						
LEHL	**Lehliu**	**63.52**	**328**	⇑P	P	22 01 37.0	-4.7
ARU	**Arti**	**64.03**	**354**	P	**P**	**22 01 43.0**	**-1.8**
	comp=Z,4.3nm,0.9s,baz=198,slow=2.4,SNR=13						
ARU	**Arti**	**64.03**	**354**	P	**P**	**22 01 42.4**	**-2.4**
ARU				IAmb	IAmb	22 01 51.4	
	comp=Z,16nm,1.0s						
VTS	**Vitosha**	**64.27**	**325**	⇑P	P	22 01 41.2	-5.6
VTS	**Vitosha**	**64.27**	**325**	P	**P**	**22 01 46.8**	**0.0**
VTS				IAmb	IAmb	22 01 54.9	
	comp=Z,14nm,1.1s						
BISRR	**Bisoca**	**64.32**	**329**	⇑P	**P**	**22 01 48.2**	**+1.2**
VRI	**Vrincioaia**	**64.53**	**329**	⇑P	**P**	**22 01 48.1**	**-0.2**
SONM	**Songino Array**	**64.55**	**28**	P	**P**	**22 01 48.3**	**-0.2**
	comp=Z,5.5nm,1.1s,baz=216,slow=6.6,SNR=15						
SONM	**Songino Array**	**64.55**	**28**	P	**P**	**22 01 48.6**	**+0.1**
SONM				IAmb	IAmb	22 01 52.8	
	comp=Z,9.8nm,1.2s						
PLOR	**Plostina**	**64.56**	**329**	⇓P	**P**	**22 01 48.0**	**-0.5**
MLR	**Muntele Rosu**	**64.67**	**329**	⇑P	**P**	**22 01 49.3**	**-0.1**
MLR	**Muntele Rosu**	**64.67**	**329**	P	**P**	**22 01 49.0**	**-0.4**
	comp=Z,6.9nm,1.1s,baz=122,slow=15,SNR=3.4						
MLR	**Muntele Rosu**	**64.67**	**329**	IAmb	IAmb	22 02 15.3	
	comp=Z,15nm,1.2s						
BJI	**Beijing**	**64.77**	**39**	P	**P**	**22 01 50.3**	**+0.4**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
COVR	**Voineasa-Covas**	**64.78**	**329**	⇑P	**P**	**22 01 49.5**	**-0.4**
ULN	**Ulaanbaatar**	**64.87**	**28**	P	**P**	**22 01 50.7**	**0.0**
TESR	**Tescani**	**65.01**	**330**	⇑P	**P**	**22 01 50.6**	**-0.8**
ASAR	**Alice Springs**	**65.05**	**113**	P	**P**	**22 01 52.6**	**+0.4**
	comp=Z,2.8nm,1.1s,baz=275,slow=6.3,SNR=12						
ASAR				LR	LR	22 28 10.0	
	comp=Z,72nm,19.6s,baz=294,slow=34						
VOIR		**65.10**	**328**	⇑P	**P**	**22 01 50.9**	**-1.2**
OZUR		**65.16**	**329**	⇓P	**P**	**22 01 50.7**	**-1.8**
DOPR	**Dopca**	**65.28**	**329**	⇑P	P	22 01 49.7	-3.5
WRA	**Warramunga Arr**	**65.33**	**109**	P	**P**	**22 01 54.5**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=279,slow=5.9,SNR=8.5						
WRA				LR	LR	22 27 06.0	
	comp=Z,146nm,21.3s,baz=232,slow=33						
WRA	**Warramunga Arr**	**65.33**	**109**	P	**P**	**22 01 54.8**	**+0.7**
BOVS	**Bovan**	**65.77**	**325**	⇑P	**P**	**22 01 54.3**	**-2.1**
LOT	**Lotru**	**65.78**	**327**	⇓P	P	22 01 49.6	-7.0
MDB	**Medias**	**65.92**	**328**	⇓P	P	22 01 50.9	-6.4
GZR	**Gura Zlata**	**66.28**	**327**	⇑P	**P**	**22 01 58.0**	**-1.8**
BURAR	**Bucovina Array**	**66.48**	**330**	⇓P	P	22 02 06.4	+5.4
AKASG	**Malin Array Be**	**66.81**	**334**	P	**P**	**22 02 01.3**	**-1.6**
	comp=Z,2.8nm,0.8s,baz=137,slow=5.5,SNR=11						
AKBB	**Malin Array Si**	**66.81**	**334**	P	**P**	**22 02 02.9**	**0.0**
AKBB				IAmb	IAmb	22 02 09.9	
	comp=Z,13nm,1.2s						
BZS	**Buzias**	**67.06**	**327**	⇑P	**P**	**22 02 03.6**	**-1.0**
DRGR		**67.22**	**328**	⇑P	**P**	**22 02 05.3**	**-0.4**
KIRV	**Kirov**	**67.40**	**350**	P	**P**	**22 02 05.1**	**-1.4**
	comp=Z,12nm,0.7s,baz=175,slow=2.0,SNR=5.2						
SIRR	**Siria**	**67.44**	**327**	⇑P	**P**	**22 02 06.6**	**-0.5**
JOW	**Kunigami**	**67.53**	**57**	LR	LR	22 29 00.9	
	comp=Z,153nm,20.8s,baz=310,slow=34						
TORD	**Torodi Ar. Bea**	**68.92**	**287**	P	**P**	**22 02 16.8**	**-0.1**
	comp=Z,2.6nm,1.0s,baz=92,slow=5.7,SNR=8.8						
KEST	**Kesra**	**69.75**	**312**	P	**P**	**22 02 22.2**	**+0.4**
	comp=Z,9.9nm,1.2s,baz=105,slow=8.3,SNR=4.5						
KEST				LR	LR	22 30 29.3	
	comp=Z,108nm,21.4s,baz=256,slow=34						
KEST	**Kesra**	**69.75**	**312**	P	**P**	**22 02 21.9**	**+0.1**
KEST				IAmb	IAmb	22 02 30.8	
	comp=Z,15nm,1.2s						
SRO2	**Moca**	**70.12**	**327**	*e*P	**P**	**22 02 22.8**	**-0.9**
SRO	**Srobarova**	**70.20**	**327**	*e*P	**P**	**22 02 25.4**	**+1.3**
VYHS	**Vyhne**	**70.33**	**328**	*e*P	**P**	**22 02 28.2**	**+3.2**
LANS	**Liptovska Anna**	**70.39**	**329**	*e*P	**P**	**22 02 26.2**	**+0.8**
NRCA	**Norcia**	**70.50**	**320**	P	**P**	**22 02 26.5**	**+0.3**
KOLL	**Kolacno**	**70.61**	**328**	*e*P	**P**	**22 02 27.6**	**+1.0**
NACGM	**Naroch**	**70.90**	**336**	*i* P	**P**	**22 02 30.6**	**+2.4**
MODS	**Modra-Piesok**	**71.09**	**327**	*e*P	**P**	**22 02 29.2**	**-0.4**
SOKA	**Soboth**	**71.38**	**325**	*e*P	**P**	**22 02 32.4**	**+0.9**
	comp=Z,6.2nm,1.5s						
ARSA	**Arzberg**	**71.42**	**325**	*e*P	**P**	**22 02 31.4**	**-0.3**
	comp=Z,8.2nm,1.3s						
KSRS	**Korea Array**	**71.43**	**47**	P	**P**	**22 02 30.4**	**-1.4**
	comp=Z,0.9nm,0.8s,baz=265,slow=3.7,SNR=5.0						
KSRS				LR	LR	22 35 57.4	
	comp=Z,286nm,18.1s,baz=240,slow=38						
OBKA	**Obir**	**71.57**	**324**	*e*P	**P**	**22 02 33.7**	**+1.0**
	comp=Z,9.3nm,1.4s						
CONA	**Conrad Observa**	**71.61**	**326**	*e*P	**P**	**22 02 31.9**	**-1.0**
	comp=Z,6.6nm,0.9s						
JNU	**Nakatsue**	**71.93**	**52**	LR	LR	22 33 21.2	
	comp=Z,124nm,20.0s,baz=258,slow=35						
MYKA	**Terra Mystica**	**72.16**	**324**	*e*P	**P**	**22 02 36.0**	**-0.2**
	comp=Z,5.5nm,1.1s						
STKA	**Stephens Creek**	**72.25**	**121**	LR	LR	22 30 12.3	
	comp=Z,123nm,21.2s,baz=239,slow=32						
ZOU	**Zoufplan**	**72.51**	**324**	IAmb	IAmb	22 02 46.4	
	comp=Z,11nm,1.1s						
STAL	**STALIGIAL**	**72.51**	**323**	P	**P**	**22 02 38.8**	**+0.5**
STAL				IAmb	IAmb	22 02 46.7	
	comp=Z,15nm,1.1s						
JAY	**Jayapura**	**72.55**	**90**	LR	LR	22 35 16.7	
	comp=Z,57nm,19.7s,baz=329,slow=36						
KBA	**Koelnbreinsper**	**72.57**	**324**	*e*P	**P**	**22 02 40.1**	**+1.3**
	comp=Z,0.3nm,0.3s						
TEOL	**Teolo**	**72.68**	**322**	P	**P**	**22 02 39.1**	**-0.1**
DPC	**Dobruska-Polom**	**72.75**	**328**	*e*P	**P**	**22 02 38.0**	**-1.6**
DPC				*e*pP	**pP**	**22 02 45.3**	**+2.8**
ABTA	**Abfaltersbach**	**72.88**	**324**	*e*P	**P**	**22 02 40.7**	**+0.2**
	comp=Z,25nm,1.2s						
OSTC	**Ostas**	**72.92**	**328**	*e*P	**P**	**22 02 39.1**	**-1.5**
CKRC	**Cesky Krumlov**	**72.97**	**326**	*e*P	**P**	**22 02 41.5**	**+0.6**
CTI	**Castel Tesino**	**73.04**	**323**	P	**P**	**22 02 41.6**	**+0.1**
CTI				IAmb	IAmb	22 02 56.9	
	comp=Z,22nm,1.4s						
GERES	**GERESS Array B**	**73.32**	**326**	P	**P**	**22 02 41.3**	**-1.7**
	comp=Z,0.4nm,0.9s,baz=118,slow=10,SNR=4.5						
SALO	**Salr**	**73.51**	**322**	P	**P**	**22 02 44.0**	**-0.2**
SALO				IAmb	IAmb	22 02 54.5	
	comp=Z,15nm,1.1s						
KHC	**Kasperske Hory**	**73.54**	**326**	*e*P	**P**	**22 02 43.0**	**-1.3**
KHC				*e*pP	**pP**	**22 02 49.5**	**+2.3**
KHC	**Kasperske Hory**	**73.54**	**326**	IAmb	IAmb	22 02 51.2	
	comp=Z,11nm,1.4s						
WTTA	**Wattenberg**	**73.66**	**324**	*e*P	**P**	**22 02 45.0**	**-0.2**
	comp=Z,13nm,0.8s						
WATA	**Walderalm**	**73.73**	**324**	*e*P	**P**	**22 02 46.6**	**+1.0**
	comp=Z,16nm,1.0s						
KIC	**Kosan Boka**	**73.82**	**279**	*e*PKP1	**P**	**22 02 47.4**	**+0.8**
	comp=Z,12nm,0.8s						
SQTA	**Sankt Quirin**	**73.89**	**324**	*e*P	**P**	**22 02 46.1**	**-0.4**
	comp=Z,12nm,0.8s						
DBIC	**Dimbokro**	**73.98**	**279**	P	**P**	**22 02 48.3**	**+0.7**
	comp=Z,3.3nm,0.9s,baz=128,slow=6.5,SNR=5.9						
DBIC				LR	LR	22 35 10.2	
	comp=Z,153nm,18.6s,baz=134,slow=36						
MOTA	**Moosalm**	**74.02**	**324**	*e*P	**P**	**22 02 46.8**	**-0.4**
	comp=Z,17nm,1.0s						
FETA	**Feichten**	**74.08**	**323**	*e*P	**P**	**22 02 46.7**	**-0.9**
	comp=Z,14nm,1.1s						
LIC	**Lamto**	**74.08**	**279**	*e*PKP1	**P**	**22 02 46.5**	**-1.6**
	comp=Z,44nm,1.1s						
TIC	**Toumodi**	**74.14**	**279**	*e*PKP1	**P**	**22 02 47.0**	**-1.5**
RETA	**Reutte**	**74.29**	**324**	*e*P	**P**	**22 02 50.2**	**+1.4**
	comp=Z,20nm,1.2s						
DAVOX	**Davos/Dischmat**	**74.47**	**323**	P	**P**	**22 02 49.5**	**-0.5**
	comp=Z,3.7nm,0.8s,baz=116,slow=12,SNR=7.2						
KOWA	**Kowa**	**74.62**	**287**	LR	LR	22 33 19.5	
	comp=Z,199nm,21.7s,baz=131,slow=34						
KOWA	**Kowa**	**74.62**	**287**	P	**P**	**22 02 51.3**	**0.0**
KOWA				IAmb	IAmb	22 03 00.5	
	comp=Z,14nm,1.1s						
DAVA	**Damuels**	**74.71**	**323**	*e*P	**P**	**22 02 51.0**	**-0.3**
	comp=Z,17nm,1.2s						
NKC	**Novy Kostel**	**74.75**	**327**	*e*P	**P**	**22 02 51.5**	**+0.2**
NKC				*e*pP	**sP**	**22 02 59.0**	**+3.1**
CLL	**Collm**	**75.03**	**328**	*e*P	**P**	**22 02 54.0**	**+1.2**
	comp=Z,20nm,1.6s						
CLL				*e*		22 03 00.0	
	comp=Z,17nm,1.2s						
CLL				*e*PP	**PP**	**22 05 37.0**	**-3.9**
CLL	**Collm**	**75.03**	**328**	P	**P**	**22 02 53.1**	**+0.2**
CLL				IAmb	IAmb	22 03 01.7	
	comp=Z,18nm,1.2s						
GRFO	**Grafenberg**	**75.14**	**326**	P	**P**	**22 02 54.2**	**+0.6**
SENIN	**Lac Senin/Sane**	**75.84**	**321**	IAmb	IAmb	22 03 11.1	
	comp=Z,16nm,1.2s						
FINES	**FINESS Array B**	**75.92**	**341**	P	**P**	**22 02 55.7**	**-2.0**
	comp=Z,3.9nm,0.9s,baz=147,slow=8.3,SNR=4.5						
USRK	**Ussuriysk Ar.**	**77.03**	**42**	LR	LR	22 39 48.7	
	comp=Z,156nm,18.8s,baz=248,slow=38						
SNAA	**Sanae**	**77.08**	**198**	LR	LR	22 29 17.3	
	comp=Z,333nm,21.6s,baz=124,slow=30						
NRIK	**Noril'sk**	**77.71**	**7**	P	**P**	**22 03 07.6**	**-0.1**
	comp=Z,0.6nm,0.2s,baz=174,slow=4.7,SNR=1.7						
NRIK				LR	LR	22 39 30.0	
	comp=Z,326nm,18.0s,baz=196,slow=37						
PMG	**Port Moresby**	**78.20**	**98**	LR	LR	22 34 51.7	
	comp=Z,69nm,19.3s,baz=47,slow=34						
MJAR	**Matsushiro Arr**	**78.76**	**51**	LR	LR	22 39 44.6	
	comp=Z,68nm,18.0s,baz=224,slow=37						
KLR	**Kul'dur**	**78.96**	**37**	LR	LR	22 40 04.8	
	comp=Z,206nm,20.3s,baz=226,slow=37						
GUMO	**Guam**	**79.09**	**75**	LR	LR	22 35 14.8	
	comp=Z,130nm,21.7s,baz=260,slow=34						
ESDC	**Sonseca Array**	**81.00**	**312**	P	**P**	**22 03 25.1**	**-1.3**
	comp=Z,1.7nm,0.8s,baz=97,slow=3.6,SNR=11						
ESDC	**Sonseca Array**	**81.00**	**312**	P	**P**	**22 03 26.3**	**-0.1**
ESDC				IAmb	IAmb	22 03 34.1	
	comp=Z,12nm,1.4s						
ARCES	**ARCESS Array B**	**82.05**	**346**	P	**P**	**22 03 30.5**	**-0.7**
	comp=Z,4.8nm,0.8s,baz=152,slow=4.1,SNR=4.8						
ARCES				LR	LR	22 42 14.9	
	comp=Z,104nm,18.6s,baz=68,slow=38						
QSPA	**South Pole Qui**	**82.68**	**180**	LR	LR	22 35 08.3	
	comp=Z,218nm,21.8s,baz=279,slow=32						
VNDA	**Vanda**	**83.72**	**167**	LR	LR	22 35 38.8	
	comp=Z,182nm,19.8s,baz=270,slow=32						
ASAJ	**Asahikawa**	**84.18**	**44**	LR	LR	22 42 53.6	
	comp=Z,154nm,18.0s,baz=230,slow=37						
TIXI	**Tiksi**	**88.14**	**16**	P	**P**	**22 04 01.1**	**-0.6**
TIXI				IAmb	IAmb	22 04 08.7	
	comp=Z,11nm,1.2s						
DZM	**Mont Dzumac**	**95.04**	**113**	LR	LR	22 44 10.7	
	comp=Z,174nm,20.7s,baz=259,slow=33						
INK	**Inuvik**	**117.45**	**9**	PKP	**PKPdf**	**22 09 56.6**	**0.0**
	comp=Z,0.7nm,0.6s,baz=333,slow=1.4,SNR=4.4						
ILAR	**Eielson Array**	**117.62**	**16**	PKP	**PKPdf**	**22 09 55.8**	**-1.3**
	comp=Z,0.9nm,1.1s,baz=305,slow=3.2,SNR=2.7						
YKA	**Yellowknife Ar**	**124.93**	**1**	PKP	**PKPdf**	**22 10 10.2**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=346,slow=2.3,SNR=14						
YKA				PP	**PP**	**22 11 58.4**	**-0.4**
	comp=Z,1.4nm,1.0s,baz=353,slow=7.1,SNR=9.8						
PDAR	**Pinedale Array**	**144.66**	**357**	PKP	**PKPab**	**22 10 47.6**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=92,slow=2.9,SNR=9.7						
NVAR	**Mina Array Bea**	**148.54**	**9**	PKPbc	**PKPdf**	**22 10 59.5**	**+4.2**
	comp=Z,2.5nm,0.8s,baz=306,slow=1.1,SNR=12						

IDC ***31*** *21:54:13.1±3.7, 37°.25N×72°.18E, h198km±23km, mb3.3/5, mb1 3.3/10, mb1mx3.0/60, mbtmp3.8/10, Error ellipse: s-maj=44.1km s-min=16.7km az=149.0*

NEIC ***31*** *21:54:15.4±1.1, 37°.40N±0°.06×72°.16E±0°.10, h219km±6km, mb4.1/4, Error ellipse: s-maj=11.9km s-min=8.8km az=111.0*

NNC ***31*** *21:54:17.6±7.4, 37°.78N×71°.99E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=61.5km s-min=54.0km az=30.0*

ISC 31 21:54:13.7±0.7**, 37°.32N**±0°.06×**72°.15E**±0°.07**, h200**km**, n45, σ1ˢ61**/50**, mb3.6**/6**, 3C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk**	**2.17**	**353**		**Pn**	**21 54 56.9**	**+2.7**
DRK				Sn	**Sn**	**21 55 27.4**	**+1.4**
CHGR	**Chuyangaron**	**2.71**	**300**	Pn	**Pn**	**21 55 02.4**	**+2.3**
BTK	**Batken**	**2.92**	**339**	Pn	**Pn**	**21 55 05.7**	**+3.2**
KBL	**Kabul**	**3.75**	**223**	Pn	**Pn**	**21 55 15.6**	**+2.9**
NIL	**Nilore**	**3.77**	**166**		**Pn**	**21 55 16.2**	**+3.4**
AML	**Almayashu**	**4.95**	**13**	P	**Pn**	**21 55 28.8**	**+1.1**
	SNR=49						
UCH	**Uchtor**	**5.22**	**20**	P	**Pn**	**21 55 32.7**	**+1.4**
	SNR=15						
EKS2	**Erkin-Say**	**5.47**	**13**	P	**Pn**	**21 55 35.8**	**+1.6**
	SNR=12						
AAK	**Ala-Archa**	**5.60**	**18**	P	**Pn**	**21 55 37.5**	**+1.7**
	3.9nm,0.3s,baz=190,slow=5.8,SNR=88						
AAK				S	**Sn**	**21 56 40.0**	**-0.9**
	2.8nm,0.3s,baz=319,slow=22,SNR=17						
AAK	**Ala-Archa**	**5.60**	**18**	P	**Pn**	**21 55 37.6**	**+1.7**
	SNR=22						
AAK	**Ala-Archa**	**5.60**	**18**	⇓Pn	**Pn**	**21 55 37.3**	**+1.3**
	14nm,0.7s						
AAK				⇑Sn	**Sn**	**21 56 39.8**	**-1.1**
	22nm,0.9s						
AAK	**Ala-Archa**	**5.60**	**18**	Pn	**Pn**	**21 55 37.2**	**+1.3**
KBK	**Karagaybulak**	**5.74**	**21**	P	**Pn**	**21 55 39.6**	**+1.9**
	SNR=8.7						
FRU1	**Bishkek**	**5.80**	**18**		**Pn**	**21 55 40.3**	**+2.0**
ULHL	**Ulahol**	**5.84**	**31**	P	**Pn**	**21 55 40.0**	**+1.0**
	SNR=13						
KKAR	**Karatay Array**	**5.91**	**348**	Pn	**Pn**	**21 55 40.8**	**+1.1**
BOOM	**Boomskoye usch**	**5.92**	**28**	Pn	**Pn**	**21 55 41.2**	**+1.2**
KK09	**Karatay Array**	**5.93**	**348**	⇑Pn	**Pn**	**21 55 40.7**	**+0.8**
	1.2nm,0.2s,baz=163,slow=14						
KK09				⇓Sn	**Sn**	**21 56 44.0**	**-4.3**
	15nm,0.7s,baz=176,slow=22						
CHMS	**Chumysh**	**6.01**	**19**	P	**Pn**	**21 55 42.6**	**+1.6**
	SNR=6.6						
DHRM	**DHARAMSHALA**	**6.10**	**145**	*e*P	**Pn**	**21 55 44.0**	**+1.4**
DHRM				*e*S	**Sn**	**21 56 50.9**	**-1.8**
DHRM				IAML		21 56 55.4	
	comp=E,110nm,0.4s						
KDJ	**Kajisay**	**6.17**	**37**	Pn	**Pn**	**21 55 44.1**	**+0.9**
TKM2	**Tokmak 2**	**6.18**	**24**	P	**Pn**	**21 55 44.8**	**+1.4**
	SNR=11						
TKM2	**Tokmak 2**	**6.18**	**24**	⇑Pn	**Pn**	**21 55 44.1**	**+0.7**
	comp=E,14nm,0.6s						
TARG	**Taragay, Kyrgy**	**6.20**	**43**		**Pn**	**21 55 44.0**	**+0.2**
HRA	**Herat**	**8.56**	**253**	Pn	**Pn**	**21 56 16.4**	**+2.0**
GEYT	**Alibeck**	**11.15**	**277**	P	**Pn**	**21 56 48.6**	**+0.9**
	comp=E,0.4nm,0.3s,baz=119,slow=12,SNR=13						
GEYT				S	**Sn**	**21 58 50.2**	**-1.9**
	comp=E,0.5nm,0.3s,baz=116,slow=30,SNR=6.7						
GEYT	**Alibeck**	**11.15**	**277**	Pn	**Pn**	**21 56 48.5**	**+0.8**
GYA0B	**ALIBECK ARRAY**	**11.15**	**277**	Pn	**Pn**	**21 56 48.3**	**+0.6**
MAKZ	**Makanchi**	**11.95**	**34**	Pn	**Pn**	**21 56 57.3**	**-0.6**
MK31	**Makanchi Array**	**12.08**	**35**	Pn	**Pn**	**21 56 59.7**	**+0.2**
MKAR	**Makanchi Array**	**12.08**	**35**	P	**Pn**	**21 57 00.0**	**+0.5**
	comp=E,0.1nm,0.3s,baz=220,slow=15,SNR=9.3						
ABKAR	**Akbulak array**	**14.85**	**327**		**Pn**	**21 57 33.9**	**0.0**
AKTO	**Aktyubinsk**	**16.56**	**327**	P	**Pn**	**21 57 55.1**	**+0.6**
	comp=E,0.3nm,0.3s,baz=124,slow=11,SNR=2.5						
ZAA0	**Zalesovo Array**	**18.79**	**24**	P	**P**	**21 58 18.0**	**+0.3**
ZAA0				IAmb	IAmb	21 58 19.2	
	comp=Z,1.4nm,0.7s						
ZALV	**Zalesovo Beam**	**18.79**	**24**	P	**P**	**21 58 18.1**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=214,slow=11,SNR=11						
ZALV	**Zalesovo Beam**	**18.79**	**24**	P	**P**	**21 58 17.6**	**-0.1**
BURAR	**Bucovina Array**	**35.62**	**302**	P	**P**	**22 00 53.7**	**+1.4**
ALN	**Alexandroupoli**	**35.64**	**290**	P	**P**	**22 00 50.4**	**-2.0**
ALN				IAmb	IAmb	22 00 51.6	
	comp=Z,14nm,1.0s						
FINES	**FINESS Array B**	**37.33**	**325**	P	**P**	**22 01 07.0**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=123,slow=7.0,SNR=3.6						
ARCES	**ARCESS Array B**	**40.74**	**337**	P	**P**	**22 01 35.1**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=113,slow=8.9,SNR=6.5						
ARCES	**ARCESS Array B**	**40.74**	**337**	P	**P**	**22 01 33.6**	**-1.0**
NOA	**NORSAR Array B**	**44.28**	**322**	P	**P**	**22 02 03.2**	**0.0**
	comp=Z,0.4nm,0.6s,baz=110,slow=6.5,SNR=1.3						
BFO	**Black Forest**	**46.82**	**305**		pP	22 03 05.4	-2.5
TORD	**Torodi Ar. Bea**	**66.66**	**269**	P	**P**	**22 04 42.2**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=44,slow=5.6,SNR=9.5						
YKA	**Yellowknife Ar**	**80.38**	**3**	P	**P**	**22 06 02.0**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=350,slow=5.5,SNR=9.4						

JMA ***31*** *22:05:25.6±0.1, 24°.08N×122°.67E, h15km±3km, M2.6*

TAP ***31*** *22:05:25.6, 24°.14N×122°.65E, h20km, ML3.1, D*

ISC 31 22:05:25.2±1.2**, 24°.09N**±0°.04×**122°.66E**±0°.02**, h18**km±5km**, n47, σ0ˢ56**/82**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.45**	**36**	P	**Pg**	**22 05 34.5**	**+0.1**
JYNG				S	**Sb**	**22 05 40.6**	**-0.4**
YOJ	**Yonaguni jima**	**0.49**	**41**	*i* P	**Pg**	**22 05 35.2**	**+0.1**
	baz=51						
YOJ				*i* S	**Sb**	**22 05 42.1**	**-0.2**
	baz=51						
YOJ	**Yonaguni jima**	**0.49**	**41**	P	**Pg**	**22 05 35.3**	**+0.1**
YOJ				*e*S	**Sb**	**22 05 42.0**	**-0.2**
EWUT	**Wuta**	**0.88**	**294**	P	**Pb**	**22 05 41.5**	**-0.5**
	baz=301						
EWUT				S	**Sb**	**22 05 53.2**	**-0.2**
	baz=301						
TWC	**Suao**	**0.90**	**305**	P	**Pb**	**22 05 41.8**	**-0.6**
	baz=296						
TWC				S	**Sb**	**22 05 53.3**	**-0.8**
	baz=296						
ENA	**Nanau**	**0.90**	**292**	P	**Pb**	**22 05 41.7**	**-0.7**
	baz=299						
ENA				S	**Sb**	**22 05 54.2**	**+0.1**
	baz=299						
ETL	**Fush Village**	**0.95**	**275**	*e*P	**Pn**	**22 05 44.2**	**+0.4**
	baz=272						
TWD	**Chiawan**	**0.97**	**270**	*e*P	**Pb**	**22 05 43.1**	**-0.5**
	baz=267						
TWD				*e*S	**Sb**	**22 05 56.7**	**+0.6**
	baz=267						
IRIF	**Iriomote-Funau**	**1.01**	**76**	P	**Pb**	**22 05 44.1**	**-0.1**
IRIF				S	**Sb**	**22 05 57.4**	**+0.2**
NDS	**Dongshan**	**1.02**	**303**	P	**Pb**	**22 05 44.0**	**-0.3**
	baz=302						
NDS				S	**Sb**	**22 05 57.4**	**0.0**
	baz=302						
HATJ	**Hateruma jima**	**1.05**	**91**	P	**Pb**	**22 05 45.1**	**+0.2**
HATJ				*e*S	**Sb**	**22 05 58.7**	**+0.4**
NTC	**Toucheng**	**1.07**	**316**	*e*P	**Pb**	**22 05 45.2**	**-0.1**
	baz=315						
NTC				S	**Sn**	**22 05 59.9**	**0.0**
	baz=315						
ETLH	**Xiulin Townshi**	**1.08**	**277**	*e*P	**Pb**	**22 05 45.4**	**-0.1**
	baz=284						
ETLH				*e*S	**Sn**	**22 06 00.5**	**+0.3**
	baz=284						
TWB1	**Santiao Chiao**	**1.10**	**327**	*e*P	**Pg**	**22 05 46.4**	**-0.2**
	baz=338						
TWB1				*e*S	**Sn**	**22 06 00.1**	**-0.5**
	baz=338						
TWE	**Neicheng**	**1.10**	**305**	P	**Pb**	**22 05 45.9**	**+0.1**
	baz=305						
TWE				*e*S	**Sb**	**22 06 00.0**	**+0.2**
	baz=305						
ENTT	**Nioudou**	**1.14**	**299**	*e*P	**Pn**	**22 05 46.5**	**+0.2**
	baz=299						
ENTT				*e*S	**Sb**	**22 06 01.0**	**+0.2**
	baz=299						
TIPB	**Shuangxi**	**1.16**	**319**	*e*P	**Pg**	**22 05 47.5**	**-0.3**
	baz=319						
TIPB				*e*S	**Sn**	**22 06 02.2**	**+0.1**
	baz=319						
NDT	**Datong Townshi**	**1.16**	**296**	*e*P	**Pb**	**22 05 47.2**	**+0.3**
	baz=296						
NDT				*e*S	**Sn**	**22 06 02.1**	**0.0**
	baz=296						
EGFH	**Guangfu**	**1.20**	**250**	*e*P	**Pb**	**22 05 48.4**	**+0.9**
	baz=248						
EGFH				*e*S	**Sb**	**22 06 02.8**	**+0.1**
	baz=248						
NNS	**Nan Shan**	**1.22**	**287**	*e*P	**Pb**	**22 05 48.1**	**+0.2**
	baz=297						
NNS				*e*S	**Sn**	**22 06 04.6**	**+0.8**
	baz=297						
JKRS	**Kuro-shima**	**1.24**	**83**	P	**Pn**	**22 05 48.3**	**+0.6**
JKRS				*e*S	**Sg**	**22 06 05.8**	**+0.2**
NWLT	**Wulai**	**1.26**	**303**	*e*P	**Pb**	**22 05 48.8**	**+0.4**
	baz=303						
NWLT				*e*S	**Sn**	**22 06 04.7**	**+0.2**
	baz=303						
NWF	**Wu-fen Shan**	**1.26**	**321**	*e*P	**Pb**	**22 05 48.8**	**+0.2**
	baz=321						
NWF				*e*S	**Sg**	**22 06 05.8**	**-0.4**
	baz=321						
WHF	**Hehuan Shan**	**1.27**	**273**	P	**Pn**	**22 05 48.4**	**-0.1**
	baz=271						
WHF				*e*S	**Sb**	**22 06 05.1**	**-0.1**
	baz=271						
FUSS	**Fushou**	**1.30**	**277**	*e*P	**Pn**	**22 05 49.2**	**+0.4**
	baz=275						
NSK	**Sanguang**	**1.32**	**297**	*e*P	**Pb**	**22 05 50.0**	**+0.4**
	baz=302						
NSK				*e*S	**Sb**	**22 06 06.8**	**+0.6**
	baz=302						
TWA	**Mucha**	**1.32**	**312**	P	**Pg**	**22 05 50.5**	**-0.3**
	baz=313						
TWA				*e*S	**Sg**	**22 06 07.2**	**-0.9**
	baz=313						
EHY	**Hungye**	**1.35**	**245**	*e*P	**Pn**	**22 05 48.5**	**-0.8**
	baz=243						
EHY				*e*S	**Sn**	**22 06 06.1**	**-0.7**
	baz=243						
OWD	**Renai**	**1.36**	**265**	*e*P	**Pn**	**22 05 49.6**	**0.0**
	baz=263						
OWD				*e*S	**Sn**	**22 06 07.0**	**-0.2**
	baz=263						
TWT	**Tachien**	**1.36**	**277**	*e*P	**Pb**	**22 05 50.5**	**+0.2**
	baz=276						
TWT				*e*S	**Sg**	**22 06 10.8**	**+1.3**
	baz=276						
JIJ	**Ishigaki jima**	**1.38**	**78**	P	**Pn**	**22 05 49.8**	**+0.1**
JIJ				S	**Sn**	**22 06 07.2**	**-0.3**
EYUL	**Yuli**	**1.43**	**239**	*e*P	**Pn**	**22 05 49.7**	**-0.6**
	baz=237						
EYUL				*e*S	**Sn**	**22 06 07.4**	**-1.3**
	baz=237						
YM01	**YM01**	**1.45**	**317**	*e*P	**Pg**	**22 05 53.0**	**-0.2**
	baz=330						
TWS1	**Kuangyinshan**	**1.51**	**312**	*e*P	**Pg**	**22 05 54.5**	**+0.1**
	baz=325						
FULB	**Fuli**	**1.53**	**235**	*e*P	**Pn**	**22 05 50.4**	**-1.3**
	baz=220						
WHP	**Taichung City**	**1.57**	**277**	*e*P	**Pb**	**22 05 54.0**	**+0.1**
	baz=263						
JISG	**Ishigakijimahi**	**1.59**	**71**	P	**Pn**	**22 05 52.6**	**+0.1**
JISG				*e*S	**Sn**	**22 06 12.1**	**-0.5**
WCS	**Beigang Elemen**	**1.60**	**269**	*e*P	**Pn**	**22 05 53.4**	**+0.8**
	baz=268						
LIOB	**Emei**	**1.60**	**291**	*e*P	**Pb**	**22 05 54.7**	**+0.4**
	baz=289						
NSTT	**Nanjuang**	**1.60**	**290**	*e*P	**Pb**	**22 05 55.0**	**+0.7**
	baz=290						
NSTT				*e*S	**Sg**	**22 06 16.5**	**-0.6**
	baz=290						
SMLT	**Sun Moon Lake**	**1.62**	**263**	*e*P	**Pb**	**22 05 55.0**	**+0.3**
	baz=262						
TYC	**Yuchr**	**1.66**	**264**	*e*P	**Pn**	**22 05 54.1**	**+0.7**
	baz=262						
ELDTW	**Lidau**	**1.75**	**240**	*e*P	**Pn**	**22 05 54.0**	**-0.9**
	baz=237						
WNT	**Mingjian**	**1.82**	**264**	*e*P	**Pb**	**22 05 58.1**	**+0.1**
	baz=262						
CHN5	**Tsauling**	**1.88**	**255**	*e*P	**Pb**	**22 05 58.4**	**-0.7**
	baz=241						
CHN5				*e*S	**Sb**	**22 06 23.7**	**+1.5**
	baz=241						
WDLH	**Douliu**	**1.98**	**259**	*e*P	**Pn**	**22 05 59.5**	**+1.6**
	baz=257						
WDLH				*e*S	**Sb**	**22 06 26.1**	**+1.0**
	baz=257						
WRL	**Guolierlin Hig**	**2.09**	**265**	*e*P	**Pb**	**22 06 02.2**	**-0.5**
	baz=264						
WRL				*e*S	**Sb**	**22 06 28.2**	**-0.2**
	baz=264						

JMA ***31*** *22:13:44.8, 36°.01N×139°.92E, h41km±1km, M2.5*

IDC ***31*** *22:13:55.8±2.1, 35°.97N×138°.94E, h0km, mb3.5/2, mb1 3.8/2, mb1mx2.8/60, mbtmp3.5/2, MS3.1/2, Ms1 3.1/2, ms1mx2.7/69, Error ellipse: s-maj=45.6km s-min=11.8km az=55.0*

ISC 31 22:13:45.1±4.4**, 36°.01N**±0°.06×**139°.9E**±0°.1**, h35**km±8km**, n12, σ0ˢ41**/15**, Eastern Honshu**

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

JYT	Yasato	0.31	46	P	Pn	22 13 53.3	+0.1
JYT				S	Sn	22 13 59.2	-0.1
JHU	Hanno	0.54	253	P	Pn	22 13 56.0	-0.3
JHU				eS	Sn	22 14 04.2	+0.1
JAG	Ashikaga	0.56	318	P	Pn	22 13 56.5	-0.1
JAG				S	Sn	22 14 04.6	0.0
JRY	Ryogami san	0.82	271	P	Pn	22 13 59.9	-0.3
JRY				S	Sn	22 14 10.5	-0.6
JKT	Katashina	0.93	325	P	Pn	22 14 01.3	-0.4
JKT				S	Sn	22 14 13.7	-0.1
JOD2	Odawara 2	1.00	222	P	Pn	22 14 02.9	+0.2
JOD2				eS	Sn	22 14 15.4	-0.2
MJAR	Matsushiro Arr	1.48	292	Pg	Pn	22 14 10.0	+0.9
	0.2nm,0.3s,baz=137,slow=11,SNR=8.7						
MJAR				Lg	Lg	22 14 22.8	
	0.3nm,0.3s,baz=167,slow=17,SNR=6.0						
MAT	Matsushiro	1.48	292	P	Pn	22 14 09.6	+0.4
MAT				S	Sn	22 14 27.6	+0.3
JNU	Nakatsue	7.99	251	LR	LR	22 18 40.3	
	comp=Z,78nm,19.8s,baz=291,slow=39						
HNR	Honiara	48.98	153	LR	LR	22 39 12.2	
	comp=Z,49nm,21.6s,baz=227,slow=31						
WRA	Warramunga Arr	55.90	186	P	P	22 23 34.0	+15
	0.7nm,0.9s,baz=5.2,slow=7.7,SNR=2.2						
ASAR	Alice Springs	59.62	186	P	P	22 24 01.7	+16
	0.5nm,1.0s,baz=4.3,slow=4.8,SNR=2.1						

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*IDC **31** 22:15:50.6±0.5, 40°.74N×72°.64E, h0^{km}, mb4.1/29, mb1 4.2/37, mb1mx4.0/70, mbtmp4.1/37, ML3.5/8, MS4.1/9, Ms1 4.1/9, ms1mx3.4/83, Error ellipse: s-maj=10.6km s-min=7.4km az=146.0*

*KRNET **31** 22:15:52.9±0.1, 40°.88N×72°.59E, h12^{km}, mb4.8*

*ISU **31** 22:15:53, 40°.84N×72°.67E, h10^{km}*

*MOS **31** 22:15:54.9±1.2, 40°.88N×72°.52E, h29^{km}, mb4.5/15, Error ellipse: s-maj=4.7km s-min=3.5km az=71.3*

*SOME **31** 22:15:54.0, 41°.02N×72°.65E, h5^{km}, MS3.8*

*NEIC **31** 22:15:58.4±1.8, 40°.89N±0°.05×72°.54E±0°.07, h48^{km}±8^{km}, mb4.5/46, Error ellipse: s-maj=8.4km s-min=5.9km az=130.0*

*NNC **31** 22:15:59.2±1.1, 41°.39N×72°.61E, h0^{km}, mb4.9, mpv4.5, Error ellipse: s-maj=11.9km s-min=5.2km az=174.0*

ISC 31 22:15:53.4±0.9, **40°.85N**±0°.02×**72°.57E**±0°.01, **h15**^{km}±6^{km}, **n387**, σ1^{s}**97**/456, **mb4.3**/77, **MS4.2**/9, **56C-44D**, **Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.36	153	i PG	Pg	22 16 00.5	-0.3
OHH	Osh	0.36	153	eP	Pg	22 16 00.0	-0.8
OHH				eS	Sg	22 16 05.0	-0.8
OHH	Osh	0.36	153	⇓iP	Pg	22 16 00.5	-0.3
	baz=57						
OHH				⇓iS	Sg	22 16 06.0	+0.2
	baz=57						
NAM	Namangan	0.71	282	eP	Pn	22 16 09.0	+0.1
NAM				eS	Sn	22 16 21.0	+1.5
SALK	Salom-Alik	0.95	88	⇓eP	Pb	22 16 10.5	-1.1
	baz=89						
SALK				⇓eS	Sb	22 16 23.4	-0.7
	baz=89						
ARK	Arkit	1.05	334	i PG	Pb	22 16 12.5	-0.9
ARK	Arkit	1.05	334	eP	Pb	22 16 13.0	-0.4
ARK				eS	Sb	22 16 27.0	-0.1
ARK	Arkit	1.05	334	⇓iP	Pb	22 16 12.5	-0.9
	baz=33						
ARK				⇓iS	Sb	22 16 27.3	+0.2
	baz=33						
SFK	Sufi-Kurgan	1.10	139	eP	Pb	22 16 13.0	-1.2
SFK				eS	Sb	22 16 28.0	-0.4
SFK	Sufi-Kurgan	1.10	139	⇓eP	Pn	22 16 14.6	+0.2
	baz=41						
SFK				⇓eS	Sn	22 16 30.2	+0.7
	baz=41						
TRKS	Terek-Say	1.28	303	⇑iP	Pn	22 16 16.5	-0.4
	baz=99						
TRKS				⇑iS	Sb	22 16 33.2	-0.3
	baz=99						
DRK	Karamyk	1.49	204	Pn	Pg	22 16 22.3	+0.3
DRK				Sn	Sg	22 16 42.6	+1.2
DRK	Karamyk	1.49	204	⇑iP	Pg	22 16 21.7	-0.3
	baz=4.0						
DRK				⇑iS	Sg	22 16 42.4	+1.0
	baz=4.0						
AML	Almayashu	1.53	33	P	Pn	22 16 21.0	+0.4
	SNR=2027						
AML	Almayashu	1.53	33	i P*	Pb	22 16 21.4	-0.4
AML				i S	Sb	22 16 42.2	+1.0
AML	Almayashu	1.53	33	⇑iP	Pb	22 16 21.4	-0.4
	baz=33						
AML				⇑iS	Sb	22 16 42.2	+1.0
	baz=33						
BTK	Batken	1.55	240	i P*	Pg	22 16 22.7	-0.5
BTK				i S	Sg	22 16 44.4	+1.0
BTK	Batken	1.55	240	i P	Pg	22 16 23.0	-0.2
BTK				i S	Sg	22 16 45.0	+1.6
BTK	Batken	1.55	240	Pn	Pg	22 16 22.8	-0.5
BTK				Sn	Sg	22 16 45.2	+1.8
BTK	Batken	1.55	240	⇑iP	Pg	22 16 22.7	-0.5
	baz=39						
BTK				⇑iS	Sg	22 16 44.4	+1.0
	baz=39						
MNAS	Manas	1.64	358	⇓iP	Pb	22 16 22.8	-0.6
	baz=58						
MNAS				⇓iS	Sg	22 16 45.7	-0.5
	baz=58						
ARLS	Aral	1.66	52	⇓iP	Pb	22 16 23.4	-0.4
	baz=53						
ARLS				⇓iS	Sb	22 16 45.4	+0.8
	baz=53						
MRKS	Merke	1.96	14	eP	Pb	22 16 29.0	+0.2
	852nm,0.5s						
MRKS				eS	Sb	22 16 54.8	+1.7
	5µm,0.5s						
UCH	Uchtor	2.01	46	P	Pb	22 16 29.5	-0.3
	SNR=1048						
UCH	Uchtor	2.01	46	i PN	Pb	22 16 29.6	-0.3
UCH				i S	Sb	22 16 56.6	+1.8
UCH	Uchtor	2.01	46	⇑iP	Pb	22 16 29.6	-0.3
	baz=46						
UCH				⇑iS	Sb	22 16 56.6	+1.8
	baz=46						
EKS2	Erkin-Say	2.02	26	P	Pb	22 16 29.7	-0.2
	SNR=530						
EKS2	Erkin-Say	2.02	26	i PN	Pb	22 16 30.0	0.0
EKS2				i S	Sb	22 16 56.9	+1.9
EKS2	Erkin-Say	2.02	26	⇓iP	Pb	22 16 30.0	0.0
	baz=26						
EKS2				⇓iS	Sb	22 16 56.9	+1.9
	baz=26						
CHMG	Chimgan	2.06	291	eP	Pg	22 16 32.0	-0.8
CHMG				eS	Sg	22 17 01.0	+1.5
DZA	Taraz	2.24	336	eP	Pb	22 16 33.8	+0.2
	2µm,0.5s						
DZA				eS	Sb	22 17 02.7	+1.5
	7µm,0.5s						
DZA	Taraz	2.24	336	ePn	Pb	22 16 32.6	-1.0
	baz=334						
DZA	Taraz	2.24	336	ePN	Pb	22 16 32.6	-1.0
AAK	Ala-Archa	2.29	38	Pn	Pb	22 16 33.7	-0.9
	93nm,0.3s,baz=201,slow=5.3,SNR=1604						
AAK				Sn	Sb	22 17 05.3	+2.5
	371nm,0.3s,baz=55,slow=19,SNR=19						
AAK	Ala-Archa	2.29	38	P	Pb	22 16 33.5	-1.1
	SNR=309						
AAK	Ala-Archa	2.29	38	⇑Pn	Pb	22 16 33.6	-0.9
	1µm,0.7s						
AAK				⇑Lg	Lg	22 16 59.6	
	1µm,0.8s						
AAK	Ala-Archa	2.29	38	Pn	Pb	22 16 33.6	-0.9
AAK				Sn	Sb	22 17 04.1	+1.2
AAK	Ala-Archa	2.29	38	⇑iP	Pb	22 16 33.7	-0.9
	baz=38						
AAK				⇑iS	Sb	22 17 03.6	+0.8
	baz=38						
YBZ	Yangibazar	2.30	282	eP	Pb	22 16 35.0	+0.4
YBZ				eS	Sg	22 17 09.0	+1.6
IUG	Iuzhnay	2.31	305	eP	Pb	22 16 35.8	+1.1
	16µm,0.4s						
IUG				eS	Sg	22 17 06.2	-1.4
	9µm,0.3s						
IUG	Iuzhnay	2.31	305	ePn	Pb	22 16 33.4	-1.4
	baz=303						
IUG	Iuzhnay	2.31	305	ePN	Pb	22 16 33.3	-1.4
TGS	TashGRES	2.38	285	eP	Pg	22 16 40.0	+1.1
TGS				eS	Sg	22 17 14.0	+4.3
FRU1	Bishkek	2.49	37	i PN	Pb	22 16 36.5	-1.4
FRU1				i S	Sb	22 17 08.5	+0.1
FRU1	Bishkek	2.49	37	Pn	Pb	22 16 36.7	-1.2
FRU1	Bishkek	2.49	37	⇓iP	Pb	22 16 36.5	-1.4
	baz=37						
FRU1				⇓iS	Sb	22 17 08.5	+0.1
	baz=37						
TAS	Tashkent	2.52	282	i PN	Pb	22 16 36.5	-1.9
TAS				i S	Sb	22 17 09.3	+0.1
TAS	Tashkent	2.52	282	eS	Sg	22 17 16.0	+1.6
TAS	Tashkent	2.52	282	Pn	Pn	22 16 35.9	+2.0
TAS	Tashkent	2.52	282	⇓iP	Pb	22 16 36.5	-1.9
	baz=81						
TAS				⇓iS	Sb	22 17 09.3	+0.1
	baz=81						
KBK	Karagaybulak	2.54	44	P	Pb	22 16 37.5	-1.2
	SNR=370						
KBK	Karagaybulak	2.54	44	i PN	Pb	22 16 37.3	-1.4
KBK				i S	Sb	22 17 09.2	-0.6
KBK	Karagaybulak	2.54	44	⇑iP	Pb	22 16 37.3	-1.4
	baz=44						
KBK				⇑iS	Sb	22 17 09.2	-0.6
	baz=44						
CHM	Chimkent	2.67	304	eP	Pg	22 16 43.0	-1.4
	4.6nm,0.3s						
CHM				eS	Sg	22 17 18.6	-0.5
	6µm,0.5s						
CHMS	Chumysh	2.69	36	P	Pn	22 16 39.0	+2.7
	SNR=159						
CHMS	Chumysh	2.69	36	i PN	Pb	22 16 39.1	-2.2
CHMS				i S	Sb	22 17 13.0	-1.2
CHMS	Chumysh	2.69	36	⇑iP	Pb	22 16 39.1	-2.2
	baz=37						
CHMS				⇑iS	Sb	22 17 13.0	-1.2
	baz=37						
KKAR	Karatay Array	2.73	326	PN	Pn	22 16 39.0	+2.3
KKAR	Karatay Array	2.73	326	Pn	Pn	22 16 39.0	+2.3
KK09	Karatay Array	2.75	326	⇓Pn	Pn	22 16 39.0	+2.1
	358nm,0.7s,baz=135,slow=14						
KK09				⇓Lg	Lg	22 17 14.8	
	579nm,0.5s,baz=129,slow=26						
USP	Ospenovka	2.81	30	P	Pn	22 16 40.4	+2.5
	SNR=114						
USP	Ospenovka	2.81	30	i PN	Pn	22 16 40.4	+2.5
USP				i S	Sb	22 17 15.7	-1.9
USP	Ospenovka	2.81	30	⇑eP	Pn	22 16 40.4	+2.5
	baz=30						
USP				⇑iS	Sb	22 17 15.7	-1.9
	baz=30						
KSH	Kashi	2.93	116	Pn	Pn	22 16 42.3	+2.8
KSH				sP	Pg	22 16 57.0	+7.6
KSH				Sn	Sn	22 17 17.3	+2.8
KSH				smax	smax		
	comp=N,2µm,0.7s						
KSH				smax	smax		
	comp=E,2µm,0.7s						
BRLS	Borolday	2.99	318	eP	Pb	22 16 46.1	-0.1
	comp=E,579nm,0.4s						
BRLS				eS	Sb	22 17 24.0	+1.5
	comp=E,1µm,0.6s						
BRLS	Borolday	2.99	318	i Pn	Pn	22 16 41.6	+1.4
	baz=311						
BRLS	Borolday	2.99	318	i PN	Pn	22 16 41.6	+1.4
BOOM	Boomskoye usch	3.01	56	i PN	Pn	22 16 43.7	+3.0
BOOM				i S	Sb	22 17 20.8	-2.6
BOOM	Boomskoye usch	3.01	56	Pn	Pn	22 16 43.3	+2.6
BOOM	Boomskoye usch	3.01	56	⇑iP	Pn	22 16 43.7	+3.0
	baz=56						
BOOM				⇑iS	Sb	22 17 20.8	-2.6
	baz=56						
SGDS	Sogindy	3.02	30	ePN	Pn	22 16 43.1	+2.4
TKM2	Tokmak 2	3.06	46	P	Pn	22 16 44.3	+2.8
	SNR=319						
TKM2	Tokmak 2	3.06	46	i PN	Pn	22 16 44.3	+2.8
TKM2				i S	Sb	22 17 22.2	-2.8
TKM2	Tokmak 2	3.06	46	⇑Pn	Pn	22 16 44.2	+2.8
	comp=E,166nm,0.6s						
TKM2				⇑Lg	Lg	22 17 26.0	
	comp=E,567nm,0.8s						
TKM2	Tokmak 2	3.06	46	⇑iP	Pn	22 16 44.3	+2.8
	baz=47						
TKM2				⇑iS	Sb	22 17 22.2	-2.8
	baz=47						
ULHL	Ulahol	3.09	62	P	Pn	22 16 44.0	+2.1
	SNR=26						
ULHL	Ulahol	3.09	62	PN	Pn	22 16 44.6	+2.8
KST	Kastek	3.35	48	eP	Pb	22 16 52.7	+0.1
	comp=E,85nm,0.6s						
KST				eS	Sb	22 17 34.9	+1.8
	comp=E,693nm,0.7s						
KST	Kastek	3.35	48	Pg	Pb	22 16 52.7	+0.1
	comp=E,85nm,0.6s						
KST				Lg	Lg	22 17 34.9	
	comp=E,693nm,0.7s						
DGS	Degeres	3.38	44	eP	Pb	22 16 54.2	+1.2
	comp=E,195nm,0.5s						
DGS				eS	Sb	22 17 37.7	+3.8
	comp=E,583nm,0.6s						
DGS	Degeres	3.38	44	Pg	Pb	22 16 54.2	+1.2
	comp=E,195nm,0.5s						
DGS				Lg	Lg	22 17 37.7	
	comp=E,583nm,0.6s						
CHGR	Chuyangaron	3.42	231	i PN	Pn	22 16 49.9	+3.6
CHGR				i S	Sb	22 17 31.9	-3.3
CHGR	Chuyangaron	3.42	231	Pn	Pn	22 16 49.6	+3.3
CHGR	Chuyangaron	3.42	231	⇓iP	Pn	22 16 49.9	+3.6
	baz=31						
CHGR				⇓iS	Sb	22 17 31.9	-3.3
	baz=31						
KRBS	Karabastau	3.66	38	eP	Pb	22 16 59.4	+1.6
	comp=E,109nm,0.6s						
KRBS				eS	Sb	22 17 45.9	+3.8
	comp=E,321nm,0.7s						
KRBS	Karabastau	3.66	38	Pg	Pb	22 16 59.4	+1.6
	comp=E,109nm,0.6s						
KRBS				Lg	Lg	22 17 45.9	
	comp=E,321nm,0.7s						
MTBS	Maitube	3.67	50	eP	Pb	22 16 59.3	+1.3
	comp=E,34nm,0.5s						
MTBS				eS	Sb	22 17 46.1	+3.8
	comp=E,248nm,0.5s						
MTBS	Maitube	3.67	50	Pg	Pb	22 16 59.3	+1.3
	comp=E,34nm,0.5s						
MTBS				Lg	Lg	22 17 46.1	
	comp=E,248nm,0.5s						
KDJ	Kajisay	3.69	68	i PN	Pn	22 16 52.5	+2.4
KDJ				i S	Sn	22 17 37.3	+3.9
KDJ	Kajisay	3.69	68	Pn	Pn	22 16 52.7	+2.6
KDJ	Kajisay	3.69	68	⇑iP	Pn	22 16 52.5	+2.4
	baz=69						
KDJ				⇑iS	Sn	22 17 37.3	+3.9
	baz=69						
KNDC	Almaty	4.04	53	PN	Pn	22 16 57.8	+3.1
KNDC	Almaty	4.04	53	⇑Pn	Pn	22 16 57.8	+3.1
	comp=E,226nm,0.6s						
KNDC				⇓Lg	Lg	22 17 58.8	
	comp=E,1µm,0.9s						
TARG	Taragay, Kyrgy	4.04	76		Pn	22 16 56.4	+1.3
MDOK	Medeo	4.06	54	eP	Pb	22 17 07.1	+2.5
	comp=E,93nm,0.7s						
MDOK				eS	Sg	22 17 59.4	-4.2
	comp=E,279nm,0.8s						
MDOK	Medeo	4.06	54	ePn	Pn	22 16 56.6	+1.5
	baz=55						
MDOK	Medeo	4.06	54	ePN	Pn	22 16 56.6	+1.5
MDOK	Medeo	4.06	54	⇓Pn	Pn	22 16 58.0	+2.9
	comp=E,102nm,0.6s						
MDOK				⇓Lg	Lg	22 17 59.5	
	comp=E,341nm,1.0s						
MDOK	Medeo	4.06	54	Pg	Pb	22 17 07.1	+2.5
	comp=E,93nm,0.7s						
MDOK				Lg	Lg	22 17 59.4	
	comp=E,279nm,0.8s						
KUU	Kurty	4.13	41	eP	Pb	22 17 07.4	+1.7
	comp=E,56nm,0.5s						
KUU				eS	Sb	22 18 00.6	+5.1
	comp=E,1µm,2.1s						
KUU	Kurty	4.13	41	ePn	Pn	22 16 57.5	+1.5
	baz=42						
KUU	Kurty	4.13	41	ePN	Pn	22 16 57.4	+1.5
KUU	Kurty	4.13	41	Pg	Pb	22 17 07.4	+1.7
	comp=E,56nm,0.5s						
KUU				Lg	Lg	22 18 00.6	
	comp=E,298nm,0.7s						
KOTS	Kotyrbulak	4.14	53	eP	Pb	22 17 09.2	+3.2
	comp=E,203nm,0.6s						
KOTS				eS	Sg	22 18 02.7	-3.5
	comp=E,456nm,1.0s						
KTBS	Karatobe	4.18	45	eP	Pb	22 17 08.7	+2.1
	comp=E,129nm,0.6s						
KTBS				eS	Sg	22 18 02.9	-4.7
	comp=E,450nm,1.0s						
KTBS	Karatobe	4.18	45	Pg	Pb	22 17 08.7	+2.1
	comp=E,129nm,0.6s						
KTBS				Lg	Lg	22 18 02.9	
	comp=E,450nm,1.0s						
ANVS	Anan'yevo	4.27	61	⇑iP	Pn	22 17 01.7	+3.7
	baz=62						
ANVS				⇑iS	Sn	22 17 51.4	+3.7
	baz=62						
BTLS	Baital	4.33	14	eP	Pb	22 17 11.4	+2.3
	comp=E,48nm,0.8s						
BTLS				eS	Sb	22 18 06.8	+5.6
	comp=E,397nm,0.9s						
BTLS	Baital	4.33	14	ePn	Pn	22 17 00.3	+1.6
	baz=14						
BTLS	Baital	4.33	14	ePN	Pn	22 17 00.2	+1.6
CHKK	Chushkaly	4.44	46	eP	Pb	22 17 12.7	+1.6
	comp=E,45nm,0.5s						
CHKK				eS	Sb	22 18 09.7	+5.3
	comp=E,178nm,0.4s						
CHKK	Chushkaly	4.44	46	i Pn	Pn	22 17 01.8	+1.5
	baz=47						
CHKK	Chushkaly	4.44	46	Pg	Pb	22 17 12.7	+1.6
	comp=E,45nm,0.5s						
CHKK				Lg	Lg	22 18 09.7	
	comp=E,178nm,0.4s						
PRZ	Przheval'sk	4.66	68	i PN	Pn	22 17 07.0	+3.6
PRZ				i S	Sn	22 18 00.8	+3.4
PRZ	Przheval'sk	4.66	68		Pn	22 17 06.8	+3.4
PRZ	Przheval'sk	4.66	68	⇓iP	Pn	22 17 07.0	+3.6
	baz=68						
PRZ				⇓iS	Sn	22 18 00.8	+3.4
	baz=68						
SATY	Saty	4.88	61	eP	Pb	22 17 22.6	+4.0
	comp=E,52nm,0.8s						
SATY				eS	Sg	22 18 26.2	-3.8
	comp=E,296nm,1.1s						
SATY	Saty	4.88	61	ePn	Pn	22 17 07.9	+1.6
	baz=62						
SATY	Saty	4.88	61	ePN	Pn	22 17 07.9	+1.6
SATY	Saty	4.88	61	Pg	Pb	22 17 22.6	+4.0
	comp=E,52nm,0.8s						
SATY				Lg	Lg	22 18 26.2	
	comp=E,296nm,1.1s						
ZHN	Zhinishke	4.95	60	eP	Pb	22 17 23.6	+3.8
	comp=E,79nm,0.5s						
ZHN				eS	Sg	22 18 27.8	-4.3
	comp=E,117nm,1.1s						
ZHN	Zhinishke	4.95	60	ePn	Pn	22 17 08.9	+1.7
	baz=61						
ZHN	Zhinishke	4.95	60	ePN	Pn	22 17 08.9	+1.7
ZHN	Zhinishke	4.95	60	Pg	Pb	22 17 23.6	+3.8
	comp=E,79nm,0.5s						
ZHN				Lg	Lg	22 18 27.8	
	comp=E,117nm,1.1s						
ARXS	Arharly	5.14	47	eP	Pb	22 17 25.3	+2.4
	comp=E,69nm,0.7s						
ARXS				eS	Sg	22 18 32.0	-6.2
	comp=E,262nm,0.8s						
ARXS	Arharly	5.14	47	Pg	Pb	22 17 25.3	+2.4
	comp=E,69nm,0.7s						
ARXS				Lg	Lg	22 18 32.0	
	comp=E,262nm,0.8s						
KPKS	Kokpek	5.24	58	eP	Pb	22 17 28.2	+3.5
	comp=E,51nm,0.6s						
KPKS				eS	Sg	22 18 36.5	-5.1
	comp=E,195nm,0.9s						
KPKS	Kokpek	5.24	58	ePn	Pn	22 17 13.5	+2.2
	baz=59						
KPKS	Kokpek	5.24	58	ePN	Pn	22 17 13.5	+2.2
UZB	Uzynbulak	5.33	62	eP	Pb	22 17 30.3	+4.1
	comp=E,38nm,0.6s						
UZB				eS	Sg	22 18 39.7	-4.7
	comp=E,106nm,0.6s						
UZB	Uzynbulak	5.33	62	ePN	Pn	22 17 19.1	+6.6
UZB	Uzynbulak	5.33	62	Pg	Pb	22 17 30.3	+4.1
	comp=E,38nm,0.6s						
UZB				Lg	Lg	22 18 39.7	
	comp=E,106nm,0.6s						
BLB	Baldybastay	5.44	51	Pg	Pb	22 17 30.5	+2.3
	comp=E,112nm,0.6s						
BLB				Lg	Lg	22 18 40.2	
	comp=E,179nm,0.9s						
SHLS	Shalkode	5.63	64	eP	Pg	22 17 41.3	+0.2
	comp=E,25nm,0.6s						
SHLS				eS	Sg	22 18 58.1	+4.2
	comp=E,186nm,0.8s						
SHLS	Shalkode	5.63	64	ePn	Pn	22 17 22.8	+6.2
	baz=65						
SHLS	Shalkode	5.63	64	ePN	Pn	22 17 22.8	+6.2
SHLS	Shalkode	5.63	64	Pg	Pg	22 17 41.3	+0.2
	comp=E,25nm,0.6s						
SHLS				Lg	Lg	22 18 58.2	
	comp=E,186nm,0.8s						
TDK	Taldyqorghan	5.96	44	ePn	Pn	22 17 22.7	+1.5
	comp=E,9.8nm,0.8s,baz=44						
TDK	Taldyqorghan	5.96	44	ePN	Pn	22 17 22.6	+1.5
TDK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DJR	Jarkent	6.36	54	eP	Pb	22 17 49.0	+5.2
	comp=Z,33nm,0.7s						
DJR				eS	Sg	22 19 11.8	-5.7
	comp=Z,84nm,1.2s						
KAPS	Kapalarasan	6.66	46	eP	Pg	22 17 55.9	-4.9
	comp=Z,17nm,0.6s						
KAPS				eS	Sg	22 19 23.6	-3.4
	comp=Z,83nm,1.5s						
KBL	Kabul	6.89	205	PN	Pn	22 17 36.5	+2.5
KBL	Kabul	6.89	205	Pn	Pn	22 17 36.5	+2.5
CHCP	Chirah Chowk	7.20	175	P	Pn	22 17 41.9	+3.8
CHCP				S	Sn	22 19 01.0	+1.3
NIL	Nilore	7.21	175	P	Pn	22 17 41.9	+3.7
NIL	Nilore	7.21	175		Pn	22 17 41.9	+3.7
OTUK	Ortayu	7.40	359	P	Pn	22 17 41.1	+0.3
OTUK	Ortayu	7.40	359	⇑Pn	Pn	22 17 41.1	+0.3
	comp=Z,17nm,0.6s						
OTUK				⇓Lg	Lg	22 19 36.9	
	comp=Z,370nm,0.9s						
THW	Thamme Wali	8.07	185	P	Pn	22 17 52.0	+2.0
MAKZ	Makanchi	9.04	46	P	Pn	22 18 03.8	+0.6
MAKZ	Makanchi	9.04	46	⇑Pn	Pn	22 18 04.4	+1.1
	comp=Z,4.8nm,0.7s						
MAKZ				⇓Lg	Lg	22 20 34.4	
	comp=Z,41nm,1.1s						
MAKZ	Makanchi	9.04	46		Pn	22 18 03.8	+0.6
BRZS	Berezniki	9.13	0	ePn	Pn	22 18 06.3	+1.7
	comp=Z,1.5nm,0.8s,baz=0.2						
BRZS	Berezniki	9.13	0	eP	Pn	22 18 06.3	+1.7
BRZS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK31	Makanchi Array	9.20	47	P	Pn	22 18 06.7	+1.2
MK31	Makanchi Array	9.20	47	⇑Pn	Pn	22 18 06.3	+0.8
	comp=Z,8.3nm,0.7s						
MK31				⇑Lg	Lg	22 20 39.7	
	comp=Z,15nm,0.8s,baz=230,slow=29,SNR=5.1						
MK31	Makanchi Array	9.20	47		Pn	22 18 06.7	+1.2
MKAR	Makanchi Array	9.20	47	Pn	Pn	22 18 06.7	+1.2
	comp=Z,0.5nm,0.3s,baz=228,slow=15,SNR=45						
MKAR				Lg	Lg	22 20 44.1	
	comp=Z,0.9nm,0.3s,baz=232,slow=27,SNR=6.0						
HRA	Herat	10.42	235		Pn	22 18 22.2	-0.3
KURBB	Kurchatov Arra	10.62	21	Pn	Pn	22 18 24.2	-0.7
	comp=Z,0.4nm,0.3s,baz=215,slow=12,SNR=8.4						
KURBB				Sn	Sn	22 20 23.2	-0.3
	comp=Z,0.1nm,0.3s,baz=86,slow=27,SNR=4.1						
KURBB				Lg	Lg	22 21 23.5	
	comp=Z,0.4nm,0.3s,baz=212,slow=32,SNR=5.0						
KURBB	Kurchatov Arra	10.62	21	P	Pn	22 18 24.1	-0.9
KURBB	Kurchatov Arra	10.62	21	⇓Pn	Pn	22 18 24.0	-0.9
	comp=Z,5.5nm,0.5s						
KURBB				⇓Lg	Lg	22 21 21.0	
	comp=Z,162nm,0.8s						
KURK	Kurchatov	10.73	21	P	Pn	22 18 24.3	-2.1
KURK						22 20 23.2	
KURK	Kurchatov	10.73	21	⇓Lg	Lg	22 21 24.3	
	comp=Z,79nm,0.8s						
KURK	Kurchatov	10.73	21		Pn	22 18 25.2	-1.2
ZSN	Zaisan	11.02	49	ePn	Pn	22 18 33.2	+2.7
	baz=49						
ZSN	Zaisan	11.02	49	eP	Pn	22 18 33.1	+2.7

GEYT	Alibeck	11.56	260	Pn	Pn	22 18 35.8	-2.0
	comp=Z,1.1nm,0.3s,baz=89,slow=13,SNR=15						
GEYT				Sn	Sn	22 20 42.0	-4.7
	comp=Z,2.5nm,0.3s,baz=76,slow=24,SNR=2.8						
GYA0	ALIBECK ARRAY	11.56	260	P	Pn	22 18 36.2	-1.7
GYA0B	ALIBECK ARRAY	11.56	260		Pn	22 18 36.2	-1.7
WMQ	Urumqi	11.58	70	ePn	Pn	22 18 43.8	+5.6
WMQ				Sn	Sn	22 20 53.0	+5.7
WMQ				smax	smax		
	comp=N,24nm,1.3s						
WMQ				smax	smax		
	comp=E,20nm,1.5s						
AB31	Akbulak array	12.25	318	P	Pn	22 18 47.2	0.0
AB31				SN	Sn	22 21 01.8	-1.6
AB31	Akbulak array	12.25	318	Pn	Pn	22 18 47.2	0.0
	comp=E,8.3nm,0.6s,baz=127,slow=13,SNR=243						
AB31				⇓Sn	Sn	22 21 01.8	-1.6
	comp=E,4.1nm,0.5s,baz=116,slow=25,SNR=5.7						
ABKAR	Akbulak array	12.25	318		Pn	22 18 45.9	-1.3
ABKAR	Akbulak array	12.25	318		Pn	22 18 46.1	-1.1
BVAR	Borovoye Array	12.27	354	Pn	Pn	22 18 47.0	-0.5
	comp=E,0.3nm,0.3s,baz=168,slow=15,SNR=13						
BVAR				Lg	Lg	22 22 17.8	
	comp=E,1.1nm,0.3s,baz=171,slow=29,SNR=2.1						
BRVK	Borovoye	12.31	354	⇓eP	Pn	22 18 47.9	-0.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	Borovoye	12.31	354	⇑Pn	Pn	22 18 48.3	+0.3
	comp=Z,6.8nm,0.7s						
BRVK				⇑Lg	Lg	22 22 10.8	
	comp=Z,69nm,1.2s						
BRVK	Borovoye	12.31	354		Pn	22 18 46.6	-1.4
DGZ	Jazzator, Alta	13.69	45	⇓eP	Pn	22 19 08.2	+1.3
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.7s						
AKTO	Aktyubinsk	13.96	318	Pn	Pn	22 19 10.0	-0.5
	comp=Z,0.8nm,0.3s,baz=123,slow=17,SNR=13						
AKTO				Sn	Sn	22 21 41.8	-3.4
	comp=Z,0.4nm,0.3s,baz=132,slow=15,SNR=2.1						
AKTO	Aktyubinsk	13.96	318	P	Pn	22 19 11.9	+1.3
AKTO				SN	Sn	22 21 44.3	-0.9
AKTO	Aktyubinsk	13.96	318	⇑Pn	Pn	22 19 11.1	+0.5
	comp=Z,14nm,0.8s						
AKTO				⇑Sn	Sn	22 21 44.3	-0.9
	comp=Z,16nm,1.1s						
PYUN	Piuthan	15.33	143	eP	Pn	22 19 25.4	-4.0
	comp=Z,22nm,0.4s						
ZAA0	Zalesovo Array	15.48	28		Pn	22 19 30.6	-0.3
ZALV	Zalesovo Beam	15.48	28	Pn	Pn	22 19 31.4	+0.4
	comp=Z,0.6nm,0.3s,baz=226,slow=13,SNR=16						
ZALV				Sn	Sn	22 22 25.2	+3.2
	comp=Z,0.2nm,0.3s,baz=220,slow=22,SNR=3.2						
ZALV				Lg	Lg	22 24 05.0	
	baz=234,slow=27,SNR=1.6						
ZALV	Zalesovo Beam	15.48	28		Pn	22 19 33.1	+2.1
DANN	Dangsing	15.48	140	eP	Pn	22 19 27.0	-4.5
	comp=Z,13nm,0.3s						
KOLN	Koldanda	15.89	142	eP	Pn	22 19 32.6	-4.1
	comp=Z,8.9nm,0.3s						
GKN	Gorkha	16.20	139	eP	Pn	22 19 36.3	-4.4
	comp=Z,11nm,0.3s						
KKN	Kakani	16.70	137	eP	Pn	22 19 42.9	-4.2
	comp=Z,12nm,0.5s						
DMN	Daman	16.76	138	eP	Pn	22 19 44.5	-3.4
GUN	Gumba	16.92	136	eP	Pn	22 19 46.2	-3.8
	comp=Z,7.1nm,0.3s						
PKIN	Phulchoki	16.94	137	eP	Pn	22 19 46.8	-3.3
	comp=Z,14nm,0.4s						
PKI	Pulchoki	16.95	137	eP	Pn	22 19 46.4	-3.9
	comp=Z,14nm,0.5s						
SVE	Sverdlovsk	17.77	338	eP	P	22 20 05.3	+4.5
ARU	Arti	18.07	334	P	Pn	22 20 03.0	-0.7
	comp=Z,0.0nm,0.3s,baz=157,slow=6.0,SNR=8.8						
ARU				Lg	Lg	22 25 29.0	
	baz=320,slow=17,SNR=1.9						
ARU	Arti	18.07	334	d iP	Pn	22 20 02.8	-0.9
ARU				S	Sn	22 23 24.2	-0.8
ARU				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ARU	Arti	18.07	334	P	Pn	22 20 02.5	-1.2
BELG	Belogornoye	20.55	313	P	P	22 20 30.8	-0.3
	comp=Z,7.9nm,0.6s,baz=102,slow=1.2,SNR=5.6						
BELG	Belogornoye	20.55	313	⇑iP	P	22 20 31.3	+0.2
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA	Gaotai	20.85	85	eP	P	22 20 35.3	+0.5
GTA				pP	sP	22 20 47.3	+6.1
GTA				sP	pP	22 20 53.0	+14
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
UOSS	Minazif	20.93	226	P	Pn	22 20 37.6	-0.5
UOSS				IAmb	IAmb	22 20 52.9	
	comp=Z,23nm,1.5s						
WSAR	Wadi Sarin	21.11	218	P	P	22 20 37.4	-0.2
	comp=Z,1.4nm,0.6s,baz=38,slow=14,SNR=1.4						
GNI	Garni	21.14	277	P	P	22 20 39.3	+1.3
	comp=Z,14nm,0.9s,baz=0.3,slow=12,SNR=5.5						
GNI	Garni	21.14	277	P	P	22 20 39.2	+1.3
GNI				pmax	pmax		
	comp=Z,19nm,0.9s						
GNI	Garni	21.14	277	P	P	22 20 39.2	+1.3
GNI				IAmb	IAmb	22 20 51.7	
	comp=Z,19nm,0.9s						
ONI	Oni	21.76	284	P	P	22 20 46.0	+1.6
ONI				pmax	pmax		
	comp=Z,19nm,1.2s						
ONI	Oni	21.76	284	P	P	22 20 46.0	+1.6
ONI				IAmb	IAmb	22 20 51.2	
	comp=Z,19nm,1.2s						
KBZ	Khabaz	22.09	287	P	P	22 20 47.8	0.0
	comp=Z,1.1nm,0.6s,baz=60,slow=8.3,SNR=5.4						
KVAR	Kislovodsk Arr	22.22	288	P	P	22 20 50.0	+0.5
	comp=Z,1.4nm,0.4s,baz=332,slow=18,SNR=1.9						
KIV	Kislovodsk	22.23	288	P	P	22 20 49.8	+0.3
MOY	Mondy	22.29	51	eP	P	22 20 51.7	+1.6
KIRV	Kirov	23.02	328	P	P	22 20 58.7	+1.2
	comp=Z,8.9nm,0.6s,baz=152,slow=6.1,SNR=4.1						
KIRV				LR	LR	22 30 24.3	
	comp=Z,303nm,18.4s,baz=138,slow=38						
KIRV	Kirov	23.02	328	ceP	P	22 20 59.0	+1.4
ZAK	Zakamensk	23.35	56	eP	P	22 21 01.2	0.0
ZAK				pmax	pmax		
	comp=Z,12nm,1.1s						
VRH	Novokhopyorsk	23.63	306	eP	P	22 21 04.5	+0.8
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HYB	Hyderabad	23.91	166	i P	P	22 21 07.0	+0.2
LZH	Lanzhou	24.87	91	eP	P	22 21 19.5	+3.9
LZH				pP	sP	22 21 28.0	+5.9
LZH				sP	pP	22 21 32.5	+12
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
SONM	Songino Array	25.03	62	P	P	22 21 17.1	+0.2
	comp=Z,2.1nm,0.9s,baz=272,slow=8.8,SNR=18						
SONM	Songino Array	25.03	62	P	P	22 21 17.4	+0.5
SONM				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SONM	Songino Array	25.03	62	P	P	22 21 17.4	+0.5
VORD	Divnogorie	25.07	305	eP	P	22 21 17.4	+0.4
VORD				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VSR	Storozhevoye	25.20	306	eP	P	22 21 17.4	-0.8
VSR				pmax	pmax		
	comp=Z,20nm,1.3s						
ULN	Ulaanbaatar	25.48	62	ceP	P	22 21 21.9	+0.9
ULN				pmax	pmax		
	comp=Z,8.0nm,1.7s						
ULN	Ulaanbaatar	25.48	62	P	P	22 21 19.8	-1.2
	comp=Z,18nm,1.6s						
ULN	Ulaanbaatar	25.48	62	P	P	22 21 21.5	+0.5
LPSR	Galich'ya Gora	25.64	309	eP	P	22 21 22.3	+0.1
LPSR				pmax	pmax		
	comp=Z,20nm,1.7s						
OBN	Obninsk	27.64	313	eP	P	22 21 39.7	-0.5
OBN				e		22 22 26.9	
OBN				ePPP	PPP	22 22 39.5	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RAYN	Ar Rayn	28.52	241	P	P	22 21 48.4	0.0
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RAYN	Ar Rayn	28.52	241	P	P	22 21 48.4	0.0
HHC	Hu-ho-hao-te	29.33	77	eP	P	22 21 58.0	+2.4
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.7s						
BR131	Keskin Array S	29.56	281	P	P	22 21 59.2	+1.6
BR131				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BR131	Keskin Array S	29.56	281	P	P	22 21 59.2	+1.6
BR131				IAmb	IAmb	22 22 05.4	
	comp=Z,8.0nm,0.8s						
BRTR	Keskin Array B	29.56	281	P	P	22 21 59.0	+1.3
	comp=Z,3.3nm,0.7s,baz=83,slow=8.1,SNR=15						
BRTR	Keskin Array B	29.56	281	i P	P	22 21 59.4	+1.8
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRTR	Keskin Array B	29.56	281	P	P	22 21 58.5	+0.8
NRIK	Noril'sk	29.63	11	P	P	22 21 57.9	+0.2
	comp=Z,2.4nm,0.8s,baz=211,slow=8.8,SNR=3.6						
NRIK	Noril'sk	29.63	11	P	P	22 21 58.2	+0.4
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NRIK	Noril'sk	29.63	11		P	22 21 58.2	+0.4
AKASG	Malin Array Be	31.39	303	P	P	22 22 13.8	+0.3
	comp=Z,0.6nm,0.3s,baz=78,slow=7.8,SNR=25						
AKASG	Malin Array Be	31.39	303	i P	P	22 22 13.8	+0.3
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKBB	Malin Array Si	31.39	303	P	P	22 22 13.5	0.0
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKBB	Malin Array Si	31.39	303	P	P	22 22 13.5	0.0
AKBB				IAmb	IAmb	22 22 14.4	
	comp=Z,6.6nm,0.8s						
CMAR	Chiang Mai Arr	31.77	127	P	P	22 22 16.7	-0.5
	comp=Z,0.5nm,0.7s,baz=328,slow=7.9,SNR=4.9						
CMAR	Chiang Mai Arr	31.77	127	i P	P	22 22 20.6	+3.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SORM	Soroca	32.01	298	⇑P	P	22 22 19.0	0.0
SORM	Soroca	32.01	298	⇑P	P	22 22 19.0	0.0
VRI	Vrincioaia	33.35	294	⇑P	P	22 22 35.1	+4.3
VRI	Vrincioaia	33.35	294	⇑P	P	22 22 35.1	+4.3
PLOR	Plostina	33.40	294	⇓P	P	22 22 34.5	+3.2
PLOR	Plostina	33.40	294	⇓P	P	22 22 34.5	+3.2
MLR	Muntele Rosu	33.95	294	⇑P	P	22 22 38.9	+2.8
MLR	Muntele Rosu	33.95	294	⇑P	P	22 22 38.9	+2.8
BURAR	Bucovina Array	34.16	298	⇓P	P	22 22 38.9	+1.0
BURAR	Bucovina Array	34.16	298	⇓P	P	22 22 38.9	+1.0
BURAR	Bucovina Array	34.16	298	P	P	22 22 38.5	+0.6
BUR08	Bucovina Ar. S	34.17	298	P	P	22 22 38.8	+0.8
DOPR	Dopca	34.26	295	⇓P	P	22 22 40.5	+1.8
FIA1	FINESS Array S	34.68	322	P	P	22 22 42.5	+0.5
FINES	FINESS Array B	34.68	322	P	P	22 22 42.5	+0.5
	comp=Z,5.0nm,0.4s,baz=110,slow=9.3,SNR=68						
KWP	Kalwaria Pacla	35.61	301	P	P	22 22 51.5	+1.2
KWP	Kalwaria Pacla	35.61	301	P	P	22 22 51.5	+1.2
DRGR		35.96	297	⇑P	P	22 22 54.2	+0.8
DRGR		35.96	297	⇑P	P	22 22 54.2	+0.8
VTS	Vitosha	36.44	290	P	P	22 22 58.8	+1.1
VTS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VTS	Vitosha	36.44	290	P	P	22 22 58.8	+1.1
BZS	Buzias	36.92	295	⇑P	P	22 23 03.0	+1.5
BZS	Buzias	36.92	295	⇑P	P	22 23 03.0	+1.5
BOVS	Bovan	37.28	292	⇑P	P	22 23 06.1	+1.5
OJC	Ojcow	37.42	303	P	P	22 23 06.1	+0.4
OJC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
OJC	Ojcow	37.42	303	P	P	22 23 06.1	+0.4
ARCES	ARCESS Array B	37.66	335	P	P	22 23 07.9	+0.4
	comp=Z,1.4nm,0.4s,baz=111,slow=8.5,SNR=24						
ARCES	ARCESS Array B	37.66	335	P	P	22 23 08.0	+0.5
ARCES				pmax	pmax		
	comp=Z,33nm,1.5s						
ARCES	ARCESS Array B	37.66	335	P	P	22 23 08.0	+0.5
PSZ	Piszkesteto	37.67	299	P	P	22 23 08.7	+0.7
PSZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PSZ	Piszkesteto	37.67	299	P	P	22 23 08.7	+0.7
PSZ				IAmb	IAmb	22 23 10.4	
	comp=Z,3.9nm,0.9s						
LANS	Liptovska Anna	37.77	301	eP	P	22 23 10.7	+2.0
LANS	Liptovska Anna	37.77	301	eP	P	22 23 10.7	+2.0
NJ2	Nanjing	37.88	88	eP	P	22 23 10.0	+0.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
AGG	Agios Georgios	38.14	284	P	P	22 23 12.2	+0.2
AGG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AGG	Agios Georgios	38.14	284	P	P	22 23 12.2	+0.2
FRGS	Fruska Gora	38.26	295	⇑P	P	22 23 14.4	+1.6
FNA	Florina	38.28	287	P	P	22 23 13.4	+0.2
FNA				pmax	pmax		
	comp=Z,20nm,1.2s						
FNA	Florina	38.28	287	P	P	22 23 13.4	+0.2
DIVS	Divibare	38.38	293	P	P	22 23 15.1	+1.1
DIVS				IAmb	IAmb	22 23 16.1	
	comp=Z,4.9nm,0.7s						
KOLL	Kolacno	38.55	300	eP	P	22 23 17.0	+1.7
MORC	Moravsky Berou	38.92	302	⇓P	P	22 23 19.5	+1.0
MORC	Moravsky Berou	38.92	302	eP	P	22 23 19.2	+0.7
MORC	Moravsky Berou	38.92	302	P	P	22 23 19.1	+0.7
MORC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MORC	Moravsky Berou	38.92	302	P	P	22 23 19.1	+0.7
MORC				IAmb	IAmb	22 23 25.1	
	comp=Z,3.6nm,0.6s						
JAVC	Velka Javorina	38.98	301	eP	P	22 23 20.6	+1.6
MODS	Modra-Piesok	39.32	300	eP	P	22 23 22.5	+0.7
MODS	Modra-Piesok	39.32	300	eP	P	22 23 22.5	+0.7
KRLC	Kraliky	39.37	303	eP	P	22 23 23.1	+1.0
KRLC				ex	x	22 23 26.5	
KRLC	Kraliky	39.37	303	eP	P	22 23 23.1	+1.0
VRAC	Vranov	39.61	302	⇓P	P	22 23 25.5	+1.4
VRAC	Vranov	39.61	302	eP	P	22 23 25.1	+1.0
VRAC	Vranov	39.61	302	⇓P	P	22 23 25.5	+1.4
DPC	Dobruska-Polom	39.62	303	eP	P	22 23 25.1	+0.9
DPC				ex	x	22 23 28.7	
DPC	Dobruska-Polom	39.62	303	eP	P	22 23 25.1	+0.9
YAK	Yakutsk	39.75	38	P	P	22 23 24.5	-0.6
	comp=Z,2.9nm,0.4s,baz=156,slow=1.7,SNR=4.6						
YAK	Yakutsk	39.75	38	ceP	P	22 23 25.2	+0.1
YAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KRUC	Moravsky	39.78	301	eP	P	22 23 26.8	+1.3
UPC	Upice	39.79	304	eP	P	22 23 26.9	+1.3
UPC	Upice	39.79	304	eP	P	22 23 26.9	+1.3
CONA	Conrad Observa	40.34	300	eP	P	22 23 31.5	+1.2
	comp=Z,3.9nm,0.7s						
ARSA	Arzberg	40.70	299	eP	P	22 23 34.2	+0.9
	comp=Z,6.6nm,1.2s						
PRU	Pruhonice	40.81	303	eP	P	22 23 35.1	+1.1
PRU				ex	x	22 23 38.3	
PRU	Pruhonice	40.81	303	eP	P	22 23 35.1	+1.1
SOKA	Soboth	41.16	298	eP	P	22 23 38.2	+1.1
	comp=Z,5.3nm,1.3s						
CKRC	Cesky Krumlov	41.17	301	eP	P	22 23 38.5	+1.4
CKRC				ex	x	22 23 41.9	
TIXI	Tiksi	41.29	24	P	P	22 23 37.2	-0.5
	comp=Z,1.5nm,0.6s,baz=284,slow=5.7,SNR=10						
TIXI	Tiksi	41.29	24	ceP	P	22 23 37.6	-0.1
MOA	Molln	41.41	300	eP	P	22 23 39.9	+0.9
	comp=Z,3.0nm,0.8s						
NC405	NORSAR Array S	41.50	320	P	P	22 23 38.7	-0.9
CLL	Collm	41.55	305	i P	P	22 23 40.8	+0.7
CLL				pmax	pmax		
	comp=Z,11nm,1.5s						
CLL	Collm	41.55	305	i P	P	22 23 40.8	+0.7
	comp=Z,11nm,1.5s						
CLL	Collm	41.55	305	P	P	22 23 40.7	+0.6
CLL				IAmb	IAmb	22 23 46.1	
	comp=Z,4.0nm,0.8s						
GEC2	GERESS Array S	41.56	302	P	P	22 23 41.2	+0.9
GEC2				IAmb	IAmb	22 23 42.4	
	comp=Z,4.9nm,0.7s						
GERES	GERESS Array B	41.56	302	P	P	22 23 41.7	+1.3
	comp=Z,3.7nm,0.7s,baz=70,slow=7.9,SNR=46						
GERES	GERESS Array B	41.56	302	P	P	22 23 41.1	+0.7
NC602	NORSAR Array S	41.58	320	P	P	22 23 39.8	-0.4
KHC	Kasperske Hory	41.59	302	eP	P	22 23 41.5	+1.0
KHC				ex	x	22 23 44.9	
KHC	Kasperske Hory	41.59	302	P	P	22 23 41.2	+0.7
KHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KHC	Kasperske Hory	41.59	302	P	P	22 23 41.2	+0.7
NC303	NORSAR Array S	41.67	320	P	P	22 23 41.3	+0.4
NC303				IAmb	IAmb	22 23 46.8	
	comp=Z,14nm,1.0s						
KLR	Kul'dur	41.69	58	P	P	22 23 41.0	-0.2
	comp=Z,1.4nm,0.7s,baz=286,slow=6.8,SNR=5.9						
NB201	NORSAR Array S	41.70	320	P	P	22 23 41.0	-0.3
NB2	NORSAR Subarra	41.74	320	P	P	22 23 41.6	0.0
	comp=Z,2.5nm,0.5s,baz=92,slow=8.6						
NOA	NORSAR Array B	41.74	320	P	P	22 23 41.7	0.0
	comp=Z,3.7nm,0.6s,baz=91,slow=8.1,SNR=19						
NAO01	NORSAR Array S	41.90	320	P	P	22 23 43.0	+0.1
NBO00	NORSAR Array S	41.95	320	P	P	22 23 42.2	-1.1
NC204	NORSAR Array S	41.96	320	P	P	22 23 43.5	+0.1
NC204				IAmb	IAmb	22 23 51.7	
	comp=Z,21nm,1.4s						
SGRT	San Giovanni R	42.03	291	P	P	22 23 44.2	-0.1
TIP	Timpagrande	42.16	287	P	P	22 23 45.8	+0.4
TIP				IAmb	IAmb	22 23 59.5	
	comp=Z,9.9nm,1.2s						
KBA	Koelnbreinsper	42.19	299	eP	P	22 23 45.9	+0.2
	comp=Z,1.7nm,0.5s						
KONO	Kongsberg	42.58	318	P	P	22 23 48.6	+0.2
KONO	Kongsberg	42.58	318	P	P	22 23 48.6	+0.2
WTTA	Wattenberg	43.27	300	eP	P	22 23 54.8	+0.4
	comp=Z,5.1nm,0.8s						
WATA	Walderalm	43.30	300	eP	P	22 23 55.4	+0.8
	comp=Z,5.9nm,0.9s						
NRCA	Norcia	43.53	293	P	P	22 23 57.0	+0.6
NRCA				IAmb	IAmb	22 23 58.6	
	comp=Z,6.0nm,0.9s						
SQTA	Sankt Quirin	43.57	300	eP	P	22 23 55.6	-1.1
	comp=Z,5.4nm,1.1s						
MOTA	Moosalm	43.60	300	eP	P	22 23 57.5	+0.4
	comp=Z,3.4nm,0.9s						
TEOL	Teolo	43.77	297	P	P	22 23 58.4	+0.2
TEOL				IAmb	IAmb	22 24 05.2	
	comp=Z,9.4nm,0.7s						
RETA	Reutte	43.79	300	eP	P	22 23 59.2	+0.8
	comp=Z,3.8nm,1.2s						
DAVA	Damuels	44.42	300	eP	P	22 24 03.7	+0.1
	comp=Z,3.4nm,0.7s						
VLC	Villacollemand	45.00	296	P	P	22 24 09.3	+1.2
VLC				IAmb	IAmb	22 24 19.7	
	comp=Z,7.8nm,1.0s						
BFO	Black Forest	45.15	302	P	P	22 24 10.2	+1.0
BFO				pmax	pmax		
	comp=Z,11nm,1.5s						
BFO	Black Forest	45.15	302	P	P	22 24 10.2	+1.0
BFO				IAmb	IAmb	22 24 17.0	
	comp=Z,11nm,1.5s						
GSI	Gunungsitoli	45.41	144	P	P	22 24 11.8	+0.2
MSSA	Maissana	45.54	296	P	P	22 24 13.3	+0.8
MSSA				IAmb	IAmb	22 24 27.1	
	comp=Z,14nm,1.0s						
SENIN	Lac Senin/Sane	46.39	300	P	P	22 24 19.2	0.0
SENIN				IAmb	IAmb	22 24 19.6	
	comp=Z,9.8nm,1.4s						
BNI	Bardonecchia	47.22	298	P	P	22 24 26.0	+0.3
BNI				pmax	pmax		
	comp=Z,22nm,1.5s						
BNI	Bardonecchia	47.22	298	P	P	22 24 26.0	+0.3
KEST	Kesra	48.94	286	P	P	22 24 39.2	+0.2
	comp=Z,2.3nm,0.7s,baz=216,slow=13,SNR=3.9						
KEST	Kesra	48.94	286	P	P	22 24 39.9	+0.8
KEST				IAmb	IAmb	22 24 41.9	
	comp=Z,5.4nm,1.1s						
MJAR	Matsushiro Arr	50.34	72	P	P	22 24 48.9	-0.7
	comp=Z,3.1nm,0.8s,baz=302,slow=8.4,SNR=6.0						
DAG	Danmarks Havn	50.93	343	i P	P	22 24 53.0	-0.5
BILL	Bilibino	54.18	28	eP	P	22 25 15.4	-2.3
BILL				e		22 26 21.9	
BILL				e		22 27 21.9	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s						
SKR	Severo-Kuril’s	56.16	50	eP	P	22 25 27.9	-4.2
ESBB	Sonseca Array	56.59	296	P	P	22 25 35.5	0.0
ESBB				IAmb	IAmb	22 25 51.9	
	comp=Z,7.1nm,1.4s						
ESDC	Sonseca Array	56.59	296	P	P	22 25 35.6	+0.1
	comp=Z,1.1nm,0.7s,baz=63,slow=9.4,SNR=7.6						
ESDC	Sonseca Array	56.59	296	P	P	22 25 34.6	-0.9
RES	Resolute Bay	64.45	356	LR	LR	22 55 41.2	
	comp=Z,151nm,19.2s,baz=359,slow=37						
TORD	Torodi Ar. Bea	67.09	268	P	P	22 26 45.7	-0.7
	comp=Z,5.0nm,0.5s,baz=49,slow=5.4,SNR=66						
LSZ	Lusaka	69.35	226	P	P	22 27 00.4	-0.2
	comp=Z,0.5nm,0.3s,baz=39,slow=10.0,SNR=4.0						
INK	Inuvik	69.42	10	P	P	22 27 00.8	+0.6
	comp=Z,0.5nm,0.3s,baz=15,slow=4.0,SNR=5.8						
C36M	Paulatuk	69.43	6	P	P	22 26 59.8	-0.5
C36M				IAmb	IAmb	22 27 13.3	
	comp=Z,5.1nm,1.1s						
ILAR	Eielson Array	70.27	17	LR	LR	23 04 30.0	
	comp=Z,181nm,19.4s,baz=324,slow=42						
KOWA	Kowa	70.58	273	P	P	22 27 07.9	-0.3
KOWA				IAmb	IAmb	22 27 08.5	
	comp=Z,7.4nm,0.6s						
KDAK	Kodiak Island	74.72	23	LR	LR	23 05 41.5	
	comp=Z,222nm,20.1s,baz=342,slow=40						
DBIC	Dimbokro	76.16	267	P	P	22 27 40.6	-0.5
	comp=Z,3.9nm,0.5s,baz=42,slow=6.3,SNR=11						
KIC	Kosan Boka	76.27	267	ePKP1	P	22 27 41.3	-0.5
	comp=Z,18nm,0.5s						
TIC	Toumodi	76.30	267	ePKP1	P	22 27 40.7	-1.3
LIC	Lamto	76.58	267	ePKP1	P	22 27 40.6	-2.9
	comp=Z,54nm,1.3s						
YKA	Yellowknife Ar	76.84	3	P	P	22 27 43.8	-0.4
	comp=Z,0.9nm,0.6s,baz=349,slow=5.9,SNR=19						
YKA	Yellowknife Ar	76.84	3	i P	P	22 27 43.7	-0.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BOSA	Boshof	81.85	221	P	P	22 28 11.3	-0.8
	comp=Z,1.3nm,0.6s,baz=27,slow=6.8,SNR=2.1						
WRA	Warramunga Arr	83.30	123	P	P	22 28 18.7	-1.0
	comp=Z,1.3nm,0.7s,baz=326,slow=4.4,SNR=5.1						
WRA	Warramunga Arr	83.30	123	i P	P	22 28 23.2	+3.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BBB	Bella Bella	85.62	13	LR	LR	23 12 21.2	
	comp=Z,104nm,19.8s,baz=336,slow=40						
ASAR	Alice Springs	85.78	126	P	P	22 28 31.2	-1.0
	comp=Z,2.0nm,0.7s,baz=312,slow=4.5,SNR=18						
NEW	Newport	90.85	6	LR	LR	23 14 37.0	
	comp=Z,73nm,18.0s,baz=352,slow=39						
YBH	Yreka Blue Hor	96.64	11	LR	LR	23 16 27.4	
	comp=Z,56nm,20.7s,baz=344,slow=38						
PDAR	Pinedale Array	96.75	2	LR	LR	23 18 12.1	
	comp=Z,65nm,18.8s,baz=358,slow=39						
ELK	Elko	98.48	6	LR	LR	23 19 27.4	
	comp=Z,83nm,18.5s,baz=353,slow=39						

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*IDC **31** 22:22:11.0±0.5, 51°.60N×173°.54W, h0^{km}, mb4.7/39, mb1 4.7/42, mb1mx4.6/66, mbtmp4.7/42, ML4.5/3, MS3.8/13, Ms1 3.9/13, ms1mx3.4/96, Error ellipse: s-maj=14.5km s-min=9.4km az=165.0*

*MOS **31** 22:22:15.3±0.9, 51°.70N×173°.50W, h38^{km}, mb5.0/35, Error ellipse: s-maj=6.9km s-min=4.8km az=96.1*

*AEIC **31** 22:22:15±2.4, 51°.53N±0°.06×173°.51W±0°.07, h42^{km}±5^{km}, Error ellipse: s-maj=9.2km s-min=6.1km az=194.0*

*NEIC **31** 22:22:17.4±1.7, 51°.68N±0°.06×173°.49W±0°.07, h40^{km}±6^{km}, mb5.0/423, ML4.3(AEIC), Error ellipse: s-maj=8.4km s-min=5.8km az=195.0*

*BGR **31** 22:22:17.3±0.0, 51°.58N×173°.32W, h46^{km}, mb4.7*

*BJI **31** 22:22:18.1±0.0, 51°.95N×174°.25W, h43^{km}, mB5.1/34, mb5.0/59, Ms4.8/36, Ms7 4.5/34*

ISC 31 22:22:17.1±0.6, **51°.62N**±0°.07×**173°.48W**±0°.03, **h44**^{km}±4^{km}, **h43**^{km}**:pP-P, n932,** σ1^{s}**01**/844, **mb4.9**/317, **MS4.1**/21, **57C-35D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.73	323		Pn	22 22 30.3	-0.7
ATKA	Atka Island	0.73	323		Sn	22 22 40.9	-0.2
KOFP	Korovin Flat P	0.76	330		Pn	22 22 31.5	0.0
KOKL	Mount Kliuchef	0.83	328		Pn	22 22 32.4	0.0
GSMY	Great Sitkin M	1.65	286		Pn	22 22 41.9	-1.8
GSTR	Great Sitkin T	1.67	287		Pn	22 22 43.0	-0.9
GSTD	Great Sitkin T	1.71	286		Pn	22 22 42.9	-1.6
KIWB	Kanaga Island	2.29	277		Pn	22 22 51.6	-0.8
KIKV	Kanaga Island	2.31	278		Pn	22 22 51.8	-0.8
KICM	Kanaga Island	2.33	279		Pn	22 22 51.7	-1.1
KIMD	Kanaga Island	2.34	275		Pn	22 22 52.2	-0.9

TAFP	Tanaga Falls P	2.81	277		Pn	22 22 59.5	0.0
TAFP					Sn	22 23 33.9	+1.7
TASE	Tanaga Southea	2.84	276		Pn	22 23 00.1	+0.1
NIKH	Nikolski High	3.14	63	Pn	Pn	22 23 03.5	-0.6
NIKH	Nikolski High	3.14	63		Sn	22 23 39.9	-0.4
NIKH	Nikolski High	3.14	63	P	Pn	22 23 03.5	-0.6
	baz=245,SNR=16						
GAEA	Gareloi East	3.28	275		Pn	22 23 06.1	+0.2
GALAA	Gareloi Lava P	3.30	274		Pn	22 23 06.1	0.0
OKSP	Okmok Steeple	3.57	61		Pn	22 23 10.1	+0.2
OKCE	Okmok Cone E	3.71	59		Pn	22 23 12.7	+0.7
OKNC	Okmok New Cone	3.75	59		Pn	22 23 13.5	+1.1
OKFG	Magazine Ridge	3.84	60		Pn	22 23 14.4	+0.8
MAPS	Pakushin South	4.54	59		Pn	22 23 23.4	+0.2
MSW	Makushin Switc	4.67	58		Pn	22 23 25.4	+0.4
UNV	Unalaska Valle	4.79	60		Pn	22 23 26.8	+0.2
UNV	Unalaska Valle	4.79	60	P	Pn	22 23 26.8	+0.2
	baz=244,SNR=5.7						
AKMO	Akutan Morgan	5.16	58		Pn	22 23 33.0	+1.4
AKBBA	Akutan Broad B	5.20	59		Pn	22 23 34.3	+2.0
AKGG	Akutan Green G	5.21	57		Pn	22 23 34.3	+1.9
HSB	Akutan Spr’s B	5.25	58		Pn	22 23 34.2	+1.2
AKUT	Akutan	5.30	59	Pn	Pn	22 23 34.9	+1.3
SPIA	Saint Paul Isl	5.88	17		Pn	22 23 42.0	+0.5
SPIA	Saint Paul Isl	5.88	17	P	Pn	22 23 42.7	+1.2
	baz=200						
FALS	False Pass	6.85	58		Pn	22 23 54.4	-0.4
FALS	False Pass	6.85	58	P	Pn	22 23 55.3	+0.4
	baz=245						
SHEM	Shemya Is, Ala	7.72	283	Pn	Pn	22 24 11.7	+4.9
	13nm,0.3s,baz=117,slow=9.0,SNR=1.9						
SHEM				LR	LR	22 26 57.6	
	comp=Z,596nm,21.1s,baz=82,slow=37						
SMY	Shemya	7.72	283	P	Pn	22 24 05.6	-1.2
SMY	Shemya	7.72	283	Pn	Pn	22 24 05.5	-1.2
SDPT	Sand Point	8.60	59	Pn	Pn	22 24 18.3	-0.6
SDPT	Sand Point	8.60	59	P	Pn	22 24 18.5	-0.4
	baz=249						
CNBA	Chernabura Isl	8.93	64	Pn	Pn	22 24 22.9	-0.4
CHNA	Chernabura Isl	8.93	63	P	Pn	22 24 22.1	-1.2
	baz=254						
CHGN	Chignik	10.03	56	Pn	Pn	22 24 37.0	-1.3
GAMB	Gambell	12.22	4		Pn	22 25 11.1	+2.8
GAMB	Gambell	12.22	4	P	Pn	22 25 09.3	+1.0
	baz=185,SNR=12						
SII	Sitkinak Islan	12.34	59	Pn	Pn	22 25 08.4	-1.6
SII	Sitkinak Islan	12.34	59	P	Pn	22 25 09.6	-0.4
	baz=254						
P18K	Big Mountain,	12.91	46	Pn	Pn	22 25 17.9	+0.2
P18K	Big Mountain,	12.91	46	P	Pn	22 25 17.3	-0.4
	baz=241						
OHAK	Old Harbor	13.00	57	Pn	Pn	22 25 16.6	-2.3
OHAK	Old Harbor	13.00	57	P	Pn	22 25 18.5	-0.4
	baz=253						
O18K	Koktuh Hills	13.15	44		Pn	22 25 21.2	+0.3
O18K	Koktuh Hills	13.15	44	P	Pn	22 25 21.6	+0.6
	baz=239						
Q19K	Cape Douglas,	13.43	49		Pn	22 25 23.2	-1.6
Q19K	Cape Douglas,	13.43	49	P	Pn	22 25 24.0	-0.8
	baz=245						
KDAK	Kodiak Island	13.53	55	Pn	Pn	22 25 22.8	-3.4
	1.1nm,0.3s,baz=269,slow=7.5,SNR=15						
KDAK	Kodiak Island	13.53	55	P	Pn	22 25 25.1	-1.1
	baz=252						
ANM	Nome	13.65	15	P	Pn	22 25 31.3	+3.5
ANM	Nome	13.65	15		Pn	22 25 31.3	+3.5
ANM	Nome	13.65	15	P	Pn	22 25 28.6	+0.8
	baz=202,SNR=22						
SVW2	Sparrevohn	13.68	39		Pn	22 25 30.6	+2.4
O19K	Port Alsworth	13.71	44	P	Pn	22 25 28.9	+0.3
	baz=240						
N19K	Bonanza Creek	13.96	41		Pn	22 25 33.9	+1.8
N19K	Bonanza Creek	13.96	41	P	Pn	22 25 32.4	+0.3
	baz=237						
TNA	Tin City	14.27	9	P	P	22 25 39.2	-3.2
TNA	Tin City	14.27	9	P	Pn	22 25 36.7	+0.6
	baz=194						
O20K	Slope Mountain	14.40	46	P	Pn	22 25 37.8	-0.1
	baz=243						
RSO	Redoubt South	14.52	44	Pn	Pn	22 25 41.3	+1.6
L19K	White Mountain	14.61	36		P	22 25 44.4	-2.0
L19K	White Mountain	14.61	36	P	Pn	22 25 41.1	+0.4
	baz=232						
TTA	Tatalina	14.69	33	P	P	22 25 45.5	-1.7
TTA	Tatalina	14.69	33	P	P	22 25 45.5	-1.7
TTA	Tatalina	14.69	33	P	Pn	22 25 41.1	-0.7
	baz=227,SNR=17						
CNPM	China Poot	14.80	49	Pn	Pn	22 25 42.8	-0.5
BRLK	Bradley Lake	15.06	48	Pn	Pn	22 25 47.6	+0.9
BRLK				IAmb	IAmb	22 26 11.1	
	comp=Z,120nm,1.6s						
BRSE	Bradley Lake S	15.12	49	P	Pn	22 25 47.8	+0.4
	baz=247						
L20K	Farewell, AK	15.15	37	P	Pn	22 25 47.8	-0.2
	baz=233						
CAPN	Captain Cook N	15.36	45	Pn	Pn	22 25 50.9	+0.4
K20K	Telida	15.63	34	P	P	22 25 55.9	-1.7
K20K	Telida	15.63	34	P	Pn	22 25 54.0	-0.1
	baz=230						
GCSA	Galena City Sc	15.72	27	P	Pn	22 25 54.9	-0.3
	baz=221						
SEW	Seward	15.86	48	Pn	Pn	22 25 54.7	-2.2
SEW	Seward	15.86	48	P	Pn	22 25 56.3	-0.6
	baz=248						
PPLA	Purkeypile	16.03	37	P	P	22 26 02.1	0.0
PPLA	Purkeypile	16.03	37	P	Pn	22 25 59.6	+0.3
	baz=235						
RC01	Rabbit Creek A	16.12	45	Pn	Pn	22 26 00.4	0.0
RC01	Rabbit Creek A	16.12	45	P	Pn	22 26 00.5	+0.2
	baz=244						
J20K	Nowinta River	16.14	31	P	P	22 26 02.4	-0.9
	baz=228,SNR=16						
CAST	Castle Rocks	16.37	36		P	22 26 05.3	-0.5
CAST	Castle Rocks	16.37	36	P	Pn	22 26 04.0	+0.5
	baz=234,SNR=12						
CUT	Chulitna	16.51	40	Pn	Pn	22 26 05.0	-0.3
CHUM	Lake Minchumin	16.57	34	P	P	22 26 07.1	-0.9
	baz=232,SNR=6.9						
PMR	Palmer	16.60	44	P	Pn	22 26 05.2	-1.2
PMR				pmax	pmax		
	comp=Z,41nm,1.5s						
PMR	Palmer	16.60	44	Pn	Pn	22 26 05.2	-1.2
PMR	Palmer	16.60	44	P	Pn	22 26 07.0	+0.6
	baz=244						
PWL	Port Wells	16.65	47	Pn	Pn	22 26 05.3	-1.7
PWL				IAmb	IAmb	22 26 22.8	
	comp=Z,158nm,1.7s						
PWL	Port Wells	16.65	47	P	Pn	22 26 06.6	-0.4
	baz=247						
GHO	Glory Hole Cre	16.77	43	Pn	Pn	22 26 06.9	-1.7
KNK	Knik Glacier	16.82	45		Pn	22 26 07.8	-1.3
KNK	Knik Glacier	16.82	45	P	Pn	22 26 08.5	-0.6
	baz=246						
KTH	Kantishna Hill	16.88	36	P	P	22 26 11.4	-0.1
SML	Sawmill	17.04	44	P	Pn	22 26 11.1	-0.8
SML	Sawmill	17.04	44		Pn	22 26 11.1	-0.8
SML	Sawmill	17.04	44	P	Pn	22 26 11.6	-0.3
	baz=244						
PET	Petropavlovsk	17.05	286	⇓eP	P	22 26 13.3	-0.1
PET	Petropavlovsk	17.05	286		P	22 26 13.0	-0.4
PET				IAmb	IAmb	22 26 26.4	
	comp=Z,118nm,1.4s						
BPAW	Bear Paw Mtn.	17.17	35	P	P	22 26 15.2	+0.5
BPAW	Bear Paw Mtn.	17.17	35	P	P	22 26 14.1	-0.6
	baz=234,SNR=12						
SCM	Sheep Creek Mo	17.48	44	P	Pn	22 26 16.2	-1.2
SCM				pmax	pmax		
	comp=Z,50nm,1.0s						
SCM	Sheep Creek Mo	17.48	44		Pn	22 26 16.2	-1.2
SCM	Sheep Creek Mo	17.48	44	P	Pn	22 26 17.4	0.0
	baz=246						
I21K	Tanana	17.51	31	P	P	22 26 19.0	+0.6
I21K	Tanana	17.51	31	P	P	22 26 18.8	+0.5
	baz=229						
IMAR	Indian Mountai	17.52	27		P	22 26 19.3	+0.7
H21K	Melozitna Rive	17.57	29	P	P	22 26 19.8	+0.7
H21K	Melozitna Rive	17.57	29	P	P	22 26 19.7	+0.7
	baz=227						
RND	Reindeer	17.58	38	P	Pn	22 26 16.2	-2.4
RND				pmax	pmax		
	comp=Z,14nm,0.8s						
RND	Reindeer	17.58	38		Pn	22 26 16.2	-2.4
PEA0B	Petropavlovsk-	17.62	286	P	Pn	22 26 19.2	+0.1
PEA0B				pmax	pmax		
	comp=Z,58nm,1.2s						
PEA0B	Petropavlovsk-	17.62	286	P	Pn	22 26 19.1	+0.1
PETK	Petropavlovsk-	17.62	286	P	Pn	22 26 18.3	-0.8
	comp=Z,1.8nm,0.3s,baz=91,slow=14,SNR=53						
PETK	Petropavlovsk-	17.62	286	P	Pn	22 26 18.5	-0.6
PETK	Petropavlovsk-	17.62	286		Pn	22 26 18.5	-0.6
WAT6	Susitna Watana	17.63	42	P	Pn	22 26 18.8	-0.5
	baz=243						
MCK	McKinley	17.72	37	P	Pn	22 26 19.2	-1.1
MCK				pmax	pmax		
	comp=Z,24nm,0.9s						
MCK	McKinley	17.72	37	P	Pn	22 26 19.2	-1.1
MCK	McKinley	17.72	37	P	Pn	22 26 19.4	-0.9
	baz=238,SNR=7.7						
EYAK	Cordova Ski Ar	17.74	49	Pn	Pn	22 26 18.1	-2.3
EYAK				IAmb	IAmb	22 26 21.6	
	comp=Z,81nm,1.3s						
BWN	Browne	17.76	36		P	22 26 20.9	-0.2
MLY	Manley	17.82	32	P	P	22 26 22.2	+0.4
MLY	Manley	17.82	32	P	P	22 26 23.0	+1.2
	baz=232						
DIV	Divide	17.92	47	P	Pn	22 26 22.1	-0.6
KLU	Klutina	17.97	46	P	Pn	22 26 21.7	-1.8
KLU	Klutina	17.97	46	P	Pn	22 26 21.8	-1.7
	baz=249						
DHY	Denali Highway	18.00	40		Pn	22 26 23.9	0.0
DHY	Denali Highway	18.00	40	P	Pn	22 26 23.4	-0.5
	baz=242						
M24K	Tolsona, Glenn	18.09	44	P	P	22 26 24.3	-0.6
M24K	Tolsona, Glenn	18.09	44	P	P	22 26 24.8	-0.1
	baz=247						
NEA2	Nenana	18.14	35	P	P	22 26 24.1	-1.2
NEA2	Nenana	18.14	35	P	P	22 26 24.5	-0.8
	baz=236						
RAGM	Ragged Mountai	18.20	50	P	P	22 26 24.8	-1.2
RAGM				IAmb	IAmb	22 26 55.0	
	comp=Z,64nm,1.0s						
I23K	Minto, Yukon-K	18.36	33	P	Pn	22 26 28.6	+0.6
I23K				IAmb	IAmb	22 26 34.4	
	comp=Z,42nm,0.8s						
I23K	Minto, Yukon-K	18.36	33	P	P	22 26 27.6	0.0
	baz=234,SNR=32						
BMRM	Bremner River	18.40	48	P	Pn	22 26 28.5	-0.1
BMRM				IAmb	IAmb	22 27 04.0	
	comp=Z,180nm,1.8s						
BMRM	Bremner River	18.40	48	P	P	22 26 27.5	-0.8
	baz=252						
WRH	Wood River Hil	18.43	36	P	P	22 26 26.9	-1.5
SUCK	Suckling Hills	18.55	51	P	P	22 26 29.2	-0.6
N25K	Chitina, Valde	18.61	46	P	P	22 26 29.7	-0.8
N25K	Chitina, Valde	18.61	46	P	P	22 26 29.9	-0.6
	baz=250						
CCB	Clear Creek Bu	18.62	36	P	P	22 26 29.4	-1.2
MDM	Murphy Dome	18.64	35	P	P	22 26 30.0	-0.9
HARP	HAARP	18.64	44	P	P	22 26 29.9	-1.0
	baz=248						
BERG	Berg Lake	18.67	50	P	P	22 26 30.3	-0.9
BERG				IAmb	IAmb	22 26 36.0	
	comp=Z,298nm,1.6s						
TCOL	CIGO, UAF Yank	18.73	35	P	P	22 26 31.4	-0.3
	baz=237						
COLA	College	18.73	35	ceP	P	22 26 32.0	+0.3
COLA				pmax	pmax		
	comp=Z,19nm,1.3s						
COLA	College	18.73	35	P	P	22 26 31.4	-0.3
	baz=237						
PAX	Paxson	18.74	42	P	P	22 26 31.2	-0.8
PAX				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PAX	Paxson	18.74	42	P	P	22 26 31.2	-0.8
PAX	Paxson	18.74	42	P	P	22 26 31.5	-0.5
	baz=246						
HDA	Harding Lake	18.82	37	P	P	22 26 32.1	-0.6
HDA	Harding Lake	18.82	37	P	P	22 26 32.7	0.0
	baz=240						
GLB	Gilahina Butte	18.91	47	P	P	22 26 32.7	-1.2
GLB				IAmb	IAmb	22 27 02.4	
	comp=Z,71nm,1.6s						
POKR	Poker Plat Res	19.01	35	P	P	22 26 33.3	-1.6
POKR	Poker Plat Res	19.01	35	P	P	22 26 33.7	-1.1
	baz=237						
VRDI	Verde Repeater	19.02	48	P	P	22 26 33.9	-1.2
VRDI				IAmb	IAmb	22 27 08.7	
	comp=Z,76nm,1.6s						
IL31		19.03	36	P	P	22 26 34.3	-0.7
IL31				IAmb	IAmb	22 26 36.9	
	comp=Z,88nm,1.4s						
ILAR	Eielson Array	19.03	36	P	P	22 26 34.1	-0.9
	comp=Z,4.5nm,0.3s,baz=242,slow=10.0,SNR=138						
ILAR				LR	LR	22 34 39.9	
	comp=Z,317nm,18.8s,baz=246,slow=39						
ILAR	Eielson Array	19.03	36	P	P	22 26 32.8	-2.2
CRQM	Cirque	19.03	50	P	P	22 26 35.4	+0.1
CRQM				IAmb	IAmb	22 26 39.4	
	comp=Z,162nm,1.6s						
SNH	Sunshine Point	19.04	51	P	Pn	22 26 35.8	-0.5
CRQE	Cirque	19.05	50	P	P	22 26 35.5	0.0
	baz=255						
WAX	Waxell Ridge	19.09	51	P	P	22 26 35.7	-0.2
WAX				IAmb	IAmb	22 27 03.5	
	comp=Z,139nm,1.5s						
BILL	Bilibino	19.18	337	ceP	Pn	22 26 39.0	+1.1
BILL				pmax	pmax		
	comp=Z,23nm,1.0s						
BILL	Bilibino	19.18	337		P	22 26 35.0	-1.7
MCARA	McCarthy VSAT	19.26	48	P	P	22 26 37.2	-0.3
MCARA				IAmb	IAmb	22 27 14.9	
	comp=Z,62nm,1.3s						
MCARA	McCarthy VSAT	19.26	48	P	P	22 26 37.5	0.0
	baz=253						
H24K	Noodor Dome	19.26	33	P	P	22 26 38.1	+0.4
H24K				IAmb	IAmb	22 26 42.2	
	comp=Z,58nm,0.9s						
H24K	Noodor Dome	19.26	33	P	P	22 26 38.0	+0.4
	baz=235,SNR=41						
RIDG	Independent Ri	19.32	40	P	P	22 26 37.6	-0.7
RIDG	Independent Ri	19.32	40	P	P	22 26 38.0	-0.3
	baz=244						
ISLE	Juniper Island	19.38	50	P	P	22 26 39.3	+0.3
ISLE				IAmb	IAmb	22 26 45.8	
	comp=Z,106nm,1.3s						
COLD	Coldfoot	19.41	28	P	Pn	22 26 40.5	-0.1
COLD	Coldfoot	19.41	28	P	Pn	22 26 40.7	0.0
	baz=228,SNR=9.3						
MESA	MESA	19.47	52	P	P	22 26 39.5	-0.5
M26K	Nabesna, AK	19.59	45	P	P	22 26 41.1	-0.2
	baz=250						
L26K	Log Cabin Wild	19.65	43	IAmb	IAmb	22 26 50.3	
	comp=Z,23nm,0.5s						
L26K	Log Cabin Wild	19.65	43	P	P	22 26 42.0	+0.1
	baz=248,SNR=11						
SCRK	Sand Creek	19.77	40	P	P	22 26 42.0	-1.2
SCRK	Sand Creek	19.77	40	P	P	22 26 42.3	-1.0
	baz=245,SNR=20						
BARN	Barnard Glacie	19.81	49	P	P	22 26 43.5	-0.3
PRP	Porcupine Dome	19.91	35	P	P	22 26 44.5	-0.3
	baz=239,SNR=6.5						
CTG	Chitna Glacier	19.94	50	P	P	22 26 43.7	-1.4
	baz=256						
CTGM	Chitina Glacie	19.94	50	P	P	22 26 44.2	-1.0
CTGM				IAmb	IAmb	22 26 54.3	
	comp=Z,44nm,1.1s						
LOGN	Logan Glacier	20.07	50	P	P	22 26 46.6	0.0
LOGN				IAmb	IAmb	22 26 56.7	
	comp=Z,73nm,1.4s						
M27K	Edge Creek, AK	20.07	45	P	P	22 26 47.0	+0.5
M27K	Edge Creek, AK	20.07	45	P	P	22 26 45.6	-1.0
	baz=252						
J26L	Joseph Creek	20.16	39	P	P	22 26 46.2	-1.2
	baz=244,SNR=75						
PCA	Pinnacle	20.29	52	P	P	22 26 49.0	+0.2
PCA				IAmb	IAmb	22 26 52.2	
	comp=Z,63nm,0.6s						
PINM	Pinnacle	20.29	52	P	P	22 26 48.4	-0.5
	baz=260						
L27K	Beaver Creek,	20.32	44	P	Pn	22 26 50.8	-0.6
L27K	Beaver Creek,	20.32	44	P	P	22 26 49.5	+0.4
	baz=250						
BCAR	Beaver Creek A	20.33	44	P	P	22 26 49.5	+0.2
BVCY	Beaver Creek	20.54	46	P	P	22 26 50.4	-1.1
	baz=253						
YUK3	Moose Creek	20.55	48	P	P	22 26 50.8	-1.0
	baz=255						
TOLK	Toolik Lake Re	20.55	25	P	P	22 26 51.8	+0.1
TOLK	Toolik Lake Re	20.55	25	P	P	22 26 51.8	+0.1
	baz=226,SNR=13						
FYU	Fort Yukon	20.56	33	P	P	22 26 52.5	+0.8
FYU				IAmb	IAmb	22 26 53.8	
	comp=Z,66nm,1.2s						
BCPM	Bancas Point	20.57	53	P	P	22 26 51.9	0.0
BCPM				IAmb	IAmb	22 27 24.8	
	comp=Z,191nm,1.4s						
A21K	Barrow	21.18	15	IAmb	IAmb	22 27 02.5	
	comp=Z,49nm,1.2s						
A21K	Barrow	21.18	15	P	P	22 26 58.1	-0.2
	baz=210,SNR=14						
EGAK	Eagle	21.22	39		P	22 26 58.5	-0.3
EGAK	Eagle	21.22	39	P	P	22 26 58.1	-0.6
	baz=247,SNR=58						
BMAR	Burnt Mountain	21.25	31	P	P	22 26 59.8	+0.6
SEY	Seymchan	21.36	315	P	P	22 27 00.9	+0.7
	comp=Z,7.8nm,0.8s,baz=112,slow=7.9,SNR=13						
SEY	Seymchan	21.36	315	⇓iP	P	22 27 00.8	+0.6
MA2	Magadan	21.48	306	ceP	P	22 27 02.8	+1.2
MA2				pmax	pmax		
	comp=Z,18nm,1.3s						
MA2	Magadan	21.48	306	P	P	22 27 02.3	+0.6
DAWY	Dawson	21.68	42	IAmb	IAmb	22 27 18.2	
	comp=Z,46nm,1.6s						
DAWY	Dawson	21.68	42	P	P	22 27 02.9	-0.8
	baz=251						
I29M	Ogilvie Camp,	22.55	39	P	P	22 27 11.6	-1.6
	baz=249,SNR=17						
SIT	Sitka	22.67	61	P	P	22 27 13.0	-1.4
SIT				pmax	pmax		
	comp=Z,119nm,1.4s						
SIT	Sitka	22.67	61	P	P	22 27 12.9	-1.4
SIT				IAmb	IAmb	22 27 19.9	
	comp=Z,119nm,1.4s						
SKAG	Skagway	22.69	55	P	P	22 27 15.0	+0.5
SKAG				IAmb	IAmb	22 27 39.6	
	comp=Z,45nm,0.8s						
BESE	Bessie Mountai	22.90	57	P	P	22 27 16.0	-0.8
BESE				IAmb	IAmb	22 27 25.8	
	comp=Z,139nm,1.7s						
WHY	Whitehorse	23.01	52	P	P	22 27 18.0	0.0
JIS	Juneau Island	23.15	58	P	P	22 27 19.7	+0.5
JIS				IAmb	IAmb	22 27 38.9	
	comp=Z,118nm,1.7s						
EPYK	Eagle Plains	23.52	37	IAmb	IAmb	22 27 26.1	
	comp=Z,19nm,0.7s						
EPYK	Eagle Plains	23.52	37	P	P	22 27 21.7	-1.1
	baz=249,SNR=8.8						
CRAG	Craig	24.04	65	P	P	22 27 26.2	-1.5
DIB	Dawson Inlet,	24.82	70	P	P	22 27 34.5	-0.3
DIB				IAmb	IAmb	22 27 38.7	
	comp=Z,84nm,1.3s						
INK	Inuvik	25.37	34	P	P	22 27 39.8	+0.1
	comp=Z,27nm,0.8s,baz=234,slow=9.1,SNR=39						
INK				LR	LR	22 39 29.1	
	comp=Z,300nm,18.6s,baz=214,slow=41						
INK	Inuvik	25.37	34	P	P	22 27 39.7	+0.1
INK				pmax	pmax		
	comp=Z,43nm,1.2s						
INK	Inuvik	25.37	34	P	P	22 27 39.6	0.0
INK				IAmb	IAmb	22 27 40.8	
	comp=Z,43nm,1.1s						
INK	Inuvik	25.37	34	P	P	22 27 39.3	-0.3
	baz=249,SNR=24						
DLBC	Dease Lake	25.44	57	P	P	22 27 42.9	+2.4
	comp=Z,24nm,0.9s,baz=286,slow=12,SNR=18						
DLBC	Dease Lake	25.44	57	IAmb	IAmb	22 27 45.0	
	comp=Z,22nm,0.8s						
RUBB	Prince Rupert	25.87	67	P	P	22 27 46.2	+1.9
RUBB				IAmb	IAmb	22 27 58.2	
	comp=Z,89nm,1.4s						
TYV	Tymovskoe	27.17	286	eP	P	22 27 56.4	+0.3
TYV				pmax	pmax		
	comp=Z,14nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,3.6s						
BBB	Bella Bella	27.65	71	LR	LR	22 37 46.7	
	comp=Z,173nm,18.6s,baz=274,slow=34						
UGL	Uglegorsk	28.15	283	eP	P	22 28 05.7	+0.8
UGL				pmax	pmax		
	comp=Z,80nm,0.8s						
YSS	Yuzh-Sakhalins	28.59	278	deP	P	22 28 09.2	+0.4
YSS				pmax	pmax		
	comp=Z,71nm,1.7s						
YSS	Yuzh-Sakhalins	28.59	278	P	P	22 28 09.2	+0.4
YSS				IAmb	IAmb	22 28 11.0	
	comp=Z,35nm,1.0s						
C36M	Paulatuk	28.96	34	P	P	22 28 11.6	-0.3
	baz=258,SNR=5.8						
A36M	Sachs Harbour	29.27	28	IAmb	IAmb	22 28 16.3	
	comp=Z,17nm,0.8s						
A36M	Sachs Harbour	29.27	28	P	P	22 28 14.4	-0.2
	baz=252,SNR=12						
JKA	Kamikawa-asahi	30.02	273	P	P	22 28 21.7	+0.2
JKA				IAmb	IAmb	22 28 24.1	
	comp=Z,38nm,1.0s						
ASAJ	Asahikawa	30.02	273	P	P	22 28 22.0	+0.4
	comp=Z,11nm,0.8s,baz=85,slow=7.0,SNR=8.7						
ASAJ	Asahikawa	30.02	273	P	P	22 28 21.7	+0.2
ASAJ				pmax	pmax		
	comp=Z,38nm,1.0s						
JEM	Erimo	30.78	269	P	P	22 28 23.9	-4.3
JEM				IAmb	IAmb	22 28 56.9	
	comp=Z,64nm,1.2s						
ERM	Erimo	30.78	269	P	P	22 28 28.5	+0.3
ERM				pmax	pmax		
	comp=Z,58nm,1.2s						
ERM	Erimo	30.78	269	P	P	22 28 28.5	+0.3
ERM				IAmb	IAmb	22 28 56.8	
	comp=Z,58nm,1.1s						
GRNR	Gornyy	30.91	289	⇓iP	P	22 28 28.6	-0.7
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,100nm,18.0s						
GRNR				MLR	MLR		
	comp=N,80nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,230nm,16.0s						
C03A	Quillayute Air	31.32	77	P	P	22 28 32.7	-0.2
JEW	Eniwo	31.40	272	P	P	22 28 32.1	-1.6
YAK	Yakutsk	31.75	311	P	P	22 28 35.9	-0.7
	comp=Z,2.2nm,0.4s,baz=224,slow=3.4,SNR=5.9						
YAK	Yakutsk	31.75	311	eP	P	22 28 35.3	-1.3
YAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,473nm,20.0s						
YAK				MLR	MLR		
	comp=N,348nm,20.0s						
YAK				MLR	MLR		
	comp=E,222nm,20.0s						
YAK	Yakutsk	31.75	311	P	P	22 28 35.7	-0.9
YAK				IAmb	IAmb	22 28 37.6	
	comp=Z,8.9nm,0.7s						
LLLB	Lillooet	31.86	71	P	P	22 28 38.4	+0.7
TIXI	Tiksi	32.08	330	P	P	22 28 39.1	-0.2
	comp=Z,4.0nm,0.4s,baz=110,slow=13,SNR=20						
TIXI				PcP	PcP	22 31 27.8	+0.2
	comp=Z,2.4nm,0.4s,baz=63,slow=1.6,SNR=7.2						
TIXI	Tiksi	32.08	330	⇓eP	P	22 28 39.5	+0.2
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TIXI	Tiksi	32.08	330	P	P	22 28 39.0	-0.3
TIXI					PcP	22 31 28.0	+0.4
D03D	Eldon	32.40	77	P	P	22 28 40.6	-1.8
	baz=296						
YKA	Yellowknife Ar	32.63	47	P	P	22 28 44.2	-0.1
	comp=Z,3.7nm,0.6s,baz=273,slow=8.1,SNR=42						
YKA				PcP	PcP	22 31 29.7	+0.5
	comp=Z,1.7nm,0.7s,baz=283,slow=2.8,SNR=9.1						
YKA				ScP	ScP	22 35 15.5	+6.2
	comp=Z,0.4nm,0.8s,baz=285,slow=3.5,SNR=4.1						
YKA				LR	LR	22 42 16.1	
	comp=Z,271nm,20.1s,baz=296,slow=37						
YKA	Yellowknife Ar	32.63	47	i P	P	22 28 44.2	-0.1
YKA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
B05A	Bryant	32.68	75	P	P	22 28 43.1	-1.7
	baz=296						
JTM	Tenmabayashi	32.77	269	P	P	22 28 46.5	+0.8
E04D	Cinebar	33.16	78	P	P	22 28 49.2	+0.1
	baz=298						
TEY	Ternei	33.28	279	⇓eP	P	22 28 50.5	+0.4
TEY				pmax	pmax		
	comp=N,20nm,0.8s						
TEY				pmax	pmax		

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      comp=E,40nm,0.8s
TEY                                  pmax   pmax
      comp=Z,80nm,0.8s
F04A  Amboy             33.55  79    P      P      22 28 52.9 +0.4
F04A                                 IAmb   IAmb   22 28 54.3
      comp=Z,12nm,0.6s
KEBM  Edson Butte       33.92  85    P      P      22 28 56.0 +0.2
KLR   Kul'dur           34.29 288    P      P      22 28 58.2 -0.6
      comp=Z,5.2nm,0.5s,baz=74,slow=6.9,SNR=41
KLR   Kul'dur           34.29 288 c iP      P      22 28 57.9 -1.0
KLR                                  pmax   pmax
      comp=Z,16nm,1.5s
B08A  Colville Reser    34.30  74    P      P      22 28 59.7 +0.7
B08A                                 IAmb   IAmb   22 29 00.9
      comp=Z,13nm,0.8s
H04A  Detroit Lake      34.30  81    P      P      22 28 59.6 +0.5
H04A                                 IAmb   IAmb   22 29 27.3
      comp=Z,11nm,0.8s
KBO   Bosley Butte      34.34  86    P      P      22 28 57.8 -1.7
KBO                                  IAmb   IAmb   22 29 17.6
      comp=Z,42nm,1.3s
K02D  Willamette Mer    34.43  85    P      P      22 28 59.6 -0.6
      baz=303
DBO   Dodson Butte      34.46  84    P      P      22 29 01.5 +1.0
DBO                                  IAmb   IAmb   22 29 03.0
      comp=Z,15nm,1.0s
G05D  Wamic, OR         34.56  80    P      P      22 29 00.7 -0.6
      baz=300
I04A  Tendick Farm,     34.62  83    P      P      22 29 01.2 -0.6
      baz=301
L02E  Cave Junction     34.76  86    P      P      22 29 02.5 -0.5
      baz=303
HUMO  Hull Mountain     34.91  85    P      P      22 29 05.0 +0.6
HUMO                                 IAmb   IAmb   22 29 26.6
      comp=Z,12nm,1.4s
I05D  Terrebonne, OR    35.00  81    P      P      22 29 04.7 -0.4
      baz=301
HAWA  Hanford           35.09  77    P      P      22 29 05.8  0.0
HAWA                                 IAmb   IAmb   22 29 07.7
      comp=Z,12nm,0.7s
ZEA   Zeya              35.09 297   eP      P      22 29 04.8 -0.9
ZEA                                  pmax   pmax
      comp=E,10.0nm,0.7s
ZEA                                  pmax   pmax
      comp=Z,10.0nm,1.0s
D08A  Wollman Farm,     35.14  75    P      P      22 29 06.7 +0.5
D08A                                 IAmb   IAmb   22 29 07.7
      comp=Z,7.4nm,0.8s
E08A  Dider Farm, El    35.33  76    IAmb   IAmb   22 29 09.5
      comp=Z,16nm,1.4s
H11N2 WAKE ISLAND Hy    35.36 213    T      T      23 07 04.3
      baz=21,slow=76,SNR=103
H11N3 WAKE ISLAND Hy    35.37 213    T      T      23 07 11.3
      baz=21,slow=76,SNR=128
H11N1 WAKE ISLAND Hy    35.38 213    T      T      23 07 01.2
      baz=21,slow=76,SNR=58
KHMM  Horse Mountain    35.40  88    P      P      22 29 10.2 +1.5
KHMM                                 IAmb   IAmb   22 29 11.9
      comp=Z,33nm,1.6s
L04D  Klamath Falls     35.53  85    P      P      22 29 09.4 -0.4
      baz=303
YBH   Yreka Blue Hor    35.55  86    P      P      22 29 11.4 +1.5
      comp=Z,4.6nm,0.9s,baz=281,slow=6.6,SNR=14
YBH   Yreka Blue Hor    35.55  86    P      P      22 29 11.6 +1.7
YBH                                  pmax   pmax
      comp=Z,9.0nm,1.1s
YBH   Yreka Blue Hor    35.55  86    P      P      22 29 11.6 +1.7
J05D  Fort Rock, OR     35.62  82    P      P      22 29 10.8 +0.3
      baz=302,SNR=7.2
M02C  Callahan          35.65  86    P      P      22 29 10.6 -0.1
      baz=304
NEW   Newport           35.66  73    LR     LR     22 40 33.0
      comp=Z,105nm,19.7s,baz=296,slow=31
NEW   Newport           35.66  73    P      P      22 29 11.7 +1.0
NEW                                  pmax   pmax
      comp=Z,12nm,0.9s
NEW   Newport           35.66  73    P      P      22 29 11.7 +1.0
NEW                                  IAmb   IAmb   22 29 12.3
      comp=Z,12nm,0.8s
NEW   Newport           35.66  73    P      P      22 29 09.9 -0.8
      baz=297,SNR=9.5
KMRM  Mail Ridge        35.78  89    P      P      22 29 13.5 +1.6
KMRM                                 IAmb   IAmb   22 29 14.5
      comp=Z,11nm,0.7s
E09A  Wood Farm, Sta    35.87  76    IAmb   IAmb   22 29 13.9
      comp=Z,8.4nm,0.9s
N02D  Trinity Center    35.98  87    P      P      22 29 13.3 -0.2
      baz=305
K05A  Summer Lake       36.13  83    P      P      22 29 16.5 +1.5
K05A                                 IAmb   IAmb   22 29 27.2
      comp=Z,16nm,1.1s
KCPM  Cahto Peak        36.18  89    P      P      22 29 16.4 +1.0
KCPM                                 IAmb   IAmb   22 29 28.0
      comp=Z,45nm,1.7s
I07A  Izee              36.26  80    P      P      22 29 17.2 +1.2
WDC   Whiskeytown Da    36.30  87    P      P      22 29 17.3 +1.1
WDC                                  pmax   pmax
      comp=Z,11nm,1.3s
WDC   Whiskeytown Da    36.30  87    P      P      22 29 17.3 +1.1
O02D  Mt. Diablo Mer    36.38  88    P      P      22 29 16.2 -0.8
      baz=306,SNR=9.7
USA0B Ussuriysk Arra    36.54 280    IAmb   IAmb   22 29 18.5
      comp=Z,16nm,0.7s
USRK  Ussuriysk Ar.     36.54 280    P      P      22 29 18.0 -0.3
      comp=Z,15nm,0.6s,baz=55,slow=9.2,SNR=65
USRK                                 PcP    PcP    22 31 41.6 +0.8
      comp=Z,2.9nm,0.9s,baz=51,slow=3.9,SNR=4.7
USRK  Ussuriysk Ar.     36.54 280    P      P      22 29 18.1 -0.1
H11S1 WAKE ISLAND Hy    36.56 213    T      T      23 08 28.9
      baz=20,slow=75,SNR=58
H11S2 WAKE ISLAND Hy    36.58 213    T      T      23 08 26.9
      baz=20,slow=75,SNR=50
H11S3 WAKE ISLAND Hy    36.58 213    T      T      23 08 29.4
      baz=20,slow=75,SNR=25
O03E  Paynes Creek      36.93  87    P      P      22 29 21.1 -0.6
      baz=306,SNR=5.1
MJAR  Matsushiro Arr    37.12 265    P      P      22 29 23.1 -0.1
      comp=Z,3.3nm,0.5s,baz=48,slow=7.3,SNR=12
MAJO  Matsushiro        37.12 265    P      P      22 29 23.4 +0.2
MAJO                                 pmax   pmax
      comp=Z,17nm,1.1s
MAJO  Matsushiro        37.12 265    P      P      22 29 23.4 +0.2
MAJO                                 IAmb   IAmb   22 29 27.3
      comp=Z,17nm,1.1s
MAT   Matsushiro        37.12 265    P      P      22 29 23.2  0.0
MJB9  Matsu-Tunnel      37.12 265    P      P      22 29 23.4 +0.2
MJB9                                 IAmb   IAmb   22 29 27.3
      comp=Z,17nm,1.1s
VLA   Vladivostok       37.18 279 d iP      P      22 29 24.2 +0.5
VLA                                  pmax   pmax
      comp=Z,47nm,1.0s
WALA  Waterton Lakes    37.19  70    IAmb   IAmb   22 29 25.6
      comp=Z,16nm,0.9s
BMO   Blue Mountains    37.21  78    P      P      22 29 24.9 +0.9
BMO                                  pmax   pmax
      comp=Z,13nm,1.5s
BMO   Blue Mountains    37.21  78    P      P      22 29 24.9 +0.9
J08A  Circle Bar Ran    37.28  81    P      P      22 29 24.8 +0.2
J08A                                 IAmb   IAmb   22 29 26.4
      comp=Z,6.8nm,0.6s
WVOR  Wild Horse Val    37.68  82    P      P      22 29 28.5 +0.4
WVOR                                 pmax   pmax
      comp=Z,7.0nm,0.8s
WVOR  Wild Horse Val    37.68  82    P      P      22 29 28.5 +0.4
MDJ   Mudanjiang        37.79 282    P      P      22 29 28.0 -0.8
MDJ                                  pP     pP     22 29 34.5 -5.6
MDJ                                  PP     PP     22 30 51.5 -4.0
MDJ                                  S      S      22 35 15.8 -0.6
MDJ                                  pmax   pmax
      comp=Z,10.0nm,1.0s
MDJ                                  pmax   pmax
      comp=Z,230nm,4.4s
MDJ                                  LR     LR
      comp=Z,280nm,6.9s
MDJ                                  LR     LR
      comp=Z,330nm,12.2s
MDJ                                  LR     LR
      comp=Z,430nm,15.5s
RES   Resolute Bay      38.13  25    P      P      22 29 31.4 +0.1
      comp=Z,1.0nm,0.7s,baz=279,slow=6.8,SNR=5.3
RES                                  PcP    PcP    22 31 45.8 +0.6
      comp=Z,2.5nm,0.6s,baz=276,slow=1.0,SNR=8.2
MSO   Missoula          38.24  73    P      P      22 29 34.1 +1.4
MSO                                  IAmb   IAmb   22 29 34.6
      comp=Z,13nm,1.1s
JGF   Kuroka            38.25 265    P      P      22 29 32.8  0.0
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JGF                                  IAmb   IAmb   22 29 34.8
      comp=Z,67nm,1.7s
PAHR  Pah Rah Range     38.78  86    P      P      22 29 38.2 +0.8
PAHR                                 IAmb   IAmb   22 29 55.2
      comp=Z,12nm,1.0s
PNTR  Pine Nut          39.01  87    P      P      22 29 39.9 +0.5
PNTR                                 IAmb   IAmb   22 29 41.4
      comp=Z,14nm,0.8s
EUNU  Eureka            39.14  16    P      P      22 29 40.5 +0.6
YERR  Yerington         39.30  87    P      P      22 29 42.9 +1.1
HLID  Hailey            39.66  78    P      P      22 29 42.6 -2.1
      baz=303
JWT   Wachi             39.67 266    P      P      22 29 45.8 +1.1
RYN   Ryan              39.96  87    P      P      22 29 47.8 +0.6
KVN   Kaiserville       39.97  86    P      P      22 29 47.8 +0.4
KVN                                  pmax   pmax
      comp=Z,7.0nm,1.1s
KVN   Kaiserville       39.97  86    P      P      22 29 47.8 +0.4
EGMT  Eagleton          40.11  69    P      P      22 29 46.9 -1.4
      baz=300,SNR=10
LHV   Little Huntoon    40.20  87    P      P      22 29 50.1 +1.1
NVAR  Mina Array Bea    40.22  87    P      P      22 29 50.3 +0.9
      comp=Z,5.7nm,0.8s,baz=292,slow=8.3,SNR=18
NVAR                                 PcP    PcP    22 31 53.3 +0.6
      comp=Z,0.9nm,0.8s,baz=316,slow=2.5,SNR=2.6
BOZ   Bozeman (W)       40.24  73    P      P      22 29 48.4 -1.1
      baz=302,SNR=9.5
OMMB  Old Mammoth Mi    40.28  88    P      P      22 29 50.5 +0.4
NV11  Mina Array Sit    40.31  87    P      P      22 29 50.3 +0.2
BOD   Bodaibo           40.47 308   eP      P      22 29 49.6 -1.4
BOD                                  pmax   pmax
      comp=Z,8.0nm,1.0s
PAGB  Antelope Grade    40.69  92    P      P      22 29 53.9 +0.7
ELK   Elko              40.74  82    P      P      22 29 54.7 +0.9
ELK                                  pmax   pmax
      comp=Z,5.0nm,1.0s
ELK   Elko              40.74  82    P      P      22 29 54.7 +0.9
CN2   Changchun         40.74 284   eP      P      22 29 51.8 -1.7
CN2                                 ePP     PP     22 31 29.5 +1.8
CN2                                 eS      S      22 35 58.0 -2.7
CN2                                 esS     sS     22 36 18.5 -0.1
CN2                                 eSS     SS     22 38 54.3 -7.9
CN2                                  pmax   pmax
      comp=Z,10.0nm,0.9s
CN2                                  LR     LR
      comp=Z,250nm,16.0s
CN2                                  LR     LR
      comp=Z,220nm,16.0s
CN2                                  LR     LR
      comp=Z,390nm,17.0s
HIA   Hailar            41.25 294 d iP      P      22 29 57.2 -0.4
HIA                                  pmax   pmax
      comp=Z,13nm,0.8s
JHS   Saijyo            41.27 268    P      P      22 29 58.5 +0.5
JHS                                  IAmb   IAmb   22 30 01.6
      comp=Z,89nm,1.5s
LCH   Last Change Ra    41.37  88    P      P      22 29 59.4 +0.6
H17A  Grant Village     41.52  74    P      P      22 30 01.5 +1.4
H17A  Grant Village     41.52  74    P      P      22 29 59.9 -0.3
      baz=303,SNR=7.5
LKWY  Lake              41.53  74    P      P      22 30 01.1 +0.8
LKWY                                 pmax   pmax
      comp=Z,8.0nm,0.7s
LKWY  Lake              41.53  74    P      P      22 30 01.1 +0.8
CWC   Cottonwood Cre    41.59  89    P      P      22 29 60.0 -0.7
      baz=309
FLWY  Flagg Ranch       41.62  75    P      P      22 30 02.3 +1.4
ISA   Isabella, Lake    41.84  90    P      P      22 30 02.8 +0.1
ISA                                  pmax   pmax
      comp=Z,6.0nm,0.9s
ISA   Isabella, Lake    41.84  90    P      P      22 30 02.8 +0.1
ISA   Isabella, Lake    41.84  90    P      P      22 30 01.8 -0.8
      baz=310
RLMT  Red Lodge         41.91  73    IAmb   IAmb   22 30 05.7
      comp=Z,14nm,0.8s
RLMT  Red Lodge         41.91  73    P      P      22 30 02.8 -0.5
      baz=303,SNR=15
REDW  Red Top Meadow    41.93  76    P      P      22 30 04.2 +0.7
R11A  Troy Canyon, C    41.96  85    P      P      22 30 02.8 -0.9
      baz=308,SNR=6.6
BGU   Big Grassy Mou    41.99  80    P      P      22 30 03.9  0.0
SPUT  South Promonto    42.13  79    P      P      22 30 05.2 +0.2
SPR3  Spring Creek 3    42.34  83    P      P      22 30 08.1 +1.1
TPNV  Topopah Spring    42.41  87    P      P      22 30 08.2 +0.8
TPNV                                 pmax   pmax
      comp=Z,5.0nm,0.8s
TPNV  Topopah Spring    42.41  87    P      P      22 30 08.2 +0.8
TPNV  Topopah Spring    42.41  87    P      P      22 30 06.4 -1.0
      baz=309,SNR=8.5
DUG   Dugway, Tooele    42.56  81    IAmb   IAmb   22 30 25.1
      comp=Z,16nm,1.1s
DUG   Dugway, Tooele    42.56  81    P      P      22 30 07.8 -0.7
      baz=306,SNR=6.8
GWY   Greenwater Val    42.63  88    P      P      22 30 09.3 +0.1
EDW2  Edwards Air Fo    42.65  91    P      P      22 30 08.8 -0.4
      baz=311
SNCC  San Nicolas Is    42.77  94    P      P      22 30 09.3 -0.9
      baz=312
LAO   LASA Array        42.86  69    P      P      22 30 11.6 +0.8
LAO                                  IAmb   IAmb   22 30 12.5
      comp=Z,15nm,0.7s
LAO   LASA Array        42.86  69    P      P      22 30 10.4 -0.4
      baz=302
PRN   Pahroc Range      42.87  86    P      P      22 30 11.6 +0.5
PRN                                  IAmb   IAmb   22 30 28.3
      comp=Z,19nm,0.9s
KSRS  Korea Array       42.95 274    P      P      22 30 12.1 +0.6
      comp=Z,12nm,0.9s,baz=54,slow=7.5,SNR=26
KSRS                                 LR     LR     22 47 29.7
      comp=Z,50nm,20.6s,baz=230,slow=35
KS19  Wonju Array Si    42.95 275    P      P      22 30 12.8 +1.3
KS19                                 IAmb   IAmb   22 30 14.3
      comp=Z,14nm,0.9s
KSAR  Wonju Array Be    42.98 274    P      P      22 30 12.5 +0.7
KSAR  Wonju Array Be    42.98 274    P      P      22 30 12.5 +0.7
SNY   Shenyang          42.99 283   ⇑P      P      22 30 12.5 +0.7
SNY                                  pmax   pmax
      comp=Z,32nm,0.9s
BW06  Boulder Array     43.05  76    P      P      22 30 12.3 -0.3
      baz=305,SNR=9.1
PDAR  Pinedale Array    43.05  76    P      P      22 30 13.0 +0.4
      comp=Z,4.2nm,0.6s,baz=312,slow=3.1,SNR=52
PDAR                                 LR     LR     22 48 48.9
      comp=Z,88nm,18.2s,baz=319,slow=37
SHOC  Shoshone, Teco    43.06  88    P      P      22 30 11.6 -0.9
      baz=310
DGMT  Dagmar            43.08  66    P      P      22 30 13.2 +0.6
DGMT                                 IAmb   IAmb   22 30 14.6
      comp=Z,32nm,1.2s
DGMT  Dagmar            43.08  66    P      P      22 30 12.0 -0.5
      baz=301
GSC   Goldstone, Bar    43.12  89    IAmb   IAmb   22 30 14.3
      comp=Z,12nm,0.8s
GSC   Goldstone, Bar    43.12  89    P      P      22 30 12.8 -0.2
      baz=310,SNR=10
BFSC  Mount Baldy Ra    43.28  91    P      P      22 30 13.8 -0.6
      baz=311
FCC   Fort Churchill    43.35  48    P      P      22 30 14.8 +0.3
FCC                                  pmax   pmax
      comp=Z,16nm,0.7s
FCC   Fort Churchill    43.35  48    P      P      22 30 14.8 +0.3
FCC                                  IAmb   IAmb   22 30 16.0
      comp=Z,16nm,0.7s
HEC   Hector,Ludlow     43.72  90    P      P      22 30 17.3 -0.5
      baz=311
CCUT  Cedar City        43.83  84    P      P      22 30 19.2 +0.2
JNU   Nakatsue          43.91 267    P      P      22 30 19.7 +0.3
      comp=Z,18nm,0.8s,baz=37,slow=10,SNR=12
JNU   Nakatsue          43.91 267    P      P      22 30 19.4 +0.1
JNU                                  IAmb   IAmb   22 30 34.5
      comp=Z,27nm,1.0s
MVU   Marysvale         43.95  82    P      P      22 30 20.7 +0.8
MVU                                  IAmb   IAmb   22 30 36.4
      comp=Z,19nm,0.9s
TJN   Taejon            43.97 274  ⇓eP      P      22 30 20.5 +0.7
TMUT  Trail Mountain    44.09  81    IAmb   IAmb   22 30 38.0
      comp=Z,14nm,0.9s
GMRC  Granite Mounta    44.16  89    P      P      22 30 20.3 -1.3
      baz=311
P17A  Butcher Ranch,    44.27  80    IAmb   IAmb   22 30 23.7
      comp=Z,8.1nm,0.6s
RDMU  Red Mountain      44.32  78    IAmb   IAmb   22 30 38.7
      comp=Z,16nm,1.1s
Q16A  Castle Valley     44.34  81    IAmb   IAmb   22 30 39.6
      comp=Z,10nm,0.8s
PFO   Pinyon Flats O    44.44  91    P      P      22 30 23.9 +0.2
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PFO                                  pmax   pmax
      comp=Z,7.0nm,1.1s
PFO   Pinyon Flats O    44.44  91    P      P      22 30 23.9 +0.2
PFO   Pinyon Flats O    44.44  91    P      P      22 30 22.7 -1.0
      baz=312
TPFO  Pinon Flats       44.45  91    P      P      22 30 22.4 -1.4
      baz=312
BELC  Belle Mtn. Jos    44.47  90    P      P      22 30 22.1 -1.8
      baz=311
P18A  Preston Nutter    44.48  80    IAmb   IAmb   22 30 38.1
      comp=Z,15nm,1.2s
KNB   Kanab             44.50  85    P      P      22 30 25.1 +0.8
KNB                                  pmax   pmax
      comp=Z,12nm,1.2s
KNB   Kanab             44.50  85    P      P      22 30 25.1 +0.8
SRU   San Rafael Swe    44.62  81    IAmb   IAmb   22 30 42.8
      comp=Z,12nm,0.8s
IRM   Iron Mountain     44.90  89    P      P      22 30 26.2 -1.0
      baz=311
K22A  Casper            44.94  74    P      P      22 30 26.5 -1.1
      baz=306
MONP2 Monument Peak     44.94  92    P      P      22 30 27.0 -0.8
      baz=312
U15A  North Rim         45.20  85    IAmb   IAmb   22 31 05.6
      comp=Z,10nm,1.0s
IKP   In-Ko-Pah, Jac    45.30  92    P      P      22 30 29.5 -1.0
      baz=312
O20A  White River Ci    45.40  78    IAmb   IAmb   22 30 47.2
      comp=Z,14nm,0.8s
O20A  White River Ci    45.40  78    P      P      22 30 31.1 -0.2
      baz=307,SNR=6.3
RSSD  Black Hills       45.56  71    P      P      22 30 32.8 +0.2
RSSD                                 pmax   pmax
      comp=Z,8.0nm,0.6s
RSSD  Black Hills       45.56  71    P      P      22 30 32.8 +0.2
RSSD                                 IAmb   IAmb   22 30 34.2
      comp=Z,8.0nm,0.6s
RSSD  Black Hills       45.56  71    P      P      22 30 31.5 -1.2
      baz=305
NRIK  Noril'sk          45.85 331    P      P      22 30 34.2 -0.1
      comp=Z,12nm,0.7s,baz=80,slow=8.9,SNR=24
NRIK  Noril'sk          45.85 331 d iP      P      22 30 34.3  0.0
NRIK                                 pmax   pmax
      comp=Z,16nm,0.8s
NRIK  Noril'sk          45.85 331    P      P      22 30 34.5 +0.3
NRIK                                 IAmb   IAmb   22 30 35.4
      comp=Z,15nm,0.8s
MDND  Maddock           46.01  64    P      P      22 30 35.6 -0.2
      baz=304,SNR=6.3
N23A  Red Feather La    46.33  76    IAmb   IAmb   22 31 02.0
      comp=Z,10.0nm,1.1s
N23A  Red Feather La    46.33  76    P      P      22 30 37.5 -1.2
      baz=307
WUAZ  Wupatki           46.36  85    P      P      22 30 37.7 -1.2
      baz=310
ULM   Lac du Bonnet     46.73  59    P      P      22 30 41.7 +0.3
      comp=Z,5.1nm,0.4s,baz=304,slow=7.7,SNR=9.9
ULM   Lac du Bonnet     46.73  59    IAmb   IAmb   22 30 42.4
      comp=Z,20nm,1.2s
ISCO  Idaho Springs     47.20  77    P      P      22 30 43.6 -2.0
      baz=308
W18A  Petrified Fore    47.63  84    P      P      22 30 48.0 -0.9
      baz=311
S22A  4UR Ranch, Cre    47.74  80    IAmb   IAmb   22 31 03.4
      comp=Z,12nm,1.4s
S22A  4UR Ranch, Cre    47.74  80    P      P      22 30 48.7 -1.2
      baz=309
AGMN  Agassiz Nation    47.83  62    P      P      22 30 49.6 -0.4
      baz=305,SNR=21
Q24A  Divide            48.00  77    P      P      22 30 49.8 -2.1
      baz=309
SUSD  Miller            48.34  68    P      P      22 30 53.4 -0.6
      baz=306
BJI   Beijing           48.55 285    P      P      22 30 56.5 +0.9
BJI                                  pP     pP     22 31 07.3 +0.2
BJI                                  sP     pwP    22 31 09.3 -1.2
BJI                                  S      S      22 37 51.5 -2.3
BJI                                  pmax   pmax
      comp=Z,13nm,1.0s
SDCO  Great Sand Dun    48.55  79    IAmb   IAmb   22 31 11.9
      comp=Z,8.3nm,1.1s
SDCO  Great Sand Dun    48.55  79    P      P      22 30 56.0 -0.1
      baz=310,SNR=5.7
OGNE  Ogallala          48.65  73    P      P      22 30 56.4 -0.1
      baz=308
TUC   Tucson            48.85  88    P      P      22 30 56.4 -1.8
      baz=313
B35A  Bob, Littlefor    48.96  60    IAmb   IAmb   22 30 59.3
      comp=Z,21nm,0.8s
F33A  5 Mile Ranch,     49.02  65    IAmb   IAmb   22 30 59.6
      comp=Z,20nm,1.2s
ULN   Ulaanbaatar       49.09 299    P      P      22 30 59.4 -0.6
ULN                                  pmax   pmax
      comp=Z,10.0nm,1.0s
ULN   Ulaanbaatar       49.09 299    P      P      22 31 00.1 +0.1
      comp=Z,48nm,0.7s
ULN   Ulaanbaatar       49.09 299    P      P      22 30 59.4 -0.6
ULN                                  IAmb   IAmb   22 31 00.9
      comp=Z,9.9nm,0.9s
SONM  Songino Array     49.47 299    P      P      22 31 02.9 +0.1
      comp=Z,8.5nm,0.4s,baz=55,slow=6.2,SNR=119
SONM  Songino Array     49.47 299    P      P      22 31 03.7 +0.9
SONM                                 pmax   pmax
      comp=Z,11nm,0.6s
SONM  Songino Array     49.47 299    P      P      22 31 03.7 +0.9
SONM                                 IAmb   IAmb   22 31 04.2
      comp=Z,11nm,0.6s
T25A  Trinidad          49.61  79    IAmb   IAmb   22 31 20.6
      comp=Z,18nm,0.9s
T25A  Trinidad          49.61  79    P      P      22 31 03.4 -0.7
      baz=310,SNR=6.8
ZAK   Zakamensk         49.64 303   eP      P      22 31 03.4 -0.6
ZAK                                  pmax   pmax
      comp=Z,15nm,1.2s
ANMO  Albuquerque       49.78  82    P      P      22 31 04.1 -1.2
      baz=311
ECSD  EROS Data Cent    50.11  67    IAmb   IAmb   22 31 07.7
      comp=Z,15nm,0.7s
ECSD  EROS Data Cent    50.11  67    P      P      22 31 06.6 -0.9
      baz=308,SNR=18
SPITS Spitsbergen Ar    50.32 357    P      P      22 31 09.2 +0.5
      comp=Z,50nm,1.3s,baz=38,slow=8.1,SNR=4.4
TIA   Tai'an            50.41 281   ⇓P      P      22 31 10.3 +0.4
TIA                                  pmax   pmax
      comp=Z,12nm,0.9s
EYMN  Ely               50.41  60    IAmb   IAmb   22 31 11.1
      comp=Z,19nm,0.8s
EYMN  Ely               50.41  60    P      P      22 31 09.4 -0.3
      baz=307
F36A  Milaca            50.56  63    P      P      22 31 10.8 -0.1
F36A                                 IAmb   IAmb   22 31 11.3
      comp=Z,10nm,0.7s
BGNE  Belgrade          50.66  70    P      P      22 31 11.4 -0.4
      baz=309
HHC   Hu-ho-hao-te      50.79 289   eP      P      22 31 11.5 -1.3
HHC                                  pmax   pmax
      comp=Z,9.0nm,1.0s
HHC                                  pmax   pmax
      comp=Z,170nm,6.2s
HHC                                  LR     LR
      comp=Z,300nm,17.0s
HHC                                  LR     LR
      comp=Z,280nm,15.9s
HHC                                  LR     LR
      comp=Z,260nm,16.6s
DAG   Danmarks Havn     50.88   7  i P      P      22 31 11.0 -1.9
E38A  The Farm, Brul    51.19  61    P      P      22 31 15.4 -0.3
E38A                                 IAmb   IAmb   22 31 16.7
      comp=Z,22nm,0.8s
SPMN  Marine on St.     51.35  63    IAmb   IAmb   22 31 17.6
      comp=Z,24nm,1.2s
SPMN  Marine on St.     51.35  63    P      P      22 31 16.1 -0.8
      baz=308
CBKS  Cedar Bluff       51.36  74    P      P      22 31 16.3 -0.7
      baz=310
BTO   Baotou            51.85 290   eP      P      22 31 21.3 +0.5
BTO                                  S      S      22 38 40.0  0.0
BTO                                  LR     LR
      comp=Z,1µm,19.5s
BTO                                  LR     LR
      comp=Z,1µm,14.1s
NJ2   Nanjing           52.11 276   eP      P      22 31 21.8 -0.9
NJ2                                  pmax   pmax
      comp=Z,9.0nm,0.6s
MNTX  Cornudas Mount    52.62  84    P      P      22 31 25.7 -0.9
      baz=313
MSTX  Muleshoe          52.70  80    P      P      22 31 25.9 -1.2
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	baz=312						
AMTX	**Amarillo**	**52.75**	**79**	IAmb	IAmb	22 31 33.4	
	comp=Z,6.6nm,0.7s						
AMTX	**Amarillo**	**52.75**	**79**	P	**P**	**22 31 26.7**	**-0.9**
	baz=312						
G40A	**Rib Lake**	**52.76**	**62**	IAmb	IAmb	22 31 27.9	
	comp=Z,13nm,0.8s						
KSU1	**Kansas State U**	**53.03**	**72**	P	**P**	**22 31 28.9**	**-0.6**
	baz=311						
SCIA	**State Center**	**53.20**	**67**	P	**P**	**22 31 30.0**	**-0.7**
	baz=310						
I40A	**Norwalk**	**53.40**	**63**	P	**P**	**22 31 31.6**	**-0.5**
I40A				IAmb	IAmb	22 31 32.6	
	comp=Z,16nm,0.9s						
F42A	**Maple Grove Fa**	**53.58**	**60**	P	**P**	**22 31 33.4**	**+0.1**
N38A	**Joes South For**	**53.91**	**68**	P	**P**	**22 31 34.9**	**-0.9**
JFWS	**Jewell Farm**	**54.23**	**64**	IAmb	IAmb	22 31 38.1	
	comp=Z,15nm,0.8s						
JFWS	**Jewell Farm**	**54.23**	**64**	P	**P**	**22 31 36.9**	**-1.3**
	baz=310						
L40A	**Anamosa**	**54.24**	**65**	IAmb	IAmb	22 31 39.0	
	comp=Z,14nm,0.7s						
I42A	**Draeger Farm,**	**54.35**	**62**	P	**P**	**22 31 38.9**	**-0.1**
I42A				IAmb	IAmb	22 31 39.6	
	comp=Z,38nm,1.3s						
WMOK	**Wichita Mounta**	**54.62**	**77**	IAmb	IAmb	22 31 56.8	
	comp=Z,10.0nm,0.9s						
WMOK	**Wichita Mounta**	**54.62**	**77**	P	**P**	**22 31 39.0**	**-2.2**
	baz=312						
LPIG	**La Paz**	**54.93**	**95**	LR	LR	22 52 38.3	
	comp=Z,65nm,18.1s,baz=32,slow=33						
L42A	**Oliver, Polo**	**55.15**	**65**	IAmb	IAmb	22 31 45.6	
	comp=Z,18nm,0.8s						
K43A	**Burlington**	**55.44**	**63**	P	**P**	**22 31 46.0**	**-0.9**
ABTX	**Abilene, Hawle**	**55.53**	**79**	P	**P**	**22 31 45.9**	**-1.8**
	baz=314						
TUL1	**Leonard**	**55.63**	**74**	P	**P**	**22 31 46.2**	**-2.1**
	baz=312						
NACB	**Ninganchiao**	**55.97**	**267**	P	**P**	**22 31 50.7**	**-0.2**
NACB				IAmb	IAmb	22 31 53.4	
	comp=Z,28nm,1.0s						
U38A	**Gravette**	**56.12**	**73**	IAmb	IAmb	22 31 52.2	
	comp=Z,15nm,1.3s						
R40A	**Maddies Statio**	**56.12**	**70**	P	**P**	**22 31 49.8**	**-2.0**
R40A				IAmb	IAmb	22 31 51.2	
	comp=Z,9.1nm,0.6s						
ZALV	**Zalesovo Beam**	**56.22**	**316**	P	**P**	**22 31 52.0**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=48,slow=6.9,SNR=8.6						
ZALV				PcP	**PcP**	**22 32 49.5**	**0.0**
	comp=Z,1.5nm,0.6s,baz=20,slow=4.1,SNR=4.2						
HDIL	**Hopedale**	**56.32**	**66**	P	**P**	**22 31 52.1**	**-1.1**
	baz=312						
M44A	**Midewin, Midew**	**56.47**	**64**	P	**P**	**22 31 53.6**	**-0.6**
SSLB	**Suanglung**	**56.65**	**267**	P	**P**	**22 31 55.6**	**-0.2**
YULB	**Yu-li**	**56.72**	**266**	P	**P**	**22 31 56.8**	**+0.5**
X37A	**Clayton**	**56.78**	**75**	P	**P**	**22 31 56.8**	**+0.3**
X37A				IAmb	IAmb	22 31 58.6	
	comp=Z,36nm,1.6s						
XAN	**Xi'an**	**56.85**	**284**	⇑P	**P**	**22 31 57.8**	**+0.7**
XAN				pP	pwP	22 32 10.5	-1.4
XAN				sP	sP	22 32 17.0	+3.3
XAN				PcP	**PcP**	**22 32 53.3**	**+0.9**
XAN				pmax	pmax		
	comp=Z,23nm,1.1s						
XAN				pmax	pmax		
	comp=Z,230nm,4.0s						
XAN				LR	LR		
	comp=Z,410nm,15.1s						
XAN				LR	LR		
	comp=Z,660nm,20.6s						
CCM	**Cathedral Cave**	**56.87**	**69**	P	**P**	**22 31 56.0**	**-1.2**
CCM				pmax	pmax		
	comp=Z,13nm,1.2s						
CCM	**Cathedral Cave**	**56.87**	**69**	P	**P**	**22 31 56.0**	**-1.2**
CCM				IAmb	IAmb	22 32 11.0	
	comp=Z,13nm,1.2s						
CCM	**Cathedral Cave**	**56.87**	**69**	P	**P**	**22 31 55.9**	**-1.3**
	baz=312						
JCT	**Junction City**	**56.91**	**81**	P	**P**	**22 31 57.1**	**-0.5**
	baz=314						
U40A	**Yellville**	**57.08**	**72**	IAmb	IAmb	22 31 59.0	
	comp=Z,26nm,1.4s						
U40A	**Yellville**	**57.08**	**72**	P	**P**	**22 31 57.1**	**-1.6**
	baz=313,SNR=9.1						
W39A	**Magazine**	**57.32**	**73**	IAmb	IAmb	22 32 08.0	
	comp=Z,14nm,1.1s						
W39A	**Magazine**	**57.32**	**73**	P	**P**	**22 31 59.6**	**-0.7**
	baz=313						
FVM	**French Village**	**57.40**	**69**	IAmb	IAmb	22 32 00.8	
	comp=Z,16nm,0.7s						
VLDQ	**Val d'Or**	**57.55**	**52**	IAmb	IAmb	22 32 01.4	
	comp=Z,23nm,0.9s						
Q44A	**Meyer Farm, Va**	**57.59**	**67**	IAmb	IAmb	22 32 03.0	
	comp=Z,18nm,0.8s						
SFIN	**Lafayette**	**57.68**	**64**	P	**P**	**22 32 02.1**	**-0.8**
	baz=313,SNR=6.0						
SCHQ	**Schefferville**	**57.69**	**41**	P	**P**	**22 32 02.9**	**+0.2**
	comp=Z,5.3nm,0.5s,baz=326,slow=7.7,SNR=25						
SCHQ	**Schefferville**	**57.69**	**41**	IAmb	IAmb	22 32 03.4	
	comp=Z,7.2nm,0.7s						
FCAR	**Ozark Folk Cen**	**57.83**	**72**	IAmb	IAmb	22 32 04.0	
	comp=Z,30nm,1.3s						
MIAR	**Mount Ida**	**57.89**	**74**	IAmb	IAmb	22 32 19.4	
	comp=Z,20nm,0.9s						
MIAR	**Mount Ida**	**57.89**	**74**	P	**P**	**22 32 03.6**	**-0.7**
	baz=314,SNR=6.8						
DGZ	**Jazzator, Alta**	**57.95**	**311**	*de*P	**P**	**22 32 04.9**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
L48A	**N Adams**	**58.10**	**61**	P	**P**	**22 32 06.1**	**+0.3**
N47A	**Urbana**	**58.13**	**63**	P	**P**	**22 32 05.5**	**-0.5**
N47A				IAmb	IAmb	22 32 05.9	
	comp=Z,20nm,0.8s						
P46A	**Rosedale**	**58.13**	**65**	IAmb	IAmb	22 32 06.6	
	comp=Z,16nm,0.8s						
PBMO	**Poplar Bluff**	**58.22**	**70**	IAmb	IAmb	22 32 20.5	
	comp=Z,35nm,1.6s						
W41B	**Gary Mavity, V**	**58.25**	**72**	IAmb	IAmb	22 32 22.1	
	comp=Z,14nm,1.1s						
W41B	**Gary Mavity, V**	**58.25**	**72**	P	**P**	**22 32 05.8**	**-1.1**
	baz=314						
LCAR	**Lake Charles**	**58.28**	**71**	IAmb	IAmb	22 32 20.5	
	comp=Z,14nm,1.5s						
AAM	**Ann Arbor**	**58.28**	**61**	P	**P**	**22 32 06.4**	**-0.7**
	baz=313						
ARCES	**ARCESS Array B**	**58.36**	**352**	P	**P**	**22 32 07.1**	**-0.1**
	comp=Z,6.0nm,0.7s,baz=19,slow=6.5,SNR=14						
ARCES				PcP	**PcP**	**22 32 58.0**	**+0.4**
	comp=Z,6.1nm,0.5s,baz=11,slow=4.7,SNR=10						
X40A	**Basin Creek Fa**	**58.37**	**73**	P	**P**	**22 32 06.8**	**-1.0**
	baz=314						
LZH	**Lanzhou**	**58.47**	**290**	⇑P	**P**	**22 32 09.5**	**+0.8**
LZH				pP	pP	22 32 19.5	-0.9
LZH				sP	pwP	22 32 23.3	-0.4
LZH				pmax	pmax		
	comp=Z,54nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,7.1s						
LZH				LR	LR		
	comp=Z,420nm,16.8s						
LZH				LR	LR		
	comp=Z,350nm,18.4s						
LZH				LR	LR		
	comp=Z,350nm,18.4s						
GTA	**Gaotai**	**58.52**	**295**	⇑P	**P**	**22 32 08.8**	**-0.1**
GTA				pP	pP	22 32 21.8	+1.4
GTA				sP	sP	22 32 26.5	+1.4
GTA				pmax	pmax		
	comp=Z,17nm,1.0s						
GTA				pmax	pmax		
	comp=Z,93nm,5.7s						
GTA				LR	LR		
	comp=Z,290nm,20.0s						
GTA				LR	LR		
	comp=Z,440nm,18.9s						
GTA				LR	LR		
	comp=Z,400nm,17.8s						
833A	**Chaparral WMA,**	**58.68**	**83**	P	**P**	**22 32 09.3**	**-0.8**
	baz=316						
LVZ	**Lovozero**	**58.95**	**348**	P	**P**	**22 32 10.7**	**-0.7**
LVZ				pmax	pmax		
	comp=Z,105nm,1.6s						
LVZ	**Lovozero**	**58.95**	**348**	P	**P**	**22 32 10.7**	**-0.7**
SADO	**Sadowa**	**58.99**	**56**	P	**P**	**22 32 12.2**	**+0.3**
SADO				IAmb	IAmb	22 32 43.1	
	comp=Z,26nm,1.2s						
P49A	**Miami Univ. Ec**	**59.59**	**64**	P	**P**	**22 32 15.0**	**-1.1**
	baz=314,SNR=7.4						
WCI	**Wyandotte Cave**	**59.60**	**66**	P	**P**	**22 32 16.1**	**-0.2**
WCI				pmax	pmax		
	comp=Z,25nm,0.8s						
WCI	**Wyandotte Cave**	**59.60**	**66**	P	**P**	**22 32 16.1**	**-0.2**
WCI	**Wyandotte Cave**	**59.60**	**66**	P	**P**	**22 32 14.9**	**-1.3**
	baz=314						
DELO	**Deloro Mine**	**59.95**	**55**	P	**P**	**22 32 19.8**	**+1.3**
DELO				IAmb	IAmb	22 32 20.7	
	comp=Z,23nm,0.9s						
T47A	**Sharon Grove**	**60.00**	**67**	IAmb	IAmb	22 32 20.1	
	comp=Z,20nm,0.8s						
M52A	**Chesterland**	**60.05**	**60**	P	**P**	**22 32 18.5**	**-0.8**
ACSO	**Alum Creek Sta**	**60.07**	**62**	P	**P**	**22 32 19.6**	**+0.2**
ACSO				IAmb	IAmb	22 32 20.1	
	comp=Z,11nm,0.7s						
ACSO	**Alum Creek Sta**	**60.07**	**62**	P	**P**	**22 32 17.9**	**-1.6**
	baz=314						
WVT	**Waverly**	**60.18**	**69**	P	**P**	**22 32 20.1**	**-0.1**
WVT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WVT	**Waverly**	**60.18**	**69**	P	**P**	**22 32 20.1**	**-0.1**
WVT				IAmb	IAmb	22 32 20.8	
	comp=Z,9.9nm,0.9s						
WVT	**Waverly**	**60.18**	**69**	P	**P**	**22 32 19.0**	**-1.2**
	baz=314						
M53A	**WI Miller and**	**60.49**	**60**	P	**P**	**22 32 22.6**	**+0.3**
M53A	**WI Miller and**	**60.49**	**60**	P	**P**	**22 32 21.9**	**-0.3**
	baz=314						
ALLY	**Alegheny Colle**	**60.63**	**59**	P	**P**	**22 32 23.8**	**+0.5**
R50A	**Paris**	**60.68**	**64**	IAmb	IAmb	22 32 24.5	
	comp=Z,19nm,1.1s						
WVNY	**West Valley, N**	**60.91**	**58**	P	**P**	**22 32 25.6**	**+0.4**
P52A	**Corning**	**60.96**	**62**	P	**P**	**22 32 25.2**	**-0.3**
P52A				IAmb	IAmb	22 32 50.3	
	comp=Z,20nm,1.3s						
P52A	**Corning**	**60.96**	**62**	P	**P**	**22 32 24.8**	**-0.7**
	baz=315						
M54A	**Oil Creek Stat**	**60.98**	**59**	IAmb	IAmb	22 32 27.2	
	comp=Z,20nm,0.8s						
M54A	**Oil Creek Stat**	**60.98**	**59**	P	**P**	**22 32 24.7**	**-0.9**
	baz=315						
O53A	**New Philadelph**	**61.03**	**61**	P	**P**	**22 32 24.5**	**-1.5**
	baz=315						
CLTN	**Cedars of Leba**	**61.07**	**68**	IAmb	IAmb	22 32 27.7	
	comp=Z,17nm,0.9s						
U49A	**Red Boiling Sp**	**61.09**	**67**	IAmb	IAmb	22 32 27.7	
	comp=Z,25nm,1.6s						
N54A	**Moraine State**	**61.19**	**60**	P	**P**	**22 32 26.8**	**-0.2**
	baz=315,SNR=7.6						
KURK	**Kurchatov**	**61.20**	**316**	*de*P	**P**	**22 32 27.1**	**+0.2**
KURK				pmax	pmax		
	comp=Z,18nm,1.3s						
KURK	**Kurchatov**	**61.20**	**316**	P	**P**	**22 32 27.1**	**+0.2**
KURK				IAmb	IAmb	22 32 28.2	
	comp=Z,11nm,0.6s						
T50A	**Nancy**	**61.27**	**66**	P	**P**	**22 32 28.1**	**+0.4**
T50A				IAmb	IAmb	22 32 28.8	
	comp=Z,28nm,1.4s						
Q52A	**Bidwell**	**61.35**	**63**	P	**P**	**22 32 28.3**	**+0.1**
Q52A				IAmb	IAmb	22 32 28.7	
	comp=Z,22nm,1.1s						
LMQ	**La Malbaie**	**61.38**	**49**	P	**P**	**22 32 28.0**	**-0.2**
LONY	**Lake Ozonia**	**61.41**	**53**	P	**P**	**22 32 27.6**	**-0.9**
	baz=316,SNR=5.7						
M55A	**Ridgway**	**61.49**	**58**	P	**P**	**22 32 29.5**	**+0.4**
S51A	**Beattyville**	**61.54**	**65**	IAmb	IAmb	22 32 30.1	
	comp=Z,15nm,0.7s						
J57A	**Williamstown**	**61.56**	**55**	P	**P**	**22 32 29.8**	**+0.3**
L56A	**Greenwood**	**61.65**	**57**	P	**P**	**22 32 30.8**	**+0.6**
FRNY	**Flat Rock**	**61.75**	**53**	P	**P**	**22 32 30.3**	**-0.5**
FRNY				IAmb	IAmb	22 32 31.0	
	comp=Z,17nm,1.1s						
K57A	**Scipio Center**	**61.77**	**56**	P	**P**	**22 32 31.2**	**+0.3**
K57A				IAmb	IAmb	22 32 32.3	
	comp=Z,19nm,0.8s						
WMQ	**Urumqi**	**61.95**	**306**	*e*P	**P**	**22 32 36.3**	**+4.1**
WMQ				pP	pP	22 32 42.3	-1.4
WMQ				sP	pwP	22 32 52.3	+3.9
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,99nm,3.7s						
WMQ				LR	LR		
	comp=Z,1μm,18.9s						
WMQ				LR	LR		
	comp=Z,250nm,15.1s						
WMQ				LR	LR		
	comp=Z,580nm,18.9s						
NCB	**Newcomb**	**62.06**	**54**	P	**P**	**22 32 33.3**	**+0.4**
NCB				IAmb	IAmb	22 32 33.6	
	comp=Z,16nm,0.8s						
Z47A	**Carrollton**	**62.10**	**71**	P	**P**	**22 32 32.8**	**-0.4**
Z47A				IAmb	IAmb	22 32 49.2	
	comp=Z,16nm,0.8s						
CD2	**Chengdu**	**62.15**	**285**	P	**P**	**22 32 32.0**	**-1.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MCWV	**Mont Chateau**	**62.19**	**61**	P	**P**	**22 32 32.4**	**-1.4**
	baz=315						
J59A	**Piesco**	**62.28**	**54**	IAmb	IAmb	22 32 35.1	
	comp=Z,17nm,0.8s						
W50A	**Signal Mountai**	**62.29**	**68**	IAmb	IAmb	22 32 35.0	
	comp=Z,15nm,0.9s						
D62A	**Allapoint, All**	**62.31**	**48**	IAmb	IAmb	22 32 35.2	
	comp=Z,17nm,0.8s						
TZTN	**Tazewell**	**62.34**	**65**	IAmb	IAmb	22 32 35.9	
	comp=Z,12nm,0.8s						
TZTN	**Tazewell**	**62.34**	**65**	P	**P**	**22 32 33.7**	**-1.2**
	baz=315						
BINY	**Binghamton**	**62.43**	**56**	P	**P**	**22 32 34.0**	**-1.4**
	baz=316						
E62A	**Clayton Lake**	**62.43**	**49**	P	**P**	**22 32 35.5**	**+0.2**
MK31	**Makanchi Array**	**62.43**	**311**	*d i*P	**P**	**22 32 34.7**	**-0.6**
MK31	**Makanchi Array**	**62.43**	**311**	IAmb	IAmb	22 32 36.9	
	comp=Z,6.2nm,0.9s						
MKAR	**Makanchi Array**	**62.43**	**311**	P	**P**	**22 32 35.1**	**-0.3**
	comp=Z,7.3nm,0.7s,baz=47,slow=6.1,SNR=125						
MKAR	**Makanchi Array**	**62.43**	**311**	*i* P	**P**	**22 32 34.7**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
O56A	**Blue Knob Stat**	**62.45**	**59**	IAmb	IAmb	22 32 36.4	
	comp=Z,18nm,0.8s						
O56A	**Blue Knob Stat**	**62.45**	**59**	P	**P**	**22 32 34.5**	**-1.1**
	baz=316,SNR=5.2						
SSPA	**Standing Stone**	**62.55**	**59**	P	**P**	**22 32 36.5**	**+0.4**
SSPA	**Standing Stone**	**62.55**	**59**	P	**P**	**22 32 35.2**	**-1.0**
	baz=316						
CPCT	**Cooper Cave**	**62.56**	**67**	P	**P**	**22 32 35.5**	**-0.8**
CPCT				IAmb	IAmb	22 32 39.9	
	comp=Z,17nm,1.4s						
MAKZ	**Makanchi**	**62.57**	**311**	P	**P**	**22 32 35.7**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MAKZ	**Makanchi**	**62.57**	**311**	P	**P**	**22 32 35.7**	**-0.5**
MAKZ				IAmb	IAmb	22 32 36.8	
	comp=Z,7.5nm,0.6s						
FPAL	**Fort Paine**	**62.58**	**68**	IAmb	IAmb	22 32 37.7	
	comp=Z,14nm,0.9s						
Y49A	**Blount Mountai**	**62.60**	**69**	P	**P**	**22 32 36.2**	**-0.5**
Y49A				IAmb	IAmb	22 32 41.8	
	comp=Z,34nm,1.6s						
BRVK	**Borovoye**	**62.80**	**323**	*ce*P	**P**	**22 32 37.9**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,20nm,1.3s						
BRVK	**Borovoye**	**62.80**	**323**	P	**P**	**22 32 38.0**	**+0.3**
BRVK				IAmb	IAmb	22 32 38.5	
	comp=Z,8.4nm,0.7s						
V52A	**Sevierville**	**62.81**	**66**	P	**P**	**22 32 38.5**	**+0.5**
V52A				IAmb	IAmb	22 32 38.8	
	comp=Z,12nm,0.9s						
TKL	**Tuckaleechee C**	**62.84**	**66**	IAmb	IAmb	22 32 49.7	
	comp=Z,18nm,1.2s						
Q56A	**Snyder Ridge,**	**62.99**	**61**	P	**P**	**22 32 39.1**	**0.0**
Q56A				IAmb	IAmb	22 32 39.9	
	comp=Z,11nm,0.8s						
LBNH	**Lisbon**	**63.01**	**52**	P	**P**	**22 32 39.5**	**+0.3**
LBNH				pmax	pmax		
	comp=Z,20nm,1.0s						
LBNH	**Lisbon**	**63.01**	**52**	P	**P**	**22 32 39.5**	**+0.3**
LBNH				IAmb	IAmb	22 32 40.4	
	comp=Z,20nm,1.0s						
LBNH	**Lisbon**	**63.01**	**52**	P	**P**	**22 32 37.9**	**-1.2**
	baz=317						
R55A	**Marlinton**	**63.02**	**62**	IAmb	IAmb	22 32 40.9	
	comp=Z,14nm,0.8s						
N58A	**Sunbury**	**63.02**	**58**	IAmb	IAmb	22 32 41.3	
	comp=Z,22nm,1.1s						
PQI	**Presque Isle**	**63.09**	**48**	P	**P**	**22 32 39.3**	**-0.3**
PQI				IAmb	IAmb	22 32 40.5	
	comp=Z,11nm,0.7s						
SVE	**Sverdlovsk**	**63.11**	**330**	*e*P	**P**	**22 32 39.5**	**-0.1**
SVE				pmax	pmax		
	comp=Z,19nm,0.8s						
HNH	**Hanover**	**63.22**	**53**	P	**P**	**22 32 40.9**	**+0.3**
F63A	**Nahmakanta, Br**	**63.30**	**49**	P	**P**	**22 32 41.4**	**+0.3**
F63A				IAmb	IAmb	22 32 42.0	
	comp=Z,27nm,1.1s						
P57A	**Homestead Farm**	**63.30**	**60**	IAmb	IAmb	22 32 42.1	
	comp=Z,13nm,0.8s						
U54A	**Nelsons Funny**	**63.34**	**64**	IAmb	IAmb	22 32 42.9	
	comp=Z,19nm,0.8s						
V53A	**Saluda**	**63.38**	**66**	IAmb	IAmb	22 32 42.8	
	comp=Z,12nm,0.9s						
N59A	**State Game Lan**	**63.46**	**57**	IAmb	IAmb	22 32 43.9	
	comp=Z,20nm,1.1s						
N59A	**State Game Lan**	**63.46**	**57**	P	**P**	**22 32 40.7**	**-1.6**
	baz=316						
PKME	**Peaks-Kenny Pk**	**63.53**	**50**	P	**P**	**22 32 43.3**	**+0.7**
PKME	**Peaks-Kenny Pk**	**63.53**	**50**	P	**P**	**22 32 41.0**	**-1.6**
	baz=318						
BATG	**Bathurst New B**	**63.54**	**47**	P	**P**	**22 32 42.7**	**+0.1**
I62A	**Tamworth**	**63.56**	**52**	P	**P**	**22 32 43.2**	**+0.3**
GYA	**Guiyang**	**63.58**	**280**	⇑P	**P**	**22 32 44.5**	**+1.1**
GYA				pmax	pmax		
	comp=Z,11nm,0.7s						
BLA	**Blacksburg**	**63.62**	**63**	P	**P**	**22 32 43.4**	**0.0**
	baz=316,SNR=7.2						
I63A	**Otisfield**	**63.80**	**52**	P	**P**	**22 32 45.0**	**+0.6**
I63A				IAmb	IAmb	22 32 45.9	
	comp=Z,23nm,0.9s						
MVL	**Millersville**	**63.82**	**58**	IAmb	IAmb	22 32 45.8	
	comp=Z,12nm,0.8s						
L61B	**Northampton**	**63.94**	**54**	P	**P**	**22 32 43.9**	**-1.4**
	baz=317						
ODNJ	**Ogdensburg**	**63.95**	**56**	IAmb	IAmb	22 32 46.5	
	comp=Z,15nm,0.9s						
SDMD	**Soldier's Deli**	**63.99**	**59**	IAmb	IAmb	22 32 46.8	
	comp=Z,14nm,1.1s						
K62A	**Royalston**	**64.00**	**54**	P	**P**	**22 32 46.6**	**+0.8**
S57A	**Dark Hollow, R**	**64.03**	**61**	IAmb	IAmb	22 32 47.6	
	comp=Z,13nm,0.8s						
KSCT	**Kent School, K**	**64.06**	**55**	P	**P**	**22 32 47.0**	**+0.9**
KSCT				IAmb	IAmb	22 32 47.3	
	comp=Z,18nm,0.8s						
ARU	**Arti**	**64.08**	**331**	LR	LR	23 05 06.8	
	comp=Z,233nm,18.0s,baz=106,slow=40						
ARU	**Arti**	**64.08**	**331**	*c i*P	**P**	**22 32 46.0**	**0.0**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ARU	**Arti**	**64.08**	**331**	P	**P**	**22 32 46.0**	**0.0**
TRNY	**Table Rock, Ra**	**64.10**	**56**	P	**P**	**22 32 47.5**	**+1.1**
TRNY				IAmb	IAmb	22 33 00.6	
	comp=Z,23nm,1.1s						
V55A	**Taylorsville**	**64.16**	**64**	IAmb	IAmb	22 32 48.5	
	comp=Z,18nm,0.9s						
WUPA	**West Chester U**	**64.26**	**58**	P	**P**	**22 32 48.3**	**+0.9**
WUPA				IAmb	IAmb	22 32 49.9	
	comp=Z,12nm,1.4s						
PAL	**Palisades**	**64.36**	**56**	P	**P**	**22 32 47.6**	**-0.5**
	baz=317						
G65A	**Princeton**	**64.40**	**49**	P	**P**	**22 32 48.2**	**0.0**
G65A				IAmb	IAmb	22 32 49.2	
	comp=Z,34nm,1.2s						
T57A	**Hurt**	**64.42**	**62**	IAmb	IAmb	22 32 49.7	
	comp=Z,12nm,0.8s						
HRV	**Adam Dziewonsk**	**64.46**	**53**	P	**P**	**22 32 48.8**	**0.0**
HRV				pmax	pmax		
	comp=Z,35nm,1.1s						
HRV	**Adam Dziewonsk**	**64.46**	**53**	P	**P**	**22 32 48.8**	**0.0**
HRV	**Adam Dziewonsk**	**64.46**	**53**	P	**P**	**22 32 48.0**	**-0.7**
	baz=318						
R58B	**Mineral**	**64.47**	**61**	P	**P**	**22 32 48.7**	**-0.2**
R58B				IAmb	IAmb	22 32 50.4	
	comp=Z,12nm,0.9s						
CPNY	**Central Park**	**64.50**	**56**	P	**P**	**22 32 50.3**	**+1.3**
WSPT	**Westport, CT**	**64.54**	**55**	IAmb	IAmb	22 32 50.7	
	comp=Z,23nm,0.8s						
KMSC	**Kings Mountain**	**64.60**	**65**	P	**P**	**22 32 49.6**	**-0.1**
	baz=316,SNR=9.3						
GOGA	**Godfrey**	**64.63**	**68**	IAmb	IAmb	22 33 06.5	
	comp=Z,11nm,0.9s						
GOGA	**Godfrey**	**64.63**	**68**	P	**P**	**22 32 49.3**	**-0.7**
	baz=316						
UCCT	**U. Connecticut**	**64.65**	**54**	P	**P**	**22 32 50.7**	**+0.7**
UCCT				IAmb	IAmb	22 32 51.8	
	comp=Z,25nm,0.9s						
WES	**Weston**	**64.67**	**53**	P	**P**	**22 32 50.4**	**+0.3**
WES				pmax	pmax		
	comp=Z,30nm,0.9s						
WES	**Weston**	**64.67**	**53**	P	**P**	**22 32 50.4**	**+0.3**
JSRW	**J. Sargeant Re**	**64.67**	**61**	P	**P**	**22 32 50.6**	**+0.4**
KIRV	**Kirov**	**64.73**	**337**	*ce*P	**P**	**22 32 50.4**	**+0.2**
HODGE	**Hodges**	**64.73**	**66**	IAmb	IAmb	22 32 51.7	
	comp=Z,14nm,1.0s						
KLMR	**Klimovskoe**	**64.80**	**343**	*e*P	**P**	**22 32 49.3**	**-1.3**
KLMR				pmax	pmax		
	comp=Z,21nm,1.4s						
KLMR	**Klimovskoe**	**64.80**	**343**	*e*P	**P**	**22 32 49.4**	**-1.2**
KLMR				AMP		22 32 51.7	
	comp=Z,21nm,1.4s						
GGN	**Saint George**	**64.80**	**49**	P	**P**	**22 32 51.2**	**+0.4**
BRYW	**Bryant College**	**64.90**	**54**	P	**P**	**22 32 51.7**	**0.0**
AFI	**Afiamalu**	**65.27**	**178**	LR	LR	22 57 04.5	
	comp=Z,100nm,19.3s,baz=252,slow=32						
T59A	**Double "B" Far**	**65.37**	**61**	IAmb	IAmb	22 32 56.4	
	comp=Z,15nm,0.8s						
BIRD	**Birdtown, Kers**	**65.45**	**65**	IAmb	IAmb	22 32 56.4	
	comp=Z,9.0nm,0.8s						
FINES	**FINESS Array B**	**66.20**	**350**	P	**P**	**22 32 59.4**	**-0.4**
	comp=Z,2.0nm,0.4s,baz=18,slow=7.9,SNR=18						
FINES				PcP	**PcP**	**22 33 29.7**	**+0.1**
	comp=Z,4.6nm,0.6s,baz=51,slow=3.6,SNR=10						
NHSC	**New Hope**	**66.74**	**66**	P	**P**	**22 33 03.1**	**-0.4**
	baz=317						
NB2	**NORSAR Subarra**	**67.62**	**358**	P	**P**	**22 33 08.5**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=3.1,slow=6.5						
NOA	**NORSAR Array B**	**67.62**	**358**	P	**P**	**22 33 08.7**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=1.8,slow=6.3,SNR=7.5						
NOA				LR	LR	23 02 50.2	
	comp=Z,127nm,18.5s,baz=70,slow=36						
KDJ	**Kajisay**	**68.35**	**311**	P	**P**	**22 33 14.7**	**+0.8**
KDJ				pmax	pmax		
	comp=Z,12nm,1.0s						
KDJ	**Kajisay**	**68.35**	**311**	P	**P**	**22 33 14.7**	**+0.8**
KDJ				IAmb	IAmb	22 33 15.6	
	comp=Z,12nm,1.0s						
TARG	**Taragay, Kyrgy**	**68.36**	**310**	IAmb	IAmb	22 33 30.1	
	comp=Z,7.0nm,0.7s						
TKM2	**Tokmak 2**	**68.47**	**312**	P	**P**	**22 33 15.6**	**+1.0**
	SNR=7.7						
BOOM	**Boomskoye usch**	**68.65**	**312**	IAmb	IAmb	22 33 17.6	
	comp=Z,17nm,0.7s						
USP	**Ospenovka**	**68.70**	**313**	P	**P**	**22 33 16.8**	**+0.9**
	SNR=25						
CHMS	**Chumysh**	**68.80**	**313**	P	**P**	**22 33 17.2**	**+0.7**
	SNR=11						
KBK	**Karagaybulak**	**68.97**	**313**	P	**P**	**22 33 18.5**	**+0.8**
	SNR=15						
VSU	**Vasula**	**69.04**	**349**	*e*P	**P**	**22 33 17.1**	**-0.5**
AAK	**Ala-Archa**	**69.20**	**313**	P	**P**	**22 33 19.9**	**+0.8**
	SNR=15						
AAK	**Ala-Archa**	**69.20**	**313**	*ce*P	**P**	**22 33 19.9**	**+0.8**
AAK				pmax	pmax		
	comp=Z,75nm,0.8s						
AAK	**Ala-Archa**	**69.20**	**313**	P	**P**	**22 33 19.8**	**+0.8**
AAK				IAmb	IAmb	22 33 21.0	
	comp=Z,21nm,0.8s						
EKS2	**Erkin-Say**	**69.50**	**313**	P	**P**	**22 33 21.9**	**+1.0**
	SNR=23						
UCH	**Uchtor**	**69.51**	**313**	P	**P**	**22 33 22.9**	**+1.5**
	SNR=7.2						
UCH	**Uchtor**	**69.51**	**313**	P	**P**	**22 33 23.4**	**+2.0**
UCH				pmax	pmax		
	comp=Z,11nm,1.2s						
SIJI	**Sorong**	**69.91**	**241**	P	**P**	**22 33 23.1**	**-0.5**
	comp=Z,8.1nm,1.1s,baz=9.1,slow=7.8,SNR=3.8						
SIJI	**Sorong**	**69.91**	**241**	P	**P**	**22 33 22.1**	**-1.5**
AML	**Almayashu**	**69.96**	**313**	P	**P**	**22 33 25.3**	**+1.2**
	SNR=19						
AML	**Almayashu**	**69.96**	**313**	P	**P**	**22 33 25.7**	**+1.6**
AML				pmax	pmax		

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      comp=Z,28nm,1.0s
LSA   Lhasa             70.45 293   P       P        22 33 29.0 +1.6
LSA   Lhasa             70.45 293   P       P        22 33 29.3 +1.9
LSA                                 pmax    pmax
      comp=Z,67nm,0.7s
BELG  Belogornoye       70.73 335ceP        P        22 33 28.3 +0.2
BELG                                pmax    pmax
      comp=Z,5.0nm,0.9s
OBN   Obninsk           70.73 342   P       P        22 33 27.8 -0.3
      comp=Z,2.1nm,0.5s,baz=280,slow=6.1,SNR=3.2
OBN   Obninsk           70.73 342⇓eP        P        22 33 26.8 -1.3
OBN                                e                 22 33 43.1
OBN                                e                 22 36 06.1
OBN                                ePPP     PPP      22 37 54.8
OBN                                 pmax    pmax
      comp=Z,26nm,1.7s
KSH   Kashi             70.96 310   P       P        22 33 34.5 +4.6
KSH                                 pP      pwP      22 33 47.8 +1.3
KSH                                 PcP     PcP      22 33 54.8 +4.7
KSH                                 pmax    pmax
      comp=Z,48nm,1.1s
KSH                                 LR      LR
      comp=Z,190nm,7.2s
KSH                                 LR      LR
      comp=Z,290nm,8.6s
ISAL  Salakas           71.94 348  eP       P        22 33 36.0 +0.7
IDID  Didziasalis       72.11 348  eP       P        22 33 36.0 -0.4
IIGN  Ignalina          72.14 348  eP       P        22 33 36.9 +0.3
PABE  Paberze           72.26 350  eP       P        22 33 37.7 +0.4
MYLDM Lahad Datu        72.39 256   P       P        22 33 39.5 +0.9
MYLDM                               IAmb    IAmb     22 34 11.3
      comp=Z,20nm,1.1s
LPSR  Galich'ya Gora    72.63 340  eP       P        22 33 39.0 -0.5
LPSR                                pmax    pmax
      comp=Z,10.0nm,0.9s
UBPT  Khong Chiam       72.64 273   P       P        22 33 39.7 -0.4
UBPT                                IAmb    IAmb     22 34 16.3
      comp=Z,60nm,1.7s
BTK   Batken            72.92 314   IAmb    IAmb     22 33 43.3
      comp=Z,24nm,0.9s
VRH   Novokhopyorsk     73.30 338  eP       P        22 33 43.1 -0.4
VRH                                 pmax    pmax
      comp=Z,20nm,0.4s
SUW   Suwalki           73.82 350  eP       P        22 33 45.5 -1.0
VSR   Storozhevoye      73.87 339  eP       P        22 33 46.9  0.0
VSR                                 pmax    pmax
      comp=Z,20nm,0.6s
CMMT  Chiang Mai        74.00 280   P       P        22 33 47.9 -0.3
      comp=Z,6.8nm,1.6s
CHTO  Chiang Mai        74.00 280   P       P        22 33 48.1  0.0
      comp=Z,4.0nm,1.6s
VORD  Divnogorie        74.08 339  eP       P        22 33 47.6 -0.5
VORD                                pmax    pmax
      comp=Z,30nm,0.6s
MRSI  Marisa            74.09 250   P       P        22 33 48.4 -0.3
      comp=Z,19nm,1.0s
CM31  Chiang Mai Arr    74.27 280   P       P        22 33 51.0 +1.3
CMAR  Chiang Mai Arr    74.27 280   P       P        22 33 50.0 +0.2
      comp=Z,3.7nm,0.8s,baz=27,slow=6.8,SNR=20
CMAR                                LR      LR       23 11 11.4
      comp=Z,33nm,18.2s,baz=315,slow=40
CMAR  Chiang Mai Arr    74.27 280  i P      P        22 33 49.9 +0.2
CMAR                                pmax    pmax
      comp=Z,3.0nm,0.7s
CMAR  Chiang Mai Arr    74.27 280   P       P        22 33 50.4 +0.6
BSEG  Bad Segeberg      74.76 358  eP       P        22 33 53.5 +1.5
      comp=Z,6.7nm,0.9s,baz=2.8,slow=5.5
GUN   Gumba             74.80 296  eP       P        22 33 54.0 +0.9
GKP   Gorka Klasztor    75.09 353  eP       P        22 33 54.2 +0.3
KKN   Kakani            75.23 296  eP       P        22 33 55.9 +0.5
      comp=Z,60nm,0.8s
PKI   Pulchoki          75.33 296  eP       P        22 33 56.1  0.0
      comp=Z,94nm,1.0s
PKIN  Phulchoki         75.33 296  eP       P        22 33 56.5 +0.4
      comp=Z,18nm,0.5s
MPSI  Mapaga            75.41 252   P       P        22 33 55.7 -0.6
      comp=Z,19nm,1.0s
GKN   Gorkha            75.42 297  eP       P        22 33 56.9 +0.4
DMN   Daman             75.47 296  eP       P        22 33 57.4 +0.6
      comp=Z,76nm,0.8s
DANN  Dangsing          75.64 297  eP       P        22 33 58.6 +0.7
      comp=Z,250nm,0.8s
RUE   Ruedersdorf       76.09 355  eP       P        22 34 01.0 +1.4
RUE   Ruedersdorf       76.09 355  eP       P        22 34 01.6 +2.0
      comp=Z,8.3nm,0.8s,baz=2.8,slow=5.5
KOLN  Koldanda          76.18 297  eP       P        22 34 01.1 +0.3
NRDL  Niedersach Rie    76.21 358  eP       P        22 34 01.1 +0.9
      comp=Z,2.9nm,0.7s,baz=2.8,slow=5.5
AKASG Malin Array Be    76.25 345   P       P        22 34 00.0 -0.5
      comp=Z,4.8nm,0.4s,baz=17,slow=6.0,SNR=59
AKASG Malin Array Be    76.25 345  i P      P        22 33 59.9 -0.6
AKASG                               pmax    pmax
      comp=Z,5.0nm,0.4s
AKBB  Malin Array Si    76.25 345ceP        P        22 33 59.7 -0.8
AKBB  Malin Array Si    76.25 345   IAmb    IAmb     22 34 01.3
      comp=Z,38nm,1.6s
PYUN  Piuthan           76.26 298  eP       P        22 34 01.8 +0.5
      comp=Z,161nm,0.9s
FLTG  Flechtingen       76.34 357  eP       P        22 34 00.9 -0.1
      comp=Z,7.7nm,0.6s,baz=2.8,slow=5.5
CLZ   Clausthal         76.86 358  eP       P        22 34 05.2 +1.1
      comp=Z,5.8nm,0.7s,baz=2.8,slow=5.5
NIL   Nilore            76.95 308   P       P        22 34 05.1 +0.2
NIL                                 pmax    pmax
      comp=Z,63nm,0.8s
NIL   Nilore            76.95 308   P       P        22 34 05.1 +0.2
GTTG  Gottingen         77.17 358  eP       P        22 34 06.8 +1.0
      comp=Z,16nm,1.1s,baz=2.8,slow=5.5
CLL   Collm             77.30 356⇑iP        P        22 34 06.5 +0.1
CLL                                i *PP    pP       22 34 19.5 +0.8
CLL                                 pmax    pmax
      comp=Z,7.0nm,0.7s
CLL   Collm             77.30 356⇑iP        P        22 34 06.5 +0.1
      comp=Z,7.0nm,0.7s
CLL                                i pP     pP       22 34 19.5 +0.8
CLL                                esP      sP       22 34 25.0 +1.6
CLL   Collm             77.30 356  eP       P        22 34 06.6 +0.1
      comp=Z,5.2nm,0.7s,baz=2.8,slow=5.5
CLL   Collm             77.30 356   IAmb    IAmb     22 34 07.5
      comp=Z,21nm,1.4s
FBE   Freiberg          77.67 356  eP       P        22 34 09.8 +1.3
      comp=Z,9.3nm,0.7s,baz=2.8,slow=5.5
BRG   Berggiesshubel    77.69 355  eP       P        22 34 08.9 +0.2
      comp=Z,18nm,1.2s,baz=2.8,slow=5.5
BRG                                epP      pP       22 34 22.0 +1.1
CHVC  Chvalec           77.84 354  eP       P        22 34 10.1 +0.5
OSTC  Ostas             77.86 354  eP       P        22 34 10.2 +0.5
UPC   Upice             77.93 354  eP       P        22 34 10.6 +0.6
UPC   Upice             77.93 354  eP       P        22 34 10.6 +0.6
PVCC  Panska Ves        78.00 355  eP       P        22 34 11.0 +0.6
PVCC  Panska Ves        78.00 355  eP       P        22 34 11.0 +0.6
MOX   Moxa              78.02 357   P       P        22 34 11.3 +0.8
MOX                                 pmax    pmax
      comp=Z,14nm,1.9s
MOX   Moxa              78.02 357  eP       P        22 34 11.0 +0.4
      comp=Z,19nm,1.2s,baz=2.8,slow=5.5
DPC   Dobruska-Polom    78.06 354  eP       P        22 34 11.5 +0.7
DPC   Dobruska-Polom    78.06 354  eP       P        22 34 11.5 +0.7
TANN  Tannenbergstha    78.21 356  eP       P        22 34 12.5 +0.9
      comp=Z,4.4nm,1.0s,baz=2.8,slow=5.5
KBL   Kabul             78.24 312   P       P        22 34 11.9 -0.4
KBL                                 pmax    pmax
      comp=Z,26nm,0.7s
KBL   Kabul             78.24 312   P       P        22 34 11.9 -0.4
GUNZ  Gunzen            78.27 356  eP       P        22 34 12.5 +0.6
      comp=Z,2.5nm,0.8s,baz=2.8,slow=5.5
KRLC  Kraliky           78.30 353  eP       P        22 34 12.5 +0.3
KRLC  Kraliky           78.30 353  eP       P        22 34 12.5 +0.3
WERN  Wernitzgruen      78.34 356  eP       P        22 34 13.3 +0.9
      comp=Z,8.3nm,0.9s,baz=2.8,slow=5.5
WERN                               epP      pwP      22 34 26.9 -0.5
NKC   Novy Kostel       78.39 356  eP       P        22 34 13.3 +0.7
NKC   Novy Kostel       78.39 356  eP       P        22 34 13.3 +0.7
TNS   Taunus Mts        78.52 359  eP       P        22 34 14.0 +0.7
      comp=Z,3.9nm,0.8s,baz=2.8,slow=5.5
PRU   Pruhonice         78.53 355  eP       P        22 34 13.9 +0.5
PRU   Pruhonice         78.53 355  eP       P        22 34 13.9 +0.5
MORC  Moravsky Berou    78.54 353  ⇓P       P        22 34 13.3 -0.2
MORC  Moravsky Berou    78.54 353  eP       P        22 34 13.8 +0.3
MORC  Moravsky Berou    78.54 353  ⇓P       P        22 34 13.3 -0.2
MANZ  Manzenberg        78.66 356  eP       P        22 34 14.7 +0.6
      comp=Z,0.9nm,0.9s,baz=2.8,slow=5.5
ROTZ  Rotzenmuhle       78.87 356  eP       P        22 34 15.8 +0.6
      comp=Z,1.9nm,1.1s,baz=2.8,slow=5.5
SORM  Soroca            78.88 345  ⇓P       P        22 34 15.0 -0.3
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SORM  Soroca            78.88 345  ⇓P       P        22 34 15.0 -0.3
GRA1  Grafenberg Arr    78.98 357   IAmb    IAmb     22 34 17.4
      comp=Z,15nm,0.6s
GRF   Grafenberg Arr    78.98 357  eP       P        22 34 16.7 +0.9
      comp=Z,12nm,0.7s,baz=2.8,slow=5.5
GRFO  Grafenberg        78.98 357   P       P        22 34 17.1 +1.2
GRFO                                pmax    pmax
      comp=Z,13nm,0.6s
GRFO  Grafenberg        78.98 357   P       P        22 34 17.1 +1.2
GRFO                                IAmb    IAmb     22 34 17.4
      comp=Z,13nm,0.6s
LANS  Liptovska Anna    79.00 351  eP       P        22 34 17.5 +1.5
LANS                                pmax    pmax
      comp=Z,8.0nm,0.6s
LANS  Liptovska Anna    79.00 351  eP       P        22 34 17.5 +1.5
VRAC  Vranov            79.08 353  ⇓P       P        22 34 16.8 +0.4
VRAC  Vranov            79.08 353  eP       P        22 34 16.8 +0.4
VRAC  Vranov            79.08 353  ⇓P       P        22 34 16.8 +0.4
WLF   Walferdange       79.09   0  eP       P        22 34 16.5 +0.1
      comp=Z,8.8nm,1.0s,baz=2.8,slow=5.5
KRUC  Moravsky          79.34 353  eP       P        22 34 18.2 +0.4
MTKI  Muara Teweh, K    79.41 255   P       P        22 34 18.3 -0.4
      comp=Z,2µmcomp=Z,10nm,0.5s
JAVC  Velka Javorina    79.44 353  eP       P        22 34 20.0 +1.5
KHC   Kasperske Hory    79.44 355  eP       P        22 34 19.2 +0.8
KHC   Kasperske Hory    79.44 355c iP       P        22 34 19.1 +0.7
KHC                                 pmax    pmax
      comp=Z,20nm,1.1s
KHC   Kasperske Hory    79.44 355   IAmb    IAmb     22 34 20.2
      comp=Z,16nm,1.2s
WET   Wettzell          79.46 356  eP       P        22 34 19.5 +1.0
      comp=Z,8.8nm,1.2s,baz=2.8,slow=5.5
TRPA  Tarpa             79.68 349  ⇑P       P        22 34 20.5 +0.8
VYHS  Vyhne             79.71 352  eP       P        22 34 19.1 -0.7
VYHS  Vyhne             79.71 352  eP       P        22 34 19.1 -0.7
CKRC  Cesky Krumlov     79.71 355  eP       P        22 34 20.4 +0.5
GEC2  GERESS Array S    79.72 355  eP       P        22 34 20.2 +0.2
      comp=Z,5.8nm,1.0s,baz=2.8,slow=5.5
GERES GERESS Array B    79.72 355   P       P        22 34 20.4 +0.4
      comp=Z,3.8nm,0.8s,baz=15,slow=5.5,SNR=34
KIV   Kislovodsk        79.78 334  ⇑P       P        22 34 21.0 +0.5
KIV   Kislovodsk        79.78 334ceP        P        22 34 20.8 +0.4
KIV                                 pmax    pmax
      comp=Z,19nm,1.0s
KIV   Kislovodsk        79.78 334   P       P        22 34 21.3 +0.9
KIV                                 IAmb    IAmb     22 34 22.3
      comp=Z,18nm,0.9s
BUR08 Bucovina Ar. S    79.82 347   IAmb    IAmb     22 34 40.2
      comp=Z,21nm,1.6s
BURAR Bucovina Array    79.85 347  ⇓P       P        22 34 21.1 +0.4
BURAR Bucovina Array    79.85 347  ⇓P       P        22 34 21.1 +0.4
BURAR Bucovina Array    79.85 347   IAmb    IAmb     22 34 21.7
      comp=Z,8.1nm,0.6s
KBZ   Khabaz            79.94 334   P       P        22 34 22.0 +0.9
      comp=Z,8.8nm,0.8s,baz=92,slow=2.1,SNR=18
KBZ   Khabaz            79.94 334ceP        P        22 34 21.8 +0.7
KBZ                                 pmax    pmax
      comp=Z,8.0nm,0.8s
MODS  Modra-Piesok      79.96 353  eP       P        22 34 21.0 -0.2
MODS  Modra-Piesok      79.96 353  eP       P        22 34 21.0 -0.2
STU   Stuttgart         79.96 358  eP       P        22 34 22.1 +1.0
      comp=Z,44nm,1.2s,baz=2.8,slow=5.5
NCK   Nalchik           79.96 334⇓eP        P        22 34 22.1 +0.8
NCK                                 pmax    pmax
      comp=Z,26nm,0.8s
MILM  Milestii Mici     79.98 345  ⇓P       P        22 34 21.4 +0.1
MILM  Milestii Mici     79.98 345  ⇓P       P        22 34 21.4 +0.1
MTN   Manton Dam        80.06 235   P       P        22 34 21.3 -0.7
MTN                                 IAmb    IAmb     22 34 22.7
      comp=Z,43nm,1.4s
GEYT  Alibeck           80.07 321   P       P        22 34 22.7 +0.7
      comp=Z,11nm,1.0s,baz=318,slow=4.2,SNR=21
GEYT  Alibeck           80.07 321   IAmb    IAmb     22 34 23.9
      comp=Z,12nm,0.9s
GYA0B ALIBECK ARRAY     80.07 321   IAmb    IAmb     22 34 23.8
      comp=Z,15nm,1.0s
ZST   Bratislava        80.15 353  eP       P        22 34 23.4 +1.2
ZST   Bratislava        80.15 353  eP       P        22 34 23.4 +1.2
PSZ   Piszkesteto       80.18 351  ⇑P       P        22 34 22.8 +0.3
PSZ   Piszkesteto       80.18 351  ⇑P       P        22 34 22.8 +0.3
PSZ   Piszkesteto       80.18 351   IAmb    IAmb     22 34 24.3
      comp=Z,10nm,1.2s
BFO   Black Forest      80.41 359  eP       P        22 34 24.5 +0.8
      comp=Z,4.2nm,0.9s,baz=2.8,slow=5.5
SRO2  Moca              80.47 352  eP       P        22 34 23.8 -0.1
SRO2  Moca              80.47 352  eP       P        22 34 23.8 -0.1
CONA  Conrad Observa    80.50 354  i P      P        22 34 25.1 +0.8
      comp=Z,4.1nm,0.6s,SNR=12
MOA   Molln             80.68 355  eP       P        22 34 25.2 +0.1
      comp=Z,4.5nm,1.2s
RJOB  Jochberg          80.87 356  eP       P        22 34 26.8 +0.6
      comp=Z,4.2nm,0.8s,baz=2.8,slow=5.5
DRGR                    80.98 349  ⇑P       P        22 34 26.9 +0.1
DRGR                    80.98 349  ⇑P       P        22 34 26.9 +0.1
UBR   Ueberruh          81.03 358  eP       P        22 34 28.2 +1.2
      comp=Z,2.9nm,0.8s,baz=2.8,slow=5.5
VLDR  Vladesti          81.15 345  ⇑P       P        22 34 28.3 +0.7
ARSA  Arzberg           81.20 354  eP       P        22 34 28.7 +0.8
      comp=Z,3.6nm,0.7s
RETA  Reutte            81.20 357  eP       P        22 34 28.8 +0.8
      comp=Z,4.2nm,0.7s
OZUR                    81.25 347  ⇑P       P        22 34 28.8 +0.6
WATA  Walderalm         81.33 357  i P      P        22 34 29.7 +1.0
      comp=Z,9.1nm,1.0s,SNR=5.2
MOTA  Moosalm           81.33 357  eP       P        22 34 29.5 +0.7
      comp=Z,12nm,1.1s
VRI   Vrincioaia        81.34 346  ⇑P       P        22 34 29.2 +0.6
VRI   Vrincioaia        81.34 346  ⇑P       P        22 34 29.2 +0.6
PLOR  Plostina          81.37 346  ⇑P       P        22 34 30.3 +1.5
PLOR  Plostina          81.37 346  ⇑P       P        22 34 30.3 +1.5
WTTA  Wattenberg        81.39 356  i P      P        22 34 30.0 +0.9
      comp=Z,9.1nm,0.9s,SNR=5.4
HRA   Herat             81.42 316   IAmb    IAmb     22 34 31.1
      comp=Z,21nm,0.8s
DAVA  Damuels           81.43 358  eP       P        22 34 28.2 -1.0
      comp=Z,11nm,1.6s
COVR  Voineasa-Covas    81.44 346  ⇑P       P        22 34 28.7 -0.5
DOPR  Dopca             81.44 347  ⇓P       P        22 34 30.7 +1.5
SLCR  Slobozia Conac    81.45 345  ⇓P       P        22 34 30.5 +1.3
SQTA  Sankt Quirin      81.45 357  i P      P        22 34 29.7 +0.4
      comp=Z,7.9nm,0.8s,SNR=5.7
IZVR  Izvoarele         81.49 345  ⇑P       P        22 34 30.5 +1.1
KBA   Koelnbreinsper    81.50 355  eP       P        22 34 30.8 +1.1
      comp=Z,13nm,0.7s
SIRR  Siria             81.62 349  ⇓P       P        22 34 30.7 +0.6
TLCR                    81.67 344  ⇓P       P        22 34 30.9 +0.6
TLCR                    81.67 344  ⇓P       P        22 34 30.9 +0.6
FETA  Feichten          81.67 357  eP       P        22 34 31.3 +0.8
      comp=Z,9.6nm,1.0s
CFR   Carcaliu          81.79 345  ⇑P       P        22 34 31.7 +0.8
CFR   Carcaliu          81.79 345  ⇑P       P        22 34 31.7 +0.8
SOKA  Soboth            81.81 354  i P      P        22 34 31.7 +0.5
      comp=Z,7.7nm,0.9s,SNR=11
BATI  Baumata           81.82 242   P       P        22 34 31.6 +0.1
      comp=Z,6.6nm,0.4s,baz=89,slow=4.3,SNR=3.9
MLR   Muntele Rosu      81.82 346  ⇑P       P        22 34 32.9 +1.6
MLR   Muntele Rosu      81.82 346  ⇑P       P        22 34 32.9 +1.6
PERS  Pernice           81.84 354  i P      P        22 34 31.9 +0.6
ABTA  Abfaltersbach     81.87 356  eP       P        22 34 32.2 +0.7
      comp=Z,6.2nm,1.2s
MYKA  Terra Mystica     81.94 355  eP       P        22 34 33.1 +1.2
      comp=Z,10nm,1.8s
OBKA  Obir              82.00 354  i P      P        22 34 32.9 +0.7
      comp=Z,4.2nm,0.6s,SNR=6.3
VOIR                    82.00 347  ⇑P       P        22 34 33.2 +1.0
VOIR                    82.00 347  ⇑P       P        22 34 33.2 +1.0
TPGR  Topolog           82.05 344  ⇓P       P        22 34 32.7 +0.3
ISR   Istrita           82.10 346  ⇑P       P        22 34 32.4 -0.3
ISR   Istrita           82.10 346  ⇑P       P        22 34 32.4 -0.3
ARR   Arges             82.13 347  ⇓P       P        22 34 34.2 +1.3
MTUR  Matau             82.21 347  ⇑P       P        22 34 33.6 +0.3
MTUR  Matau             82.21 347  ⇑P       P        22 34 33.6 +0.3
BZS   Buzias            82.27 349  ⇑P       P        22 34 33.5  0.0
BZS   Buzias            82.27 349  ⇑P       P        22 34 33.5  0.0
HARR  Harsova           82.30 345  ⇑P       P        22 34 33.7  0.0
HARR  Harsova           82.30 345   P       P        22 34 34.7 +1.1
TIRR  Tirgusor          82.44 344  ⇑P       P        22 34 35.2 +0.8
TIRR  Tirgusor          82.44 344  ⇑P       P        22 34 35.2 +0.8
CTI   Castel Tesino     82.61 356   IAmb    IAmb     22 34 39.9
      comp=Z,15nm,1.4s
MFTR  Murfatlar         82.71 344  ⇓P       P        22 34 36.2 +0.4
PBKI  Pangkalan Bun     82.76 256   P       P        22 34 38.6 +2.2
      comp=Z,6µmcomp=Z,50nm,0.5s
RAZG  Razgrad           83.62 346  ⇑P       P        22 34 41.2 +0.7
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BNI   Bardonecchia      83.70 360   IAmb    IAmb     22 34 43.5
      comp=Z,9.0nm,0.9s
DIVS  Divibare          83.95 350  eP       P        22 34 42.4 +0.1
ZAGS  Zajecar           83.97 349  eP       P        22 34 43.7 +1.4
GRUS  Gruza             84.08 350  eP       P        22 34 43.3 +0.4
BOVS  Bovan             84.21 349  ⇑P       P        22 34 43.1 -0.5
BOVS  Bovan             84.21 349  eP       P        22 34 43.1 -0.5
BBLS  Lazi&#263;i       84.24 351  eP       P        22 34 44.2 +0.4
IVAS  Ivanjica          84.45 350  eP       P        22 34 44.7 -0.1
ZAPS  Zavoj             84.45 348  eP       P        22 34 44.6 -0.2
VLC   Villacollemand    84.54 357   IAmb    IAmb     22 34 47.1
      comp=Z,27nm,1.4s
WRA   Warramunga Arr    84.58 228   P       P        22 34 44.0 -1.5
      comp=Z,1.5nm,0.7s,baz=30,slow=5.7,SNR=11
WRA   Warramunga Arr    84.58 228  i P      P        22 34 44.4 -1.2
WRA                                 pmax    pmax
      comp=Z,1.0nm,0.6s
SELS  Selova            84.69 349  eP       P        22 34 45.3 -0.7
SJES  Sjenica           84.78 350  eP       P        22 34 47.4 +0.8
BARS  Barje             85.01 349  eP       P        22 34 47.1 -0.5
VTS   Vitosha           85.02 348  ⇑P       P        22 34 47.3 -0.6
VTS   Vitosha           85.02 348  ⇑P       P        22 34 47.3 -0.6
VTS   Vitosha           85.02 348   IAmb    IAmb     22 34 49.2
      comp=Z,5.3nm,0.7s
OSSC  Osservatorio P    85.14 357   IAmb    IAmb     22 34 50.4
      comp=Z,17nm,1.2s
BOSS  Bosilegrad        85.24 348  eP       P        22 34 48.4 -0.4
PDG   Podgorica         85.67 351  ⇑P       P        22 34 50.7 -0.1
SKO   Skopje            85.88 349  i P      P        22 34 52.9 +0.9
BR131 Keskin Array S    86.00 339   IAmb    IAmb     22 34 54.7
      comp=Z,7.4nm,0.8s
BRTR  Keskin Array B    86.00 339   P       P        22 34 53.5 +0.7
      comp=Z,5.3nm,0.8s,baz=28,slow=2.2,SNR=23
ANTO  Ankara            86.04 340  ⇑P       P        22 34 51.4 -1.5
ANTO  Ankara            86.04 340  ⇑P       P        22 34 51.4 -1.5
STIP  Stip              86.07 348  i P      P        22 34 52.8 -0.1
VAY   Valandovo         86.38 348  i P      P        22 34 55.4 +1.0
OHR   Ohrid             86.81 349  i P      P        22 34 57.0 +0.4
HYB   Hyderabad         87.19 295  i P      P        22 34 58.0 -0.8
HYB                                e                 22 35 10.5
FITZ  Fitzroy Crossi    87.30 236   P       P        22 34 58.6 -0.4
      comp=Z,6.2nm,0.8s,baz=17,slow=4.6,SNR=8.9
AS31  Alice Springs     88.00 227   P       P        22 35 01.9 -0.4
ASAR  Alice Springs     88.00 227   P       P        22 35 01.9 -0.3
      comp=Z,3.8nm,0.8s,baz=28,slow=4.8,SNR=33
ASAR  Alice Springs     88.00 227   P       P        22 35 02.0 -0.3
ASAR  Alice Springs     88.00 227   P       P        22 35 01.4 -0.9
ESDC  Sonseca Array     88.62   8   P       P        22 35 05.4 +0.1
      comp=Z,3.2nm,0.9s,baz=350,slow=4.2,SNR=13
ESDC  Sonseca Array     88.62   8   P       P        22 35 05.6 +0.3
ESDC                                IAmb    IAmb     22 35 34.3
      comp=Z,12nm,1.5s
STKA  Stephens Creek    92.03 217   P       P        22 35 21.1 +0.2
      comp=Z,2.1nm,0.6s,baz=339,slow=10,SNR=3.6
TORD  Torodi Ar. Bea   115.36   5   PKKPbc  PKKPbc   22 51 25.9 -0.2
      comp=Z,0.3nm,0.8s,baz=198,slow=4.1,SNR=1.6
PLCA  Paso Flores      127.90 110   PKP     PKPdf    22 41 17.1 -0.2
      comp=Z,2.1nm,0.8s,baz=90,slow=1.0,SNR=5.3
MATP  Matopo           144.44 323  i P      PKiKP    22 41 53.1 +0.9
MATP  Matopo           144.44 323  i P      PKiKP    22 41 53.1 +0.9
MAW   Mawson           148.72 218   PKPbc   PKPbc    22 41 58.0  0.0
      comp=Z,8.4nm,0.8s,baz=80,slow=4.4,SNR=6.4
MAW   Mawson           148.72 218   PKP2    PKPbc    22 41 58.0  0.0
LBTB  Lobatse          149.69 324  i P      PKiKP    22 42 02.6 -0.3
LBTB  Lobatse          149.69 324  i P      PKiKP    22 42 02.6 -0.3
BOSA  Boshof           153.07 321   PKPbc   PKPbc    22 42 09.6 -0.1
      comp=Z,2.0nm,0.6s,baz=85,slow=0.7,SNR=10
BOSA  Boshof           153.07 321  i P      PKPbc    22 42 09.5 -0.1
BOSA  Boshof           153.07 321  i P      PKPbc    22 42 09.5 -0.1
SYO   Syowa Base       156.58 210⇓ePKPdf    PKPdf    22 42 06.6 +1.0
SYO   Syowa Base       156.58 210⇑epPKPdf   pPKPdf   22 42 20.8 +3.0
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IDC ***31*** *22:23:09.1±0.7, 7°.27S×68°.06E, h0^{km}, mb3.9/11, mb1 4.0/11, mb1mx3.6/60, mbtmp3.9/11, MS4.2/45, Ms1 4.2/45, ms1mx4.1/78, Error ellipse: s-maj=26.3km s-min=18.1km az=177.0*

GCMT ***31*** *22:23:12.0±0.2, 7°.31S±0°.02×67°.96E±0°.02, h12^{km}, MW5.0/104, Moment Tensor Solution. s37,c45; s104,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.88±.09; M$_{\theta\theta}$1.95±.09; M$_{\phi\phi}$1.93±.09; M$_{r\theta}$0.32±.33; M$_{\theta\phi}$-1.67±.07; M$_{\phi r}$0.51±.29; Best double couple: M$_0$3.78700×10^{16} NP1:φ$_s$307.00000°,δ45.00000°, λ-101.00000°. NP2:φ$_s$143.00000°,δ47.00000°, λ-79.00000°. Principal axes: T 3.6120, Plg1.0000°, Azm225.0000°; N 0.3500, Plg8.0000°, Azm315.0000°; P -3.9620, Plg82.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 31 22:23:11.0±0.8**, 7°.3S**±0°.2×**68°.1E**±0°.1**, h12^{km}, n56, σ0^{s}55**/16**, mb4.0**/11**, MS4.3**/44**, 1C, Chagos Archipelago region**

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Code  Station Name       Δ°   AZ°    Phase ID         Time      Res
                                   Op       ISC      h  m  s    ISC
PALK  Pallekele         19.17  41   LR      LR       22 33 21.6
      comp=Z,2µm,18.7s,baz=298,slow=32
OPO   Ambohidratompo    23.21 239   LR      LR       22 35 18.0
      comp=Z,664nm,18.1s,baz=216,slow=31
ATD   Arta Tunnel       31.27 306   LR      LR       22 40 06.9
      comp=Z,204nm,20.1s,baz=118,slow=32
WSAR  Wadi Sarin        31.69 343   LR      LR       22 39 50.3
      comp=Z,227nm,19.6s,baz=164,slow=32
PSI   Prapat            32.38  73   LR      LR       22 41 25.5
      comp=Z,1µm,18.9s,baz=264,slow=34
MBAR  Mbarara           37.80 278   LR      LR       22 44 36.8
      comp=Z,313nm,18.2s,baz=82,slow=34
CMAR  Chiang Mai Arr    39.76  50   P       P        22 30 44.7 +0.6
      1.3nm,0.7s,baz=242,slow=9.1,SNR=12
CMAR                                LR      LR       22 44 48.1
      comp=Z,242nm,21.7s,baz=240,slow=33
LSZ   Lusaka            39.86 255   P       P        22 30 45.4 +0.3
      2.0nm,0.6s,baz=66,slow=11,SNR=7.8
LSZ                                 LR      LR       22 45 47.0
      comp=Z,554nm,18.8s,baz=96,slow=34
MATP  Matopo            40.46 247   LR      LR       22 46 22.5
      comp=Z,540nm,18.1s,baz=88,slow=34
LBTB  Lobatse           44.21 241   LR      LR       22 47 57.6
      comp=Z,838nm,18.9s,baz=64,slow=34
BOSA  Boshof            45.59 237   P       P        22 31 31.6 +0.1
      3.2nm,0.9s,baz=78,slow=8.0,SNR=3.1
BOSA                                LR      LR       22 48 13.5
      comp=Z,338nm,18.7s,baz=62,slow=33
GEYT  Alibeck           45.91 349   P       P        22 31 33.8 +0.2
      0.5nm,0.8s,baz=38,slow=5.4,SNR=1.7
GEYT                                LR      LR       22 49 34.7
      comp=Z,156nm,21.6s,baz=156,slow=34
AAK   Ala-Archa         50.01   6   LR      LR       22 53 05.5
      comp=Z,384nm,18.3s,baz=189,slow=36
H01W3 Cape Leeuwin H    50.41 130   T       T        23 26 13.0
      baz=292,slow=75,SNR=6.0
H01W2 Cape Leeuwin H    50.41 130   T       T        23 26 13.4
      baz=292,slow=75,SNR=6.1
H01W1 Cape Leeuwin H    50.42 130   T       T        23 26 14.4
      baz=292,slow=75,SNR=5.6
SUR   Sutherland        50.45 234   LR      LR       22 52 41.4
      comp=Z,359nm,18.3s,baz=50,slow=35
KAPI  Kappang           51.42  91   LR      LR       22 51 10.3
      comp=Z,136nm,21.9s,baz=286,slow=33
GNI   Garni             51.86 337   LR      LR       22 55 07.1
      comp=Z,106nm,19.2s,baz=88,slow=37
MKAR  Makanchi Array    55.29  12   LR      LR       22 55 39.1
      comp=Z,325nm,19.9s,baz=178,slow=35
BRTR  Keskin Array B    56.55 328   P       P        22 32 53.7  0.0
      0.7nm,0.9s,baz=145,slow=15,SNR=3.6
AKTO  Aktyubinsk        58.12 352   LR      LR       22 56 42.2
      comp=Z,138nm,20.2s,baz=130,slow=35
KURBB Kurchatov Arra    58.36   8   LR      LR       22 56 44.9
      comp=Z,328nm,21.7s,baz=160,slow=34
MAW   Mawson            60.36 182   LR      LR       22 52 55.6
      comp=Z,320nm,22.0s,baz=51,slow=30
ZALV  Zalesovo Beam     62.60  11   LR      LR       23 01 36.8
      comp=Z,231nm,18.1s,baz=216,slow=37
SONM  Songino Array     64.44  28   P       P        22 33 47.4  0.0
      1.2nm,0.8s,baz=221,slow=8.5,SNR=4.4
SONM                                LR      LR       23 01 21.2
      comp=Z,528nm,20.9s,baz=220,slow=36
SYO   Syowa Base        64.44 191⇑esPKPdf            22 42 26.1
ASAR  Alice Springs     65.01 113   P       P        22 33 51.6  0.0
      0.6nm,0.6s,baz=276,slow=5.9,SNR=8.9
ASAR                                LR      LR       23 03 24.9
      comp=Z,66nm,18.0s,baz=302,slow=37
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WRA	Warramunga Arr	65.28	109	P	P	22 33 53.4	0.0
	1.1nm,0.8s,baz=279,slow=6.5,SNR=8.7						
WRA				LR	LR	22 59 14.6	
	comp=Z,134nm,21.2s,baz=206,slow=33						
JOW	Kunigami	67.42	57	LR	LR	23 04 44.9	
	comp=Z,102nm,18.0s,baz=202,slow=37						
TORD	Torodi Ar. Bea	68.96	287	P	P	22 34 17.0	+0.2
	0.7nm,0.8s,baz=80,slow=5.7,SNR=5.0						
KSRS	Korea Array	71.31	47	LR	LR	23 07 46.8	
	comp=Z,242nm,18.0s,baz=255,slow=38						
STKA	Stephens Creek	72.22	121	LR	LR	23 02 10.4	
	comp=Z,119nm,21.4s,baz=249,slow=32						
DBIC	Dimbokro	74.04	279	P	P	22 34 48.0	+0.5
	2.0nm,0.7s,baz=112,slow=7.6,SNR=3.2						
DBIC				LR	LR	23 07 28.5	
	comp=Z,146nm,18.1s,baz=132,slow=36						
KOWA	Kowa	74.67	287	LR	LR	23 05 55.1	
	comp=Z,126nm,19.7s,baz=127,slow=34						
USRK	Ussuriysk Ar.	76.91	42	LR	LR	23 11 57.3	
	comp=Z,176nm,18.5s,baz=227,slow=38						
SNAA	Sanae	77.18	198	LR	LR	23 01 16.1	
	comp=Z,246nm,21.3s,baz=125,slow=30						
NRIK	Noril'sk	77.61	7	LR	LR	23 11 39.6	
	comp=Z,206nm,18.9s,baz=206,slow=38						
MJAR	Matsushiro Arr	78.64	51	LR	LR	23 11 25.8	
	comp=Z,82nm,18.3s,baz=232,slow=37						
KLR	Kul'dur	78.84	37	LR	LR	23 14 12.0	
	comp=Z,138nm,18.1s,baz=250,slow=39						
JHJ	Hachijo jima 2	78.88	54	LR	LR	23 06 55.8	
	comp=Z,80nm,21.8s,baz=108,slow=33						
GUMO	Guam	78.99	75	LR	LR	23 07 13.1	
	comp=Z,102nm,21.6s,baz=236,slow=34						
ESDC	Sonseca Array	81.00	312	P	P	22 35 25.0	-1.0
	0.7nm,0.8s,baz=92,slow=3.9,SNR=4.7						
ARCES	ARCESS Array B	81.98	346	LR	LR	23 12 28.6	
	comp=Z,208nm,18.6s,baz=73,slow=36						
QSPA	South Pole Qui	82.77	180	LR	LR	23 08 37.8	
	comp=Z,67nm,18.9s,baz=277,slow=33						
YAK	Yakutsk	83.59	25	LR	LR	23 14 42.3	
	comp=Z,163nm,18.2s,baz=256,slow=37						
VNDA	Vanda	83.78	167	LR	LR	23 07 58.6	
	comp=Z,147nm,18.7s,baz=272,slow=32						
ASAJ	Asahikawa	84.06	44	LR	LR	23 12 23.6	
	comp=Z,95nm,20.4s,baz=291,slow=35						
TIXI	Tiksi	88.04	16	LR	LR	23 16 00.4	
	comp=Z,325nm,21.9s,baz=246,slow=36						
JMIC	Jan Mayen	92.47	341	LR	LR	23 18 09.5	
	comp=Z,156nm,18.1s,baz=64,slow=36						
PETK	Petropavlovsk-	95.53	37	LR	LR	23 22 18.4	
	comp=Z,136nm,20.7s,baz=274,slow=37						
PMSA	Palmer Station	99.88	199	LR	LR	23 14 24.7	
	comp=Z,71nm,20.6s,baz=157,slow=31						
YKA	Yellowknife Ar	124.84	2	PKP	PKPdf	22 42 09.4	-1.2
	0.4nm,0.7s,baz=347,slow=2.2,SNR=9.4						
YKA				PP	PP	22 43 58.3	+0.5
	0.4nm,0.9s,baz=356,slow=6.4,SNR=3.6						
PDAR	Pinedale Array	144.58	357	PKP	PKPab	22 42 46.2	-0.4
	0.7nm,0.5s,baz=75,slow=3.2,SNR=8.4						
ELK	Elko	146.53	5	PKPbc	PKPbc	22 42 52.7	-0.3
	0.7nm,0.6s,baz=30,slow=4.5,SNR=4.0						
NVAR	Mina Array Bea	148.44	10	PKPbc	PKPbc	22 42 58.1	-0.2
	1.4nm,0.7s,baz=312,slow=2.1,SNR=8.7						

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*NSSP **31** 22:32:42.6, 38.°32N×45.°78E, h12^{km}, Ms2.9*

TEH 31 22:31:40.5, 38.°34N×45.°75E, h12^{km}, ML3.0, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISHB	Shabestar	0.12	241	*e*Pg	Pg	22 31 43.4	-0.4
ITBZ	Tabriz	0.33	109	*e*Pg	Pg	22 31 47.3	0.0
ITBZ				*e*Sg	Sg	22 31 52.4	+0.6
IMRD	Marand	0.37	355	*e*Pg	Pg	22 31 48.4	+0.3
IMRD				*e*Sg	Sg	22 31 53.9	+0.8
IAZR	Azarshahr	0.69	164	*e*Pg	Pg	22 31 54.1	+0.2
IAZR				*e*		22 31 56.1	
	comp=Z,49µm,0.2s						
IAZR				*e*Sg	Sb	22 32 04.1	0.0
IBST	Bostanabad	1.11	125	*e*Pg	Pb	22 32 01.3	-0.5
IBST				*e*		22 32 17.3	
	comp=Z,3µm,0.1s						
MAHB	Mahabad	1.57	181	*e*Pg	Pb	22 32 10.1	+0.5
MAHB				*e*		22 32 34.2	
	comp=Z,4µm,0.4s						
ISRB	Sarab	1.60	108	*e*Pg	Pb	22 32 10.4	+0.3
ISRB				*e*		22 32 35.5	
	comp=Z,3µm,0.4s						
NRKZ	NAREK	1.86	333	*i* P	Pg	22 32 15.9	-0.3
NRKZ				*i* S	Sg	22 32 42.6	+2.2
GNI	Garni	1.97	337	*i* P	Pg	22 32 17.9	-0.3
GNI				*i* S	Sg	22 32 46.4	+2.6
KAPZ	Kaputan	2.14	338	*i* P	Pb	22 32 19.4	+0.1
KAPZ				*i* S	Sg	22 32 49.1	-0.1
METS	Metsamor	2.22	325	*i* P	Pb	22 32 21.5	+0.9
METS				*i* S	Sg	22 32 51.7	-0.2
VNNZ	Vanand	2.31	320	*i* P	Pg	22 32 24.1	-0.6
VNNZ				*i* S	Sg	22 32 56.2	+1.5
QABG	Abgarm-Qazvin	4.04	129	*e*Pn	Pn	22 32 44.1	+1.7

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*IDC **31** 22:32:16.3±2.2, 5.°87S×147.°73E, h0^{km}, mb3.9/5, mb1 4.2/7, mb1mx3.8/37, mbtmp4.0/7, ML4.4/1, Error ellipse: s-maj=65.0km s-min=20.9km az=94.0*

*NEIC **31** 22:32:23.6±0.8, 6.°0S±0.°1×147.°7E±0.°1, h48^{km}±18^{km}, mb4.1/9, Error ellipse: s-maj=21.0km s-min=13.6km az=125.0*

ISC 31 22:32:23.0±0.9**, 5.°94S**±0.°09×**147.°7E**±0.°1**, h50^{km}, n37,** σ**0^{s}.70**/38**, mb4.2**/9**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.48	189	Pn	Pn	22 33 14.0	-0.8
	13nm,0.3s,baz=11,slow=11,SNR=20						
PMG				Sn	Sn	22 33 56.8	+2.1
	19nm,0.3s,baz=156,slow=22,SNR=6.9						
PMG	Port Moresby	3.48	189	P	Pn	22 33 14.3	-0.4
PMG	Port Moresby	3.48	189		Pn	22 33 14.4	-0.3
PMG	Port Moresby	3.48	189	P	Pn	22 33 13.9	-0.8
PMG	Port Moresby	3.48	189	P	Pn	22 33 14.1	-0.6
RABL	Rabaul	4.78	69	Pn	Pn	22 33 32.3	-0.2
COEN	Coen	9.13	209	Pn	Pn	22 34 32.0	-0.1
COEN	Coen	9.13	209	P	Pn	22 34 31.5	-0.6
KDU	Kakadu	16.44	245	P	Pn	22 36 10.4	0.0
QIS	Mount Isa	16.52	208	P	Pn	22 36 11.2	-0.2
	6.9nm,1.2s						
MTN	Manton Dam	17.71	246		Pn	22 36 25.7	-0.5
WB0	Warramunga Arr	18.87	222	P	P	22 36 38.8	-0.5
WB0				IAmb	IAmb	22 36 55.8	
	comp=Z,12nm,1.3s						
WR0	Warramunga Arr	18.91	221	P	P	22 36 39.2	-0.5
WR0				IAmb	IAmb	22 36 39.9	
	comp=Z,9.5nm,0.9s						
WRAB	Tennant Creek	19.02	222	P	P	22 36 39.9	-1.0
	comp=Z,12nm,0.6s						
WB2	Warramunga Arr	19.03	222	P	P	22 36 40.2	-0.7
WB2				IAmb	IAmb	22 36 50.4	
	comp=Z,32nm,1.8s						
WRA	Warramunga Arr	19.03	222	P	P	22 36 40.6	-0.4
	comp=Z,1.1nm,0.3s,baz=51,slow=10,SNR=29						
WRA	Warramunga Arr	19.03	222	P	P	22 36 39.4	-1.6
EIDS	Eidsvold	19.59	171	P	P	22 36 46.3	-0.8
EIDS				IAmb	IAmb	22 37 31.4	
	comp=Z,20nm,1.3s						
RMQ	Roma	20.46	177	P	P	22 36 57.0	+0.5
QLP	Quilpie	20.79	189	P	P	22 36 59.3	-0.8
	comp=Z,58nm,0.5s						
KNRA	Kununurra	20.94	241	P	P	22 37 01.6	-0.2
KNRA	Kununurra	20.94	241	P	P	22 37 01.8	0.0
	comp=Z,19nm,1.4s						
AS31	Alice Springs	22.06	216	P	P	22 37 13.2	-0.6
AS31				IAmb	IAmb	22 37 14.5	
	comp=Z,2.5nm,0.5s						
ASAR	Alice Springs	22.06	216	P	P	22 37 13.5	-0.3
	comp=Z,4.1nm,0.4s,baz=48,slow=9.3,SNR=101						
ASAR	Alice Springs	22.06	216	P	P	22 37 13.1	-0.7
INKA	Innaminka	22.67	196	P	P	22 37 20.3	+0.1
	comp=Z,16nm,0.5s						
OOD	Oodnadatta	24.55	206	P	P	22 37 38.3	+0.2
FITZ	Fitzroy Crossi	24.69	239	P	P	22 37 40.2	+0.7
	comp=Z,9.3nm,0.6s,baz=58,slow=8.4,SNR=25						
LCRK	Leigh Creek	25.96	199	P	P	22 37 50.3	-0.6
STKA	Stephens Creek	26.43	192	P	P	22 37 55.6	+0.5
	comp=Z,4.2nm,0.6s,baz=2.8,slow=8.1,SNR=12						
STKA	Stephens Creek	26.43	192	P	P	22 37 55.6	+0.5
STKA	Stephens Creek	26.43	192	P	P	22 37 55.1	0.0
WRKA	Warakurna	26.57	222	P	P	22 37 56.3	-0.3
	comp=Z,12nm,1.2s						
MULG	Mulgathing	27.41	206	P	P	22 38 04.3	+0.3
	comp=Z,15nm,1.7s						
SONM	Songino Array	64.69	331	P	P	22 42 56.7	+0.8
	comp=Z,0.1nm,0.5s,baz=141,slow=7.1,SNR=1.8						
MKAR	Makanchi Array	77.89	320	P	P	22 44 16.0	+0.5
	comp=Z,0.2nm,0.7s,baz=99,slow=6.3,SNR=1.7						
TORD	Torodi Ar. Bea	145.75	285	PKPbc	PKPdf	22 51 56.4	-0.7
	comp=Z,0.3nm,0.7s,baz=85,slow=2.8,SNR=4.2						

IDC 31 22:34:10.2±2.9**, 19.°20S**×**66.°70W, h0^{km}, mb3.5**/2**, mb1 3.8**/4**, mb1mx3.6**/34**, mbtmp3.6**/4**, ML3.6**/2**, Error ellipse: s-maj=65.8km s-min=32.1km az=34.0, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.20	335	Pn	Pn	22 35 03.3	+0.9
	5.3nm,0.3s,baz=148,slow=14,SNR=101						
LPAZ				Sn	Sn	22 35 41.1	-0.4
	8.4nm,0.3s,baz=272,slow=22,SNR=9.3						
SIV	San Ignacio	6.24	60	Pn	Pn	22 35 43.9	+0.2
	1.4nm,0.3s,baz=247,slow=12,SNR=18						
SIV				Sn	Sn	22 36 49.3	-6.4
	0.7nm,0.3s,baz=327,slow=17,SNR=5.8						
TORD	Torodi Ar. Bea	74.62	70	P	P	22 45 51.9	0.0
	0.5nm,1.0s,baz=264,slow=5.6,SNR=1.7						
YKA	Yellowknife Ar	89.73	340	P	P	22 47 09.7	-0.3
	0.2nm,0.6s,baz=125,slow=4.9,SNR=5.5						

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*OSPL **31** 22:39:51.4±0.3, 19.°08N×73.°91W, h10^{km}±3^{km}, ML2.9*

*SSNC **31** 22:39:52.0±1.4, 19.°40N×73.°76W, h4^{km}±11^{km}, MD3.2, ML3.0, MW3.0*

ISC 31 22:39:49.2±1.8**, 19.°30N**±0.°07×**73.°81W**±0.°04**, h11^{km}**±13^{km}**, n17,** σ**1^{s}.94**/26**, Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASC	Masc	0.95	335	*i* P	Pg	22 40 07.8	+0.1
MASC				*e*S	Sg	22 40 18.8	-1.3
MASC				IAML		22 40 19.8	
	comp=E,317nm,0.2s						
MASC				IAML		22 40 22.9	
	comp=N,193nm,0.2s						
GTBY	Guantanamo Bay	1.38	297	*e*P	Pn	22 40 15.1	+0.8
GTBY				*e*S	Sb	22 40 32.9	+0.3
GTBY	Guantanamo Bay	1.38	297	*i* P	Pn	22 40 15.4	+1.1
GTBY				*e*S	Sb	22 40 33.1	+0.6
GTBY				IAML		22 40 36.5	
	comp=Z,156nm,0.3s						
LGNH	Logne	1.38	125	*i* P	Pn	22 40 14.7	+0.3
LGNH				*e*S	Sb	22 40 31.7	-1.0
LGNH				IAML		22 40 33.3	
	comp=Z,63nm,0.4s						
GTMO	Guantanamo	1.48	302	*e*P	Pn	22 40 14.8	-0.9
GTMO				*e*S	Sn	22 40 32.9	-2.1
GTMO				IAML		22 40 36.7	
	comp=E,6µm,0.2s						
GTMO				IAML		22 40 37.2	
	comp=N,5µm,0.3s						
JAKH	Jacmel	1.62	131	*i* P	Pn	22 40 17.4	-0.2
JAKH				IAML		22 40 41.8	
	comp=Z,106nm,0.2s						
PAPH	Port-au-Prince	1.62	118	*i* P	Pn	22 40 18.1	+0.4
PAPH				IAML		22 40 41.6	
	comp=Z,196nm,0.1s						
MOAC	Moa	1.73	321	*e*P	Pn	22 40 20.8	+1.6
MOAC				*e*S	Sn	22 40 43.4	+2.1
MOAC				IAML		22 40 43.6	
	comp=E,97nm,0.4s						
MOAC				IAML		22 40 44.0	
	comp=N,74nm,0.4s						
RCC	Rio Carpintero	1.91	291	*e*P	Pn	22 40 22.2	+0.6
RCC				*e*S	Sn	22 40 45.8	+0.1
RCC				IAML		22 40 51.1	
	comp=N,125nm,0.2s						
RCC				IAML		22 40 51.3	
	comp=E,141nm,0.2s						
LONE2	Loma La Sidra	2.33	108	*i* P	Pn	22 40 28.5	+1.0
LONE2				IAML		22 41 08.0	
	comp=Z,141nm,1.4s						
SDDR	Presa de Saban	2.40	97	*e*P	Pn	22 40 29.3	+0.8
SDDR				*e*S	Sn	22 40 59.5	+1.6
SDDR	Presa de Saban	2.40	97	*i* P	Pn	22 40 30.3	+1.8
SDDR				IAML		22 41 07.6	
	comp=Z,83nm,0.5s						
HLGC	Holguin	2.64	307	*e*P	Pn	22 40 36.3	+4.5
HLGC				IAML		22 41 16.8	
	comp=N,15nm,0.6s						
HLGC				IAML		22 41 23.8	
	comp=E,18nm,0.6s						
LMGC	Las Mercedes	3.11	285	*e*P	Pn	22 40 38.1	0.0
LMGC				*e*S	Sn	22 41 12.7	-2.6
LMGC				IAML		22 41 20.2	
	comp=N,45nm,0.1s						
LMGC				IAML		22 41 22.1	
	comp=E,50nm,0.1s						
GRTK	Grand Turk	3.33	48	*e*P	Pn	22 40 40.4	-0.9
MTDJ	Mount Denham	3.69	254	*e*P	Pn	22 40 49.0	+2.8
CCCC	Cccc	4.17	298	*e*P	Pn	22 40 50.7	-2.0
CCCC				*e*S	Sn	22 41 36.7	-4.7
CCCC				IAML		22 41 43.1	
	comp=E,3.5nm,0.4s						
CCCC				IAML		22 41 44.8	
	comp=N,2.5nm,0.5s						

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*IDC **31** 23:11:24.5±1.5, 26.°42S×141.°74E, h0^{km}, mb3.4/2, mb1 3.7/7, mb1mx3.4/39, mbtmp3.6/7, ML3.6/5, Error ellipse: s-maj=24.6km s-min=19.2km az=95.0*

ISC 31 23:11:25.0±0.9**, 26.°34S**±0.°07×**141.°65E**±0.°08**, h10^{km}, n7,** σ**3^{s}.45**/11**, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	5.52	180	Pn	Pn	23 12 48.9	+1.6
	1.1nm,0.3s,baz=357,slow=14,SNR=19						
STKA				Sn	Sn	23 13 45.5	-5.3
	1.0nm,0.3s,baz=330,slow=18,SNR=3.6						
STKA				Lg	Lg	23 14 15.7	
	1.1nm,0.3s,baz=292,slow=16,SNR=3.5						
ASAR	Alice Springs	7.51	289	Pn	Pn	23 13 16.2	+1.5
	0.7nm,0.3s,baz=111,slow=14,SNR=32						
ASAR				Sn	Sn	23 14 36.2	-3.7
	1.1nm,0.3s,baz=108,slow=24,SNR=7.6						
ASAR				Lg	Lg	23 15 30.1	
	baz=101,slow=28,SNR=1.8						
CTA	Charters Tower	7.52	35	Pn	Pn	23 13 15.7	+0.8
	1.3nm,0.3s,baz=208,slow=14,SNR=14						
CTA				Sn	Sn	23 14 35.9	-4.3
	2.1nm,0.3s,baz=248,slow=21,SNR=7.8						
CTA				Lg	Lg	23 15 25.9	
	0.3nm,0.3s,baz=63,slow=13,SNR=1.1						
WRA	Warramunga Arr	9.26	312	Pn	Pn	23 13 40.0	+1.3
	0.6nm,0.3s,baz=131,slow=12,SNR=26						
WRA				Sn	Sn	23 15 18.6	-4.3
	0.8nm,0.3s,baz=138,slow=24,SNR=3.7						
WRA				Lg	Lg	23 16 16.5	
	baz=122,slow=27,SNR=2.0						
FITZ	Fitzroy Crossi	16.93	296	Pn	Pn	23 15 23.9	+1.8
	0.1nm,0.3s,baz=118,slow=10,SNR=2.1						
FITZ				Sn	Sn	23 18 17.5	-13
	0.1nm,0.3s,baz=150,slow=20,SNR=2.0						
SONM	Songino Array	80.35	337	P	P	23 23 38.4	+2.1
	0.2nm,0.5s,baz=151,slow=6.4,SNR=2.9						
MKAR	Makanchi Array	90.36	324	P	P	23 24 27.1	+0.8
	0.1nm,0.6s,baz=122,slow=5.2,SNR=1.4						

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*MOS **31** 23:11:28.0±0.8, 42.°24N×133.°31E, h475^{km}, mb3.9/11, Error ellipse: s-maj=9.8km s-min=7.5km az=101.8*

*IDC **31** 23:11:29.4±0.7, 42.°25N×133.°20E, h473^{km}±7^{km}, mb3.0/17, mb1 3.2/24, mb1mx3.0/67, mbtmp3.9/24, Error ellipse: s-maj=13.5km s-min=10.7km az=155.0*

*JMA **31** 23:11:29.2±0.4, 42.°21N×134.°20E, h552^{km}, M3.8*

*SKHL **31** 23:11:29.1±0.4, 42.°25N×133.°50E, h488^{km}±9^{km}, mb4.3/1, msh3.8/2*

*NEIC **31** 23:11:29.6±1.4, 42.°28N±0.°10×133.°2E±0.°1, h473^{km}±9^{km}, mb4.0/53, Error ellipse: s-maj=14.9km s-min=14.2km az=113.0*

ISC 31 23:11:27.7±0.4**, 42.°25N**±0.°06×**133.°36E**±0.°05**, h450^{km}, n145,** σ**1^{s}.77**/152**, mb3.8**/49**, 8C-3D, Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLA	Vladivostok	1.39	309*d*	*i*P	P	23 12 28.5	+3.4
VLA				pmax	pmax		
	comp=Z,24nm,0.6s						
USA0B	Ussuriysk Arra	2.19	333	P	P	23 12 32.7	+3.6
USA0B	Ussuriysk Arra	2.19	333	P	P	23 12 32.7	+3.6
USRK	Ussuriysk Ar.	2.19	333	P	P	23 12 32.8	+3.7
	baz=147,slow=4.5,SNR=142						
USRK				S	S	23 13 24.6	+5.4
	baz=166,slow=8.8,SNR=1.7						
MDJ	Mudanjiang	3.62	312	P	P	23 12 42.5	+3.0
JSH	Shimam	4.96	83	P	P	23 12 54.2	+2.6
JSD	Sado	5.64	137		P	23 13 00.4	+2.0
JKB	Kayabe	5.72	91	P	P	23 13 00.5	+1.4
JOT	Ohata	5.81	96	P	P	23 13 01.4	+1.4
JTM	Tenmabayashi	5.97	102	P	P	23 13 03.4	+1.7
JEW	Eniwo	6.01	82	P	P	23 13 03.9	+1.9
JRG	Rokugo	6.21	115	P	P	23 13 05.7	+1.5
JRG				*e*S	S	23 14 23.3	+0.3
KS19	Wonju Array Si	6.35	223	P	P	23 13 08.7	+3.0
KSRS	Korea Array	6.36	223	P	P	23 13 09.1	+3.4
	comp=Z,1.5nm,0.3s,baz=38,slow=10,SNR=50						
KSAR	Wonju Array Be	6.39	223	P	P	23 13 07.8	+1.8
KSAR	Wonju Array Be	6.39	223	P	P	23 13 07.8	+1.8
MJB9	Matsu-Tunnel	6.82	145	P	P	23 13 13.4	+2.8
MAJO	Matsushiro	6.83	145	P	P	23 13 13.6	+2.9
MAJO	Matsushiro	6.83	145	P	P	23 13 13.6	+2.9
MJAR	Matsushiro Arr	6.83	145	P	P	23 13 13.0	+2.4
	comp=Z,0.1nm,0.3s,baz=333,slow=11,SNR=6.4						
JMK	Ichinoseki	6.83	116	P	P	23 13 11.1	+0.5
MJA0	Matsu Arr-Jizo	6.84	145	*e*P	P	23 13 11.9	+1.0
JNG	Nsakai	6.90	146	P	P	23 13 13.7	+2.2
ASAJ	Asahikawa	7.01	71	P	P	23 13 14.0	+1.6
	comp=Z,5.1nm,0.3s,baz=229,slow=8.3,SNR=26						
ASAJ	Asahikawa	7.01	71	P	P	23 13 14.3	+2.0
JKA	Kamikawa-asahi	7.01	71	P	P	23 13 14.3	+1.9
KLR	Kul'dur	7.07	351	P	P	23 13 14.8	+1.9
	comp=Z,3.1nm,0.3s,baz=167,slow=8.9,SNR=99						
KLR	Kul'dur	7.07	351*c*	*i*P	P	23 13 14.5	+1.6
JWT	Wachi	7.14	166	P	P	23 13 18.4	+4.4
JWT	Wachi	7.14	166	P	P	23 13 17.9	+3.9
JMM	Marumori	7.19	125	P	P	23 13 15.0	+0.6
JMM	Marumori	7.19	125	P	P	23 13 15.1	+0.6
JHS	Saijyo	7.25	182	P	P	23 13 18.2	+3.1
JHS	Saijyo	7.25	182	P	P	23 13 18.1	+2.9
ERM	Erimo	7.29	89	P	P	23 13 17.4	+2.0
ERM	Erimo	7.29	89	P	P	23 13 17.4	+2.0
JEM	Erimo	7.29	89	P	P	23 13 17.9	+2.6
JCH	Churui	7.41	84	P	P	23 13 16.8	+0.1
JCH				S	S	23 14 41.7	-4.3
YSS	Yuzh-Sakhalins	8.19	52⇑	*e*P	P	23 13 27.1	+2.2
YSS				pmax	pmax		
	comp=Z,35nm,1.7s						
JMN	Monobe	8.52	177	P	P	23 13 31.8	+3.0
JNU	Nakatsue	9.32	193	P	P	23 13 39.7	+2.2
	comp=Z,1.0nm,0.3s,baz=27,slow=6.8,SNR=13						
JNU	Nakatsue	9.32	193	P	P	23 13 40.5	+3.0
SHO	Shikotan	9.99	76	*e*P	P	23 13 45.0	+0.4
SHO				*e*S	S	23 15 34.2	-3.1
JHJ2	Mitsune	10.46	149	P	P	23 13 53.7	+3.9
ULN	Ulaanbaatar	19.36	296*c*	*e*P	P	23 15 23.0	-0.2
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ULN	Ulaanbaatar	19.36	296	P	P	23 15 22.5	-0.7
ULN				IAmb	IAmb	23 15 24.5	
	comp=Z,2.8nm,0.8s						
SONM	Songino Array	19.80	296	P	P	23 15 27.2	0.0
	comp=Z,0.5nm,0.3s,baz=94,slow=9.3,SNR=26						
SONM	Songino Array	19.80	296	P	P	23 15 27.0	-0.2
SONM				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SONM	Songino Array	19.80	296		P	23 15 27.0	-0.2
SONM				IAmb	IAmb	23 15 28.2	
	comp=Z,3.1nm,1.2s						
YAK	Yakutsk	19.93	355*c*	*e*P	P	23 15 28.1	+0.1
YAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MA2	Magadan	20.41	26*c*	*e*P	P	23 15 33.2	+0.8
MA2				pmax	pmax		
	comp=Z,16nm,2.5s						
MA2	Magadan	20.41	26	P	P	23 15 32.9	+0.4
SEY	Seymchan	23.54	22	P	P	23 16 02.2	+1.6
	comp=Z,1.3nm,0.3s,baz=227,slow=10,SNR=14						
BILL	Bilibino	31.22	23	*e*P	P	23 17 08.9	+0.8
BILL				*e**PP	PP	23 18 33.5	+2.0
BILL				pmax	pmax		
	comp=Z,8.0nm,2.5s						
DGZ	Jazzator, Alta	32.35	299*d*	*e*P	P	23 17 18.4	+0.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZAA0	Zalesovo Array	33.81	307	P	P	23 17 29.5	-0.9
ZAA0				IAmb	IAmb	23 17 30.5	
	comp=Z,3.7nm,1.1s						
ZALV	Zalesovo Beam	33.81	307	P	P	23 17 29.4	-0.9
	comp=Z,1.4nm,0.4s,baz=83,slow=8.7,SNR=13						
ZALV				ScP	ScP	23 22 54.6	-3.6
	comp=Z,0.9nm,0.5s,baz=93,slow=3.5,SNR=6.5						
ZALV	Zalesovo Beam	33.81	307	P	P	23 17 29.3	-1.1
MK31	Makanchi Array	36.17	295	P	P	23 17 49.6	-0.8
MK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MK31	Makanchi Array	36.17	295	P	P	23 17 49.6	-0.8
MK31				IAmb	IAmb	23 17 50.3	
	comp=Z,2.6nm,0.7s						
MKAR	Makanchi Array	36.17	295	P	P	23 17 49.6	-0.7
	comp=Z,2.6nm,0.6s,baz=84,slow=11,SNR=43						
MKAR	Makanchi Array	36.17	295	P	P	23 17 49.5	-0.8
ATKA	Atka Island	36.24	56	P	P	23 17 50.5	-0.3
MAKZ	Makanchi	36.37	295	P	P	23 17 51.1	-1.0
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	Makanchi	36.37	295	P	P	23 17 51.1	-1.0
MAKZ				IAmb	IAmb	23 17 52.1	
	comp=Z,3.9nm,0.9s						
CHTO	Chiang Mai	37.35	242	P	P	23 17 59.3	-1.2
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CHTO	Chiang Mai	37.35	242	P	P	23 17 59.3	-1.2
CMAR	Chiang Mai Arr	37.61	242	P	P	23 18 01.6	-1.0
	comp=Z,0.4nm,0.5s,baz=34,slow=7.6,SNR=4.3						
KURK	Kurchatov	37.85	302*d*	*i*P	P	23 18 02.8	-1.4
KURK				pmax	pmax		
	comp=Z,19nm,1.3s						
KURK	Kurchatov	37.85	302	P	P	23 18 03.1	-1.1
UNV	Unalaska Valle	40.65	52	P	P	23 18 30.1	+3.3
TARG	Taragay, Kyrgy	40.66	289	IAmb	IAmb	23 18 28.6	
	comp=Z,4.6nm,0.8s						
ANM	Nome	40.68	36	P	P	23 18 28.1	+1.2
ANM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANM	Nome	40.68	36	P	P	23 18 28.1	+1.2
KDJ	Kajisay	40.96	289	P	P	23 18 29.3	-0.5
KDJ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KDJ	Kajisay	40.96	289	P	P	23 18 29.3	-0.5
KDJ				IAmb	IAmb	23 18 29.6	
	comp=Z,3.5nm,0.6s						
PATS	Pohnpei	41.62	141	P	P	23 18 35.0	0.0
BOOM	Boomskoye usch	41.71	290	P	P	23 18 35.7	0.0
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BOOM	Boomskoye usch	41.71	290	P	P	23 18 35.7	0.0
BOOM				IAmb	IAmb	23 18 36.1	
	comp=Z,3.1nm,0.6s						
BRVK	Borovoye	42.52	307	P	P	23 18 40.8	-0.9
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRVK	Borovoye	42.52	307	P	P	23 18 40.8	-0.9
AAK	Ala-Archa	42.66	291*c*	*e*P	P	23 18 42.6	-0.7
AAK				*i* *PP	pP	23 20 12.1	+3.9
AAK				pmax	pmax		
	comp=Z,16nm,2.5s						
AAK	Ala-Archa	42.66	291	P	P	23 18 42.5	-0.7
AAK				IAmb	IAmb	23 18 43.3	
	comp=Z,3.7nm,0.9s						
KKAR	Karatay Array	45.23	293	P	P	23 19 01.9	-1.2
KKAR	Karatay Array	45.23	293	P	P	23 19 01.9	-1.2
SVW2	Sparrevohn	45.36	40	P	P	23 19 06.2	+2.4
IMAR	Indian Mountai	45.52	33	P	P	23 19 05.8	+0.8
J20K	Nowinta River	45.57	36	P	P	23 19 06.6	+1.2

J20K				IAmb	IAmb	23 19 07.3	
	comp=Z,4.1nm,0.9s						
O18K	Koktuh Hills	45.76	42	P	P	23 19 08.5	+1.6
O18K				IAmb	IAmb	23 19 25.9	
	comp=Z,8.3nm,1.1s						
H21K	Melozitna Rive	45.95	34	P	P	23 19 08.6	+0.4
BTK	Batken	46.20	289	P	P	23 19 09.3	-1.4
BTK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BTK	Batken	46.20	289	P	P	23 19 09.3	-1.4
PPLA	Purkeypile	46.63	37	P	P	23 19 14.7	+1.0
PPLA				IAmb	IAmb	23 19 18.3	
	comp=Z,12nm,1.2s						
Q19K	Cape Douglas,	46.74	43	P	P	23 19 13.4	-1.0
TOLK	Toolik Lake Re	46.83	29	P	P	23 19 15.4	+0.5
KULM	Kulim	46.89	227	P	P	23 19 15.1	-1.0
KTH	Kantishna Hill	47.08	36	P	P	23 19 17.6	+0.7
KTH				IAmb	IAmb	23 19 17.8	
	comp=Z,4.9nm,1.0s						
NIL	Nilore	47.30	280	P	P	23 19 18.9	-0.2
NIL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NIL	Nilore	47.30	280	P	P	23 19 18.9	-0.2
NIL				IAmb	IAmb	23 19 19.7	
	comp=Z,7.9nm,0.9s						
OHAK	Old Harbor	47.33	45	P	P	23 19 18.3	-0.5
OHAK				IAmb	IAmb	23 19 31.9	
	comp=Z,12nm,1.2s						
KDAK	Kodiak Island	47.55	44	P	P	23 19 20.7	+0.2
KDAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KDAK	Kodiak Island	47.55	44	P	P	23 19 20.7	+0.2
KDAK				IAmb	IAmb	23 19 27.7	
	comp=Z,5.0nm,0.8s						
CNPM	China Poot	47.80	42	P	P	23 19 22.9	+0.5
MCK	McKinley	47.91	36	P	P	23 19 23.7	+0.5
MCK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MCK	McKinley	47.91	36	P	P	23 19 23.7	+0.5
MCK				IAmb	IAmb	23 19 40.2	
	comp=Z,5.7nm,1.2s						
BRLK	Bradley Lake	47.91	41	P	P	23 19 23.9	+0.6
H24K	Noodor Dome	47.93	33	P	P	23 19 24.6	+1.3
CHGR	Chuyangaron	47.95	288	P	P	23 19 23.2	-0.8
CHGR				pmax	pmax		
	comp=Z,13nm,0.7s						
CHGR	Chuyangaron	47.95	288	P	P	23 19 23.1	-0.8
MDM	Murphy Dome	47.96	34	P	P	23 19 24.7	+1.1
WRH	Wood River Hil	48.12	35	P	P	23 19 25.9	+1.2
COLA	College	48.13	34⇑	eP	P	23 19 26.4	+1.6
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CCB	Clear Creek Bu	48.20	35	P	P	23 19 25.6	+0.3
ARU	Arti	48.30	314c	iP	P	23 19 24.7	-1.5
ARU				S	S	23 25 49.1	-2.4
GHO	Glory Hole Cre	48.36	38	P	P	23 19 27.9	+1.2
GHO				IAmb	IAmb	23 19 34.0	
	comp=Z,11nm,1.2s						
IL31		48.56	34	P	P	23 19 28.5	+0.6
IL31				IAmb	IAmb	23 19 29.1	
	comp=Z,2.3nm,0.6s						
ILAR	Eielson Array	48.56	34	P	P	23 19 28.4	+0.4
	comp=Z,1.1nm,0.5s,baz=286,slow=7.7,SNR=18						
PWL	Port Wells	48.87	40	P	P	23 19 29.5	-0.9
PWL				IAmb	IAmb	23 19 37.8	
	comp=Z,9.1nm,1.1s						
BMAR	Burnt Mountain	48.88	30	P	P	23 19 32.1	+1.6
SCM	Sheep Creek Mo	49.08	38	P	P	23 19 32.8	+0.8
SCM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SCM	Sheep Creek Mo	49.08	38	P	P	23 19 32.8	+0.8
SCM				IAmb	IAmb	23 19 49.4	
	comp=Z,2.7nm,0.6s						
ABKAR	Akbulak array	49.84	305	P	P	23 19 36.6	-1.1
ABKAR				IAmb	IAmb	23 19 36.9	
	comp=Z,3.2nm,0.5s						
ABKAR	Akbulak array	49.84	305	P	P	23 19 36.5	-1.3
N25K	Chitina, Valde	50.39	38	P	P	23 19 42.8	+1.0
N25K				IAmb	IAmb	23 20 01.2	
	comp=Z,11nm,1.1s						
BCAR	Beaver Creek A	51.19	36	P	P	23 19 48.7	+1.2
BARN	Barnard Glacie	51.91	38	P	P	23 19 54.0	+1.0
BARN				IAmb	IAmb	23 19 55.4	
	comp=Z,11nm,1.1s						
CTGM	Chitina Glacie	52.09	38	P	P	23 19 55.4	+1.1
INK	Inuvik	52.63	28	P	P	23 19 58.3	+0.5
	comp=Z,1.1nm,0.5s,baz=299,slow=11,SNR=10						
A36M	Sachs Harbour	53.77	22	P	P	23 20 06.3	+0.4
MTN	Manton Dam	54.86	183	P	P	23 20 14.0	-0.3
C36M	Paulatuk	55.32	25	P	P	23 20 17.4	+0.5
C36M				IAmb	IAmb	23 20 17.6	
	comp=Z,4.1nm,0.4s						
GEYT	Alibeck	55.97	293	P	P	23 20 20.9	-1.2
	comp=Z,1.5nm,0.8s,baz=74,slow=6.2,SNR=4.2						
FIA1	FINESS Array S	61.21	328	P	P	23 20 55.8	-1.2
FINES	FINESS Array B	61.21	328	P	P	23 20 56.3	-0.8
	comp=Z,1.4nm,0.5s,baz=76,slow=8.0,SNR=14						
YKA	Yellowknife Ar	62.35	29	P	P	23 21 04.7	+0.2
	comp=Z,0.4nm,0.5s,baz=310,slow=6.3,SNR=10.0						
ASAR	Alice Springs	65.59	179	P	P	23 21 25.7	-0.1
	comp=Z,0.3nm,0.9s,baz=356,slow=5.9,SNR=1.6						
AKASG	Malin Array Be	66.31	318	P	P	23 21 28.7	-1.4
	comp=Z,1.7nm,0.6s,baz=50,slow=6.3,SNR=16						
AKASG	Malin Array Be	66.31	318	eP	P	23 21 28.6	-1.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	66.86	333	P	P	23 21 32.2	-1.1
	comp=Z,0.7nm,0.8s,baz=54,slow=8.3,SNR=1.6						
BRTR	Keskin Array B	70.74	306	P	P	23 21 56.1	-1.3
	comp=Z,0.6nm,0.8s,baz=61,slow=6.8,SNR=1.4						
FRB	Frobisher Bay	72.92	10	P	P	23 22 08.4	-1.0
	comp=Z,1.0nm,0.6s,baz=288,slow=4.5,SNR=3.6						
GERES	GERESS Array B	74.91	324	P	P	23 22 20.4	-0.9
	comp=Z,0.2nm,0.4s,baz=43,slow=5.8,SNR=7.1						
GERES	GERESS Array B	74.91	324	eP	P	23 22 20.9	-0.4
NVAR	Mina Array Bea	76.63	50	P	P	23 22 32.0	+0.8
	comp=Z,0.5nm,0.6s,baz=298,slow=1.9,SNR=2.6						
PDAR	Pinedale Array	78.21	42	P	P	23 22 40.0	+0.3
	comp=Z,0.3nm,0.5s,baz=310,slow=4.5,SNR=2.8						

NEIC 31 23:12:39.3±0.4**, 36°.758N**±0°.007×**97°.79W**±0°.01**, h5**^{km}±5^{km}**,**
mb_Lg2.1/3**, Error ellipse: s-maj=1.6km s-min=0.8km**
az=61.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.11	328	Pg	Pg	23 12 41.6	0.0
GC02				Sg	Sg	23 12 43.1	-0.1
KAN14	Manchester OK	0.24	325	Pg	Pg	23 12 44.1	0.0
KAN14				Sg	Sg	23 12 47.2	0.0
KAN17	Caldwell West	0.29	4		Pg	23 12 44.9	0.0
KAN17				Sg	Sg	23 12 48.7	+0.1
CROK	Carrier	0.30	212	Pg	Pg	23 12 45.5	+0.4
CROK				Sg	Sg	23 12 50.1	+1.1
OK032	Salt Plains WL	0.34	278	Pg	Pg	23 12 46.0	+0.1
OK032				Sg	Sg	23 12 50.7	+0.2
KAN13	South Haven SW	0.35	44	Pg	Pg	23 12 46.4	+0.2
KAN13				Sg	Sg	23 12 51.3	+0.5
KAN05	Bluff City Nor	0.36	349	Pg	Pg	23 12 46.1	-0.1
KAN05				Sg	Sg	23 12 51.0	+0.1
KAN01	Argonia South	0.40	3		Pg	23 12 46.9	0.0
KAN01				Sg	Sg	23 12 52.2	0.0
KAN10	Anthony SW Sta	0.44	326	Pg	Pg	23 12 47.7	-0.1
KAN10				Sg	Sg	23 12 53.7	+0.1
BLOK	Blackwell	0.46	90	Pg	Pg	23 12 48.3	+0.2
BLOK				Sg	Sg	23 12 54.4	+0.2
KAN08	Anthony NE Sta	0.49	343		Pg	23 12 48.6	-0.1
KAN08				Sg	Sg	23 12 55.3	+0.2
KAN06	Argonia West S	0.49	353		Pg	23 12 48.6	-0.1
KAN06				Sg	Sg	23 12 55.4	+0.2
KAN16	Harper SW Stat	0.52	335	Pg	Pg	23 12 49.1	-0.1
KAN16				Sg	Sg	23 12 56.2	+0.2
KAN12	Harper NE Stat	0.56	343	Pg	Pg	23 12 49.9	-0.3
KAN12				Sg	Sg	23 12 57.5	+0.1
T35A	Sooner Cattle	1.03	81		Pg	23 12 58.9	-0.2
QUOK	Quay	1.05	124	Pg	Pg	23 12 59.3	0.0
U32A	Winter Ranch,	1.05	249	Pg	Pg	23 12 58.9	-0.5
BCOK	Bluff Creek, N	1.11	173	Pg	Pg	23 13 00.3	-0.2
OK031	S. Brethren Rd	1.11	136	Pg	Pg	23 13 00.4	-0.1
OK034	N. Norfolk Rd.	1.14	130		Pg	23 13 01.1	-0.1
OK025	Westminster Rd	1.23	163		Pg	23 13 02.7	-0.2
OKCFA	Oklahoma City	1.37	168	Pn	Pn	23 13 05.0	0.0
OKCSW	OKLAHOMA CITY	1.38	168	Pn	Pn	23 13 04.8	-0.3
FNO	Franklin	1.53	168	Pn	Pn	23 13 07.2	-0.1
R32A	Long Quarter,	1.82	336	Pn	Pn	23 13 11.2	0.0
R32A				IAmb_Lg		23 13 36.8	
	comp=Z,10nm,1.0s						
TUL1	Leonard	1.82	117	Pn	Pn	23 13 10.8	-0.4
X34A	Smith Ranch, M	2.15	181	Pn	Pn	23 13 16.0	+0.2
WMOK	Wichita Mounta	2.17	202	Pn	Pn	23 13 16.6	+0.5
KSU1	Kansas State U	2.52	21	Pn	Pn	23 13 21.2	+0.4
CBKS	Cedar Bluff	2.57	324	Pn	Pn	23 13 22.3	+0.7
HHAR	Hobbs	3.13	98	IAmb_Lg		23 14 22.1	
	comp=Z,2.6nm,0.7s						
U40A	Yellville	3.99	94	IAmb_Lg		23 14 45.8	
	comp=Z,5.6nm,0.9s						

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*NEIC **31** 23:15:05.9±2.9, 43°.66N±0°.05×105°.44W±0°.10, h0^{km}±2^{km},*
ML3.2/51, Error ellipse: s-maj=12.1km s-min=9.0km
az=83.0
*IDC **31** 23:15:06.8±2.0, 43°.62N×105°.46W, h0^{km}, mb3.7/2,*
mb1 3.3/5, mb1mx3.2/51, mbtmp3.2/5, ML3.1/3, Error
ellipse: s-maj=43.7km s-min=12.9km az=152.0
ISC 31 23:15:06.1±0.9**, 43°.66N**±0°.04×**105°.44W**±0°.04**, h0**^{km}**, n37,**
σ**1**^{s}.**26**/32**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.12	65		Pg	23 15 26.6	-1.0
K22A	Casper	1.28	219	Pg	Pn	23 15 31.5	+0.1
K22A				IAML		23 15 56.6	
	comp=E,330nm,0.9s						
RWWY	Rawlins	2.36	214	Pg	Pb	23 15 49.6	-0.1
RWWY				IAML		23 16 29.7	
	comp=E,125nm,0.8s						
N23A	Red Feather La	2.79	188	Pn	Pn	23 15 51.8	-0.5
N23A				IAML		23 16 37.8	
	comp=N,94nm,0.7s						
N23A				IAML		23 16 46.7	
	comp=E,100nm,0.8s						
LAO	LASA Array	3.08	350	Pn	Pn	23 15 56.3	+0.2
RLMT	Red Lodge	3.11	299	Pn	Pn	23 15 57.6	+0.9
RLMT				IAML		23 16 51.7	
	comp=E,50nm,0.7s						
RLMT				IAML		23 16 57.9	
	comp=E,59nm,0.9s						
BW06	Boulder Array	3.14	255	Pn	Pn	23 15 55.5	-1.5
PD31	Pinedale Array	3.14	255	Pn	Pn	23 15 58.8	+1.7
PDAR	Pinedale Array	3.14	255	Pn	Pb	23 16 00.1	-2.8
	comp=E,1.2nm,0.3s,baz=76,slow=17,SNR=22						
PDAR				Lg	Lg	23 16 44.5	
	comp=E,4.3nm,0.3s,baz=74,slow=32,SNR=12						
PDAR	Pinedale Array	3.14	255		Pn	23 15 58.2	+1.2
YMP	Mirror Lake Pl	3.56	289	Pn	Pn	23 16 04.5	+1.6
LKWY	Lake	3.68	286	Pn	Pn	23 16 03.9	-0.7
LKWY				IAML		23 16 33.5	
	comp=E,49nm,0.7s						
GCMT	Greycliff	3.69	307	Pn	Pn	23 16 06.3	+1.8
OGNE	Ogallala	3.71	136	Pg	Pg	23 16 16.2	-1.0
LOHW	Long Hollow	3.75	271	Pg	Pg	23 16 17.4	-0.5
LOHW				IAML		23 17 16.7	
	comp=E,25nm,0.8s						
LOHW				IAML		23 17 45.4	
	comp=E,23nm,1.0s						
H17A	Grant Village	3.78	283	Pg	Pg	23 16 19.1	+0.6
H17A				IAML		23 17 14.8	
	comp=N,39nm,1.3s						
H17A				IAML		23 18 25.3	
	comp=E,23nm,0.2s						
FLWY	Flagg Ranch	3.83	278	Pg	Pg	23 16 19.4	-0.1
FLWY				IAML		23 17 21.3	
	comp=E,43nm,1.7s						
FLWY				IAML		23 17 22.7	
	comp=E,38nm,1.7s						
MOOW	Moose Ponds	3.85	273	Pg	Pg	23 16 18.7	-1.2
ISCO	Idaho Springs	3.86	182	Pn	Pn	23 16 09.1	+2.1
SNOW	Snow King Moun	3.87	269		Pg	23 16 20.0	-0.2
SNOW				IAML		23 17 18.9	
	comp=E,46nm,1.1s						
SNOW				IAML		23 17 25.5	
	comp=E,46nm,1.4s						
YNR	Norris Junctio	3.91	288	Pg	Pg	23 16 19.8	-1.3
REDW	Red Top Meadow	3.95	268		Pn	23 16 07.5	-0.7
YFT	Old Faithful	3.97	283	Pg	Pg	23 16 20.8	-1.3
YFT				IAML		23 17 31.1	
	comp=N,25nm,0.9s						
O20A	White River Ci	4.09	212		Pn	23 16 09.0	-1.2
O20A				IAML		23 17 28.3	
	comp=E,38nm,1.1s						
O20A				IAML		23 17 34.0	
	comp=N,44nm,1.4s						
YMR	Madison River	4.10	286	IAML		23 17 27.1	
	comp=E,41nm,0.9s						
AHID	Auburn Hatcher	4.23	260	IAML		23 17 29.6	
	comp=E,40nm,0.9s						
AHID				IAML		23 17 34.9	
	comp=E,35nm,1.6s						
YHL	Hebgen Lake	4.29	288	IAML		23 17 39.1	
	comp=E,36nm,1.2s						
YHL				IAML		23 17 47.7	
	comp=N,28nm,0.9s						
RDMU	Red Mountain	4.35	226	Pg	Pg	23 16 29.4	-0.1
RDMU				IAML		23 17 30.9	
	comp=N,32nm,1.2s						
RDMU				IAML		23 17 34.6	
	comp=E,30nm,0.9s						
QLMT	Earthquake Lak	4.46	287		Pg	23 16 31.3	-0.3
SMCO	Snowmass	4.62	195		Pg	23 16 34.7	0.0
SMCO				IAML		23 17 44.8	
	comp=E,16nm,1.1s						
SMCO				IAML		23 18 08.7	
	comp=E,24nm,1.1s						
DGMT	Dagmar	4.89	10	Pn	Pn	23 16 21.4	+0.5
ELK	Elko	7.83	252	Pn	Pn	23 17 04.2	+2.7
	comp=E,0.1nm,0.3s,baz=63,slow=9.0,SNR=1.7						
I10CA	LAC DU BONNET	9.18	41	i		00 14 10.0	
	baz=217,slow=330,SNR=2.5						
ULM	Lac du Bonnet	9.28	41	Lg	Lg	23 19 54.5	
YKA	Yellowknife Ar	19.62	347	P	Pn	23 19 37.4	+0.3
	comp=E,0.0nm,0.3s,baz=159,slow=12,SNR=4.2						
ZALV	Zalesovo Beam	82.37	354	P	P	23 27 30.8	+1.2
	comp=E,0.6nm,0.7s,baz=15,slow=6.3,SNR=3.6						
MKAR	Makanchi Array	89.67	355	P	P	23 28 07.1	+1.2
	comp=E,0.2nm,0.6s,baz=0.0,slow=5.8,SNR=2.1						

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*IDC **31** 23:15:13.5±0.7, 5°.52S×11°.48W, h0^{km}, mb4.2/17,*
mb1 4.2/18, mb1mx4.1/40, mbtmp4.1/18, ML3.5/1, MS3.7/23,
Ms1 3.7/23, ms1mx3.5/77, Error ellipse: s-maj=21.2km
s-min=15.5km az=110.0
*NEIC **31** 23:15:15.7±1.2, 5°.52S±0°.06×11°.5W±0°.1, h10^{km}±1^{km},*
mb4.6/12, Error ellipse: s-maj=19.9km s-min=7.1km
az=248.0
ISC 31 23:15:14.9±0.6**, 5°.52S**±0°.08×**11°.5W**±0°.1**, h10**^{km}**, n63,**
σ**1**^{s}.**42**/36**, mb4.4**/24**, MS3.6**/22**, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	3.75	232	T	T	23 20 04.5	
	baz=54,slow=74						
H10N1	ASCENSION HYDR	3.76	232	T	T	23 20 01.5	
	baz=54,slow=74						
H10N3	ASCENSION HYDR	3.77	232	T	T	23 19 59.0	
	baz=54,slow=74						
SHEL	Horse Pasture	11.81	152	Pn	Pn	23 18 03.3	-0.3
LIC	Lamto	13.34	29	ePKP1	Pn	23 18 24.5	+0.1
	45nm,1.6s						
KIC	Kosan Boka	13.59	30	ePKP1	Pn	23 18 24.3	-3.7
	9.2nm,0.8s						
TIC	Toumodi	13.71	28	ePKP1	Pn	23 18 25.3	-4.2
DBIC	Dimbokro	13.81	29	Pn	Pn	23 18 28.7	-2.1
	0.2nm,0.3s,baz=214,slow=14,SNR=4.2						
DBIC				LR	LR	23 22 44.2	
	comp=Z,164nm,20.5s,baz=242,slow=33						
DBIC	Dimbokro	13.81	29		Pn	23 18 31.2	+0.4
KOWA	Kowa	21.23	20	P	P	23 19 60.0	-1.1
	11nm,0.9s,baz=214,slow=9.7,SNR=25						
KOWA				LR	LR	23 27 11.9	
	comp=Z,220nm,19.0s,baz=189,slow=34						
KOWA	Kowa	21.23	20	P	P	23 20 00.1	-1.1
KOWA				IAmb	IAmb	23 20 07.5	
	comp=Z,38nm,1.1s						
TORD	Torodi Ar. Bea	22.71	35	P	P	23 20 16.2	-0.9
	comp=Z,5.3nm,0.6s,baz=215,slow=10,SNR=73						
BDFB	Brasilia	37.22	251	P	P	23 22 26.8	-0.2
	comp=Z,4.0nm,0.7s,baz=53,slow=11,SNR=5.8						
BDFB	Brasilia	37.22	251	IAmb	IAmb	23 22 27.7	
	comp=Z,8.3nm,1.0s						
MDT	Midelt	38.68	9	LR	LR	23 37 54.7	
	comp=Z,53nm,18.5s,baz=24,slow=35						
LSZ	Lusaka	40.15	107	LR	LR	23 37 21.2	
	comp=Z,96nm,20.7s,baz=320,slow=33						
LSZ	Lusaka	40.15	107	P	P	23 22 51.5	-0.2
SUR	Sutherland	40.29	136	P	P	23 22 52.8	+0.1
	comp=Z,6.4nm,1.0s,baz=301,slow=14,SNR=2.5						
SUR				LR	LR	23 37 35.5	
	comp=Z,82nm,18.5s,baz=314,slow=33						
SUR	Sutherland	40.29	136	IAmb	IAmb	23 22 57.3	
	comp=Z,27nm,1.4s						
LBTB	Lobatse	40.48	123	P	P	23 22 53.8	-0.6
	comp=Z,8.7nm,1.2s,baz=316,slow=9.9,SNR=5.6						
LBTB				LR	LR	23 38 39.4	
	comp=Z,82nm,18.3s,baz=311,slow=35						
LBTB	Lobatse	40.48	123	IAmb	IAmb	23 22 55.0	
	comp=Z,16nm,1.4s						
MATP	Matopo	41.55	115	LR	LR	23 37 35.5	
	comp=Z,39nm,21.7s,baz=282,slow=32						
BOSA	Boshof	41.69	128	P	P	23 23 04.0	-0.3
	comp=Z,5.7nm,1.1s,baz=298,slow=4.6,SNR=4.0						
BOSA				LR	LR	23 37 06.1	
	comp=Z,64nm,19.1s,baz=336,slow=32						
BOSA	Boshof	41.69	128	IAmb	IAmb	23 23 04.9	
	comp=Z,15nm,1.3s						
MDP	Montagnes des	42.42	284	LR	LR	23 36 46.1	
	comp=Z,88nm,21.5s,baz=76,slow=30						
MBAR	Mbarara	42.44	85	LR	LR	23 39 08.4	
	comp=Z,256nm,19.7s,baz=238,slow=34						
KEST	Kesra	45.47	24	P	P	23 23 35.5	+1.0
	comp=Z,2.7nm,0.9s,baz=162,slow=4.5,SNR=5.4						
KEST	Kesra	45.47	24	IAmb	IAmb	23 23 50.8	
	comp=Z,13nm,1.2s						
ESDC	Sonseca Array	45.51	8	P	P	23 23 34.4	-0.2
	comp=Z,0.3nm,0.8s,baz=188,slow=8.4,SNR=1.9						
ESBB	Sonseca Array	45.51	8	P	P	23 23 35.6	+0.9
ESBB				IAmb	IAmb	23 23 35.9	
	comp=Z,8.9nm,1.3s						
CPUP	Villa Florida	48.35	239	LR	LR	23 41 12.5	
	comp=Z,45nm,22.0s,baz=36,slow=32						
PTGA	Pitinga	48.61	274	LR	LR	23 42 20.8	
	comp=Z,155nm,19.9s,baz=88,slow=34						
KMBO	Kilima Mbogo	48.84	87	P	P	23 24 02.3	+0.8
	comp=Z,0.9nm,0.7s,baz=235,slow=22,SNR=2.3						
BOAV	Boa Vista	49.60	278	P	P	23 24 05.6	-1.3
SIV	San Ignacio	49.69	254	P	P	23 24 07.9	+0.3
	comp=Z,1.2nm,0.7s,baz=117,slow=9.9,SNR=7.0						
DAVOX	Davos/Dischmat	55.42	18	LR	LR	23 48 00.7	
	comp=Z,100nm,18.4s,baz=280,slow=36						
FETA	Feichten	55.89	18	eP	P	23 24 53.9	+0.8
	comp=Z,5.4nm,1.1s						
SQTA	Sankt Quirin	56.22	18	eP	P	23 24 55.3	-0.1
	comp=Z,7.4nm,1.1s						
ABTA	Abfaltersbach	56.23	20	eP	P	23 24 59.4	+4.0
	comp=Z,10nm,1.9s						
MOTA	Moosalm	56.30	18	eP	P	23 24 59.8	+3.8
	comp=Z,5.6nm,1.2s						
WTTA	Wattenberg	56.40	19	eP	P	23 24 56.6	-0.1
	comp=Z,11nm,1.0s						
WATA	Walderalm	56.44	19	eP	P	23 24 57.0	+0.1
	comp=Z,4.5nm,1.1s						
EIL	Elat	56.64	49	LR	LR	23 49 45.5	
	comp=Z,43nm,18.1s,baz=287,slow=37						
ATD	Arta Tunnel	56.65	72	LR	LR	23 46 39.2	
	comp=Z,68nm,21.3s,baz=326,slow=33						
LVC	Limon Verde	57.87	247	LR	LR	23 49 07.0	
	comp=Z,53nm,19.2s,baz=7.5,slow=35						
GEC2	GERESS Array S	58.45	19	P	P	23 25 11.2	+0.2
GEC2				IAmb	IAmb	23 25 18.0	
	comp=Z,6.9nm,1.1s						
GERES	GERESS Array B	58.45	19	P	P	23 25 11.0	-0.1
	comp=Z,1.0nm,0.7s,baz=182,slow=6.7,SNR=11						
BRTR	Keskin Array B	61.27	39	P	P	23 25 31.7	+1.0
	comp=Z,2.3nm,0.9s,baz=221,slow=4.9,SNR=7.9						
BRTR	Keskin Array B	61.27	39	P	P	23 25 30.4	-0.3
BNN	Bunyan	62.16	40	P	P	23 25 37.4	+0.6
PLCA	Paso Flores	63.19	227	LR	LR	23 50 08.1	
	comp=Z,36nm,18.3s,baz=90,slow=33						
NNA	Nana	64.78	259	LR	LR	23 52 18.8	
	comp=Z,90nm,21.4s,baz=61,slow=34						
AKASG	Malin Array Be	66.05	27	P	P	23 26 01.1	-0.8
	comp=Z,3.9nm,0.9s,baz=225,slow=7.0,SNR=14						
AKBB	Malin Array Si	66.05	27	P	P	23 26 01.4	-0.4
SNAA	Sanae	66.30	177	P	P	23 26 03.3	+0.1
	comp=Z,1.6nm,0.9s,baz=329,slow=5.9,SNR=4.6						
KBZ	Khabaz	69.25	39	P	P	23 26 22.7	+0.5
	comp=Z,5.2nm,1.1s,baz=305,slow=3.2,SNR=5.0						
PMSA	Palmer Station	69.77	201	LR	LR	23 49 28.2	
	comp=Z,83nm,20.4s,baz=105,slow=29						
FINES	FINESS Array B	72.83	18	P	P	23 26 45.7	+2.1
	comp=Z,3.0nm,0.8s,baz=181,slow=7.0,SNR=1.1						
WSAR	Wadi Sarin	74.11	64	LR	LR	23 59 04.9	
	comp=Z,71nm,18.2s,baz=276,slow=36						
GEYT	Alibeck	77.54	49	LR	LR	00 02 31.3	
	comp=Z,60nm,19.0s,baz=347,slow=37						
AAK	Ala-Archa	90.75	47	LR	LR	00 12 18.0	
	comp=Z,66nm,18.3s,baz=342,slow=38						
PALK	Pallekele	92.86	83	LR	LR	00 07 37.3	
	comp=Z,55nm,18.8s,baz=31,slow=34						
MKAR	Makanchi Array	96.58	44	P	P	23 28 44.2	-1.1
	comp=Z,0.4nm,0.8s,baz=275,slow=4.3,SNR=2.5						

IDC 31 23:19:54.0±2.9**, 2°.88N**×**126°.53E, h0**^{km}**, mb3.3**/3**,**
mb1 3.6/3**, mb1mx3.1**/43**, mbtmp3.3**/3**, Error ellipse:**
s-maj=270.6km s-min=28.4km az=66.0, Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.94	162	P	P	23 25 08.4	-1.7
	0.9nm,0.8s,baz=340,slow=11,SNR=7.2						
ASAR	Alice Springs	27.34	165	P	P	23 25 42.8	+1.8
	0.2nm,0.4s,baz=335,slow=8.4,SNR=7.3						
MKAR	Makanchi Array	58.14	326	P	P	23 29 49.2	-0.4
	0.1nm,0.5s,baz=116,slow=6.6,SNR=1.7						

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*IDC **31** 23:24:58.8±0.8, 15°.02S×166°.96E, h0^{km}, mb4.1/13,*
mb1 4.2/14, mb1mx3.9/41, mbtmp4.1/14, ML4.1/1, MS3.6/7,
Ms1 3.6/7, ms1mx3.1/59, Error ellipse: s-maj=30.5km
s-min=18.4km az=115.0
*NEIC **31** 23:25:03.9±1.2, 15°.04S±0°.08×167°.1E±0°.2, h30^{km}±2^{km},*
mb4.6/10, Error ellipse: s-maj=23.3km s-min=11.9km
az=87.0
ISC 31 23:25:03.9±0.5**, 15°.08S**±0°.07×**167°.0E**±0°.1**, h35**^{km}**, n43,**
σ**0**^{s}.**89**/40**, mb4.2**/18**, MS3.5**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.41	154		Pn	23 25 12.0	-1.4
SANVU					Sn	23 25 19.6	-0.3
LIFNC	LIFOU	5.67	178	Pn	Pn	23 26 26.1	+0.3
DZM	Mont Dzumac	6.98	184	Pn	Pn	23 26 44.1	+0.3
	3.1nm,0.3s,baz=313,slow=8.2,SNR=41						
DZM				Sn	Sn	23 28 02.0	-0.1
	1.9nm,0.3s,baz=302,slow=18,SNR=2.6						
DZM				LR	LR	23 29 19.0	
	comp=Z,476nm,18.2s,baz=95,slow=37						
DZM	Mont Dzumac	6.98	184		Pn	23 26 44.0	+0.2
OUENC	Ouen Island, N	7.31	181	Pn	Pn	23 26 48.2	0.0
PINNC	Pines Island,	7.51	177	Pn	Pn	23 26 52.0	+1.1
HNR	Honiara	8.90	308	LR	LR	23 29 58.3	
	comp=Z,222nm,19.1s,baz=190,slow=34						
MSVF	Nonsavu	10.91	106	LR	LR	23 31 10.5	
	comp=Z,458nm,18.9s,baz=339,slow=34						
STKA	Stephens Creek	28.59	230	P	P	23 30 57.4	+0.5
	0.9nm,0.6s,baz=79,slow=9.0,SNR=1.5						
STKA				LR	LR	23 41 21.0	
	comp=Z,85nm,19.5s,baz=27,slow=34						
WB0	Warramunga Arr	31.45	257	P	P	23 31 21.3	-1.0
WB2	Warramunga Arr	31.50	256	P	P	23 31 23.1	+0.3
WB2				IAmb	IAmb	23 31 42.2	
	comp=Z,8.2nm,1.1s						
WRAB	Tennant Creek	31.50	256		S	23 36 26.3	-2.6
WRA	Warramunga Arr	31.51	256	P	P	23 31 21.5	-1.4
	comp=Z,0.9nm,0.9s,baz=86,slow=9.3,SNR=3.6						
WRA				LR	LR	23 43 56.1	
	comp=Z,148nm,18.1s,baz=204,slow=36						
ASAR	Alice Springs	32.32	250	P	P	23 31 28.4	-1.6
	comp=Z,1.1nm,0.8s,baz=73,slow=9.4,SNR=12						
ASAR	Alice Springs	32.32	250	P	P	23 31 30.6	+0.5
BBOO	Buckleboo	33.17	232	P	P	23 31 38.7	+1.4
BBOO				IAmb	IAmb	23 31 43.6	

	comp=Z,10.0nm,1.0s						
KNRA	Kununurra	36.86	264	P	P	23 32 10.2	+0.9
FITZ	Fitzroy Crossi	39.71	260	P	P	23 32 32.7	-0.6
	comp=Z,2.9nm,0.8s,baz=90,slow=5.1,SNR=2.3						
DAV	Davao City (W)	46.59	295	LR	LR	23 52 47.1	
	comp=Z,28nm,18.4s,baz=156,slow=36						
VNDA	Vanda	62.51	181	P	P	23 35 24.4	+0.9
	comp=Z,1.3nm,0.7s,baz=22,slow=4.5,SNR=7.8						
VNDA	Vanda	62.51	181	IAmb	IAmb	23 35 25.2	
	comp=Z,6.1nm,1.1s						
PETK	Petropavlovsk-	68.38	354	P	P	23 36 02.8	+1.1
	comp=Z,3.6nm,0.8s,baz=157,slow=9.4,SNR=4.8						
CMAR	Chiang Mai Arr	74.87	294	P	P	23 36 42.5	+1.0
	comp=Z,1.5nm,0.9s,baz=129,slow=4.9,SNR=8.8						
CMAR	Chiang Mai Arr	74.87	294	P	P	23 36 41.8	+0.3
QSPA	South Pole Qui	74.95	180	P	P	23 36 42.3	+0.9
QSPA				IAmb	IAmb	23 36 43.3	
	comp=Z,9.7nm,1.1s						
SEY	Seymchan	78.59	353	P	P	23 37 01.9	+0.3
	comp=Z,3.7nm,0.8s,baz=157,slow=6.6,SNR=15						
ANM	Nome	82.15	12	P	P	23 37 21.1	+0.4
SONM	Songino Array	82.63	324	P	P	23 37 24.1	+0.3
	comp=Z,0.5nm,0.7s,baz=141,slow=5.4,SNR=4.1						
BILL	Bilibino	82.89	360	P	P	23 37 24.4	0.0
ILAR	Eielson Array	86.93	18	P	P	23 37 43.9	-1.0
	comp=Z,0.7nm,0.5s,baz=238,slow=5.0,SNR=16						
BMN	Battle Mountai	89.17	48	P	P	23 37 56.6	+0.3
BMN				IAmb	IAmb	23 37 59.1	
	comp=Z,3.1nm,0.7s						
G08A	Pilot Rock	89.73	43	P	P	23 37 59.0	+0.2
G08A				IAmb	IAmb	23 38 01.5	
	comp=Z,2.9nm,1.0s						
ELK	Elko	90.70	48	LR	LR	00 10 13.6	
	comp=Z,42nm,21.1s,baz=44,slow=30						
SNAA	Sanae	93.19	183	P	P	23 38 14.0	-0.4
VNA3	Neumayer Olymp	93.87	181	P	P	23 38 16.2	-1.2
VNA2	Neumayer--Watz	94.13	182	P	P	23 38 18.8	+0.2
	baz=183,slow=4.2						
MKAR	Makanchi Array	97.28	316	P	P	23 38 33.5	+0.1
	comp=Z,0.4nm,0.6s,baz=96,slow=6.2,SNR=4.9						
ZALV	Zalesovo Beam	97.53	324	P	P	23 38 33.3	-0.9
	comp=Z,0.5nm,0.7s,baz=92,slow=3.3,SNR=2.5						
YKA	Yellowknife Ar	97.96	27	P	P	23 38 35.6	-0.4
	comp=Z,0.4nm,0.7s,baz=257,slow=4.7,SNR=8.6						
ARCES	ARCESS Array B	120.52	345	PKP	PKPdf	23 43 51.1	-0.2
	comp=Z,4.9nm,1.0s,baz=29,slow=2.1,SNR=5.9						
GERES	GERESS Array B	139.84	333	PKP	PKPdf	23 44 27.8	-0.7
	comp=Z,0.4nm,0.8s,baz=104,slow=2.0,SNR=2.7						
DAVOX	Davos/Dischmat	143.08	334	PKP	PKPdf	23 44 33.2	-1.3
	comp=Z,1.3nm,0.5s,baz=41,slow=1.6,SNR=4.1						
KEST	Kesra	151.32	320	PKPbc	PKiKP	23 44 54.9	-0.1
	comp=Z,3.8nm,1.0s,baz=42,slow=2.7,SNR=5.7						

IDC ***31*** *23:35:02.1±2.5, 51°.69N×173°.45W, h0^{km}, mb3.7/10, mb1 3.9/12, mb1mx3.5/71, mbtmp3.7/12, ML3.7/2, Error ellipse: s-maj=61.8km s-min=18.9km az=176.0*

NEIC ***31*** *23:35:07.8±1.5, 51°.62N±0°.06×173°.52W±0°.09, h40^{km}±10^{km}, mb3.6/11, ML3.0/14(AEIC), Error ellipse: s-maj=8.1km s-min=7.9km az=51.0*

AEIC ***31*** *23:35:07.7±2.9, 51°.57N±0°.05×173°.65W±0°.05, h30^{km}±6^{km}, Error ellipse: s-maj=8.0km s-min=4.4km az=195.0*

ISC 31 23:35:07.4±0.9**, 51°.60N**±0°.09×**173°.47W**±0°.05**, h37**^{km}**, n46, σ0^{s}77**/48**, mb3.6**/11**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.75	323		Pn	23 35 21.0	-0.4
ATKA	Atka Island	0.75	323		Sn	23 35 30.8	-0.7
KOFP	Korovin Flat P	0.78	330		Pn	23 35 22.1	+0.2
KOFP					Sn	23 35 33.3	+0.9
KOKL	Mount Kliuchef	0.85	328		Pn	23 35 23.2	+0.3
KONE	Korovin Northe	0.89	333		Pn	23 35 24.2	+0.8
KOWE	Korovin West	0.91	328		Pn	23 35 24.2	+0.6
GSMY	Great Sitkin M	1.67	286		Pn	23 35 34.0	-0.1
GSTR	Great Sitkin T	1.68	288		Pn	23 35 34.3	0.0
GSTD	Great Sitkin T	1.72	286		Pn	23 35 34.6	-0.3
GSTD					Sn	23 35 56.5	+0.9
KIWB	Kanaga Island	2.31	278		Pn	23 35 42.9	+0.1
KIMD	Kanaga Island	2.35	275		Pn	23 35 43.2	-0.2
TAFP	Tanaga Falls P	2.82	278		Pn	23 35 50.1	+0.2
TAFP					Sn	23 36 24.1	+1.5
TASE	Tanaga Southea	2.85	276		Pn	23 35 50.8	+0.5
NIKH	Nikolski High	3.15	62	Pn	Pn	23 35 54.6	+0.3
UNV	Unalaska Valle	4.79	59	Pn	Pn	23 36 17.7	+0.8
AKUT	Akutan	5.31	58	Pn	Pn	23 36 24.1	+0.2
SPIA	Saint Paul Isl	5.89	17	Pn	Pn	23 36 31.9	-0.1
GAMB	Gambell	12.24	4	Pn	Pn	23 37 59.2	+0.3
KDAK	Kodiak Island	13.54	55	Pn	Pn	23 38 16.1	-0.5
	0.3nm,0.3s,baz=263,slow=8.1,SNR=7.0						
CNPM	China Poot	14.81	49	Pn	Pn	23 38 36.3	+2.4
BRLK	Bradley Lake	15.07	48	Pn	Pn	23 38 36.8	-0.5
BRLK				IAmb	IAmb	23 38 46.6	
	comp=Z,9.6nm,1.1s						
J20K	Nowinta River	16.16	31		P	23 38 54.8	+0.6
BPAW	Bear Paw Mtn.	17.18	35		Pn	23 39 02.4	-1.9
SCM	Sheep Creek Mo	17.49	44	Pn	Pn	23 39 07.5	-0.6
IMAR	Indian Mountai	17.54	27		Pn	23 39 09.0	+0.4
H21K	Melozitna Rive	17.59	29		Pn	23 39 09.6	+0.3
RND	Reindeer	17.59	38	Pn	Pn	23 39 08.6	-0.8
RND				IAmb	IAmb	23 39 20.6	
	comp=Z,4.0nm,1.2s						
MCK	McKinley	17.73	37		Pn	23 39 10.1	-1.0
MCK				IAmb	IAmb	23 39 26.9	
	comp=Z,2.8nm,1.0s						
IL31		19.04	36	P	P	23 39 26.6	+0.7
IL31				IAmb	IAmb	23 39 33.8	
	comp=Z,3.1nm,1.1s						
ILAR	Eielson Array	19.04	36	P	P	23 39 25.4	-0.6
	comp=Z,0.3nm,0.3s,baz=224,slow=8.9,SNR=16						
ILAR	Eielson Array	19.04	36	P	P	23 39 26.7	+0.8
H24K	Noodor Dome	19.28	33	P	P	23 39 29.3	+0.7
H24K				IAmb	IAmb	23 39 32.8	
	comp=Z,5.0nm,1.1s						
DOT	Dot Lake	19.61	41	P	P	23 39 31.1	-1.1
EGAK	Eagle	21.23	39	P	P	23 39 49.8	+0.2
EGAK				IAmb	IAmb	23 40 05.3	
	comp=Z,6.6nm,1.0s						
BMAR	Burnt Mountain	21.27	31	P	P	23 39 51.6	+1.5
SEY	Seymchan	21.38	315	P	P	23 39 50.9	-0.3
	comp=Z,0.4nm,0.5s,baz=62,slow=17,SNR=1.7						
INK	Inuvik	25.39	34	P	P	23 40 30.3	-0.4
	comp=Z,0.6nm,0.4s,baz=219,slow=11,SNR=5.6						
INK	Inuvik	25.39	34	IAmb	IAmb	23 40 38.8	
	comp=Z,1.6nm,1.1s						
YKA	Yellowknife Ar	32.64	47	P	P	23 41 35.2	0.0
	comp=Z,0.3nm,0.6s,baz=273,slow=8.1,SNR=8.6						
PDAR	Pinedale Array	43.04	76	P	P	23 43 03.4	-0.1
	comp=Z,0.3nm,0.4s,baz=304,slow=2.9,SNR=5.3						
SONM	Songino Array	49.49	299	P	P	23 43 54.4	+0.5
	comp=Z,0.3nm,0.4s,baz=52,slow=5.2,SNR=7.5						
ARCES	ARCESS Array B	58.38	352	P	P	23 44 58.2	-0.1
	comp=Z,6.7nm,1.0s,baz=350,slow=4.9,SNR=2.3						
MKAR	Makanchi Array	62.45	311	P	P	23 45 25.7	-0.8
	comp=Z,0.2nm,0.4s,baz=54,slow=6.0,SNR=9.7						
BVAR	Borovoye Array	62.81	322	P	P	23 45 28.4	-0.3
	comp=Z,0.8nm,0.5s,baz=52,slow=5.7,SNR=4.3						
FINES	FINESS Array B	66.23	350	P	P	23 45 50.2	-0.7
	comp=Z,3.7nm,1.1s,baz=15,slow=6.3,SNR=1.5						
AKTO	Aktyubinsk	69.36	328	P	P	23 46 10.7	-0.1
	comp=Z,1.3nm,0.6s,baz=8.1,slow=7.1,SNR=4.0						

IDC ***31*** *23:35:06.6±1.1, 2°.74S×141°.79E, h0^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.6/44, mbtmp3.8/8, ML3.9/2, Error ellipse: s-maj=22.5km s-min=19.4km az=175.0*

ISC 31 23:35:12.0±1.0**, 2°.7S**±0°.1×**141°.6E**±0°.1**, h35**^{km}**, n16, σ1^{s}13**/10**, mb3.8**/6**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	0.91	284	Pg	Pn	23 35 28.0	-0.3
	41nm,0.3s,baz=137,slow=6.7,SNR=115						
JAY				Lg	Lg	23 35 40.0	
	84nm,0.3s,baz=297,slow=14,SNR=14						
SIJI	Sorong	10.48	280	Pn	Pn	23 37 39.3	-0.6
	1.0nm,0.3s,baz=293,slow=22,SNR=2.0						
WRA	Warramunga Arr	18.50	202	P	Pn	23 39 24.8	-1.0
	0.4nm,0.3s,baz=21,slow=12,SNR=10						
FITZ	Fitzroy Crossi	21.85	225	P	P	23 40 03.5	+1.8
	3.1nm,0.7s,baz=207,slow=9.0,SNR=2.9						
ASAR	Alice Springs	22.09	199	P	P	23 40 04.2	-0.1
	1.1nm,0.7s,baz=24,slow=8.8,SNR=9.9						
H11S3	WAKE ISLAND Hy	32.50	49	T	T	00 16 02.6	
	baz=232,slow=74						
H11S2	WAKE ISLAND Hy	32.51	49	T	T	00 16 08.5	
	baz=232,slow=74						
H11S1	WAKE ISLAND Hy	32.52	49	T	T	00 16 07.9	
	baz=232						
H11N1	WAKE ISLAND Hy	33.41	47	T	T	00 17 02.8	
	baz=230,slow=76,SNR=20						
H11N2	WAKE ISLAND Hy	33.42	47	T	T	00 17 04.1	
	baz=230,slow=76,SNR=25						
H11N3	WAKE ISLAND Hy	33.42	47	T	T	00 17 02.6	
	baz=230,slow=76,SNR=12						
MKAR	Makanchi Array	71.58	321	P	P	23 46 31.6	+1.8
	0.9nm,0.9s,baz=109,slow=9.4,SNR=6.8						
ZALV	Zalesovo Beam	73.42	329	P	P	23 46 40.2	-0.4
	0.5nm,0.6s,baz=124,slow=7.9,SNR=3.6						
ILAR	Eielson Array	84.68	24	P	P	23 47 41.5	-0.5
	1.1nm,0.7s,baz=261,slow=4.1,SNR=8.9						
YKA	Yellowknife Ar	98.79	27	P	P	23 48 48.3	+0.4
	0.5nm,1.0s,baz=283,slow=5.5,SNR=3.1						
LPAZ	La Paz	145.08	124	PKP	PKPbc	23 54 46.4	-0.6
	1.3nm,0.7s,baz=214,slow=3.6,SNR=5.4						

BJI ***31*** *23:39:21.1±0.0, 7°.66S×130°.51E, h120^{km}, mB4.9/16, mb4.6/33*

IDC ***31*** *23:39:27.2±1.9, 6°.94S×129°.85E, h97^{km}±16^{km}, mb4.0/20, mb1 4.1/24, mb1mx3.9/42, mbtmp4.4/24, MS3.2/2, Ms1 3.1/2, ms1mx2.6/64, Error ellipse: s-maj=14.4km s-min=11.8km az=80.0*

NEIC ***31*** *23:39:28.9±1.5, 7°.07S±0°.06×129°.85E±0°.07, h113^{km}±7^{km}, mb4.6/47, Error ellipse: s-maj=10.5km s-min=8.8km az=59.0*

KLM ***31*** *23:39:28, 7°.26S×129°.81E, h104^{km}, mb4.9*

DJA ***31*** *23:39:28.1±0.2, 7°S±2°×13°0E±°, h123^{km}±4^{km}, M4.8/25, mB5.3/10, mb4.7/25, MLv5.0/13, Mw(mB)4.7/10*

ISC 31 23:39:27.1±0.3**, 7°.14S**±0°.04×**129°.84E**±0°.04**, h104**^{km}**, n171, σ1^{s}83**/176**, mb4.5**/53**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.67	120	P	Pn	23 39 58.8	+3.1
SAUI	Saumlaki	1.67	120	Pn	Pn	23 39 58.5	+2.8
SAUI				Sn	Sn	23 40 20.5	+3.0
SAUI	Saumlaki	1.67	120	P	Pn	23 39 59.3	+3.6
BNDI	Bandanaira	2.60	1	P	Pn	23 40 09.9	+2.2
AAI	Ambon	3.80	334	P	Pn	23 40 25.7	+1.9
MSAI	Masohi	3.88	346	P	Pn	23 40 27.3	+2.5
KRAI	Karang Ratu	4.06	339	P	Pn	23 40 29.9	+2.7
FAKI	Fak Fak	4.83	30	P	Pn	23 40 36.8	-0.8
FAKI	Fak Fak	4.83	30	Pn	Pn	23 40 36.7	-0.9
FAKI	Fak Fak	4.83	30	P	Pn	23 40 37.0	-0.6
DRS	Darwin Rock St	5.36	169	P	Pn	23 40 46.4	+1.5
MTN	Manton Dam	5.81	167	Pn	Pn	23 40 51.9	+0.9
MTN	Manton Dam	5.81	167	P	Pn	23 40 52.6	+1.7
KDU	Kakadu	6.09	155	P	Pn	23 40 55.8	+1.0
SOEI	Soe	6.10	244	P	Pn	23 40 57.1	+2.1
	2.5nm4µm209nm,0.6s						
SOEI	Soe	6.10	244	Pn	Pn	23 40 57.0	+2.0
SOEI	Soe	6.10	244	P	Pn	23 40 57.4	+2.4
SANI	Sanana	6.35	323	P	Pn	23 41 00.6	+2.4
	0.1nm36nm,0.7s						
SANI	Sanana	6.35	323	P	Pn	23 41 01.7	+3.5
SIJI	Sorong	6.39	13	P	Pn	23 40 58.0	-0.8
	22nm,0.3s,baz=201,slow=14,SNR=119						
SIJI				S	Sn	23 42 05.6	-4.7
	16nm,0.3s,baz=267,slow=23,SNR=8.7						
SIJI	Sorong	6.39	13	P	Pn	23 40 58.2	-0.6
SWI	Sorong	6.39	13	P	Pn	23 40 58.2	-0.6
	0.7nm5µm83nm,0.4s						
BATI	Baumata	6.83	243	P	Pn	23 41 06.8	+2.0
	49nm,0.3s,baz=86,slow=2.9,SNR=67						
BATI				S	Sn	23 42 19.7	-1.4
	47nm,0.3s,baz=51,slow=23,SNR=13						
BATI				LR	LR	23 43 33.3	
	comp=Z,96nm,19.1s,baz=36,slow=36						
BATI	Baumata	6.83	243	P	Pn	23 41 06.5	+1.7
	1.1nm3µm99nm,0.6s						
LBMI	Labuha	6.87	340	P	Pn	23 41 08.1	+2.8
	0.8nm2µm222nm,0.8s						
BBSI	Bau Bau	7.41	282	P	Pn	23 41 13.2	+0.5
	0.0nm205nm16nm,0.9s						
MMRI	Maumere	7.68	258	P	Pn	23 41 18.0	+1.6
	0.3nm26nm,0.8s						
MMRI	Maumere	7.68	258		Pn	23 41 18.8	+2.4
EDFI	Ende, Flores	8.23	258	P	Pn	23 41 26.2	+2.2
	12nm,0.7s						
TNTI	Ternate	8.24	342	P	Pn	23 41 26.1	+2.2
	36nm,0.9s						
TNTI	Ternate	8.24	342	Pn	Pn	23 41 25.1	+1.1
TNTI	Ternate	8.24	342	P	Pn	23 41 26.2	+2.3
KNRA	Kununurra	8.55	187	Pn	Pn	23 41 27.2	-1.0
KNRA	Kununurra	8.55	187	P	Pn	23 41 27.4	-0.8
BASI	Baing, Sumba	9.66	251	P	Pn	23 41 43.1	-0.1
	66nm,0.6s						
BKSI	Bulukumba	9.83	280	P	Pn	23 41 47.6	+2.0
	33nm,1.1s						
LBFI	Labuhan Bajo,	9.95	262	P	Pn	23 41 49.6	+2.4
	18nm,0.7s						
WBSI	Waikabubak, Su	10.64	256	P	Pn	23 41 58.2	+1.6
	1µm49nm,0.6s						
FITZ	Fitzroy Crossi	11.64	200	P	Pn	23 42 07.2	-2.8
	11nm,0.3s,baz=26,slow=9.4,SNR=102						
FITZ				S	Sn	23 44 09.2	-8.8
	5.2nm,0.3s,baz=97,slow=15,SNR=2.0						
JAY	Jayapura	11.75	68	P	Pn	23 42 10.2	-1.4
	0.8nm,0.3s,baz=234,slow=17,SNR=2.0						
JAY				S	Sn	23 44 18.1	-2.9
	1.0nm,0.3s,baz=316,slow=21,SNR=1.3						
TOLI2	Tolitoli	12.20	312	Pn	Pn	23 42 18.2	+0.7
WB0	Warramunga Arr	13.31	161	Pn	Pn	23 42 28.9	-3.2
WRAB	Tennant Creek	13.45	161	P	Pn	23 42 31.4	-2.5
WRAB	Tennant Creek	13.45	161	P	Pn	23 42 33.5	-0.4
WRA	Warramunga Arr	13.46	162	P	Pn	23 42 31.2	-2.7
	17nm,0.3s,baz=346,slow=12,SNR=135						
WRA				S	Sn	23 44 51.7	-10
	4.6nm,0.3s,baz=339,slow=22,SNR=10						
WRA	Warramunga Arr	13.46	162		Pn	23 42 30.5	-3.5
WB2	Warramunga Arr	13.46	161		Pn	23 42 31.8	-2.2
WR0	Warramunga Arr	13.54	161	Pn	Pn	23 42 32.9	-2.1
KLNI	Mataram	13.68	264	P	Pn	23 42 37.8	+0.9
COEN	Coen	14.75	118		Pn	23 42 50.2	-0.4
JAGI	Jajag, Banyuwa	15.60	264	Pn	Pn	23 43 00.6	-0.8
JAGI				IAmb	IAmb	23 43 03.4	
	comp=Z,29nm,1.3s						
GMJI	Gumukmas	16.29	265	P	Pn	23 43 10.0	0.0
	comp=Z,41nm,1.7s						
QIS	Mount Isa	16.35	146	P	P	23 43 11.8	+0.1
PKKI	Palangkaraya	16.55	286	P	P	23 43 16.5	+2.6
	comp=Z,2µmcomp=Z,236nm,1.0s						
MYLDM	Lahad Datu	16.67	317		Pn	23 43 14.3	-0.3
MYLDM				IAmb	IAmb	23 43 30.4	
	comp=Z,49nm,1.3s						
AS31	Alice Springs	16.89	167		Pn	23 43 16.0	-1.3
AS31				IAmb	IAmb	23 43 19.4	
	comp=Z,16nm,0.5s						
ASAR	Alice Springs	16.89	167	P	Pn	23 43 16.9	-0.5
	comp=Z,5.4nm,0.3s,baz=336,slow=9.3,SNR=178						
ASAR				S	Sn	23 46 15.0	-10
	comp=Z,1.5nm,0.3s,baz=346,slow=24,SNR=4.9						
ASAR				ScP	ScP	23 51 23.1	-1.1
	comp=Z,0.5nm,0.3s,baz=3.2,slow=1.7,SNR=7.8						
ASAR	Alice Springs	16.89	167		Pn	23 43 16.1	-1.2
PMG	Port Moresby	17.28	99	P	P	23 43 20.7	-1.3
	comp=Z,1.8nm,0.3s,baz=282,slow=9.6,SNR=1.3						
PMG	Port Moresby	17.28	99	IAmb	IAmb	23 43 29.4	
	comp=Z,18nm,0.8s						
PSA00	Pilbara Seismi	17.30	213	P	P	23 43 21.7	-0.4
PSA00	Pilbara Seismi	17.30	213	P	P	23 43 21.5	-0.7
PSA00				IAmb	IAmb	23 43 27.4	
	comp=Z,15nm,0.9s						
PSA00	Pilbara Seismi	17.30	213	P	Pn	23 43 24.7	+2.4
SPMM	Sapulut	17.80	311	P	Pn	23 43 31.0	+2.6
MTSU	Mount Surprise	17.84	129	P	Pn	23 43 31.1	+2.2
WRKA	Warakurna	17.86	185	P	P	23 43 27.7	-0.6
PCJI	Pacitan	18.53	266	P	P	23 43 35.2	-0.5
	comp=Z,26nm,0.4s						
KKM	Kota Kinabalu	18.88	314	P	P	23 43 39.7	+0.1
KKM				IAmb	IAmb	23 43 51.7	
	comp=Z,38nm,1.1s						
SBUM	Sibu	20.00	298	P	Pn	23 43 54.0	-0.4
SBUM	Sibu	20.00	298	P	P	23 43 50.1	-1.6
	comp=Z,16nm,0.9s						
SBUM	Sibu	20.00	298	P	P	23 43 52.8	+1.0
SBUM				IAmb	IAmb	23 43 55.2	
	comp=Z,21nm,1.2s						
CTAO	Charters Tower	20.47	131	P	Pn	23 43 59.5	-0.3
OOD	Oodnadatta	21.28	166	P	P	23 44 07.3	+2.0
KSM	Kuching	21.29	293	P	P	23 44 05.5	0.0
KSM				IAmb	IAmb	23 44 12.4	
	comp=Z,34nm,1.4s						
GIRL	Giralia	21.53	223	P	P	23 44 09.3	+1.2
LEM	Lembang	22.06	269	P	P	23 44 14.1	+0.1
	comp=Z,19nm,0.5s,baz=5.7,slow=8.9,SNR=5.2						
FORT	Forrest	23.58	184	P	P	23 44 29.8	+1.3
LCRK	Leigh Creek	24.48	162	P	P	23 44 39.4	+2.7
MORW	Morawa	25.41	209	P	P	23 44 46.0	+1.0
MORW				IAmb	IAmb	23 44 46.9	
	comp=Z,43nm,1.5s						
BBOO	Buckleboo	26.19	168	P	P	23 44 55.1	+3.0
STKA	Stephens Creek	26.95	158	P	P	23 45 00.9	+2.0
	comp=Z,4.3nm,0.8s,baz=358,slow=8.0,SNR=10						
STKA				LR	LR	23 55 50.0	
	comp=Z,70nm,18.4s,baz=23,slow=36						
STKA	Stephens Creek	26.95	158	P	P	23 45 00.8	+2.0
HNR	Honiara	29.87	96	P	P	23 45 26.2	+1.1
	comp=Z,166nm,1.0s,baz=166,slow=7.4,SNR=2.0						
IPM	Ipoh	30.99	291	P	P	23 45 37.0	+2.0
KULM	Kulim	31.64	292	P	P	23 45 39.9	-0.8
KULM				IAmb	IAmb	23 45 55.2	
	comp=Z,28nm,1.4s						
UBPT	Khong Chiam	32.86	313	P	P	23 45 50.4	-0.9
UBPT				IAmb	IAmb	23 45 54.2	
	comp=Z,19nm,1.2s						
KNMB	Chin-men Tao	33.34	341	P	P	23 45 57.7	+2.4
TOO	Toolangi	33.47	157	P	P	23 45 59.1	+2.7
TOO				IAmb	IAmb	23 46 17.9	
	comp=Z,16nm,1.5s						
CMAR	Chiang Mai Arr	39.70	310	P	P	23 46 49.3	-0.3
	comp=Z,4.8nm,0.8s,baz=139,slow=7.3,SNR=39						
CMAR				PcP	PcP	23 48 54.8	+0.4
	comp=Z,1.2nm,0.8s,baz=172,slow=3.8,SNR=6.5						
CMAR	Chiang Mai Arr	39.70	310	P	P	23 46 49.0	-0.6
CHTO	Chiang Mai	39.91	311	P	P	23 46 51.3	0.0
CHTO				IAmb	IAmb	23 46 51.8	
	comp=Z,10nm,0.8s						
GYA	Guiyang	40.26	327	⇓P	P	23 46 56.0	+1.8
GYA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NJ2	Nanjing	40.36	346	*e*P	P	23 46 56.0	+1.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
JMN	Monobe	40.82	5	P	P	23 46 57.6	-1.0
JHS	Saijyo	42.02	4	P	P	23 47 08.8	+0.4
JWT	Wachi	42.52	7	P	P	23 47 12.0	-0.3
MJAR	Matsushiro Arr	44.15	10	P	P	23 47 24.1	-1.4
	comp=Z,3.3nm,0.7s,baz=195,slow=9.6,SNR=5.8						
MAJO	Matsushiro	44.15	10	P	P	23 47 26.4	+0.8
MAJO				IAmb	IAmb	23 47 30.5	
	comp=Z,12nm,1.2s						
KSRS	Korea Array	44.39	358	P	P	23 47 26.4	-1.0
	comp=Z,0.7nm,0.6s,baz=175,slow=9.9,SNR=4.1						
XAN	Xi'an	45.50	335	P	P	23 47 35.5	-0.8
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BJI	Beijing	48.61	346	P	P	23 47 59.8	-0.5
BJI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LZH	Lanzhou	49.45	332	*e*P	P	23 48 03.3	-3.7
LZH				sP	sP	23 48 49.5	+6.4
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
HHC	Hu-ho-hao-te	50.62	342	*e*P	P	23 48 18.3	+2.6
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,5.1s						
USRK	Ussuriysk Ar.	51.13	2	P	P	23 48 18.7	-0.6
	comp=Z,2.9nm,0.6s,baz=183,slow=6.0,SNR=3.4						
TUWZ	Tuamarina	51.88	138	P	P	23 48 25.2	+0.2
GTA	Gaotai	54.02	331	*e*P	P	23 48 40.5	-0.4
GTA				pP	pP	23 49 06.0	+0.5
GTA				sP	sP	23 49 18.5	+1.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GUN	Gumba	54.93	311	*e*P	P	23 48 47.9	0.0
	comp=Z,25nm,0.5s						
PKI	Pulchoki	55.10	311	*e*P	P	23 48 48.2	-1.0
	comp=Z,5.8nm,0.5s						
PKIN	Phulchoki	55.11	311	*e*P	P	23 48 48.7	-0.5
KKN	Kakani	55.31	311	*e*P	P	23 48 50.7	+0.1
GKN	Gorkha	55.91	311	*e*P	P	23 48 53.8	-0.9
	comp=Z,17nm,0.5s						
KLR	Kul'dur	56.15	2	P	P	23 48 55.8	-0.1
	comp=Z,1.5nm,0.9s,baz=153,slow=6.8,SNR=4.2						
KOLN	Koldanda	56.57	310	*e*P	P	23 48 58.6	-0.9
	comp=Z,13nm,0.6s						
DANN	Dangsing	56.74	311	*e*P	P	23 49 01.3	+0.4
	comp=Z,16nm,0.5s						
PYUN	Piuthan	57.20	310	*e*P	P	23 49 03.3	-0.7
	comp=Z,18nm,0.6s						
ULN	Ulaanbaatar	58.35	342	P	P	23 49 11.7	+0.1
SONM	Songino Array	58.52	342	P	P	23 49 12.8	+0.1
	comp=Z,2.0nm,0.4s,baz=162,slow=7.1,SNR=55						
SONM	Songino Array	58.52	342	P	P	23 49 12.8	+0.1
SONM				IAmb	IAmb	23 49 14.0	
	comp=Z,5.3nm,1.3s						
WMQ	Urumqi	63.42	327	*e*P	P	23 49 45.5	-0.4
WMQ				pmax	pmax		
	comp=Z,12nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.6s						
PEA0B	Petropavlovsk-	64.50	18	P	P	23 49 51.6	-1.1
PETK	Petropavlovsk-	64.50	18	P	P	23 49 53.0	+0.3
	comp=Z,4.2nm,1.0s,baz=190,slow=1.7,SNR=7.3						
NIL	Nilore	67.19	311	P	P	23 50 10.7	+0.3
KSH	Kashi	68.01	318	P	P	23 50 17.5	+1.9
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MK31	Makanchi Array	68.25	327	P	P	23 50 17.0	+0.2
MK31				IAmb	IAmb	23 50 17.8	
	comp=Z,4.6nm,0.7s						
MKAR	Makanchi Array	68.25	327	P	P	23 50 17.0	+0.2
	comp=Z,6.3nm,0.5s,baz=117,slow=8.1,SNR=141						
MKAR	Makanchi Array	68.25	327	P	P	23 50 16.7	-0.1
MAKZ	Makanchi	68.43	327	P	P	23 50 17.8	-0.1
MAKZ				IAmb	IAmb	23 50 18.8	
	comp=Z,5.9nm,0.7s						
KDJ	Kajisay	68.58	321	P	P	23 50 19.4	+0.2
KDJ				IAmb	IAmb	23 50 34.8	
	comp=Z,5.8nm,1.1s						
BOOM	Boomskoye usch	69.55	320	P	P	23 50 25.6	+0.5
TKM2	Tokmak 2	69.99	321	P	P	23 50 28.7	+0.8
	SNR=8.8						
UCH	Uchtor	70.33	320	P	P	23 50 31.2	+1.0
	SNR=5.2						
AAK	Ala-Archa	70.55	320	P	P	23 50 32.2	+1.0
AML	Almayashu	70.81	319	P	P	23 50 34.1	+1.0
	SNR=7.6						
USP	Ospenovka	70.86	321	P	P	23 50 33.8	+0.8
	SNR=8.6						
EKS2	Erkin-Say	71.02	320	P	P	23 50 34.8	+0.8
	SNR=7.4						
ZAA0	Zalesovo Array	71.64	334	P	P	23 50 36.1	-1.2
ZAA0				IAmb	IAmb	23 50 37.2	
	comp=Z,5.9nm,0.8s						
ZALV	Zalesovo Beam	71.64	334	P	P	23 50 36.3	-1.0
	comp=Z,4.9nm,0.6s,baz=130,slow=5.8,SNR=33						
BTK	Batken	71.77	316	P	P	23 50 38.8	+0.3
SEY	Seymchan	71.97	11	P	P	23 50 39.3	+0.2
	comp=Z,3.4nm,0.7s,baz=210,slow=4.0,SNR=16						
CHGR	Chuyangaron	72.33	314	P	P	23 50 42.2	+0.3
CHGR				IAmb	IAmb	23 50 42.5	
	comp=Z,12nm,0.7s						
VNDA	Vanda	72.33	173	P	P	23 50 42.4	+1.2
	comp=Z,1.3nm,1.1s,baz=315,slow=8.8,SNR=1.5						
KURK	Kurchatov	72.55	329	P	P	23 50 42.5	-0.3
KURK				IAmb	IAmb	23 50 43.0	
	comp=Z,6.2nm,0.8s						
KKAR	Karatay Array	73.34	319	P	P	23 50 47.3	-0.4
HRA	Herat	75.92	308	P	P	23 51 03.5	+0.4
SOCY	Socotra	77.81	284	P	P	23 51 12.3	-1.6
SOCY				IAmb	IAmb	23 51 19.2	
	comp=Z,12nm,0.9s						
BVAR	Borovoye Array	78.10	328	P	P	23 51 14.1	-0.5
	comp=Z,4.6nm,0.9s,baz=142,slow=7.5,SNR=17						
TIXI	Tiksi	78.63	360	P	P	23 51 16.3	-0.8
	comp=Z,2.2nm,0.6s,baz=167,slow=5.3,SNR=11						
GEYT	Alibeck	80.18	310	P	P	23 51 26.1	-0.3
	comp=Z,0.9nm,0.5s,baz=105,slow=9.3,SNR=7.6						

GEYT	**Alibeck**	**80.18**	**310**	P	**P**	**23 51 26.6**	**+0.2**
VOI	**Vohitsoka**	**80.95**	**249**	P	**P**	**23 51 30.8**	**-0.1**
VOI				IAmb	IAmb	23 51 39.0	
	comp=Z,13nm,1.0s						
NRIK	**Noril'sk**	**81.65**	**346**	P	**P**	**23 51 33.3**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=113,slow=5.0,SNR=4.9						
ABKAR	**Akbulak array**	**82.52**	**322**	P	**P**	**23 51 37.9**	**-0.5**
ABKAR				IAmb	IAmb	23 51 40.1	
	comp=Z,4.3nm,0.6s						
ABKAR	**Akbulak array**	**82.52**	**322**	P	**P**	**23 51 37.7**	**-0.6**
QSPA	**South Pole Qui**	**82.84**	**180**	P	**P**	**23 51 40.9**	**+1.0**
AKTO	**Aktyubinsk**	**84.09**	**322**	P	**P**	**23 51 46.2**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=120,slow=5.7,SNR=8.6						
ARU	**Arti**	**85.74**	**328**	P	**P**	**23 51 54.1**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=135,slow=4.3,SNR=10						
ARU	**Arti**	**85.74**	**328**	P	**P**	**23 51 53.6**	**-0.8**
ARU				IAmb	IAmb	23 51 54.7	
	comp=Z,4.6nm,0.8s						
RAYN	**Ar Rayn**	**87.66**	**294**	P	**P**	**23 52 04.5**	**-0.2**
RAYN				IAmb	IAmb	23 52 05.5	
	comp=Z,5.1nm,0.8s						
ILAR	**Eielson Array**	**93.54**	**25**	P	**P**	**23 52 29.6**	**-1.5**
	comp=Z,0.7nm,0.8s,baz=221,slow=6.4,SNR=5.6						
BMAR	**Burnt Mountain**	**94.84**	**23**	P	**P**	**23 52 38.1**	**+1.1**
BCAR	**Beaver Creek A**	**95.57**	**27**	P	**P**	**23 52 40.8**	**+0.3**
FINES	**FINESS Array B**	**102.81**	**331**	PKiKP	**PKiKP**	**23 57 32.9**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=96,slow=4.2,SNR=4.4						
YKA	**Yellowknife Ar**	**107.94**	**26**	PKiKP	**PKiKP**	**23 57 42.2**	**0.0**
	comp=Z,0.4nm,0.5s,baz=292,slow=2.0,SNR=17						
GERES	**GERESS Array B**	**112.43**	**320**	PKiKP	**PKiKP**	**23 57 51.2**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=83,slow=1.5,SNR=12						
KEST	**Kesra**	**118.78**	**307**	PKP	**PKiKP**	**23 58 04.2**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=140,slow=1.6,SNR=5.3						
TORD	**Torodi Ar. Bea**	**128.68**	**281**	PKP	**PKiKP**	**23 58 23.9**	**0.0**
	comp=Z,1.4nm,0.5s,baz=74,slow=2.8,SNR=22						
PLCA	**Paso Flores**	**128.80**	**160**	PKP	**PKiKP**	**23 58 24.1**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=304,slow=3.7,SNR=4.5						
SCHQ	**Schefferville**	**130.59**	**13**	PKP	**PKiKP**	**23 58 26.2**	**-0.5**
	comp=Z,4.2nm,1.1s,baz=288,slow=3.2,SNR=1.7						
DBIC	**Dimbokro**	**135.04**	**272**	PKP	**PKPdf**	**23 58 35.6**	**+0.3**
	comp=Z,1.6nm,0.4s,baz=110,slow=2.1,SNR=6.0						
CPUP	**Villa Florida**	**146.01**	**168**	PKPbc	**PKPab**	**23 58 57.2**	**+0.9**
	comp=Z,6.3nm,0.6s,baz=164,slow=2.3,SNR=12						
LPAZ	**La Paz**	**150.71**	**143**	PKPbc	**PKiKP**	**23 59 10.8**	**+1.2**
	comp=Z,5.0nm,0.4s,baz=30,slow=2.3,SNR=46						

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*CNRM **31** 23:48:25.2, 36°01N×2°94W, h28^{km}, ml2.8*
*INMG **31** 23:48:26.7±1.4, 36°14N×3°17W, h6^{km}±5^{km}, ML2.3, Error ellipse: s-maj=5.8km s-min=3.8km az=143.0*
*MDD **31** 23:48:26.0±0.3, 36°16N×3°04W, h2^{km}±5^{km}, mbLg2.4/24, Error ellipse: s-maj=5.3km s-min=2.5km az=87.0, PRXIMO*
*SFS **31** 23:48:26.0, 36°10N×3°00W, ML2.4, ALBORAN N.*
ISC 31 23:48:25.3±0.9, **36°07N**±0°02×**3°02W**±0°03, **h25**^{km}±7^{km}, **n67, σ1^{s}85**/114, **2D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EALB	**Alboran**	**0.13**	**185**	⇓P	**Pb**	**23 48 30.0**	**-0.2**
	1μm,0.1s,SNR=18						
EALB				S	**Sb**	**23 48 32.8**	**-0.5**
	5μm,0.1s,SNR=4.8						
EBER	**Berja**	**0.84**	**7**	P	**Pn**	**23 48 40.2**	**-1.6**
	8.2nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**23 48 50.8**	**-2.6**
	136nm,0.2s,SNR=7.9						
GOG	**Mont Gurugu**	**0.84**	**179**	P	**Pn**	**23 48 40.5**	**-1.2**
GOG				S	**Sn**	**23 48 50.6**	**-2.7**
ELGU	**Los Guajares,**	**0.94**	**329**	⇓P	**Pn**	**23 48 41.6**	**-1.5**
	19nm,0.2s,SNR=18						
ELGU				S	**Sn**	**23 48 53.2**	**-2.5**
	220nm,0.1s,SNR=7.9						
CHAS	**Isla Isabel II**	**1.00**	**151**	P	**Pb**	**23 48 46.2**	**+2.2**
CHAS				S	**Sn**	**23 48 57.1**	**0.0**
ENIJ	**Nijar**	**1.12**	**36**	P	**Pn**	**23 48 43.6**	**-1.9**
	6.3nm,0.2s,SNR=7.9						
ENIJ				S	**Sn**	**23 48 59.6**	**-0.5**
	53nm,0.3s,SNR=7.9						
PALE	**Palemas**	**1.13**	**222**	P	**Pn**	**23 48 45.3**	**-0.3**
PALE				S	**Sn**	**23 48 58.7**	**-1.6**
EMAL	**Malaga-Limoner**	**1.33**	**302**	P	**Pb**	**23 48 50.2**	**+0.5**
EMAL				S	**Sn**	**23 49 02.5**	**-2.8**
EMAL	**Malaga-Limoner**	**1.33**	**302**	P	**Pb**	**23 48 50.2**	**+0.5**
EMAL				S	**Sn**	**23 49 02.5**	**-2.8**
EGOR	**Sierra Gorda,**	**1.36**	**320**	P	**Pn**	**23 48 48.7**	**-0.2**
	3.8nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**23 49 06.1**	**-0.2**
	18nm,0.2s,SNR=7.9						
GORA	**Gorafe**	**1.41**	**359**	P	**Pn**	**23 48 49.6**	**+0.1**
	8.4nm,0.2s,SNR=7.9						
GORA				S	**Sn**	**23 49 08.6**	**+1.2**
	48nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**1.50**	**290**	P	**Pn**	**23 48 49.3**	**-1.4**
	1.0nm,0.1s,SNR=22						
EMIJ				S	**Sn**	**23 49 05.7**	**-3.8**
	17nm,0.2s						
AKLM	**AKL**	**1.70**	**204**	P	**Pn**	**23 48 53.7**	**+0.2**
AKLM				S	**Sn**	**23 49 14.3**	**-0.2**
EQES	**Quesada**	**1.73**	**359**	P	**Pn**	**23 48 55.7**	**+1.7**
	6.2nm,0.1s,SNR=126						
EQES				S	**Sn**	**23 49 17.2**	**+1.8**
	21nm,0.2s,SNR=5.9						
JBK	**JBK**	**1.77**	**168**	P	**Pn**	**23 48 53.9**	**-0.6**
JBK				S	**Sn**	**23 49 15.0**	**-1.3**
CEU	**Ceuta**	**1.92**	**266**	P	**Pb**	**23 48 58.3**	**-1.2**
CEU				S	**Sn**	**23 49 17.6**	**-2.1**
CEU	**Ceuta**	**1.92**	**266**	P	**Pb**	**23 48 58.3**	**-1.2**
CEU				S	**Sn**	**23 49 17.6**	**-2.1**
ECEU	**Ceuta**	**1.92**	**266**	S	**Sn**	**23 49 18.2**	**-1.6**
	5.3nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**2.09**	**10**	P	**Pn**	**23 49 00.4**	**+1.5**
	7.8nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**23 49 25.6**	**+1.5**
	26nm,0.2s,SNR=7.9						
LIJA	**Lijar**	**2.10**	**294**	P	**Pb**	**23 49 04.5**	**+1.8**
CHEFC	**Chefchaouen**	**2.12**	**244**	P	**Pn**	**23 49 00.0**	**+0.7**
CART	**Cartagena**	**2.22**	**46**	P	**Pn**	**23 48 59.2**	**-1.4**
EMUR	**La Murta**	**2.28**	**38**	P	**Pn**	**23 49 03.7**	**+2.3**
	1.6nm,0.2s,SNR=7.9						
EMUR				S	**Sn**	**23 49 23.5**	**-5.2**
	4.1nm,0.3s,SNR=7.9						
ESPR	**Espera**	**2.42**	**290**	S	**Sn**	**23 49 33.9**	**+1.7**
	2.6nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.44**	**330**	P	**Pn**	**23 49 04.4**	**+0.8**
	0.3nm,0.1s,SNR=39						
EADA				S	**Sn**	**23 49 33.6**	**+0.9**
	5.1nm,0.1s,SNR=6.3						
ECAB	**El Cabril**	**2.77**	**317**	P	**Pn**	**23 49 08.1**	**-0.1**
	1.2nm,0.3s,SNR=7.9						
ECAB				S	**Sn**	**23 49 40.3**	**-0.7**
	1.6nm,0.2s,SNR=7.9						
LCRM	**LCR**	**2.81**	**213**	P	**Pn**	**23 49 10.0**	**+1.2**
LCRM				S	**Sn**	**23 49 42.7**	**+0.6**
ETOB	**Tobarra**	**2.83**	**24**	P	**Pn**	**23 49 09.3**	**+0.2**
	1.0nm,0.2s,SNR=25						
ETOB				S	**Sn**	**23 49 41.1**	**-1.3**
	2.6nm,0.2s						
IFR	**Ifrane**	**3.08**	**215**	P	**Pn**	**23 49 12.9**	**+0.4**
IFR				S	**Sn**	**23 49 47.5**	**-1.2**
TDRA	**Tendrara**	**3.13**	**165**	P	**Pn**	**23 49 13.1**	**-0.2**
AFON	**Font Roja**	**3.26**	**37**	P	**Pn**	**23 49 15.3**	**+0.3**
	0.6nm,0.3s,SNR=7.9						
AFON				S	**Sn**	**23 49 50.1**	**-3.0**
	3.1nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.38**	**301**	P	**Pn**	**23 49 16.9**	**+0.3**
	0.5nm,0.1s,SNR=7.7						
EMIN				S	**Sn**	**23 49 53.5**	**-2.4**
	1.4nm,0.1s						
MDT	**Midelt**	**3.50**	**202**	P	**Pn**	**23 49 19.4**	**+1.2**
MDT				S	**Sn**	**23 49 57.7**	**-1.2**
MD31	**MD31**	**3.50**	**205**	P	**Pn**	**23 49 19.0**	**+0.8**
MD31				S	**Sn**	**23 49 59.1**	**+0.2**
PAB	**San Pablo**	**3.63**	**344**	P	**Pn**	**23 49 21.3**	**+1.3**
	1.5nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**23 50 00.3**	**-1.8**
	1.2nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**3.68**	**349**	P	**Pn**	**23 49 22.0**	**+1.3**
	1.1nm,0.3s,baz=171,slow=12,SNR=16						
ESDC				S	**Sn**	**23 50 03.3**	**0.0**
	1.5nm,0.5s,baz=174,slow=16,SNR=7.9						
EGRO	**El Granado**	**3.87**	**294**	P	**Pn**	**23 49 24.4**	**+1.1**
	0.5nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**23 50 06.7**	**-1.2**
	2.3nm,0.2s,SNR=7.9						
PVAQ	**Vaqueiros**	**4.00**	**291**	*e*Pn	**Pn**	**23 49 26.4**	**+1.3**
PVAQ				*e*Sn	**Sn**	**23 50 09.5**	**-1.7**
PVAQ				A	A	23 50 24.5	
	3.8nm,0.6s						
PVAQ	**Vaqueiros**	**4.00**	**291**	P	**Pn**	**23 49 25.5**	**+0.5**
PBDV	**Barranco-do-Ve**	**4.12**	**288**	*e*Pn	**Pn**	**23 49 28.4**	**+1.7**
PBDV				*e*Sn	**Sn**	**23 50 12.3**	**-1.8**
PBDV				A	A	23 50 16.5	
	3.0nm,0.4s						
EBAD	**Badajoz**	**4.16**	**311**	P	**Pn**	**23 49 27.5**	**+0.3**
	0.5nm,0.1s,SNR=7.5						
EBAD				S	**Sn**	**23 50 13.3**	**-1.8**
	6.3nm,0.2s,SNR=7.9						
UCM	**Universidad Co**	**4.24**	**358**	P	**Pn**	**23 49 29.6**	**+1.3**
UCM				S	**Sb**	**23 50 33.9**	**+3.9**
PCVE	**Castro Verde**	**4.32**	**293**	*e*Pn	**Pn**	**23 49 30.5**	**+1.1**
PBEJ	**Beja**	**4.34**	**298**	*e*Pn	**Pn**	**23 49 30.6**	**+0.8**
EIBI	**Ibiza**	**4.56**	**48**	P	**Pn**	**23 49 31.9**	**-0.8**
	0.5nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**23 50 18.8**	**-6.0**
	1.0nm,0.2s,SNR=7.9						
PESTR	**Estremoz**	**4.59**	**309**	*e*Pn	**Pn**	**23 49 33.7**	**+0.6**
PESTR				*e*Sn	**Sn**	**23 50 23.9**	**-1.7**
PESTR				A	A	23 50 45.4	
	2.9nm,0.5s						
PESTR	**Estremoz**	**4.59**	**309**	P	**Pn**	**23 49 33.1**	**-0.1**
GUD	**Guadarrama**	**4.66**	**349**	P	**Pn**	**23 49 35.0**	**+0.8**
	0.6nm,0.2s,SNR=6.5						
GUD				S	**Sn**	**23 50 25.8**	**-1.7**
	0.3nm,0.2s						
EVO	**Evora**	**4.68**	**303**	P	**Pn**	**23 49 36.2**	**+1.8**
EVO				S	**Sn**	**23 50 23.1**	**-4.8**
EVO	**Evora**	**4.68**	**303**	*e*Pn	**Pn**	**23 49 35.1**	**+0.7**
EVO				*e*Sn	**Sn**	**23 50 24.9**	**-3.0**
EVO				A	A	23 50 33.7	
	2.3nm,0.5s						
MORF	**Marmelete**	**4.69**	**287**	*e*Pn	**Pn**	**23 49 38.4**	**+3.8**
MORF				*e*Sn	**Sn**	**23 50 27.8**	**-0.5**
MORF				A	A	23 50 30.1	
	15nm,0.8s						
PFVI	**Vila Bisbo**	**4.79**	**285**	*e*Pn	Pn	23 49 40.5	+4.6
PFVI				*e*Sn	**Sn**	**23 50 29.0**	**-1.6**
ETOR	**Torete**	**4.81**	**9**	P	**Pn**	**23 49 37.3**	**+1.1**
	1.9nm,0.2s,SNR=7.3						
ETOR				S	**Sn**	**23 50 31.2**	**+0.1**
	2.5nm,0.4s						
PTEO	**Sao Teotonio**	**4.81**	**290**	*e*Pn	Pn	23 49 42.8	+6.6
PMRV	**Marv??o**	**4.82**	**315**	*e*Pn	**Pn**	**23 49 36.9**	**+0.5**
PMRV				*e*Sn	**Sn**	**23 50 27.2**	**-4.3**
PMRV				A	A	23 50 58.1	
	3.2nm,0.5s						
PNCL	**Nicolau / Gran**	**4.85**	**297**	*e*Pn	**Pn**	**23 49 37.6**	**+0.8**
PNCL				*e*Sn	**Sn**	**23 50 30.0**	**-2.2**
PNCL				A	A	23 50 34.4	
	12nm,0.8s						
PMTG	**Montargil**	**5.11**	**308**	*e*Pn	**Pn**	**23 49 40.9**	**+0.7**
PMTG				*e*Sn	**Sn**	**23 50 36.1**	**-2.3**
PCBR	**Castelo Branco**	**5.16**	**318**	*e*Pn	**Pn**	**23 49 41.7**	**+0.8**
PCBR				*e*Sn	**Sn**	**23 50 36.0**	**-3.6**
MTE	**Manteigas**	**5.60**	**322**	*e*Pn	**Pn**	**23 49 48.0**	**+0.9**
PSBE	**So Bento**	**5.72**	**309**	*e*Pn	**Pn**	**23 49 49.5**	**+0.7**
PCAS	**Casmilo, Conde**	**5.88**	**314**	*e*Pn	**Pn**	**23 49 51.1**	**+0.3**
ETOS	**Mallorca**	**5.91**	**50**	P	**Pn**	**23 49 52.9**	**+1.6**
	0.3nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.98**	**330**	*e*Pn	**Pn**	**23 49 53.2**	**+0.9**
MVO				*e*Sn	**Sn**	**23 50 57.1**	**-2.9**
MVO	**Moncorvo**	**5.98**	**330**	P	**Pn**	**23 49 53.0**	**+0.6**
	1.0nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**23 50 56.7**	**-3.3**
	2.7nm,0.3s,SNR=7.9						
PVIS	**Viseu**	**6.02**	**322**	*e*Pn	**Pn**	**23 49 53.7**	**+0.9**
PBRG	**Braganca**	**6.42**	**334**	*e*Pn	**Pn**	**23 49 59.5**	**+1.1**
POLO	**Lamas de Olo**	**6.48**	**326**	*e*Pn	**Pn**	**23 50 00.6**	**+1.4**

ISC Computed Locations for December 2015

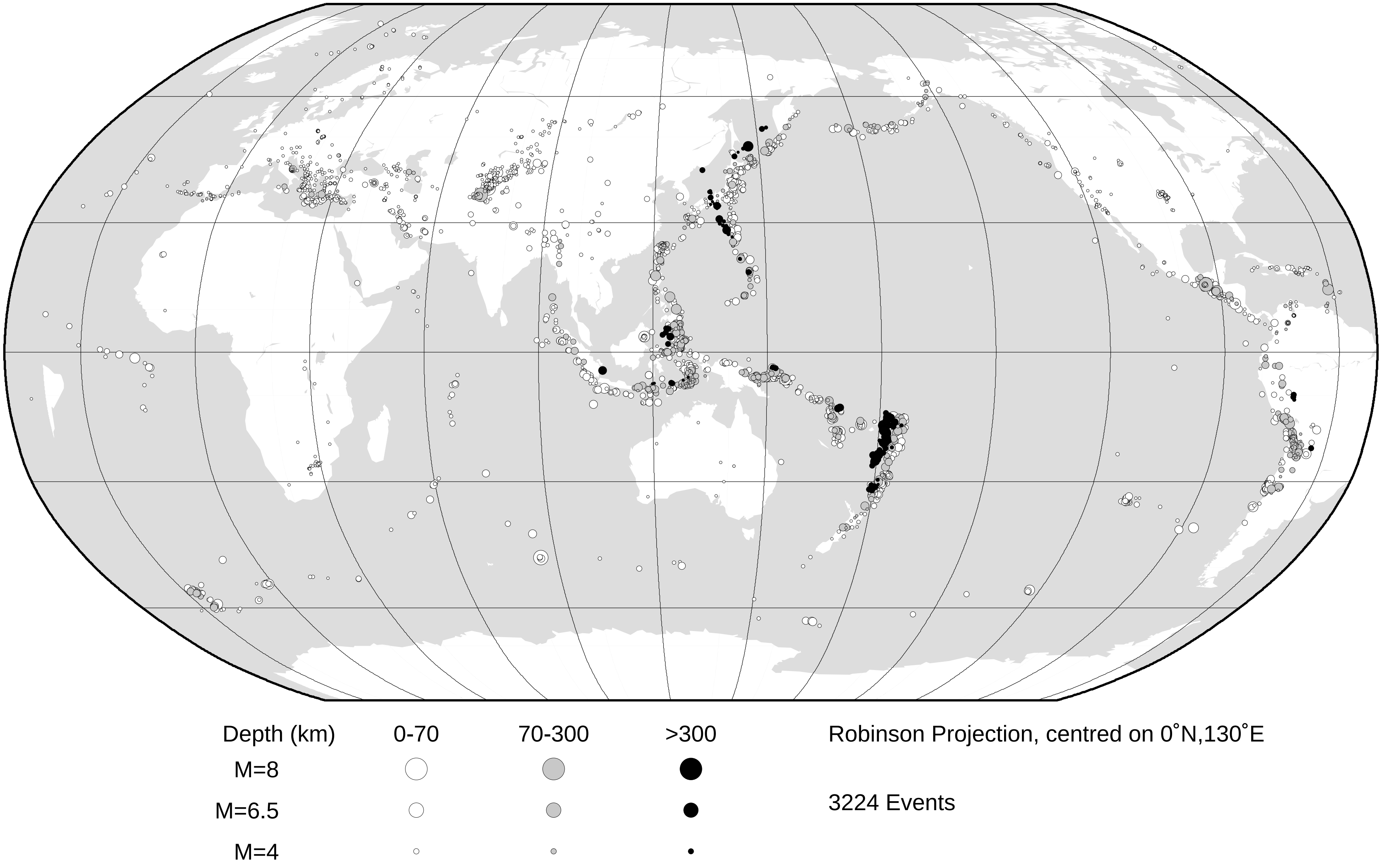

Robinson Projection, centred on 0˚N,130˚E

3224 Events